



Board of Directors Agenda

Click link to access the meeting:

<https://www.zoomgov.com/j/1602805839>

Zoom Meeting ID

Ways to Join



Computer: Click the link above. You will be prompted to run the Zoom browser or Zoom application. Once signed on to the meeting, you will have the option to join using your computer audio system or phone.

Webinar Features:

 Raise Hand	▶	Use the raise hand feature every time you wish to make a public comment.
	▶	Participants can enable closed captioning by clicking the CC icon. You may also view the full transcript and change the font size by clicking 'subtitle settings'. These features are not available via phone.
	▶	This symbol shows you are muted , click this icon to unmute your microphone.
	▶	This symbol shows you are currently unmuted , click this button to mute your microphone.
	▶	The chat feature should be used by panelists and attendees solely for "housekeeping" matters as comments made through this feature will not be retained as part of the meeting record. See the Live Verbal Public Comment for instructions on how to make a public comment.



Smartphone or Tablet: Download the Zoom app and join the meeting by clicking the link or using the webinar ID (found in the link).



Phone:

1. If you are joining the meeting audio by phone and viewing the meeting on a device, dial the number provided in the 'join audio' phone call tab of the initial pop-up, and enter the Meeting ID (found in the link).
2. If you are joining by phone only, dial: **+1-669-900-9128** or **+1-253-215-8782** and type the meeting ID found in the link, press #. You will have access to the meeting audio, **but will NOT be able to view the PowerPoint presentations.**



Live Verbal Public Comments: Use the 'Raise Hand' icon every time you wish to make a public comment on an item. Raise your hand once the agenda item you wish to comment on has been called. In person public comments will be taken first, virtual attendees will be taken in the order in which they raise their hand. Requests to speak will not be taken after the public comment period ends, unless under the Chair's discretion. General Public Comment, at the beginning of the Board of Directors meeting only, will be limited to five speakers. Additional speakers with general public comments will be heard at the end of the meeting. Two-minutes of time is allotted per speaker, unless otherwise directed by the Chair.

Public Comments Made Via Zoom

1. Click the link found at the top of this instruction page
2. Click the raise hand icon located in the bottom center of the platform
3. The Clerk will announce your name when it is your turn to speak
4. Unmute yourself to speak

Public Comments Made by Phone Only

1. Dial **+1-669-900-9128**
2. Type in the zoom meeting ID found in the link and press #
3. Dial *9 to raise your hand via phone
4. The Clerk will call out the last 4 digits of your phone number to announce you are next to speak
5. Dial *6 to unmute yourself



Written Public Comments (before the meeting): Written public comments will be recorded in the public record and will be provided to MTS Board Members in advance of the meeting. Comments must be emailed or mailed to the Clerk of the Board* by 4:00pm the day prior to the meeting.



Translation Services: Requests for translation services can be made by contacting the Clerk of the Board* at least four working days in advance of the meeting.



In-Person Participation: In-person public comments will be heard first. Following in-person public comments, virtual attendees will be heard in the order in which they raise their hand via the Zoom platform. Speaking time will be limited to two minutes per person, unless specified by the Chairperson. Requests to speak will not be taken after the public comment period ends, unless under the Chair's discretion.

Instructions for providing in-person public comments:

1. Fill out a speaker slip located at the entrance of the Board Room;
2. Submit speaker slip to MTS staff seated at the entrance of the Board Room;
3. When your name is announced, please approach the podium located on the right side of the dais to make your public comments.

Members of the public are permitted to make general public comment at the beginning of the agenda or specific comments referencing items on the agenda during the public comment period. General Public Comment, at the beginning of the Board of Directors meeting only, will be limited to five speakers. Additional speakers with general public comments will be heard at the end of the meeting.



Assistive Listening Devices (ALDs): ALDs are available from the Clerk of the Board* prior to the meeting and are to be returned at the end of the meeting.



Reasonable Accommodations: As required by the Americans with Disabilities Act (ADA), requests for agenda information in an alternative format or to request reasonable accommodations to facilitate meeting participation, please contact the Clerk of the Board* at least two working days prior to the meeting.



***Contact Information:** Contact the Clerk of the Board via email at ClerkoftheBoard@sdmts.com, phone at (619) 398-9561 or by mail at 1255 Imperial Ave. Suite 1000, San Diego CA 92101.



Agenda de la Junta de Directores

Haga clic en el enlace para acceder a la reunión:

<https://www.zoomgov.com/j/1602805839>






Formas de Participar



Computadora: Haga clic en el enlace más arriba. Recibirá instrucciones para operar el navegador de Zoom o la aplicación de Zoom. Una vez que haya iniciado sesión en la reunión, tendrá la opción de participar usando el sistema de audio de su computadora o teléfono.

ID de la reunión
en Zoom

Funciones del Seminario En Línea:

 Levantar la mano	►	Use la herramienta de levantar la mano cada vez que desee hacer un comentario público.
	►	Los participantes pueden habilitar el subtitulado haciendo clic en el ícono CC. También puede ver la transcripción completa y cambiar el tamaño de letra haciendo clic en “configuración de subtítulos”. Estas herramientas no están disponibles por teléfono.
	►	Este símbolo indica que usted se encuentra en silencio , haga clic en este ícono para quitar el silenciador de su micrófono.
	►	Este símbolo indica que su micrófono se encuentra encendido . Haga clic en este símbolo para silenciar su micrófono.
	►	La herramienta de chat deben usarla los panelistas y asistentes únicamente para asuntos “pertinentes a la reunión”, ya que comentarios realizados a través de esta herramienta no se conservarán como parte del registro de la reunión. Consulte el Comentario público verbal en vivo para obtener instrucciones sobre cómo hacer un comentario público.



Teléfono Inteligente o Tableta: Descargue la aplicación de Zoom y participe en la reunión haciendo clic en el enlace o usando el ID del seminario web (que se encuentra en el enlace).



Teléfono:

1. Si está participando en la reunión mediante audio de su teléfono y viendo la reunión en un dispositivo, marque el número indicado en la pestaña de llamada telefónica “unirse por audio” en la ventana emergente inicial e ingrese el ID de la reunión (que se encuentra en el enlace).
2. Si está participando solo por teléfono, marque: **+1-669-900-9128** o **+1-253-215-8782** e ingrese el ID de la reunión que se encuentra en el enlace, pulse #. Tendrá acceso al audio de la reunión, **pero NO podrá ver las presentaciones en PowerPoint.**



Comentarios Públicos Verbales en Vivo: Use la herramienta “levantar la mano” cada vez que desee hacer un comentario público sobre alguno de los artículos. Levante la mano una vez que el artículo de la agenda sobre el que desea comentar haya sido convocado. Los comentarios públicos en persona se escucharán primero, se escuchará a los asistentes virtuales en el orden en el que levanten la mano. No se aceptarán solicitudes para hablar después de que termine el periodo para hacer comentarios públicos, a menos de que el presidente determine de otra forma a su discreción. Comentarios públicos generales, únicamente al inicio de la reunión de la Junta de Directores, se limitarán a cinco personas que deseen hablar. Las personas adicionales que deseen aportar comentarios públicos generales podrán hacerlo al final de la reunión. Se otorga dos minutos de tiempo por persona que desee hablar, a menos de que el presidente instruya de otra forma. *(Consulte la página 2 para obtener instrucciones sobre cómo hacer un comentario público.)*

Comentarios Públicos a Través de Zoom

1. Haga clic en el enlace que se encuentra en la parte superior de esta página de instrucciones
2. Haga clic en el ícono de levantar la mano en el centro inferior de la plataforma
3. El secretario anunciará su nombre cuando sea su turno de hablar
4. Desactive el silenciador para que pueda hablar

Comentarios Públicos Realizados Únicamente por Teléfono

1. Marque el **+1-669-900-9128**
2. Ingrese el ID de la reunión en Zoom que se encuentra en el enlace y pulse #
3. Marque *9 para levantar la mano por teléfono
4. El secretario indicará los últimos 4 dígitos de su número de teléfono para anunciar que usted será el siguiente en hablar
5. Marque *6 para desactivar el silenciador



Comentarios Públicos por Escrito (Antes de la Reunión): Los comentarios públicos por escrito se registrarán en el registro público y se entregarán a los miembros de la Junta de MTS antes de la reunión. Los comentarios deben enviarse por correo electrónico o postal al secretario de la Junta* antes de las 4:00 p.m. el día anterior a la reunión.



Servicios de Traducción: Pueden solicitarse servicios de traducción comunicándose con el secretario de la Junta* por lo menos cuatro días hábiles antes de la reunión.



Participación en Persona: Los comentarios públicos en persona se escucharán primero. Después de los comentarios públicos en persona, se escuchará a los asistentes virtuales en el orden en el que levanten la mano a través de la plataforma de Zoom. El tiempo para hablar se limitará a dos minutos por persona, a menos de que el presidente especifique de otra forma. No se recibirán solicitudes para hablar después de que termine el periodo para hacer comentarios públicos, a menos de que el presidente determine de otra forma a su discreción.

Instrucciones para brindar comentarios públicos en persona:

1. Llene la boleta para personas que desean hablar que se encuentran en la entrada de la Sala de la Junta.
2. Entregue la boleta para personas que desean hablar al personal de MTS que se encuentra sentado en la entrada de la Sala de la Junta.
3. Cuando anuncien su nombre, por favor, acérquese al podio ubicado en el lado derecho de la tarima para hacer sus comentarios públicos.

Los miembros del público pueden hacer comentarios públicos generales al inicio de la agenda o comentarios específicos que hagan referencia a los puntos de la agenda durante el periodo de comentarios públicos. Los comentarios públicos generales únicamente al inicio de la reunión de la Junta de Directores, se limitarán a cinco personas que deseen hablar. Las personas adicionales que deseen aportar comentarios públicos generales podrán hacerlo al final de la reunión.



Dispositivos de Asistencia Auditiva (ALD, por sus siglas en inglés): Los ALD están disponibles con el secretario de la Junta* antes de la reunión y estos deberán ser devueltos al final de la reunión.



Facilidades Razonables: Según lo requerido por la Ley de Estadounidenses con Discapacidades (ADA, por sus siglas en inglés), para presentar solicitudes de información de la agenda en un formato alternativo o solicitar facilidades razonables para facilitar su participación en la reunión, por favor, comuníquese con el secretario de la Junta* por lo menos dos días hábiles antes de la reunión.



***Información de Contacto:** Comuníquese con el secretario de la Junta por correo electrónico en ClerkoftheBoard@sdmts.com, por teléfono al **(619) 398-9561** o por correo postal en **1255 Imperial Ave. Suite 1000, San Diego CA 92101.**



Board of Directors Agenda

May15, 2025 at 9:00 a.m.

In-Person Participation: James R. Mills Building, 1255 Imperial Avenue, 10th Floor Board Room, San Diego CA 92101

Teleconference Participation: (669) 254-5252; Webinar ID: 160 280 5839, <https://www.zoomgov.com/j/1602805839>

NO.	ITEM SUBJECT AND DESCRIPTION	ACTION
1.	Roll Call	
2.	Public Comments This item is limited to five speakers with two minutes per speaker. Others will be heard after Board Discussion items. If you have a report to present, please give your copies to the Clerk of the Board.	
CONSENT ITEMS		
3.	Approval of Minutes Action would approve the April 17, 2025 Board of Director meeting minutes.	Approve
4.	CEO Report	Informational
5.	Investment Report – Quarter Ending March 31, 2025	Informational
6.	Non-Revenue Vehicle Camera System – Contract Award Action would authorize the Chief Executive Officer (CEO) to: 1) Execute MTS Doc. G2950.0-24 with Motive Technologies, Inc. (Motive), for a Non-Revenue Vehicle Camera System for a five (5) year base period with three (3) 1-year options, for a total amount of \$1,070,655.00; and 2) Exercise the option years at the CEO's discretion.	Approve
7.	Increased Authorization for Legal Services Contracts to Pay Projected Expenses through Fiscal Year 2026 (FY26) – Contract Amendment Action would authorize the Chief Executive Officer (CEO) to execute amendments to twelve (12) legal services contracts increasing the funding authorization by \$2,770,000.00 to cover anticipated expenses through FY26.	Approve
8.	Operations Budget Status Report for March 2025	Informational

1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • sdmts.com

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.



9. **First Responder Network (FirstNet) Services – Contract Amendment** Approve

Action would 1) Ratify Amendment No. 3 to MTS Doc. No. G2377.0-20 with AT&T Corp. (AT&T), for the static Internet Protocol (IP) address block setup and recurring monthly charges at no cost due to available extra contract capacity; and 2) Authorize the Chief Executive Officer (CEO) to Execute Amendment No. 4 to MTS Doc. No G2377.0-20 with AT&T, to extend the agreement through August 11, 2029, to coincide with the amended National Association of State Procurement Offices (NASPO) ValuePoint Cooperative Purchasing Agreement Master Agreement (Master Agreement) 149 exercised option.
10. **Beyer Blvd Pathway Beautification Project Art Concepts – Contract Award** Approve

Action would 1) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWG410.0-25 with Alicia Siu, for artistic services, inclusive of conceptualization, design and installation and an as-needed five-year maintenance plan for Art Concept 1 located along the Beyer Pathway near the Blvd. Trolley Station in San Diego in the amount of \$55,500.00; and 2) Authorize the CEO to execute MTS Doc. No. PWG.440.0-25 with Johnny Bear Contreras, DBA Johnny Bear Art, for artistic services inclusive of conceptualization, design and installation and an as-needed five (5) year maintenance plan for Art Concept 2 located along the Beyer Pathway near the Blvd. Trolley Station in San Diego in the amount of \$48,850.00.
11. **Weed Abatement Services – Contract Award** Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWL429.0-25 with Baja Wildlife Control for up to a five-year (5) period for weed abatement service of all MTS rail right-of-way (ROW) in the amount of \$378,300.00.
12. **HASTUS Regional Scheduling System Annual Software Maintenance and Support Services – Sole Source Contract Award** Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G3068.0-25 with GIRO, Inc. (GIRO), on a Sole Source basis, for the provision of HASTUS Regional Scheduling System (RSS) annual software maintenance and support services for a period of three (3) years in the amount of \$1,258,437.00.
13. **Hewlett Packard Enterprise (HPE) Closed Circuit Television (CCTV) Servers – Contract Award** Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G3010.0-25 with Nth Generation Computing (Nth Generation), for the purchase of HPE CCTV Servers for a five (5) year period, for a total of \$443,871.75.
14. **Cisco Hardware and Subscription – Contract Award** Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2979.0-25 with Insight Public Sector Inc. (Insight) for the purchase of Cisco Hardware and Subscription, for a total of \$663,463.40.

15. **South Bay Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services – Work Order Agreement** Approve

Action would authorize the Chief Executive Officer (CEO) to execute Work Order WOA353-AE-51 under MTS Doc No. PWL353.0-22 with Dokken Engineering (Dokken), in the amount of \$1,737,483.85 to provide engineering design services for Phase 2 of the SBFM electric bus charging infrastructure project.
16. **Battery Electric Bus (BEB) Fire and Life Safety Study – Work Order Agreement** Approve

Action would authorize the Chief Executive Officer (CEO) to execute Work Order Amendment WOA353-AE-28 under MTS Doc No. PWL353.0-22 with Dokken Engineering (Dokken) in the amount of \$153,546.13 to provide an engineering study service for fire and life safety of MTS bus maintenance facilities related to BEBs.
17. **Orange Line Improvement Project (OLIP) Phase 2: Procurement of Prewired Signal Houses and Related Materials — Contract Award** Approve

Action would 1) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1691.0-25 with Diverging Approach, Incorporated (DAI) in the amount of \$6,563,227.74 for the purchase of prewired signal houses and related materials for Phase 2 of the Orange Line Improvement Project; and 2) Authorize the CEO to execute amendments or change orders up to 10% contingency (\$656,322.77) for this contract, bringing the total expenditure authority to \$7,219,550.51.
18. **Broadway & C Street Wheel Counter and Signal Replacement Construction Management Services– Contract Award** Approve

Action would authorize the Chief Executive Officer (CEO) to execute Work Order No. WOA2498-CM30 under MTS Doc No. G2498.0-21 with Kleinfelder Construction Services, Inc., in the amount of \$156,269.58 for Construction Management (CM) services on the Broadway & C Street Wheel Counter and Signal Replacement project.
19. **Fiscal Year (FY) 2024-2025 Low Carbon Transit Operations Program (LCTOP) Funding** Approve

Action would 1) Rescind MTS Resolution No. 25-02 adopted on April 17, 2025; and 2) Adopt MTS Resolution No. 25-04 to: a) Agree to comply with all conditions and requirements set forth in the Certification and Assurances Document, and applicable statutes, regulations, and guidelines for all LCTOP funded transit projects; b) Authorize the Chief Executive Officer (CEO), or designated representative, to execute all required documents of the LCTOP and any amendments thereto with the California Department of Transportation;

c) Authorize the allocation of \$8,527,008 in Fiscal Year (FY) 2024-2025 LCTOP funding for the procurement of Battery Electric Buses (BEBs), which will reduce greenhouse gas emissions and improve mobility with a priority on serving Disadvantaged Communities (DAC); and d) Certify that at least 50% of the total LCTOP funds received will be spent on projects or services that will benefit DACs identified in Section 39711 of the Health and Safety Code.

PUBLIC HEARING

- 20. Fiscal Year (FY) 2026 Operating Budget Discussion (Gordon Meyer)** Approve
- Action would 1) Receive testimony, review, and comment on the FY 2026 MTS Operating Budget at a public hearing; and 2) Enact Resolution No. 25-03 adopting the FY 2026 operating budget for the MTS, San Diego Transit Corporation (SDTC), San Diego Trolley (SDTI), MTS Contract Services, and the Coronado Ferry.

DISCUSSION ITEMS

- 21. Fiscal Year (FY) 2025 Q3 Monitoring Report (Brent Boyd and Matthew Grace)** Informational
- 22. Comprehensive Operational Analysis – Contract Award (Brent Boyd and Brianda Diaz)** Approve
- Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G3042.0-25 with Transportation Management & Design, Inc. (TMD), a Disadvantaged Business Enterprise (DBE), for a Comprehensive Operational Analysis for a two (2) year period, for a total amount of \$682,576.31.

OTHER ITEMS

- 23. Chair, Board Member and Chief Executive Officer's (CEO's) Communications**
- 24. Remainder of Public Comments Not on The Agenda**
- This item is a continuation of item No. 2 (Public Comment), in the event all speakers who request to comment on item No. 2 are not called. If all Public Comment is accepted during item No. 2, no additional public comment will be accepted under this item.

ADJOURNMENT

- 25. Next Meeting Date**
- The next Board of Director's meeting is scheduled for June 26, 2025 at 9:00am.
- 26. Adjournment**

MINUTES
MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

April 17, 2025

[Clerk's note: Except where noted, public, staff and board member comments are paraphrased. The full comment can be heard by reviewing the recording at the [MTS website](#).]

1. Roll Call

Chair Whitburn called the Board meeting to order at 9:05 a.m. A roll call sheet listing Board member attendance is attached as Attachment A.

2. Public Comment

Guadalupe Rojas – Representing Mid-City CAN submitted a written statement to the Board prior to the meeting. The written comment is provided in the April 17, 2025, Final Meeting Packet.

Peter Zscheschie – Representing United Taxi Workers of San Diego (UTWSD) made a verbal statement to the Board during the meeting. Zscheschie announced UTWSD's role in implementing the MTS Wheelchair Accessible Vehicle Program, aiming to integrate taxis into on-demand wheelchair-accessible transportation despite existing structural challenges.

Mikail Hussein – Representing UTWSD made a verbal statement to the Board during the meeting. Hussein expressed gratitude for MTS's work and support, and invited Board Members to a future event to further collaborate on expanding wheelchair-accessible transportation, particularly at the San Diego Airport.

CONSENT ITEMS:

3. Approval of Minutes

Action would approve the March 13, 2025 Board of Director meeting minutes.

4. CEO Report

5. Traction Power Substations (TPSS) Design – Work Order Amendment

Action would authorize the Chief Executive Officer (CEO) to execute Amendment No. 1 to Work Order WOA357-AE-31.01, under MTS Doc No. PWL357.0-22, with CR Associates (CRA), a Disadvantaged Business Enterprise (DBE), in the amount of \$279,964.04 for design services to provide additional survey data and right-of-way services for future TPSS substation replacements.

6. Emergency Telecommunications System at Trolley Stations – Contract Award

Action would authorize the Chief Executive Officer (CEO) to: 1) Execute MTS Doc. L1675.0-24, with Western Automated Solutions, Inc. (Western Automated), for an Emergency Telecommunications System at Trolley Stations for a three (3) year base period with three (3) 1-year options, for a total amount of \$672,140.40; and 2) Exercise the option years at the CEO's discretion.

- 7. Imperial Avenue Division (IAD) 2nd Floor Administration Restroom Rehabilitation – Work Order Agreement**
Action would authorize the Chief Executive Officer (CEO) to execute Work Order Agreement MTSJOC324-62 under Job Order Contract (JOC) MTS Doc. No. PWG324.0-21 with ABC General Contracting, Inc. (ABCGC), in the amount of \$375,626.65, for the rehabilitation of restrooms located on the 2nd floor of the administration building at IAD.
- 8. Variable Message Signs (VMS) Installations for Blue and Green Lines – Contract Award**
Action would authorize the Chief Executive Officer (CEO) to execute contract MTS Doc. No. PWL427.0-25, with M J Builder, in the amount of \$528,850.00 for the VMS replacements on the Blue and Green Lines.
- 9. Rail Maintenance Program Including Rail Grinding Services – Contract Award**
Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWL420.0-25 with Advanced Rail Management Corporation (ARM Corp) for a Rail Maintenance Program Including Rail Grinding Services for five (5) years for \$3,885,717.17.
- 10. Radio Airtime and Maintenance – Contract Award**
Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2947.0-25, with Mobile Relay Associates, for Radio Airtime and Maintenance services for a three (3) year base term with two (2) option years, for a total of \$706,479.26.
- 11. Fiscal Year (FY) 2024-2025 Low Carbon Transit Operations Program (LCTOP) Funding**
Action would adopt Resolution No. 25-02 to: 1) Agree to comply with all conditions and requirements set forth in the Certification and Assurances Document, and applicable statutes, regulations, and guidelines for all LCTOP funded transit projects; 2) Authorize the Chief Executive Officer (CEO), or designated representative, to execute all required documents of the LCTOP and any amendments thereto with the California Department of Transportation; 3) Authorize the allocation of \$8,376,706 in FY 2024-2025 LCTOP funding for the procurement of Battery Electric Buses (BEBs), which will reduce greenhouse gas emissions and improve mobility with a priority on serving Disadvantaged Communities (DAC); and 4) Certify that at least 50% of the total LCTOP funds received will be spent on projects or services that will benefit DACs identified in Section 39711 of the Health and Safety Code.
- 12. Orange Line Improvement Project (OLIP) (Phase 1 and 2): Design Services – Work Order Amendment**
Action would 1) Ratify Work Order Amendment WOA356-AE-06.04 under MTS Doc No. PWL356.0-22 with Pacific Rail Enterprises, Inc. (PRE), a Disadvantaged Business Enterprise (DBE), for a total of \$1,570,283.20, which includes an additional \$53,274.17 in funding that was added after Board Approval of the work order amendment on July 18, 2024 (Agenda Item (AI) 10); 2) Authorize the Chief Executive Officer (CEO) to execute Work Order Amendment No. WOA356-AE-06.05 under MTS Doc No. PWL356.0-22 with PRE to add track, civil and OCS design services for Phase 2 totaling \$140,736.84; and 3) Authorize the CEO to execute Work Order Amendment WOA356-AE-06.06, under MTS Doc No. PWL356.0-22, with PRE, in the amount of \$704,657.59, to provide Centralized Train Control system changes for the Phase 1 Orange Line Improvement Project.

- 13. Orange Line Improvement Project (OLIP) (Phase 2): Owner Furnished Special Trackwork Procurement – Contract Award**
Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1699.0-25, with Progress Rail Services (Progress Rail), for the one-time supply of special trackwork materials, in the amount of \$2,050,595.75, inclusive of 8.5% CA Sales Tax.
- 14. Purchase of Hardened Steel Rail – Contract Award**
Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1694.0-25, with L.B. Foster Company (L.B. Foster) for the purchase of 736 tons of hardened steel rail, with the option to purchase an additional 368 tons, all in 320 linear feet (LF) lengths, for a total of \$2,134,070.64 which includes delivery and California sales tax.
- 15. Purchase of Refurbished Wheel Truing Machine – Sole Source Contract Award**
Action would authorize the issuance of a Purchase Order (PO) to Delta Wheel Truing Solutions for the purchase of a refurbished RTS 2000-DOM Above Floor Wheel Maintenance System for \$558,250.00 including shipping and sales tax.
- 16. 7th And C Street Grade Crossing Replacement – Work Order Agreement**
Action would authorize the Chief Executive Officer (CEO) to execute Work Order No. MTSJOC348-18, under MTS Doc. No. PWG348.0-22, in the amount of \$961,744.18, with Veterans Engineering Inc. (Veterans), a Disabled Veterans Business Enterprise (DVBE), for the replacement of the existing grade crossing and installation of a duct bank to support future parallel feeder replacement at 7th and C Street in downtown San Diego.
- 17. El Cajon Transit Center Repairs – Work Order Agreement**
Action would authorize the Chief Executive Officer (CEO) to execute Work Order Agreement No. MTSJOC347-40, under MTS Doc. No. PWG347.0-22, with ABC General Contractor, Inc. (ABCGC), in the amount of \$926,204.08 for the El Cajon Transit Center Repairs.
- 18. Massachusetts Station Pavement Repair – Work Order Agreement**
Action would authorize the Chief Executive Officer (CEO) to execute Work Order No. MTSJOC347-39, under MTS Doc. No. PWG347.0-22, with ABC General Contractor, Inc. (ABCGC), in the amount of \$399,627.73 for the Massachusetts Station Pavement Repair.
- 19. Mural Artwork on MTS East Beyer Rail Bridge located in San Ysidro – Contract Award**
Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc No. PWL421.0-25, with Michelle Guerrero, DBA, Mr. B Baby, a Small Business (SB), for the design and installation and an as-needed five-year maintenance plan for mural artwork on the MTS East Beyer Rail Bridge in the amount of \$169,938.17.
- 20. Bus “In-Lane” Revenue Collection Hardware – Sole Source Contract Award**
Action would authorize the Chief Executive Officer (CEO) to execute Contract B0774.0-24, with Genfare, LLC (Genfare), in the amount of \$600,485.69 for the replacement of Genfare fare lane hardware at the Imperial Avenue Division (IAD) and the Kearny Mesa Division (KMD).

21. Beyer Blvd Pathway Beautification Design – Work Order Amendment

Action would 1) Ratify Work Order WOA355-AE-42, under MTS Doc No. PWL355.0-22, with Psomas in the amount of \$149,827.08 for preliminary design work for the Beyer Blvd Pathway Beautification project; and
2) Authorize the Chief Executive Officer (CEO) to execute Work Order Amendment WOA355-AE-42.02 under MTS Doc No. PWL355.0-22, with Psomas in the amount of \$394,627.88, to provide 100% design services for the Beyer Blvd Pathway Beautification.

22. Federal Fiscal Year (FFY) 2023 (SANDAG Cycle 12) Federal Transit Administration (FTA) Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities – Grant Award

Action would 1) Accept the FFY 2023 Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities Cycle 12 awarded by the San Diego Association of Governments (SANDAG) in the amount of \$952,861 for paratransit vehicle procurement; and 2) Authorize \$525,563.15 in local matching funds to fully fund the purchase of seven (7) Americans with Disabilities Act (ADA) paratransit vehicles.

Public Comment

There were no Public Comments.

Board Comment

Board Member Moreno expressed strong support for consent agenda items 19 and 21, praising the San Ysidro mural and the Beyer Boulevard Pathway beautification projects for their cultural significance, community-driven design, and role in transforming public spaces into welcoming, safe, and reflective environments that celebrate local identity and pride.

Action on Recommended Consent Items 3 - 22

Board Member Hall moved to approve Consent Agenda Item Nos. 3 to 22. Board Member McCann seconded the motion, and the vote was 12 to 0 in favor with Board Member Bush, Board Member Montgomery Steppe and Board Member Dillard absent.

DISCUSSION ITEMS:

23. Assembly Bill (AB) 1070 (As Amended) – Transit Districts: Governing Boards: Compensation: Nonvoting Members (Sharon Cooney)

Sharon Cooney, MTS Chief Executive Officer, presented on AB 1070. She provided details on: bill overview, bill intent, board member compensation, adding non-voting members, adding non-voting members, AB 1070 status, AB 1070 opposition/support, and staff's recommendation.

Public Comment

Parke Troutman – Representing Mid-City CAN made a verbal statement to the Board during the meeting. Troutman expressed support for AB 1070, emphasizing the importance of consistently including transit riders and workers in decision-making. Troutman felt the suggestion to make the board changes option would undermine the bill's intent. Troutman urged MTS to strengthen collaboration with the community.

Board Comment

Vice Chair Goble asked whether the non-voting members, if added under the amended proposal, would be subject to Form 700 requirements. He noted that Form 700 is a financial disclosure form used by elected officials to declare personal investments and potential conflicts of interest, ensuring transparency in decision-making. Ms. Cooney confirmed that they would since they'd be involved in the deliberation and they would have an impact on policy making.

Vice Chair Goble raised a question about the Levine Act, explaining that it prohibits Board Members from voting on an item if they have received a campaign contribution of \$250 or more in the preceding 12 months, and from voting for the following 12 months. He asked whether the non-voting members and their organizations would be required to follow the same rules. Karen Landers, MTS General Counsel, responded that she would need to investigate the matter further but didn't believe the Levine Act would apply to non-voting members, as they wouldn't be elected officials and wouldn't have received campaign contributions. She explained that if the bill passes, a deeper analysis of conflict-of-interest rules would be necessary to ensure non-voting members are excluded from decisions where there are potential conflicts, especially if their employment could create a financial interest in certain transit policies. Ms. Landers added that while non-voting members may not be subject to the Levine Act, they would still be subject to other conflict-of-interest rules since they participate in policy discussions. She clarified that the Levine Act typically applies to elected officials and their campaign contributions, so it would likely not affect non-elected, non-voting members unless they also hold elected positions elsewhere. Ms. Cooney highlighted the complexity of the situation by providing an example involving a labor union with a political action committee (PAC) that contributes to various initiatives. She raised the concern that such contributions could potentially create conflicts of interest. Ms. Cooney also noted that a transit rider who is involved in campaigns could similarly face conflicts. She emphasized that while the intention to add these members was well-meaning, more information would be needed to fully understand the potential impact on the board's operations.

Vice Chair Goble then asked a follow-up question about accountability, referring to the point made earlier regarding speaking without consequences. He noted that a Board Members could be removed by their cities for various reasons but inquired who would have the authority to remove the non-voting members in cases of misconduct, asking whether there was currently any mechanism in place for such actions. Ms. Cooney responded by explaining that, under the current legislation, there would be no mechanism for removing non-voting members from the Board. She clarified that while First Amendment rights would need to be considered before action, there is currently no mechanism for removal, as the existing legislation did not include provisions for such scenarios. Vice Chair Goble expressed concern about the lack of public accountability for non-voting members, noting that unlike elected officials, these members would not be elected and therefore do not have the same level of accountability to the public. He also raised the issue that non-voting members could potentially have more rights than elected officials, particularly regarding longevity and accountability. Vice Chair Goble suggested that this discrepancy should be addressed and tightened up.

Board Member Downey expressed general approval of the suggested amendments, she was also confused about the requirement for directors to ride transit, as the proposal lacked details on how this would be monitored. Board Member Downey shared her personal experience of using transit, noting that their city paid for the 901 bus service, but it wasn't tracked, making it

difficult for them to prove usage. She also mentioned using a handicap pass to help track their rides but pointed out that there was no system in place to monitor this. Board Member Downey raised concerns about the additional work this would create for staff without clear guidelines or accountability for tracking transit usage. Ms. Cooney confirmed and noted that Board Members would attest to adhering to this part of the law.

Board Member Hall reiterated concerns shared earlier, pointing out that cities like Poway, which only had one bus, would struggle to meet the proposed transit use requirements. He emphasized the need to refine and clarify that part of the proposal. Board Member Hall questioned whether driving to a trolley station would count as transit time and highlighted the lack of clarity on what qualifies as transit use. He stressed that the absence of a tracking system made implementation difficult and noted that he had raised the same issue in a previous meeting. Board Member Hall concluded by urging further work on defining and addressing these concerns.

Board Member Dillard recalled that during the Executive Committee meeting, two main concerns were mentioned: where the new members would be placed and why the proposed bill was being directed solely at MTS rather than other Boards. Board Member Dillard expressed support for adding representation from the unincorporated areas of San Diego County, noting that these communities were often underrepresented on other boards and rarely had their voices heard. However, Board Member Dillard also expressed concern about the inclusion of union representatives, stating that it complicated the matter. She reiterated the logistical issue of where to seat additional members and emphasized the importance of maintaining proper meeting protocols. Board Member Dillard worried that if new members were not held to the same procedural standards, it could cause confusion, delays, and disrupt the efficiency of meetings. She was also concerned about the financial burden that implementing the proposed changes could place on MTS. Reflecting on discussions at the Executive Committee meeting, Board Member Dillard admitted feeling conflicted and ultimately stated that she could not support the proposal at that time.

Chair Whitburn recalled that the Executive Committee had engaged in a robust discussion on the topic and expressed support for the general goal of increasing public input. He noted that the Board already encouraged public participation on every agenda item, both in person and virtually, and that the public actively took advantage of those opportunities. Board Member raised a concern about the idea of appointing a public member to a board composed entirely of elected officials, comparing it to placing a public member on a city council, which would be unusual given that the responsibility to represent the public already rested with elected officials. He emphasized that decisions such as requiring Board Members to use transit or adding public members should be made locally by the board itself. Chair Whitburn stated their support for the staff's recommendation to keep such changes within the Board's discretion rather than mandating them through state legislation. He also acknowledged that while other boards in California might be more insular and in greater need of public or labor representation, MTS already demonstrated strong engagement, citing the agency's Project Labor Agreement (PLA) as an example.

Board Member Moreno expressed uncertainty about the bill's intent, questioning what issue it was trying to address or fix. Reflecting on her six years of representing District 8, Board Member Moreno shared pride in the progress made in communities like San Ysidro, Mesa, and Barrio Logan. She stated that she was unsure how the proposed bill would have either helped or hindered those accomplishments, further emphasizing her confusion about its purpose.

Board Member Moreno reiterated that she did not yet understand the point of the bill and would need further clarification before being able to support any motion related to it. She acknowledged that rural communities have long sought greater representation from MTS and other agencies like San Diego Association of Governance (SANDAG). However, she raised concerns that requiring a rural representative to rely on transit could be a barrier. While recognizing that agencies such as SANDAG include non-voting members from various organizations, she maintained that she was not prepared to support the bill or its amendments without a clearer understanding of its goals.

Board Member Elo-Rivera acknowledged the concerns that had been raised by others and recognized that everyone brings their own perspective to the discussion. He stated that he did not foresee the more alarming scenarios mentioned by others becoming a reality. He expressed trust in the Chair's judgment, believing that any appointments made would be thoughtful and responsible.

Board Member Elo-Rivera added that he did not believe the current Chair—or any future Chair—would risk their credibility by appointing individuals who would be disruptive or behave inappropriately during board proceedings. MS. Cooney mentioned that in the bill as amended, the Chair would not have the power to make appointments directly. Instead, it would be a new advisory committee's responsibility to bring forward a candidate. If the Chair did not approve of the candidate, the Chair would be required to send it back to the advisory committee for re-evaluation. Board Member Elo-Rivera expressed confidence that the proposal would not disrupt the board's work, noting that the appointed individuals would provide perspectives, not represent all riders or workers. He highlighted that non-voting members wouldn't dilute the board's voting power and referenced situations where real-time worker input could have been beneficial. He encouraged continued collaboration with Assembly Member Ward, concluding with a "no" vote, hoping for further refinement of the bill to avoid unintended consequences.

Chair Whitburn agreed with Board Member Elo-Rivera, noting that the Bill was brought forward with the best of intentions.

Board Member Moreno asked if Assembly Member Ward contacted MTS staff or the Chair's Office during the development of the Bill. Ms. Cooney replied no. Chair Whitburn replied no. Board Member Moreno asked if there was an agency that was backing the Bill. Ms. Cooney replied that the Amalgamated Transit Union (ATU) brought the Bill forward. Board Member Moreno asked to receive additional information on the bill from the sponsoring agency.

[Clerk's Comment: Later in the meeting, the Chair corrected his response on Assembly Member Ward's communication efforts. While he initially stated that there had been no contact with his office, Chair Whitburn corrected the record to confirm that Ward's staff had, in fact, reached out to his staff. He explained that he became involved once a meeting was arranged with Assembly Member Ward's team and Sharon Cooney after the bill was filed. He stated that he had not been aware of the full communication chain at the time of his response to the question from Board Member Moreno.]

Board Member Downey expressed support for the motion, stating that while not fully comfortable with the proposal, the staff's recommendation was a good starting point to address concerns. She emphasized that if the bill were to proceed, this would ensure that their concerns were presented, and Assembly Member Ward would need to address them, given the impact on their large transit agency.

Vote Held: to Authorize the CEO to Communicate a “Support if Amended” Position on AB 1070

Chair Whitburn moved to authorize the Chief Executive Officer to communicate a position of “Support If Amended” for AB 1070 (Ward) and to seek the following amendments to the bill: 1) Encourage rather than require transit agencies to include transit use as a condition for receipt of board member stipends; 2) Permit transit agencies to add additional nonvoting members to their boards, rather than require; 3) If the requirement to add two specific nonvoting members remains, remove the references to rights of nonvoting members, and replace it with language indicating that these members would be governed by the same rules of conduct and deliberation as voting board members; 4) Clarify that nonvoting members would not be included in any closed session deliberations; and 5) Remove the language dictating how nonvoting members would be nominated and appointed and leave it to individual agencies to determine, along with terms in office, and procedures for removal from membership. Board Member Downey seconded the motion, and the vote was 5 in favor (Board Member: Downey, Foster, Mendoza, Hall and Whitburn) to 8 opposed (Fernandez, McCann, Leyba-Gonzalez, Dillard, Elo-Rivera, Goble, Vaus and Moreno) with Board Member Bush and Board Member Montgomery Steppe absent. The proposed action did not pass. Discussion resumed.

Board Comment

Board Member Moreno asked a follow-up question regarding the timeline of the bill, inquiring whether there was still time to revisit the item for further discussion. Ms. Cooney stated that the item was scheduled to go to the Local Government Committee the following week. She expressed confidence that it would likely pass, noting that Assembly Member Ward was on the committee. Ms. Cooney continued by saying that the item would then be assigned to the Appropriations Committee. At that stage, the Board would be able to take further action.

Board Member Hall expressed the assumption that efforts were being made to establish contact with Assembly Member Ward. He indicated that staff should at least attempt to reach out by phone if no other means were available. Ms. Cooney shared that Chair Whitburn and staff had met with Assembly Member Ward and had discussed several potential ideas. During the meeting, they raised questions such as how certain aspects might be amended and asked for clarification on specific points. After that conversation, Assembly Member Ward put forward some amendments to the original bill.

Vice Chair Goble expressed that if the proposed amendments were not accepted, the agency might potentially decide to oppose the bill. Ms. Cooney stated staff could not oppose the bill on their own at that point but indicated they could do so if the Board provided that direction. Vice Chair Goble explained that based on the current sentiment of the group, the body might take a position to oppose the bill if the proposed amendments—along with a few additional suggestions—were not accepted. He suggested that this stance could be communicated to Assembly Member Ward and emphasized the need for continued dialogue as part of the legislative process. Ms. Cooney stated that if the Board provided direction, staff would act accordingly. However, in the absence of such direction at that moment, she would remain silent. Vice Chair Goble made a motion for the Board to direct the CEO to continue communicating with the Assembly Member, specifically to express the concerns that had been raised during the meeting.

Board Member Dillard added a brief comment in response to Vice Chair Goble's comment about the Levine Act, she mentioned that the limit had changed to \$500. She clarified that while it wasn't a significant detail, she wanted to share the update for awareness.

Board Member Foster sought clarification on the motion, asking for a better understanding of what exactly the CEO was being directed to convey. He specifically wanted to know if the concern being communicated referred solely to the issue of monitoring and documenting how members were using transit to meet the requirement. Board Member Foster expressed uncertainty about the details and asked for further explanation.

Vice Chair Goble explained that he wanted the motion to be broad enough to give the CEO flexibility in her communications. He noted that the concerns raised by staff were valid, particularly regarding the language used in the bill. Vice Chair Goble emphasized the importance of using the word "encourage" instead of "require," warning that otherwise, everyone could be obligated to comply with the provisions. He also asked that the CEO convey the preference for permitting, rather than mandating, the addition of non-voting members, highlighting that as another area of concern. Ms. Cooney proposed taking a "seek amendments" position rather than "support if amended," and identified the specific changes he would recommend pursuing. Vice Chair Goble expressed that he felt more comfortable with the "seek amendments" position rather than "support if amended." He stated he was willing to modify his motion to reflect "seek amendments," aligning it with the amendments listed in the staff recommendation.

Board Member Foster clarified that he believed there was already a motion on the floor based on the staff recommendation. He admitted he might have missed something and asked whether that motion had already been voted down or not. Ms. Cooney explained that the previous motion had been to communicate a position of "support if amended," whereas the current proposal was to "seek amendments." She noted that board members had expressed differing views - some opposed the bill entirely, while others supported it as written. Due to these conflicting opinions, Ms. Cooney stated she would have to remain silent unless the Board took further action.

Chair Whitburn clarified that the Board could choose to communicate support for the bill if it were amended; however, that specific motion had already failed. He explained that taking a neutral position - neither supporting nor opposing the bill - while seeking amendments would constitute a different motion, which could still be introduced if that was the Board's intent.

Vice Chair Goble noted that the conflict-of-interest applicability to a non-voting member was not addressed in the bullet points and remained unclear. He stated that this was not an amendment but a question that would require clarification.

Board Member Mendoza sought clarification, asking if by voting to seek the amendments, the Board agreed with the staff's recommendations, but was not in agreement with issuing a formal letter of support. She clarified that the intent was to present the amendments as recommendations from the Board, rather than from staff.

Chair Whitburn explained that if the motion passed, MTS as an agency would communicate a neutral position - neither supporting nor opposing the bill. However, the agency would encourage the Assembly Member to make the proposed bullet points optional for transit agencies rather than mandatory.

Vice Chair Goble clarified that the motion still allowed the Board to take a formal position to support or oppose the bill at a future date, depending on the outcome of the amendments.

Board Member Moreno proposed that the Board could take a position to oppose the bill in its current form, with the option to support it, should the bill be amended in the future.

Chair Whitburn confirmed that this was an option that the Board could take. Ms. Cooney acknowledged that Assembly Member Ward had been very helpful with their legislative requests and was open to discussions about various bills. She explained that the Board's intent, as a courtesy to the author's office, was to express "support if amended" rather than immediately opposing the bill.

Board Member Moreno expressed that she would have appreciated the courtesy of being consulted prior to the introduction of a bill that could impact the Board. She emphasized the importance of considering the Board's input, including that of the Chair. While she was not currently inclined to make a motion, she acknowledged that it remained a potential course of action.

Action Taken: to Authorize the CEO to Communicate a Neutral Position on AB 1070 and Discuss Concerns with Bill's Author

Vice Chair Goble moved to direct the CEO to continue communicating with the Assembly Member, specifically to express the concerns that had been raised during the meeting. Board Member Hall seconded the motion, and the vote was 10 in favor (Board Member: Downey, Fernandez, Mendoza, Leyba-Gonzalez, Dillard, Hall, Whitburn, Goble, Vaus and Moreno) with 3 opposed (Board Member: Foster, McCann and Elo-Rivera), Board Member Bush and Board Member Montgomery Steppe absent.

24. 2024 Customer Satisfaction Findings (Stacie Bishop and Chris Tatham with ETC Institute)

Stacie Bishop, MTS Manager of Marketing and Communication, and Chris Tatham with ETC Institute presented on the 2024 Customer Satisfaction Findings. They presented on: Methodology, key highlights, customer characteristics, transit dependency, trip alternatives, customer opinions, overall satisfaction and community value, net promoter score (NPS), satisfaction data, on time performance, service disruption information, cleanliness, safety, transportation convenience, transportation efficiency, fare price, customer importance factor, key highlights and next steps.

Public Comment

Alex Sanchez – Representing Mid-City CAN made a verbal statement to the Board during the meeting. Sanchez expressed dissatisfaction with the Youth Opportunity Program (YOP) recertification process.

Board Comment

Board Member Downey referenced slide 22, that showed customer feedback about feeling unsafe while waiting at trolley or bus stops, specifically asking about security concerns. She asked if it were possible to identify specific stops or stations that were more concerning, so the Board and staff could focus on security improvements on those areas. She inquired whether this could be done with the available data. Ms. Bishop confirmed that all the necessary data was available and that staff could run the analysis.

Board Member Mendoza expressed her appreciation for the weekly safety and security reports, noting their usefulness in monitoring conditions at stations within her community. She shared her personal experience as an older passenger who had previously felt unsafe taking the trolley at night but had recently begun using it to attend evening cultural events. While she felt safe during the outbound trips, she remained concerned about safety when returning late at night. Board Member Mendoza emphasized the importance of ensuring that stations are well lit, particularly during evening hours, to enhance safety and encourage greater ridership.

Board Member Moreno was impressed by how well the agency's performance compared to others, noting that the data was outstanding. Ms. Cooney explained that improving station lighting was currently a major focus for the agency. She noted that several stations were undergoing lighting retrofits and credited the Rail team for meeting weekly to address lighting needs, including replacements and repairs. She shared that it was staff who had first identified lighting as a significant issue several years ago, particularly at stations along the Orange Line. As a result, the agency made substantial investments to enhance lighting. She concluded by expressing satisfaction that the data reflected the positive impact of these efforts.

Chair Whitburn noted that, as highlighted in the presentation, the agency continued to focus on delivering reliable service for those who depend on MTS. He found it encouraging that more individuals were choosing to ride the bus and trolley and emphasized the Board's continued efforts to enhance service quality. Chair Whitburn concluded by reaffirming the Board's commitment to addressing areas of opportunity, particularly ensuring that riders feel safe both during their journeys and when arriving at their destinations.

Action Taken

No action taken. Informational item only.

PUBLIC HEARINGS

25. AB (Assembly Bill) 2561 (McKinnor): Status of Vacancies, Recruitment and Retention (Thuy Nguyen)

Thuy Nguyen, MTS Manager of Talent Acquisition, presented on AB 2561 (McKinnor): Status of Vacancies, Recruitment and Retention. She outlined: the overview of AB2561, current vacancy rates by bargaining unit, most challenging position to fill, bus operator storage contributing factors, bus operator recruitment and retention efforts, LRV & MOW assistant lineman shortage contributing factors, recruitment and retention efforts, construction safety flag person challenges and solutions and overall recruitment strategy.

Public Comment

There were no Public Comments.

Board Comment

Board Member Leyba-Gonzalez expressed appreciation for the presentation and highlighted the importance of engaging and motivating younger generations to explore a variety of career paths. He shared his efforts in organizing an annual job fair at Mar Vista High School, scheduled for May 1st, which aims to expose students to opportunities beyond traditional college routes. He emphasized the value of careers in the trades, noting their potential for strong earnings, benefits, and long-term stability through apprenticeship programs. He invited MTS to participate by hosting an informational table and offered to provide further details.

Vice Chair Goble thanked the Chair and shared a suggestion. He proposed that the recipients of the Youth Opportunity Pass, who are regular users of the system and have an affinity for it, could be ideal candidates for messages about job opportunities within the system.

Board Member Downey shared that she wished she had seen the presentation earlier, as the City of Coronado had recently hosted a job fair. She noted similar challenges in filling entry-level positions, particularly in the hotel industry, and explained that they had expanded the fair to include all local businesses and Navy personnel. Board Member Downey expressed her intention to contact MTS next year to invite them to participate, as they were working with local schools to get students involved. While Coronado High School students had not yet attended due to scheduling conflicts, she hoped to include them in the future. She concluded by highlighting the success of the fair and the high rate of job placements, looking forward to partnering with MTS next year.

Action Taken

No action taken. Informational item only.

OTHER ITEMS:

26. Chair, Board Member and Chief Executive Officer's (CEO's) Communications

Chair Whitburn adjourned the meeting in honor of the memory of Harry Mathis, a regional leader and former Chair of MTS. Mr. Mathis was a dedicated public servant, civic leader, and Navy veteran whose decades-long leadership in San Diego's transit system helped elevate MTS into one of the top agencies in the nation, marked by record ridership, national recognition, and major expansions like the Mid-Coast Trolley extension. His passion for public transit, rooted in childhood experiences, made him a visionary who left a lasting impact on the community, always striving to make transit inclusive, accessible, and reflective of the needs of all San Diegans.

27. Remainder of Public Comments Not on The Agenda

There were no additional public comments.

CLOSED SESSION:

The Board convened to Closed Session at 10:59 a.m.

28. Public Comment for Closed Session

29. Closed Session – Conference with Legal Counsel – Anticipated Litigation

Pursuant to California Government Code Section 54956.9(d)(2) and (4) (1 Potential Cases - Shimmick Construction Company, Inc.– El Cajon Third Track Project)

Closed Session Reconvening

The Board reconvened to Open Session at 11:20 a.m.

Karen Landers, General Counsel, reported the following oral report of final actions taken in Closed Session. The Board received a report from legal counsel and gave instructions.

ADJOURNMENT

30. Next Meeting Date

The next regularly scheduled Board meeting is May 15, 2025 at 9 a.m.

31. Adjournment

The meeting was adjourned at 11:20 a.m.

Chairperson
San Diego Metropolitan Transit System

Filed by:

Approved as to form:

Clerk of the Board
San Diego Metropolitan Transit System

General Counsel
San Diego Metropolitan Transit
System

Attachment: A. Roll Call Sheet

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS
ROLL CALL

MEETING OF (DATE): April 17, 2025 CALL TO ORDER (TIME): 9:05 a.m.
 RECESS: _____ RECONVENE: _____
 CLOSED SESSION: 10:59 a.m. RECONVENE: 11:20 a.m.
 PUBLIC HEARING: 10:38 a.m. RECONVENE: 10:55 a.m.
 ORDINANCES ADOPTED: _____ ADJOURN: 11:20 a.m.

JURISDICTION	BOARD MEMBER		ALTERNATE		PRESENT (TIME ARRIVED)	ABSENT (TIME LEFT)
City of Chula Vista	Fernandez	<input checked="" type="checkbox"/>	Preciado	<input type="checkbox"/>	9:05 a.m.	11:20 a.m.
City of Chula Vista	McCann	<input checked="" type="checkbox"/>	Preciado	<input type="checkbox"/>	9:05 a.m.	11:20 a.m.
City of Coronado	Downey	<input checked="" type="checkbox"/>	Fleming	<input type="checkbox"/>	9:07 a.m.	11:20 a.m.
County of San Diego	Montgomery Steppe	<input type="checkbox"/>	VACANT	<input type="checkbox"/>	ABSENT	ABSENT
City of El Cajon	Goble (Vice-Chair)	<input checked="" type="checkbox"/>	Ortiz	<input type="checkbox"/>	9:05 a.m.	11:20 a.m.
City of Imperial Beach	Leyba-Gonzalez	<input checked="" type="checkbox"/>	Aguirre	<input type="checkbox"/>	9:05 a.m.	11:20 a.m.
City of La Mesa	Dillard	<input checked="" type="checkbox"/>	Arapostathis	<input type="checkbox"/>	9:18 a.m.	11:20 a.m.
City of Lemon Grove	Mendoza	<input checked="" type="checkbox"/>	Faiai	<input type="checkbox"/>	9:05 a.m.	11:20 a.m.
City of National City	Bush	<input type="checkbox"/>	Rodriguez	<input type="checkbox"/>	ABSENT	ABSENT
City of Poway	Vaus	<input checked="" type="checkbox"/>	De Hoff	<input type="checkbox"/>	9:05 a.m.	11:20 a.m.
City of San Diego	Moreno	<input checked="" type="checkbox"/>	Campbell	<input type="checkbox"/>	9:05 a.m.	11:20 a.m.
City of San Diego	Elo-Rivera	<input checked="" type="checkbox"/>	LaCava	<input type="checkbox"/>	9:09 a.m.	11:20 a.m.
City of San Diego	Gloria	<input type="checkbox"/>	Foster	<input checked="" type="checkbox"/>	9:05 a.m.	11:20 a.m.
City of San Diego	Whitburn (Chair)	<input checked="" type="checkbox"/>	Lee	<input type="checkbox"/>	9:05 a.m.	11:20 a.m.
City of Santee	Hall	<input checked="" type="checkbox"/>	Koval Minto	<input type="checkbox"/> <input type="checkbox"/>	9:05 a.m.	11:20 a.m.

SIGNED BY THE CLERK OF THE BOARD: /S/ Dalia Gonzalez



**Metropolitan
Transit
System**

Agenda Item No. 4

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Chief Executive Officer's (CEO) Report

INFORMATIONAL

In accordance with Board Policy No. 52, "Procurement of Goods and Services", attached are listings of contracts, purchase orders, and work orders that have been approved within the CEO's authority (up to and including \$150,000) for the period April 10, 2025 – May 7, 2025.

Also attached is a report of a non-competitive contract award under "immediate remedial measures" exception.

CEO TRAVEL REPORT (since last Board meeting)

April 28 – 30	CTA Federal Lobby Day	Washington, DC
May 7-8	CTA Executive Committee & Legislative Conference	Sacramento, CA

BOARD MEMBER TRAVEL REPORT (since last Board meeting)

N/A



Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4400003326	4/10/2025	W.W. Grainger Inc		0 G270-ELECTRICAL/LIGHTING	\$138.33	\$ -	\$ -
4400003327	4/10/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$171.50	\$ -	\$ -
4400003328	4/10/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$40.82	\$ -	\$ -
4400003329	4/11/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$105.02	\$ -	\$ -
4400003330	4/14/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$67.45	\$ -	\$ -
4400003331	4/16/2025	W.W. Grainger Inc		0 G190-SAFETY/MED SUPPLIES	\$9.18	\$ -	\$ -
4400003332	4/17/2025	W.W. Grainger Inc		0 G200-OFFICE SUPPLIES	\$109.58	\$ -	\$ -
4400003333	4/22/2025	Mcmaster-Carr Supply Co		0 G140-SHOP SUPPLIES	\$224.04	\$ -	\$ -
4400003334	4/22/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$143.06	\$ -	\$ -
4400003335	4/23/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$37.41	\$ -	\$ -
4400003336	4/23/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$109.55	\$ -	\$ -
4400003337	4/24/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$683.34	\$ -	\$ -
4400003338	4/24/2025	W.W. Grainger Inc		0 G190-SAFETY/MED SUPPLIES	\$2,144.87	\$ -	\$ -
4400003339	4/25/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$540.39	\$ -	\$ -
4400003340	4/25/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$405.32	\$ -	\$ -
4400003341	4/28/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$38.14	\$ -	\$ -
4400003342	4/29/2025	W.W. Grainger Inc		0 G130-SHOP TOOLS	\$58.30	\$ -	\$ -
4400003343	4/30/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$275.19	\$ -	\$ -
4400003344	4/30/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$188.22	\$ -	\$ -
4400003345	5/1/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$219.03	\$ -	\$ -
4400003346	5/1/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$209.54	\$ -	\$ -
4400003347	5/1/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$626.82	\$ -	\$ -
4400003348	5/1/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$52.78	\$ -	\$ -
4400003349	5/1/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$430.28	\$ -	\$ -
4400003350	5/2/2025	Mcmaster-Carr Supply Co		0 G130-SHOP TOOLS	\$741.59	\$ -	\$ -
4400003351	5/2/2025	W.W. Grainger Inc		0 R230-RAIL/LRV MECHANICAL	\$123.19	\$ -	\$ -
4400003352	5/2/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$317.10	\$ -	\$ -
4400003353	5/5/2025	W.W. Grainger Inc		0 G180-JANITORIAL SUPPLIES	\$67.23	\$ -	\$ -
4400003354	5/5/2025	W.W. Grainger Inc		0 G190-SAFETY/MED SUPPLIES	\$267.43	\$ -	\$ -
4500067597	4/10/2025	Signal Hill Auto Enterprises, Inc.		0 G180-JANITORIAL SUPPLIES	\$904.78	\$ -	\$ -
4500067598	4/10/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$439.41	\$ -	\$ -
4500067599	4/10/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$464.52	\$ -	\$ -
4500067600	4/10/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$1,473.50	\$ -	\$ -
4500067601	4/10/2025	Transit Holdings Inc		0 B130-BUS BODY	\$173.78	\$ -	\$ -
4500067602	4/10/2025	TK Services Inc		0 B250-BUS REPAIR PARTS	\$2,527.44	\$ -	\$ -
4500067603	4/10/2025	Gillig LLC		0 B250-BUS REPAIR PARTS	\$3,224.08	\$ -	\$ -
4500067604	4/10/2025	Transit Holdings Inc		0 B130-BUS BODY	\$1,325.48	\$ -	\$ -
4500067605	4/10/2025	Prochem Specialty Products Inc	Small Business	G180-JANITORIAL SUPPLIES	\$2,044.00	\$ -	\$ -
4500067606	4/10/2025	Daniels Tire Service, Inc		0 A110-AUTO/TRUCK TIRES	\$2,387.95	\$ -	\$ -
4500067607	4/10/2025	San Diego Hydraulics, Inc.		0 P210-NON-REV VEH REPAIRS	\$822.24	\$ -	\$ -
4500067608	4/10/2025	W.W. Grainger Inc		0 P280-GENERAL SVC AGRMNTS	\$283.98	\$ -	\$ -
4500067609	4/10/2025	Home Depot USA Inc		0 G130-SHOP TOOLS	\$64.55	\$ -	\$ -
4500067610	4/10/2025	Gillig LLC		0 B250-BUS REPAIR PARTS	\$74.93	\$ -	\$ -
4500067611	4/10/2025	Network Industries, Inc.		0 F200-TANK EQUIPMENT	\$41.49	\$ -	\$ -
4500067612	4/10/2025	Gillig LLC		0 B250-BUS REPAIR PARTS	\$74.93	\$ -	\$ -
4500067613	4/10/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$3,749.70	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500067614	4/10/2025	AEP California, LLC		0 G120-SECURITY	\$420.00	\$ -	\$ -
4500067615	4/11/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$1,495.14	\$ -	\$ -
4500067616	4/11/2025	Transit Holdings Inc		0 B160-BUS ELECTRICAL	\$2,751.21	\$ -	\$ -
4500067617	4/11/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$2,639.73	\$ -	\$ -
4500067618	4/11/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$446.30	\$ -	\$ -
4500067619	4/11/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$390.80	\$ -	\$ -
4500067620	4/11/2025	Siemens Mobility, Inc.		0 R190-RAIL/LRV PANTOGRAPH	\$380.14	\$ -	\$ -
4500067621	4/11/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$1,131.12	\$ -	\$ -
4500067622	4/11/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$165.94	\$ -	\$ -
4500067623	4/11/2025	Cummins Inc		0 B250-BUS REPAIR PARTS	\$233.13	\$ -	\$ -
4500067624	4/11/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$6,343.38	\$ -	\$ -
4500067625	4/11/2025	Sportworks Global LLC		0 B130-BUS BODY	\$1,998.20	\$ -	\$ -
4500067626	4/11/2025	Prudential Overall Supply		0 G140-SHOP SUPPLIES	\$853.51	\$ -	\$ -
4500067627	4/11/2025	Gillig LLC		0 B250-BUS REPAIR PARTS	\$1,025.08	\$ -	\$ -
4500067628	4/11/2025	AirSupply Tools, Inc		0 G140-SHOP SUPPLIES	\$215.03	\$ -	\$ -
4500067629	4/11/2025	American Battery Corporation	Small Business	M110-SUB STATION	\$8,424.38	\$ -	\$ -
4500067630	4/11/2025	APD Incorporated		0 G140-SHOP SUPPLIES	\$1,185.25	\$ -	\$ -
4500067631	4/11/2025	Clarran Inc.	DBE	G150-FASTENERS	\$112.78	\$ -	\$ -
4500067633	4/11/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$1,900.19	\$ -	\$ -
4500067634	4/11/2025	Fastenal Company		0 G140-SHOP SUPPLIES	\$1,587.16	\$ -	\$ -
4500067635	4/11/2025	Genfare, LLC		0 B190-BUS FARE EQUIP	\$2,344.92	\$ -	\$ -
4500067636	4/11/2025	Hanning & Kahl LP		0 M140-WAYSIDE SIGNALS	\$14,255.33	\$ -	\$ -
4500067637	4/11/2025	Home Depot USA Inc		0 G140-SHOP SUPPLIES	\$122.94	\$ -	\$ -
4500067638	4/11/2025	IFE North America, LLC		0 R140-RAIL/LRV DOORS/RAMP	\$117,620.36	\$ -	\$ -
4500067639	4/11/2025	Jamison Professional Services, LLC	DBE	G170-LUBRICANTS	\$1,744.78	\$ -	\$ -
4500067640	4/11/2025	Motion Industries, Inc.		0 B250-BUS REPAIR PARTS	\$102.27	\$ -	\$ -
4500067641	4/11/2025	Knox Kershaw, Inc.		0 G140-SHOP SUPPLIES	\$1,359.86	\$ -	\$ -
4500067642	4/11/2025	Kurt Morgan		0 G200-OFFICE SUPPLIES	\$2,890.16	\$ -	\$ -
4500067643	4/11/2025	MAC-IMPULSE, LLC		0 M120-OVRHEAD CATENARY SYS	\$5,533.14	\$ -	\$ -
4500067644	4/11/2025	Mcmaster-Carr Supply Co		0 B130-BUS BODY	\$748.37	\$ -	\$ -
4500067645	4/11/2025	Mohawk Mfg & Supply Co		0 B160-BUS ELECTRICAL	\$186.56	\$ -	\$ -
4500067646	4/11/2025	Mouser Electronics Inc		0 B250-BUS REPAIR PARTS	\$94.82	\$ -	\$ -
4500067647	4/11/2025	Muncie Reclamation and Supply Co		0 B250-BUS REPAIR PARTS	\$1,004.92	\$ -	\$ -
4500067648	4/11/2025	Transit Innovations LLC		0 M120-OVRHEAD CATENARY SYS	\$3,986.75	\$ -	\$ -
4500067649	4/11/2025	Transit Holdings Inc		0 B160-BUS ELECTRICAL	\$123.84	\$ -	\$ -
4500067650	4/11/2025	Professional Contractors Supplies		0 G130-SHOP TOOLS	\$1,107.93	\$ -	\$ -
4500067651	4/14/2025	Transit Holdings Inc		0 B130-BUS BODY	\$407.81	\$ -	\$ -
4500067652	4/14/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$405.68	\$ -	\$ -
4500067653	4/14/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$4,432.56	\$ -	\$ -
4500067654	4/14/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$251.75	\$ -	\$ -
4500067655	4/14/2025	Winzer Franchise Company		0 G270-ELECTRICAL/LIGHTING	\$733.27	\$ -	\$ -
4500067656	4/14/2025	W.W. Grainger Inc		0 M180-STATION ELECTRICAL	\$1,154.61	\$ -	\$ -
4500067657	4/14/2025	Elkhart Brass Manufacturing Co.		0 R150-RAIL/LRV COMM EQUIP	\$50,547.68	\$ -	\$ -
4500067658	4/14/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$4,494.79	\$ -	\$ -
4500067659	4/14/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$784.95	\$ -	\$ -
4500067660	4/14/2025	Transit Holdings Inc		0 B130-BUS BODY	\$1,340.98	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500067661	4/14/2025	Willy's Electronic Supply Co Inc		0 M110-SUB STATION	\$370.56	\$ -	\$ -
4500067662	4/14/2025	Virginia Electronic & Lighting LLC		0 M140-WAYSIDE SIGNALS	\$2,020.32	\$ -	\$ -
4500067663	4/14/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$7,033.92	\$ -	\$ -
4500067664	4/14/2025	Waxie's Enterprises, LLC		0 G140-SHOP SUPPLIES	\$261.84	\$ -	\$ -
4500067665	4/14/2025	Supreme Oil Co.		0 A120-AUTO/TRUCK GASOLINE	\$11,813.70	\$ -	\$ -
4500067666	4/14/2025	SC Commercial, LLC		0 A120-AUTO/TRUCK GASOLINE	\$3,002.36	\$ -	\$ -
4500067667	4/14/2025	D2G Group LLC		0 G200-OFFICE SUPPLIES	\$1,314.56	\$ -	\$ -
4500067668	4/14/2025	Brand Makers LLC		0 G200-OFFICE SUPPLIES	\$299.55	\$ -	\$ -
4500067669	4/14/2025	Brand Makers LLC		0 G260-MEDIA	\$4,633.25	\$ -	\$ -
4500067670	4/14/2025	TK Services Inc		0 B250-BUS REPAIR PARTS	\$9,599.02	\$ -	\$ -
4500067671	4/14/2025	Siemens Mobility, Inc.		0 R160-RAIL/LRV ELECTRICAL	\$770.42	\$ -	\$ -
4500067672	4/14/2025	Siemens Mobility, Inc.		0 M140-WAYSIDE SIGNALS	\$13,522.63	\$ -	\$ -
4500067673	4/14/2025	Clarran Inc.	DBE	B200-BUS PWR TRAIN EQUIP	\$268.91	\$ -	\$ -
4500067674	4/15/2025	Transit Holdings Inc		0 B160-BUS ELECTRICAL	\$1,048.07	\$ -	\$ -
4500067675	4/15/2025	Signal Hill Auto Enterprises, Inc.		0 G180-JANITORIAL SUPPLIES	\$1,202.49	\$ -	\$ -
4500067676	4/15/2025	Transit Holdings Inc		0 B130-BUS BODY	\$369.46	\$ -	\$ -
4500067677	4/15/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$2,839.14	\$ -	\$ -
4500067678	4/15/2025	Transit Holdings Inc		0 B110-BUS HVAC SYSTEMS	\$6,080.59	\$ -	\$ -
4500067679	4/15/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$877.86	\$ -	\$ -
4500067680	4/15/2025	Teknoware Inc.		0 R180-RAIL/LRV LIGHTING	\$2,720.47	\$ -	\$ -
4500067681	4/15/2025	Annex Warehouse Company, Inc		0 F120-BUS/LRV PAINT BOOTHS	\$4,248.91	\$ -	\$ -
4500067682	4/15/2025	Clarran Inc.	DBE	G150-FASTENERS	\$310.45	\$ -	\$ -
4500067683	4/15/2025	Cummins Inc		0 B250-BUS REPAIR PARTS	\$147.28	\$ -	\$ -
4500067684	4/15/2025	Fastenal Company		0 G180-JANITORIAL SUPPLIES	\$964.09	\$ -	\$ -
4500067685	4/15/2025	Freeby Signs		0 B130-BUS BODY	\$23.53	\$ -	\$ -
4500067686	4/15/2025	Genfare, LLC		0 B250-BUS REPAIR PARTS	\$1,011.70	\$ -	\$ -
4500067687	4/15/2025	Gillig LLC		0 B120-BUS MECHANICAL PARTS	\$3,113.06	\$ -	\$ -
4500067688	4/15/2025	Graybar Electric Co Inc		0 M180-STATION ELECTRICAL	\$1,266.07	\$ -	\$ -
4500067689	4/15/2025	Hanning & Kahl LP		0 M140-WAYSIDE SIGNALS	\$14,255.33	\$ -	\$ -
4500067690	4/15/2025	Harbor Diesel & Equipment, Inc		0 B120-BUS MECHANICAL PARTS	\$390.74	\$ -	\$ -
4500067692	4/15/2025	National Carwash Solutions Inc		0 G160-PAINTS & CHEMICALS	\$1,614.37	\$ -	\$ -
4500067693	4/15/2025	Neopart Transit LLC		0 B250-BUS REPAIR PARTS	\$78.38	\$ -	\$ -
4500067694	4/15/2025	OneSource Distributors, LLC		0 M140-WAYSIDE SIGNALS	\$150.08	\$ -	\$ -
4500067695	4/15/2025	Network Industries, Inc.		0 F200-TANK EQUIPMENT	\$1,268.20	\$ -	\$ -
4500067696	4/15/2025	Network Industries, Inc.		0 P130-EQUIP MAINT REPR SVC	\$2,546.12	\$ -	\$ -
4500067697	4/15/2025	Professional Contractors Supplies		0 G180-JANITORIAL SUPPLIES	\$108.89	\$ -	\$ -
4500067698	4/15/2025	SC Commercial, LLC		0 A120-AUTO/TRUCK GASOLINE	\$2,502.47	\$ -	\$ -
4500067699	4/15/2025	Prudential Overall Supply		0 G140-SHOP SUPPLIES	\$139.65	\$ -	\$ -
4500067700	4/15/2025	R.S. Hughes Co Inc		0 G140-SHOP SUPPLIES	\$2,816.33	\$ -	\$ -
4500067701	4/15/2025	RJ International LLC	DBE	G190-SAFETY/MED SUPPLIES	\$82.43	\$ -	\$ -
4500067702	4/15/2025	Schunk Carbon Technology LLC		0 R190-RAIL/LRV PANTOGRAPH	\$2,556.58	\$ -	\$ -
4500067703	4/15/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$1,293.00	\$ -	\$ -
4500067704	4/15/2025	Staples Contract & Commercial LLC		0 G200-OFFICE SUPPLIES	\$123.90	\$ -	\$ -
4500067705	4/15/2025	Knox Kershaw, Inc.		0 P130-EQUIP MAINT REPR SVC	\$403.99	\$ -	\$ -
4500067706	4/15/2025	Staples Contract & Commercial LLC		0 G200-OFFICE SUPPLIES	\$932.62	\$ -	\$ -
4500067707	4/15/2025	Transit Holdings Inc		0 B120-BUS MECHANICAL PARTS	\$1,794.76	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500067708	4/15/2025	Vern Rose Inc		0 G160-PAINTS & CHEMICALS	\$287.37	\$ -	\$ -
4500067709	4/15/2025	W.W. Grainger Inc		0 G170-LUBRICANTS	\$211.43	\$ -	\$ -
4500067710	4/15/2025	VGP Holdings LLC		0 B120-BUS MECHANICAL PARTS	\$7,711.89	\$ -	\$ -
4500067711	4/16/2025	Transit Holdings Inc		0 B120-BUS MECHANICAL PARTS	\$538.15	\$ -	\$ -
4500067712	4/16/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$2,569.19	\$ -	\$ -
4500067713	4/16/2025	Transit Holdings Inc		0 B160-BUS ELECTRICAL	\$1,283.62	\$ -	\$ -
4500067714	4/16/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$2,273.54	\$ -	\$ -
4500067715	4/16/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$146.22	\$ -	\$ -
4500067716	4/16/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$17.20	\$ -	\$ -
4500067717	4/16/2025	Siemens Mobility, Inc.		0 R180-RAIL/LRV LIGHTING	\$1,325.33	\$ -	\$ -
4500067718	4/16/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$34,810.27	\$ -	\$ -
4500067719	4/16/2025	Maxwell Industries R&D, Inc.		0 R130-RAIL/LRV COUPLER	\$23,791.20	\$ -	\$ -
4500067720	4/16/2025	RJ International LLC	DBE	G190-SAFETY/MED SUPPLIES	\$2,317.72	\$ -	\$ -
4500067721	4/16/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$1,673.36	\$ -	\$ -
4500067722	4/16/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$973.14	\$ -	\$ -
4500067723	4/16/2025	Rockwest Technology Group Inc		0 G200-OFFICE SUPPLIES	\$5,015.77	\$ -	\$ -
4500067724	4/16/2025	Madden Construction Inc		0 P280-GENERAL SVC AGRMNTS	\$653.00	\$ -	\$ -
4500067726	4/16/2025	W.W. Grainger Inc		0 G140-SHOP SUPPLIES	\$176.88	\$ -	\$ -
4500067727	4/16/2025	Ace Uniforms LLC	Small Business	C120-SPECIALTY CONTRACTOR	\$103.43	\$ -	\$ -
4500067728	4/16/2025	Trinity Sling Authority, Inc.		0 F180-BUILDING MATERIALS	\$512.48	\$ -	\$ -
4500067729	4/16/2025	Transit Holdings Inc		0 B130-BUS BODY	\$827.18	\$ -	\$ -
4500067730	4/16/2025	Articulate Global LLC		0 P490-MANAGEMENT TRAINING	\$1,499.00	\$ -	\$ -
4500067731	4/16/2025	iPROMOTEu.com, Inc.		0 G250-NOVELTIES & AWARDS	\$3,267.50	\$ -	\$ -
4500067732	4/16/2025	Gillig LLC		0 R120-RAIL/LRV CAR BODY	\$19,222.15	\$ -	\$ -
4500067733	4/16/2025	Uline Inc		0 P280-GENERAL SVC AGRMNTS	\$2,342.95	\$ -	\$ -
4500067734	4/16/2025	Mohawk Mfg & Supply Co		0 B200-BUS PWR TRAIN EQUIP	\$648.46	\$ -	\$ -
4500067735	4/16/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$1,531.93	\$ -	\$ -
4500067736	4/16/2025	Clarran Inc.	DBE	G150-FASTENERS	\$149.70	\$ -	\$ -
4500067737	4/16/2025	Madden Construction Inc		0 P280-GENERAL SVC AGRMNTS	\$1,961.07	\$ -	\$ -
4500067738	4/16/2025	W.W. Grainger Inc		0 P280-GENERAL SVC AGRMNTS	\$391.91	\$ -	\$ -
4500067739	4/16/2025	Transit Holdings Inc		0 B160-BUS ELECTRICAL	\$3,633.33	\$ -	\$ -
4500067740	4/16/2025	Transit Holdings Inc		0 B130-BUS BODY	\$259.18	\$ -	\$ -
4500067741	4/16/2025	Shilpark Paint Corporation		0 G160-PAINTS & CHEMICALS	\$941.81	\$ -	\$ -
4500067742	4/16/2025	OneSource Distributors, LLC		0 M110-SUB STATION	\$352.86	\$ -	\$ -
4500067743	4/16/2025	Otay Mesa Sales, Inc		0 P160-EQUIPMENT RENTALS	\$1,159.52	\$ -	\$ -
4500067744	4/16/2025	ODP Business Solutions, LLC		0 G200-OFFICE SUPPLIES	\$111.75	\$ -	\$ -
4500067745	4/16/2025	J H Platinum		0 P330-UNIFORM RENT/CLEAN	\$137,175.00	\$ -	\$ -
4500067746	4/16/2025	Sacramento Computer Power, Inc.	Small Business	I110-INFORMATION TECH	\$4,777.10	\$ -	\$ -
4500067747	4/16/2025	Home Depot USA Inc		0 F180-BUILDING MATERIALS	\$1,034.40	\$ -	\$ -
4500067748	4/16/2025	USPS		0 P420-MAIL SERVICES	\$105,000.00	\$ -	\$ -
4500067749	4/16/2025	Home Depot USA Inc		0 G140-SHOP SUPPLIES	\$82.82	\$ -	\$ -
4500067750	4/16/2025	Robcar Corporation	Woman Owned Business	G160-PAINTS & CHEMICALS	\$998.87	\$ -	\$ -
4500067751	4/16/2025	Reid and Clark Screen Arts Co		0 G230-PRINTED MATERIALS	\$997.23	\$ -	\$ -
4500067752	4/17/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$68.10	\$ -	\$ -
4500067753	4/17/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$3,289.39	\$ -	\$ -
4500067754	4/17/2025	Transit Holdings Inc		0 B160-BUS ELECTRICAL	\$54.52	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500067755	4/17/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$979.88	\$ -	\$ -
4500067756	4/17/2025	Transit Holdings Inc		0 B160-BUS ELECTRICAL	\$152.40	\$ -	\$ -
4500067757	4/17/2025	Transit Holdings Inc		0 B130-BUS BODY	\$74.48	\$ -	\$ -
4500067758	4/17/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$10,201.07	\$ -	\$ -
4500067759	4/17/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$849.12	\$ -	\$ -
4500067760	4/17/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$12.42	\$ -	\$ -
4500067761	4/17/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$2,334.02	\$ -	\$ -
4500067762	4/17/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$1,055.26	\$ -	\$ -
4500067763	4/17/2025	Signal Hill Auto Enterprises, Inc.		0 G180-JANITORIAL SUPPLIES	\$4,633.25	\$ -	\$ -
4500067764	4/17/2025	Signal Hill Auto Enterprises, Inc.		0 G180-JANITORIAL SUPPLIES	\$693.66	\$ -	\$ -
4500067765	4/17/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$857.66	\$ -	\$ -
4500067766	4/17/2025	HDR Engineering Inc		0 P340-LEGAL	\$85,377.78	\$ -	\$ -
4500067767	4/17/2025	Veterans Engineering Services, Inc.	Disabled Veteran Business	T110-TRACK, RAIL	\$26,275.38	\$ -	\$ -
4500067768	4/17/2025	San Diego Friction Products, Inc.		0 B120-BUS MECHANICAL PARTS	\$2,122.80	\$ -	\$ -
4500067769	4/17/2025	The Gordian Group, Inc.		0 T110-TRACK, RAIL	\$462.45	\$ -	\$ -
4500067770	4/17/2025	San Diego Compressed Air Power LLC		0 F110-SHOP/BLDG MACHINERY	\$519.44	\$ -	\$ -
4500067771	4/17/2025	Home Depot USA Inc		0 F110-SHOP/BLDG MACHINERY	\$689.94	\$ -	\$ -
4500067772	4/17/2025	La Mesa Glass, Inc.	Small Business	P550-REAL ESTATE	\$998.00	\$ -	\$ -
4500067773	4/17/2025	Home Depot USA Inc		0 F180-BUILDING MATERIALS	\$144.21	\$ -	\$ -
4500067774	4/17/2025	San Diego Seal, Inc.	Small Business	R140-RAIL/LRV DOORS/RAMP	\$2,464.15	\$ -	\$ -
4500067775	4/17/2025	VGP Holdings LLC		0 B200-BUS PWR TRAIN EQUIP	\$2,471.25	\$ -	\$ -
4500067776	4/18/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$12,711.31	\$ -	\$ -
4500067777	4/18/2025	Cummins Inc		0 B120-BUS MECHANICAL PARTS	\$113.00	\$ -	\$ -
4500067778	4/18/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$4,801.13	\$ -	\$ -
4500067779	4/18/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$1,024.65	\$ -	\$ -
4500067780	4/18/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$4,147.72	\$ -	\$ -
4500067781	4/18/2025	Gillig LLC		0 B130-BUS BODY	\$1,781.24	\$ -	\$ -
4500067782	4/18/2025	Powerstride Battery Co. Inc.		0 F110-SHOP/BLDG MACHINERY	\$800.41	\$ -	\$ -
4500067783	4/18/2025	W.W. Grainger Inc		0 F110-SHOP/BLDG MACHINERY	\$672.35	\$ -	\$ -
4500067784	4/18/2025	Cart Mart Inc		0 F110-SHOP/BLDG MACHINERY	\$465.89	\$ -	\$ -
4500067785	4/18/2025	Gillig LLC		0 B130-BUS BODY	\$2,532.36	\$ -	\$ -
4500067786	4/18/2025	Flyers Energy LLC		0 G170-LUBRICANTS	\$9,213.22	\$ -	\$ -
4500067787	4/21/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$6,734.80	\$ -	\$ -
4500067788	4/21/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$1,023.67	\$ -	\$ -
4500067789	4/21/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$14.96	\$ -	\$ -
4500067790	4/21/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$2,939.06	\$ -	\$ -
4500067791	4/21/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$283.25	\$ -	\$ -
4500067792	4/21/2025	Transit Holdings Inc		0 B120-BUS MECHANICAL PARTS	\$4,429.15	\$ -	\$ -
4500067793	4/21/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$3,094.28	\$ -	\$ -
4500067794	4/21/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$3,843.37	\$ -	\$ -
4500067795	4/21/2025	Transit Holdings Inc		0 B120-BUS MECHANICAL PARTS	\$1,734.43	\$ -	\$ -
4500067796	4/21/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$730.48	\$ -	\$ -
4500067797	4/21/2025	San Diego Community		0 P280-GENERAL SVC AGRMNTS	\$75.00	\$ -	\$ -
4500067798	4/21/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$1,616.25	\$ -	\$ -
4500067799	4/21/2025	County of San Diego		0 P130-EQUIP MAINT REPR SVC	\$1,192.17	\$ -	\$ -
4500067800	4/21/2025	ZUZA LLC		0 G230-PRINTED MATERIALS	\$1,860.85	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500067801	4/21/2025	Steven R Timme		0 G230-PRINTED MATERIALS	\$2,282.76	\$ -	\$ -
4500067803	4/21/2025	Dimensional Silk Screen Inc		0 G230-PRINTED MATERIALS	\$1,120.11	\$ -	\$ -
4500067805	4/21/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$1,306.98	\$ -	\$ -
4500067806	4/21/2025	Dimensional Silk Screen Inc		0 G230-PRINTED MATERIALS	\$3,919.41	\$ -	\$ -
4500067807	4/21/2025	Neyenesch Printers Inc	Small Business	G230-PRINTED MATERIALS	\$2,912.36	\$ -	\$ -
4500067808	4/21/2025	Staples Contract & Commercial LLC		0 G200-OFFICE SUPPLIES	\$107.74	\$ -	\$ -
4500067809	4/21/2025	Supreme Oil Co.		0 A120-AUTO/TRUCK GASOLINE	\$12,104.98	\$ -	\$ -
4500067810	4/21/2025	Element Materials Technology		0 G190-SAFETY/MED SUPPLIES	\$4,715.00	\$ -	\$ -
4500067811	4/21/2025	SC Commercial, LLC		0 A120-AUTO/TRUCK GASOLINE	\$3,057.84	\$ -	\$ -
4500067812	4/21/2025	Freeby Signs		0 B250-BUS REPAIR PARTS	\$460.63	\$ -	\$ -
4500067813	4/21/2025	Home Depot USA Inc		0 F110-SHOP/BLDG MACHINERY	\$1,137.91	\$ -	\$ -
4500067814	4/21/2025	W.W. Grainger Inc		0 F110-SHOP/BLDG MACHINERY	\$819.34	\$ -	\$ -
4500067815	4/21/2025	Mcmaster-Carr Supply Co		0 P190-REV VEHICLE REPAIRS	\$373.13	\$ -	\$ -
4500067816	4/21/2025	B and H Photo and Electronics		0 G220-OFFICE EQUIPMENT	\$23.62	\$ -	\$ -
4500067817	4/21/2025	Cummins Inc		0 B250-BUS REPAIR PARTS	\$351.00	\$ -	\$ -
4500067818	4/21/2025	Tolar Manufacturing Company Inc		0 P280-GENERAL SVC AGRMNTS	\$1,903.54	\$ -	\$ -
4500067819	4/21/2025	OneSource Distributors, LLC		0 M180-STATION ELECTRICAL	\$1,506.81	\$ -	\$ -
4500067820	4/21/2025	NS Corporation		0 F110-SHOP/BLDG MACHINERY	\$1,140.00	\$ -	\$ -
4500067821	4/21/2025	Network Industries, Inc.		0 G160-PAINTS & CHEMICALS	\$381.95	\$ -	\$ -
4500067822	4/21/2025	Uline Inc		0 G140-SHOP SUPPLIES	\$771.92	\$ -	\$ -
4500067823	4/22/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$1,106.77	\$ -	\$ -
4500067824	4/22/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$305.15	\$ -	\$ -
4500067825	4/22/2025	Freeby Signs		0 B250-BUS REPAIR PARTS	\$420.25	\$ -	\$ -
4500067826	4/22/2025	Annex Warehouse Company, Inc		0 F120-BUS/LRV PAINT BOOTHS	\$3,348.75	\$ -	\$ -
4500067827	4/22/2025	Winzer Franchise Company		0 G150-FASTENERS	\$162.71	\$ -	\$ -
4500067828	4/22/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$2,894.96	\$ -	\$ -
4500067829	4/22/2025	Uline Inc		0 F110-SHOP/BLDG MACHINERY	\$183.18	\$ -	\$ -
4500067830	4/22/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$177.93	\$ -	\$ -
4500067831	4/22/2025	Johnson Health Tech Retail Inc.		0 F110-SHOP/BLDG MACHINERY	\$402.22	\$ -	\$ -
4500067832	4/22/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$1,296.71	\$ -	\$ -
4500067833	4/22/2025	Transit Holdings Inc		0 B130-BUS BODY	\$2,196.22	\$ -	\$ -
4500067834	4/22/2025	Reid and Clark Screen Arts Co		0 G140-SHOP SUPPLIES	\$3,645.19	\$ -	\$ -
4500067835	4/22/2025	Clarran Inc.	DBE	G150-FASTENERS	\$114.75	\$ -	\$ -
4500067836	4/22/2025	Transit Holdings Inc		0 B150-BUS COMM EQUIP.	\$3,210.03	\$ -	\$ -
4500067837	4/22/2025	Fastenal Company		0 G140-SHOP SUPPLIES	\$2,268.96	\$ -	\$ -
4500067838	4/22/2025	Tennant Sales & Serv Co		0 P130-EQUIP MAINT REPR SVC	\$955.72	\$ -	\$ -
4500067839	4/22/2025	Tennant Sales & Serv Co		0 P130-EQUIP MAINT REPR SVC	\$373.09	\$ -	\$ -
4500067840	4/22/2025	Phunware Inc		0 P280-GENERAL SVC AGRMNTS	\$24,867.00	\$ -	\$ -
4500067841	4/22/2025	Virginia Electronic & Lighting LLC		0 M140-WAYSIDE SIGNALS	\$2,020.32	\$ -	\$ -
4500067842	4/22/2025	Laird Plastics, Inc		0 F180-BUILDING MATERIALS	\$3,636.57	\$ -	\$ -
4500067843	4/22/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$280.19	\$ -	\$ -
4500067844	4/22/2025	Heliox Technology Inc.		0 P110-BLDG MAINTENANCE	\$47,120.34	\$ -	\$ -
4500067845	4/22/2025	Don Oleson Inc	Small Business	B120-BUS MECHANICAL PARTS	\$3,216.82	\$ -	\$ -
4500067846	4/22/2025	Keystone Automotive Industries		0 F120-BUS/LRV PAINT BOOTHS	\$1,435.23	\$ -	\$ -
4500067847	4/22/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$5,219.14	\$ -	\$ -
4500067848	4/22/2025	Genfare, LLC		0 G290-FARE REVENUE EQUIP	\$805.18	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500067849	4/22/2025	Staples Contract & Commercial LLC		0 G200-OFFICE SUPPLIES	\$3,162.66	\$ -	\$ -
4500067850	4/22/2025	Siemens Mobility, Inc.		0 M130-CROSSING MECHANISM	\$2,409.29	\$ -	\$ -
4500067851	4/23/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$2,199.36	\$ -	\$ -
4500067852	4/23/2025	Fastenal Company		0 G140-SHOP SUPPLIES	\$2,268.96	\$ -	\$ -
4500067853	4/23/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$372.60	\$ -	\$ -
4500067854	4/23/2025	Brault Inc	Small Business	P280-GENERAL SVC AGRMNTS	\$73,255.05	\$ -	\$ -
4500067855	4/23/2025	Charter Industrial Supply Inc	Small Business	B250-BUS REPAIR PARTS	\$223.05	\$ -	\$ -
4500067856	4/23/2025	AirSupply Tools, Inc		0 G130-SHOP TOOLS	\$49.69	\$ -	\$ -
4500067857	4/23/2025	Cummins Inc		0 B250-BUS REPAIR PARTS	\$1,088.13	\$ -	\$ -
4500067858	4/23/2025	Efficient Energy Company		0 P410-CONSULTING	\$4,725.00	\$ -	\$ -
4500067859	4/24/2025	Muncie Reclamation and Supply Co		0 B200-BUS PWR TRAIN EQUIP	\$19.44	\$ -	\$ -
4500067860	4/24/2025	Siemens Mobility, Inc.		0 R160-RAIL/LRV ELECTRICAL	\$5,922.62	\$ -	\$ -
4500067861	4/24/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$4,712.40	\$ -	\$ -
4500067862	4/24/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$280.19	\$ -	\$ -
4500067863	4/24/2025	Allied Refrigeration Inc		0 F110-SHOP/BLDG MACHINERY	\$95.35	\$ -	\$ -
4500067864	4/24/2025	Hi-Tec Enterprises		0 R220-RAIL/LRV TRUCKS	\$14,276.88	\$ -	\$ -
4500067865	4/24/2025	W.W. Grainger Inc		0 F110-SHOP/BLDG MACHINERY	\$4,258.22	\$ -	\$ -
4500067866	4/24/2025	Tolar Manufacturing Company Inc		0 P280-GENERAL SVC AGRMNTS	\$404.07	\$ -	\$ -
4500067867	4/24/2025	Tolar Manufacturing Company Inc		0 P280-GENERAL SVC AGRMNTS	\$1,478.36	\$ -	\$ -
4500067868	4/24/2025	NS Corporation		0 F110-SHOP/BLDG MACHINERY	\$3,384.66	\$ -	\$ -
4500067869	4/24/2025	VGP Holdings LLC		0 B120-BUS MECHANICAL PARTS	\$5,318.54	\$ -	\$ -
4500067870	4/24/2025	Steven R Timme		0 G230-PRINTED MATERIALS	\$262.44	\$ -	\$ -
4500067871	4/24/2025	Dimensional Silk Screen Inc		0 G230-PRINTED MATERIALS	\$236.72	\$ -	\$ -
4500067872	4/24/2025	Kurt Morgan		0 G200-OFFICE SUPPLIES	\$1,592.61	\$ -	\$ -
4500067873	4/24/2025	Delphin Computer Supply	Small Business	G200-OFFICE SUPPLIES	\$613.85	\$ -	\$ -
4500067874	4/24/2025	Tribologik Corporation		0 G140-SHOP SUPPLIES	\$3,332.81	\$ -	\$ -
4500067875	4/24/2025	Muncie Reclamation and Supply Co		0 B160-BUS ELECTRICAL	\$285.26	\$ -	\$ -
4500067876	4/24/2025	J H Platinum		0 P330-UNIFORM RENT/CLEAN	\$3,362.00	\$ -	\$ -
4500067877	4/24/2025	Harbor Diesel & Equipment, Inc		0 B120-BUS MECHANICAL PARTS	\$393.51	\$ -	\$ -
4500067878	4/24/2025	Mohawk Mfg & Supply Co		0 B200-BUS PWR TRAIN EQUIP	\$393.03	\$ -	\$ -
4500067879	4/25/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$3,622.93	\$ -	\$ -
4500067880	4/25/2025	Mohawk Mfg & Supply Co		0 B140-BUS CHASSIS	\$19.18	\$ -	\$ -
4500067881	4/25/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$45.90	\$ -	\$ -
4500067882	4/25/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$2,860.43	\$ -	\$ -
4500067883	4/25/2025	Transit Holdings Inc		0 B120-BUS MECHANICAL PARTS	\$1,294.23	\$ -	\$ -
4500067884	4/25/2025	Transit Holdings Inc		0 B130-BUS BODY	\$179.68	\$ -	\$ -
4500067885	4/25/2025	Init Innovations in Transportation		0 B190-BUS FARE EQUIP	\$1,047.35	\$ -	\$ -
4500067886	4/25/2025	Airgas Inc		0 G140-SHOP SUPPLIES	\$543.79	\$ -	\$ -
4500067887	4/25/2025	Annex Warehouse Company, Inc		0 F120-BUS/LRV PAINT BOOTHS	\$4,662.56	\$ -	\$ -
4500067888	4/25/2025	Aymar Industries, LLC.		0 R140-RAIL/LRV DOORS/RAMP	\$3,742.50	\$ -	\$ -
4500067889	4/25/2025	Bees Lighting		0 M180-STATION ELECTRICAL	\$4,362.52	\$ -	\$ -
4500067890	4/25/2025	CDW LLC		0 B150-BUS COMM EQUIP.	\$1,348.17	\$ -	\$ -
4500067891	4/25/2025	Charter Industrial Supply Inc	Small Business	B250-BUS REPAIR PARTS	\$148.70	\$ -	\$ -
4500067892	4/25/2025	Clarran Inc.	DBE	G150-FASTENERS	\$197.92	\$ -	\$ -
4500067893	4/25/2025	Compressed Air Systems		0 F110-SHOP/BLDG MACHINERY	\$969.75	\$ -	\$ -
4500067894	4/25/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$2,102.71	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500067895	4/25/2025	Fastenal Company		0 G140-SHOP SUPPLIES	\$397.02	\$ -	\$ -
4500067896	4/25/2025	Freeby Signs		0 B130-BUS BODY	\$291.47	\$ -	\$ -
4500067897	4/25/2025	Genuine Parts Company Inc		0 B120-BUS MECHANICAL PARTS	\$193.86	\$ -	\$ -
4500067898	4/25/2025	Gillig LLC		0 B250-BUS REPAIR PARTS	\$4,356.89	\$ -	\$ -
4500067899	4/25/2025	Graybar Electric Co Inc		0 M180-STATION ELECTRICAL	\$1,266.07	\$ -	\$ -
4500067900	4/25/2025	Hanning & Kahl LP		0 M140-WAYSIDE SIGNALS	\$14,255.33	\$ -	\$ -
4500067901	4/25/2025	Pacific Arts Movement		0 G260-MEDIA	\$4,000.00	\$ -	\$ -
4500067902	4/25/2025	711 Print Enterprises Inc		0 G230-PRINTED MATERIALS	\$947.13	\$ -	\$ -
4500067903	4/25/2025	Home Depot USA Inc		0 G220-OFFICE EQUIPMENT	\$227.31	\$ -	\$ -
4500067904	4/25/2025	Steven R Timme		0 G230-PRINTED MATERIALS	\$203.18	\$ -	\$ -
4500067905	4/25/2025	Steven R Timme		0 G230-PRINTED MATERIALS	\$2,889.50	\$ -	\$ -
4500067906	4/25/2025	Data Controls Printworks, Inc.	Small Business	G230-PRINTED MATERIALS	\$94.83	\$ -	\$ -
4500067907	4/25/2025	Home Depot USA Inc		0 G140-SHOP SUPPLIES	\$710.63	\$ -	\$ -
4500067909	4/25/2025	Init Innovations in Transportation		0 G290-FARE REVENUE EQUIP	\$530.15	\$ -	\$ -
4500067910	4/25/2025	Init Innovations in Transportation		0 G290-FARE REVENUE EQUIP	\$1,103.40	\$ -	\$ -
4500067911	4/25/2025	Init Innovations in Transportation		0 G290-FARE REVENUE EQUIP	\$1,555.95	\$ -	\$ -
4500067912	4/25/2025	Init Innovations in Transportation		0 G290-FARE REVENUE EQUIP	\$1,252.08	\$ -	\$ -
4500067913	4/25/2025	Shilpark Paint Corporation		0 G160-PAINTS & CHEMICALS	\$931.17	\$ -	\$ -
4500067914	4/25/2025	Init Innovations in Transportation		0 G290-FARE REVENUE EQUIP	\$1,144.33	\$ -	\$ -
4500067915	4/25/2025	Init Innovations in Transportation		0 G290-FARE REVENUE EQUIP	\$2,116.25	\$ -	\$ -
4500067916	4/25/2025	Init Innovations in Transportation		0 G290-FARE REVENUE EQUIP	\$6,654.80	\$ -	\$ -
4500067917	4/25/2025	Network Industries, Inc.		0 F200-TANK EQUIPMENT	\$1,078.27	\$ -	\$ -
4500067918	4/25/2025	Jamison Professional Services, LLC	DBE	G170-LUBRICANTS	\$2,181.55	\$ -	\$ -
4500067919	4/25/2025	Jamison Professional Services, LLC	DBE	G170-LUBRICANTS	\$1,192.66	\$ -	\$ -
4500067920	4/25/2025	KLI Midco LLC		0 G170-LUBRICANTS	\$905.54	\$ -	\$ -
4500067921	4/25/2025	Louis Sardo Upholstery Inc		0 B130-BUS BODY	\$3,171.02	\$ -	\$ -
4500067922	4/25/2025	Mohawk Mfg & Supply Co		0 B200-BUS PWR TRAIN EQUIP	\$196.63	\$ -	\$ -
4500067923	4/25/2025	Motion Industries, Inc.		0 G170-LUBRICANTS	\$150.64	\$ -	\$ -
4500067924	4/25/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$2,159.31	\$ -	\$ -
4500067925	4/28/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$4,262.41	\$ -	\$ -
4500067926	4/28/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$164.42	\$ -	\$ -
4500067927	4/28/2025	Transit Holdings Inc		0 B160-BUS ELECTRICAL	\$2,090.15	\$ -	\$ -
4500067928	4/28/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$115.94	\$ -	\$ -
4500067929	4/28/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$197.83	\$ -	\$ -
4500067930	4/28/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$260.49	\$ -	\$ -
4500067931	4/28/2025	Transit Holdings Inc		0 B130-BUS BODY	\$3,037.53	\$ -	\$ -
4500067932	4/28/2025	Prochem Specialty Products Inc	Small Business	G180-JANITORIAL SUPPLIES	\$3,437.24	\$ -	\$ -
4500067933	4/28/2025	Maintex Inc		0 G170-LUBRICANTS	\$1,490.47	\$ -	\$ -
4500067934	4/28/2025	R.S. Hughes Co Inc		0 G140-SHOP SUPPLIES	\$2,161.83	\$ -	\$ -
4500067935	4/28/2025	DHD LP		0 I110-INFORMATION TECH	\$3,919.94	\$ -	\$ -
4500067936	4/28/2025	Vern Rose Inc		0 G160-PAINTS & CHEMICALS	\$864.47	\$ -	\$ -
4500067937	4/28/2025	The Sherwin-Williams Company		0 F120-BUS/LRV PAINT BOOTHS	\$2,002.45	\$ -	\$ -
4500067938	4/28/2025	San Diego Friction Products, Inc.		0 G140-SHOP SUPPLIES	\$1,683.22	\$ -	\$ -
4500067939	4/28/2025	Association Voting Dot Com LLC		0 G220-OFFICE EQUIPMENT	\$639.00	\$ -	\$ -
4500067940	4/28/2025	CDW LLC		0 I110-INFORMATION TECH	\$249.23	\$ -	\$ -
4500067941	4/28/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$2,894.96	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500067942	4/28/2025	Init Innovations in Transportation		0 G290-FARE REVENUE EQUIP	\$875.00	\$ -	\$ -
4500067943	4/28/2025	SC Commercial, LLC		0 A120-AUTO/TRUCK GASOLINE	\$3,045.51	\$ -	\$ -
4500067944	4/28/2025	Supreme Oil Co.		0 A120-AUTO/TRUCK GASOLINE	\$12,104.98	\$ -	\$ -
4500067945	4/28/2025	Annex Warehouse Company, Inc		0 F120-BUS/LRV PAINT BOOTHS	\$7,687.14	\$ -	\$ -
4500067946	4/28/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$2,372.66	\$ -	\$ -
4500067947	4/28/2025	MAC-IMPULSE, LLC		0 M120-OVRHEAD CATENARY SYS	\$5,407.98	\$ -	\$ -
4500067948	4/28/2025	RJ International LLC	DBE	G190-SAFETY/MED SUPPLIES	\$452.55	\$ -	\$ -
4500067949	4/28/2025	Waxie's Enterprises, LLC		0 G140-SHOP SUPPLIES	\$4,470.40	\$ -	\$ -
4500067950	4/28/2025	RS Americas, Inc.		0 G170-LUBRICANTS	\$2,272.06	\$ -	\$ -
4500067951	4/28/2025	RJ International LLC	DBE	G140-SHOP SUPPLIES	\$977.51	\$ -	\$ -
4500067952	4/29/2025	Mohawk Mfg & Supply Co		0 B140-BUS CHASSIS	\$216.58	\$ -	\$ -
4500067953	4/29/2025	Mohawk Mfg & Supply Co		0 B140-BUS CHASSIS	\$7.68	\$ -	\$ -
4500067954	4/29/2025	Transit Holdings Inc		0 B130-BUS BODY	\$869.57	\$ -	\$ -
4500067955	4/29/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$421.37	\$ -	\$ -
4500067956	4/29/2025	TESSCO Incorporated		0 P210-NON-REV VEH REPAIRS	\$92.23	\$ -	\$ -
4500067957	4/29/2025	Annex Warehouse Company, Inc		0 F120-BUS/LRV PAINT BOOTHS	\$2,819.13	\$ -	\$ -
4500067958	4/29/2025	Winzer Franchise Company		0 G130-SHOP TOOLS	\$147.14	\$ -	\$ -
4500067959	4/29/2025	Louis Sardo Upholstery Inc		0 R200-RAIL/LRV SEATING	\$4,579.38	\$ -	\$ -
4500067960	4/29/2025	Team One Repair Inc		0 G290-FARE REVENUE EQUIP	\$7,751.54	\$ -	\$ -
4500067961	4/29/2025	Teknoware Inc.		0 R180-RAIL/LRV LIGHTING	\$2,720.47	\$ -	\$ -
4500067962	4/29/2025	Professional Contractors Supplies		0 G130-SHOP TOOLS	\$76.86	\$ -	\$ -
4500067963	4/29/2025	W.W. Grainger Inc		0 G130-SHOP TOOLS	\$1,633.20	\$ -	\$ -
4500067964	4/29/2025	Citywide Auto Glass Inc		0 A140-AUTO/TRUCK REPAIR	\$533.75	\$ -	\$ -
4500067965	4/29/2025	CalMat Co.		0 T160-TRACK, AGGREGATES	\$3,727.44	\$ -	\$ -
4500067966	4/29/2025	Seon Design (USA) Corp.		0 G120-SECURITY	\$4,184.04	\$ -	\$ -
4500067967	4/29/2025	Tennant Sales & Serv Co		0 P130-EQUIP MAINT REPR SVC	\$984.47	\$ -	\$ -
4500067968	4/29/2025	RJ International LLC	DBE	G190-SAFETY/MED SUPPLIES	\$329.72	\$ -	\$ -
4500067969	4/29/2025	Dimensional Silk Screen Inc		0 R120-RAIL/LRV CAR BODY	\$560.30	\$ -	\$ -
4500067970	4/29/2025	Vern Rose Inc		0 G140-SHOP SUPPLIES	\$185.97	\$ -	\$ -
4500067971	4/29/2025	OneSource Distributors, LLC		0 M180-STATION ELECTRICAL	\$3,043.39	\$ -	\$ -
4500067972	4/29/2025	Railroad Component Rebuilds		0 P130-EQUIP MAINT REPR SVC	\$137.75	\$ -	\$ -
4500067973	4/30/2025	Transit Holdings Inc		0 B110-BUS HVAC SYSTEMS	\$45.04	\$ -	\$ -
4500067974	4/30/2025	Transit Holdings Inc		0 B130-BUS BODY	\$159.47	\$ -	\$ -
4500067975	4/30/2025	Transit Holdings Inc		0 B130-BUS BODY	\$2,565.58	\$ -	\$ -
4500067976	4/30/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$2,392.47	\$ -	\$ -
4500067977	4/30/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$713.50	\$ -	\$ -
4500067978	4/30/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$69.56	\$ -	\$ -
4500067979	4/30/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$5,203.50	\$ -	\$ -
4500067980	4/30/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$86.99	\$ -	\$ -
4500067981	4/30/2025	RJ International LLC	DBE	G190-SAFETY/MED SUPPLIES	\$109.97	\$ -	\$ -
4500067982	4/30/2025	Romaine Electric Corporation		0 B160-BUS ELECTRICAL	\$2,488.04	\$ -	\$ -
4500067983	4/30/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$1,171.72	\$ -	\$ -
4500067984	4/30/2025	W.W. Grainger Inc		0 G140-SHOP SUPPLIES	\$24.49	\$ -	\$ -
4500067985	4/30/2025	Siemens Mobility, Inc.		0 M130-CROSSING MECHANISM	\$784.85	\$ -	\$ -
4500067986	4/30/2025	Jamison Professional Services, LLC	DBE	G170-LUBRICANTS	\$14,923.38	\$ -	\$ -
4500067987	4/30/2025	Neopart Transit LLC		0 B250-BUS REPAIR PARTS	\$209.04	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500067988	4/30/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$4,858.91	\$ -	\$ -
4500067989	4/30/2025	TK Services Inc		0 B250-BUS REPAIR PARTS	\$12,056.87	\$ -	\$ -
4500067990	4/30/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$3,628.62	\$ -	\$ -
4500067991	4/30/2025	San Diego Friction Products, Inc.		0 B140-BUS CHASSIS	\$9,280.55	\$ -	\$ -
4500067992	4/30/2025	Mohawk Mfg & Supply Co		0 B160-BUS ELECTRICAL	\$1,411.56	\$ -	\$ -
4500067994	4/30/2025	Muncie Reclamation and Supply Co		0 B160-BUS ELECTRICAL	\$7,131.12	\$ -	\$ -
4500067995	4/30/2025	Gillig LLC		0 B250-BUS REPAIR PARTS	\$4,889.76	\$ -	\$ -
4500067996	5/1/2025	Brault Inc	Small Business	C110-GENERAL CONTRACTORS	\$6,290.00	\$ -	\$ -
4500067997	5/1/2025	Cummins Inc		0 B250-BUS REPAIR PARTS	\$230.42	\$ -	\$ -
4500067998	5/1/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$635.47	\$ -	\$ -
4500067999	5/1/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$1,204.97	\$ -	\$ -
4500068000	5/1/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$80.08	\$ -	\$ -
4500068001	5/1/2025	Transit Holdings Inc		0 B130-BUS BODY	\$1,024.38	\$ -	\$ -
4500068002	5/1/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$122.23	\$ -	\$ -
4500068003	5/1/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$142.58	\$ -	\$ -
4500068004	5/1/2025	Ace Uniforms LLC	Small Business	G200-OFFICE SUPPLIES	\$216.58	\$ -	\$ -
4500068005	5/1/2025	W.W. Grainger Inc		0 G140-SHOP SUPPLIES	\$68.03	\$ -	\$ -
4500068006	5/1/2025	Day Management Corp		0 C120-SPECIALTY CONTRACTOR	\$450.00	\$ -	\$ -
4500068007	5/1/2025	AirSupply Tools, LLC		0 G140-SHOP SUPPLIES	\$138.04	\$ -	\$ -
4500068008	5/1/2025	Clarran Inc.	DBE	G200-OFFICE SUPPLIES	\$537.44	\$ -	\$ -
4500068009	5/1/2025	VCA Animal Hospitals, Inc.		0 G120-SECURITY	\$33.92	\$ -	\$ -
4500068010	5/1/2025	MTB Gear Inc		0 P130-EQUIP MAINT REPR SVC	\$2,079.93	\$ -	\$ -
4500068011	5/1/2025	Staples Contract & Commercial LLC		0 G200-OFFICE SUPPLIES	\$589.91	\$ -	\$ -
4500068012	5/1/2025	ChargePoint, Inc		0 B250-BUS REPAIR PARTS	\$1,282.45	\$ -	\$ -
4500068013	5/1/2025	Southwestern Community College Dist		0 P280-GENERAL SVC AGRMNTS	\$50.00	\$ -	\$ -
4500068014	5/1/2025	Siemens Mobility, Inc.		0 R190-RAIL/LRV PANTOGRAPH	\$2,992.00	\$ -	\$ -
4500068016	5/1/2025	The Gordian Group, Inc.		0 C130-CONSTRUCTION SVCS	\$6,611.03	\$ -	\$ -
4500068017	5/1/2025	Harbor Diesel & Equipment, Inc		0 B200-BUS PWR TRAIN EQUIP	\$21,476.74	\$ -	\$ -
4500068018	5/1/2025	Robcar Corporation	Woman Owned Business	P280-GENERAL SVC AGRMNTS	\$862.02	\$ -	\$ -
4500068019	5/1/2025	Prudential Overall Supply		0 G140-SHOP SUPPLIES	\$1,186.96	\$ -	\$ -
4500068020	5/1/2025	San Diego Community		0 P540-MAINTENANCE TRAINING	\$657.17	\$ -	\$ -
4500068021	5/1/2025	Staples Contract & Commercial LLC		0 G210-OFFICE FURNITURE	\$711.09	\$ -	\$ -
4500068022	5/1/2025	ACCO Brands USA LLC		0 G200-OFFICE SUPPLIES	\$575.20	\$ -	\$ -
4500068023	5/2/2025	Siemens Mobility, Inc.		0 R190-RAIL/LRV PANTOGRAPH	\$3,740.01	\$ -	\$ -
4500068024	5/2/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$13.68	\$ -	\$ -
4500068025	5/2/2025	Transit Holdings Inc		0 B160-BUS ELECTRICAL	\$2,751.21	\$ -	\$ -
4500068026	5/2/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$218.30	\$ -	\$ -
4500068027	5/2/2025	San Diego Friction Products, Inc.		0 B120-BUS MECHANICAL PARTS	\$4,285.22	\$ -	\$ -
4500068028	5/2/2025	Home Depot USA Inc		0 G140-SHOP SUPPLIES	\$59.21	\$ -	\$ -
4500068029	5/2/2025	SC Commercial, LLC		0 A120-AUTO/TRUCK GASOLINE	\$3,045.51	\$ -	\$ -
4500068030	5/2/2025	Dimensional Silk Screen Inc		0 G230-PRINTED MATERIALS	\$2,060.72	\$ -	\$ -
4500068031	5/2/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$320.06	\$ -	\$ -
4500068032	5/2/2025	Dimensional Silk Screen Inc		0 G230-PRINTED MATERIALS	\$771.43	\$ -	\$ -
4500068033	5/2/2025	vCloud Tech Inc.	DBE	I110-INFORMATION TECH	\$8,549.31	\$ -	\$ -
4500068034	5/2/2025	Blue Angel International LLC	Small Business	I110-INFORMATION TECH	\$9,012.06	\$ -	\$ -
4500068035	5/5/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$1,495.14	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500068036	5/5/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$311.81	\$ -	\$ -
4500068037	5/5/2025	Taradigm, Inc.		0 I120-INFO TECH, SVCS	\$4,700.00	\$ -	\$ -
4500068038	5/5/2025	Teknita LLC	Small Business	I120-INFO TECH, SVCS	\$74,941.18	\$ -	\$ -
4500068039	5/5/2025	Arts Lawnmower and Repairs LLC		0 F190-LANDSCAPING MAT'LS	\$43.61	\$ -	\$ -
4500068040	5/5/2025	Arts Lawnmower and Repairs LLC		0 F190-LANDSCAPING MAT'LS	\$623.63	\$ -	\$ -
4500068041	5/5/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$15,281.21	\$ -	\$ -
4500068042	5/5/2025	Wesco Distribution Inc		0 F110-SHOP/BLDG MACHINERY	\$433.16	\$ -	\$ -
4500068043	5/5/2025	Transit Holdings Inc		0 B120-BUS MECHANICAL PARTS	\$10,024.73	\$ -	\$ -
4500068044	5/5/2025	Transit Holdings Inc		0 B250-BUS REPAIR PARTS	\$3,000.21	\$ -	\$ -
4500068045	5/5/2025	AirSupply Tools, LLC		0 G180-JANITORIAL SUPPLIES	\$141.54	\$ -	\$ -
4500068046	5/5/2025	W.W. Grainger Inc		0 G140-SHOP SUPPLIES	\$100.36	\$ -	\$ -
4500068047	5/5/2025	San Diego Friction Products, Inc.		0 B120-BUS MECHANICAL PARTS	\$2,856.81	\$ -	\$ -
4500068048	5/5/2025	Airgas Inc		0 G140-SHOP SUPPLIES	\$104.26	\$ -	\$ -
4500068049	5/5/2025	American Battery Corporation	Small Business	P280-GENERAL SVC AGRMNTS	\$4,776.56	\$ -	\$ -
4500068050	5/5/2025	Dimensional Silk Screen Inc		0 P210-NON-REV VEH REPAIRS	\$984.31	\$ -	\$ -
4500068051	5/5/2025	Tennant Sales & Serv Co		0 P130-EQUIP MAINT REPR SVC	\$352.84	\$ -	\$ -
4500068052	5/5/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$1,600.09	\$ -	\$ -
4500068053	5/5/2025	Siemens Mobility, Inc.		0 R230-RAIL/LRV MECHANICAL	\$2,262.75	\$ -	\$ -
4500068054	5/5/2025	SMC Electrical Products Inc		0 M110-SUB STATION	\$5,301.30	\$ -	\$ -
4500068055	5/5/2025	Western-Cullen-Hayes Inc		0 M130-CROSSING MECHANISM	\$4,148.38	\$ -	\$ -
4500068056	5/5/2025	General Signals Inc		0 M130-CROSSING MECHANISM	\$13,821.04	\$ -	\$ -
4500068057	5/5/2025	Cengage Learning, Inc.		0 P540-MAINTENANCE TRAINING	\$123.97	\$ -	\$ -
4500068058	5/5/2025	M Power Truck & Diesel		0 P210-NON-REV VEH REPAIRS	\$2,298.82	\$ -	\$ -
4500068059	5/5/2025	Motion Industries, Inc.		0 G160-PAINTS & CHEMICALS	\$397.37	\$ -	\$ -
4500068060	5/5/2025	Supreme Oil Co.		0 A120-AUTO/TRUCK GASOLINE	\$11,910.78	\$ -	\$ -
4500068061	5/5/2025	SC Commercial, LLC		0 A120-AUTO/TRUCK GASOLINE	\$3,008.52	\$ -	\$ -
4500068062	5/5/2025	Siemens Mobility, Inc.		0 M130-CROSSING MECHANISM	\$2,409.29	\$ -	\$ -
4500068063	5/5/2025	Siemens Mobility, Inc.		0 R120-RAIL/LRV CAR BODY	\$1,616.25	\$ -	\$ -
4500068064	5/5/2025	OneSource Distributors, LLC		0 G180-JANITORIAL SUPPLIES	\$1,896.06	\$ -	\$ -
4500068065	5/5/2025	Facility Solutions Group, Inc.		0 M180-STATION ELECTRICAL	\$1,293.01	\$ -	\$ -
4500068066	5/5/2025	Pestmaster Services, L.P.		0 C120-SPECIALTY CONTRACTOR	\$216.83	\$ -	\$ -
4500068067	5/5/2025	Arts Lawnmower and Repairs LLC		0 G130-SHOP TOOLS	\$344.80	\$ -	\$ -
4500068068	5/5/2025	Home Depot USA Inc		0 G140-SHOP SUPPLIES	\$1,688.11	\$ -	\$ -
4500068069	5/5/2025	Inland Lighting Supplies Inc	Small Business	M180-STATION ELECTRICAL	\$1,703.53	\$ -	\$ -
4500068070	5/5/2025	Western-Cullen-Hayes Inc		0 M130-CROSSING MECHANISM	\$2,586.00	\$ -	\$ -
4500068071	5/6/2025	Muncie Reclamation and Supply Co		0 B200-BUS PWR TRAIN EQUIP	\$38.88	\$ -	\$ -
4500068072	5/6/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$2,791.71	\$ -	\$ -
4500068073	5/6/2025	Cummins Inc		0 B200-BUS PWR TRAIN EQUIP	\$145.47	\$ -	\$ -
4500068074	5/6/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$206.73	\$ -	\$ -
4500068075	5/6/2025	Waxie's Enterprises, LLC		0 G180-JANITORIAL SUPPLIES	\$822.33	\$ -	\$ -
4500068076	5/6/2025	Transit Holdings Inc		0 B140-BUS CHASSIS	\$712.91	\$ -	\$ -
4500068077	5/6/2025	Transit Holdings Inc		0 B200-BUS PWR TRAIN EQUIP	\$376.23	\$ -	\$ -
4500068078	5/6/2025	Parts Authority, LLC		0 B160-BUS ELECTRICAL	\$3,930.08	\$ -	\$ -
4500068079	5/6/2025	Pacific Star Corporation		0 G180-JANITORIAL SUPPLIES	\$58.46	\$ -	\$ -
4500068080	5/6/2025	KB Signaling, Inc.		0 M140-WAYSIDE SIGNALS	\$1,542.98	\$ -	\$ -
4500068081	5/6/2025	KB Signaling, Inc.		0 M140-WAYSIDE SIGNALS	\$1,174.48	\$ -	\$ -

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500068082	5/6/2025	Gillig LLC	0	B250-BUS REPAIR PARTS	\$688.85	\$ -	\$ -
4500068083	5/6/2025	Gillig LLC	0	B250-BUS REPAIR PARTS	\$155.24	\$ -	\$ -
4500068084	5/6/2025	Gillig LLC	0	B250-BUS REPAIR PARTS	\$1,638.16	\$ -	\$ -
4500068085	5/6/2025	Gillig LLC	0	B250-BUS REPAIR PARTS	209.08	\$ -	\$ -
4500068086	5/6/2025	Facility Solutions Group, Inc.	0	R180-RAIL/LRV LIGHTING	96.98	\$ -	\$ -

EXPENSE CONTRACTS

Att.B, Item 4, 05/15/25

Doc #	Organization	Subject	Amount	Day
S200-25-902	CROWN CASTLE LLC	CASTLE FIBER INSTALLATION SAN YSIDRO BLVD RAIL	\$1,214.48	4/28/2025
G2608.2-22	ACE UNIFORMS	BODY ARMOR PRICE INCREASE	\$4,024.46	4/23/2025
L1687.1-25	BALFOUR	INCREASE QTY	\$25,649.11	4/15/2025
PWG348.0-22JOC348-14	VETERANS	SUN KINK REPAIR	\$26,275.38	4/17/2025
PWL312.0-20JOC312-02.05	HMS	CCO 05	\$30,591.68	4/16/2025
G3036.0-25	SD WAVE	2025 SPONSORSHIP AGREEMENT	\$36,500.00	5/5/2025
G2757.1-23	DRUG TESTING NETWORK	ADD FUNDS	\$75,843.75	4/14/2025
G2621.1-22	NOVA	ECTC ADDITION	\$79,896.00	4/18/2025
PWL352.0-22WOA-AE-63	HDR	GOVT AFFAIRS SUPPRT	\$85,377.78	4/17/2025
G2091.21-18	INIT	PCI	\$113,337.50	4/28/2025
PWL356.0-22WOAAE06.05	PRE	ADD TASKS PHASE 2	\$140,736.84	5/2/2025

REVENUE CONTRACTS AND MOUs				
Doc #	Organization	Subject	Amount	Day
L1640.2-23	SUNSAFE WINDOW FILMS	SD HOUSE COMMISSION TIME EXT	\$750.00	4/22/2025
G1710.10-14	CITY OF CORONADO	FREE SUMMER SHUTTLE	\$121,636.65	4/21/2025



**Metropolitan
Transit
System**

Agenda Item No. 5

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Investment Report – Quarter Ending March 31, 2025

INFORMATIONAL ONLY

Budget Impact

None.

DISCUSSION:

Attachment A comprises a report of the San Diego Metropolitan Transit System (MTS) investments as of March 31, 2025. The combined total of all investments has increased quarter to quarter from \$460.4M to \$465.8M. This \$5.4M increase is primarily attributable to \$13.0M in Coronavirus Aid, Relief, and Economic Security Act (CARES) revenue, \$5.0M in Federal Transit Assistance (FTA) capital funding, partially offset by \$10.5 million in capital expenditures, as well as normal timing differences between other payments and receipts for both capital and operations.

The first column provides details about investments restricted for Capital Improvement Projects (CIP), SB125 funded operations and PRONTO Stored Value.

The second column, unrestricted investments, reports the working capital for MTS operations allowing payments for employee payroll and vendors' goods and services.

MTS remains in compliance with Board Policy 30 (Investment Policy) and can meet expenditure requirements for a minimum of the next six months as required.

/S/ Sharon Cooney

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, Mark.Olson@sdmts.com

Attachment: A. Investment Report for the Quarter Ending March 31, 2025

1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • sdmts.com

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.



**San Diego Metropolitan Transit System
Investment Report
March 31, 2025**

Institution / Issuer	Function	Investment Type	Restricted	Unrestricted	Total	Avg. Rate of Return	Benchmark
J.P. Morgan Chase	Operating Funds	Depository Bank	1,581,000	45,042,317	46,623,317	2.19%	* 0.460% WSJ Money Market
U.S. Bank - Retention Trust Account	Restricted for Capital Support	Depository Bank	1,880,804	-	1,880,804	N/A	** -
American Business Bank - Retention Trust Account	Restricted for Capital Support	Depository Bank	30,394	-	30,394		
Local Agency Investment Fund (LAIF)	Restricted (Stored Value)	Investment Pool	10,120,607	-	10,120,607	4.313%	4.579% S&P US T-Bill 0-3 Mth Index
San Diego County Treasurer's Office	State Grant Funds	Investment Pool	165,323,096	10,786,018	176,109,114	3.750%	4.579% S&P US T-Bill 0-3 Mth Index
Subtotal: Restricted for Capital Support / Stored Value			177,354,902	10,786,018	188,140,920		
Local Agency Investment Fund (LAIF)	Investment of Surplus Funds	Investment Pool	-	64,695,633	64,695,633	4.313%	4.579% S&P US T-Bill 0-3 Mth Index
San Diego County Treasurer's Office	Investment of Surplus Funds	Investment Pool	-	166,368,655	166,368,655	3.750%	4.579% S&P US T-Bill 0-3 Mth Index
Subtotal: Investment Surplus Funds			-	231,064,288	231,064,288		
Grand Total Cash and Investments			\$ 178,935,902	\$ 286,892,622	\$ 465,828,524		

*-The 2.19% is an annual percentage yield on the average daily balance that exceeds \$3.5 million

** - Per trust agreements, interest earned on retention accounts are allocated to trust beneficiaries (contractors)



Agenda Item No. 6

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Non-Revenue Vehicle Camera System – Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to:

- 1) Execute MTS Doc. G2950.0-24 (in substantially the same format as Attachment A), with Motive Technologies, Inc. (Motive), for a Non-Revenue Vehicle Camera System for a five (5) year base period with three (3) 1-year options, for a total amount of \$1,070,655.00; and
- 2) Exercise the option years at the CEO's discretion.

Budget Impact

The total cost of this contract is estimated to be \$1,070,655.00 (Attachment A) (\$676,050.00 for the base years and \$394,605.00 for the option years).

Description	Non-Revenue Camera System Costs	As-Needed Replacement Parts
BASE YEAR 1	\$ 94,290.00	\$ 37,245.00
BASE YEAR 2	\$ 94,290.00	\$ 37,245.00
BASE YEAR 3	\$ 94,290.00	\$ 37,245.00
BASE YEAR 4	\$ 94,290.00	\$ 37,245.00
BASE YEAR 5	\$ 112,665.00	\$ 37,245.00
SUBTOTAL (BASE)	\$ 489,825.00	\$ 186,225.00
OPTION YEAR 1 (YEAR 6)	\$ 94,290.00	\$ 37,245.00
OPTION YEAR 2 (YEAR 7)	\$ 94,290.00	\$ 37,245.00
OPTION YEAR 3 (YEAR 8)	\$ 94,290.00	\$ 37,245.00
SUBTOTAL (OPTION)	\$ 282,870.00	\$ 111,735.00
TOTAL	\$ 772,695.00	\$ 297,960.00
GRAND TOTAL	\$	1,070,655.00

1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • sdmts.com

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.



The project will be funded by the MTS General Operations Budget account 902010-571210.

DISCUSSION:

MTS Department leases and/or owns an estimated 175 (one hundred seventy-five) non-revenue vehicles as part of their operations and administrative functions. MTS's objective is to equip all non-revenue vehicles with interior and exterior audio-video camera systems to support any motor vehicle incident investigations, address complaints against drivers, and monitor driver safety and performance as necessary. MTS is seeking to lease systems for its non-revenue vehicles.

The following Departments lease/own non-revenue vehicles: Administration, Bus Operations, Contracted Bus Services, Trolley Operations, Revenue Collection, Security, For-Hire Vehicle Administration, and Inventory. Vehicles consist of various body types but are not limited to sedans, coupes, vans, sport utility vehicles (SUVs), and pickup trucks. Certain maintenance activities for these vehicles are performed at the following locations:

1. Imperial Avenue Division (IAD) -100 16th Street, San Diego, CA 92101
2. Kearny Mesa Division (KMD) - 4630 Ruffner Street, San Diego, CA 92111
3. Trolley Building C - 1535 Newton Avenue, San Diego, CA 92101
4. Trolley Building B - 1341 Commercial Street, San Diego, CA 92010

On November 20, 2024, MTS issued a Request for Proposal (RFP) for a Non-Revenue Camera System on PlanetBids. MTS received one (1) proposal on the due date of January 15, 2025, from the following:

Proposer	Firm Certification
Motive Technologies, Inc.	N/A

To confirm that the solicitation was not unduly restrictive, MTS conducted a post-proposal survey with prospective proposers requesting their reason(s) for not proposing. MTS received one (1) response. The response determined that neither the request for proposal (RFP) nor MTS's procurement process played a role in their decision to not participate; staff proceeded as a competitive solicitation.

Motive's proposal was deemed responsive and responsible and was evaluated by a committee comprised of representatives from the MTS Rail, Transit Security, General Counsel, Bus, and Finance departments. The proposal was evaluated on the following:

Qualifications of the Firm or Individual	15%
Staffing, Organization, and Management Plan	20%
Work Plan	35%
Cost and Price	<u>30%</u>
	100%

The following table illustrates the initial score of Motive:

PROPOSER	INDEPENDENT COST ESTIMATE	TOTAL COST	TOTAL AVERAGE TECH SCORE	TOTAL AVERAGE COST SCORE	TOTAL AVERAGE SCORE TOTAL POSSIBLE: 100
Motive	\$1,760,396.00	\$811,850.00	49.40	21.60	71.00

As a result of the initial review, MTS requested additional clarifications from Motive regarding the proposed subcontractor, key staff members, and scope of work. After receiving the clarifications, MTS held an interview on March 14, 2025, with Motive. During the interview, Motive provided a demo of the system, and the evaluation panel was able to ask more questions. After the interview, MTS requested a revised cost proposal and was able to negotiate a \$39,155.00 cost reduction.

After the interview and additional clarifications, the final scores remained the same as follows:

PROPOSER	INDEPENDENT COST ESTIMATE	TOTAL COST	TOTAL AVERAGE TECH SCORE	TOTAL AVERAGE COST SCORE	TOTAL AVERAGE SCORE TOTAL POSSIBLE: 100
Motive	\$1,760,396.00	\$772,695.00	49.40	21.60	71.00

In comparison to MTS's Independent Cost Estimate (ICE) in the amount of \$1,760,396.00 and MTS's past purchase history of camera equipment, staff determined Motive's pricing to be fair and reasonable. The ICE was significantly higher because staff believed the costs would be higher due to the consumer price index and maintenance costs. Staff also included as-needed funds in the amount of \$297,960.00 to this contract for estimated replacement parts for as-needed maintenance services for the contract term.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to:

- 1) Execute MTS Doc. G2950.0-24 (in substantially the same format as Attachment A), with Motive Technologies, Inc. (Motive), for a Non-Revenue Vehicle Camera System for a five (5) years base period with three (3) 1-year options, for a total amount of \$1,070,655; and
- 2) Exercise the option years at the CEO's discretion.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, mark.olson@sdmts.com

Attachments: A. Draft Agreement
B. Scope of Work
C. Cost Proposal

STANDARD AGREEMENT**FOR****MTS DOC. NO. G2950.0-24****NON-REVENUE VEHICLE CAMERA SYSTEM**

THIS AGREEMENT is entered into this _____ day of _____, 2025 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: Motive Technologies, Inc. Address: 55 Hawthorne Street, Suite 400
San Francisco CA 94105
City State Zip
Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.) Email: Derek.Mernagh@gomotive.com
Telephone: 855-434-3564

Authorized person to sign contracts Derek Mernagh Chief Accounting Officer
Name Title

The Contractor agrees to provide services as specified in the conformed Scope of Work/Technical Specification (Exhibit A), Contractor's Cost/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), Forms (Exhibit D).

The contract term is for a five (5) year base period with three (3) 1-year options, exercisable at MTS's sole discretion, for a total of eight (8) years. Base period shall be effective July 1, 2025 through June 30, 2030 and option years shall be effective July 1, 2030 through June 30, 2033, if exercised by MTS.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed \$676,050.00 for the base years and \$394,605.00 for the option years, for a contract total not to exceed \$1,070,655.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	MOTIVE TECHNOLOGIES, INC.
By: <u>Sharon Cooney, Chief Executive Officer</u>	By _____
Approved as to form:	Title: _____
By: <u>Karen Landers, General Counsel</u>	

1.1. GENERAL

The San Diego Metropolitan Transit System (MTS) is a public transportation operator for the greater southern San Diego region. MTS Departments leases and/or owns an estimated 175 non-revenue vehicles as part of their operations and administrative functions. MTS's objective is for all of its non-revenue vehicles to have a camera system that provides video and audio recording in both the interior and exterior of the non-revenue vehicle in order to have an additional investigative tool whenever there are any motor vehicle incidents or accidents, investigate any received complaints against drivers, and to review driver safety and performance as necessary.

The following Departments lease/own non-revenue vehicles includes administration, bus operations, contracted bus services, trolley operations, revenue collection, security, for-hire vehicle administration, and inventory. Attachment 2 includes a list of MTS's non-revenue vehicle fleet, but this list is subject to change. Vehicles consist of various body types but are not limited to sedans, coupes, vans, sport utility vehicles (SUV) and pickup trucks. Certain maintenance activities for these vehicles are performed at the following locations:

1. Imperial Avenue Division (IAD) -100 16th Street, San Diego, CA 92101
2. Kearny Mesa Division (KMD) - 4630 Ruffner Street, San Diego, CA 92111
3. Trolley Building C - 1535 Newton Avenue, San Diego, CA 92101
4. Trolley Building B - 1341 Commercial Street, San Diego, CA 92010

Please note bus operations have already installed an estimated 68 cameras (Seon and Lytx) that have been procured out right on its non-revenue fleet. MTS's objective is that any new camera system would replace the currently affixed 68 cameras when the new camera system is procured, when these cameras reach the end of their useful life and/or when these vehicles need to be replaced (e.g., end of vehicle lease term).

1.2. SCOPE OF WORK

The proposed equipment shall meet the following minimum requirements:

1. Leased Camera System
2. Quantity of Cameras
 - a. Two (2) cameras shall be installed. One camera lens should be facing out the cab at the road ahead (exterior camera). The second camera lens should be facing inside the cabin area monitoring the driver (interior camera).
 - b. Three (3) Cameras for Select Vehicles: The third camera should be installed in the rear cabin seating to monitor detainees on selected vehicles for select security department vehicles. There are an estimated 16 vehicles that would need this camera installed. Option to be exercised at the sole discretion of MTS.
3. Video Resolution
 - a. Front facing camera should be at least 1080p at 30 frames per second
 - b. Driver facing camera should be at least 1080p

- c. Optional rear seat facing camera should be at least 1080p
 - d. Low light visibility video recording
- 4. Audio recording capability
 - a. Must include a microphone for both the interior and exterior cameras.
- 5. Global Positioning System (GPS)
 - a. The Contractor shall utilize the latest technologies to ensure a complete and fully functional GPS system.
 - b. GPS must display current real-time location and location history of vehicle.
- 6. Data monitoring on speeding and hard braking
 - a. Have the ability to create events and alerts.
- 7. Tamper proof
 - a. Both the hardware device and the authentication of the video footage should be tamper proof.
- 8. Cloud-Based Portal with audio, video, and GPS access
 - a. All recordings should be stored in the cloud and easily accessed through Contractor's portal, and stored in accordance with video/audio retention standards as set forth in this contract.
 - b. Recordings that MTS staff wants to save indefinitely should be able to be tagged and should be able to be downloaded to MTS's network.
 - c. Contractor will provide the necessary training to facilitate the use of its portal
 - d. Log-in for selected personnel will be granted.
- 9. Camera system power on and power off capabilities
 - a. The proposed equipment should be hardwired to the vehicle battery and ignition system.
 - b. Equipment should turn on with ignition set to on and should turn off when the ignition is set to off. With the engine off, the operating time of the equipment shut down should be no more than 30 seconds.
 - c. An indicator light should be visible to show and confirm it is in recording mode.
- 10. Placement of camera should meet California state regulations not obstructing driver's view of the road.
- 11. Size of the camera should meet California state regulations not obstructing driver's view of the road.
- 12. Any other components not integrated within the camera such as cellular routers, repeaters or modems should be small enough to be placed under driver or passenger seat without impacting functionality of seat.

13. Camera system must meet network security standards

14. Video/Audio Retention

- a. Minimum 7-14 days (or its equivalent based on number of hours the vehicle is operating).
- b. *OPTION FOR EXTENDED RETENTION*: Optional minimum 30 days (or its equivalent based on number of hours the vehicle is operating). For purposes of the Cost Form, please provide the price that it would cost to have this extended amount of retention (i.e. what is the additional cost to have 30-day retention, compared to what is already included in the monthly lease for 7–14-day minimum retention as stated above).
 - i. Option to be exercised at the sole discretion of MTS.

1.3. IT TECHNICAL REQUIREMENTS

1.3.1. Fundamental Technical Requirements

- a. The system should provide a cloud-based solution for storing, accessing, viewing, editing and sharing video.
- b. The system should provide a holistic approach to network communications, data storage, software and hardware required for the operations of the camera system, its maintenance and lifecycle.
- c. The system should include the ability to communicate and pass data from onboard devices to their ultimate storage and management locations.
- d. The system should provide clear documentation on network protocols, firewall requirements, connectivity procedures and cybersecurity techniques used for operations.
- e. The system should generate video files in commonly used industry standards such as MP4, AVI, MOV, H.264, H.265 (HEVC), 1080p, 1440p, 2160p, 30 fps, 60fps, AAC, WAV, video segmenting, and loop recording or better.
- f. The system should operate with minimal operator action and minimal system administration requirements.
- g. The system should provide a management utility for rapid review, tagging and sharing of video footage.
- h. The system should provide a warning system for action required and degradation of system hardware and software.
- i. The system should provide unlimited data retention and storage in a cloud environment.
- j. The system should provide secure file transfer and download capabilities to remote San Diego MTS storage locations.
- k. The system should be account based.
- l. The system should be collaborative in nature.
- m. The system should use common technical file formats and data stores.
- n. The system should allow easy data parsing.
- o. The system should clearly state all hardware and software requirements to deploy a functional and operational system.

1.3.2. Basic Setup

- a. Setup should allow flexibility to create/modify/delete company specific named locations and vehicle assets.
- b. Setup should facilitate creation of new users and assignment of roles.
- c. Setup should allow editing, deleting, and updating user information.

- d. System should also allow setting up basic user preferred configurations.
- e. Setup should allow management of administrative tasks like video review or workflows for managers to review video incidents.
- f. Setup should allow for user workspace or dashboard to be customizable and configurable on the fly.
- g. Setup should allow user workspace or dashboard to have various filter capabilities for easily parsing data.
- h. Setup should allow MTS to configure detailed reporting of video status like locations, dates, times, and operators involved.

1.3.3. User Management

- a. System should allow the functionality to create, view, update and delete users.
- b. System should allow assignment of different roles to the system users.
- c. System employs user access control to prevent access to accounts.
- d. System should allow users to login to the system after required authentication.
- e. System should be able to limit the user privileges based on the user role and assigned group in the application.
- f. A logged in user should be able to see his/her personal data and assigned role.

1.3.4. Geo Location

- a. System should provide capability to understand GEO tagging and file location data.
- b. System should communicate where a video was captured or the location data is pointing.
- c. System should provide latitude and longitude coordinates of video capture locations.
- d. System should integrate with standard ArcGIS, Esri systems and GPS data.
- e. System should offer store and forward technology for areas with limited reception.
- f. System should provide the ability to enter intersections, grade crossings, mile markers, and vehicle numbers.

1.3.5. Mobile Application and Web Application Integration

- a. Mobile and Web Application should require authentication from a user before he/she can use the application.
- b. Mobile and Web App should allow the users to add/update their profile information which may include Picture, Password and Signature. The signature provided in user profile section should later be displayed on different reports wherever applicable.
- c. Mobile and Web Application should show data in accordance with the role of the logged in user.
- d. Mobile and Web App should have the capability to work in both Online and Offline modes, whereby online mode is defined as connectivity to the server is available for mobile and web app. On the other hand, offline mode is defined when server/internet connectivity is not available.
- e. Mobile and Web app should allow technical support user to add, update and delete server information data.
- f. Mobile and Web app should support multilingual operation. It should allow the user to select one of the desired language options.
- g. Mobile and Web application should also show assets in geographical map mode where markers or icons shall indicate asset locations on the map.

1.3.6. Technical Management and Security

- a. Data encryption for data in flight and for data at rest.
- b. User and Entity Based Behavioral Analytics (UEBA).
- c. 99.999% availability with vendor reported service level agreement metrics.
- d. Disaster Recovery and data protection.
- e. System health dashboard with real-time status on cloud infrastructure and application health down to the service level.
- f. Mitigations for current OWASP Top ten (10) Web Application Security Risks.
- g. Single Sign-On (SSO) using Azure Active Directory (AD) as the identity provide (IDP). Security Assertion Markup Language (SAML) 2.0 or OpenID Connect (OIDC) 1.0/OAuth 2.0. Additionally Azure AD provisioning via SCIM (System for Cross-Domain Identity Management).
- h. Self-service on demand user and security audits.
- i. Cloud threat detection service with easy-to-read security logs and reports.
- j. Security Information and Event Management (SIEM) integration.
- k. Real time monitoring through Streaming Analytics.
- l. Role based access control (RBAC) for users.
- m. System will provide indefinite data retention.
- n. System will provide secure file transfer of data as requested by SDMTS.

1.3.7. Cloud-Native Application

- a. The system is deployed and managed using Continuous Integration/Continuous Delivery pipelines (CI/CD).
- b. Separate Test, Training and Production cloud tenants/environments.
- c. Self-service configuration management.
- d. Change & Release Management.
- e. Advanced release notice with release notes including new features and/or changes.
- f. Product feature update and defect fix history.
- g. Gated feature/change deployments with traffic control.
- h. Cloud services will utilize a high availability service like Azure, GCP or AWS.

1.3.8. Business Intelligence Dashboards and Reporting

- a. Integrates with or includes web-based business analytics and visualization tools that deliver dynamic reports and real-time dashboards of data.
- b. Integrate with SDMTS owned Microsoft Power BI and SQL Server Reporting environments.
- c. Generating reports for the purpose of printing and/or exporting to PDF.
- d. Event and History that includes location history, logon and logoff times, etc.
- e. Runs report on action items.
- f. Runs ad-hoc reports on underlying data sources.
- g. The system will make our analytics data available for MTS use and access through a repository or data warehouse.
- h. Historical GPS location information, the ability to playback or show locations of report creation.

1.3.9. User Interface

- a. Personalized Sticky graphical user interface (GUI).
- b. Multiscreen configuration, allowing users to easily multitask.
- c. Responsive/flex/fluid application that adapts to any screen size.

- d. Runs on a modern browser Chromium version 110 or higher for both Microsoft Edge and Google Chrome.
- e. Progressive Web App (PWA) support providing a native application experience.
- f. Active application handoff experience between clients (such as transition from workstation to mobile device or transition from console to laptop, etc.).
- g. Basic printing capabilities.
- h. Keyboard shortcut keys & customizability.

1.3.10. Training and Documentation

- a. User Guides
- b. Curriculum and Training Materials (Files, Videos, Etc.)
- c. Onsite and Virtual Training Options

1.3.11. Support

- a. Dedicated Support staff including Help Desk with hotline to speak with someone immediately for critical issues.
- b. Online Portal to manage service requests and other support related content.
- c. Service request severity levels and the escalation process.

1.3.12. Business Continuity and Disaster Recovery Plan

Describe your organization's contingency plan and/or business continuity plan for unexpected events. Unexpected events can include, but are not limited to, natural disasters, emergencies, or employee job actions.

1.4. INSTALLATION OF EQUIPMENT

The Contractor and/or designated Subcontractor is responsible for installing camera system on all vehicles. Care must be taken to ensure that MTS vehicles do not sustain structural, mechanical, cosmetic, or electrical damage from installation. The battery and charging system of the vehicle should not be modified in any way.

1.5. INSTALLATION SCHEDULE OF EQUIPMENT

It is anticipated that MTS will request all or the substantial majority of its leased and owned non-revenue vehicles to have the camera system installed after the Notice to Proceed for the Contract is issued. After that time, removal and/or installations of new camera system may occur whenever the leased vehicles are returned, and new leased vehicles are placed into service (e.g. generally every 2-3 years leased vehicles are replaced); whenever a lease vehicle or owned vehicle is damaged in an accident and needs camera system replacement; whenever a camera system is malfunctioning/defective; and/or as otherwise requested by MTS.

1.6. MAINTENANCE OF EQUIPMENT

The Contractor is and shall remain the owner of the equipment, hardware and enclosures operated under the authority of this contract, whether physically attached to the vehicles and whether the Contractor utilizes a subcontractor for maintenance of the equipment.

The Contractor shall:

- a. Provide and install cameras and associated equipment. All components used to provide service, when installed, shall be in good working order.
- b. The minimum response time to any repair shall be within 24 hours. The maximum acceptable downtime is three (3) days. The Contractor shall notify MTS of any equipment with a longer anticipated downtime. MTS may require the Contractor to replace, rather than repair, the affected equipment. Contractor shall document escalation procedures for troubles not repaired within the initial three full business days including names, positions, locations. For this section, a business day is from 8:00 AM to 5:00 PM Pacific time excluding weekends and holidays.
- c. The Contractor shall perform preventive maintenance as may be required by the equipment manufacturer and as necessary to maintain the level of services proposed and provided throughout the term of this contract. Contractor shall provide the following:
 - 1) The necessary labor, parts, materials, and transportation to maintain all equipment and related services equipment in good working order and in compliance with the equipment manufacturer's specifications throughout the term of this contract.
 - 2) The Contractor shall bear responsibility for all equipment, supporting materials, and project coordination.

1.7. OPTIONAL INSTALLATION OF PRIVACY NOTICE SIGNAGE

As an option that could be exercised at the sole discretion of MTS, Contractor shall provide signage that would be posted in the interior of the vehicle that would provide the legally required notice to any individuals in the vehicle that there is a camera system actively recording video and audio.

1.8. REMOVAL OF EQUIPMENT

Any leased equipment replacement during term of contract, the Contractor is responsible for properly disposing of all e-waste removed from vehicles but not limited to cameras, wiring, modems, etc. The e-waste removed shall not be placed into any MTS trash or recycling bins.

The Contractor is also responsible for removing all leased equipment from all the vehicles at the end of the contract term at no additional cost to MTS.

1.9. LOCATION OF INSTALLATION, MAINTENANCE, REPAIR AND/OR REMOVAL OF EQUIPMENT

Contractor shall perform all installation, maintenance, repair and/or removal of equipment at one of the following locations, with scheduling coordination required with MTS:

1. Imperial Avenue Division (IAD)-100 16th Street, San Diego, CA 92101
2. Kearny Mesa Division (KMD)-4630 Ruffner Street, San Diego, CA 92111
3. Trolley Building C - 1535 Newton Avenue, San Diego, CA 92101

4. Trolley Building B - 1341 Commercial Street, San Diego, CA 92010

1.10. SERVICE AGREEMENT

1.10.1. GENERAL

The contractor shall provide removal of any old system, installation of new system, and unscheduled repairs on the vehicle fleet cameras whenever a defect is found by MTS personnel.

The contractor shall provide all tools, supplies, parts, and software during the initial installation, and all technical resources including supervision and labor to provide camera repair, and parts support.

Services may be requested 24 hours a day, seven (7) days a week including holidays. All service requests must be treated with urgency and Contractor must commit to the response times given by MTS to restore services and prevent loss or damage to MTS property.

The Contractor must exercise great caution when performing work. Workmanship throughout the project shall conform to the highest standard of commercially accepted practice for the class of work and shall result in a neat and finished appearance.

In the event of a camera/system failure due to vandalism, the contractor shall diagnose the issue and provide a report of defect findings, and a detailed quote for the cost of repair including parts and installation costs.

MTS personnel shall submit service issues through Contractor's Service Portal. The customer service portal provides optimized services and processes to better receive, track, resolve, and analyze MTS service issues. This tool will also provide MTS with visibility to the status of our support requests.

1.10.2. RESPONSE TIME

The Contractor must respond within twenty-four (24) hours when notified of a camera issue.

The Contractor must arrange for qualified technicians to be available within two (2) business days for repairs needed to any vehicle camera.

The Contractor must remedy any issue discovered by MTS personnel within three (3) working days of the first report.

Contractor shall consider its inventory levels, delivery modes, and labor to meet this response time.

1.10.3. COORDINATION

- a. This contract involves functioning systems and coordination with MTS is critical to avoid interruptions. Contractor shall:

- b. Coordinate the work with MTS and others to assure that where this work interfaces to other trades, those interfaces are provided complete and functional.
- c. Become familiar with the available access and space for equipment and any potential interference requiring coordination. Coordinate with MTS to ensure that adequate electrical services are available. Provide the physical space for access room for installation and maintenance of equipment.
- d. Provide additional support or positioning members as required for the proper installation/repair and operation of equipment, materials, and devices provided as part of this work as approved by MTS.
- e. Provide items necessary to complete this work in conformance with the Contract Documents or the satisfaction of MTS.
- f. Equipment shall be properly mounted with sufficient clearance to meet applicable codes and facilitate operation, observation, and testing. All wires/harness should be secured properly to ensure no chaffing. Use the appropriate fittings to ensure proper grounding, free of ground loops, throughout the entire system.
- g. Installation and repair work shall comply with all applicable "Codes and Standards." Where more than one (1) code or regulation is applicable, the more stringent shall apply.
- h. Only Applicable to Vehicles with existing estimated 68 cameras (Seon and Lytx): Where new equipment is replacing old equipment, Contractor is responsible for removing the old equipment and doing whatever repair work is necessary to meet standards determined by MTS. All equipment removed or salvaged in conjunction with replacements (other than cabling and wires) must be returned to MTS Storeroom within five (5) days. MTS will inform the Contractor the MTS Storeroom location, provide a return template form, and contact information for returns.
- i. Review project documentation. If the Contractor perceives any conflict of ambiguity in the contract documents, they shall seek interpretation from MTS.
- j. Continuously make known to MTS any conflicts discovered which may affect the orderly completion or the specified performance of this work. Cooperate with MTS to accommodate such changes as may be necessary to resolve conflicts found.
- k. Promptly notify MTS in writing of any difficulties which may prevent proper coordination or timely completion of this work. Failure to do so shall constitute acceptance of installation and/or repair.
- l. Verify that intended location(s) for equipment is suitable for the equipment. If any conditions such as temperature, humidity, dust level, or the like require modification, make it known to MTS immediately. Failure to notify MTS of such conditions shall constitute acceptance of the conditions and any later required modifications to the equipment or the environment shall be the sole cost of the Contractor.

1.11. INVOICES

Invoices must be sent to the MTS Accounting Department, via email, at ap@sdmts.com. All invoices must have the Purchase Order and contract number clearly displayed to

ensure timely payment. MTS will not pay on packing slips, receiving documents, delivery documents, or other similar documents. Invoices must be submitted for payment.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) is for service or work provided by a subcontractor and indicate the amount that will be paid to the subcontractor. Contractors must also comply with the prompt payment requirements in the *Prompt Progress Payments* section of the Standard Conditions.

1.12. CONTRACTOR'S INFORMATION SECURITY RESPONSIBILITIES

MTS has established the following responsibilities to ensure the security of vendor operations in accordance with MTS policies, standards, and SOPs. The following procedures outline the expectations for Contractor and any subcontractors:

- A. Contractor Lists: Contractor and any subcontractors must provide an up-to-date list of all staff working on the contract. This list should be promptly updated and submitted to MTS whenever there are staff changes.
- B. ID and Security Clearances: Contractor and subcontractor onsite technicians must be issued MTS security badges/key cards. These badges/key cards should be visibly displayed at all times while on MTS premises.
- C. Incident Reporting: Contractor and subcontractors agree to promptly report any security incidents or breaches involving their systems or access to the MTS network. Detailed incident response procedures should be provided, and cooperation in investigations, including the provision of necessary logs and evidence, is expected.
- D. Change Management: Contractor and subcontracted personnel must adhere to all applicable MTS change control processes and procedures.
- E. Patch Management: Contractor and subcontractors agree to promptly apply security patches and updates to their systems and software used to perform services in this contract.
- F. Data Protection and Privacy: The vendor must protect MTS data in accordance with applicable laws and regulations, including those related to data privacy. Appropriate safeguards should be implemented to ensure the confidentiality, integrity, and availability of MTS data.
- G. Remote Access and Forms: Remote access must be uniquely identifiable, and password management should comply with MTS password standards' reserves the right to determine the applicable virtual private network and encryption technologies used to access their systems and network. Remote access forms must be updated and submitted yearly or upon request by MTS.
- H. Contractor Termination: Upon departure of a contractor from MTS for any reason, Contractor or subcontractors must ensure that all sensitive information is collected and returned to MTS or destroyed within the timeframe specified in the original contract terms.

- I. Keycard and Security Access: Upon termination of the contract or at the request of MTS, Contractor and subcontractors must surrender all MTS-issued identification badges, access cards, equipment, and supplies immediately. Equipment and supplies retained by Contractor or subcontractors must be documented and authorized by the MTS contract POC or their designee.
- J. Auditing and Compliance: Contractor or subcontractor are required to comply with all applicable MTS security Policies, Standards and SOP's. Contractor and subcontractor must comply with MTS when conducting an audit or risk assessment based on contractual obligations and applicable security policy's, standard and SOP's set by MTS.
- K. Disclosure and Sub-Contractor Security: If the vendor engages subcontractors or third-party service providers, they must ensure that these entities adhere to the same vendor information security obligations outlined in this contract. The vendor is responsible for the security practices of their subcontractors and should perform due diligence in selecting and monitoring them.
- L. Training and Awareness: Contractor and subcontractors agree to provide security awareness training to individuals who have access to the MTS network or systems. The training should cover topics such as security policies, data handling, and incident response procedures. If training cannot be provided by Contractor or subcontracted staff, then MTS provided training must be completed on initial access and yearly refresher training.

1.13. [NOT APPLICABLE] BUY AMERICA

1.14. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)

1.15. [NOT APPLICABLE] NO RIGHT TO POST SIGNS

1.16. [NOT APPLICABLE] REPLACEMENT PARTS

1.17. [NOT APPLICABLE] DELIVERY AND ACCEPTANCE

1.18. [NOT APPLICABLE] EXPEDITING

1.19. [NOT APPLICABLE] ACQUISITION OF ROLLING STOCK

Motive Hardware

Motive designs, manufactures, distributes, and deploys our hardware and software as an integrated platform supported by our in-house support team. This results in a world-class experience when working with Motive as we operate independently without reliance on resellers, outsourced support teams, or white-labeled hardware that other companies use to increase their profit margins at the expense of the experience and quality. Devices are also updated via firmware update over the air when the devices are resting and not active. Updates are included in the service cost. The Motive hardware proposed for the Agency's camera solution is composed of the following:



Motive Vehicle Gateway: The Motive Vehicle Gateway uses built-in cellular connectivity to continuously sync driver and vehicle data with the Motive's Driver App and Fleet Dashboard. The Vehicle Gateway supports Live GPS Tracking, Telematics, Electronic Logging Device (ELD), WiFi Hotspot, automatic software updates, Asset Gateway pairing, and integration with Motive Dashcams.

Technical Specs:

- Dimensions: 111 mm x 106 mm x 25 mm (4.4 in x 4.2 in x 1 in)
- Weight: 257 gm (9oz)
- Cellular Network: AT&T 4G LTE with 3G fallback cellular network
- Operating temperature: -40°F-185°F (-40°C-85°C)
- Power: 1.55W-5.5W (<30 mA in Sleep mode)
- Voltage: 8V-32V
- AUX lines: 2 digital inputs
- Vehicle Diagnostic Port (J1939, J1962/OBD-II, J1708)
- Vehicle Specific connections include TMC RP 1226, Volvo, Mac, and Freightliner (varies by model and year)
- Internal memory: 4 months of log data
- Real time disconnection alerts
- Power options to connect into vehicle diagnostic port or hardwire



Motive AI Dashcam: The Motive AI Dashcam helps drivers modify risky behaviors instantly. Powered by a cutting-edge AI processor and advanced computer vision algorithms, Motive has the fastest, most accurate AI dashcam. The AI Dashcam continually records capturing driving events providing in-cab alerts to help drivers improve behavior in the moment with industry leading accuracy. The Motive AI Dashcam comes in "dual facing" (driver and road) model (DC-54) and "road-facing" model (DC-53). The AI Dashcam supports Motive Driver Safety solution's event review, event exoneration, and driver coaching workflows (including self-coaching) to help drivers improve driving behaviors before accidents occur.

Technical Specs:

- 35+ types of events
- 35+ environmental condition tags
- Weight: 257 gm (9oz)
- Dimensions: 115 mm x 60 mm x 27 mm (4.53 in x 2.36 in x 1.06 in)
- Resolution: 1080p (Road-facing) and driver facing)
- Frame rate: 30 fps (Road-facing) 15 fps (Driver-facing)
- Field of view: 150° (Road-facing) 180° (Driver-facing)
- Low light video recording Up to 104 hours of camera storage
- Built-in Quick Capture button
- Video recall: Up to 3 minutes/ request (60 minutes with time lapse recall)
- In-cab audio recording and built in speaker
- Dash cam health data
- Automated collision reporting (FNOL)
- Live streaming & Live images
- Engine-off recording
- Driver Privacy Mode
- Powered through connection into Motive Vehicle Gateway

We also propose the Motive AI Omnicam, which offers the Agency significant added value for its Video Monitoring System in the future. The AI Omnicam provides enhanced coverage and additional insights that can further improve driver safety and fleet management. Integrating Motive's AI Omnicam advanced technology will help the Agency proactively address safety challenges and build a comprehensive safety culture over time.



Motive AI Omnicam: Unlock 360° visibility with AI, and transform blind spots into insights. Regain time, control, and reduce accident costs by seeing more of your fleet's operations. As part of the Motive safety platform, the AI Omnicam provides comprehensive coverage, including side, rear, passenger, and passenger monitoring so you can prioritize key tasks that require your attention. Reduce manual incident reviews, safety checks, and reporting.

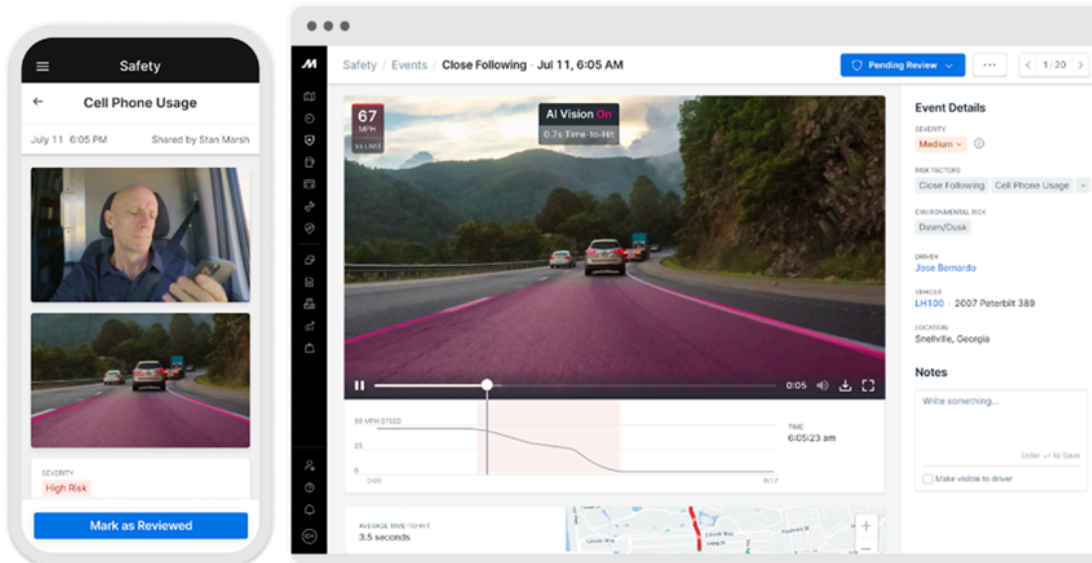
Technical Specs:

- Resolution: 1920 x 1080 (1080p)
- Frame rate: 30 fps
- Pixel size: 2.8 µm x 2.8 µm
- Low light performance: Nightvision with IR illumination
- Dimensions: Camera: 3.23 x 3.23 x 2.64 in (82 x 82 x 67 mm)
- Weight: Camera (including cable): 1.12 lb (510 g)
- Operating Temperature: -22°F to 140°F (-30°C to 60°C)
- Storage Temperature: -40°F to 185°F (-40°C to 85°C)
- Ingress Protection: IP69K
- Power: 12V/24V switched ignition power source or constant power source
- Storage: Built-in Storage: Configurable recording duration: 50-200 hours
- Power: Built-in Battery Backup Power: 2-5 minutes
- Power Consumption: Daylight: 4.7W; Nighttime (Max): 6.4W

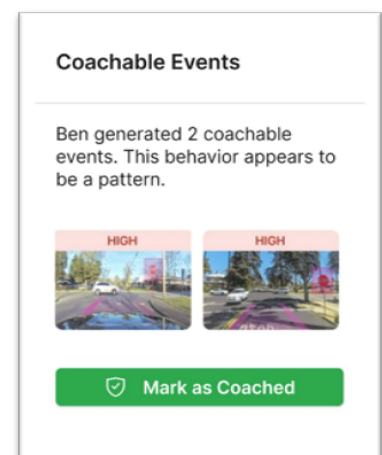
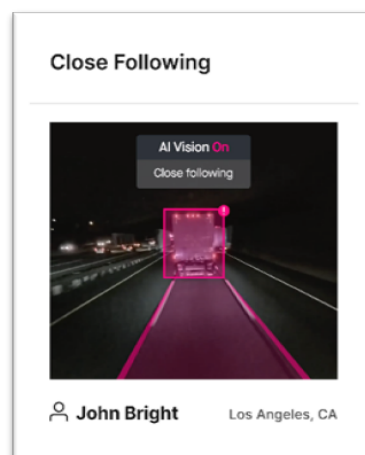
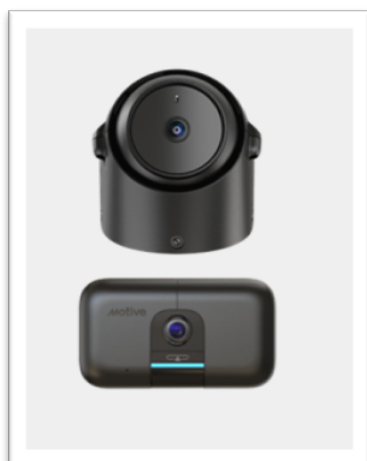
Motive Solution Overview

Driver Safety Program

Motive uses the industry's most accurate AI to monitor and protect drivers, and gives safety managers the tools to prevent accidents and reduce risk through video technology.



- AI Dashcam & AI Omnicam provide 360-degree visibility.
- Our AI detects unsafe driving 4x more accurately than competitors.
- The Motive Safety Team eliminates false positives.
- Coach drivers who need improvement virtually.
- Get HD footage within seconds of an accident.



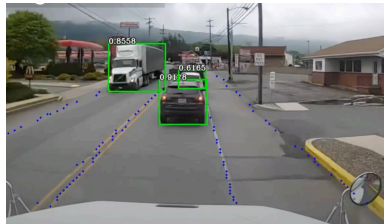
The Motive AI Dashcam leads the industry in AI performance and video quality.

- Motive uses the highest performance AI processor for computer vision from Ambarella.
- Motive detects more than 15+ unsafe behaviors with industry leading accuracy.
- Configurable storage based on video quality: 45-235 hours with long-duration cloud recall options.
- Battery backup recording in case of power loss.
- Driver-centric with visual LED, privacy controls, and quick capture button.

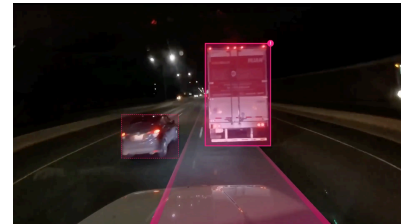
Motive detects 15+ safety events.

- Close Following
- Cell Phone Usage
- Distraction
- Stop Sign Violation
- Seat Belt Violation
- Unsafe Lane Change
- Lane Departure
- Drowsiness
- Obstructed Camera
- Forward Collision Warning
- Ran Red Light
- U-turn Violation
- Sitting Duck
- Collision
- Speeding Over Posted Limit
- Positive Driving
- Hard Braking
- Hard Cornering
- Hard Acceleration

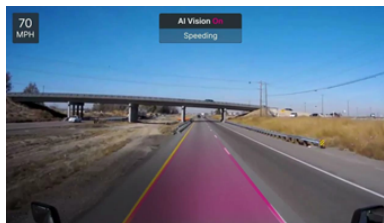
Forward Collision Warning



Unsafe Lane Changes



Speeding



Speed Sign Detection



Close Following






Distraction



Motive uses the industry's most accurate AI to monitor and protect drivers and gives safety managers the tools to prevent accidents and reduce risk.

The Virginia Tech Transportation Institute found that Motive detects unsafe driving behavior 4x more accurately than competitors.

				
Tests		Motive	Samsara	Lytx
Overall	234	86% (9.4 sec)	21% (12 sec)	32% (17 sec)
Texting	39	92% (6.9 sec)	47% (7.5 sec)	18% (14.5 sec)
Phone Call	39	95% (7.5 sec)	38% (5.5 sec)	28% (21 sec)
Phone in Lap	39	53% (7.0 sec)	15% (8.7 sec)	8% (16.2 sec)
Close Following	39	100% (15.5 sec)	28% (26.1 sec)	36% (13.1 sec)
No Seatbelt	39	100% (15.5 sec)	0% (N/A)	100% (20.1 sec)
Rolling Stop	39	77% (3.8 sec)	0% (N/A)	Not tested

Proportion of average successful alerts across all trials (%):

● 67%-100%
 ● 34%-66%
 ● 0%-33%

See dash cams side by side:



Motive customers prevent accidents through active coaching, reduce accident-related expenses, and reduce insurance costs.

Accidents reduced within 4 months of deployment.

57%

Reduction in accident-related costs

30%

Reduction in Insurance costs

21%

Video Quality

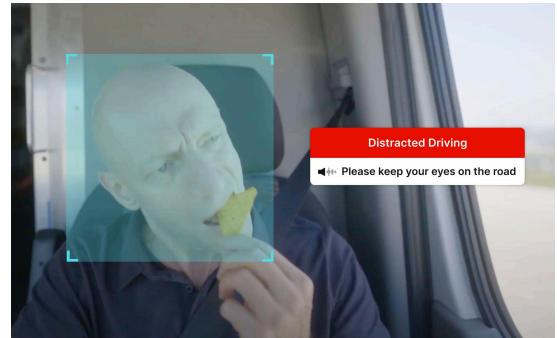
- Motive uses the highest performance AI processor for computer vision from Ambarella.
- Configurable storage based on video quality: 45-235 hours with long-duration cloud recall options.
- Battery backup recording in case of power loss.
- Driver-centric with visual LED, privacy controls, and a quick capture button.

Fatigue and Distracted Driving:

When the driver is not fully attentive to what’s happening on the road, an event is generated as a Distraction event. There are different kinds of distractions, including visual (not looking at the road), manual (not keeping hands on the steering wheel), or cognitive (take the mind off of driving). By default, an event is generated when the driver looks down for at least 3 seconds within a 5 second period when the vehicle is above 10 mph.

Motive provides advanced and customized AI models to prevent at-fault accidents.

- Lane swerving across multiple lanes to detect distraction.
- Advanced drowsiness detection through eye movement.
- Blind spot monitoring on AI Omnicam and visibility directly in live monitoring tablet.



Driver safety profiles and reports help you monitor safety improvements and the effectiveness of your coaching program.

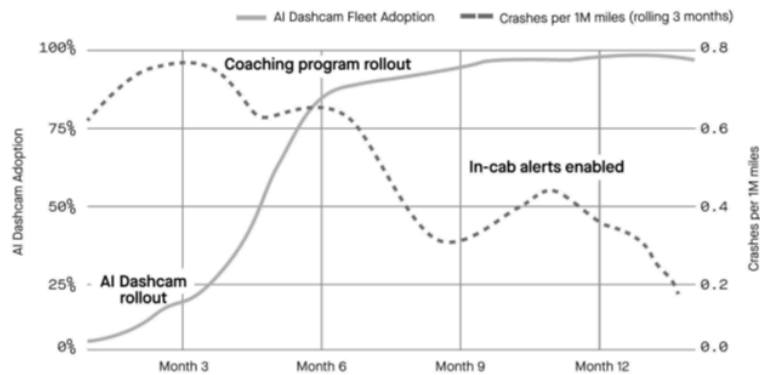
- Driver safety profiles provide a snapshot of individual Safety Scores and unsafe behaviors over time.
- Evaluate the effectiveness of coaching on driver performance with the Safety Score trend.
- For additional insights, the Driver Safety Performance report summarizes driver safety behavior over time, with behaviors broken down by event severity level and coachability.
- The Driver Safety Score report analyzes driver Safety Scores over time, showing the impact each behavior and coaching sessions have on the score.

Motive lets you choose which unsafe behaviors to detect, ensuring you aren't overwhelmed with safety videos or exposed to unnecessary liability.

- Customize the safety experience based on your program's needs; choose which events to detect and the threshold at which they are detected.
- Choose between uploading video or generating in-cab alerts at different thresholds for each unsafe behavior, with the ability to warn drivers before uploading videos for coaching.
- Advanced controls enable safety managers to fully customize threshold settings for each safety event beyond Motive's default options.
- Minimize legal liability by only capturing the behaviors you have time to coach.

A 4,000+ vehicle fleet reduced accidents by up to 75% within months of deployment with in-cab alerts and coaching program.

Behavior	Reduction
Distraction / Cell Phone Use	79%
Seatbelt Violations	79%
Drowsiness	72%
Hard Brakes	67%
Close Following / Tailgating	60%
Unsafe Lane Changes	55%
Lane Cutoffs	42%
Stop Sign Violations	40%
Speeding Above Posted Limit	28%



The Motive Safety Team ensures that your drivers are never punished for false positives.

- Our 400+ person Safety Team watches every safety video and identifies false positives so that your drivers are not penalized for mistakes they didn't make. Your safety managers only see true safety events that deserve their attention.
- The Safety Team adds further context to each safety event such as weather conditions, road conditions, traffic activity, presence of pedestrians, and the driver's state.
- We continuously improve the accuracy of our AI models based on the Safety Team's identification of uncommon scenarios.

Motive identifies and rewards drivers for safe driving behavior.

- Motive accurately detects safe driving behavior, such as a driver creating a safe following distance after being cut off.
- Safety managers can foster an environment where drivers are more open to feedback by first reviewing positive behaviors.

Motive is the only platform that lets safety managers fully customize the Safety Score to suit their specific program needs.

- Pair insights into safe driving habits with a rewards program to incentivize and recognize driver excellence.
- Drivers can receive alerts showcasing safe driving behavior and be rewarded via the Motive Safety Score.

Motive makes it easy to coach those who need improvement virtually through the Driver App, or in-person using Coaching Sessions.

- The Safety Score evaluates driver safety performance over time for an accurate measure of driver risk by capturing all safety behaviors, including positive behaviors.
- Advanced controls enable safety managers to fully customize the weight of each behavior or turn off specific behaviors to better manage their safety program.
- Drivers have full visibility into how they are scored with detailed behavior breakdown.
- Instead of coaching one event at a time, our turnkey coaching workflow identifies drivers and behaviors that require attention.
- Start a Coaching Session for a holistic view of your driver's coachable events, unsafe driving patterns, and coaching history.
- Use Pro Tips to clearly explain each behavior, associated risks, and how to prevent them.
- Enable self-improvement by allowing drivers to view their safety events in the Motive Driver App.

Live streaming, video recall, and engine-off recording give you complete visibility on the road.

- With live streaming it's easy to onboard new drivers, perform virtual ride-alongs, and provide remote training.
- Video recall enables access to additional context for events, with recall of up to 60 minutes of timelapse video in a single request.
- Engine-off recording allows you to record up to 24 hours of video after a vehicle is turned off.
- Live images make it easy to check in on drivers with real time snapshots of their trip.

Motive leads the industry in accident detection, and is the only platform that alerts first responders.

- Motive automatically detects 99% of severe accidents and uploads footage within seconds, minimizing risk of losing footage.
- The Motive Safety Team reviews all collisions to ensure validity. Our AI model, trained on 10,000+ collisions, is

regularly updated for continuous improvement.

- First responder and emergency services are alerted to arrive within seconds of accident detection.
- Safety managers are alerted immediately with video and automatic collision report.
- Drivers can access collision video immediately in the Driver App for roadside exoneration. They also get a customizable checklist to capture relevant accident information.
- The Motive AI Dashcam contains an industrial grade battery, ensuring that video footage is captured even in a catastrophic accident.

Motive protects your drivers and prevents vehicle theft with the Panic Button and Engine Immobilizer.

- The Motive Panic Button allows drivers to discreetly alert managers of an emergency situation. Managers are immediately notified via SMS and email, along with GPS location and dashcam footage.
- The Motive Engine Immobilizer allows fleet managers to remotely disable a vehicle in response to an emergency or as part of standard operations to prevent theft or misuse.

Preventive maintenance helps you stay ahead of issues to minimize equipment downtime.

- Avoid costly, unexpected breakdowns with real-time fault code alerts, worker-reported defects, and custom service reminders.
- Schedule timely service reminders based on engine hours, distance, or time.
- To catch defects early, customize inspection forms to cover critical checkpoints for all equipment types.
- Enable workers to conduct thorough inspections via the Driver App, tagging defects and adding detailed notes and photos for clarity.
- Track maintenance history, including service costs and dates, and store key documents like invoices and warranties in one system.

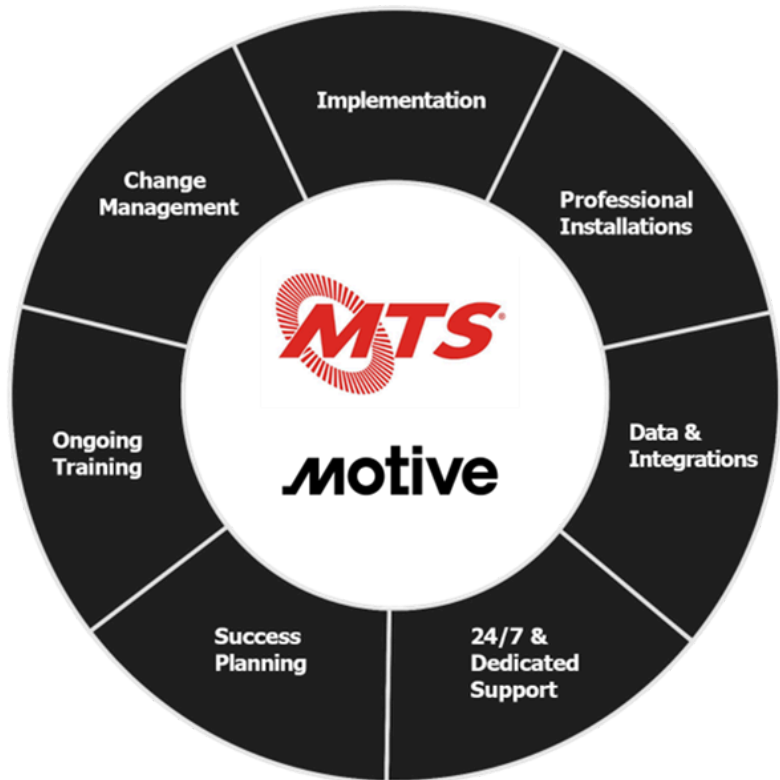
Follow Mode and live streaming enhance oversight by connecting you directly with what's happening on the road in real time.

- Follow Mode allows real-time vehicle tracking, perfect for monitoring critical deliveries and high-value assets.
- Follow Mode provides detailed vehicle information, including speed and fuel levels, enhancing situational awareness for fleet managers.
- Live streaming and trip images enables an up-to-the-moment view of your fleet operations, giving you a look into exactly what's happening.

System Maintenance and Support

Our responsibility is to make it easy for customers to achieve their most aspirational business goals through Motive's suite of products and services.

- **Phone Support: (855-434-3564)**
Ideal for customers who prefer a direct and immediate response, our phone support is staffed with knowledgeable representatives ready to assist with any inquiries or issues.
- **Email Support (support@gomotive.com):** For less urgent matters, customers can reach out to us via email. This channel is particularly useful for issues that may require detailed explanations or the sharing of documents.
- **Chat Support:** Our chat support offers real-time assistance and is ideal for quick queries or troubleshooting. This channel provides an efficient way to get answers without interrupting the user's workflow.



Tiered Support Model

Motive employs a tiered support model to ensure the Agency's issues are resolved efficiently and effectively by leveraging the appropriate level of expertise.

- **Tier-1 Support:** This level handles general inquiries and initial troubleshooting. Tier-1 is designed to provide quick resolutions for common issues, ensuring that customers can continue using our services with minimal disruption.
- **Technical Support (Tier-2):** For more complex or technical problems, cases are escalated to Tier-2. Our highly skilled technical support team addresses these issues with specialized expertise, ensuring that even the most challenging problems are resolved.

MTS Doc. No. G950.0-24 GPS Service and Camera System Services RFP

MTS COST FORM

PROPOSER: Motive Technologies, Inc.

LABOR				Base Year 1		Base Year 2		Base Year 3		Base Year 4		Base Year 5		GRAND TOTAL
Item	Description	Est. Annual Qty. *	Unit of Measure	Rate	Extended Total	Rate	Extended Total	Rate	Extended Total	Rate	Extended Total	Rate	Extended Total	
1	Monthly Fee for Lease of Equipment (2-Cameras)	175	each	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2	Monthly Fee for Lease of Equipment (3-Cameras)	16	each	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
3	Licensing Fee per month	12	each	\$ 7,420.00	\$ 89,040.00	\$ 7,420.00	\$ 89,040.00	\$ 7,420.00	\$ 89,040.00	\$ 7,420.00	\$ 89,040.00	\$ 7,420.00	\$ 89,040.00	
4	Initial Installation of Equipment (All vehicles)	1	each	\$ -	\$ -									
5	30 days Video/Audio Retention per month (Optional)	12	each	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
6	Initial Privacy Notice Posting (Optional)	175	each	\$ -	\$ -									
7	Removing equipment and installing in new vehicles (end of vehicle lease)	50	each	\$ 105.00	\$ 5,250.00	\$ 105.00	\$ 5,250.00	\$ 105.00	\$ 5,250.00	\$ 105.00	\$ 5,250.00	\$ 105.00	\$ 5,250.00	
8	Removal of equipment at end of contract (All Vehicles)	1										\$ 105.00	\$ 18,375.00	
Total (BASE)					\$ 94,290.00		\$ 94,290.00		\$ 94,290.00		\$ 94,290.00		\$ 112,665.00	\$ 489,825.00

**The above quantities are for bidding purposes only and are based on MTS' current usage. They represent what MTS anticipates as a requirement, but MTS does not guarantee this quantity. The actual quantity ordered may be more or less than what is anticipated on the pricing form, and it is dictated by MTS actual requirements and the available funding at the time each order is initiated.*

MTS Doc. No. G2950.0-24 GPS Service and Camera System Services RFP
MTS Cost Form

PROPOSER: Motive Technologies, Inc.

Labor				Option Year 1		Option Year 2		Option Year 3		GRAND TOTAL
Item	Description	Est. Annual Qty. *	Unit of Measure	Rate	Extended Total	Rate	Extended Total	Rate	Extended Total	
1	Monthly Fee for Lease of Equipment (2-Cameras)	175	each	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2	Monthly Fee for Lease of Equipment (3-Cameras)	16	each	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
3	Licensing Fee per month	12	each	\$ 7,420.00	\$ 89,040.00	\$ 7,420.00	\$ 89,040.00	\$ 7,420.00	\$ 89,040.00	
4	30 days Video/Audio Retention (Optional)	12	each	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
5	Removing equipment and installing in new vehicles (end of vehicle lease)	50	each	\$ 105.00	\$ 5,250.00	\$ 105.00	\$ 5,250.00	\$ 105.00	\$ 5,250.00	
6	Removal of of equipment at end of contract (All Vehicles)	175								
Total (OPTIONS)					\$ 94,290.00		\$ 94,290.00		\$ 94,290.00	\$ 282,870.00

**The above quantities are for bidding purposes only and are based on MTS' current usage. They represent what MTS anticipates as a requirement, but MTS does not guarantee this quantity. The actual quantity ordered may be more or less than what is anticipated on the pricing form, and it is dictated by MTS actual requirements and the available funding at the time each order is initiated.*

**MTS Doc. No. G2950.0-24 GPS Service and Camera System Services
RFP**

MTS Cost Form

PROPOSER: Motive Technologies, Inc.

Description	Total
BASE YEAR 1	\$ 94,290.00
BASE YEAR 2	\$ 94,290.00
BASE YEAR 3	\$ 94,290.00
BASE YEAR 4	\$ 94,290.00
BASE YEAR 5	\$ 112,665.00
SUBTOTAL (BASE)	\$ 489,825.00
OPTION YEAR 1 (YEAR 6)	\$ 94,290.00
OPTION YEAR 2 (YEAR 7)	\$ 94,290.00
OPTION YEAR 3 (YEAR 8)	\$ 94,290.00
SUBTOTAL (OPTION)	\$ 282,870.00

GRAND TOTAL	\$ 772,695.00
--------------------	----------------------

		BASE YEAR 1			BASE YEAR 2			BASE YEAR 3			BASE YEAR 4			BASE YEAR 5		
Item	Description	Unit Price	Est Qty	Extended Cost	Unit Price	Est. Qty	Extended Cost	Unit Price	Est. Qty	Extended Cost	Unit Price	Est. Qty	Extended Cost	Unit Price	Est. Qty	Extended Cost
1	Camera	\$ 450.00	39	\$ 17,550.00	\$ 450.00	39	\$ 17,550.00	\$450.00	39	\$17,550.00	\$ 450.00	39	\$ 17,550.00	\$ 450.00	39	\$ 17,550.00
2	Camera Mount	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00
3	Harness	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00
4	DVR	N/A			N/A			N/A			N/A			N/A		
5	As-Needed Repair and Service (Non-Warranty)	N/A			N/A			N/A			N/A			N/A		
6	Swapping Cameras from vehicle to the next	\$ 250.00	39	\$ 9,750.00	\$ 250.00	39	\$ 9,750.00	\$250.00	39	\$ 9,750.00	\$ 250.00	39	\$ 9,750.00	\$ 250.00	39	\$ 9,750.00
7	Fleet Increase Camera Install Cost	\$ 205.00	39	\$ 7,995.00	\$ 205.00	39	\$ 7,995.00	\$205.00	39	\$ 7,995.00	\$ 205.00	39	\$ 7,995.00	\$ 205.00	39	\$ 7,995.00

		OPTION YEAR 1			OPTION YEAR 2			OPTION YEAR 3		
Item	Description	Unit Price	Est. Qty	Extended Cost	Unit Price	Est. Qty	Extended Cost	Unit Price	Est. Qty	Extended Cost
1	Camera	\$ 450.00	39	\$ 17,550.00	\$ 450.00	39	\$ 17,550.00	\$450.00	39	\$17,550.00
2	Camera Mount	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00
3	Harness	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00	\$ 25.00	39	\$ 975.00
4	DVR	N/A			N/A			N/A		
5	As-Needed Repair and Service (Non-Warranty)	N/A			N/A			N/A		
6	Swapping Cameras from vehicle to the next	\$ 250.00	39	\$ 9,750.00	\$ 250.00	39	\$ 9,750.00	\$250.00	39	\$ 9,750.00
7	Fleet Increase Camera Install Cost	\$ 205.00	39	\$ 7,995.00	\$ 205.00	39	\$ 7,995.00	\$205.00	39	\$ 7,995.00

Description	Total
Base Year 1	\$ 37,245.00
Base Year 2	\$ 37,245.00
Base Year 3	\$ 37,245.00
Base Year 4	\$ 37,245.00
Base Year 5	\$ 37,245.00
Total (Base)	\$ 186,225.00
Option Year 1	\$ 37,245.00
Option Year 2	\$ 37,245.00
Option Year 3	\$ 37,245.00
Total (Option)	\$ 111,735.00
Grand Total	\$ 297,960.00



**Metropolitan
Transit
System**

Agenda Item No. 7

**MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS**

May 15, 2025

SUBJECT:

Increased Authorization for Legal Services Contracts to Pay Projected Expenses through Fiscal Year 2026 (FY26) – Contract Amendment

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute amendments to twelve (12) legal services contracts increasing the funding authorization by \$2,770,000.00 to cover anticipated expenses through FY26.

Budget Impact

The total cost of these amendments is estimated to be \$2,770,000.00. Sufficient funding has been programmed to pay these expenses in the current operating and capital budgets. The departments from which these expenses are drawn include Risk & Claims, Land Management, Legal, Human Resources (HR), Finance, and the San Diego & Arizona Eastern Railway (SD&AE).

DISCUSSION:

On October 11, 2018 (Agenda Item (AI) 12), the Board established a panel of qualified law firms to assist MTS with various legal matters on an as-needed basis. Thereafter, MTS began contracting with the approved firms for designated amounts. The firms provide different specialties of law, such as tort liability, workers' compensation, employment practices, real estate/land management, environmental and taxation. Twelve (12) of these firms will require contract increases to pay current and anticipated legal expenses through FY26.

MTS currently employs three in-house attorneys: General Counsel, Deputy General Counsel, and Staff Attorney. The General Counsel position represents the Board at public meetings, sits on the executive management team, oversees outside litigation in collaboration with the Risk Department, supervises Internal Audit department, and handles various legal matters such as review of contracts, real estate transactions, public records requests, Brown Act compliance, regulatory compliance, ethics questions, and oversight of various outside counsel assignments. The Deputy General Counsel position focuses on various regulatory compliance matters, For-Hire Vehicle (FHV) Program Administration, Title VI, ADA, and other matters in support of the



Agency and the General Counsel. The Staff Attorney position focuses on procurement compliance, contract reviews, and other matters. The legal services panel is used on an as-needed basis to provide expert advice on various matters such as public contracting requirements, taxation, environmental compliance, labor and employment, federal railroad law and other specialized areas of the law where MTS does not have sufficient in-house expertise or capacity. MTS also assigns all litigation matters to outside counsel.

Legal services needs are estimated every year during the MTS budget process. Each department or capital project that may incur legal fees evaluates ongoing matters and upcoming projects or cases and builds the estimated legal services costs into each department's budget. Most legal services costs are borne by the Risk Department (for tort liability and workers' compensation cases), the HR Department (for labor and employment advice and litigation), and the Legal Department (for general advice and special projects). Storm water compliance matters are billed to the Storm Water Department budget, and matters involving the Desert Line or legal issues related to property owned by the SD&AE are billed to the SD&AE budget. FHV related legal expense are billed to that department, which is funded by FHV permit fees.

After the budget is approved, and at the start of the fiscal year, each department looks at the applicable law firm contracts for matters that are overseen by that department. If it appears that there is sufficient Board-authorized funding on a law firm contract to handle the anticipated needs for the fiscal year (as determined during the budget process), then no action is taken on the contract. If the contract funding is below the estimated needs for the new fiscal year, then a contract amendment adding funding is processed according to Board Policy 41. The contracts proposed for today's action require Board authority under Board Policy 41.

Individual cases are assigned to a given firm based on the subject area of the case, the expertise of a particular law firm, the capacity of the firm to handle the case, and the number of MTS cases already being handled by that firm. Adding funding authority does not guarantee that MTS will assign a case to a particular law firm or otherwise limit MTS's ability to determine the best firm on MTS's Board-approved legal services panel to handle a particular matter. If the anticipated need is not realized, then the excess funding authority will be carried over to the next fiscal year.

The proposed contract increases included in today's proposed action are based upon each firm's current caseload, the likelihood that a particular case may go to trial, and anticipated future litigation assigned to these firms in the current fiscal year. The following table includes the contracts needing Board approval to increase the dollar amount for legal services contracts for FY26:

#	Firm Name	Area of Law	Contract No.	Current Contract Amount	Proposed Increase Amount	Total Contract Amount
1	Laughlin Falbo Levy & Moresi	Workers' Compensation	G2216.12-19	\$ 586,911.71	\$100,000	\$686,911.71
2	Law Offices of Eldon Floyd	Workers' Compensation	G2214.11-19	\$325,000.00	\$50,000	\$375,000.00
3	Trovillion Inveiss & Demakis	Workers' Compensation	G2218.10-19	\$ 625,173.24	\$100,000	\$725,173.24
4	Llarena Murdock	Workers' Compensation	G2761.4-23	\$220,000.00	\$75,000	\$295,000.00
5	Dietz Gilmore	Workers' Compensation	G2617.6-22	\$220,000.00	\$120,000	\$340,000.00
6	Wheatley Bingham & Baker	Tort Liability	G2209.11-19	\$ 2,442,369.09	\$600,000	\$3,042,369.09
7	Horton, Oberrecht & Kirkpatrick	Tort Liability	G2326.9-20	\$500,000.00	\$175,000	\$675,000.00
8	Kahana & Feld	Tort Liability	G2782.3-24	\$ 677,725.00	\$100,000	\$777,725.00
9	McDougal Boehmer	Tort Liability	G2783.4-24	\$ 677,725.00	\$50,000	\$727,725.00
10	Stoel Rives	General	G2749.6-23	\$400,000.00	\$100,000	\$500,000.00
11	Hanson Bridgett	General	G2201.8-19	\$ 372,069.60	\$300,000	\$672,069.60
12	Meyers Nave	General	G2202.12-19	\$ 1,625,000.00	\$1,000,000	\$2,625,000.00
Totals				\$8,671,973.64	\$2,770,000.00	\$11,441,973.64

That the MTS Board of Directors authorize the CEO to execute amendments to the above listed twelve (12) legal services contracts increasing the funding authorization by \$2,770,000.00 to cover anticipated expenses through FY26.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, Mark.Olson@sdmts.com



**Metropolitan
Transit
System**

Agenda Item No. 8

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Operations Budget Status Report for March 2025

INFORMATIONAL ONLY

Budget Impact

None.

DISCUSSION:

This report summarizes the year-to-date operating results for March 2025 compared to the Fiscal Year (FY) 2025 amended budget for the San Diego Metropolitan Transit System (MTS). Attachment A-1 combines the Operations, Administrations, and Other Activities results for March 2025. Attachment A-2 details the March 2025 Combined Operations results and Attachments A-3 to A-7 present budget comparisons for each MTS operation. Attachment A-8 details budget comparisons for MTS Administration, and Attachment A-9 provides March 2025 results for MTS's Other Activities (For Hire Vehicle Administration (FHVA)/San Diego and Arizona Eastern Railway Company (SD&AE)).

MTS NET-OPERATING SUBSIDY RESULTS

As indicated within Attachment A-1, for the year-to-date period ending March 2025, MTS's net-operating income favorable variance totaled \$562,000 (0.2%). Operations produced a \$141,000 (-0.1%) unfavorable variance and the administrative/other activities areas were favorable by \$703,000 (20.1%).

MTS COMBINED RESULTS

Operating Revenues. Year-to-date combined revenues through March 2025 were \$81,285,000 compared to the year-to-date budget of \$81,682,000, representing a \$397,000 (-0.5%) unfavorable variance. Year-to-date passenger revenue was unfavorable to budget by \$579,000 (-1.0%) through March, primarily due to average fare. Average fare in February and March (\$1.00/passenger) is \$0.06 (6.9%) higher than last fiscal year's average fare primarily due to fare enforcement changes. This trails the budgeted forecast of average fare from February through June at \$1.04 (-2.0%).



Other operating revenue was favorable by \$182,000 (0.8%), primarily due to land management rental income.

Operating Expenses. Year-to-date combined expenses through March 2025 were \$325,278,000 compared to the budget of \$326,237,000, resulting in a \$959,000 (0.3%) favorable variance.

Personnel Costs. Year-to-date personnel-related costs totaled \$144,628,000, compared to a budgetary figure of \$145,312,000, producing a favorable variance of \$685,000 (0.5%). This is primarily due to favorable code compliance wages within Administration and operator wages within Rail Operations. Personnel variances are expected to tighten up considerably in the remaining months, as the 7.0% wage increases included in the newest collective bargaining agreement for hourly Rail employees will take effect in April 2025.

Outside Services and Purchased Transportation. Outside services in total through March 2025 were \$117,592,000, compared to a budget of \$117,722,000, resulting in a favorable variance of \$131,000. This is primarily due to favorable contracted security services and IT general outside services within Administration.

Materials and Supplies. Total year-to-date materials and supplies expenses were \$14,041,000, compared to a budgetary figure of \$14,023,000, resulting in an unfavorable variance of \$18,000 (-0.1%). This is primarily due to unfavorable revenue vehicle parts and maintenance supplies within Bus Operations.

Energy. Total year-to-date costs were \$34,701,000, compared to the budget of \$35,160,000, resulting in a favorable variance of \$460,000 (1.3%). This is primarily due to favorable commodity rates for compressed natural gas (CNG) and electricity.

Risk Management. Total year-to-date expenses for risk management were \$7,704,000 compared to the budget of \$7,341,000, resulting in an unfavorable variance totaling \$362,000 (-4.9%). This is primarily due to a large claim payout within Bus Operations.

General and Administrative. The year-to-date general and administrative costs were \$4,984,000 through March 2025, compared to a budget of \$5,046,000, resulting in a favorable variance of \$62,000 (1.2%).

Vehicle and Facility Leases. The year-to-date vehicle and facilities lease costs were \$1,629,000 compared to the budget of \$1,631,000, resulting in a favorable variance of \$3,000 (0.2%).

YEAR-TO-DATE SUMMARY

The March 2025, year-to-date net-operating income totaled a favorable variance of \$562,000 (0.2%). These factors include favorable variances in other operating revenue, personnel costs, outside services, energy, general and administrative costs, and vehicle/facility leases, partially offset by unfavorable passenger revenue, materials and supplies, and risk management.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, mark.olson@sdmts.com

Attachment: A. March Operating Budget Result

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
MTS
CONSOLIDATED
COMPARISON TO BUDGET - FISCAL YEAR 2025
MARCH 31, 2025
(in \$000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	\$ 57,186	\$ 57,766	\$ (579)	-1.0%
Other Revenue	24,098	23,916	182	0.8%
Total Operating Revenue	\$ 81,285	\$ 81,682	\$ (397)	-0.5%
Personnel costs	\$ 144,628	\$ 145,312	\$ 685	0.5%
Outside services	117,592	117,722	131	0.1%
Materials and supplies	14,041	14,023	(18)	-0.1%
Energy	34,701	35,160	460	1.3%
Risk management	7,704	7,341	(362)	-4.9%
General & administrative	4,984	5,046	62	1.2%
Vehicle/facility leases	1,629	1,631	3	0.2%
Administrative Allocation	(0)	(0)	(0)	0.0%
Total Operating Expenses	\$ 325,278	\$ 326,237	\$ 959	0.3%
Operating Income (Loss)	\$ (243,993)	\$ (244,555)	\$ 562	0.2%
Total Non-Operating Activities	287	356	(69)	-19.4%
Income (Loss) before Capital Contributions	\$ (243,707)	\$ (244,199)	\$ 493	-0.2%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
CONSOLIDATED
COMPARISON TO BUDGET - FISCAL YEAR 2025
MARCH 31, 2025
(in \$000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	\$ 57,186	\$ 57,766	\$ (579)	-1.0%
Other Revenue	1,019	994	25	2.5%
Total Operating Revenue	\$ 58,205	\$ 58,760	\$ (555)	-0.9%
Personnel costs	\$ 118,845	\$ 119,235	\$ 390	0.3%
Outside services	96,442	96,415	(27)	0.0%
Materials and supplies	14,025	14,002	(22)	-0.2%
Energy	33,709	34,161	452	1.3%
Risk management	6,997	6,597	(401)	-6.1%
General & administrative	841	861	20	2.3%
Vehicle/facility leases	1,295	1,297	1	0.1%
Administrative Allocation	27,254	27,254	(0)	0.0%
Total Operating Expenses	\$ 299,408	\$ 299,821	\$ 413	0.1%
Operating Income (Loss)	\$ (241,203)	\$ (241,061)	\$ (141)	-0.1%
Total Non-Operating Activities	287	240	46	19.4%
Income (Loss) before Capital Contributions	\$ (240,916)	\$ (240,821)	\$ (95)	0.0%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
BUS - DIRECTLY OPERATED (SAN DIEGO TRANSIT CORP.)
COMPARISON TO BUDGET - FISCAL YEAR 2025
MARCH 31, 2025
(in \$000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	\$ 15,263	\$ 15,382	\$ (118)	-0.8%
Other Revenue	23	27	(5)	-16.8%
Total Operating Revenue	\$ 15,286	\$ 15,409	\$ (123)	-0.8%
Personnel costs	\$ 73,333	\$ 73,384	\$ 51	0.1%
Outside services	1,546	1,580	34	2.2%
Materials and supplies	5,837	5,812	(25)	-0.4%
Energy	5,749	5,854	105	1.8%
Risk management	3,032	2,611	(421)	-16.1%
General & administrative	405	410	5	1.2%
Vehicle/facility leases	435	433	(2)	-0.6%
Administrative Allocation	3,778	3,778	(0)	0.0%
Total Operating Expenses	\$ 94,115	\$ 93,862	\$ (253)	-0.3%
Operating Income (Loss)	\$ (78,829)	\$ (78,453)	\$ (376)	-0.5%
Total Non-Operating Activities	-	-	-	-
Income (Loss) before Capital Contributions	\$ (78,829)	\$ (78,453)	\$ (376)	0.5%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
RAIL (SAN DIEGO TROLLEY INC.)
COMPARISON TO BUDGET - FISCAL YEAR 2025
MARCH 31, 2025
(in \$000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	\$ 23,105	\$ 23,191	\$ (86)	-0.4%
Other Revenue	996	967	29	3.0%
Total Operating Revenue	\$ 24,101	\$ 24,158	\$ (57)	-0.2%
Personnel costs	\$ 44,816	\$ 45,167	\$ 352	0.8%
Outside services	9,015	9,055	40	0.4%
Materials and supplies	8,072	8,082	10	0.1%
Energy	20,785	21,169	384	1.8%
Risk management	3,950	3,970	20	0.5%
General & administrative	429	441	11	2.6%
Vehicle/facility leases	579	569	(10)	-1.8%
Administrative Allocation	21,230	21,230	(0)	0.0%
Total Operating Expenses	\$ 108,876	\$ 109,682	\$ 806	0.7%
Operating Income (Loss)	\$ (84,775)	\$ (85,525)	\$ 749	0.9%
Total Non-Operating Activities	46	-	46	-
Income (Loss) before Capital Contributions	\$ (84,729)	\$ (85,525)	\$ 796	-0.9%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
BUS - CONTRACTED SERVICES (FIXED ROUTE)
COMPARISON TO BUDGET - FISCAL YEAR 2025
MARCH 31, 2025
(in \$000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	\$ 17,675	\$ 18,031	\$ (356)	-2.0%
Other Revenue	-	-	-	-
Total Operating Revenue	\$ 17,675	\$ 18,031	\$ (356)	-2.0%
Personnel costs	\$ 539	\$ 527	\$ (12)	-2.3%
Outside services	71,458	71,334	(124)	-0.2%
Materials and supplies	116	108	(7)	-6.9%
Energy	6,245	6,233	(12)	-0.2%
Risk management	-	-	-	-
General & administrative	5	6	1	20.6%
Vehicle/facility leases	24	38	14	36.7%
Administrative Allocation	1,851	1,851	(0)	0.0%
Total Operating Expenses	\$ 80,236	\$ 80,096	\$ (140)	-0.2%
Operating Income (Loss)	\$ (62,561)	\$ (62,066)	\$ (496)	-0.8%
Total Non-Operating Activities	-	-	-	-
Income (Loss) before Capital Contributions	\$ (62,561)	\$ (62,066)	\$ (496)	0.8%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
BUS - CONTRACTED SERVICES (PARATRANSIT)
COMPARISON TO BUDGET - FISCAL YEAR 2025
MARCH 31, 2025
(in \$000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	\$ 1,143	\$ 1,162	\$ (19)	-1.7%
Other Revenue	-	-	-	-
Total Operating Revenue	\$ 1,143	\$ 1,162	\$ (19)	-1.7%
Personnel costs	\$ 158	\$ 157	\$ (1)	-0.8%
Outside services	14,182	14,206	23	0.2%
Materials and supplies	-	-	-	-
Energy	930	906	(25)	-2.7%
Risk management	15	15	-	0.0%
General & administrative	2	4	2	56.4%
Vehicle/facility leases	257	257	0	0.0%
Administrative Allocation	396	396	0	0.0%
Total Operating Expenses	\$ 15,940	\$ 15,940	\$ (0)	0.0%
Operating Income (Loss)	\$ (14,797)	\$ (14,778)	\$ (19)	-0.1%
Total Non-Operating Activities	-	-	-	-
Income (Loss) before Capital Contributions	\$ (14,797)	\$ (14,778)	\$ (19)	0.1%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS
CORONADO FERRY
COMPARISON TO BUDGET - FISCAL YEAR 2025
MARCH 31, 2025
(in \$000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	\$ -	\$ -	\$ -	-
Other Revenue	-	-	-	-
Total Operating Revenue	\$ -	\$ -	\$ -	-
Personnel costs	\$ -	\$ -	\$ -	-
Outside services	240	240	-	0.0%
Materials and supplies	-	-	-	-
Energy	-	-	-	-
Risk management	-	-	-	-
General & administrative	-	-	-	-
Vehicle/facility leases	-	-	-	-
Administrative Allocation	-	-	-	0.0%
Total Operating Expenses	\$ 240	\$ 240	\$ -	0.0%
Operating Income (Loss)	\$ (240)	\$ (240)	\$ -	0.0%
Total Non-Operating Activities	240	240	-	0.0%
Income (Loss) before Capital Contributions	\$ -	\$ -	\$ -	-

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
ADMINISTRATION
CONSOLIDATED
COMPARISON TO BUDGET - FISCAL YEAR 2025
MARCH 31, 2025
(in \$000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	\$ -	\$ -	\$ -	-
Other Revenue	22,051	21,911	140	0.6%
Total Operating Revenue	\$ 22,051	\$ 21,911	\$ 140	0.6%
Personnel costs	\$ 25,313	\$ 25,611	\$ 299	1.2%
Outside services	21,103	21,249	146	0.7%
Materials and supplies	16	21	4	20.1%
Energy	989	996	7	0.7%
Risk management	662	701	39	5.6%
General & administrative	4,089	4,127	38	0.9%
Vehicle/facility leases	316	318	2	0.7%
Administrative Allocation	(27,263)	(27,263)	0	0.0%
Total Operating Expenses	\$ 25,226	\$ 25,761	\$ 535	2.1%
Operating Income (Loss)	\$ (3,175)	\$ (3,850)	\$ 675	17.5%
Total Non-Operating Activities	-	115	(115)	-
Income (Loss) before Capital Contributions	\$ (3,175)	\$ (3,734)	\$ 560	-15.0%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OTHER ACTIVITIES
CONSOLIDATED
COMPARISON TO BUDGET - FISCAL YEAR 2025
MARCH 31, 2025
(in \$000's)

	YEAR TO DATE			
	ACTUAL	BUDGET	VARIANCE	VAR. %
Passenger Revenue	\$ -	\$ -	\$ -	-
Other Revenue	1,028	1,011	17	1.7%
Total Operating Revenue	\$ 1,028	\$ 1,011	\$ 17	1.7%
Personnel costs	\$ 470	\$ 466	\$ (4)	-0.8%
Outside services	47	59	12	20.1%
Materials and supplies	-	0	0	-
Energy	3	3	1	15.6%
Risk management	44	43	(1)	-1.5%
General & administrative	54	58	4	6.5%
Vehicle/facility leases	18	17	(1)	-6.0%
Administrative Allocation	8	8	0	0.0%
Total Operating Expenses	\$ 644	\$ 655	\$ 11	1.6%
Operating Income (Loss)	\$ 384	\$ 356	\$ 28	-7.8%
Total Non-Operating Activities	-	-	-	-
Income (Loss) before Capital Contributions	\$ 384	\$ 356	\$ 28	7.8%



**Metropolitan
Transit
System**

Agenda Item No. 9

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

First Responder Network (FirstNet) Services – Contract Amendment

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors to:

- 1) Ratify Amendment No. 3 to MTS Doc. No. G2377.0-20 (Attachment A), with AT&T Corp. (AT&T), for the static Internet Protocol (IP) address block setup and recurring monthly charges at no cost due to available extra contract capacity; and**
- 2) Authorize the Chief Executive Officer (CEO) to Execute Amendment No. 4 to MTS Doc. No G2377.0-20 (in substantially the same format as Attachment B), with AT&T, to extend the agreement through August 11, 2029, to coincide with the amended National Association of State Procurement Offices (NASPO) ValuePoint Cooperative Purchasing Agreement Master Agreement (Master Agreement) 149 exercised option.**

Budget Impact

The total cost of amendment 4 is estimated to be \$2,546,824.00, and the total contract cost of the services is estimated to be \$5,458,172.00 through August 11, 2029. The monthly cost of these services is \$51,976.00. These services will be funded by the Information Technology (IT) Operations Budget account 661010-571250.

DISCUSSION:

FirstNet Services is a nationwide wireless broadband network for first responders that was built and deployed through a public-private partnership between the federal government and AT&T. FirstNet offers a public safety communications network built and customized to meet first responders' needs. As a member of FirstNet, MTS will have dedicated, reliable, and prioritized communications during any emergency, such as earthquakes, fires, or blackouts.

In March 2017, FirstNet awarded a 25-year, \$6.5 billion contract solely to AT&T to build and maintain the nationwide network for public safety. FirstNet provided AT&T with 20 megahertz (MHz) of the broadband spectrum, which AT&T can monetize for public safety and non-public safety use.

1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • sdmts.com

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.



State and federal rules allow agencies like MTS to meet competitive procurement requirements in some instances by accessing cooperative purchasing programs that have been competitively negotiated by other public agencies. For this contract, MTS utilized the State of Utah Master Agreement with AT&T under the NASPO ValuePoint Cooperative Purchasing Program effective December 6, 2019. The stated pricing is based on Master Agreement No. MA149 with Participating Addendum (PA) for San Diego MTS, which allows MTS to acquire FirstNet Service at a competitive rate.

On April 16, 2020 (Agenda Item (AI) 8), the MTS Board authorized an agreement with AT&T to provide FirstNet broadband services to 902 devices for a five-year period, for a total of \$2,264,288.80. The funding was calculated through June 30, 2025, with the assumption that the agreement would be extended once the underlying NASPO MA 149 agreement was extended past its 2024 base term expiration date. The contract term began on July 1, 2020 and expired on August 11, 2024.

On January 20, 2022 (AI 11), the MTS Board authorized FirstNet services for an additional three hundred thirty-five (335) devices that MTS purchased to accommodate the upgrade of the MTS bus and trolley fleets and the PRONTO Fare Systems, bringing the authorized funding to \$2,911,348. The funding authorized was calculated through June 30, 2025. Staff was also authorized to extend the agreement through that date to align with the underlying NASPO MA 149 agreement once the option years were exercised by the State of Utah. However, through an administrative error, the MTS-AT&T agreement was never formally amended to do so. AT&T has continued to provide MTS with FirstNet services and MTS has paid for those under the purchase order that was created as part of the contract administration process. Today's proposed action would fix this and also extend the agreement to the new NASPO MA 149 expiration date of August 11, 2029.

Today's Board action also ratifies Amendment 3, which purchased static IP addresses for the FirstNet devices.

Therefore, staff recommends the MTS Board of Directors:

- 1) Ratify Amendment No. 3 to MTS Doc. No. G2377.0-20 (Attachment A), with AT&T, for the static IP address block setup and recurring monthly charges, at no cost due to available contract capacity; and
- 2) Authorize the CEO to Execute Amendment No. 4 to MTS Doc. No G2377.0-20 (in substantially the same format as Attachment B), with AT&T, to extend the agreement through August 11, 2029, to coincide with the amended NASPO ValuePoint Cooperative Purchasing Agreement MA 149 exercised option.

/S/ Sharon Cooney

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, mark.olson@sdmts.com

Attachments: A. Executed Amendment, MTS Doc. No. G2377.3-20
B. Draft Amendment, MTS Doc. No. G2377.4-20



Metropolitan
Transit
System

Att.A, Item 20, 05/15/25

Amendment 3

July 12, 2023

MTS Doc No. G2377.3-20

FIRSTNET SERVICES

AT&T Corp.
Amanda Eliades
Client Services
8909-F Complex Drive
San Diego, CA 92123

This shall serve as Amendment No.3 to the original agreement G2377.0-20 as further described below.

SCOPE

Pursuant to the Scope of Work of the San Diego Metropolitan Transit System (MTS) contractor shall setup and maintain a static IP address block, per attachment A.

SCHEDULE

Due to this amendment there shall be no change to the schedule of this agreement.

PAYMENT

This contract amendment will make use of existing contract funding. The total value of this contract including this amendment remains \$2,911,348.00. This amount shall not be exceeded without prior written approval from MTS.

Please sign and return a copy to the Contract Specialist at MTS. All other terms and conditions shall remain the same and in effect. Retain a copy for your records.

Sincerely,

Sharon Cooney

Digitally signed by Sharon Cooney
Date: 2023.07.31 08:45:09 -07'00'

Sharon Cooney, Chief Executive Officer

Agreed:

Amanda Eliades, Client Services
AT&T Corp.

Date: 7/31/23

Attachment: A. AT&T Quote

1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • sdmts.com

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for nine cities.



ATTACHMENT A

(AT&T Quote)

San Diego MTS
28-Jun-23



One-time Private Mobile Connectivity Pricing:

Description	Qty	FirstNet Pricing	Total Cost
PMC Custom APN Setup	1	\$500.00	\$500.00
PMC Connectivity Setup	1	\$500.00	\$500.00
Estimated Total for One time Costs			\$1,000.00

Above service subject to applicable tax, fees, or surcharges***Estimate TAX***

Monthly Reoccurring Costs for Public Static IP Blocks

Description	FirstNet Pricing	Total Cost
188 Public Static IPs	\$564.00	\$564.00
Estimated Total for Monthly Reoccurring Costs		\$564.00

Above service subject to applicable tax, fees, or surcharges***Estimate TAX***

Amanda Eliades
Client Services Executive FirstNet
714-478-6443
amanda.eliades@att.com



**Metropolitan
Transit
System**

Amendment 4

May 15, 2025

MTS Doc No. G2377.4-20

FIRST RESPONDER NETWORK (FIRSTNET) SERVICES

AT&T Corp.
Justin Ater
Client Solutions Executive
5855 Copley Dr
San Diego, CA 92111

This shall serve as Amendment No.4 to the original agreement G2377.0-20 as further described below.

SCOPE

Pursuant to the Scope of Work of the San Diego Metropolitan Transit System (MTS) contractor shall continue to provide FirstNet Services through the end of the amended National Association of State Procurement Offices (NASPO) ValuePoint Cooperative Purchasing Agreement Master Agreement (MA) 149.

SCHEDULE

Due to this contract amendment the contract term will end August 11, 2029, to coincide with the NASPO MA 149 amended end date.

PAYMENT

This contract amendment shall authorize an estimated monthly cost of \$51,976.00 for 49 months for a total additional cost not to exceed \$2,546,824.00. The total value of this contract including this amendment shall be in the amount of \$5,458,172.00. This amount shall not be exceeded without prior written approval from MTS.

Please sign and return a copy to the Contract Specialist at MTS. All other terms and conditions shall remain the same and in effect. Retain a copy for your records.

Sincerely,

Agreed:

Sharon Cooney, Chief Executive Officer

Justin Ater, Client Solutions Executive
AT&T Corp.

Date: _____





Agenda Item No. 10

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Beyer Blvd Pathway Beautification Project Art Concepts – Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors:

- 1) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWG410.0-25 (in substantially the same format as Attachment A), with Alicia Siu, for artistic services, inclusive of conceptualization, design and installation and an as-needed five-year maintenance plan for Art Concept 1 located along the Beyer Pathway near the Blvd. Trolley Station in San Diego in the amount of \$55,500.00; and
- 2) Authorize the CEO to execute MTS Doc. No. PWG.440.0-25 (in substantially the same format as Attachment B), with Johnny Bear Contreras, DBA Johnny Bear Art, for artistic services inclusive of conceptualization, design and installation and an as-needed five (5) year maintenance plan for Art Concept 2 located along the Beyer Pathway near the Blvd. Trolley Station in San Diego in the amount of \$48,850.00.

Budget Impact

The total contract cost of services is estimated to be \$104,350.00. The projects will be funded by the following Capital Improvement Program (CIP) and Operating Budget accounts:

Service Description	Budget Description	Amount
Artistic Services (Beyer Pathway Murals/Art Concept 1)	CIP 2009123701 – Beyer Blvd Pathway Beautification	\$49,500.00
Five-Year Maintenance Plan	San Diego Trolley, Inc. (SDTI) Facilities Operations Budget 380016- 571142	\$6,000
Subtotal		\$55,500.00



Service Description	Budget Description	Amount
Artistic Services (Beyer Pathway Sculptures/Art Concept 2)	CIP 2009123701 – Beyer Blvd Pathway Beautification	\$41,850.00
Five-Year Maintenance Plan	San Diego Trolley, Inc. (SDTI) Facilities Operations Budget 380016-571142	\$7,000.00
Subtotal		\$48,850.00
Total		\$104,350.00

DISCUSSION:

The California Department of Transportation (Caltrans) developed the Clean California (Clean CA) Program for the successful delivery of transit projects through collaboration between the Clean CA Program, Caltrans districts, and local/transit agencies. This initiative is centered around the critical role of Caltrans districts in delivering this initiative and underscores the importance of district partnerships with local transit agencies in their respective jurisdictions. The program aims to enhance public transit infrastructure, focusing on active transportation, micro-mobility, and transit station enhancements with art, landscaping, or similar improvements to bus stops and stations. By prioritizing districts and transit agencies facing challenges in waste management, graffiti, and aesthetic appeal, it addresses critical needs while aligning with the California State Transportation Agency objectives on climate action.

On October 9, 2023, MTS was notified by Caltrans that its Cycle 2 application for the Clean California Local Grant Program (CCLGP) had been awarded funding for the Beyer Blvd Pathway Beautification Project, with a 25% local match requirement. As the lead applicant, MTS sought design and construction funding for the project in partnership with Casa Familiar.

The area of improvement in San Ysidro is the pedestrian path towards the Beyer Trolley station on MTS property located between Seaward Ave. And West Park Ave. The area is in tandem to the San Ysidro community effort for pedestrian safety, art, and greening efforts on the Cultural Corridor.



Casa Familiar, a community organization serving the residents of South San Diego County for over fifty years, partnered with MTS on the grant application and has played a key role in supporting the project. Casa Familiar assisted MTS with artist solicitation, procurement, and public engagement efforts. These efforts aim to beautify and enhance the pathway along the trolley line from the San Ysidro community to the Beyer Blvd. Trolley Station.

A central feature of the project is the integration of culturally appropriate public art created by local artists, celebrating the heritage and identity of the surrounding community. In addition to the public art installations, the project includes concrete repair and replacement to improve safety and accessibility for pedestrians and cyclists, the installation of energy-efficient lighting to enhance visibility, and the addition of drought-tolerant greenery to support long-term environmental sustainability. As detailed below, renderings of the proposed murals for approval are provided in Attachments C and D.

This Project emphasizes MTS's commitment to continue the initiatives to maintain clean, accessible, and inviting spaces and to promote active transportation through appealing aesthetics. The entire project is expected to be completed by the Spring of 2026.

On September 16, 2024, MTS issued a Request for Proposals for the Beyer Blvd Pathway Beautification Project. The RFP allowed offerors to propose on one or both mural sites.

On November 18, 2024, MTS received a total of three (3) responsive proposals from the following firms:

Firm	Certification	Art Concept
Alicia Siu	N/A	Mural
Johnny Bear Contreras	N/A	Sculpture
Signe Ditona	N/A	Mural

On December 04, 2024, an evaluation panel consisting of Casa Familiar and MTS staff from Marketing reviewed the proposals based on the following criteria:

Criteria	%
Qualifications of the Firm or Individual	15%
Artist Draft Concept	40%
Work Plan	30%
Cost and Price	15%

During the initial evaluation, the selection committee scored and ranked the firms as follows:

Rank	Firm Name	Technical (Max 85%)	Cost (Max 15%)	Proposed Cost	Total Score
1.	Alicia Siu	68.75	7.42	\$48,750.00	76.17
2.	Signe Ditona	55.25	15.00	\$24,100.00	70.25
3.	Johnny Bear Art	52.75	7.40	\$48,850.00	60.15

Following the initial evaluations, the panel requested clarifications from Johnny Bear Art regarding their concept for the project.

On December 10, 2024, following the receipt of the clarifications from Johnny Bear Art, the Panel reconvened, and using the same criteria as before, rescored the proposals.

Rank	Firm Name	Technical (Max 85%)	Cost (Max 15%)	Proposed Cost	Total Score
1.	Alicia Siu	68.75	7.42	\$48,750.00	76.17
2.	Signe Ditona	55.25	15.00	\$24,100.00	70.25
3.	Johnny Bear Art	58.25	7.40	\$48,850.00	65.65

After considering the technical and price factors, the selection committee deemed that Alicia Siu provided the best value for Art Concept 1, and Johnny Bear provided the best value for Art Concept 2 to MTS.

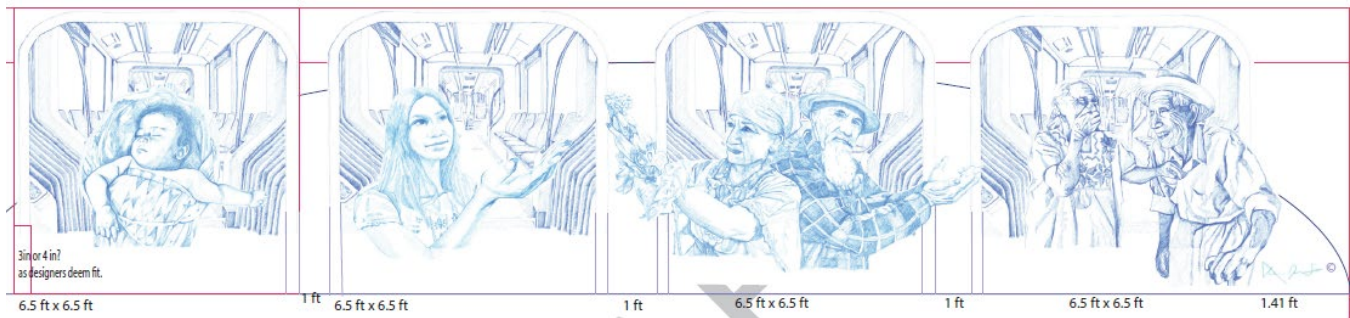
Beyer Pathway Murals – Art Concept 1 - Alicia Siu

Alicia Maria Siu's art centers around the contemporary revitalization of a Mesoamerican mural tradition and the recovery of historical memory through art. As a first-generation refugee from the political violence of Central America, Siu came to the U.S. at the tender age of 15, eventually earning a BA in Studio Art and a Masters Degree in Native American Studies from UC Davis. She has spent the last 25 years honing her craft as a muralist through a process of community engagement, painting prominent murals for organizations and universities throughout California. Siu's art has focused heavily on supporting and inspiring indigenous and immigrant people of color to overcome the generational effects of colonization, displacement and marginalization. Her continued aspiration is to help communities represent themselves in a way that visually compliments and supports an ongoing process of collective self-actualization.

The proposed mural would be installed on the north side of trolley trails and would span 52 feet in length and 13 feet in height, with the wall tapering in size towards both ends. The mural will be divided into four separate but interconnected sections, each representing a different stage of human life, depicted through a transversal view of the inside of a trolley. The artwork will highlight the beauty and importance of living each stage of life to the fullest, emphasizing the need for respect, joy, and vitality at every age.

The concept behind the mural is inspired by the four stages or "stations" of life, which are further explored through the Spanish word "estación" (meaning "season" in English), reflecting the cyclical nature of life as seen in indigenous cosmologies. In particular, I draw from the indigenous teachings of the four hills of life, each symbolized by an element that corresponds to a stage of life and a season of the year:

1. *Childhood, Purity of Water/ Spring*: Represented by a baby swaddled in a blanket with water colors.
2. *Puberty to Adulthood/Fertility, Seeds/Summer*: Depicted by a teenager holding seeds, symbolizing growth and the transition to adulthood.
3. *Maturity/Adulthood, Fruit/Fall*: Shown by two adults holding fruit in a trolley, representing wisdom, knowledge, and the harvest of fruits, imparting fruits of experience, ready to share and teach others.
4. *Elders, Fragility, and Returning to Childlike, Cane/Winter*: An elderly couple joyfully navigating the trolley with a cane, symbolizing the wisdom of age and the return to a more vulnerable, childlike stage.



Beyer Pathway Sculptures – Art Concept 2 – Johnny Bear

Johnny Bear Contreras is a recognized public artist, and community leader. Through art, he contextualizes the Native Community in a contemporary setting allowing it to be preserved for generations ahead. Recognized for multidisciplinary contributions to the local art world and indigenous communities, he is an award-winning artist with displays throughout the US. Each piece is a testament and dedication to keeping the Kumeyaay heritage alive. “It is not just about preserving the past, but inspiring and mentoring Native youth for the future.” Serving as a community board member and cultural advisor for organizations, he understands the importance of indigenous cultures and preserving for generations to come.

The proposed sculpture would be stainless steel and approximately 10 feet high x 5 feet wide x 12 feet long. The sculpture will be made up of multiple layers that will change as pedestrians walk by or find a spot on a bench to view the piece. The sculpture as a whole will have a specific meaning while viewed from a distance and reveal intimate detail when viewed up close and or felt. Potential concept drawings included:



Community Engagement

Following the selection of the artists, Casa Familiar facilitated various community outreach events that further refined artwork concepts. Additionally, the selected artists met with MTS's design team, Psomas, to refine both placement and the scale of the artwork in concert with landscape and hardscape design.

Between the community outreach and discussions with the design team, Alicia M. Siu refined her project budget accordingly. The final cost of her artistic services is in the amount of \$55,500.00. The final cost of the artistic services by Johnny Bear Art did not change.

Therefore, staff recommends that the MTS Board of Directors:

- 1) Authorize the CEO to execute MTS Doc. No. PWG410.0-25 (in substantially the same format as Attachment A), with Alicia Siu, for artistic services, inclusive of conceptualization, design and installation and an as-needed five-year maintenance plan for Art concept 1 located along the Beyer Pathway near the Blvd. Trolley Station in San Diego in the amount of \$55,500.00; and
- 2) Authorize the CEO to execute MTS Doc. No. PWG440.0-25 (in substantially the same format as Attachment B), with Johnny Bear Contreras, DBA Johnny Bear Art, for artistic services inclusive of conceptualization, design and installation and an as-needed (5) year maintenance plan for Art concept 2 located along the Beyer Pathway near the Blvd. Trolley Station in San Diego in the amount of \$48,850.00.

/S/ Sharon Cooney

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, Mark.Olson@sdmts.com

Attachments: A. Draft Agreement, MTS Doc No. PWG410.0-25 (Alicia Siu - Muralist)
B. Draft Agreement MTS Doc No. PWG440.0-25 (Johnny Bear - Sculpture)



Metropolitan Transit System

STANDARD AGREEMENT FOR MTS DOC. NO. PWG410.0-25

THIS AGREEMENT is entered into this _____ day of _____, 2025 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: <u>Alicia M. Siu</u>	Address: <u>9041 El Dorado Parkway #33</u>
	<u>El Cajon, CA 92021</u>
	<u>City State Zip</u>
Form of Business: <u>Sole Proprietor</u> (Corporation, Partnership, Sole Proprietor, etc.)	Email: <u>aliciamariasiu@gmail.com</u>
Telephone: <u>818 314 9841</u>	
Authorized person to sign contracts <u>Alicia M. Siu</u>	<u>Artist/Muralist</u>
	<u>Name Title</u>

The Contractor agrees to provide services as specified in the conformed Scope of Work/Technical Specification/Artist Proposal (Exhibit A), Contractor's Cost/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), Federal Requirements (Exhibit D) Forms (Exhibit E), and Clean California Third Party Contract Requirements (Exhibit F)

The contract term shall be based upon the negotiated timeline for the creation and painting the murals included in the Proposal, but no longer than 2 months from the Notice of Proceed, and a five (5) year maintenance period. The maintenance period shall be effective five (5) years from the date the Artwork installation is completed.



Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed \$55,500.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	ALICIA M. SIU
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

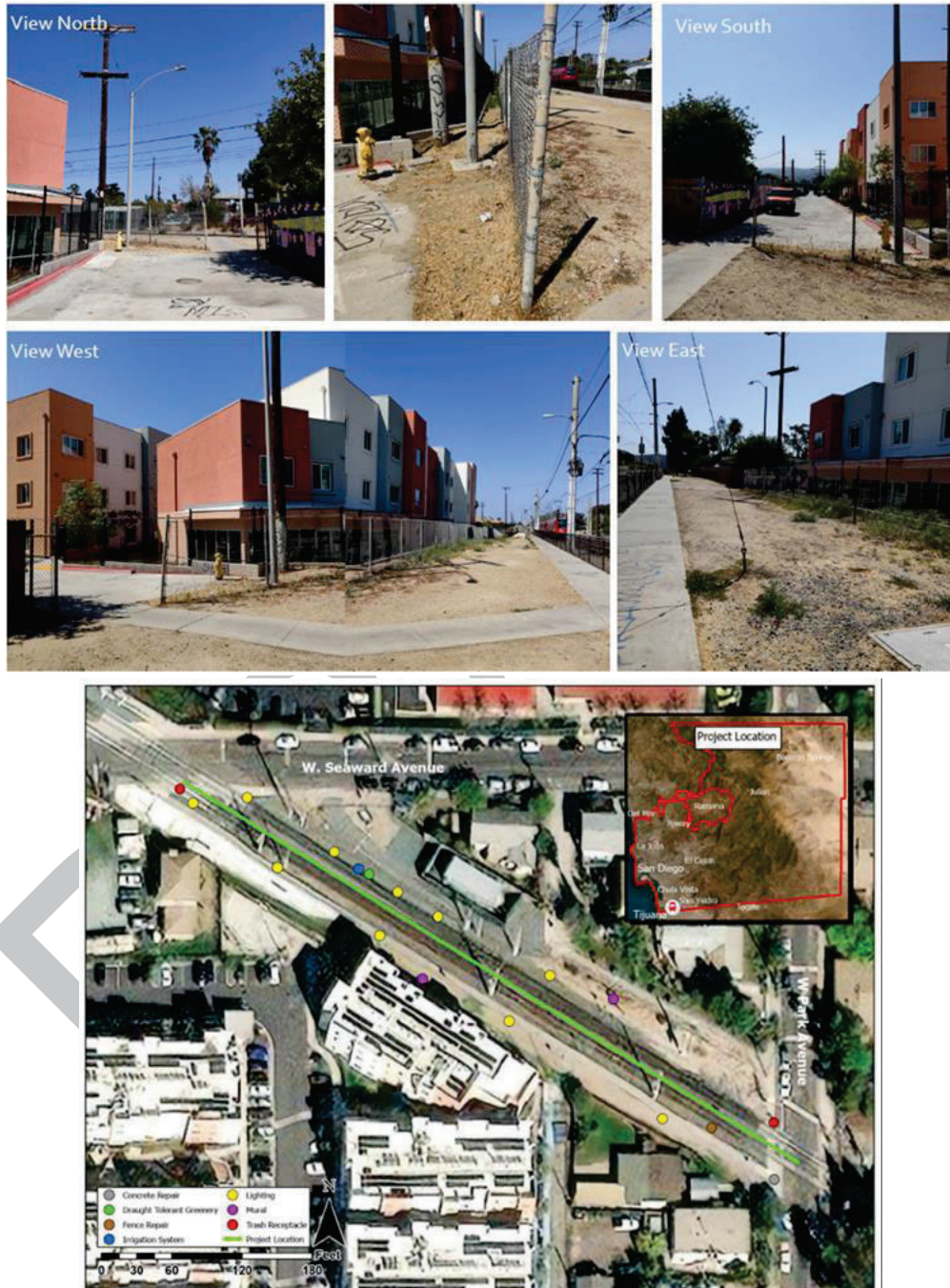
DRAFT

EXHIBIT A
SCOPE OF WORK/TECHNICAL SPECIFICATION/ARTIST PROPOSAL

DRAFT

5.1. SCOPE/BACKGROUND

The area of improvement in San Ysidro is the pedestrian path towards the Beyer Trolley station on MTS property located between Seaward Ave. And West Park Ave. The area is in tandem to the San Ysidro community effort for pedestrian safety, art, and greening efforts on the Cultural Corridor.



1. 3D/ Sculpture / Environmental / Land art/ Installation

The area serves as a gateway to the community but is poorly lit and deemed unsafe at night. The community has expressed interest in monuments illustrating the pathway. Examples can be creative benches to rest, illuminated structures that serve at night, and gateways to welcome transit users and passersby, and structures that incorporate environmental features / planting.

2. 2D/Mural Art

Incorporating into the existing mural art along San Ysidro, commissioned artist will also advise on possible surfaces to be built on the designated area. Murals are not limited to walls, and we encourage creative community murals on multiple surfaces.

Artists may submit applications for one or both artworks. The artists selected for the - Public Art Project are expected to design, fabricate, and transport permanent, site-specific artwork and consult during installation of artwork at the site by MTS /Casa Familiar.

5.2. PERIOD OF PERFORMANCE – ARTWORK

Proposer will propose a schedule as part of its Proposal. Notwithstanding, all installation work must be completed by March 27, 2025. Artist shall follow the installation schedule provided in their proposal. Any changes to said schedule must approved by MTS.

5.3. MAINTENANCE PLAN

MTS anticipates possible wear and tear and/or graffiti which may require maintenance once the murals have been completed. Successful Artist will provide MTS a Maintenance Manual upon mural completion that will provide MTS staff instructions on how it should be maintained to keep the mural's integrity.

Successful Artist shall also be available for five (5) years after completion of mural to conduct maintenance services on mural, upon request. During this 5-year period, MTS would ask the successful Artist for a quote for the proposed amount of hours for any requested repairs would need. After the 5-year period, there is no guarantee that MTS will request the successful Artist to complete maintenance repairs on the mural.

5.4. BUY AMERICA

This scope of work may trigger Buy America and/or Build America Buy America requirements, which apply to construction materials, manufactured products, rolling stock, iron and steel. The below list of definitions and examples is not exhaustive and is only to be used as illustrative and a guidance tool for Contractor compliance.

5.4.1 CONSTRUCTION MATERIALS

- A. Per Infrastructure Investment and Jobs Act (IIJA) Sec. 70912 (2)(C), all construction materials must be manufactured in the United States. This means that all manufacturing processes for the construction material occurred in the United States.
- B. "Construction materials" **includes** an article, material, or supply that is or consists primarily of:

- i. non-ferrous metals;
 - ii. plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
 - iii. glass (including optic glass);
 - iv. lumber; or
 - v. drywall.
- Exception: "Construction Materials" **does not include** an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.

C. According to the Office of Management and Budget (OMB) Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure M-22-11, April 18, 2022, a Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computers.

5.4.2 [NOT APPLICABLE] MANUFACTURED PRODUCT

5.4.3 [NOT APPLICABLE] ROLLING STOCK

5.4.4 [NOT APPLICABLE] IRON OR STEEL

5.5. INVOICES

Invoices must be sent to the MTS Accounting Department, via email, at ap@sdmts.com. All invoices must have the Purchase Order and contract number clearly displayed to ensure timely payment. MTS will not pay on packing slips, receiving documents, delivery documents, or other similar documents. Invoices must be submitted for payment.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) is for service or work provided by a subcontractor and indicate the amount that will be paid to the subcontractor. Contractors must also comply with the prompt payment requirements in the *Prompt Progress Payments* section of the Standard Conditions.

5.6. MATERIAL SAFETY DATA SHEETS (MSDS)

MTS retains the safety data sheets on an electronic database (currently CloudSDS). Upon award, Contractors shall email the MSDS for chemicals that any individuals may be exposed to, attention Ngan Nguyen, MTS Environmental Health and Safety Specialist at Ngan.Nguyen@sdmts.com to upload into the database. The Contractor shall notify the MTS Environmental Health and Safety

Specialist if there are changes or updates to the MSDS during the term of the contract to ensure the MTS database is kept updated throughout the contract.

5.7. [NOT APPLICABLE] NO RIGHT TO POST SIGNS

DRAFT

ARTIST PROPOSAL

DRAFT

Beyer Blvd Pathway Beautification Project Proposal

3.2. LETTER OF TRANSMITTAL

Alicia Siu, Muralist
9041 El Dorado Parkway #33
El Cajon CA 92021
Phone: 818.314.9841
Email: aliciamariasiu@gmail.com

To: Francisco Morales, Casa Familiar
San Diego, CA

Dear Francisco Morales and San Diego Metropolitan Transit System,

I am writing to submit my proposal for the mural project at Casa Familiar, as described in the recent call for artists. As a muralist with over 25 years of experience creating large-scale public art throughout California, I have developed a deep appreciation for the power of murals to tell stories, build community, and reflect the cultural and historical context of a space. I am excited about the opportunity to collaborate with Casa Familiar, and I believe my work aligns strongly with the mission and goals of the organization.

Passion and Comprehension of the Project:

Throughout my career, I have focused on projects that highlight the voices and histories of marginalized communities, particularly those rooted in Latinx, Indigenous, immigrant and student experiences and diverse communities. The work of Casa Familiar in building community resilience and supporting underserved populations resonates deeply with me. I understand that this mural is not just an artistic endeavor, but a chance to visually amplify the voices and narratives of the people who are most affected by the social and cultural forces at play in our community.

My passion for this project comes from my commitment to creating art that is not only visually compelling, but also meaningful and accessible. I aim to create a mural that reflects the spirit of Casa Familiar's mission: to enhance quality of life for people living in underserved and underrepresented communities. This mural will be a reflection of the neighborhood's diversity and strength, creating a sense of belonging and pride for all who encounter it as well as highlighting the value of respect for each other.

Methodology for Conceptualizing and Creating Art:

My creative process begins with thorough research and community engagement. For this proposal, I attended the meeting, Community Meeting Construyendo Juntos, held on October 8th, 2024. If chosen for this project, I would ask for another community meeting to hear further community input, edits and approvals of design, as my process always starts by listening to the stories and perspectives of residents, and community members. This collaborative approach ensures that the mural reflects the values, experiences, and aspirations of the people it represents. I will also spend time researching based on the conversations and meetings, with the history and culture of the area to further ensure that the mural resonates with its unique context.

Why I'm Well-Matched for the Project:

I am uniquely suited for this project because of my extensive experience with large-scale, community-driven murals, as well as my passion for creating work that speaks to local histories and identities. My portfolio includes a range of public art projects that engage with diverse communities, and I am skilled at working with a variety of stakeholders to ensure that the final artwork is a true reflection of the community it serves.

My artistic style is characterized by vibrant color palettes, dynamic compositions, and symbolism drawn from cultural traditions and social movements. I am committed to creating work that is not only visually impactful but also deeply resonant and relevant to the community it serves. My approach is rooted in respect for the community, collaboration, and a shared vision for creating meaningful art.

What Excites Me About This Project:

What excites me most about this project is that the art will serve a meaningful purpose to improve the sense of safety of the San Ysidro community. I am deeply passionate

about advocating against violence, and I believe this beautification project will help foster safe and healthy communities where people can move through their neighborhoods without fear. I am especially inspired by the opportunity to contribute to public spaces for environmental justice because San Ysidro is in the lower percentile of healthy neighborhoods index and I am excited that the city has initiatives to improve public transportation, car-free solutions to the current environmental challenges of reducing air pollution. The chance to create artwork that encourages people to feel safe, connected, and empowered in their daily lives is a powerful motivation for me.

This proposal shall remain valid for a period of no less than one hundred and twenty (120) days from the date of submittal.

Thank you for considering my proposal. I am confident that my skills, passion, and approach to public art make me an excellent fit for this mural project. I look forward to the opportunity to discuss how I can contribute to this exciting initiative and create a mural that will inspire and uplift the community for years to come.

Sincerely,
Alicia Siu

3.3. TECHNICAL PROPOSAL

3.3.1. QUALIFICATIONS, RELATED EXPERIENCE, AND REFERENCES OF PROPOSER - Please refer to my CV for my 25+ years of work, website www.aliciasiu.com, and attached samples to this application.

Murals/ Public Works:

Aug. 2024	"I Am EOP", Educational Opportunity Program Mural, EOP Office San Diego State University, 50 x 8 feet, San Diego CA
2024	"Haawka!" Environmental Health Coalition Anniversary Mural, Far South Border North Artist Grantee 38 by 18 feet - Installation Pending, San Diego CA
2023	Latin(X) Resource Center Mural, LRC Love library at San Diego State University, 70 x 8 feet, San Diego CA
2021-2023	"K'Ajlay Suum, Thread of Memory, Hilo de la Memoria", 12 x 12 feet. And "B'atz'al Q'ij." 12 x 18 feet Maya Exhibit Murals at the Museum of Us, Balboa Park, San Diego CA
2022	"50th Anniversary Chicana/o Studies at San Diego City College" Mural, 60 x 7.4 feet San Diego City College, San Diego CA

2020 "¡Ya no hay tiempo! Sin oro se vive. Sin agua se muere./There is no time! Without gold you live. Without water you die./Xan tesu kanah Iman! Oro in tê, a lapil. Wash in tê, a kanapil. " "Inside the Mask Exhibition" 16 x 8ft, Hammer Museum UCLA, Los Angeles CA

2019 "Maestras", Las Maestras Center for Xicana Indigenous Thought, Art and Social Practice, 6 x 10 feet, Santa Barbara CA

2019 "Respeto, Responsabilidad, Alegría, Seguridad, Paz, Sabiduría", Boyd Elementary School Mural" - Rialto, 70 x 16 ft, San Bernardino CA

2018 "Kumeyaay Basket Weaver" Sycuan Cultural Center, Sycuan Nation, 10 x 14 feet by San Diego CA

2016 "Luz de Berta Cáceres" Primer Guancasco de Muralismo Colectivo y Comunitario de los Pueblos en Honduras - 28 x 10 feet, Santa Barbara, Honduras

2016 "Taking Flight", Cal State Channel Islands, Chicano Studies Mural- 8 x 16 feet, Cal State Channel Islands, Ventura CA

2007 "Somos Cucapa y Jamas Moriremos" Community Mural in Cucapa Community. - 8 x 16 feet, Cucapa, El Mayor, Baja California Mexico

2006 "The People and the River have Stories to Tell"- 70 x 10 feet, Knights Landing CA

2003 "Birth of the Caracoles" - 8 by 4 feet, Estacion Libre Mural, San Cristobal de las Casas, Chiapas México

Permanent Public Installations Paintings/Pieces & Collections:

2019 Martin Luther King Jr. Street Promenade Installation, Digital Art, Quotes, Plaque Designs, Heritage Street, Urban Corps of San Diego- Lemon Grove, San Diego CA

2017 "Past and Present Struggles for Ethnic Studies" Acrylic on Wood Panels, 6 by 16 feet, UC Berkeley, Berkeley, CA

2017 "Tribute to our Maestros Xhuy Ocelotl and Chug-a-law-ick Nobwit" - 3 x 2 feet, Oil Painting, The Mexican Heritage Plaza San Jose, CA

2016 "Noya, Flor y Canto Para Nuestros Niñas y Niños" Acrylic on Canvas, 4 x 8 feet, Biblioteca de los Sueños - Cuscatlan, El Salvador Central America

2015 "Fuerza de la Alas de Papalotl" Acrylic on Wood, Private commission UCLA, Prof. Raul Hinojosa, North American Integration and Development Center, Los Angeles CA

2014 "First Contact", "Survivors of Genocide", "Mission Era" Series Acrylic on Wood, 3 by 2 feet: Commissioning Agency: California Indian Heritage Foundation and the Juan Bautista de Anza National Historic Trail, part of the National Park Service. Displayed at the Sac State Indian Museum, de Anza Expedition and its impact on Native American peoples from a Native Perspective Series of Four Paintings, State Indian Museum, Sacramento CA.

Proposer shall:

A. Current professional résumé or curriculum vitae (CV) **ATTACHED**

B. Provide a brief profile of the Proposer (individual or firm) identify the types of services offered: the year the business was founded; form of the organization (corporation, partnership, sole proprietorship); number, size, and location of offices; and number of employees.

Alicia Maria Siu, Muralist/Artist. B.A. Studio Art, M.A. Native American Studies

Services: Commissions and Contract Hires for Public Works: Public Murals at University and College campuses. Museum Permanent Murals within permanent Exhibitions. Museum Exhibition Collections. Art Installations within Galleries. Children's Book Illustration. Non-Profit Organization designs/logos.
Mural Business founded 2001.

Sole Proprietor, work locations: on site of murals, streets, Museums, and studio spaces.

Alicia Maria Siu's art centers around the contemporary revitalization of a Mesoamerican mural tradition and the recovery of historical memory through art. As a first generation refugee from the political violence of Central America, Siu came to the U.S. at the tender age of 15, eventually earning a BA in Studio Art and a Masters Degree in Native American Studies from UC Davis. She has spent the last 25 years honing her craft as a muralist through a process of community engagement, painting prominent murals for organizations and universities throughout California such as the Museum of US Maya exhibit, and multiple university organizations such as Chicana/o Studies Department at Cal State Channel Islands, the Chicana/o Studies department at San Diego City College, the Latin X Resource Center at San Diego State University, Las Maestras Center at UC Santa Barbara, the Education Opportunity Program at San Diego State University and the Environmental Health Coalition mural sponsored by Far South Border North Artist grant. Siu's art has focused heavily on supporting and inspiring indigenous and immigrant people of color to overcome the generational effects of colonization, displacement and marginalization. Her continued aspiration is to help communities represent themselves in a way that visually compliments and supports an ongoing process of collective self actualization.

- C. *Financial Questionnaire Form ATTACHED*
- D. *Examples of past work ATTACHED*
- E. *Identify subcontractors ATTACHED*
- F. *"Status of Current and Past Contracts Form," Proposer shall provide as a minimum three (3) references of current and past contracts ATTACHED*

3.3.2. ARTIST DRAFT CONCEPT

ON THE NORTH SIDE OF TROLLEY TRAILS: I propose a mural that spans 52 feet in length and 13 feet in height, with the wall tapering in size towards both ends as shown in the provided image. The design and built of wall shall be determined with designers/MTS and modifications of size/shape placement etc can be revised, adjusted (Appendix D). The wall must have a smooth finish in the front where the mural will be installed, and per community request, lighting on the mural for safety and night visibility. The mural will be divided into four separate but interconnected sections, each representing a different stage of human life, depicted through a transversal view of the inside of a trolley. The artwork will highlight the beauty and importance of living each stage of life to the fullest, emphasizing the need for respect, joy, and vitality at every age.

The concept behind the mural is inspired by the four stages or "stations" of life, which are further explored through the Spanish word "estación" (meaning "season" in English), reflecting the cyclical nature of life as seen in indigenous cosmologies. In particular, I draw from the indigenous teachings of the four hills of life, each symbolized by an element that corresponds to a stage of life and a season of the year:

1. Childhood, Purity of Water/ Spring : Represented by a baby swaddled in a blanket with water colors.
2. Puberty to Adulthood/Fertility, Seeds/Summer: Depicted by a teenager holding seeds, symbolizing growth and the transition to adulthood.
3. Maturity/Adulthood, Fruit/Fall: Shown by two adults holding fruit in a trolley, representing wisdom, knowledge, and the harvest of fruits, imparting fruits of experience, ready to share and teach others.
4. Elders, Fragility, and Returning to Childlike, Cane/Winter: An elderly couple joyfully navigating the trolley with a cane, symbolizing the wisdom of age and the return to a more vulnerable, childlike stage.

Each section will incorporate representations of the four seasons through the windows of the trolley, with spring in the first section (childhood), summer in the second (adolescence), fall in the third (maturity/adulthood), and winter in the fourth (elderhood). This seasonal motif will further tie the stages of life to the passage of time, underlining the idea of life as a cycle that is constantly renewing itself and how each season's behavior in nature mimics human stages and respective responsibilities/values: 1. birth with water, essential element for life, 2. seeds of fertility, 3. giving fruit, harvest, as imparting wisdom in maturity, and 4. a cane for fragility.

Size and Color Palette: The mural will be 52 feet long and 13 feet tall, with vibrant, natural colors to evoke the themes of life, nature, and the changing seasons. I will use a rich palette that reflects the organic tones of each stage and season:

- Soft blues, turquoise and greens for childhood and water (spring).
- Bright yellows and light for adolescence and growth (summer).
- Warm oranges and reds for maturity and wisdom (fall).
- Cool whites, blues, and grays for elderhood and reflection (winter).

These colors will create a dynamic contrast while maintaining a harmonious flow across the mural, connecting the sections through their underlying symbolism.

As part of this initial design process, I took pictures of community members during a Day of the Dead celebration to obtain their consent and photographic references for this initial design. Some of the community members portrayed are from San Ysidro, however I chose them randomly to represent stages of life and not their individual persona. I did incorporate a dancer (Mexican dancer) with her dance regalia, from the San Ysidro community, and I chose a young woman with her backpack to portray students that use the trolley to get to their campuses and achieve their educational goals.

ON THE SOUTH SIDE OF THE TROLLEY TRAILS: I propose to place four circular planters aligned facing each section of the mural. Each planter will contain a native plant that is significant to the stages/seasons of life. My suggested plants are: sage for purity, amaranth to represent seeds, lemonade berry representing fruit and is a local Kumeyaay plant used for fruit, tea and medicinal purposes, and local coastal prickly pear for the fourth stage. In each planter I will paint the respective symbol: water, seed, fruit, cane.

Community Consultation Meeting, Construyendo Juntos Oct. 8th:

The community meeting highlighted key priorities, with a strong emphasis on safety and lighting. Residents expressed a desire to avoid benches to prevent sleeping in the area, while stressing the importance of creating a space where they feel secure. This design reflects those concerns by prioritizing safety features and lighting, while also honoring the community's values of respect for life and well-being. PLEASE SEE STICKY NOTE PICTURE FOR REFERENCE TO THIS COMMUNITY INPUT and Testimonials.

COLLABORATION WITH MTS:

Before finalizing the design, I will work closely with MTS to ensure that the mural aligns with the vision for the space and meets all technical requirements. This will involve presenting initial sketches and conceptual drafts to MTS for feedback, making adjustments as needed to integrate any feedback from the community or stakeholders. I will also work with MTS to finalize the materials and ensure the design is both feasible for the location and durable for public transportation environments. Throughout the process, I will prioritize clear communication and collaboration to ensure the mural not only reflects the community's values but also enhances the space in a way that is both meaningful and enduring.

I am confident that this mural will be a powerful addition to the area, blending cultural symbolism with the everyday experience of public transportation, while offering a vibrant reflection of life's journey through the four seasons.

ARTISTIC TECHNIQUE: For this large-scale mural, I will employ precise artistic techniques and products that are specifically suited to its environment, ensuring both high-quality execution and long-term durability. To maintain a controlled and efficient working environment, I will complete the mural in a studio setting. This provides safer working conditions and allows me to focus on intricate details while optimizing the overall workflow.

The mural will be painted on MuralColors™ Mural Cloth, an eco-friendly, synthetic fabric designed for permanent and outdoor mural installations. This material features a bright white polymer fabric substrate with a premium acrylic coating that encapsulates the polymer fibers, ensuring superior durability and stability for both indoor and outdoor use. MuralColors™ Mural Cloth offers an excellent painting surface with a non-reflective finish, which provides optimal color vibrancy, superior abrasion resistance, and a surface texture that facilitates detailed work.

The fabric is highly stable when exposed to sunlight, mold, biomatter, rainfall, and extreme temperatures, making it ideal for public art installations in diverse environments. Additionally, MuralColors™ Mural Cloth is fire-rated per ASTM E84 and NFPA 701 FR, ensuring compliance with industry safety standards. It is also fully compatible with the MuralColors Preservation System, which includes

conservation-grade coatings to protect the mural from UV degradation, efflorescence, and water damage, ensuring the longevity and vibrancy of the artwork.

Installation:

To ensure proper adhesion and a seamless installation, the surface of the wall must be clean, smooth, and free of any imperfections. If there are any bumps or uneven areas remaining after construction, I will smooth them out using an angle grinder or sander to create a perfectly level surface.

Once the wall is properly prepared, I will apply a mural primer to optimize adhesion and create a stable base for the mural. After the primer has dried, I will apply High Performance Mural Gel Acrylic Adhesive using a thick coat, applied with a heavy nap roller. The mural will be carefully rolled up and then unrolled onto the adhesive surface. Using a squeegee, I will work out any air bubbles from behind the Mural Cloth, ensuring a smooth, secure attachment. If any adhesive comes into contact with the surface of the mural, I will quickly wipe it off with a wet cloth. This method ensures the mural is firmly and evenly affixed, providing a durable and long-lasting finish that maintains its visual integrity for years to come.

3.3.3. WORK PLAN

Part I: Community Content Dialogue (Oct. 8 2024 and Follow up Meeting: Invite community Date to be Determined)

Artist Intro and Project Purpose:

- Community Mural Process Overview
- Artist Introduction and Previous Work Samples
- Share statement of need and grant goals as background for mural project- Recap Oct 8th meeting community voices/input

**(Conceptualization: Community Content Discussion of Mural's Purpose, Community's Message, Narrative*

- As a group, create the question(s) to be answered by the mural.
- Small groups discuss the answers to question(s). Each group presents their answers to the larger group.
- Create a final master list of content and narrative.)

*Conceptualization and community input began Oct. 8th

Part II: Artist Design, Community Feedback and Approval

Artist Research and Design (Oct 2024- January)

Artist gathers necessary photo references, research, and designs a rendering of mural design, (collage/map of photographic references and mixed media). Note: This design is not an exact representation of the final mural but it contains all elements and color choice so that it can be read, edited and approved by community participants.

January 2025

Community Approval and One time Edit Meeting:

Artist presents to community members, who provides feedback, edits and approves the design. Artist takes notes of the edits to include in the mural.

January 2025- Mid March 2025

Part IV: Mural Painting, Installation, and Community Opening

Sign Contract, MTS collab Design Finalize plan with designers, and Site Preparation (January- Date to be determined)

Mural Painting (January- First week of March 2025):

- Prepare Studio Space, Acquire Paint, Materials
- Prime Mural Cloth
- Design Transfer/Map Elements
- Mural Painting: Color block, Detailing
- Varnish

Mural Installation (by Artist and/or Installation Team) One week March 2025

- Surface preparation
- Install team installs poly tab sheets of complete mural onto mural surface.
- Mural Shield anti-graffiti protection cover

Community Mural Opening Celebration (Celebration costs not included in Artist Budget):

- Celebration Event Program as determined by the mural committee/CASA Familiar .
- Mural reveal
- Artist Guest Speaker

- Community/Organization Speaker(s)
- Food and music, etc

INSURANCE *ATTACHED see Business Insurance*

Submit a statement in the cover letter or provide proof that the required insurance coverage contained in the Sample Agreement can be obtained by the Proposer (to be submitted with the proposal as Appendix C). Should Proposer be unable to provide evidence of insurability, MTS may remove that Proposer's proposal from consideration.

Appendix D:

3.3.4. EXCEPTIONS/DEVIATIONS

Proposer shall state any exceptions to or recommended deviations from the requirements of this RFP, segregating "technical" exceptions from "contractual" exceptions, and including RFP sections and page numbers. Where Proposer wishes to submit alternative approaches to meeting MTS' technical or contractual requirements, these should be thoroughly explained (to be submitted with the proposal as Appendix D).

Proposer may also propose procedural or technical enhancements/innovations to the Scope of Work which do not materially deviate from the objectives of the project.

Deviations, Technical Exceptions: as determined with Designers, ex: shape of wall, size

3.4. COST AND PRICE PROPOSAL – A PRICING/COST FORM IS PROVIDED IN THIS RFP

ATTACHED as ATT 1 Cost Pricing Form.

3.5. APPENDICES

Information considered by Proposer to be pertinent to this project, and which has not been specifically solicited in any of the previous sections, may be submitted as a separate attachment.

MAINTENANCE PLAN

As a muralist, I prioritize the long-term care of my work by applying conservation-grade coatings. To protect my murals and ensure they remain vibrant and meaningful, I use OverCoat UV Paint Protector, a semi-sacrificial coating that allows for easy removal of graffiti and dirt, restoring the mural to its original state. For added durability and color preservation, I also apply ColorShield UV Paint Preserver, which strengthens the paint, prevents fading from sunlight, and protects against water damage. These coatings are essential to maintaining the integrity of my art, even in high-traffic or vulnerable areas.

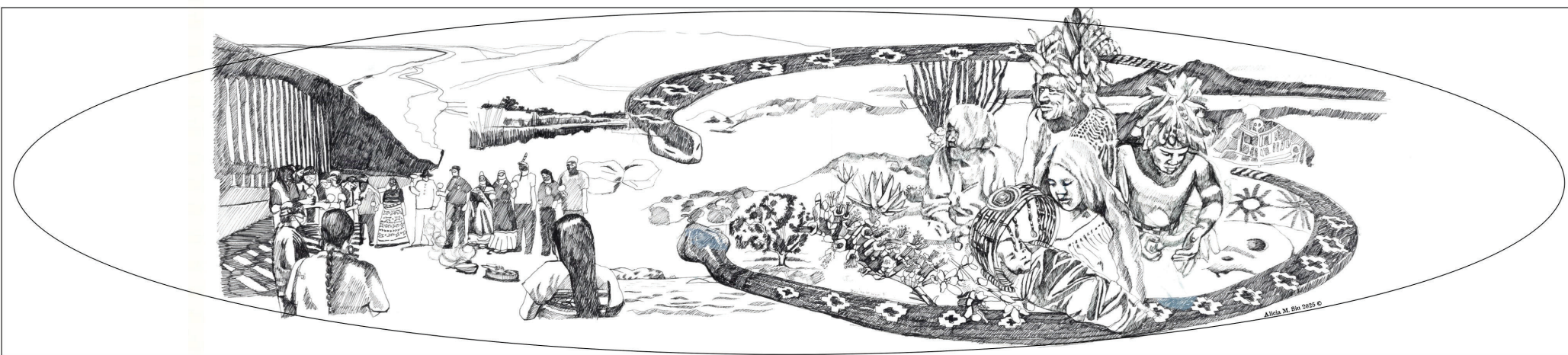
ColorShield UV Paint Preserver to keep paints strong, vibrant, and attached to the wall. ColorShield also helps protect paint from efflorescence and water damage.

Following the installation of the mural, I will assess adequate installation for the next three weeks.

We will share information with participants and collaborate with Casa Familiar to educate community stakeholders, commissioning agency/ Trolley maintenance personnel, families who have lived in the neighborhood for generations and community members about the collective effort to safeguard the murals and installations.

I will work with Casa Familiar to develop a schedule to routinely assess the conditions of the mural for the next 5 years.

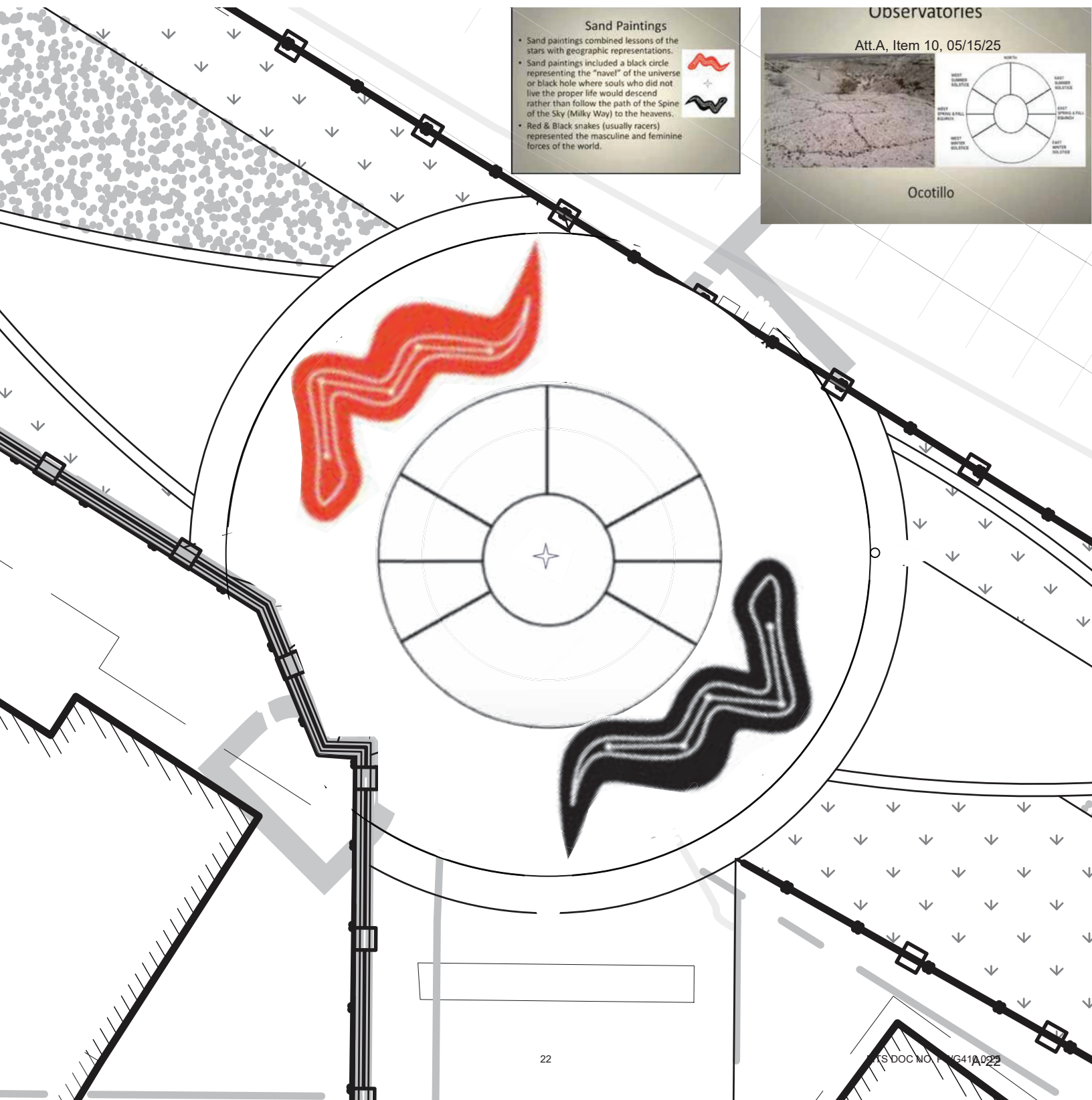
When need arises, I will develop a work plan (depending on damage/need) and budget to restore the mural to its original state, and notify and present the plan to hire for restoration work to MTS/commissioning agency/Casa. The budget of work shall cover the hourly rate, materials, transportation to the site of work of the artist and if necessary, subcontractors and or team assigned by artist. Restoration cost can range from \$100- \$200 per hour, and material replacement. Depending on the extent of work, MuralColors will be hired as soundboard, consultant, and subcontractor restoration team.



Kumeyaay Scene:
 Consultant: Robert Wallace (A.K.A. Bobby Wallace of the Barona Band of the Kumeyaay Nation, Bobby has been fighting for the preservation of the Tijuana river for decades. The scene pays homage to family & community values and the creation story of the Kumeyaay people, who have inhabited the San Diego region and parts of Baja California for over ten thousand years. The mural features the diverse range of habitats encompassing various ecosystems of their traditional territory from the Pacific Ocean in the west to the Colorado River. It features, from right to left the various environments in which they lived seasonally: the Salton Sea, Lake Cahuilla, desert ecosystem of Anza Borrego, Sonoran and Colorado deserts (Ocotillo, Agave, Yerba Mansa, Creosote flowers, highly cherished for their medicinal uses), petroglyph paintings, grasslands and oak woodlands, chaparral medicinal shrublands, coastal areas and lagoons of the Pacific coast, including the scrub and tule marshlands, the Tijuana Estuary, and the Coronado Islands featured in their creation story. The mural shows a Kumeyaay family, or ancestors, dressed in traditional clothing looking at contemporary Kumeyaay Nation members coming together to defend the ancestral remains and land between the U.S.-Mexico border near Campo Kumeyaay Nation Reservation, singing in prayer with sage. During the days of the prayer in 2020, on either side stood members of the Kumeyaay Nation, in the mural they are depicted together, as a symbol of their unity despite the arbitrary border that divides their lands and people. The mural celebrates cultural continuity and connection to the ancestors. The two snakes are two important characters, little brother and big brother Tcaipakomat, in the Kumeyaay creation story.

Wall: 27.667 Feet x 6.5 feet

- The eclipse oval can be a recessed wall built further back than the rest of rectangle wall, creating an eclipse niche for the art scene and for lights to be placed on inside edge of eclipse (maybe three lights on top, and three lights on bottom.
- If this is not possible, the inner larger rectangle can be recessed with frame around it for lights.



Sand Paintings

- Sand paintings combined lessons of the stars with geographic representations.
- Sand paintings included a black circle representing the "navel" of the universe or black hole where souls who did not live the proper life would descend rather than follow the path of the Spine of the Sky (Milky Way) to the heavens.
- Red & Black snakes (usually racers) represented the masculine and feminine forces of the world.

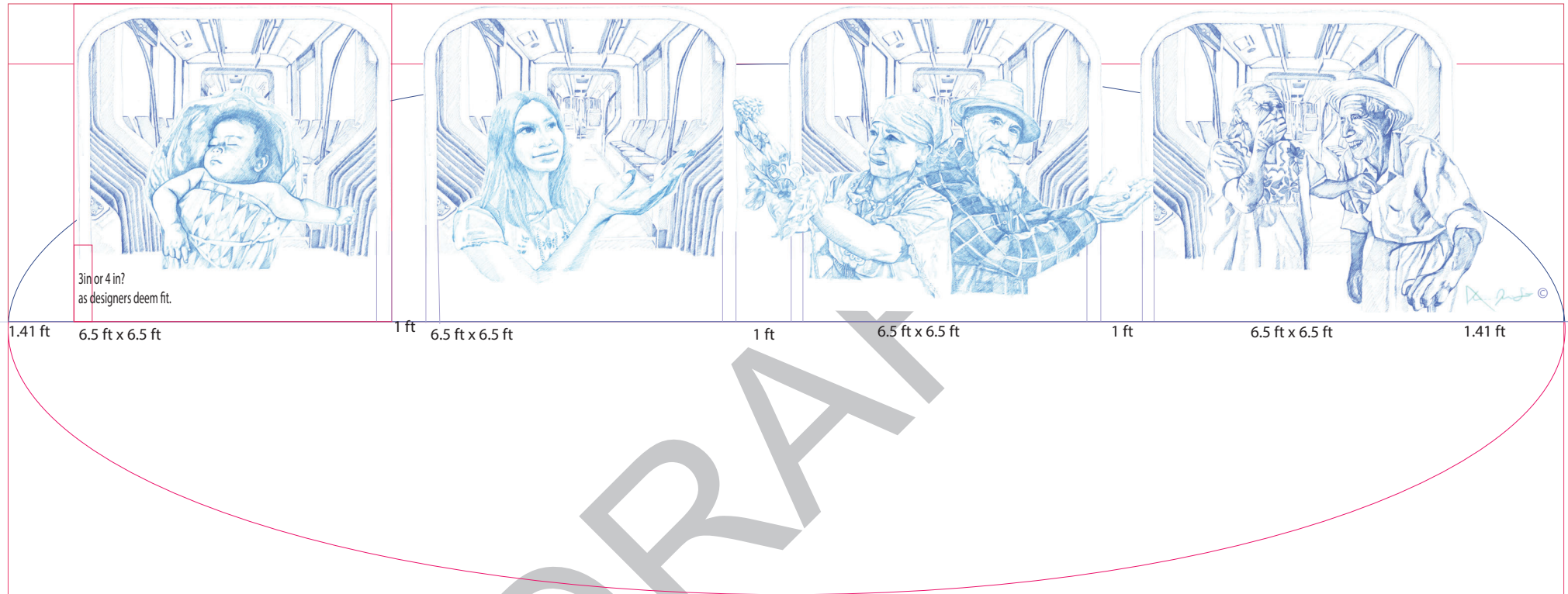


Observatories

Att.A, Item 10, 05/15/25




Ocotillo



Proposed walls and artwork are in BLUE, (the red outlines are references for sizes of eclipse radius).

The back wall's shape is half of eclipse (it will symbolize the setting or rising sun) whose half eclipse path falls inside a 5.425 ft x 31.833 ft rectangle.

The front walls are cross sections of trolley-like shaped/boxes with rounded top corners, each measuring: 6.5 ft by 6.5 ft. If there is a possibility of creating shaped hands for the figures with hands outside of "box" walls.

Each "box" trolley cross section will have an outer frame so that lights can be placed at top lighting the portraits/artwork.

"Seasons of Life/Estaciones de la Vida" Mural's Imagery/Concept:

The trolley shaped boxes and trolley imagery is a metaphor for a person's journey/path through their life stages. The mural is meant to amuse the viewer with its play of words: in spanish the word Estacion (Estacion de tren (Train Station) and Estacion de temporada (Seasons), is the same word with two meanings. Although it is a play of words in the spanish language with "Estacion del tren" (Train station) it does not pertain to a literal theme of public transportation, rather it is a metaphor for each person's life journey throughout the different "seasons" or stages of their lives. The mural pays homage to cyclical world views and values present in many cultures and Indigenous cosmologies. The seasons are not only symbolic of each stage in a person's natural cycle of life, but hold deep meaning for Indigenous cultures in the roles, responsibilities, and qualities of a person. These stages are not static, but can be thought of as in motion. Spring is purity and innocence, when life begins. Summer, from youth to mid adulthood (image is missing seed sprouting), is a stage when the seeds sprout and we can see the personalities and qualities of a person, responsibilities, goals are set and worked on. Fall or autumn stage- is when a person has acquired experience and knowledge and can harvest and give back to the community the fruits of their experiences/knowledge/labor. Winter stage, elderly, holding a cane, symbolizing wisdom and support, is characterized with introspection, also a return to childlike, still holding wisdom and knowledge but not longer in frontlines, the elderly can relax and prepare for the next journey. The theme is inspired directly from San Ysidro community input, in which the community voiced its need for safety, security and respect for life, as many have experienced assaults to their safety. It highlights the preciousness and respect we must have for life and each person's integrity, as well as the vibrancy of San Ysidro's intergenerational community. The portraits of summer and fall are of San Ysidro community members who gave permission to use their portraits as references. They are set against a Sun either setting or rising as backdrop and as metaphor for cyclical journeys. Each season's background will be in colors that pertain to each season. All of the mural imagery will be in full color, Acrylic Nova Color, painted on Mural Cloth by Mural Colors, to be installed on wall surface that is smooth, free of bumps or holes, overcoats: ColorShield and Over Coat Semi-Sacrificial Paint Protector.

EXHIBIT B
CONTRACTOR'S COST/PRICING FORM (

DRAFT

PWG410.0-25

BEYER BLVD PATHWAY BEAUTIFICATION PROJECT

ATT 1 - Cost Form

**** Fill in the Green Cells ****

#	Description	# of Hours	Hourly Rate	Extended Total
1	Design and Concept Development/two walls/floor	30.00	\$150.00	\$ 4,500.00
2	Mural Artist Painting	300.00	\$120.00	\$ 36,000.00
3	Installation of Work at Worksite	20.00	\$100.00	\$ 2,000.00
4	Materials, milleage, insurance, studio <i>(excluding tax)</i>			\$ 7,000.00
5	Overall Total:			\$ 49,500.00
After Completion Clean-Up and Maintenance (All Labor and Materials shall be included and all-inclusive in the Hourly Rate)				
	Year	Estimated # of Hours Per Year	Hourly Rate	Extended Total
	Year 1	40.00	\$30.00	\$ 1,200.00
	Year 2	40.00	\$30.00	\$ 1,200.00
	Year 3	40.00	\$30.00	\$ 1,200.00
	Year 4	40.00	\$30.00	\$ 1,200.00
	Year 5	40.00	\$30.00	\$ 1,200.00
	Overall Total:			\$ 6,000.00
	**Total Cost for Base & Clean-Up and Maintenance			\$ 55,500.00
**For all items, total costs shall be all-inclusive, including, but not limited to, transportation, materials, travel, insurance, etc. No additional costs are allowed.				

EXHIBIT C
IN ACCORDANCE WITH THE STANDARD AGREEMENT, INCLUDING STANDARD CONDITIONS,

DRAFT

CONTRACT TO FABRICATE AND INSTALL ARTWORK

THIS CONTRACT is made and entered into on _____, 2025, by and between **SAN DIEGO METROPOLITAN TRANSIT SYSTEM**, a public agency, ("MTS") and **Alicia M. Siu** ("ARTIST").

RECITALS

WHEREAS, MTS intends to procure artwork as part of the Beyer Blvd. Pathway Beautification Project (the "Project"); and

WHEREAS, ARTIST has prepared and submitted an Artwork Conceptual Design Proposal that has been accepted by MTS; and

WHEREAS, MTS and ARTIST desire to enter into a contract for ARTIST to construct artwork for the Project in accordance with ARTIST's Artwork Conceptual Design Proposal as defined below.

WITNESS

MTS AND ARTIST MUTUALLY AGREE AS FOLLOWS:

7.1. ARTWORK DEFINED

The work of art (the "Artwork") to be supplied under this Contract must be the same as that Artwork described in ARTIST's Artwork Conceptual Design Proposal (hereinafter "Proposal"). A true and correct copy of the Proposal is attached hereto as Exhibit A and incorporated herein by this reference

7.2. EFFECTIVE DATE

This Contract commences on the date first hereinabove appearing and expires upon completion of the Maintenance Plan, unless sooner terminated or cancelled in the manner provided under Articles 17, 29 and 30 below.

7.3. TOTAL CONSIDERATION

The total consideration paid to ARTIST may not exceed, in the aggregate, the sum of \$55,500.00, which will be paid in accordance with the Payment Schedule attached as Exhibit A to this Agreement.

ARTIST is responsible for payment of any state or local sales taxes. ARTIST represents and warrants that MTS will have no obligations regarding payment of any commissions or any other obligation pursuant to ARTIST's agreements with galleries or agents and ARTIST is solely responsible for such obligations. ARTIST agrees that the total consideration includes any amounts ARTIST is obligated to pay to galleries or agents, if any.

7.4. METHOD OF PAYMENT

Upon completion of each phase of fabrication and installation as set out in the Artwork Budget included as part of the Proposal (Exhibit A), ARTIST must remit an invoice for review and approval by MTS to ap@sdmts.com. Payment of each approved invoice will be made by MTS within 30

days after receipt. MTS reserves the right to withhold payments if MTS's site visits indicate that the progress of the Artwork is not in accordance with the Proposal or Contract requirements. MTS will provide notice to ARTIST of the reasons for withholding payment within 7 days after receipt of the invoice.

7.5. SCOPE OF SERVICES

See Exhibit A.

7.6. AUTHORIZED REPRESENTATIVES

The person designated in Article 31 to provide formal notices to ARTIST may designate, in writing, one or more Authorized Representatives to interact with the ARTIST regarding the production and installation of the Artwork. ARTIST must communicate with and take direction from Authorized Representatives acting within the scope of the written designation. This may include construction management personnel acting as consultants for MTS.

7.7. WORK SCHEDULE

ARTIST may not commence performance of any of the services identified in Section 5 above, until ARTIST receives a Notice to Proceed (NTP) from MTS. ARTIST must dedicate such time and effort as is necessary to fulfill ARTIST's obligations to completely finish and install the Artwork pursuant to this Contract in accordance with the Artwork Fabrication and Installation Schedule contained in the Proposal (Exhibit A). Time and strict punctual performance are of the essence to this Contract. MTS and ARTIST may agree to modify schedule. The revised schedule will be signed and dated by both parties, and will be attached and labeled as the Revised Schedule. ARTIST must respond within 7 days to any inquiry from MTS regarding the progress of the design for the Artwork.

7.8. MTS PRIOR APPROVAL OF ARTWORK

ARTIST must submit the following to MTS for technical approval: specifications that reflect compliance with MTS technical requirements and a digital image of the Artwork, as described in the Proposal (Exhibit A). MTS provided the relevant technical requirements during the development of the Artwork Conceptual Design Proposal, and the price proposed includes compliance with those requirements. The relevant technical requirements are attached as Section 5 and incorporated into this Contract. ARTIST may not begin to fabricate the Artwork until MTS has approved the specifications and digital image. MTS reserves the right to require ARTIST to modify the proposed Artwork to meet safety, aesthetic and/or technical requirements. MTS will specify any required material changes and document safety and/or technical requirements that justify such material changes within 30 days after delivery by ARTIST of the digital image. If MTS imposes additional technical requirements after Contract execution, that were not included in the technical requirements identified in Section 5, and such technical requirements cause an increase in cost for ARTIST to complete and install the Artwork, ARTIST may submit a written request for an equitable adjustment in the Total Consideration; any such equitable adjustment will be reflected in an amendment to this Contract. ARTIST must receive written approval by MTS of the Artwork digital image before ARTIST commences fabrication of the Artwork.

7.9. INSTALLATION OF ARTWORK

- A. At least 25 days prior to ARTIST's planned arrival at the Project site to begin installation, ARTIST must provide MTS with a Work Plan submittal detailing how ARTIST intends to

accomplish the installation, including planned labor, equipment, materials, schedule and duration of work, installation methodology, access route (which must comply with MTS's Stormwater Pollution Prevention Plan (SWPPP)), and clean-up.

- B. At least 14 days in advance of the ARTIST's planned arrival at the Project site to begin installation, ARTIST must attend a kick-off meeting with MTS to discuss the planned installation.
- C. The installation of the Artwork must meet or exceed the quality of the Project location's construction in all respects.
- D. While working at the Project site, ARTIST must work in such a way as not to delay MTS's operations or disrupt MTS or MTS's Contractor work. ARTIST must respond to reasonable requests by MTS to modify its installation activities to avoid unreasonably delaying or obstructing MTS's services and operations. Likewise, MTS will timely respond to ARTIST's reports, if any, that MTS or MTS's Contractors are unreasonably delaying or disrupting ARTIST's installation efforts.
- E. In accessing the Project site and performing the installation, ARTIST must comply with the terms of MTS's SWPPP, any applicable permits, and other general project requirements.
- F. The Artist will coordinate closely with MTS to ascertain that the Project Site is prepared to receive the Artwork. Artist must notify Agency of any adverse conditions at the Site that would effect or impede the installation of the Artwork. The Artist is responsible for timely installation of the Artwork.
- G. ARTIST is responsible for cleaning and protection of the Artwork until it is accepted by MTS. Once MTS is notified by ARTIST that the Artwork installation is complete, MTS will determine within 30 days whether it will accept the Artwork as installed.
- H. Within 30 days after completion of the Artwork, ARTIST must remove all excess materials and rubbish related to the Artwork installation from the Artwork site. ARTIST is prohibited from using MTS's trash receptables during installation and cleanup. ARTIST must restore the Artwork site (including the entire area affected by the fabrication and installation of the Artwork) to its prior condition if directed by MTS.

7.10. SAFETY

ARTIST must take all necessary precautions for the safety of employees on the work and the safety of other persons authorized to be present on the Artwork site. ARTIST must comply with all applicable provisions of federal, state, and local safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the Artwork site. ARTIST must erect and properly maintain, at all times as required by the conditions and progress of the work, all necessary safeguards for the protection of workers and the public and must post danger signs warning against the hazards created by such features of construction. If and when requested by MTS, ARTIST must deliver to MTS a copy of ARTIST's safety plan for conducting the work (the "Safety Plan"). MTS will have the right, but not the obligation, to require ARTIST to correct any deficiencies in the Safety Plan. If there are any inconsistencies between this Contract and the Safety Plan, then the Contract takes precedence.

ARTIST must comply with the applicable provisions of the California Occupational Safety and Health Act of 1973 and the Labor Code. In addition to ARTIST's own safety procedures and any safety procedures required under Federal, state, or local laws or regulations, including compliance with the provisions of the California Occupational Safety and Health Act of 1973, ARTIST must implement and enforce all safety requirements determined by MTS to be applicable to the performance of any work under this Contract.

7.11. QUALITY CONTROL

ARTIST must provide Quality Control (QC) for all items of work performed under this Contract, including the work of all subcontractors and suppliers both on-site and off-site. All costs for QC are deemed to be included in the total consideration.

For purposes of this Contract, QC is to be performed by ARTIST and is understood as the techniques, activities and inspections that sustain process and product control and measure the performance characteristics of a material, component, fabrication, installation, or system against specific contract acceptance criteria during work in-progress. QC refers to the act of taking measurements, testing, and inspecting a process or product to ensure that it meets Contract requirements. QC also includes the process of documenting all of these actions.

For purposes of this Contract, Quality Assurance (QA) is performed by MTS or its representative and is understood as the review, monitoring, observation, audit, and inspection or testing of work for assurance or verification purposes.

ARTIST must ensure that all Work is performed in accordance with applicable codes, standards, specifications and other special contractual requirements using qualified personnel and/or equipment.

7.12. PROPERTY DAMAGE

ARTIST must repair or replace any property damage (real or personal) caused by the acts or omissions of ARTIST or ARTIST's subcontractors and/or employees. ARTIST is solely responsible for all expenses and costs that may be necessary to comply with the requirements of this Article, and MTS has no responsibility or liability therefor. MTS may withhold payment if ARTIST has not completed any repair, replacement and/or restoration required under this Article. If ARTIST fails to repair or replace any damaged property as required by this Article within 30 calendar days after receipt of the written notice of such damage, MTS may undertake the required repairs, replacement and/or restoration at ARTIST's expense. MTS reserves the right to offset its costs of repairs, replacement and/or restoration against any payments owed to ARTIST.

7.13. STOP WORK ORDER

In addition to MTS's right to suspend work under any other provision of this Contract, MTS may require ARTIST to suspend all or part of the work called for by this Contract at any time for up to **90 days** after a written Stop Work Order is delivered to ARTIST, and for any further period as directed by MTS. The Stop Work Order will include a clear description of the work to be suspended and may also include guidance as to the action to be taken on subcontracts; and other requests for minimizing costs.

Upon receipt of a Stop Work Order, ARTIST must comply with its terms immediately and take all reasonable steps to minimize the cost associated with the work covered by the Stop Work Order

during the period of work stoppage. Within the period specified by the Stop Work Order, or within any extension of that period to which the parties may agree, MTS may:

- Terminate the Work covered by the Stop Work Order, as permitted in Articles 29 and 30 .
- Cancel the Stop Work Order; or
- Allow the period of the Stop Work Order to expire.

ARTIST must resume work upon the cancellation or expiration of a Stop Work Order. An equitable adjustment will be made in the Work scope, Contract Price, or Contract time, as appropriate if:

- The Stop Work Order results in an increase in the time required for, or in ARTIST's cost properly allocable to, the performance of any part of this Contract;
- ARTIST asserts a claim for an adjustment within 30 days after the end of the period of work stoppage; however, if MTS decides the facts justify such action, MTS may receive and act upon any such claim asserted at any time prior to final payment under this Contract; and
- The Stop Work Order was not caused by ARTIST's default or other act or omission within the control or responsibility of ARTIST.

Any cost due to a Stop Work Order issued because of Contract noncompliance will be borne by ARTIST.

In preparation for and during suspensions of work, ARTIST must take every reasonable precaution to prevent damage to or deterioration of the work. ARTIST must repair or replace, at no cost to MTS, work that is damaged or deteriorated during a work suspension due to ARTIST's failure to comply with this duty. If MTS determines that ARTIST is not taking reasonable precautions and ARTIST fails to take the corrective action within 5 days after written notice from MTS, MTS may cause such action to be taken and recover the reasonable cost thereof from ARTIST.

7.14. TITLE TO ARTWORK/RISK OF LOSS

Notwithstanding any payment MTS may make to ARTIST prior to the completion of the Artwork, title to the Artwork will remain with the ARTIST until MTS accepts the Artwork as complete. At the time MTS accepts the Artwork, title to the Artwork will transfer to MTS. ARTIST will bear all risk of loss of the Artwork until title has been transferred to MTS, unless the Artwork is damaged or destroyed due to the gross negligence or intentional act of MTS, its agents, employees or contractors.

7.15. WARRANTIES

- A. ARTIST warrants that the Artwork is original, the product of ARTIST's own creative efforts as sole author of the Artwork, and that the Artwork does not infringe upon the rights of any person, business or corporation. ARTIST also warrants that unless otherwise stipulated in writing, the Artwork is an edition of one (1), and that ARTIST may not sell, license, perform or reproduce a substantially identical copy of the Artwork without the prior written consent of MTS.

- B. ARTIST will warrant and maintain the Artwork free from all faults or defects in material and workmanship for a period of one year after MTS's acceptance of the Artwork. This subsection of this Article does not extend to damage to the Artwork caused by the exposure to the elements, physical damage inflicted by MTS patrons or members of the public, or any other damage unrelated to the material used in the Artwork or ARTIST's workmanship.

7.16. PROFESSIONAL STANDARDS

ARTIST warrants and guarantees that the Artwork provided hereunder will be designed, fabricated and installed in a professional manner. All services must be performed in the manner and in accordance with the professional standards observed by a competent practitioner of the profession in which ARTIST is engaged.

ARTIST represents and warrants to MTS that ARTIST possesses all required licenses, insurance, and other entitlements of whatever nature to legally pursue ARTIST's occupation and such licenses, insurance and other entitlements must be in full force and effect during the term of this Contract.

7.17. ACCEPTANCE OF ARTWORK

- A. MTS agrees to accept the completed Artwork, unless:
1. The Artwork was not fabricated or installed substantially in accordance with the Proposal (Exhibit A), MTS-approved specifications, or a reasonable standard of technical quality for similar artwork. If MTS refuses to accept the Artwork for this reason, ARTIST may appeal the refusal to the MTS CEO. The determination of the MTS CEO is final and binding.
 2. The Artwork, or any portion thereof, as completed by the ARTIST, does not conform to a reasonable standard of professional artistic quality. If MTS refuses to accept the Artwork for this reason and the ARTIST disputes MTS's refusal, the parties agree that the matter will be submitted to the arbitration in accordance with the rules of the Arts Arbitration and Mediation Services of California Lawyers for the Arts, or such other arbitration or mediation service to which both parties mutually agree. The scope of the arbitration is limited to a determination of whether the Artwork conforms to a reasonable standard of professional artistic or technical quality. The determination of the arbitrator will be final and binding upon MTS and ARTIST and neither has any further recourse or cause of action.
- B. MTS will have the right to inspect the Artwork during fabrication prior to completion or installation of the Artwork. MTS may request corrections and modifications necessary for the Artwork to conform to ARTIST's Proposal and the other requirements of this Contract. Prior to the date specified for completion of the Artwork, ARTIST must make all such corrections and modifications to which MTS and ARTIST mutually agree.
- C. If MTS refuses to accept the Artwork according to the provisions of this Article, it must notify ARTIST in writing specifying the reasons for such refusal within 30 calendar days after ARTIST's tender of the Artwork to MTS for acceptance. No prior payment to ARTIST will be deemed to waive MTS's right to refuse to accept the Artwork under this Article.

- D. If MTS refuses to accept the Artwork according to the provisions of this Article, MTS has the right, subject to ARTIST's right to dispute MTS's refusal, either:
1. To have ARTIST correct deficiencies in the Artwork, specified in the notice to ARTIST required under subsection B of this Article, at ARTIST's sole cost and within a reasonable time, and then accept the Artwork if the deficiencies are remedied to MTS's satisfaction; or
 2. To cancel this Contract for breach as set forth in Article 30, below, except that ARTIST has the right to cure said breach to MTS's satisfaction within 30 calendar days after receipt of MTS's notice of cancellation or to dispute MTS's determination as set out in paragraph A..
 3. Remedies identified in subsections D1 and D2 above are cumulative and in addition to any other remedy available to MTS. Enforcement of one such remedy is not exclusive nor deemed an election of such remedy to the exclusion of any other or further remedy.
 4. Payments to the ARTIST are not deemed as a waiver of MTS's right to refuse or accept the Artwork.

7.18. ABANDONMENT

If it becomes impossible for ARTIST to timely complete the Artwork because of illness, death, or injury (for example), or if ARTIST abandons the Artwork by failing to work on the Artwork during a continuous 30-day period, unless MTS, its agents, employees or contractors are the cause of ARTIST's inability to work on the Artwork during such period or MTS has issued a Stop Work Order, MTS may take such action as may be appropriate including, without limitation, cancelling this Contract for breach as set forth in Article 30.

7.19. ASSIGNMENT AND SUBCONTRACTING

- A. ARTIST's obligations imposed by this Contract are not assignable or transferable without first obtaining the written consent of MTS, which consent may be withheld in MTS's sole discretion.
- B. If ARTIST subcontracts any portion of the work, any subcontractors must be properly licensed pursuant to the contractor's state license law (Business and Professions Code sections 7000 et seq.). Before performing any work, each subcontractor must provide MTS and ARTIST evidence that the subcontractor has Workers' Compensation insurance coverage if this insurance is required by state law.

7.20. COPYRIGHT

ARTIST expressly reserves every right available to them under U.S. and international copyright laws to control the making and disseminating of copies or reproduction of the Artwork, except as those rights are limited by this Contract. Contractor under this Agreement as shall be considered necessary by MTS may be retained until disposition has been made of any claim for damages.

1. ARTIST agrees to give a credit substantially in the following form: "Original owned by San Diego Metropolitan Transit System" in any public display or distribution of reproductions of the Artwork.

2. ARTIST hereby authorizes MTS and its successors and assigns to make photographs, drawings and other two-dimensional reproductions of the Artwork without compensation or prior consent of ARTIST if used solely for non-commercial purposes including, but not limited to, advertising, descriptive brochures, promotional materials, schedules, fare passes, and other similar purposes. All reproductions by MTS or its successors and assigns where the Artwork is the exclusive or primary subject will acknowledge the authorship of the ARTIST in substantially the following form: "Copyright ©, ARTIST's name, date" and in such manner and location as prescribed under U.S. copyright laws.
3. The Artwork Conceptual Design Proposal and all accompanying materials, models, drawings, plans, sketches and specifications will become the property of MTS upon submission to MTS. MTS may use, reproduce, make derivations and distribute these documents, etc. in any fashion or manner MTS desires, provided that the use and distribution of these documents complies with the provisions set forth in subsection 2 above.

7.21. ARTISTS' RIGHTS/MTS DUTIES RELATIVE TO ARTWORK

Applicant hereby acknowledges that Applicant is familiar with all rights under the Visual Artists Rights Act of 1990 (17 U.S.C. Sections 106A and 113(d)), the California Art Preservation Act (California Civil Code Sections 987 and 989) (collectively, "Acts") and any other local, state, foreign or international law (collectively, "Artist Rights Laws") that protect against the alteration of a work of art and protect the artist's getting credit for a work of art. The Acts and Moral Rights Laws require that a person who intends to waive these provisions must do so expressly in writing.

The ARTIST, for themselves and their heirs, beneficiaries, devisees and personal representatives, expressly waive any right or benefit that ARTIST has or may have under the Artist Rights Laws, and hereby releases, acquits and discharges MTS from all suits, claims, actions, liability, damages and expenses arising out of the display, use, maintenance, movement, removal or alteration of the Artwork on the Project.

- A. MTS may not intentionally destroy, damage, alter, modify, or change the Artwork in any way except after notice as required under applicable law. ARTIST acknowledges that use of the Artwork site by the public and MTS's cleaning and maintenance of the Artwork site may cause wear and tear to the Artwork. Such wear and tear will not be deemed to be an unpermitted alteration of the Artwork. If an alteration should occur, either intentionally or unintentionally, ARTIST may notify MTS in writing denying authorship of the Artwork or requesting that their name not be displayed as provided in Article 22, below.
- B. If, after acceptance of the Artwork, repair to the Artwork is required, MTS will send ARTIST a notice giving ARTIST the opportunity to repair the Artwork, so long as within the period of performance of the contract.
 1. If within 30 days after MTS sends notice to the ARTIST at the address set forth in Article 31, ARTIST does not respond to the notice, , MTS may contract with someone qualified to repair the Artwork and ARTIST will have no recourse for damages against MTS.

2. If MTS reasonably determines that damage to the Artwork is irreparable or impractical to repair, MTS may take any action it deems appropriate under the circumstances.
 3. ARTIST must notify MTS of a change of their address for the purpose of obtaining notice under this Article. Failure to notify MTS will constitute a waiver of ARTIST's right to be notified by MTS prior to repair of the Artwork.
- C. When emergency repairs are necessary to prevent the loss of or further damage to the Artwork, or for public safety, such repairs may be undertaken by MTS without advance notice to ARTIST and such repairs will not be deemed to constitute an artistic alteration. If such repairs are substantial, ARTIST may deny authorship as provided in Article 22, below.
- D. After acceptance of the Artwork, MTS will have the right to relocate, store or sell the Artwork or remove it from display in its sole discretion without notice to ARTIST, except for any payment that may be required under Civil Code Section 986.
- E. If, after acceptance of the Artwork, MTS reasonably determines that it is necessary to remove the Artwork and such removal is likely to cause damage or destruction to the Artwork, MTS will give ARTIST written notice to remove the Artwork in the manner set forth in Article 31, below.
1. ARTIST must respond in writing within 30 days after MTS sends notice. In its response, ARTIST must inform MTS whether ARTIST intends to exercise or waive their right to remove the Artwork under this Article. If ARTIST does not respond to the notice within 30 days after MTS sends notice to the ARTIST at the address set forth in Article 31, ARTIST will have no recourse for damages against MTS. ARTIST must notify MTS of a change of his or her address for these purposes. Failure to so notify MTS will constitute a waiver of ARTIST's right to be notified by MTS prior to removal of the Artwork.
 2. Unless ARTIST has waived their right or has failed to timely respond to MTS's notice, ARTIST will have the right to remove the Artwork at ARTIST's expense within 90 calendar days after MTS provides such notice. In such case, ARTIST must pay MTS the value (if any) of the Artwork after its removal and title to the Artwork will vest in ARTIST upon MTS's receipt of such payment. A dispute regarding the value of the Artwork will be submitted to the Arts Arbitration and Mediation Services of the California Lawyers for the Arts, or such other arbitration or mediation service to which both parties mutually agree.
 3. If ARTIST fails to remove the Artwork within the 90-day period or if ARTIST fails to timely respond to the notice, MTS will have the right to remove the Artwork and ARTIST will have no recourse against MTS for any damage to or destruction of the Artwork that may occur during such removal. In such case, MTS will have the right to display, store or dispose of the Artwork in MTS's sole discretion.
- F. If MTS cancels this Contract for breach and arranges to have the Artwork completed by another artist, ARTIST will be deemed to have waived his or her rights related to authorship of the Artwork under federal and state laws and under this Contract, except as set forth in Article 22, below. If ARTIST disputes such deemed waiver of his or her rights,

ARTIST must submit a written objection to MTS within 30 calendar days after the date of MTS's notice of cancellation. In such event, the matter must be submitted to the Arts Arbitration and Mediation Service of the California Lawyers for the Arts, or such other arbitration or mediation service to which both parties mutually agree. If arbitration is held, the determination of ARTIST's rights under this Contract by the arbitrator is final and binding upon MTS and ARTIST and neither will have any further recourse or cause of action.

7.22. AUTHORSHIP OF ARTWORK

Except as provided in this Contract, ARTIST will retain the right to claim authorship of the Artwork. MTS will publicly display ARTIST's name on, at, or near the Artwork, except as provided below:

- A. If the Artwork is substantially damaged or artistically altered in a substantial manner, and if ARTIST gives written notice to MTS that ARTIST wishes to deny authorship, then MTS may no longer represent the Artwork to be the work of the ARTIST. If MTS disputes the right of ARTIST to deny authorship, the parties agree that the matter will be submitted to the Arts Arbitration and Mediation Service of the California Lawyers for the Arts, or such other arbitration or mediation service to which both parties mutually agree. The scope of the arbitration will be limited to whether the Artwork is substantially damaged or artistically altered in a substantial manner. The determination of the arbitrator will be final and binding upon MTS and ARTIST and neither will have any further recourse or cause of action.
- B. If the Artwork is substantially damaged or artistically altered in a substantial manner after the life of the ARTIST, MTS will consult with the California Arts Council, or their successors, in determining whether to continue representing the ARTIST as author of the Artwork.
- C. If MTS arranges to have another artist complete the Artwork as provided under Article 30 below, ARTIST's name must be publicly displayed on, at, or near the Artwork, unless ARTIST gives written notice to MTS not to display ARTIST's name or ARTIST wishes to deny authorship of the Artwork. If the work to complete the Artwork is substantial, MTS will consult with the California Arts Council, or their successors, regarding the selection of the artist who will complete the Artwork. After such consultation, MTS may select such artist in MTS's sole discretion. The name of the artist who completes the Artwork will be displayed in a manner equal to the display, if any, of ARTIST. The term "equal" means similar, not identical, and does not mandate any preference of position or size of location.
- D. If ARTIST effectively denies authorship of the Artwork for the reasons set out above or for any other reason, such action constitutes a waiver of all of ARTIST's rights related to authorship of the Artwork under federal and state law and this Contract.

7.23. INDEPENDENT CONTRACTOR

In providing the above-referenced services, ARTIST acts as an independent contractor and not as an employee of MTS. In accordance with that relationship, ARTIST must assume all responsibility for federal and state income tax withholding, FICA, SDI, and any other deductions from income that ARTIST is required to make as an independent contractor. ARTIST hereby agrees to indemnify and hold MTS, its officers and employees, harmless from any and all claims

that may be made against MTS based upon any contention by any employee of ARTIST or by any third party, including but not limited to any federal or state agency, that an employer-employee relationship or a substitute therefore exists for any purpose whatsoever by reason of this Contract or by reason of the nature and/or performance of any obligation under this Contract.

7.24. WORKERS' COMPENSATION

Responsibility for payment due by MTS is limited to the compensation set forth in Article 3 above. MTS is not responsible for providing workers' compensation insurance or any other protective insurance coverage or employment benefit payable to employees of ARTIST that is based upon the relationship of employer and employee.

7.25. THIRD PARTY OBLIGATION

ARTIST is solely liable to third parties with whom it enters into contracts to effectuate the purposes of this Contract. ARTIST must pay directly such parties for all amounts due under said arrangement. ARTIST must indemnify and hold MTS harmless from any and all claims and liabilities arising from such Contract. ARTIST must exert its best efforts to prevent any loss to MTS from the failure of proper performance of any third party. MTS's only obligation with respect to such third parties will be limited to reimbursement to ARTIST for those expenses for which MTS is obligated to reimburse by virtue of the terms of this Contract.

If ARTIST hires or contracts with employees or material suppliers, ARTIST must pay such employees and suppliers out of the payments made to ARTIST by MTS for completion of each phase of work. If any underpayment of wages or other amounts due ARTIST's employees and suppliers, MTS may withhold from ARTIST out of any payments due amounts sufficient to pay the claims of such employees and suppliers. In addition, before MTS is obligated to make final payment to ARTIST, MTS may require ARTIST to demonstrate to MTS's satisfaction that all employees and material suppliers have been fully paid.

7.26. INSURANCE REQUIREMENTS

A. Liability

1) Commercial General Liability

At all times during this contract and, with respect to Products and Completed Operations Liability, for twelve (12) months following the acceptance of the work by MTS, Contractor agrees to maintain Commercial General Liability Insurance utilizing Insurance Services Office (ISO) coverage form CG0001, edition date 10/01 or later, or an equivalent form and with insurance companies acceptable to MTS. The coverage shall contain no restricting or exclusionary endorsements with respect to the performing of services described in the scope of work.

All such policies shall name in the endorsement San Diego Metropolitan Transit System (MTS), San Diego Trolley, Inc. (SDTI), San Diego and Arizona Eastern Railway (SD&AE), San Diego and Imperial Valley Railroad (SD&IV), and San Diego Transit Corporation (SDTC), their directors, officers, agents, and employees as additional insureds as their interests may appear. Furthermore, an endorsement will be required demonstrating that the standard railroad exclusionary language has been removed as applicable.

2) Automobile Liability

At all times during this contract, Contractor agrees to maintain Automobile Liability Insurance for bodily injury and property damage including coverage for all owned, nonowned, and hired vehicles.

3) Workers' Compensation/Employer Liability

At all times during this contract, Contractor agrees to maintain Workers' Compensation and Employers' Liability Insurance in compliance with the applicable statutory requirements. Contractor waives any rights of subrogation against MTS, SDTI, SD&AE, SD&IV, and SDTC, and the policy form must permit and accept such waiver.

7.26.1. ADDITIONAL COVERAGES REQUIRED (AS INDICATED. WHERE THERE IS A CHECKMARK, THE COVERAGE IS REQUIRED)

☒ (1) Primary and Non-Contributory Insurance

Contractor agrees that all general liability coverages required under this insurance section are PRIMARY and that any insurance of MTS, SDTI, SD&AE, SD&IV, and SDTC shall be excess and noncontributory (endorsement required).

☐ (2) Owner-Provided Builder's Risk

MTS will provide Builder's Risk Insurance on a special form basis, excluding the perils of earthquake and flood, at a limit of not less than the full replacement value of the work and covering the work and all materials and equipment to be incorporated therein, including property in transit elsewhere, and insuring the interests of the Contractor, subcontractors, materialmen, and MTS, SDTI, SD&AE, SD&IV, SDTC, MTS's contractor for design, and MTS's contractor for construction management. However, Contractor is responsible for the portion of any loss that is within the deductible amount of this Builder's Risk Insurance, which is currently at \$50,000 but is subject to change.

☐ (3) Railroad Protective Liability and CG 24 17 Endorsement for CGL Policy - Required

The CGL policy must contain the following endorsement: Contractual Liability Railroads ISO Form CG 24 17 10 01 (or a substitute form providing equivalent coverage). Furthermore, Contractor shall maintain a Railroad Protective Liability coverage with limits of not less than \$2,000,000 each occurrence and \$4,000,000 annual aggregate, naming MTS as the named insured on the policy.

☐ (4) Professional Liability

At all times during this contract, and for twelve (12) months following acceptance of work by owner, Contractor agrees to maintain Professional Liability Insurance with respect to services or operations under this Agreement.

☐ (5) Pollution Legal Liability

At all times during this contract, and for twenty-four (24) months following, Contractor agrees to maintain Pollution Legal Liability Insurance with respect to services or operations under this Agreement. The extended discovery period must be no less than twenty-four (24) months.

☐ (6) Contractor Equipment

At all times during this contract, Contractor agrees to maintain Contractor's Equipment Insurance on a special form basis covering equipment owned, leased, or used by Contractor. Contractor waives any rights of subrogation against MTS, SDTI, SD&AE, SD&IV, and SDTC, and the policy form must permit and accept such waiver. Contractor hereby releases and holds harmless MTS for any loss or damage to its equipment.

☐ (7) Installation Floater

At all times during this contract, Contractor agrees to maintain Installation Floater Insurance on a special form basis covering property owned or provided by Contractor. Contractor waives any rights of subrogation against MTS, SDTI, SD&AE, SD&IV, and SDTC, and the policy form must permit and accept such waiver. Contractor hereby releases and holds harmless these entities for any loss or damage to its property.

☐ (8) Garage Keeper's Legal Liability & Automobile Portion

At all times during this contract, Contractor agrees to maintain Garage Keeper's Legal Liability as well Automobile Portion which covers the risk of loss or damage to MTS vehicles while in the care, custody or control of Contractor. Automobile portion shall cover the Contractor in the event of a vehicle accident while they are driving an MTS vehicle, which results in a third party claim of physical damage or bodily injury.

☐ (9) Crime Fidelity Insurance

At all times during this contract, Contractor agrees to maintain Crime Fidelity Insurance with respect to services or operations under this agreement. The coverage should include the following:

- Employee dishonesty/theft
- Theft, disappearance and destruction on the premises
- Theft, disappearance and destruction while in transit
- Forgery/alteration

☐ (10) Umbrella or Excess Liability (if required to meet liability limits above)

Contractor agrees that any Umbrella or Excess Liability Policy utilized to provide the required limits of liability shall contain coverage at least as broad as that provided by the General Liability Policy, and be written for a term concurrent with the General Liability Policy.

☐ (11) Property Insurance

Contractor is responsible to insure physical damage coverage at replacement cost value on the rolling stock (i.e., revenue and non-revenue vehicles) it operates. [Note: MTS insures the buildings in which the fixed route contract operates.]

- ☐ (12) Cyber and Privacy Liability, including Technology Errors and Omissions

Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by Contractor in this agreement and shall include, but not be limited to, claims involving security breach, system failure, data recovery, business interruption, cyber extortion, social engineering, infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, and alteration of electronic information. The policy shall provide coverage for breach response costs, regulatory fines and penalties as well as credit monitoring expenses. Coverage shall also include Technology Professional Liability Errors & Omissions appropriate to the Consultant's profession and work hereunder

7.24.2 MINIMUM POLICY LIMITS REQUIRED

	Combined Single Limit (CSL)
Commercial General Liability (Per Occurrence):	\$2,000,000
(General Aggregate)	\$4,000,000
(Completed Operations & Products Aggregate)	\$2,000,000
Automobile Liability: (Combined Single Limit)	\$2,000,000
Worker's Compensation:	Statutory Limits
Employer's Liability per Accident /or Disease:	\$1,000,000

1. Additional Coverages (as indicated under Additional Coverages Required Section):

<input checked="" type="checkbox"/>	B (1) Primary and Non-Contributory Insurance	
<input type="checkbox"/>	B (2) Owner Provided Builder's Risk	Replacement Cost
<input type="checkbox"/>	B (3) Railroad Protective (Per Occurrence)	\$2,000,000
	Railroad Protective (General Aggregate)	\$4,000,000
<input type="checkbox"/>	B (4) Professional Liability	\$
<input type="checkbox"/>	B (5) Pollution and Legal Liability	\$
<input type="checkbox"/>	B (6) Contractor Equipment	Replacement Cost
<input type="checkbox"/>	B (7) Installation Floater	Replacement Cost
<input type="checkbox"/>	B (8) Garage Keeper's Legal Liability & Automobile Portion	(Per Occurrence)

	(Combined Single Limit (CSL))	_____
<input type="checkbox"/>	B (9) Crime Fidelity Insurance	\$ _____
<input type="checkbox"/>	B (10) Umbrella or Excess Liability (if required to meet liability limits above)	\$ _____
<input type="checkbox"/>	B (11) Property Insurance	\$ _____
<input type="checkbox"/>	B (12) Cyber Security Liability Insurance	\$ _____
	(per occurrence or claim)	_____
	(Aggregate)	\$ _____

7.27. INDEMNIFICATION

To the extent permitted by law, ARTIST does hereby assume liability for, and agrees to defend, with counsel acceptable to MTS, indemnify, protect, save and keep harmless **MTS, SDTI, SDTC, SD&AE, SD&IV** and its directors, officers, employees, agents and their respective successors and assigns from and against any and all liabilities, obligations, losses, damages, penalties, fines, claims, actions, suits, costs and expenses and disbursements including reasonable attorneys' fees and expenses (including allocated costs of MTS attorneys) of any kind and nature imposed in, asserted against, incurred or suffered by **MTS, SDTI, SDTC, SD&AE, SD&IV** or its directors, officers or employees or its successors and assigns by reason of damage, loss or injury (including death) of any kind or nature whatsoever to persons or property in any way relating to or arising out of:

- (i) any acts, errors or omissions by ARTIST or any of its officers, agents, servants, employees, subconsultants of any tier in its or their performance hereunder, whether or not caused by MTS's negligence, but not to the extent of MTS's sole negligence or willful misconduct; or
- (ii) any claim of patent or copyright infringement in connection with the services performed or work products provided under this Contract by ARTIST or any of its officers, agents, servants, employees, subcontractors or subcontractors of any tier; or
- (iii) a release by ARTIST or any of its officers, agents, servants, employees, subcontractors or subcontractors of any tier in its or their performance hereunder of any substance or material defined or designated as a hazardous or toxic substance, material or waste by any federal, state or local law or environmental statute, regulation or in effect when the release occurs, or as amended or promulgated in the future, but only to the extent based upon principles of comparative fault that such release is not proximately contributed to or caused by MTS, or its directors, officers or employees; and/or
- (iv) successful efforts to enforce this indemnity provision.

The parties will establish procedures to notify the other party where appropriate of any claims, administrative actions or legal actions with respect to any of the matters described in this indemnification provision. The parties will cooperate in the defense of such actions brought by others with respect to the matters covered in this indemnity. Nothing set forth in this Contract will establish a standard of care for, or create any legal rights in, any person not a party to this Contract.

In addition to any other remedy authorized by law, MTS may retain as much of the money due ARTIST under this Contract as it considers necessary until disposition has been made of any claim for damages.

The foregoing requirements are not intended to and will not in any manner limit or qualify the liabilities and obligations otherwise assumed by ARTIST pursuant to this Contract, including, but not limited to, the provisions concerning insurance.

7.28. CONFLICT OF INTEREST

During the term of this Contract, ARTIST, its officers, employees and their immediate families may not acquire any interest, direct or indirect, that would conflict with the performance of services required to be performed under this Contract. Violation of this prohibition is a material breach of this Contract and MTS will have the right to debar ARTIST from participating at any tier in any MTS contract for a period of up to 5 years.

ARTIST covenants that prior to award of this Contract, ARTIST has disclosed in writing to the MTS General Counsel any present interest and any interest existing within 12 months prior to award of this Contract including, without limitation, any business or personal relationship that creates an appearance of a conflict of interest. Disclosable interests and relationships are those that may reasonably be viewed as creating a potential or actual conflict of interest. In addition, ARTIST must immediately disclose in writing to the MTS General Counsel any interest or relationship described above acquired or occurring after ARTIST's initial disclosure. Violation of the above disclosure obligations is a material breach of this Contract.

7.29. TERMINATION FOR CONVENIENCE

After MTS issues Notice to Proceed, MTS may terminate this Contract by giving 5 days' advance written notice to ARTIST. Upon termination of the Contract under this Article, ARTIST will be paid for all actual services rendered to MTS to and inclusive of the specified date of termination. If MTS terminates this Contract for convenience before issuance of Notice to Proceed to fabricate the Artwork, MTS will not be obligated to make any payment to ARTIST. All designs, materials, finished and unfinished portions of the Artwork, and written documents pertaining to the Artwork under this Contract, will remain the property of ARTIST. Within 30 days after issuance of the notice of termination, ARTIST must remove all finished or unfinished portions of the Artwork and restore the Artwork site to its prior condition. If ARTIST fails to remove his or her personal property and restore the Artwork site, MTS may do so at ARTIST's expense.

7.30. TERMINATION FOR BREACH

Either party may terminate this Contract immediately following written notice if the other party is in default as to any of its material obligations hereunder, provided that: (a) the defaulting party has received a written notice containing a reasonably complete description of the default; and (b) the defaulting party has failed to cure the default within 30 calendar days after receiving such notice; provided that if such failure is capable of cure but cannot be cured during such 30-day period, no event of default may occur so long as the defaulting party is diligently attempting to cure and does so within such additional period of time as is approved in writing by the non-defaulting party. If MTS terminates for breach, ARTIST will only be paid its fees and costs for services performed, as of the effective date of termination, in accordance with the terms and conditions of this Contract. MTS reserves the right to offset the damages it incurs as a result of

ARTIST's breach against any payments owed to ARTIST. The foregoing remedy is cumulative and is in addition to any right or remedy that MTS may have in law or equity.

If, after termination for failure to fulfill contract obligations, it is determined that ARTIST was not in default, the rights and obligations of the parties will be the same as if the termination had been issued for MTS's convenience.

7.31. NOTICES

All notices and other communications under this Contract must be in writing and will be deemed to have been duly given (i) on the date of delivery, if delivered personally to the party to whom notice is given, or if made by email directed to the party to whom notice is to be given at the email address listed below, or (ii) at the earlier of actual receipt or the second business day following deposit in the United States mail, postage prepaid. Notices and other communications must be directed to the parties at the addresses shown below. A party may change its person designated to receive notice, its email address, or its address from time to time by giving notice to the other party in accordance with the procedures set forth in this Article.

TO MTS: San Diego Metropolitan Transit System
Attn: Brett Hoffman
Phone: (619) 398-9559
Email: Brett.Hoffman@sdmts.com

TO ARTIST:

7.32. PREVAILING WAGES

Pursuant to Labor Code sections 1725.5 and 1771.1, ARTIST and subcontractors that wish to enter into a contract to perform public work must be registered with the Department of Industrial Relations. No contract will be entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project.

LABOR

Hours of Work: Eight (8) hours of work shall constitute a legal day's work. ARTIST and each subcontractor shall forfeit, as penalty to MTS, twenty-five dollars (\$25) for each worker employed in the execution of Work by the ARTIST or any subcontractor for each day during which such worker is required or permitted to work more than eight (8) hours in any one day and forty (40) hours in any week in violation of the provisions of the Labor Code, and in particular, section 1810 to section 1815, except as provided in Labor Code section 1815. The ARTIST and every subcontractor shall keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed in connection with the Work or any part of the Work contemplated by this Contract. The record shall be kept open at all reasonable hours to the inspection of MTS and to the Division of Labor Law Enforcement, Department of Industrial Relations of the State of California.

Prevailing Rates of Wages: The ARTIST is aware of the requirements of Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. Since this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and since the total compensation is \$1,000 or more, ARTIST agrees to fully comply with such Prevailing Wage Laws. The Contractor shall obtain a copy of the prevailing rates of per diem wages at the commencement of this Contract from the website of the Division of Labor Statistics and Research of the Department of Industrial Relations located at www.dir.ca.gov. In the alternative, the Contractor may view a copy of the prevailing rate of per diem wages which are on file at MTS's Administration Office and shall be made available to interested parties upon request. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification, or type of worker needed to perform work on the Project available to interested parties upon request, and shall post copies at the ARTIST's principal place of business and at the Project site. Contractor shall defend, indemnify and hold MTS, its Board, members of the Board, employees and authorized volunteers free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or allege failure to comply with the Prevailing Wage Laws.

The ARTIST shall forfeit as a penalty to MTS not more than Two Hundred Dollars (\$200.00), pursuant to Labor Code Section 1775, for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate as determined by the Director of the Department of Industrial Relations for such work or craft in which such worker is employed for any public work done under the Contract by it or by any subcontractor under it. The difference between such prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof, for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by the ARTIST.

ARTIST shall post, at appropriate conspicuous points on the Project site, a schedule showing all determined general prevailing wage rates and all authorized deductions, if any, from unpaid wages actually earned.

Payroll Records: Pursuant to Labor Code Section 1776, ARTIST and all subcontractors shall maintain weekly certified payroll records, showing the names, addresses, Social Security numbers, work classifications, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by them in connection with the Work under this Contract. ARTIST shall certify under penalty of perjury that records maintained and submitted by Contractor are true and accurate. ARTIST shall also require subcontractor(s) to certify weekly payroll records under penalty of perjury.

In accordance with Labor Code section 1771.4, the ARTIST and each subcontractor shall furnish the certified payroll records directly to the Department of Industrial Relations ("DIR") on the specified interval and format prescribed by the DIR, which may include electronic submission. ARTIST shall comply with all requirements and regulations from the DIR relating to labor compliance monitoring and enforcement.

If not subject to paragraph (a), the certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement ("DLSE") of the DIR or shall contain the same information as the forms provided by the DLSE.

In the event of noncompliance with the requirements of this Section, the ARTIST shall have ten (10) calendar days in which to comply subsequent to receipt of written notice specifying in what respects the ARTIST must comply with this section. Should noncompliance still be evident after such 10-day period, the ARTIST shall pay a penalty of one hundred dollars (\$100.00) to MTS for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from progress payment then due.

Employment of Apprentices: ARTIST's attention is directed to the provisions of sections 1777.5, 1777.6, and 1777.7 of the Labor Code concerning employment of apprentices by the Contractor or any subcontractor. ARTIST shall obtain a certificate of apprenticeship before employing any apprentice pursuant to sections 1777.5, 1777.6, and 1777.7 of the Labor Code. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, the Administrator of Apprenticeships, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

Nondiscrimination: Pursuant to Labor Code Section 1735 and other applicable provisions of law, the ARTIST and its subcontractors shall not discriminate against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, or any other classifications protected by law on this Project. The ARTIST will take affirmative action to ensure that employees are treated during employment or training without regard to their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, or any other classifications protected by law.

Labor Certification I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract code.

7.33. WATER QUALITY MANAGEMENT AND COMPLIANCE

- A. Contractor must recover and legally dispose of all wastewater created while providing services. Contractor assumes any and all risks and liabilities arising from the failure to properly recover and legally dispose of wastewater. Contractor must implement best management practices set forth in any stormwater pollution prevention plan relevant to the provision of the services.
- B. Compliance with Water Quality Laws, Ordinances and Regulations. Contractor shall keep itself and all subcontractors, staff, and employees fully informed of and in compliance with all local, state and federal laws, rules and regulations that may impact, or be implicated by the performance of the services including, without limitation, all applicable provisions of the Federal Water Pollution Control Act (33 U.S.C. § 1251, et seq.); the California Porter-Cologne Water Quality Control Act (Water Code § 13000 et seq.); and any and all regulations, policies,

or permits issued pursuant to any such authority. Contractor shall additionally comply with the lawful requirements of the San Diego Regional Water Quality Control Board, any municipality, drainage district, or other local agency with jurisdiction over the location where the services are to be conducted, regulating water quality and storm water discharges and shall implement best management practices, consistent with the requirements of any board, municipality, drainage district or other local agency appropriate for the control of discharges related to the services.

- C. Standard of Care. Contractor warrants that all employees and subcontractors shall have sufficient skill and experience to perform the work assigned to them without impacting water quality in violation of the laws, regulations and policies described in this section. Contractor further warrants that it, its employees and subcontractors have or will receive adequate training, as determined by MTS, regarding these requirements as they may relate to the services.
- D. Liability for Non-compliance.
 - 1. Indemnity: Failure to comply with laws, regulations, and ordinances listed in this section may constitute a violation of federal and state law. Notwithstanding any other indemnity contained in this Agreement, Contractor agrees to indemnify, defend and hold harmless MTS, its officials, officers, agents, employees and authorized volunteers from and against any and all claims, demands, losses or liabilities of any kind or nature which MTS, its officials, officers, agents, employees and authorized volunteers may sustain or incur for noncompliance with the laws, regulations, and ordinances listed above, arising out of or in connection with the services, except for liability resulting from the sole established negligence, willful misconduct or active negligence of MTS, its officials, officers, agents, employees or authorized volunteers. Contractor is solely liable for any administrative or civil enforcement action arising from Contractor's failure to comply with the laws, regulations, and ordinances listed in this section and must pay any monetary penalty, fine, or damages associated with such action.
 - 2. Defense: MTS reserves the right to defend any enforcement action or civil action brought against MTS for Contractor's failure to comply with any applicable water quality law, regulation, or policy. Contractor hereby agrees to be bound by, and to reimburse MTS for the costs associated with, any settlement reached between MTS and the relevant enforcement entity.
 - 3. Damages: MTS may seek damages from Contractor for delay in completing the services caused by Contractor's failure to comply with the laws, regulations and policies described in this section, or any other relevant water quality law, regulation, or policy.

7.34. NONDISCRIMINATION

In accordance with applicable federal and state laws and regulations, ARTIST agrees that it will not discriminate against any employee, applicant for employment, or subcontractor because of race, color, religion, creed, ancestry, national origin, sex, marital status, age, medical condition, gender, gender identity, gender expression, genetic information or physical or mental disability.

7.35. SUBCONTRACTORS

ARTIST agrees to bind every subcontractor to the terms of the Agreement as far as such terms are applicable to subcontractor's portion of the Work. ARTIST shall be as fully responsible to MTS for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by its subcontractors, as ARTIST is for acts and omissions of persons directly employed by ARTIST. Nothing contained in this Agreement shall create any contractual relationship between any subcontractor and MTS. MTS reserves the right to approve all subcontractors. MTS's approval of any subcontractor under this Agreement shall not in any way relieve ARTIST of its obligations under this Agreement.

7.36. PROMPT PROGRESS PAYMENT AND RETENTION

ARTIST or Subcontractor shall pay any Subcontractor no later than seven (7) business days from the receipt of each progress payment from MTS. No retainage will be held by MTS from progress payments due to the ARTIST. Any retainage kept by the ARTIST or by a Subcontractor must be paid in full to the Subcontractor in seven (7) business days after the Subcontractor's work is satisfactorily completed. Any delay or postponement of a progress payment or retainage to the Subcontractor over 30 calendar days may take place only for good cause and with MTS's prior written approval. Failure to comply with this provision will constitute noncompliance, which may result in the application of legal and contract remedies, including, but not limited to, prime contractor not being reimbursed for work performed by subcontractors unless and until the prime contractor ensures that the subcontractors are promptly paid for the work they have performed. This requirement shall not be construed to limit or impair any contractual, administrative or judicial remedies otherwise available to the ARTIST or Subcontractor in the event of a dispute involving late or nonpayment by the ARTIST, deficient Subcontractor performance or noncompliance by a Subcontractor.

ARTIST must submit the MTS Prompt Payment Certification Form to the MTS Contracts Administrator if any Subcontractors. The form is available for download at <https://www.sdmts.com/business-center/procurement>. The form certifies that all Subcontractors were paid within seven (7) business days of receiving payment from MTS for work performed during the previous month. The ARTIST must submit the completed certification, as required on the form, and the month following final acceptance of the project. In addition, seven (7) business day prompt payment requirement prevails over contract language between an ARTIST and a Subcontractor.

7.37. RECORDS RETENTION

The ARTIST and any Subcontractor shall maintain all data, documents, books, reports, payroll, statistics, subcontracts, leases, arrangements, papers, accounting records, and other evidence and supporting materials pertaining to the performance of the contract including, but not limited to, the costs of administering the contract. The Contractor shall make such materials available at its respective office at all reasonable times during the Agreement and for three (3) years from the date of the final payment under the Contract and three (3) years from the date that any pending legal matters relating to the Contract are closed. MTS, the state, the State Auditor, or any duly authorized representative shall have access to any books, records, and documents of the ARTIST that are pertinent to the contract for audit examination, excerpts, and transactions, and copies thereof shall be furnished if requested.

7.38. DISADVANTAGED BUSINESS ENTERPRISE (DBE) AND OTHER SMALL BUSINESS PARTICIPATION

MTS encourages the participation of DBEs, minority owned businesses (MBEs), women owned businesses (WBEs), disabled veteran business enterprises (DVBEs) lesbian gay bisexual transgender businesses (LGBTs), and small businesses (SB) in the performance of all of its contracts. MTS encourages the Contractor to outreach to DBEs and other small business enterprises for any potential subcontracting opportunities on this project. MTS tracks DBE, MBE, WBE, DVBE, PDBE, LGBT and SB participation and therefore requires all successful proposers to report whether the prime contractor and any subcontractors are a DBE or other small business enterprise. Contractor must complete MTS's Designation of Subcontractors and DBE Program - Information for MTS's Bidder List. If interested in learning about bonding or financial assistance that may be available for small businesses, visit www.sba.gov. If interested in learning about the eligibility requirements to become certified as a DBE, PDBE, MBE, WBE, DVBE, LGBT or SB or how to view a list of certified firms, please contact MTS's DBE Liaison Officer, Samantha Leslie, at DBEProgram@sdmts.com for more information.

7.39. EQUAL EMPLOYMENT

A. MTS'S EQUAL EMPLOYMENT OPPORTUNITY PROGRAM:

MTS is an Equal Opportunity Employer. As such, MTS agrees to comply with all applicable Federal civil rights laws and implementing regulations. Apart from inconsistent requirements imposed by Federal laws or regulations, MTS agrees to comply with the requirements of 49 U.S.C. § 5323(h) (3) by not using any Federal assistance awarded by FTA to support procurements using exclusionary or discriminatory specifications. MTS' Equal Employment Opportunity Program for Contractors, MTS Policy No. 25, is part of this Agreement (a copy can be obtained from MTS' Clerk of the Board).

B. CONTRACTOR'S EQUAL EMPLOYMENT OPPORTUNITY PLAN:

Each Contractor who provides MTS labor, equipment, materials and services of \$50,000 or more per year with fifty (50) or more employees shall have, maintain, and submit an Equal Employment Opportunity Plan to the Director of Human Resources and Labor Relations for MTS each year of the contract, and a Workforce Utilization Report on or before January 1 and July 1 for each year of the contract. The objective of this plan is to assure that the Contractor will not discriminate against any employee or applicant for employment because of race, color, national origin, sex, sexual orientation, gender identity, religion, disability, age or status as a parent. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

C. COMPLIANCE WITH REGULATIONS:

Contractor shall comply with Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e et seq.; Facilitate compliance with Executive Order No. 11246, "Equal Employment Opportunity" September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it in part and is applicable to federal assistance programs; Comply with federal transit law, specifically 49 U.S.C. § 5332; FTA Circular 4704.1 "Equal

Employment Opportunity (EEO) Requirements and Guidelines for Federal Transit Administration Recipients,”; and Follow any other federal guidance pertaining to EEO laws, regulations, and requirements, and prohibitions against discrimination.

7.40. ROADWAY WORKERS PROTECTION (RWP) TRAINING

Prior to entering the MTS railroad operating corridor, all workers of Contractor, sub-Contractors, and any other third-party contractor under Contractor’s control working on MTS property shall have taken and passed a four (4) hour RWP training course as required by the Federal Railroad Administration (FRA) California Public Utilities Commission (CPUC). Training courses are valid for one year from date issued. Contractor should allow at least two weeks to schedule training prior to commencement of services on the right of way (ROW). Registration for the course can be found online at: <http://www.sdmts.com/Business/RAILSAFETYTRAINING.htm>. Any costs related to RWP training courses shall be at the sole expense of the Contractor.

7.41. FLAGGING

Any work within fifteen (15) feet of active rail, or as otherwise identified by MTS, shall require an MTS flagger. An MTS Flagger Request form must be submitted to FlagRequest@sdmts.com no later than 72 hours prior to the commencement of the work. The MTS Flagger Request shall include: the specific location, time(s) and date(s) for when an MTS flagger(s) will be necessary. The MTS Flagger will be provided at the expense of the party requesting the work. The requester will be responsible to contact SDTI Assignment Office at (619) 595-4956 no later than 24 hours prior to beginning of work for all cancellations and may be subject to SDTI labor reporting costs.

7.42. GRANT CONDITIONS

This Contract is subject to a financial assistance contract between MTS and the United States of America, acting through the Department of Transportation and the Federal Transit Administration (hereinafter "FTA"), as well as Clean California Local Grant Program ("CALTRANS"). If FTA or CALTRANS requires any change to this Contract to comply with its requirements, both parties agree to amend this Contract as required by FTA or CALTRANS. If such changes cause an increase or decrease in the work to be performed by the ARTIST or the time for such performance, then the compensation to be paid to ARTIST and time of performance will be equitably adjusted.

7.43. ARBITRATION

If any matter is to be submitted to the Arts and Mediation Services of the California Lawyers for the Arts, all fees expenses and costs connected therewith will be borne jointly and equally by MTS and ARTIST. Each and every obligation under this Contract to submit any matter in dispute to a third party for resolution is conditioned upon the foregoing provision of this Article. If any matter is to be submitted to the Arts and Mediation Services of the California Lawyers for the Arts for resolution pursuant to this Contract, and if, at the time of submission such organization is no longer in existence, or is not able or willing to provide such resolution service, then the matter will be submitted for resolution to the American Arbitration Association or such other organization to which both parties mutually agree. Unless the parties agree otherwise, the arbitration procedures to be used for resolving the dispute will be those current procedures adopted by the applicable arbitration board.

7.44. ASSIGNMENT OF WORK

The services provided pursuant to this Contract may not be assigned by ARTIST unless approved in writing by MTS. If ARTIST is not available to perform the terms of the Contract, MTS may at its election terminate the Contract for convenience or cancel the Contract for breach by giving notice as set forth herein.

7.45. SUCCESSORS AND ASSIGNS

This Contract will be binding upon and the benefits of this Contract will inure to the successors and assigns of the parties hereto, subject to the provisions of Article 37 above.

7.46. GOVERNING LAW

The interpretation and enforcement of this Contract is governed by the laws of the State of California, the state in which this Contract was signed. The parties agree to submit any disputes not subject to arbitration arising under the Contract to a court of competent jurisdiction located in San Diego, California.

7.47. NONWAIVER

Waiver of any breach or default hereunder does not constitute a continuing waiver or a waiver of any subsequent breach either of the same or of another provision of this Contract.

7.48. MODIFICATION

No waiver, alteration, modification, or termination of this Contract will be valid unless made in writing and signed by the authorized parties hereof.

7.49. AMBIGUITIES

The parties have each carefully reviewed this Contract and have agreed to each term of this Contract. ARTIST acknowledges that he or she has been encouraged to retain his or her own attorney for the purposes of reviewing this Contract before signing it. No ambiguity is presumed to be construed against either party.

7.50. COUNTERPARTS

This Contract may be executed in one or more counterparts, each of which will be deemed to be an original, but all of which together will constitute but one and the same instrument.

7.51. SEVERABILITY

If any term, covenant, or condition of this Contract is held by a court of competent jurisdiction to be invalid, the remainder of this Contract will remain in effect.

7.52. SURVIVAL

All warranties, indemnities and waiver of rights contained in this Contract will survive the expiration, termination or cancellation of this Contract.

7.53. ENTIRE AGREEMENT

All warranties, indemnities and waiver of rights contained in this Contract will survive the expiration, termination or cancellation of this Contract.

EXHIBIT E
FEDERAL REQUIREMENTS

DRAFT

FEDERAL TRANSIT ADMINISTRATION REQUIREMENTS

As a Federal Transit Administration (FTA) grantee, the San Diego Metropolitan Transit System (MTS), a California Public Agency, is required to inform the Contractor and any Subcontractor of the following information:

8.1. INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

The preceding provisions include, in part, certain Standard Terms and Conditions required by the Department of Transportation (DOT), whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F, are hereby incorporated by reference. Notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Contract. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any MTS requests which would cause MTS to be in violation of the FTA terms and conditions.

8.2. FEDERAL CHANGES

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

The Contractor shall at all times comply with all applicable FTA regulations, policies, procedures, and directives, including without limitation those listed directly or by reference in the Master Agreement between MTS and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor shall also ensure compliance by subcontractors at any tier of any applicable change to federal requirements.

8.3. NO FEDERAL GOVERNMENT OBLIGATIONS TO THIRD PARTIES

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

Notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying Contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this Contract and shall not be subject to any obligations or liabilities to Contractor or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying Contract. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by the FTA.

8.4. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. part 31, apply to its actions pertaining to this Contract. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification,

the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate. The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. chapter 53, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5323(l) on the Contractor, to the extent the Federal Government deems appropriate. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA.

False Claims Act (*APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS*)

The Contractor and any Subcontractor acknowledges that the False Claims Act, 31 U.S.C. 3729 et seq., pertains to the underlying contract or the FTA assisted project for which this contract work is performed. If the Contractor has knowledge of potential fraud, waste, or abuse occurring on a Project receiving assistance from FTA, or has or may have committed a criminal or civil violation of law pertaining to such matters as fraud, conflict of interest, bid rigging, misappropriation or embezzlement, bribery, gratuity, or similar misconduct involving federal assistance, the Contractor must notify MTS, U.S. DOT Inspector General, and the FTA Chief Counsel or FTA Region 9 Counsel. Knowledge, as used in this paragraph, includes, but is not limited to, knowledge of a criminal or civil investigation by a Federal, state, or local law enforcement or other investigative agency, a criminal indictment or civil complaint, or probable cause that could support a criminal indictment, or any other credible information in the possession of the Recipient. In this paragraph, "promptly" means to refer information without delay and without change. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA.

Notice to FTA on Legal Matters (*APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS EXCEEDING \$25,000*)

The Contractor and any Subcontractor shall notify MTS and the FTA Chief Counsel or FTA Region 9 Counsel if a current or prospective legal matter that may affect the Federal Government emerges. The types of legal matters that require notification include, but are not limited to, a major dispute, breach, default, litigation, or naming the Federal Government as a party to litigation or a legal disagreement in any forum for any reason. Matters that may affect the Federal Government include, but are not limited to, the Federal Government's interests in an award of federal funding, or the Federal Government's administration or enforcement of federal laws, regulations, and requirements. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA.

8.5. DEBARMENT AND SUSPENSION

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS EXCEEDING \$25,000)

The Contractor shall comply and facilitate compliance with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Government wide Debarment and Suspension (Nonprocurement)," 2 C.F.R. part 180. Contractor

shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or agency to be: a) Debarred from participation in any federally assisted Award; b) Suspended from participation in any federally assisted Award; c) Proposed for debarment from participation in any federally assisted Award; d) Declared ineligible to participate in any federally assisted Award; e) Voluntarily excluded from participation in any federally assisted Award; or f) Disqualified from participation in any federally assisted Award. The Contractor agrees to include a provision requiring compliance to this section in its lower tier covered transactions.

8.6. RESTRICTIONS ON LOBBYING

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS EXCEEDING \$100,000)

The Contractor and their subcontracts at every tier certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. The Contractor and their subcontracts at every tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

8.7. CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS EXCEEDING \$150,000)

The Contractor and any Subcontractor agrees: 1) It will not use any violating facilities; 2) It will report the use of facilities placed on or likely to be placed on the U.S. EPA "List of Violating Facilities;" 3) It will report violations of use of prohibited facilities to FTA; and 4) It will comply with the inspection and other requirements of the Clean Air Act, as amended, (42 U.S.C. §§ 7401 – 7671q); and the Federal Water Pollution Control Act as amended, (33 U.S.C. §§ 1251-1387).

8.8. ENERGY CONSERVATION

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

The Contractor and any Subcontractor agrees to comply with the mandatory energy efficiency standards and policies within the applicable state energy conservation plans issued in compliance with the Energy Policy and Conservation Act, 42 U.S.C. §§ 6321 et seq and 49 C.F.R. part 622, subpart C.

8.9. FLY AMERICA REQUIREMENTS

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS TRANSPORTING PERSONS OR PROPERTY BY AIR OUTSIDE THE U.S.)

The Contractor agrees to comply with 49 U.S.C. 40118 (the "Fly America" Act) in accordance with the General Services Administration's regulations at 41 C.F.R. Part 301-10, which provide that recipients and subrecipients of Federal funds and their contractors are required to use U.S. Flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately

explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.

8.10. ENVIRONMENTAL PROTECTIONS

(APPLICABLE TO ALL CONTRACTS)

8.12.1. GENERAL

Contractor agrees to comply with all applicable environmental and resource use laws, regulations, and requirements, and follow applicable guidance, now in effect or that may become effective in the future, including state and local laws, ordinances, regulations, and requirements and follow applicable guidance.

8.12.2. NATIONAL ENVIRONMENTAL POLICY ACT

An Award of federal assistance requires the full compliance with applicable environmental laws, regulations, and requirements. Accordingly, the Contractor agrees that it will: (1) Comply and facilitate compliance with federal laws, regulations, and requirements, including, but not limited to: (a) Federal transit laws, such as 49 U.S.C. § 5323(c)(2), and 23 U.S.C. § 139, (b) The National Environmental Policy Act of 1969 (NEPA), as amended, 42 U.S.C. §§ 4321 et seq., as limited by 42 U.S.C. § 5159, and CEQ's implementing regulations 40 C.F.R. part 1500 – 1508, (c) Joint FHWA and FTA regulations, "Environmental Impact and Related Procedures," 23 C.F.R. part 771 and 49 C.F.R. part 622, (d) Executive Order No. 11514, as amended, "Protection and Enhancement of Environmental Quality," March 5, 1970, 42 U.S.C. § 4321 note, and (e) Other federal environmental protection laws, regulations, and requirements applicable to the Recipient or the Award, the accompanying Underlying Agreement, and any Amendments thereto. (2) Follow the federal guidance identified herein to the extent that the guidance is consistent with applicable authorizing legislation: (a) Joint FHWA and FTA final guidance, "Interim Guidance on MAP-21 Section 1319, Accelerated Decision making in Environmental Reviews," January 14, 2013, (b) Joint FHWA and FTA final guidance, "SAFETEA-LU Environmental Review Process (Pub. L. 109-59)," 71 Fed. Reg. 66576, November 15, 2006, and (c) Other federal environmental guidance applicable to the Recipient or the Award, the accompanying Underlying Agreement, and any Amendments thereto.

8.12.3. ENVIRONMENTAL JUSTICE

Contractor agrees to promote environmental justice by following: (1) Executive Order No. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," February 11, 1994, 42 U.S.C. § 4321 note, as well as facilitating compliance with that Executive Order, (2) U.S. DOT Order 5610.2, "Department of Transportation Actions To Address Environmental Justice in Minority Populations and Low-Income Populations," 62 Fed. Reg. 18377, April 15, 1997, and (3) The most recent edition of FTA Circular 4703.1, "Environmental Justice Policy Guidance for Federal Transit Administration Recipients," August 15, 2012, to the extent consistent with applicable federal laws, regulations, requirements, and guidance.

8.12.4. OTHER ENVIRONMENTAL FEDERAL LAWS

Contractor agrees that it will comply or facilitate compliance with all applicable federal laws, regulations, and requirements, and will follow applicable guidance, including, but not limited to, the Clean Air Act, Clean Water Act, Wild and Scenic Rivers Act of 1968, Coastal Zone Management Act of 1972, the Endangered Species Act of 1973, Magnuson Stevens Fishery Conservation and Management Act, Resource Conservation and Recovery Act, Comprehensive Environmental Response, Compensation, and Liability Act, Executive Order No. 11990 relating to "Protection of Wetlands," and Executive Order Nos. 11988 and 13690 relating to "Floodplain Management."

8.12.5. USE OF CERTAIN PUBLIC LANDS

Contractor agrees it will comply with U.S. DOT laws, specifically 49 U.S.C. § 303 (often referred to as "section 4(f)"), and joint FHWA and FTA regulations, "Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites," 23 C.F.R. part 774, and referenced in 49 C.F.R. part 622.

8.12.6. HISTORIC PRESERVATION

The Contractor agrees that it will: (1) Comply with U.S. DOT laws, including 49 U.S.C. § 303 (often referred to as "section 4(f)"), which requires certain findings be made before an Award may be undertaken if it involves the use of any land from a historic site that is on or eligible for inclusion on the National Register of Historic Places. (2) Encourage compliance with the federal historic and archaeological preservation requirements of section 106 of the National Historic Preservation Act, as amended, 54 U.S.C. § 306108. (3) Comply with the Archeological and Historic Preservation Act of 1974, as amended, 54 U.S.C. § 312501 et seq. (4) Comply with U.S. Advisory Council on Historic Preservation regulations, "Protection of Historic Properties," 36 C.F.R. part 800. (5) Comply with federal requirements and follow federal guidance to avoid or mitigate adverse effects on historic properties.

8.12.7. INDIAN SACRED SITES

The Contractor agrees that it will facilitate compliance with federal efforts to promote the preservation of places and objects of religious importance to American Indians, Eskimos, Aleuts, and Native Hawaiians, and facilitate compliance with the American Indian Religious Freedom Act, 42 U.S.C. § 1996, and Executive Order No. 13007, "Indian Sacred Sites," May 24, 1996, 42 U.S.C. § 3161 note.

8.11. ADA ACCESS

(APPLICABLE TO ALL CONTRACTS)

The Contractor shall comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA), 42 USC Section 12101 et seq; Section 504 of the Rehabilitation Act of 1973, as amended, 29 USC Section 794; 49 USC Section 5301(d)., which prohibit discrimination on the basis of handicaps, with the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §§ 12101 et seq., which requires that accessible facilities and services be made available to persons with disabilities, including any subsequent amendments to that Act, and with the Architectural Barriers Act of 1968, as amended, 42 U.S.C. §§ 4151 et seq., which requires that

buildings and public accommodations be accessible to persons with disabilities, including any subsequent amendments to that Act.

8.12. CIVIL RIGHTS

(APPLICABLE TO ALL CONTRACTS)

8.14.1. SUBCONTRACT

The Contractor shall include these requirements in each subcontract entered into as part thereof.

8.14.2. NONDISCRIMINATION

In accordance with Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, gender identity, sexual orientation, disability, or age. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

8.14.3. RACE, COLOR, RELIGION, NATIONAL ORIGIN, SEX

In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e et seq., and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. chapter 60, and Executive Order No. 11246, "Equal Employment Opportunity in Federal Employment," September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it, referenced in 42 U.S.C. § 2000e note. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, or sex (including sexual orientation and gender identity). Such action shall include, but not be limited to, the following: employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

8.14.4. AGE

In accordance with the Age Discrimination in Employment Act, 29 U.S.C. §§ 621- 634, U.S. Equal Employment Opportunity Commission (U.S. EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 et seq., U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. part 90, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

8.14.5. DISABILITIES

In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. § 12101 et seq., the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § A-27 4151 et seq., and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against individuals on the basis of disability. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

8.13. VETERANS EMPLOYMENT

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

Recipients and subrecipients of Federal financial assistance under this chapter shall ensure that contractors working on a capital project funded using such assistance give a hiring preference, to the extent practicable, to veterans (as defined in section 2108 of title 5) who have the requisite skills and abilities to perform the construction work required under the contract. This subsection shall not be understood, construed or enforced in any manner that would require an employer to give preference to any veteran over any equally qualified applicant who is a member of any racial or ethnic minority, female, an individual with a disability, or former employee.

8.14. EXCLUSIONARY OR DISCRIMINATORY SPECIFICATIONS

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

Apart from inconsistent requirements imposed by federal statute or regulations, MTS shall comply with the requirements of 49 U.S.C. § 5323 (h)(2) by refraining from using any federal assistance awarded by FTA to support procurements using exclusionary or discriminatory specifications.

8.15. CONTRACTOR ASSURANCE

(APPLICABLE TO ALL CONTRACTS)

The Contractor and Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as MTS deems appropriate, which may include, but is not limited to: (1) Withholding monthly progress payments; (2) Assessing sanctions; (3) Liquidated damages; and/or (4) Disqualifying the contractor from future bidding as non-responsible. Each subcontract the Contractor signs with a Subcontractor must include the assurance in this paragraph.

8.16. CARGO PREFERENCE

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS INVOLVING EQUIPMENT, MATERIALS, OR COMMODITIES WHICH MAY BE TRANSPORTED BY OCEAN VESSELS)

- A. 46 U.S.C. 55305 and 46 C.F.R. Part 381 which imposes U.S. cargo preference requirements on the shipment of foreign made goods shall apply to this procurement. The Contractor shall utilize privately owned United States-flagged commercial vessels to ship at least 50 percent of the gross tonnage (competed separately for dry bulk carriers, dry cargo liners, and tankers) involved,

whenever shipping any equipment, materials, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flagged commercial vessels.

- B. The Contractor shall furnish within 20 days following the date of loading for shipments originating within the United States, or within 30 working days following the date of loading for shipments originating outside United States, a legible copy of a rated, "onboard" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (A) above to MTS (through the prime Contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, 400 Seventh Street, S.W., Washington, D.C. 20590, marked with appropriate identification of the project.
- C. The Contractor shall insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract when the subcontract may involve the transport of equipment, material or commodities by ocean vessel.

8.17. SAFE OPERATION OF MOTOR VEHICLES

(APPLICABLE TO ALL CONTRACTS)

8.20.1. SEAT BELT USE

The Contractor is encouraged to adopt and promote on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned vehicles, company- rented vehicles, or personally operated vehicles. The terms "company-owned" and "company-leased" refer to vehicles owned or leased either by the Contractor or MTS.

8.20.2. DISTRACTED DRIVING

The Contractor agrees to adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while using an electronic device supplied by an employer, and driving a vehicle the driver owns or rents, a vehicle Contractor owns, leases, or rents, or a privately-owned vehicle when on official business in connection with the work performed under this Contract. The Contractor agrees to conduct workplace safety initiatives in a manner commensurate with its size, such as establishing new rules and programs to prohibit text messaging while driving, re-evaluating the existing programs to prohibit text messaging while driving, and providing education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

8.18. DOMESTIC PREFERENCES FOR PROCUREMENTS

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

As appropriate and to the extent consistent with law, the Contractor should, to the greatest extent practicable under a Federal award, a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum;

plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

8.19. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

(APPLICABLE TO ALL CONTRACTS)

In accordance with 2 CFR part 200.216, Contractor and its subcontractors are prohibited from expending funds under this Contract to: procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). This includes: for the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities); telecommunications or video surveillance services provided by such entities or using such equipment; and telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

8.20. [NOT APPLICABLE] CONTRACT WORK HOURS AND SAFETY STANDARDS FOR AWARDS

8.21. RECYCLED PRODUCTS

(APPLICABLE TO OPERATIONS, CONSTRUCTION AND GOODS CONTRACTS AND SUBCONTRACTS INVOLVING ITEMS DESIGNATED BY THE EPA, WHERE THE PURCHASE PRICE OF THE ITEM EXCEEDS \$10,000 OR THE VALUE OF THE QUANTITY ACQUIRED DURING THE PRECEDING FISCAL YEAR EXCEEDED \$10,000)

The Contractor and any Subcontractor agrees to provide a preference for those products and services that conserve natural resources, protect the environment, and are energy efficient by complying with and facilitating compliance with Section 6002 of the State Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 U.S.C. § 6962, and U.S. Environmental Protection Agency (U.S. EPA), "Comprehensive Procurement Guideline for Products Containing Recovered Materials," 40 C.F.R. part 247. The requirements of Section 6002 include procuring only items designated in guidelines of the U.S. EPA at 40 C.F.R. part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

8.22. [NOT APPLICABLE] TRANSIT EMPLOYEE PROTECTIVE ARRANGEMENT**8.23. [NOT APPLICABLE] SCHOOL BUS OPERATIONS****8.24. [NOT APPLICABLE] MOTOR CARRIER SAFETY****8.25. [NOT APPLICABLE] DRUG AND ALCOHOL TESTING REQUIREMENTS****8.26. [NOT APPLICABLE] PRIVACY ACT REQUIREMENTS****8.27. [NOT APPLICABLE] CHARTER SERVICE****8.28. [NOT APPLICABLE] BUY AMERICA**

(APPLICABLE TO PURCHASE OF MORE THAN \$150,000 OF IRON, STEEL, MANUFACTURED GOODS, ROLLING STOCK, OR CONSTRUCTION MATERIALS)

The Contractor's attention is directed to the "Buy America" requirements set forth in Section 165 of the federal Surface Transportation Act of 1982, Section 70914 of the Infrastructure Investment Jobs Act, Pub. L. No. 117-58, which includes the Build America, Buy America Act (Section 70914 of the Infrastructure Investment Jobs Act), and the FTA regulations implementing Section 165 (49 C.F.R. Part 661). Information on "Buy America" requirements is available for review upon request. Contractor agrees to comply with 49 U.S.C. 5323(j), as amended by the FAST Act, FTA regulations 49 C.F.R. Part 661, and Section 70914 of the Infrastructure Investment Jobs Act, which provide that Federal funds may not be obligated unless steel, iron, manufactured products, and construction materials used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. See 49 C.F.R. 661.7 and Section 70914 of the Infrastructure Investment Jobs Act regarding general waivers. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11. Rolling stock must be assembled in the United States and have a 70 percent domestic content. Contractor shall submit to MTS with its Bid/Proposal the appropriate Buy America certification included as part of the Bid/Proposal Documents and Forms, except those subject to a general waiver. MTS will reject as nonresponsive Bids/Proposals or offers that are not accompanied by a completed Buy America certification. This requirement does not apply to lower tier subcontractors

8.29. [NOT APPLICABLE] AIR POLLUTION AND FUEL ECONOMY**8.30. [NOT APPLICABLE] BUS TESTING****8.31. [NOT APPLICABLE] PRE-AWARD AND POST-DELIVERY AUDIT REQUIREMENTS**

EXHIBIT D
FORMS

DRAFT

CONTACT INFORMATION

Read attached General Provisions carefully. They are a part of your proposal. Unit prices will prevail regardless of extensions submitted by the Proposer.

Company Information:

The Official, Legal Name of Proposing Firm:

Alicia M. Siu

Doing Business As:

Alicia M. Siu

Legal Structure (Corp./Partner/Proprietor):

Sole Proprietor

Company Mailing Address:

9041 El Dorado Parkway #33

Street

El Cajon

CA

92021

City

State

Zip

Person Authorized to sign:

Point of Contact:

Alicia M. Siu

Title:

Artist/Muralist

E-Mail Address:

aliciamariasiu@gmail.com

Phone Number:

818 314 9841

Accounts Receivable

Point of Contact:

Alicia M. Siu

Title:

Artist/Muralist

E-Mail Address:

aliciamariasiu@gmail.com

Phone Number:

8183149841

RETURN THIS FORM WITH YOUR BID

DESIGNATION OF SUBCONTRACTORS

List Subcontractor participants below. If 100% of item is not to be performed or furnished by subcontractor, describe exact portion of item to be performed or furnished by subcontractor. The successful bidder must execute and return this form even if no subcontractor participation will be reported.

NONE NEEDED

S

Company Name:

Contractor License or Certificate Number

DBE, PDBE, DVBE, LGBT, MBE, SB, WBE:

% of Work:

Department of Industrial Relations (DIR) Number:

Point of Contact

Email:

Phone Number:

Address:

Street

City

State

Zip

Description of Work:

COPY THIS FORM IF NEEDED FOR ADDITIONAL SUBCONTRACTORS.

~~Subcontractor~~

Company Name:

Contractor License or Certificate Number

DBE, PDBE, DVBE LGBT, MBE, SB,
WBE:

% of Work:

Department of Industrial Relations (DIR)
Number:

Point of Contact

Email:

Phone Number:

Address:

Street

City

State

Zip

Description of Work:

DBE PROGRAM – INFORMATION FOR MTS’S PROPOSAL LIST

This information will be maintained in MTS’s proposer list. The purpose for maintaining a proposer list is to derive data on the relative availability of DBEs in the local market. MTS may use this data in the future to help set MTS’s overall DBE participation goals.

INSTRUCTIONS: Each prime contractor and each subcontractor bidding is **required** to complete this form as part of their bid/proposal.

1. What is your company’s name? Alicia M. Siu Artist/Muralist
2. What is your company’s address? 9041 El Dorado Parkway #33, El Cajon CA 92021
3. What type of work does your company perform ?
(list NAICS Codes if known) Mural Community Consultation Workshops, Design Research, Mural Design, Mural Painting and Installation
Is your company a certified DBE PDBE, WBE, DVBE, ☒ DBE ☐ DVBE
SB or LGBT? If yes, please check the applicable box ☒ MBE ☒ SB
and state the corresponding certification number. ☒ WBE ☐ LGBT
☐ PDBE
5. How many years has your company been in business? 20
6. What are the annual gross receipts of your company (please check the applicable bracket)? ☒ Less than \$1,000,000
☐ \$1,000,001 – \$15,000,000
☐ \$15,000,001 - \$26,290,000*
☐ \$26,290,001– \$50,000,000
☐ \$50,000,001 - \$100,000,000
☐ Greater than \$100,000,000

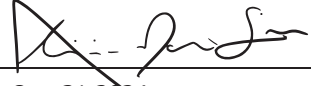
*The DOT annually decides the amount of average annual gross receipts a firm must have to be eligible to become a DBE. Currently, if your company in the previous 3 fiscal years has had average annual gross receipts below \$26,290,000, your company may be eligible for DBE Certification. To learn more about DBE certification, visit <https://dot.ca.gov/programs/civil-rights/dbe-certification-information> *

ACKNOWLEDGED AND AGREED**SUBCONTRACTOR**

(Copy this form if needed for additional subcontractors)

Print Name: _____
Title : _____
Signature: _____
Date: _____

PRIME CONTRACTOR

Print Name: Alicia M. Siu
Title : Artist/Muralist
Signature: 
Date: Oct. 31 2024

CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER INELIGIBLE AND VOLUNTARY EXCLUSIONS LOWER THAN TIER COVERED TRANSACTIONS

CONTRACTOR AND SUBCONTRACTOR'S STATEMENT OF ELIGIBILITY

(Provide one completed Form for the Prime Contractor and any Subcontractors)

MTS may not permit a contractor or subcontractor to bid on, be awarded, or perform work on a public works project if the contractor or subcontractor is ineligible to bid on, be awarded or perform work on a public works project pursuant to California Labor Code sections 1777.1 or 1777.7.

In addition, MTS may not award any federally funded contract over \$25,000 to a contractor or subcontractor that is excluded or disqualified pursuant to 2 CFR Part 180 Subpart C.

The prime/subcontractor certifies or affirms the truthfulness and accuracy of the contents of the statements submitted on or with this certification.

QUESTIONNAIRE

Has the Contractor, or any officer, principal, affiliates or employee of the Contractor ever been debarred, suspended, proposed for debarment, declared ineligible or otherwise prevented from bidding on, or completing a federal, state, or local government project? ☐ Yes ☒ No

If the answer is yes, or where the prime/subcontractor is unable to certify any of the statements in the above certifications, such prime/subcontractor shall attach an explanation (i.e. date, background, resolution) with this form.

Note: Failure to provide this form at the time of Bid/Proposal will not result in a finding of a non-responsive bid/proposal. Submittal of this form for The Prime Contractor and all Subcontractors is required for a Proposer to be deemed "Responsible." MTS encourages Proposers to complete and submit all forms at the time of bid/proposal.

SUBCONTRACTOR

(Copy this form if needed for additional subcontractors)

Business Name: _____
License No. (if applicable): _____
DUNS No.: _____

PRIME CONTRACTOR

Business Name: _____ Alicia M. Siu
License No. (if applicable): _____
DUNS No.: _____

ACKNOWLEDGED AND AGREED

Print Name: _____
Title: _____
Signature: _____
Date: _____

Print Name: _____ Alicia M. Siu
Title: _____ Artist/Muralist
Signature: _____
Date: _____ Oct. 31st 2024

EQUAL OPPORTUNITY PROGRAM WORKFORCE REPORT

Metropolitan Transit System (MTS) enforces an Equal Opportunity (EEO) program established under MTS policies and procedures No. 25. This program prohibits discrimination in employment and requires MTS Contractors to be equal opportunity employers. You may submit a copy of the Employer Information Report, EEO-1, in lieu of the **Equal Opportunity Program Workforce Report Continued Form**. The undersigned hereby certifies that the foregoing data contained herein is true and correct:

COMPLETE ALL SECTIONS OF THIS FORM:

1. The Official, Legal Name of Proposing Firm: _____
Alicia M. Siu
2. Doing Business As: _____
Alicia M. Siu
3. Legal Structure (Corp./Partner/Proprietor): _____
4. Address of Establishment in San Diego County: _____
9041 El Dorado Parkway #33

Street

El Cajon CA 92021

City State Zip
5. If there is no office in San Diego County, or if there are less than 15 employees in that office, include an address for your regional office that will oversee the work under MTS' contract: _____

Street

City State Zip

Employment Data - Include the employees located in San Diego County only, unless your firm employs fewer than fifteen (15) people locally. In the event, you should list the workforce of the regional office that will oversee the work under MTS' contract. Report all permanent full-time and part-time employees including apprentices and on-the-job trainees. Blank spaces will be considered as zeros

ACKNOWLEDGED AND AGREED

6. Name, Address, and Phone Number of Person to Contact Regarding this Report:

Name of Signee: _____
Alicia M. Siu
Title: _____
Artist/Muralist
Phone Number: _____
818 314 9841
Address: _____
9041 El Dorado Parkway #33

Street

El Cajon CA 92021

City State Zip

Name of Signee: _____
Authorized Signature: _____
Date: _____
Nov. 4 2024

EQUAL OPPORTUNITY PROGRAM WORKFORCE REPORT CONTINUED

OCCUPATIONAL CATEGORY	African American		Hispanic		Asian or Pacific Islander		Native American		Other		Overall Total	
	M	F	M	F	M	F	M	F	M	F	M	F
Executive/Managerial												
Engineers/Architects/ Surveyors												
Professionals (N.E.C.)												
Technicians												
Sales												
Administrative Support												
Protective Services												
Services (N.E.C.)												
Craft Workers (Skilled)												
Machine Operators, Assemblers & Inspectors												
Transportation and Material Moving												
Laborers (Unskilled)												
TOTALS FOR EACH COLUMN												

Indicate by gender and ethnic code the number of the above workforce, which are persons with disabilities:

DISABLED												
----------	--	--	--	--	--	--	--	--	--	--	--	--

ETHNIC IDENTIFICATION

African American: (NOT OF HISPANIC ORIGIN): All persons having origins in any of the black racial groups of Africa.

Hispanic: All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

Asian or Pacific Islander: Persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area, includes, China, Japan, Korea, the Philippine Islands, and Samoa.

Native American: All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition

Other: Caucasian and others not falling into one of the designated categories.

DISABLED DEFINITION

Any person who 1) has a physical or mental condition which limits one or more of such person's major life activities, 2) has a history of such a condition, or 3) is regarded as having such a condition. For purposes of this definition, "major life activity" means any mental or physical function or activity, which if impaired, creates a substantial barrier to employment.

OCCUPATIONAL CATEGORY LIST

Executive/Managerial

Executive, Management Related

Engineers/Architects/Surveyors

Professionals (N.E.C.)*

Mathematical and Computer Scientists

Natural Scientists

Health Diagnosing

Health Assessment and Treating

Teachers, Postsecondary

Teachers, except Postsecondary

Counselors, Educational and Vocational

Librarians, Archivists, Curators

Social Scientists and Urban Planners

Social, Recreation and Religious Workers

Lawyers and Judges

Writers, Artists Entertainers & Athletes

Technicians

Health Technologists and Technicians

Engineering and Related Technologists and Technicians

Science Technicians

Technicians, Except Health, Engineering, and Service

Sales

Supervisors and Proprietors

Sales Representatives, Finance, and Business

Services

Sales Representatives, Commodities except Retail

Sales Workers, Retail, and Personal Services

Other Sales Related

Administrative Support

Supervisors of Administrative Support

Computer Equipment Operators

Secretaries, Stenographers, Typists

Information Clerks

Records Processing, Except Financial

Financial Records Processing

Duplicating and Other Office Machine Operators

Communications Equipment Operators

Mail and Message Distributing

Material Recording and Distributing Clerks

Adjusters and Investigators

Other Office/Clerical

*N.E.C.: Not Elsewhere Classified

Protective Services

Supervisors of Protective Services

Firefighting and Fire Prevention

Police and Detectives

Guards & Other Protective Services

Services (N.E.C.)*

Private Households

Food Preparation and Services

Health Services

Cleaning and Building Services

Personal Services

Craft Workers (Skilled)

Supervisors of Mechanics and Repairers

Vehicle and Mobile Equipment Mechanics and Repairers

Heating, Air Conditioning, Refrigeration, Mechanics

Other Mechanics and Repairers

Supervisors of Construction Trades

Construction Trades, Except Supervisors

Extractive Occupations

Precision Production Occupations

Machine Operators, Assemblers & Inspectors

Metalworking and Plastic Working Machine Operator

Metal and Plastic Processing Machine Operators

Woodworking Machine Operators

Printing Machine operators

Textile, Apparel, and furnishing Machine Operators

Machine Operators, Assorted Materials

Fabricators, Assembler and Hand Working Occupations

Production Inspector, Tester, Sampler, Weigher

Transportation and Material Moving

Motor Vehicle Operators

Rail Transportation Occupations

Water Transportation Occupations

Material Moving Equipment Operators

Laborers (Unskilled)

Handlers

Equipment Cleaners

Helpers & Laborers

CALIFORNIA PUBLIC RECORD ACT (PRA) ACKNOWLEDGEMENT

I/We hereby represent, acknowledge, and agree as follows:

1. MTS is a California public agency established by California Public Utilities Code, Section 120000. et. seq. , and is subject to the California PRA (Government Code sec. 6250 et seq.) which provides generally that all records relating to a public agency's business are open to public inspection unless exempted from disclosure by law.
2. The proposal I/we have submitted to MTS is open to public inspection under PRA unless it is exempted from disclosure by law.
3. To the extent the proposal includes materials that I/we believe are exempt from disclosure under PRA, I/we understand that I/we must provide a letter identifying the materials that I/we believe are exempt from disclosure and explaining the basis for exemption.
4. Any materials not identified as exempt from disclosure are open to public inspection, and I/we waive any right to subsequently claim exemption from disclosure for such materials.
5. MTS at all times retains the right to make the final determination regarding what, if any, portion of a proposal is subject to disclosure under PRA.
6. Use of headers/footers bearing designations such as "confidential", "proprietary", or "trade secret" on all or nearly all of a proposal which would prohibit or limit public inspection is not acceptable and may deem the proposal non-responsive and may be rejected; labeling a page as such does not prohibit MTS from disclosing the page in response to a PRA response or in the ordinary course of business if MTS concludes it is obligated to so by applicable law.
7. To defend and indemnify MTS in any action on a PRA request for any of the contents of a Proposal marked TRADE SECRET, CONFIDENTIAL or PROPRIETARY.
8. Marking a document as "trade secret", "confidential" or "proprietary" without the express written permission of MTS does not exempt a document from disclosure to third parties under state or federal law, or in the normal course of MTS's business operations. MTS has no obligation to get a respondent's permission before producing such documents.
9. The bid I/we have submitted (*check one of the following*) materials that we believe are exempt from disclosure under PRA.

INCLUDES	<input type="checkbox"/>
DOES NOT INCLUDE	<input checked="" type="checkbox"/>

ACKNOWLEDGED AND AGREED

Company Name:

Alicia M. Siu

Title:

Artist/Muralist

Signature:



Date:

Nov. 4 2024

NONCOLLUSION DECLARATION

TO BE EXECUTED BY PROPOSER AND SUBMITTED WITH OFFER

(23 U.S.C. § 112(c) and California Public Contract Code § 7106)

The undersigned declares:

I am the undersigned of Alicia M. Siu, the party making the foregoing offer.

The offer is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The offer is genuine and not collusive or sham. The proposer has not directly or indirectly induced or solicited any other proposer to put in a false or sham offer. The proposer has not directly or indirectly colluded, conspired, connived, or agreed with any proposer or anyone else to put in a sham offer, or to refrain from submitting an offer. The proposer has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the offer price of the proposer or any other proposer, or to fix any overhead, profit, or cost element of the offer price, or of that of any other proposer. All statements contained in the offer are true. The proposer has not, directly or indirectly, submitted his or her offer price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, offer depository, or to any member or agent thereof, to effectuate a collusive or sham offer, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of the proposer that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the proposer.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on Nov. 4 2024 (date), at San Diego (city), CA (state).

ACKNOWLEDGED AND AGREED

Name of Contractor:

Alicia M. Siu

Signature:



Date:

Nov. 4, 2024

IRAN CONTRACTING ACT CERTIFICATION

(Public Contract Code Section 2200 *et seq.*)

As required by California Public Contract Code Section 2204, the Contractor certifies subject to penalty for perjury that the option checked below relating to the Contractor's status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 *et seq.*) is true and correct:

1. The Contractor is not:
 - a. identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203; or
 - b. a financial institution that extends, for 45 days or more, credit in the amount of \$20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran. ☒
2. MTS has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, MTS will be unable to obtain the goods and/or services to be provided pursuant to the Contract. ☒
3. The amount of the Contract payable to the Contractor for the Project does not exceed \$1,000,000. ☒

Note: In accordance with Public Contract Code Section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of \$250,000 or twice the Contract amount, termination of the Contract and/or ineligibility to bid on contracts for three years.

ACKNOWLEDGED AND AGREED

Company Name:

Alicia M. Siu

Title:

Artist/Muralist

Signature:



Date:

Oct. 31st 2024

SAFETY DEPARTMENT STANDARD OPERATING PROCEDURES

FOR CONTRACTORS SAFETY AND HEALTH REQUIREMENTS

(SAF 016-03)

January 2003

SAF 016-03

Purpose: To establish environmental, safety and health requirements for the San Diego Metropolitan Transit System (MTS) Contractors.

Background: MTS is committed in providing and maintaining a safe work place, safe plant and equipment, and a safe and competent workforce as required by legislation and best industrial practice for our employees, customers, visitors, and general public.

To support this commitment, we require our Contractors to provide adequate leadership and safety training for their employees and require the same of their sub-Contractors.

Objectives: This SOP requires all MTS Contractors to:

- Comply with the environmental, safety and health requirements of the contract as per FTA, OSHA, Cal OSHA, and San Diego Metropolitan Transit System (MTS).
- Assign a competent person the responsibility for the implementation of the safety regulations, personal protective equipment usage, and compliance with hazardous materials/environmental policies, and drug and alcohol program.
- Ensure that all Contractor employees and sub-Contractors are trained and educated in safety and support on-site Contractors on safe work and MTS safety programs.
- Sign the MTS Contractual Agreement with Outside Agencies (Safety Rules).

MTS Representatives are required to:

- Pro-actively monitor the Contractors' workplace to identify all occupational health and safety hazards – Departmental/Safety representative.
- Safety and contract requirements compliance – Audit/Inspection conducted and documented (schedule and spot check) by Quality Assurance Department.

NOTE: Copies of both MTS Illness and Injury Prevention Program (IIPP) and the MTS Maintenance Department Code of Safe Practices are available in the Safety Department's office. MTS handles the Engineering/Construction site safety plans.

SAFETY DEPARTMENT SAFETY RULES

MTS Contractual Agreement with Outside Agencies

Work on MTS Premises

A. Safety Rules

These safety rules apply specifically to Contractors, Contractor's employees, or sub-Contractors working on Metropolitan Transit System (MTS) property. Any loss or damage, including death, resulting from Contractors, Contractor's employees, or subcontractor's negligence shall hold MTS management and employees harmless from any such loss. No work shall be performed on MTS property without approval and proper permits, when required. Requirements:

1. Comply with Cal OSHA, state, local and MTS' safety, and environmental policies.
2. Observe and follow all posted facilities safety regulations.
3. Use the proper Personal Protective Equipment required for the job.
4. No illegal drugs or alcohol will be consumed on site or off the premises while working for MTS.

B. Use of Tools and Equipment (when required)

1. Required Tools and Equipment must be in good condition, safe for use and calibrated (if required).
2. Follow safe engineering work practices/procedures.
3. Wear the required personal protective equipment when using tools.

C. Machinery and Vehicles (when required)

1. Do not attempt to operate MTS machinery or equipment without special permission.
2. Only licensed operators may operate Forklift Trucks and other equipment on MTS occupied spaces.

D. Contractor Requirements (when required)

1. Valid Contractor's license number.

ACKNOWLEDGED AND AGREED

Company Name: Alicia M. Siu/ Artist Muralist

Print Name: Alicia M. Siu

Title: Artist/Muralist

Signature: 

Date: Oct. 31 2024

PUBLIC WORKS CONTRACTOR REGISTRATION CERTIFICATE FORM

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to submit a proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. See <http://www.dir.ca.gov/Public-Works/PublicWorks.html> for additional information.

No proposal will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work.

Proposer hereby certifies that it is aware of the registration requirements set forth in Labor Code sections 1725.5 and 1771.1 and is currently registered as a contractor with the Department of Industrial Relations.

Bidder further acknowledges:

- Proposer shall maintain a current DIR registration for the duration of the project.
- Proposer shall include the requirements of Labor Code sections 1725.5 and 1771.1 in its contract with subcontractors and ensure that all subcontractors are registered at the time of bid opening and maintain registration status for the duration of the project.
- Failure to submit this form or comply with any of the above requirements may result in a finding that the proposal is non-responsive.

PRIME CONTRACTOR

Business Name: Alicia M. Siu

Registration No.
(if applicable): 2000006189 (PWCR)

DUNS No.:

Company Name: Alicia M. Siu

Print Name: Alicia M. Siu

Title: Artist/Muralist

SAMPLE PROMPT PAYMENT CERTIFICATION FORM

SAN DIEGO METROPOLITAN TRANSIT SYSTEM **PROMPT PAYMENT CERTIFICATION FORM**

PURPOSE: This certification is used to monitor compliance by prime contractors to promptly pay its subcontractors. In accordance with DOT's DBE Regulations and MTS's DBE Program, prime contractors must pay its subcontractors for satisfactory performance of their contracts no later than seven (7) days from receipt of payment from MTS. Any delay or postponement of payment over thirty (30) days must be for good cause and after receipt of prior written approval from a MTS Project Manager.

INSTRUCTIONS: Please complete the below Prompt Payment Certification Form and return to MTS within **14 days** after receipt of payment from MTS at the following email address: ContractAdmin@sdmts.com. If there is more than one subcontractor on the contract, please complete a separate Prompt Payment Certification Form for each subcontractor.

1. CONTRACTOR INFORMATION

Contractor Name: _____ Contract No. _____ Work Order No. _____

Telephone No. _____ Email Address _____

2. PAYMENT INFORMATION

a) Name of Subcontractor: _____

b) Type of Services or Materials Provided by Subcontractor (state NAICS code if known)? _____

c) Date Last Payment Received from MTS?: _____

d) Was any of that payment for services/materials provided by the subcontractor?: _____
* If YES, please answer questions e-h. If NO, proceed to Part 3 Certification.

e) Payment Amount: _____

f) Payment Date: _____
* Prime contractors must pay their subcontractors for satisfactory performance of their contracts no later than seven (7) days from receipt of payment from MTS

g) If payment was delayed or postponed over thirty (30) days, who at MTS pre-authorized the delay or postponement and when was such pre-authorization given?: _____

h) If payment was delayed or postponed over thirty (30) days, was the reason for good cause? (Explain): _____

3. CERTIFICATION

The contractor hereby certifies that the foregoing Prompt Payment Certification Form is true and correct.

Signature _____ Title _____ Date _____

***** FOR MTS USE ONLY *****

Date Certification Received _____ Contractor Compliant _____

BUY AMERICA (IRON, STEEL MANUFACTURED PRODUCTS AND CONSTRUCTION MATERIALS)

ALTERNATIVE A

CERTIFICATE OF COMPLIANCE WITH BUY AMERICA REQUIREMENTS

The Proposer/Bidder hereby certifies that it will comply with the requirements of Section 49 U.S.C. 5323 (j)(1), the applicable regulations in 49 C.F.R. 661, and Section 70914 of the Infrastructure Investment Jobs Act.

ACKNOWLEDGED AND AGREED

Print Name: Alicia M. Siu

Signature:

Date: 10/31/2024

CERTIFICATE FOR NON-COMPLIANCE WITH BUY AMERICA REQUIREMENTS

ALTERNATIVE B

The Proposer/Bidder hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323 (j)(1) or Section 70914 of the Infrastructure Investment Jobs Act but it may qualify for an exception to the requirement pursuant to Section 49 U.S.C. 5323 (j)(2), and the applicable regulations in 49 C.F.R. 661.7 or Section 70914 of the Infrastructure Investment Jobs Act.

ACKNOWLEDGED AND AGREED

Print Name: Alicia M. Siu

Signature:

Date: 10/31/2024

Complete the form on the next page if you select **Alternative B**.

NOTE: COMPLETE EITHER ALTERNATIVE A OR B - DO NOT COMPLETE BOTH.

BUY AMERICA (IRON, STEEL, MANUFACTURED PRODUCTS AND CONSTRUCTION MATERIALS)

ADDITIONAL INFORMATION FOR BUY AMERICA CERTIFICATE - ALTERNATIVE B

The Proposer/Bidder hereby certifies that it cannot comply with the requirements of Section 49 U.S.C. 5323 (j)(1) or Section 70914 of the Infrastructure Investment Jobs Act, but it may qualify for an exception to the requirement pursuant to Section 49 U.S.C. 5323 (j)(2), and the applicable regulations in 49 C.F.R. 661.7 or Section 70914 of the Infrastructure Investment Jobs Act.

[illegible]

Notes: (1) For "Type of Waiver Requested," See Buy America, Section 7-5.8. List 1, 2, 3 or 4.

(2) Proposer must complete either Alternative A or B, Buy America Certificate.

CERTIFICATE OF RESTRICTIONS ON LOBBYING

The CONTRACTOR hereby certifies that:

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
2. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.
3. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions. Check one of the following Boxes.

Does NOT Apply	<input checked="" type="checkbox"/>
Applies	<input type="checkbox"/>

This certification is a material representation of fact upon which reliance is placed when this transaction is made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U. S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Executed this 31 day of October, 2024.

ACKNOWLEDGED AND AGREED

Name of Contractor:

Alicia M. Siu

Signature:



Date:

Oct. 31 2024

ADDENDA ACKNOWLEDGEMENT FORM

Proposer acknowledges the receipt of the following Addenda:

<i>ADDENDUM</i>	<i>CHECK (✓)</i> <i>RECEIVED</i>	<i>DATE</i> <i>RECEIVED</i>	<i>ADDENDUM</i>	<i>CHECK (✓)</i> <i>RECEIVED</i>	<i>DATE</i> <i>RECEIVED</i>
ADDENDUM NO. 1	✓	Oct. 28th 2024	ADDENDUM NO. 4		
ADDENDUM NO. 2			ADDENDUM NO. 5		
ADDENDUM NO. 3			ADDENDUM NO. 6		

FIRM NAME: Alicia M. Siu

ADDRESS: 9041 El Dorado Parkway #33, El Cajon CA 92021

TELEPHONE: 818 314 9841 **FAX:** _____

PLEASE PRINT NAME OF INDIVIDUAL RESPONSIBLE FOR THE PREPARATION OF THIS PROPOSAL:

DATE: Oct. 31 2024

PRINT NAME: Alicia M. Siu

SIGNATURE OF PROPOSER: 
(Sign Here)

TITLE: Artist/Muralist

EXHIBIT F
CLEAN CALIFORNIA THIRD PARTY CONTRACT REQUIREMENTS

DRAFT

As a Clean California Local Grant Program (CALTRANS) grantee, the San Diego Metropolitan Transit System (MTS), is required to inform the Contractor and any Subcontractor of the following information. In the event there are similar clauses between these CALTRANS provisions, and the terms of this Contract, including any Federal Transit Administration (FTA) clauses, Contractor and any Subcontractor shall comply with both to the extent possible. If there is a conflict between provisions that would result in the Contractor not complying with one or more provisions, contact MTS staff for further direction. 1.

1. Cost Principles:

The Contractor and its subcontractors agrees that Contract Cost Principles and Procedures, 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31, et seq., shall be used to determine the allowability of individual Project cost items. Contractor and any of its subcontractors also agrees to comply with Federal administrative procedures in accordance with 2 CFR, Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, to the extent applicable.

Contractors and its subcontractors also shall establish and maintain an accounting system and records that properly accumulate and segregate incurred Project costs and matching funds by line. Contractors and any of its subcontractors agree to comply with Generally Accepted Accounting Principles (GAAP), to enable the determination of incurred costs at interim points of completion, and provide support for reimbursement payment vouchers or invoices.

1. Nondiscrimination

Contractors and its subcontractors shall not deny the contract's benefits to any person on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status.

Contractors and its subcontractors shall also give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

The Contractor agrees to include the above clause in each subcontract.

2. Mandatory Organic Waste Recycling

Pursuant to Public Resources Code Sections 42649.8 et seq., if Contractor generates two (2) cubic yards or more of organic waste or commercial solid waste per week in performance of this Contract, Contractor shall arrange for organic waste or commercial waste recycling services that separate/source organic waste for organic waste recycling. Contractor shall provide MTS proof of compliance, i.e., organic waste recycling services or commercial waste recycling services that separate/source organic waste recycling.

3. Record Retention

Contractors and any of its subcontractors shall each maintain and make available for inspection all books, documents, papers, accounting records, and other evidence pertaining to the performance of this Contract, including, but not limited to, the costs of administering those various contracts. Materials shall be available at their respective offices at all reasonable times during the entire Project period and for

three (3) years from the date of final payment to MTS under this Contract. CALTRANS, the California State Auditor, or any duly authorized representative of CALTRANS or the United States Department of Transportation, shall each have access to any books, records, and documents that are pertinent to a Project for audits, examinations, excerpts, and transactions.

All accounting records and other supporting papers connected with Project performance shall be maintained for a minimum of three (3) years from the date of final payment to MTS and shall be held open to inspection, copying, and audit by representatives of CALTRANS, the California State Auditor, and auditors representing the federal government. Copies thereof will be furnished upon receipt of any request made by CALTRANS or its agents.

Contractor and any subcontractors shall permit access to all records of employment, employment advertisements, employment application forms, and other pertinent data and records to the State Fair Employment Practices and Housing Commission, or any other agency of the State of California designated by CALTRANS.

The Contractor agrees to include the above clause in each subcontract.

4. Travel Reimbursements

If applicable and if expressly authorized by MTS within the Contract, travel and per diem reimbursements of Contractor and its subcontractors, will be allowable as Project costs only after those costs are incurred and paid for.

Travel expenses and per diem rates are not to exceed the rate specified by the State of California Department of Human Resources for similar employees (i.e. non-represented employees) unless written verification is supplied that government hotel rates were not then commercially available to Contractor and its subcontractors, at the time and location required as specified in the California Department of Transportation's Travel Guide Exception Process at the following link:

<https://travelpocketguide.dot.ca.gov/>.

5. Educational Programming

If applicable, Contractor shall provide MTS a sublicensable, irrevocable, perpetual, royalty-free, unlimited, worldwide license to prepare derivative works, make, publish, display, and distribute two-dimensional reproductions and/or copies, digitally and in print, of the educational programming created or produced for this Contract, or derivatives thereof, for non-commercial purposes or any State government purposes. This includes, but is not limited to, reproductions used in brochures, media publicity, public outreach campaigns (including television and social media campaigns), education, exhibition catalogues or other similar publication. Contractor shall provide MTS any and all other intellectual property rights necessary.

To the extent any logos, including trademarks or service marks, are used on educational programming created or produced for this Contract, Contractor agrees to grant MTS and Caltrans all necessary rights to use and allow agents of CALTRANS to use the logos in connection with use of the educational programming for non-commercial purposes or State government purposes. This includes but is not limited to reproductions used in brochures, media publicity, public outreach campaigns (including television and social media campaigns), education and exhibition catalogues or other similar publication.

Contractor must place a disclaimer statement in a conspicuous manner on the educational programming created or produced for this Contract a disclaimer that states the content of the educational programming

does not reflect the official views or policies of MTS or CALTRANS. The educational programming does not constitute a standard, specification, or regulation.

6. Artwork

If applicable, Contractor, or any other copyright owner(s) of Artwork, shall grant MTS and CALTRANS a sublicensable, irrevocable, perpetual, royalty-free, unlimited, worldwide license to prepare derivative works, make, publish, display, and distribute two-dimensional reproductions and/or copies, digitally and in print, of Artwork created or produced for Project under this RGA, or derivatives thereof, for non-commercial purposes or any State government purposes. This includes, but is not limited to, reproductions used in brochures, media publicity, public outreach campaigns (including television and social media campaigns), education, and exhibition catalogues or other similar publication. Contractor shall grant MTS any and all other intellectual property rights necessary.

Contractor must place a disclaimer statement in a conspicuous manner on or in close proximity to the Artwork created or produced for this Contract a disclaimer statement that the contents of the artwork do not reflect the official views or policies of MTS or CALTRANS.

7. Government Purpose Rights for Inventions

Inventions are any idea, methodologies, design, concept, technique, invention, discovery, improvement, or development regardless of patentability made solely by Contractor and its subcontractors in performance of any work and during the term under this Contract. If applicable, Contractor and its subcontractors shall provide MTS and CALTRANS Government Purpose Rights to any inventions created as a result of the Contract. "Government Purpose Rights" are the unlimited, irrevocable, worldwide, perpetual, royalty-free, non-exclusive rights, and licenses to use, modify, reproduce, perform, release, display, create derivative works from, and disclose any said invention. "Government Purpose Rights" also include the right to release or disclose said invention(s) outside MTS and CALTRANS for any State government purpose and to authorize recipients to use, modify, reproduce, perform, release, display, create derivative works from, and disclose the invention(s) for any State government purpose. "Government Purpose Rights" do not include any rights to use, modify, reproduce, perform, release, display, create derivative works from, or disclose the invention(s) for any commercial purpose.

8. Intellectual Property

If applicable, Contractor and any subcontractors shall grant the rights necessary to MTS and CALTRANS to allow for use of the intellectual property in a fashion similar to other rights for non-commercial uses and State government purposes.

If additional uses are reasonably determined to be needed for public outreach purposes, Contractor shall grant MTS and CALTRANS obtain rights and grant its agents said additional rights for use of the "Before" and "After" Project photos, Artwork created or produced for this Contract, and educational programming created or produced for this Contract. The grant will be an irrevocable, non-exclusive, perpetual, royalty-free, sublicensable, unlimited, worldwide license. As requested by MTS, all reproductions and/or copies of "Before" or "After" Project photographs, educational programming, and Artwork shall contain a credit to the Artist/ Copyright owner(s) and a copyright notice in substantially the following form: © [Artist/Copyright owner's name, date of publication].

In performing services under this Contract, Contractor and its Subcontractor shall agree to avoid designing or developing any items that infringe one (1) or more patents or other intellectual property rights

of any third party. If Contractor and its Subcontractors becomes aware of any such possible infringement in the course of performing any work under this RGA, immediate notification to MTS in writing is required.

DRAFT



Metropolitan Transit System

STANDARD AGREEMENT FOR MTS DOC. NO. PWG440.0-25

THIS AGREEMENT is entered into this _____ day of _____, 2025 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: <u>Johnny B. Contreras, DBA Johnny Bear Art</u>	Address: <u>27789 Oos Road</u>
	<u>Valley Center, CA 92082</u>
	<u>City State Zip</u>
Form of Business: <u>Sole Proprietor</u> (Corporation, Partnership, Sole Proprietor, etc.)	Email: <u>johnny@johnnybearart.com</u>
Telephone: <u>619.488.0000</u>	
Authorized person to sign contracts <u>Johnny B. Contreras</u>	<u>Sculptor</u>
<u>Name</u>	<u>Title</u>

The Contractor agrees to provide services as specified in the conformed Scope of Work/Technical Specification/Artist Proposal (Exhibit A), Contractor's Cost/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), Federal Requirements (Exhibit D) Forms (Exhibit E), and Clean California Third Party Contract Requirements (Exhibit F)

The contract term shall be based upon the negotiated timeline for the creation and painting the murals included in the Proposal, but no longer than 2 months from the Notice of Proceed, and a five (5) year maintenance period. The maintenance period shall be effective five (5) years from the date the Artwork installation is completed.



Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed \$48,850.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	JOHNNY BEAR ART
<p>By: _____ Sharon Cooney, Chief Executive Officer</p> <p>Approved as to form:</p> <p>By: _____ Karen Landers, General Counsel</p>	<p>By _____</p> <p>Title: _____</p>

DRAFT

EXHIBIT A
SCOPE OF WORK/TECHNICAL SPECIFICATION/ARTIST PROPOSAL

DRAFT

5.1. SCOPE/BACKGROUND

The area of improvement in San Ysidro is the pedestrian path towards the Beyer Trolley station on MTS property located between Seaward Ave. And West Park Ave. The area is in tandem to the San Ysidro community effort for pedestrian safety, art, and greening efforts on the Cultural Corridor.



1. 3D/ Sculpture / Environmental / Land art/ Installation

The area serves as a gateway to the community but is poorly lit and deemed unsafe at night. The community has expressed interest in monuments illustrating the pathway. Examples can be creative benches to rest, illuminated structures that serve at night, and gateways to welcome transit users and passersby, and structures that incorporate environmental features / planting.

2. 2D/Mural Art

Incorporating into the existing mural art along San Ysidro, commissioned artist will also advise on possible surfaces to be built on the designated area. Murals are not limited to walls, and we encourage creative community murals on multiple surfaces.

Artists may submit applications for one or both artworks. The artists selected for the - Public Art Project are expected to design, fabricate, and transport permanent, site-specific artwork and consult during installation of artwork at the site by MTS /Casa Familiar.

5.2. PERIOD OF PERFORMANCE – ARTWORK

Proposer will propose a schedule as part of its Proposal. Notwithstanding, all installation work must be completed by March 27, 2025. Artist shall follow the installation schedule provided in their proposal. Any changes to said schedule must approved by MTS.

5.3. MAINTENANCE PLAN

MTS anticipates possible wear and tear and/or graffiti which may require maintenance once the murals have been completed. Successful Artist will provide MTS a Maintenance Manual upon mural completion that will provide MTS staff instructions on how it should be maintained to keep the mural's integrity.

Successful Artist shall also be available for five (5) years after completion of mural to conduct maintenance services on mural, upon request. During this 5-year period, MTS would ask the successful Artist for a quote for the proposed amount of hours for any requested repairs would need. After the 5-year period, there is no guarantee that MTS will request the successful Artist to complete maintenance repairs on the mural.

5.4. BUY AMERICA

This scope of work may trigger Buy America and/or Build America Buy America requirements, which apply to construction materials, manufactured products, rolling stock, iron and steel. The below list of definitions and examples is not exhaustive and is only to be used as illustrative and a guidance tool for Contractor compliance.

5.4.1 CONSTRUCTION MATERIALS

- A. Per Infrastructure Investment and Jobs Act (IIJA) Sec. 70912 (2)(C), all construction materials must be manufactured in the United States. This means that all manufacturing processes for the construction material occurred in the United States.
- B. "Construction materials" **includes** an article, material, or supply that is or consists primarily of:

- i. non-ferrous metals;
 - ii. plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
 - iii. glass (including optic glass);
 - iv. lumber; or
 - v. drywall.
- Exception: "Construction Materials" **does not include** an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives.

C. According to the Office of Management and Budget (OMB) Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure M-22-11, April 18, 2022, a Buy America preference only applies to articles, materials, and supplies that are consumed in, incorporated into, or affixed to an infrastructure project. As such, it does not apply to tools, equipment, and supplies, such as temporary scaffolding, brought to the construction site and removed at or before the completion of the infrastructure project. Nor does a Buy America preference apply to equipment and furnishings, such as movable chairs, desks, and portable computers.

5.4.2 [NOT APPLICABLE] MANUFACTURED PRODUCT

5.4.3 [NOT APPLICABLE] ROLLING STOCK

5.4.4 [NOT APPLICABLE] IRON OR STEEL

5.5. INVOICES

Invoices must be sent to the MTS Accounting Department, via email, at ap@sdmts.com. All invoices must have the Purchase Order and contract number clearly displayed to ensure timely payment. MTS will not pay on packing slips, receiving documents, delivery documents, or other similar documents. Invoices must be submitted for payment.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) is for service or work provided by a subcontractor and indicate the amount that will be paid to the subcontractor. Contractors must also comply with the prompt payment requirements in the *Prompt Progress Payments* section of the Standard Conditions.

5.6. MATERIAL SAFETY DATA SHEETS (MSDS)

MTS retains the safety data sheets on an electronic database (currently CloudSDS). Upon award, Contractors shall email the MSDS for chemicals that any individuals may be exposed to, attention Ngan Nguyen, MTS Environmental Health and Safety Specialist at Ngan.Nguyen@sdmts.com to upload into the database. The Contractor shall notify the MTS Environmental Health and Safety

Specialist if there are changes or updates to the MSDS during the term of the contract to ensure the MTS database is kept updated throughout the contract.

5.7. [NOT APPLICABLE] NO RIGHT TO POST SIGNS

DRAFT

ARTIST PROPOSAL

DRAFT



Letter of Transmittal – Johnny Bear Art

Johnny Bear Contreras
27789 Oos Road
Valley Center, CA 92082
760.215.2294
pride@johnnybearart.com

Dear Francisco Morales.

Please accept my application, technical proposal, work plan, COI, CV and letter of transmittal for *Beyer Blvd. Pathway Beautification Project*.

1.2: I am well suited for a project of this magnitude, due to my experience as a professional artist and sculpture for over 29 years. My first public commission was in 1995. In addition to hands on technical experience, I also come from a tribal perspective, and community care. Which is a big component of site-specific art and projects with this impact and scope. I have been a part of my community at every level, since I was 14. Including having my art represent and be a part of our community voice and vision. I have been engaged from the cultural side, to youth activity all the way to community responsive programs and capacity building, as an active member of the San Pascual Band. I have been a part of my community at this level for over 48 years. Attending and being a member of council for decades, my perspective and being entrenched in my tribal community, aligns me with this project.

I just finished the *Casa Familiar Far South Border North Project* with the City of San Diego and Imperial County. This project required us to truly be a part of the community and was a campaign that was by and for the people. The campaign was based in San Ysidro, so I have been among the community of San Ysidro for the last few years. I also recently helped bring a cultural component to their project called *Las Amia*. A sustainable building design: ranging from garden to cultural center. An educational offering center that touched all levels.

I am confident to conclude this means the *Beyer Blvd. Pathway Beautification Project* is a great match for Johnny Bear Art. Given I am already used to hearing from the community of San Ysidro, and what their needs and visions are, helps the project stay within planning scope and needs. Some additional community based, site specific projects that you will see in my CV includes the SDSU *Living Land Acknowledgement* and the USD *My Ewaa Ah – Sky House Door*.

What excites me about this project is being able to have continuous and immediate effects and positive impacts on the San Ysidro community. This stems from the reflections that I draw from when interacting with the community and when building a project of this scope and impact. I have walked these streets, seen the holes in fences, and the disconnect! And the lack of ... and unfortunately often devoid of cultural representation, due to lack of resources. The community comprehends what culturally site-specific art can do, but as an artist bringing that to life and seeing the expressions of gratitude and shared experiences for generations to come, is why I do art. Especially with culturally sensitive art, public and site-specific art.

When people are waiting in these transit areas, going to and from school, work and extra-curricular activities with family and friends, I want something that not only speaks to these individuals providing reflections and event smiles. By creating individuals waiting time and place of travel a beautiful experience. While being a part of a culturally interactive space and experience. As well as practical and reflective at the same time. That is personally why I enjoy site specific art. It is being able to tap into the communities conscious and subconscious and create a positive impact and ripple affect that continues for generations.

3.3.2

Site specific and culturally connected, this is my launch point for my concept. First steps would be to consider maintenance and ergonomics of the sculpture. I would rely heavily on MTS engineering guidelines to hone the final design, site visits followed by ¼ size model. And address any pedestrian safety concerns, sharp or pointy edges and entrapment points.

Stainless steel sculpture 10'height x5'width x12'length made up multiple layers that would change as you walk by or find a spot on a bench to view the piece while waiting for your bus to arrive, or uber. The sculpture as a hole would have a specific meaning while viewed from a distance and reveal intimate detail when viewed up close and or felt.

Much of my work has been life size metal sculpture bronze and aluminum with patina and roto cast resin, I have combined the two for some dynamic modern/figurative sculpture.

The stainless panels would depict everyday scenes, for example some of the local fauna and flora. And in some regard could be neighborhood specific. This would be cultural representative by shape and outlines of negative spaces (cut outs) one example are the flowered skulls that are a staple for day of the dead. But when seen from a distance would depict a raven's wing.

Voiced ideas and input from the meeting with the locals at the community building ranged from beautification to cultural significance. My work with in my own indigenous community is my experience that I will draw from and is going ehco with the San Ysidro community this I can assure you.

333

Site visits discuss any constraints such as acess for installation and the disruption of site.

Perspective drawings along with engineering guidance, to produce a model. Site preparation, delineation for site work.

Traffic control if needed for day of install, possible storage of piece prior to install to insure timing and anticipate any delays such as weather.

3.4

All work will not exceed 45,000.00



JOHNNY BEAR CONTRERAS

SCULPTOR & CULTURER BEARER

MEDIUMS

- Clay
- Resin
- Steel
- Bronze
- Aluminum

EDUCATION

Palomar College

1995 – 2001

Foundry / Sculpture

EXPERIENCE

Johnny Bear Art

1995 – Current

Founder & Sculptor

**National Museum of the
American Indian**

2019 – 2020

*Visiting Artist Fellowship
Apprenticeship*

LANGUAGES

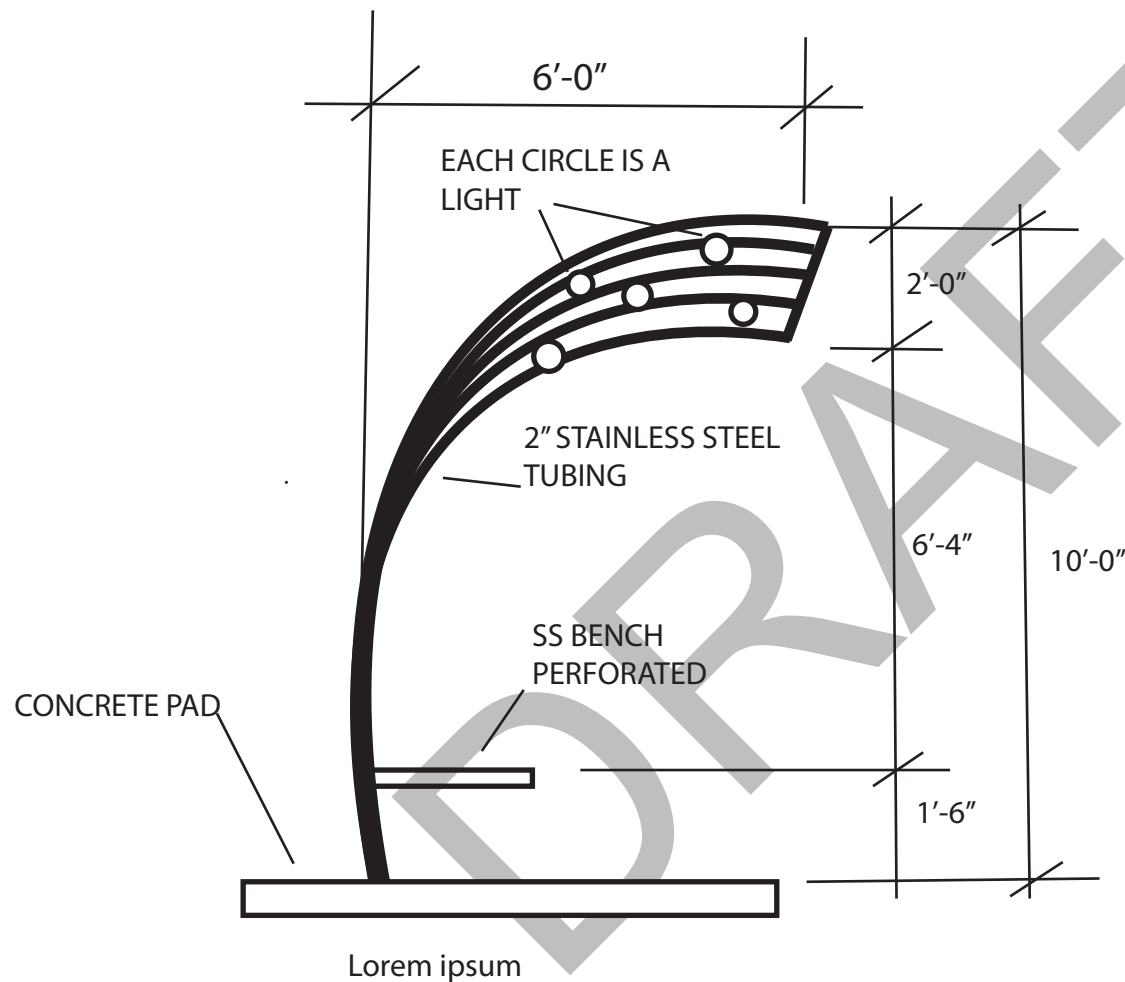
English ● ● ● ● ●

Kumeyaay ● ● ● ● ○

Spanish ● ● ● ● ○







CREATED BY
JOHNNY BEAR CONTRERAS
FOR CASA FAMILIAR / MTS PROJECT

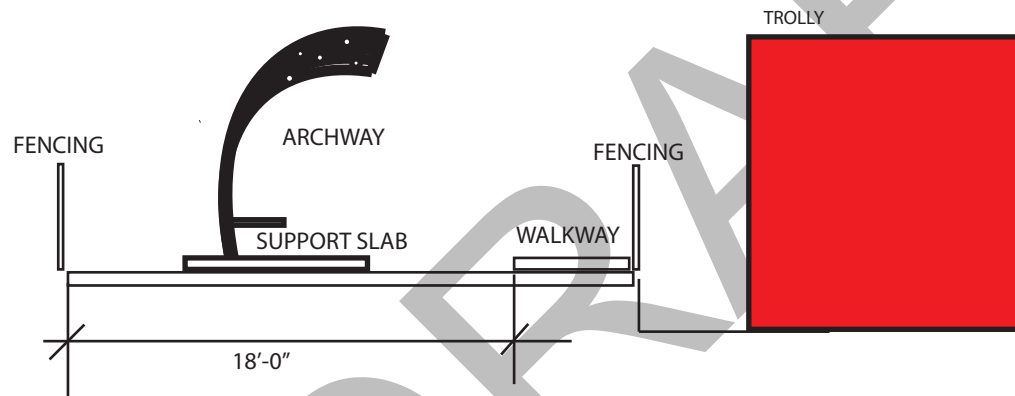
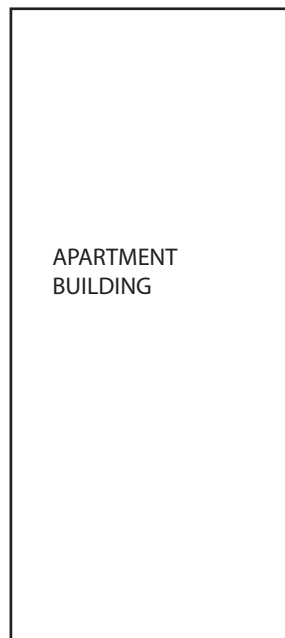
JOHNNY@JOHNNYBEARART.COM
OFFICE 619-488-0000
STUDIO 760-215-2294

ALL RIGHTS RESERVED

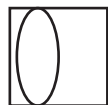
CREATED BY
JOHNNY BEAR CONTRERAS
FOR CASA FAMILIAR / MTS PROJECT

JOHNNY@JOHNNYBEARART.COM
OFFICE 619-488-0000
STUDIO 760-215-2294

ALL RIGHTS RESERVED



APARTMENT
BUILDING



ARCHWAY

WALKWAY



ARCHWAY

TROLLY

CREATED BY
JOHNNY BEAR CONTRERAS
FOR CASA FAMILIAR / MTS PROJECT

JOHNNY@JOHNNYBEARART.COM
OFFICE 619-488-0000
STUDIO 760-215-2294

ALL RIGHTS RESERVED

EXHIBIT B
CONTRACTOR'S COST/PRICING FORM (

DRAFT

PWG410.0-25
BEYER BLVD PATHWAY BEAUTIFICATION PROJECT
ATT 1 - Cost Form

**** Fill in the Green Cells ****

#	Description	# of Hours	Hourly Rate	Extended Total
1	Design and Concept Development	80.00	\$150.00	\$ 12,000.00
2	Preparation of Worksite	34.00	\$150.00	\$ 5,100.00
3	Mural Artist Painting	65.00	\$150.00	\$ 9,750.00
4	Materials (<i>excluding tax</i>)			\$ 15,000.00
5	Overall Total:			\$ 41,850.00

After Completion Clean-Up and Maintenance (All Labor and Materials shall be included and all-inclusive in the Hourly Rate)			
Year	Estimated # of Hours Per Year	Hourly Rate	Extended Total
Year 1	40.00	\$35.00	\$ 1,400.00
Year 2	40.00	\$35.00	\$ 1,400.00
Year 3	40.00	\$35.00	\$ 1,400.00
Year 4	40.00	\$35.00	\$ 1,400.00
Year 5	40.00	\$35.00	\$ 1,400.00
Overall Total:			\$ 7,000.00

**Total Cost for Base & Clean-Up and Maintenance	\$ 48,850.00
---	---------------------

****For all items, total costs shall be all-inclusive, including, but not limited to, transportation, materials, travel, insurance, etc. No additional costs are allowed.**

EXHIBIT C
IN ACCORDANCE WITH THE STANDARD AGREEMENT, INCLUDING STANDARD CONDITIONS,

DRAFT

CONTRACT TO FABRICATE AND INSTALL ARTWORK

THIS CONTRACT is made and entered into on _____, 2025, by and between **SAN DIEGO METROPOLITAN TRANSIT SYSTEM**, a public agency, ("MTS") and **Johnny Bear Art** ("ARTIST").

RECITALS

WHEREAS, MTS intends to procure artwork as part of the Beyer Blvd. Pathway Beautification Project (the "Project"); and

WHEREAS, ARTIST has prepared and submitted an Artwork Conceptual Design Proposal that has been accepted by MTS; and

WHEREAS, MTS and ARTIST desire to enter into a contract for ARTIST to construct artwork for the Project in accordance with ARTIST's Artwork Conceptual Design Proposal as defined below.

WITNESS

MTS AND ARTIST MUTUALLY AGREE AS FOLLOWS:

7.1. ARTWORK DEFINED

The work of art (the "Artwork") to be supplied under this Contract must be the same as that Artwork described in ARTIST's Artwork Conceptual Design Proposal (hereinafter "Proposal"). A true and correct copy of the Proposal is attached hereto as Exhibit A and incorporated herein by this reference

7.2. EFFECTIVE DATE

This Contract commences on the date first hereinabove appearing and expires upon completion of the Maintenance Plan, unless sooner terminated or cancelled in the manner provided under Articles 17, 29 and 30 below.

7.3. TOTAL CONSIDERATION

The total consideration paid to ARTIST may not exceed, in the aggregate, the sum of \$48,850.00, which will be paid in accordance with the Payment Schedule attached as Exhibit B to this Agreement.

ARTIST is responsible for payment of any state or local sales taxes. ARTIST represents and warrants that MTS will have no obligations regarding payment of any commissions or any other obligation pursuant to ARTIST's agreements with galleries or agents and ARTIST is solely responsible for such obligations. ARTIST agrees that the total consideration includes any amounts ARTIST is obligated to pay to galleries or agents, if any.

7.4. METHOD OF PAYMENT

Upon completion of each phase of fabrication and installation as set out in the Artwork Budget included as part of the Proposal (Exhibit A), ARTIST must remit an invoice for review and approval by MTS to ap@sdmts.com. Payment of each approved invoice will be made by MTS within 30

days after receipt. MTS reserves the right to withhold payments if MTS's site visits indicate that the progress of the Artwork is not in accordance with the Proposal or Contract requirements. MTS will provide notice to ARTIST of the reasons for withholding payment within 7 days after receipt of the invoice.

7.5. SCOPE OF SERVICES

See Exhibit A.

7.6. AUTHORIZED REPRESENTATIVES

The person designated in Article 31 to provide formal notices to ARTIST may designate, in writing, one or more Authorized Representatives to interact with the ARTIST regarding the production and installation of the Artwork. ARTIST must communicate with and take direction from Authorized Representatives acting within the scope of the written designation. This may include construction management personnel acting as consultants for MTS.

7.7. WORK SCHEDULE

ARTIST may not commence performance of any of the services identified in Section 5 above, until ARTIST receives a Notice to Proceed (NTP) from MTS. ARTIST must dedicate such time and effort as is necessary to fulfill ARTIST's obligations to completely finish and install the Artwork pursuant to this Contract in accordance with the Artwork Fabrication and Installation Schedule contained in the Proposal (Exhibit A). Time and strict punctual performance are of the essence to this Contract. MTS and ARTIST may agree to modify schedule. The revised schedule will be signed and dated by both parties, and will be attached and labeled as the Revised Schedule. ARTIST must respond within 7 days to any inquiry from MTS regarding the progress of the design for the Artwork.

7.8. MTS PRIOR APPROVAL OF ARTWORK

ARTIST must submit the following to MTS for technical approval: specifications that reflect compliance with MTS technical requirements and a digital image of the Artwork, as described in the Proposal (Exhibit A). MTS provided the relevant technical requirements during the development of the Artwork Conceptual Design Proposal, and the price proposed includes compliance with those requirements. The relevant technical requirements are attached as Section 5 and incorporated into this Contract. ARTIST may not begin to fabricate the Artwork until MTS has approved the specifications and digital image. MTS reserves the right to require ARTIST to modify the proposed Artwork to meet safety, aesthetic and/or technical requirements. MTS will specify any required material changes and document safety and/or technical requirements that justify such material changes within 30 days after delivery by ARTIST of the digital image. If MTS imposes additional technical requirements after Contract execution, that were not included in the technical requirements identified in Section 5, and such technical requirements cause an increase in cost for ARTIST to complete and install the Artwork, ARTIST may submit a written request for an equitable adjustment in the Total Consideration; any such equitable adjustment will be reflected in an amendment to this Contract. ARTIST must receive written approval by MTS of the Artwork digital image before ARTIST commences fabrication of the Artwork.

7.9. INSTALLATION OF ARTWORK

- A. At least 25 days prior to ARTIST's planned arrival at the Project site to begin installation, ARTIST must provide MTS with a Work Plan submittal detailing how ARTIST intends to

accomplish the installation, including planned labor, equipment, materials, schedule and duration of work, installation methodology, access route (which must comply with MTS's Stormwater Pollution Prevention Plan (SWPPP)), and clean-up.

- B. At least 14 days in advance of the ARTIST's planned arrival at the Project site to begin installation, ARTIST must attend a kick-off meeting with MTS to discuss the planned installation.
- C. The installation of the Artwork must meet or exceed the quality of the Project location's construction in all respects.
- D. While working at the Project site, ARTIST must work in such a way as not to delay MTS's operations or disrupt MTS or MTS's Contractor work. ARTIST must respond to reasonable requests by MTS to modify its installation activities to avoid unreasonably delaying or obstructing MTS's services and operations. Likewise, MTS will timely respond to ARTIST's reports, if any, that MTS or MTS's Contractors are unreasonably delaying or disrupting ARTIST's installation efforts.
- E. In accessing the Project site and performing the installation, ARTIST must comply with the terms of MTS's SWPPP, any applicable permits, and other general project requirements.
- F. The Artist will coordinate closely with MTS to ascertain that the Project Site is prepared to receive the Artwork. Artist must notify Agency of any adverse conditions at the Site that would effect or impede the installation of the Artwork. The Artist is responsible for timely installation of the Artwork.
- G. ARTIST is responsible for cleaning and protection of the Artwork until it is accepted by MTS. Once MTS is notified by ARTIST that the Artwork installation is complete, MTS will determine within 30 days whether it will accept the Artwork as installed.
- H. Within 30 days after completion of the Artwork, ARTIST must remove all excess materials and rubbish related to the Artwork installation from the Artwork site. ARTIST is prohibited from using MTS's trash receptables during installation and cleanup. ARTIST must restore the Artwork site (including the entire area affected by the fabrication and installation of the Artwork) to its prior condition if directed by MTS.

7.10. SAFETY

ARTIST must take all necessary precautions for the safety of employees on the work and the safety of other persons authorized to be present on the Artwork site. ARTIST must comply with all applicable provisions of federal, state, and local safety laws and building codes to prevent accidents or injury to persons on, about, or adjacent to the Artwork site. ARTIST must erect and properly maintain, at all times as required by the conditions and progress of the work, all necessary safeguards for the protection of workers and the public and must post danger signs warning against the hazards created by such features of construction. If and when requested by MTS, ARTIST must deliver to MTS a copy of ARTIST's safety plan for conducting the work (the "Safety Plan"). MTS will have the right, but not the obligation, to require ARTIST to correct any deficiencies in the Safety Plan. If there are any inconsistencies between this Contract and the Safety Plan, then the Contract takes precedence.

ARTIST must comply with the applicable provisions of the California Occupational Safety and Health Act of 1973 and the Labor Code. In addition to ARTIST's own safety procedures and any safety procedures required under Federal, state, or local laws or regulations, including compliance with the provisions of the California Occupational Safety and Health Act of 1973, ARTIST must implement and enforce all safety requirements determined by MTS to be applicable to the performance of any work under this Contract.

7.11. QUALITY CONTROL

ARTIST must provide Quality Control (QC) for all items of work performed under this Contract, including the work of all subcontractors and suppliers both on-site and off-site. All costs for QC are deemed to be included in the total consideration.

For purposes of this Contract, QC is to be performed by ARTIST and is understood as the techniques, activities and inspections that sustain process and product control and measure the performance characteristics of a material, component, fabrication, installation, or system against specific contract acceptance criteria during work in-progress. QC refers to the act of taking measurements, testing, and inspecting a process or product to ensure that it meets Contract requirements. QC also includes the process of documenting all of these actions.

For purposes of this Contract, Quality Assurance (QA) is performed by MTS or its representative and is understood as the review, monitoring, observation, audit, and inspection or testing of work for assurance or verification purposes.

ARTIST must ensure that all Work is performed in accordance with applicable codes, standards, specifications and other special contractual requirements using qualified personnel and/or equipment.

7.12. PROPERTY DAMAGE

ARTIST must repair or replace any property damage (real or personal) caused by the acts or omissions of ARTIST or ARTIST's subcontractors and/or employees. ARTIST is solely responsible for all expenses and costs that may be necessary to comply with the requirements of this Article, and MTS has no responsibility or liability therefor. MTS may withhold payment if ARTIST has not completed any repair, replacement and/or restoration required under this Article. If ARTIST fails to repair or replace any damaged property as required by this Article within 30 calendar days after receipt of the written notice of such damage, MTS may undertake the required repairs, replacement and/or restoration at ARTIST's expense. MTS reserves the right to offset its costs of repairs, replacement and/or restoration against any payments owed to ARTIST.

7.13. STOP WORK ORDER

In addition to MTS's right to suspend work under any other provision of this Contract, MTS may require ARTIST to suspend all or part of the work called for by this Contract at any time for up to **90 days** after a written Stop Work Order is delivered to ARTIST, and for any further period as directed by MTS. The Stop Work Order will include a clear description of the work to be suspended and may also include guidance as to the action to be taken on subcontracts; and other requests for minimizing costs.

Upon receipt of a Stop Work Order, ARTIST must comply with its terms immediately and take all reasonable steps to minimize the cost associated with the work covered by the Stop Work Order during the period of work stoppage. Within the period specified by the Stop Work Order, or within any extension of that period to which the parties may agree, MTS may:

- Terminate the Work covered by the Stop Work Order, as permitted in Articles 29 and 30 .
- Cancel the Stop Work Order; or
- Allow the period of the Stop Work Order to expire.

ARTIST must resume work upon the cancellation or expiration of a Stop Work Order. An equitable adjustment will be made in the Work scope, Contract Price, or Contract time, as appropriate if:

- The Stop Work Order results in an increase in the time required for, or in ARTIST's cost properly allocable to, the performance of any part of this Contract;
- ARTIST asserts a claim for an adjustment within 30 days after the end of the period of work stoppage; however, if MTS decides the facts justify such action, MTS may receive and act upon any such claim asserted at any time prior to final payment under this Contract; and
- The Stop Work Order was not caused by ARTIST's default or other act or omission within the control or responsibility of ARTIST.

Any cost due to a Stop Work Order issued because of Contract noncompliance will be borne by ARTIST.

In preparation for and during suspensions of work, ARTIST must take every reasonable precaution to prevent damage to or deterioration of the work. ARTIST must repair or replace, at no cost to MTS, work that is damaged or deteriorated during a work suspension due to ARTIST's failure to comply with this duty. If MTS determines that ARTIST is not taking reasonable precautions and ARTIST fails to take the corrective action within 5 days after written notice from MTS, MTS may cause such action to be taken and recover the reasonable cost thereof from ARTIST.

7.14. TITLE TO ARTWORK/RISK OF LOSS

Notwithstanding any payment MTS may make to ARTIST prior to the completion of the Artwork, title to the Artwork will remain with the ARTIST until MTS accepts the Artwork as complete. At the time MTS accepts the Artwork, title to the Artwork will transfer to MTS. ARTIST will bear all risk of loss of the Artwork until title has been transferred to MTS, unless the Artwork is damaged or destroyed due to the gross negligence or intentional act of MTS, its agents, employees or contractors.

7.15. WARRANTIES

- A. ARTIST warrants that the Artwork is original, the product of ARTIST's own creative efforts as sole author of the Artwork, and that the Artwork does not infringe upon the rights of any person, business or corporation. ARTIST also warrants that unless otherwise stipulated in writing, the Artwork is an edition of one (1), and that ARTIST may not sell, license, perform or reproduce a substantially identical copy of the Artwork without the prior written consent of MTS.

- B. ARTIST will warrant and maintain the Artwork free from all faults or defects in material and workmanship for a period of one year after MTS's acceptance of the Artwork. This subsection of this Article does not extend to damage to the Artwork caused by the exposure to the elements, physical damage inflicted by MTS patrons or members of the public, or any other damage unrelated to the material used in the Artwork or ARTIST's workmanship.

7.16. PROFESSIONAL STANDARDS

ARTIST warrants and guarantees that the Artwork provided hereunder will be designed, fabricated and installed in a professional manner. All services must be performed in the manner and in accordance with the professional standards observed by a competent practitioner of the profession in which ARTIST is engaged.

ARTIST represents and warrants to MTS that ARTIST possesses all required licenses, insurance, and other entitlements of whatever nature to legally pursue ARTIST's occupation and such licenses, insurance and other entitlements must be in full force and effect during the term of this Contract.

7.17. ACCEPTANCE OF ARTWORK

- A. MTS agrees to accept the completed Artwork, unless:
 - 1. The Artwork was not fabricated or installed substantially in accordance with the Proposal (Exhibit A), MTS-approved specifications, or a reasonable standard of technical quality for similar artwork. If MTS refuses to accept the Artwork for this reason, ARTIST may appeal the refusal to the MTS CEO. The determination of the MTS CEO is final and binding.
 - 2. The Artwork, or any portion thereof, as completed by the ARTIST, does not conform to a reasonable standard of professional artistic quality. If MTS refuses to accept the Artwork for this reason and the ARTIST disputes MTS's refusal, the parties agree that the matter will be submitted to the arbitration in accordance with the rules of the Arts Arbitration and Mediation Services of California Lawyers for the Arts, or such other arbitration or mediation service to which both parties mutually agree. The scope of the arbitration is limited to a determination of whether the Artwork conforms to a reasonable standard of professional artistic or technical quality. The determination of the arbitrator will be final and binding upon MTS and ARTIST and neither has any further recourse or cause of action.
- B. MTS will have the right to inspect the Artwork during fabrication prior to completion or installation of the Artwork. MTS may request corrections and modifications necessary for the Artwork to conform to ARTIST's Proposal and the other requirements of this Contract. Prior to the date specified for completion of the Artwork, ARTIST must make all such corrections and modifications to which MTS and ARTIST mutually agree.
- C. If MTS refuses to accept the Artwork according to the provisions of this Article, it must notify ARTIST in writing specifying the reasons for such refusal within 30 calendar days after ARTIST's tender of the Artwork to MTS for acceptance. No prior payment to ARTIST will be deemed to waive MTS's right to refuse to accept the Artwork under this Article.

- D. If MTS refuses to accept the Artwork according to the provisions of this Article, MTS has the right, subject to ARTIST's right to dispute MTS's refusal, either:
1. To have ARTIST correct deficiencies in the Artwork, specified in the notice to ARTIST required under subsection B of this Article, at ARTIST's sole cost and within a reasonable time, and then accept the Artwork if the deficiencies are remedied to MTS's satisfaction; or
 2. To cancel this Contract for breach as set forth in Article 30, below, except that ARTIST has the right to cure said breach to MTS's satisfaction within 30 calendar days after receipt of MTS's notice of cancellation or to dispute MTS's determination as set out in paragraph A..
 3. Remedies identified in subsections D1 and D2 above are cumulative and in addition to any other remedy available to MTS. Enforcement of one such remedy is not exclusive nor deemed an election of such remedy to the exclusion of any other or further remedy.
 4. Payments to the ARTIST are not deemed as a waiver of MTS's right to refuse or accept the Artwork.

7.18. ABANDONMENT

If it becomes impossible for ARTIST to timely complete the Artwork because of illness, death, or injury (for example), or if ARTIST abandons the Artwork by failing to work on the Artwork during a continuous 30-day period, unless MTS, its agents, employees or contractors are the cause of ARTIST's inability to work on the Artwork during such period or MTS has issued a Stop Work Order, MTS may take such action as may be appropriate including, without limitation, cancelling this Contract for breach as set forth in Article 30.

7.19. ASSIGNMENT AND SUBCONTRACTING

- A. ARTIST's obligations imposed by this Contract are not assignable or transferable without first obtaining the written consent of MTS, which consent may be withheld in MTS's sole discretion.
- B. If ARTIST subcontracts any portion of the work, any subcontractors must be properly licensed pursuant to the contractor's state license law (Business and Professions Code sections 7000 et seq.). Before performing any work, each subcontractor must provide MTS and ARTIST evidence that the subcontractor has Workers' Compensation insurance coverage if this insurance is required by state law.

7.20. COPYRIGHT

ARTIST expressly reserves every right available to them under U.S. and international copyright laws to control the making and disseminating of copies or reproduction of the Artwork, except as those rights are limited by this Contract. Contractor under this Agreement as shall be considered necessary by MTS may be retained until disposition has been made of any claim for damages.

1. ARTIST agrees to give a credit substantially in the following form: "Original owned by San Diego Metropolitan Transit System" in any public display or distribution of reproductions of the Artwork.

2. ARTIST hereby authorizes MTS and its successors and assigns to make photographs, drawings and other two-dimensional reproductions of the Artwork without compensation or prior consent of ARTIST if used solely for non-commercial purposes including, but not limited to, advertising, descriptive brochures, promotional materials, schedules, fare passes, and other similar purposes. All reproductions by MTS or its successors and assigns where the Artwork is the exclusive or primary subject will acknowledge the authorship of the ARTIST in substantially the following form: "Copyright ©, ARTIST's name, date" and in such manner and location as prescribed under U.S. copyright laws.
3. The Artwork Conceptual Design Proposal and all accompanying materials, models, drawings, plans, sketches and specifications will become the property of MTS upon submission to MTS. MTS may use, reproduce, make derivations and distribute these documents, etc. in any fashion or manner MTS desires, provided that the use and distribution of these documents complies with the provisions set forth in subsection 2 above.

7.21. ARTISTS' RIGHTS/MTS DUTIES RELATIVE TO ARTWORK

Applicant hereby acknowledges that Applicant is familiar with all rights under the Visual Artists Rights Act of 1990 (17 U.S.C. Sections 106A and 113(d)), the California Art Preservation Act (California Civil Code Sections 987 and 989) (collectively, "Acts") and any other local, state, foreign or international law (collectively, "Artist Rights Laws") that protect against the alteration of a work of art and protect the artist's getting credit for a work of art. The Acts and Moral Rights Laws require that a person who intends to waive these provisions must do so expressly in writing.

The ARTIST, for themselves and their heirs, beneficiaries, devisees and personal representatives, expressly waive any right or benefit that ARTIST has or may have under the Artist Rights Laws, and hereby releases, acquits and discharges MTS from all suits, claims, actions, liability, damages and expenses arising out of the display, use, maintenance, movement, removal or alteration of the Artwork on the Project.

- A. MTS may not intentionally destroy, damage, alter, modify, or change the Artwork in any way except after notice as required under applicable law. ARTIST acknowledges that use of the Artwork site by the public and MTS's cleaning and maintenance of the Artwork site may cause wear and tear to the Artwork. Such wear and tear will not be deemed to be an unpermitted alteration of the Artwork. If an alteration should occur, either intentionally or unintentionally, ARTIST may notify MTS in writing denying authorship of the Artwork or requesting that their name not be displayed as provided in Article 22, below.
- B. If, after acceptance of the Artwork, repair to the Artwork is required, MTS will send ARTIST a notice giving ARTIST the opportunity to repair the Artwork, so long as within the period of performance of the contract.
 1. If within 30 days after MTS sends notice to the ARTIST at the address set forth in Article 31, ARTIST does not respond to the notice, , MTS may contract with someone qualified to repair the Artwork and ARTIST will have no recourse for damages against MTS.

2. If MTS reasonably determines that damage to the Artwork is irreparable or impractical to repair, MTS may take any action it deems appropriate under the circumstances.
 3. ARTIST must notify MTS of a change of their address for the purpose of obtaining notice under this Article. Failure to notify MTS will constitute a waiver of ARTIST's right to be notified by MTS prior to repair of the Artwork.
- C. When emergency repairs are necessary to prevent the loss of or further damage to the Artwork, or for public safety, such repairs may be undertaken by MTS without advance notice to ARTIST and such repairs will not be deemed to constitute an artistic alteration. If such repairs are substantial, ARTIST may deny authorship as provided in Article 22, below.
- D. After acceptance of the Artwork, MTS will have the right to relocate, store or sell the Artwork or remove it from display in its sole discretion without notice to ARTIST, except for any payment that may be required under Civil Code Section 986.
- E. If, after acceptance of the Artwork, MTS reasonably determines that it is necessary to remove the Artwork and such removal is likely to cause damage or destruction to the Artwork, MTS will give ARTIST written notice to remove the Artwork in the manner set forth in Article 31, below.
1. ARTIST must respond in writing within 30 days after MTS sends notice. In its response, ARTIST must inform MTS whether ARTIST intends to exercise or waive their right to remove the Artwork under this Article. If ARTIST does not respond to the notice within 30 days after MTS sends notice to the ARTIST at the address set forth in Article 31, ARTIST will have no recourse for damages against MTS. ARTIST must notify MTS of a change of his or her address for these purposes. Failure to so notify MTS will constitute a waiver of ARTIST's right to be notified by MTS prior to removal of the Artwork.
 2. Unless ARTIST has waived their right or has failed to timely respond to MTS's notice, ARTIST will have the right to remove the Artwork at ARTIST's expense within 90 calendar days after MTS provides such notice. In such case, ARTIST must pay MTS the value (if any) of the Artwork after its removal and title to the Artwork will vest in ARTIST upon MTS's receipt of such payment. A dispute regarding the value of the Artwork will be submitted to the Arts Arbitration and Mediation Services of the California Lawyers for the Arts, or such other arbitration or mediation service to which both parties mutually agree.
 3. If ARTIST fails to remove the Artwork within the 90-day period or if ARTIST fails to timely respond to the notice, MTS will have the right to remove the Artwork and ARTIST will have no recourse against MTS for any damage to or destruction of the Artwork that may occur during such removal. In such case, MTS will have the right to display, store or dispose of the Artwork in MTS's sole discretion.
- F. If MTS cancels this Contract for breach and arranges to have the Artwork completed by another artist, ARTIST will be deemed to have waived his or her rights related to authorship of the Artwork under federal and state laws and under this Contract, except as set forth in Article 22, below. If ARTIST disputes such deemed waiver of his or her rights,

ARTIST must submit a written objection to MTS within 30 calendar days after the date of MTS's notice of cancellation. In such event, the matter must be submitted to the Arts Arbitration and Mediation Service of the California Lawyers for the Arts, or such other arbitration or mediation service to which both parties mutually agree. If arbitration is held, the determination of ARTIST's rights under this Contract by the arbitrator is final and binding upon MTS and ARTIST and neither will have any further recourse or cause of action.

7.22. AUTHORSHIP OF ARTWORK

Except as provided in this Contract, ARTIST will retain the right to claim authorship of the Artwork. MTS will publicly display ARTIST's name on, at, or near the Artwork, except as provided below:

- A. If the Artwork is substantially damaged or artistically altered in a substantial manner, and if ARTIST gives written notice to MTS that ARTIST wishes to deny authorship, then MTS may no longer represent the Artwork to be the work of the ARTIST. If MTS disputes the right of ARTIST to deny authorship, the parties agree that the matter will be submitted to the Arts Arbitration and Mediation Service of the California Lawyers for the Arts, or such other arbitration or mediation service to which both parties mutually agree. The scope of the arbitration will be limited to whether the Artwork is substantially damaged or artistically altered in a substantial manner. The determination of the arbitrator will be final and binding upon MTS and ARTIST and neither will have any further recourse or cause of action.
- B. If the Artwork is substantially damaged or artistically altered in a substantial manner after the life of the ARTIST, MTS will consult with the California Arts Council, or their successors, in determining whether to continue representing the ARTIST as author of the Artwork.
- C. If MTS arranges to have another artist complete the Artwork as provided under Article 30 below, ARTIST's name must be publicly displayed on, at, or near the Artwork, unless ARTIST gives written notice to MTS not to display ARTIST's name or ARTIST wishes to deny authorship of the Artwork. If the work to complete the Artwork is substantial, MTS will consult with the California Arts Council, or their successors, regarding the selection of the artist who will complete the Artwork. After such consultation, MTS may select such artist in MTS's sole discretion. The name of the artist who completes the Artwork will be displayed in a manner equal to the display, if any, of ARTIST. The term "equal" means similar, not identical, and does not mandate any preference of position or size of location.
- D. If ARTIST effectively denies authorship of the Artwork for the reasons set out above or for any other reason, such action constitutes a waiver of all of ARTIST's rights related to authorship of the Artwork under federal and state law and this Contract.

7.23. INDEPENDENT CONTRACTOR

In providing the above-referenced services, ARTIST acts as an independent contractor and not as an employee of MTS. In accordance with that relationship, ARTIST must assume all responsibility for federal and state income tax withholding, FICA, SDI, and any other deductions from income that ARTIST is required to make as an independent contractor. ARTIST hereby agrees to indemnify and hold MTS, its officers and employees, harmless from any and all claims

that may be made against MTS based upon any contention by any employee of ARTIST or by any third party, including but not limited to any federal or state agency, that an employer-employee relationship or a substitute therefore exists for any purpose whatsoever by reason of this Contract or by reason of the nature and/or performance of any obligation under this Contract.

7.24. WORKERS' COMPENSATION

Responsibility for payment due by MTS is limited to the compensation set forth in Article 3 above. MTS is not responsible for providing workers' compensation insurance or any other protective insurance coverage or employment benefit payable to employees of ARTIST that is based upon the relationship of employer and employee.

7.25. THIRD PARTY OBLIGATION

ARTIST is solely liable to third parties with whom it enters into contracts to effectuate the purposes of this Contract. ARTIST must pay directly such parties for all amounts due under said arrangement. ARTIST must indemnify and hold MTS harmless from any and all claims and liabilities arising from such Contract. ARTIST must exert its best efforts to prevent any loss to MTS from the failure of proper performance of any third party. MTS's only obligation with respect to such third parties will be limited to reimbursement to ARTIST for those expenses for which MTS is obligated to reimburse by virtue of the terms of this Contract.

If ARTIST hires or contracts with employees or material suppliers, ARTIST must pay such employees and suppliers out of the payments made to ARTIST by MTS for completion of each phase of work. If any underpayment of wages or other amounts due ARTIST's employees and suppliers, MTS may withhold from ARTIST out of any payments due amounts sufficient to pay the claims of such employees and suppliers. In addition, before MTS is obligated to make final payment to ARTIST, MTS may require ARTIST to demonstrate to MTS's satisfaction that all employees and material suppliers have been fully paid.

7.26. INSURANCE REQUIREMENTS

A. Liability

1) Commercial General Liability

At all times during this contract and, with respect to Products and Completed Operations Liability, for twelve (12) months following the acceptance of the work by MTS, Contractor agrees to maintain Commercial General Liability Insurance utilizing Insurance Services Office (ISO) coverage form CG0001, edition date 10/01 or later, or an equivalent form and with insurance companies acceptable to MTS. The coverage shall contain no restricting or exclusionary endorsements with respect to the performing of services described in the scope of work.

All such policies shall name in the endorsement San Diego Metropolitan Transit System (MTS), San Diego Trolley, Inc. (SDTI), San Diego and Arizona Eastern Railway (SD&AE), San Diego and Imperial Valley Railroad (SD&IV), and San Diego Transit Corporation (SDTC), their directors, officers, agents, and employees as additional insureds as their interests may appear. Furthermore, an endorsement will be required demonstrating that the standard railroad exclusionary language has been removed as applicable.

2) Automobile Liability

At all times during this contract, Contractor agrees to maintain Automobile Liability Insurance for bodily injury and property damage including coverage for all owned, nonowned, and hired vehicles.

3) Workers' Compensation/Employer Liability

At all times during this contract, Contractor agrees to maintain Workers' Compensation and Employers' Liability Insurance in compliance with the applicable statutory requirements. Contractor waives any rights of subrogation against MTS, SDTI, SD&AE, SD&IV, and SDTC, and the policy form must permit and accept such waiver.

7.26.1. ADDITIONAL COVERAGES REQUIRED (AS INDICATED. WHERE THERE IS A CHECKMARK, THE COVERAGE IS REQUIRED)

☒ (1) Primary and Non-Contributory Insurance

Contractor agrees that all general liability coverages required under this insurance section are PRIMARY and that any insurance of MTS, SDTI, SD&AE, SD&IV, and SDTC shall be excess and noncontributory (endorsement required).

☐ (2) Owner-Provided Builder's Risk

MTS will provide Builder's Risk Insurance on a special form basis, excluding the perils of earthquake and flood, at a limit of not less than the full replacement value of the work and covering the work and all materials and equipment to be incorporated therein, including property in transit elsewhere, and insuring the interests of the Contractor, subcontractors, materialmen, and MTS, SDTI, SD&AE, SD&IV, SDTC, MTS's contractor for design, and MTS's contractor for construction management. However, Contractor is responsible for the portion of any loss that is within the deductible amount of this Builder's Risk Insurance, which is currently at \$50,000 but is subject to change.

☐ (3) Railroad Protective Liability and CG 24 17 Endorsement for CGL Policy - Required

The CGL policy must contain the following endorsement: Contractual Liability Railroads ISO Form CG 24 17 10 01 (or a substitute form providing equivalent coverage). Furthermore, Contractor shall maintain a Railroad Protective Liability coverage with limits of not less than \$2,000,000 each occurrence and \$4,000,000 annual aggregate, naming MTS as the named insured on the policy.

☐ (4) Professional Liability

At all times during this contract, and for twelve (12) months following acceptance of work by owner, Contractor agrees to maintain Professional Liability Insurance with respect to services or operations under this Agreement.

☐ (5) Pollution Legal Liability

At all times during this contract, and for twenty-four (24) months following, Contractor agrees to maintain Pollution Legal Liability Insurance with respect to services or operations under this Agreement. The extended discovery period must be no less than twenty-four (24) months.

☐ (6) Contractor Equipment

At all times during this contract, Contractor agrees to maintain Contractor's Equipment Insurance on a special form basis covering equipment owned, leased, or used by Contractor. Contractor waives any rights of subrogation against MTS, SDTI, SD&AE, SD&IV, and SDTC, and the policy form must permit and accept such waiver. Contractor hereby releases and holds harmless MTS for any loss or damage to its equipment.

☐ (7) Installation Floater

At all times during this contract, Contractor agrees to maintain Installation Floater Insurance on a special form basis covering property owned or provided by Contractor. Contractor waives any rights of subrogation against MTS, SDTI, SD&AE, SD&IV, and SDTC, and the policy form must permit and accept such waiver. Contractor hereby releases and holds harmless these entities for any loss or damage to its property.

☐ (8) Garage Keeper's Legal Liability & Automobile Portion

At all times during this contract, Contractor agrees to maintain Garage Keeper's Legal Liability as well Automobile Portion which covers the risk of loss or damage to MTS vehicles while in the care, custody or control of Contractor. Automobile portion shall cover the Contractor in the event of a vehicle accident while they are driving an MTS vehicle, which results in a third party claim of physical damage or bodily injury.

☐ (9) Crime Fidelity Insurance

At all times during this contract, Contractor agrees to maintain Crime Fidelity Insurance with respect to services or operations under this agreement. The coverage should include the following:

- Employee dishonesty/theft
- Theft, disappearance and destruction on the premises
- Theft, disappearance and destruction while in transit
- Forgery/alteration

☐ (10) Umbrella or Excess Liability (if required to meet liability limits above)

Contractor agrees that any Umbrella or Excess Liability Policy utilized to provide the required limits of liability shall contain coverage at least as broad as that provided by the General Liability Policy, and be written for a term concurrent with the General Liability Policy.

☐ (11) Property Insurance

Contractor is responsible to insure physical damage coverage at replacement cost value on the rolling stock (i.e., revenue and non-revenue vehicles) it operates. [Note: MTS insures the buildings in which the fixed route contract operates.]

- ☐ (12) Cyber and Privacy Liability, including Technology Errors and Omissions

Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by Contractor in this agreement and shall include, but not be limited to, claims involving security breach, system failure, data recovery, business interruption, cyber extortion, social engineering, infringement of intellectual property, including but not limited to infringement of copyright, trademark, trade dress, invasion of privacy violations, information theft, damage to or destruction of electronic information, release of private information, and alteration of electronic information. The policy shall provide coverage for breach response costs, regulatory fines and penalties as well as credit monitoring expenses. Coverage shall also include Technology Professional Liability Errors & Omissions appropriate to the Consultant's profession and work hereunder

7.24.2 MINIMUM POLICY LIMITS REQUIRED

	Combined Single Limit (CSL)
Commercial General Liability (Per Occurrence):	\$2,000,000
(General Aggregate)	\$4,000,000
(Completed Operations & Products Aggregate)	\$2,000,000
Automobile Liability: (Combined Single Limit)	\$2,000,000
Worker's Compensation:	Statutory Limits
Employer's Liability per Accident /or Disease:	\$1,000,000

1. Additional Coverages (as indicated under Additional Coverages Required Section):

<input checked="" type="checkbox"/>	B (1) Primary and Non-Contributory Insurance	
<input type="checkbox"/>	B (2) Owner Provided Builder's Risk	Replacement Cost
<input type="checkbox"/>	B (3) Railroad Protective (Per Occurrence)	\$2,000,000
	Railroad Protective (General Aggregate)	\$4,000,000
<input type="checkbox"/>	B (4) Professional Liability	\$
<input type="checkbox"/>	B (5) Pollution and Legal Liability	\$
<input type="checkbox"/>	B (6) Contractor Equipment	Replacement Cost
<input type="checkbox"/>	B (7) Installation Floater	Replacement Cost
<input type="checkbox"/>	B (8) Garage Keeper's Legal Liability & Automobile Portion	(Per Occurrence)

	(Combined Single Limit (CSL))	
<input type="checkbox"/>	B (9) Crime Fidelity Insurance	\$
<input type="checkbox"/>	B (10) Umbrella or Excess Liability (if required to meet liability limits above)	\$
<input type="checkbox"/>	B (11) Property Insurance	\$
<input type="checkbox"/>	B (12) Cyber Security Liability Insurance	\$
	(per occurrence or claim)	
	(Aggregate)	\$

7.27. INDEMNIFICATION

To the extent permitted by law, ARTIST does hereby assume liability for, and agrees to defend, with counsel acceptable to MTS, indemnify, protect, save and keep harmless **MTS, SDTI, SDTC, SD&AE, SD&IV** and its directors, officers, employees, agents and their respective successors and assigns from and against any and all liabilities, obligations, losses, damages, penalties, fines, claims, actions, suits, costs and expenses and disbursements including reasonable attorneys' fees and expenses (including allocated costs of MTS attorneys) of any kind and nature imposed in, asserted against, incurred or suffered by **MTS, SDTI, SDTC, SD&AE, SD&IV** or its directors, officers or employees or its successors and assigns by reason of damage, loss or injury (including death) of any kind or nature whatsoever to persons or property in any way relating to or arising out of:

- (i) any acts, errors or omissions by ARTIST or any of its officers, agents, servants, employees, subconsultants of any tier in its or their performance hereunder, whether or not caused by MTS's negligence, but not to the extent of MTS's sole negligence or willful misconduct; or
- (ii) any claim of patent or copyright infringement in connection with the services performed or work products provided under this Contract by ARTIST or any of its officers, agents, servants, employees, subcontractors or subcontractors of any tier; or
- (iii) a release by ARTIST or any of its officers, agents, servants, employees, subcontractors or subcontractors of any tier in its or their performance hereunder of any substance or material defined or designated as a hazardous or toxic substance, material or waste by any federal, state or local law or environmental statute, regulation or in effect when the release occurs, or as amended or promulgated in the future, but only to the extent based upon principles of comparative fault that such release is not proximately contributed to or caused by MTS, or its directors, officers or employees; and/or
- (iv) successful efforts to enforce this indemnity provision.

The parties will establish procedures to notify the other party where appropriate of any claims, administrative actions or legal actions with respect to any of the matters described in this indemnification provision. The parties will cooperate in the defense of such actions brought by others with respect to the matters covered in this indemnity. Nothing set forth in this Contract will establish a standard of care for, or create any legal rights in, any person not a party to this Contract.

In addition to any other remedy authorized by law, MTS may retain as much of the money due ARTIST under this Contract as it considers necessary until disposition has been made of any claim for damages.

The foregoing requirements are not intended to and will not in any manner limit or qualify the liabilities and obligations otherwise assumed by ARTIST pursuant to this Contract, including, but not limited to, the provisions concerning insurance.

7.28. CONFLICT OF INTEREST

During the term of this Contract, ARTIST, its officers, employees and their immediate families may not acquire any interest, direct or indirect, that would conflict with the performance of services required to be performed under this Contract. Violation of this prohibition is a material breach of this Contract and MTS will have the right to debar ARTIST from participating at any tier in any MTS contract for a period of up to 5 years.

ARTIST covenants that prior to award of this Contract, ARTIST has disclosed in writing to the MTS General Counsel any present interest and any interest existing within 12 months prior to award of this Contract including, without limitation, any business or personal relationship that creates an appearance of a conflict of interest. Disclosable interests and relationships are those that may reasonably be viewed as creating a potential or actual conflict of interest. In addition, ARTIST must immediately disclose in writing to the MTS General Counsel any interest or relationship described above acquired or occurring after ARTIST's initial disclosure. Violation of the above disclosure obligations is a material breach of this Contract.

7.29. TERMINATION FOR CONVENIENCE

After MTS issues Notice to Proceed, MTS may terminate this Contract by giving 5 days' advance written notice to ARTIST. Upon termination of the Contract under this Article, ARTIST will be paid for all actual services rendered to MTS to and inclusive of the specified date of termination. If MTS terminates this Contract for convenience before issuance of Notice to Proceed to fabricate the Artwork, MTS will not be obligated to make any payment to ARTIST. All designs, materials, finished and unfinished portions of the Artwork, and written documents pertaining to the Artwork under this Contract, will remain the property of ARTIST. Within 30 days after issuance of the notice of termination, ARTIST must remove all finished or unfinished portions of the Artwork and restore the Artwork site to its prior condition. If ARTIST fails to remove his or her personal property and restore the Artwork site, MTS may do so at ARTIST's expense.

7.30. TERMINATION FOR BREACH

Either party may terminate this Contract immediately following written notice if the other party is in default as to any of its material obligations hereunder, provided that: (a) the defaulting party has received a written notice containing a reasonably complete description of the default; and (b) the defaulting party has failed to cure the default within 30 calendar days after receiving such notice; provided that if such failure is capable of cure but cannot be cured during such 30-day period, no event of default may occur so long as the defaulting party is diligently attempting to cure and does so within such additional period of time as is approved in writing by the non-defaulting party. If MTS terminates for breach, ARTIST will only be paid its fees and costs for services performed, as of the effective date of termination, in accordance with the terms and conditions of this Contract. MTS reserves the right to offset the damages it incurs as a result of

ARTIST's breach against any payments owed to ARTIST. The foregoing remedy is cumulative and is in addition to any right or remedy that MTS may have in law or equity.

If, after termination for failure to fulfill contract obligations, it is determined that ARTIST was not in default, the rights and obligations of the parties will be the same as if the termination had been issued for MTS's convenience.

7.31. NOTICES

All notices and other communications under this Contract must be in writing and will be deemed to have been duly given (i) on the date of delivery, if delivered personally to the party to whom notice is given, or if made by email directed to the party to whom notice is to be given at the email address listed below, or (ii) at the earlier of actual receipt or the second business day following deposit in the United States mail, postage prepaid. Notices and other communications must be directed to the parties at the addresses shown below. A party may change its person designated to receive notice, its email address, or its address from time to time by giving notice to the other party in accordance with the procedures set forth in this Article.

TO MTS: San Diego Metropolitan Transit System
Attn: Brett Hoffman
Phone: (619) 398-9559
Email: Brett.Hoffman@sdmts.com

TO ARTIST:

7.32. PREVAILING WAGES

Pursuant to Labor Code sections 1725.5 and 1771.1, ARTIST and subcontractors that wish to enter into a contract to perform public work must be registered with the Department of Industrial Relations. No contract will be entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work. If awarded a contract, the Bidder and its subcontractors, of any tier, shall maintain active registration with the Department of Industrial Relations for the duration of the Project.

LABOR

Hours of Work: Eight (8) hours of work shall constitute a legal day's work. ARTIST and each subcontractor shall forfeit, as penalty to MTS, twenty-five dollars (\$25) for each worker employed in the execution of Work by the ARTIST or any subcontractor for each day during which such worker is required or permitted to work more than eight (8) hours in any one day and forty (40) hours in any week in violation of the provisions of the Labor Code, and in particular, section 1810 to section 1815, except as provided in Labor Code section 1815. The ARTIST and every subcontractor shall keep an accurate record showing the name of and actual hours worked each calendar day and each calendar week by each worker employed in connection with the Work or any part of the Work contemplated by this Contract. The record shall be kept open at all reasonable hours to the inspection of MTS and to the Division of Labor Law Enforcement, Department of Industrial Relations of the State of California.

Prevailing Rates of Wages: The ARTIST is aware of the requirements of Labor Code Sections 1720 et seq. and 1770 et seq., as well as California Code of Regulations, Title 8, Section 16000 et seq. ("Prevailing Wage Laws"), which require the payment of prevailing wage rates and the performance of other requirements on certain "public works" and "maintenance" projects. Since this Project involves an applicable "public works" or "maintenance" project, as defined by the Prevailing Wage Laws, and since the total compensation is \$1,000 or more, ARTIST agrees to fully comply with such Prevailing Wage Laws. The Contractor shall obtain a copy of the prevailing rates of per diem wages at the commencement of this Contract from the website of the Division of Labor Statistics and Research of the Department of Industrial Relations located at www.dir.ca.gov. In the alternative, the Contractor may view a copy of the prevailing rate of per diem wages which are on file at MTS's Administration Office and shall be made available to interested parties upon request. Contractor shall make copies of the prevailing rates of per diem wages for each craft, classification, or type of worker needed to perform work on the Project available to interested parties upon request, and shall post copies at the ARTIST's principal place of business and at the Project site. Contractor shall defend, indemnify and hold MTS, its Board, members of the Board, employees and authorized volunteers free and harmless from any claims, liabilities, costs, penalties or interest arising out of any failure or allege failure to comply with the Prevailing Wage Laws.

The ARTIST shall forfeit as a penalty to MTS not more than Two Hundred Dollars (\$200.00), pursuant to Labor Code Section 1775, for each calendar day, or portion thereof, for each worker paid less than the prevailing wage rate as determined by the Director of the Department of Industrial Relations for such work or craft in which such worker is employed for any public work done under the Contract by it or by any subcontractor under it. The difference between such prevailing wage rate and the amount paid to each worker for each calendar day or portion thereof, for which each worker was paid less than the prevailing wage rate, shall be paid to each worker by the ARTIST.

ARTIST shall post, at appropriate conspicuous points on the Project site, a schedule showing all determined general prevailing wage rates and all authorized deductions, if any, from unpaid wages actually earned.

Payroll Records: Pursuant to Labor Code Section 1776, ARTIST and all subcontractors shall maintain weekly certified payroll records, showing the names, addresses, Social Security numbers, work classifications, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by them in connection with the Work under this Contract. ARTIST shall certify under penalty of perjury that records maintained and submitted by Contractor are true and accurate. ARTIST shall also require subcontractor(s) to certify weekly payroll records under penalty of perjury.

In accordance with Labor Code section 1771.4, the ARTIST and each subcontractor shall furnish the certified payroll records directly to the Department of Industrial Relations ("DIR") on the specified interval and format prescribed by the DIR, which may include electronic submission. ARTIST shall comply with all requirements and regulations from the DIR relating to labor compliance monitoring and enforcement.

If not subject to paragraph (a), the certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement ("DLSE") of the DIR or shall contain the same information as the forms provided by the DLSE.

In the event of noncompliance with the requirements of this Section, the ARTIST shall have ten (10) calendar days in which to comply subsequent to receipt of written notice specifying in what respects the ARTIST must comply with this section. Should noncompliance still be evident after such 10-day period, the ARTIST shall pay a penalty of one hundred dollars (\$100.00) to MTS for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, such penalties shall be withheld from progress payment then due.

Employment of Apprentices: ARTIST's attention is directed to the provisions of sections 1777.5, 1777.6, and 1777.7 of the Labor Code concerning employment of apprentices by the Contractor or any subcontractor. ARTIST shall obtain a certificate of apprenticeship before employing any apprentice pursuant to sections 1777.5, 1777.6, and 1777.7 of the Labor Code. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, the Administrator of Apprenticeships, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

Nondiscrimination: Pursuant to Labor Code Section 1735 and other applicable provisions of law, the ARTIST and its subcontractors shall not discriminate against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, or any other classifications protected by law on this Project. The ARTIST will take affirmative action to ensure that employees are treated during employment or training without regard to their race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex, age, sexual orientation, or any other classifications protected by law.

Labor Certification I am aware of the provisions of section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract code.

7.33. WATER QUALITY MANAGEMENT AND COMPLIANCE

- A. Contractor must recover and legally dispose of all wastewater created while providing services. Contractor assumes any and all risks and liabilities arising from the failure to properly recover and legally dispose of wastewater. Contractor must implement best management practices set forth in any stormwater pollution prevention plan relevant to the provision of the services.
- B. Compliance with Water Quality Laws, Ordinances and Regulations. Contractor shall keep itself and all subcontractors, staff, and employees fully informed of and in compliance with all local, state and federal laws, rules and regulations that may impact, or be implicated by the performance of the services including, without limitation, all applicable provisions of the Federal Water Pollution Control Act (33 U.S.C. § 1251, et seq.); the California Porter-Cologne Water Quality Control Act (Water Code § 13000 et seq.); and any and all regulations, policies,

or permits issued pursuant to any such authority. Contractor shall additionally comply with the lawful requirements of the San Diego Regional Water Quality Control Board, any municipality, drainage district, or other local agency with jurisdiction over the location where the services are to be conducted, regulating water quality and storm water discharges and shall implement best management practices, consistent with the requirements of any board, municipality, drainage district or other local agency appropriate for the control of discharges related to the services.

- C. Standard of Care. Contractor warrants that all employees and subcontractors shall have sufficient skill and experience to perform the work assigned to them without impacting water quality in violation of the laws, regulations and policies described in this section. Contractor further warrants that it, its employees and subcontractors have or will receive adequate training, as determined by MTS, regarding these requirements as they may relate to the services.
- D. Liability for Non-compliance.
 - 1. Indemnity: Failure to comply with laws, regulations, and ordinances listed in this section may constitute a violation of federal and state law. Notwithstanding any other indemnity contained in this Agreement, Contractor agrees to indemnify, defend and hold harmless MTS, its officials, officers, agents, employees and authorized volunteers from and against any and all claims, demands, losses or liabilities of any kind or nature which MTS, its officials, officers, agents, employees and authorized volunteers may sustain or incur for noncompliance with the laws, regulations, and ordinances listed above, arising out of or in connection with the services, except for liability resulting from the sole established negligence, willful misconduct or active negligence of MTS, its officials, officers, agents, employees or authorized volunteers. Contractor is solely liable for any administrative or civil enforcement action arising from Contractor's failure to comply with the laws, regulations, and ordinances listed in this section and must pay any monetary penalty, fine, or damages associated with such action.
 - 2. Defense: MTS reserves the right to defend any enforcement action or civil action brought against MTS for Contractor's failure to comply with any applicable water quality law, regulation, or policy. Contractor hereby agrees to be bound by, and to reimburse MTS for the costs associated with, any settlement reached between MTS and the relevant enforcement entity.
 - 3. Damages: MTS may seek damages from Contractor for delay in completing the services caused by Contractor's failure to comply with the laws, regulations and policies described in this section, or any other relevant water quality law, regulation, or policy.

7.34. NONDISCRIMINATION

In accordance with applicable federal and state laws and regulations, ARTIST agrees that it will not discriminate against any employee, applicant for employment, or subcontractor because of race, color, religion, creed, ancestry, national origin, sex, marital status, age, medical condition, gender, gender identity, gender expression, genetic information or physical or mental disability.

7.35. SUBCONTRACTORS

ARTIST agrees to bind every subcontractor to the terms of the Agreement as far as such terms are applicable to subcontractor's portion of the Work. ARTIST shall be as fully responsible to MTS for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by its subcontractors, as ARTIST is for acts and omissions of persons directly employed by ARTIST. Nothing contained in this Agreement shall create any contractual relationship between any subcontractor and MTS. MTS reserves the right to approve all subcontractors. MTS's approval of any subcontractor under this Agreement shall not in any way relieve ARTIST of its obligations under this Agreement.

7.36. PROMPT PROGRESS PAYMENT AND RETENTION

ARTIST or Subcontractor shall pay any Subcontractor no later than seven (7) business days from the receipt of each progress payment from MTS. No retainage will be held by MTS from progress payments due to the ARTIST. Any retainage kept by the ARTIST or by a Subcontractor must be paid in full to the Subcontractor in seven (7) business days after the Subcontractor's work is satisfactorily completed. Any delay or postponement of a progress payment or retainage to the Subcontractor over 30 calendar days may take place only for good cause and with MTS's prior written approval. Failure to comply with this provision will constitute noncompliance, which may result in the application of legal and contract remedies, including, but not limited to, prime contractor not being reimbursed for work performed by subcontractors unless and until the prime contractor ensures that the subcontractors are promptly paid for the work they have performed. This requirement shall not be construed to limit or impair any contractual, administrative or judicial remedies otherwise available to the ARTIST or Subcontractor in the event of a dispute involving late or nonpayment by the ARTIST, deficient Subcontractor performance or noncompliance by a Subcontractor.

ARTIST must submit the MTS Prompt Payment Certification Form to the MTS Contracts Administrator if any Subcontractors. The form is available for download at <https://www.sdmts.com/business-center/procurement>. The form certifies that all Subcontractors were paid within seven (7) business days of receiving payment from MTS for work performed during the previous month. The ARTIST must submit the completed certification, as required on the form, and the month following final acceptance of the project. In addition, seven (7) business day prompt payment requirement prevails over contract language between an ARTIST and a Subcontractor.

7.37. RECORDS RETENTION

The ARTIST and any Subcontractor shall maintain all data, documents, books, reports, payroll, statistics, subcontracts, leases, arrangements, papers, accounting records, and other evidence and supporting materials pertaining to the performance of the contract including, but not limited to, the costs of administering the contract. The Contractor shall make such materials available at its respective office at all reasonable times during the Agreement and for three (3) years from the date of the final payment under the Contract and three (3) years from the date that any pending legal matters relating to the Contract are closed. MTS, the state, the State Auditor, or any duly authorized representative shall have access to any books, records, and documents of the ARTIST that are pertinent to the contract for audit examination, excerpts, and transactions, and copies thereof shall be furnished if requested.

7.38. DISADVANTAGED BUSINESS ENTERPRISE (DBE) AND OTHER SMALL BUSINESS PARTICIPATION

MTS encourages the participation of DBEs, minority owned businesses (MBEs), women owned businesses (WBEs), disabled veteran business enterprises (DVBEs) lesbian gay bisexual transgender businesses (LGBTs), and small businesses (SB) in the performance of all of its contracts. MTS encourages the Contractor to outreach to DBEs and other small business enterprises for any potential subcontracting opportunities on this project. MTS tracks DBE, MBE, WBE, DVBE, PDBE, LGBT and SB participation and therefore requires all successful proposers to report whether the prime contractor and any subcontractors are a DBE or other small business enterprise. Contractor must complete MTS's Designation of Subcontractors and DBE Program - Information for MTS's Bidder List. If interested in learning about bonding or financial assistance that may be available for small businesses, visit www.sba.gov. If interested in learning about the eligibility requirements to become certified as a DBE, PDBE, MBE, WBE, DVBE, LGBT or SB or how to view a list of certified firms, please contact MTS's DBE Liaison Officer, Samantha Leslie, at DBEProgram@sdmts.com for more information.

7.39. EQUAL EMPLOYMENT

A. MTS'S EQUAL EMPLOYMENT OPPORTUNITY PROGRAM:

MTS is an Equal Opportunity Employer. As such, MTS agrees to comply with all applicable Federal civil rights laws and implementing regulations. Apart from inconsistent requirements imposed by Federal laws or regulations, MTS agrees to comply with the requirements of 49 U.S.C. § 5323(h) (3) by not using any Federal assistance awarded by FTA to support procurements using exclusionary or discriminatory specifications. MTS' Equal Employment Opportunity Program for Contractors, MTS Policy No. 25, is part of this Agreement (a copy can be obtained from MTS' Clerk of the Board).

B. CONTRACTOR'S EQUAL EMPLOYMENT OPPORTUNITY PLAN:

Each Contractor who provides MTS labor, equipment, materials and services of \$50,000 or more per year with fifty (50) or more employees shall have, maintain, and submit an Equal Employment Opportunity Plan to the Director of Human Resources and Labor Relations for MTS each year of the contract, and a Workforce Utilization Report on or before January 1 and July 1 for each year of the contract. The objective of this plan is to assure that the Contractor will not discriminate against any employee or applicant for employment because of race, color, national origin, sex, sexual orientation, gender identity, religion, disability, age or status as a parent. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

C. COMPLIANCE WITH REGULATIONS:

Contractor shall comply with Title VII of the Civil Rights Act of 1964, as amended, 42 U.S.C. § 2000e et seq.; Facilitate compliance with Executive Order No. 11246, "Equal Employment Opportunity" September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it in part and is applicable to federal assistance programs; Comply with federal transit law, specifically 49 U.S.C. § 5332; FTA Circular 4704.1 "Equal

Employment Opportunity (EEO) Requirements and Guidelines for Federal Transit Administration Recipients,”; and Follow any other federal guidance pertaining to EEO laws, regulations, and requirements, and prohibitions against discrimination.

7.40. ROADWAY WORKERS PROTECTION (RWP) TRAINING

Prior to entering the MTS railroad operating corridor, all workers of Contractor, sub-Contractors, and any other third-party contractor under Contractor’s control working on MTS property shall have taken and passed a four (4) hour RWP training course as required by the Federal Railroad Administration (FRA) California Public Utilities Commission (CPUC). Training courses are valid for one year from date issued. Contractor should allow at least two weeks to schedule training prior to commencement of services on the right of way (ROW). Registration for the course can be found online at: <http://www.sdmts.com/Business/RAILSAFETYTRAINING.htm>. Any costs related to RWP training courses shall be at the sole expense of the Contractor.

7.41. FLAGGING

Any work within fifteen (15) feet of active rail, or as otherwise identified by MTS, shall require an MTS flagger. An MTS Flagger Request form must be submitted to FlagRequest@sdmts.com no later than 72 hours prior to the commencement of the work. The MTS Flagger Request shall include: the specific location, time(s) and date(s) for when an MTS flagger(s) will be necessary. The MTS Flagger will be provided at the expense of the party requesting the work. The requester will be responsible to contact SDTI Assignment Office at (619) 595-4956 no later than 24 hours prior to beginning of work for all cancellations and may be subject to SDTI labor reporting costs.

7.42. GRANT CONDITIONS

This Contract is subject to a financial assistance contract between MTS and the United States of America, acting through the Department of Transportation and the Federal Transit Administration (hereinafter "FTA"), as well as Clean California Local Grant Program ("CALTRANS"). If FTA or CALTRANS requires any change to this Contract to comply with its requirements, both parties agree to amend this Contract as required by FTA or CALTRANS. If such changes cause an increase or decrease in the work to be performed by the ARTIST or the time for such performance, then the compensation to be paid to ARTIST and time of performance will be equitably adjusted.

7.43. ARBITRATION

If any matter is to be submitted to the Arts and Mediation Services of the California Lawyers for the Arts, all fees expenses and costs connected therewith will be borne jointly and equally by MTS and ARTIST. Each and every obligation under this Contract to submit any matter in dispute to a third party for resolution is conditioned upon the foregoing provision of this Article. If any matter is to be submitted to the Arts and Mediation Services of the California Lawyers for the Arts for resolution pursuant to this Contract, and if, at the time of submission such organization is no longer in existence, or is not able or willing to provide such resolution service, then the matter will be submitted for resolution to the American Arbitration Association or such other organization to which both parties mutually agree. Unless the parties agree otherwise, the arbitration procedures to be used for resolving the dispute will be those current procedures adopted by the applicable arbitration board.

7.44. ASSIGNMENT OF WORK

The services provided pursuant to this Contract may not be assigned by ARTIST unless approved in writing by MTS. If ARTIST is not available to perform the terms of the Contract, MTS may at its election terminate the Contract for convenience or cancel the Contract for breach by giving notice as set forth herein.

7.45. SUCCESSORS AND ASSIGNS

This Contract will be binding upon and the benefits of this Contract will inure to the successors and assigns of the parties hereto, subject to the provisions of Article 37 above.

7.46. GOVERNING LAW

The interpretation and enforcement of this Contract is governed by the laws of the State of California, the state in which this Contract was signed. The parties agree to submit any disputes not subject to arbitration arising under the Contract to a court of competent jurisdiction located in San Diego, California.

7.47. NONWAIVER

Waiver of any breach or default hereunder does not constitute a continuing waiver or a waiver of any subsequent breach either of the same or of another provision of this Contract.

7.48. MODIFICATION

No waiver, alteration, modification, or termination of this Contract will be valid unless made in writing and signed by the authorized parties hereof.

7.49. AMBIGUITIES

The parties have each carefully reviewed this Contract and have agreed to each term of this Contract. ARTIST acknowledges that he or she has been encouraged to retain his or her own attorney for the purposes of reviewing this Contract before signing it. No ambiguity is presumed to be construed against either party.

7.50. COUNTERPARTS

This Contract may be executed in one or more counterparts, each of which will be deemed to be an original, but all of which together will constitute but one and the same instrument.

7.51. SEVERABILITY

If any term, covenant, or condition of this Contract is held by a court of competent jurisdiction to be invalid, the remainder of this Contract will remain in effect.

7.52. SURVIVAL

All warranties, indemnities and waiver of rights contained in this Contract will survive the expiration, termination or cancellation of this Contract.

7.53. ENTIRE AGREEMENT

All warranties, indemnities and waiver of rights contained in this Contract will survive the expiration, termination or cancellation of this Contract.

EXHIBIT E
FEDERAL REQUIREMENTS

DRAFT

FEDERAL TRANSIT ADMINISTRATION REQUIREMENTS

As a Federal Transit Administration (FTA) grantee, the San Diego Metropolitan Transit System (MTS), a California Public Agency, is required to inform the Contractor and any Subcontractor of the following information:

8.1. INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION (FTA) TERMS

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

The preceding provisions include, in part, certain Standard Terms and Conditions required by the Department of Transportation (DOT), whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F, are hereby incorporated by reference. Notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Contract. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any MTS requests which would cause MTS to be in violation of the FTA terms and conditions.

8.2. FEDERAL CHANGES

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

The Contractor shall at all times comply with all applicable FTA regulations, policies, procedures, and directives, including without limitation those listed directly or by reference in the Master Agreement between MTS and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor shall also ensure compliance by subcontractors at any tier of any applicable change to federal requirements.

8.3. NO FEDERAL GOVERNMENT OBLIGATIONS TO THIRD PARTIES

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

Notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying Contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this Contract and shall not be subject to any obligations or liabilities to Contractor or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying Contract. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by the FTA.

8.4. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. part 31, apply to its actions pertaining to this Contract. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the FTA assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification,

the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate. The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. chapter 53, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5323(l) on the Contractor, to the extent the Federal Government deems appropriate. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA.

False Claims Act (*APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS*)

The Contractor and any Subcontractor acknowledges that the False Claims Act, 31 U.S.C. 3729 et seq., pertains to the underlying contract or the FTA assisted project for which this contract work is performed. If the Contractor has knowledge of potential fraud, waste, or abuse occurring on a Project receiving assistance from FTA, or has or may have committed a criminal or civil violation of law pertaining to such matters as fraud, conflict of interest, bid rigging, misappropriation or embezzlement, bribery, gratuity, or similar misconduct involving federal assistance, the Contractor must notify MTS, U.S. DOT Inspector General, and the FTA Chief Counsel or FTA Region 9 Counsel. Knowledge, as used in this paragraph, includes, but is not limited to, knowledge of a criminal or civil investigation by a Federal, state, or local law enforcement or other investigative agency, a criminal indictment or civil complaint, or probable cause that could support a criminal indictment, or any other credible information in the possession of the Recipient. In this paragraph, "promptly" means to refer information without delay and without change. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA.

Notice to FTA on Legal Matters (*APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS EXCEEDING \$25,000*)

The Contractor and any Subcontractor shall notify MTS and the FTA Chief Counsel or FTA Region 9 Counsel if a current or prospective legal matter that may affect the Federal Government emerges. The types of legal matters that require notification include, but are not limited to, a major dispute, breach, default, litigation, or naming the Federal Government as a party to litigation or a legal disagreement in any forum for any reason. Matters that may affect the Federal Government include, but are not limited to, the Federal Government's interests in an award of federal funding, or the Federal Government's administration or enforcement of federal laws, regulations, and requirements. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA.

8.5. DEBARMENT AND SUSPENSION

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS EXCEEDING \$25,000)

The Contractor shall comply and facilitate compliance with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Government wide Debarment and Suspension (Nonprocurement)," 2 C.F.R. part 180. Contractor

shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or agency to be: a) Debarred from participation in any federally assisted Award; b) Suspended from participation in any federally assisted Award; c) Proposed for debarment from participation in any federally assisted Award; d) Declared ineligible to participate in any federally assisted Award; e) Voluntarily excluded from participation in any federally assisted Award; or f) Disqualified from participation in any federally assisted Award. The Contractor agrees to include a provision requiring compliance to this section in its lower tier covered transactions.

8.6. RESTRICTIONS ON LOBBYING

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS EXCEEDING \$100,000)

The Contractor and their subcontracts at every tier certifies that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. The Contractor and their subcontracts at every tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

8.7. CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS EXCEEDING \$150,000)

The Contractor and any Subcontractor agrees: 1) It will not use any violating facilities; 2) It will report the use of facilities placed on or likely to be placed on the U.S. EPA "List of Violating Facilities;" 3) It will report violations of use of prohibited facilities to FTA; and 4) It will comply with the inspection and other requirements of the Clean Air Act, as amended, (42 U.S.C. §§ 7401 – 7671q); and the Federal Water Pollution Control Act as amended, (33 U.S.C. §§ 1251-1387).

8.8. ENERGY CONSERVATION

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

The Contractor and any Subcontractor agrees to comply with the mandatory energy efficiency standards and policies within the applicable state energy conservation plans issued in compliance with the Energy Policy and Conservation Act, 42 U.S.C. §§ 6321 et seq and 49 C.F.R. part 622, subpart C.

8.9. FLY AMERICA REQUIREMENTS

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS TRANSPORTING PERSONS OR PROPERTY BY AIR OUTSIDE THE U.S.)

The Contractor agrees to comply with 49 U.S.C. 40118 (the "Fly America" Act) in accordance with the General Services Administration's regulations at 41 C.F.R. Part 301-10, which provide that recipients and subrecipients of Federal funds and their contractors are required to use U.S. Flag air carriers for U.S Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available. The Contractor shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately

explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.

8.10. ENVIRONMENTAL PROTECTIONS

(APPLICABLE TO ALL CONTRACTS)

8.12.1. GENERAL

Contractor agrees to comply with all applicable environmental and resource use laws, regulations, and requirements, and follow applicable guidance, now in effect or that may become effective in the future, including state and local laws, ordinances, regulations, and requirements and follow applicable guidance.

8.12.2. NATIONAL ENVIRONMENTAL POLICY ACT

An Award of federal assistance requires the full compliance with applicable environmental laws, regulations, and requirements. Accordingly, the Contractor agrees that it will: (1) Comply and facilitate compliance with federal laws, regulations, and requirements, including, but not limited to: (a) Federal transit laws, such as 49 U.S.C. § 5323(c)(2), and 23 U.S.C. § 139, (b) The National Environmental Policy Act of 1969 (NEPA), as amended, 42 U.S.C. §§ 4321 et seq., as limited by 42 U.S.C. § 5159, and CEQ's implementing regulations 40 C.F.R. part 1500 – 1508, (c) Joint FHWA and FTA regulations, "Environmental Impact and Related Procedures," 23 C.F.R. part 771 and 49 C.F.R. part 622, (d) Executive Order No. 11514, as amended, "Protection and Enhancement of Environmental Quality," March 5, 1970, 42 U.S.C. § 4321 note, and (e) Other federal environmental protection laws, regulations, and requirements applicable to the Recipient or the Award, the accompanying Underlying Agreement, and any Amendments thereto. (2) Follow the federal guidance identified herein to the extent that the guidance is consistent with applicable authorizing legislation: (a) Joint FHWA and FTA final guidance, "Interim Guidance on MAP-21 Section 1319, Accelerated Decision making in Environmental Reviews," January 14, 2013, (b) Joint FHWA and FTA final guidance, "SAFETEA-LU Environmental Review Process (Pub. L. 109-59)," 71 Fed. Reg. 66576, November 15, 2006, and (c) Other federal environmental guidance applicable to the Recipient or the Award, the accompanying Underlying Agreement, and any Amendments thereto.

8.12.3. ENVIRONMENTAL JUSTICE

Contractor agrees to promote environmental justice by following: (1) Executive Order No. 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," February 11, 1994, 42 U.S.C. § 4321 note, as well as facilitating compliance with that Executive Order, (2) U.S. DOT Order 5610.2, "Department of Transportation Actions To Address Environmental Justice in Minority Populations and Low-Income Populations," 62 Fed. Reg. 18377, April 15, 1997, and (3) The most recent edition of FTA Circular 4703.1, "Environmental Justice Policy Guidance for Federal Transit Administration Recipients," August 15, 2012, to the extent consistent with applicable federal laws, regulations, requirements, and guidance.

8.12.4. OTHER ENVIRONMENTAL FEDERAL LAWS

Contractor agrees that it will comply or facilitate compliance with all applicable federal laws, regulations, and requirements, and will follow applicable guidance, including, but not limited to, the Clean Air Act, Clean Water Act, Wild and Scenic Rivers Act of 1968, Coastal Zone Management Act of 1972, the Endangered Species Act of 1973, Magnuson Stevens Fishery Conservation and Management Act, Resource Conservation and Recovery Act, Comprehensive Environmental Response, Compensation, and Liability Act, Executive Order No. 11990 relating to "Protection of Wetlands," and Executive Order Nos. 11988 and 13690 relating to "Floodplain Management."

8.12.5. USE OF CERTAIN PUBLIC LANDS

Contractor agrees it will comply with U.S. DOT laws, specifically 49 U.S.C. § 303 (often referred to as "section 4(f)"), and joint FHWA and FTA regulations, "Parks, Recreation Areas, Wildlife and Waterfowl Refuges, and Historic Sites," 23 C.F.R. part 774, and referenced in 49 C.F.R. part 622.

8.12.6. HISTORIC PRESERVATION

The Contractor agrees that it will: (1) Comply with U.S. DOT laws, including 49 U.S.C. § 303 (often referred to as "section 4(f)"), which requires certain findings be made before an Award may be undertaken if it involves the use of any land from a historic site that is on or eligible for inclusion on the National Register of Historic Places. (2) Encourage compliance with the federal historic and archaeological preservation requirements of section 106 of the National Historic Preservation Act, as amended, 54 U.S.C. § 306108. (3) Comply with the Archeological and Historic Preservation Act of 1974, as amended, 54 U.S.C. § 312501 et seq. (4) Comply with U.S. Advisory Council on Historic Preservation regulations, "Protection of Historic Properties," 36 C.F.R. part 800. (5) Comply with federal requirements and follow federal guidance to avoid or mitigate adverse effects on historic properties.

8.12.7. INDIAN SACRED SITES

The Contractor agrees that it will facilitate compliance with federal efforts to promote the preservation of places and objects of religious importance to American Indians, Eskimos, Aleuts, and Native Hawaiians, and facilitate compliance with the American Indian Religious Freedom Act, 42 U.S.C. § 1996, and Executive Order No. 13007, "Indian Sacred Sites," May 24, 1996, 42 U.S.C. § 3161 note.

8.11. ADA ACCESS

(APPLICABLE TO ALL CONTRACTS)

The Contractor shall comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA), 42 USC Section 12101 et seq; Section 504 of the Rehabilitation Act of 1973, as amended, 29 USC Section 794; 49 USC Section 5301(d)., which prohibit discrimination on the basis of handicaps, with the Americans with Disabilities Act of 1990 (ADA), as amended, 42 U.S.C. §§ 12101 et seq., which requires that accessible facilities and services be made available to persons with disabilities, including any subsequent amendments to that Act, and with the Architectural Barriers Act of 1968, as amended, 42 U.S.C. §§ 4151 et seq., which requires that

buildings and public accommodations be accessible to persons with disabilities, including any subsequent amendments to that Act.

8.12. CIVIL RIGHTS

(APPLICABLE TO ALL CONTRACTS)

8.14.1. SUBCONTRACT

The Contractor shall include these requirements in each subcontract entered into as part thereof.

8.14.2. NONDISCRIMINATION

In accordance with Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, gender identity, sexual orientation, disability, or age. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

8.14.3. RACE, COLOR, RELIGION, NATIONAL ORIGIN, SEX

In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e et seq., and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. chapter 60, and Executive Order No. 11246, "Equal Employment Opportunity in Federal Employment," September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it, referenced in 42 U.S.C. § 2000e note. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, or sex (including sexual orientation and gender identity). Such action shall include, but not be limited to, the following: employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

8.14.4. AGE

In accordance with the Age Discrimination in Employment Act, 29 U.S.C. §§ 621- 634, U.S. Equal Employment Opportunity Commission (U.S. EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 et seq., U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. part 90, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

8.14.5. DISABILITIES

In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. § 12101 et seq., the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § A-27 4151 et seq., and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against individuals on the basis of disability. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

8.13. VETERANS EMPLOYMENT

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

Recipients and subrecipients of Federal financial assistance under this chapter shall ensure that contractors working on a capital project funded using such assistance give a hiring preference, to the extent practicable, to veterans (as defined in section 2108 of title 5) who have the requisite skills and abilities to perform the construction work required under the contract. This subsection shall not be understood, construed or enforced in any manner that would require an employer to give preference to any veteran over any equally qualified applicant who is a member of any racial or ethnic minority, female, an individual with a disability, or former employee.

8.14. EXCLUSIONARY OR DISCRIMINATORY SPECIFICATIONS

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

Apart from inconsistent requirements imposed by federal statute or regulations, MTS shall comply with the requirements of 49 U.S.C. § 5323 (h)(2) by refraining from using any federal assistance awarded by FTA to support procurements using exclusionary or discriminatory specifications.

8.15. CONTRACTOR ASSURANCE

(APPLICABLE TO ALL CONTRACTS)

The Contractor and Subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as MTS deems appropriate, which may include, but is not limited to: (1) Withholding monthly progress payments; (2) Assessing sanctions; (3) Liquidated damages; and/or (4) Disqualifying the contractor from future bidding as non-responsible. Each subcontract the Contractor signs with a Subcontractor must include the assurance in this paragraph.

8.16. CARGO PREFERENCE

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS INVOLVING EQUIPMENT, MATERIALS, OR COMMODITIES WHICH MAY BE TRANSPORTED BY OCEAN VESSELS)

- A. 46 U.S.C. 55305 and 46 C.F.R. Part 381 which imposes U.S. cargo preference requirements on the shipment of foreign made goods shall apply to this procurement. The Contractor shall utilize privately owned United States-flagged commercial vessels to ship at least 50 percent of the gross tonnage (competed separately for dry bulk carriers, dry cargo liners, and tankers) involved,

whenever shipping any equipment, materials, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flagged commercial vessels.

- B. The Contractor shall furnish within 20 days following the date of loading for shipments originating within the United States, or within 30 working days following the date of loading for shipments originating outside United States, a legible copy of a rated, "onboard" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (A) above to MTS (through the prime Contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, 400 Seventh Street, S.W., Washington, D.C. 20590, marked with appropriate identification of the project.
- C. The Contractor shall insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract when the subcontract may involve the transport of equipment, material or commodities by ocean vessel.

8.17. SAFE OPERATION OF MOTOR VEHICLES

(APPLICABLE TO ALL CONTRACTS)

8.20.1. SEAT BELT USE

The Contractor is encouraged to adopt and promote on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned vehicles, company- rented vehicles, or personally operated vehicles. The terms "company-owned" and "company-leased" refer to vehicles owned or leased either by the Contractor or MTS.

8.20.2. DISTRACTED DRIVING

The Contractor agrees to adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while using an electronic device supplied by an employer, and driving a vehicle the driver owns or rents, a vehicle Contractor owns, leases, or rents, or a privately-owned vehicle when on official business in connection with the work performed under this Contract. The Contractor agrees to conduct workplace safety initiatives in a manner commensurate with its size, such as establishing new rules and programs to prohibit text messaging while driving, re-evaluating the existing programs to prohibit text messaging while driving, and providing education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

8.18. DOMESTIC PREFERENCES FOR PROCUREMENTS

(APPLICABLE TO ALL CONTRACTS AND SUBCONTRACTS)

As appropriate and to the extent consistent with law, the Contractor should, to the greatest extent practicable under a Federal award, a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum;

plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

8.19. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

(APPLICABLE TO ALL CONTRACTS)

In accordance with 2 CFR part 200.216, Contractor and its subcontractors are prohibited from expending funds under this Contract to: procure or obtain; extend or renew a contract to procure or obtain; or enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system. As described in Public Law 115-232, section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities). This includes: for the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities); telecommunications or video surveillance services provided by such entities or using such equipment; and telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

8.20. [NOT APPLICABLE] CONTRACT WORK HOURS AND SAFETY STANDARDS FOR AWARDS

8.21. RECYCLED PRODUCTS

(APPLICABLE TO OPERATIONS, CONSTRUCTION AND GOODS CONTRACTS AND SUBCONTRACTS INVOLVING ITEMS DESIGNATED BY THE EPA, WHERE THE PURCHASE PRICE OF THE ITEM EXCEEDS \$10,000 OR THE VALUE OF THE QUANTITY ACQUIRED DURING THE PRECEDING FISCAL YEAR EXCEEDED \$10,000)

The Contractor and any Subcontractor agrees to provide a preference for those products and services that conserve natural resources, protect the environment, and are energy efficient by complying with and facilitating compliance with Section 6002 of the State Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, 42 U.S.C. § 6962, and U.S. Environmental Protection Agency (U.S. EPA), "Comprehensive Procurement Guideline for Products Containing Recovered Materials," 40 C.F.R. part 247. The requirements of Section 6002 include procuring only items designated in guidelines of the U.S. EPA at 40 C.F.R. part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

8.22. [NOT APPLICABLE] TRANSIT EMPLOYEE PROTECTIVE ARRANGEMENT

8.23. [NOT APPLICABLE] SCHOOL BUS OPERATIONS

8.24. [NOT APPLICABLE] MOTOR CARRIER SAFETY

8.25. [NOT APPLICABLE] DRUG AND ALCOHOL TESTING REQUIREMENTS

8.26. [NOT APPLICABLE] PRIVACY ACT REQUIREMENTS

8.27. [NOT APPLICABLE] CHARTER SERVICE

8.28. [NOT APPLICABLE] BUY AMERICA

(APPLICABLE TO PURCHASE OF MORE THAN \$150,000 OF IRON, STEEL, MANUFACTURED GOODS, ROLLING STOCK, OR CONSTRUCTION MATERIALS)

The Contractor's attention is directed to the "Buy America" requirements set forth in Section 165 of the federal Surface Transportation Act of 1982, Section 70914 of the Infrastructure Investment Jobs Act, Pub. L. No. 117-58, which includes the Build America, Buy America Act (Section 70914 of the Infrastructure Investment Jobs Act), and the FTA regulations implementing Section 165 (49 C.F.R. Part 661). Information on "Buy America" requirements is available for review upon request. Contractor agrees to comply with 49 U.S.C. 5323(j), as amended by the FAST Act, FTA regulations 49 C.F.R. Part 661, and Section 70914 of the Infrastructure Investment Jobs Act, which provide that Federal funds may not be obligated unless steel, iron, manufactured products, and construction materials used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. See 49 C.F.R. 661.7 and Section 70914 of the Infrastructure Investment Jobs Act regarding general waivers. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11. Rolling stock must be assembled in the United States and have a 70 percent domestic content. Contractor shall submit to MTS with its Bid/Proposal the appropriate Buy America certification included as part of the Bid/Proposal Documents and Forms, except those subject to a general waiver. MTS will reject as nonresponsive Bids/Proposals or offers that are not accompanied by a completed Buy America certification. This requirement does not apply to lower tier subcontractors

8.29. [NOT APPLICABLE] AIR POLLUTION AND FUEL ECONOMY

8.30. [NOT APPLICABLE] BUS TESTING

8.31. [NOT APPLICABLE] PRE-AWARD AND POST-DELIVERY AUDIT REQUIREMENTS

EXHIBIT D
FORMS

DRAFT

Company Information:

The Official, Legal Name of Proposing Firm:

Doing Business As:

Legal Structure (Corp./Partner/Proprietor):

Company Mailing Address:

Johnny B. Contreras

Johnny Bear Art

Sole Proprietor

27789 Oos Road

Street

Valley Center CA 92082

City

State

Zip

Person Authorized to sign:

Point of Contact:

Title:

E-Mail Address:

Phone Number:

Johnny B. Contreras

Sculptor

Johnny@johnnybearart.com

619. 488. 0000

Accounts Receivable

Point of Contact:

Title:

E-Mail Address:

Phone Number:

Johnny B. Contreras

Sculptor

johnny@johnnybearart.com

619. 488. 0000

List Subcontractor participants below. If 100% of item is not to be performed or furnished by subcontractor, describe exact portion of item to be performed or furnished by subcontractor. Item 10, 05/15/25
successful bidder must execute and return this form even if no subcontractor participation will be reported.

Subcontractor 1 NIA

Company Name: Johnny B. Contreras

Contractor License or Certificate Number: N/A

DBE, PDBE, DVBE LGBT, MBE, SB, WBE: _____

% of Work: 100 %

Department of Industrial Relations (DIR) Number: _____

Point of Contact: Johnny B. Contreras

Email: johnny@johnnybearart.com

Phone Number: 619.488.0000

Address: 27789 Oos Rd.
Street

Valley Center CA 92082
City State Zip

Description of Work:

Subcontractor

N/A

Att. B, Item 10, 05/15/25

Company Name:

Contractor License or Certificate Number

DBE, PDBE, DVBE LGBT, MBE, SB,
WBE:

% of Work:

Department of Industrial Relations (DIR)
Number:

Point of Contact

Email:

Phone Number:

Address:

Street

City

State

Zip

Description of Work:

This information will be maintained in MTS's proposer list. The purpose for maintaining a proposer list is to derive data on the relative availability of DBEs in the local market. MTS may use this data in the future to help set MTS's overall DBE participation goals. Att B, Item 10, 05/15/25

INSTRUCTIONS: Each prime contractor and each subcontractor bidding is **required** to complete this form as part of their bid/proposal.

1. What is your company's name?
2. What is your company's address?
3. What type of work does your company perform ?
(list NAICS Codes if known)

Is your company a certified DBE PDBE, WBE, DVBE, SB or LGBT? If yes, please check the applicable box and state the corresponding certification number.

NIA

- | | |
|-------------------------------|-------------------------------|
| <input type="checkbox"/> DBE | <input type="checkbox"/> DVBE |
| <input type="checkbox"/> MBE | <input type="checkbox"/> SB |
| <input type="checkbox"/> WBE | <input type="checkbox"/> LGBT |
| <input type="checkbox"/> PDBE | |

5. How many years has your company been in business?
6. What are the annual gross receipts of your company
(please check the applicable bracket)?

- 25 plus years
- ☒ Less than \$1,000,000
- ☐ \$1,000,001 – \$15,000,000
- ☐ \$15,000,001 - \$26,290,000*
- ☐ \$26,290,001– \$50,000,000
- ☐ \$50,000,001 - \$100,000,000
- ☐ Greater than \$100,000,000

*The DOT annually decides the amount of average annual gross receipts a firm must have to be eligible to become a DBE. Currently, if your company in the previous 3 fiscal years has had average annual gross receipts below \$26,290,000, your company may be eligible for DBE Certification. To learn more about DBE certification, visit <https://dot.ca.gov/programs/civil-rights/dbe-certification-information> *

ACKNOWLEDGED AND AGREED

SUBCONTRACTOR

(Copy this form if needed for additional subcontractors)

Print Name: NIA

Title: _____

Signature: _____

Date: _____

PRIME CONTRACTOR

Print Name: Johnny B. Contreras

Title: Sculptor

Signature: Johnny B. Contreras

Date: 11/18/24

INELIGIBLE AND VOLUNTARY EXCLUSIONS LOWER THAN TIER
COVERED TRANSACTIONS

Att.B, Item 10, 05/15/25

CONTRACTOR AND SUBCONTRACTOR'S STATEMENT OF ELIGIBILITY

(Provide one completed Form for the Prime Contractor and any Subcontractors)

MTS may not permit a contractor or subcontractor to bid on, be awarded, or perform work on a public works project if the contractor or subcontractor is ineligible to bid on, be awarded or perform work on a public works project pursuant to California Labor Code sections 1777.1 or 1777.7.

In addition, MTS may not award any federally funded contract over \$25,000 to a contractor or subcontractor that is excluded or disqualified pursuant to 2 CFR Part 180 Subpart C.

The prime/subcontractor certifies or affirms the truthfulness and accuracy of the contents of the statements submitted on or with this certification.

QUESTIONNAIRE

Has the Contractor, or any officer, principal, affiliates or employee of the Contractor ever been debarred, suspended, proposed for debarment, declared ineligible or otherwise prevented from bidding on, or completing a federal, state, or local government project?

☐ Yes

☒ No

If the answer is yes, or where the prime/subcontractor is unable to certify any of the statements in the above certifications, such prime/subcontractor shall attach an explanation (i.e. date, background, resolution) with this form.

Note: Failure to provide this form at the time of Bid/Proposal will not result in a finding of a non-responsive bid/proposal. Submittal of this form for The Prime Contractor and all Subcontractors is required for a Proposer to be deemed "Responsible." MTS encourages Proposers to complete and submit all forms at the time of bid/proposal.

SUBCONTRACTOR NIA

(Copy this form if needed for additional subcontractors)

Business Name: _____
License No. _____
(if applicable): _____
DUNS No.: _____

PRIME CONTRACTOR

Business Name: Johnny Bear Art
License No. _____
(if applicable): NIA
DUNS No.: _____

ACKNOWLEDGED AND AGREED

Print Name: Johnny B. Contreras
Title: Sculptor
Signature: [Signature]
Date: 11/18/24

Print Name: _____
Title: _____
Signature: _____
Date: _____

Metropolitan Transit System (MTS) enforces an Equal Opportunity (EEO) program established under MTS policies and procedures No. 25. This program prohibits discrimination in employment and requires MTS Contractors to be equal opportunity employers. You may submit a copy of the Employer Information Report, EEO-1, in lieu of the **Equal Opportunity Program Workforce Report Continued Form**. The undersigned hereby certifies that the foregoing data contained herein is true and correct.

COMPLETE ALL SECTIONS OF THIS FORM:

1. The Official, Legal Name of Proposing Firm: Johanny B. Contreras
2. Doing Business As: Johnny Bear Art
3. Legal Structure (Corp./Partner/Proprietor): _____
4. Address of Establishment in San Diego County:

Street
Valley Center CA 92082
City State Zip

Street

City State Zip
5. If there is no office in San Diego County, or if there are less than 15 employees in that office, include an address for your regional office that will oversee the work under MTS' contract: _____

City State Zip

Employment Data - Include the employees located in San Diego County only, unless your firm employs fewer than fifteen (15) people locally. In the event, you should list the workforce of the regional office that will oversee the work under MTS' contract. Report all permanent full-time and part-time employees including apprentices and on-the-job trainees. Blank spaces will be considered as zeros

ACKNOWLEDGED AND AGREED

6. Name, Address, and Phone Number of Person to Contact Regarding this Report:

Name of Signee: Johanny B. Contreras
Title: Sculptor
Phone Number: _____
Address: 27789 Oos Rd.
Street
Valley Center, CA 92082
City State Zip

Name of Signee: Johanny B. Contreras
Authorized Signature: [Signature]
Date: 11/18/24

African American: (NOT OF HISPANIC ORIGIN): All persons having origins in any of the black racial groups of Africa.

Hispanic: All persons of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race.

Asian or Pacific Islander: Persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands. This area, includes, China, Japan, Korea, the Philippine Islands, and Samoa.

Native American: All persons having origins in any of the original peoples of North America, and who maintain cultural identification through tribal affiliation or community recognition

Other: Caucasian and others not falling into one of the designated categories.

DISABLED DEFINITION

Any person who 1) has a physical or mental condition which limits one or more of such person's major life activities, 2) has a history of such a condition, or 3) is regarded as having such a condition. For purposes of this definition, "major life activity" means any mental or physical function or activity, which if impaired, creates a substantial barrier to employment.

OCCUPATIONAL CATEGORY LIST

Executive/Managerial

Executive, Management Related

Engineers/Architects/Surveyors

Professionals (N.E.C.)*

Mathematical and Computer Scientists

Natural Scientists

Health Diagnosing

Health Assessment and Treating

Teachers, Postsecondary

Teachers, except Postsecondary

Counselors, Educational and Vocational

Librarians, Archivists, Curators

Social Scientists and Urban Planners

Social, Recreation and Religious Workers

Lawyers and Judges

Writers, Artists Entertainers & Athletes

Technicians

Health Technologists and Technicians

Engineering and Related Technologists and Technicians

Science Technicians

Technicians, Except Health, Engineering, and Service

Sales

Supervisors and Proprietors

Sales Representatives, Finance, and Business

Services

Sales Representatives, Commodities except Retail

Sales Workers, Retail, and Personal Services

Other Sales Related

Administrative Support

Supervisors of Administrative Support

Computer Equipment Operators

Secretaries, Stenographers, Typists

Information Clerks

Records Processing, Except Financial

Financial Records Processing

Duplicating and Other Office Machine Operators

Communications Equipment Operators

Mail and Message Distributing

Material Recording and Distributing Clerks

Adjusters and Investigators

Other Office/Clerical

*N.E.C.: Not Elsewhere Classified

Protective Services

Supervisors of Protective Services

Firefighting and Fire Prevention

Police and Detectives

Guards & Other Protective Services

Services (N.E.C.)*

Private Households

Food Preparation and Services

Health Services

Cleaning and Building Services

Personal Services

Craft Workers (Skilled)

Supervisors of Mechanics and Repairers

Vehicle and Mobile Equipment Mechanics and Repairers

Heating, Air Conditioning, Refrigeration, Mechanics

Other Mechanics and Repairers

Supervisors of Construction Trades

Construction Trades, Except Supervisors

Extractive Occupations

Machine Operators, Assemblers & Inspectors

Metalworking and Plastic Working Machine Operator

Metal and Plastic Processing Machine Operators

Woodworking Machine Operators

Printing Machine operators

Textile, Apparel, and furnishing Machine Operators

Machine Operators, Assorted Materials

Fabricators, Assembler and Hand Working Occupations

Production Inspector, Tester, Sampler, Weigher

Transportation and Material Moving

Motor Vehicle Operators

Rail Transportation Occupations

Water Transportation Occupations

Material Moving Equipment Operators

Laborers (Unskilled)

Handlers

Equipment Cleaners

Helpers & Laborers

I/We hereby represent, acknowledge, and agree as follows:

Att.B, Item 10, 05/15/25

1. MTS is a California public agency established by California Public Utilities Code, Section 120000. et seq. , and is subject to the California PRA (Government Code sec. 6250 et seq.) which provides generally that all records relating to a public agency's business are open to public inspection unless exempted from disclosure by law.
2. The proposal I/we have submitted to MTS is open to public inspection under PRA unless it is exempted from disclosure by law.
3. To the extent the proposal includes materials that I/we believe are exempt from disclosure under PRA, I/we understand that I/we must provide a letter identifying the materials that I/we believe are exempt from disclosure and explaining the basis for exemption.
4. Any materials not identified as exempt from disclosure are open to public inspection, and I/we waive any right to subsequently claim exemption from disclosure for such materials.
5. MTS at all times retains the right to make the final determination regarding what, if any, portion of a proposal is subject to disclosure under PRA.
6. Use of headers/footers bearing designations such as "confidential", "proprietary", or "trade secret" on all or nearly all of a proposal which would prohibit or limit public inspection is not acceptable and may deem the proposal non-responsive and may be rejected; labeling a page as such does not prohibit MTS from disclosing the page in response to a PRA response or in the ordinary cause of business if MTS concludes it is obligated to so by applicable law.
7. To defend and indemnify MTS in any action on a PRA request for any of the contents of a Proposal marked TRADE SECRET, CONFIDENTIAL or PROPRIETARY.
8. Marking a document as "trade secret", "confidential" or "proprietary" without the express written permission of MTS does not exempt a document from disclosure to third parties under state or federal law, or in the normal course of MTS's business operations. MTS has no obligation to get a respondent's permission before producing such documents.
9. The bid I/we have submitted (check one of the following)
materials that we believe are exempt from disclosure under PRA.

INCLUDES ☒

DOES NOT INCLUDE ☐

ACKNOWLEDGED AND AGREED

Company Name: _____

Title: _____

Signature: _____

Date: _____

Johnny Bear Art
Sculptor

11/18/24

The undersigned declares:

I am the owner of Johnny Bear Art, the party making the foregoing offer.

The offer is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The offer is genuine and not collusive or sham. The proposer has not directly or indirectly induced or solicited any other proposer to put in a false or sham offer. The proposer has not directly or indirectly colluded, conspired, connived, or agreed with any proposer or anyone else to put in a sham offer, or to refrain from submitting an offer. The proposer has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the offer price of the proposer or any other proposer, or to fix any overhead, profit, or cost element of the offer price, or of that of any other proposer. All statements contained in the offer are true. The proposer has not, directly or indirectly, submitted his or her offer price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, offer depository, or to any member or agent thereof, to effectuate a collusive or sham offer, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of the proposer that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the proposer.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on 18 (date), at Valley Center (city), CA (state).

ACKNOWLEDGED AND AGREED

Name of Contractor:

Johnny B. Contreras

Signature:

66

Johnny B. Contreras

Date:

11/18/24

As required by California Public Contract Code Section 2204, the Contractor certifies subject to penalty for perjury that the option checked below relating to the Contractor's status in regard to the Iran Contracting Act of 2010 (Public Contract Code Section 2200 et seq.) is true and correct:

1. The Contractor is not:
 - a. identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203; or
 - b. a financial institution that extends, for 45 days or more, credit in the amount of \$20,000,000 or more to any other person or entity identified on the current list of persons and entities engaging in investment activities in Iran prepared by the California Department of General Services in accordance with subdivision (b) of Public Contract Code Section 2203, if that person or entity uses or will use the credit to provide goods or services in the energy sector in Iran. ☒
2. MTS has exempted the Contractor from the requirements of the Iran Contracting Act of 2010 after making a public finding that, absent the exemption, MTS will be unable to obtain the goods and/or services to be provided pursuant to the Contract. ☒
3. The amount of the Contract payable to the Contractor for the Project does not exceed \$1,000,000. ☒

Note: In accordance with Public Contract Code Section 2205, false certification of this form shall be reported to the California Attorney General and may result in civil penalties equal to the greater of \$250,000 or twice the Contract amount, termination of the Contract and/or ineligibility to bid on contracts for three years.

ACKNOWLEDGED AND AGREED

Company Name: Johnny Bear Art
Title: Sculptor
Signature: [Signature]
Date: 11/18/24

FOR CONTRACTORS SAFETY AND HEALTH REQUIREMENTS

(SAF 016-03)

Att.B, Item 10, 05/15/25

January 2003

SAF 016-03

Purpose: To establish environmental, safety and health requirements for the San Diego Metropolitan Transit System (MTS) Contractors.

Background: MTS is committed in providing and maintaining a safe work place, safe plant and equipment, and a safe and competent workforce as required by legislation and best industrial practice for our employees, customers, visitors, and general public.

To support this commitment, we require our Contractors to provide adequate leadership and safety training for their employees and require the same of their sub-Contractors.

Objectives: This SOP requires all MTS Contractors to:

- Comply with the environmental, safety and health requirements of the contract as per FTA, OSHA, Cal OSHA, and San Diego Metropolitan Transit System (MTS).
- Assign a competent person the responsibility for the implementation of the safety regulations, personal protective equipment usage, and compliance with hazardous materials/environmental policies, and drug and alcohol program.
- Ensure that all Contractor employees and sub-Contractors are trained and educated in safety and support on-site Contractors on safe work and MTS safety programs.
- Sign the MTS Contractual Agreement with Outside Agencies (Safety Rules).

MTS Representatives are required to:

- Pro-actively monitor the Contractors' workplace to identify all occupational health and safety hazards – Departmental/Safety representative.
- Safety and contract requirements compliance – Audit/Inspection conducted and documented (schedule and spot check) by Quality Assurance Department.

NOTE:

Copies of both MTS Illness and Injury Prevention Program (IIPP) and the MTS Maintenance Department Code of Safe Practices are available in the Safety Department's office. MTS handles the Engineering/Construction site safety plans.

Work on MTS Premises

A. Safety Rules

These safety rules apply specifically to Contractors, Contractor's employees, or sub-Contractors working on Metropolitan Transit System (MTS) property. Any loss or damage, including death, resulting from Contractors, Contractor's employees, or subcontractor's negligence shall hold MTS management and employees harmless from any such loss. No work shall be performed on MTS property without approval and proper permits, when required. Requirements:

1. Comply with Cal OSHA, state, local and MTS' safety, and environmental policies.
2. Observe and follow all posted facilities safety regulations.
3. Use the proper Personal Protective Equipment required for the job.
4. No illegal drugs or alcohol will be consumed on site or off the premises while working for MTS.

B. Use of Tools and Equipment (when required)

1. Required Tools and Equipment must be in good condition, safe for use and calibrated (if required).
2. Follow safe engineering work practices/procedures.
3. Wear the required personal protective equipment when using tools.

C. Machinery and Vehicles (when required)

1. Do not attempt to operate MTS machinery or equipment without special permission.
2. Only licensed operators may operate Forklift Trucks and other equipment on MTS occupied spaces.

D. Contractor Requirements (when required)

1. Valid Contractor's license number.

ACKNOWLEDGED AND AGREED

Company Name:

Johnny Bear Art

Print Name:

Johnny B. Contreras

Title:

Sculptor

Signature: ⁶⁹

Johnny B. Contreras
11/18/24

Date:

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors and subcontractors that wish to submit a proposal, or enter into a contract to perform public work must be registered with the Department of Industrial Relations. See <http://www.dir.ca.gov/Public-Works/PublicWorks.html> for additional information. Att.B, Item 10, 05/15/25

No proposal will be accepted nor any contract entered into without proof of the contractor's and subcontractors' current registration with the Department of Industrial Relations to perform public work.

Proposer hereby certifies that it is aware of the registration requirements set forth in Labor Code sections 1725.5 and 1771.1 and is currently registered as a contractor with the Department of Industrial Relations.

Bidder further acknowledges:

- Proposer shall maintain a current DIR registration for the duration of the project.
- Proposer shall include the requirements of Labor Code sections 1725.5 and 1771.1 in its contract with subcontractors and ensure that all subcontractors are registered at the time of bid opening and maintain registration status for the duration of the project.
- Failure to submit this form or comply with any of the above requirements may result in a finding that the proposal is non-responsive.

PRIME CONTRACTOR

Business Name: Johnny Bear Art

Registration No.
(if applicable): _____

DUNS No.: _____

Company Name: Johnny Bear Art

Print Name: Johnny B. Contreras

Title: Sculptor

ALTERNATIVE A

Att.B, Item 10, 05/15/25

CERTIFICATE OF COMPLIANCE WITH BUY AMERICA REQUIREMENTS

The Proposer/Bidder hereby certifies that it will comply with the requirements of Section 49 U.S.C. 5323 (j)(1), the applicable regulations in 49 C.F.R. 661, and Section 70914 of the Infrastructure Investment Jobs Act.

ACKNOWLEDGED AND AGREED

Print Name:

Johnny B. Contreras

Signature:

[Signature]

Date:

11/18/24

CERTIFICATE FOR NON-COMPLIANCE WITH BUY AMERICA REQUIREMENTS

ALTERNATIVE B

The Proposer/Bidder hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323 (j)(1) or Section 70914 of the Infrastructure Investment Jobs Act but it may qualify for an exception to the requirement pursuant to Section 49 U.S.C. 5323 (j)(2), and the applicable regulations in 49 C.F.R. 661.7 or Section 70914 of the Infrastructure Investment Jobs Act.

ACKNOWLEDGED AND AGREED

Print Name:

Signature:

Date:

Complete the form on the next page if you select Alternative B.

NOTE: COMPLETE EITHER ALTERNATIVE A OR B - DO NOT COMPLETE BOTH.

ADDITIONAL INFORMATION FOR BUY AMERICA CERTIFICATE - ALTERNATIVE B Att.

The Proposer/Bidder hereby certifies that it cannot comply with the requirements of Section 49 U.S.C. 5323 (j)(1) or Section 70914 of the Infrastructure Investment Jobs Act, but it may qualify for an exception to the requirement pursuant to Section 49 U.S.C. 5323 (j)(2), and the applicable regulations in 49 C.F.R. 661.7 or Section 70914 of the Infrastructure Investment Jobs Act.

[illegible]

Notes: (1) For "Type of Waiver Requested," See Buy America, Section 7-5.8. List 1, 2, 3 or 4.
(2) Proposed

(2) Proposer must complete either Alternative A or B, Buy America Certificate.

The CONTRACTOR hereby certifies that:

Att.B, Item 10, 05/15/25

1. No federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with the awarding of any federal contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any federal contract, grant, loan, or cooperative agreement.
2. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.
3. If any funds other than federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions. Check one of the following Boxes.

Does NOT Apply ☒

Applies ☐

This certification is a material representation of fact upon which reliance is placed when this transaction is made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, U. S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Executed this 18 day of November, 2024

ACKNOWLEDGED AND AGREED

Name of Contractor:

Johnny B. Contreras

Signature:

Johnny B. Contreras

Date:

11/18/24

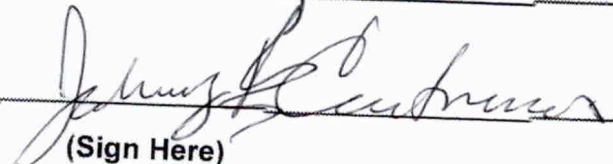
ADDENDUM	CHECK (✓) RECEIVED	DATE RECEIVED	ADDENDUM	CHECK (✓) RECEIVED	DATE RECEIVED
ADDENDUM NO. 1	✓		ADDENDUM NO. 4	✓	
ADDENDUM NO. 2	✓		ADDENDUM NO. 5	✓	
ADDENDUM NO. 3	✓		ADDENDUM NO. 6	✓	

N/A
 FIRM NAME: Johnny Bear Art
 ADDRESS: 27784 1000 Road
Valley Center, CA 92082
 TELEPHONE: 619. 488. 0000 FAX: _____

PLEASE PRINT NAME OF INDIVIDUAL RESPONSIBLE FOR THE PREPARATION OF THIS PROPOSAL:

DATE: 11/18/24

PRINT NAME: Johnny B. Contreras

SIGNATURE OF PROPOSER: 
 (Sign Here)

TITLE: Sculptor

EXHIBIT F
CLEAN CALIFORNIA THIRD PARTY CONTRACT REQUIREMENTS

DRAFT

As a Clean California Local Grant Program (CALTRANS) grantee, the San Diego Metropolitan Transit System (MTS), is required to inform the Contractor and any Subcontractor of the following information. In the event there are similar clauses between these CALTRANS provisions, and the terms of this Contract, including any Federal Transit Administration (FTA) clauses, Contractor and any Subcontractor shall comply with both to the extent possible. If there is a conflict between provisions that would result in the Contractor not complying with one or more provisions, contact MTS staff for further direction. 1.

1. Cost Principles:

The Contractor and its subcontractors agrees that Contract Cost Principles and Procedures, 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31, et seq., shall be used to determine the allowability of individual Project cost items. Contractor and any of its subcontractors also agrees to comply with Federal administrative procedures in accordance with 2 CFR, Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, to the extent applicable.

Contractors and its subcontractors also shall establish and maintain an accounting system and records that properly accumulate and segregate incurred Project costs and matching funds by line. Contractors and any of its subcontractors agree to comply with Generally Accepted Accounting Principles (GAAP), to enable the determination of incurred costs at interim points of completion, and provide support for reimbursement payment vouchers or invoices.

1. Nondiscrimination

Contractors and its subcontractors shall not deny the contract's benefits to any person on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, genetic information, marital status, sex, gender, gender identity, gender expression, age, sexual orientation, or military and veteran status.

Contractors and its subcontractors shall also give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

The Contractor agrees to include the above clause in each subcontract.

2. Mandatory Organic Waste Recycling

Pursuant to Public Resources Code Sections 42649.8 et seq., if Contractor generates two (2) cubic yards or more of organic waste or commercial solid waste per week in performance of this Contract, Contractor shall arrange for organic waste or commercial waste recycling services that separate/source organic waste for organic waste recycling. Contractor shall provide MTS proof of compliance, i.e., organic waste recycling services or commercial waste recycling services that separate/source organic waste recycling.

3. Record Retention

Contractors and any of its subcontractors shall each maintain and make available for inspection all books, documents, papers, accounting records, and other evidence pertaining to the performance of this Contract, including, but not limited to, the costs of administering those various contracts. Materials shall be available at their respective offices at all reasonable times during the entire Project period and for

three (3) years from the date of final payment to MTS under this Contract. CALTRANS, the California State Auditor, or any duly authorized representative of CALTRANS or the United States Department of Transportation, shall each have access to any books, records, and documents that are pertinent to a Project for audits, examinations, excerpts, and transactions.

All accounting records and other supporting papers connected with Project performance shall be maintained for a minimum of three (3) years from the date of final payment to MTS and shall be held open to inspection, copying, and audit by representatives of CALTRANS, the California State Auditor, and auditors representing the federal government. Copies thereof will be furnished upon receipt of any request made by CALTRANS or its agents.

Contractor and any subcontractors shall permit access to all records of employment, employment advertisements, employment application forms, and other pertinent data and records to the State Fair Employment Practices and Housing Commission, or any other agency of the State of California designated by CALTRANS.

The Contractor agrees to include the above clause in each subcontract.

4. Travel Reimbursements

If applicable and if expressly authorized by MTS within the Contract, travel and per diem reimbursements of Contractor and its subcontractors, will be allowable as Project costs only after those costs are incurred and paid for.

Travel expenses and per diem rates are not to exceed the rate specified by the State of California Department of Human Resources for similar employees (i.e. non-represented employees) unless written verification is supplied that government hotel rates were not then commercially available to Contractor and its subcontractors, at the time and location required as specified in the California Department of Transportation's Travel Guide Exception Process at the following link:

<https://travelpocketguide.dot.ca.gov/>.

5. Educational Programming

If applicable, Contractor shall provide MTS a sublicensable, irrevocable, perpetual, royalty-free, unlimited, worldwide license to prepare derivative works, make, publish, display, and distribute two-dimensional reproductions and/or copies, digitally and in print, of the educational programming created or produced for this Contract, or derivatives thereof, for non-commercial purposes or any State government purposes. This includes, but is not limited to, reproductions used in brochures, media publicity, public outreach campaigns (including television and social media campaigns), education, exhibition catalogues or other similar publication. Contractor shall provide MTS any and all other intellectual property rights necessary.

To the extent any logos, including trademarks or service marks, are used on educational programming created or produced for this Contract, Contractor agrees to grant MTS and Caltrans all necessary rights to use and allow agents of CALTRANS to use the logos in connection with use of the educational programming for non-commercial purposes or State government purposes. This includes but is not limited to reproductions used in brochures, media publicity, public outreach campaigns (including television and social media campaigns), education and exhibition catalogues or other similar publication.

Contractor must place a disclaimer statement in a conspicuous manner on the educational programming created or produced for this Contract a disclaimer that states the content of the educational programming

does not reflect the official views or policies of MTS or CALTRANS. The educational programming does not constitute a standard, specification, or regulation.

6. Artwork

If applicable, Contractor, or any other copyright owner(s) of Artwork, shall grant MTS and CALTRANS a sublicensable, irrevocable, perpetual, royalty-free, unlimited, worldwide license to prepare derivative works, make, publish, display, and distribute two-dimensional reproductions and/or copies, digitally and in print, of Artwork created or produced for Project under this RGA, or derivatives thereof, for non-commercial purposes or any State government purposes. This includes, but is not limited to, reproductions used in brochures, media publicity, public outreach campaigns (including television and social media campaigns), education, and exhibition catalogues or other similar publication. Contractor shall grant MTS any and all other intellectual property rights necessary.

Contractor must place a disclaimer statement in a conspicuous manner on or in close proximity to the Artwork created or produced for this Contract a disclaimer statement that the contents of the artwork do not reflect the official views or policies of MTS or CALTRANS.

7. Government Purpose Rights for Inventions

Inventions are any idea, methodologies, design, concept, technique, invention, discovery, improvement, or development regardless of patentability made solely by Contractor and its subcontractors in performance of any work and during the term under this Contract. If applicable, Contractor and its subcontractors shall provide MTS and CALTRANS Government Purpose Rights to any inventions created as a result of the Contract. "Government Purpose Rights" are the unlimited, irrevocable, worldwide, perpetual, royalty-free, non-exclusive rights, and licenses to use, modify, reproduce, perform, release, display, create derivative works from, and disclose any said invention. "Government Purpose Rights" also include the right to release or disclose said invention(s) outside MTS and CALTRANS for any State government purpose and to authorize recipients to use, modify, reproduce, perform, release, display, create derivative works from, and disclose the invention(s) for any State government purpose. "Government Purpose Rights" do not include any rights to use, modify, reproduce, perform, release, display, create derivative works from, or disclose the invention(s) for any commercial purpose.

8. Intellectual Property

If applicable, Contractor and any subcontractors shall grant the rights necessary to MTS and CALTRANS to allow for use of the intellectual property in a fashion similar to other rights for non-commercial uses and State government purposes.

If additional uses are reasonably determined to be needed for public outreach purposes, Contractor shall grant MTS and CALTRANS obtain rights and grant its agents said additional rights for use of the "Before" and "After" Project photos, Artwork created or produced for this Contract, and educational programming created or produced for this Contract. The grant will be an irrevocable, non-exclusive, perpetual, royalty-free, sublicensable, unlimited, worldwide license. As requested by MTS, all reproductions and/or copies of "Before" or "After" Project photographs, educational programming, and Artwork shall contain a credit to the Artist/ Copyright owner(s) and a copyright notice in substantially the following form: © [Artist/Copyright owner's name, date of publication].

In performing services under this Contract, Contractor and its Subcontractor shall agree to avoid designing or developing any items that infringe one (1) or more patents or other intellectual property rights

of any third party. If Contractor and its Subcontractors becomes aware of any such possible infringement in the course of performing any work under this RGA, immediate notification to MTS in writing is required.

DRAFT



Agenda Item No. 11

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Weed Abatement Services – Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWL429.0-25 (in substantially the same format as Attachment A, B, and C), with Baja Wildlife Control for up to a five-year (5) period for weed abatement service of all MTS rail right-of-way (ROW) in the amount of \$378,300.00.

Budget Impact

The total cost of this contract is estimated to be \$378,300.00. The project will be funded by the Track Operations Budget account 370016-536600.

DISCUSSION:

MTS is seeking a contractor to implement a comprehensive herbicide program that encompasses both pre-emergent and post-emergent applications for the right-of-way (ROW) on properties operated by San Diego Trolley, Inc. (SDTI). The primary objective of this program is to protect the ROW through effective weed management, particularly in the bare ground zones within the ballast area. This initiative aims to tackle plant species that have posed difficulties for SDTI during the mid-summer months in previous years. Targeted species include, but are not limited to, Kochia, Russian thistle, Marestalk, palm trees, flea bane, and fountain grass.

On January 10, 2025, MTS issued an Invitation for Bids (IFB) for the provision of weed control services for one (1) base year with four (4) 1-year options. A total of three (3) bids were received on February 20, 2025:

FIRM	FIRM CERTIFICATION	TOTAL 5 YEARS
<i>MTS - Independent Cost Estimate (ICE)</i>		<i>\$517,199.09</i>
Baja Wildlife Control	Small Business	\$378,300.00
DeAngelo Contracting	n/a	\$429,975.00
Quality Sprayers	Small Business	\$491,400.00



Based on the bid summary above, and in comparison with the ICE, MTS staff has determined Baja Wildlife Control's price to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. PWL429.0-25 (in substantially the same format as Attachment A, B and C), with Baja Wildlife Control for up to a five-year period for weed abatement service of all MTS ROW in the amount of \$378,300.00.

/S/ Sharon Cooney

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olsen, 619.557.4588, mark.olsen@sdmts.com

Attachments: A. Draft PWL429.0-25 Contract Cover Page
B. Scope of Work
C. Bid Form



Metropolitan Transit System

STANDARD AGREEMENT FOR MTS DOC. NO. PWL429.0-25 WEED ABATEMENT SERVICES

THIS AGREEMENT is entered into this _____ day of _____, 2025 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: Baja Wildlife Control

Address: 171 Sellsway Street

Form of Business: Corporation

San Ysidro CA 92173
City State Zip

Email: michael@bajwildlifecontrol.com

Telephone: (858) 905-2252

Authorized person to sign contracts

Michael Mooshabad
Name

President
Title

The Contractor agrees to provide services as specified in the conformed Scope of Work/Technical Specifications (Exhibit A), Contractor's Bid Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), Federal Requirements (Exhibit D), and MTS Forms (Exhibit E).

The contract term is for one (1) base year with four (4) 1-year options, exercisable at MTS's sole discretion, for a total of five (5) years. Base period shall be effective July 1, 2025 through June 30, 2026 and option years shall be effective July 1, 2026 through June 30, 2030, if exercised by MTS.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed \$75,660.00 for the base year and \$302,640.00 for the option years (if exercised), for a contract total not to exceed \$378,300.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	BAJA WILDLIFE CONTROL
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____



2. SCOPE OF WORK/TECHNICAL SPECIFICATIONS

2.1 INTRODUCTION

Contractor shall be experienced and licensed (C-27 or C-61/D-49 required) to provide weed abatement services per the minimum technical specifications/scope of work below. Contractor must also maintain a current qualified applicator's license, must have the necessary vehicles and equipment noted in the specifications during the contract term. Upon request by MTS, Contractor shall submit these to MTS for its files.

Contractor shall provide a combination pre-emergent and post-emergent roadbed and Right-of-Way (ROW) herbicide program on San Diego Trolley, Inc., (SDTI) properties. Services are to be performed in full compliance with these specifications for a five (5) year period effective 7/01/2025.

This program includes a follow-up post-emergent spray program to combat particularly troublesome species that have provided SDTI with mid-summer trouble over the last several years. These species include, but are not exclusively limited to: Kochia, Russian thistle, Mares Tail, Palm Tree, Flea Bane, and Fountain Grass.

At a minimum, annual inspections are required between Contractor and SDTI. They consist of inspection by train accompanied by an MTS Track Supervisor, and trip to any trouble locations. The trips identify what types of vegetation are in different locations. The goal of these inspections will be to maintain the value of the investment in SDTI's ROW weed abatement control, i.e., very nearly bare ground in the ballast section and on ROW.

2.2 GENERAL REQUIREMENTS

Contractor shall spray as wide as possible, from centerline of each track, for all mainline tracks and sidings. Railroad tracks consisting of multiple tracks shall have spray pattern adjusted to minimize overlap. Spray pattern will vary from fifty feet (50') from centerline of each track to one hundred fifty (150') feet from centerline of each track depending upon ROW and location. Industry tracks shall be sprayed up to the clearance point of the mainline turnout.

Contractor shall spray wide around the following: mile posts, signs, signal cases and bungalows, catenary foundations, switch stands, material piles and other trackside structures (utilize the truck boom or hose if necessary).

Yard railroad tracks, where sprayed, shall be treated with the area over the ties and the track centers between ends of ties receiving a solid spray regardless of width of track centers.

All on-track applications shall be conducted during non-revenue hours to take advantage of available track time. Track time will vary between the hours of 12:50 a.m. and 5:00 a.m., and 2:00 a.m. and 4:00 a.m., depending upon the line segment. All equipment shall have additional lights to enable safe night operation.

Note: Second application and any necessary re-treatments shall be at no additional cost to SDTI.

2.3 ROADBED HERBICIDE FORMULATION & APPLICATION

Contractor shall provide a Pest Control Advisor's (PCA) recommendations and shall make all applications as per those recommendations. Chemical program shall be designed based on the problem species, as observed during a site inspection and shall be approved by SDTI. Apply at a rate to ensure adequate wetting of vegetation – minimum thirty (30) gallons/acre. Pre-emergent spray program shall begin in early winter. The schedule may need to be adjusted according to

weather conditions. Contractor shall provide off-track treatment as directed utilizing the same mix at designated locations such as substations, parking areas, and storage lots. Post-emergent spray program shall begin early summer and shall be limited to locations needing a second application due to localized sprouting. This schedule may also be adjusted according to weather and vegetation conditions.

Contractor shall guarantee the desired result; 98% annual control following the first application; and 98% annual and perennial control following the second application through the years 2019, 2020, 2021, 2022 and 2023 growing seasons. Contractor, at their expense, shall provide as many additional applications as necessary to produce the required control. The second application shall not be utilized to remediate the out-of-face failure of the pre-emergent application. Contractor shall participate in a joint inspection prior to the second application to determine where second treatment sprouting is occurring and where failure of the first application occurred.

In the event the Contractor shall receive a "call-back," that is, a written demand by SDTI to retreat an area, the terms of "call-back" are that the Contractor must submit a written treatment schedule within five (5) calendar days, and actually arrive at the designated location to begin treatment within ten (10) calendar days. Failure to comply with such a schedule will be considered default of the contract.

In the event re-treatment is required, the Contractor shall provide sufficient personnel and equipment resources to ensure re-treatment, and it shall not interfere with the regular scheduled program treatments.

The Contractor will be required to re-treat all areas considered unsatisfactory at their cost. This could include, but not limited to, all costs associated with the railroad providing an escort, any overtime associated with the escort, or transportation employee for movement of trains in yard areas.

The primary goal of railroad weed abatement services is to treat the ROW and property in an appropriate manner to accomplish weed control with one (1) application of pre-emergence herbicide(s). A second application using systemic herbicides will be required for control of difficult to control species and untreated areas.

Contractor has submitted to MTS the following herbicides to be used for pre- and post- emergent applications: Esplanade 200 SC, Vanquish, Milestone and Rodeo. Contractor may specify different herbicide programs for specific areas. Contractor may elect to add additional formulations if desired at no expense to, and subject to approval of SDTI, for the purposes of producing the desired control. Contractor may elect to change mixes and costs as required by the State of California Department Pesticides Regulations (DPR), or as justified by annual inspections and as agreed to by SDTI.

Contractor shall make all on-track applications at night to secure maximum available track time. Off-track spray shall be performed during the day or early evening hours. At SDTI's discretion, spray applications may include weekend hours.

Start dates for roadbed applications may need to be adjusted ahead or behind according to weather conditions.

2.4 OFF-TRACK SUPPLY

Contractor shall utilize truck-mounted hose to spray around off-track buildings, substations, and other locations not reachable from the rail as directed by SDTI. Apply the roadbed pre-emergent formulation in a solid pattern.

2.5 CONTRACTOR REQUIREMENTS

Contractor shall fill out SDTI or Contractor's daily log sheet on a daily basis and shall have SDTI Representative sign sheets prior to submitting it to SDTI. A copy of the log sheet must also be left with the employee accompanying the spray operator at the end of their daily tour of duty.

SDTI shall refuse payment for any day's herbicide application not supported by a SDTI representative signed log sheet.

An SDTI representative shall accompany the herbicide applicator at all times while Contractor is on the property. The SDTI representative shall document in writing:

- Beginning and end-of-day tank readings; and
- Quantities of chemical added.

All calculations determining outlet pressure and truck speed to guarantee required application rate.

SDTI representative shall advise Contractor of areas designated as non-sprayable by wetland or environmental concerns. It shall be the Contractor's responsibility, however, to determine the safe application of all chemicals.

Contractor must not use any chemicals that could damage track ballast areas, ornamental landscaping, vegetation on adjacent property, and human and/or animal life, located along or near SDTI's ROW.

2.6 OTHER CONTRACTOR REQUIREMENTS

Contractor must hold a current qualified applicator's license and Contractor is expected to follow all governmental rules and regulations in the performance of this contract, and to process and/or maintain all of the appropriate documents required by law.

Contractor must provide SDTI with a copy of all spraying records that Contractor is required to file with governmental agencies during the life of this contract. Contractor must submit the documents to the SDTI representative within sixty (60) days of the filing date or upon request.

Contractor must furnish all material safety data sheets and any related information concerning the toxicity of the products used, for all herbicides used on SDTI's ROW, to the contract administrator at least seven (7) calendar days before the product is used under this contract.

Contractor is prohibited from using any chemical in the performance of this contract, which would contaminate soil or ground water, or present a health risk for human or animal life along the ROW.

Contractor's personnel shall adhere to all SDTI rules and regulations. Contractor will be responsible for any damage to SDTI property or adjacent property that results from Contractor's weed abatement activities under this contract.

Contractor's personnel must be trained to perform duties pursuant to California Department of Pesticide Regulations. Contractor must be registered with the San Diego County Agriculture Commissioner's office and shall submit monthly chemical usage reports to the Agriculture Commissioner as required.

Contractor shall perform herbicide application work in full compliance with U.S., State of California, Environmental Protection Agency, and other federal regulatory and State of California Department of Pesticide Regulation requirements, and any other applicable agencies having jurisdiction.

Herbicide containers must be disposed of in full compliance with EPA regulations, off SDTI property, and shall be the sole responsibility of the Contractor.

Contractor shall ensure that spraying will not be performed when wind velocity exceeds the maximum permissible by law and or there is an immediate prediction of rain. Spraying will cease immediately upon the event of rain. Hi-rail truck speed shall not exceed 15 MPH for roadbed applications and 10 MPH for broadleaf/brush applications while spraying to ensure adequate coverage.

Contractor shall perform an initial calibration of the spraying rig to ensure that application rate is as designated, and that maximum permissible legal rate is not exceeded. Contractor making a significant change in spray setup (different nozzles, etc.) shall recalibrate the rig to ensure application at the proper rate.

Contractor must consider drift, and the potential for root uptake in adjoining neighborhood properties. Great care must be taken to ensure that the application is effective on SDTI's property only.

All insurance requirements noted in the Standard Services Agreement must be furnished before work can begin.

2.7 EQUIPMENT REQUIREMENTS

After notification of award of a contract, Contractor must provide detailed description and pictures of all equipment that will be used for these services. The hi-rail vehicle shall have continuous shunting capabilities when on our main line, crossing gates, signals and other devices should active, if this requirement is not met no spraying will be approved.

Before Contractor can start providing herbicide application services, contractor must have their hi-rail vehicle and all equipment inspected and certified by MTS authorized independent inspectors. Inspection shall be required for every pre-emergent and post-emergent session at the contractor's expense.

Contractor has provided current MSDS sheets to Project Manager for review as well as a copy of the sheet(s) for MTS's records for Esplanade 200 SC, Vanquish, Milestone and Rodeo. Should the herbicides change Contractor shall submit to MTS first for review before application. MSDS sheets shall be required for every pre-emergent and post-emergent session.

2.8 SAFETY DATA SHEETS

Upon award, Contractors shall email the SDS for materials/ chemicals that will be used or stored at the construction site during the duration of the project, attention Ngan Nguyen, MTS Environmental Health and Safety Specialist at Ngan.Nguyen@sdmts.com for review or comment if needed. The Contractor shall notify the MTS Environmental Health and Safety Specialist if there are changes or updates to the SDS during the term of the contract to ensure the MTS recordkeeping is kept updated throughout the contract.

2.9 NO RIGHT TO POST SIGNS

The Contractor shall not post or otherwise affix signs, decals or other media on MTS property or equipment, except as required to maintain safety during the course of repair or maintenance work. No permanent signs, decals, or other media may be installed without MTS's express written permission.

2.10 INVOICES

Invoices must be sent to the MTS Accounting Department, via email, at ap@sdmts.com. All invoices must have the Purchase Order and contract number clearly displayed to ensure timely payment. MTS will not pay on packing slips, receiving documents, delivery documents, or other similar documents. Invoices must be submitted for payment.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) is for service or work provided by a subcontractor and indicate the amount that will be paid to the subcontractor. Contractors must also comply with the prompt payment requirements in the *Prompt Progress Payments* section of the Standard Conditions



WEED ABATEMENT SERVICES - FIVE YEAR TERM - BID FORM

MTS Doc. No. PWL429.0-25

Bidder's Name: Baja Wildlife Control

Agreement shall be from 7/01/2025 to 6/30/2030

Description	Quantity	Unit Price Per Acre at \$97	Unit Price Per Acre at \$97	Unit Price Per Acre at \$97	Unit Price Per Acre at \$97	Unit Price Per Acre at \$97
		Year One	Year Two	Year Three	Year Four	Year Five
Chemical Application on Track Right-of-Way	Up To 480 Acres	\$46,560.00	\$46,560.00	\$46,560.00	\$46,560.00	\$46,560.00
Chemical Application Off Track [substation other locations]	Up To 180 Acres	\$17,460.00	\$17,460.00	\$17,460.00	\$17,460.00	\$17,460.00
Optional Chemical Application On/Off Track	Up To 120 Acres	\$11,640.00	\$11,640.00	\$11,640.00	\$11,640.00	\$11,640.00
Subtotal per Year		\$75,660.00	\$75,660.00	\$75,660.00	\$75,660.00	\$75,660.00
(BASIS OF AWARD) GRAND TOTAL (Inclusive of all charges):						\$378,300.00

BIDDER ACCEPTS RESPONSIBILITY FOR ACCURACY AND PRESENTATION OF THE ABOVE NUMBERS.

**The above quantities are for bidding purposes only and are based on MTS' current usage. They represent what MTS anticipates as a requirement, but MTS does not guarantee this quantity. The actual quantity ordered may be more or less than what is anticipated on the pricing form, and it is dictated by MTS actual requirements and the available funding at the time each order is initiated.*



**Metropolitan
Transit
System**

Agenda Item No. 12

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

HASTUS Regional Scheduling System Annual Software Maintenance and Support Services –
Sole Source Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G3068.0-25 (in substantially the same format as Attachment A) with GIRO, Inc. (GIRO), on a Sole Source basis, for the provision of HASTUS Regional Scheduling System (RSS) annual software maintenance and support services for a period of three (3) years in the amount of \$1,258,437.00.

Budget Impact

The total contract cost is estimated at \$1,258,437.00. This contract will be funded by MTS and North County Transit District (NCTD) as shown in the table below. The estimated cost sharing between MTS and NCTD is governed by a Memorandum of Understanding (MOU). NCTD is estimated to pay 22.4% of the scheduling modules, while MTS pays the full costs of other features and the balance of the scheduling modules.

MTS's share of the cost will be funded by Information Technology (IT) Operations Budget account 661010-571250.

Year	Scheduling	All Other Costs	Total Costs	NCTD Portion	MTS Portion
FY26	\$182,033.00	\$221,154.00	\$403,187.00	\$40,775.00	\$362,412.00
FY27	\$189,314.00	\$229,951.00	\$419,265.00	\$42,406.00	\$376,859.00
FY28	\$196,887.00	\$239,098.00	\$435,985.00	\$44,103.00	\$391,882.00
Total	\$568,234.00	\$690,203.00	\$1,258,437.00	\$127,284.00	\$1,131,153.00

DISCUSSION:

RSS is a regional fixed-bus route and rail-scheduling system. The system provides MTS and NCTD with the necessary tools to build efficient timetables and vehicle and crew schedules for bus and rail operations. It also supports operator bid processing and aids the physical dispatching of bus drivers and train operators.

1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • sdmts.com

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.



MTS and NCTD currently use GIRO to provide HASTUS scheduling software for the RSS. GIRO was selected through a Request for Proposal (RFP) in 2003 and has been providing annual maintenance and support for both agencies since then. An existing MOU outlines the responsibilities for each agency and includes the cost-sharing strategy and invoice payment procedures.

Both agencies have made significant investments in software, training, and workflow, and need GIRO to continue to provide maintenance and support services. The services also include a bank of programming days that MTS can utilize to make changes to algorithms, the user interface, or other minor changes that need to be made to keep up with changes to operations.

This is a sole-source procurement. The HASTUS software is proprietary and all codes and intellectual property rights are owned by GIRO. No other contractor can provide the software maintenance and support services needed by both MTS and NCTD. In comparison to the staff's Independent Cost Estimate (ICE) in the amount of \$1,225,832.74, staff has deemed the costs to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. G3068.0-25 (in substantially the same format as Attachment A) with GIRO, on a sole source basis, for the provision of HASTUS RSS annual software maintenance and support services for a period of three (3) years in the amount of \$1,258,437.00.

/S/ Sharon Cooney

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, mark.olson@sdmts.com

Attachments: A. Draft Agreement
B. Cost Proposal



Metropolitan Transit System

STANDARD AGREEMENT FOR MTS DOC. NO. G3068.0-25

HASTUS REGIONAL SCHEDULING SYSTEM ANNUAL SOFTWARE MAINTENANCE SUPPORT

THIS AGREEMENT is entered into this _____ day of _____, 2025 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: GIRO, Inc. Address: 75 rue de Port Royal Est.
Montreal (Quebec) Canada H3L
 Form of Business: Corporation
 (Corporation, Partnership, Sole Proprietor, etc.) Email: DArboleda@compu-link.com
 Telephone: 514-383-0404
 Authorized person to sign contracts Jean Aubin President and Chief Executive Officer
 Name Title

The Contractor agrees to provide services as specified in the conformed Scope of Work/Technical Specification (Exhibit A), Contractor's Cost/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), Forms (Exhibit D).

The contract term is for three (3) years effective July 1, 2025 through June 30, 2028.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed \$1,258,437.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	GIRO, INC.
By: <u>Sharon Cooney, Chief Executive Officer</u>	By _____
Approved as to form:	Title: _____
By: <u>Karen Landers, General Counsel</u>	



HASTUS MAINTENANCE AND SUPPORT CONTRACT
(Reference number: 395-12)

ENTERED INTO BETWEEN:

GIRO INC./LE GROUPE EN INFORMATIQUE ET RECHERCHE OPÉRATIONNELLE, having its principal place of business at 5800, St-Denis Street, Suite 1102, in the city of Montreal, Province of Quebec, Canada, H2S 3L5 (hereinafter referred to as "GIRO").

AND:

SAN DIEGO METROPOLITAN TRANSIT SYSTEM (MTS), having its principal place of business at 1255 Imperial Avenue, Suite 1000, in the city of San Diego, California, USA 92101-7490 (hereinafter referred to as the "Client").

FOR:

The software licenced under the HASTUS licence agreement no. 395 (hereinafter referred to as "Software").

Starting on July 1, 2025 (the "Commencement Date") for three (3) years.

1. SERVICES PROVIDED

GIRO will provide the Client with the following services beginning on the Commencement Date of this Contract specified above and conditionally on payment of annual charges for support and maintenance as defined in Section 2.

1.1 GIRO will assign, in a maximum delay of twenty-four (24) hours, an employee to correct a Software defect, once the Client has provided GIRO with a detailed description of the said defect. For the purposes of this Contract, a defect is considered to exist when the Software does not perform according to the description given in the appropriate version of the Detailed Design Specifications documents, User Guide, and online help and when the said defect affects the performance of the Software. Correction of any problems due to one or several of the following causes is excluded from this Contract: an accident, a disaster, faulty use of Software, additions and/or modifications (including changes to system setting files) which are made to the Software by other than GIRO's personnel except if these additions and/or modifications have been done with prior approval by GIRO, a change to an unsupported version of the operating system or database management system, and failure to supply the necessary facilities for correct operation of the Software.

In case of accident, disaster or faulty use of Software by the Client, at Client's request, GIRO will provide the necessary support to correct the problems. Such support will be charged to the Client by GIRO in addition to this Contract at then-current rates for GIRO personnel.

1.2 Electronic mail and telephone support are available from Monday to Friday inclusively from 9 a.m. to 5 p.m. (Eastern Standard Time) excluding Québec public holidays.

1.3 When the Geo module is included in the Software, the support required to assist in one annual conversion of the geographical data is included. However, any Software modification required for the data conversion is not covered by this Contract and the additional costs will be invoiced.

1.4 GIRO will provide the Client with an annual bank of thirty (30) person-days of GIRO staff time. This time can be used to perform tests on system operation, to make minor modifications to the Software, to train personnel on the Client's premises, and to approve additions and/or modifications made by the Client. The use of these person-days is determined by the Client. Non-used days can be accumulated and used in subsequent years as long as this Contract is renewed by the Client without interruption. The time needed by GIRO personnel to perform modifications requested by the Client under this Contract and that are not defects as defined in the present Contract will be deducted from this bank. If the person-days allotted have been completely used, the time necessary to perform any work requested by the Client under this Contract except for work required for defects as defined in this Contract, will be charged to the Client by GIRO according to current rates for GIRO personnel.

1.5 Additions and improvements made to the Software by GIRO for other customers, excluding new modules or new products, are made available to the Client, without additional licence fees. These improvements or additions to the Software could

include a new report, a new command or a new function. On request by the Client, and subject to GIRO and Client agreeing on an implementation timeframe, they can be adapted and/or installed by GIRO on the Client's version of the Software without any additional licence fees related to their purchase. Charges relative to services associated with the adaptation and/or installation of these additions, improvements or new version by GIRO, will be payable by the Client and invoiced separately. Any charges relative to third party software licences, if applicable, are also payable by the Client.

1.6 A 20% discount on the license fee is accorded to the Client when a new module of *HASTUS* is added to *HASTUS-Vehicle* and *HASTUS-Crew*. This discount is valid only if the Client has maintained a Maintenance and Support Contract without interruption since the initial installation of the Software.

1.7 Software upgrades: An upgrade to a newer version of the Software is available when a maintenance and support contract is in force and paid annually without interruption by the Client until the year corresponding to the newer version. Any services performed by GIRO pertaining to an upgrade are not included and will be invoiced separately.

2. TERMS AND CONDITIONS

2.1 For services specified in Section 1, the Client will pay GIRO the following fees:

Maintenance and support

Year 1 – July 1, 2025 to June 30, 2026	\$354,387 US
Year 2 – July 1, 2026 to June 30, 2027	\$368,563 US
Year 3 – July 1, 2027 to June 30, 2028	\$383,305 US

For the bank of thirty (30) person-days

Year 1 – July 1, 2025 to June 30, 2026	\$47,550 US
Year 2 – July 1, 2026 to June 30, 2027	\$49,452 US
Year 3 – July 1, 2027 to June 30, 2028	\$51,430 US

For the escrow annual fees

Year 1 – July 1, 2025 to June 30, 2026	\$1,250 US
Year 2 – July 1, 2026 to June 30, 2027	\$1,250 US
Year 3 – July 1, 2027 to June 30, 2028	\$1,250 US

The above amounts are payable semi-annually at the beginning of each semester (first payment on July 1st and second payment on January 1st).

2.2 The annual fee includes the following direct expenses: telephone charges, fax and courier incurred by GIRO during the provision of the services specified in this Contract. Travel and living expenses that may be incurred are not included, unless required to repair

a defect in the Software that cannot be corrected otherwise.

2.3 All charges quoted or understood in the present Contract will be increased as necessary to reflect any applicable taxes in vigor at the time that the monies become due.

2.4 The Client will supply GIRO with a method to access the installed Software remotely for maintenance and support purposes.

2.5 GIRO undertakes not to reveal any of the Client's confidential information acquired during product installation and support activities without the express authorization of the Client.

The Client acknowledges that he has read this Contract, understood it, and has agreed to be bound by its terms and conditions. Further, he agrees that it is the complete and exclusive statement of the Contract between the parties and that it supersedes all proposals or prior agreements, oral or written, and all other communications between the parties relating to its subject matter.

At _____, this ____ day of _____.

GIRO INC./LE GROUPE EN INFORMATIQUE ET RECHERCHE OPÉRATIONNELLE

Per:

Name: Annie Gagné

Title: Senior Director, Business Relations and Risk Management

Signature: _____

Duly authorized, as she so declares.

At _____, this ____ day of _____.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM (MTS)

Per:

Name: _____

Title: _____

Signature: _____

Duly authorized, as he(she) so declares



Agenda Item No. 13

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Hewlett Packard Enterprise (HPE) Closed Circuit Television (CCTV) Servers – Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G3010.0-25 (in substantially the same format as Attachment A), with Nth Generation Computing (Nth Generation), for the purchase of HPE CCTV Servers for a five (5) year period, for a total of \$443,871.75.

Budget Impact

The total contract cost is estimated to be \$443,871.75, inclusive of 7.75% California (CA) Sales Tax (Attachment C). This project is funded by Information Technology (IT) Operations Budget account 661010-571250 and Capital Improvement Program (CIP) 1007122201 – Server Refresh.

Contract Term	Description	Funding/Account	Amount
Years 1-5	Information Technology (IT) Operations Budget	661010-571250	\$155,425.00
Years 1-5	CIP – Server Refresh	1007122201-599902	\$288,446.75
Total			\$443,871.75

DISCUSSION:

The MTS IT Department is looking to purchase twenty-five (25) HPE CCTV servers to replace the current servers with expired warranties. The CCTV servers maintain continuous surveillance coverage for our bus and trolley stations and our buildings.

The CCTV servers support the safety and security of our stations and facilities by storing and processing hi-resolution video feeds from our numerous surveillance cameras. The reliable operation of these servers is essential to meet our security monitoring requirements and enable timely incident response. Replacing them will improve system performance, reduce the risk of downtime, and ensure manufacturer support through warranties.



On January 23, 2025, MTS issued an Invitation for Bids (IFB) to purchase twenty-five (25) HPE CCTV servers. On February 27, 2025, MTS received a total of twelve (13) bids from the following:

Bidder Name	Certification	Amount	Sales Tax	Overall Total Amount
Serverli Inc **	N/A	\$348,134.75	\$13,557.60	\$361,692.35
Nth Generation Computing Inc	N/A	\$423,125.00	\$20,746.75	\$443,871.75
Everon	N/A	\$430,000.00	\$24,086.75	\$454,086.75
Ignite Logistix Inc	N/A	\$519,092.68	\$27,708.50	\$546,801.18
Questivity Inc	N/A	\$519,667.75	\$28,160.46	\$547,828.21
vPrime Tech Inc	N/A	\$521,468.75	\$40,413.75	\$561,882.50
XIT Solutions	N/A	\$565,480.63	\$28,106.36	\$593,586.99
Compulink Technologies Inc	N/A	\$583,169.25	\$29,554.59	\$612,723.84
Data Center Interworks Inc	N/A	\$765,985.48	\$58,736.53	\$824,722.01
Peacock Enterprises	N/A	\$795,524.75	\$43,077.83	\$838,602.58
Sai Infotek Inc	N/A	\$824,598.50	\$45,415.47	\$870,013.97
Mvation Worldwide	N/A	\$829,443.18	\$45,294.74	\$874,737.92

*** Non-responsive Bidder*

All bids were deemed responsive and responsible except for Severli, Inc. due to incomplete submission of required MTS documentation. MTS staff deemed Nth Generation to be the lowest responsive and responsible bidder and has determined their bid to be fair and reasonable based on the comparison of all bids received and MTS's Independent Cost Estimate (ICE) of \$973,437.50. The MTS's ICE is much higher than the bids due to conservative assumptions on equipment, inflation, and shipping.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. G3010.0-25 (In substantially the same format as Attachment A), with Nth Generation for the purchase of HPE CCTV Servers for a five (5) year period, for a total of \$442,492.25.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, Mark.Olson@sdmts.com

Attachments: A. Draft Agreement
B. Scope of Work
C. Cost Form



**STANDARD AGREEMENT
FOR**

MTS DOC. NO. G3010.0-25

HPE CCTV SERVERS PURCHASE

THIS AGREEMENT is entered into this _____ day of _____, 2025 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: Nth Generation Computing Inc. Address: 17055 Camino San Bernardo
San Deigo, CA, 92127

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.) Email: bids@nth.com

Telephone: 858-451-2383

Authorized person to sign contracts Joyce Russell EVP/CFO
Name Title

The Contractor agrees to provide services with goods as specified in the conformed Scope of Work/Minimum Technical Specification (Exhibit A), Contractor's Bid/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), Forms (Exhibit D).

The contract term is for five (5) years effective June 1, 2025 through May 31, 2030.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed \$443,871.75 (inclusive of tax) without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	NTH GENERATION COMPUTING INC.
By: <u>Sharon Cooney, Chief Executive Officer</u>	By _____
Approved as to form:	
By: <u>Karen Landers, General Counsel</u>	Title: _____

1. SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1.1. INTRODUCTION

The San Diego Metropolitan Transit System (MTS) is soliciting quotes from authorized and active Hewlett Packard Enterprise Partners (HPE) partners, suppliers and resellers that can provide support for our Avigilon CCTV servers and meet the requirements.

1.2. SCOPE OF WORK/TECHNICAL SPECIFICATIONS (SEE ATTACHMENT 1)

The intent of this section is to ensure MTS receives the exact support specification for the servers (or approved equals). Failure to meet these requirements may result in bids being declared nonresponsive. The selected bidder shall provide Technical Product or Service Data Sheet with the information of service coverage as an addition to the actual pricing quote.

MTS is looking to approximately procure twenty-five (25) HPE Configure to Order (CTO) servers and support as specified/listed under Bid/Pricing Form Section 5.0 (ATT 1). Server must be CTO to meet MTS' unique server requirements and include the HPE manufacturer's warranty.

1.3. HEWLETT PACKARD ENTERPRISE (HPE) MINIMUM REQUIREMENTS

- A. All HPE equipment or hardware shall come from HPE or from an authorized HPE reseller. Only with an active HPE Partner ID.
- B. All HPE equipment shall be in proper condition, brand new and not refurbished or remanufactured with its original HPE packaging.
- C. All HPE equipment shall be running the safest and most up-to-date software specified in this Scope of work.
- D. All HPE equipment warranty shall cover the defects resulting from defective parts, materials, or manufacturing if such defects are revealed during the period of 6 months since the date of purchase or/and shall have hardware limited warranty option.
- E. For the defective parts under warranty, the vendor shall provide a return label. MTS will only send back the defective parts once we have received the replacement.
- F. HPE Brand or any HPE compatible products and services herein, is required to be with the highest level of quality standards and backed by warranty and shall be sourced through authorized HPE distributors.
- G. All HPE equipment shall be delivered in complete/full packages to the address specified. In addition, the packages label shall specify the PO number.

1.4. [NOT APPLICABLE] CISCO MINIMUM REQUIREMENTS

1.5. CONTRACTOR'S INFORMATION SECURITY RESPONSIBILITIES

MTS has established the following responsibilities to ensure the security of vendor operations in accordance with MTS policies, standards, and SOPs. The following procedures outline the expectations for Contractor and any subcontractors:

- A. Contractor Lists: Contractor and any subcontractors must provide an up-to-date list of all staff working on the contract. This list should be promptly updated and submitted to MTS whenever there are staff changes.

- B. ID and Security Clearances: Contractor and subcontractor onsite technicians must be issued MTS security badges/key cards. These badges/key cards should be visibly displayed at all times while on MTS premises.
- C. Incident Reporting: Contractor and subcontractors agree to promptly report any security incidents or breaches involving their systems or access to the MTS network. Detailed incident response procedures should be provided, and cooperation in investigations, including the provision of necessary logs and evidence, is expected.
- D. Change Management: Contractor and subcontracted personnel must adhere to all applicable MTS change control processes and procedures.
- E. Patch Management: Contractor and subcontractors agree to promptly apply security patches and updates to their systems and software used to perform services in this contract.
- F. Data Protection and Privacy: The vendor must protect MTS data in accordance with applicable laws and regulations, including those related to data privacy. Appropriate safeguards should be implemented to ensure the confidentiality, integrity, and availability of MTS data.
- G. Remote Access and Forms: Remote access must be uniquely identifiable, and password management should comply with MTS password standards' reserves the right to determine the applicable virtual private network and encryption technologies used to access their systems and network. Remote access forms must be updated and submitted yearly or upon request by MTS.
- H. Contractor Termination: Upon departure of a contractor from MTS for any reason, Contractor or subcontractors must ensure that all sensitive information is collected and returned to MTS or destroyed within the timeframe specified in the original contract terms.
- I. Keycard and Security Access: Upon termination of the contract or at the request of MTS, Contractor and subcontractors must surrender all MTS-issued identification badges, access cards, equipment, and supplies immediately. Equipment and supplies retained by Contractor or subcontractors must be documented and authorized by the MTS contract POC or their designee.
- J. Auditing and Compliance: Contractor or subcontractor are required to comply with all applicable MTS security Policies, Standards and SOP's. Contractor and subcontractor must comply with MTS when conducting an audit or risk assessment based on contractual obligations and applicable security policy's, standard and SOP's set by MTS.
- K. Disclosure and Sub-Contractor Security: If the vendor engages subcontractors or third-party service providers, they must ensure that these entities adhere to the same vendor information security obligations outlined in this contract. The vendor is responsible for the security practices of their subcontractors and should perform due diligence in selecting and monitoring them.
- L. Training and Awareness: Contractor and subcontractors agree to provide security awareness training to individuals who have access to the MTS network or systems. The training should cover topics such as security policies, data handling, and incident response procedures. If training cannot be provided by Contractor or subcontracted staff then MTS provided training must be completed on initial access and yearly refresher training.

1.6. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)

1.7. [NOT APPLICABLE] NO RIGHT TO POST SIGNS

1.8. WARRANTY

Bidders shall outline in detail their warranty on the equipment offered, including the method of adjustment in cases of equipment, component or parts failure. Warranty shall also be stated for installation labor, materials, and method of adjustment.

1.9. REPLACEMENT PARTS

Replacement parts and technical support for the specified equipment must be guaranteed by the manufacturer; to be available for a ten (10) year period from the date of purchase. Manufacturer shall keep parts books and maintenance manuals up-to-date for that period.

1.10. DELIVERY AND ACCEPTANCE

Equipment or any deliverable provided under this contract shall be delivered F.O.B. to MTS, 100 16th Street, San Diego, California 92101 unless otherwise specified, in first class condition, complete and ready for operation, and the Contractor shall assume all responsibility and risk of loss incident to said delivery.

Contractor shall indicate delivery date on the Bid Form unless already specified, in which case, shall be made within the time set forth. Delivery is part of the consideration and must be adhered to as specified.

Contractor will not be held liable for failure to make delivery because of strikes, construction of property, governmental regulations, acts of God or any other causes beyond his control, provided a written extension of time is obtained from MTS.

Upon delivery, MTS will acknowledge receipt of said items or products. Delivery shall not constitute acceptance. Upon inspection and testing (if necessary) by MTS, a determination will be made whether said items or products are in conformance with contract requirements. If found in conformance, MTS shall approve the Contractor's invoice for payment; thereby constituting acceptance. Payment terms begin from this point. If the delivered items or products are found not in compliance, MTS will immediately notify the Contractor, and furnish all details of deficiencies. Contractor shall correct the deficiencies or supply new items or products (at the discretion of MTS) and resubmit for inspection and testing (if necessary).

1.11. [NOT APPLICABLE] LIQUIDATED DAMAGES

1.12. INVOICES

Invoices must be sent to the MTS Accounting Department, via email, at ap@sdmts.com. All invoices must have the Purchase Order and contract number clearly displayed to ensure timely payment. MTS will not pay on packing slips, receiving documents, delivery documents, or other similar documents. Invoices must be submitted for payment.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) is for service or work provided by a subcontractor and indicate the amount that will be paid to the subcontractor. Contractors must

also comply with the prompt payment requirements in the *Prompt Progress Payments* section of the Standard Conditions.

HPE CCTV Servers - Bid Form

MTS G3010.0-25

Bidder Name: Nth Generation Computing, Inc.

HPE PARTNER ID: 10031858

Cooperative Purchasing Program ref. number: (e.g.GSA, NASPO, CMAS, OMNI reference) if applicable: HPE pricing is in accordance with CA NASPO ValuePoint Contract #7-15-70-34-002.

*Please specify the reference number of the Cooperative Purchasing Agreement used as the basis of your bid.

Product #	Item Description	Quantity	Unit of Measure	Unit Price	Extended Price
P52533-B21	HPE ProLiant DL380 Gen11 12LFF NC Configure-to-order Server	25	Each	\$ 1,686.00	\$ 42,150.00
P67092-B21	Intel Xeon-Silver 4514Y 2.0GHz 16-core 150W Processor for HPE	25	Each	\$ 987.00	\$ 24,675.00
P64705-B21	HPE 16GB (1x16GB) Single Rank x8 DDR5-5600 CAS-46-45-45 EC8 Registered Smart Memory Kit	50	Each	\$ 289.00	\$ 14,450.00
P48823-B21	HPE ProLiant DL380 Gen11 2LFF Primary Riser Cage Kit	25	Each	\$ 139.00	\$ 3,475.00
834031-B21	HPE 8TB SAS 12G Business Critical 7.2K LFF LP 1-year Warranty 512e Multi Vendor HDD	300	Each	\$ 355.00	\$ 106,500.00
P47808-B21	HPE 960GB SATA 6G Read Intensive SFF LPC Multi Vendor SSD	50	Each	\$ 339.00	\$ 16,950.00
P02377-B21	HPE Smart Storage Hybrid Capacitor with 145mm Cable Kit	25	Each	\$ 88.00	\$ 2,200.00
P48918-B21	HPE ProLiant DL360 Gen11 Storage Controller Enablement Cable Kit	25	Each	\$ 9.00	\$ 225.00
P47781-B21	HPE MR416i-o Gen11 x16 Lanes 8GB Cache OCP SPDM Storage Controller	25	Each	\$ 795.00	\$ 19,875.00
P51181-B21	Broadcom BCM5719 Ethernet 1Gb 4-port BASE-T OCP3 Adapter for HPE	25	Each	\$ 108.00	\$ 2,700.00
P38995-B21	HPE 800W Flex Slot Platinum Hot Plug Low Halogen Power Supply Kit	50	Each	\$ 117.00	\$ 5,850.00
AF556A	HPE C13 - Nema 5-15P TH/PH 250V 10Amp 1.83m Power Cord	50	Each	\$ 13.00	\$ 650.00
BD505A	HPE iLO Advanced 1-server License with 3yr Support on iLO Licensed Features	25	Each	\$ 352.00	\$ 8,800.00
P8B31A	HPE OneView w/o iLO including 3yr 24x7 Support 1-server FIO LTU	25	Each	\$ 360.00	\$ 9,000.00
P51911-B21	HPE ProLiant DL360 Gen11 CPU1 to OCP2 x8 Enablement Kit	25	Each	\$ 27.00	\$ 675.00
P56995-B21	HPE DL380 Gen11 LFF Front TM Cbl Kit	25	Each	\$ 55.00	\$ 1,375.00
P48820-B21	HPE DL380/DL560 G11 2U High Perf Fan Kit	25	Each	\$ 216.00	\$ 5,400.00
P07818-B21	HPE DDR4 DIMM Blank Kit	25	Each	\$ 29.00	\$ 725.00
P35876-B21	HPE CE Mark Removal FIO Enablement Kit	25	Each	\$ 1.00	\$ 25.00
P49145-B21	HPE ProLiant DL380 Gen11 Standard Heat Sink Kit	25	Each	\$ 35.00	\$ 875.00
P52341-B21	HPE ProLiant DL3XX Gen11 Easy Install Rail 3 Kit	25	Each	\$ 45.00	\$ 1,125.00
HU4A6A5	HPE 5 Year Tech Care Essential SVC	25	Each	\$ -	\$ -
HU4A6A5 R2M	HPE iLO Advanced Non Blade Support	25	Each	\$ 35.00	\$ 875.00
HU4A6A5 SVP	HPE One View w/o iLO Support	25	Each	\$ 94.00	\$ 2,350.00
HU4A6A500DK	HPE DL380 Gen11 Support	25	Each	\$ 6,088.00	\$ 152,200.00
Total Environmental Fee				N/A	
CA Sales Tax (7.75%)				\$ 20,746.75	
Shipping				N/A	
Sub-Total				\$ 423,125.00	
(BASIS OF AWARD) GRAND TOTAL (All Inclusive):				\$ 443,871.75	

BIDDER ACCEPTS RESPONSIBILITY FOR ACCURACY AND PRESENTATION OF THE ABOVE NUMBERS.

*The above quantities are for bidding purposes only and are based on MTS' current usage. They represent what MTS anticipates as a requirement, but MTS does not guarantee this quantity. The actual quantity ordered may be more or less than what is anticipated on the pricing form, and it is dictated by MTS actual requirements and the available funding at the time each order is initiated.



**Metropolitan
Transit
System**

Agenda Item No. 14

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Cisco Hardware and Subscription – Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2979.0-25 (in substantially the same format as Attachment A), with Insight Public Sector Inc. (Insight) for the purchase of Cisco Hardware and Subscription, for a total of \$663,463.40.

Budget Impact

The total contract cost of this contract is estimated to be \$663,463.40, inclusive of 7.75% CA sales tax (Attachment C). This project is funded by Capital Improvement Program (CIP) 1007106101 – Trolley Station Network Communication Equipment, 1008125601 – Southbay Bus Rapid Transit (BRT) Stations Network Replacement, 1007121001 - East County Bus Yard Wireless Network Replacement, IT cost center 661010 and TransNet cost center 848012 as reflected below:

Contract Term	Description	Funding	Amount
Years 1-5	Trolley Stations Cisco Hardware	WBSE# 1007106101	\$222,497.89
Years 1-5	Trolley Stations Cisco Subscriptions	IT Cost Center# 661010	\$164,148.33
Years 1-5	South Bay Bus Rapid Transit (BRT) Stations Cisco Hardware	WBSE# 1008125601	\$125,573.07
Years 1-5	South Bay Bus Rapid Transit (BRT) Stations Cisco Subscriptions	TransNet Cost Center#848012	\$57,417.00
Years 1-5	El Cajon Division Bus Yard Cisco Hardware	WBSE# 1007121001	\$63,159.67
Years 1-5	El Cajon Division Bus Yard Cisco Subscriptions	IT Cost Center#661010	\$30,667.44
Total			\$663,463.40



DISCUSSION:

The MTS Information Technology (IT) Department is looking to purchase network equipment to replace end-of-life network equipment to support Trolley and Bus Operations. This network equipment is located in the MTS data center, South Bay BRT 225 Rapid bus stations, and the El Cajon Division bus yard.

On January 27, 2025, MTS issued an Invitation for Bids (IFB) to purchase Cisco network equipment and support. On March 4, 2025, MTS received a total of seven (7) bids from the following.

Bidder Name	Small Business (SB)	Amount	Sales Tax	Overall Total Amount
Insight Public Sector Inc.	N/A	\$633,885.33	\$29,578.07	\$663,463.40
ICT Resources	N/A	\$657,761.02	\$50,976.48	\$708,737.50
Axelliant	N/A	\$693,954.77	\$33,849.35	\$727,804.12
GigaKom	SB	\$706,449.17	\$32,290.12	\$738,739.29
Datel Systems Inc	SB	\$705,894.00	\$34,379.23	\$740,273.23
Kambrian	SB	\$718,330.25	\$54,299.24	\$772,629.49
Meijun	N/A	\$1,120,361.07	\$86,827.98	\$1,121,644.07
MTS Independent Cost Estimate (ICE)		\$1,019,352.71	\$52,444.63	\$1,071,797.34

MTS staff have deemed Insight Public Sector Inc. to be the lowest responsive and responsible bidder and determined their bid to be fair and reasonable based on the comparison of all bids received and MTS's ICE as shown above. The MTS ICE is much larger than the bids based on conservative assumptions on equipment, inflation, and shipping.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. G2979.0-25 (In substantially the same format as Attachment A), with Insight for the purchase of Cisco Hardware and Subscription, for a total of \$663,463.40.

/S/ Sharon Cooney

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, Mark.Olson@sdmts.com

Attachments: A. Draft Agreement G3010.0-25
B. Scope of Work
C. Cost Form



**STANDARD AGREEMENT
FOR**

MTS DOC. NO. G2979.0-25

CISCO HARDWARE AND SUBSCRIPTION

THIS AGREEMENT is entered into this _____ day of _____, 2025 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: Insight Public Sector Address: 2701 E Insight Way
Chandler, AZ, 85286

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.) Email: Lisanne.steingeiser@insight.com

Telephone: 480-333-3012

Authorized person to sign contracts Lisanne Steinheiser Global Compliance Officer
Name Title

The Contractor agrees to provide services with goods as specified in the conformed Scope of Work/Minimum Technical Specification (Exhibit A), Contractor's Bid/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), Forms (Exhibit D).

The contract term is for five (5) years effective at PO issuance.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed \$663,463.40 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	INSIGHT PUBLIC SECTOR
By: <u>Sharon Cooney, Chief Executive Officer</u>	By _____
Approved as to form:	Title: _____
By: <u>Karen Landers, General Counsel</u>	

1. SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1.1. BACKGROUND

The San Diego Metropolitan Transit System ("MTS") has embraced Cisco Digital Network Architecture Center (DNAC) deployment since 2019 as a comprehensive network management and configuration solution for its transportation infrastructure. DNA Center, a cutting-edge management platform, consolidates data and interfaces from diverse sources into a centralized view. This strategic implementation enables the MTS IT department to streamline network operations, enhancing efficiency and ensuring optimal performance across San Diego County's extensive transit network. Through DNAC's advanced capabilities, the San Diego Metropolitan Transit System can leverage a broad approach to network management, encompassing configuration, automation, and real-time monitoring. This powerful tool empowers network administrators with a comprehensive overview of the entire network landscape, facilitating proactive identification and resolution of potential issues before they escalate into service disruptions.

In 2019, MTS utilized Cisco's DNA Center (DNAC) platform to manage approximately 200 network devices. However, by 2024, the organization's network infrastructure had expanded significantly, with DNAC overseeing the configuration and management of more than 465 devices. Consequently, MTS recognized the need to update and enhance its network configuration capabilities to accommodate this substantial growth. This is also in response to Cisco's end-of-life (EOL) announcements for the DNA Center platform.

MTS has installed more than 25 critical network components throughout its Transit Station Bus network, primarily to support the Bus Rapid Transit (BRT) system in San Diego County. These network devices are responsible for facilitating communication and data sharing among various systems within the transit stations, such as Visual Messaging Systems (VMS), Public announcements (PA), video servers (CCTV), and VoIP.

A network device's typical lifespan is five (5) years. After this period, it faces challenges such as increased maintenance costs, limited support, and parts availability, which can result in inefficiencies and potential disruptions in the network.

To maintain a state of good repair, MTS must regularly assess and upgrade its network infrastructure by replacing end-of-life (EOL) devices. This proactive approach ensures that the network remains robust, secure, and capable of meeting evolving technological needs. MTS IT will aim for a 5-year lifespan for all production network devices.

MTS has established a wireless network in the Bus yards (IAD, KMD, SB, EC, Copley). This wireless network is the primary communication support for various applications, enabling efficient and reliable data transfer among the bus applications.

The average life of a typical network device is five (5) years. After this period, network infrastructure faces challenges such as higher maintenance costs, limited support, and parts availability. This can lead to inefficiencies and potential disruptions in the network.

To maintain a state of good repair, it is crucial for MTS to regularly assess and upgrade its wireless network infrastructure by replacing end-of-life devices. This proactive approach ensures that the wireless network remains robust, secure, and capable of meeting evolving

technological needs. MTS IT will keep the target of a 5-year lifespan for all production wireless network devices

1.2. OBJECTIVES

We aim to replace the current Cisco Digital Network Architecture Center (DNAC) with the updated Cisco Catalyst Center to ensure a smooth transition while maintaining compatibility with all infrastructure currently managed by DNAC.

MTS intends to upgrade the current Cisco Network Switches 3800 series at the BRT 225 Bus Stations with the updated Cisco 9300 series to ensure a seamless transition while preserving compatibility with all infrastructure currently managed by DNAC.

MTS intends to upgrade the Cisco Wireless infrastructure at the El Cajon Bus Yard, aligning it with the established standards implemented at other bus yard facilities. The primary objective of this initiative is to maintain consistency across all MTS Bus facilities, maintain the equipment in a state of good repair, and enhance the overall performance of the wireless network.

1.3. STATEMENT OF WORK

MTS has established a direct collaboration with the Cisco Engineering team, which has meticulously specified the hardware requirements outlined in this Statement of Work (SOW). This request solely pertains to procuring the material components explicitly designated by Cisco. The contractor shall provide all hardware components and exact quantities described in the Technical Specifications list or the attached Cisco bill of materials worksheet.

1.4. REQUIREMENTS

- a. All Cisco hardware must be purchased from a certified Cisco Gold Partner Authorized Reseller and must be an Enterprise Agreement authorized partner.
- b. MTS will not allow substitutions of the manufacturer or part numbers. All items purchased by MTS shall be new, the most current product lines, in unopened original manufacturer packaging.
- c. All Cisco equipment must operate with the most recent and secure software versions.
- d. The contractor must have at minimum 2 Cisco Certified Internetwork Experts (CCIEs) on staff full-time.

1.5. TECHNICAL SPECIFICATIONS (SEE ATTACHMENT 1)

1.6. [NOT APPLICABLE] HEWLETT PACKARD ENTERPRISE (HPE) MINIMUM REQUIREMENTS

1.7. CISCO MINIMUM REQUIREMENTS

- A. Bidder must be a Cisco Authorized Reseller with Cisco Gold Partner Status and must be an Enterprise Agreement authorized partner.
- B. Bidder must have at minimum two (2) Cisco Certified Internetwork Expert (CCIE) on staff fulltime.
- C. A Manufacturers Authorization Form (MAF) from Cisco must be included with your submission to validate that your company has Cisco Gold Partner Status and Enterprise Agreement authorization.

- D. MTS will not allow substitutions of manufacturer or part numbers requested in this solicitation. All items potentially purchased by MTS shall be new, latest design and technology, the most current product lines, in unopened original manufacturer packaging and with Cisco Smartnet support ordered only with Cisco. MTS will not accept delivery of any refurbished, demonstration, previously used, or open-box hardware products. All quotes must be obtained and validated by our Cisco Account Manager.

1.8. CONTRACTOR'S INFORMATION SECURITY RESPONSIBILITIES

MTS has established the following responsibilities to ensure the security of vendor operations in accordance with MTS policies, standards, and SOPs. The following procedures outline the expectations for Contractor and any subcontractors:

- A. Contractor Lists: Contractor and any subcontractors must provide an up-to-date list of all staff working on the contract. This list should be promptly updated and submitted to MTS whenever there are staff changes.
- B. ID and Security Clearances: Contractor and subcontractor onsite technicians must be issued MTS security badges/key cards. These badges/key cards should be visibly displayed at all times while on MTS premises.
- C. Incident Reporting: Contractor and subcontractors agree to promptly report any security incidents or breaches involving their systems or access to the MTS network. Detailed incident response procedures should be provided, and cooperation in investigations, including the provision of necessary logs and evidence, is expected.
- D. Change Management: Contractor and subcontracted personnel must adhere to all applicable MTS change control processes and procedures.
- E. Patch Management: Contractor and subcontractors agree to promptly apply security patches and updates to their systems and software used to perform services in this contract.
- F. Data Protection and Privacy: The vendor must protect MTS data in accordance with applicable laws and regulations, including those related to data privacy. Appropriate safeguards should be implemented to ensure the confidentiality, integrity, and availability of MTS data.
- G. Remote Access and Forms: Remote access must be uniquely identifiable, and password management should comply with MTS password standards' reserves the right to determine the applicable virtual private network and encryption technologies used to access their systems and network. Remote access forms must be updated and submitted yearly or upon request by MTS.
- H. Contractor Termination: Upon departure of a contractor from MTS for any reason, Contractor or subcontractors must ensure that all sensitive information is collected and returned to MTS or destroyed within the timeframe specified in the original contract terms.
- I. Keycard and Security Access: Upon termination of the contract or at the request of MTS, Contractor and subcontractors must surrender all MTS-issued identification badges, access cards, equipment, and supplies immediately. Equipment and supplies retained by Contractor or subcontractors must be documented and authorized by the MTS contract POC or their designee.

- J. Auditing and Compliance: Contractor or subcontractor are required to comply with all applicable MTS security Policies, Standards and SOP's. Contractor and subcontractor must comply with MTS when conducting an audit or risk assessment based on contractual obligations and applicable security policy's, standard and SOP's set by MTS.
- K. Disclosure and Sub-Contractor Security: If the vendor engages subcontractors or third-party service providers, they must ensure that these entities adhere to the same vendor information security obligations outlined in this contract. The vendor is responsible for the security practices of their subcontractors and should perform due diligence in selecting and monitoring them.
- L. Training and Awareness: Contractor and subcontractors agree to provide security awareness training to individuals who have access to the MTS network or systems. The training should cover topics such as security policies, data handling, and incident response procedures. If training cannot be provided by Contractor or subcontracted staff then MTS provided training must be completed on initial access and yearly refresher training.

1.9. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)

1.10. NO RIGHT TO POST SIGNS

The Contractor shall not post or otherwise affix signs, decals or other media on MTS property or equipment, except as required to maintain safety during the course of repair or maintenance work. No permanent signs, decals, or other media may be installed without MTS's express written permission.

1.11. WARRANTY

Bidders shall outline in detail their warranty on the equipment offered, including the method of adjustment in cases of equipment, component or parts failure. Warranty shall also be stated for installation labor, materials, and method of adjustment.

1.12. REPLACEMENT PARTS

Replacement parts and technical support for the specified equipment must be guaranteed by the manufacturer; to be available for a ten (10) year period from the date of purchase. Manufacturer shall keep parts books and maintenance manuals up-to-date for that period.

1.13. DELIVERY AND ACCEPTANCE

Equipment or any deliverable provided under this contract shall be delivered F.O.B. to MTS, 100 16th Street, San Diego, California 92101 unless otherwise specified, in first class condition, complete and ready for operation, and the Contractor shall assume all responsibility and risk of loss incident to said delivery.

Contractor shall indicate delivery date on the Bid Form unless already specified, in which case, shall be made within the time set forth. Delivery is part of the consideration and must be adhered to as specified.

Contractor will not be held liable for failure to make delivery because of strikes, construction of property, governmental regulations, acts of God or any other causes beyond his control, provided a written extension of time is obtained from MTS.

Upon delivery, MTS will acknowledge receipt of said items or products. Delivery shall not constitute acceptance. Upon inspection and testing (if necessary) by MTS, a determination will be made whether said items or products are in conformance with contract requirements. If found in conformance, MTS shall approve the Contractor's invoice for payment; thereby constituting acceptance. Payment terms begin from this point. If the delivered items or products are found not in compliance, MTS will immediately notify the Contractor, and furnish all details of deficiencies. Contractor shall correct the deficiencies or supply new items or products (at the discretion of MTS) and resubmit for inspection and testing (if necessary).

1.14. [NOT APPLICABLE] LIQUIDATED DAMAGES

1.15. INVOICES

Invoices must be sent to the MTS Accounting Department, via email, at ap@sdmts.com. All invoices must have the Purchase Order and contract number clearly displayed to ensure timely payment. MTS will not pay on packing slips, receiving documents, delivery documents, or other similar documents. Invoices must be submitted for payment.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) is for service or work provided by a subcontractor and indicate the amount that will be paid to the subcontractor. Contractors must also comply with the prompt payment requirements in the *Prompt Progress Payments* section of the Standard Conditions.

ADVANCED PAYMENT IS NOT ALLOWABLE.



Cisco Hardware and Subscription IFB

MTS Doc. No. G2979.0-25

Bidder Name: _____

Cooperative Purchasing Program ref. number: (e.g.GSA, NASPO, CMAS, OMNI reference) if applicable: **ID 1510001600 OMNIA PARTNERS (COBB COUNTY)**

*Please specify the reference number of the Cooperative Purchasing Agreement used as the basis of your bid.

Part Number	Smart Account Mandatory	Item Description	Service Duration (Months)	Quantity	Unit of Measure	Unit Price	Extended Price
DN3-HW-APL-L	-	Cisco Catalyst Center Appliance (Gen 3) - 56 Core	---	3	EA	\$ 68,473.12	\$ 205,419.36
CON-L1NBD-DN3HWAPL	-	CX LEVEL 1 8X5XNBD Cisco DNA Center Appliance (Gen 3) - 56 - 60 Month Service	60	3	EA	\$ 36,103.59	\$ 108,310.77
DNA-SW-2.3.7	-	Cisco Catalyst Center SW 2.3.7	---	3	EA	\$ -	\$ -
DN3-HW-APL-L-LIC	Yes	Cisco Catalyst Center Appliance License - 56 Core	---	3	EA	\$ -	\$ -
SFP-H10GB-ACU7M	-	Active Twinax cable assembly, 7m	---	6	EA	\$ 179.20	\$ 1,075.20
CAB-US515P-C19-US	-	NEMA 5-15 to IEC-C19 13ft US	---	6	EA	\$ -	\$ -
DN3-CPU-I6348	-	Intel 6348 2.6GHz/235W 28C/42MB DDR4 3200MHz	---	6	EA	\$ -	\$ -
DN3-MR-X32G2RW	-	32GB RDIMM DRx4 3200 (8Gb)	---	36	EA	\$ -	\$ -
DN3-SD38T6S1X-EV	-	3.8TB 2.5in Enter Value 6G SATA Samsung SSD	---	18	EA	\$ -	\$ -
DN3-SD38TKA1X-EV	-	3.8TB 2.5 inch Enterprise Value 12G SAS SSD	---	6	EA	\$ -	\$ -
DN3-SD960G6S1X-EV	-	960GB 2.5in Enter Value 6G SATA Samsung SSD	---	6	EA	\$ -	\$ -
DN3-RAID-220M6	-	Cisco 12G SAS RAID Controller w/4GB FBWC (16 Drv) w/1U Brkt	---	3	EA	\$ -	\$ -
DN3-PSU1-2300W	-	Cisco UCS 2300W AC Power Supply for Rack Servers Titanium	---	6	EA	\$ -	\$ -
DN3-GPURKIT-C220	-	GPU Riser Bracket assy kit C220 / C225 1U	---	3	EA	\$ -	\$ -
DN3-TPM-002C	-	TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified, for M6 servers	---	3	EA	\$ -	\$ -
DN3-P-I8Q25GF	-	Cisco-Intel E810XXVDA4L 4x25/10 GbE SFP28 PCIe NIC	---	3	EA	\$ -	\$ -
DN3-P-I8D25GF	-	Cisco-Intel E810XXVDA2 2x25/10 GbE SFP28 PCIe NIC	---	3	EA	\$ -	\$ -
BUNDLE-SAS-BF	-	SAS Bundle for Cross Architecture with Multiple SAS skus	---	1	EA	\$ -	\$ -
CON-CXP-ENS-SAS	-	Solution Attached Services for Enterprise Network Switching - 12 Month	12	1	EA	\$ 55,837.56	\$ 55,837.56
C9300-48UXM-E	-	Catalyst 9300 48-port(12 mGig,36 2.5Gbps) Network Essentials	---	10	EA	\$ 6,707.64	\$ 67,076.40
CON-SSSNT-C93E048X	-	SOLN SUPP 8X5XNBD Catalyst 9300 48-port(12 mGig36 2.5Gbps	60	10	EA	\$ 4,609.74	\$ 46,097.40
C9300-DNA-E-48	Yes	C9300 DNA Essentials, 48-Port Term Licenses	---	10	EA	\$ -	\$ -
CON-SSTCM-C93E48	-	SOLN SUPP SW SUBC9300 DNA Essentials	60	10	EA	\$ 233.69	\$ 2,336.90
C9300-DNA-E-48-5Y	-	C9300 DNA Essentials, 48-Port, 5 Year Term License	60	10	EA	\$ 898.27	\$ 8,982.70
C9300-NW-E-48	Yes	C9300 Network Essentials, 48-port license	---	10	EA	\$ -	\$ -

SC9300UK9-1712	-	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	---	10	EA	\$ -	\$ -
PWR-C1-1100WAC-P	-	1100W AC 80+ platinum Config 1 Power Supply	---	10	EA	\$ -	\$ -
PWR-C1-1100WAC-P/2	-	1100W AC 80+ platinum Config 1 Secondary Power Supply	---	10	EA	\$ 945.78	\$ 9,457.80
CAB-TA-NA	-	North America AC Type A Power Cable	---	20	EA	\$ -	\$ -
SSD-240G	-	Cisco pluggable USB3.0 SSD storage	---	10	EA	\$ 746.67	\$ 7,466.70
STACK-T1-50CM	-	50CM Type 1 Stacking Cable	---	10	EA	\$ 49.78	\$ 497.80
CAB-SPWR-30CM	-	Catalyst Stack Power Cable 30 CM	---	10	EA	\$ 47.30	\$ 473.00
C9K-ACC-RBFT	-	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	---	10	EA	\$ -	\$ -
C9K-ACC-SCR-4	-	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	---	10	EA	\$ -	\$ -
CAB-GUIDE-1RU	-	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	---	10	EA	\$ -	\$ -
C9300-NM-8X	-	Catalyst 9300 8 x 10GE Network Module	---	10	EA	\$ 1,269.34	\$ 12,693.40
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero-touch device deployment	---	10	EA	\$ -	\$ -
SFP-10G-LR-S=	-	10GBASE-LR SFP Module, Enterprise-Class	---	24	EA	\$ 724.28	\$ 17,382.72
SSD-240G=	-	Cisco pluggable USB3.0 SSD storage	---	2	EA	\$ 746.67	\$ 1,493.34
C9300X-48HXN-E	-	Catalyst 9300 48-port, 8xmGig+40x5G 90W UPOE+, Network Ess	---	4	EA	\$ 6,780.53	\$ 27,122.12
CON-SSSNT-C9300XP4	-	SOLN SUPP 8X5XNBD Catalyst 9300 48-port, 8xmGig+40x5G 90W	60	4	EA	\$ 4,659.44	\$ 18,637.76
C9300-DNA-E-48	Yes	C9300 DNA Essentials, 48-Port Term Licenses	---	4	EA	\$ -	\$ -
CON-SSTCM-C93E48	-	SOLN SUPP SW SUBC9300 DNA Essentials	60	4	EA	\$ 233.69	\$ 934.76
C9300-DNA-E-48-5Y	-	C9300 DNA Essentials, 48-Port, 5 Year Term License	60	4	EA	\$ 898.28	\$ 3,593.12
C9300-NW-E-48	Yes	C9300 Network Essentials, 48-port license	---	4	EA	\$ -	\$ -
SC9300UK9-1712	-	Cisco Catalyst 9300 XE 17.12 UNIVERSAL	---	4	EA	\$ -	\$ -
PWR-C1-1100WAC-P	-	1100W AC 80+ platinum Config 1 Power Supply	---	4	EA	\$ -	\$ -
PWR-C1-1100WAC-P/2	-	1100W AC 80+ platinum Config 1 Secondary Power Supply	---	4	EA	\$ 945.78	\$ 3,783.12
CAB-TA-NA	-	North America AC Type A Power Cable	---	8	EA	\$ -	\$ -
SSD-240G	-	Cisco pluggable USB3.0 SSD storage	---	4	EA	\$ 746.67	\$ 2,986.68
STACK-T1-50CM	-	50CM Type 1 Stacking Cable	---	4	EA	\$ 49.78	\$ 199.12
CAB-SPWR-30CM	-	Catalyst Stack Power Cable 30 CM	---	4	EA	\$ 47.30	\$ 189.20
C9K-ACC-RBFT	-	RUBBER FEET FOR TABLE TOP SETUP 9200 and 9300	---	4	EA	\$ -	\$ -
C9K-ACC-SCR-4	-	12-24 and 10-32 SCREWS FOR RACK INSTALLATION, QTY 4	---	4	EA	\$ -	\$ -
CAB-GUIDE-1RU	-	1RU CABLE MANAGEMENT GUIDES 9200 and 9300	---	4	EA	\$ -	\$ -
C9300X-NM-8Y	-	Catalyst 9300 8 x 10G/25G Network Module SFP+/SFP28	---	4	EA	\$ 1,269.34	\$ 5,077.36
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero-touch device deployment	---	4	EA	\$ -	\$ -
SFP-10G-LR-S=	-	10GBASE-LR SFP Module, Enterprise-Class	---	8	EA	\$ 724.28	\$ 5,794.24
AIR-MNT-ART1=	-	Vert. pole/wall mount Kit for Catalyst 9124AX w/ tilt adjust	---	10	EA	\$ 104.53	\$ 1,045.30
C9124AXD-B	-	Wi-Fi 6 Outdoor AP, Directional Ant, -B Regulatory Domain	---	10	EA	\$ 1,241.97	\$ 12,419.70
CON-SSSNT-C91B14XD	-	SOLN SUPP 8X5XNBD Wi-Fi 6 Outdoor AP, Directional Ant, -B	60	10	EA	\$ 524.01	\$ 5,240.10
NETWORK-PNP-LIC	Yes	Network Plug-n-Play Connect for zero-touch device deployment	---	10	EA	\$ -	\$ -

SW9124AX-CAPWAP-K9	-	Capwap software for Catalyst 9124AX	---	10	EA	\$ -	\$ -
CDNA-E-C9124	-	Wireless Cisco DNA On-Prem Essentials, 9124Tracking	---	10	EA	\$ -	\$ -
DNA-E-5Y-C9124	-	C9124AX Cisco DNA On-Prem Essential,5Y Term,Trk Lic	60	10	EA	\$ -	\$ -
AIR-DNA-E	-	Wireless Cisco DNA On-Prem Essential, Term Lic	---	10	EA	\$ -	\$ -
CON-SSTCM-AIRDNAE	-	SOLN SUPP SW SUBAironet CISCO DNA Es	60	10	EA	\$ 46.03	\$ 460.30
AIR-DNA-E-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term Lic	60	10	EA	\$ 180.14	\$ 1,801.40
AIR-DNA-E-T	Yes	Wireless Cisco DNA On-Prem Essential, Term, Tracker Lic	---	10	EA	\$ -	\$ -
AIR-DNA-E-T-5Y	-	Wireless Cisco DNA On-Prem Essential, 5Y Term, Tracker Lic	60	10	EA	\$ -	\$ -
AIR-DNA-NWSTACK-E	Yes	Wireless DNA Perpetual Network Stack - Essentials	---	10	EA	\$ -	\$ -
AIR-AP-NO-BRACKET	-	AP Bracket not shipped	---	10	EA	\$ -	\$ -
Total Environmental Fee						\$	-
Sub-Total						\$	633,885.33
Shipping						\$	-
Tax (7.75%)						\$	29,578.07
(BASIS OF AWARD) GRAND TOTAL (All Inclusive):						\$	663,463.40

BIDDER ACCEPTS RESPONSIBILITY FOR ACCURACY AND PRESENTATION OF THE ABOVE NUMBERS.

**The above quantities are for bidding pruposes only and are based on MTS' current usage. They represent what MTS anticipates as a requirement, but MTS does not guarantee this quantity. The actual quantity ordered may be more or less than what is anticipated on the pricing form, and it is dictated by MTS actual requirements and the available funding at the time each order is initiated.*



**Metropolitan
Transit
System**

Agenda Item No. 15

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

South Bay Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2
Design Services – Work Order Agreement

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Work Order WOA353-AE-51 under MTS Doc No. PWL353.0-22 (in substantially the same format as Attachment A), with Dokken Engineering (Dokken), in the amount of \$1,737,483.85 to provide engineering design services for Phase 2 of the SBMF electric bus charging infrastructure project.

Budget Impact

The total contract cost for this project is estimated to be \$1,737,483.85 (\$1,573,840.60 plus \$163,643.25 optional design service that may be executed at a later date). The project will be funded by the Capital Improvement Program (CIP) 1009125401– South Bay Division (SBD) Battery Electric Bus (BEB) Charging Phase II – Design.

DISCUSSION:

Under MTS's Zero Emission Bus (ZEB) Transition Plan, MTS is converting its bus fleet to ZEBs with a targeted completion date of 2040. Based on the state of technology in the bus manufacturing industry, the initial portion of the ZEB Transition Plan has focused on the purchase of Battery Electric Buses (BEB). The rollout in this BEB technology has been separated into several phases to accommodate budget limitations and provide for a measured roll out of required buses, charging infrastructure, and other facilities at each bus maintenance facility.

This work order relates to the second phase of charging infrastructure at the South Bay Maintenance Facility (SBMF). The first phase consisted of 24 dispensers, 12 chargers, overhead gantry for 24 dispensers, equipment on an adjacent grade-level island, and underground infrastructure for future additions. This second phase generally consists of installing new overhead structure, chargers and dispensers to support 82 new bus charging positions, 58 for 40' buses and 24 for 60' buses. Once the design is complete, construction will be separated into 3 distinct packages and spread over 5-7 years to align with the anticipated ZEB bus deliveries between FY 27 and FY 33.



Under the proposed work order, Dokken will provide engineering services to develop and refine the SBMF ZEB Master Plan conceptual plan into 100% construction plans, specifications, and cost estimates for the next 82 bus overhead charging positions. The work order includes the option to add design services at a future date for a backup generator, battery energy storage system, and photovoltaic system. Phase 1 included similar back up elements and the installation and testing of the phase 1 system is not yet complete. Staff will evaluate the efficacy of the phase 1 design prior to executing the design option for phase 2.

On September 15, 2021, MTS issued a solicitation for On-Call Architectural and Engineering (A&E) Design Services by requesting Statements of Qualifications (RFSQ) from firms with expertise in a variety of A&E design and related consulting services separated into the following three (3) categories:

- Category A: Comprehensive/Full Service - Five (5) prime contracts
- Category B: Small Business Set Aside- Three (3) prime contracts awarded to a certified Small Business (SB) or a Disadvantaged Business Enterprise (DBE) certified firm, (which is also considered to be a Small Business)
- Category C: Specialty Prime – Up to Five (5) specialty service contracts

As a result of the RFSQ, seven (7) firms were selected to perform various A&E services. For projects requiring A&E Services, work orders will be issued to these firms.

On October 18, 2024, MTS issued a Request for Proposals (RFP) to all firms in Categories A and B. On November 8, 2024, MTS received proposals from the following A&E firms:

Firm Name	Firm Certification
Dokken	None
Pacific Rail Enterprises, Inc.	Disadvantaged Business Enterprise (DBE)

An evaluation panel was comprised of MTS representatives, and the proposals were evaluated based on the following criteria.

Criteria	Points
Project Team	25
Project Team's Capabilities	30
Project Understanding and Approach	35
Schedule	10
Total Possible Score	100

On December 17, 2024, the selection committee evaluated the initial proposals and scored as follows:

Ranking	Proposer Name	Total Score
1	Dokken	84.33
2	Pacific Rail Enterprises, Inc.	77.33

As a result of the evaluations, Dokken was deemed to be the most qualified firm to perform the services. Dokken's initial proposed amount for the services was \$2,076,495.75. Through negotiations, staff was able to reduce the cost by \$339,011.90, a 19.51% savings to MTS.

MTS's Independent Cost Estimate (ICE) for the services was \$1,315,000.00. Based on the level of effort and proposed classifications, Dokken's final cost proposal in the amount of \$1,737,483.85 was determined to be fair and reasonable.

For this project Dokken will utilize the following subconsultant(s):

Subconsultant Name	Subconsultant Certification	Subconsultant Amount
Aguirre & Associates	Disadvantaged Business Enterprise (DBE)	\$38,645.10
Geocon Incorporated	None	\$43,647.70
WSP	None	\$1,211,870.76

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order WOA353-AE-51 under MTS Doc No. PWL353.0-22 (in substantially the same format as Attachment A), with Dokken, in the amount of \$1,737,483.85 to provide engineering design services for Phase 2 of the SBMF electric bus charging infrastructure project.

/S/ Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, Mark.Olson@sdmts.com

Attachment: A. Draft Work Order WOA353-AE-51



Metropolitan Transit System

May 15, 2025

MTS Doc. No. PWL353.0-22
WOA353-AE-51

Mr. John Klemunes, PE
Regional Manager
Dokken Engineering
1450 Frazee Road, Suite 100
San Diego, CA 92108

Dear Mr. Klemunes:

Subject: WORK ORDER WOA353-AE-51, TO MTS DOC. NO. PWL353.0-22, ENGINEERING SERVICES FOR SOUTH BAY MAINTENANCE FACILITY (SBMF) ZERO EMISSION BUS (ZEB) OVERHEAD CHARGING PHASE 2

This letter shall serve as Work Order WOA353-AE-51, under the General Engineering Consultant Agreement, MTS Doc. No. PWL353.0-22, as further described below.

SCOPE OF SERVICES

This Work Order shall provide design services South Bay Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 project in accordance with the attached Scope of Services (Attachments A and A1). Federal terms do apply.

SCHEDULE

The Scope of Services shall remain in effect for a period of one year (1) year from the date of the Notice to Proceed.

PAYMENT

Payment shall be in the amount of \$1,573,840.60. Payment shall be based on actual costs, and shall not be exceeded without prior authorization of MTS (Attachment B).



Please sign below, and return the document to the Contracts Specialist at MTS. All other terms and conditions shall remain the same and in effect.

Sincerely,

Accepted:

Sharon Cooney
Chief Executive Officer

John Klemunes, PE
Regional Manager, Dokken Engineering

Date: _____

Attachments: Attachment A, Scope of Services
Attachment A1, Consultant's Proposal
Attachment B, Negotiated Fee Proposal

DRAFT

ATTACHMENT A
SCOPE OF SERVICES

DRAFT

TITLE: South Bay Bus Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services **WOA #:** WOA353-AE-51

I. PROJECT DESCRIPTION

The San Diego Metropolitan Transit System, (referred to hereafter as “MTS”) seeks a proposal for consultant services for the schematic design, design development, and final engineering for phase 1 of the new Battery Electric Bus (BEB) infrastructure at MTS’s South Bay Bus Maintenance Facility (referred to hereafter as “SBMF”). The proposed infrastructure is the second phase of MTS’s Master plan to replace the existing Compressed Natural Gas (CNG) bus fleet with electric buses over the next 20 years. The first phase consisted of 24 dispensers, 12 chargers, overhead gantry for 24 max dispensers, equipment on an adjacent grade-level island, and underground infrastructure for this second phase. Substation A & B have been constructed, Substation B can support charging for 48 dispensers so Substation C will have to be installed on the existing island and Substation D will have to be installed on new island or on top of overhead gantry. This second phase generally consists of the following:

1. Buses need charging positions/dispensers consists of 1 40’ from FY24, 12 40’ in FY28, 5 60’ in FY29, 36 40’ in FY30, 9 60’ in FY30, 7 40’ in FY31 and 8 60’ in FY31. 56 total 40’ charging positions/dispensers and 22 total 60’ charging positions/dispensers. It is anticipated that bus deliveries will occur starting in December of each fiscal year.
2. Based on previous experience from phase 1, it is difficult to absorb operational impacts for constructing overhead gantry across more than 5 lanes, so the construction for this design will have to occur over 3 construction phases. Unfortunately, due to the bus delivery schedule it is anticipated that the first construction phase will have to span 6 lanes, but the second and third phases will span 5 lanes.
3. Phase II will consist of charging infrastructure and dispensers for 16 40’ buses and 12 60’ buses.
4. Phase III will consist of charging infrastructure and dispensers for 30 40’ buses.
5. Phase IV will consist of charging infrastructure and dispensers for 12 40’ buses and 12 60’ buses. The design will consist of the complete design of all 3 phases. The construction bid will be separated into three separate construction phases. Phasing plans will be developed by the Consultant.
6. Lane length and configuration are to match the existing layout and 40’ and 60’ dispensers can not be intermingled in each lane.
7. Each phase of construction must be fully completed prior to moving on to the next phase of construction.
8. A modular and scalable design
9. Provide for implementation without disruptions to current service.
10. Located east of and adjacent to the phase I overhead gantry. Existing island is to be utilized and MTS is open to having the equipment on future phases above the gantry if feasible.
11. 3:1 charging ratio, 180kW, depot-style piston down pantographs that offer sequential

charging, similar to the phase I install with Heliox/Schunk as the manufacturer or equal. Charging equipment will be CF/CI not OF/CI, but this may be subject to change.

12. Charging equipment is to tie into the BP Pulse Charge Management System.
13. Paving underneath the overhead gantry to be PCC paving.
14. Optional Task (included as Optional Task 6): Consultant shall provide additive/alternative pricing for the portion of the design that includes solar panels, battery energy storage system, and a backup generator that will be bid as an additive/alternate and shall tie into the microgrid system. Task 6 Base design shall include the necessary infrastructure and underground for the solar panels, battery energy storage system and backup generator so in the event that it is added after construction is complete or during the course of base contract design, excessive demolition will not be required or excessive re-design will not be required.
15. Design shall include considerations and necessary underground or stub-outs and vaults as needed for the next phase of construction.
16. Project is to meet Buy America requirements. Consultant is to specify only equipment that meets Buy America requirements. Specifications must list the requirements for contractors to submit Buy America certificates of compliance with each submittal, consultant is to support MTS with any additional coordination with FTA or internal Legal to determine paths for items that may not meet Buy America.

II. SCOPE OF WORK

The scope of work shall consist of the following tasks and deliverables:

TASK 1: PROJECT MANAGEMENT

1.1. Project Management

Consultant shall provide project management services that shall include monthly progress reports, invoicing and administration of the project. As part of this task the consultant shall be responsible to maintain schedule compliance of final deliverables for this task order. It is assumed there will be a 60%, 90%, and 100% plan submittal and review packages with MTS.

1. Provide project management services including the requirements for invoicing, scheduling, monthly project progress reports, and administration of the consultant's team.
2. Arrange and facilitate Project Development Team (PDT) meetings, interagency meetings, field reviews, and other project-related meetings. Consultant shall prepare meeting agendas, meeting minutes, necessary supplemental materials, and meeting sign-in sheets for all meetings.
3. Develop and implement a project schedule to complete the Scope of Work, and manage the project to eliminate or minimize supplemental agreements.
4. Provide coordination between MTS and outside agencies and stakeholders, this includes manage decision making and communication with MTS, community/agency stakeholder team, and the public.
5. Prepare monthly status reports and project schedules which are to be submitted with invoices. The status report must outline all activities for which charges have been made

by the Consultant or sub-Consultants. The Consultant shall prepare a draft status report and submit it for approval prior to submitting the first invoice.

6. Provide QA/QC on all deliverables. To ensure quality of work and compliance with the scope of work, the consultant shall perform a systematic in-house review of all documents produced prior to submittal. All reviewed documents shall have a check box or signature indicating a review has been performed.

1.2. Agency Coordination

1. Consultant shall provide all necessary coordination with outside agencies and key stakeholders as required for the design. This includes but isn't limited to San Diego Gas & Electric (SDG&E) and the City of Chula Vista. Consultant shall coordinate with MTS staff regarding ownership, easements, and joint-use agreements for any of the work. Permit through the San Diego County Air Quality Control Board is excluded from the base scope of services.
2. Consultant shall ensure all design elements meet the requirements of SDG&E and SDG&E Design Standards as well as submissions of drawings for SDG&E approval as required by SDG&E.
3. Collect all necessary as-builts from outside agencies required for the design.
4. Conduct initial site visits with MTS for review of project, confirmation of existing conditions, and examine existing environment, structures, and facilities.

1.3. Survey and Geotechnical Engineering During Design

1. Provide all necessary surveying and topographic mapping as needed, for use in the design of the site improvements. As-built topographic survey will be completed for the phase 1 design, topographic surveys for the project limits, and flown aerial topography for use with basefile development. CADD file containing 1 foot contours and major visible site items. Consultant will coordinate potholing for existing utilities. Scope includes pothole surveys. Consultant shall review and evaluate information for the proposed work area, including all available information and MTS design guidelines, local jurisdiction requirements, ADA standards and other pertinent information that may apply. Any survey after design or during the construction phase will be performed by the construction manager or contractor.
2. Provide all necessary geotechnical engineering as required for the design. Any geotechnical engineering, special inspection, observations, or recommendations required during the course of the construction will be performed by the construction manager and/or contractor. Consultant shall review all pertinent and available geotechnical literature including geotechnical reports, topographic maps, geologic maps and aerial photographs; perform 4 geotechnical field borings approximately 5 feet below the expected pier tip elevation, up to 30-ft in depth; and compile and analyze the data obtained; prepare a geotechnical memo. The geotechnical memo shall consist of a proposed pavement section, boring logs, and R-value test results. Consultant shall conduct R-Value testing and engineering analysis required to evaluate geotechnical parameters and develop a proposed pavement section.

3. Consultant shall provide environmental sampling in conjunction with the geotechnical evaluation. The environmental sampling shall consist of collecting twelve (12) total soil samples during manual advancement of the required borings at depths of 1, 3, and 5 feet below ground surface (bgs); submitting the soil samples, under chain-of-custody procedures, to a State of California certified laboratory for analysis of total petroleum hydrocarbons (TPH) extended range organics (TPH-ext) (C4-C40) utilizing EPA Method 8015B, volatile organic compounds (VOCs), including fuel oxygenates, utilizing EPA Method 8260B, and Title 22 Metals utilizing EPA Method 6010B/7471A; and preparing and submitting a technical memorandum summarizing the analytical results, including analytical data tables and figures. In the event that soil export is required, Consultant shall provide direction on the proper removal and disposal of the soil but would be the responsibility of a separate contractor to remove and dispose of any contaminated soil.
4. Consultant shall prepare a limited geotechnical report based on the design phase geotechnical explorations.

TASK 2: 60% CONSTRUCTION DOCUMENTS – SCHEMATIC DESIGN (SD)

The development of the 60% Construction Documents is to be based on the final conceptual plan developed during the programming/master plan development phase. The plans will be further refined through the design development of the following elements of work. This task assumes bi-weekly meetings will be held with MTS during this phase

2.1 Base Sheet & Topo Map

Consultant shall create a base file based on the topo survey and boundary developed in Task 1.3. This map will be located in real world coordinates and will include contours, structures, and available utilities.

2.2 60% Construction Documents - Schematic Design (SD)

Consultant shall develop and refine the master plan Phase 1 conceptual plan into a Schematic Design Site Plan for the site. Efforts include adjustments to the concept site backgrounds to fix misalignments / non-coplanar CAD data between the received different site as-builts to create an accurate aligned background suitable for a construction document level detail design background in both AutoCAD for Civil and Revit for the remainder of the disciplines. Creation of all discipline construction document plan sheets at 1"=40' scale (Architectural / General, Civil, Structural, Electrical, Equipment, Fire Protection). This task includes a detailed and dimensioned layout for the Phase 1 electric charging infrastructure location, ingress/egress, vehicular flow, proposed wet and dry utilities, grading, demolition, and future improvements. Inclusion of solar, on-site energy (battery) storage, charge management systems and on-site generation will be confirmed as part of this task. Inclusion of solar, on-site energy (battery) storage, charge management systems and on-site generation will be provided as an optional scope, listed below in Task 6.

Key decisions that need completion in 60% Construction Documents phase prior to the start of 90% Construction Documents include:

1. Confirm how final Bid Documents will be presented with the assumption that the project will be procured using design-bid-build delivery.
2. Document any bus charging systems components that will be included in the bid scope of work and any items that will be provided by MTS to the awarded contractor as either owner

furnished / owner installed or owner furnished / contractor installed items.

3. Confirm any long-lead times bid items that need to be developed separately and / or concurrently with the bid set.

2.3 General Outline Specifications

Consultant shall develop general-outline specifications highlighting the major components and identifying the general quality of the product.

2.4 Construction Cost Estimates

Consultant shall provide updated quantities and cost for the electrical, civil, structural, fire protection, and equipment components. This task includes generating new quantity takeoffs based on the more detailed 60% design from all the disciplines. Produce Class 3 Opinion of Probable cost.

TASK 3: 90% CONSTRUCTION DOCUMENTS - DESIGN DEVELOPMENT (DD)

The 90% Construction Documents design development will refine and further develop the design established during the 60% Construction Documents Schematic Design Phase. The main objective of the design development will be to fix (if necessary) and describe the civil, structural, electrical, fire, charging systems, and finalize design decisions. This task assumes bi-weekly meetings will be held with MTS during this phase.

Design Development Package: Consultant shall modify the schematic design plans at 1'=40" scale and create a design development package. This package will be the next iteration in design, conveying all key aspects of the design including the structural and electrical charging systems, in order to obtain MTS's acceptance of the design and form the basis for a further developed and refined cost estimate. The plans and specifications will be brought to a 90% level design and will introduce final design detail sheets for each of the disciplines described above. Details will be drawn at 1"=10' scale for clarity.

3.1. Electric Charging Equipment Plans

The type, quantity, location, and utility requirements of the electric charging equipment is critical to the design of the BEB facility. Consultant shall:

1. Develop initial charging equipment layouts that provide an efficient, cost effective, safe industrial workflow through the site.
2. Obtain brochures and cut sheets on charging equipment.
3. Review equipment list, cut sheets, and layout with MTS and design team to ensure that all electric charging requirements have been addressed.
4. Update electric charging equipment list to be consistent with layouts, facility design, and input received during the review session.
5. Identify unusual constraints including, but not limited to, specialized systems or equipment to be accommodated, construction access limitations, and work-around requirements.
6. Document MTS Operations preference for shared dispenser charging positions and order

of charging of specific dispensers in order to establish circuiting/wiring schematic from specific dispensers to specific chargers.

7. Update project quantities.
8. Develop utility requirements drawing(s) based on information developed with MTS. These will be drawn on a separate layer on AutoCAD and will include locations of SDG&E facilities and onsite private electrical needs.
9. Develop draft specifications for the proposed electric charging infrastructure items. Coordinate format with civil engineering specifications. These draft specifications are to be reviewed by the various design team disciplines during the construction document phase to insure coordination between disciplines.
10. Prepare a report outlining system selections, and design assumptions.

3.2. Electrical Plans

Consultant shall:

1. Attend up to eight (8) meetings and coordinate with SDG&E as requested by MTS to assist with the design for providing service to the property for the BEB charging stations. This includes providing SDG&E with design plans and infrastructure loads.
2. Electrical designers shall meet with MTS to confirm project goals, system performance expectations and standards to be implemented.
3. Evaluate application of national, state and local codes, and established technical standards, for their impact on the site and infrastructure design.
4. Identify the applicable code enforcement authorities and contact such authorities to discuss preliminary concepts; review applicable, regulations, codes, standards and guidelines; and identify particular concerns by the authorities.
5. Evaluate electrical system requirements including standby or emergency power; provisions for future electrical loads, provisions for voice/data communication systems, and wireless communication.
6. Prepare preliminary calculations for electrical service requirements, and panel distribution.
7. Prepare preliminary plans illustrating locations of utility connections, electrical service and panel locations, backup generator locations, and placement of electrical special system devices such as CCTV cameras and telecommunication outlets. This special system device locations will be coordinated with the appropriate MTS Department(s).
8. Electrical designers shall include convenience lighting on the structure and reviews its compatibility with the existing site lighting to ensure there are no issues with the safety and visibility during night operations.

3.3 Fire Protection

This project will require a building permit from the City of Chula Vista. As such, coordination and

compliance with the city's fire marshal, permit reviewers, building officials, etc. will be required.

1. It is assumed per NFPA that a sprinkler system will be required (in lieu of fire extinguishers) under the gantry. It is assumed the water service to the property has sufficient pressure to service the fire suppression system.
2. Consultant shall provide input necessary for the development of the construction cost estimate.
3. Consultant shall identify requirements for specialized fire projection, if any, and prepare draft specifications. Coordinate format with other disciplines.

3.4 Structural Plans

Consultant shall:

1. Develop design criteria for equipment and electrical distribution system dead loads based on equipment data and electrical design completed as part of this work phase.
2. Develop wind and seismic criteria based on local, state, and/or national codes.
3. Finalize layout and framing for the structure based on the approved schematic design.
4. Analyze and design structural elements including intermediate trusses (long-span joists), moment frames, and braced frames.
5. Based on current or recent geotechnical information, design foundations under structural columns.
6. Provide Revit drawings for all structural elements including plans, elevations, sections, and details. Coordinate base slab with new and existing site paving.
7. Develop preliminary technical specifications for structural materials and components.
8. Compute quantities of structural elements as input to the Design Development cost estimate.
9. Structural Assumptions and Exclusions:
 - Structural specific meetings are not anticipated with the City of Chula Vista. Calculations will be submitted, and one round of comments/resolution from the AHJ is assumed.
 - Construction administration scope is not included.
 - Seismic site hazards such as liquefaction and fault rupture are assumed to be not applicable.
 - Solar panel support framing is assumed to be delegated design, not included in this scope. Canopy design will include one typical attachment detail, and account for the structural load of the solar panels on the canopy structure.

- Access and cable bridges are assumed to be able to be framed with wide flange steel girders.
- Double columns are assumed to be used for the seismic joints at the cable and personnel bridges.

3.5 Civil Plans

Consultant shall:

1. Prepare site staging, laydown areas, and construction phasing plans to show how operations will be maintained during construction.
2. Prepare Site Demolition Plans. The demolition plan will include removal of existing pavement, utilities, and landscaping to the extent as identified by MTS.
3. Develop horizontal control, site plans, and details for striping, bollards, trenching pavement put back, PCC replacement of existing pavement fully within contractor on-site phased construction areas. The horizontal control plan will be prepared at 1"=20" scale for construction purposes to horizontally located the proposed columns, curbs, and water line location. It is assumed that new paving will be installed within the project limits where disturbed by the proposed construction and trenching.
4. Document site drainage flow with new islands and site equipment pads.
5. Prepare MTS PCSM stormwater documents.
6. Determine code compliance as it relates to the existing fire water service and to ensure there are no conflicts with proposed improvements. Fire water line may have to be redesigned and re-routed if there are any conflicts with proposed improvements.
7. Prepare on-site utility plans showing the proposed horizontal and vertical locations of proposed wet utilities within the project site (fire service or fire hydrant). Wet utilities assumed to be designed will be limited to Water (Fire). It is assumed existing utilities on-site will not require relocation in this first Phase

3.6 Technical Specifications

Prepare technical specifications for the final construction documents. As part of this task, the Consultant shall develop CSI format technical specifications based CALTRANS and APWA standard specifications. It is anticipated that a 100 percent Construction Documents (CDs) will be made to MTS and that comments will be received, log the comments, issue responses, and incorporate the comments into the final 100 percent Bid Documents.

3.7 Option of Probable Cost

Consultant shall provide updated quantities and cost for the civil, electrical, structural, fire protection, and equipment components. This task includes generating new quantity takeoffs based on the more detailed 90% design from all the disciplines. Produce Class 3 Opinion of Probable cost.

3.8 Design Development Quality Control

Consultant shall coordinate operational and equipment related functional requirements for human engineering and electrical/building systems and components including civil, structural,

mechanical, and electrical. Items to be addressed include:

- a. Modifications to the design due to Peer Review comments. Note that the extent of these modifications may require additional design fees, which are not included in the fee estimate.
- b. Structural details for frames, as needed.
- c. Charging equipment documentation and specifications will be reviewed by a qualified checker to confirm that the equipment will meet the requirements and needs of the project.

Review engineering (civil, structural, fire, electrical) design for compliance with the approved design criteria, and operational/maintenance concepts.

TASK 4: 100% CONSTRUCTION DOCUMENTS (CD)

Upon completion of the 90% Construction Document review period, the consultant shall have thoroughly reviewed the 90% Construction Documents and have prepared a key design/coordination issues, cost issues, and MTS feedback issues tracker. The major tasks arising out of the reviews will be to resolve and incorporate into the Project all agreed upon Design Development review comments and to establish a list of priorities and action items for the Construction Document Phase. Specific direction on Design Development issues for all disciplines will be critical to move into the Construction Document Phase.

The main objective of the Construction Document Phase is to prepare and issue construction document packages, 100% Bid Documents including plans, specifications and estimate, setting forth in detail the requirement for the project necessary for bidding, negotiating, contracting, and construction.

1. Consultant shall modify the design development plans at 1'=40" scale and prepare a final construction document package. This package shall include final construction drawings including details, specifications, and cost estimate for civil, electrical charging equipment, structural, and electrical service for the project. The plans will be brought to a 100% level design

4.1. Charging Equipment Plans:

The type, quantity, location, and utility requirements of the charging equipment are critical to the design of the BEB facility. Consultant shall:

1. Finalize charging equipment layout drawings based on the 90 percent plans reviewed with MTS. Layouts will be prepared on Revit files and AutoCAD background.
2. Provide brochures and cut sheets on charging equipment.
3. Finalize the charging equipment list to be consistent with BEB charging layouts, facility design, and input received during the review sessions with MTS.
4. Provide final charging equipment cost estimate.
5. Finalize utility requirements drawings based on information developed with the client.

These will be drawn on a separate view in Revit and will include electrical equipment locations.

6. Finalize specifications for charging equipment items. Coordinate format with other disciplines.
7. Finalize construction workaround plan.
8. Coordinate directly with charging equipment manufacturer Heliox or equal on the charging equipment design and requirements.

4.2. Structural Plans:

Consultant shall:

1. Finalize overhead frame structural criteria, and durability criteria.
2. Finalize layout and framing for the structure based on the approved schematic and design development designs.
3. Develop and design the overhead frame support columns to support the truss and support suspended pantograph and overhead power / data distribution systems, and coordination of connections of proposed framing system with electrical systems.
4. In coordination with the civil, electrical, finalize design of gravity framing members including columns, beams, equipment supports, seismic analysis.
5. Develop framing drawings showing layouts of areas and detail sizes and materials of the elements.
6. Based on current or recent geotechnical information, finalize the foundation design under structural columns.
7. Develop typical details as required to show the overall scope of work.
8. Advance the REVIT model and typical details and adjust the model to address MTS comments.
9. Provide input necessary to the development of construction cost estimate and to construction phasing and scheduling.
10. Finalize specifications. Coordinate format with other disciplines.
11. See Task 3 Structural Plans section for clarifications, assumptions, and exclusions.

4.3. Fire Protection

1. Consultant will address final comments from City of Chula Vista and/or MTS to finalize fire suppression system and design.
2. Consultant shall provide input necessary for the development of the construction cost estimate.

3. Consultant shall finalize specifications. Coordinate format with other disciplines.

4.4. Electrical Plans:

Consultant shall:

1. Finalize the development of drawings for the required electrical materials and equipment, including power, emergency/standby power, fire alarm system, and the electrical raceways for special devices. All SDG&E provided materials and equipment will be marked as such on the drawings.
2. Coordinate primary service requirements including the required underground feeders from the electrical service points to the pad mounted 4-way switches, service interrupters, and transformers. All SDG&E provided equipment and materials will be marked as such on the drawings.
3. Design the underground duct bank to serve all current and future project phases from the transformers to the Phase 1 Lot B work area. Three of the underground conduit feeds will be terminated in a new electrical manhole in the southern edge of Lot B. Three of the underground conduit feeds will terminate at the Switchboard #1, #2, and #6 locations. The required cables necessary to complete Phase 1 will be indicated on the drawings.
4. Design the underground duct bank, including pull boxes for future tie-ins, from all transformer locations to the existing generator and battery storage areas.
5. Finalize the locations of the switchboards, charging cabinets, and BEB equipment support island, and determine the appropriate cable routing between Switchboards #1-2 and the charging cabinets. Underground feeders and surface-mounted cables and wireways will be indicated on the drawings.
6. Design the requirements and layout of the power and communication cabling, wireway, and cable tray between the charging cabinets and overhead pantograph dispensers.
7. Coordinate site and facility lighting requirements for the work area. Lighting selection considerations will be given for visibility, efficiency, specialty accent, and site and task lighting. Lighting calculations will demonstrate compliance with CalGreen Code and California Title 24 energy code.
8. Calculate the size of the facility electrical service based on the new bus energy demand, size the incoming electrical service distribution equipment, and coordinate electrical panel size requirements. Calculations will be provided.
9. Finalize the electrical system requirements including standby or emergency power, provisions for future electrical loads or changes to the infrastructure configuration, fire alarm system, provisions for voice/data communication systems, and wireless communication.
10. Finalize the specifications and coordinate the format with other disciplines.
11. Provide input necessary for the development of the construction cost estimate.

4.5. On-Site Site Civil Improvements

Consultant shall prepare site civil plans to incorporate the new BEB site infrastructure. This includes minor drainage improvements, pavement removal and replace, concrete curb islands for the charging equipment, signing and striping, and minor water system improvements. Consultant shall also:

1. Finalize the demolition plan. The demolition plan will include removal of existing pavement, utilities, and landscaping to the extent as identified by MTS.
2. Finalize the a striping and signage plan at 1"=40' scale for the revised onsite bus lane configuration and parking lot. It will identify fire lanes, and other on-site striping.
3. Finalize on-site horizontal control and paving plans that will show the limits of proposed physical improvements, such as paving delineations, curb and gutter locations, and structural frame and column locations. The horizontal control plan will be prepared at 1"=20" scale for construction purposes to horizontally located the proposed columns, curbs, and water line location, if required. It is assumed that new paving will be installed within the project limits where disturbed by the proposed construction and trenching.
4. Finalize on-site utility plans showing the proposed horizontal and vertical relocations of proposed wet utilities within the project site (fire service). Wet Utilities assumed to be designed will be limited to Water (Fire) if there are conflicts with proposed improvements. It is assumed all other existing utilities on-site will not require relocation in this first phase, but there is an existing CNG line that transverses the first phase.
5. Finalize on-site utility plans showing the proposed horizontal and vertical locations of dry utilities running from the public right of way to the service points at the charging stations. Dry utilities will be limited to Electrical. It is assumed all existing utilities on-site other than Water (Fire) will not require relocation in this first Phase.
6. Finalize a construction laydown plan for use by the Contractor and MTS during construction. This will identify areas that the Contractor can use for materials and storage and will also show any areas that will need reconfigured for bus parking and PCC pavement replacement.

4.6. Technical Specifications

Upon completion of the 90% Construction Document review period, the consultant shall have Consultant shall finalize technical specifications for the final construction documents. It is anticipated that the 100 percent Construction Documents (CDs) will be made to MTS and that comments will be received, log the comments, issue responses and incorporate the comments into the final 100 percent Bid Documents.

4.7. Opinion of Probable Construction Cost

Consultant shall prepare a final Class 3 Opinion of Probable Cost based on the 100% Construction Documents.

4.8. Construction Document Quality Control – 100% CDs and 100% Bid Documents

Consultant shall provide quality control of the final construction documents. It is anticipated that the 100% Construction Documents (CDs) submittal will be made to MTS and that the consultant will receive comments on the submittals, log the comments, issue responses and incorporate the comments into the final 100% Bid Documents.

Consultant shall coordinate operational and equipment related functional requirements for human engineering and building systems and components including structural, and electrical. Items to be addressed include:

- a. Modifications to the design due to Value Engineering input. Note that the extent of these modifications may require additional design fees, which are not included in the fee estimate.
- b. Final coordination of all plan sheets.

Consultant shall review engineering (civil, structural, electrical) design for compliance with the approved design criteria, operational/maintenance concepts, and maintenance equipment requirements.

TASK 5: CONTRACT BID SUPPORT

5.1 Conformed Plans

Consultant shall prepare the conformed plans and specifications by incorporating any relevant construction contractor RFI's and bid addendum affective during the Bid Phase.

TASK 6: Power Back Up Plans, Specs and Estimate - Generator, PV and Bess (OPTIONAL)

Consultant shall provide final design services for the following additional items: Generator, Battery Energy Storage Systems (BESS) and Photo Voltaic (PV) system. As part of this task the consultant will be responsible for preparing plans, specifications and an estimate similar to, as describe above in task items 2, 3 4 & 5; 60%, 90%, and 100% project deliverables.

6.1 60%, 90% & 100% Deliverable: Generator, BESS & PV

WSP will provide mechanical, photo voltaic, and battery energy storage systems design for 60%, 90% and 100% project submittals (plans, specifications & estimate). This optional Task 6 and fee proposal is contingent upon these services being authorized no later than the notice to proceed of the construction contract of the first construction phase of the Phase 2 project, or no longer than 90 days following the submittal or Task 5 above, whichever is shorter. Should the contract authorization for the Optional Services be delayed, WSP reserves the right to amend our fee proposal.

III. PERIOD OF PERFORMANCE

This work order shall be for a period of three hundred sixty-five (365) calendar days from the date of the Notice to Proceed.

IV. DELIVERABLES

1. Monthly progress reports
2. 60% Construction Documents
 - a. Schematic Site Plan Design
 - b. General Outline Specifications
 - c. 60% Opinion of Probable Cost
 - d. Specification Table of Contents
3. 90% Design Package
 - a. 90% Construction Documents

- b. Draft Technical Specifications
 - c. 90% Opinion of Probable Cost
4. 100% Construction Documents
- a. 100% Construction Drawings
 - b. 100% Technical Specifications
 - c. 100% Opinion of Probable Cost

V. SCHEDULE OF SERVICES/MILESTONES/DELIVERABLES

A. Tasks Schedule

Task	Begin/End Dates
1. Project Management	NTP + 365 days
2. 60% Construction Documents	NTP + 120 days
3. 90% Construction Documents	NTP + 210 days
4. 100% Construction Documents	NTP + 270 days
5. Bid Support	NTP + 365 days

B. Milestones/Deliverables Schedule

Milestone/Deliverable	Due Date
1. Project Management	NTP + 365 days
2. 60% Construction Documents	NTP + 120 days
3. 90% Construction Documents	NTP + 210 days
4. 100% Construction Documents	NTP + 270 days
5. Bid Support	NTP + 365 days

VI. MATERIALS TO BE PROVIDED BY MTS AND/OR THE OTHER AGENCY

1. SBMF As-builts and related documentation.

VII. SPECIAL CONDITIONS

Any condition listed below applies solely to this Work Order and does not otherwise alter the Agreement or other Work Orders.

Not applicable

VIII. MTS ACCEPTANCE OF SERVICES:

Contractor shall not be compensated at any time for unauthorized work outside of this Work Order. Contractor shall provide notice to MTS' Project Manager upon 100% completion of this Work Order. Within five (5) business days from receipt of notice of Work Order completion, MTS' Project Manager shall review, for acceptance, the 100% completion notice. If Contractor provides final service(s) or final work product(s) which are found to be unacceptable due to Contractors and/or Contractors subcontractors negligence and thus not 100% complete by MTS' Project Manager, Contractor shall be required to make revisions to said service(s) and/or work product(s) within the Not to Exceed (NTE) Budget. MTS reserves the right to withhold payment associated with this Work Order until the Project Manager provides written acceptance for the 100% final completion notice. Moreover, 100% acceptance and final completion will be based on resolution of comments received to the draft documents and delivery of final documentation which shall incorporate all MTS revisions and comments.

Monthly progress payments shall be based on hours performed for each person/classification identified in the attached Fee Schedule and shall at no time exceed the NTE. Contractor shall only be compensated for actual performance of services and at no time shall be compensated for services for which MTS does not have an accepted deliverable or written proof and MTS acceptance of services performed.

IX. DEFICIENT WORK PRODUCT

Consistent with the Standard of Care, throughout the construction management and/or implementation phases associated with the services rendered by the Contractor, if MTS finds any work product provided by Contractor to be deficient and the deficiently delays any portion of the project, Contractor shall bear the full burden of their deficient work and shall be responsible for taking all corrective actions to remedy their deficient work product including but not limited to the following:

- Revising provided documents,

At no time will MTS be required to correct any portion of the Contractors deficient work product and shall bear no costs or burden associated with Contractors deficient performance and/or work product.

X. DELIVERABLE REQUIREMENTS

Contractor will be required to submit any and all documentation required by the Scope of Work. The deliverables furnished shall be of a quality acceptable to MTS. The criteria for acceptance shall be a product of neat appearance, well-organized, and procedurally, technically and grammatically correct. MTS reserves the right to request a change in the format if it doesn't satisfy MTS's needs. All work products will become the property of MTS. MTS reserves the right to disclose any reports or material provided by the Contractor to any third party.

Contractor shall provide with each task, a work plan showing the deliverables schedule as well as other relevant date needed for Contractor's work control, when and as requested by MTS.

Contractor's computer data processing and work processing capabilities and data storage should be compatible with Windows compatible PC's, text files readable in Microsoft Word, and standard and customary electronic storage. Contractor shall maintain backup copies of all data conveyed to MTS.

Contractor shall provide MTS with hard copy or electronic versions of reports and/or other material as requested by MTS.

XI. PRICING

Except where otherwise noted herein, pricing shall be firm and fixed for the duration of the Work Order and any subsequent Change Orders/Amendments to the Work Order. There shall be no escalation of rates or fees allowed.

XII. ADDITIONAL INFORMATION

List additional information as applicable to the specific Work Order scope of services.

XIII. PREVAILING WAGE

Prevailing wage rates apply to certain personnel for these services? ☒ Yes ☐ No

ATTACHMENT A1
CONSULTANT'S PROPOSAL

DRAFT



PROPOSAL

A&E MASTER AGREEMENT AWARDS FOR SOUTH BAY BUS MAINTENANCE FACILITY (SBMF) ZERO EMISSION BUS (ZEB) OVERHEAD CHARGING PHASE 2 DESIGN SERVICES – WOAXXX-AE-51

SUBMITTED TO:
STEVE AUGUSTYN
PROCUREMENT SPECIALIST
METROPOLITAN TRANSIT SYSTEM
1255 IMPERIAL AVENUE, SUITE 1000
SAN DIEGO, CA 92101



SUBMITTED BY: **Mark Tarrall, PE**
Project Manager
1450 Frazee Road, Suite 100
San Diego, CA 92108
(858) 514-8377
mtarrall@dokkenengineering.com



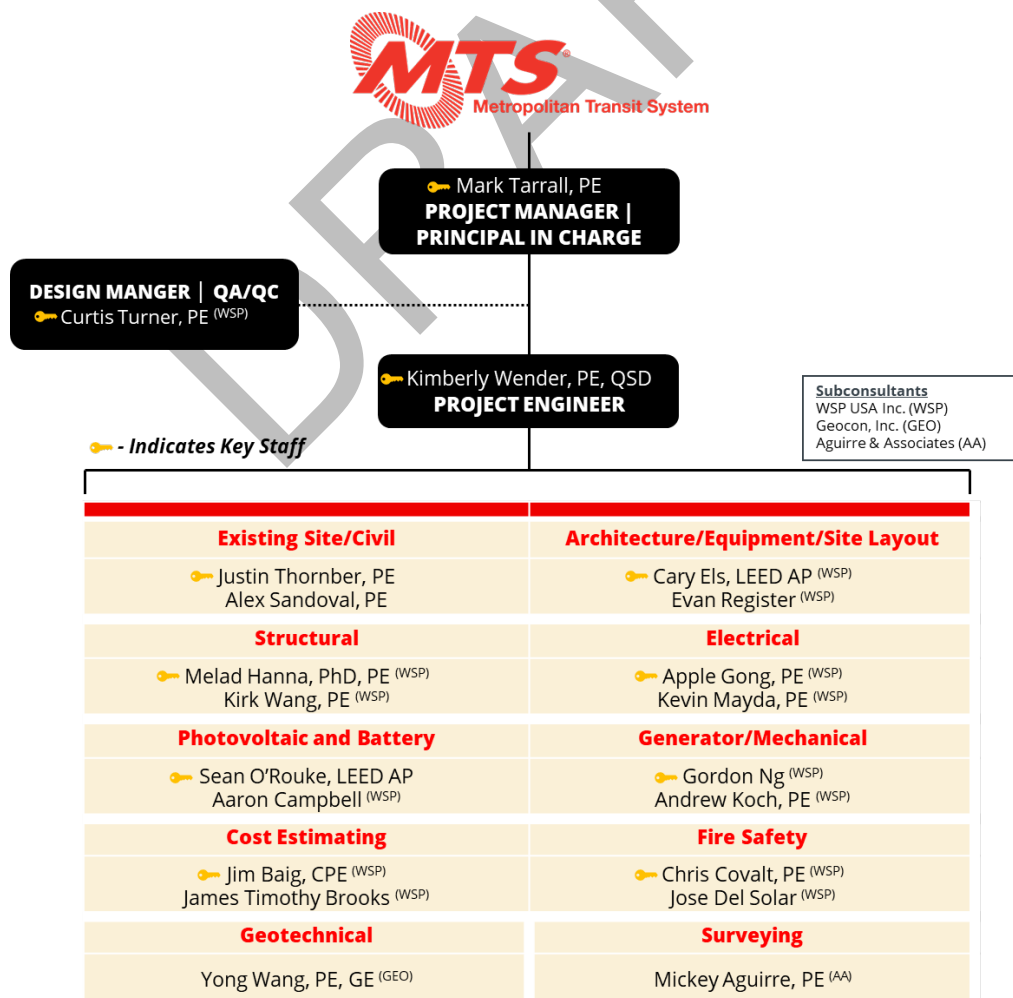
EXECUTIVE SUMMARY

The Dokken team appreciates the opportunity to continue being your trusted partner for the South Bay Bus Maintenance (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 project. As an extension of MTS staff on SBMF ZEB Overhead Charging Phase 1 project, we share MTS' enthusiasm for being the first transit agency in North America to construct this type of overhead charging infrastructure. We were honored to stand beside MTS staff to receive the Sustainable Project of the Year for both the San Diego Chapter of the American Society of Civil Engineers and the American Public Works Association. During Phase 1, our team had a deep understanding of MTS' need for future electrification on site and carefully planned the design and layout such that expansion of the charging system could be completed as additional battery electric buses are procured. Our intimate knowledge of the challenges associated with designing and building an overhead gantry with pantograph charging equipment, along with our intimate knowledge and understanding of the project site and operations at SBMF make our team uniquely qualified for this project.

1. Project Team

QUALIFICATIONS AND RELEVANT EXPERIENCE

Dokken Engineering has assembled a qualified team of engineers, technical experts and support staff who will support the delivery of the SBMF ZEB Overhead Charging Phase 2 project. Project Manager Mark Tarrall, PE, was the project manager for the SBMF ZEB Overhead Charging Phase 1 project and has over 25 years of providing civil engineering services and expertise in design and construction. Mark will serve as the principal contact for MTS and is committed to providing an exceptionally high level of customer service to MTS. Mark hand selected each team member for this project based on experience with similar ongoing and recently completed projects and availability to focus on this project. The qualifications that make our team uniquely suitable for this project are represented in the descriptions below. Detailed resumes of key staff are included in Exhibit A.



**Mark Tarrall, PE – Project Manager |**

Mark has 25 years of experience specializing in the management, permitting, and design of transportation-related projects, including local roadway, interchange, bike path, highway widening, and transit projects. He has extensive experience with transit infrastructure delivery and has coordinated and designed multiple MTS facilities.

**Curtis Turner, PE – Design Manager |**

Curtis has over 35 years of experience and excels in providing a quality product, managing consultants and staff, along with agencies coordination through the course of planning, design, and construction. His recent experience on ZEB project sites, incorporating lessons learned and providing design services during construction for SBMF-ZEB, will be beneficial in providing a master plan the owner expects.

**Kimberly Wender, PE – Project Engineer |**

Kimberly has a strong portfolio of transit facilities and public works projects, including mobility hubs, bus transit centers, bus rapid transit, bus stop engineering, and light rail stations. She has worked closely with multiple transit agencies, and the cities in which they operate, to provide safe, efficient, pedestrian, and rider-friendly facilities.

**Justin Thornber, PE – Existing Site/Civil |**

Justin has a demonstrated history of civil design excellence, specifically with roadway, ADA compliance, site development, mass/precise grading, and construction support. He is a member of ASCE and currently serves as the webmaster for the San Diego section. Mr. Thornber's recent relevant project experience includes SBMF ZEB, IAD ZEB, and Clean Transit Advancement Campus.

**Alex Sandoval, PE – Existing Site/Civil |**

Alex has provided support for large-scale transportation projects and has been involved with design and plan production for bikeway, LRT, drainage, traffic, street improvements, utilities, roadway design and retaining walls. Other experience includes earthwork, quantity calculations, and As-Built research. Alex has knowledge of civil engineering theories, principles, specifications, and standards.

**Cary Els – Facilities (Equipment) |**

As senior architect with the Fleet and Facilities division of WSP, some of Cary's principal responsibilities include transit facility planning, transit facility site planning with site selection and analysis, and equipment and process planning as focused on transit facilities. Previous professional experience has provided substantial insight into the design and construction processes.

**Evan Register – Facilities (Equipment) |**

Evan's experience includes facility conceptual designs, design criteria, detail design, specialty equipment selection and layout, and battery electric vehicles / zero emission vehicle systems. Evan has maintenance and operations facility experience throughout North America for a varied group of fleet operators. Battery electric buses and their associated charging equipment and infrastructure requirements are a primary focus.

**Melad Hanna, PhD, PE – Structural |**

Melad is a senior director and structural engineer with over 36 years of experience, specializing in transportation infrastructure projects. He has designed more than 200 bridges and structures, and his expertise includes major and minor structures, rehabilitation, and seismic retrofit design.

**Kirk Wang, PE – Structural |**

Kirk is a seasoned structural engineer with over 30 years of experience in designing and independently checking various transportation infrastructure projects, including highway and railroad bridges, pump stations, and retaining walls. He has been involved in the PS&E for over 100 bridges and has provided structural design and seismic rehabilitation for numerous transportation-related structures.

**Apple Gong, PE – Electrical |**

Apple Gong is a lead electrical engineer with design experience in electrical engineering design. During her time with WSP, she has gained tremendous experience and knowledge in the electrical vehicle charging infrastructure field. She has significant expertise in electric vehicle charging infrastructure, including the design and implementation of systems for both Level 2 and Level 3 fast chargers.



Kevin Mayda, PE – Electrical | Kevin is a highly skilled electrical engineer with a proven track record of successfully designing, verifying, and implementing engineering packages, calculations, and drawings for a variety of projects. These projects include power inverter replacement, turbine control upgrades, transformer feeder cable replacement, and vehicle charger installation.



Sean O'Rourke – Photo-Voltaic/BESS | Sean is an accomplished electrical engineer, specializing in electrical power distribution, lighting, low voltage communication structures, and renewable energy systems for large-scale infrastructure projects.



Aaron Campbell – Photo-Voltaic/BESS | Aaron Campbell is an electrical engineer with demonstrated experience in design and field inspection of electrical power systems up to 15kV. Aaron has developed designs for emergency power systems, tunnel and roadway lighting branch circuiting and control, low-voltage power distribution, and special systems.



Gordon Ng, PE – Mechanical | Gordon is a seasoned mechanical engineer specializing in the analysis, design, and operation of central utility systems for commercial, institutional, and industrial facilities. Experienced in developing design drawings and specifications, modeling systems, computer simulations, and providing construction administration services.



Jose Del Solar – Fire Safety | José is a lead mechanical engineer with over 20 years of experience in the analysis and design of ventilation systems and fixed-fire fighting systems for vehicular and transit tunnel systems. He specializes in the application of the Subway Environment Simulation (SES) and computational fluid dynamics (CFD) computer programs.



Mickey Aguirre, PE – Suveying | Mickey has 50 years of experience in managing, directing and performing civil engineering and land surveying tasks. His experience includes a broad range of projects, including rail and light rail, public works, residential, commercial, and other institutional projects. He has extensive experience with local agencies in San Diego County including MTS.



Andrew Koch, PE – Mechanical | Andrew is a seasoned Lead Mechanical Engineer with over eight years of experience, specializing in offshore substation mechanical systems, district energy plants, and MEP systems for industrial and commercial buildings. He is skilled in pipe stress analysis, hydraulic modeling, and CAD/BIM modeling, with a focus on emerging markets like offshore wind and hydrogen.



Jim Baig, CPE – Cost Estimating | Jim is a supervising estimator with over 41 years of experience in transit, aviation, bridges, highway, and building facilities. He has led major projects such as the Honolulu High Capacity Transit Corridor Project.



James Timothy Brooks – Cost Estimating | James (Timothy) is a supervising project estimator with extensive experience in designing, installing, testing, and estimating costs for complex communication and control systems. He has provided cost estimation of large-scale electrical and transportation projects, focusing on networks, safety, and power controls for passenger rail systems.



Chris Covalt, PE – Fire Safety | Chris has over 20 years' experience specializing in fire protection for electrification of facilities for electric vehicles and building assessment. Current projects have included South Dade Bus Maintenance Facility, Miami Dade County and Montgomery County Maryland EMTOC facility.



Yong Wang, PE, GE – Geotechnical | Yong specializes in geotechnical investigations, laboratory testing, and construction observation. He provides engineering analyses and geotechnical recommendations for bridge and power pole foundations, pipelines, retaining walls, pavements, slopes, dams, and shallow and deep foundations.



UNIQUE QUALIFICATIONS OF PROJECT PERSONNEL & TIME COMMITMENT TO PROJECT

A summary table of our key project personnel outlining each of their qualifications, years of experience, and relevant project experience is included on the following page. Full resumes of key staff are provided in Exhibit A detailing our team's qualifying experience.

KEY PERSONNEL ROLE	YEARS EXP.	EDUCATION/LICENSES	SIMILAR PROJECT PERFORMANCE	CURRENT COMMITMENTS	AVAILABILITY TO MTS
MARK TARRALL Project Manager	25 yrs	<ul style="list-style-type: none"> MSCE BSCE Professional Civil Engineer (CA) 	<ul style="list-style-type: none"> SBMF ZEB Concept Plan and Final Engineering IAD ZEB Concept Plan and Final Engineering CTAC Master Plan 	<ul style="list-style-type: none"> MTS As-Needed NCTD As-Needed Engineering Services Alvarado Canyon Road Realignment 	40%
CURTIS TURNER Design Manager	35 yrs	<ul style="list-style-type: none"> BSCE Professional Civil Engineer (CA) Professional Land Surveyor (CA) 	<ul style="list-style-type: none"> SBMF ZEB Concept Plan and Final Engineering IAD ZEB Concept Plan and Final Engineering Mid-Coast Light Rail Trolley Ext. 	<ul style="list-style-type: none"> SANDAG Otay Mesa POE 12th & Imperial Transit Center ECBMF Master Plan IAD DSDC Services 	30%
KIMBERLY WENDER Project Engineer	16 yrs	<ul style="list-style-type: none"> BSCE Professional Civil Engineer (CA) Qualified SWPPP Developer 	<ul style="list-style-type: none"> IAD ZEB Concept Plan and Final Engineering CTAC Master Plan MTS Bus Stop Improvements 	<ul style="list-style-type: none"> MTS As-Needed Alvarado Canyon Road Realignment La Jolla Improv 	50%
JUSTIN THORNER Existing Site/Civil	14 yrs	<ul style="list-style-type: none"> BSCE Professional Civil Engineer (CA) 	<ul style="list-style-type: none"> SBMF ZEB Concept Plan and Final Engineering IAD ZEB Concept Plan and Final Engineering CTAC Master Plan 	<ul style="list-style-type: none"> IAD ZEB Iris Rapid Corridor Circulation Improvements 	50%
CARY ELS Facilities (Equipment)	20 yrs	<ul style="list-style-type: none"> BA LEED Accredited Professional 	<ul style="list-style-type: none"> IAD ZEB Concept Plan and Final Engineering ECBMF 	<ul style="list-style-type: none"> MTS CTAC RTD Facilities Upgrades CDTA Albany & West Facilities 	65%
MELAD HANNA Structural	36 yrs	<ul style="list-style-type: none"> PhD Structures Mechanicus/Dynamics MSSE BSCE Professional Civil Engineer (CA) 	<ul style="list-style-type: none"> Orange Line Bus Rapid Transit Pasadena Metro Gold Line – Light Rail Project Maintenance Facility at Union Station 	<ul style="list-style-type: none"> I-105 Express Lanes Caltrans District 59 Corporate Product On-Call 	65%
APPLE GONG Electrical	8 yrs	<ul style="list-style-type: none"> BASC Electrical & Computer Engineering 	<ul style="list-style-type: none"> IAD ZEB Concept Plan and Final Design 	<ul style="list-style-type: none"> P859 – NAVFAC Fontana 1 Fontana 2 	10%
SEAN O'ROUKE Photo-Voltaic/BESS	24 yrs	<ul style="list-style-type: none"> BSEE LEED Accredited Professional 	<ul style="list-style-type: none"> San Diego MTS San Diego International Airport Consolidated Rental Car Facility On-call A&E Services 	<ul style="list-style-type: none"> Massport Shore Power Austin Airport Expansion Electrical SME WCAA Airport MEP OnCall 	20%
GORDON NG Mechanical	30 yrs	<ul style="list-style-type: none"> BSME 	<ul style="list-style-type: none"> SBMF ZEB Concept Plan and Final Engineering IAD ZEB Concept Plan and Final Engineering 	<ul style="list-style-type: none"> SacSewer Biogeneration Facility Columbia University Mudd Plant Piping Modifications 	30%
JIM BAIG Cost Estimating	41 yrs	<ul style="list-style-type: none"> BS Building Construction 	<ul style="list-style-type: none"> RTD ZE Transition CTAC Master Plan 	<ul style="list-style-type: none"> RTD ZE Transition 	40%
CHRIS COVALT Fire Safety	41 yrs	<ul style="list-style-type: none"> BSME Professional Engineer (FL) 	<ul style="list-style-type: none"> EMTOC DTPW Miami 	<ul style="list-style-type: none"> DTPW Miami 	35%

2. Project Team's Capabilities

MANAGEMENT, COORDINATION AND SCHEDULING ABILITIES

Mark Tarrall, the Dokken Team Project Manager, was the project manager for SBMF ZEB Overhead Charging Phase 1 project, making him uniquely qualified to lead and manage the team for this next phase. Mark's experience with the planning, design, and construction of Phase 1 reinforces his strong aptitude for project management and managing the three interdependent elements found in every project – scope, schedule, and budget. Mark will use his past experience and lessons learned from the previous phase to develop and implement the project controls plan for this project. The plan outlines the procedures for conducting work, managing project resources, and reporting project status and progress. The project management tools identified on the right ensure on-time and within budget project deliverables. Mark's proven project management style and philosophy guarantee that all project personnel, including MTS and the Dokken Engineering team, will be aware of the project status in order to make informed management decisions to successfully deliver the project.

Dokken Engineering prepares and maintains project schedules for every project. The schedules are monitored, and staffing is adjusted to meet milestones. Performance is monitored through quality control checks, review of actual versus planned progress, completion of action items prepared after meetings, monthly invoicing, and progress reporting. We will use MTS standards and formats, making invoice review streamlined and familiar to MTS.



Our project controls plan has proved successful project after project, including recent MTS projects South Bay Maintenance Facility ZEB Phase 1, Imperial Avenue Division ZEB Phase 1, and Clean Transit Advancement Campus.

Coordination

As an extension of MTS staff, Mark will use a suite of communication techniques to keep MTS informed and maintain the project schedule. The diagram below identifies the key communication methods to deliver this project for MTS.



Internal: Dokken Engineering has long-standing relationships with our subconsultants, and we have established communication protocols that all team members understand. We host weekly internal team conference calls to track progress and keep everyone current on project status and recent decisions that affect their awareness and productivity.

External: Our number one goal when working with our clients is successful project delivery. We identify risks early in the process and develop ways to mitigate these risks. We work closely with our clients to keep them informed on the status of their projects and any pending decisions, and we are extremely responsive to their needs.

Dokken Engineering takes pride in our ability to be highly communicative, proactive, and responsive to MTS' needs. With Mark serving as the team's project manager, MTS staff can be assured that there is no learning curve on this project and ultimately we will successfully deliver the next phase of this project.

OTHER ONGOING PROJECTS/COMMITMENTS AND STAFF AVAILABILITY

Our key team members were specifically selected not only for their technical abilities but also for their availability for this project. All staff listed on the organization chart had involvement with the SBMF ZEB Overhead Charging Phase 1 project and are committed and ready to work on the next phase. *The table on page 4 presents other ongoing projects/current commitments of our project personnel showing real availability and capacity to successfully deliver this project.*

QUALITY ASSURANCE AND QUALITY CONTROL

Our team is committed to deliver quality project documents for MTS that exceed the standards in the industry. For our team, quality is not just a priority—it is a core value. As prime consultant we also understand the importance of reviewing our subconsultant's work and cross-disciplinary reviews to meet all requirements of the work. Our QA/QC procedures are implemented in accordance with our scope of work and will be consistent with industry principles. The procedure will incorporate the approach of continuous review of products as they are developed and as a series of formal review procedures enacted in preparation of major deliverables. The policies and procedures will provide documentation that deliverables meet all requirements of the scope of work. The review of deliverables needed to satisfy the QA/QC procedure is built into our proposed schedule. The following flow chart outlines our QA/QC procedures:



We take quality very seriously. This team has worked on various ZEB projects for MTS and has streamlined our ability to follow processes that provide high quality deliverables. We use both SharePoint and Bluebeam Studio for comprehensive and collaborative documents, schedule interdisciplinary reviews amongst team members, and have regularly scheduled meetings with the design team. MTS can rest assured in the quality of our documents.



COST CONTROL MEASURES

We have found that the best way to control the budget is to ensure that the project schedule is followed. This method avoids costly overruns and extended production times. Similarly, the key to preserving budgets is to start on time, get it right, and submit the deliverable on time. Utilizing the same working group from SBMF ZEB Overhead Charging Phase 1 ensures consistent thought and engineering practice while eliminating wasteful hours spent “getting familiar” with this unique project. Each staff member working on the project has the project scope and assigned budget and schedule, so they are an integral part of the team and understand how their assignment fits into the overall project. This method has enabled our team to control costs by

engaging staff at all levels to prepare and deliver a quality project within the assigned budget. Our cost management is both simple and effective. Our team assesses the status of every project budget each month. We review the percentage of budget obligated versus the estimated work completed and schedule time elapsed. By completing this monthly, we are able to determine the overall project budget and schedule status and make adjustments as required.

STAFF AVAILABILITY/COMMITMENT TO PROJECT

In order to meet MTS's needs for this project, we have organized a team with a proven track record and availability to deliver the SBMF ZEB Overhead Charging Phase 2 project. The team was also developed to provide MTS the maximum flexibility possible in order to meet all of the contract's needs. As presented in the previous **Other On-Going Projects/Commitments and Staff Availability** section, our team has the capacity and availability to work and complete this project according to MTS's requested schedule.

PROJECT EXPERIENCE

Our team offers outstanding experience and technical competence to successfully deliver projects similar to the requirements of the SBMF ZEB Overhead Charging Phase 2 project, as shown in the following fact sheets.



In accordance with the California Air Resources Board (CARB) and the Innovative Clean Transit (ICT) regulation, the San Diego Metropolitan Transit Systems (MTS) has started paving the way for a transition to Zero Emission Buses (ZEBs) due to its commitment to continue providing safe, reliable transit service while also striving to improve air quality in the region. MTS's Zero-Emissions Bus Pilot Program has already

taken steps toward accomplishing the goals set forth in the ICT. The Dokken team developed a Master Plan that provided a template for charging 253 new ZEBs to be purchased in accordance with CARB requirements at the South Bay Maintenance Facility (SBMF) in Chula Vista, California, and to help MTS develop and implement a ZEB rollout plan (required by ICT) with MTS's next purchase of ZEBs. In addition, this project set the tone for future implementation of ZEB infrastructure at MTS's other bus facilities. For SBMF, MTS procured an initial 40-foot and 60-foot ZEB fleet of 24 buses in 2022. Beyond 2022, MTS will comply with state regulations requiring 25% ZEB purchases starting in 2023, transitioning to 50% at a later date.

The Dokken team first collected and reviewed existing documents provided by MTS that are pertinent to SBMF, including facility as-built drawings, facility's current bus parking layout, current circulation routes, historic electricity and gas usage information, and existing fleet inventory. After the existing documentation was reviewed, a ZEB checklist was developed to document key findings for both the existing facility and proposed on-site operations. Upon reviewing the existing operational and facility information with the documented understanding of MTS's preferred future ZEB operational needs and holding bi-weekly meetings with an in-person Concept Design Workshop with MTS, various master site layouts were developed around three (3) available charging technologies. The 3 charging technology options studied were induction, manual plug-in chargers, and automatic overhead charging.

Once the Preferred Master site plan (overhead charging infrastructure with a pantograph charging dispenser over each parking space) was selected by MTS, the phasing of the infrastructure was developed. The location was chosen to minimize disruption to the current operations and limit the capital expenditure needed on opening day. The phasing plan identifies how to accommodate the first 24 ZEB's scheduled to arrive in the near term of March 2022, and subsequent infrastructure phases based on MTS's bus procurement schedule.

Dokken provided final engineering services for Phase 1 including detailed drawings, specification and estimates. Construction was completed in 2023.

This project is the first of its kind in North America, earning MTS the American Public Works Association (APWA) Sustainable Project of the Year Award and the American Society of Civil Engineers (ASCE) Outstanding Sustainable Engineering Project Award.

SOUTH BAY MAINTENANCE FACILITY ZERO EMISSION BUS MASTER PLAN AND PHASE 1 Chula Vista, CA

CLIENT:

Metropolitan Transit System
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101

REFERENCE:

Heather Furey
(619) 557-4588
Heather.furey@sdmts.com

AWARDS:

- APWA San Diego Sustainable Project of the Year 2024
- ASCE San Diego Outstanding Sustainable Engineering Project 2024

SCOPE OF SERVICES:

- Utility coordination
- Master Planning
- Zero emission infrastructure and equipment layout and specification
- Multi-stage phasing
- Concept design
- Electrical load design
- Electrical utility consultations
- Final Plans, Specifications, Estimates





IMPERIAL AVENUE MAINTENANCE FACILITY ZERO EMISSION BUS MASTER PLAN AND PHASE 1 San Diego, CA

CLIENT:

Metropolitan Transit System
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101

REFERENCE:

Heather Furey
(619) 557-4588
Heather.furey@sdmts.com

SCOPE OF SERVICES:

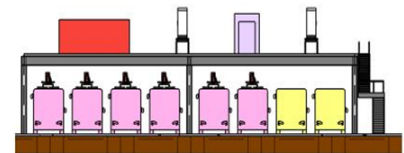
- Utility coordination
- Master Planning
- Zero emission infrastructure and equipment layout and specification
- Multi-stage phasing
- Concept design
- Electrical load design
- Electrical utility consultations
- Final Plans, Specifications, Estimates

The Dokken Team developed a Master Plan with a template for charging 130 new ZEBs to be purchased in accordance with CARB requirements at the Imperial Avenue Maintenance Facility (IAD) in San Diego, California, and to help MTS develop and implement a ZEB rollout plan (required by ICT) with MTS's next purchase of ZEBs.

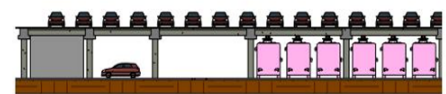
The first step was to collect and review existing documents provided by MTS that were pertinent to IAD, including facility as-built drawings, facility's current bus parking layout, current circulation routes, historic electricity and gas usage information, and existing fleet Inventory. After the existing documentation was reviewed, a ZEB checklist was developed to document key findings for both the existing facility and proposed on-site operations. An in-person site tour was conducted to acquire missing data not ascertainable from the received existing condition documentation and previous operational discussions.

Upon reviewing the existing operational and facility information with the documented understanding of MTS's preferred future ZEB operational needs and holding bi-weekly meetings with an in-person Concept Design Workshop with MTS, various master site layouts were developed around the selected charging infrastructure for IAD – overhead charging via depot pantograph. The master plan considered various options for various areas of the lot, as well as types of charging infrastructure, primarily:

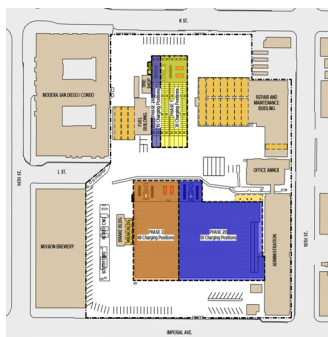
- Location of the medium voltage switchgear / utility entrance (L street vs K Street)
- Location of charging cabinets (elevated curb vs on top of overhead structure)
- Charging system infrastructure (Individual charging cabinets with transformers and low voltage distribution vs "big box, all-in-one" charging cabinets.)
- In the South Lot, use of an overhead steel structure or new concrete parking deck for employee parking to be above the level of bus parking.



North Lot Elevation - Overhead Steel Structure



South Lot Elevation - Parking Deck - Eastern Side



Once the Preferred Master site plan (Medium voltage switchgear at K street, charging cabinets on top of structure in the north and south lots, design around individual cabinets, and concrete parking deck in the south lot) was selected by MTS, the phasing of the infrastructure was developed. The location was chosen to minimize disruption to the current operations and limit the capital expenditure needed on opening day.

Dokken provided final engineering services for Phase 1 with construction anticipated to begin in spring 2025.



MTS currently performs bus maintenance services at five divisions within San Diego County. With anticipated ridership growth and bus fleet electrification, all divisions are constrained. The Dokken Team developed a Master Plan to construct a new bus maintenance division (referred to hereafter as Clean Transit Advancement Campus (CTAC)) located north of Federal Boulevard at the intersection with 47th Street. It is anticipated that the CTAC site will have the same operation and maintenance functions as other MTS bus maintenance facilities and will house 200-250 buses. However, CTAC will be *100% Zero Emission*; there will be no compressed natural gas (CNG) fueling at this site.

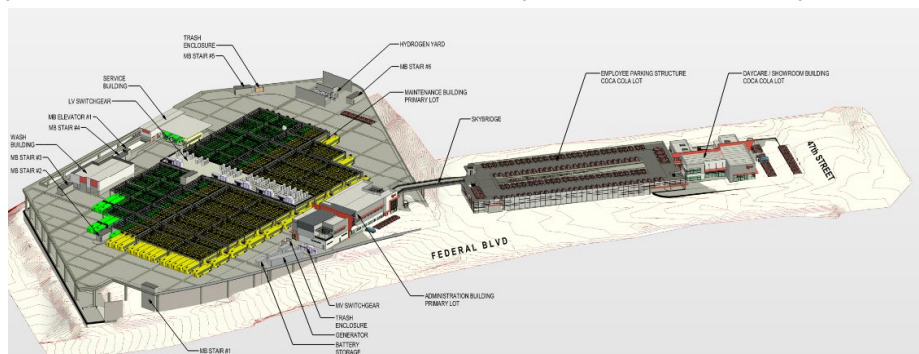
Dokken Engineering is providing engineering design services for various phases of the project; master plan, programming, and 15% Schematic Design.

The master plan included a feasibility analysis of the proposed CTAC improvements. The Dokken Team developed the plan that provided a template for charging/fueling 200 to 250 new ZEBs to be purchased in accordance with CARB requirements at the potential Clean Transit Advancement Campus (CTAC) in San Diego, California and to help MTS develop and implement a ZEB rollout plan (required by ICT) with MTS's future purchase of ZEBs.

As part of the master plan, the first step was to perform an existing conditions analysis and field reconnaissance for site selection. The next step was to determine and define any needs for the new facility. The needs were defined as providing Administration offices and functions, Operations Areas and Functions, Vehicle Maintenance Facility, Battery Electric Bus Charging Infrastructure, Hydrogen Vehicle Fueling Infrastructure, Vehicle Washing Facilities, Agency Vehicle Parking and Employee Parking Structure, Employee/Visitor parking, Personnel Training and Clean Technology Learning Center, Daycare Center, and minimize the amount of dirt removal from the site for construction.

Following the master plan phase, the design team conducting multiple workshops with MTS staff to establish detailed design requirements, including space program and functional needs. The final programming document outlines the decisions made during the workshops, administrative and maintenance needs/requirements, and code requirements and served as the basis of design for the 15% Schematic design phase.

The 15% Schematic Design phase was completed in Fall of 2024 and included 15% Schematic Plans, Final Design Criteria, Basis of Estimate and Cost Estimate.



CLEAN TRANSIT ADVANCEMENT CAMPUS (CTAC) San Diego, CA

CLIENT:

Metropolitan Transit System
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101

REFERENCE:

Heather Furey
(619) 557-4588
Heather.furey@sdmts.com

SCOPE OF SERVICES:

- Easement coordination
- Master planning
- Zero emission infrastructure and equipment layout
- Concept design
- Electrical load design
- Cost estimate



Following the success of WSP's system wide Battery Electric Bus (BEB) feasibility study, MBTA re-selected WSP to perform the final design to convert their existing North Cambridge bus facility to allow for parking and overnight depot charging of BEBs.

The project accommodates approximately 30 exterior BEB charging positions with DC charging cabinets, pantographs and a gantry support system for the pantographs. Interior plug-in DC chargers are provided in the maintenance building for additional charging convenience.

Notably, the project included a computational fluid dynamics (CFD) study for the interior and exterior that explored the possibility of fire spread among the BEBs in the event of a BEB thermal runaway, potential effects to the surrounding area, identified distances of concern, and provided recommendations for potential safety systems that may protect both life and property. Recommended safety measures were evaluated by MBTA and WSP for practical application, feasibility, and effectiveness. This resulted in the inclusion of a dry-pipe water deluge sprinkler system for the exterior BEB parking yard, additional sprinkler system for the interior of the bus maintenance facility, and heat sensing camera monitoring system that oversees the BEB parking area.

Additionally, the study for MBTA lead to additional internal research by WSP's fire and life safety professionals that resulted in the ASHRAE published report "Investigation of Fire Hazard Mitigation, Control and Ventilation for Battery Electric Bus Fire in Enclosed Vehicular Facility" (Raza, Connel, Del Solar, et. all, 2024). This publicly available document offers foundational research which backs recommendations for facility types common in the bus transportation industry.

The facility was formerly used for catenary trolley vehicles, and has exterior vehicle parking, and included a small maintenance facility with vehicle bays. The site itself is small and oddly shaped, presenting difficulties in exploring practical options for BEB parking. Adjacent properties include residential, further stressing the desire for on-site safety systems. The property also has an adjacent easement for MBTA's subway system, which required modified structural solutions for the gantry system supporting the charging pantographs. Some specifics include new electrical service with switchgear, dry pipe water deluge system with new fire pump building, fire resistance modifications to existing building, heat sensing camera system, and integration with existing SCADA system.

Given the age of the North Cambridge site, its previous use for catenary vehicles, the compact, irregular shape of the site, and immediate adjacent properties, the facility is not suited for easy adaption to service BEBs. Research and examination of new electrical service and a potential secondary redundant electrical service was necessary. Exploration of various safety systems and their suitability to greatly mitigate the potential dangers posed by BEBs at this specific site was required. Potential interference as well as communication through MBTA's existing SCADA system had to be investigated and solutions offered. Solutions to mitigate effects of exterior charging and cold weather impacts to overhead pantographs were needed. Available site space and on-site operations required a fresh look as the inclusion of additional electrical infrastructure and sprinkler water infrastructure would be needed. All of these requirements resulted in significant investigation, study, and decision making prior to commencement of a final design, while also presenting issues and discussing potential solutions to a wider stake-holder audience.

NORTH CAMBRIDGE FACILITY MODIFICATIONS FOR BEB Cambridge, MA

CLIENT:

Massachusetts Bay Transportation
Authority (MBTA)
10 Park Plaza
Boston, MA 02116

REFERENCE:

Gregory McNally
(857) 406-0085
gmcnally@mbta.com

SCOPE OF SERVICES:

- Existing Facility Review to Accommodate BEBs
- Detail Designs, including Construction Documents and Specifications
- Computational Fluid Dynamics Modeling
- Safety Systems Development, Review and Coordination
- Review and Coordination with Local Officials
- BEB Charging Technology Review
- Cost estimates

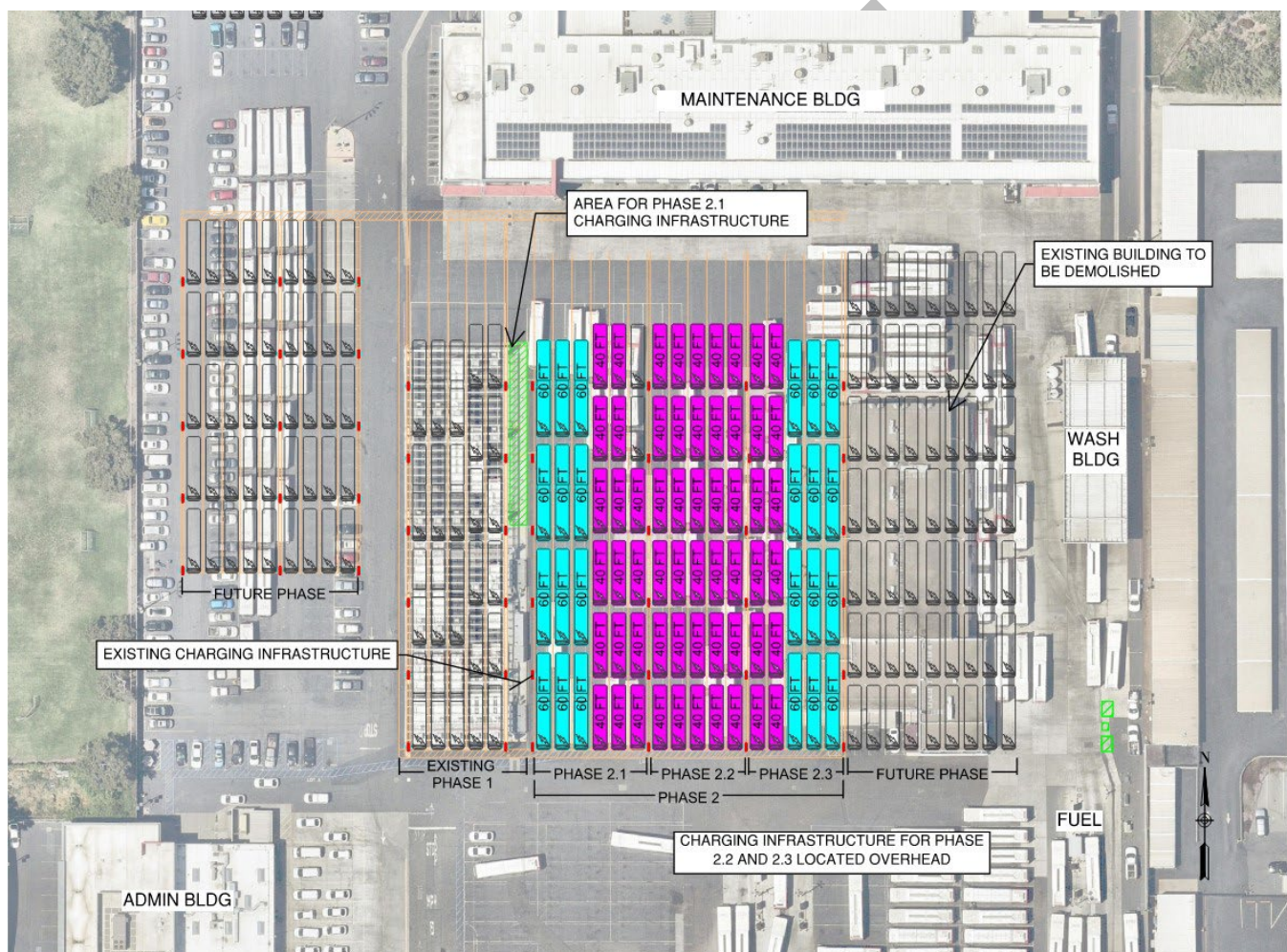


3. Project Understanding and Approach

In compliance with the Innovative Clean Transit regulation adopted by the California Air Resources Board, MTS seeks to further expand their BEB fleet at SBMF. The Dokken team worked alongside MTS staff for the master plan, design, and construction for the SBMF ZEB Overhead Charging Phase 1 project. During Phase 1, our team had a deep understanding of MTS' need for future electrification on site and carefully planned the design and layout such that expansion of the charging system could be completed as additional battery electric buses are procured. Our detailed project understanding and approach below will demonstrate our team's institutional knowledge, memories, and documents that provide a deep understanding of this next phase of work – there is no learning curve for our team on this next phase.

3A. DEMONSTRATE KNOWLEDGE OF THE WORK REQUIRED

The Dokken team understands the unique site operations at SBMF resulting in the need to implement the next phase of this project in 3 Construction Phases to limit impacts to circulation, service, and personnel. The following exhibit illustrates our understanding for implementation of the next three phases at SBMF.



The exhibit above shows the 6 lanes in Phase 2.1, 5 lanes in Phase 2.2, and 5 lanes in Phase 2.3 as outlined in the RFP. Based on our experience in Phase 1, our team will work closely with MTS for the bus configurations and find opportunities to improve efficiency to achieve MTS' goals. It is understood that the existing building to the east will be demolished as part of a design build project with MTS. The removal of the building provides the required space for the overhead infrastructure and required circulation.

Electrical Infrastructure

The existing sub-station was designed to accommodate most, but not all, of the new bus charging positions requested. Our team will perform final engineering analysis to understand the built-in spare capacity available. Based on our knowledge of the existing sub-station, it is likely that a new substation would be needed within phase 2.3.

Similarly, the existing island housing electrical equipment was designed and constructed to accommodate some, but not all, of the new charging cabinets and infrastructure for this phase. Our team will maximize the use of the existing island then discuss with MTS the desire to locate the equipment on an overhead deck above the bus charging, similar to the solution we helped develop for the Imperial Avenue Division ZEB Overhead Charging Phase 1 project.



Structural Connections

Considering the potential strategy of adding electrical infrastructure above the bus parking, along with the concrete decking for support, we have the opportunity to connect the overhead canopy of Phase 2.1 with 2.2, and similarly 2.2 with 2.3 – utilizing one set of columns for each sub-phase. By reducing the number of columns, we reduce the overall project footprint – helping to maintain MTS operations to this active project site. While subject to final structural engineering analysis, this forward thinking demonstrates both our familiarity with the site and our ability to quickly and efficiently find realistic alternative solutions to benefit the project.



Fire Suppression

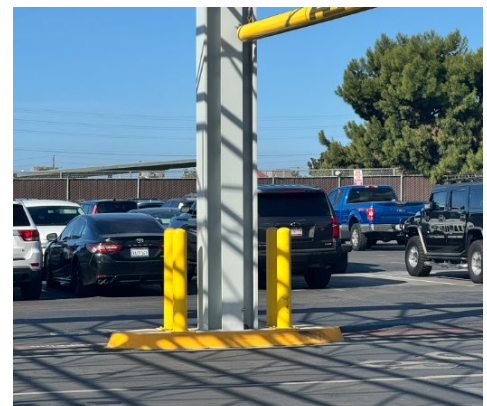
Since the initial implementation of Phase 1, part of the Dokken Team's developing recommendations for battery electric buses utilizing lithium ion batteries is to incorporate overhead sprinkler systems for the protection of life and property. This comes as a result of significant research on our part as well as lessons learned from BEB incidents which have occurred both in North America and Europe. Our research indicates deployment of these sprinklers, while likely insufficient to extinguish BEB fires by themselves, will be very effective in keeping ambient temperatures down to better prevent the further spread of a BEB fire, thereby potentially damaging other buses or structures. We believe this can be incorporated into this phase and potentially the previously built phase as part of this scope of work, if MTS desires. This can potentially work concurrently and in synch with other fire and life safety investigations MTS may be performing.

Rigid Pavement and Grade Differential

Rigid pavement will be installed beneath the new overhead gantry, within the bus parking areas. Pavement replacement during this project allows for even grading beneath the gantry, ultimately providing better connection and tolerance for the pantographs. Rigid pavement also has a longer lifespan, reducing outage of charging during pavement replacement activities. Our team made this recommendation to MTS during the Imperial Avenue Division ZEB Overhead Charging Phase 1 project.

Bollard Placement

Although our team has successfully delivered final design for the SBMF Phase 1 and IAD Phase 1, we are always striving to improve our design as we deliver these groundbreaking and innovative projects. We pay attention to the smallest of details and incorporate lessons learned into our future designs. An example of this type of small detail is bollard placement. During the SBMF Phase 1 project, the elevation of the tie beams had to be raised due to an unforeseen conflict, which inadvertently created an issue with placement of bollards to protect the columns. Although we were able to adjust in the field and develop a spread footing detail to alleviate the issue, we did not want to encounter the same issue on future projects. We



incorporated this lesson into the design at IAD and developed a bollard placement detail that was able to be merged with the design of the tie beams and will be able to be constructed seamlessly.

City of Chula Vista Permitting

Our team has experience permitting projects with the City of Chula Vista. During SBMF Phase 1, the team obtained a building permit through the City for the project. Based on our experience from Phase 1, our team understands we will be submitting plans through the City's Development Services group. Similar to Phase 1, we will meet with the head of Development Services to describe the project and buy-in for the various discipline/department reviews and approvals. We anticipate the following departments will review the plans: Building, Planning, Fire Department, and Engineering – including Structural, Electrical, Accessibility, and Architectural and Engineering.

It will be important to review the latest adopted CBC during the permitting phase to confirm the overhead gantry still classifies as Type 1 construction. Based on our teams extensive work in this field, we understand this classification is likely to be updated in 2025 or subsequent publications.



Stormwater

This project will require a post construction stormwater management plan to comply with MTS' Phase 2 MS4. Our team anticipates existing treatment BMPs on-site will comply with permit requirements. We also anticipate the City of Chula Vista requesting completion of their own Stormwater Applicability Checklist as part of their permit review process. A water pollution control plan for BMPs during construction will be required. As such, our team will incorporate temporary BMPs and stormwater requirements into the construction bid documents.

Buy America Requirements

Our team has experience with federally funded projects and meeting Buy America requirements. If the project is federally funded, our team will be able to incorporate these requirements into the construction bid documents, similar to our on-going efforts on the Imperial Avenue Division ZEB Overhead Charging Phase 1 project.



Existing On-Site Utilities

This unique project requires a comprehensive understanding of the existing conditions of the site, both above and below ground. Based on our record research during Phase 1, we understand there are existing utilities that are likely to be in conflict with our project. Early in the project design phase, our team will develop a potholing exhibit to verify all existing utility types, sizes, horizontal and vertical locations to understand what conflicts, if any, exist and develop a relocation strategy or redesign early in the project. Potholing during the design phase and confirming during construction helps to reduce surprises during construction and avoids costly redesign.

3B. EXPLANATION OF THE PROJECT/SERVICES REQUIRED

The previous section outlines, in detail, our teams comprehensive understanding of the project and the services required. The Dokken team appreciates the detailed scope that was prepared for the RFP and takes no exception to scope of work.

3C. INNOVATIVE APPROACH AND INTERNAL MEASURES FOR TIMELY COMPLETION

Throughout the Dokken Team's approach, we have identified unique aspects of the project and, based on our experience and history with similar projects – specifically the 1st phase of SBMF ZEB Electrification project - have developed the following innovative solutions:

- Fire suppression requirements for Lithium-Ion Chemistry Battery Electric Bus vehicles are currently a subject of significant interest in the industry given fairly recent events in Connecticut and other locations, as well as APTA's follow-up discussions held for the industry at large. While at this time of this writing there is no adopted code that specifically addresses the issue, it is the Dokken team's opinion that industry consensus is slowly developing

and will likely continue to evolve. The Dokken team has found that solutions relating to precisely located sprinkler and water deluge systems and bus movement protocols may work during a thermal runaway event, it is early detection from smoke, thermal imaging and/or battery off-gassing that will likely be key to prevent further development of an incident. Additionally, isolation of vehicles that have either had a thermal runaway event or vehicles anticipated to have a thermal runaway event is a critical method of prevention. The Dokken team continues to investigate BEB fire suppression and issues related to it to form and update recommended best practices, especially how they can be implemented in any master plan.

- To the Dokken Team's knowledge, the 2024 Model International Building Code (IBC) is scheduled to be adopted by the State of California in the first quarter of 2025 as part of the California Building Standards Code. The 2024 IBC is the first code that specifically addresses facilities for the maintenance and repair of vehicles with lithium metal battery chemistries. These requirements will likely impose some interrelated restrictions on overall size, configuration, construction materials, and potentially the presence of sprinklers. The Dokken Team has researched potential impacts of this code and has potential strategies to properly address it.
- From various project experience, the Dokken Team has noticed that charging indicator light placement on the DC outlet boxes attached to charging pantographs is typically not well positioned for drivers and personnel. We've developed two strategies to address this: inclusion of a secondary charging indicator light, or in-filed modification of the placement of the DC outlet box.
- A lesson learned from the South Bay Phase 1 is the inclusion of headache bars at the entry to each bus lane. These bars are mounted so that the bottom of the bar is slightly below the bottom of the raised pantograph. This keeps a bus from potentially damaging a raised pantograph by effectively prohibiting it from entering the lane.
- For any exterior steel structure, it is the Dokken Team's preference and recommendation to utilize hot-dipped galvanized steel for long-term corrosion protection. This will be specified as occurring prior to delivery of the steel to the site to maximize potential efficiency in delivery and installation. In lieu of that our secondary recommendation is for a zinc rich primer and protective topcoats. All of this will be clearly detailed within our drawings and specifications to avoid potential RFIs and unexpected costs.
- WSP, sub-consultant to Dokken, utilizes an internal Team site for all things related to zero emissions transit vehicles. It elicits and encourages participation from a variety of industry professionals across the United States, including engineers, transit planners, industrial design specialists, and from transit agency employees. This allows the Dokken Team to seek advice and perspectives from a variety of backgrounds and integrate them into an overall response or approach when needed.



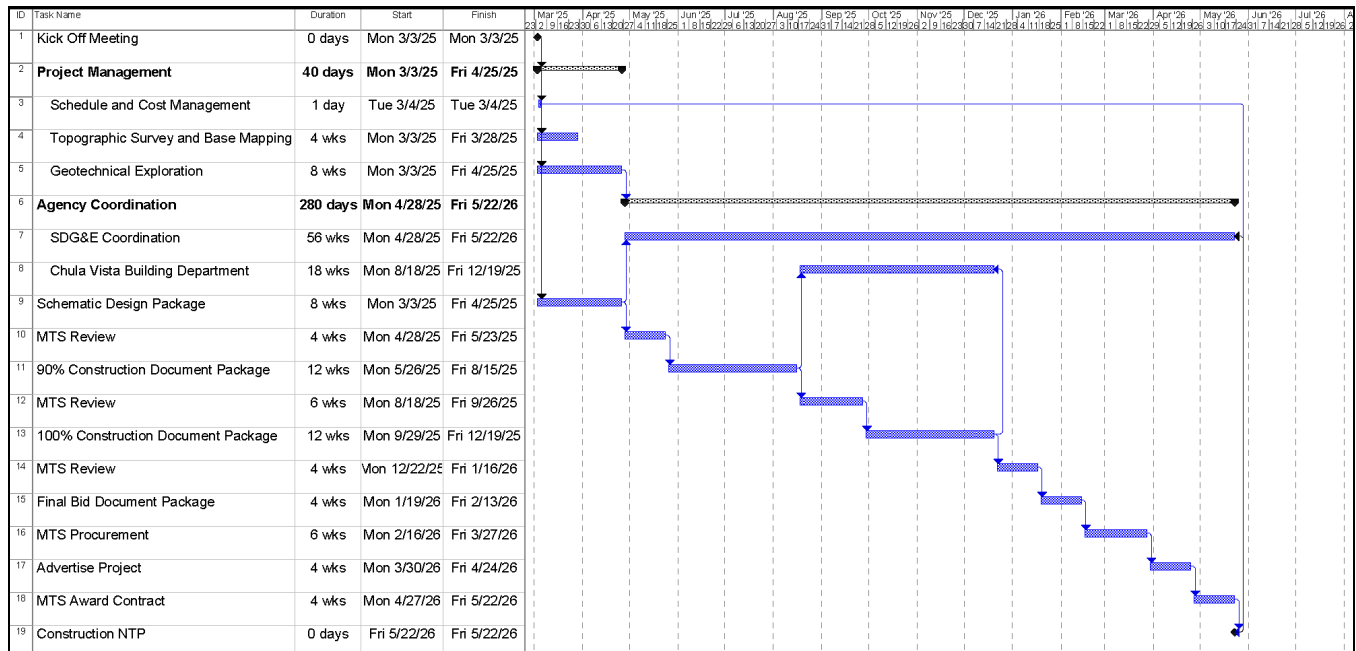
The SBMF ZEB Overhead Charging Phase 1 & 2 projects are the definition of innovative projects. As an extension of MTS staff on SBMF ZEB Overhead Charging Phase 1 project, we share MTS' enthusiasm for being the first transit agency in North America to construct this type of overhead charging infrastructure. We were honored to stand beside MTS staff to receive the **Sustainable Project of the Year** for both the San Diego Chapter of the American Society of Civil Engineers and the American Public Works Association.



Pictured left to right: Justin Thornber (Dokken Engineering), Eli Belknap (MTS), Jose Aguilar (ASCE President), Heather Furey (MTS), Mark Tarrall (Dokken Engineering), Kimberly Wender (Dokken Engineering)

Our team's history and experience with similar projects and SBMF Phase 1 means there is no learning curve. Our team knows the questions to ask early in the design process to avoid surprises, adhere to the project schedule, and successfully "cut the ribbon" on critical infrastructure projects for MTS.

4. Schedule



Local Resources for Proposed Services

We have put together a team with extensive experience delivering similar transit improvement projects. Our team will ensure that MTS will get the most responsive service possible and commit to being available to MTS on short notice throughout the duration of the project.

The Dokken team's key staff are locally based in San Diego, which allows us to attend meetings on a moment's notice, rapidly visit job sites, and maintain effective interactions with MTS and other stakeholders to the project. However, because of the intricacies of the job and expertise required for a project of this nature, we have rounded off our team with staff from across the nation for certain specialized services. The team is set up to give MTS the personnel that is most familiar and experienced with delivering projects similar to the SBMF ZEB Overhead Charging Phase 2 project but has also worked together to successfully deliver MTS projects such as SBMF ZEB Concept Plan and Phase 1 Final Engineering project, IAD ZEB Concept Plan and Final Engineering project, and the Clean Transit Advancement Campus, all of which will be at substantial completion when the NTP is issued.

We know we are the right team with the expertise and depth of resources to successfully deliver this project with MTS.

5. DBE Subcontractor Utilization Plan

Dokken Engineering maintains a strong commitment to Equal Opportunity in our hiring practices, training, promotions, and sub-contracting. We have supported and participated in the Caltrans and SANDAG outreach programs to small minority consultants. Dokken Engineering is pleased to team up with sub consultants who are both highly qualified in their fields and meet the requirements for Disadvantaged Business Enterprise (DBE) to ensure that MTS will meet/exceed their DBE goal. The following table lists our team's small and disadvantaged business firms and their certifications.

FIRM	ROLE	CERTIFICATION
Aguirre & Associates	Survey	DBE #6729 / MBE #6729 SLBE #11AE0172 SB (Micro) #33859



EXHIBIT A: RESUMES



Exhibit A: Resumes



MARK TARRALL, PE PROJECT MANAGER/PRINCIPAL IN CHARGE

Mr. Tarrall has over 25 years of experience and specializes in the management, permitting and design of transportation related projects including local roadway, interchange, bike path, highway widening, and transit projects. Mr. Tarrall has led both local agency, transit, and Caltrans projects through the concept planning, preliminary engineering, Environmental Document approval, right of way acquisition, and preparation of PS&E. He is experienced in geometric designs, ADA analysis, drainage design, utility coordination, environmental permitting, public outreach, and Caltrans and local agency procedures and standards.

EXPERIENCE

MTS South Bay ZEB Infrastructure Phase 1 Final Design, Chula Vista, CA | Project Manager for the final engineering for Phase 1 of the new Battery Electric Bus (BEB) infrastructure at the SBMF in Chula Vista, CA. The final construction package includes structural, electrical, fire protection, technical specifications, equipment list, and a construction cost estimate for the facility upgrades. MTS operates and maintains a fleet of 235 compressed natural gas (CNG) buses at the SBMF and seeks to implement a scalable and modular battery bus charging system for an initial twelve BEBs, while maintaining current operations. The initial fleet will be an expansion to current fleet and facility improvements are designed to accommodate a sixty-foot vehicle. The infrastructure is the first phase of MTS's regional plan to replace the existing CNG bus fleet with electric buses over the next 20 years.

Imperial Avenue Division ZEB Phase 1, San Diego CA | Project Manager for the concept development and final engineering for Phase 1 of the new Battery Electric Bus (BEB) infrastructure at the Imperial Avenue Division in San Diego, CA. The proposed infrastructure is the first phase of MTS's Master plan to replace the existing CNG bus fleet with electric buses over the next 20 years. The project will accommodate a minimum of 30 new forty-foot electric buses, infrastructure and overhead gantry, 3:1 charging ratio, platform mounted cabinet equipment, switchgear installation, solar panels, battery storage, and a backup generator.

Clean Transit Advancement Campus, San Diego, CA | Project Manager responsible for the engineering design services for feasibility analysis of the proposed CTAC site improvements. Efforts included coordination with MTS regarding anticipate fleet size, building needs and locations, number of staff, and bus maintenance facility requirements. The team developed four conceptual site layouts for the electric bus operations. Including evaluation of site grading, retaining wall location, drainage improvements, utility impacts, and building massing, along with performing a geotechnical paper study to evaluate existing site conditions and substrata. Final Report Recommendations include a Rough Order of Magnitude (ROM) cost estimate for each alternative and recommendations on infrastructure improvements at the site.

MTS Iris Rapid Corridor and Transit Station, San Diego County, CA | Project Manager for the design of a new Bus Rapid Transit (BRT) route that will run between the Otay Mesa Transit Center to Imperial Beach. The project includes BRT station improvements at 12 locations and a 4-bay transit center at the intersection of Iris Avenue and 30th. Transit Signal Priority improvements and Real Time Message Board installations will be included in the project. Once completed, the Iris Rapid project will be the first BRT route in San Diego County to run on all electric battery busses.

EDUCATION

1997, MS Civil Engineering
Georgia Tech

1996, BS Civil Engineering
Virginia Tech

REGISTRATION

California Professional Civil
Engineer, #C71953

EXPERIENCE

25 Years

AFFILIATIONS

American Public Works
Association (APWA)

American Society of Civil
Engineers (ASCE)

AREAS OF EXPERTISE

- Project Management
- Local Roads
- Grant Funding
- Highway Bridge Program
- PS&E
- Bridge Design
- Interchanges
- Freeways
- Complete Streets
- Multi-use Paths
- Transit Facilities
- Site Design



CURTIS TURNER, PE, PLS

DESIGN MANAGER

Mr. Turner is a registered civil engineer and licensed land surveyor with more than 35 years of civil engineering and project management experience specializing in large and small-scale land development projects. Curt's background includes residential, commercial, industrial, and mixed-use projects, as well as public works and municipal assignments. He possesses strong written and verbal communication skills and is experienced in site evaluation studies, engineering feasibility studies, entitlement, cost estimating, and contract documents (drawing, scheduling, construction permitting, administration and engineering support).

EXPERIENCE

EDUCATION

1989, BS Civil Engineering
California Polytechnic State
University, San Luis Obispo

REGISTRATION

California Professional Civil
Engineer, #C59285

California Land Surveyor,
#LS7423

EXPERIENCE

35 Years

Imperial Avenue Division Zero Emission Bus Facility, San Diego, CA | Project Manager/Coordinator of WSP's design team. As a sub-contractor to Dokken Engineering, duties include overseeing the final engineering preparation of the plans, specifications and estimates for the following disciplines: structural, electrical, mechanical, facilities and photo voltaic.

South Bay Maintenance Facility Zero Emission Bus, Chula Vista, CA | Project Manager/ Coordinator of design services during construction. Coordinate all RFI's, submittals and CCO's with design team/MTS/Project RE/Contractor in support of construction.

Clean Transit Advancement Campus, San Diego, CA | Project Manager/Coordinator of WSP's design team. As a sub-contractor to Dokken Engineering, duties include overseeing the preliminary conceptual design of the campus managing the WSP design team including following disciplines: structural, electrical, mechanical, facilities and photo voltaic.

West Santa Ana Branch LRT, Los Angeles, CA | Civil task lead on preparation of a grade separation study at the new West Santa Ana Branch LRT and Downey Avenue. Evaluated both road over rail and road under rail options. Road under rail was deemed to be more plausible and therefore an extensive evaluation was performed to review and document both circulation and utility impacts/conflicts/relocations. This effort was performed concurrently with the development of the 60% design for the rail alignment.

Otay Mesa East Land Port of Entry (OME-LPOE), San Diego, CA | As the Lead Civil Project Manager, Curt oversees the design of all grading, drainage, water, sewer, and site layout for the 120-acre project site, which will serve as a new land border crossing between the United States and Mexico.

Alameda County Transportation Commission (ACTC) (Client), East Bay Greenway PS&E, Alameda, CA | Project Manager, oversee all civil engineering activities for the design of 3.5 miles of new Class 4 Separated Bikeway in the City of Oakland. Scope of work included design and preparation of construction documents.

Mid-Coast Light Rail Trolley Extension, San Diego, CA | Early Wet Utility Relocations, San Diego, California: civil discipline lead (PM) for the construction of water and sewer relocations necessary for the future light rail project (+/- 11 miles) from Old Town to University Town Center via University of California at San Diego. The project consisted of approximately 50 individual system locations that required modifications/ relocations/ additional service lines and or abandonments of varying size and type (i.e., from 4-inch reclaimed water lines on UCSD campus to 36-inch CMLC pipe installation within Balboa Avenue). Provided design services during construction to rectify conflicts when discovered, answer request for information and respond to utility submittals.



KIMBERLY WENDER, PE, ENV SP

PROJECT ENGINEER | EXISTING SITE/CIVIL

Ms. Wender has a strong portfolio of transit facilities and public works projects, including mobility hubs, bus transit centers, bus rapid transit, bus stop engineering, and light rail stations. She has worked closely with multiple transit agencies, and the cities in which they operate, to provide safe, efficient, pedestrian, and rider friendly facilities. She provides a high-level of service through her organizational and expert project control skills. Kimberly's success in managing the timely delivery of projects and meeting client goals and objectives is attributed to her commitment to ongoing communication, technical expertise, and passion for transit mode choice.

EXPERIENCE

MTS South Bay ZEB Infrastructure Phase 1 Final Design, Chula Vista, CA | Project Engineer for the final engineering for Phase 1 of the new Battery Electric Bus (BEB) infrastructure at the SBMF in Chula Vista, CA. The final construction package includes structural, electrical, fire protection, technical specifications, equipment list, and a construction cost estimate for the facility upgrades. MTS operates and maintains a fleet of 235 compressed natural gas (CNG) buses at the SBMF and seeks to implement a scalable and modular battery bus charging system for an initial twelve BEBs, while maintaining current operations. The initial fleet will be an expansion to current fleet and facility improvements are designed to accommodate a sixty-foot vehicle. The infrastructure is the first phase of MTS's regional plan to replace the existing CNG bus fleet with electric buses over the next 20 years.

Imperial Avenue Division ZEB Phase 1, San Diego CA | Project Engineer for the concept development and final engineering for Phase 1 of the new Battery Electric Bus (BEB) infrastructure at the Imperial Avenue Division in San Diego, CA. The proposed infrastructure is the first phase of MTS's Master plan to replace the existing CNG bus fleet with electric buses over the next 20 years. The project will accommodate a minimum of 30 new forty-foot electric buses, infrastructure and overhead gantry, 3:1 charging ratio, platform mounted cabinet equipment, switchgear installation, solar panels, battery storage, and a backup generator.

Clean Transit Advancement Campus, San Diego, CA | Project Engineer responsible for the engineering design services for feasibility analysis of the proposed CTAC site improvements. Efforts included coordination with MTS regarding anticipate fleet size, building needs and locations, number of staff, and bus maintenance facility requirements. The team developed four conceptual site layouts for the electric bus operations. Including evaluation of site grading, retaining wall location, drainage improvements, utility impacts, and building massing, along with performing a geotechnical paper study to evaluate existing site conditions and substrata. Final Report Recommendations include a Rough Order of Magnitude (ROM) cost estimate for each alternative and recommendations on infrastructure improvements at the site.

MTS Iris Rapid Corridor and Transit Station, San Diego County, CA | Project Engineer for the design of a new Bus Rapid Transit (BRT) route that will run between the Otay Mesa Transit Center to Imperial Beach. The project includes BRT station improvements at 12 locations and a 4-bay transit center at the intersection of Iris Avenue and 30th. Transit Signal Priority improvements and Real Time Message Board installations will be included in the project. Once completed, the Iris Rapid project will be the first BRT route in San Diego County to run on all electric battery busses.

EDUCATION

2008, BS Civil Engineering
University of Connecticut

REGISTRATION

California Professional Civil
Engineer, #C85674

Envision Sustainability
Professional

Qualified SWPPP Developer,
#85674

EXPERIENCE

16 Years

AFFILIATIONS

American Public Works
Association (APWA)

American Council of Engineering
Companies (ACEC)



JUSTIN THORNBUR, PE EXISTING SITE/CIVIL

Mr. Thornber has a demonstrated history of civil design excellence specifically with roadway, ADA compliance, site development, mass/precise grading, and construction support. Mr. Thornber is a member of the American Society of Civil Engineers (ASCE) and currently serves as the webmaster for the San Diego section. Mr. Thornber is proficient using AutoCAD Civil 3D, Microstation, ArcMAP, Flowmaster, Bluebeam, and Projectwise.

EXPERIENCE

South Bay ZEB Infrastructure, Chula Vista, CA | This project involves retrofitting the existing MTS South Bay Maintenance Facility in Chula Vista to include new Battery Electric Bus (BEB) infrastructure that is scalable/modular while maintaining current facility operations. More specifically, the proposed improvements are the first phase of MTS's Regional Plan to replace the existing fleet with electric buses over the next 20 years. Mr. Thornber provided construction support including response to RFIs and review of submittals.

Imperial Ave ZEB Infrastructure, San Diego, CA | The project involves completing schematic design, design development, and final engineering for phase 1 of the new Battery Electric Bus (BEB) infrastructure at MTS's Imperial Avenue Division. The proposed infrastructure is the first phase of MTS's Master plan to replace the existing CNG bus fleet with electric buses over the next 20 years. Mr. Thornber led the roadway design team for layout recommendations and schematic design.

Clean Transit Advancement Campus, San Diego, CA | MTS is in the process of obtaining five contiguous parcels in order to construct a new Division 6. This project involves evaluating multiple conceptual site layouts, creating a concept level summary memo, and a rough of order of magnitude cost estimate. The final report included the top two preferred alternatives for the site. Mr. Thornber completed the existing site research, including existing easements, and evaluated the earthwork and retaining wall requirements for each layout.

Iris Rapid Bus Route Corridor, San Diego, CA | This project involves completing the corridor and station design for the Iris Rapid bus route. The new bus route extends from Otay Mesa Transit Center to Imperial Beach, connecting both areas to the UC San Diego Blue Line at the Iris Avenue Transit Center. The project includes improvements to the existing transit center located at Iris Ave near 30th street. Mr. Thornber provided construction support including response to RFIs and review of submittals.

San Pablo Avenue Streetscape Phases I & II, Palm Desert, CA | Mr. Thornber was responsible for preparing the ATP cycle 4 grant application for San Pablo Avenue. He designed the driveways and curb ramps along the San Pablo corridor from Highway 111 to Fred Waring Drive. He developed the cost estimate separated by funding source to aid with funding decisions. He reduced construction cost by recommending grind and overlay work, instead of full depth removal, between Royal Palm Drive and Fred Waring Drive. He developed solutions to potential right of way issues with the shop owners between Highway 111 and San Geronio Avenue. He coordinated with CWVD to revise limits of work near San Geronio to reduce water meter relocations.

Redcrest CAPM, Caltrans Districts 1 & 2, Redcrest, CA | Mr. Thornber lead the design for the PS&E of this Capital Preventative Maintenance (CAPM) project located on Route 101 near Redcrest, from Englewood Park Undercrossing to Eel River Bridge and Overhead. The project repaired the existing flexible pavement in accordance with the guidelines of DIB81-01.

EDUCATION

2010, BS Civil Engineering
San Diego State University

REGISTRATION

California Professional Civil
Engineer, #C88901

EXPERIENCE

14 Years

AFFILIATIONS

American Society of Civil
Engineers (ASCE)



CARY ELS, LEED AP FACILITIES (EQUIPMENT)

EDUCATION

2000, Bachelor of Architecture
University of Houston

REGISTRATION

LEED Accredited Professional

EXPERIENCE

20 Years

As senior architect with the Fleet and Facilities division of WSP, Mr. Els's principal responsibilities include transit facility planning, transit facility site planning with site selection and analysis, equipment and process planning as focused on transit facilities, the creation and development of construction and bidding drawings and specifications, coordination of facility and equipment layouts with building architects, coordination of utility needs with mechanical, electrical and plumbing engineers, researching new technology and equipment pertinent to Fleet and Facility projects, and overseeing the maintenance and updating of Fleet and Facilities' own internal equipment database. Previous professional experience has provided substantial insight into the design and construction processes from various points of view, resulting in the ability to understand and anticipate the needs of the parties involved, and how those needs shift over the course of a project.

EXPERIENCE

MTS Imperial Avenue Division ZEB Phase 1, San Diego, CA | Task lead for site analysis of existing bus maintenance and storage facilities, BEB charging technology selection, parking layouts, and impacts of implementation of various structures and charging technologies. Developed master plan implementable in 3 phases to allow full BEB transition while maintaining use of the site. A portion of the site to be covered by light steel structure, the other portion of the site to be concrete parking deck to allow for staff parking on top, and bus parking and charging below.

MTS Clean Transit Advancement Campus, San Diego, CA | Task lead for developing several conceptual options that could be implemented for a new site. The new facility is to accommodate 250 buses; of which there would be 175 BEBs and 75 Hydrogen fueled buses. The extreme variations of topography at the considered site will require significant regrading in order to accommodate a new BEB. This topography also lent itself to the construction of a multi-level facility, minimizing the adjustments required to the existing topography. Considerations for daycare, admin/ops, maintenance, and bus service spaces were taken into account for the presented concepts. Several two level and three level options were developed, ultimately two options were selected to be presented in the conceptual technical memorandum.

MTS East County Bus Maintenance Facility, San Diego, CA | Led the project for a new bus maintenance and operations facility, including administrative offices, CNG fueling lanes, and parking for a fleet of 120 CNG buses. The project involved demolishing and rebuilding existing structures without disrupting ongoing operations.

RTD Reimagine, Denver, CO | Task lead for high level assessment of facility modifications and infrastructure upgrades necessary to accommodate new future full fleet and near term initial BEB charging at all seven RTD facilities. This assessment included considerations for a fleet of over a thousand buses housed at three RTD owned facilities, and four privately owned facilities contracted with RTD.

Translink Marpole Transit Centre, Vancouver, BC | Task lead for programming and conceptual design for a proposed Transit Centre in Vancouver, BC to accommodate a fleet of 300 Battery Electric Buses. Conceptual design included programming, site analysis and initial planning for a Maintenance Building, a Parking Garage with covered bus parking, an electric bus pantograph charging systems, Administrative Offices, employee parking, and onsite bus route planning for morning drive out, evening drive-in / fuel / wash / park. Additional planning for on-site waste water treatment plant and electrical substation was also included in the work.



MELAD HANNA PH.D., PE STRUCTURAL

Mr. Hanna is a senior director and structural engineer with over 36 years of experience in civil and structural engineering, specializing in transportation infrastructure projects. His extensive portfolio includes highways, heavy rail, light transit, and various facilities. Melad has designed more than 200 bridges and structures and has managed numerous notable roadway, rail, transit, and toll road projects. He is adept at preparing plans, specifications, and estimates in line with state and federal requirements. His expertise spans the design of major and minor structures, including steel trusses, plate girders, precast concrete, cast-in-place post-tensioned concrete, new structures, rehabilitation, and seismic retrofit design. Melad is proficient in using the Finite Elements Method for linear and non-linear, static and dynamic structural analysis.

EDUCATION

PHD, Civil Engineering
University Of California-Irvine

MENG Civil Engineering
California Polytechnic State
University - Pomona

BE Civil Engineering
University Of Aleppo-Syria

REGISTRATION

California Professional Civil
Engineer, #C42215

EXPERIENCE

36 Years

EXPERIENCE

US 50 Multimodal Corridor Enhancement and Rehabilitation, Sacramento, CA | Provided design support during construction services, including responding to RFIs, reviewing shop drawings, and addressing design changes. The project involves the design and construction of 8 miles on U.S. Route 50, including sound walls, pavement rehabilitation, and increasing vertical clearance at seven overcrossings. Construction began in 2020 and is projected to finish in 2024.

California Department of Transportation Structures Project Development On-call, CA | As project manager, Melad performed engineering studies and developed design plans, including calculations, quality reviews, constructability reviews, and preparation of plans, specifications, and estimates. He supported office engineers during project advertisement and award, and provided design support during construction. The on-call contract included 27 task orders ranging from studies and peer reviews to structure plans, specifications, and estimates.

Pasadena Metro Blue Line Light Rail Project, Los Angeles and Pasadena, CA | As chief structure engineer, Melad provided engineering and design services for the preparation of construction documents for this light rail design-build project.

Gold Line Eastside Extension, Los Angeles, CA | Chief engineer responsible for the final design of bridges, retaining walls, sound walls, and drainage structures for this design-build project.

South Wilmington Grade Separation PS&E, San Pedro, CA | Responsible for the structure design of a cast-in-place concrete box girder structure elevating the roadway above existing and proposed railroad tracks.

Shoemaker Bridge Replacement Project, Long Beach, CA | Melad reviewed structure maintenance records, prepared planning studies, and documented seismic retrofit modifications for this project involving three structures.

Port of Long Beach Pier A West Grade Separation, Long Beach, CA | Provided engineering and design services for plans, specifications, and estimates, and prepared type selection, materials, and foundation reports.

Port of Long Beach Pier J Grade Separation, Long Beach, CA | Responsible for the final design documents for a railroad overcrossing and provided design support during construction.

Colton Crossing Grade Separation, Colton, CA | Provided engineering and design services for preparing the project study report for the grade separation of two double-tracked rail lines.



APPLE GONG, PE

ELECTRICAL

Ms. Gong is a lead electrical engineer with 9 years of electrical engineering design experience. Prior to joining WSP, she is experienced in designing low-voltage power distribution system for commercial, residential and light industrial buildings. She has provided electrical designs and engineering solutions for a number of projects in both Canada and United States. During her time with WSP, she has gained tremendous experience and knowledge in the electrical vehicle charging infrastructure field. She has designed and been involved with projects that required electrical infrastructure design to support the power requirements from a few level 2 chargers to over a hundred of DC fast chargers.

EXPERIENCE

EDUCATION

2013, BASc Electrical and
Computer Engineering
University of British Columbia

EXPERIENCE

8 Years

MTS Imperial Avenue Division ZEB Infrastructure, San Diego, CA | Electrical lead for this project. She is responsible for providing detailed construction package for electrical power distribution to meet charging solutions for 155 battery electric bus (BEB). Design includes new medium and low voltage power distribution to overhead charging infrastructures, underground/overhead cable routing, and construction phase planning.

MTS South Bay Maintenance Facility ZEB Infrastructure, Chula Vista, CA | Electrical design support for this project. She is responsible for designing overhead DC power and communication cable distribution to 24 pantographic chargers. Design includes conduit schedule, cable tray details, section and elevation view details.

Battery Electrical Bus Inductive Charger Infrastructure for 6 Sites, CA | Electrical design lead for all six sites for this project. She designed low-voltage power distribution for one 300kW wireless inductive charging coils and associated equipment. This included 100% design of new 480V utility service, a new main switchboard, and few new underground duct banks. Apple reviewed and analyzed the existing site conditions for each of the site through existing underground utility drawings, survey drawings and site photos. She extracted relevant information to assess the feasibility of project implementation. She coordinated with facilities and civil engineers to design around site conditions. Apple coordinated with inductive charger vendor to design with equipment limitations. She designed to allow for easy expansion in the future if additional wireless chargers are needed.

MDOT MTA Kirk, Northwest, and Eastern Sites, Charging Strategy Modeling & Optimization, Baltimore, MD | Responsible for modeling charging scenarios with existing and future constraints to identify requirements for electrifying the existing fleet of over 150 internal combustion engine (ICE) buses at three separate sites; Kirk, Northwest, and Eastern. Apple developed comprehensive request for information (RFI) lists to gather essential specifications needed to perform the charge modeling. She collected and assessed single line diagrams, site layout and equipment cutsheets. She analyzed the gathered data to identify electrical information such as power, voltage and current from battery, vehicle and charger specifications.

MTS Conceptual Cost Estimating and Scheduling Services, San Diego, CA | Provided design services for the South Bay Maintenance Facility, developing rough order-of-magnitude cost estimates and implementation schedules for various transportation projects.

SFMTA Zero-Emission Facility and Fleet Transition Plan, San Francisco, CA | As the electrical lead, Apple provided electrical concept power distribution to meet charging solutions for 155 battery electric buses. The design included new medium and low voltage power distribution, underground and overhead cable routing, and construction phase planning.



SEAN O'ROURKE, LEED AP PHOTO-VOLTAIC/BESS

Mr. O'Rourke is the director of electrical engineering for the Boston Office with WSP USA's mechanical/electrical group. His primary focus has been on electrical power distribution and integration of photovoltaic systems into transportation infrastructure projects. Additional design elements have consisted of lighting design; low voltage communication structures including supervisory control and data acquisition (SCADA), fiber optic networks, security and closed-circuit television (CCTV).

EXPERIENCE

EDUCATION

2000, BS Electrical Engineering
University of Massachusetts

REGISTRATION

LEED Accredited Professional

EXPERIENCE

24 Years

San Diego MTS, San Diego, CA | Electrical engineer for design of rooftop photovoltaic system complementing the conversion of bus fleet to battery electric bus (BEB). The project consisted of 200kW of photovoltaic modules, coupled with a 1000kW-hr battery storage system.

San Diego International Airport Consolidated Rental Car Facility On-call Architectural and Engineering Services, San Diego, CA | Designed a new LEED-certified rental car center using REVIT, coordinating incoming 12,000-volt services to substations that provide facility and tenant power requirements. The project consolidated 17 rental car companies into one location, including maintenance bays, car washes, fueling stations, and roadway improvements.

Coronado Tunnel Project Report and Environmental Documents, Coronado, CA | Worked on a conceptual design report defining electrical and control systems for new traffic tunnels, including compliance with NFPA 502 and other design standards.

Interstate 35 East Southern Gateway Design-Build Project, Dallas, TX | Responsible for the power distribution system for tunnel lighting and associated systems for a 600-foot-long tunnel created by deck construction. The project involved rebuilding and widening 11 miles of I-35 south of downtown Dallas, adding reversible non-toll express lanes, and reconstructing the I-35 and U.S. 67 interchange. His work included designing and constructing 41 bridges, continuous frontage roads, a deck park, retaining walls, drainage, and ramp and safety improvements.

San Francisco-Oakland Bay Bridge East Span Design Support, San Francisco, CA | Reviewed shop drawings for pre-fabricated cable tray layouts within box tee structures to ensure seamless installation. He led the electrical integration process between different East Span contracts, ensuring the successful functioning of the electrical system on the finished bridge.

South Station Evacuation, Boston, MA | Documented existing ventilation controls and developed a procedure to implement a new National Fire Protection Association Standard 130-compliant ventilation control scheme. He coordinated with various agencies to ensure compliance and maintain rail operations during construction.

CVG Airport Terminal 3 Transportation Center Design, Cincinnati, OH | Worked on the covered walkway expansion of the terminal, extending existing fire alarm, lighting, and CCTV systems. The project included planning and design services for a new transportation center with shelter bus bays, signage, and canopy.

New Haven Rail Yard Facility Improvements, New Haven, CT | Served as a QA/QC reviewer for rail yard communications and security layouts for new facilities supporting the expansion of the New Haven Line fleet's new M-8 rail cars.



GORDON NG, PE

MECHANICAL

Mr. Ng is responsible for the analysis, design and operation of central utility systems for commercial, institutional and industrial facilities. He has developed conceptual, schematic, and detailed design drawings and specifications. In addition, Mr. Ng has modeled systems, performed computer simulations, and evaluated systems for feasibility analyses and studies. During the construction phase of projects, he has been responsible for review of submittals and RFIs and provided construction administration services.

EXPERIENCE

EDUCATION

1994, BS Mechanical Engineering
Columbia University

REGISTRATION

New York Professional Engineer

EXPERIENCE

30 Years

MTS Imperial Avenue Division Zero Emission Bus, San Diego, CA | Generator Installation 60% Design. Lead Mechanical Engineer. Performed 60% mechanical design work associated with the design of a 1 MW standby/peaking natural gas fired generator to support the facility's new electric bus charging design.

MTS South Bay Maintenance Facility Zero Emission Bus, Chula Vista, CA | Generator Installation Design. Lead Mechanical Engineer. Performed mechanical design and specification work associated with the design of a 1 MW standby/peaking natural gas fired generator to support the facility's new electric bus charging design. Supported the air permit application process with the San Diego Air Pollution Control District.

LA County MTS – Zero Emission Bus Resiliency Charging, Los Angeles, CA | Performed mechanical design work for the installation of multiple natural gas-fired generators to support electric bus charging.

JFK International Airport, Queens, NY | KIAC CHRP Expansion OE Services, Senior Mechanical Engineer. Project includes providing Owner's Engineering services for a major expansion of the existing Central Heating and Refrigeration Plant (CHRP) providing heating and cooling for the airport due to the planned redevelopment of JFK. Provided design basis and planning for the phased expansion and replacement of existing chilled water, condenser water, and medium temperature hot water equipment and systems at the CHRP. Phasing needed to keep the plant operational and serving the existing airport through construction. Close coordination with plant operations staff and the EPC team.

Port Authority of NY & NJ – Newark Liberty International Airport, Newark, NJ | Chiller Replacement Design. Mechanical Engineer. Performed mechanical design and specification work associated with the design of two 2,000 tonR dual compressor electric centrifugal chillers with two 700 gal expansion tanks associated auxiliaries (refrigerant leak detection, emergency exhaust fan, etc.).

York Correctional, Niantic, CT | Central Plant and Distribution Design. Mechanical Engineer. Performed mechanical design and specification work associated with the design of a 700 tonR cooling and 23,000 MBH heating plant with associated auxiliaries (cooling tower, pumps, expansion tanks, etc.). Coordinated with the project team to provide the balance of the site wide chilled water and hot water distribution, electrical, HVAC, plumbing, fire protection, structural, civil and controls design documents.

Bristol-Myers Squibb – Hopewell, Hopewell, NJ | Cogeneration Project Design. Lead Mechanical Engineer. Performed mechanical design and specification work associated with the design of two 2.0 MW gas reciprocating engine generators with associated auxiliaries (heat recovery steam generator, heat recovery package skid, urea tank, etc.). Coordinated with the project team to provide the balance of the electrical, HVAC, plumbing, fire protection, structural, civil and controls design documents.



MIRZA "JIM" BAIG

COST ESTIMATING

Mr. Baig is a supervising estimator for WSP USA, whose duties include complete estimating services for projects in all levels of design and construction. He has extensive experience in transit, aviation, bridges, highway, and building facilities. Jim coordinates with designers and owners for all information regarding projects and generates estimates based on that information with assistance from project controls staff. Jim has developed assemblies and systems in Timberline estimating software currently in accordance with the Federal Transit Administration (FTA) New Starts program that streamlines the cost estimating process using database driven cost data.

EXPERIENCE

EDUCATION

1982, BS Bulding Construction
Texas A&M University

EXPERIENCE

41 Years

Trinidad National Transportation Plan, Nationwide | Developed a conceptual estimate for a heavy rail project linking Trinidad with three main corridors. The Strategic National Transportation Plan encompasses all transportation modes and provides the Trinidad and Tobago Ministry of Works and Transport with a systematic decision-making tool for infrastructure investment and policy determination over the next twenty years.

Honolulu High Capacity Transit Corridor Project, Honolulu, HI | Estimating manager for this \$5.12 billion FTA New Starts transit program. Over the past six years, he has led a team of six full-time estimators, transitioning the project from alternative analysis through construction. He works closely with the Honolulu Authority for Rapid Transit (HART), WSP design group, various final design firms, and FTA representatives to ensure the project receives appropriate cost estimating support through its critical stages.

Alaskan Way Viaduct and Seawall Replacement Project - South Access Surface Streets, Seattle, WA | As a senior estimator, Jim contributed to this multibillion-dollar program to replace the aging viaduct and seawall. He continues to provide estimating services on an on-call basis, supporting one of the largest infrastructure projects in the western United States.

Interstate 75 and Interstate 575 Northwest Corridor Study, Atlanta, GA | Lead estimator for the preliminary engineering estimate of the bus rapid transit portion of this project. The estimate was developed in the FTA New Starts format for the draft EIS, addressing congestion on Interstate 75 and Interstate 575.

Kennedy Center Access Improvements, Washington, DC | Developed a conceptual cost estimate for improvements around the Kennedy Center for the Performing Arts. The project included planning and engineering services for vehicle, pedestrian, and bicycle access improvements.

East Valley Light Rail Transit Final Design, Phoenix, AZ | Provided on-call estimating services for this \$1.3 billion starter rail project. His primary responsibility was to provide engineer's estimates for projects in various design stages, contributing to the overall facility designs and ongoing design support services during construction.

Central Artery/Tunnel Program, Boston, MA | Responsible for cost validation and change order estimating support for roadway work and bridges in this multibillion-dollar project. The project involved replacing a congested viaduct with an underground expressway, constructing a new tunnel under Boston Harbor, and extending the Massachusetts Turnpike.



CHRISTOPHER COVALT, PE

FIRE SAFETY

Mr. Covalt is a seasoned professional with 41 years of extensive experience in mechanical, plumbing, and fire protection engineering. His career encompasses a wide range of roles including construction management, project management, and cost estimating across diverse project types such as parks and recreation facilities, medical facilities, office buildings, transportation hubs, airports, residential and housing facilities, and educational institutions. His expertise lies in HVAC system analysis and design, fire protection, plumbing system design, and thermodynamic system commissioning and start-up.

EXPERIENCE

New York New Jersey Port Authority Central Bus Terminal – Building Hardening, NY/NJ | Led the project to internally harden the building structure against terrorist bomb attacks while maintaining operational continuity. Designed a phasing plan to ensure continuous fire protection during construction, adapting to temporary conditions and reinstating protection post-construction.

South Dade Transit Operations Center, Miami-Dade Department of Transportation and Public Works (DTPW), Miami, FL | Conducted battery electric bus fire analysis for the new electric bus operations, maintenance, and storage depot facility.

Fort Lauderdale Executive Airport (FXE), US Customs and Border Protection Services Building, Fort Lauderdale, FL | Designed plumbing and fire protection systems for a new 7,900 sq. ft. structure, including a FM-200 fire suppression system.

Port Miami, Cruise Terminal F Upgrades, Miami, FL | As lead fire protection engineer, oversaw the design-build project for a new 32,000 sq. ft. facility and a 5,000 sq. ft. passenger boarding bridge. Responsibilities included threshold building special inspections, LEED fundamentals commissioning, and comprehensive MEP design. The project achieved LEED Silver certification.

Fort Lauderdale International Airport (FLL), South Runway Expansion, Fort Lauderdale, FL | Managed life safety systems design for a new 800 ft. runway/roadway tunnels and a 350 ft. taxiway open structure. Responsibilities included preparing the design criteria package for smoke evacuation control and displacement ventilation.

FLL, Terminal 2, Fort Lauderdale, FL | Oversaw the redesign of plumbing, fire protection, and HVAC systems for Terminal 2, achieving LEED Silver certification. Responsibilities included project management of fire protection systems, plumbing design, and HVAC system design.

FLL, Terminal 3, Fort Lauderdale, FL | As senior engineer and EOR, managed the redesign of plumbing and fire protection systems for Terminal 3, achieving LEED Silver certification.

JFK Airport Terminal 1, Jamaica, NY | Provided a condition report on HVAC, plumbing, and fire protection systems as a senior mechanical engineer.

JFK Airport Buildings 6, 129, 146, 151, 262, and 267, Jamaica, NY | Inspected HVAC, plumbing, and fire protection systems across six buildings totaling 1,000,000 sq. ft.

EDUCATION

BS Mechanical Engineering
Florida Institute of Technology

REGISTRATION

Florida Professional Engineer,
#45841

EXPERIENCE

41 Years

ATTACHMENT B
NEGOTIATED FEE PROPOSAL

DRAFT

Work Order Estimate Summary

Att.A, Item 15, 05/15/25

MTS Doc. No. **PWL353.0-22**

Work Order No. **WOA353-AE-51**

Attachment: **B**

Work Order Title: **South Bay Bus Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services**

Project No:

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes	Cost Codes Description	Total Costs
1	Labor	Total Direct Labor	\$1,683,033.85
2	ODCs	Total Other Direct Costs	\$54,450.00

Totals = **\$1,737,483.85**

Table 2 - TASKS/WBS Summary (Costs & Hours)

Item	TASKS/WBS	TASKS/WBS Description	Labor Hrs	Total Costs
1	Task 1	Project Management	1,096.0	\$298,492.62
2	Task 2	60% Construction Documents - Schematic Design (SD)	1,934.0	\$433,932.92
3	Task 3	90% Construction Documents - Design Development (DD)	2,112.0	\$465,423.98
4	Task 4	100% Construction Documents (CD)	1,530.0	\$331,842.83
5	Task 5	Contract Bid Support	208.0	\$44,148.25
6	Task 6	Power Back Up Plans, Specs and Estimate - Generator, PV and Bess (OPTIONAL)	835.0	\$163,643.25

Totals = **7,715.0** **\$1,737,483.85**

Table 3 - Consultant/Subconsultant Summary (Costs & Hours)

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
				DOKKEN ENGINEERING	2,063.0	\$443,328.64
				AGUIRRE & ASSOCIATES	170.0	\$38,644.29
				GEOCON INCORPORATED	152.0	\$43,647.27
				WSP	5,330.0	\$1,211,863.65

Totals = **7,715.0** **\$1,737,483.85**

Work Order Estimate
Summary

Att.A, Item 15, 05/15/25

Total Hours =	2,063
Total Costs =	\$443,328.64

DOKKEN ENGINEERING

South Bay Bus Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Contract Manager	Task Manager	Engineer - Senior	Engineer - 3	Engineer - 2	Engineer - 1	CADD - Senior	CADD - 3	Total Hours	Totals
				\$ 335.35	\$ 237.76	\$ 227.06	\$ 190.44	\$ 168.34	\$ 124.57	\$ 214.63	\$ 145.88		
1	Project Management												
1.1	Project Management			120	160							280	\$78,283.85
1.2	Agency Coordination			30	80	20	100		40			270	\$57,649.11
1.3	Survey and Geotechnical Engineering During Design			8	12	4	20		30			74	\$13,990.04
	Task 1 ODCs			\$20,000.00									\$20,000.00
	Subtotals (Hours) =	N/A		158	252	24	120		70			624	\$169,923.00
	Subtotals (Costs) =	\$20,000.00		\$52,985.47	\$59,915.71	\$5,449.42	\$22,852.44		\$8,719.95			624	\$169,923.00
2	60% Construction Documents - Schematic Design (SD)												
2.1	Base Sheet & Topo Map			4	12		20		30			66	\$11,740.40
2.2	Schematic Site Plan Design			10	40	12	80	40	80			262	\$47,523.05
2.3	General Outline Specifications			4	12	2	20					38	\$8,457.39
2.4	Construction Cost Estimates			4	16	2	20		20			62	\$11,899.85
	Task 2 ODCs												
	Subtotals (Hours) =	N/A		22	80	16	140	40	130			428	\$79,620.69
	Subtotals (Costs) =			\$7,377.72	\$19,020.86	\$3,632.95	\$26,661.18	\$6,733.76	\$16,194.20			428	\$79,620.69
3	90% Construction Documents - Design Development (DD)												
3.1	Electric Charging Equipment Plans												
3.2	Electrical Plans												
3.3	Fire Protection												
3.4	Structural Plans												
3.5	Civil Plans			8	20	12	80	20	100			240	\$41,221.66
3.6	Technical Specifications			4	10	4	40					58	\$12,244.73
3.7	Opinion of Probable Cost			6	10	4	12		20			52	\$10,074.61
3.8	Design Development Quality Control			10	30	20	40					100	\$22,645.00
	Task 3 ODCs												
	Subtotals (Hours) =	N/A		28	70	40	172	20	120			450	\$86,185.99
	Subtotals (Costs) =			\$9,389.83	\$16,643.25	\$9,082.37	\$32,755.17	\$3,366.89	\$14,948.49			450	\$86,185.99
4	100% Construction Documents (CD)												
4.1	Charging Equipment Plans												
4.2	Electrical Plans												
4.3	Fire Protection												
4.4	Structural Plans												
4.5	On-Site Civil Improvements			8	30	12	60	20	80			210	\$37,299.11
4.6	Technical Specifications			4	12	4	30					50	\$10,815.88
4.7	Opinion of Probable Cost			6	10		20		20			56	\$10,889.87
4.8	Construction Document Quality Control - 100% CDs & 100% Bid Documents			10	30	20	40					100	\$22,645.00
	Task 4 ODCs												
	Subtotals (Hours) =	N/A		28	82	36	150	20	100			416	\$81,449.86
	Subtotals (Costs) =			\$9,389.83	\$19,496.38	\$8,174.13	\$28,565.55	\$3,366.89	\$12,457.07			416	\$81,449.86
5	Contract Bid Support												
5.1	Conformed Plans			4	12	4	20	10	30			80	\$14,332.08
	Task 5 ODCs												
	Subtotals (Hours) =	N/A		4	12	4	20	10	30			80	\$14,332.08
	Subtotals (Costs) =			\$1,341.40	\$2,853.13	\$908.24	\$3,808.74	\$1,683.44	\$3,737.12			80	\$14,332.08
6	Power Back Up Plans, Specs and Estimate - Generator, PV and Bess (OPTIONAL)												
6.1	Power Back Up Plans, Specs and Estimate - Generator, PV and Bess (OPTIONAL)			5	10		10	20	20			65	\$11,817.04
	Task 6 ODCs												
	Subtotals (Hours) =	N/A		5	10		10	20	20			65	\$11,817.04
	Subtotals (Costs) =			\$1,676.76	\$2,377.61		\$1,904.37	\$3,366.89	\$2,491.41			65	\$11,817.04
Totals (Summary) =												2,063	\$443,328.64
Total (Hours) =			N/A	245	506	120	612	110	470			2063	
Total (Costs) =			\$20,000.00	\$82,161.02	\$120,306.93	\$27,247.10	\$116,547.46	\$18,517.88	\$58,548.25				\$443,328.64
Percentage of Total (Hours) =			N/A	12%	25%	6%	30%	5%	23%			100%	
Percentage of Total (Costs) =				5%	19%	27%	6%	26%	4%	13%			100%

Work Order Estimate
Summary

Att.A, Item 15, 05/15/25

Consultant/ Subconsultant: DOKKEN ENGINEERING

Work Order Title: South Bay Bus Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services

ODC Item	TASKS/WBS (1-6)																
	Description	Unit	Unit Cost	Task 1		Task 2		Task 3		Task 4		Task 5		Task 6		Totals	
				Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Permit Fees	LS	\$20,000.00	1	\$20,000.00											1	\$20,000.00
2	Potholing for Existing Utilities	Ea	\$2,000.00														
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
Subtotal =				\$20,000.00	Subtotal =			Subtotal =			Subtotal =			Subtotal =			Totals = \$20,000.00

Work Order Estimate Summary

Att.A, Item 15, 05/15/25

Total Hours =		170		Consultant/Subconsultant:		AGUIRRE & ASSOCIATES												
Total Costs =		\$38,644.29		Work Order Title:		South Bay Bus Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services												
Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Chainman	Party Chief	Surveyor - Senior	Surveyor - 3				Total Hours	Totals						
				\$ 250.02	\$ 254.38	\$ 182.63	\$ 125.91											
1	Project Management																	
1.1	Project Management																	
1.2	Agency Coordination																	
1.3	Survey and Geotechnical Engineering During Design											170	\$35,874.29					
	Task 1 ODCs											\$2,770.00	\$2,770.00					
	Subtotals (Hours) =											N/A	51	51	28	40	170	\$38,644.29
	Subtotals (Costs) =											\$2,770.00	\$12,751.02	\$12,973.38	\$5,113.55	\$5,036.34	170	\$38,644.29
2	60% Construction Documents - Schematic Design (SD)																	
2.1	Base Sheet & Topo Map																	
2.2	Schematic Site Plan Design																	
2.3	General Outline Specifications																	
2.4	Construction Cost Estimates																	
	Task 2 ODCs																	
	Subtotals (Hours) =											N/A						
	Subtotals (Costs) =																	
3	90% Construction Documents - Design Development (DD)																	
3.1	Electric Charging Equipment Plans																	
3.2	Electrical Plans																	
3.3	Fire Protection																	
3.4	Structural Plans																	
3.5	Civil Plans																	
3.6	Technical Specifications																	
3.7	Opinion of Probable Cost																	
3.8	Design Development Quality Control																	
	Task 3 ODCs																	
	Subtotals (Hours) =											N/A						
	Subtotals (Costs) =																	
4	100% Construction Documents (CD)																	
4.1	Charging Equipment Plans																	
4.2	Electrical Plans																	
4.3	Fire Protection																	
4.4	Structural Plans																	
4.5	On-Site Civil Improvements																	
4.6	Technical Specifications																	
4.7	Opinion of Probable Cost																	
4.8	Construction Document Quality Control - 100% CDs & 100% Bid Documents																	
	Task 4 ODCs																	
	Subtotals (Hours) =											N/A						
	Subtotals (Costs) =																	
5	Contract Bid Support																	
5.1	Conformed Plans																	
	Task 5 ODCs																	
	Subtotals (Hours) =											N/A						
	Subtotals (Costs) =																	
6	Power Back Up Plans, Specs and Estimate - Generator, PV and Bess (OPTIONAL)																	
6.1	Power Back Up Plans, Specs and Estimate - Generator, PV and Bess (OPTIONAL)																	
	Task 6 ODCs																	
	Subtotals (Hours) =											N/A						
	Subtotals (Costs) =																	
Totals (Summary) =												170	\$38,644.29					
Total (Hours) =											N/A	51	51	28	40	170		
Total (Costs) =											\$2,770.00	\$12,751.02	\$12,973.38	\$5,113.55	\$5,036.34		\$38,644.29	
Percentage of Total (Hours) =											N/A	30%	30%	16%	24%	100%		
Percentage of Total (Costs) =											7%	33%	34%	13%	13%		100%	

Work Order Estimate
Summary

Att.A, Item 15, 05/15/25

Consultant/ Subconsultant: AGUIRRE & ASSOCIATES

Work Order Title: South Bay Bus Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services

ODC Item	TASKS/WBS (1-6)																
	Description	Unit	Unit Cost	Task 1		Task 2		Task 3		Task 4		Task 5		Task 6		Totals	
				Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Photogrammetry (OPTIONAL)	LS	\$2,770.00	1	\$2,770.00											1	\$2,770.00
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
				Subtotal =	\$2,770.00	Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Totals =	\$2,770.00

DRAFT

Work Order Estimate
Summary

Att.A, Item 15, 05/15/25

Total Hours =		152		Consultant/Subconsultant: GEOCON INCORPORATED																	
Total Costs =		\$43,647.27		Work Order Title: South Bay Bus Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services																	
Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Technician - Senior	Technician - 3	Technician - 2	Scientist - 1	Inspector - 3	Geologist - Senior	Geologist - 3	Geologist - 2	Geologist - 1	Field Technician - 3	Field Technician - 2	Field Technician - 1	Engineer - Principal	Engineer - Senior	Engineer - 2	Admin - 2	Total Hours	Totals
			\$ 147.59	\$ 124.19	\$ 86.40	\$ 90.00	\$ 125.99	\$ 207.29	\$ 127.75	\$ 116.09	\$ 97.20	\$ 111.67	\$ 62.95	\$ 72.25	\$ 278.09	\$ 176.18	\$ 121.31	\$ 86.40			
1	Project Management																				
1.1	Project Management																				
1.2	Agency Coordination																				
1.3	Survey and Geotechnical Engineering During Design									30	20					4	54	22	22	152	\$21,027.27
	Task 1 ODCs			\$22,620.00																	\$22,620.00
	Subtotals (Hours) =			N/A						30	20					4	54	22	22	152	\$43,647.27
	Subtotals (Costs) =			\$22,620.00						\$3,833.75	\$2,321.84					\$1,112.35	\$9,189.72	\$2,668.82	\$1,900.80	152	\$43,647.27
2	60% Construction Documents - Schematic Design (SD)																				
2.1	Base Sheet & Topo Map																				
2.2	Schematic Site Plan Design																				
2.3	General Outline Specifications																				
2.4	Construction Cost Estimates																				
	Task 2 ODCs																				
	Subtotals (Hours) =			N/A																	
	Subtotals (Costs) =																				
3	90% Construction Documents - Design Development (DD)																				
3.1	Electric Charging Equipment Plans																				
3.2	Electrical Plans																				
3.3	Fire Protection																				
3.4	Structural Plans																				
3.5	Civil Plans																				
3.6	Technical Specifications																				
3.7	Option of Probable Cost																				
3.8	Design Development Quality Control																				
	Task 3 ODCs																				
	Subtotals (Hours) =			N/A																	
	Subtotals (Costs) =																				
4	100% Construction Documents (CD)																				
4.1	Charging Equipment Plans																				
4.2	Electrical Plans																				
4.3	Fire Protection																				
4.4	Structural Plans																				
4.5	On-Site Civil Improvements																				
4.6	Technical Specifications																				
4.7	Option of Probable Cost																				
4.8	Construction Document Quality Control - 100% CDs & 100% Bid Documents																				
	Task 4 ODCs																				
	Subtotals (Hours) =			N/A																	
	Subtotals (Costs) =																				
5	Contract Bid Support																				
5.1	Confirmed Plans																				
	Task 5 ODCs																				
	Subtotals (Hours) =			N/A																	
	Subtotals (Costs) =																				
6	Power Back Up Plans, Specs and Estimate - Generator, PV and Bess (OPTIONAL)																				
6.1	Power Back Up Plans, Specs and Estimate - Generator, PV and Bess (OPTIONAL)																				
	Task 6 ODCs																				
	Subtotals (Hours) =			N/A																	
	Subtotals (Costs) =																				
Totals (Summary) =																				152	\$43,647.27
Total (Hours) =			N/A							30	20					4	54	22	22	152	
Total (Costs) =			\$22,620.00							\$3,833.75	\$2,321.84					\$1,112.35	\$9,189.72	\$2,668.82	\$1,900.80		\$43,647.27
Percentage of Total (Hours) =			N/A							20%	13%					3%	36%	14%	14%	100%	
Percentage of Total (Costs) =			52%							9%	5%					3%	21%	6%	4%		100%

Work Order Estimate
Summary

Att.A, Item 15, 05/15/25

Consultant/ Subconsultant: GEOCON INCORPORATED

Work Order Title: South Bay Bus Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services

TASKS/WBS (1-6)																	
ODC Item	Description	Unit	Unit Cost	Task 1		Task 2		Task 3		Task 4		Task 5		Task 6		Totals	
				Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	DEH Boring Permits	Item	\$250.00	4	\$1,000.00											4	\$1,000.00
2	Private Utility Locator	hr	\$190.00	8	\$1,520.00											8	\$1,520.00
3	Drilling of borings	day	\$3,600.00	2	\$5,400.00											2	\$5,400.00
4	Lab testing	LS	\$4,900.00	1	\$4,900.00											1	\$4,900.00
5	Drilling waste disposal/analytical profile	item	\$1,300.00	1	\$1,300.00											1	\$1,300.00
6	Environmental sampling/testing/report	item	\$8,500.00	1	\$8,500.00											1	\$8,500.00
7																	
8																	
9																	
10																	
Subtotal =				\$22,620.00												Totals =	

Work Order Estimate
Summary

Att.A, Item 15, 05/15/25

Total Hours =		5,330																																							
Total Costs =		\$1,211,863.65																																							
Consultant/Subconsultant:		WSP																																							
Work Order Title:		South Bay Bus Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services																																							
Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Technical Expert	Task Manager	Scientist - 2	Project Manager	Project Controls - Senior	Project Controls - 3	Project Controls - 2	Planner - 2	Planner 1	Engineer - Principal	Engineer - Senior	Engineer - 3	Engineer - 2	Engineer - 1	Contract Manager	Architect - Senior	Admin - 1	Total Hours	Totals																			
			\$ 393.15	\$ 251.48	\$ 107.10	\$ 343.70	\$ 243.00	\$ 216.44	\$ 175.31	\$ 191.26	\$ 124.75	\$ 334.83	\$ 261.74	\$ 192.33	\$ 168.17	\$ 100.73	\$ 373.51	\$ 260.48	\$ 71.35																						
1	Project Management																																								
1.1	Project Management																						80	\$24,128.21																	
1.2	Agency Coordination																						70	\$17,269.85																	
1.3	Survey and Geotechnical Engineering During Design																																								
	Task 1 ODCs																						\$4,880.00															\$4,880.00			
	Subtotals (Hours) =																						N/A	70		20				40		20							150	\$46,278.06	
	Subtotals (Costs) =																						\$4,880.00			\$24,059.00		\$3,506.21			\$10,469.46		\$3,363.39							150	\$46,278.06
2	60% Construction Documents - Schematic Design (SD)																																								
2.1	Base Sheet & Topo Map																																								
2.2	Schematic Site Plan Design																						16		20				244	64	220	554		40		1,158	\$257,511.87				
2.3	General Outline Specifications																						4		4				16	20	16	12		8		80	\$20,718.58				
2.4	Construction Cost Estimates																												104	82	16	54		8		268	\$71,901.79				
	Task 2 ODCs																						\$4,180.00															\$4,180.00			
	Subtotals (Hours) =																						N/A	20	28				364	166	252	620		56		1,506	\$354,312.24				
	Subtotals (Costs) =																						\$4,180.00	\$7,863.00		\$9,623.60			\$121,878.12	\$43,448.25	\$48,467.26	\$104,265.07		\$14,586.94		1,506	\$354,312.24				
3	90% Construction Documents - Design Development (DD)																																								
3.1	Electric Charging Equipment Plans																								4							210		60		274	\$62,319.25				
3.2	Electrical Plans																								4				4	44	20	90				162	\$33,212.38				
3.3	Fire Protection																							16	4							120	86			236	\$44,622.35				
3.4	Structural Plans																						32		4				160		96	160				452	\$112,899.23				
3.5	Civil Plans																																								
3.6	Technical Specifications																						2						20	10	16	60		16		128	\$28,810.22				
3.7	Opinion of Probable Cost																						8		16				100	80	8	40			252	\$71,331.74					
3.8	Design Development Quality Control																						8		4				30	8	20	80		8		158	\$36,042.81				
	Task 3 ODCs																																								
	Subtotals (Hours) =																						N/A	50	16	40			314	142	280	736		84		1,662	\$379,237.98				
	Subtotals (Costs) =																						\$19,657.50	\$4,023.64		\$13,748.00			\$105,136.82	\$37,166.57	\$53,852.51	\$123,772.73		\$21,880.41		1,662	\$379,237.98				
4	100% Construction Documents (CD)																																								
4.1	Charging Equipment Plans																								4							200		80		284	\$55,847.18				
4.2	Electrical Plans																								4				4	44	8	70				130	\$27,541.03				
4.3	Fire Protection																								4						40	60				104	\$19,158.18				
4.4	Structural Plans																						8		4				40		32	56				140	\$33,485.26				
4.5	On-Site Civil Improvements																																								
4.6	Technical Specifications																						2		4				10	32	42	30		8		128	\$29,091.78				
4.7	Opinion of Probable Cost																								8				84	76	12	36				216	\$59,129.36				
4.8	Construction Document Quality Control - 100% CDs & 100% Bid Documents																						4						16	4	20	44		16		112	\$26,140.19				
	Task 4 ODCs																																								
	Subtotals (Hours) =																						N/A	14	36				154	156	154	496		104		1,114	\$250,392.97				
	Subtotals (Costs) =																						\$5,004.10		\$12,373.20			\$51,563.82	\$40,830.88	\$29,618.88	\$83,412.06		\$27,090.03		1,114	\$250,392.97					
5	Contract Bid Support																																								
5.1	Conformed Plans																								16				16	16	24	48		8		128	\$29,816.18				
	Task 5 ODCs																																								
	Subtotals (Hours) =																						N/A		16				16	16	24	48		8		128	\$29,816.18				
	Subtotals (Costs) =																								\$5,499.20			\$5,357.28	\$4,187.78	\$4,615.93	\$8,072.13		\$2,083.85		128	\$29,816.18					
6	Power Back Up Plans, Specs and Estimate - Generator, PV and Bess (OPTIONAL)																																								
6.1	Power Back Up Plans, Specs and Estimate - Generator, PV and Bess (OPTIONAL)																												40	90	300	340					770	\$151,826.22			
	Task 6 ODCs																																								
	Subtotals (Hours) =																						N/A						40	90	300	340				770	\$151,826.22				
	Subtotals (Costs) =																												\$13,393.20	\$23,056.28	\$57,699.12	\$57,177.62				770	\$151,826.22				
Totals (Summary) =																						5,330	\$1,211,863.65																		
Total (Hours) =		N/A	84	16		190			20				888	610	1010	2260			252		5330																				
Total (Costs) =		\$9,060.00	\$33,024.60	\$4,023.64		\$65,303.00			\$3,506.21				\$297,329.04	\$159,659.23	\$194,253.69	\$380,063.00			\$65,641.23			\$1,211,863.65																			
Percentage of Total (Hours) =		N/A	2%	0%		4%			0%				17%	11%	19%	42%			5%		100%																				
Percentage of Total (Costs) =			1%	3%	0%	5%			0%				25%	13%	16%	31%			5%			100%																			

Work Order Estimate
Summary

Att.A, Item 15, 05/15/25

Consultant/ Subconsultant: **WSP**

Work Order Title: **South Bay Bus Maintenance Facility (SBMF) Zero Emission Bus (ZEB) Overhead Charging Phase 2 Design Services**

TASKS/WBS (1-6)																	
ODC Item	Description	Unit	Unit Cost	Task 1		Task 2		Task 3		Task 4		Task 5		Task 6		Totals	
				Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Airfare	EA	\$800.00	2	\$1,600.00	2	\$1,600.00										\$3,200.00
2	Ground Transit	EA	\$85.00	6	\$510.00	6	\$510.00										\$1,020.00
3	Hotel	EA	\$350.00	4	\$1,400.00	4	\$1,400.00										\$2,800.00
4	Meals & Incidentals	EA	\$80.00	6	\$480.00	6	\$480.00										\$960.00
5	Parking	EA	\$20.00	6	\$120.00	6	\$120.00										\$240.00
6	Printing & Reprographics	EA	\$3.50	200	\$700.00												\$700.00
7	Mileage	MI	\$0.70	100	\$70.00	100	\$70.00										\$140.00
8																	
9																	
10																	
Subtotal =					\$4,880.00	Subtotal =	\$4,180.00	Subtotal =		Subtotal =		Subtotal =		Subtotal =		Totals =	\$9,060.00



Agenda Item No. 16

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Battery Electric Bus (BEB) Fire and Life Safety Study – Work Order Agreement

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Work Order Amendment WOA353-AE-28 under MTS Doc No. PWL353.0-22 (in substantially the same format as Attachment A) with Dokken Engineering (Dokken) in the amount of \$153,546.13 to provide an engineering study service for fire and life safety of MTS bus maintenance facilities related to BEBs.

Budget Impact

The total cost of this contract is estimated to be \$153,546.13. The contract will be funded by the MTS Bus Maintenance Buildings and Grounds Operating Budget account 331014-571142.

DISCUSSION:

MTS's bus fleet currently includes BEBs powered by lithium-ion batteries. There is also potential to purchase and operate hydrogen buses as part of MTS's future zero emission bus transition plan efforts. These BEBs and potential future hydrogen buses will be maintained at facilities not originally designed to include fire and life safety alarms and detection for these types of buses.

To address this issue, MTS is seeking a consultant to review the fire detection & fire suppression systems in place and determine if they are up to industry or code standards specifically related to BEB thermal events. The consultant will also review our existing facilities focusing on the interior maintenance bays and the new overhead gantry at the South Bay Maintenance Facility (SBMF) and advise if there is anything that could be improved upon to put MTS in a better position to address a thermal event, and provide any recommendations available to prevent, detect and extinguish thermal events related to BEBs.

Under the proposed work order, Dokken will:

- Conduct site assessments at the East County Division, Kearny Mesa Division (KMD), Imperial Avenue Division (IAD), South Bay Bus Maintenance Facility;
- Provide an existing conditions report based on the site assessments; and

1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • sdmts.com

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.



- Identify best known practices, procedures, and recommendations to manage gas released by lithium-ion battery and hydrogen thermal events ensuring the facilities are up to current code standards and requirements related to fire and life safety.

On September 15, 2021, MTS issued a solicitation for On-Call Architectural and Engineering (A&E) Design Services by requesting Statements of Qualifications (RFSQ) from firms with expertise in a variety of A&E design and related consulting services separated into the following three (3) categories:

Category A: Comprehensive/Full Service - Five (5) prime contracts
Category B: Small Business Set Aside- Three (3) prime contracts awarded to a certified Small Business (SB) or a DBE certified firm, (which is also considered to be a SB)
Category C: Specialty Prime – Up to Five (5) specialty service contracts

As a result of the RFSQ, seven (7) firms were selected to perform various A&E services. For projects requiring A&E Services, work orders are issued to these firms.

On September 2024, MTS issued a Request for Proposals (RFP) to all firms in Categories A and B. On October 18, 2024, MTS received proposals from the following A&E firms:

Firm Name	Firm Certification
Dokken	None
Pacific Rail Enterprises, Inc. (PRE)	Disadvantaged Business Enterprise (DBE)
Mott MacDonald Group, Inc. (Mott)	None

An evaluation panel was comprised of MTS representatives, and the proposals were evaluated based on the following criteria.

Criteria	Points
Project Team	25
Project Team's Capabilities	25
Project Understanding and Approach	40
Schedule	10
Total Possible Score	100

On November 19, 2024, the selection committee conducted the initial evaluations of the proposals and scored as follows:

Ranking	Proposer Name	Total Score
1	Dokken	88.40
2	Mott	86.00
3	PRE	64.80

Following the initial evaluations, the selection panel deemed Dokken and Mott to be within the competitive range, and requested clarifications concerning their proposals. PRE was eliminated from further consideration.

On December 16, 2024, following the receipt of the revised proposals with clarifications, the selection panel conducted a second round of evaluations, and scored the submissions as follows:

Ranking	Proposer Name	Total Score
1	Dokken	91.00
2	Mott	87.00

As a result of the evaluations, Dokken was deemed to be the most qualified firm to perform the services. Dokken's initial proposed amount for the services was \$843,268.74. Through negotiations, including scope modifications, staff was able to reduce the cost by \$689,722.61, an 81.79% savings to MTS.

The scope modifications included the following:

Under the original work order scope as part of the RFP the consultant was to comprehensively evaluate the fire and life safety aspects of BEBs and hydrogen buses at all 5 divisions by:

- Conducting a thorough risk and site assessment of all facilities including on-board review of buses, facility review, SOP and maintenance procedure review.
- Providing recommendations on early detection, technologies available, improvements, and site-specific challenges
- Providing an existing conditions report for each division.
- Providing a comprehensive current state of the industry report on all current technology, types of suppression systems, best practices for extinguishing a thermal event, and recommendations for improvements.
- Providing a fire model analysis using computational fluid dynamics to assess the potential for reducing spread inside each facility should a thermal event occur.

Under the negotiated and deducted scope, Dokken will:

- Remove CPD from the study as there is no current regulation for cutaways.
- Focus the site assessment to being just inside the facilities where BEBs could occur.
- Remove the state of the industry report.
- Remove the fire model analysis.
- Perform a site assessment focusing on reviewing the fire detection & fire suppression systems in place and determine if they are up to industry or code standards specifically related to BEB thermal events.
- Reduce the scope of the existing conditions report to focus on the results of the site assessment.
- Provide recommendations for improvements to put MTS in a better position to address a thermal event, and provide any recommendations available to prevent, detect and extinguish thermal events related to BEBs only.

MTS's Independent Cost Estimate (ICE) for the services was \$146,590.90. Based on the level of effort and proposed classifications, Dokken's final cost proposal in the amount of \$153,546.13 was determined to be fair and reasonable.

For this project Dokken will utilize the following subconsultant(s):

Subconsultant Name	Subconsultant Certification	Subconsultant Amount
WSP	None	\$128,329.21

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order Amendment WOA353-AE-28 under MTS Doc No. PWL353.0-22 (in substantially the same format as Attachment A) with Dokken in the amount of \$153,546.13 to provide an engineering study service for fire and life safety of MTS bus maintenance facilities related to BEBs.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, mark.olson@sdmts.com

Attachment: A. Draft Work Order WOA353-AE-28



Metropolitan Transit System

May 15, 2025

MTS Doc. No. PWL353.0-22
WOA353-AE-28

Mr. John Klemunes, PE
Regional Manager
Dokken Engineering
1450 Frazee Road, Suite 100
San Diego, CA 92108

Dear Mr. Klemunes:

Subject: WORK ORDER WOA353-AE-28, TO MTS DOC. NO. PWL353.0-22, ENGINEERING SERVICES FOR BATTERY ELECTRIC BUS (BEB) FIRE AND LIFE SAFETY STUDY

This letter shall serve as Work Order WOA353-AE-28, under the General Engineering Consultant Agreement, MTS Doc. No. PWL353.0-22, as further described below.

SCOPE OF SERVICES

This Work Order shall provide design services for the Battery Electric Bus (BEB) Fire and Life Safety Study project in accordance with the attached Scope of Services (Attachments A). Federal terms do not apply.

SCHEDULE

The Schedule shall remain in effect for a period of one hundred twenty (120) calendar days from the date of the of the Notice to Proceed (NTP).

PAYMENT

Payment shall be in the amount of \$153,546.13. Payment shall be based on actual costs, and shall not be exceeded without prior authorization of MTS (Attachment B).



Please sign below, and return the document to the Contracts Specialist at MTS. All other terms and conditions shall remain the same and in effect.

Sincerely,

Accepted:

Sharon Cooney
Chief Executive Officer

John Klemunes, PE
Regional Manager, Dokken Engineering

Date: _____

Attachments: Attachment A, Scope of Services
Attachment B, Negotiated Fee Proposal

DRAFT

ATTACHMENT A
SCOPE OF SERVICES

DRAFT

TITLE: BATTERY ELECTRIC BUS (BEB) FIRE & LIFE SAFETY STUDY WOA #: WOA353-AE-28

I. PROJECT DESCRIPTION

The San Diego Metropolitan Transit System, (referred to hereafter as “MTS”) seeks a proposal for consultant services to conduct a study regarding BEB fire and life safety.

The objective of this study is to comprehensively evaluate the fire and life safety aspects of BEBs at the following five (5) MTS bus maintenance facilities:

- Imperial Avenue Division
100 16th St.
San Diego, CA 92101
- Kearny Mesa Division
4630 Ruffner Road
San Diego, CA 92111
- East County Division
544 Vernon Way
El Cajon, CA 92020
- South Bay Division
3610 Main Street
Chula Vista, CA 91911

Currently in operation, MTS has Battery Electric Buses (BEB) in our fleet which are powered by lithium-ion batteries. As part of future bus procurements, we are considering the addition of Hydrogen buses to our fleet. As part of this study, the consultant is to take into consideration that the future may consist of a mixed fleet of CNG, BEB, and Hydrogen and shall review all facilities and generate reports with this in mind.

Consultant shall consider the unique characteristics and operational requirements of each site and develop a study of Zero Emission Buses (ZEBs) (both hydrogen and battery electric) fire prevention and risk management with recommended practices and a strategic plan of action. The work shall consist of performing and inspection of all battery electric buses, bus maintenance locations, with recommendations for improvements and additional fire and life safety items.

II. SCOPE OF WORK

The scope of work shall consist of the following tasks and deliverables:

Task 1: Project Management and Coordination

- 1.1 Provide project management services including the requirements for invoicing, scheduling, monthly project progress reports, and administration of the Consultant's team.
- 1.2 Provide project coordination with MTS as well as coordination with other project stakeholders as necessary.
- 1.3 Provide coordination and oversight of subconsultant(s) and integration of plans and specifications into submittal packages.

- 1.4 Also included in Project Management is QA/QC which will be performed on all deliverables. To ensure quality of work and compliance with the scope of work, the consultant shall perform a systematic in-house review of all documents produced prior to submittal. All reviewed documents will have a check box or signature page indicating review has been performed.

Task 2: Site Assessment – Existing Conditions

- 2.1 Site Assessment - Conduct a thorough assessment of the existing conditions at MTS' bus maintenance facilities as they relate their transition to the maintenance, repair, and charging of battery electric buses (BEBs) and the resulting potential risk to life and property. The facilities shall be limited to Imperial Avenue Division (IAD), Kearny Mesa Division (KMD), South Bay Division (SBMF), and East County Division (ECD). The assessment shall consist of the following:
- Review and analysis of existing charging infrastructure including overhead charging and plug-in charging systems.
 - Review and analysis of existing fire alarm and fire sprinkler systems as they relate to fire detection and fire suppression in order to determine if they are up to industry code standards specifically related to BEB thermal events.
 - Review and analysis of on-site spaces and structures where BEBs are expected to be repaired, maintained, and charged.
- 2.2 Existing Conditions Report – The above site assessments shall be recorded in an existing conditions report showing and describing locations of notable observations made during the review. Analysis shall include comparisons of the existing conditions with WSP known best practices, products, studies, and codes. Analysis shall also include recommendations of products and systems which may not present at the existing facilities which, if included, may improve the risk to life and property, especially items like monitoring and early warning systems and associated alarms. Together, this information shall conclude in real, constructable facility improvements along with reasoning and recommended prioritization for each such that MTS has sufficient information for their further decision making.

Deliverable: Existing Conditions Report

Task 3: Further Recommendation

- 3.1 Further Recommendation - With the focus on mitigating the potential risk to life and health of MTS personnel, provide known best practices, procedures, and recommendations to manage gas released by lithium-ion battery fires. Consultant to advise if there is anything that could be improved upon to put MTS in a better position to address a BEB thermal events and provide recommendations to prevent, detect and extinguish BEB thermal events. This information shall be incorporated into the Existing Conditions Report, and again result in recommendations for real, constructable facility improvements to aide in MTS' decision making.

Deliverable: Further Recommendation.

III. PERIOD OF PERFORMANCE

Services shall be completed within one hundred twenty (120) calendar days from the date of the of the Notice to Proceed (NTP).

IV. DELIVERABLES

Final documents shall be prepared and anticipated to be delivered within the Period of Performance. MTS final comments shall be incorporated into the final document set.

V. SCHEDULE OF SERVICES/MILESTONES/DELIVERABLES**A. Tasks Schedule**

<u>Task</u>	<u>Begin/End Dates</u>
Task 1: Project Management	NTP / 120 days
Task 2: Site Assessment and Existing Conditions	NTP / 120 days
Task 3: Further Recommendation	NTP / 120 days

B. Milestones/Deliverables Schedule

<u>Milestone/Deliverable</u>	<u>Due Date</u>
Task 2: Existing Conditions Report	NTP / 120 days
Task 3: Further Recommendation	NTP / 120 days

VI. MATERIALS TO BE PROVIDED BY MTS AND/OR THE OTHER AGENCY

Background reports from prior work efforts will be provided by MTS

VII. SPECIAL CONDITIONS

Not Applicable.

VIII. MTS ACCEPTANCE OF SERVICES:

Contractor shall not be compensated at any time for unauthorized work outside of this Work Order. Contractor shall provide notice to MTS' Project Manager upon 100% completion of this Work Order. Within five (5) business days from receipt of notice of Work Order completion, MTS' Project Manager shall review, for acceptance, the 100% completion notice. If Contractor provides final service(s) or final work product(s) which are found to be unacceptable due to Contractors and/or Contractor's subcontractors negligence and thus not 100% complete by MTS' Project Manager, Contractor shall be required to make revisions to said service(s) and/or work product(s) within the Not to Exceed (NTE) Budget. MTS reserves the right to withhold payment associated with this Work Order until the Project Manager provides written acceptance for the 100% final completion notice. Moreover, 100% acceptance and final completion will be based on resolution of comments received to the draft documents and delivery of final documentation which shall incorporate all MTS revisions and comments.

Monthly progress payments shall be based on hours performed for each person/classification identified in the attached Fee Schedule and shall at no time exceed the NTE. Contractor shall only be compensated for actual performance of services and at no time shall be compensated for services for which MTS does not have an accepted deliverable or written proof and MTS acceptance of services performed.

IX. DEFICIENT WORK PRODUCT

Throughout the construction management and/or implementation phases associated with the

services rendered by the Contractor, if MTS finds any work product provided by Contractor to be deficient and the deficiently delays any portion of the project, Contractor shall bear the full burden of their deficient work and shall be responsible for taking all corrective actions to remedy their deficient work product including but not limited to the following:

- Revising provided documents,

At no time will MTS be required to correct any portion of the Contractors deficient work product and shall bear no costs or burden associated with Contractors deficient performance and/or work product.

X. DELIVERABLE REQUIREMENTS

Contractor will be required to submit any and all documentation required by the Scope of Work. The deliverables furnished shall be of a quality acceptable to MTS. The criteria for acceptance shall be a product of neat appearance, well-organized, and procedurally, technically and grammatically correct. MTS reserves the right to request a change in the format if it doesn't satisfy MTS's needs. All work products will become the property of MTS. MTS reserves the right to disclose any reports or material provided by the Contractor to any third party.

Contractor shall provide with each task, a work plan showing the deliverables schedule as well as other relevant date needed for Contractor's work control, when and as requested by MTS.

Contractor's computer data processing and work processing capabilities and data storage should be compatible with Windows compatible PC's, text files readable in Microsoft Word, and standard and customary electronic storage. Contractor shall maintain backup copies of all data conveyed to MTS.

Contractor shall provide MTS with hard copy or electronic versions of reports and/or other material as requested by MTS.

XI. PRICING

Except where otherwise noted herein, pricing shall be firm and fixed for the duration of the Work Order and any subsequent Change Orders/Amendments to the Work Order. There shall be no escalation of rates or fees allowed.

XII. ADDITIONAL INFORMATION

List additional information as applicable to the specific Work Order scope of services.

XIII. PREVAILING WAGE

Prevailing wage rates apply to certain personnel for these services? ☐ Yes ☒ No

ATTACHMENT B
NEGOTIATED FEE PROPOSAL

DRAFT

Work Order Estimate Summary

Att.A, Item 16, 05/15/25

MTS Doc. No.	PWL353.0-22
Work Order No.	WOA353-AE-28
Attachment:	B

Work Order Title: **BATTERY ELECTRIC BUS (BEB) FIRE & LIFE SAFETY STUDY**

Project No:

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes	Cost Codes Description	Total Costs
1	Labor	Total Direct Labor	\$149,205.13
2	ODCs	Total Other Direct Costs	\$4,341.00

Totals = **\$153,546.13**

Table 2 - TASKS/WBS Summary (Costs & Hours)

Item	TASKS/WBS	TASKS/WBS Description	Labor Hrs	Total Costs
1	Task 1	Project Management and Coordination	72.0	\$21,113.52
2	Task 2	Site Assessment - Existing Conditions	402.0	\$103,901.20
3	Task 3	Further Recommendation	118.0	\$28,531.40
4	Task 4			

Totals = **592.0** **\$153,546.13**

Table 3 - Consultant/Subconsultant Summary (Costs & Hours)

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
				DOKKEN ENGINEERING	88.0	\$25,216.92
				WSP	504.0	\$128,329.21

Totals = **592.0** **\$153,546.13**

Work Order Estimate
Summary

Total Hours =

88

Total Costs =

\$25,216.92

Consultant/Subconsultant:

DOKKEN ENGINEERING

Work Order Title:

BATTERY ELECTRIC BUS (BEB) FIRE & LIFE SAFETY STUDY

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Contract Manager	Project Manager	Task Manager	Engineer - Principal	Engineer - Senior	Engineer - 3	Engineer - 2	Engineer - 1	CADD - Senior	CADD - 3	Total Hours	Totals
				\$ 335.35	\$ 324.45	\$ 237.76	\$ 452.71	\$ 227.06	\$ 190.43	\$ 168.35	\$ 124.57	\$ 214.63	\$ 145.88		

Battery Electric Bus (BEB) Fire & Life Safety Study														
1.0	Project Management and Coordination		20		20								40	\$11,462.24
2.0	Site Assessment - Existing Conditions		16		16								32	\$9,169.79
3.0	Further Recommendation		8		8								16	\$4,584.89
4.0														
Subtotals (Hours) =		N/A	44		44								88	\$25,216.92
Subtotals (Costs) =			\$14,755.45		\$10,461.47								88	\$25,216.92
Totals (Summary) =													88	\$25,216.92
Total (Hours) =		N/A	44		44								88	
Total (Costs) =			\$14,755.45		\$10,461.47									\$25,216.92
Percentage of Total (Hours) =		N/A	50%		50%								100%	
Percentage of Total (Costs) =			59%		41%									100%

Work Order Estimate Summary

Att.A, Item 16, 05/15/25

Consultant/ Subconsultant: **DOKKEN ENGINEERING**

Work Order Title: **BATTERY ELECTRIC BUS (BEB) FIRE & LIFE SAFETY STUDY**

TASKS/WBS (1-5)													
ODC Item	Description	Unit	Unit Cost	Task 1		Task 2		Task 3		Task 4		Totals	
				Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
Subtotal =						Subtotal =				Subtotal =		Totals =	

Work Order Estimate
Summary

Total Hours =

504

Total Costs =

\$128,329.21

Consultant/Subconsultant:

WSP

Work Order Title:

BATTERY ELECTRIC BUS (BEB) FIRE & LIFE SAFETY STUDY

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Technical Expert	Task Manager	Scientist - 2	Project Manager	Project Controls - Senior	Project Controls - 3	Project Controls - 2	Planner - 2	Planner 1	Engineer - Principal	Engineer - Senior	Engineer - 3	Engineer - 2	Engineer - 1	Contract Manager	Architect - Senior	Admin - 1	Total Hours	Totals
				\$ 393.15	\$ 251.48	\$ 157.10	\$ 343.70	\$ 243.00	\$ 216.44	\$ 175.31	\$ 191.26	\$ 124.75	\$ 334.83	\$ 261.74	\$ 192.33	\$ 168.17	\$ 100.73	\$ 373.51	\$ 260.48	\$ 71.35		

Battery Electric Bus (BEB) Fire & Life Safety Study																					
1.0	Project Management and Coordination					24			8										32	\$9,651.29	
2.0	Site Assessment - Existing Conditions	\$4,341.00	44	70		8						8	120	40			80		370	\$94,731.41	
3.0	Further Recommendation					8						14	16	24			40		102	\$23,946.51	
4.0																					
Subtotals (Hours) =		N/A	44	70		40			8				22	136	64			120		504	\$128,329.21
Subtotals (Costs) =		\$4,341.00	\$17,298.60	\$17,603.41		\$13,748.00			\$1,402.49			\$5,758.20	\$26,156.93	\$10,762.85			\$31,257.73		504	\$128,329.21	
Totals (Summary) =																			504	\$128,329.21	
Total (Hours) =		N/A	44	70		40			8				22	136	64			120		504	
Total (Costs) =		\$4,341.00	\$17,298.60	\$17,603.41		\$13,748.00			\$1,402.49			\$5,758.20	\$26,156.93	\$10,762.85			\$31,257.73			\$128,329.21	
Percentage of Total (Hours) =		N/A	9%	14%					2%			4%	27%	13%			24%		92%		
Percentage of Total (Costs) =			3%	13%	14%				1%			4%	20%	8%			24%			89%	

Work Order Estimate Summary

Att.A, Item 16, 05/15/25

Consultant/ Subconsultant: **WSP**

Work Order Title: **BATTERY ELECTRIC BUS (BEB) FIRE & LIFE SAFETY STUDY**

TASKS/WBS (1-5)													
ODC Item	Description	Unit	Unit Cost	Task 1		Task 2		Task 3		Task 4		Totals	
				Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Airfare	Each	\$800.00			2	\$1,600.00					2	\$1,600.00
2	Graound Transit	Each	\$85.00			6	\$510.00					6	\$510.00
3	Hotel	Each	\$350.00			4	\$1,400.00					4	\$1,400.00
4	Meals & Incidental	Each	\$80.00			6	\$480.00					6	\$480.00
5	Parking	Each	\$20.00			6	\$120.00					6	\$120.00
6	Printing & Reprographics	Each	\$3.50			50	\$175.00					50	\$175.00
7	Milage	Miles	\$0.70			80	\$56.00					80	\$56.00
8													
9													
10													
Subtotal =						Subtotal =		\$4,341.00		Subtotal =		Subtotal =	
												Totals =	
												\$4,341.00	



Agenda Item No. 17

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Orange Line Improvement Project (OLIP) Phase 2: Procurement of Prewired Signal Houses and Related Materials — Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors:

- 1) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1691.0-25 (in substantially the same format as attachment A) with Diverging Approach, Incorporated (DAI) in the amount of \$6,563,227.74 for the purchase of prewired signal houses and related materials for Phase 2 of the Orange Line Improvement Project; and
- 2) Authorize the CEO to execute amendments or change orders up to 10% contingency (\$656,322.77) for this contract, bringing the total expenditure authority to \$7,219,550.51.

Budget Impact

The total cost of the equipment is estimated to be \$6,563,227.74, inclusive of 7.75% CA Sales Tax (Attachment C), plus up to a 10% contingency in the amount of \$656,322.77 for an estimated total contract cost of \$7,219,550.51. This contract will be funded by the Capital Improvement Program (CIP) account 2005123501 – Orange Line Rail Signals Phase 2.

DISCUSSION:

The OLIP work is divided into two phases and will make trolley system improvements at various locations within the seventeen and six tenths (17.6) mile line, benefitting the cities of San Diego, Lemon Grove, La Mesa, and El Cajon. The project's goal is to increase train speeds, improve service reliability and operating flexibility, maintain grade crossing safety, and increase the State of Good Repair (SGR).

The Phase 2 Project will upgrade the signal system and grade crossing warning systems to support bi-directional running between Massachusetts Avenue Station and El Cajon Transit Center. The Orange Line Automatic Block Signal (ABS) system was initially built for unidirectional running, with the grade crossing warning systems monitoring trains approaching the normal traffic direction. Trains operating reverse currents of traffic must do so under a set of



rules that significantly reduce efficiency. Trains must stop one car length approaching each grade crossing to activate the warning system and then proceed once the gates are in the down position. Trains must operate at restricted speed, which limits the Maximum Authorized Speed (MAS) to 20 mph.

SGR work includes the replacement of equipment that is beyond its useful life. Signal instrument shelters and the associated equipment within this area are approximately thirty-five (35) years old, have served their useful life, and need upgrading. These upgrades will improve the overall reliability, performance, and maintenance of the Orange Line.

While the design has progressed, MTS Capital Projects staff and the design team have been working on a project implementation schedule to meet the Transit and Intercity Rail Capital Program (TIRCP) grant's required completion date of June 30, 2028. The scheduling effort identified required start dates for construction. When compared with known lead times for specialty equipment to be installed by the contractor, staff identified that equipment lead times could put the construction schedule at risk. To limit the schedule risk associated with long lead equipment, the MTS Capital Projects team proposes that MTS directly purchase the signaling equipment so that it can be provided as "owner-furnished equipment" to the construction contractor for installation. The following items are planned to be pre-purchased to meet the Phase 2 schedule:

#	Item	MTS Board Meeting	Total
1	Catenary Poles	November 14, 2024 (Agenda Item (AI) 16)	\$167,653.40
2	Hitachi Switch Machines	February 13, 2025 (AI 6)	\$542,607.45
3	KB Signaling Electro codes	February 13, 2025 (AI 7)	\$1,355,932.79
4	Siemens PSO Assemblies	February 13, 2025 (AI 8)	\$427,849.39
5	Special Trackwork Materials	April 17, 2025 (AI 13)	\$2,050,595.75
6	Hardened Steel Rail	April 17, 2025 (AI 14)	\$2,134,070.64
7	Signal Houses	Today's Proposed Action	\$7,219,550.51
8	Signal Cable	Summer 2025	TBD

Signal House Manufacturer Selection Process

MTS Policy No. 52, "Procurement of Goods and Services", requires a formal competitive process for procurements and service contracts over \$150,000.00. On January 27, 2025, MTS issued a Request for Proposals (RFP) to qualified proposers to provide pre-wired signal houses and related materials for Phase 2 of the Orange Line Improvement Project. On March 26, 2025, MTS received a total of six (6) proposals from the following firms:

Firm Name	Firm Certification
Advanced Transit Solutions, Inc. (ATSI)	N/A
Diverging Approach, Inc. (DAI)	N/A
Herzog Technologies, Inc. (Herzog)	N/A
Progress Rail Services (Progress)	N/A
Siemens Mobility, Inc. (Siemens)	N/A
Wabtec Corporation (Wabtec)	N/A

On April 14, 2025, an evaluation committee consisting of representatives from Finance, MTS Trolley and Capital Projects scored the proposal based on the following evaluation criteria:

Evaluation Criteria	Total Possible Points
Qualifications of the Firm	30
Project Manager Qualifications, Organization, & Management Plan	20
Manufacturing Process Description/Project Approach	25
Cost	25
Total	100

The table below represents the proposer's initial score and ranking:

Proposer Name	Cost	Technical Score	Cost Score	Total Score (Maximum: 100)	Ranking
DAI	\$6,563,227.74	73.60	25.00	98.60	1
Progress	\$7,383,391.55	68.40	22.22	90.62	2
Wabtec	\$8,236,649.21	65.20	22.93	88.13	3
Siemens	\$7,070,996.78	64.00	23.20	87.20	4
Herzog	\$7,553,587.48	61.00	21.72	82.72	5
ATSI	\$10,967,991.03	62.00	14.96	76.96	6

Based on this scoring, after the initial review the evaluation committee proceeded with DAI as the top ranked proposal. By comparison of all proposals, and MTS' Independent Cost Estimate (ICE) at \$9,262,786.00, staff deems the proposal cost to be fair and reasonable.

For this project DAI will not utilize any subcontractors.

Therefore, staff recommends that the San Diego MTS Board of Directors:

- 1) Authorize the CEO to execute MTS Doc. No. L1691.0-25 (in substantially the same format as attachment A) with DAI in the amount of \$6,563,227.74 for the purchase of prewired signal houses and related materials for Phase 2 of the Orange Line Improvement Project; and
- 2) Authorize the CEO to execute amendments or change orders up to a 10% contingency (\$656,322.77) for this contract, bringing total expenditure authority of \$7,219,550.51.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, mark.olson@sdmts.com

Attachments: A. Draft Agreement MTS Doc. No. L1691.0-25
B. Scope of Work
C. Cost Proposal



Metropolitan Transit System

STANDARD AGREEMENT FOR MTS DOC. NO. L1691.0-25

PROCUREMENT OF PREWIRED SIGNAL HOUSES AND RELATED MATERIALS - PHASE 2

THIS AGREEMENT is entered into this _____ day of _____, 2025 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: Diverging Approach, Incorporated Address: 6623 Richmond Road Ste L
Williamsburg VA 23188
City State Zip
 Form of Business: S Corporation
 (Corporation, Partnership, Sole Proprietor, etc.) Email: jstanko@divappinc.com
 Telephone: 757-220-2316
 Authorized person to sign contracts Joseph Stanko President
Name Title

The Contractor agrees to provide services with goods as specified in the conformed Scope of Work/Technical Specification (Exhibit A), Contractor's Cost/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), and Forms (Exhibit D).

The contract term shall be effective from June 16, 2025 through December 31, 2027. This period allows for the completion of deliveries and processing of all invoices.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed \$6,563,227.74 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	DIVERGING APPROACH, INCORPORATED
By: <u>Sharon Cooney, Chief Executive Officer</u>	By _____
Approved as to form:	Title: _____
By: <u>Karen Landers, General Counsel</u>	



SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1. GENERAL

The San Diego Metropolitan Transit System (MTS), on behalf of San Diego Trolley, Inc. (SDTI), is inviting qualified Contractors to submit proposals for prewired signal enclosures and related materials. Requirements are generally described below, and described in more detail in Attachment 2 and Attachment 3.

The specifications provide the minimum acceptable technical requirements for the manufacturing and delivery of the prewired signal enclosures and related materials for the Project with the Contractor providing all labor, materials, equipment, storage space and services.

The contract term shall be effective approximately from June 16, 2025 through December 31, 2027. This timeframe allows for the completion of deliveries and processing of all invoices.

2. SCOPE OF WORK

In general, the Work consists of manufacturing and delivering thirty-one (31) new, prewired signal enclosures in seven (7) Delivery Segments more specifically detailed within the Contract Plans. Enclosure sizes include 6'x8', 6'x10', 6'x12', 20.5"x51.5", 10'x14', and 2-door case. The objective of this procurement is to reduce lead times by procuring signal enclosures separately from a future construction contract. Time is of the essence in the performance of this Work.

DELIVERY SEGMENT	LOCATION AND ENCLOSURE SIZE
1	E1653RCA – 2 door case
1	E1616RC – 6'x10' signal enclosure
1	E1567RC – 6'x8' signal enclosure
1	E1571RC – 20.5" x 51.5" transformer case
1	E1527RC – 6'x12' signal enclosure
1	Temporary Interface Case – 2-door case
2	E1471RC – 6'x10' signal enclosure
2	E1455RC – 6'x8' signal enclosure
2	E1424RC – 6'x12' signal enclosure
2	Temporary Interface Case – 2 door case
3	E1394RC – 6'x8' signal enclosure
3	E1370RC – 6'x12' signal enclosure
3	E1316RC – 6'x12' signal enclosure
4	E1297RC – 6'x12' signal enclosure
4	E1291RC – 10'x14' signal enclosure
4	R1279RC – 6'x12' signal enclosure
5	R1256RC – 6'x10' signal enclosure
5	R1241RC – 6'x10' signal enclosure
5	R1230RC – 6'x10' signal enclosure
5	R1224RC – 6'x10' signal enclosure
5	R1199RC – 6'x8' signal enclosure
5	R1174RC – 6'x8' signal enclosure

DELIVERY SEGMENT	LOCATION AND ENCLOSURE SIZE (Continuation)
5	R1114RC – 6'x8' signal enclosure
5	R1075RC – 6'x12' signal enclosure
5	R1050RC – 6'x12' signal enclosure
6	R1025RC – 6'x10' signal enclosure
6	R1000RC – 6'x10' signal enclosure
6	R967RC – 6'x10' signal enclosure
6	R945RC – 6'x12' signal enclosure
7	R917RC – 6'x8' signal enclosure
7	R886RC – 6'x10' signal enclosure

- A. Work, including material, shall comply with all Federal, State, and local laws and regulations.
- B. The signal instrument enclosure manufacturer selected by the Contractor shall be ISO 9001-2015 certified. All signal instrument enclosures shall be 12-gauge Type 316 stainless steel.
- C. Contractor shall note that each 6'x8', 6'x10', 6'x12', or 10'x14' enclosure will have specific door outswing (left or right) associated with its location as shown in the Drawings, to accommodate final placement in the field for required clearances within limited railroad right-of-way.
- D. Certain material to be installed within the signal instrument enclosures will be Owner furnished by MTS to reduce overall Contract time. All Owner furnished material will be made available to the Contractor six (6) months after Notice to Proceed. All other material to be procured by the Contractor is anticipated to require a lead time of 6 months or less. The Contractor shall identify in their proposal to MTS whether any material requires a lead time in excess of 6 months.
- E. Specific material is shown in the Contract Plans. All equivalent material shall be proposed by the Contractor for evaluation and acceptance by MTS during the bid Question and Answer Period only. No equivalent material will be accepted during the performance of the Work.
- F. Upon completion of each Delivery Segment and prior to shipment to San Diego, CA, the prewired signal instrument enclosures within that Segment shall undergo Factory Acceptance Testing (FAT). The Contractor shall be responsible for basic functional FAT as listed in the Specifications, under MTS' observation to confirm compliance with the Specifications. Materials which do not comply with the Specifications, or materials which, notwithstanding tests, inspection or acceptance are found to contain deficiencies, will be subject to rejection. Upon completion of the Contractor's functional FAT, MTS will conduct a performance FAT at the Contractor's facility.
- G. Upon MTS acceptance of the signal instrument enclosures within each Segment, the Contractor shall be responsible for all costs associated with the supply, delivery, and offloading of the prewired signal enclosures and related materials.
- H. Because the manufacturer's warranty for material begins when the material is received, the Contractor shall supplement the manufacturer's warranty for time elapsed between Contractor's receipt of materials and MTS' final acceptance plus one (1) year.

3. SPECIFICATIONS

Standard specification sections applicable to this procurement package are as follows.

- A. 34 42 01 - Transportation Signaling and Control
- B. 34 42 13.13 - General Railway Signal Requirements
- C. 34 42 13.14 - Route Control Equipment
- D. 34 42 13.15 – Battery and Charging Equipment
- E. 34 42 13.17 – Track Circuits
- F. 34 42 13.18 – Instrument Enclosures
- G. 34 42 13.19 – Signal System Grounding
- H. 34 42 13.20 – Relays
- I. 34 42 13.21 – Miscellaneous Signal System Products
- J. 34 42 13.26 – Highway Grade Crossing Warning System
- K. 34 44 13.27 – Painting and Galvanizing
- L. 34 42 13.28 – Block Signal and Highway Grade Crossing Warning Systems Factory Acceptance Testing
- M. 34 42 16 – Train Control Wire and Cable
- N. 34 42 19.01 – Vital Logic Controller
- O. 34 42 23 – Railway Control Equipment
- P. 34 42 26.13 – Signal System Fiber Optic Equipment

4. DRAWINGS

See Attachment 3.

5. CODES AND STANDARDS

Applicable codes and standards as described in the specifications but not limited to:

- A. AREMA Communications and Signal (C&S) Manual
- B. G.O. 143-B – Safety Rules and Regulations Governing Light-Rail Transit
- C. G.O. 164-E – Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems
- D. 49 CFR Part 212 – State Safety Participation Regulations
- E. 49 CFR Part 234 – Grade Crossing Safety
- F. 49 CFR Part 236 - Rules, Standards, and Instructions Governing the Installation, Maintenance, and Repair of Signal and Train Control Systems, Devices, and Appliances
- G. NFPA 70 – National Electrical Code

6. MATERIALS

5.6.1. OWNER FURNISHED MATERIALS

MATERIAL	QUANTITY
AC Vane Relay PV-250	30
PV-250 Relay Base	30
PSO 4000 Crossing Assembly	22
PSO 4000 Transceiver Assembly	10
PSO 4000 Transmitter Assembly	42
E ² CODE Configuration B	84

5.6.2. CONTRACTOR FURNISHED MATERIALS

The Contractor shall furnish all materials necessary to supply new prewired signal enclosures as shown in the Contract Drawings and defined in the Contract Specifications. All material to be procured by the Contractor is anticipated to require a lead time of 6 months or less. The Contractor shall identify in their proposal to MTS whether any material requires a lead time in excess of 6 months.

7. EXECUTION

5.7.1. ASSEMBLY FACILITY AND STORAGE

The systems housed in the prewired signal instrument enclosures shall be assembled in a facility normally engaged in such work. The Contractor shall provide the necessary space for storage, assembly, factory acceptance testing, and delivery of wayside signal instrument enclosures in successive Segments. The Contractor shall provide sufficient space to wire approximately nine (9), 6'x12' enclosures simultaneously during an active Segment, while staging/storing another four (4), 6'x12' enclosures for the next Segment. Should the Contractor choose to wire multiple Segments in parallel, the Contractor shall have sufficient space to store the completed enclosures with the assembly facility until FAT is performed.

5.7.2. QUALITY ASSURANCE

All materials and equipment provided by the Contractor shall be new. All materials and equipment shall conform to the recommendations of AREMA C&S Manual, except as modified in the Specifications and Contract Plans.

5.7.3. INSPECTION

All materials supplied by the Contractor shall be subject to inspection and testing at the Contractor's plant by MTS or their representative to confirm compliance with the specifications prior to shipment to the project site. The Contractor shall provide the Inspector, without any charges, with all necessary facilities to examine the work during its progress as well as the finished product to satisfy the Inspector that the signal instrument enclosures comply with the Specifications.

The signal instrument enclosures shall not be packaged for shipment without being released or approved by MTS. Signal instrument enclosures shipped before release or approved by MTS shall be subject to rejection and may be returned to the Contractor who shall be responsible for the expenses of handling and transport in both directions.

5.7.4. HANDLING AND DELIVERY

Contractor shall be responsible for transporting the Owner furnished materials from San Diego to the signal instrument enclosure assembly and wiring facility at no additional cost. All Owner furnished material will be made available to the Contractor as it becomes available to MTS, but no later than six (6) months after Notice to Proceed.

Once MTS has approved a Segment, the Contractor shall ship the enclosures to a designated location within a twenty-five (25) mile radius of MTS headquarters at 1255 Imperial Avenue, San Diego, CA, 92101.

Delivery of each Segment must be completed in a timely manner. MTS has determined that a progressive delivery schedule (by Segment) is required for this procurement. To support this schedule:

- Signal instrument enclosure detail drawings (each type) shall be submitted within 14 calendar days from Notice to Proceed (NTP).
- A project baseline schedule using Microsoft Project shall be submitted within 21 calendar days of NTP.
- Material submittals shall be submitted within 30 calendar days from NTP.

All orders shall be delivered completely within these time frames unless otherwise approved by MTS.

5.7.5. DELIVERY SCHEDULE

Contractor shall have the signal enclosures ready to begin Contractor FAT by the MTS target dates listed. The performance FAT (performed by MTS) requires other MTS contractors to be present at the Contractor's facility to accept the signal instrument enclosures as owner furnished material for a future contract. Given this dependency, each Segment's FAT shall not begin earlier than 14 calendar days prior to the dates listed.

<u>QTY</u>	<u>Description</u>	<u>MTS Target Date (Begin of FAT)</u>
6	Segment 1 Signal Instrument Enclosures	5/4/26
4	Segment 2 Signal Instrument Enclosures	8/3/26
3	Segment 3 Signal Instrument Enclosures	11/9/26
3	Segment 4 Signal Instrument Enclosures	2/15/27
9	Segment 5 Signal Instrument Enclosures	5/17/27
4	Segment 6 Signal Instrument Enclosures	8/23/27
2	Segment 7 Signal Instrument Enclosures	10/18/27

4.2. MEASUREMENT AND PAYMENT

Payment will be made on the following schedule of milestones:

- Milestone #1 – 30% release of payment following 80% of material on-hand
- Milestone #2 – 50% release of payment following completion of FAT testing
- Milestone #3 – 20% release of payment after all houses are delivered and accepted by MTS

4.3. INVOICES

Invoices must be sent to the MTS Accounting Department, via email, at ap@sdmts.com. All invoices must have the Purchase Order and contract number clearly displayed to ensure timely payment. MTS will not pay on packing slips, receiving documents, delivery documents, or other similar documents. Invoices must be submitted for payment.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) is for service or work provided by a subcontractor and indicate the amount that will be paid to the subcontractor. Contractors must also comply with the prompt payment requirements in the *Prompt Progress Payments* section of the Standard Conditions.

4.4. [NOT APPLICABLE] BUY AMERICA

5.10.1. [NOT APPLICABLE] CONSTRUCTION MATERIALS

5.10.2. [NOT APPLICABLE] MANUFACTURED PRODUCT

5.10.3. [NOT APPLICABLE] ROLLING STOCK

5.10.4. [NOT APPLICABLE] IRON OR STEEL

4.5. [NOT APPLICABLE] SAFETY DATA SHEETS (SDS)

4.6. [NOT APPLICABLE] NO RIGHT TO POST SIGNS

4.7. REPLACEMENT PARTS

Replacement parts and technical support for the specified equipment must be guaranteed by the manufacturer; to be available for a ten (10) year period from the date of purchase. Manufacturer shall keep parts books and maintenance manuals up-to-date for that period.

4.8. EXPEDITING

The goods furnished under this Agreement shall be subject to expediting by MTS. MTS shall be afforded free access to Contractor's shops, factories, or places of business, and those of Contractor's suppliers, for expediting purposes. As required by MTS, Contractor shall supply schedules, unpriced copies of purchase orders and progress reports for MTS's use in expediting.

4.9. [NOT APPLICABLE] ACQUISITION OF ROLLING STOCK

L1691.0-25 Procurement of Prewired Signal Houses and Related Materials Phase 2 RFP**AMD 2 -- ATT 2 Cost Proposal Form 2-26-25****** Fill in the Green Cells ****

Line #	Item Description	Notes		Est. QTY	Unit Cost	Extended Total
1	2-Door Interface Case Signal Enclosure Complete	2-door case	Interface case	2	\$ 141,068.33	\$ 282,136.66
2	E1653RCA Signal Enclosure Complete	2-door case	E26	1	\$ 50,336.45	\$ 50,336.45
3	E1616RC Signal Enclosure Complete	6x10	Xing/Int	1	\$ 204,869.42	\$ 204,869.42
4	E1567RC Signal Enclosure Complete	6x8	Int	1	\$ 140,210.21	\$ 140,210.21
5	E1571RC Transformer Case Signal Enclosure Complete	20.5"x51.5"	Tranformer case	1	\$ 35,424.19	\$ 35,424.19
6	E1527RC Signal Enclosure Complete	6x12	E22	1	\$ 284,529.67	\$ 284,529.67
7	E1471RC Signal Enclosure Complete	6x10	Xing/Int	1	\$ 201,323.45	\$ 201,323.45
8	E1455RC Signal Enclosure Complete	6x8	Int	1	\$ 139,219.01	\$ 139,219.01
8A	E1445RC Signal Enclosure Complete	2-door case	AFO Case	1	\$ 52,863.39	\$ 52,863.39
9	E1424RC Signal Enclosure Complete	6x12	E18	1	\$ 293,034.87	\$ 293,034.87
10	E1394RC Signal Enclosure Complete	6x8	Int	1	\$ 136,120.74	\$ 136,120.74
11	E1370RC Signal Enclosure Complete	6x12	E14	1	\$ 284,084.31	\$ 284,084.31
12	E1316RC Signal Enclosure Complete	6x12	E10	1	\$ 284,084.31	\$ 284,084.31
13	E1297RC Signal Enclosure Complete	6x12	E6 Remote	1	\$ 208,339.32	\$ 208,339.32
14	E1291RC Signal Enclosure Complete	10x14	E6 Main	1	\$ 356,069.74	\$ 356,069.74
15	R1279RC Signal Enclosure Complete	6x12	R30	1	\$ 233,323.33	\$ 233,323.33
16	R1256RC Signal Enclosure Complete	6x10	Xing	1	\$ 171,909.45	\$ 171,909.45
17	R1241RC Signal Enclosure Complete	6x10	Xing/Int	1	\$ 199,039.85	\$ 199,039.85
18	R1230RC Signal Enclosure Complete	6x10	Xing	1	\$ 166,916.83	\$ 166,916.83
19	R1224RC Signal Enclosure Complete	6x10	Xing/Int	1	\$ 203,394.52	\$ 203,394.52
20	R1199RC Signal Enclosure Complete	6x8	CS	1	\$ 153,694.62	\$ 153,694.62
21	R1174RC Signal Enclosure Complete	6x8	CS/Int	1	\$ 134,771.55	\$ 134,771.55
22	R1114RC Signal Enclosure Complete	6x8	Int	1	\$ 134,534.00	\$ 134,534.00
23	R1075RC Signal Enclosure Complete	6x12	R26/Xing	1	\$ 300,044.72	\$ 300,044.72
24	R1050RC Signal Enclosure Complete	6x12	R26 Remote	1	\$ 210,402.45	\$ 210,402.45
25	R1025RC Signal Enclosure Complete	6x10	Xing/Int	1	\$ 192,100.78	\$ 192,100.78
26	R1000RC Signal Enclosure Complete	6x10	Xing/Int	1	\$ 204,197.66	\$ 204,197.66

Line #	Item Description	Notes		Est. QTY	Unit Cost	Extended Total
27	R967RC Signal Enclosure Complete	6x10	Xing	1	\$ 168,255.20	\$ 168,255.20
28	R945RC Signal Enclosure Complete	6x12	R22	1	\$ 316,158.55	\$ 316,158.55
29	R917RC Signal Enclosure Complete	6x8	CS	1	\$ 126,420.13	\$ 126,420.13
30	R886RC Signal Enclosure Complete	6x10	Xing/Int	1	\$ 223,353.25	\$ 223,353.25
Total Delivery Cost (If Applicable)						
Sub-Total						\$ 6,091,162.63
Taxes						\$ 472,065.10
Grand Total						\$ 6,563,227.74
Costs shall be firm fixed, all-inclusive with the exception of California sales tax. MTS will calculate sales tax at purchase order issuance. Other than the CA sales tax, MTS will not pay any other additional costs.						
Delivery shall be F.O.B. within 25-mile radius of MTS Headquarters at 1255 Imperial Avenue, San Diego, CA 92101.						



**Metropolitan
Transit
System**

Agenda Item No. 18

**MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS**

May 15, 2025

SUBJECT:

Broadway & C Street Wheel Counter and Signal Replacement Construction Management Services— Contract Award

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Work Order No. WOA2498-CM30 under MTS Doc No. G2498.0-21 (in substantially the same format as Attachment A), with Kleinfelder Construction Services, Inc., in the amount of \$156,269.58 for Construction Management (CM) services on the Broadway & C Street Wheel Counter and Signal Replacement project.

Budget Impact

The total cost of this contract is estimated to be \$156,269.58 (Attachment C). This project will be funded by the MTS Capital Improvement Program (CIP) account 2005114501 – Signal Replacement.

DISCUSSION:

On March 13, 2025 (Agenda Item (AI) 15), the MTS Board of Directors approved a construction contract with Modern Railway Systems, Inc. to replace the existing Siemens axle counter system, the Frauscher FAdC Axle Counter System and upgrade the Siemens Sicas S7 Vital Logic Controller with an Alstom ElectrologIXS Controller. MTS requires CM services to assist staff with the coordination, control, and oversight of the construction contractor from the beginning of the work through completion.

Today's proposed action would be to issue a work order to Kleinfelder Construction Services Inc. for the CM services related to the Modern Railway Systems contract. Kleinfelder's tasks will include engineering and field inspections of the signaling and wheel counter systems. Kleinfelder will provide electrical and signaling field inspections for the entirety of the project to ensure the signaling systems are installed and operating per plans and specifications.

CM Consultant Selection Process

On January 11, 2021, the San Diego Association of Governments (SANDAG) and MTS issued a joint Request for Statement of Qualifications (RFSQ) for On-Call CM Services. The RFSQ resulted in the identification of six (6) firms qualified to perform CM services; the MTS Board of



Directors approved this panel of On-Call CM Services firms on July 29, 2021 (AI 16). Tasks are assigned to the firms through a work order process.

On February 21, 2025, MTS issued a Request for Proposals (RFP) to all firms.

On March 21, 2025, MTS received one (1) proposal from the following firm:

Firm Name	Firm Certification
Kleinfelder Construction Services, Inc.	None

An evaluation panel comprised of MTS representatives, and the proposal was evaluated based on the following criteria:

Criteria	Points
Project Team	40
Project Team's Capabilities	40
Schedule	20
Total Possible Score 100	100

On April 17, 2025, the selection committee evaluated the initial proposal and scored as follows:

Ranking	Proposer Name	Total Score
1	Kleinfelder Construction Services, Inc.	93

As a result of the evaluations, Kleinfelder was deemed qualified to perform the services.

Kleinfelder's initial proposal amount for the services was \$174,654.80. Through negotiations, staff were able to reduce the cost by \$14,442.80, a 9% savings to MTS. The Independent Cost Estimate (ICE) for the services was \$160,212.00. Based on the level of effort and proposal classifications, Kleinfelder's final cost proposal in the amount of \$156,269.58 was determined to be fair and reasonable.

For this project, Kleinfelder will utilize the following subconsultants:

Subconsultant Name	Subconsultant Certification	Subconsultant Amount
C.A. Wehsener Engineering	Small Business (SB)	\$62,971.06
Destination Enterprises	SB	\$78,922.64

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order No. WOA2498-CM30 under MTS Doc No. G2498.0-21 (in substantially the same format as Attachment A), with Kleinfelder Construction Services, Inc., in the amount of \$156,269.58 for the Broadway & C Street Wheel Counter and Signal Replacement CM Services.

/S/ Sharon Cooney

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, mark.olson@sdmts.com

Attachments: A. Draft Work Order WOA2498-CM30



Metropolitan Transit System

May 2, 2025

MTS Doc. No. G2498.0-21
Work Order No. WOA2498-CM30

Marc McIntyre
Area Manager
Kleinfelder Construction Services, inc.
5761 Copley Dr. Ste. 100
San Diego, CA 92101

Dear Marc McIntyre:

Subject: WOA2498-CM30 TO MTS DOC. NO. G2498.0-21, CONSTRUCTION MANAGEMENT SERVICES FOR WORK ORDER AGREEMENT FOR BROADWAY & C STREET WHEEL COUNTER AND SIGNAL REPLACEMENT

This letter shall serve as our agreement for WOA2498-CM30 to MTS Doc. No. G2498.0-21, for Construction Management Services under the Construction Management Consultant Agreement, as further described below.

SCOPE OF SERVICES

This work order shall provide wheel counter and signal replacement construction management services in accordance with the Scope of Services (Attachment A).

SCHEDULE

The Schedule for this work order shall have a period of performance for sixty (60) calendar days from issuance of Notice to Proceed.

PAYMENT

The Payment for this work order shall be \$156,269.58 (Attachment B). This amount shall not be exceeded without prior written approval from MTS.



Please sign below, and return the document to the Contracts Specialist at MTS. All other terms and conditions shall remain the same and in effect.

Sincerely,

Sharon Cooney
Chief Executive Officer

Accepted:

Marc McIntyre – Area Manager
Kleinfelder Construction Services, inc

Date:

Attachments: A, Scope of Services
A1, Consultant's Proposal
B, Negotiated Fee Proposal

DRAFT

ATTACHMENTS A
SCOPE OF SERVICES

DRAFT

TITLE: Broadway and C St Wheel Counter and Sica S7 Replacement **WOA #:** WOAXXXX-CM30

I. PROJECT DESCRIPTION

This project aims to replace the existing axle counter system provided by Siemens with a system provided by Frauscher FAdC Axle Counter System. It will also replace the existing Sicas S7 vital logic controller with an ElectrologIXS Controller within the Broadway signal house, as well as the existing and new C Street signal case.

Contractor shall provide construction management services to manage and administer the construction contract. Services include part-time project controls, contract administration, field inspection, special inspection, as-needed quality assurance materials testing, and as-needed specialty services. Services shall be performed in accordance with MTS and San Diego Association of Governments (SANDAG) policies and procedures and under the management of MTS. Key staff shall include:

- Task Order Manager
- Resident Engineer
- Signal Engineer and Inspector

II. SCOPE OF WORK

The scope of work shall consist of the following services which will be conducted in accordance with the Master On-call Agreement, the SANDAG Construction Manual, this scope of work, and the contract documents.

The SANDAG Construction Manual can be found at the link below:

<https://www.sandag.org/-/media/SANDAG/Documents/PDF/projects-and-programs/SANDAG-construction-manual-2022-12-01.pdf>

Task 1.0: Submittal/Schedule Review

- 1.1 Review Contractor's submittals for compliance to contract documents prior to submitting to Owner and Design Team.
- 1.2 Review and comment on Contractor's Critical Path Method (CPM) baseline schedule and the Contractor's CPM schedule updates

Task 2.0: Project/Task Order Manager

The project manager will provide periodic supervision of the construction team, manage Construction Manager's (CM) contract budget and schedule, and serve as MTS' point of contact for conduct and performance of CM services. Tasks include:

- 2.1 Verify that the assigned field personnel are trained in the skills that are needed to manage each task
- 2.2 Administer personnel action and coordinate personnel matters with MTS' Contract Manager
- 2.3 Review construction contractor's monthly invoices prior to submission to MTS

- 2.4 Review and comment on Contractor's CPM baseline schedule and the Contractor's CPM schedule updates

Task 3.0: Resident Engineer

- 3.1 Resident Engineer will be assigned specifically to this Project and work under the direction of MTS Project Manager
- 3.2 Perform quality assurance inspections of the work to verify compliance with the contract documents
- 3.3 Prepare daily reports noting work description, materials, quantities, and pertinent decisions or recommendations
- 3.4 Manage the track and operational elements of the project improvements
- 3.5 Regular tasks include:
 - 1. On Time and Material (T&M) change orders, keep a daily record of contractor's equipment, labor, and materials on Tentative Agreements
 - 2. Obtain photos/video of existing conditions and regular progress photo documentation
 - 3. Arrange for material tests for soils, concrete, hot mix asphalt, and other materials incorporated in the work, on an as-needed basis
 - 4. Identify non-compliant work to the Contractor and report findings to the MTS Project Manager
 - 5. Maintain accounting of daily quantities of contract bid item or change order work performed. Assist MTS Project Manager in reviewing Contractor's Pay App and assist in determining quantities to be included for payment in the monthly progress payment
 - 6. If observed work does not meet contract or change order requirements, prepare, and submit Non-Conformance Report (NCR) to the MTS Project Manager
 - 7. Attend weekly progress meeting, as well as additional meetings as requested by the MTS Project Manager
 - 8. Monitor the construction progress with the approved construction schedule and advise the MTS Project Manager of inconsistencies or non-conformance with critical path activities
- 3.6 Coordinate construction activities with MTS operations
- 3.7 Coordinate/verify Contractor's flagging requests with MTS
- 3.8 Perform submittal reviews
- 3.9 Manage and coordinate work windows
- 3.10 Support MTS Project Manager in management of the construction contract
- 3.11 Coordinate with Design Team to resolve issues
- 3.12 Assist with contract administration duties and attend or lead weekly progress meetings, as required

Task 4.0: Track Signal Engineering Inspection

- 4.1 Review submittals for signals elements of the work, as requested
- 4.2 Review construction work plans and cutover plans for signal installations
- 4.3 Perform field inspections for signal installations, including conduits, foundations, signal cases, track circuits, switch machines, axle counters and other signal devices
- 4.4 Oversee testing for signal installations and cutovers
- 4.5 Perform tasks provided in "Field Inspection Staff"

III. PERIOD OF PERFORMANCE

The Period of Performance for submittal and schedule reviews shall be twelve (12) calendar days from Limited Notice to Proceed. For all other tasks, the Period of Performance shall be from the date the of Notice to Proceed through the completion of construction activities, which is anticipated to be sixty (60) calendar days from date Notice to Proceed.

IV. DELIVERABLES

1. Inspection reports, inspection daily diaries, photo documentation, and pay estimates in accordance with MTS procedures
2. Meeting agendas, RFI, and Submittal Logs
3. Project records in accordance with MTS procedures.

V. SCHEDULE OF SERVICES/MILESTONES/DELIVERABLES

A. Tasks Schedule

Task	Begin/End Dates
1.0 Submittals/ Contractor Schedule Review	LNTP to 12 Calendar Days
2.0 Project/Task Order Management	NTP to 60 Calendar Days
3.0 Resident Engineer	NTP to 60 Calendar Days
4.0 Track Signal Engineering and Inspection	NTP to 60 Calendar Days

B. Milestones/Deliverables Schedule

Milestone/Deliverable	Due Date
1. Inspection Reports and Diaries	Daily
2. Agendas, RFI's, and Submittal Logs	Weekly
3. Project Records	NTP to 60 Calendar Days

VI. MATERIALS TO BE PROVIDED BY MTS AND/OR THE OTHER AGENCY

1. Project plans, special provisions, and standard specifications
2. RE Pending File (from design team)
3. Applicable permits
4. Flagging personnel for work alongside MTS right-of-way
5. MTS Roadway Worker training (if necessary) for personnel working alongside MTS right-of-way

VII. SPECIAL CONDITIONS

Construction Sequence:

Work to be done requires specific installation sequencing to maintain service to customers during all phases of construction. Contractor and MTS shall closely coordinate the necessary shutdowns, which shall be performed by MTS crews. Contractor shall submit for approval the sequence of work.

MTS will allow the contractor one (1) signal system cutover. The cutover period is limited to fourteen (14) total consecutive days. During the cutover, trains will continue to run through the construction area, and MTS will provide switch tenders. All system route testing shall be done during nonrevenue hours.

Contractor shall prepare detailed, hour by hour work plan, for the duration of the shutdown, to be approved by MTS prior to initiating shutdown of any systems.

Standard Work Windows:

Weekday work is to be performed between trains from 8:00 AM to 4:00 PM.

Weekday non-revenue service will be from 1:30 AM to 4:00 AM - (Tuesday through Saturday).

Saturday work is to be performed between trains from 8:00 AM to 4:00 PM.

Saturday non-revenue service will be from 1:30 AM to 4:30 AM – (Sunday).

Sunday work is to be performed between trains from 8:00 AM to 4:00 PM.

Sunday non-revenue service will be from 12:00 AM to 4:00 AM – (Monday).

Scope of services excludes:

1. Labor compliance services for the construction contract
2. Construction staking and surveying
3. Hazardous material monitoring and testing services. Services may be performed, as requested by MTS, and as needed, for additional fee
4. Construction contractor is responsible for job site safety and safety of transit patrons and general public during construction, including for non-completed work and work in progress

VIII. MTS ACCEPTANCE OF SERVICES:

Contractor shall not be compensated at any time for unauthorized work outside of this Work Order. Contractor shall provide notice to MTS' Project Manager upon 100% completion of this Work Order. Within five (5) business days from receipt of notice of Work Order completion, MTS' Project Manager shall review, for acceptance, the 100% completion notice. If Contractor provides final service(s) or final work product(s) which are found to be unacceptable due to Contractors and/or Contractor's subcontractors negligence and thus not 100% complete by MTS' Project Manager, Contractor shall be required to make revisions to said service(s) and/or work product(s) within the Not to Exceed (NTE) Budget. MTS reserves the right to withhold payment associated with this Work Order until the Project Manager provides written acceptance for the 100% final completion notice. Moreover, 100% acceptance and final completion will be based on resolution of comments received to the draft documents and delivery of final documentation which shall incorporate all MTS revisions and comments.

Monthly progress payments shall be based on hours performed for each person/classification identified in the attached Fee Schedule and shall at no time exceed the NTE. Contractor shall only be compensated for actual performance of services and at no time shall be compensated for services for which MTS does not have an accepted deliverable or written proof and MTS acceptance of services performed.

IX. DEFICIENT WORK PRODUCT

Throughout the construction management and/or implementation phases associated with the services rendered by the Contractor, if MTS finds any work product provided by Contractor to be

deficient and the deficiently delays any portion of the project, Contractor shall bear the full burden of their deficient work and shall be responsible for taking all corrective actions to remedy their deficient work product including but not limited to the following:

- Paying applicable delay fees,
- Revising provided documents,

At no time will MTS be required to correct any portion of the Contractors deficient work product and shall bear no costs or burden associated with Contractors deficient performance and/or work product.

X. DELIVERABLE REQUIREMENTS

Contractor will be required to submit any and all documentation required by the Scope of Work. The deliverables furnished shall be of a quality acceptable to MTS. The criteria for acceptance shall be a product of neat appearance, well-organized, and procedurally, technically and grammatically correct. MTS reserves the right to request a change in the format if it doesn't satisfy MTS's needs. All work products will become the property of MTS. MTS reserves the right to disclose any reports or material provided by the Contractor to any third party.

Contractor shall provide with each task, a work plan showing the deliverables schedule as well as other relevant date needed for Contractor's work control, when and as requested by MTS.

Contractor's computer data processing and work processing capabilities and data storage should be compatible with Windows compatible PC's, text files readable in Microsoft Word, and standard and customary electronic storage. Contractor shall maintain backup copies of all data conveyed to MTS.

Contractor shall provide MTS with hard copy or electronic versions of reports and/or other material as requested by MTS.

XI. PRICING

MTS shall reimburse the Contractor for actual costs of Work Order Agreements (including labor costs, employee benefits, overhead, and other direct costs applicable to the specific Work Order Agreement) incurred by the Contractor in performance of the work, in an amount established in the Work Order Agreement (WOA). Actual costs shall not exceed the estimated wage rates established in the negotiations between the Parties.

Fees and all other charges will be billed as identified in the WOA, and the net amount shall be due at the time of billing, unless otherwise specified.

XII. ADDITIONAL INFORMATION

List additional information as applicable to the specific Work Order scope of services.

XIII. PREVAILING WAGE

Prevailing wage rates apply to certain personnel for these services? x Yes ☐ No

Exhibit:

Exhibit A: Specifications Issued for Construction

Exhibit B: C Street Drawings
Exhibit C: Broadway Drawings

DRAFT

Exhibit A
Specifications Issued for Construction

DRAFT



C Street & Broadway Wye Design
1255 Imperial Avenue
San Diego, California 92101
MTS Doc. No. PWL394.0-24

SPECIFICATIONS

**Issued for
Construction**

March 2024

METROPOLITAN TRANSIT SYSTEM



C Street & Broadway Wye Design

San Diego, California

**Job Order
Contract**

**Specifications
Issued for Bid**

March, 2024

TABLE OF CONTENTS

Division	Section Title
----------	---------------

SPECIFICATIONS GROUP

Site and Infrastructure Subgroup

DIVISION 26 – ELECTRICAL

260543	Underground Ducts and Raceways for Electrical Systems
260553	Identification for Electrical Systems
262816	Enclosed Switches and Circuit Breakers

DIVISION 34 - TRANSPORTATION

344201	Transportation and Signaling Control
344213.13	General Railway Signal Requirements
344213.14	Route Control Equipment
344213.15	Battery and Charging Equipment
344213.17	Track Circuits
344213.18	Instrument Shelters
344213.19	Signal System Grounding
344213.20	Relays
344213.21	Miscellaneous Signal System Products
344213.27	Painting and Galvanizing
344213.28	Block Signal and Highway Grade Crossing Warning Systems Testing
344213.29	Abandonment, Demolition, Removal, and Disposal of Existing Signal System Facilities
344216	Train Control Wire and Cable
344219.01	Vital Logic Controller
344223	Railway Control Equipment
344223.1	Railway Axle Counter Requirements
344226.13	Signal System Fiber Optic Network

SECTION 260543

UNDERGROUND DUCTS AND RACEWAYS FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including MTS C Street & Broadway Wye Design apply to this Section.

1.2 UNIT PRICE - MEASUREMENT AND PAYMENT

A. UNDERGROUND GROUND SYSTEM

- 1. Basis of Measurement: Lump Sum Power/Lighting Cable and Underground Conduit System.
- 2. Basis of Payment: Include handhole, ducts and accessories required and installation.

1.3 SUMMARY

A. Section Includes:

- 1. Rigid nonmetallic duct.
- 2. Duct accessories.
- 3. Precast concrete handholes.

1.4 DEFINITIONS

- A. Direct Buried: Duct or a duct bank that is buried in the ground, without any additional casing materials such as concrete.
- B. Duct: A single duct or multiple ducts. Duct may be either installed singly or as component of a duct bank.
- C. Duct Bank:
 - 1. Two or more ducts installed in parallel, with or without additional casing materials.
 - 2. Multiple duct banks.
- D. GRC: Galvanized rigid (steel) conduit.

- E. Trafficways: Locations where vehicular or pedestrian traffic is a normal course of events.

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include duct-bank materials, including spacers and miscellaneous components.
 - 2. Include duct, conduits, and their accessories, including elbows, end bells, bends, fittings, and solvent cement.
 - 3. Include accessories for manholes, handholes, boxes.
 - 4. Include underground-line warning tape.
 - 5. Include warning planks.
- B. Shop Drawings:
 - 1. Factory-Fabricated Handholes and Boxes Other Than Precast Concrete:
 - a. Include dimensioned plans, sections, and elevations, and fabrication and installation details.
 - b. Include duct entry provisions, including locations and duct sizes.
 - c. Include cover design.
 - d. Include grounding details.
 - e. Include dimensioned locations of cable rack inserts, and pulling-in and lifting irons.

1.6 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: For duct and duct bank. Show duct profiles and coordination with other utilities and underground structures.
 - 1. Include plans and sections, drawn to scale, and show bends and locations of expansion fittings.
 - 2. Drawings shall be signed and sealed by a qualified professional engineer.
- B. Qualification Data: For professional engineer and testing agency responsible for testing nonconcrete handholes and boxes.
- C. Product Certificates: For concrete and steel used in precast concrete handholes, as required by ASTM C858.
- D. Source quality-control reports.
- E. Field quality-control reports.

1.7 MAINTENANCE MATERIALS SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
- B. Furnish cable-support stanchions, arms, insulators, and associated fasteners in quantities equal to 5 percent of quantity of each item installed.

1.8 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM E329 for testing indicated.

1.9 FIELD CONDITIONS

- A. Interruption of Existing Electrical Service: Do not interrupt electrical service to facilities occupied by Owner or others unless permitted under the following conditions, and then only after arranging to provide temporary electrical service according to requirements indicated:
 - 1. Notify Construction Manager no fewer than seven days in advance of proposed interruption of electrical service.
 - 2. Do not proceed with interruption of electrical service without Construction Manager's written permission.
- B. Ground Water: Assume ground-water level is at grade level unless a lower water table is noted on Drawings.
- C. Ground Water: Assume ground-water level is 36 inches below ground surface unless a higher water table is noted on Drawings.

PART 2 - PRODUCTS

2.1 RIGID NONMETALLIC DUCT

- A. Underground Plastic Utilities Duct: Type EPC-40-PVC RNC, complying with NEMA TC 2 and UL 651, with matching fittings complying with NEMA TC 3 by same manufacturer as duct.
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. ARNCO Corp.
 - 2. Beck Manufacturing.
 - 3. Cantex Inc.
 - 4. CertainTeed Corporation.
 - 5. Condux International, Inc.

6. Crown Line Plastics.
7. ElecSys, Inc.
8. Electri-Flex Company.
9. Endot Industries Inc.
10. IPEX USA LLC.
11. Lamson & Sessions.
12. Manhattan/CDT.
13. National Pipe & Plastics.
14. Opti-Com Manufacturing Network, Inc (OMNI).
15. Spiraduct/AFC Cable Systems, Inc.

- C. Listed and labeled as defined in NFPA 70, by a nationally recognized testing laboratory, and marked for intended location and application.
- D. Solvents and Adhesives: As recommended by conduit manufacturer.

2.2 DUCT ACCESSORIES

- A. Duct Spacers: Factory-fabricated, rigid, PVC interlocking spacers; sized for type and size of duct with which used and selected to provide minimum duct spacing indicated while supporting duct during concreting or backfilling.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Atkore International (Allied Tube & Conduit).
 - b. Cantex Inc.
 - c. Carlon; a brand of Thomas & Betts Corporation.
 - d. IPEX USA LLC.
 - e. PenCell Plastics.
 - f. Underground Devices, Inc.
- B. Underground-Line Warning Tape: Comply with requirements for underground-line warning tape specified in Section 260553 "Identification for Electrical Systems."
- C. Concrete Warning Planks: Nominal 12 by 24 by 3 inches in size, manufactured from 6000-psi concrete.
 1. Color: Red dye added to concrete during batching.
 2. Mark each plank with "ELECTRIC" in 2-inch-high, 3/8-inch-deep letters.

2.3 PRECAST CONCRETE HANDHOLES AND BOXES

- A. Description: Factory-fabricated, reinforced-concrete, monolithically poured walls and bottom unless open-bottom enclosures are indicated. Frame and cover shall form top of enclosure and shall have load rating consistent with that of handhole or box.

- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Christy Concrete Products.
 2. Elmhurst-Chicago Stone Co.
 3. Oldcastle Precast, Inc.
 4. Rinker Group, Ltd.
 5. Riverton Concrete Products.
 6. Utility Concrete Products, LLC.
 7. Utility Vault Co.
 8. Wausau Tile Inc.
- C. Comply with ASTM C858 for design and manufacturing processes.
- D. Frame and Cover: Weatherproof cast-iron frame, with cast-iron cover with recessed cover hook eyes and tamper-resistant, captive, cover-securing bolts.
- E. Frame and Cover: Weatherproof steel frame, with steel cover with recessed cover hook eyes and tamper-resistant, captive, cover-securing bolts.
- F. Frame and Cover: Weatherproof steel frame, with hinged steel access door assembly with tamper-resistant, captive, cover-securing bolts.
1. Cover Hinges: Concealed, with hold-open ratchet assembly.
 2. Cover Handle: Recessed.
- G. Frame and Cover: Weatherproof aluminum frame with hinged aluminum access door assembly with tamper-resistant, captive, cover-securing bolts.
1. Cover Hinges: Concealed, with hold-open ratchet assembly.
 2. Cover Handle: Recessed.
- H. Cover Finish: Nonskid finish shall have a minimum coefficient of friction of 0.50.
- I. Cover Legend: Molded lettering, "ELECTRIC."
- J. Configuration: Units shall be designed for flush burial and have closed bottom unless otherwise indicated.
- K. Joint Sealant: Asphaltic-butyl material with adhesion, cohesion, flexibility, and durability properties necessary to withstand maximum hydrostatic pressures at the installation location with the ground-water level at grade.
- L. Knockout Panels: Precast openings in walls, arranged to match dimensions and elevations of approaching duct, plus an additional 12 inches vertically and horizontally to accommodate alignment variations.
1. Center window location.

2. Knockout panels shall be located no less than 6 inches from interior surfaces of walls, floors, or frames and covers of handholes, but close enough to corners to facilitate racking of cables on walls.
 3. Knockout panel opening shall have cast-in-place, welded-wire fabric reinforcement for field cutting and bending to tie in to concrete envelopes of duct.
 4. Knockout panels shall be framed with at least two additional No. 3 steel reinforcing bars in concrete around each opening.
 5. Knockout panels shall be 1-1/2 to 2 inches thick.
- M. Duct Entrances in Handhole Walls: Cast end-bell or duct-terminating fitting in wall for each entering duct.
1. Type and size shall match fittings to duct to be terminated.
 2. Fittings shall align with elevations of approaching duct and be located near interior corners of handholes to facilitate racking of cable.
- N. Handholes 12 inches wide by 24 inches long and larger shall have inserts for cable racks and pulling-in irons installed before concrete is poured.

2.4 SOURCE QUALITY CONTROL

- A. Test and inspect precast concrete utility structures according to ASTM C1037.
- B. Nonconcrete Handhole and Pull-Box Prototype Test: Test prototypes of manholes and boxes for compliance with SCTE 77. Strength tests shall be for specified tier ratings of products supplied.
1. Tests of materials shall be performed by an independent testing agency.
 2. Strength tests of complete boxes and covers shall be by an independent testing agency or manufacturer. A qualified registered professional engineer shall certify tests by manufacturer.
 3. Testing machine pressure gages shall have current calibration certification, complying with ISO 9000 and ISO 10012, and traceable to NIST standards.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Coordinate layout and installation of duct, duct bank, manholes, handholes, and boxes with final arrangement of other utilities, site grading, and surface features as determined in the field. Notify Architect if there is a conflict between areas of excavation and existing structures or archaeological sites to remain.
- B. Coordinate elevations of duct and duct-bank entrances into manholes, handholes, and boxes with final locations and profiles of duct and duct banks, as determined by coordination with other utilities, underground obstructions, and surface features. Revise

locations and elevations as required to suit field conditions and to ensure that duct and duct bank will drain to manholes and handholes, and as approved by Architect.

3.2 UNDERGROUND DUCT APPLICATION

- A. Duct for Electrical Cables More Than 600 V: Type EPC-40-PVC RNC, concrete-encased unless otherwise indicated.
- B. Duct for Electrical Feeders 600 V and Less: Type EPC-40-PVC RNC, concrete-encased unless otherwise indicated.
- C. Duct for Electrical Feeders 600 V and Less: Type EPC-40-PVC RNC, direct-buried unless otherwise indicated.
- D. Duct for Electrical Branch Circuits: Type EPC-40-PVC RNC, direct-buried unless otherwise indicated.
- E. Underground Ducts Crossing Paved Paths, Roadways and Railroads: Type EPC-40 PVC RNC, encased in reinforced concrete.
- F. Stub-ups: Concrete-encased RNC.

3.3 UNDERGROUND ENCLOSURE APPLICATION

- A. Handholes and Boxes for 600 V and Less:
 - 1. Units in Roadways and Other Deliberate Traffic Paths: Precast concrete. AASHTO HB 17, H-20 structural load rating.
 - 2. Units in Sidewalk and Similar Applications with a Safety Factor for Nondeliberate Loading by Vehicles: Precast concrete, AASHTO HB 17, H-10 structural load rating.
 - 3. Cover design load shall not exceed the design load of the handhole or box.

3.4 EARTHWORK

- A. Restoration: Replace area after construction vehicle traffic in immediate area is complete.

- B. Restore surface features at areas disturbed by excavation and re-establish original grades unless otherwise indicated. Replace removed sod immediately after backfilling is completed.
- C. Restore areas disturbed by trenching, storing of dirt, cable laying, and other work. Restore vegetation and include necessary topsoiling, fertilizing, liming, seeding, sodding, sprigging, and mulching.
- D. Cut and patch existing pavement in the path of underground duct, duct bank, and underground structures.

3.5 DUCT AND DUCT-BANK INSTALLATION

- A. Where indicated on Drawings, install duct, spacers, and accessories into the duct-bank configuration shown. Duct installation requirements in this Section also apply to duct bank.
- B. Install duct according to NEMA TCB 2.
- C. Slope: Pitch duct a minimum slope of 1:300 down toward manholes and handholes and away from buildings and equipment. Slope duct from a high point between two manholes, to drain in both directions.
- D. Curves and Bends: Use 5-degree angle couplings for small changes in direction. Use manufactured long sweep bends with a minimum radius of 48 inches, both horizontally and vertically, at other locations unless otherwise indicated.
 - 1. Duct shall have maximum of two 90 degree bends or the total of all bends shall be no more 180 degrees between pull points.
- E. Joints: Use solvent-cemented joints in duct and fittings and make watertight according to manufacturer's written instructions. Stagger couplings so those of adjacent duct do not lie in same plane.
- F. Installation Adjacent to High-Temperature Steam Lines: Where duct is installed parallel to underground steam lines, perform calculations showing the duct will not be subject to environmental temperatures above 40 deg C. Where environmental temperatures are calculated to rise above 40 deg C, and anywhere the duct crosses above an underground steam line, install insulation blankets listed for direct burial to isolate the duct bank from the steam line.
- G. End Bell Entrances to Manholes and Concrete and Polymer Concrete Handholes: Use end bells, spaced approximately 10 inches o.c. for 5-inch duct, and vary proportionately for other duct sizes.
 - 1. Begin change from regular spacing to end-bell spacing 10 feet from the end bell, without reducing duct slope and without forming a trap in the line.
 - 2. Expansion and Deflection Fittings: Install an expansion and deflection fitting in each duct in the area of disturbed earth adjacent to manhole or handhole. Install

- an expansion fitting near the center of all straight line direct-buried duct with calculated expansion of more than 3/4 inch.
3. Grout end bells into structure walls from both sides to provide watertight entrances.
- H. Terminator Entrances to Manholes and Concrete and Polymer Concrete Handholes: Use manufactured, cast-in-place duct terminators, with entrances into structure spaced approximately 6 inches o.c. for 4-inch duct, and vary proportionately for other duct sizes.
1. Begin change from regular spacing to terminator spacing 10 feet from the terminator, without reducing duct line slope and without forming a trap in the line.
 2. Expansion and Deflection Fittings: Install an expansion and deflection fitting in each duct in the area of disturbed earth adjacent to manhole or handhole. Install an expansion fitting near the center of all straight line duct with calculated expansion of more than 3/4 inch.
- I. Building Wall Penetrations: Make a transition from underground duct to GRC at least 10 feet outside the building wall, without reducing duct line slope away from the building and without forming a trap in the line. Use fittings manufactured for RNC-to-GRC transition. Install GRC penetrations of building walls.
- J. Sealing: Provide temporary closure at terminations of duct with pulled cables. Seal spare duct at terminations. Use sealing compound and plugs to withstand at least 15-psig hydrostatic pressure.
- K. Pulling Cord: Install 200-lbf-test nylon cord in empty ducts.
- L. Direct-Buried Duct and Duct Bank:
1. Width: Excavate trench 12 inches wider than duct on each side.
 2. Width: Excavate trench 3 inches wider than duct on each side.
 3. Depth: Install top of duct at least 36 inches below finished grade unless otherwise indicated.
 4. Set elevation of bottom of duct bank below frost line.
 5. Support ducts on duct spacers coordinated with duct size, duct spacing, and outdoor temperature.
 6. Spacer Installation: Place spacers close enough to prevent sagging and deforming of duct, with not less than four spacers per 20 feet of duct. Place spacers within 24 inches of duct ends. Stagger spacers approximately 6 inches between tiers. Secure spacers to earth and to ducts to prevent floating during concreting. Tie entire assembly together using fabric straps; do not use tie wires or reinforcing steel that may form conductive or magnetic loops around ducts or duct groups.
 7. Install duct with a minimum of 3 inches between ducts for like services and 6 inches between power and communications duct.

10. Elbows: Install manufactured duct elbows for stub-ups, at building entrances, and at changes of direction in duct direction unless otherwise indicated. Encase elbows for stub-up ducts throughout length of elbow.
 11. Install manufactured GRC elbows for stub-ups, at building entrances, and at changes of direction in duct.
 - a. Couple RNC duct to GRC with adapters designed for this purpose and encase coupling with 3 inches of concrete.
 - b. Stub-ups to Outdoor Equipment: Extend concrete-encased GRC horizontally a minimum of 60 inches from edge of base. Install insulated grounding bushings on terminations at equipment.
 - 1) Stub-ups shall be minimum 4 inches above finished floor and minimum 3 inches from conduit side to edge of slab.
 - M. Warning Planks: Bury warning planks approximately 12 inches above direct-buried duct, placing them 24 inches o.c. Align planks along the width and along the centerline of duct or duct bank. Provide an additional plank for each 12-inch increment of duct-bank width over a nominal 18 inches. Space additional planks 12 inches apart, horizontally.
 - N. Underground-Line Warning Tape: Bury conducting underground line specified in Section 260553 "Identification for Electrical Systems" no less than 12 inches above all concrete-encased duct and duct banks and approximately 12 inches below grade. Align tape parallel to and within 3 inches of centerline of duct bank. Provide an additional warning tape for each 12-inch increment of duct-bank width over a nominal 18 inches. Space additional tapes 12 inches apart, horizontally.
- 3.6 INSTALLATION OF CONCRETE MANHOLES, HANDHOLES, AND BOXES
- A. Cast-in-Place Manhole Installation: **Section Omitted**
1. ~~Finish interior surfaces with a smooth-troweled finish.~~

- ~~2. Knockouts for Future Duct Connections: Form and pour concrete knockout panels 1 1/2 to 2 inches thick, arranged as indicated.~~
- ~~3. Comply with requirements in Section 033000 "Cast in Place Concrete" for cast in place concrete, formwork, and reinforcement.~~

B. Precast Concrete Handhole and Manhole Installation:

1. Comply with ASTM C891 unless otherwise indicated.
2. Install units level and plumb and with orientation and depth coordinated with connecting duct, to minimize bends and deflections required for proper entrances.
3. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.

C. Elevations:

1. Manhole Roof: Install with rooftop at least 15 inches below finished grade.
2. Manhole Frame: In paved areas and trafficways, set frames flush with finished grade. Set other manhole frames 1 inch above finished grade.
3. Install handholes with bottom below frost line, below grade.
4. Handhole Covers: In paved areas and trafficways, set surface flush with finished grade. Set covers of other handholes 1 inch above finished grade.
5. Where indicated, cast handhole cover frame integrally with handhole structure.

D. Hardware: Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators as required for installation and support of cables and conductors and as indicated.

E. Field-Installed Bolting Anchors in Manholes and Concrete Handholes: Do not drill deeper than 3-7/8 inches for manholes and 2 inches for handholes, for anchor bolts installed in the field. Use a minimum of two anchors for each cable stanchion.

3.7 INSTALLATION OF HANDHOLES AND BOXES OTHER THAN PRECAST CONCRETE

- A. Install handholes and boxes level and plumb and with orientation and depth coordinated with connecting duct, to minimize bends and deflections required for proper entrances. Use box extension if required to match depths of duct, and seal joint between box and extension as recommended by manufacturer.
- B. Unless otherwise indicated, support units on a level bed of crushed stone or gravel, graded from 1/2-inch sieve to No. 4 sieve and compacted to same density as adjacent undisturbed earth.
- C. Elevation: In paved areas and trafficways, set cover flush with finished grade. Set covers of other handholes 1 inch above finished grade.
- D. Install handholes and boxes with bottom below frost line, below grade.

- E. Install removable hardware, including pulling eyes, cable stanchions, cable arms, and insulators, as required for installation and support of cables and conductors and as indicated. Select arm lengths to be long enough to provide spare space for future cables, but short enough to preserve adequate working clearances in enclosure.
- F. Field cut openings for duct according to enclosure manufacturer's written instructions. Cut wall of enclosure with a tool designed for material to be cut. Size holes for terminating fittings to be used, and seal around penetrations after fittings are installed.

3.8 GROUNDING **Section Omitted**

- ~~A. Ground underground ducts and utility structures according to Section 260526 "Grounding and Bonding for Electrical Systems."~~

3.9 FIELD QUALITY CONTROL

- A. Perform the following tests and inspections:
 - 1. Demonstrate capability and compliance with requirements on completion of installation of underground duct, duct bank, and utility structures.
 - 2. Pull solid aluminum or wood test mandrel through duct to prove joint integrity and adequate bend radii, and test for out-of-round duct. Provide a minimum 12-inch-long mandrel equal to duct size minus 1/4 inch. If obstructions are indicated, remove obstructions and retest.
 - 3. Test handhole grounding to ensure electrical continuity of grounding and bonding connections. Measure and report ground resistance as specified in Section 260526 "Grounding and Bonding for Electrical Systems."
- B. Correct deficiencies and retest as specified above to demonstrate compliance.
- C. Prepare test and inspection reports.

3.10 CLEANING

- A. Pull leather-washer-type duct cleaner, with graduated washer sizes, through full length of duct until duct cleaner indicates that duct is clear of dirt and debris. Follow with rubber duct swab for final cleaning and to assist in spreading lubricant throughout ducts.
- B. Clean internal surfaces of manholes, including sump.
 - 1. Sweep floor, removing dirt and debris.
 - 2. Remove foreign material.

END OF SECTION 260543

SECTION 260553

IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including MTS C Street & Broadway Wye Design, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Labels.
 - 2. Bands and tubes.
 - 3. Tapes and stencils.
 - 4. Tags.
 - 5. Signs.
 - 6. Cable ties.
 - 7. Miscellaneous identification products.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for electrical identification products.
- B. Samples: For each type of label and sign to illustrate composition, size, colors, lettering style, mounting provisions, and graphic features of identification products.
- C. Identification Schedule: For each piece of electrical equipment and electrical system components to be an index of nomenclature for electrical equipment and system components used in identification signs and labels. Use same designations indicated on Drawings.
- D. Delegated-Design Submittal: For arc-flash hazard study.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Comply with ASME A13.1 and IEEE C2.
- B. Comply with NFPA 70.
- C. Comply with 29 CFR 1910.144 and 29 CFR 1910.145.
- D. Comply with ANSI Z535.4 for safety signs and labels.
- E. Comply with NFPA 70E requirements for arc-flash warning labels.
- F. Adhesive-attached labeling materials, including label stocks, laminating adhesives, and inks used by label printers, shall comply with UL 969.
- G. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes.
 - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.2 COLOR AND LEGEND REQUIREMENTS

- A. Raceways and Cables Carrying Circuits at 600 V or Less:
 - 1. Black letters on an orange field.
 - 2. Legend: Indicate voltage.
- B. Color-Coding for Phase- and Voltage-Level Identification, 600 V or Less: Use colors listed below for ungrounded feeder and branch-circuit conductors.
 - 1. Color shall be factory applied.
 - 2. Colors for 208/120-V Circuits:
 - a. Phase A: Black.
 - b. Phase B: Red.
 - c. Phase C: Blue.
 - 3. Colors for 240-V Circuits:
 - a. Phase A: Black.
 - b. Phase B: Red.
 - 4. Colors for 480/277-V Circuits:
 - a. Phase A: Brown.
 - b. Phase B: Orange.
 - c. Phase C: Yellow.

5. Color for Neutral: White.
6. Color for Equipment Grounds: Green.
7. Colors for Isolated Grounds: Green with two or more yellow stripes.

C. Raceways and Cables Carrying Circuits at More Than 600 V:

1. Black letters on an orange field.
2. Legend: "DANGER - CONCEALED HIGH VOLTAGE WIRING."

D. Warning Label Colors:

1. Identify system voltage with black letters on an orange background.

E. Warning labels and signs shall include, but are not limited to, the following legends:

1. Multiple Power Source Warning: "DANGER - ELECTRICAL SHOCK HAZARD - EQUIPMENT HAS MULTIPLE POWER SOURCES."
2. Workspace Clearance Warning: "WARNING - OSHA REGULATION - AREA IN FRONT OF ELECTRICAL EQUIPMENT MUST BE KEPT CLEAR FOR 36 INCHES."

F. Equipment Identification Labels:

1. Black letters on a white field.

2.3 LABELS

A. Vinyl Wraparound Labels: Preprinted, flexible labels laminated with a clear, weather- and chemical-resistant coating and matching wraparound clear adhesive tape for securing label ends.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Champion America.
 - c. emedco.
 - d. Grafoplast Wire Markers.
 - e. HellermannTyton.
 - f. LEM Products Inc.
 - g. Marking Services, Inc.
 - h. Panduit Corp.
 - i. Seton Identification Products; a Brady Corporation company.

B. Snap-around Labels: Slit, pretensioned, flexible, preprinted, color-coded acrylic sleeves, with diameters sized to suit diameters and that stay in place by gripping action.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. HellermannTyton.
 - c. Marking Services, Inc.
 - d. Panduit Corp.
 - e. Seton Identification Products; a Brady Corporation company.
- C. Self-Adhesive Wraparound Labels: Preprinted, 3-mil-thick, vinyl flexible label with acrylic pressure-sensitive adhesive.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. A'n D Cable Products.
 - b. Brady Corporation.
 - c. Brother International Corporation.
 - d. emedco.
 - e. Grafoplast Wire Markers.
 - f. Ideal Industries, Inc.
 - g. LEM Products Inc.
 - h. Marking Services, Inc.
 - i. Panduit Corp.
 - j. Seton Identification Products; a Brady Corporation company.
 2. Self-Lamination: Clear; UV-, weather- and chemical-resistant; self-laminating, protective shield over the legend. Labels sized such that the clear shield overlaps the entire printed legend.
 3. Marker for Labels:
 - a. Permanent, waterproof, black ink marker recommended by tag manufacturer.
 - b. Machine-printed, permanent, waterproof, black ink recommended by printer manufacturer.
- D. Self-Adhesive Labels: Vinyl, thermal, transfer-printed, 3-mil-thick, multicolor, weather- and UV-resistant, pressure-sensitive adhesive labels, configured for intended use and location.
 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. A'n D Cable Products.
 - b. Brady Corporation.
 - c. Brother International Corporation.
 - d. emedco.
 - e. Grafoplast Wire Markers.
 - f. HellermannTyton.

- g. Ideal Industries, Inc.
- h. LEM Products Inc.
- i. Marking Services, Inc.
- j. Panduit Corp.
- k. Seton Identification Products; a Brady Corporation company.

2. Minimum Nominal Size:

- a. 1-1/2 by 6 inches for raceway and conductors.
- b. 3-1/2 by 5 inches for equipment.
- c. As required by authorities having jurisdiction.

2.4 BANDS AND TUBES

- A. Snap-around, Color-Coding Bands: Slit, pretensioned, flexible, solid-colored acrylic sleeves, 2 inches long, with diameters sized to suit diameters and that stay in place by gripping action.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. Brady Corporation.
- b. HellermannTyton.
- c. Marking Services, Inc.
- d. Panduit Corp.

- B. Heat-Shrink Preprinted Tubes: Flame-retardant polyolefin tubes with machine-printed identification labels, sized to suit diameter and shrunk to fit firmly. Full shrink recovery occurs at a maximum of 200 deg F. Comply with UL 224.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. Brady Corporation.
- b. Panduit Corp.

2.5 TAPES AND STENCILS

- A. Marker Tapes: Vinyl or vinyl-cloth, self-adhesive wraparound type, with circuit identification legend machine printed by thermal transfer or equivalent process.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. Carlton Industries, LP.
- b. Champion America.
- c. HellermannTyton.
- d. Ideal Industries, Inc.
- e. Marking Services, Inc.

- f. Panduit Corp.
- B. Self-Adhesive Vinyl Tape: Colored, heavy duty, waterproof, fade resistant; not less than 3 mils thick by 1 to 2 inches wide; compounded for outdoor use.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.
 - c. emedco.
 - d. Marking Services, Inc.
- C. Tape and Stencil: 4-inch-wide black stripes on 10-inch centers placed diagonally over orange background and are 12 inches wide. Stop stripes at legends.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brimar Industries, Inc.
 - b. HellermannTyton.
 - c. LEM Products Inc.
 - d. Marking Services, Inc.
 - e. Seton Identification Products; a Brady Corporation company.
- D. Underground-Line Warning Tape:
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Brimar Industries, Inc.
 - c. Ideal Industries, Inc.
 - d. LEM Products Inc.
 - e. Marking Services, Inc.
 - f. Reef Industries, Inc.
 - g. Seton Identification Products; a Brady Corporation company.
 - 2. Tape:
 - a. Recommended by manufacturer for the method of installation and suitable to identify and locate underground electrical utility lines.
 - b. Printing on tape shall be permanent and shall not be damaged by burial operations.
 - c. Tape material and ink shall be chemically inert and not subject to degradation when exposed to acids, alkalis, and other destructive substances commonly found in soils.
 - 3. Color and Printing:

- a. Comply with ANSI Z535.1, ANSI Z535.2, ANSI Z535.3, ANSI Z535.4, and ANSI Z535.5.
- b. Inscriptions for Red-Colored Tapes: "ELECTRIC LINE, HIGH VOLTAGE".
- c. Inscriptions for Orange-Colored Tapes: "TELEPHONE CABLE, CATV CABLE, COMMUNICATIONS CABLE, OPTICAL FIBER CABLE".

4. Tape Type ID:

- a. Detectable three-layer laminate, consisting of a printed pigmented polyolefin film, a solid aluminum-foil core, and a clear protective film that allows inspection of the continuity of the conductive core; bright colored, continuous-printed on one side with the inscription of the utility compounded for direct-burial service.
- b. Width: 3 inches.
- c. Overall Thickness: 5 mils.
- d. Foil Core Thickness: 0.35 mil.
- e. Weight: 28 lb/1000 sq. ft.
- f. Tensile according to ASTM D882: 70 lbf and 4600 psi.

- E. Stenciled Legend: In nonfading, waterproof, black ink or paint. Minimum letter height shall be 1 inch.

2.6 TAGS

- A. Metal Tags: Brass or aluminum, 2 by 2 by 0.05 inch, with stamped legend, punched for use with self-locking cable tie fastener.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. Brady Corporation.
- b. Carlton Industries, LP.
- c. emedco.
- d. Marking Services, Inc.
- e. Seton Identification Products; a Brady Corporation company.

- B. Nonmetallic Preprinted Tags: Polyethylene tags, 0.015 inch thick, color-coded for phase and voltage level, with factory printed permanent designations; punched for use with self-locking cable tie fastener.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. Brady Corporation.
- b. Carlton Industries, LP.
- c. emedco.
- d. Grafoplast Wire Markers.
- e. LEM Products Inc.
- f. Marking Services, Inc.
- g. Panduit Corp.

h. Seton Identification Products; a Brady Corporation company.

C. Write-on Tags:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brimar Industries, Inc.
 - b. Carlton Industries, LP.
 - c. LEM Products Inc.
 - d. Seton Identification Products; a Brady Corporation company.
2. Polyester Tags: 0.015 inch thick, with corrosion-resistant grommet and cable tie for attachment.
3. Marker for Tags:
 - a. Permanent, waterproof, black ink marker recommended by tag manufacturer.
 - b. Machine-printed, permanent, waterproof, black ink marker recommended by printer manufacturer.

2.7 SIGNS

A. Baked-Enamel Signs:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Carlton Industries, LP.
 - b. Champion America.
 - c. emedco.
 - d. Marking Services, Inc.
2. Preprinted aluminum signs, punched or drilled for fasteners, with colors, legend, and size required for application.
3. 1/4-inch grommets in corners for mounting.
4. Nominal Size: 7 by 10 inches.

B. Metal-Backed Butyrate Signs:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Champion America.
 - c. emedco.
 - d. Marking Services, Inc.

2. Weather-resistant, nonfading, preprinted, cellulose-acetate butyrate signs, with 0.0396-inch galvanized-steel backing, punched and drilled for fasteners, and with colors, legend, and size required for application.
3. 1/4-inch grommets in corners for mounting.
4. Nominal Size: 10 by 14 inches.

C. Laminated Acrylic or Melamine Plastic Signs:

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Brady Corporation.
 - b. Carlton Industries, LP.
 - c. emedco.
 - d. Marking Services, Inc.
2. Engraved legend.
3. Thickness:
 - a. For signs up to 20 sq. in., minimum 1/16 inch thick.
 - b. For signs larger than 20 sq. in., 1/8 inch thick.
 - c. Engraved legend with white letters on a dark gray background.
 - d. Punched or drilled for mechanical fasteners with 1/4-inch grommets in corners for mounting.
 - e. Framed with mitered acrylic molding and arranged for attachment at applicable equipment.

2.8 CABLE TIES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. HellermannTyton.
 2. Ideal Industries, Inc.
 3. Marking Services, Inc.
 4. Panduit Corp.
- B. General-Purpose Cable Ties: Fungus inert, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.
 1. Minimum Width: 3/16 inch.
 2. Tensile Strength at 73 Deg F according to ASTM D638: 12,000 psi.
 3. Temperature Range: Minus 40 to plus 185 deg F.
 4. Color: Black, except where used for color-coding.
- C. UV-Stabilized Cable Ties: Fungus inert, designed for continuous exposure to exterior sunlight, self-extinguishing, one piece, self-locking, and Type 6/6 nylon.
 1. Minimum Width: 3/16 inch.

2. Tensile Strength at 73 Deg F according to ASTM D638: 12,000 psi.
3. Temperature Range: Minus 40 to plus 185 deg F.
4. Color: Black.

2.9 MISCELLANEOUS IDENTIFICATION PRODUCTS

- A. Paint: Comply with requirements in painting Sections for paint materials and application requirements. Retain paint system applicable for surface material and location (exterior or interior).
- B. Fasteners for Labels and Signs: Self-tapping, stainless-steel screws or stainless-steel machine screws with nuts and flat and lock washers.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Self-Adhesive Identification Products: Before applying electrical identification products, clean substrates of substances that could impair bond, using materials and methods recommended by manufacturer of identification product.

3.2 INSTALLATION

- A. Verify and coordinate identification names, abbreviations, colors, and other features with requirements in other Sections requiring identification applications, Drawings, Shop Drawings, manufacturer's wiring diagrams, and operation and maintenance manual. Use consistent designations throughout Project.
- B. Install identifying devices before installing acoustical ceilings and similar concealment.
- C. Verify identity of each item before installing identification products.
- D. Coordinate identification with Project Drawings, manufacturer's wiring diagrams, and operation and maintenance manual.
- E. Apply identification devices to surfaces that require finish after completing finish work.
- F. Install signs with approved legend to facilitate proper identification, operation, and maintenance of electrical systems and connected items.
- G. System Identification for Raceways and Cables under 600 V: Identification shall completely encircle cable or conduit. Place identification of two-color markings in contact, side by side.
 1. Secure tight to surface of conductor, cable, or raceway.

- H. System Identification for Raceways and Cables over 600 V: Identification shall completely encircle cable or conduit. Place adjacent identification of two-color markings in contact, side by side.
 - 1. Secure tight to surface of conductor, cable, or raceway.
- I. Auxiliary Electrical Systems Conductor Identification: Identify field-installed alarm, control, and signal connections.
- J. Elevated Components: Increase sizes of labels, signs, and letters to those appropriate for viewing from the floor.
- K. Vinyl Wraparound Labels:
 - 1. Secure tight to surface of raceway or cable at a location with high visibility and accessibility.
 - 2. Attach labels that are not self-adhesive type with clear vinyl tape, with adhesive appropriate to the location and substrate.
- L. Snap-around Labels: Secure tight to surface at a location with high visibility and accessibility.
- M. Self-Adhesive Wraparound Labels: Secure tight to surface at a location with high visibility and accessibility.
- N. Self-Adhesive Labels:
 - 1. On each item, install unique designation label that is consistent with wiring diagrams, schedules, and operation and maintenance manual.
 - 2. Unless otherwise indicated, provide a single line of text with 1/2-inch-high letters on 1-1/2-inch-high label; where two lines of text are required, use labels 2 inches high.
- O. Snap-around Color-Coding Bands: Secure tight to surface at a location with high visibility and accessibility.
- P. Heat-Shrink, Preprinted Tubes: Secure tight to surface at a location with high visibility and accessibility.
- Q. Marker Tapes: Secure tight to surface at a location with high visibility and accessibility.
- R. Self-Adhesive Vinyl Tape: Secure tight to surface at a location with high visibility and accessibility.
 - 1. Field-Applied, Color-Coding Conductor Tape: Apply in half-lapped turns for a minimum distance of 6 inches where splices or taps are made. Apply last two turns of tape with no tension to prevent possible unwinding.
- S. Tape and Stencil: Comply with requirements in painting Sections for surface preparation and paint application.

T. Underground Line Warning Tape:

1. During backfilling of trenches, install continuous underground-line warning tape directly above cable or raceway at 6 to 8 inches below finished grade. Use multiple tapes where width of multiple lines installed in a common trench exceeds 16 inches overall.
2. Limit use of underground-line warning tape to direct-buried cables.
3. Install underground-line warning tape for direct-buried cables and cables in raceways.

U. Laminated Acrylic or Melamine Plastic Signs:

1. Attach signs that are not self-adhesive type with mechanical fasteners appropriate to the location and substrate.
2. Unless otherwise indicated, provide a single line of text with 1/2-inch-high letters on 1-1/2-inch-high sign; where two lines of text are required, use labels 2 inches high.

V. Cable Ties: General purpose, for attaching tags, except as listed below:

1. Outdoors: UV-stabilized nylon.
2. In Spaces Handling Environmental Air: Plenum rated.

3.3 IDENTIFICATION SCHEDULE

- A. Install identification materials and devices at locations for most convenient viewing without interference with operation and maintenance of equipment. Install access doors or panels to provide view of identifying devices.
- B. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, pull points, and locations of high visibility. Identify by system and circuit designation.
- C. Power-Circuit Conductor Identification, 600 V or Less: For conductors in vaults, pull and junction boxes, manholes, and handholes, use self-adhesive wraparound labels to identify the phase.
 1. Locate identification at changes in direction, at penetrations of walls and floors, at 50-foot maximum intervals in straight runs, and at 25-foot maximum intervals in congested areas.
- D. Power-Circuit Conductor Identification, More Than 600 V: For conductors in vaults, pull and junction boxes, manholes, and handholes, use nonmetallic preprinted tags colored and marked to indicate phase, and a separate tag with the circuit designation.
- E. Control-Circuit Conductor Identification: For conductors and cables in pull and junction boxes, manholes, and handholes, use self-adhesive labels with the conductor or cable designation, origin, and destination.
- F. Auxiliary Electrical Systems Conductor Identification: Self-adhesive vinyl tape that is uniform and consistent with system used by manufacturer for factory-installed connections.

1. Identify conductors, cables, and terminals in enclosures and at junctions, terminals, and pull points. Identify by system and circuit designation.
- G. Locations of Underground Lines: Underground-line warning tape for power, lighting, communication, and control wiring and optical-fiber cable.
- H. Concealed Raceways and Duct Banks, More Than 600 V, within Buildings: Apply floor marking tape to the following finished surfaces:
 1. Floor surface directly above conduits running beneath and within 12 inches of a floor that is in contact with earth or is framed above unexcavated space.
 2. Wall surfaces directly external to raceways concealed within wall.
 3. Accessible surfaces of concrete envelope around raceways in vertical shafts, exposed in the building, or concealed above suspended ceilings.
- I. Instructional Signs: Self-adhesive labels, including the color code for grounded and ungrounded conductors.
- J. Equipment Identification Labels:
 1. Outdoor Equipment: Laminated acrylic or melamine sign.
 2. Equipment to Be Labeled:
 - a. Panelboards: Typewritten directory of circuits in the location provided by panelboard manufacturer. Panelboard identification shall be in the form of a self-adhesive, engraved, laminated acrylic or melamine label.
 - b. Enclosures and electrical cabinets.
 - c. Switchboards.
 - d. Transformers: Label that includes tag designation indicated on Drawings for the transformer, feeder, and panelboards or equipment supplied by the secondary.

END OF SECTION 260553

SECTION 262816

ENCLOSED SWITCHES AND CIRCUIT BREAKERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including MTS C Street & Broadway Wye Design, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Fusible switches.
 - 2. Enclosures.

1.3 DEFINITIONS

- A. NC: Normally closed.
- B. NO: Normally open.
- C. SPDT: Single pole, double throw.
- D. DPDT: Double pole, double throw.

1.4 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Enclosed switches and circuit breakers shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
 - 1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of enclosed switch, circuit breaker, accessory, and component indicated. Include dimensioned elevations, sections, weights, and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.

1. Enclosure types and details for types other than NEMA 250, Type 1.
2. Current and voltage ratings.
3. Short-circuit current ratings (interrupting and withstand, as appropriate).
4. Include evidence of NRTL listing for series rating of installed devices.
5. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices, accessories, and auxiliary components.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified testing agency.
- B. Field quality-control reports.
 1. Test procedures used.
 2. Test results that comply with requirements.
 3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.
- C. Manufacturer's field service report.

1.7 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Member company of NETA or an NRTL.
 1. Testing Agency's Field Supervisor: Currently certified by NETA to supervise on-site testing.
- B. Source Limitations: Obtain enclosed switches and circuit breakers, overcurrent protective devices, components, and accessories, within same product category, from single source from single manufacturer.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- D. Comply with NFPA 70.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Rate equipment for continuous operation under the following conditions unless otherwise indicated:
 1. Ambient Temperature: Not less than minus 22 deg F and not exceeding 104 deg F.
 2. Altitude: Not exceeding 6600 feet (2010 m).

1.9 COORDINATION

- A. Coordinate layout and installation of switches, circuit breakers, and components with equipment served and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

PART 2 - PRODUCTS

2.1 FUSIBLE SWITCHES

- A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
 - 1. Eaton.
 - 2. General Electric Company.
 - 3. Siemens Industry, Inc.
 - 4. Or Equal.
- B. Type HD, Heavy Duty, Single Throw, 600-V ac, 1200 A and Smaller: UL 98 and NEMA KS 1, horsepower rated, with clip or bolt pads to accommodate fuses, lockable handle with capability to accept three padlocks, and interlocked with cover in closed position.
- C. Accessories:
 - 1. Equipment Ground Kit: Internally mounted and labeled for copper and aluminum ground conductors.
 - 2. Neutral Kit: Internally mounted; insulated, capable of being grounded and bonded; labeled for copper and aluminum neutral conductors.
 - 3. Lugs: Mechanical type, suitable for number, size, and conductor material.
 - 4. Class R Fuse Kit: Provides rejection of other fuses when Class R fuses are specified.

2.2 ENCLOSURES

- A. Enclosed Switches and Circuit Breakers: NEMA AB 1, NEMA KS 1, NEMA 250, and UL 50, to comply with environmental conditions at installed location.
 - 1. Hazardous Areas Indicated on Drawings: NEMA 250.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine elements and surfaces to receive enclosed switches and circuit breakers for compliance with installation tolerances and other conditions affecting performance of the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install individual wall-mounted switches and circuit breakers with tops at uniform height unless otherwise indicated.
- B. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from enclosures and components.
- C. Comply with NECA 1.

3.3 IDENTIFICATION

- A. Comply with requirements in Section 260553 "Identification for Electrical Systems."
 - 1. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs.
 - 2. Label each enclosure with engraved metal or laminated-plastic nameplate.

3.4 FIELD QUALITY CONTROL

- A. Acceptance Testing Preparation:
 - 1. Test insulation resistance for each enclosed switch and circuit breaker, component, connecting supply, feeder, and control circuit.
 - 2. Test continuity of each circuit.
- B. Tests and Inspections:
 - 1. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
 - 2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.
 - 3. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.

- C. Enclosed switches and circuit breakers will be considered defective if they do not pass tests and inspections.
- D. Prepare test and inspection reports, including a certified report that identifies enclosed switches and circuit breakers and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.5 ADJUSTING

- A. Adjust moving parts and operable components to function smoothly and lubricate as recommended by manufacturer.

END OF SECTION 262816

SECTION 344201

TRANSPORTATION SIGNALING AND CONTROL

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This Section consists of a general description of the Work, procedures and requirements necessary to the planning, designing, manufacturing, installing, removal, relocation, modification, testing, placing in service and documenting as-built conditions, and warranty support for various signaling, communications and highway-rail grade crossing systems to be provided or altered by the Contractor. The Work shall consist of, but is not limited to:
- i. B0016RC: Contractor shall make wiring changes for the changeover to new processor-based interlocking as depicted in the contract drawings.
 - ii. CSRC: Contractor shall provide and install single width case, cables wheel sensors and equipment as depicted in the contract drawings.
- 1. The Contract Plans represent a detailed design utilizing systems, components and materials that meet the specifications. The Contractor may provide equivalent systems, components and materials subject to the approval of the Engineer and as specified herein. Any modifications made to meet the functional and safety requirements of this Specification are the Contractor's responsibility and therefore, no additional compensation shall be paid for this Work.
 - 2. The manufacture, delivery, installation, testing and operations of the crossover systems as shown on the Contract Plans and specified in these Specifications.
 - 3. The Contractor supplies all new components for the above systems and completes all work necessary to provide satisfactory performance of a complete, safe and operable signaling system.
- B. Section Includes:
- 1. Transportation Signaling and Control

C. Related Sections:

1. Submittals, MTS C Street & Broadway Wye Design.
2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCES

A. Abbreviations and Acronyms

1. AFO – Audio Frequency Overlay
2. AREMA – American Railway Engineering and Maintenance-of-Way Association
3. C&S – Communications and Signals
4. CA MUTCD – California Manual of Uniform Traffic Control Devices
5. CFR – Code of Federal Regulations
6. CPUC – California Public Utility Commission
7. FRA – Federal Railroad Administration
8. G.O. – General Order
9. GRS – ALSTOM Transportation Inc. (formerly known as General Railway Signal Co.)
10. GETS – GE Transportation Systems – Global Signaling
11. MTS – San Diego Metropolitan Transit System
12. NCTD – North County Transit District
13. NEC – National Electrical Code
14. NEMA – National Electrical Manufacturers Association
15. NFPA – National Fire Protection Association
16. SANDAG – San Diego Association of Governments
17. SDTI – San Diego Trolley, Inc.
18. TWC – Train-to-Wayside Communications
19. US&S – Ansaldo STS (formerly known as Union, Switch & Signal)

B. Reference Standards

1. In addition to the Regulations and Code requirements specified in this Section, materials and equipment for the block signaling system and the highway crossing warning shall conform to the latest recommendations of the AREMA Communications and Signals (C&S) Manual and applicable MTS standard circuit plans. The compatibility shall include form, fit and function of block signaling and highway crossing warning systems. Existing circuits, equipment and material shall serve as the basis of design for signal design circuits, equipment and material.
2. California Public Utilities Commission (CPUC), General Orders (G.O.):
 - a. G.O. 26-D – Clearances on Railroads and Street Railroads as to Side and Overhead Structures, Parallel Tracks and Crossings
 - b. G.O. 52 – Construction and Operation of Power and Communication Lines for the Prevention or Mitigation of Inductive Interference
 - c. G.O. 75-D – Regulations Governing Standards for Warning Devices for At-Grade Highway-Rail Crossings
 - d. G.O. 88B – Rules for Altering Public Highway-Grade Crossings
 - e. G.O. 95 – Overhead Electric Line Construction G.O. 118: Construction, Reconstruction and Maintenance of Walkways and Control of Vegetation
 - f. G.O. 118-A – Construction, Reconstruction and Maintenance of Walkways and Control of Vegetation Adjacent to Railroad Tracks
 - g. G.O. 128 – Construction of Underground Electric Supply and Communication Systems
 - h. G.O. 143-B – Design, Construction and Operation of Light-Rail Transit Systems
 - i. G.O. 164-D – Rules and Regulations Governing State Safety Oversight of Rail Fixed Guideway Systems
3. Code of Federal Regulations (CFR), Title 49, Transportation:
 - a. 49 CFR Part 212 – State Safety Participation Regulations
 - b. 49 CFR Part 214 – Railroad Workplace Safety
 - c. 49 CFR Part 218 – Railroad Operating Practices
 - d. 49 CFR Part 219 – Control of Alcohol and Drug Use
 - e. 49 CFR Part 228 – Hours of Service of Railroad Employees
 - f. 49 CFR Part 234 – Grade Crossing Safety
 - g. 49 CFR Part 236 – Rules, Standards, and Instructions Governing the Installation, Maintenance, and Repair of Signal and Train Control Systems, Devices, and Appliances
 - h. The Contractor shall be responsible for adherence to all of the above rules and reporting requirements, including those regulations which require pre-employment drug testing, random drug testing and reporting and tracking hours of service of employees engaged in the installation and testing of signal facilities and the reporting and tracking of employees injured in the performance of work on a railroad.

4. California Department of Transportation (Caltrans):
 - a. California Manual on Uniform Traffic Control Devices (CA MUTCD) – California Supplement, Part VIII, Traffic Controls for Highway-Rail Grade Crossings
5. National Fire Protection Association (NFPA)
 - a. NFPA 70 – National Electrical Code.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. SDTI systems shall be fully operational at all times unless approved by the Engineer.
- B. The Contractor shall be represented at all meetings held with the Engineer where construction work may affect signal systems or where signal systems shall be discussed by a Signal Engineer qualified in the design and application of the signal equipment the Contractor proposes for use on this project.

1.4 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein and other Sections within the Specification group 34 42, Transportation Signaling and Control and shall include the following:
 1. Plans, procedures, data sheets of proposed material, vital and non-vital application logic, installation details, shop drawings, mechanical drawings, conduit layout drawings, proofs of compliance with applicable standards and any other pertinent data required to fully demonstrate the Contractor's proposed plan for the manufacture, installation, testing and maintenance of the various systems. The Contractor shall provide submittals as indicated in the applicable technical specification section and any proposed design changes.
 2. The Contractor shall submit detailed circuit drawings for all modifications to existing systems and temporary interfaces between existing systems and new systems. Separate submittals shall be provided for approval for each phase of the work.
 3. The Contractor shall submit detailed Test Plan for all systems a minimum of 60 calendar days in advance of testing. Test Procedures for factory testing or placing any system or subsystem in service, shall be submitted a minimum of 45 calendar days in advance. These Test Procedures shall reflect the latest revisions and changes approved by the Engineer and made as a result of field checks and conditions. The Contractor shall not proceed with the factory or in-service testing until the Test Procedures are approved by the Engineer.

4. The Contractor shall prepare and submit a Systems Construction Sequencing Plan for each location where a system is to be modified, installed, or removed. The Plan shall be submitted 30 calendar days in advance and, as a minimum, contain the following:
 - a. A narrative description of the work to be undertaken at the designated location.
 - b. A step-by-step sequence of work description which identifies those steps during which the existing system will be disabled and a description of what steps will be taken to assure that the signal system will be tested and returned to full operation without causing a delay to any train movement.
 - c. An estimate of time to complete the critical steps in the sequence specified in 1.04A.4b.
 5. The Contractor shall submit revisions to existing circuit plans using the "Red In" / "Yellow Out" convention to show changes. "Deletions" shall be identified by highlighting the modification with Yellow and "Additions" shall be identified by use of red-colored symbols and text.
 6. The Contractor shall submit application logic software reports to the Engineer for approval. Software logic reports for each location shall be submitted in 3-ring binders. Binders shall be clearly marked with crossover, ABS signal, or crossing name and instrument shelter designation.
 7. Manufacturers' warranties, instruction sheets and parts list furnished for materials used in the work, shall be delivered to the Engineer prior to acceptance of the project. All equipment, and material warranties and guarantees shall cover parts and labor for two years from the date the equipment is "placed in service."
 8. After a location is placed in service and before Contract acceptance of the C Street & Broadway Wye Design Project, the Contractor shall submit as-built documentation as follows:
 - a. Red line detailed circuit drawings within 3 working days.
 - b. Final application logic documentation within 3 working days.
 - c. The Contractor shall submit 8 sets of as-built (red line) corrections to the Engineer. In addition, a set shall be placed in each enclosure affected.
 9. The Contractor shall submit certified test results for all phases of testing in conjunction with factory and in-service tests.
- B. All submittals required within Transportation Signaling and Control shall be signed by the Contractor's Signal Engineer.

1.5 QUALITY ASSURANCE

- A. The Contractor shall be responsible for adherence to all referenced 49 CFR rules and reporting requirements, including those regulations which require pre-employment drug testing, random drug testing and reporting and tracking hours of service of employees engaged in the installation and testing of signal facilities and the reporting and tracking of employees injured in the performance of work on the railroad.
- B. The Contractor shall perform and document all tests and inspections in accordance with 49 CFR regulations, the AREMA C&S Manual and these Specifications.
- C. All submittals, programming, materials, equipment, manufacturing methods, system installation, testing and construction workmanship specified in the Specifications group Transportation Signaling and Control shall conform to the requirements specified in: Article 1.04 of this Section; Section 344213.28, Block Signaling and Highway Grade Crossing Warning Systems Testing; and various other related Sections contained herein.
- D. No circuit or system is considered to have met the requirement of these Specifications for function and safety until it has been properly tested and verified in the field. Any circuit modifications made to meet the functional and safety requirements of this Specification shall be considered as a part of the Contractor's responsibility and therefore no additional compensation will be paid for this Work.
- E. Signal Personnel Qualifications:
 - 1. The Contractor shall assign experienced and qualified staff as key Signaling personnel for this Work. The Contractor shall not replace key staff members without prior approval from the Engineer. Key employees of the Contractor engaged in the installation, adjustment and testing of the various systems shall be qualified and have had experience on an operating transit system in the type and level of systems installation and testing work as required herein. At a minimum "key employees" shall include the Contractor's Signal Engineers, Application Software Engineer(s), Signal Supervisor, Construction Foreman and Lead Wire person. Additional experienced personnel shall be provided by the contractor for testing and placing systems in operation. The Contractor shall submit resumes for the "key employees" to the Engineer. The Engineer's decision concerning the candidate's qualifications shall be final. The Contractor shall propose alternate personnel if the original candidate(s) is found to be unacceptable. No signaling related work shall begin prior to the Contractor's "key employees" having been approved by the Engineer.
 - 2. The Contractor's systems construction forces shall work under the supervision and direction of an approved Signal Supervisor. The Contractor's Signal Supervisor shall oversee the installation, adjustment, and testing and commissioning of signal related work. The Contractor's Signal Supervisor shall be within the project limits whenever signal related work or whenever roadway or track construction work is in progress in the vicinity of existing wayside signaling equipment, highway-rail grade crossings and/or cabling.

3. The Contractor's Signal Engineers shall direct and certify the successful completion of all tests on equipment and systems prior to releasing the systems for operation. The Contractor's Signal Engineers are responsible to ensure that all applicable test documentation is completed prior to, or immediately after, in-service testing is completed.
4. The Contractor's proposed Signal Engineers shall demonstrate experience in the philosophy, application and testing requirements of the various systems, including vital railroad signal systems. The Contractor's proposed Signal Engineers shall have at least 5 years of experience in signal testing and commissioning of signal systems. The Contractor's proposed Signal Engineers shall have a minimum of 10 years signal supervisory or management experience on a major transit or commuter system in the United States. The proposed Signal Engineers shall also demonstrate knowledge of the governing CPUC and FRA rules and regulations. This demonstration shall be by interview of the proposed Signal Engineers by the Engineer prior to commencement of any signal related work. The Engineer's decision concerning the candidate's qualifications shall be final. The Contractor shall propose alternate personnel if the original candidate is found to be unacceptable. No signaling related work shall begin prior to the Contractor's Signal Engineer having been approved by the Engineer.
5. The Contractor's proposed Signal Supervisor(s) shall demonstrate knowledge and experience in the installation and maintenance of the various systems to be installed. The proposed Signal Supervisor shall have a minimum of 5 years signal supervisory experience on a major transit or commuter system in the United States. The Contractor's Signal Supervisor shall demonstrate the proper methods and procedures required to adjust, inspect and test the signaling and highway warning systems and subsystems. This demonstration shall be by interview of the proposed Signal Supervisor by the Engineer prior to commencement of any signal related work. The Engineer's decision concerning the candidate's qualifications shall be final. The Contractor shall propose alternate personnel if the original candidate is found to be unacceptable. No signaling related work shall begin prior to the Contractor's Signal Supervisor having been approved by the Engineer.
6. The Contractor's proposed Application Software Engineer(s) shall demonstrate knowledge and experience in the development of safety-critical software on a rail system with the same or greater level of complexity as that being constructed on this project and specified herein. The Contractor shall submit resumes and contact information for a reference(s) that can attest to the applicant's abilities and knowledge. Each reference shall be a signal manager or agency person responsible for signal systems on which the applicant produced safety-critical software for the signaling system. Furthermore, the system for which the software was provided shall have been in revenue service a minimum of 12 months prior to advertisement of this Contract. In addition, the proposed applicant shall:
 - a. Have been officially trained by the manufacturer on the solid-state controller systems and the application software to be furnished by the Contractor for this project;
 - b. Possess a certificate of completion of software training issued by the manufacturers of the controllers to be used;
 - c. Demonstrate past experience programming the logic controller to be furnished by the Contractor as part of the contract and have provided

- safety-critical software of the same or greater level of complexity that is required for this project;
 - d. Demonstrate extensive experience in railroad signaling including design and programming of safety critical applications in conformance with AREMA C&S Manual of Recommended Practices and FRA and CA MUTCD regulatory requirements; and demonstrate a complete understanding of the logic controller hardware to be furnished by the Contractor as part of this contract.
 - e. This demonstration shall be by interview of the proposed Application Software Engineer(s) by the Engineer prior to commencement of any software development. The Engineer's decision concerning the candidate's qualifications shall be final. The Contractor shall propose alternate personnel if the original candidate(s) is found to be unacceptable.
7. The Contractor shall provide a Field Engineer. The Field Engineer shall maintain signal drawings and test documents. The Field Engineer shall be proficient with CADD and coordinate work with the Contractor's Signal Engineer and Signal Supervisor. SDTI may choose to interview the Field Engineer to verify qualifications and experience. The Field Engineer shall be responsible for the following:
- a. Maintaining up-to-date and current "redline" drawings in the instrument enclosures.
 - b. Updating and distributing design files to the Engineer, the Contractor's Signal Engineer and Signal Supervisor within 7 working days of any revision made to the system.
 - c. Maintaining and distributing test result documentation for all systems placed in operation.
 - d. Coordinating with civil, structural, traction power and communication disciplines to ensure all data shown on signal drawings and incorporated into the CADD files are correct and accurate.
8. All Contractor field personnel must receive safety training that shall include a thorough briefing in the rules of conduct in work areas where moving trains may be present. No work shall be performed on operating systems or appliances without a SDTI representative being present.
9. Any Contractor personnel found to be acting in violation of safety or operating rules and regulations will be barred from the work site.

1.6 SIGNAL CONTRACT PLANS

- A. Signal Contract Plans represent a detailed design utilizing systems, components and materials that meet specification requirements. The Contractor may provide equivalent systems, components and materials subject to the approval of the Engineer. The Contractor's written request for changes shall include catalog cuts, specification sheets, operating and maintenance manuals, logic development and compiling software (if applicable), a record of in-service dates and references and other data supporting the Contractor's contention that the system, component or material is equal to the equipment shown on the Contract Plans.
- B. The Contractor shall modify the Contract Plans as necessary to provide a complete and operating system as specified in these Specifications and as approved by the Engineer. The Contractor's design shall utilize the symbology, nomenclature and CADD standards depicted in the Contract Plans.

- C. The Engineer shall render a decision concerning the alternate systems, components or materials within 15 working days of receiving the Contractor's alternate design submittal. No additional payment shall be made to the Contractor for the alternate design. Construction schedules and contract milestones shall not be modified to offset any delays incurred by the Contractor in conjunction with the alternate design effort. The Contractor shall be responsible to provide calculations for Mean Time Between Failures (MTBF) and Mean Time to Repair (MTTR) for all alternative devices.

1.7 MODIFICATION TO EXISTING DRAWINGS

- A. Regardless of accuracy of MTS drawings, the Contractor shall be solely responsible for the correctness of all circuits designed by him/her. The Contractor shall compare actual field condition with drawings provided and make any correction necessary to the drawings prior to designing required interfaces.

1.8 FIELD CONDITIONS

- A. Existing signaling systems shall be fully operational at all times unless otherwise approved by the Engineer. The Contractor's work shall not interfere with revenue service operations and maintenance activities. The Contractor shall plan and schedule the Work accordingly and get approval from the Engineer.
- B. The Contractor shall be responsible for providing continuous train control (also referred to as Signaling or Signals within these Specifications) and highway-rail grade crossing warning during all phases of construction. At no time shall the work of the Contractor cause delays to train operation, cause an unsafe condition to exist, or reduce the effectiveness or quality of the existing crossing warning systems. The Contractor shall submit, for approval by the Engineer, its proposed plan for providing alternate methods of crossing warning whenever an existing automatic crossing warning device is deactivated, altered, or modified in order to accommodate construction work. Alternate methods shall conform to 49 CFR, Part 234 and all Federal, State, and local ordinances.
- C. The Contractor shall protect existing SDTI cabling and, where necessary, relocate existing cabling in order to prevent damage to the cabling during all phases of Work. All relocation shall be approved by the Engineer in advance.
- D. The Contractor shall be responsible for the detailed design of temporary interfaces required to support full operation of new and existing systems until such time as the final systems are placed in full and final operation.
- E. At no time shall the Contractor take the existing block signaling or highway grade crossing warning system out of service without detailed work plan and prior approval from the Engineer.

1.9 DELIVERY, STORAGE AND HANDLING

- A. All material delivery, storage and handling shall conform to the requirements specified herein and in related sections.

PART 2 - PRODUCTS

2.1 LABELING

- A. All signaling system components, assemblies and subassemblies shall be appropriately labeled so they may be readily identified as specified herein.

2.2 ENVIRONMENTAL CONDITIONS

- A. All materials, equipment, product design, manufacturing methods, system installation, testing and construction workmanship shall conform to the requirements specified in Section 344223, Railway Control Equipment, Part 2.01 Equipment – Environmental Parameters and as recommended in the AREMA C&S Manual.

2.3 APPLICATION LOGIC SOFTWARE, LOGIC CONFIGURATION DEVELOPMENT AND LICENSING

- A. The Contractor shall install, test and commission application software for programmable logic controllers,
- B. Software shall be provided to the Contractor, any discrepancies or modifications required to the application logic, the contractor shall modify accordingly.
- C. Logic configuration shall incorporate the signaling principles referenced in these Specifications and the Contract Plans. Logic configuration shall be streamlined and simple as possible to achieve the desired system performance. Similar locations shall utilize the same base logic configuration, nomenclature and performance criteria. The software shall be user friendly and the control logic shall be configured to enable SDTI signal personnel to modify application logic with ease.
- D. The Contractor's team shall cooperatively work together to provide all services required to develop safety-critical software that fulfills all contract requirements including requirements to ensure that the development, installation, implementation, inspection, testing and commissioning of those products will achieve and maintain an acceptable level of safety in conformance with all AREMA Standards and Regulatory Requirements, including but not limited to, Title 49, Part 236 Subpart H "Standards for Processor-Based Signal and Train Control Systems."
- E. The Contractor shall demonstrate and factory test application logic prior to field deployment. Application logic shall be tested on actual programmable controllers, linked as necessary to other controllers, to clearly simulate each possible movement and resulting reaction. Where temporary interfaces will be required to accommodate construction staging both the permanent application logic software and the temporary interim application logic software tested at the factory and demonstrate proper functionality prior to shipping the application logic software.

PART 3 - EXECUTION

3.1 GENERAL

- A. The Contractor shall remove and dispose of instrument enclosures, enclosure contents, TWC equipment, nearside indicators, switch machines, switch rods, and associated equipment hardware as shown on the Contract Plans.
- B. The Contractor shall protect in place all existing rail bonding and impedance bonds to ensure proper operation of the signaling and traction power systems.
- C. The Contractor shall be responsible for relocation, removal and salvage of existing signal equipment and associated accessories.
- D. The Contractor shall be responsible for conduit layout designs for each location. The conduit shall be of such size that the sum of the cross-sectional area of the individual cables shall meet requirements of the latest version of the National Electrical Code (NFPA 70).
- E. The Contractor shall perform all work and provide all documentation required to support MTS' certification that the systems furnished and installed are ready for public use in accordance with CPUC and FRA Requirements.
- F. The Contractor shall furnish, install and test all items, including cables and interfaces necessary to ensure proper operation of the block signaling and highway grade crossing warning systems.

3.2 CLOSEOUT ACTIVITIES

- A. The Contractor shall record the final as-built conditions of the signal and communication systems for each location.
- B. Record Drawings
 - 1. Record drawings shall conform to the provisions of Section 3.10 – Shop Drawings, MTS C Street & Broadway Wye Design. The final record drawings (Final Design “AS IN SERVICE” Signal Plans) submitted shall include:
 - a. An index.
 - b. Location plans.
 - c. Detailed wiring diagrams of equipment.
 - d. Detailed and complete circuit drawings including fiber connections
 - e. Case layout plans.
 - f. Cable plans.
 - g. Conduit installation plans.
 - h. Shop drawings of equipment.
 - i. Material list.
 - 1) The materials list shall include details such as equipment supplier’s names, physical and website addresses, phone numbers, and email addresses for contacts.
 - j. GPS coordinates of key equipment/locations as determined by the Engineer.
 - 2. The Contractor shall prepare and submit documentation of as-built software logic for vital processor controllers. Documentation shall include validations made to the software during in service testing and difference reports illustrating changes made.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Transportation and Signaling and Control.

4.2 PAYMENT

- A. Full compensation for Transportation and Signal and Control shall be included in the contract price paid per each for various items, therefore no separate payment will be made.

END OF SECTION 344201

SECTION 344213.13

GENERAL RAILWAY SIGNAL REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This section includes furnishing interim and final designs as required for complete and operating train control and highway grade crossing warning systems.
- B. Section Includes:
 - 1. General railway signal requirements
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment
 - 3. Section 344201 – Transportation Signaling and Control.

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice
- B. California Public Utilities Commission (CPUC), General Orders (G.O.):
 - 1. G.O. 75-D – Regulations Governing Standards for Warning Devices for At-Grade Highway-Rail Crossings
- C. Code of Federal Regulations (CFR), Title 49, Transportation:
 - 1. 49 CFR Part 234 – Grade Crossing Safety

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein and other Sections within Section 34 42, Transportation Signaling and Control.

1.4 QUALITY ASSURANCE

- A. The signal system design shall be functionally consistent to what is currently installed on the San Diego Trolley Inc. (SDTI) system and shall conform to the requirements contained in this contract. It is the Contractor's responsibility to review existing designs and conditions in preparing the bid. San Diego Trolley Inc. will not compensate the Contractor for correcting omissions or errors in the Contractor's design, which are found during the design submittal review or during installation of permanent or temporary signaling system configurations at any stage of the project.
- B. The Contractor's design shall be compatible with the existing signaling equipment and properly interface with the existing light rail vehicles system.
- C. The Contract Plans shall serve as the standard to be used for the engineering, layouts and the Contractor's interface designs. Any deviations from these requirements shall be submitted to the Engineer for approval.

PART 2 - PRODUCTS

2.1 FAIL-SAFE DESIGN PRINCIPLE

- A. As used in these technical specifications, the fail-safe principle shall mean that whenever an equipment failure, human error or failure to act, or adverse environmental condition affects the specified operation of a system involved with the safety of life or property, that system shall revert to a state known to be safe.

- B. Failure of a circuit or equipment that results in an indication of a dangerous or restrictive condition, whether or not there is in fact actual danger, shall have met the fail-safe requirements. Conversely, a failure that results in an indication of safe or nonrestrictive condition when, in fact, a dangerous condition may exist, shall not have met the fail-safe requirements.
- C. Vital applications, such as detector locking of switches, shall be based on the following principles that permit the attainment of fail-safe operation in all known or discovered failure modes:
1. Closed Loops: Fail-safe circuits shall employ the closed loop principle and shall protect against open circuits, shorts, or any combination thereof.
 2. Vital Relays: Relays used in vital circuits.
 3. Vital Circuits: All line circuits that energize a vital relay shall be two-wire, double-break circuits and shall be energized from an ungrounded direct current (DC) power supply. Failure of any circuit component or any combination thereof shall not result in unsafe condition.
 4. Grounds: Components or wires becoming grounded shall not cause an unsafe condition.
 5. Spurious Oscillations: Any amplifier, generator, or device element, active or passive, breaking into spurious oscillations shall not cause an unsafe condition.
 6. Filters: Filters used in fail-safe circuits shall be designed to prevent undesired signals from appearing at the filter output at levels that could cause an unsafe condition.
- D. Equipment failures and conditions that shall be considered in producing a fail-safe design shall include, but not be limited to:
1. Relays (non-vital): Open coil, fused contacts, high contact resistance, shorted coil, armature sticking, contacts sticking, or broken spring.
 2. Relay (vital or safety as defined by the AREMA): Open coil, shorted coil, or high contact resistance.
 3. Transformers: Open primary, open secondary, shorted turns, primary-to-secondary shorts, or combinations thereof.
 4. Capacitors: Short, open, or leakage.
 5. Resistors: Increase or decrease in resistance.
 6. Transistors: Short, open, leakage, or loss of Beta.
 7. Diodes: Short, open, or reverse leakage.
 8. Coils: Open or shorted turns.
 9. Loss or degradation of power sources.
 10. Appearance of abnormal signal levels, electrical noise levels, frequencies and delays.
 11. Effects of electrical interference.
 12. Absent or abnormal input signals.
 13. Opens or shorts in internal circuitry at inputs and at outputs.
 14. Mechanical vibration or shock.
 15. Drift or instability of amplifiers, receivers, transmitters, oscillators, switching circuits and power supplies.

16. Deterioration of contacts, connectors, terminals, solder connections, printed circuits, circuit adjusting devices and mechanical devices.
- E. Fail-safe equipment proposed for vital signaling applications under this Contract shall have been proven safe with 3 years of successful railroad or transit service operation in the United States of America.

PART 3 - EXECUTION

3.1 GENERAL BLOCK SIGNALING SYSTEM FUNCTIONS

- A. The Contractor's design shall satisfy the following block signaling system functional requirements
 1. Prevent unsafe switch operation and prevent clearing of signals for opposing or conflicting routes.
 2. Provide safe train separation.
 3. Assure and maintain safe train operation.
 4. Design of circuits and equipment shall be fail-safe.

3.2 AUTOMATIC ROUTE CONTROL

- A. The system shall automatically and safely align and lock routes through a signal crossover and control the aspects of signals to indicate that a safe route has been established for train movement through absolute block protection. Absolute signals shall remain normally red until a route has been requested and assigned.
- B. Automatic routing shall primarily be accomplished using track occupancy but in special circumstances the Train-to-Wayside Communications (TWC) system shall be utilized.
- C. The signaling system shall, at a minimum, satisfy the following sequence of events in establishment and occupancy of a route:
 1. Detection of approaching train.
 2. Request for clearance through blocks in advance of train.
 3. Check that downstream blocks are clear.
 4. Check that no opposing or conflicting traffic or Signal Block is in effect.
 5. Move, lock and detect switches.
 6. Establish traffic locking.
 7. Clear signal.
 - a. Upon occupancy of the block establish route locking.
 - b. Upon clearance of the block by the train, cancel route and traffic locking.
 - c. Return crossovers and turnouts to the NORMAL position.

3.3 SIGNAL INDICATORS

- A. The signal indicators shall be displayed as follow:
1. RULE - 4.6.4 ASPECT- Horizontal Red INDICATION- Stop. Improper switch alignment or train ahead
 2. RULE – 4.6.3 ASPECT- Diagonal Lunar/Diagonal Lunar INDICATION-Proceed, Diverging (Reverse) switch alignment through two adjacent crossovers
 3. RULE – 4.6.2 ASPECT- Diagonal Lunar INDICATION-Proceed, Diverging (Reverse) switch alignment
 4. RULE – 4.6.1 ASPECT- Vertical Lunar INDICATION-Proceed, Straight (Normal) switch alignment

3.4 ROUTE REQUEST AND CANCEL

- A. The signaling system shall allow a Light Rail Vehicle (LRV) operator to cancel and align all routes at the signals from an LRV TWC control console.
- B. The signaling system shall incorporate back-up wayside pushbutton control at each signal, which will operate in parallel with the TWC output contacts. Each pushbutton control location shall include an indication light; to indicate the routes are unlocked and available for realignment. The RED LED indication light shall be plainly visible to the operator from the cab when the car is over the TWC loop.
- C. Route requests shall be initiated by the means of TWC loops, track occupancy, route request via a push-button control cabinet located in the vicinity of the crossover signal, or Central Control. TWC loops with associated interrogators and output cards shall provide information to crossovers for LRV route selection. Route selection shall be accomplished as follows:
1. The Train-to-Wayside loops shall be located as shown on the Contract Plans.
 2. The signal system shall align and lock switches for the route selected if a route has not already been established for the opposing traffic. The stored route shall be processed when opposing traffic clears the crossover.

3.5 SCADA INTERFACE

- A. The signaling system shall support remote monitoring of all crossovers and remote route requests through each crossover from Central Control.

3.6 EVENT RECORDER

- A. Systems shall record events as determined in the software development session. Event recorders shall be furnished and installed in accordance with Part 3.1.29 of the AREMA C&S Manual.

3.7 TRAIN TO WAYSIDE COMMUNICATIONS EQUIPMENT DESIGN

- A. The TWC equipment shall be compatible with the existing car-carried and wayside TWC system. The Contractor shall demonstrate by test that the new TWC equipment is compatible with the existing system. Wayside interrogators transmit a 100 KHz interrogation signal through a loop antenna installed between the rails. On receipt of the interrogation signal, while the car antenna is over a loop, the vehicle-borne transponder responds with a low power signal encoded with a 19-bit message. On validation by the interrogator, the message is passed on to specific electronic application cards in the interrogator, which energize selected output relays or transmits a digital signal to the crossover controller.

3.8 TWC LOOP ANTENNA

- A. The TWC loop antenna shall be constructed in a figure "8" pattern, with a support structure affixed directly to the track work in open right-of-way and beneath pavement in paved areas, as shown on the Contract Plans and specified in these Specifications. Each loop antenna shall be connected to:
 - 1. A loop connecting unit, or
 - 2. A tuned filter unit adjacent to the loop as required and via shielded twisted 2 pair #12 AWG conductor to the loop scanner or interrogator. Loop connecting unit or tuned filter unit shall be installed and sealed in accordance with the manufacturer's recommended installation

3.9 INTERROGATORS

- A. Interrogators shall provide the functional information, as required.
 - 1. Interrogators shall be configured with a loop scanner card that is located in an interrogator card slot to avoid cross-talk problems. Interrogators shall not be configured for operation with a stand-alone loop scanner unit. The Contractor shall provide power supplies and slots for 9 application cards.
 - 2. The Contractor's design shall include serial (RS-232/RS-485) or Ethernet (RJ-45) communication cards where shown on the Contract Plans and programmable decoder cards containing eight programmable outputs for control of desired functions where shown on the Contract Plans. Connect the relay outputs to perform the functions as indicated.

3.10 MANUAL ROUTE REQUEST AND CANCEL SYSTEM FOR CROSSOVERS

- A. TWC loops with associated equipment, adjacent to each crossover signal as shown on the Contract Plans, shall allow the operator to cancel and align routes at the signals from the LRV TWC control console. TWC shall initiate an automatic route request based on the TWC input from the light rail vehicle's TWC signal.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for General Railway Signal Requirements.

4.2 PAYMENT

- A. Full compensation for General Railway Signal Requirements shall be considered included in the contract price paid per each various items, therefore no separate payment will be made.

END OF SECTION 344213.13

SECTION 344213.14

ROUTE CONTROL EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This section includes furnishing and installing Train-to-Wayside-Communication (TWC) Equipment and Route Selectors as shown on the Contract Plans.
- B. Section Includes:
 - 1. TWC Equipment and Route Selectors.
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals Manual of Recommended Practice.
- B. National Fire Protection Association (NFPA)
 - 1. NFPA 70 – National Electrical Code

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein.

1.4 QUALITY ASSURANCE

- A. The TWC equipment shall be compatible with the existing car-carried and wayside TWC system. The Contractor shall demonstrate by test that the new TWC equipment is compatible with the existing system and the Rockwell Collin's ARINC AIMS platform used in the San Diego Trolley Inc. (SDTI) Operation Control Center (OCC).

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Wayside interrogator is currently installed and operational and is to be relocated as part of this project.
- B. The loop antenna junction box shall be a Hanning & Kahl HCS-R-FI, Part No. 44 335 006.
- C. Each loop antenna shall consist of one turn of insulated, stranded, copper wire suitable for a 30-year life in direct burial wet and dry applications, with a conductor size minimum of #12 AWG. The wire shall meet the requirements of Article 310 of the National Electrical Code. Insulation shall be type RHW, RHH, USE, or XHHW with a thickness of 45 mils.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Loop antennas shall be attached to the ties as shown on the Contract Plans.
- B. The Contractor shall setup, configure and test interrogators in accordance with the manufacturer's recommendations.
- C. SDTI shall provide coding information for each interrogator.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Route Control Equipment.

4.2 PAYMENT

- A. No separate payment will be made for the Work described in this Section, and the compensation for its performance will be incidental to the payment for all associated items of Work with separate pay items that require the Work covered by this section.

END OF SECTION 344213.1

SECTION 344213.17

TRACK CIRCUITS

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This section includes furnishing and installing Axle Counters/Wheel Sensors as shown on the Contract Plans.
- B. Section Includes:
 - 1. Axle Counters (Wheel Sensors)
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein.
- B. Product data sheets and Operation and Maintenance manuals for each type of track circuit provided. The Contractor shall place an operation and maintenance manual in each instrument shelter where the track circuit is installed.

1.4 QUALITY ASSURANCE

- A. Track circuits shall meet the requirements established by AREMA Communications & Signals (C&S) Manual where the requirements of the AREMA Specifications do not conflict with any requirements of this Section.

1.5 DELIVERY, STORAGE and HANDLING

- A. Track circuit component shall be protected against damage during handling and shipment and shall be secured against loss during storage.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Axle Counter/Wheel Sensor Requirements
 - 1. Axle Counter/Wheel Sensor shall be provided for train detection where shown on the contract plans.
 - 2. Axle Counter/Wheel Sensor shall be Frauscher FAdC Axle Counter system including the necessary card modules (AEB, RP COM), RSR180 (wheel sensors), BSI001 (surge protection) meeting manufacturers safety requirements by Frauscher or approved equal.
 - 3. Wheel sensors shall be installed within the existing axle counter rail box or manufacturer recommended boxes
 - 4. The contractor shall coordinate with the manufacturers on the software requirements for the Frauscher FAdC Axle Counter System
 - 5. The Contractor shall make adjustments to the circuit design and hardware components as necessary to adhere to the manufacturer's specifications restrictions to include.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Track circuitry components shall be installed, adjusted and tested in accordance with the manufacturer's recommendations.
- B. Cable conductor size shall meet or exceed the recommendations of the equipment manufacturer.
- C. Cable Splining shall be watertight in accordance with the manufacturer's recommendations.

3.2 FIELD TESTS

- A. Tests for proper operation and setting of Axle Counter system shall be made in accordance with the manufacturer's specification and manuals.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Frauscher FAdC Axle Counter System.

4.2 PAYMENT

- A. Payment for procurement of Frauscher FAdC Axle Counter System and Manufacturer Support shall be included in the contract price paid for "Signal House/Case Complete", therefore no separate payment will be made.

END OF SECTION 344213.17

SECTION 344213.18

INSTRUMENT SHELTERS

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This section includes furnishing and installing factory wired equipment shelters as specified herein and as shown on the Contract Plans.
- B. Section Includes:
 - 1. Factory wired equipment shelters
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice
- B. Code of Federal Regulations (CFR) Title 49, Transportation:
 - 1. 49 CFR Part 236 – Rules, Standards, and Instructions Governing the Installation, Maintenance, and Repair of Signal and Train Control Systems, Devices, and Appliances

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein.
- B. Shop Drawings showing the proposed size and equipment layout including rack, lighting and convenience outlet arrangement.
- C. Shop Drawings of the complete grounding arrangement.
- D. Shop Drawings of each instrument and entrance rack, showing the arrangement and description of the mounted equipment and wiring if different from those shown on Contract Plans.
- E. Sizes and types of internal wire proposed if different from those shown on Contract Plans.
- F. Factory Test Procedures proposed.
- G. Installation Test Procedures proposed.
- H. Load calculations, indicating sizes of load center panel, voltage drops and all other 240/120 VAC equipment if different than the equipment shown on Contract Plans.

1.4 QUALITY ASSURANCE

- A. The factory test of the shelters and the functioning of the equipment contained within each, shall be conducted in accordance with the Contractor's approved Factory Test Procedure.
- B. Each shelter will be inspected after it has been installed and any deficiencies shall be corrected by the Contractor. This inspection will be conducted in conformance with the requirements of the Contractor's approved Installation Inspection Procedure.
- C. The Contractor shall verify the instrument shelters can be mounted and secured on the structure foundations as shown on the Contract Plans structure sheets. All instrument shelters and installed equipment within shall comply with the earthquake requirements in the San Diego, CA region

1.5 DELIVERY, STORAGE and HANDLING

- A. Equipment shipped within shelters shall be properly fastened and braced to prevent damage during transit. Any equipment damaged during transit or prior to in-service operation shall be replaced at no additional cost to MTS.
- B. All vital relays, batteries and electronic plug-in modules shall be packaged in separate containers for shipment and not installed until the shelter is set at its final location.

PART 2 - PRODUCTS

2.1 MATERIAL - GENERAL

- A. The Contractor shall supply factory wired equipment shelters, as described herein and as shown on the Contract Plans. Shelters shall be complete with all the equipment shown on the Contract Plans. Wiring shall conform to the requirements of the AREMA C&S Manual.
- B. Equipment shelters shall be manufactured by P.T.M.W., Siemens Systems, or approved equal.
- C. Equipment shelters shall be the same size and layout as shown on the Contract Plans. Unless otherwise shown on the Contract Plans, the minimum signal case equipment shelter depth shall be 24 inches.
- D. Houses shall be equipped with an appropriately sized ventilation unit. Cases shall be vented utilizing ventilation openings in the doors unless otherwise approved by the Engineer. The Contractor shall evaluate each case and house for adequate ventilation and modify the design as necessary to ensure inside shelter temperature levels will not exceed 85 percent of the maximum operating temperature level specified for the equipment housed in the shelter.
- E. Equipment shelters shall be rain-tight and dust/tight, designed to conform to National Electrical Manufacturers Association (NEMA) 4 specifications, ventilated and shall have hinged doors with three point catch and handle.
- F. Equipment shelters shall be constructed of 12-gauge Type 316 stainless steel.. If the Contractor would prefer to use an alternative equivalent AWS welding method to weld the instrument shelters, then the Contractor shall submit the equivalent welding method to the Engineer in writing for approval. In order to be considered to be an equivalent process the alternative AWS welding methods shall: a) conform to an American Welding Society (AWS) standard process, b) result in a quality weld and c) shall result in a weld that will not rust. The Engineer shall be the sole judge as to the quality and suitability of the alternative welding method and the Engineer's decision shall be final.
- G. The instrument shelters shall be complete with moveable shelves and backboard.

- H. The equipment shelters shall provide access to underground and aerial cable entrance behind the main terminal rack. Roof and side ventilation openings shall be provided as required for the size of the shelter proposed. Lift rings shall be provided to facilitate the movement of the shelter.
- I. In each door, there shall be ventilation openings. The exterior of the ventilation openings shall be hooded to minimize the entrance of precipitation. The doors shall be hinged and equipped with gaskets so that they will provide a dustproof and weatherproof seal. Doors shall be provided with a two-position retaining device to secure the door when open. House doors shall be a minimum width of 32 inches. Doors shall be equipped with a three-point latching system that will allow opening from the inside when lock is applied on the outside.
- J. Hinges shall be separate castings, securely fastened to the shelter and door with anti-theft layout. The hinges shall be equipped with stainless steel hinge pins, shall be lubricated by the manufacturer before the case is shipped and shall have grease fittings for later lubrication.
- K. Equipment shelters shall be furnished with interior lighting and duplex 120 volt alternating current (AC) power receptacle. Receptacle loads shall be fed from a ground fault interrupt circuit breaker used exclusively for these loads. Signaling logic and appliance power loads shall be fed from separate circuit breakers. Circuit breakers and wiring shall be the size as shown on the Contract Plans unless otherwise approved by the Engineer.
- L. Shelters shall be furnished complete with a 120/240 VAC power distribution panel, circuit protective devices and all appurtenances necessary to supply the AC power required at each site.

2.2 EQUIPMENT MOUNTING

- A. Equipment shall be mounted in a "logical" arrangement with focus on access needs and "ease of maintenance."
- B. Relay plugboards shall be designed for insertion of removable type contacts. The method of attaching the wires to the removable contacts shall be solderless connections. The plugboard shall be designed so that the removable contact will have a direct connection with the contact and coil prongs. The plugboards shall be in accordance with the applicable sections of AREMA C&S Manual, Part 6.2.2.
- C. All wires shall be of sufficient length to permit them to be moved to any contact on the same relay plugboard.
- D. The relay plugboards for vital relays shall be equipped with a registration plate to prevent relays of the wrong type, contact arrangement, or operating characteristics from being inserted.

2.3 IDENTIFICATION

- A. A white identification number shall be stenciled at the top of the front and rear frames of each rack or panel.
- B. There shall be an identifying nameplate for each relay, or other instrument mounted on the rack or panel.
- C. The back and front of the relay plugboards shall be equipped with a tag, as specified in Section 344213.20, Relays. This tag shall indicate the nomenclature of the relay.
- D. Terminals and both ends of all internal wires shall be identified with a sleeve tag printed with the circuit nomenclatures and terminal designations as shown on the Contract Plans. The information shown on each tag shall be the nomenclature, the near location of wire and the far location of the wire.

2.4 CABLE ENTRANCE TERMINAL BOARDS

- A. Furnishing and installing factory wired equipment shelters as described herein and as shown on the Contract Plans.
- B. Cable Entrance Terminal Boards shall be made of 3/4 inch, 2-sided, MDO paneling, securely mounted to the shelter and painted with a fire retardant paint.
- C. Multiple-unit terminal blocks for wire and cable conductors shall be in accordance with AREMA Signal Drawing 14.1.6. Each binding post shall be furnished with two binding nuts, one clamp nut and three washers.
- D. Siemens test terminals shall be provided on all conductors entering shelters.
- E. Lightning arrestors shall be provided as shown on the Contract Plans.
- F. Binding posts and exposed terminals of other apparatus for circuits exceeding 50 volts or greater (AC or DC) shall be equipped with insulating nuts and sleeves.
- G. Cable entrance facilities shall be located as shown on the Contract Plans.

2.5 CABLE ENTRANCE PIPES

- A. Cable entrance pipes shall be supplied by the Contractor as specified herein.

2.6 GROUNDING

- A. Signal houses shall be fitted with four 48 inch long #6 copper ground wires exothermically welded to the underside of the house at each corner, using Erico CADWELD or approved equivalent. House terminal boards shall be fitted with two 12 ft. long #6 copper ground wires exothermically welded on the rear of frame

approximately 18 inches above the floor. Signal cases shall be fitted with two 48 inch long #6 copper ground wires exothermically welded to underside of the case on each side of the case. Ground wires shall be coiled and secured to enclosure in a manner that prevents damage during shipment.

- B. Grounding material shall be supplied by the Contractor and installed as specified herein.

2.7 INTERNAL WIRING

- A. Internal wiring shall be in accordance with AREMA C&S Manual Parts 10.4.1 and 10.4.30, unless otherwise specified herein.
- B. Minimum wire conductor sizes shall be as shown on the Contract Plans unless otherwise approved by the Engineer.
- C. Adhering to minimum wire size specifications does not relieve the Contractor's responsibility of using wire sized large enough to safely and effectively provide power to the circuit it serves.
- D. Solderless terminals, for stranded wire, shall be used.
- E. Solid terminal strap connectors shall be used for all short terminal jumpers.

2.8 PAINTING

- A. The interior including the ceiling, walls, terminal boards and shelves shall be finished with a primer and two coats of white latex enamel paint.
- B. All paint shall be fire retardant type.

2.9 OTHER EQUIPMENT

- A. Panel Board: Furnish a single-phase, three-wire 120/240 VAC, 60 Hz panel board for each shelter furnished under this Contract. The panel board shall be sized as shown on the Contract Plans.

2.10 SHELTER FOUNDATIONS

- A. Shelter foundations shall be pre-cast concrete foundations designed and constructed in accordance with AREMA C&S Manual and the shelter's manufacturer recommendations.
- B. The Shelter Foundations shall be designed, stamped and signed by a registered professional California civil or structural engineer. Relay Case foundations shall conform to Part 14.4.11 of the AREMA C&S Manual recommendations. The Contractor's Engineer shall determine the height of the foundation.

- C. Where existing improvements such as sidewalks, curbs, gutters, pavement, underlying material, lawns, plants and other improvements are removed, broken, or damaged by the Contractor's operation of installing a new foundation, the contractor shall replace or reconstruct the improvements.
- D. All surplus excavation, from whatever source, shall be disposed of in accordance with Section 4.20, "Cleaning Up" of the General Conditions.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. The shelters shall be mounted level, plumb and secured on concrete footings as approved by the Engineer. Shims, spacers, or other filler devices shall not be used to level and plumb the shelters.
- B. Cable entrance pipes shall be installed through the cable knockout holes provided in the floor of the shelter behind the terminal board. Pipes shall be 4-inch Sch. 40 PVC extending through the knockout holes to a minimum of 18 inches below final grade. Pipes and knockout hole edges shall be filled with a substance designed to prevent entrance of debris, rodents and other pests.
- C. The Contractor shall construct an earth pad for each instrument shelter. Pad shall be constructed to facilitate drainage away from the track and the shelter. Refer to Contract Plans for special installations requiring retaining wall or unique conditions. If conditions do not allow placement at the location shown on the Contract Plans then the Contractor shall submit alternate placement for approval of the Engineer.
- D. The Contractor shall coordinate all shelter placements with the Engineer. Shelters and associated appurtenances shall be located at the stationing shown on the Contract Plans train control sheets. The Contractor shall refer to the civil drawings of the Contract Plans for exact equipment location information. Shelters shall be identified with 4" letters/numbers per locations shown on the Contract Plans.
- E. Shelters shall be grounded as specified herein.
- F. Relays shall be installed on the relay plugboards corresponding to the relay nomenclature and identification plate and securely fastened in place with the hardware provided by the relay manufacturer.
- G. Batteries shall be installed on battery trays. Battery posts shall be coated with an approved grease and battery connectors shall be securely fastened to the battery posts.

3.2 AC POWER

- A. House load center shall be located within the house and sized as shown on the Contract Plans.

3.3 CABLING TO EXISTING EQUIPMENT AND RAILS

- A. Existing equipment not specifically shown to be removed or taken "out" in yellow shall be protected in place. The Contractor shall install new conduit, signal cabling and pull boxes from the new Instrument Shelter to the existing equipment and that is to be protected in place. Signal cabling shall conform to the requirements of section 344216, Train Control Wire and Cable.

3.4 TESTING

- A. Tests for proper operation shall be made in accordance with Section 344213.28, Block Signaling and Highway Grade Crossing Warning Systems Testing.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity for Signal House/Case Complete shall be measured for payment for each, completed in place, as shown on the plans.

4.2 PAYMENT

- A. The Contract priced paid per each Signal House/Case Complete shall include full compensation for furnishing all labor, materials, tools, equipment, and all incidentals: and for all the work involved in installing the Instrument Shelters, complete in place, including testing, in accordance with the Plans and as directed by the Engineer.

END OF SECTION 344213.18

SECTION 344213.19

SIGNAL SYSTEM GROUNDING

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This Section includes furnishing and installing a grounding system for the equipment shelter and all other wayside equipment apparatus, as specified herein and shown on the Contract Plans.
- B. Section Includes:
 - 1. Grounding system for the equipment shelter
 - 2. Grounding system for the other wayside equipment apparatus
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice
- B. ASTM International (ASTM):
 - 1. ASTM B8 – Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft

C. National Fire Protection Association (NFPA)

1. NFPA 70 – National Electrical Code

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein.
- B. Schematic Drawings showing the design and detail of the proposed grounding system for the signal equipment proposed to be furnished and installed.
- C. Catalog cuts or drawings showing the type of components to be used for the proposed grounding system(s).
- D. Installation and Test Procedure proposed for all equipment grounding.
- E. Submit test reports to the Engineer upon completion of ground tests that completely describe ground resistance test procedures and test results. Test reports shall be signed by a technician and witnessed by a representative of the Engineer.

1.4 QUALITY ASSURANCE

- A. Materials and equipment furnished and installed under this Section shall conform to all applicable state and local ordinances pertaining to electrical power installations and the latest edition of the National Electrical Code (NEC).

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Cadweld exothermic connections - Manufactured by Erico Corp.
- B. Ground rods shall be manufactured by Copperweld Corp. and shall be copper-clad stainless steel. The rod shall be at least 10 feet in length and at least 3/4 inch diameter.

- C. Ground rod clamps shall be manufactured by Copperweld Corp. and shall be made of a cast bronze clamp body, with non-ferrous set screws.
- D. Internal ground wire, from the equipment to the ground bus, shall be insulated No. 6 AWG standard copper wire, as specified within Section 344216, Train Control Wire and Cable. Insulated ground wire shall be colored green.
- E. A grounding bus of nickel plated hard drawn pure copper shall be provided in the equipment shelters.
- F. Bare Ground Wire: Soft drawn copper, Class A or Class B stranded, shall meet the requirements of ASTM B8. Sizing of ground wire shall be in accordance with the NEC, except where sizes specified herein or shown on the Contract Plans are larger than those required by NEC; UL listed, Label A for lightning protection conductors. Grounding cable shall be continuous without joints or splices throughout its length.
- G. Bolted Grounding Connectors: Use connectors made of high strength electrical bronze, with silicon bronze clamping bolts and hardware; designed such that bolts, nuts, lock washers and similar hardware which might nick or otherwise damage the ground wire, shall not make direct contact with the ground wire.
- H. Ground Leakage Detector as shown on the Contract Plans.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Service equipment, motor frames, switchgear and equipment enclosures, lighting and power panelboards, transformers, raceways, fences and gates, building or structure steel frames, lighting standards, floodlight poles, power/light pull boxes/maintenance holes, shall be grounded as described herein and in accordance with the applicable requirements of the NEC and local codes.
- B. The grounding system shall preclude any closed loop grounding arrangements.
- C. Ground connection(s) to the track rails or use of the neutral conductors of the AC Power Supply shall not be permitted.
- D. Grounding under these specifications will conform to AREMA C&S Manual, Section 11. In cases where these instructions differ, the Engineer will make final decision.
- E. Ground wire/cable runs shall be as short and straight as possible and shall not be interrupted by any device.
- F. At equipment shelters, four ground rods shall be driven into the ground, at the corners of the structure. The ground rods shall be a minimum of 6 feet apart and shall be driven below ground level. A trench, 12 inches deep, shall be dug between the ground rods. Each of the ground rods shall be electrically connected to the others, using a #6 AWG

bare solid copper wire, exothermically welded, using Erico CADWELD or approved equivalent. Exothermically welded connections shall be coated with epoxy resin. The ground wires shall be placed in the bottom of the trench. The trench shall be backfilled, returning the soils removed during construction of the trench.

- G. The shelter's copper ground cables shall be exothermically welded to the ground rods.
- H. Ground resistance, as measured by the "Fall-of-Potential" method, shall not exceed 5 ohms.
- I. Where flexible conduit is used, a bonding jumper shall be provided.
- J. Interior: Equipment Grounding
 - 1. All shelters shall be equipped with a prime ground terminal securely attached electrically to the shelter structure and to the made ground network.
 - 2. Ground connections from lightning arrestors and equipment chassis shall run separately to ground buses in the shelters, as shown on Contract Plans. Ground busses shall be connected to the prime ground with green insulated No. 6 AWG stranded wire.
 - 3. All equipment that is powered by, or switches voltages greater than 35 volts AC or DC shall be properly grounded.
 - 4. All equipment that has conductors that leave the shelter shall be properly grounded.
 - 5. Set up ground leakage detector as described by manufacturer recommended procedures.

3.2 TESTING

A. Ground Resistance Testing:

- 1. Verify that resistance between ground buses and absolute earth, as measured by the "Fall-Of Potential" or "Clamp-on" test method, does not exceed 5 ohms without benefit of chemical treatment or other artificial means.
- 2. The Contractor shall submit the test equipment and test procedure to the Engineer prior to conducting the first test.
- 3. In the presence of the Engineer, test the grounding system by the "Fall-of-Potential" or "Clamp-on" test method to demonstrate that the total ground resistance does not exceed 5 ohms.
- 4. To meet this resistance requirement, if necessary, bury additional ground rods and Cad-weld the ground rods to the ground wire or cable.
- 5. Test grounding systems connected to Instrument Shelters, Catenary poles, Sub-panels, Instrument Shelters, Signals, Flashing Light Signals (all types), pull box grounding and all other grounds shown on the Contract Plans.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Signal System Grounding.

4.2 PAYMENT

- A. Payment for procurement of Signal System Grounding shall be included in the contract price paid for "Signal House/Case Complete", therefore no separate payment will be made.

END OF SECTION 344213.19

SECTION 344213.20

RELAYS

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This Section includes furnishing and installing all required relays and associated relay plugboards. Unless otherwise shown on the Contract Plans, relays shall be the plug-in type. Relays of each type shall be uniform in design and contact assembly.
- B. Section Includes:
 - 1. Relays
 - 2. Relay plugboards
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice

- A. Submittals shall be in accordance with the requirements of MTS Construction IMT Double Trac, except as modified herein.
- B. Relay specifications, any special mounting or supporting arrangements and contact stacking arrangements, for all relay types to be furnished under this Contract. Include any arc suppression where arc suppression is required.
- C. Contract Plans show acceptable relays in use. If the Contractor proposes use of alternate relays not shown and the alternate relays have been approved by the Engineer, the Contractor shall submit manuals with comprehensive descriptions and illustrations of each type of alternate relay provided. The Contractor shall provide four relay manuals, four copies of relay specifications and calibration sheets for each type of alternate relay furnished.
- D. Test forms provided by the manufacturer of each vital relay shall be completed for each vital relay furnished under this Contract. Test forms shall conform to all FRA requirements. The use of type written characters shall be used to fill in all information requested on the form.
- E. Sample relay identification tag, including method of mounting proposed.

1.4 QUALITY ASSURANCE

- A. Vital relays shall meet the requirements of AREMA C&S Manual Part 6.2.1, where the requirements of the AREMA Specifications do not conflict with any requirements specified herein.
- B. Factory testing of each relay shall be the manufacturer's standard. Relays removed from existing facilities shall be tested prior to returning to service.
- C. Before any relay is used, the Engineer's written acceptance shall be obtained. Acceptance will be based on the test results and the proper completion of the MTS test form.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Vital relays shall be shipped separately from the wired racks in which they are to be used. Relays shall be packaged individually, each in a sturdy corrugated cardboard carton with the drawing number of the relay printed on the outside of the carton. Relays shall be stored in a protected area until tested and installed.

2.1 PRODUCTS - GENERAL

- A. Relays and equipment specified shall be capable of rated performance through an operating temperature range of minus 40 degrees Fahrenheit to plus 160 degrees Fahrenheit.
- B. Relays shall be in dustproof enclosures, except a provision shall be made for ventilation where required, for heat dissipation.

2.2 SIGNALING RELAYS

A. DC Relays:

- 1. Vital relays shall be plug-in biased neutral type manufactured by Alstom, Ansaldo STS, or Siemens. The Contractor shall use the specific relay type and configuration shown on the Contract Plans, unless approved otherwise by the Engineer.
- 2. Vital DC relays, unless otherwise shown on the Contract Plans, shall be of the plug-in type and rack-mounted. Relays shall have a transparent dust cover made of a nonflammable composition that will not support combustion.
- 3. Vital relays, with a nominal operating voltage of 10 to 16 volts, shall be capable of operating continuously without resultant damage, with a minimum voltage range of 7 to 21 volts inclusive, applied to their operating coils.
- 4. Vital relays shall have a front testing facility to permit de-energizing.
- 5. Biased neutral vital relays shall be designed so that gravity alone will prevent the armature from picking up if the permanent magnet is de-energized or if no current is applied to the coil, due to interruption of the normal magnetic circuit.
- 6. All front contacts shall be silver-to-metalized carbon, meeting the requirements of the AREMA C&S Manual Part 6.2.1.
- 7. When three DC vital relays, suppressed as specified herein, are connected in parallel and operated as a test load from normal working voltage, a vital relay front or back contact that breaks this load shall be capable of at least five million operations at this load without the contact resistance, measured with ten milliamp current, exceeding five ohms.
- 8. Arc suppression for vital relays shall be built into the relay or into its plugboard.
- 9. Vital plug-in relays, except vital time-element relays and special application relays shall be equipped with front current testing facilities. Where required by the Engineer and as shown on the Contract Plans, facilities shall be provided to enable the testing of voltage from the front of the relay, without having to remove the relay or remove adjacent relays.
- 10. Vital relays shall be equipped with a registration plate to prevent relays of the wrong style, contact arrangement, or operating characteristics, from being inserted into the plugboard.

1. Vital switch operating relays used for control of switch-and-lock movements related to non-embedded switch machines shall meet the same requirements as specified for vital biased neutral relays, except that a minimum of two front-back dependent contacts shall be supplied and contacts shall be heavy-duty metal-to-metal construction.
2. Each contact shall be equipped with a magnetic blow-out feature to effectively interrupt high currents and minimize contact wear. Switch operating relays shall be identical. One normal and one reverse switch operating relay shall be provided for each switch-and-lock movement. Switch operating relays shall be ALSTOM Type B, USS Model PN150BM, or approved equal.
3. Vital switch operating relays used for control of switch-and-lock movements related to the embedded switch machines shall be rated for 208 3-Phase motor control as shown in the contract documents.

C. AC VANE Relays

1. Vital AC relays shall be plug-in type, two element, 60 or 100 Hz, as applicable, vane-type induction relays. Vital AC relays shall be capable of operating continuously and successfully without resultant damage with a minimum voltage range of 100 volts to 135 volts, inclusive, applied to the local winding and with a minimum voltage range of 0.75 volt to 5.0 volts, inclusive, applied to the control winding.
2. Each vital AC relay shall have a minimum of two dependent front-back contacts. Each front contact shall be of the silver-to-metalized carbon type.
3. Vital AC relays shall meet the recommendations established by AREMA Signal Section Specification (part 6.1.35), unless otherwise specified herein, with the exception that these relays shall be plug-in type and therefore shall not have a screened breather and shall not be equipped with binding posts.
4. If power frequency track circuits using matching transformers are supplied, the vital AC relays supplied shall meet the requirements herein above, except that a voltage range of at least 8 volts to 50 volts, inclusive, shall be required for application to the control winding.
5. Vital AC relays shall be manufactured by Ansaldo STS, Alstom, or approved equal.

D. Non-vital Relays

1. Non-vital relays shall be used for indication or non-vital functions only. The Contractor shall use the specific relays shown on the Contract Plans.
2. Non-vital relays shall be DC or AC operated as shown on the Contract Plans.
3. Non-vital relay bases shall contain an octal socket, screw type terminals and be capable of being mounted on DIN rail or screw mounted to a backboard.

E. Identification

1. Facilities shall be included for mounting an approved typed or printed relay name tag for each relay, either on the relay cover or on the relay cabinet front plate, as applicable. The name tag shall be easily replaceable but shall not come off during normal service.

3.1 INSTALLATION

- A. The Contractor shall ensure that the relay operating characteristics have not been altered due to damage during shipping procedures.
- B. The Contractor shall ensure that all AC and DC power busses are open while installing relays. Busses shall not be reconnected until all relays have been installed.
- C. The Contractor shall install and wire the relays as shown on the Contract Plans.

3.2 TESTING

- A. All vital relays shall be factory tested and inspected in accordance with AREMA C&S Manual Part 6.4.1 and Part 6.4.5.
- B. Test measurements shall be recorded on SDTI prescribed forms.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Relays.

4.2 PAYMENT

- A. Payment for procurement of Relays shall be included in the contract price paid for "Signal House/Case Complete", therefore no separate payment will be made.

END OF SECTION 344213.20

SECTION 344213.21

MISCELLANEOUS SIGNAL SYSTEM PRODUCTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This Section includes furnishing miscellaneous components and products to be used on this Contract and shown on the Contract Plans.
- B. Section Includes:
 - 1. Miscellaneous signal system components
 - 2. Miscellaneous signal system products
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein.
- B. Product Data: Manufacturer's catalog cuts, material descriptions, specifications and other data pertinent to the miscellaneous products required.
- C. Samples of solderless terminals conforming to paragraph 2.1 G of this section.

1.4 QUALITY ASSURANCE

- A. All miscellaneous components and products used on this Contract shall be:
 - 1. New and free of manufacturing defects.
 - 2. Clearly and permanently labeled with value or type identification.
- B. All electrical components shall be rated to operate at power, voltage, current and temperature levels exceeding by 20 percent those that the components will be subject to in service, unless otherwise specified herein.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Signal system terminal blocks shall be in accordance with the applicable requirements of AREMA C&S Manual Part 14.1.5.
- B. Signal system terminal binding posts shall be in accordance with the applicable requirements of AREMA C&S Manual Part 14.1.10.
- C. Terminal binding posts for communications grade wires shall be in accordance with the AREMA C&S Manual, Part 14.1.2.
- D. All terminal posts, located on terminal boards in the wayside cases, signal instrument shelters used to terminate 50V, or greater, AC or DC circuits shall be provided with a protective insulator. The type of insulator shall be individual for each terminal post and shall be fire-resistant.
- E. Type 024620-1X insulated test link as manufactured by Siemens, Inc., or approved equal.

- F. Lightning arrestors, line filters and equalizers shall conform to the manufacturer's recommendations for the equipment being protected. Lightning arrestors and equalizers shall be mounted on accepted type base and shall be in accordance with AREMA C&S Manual Part 11.3.1.
- G. Terminals for wire and cables:
1. All solderless terminals shall be in accordance with the AREMA C&S Manual, Part 14.1.1, unless otherwise specified herein.
 2. Terminals shall be of the solderless crimp-on type. Samples of all solderless terminals shall be submitted for approval.
 3. All stranded copper wire shall be fitted with an approved type of terminal at all points where the wires are to be terminated on terminal binding posts.
 4. The terminating means shall be of four types:
 - a. A lug for terminating heavy wires or signal power wires.
 - b. A solderless type of terminal as manufactured by Tyco Electronics AMP, under the trade name of "Pre-Insulated Flags" with translucent insulation similar to Catalog No. 322313, or approved equal, for terminating No. 16 and No. 14, American Wire Gauge (AWG) stranded wires.
 - c. An AMP Solistrand "Ring Tongue-Flat" terminal, similar to that shown on the AMP Drawing P64044, together with slip-on nylon post insulator, similar to that shown on AMP Drawing P64-0264, or approved equal, for terminating wires larger than No. 14 AWG to a maximum diameter over the insulation of 0.40 inch.
 - d. An AMP pre-insulated, diamond grip ring nylon insulated wire terminal shall be used for terminating other stranded wires, No. 20 and No. 18 AWG, having maximum diameter of 0.125 inch. AMP Catalog No. 320554, or approved equal, shall be furnished for No. 8 studs and AMP Catalog No. 320571, or approved equal, shall be furnished for 1/4-inch studs.
 5. The terminals shall be attached to the ends of the conductor in such a manner that the flexibility of the conductor will not be destroyed and the possibility of breakage at the terminal will be reduced to a minimum.
 6. Terminals shall be attached to the wire with a tool made by the manufacturer of the terminal and recommended by the manufacturer for the terminals being furnished.
 7. The tool shall be equipped with a ratchet device to ensure proper compression of the terminal, which will not release until proper compression is complete.
- H. Tagging for cables, wires and equipment:
1. Except as otherwise specified in this Section, both ends of each cable, each cable wire and all single wires that terminate in the junction boxes, switch mechanisms, signal instrument shelters, on entrance racks, shelter and any equipment of the signal system outside of such locations shall be permanently identified with a tag. Tags shall be installed so that they may be read with a minimum of disturbance of the tags. Each conductor of the cable shall be rung out and identified before applying the tag. The circuit nomenclature, as shown on the Contract Plans or approved shop drawing, shall be placed on the tag along with the "location" or "terminal" designation.

2. Tags for wire and cable identification and for identification of transformers, resistors, reactors and other components shall meet the following requirements and shall be subject to the Engineer's acceptance:

- a. Sleeve Type Tags:

- 1) Tags for identifying individual cable conductors and wires within the signal instrument shelters, wayside cases, switch mechanisms, switch layout junction boxes, base of signal junction boxes and similar applications, shall be the sleeve type as manufactured by Raychem Corporation, Thermofit Marker System (TMS), or approved equal. The application of the conductor nomenclature shall be in accordance with the manufacturer's instructions and shall result in a permanently bonded and legible identification.

- b. Flat Plastic Tags:

- 1) Tags for identification of vital relay plug boards, individual transformers, resistors, reactors, terminals and other miscellaneous components within the signal instrument shelters, wayside cases and outside terminal cases, shall be the flat plastic laminated type.
- 2) These tags shall be 1-1/2 inches long by 1/2-inch-wide. The untreated tag shall be milk white "vinylite," or approved equal.
- 3) The identifying nomenclature space shall allow for two rows of lettering and the tag material shall be capable of receiving typed-on characters by conventional means. The height of the lettering shall not be less than 1/8 inch.
- 4) After lettering, both the face and back side of the tag shall be covered with a clear plastic coating, "vinylite," or approved equal.

- I. Hardware:

1. Mounting hardware exposed to the elements and used for signal equipment, cases, conduit, hangers, brackets, clamps, etc., shall be hot-dip galvanized, except as otherwise noted to use Stainless Steel or approved by the Engineer.

- a. Galvanizing:

- 1) The hot-dip process of galvanizing shall be used. All parts shall be picked so that all scale and adhering impurities are removed. The zinc coating shall be of commercially pure zinc and shall be continuous and thorough. It shall not scale, blister, or be removable by any of the processes of handling or installation. The finished surface shall be free from fine line cracks, holes, or other indications of faulty galvanizing. It shall be smooth and free from adhering flux and other impurities. The edges and ends of parts shall be free from lumps and globules. Parts shall be coated with at least two ounces of zinc per square foot of galvanized surface, after all bending, cutting, drilling and final fabrication.
- 2) In order to avoid destruction of resilience encountered in the hot-dip process of galvanizing, all lock-washers shall be cadmium plated.

J. Conduit, Pull boxes and Fittings:

1. Conduit shall conform to the requirements of the Contract Drawings
2. Pull boxes shall conform to the requirements of Caltrans Standard Specifications Section 86-2.03.
3. Fittings:
 - a. Approved fittings for PVC conduit shall be used.
 - b. Fittings for rigid steel conduit shall be of cast malleable iron and shall be protected by hot-dip galvanizing.
 - c. Fittings used in conjunction with flexible liquid-tight conduit shall be design for use with such conduit. Fittings shall be galvanized, made of stainless steel, or otherwise constructed to resist rust or corrosion from exposure to salt air.

K. SDTI will provide switch padlocks and signal padlocks. The Contractor shall provide temporary padlocks until such time the equipment is placed in-service.

L. Sealing compound for use in sealing cable entrances shall be in accordance with AREMA C&S Manual Part 15.2.15.

M Omitted.

N. Environmental protection, as hereinafter specified for machine-finished surfaces, threaded rods, nuts and other parts that are susceptible to rusting or corroding, shall be a corrosion preventive compound, NO-OX-IDE No. 90918, or approved equal. The product must have sufficient body to resist weather and rusting for at least 6 months. Two gallons or equivalent weight shall be furnished by the Contractor.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Material and apparatus specified herein shall be installed in accordance with the details of respective technical Sections of these Specifications, manufacturer's recommendations and in accordance with the Contractor's approved installation drawings.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Miscellaneous Signal System Products.

4.2 PAYMENT

- A. Payment for procurement of Miscellaneous Signal System Products shall be included in the contract price paid for "Signal House/Case Complete", therefore no separate payment will be made.

END OF SECTION 344213.21

SECTION 344213.27

PAINTING AND GALVANIZING

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This Section includes the painting and galvanizing equipment, hardware and apparatus as specified within these Specifications and as shown on the Contract Plans.
- B. Section Includes:
 - 1. Painting
 - 2. Galvanizing
- C. Related Sections:
 - 1. Section 344201 – Transportation Signaling and Control
 - 2. Section 344213.18 – Instrument Shelters

1.2 REFERENCE STANDARDS

- A. ASTM International (ASTM):
 - 1. ASTM A123 – Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
 - 2. ASTM A143 –Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement
 - 3. ASTM A153 – Zinc Coating (Hot-Dip) on Iron and Steel Hardware
 - 4. ASTM A384 – Safeguarding Against Warpage and Distortion During Hot-Dip Galvanizing of Steel Assemblies
 - 5. ASTM A780 – Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
 - 6. ASTM D6386 – Preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting
- B. California Department of Transportation (Caltrans):
 - 1. California Manual on Uniform Traffic Control Devices (CA MUTCD)
- C. Society for Protective Coatings (SSPC)

1. SSPC PA 1 – Shop, Field and Maintenance Painting of Steel
2. SSPC PS Guide 12.00 – Guide to Zinc-Rich Systems
3. SSPC Paint 20 – Zinc Rich Primers IO and O

1.3 QUALITY ASSURANCE

A. Painting:

1. All equipment shall be inspected prior to shipment and upon receipt at the Contractor's storage facility to ensure surfaces are properly painted and galvanized as specified herein.
2. The Contractor shall make repairs or replace items as approved by the Engineer if any surfaces are damaged prior to or during installation with no additional cost to MTS.
3. Comply with the applicable provisions and recommendations of SSPC and AISC for shop painting of structural steel.

B. Galvanizing:

1. Steel and ferrous metal items exposed to moisture, gratings and items as shown on the Contract Plans, shall be galvanized after fabrication by the hot-dip process in accordance with ASTM A123. Weight of the zinc coating shall conform to the requirements specified under "Weight of Coating" in ASTM A123.
2. Safeguarding against steel embrittlement shall conform to the applicable requirements of ASTM A143.
3. Safeguarding against contortion and distortion of steel members shall conform to the applicable requirements of ASTM A384.
4. Shop galvanized metalwork, requiring field welding, which in any manner removes original galvanizing shall be restored by field galvanizing repair in accordance with ASTM A780.
5. Bolts and screws for attachment of galvanized items shall be galvanized in accordance with ASTM A153.
6. Prepare galvanized metal surfaces, to be painted, in accordance with ASTM D6386.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 PAINTING

- A. Shop paint miscellaneous metalwork, except for those members or portions of members to be embedded in concrete or masonry, surfaces and edges to be field welded and galvanized surfaces, unless otherwise indicated.

B. Prepare and clean substrates in accordance with the paint manufacturer's written instructions and as specified, for each particular substrate condition:

1. Projections and irregular surfaces shall be ground smooth or removed. Weld accumulations, spatter and slag shall be removed.
2. Remove accessories, cover plates and similar items in place and not to be painted or provide suitable protection from surface preparation and painting operations. Remove such items, if necessary, for the complete painting of the items and adjacent surfaces. Following completion of painting of each space or area, re-install the removed items using workers skilled in the trades involved.
3. Surfaces to be painted shall be cleaned to remove all oil and grease prior to mechanical cleaning. Neutralize welds with a chemical solvent that is compatible with the specified painting systems.
4. Mechanically clean and abrade all prepared surfaces. Abrasive type and size shall be selected to provide the required level of cleanliness while establishing a surface profile recommended by the paint manufacturer. Abrasive material shall be new material, free of contaminants that would interfere with adhesion of the paint. Abraded surfaces shall be vacuumed immediately prior to primer application to remove residual dust. All mechanically cleaned surfaces shall receive a coating of paint within eight hours or before flash rusting can occur. If flash rusting occurs, the surface shall be re-cleaned prior to paint application.

C. Exterior Applications:

1. After fabrication and immediately before shop painting, clean and prepare surfaces as described above.
2. Abrasive blast all steel surfaces to be painted.
3. Re-wipe as necessary and vacuum all surfaces to remove dust immediately prior to paint application.
4. Apply one coat of solvent based, inorganic zinc primer, at 2.5-3.0 mils DFT, in accordance with the applicable sections of SSPC-PA 1 and SSPC-PS Guide 12.00. Materials shall conform to SSPC-Paint 20, Zinc-Rich Primers.

D. Inaccessible Surfaces:

1. For surfaces that shall be inaccessible after assembly or erection, apply a second coat of water based acrylic primer, at 2.0-3.0 mils DFT.

3.2 GALVANIZING

A. Galvanized surfaces that have become damaged from welding, handling, or installation shall be repaired immediately after installation with galvanizing repair material in accordance with, ASTM A780.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Painting and Galvanizing.

4.2 PAYMENT

- A. Full compensation for Painting and Galvanizing shall be considered included in the contract price paid per each various item, therefore no separate payment will be made.

END OF SECTION 344213.27

SECTION 344213.28

BLOCK SIGNAL AND HIGHWAY GRADE CROSSING WARNING SYSTEMS

TESTING PART 1 - GENERAL

1.1 SUMMARY

- A. Description: The Contractor shall test the block signal and highway crossing warning systems in accordance with the test plan and procedures developed by the Contractor and submitted to and approved by the Engineer.
- B. Section Includes:
 - 1. Block Signal and Highway Grade Crossing Warning Systems Testing
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice
- B. California Public Utilities Commission (CPUC) General Orders (G.O.):
 - 1. G.O. 75-D – Regulations Governing Standards for Warning Devices for At-Grade Highway-Rail Crossings

C. Code of Federal Regulations (CFR), Title 49, Transportation:

1. 49 CFR Part 234 – Grade Crossing Safety

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein.
- B. The Contractor shall submit a draft Field Test Procedures for all equipment, systems and subsystems installed, modified, and/or adjusted as a result of the Contractor work a minimum of 120 calendar days prior to the proposed date of the Field Test for Engineer's approval. The Contractor shall submit a final Field Test Procedures a minimum of 60 calendar days prior to the proposed date of the Field Test for Engineer's approval.
- C. The Contractor shall submit a Field Test Plan a minimum of 30 calendar days prior to the proposed date of testing for Engineer's approval. A Field Test Plan shall be submitted for each phase of a system or subsystem cutover and placing the system or subsystem in operation.

1.4 QUALITY ASSURANCE

- A. Test plan and procedures shall conform with Parts 8.6.1, 8.6.10, 11.1.1, 10.4.30, 12.5.1, 12.5.5, 6.2.1, 6.1.5, 3.3.1, 2.4.1, 2.4.5 and 3.3.5 of the AREMA C&S Manual and the requirements specified herein.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

3.1 CALIBRATION OF TEST INSTRUMENTS

- A. All instruments or recorders employed in these test programs shall bear a record of calibration against certified standards by the National Institute of Standards and Technology. Such calibrations shall be made at least each 180 calendar days and at such other periods as may be directed by the Engineer. Each test record shall identify the specific instrument employed in the test and the latest date on which it was calibrated, and the calibration expiration date.

3.2 FACTORY ACCEPTANCE TESTS AND INSPECTIONS

- A. All systems, subsystems and components forming an integral part of a fail-safe circuit or subsystem shall be completely inspected and tested at the wiring and assembly facility.
- B. All components or units, other than those related to fail-safe circuits, may be tested on a sampling basis. An approved number of randomly selected components or units from the manufacturing process shall be tested by the Contractor, beyond the manufacturer's testing process. The Engineer and/or a designated representative may witness such tests to ascertain the adequacy and acceptability of all components and units produced.
- C. Each component and unit shall be inspected at its point of manufacture and evidence of this inspection and acceptability shall be indicated on the item where practical.
- D. The Contractor shall notify the Engineer in writing, a minimum of 30 working days in advance of each test. When tests are to be conducted continuously as a production line routine, the Engineer shall be notified in writing at least 30 working days in advance of the date of commencing the tests and the expected duration. No testing shall be scheduled until the Engineer has approved the Contractor's proposed FAT Procedures and FAT Plan.
- E. All vital relays shall be factory-tested in accordance with the AREMA C&S Manual, Parts 6.2.1 and 6.1.5 and the provisions of these Specifications.
- F. Breakdown tests shall be performed in accordance with the requirements as specified herein.
- G. All factory installed rack wiring shall be tested as completely as possible before shipment to provide for the continuity of each circuit and the connection of each conductor to the proper terminating point.
- H. All wayside signal equipment shall be inspected and tested prior to shipment. All wire, terminal, equipment, cable, relay and rack tagging shall be inspected prior to shipment to insure they agree with the Contractor's design submittals.
- I. All signal equipment shall be operationally tested and inspected as a complete functional assembly prior to shipment. The Contractor shall test each function by simulating operating conditions. Where equipment is related to a safety function, each component or subassembly shall be separately inspected and tested.

3.3 FIELD TESTS AND INSPECTIONS

- A. The Contractor shall perform pretests in advance of actual testing.
- B. The Contractor shall perform all tests required to provide for the proper and safe operation of all signal equipment and to prove the adequacy and acceptability of the total installation.
- C. The tests to be performed shall cause each system and subsystem to be sequenced through all required operations and shall include simulated conditions to prove that the installation is in compliance with fail-safe requirements.
- D. Prior to operational testing, the Contractor shall check the quality of the installation by visual inspection and by tests of continuity, insulation resistance, resistance of ground connections, vital circuit breakdown and other tests as required.
- E. During field testing if any jumpers or special wiring is temporarily added for any reason, it shall be recorded on a log sheet indicating the circuit involved, the placement of the jumper or special wiring, the purpose for the change and when jumpers or special wiring are added and removed. Log sheet entries shall be signed by the Contractor's Signal Engineer and a copy furnished to the Engineer. All jumpers and temporary wiring shall be removed after the completion of the test and the removal noted on the log sheet. Temporary wiring shall be marked so as to be clearly distinguishable from permanent wiring.
- F. The Engineer shall receive written notification at least 72 hours prior to each test.
- G. No testing shall begin until the Engineer has approved the Contractor proposed Field Test Procedure and Field Test Plan.

3.4 TEST PROCEDURES, TEST PLANS AND TEST RESULTS

- A. Test Procedures:
 - 1. Test Procedures shall provide a narrative description of the adjustments, equipment setup and testing requirements for each sub-system and system to be tested.
 - 2. The Test Procedure submittal package shall include drawings, checklists and test forms for recording the results.
 - 3. Test Procedure packages shall be bound individually by location. For example, a separate package shall be submitted for each crossing case and or house where modifications were completed by contractor.

4. If additional tests are required because submitted test results do not comply with the requirements of the specifications, or do not provide adequate information the Contractor shall be required to retest, at no expense to MTS and the retesting is to be documented and submitted to the Engineer for approval as part of the work.
5. Each Test Procedure package submitted shall be signed by the Signal Engineer(s) responsible for directing the test. If the test schedule requires shifts in which multiple Signal Engineers direct testing, each Signal Engineer shall sign the Test Procedure package submitted.

B. Test Plan:

1. The Contractor's Test Plan shall include, but not limited to:
 - a. A comprehensive description of the work to be completed prior to beginning in-service testing.
 - b. A description of the track limits needed to complete the testing.
 - c. Emergency phone numbers.
 - d. Location of emergency medical facilities in the immediate area.
 - e. Method of Roadway Worker Protection being provided.
 - f. Location of job briefing for each shift.
 - g. A detailed cutover schedule that includes the activities to be completed and the time allotted for each activity.
 - h. Resources, tool and test equipment requirements.
 - i. Listing of personnel with duty assignments with respect to duties during cutover and location assignment during testing.
 - j. Contingency plan if work is not completed within specified time.
 - k. Method of communications (i.e. radio channel to be used, etc.)
 - l. Any special considerations.
 - m. Rollback procedures due to installation failure.
 - n. The Engineer reserves right to request additional information to supplement the data provided by the Contractor if the Engineer does not believe the information submitted is sufficient.

C. Certified Test Reports:

1. Certified Test Reports shall consist of, but not limited to the following forms and checklists as required:

- a. Signal Shelter Inspection Checklist
- b. Local Control Panel Checklist
- c. Test Equipment Calibration form
- d. Battery Voltage Record form
- e. Battery Charger Settings form
- f. Grounds Test form
- g. Insulation Resistance Test form
- h. Vital Relay Test form
- i. Switch Indication Test form
- j. Axle Counter System Test form
- k. TWC Interrogator Settings form
- l. Time Settings Test form
- m. Time Locking Test form
- n. Route Locking Test form
- o. Indication Locking test form
- p. CTC Control & Indication Bit form

- D. The appropriate forms and checklists listed above shall be populated with the location, circuit/device designation, acceptable parameters, etc. and submitted in the Test Procedure package as described in 3.4 A. above.
- E. Based upon the results of the first items tested, the Contractor may initiate revisions to the test procedures if approved by the Engineer. Modified test procedures shall be resubmitted to the Engineer for review and shall meet the same submittal requirements indicated unless waived in writing by the Engineer.
- F. The test forms and inspection checklist shall include, but shall not be limited to the following information:
 1. Title of test.
 2. Equipment to be tested, including model and serial numbers.
 3. Location and date of test.
 4. Step-by-step test procedure to describe how test should be conducted.
 5. Acceptable parameters.
 6. Test Results with quantified results such as, voltage and/or current readings, time duration, Pass/Fail results and equipment settings. Non-quantified Pass/Fail results shall not be acceptable.
 7. Signature of the Signal Engineer directing and witnessing the test.
- G. Test required by 49 CFR Part 234 shall be recorded on a form compliant with that Part. Test forms shall be signed and dated by the responsible individual directing/completing the test. Individuals performing the tests shall be qualified and experienced. The Engineer may at any time request a retest, at no additional cost to MTS, if the Engineer deems the individual that completed the test was not qualified or experienced.

3.5 WIRE AND CABLE TESTS

- A. Ground Verification Test. This test shall verify that the ground resistance at each location is less than 5 ohms.
- B. Cable Verification Test. This test shall ensure that each exterior cable conductor is correctly installed, has correct nomenclature and is continuous from end to end.
- C. Cable Insulation Resistance Test. This test shall ensure that each exterior cable conductor meets the minimum conductor-to-conductor and conductor-to-ground resistance.
- D. The Contractor shall test all signal bonds and power bonds, to verify that the resistance across the rail connection is not greater than that specified herein.

3.6 GENERAL LOCATION Tests

- A. The Contractor shall perform circuit breakdown tests to ensure all instrument enclosures and connections to field devices are as shown on circuit plans.
- B. All metallic wiring shall be tested after installation to ascertain continuity and proper connection according to the circuit plans.
- C. Where parallel circuits exist, the Contractor shall test each parallel path independently to verify the continuity of each path.
- D. Each function shall be tested as a complete system or subsystem for the correct operation in response to circuit element or contact closure.
- E. Equipment operating conditions shall be simulated to verify that circuits operate as designed.
- F. Power Verification
 - 1. All fuses shall be removed and all circuit breakers opened to ensure energy is removed from equipment and circuits supplied by the power source.
 - 2. The Contractor shall verify that circuit breaker size and specification compares to that of approved circuit drawings.
 - 3. All energy distribution shall be checked using resistance test instrument approved by the Engineer.
 - 4. The Contractor shall verify that all wire gauges are as called for on approved circuit drawings and that the number of wires on each termination compares with the approved circuit drawings.
 - 5. Check AC power for correct voltage levels and phasing where required.
 - 6. Check all DC power for correct voltage levels.
 - 7. Check and adjust transformer taps where required.
 - 8. Each energy bus shall be tested to all other energy buses to ensure that no shorts, grounds or crosses exist.

9. Check circuit power failure alarms for proper indication to the local control panel, the code system, control office and event recorder.

G. The Contractor shall verify tags for proper nomenclature and terminal location.

H. The Contractor shall ensure all equipment is installed correctly at the location shown on the Contractor's submittals.

3.7 CROSSOVER LOCATION TESTS - Omitted

3.8 AUDIO FREQUENCY OVERLAY (AFO) TRACK CIRCUITS

A. The Contractor shall perform the following tests and verify the indicated test results:

1. For each track circuit, determine the effectiveness of the filtering. With the transmitter disabled, measure any harmonic noise or crosstalk interference at the receiver to verify compliance with maximum crosstalk level requirements.
 2. After adjustment ensure the track circuit is de-energized when shunted with a 0.2 ohm shunt at the receiving end. With the 0.2 ohm shunt removed, the track circuit shall operate normally. Perform the same test with the shunt at the center of the track circuit and again with the shunt placed at the transmitter end.
- B. All tests and normal operating parameters shall be recorded for each track circuit and submitted to the Engineer.

3.9 AUDIO FREQUENCY (AF) TRACK CIRCUITS

A. The Contractor shall perform the following tests and verify the indicated test results:

1. For each track circuit, determine the effectiveness of the filtering. With the transmitter disabled, measure any harmonic noise or crosstalk interference at the receiver to verify compliance with the maximum crosstalk level requirements.
2. After adjustment, test track circuits as follows:
 - a. With a 5 ohm per thousand feet simulate ballast leakage, the track circuit shall de-energize when shunted with a 0.2 ohm shunt at the receiver end. With the 0.2 ohm shunt removed, the track circuit shall operate normally. Perform the same test with the shunt at the center of the track circuit and again with the shunt placed at the transmitter end.
 - b. After adjustment for proper operation, all track circuits shall be tested with a 0.2 ohm shunt to verify proper operation. Additional manufactures recommended testing shall be adhered to.
3. All test and normal operating parameters shall be recorded for each track circuit and submitted to the Engineer.

3.10 POWER FREQUENCY (AC) TRACK CIRCUITS

A. The Contractor shall preform the following tests and verify the indicated test results:

1. With a three ohm per thousand feet simulated ballast leakage, the track circuit shall de-energize when shunted with a 0.2 ohm shunt at the center of the circuit as well as at the feed and relay ends. With the 0.2 ohm shunt removed, the track circuit shall operate normally.
2. The track circuit shall de-energize when any one of the insulated joints defining the track circuit boundaries is shunted.
3. The track circuit relay shall be de-energized when the feed end or relay end of the circuit is disconnected. The track circuit relay shall also be de-energized when the local reference voltage is de-energized.
4. The normal operating parameters and track circuit leakage shall be recorded and submitted to the Engineer.

3.11 INSULATED JOINTS

- Omitted

3.12 SWITCH APPURTENANCES INSULATION TEST

- Omitted

3.13 SWITCH FOULING CIRCUITS

- Omitted

3.14 EVENT RECORDER

- Omitted

3.15 SIGNAL SYSTEM DEMONSTRATION TESTS

- A. Failure of a component, of the signaling system, to successfully complete a test shall be cause for rejection and the Contractor shall adjust the component and repeat the test where possible. Should the equipment fail to perform properly on the re-test, or the equipment is not adjustable, the equipment shall be replaced. The Contractor shall reimburse SDTI for its cost associated with retesting.
- B. This test shall be performed by simulating train movements using manual track occupancies to test the overall functioning and safety of the signaling and highway crossing warning systems. The Contractor shall include simulated unusual conditions to determine that the crossover equipment will respond in a safe manner. All of the functions of the complete signaling system shall be exercised, including as a minimum:
 - 1. Detection of all revenue vehicles on signaled mainline tracks.
 - 2. Automatic, local control panels, route selectors, and TWC operations.
 - 3. The elimination of conflict arising from two vehicles simultaneously requesting routing through a particular crossover.
 - 4. Determining that all wayside hardware will be safe for the vehicle prior to permitting any route to be traversed.
 - 5. Automatic or train-to-wayside (TWC) device routing for all routes at terminals.
 - 6. The Contractor shall perform tests required to demonstrate compliance with electromagnetic compatibility criteria.

3.16 DYNAMIC OPERATIONAL TESTS

- A. The same functions as specified in Article 3.16 of this Section shall be tested using actual vehicles, including safe braking for only the shortest effective braking distance. SDTI will provide LRVs and the operators, the Contractor shall provide all equipment, wiring and interface for this test.

3.17 REQUIRED CONTRACTOR SUPPORT

- A. The Contractor's Signal Engineer and Application Software Engineer shall be on site for the duration of the testing specified in Article 3.16 of this Section. The Contractor shall also make available, on site, a qualified representative of the signaling system hardware manufacturer, within 48 hours of an initial request by the Engineer, prior to Engineer acceptance of the signaling system. These services shall be at no additional cost to MTS.
- B. The Contractor shall make available to the Engineer all staging equipment and material during testing to facilitate replacement of defective equipment.
- C. To ensure the time required, to cutover signal systems handling revenue operation, is as short as possible the Contractor shall:
 - 1. Have personnel mobilized not less than one hour prior to the scheduled start of the cutover.
 - 2. Have the Signal Engineer and Application Software Engineer in attendance at the cutover control point.
 - 3. Make allowance for rotating personnel during shift changes.

4. Provide qualified manpower to each location involved in the cutover testing, as required, to adequately complete all required testing and to make adjustments, changes or corrections to the installation to successfully complete the testing.
5. Provide enough qualified personnel to provide replacement personnel on a 12 hour shift basis for the entire length of the cutover. This also applies to the Contractor's Signal Engineer, Application Software Engineer, as required.
6. The Contractor's personnel shall be prepared to make any changes or adjustments to equipment, apparatus or wiring as deemed necessary.
7. The Contractor shall equip personnel with two-way radio units at each location.
8. The Contractor's personnel shall undergo SDTI safety training at the Contractor's expense and observe SDTI Safety Rules while on MTS Property.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Block Signal and Highway Grade Crossing Warning Systems Testing.

4.2 PAYMENT

- A. Full compensation for Block Signals and Highway Grade Crossing Warning Systems shall be considered as included in the contract price paid per each various items, therefore no separate payment will be made.

END OF SECTION 344213.28

SECTION 344213.29

ABANDONMENT, DEMOLITION, REMOVAL AND DISPOSAL OF
EXISTING SIGNAL SYSTEM FACILITIES

PART 1 - GENERAL

1.1 SUMMARY

A. Description:

1. All facilities identified in yellow "out" on the Contract Plans Train Control plan sheets and described in this Section shall be removed and disposed of by the Contractor as described herein, and in compliance with applicable standards unless directed otherwise by the Engineer.
2. All facilities not identified on the Contract Plans or described in this Section to be removed, shall be protected in place.

B. Section Includes:

1. Abandonment
2. Demolition
3. Removal and Disposal of Existing Signal System Facilities

1. Related Sections:

1. Submittal, MTS C Street & Broadway Wye Design.
2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 SUBMITTALS

- A. The Contractor shall submit an Abandonment, Demolition, Removal and Disposal of Existing Signal System Facilities Plan related to the existing signal system. The Plan shall be submitted at least 60 calendar days prior to beginning the Work identified in this section of Specifications, work shall not begin until the Engineer has approved the Plan.

1.3 QUALITY ASSURANCE

- A. Salvaged equipment and materials shall be protected from theft and damage until such time the materials are delivered and unloaded at the MTS yard.
- B. The Contractor shall not damage or destroy this material and shall protect all salvaged material during the demolition and removal work. The Contractor shall not reuse any removed material without the Engineer's written approval.
- C. Existing facilities to be salvaged shall be immediately loaded onto trucks and removed to their predetermined salvage location. No stockpiling of said materials shall occur on MTS property without the expressed approval of the Engineer.

PART 2 - PRODUCTS

NOT USED.

PART 3 - EXECUTION

3.1 EQUIPMENT TO BE REMOVED AND SALVAGED

- A. All equipment identified to be salvaged shall be removed and delivered to MTS for storage and reuse, unless otherwise directed by the Engineer. The Contractor shall contact MTS Assistant Superintendent of Wayside Maintenance to arrange for delivery to a San Diego Trolley Maintenance Facility in San Diego, CA. The Contractor shall contact MTS Assistant Superintendent of Wayside Maintenance a minimum of 5 working days prior to delivering and unloading the materials at the MTS storage facility. The Contractor shall provide a complete log of materials delivered. The Contractor is responsible for providing all necessary equipment to safely unload salvaged materials at the MTS storage facility.
- B. The equipment listed below shall be salvaged and delivered to the MTS at a point within 10 miles of the project limits. Material salvaged shall be carefully removed and properly packaged for shipment and storage. All other materials shall become the property of the Contractor and disposed of in accordance with federal, state and local ordinances and as specified in these Specifications.
 - 1. S7 Modules (Including CPUs, I/O Modules, COMs)
 - 2. ACM100 Modules
 - 3. ACM100 Wheel Sensors

- C. Items to be protected in place that are damaged during demolition shall be repaired or replaced as directed by the Engineer at no cost to the MTS. Items to be salvaged that are damaged during removal shall be repaired or replaced as directed by the Engineer at no cost to the MTS.

3.2 REMOVE AND DISPOSE OF EXISTING FOUNDATIONS

- Omitted

3.3 EXISTING CASES (RETIRED)

- Omitted

3.4 EXISTING RAIL CONNECTIONS (RETIRED)

- A. The Contractor shall remove existing rail connections not required in the final layout in a manner as described below.
 - 1. Where rail connections consist of welded connection to the rail, the Contractor shall grind off the connection completely and grind the weld level with rail surface.

3.5 EXISTING SIGNAL WIRE AND CABLE (RETIRED)

- A. Except as may be otherwise shown on the Contract Plans or specified in these Specifications, the Contractor shall remove and dispose of all existing aerial and underground signal wire and cable not required in the temporary or final layout. The Contractor shall remove the wire and cable complete, including all brackets, supporting galvanizing strand wire and fastenings. All existing underground direct buried cable and cable that cannot be pulled out of existing conduit shall be cut at a minimum of 6 inches below the finish grade.
- B. All materials removed shall be disposed of by the Contractor as described in this section.
- C. To facilitate the work of the final changeover at certain existing pieces of equipment where new cable is to be installed to replace the existing cable, the Contractor shall remove existing cable from the equipment housing and pull it into the equipment housing again, through the door or handhole rather than the regular cable entrance and temporarily reconnect it to the equipment. During this period, which shall be kept to a minimum, the Contractor shall provide ample protection to the material and equipment so as to prevent the entrance of rain, snow, foreign materials of any kind, or anything, which may cause or tend to cause signal interruptions or interferences, or create or tend to create fire hazards. At the time of the final change-over the new cable installed shall be connected to the equipment and the existing cable disconnected and removed.

- D. Where cable or wire in duct or conduit is to be removed from service, it shall be removed completely from the conduit or duct and the duct or conduit entrances shall be sealed, all as approved by the Engineer. If the actual movement for withdrawal of the cable cannot be initiated within thirty (30) minutes, after a Coffin Safety-Pull Ratchet Lever Hoist ("come along") exerting a force of up to three thousand (3,000) pounds has been applied and the cable shall not move, the Contractor shall notify the Engineer and request permission to abandon the cable in the conduit or duct. If permission is granted, three (3) feet of cable shall be left protruding from each end of the conduit or duct and the conduit or duct entrances around the abandoned cable shall be sealed. The work described in this paragraph shall be performed only in the presence of the Engineer's representative.

3.6 EXISTING MESSENGER WIRE (RETIRED)

- A. The Contractor shall remove all existing messenger wire, except those portions of messenger wire supporting existing cable, which is retained in the temporary or final layout. The Contractor shall remove the messenger wire, including supporting brackets, deadends, insulators, century brackets, hooks, clamps, bolts and other appurtenances.

3.7 EXISTING CONDUIT (RETIRED)

- A. The Contractor shall remove existing exposed conduit and pole mounted junction boxes containing cabling related to the existing signaling system that will not be used as part of the final signaling system configuration. The Contractor shall remove the conduit, junction boxes, including all conduit fittings, mounting assemblies and hardware, fastening materials, banding, special brackets and all other appurtenances associated with the signaling system conduit system to a minimum depth of 6 inches below finish grade.
- B. Where it may be necessary to remove conduit that is buried in concrete that is to remain in place, the conduit shall be removed to a point below the top of the concrete. The hole shall be filled with concrete and neatly grouted.
- C. Where conduits are buried in earth, the conduit shall be removed two feet down from top of grade. The conduits under tracks shall be abandoned.

3.8 EXISTING CONCRETE FOUNDATIONS (RETIRED)

- Omitted

3.9 EXISTING INSULATED JOINTS (RETIRED)

- Omitted

3.10 EXISTING MATERIAL AND EQUIPMENT (RETIRED)

- A. The Contractor shall remove no longer used material and equipment from the cases. All relays including bases and other equipment specified for salvage shall be removed, properly packaged and shipped for storage. All other equipment shall be disposed of as specified in these Specifications.
- B. The Contractor shall plug all holes left in structures and rail ties resulting from the removal of equipment fasteners and shall paint all steel exposed when equipment is removed.
- C. At locations where track cases are to be removed, the Contractor shall remove the rail connections and track leads and abandon the conduit in place unless it interferes with final signal layout or structure, in which case the conduit shall be removed. Where the cases are mounted on the concrete floor by means of expansion bolts, the bolts shall be extracted and the concrete finished to conform with the rest of the structure in a manner approved by the Engineer.
- D. Rail connections consisting of steel pins driven into the rail shall be removed by driving the bond pins from the rail. Where rail connections consist of clamps, the Contractor shall remove the clamps.
- E. Rail connections connected to a solderless connector, which is fastened by means of nuts to a threaded tapered pin driven into the rail, shall be removed by backing off the nuts on the tapered pin and driving the pin from the rail by using a rail connector starting tool and a three pounds hammer.
- F. Welded rail connections shall be removed by grinding off the connection, for 6 AWG and larger cable, otherwise the connection can be removed without grinding. The Contractor shall remove the rail connections completely including wire, conduit, fittings, cast-iron bootleg riser and junction boxes, all as approved by the Engineer.
- G. Where existing cable or wire is buried in the ground it shall be cut 6 inches below finish grade and the remaining buried cable shall be abandoned in place unless it interferes with final signal layout or structure. The Contractor shall not leave any portions of the cable above ground.
- H. The Contractor shall remove all supporting brackets, dead-ends, insulators, century brackets, hooks, clamps, bolts, unnecessary downguy assemblies and other appurtenances when wire or cable is removed.
- I. The Contractor shall remove existing exposed conduit not required in the temporary or final layout, including all conduit fittings, all mounting, banding and fastening materials and special brackets. The Contractor shall fill all holes and paint all surfaces exposed by the removal of the conduit.
- J. Where equipment has been removed and conduit stub-up(s) are no longer required and the Engineer determines the existing pavement shall be protected in place, the conduit shall be removed to a point one inch (1 inch) below the top of the concrete. The hole shall be filled with concrete and neatly grouted.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities.

4.2 PAYMENT

- A. Full compensation for Abandonment, Demolition, Removal and Disposal of Existing Signal System Facilities shall be considered included in the contract price paid per each various items; therefore no separate payment will be made.

END OF SECTION 344213.29

SECTION
344216

TRAIN CONTROL WIRE AND CABLE

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This Section includes furnishing and installing all cable and wire required for signal and signal power system wiring to wayside signals, junction boxes and factory wired mechanisms. Cables shall be furnished and installed as specified herein and as shown on the Contract Plans.
- B. Section Includes:
 - 1. Train Control Wire and Cable
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice
- B. ASTM International (ASTM):
 - 1. ASTM B3 – Soft or Annealed Copper Wire
 - 2. ASTM B8 – Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft
 - 3. ASTM B33 – Tin-Coated Soft or Annealed Copper Wire for Electrical Purposes
 - 4. ASTM D3159 – Modified ETFE-Fluoropolymer Molding and Extrusion Materials

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein.
- B. Product Data: Manufacturer's catalog cuts, material descriptions and specifications for each type of wire and cable the Contractor proposes for use.
- C. Submit the results following tests conducted during manufacturing of all applicable wires and cable:
 - 1. Conductor size and physical characteristics.
 - 2. Insulation HV and IR tests.
 - 3. Physical dimension tests.
 - 4. Special tests on materials in coverings.
 - 5. Final HV, IR and conductor resistance tests on shipping reels.

1.4 QUALITY ASSURANCE

- A. Material and workmanship shall be of the highest quality, assuring durability for minimum life expectancy of 40 years. Cables to be furnished and installed shall be suitable for use in the environment to be encountered on a railroad signal system and shall be certified for continuous operation at 75 degrees Celsius, in wet or dry locations, with no conductor failing in continuity or with loss of insulation to cross or ground less than one meg-ohm.
- B. Cable manufacturer's qualifications shall be as follows:
 - 1. Past Performance and Experience: Demonstrated previous successful experience in supplying cable to the railway or transit industry for use as vital signal control cables. A list of such installations shall be provided for each cable manufacturer to be considered.
 - 2. Quality Control Program: The manufacture of cables in accordance with the requirements of this Specification shall be accomplished in compliance with a

Quality Control Program that meets the intent of the American National Standard Institute (ANSI)/American Society for Quality (ASQ) Standard C1; general reinstatement provided for in this subparagraph shall apply only to the first replacement or repair of any such item and, in the case of failure of major importance, to the first extension of the said warranty to said affected items.

3. The Engineer shall have the right to make inspections and tests, as necessary, to determine if the cable meets the requirements of this Specification. The Engineer shall have the right to reject cable that is defective in any respect.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Shipping, storage and handling shall be in accordance with AREMA C&S Manual, Part 10.4.1 and 10.3.17.
- B. During storage and handling, prior to final conductor termination, cable ends shall be sealed to prevent the entrance of moisture.
- C. Any instance of damaged cable observed at any time, whether prior to installation, occurring during construction, or discovered by test observation subsequent to installation, shall be immediately called to the Engineer's attention in writing by the Contractor. The method of correction shall be in accordance with the Engineer's written instruction. The Contractor shall promptly repair such damage and re-test the cable per approved procedures and re-submit the results for Engineer's review.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Internal Wire and Cable:
 1. Individual cable makeup and conductor sizes shall be as shown on the Contract Plans.
 2. Internal wire shall be Okozel type Z manufactured by Okonite Co. or approved equal.
 3. Unless otherwise specified herein, internal wire and cable shall conform to AREMA C&S Manual, Part 10.3.14.
 4. Conductors shall be soft and annealed copper per ASTM B3 and tin coated in accordance with ASTM B33.
 5. Stranded conductors shall be in accordance with ASTM B8, Class B.
 6. Signal instrument shelter and case internal wire and cable insulation shall conform to AREMA C&S Manual Part 10.3.24, unless otherwise specified herein and the following requirements:
 - a. Insulation shall be modified ethylene tetrafluoroethylene (ETFE) conforming to ASTM D3159, unless otherwise specified.
 - b. The minimum insulation rating shall be 600 volts.

7. Wiring within an instrument shelter shall be neatly arranged and laced or enclosed in plastic tubing or raceway; be properly tagged and labeled; and shall have sufficient slack as described in Part 10.4.1 of the AREMA C&S Manual. Stranded conductors shall be terminated with compression type eyelet terminals and installed using compression crimping tool which prevents opening of the handles until the crimp is completed. Solid wire shall be formed in eyelets using a proper eyelet forming tool. In forming the eyes or applying terminals to the ends of wires, the wires shall not be nicked or twisted.

B. External Wire and Cable:

1. General

- a. Individual cable makeup and conductor sizes shall be as shown on the Contract Plans.
- b. Conductors shall be soft or annealed copper per ASTM B3 and tin coated in accordance with ASTM B33.
- c. Stranded conductors shall be in accordance with ASTM B8, Class B.

2. Track Wire

- a. Track wire shall be two single conductor No. 6 AWG solid jacketed wires twisted two turns per foot. Track wire shall be Okonite-Okolene manufactured by Okonite Co. or approved equal.
- b. Where not otherwise specified herein, track wire shall be underground type that meets the requirements of AREMA C&S Manual, Part 10.3.16. Track wire jacket shall be polyethylene and the insulation shall be ethylene-propylene. Jacket and insulation average thickness shall not be less than the following minimums:
 - 1) Jacket = 60 mil.
 - 2) Insulation = 90 mil.
- c. Frauscher Axle Counter cables shall be as specified in Contract Drawings.

3. Cable in Conduit

- a. Cable to signals, switches, highway warning devices and express cable between instrument shelters shall be Underground Signal Cable manufactured by Okonite Co. or approved equal. All cable between the shelter and the equipment, including direct burial cable, shall be installed in conduit and pull boxes, except at rail connection points shown on the Contract Plans.
- b. Conductors number 6 AWG and greater shall be solid. Conductors number 4 AWG and lessor shall be stranded.
- c. Unless otherwise specified herein, direct burial cable shall meet the requirements of AREMA C&S Manual, Part 10.3.17. Cable conductors shall be printed with a number for easy identification of the conductor. Conductor insulation shall be ethylene-propylene rubber and cable jacket shall be made of polyethylene. Jacket and insulation average thickness shall not be less than the following minimums:

i.	3 Conductor No. 6 AWG	Jacket = 95 mil	Insulation = 80mil
ii.	5 Conductor No. 6 AWG	Jacket = 95 mil	Insulation = 80mil
iii.	7 Conductor No. 6 AWG	Jacket = 95 mil	Insulation = 80mil
iv.	7 Conductor No. 9 AWG	Jacket = 80 mil	Insulation = 60mil
v.	7 Conductor No. 14 AWG	Jacket = 95 mil	Insulation = 60mil
vi.	12 Conductor No. 14 AWG	Jacket = 95 mil	Insulation = 60mil

d. Power Cable:

- 1) Power cable shall be three (3) Conductor No. 2 AWG Armored Underground Signal Cable as manufactured by Okonite CO., Catalog No. 206-11-6130 or approved equal.

PART 3 - EXECUTION

3.1 INSTALLATION – CABLES ENTERING INSTRUMENT SHELTERS

- A. Exterior cable entering instrument shelters and junction boxes shall have sufficient length to extend to within 6 inches of the top of the instrument shelter and then run down to the applicable terminal post at which it is terminated. Cables shall be neatly arranged and laced or enclosed in plastic tubing or raceway; be properly tagged and labeled; and shall have sufficient slack as described in Part 10.4.1 of the AREMA C&S Manual. Stranded conductors shall be terminated with compression type eyelet terminals and installed using compression crimping tool which prevents opening of the handles until the crimp is completed. Solid wire shall be formed in eyelets using a proper eyelet forming tool. In forming the eyes or applying terminals to the ends of wires, the wires shall not be nicked or twisted.

3.2 UNDERGROUND CABLE INSTALLATION

A. General

1. The installation of wire and cable shall conform to AREMA C&S Manual Parts 10.4.1 and 10.4.30, except as specified herein.
2. Underground cable and track wire shall be routed through conduit and pull boxes between equipment shelters and from equipment shelters to switch apparatus, signal junction boxes, warning device junction boxes, pole junction boxes, track hand holes, meter services and other apparatus. Provide sufficient cable slack in pull boxes for relocation of apparatus up to 5 feet.
3. The Contractor shall provide 48 hours (or two working days) notice to the Engineer prior to installing any cables.
4. Provide sufficient slack in cable conductors at all terminating posts to enable three re-terminations of the conductor, due to broken eyelets without resurfacing or re-pot heading the cable.
5. In certain types of installation, the cable cannot be constrained; therefore, ample cable slack shall be provided for additional flexibility due to vibration of such equipment.
6. Cables shall not be bent to a radius less than manufacturer's recommendation. Sheaves shall be used where necessary during installation to maintain minimum bending radius.
7. Distribution cable runs shall be continuous without splices between cable terminating locations. Express cable runs longer than cable lengths shall be terminated in a junction box, instrument case, or other acceptable shelter.
8. Individual cable conductors shall be identified at each cable termination with plastic tags, as specified in these Specifications. All spare conductors in each cable shall be identified and terminated.
9. Cable entrance openings in equipment enclosures and junction boxes shall be sealed with either compression type fitting or pliable sealing compound after the cable is in place. Sealing compound shall be used to seal the area around cable where the cable emerges from the end of a conduit or pipe. All spare conduits shall be sealed or plugged.
10. Wherever multiple conductor cables are terminated, the outer sheath of the cable shall be carefully removed to a minimum point of 3 inches from the cable entrance. At the end of the cable sheath or covering, two layers of plastic electrical tape shall be applied.
11. All cable conductors shall be terminated in conductor sequence from top to bottom.
12. The pot heading of buried cables shall be applied whenever cable is terminated in signal equipment and such termination is within two feet of the grade level. This neoprene and seal pothead shall be installed in accordance with the manufacturer's instructions.
13. Cables shall not cross one another when they are pulled into a conduit or pipe and care shall be taken not to have the conductors pulled tight or kinked in conduit fittings or boxes. All cables to be installed in a conduit or pipe shall be pulled and installed simultaneously.

B. Special Protection

1. Provide appropriate special protection for cables in areas where the cables are unavoidably exposed to hazardous conditions, such as vibration or sharp corners on equipment. The Contractor shall be responsible for replacing, at no additional cost to MTS, any cable that is installed but subsequently damaged prior to acceptance as a result of the Contractor's failure to provide such special protection.

C. Aerial Installations

1. Aerial cables used in conjunction with contract plans shall so be rated and shall be installed as shown in contract drawings. Aerial Cables shall be lashed to existing messenger wire, if necessary existing cables shall be unlashed and re-lashed with the new cable(s).

3.3 TESTING

- A. All installed external cable shall be tested in accordance with the requirements of Section 344213.28, Block Signaling and Highway Grade Crossing Warning Systems Testing and AREMA C&S Manual, Part 10.4.30.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity for Train Control Wire and Cable shall be measured by each, complete in place, as shown on the plans.

4.2 PAYMENT

- A. The contract price paid per each Train Control Wire and Cable shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all work involved to furnish and install train control wire and cable, complete in place, including testing, in accordance with the Plans and as directed by the Engineer.

END OF SECTION 344216

SECTION 344219.01

VITAL LOGIC CONTROLLER

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This Section includes furnishing, programming, installing, testing and documenting a vital microprocessor-based controller that provides the functionality as shown on the Contract Plans.
- B. Section Includes:
 - 1. Vital Logic Controller
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice
- B. The following parts of the Code of Federal Regulations (CFR), Title 49, Transportation shall apply:
 - 1. 49 CFR Part 234 – Grade Crossing Safety
 - 2. 49 CFR Part 236 – Rules, Standards, and Instructions Governing the Installation, Maintenance, and Repair of Signal and Train Control Systems, Devices, and Appliances

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein.
- B. The Contractor shall provide 5 copies of software development instruction and maintenance manuals required to create or modify vital and non-vital application logic for the proposed controller system. The Contractor shall provide 5 copies of the latest version of development, validation, compiler and LCP graphics development software.
- C. The Contractor shall submit application logic software reports to the Engineer for approval.
- D. The Contractor shall submit detailed factory test procedures to the Engineer a minimum of 60 calendar days prior to factory testing.

1.4 QUALITY ASSURANCE

- A. The controller shall be programmed and tested in accordance with all applicable requirements of 49 CFR, Part 234, Part 236 and AREMA C&S Manual. The Contractor shall perform operational testing of the equipment in accordance with the requirements specified herein.

1.5 DELIVERY, STORAGE and HANDLING

- A. Solid-state modules shall be shipped separately from the wired card cages. Modules shall be packaged individually in a sturdy carton with the type of module printed on the outside of the carton. All materials shall be stored in a protected area until installed.

PART 2 - PRODUCTS

2.1 LOGIC CONTROLLER

- A. New logic controllers shall be an ElectroLogIXS Vital Logic Controller as manufactured by ALSTOM or approved equal.
- B. The logic controller shall be capable of operating 12/24 VDC vital and non-vital relays. Vital input/output modules shall accommodate a minimum of 8 inputs and 6 outputs from a single module.
- C. The software associated with assuring the vitality of the system shall be an inherent part of the basic controller system and shall not be accessible for modification by the user. Changes to the application logic installed in the system shall not require re-verification of the software associated with assuring system vitality. The application logic shall be protected so that it is user modifiable by authorized personnel only.
- D. The program compiler used in developing the site-specific application logic software shall be designed to allow the user to construct individual logic equations utilizing "ladder-logic" display elements. Reports generated by the compiler shall provide the user with a complete and detailed description of the system configuration including, but not limited to, module location assignments, internal timer settings, auxiliary input/output assignments, vital lamp output assignments, CTC control and indication bit assignments, electronic track code circuit assignments, data recorder equation selection, remote input/output assignments, and module plug-connector pin assignments.
- E. The logic controller shall provide event recording. The event recording shall be designed so that the correct time is maintained when the vital logic and/or code system equipment is reset or powered down. The event recording equipment shall have sufficient storage capacity to store a minimum of 100 train movements, recording user selected status changes along with diagnostically important internal status changes.
- F. The logic controller shall interface with Frauscher FAdC Axle Counter System via RP COM card with a serial interface.
- G. The failure of an output shall not cause loss of functions not associated with those of the failed module.
- H. The logic controller shall operate from a standard 12 VDC signal battery supply. Any special power supply filtering devices required for reliable operation shall be provided as a part of the system.
- I. The logic controller shall be furnished with the latest version of the manufacturer's executive software at the date on which it is placed in service.

2.2 LOCAL CONTROL PANEL

- A. The Local Control Panel shall be composed of two components, a local control panel board and a local control panel computer.
- B. Local Control Panel Board
 - 1. The local control panel shall be the QLCP-NET with Ethernet port manufactured by QuEST Rail, LLC or approved equal.
 - 2. The local control panel board shall have the ability to communicate via RS-232, RS-485, 2000 Vrms isolated Current Loop and Ethernet, with support for Ansaldo PEER protocol and Alstom LCP protocol.
 - 3. The local control panel board shall contain an integrated power supply compliant with AREMA Wayside Class C requirements.
 - 4. The local control board shall be capable of being configured via a USB port.
 - 5. The local control panel board shall provide 128 physical inputs and 128 physical outputs.
 - 6. The local control panel board shall be capable to be configured as a soft local control panel. The software for building and operating the soft local control panel shall be opened sourced, allowing the client or end user to make modify LCP designs. The software shall not require licensing. The software shall have the ability to program passcodes to protect soft controls.
 - 7. The local control panel board shall be housed in an aluminum enclosure that is rack mountable.
- C. Local Control Pan Computer
 - 1. The local control panel computer shall be part number VTPC190R NEMA 4 9U rack mount all-in-one LCD computer manufactured by Vartech Systems, Inc. or approved equal.
 - 2. The local control panel computer shall have a 19" ARMOR touch resistive screen or approved equal where a stylus, finger or glove may be used for operation. The touch shall be waterproof, chemical and scratch resistant, have a hardness of 6.5 Mohs, and allow for over 200 million touches.
 - 3. The local control panel computer shall have a reliability rating of 100,000 MTBF.
 - 4. The local control panel computer shall be equipped with an Intel Celeron 2.0 GHz Quad Core Processor, 2 GB DDR3L-1333 system Memory, 512 Solid State Hard Drive, Window 10 Professional operating system, 12 volts DC isolated power input, an On/Off Button mounted on the front panel and conformal coating of internal electrical boards.

2.2 SIGNAL NETWORKS

A. The following Signal Networks shall be provided with the system:

1. Two dedicated signaling networks shall be provided: a vital signal network and a signal maintenance network. Additionally, a connection to the central control office shall be available at all interlockings.
2. The vital network shall be a closed, protected network for the transmission of vital signal information between signal locations. This shall be a 2-fiber single mode (2SM) fiber optic transmission system. The signal supplier shall provide hardened, industrial communication switches, which provide the interface between the fiber system and the signaling equipment. The interface to the signaling equipment shall be Ethernet. An additional port shall be provided in each signal room, which provides for the ability to access the CPUs and programs in other locations.
3. The maintenance network shall provide for remote access to the VLCs. The signal supplier shall provide hardened, industrial communication switches, which provide the interface between the fiber system and the equipment. The interface to the equipment shall be Ethernet.
4. The interface to the central control office shall be either an RS232 or Ethernet connection provided by the signal equipment. Protocol shall be Genisys.
5. The Contractor shall review the Contract Plans and make any equipment additions, modifications, or adjustments to the networks to ensure efficient and reliable service.

2.3 APPLICATION LOGIC

- A. The application logic has been developed outside of this project; modifications required upon testing will be required shall be undertaken by the contractor.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS

- A. The logic controllers shall be wired and installed as shown on the Contract Plans.
- B. Each item shall be protected from damage or loss during handling and shipment. All test and diagnostic equipment shall be provided at least 30 calendar days prior to installation.
- C. Each controller unit shall be clearly identified on the packing crate, referencing its intended location.
- D. The Contractor shall provide warranty from defects arising from defective parts and workmanship for 1 year from the first date of service.

3.2 TESTING

- A. The Contractor shall install and perform all applicable tests in accordance with Section 344213.28, Block Signaling and Highway Grade Crossing Warning Systems Testing to ensure that the logic controller software has been installed and made operational as part of the operating signal system. Verification of such tests made shall be provided to the Engineer.
- B. The Contractor shall conduct tests as specified in AREMA C&S Manual Parts 2.4.1 and 7.4.1, to ensure proper operation of the signal system.
- C. The Contractor shall conduct tests to ensure that the grade crossing system conforms to 49CFR, Part 234.

3.3 SOFTWARE CONTROL REQUIREMENTS

- A. The Contract Documents require the Contractor's Application Software Engineer to conform to all requirements of the MTS Software Control Requirements document and submit all required documentation described in the MTS Software Control Requirements: including but not limited to:
 - 1. At existing Processor Based Signaling locations where software will be updated, a request for all existing locations shall be submitted to the MTS Software Configuration Manager.
 - 2. List of locations where the software will be installed.
 - 3. Not less than 40 working days prior to a system cutover or commissioning of a new line segment, the Contractor's Application Software Engineer shall:
 - a. Submit to MTS Software Configuration Control Manager (SCCM) via the Engineer, difference reports that show both the original logic equation(s) and the modified equation(s) for all locations that will contain modified software. Each difference report must include the CRC of the original program and the CRC of the new program;
 - b. Submit to MTS SCCM and the Engineer software, difference reports, and logic/hardware printouts files on a DVD clearly marked with the line segment and date;
 - c. Submit to MTS SCCM and the Engineer a list of the new locations and/or existing locations where software has been modified with all required submissions to the SCCM;
 - d. Submit to MTS SCCM and the Engineer copy of the software that has successfully passed Factory Acceptance Testing (FAT) on a DVD, hard drive, or approved equivalent;
 - e. Submit to MTS SCCM and the Engineer logic/hardware printouts of the new and revised programs;
 - 4. A minimum of 5 working days prior to a system cutover or commissioning of a new line segment, the Contractor's Application Software Engineer shall confirm that the SCCB has approved or is expected to approve the SCR prior to the cutover or commissioning of a new line segment.

5. Should the SCCB not take action prior to the planned system cutover or commissioning of a new line segment, then a minimum of 5 working days prior to the planned system cutover or commissioning of a new line segment, the Contractor's Application Software Engineer shall notify the Contractor's management, the Contractor's Signal Engineer, the MTS Systems Engineer, and the Engineer informing them that the planned system cutover or commissioning of a new line segment must be rescheduled since the SCR would not be approved in advance of the cutover or commissioning of the new line segment.
 6. The Contractor's Application Software Engineer shall submit difference reports to the SCCM and the Engineer if any modifications are made to the software during or after in-service testing; and
 7. Software, logic/hardware printouts, and difference reports shall be submitted to the SCCM on a DVD within 5 working days of placing any software in-service.
- B. The Contractor shall follow the Mid-Coast Systems Safety Certification Plan. The MidCoast systems Safety Certification Plan includes Certificates of Conformance to be signed by MTS's SCCB members prior to a system cutover or commissioning of a new line segment.

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Vital Logic Controller.

4.2 PAYMENT

- A. Payment for procurement of Vital Logic Controller shall be included in the contract price.

END OF SECTION 344219.01

SECTION 344223

RAILWAY CONTROL EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This Section includes requirements for Contractor furnished equipment related to all Sections within 34 as required for a complete and operating train control and highway grade crossing warning system.
- B. Section Includes:
 - 1. Railway Control Equipment
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein and other sections within Section 34 42, Transportation Signaling and Control.

1.4 QUALITY ASSURANCE

- A. All materials and equipment for installation and for interconnection of the various systems shall be fabricated, furnished and installed as shown on the Contract Plans and specified herein. Signaling materials and equipment shall be the products of manufacturers regularly engaged in the production of such material and equipment and shall be the manufacturer's latest design. All "or equal" equipment or materials, not shown on the Contract Plans but proposed by the Contractor, shall have shown proven performance in the United States of America for a minimum of 3 years. Materials and equipment shall be delivered to the jobsite in unbroken packages, reels, or other forms of containers.
- B. All materials and equipment provided by the Contractor shall be new. All materials and equipment shall conform to the recommendations of AREMA C&S Manual, except as modified in the Specifications and Contract Plans.
- C. Reference to specific equipment and/or manufacturers is intended to establish quality, overall design and fit, subject to compliance with all criteria specifications. Certain equipment shown on the Contract Plans and indicated in the Specification shall be required to ensure compatibility with the existing system. Equipment equal to or exceeding the Specifications and requirements may be used subject to the Engineer's written acceptance. Should alternate equipment be approved, the Contractor shall perform all necessary work to fit the alternate equipment to these Specifications and to revise the Contract Plans at no additional cost to MTS.

PART 2 - PRODUCTS

2.1 EQUIPMENT - ENVIRONMENTAL PARAMETERS

- A. All Contractor provided material and equipment shall be fully operable with no impairment resulting from the effect of the environment throughout the range of worst values indicated below. The general operating environment shall be considered to be in coastal atmosphere and in generally sunny weather.
 - 1. Ambient outdoor temperature range: from negative 40 degrees Celsius to plus 70 degrees Celsius.
 - 2. Relative humidity range: from 0 to 100 percent.
 - 3. Maximum rainfall: 4 inches in 24 hours and 1.5 inches in 1 hour.
 - 4. Maximum wind velocity: 100 miles per hour.
 - 5. The project is in Seismic Zone 4 earthquake region (earthquake requirements in San Diego, CA region).
 - 6. Provisions shall be made to assure equipment within the instrument shelters and relay cases is securely anchored or otherwise fastened after the enclosure has been delivered to the job site and installed by the Contractor.
 - 7. Securing equipment shall not negate the requirements to maintain isolation between ground systems as otherwise called for in these Specifications.
 - 8. Isokeraunic level: five per year.

2.2 ELECTRICAL AND ELECTRONIC COMPONENTS

- A. This Section specifies the requirements for the various electrical and electronic components to be incorporated within the signaling systems.
- B. The Contractor shall design fusing of all DC power supplies and circuitry according to the following requirements:
 - 1. Circuit breakers and fuses shall be the correct sideband rating for circuit current interruption and shall protect the electrical equipment and circuits from short-term and long-term overloads.
 - 2. Fuses shall be sized to protect electronics and wire.
 - 3. Fuses shall be in the positive leg of the power supply.
 - 4. Fuses shall be of the nonrenewable indicating type.
 - 5. All branch feeds for a circuit shall be from the same fuse so as to prevent fuse cascading due to branch fusing carrying loads for other circuits.
 - 6. Fuses shall be no smaller than 5 amperes unless otherwise shown on the Contract Plans.
 - 7. Loads shall be divided so that no normal operating current is more than 75 percent of the fuse rating.
 - 8. Fusing shall be functionally oriented to minimize the equipment affected by a blown fuse (i.e., per track, switch control circuits, etc.)
 - 9. Fuse clips shall be constructed to retain their resilience under all installation and service conditions and to ensure a positive contact between the clips and the fuse.
- C. Printed Circuit (PC) Cards and Connectors shall be as specified in the following:
 - 1. The PC cards shall be mounted in 19 inch Electronic Industries Alliance (EIA) standard racks unless otherwise specified for in the Specifications or approved by the Engineer.
 - 2. The PC wiring shall be organized so that wires serving the same function shall be connected to the same terminal of PC cards. PC cards containing the same circuitry and programming, where applicable, shall be interchangeable between subsystems.
 - 3. The design and construction of PC cards of the same subsystems shall be the same. Cards of different subsystems shall be of the same design and construction wherever practicable.
 - 4. PC cards shall be of glass epoxy construction. Card material shall meet the requirements of NEMA, Type FR-4. Cards shall have sufficient thickness to permit easy insertion and removal and shall be physically keyed to protect against incorrect interchange. Circuits shall be formed by etching. Conductor material shall be copper and shall be protected from exposure to air.
 - 5. PC cards containing components that may be damaged if a plug connector or plug-in unit is removed while the equipment is energized shall be clearly identified in the equipment maintenance manual. PC Addendum No. 2 cards shall be marked or labeled with a warning note on the individual board, be conspicuously located on the module, or by an alternate means as approved by the Engineer. A means shall be provided to remove power from the module or card file.
 - 6. Components mounted on the PC card, weighing more than 1/2 ounce or with a displacement of more-than 1/2 cubic inch, shall have a mechanical supporting attachment to the card separate from all electrical connections.

7. Stacking or piggybacking of PC sections in order to accomplish changes or modifications to wiring or components on printed circuit cards shall not be allowed.
8. Connectors shall have plating with a minimum thickness of 0.00005 inch.

D. Printed Circuit card files shall be as specified in the following:

1. There shall be not more than one type of card file for each size of PC card. The card file plugboards shall be registered to agree with the registry of the associated PC card. PC cards shall not project beyond the front of the equipment rack when mounted in the card file.
2. Card files shall be installed in dustproof cabinets and protected with dust covers.
3. Insulated cable clamping devices shall be located on the back of the file in such a way that wires terminating in the files shall be installed in a neat and secure bundle, rigidly supported and protected to prevent chafing of insulation. Cabling provision on the file shall permit wires to enter or leave the file from both the right and left sides. Such cabling shall not restrict access to the card file when the rear covers of the card files are removed.

PART 3 - EXECUTION

NOT USED

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Railway Control Equipment.

4.2 PAYMENT

- A. Payment for procurement of Railway Control Equipment shall be included in the contract price.

END OF SECTION 344223

SECTION 344223.1

RAILWAY AXLE COUNTER REQUIREMENTS

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This Section includes requirements for Contractor furnished equipment related to all Axle Counter installations as required for a complete and operating train control and highway grade crossing warning system.
- B. The Frauscher railroad axle counter system shall be designed and installed to accurately count and detect the passage of trains on the specified railway tracks. The system shall meet all necessary standards and regulatory requirements and provide reliable data for train detection and occupancy monitoring.
- B. Section Includes:
 - 1. Railway Axle Counters
- C. Related Sections:
 - 1. Submittal, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

- A. American Railway Engineering and Maintenance of Way Association (AREMA):
 - 1. Communications & Signals (C&S) Manual of Recommended Practice

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein and other sections within Section 34 42, Transportation Signaling and Control.
- B. As-built drawings and schematics of the installed system shall be submitted upon project completion.
- C. The contractor shall furnish proof of compliance with safety and regulatory standards, including certification and test reports.

1.4 QUALITY ASSURANCE

- A. All materials and equipment for installation and for interconnection of the various systems shall be fabricated, furnished and installed as shown on the Contract Plans and specified herein. Axle Counter Signaling materials and equipment shall be the products of Frauscher manufacturer and shall be the manufacturer's latest design as per contract drawings.
- B. All Frauscher Railway Axle Counters shall be installed, calibrated, and tested under the direct supervision of certified/qualified Frauscher technician(s). All materials and equipment shall conform to the recommendations of AREMA C&S Manual, except as modified in the Specifications and Contract Plans.
- C. Reference to specific equipment and/or manufacturers is intended to establish quality, overall design and fit, subject to compliance with all criteria specifications. Certain equipment shown on the Contract Plans and indicated in the Specification shall be required to ensure compatibility with the existing system. Equipment equal to or exceeding the Specifications and requirements may be used subject to the Engineer's written acceptance. Should alternate equipment be approved, the Contractor shall perform all necessary work to fit the alternate equipment to these Specifications and to revise the Contract Plans at no additional cost to MTS.

PART 2 - PRODUCTS

2.1 EQUIPMENT - ENVIRONMENTAL PARAMETERS

- A. All Contractor provided material and equipment shall be fully operable with no impairment resulting from the effect of the environment throughout the range of worst values indicated below. The general operating environment shall be considered to be in coastal atmosphere and in generally sunny weather.
 - 1. Ambient outdoor temperature range: from negative 40 degrees Celsius to plus 70 degrees Celsius.
 - 2. Relative humidity range: from 0 to 100 percent.
 - 3. Maximum rainfall: 4 inches in 24 hours and 1.5 inches in 1 hour.
 - 4. Maximum wind velocity: 100 miles per hour.
 - 5. The project is in Seismic Zone 4 earthquake region (earthquake requirements in San Diego, CA region).

6. Provisions shall be made to assure equipment within the instrument shelters and relay cases is securely anchored or otherwise fastened after the enclosure has been delivered to the job site and installed by the Contractor as per Frauscher documented specifications when applicable. See Frauscher document D1414-6 and associated Frauscher manufacturer documents for mounting, commissioning, and maintenance needs for all axle counter equipment.
7. Securing equipment shall not negate the requirements to maintain isolation between ground systems as otherwise called for in these Specifications.
8. Isokeraunic level: five per year.

2.2 ELECTRICAL AND ELECTRONIC COMPONENTS

- A. This Section specifies the requirements for the various electrical and electronic components to be incorporated within the signaling systems.
- B. The Contractor shall design fusing of all DC power supplies and circuitry according to the following requirements:
 1. Circuit breakers and fuses shall be the correct sideband rating for circuit current interruption and shall protect the electrical equipment and circuits from short-term and long-term overloads.
 2. Fuses shall be sized to protect electronics and wire.
 3. Fuses shall be in the positive leg of the power supply.
 4. Fuses shall be of the nonrenewable indicating type.
 5. All branch feeds for a circuit shall be from the same fuse so as to prevent fuse cascading due to branch fusing carrying loads for other circuits.
 6. Fuses shall be no smaller than 5 amperes unless otherwise shown on the Contract Plans.
 7. Loads shall be divided so that no normal operating current is more than 75 percent of the fuse rating.
 8. Fusing shall be functionally oriented to minimize the equipment affected by a blown fuse (i.e., per track, switch control circuits, etc.)
 9. Fuse clips shall be constructed to retain their resilience under all installation and service conditions and to ensure a positive contact between the clips and the fuse.
- C. Printed Circuit (PC) Cards and Connectors shall be as specified in the following:
 1. The PC cards shall be mounted in 19 inch Electronic Industries Alliance (EIA) standard racks unless otherwise specified for in the Specifications or approved by the Engineer.
 2. The PC wiring shall be organized so that wires serving the same function shall be connected to the same terminal of PC cards. PC cards containing the same circuitry and programming, where applicable, shall be interchangeable between subsystems.
 3. The design and construction of PC cards of the same subsystems shall be the same. Cards of different subsystems shall be of the same design and construction wherever practicable.
 4. PC cards shall be of glass epoxy construction. Card material shall meet the requirements of NEMA, Type FR-4. Cards shall have sufficient thickness to permit easy insertion and removal and shall be physically keyed to protect

- against incorrect interchange. Circuits shall be formed by etching. Conductor material shall be copper and shall be protected from exposure to air.
5. PC cards containing components that may be damaged if a plug connector or plug-in unit is removed while the equipment is energized shall be clearly identified in the equipment maintenance manual. PC Addendum No. 2 cards shall be marked or labeled with a warning note on the individual board, be conspicuously located on the module, or by an alternate means as approved by the Engineer. A means shall be provided to remove power from the module or card file.
 6. Components mounted on the PC card, weighing more than 1/2 ounce or with a displacement of more-than 1/2 cubic inch, shall have a mechanical supporting attachment to the card separate from all electrical connections.
 7. Stacking or piggybacking of PC sections in order to accomplish changes or modifications to wiring or components on printed circuit cards shall not be allowed.
 8. Connectors shall have plating with a minimum thickness of 0.00005 inch.
- D. Printed Circuit card files shall be as specified in the following:
1. There shall be not more than one type of card file for each size of PC card. The card file plugboards shall be registered to agree with the registry of the associated PC card. PC cards shall not project beyond the front of the equipment rack when mounted in the card file.
 2. Card files shall be installed in dustproof cabinets and protected with dust covers.
 3. Insulated cable clamping devices shall be located on the back of the file in such a way that wires terminating in the files shall be installed in a neat and secure bundle, rigidly supported and protected to prevent chafing of insulation. Cabling provision on the file shall permit wires to enter or leave the file from both the right and left sides. Such cabling shall not restrict access to the card file when the rear covers of the card files are removed.

PART 3 - EXECUTION

NOT USED

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. No separate measure will be made for Railway Control Equipment.

4.2 PAYMENT

- A. Payment for procurement of Railway Control Equipment shall be included in the contract price.

SECTION 344226.13

SIGNAL SYSTEM FIBER OPTIC NETWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Description: This Section includes installing, splicing, testing and commissioning signal system fiber optic network as described herein and as shown on the Contract Plans.
- B. Section Work Includes:
 - 1. Signal System Fiber Optic Network as herein described and shown on the Contract Plans
 - a. Connect Single mode fiber optic cable connectors at CSRC and B016RC to the new switches creating the new communication network.
- C. Related Sections:
 - 1. Section 3.9 – Submittals, MTS C Street & Broadway Wye Design.
 - 2. Additional Transportation Signaling and Control Specifications below, as applicable:
 - a. Section 344213.13 – General Railway Signal Requirements
 - b. Section 344213.14 – Route Control Equipment
 - c. Section 344213.17 – Track Circuits
 - d. Section 344213.18 – Instrument Shelters
 - e. Section 344213.19 – Signal System Grounding
 - f. Section 344213.20 – Relays
 - g. Section 344213.21 – Miscellaneous Signal System Products
 - h. Section 344213.27 – Painting and Galvanizing
 - i. Section 344213.28 – Block Signaling and Highway Grade Crossing Warning Systems Testing
 - j. Section 344213.29 – Abandonment, Demolition, Removal and Disposal of Existing Signal Systems Facilities
 - k. Section 344216 – Train Control Wire and Cable
 - l. Section 344219.01 – Vital Logic Controller
 - m. Section 344223 – Railway Control Equipment

1.2 REFERENCE STANDARDS

A. Telecommunications Industry Association/Electronic Industries Alliance (TIA/EIA)

1. TIA/EIA 455-181, FOTP-181 – Lighting Damage Susceptibility Test for Optic Cables with Metallic Components.
2. TIA-526-7 – OFSTP-7 Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant.
3. TIA-568-B.1-2 – Commercial Building Telecommunications Cabling Standard.
4. TIA-598-C – Color Coding of Fiber Optic Cables.
5. TIA/EIA-606 – Administration Standard for Telecommunications Infrastructure.
6. TIA/EIA 455-B – Standard Test Procedure for Fiber Optic Fiber Cables, Transducers, Sensors. Connecting and Terminating Devices and other Fiber Optic Components.
7. EIA 455-60A – Measurement of Fiber or Cable Length Using an OTDR.
8. EIA 455-61 A, FOTP-61 – Measurement of Fiber or Cable Attenuation Using an OTDR.
9. EIA/TIA 455-3, FOTP-3 – Procedure to Measure Temperature Cycling Effects on Optical Fibers, Optical Cable, and Other Passive Fiber Optic Components.
10. TIA 455-33, FOTP-33-B – Fiber Optic Cable Tensile Loading and Bending Test.
11. TIA/EIA 455-37A, FOTP-37 – Low or High Temperature Bend Test for Fiber Optic Cable EIA 455-60A, FOTP-60 - Measurement of Fiber or Cable Attenuation Using an OTDR.
12. TIA/EIA 455-41 A, FOTP-41 – Compressive Loading Resistance of Fiber Optic Cables.
13. TIA/EIA 455-47B, FOTP-47 – Output Far-Field Radiation Pattern Measurement.
14. TIA 455-78B, FOTP-78B – Optical Fibers: Measurement and Test Procedures – Attenuation.
15. TIA/EIA 455-81 B, FOTP-81 – Compound Flow (Drip) Test for Filled Fiber Optic Cable.
16. TIA 455-82B, FOTP-82 – Fluid Penetration Test for Fluid-Blocked Fiber Optic Cable.
17. TIA/EIA 455-85A, FOTP-85A – Fiber Optic Cable Twist Test.
18. TIA/EIA 455-88, FOTP-88 – Fiber Optic Cable Bend Test
19. TIA 455-91, FOTP-91 – Fiber Optic Cable Twist-Bend Test.
20. TIA 455-104A, FOTP-104 – Fiber Optic Cable Cyclic Flexing Test.
21. TIA/EIA 455-171 A, FOTP-171 – Attenuation by Substitution Measurement – for Short-Length Multimode Graded-Index and Single-Mode Optical Fiber Cable Assemblies.
22. TIA/EIA TSB72 – Centralized Optical cabling Guidelines.

B. American National Standards Institute (ANSI)

1. ANSI/EIA-472 – Generic Specification of Fiber Optic Cables.
2. ANSI/TIA/EIA-455 – Standard Test Procedure for Fiber Optic Fibers, Cables, Transducers and Other Fiber Optic Components.

C. ASTM International (ASTM):

1. ASTM D2239 – Polyethylene (PE) Plastic Pipe (SIDR-PR) Based on Controlled Inside Diameter
2. ASTM D3035 – Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter

1.3 SUBMITTALS

- A. Submittals shall be in accordance with the requirements of MTS C Street & Broadway Wye Design, except as modified herein.
- B. The Contractor shall submit for approval the following:
 - 1. Catalog data and manufacturer's data sheets.
 - 2. Samples of cables to be installed by the Contractor.
 - 3. Installation and operational instructions.
 - a. Develop a written cable installation plan, procedure and a checkoff list for approval at least 60 calendar days prior for plan and 30 calendar days prior (for procedures) to cable installation. These documents shall be prepared based on the Contractor's review of the conduit plans and field site survey and shall include pulling and installation information for each cable pull. The documents shall include proper approach and step-by-step procedures for feeding cable into conduit, to maintain proper bend radii and to minimize friction. Installation of data and communication cable shall conform to all applicable RUS and TIA/EIA standards.
 - 4. Complete bill of material.
 - 5. Test plan, test procedures and test reports.
 - 6. Documentation about corrective action taken on installed equipment post testing.
 - 7. Warranties, guarantees and instruction sheets.

1.4 QUALITY ASSURANCE

- A. All wire and cable manufacturers must be approved by the Engineer. The Contractor shall provide all data required for evaluation and shall make the arrangements for any required demonstrations and tests.

1.5 DELIVERY, STORAGE and HANDLING

- A. All cable barrels shall be not less than twenty (20) times the finished cable nominal diameter and shall in no case be less than the minimum bending radius or as recommended by the manufacturer. The following particulars shall be stenciled or painted in a permanent manner on the outside of the flange of each drum. Wherever necessary, the whole of the outside of the flange of the drum shall be painted over to cover all marks having no reference to this Contract.
 - 1. The manufacturer's identification of the cable type and date of manufacture.
 - 2. Gross weight of Reel and Cable.
 - 3. Full description of the cable.
 - 4. Cable identification number that is referenced to the test sheet.
 - 5. Length of Cable.
 - 6. An arrow showing the direction in which the drum should be rolled to gain access to the cable.
- B. All ends of the cable shall be sealed to prevent entrance of moisture.

- C. Handling – Cable drums shall be complete with close fitting wooden battens to prevent damage to the cable during transit and storage.
- D. Cable reels shall be stored with flanges upright, Cable on drums with batten in place shall be stored indoors.
- E. Fiber optic cable shall be handled carefully and protected from damage until it is installed in place. Cable shall be delivered on spools or reels and shall be removed by unreeling and not by uncoiling or twisting over the edge of the reel. Cable with dents, flat spots, or other sheath distortions shall not be installed. Two meters of cable at both ends of the cable shall be accessible for testing. Attach permanent label on each reel showing length, cable identification number, cable size, cable type, attenuation, bandwidth and date of manufacture.
- F. The Contractor shall inspect cables at time of delivery to the construction site to assure that no damage was done in shipping and that the specified cable was received. Every reel shall be inspected by the Contractor for physical damage such as nails driven into reels to secure shipping blocks, lagging, or reel covering missing and cable and seals missing or damaged. The Contractor shall replace all damaged or rejected cable promptly at no cost.
- G. Wires and cables shall be stored at the construction site on solid surfaces that shall adequately support the cable reels, but which shall be well drained and not allow accumulation of liquids, oils, or chemicals.
- H. The cable reels shall be aligned and protection provided so as not to allow the reel flanges to damage other reels. Adequate aisles and barricades shall provide accessibility but prevent construction equipment from damaging the cable reels
- I. Cable ends shall be resealed promptly when a length is cut from the reel. Cable reels shall be properly handled, i.e., by using a sling and spreader attached to a shaft through the reel hubs, or by cradling both flanges between lift truck forks. The reels shall not be lifted by the top reel flange or dropped from any height. Lift truck forks shall not touch cable surfaces on the reel. Reels shall always be rolled in the direction opposite the cable wind on the reel. Reels shall not be laid flat.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Fiber Optic Cable

1. Cable shall be an all-dielectric, single mode, gel-free fiber optic cable in a loose buffer design, which meets or exceeds the following specifications and conforms to ANSI/EIA-472. Cable shall be designed for direct burial, conduits, ducts and aerial installation and rodent proof. Each fiber shall be distinguishable by means of color-coding in accordance TIA/EIA-598-A. Loose tube design, with 24 individual fibers shall be evenly distributed among the buffer tubes. Fiber optic materials and equipment shall be equal in quality and performance to that manufactured by Corning, Siecor, Lucent, General Cable, Belden, or approved equal.
2. Fiber optic cable shall consist of optical fibers, strength members and jacketing. Materials used within a given cable shall be compatible with all other materials used in the same cable when such materials come into intimate contact. All cable components used shall have no adverse effect on optical transmission or on the mechanical integrity characteristics of the fiber placed in the cable. All materials used shall be non-toxic, non-corrosive and shall present no dermal hazard. Cable shall be manufactured continuous with no factory splices in the fiber. All cable used on this project shall be from one manufacturer.
3. A strength member constructed of Kevlar or glass-reinforced plastic shall be included in the cable. The cable shall contain at least one ripcord.
4. Cable outer jacket shall be polyethylene insulated, low smoke and polyolefin. Cable jacket shall be marked with manufacturer's name, sequential meter or foot markings, date of manufacture and a telecommunication handset symbol, as required by Section 350G of the National Electrical Safety Code (NESC).
5. Optical Specifications
 - a. Operational Wavelength: 1,310 nm and 1,550 nm
 - b. Optical Attenuation: @ 1,310 nm: 0.4 dB/km
 - c. @ 1,550 nm: 0.3 dB/km
6. Mechanical Specifications:
 - a. Crush Resistance: 10,000 nm (6.78 pounds/feet)
 - b. Minimum Bending Radius: 15 times the cable outside diameter under tension and 10 times the cable outside diameter installed.
 - c. Temperature:
 - 1) Operational: 0 to +70 degrees Celsius
 - 2) Storage: 0 to +70 degrees Celsius
 - d. Humidity: 0 to 100 percent
 - e. Tensile Strength:
 - 1) Installation: 2,700 N (600 lbf)
 - 2) Static: 600 N (135 lbf)

a) Optical Fibers:

- 1) Optical fibers shall be single-mode (SM) step index optical glass waveguides with a nominal core diameter of 8 to 9 microns. The fiber shall have a transmission window centered at 1310 nanometer (nm) wavelength. The attenuation at 1310 nanometers shall be 0.5 dB/Km or less. Optical fiber shall be Corning, Lucent or approved equal.
- 2) Cladding diameter shall be 125 microns plus or minus 3 microns. Core cladding offset shall be less than 1 micron. Minimum tensile strength of the fiber after primary protective coating shall be greater than 50,000 psi. Softening point of the clad material of the optical fiber shall be 1630 degrees Celsius plus or minus 50 degrees Celsius.
- 3) Optical fiber shall be coated with suitable material to preserve the intrinsic high tensile strength of the glass fiber. Outside diameter of the coated optical fiber shall be 250 plus or minus 15 microns. Coating material shall be readily removable, mechanically or chemically, without damaging the optical fibers when the removal is desired.
- 4) Optical fibers shall be surrounded with a loose tube buffering for protection from external mechanical and environmental influences. Loose tube buffering shall be color coded for the tube identification. Material of the buffering tube shall be the manufacturer's standard for the particular cable application.

b) Color Coding

- 1) Primary protective coated SM fibers shall be coated with a color-code coating for individual fiber identification. Maximum outside diameter of color-code coated fiber shall be less than 300 microns.
- 2) Color coding of optical fibers and loose buffer tube shall conform to EIA/TIA-598, Optical Fiber Cable Color Coding.
- 3) Color concentrates or inks used to color code the optical fibers and the loose buffer tube shall not be susceptible to migration and chemical reaction with gel filling compound.

c) Strength Members:

- 1) Strength members shall be integral part of the cable construction. Combined strength of the members shall be sufficient to support the stress of installation and protect the cable in service. Strength members shall be nonmetallic.
- 2) Cables shall withstand an installation tensile load of not less than 600 pounds force and not less than 200 foot-pounds of continuous tensile load.

d) Cable Jacketing:

- 1) Cable jacketing for outdoor and aerial installations shall be medium density polyethylene material containing at least 2.6 percent carbon black with only black pigment added for additional coloring. Cable jacketing shall be UV resistant.
- 2) The cables shall withstand an impact of 1.5 pounds/inch as a minimum and shall have a crush resistance of 300 pounds per square inch as a minimum.

B. Innerduct

1. HDPE innerduct shall comply with ASTM D2447, schedule 80, 2.375" O.D., black with an orange stripe in color, ribbed interior and smooth exterior. Ribbed interior wall shall be lubricated to reduce friction when installing fiber cable.
2. Equivalent material shall meet the minimum requirements of SDR 11 – ASTM D3035 or SDR 9 – ASTM D2239.
3. HDPE innerduct shall be an extruded coilable tube supplied on reels at a minimum of 5000 feet lengths.
4. HDPE innerduct shall be capped at both ends to prevent any undesirable contaminants from entering conduit.
5. HDPE innerduct shall be supplied with factory installed pull lines.

C. Galvanized Rigid Steel (GRS) Conduit and Accessories

1. GRS conduit shall be steel. Contractor shall provide conduit, couplings, elbows, bends, sealing fittings and nipples conforming to ANSI C80.1 and UL 6, with each length bearing the manufacturer's stamp and UL label.
2. Conduit shall be hot-dip galvanized zinc coating inside and out to provide galvanic corrosion protection.
3. Conduit shall be threaded on both ends, with a threaded coupler attached on one end to allow joining of multiple conduits and a color coded thread protector on the other end to protect threads during handling.
4. All fittings shall be galvanized rigid. This includes but is not limited to couplings, elbows, sweeps, bends and nipples.

D. PVC Conduit and Fittings for electrical application

1. For underground conduit installation parallel to track structure, Contractor shall provide heavy wall, high impact strength, rigid PVC conforming to the requirements of EPC-40-PVC conduit of NEMA TC 2 and fittings for EPC-40-PVC conduit of NEMA TC 3.
2. Conduit and fittings shall be UL 651 listed.

E. Fiber Optic Connectors

1. Single mode fiber optic cable connectors shall be Type SC unless otherwise approved by the Engineer. FO connectors shall match the fiber core and cladding diameters. Product literature on the single-mode FO connectors shall be submitted to the Engineer for approval. The connector housing shall be composite and the alignment ferrule shall be ceramic. FO equipment and cable shall use the same type connectors. Connector insertion loss shall be nominally 0.3 dB and less than 0.5 db.

I. Wire Pulling Lubricant

1. Wire pulling lubricant that is polymer based shall be utilized for fiber cable installation and be compatible with all cable types. The lubricant coefficient of friction shall not cause damage the cable.

J. Serial to Fiber Converter

1. The serial to Fiber converter is required for RS232 CTC information to be transmitted to Central Control. The serial to Fiber convertor shall be a hardened device at crossover signal shelters. A fiber to electrical (copper) Ethernet converter should be installed in the communication cabinets. The serial device shall be the Siemens RS910 or approved equal. The fiber connection in the signal shelter shall be single mode using SC connectors.

K. Fiber to Ethernet Switch

1. The fiber to Ethernet Switch is required for vital and maintenance information to be passed on segregated networks. The fiber to Ethernet switch shall be the Siemens RS900 or approved equal. The switch shall be a hardened device installed in signal shelters.

PART 3 - EXECUTION

3.1 INSTALLATION – GENERAL

- A. Underground fiber optic cables shall be installed in flexible, nonmetallic inner duct within the underground ducts. The inner duct may be pulled into underground ducts with the fiber optic cable pre-installed in the inner duct.
- B. After conductors have been installed, the ends of conduits terminating in pull boxes, junction boxes, controller cabinets and equipment cases shall be sealed with an approved type of sealing compound.
- C. The Contractor shall:
 1. Install individual conductors and multiple conductor sheathed cables in conduits, raceways, cable trays, ducts and trenches as indicated to complete the wiring systems.
 2. Train cables into final position while observing minimum bending radii. Slack shall be provided at all terminals in an amount sufficient for two re-terminations.
 3. Secure and neatly bundle cables inside panel boards, control cabinets and pull boxes with nylon straps.

3.2 CABLE AND INNERDUCT PULLING

- A. All requirements apply to both cable and innerduct installation.
- B. Cable shall be pulled in strict accordance with manufacturer's recommendations. The Contractor shall submit the manufacturer's installation recommendations to the Engineer for approval a minimum of 30 working days in advance of cable pulling. Before installation of cables in raceway, a suitable wire brush, swab and mandrel shall be pulled through the conduit to remove extraneous matter and to verify that the raceway system is free of obstructions. Wire rope shall not be used to pull cable in non-metallic raceways. Pulling tensions shall be kept below values recommended by manufacturers for both longitudinal tensions and side pressures.
- C. The cable pull line tension shall be continuously monitored using dynamometers or load-cell instruments and shall not exceed the maximum tension specified by the cable manufacturer. The mechanical stress placed upon the cable during installation shall be such that the cable is not twisted or stretched.
- D. When necessary, the Contractor shall pump out any water that may have accumulated in the pull boxes and manholes and shall provide ventilation to disperse collections of noxious gases. The Contractor shall pull the cables in the presence of the Engineer and shall notify him at least 48 hours in advance of each scheduled pull. If the Contractor observes manufacturing defects in cable being pulled, such cable shall not be pulled.
- E. Pulling winches and associated equipment shall be of adequate capacity to assure a steady continuous pull on the cable.
- F. Unless ends of pull are within voice or visual range, two-way radios or portable phones shall be used to maintain contact between teams.
- G. Cable feeder tubes and nozzles shall be used on all pulls to protect cables and reduce pulling tensions. Cable reels shall be setup in tandem so that cable may be fed into the raceways without changing direction of bend. Supply reels shall be turned while pulling cable to assist in reducing tension. As the cable is unspooled from the reel, it shall be inspected for jacket defects or damage. The cable shall not be kinked or crushed and the minimum bend radius of the cable shall not be exceeded during installation.
- H. Cable shall not be pulled unless contaminants and moisture can be sealed out of the cable. Where pulling grips are used, damaged ends shall be removed as soon as cable has been installed. Cable ends shall be sealed with caps at conclusion of pulling. Temporary cable tags shall be attached to the cable as soon as it is pulled.
- I. Whenever a cable is cut, the ends shall be sealed by caps and tape to prevent entrance of dirt and moisture before permanent connections are made. Cut ends of cable, whether on reels or in raceways, shall not be allowed to remain exposed.
- J. The method may require the cable to be pulled in successive pulls. If the cable is pulled out of a junction box or pull box the cable shall be protected from dirt and moisture by laying the cable on a ground covering.

3.3 SPLICING AND TERMINATION

- A. All fiber-optic cable splices shall be by fusion. Splices shall be housed in a splice enclosure and shall be encapsulated with an epoxy, ultraviolet light cured splice encapsulate, or otherwise protected against infiltration of moisture or contaminants. Fiber-optic splices shall be field tested at the time of splicing. Fusion splices shall have less than 0.2 dB loss.
- B. All SM optical fibers shall be terminated with Type ST connectors. Such terminations shall be made with "pigtailed," not less than 3 feet in length, cut from factory fabricated and tested cable assemblies having connectors at both ends. The mated pair loss, without rotational optimization, shall not exceed 0.75 dB per mated pair. The pull strength between the connector and the attached fiber shall not be less than 50 pounds force.
- C. Termination enclosures shall be sized to accommodate the fiber optic terminations to be made. Sizing shall include sufficient space for service loops to be provided and to accommodate a neat, workmanlike layout of equipment and the bend radii of fibers and cables terminated inside the enclosure. Termination enclosures shall be located as shown in the Contract Plans.
- D. In all train control enclosures a 50 foot slack loop shall be provided.

3.4 VERIFICATION

- A. The Contractor shall verify that the installation design is correct and adequate for the cables installed. The Contractor shall assure that conduit size, conduit fill, conduit bend radii, manhole spacing, manhole size, raceways, ducts and associated hardware are proper for the intended installation.

3.5 MECHANICAL PROTECTION

- A. Where cables leave conduits, the end of the conduit shall be fitted with end bells to prevent damage to the cable.
- B. The Contractor shall provide appropriate special protection for cables in areas where the cables are unavoidably exposed to hazardous conditions such vibration or sharp corners on equipment.

3.6 TESTING

A. Fiber Optic Cable:

1. Optical time domain reflectometer (OTDR) tests shall be performed using the FO test procedures of EIA 455-59. An optical time domain reflectometer test shall be performed on all fibers of the fiber optic cable on the reel prior to installation. The OTDR shall be calibrated before conducting any official tests and the Contractor shall submit proof of calibration with test results. Photographs of the traces shall be furnished to the Engineer. An OTDR test shall be performed on all fibers of the fiber optic cable while cables are on the reel before installation and after it is installed. If the OTDR test results show anomalies greater than 1 dB, the fiber optic cable segment will be rejected by the Engineer. The unsatisfactory segments of cable shall be replaced with a new segment of cable. The new segment of cable shall then be tested to demonstrate acceptability. Photographs of the traces as well as charts shall be furnished to the Engineer for each link.
2. Power attenuation test shall be performed at the light wavelength of the transmitter to be used on the circuit being tested. The flux shall be measured at the fiber optic receiver end and shall be compared to the flux injected at the transmitter end. There shall be a jumper added at each end of the circuit under test so that end connector loss shall be validated. Rotational optimization of the connectors will not be permitted. If the circuit loss exceeds the calculated circuit loss by more than 2 dB, the circuit is unsatisfactory and shall be examined to determine the problem. The Engineer shall be notified of the problem and what procedures the Contractor proposes to eliminate the problem. The Contractor shall prepare and submit a report documenting the results of the test for Engineer's approval.
3. Flux Budget/Gain Margin Test. The Contractor shall test and verify that each circuit has a gain margin which exceeds the circuit loss by at least 6 dB. The flux budget is the difference between the transmitter output power and the receiver input power required for signal discrimination when both are expressed in dBm. The flux budget shall be equal to the sum of losses (such as insertion losses, connector and splice losses and transmission losses) plus the gain margin. When a repeater or other signal regenerating device is inserted to extend the length of a fiber optic circuit, both the circuit between the transmitter and the repeater-receiver and the circuit between the repeater-transmitter and the receiver are considered independent fiber optic links for gain margin calculations. The Contractor shall submit all Flux Budget/Gain Margin results for Engineer's approval.
4. The Contractor shall prepare complete documentation of the fiber optic plant as installed. Plant documentation shall include the following information for every fiber, connection and test:
 - a. Cable: manufacturer, type, length installed
 - b. Fiber: fiber type and size, splice and connection data, losses
 - c. Splice and termination points
 - d. Connections: types (splice or mechanical), fibers connected, losses
 - e. Paths: where the link path goes in every cable
5. The Contractor shall submit electronic copies of the test traces/charts on CDs in the native file format of the software. The Contractor shall also submit one copy of the software used to create traces/charts to enable the Engineer to review the traces/charts. Additionally, the Contractor shall also submit paper copies of all traces/charts for the Engineer's records.

6. Test Equipment

- a. OTDR shall conform to the following minimum requirements:
 - 1) Operating wavelengths: 1,300 plus or minus 20 nanometers
 - 2) Attenuation Range (one way): minimum 15dB at 1,300 nm
 - 3) Attenuation Resolution: 0.01 dB
 - 4) Accuracy: 0.5 dB or better
- b. OTDRs shall have digital readout capability and shall have a means of providing a permanent record in the form of a strip chart and electronic files for recording on flash-memory, CDs or DVDs.
- c. Attenuation Measurement Test Set shall consist of an optical power meter and an optical power source. Attenuation measurement test set shall be in accordance with the applicable National Bureau of Standards (NBS) standards for a stable optical source. Meter may be analog or digital. Measurement test set shall conform to the following minimum requirements:
 - 1) Operating wavelengths: 1,300 plus or minus 20 nanometers
 - 2) Attenuation Range: at least 30 dB at 1,300 nm
 - 3) Attenuation Resolution: 0.01 dB
 - 4) Accuracy: shall be plus or minus 5 percent
 - 5) The optical source shall be capable of coupling sufficient power into the fiber so that the light received at the meter is within the meter detectability limits.
- d. Bandwidth Measurement Equipment shall conform to the following minimum requirements:
 - 1) Operating wavelengths: 1,300 plus or minus 20 nanometers
 - 2) Bandwidth range: Minimum 1000 megahertz
 - 3) Bandwidth Resolution: 1 megahertz
 - 4) Accuracy: Plus or minus 0.5 megahertz
 - 5) Measurement Method: Swept Frequency

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. The quantity for Fiber Modifications shall be measured as a lump sum, complete in place, as shown on the plans.

4.2 PAYMENT

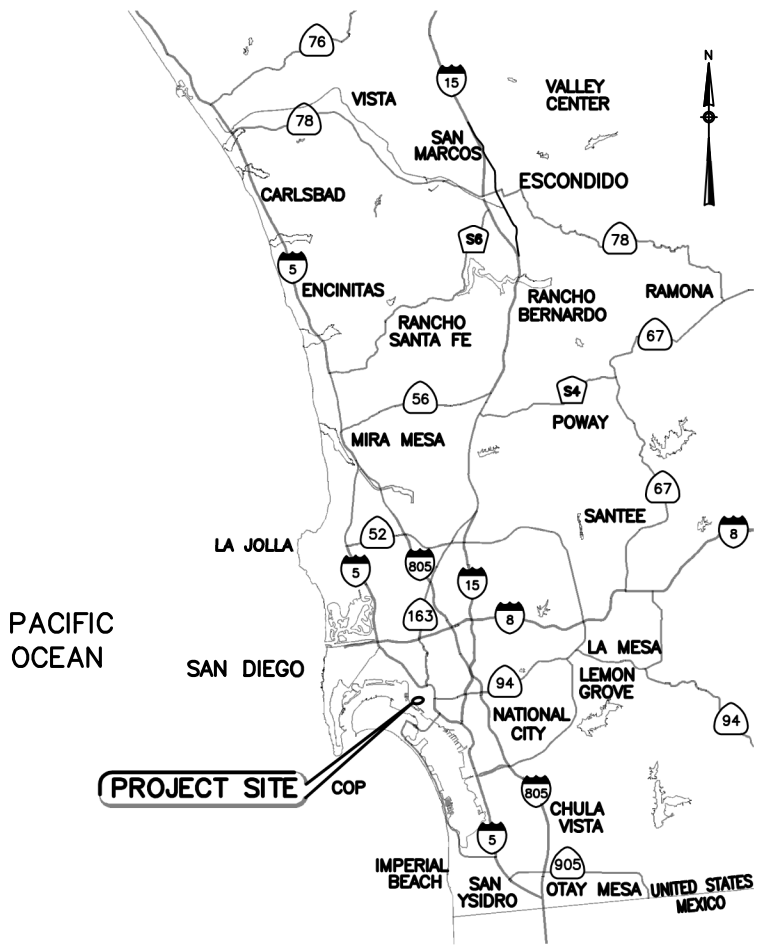
- A. The contract price paid for Fiber Modifications shall include full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all work involved to furnish and install the Fiber Modifications, complete in place, including testing, in accordance with the Plans and as directed by the Engineer.

END OF SECTION 344226.13

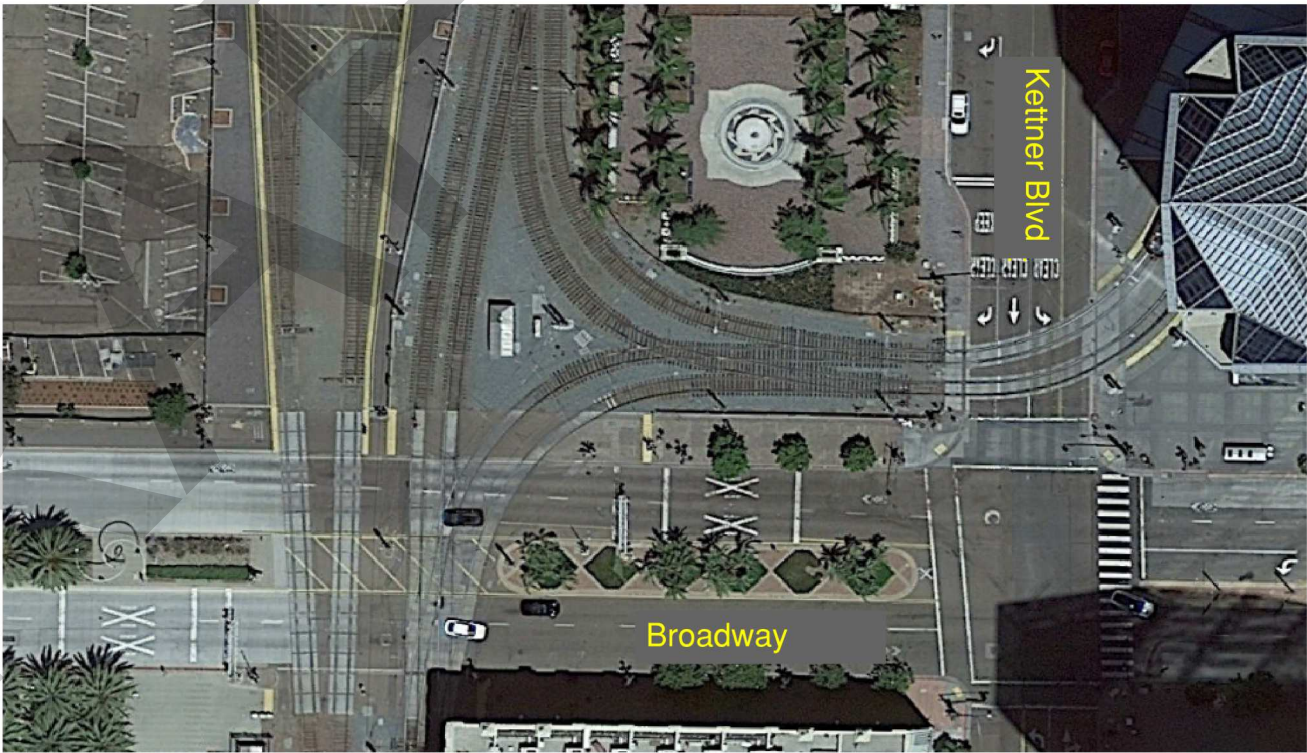
Exhibit B
C Street Drawings

DRAFT

METROPOLITAN TRANSIT SYSTEM
BROADWAY WYE (B0016RC)
INTERLOCKING
UPGRADE DESIGN



VICINITY MAP



LOCATION MAP

ATTENTION!

BEFORE ANY ALTERATIONS ARE CARRIED OUT TO EXISTING WIRING, A CORRELATION CHECK MUST BE CONDUCTED BETWEEN THE CIRCUIT CHANGES SHOWN AND THE ON-SITE WIRING TO ENSURE THEY ARE THE SAME.

THIS MUST BE DONE BY HAND TRACING THE WIRING AND WIRE-COUNTING EACH TERMINATION POINT WITHIN THE AFFECTED AREA. THIS CHECK IS TO EXTEND TO ONE UNALTERED 'CLEAN' TERMINATION POINT ON EACH SIDE OF THE ALTERATION.

ANY DISCREPANCIES MUST IMMEDIATELY BE BROUGHT TO THE ATTENTION OF M.T.S. MAINTENANCE OF WAY.

WARNING!

HIGHWAY-RAIL GRADE CROSSING
WARNING SYSTEM AND HIGHWAY TRAFFIC
SIGNALS ARE INTERCONNECTED

BEFORE MODIFICATION IS MADE TO ANY OPERATION WHICH CONNECTS TO OR CONTROLS THE TIMING OF AN ACTIVE RAILROAD WARNING SYSTEM AND/OR TIMING AND PHASING OF A TRAFFIC SIGNAL, THE APPROPRIATE PARTIES SHALL BE NOTIFIED AND, IF NECESSARY, A JOINT INSPECTION CONDUCTED

DOT# 026871H
CPUC# 106-267.6,081-0.04
RSSIMS ID# XING SD-1131





GLOBAL
SIGNALS
GROUP INC

C STREET AND BROADWAY WYE CONVERSION



B16RC (BROADWAY WYE)
COVER SHEET

DESCRIPTION	DWG. NO.	SHT. NO.	REVISION	DATE	DESCRIPTION	DWG. NO.	SHT. NO.	REVISION	DATE	DESCRIPTION	DWG. NO.	SHT. NO.	REVISION	DATE
COVER	SAB0016RC	00	0	08/08/18	MAIN TERMINAL BOARD 1 CABLE LAYOUT	SAB0016RC	50	6	08/08/18					
SHEET INDEX	SAB0016RC	01T	3	08/08/18	MAIN TERMINAL BOARD 1 CABLE LAYOUT	SAB0016RC	51	6	08/08/18					
APPARATUS TABULATION	SAB0016RC	02	2	08/08/18	MAIN TERMINAL BOARD 1 POWER LOOPS	SAB0016RC	52	6	08/08/18					
APPARATUS TABULATION	SAB0016RC	03	2	08/08/18	MAIN TERMINAL BOARD 1 POWER LOOPS	SAB0016RC	53	6	08/08/18					
ROUTE TABLE	SAB0016RC	04	2	08/08/18	MAIN TERMINAL BOARD 2 RACK LAYOUT	SAB0016RC	54	3	08/08/18					
ROUTE CHART	SAB0016RC	05	2	08/08/18	MAIN TERMINAL BOARD 2 CABLE LAYOUT	SAB0016RC	55T	3	08/08/18					
TRACK LAYOUT	SAB0016RC	06	8	08/08/18	MAIN TERMINAL BOARD 2 CABLE LAYOUT	SAB0016RC	56	3	08/08/18					
CABLE PLAN	SAB0016RC	07	8	08/08/18	MAIN TERMINAL BOARD 2 POWER LOOPS	SAB0016RC	57	3	08/08/18					
CONDUIT LAYOUT	SAB0016RC	08	8	08/08/18	RACK 1 RELAY LAYOUT	SAB0016RC	58T	6	08/08/18					
AC TRACK CIRCUITS	SAB0016RC	09	6	08/08/18	RACK 1 POWER LOOPS	SAB0016RC	59	6	08/08/18					
AC TRACK CIRCUITS	SAB0016RC	10	6	08/08/18	RACK 2 RELAY LAYOUT	SAB0016RC	60	6	08/08/18					
ROUTE SELECTOR CIRCUITS 131, 137, 139	SAB0016RC	11T	2	08/08/18	RACK 2 POWER LOOPS	SAB0016RC	61	6	08/08/18					
ROUTE SELECTOR CIRCUITS 133, 135, 141	SAB0016RC	12T	2	08/08/18	RACK 3 RELAY LAYOUT	SAB0016RC	62	6	08/08/18					
131-133 TWC INTERROGATOR CIRCUITS	SAB0016RC	13T	2	08/08/18	RACK 3 POWER LOOPS	SAB0016RC	63	6	08/08/18					
135-137 TWC INTERROGATOR CIRCUITS	SAB0016RC	14T	3	08/08/18	RACK 4 LAYOUT	SAB0016RC	64T	3	08/08/18					
139-141 TWC INTERROGATOR CIRCUITS	SAB0016RC	15T	3	08/08/18	RACK 4 POWER LOOPS	SAB0016RC	65T	3	08/08/18					
SFD/145 TWC INTERROGATOR CIRCUITS	SAB0016RC	16T	2	08/08/18	RACK 5 LAYOUT	SAB0016RC	66T	3	08/08/18					
NO30 TWC INTERROGATOR CIRCUITS	SAB0016RC	17	3	08/08/18	RACK 5 POWER LOOPS	SAB0016RC	67	3	08/08/18					
SWITCH 131 CIRCUITS	SAB0016RC	18T	3	08/08/18	RACK 6 LAYOUT	SAB0016RC	68	3	08/08/18					
SWITCH 133 CIRCUITS	SAB0016RC	19T	3	08/08/18	RACK 6 POWER LOOPS	SAB0016RC	69	3	08/08/18					
SWITCH 135 CIRCUITS	SAB0016RC	20T	3	08/08/18	WALL "A" RACK LAYOUT	SAB0016RC	70	6	08/08/18					
SWITCH 137 CIRCUITS	SAB0016RC	21T	3	08/08/18	WALL "A" POWER LOOPS	SAB0016RC	71	6	08/08/18					
SWITCH 139 CIRCUITS	SAB0016RC	22T	3	08/08/18	WALL "A" POWER LOOPS	SAB0016RC	72T	6	08/08/18					
SWITCH 141 CIRCUITS	SAB0016RC	23T	3	08/08/18	WALL "B" RACK LAYOUT	SAB0016RC	73	6	08/08/18					
SIGNAL CIRCUITS 131, 137, 139	SAB0016RC	24	3	08/08/18	WALL "B" POWER LOOPS	SAB0016RC	74T	6	08/08/18					
SIGNAL CIRCUITS 133, 135, 141, 145	SAB0016RC	25	3	08/08/18	WALL "C" RACK LAYOUT	SAB0016RC	75	6	08/08/18					
KETTNER BLVD AND L.O IND. CIRCUITS	SAB0016RC	26	4	08/08/18	WALL "C" POWER LOOPS	SAB0016RC	76	6	08/08/18					
CROSSING CONTROL CIRCUITS	SAB0016RC	27	4	08/08/18	WALL "D" RACK LAYOUT	SAB0016RC	77	3	08/08/18					
CROSSING CONTROL CIRCUITS	SAB0016RC	28	4	08/08/18	WALL "D" POWER LOOPS	SAB0016RC	78	3	08/08/18					
CROSSING 1 & 2 SIGNAL CIRCUITS (GATE)	SAB0016RC	29	3	08/08/18	WALL "E" RACK LAYOUT	SAB0016RC	79	3	08/08/18					
CROSSING 3 & 4 SIGNAL CIRCUITS (GATE)	SAB0016RC	30	3	08/08/18	WALL "E" POWER LOOPS	SAB0016RC	80	3	08/08/18					
CROSSING MLK OBJECT CONTROLLER	SAB0016RC	31	1	08/08/18	WALL "F" RACK LAYOUT	SAB0016RC	81	3	08/08/18					
CROSSING EVENT RECORDER	SAB0016RC	32	1	08/08/18	WALL "F" POWER LOOPS	SAB0016RC	82	3	08/08/18					
VITAL PROCESSOR INPUTS	SAB0016RC	33T	2	08/08/18										
VITAL PROCESSOR INPUTS	SAB0016RC	34T	2	08/08/18	B016JB-B JUNCTION BOX LAYOUT	SAB0016JB	01	8	08/08/18					
VITAL PROCESSOR INPUTS	SAB0016RC	35T	2	08/08/18	B016JB-B CABLE LAYOUT	SAB0016JB	02	8	08/08/18					
VITAL PROCESSOR INPUTS	SAB0016RC	36T	2	08/08/18										
VITAL PROCESSOR INPUTS	SAB0016RC	37T	2	08/08/18										
VITAL PROCESSOR OUTPUTS	SAB0016RC	38T	2	08/08/18										
VITAL PROCESSOR OUTPUTS	SAB0016RC	39T	2	08/08/18										
VITAL PROCESSOR POWER WIRING	SAB0016RC	40T	2	08/08/18										
VITAL PROCESSOR POWER AND COMM WIRING	SAB0016RC	41T	2	08/08/18										
VITAL PROCESSOR ADDRESS ASSIGNMENTS	SAB0016RC	42T	2	08/08/18										
HMI PANEL	SAB0016RC	43	2	08/08/18										
POWER DISTRIBUTION AND CHARGING CIRCUITS	SAB0016RC	44T	2	08/08/18										
HOUSE POWER TIE-UP	SAB0016RC	45	2	08/08/18										
HOUSE POWER TIE-UP	SAB0016RC	46	2	08/08/18										
HOUSE PANEL	SAB0016RC	47	2	08/08/18										
SAB0016RC 8' X 20' HOUSE LAYOUT	SAB0016RC	48	2	08/08/18										
MAIN TERMINAL BOARD 1 RACK LAYOUT	SAB0016RC	49	6	08/08/18										

RED = IN YELLOW = OUT

REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 1. STREET CROSSOVERS SANJO C-11070		6/24/12 HMS 2. QUIETZONE UPGRADES CITY OF SD		8/30/12 SELECT 3. RECORDED AS-IN-SERVICE 8/9/18		 DESIGNED BY GK DATE 12/23 DRAWN BY GK 12/23 CHECKED BY PRJ. ENG.		 GLOBAL SIGNALS GROUP INC		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) SHEET INDEX		SCALE NTS CONTRACT NO. DRAWING NO. S-001-150-011 SHT NO. 011	
--	--	--	--	--	--	--	--	--	--	---	--	--	--

DESCRIPTION	DWG. NO.	SHT. NO.	REVISION	DATE	DESCRIPTION	DWG. NO.	SHT. NO.	REVISION	DATE	DESCRIPTION	DWG. NO.	SHT. NO.	REVISION	DATE
COVER	SAB0016RC	00	0	08/08/18	MAIN TERMINAL BOARD 1 CABLE LAYOUT	SAB0016RC	50	6	08/08/18					
SHEET INDEX	SAB0016RC	01	A	12/29/22	MAIN TERMINAL BOARD 1 CABLE LAYOUT	SAB0016RC	51	6	08/08/18					
APPARATUS TABULATION	SAB0016RC	02	2	08/08/18	MAIN TERMINAL BOARD 1 POWER LOOPS	SAB0016RC	52	6	08/08/18					
APPARATUS TABULATION	SAB0016RC	03	2	08/08/18	MAIN TERMINAL BOARD 1 POWER LOOPS	SAB0016RC	53	6	08/08/18					
ROUTE TABLE	SAB0016RC	04	2	08/08/18	MAIN TERMINAL BOARD 2 RACK LAYOUT	SAB0016RC	54	3	08/08/18					
ROUTE CHART	SAB0016RC	05	2	08/08/18	MAIN TERMINAL BOARD 2 CABLE LAYOUT	SAB0016RC	55	A	12/29/22					
TRACK LAYOUT	SAB0016RC	06	8	08/08/18	MAIN TERMINAL BOARD 2 CABLE LAYOUT	SAB0016RC	56	3	08/08/18					
CABLE PLAN	SAB0016RC	07	8	08/08/18	MAIN TERMINAL BOARD 2 POWER LOOPS	SAB0016RC	57	3	08/08/18					
CONDUIT LAYOUT	SAB0016RC	08	8	08/08/18	RACK 1 RELAY LAYOUT	SAB0016RC	58	A	12/29/22					
AC TRACK CIRCUITS	SAB0016RC	09	6	08/08/18	RACK 1 POWER LOOPS	SAB0016RC	59	6	08/08/18					
AC TRACK CIRCUITS	SAB0016RC	10	6	08/08/18	RACK 2 RELAY LAYOUT	SAB0016RC	60	6	08/08/18					
ROUTE SELECTOR CIRCUITS 131, 137, 139	SAB0016RC	11	A	12/29/22	RACK 2 POWER LOOPS	SAB0016RC	61	6	08/08/18					
ROUTE SELECTOR CIRCUITS 133, 135, 141	SAB0016RC	12	A	12/29/22	RACK 3 RELAY LAYOUT	SAB0016RC	62	6	08/08/18					
131–133 TWC INTERROGATOR CIRCUITS	SAB0016RC	13	A	12/29/22	RACK 3 POWER LOOPS	SAB0016RC	63	6	08/08/18					
135–137 TWC INTERROGATOR CIRCUITS	SAB0016RC	14	A	12/29/22	RACK 4 LAYOUT	SAB0016RC	64	A	12/29/22					
139–141 TWC INTERROGATOR CIRCUITS	SAB0016RC	15	A	12/29/22	RACK 4 POWER LOOPS	SAB0016RC	65	A	12/29/22					
SFD/145 TWC INTERROGATOR CIRCUITS	SAB0016RC	16	A	12/29/22	RACK 5 LAYOUT	SAB0016RC	66	A	12/29/22					
NO30 TWC INTERROGATOR CIRCUITS	SAB0016RC	17	3	08/08/18	RACK 5 POWER LOOPS	SAB0016RC	67	3	08/08/18					
SWITCH 131 CIRCUITS	SAB0016RC	18	A	12/29/22	RACK 6 LAYOUT	SAB0016RC	68	3	08/08/18					
SWITCH 133 CIRCUITS	SAB0016RC	19	A	12/29/22	RACK 6 POWER LOOPS	SAB0016RC	69	3	08/08/18					
SWITCH 135 CIRCUITS	SAB0016RC	20	A	12/29/22	WALL "A" RACK LAYOUT	SAB0016RC	70	6	08/08/18					
SWITCH 137 CIRCUITS	SAB0016RC	21	A	12/29/22	WALL "A" POWER LOOPS	SAB0016RC	71	6	08/08/18					
SWITCH 139 CIRCUITS	SAB0016RC	22	A	12/29/22	WALL "A" POWER LOOPS	SAB0016RC	72	A	12/29/22					
SWITCH 141 CIRCUITS	SAB0016RC	23	A	12/29/22	WALL "B" RACK LAYOUT	SAB0016RC	73	6	08/08/18					
SIGNAL CIRCUITS 131, 137, 139	SAB0016RC	24	3	08/08/18	WALL "B" POWER LOOPS	SAB0016RC	74	A	12/29/22					
SIGNAL CIRCUITS 133, 135, 141, 145	SAB0016RC	25	3	08/08/18	WALL "C" RACK LAYOUT	SAB0016RC	75	6	08/08/18					
KETTNER BLVD AND L.O IND. CIRCUITS	SAB0016RC	26	4	08/08/18	WALL "C" POWER LOOPS	SAB0016RC	76	6	08/08/18					
CROSSING CONTROL CIRCUITS	SAB0016RC	27	4	08/08/18	WALL "D" RACK LAYOUT	SAB0016RC	77	3	08/08/18					
CROSSING CONTROL CIRCUITS	SAB0016RC	28	4	08/08/18	WALL "D" POWER LOOPS	SAB0016RC	78	3	08/08/18					
CROSSING 1 & 2 SIGNAL CIRCUITS (GATE)	SAB0016RC	29	3	08/08/18	WALL "E" RACK LAYOUT	SAB0016RC	79	3	08/08/18					
CROSSING 3 & 4 SIGNAL CIRCUITS (GATE)	SAB0016RC	30	3	08/08/18	WALL "E" POWER LOOPS	SAB0016RC	80	3	08/08/18					
CROSSING MLK OBJECT CONTROLLER	SAB0016RC	31	1	08/08/18	WALL "F" RACK LAYOUT	SAB0016RC	81	3	08/08/18					
CROSSING EVENT RECORDER	SAB0016RC	32	1	08/08/18	WALL "F" POWER LOOPS	SAB0016RC	82	3	08/08/18					
VITAL PROCESSOR INPUTS	SAB0016RC	33	A	12/29/22										
VITAL PROCESSOR INPUTS	SAB0016RC	34	A	12/29/22	B016JB–B JUNCTION BOX LAYOUT	SAB0016JB	01	8	08/08/18					
VITAL PROCESSOR INPUTS	SAB0016RC	35	A	12/29/22	B016JB–B CABLE LAYOUT	SAB0016JB	02	8	08/08/18					
SPARE	SAB0016RC	36	A	12/29/22										
VITAL PROCESSOR OUTPUTS	SAB0016RC	37	A	12/29/22										
VITAL PROCESSOR OUTPUTS	SAB0016RC	38	A	12/29/22										
VITAL PROCESSOR OUTPUTS	SAB0016RC	39	A	12/29/22										
VITAL PROCESSOR POWER WIRING	SAB0016RC	40	A	12/29/22										
VITAL PROCESSOR POWER AND COMM WIRING	SAB0016RC	41	A	12/29/22										
SYSTEM CONFIGURATION	SAB0016RC	42	A	12/29/22										
HMI PANEL	SAB0016RC	43	2	08/08/18										
POWER DISTRIBUTION AND CHARGING CIRCUITS	SAB0016RC	44	A	12/29/22										
HOUSE POWER TIE–UP	SAB0016RC	45	2	08/08/18										
HOUSE POWER TIE–UP	SAB0016RC	46	2	08/08/18										
HOUSE PANEL	SAB0016RC	47	2	08/08/18										
SAB0016RC 8’ X 20’ HOUSE LAYOUT	SAB0016RC	48	2	08/08/18										
MAIN TERMINAL BOARD 1 RACK LAYOUT	SAB0016RC	49	6	08/08/18										

REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 1. C STREET CROSSOVERS SANDB CPT10070		6/24/12 HMS 2. QUIETZONE UPGRADES CITY OF SD		8/30/12 SELECT 3. RECORDED AS-IN-SERVICE 8/9/18		 DESIGNED BY GK DATE 12/23 DRAWN BY GK 12/23 CHECKED BY PRJ. ENG.		 GLOBAL SIGNALS GROUP INC		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) SHEET INDEX		SCALE NTS CONTRACT NO. DRAWING NO. S160016RC_01 SHT NO. 01	
---	--	--	--	--	--	--	--	--	--	---	--	--	--



REF NO.	APPARATUS	CONTACTS	DESCRIPTION	APPARATUS REFERENCE	PLUG COUPLER OR BASE REFERENCE	USEAGE	REF NO.	APPARATUS	CONTACTS	DESCRIPTION	APPARATUS REFERENCE	PLUG COUPLER OR BASE REFERENCE	USEAGE
1	PN150B RELAY	6FB	NEUTRAL BIASED, 800 OHM US&S	N322500-702	N451376-0302	GENERAL PURPOSE	44	FUSE		10A, 600V - DUAL ELEMENT, TIME DELAY, GOULD FUSE BLOCK, SAFETRAN P.N. 027841-X	TRS10R		TRACK CIRCUIT
							45	FUSE		20A, 600V - DUAL ELEMENT, TIME DELAY, GOULD FUSE BLOCK, SAFETRAN P.N. 027841-X	TRS20R		TRACK CIRCUIT
2	PN250B RELAY	8FB, 4FM 2B	NEUTRAL BIASED, 250 OHM US&S	N322554-702	N438689-003	GENERAL PURPOSE	46	DUPLEX		G.F.I., 20A, LEVITON	6899-I		CASE
3							47	BATTERIES		340 AMP HOUR EDISON, 11 CELL	ED340		B12
4							48	FUSE		5A, 250V - DUAL ELEMENT, TIME DELAY, BUSSMAN 2" BLOCK, SAFETRAN P.N. 027841-X	FRN5		PLC
5							49	FUSE		1A, 250V - DUAL ELEMENT, TIME DELAY, BUSSMAN 2" BLOCK, SAFETRAN P.N. 027841-X	FRN1		SIGNAL
6	PN150BSR RELAY	6FB	SLOW RELEASE, 250 OHM US&S	N322503-702	N451376-0302	STICK, SIGNAL	50	CIRCUIT BREAKER		2 POLE 220/110VAC 30 AMP, G.E.	TEB122030WL		ENTRANCE
7	PN150F	6FB	FLASHER, 600 OHM, US&S	X451018-3001	N451376-0302	CROSSING	51						
8	PN150HD	4FB(HD), 2FB	HEAVY DUTY, 800 OHM, US&S	N322505-702	N451376-0302	CROSSING	52	DATA RECORDER		PROCESSOR UNIT - 160,000 EVENTS SAFETRAN	8000-80251-5801		DATA RECORDER
9	VITAL TIMER	3F, 1B	EVT ADJUSTABLE, 0-60 MIN. US&S	N401025-01	N451376-0302	APPROACH STICK	53	I/O UNIT		ANALOG/DIGITAL, SAFETRAN	8000-80258-0001		DATA RECORDER
10							54	I/O UNIT		DIGITAL ONLY, SAFETRAN	8000-80258-0002		DATA RECORDER
11	TIMER		5 SEC. GETS	LOS-05		LOSS OF SHUNT	55						
12							56	TIMER CARD		5 SEC. 4700MFD 15 OHM, SIGCON			GATE DOWN
13							57						
14							58	N-V RELAY	3FB	P&B, 12VDC	KRPA-14DG-12	27E123	GENERAL PURPOSE
15	PN150BM RELAY	3F (HD)	MAGNETIC BLOWOUT, 240 OHM US&S	N322524-001	N451376-0302	SWITCH CONTROL	59	N-V TIMER	2FB	SSAC, 12VDC, MULTIMODE	TRDU12D3	27E123	N-V SW MACH
16	PN150SO RELAY	1FB-1B	SWITCH OVERLOAD, 5/65 OHM US&S	N322512-001	N451376-0302	SWITCH CONTROL	60						
17	PN150P RELAY	4FB (HD)	POWER OFF, 400 OHM US&S	N322508-703	N451376-0302	POWER TRANSFER	61	INVERTER		12VDC - 120VAC, 1000W	PROSINE 1000		TRACK CIRCUIT
18							62						
19							63	INTERFACE		A-B, NET-ENI			PLC
20							64	RACK		A-B, 10 SLOT	AB1746A10		PLC
21							65	POWER SUPPLY		A-B, 5A	AB1746P2		PLC
22							66	PROCESSOR		A-B, SLC504	AB1747L542		PLC
23	PV250 RELAY	2F-2B	VANE 60/100 HZ, US&S	N342555-814	N438689-003	TRACK CIRCUIT	67	INPUT MODULE		A-B, D-24VDC, 16 IN	AB1746IB16		PLC
24	TRANSFORMER		PRI-120V SEC, 18V, 20 AMP 400VA US&S TYPE W400	N451428-0101		TRACK CIRCUIT	68	OUTPUT MODULE		A-B, CONTACT, 8 OUT	AB17460XB		PLC
25	TRANSFORMER		RELAY, 1:1, US&S	N393992		TRACK CIRCUIT	69						
26	TRANSFORMER		LIGHTING, 50A, SAFETRAN	010520-50X		CROSSING	70	SURGE SUPPRESSOR		CPC	CG90L		TWC
27	POWER SUPPLY		12VDC - 20 AMP RAILWAY EQUIPMENT CO.	20ATC-12V		B14	71						
28	POWER SUPPLY		12VDC - 40 AMP RAILWAY EQUIPMENT CO.	40ATC-12V		B12	72	INTERROGATOR		MEISTER - MULTI LOOP	28526006		ROUTE REQUESTS
29	SWITCH RECTIFIER		RN-20, 110V-3ADC US&S	N435449		SW MACHINE POWER	73	LOOP SCANNER		MEISTER - MULTI LOOP	28526032		ROUTE REQUESTS
30	RESISTOR		FIXED 25 OHM 12 WATT OHMITE TYPE 200	8B12J25R		LINE CIRCUITS	74	PROGRAMMABLE DECODER CARD		MEISTER	28836191-01		TWC
31	RESISTOR		TAPPED 0 - 5 OHM 300 WATT, US&S	N4511400102		AC TRACK CIRCUIT	75	RELAY OUTPUT CARD		MEISTER	28826185		TWC
32							76	PSO-4000 RECEIVER		3240Hz, INVENSYS	7A473		GRADE CROSSING APPROACH
33	RESISTOR		ADJUSTABLE 0 - .5 OHM 300 WATT OHMITE	E300KR50		GRADE CROSSING FLASHING LIGHTS	77	PS4-4000 COUPLER		3240Hz, INVENSYS	7A355-f (f=3240)		GRADE CROSSING APPROACH
34	ARRESTOR		SERIES US&S	N451552-0201		LINE CIRCUITS	78	CELL TRANSMITTER		PROXICAST	1XMG-401S		TRAIN LOCATION
35	ARRESTOR		EQUALIZER US&S	N451552-0101		TRACK FEEDS	82	PSO-II TRANSMITTER		645 HZ, SAFETRAN	7A400-645		GRADE CROSSING APPROACH
36	ARRESTOR		AC US&S	N451552-0401		INPUT POWER	83	PSO-II TRANSMITTER		790 HZ, SAFETRAN	7A400-790		GRADE CROSSING APPROACH
37	FUSE		2A, 250V - DUAL ELEMENT, TIME DELAY BUSSMAN 2" BLOCK SAFETRAN P.N. 027840-X	FRN2		AC TRACK CIRCUIT	100	IMPEDANCE BOND		1500 AMP - UNTUNED, US&S	98063311		WAYSIDE
38	FUSE		3A, 250V - DUAL ELEMENT, TIME DELAY BUSSMAN 2" BLOCK SAFETRAN P.N. 027840-X	FRN3		AC TRACK CIRCUIT	101	SWITCH MACHINE		M23A, 110VDC, R.H. US&S	N451160-0510		WAYSIDE
39	FUSE		6A, 250V - DUAL ELEMENT, TIME DELAY BUSSMAN 2" BLOCK SAFETRAN P.N. 027840-X	FRN6		SIGNAL	102	SWITCH MACHINE		MODEL 3000, L.H. RAIL TECH	3000LP-I LP		WAYSIDE
40	FUSE		10A, 250V - DUAL ELEMENT, TIME DELAY BUSSMAN 2" BLOCK SAFETRAN P.N. 027840-X	FRN10		RECTIFIER	103	SIGNAL		3 ASPECT (, / , -) McCAIN	PEDESTRIAN		WAYSIDE
41	FUSE		15A, 250V - DUAL ELEMENT, TIME DELAY, BUSSMAN 2" BLOCK SAFETRAN P.N. 027840-X	FRN15		AC RECEPTACLE	104	SIGNAL		3 ASPECT (, \ , -) McCAIN	PEDESTRIAN		WAYSIDE
42	FUSE		25A, 250V - DUAL ELEMENT, TIME DELAY, BUSSMAN 2" BLOCK SAFETRAN P.N. 027840-X	FRN25		CROSSING GATE	105	FILTER-V		MEISTER	28526035		TWC LOOP
43	CIRCUIT BREAKER		2 POLE 220/110VAC 15 AMP, G.E.	TEB122015WL		ENTRANCE	106	TUNING KIT		MEISTER	28526036		TWC LOOP
							107	ROUTE SELECTOR		FABRICATED METALS	DWG. #D21101		WAYSIDE
NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY.													

NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

[illegible]

APPARATUS TABULATION						
REF. NO.	APPARATUS	CONTACTS	DESCRIPTION	USE	MANUFACTURERS PART NUMBER	MANUFACTURER
200	CPU		S7	S7	6ES7315-2FJ14-0AB0	SIEMENS
201	POWER MODULE		S7, 12VDC	S7	A2V00082037694	SIEMENS
202	INTERFACE MODULE		S7, DISTRIBUTED I/O, MODEL IM-151	S7	A2V00082037674	SIEMENS
203	VITAL INPUT MODULE		S7, 12VDC	S7	A2V00001788217	SIEMENS
204	VITAL OUTPUT MODULE		S7, 12VDC	S7	A2V00001788219	SIEMENS
205	TERMINAL MODULE		I/O	S7	A2V00082037675	SIEMENS
206	TERMINAL MODULE		PM	S7	A2V00082037679	SIEMENS
207	COMMUNICATION PROCESSOR		S7, CP340, RS232	S7	A2V00001178045	SIEMENS
208	CONVERTER		12V/12VDC, 3A	S7	GPHS01-12S3000/38	SIEMENS
209	CONVERTER		12V/24VDC, 5A	S7	GPHS64-24S5000M1	SIEMENS
210	HMI PANEL		LOCAL CONTROL PANEL, MP277	S7	6AV6643-0DD01-11AX1	SIEMENS
211	SCALANCE SWITCH		X108, UNMANAGED, 8 PORT	S7	6GK5108-0BA00-2AA3	SIEMENS
212	SCALANCE SWITCH		X204-2LD, 4 PORT	S7	6GK5204-2BC10-2AA3	SIEMENS
213	MOUNTING RAIL - LARGE		19"	S7	6ES7390-1AE80-0AA0	SIEMENS
214	MOUNTING RAIL - SMALL		19"	S7	6ES7108MA11	SIEMENS
215	ISOLATION MODULE		9.8-16.2 VDC INPUT	S7	N34800901	US&S
216	ETHERNET DEVICE		LANTRONIX	COMMUNICATION INTERFACE	UDS1100-IAP	LANTRONIX
217	MEDIA CONVERTER		ETHERNET TO SM FIBER	COMMUNICATION INTERFACE	EL 100C-20	ETHERWAN
218	FIBER DISTRIBUTION PANEL		6 PORT ST 601 ENCLOSURE, SM	S7	WFR-00011-02	MOLEX
219	FILTER		20 AMPS	S7	FN2060-20-06	SCHAFFNER
220	TRANZORB		SURGE PROTECTION	VITAL POWER	5KP16A	VISHAY
221	BREAKER		4A, 1P, DIN RAIL MOUNT	S7	WMZS1D04	CUTTLER-HAMMER
222	BREAKER		10A, 1P, DIN RAIL MOUNT	S7	WMZS1D10	CUTTLER-HAMMER
223	BREAKER		20A, 2P, DIN RAIL MOUNT	S7	WMZS2D20	CUTTLER-HAMMER
224	DATA LOGGER		SERIAL LINK W/ ETHERNET PORT	EVENT RECORDER	VDL S7-300/85-0136	MICRO-AIDE
225	TWC INTERROGATOR		19" RACK	TWC		
226	POWER SUPPLY			TWC		
227	TRANSMIT/RECEIVE CARD			TWC		
228	LOOP SCAN TIMING CARD			TWC		
229	SHIFT REGISTER CARD			TWC		
230	LOOP SCANNER			TWC		
231	COMM 2-2 CARD			TWC		
232	RELAY OUTPUT CARD			TWC		
233	DISPLAY CARD		LOOP DATA	TWC		
234	RELAY, NON-VITAL		12VDC	UNLOCK CIRCUITS	R10-T1V2-J1.0K	POTTER & BRUMFIELD
235	LOOP CONNECTING UNIT			TWC		
236	BATTERIES		80AH, 10 CELL	B14	SPL80	SAFT
237	TRANZORB		SURGE PROTECTION	VITAL OUTPUT RELAYS	1.5KE39CA	LITTLE FUSE
238	FUSE		30A, 250V - DUAL ELEMENT, TIME DELAY BUSSMAN 2" BLOCK SAFETRAN P.N. 027840-X	SWITCH RECTIFIERS	FRN30	BUSSMAN
239	A-ISOMETER		ISOLATION MONITORING DEVICE	GROUND DETECTION	IR425-D4-1	BENDER
240	SIGNAL		2 ASPECT - LED	WAYSIDE SIGNAL	45812976	HANNING & KAUL
241	DATA LOGGER		SERIAL LINK W/ ETHERNET PORT	EVENT RECORDER	CWR-24E	MICRO-AIDE



NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

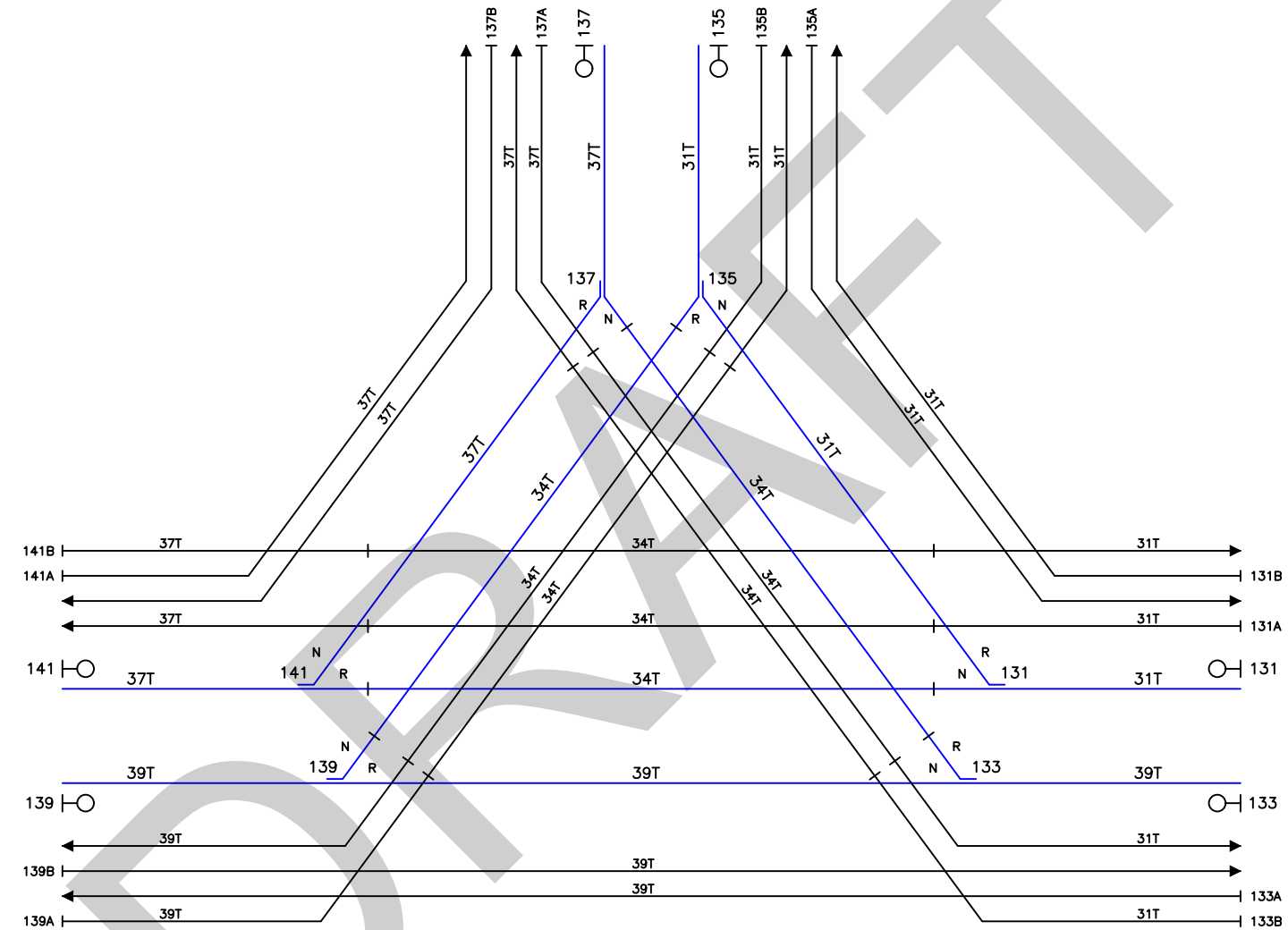
REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 1. 8 STREET CROSSOVERS SANAB CH-11070	6/24/12 HMS 2. RECORDED AS-IN-SERVICE 8/8/18	 Sign Date: 05/15/24	DESIGNED BY	DATE		SANTA FE – 12TH & IMPERIAL (BAYSIDE) B16RC (BROADWAY) APPARATUS TABULATION	SCALE NTS	
			DRAWN BY				CONTRACT NO.	
			CHECKED BY				DRAWING NO. SHT NO.	
			PRJ. ENG.				B0046RC_03 03	

ALIGN ROUTE		ROUTE REQUEST			SIGNAL ASPECTS	MUST LOCK SWITCHES	FORCES SWITCHES	TIME LOCKING APPROACH LOCKED	TIME LOCKING TRACK RESET	TIME SETTING	PUT TO STOP BY ASR	SECTIONAL SWITCH RELEASE	PARALLEL ROUTES	CONFLICTING ROUTES		COMMENT	
SIGNAL	LIMIT	P.B. (Y/N)	AUTO (Y/N)	TWC (Y/N)													
131A	SIG 141 37T	Y	Y	Y	VERT. WH	131-N 141-R	133-N 139-R	131 ASR	OFF OF 34T	30 SEC	141 ASR	131 (VIA 34T)	133A (133-139) 139B (139-133)	131B (131-135) 133B (133-137) 135A (135-131) 135B (135-139) 137A (137-133)	137B (137-141) 139A (139-135) 141A (141-137) 141B (141-131)	MUST HAVE GATES DOWN	
131B	*SIG 101A 31T, APE1T, APE1AT	Y	Y	Y	DIAG. WH - R	131-R 135-N		131 ASR	OFF OF 31T	30 SEC	135 ASR C-St 101B(B) C-St 103B(A)		133A (133-139) 133B (133-137) 137A (137-133)	137B (137-141) 141A (141-137)	131A (131-141) 135A (135-131) 135B (135-139)	139A (139-135) 141B (141-131)	MUST HAVE GATES DOWN REQUIRES 101B(B) AND 103B(A) NOT SET
133A	SIG 145 39T, 39AT	Y	N	Y	VERT. WH	133-N 139-R		133 ASR	OFF OF 39T	30 SEC	139 ASR 145 ASR		131A (131-141) 131B (131-135) 135A (135-131)	137B (137-141) 141A (141-137) 141B (141-131)	133B (133-137) 135B (135-139) 137A (137-133)	139A (139-135) 139B (139-133)	MUST HAVE GATES DOWN
133B	*SIG 103A 39T, 34T, 37T, APW1T APW1AT	Y	N	Y	DIAG. WH - R	133-R 137-N	131-R 135-N	133 ASR	OFF OF 34T	30 SEC	137 ASR C-St 101B(A) C-St 103B(B)	133 (VIA 34T)	131B (131-135) 135A (135-131)		131A (131-141) 133A (133-139) 135B (135-139) 137A (137-133) 137B (137-141)	139A (139-135) 139B (139-133) 141A (141-137) 141B (141-131)	MUST HAVE GATES DOWN REQUIRES 101B(A) AND 103B(B) NOT SET
135A	SIG 131 31T	Y	N	Y	VERT. WH	135-N 131-R		135 ASR	OFF OF 31T	30 SEC	131 ASR		133A (133-139) 135B (135-137) 137A (137-133)	137B (137-141) 139B (139-133) 141A (141-137)	131A (131-141) 135A (135-131) 135B (135-139)	139A (139-135) 141B (141-131)	CALLS GATES W/ ROUTE
135B	SIG 145 31T, 34T, 39T, 39AT	Y	N	Y	DIAG. WH - R	135-R 139-N	137-R 141-N	135 ASR	OFF OF 34T	30 SEC	139 ASR 145 ASR	135 (VIA 34T)	137B (137-141) 141A (141-137)		131A (131-141) 131B (131-135) 133A (133-139) 133B (133-137) 135A (135-131)	137A (137-133) 139A (139-135) 139B (139-133) 141B (141-131)	
137A	SIG 133 39T	Y	Y	Y	VERT. WH	137-N 133-R	131-R 135-N	137 ASR	OFF OF 34T	30 SEC	133 ASR	137 (VIA 34T)	131B (131-135) 135A (135-131)		131A (131-141) 133A (133-139) 133B (133-137) 135B (135-139) 137B (137-141)	139A (139-135) 139B (139-133) 141A (141-137) 141B (141-131)	CALLS GATES W/ ROUTE
137B	SIG 141 37T	Y	Y	Y	DIAG. WH - R	137-R 141-N		137 ASR	OFF OF 37T	30 SEC	141 ASR		131B (131-135) 133A (133-139) 135A (135-131)	135B (135-139) 139A (139-135) 139B (139-133)	131A (131-141) 133B (133-137) 137A (137-133)	141A (141-137) 141B (141-131)	
139A	*SIG 101A 39T, 34T, 31T, APE1T APE1AT	Y	Y	Y	DIAG. WH - L	139-N 135-R	141-N 137-R	139 ASR	OFF OF 34T	30 SEC	135 ASR C-St 101B(B) C-St 103B(A)	139 (VIA 34T)	137B (137-141) 141A (141-137)		131A (131-141) 131B (131-135) 133A (133-139) 133B (133-137) 135A (135-131)	135B (135-139) 137A (137-133) 139B (139-133) 141B (141-131)	ALSO SET BY SIG.145 REQUIRES 39AT UNOCCUPIED AND 45AT OCCUPIED REQUIRES 101B(B) AND 103B(A) NOT SET
139B	SIG 133 39T	Y	Y	Y	VERT. WH	139-R 133-N		139 ASR	OFF OF 39T	30 SEC	133 ASR		131A (131-137) 131B (131-135) 135A (135-131)	137B (137-141) 141A (141-137) 141B (141-131)	133A (133-139) 133B (133-137) 135B (135-139)	137A (137-133) 139A (139-135)	ALSO SET BY SIG.145 REQUIRES 39AT UNOCCUPIED AND 45AT OCCUPIED
141A	*SIG 103A 37T, APW1T APW1AT	Y	N	Y	DIAG. WH - L	141-N 137-R		141 ASR	OFF OF 37T	30 SEC	137 ASR C-St 101B(A) C-St 103B(B)		131B (131-135) 133A (133-139)	135B (135-139) 139A (139-133) 139B (139-135)	131A (131-141) 133B (133-137) 137A (137-133)	137B (137-141) 141A (141-131)	REQUIRES 101B(A) AND 103B(B) NOT SET
141B	SIG 131 31T	Y	N	Y	VERT. WH	141-R 131-N	133-N 139-R	141 ASR	OFF OF 34T	30 SEC	131 ASR	141 (VIA 34T)	133A (133-139) 139B (139-133)	131A (131-141) 131B (131-135) 133B (133-137) 135A (135-131) 135B (135-139)	137A (137-133) 137B (137-141) 139A (139-135) 141A (141-137)		CALLS GATES W/ ROUTE
145	SIG 139 39AT	Y	Y	Y	VERT. WH			145 ASR	OFF OF 34T	30 SEC	133 ASR 135 ASR						CHECKS & SETS 139. ROUTE(S) MUST CLEAR PRIOR TO 145 SHOWING PROCEED



NOTE: * = AMERICA PLAZA SIGNAL CONTROLLED VIA CSRC

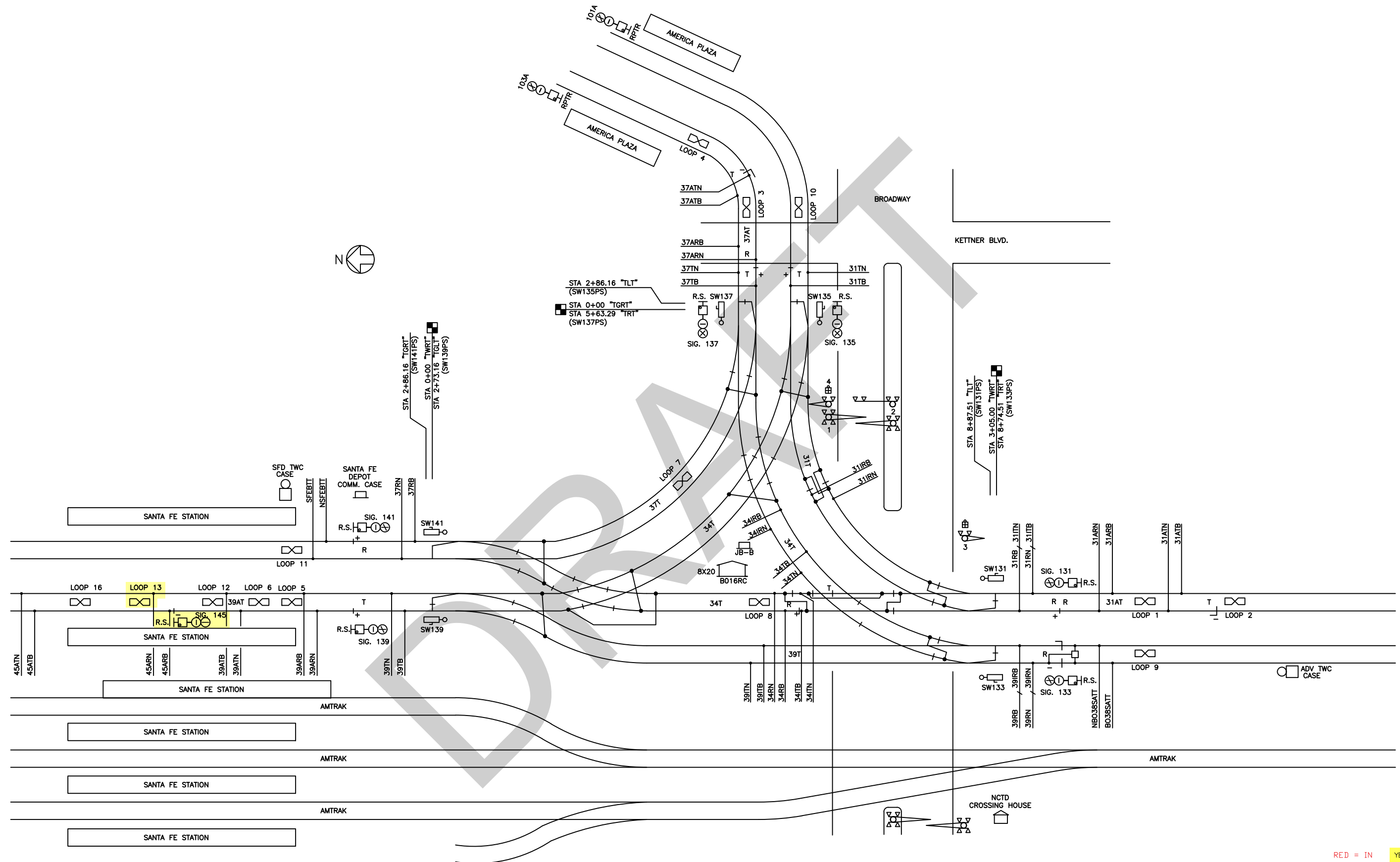
NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 1. STREET CROSSOVERS SANDB C-11070		6/24/12 HMS 2. RECORDED AS-IN-SERVICE 8/8/18				DESIGNED BY _____ DATE _____ DRAWN BY _____ CHECKED BY _____ PRJ. ENG. _____				SANTA FE – 12TH & IMPERIAL (BAYSIDE) B16RC (BROADWAY) ROUTE TABLE		SCALE NTS CONTRACT NO. _____ DRAWING NO. SFB0016RC_04 SHT NO. 04	
--	--	---	--	---	--	---	--	---	--	---	--	--	--



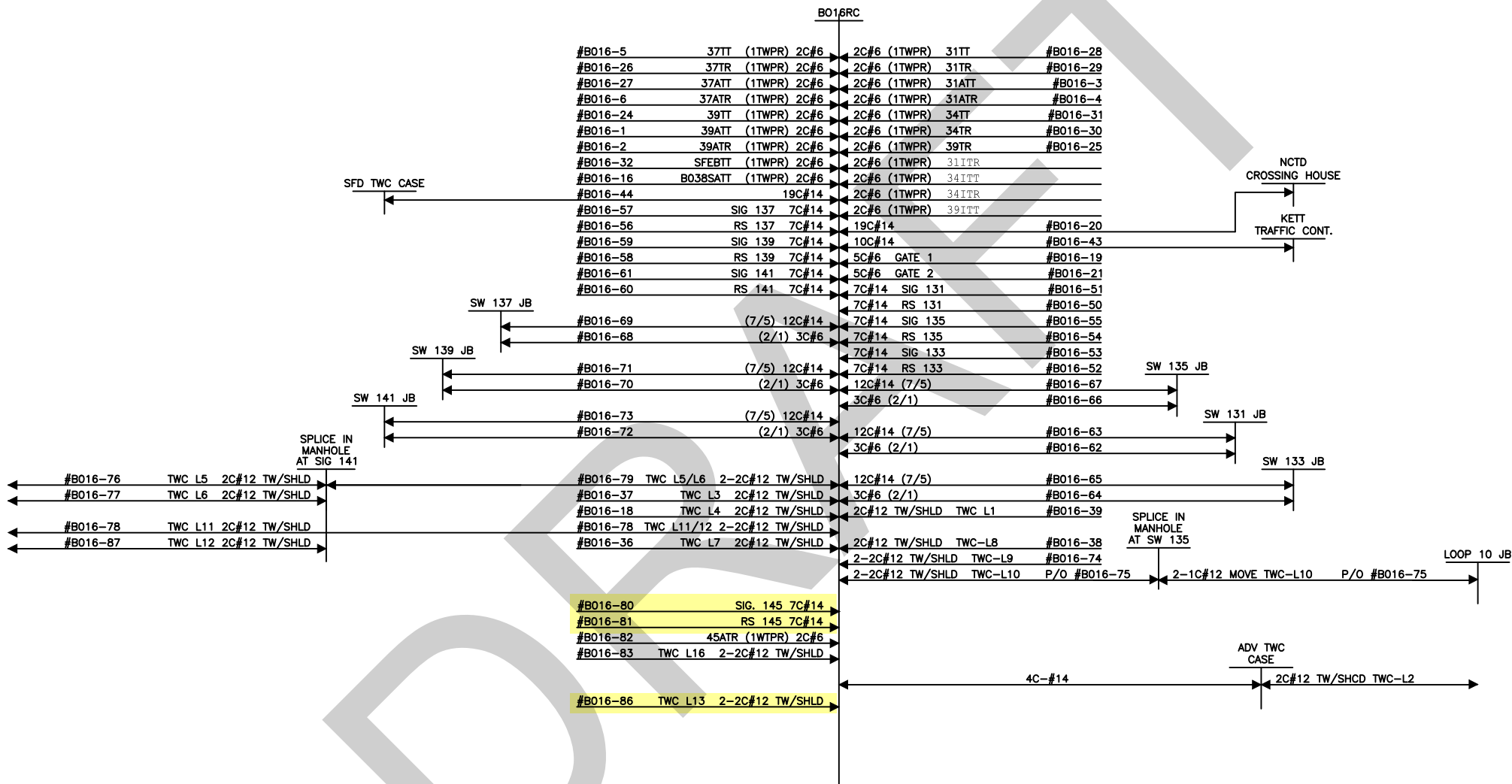
NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 1. 10 STREET CROSSOVERS SANDB C-11070		6/24/12 HMS 2. RECORDED AS-IN-SERVICE 8/8/18				DESIGNED BY _____ DATE _____ DRAWN BY _____ CHECKED BY _____ PRJ. ENG. _____				SANTA FE – 12TH & IMPERIAL (BAYSIDE) B16RC (BROADWAY) ROUTE CHART		SCALE NTS CONTRACT NO. _____ DRAWING NO. _____ SHT NO. _____ SB0043RC_05 05	
---	--	---	--	---	--	---	--	---	--	---	--	---	--



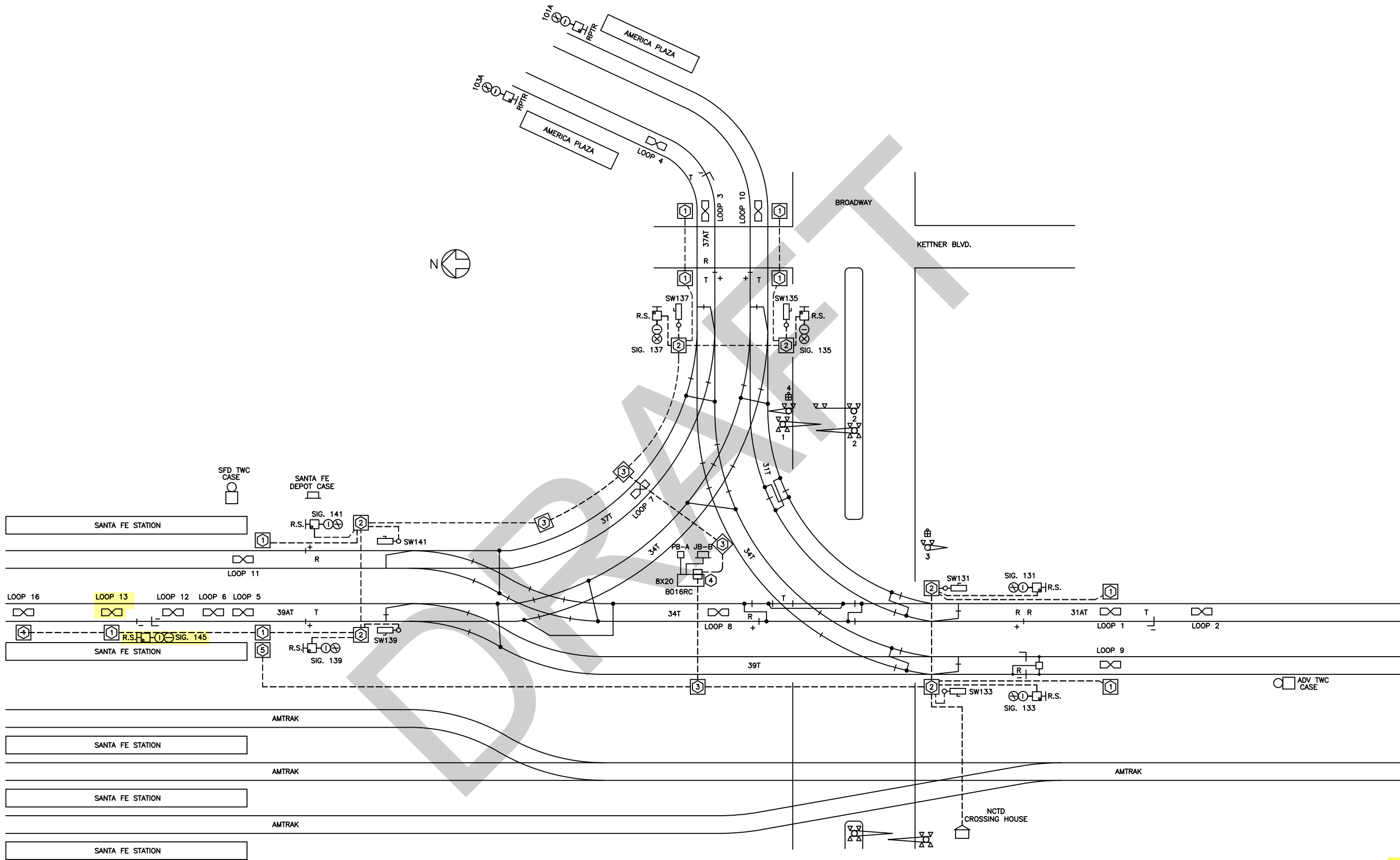
RED = IN YELLOW = OUT

[illegible]



RED = IN YELLOW = OUT

REVISIONS	0	SIGNAL CASES PER LRT-450	9/27/89	JML	
	1	ADDED POWER SWITCHES AND TWC PER LRT-147	12/31/92	JML	
	2	NEW SIG HOUSE & PKTS THAT REPLACE ORIGINAL B016RC/RCA CASES	10/31/02	KMZ	
	3	AS BUILT CHANGES PER CONTRACT #LRT-10834/10879	8/28/03		
4	AS BUILT CHANGES PER CONTRACT #LRT-1108100/CIP11378	5/31/07	SECA		
5	BROADWAY WYE REHAB CONTRACT JOC 1338-04	11/14/11	HMS		
6	C STREET CROSSOVERS SANDAG CIP1210070	6/24/12	HMS		
7	QUARTERZONE UPGRADES CITY OF SD	8/30/12	SELECT		
8	RECORDED AS-IN-SERVICE	8/8/18			
<div><div></div><div>DESIGNED BY GK DRAWN BY GK CHECKED BY PRJ. ENG.</div><div>DATE 12/23 12/23</div></div> <div></div> <div>C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) CABLE PLAN</div> <div>SCALE NTS</div> <div>CONTRACT NO.</div> <div>DRAWING NO. SAB0046RC_07 A-157</div> <div>SHT NO. 07</div>					





RED = IN YELLOW = OUT

REVISIONS	
0.	SIGNAL CASES PER LRT-450
9/27/89	JML
1.	ADDED POWER SWITCHES AND TWC PER LRT-147
12/31/92	JML
2.	NEW SIG. HOUSE & PKTS THAT REPLACE ORIGINAL B016RC/RCA CASES
10/31/02	KMZ
3.	AS BUILT CHANGES PER CONTRACT #LRT-10834/10879
8/28/03	
4.	AS BUILT CHANGES PER CONTRACT #LRT-1108100/CIP11378
5/31/07	SECA
5.	BROADWAY WYE REHAB CONTRACT JOC 1338-04
11/14/11	HMS
6.	C STREET CROSSOVERS SANDAG CIP1210070
6/24/12	HMS
7.	QUETZONE UPGRADES CITY OF SD
8/30/12	SELECT
8.	RECORDED AS-IN-SERVICE
8/8/18	

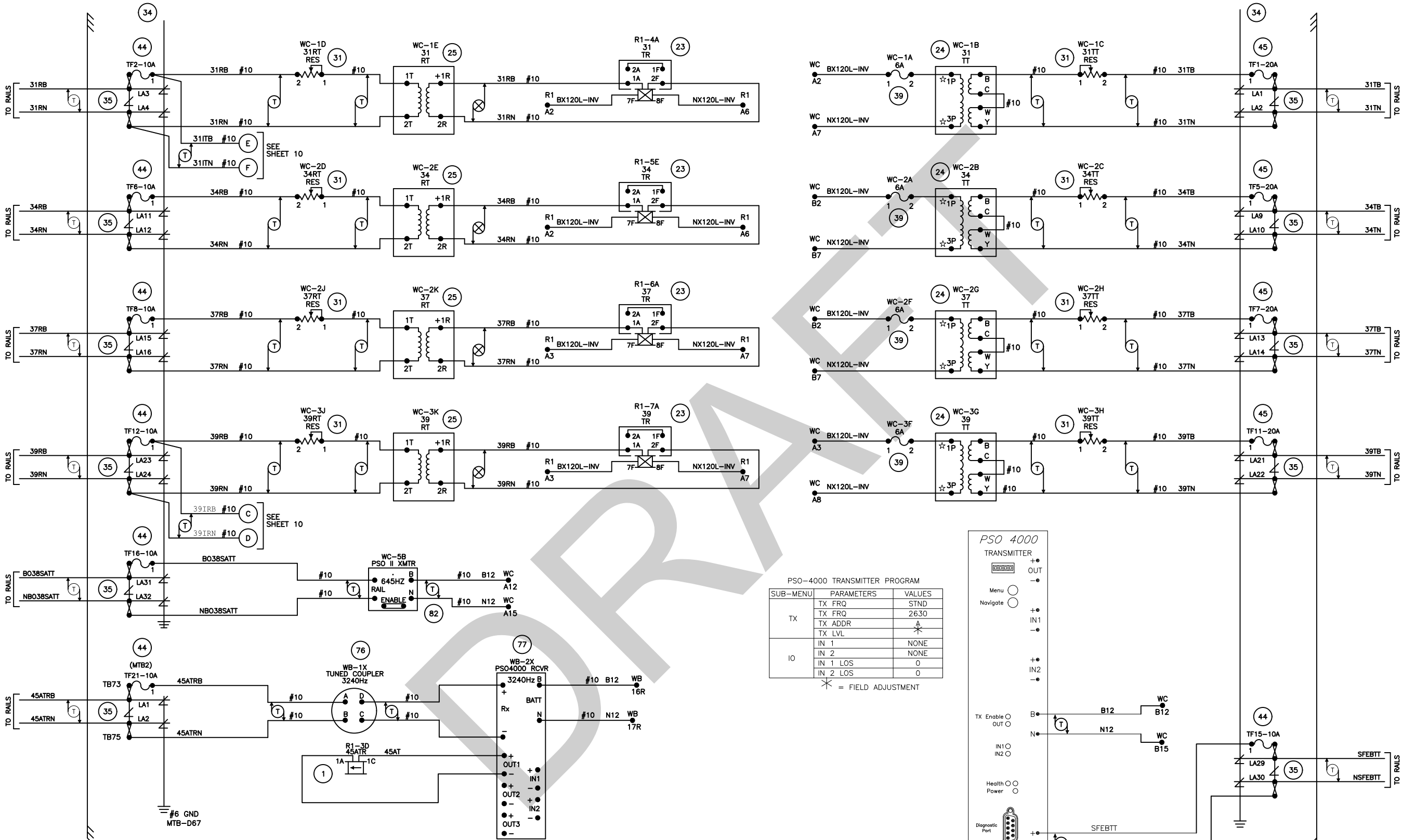


DESIGNED BY	GK	DATE	12/23
DRAWN BY	GK		12/23
CHECKED BY			
PRJ. ENG.			

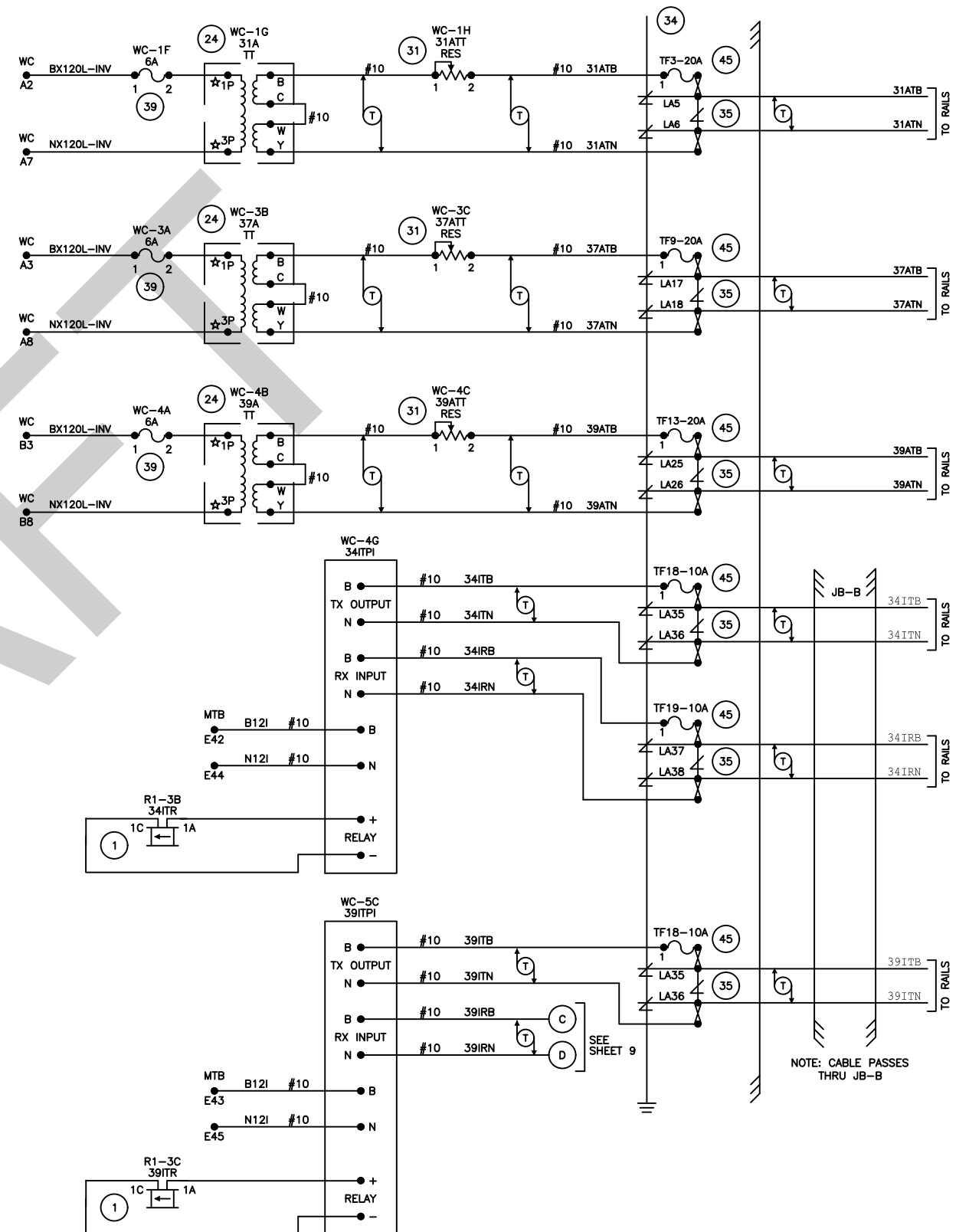
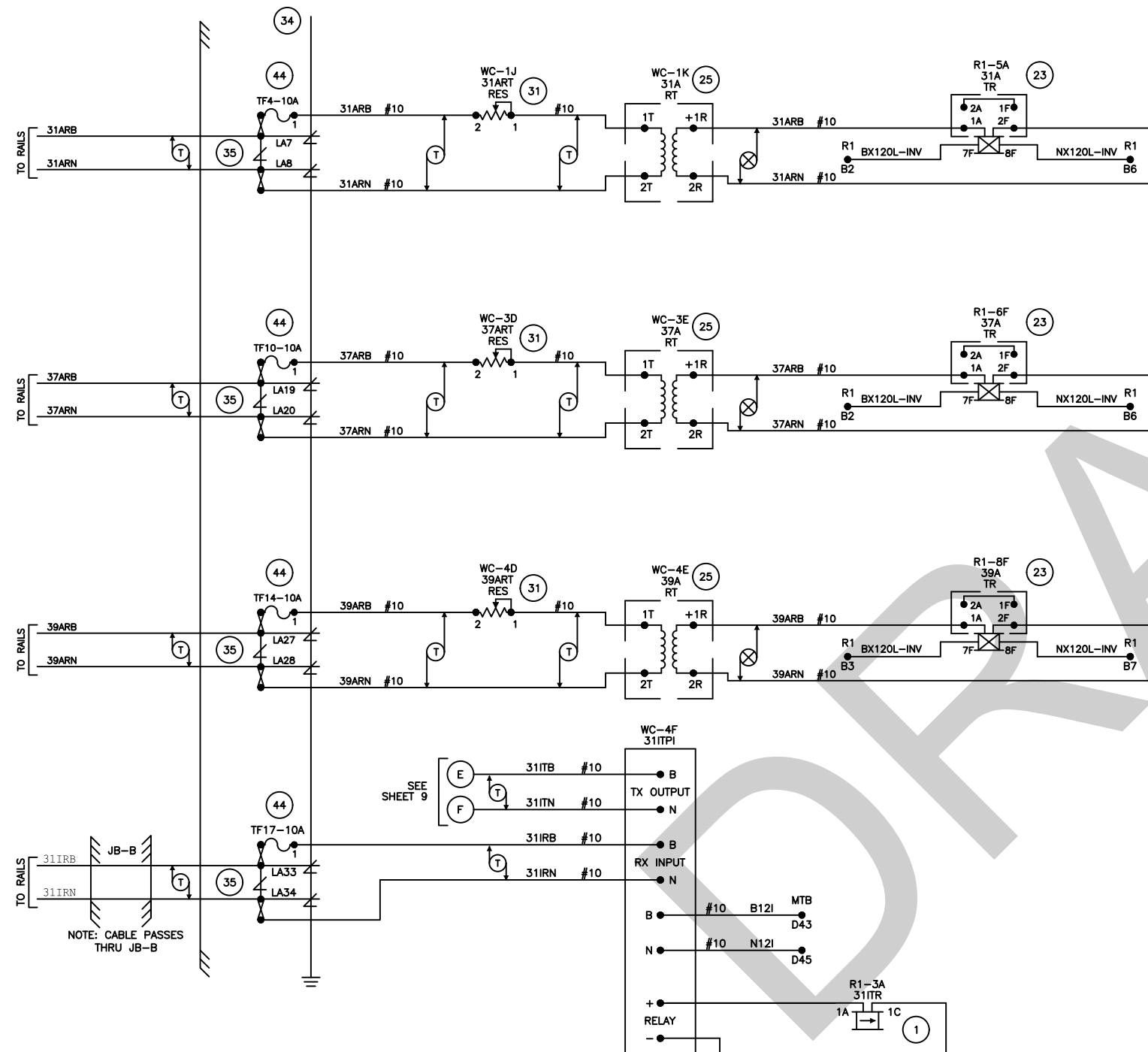


GLOBAL SIGNALS GROUP INC



C STREET & BROADWAY WYE CONVERSION		SCALE NTS	
B16RC (BROADWAY) CONDUIT LAYOUT		CONTRACT NO.	
		DRAWING NO. SAB0016RC_08 A-158	SHT NO. 08

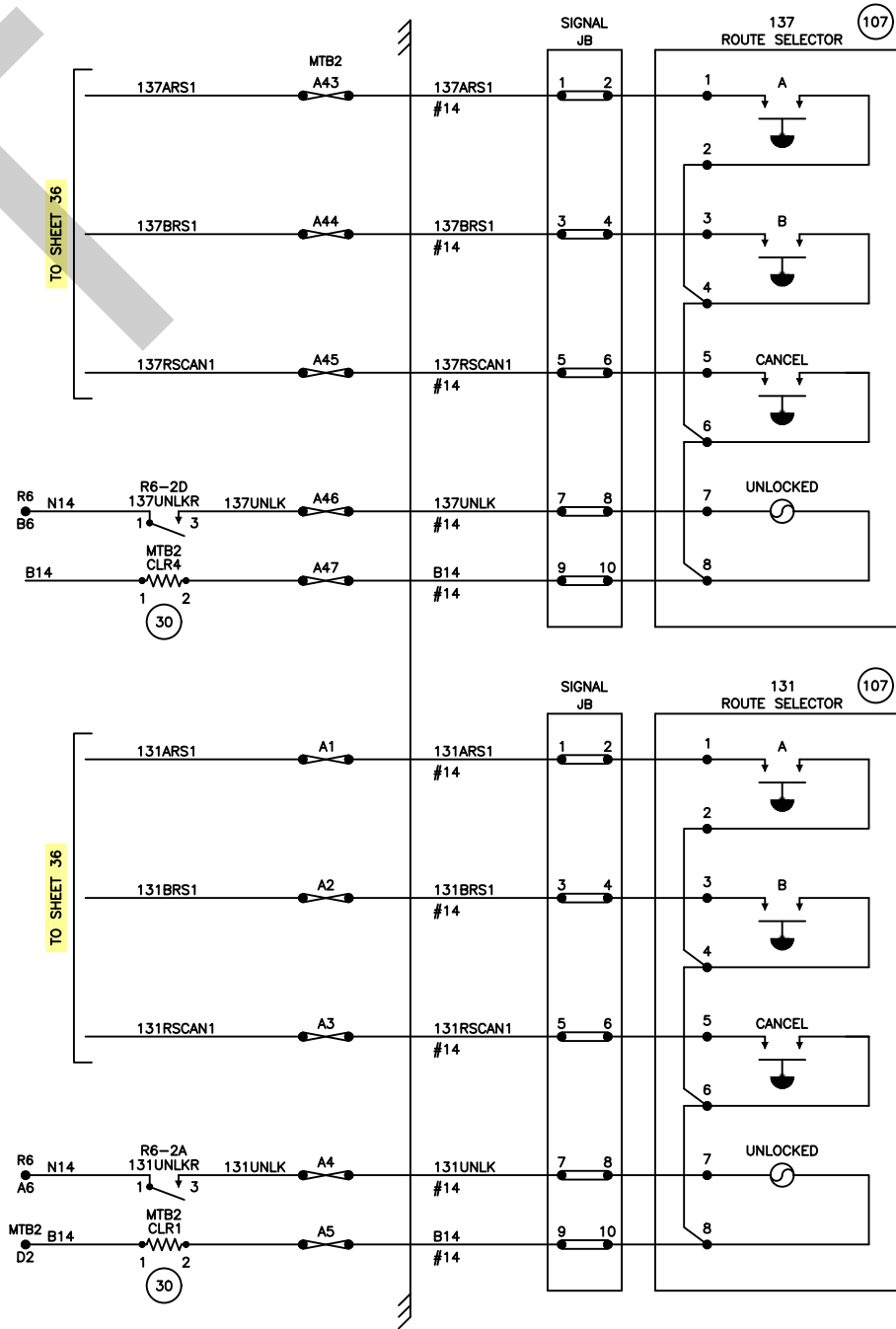
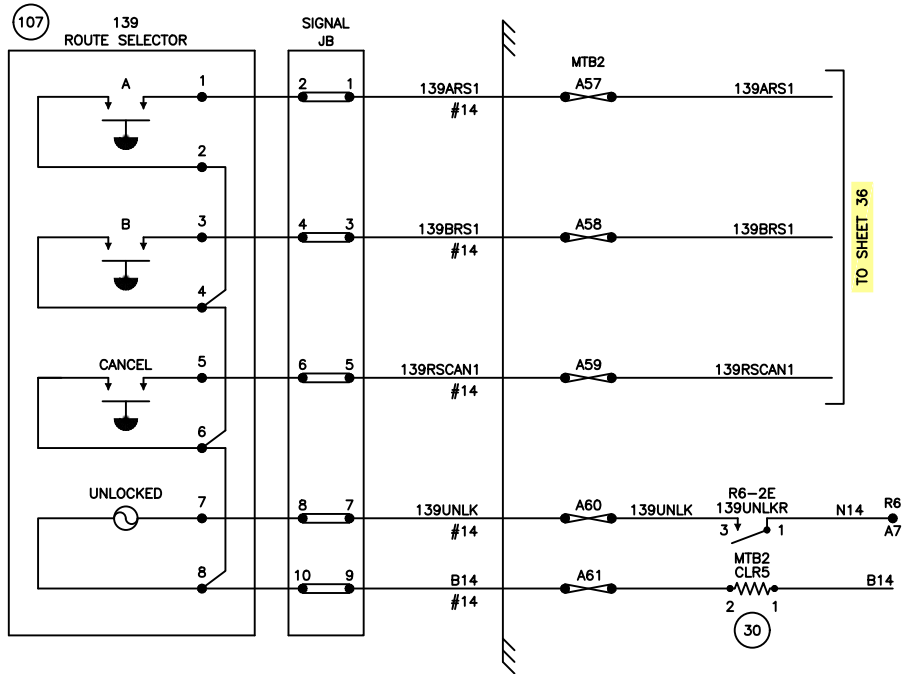


NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

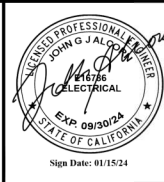


NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS														DESIGNED BY	DATE		SANTA FE – 12TH & IMPERIAL (BAYSIDE)		SCALE NTS		
														DRAWN BY			B16RC (BROADWAY)		CONTRACT NO.		
														CHECKED BY			AC TRACK CIRCUITS		DRAWING NO. SAB000RC-10		SHT NO. 10
														PRJ. ENG.							
0	NEW SIG HOUSE & CKTS THAT REPLACE CANNAL B016RC/PICA CASES																				
	10/31/02 KMZ																				
1	AS BUILT CHANGES PER CONTRACT #URT-10834/10879																				
	8/28/03																				
2	AS BUILT CHANGES PER CONTRACT #URT-108106/06/CP11378																				
	5/31/07 SECA																				
3	BROADWAY WYE REHAB CONTRACT JOC 1338-04																				
	11/14/11 HMS																				
4	C STREET CROSSOVERS SANDING CP1210070																				
	6/24/12 HMS																				
5	QUIETZANE UPGRADES CITY OF SD																				
	8/30/12 SELECT																				
6	RECORDED AS-IN-SERVICE																				
	8/8/18																				



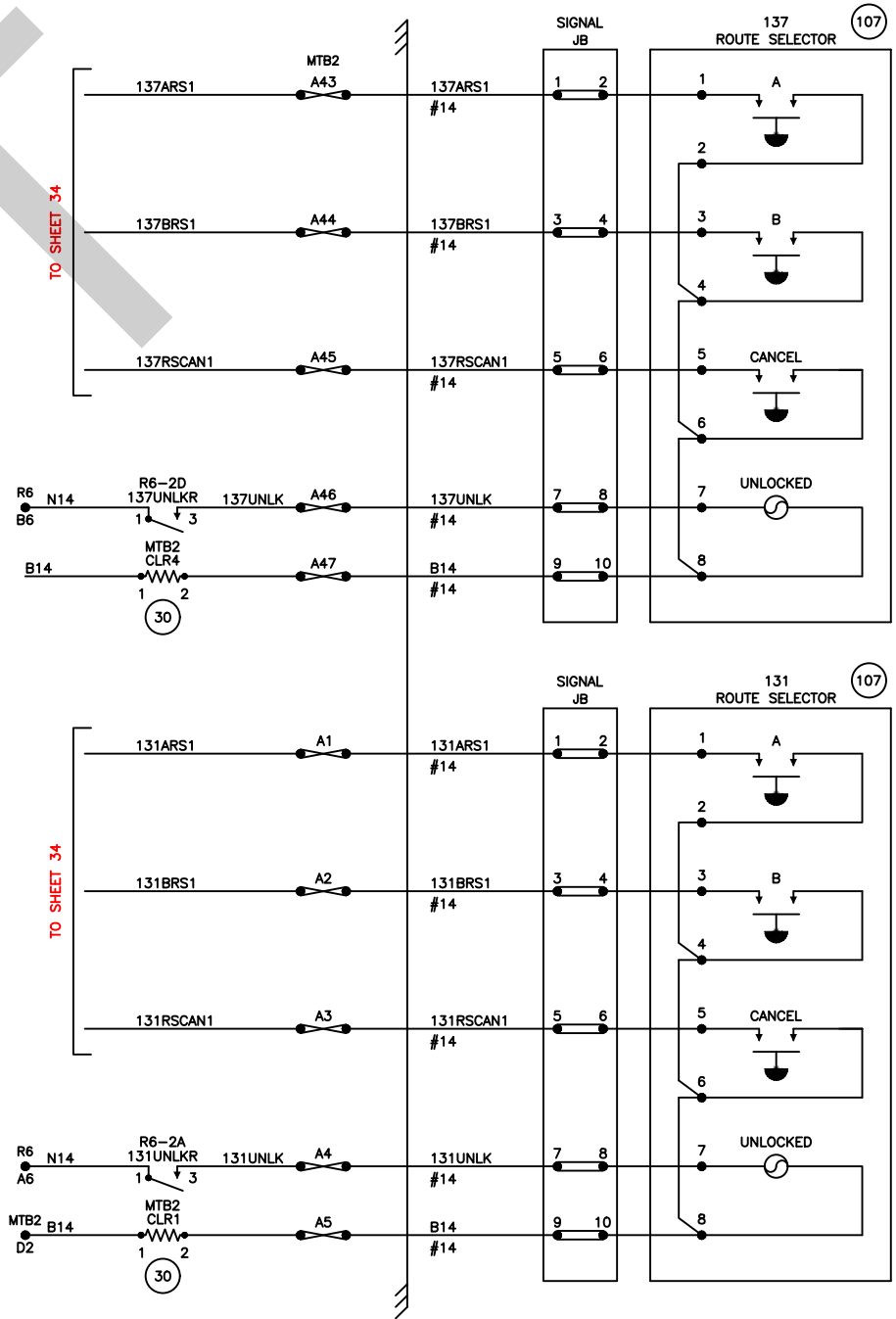
REVISIONS		DATE	BY	CHKD	APP'D
1	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS		
2	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS		
3	RECORDED AS-AN-SERVICE	8/8/18			
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

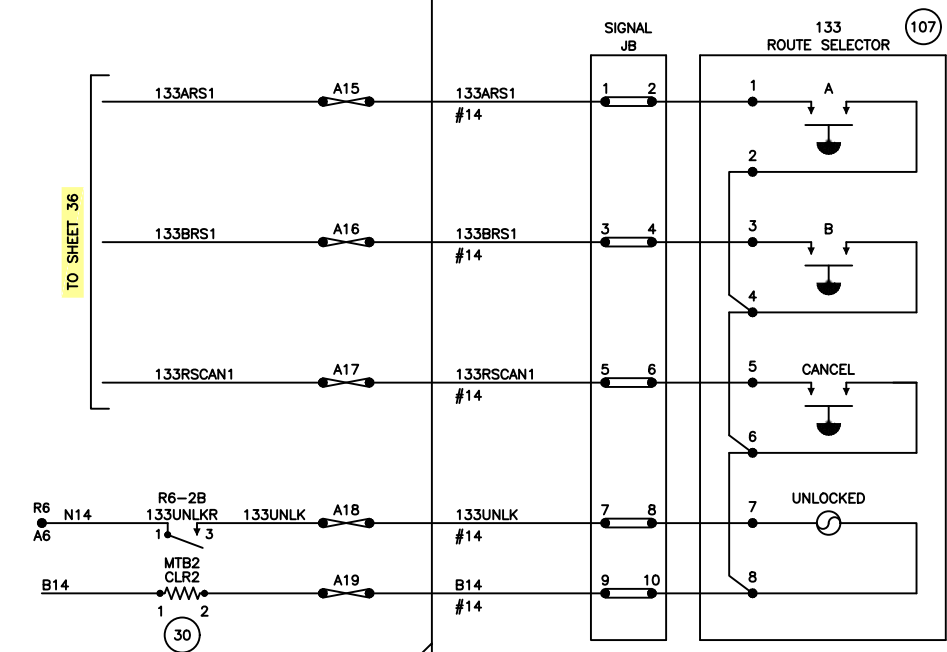
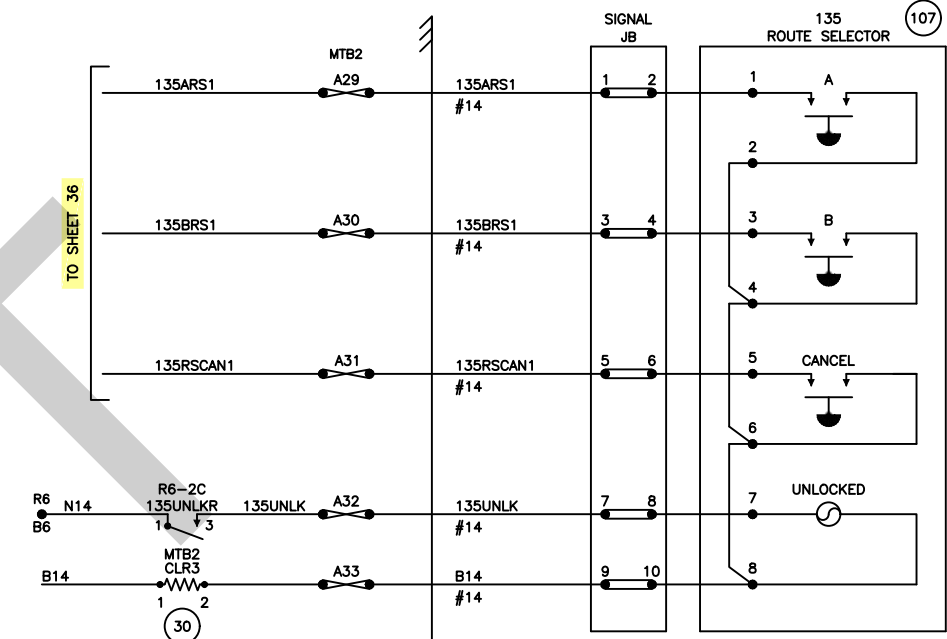
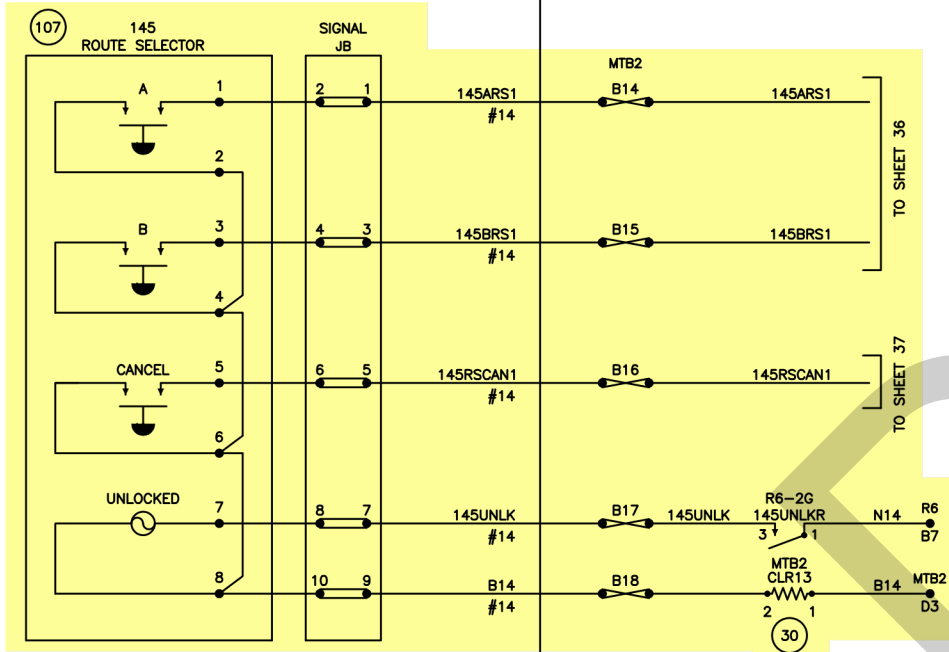
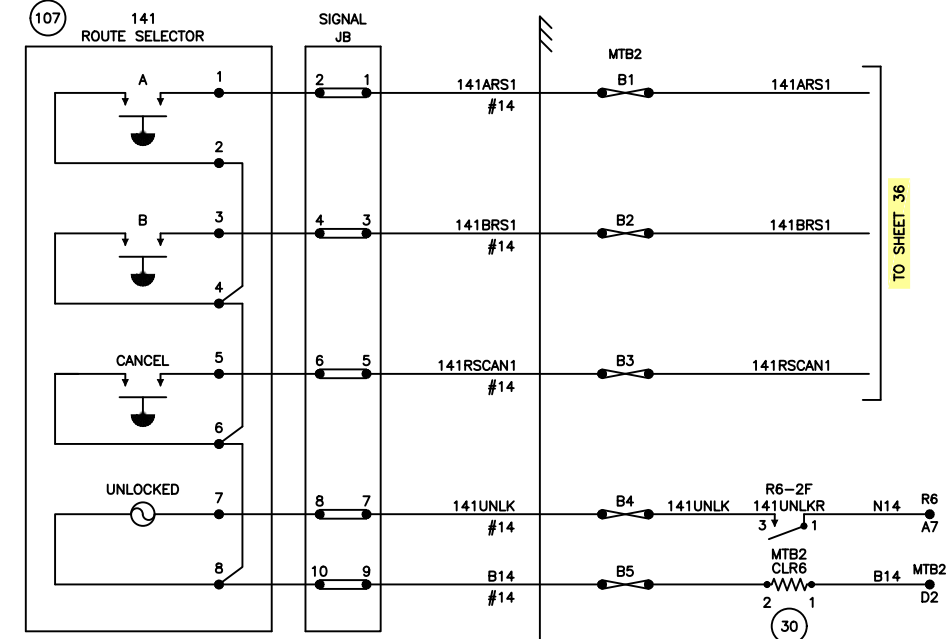


DESIGNED BY	GK	DATE	12/23
DRAWN BY	GK	CHECKED BY	
PRJ. ENG.			



C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
B16RC (BROADWAY) ROUTES SELECTOR CIRCUITS 131, 137, 139		CONTRACT NO.	
DRAWING NO. SA00916RC-11T	SHT NO. 11T		

[illegible]



REVISIONS	DATE	BY	CHKD	APP'D
1	11/14/11	HMS		
2	6/24/12	HMS		
3	8/8/18			
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

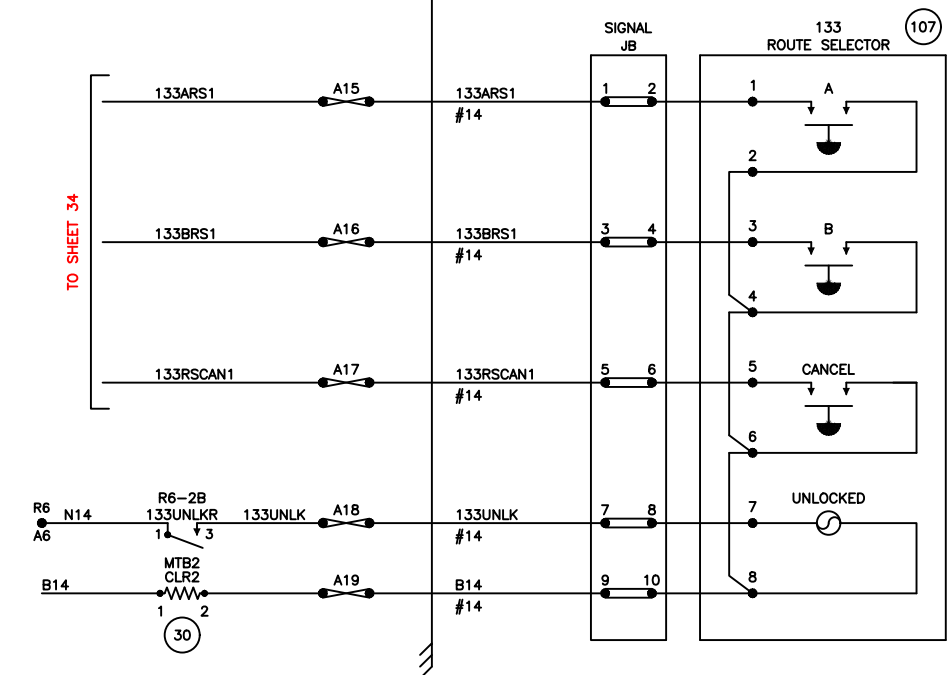
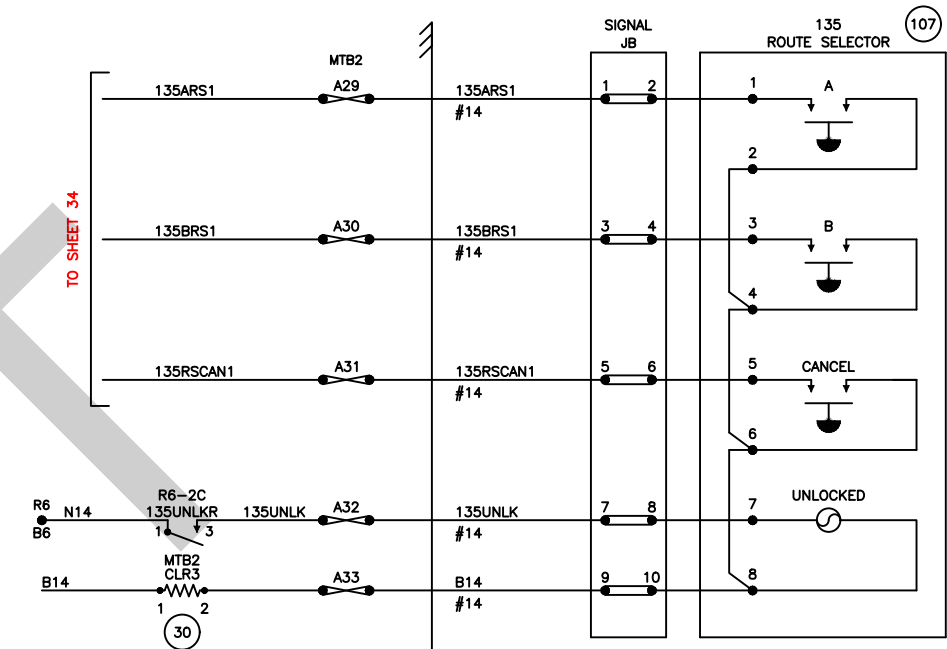
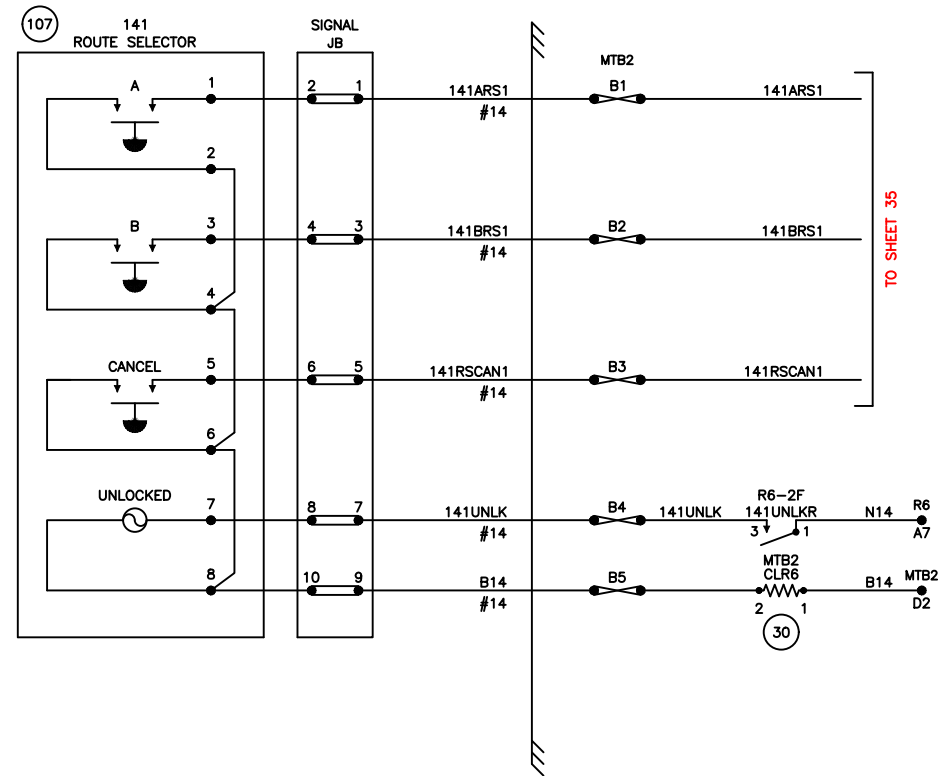


DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	
PRJ. ENG.	





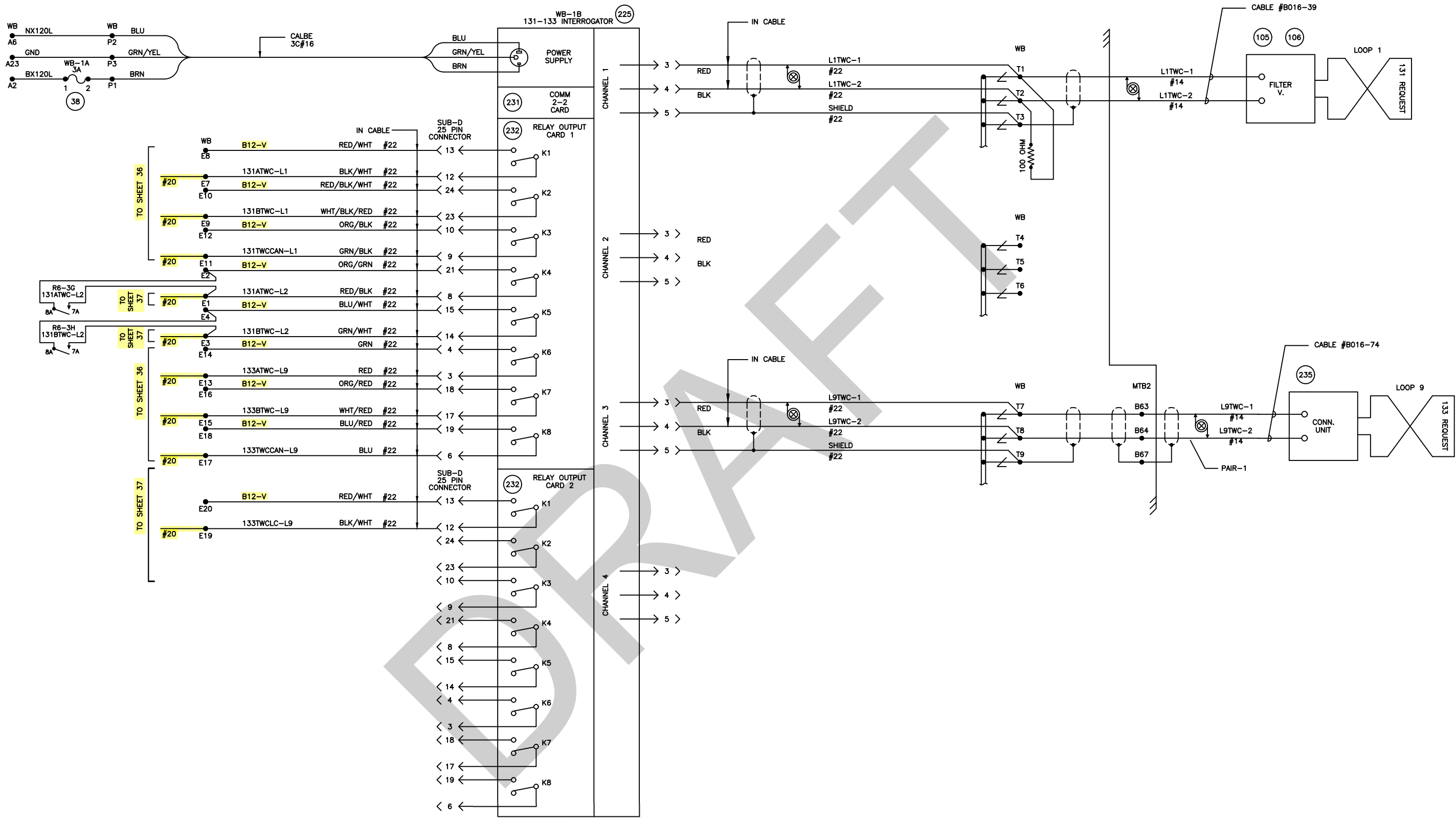
GLOBAL SIGNALS GROUP INC

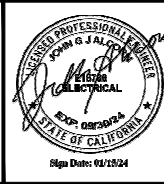
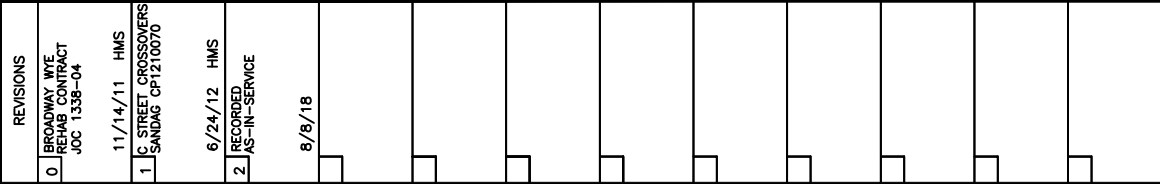
C STREET & BROADWAY WYE CONVERSION	SCALE
B16RC (BROADWAY)	NTS
ROUTE SELECTOR CCTS-133,135,141	CONTRACT NO.
DRAWING NO.	SHT NO.
A-163	127



RED = IN YELLOW = OUT

REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS C STREET CROSSOVERS SANJO CPT120070		6/24/12 HMS 2. RECORDED AS-IN-SERVICE 8/8/18				DESIGNED BY GK DATE 12/23 DRAWN BY GK 12/23 CHECKED BY PRJ. ENG.				C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) ROUTE SELECTOR CCTS-133,135,141		SCALE NTS CONTRACT NO. DRAWING NO. SBT006RC-12 SHT NO. 12	
---	--	---	--	---	--	--	--	---	--	---	--	---	--



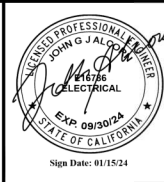
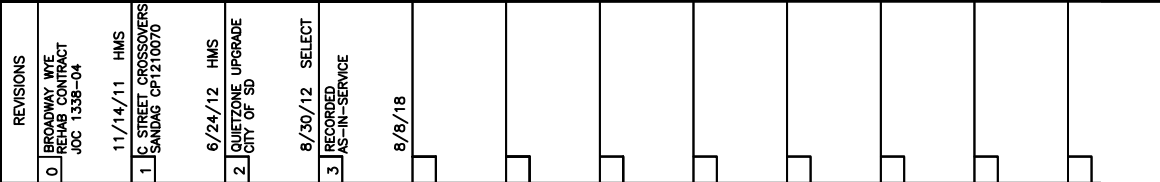


DESIGNED BY	DATE
GK	12/23
DRAWN BY	
GK	12/23
CHECKED BY	
PRJ. ENG.	

GLOBAL
SIGNALS
GROUP INC

C STREET & BROADWAY WYE CONVERSION
B16RC (BROADWAY) 131-133 TWC INTERROGATOR CIRCUITS

SCALE		NTS	
CONTRACT NO.			
DRAWING NO.		SHT NO.	
SAB0016PC_13		13	



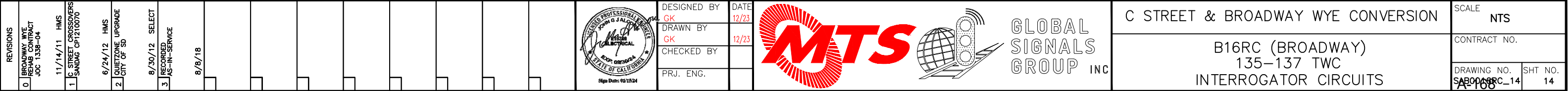
DESIGNED BY GK	DATE 12/23
DRAWN BY GK	12/23
CHECKED BY	
PRJ. ENG.	

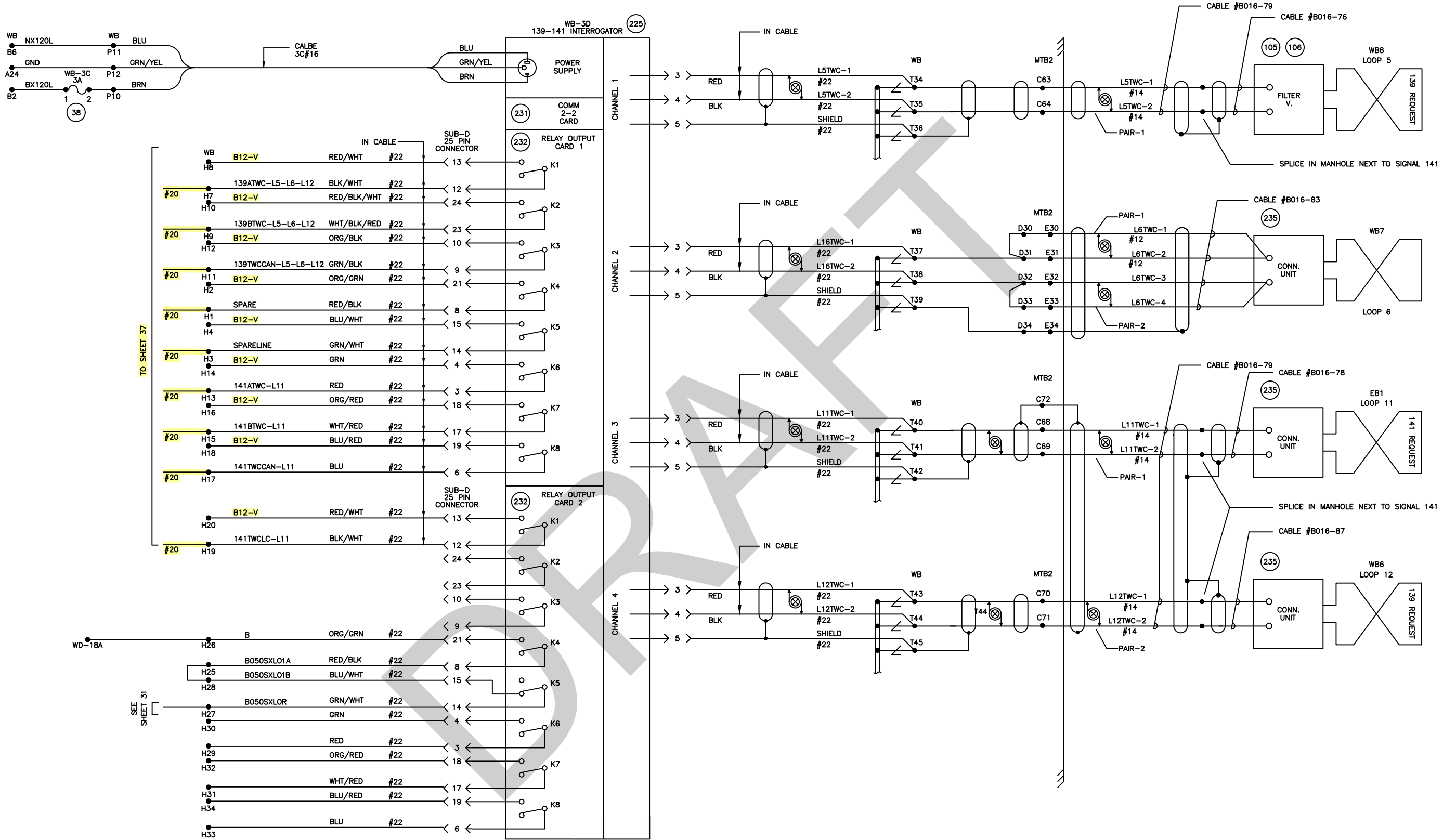


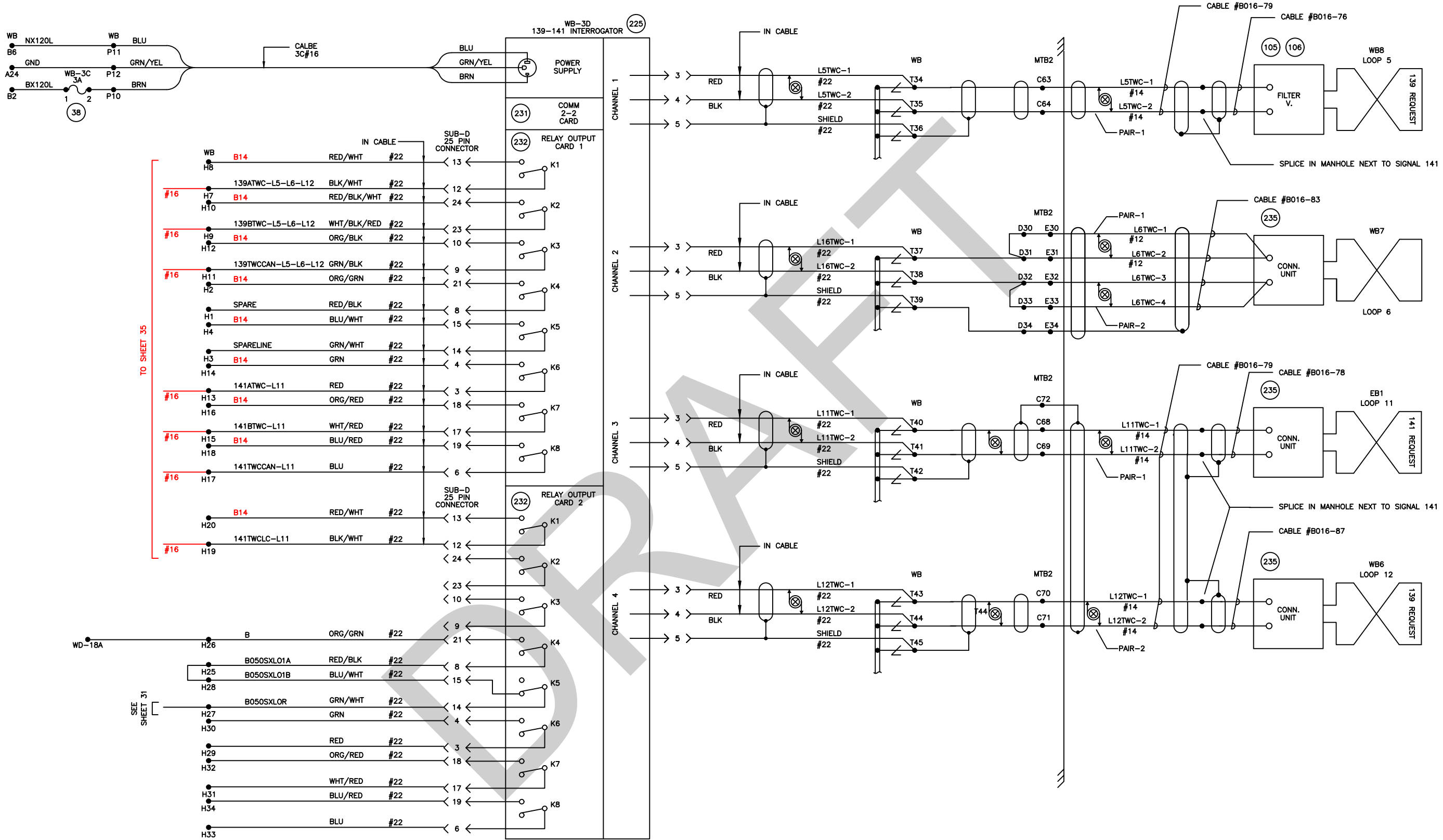
GLOBAL
SIGNALS
GROUP INC

<p>B16RC (BROADWAY) 135-137 TWC INTERROGATOR CIRCUITS</p>

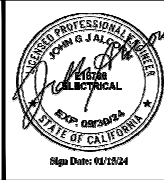
SCALE	
NTS	
CONTRACT NO.	
DRAWING NO.	SHT NO.
SAB00157C-14T	14T







REVISIONS		DATE	BY	CHKD	APP'D
1	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS		
2	1. C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS		
3	2. SILENTONE UPGRADE CITY OF SD	8/30/12	SELECT		
4	3. RECORDED AS-IN-SERVICE	8/8/18			
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					



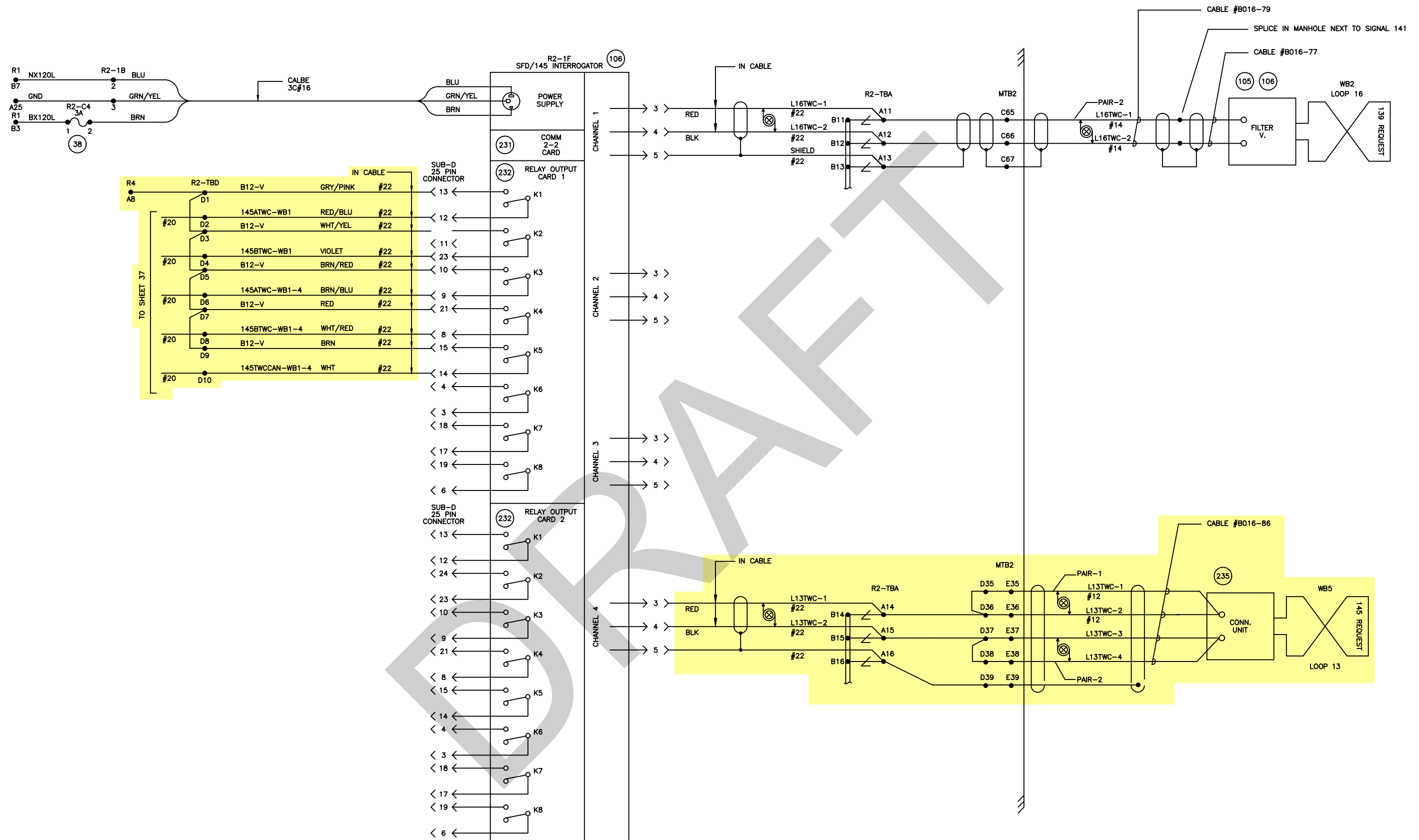
DESIGNED BY	DATE
GK	12/23
DRAWN BY	
GK	12/23
CHECKED BY	
PRJ. ENG.	





C STREET & BROADWAY WYE CONVERSION

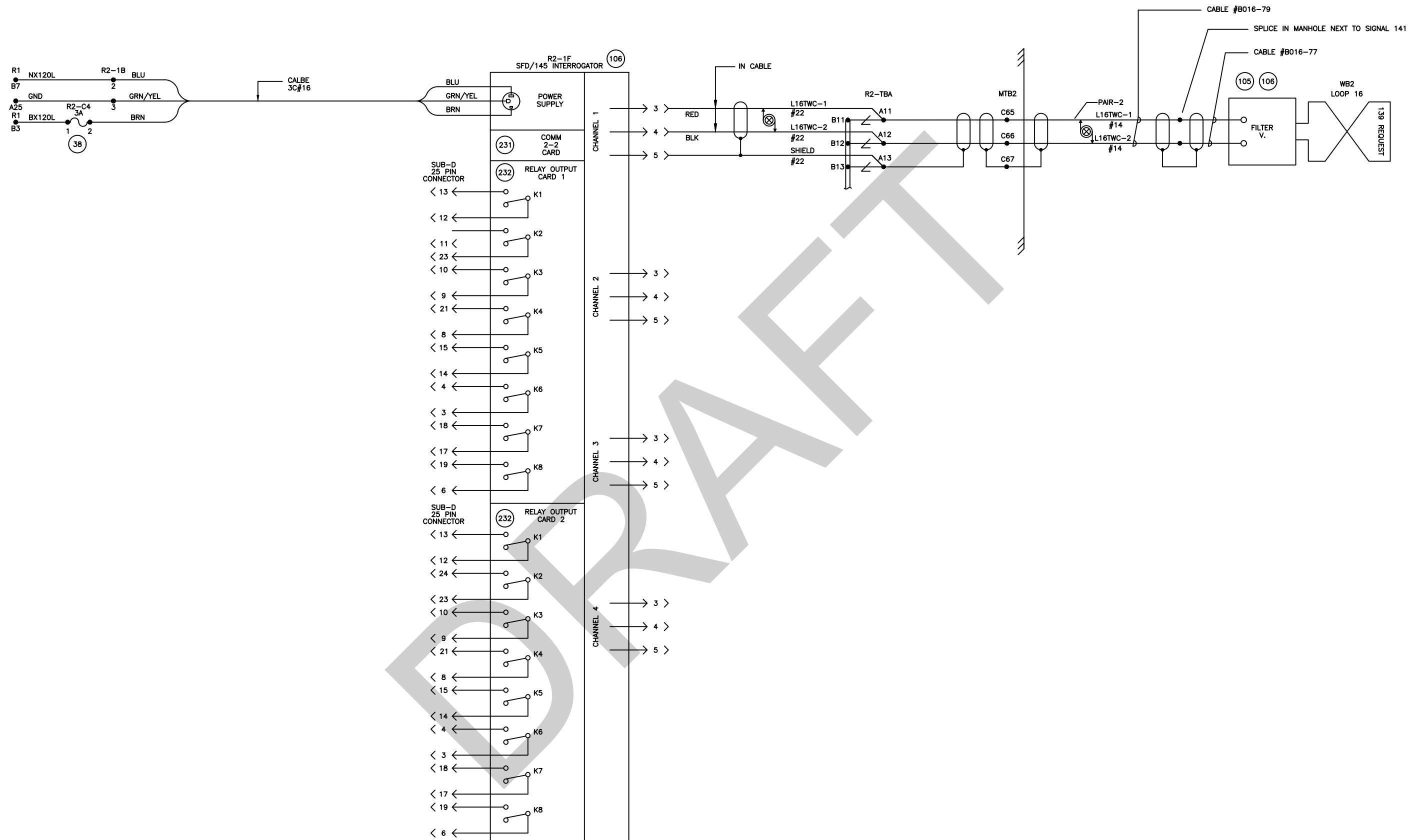
B16RC (BROADWAY)
139-141 TWC INTERROGATOR CIRCUITS

SCALE	NTS
CONTRACT NO.	
DRAWING NO.	SHT NO.
A-170	15





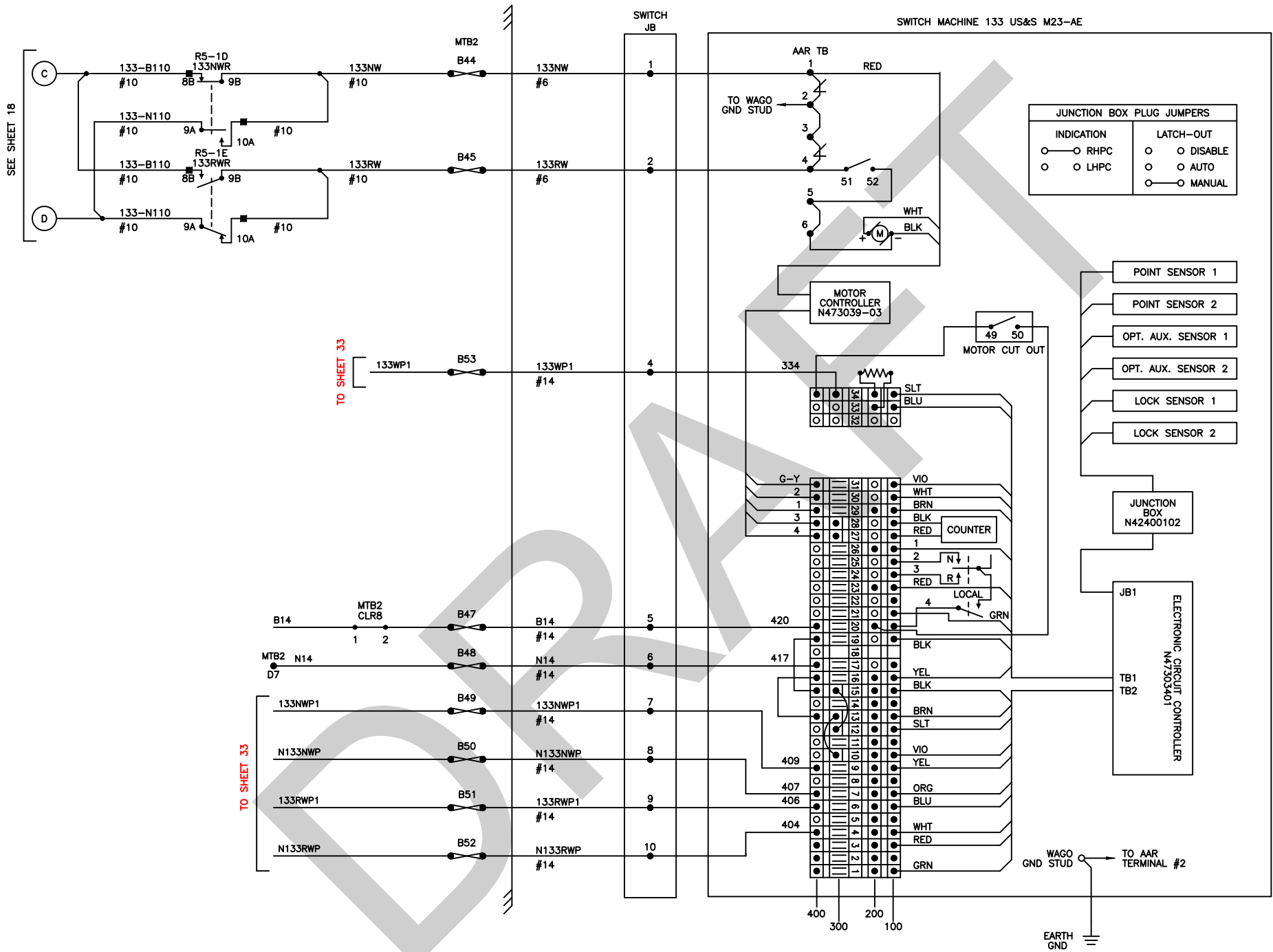
RED = IN YELLOW = OUT

REVISIONS		11/14/11 HMS		6/24/12 HMS		8/8/18				DESIGNED BY GK DATE 12/23 DRAWN BY GK DATE 12/23 CHECKED BY PRJ. ENG.				C STREET & BROADWAY WYE CONVERSION		SCALE NTS	
0 BROADWAY WYE INTERROGATOR JOC 1339-04		1 C STREET CROSSOVERS SANDAG CP1210070		2 RECORDED AS-IN-SERVICE										B16RC (BROADWAY) SFD/145 TWC INTERROGATOR CIRCUITS		CONTRACT NO.	
																DRAWING NO. SFD/145 TWC SHT NO. 16T	



RED = IN YELLOW = OUT

REVISIONS 0 BROADWAY WYE INTERROGATOR JOC 139-04 11/14/11 HMS 1 C STREET CROSSOVERS SANJING CP1210070		6/24/12 HMS 2 RECORDED AS-IN-SERVICE 8/8/18		 DESIGNED BY GK DRAWN BY GK CHECKED BY PRJ. ENG.		DATE 12/23 12/23		 GLOBAL SIGNALS GROUP INC		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) SFD/145 TWC INTERROGATOR CIRCUITS		SCALE NTS		CONTRACT NO.		DRAWING NO. SAB0076RC_16		SHT NO. 16	
--	--	--	--	--	--	------------------------	--	--	--	---	--	--------------	--	--------------	--	-----------------------------	--	---------------	--

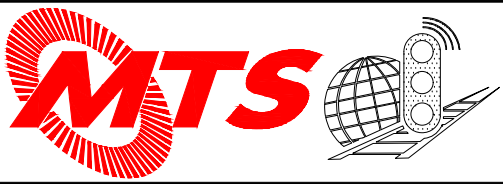


RED = IN YELLOW = OUT

REVISIONS		DATE	BY	CHKD	APP'D
1	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS		
2	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS		
3	GUETZTONE UPGRADES CITY OF SD	8/30/12	SELECT		
4	RECORDED AS-IN-SERVICE	8/8/18			
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

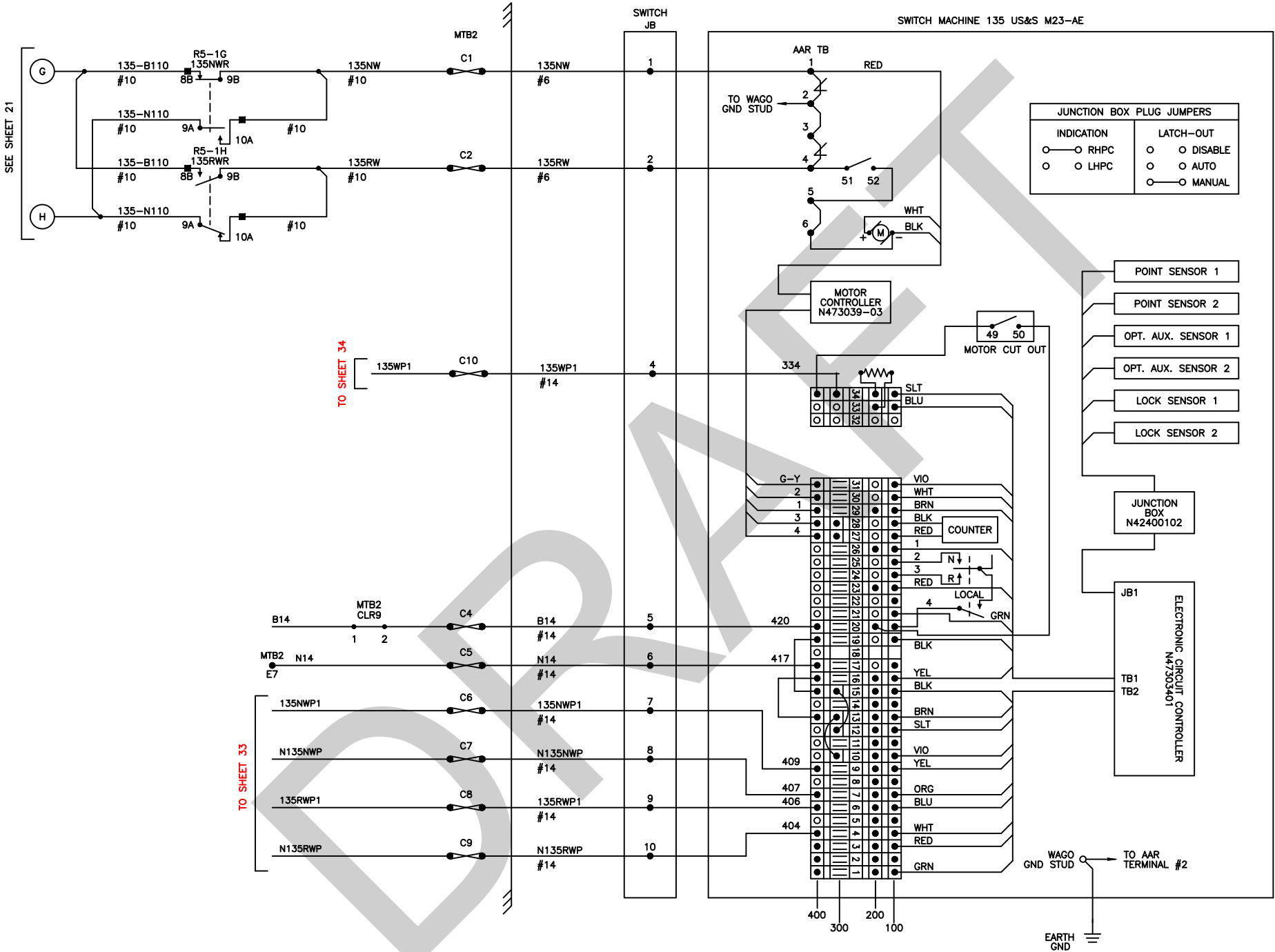


DESIGNED BY	GK	DATE	12/23
DRAWN BY	GK	DATE	12/23
CHECKED BY			
PRJ. ENG.			



GLOBAL SIGNALS GROUP INC

C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
B16RC (BROADWAY) SWITCH 133 CIRCUITS		CONTRACT NO.	
DRAWING NO.	SHT NO.		
SA00176C_19	19		



REVISIONS		DATE	BY	CHKD	APP'D
1	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS		
2	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS		
3	QUETZON UPGRADES CITY OF SD	8/30/12	SELECT		
4	RECORDED AS-IN-SERVICE	8/8/18			
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					



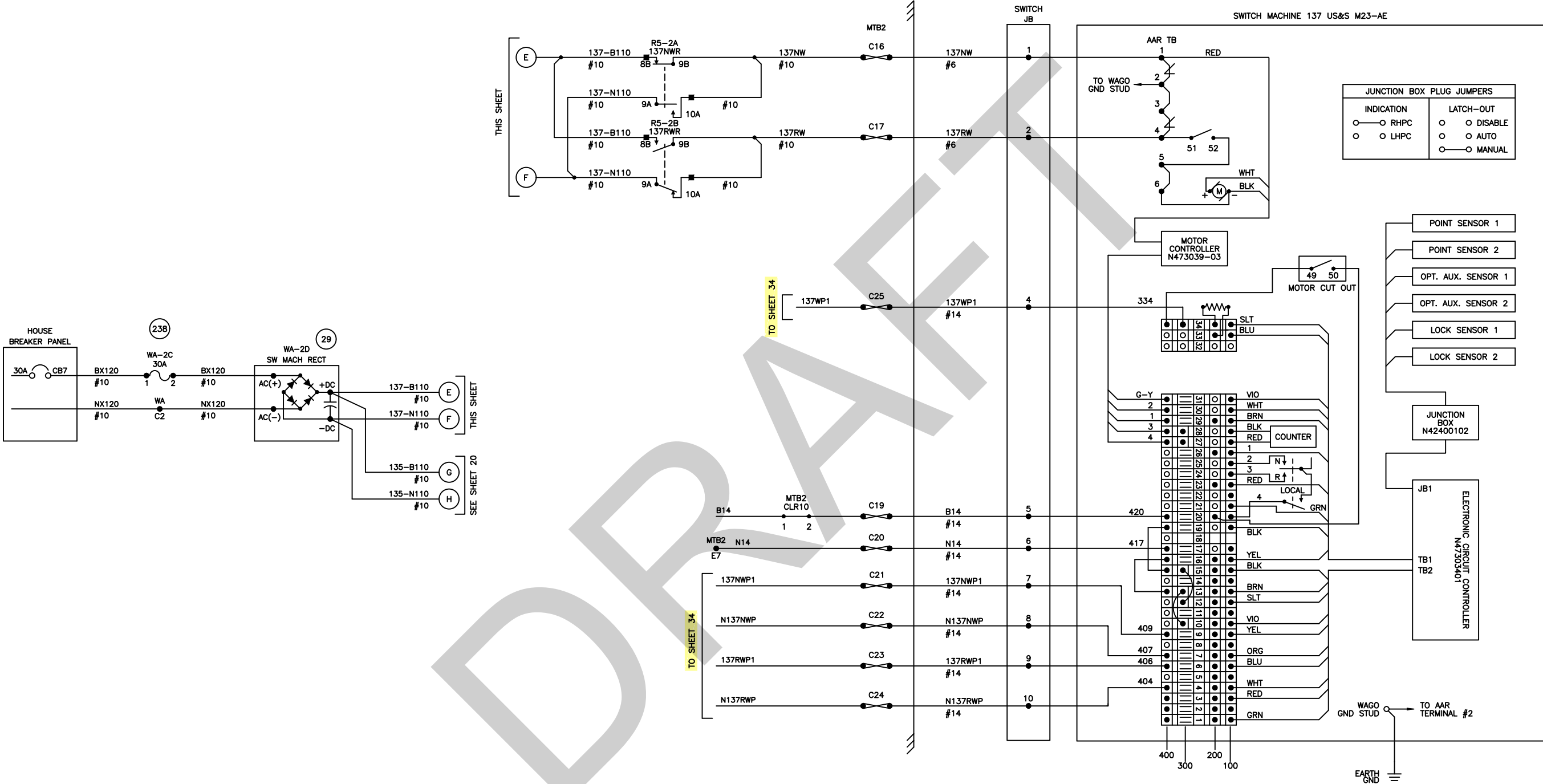
DESIGNED BY	GK	DATE	12/23
DRAWN BY	GK	DATE	12/23
CHECKED BY			
PRJ. ENG.			



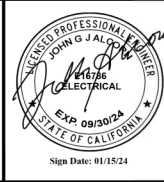
GLOBAL
SIGNALS
GROUP INC

C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
B16RC (BROADWAY) SWITCH 135 CIRCUITS		CONTRACT NO.	
DRAWING NO.	SHT NO.		
SA00178C_20	20		

SCALE	NTS
CONTRACT NO.	
DRAWING NO.	SHT NO.
SA00178C_20	20



REVISIONS		DATE	BY	CHKD
1	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS	
2	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS	
3	QUIETONE UPGRADES CITY OF SD	8/30/12	SELECT	
4	RECORDED AS-IN-SERVICE	8/8/18		
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				
51				
52				
53				
54				
55				
56				
57				
58				
59				
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70				
71				
72				
73				
74				
75				
76				
77				
78				
79				
80				
81				
82				
83				
84				
85				
86				
87				
88				
89				
90				
91				
92				
93				
94				
95				
96				
97				
98				
99				
100				



DESIGNED BY	GK	DATE	12/23
DRAWN BY	GK	CHECKED BY	
PRJ. ENG.			

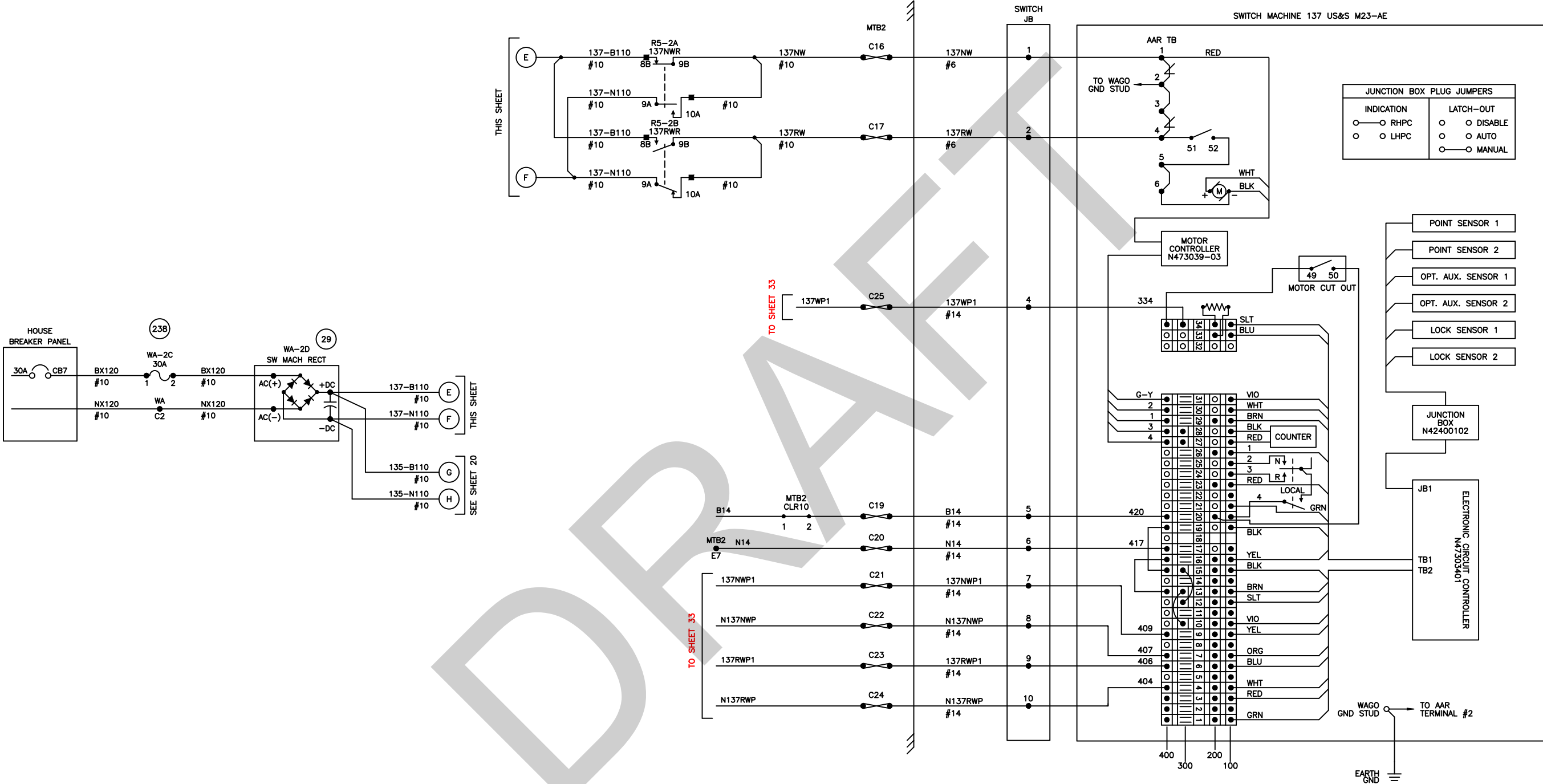


GLOBAL SIGNALS GROUP INC

C STREET & BROADWAY WYE CONVERSION
B16RC (BROADWAY)
SWITCH 137 CIRCUITS

SCALE	NTS
CONTRACT NO.	
DRAWING NO.	SA009156C-21T
SHT NO.	21T

RED = IN YELLOW = OUT



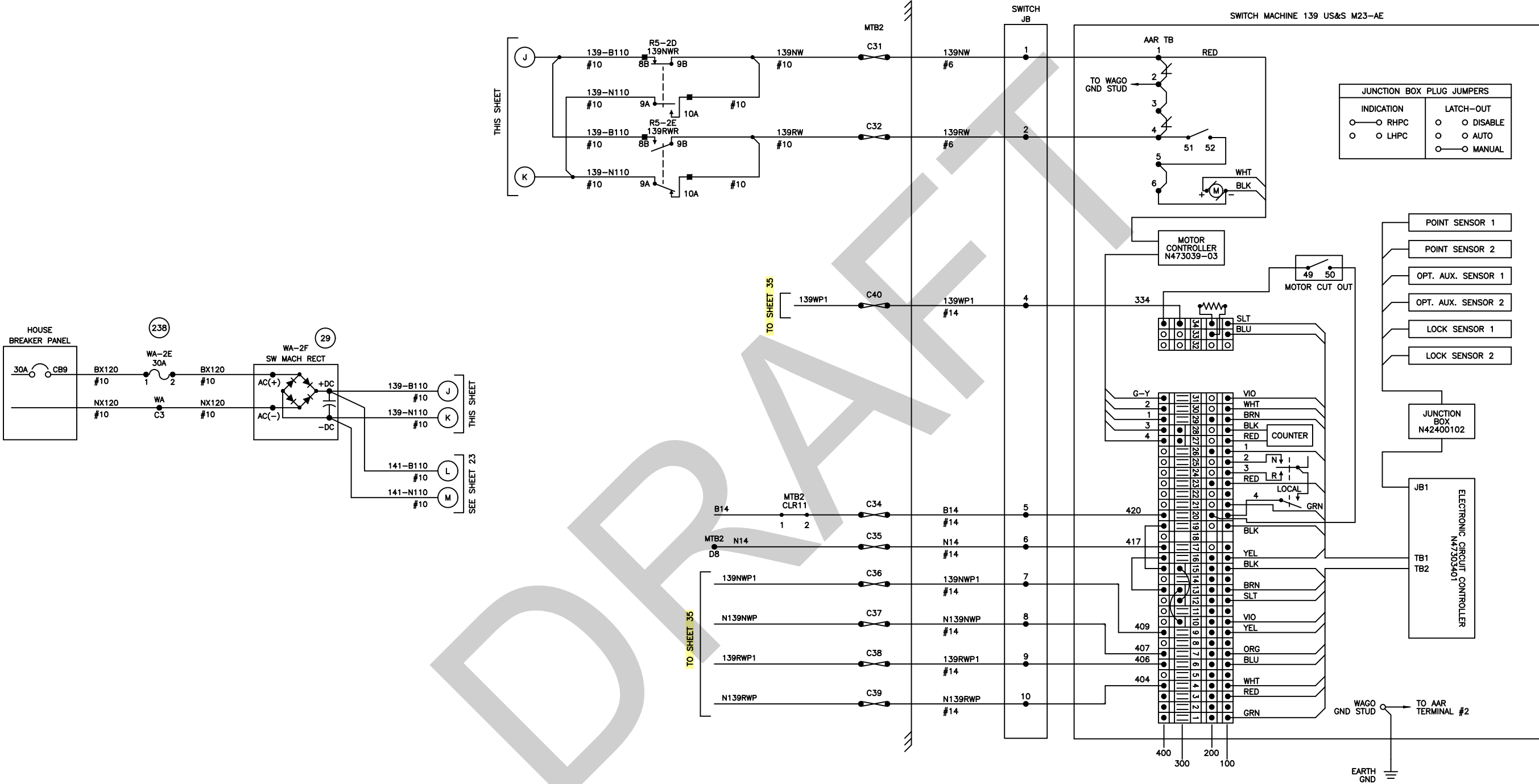
REVISIONS		DATE	BY	CHKD	APP'D
1	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS		
2	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS		
3	QUIETONE UPGRADES CITY OF SD	8/30/12	SELECT		
4	RECORDED AS-IN-SERVICE	8/8/18			
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					



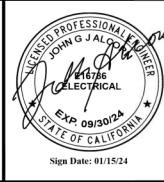
DESIGNED BY	DATE
GK	12/23
DRAWN BY	DATE
GK	12/23
CHECKED BY	
PRJ. ENG.	



C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
B16RC (BROADWAY) SWITCH 137 CIRCUITS		CONTRACT NO.	
DRAWING NO.	SHT NO.		
A-181	21		



REVISIONS		DATE	BY	CHKD	APP'D
1	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS		
2	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS		
3	GUETSTONE UPGRADES CITY OF SD	8/30/12	SELECT		
4	RECORDED AS-IN-SERVICE	8/8/18			
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63					
64					
65					
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					



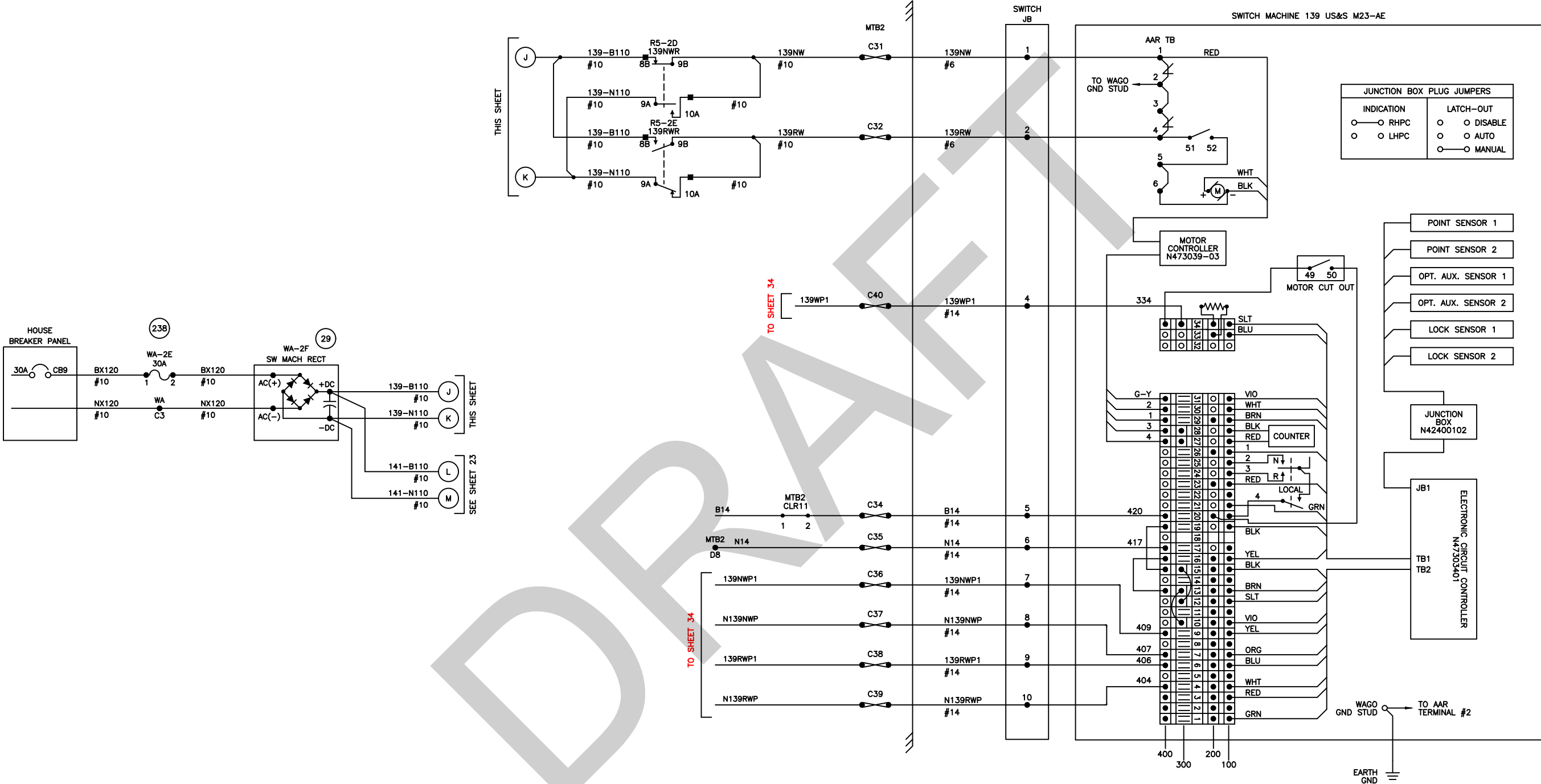
DESIGNED BY	DATE
GK	12/23
DRAWN BY	DATE
GK	12/23
CHECKED BY	
PRJ. ENG.	



GLOBAL SIGNALS GROUP INC

C STREET & BROADWAY WYE CONVERSION
B16RC (BROADWAY)
SWITCH 139 CIRCUITS

SCALE	NTS
CONTRACT NO.	
DRAWING NO.	SHT NO.
A-182	22T



REVISIONS		DATE	BY	CHKD	APP'D
1	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS		
2	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS		
3	QUIETONE UPGRADES CITY OF SD	8/30/12	SELECT		
4	RECORDED AS-IN-SERVICE	8/8/18			
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63					
64					
65					
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					

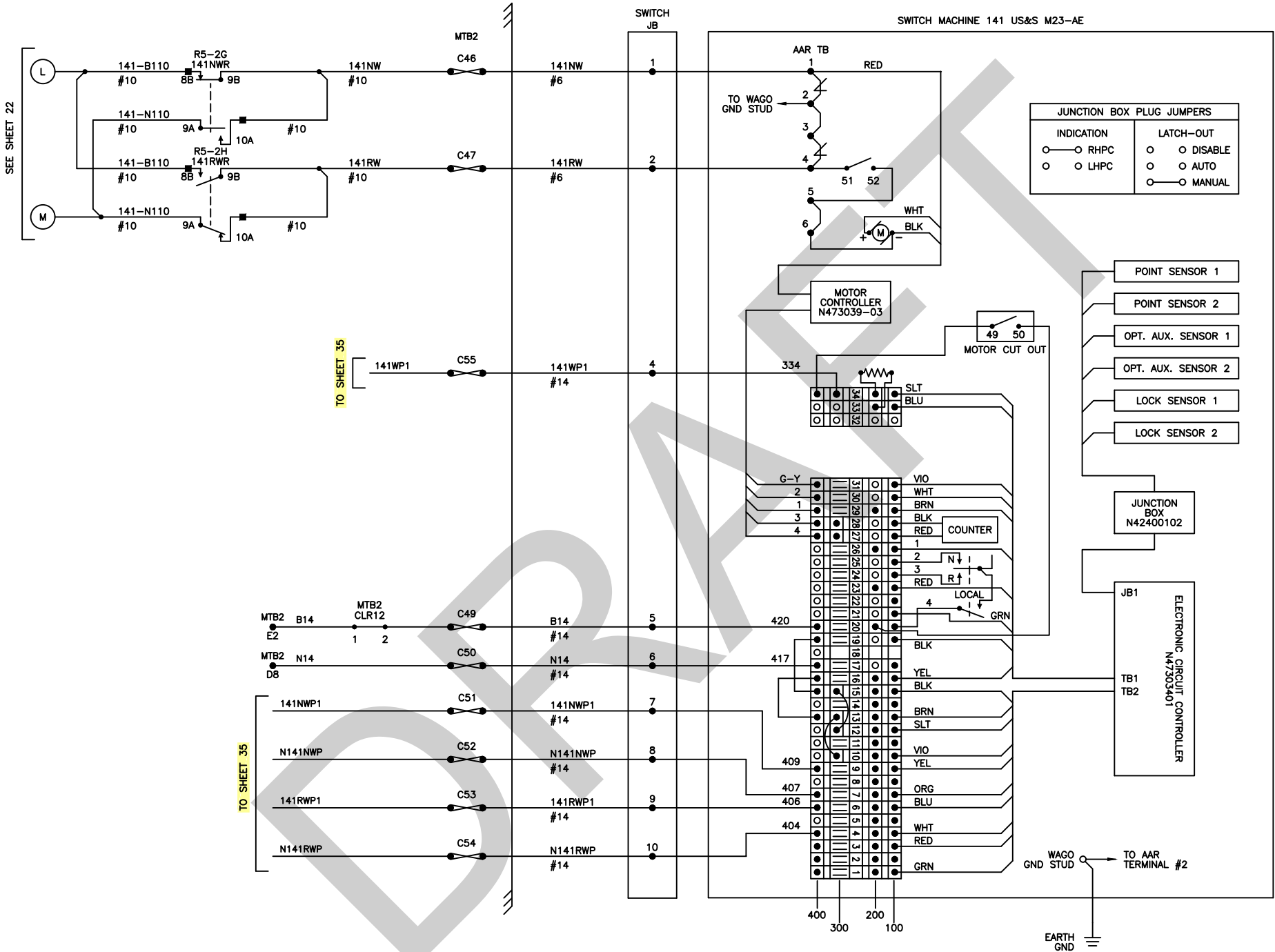


DESIGNED BY	DATE
GK	12/23
DRAWN BY	DATE
GK	12/23
CHECKED BY	
PRJ. ENG.	

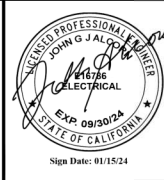


GLOBAL SIGNALS GROUP INC

C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
B16RC (BROADWAY) SWITCH 139 CIRCUITS		CONTRACT NO.	
DRAWING NO. SAB0006RC_22	SHT NO. 22		



REVISIONS		DATE	BY	CHKD	APP'D
0	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS		
1	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS		
2	GUETZTONE UPGRADES CITY OF SD	8/30/12	SELECT		
3	RECORDED AS-IN-SERVICE	8/8/18			
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63					
64					
65					
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					

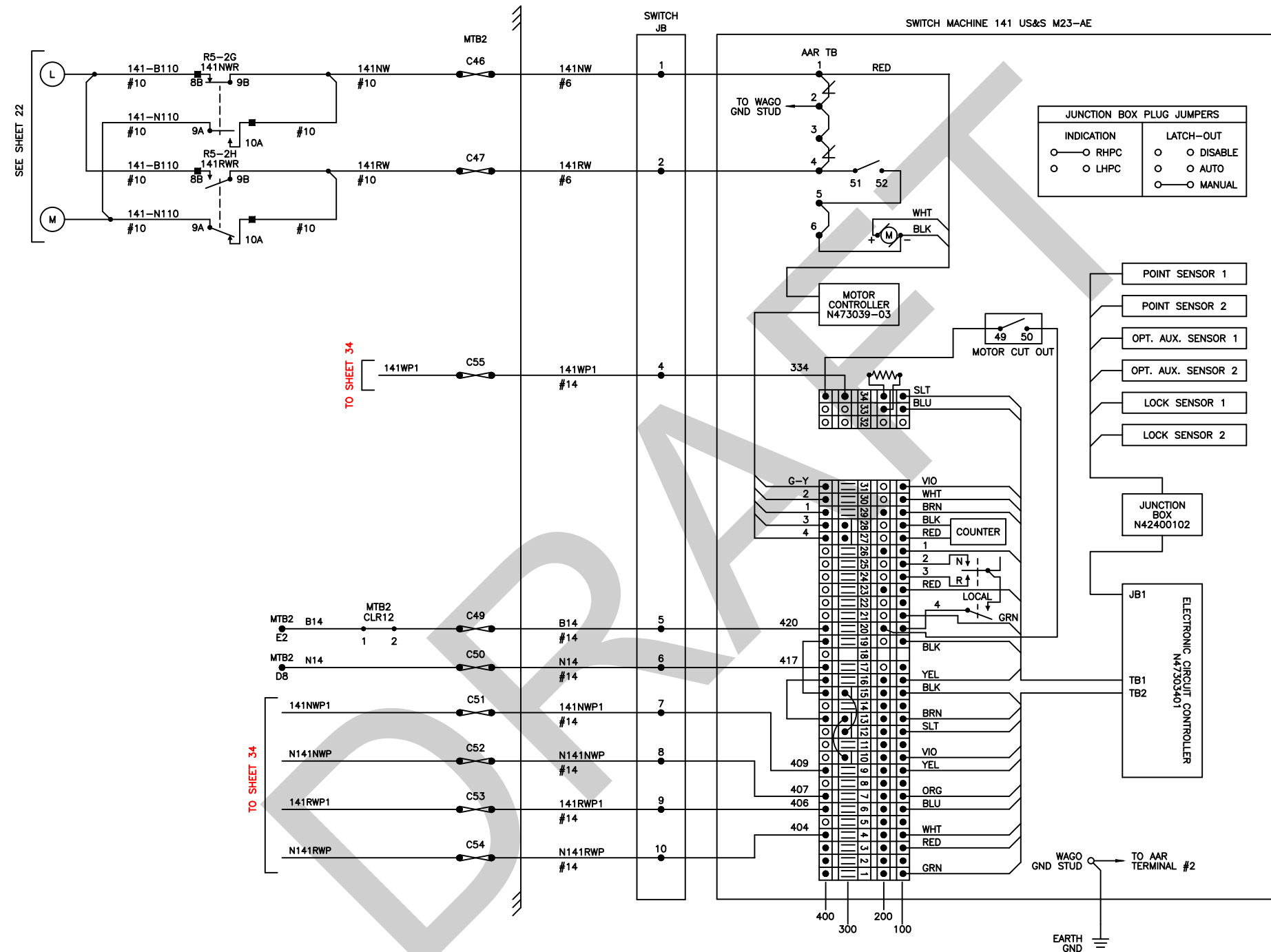


DESIGNED BY	GK	DATE	12/23
DRAWN BY	GK	DATE	12/23
CHECKED BY			
PRJ. ENG.			





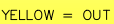
GLOBAL
SIGNALS
GROUP INC

C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
B16RC (BROADWAY) SWITCH 141 CIRCUITS		CONTRACT NO.	
DRAWING NO.	SHT NO.	DRAWING NO.	SHT NO.
SA00016RC-23T	23T	SA00016RC-23T	23T

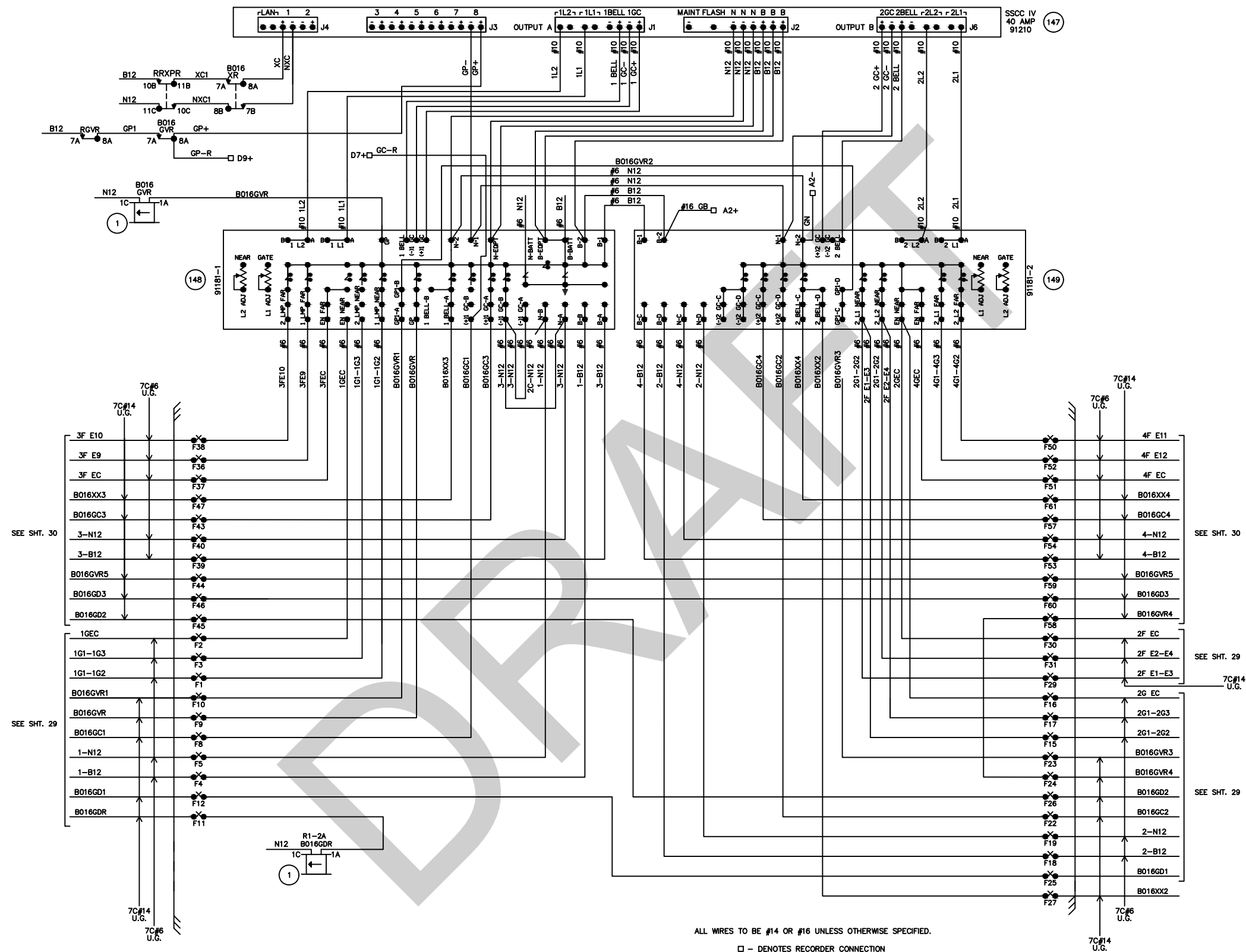


RED = IN YELLOW = OUT



REVISIONS 0 BROADWAY WYE 11/14/11 HMS 1 C STREET CROSSOVERS 8/30/12 SELECT 3 RECORDED 8/8/18 2 QUIETZONE UPGRADES CITY OF SD 8/30/12 SELECT 3 RECORDED 8/8/18 2 QUIETZONE UPGRADES CITY OF SD		 DESIGNED BY GK DATE 12/23 DRAWN BY GK DATE 12/23 CHECKED BY PRJ. ENG.	 GLOBAL SIGNALS GROUP INC	C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) SWITCH 141 CIRCUITS	SCALE NTS CONTRACT NO. DRAWING NO. SAB00008RC-23 SHT NO. 23
--	--	--	--	---	---

[illegible]

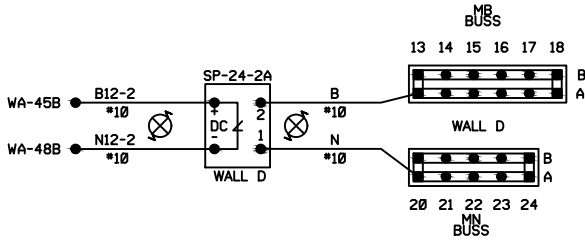
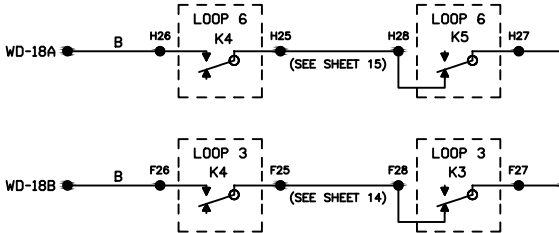
REVISIONS	0	NEW SIG HOUSE & CKTS THAT REPLACE CABLE BOT/RC/PICA CASES	10/31/02	KMZ	1	AS BUILT CHANGES PER CONTRACT #LRT-1106100/CIP11378	5/31/07	SECA	2	BROADWAY WYE REHAB CONTRACT JOC 1338-04	11/14/11	HMS	3	QUIETZONE UPGRADES CITY OF SD	8/30/12	SELECT	4	RECORDED AS-IN-SERVICE	8/8/18																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
-----------	---	---	----------	-----	---	---	---------	------	---	---	----------	-----	---	-------------------------------	---------	--------	---	------------------------	--------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--



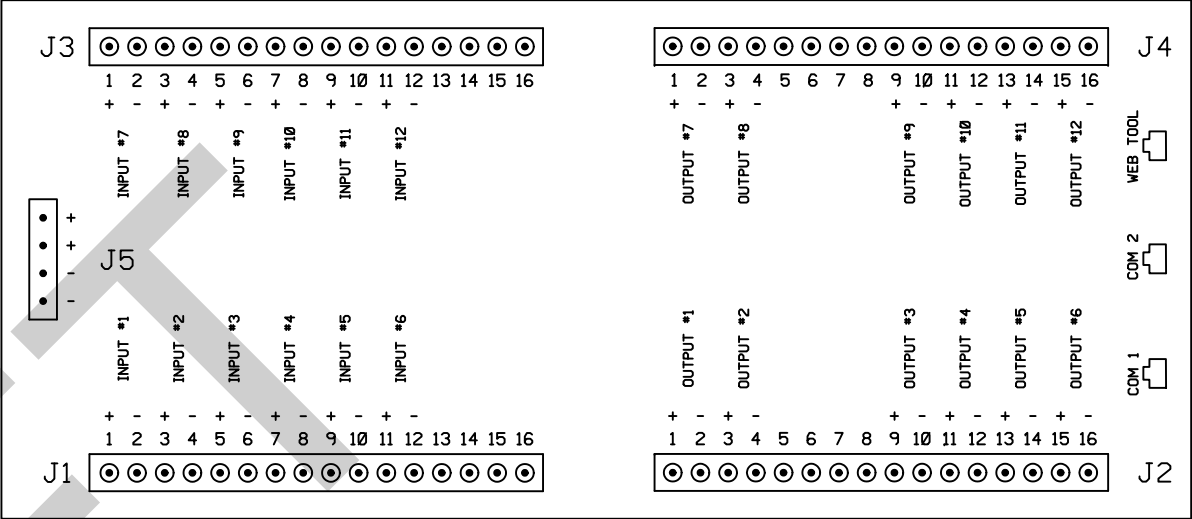
NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS 0. NEW SIG HOUSE & CKTS THAT REPLACE ORIGINAL B016RC/RCA CASES 10/31/02 KMZ 1. AS BUILT CHANGES PER CONTRACT #LRT-106100/CIP11378 5/31/07 SECA 2. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HNS 3. QUIETZONE UPGRADES CITY OF SD 8/30/12 SELECT 4. RECORDED AS-IN-SERVICE 8/8/18			DESIGNED BY _____ DATE _____ DRAWN BY _____ CHECKED BY _____ PRJ. ENG. _____		SANTA FE – 12TH & IMPERIAL (BAYSIDE) B16RC (BROADWAY) CROSSING CONTROL CIRCUITS	SCALE NTS CONTRACT NO. DRAWING NO. SFP0000028 SHT NO. 28
---	--	---	---	---	---	--

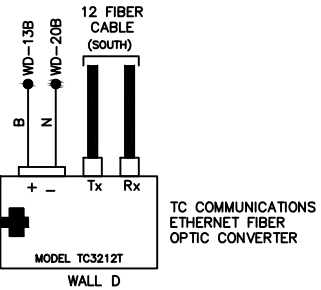
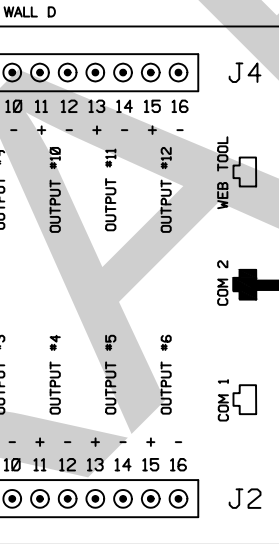
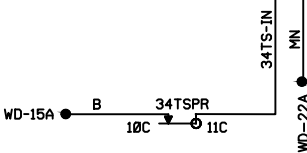
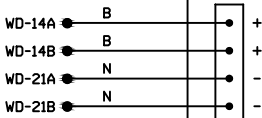
LOOP 3 - K4 = PICK ON IN-SERVICE TROLLEY
LOOP 3 - K3 = PICK ON OUT OF SERVICE TROLLEY
LOOP 6 - K4 = PICK ON IN SERVICE TROLLEY
LOOP 6 - K5 = PICK ON OUT OF SERVICE TROLLEY



STANDBY UNIT
MICROLOK
N17700108




NORMAL UNIT
MICROLOK
N17700108

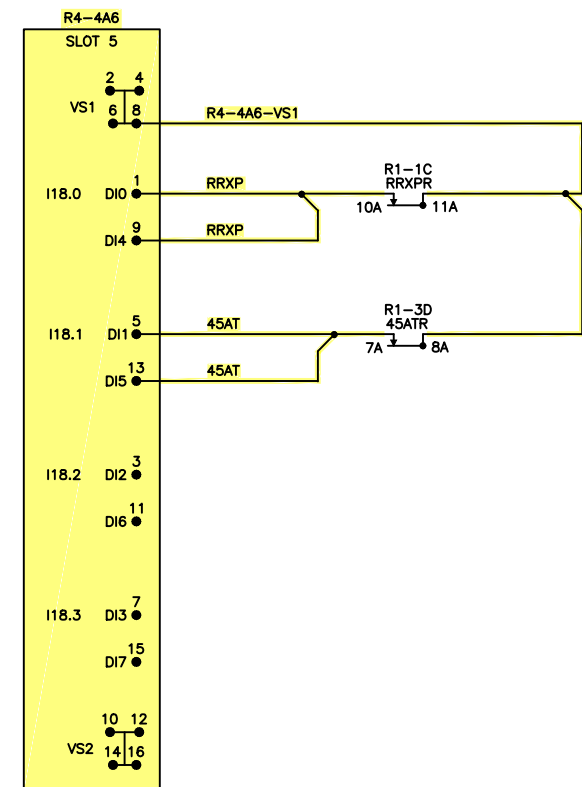


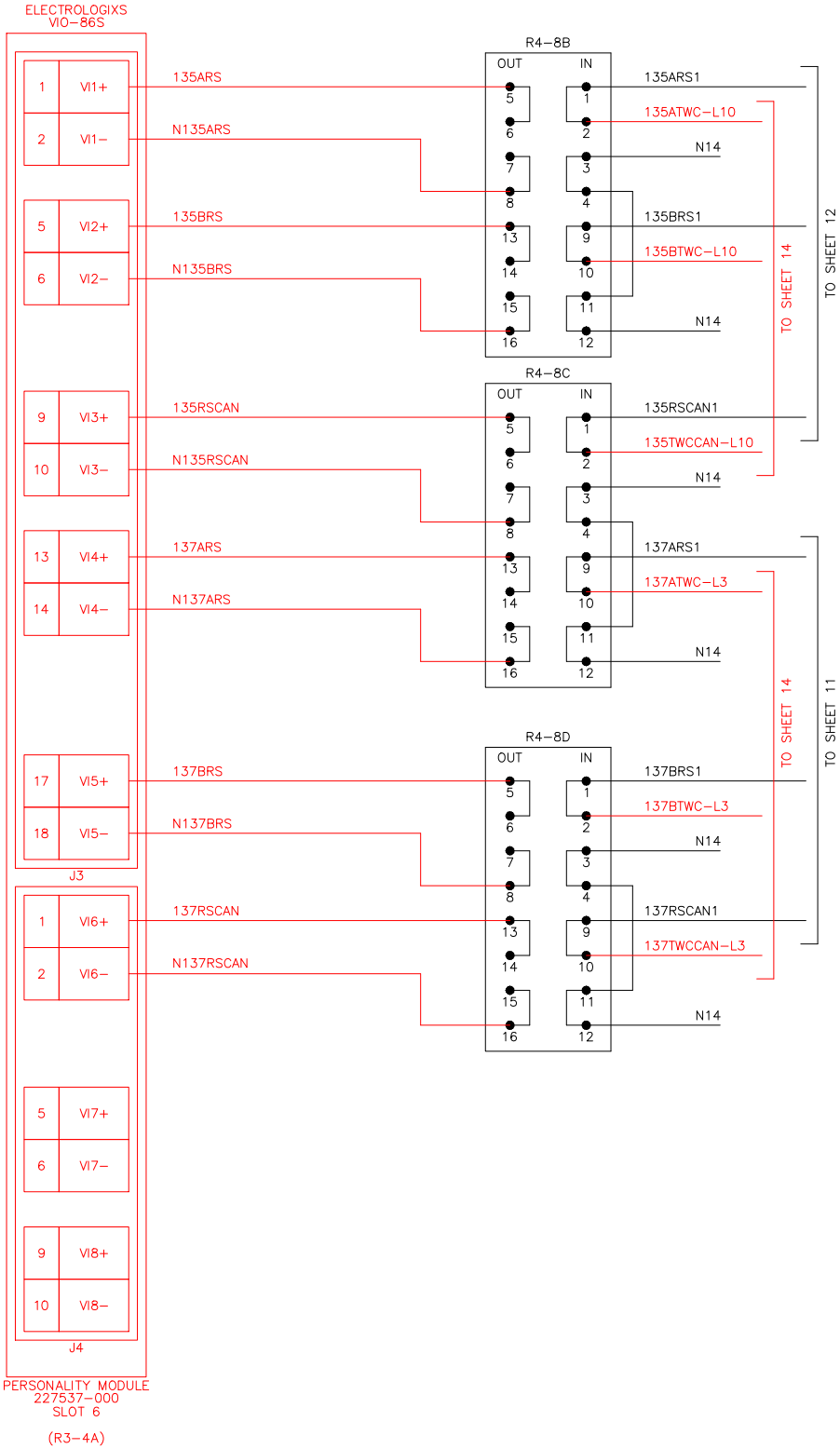
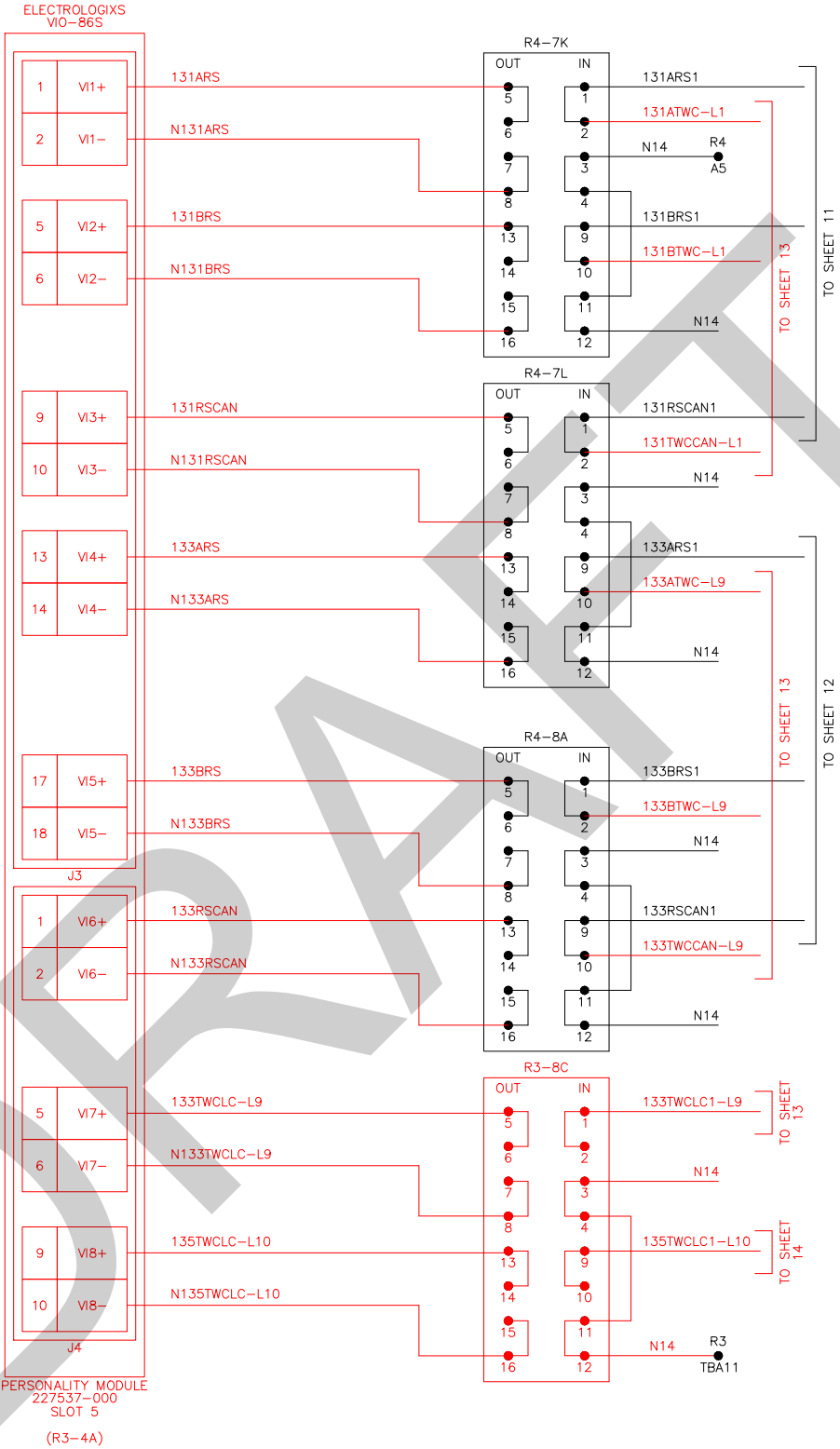
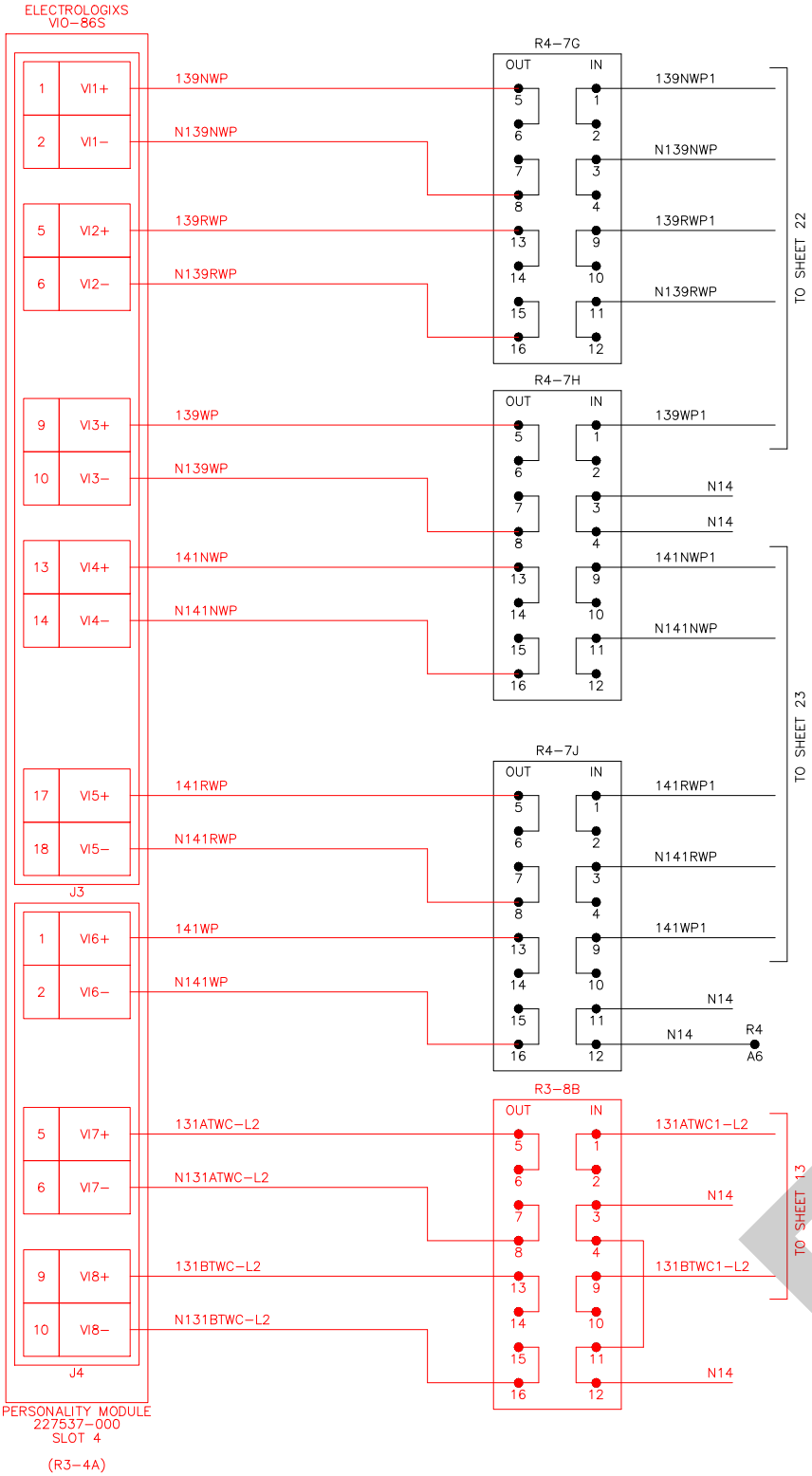
- NOTE:
1. WIRE LENGTH SHALL BE SUFFICIENT TO ALLOW REMOVAL OF "J" CONNECTORS FROM "NORMAL" OBJECT CONTROLLER AND RECONNECTION TO STANDBY OBJECT CONTROLLER.
 2. STANDBY UNIT SHALL CONTAIN SAME APPLICATION SOFTWARE AS NORMAL UNIT TO FACILITATE RAPID TRANSFER IN CASE OF OBJECT CONTROLLER FAILURE.

NOTE: ALL WIRE TO BE #16 UNLESS NOTED

NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS	DESIGNED BY	DATE		SANTA FE - 12TH & IMPERIAL (BAYSIDE)	SCALE
0. QUOTE/ZONE UPGRADES	DRAWN BY				NTS
8/30/12 SELECT	CHECKED BY				
1. RECORDED AS-IN-SERVICE	PRJ. ENG.				
8/8/18				B16RC (BROADWAY) CROSSING MLK OBJECT CONTROLLER	CONTRACT NO.
					DRAWING NO. SHT NO.
					SA-B0006RC_31 31

[illegible]



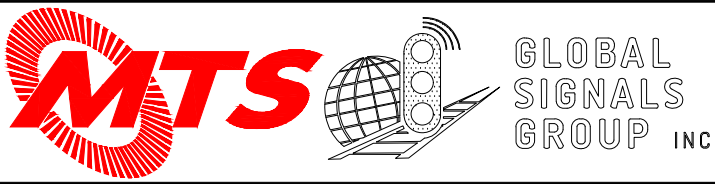
NOTE:
ALL WIRE #16 AWG FLEX UNLESS OTHERWISE NOTED.

RED = IN YELLOW = OUT

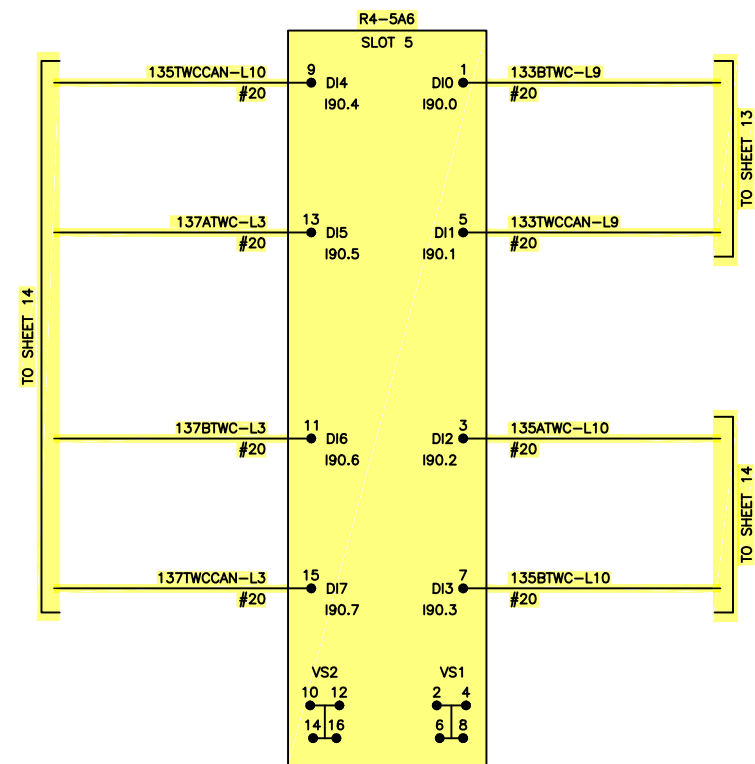
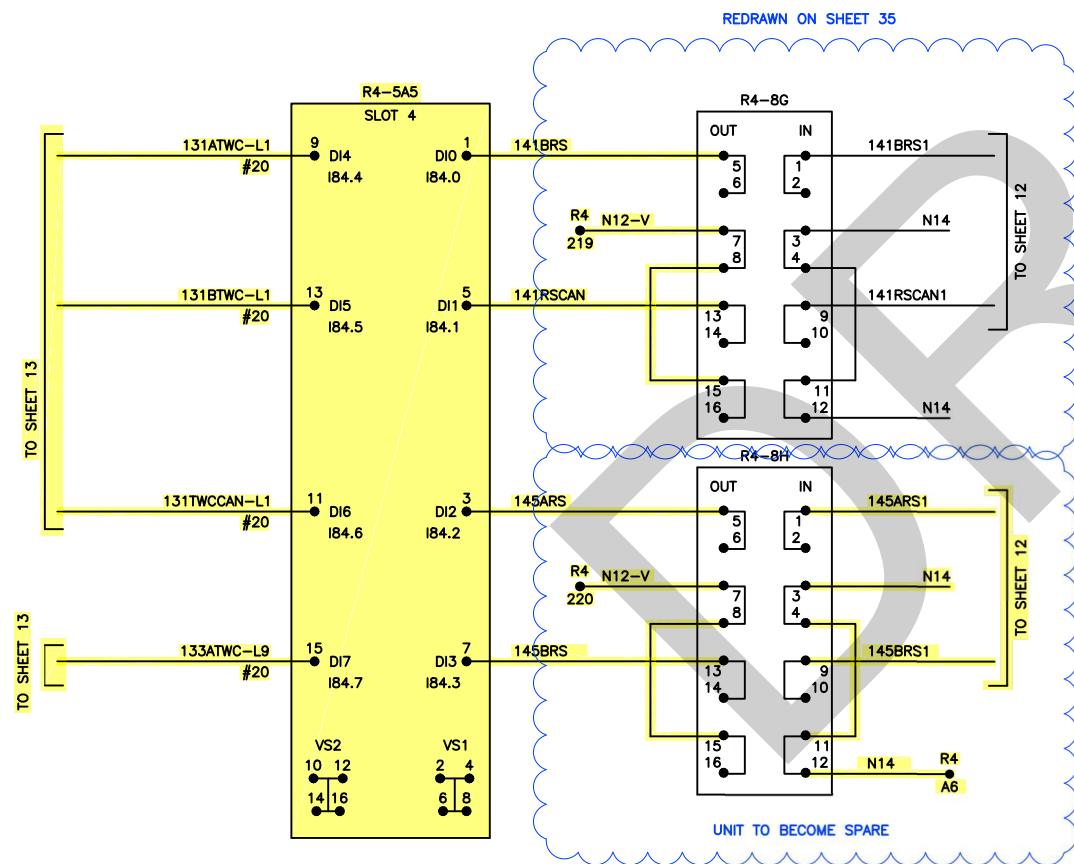
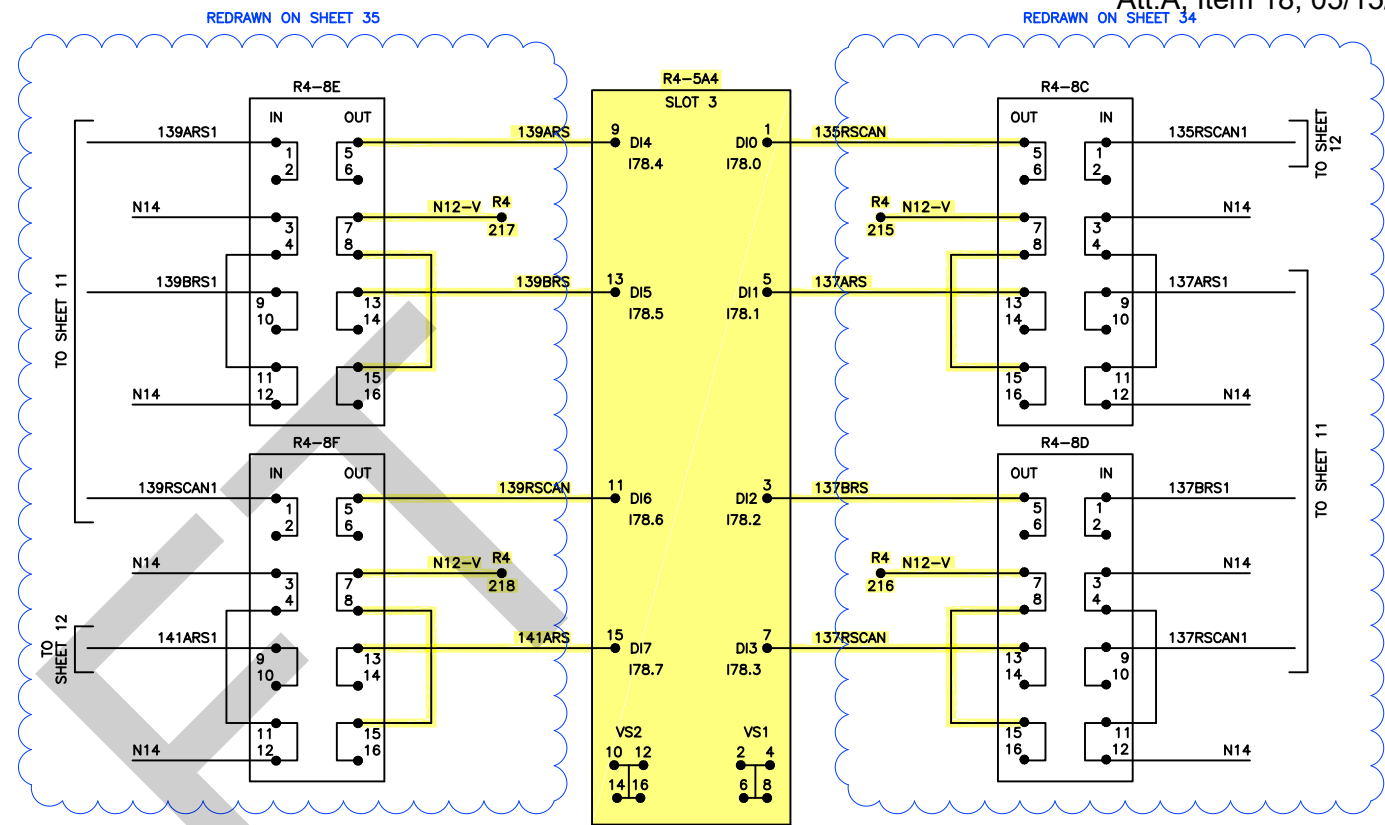
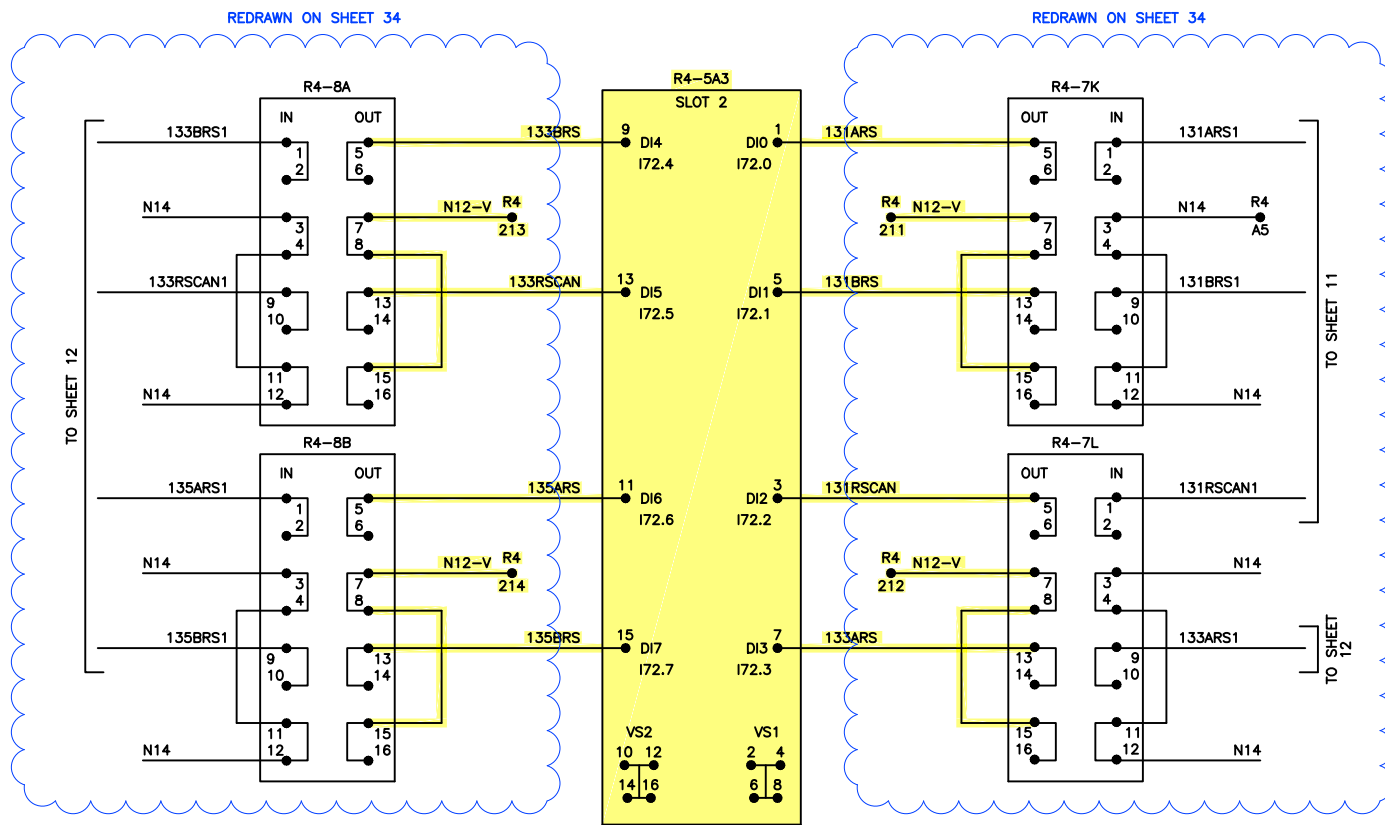
REVISIONS		DATE	BY	CHKD	APP'D
1	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS		
2	1 C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS		
3	RECORDED AS-IN-SERVICE	8/8/18			
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					






DESIGNED BY	GK	DATE	12/23
DRAWN BY	GK	DATE	12/23
CHECKED BY			
PRJ. ENG.			

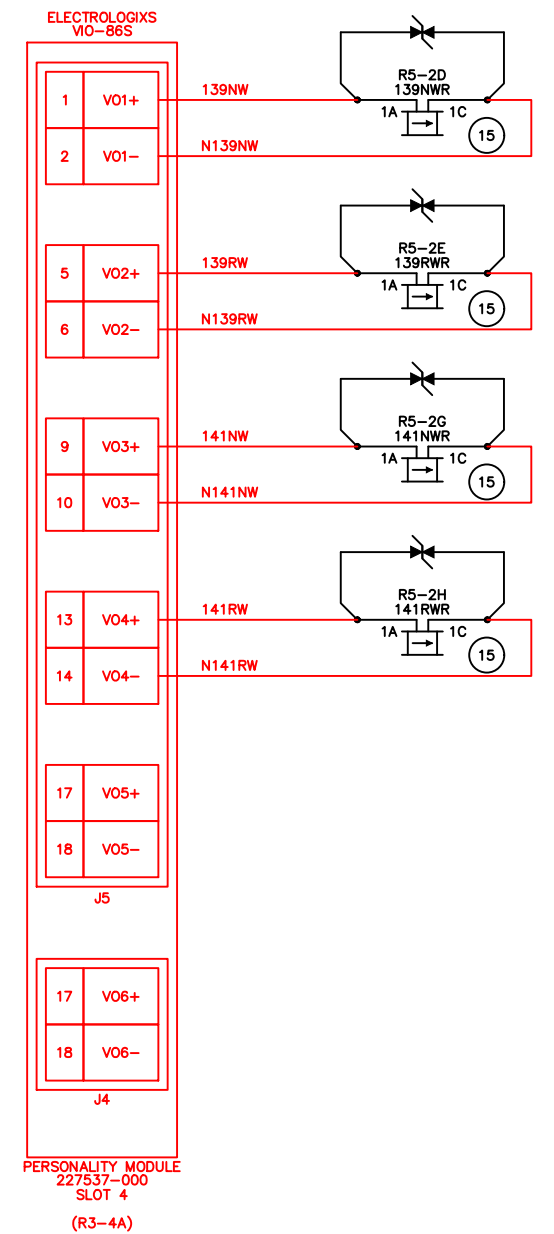
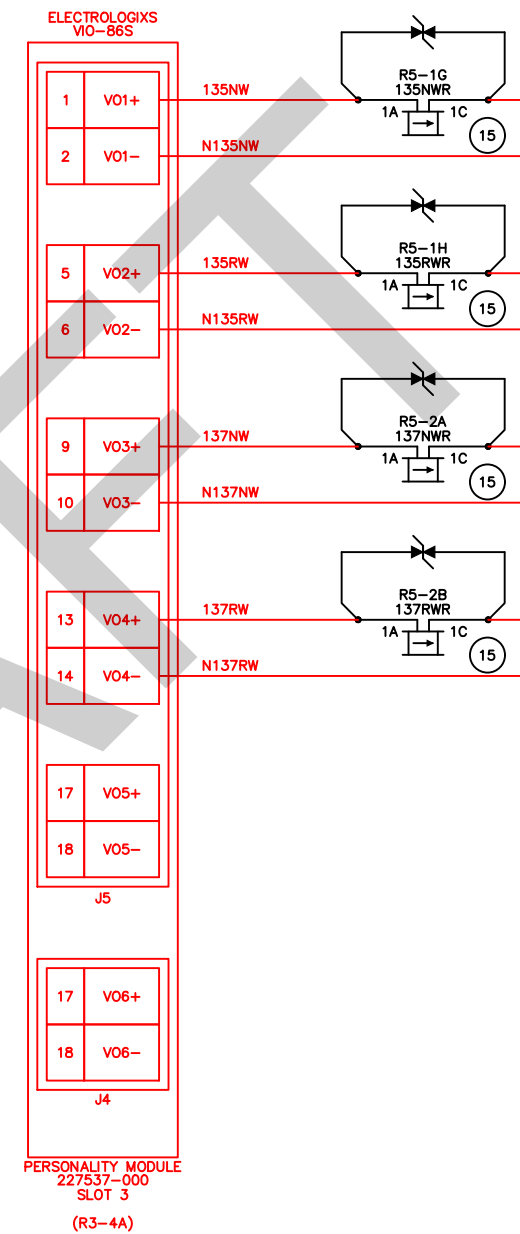
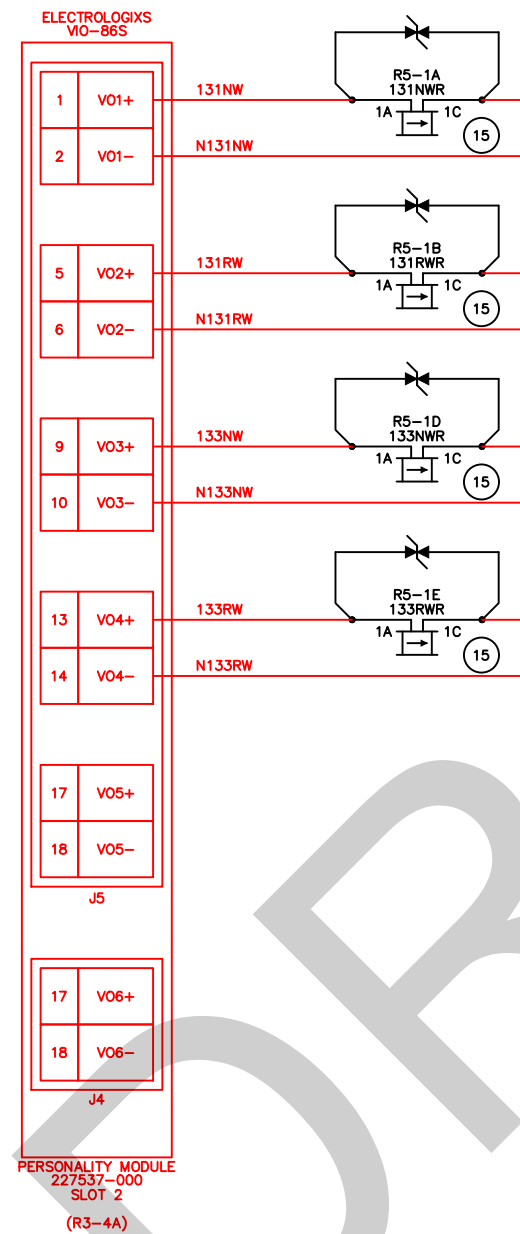
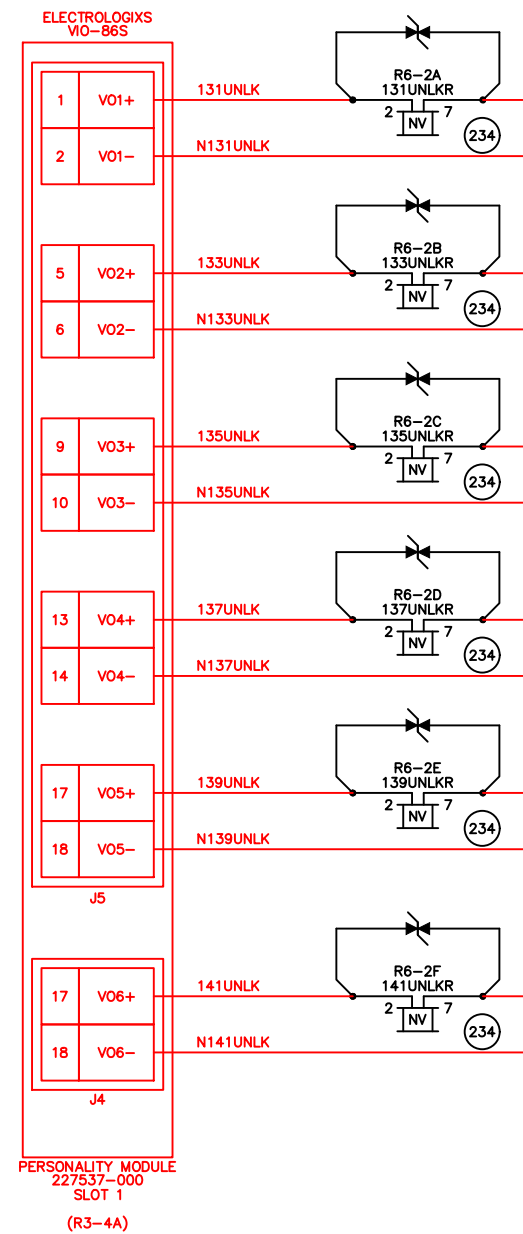


C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
B16RC (BROADWAY) VITAL PROCESSOR INPUTS		CONTRACT NO.	
		DRAWING NO.	SHT NO.
A-198		34	34





RED = IN YELLOW = OUT

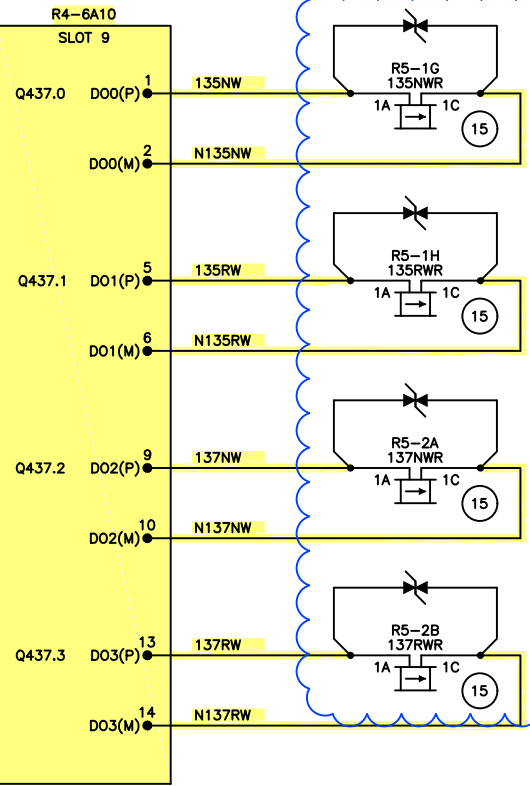
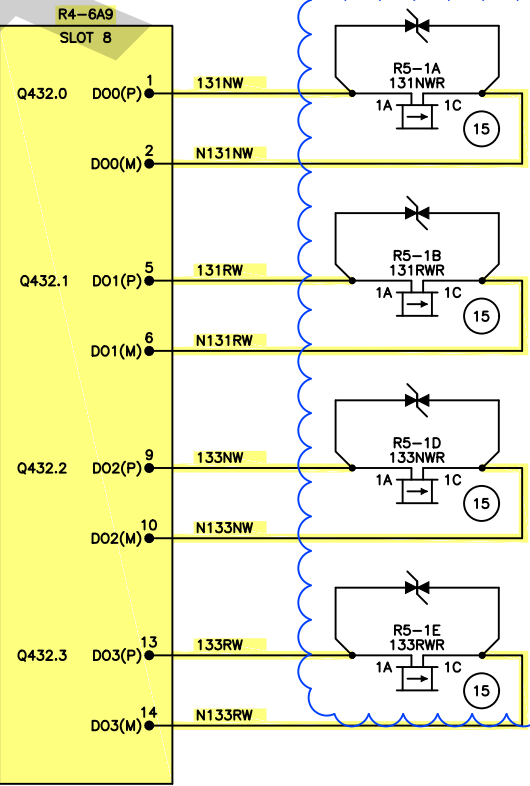
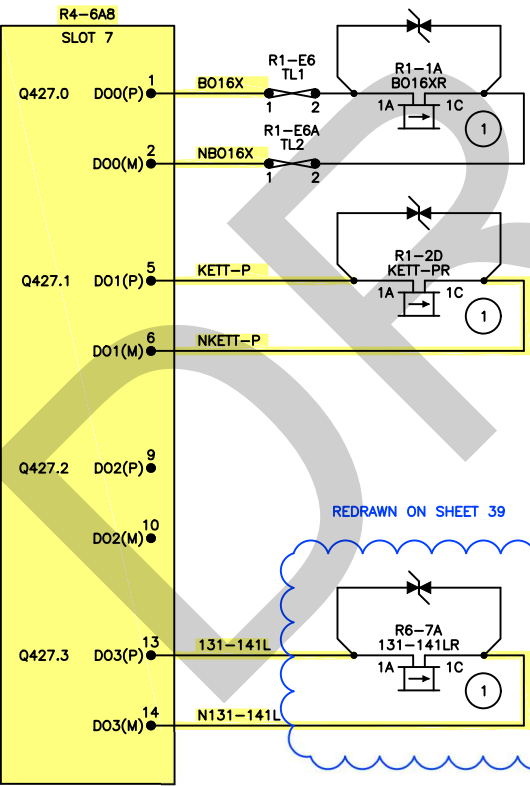
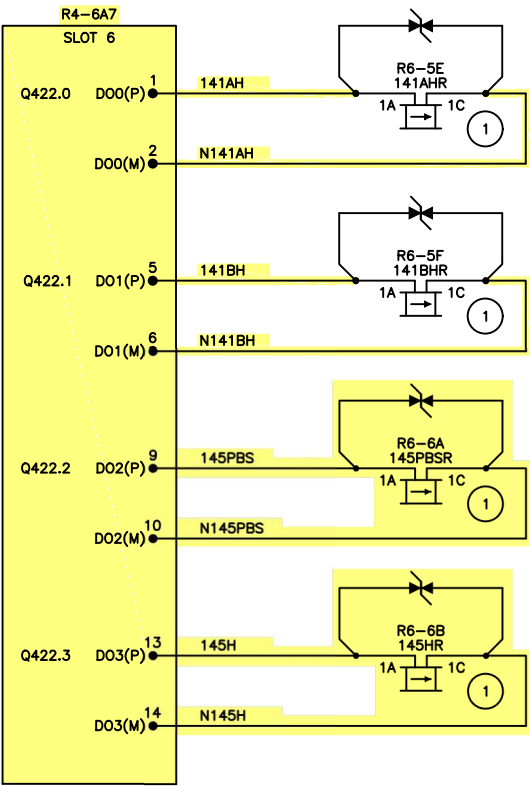
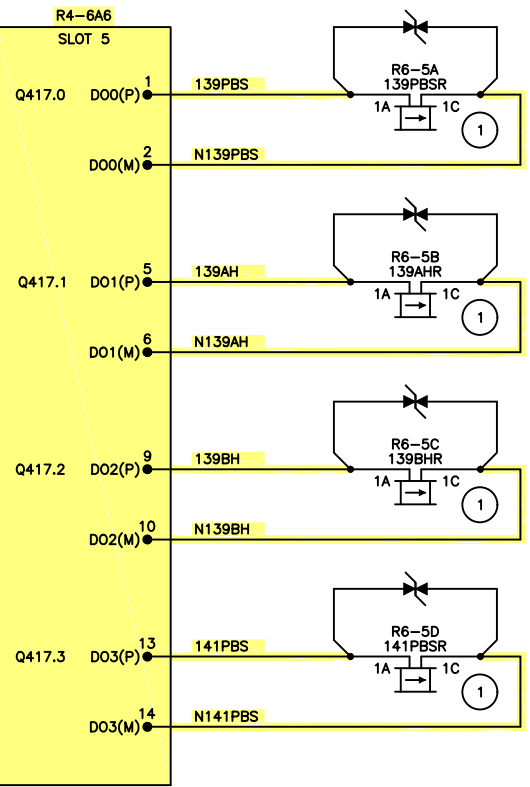
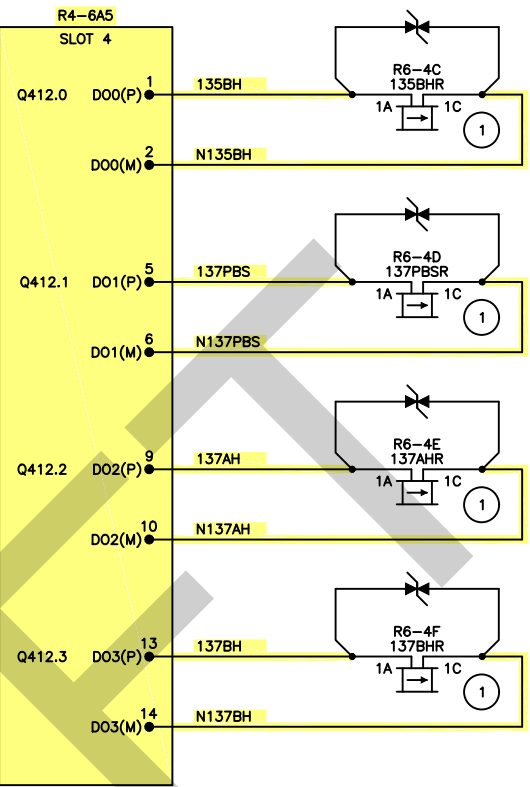
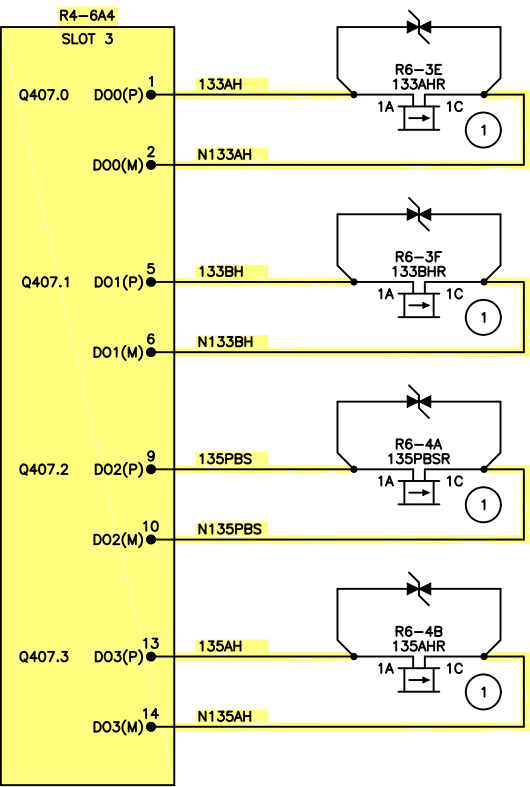
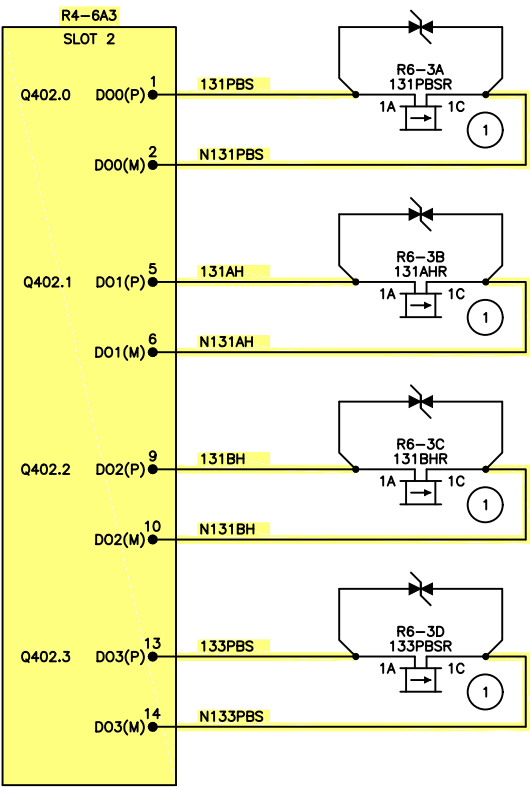
REVISIONS	11/14/11		HMS		DESIGNED BY	GK	DATE	12/23	 	C STREET & BROADWAY WYE CONVERSION		SCALE NTS		
	6/24/12		HMS		DRAWN BY	GK	DATE	12/23		B16RC (BROADWAY) VITAL PROCESSOR INPUTS		CONTRACT NO.		
	8/8/18				CHECKED BY							DRAWING NO.		SHT NO.
					PRJ. ENG.							360016RC-361		36T



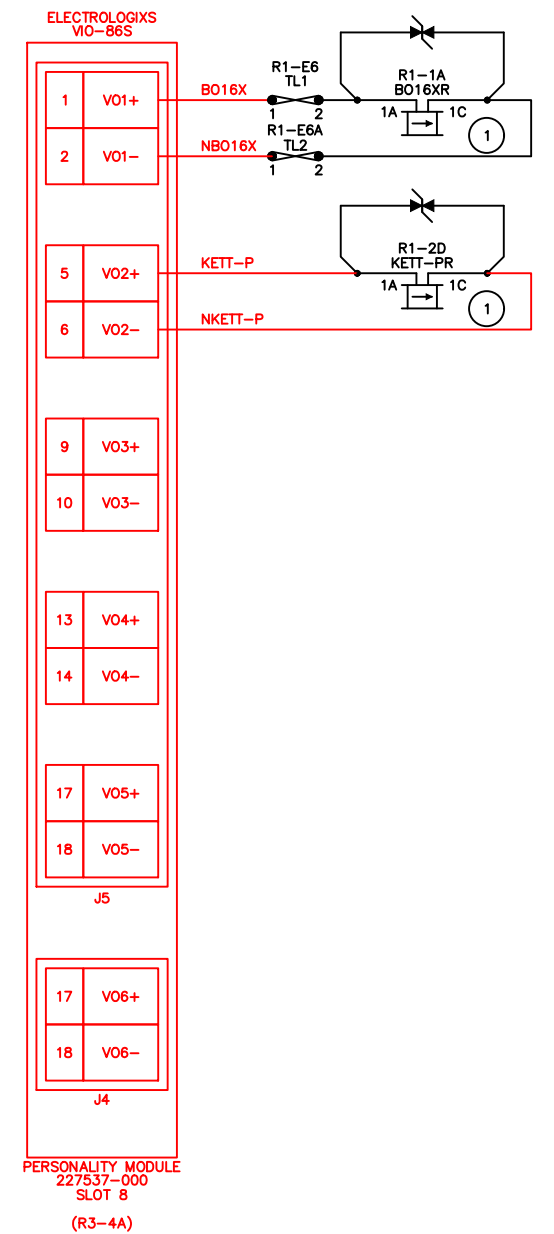
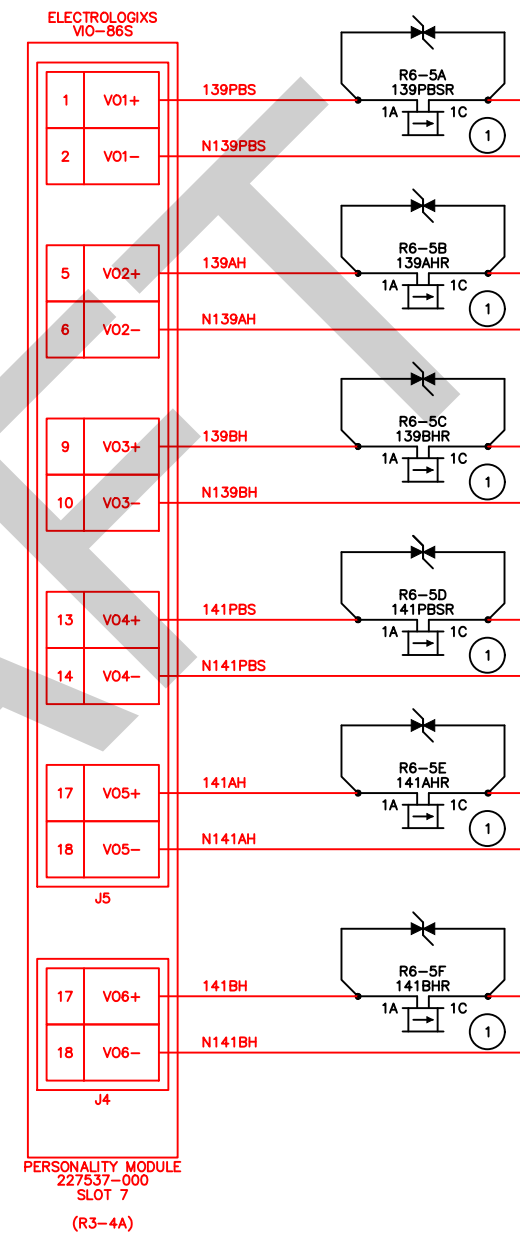
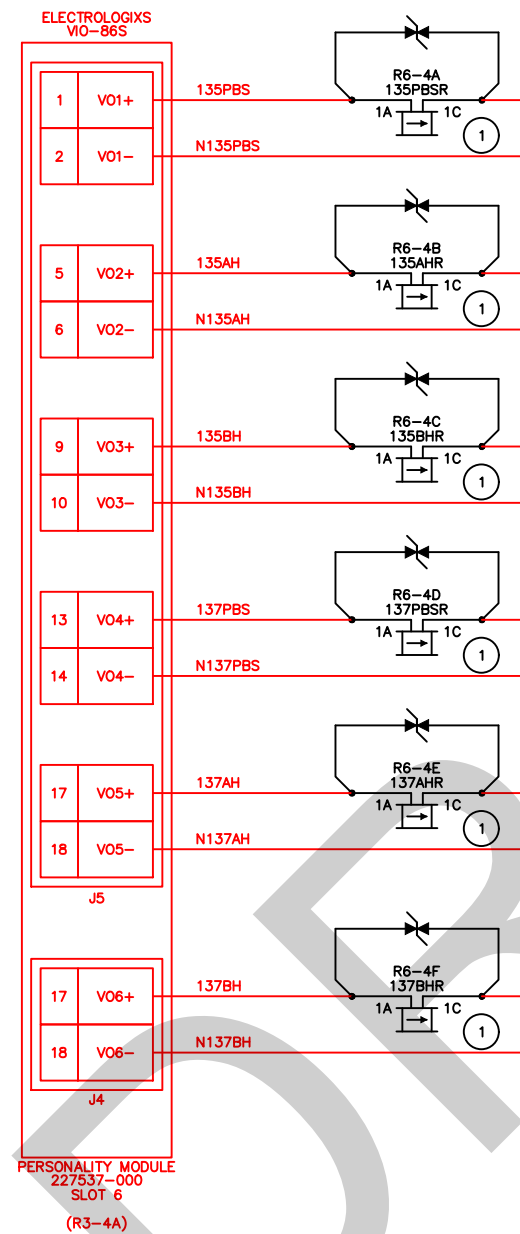
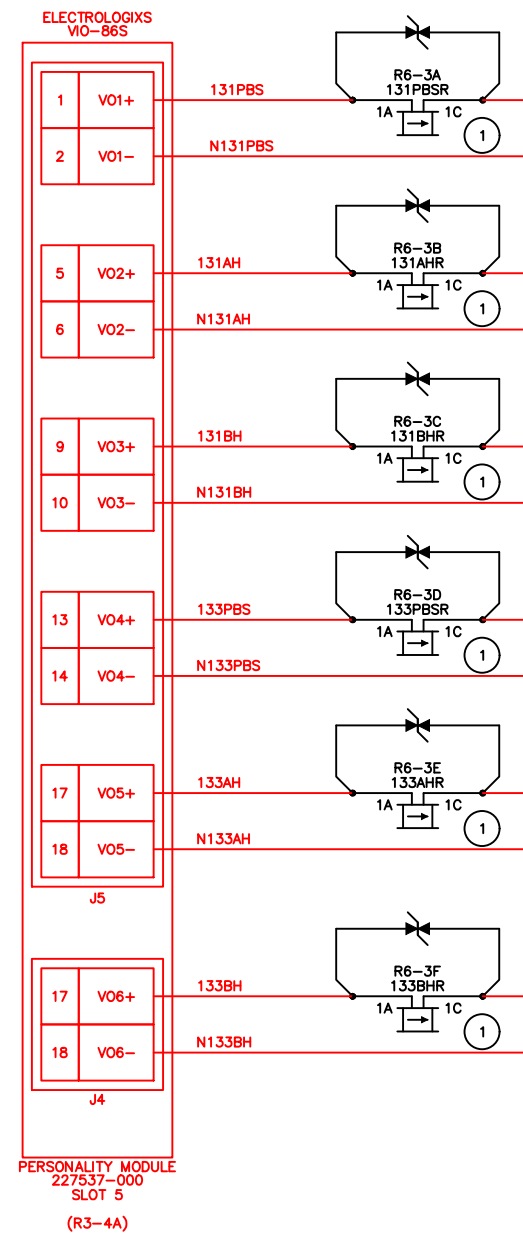
NOTE:
ALL WIRE #16 AWG FLEX UNLESS OTHERWISE NOTED.

RED = IN YELLOW = OUT

REVISIONS 0 BROADWAY WYE 11/14/11 HMS 1 C STREET CROSSOVERS 6/24/12 HMS 2 RECORDED AS-IN-SERVICE 8/8/18		 DESIGNED BY GK DRAWN BY GK CHECKED BY PRJ. ENG.		 GLOBAL SIGNALS GROUP INC		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) VITAL PROCESSOR OUTPUTS		SCALE NTS CONTRACT NO. DRAWING NO. SAB000RC-37 SHT NO. 37	
--	--	--	--	--	--	---	--	---	--





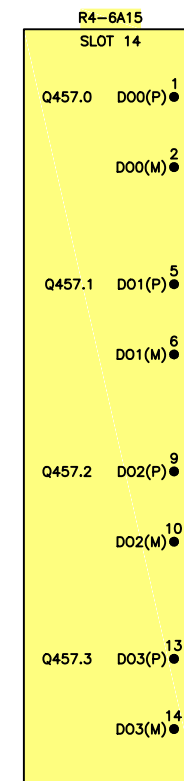
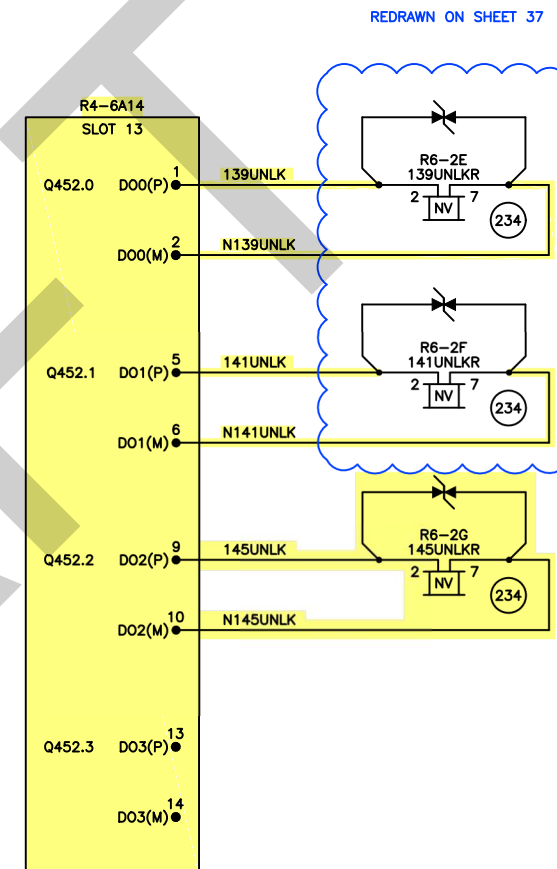
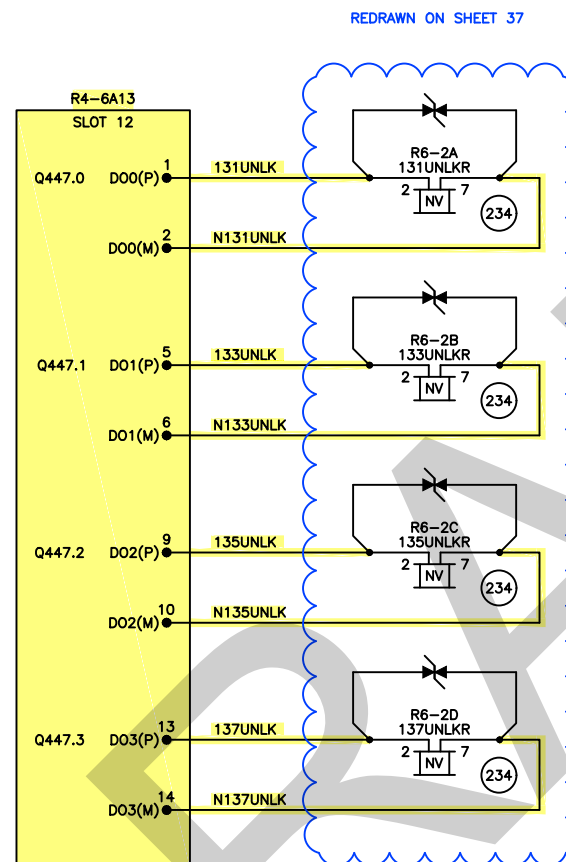
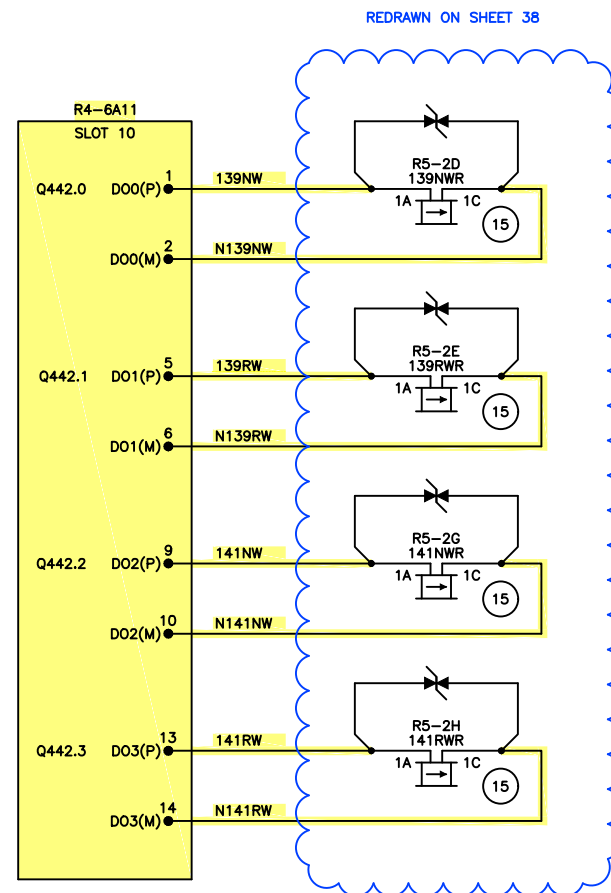
RED = IN YELLOW = OUT

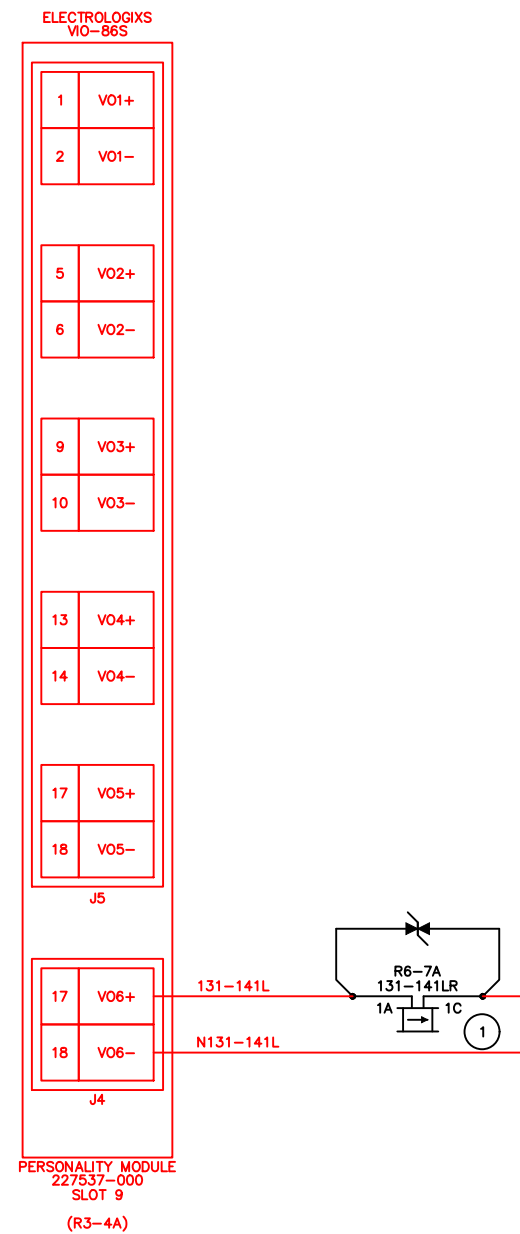


NOTE:
ALL WIRE #16 AWG FLEX UNLESS OTHERWISE NOTED.

RED = IN YELLOW = OUT



REVISIONS 0 BROADWAY WYE JOC 139-04 11/14/11 HMS 1 C STREET CROSSOVERS SANJAG CP1210070		6/24/12 HMS 2 RECORDED AS-IN-SERVICE 8/8/18		 DESIGNED BY GK DRAWN BY GK CHECKED BY PRJ. ENG.		DATE 12/23 12/23		 GLOBAL SIGNALS GROUP INC		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) VITAL PROCESSOR OUTPUTS		SCALE NTS		CONTRACT NO.		DRAWING NO. SAB0016RC_38		SHT NO. 38	
--	--	--	--	--	--	------------------------	--	--	--	---	--	--------------	--	--------------	--	-----------------------------	--	---------------	--

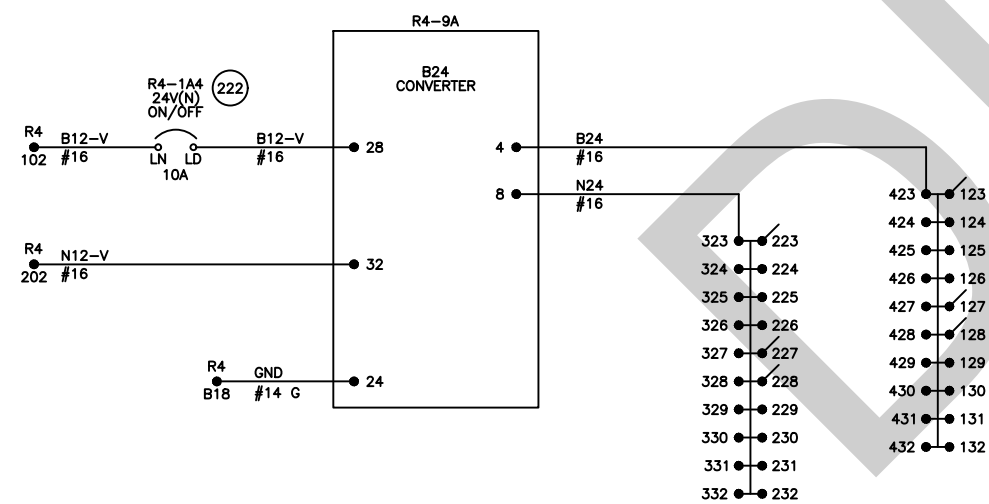
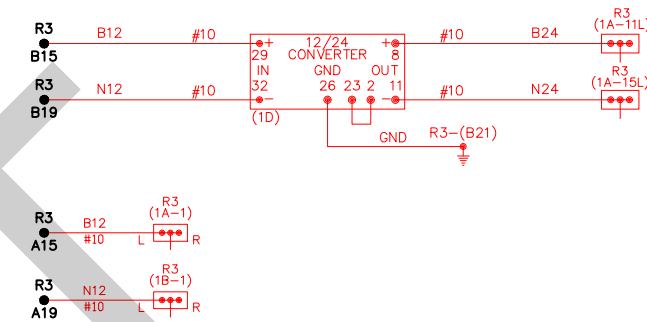
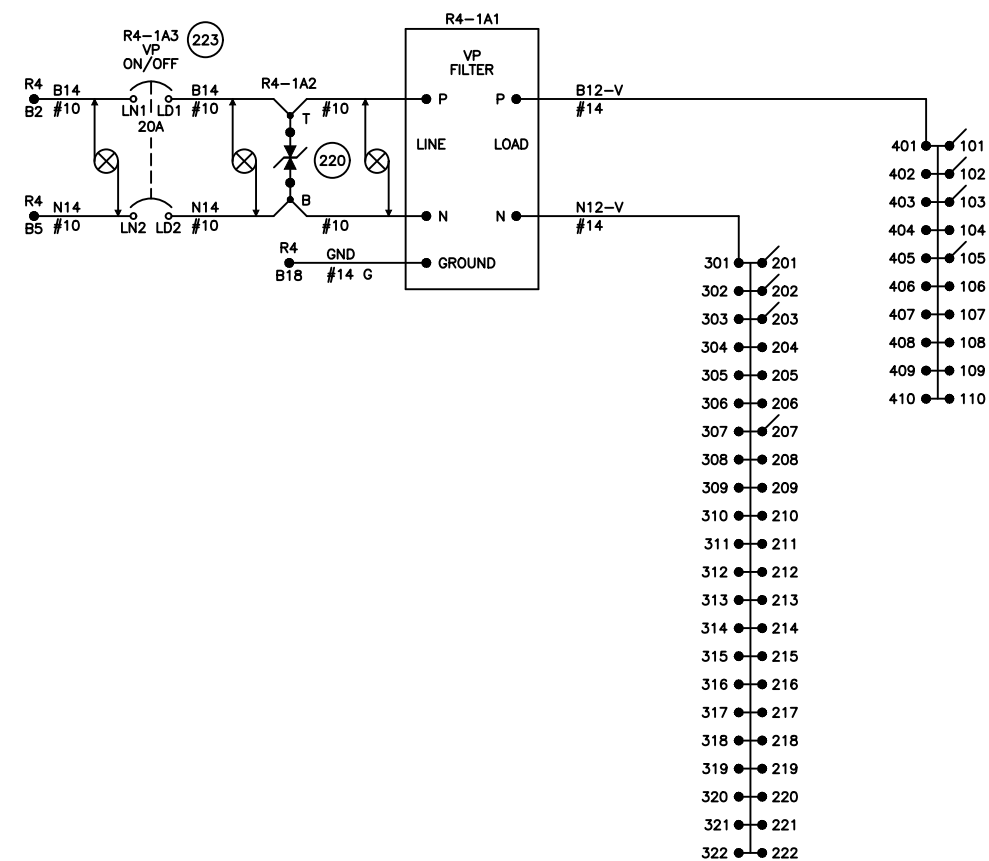
[illegible]

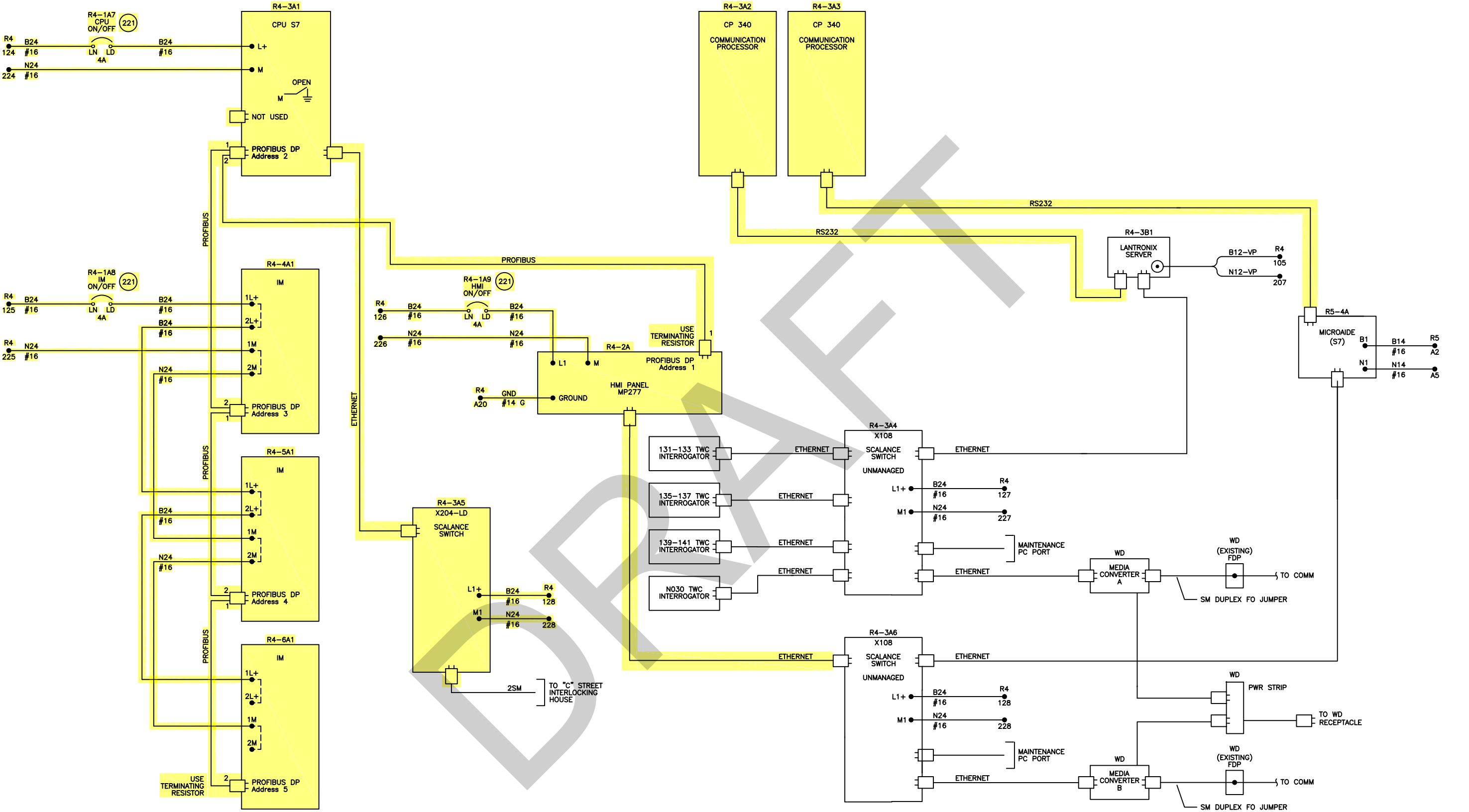


NOTE:
ALL WIRE #16 AWG FLEX UNLESS OTHERWISE NOTED.

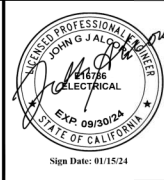
RED = IN YELLOW = OUT

REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 1. C STREET CROSSOVERS SANJO C-11070		6/24/12 HMS 2. RECORDED AS-IN-SERVICE		8/8/18				DESIGNED BY GK 12/23 DRAWN BY GK 12/23 CHECKED BY PRJ. ENG.				C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) VITAL PROCESSOR OUTPUTS		SCALE NTS CONTRACT NO. DRAWING NO. SHT NO. SAB0008RC_39 39	
---	--	--	--	--------	--	---	--	--	--	---	--	---	--	---	--

[illegible]



REVISIONS		DATE	BY
1	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS
2	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS
3	RECORDED AS-IN-SERVICE	8/8/18	
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			



DESIGNED BY	GK	DATE	12/23
DRAWN BY	GK	CHECKED BY	
PRJ. ENG.			

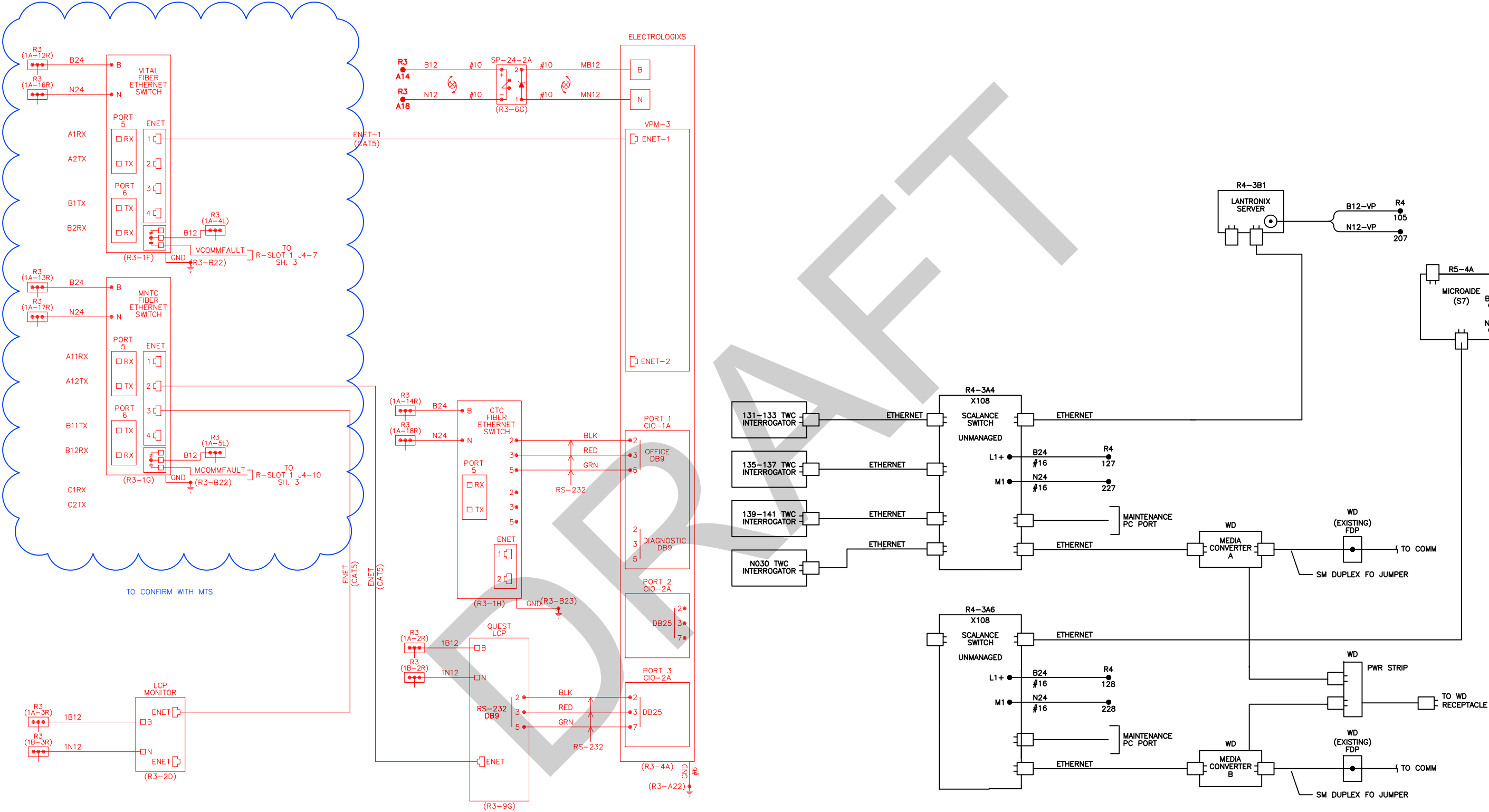


GLOBAL SIGNALS GROUP INC

C STREET & BROADWAY WYE CONVERSION
B16RC (BROADWAY)
VITAL PROCESSOR POWER AND COMM WIRING

SCALE	NTS
CONTRACT NO.	
DRAWING NO.	SAB0016RC-41T
SHT NO.	41T

RED = IN YELLOW = OUT



NOTE:
ALL WIRE #16 AWG FLEX UNLESS OTHERWISE NOTED.

REVISIONS	DATE	BY	CHKD	APP'D
1	11/14/11	HMS		
2	6/24/12	HMS		
3	8/8/18	HMS		
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				



DESIGNED BY	DATE
GK	12/23
DRAWN BY	DATE
GK	12/23
CHECKED BY	
PRJ. ENG.	



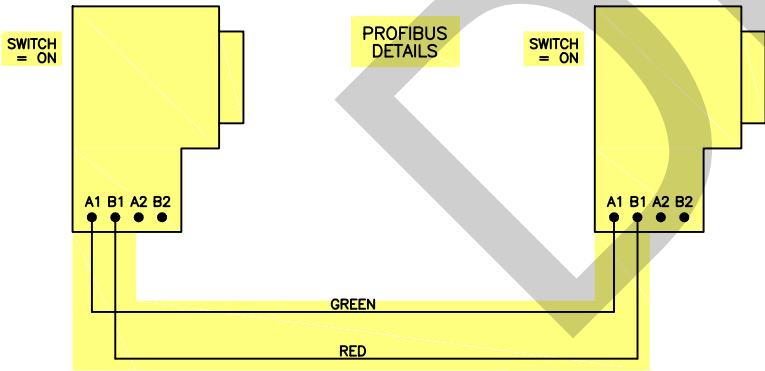
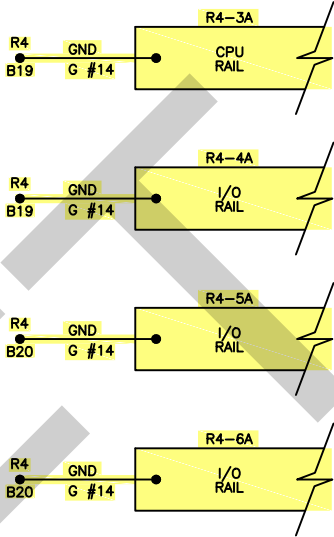
GLOBAL
SIGNALS
GROUP INC

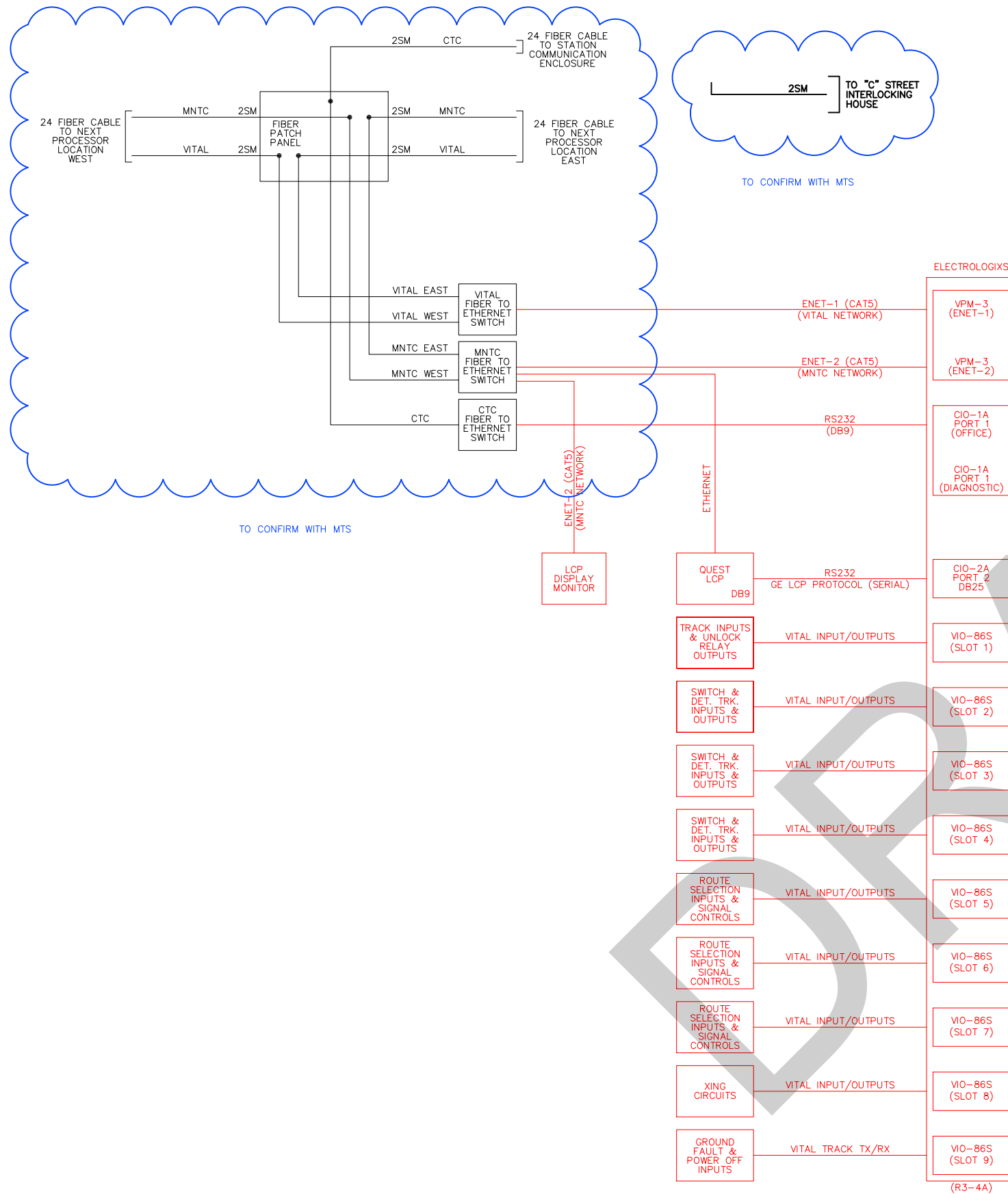
C STREET & BROADWAY WYE CONVERSION		SCALE
B16RC (BROADWAY) VITAL PROCESSOR POWER AND COMM WIRING		NTS
DRAWING NO. SHT NO.		
SA-212	41	

I/O ADDRESS ASSIGNMENTS

I/O TYPE	R4 RACK POSITION	DIL SETTINGS									
		9	8	7	6	5	4	3	2	1	0
IN	4A3	0	0	1	1	0	0	0	1	0	1
IN	4A4	0	0	1	1	0	0	0	0	1	1
IN	4A5	0	0	1	1	0	0	0	0	1	0
IN	4A6	0	0	1	1	0	0	0	0	0	1
IN	4A7	0	0	1	1	0	0	1	0	0	0
IN	4A8	0	0	1	1	0	0	0	1	1	1
IN	4A9	0	0	1	1	0	0	0	0	0	0
IN	4A10	0	0	1	0	1	1	1	1	1	1
IN	4A11	0	0	1	0	1	1	1	1	1	0
IN	4A12	0	0	1	0	1	1	1	1	0	1
IN	5A3	0	0	1	1	0	0	0	1	1	0
IN	5A4	0	0	1	1	0	0	0	1	0	0
IN	5A5	0	0	1	0	1	1	1	1	0	0
IN	5A6	0	0	1	0	1	1	1	0	1	1
IN	5A7	0	0	1	0	1	1	1	0	1	0
IN	5A8	0	0	1	0	1	1	1	0	0	1
IN	5A9	0	0	1	0	1	1	1	0	0	0
OUT	6A3	0	0	1	0	1	1	0	1	0	1
OUT	6A4	0	0	1	0	1	1	0	1	0	0
OUT	6A5	0	0	1	0	1	1	0	0	1	1
OUT	6A6	0	0	1	0	1	1	0	0	1	0
OUT	6A7	0	0	1	0	1	1	0	0	0	1
OUT	6A8	0	0	1	0	1	1	0	0	0	0
OUT	6A9	0	0	1	0	1	0	1	1	1	1
OUT	6A10	0	0	1	0	1	0	1	1	1	0
OUT	6A11	0	0	1	0	1	0	1	1	0	1
OUT	6A13	0	0	1	0	1	0	1	1	0	0
OUT	6A14	0	0	1	0	1	0	1	0	1	1
OUT	6A15	0	0	1	0	1	0	1	0	1	0
PROFIBUS ADDRESS SETTING											
CPU	3A1	2									
IM151	4A1	3									
IM151	5A1	4									
IM151	6A1	5									

GROUNDING DETAILS






ELECTROLOGIXS V.LC MODULE REQUIREMENTS																	(R3-4A)
																	PERSONALITY MODULES
VC-86S 227537-000		VC-86S 227537-000		VC-86S 227537-000		VC-86S 227537-000		VC-86S 227537-000		VC-86S 227537-000		VC-86S 227537-000		VC-86S 227537-000			
1	2	3	4	5	6	7	8	9									
VO-86S 251380-000		VO-86S 251380-000		VO-86S 251380-000		VO-86S 251380-000		VO-86S 251380-000		VO-86S 251380-000		VO-86S 251380-000		VO-86S 251380-000		INPUT/OUTPUT MODULES	
1	2	3	4	5	6	7	8	9									
GPS-3 251456-000		VACANT		VPM-3 251432-100		VACANT		CIO-1A 251229-000		CIO-2A 251467-000		VACANT		VACANT		SYSTEM MODULES	
UCI-3 251495-000																	
10	11	12	13	14	15	16	17										
ELECTROLOGIXS 9-SLOT CHASSIS AND BACKPLANE 300752-000																	
CDU-2 DISPLAY 251124-100																	

ASR TIME	
131TER	30 SEC.
133TER	30 SEC.
135TER	30 SEC.
137TER	30 SEC.
139TER	30 SEC.
141TER	30 SEC.
145TER	30 SEC.

ELECTROLOGIXS SOFTWARE INFORMATION	
CHASSIS ID:	XXXX
APPLICATION ID:	XXXX
VPM-3 EXECUTIVE	
VERSION	6.16 OR GREATER
VITAL APPLICATION	
NAME	CSRCV
EPT CRC	XXXX
EPT CHECKSUM	XXXX
NON-VITAL APPLICATION	
NAME	CSRCNV
EPT CRC	XXXX
EPT CHECKSUM	XXXX

CHASSIS ID DIP SHUNTS
LOCATED ON BACKPLANE
UNDERNEATH UCI-3 MODULE


CHASSIS ID
IXS




1 2 3 4 5 6 7 8

APPLICATION DIP SHUNTS
LOCATED INSIDE UCI-3 MODULE
UNDERNEATH EPROM


APPLICATION ID SHUNTS



1 2 3 4 5 6 7 8





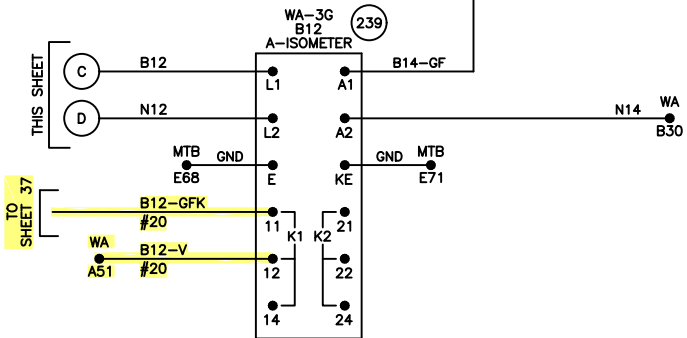
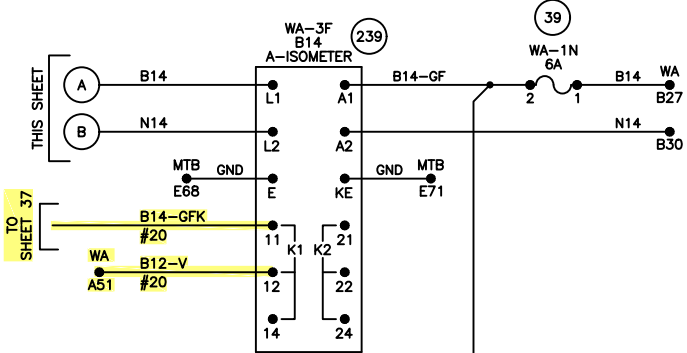
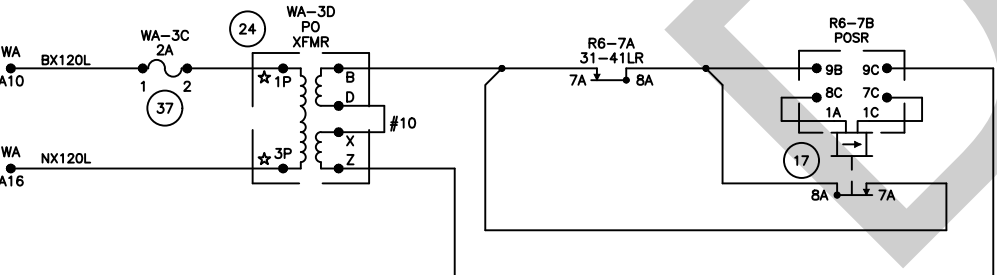
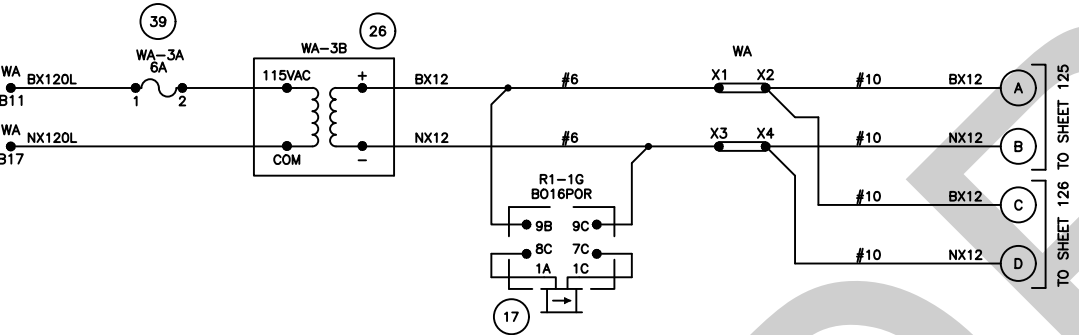
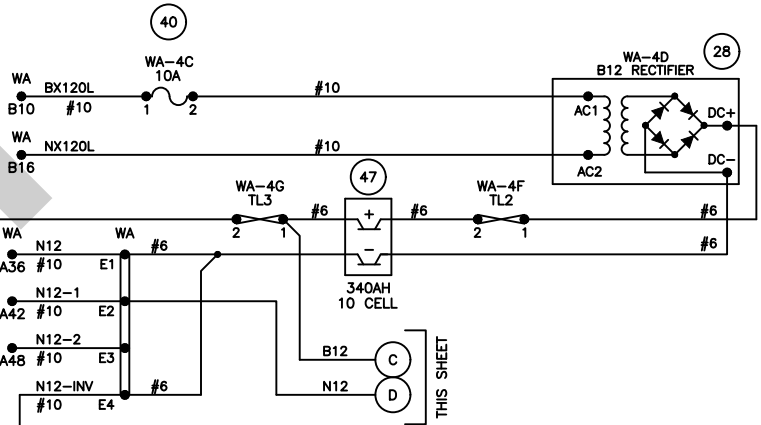
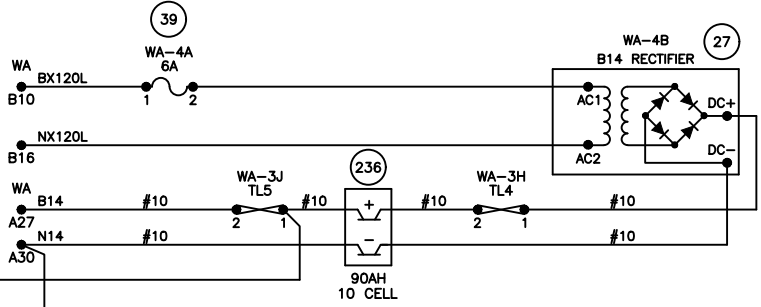
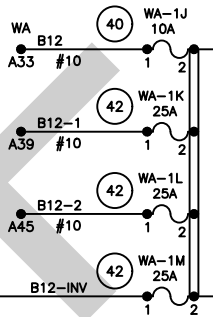
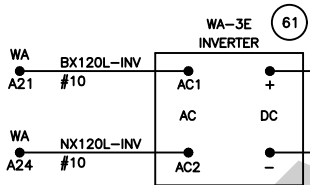
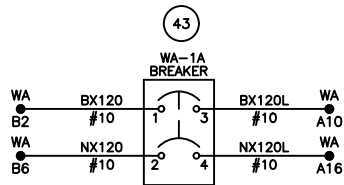
1 2 3 4 5 6 7 8



● NOT PUNCHED ○ PUNCHED

NOTE:
XXXX = TO BE COMPLETED BY CONTRACTOR

REVISIONS 0 BROADWAY WYE REMB CONTRACT JOC 1338-04 11/14/11 HMS 1 C STREET CROSSOVERS SANDB CP 1210070 6/24/12 HMS 2 RECORDED AS-IN-SERVICE 8/8/18			DESIGNED BY GK 12/23 DRAWN BY GK 12/23 CHECKED BY PRJ. ENG.		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) SYSTEM CONFIGURATION	SCALE NTS CONTRACT NO. DRAWING NO. SB0016RC_42 SHT NO. 42
--	--	---	--	---	--	---



RED = IN YELLOW = OUT

REVISIONS	DATE	BY	CHKD	APP'D
1	11/14/11	HMS		
2	6/24/12	HMS		
3	8/8/18			
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				



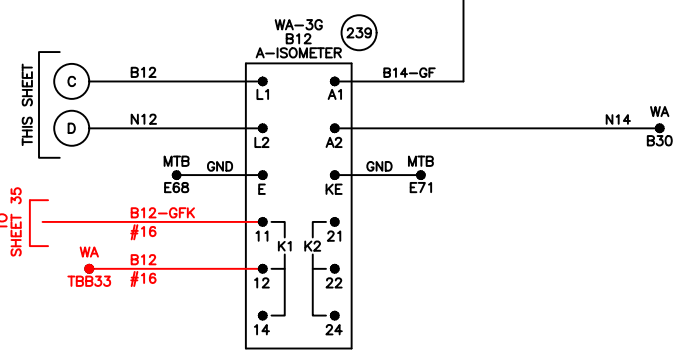
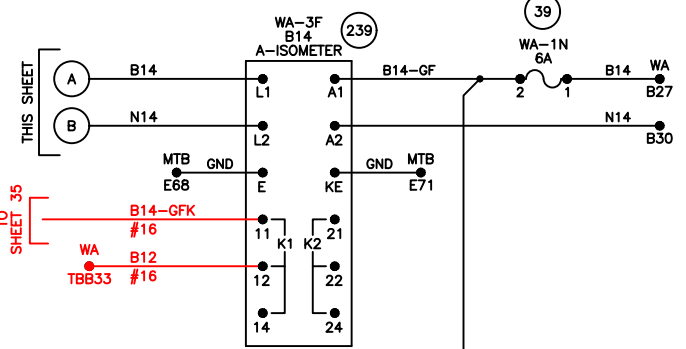
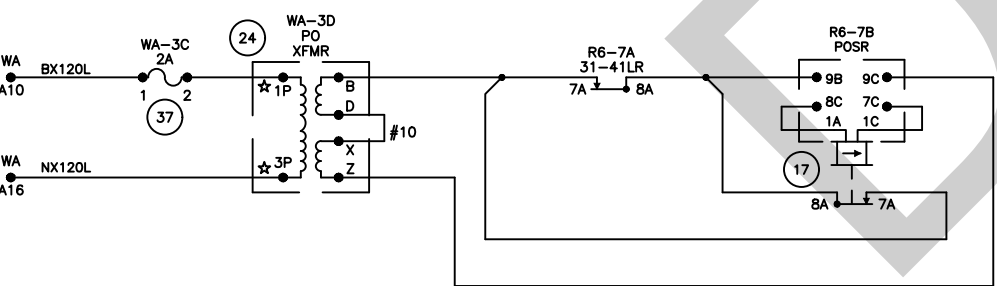
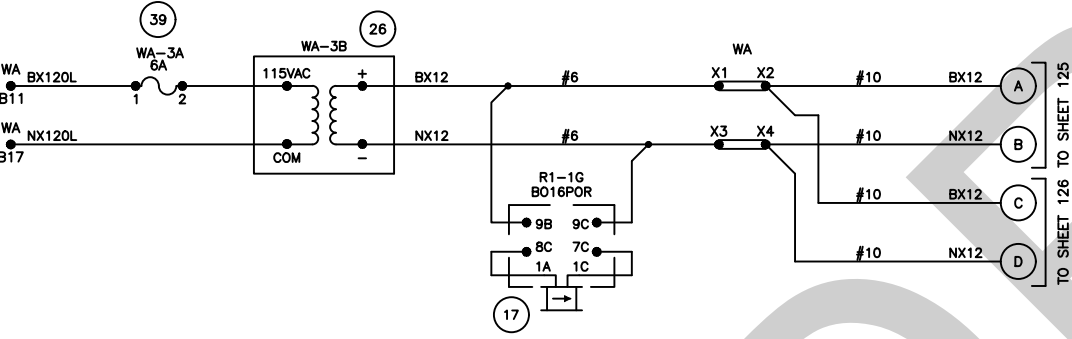
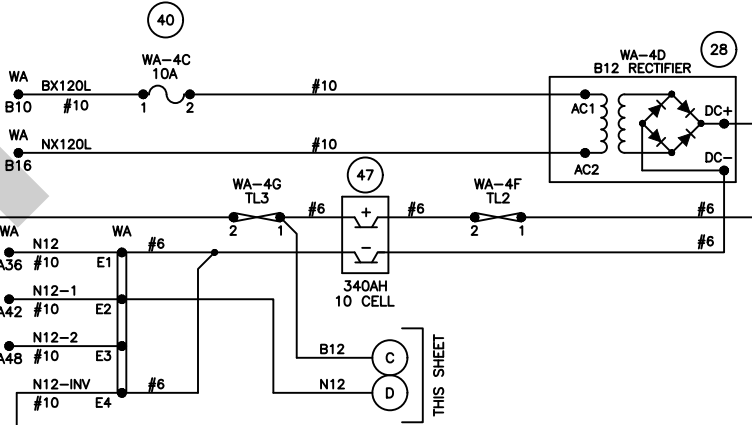
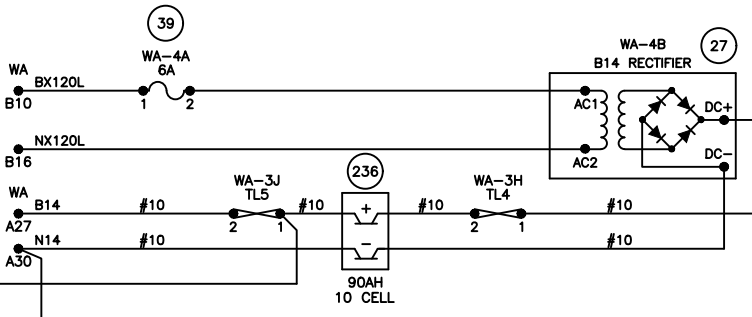
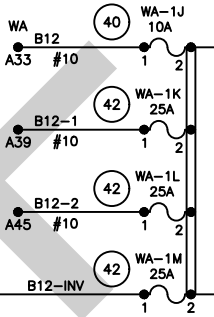
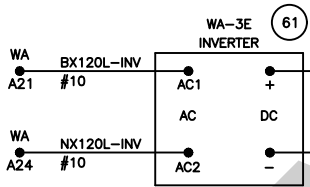
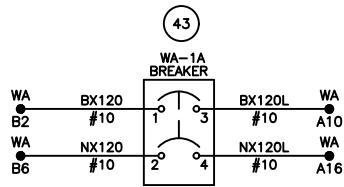
DESIGNED BY	DATE
GK	12/23
DRAWN BY	DATE
GK	12/23
CHECKED BY	
PRJ. ENG.	



GLOBAL SIGNALS GROUP INC

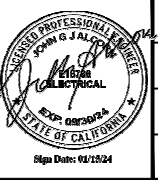
C STREET & BROADWAY WYE CONVERSION	SCALE
B16RC (BROADWAY) POWER DISTRIBUTION AND CHARGING CIRCUITS	NTS

CONTRACT NO.	SHT NO.
447	447



RED = IN YELLOW = OUT

REVISIONS	DATE	BY	CHKD	APP'D
1	11/14/11	HMS		
2	6/24/12	HMS		
3	8/8/18			
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				
41				
42				
43				
44				
45				
46				
47				
48				
49				
50				



DESIGNED BY	DATE
GK	12/23
DRAWN BY	DATE
GK	12/23
CHECKED BY	
PRJ. ENG.	



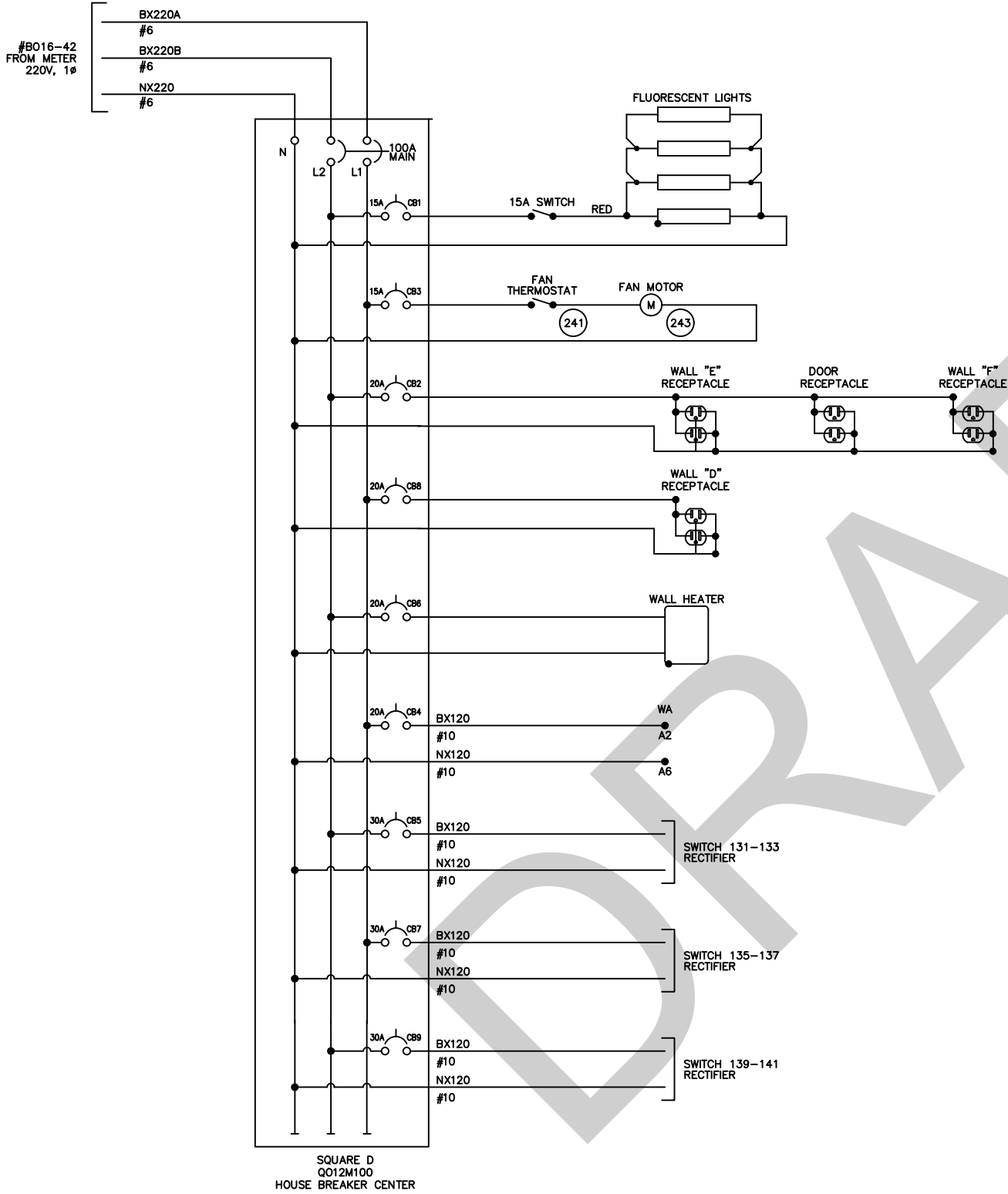
GLOBAL SIGNALS GROUP INC

C STREET & BROADWAY WYE CONVERSION

B16RC (BROADWAY)

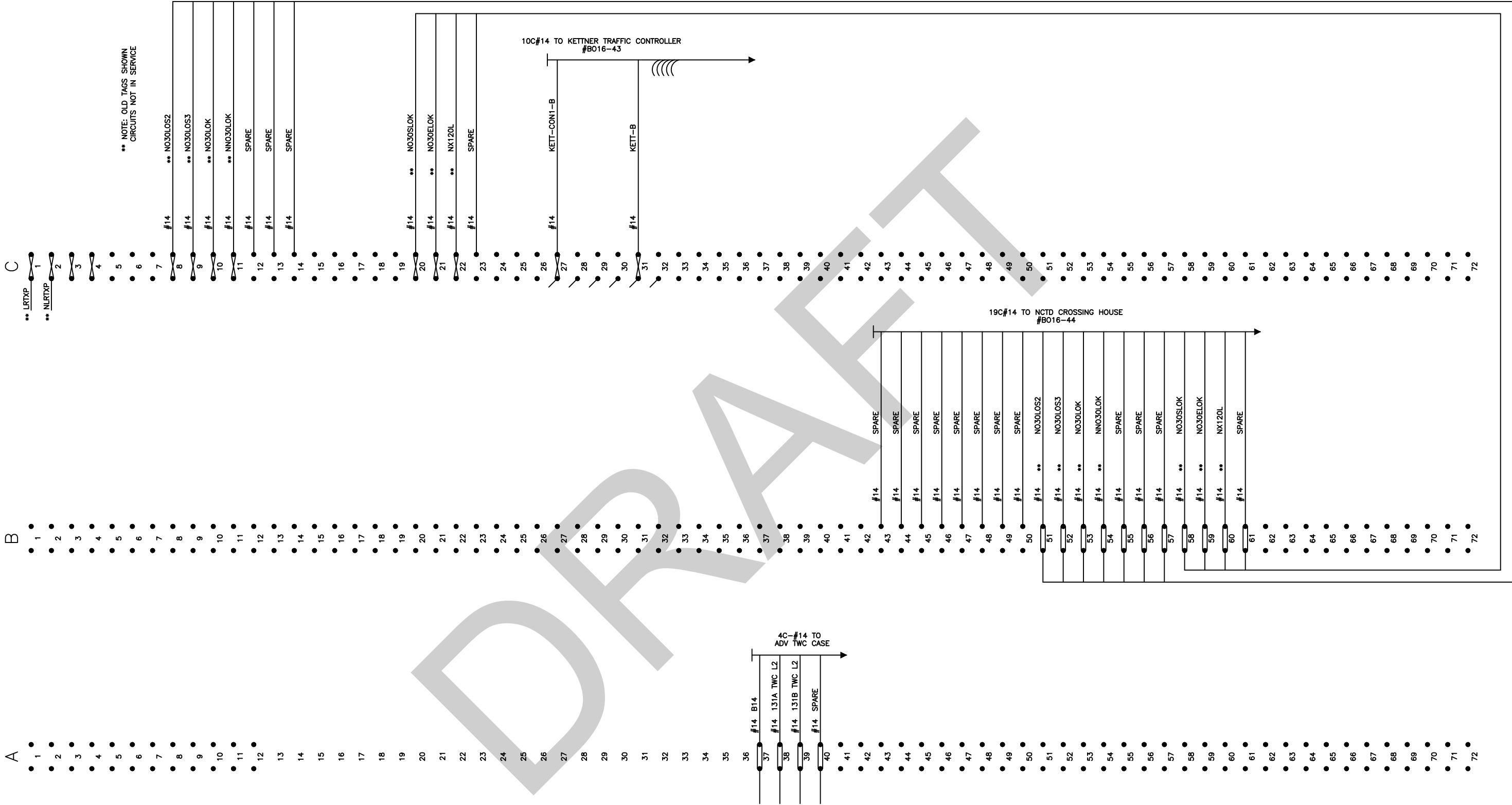
POWER DISTRIBUTION AND CHARGING CIRCUITS

SCALE	NTS
CONTRACT NO.	
DRAWING NO.	SHT NO.
A-217	44



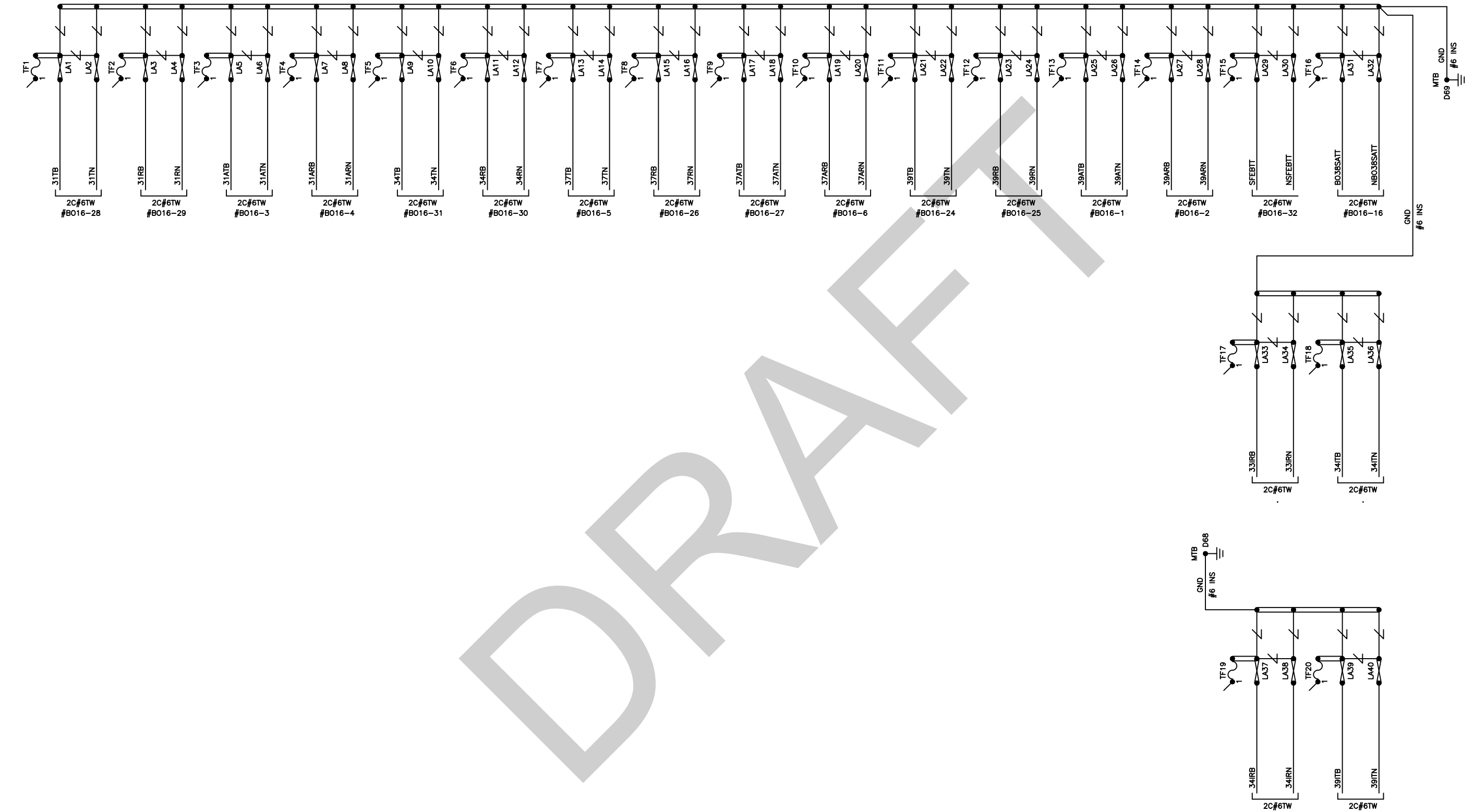
MAIN BREAKER			
LIGHTS	1 15A	2 20A	RECEPTACLES
FANS	3 15A	4 20A	SIGNAL RACKS
SW 131-133 RECT.	5 30A	6 20A	HEATER
SW 135-137 RECT.	7 30A	8 20A	WALL-D RECEPTACLE
SW 139-141 RECT.	9 30A	10 15A	SPARE
SPARE	11 20A	12 15A	SPARE
SPARE	13 20A	14	
	15	16	
	17	18	
	19	20	
	21	22	
	23	24	

NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY





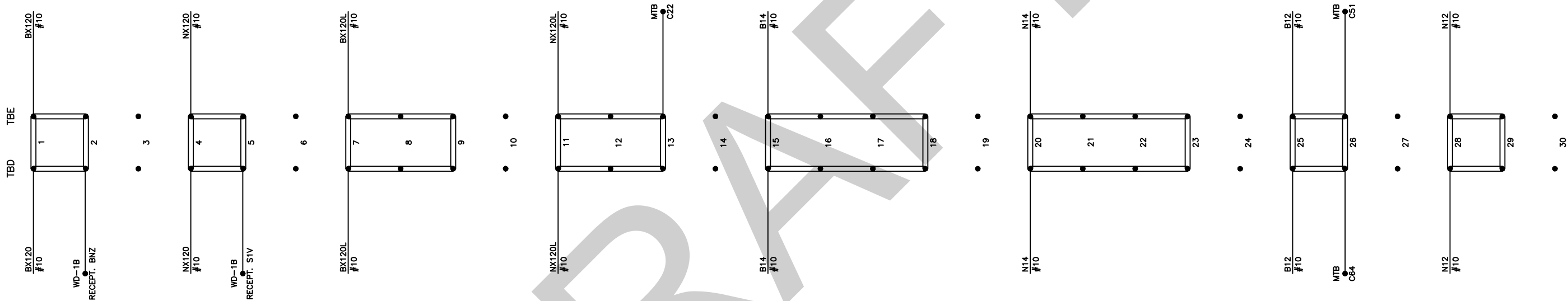
NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
-----------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--




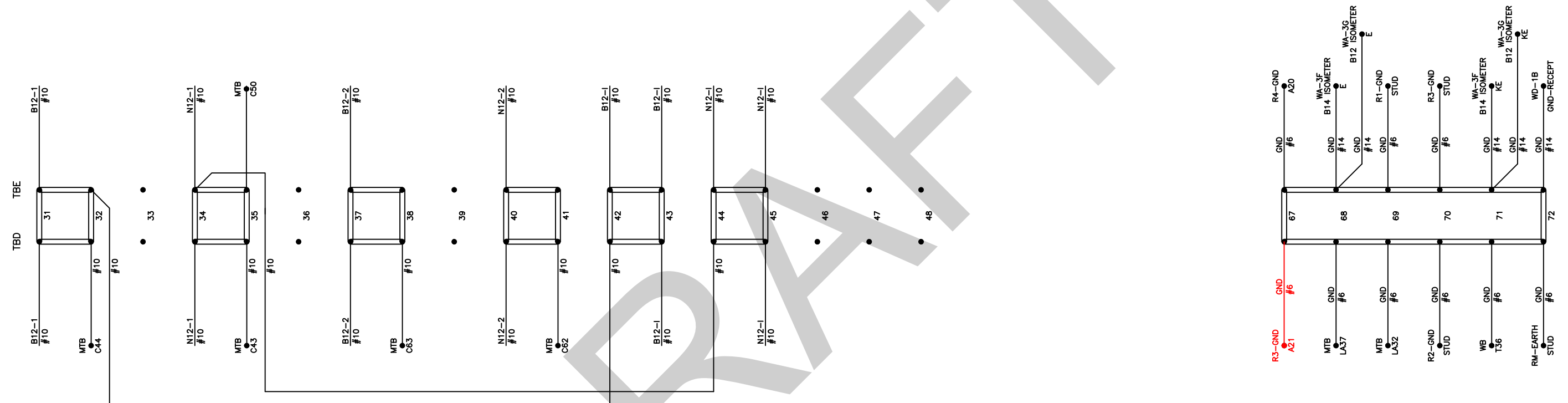
NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS		DESIGNED BY		DATE			SANTA FE – 12TH & IMPERIAL (BAYSIDE)		SCALE NTS	
0 NEW SIG HOUSE & CKTS THAT REPLACE ORIGINAL B016RC/RCA CASES 10/31/02 KMZ 1 AS BUILT CHANGES PER CONTRACT #LRT-10834/10879 8/28/03 2 AS BUILT CHANGES PER CONTRACT #LRT-108100/CPT1378 5/31/07 SECA 3 BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 6/24/12 HMS 5 QUETZONE UPGRADES CITY OF SD 8/30/12 SELECT 6 RECORDED AS-IN-SERVICE 8/8/18				DRAWN BY			B16RC (BROADWAY) MAIN TERMINAL BOARD 1 CABLE LAYOUT		CONTRACT NO.	
		PRJ. ENG.					DRAWING NO. SAB0016RC-51		SHT NO. 51	





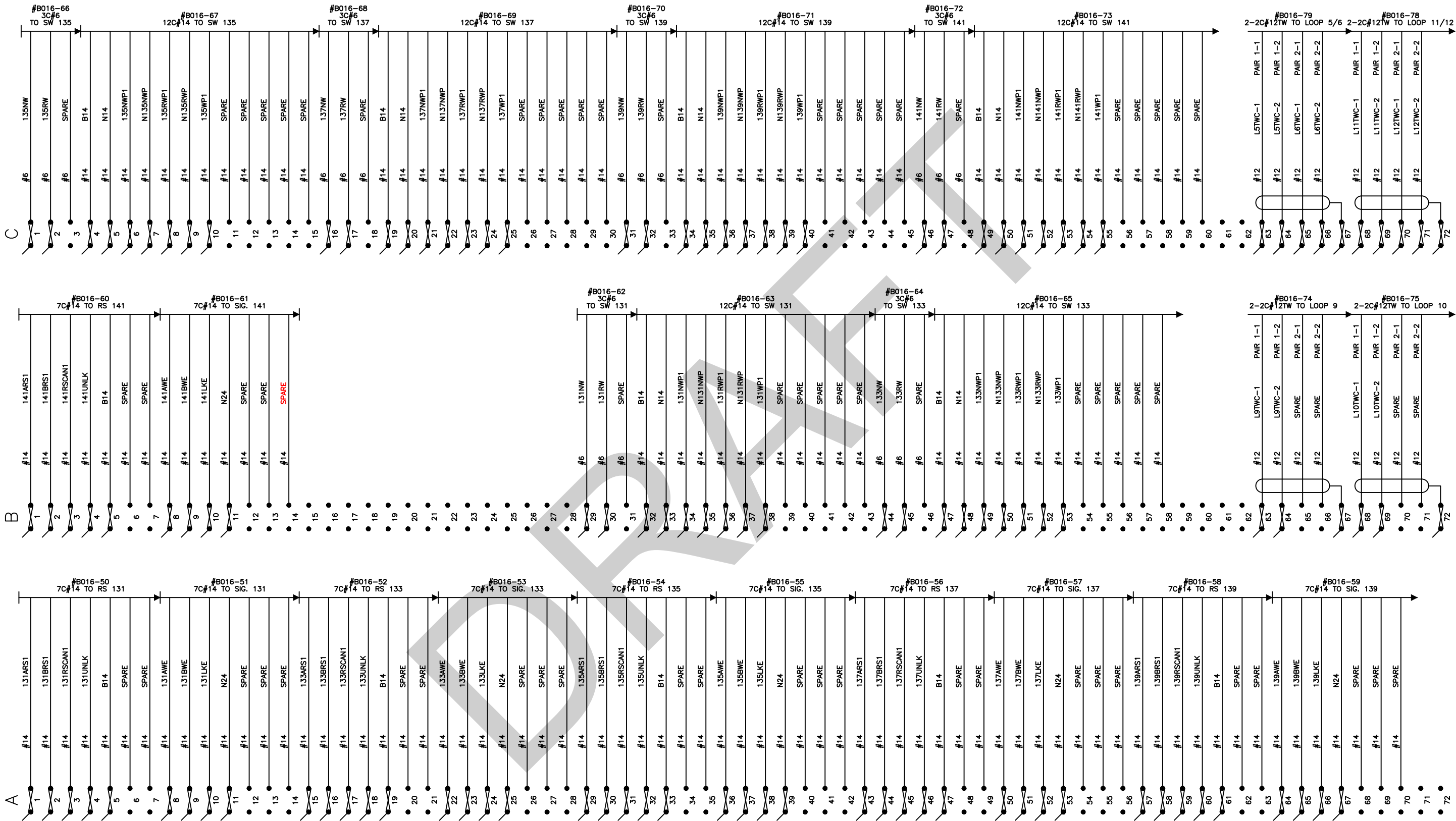
NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS	0	NEW SIG. HOUSE & CKTS THAT REPLACE ORIGINAL B016RC/RCA CASES	10/31/02	KNZ
	1	AS BUILT CHANGES PER CONTRACT #LRT-10834/10879		
8/28/03	2	AS BUILT CHANGES PER CONTRACT #LRT-1108100/CIP11378		
	3	5/31/07 SECA BROADWAY WYE REHAB CONTRACT JOC 1338-04		
11/14/11	4	STREET CROSSED OVERS SANDAG CIP1210070		
	5	6/24/12 HMS QUIETZONE UPGRADES CITY OF SD		
8/30/12	6	SELECT RECORDED AS-IN-SERVICE		
	8/8/18			
DESIGNED BY	DRAWN BY	CHECKED BY	PRJ. ENG.	DATE
				
SANTA FE – 12TH & IMPERIAL (BAYSIDE)				
B16RC (BROADWAY)				
MAIN TERMINAL BOARD 1 POWER LOOPS				
SCALE			NTS	
CONTRACT NO.				
DRAWING NO.			SHT NO.	
SAB0016RC_52			52	

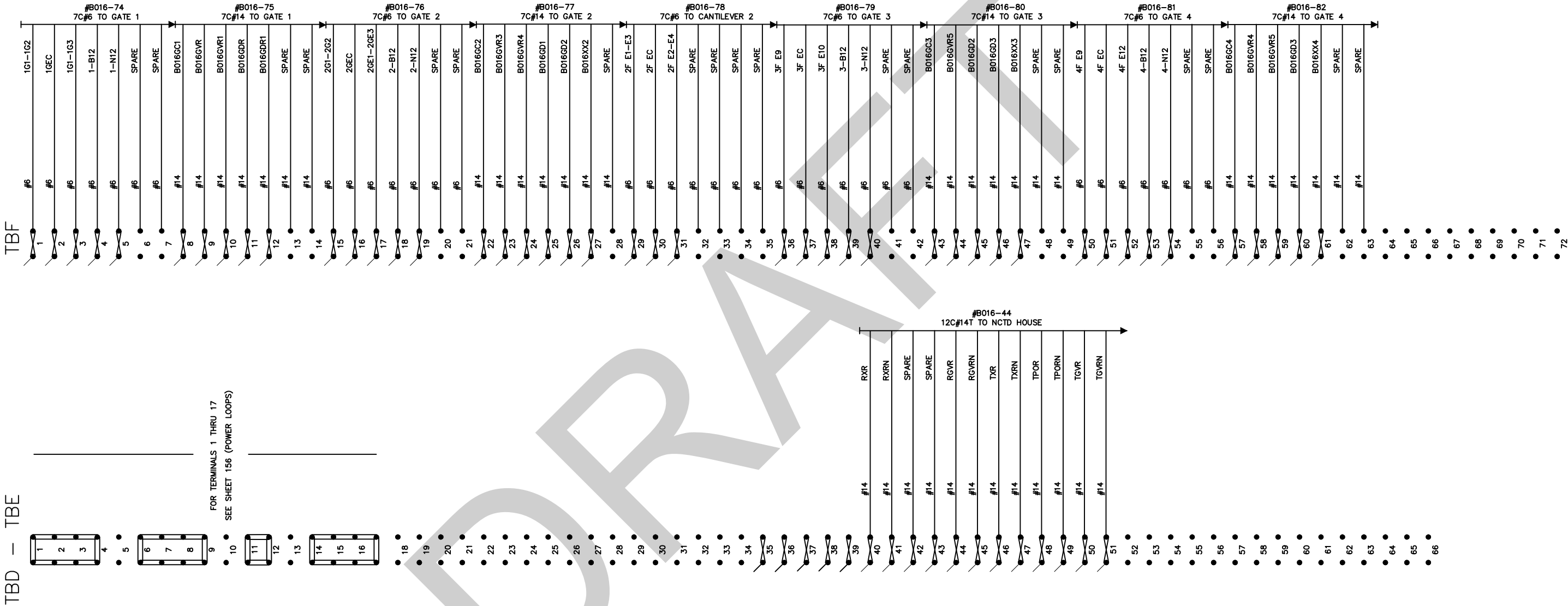


RED = IN YELLOW = OUT


REVISIONS 0. NEW SIG HOUSE & CKTS THAT REPLACE ORIGINAL B16RC/RCA CASES 10/31/02 KMZ 1. AS BUILT CHANGES PER CONTRACT #LRT-10834/10879 8/28/03 2. AS BUILT CHANGES PER CONTRACT #LRT-108100/CP11378 5/31/07 SECA 3. BROADWAY WYE B16RC/CP11378 JOC 1338-04 11/14/11 HMS 4. C STREET CROSSOVERS SANGAG CP1210070 6/24/12 HMS 5. QUIETZONE UPGRADES CITY OF SD 8/30/12 SELECT 6. RECORDED 7. AS-IN-SERVICE 8/8/18		 DESIGNED BY GK DRAWN BY GK CHECKED BY PRJ. ENG.	DATE 12/23 12/23	 GLOBAL SIGNALS GROUP INC		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) MAIN TERMINAL BOARD 1 POWER LOOPS		SCALE NTS		CONTRACT NO.		DRAWING NO. SHT NO. SAB000065_53 53	
---	--	--	------------------------	--	--	---	--	--------------	--	--------------	--	--	--

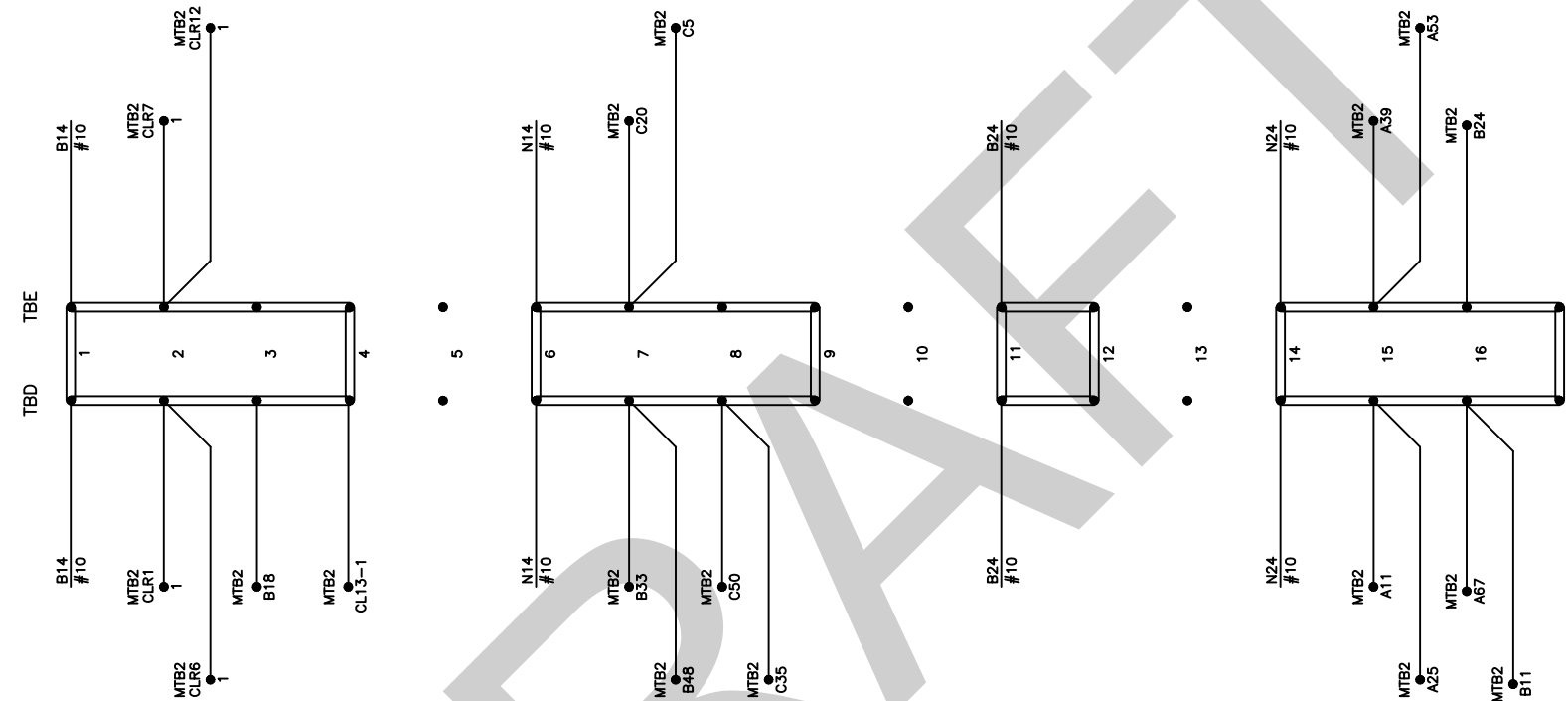


REVISIONS		DESIGNED BY		DATE		<div>GLOBAL SIGNALS GROUP INC</div>	C STREET & BROADWAY WYE CONVERSION		SCALE				
0. BROADWAY WYE REHAB CONTRACT JOC 1338-04		GK		12/23			B16RC (BROADWAY) MAIN TERMINAL BOARD 2 CABLE LAYOUT		NTS				
1. C STREET CROSSOVERS SANDAG CP1210070		GK		12/23					CONTRACT NO.				
2. SILENTONE UPGRADES CITY OF SD		CHECKED BY		PRJ. ENG.					DRAWING NO. SHT NO.				
3. 8/30/12 SELECT AS-IN-SERVICE									A-229 55				
8/8/18													





NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS	DESIGNED BY	DATE		SANTA FE – 12TH & IMPERIAL (BAYSIDE)		SCALE
	DRAWN BY			B16RC (BROADWAY) MAIN TERMINAL BOARD 2 CABLE LAYOUT	NTS	
	CHECKED BY				CONTRACT NO.	
	PRJ. ENG.				DRAWING NO. SAB0016RC_56 A-230	SHT NO. 56
0. BROADWAY WYE REHAB CONTRACT JOC 1338-04						
11/14/11 HMS						
1. C STREET CROSSOVERS SANDAG CP1210070						
6/24/12 HMS						
2. QUIETZONE UPGRADES CITY OF SD						
8/30/12 SELECT						
3. RECORDED AS-IN-SERVICE						
8/8/18						



NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 1. 10 STREET CROSSOVERS SANGA CP11070		6/24/12 HMS 2. QUIETZONE UPGRADES CITY OF SD		8/30/12 SELECT 3. RECORDED AS-IN-SERVICE 8/9/18				DESIGNED BY _____ DATE _____ DRAWN BY _____ CHECKED BY _____ PRJ. ENG. _____				SANTA FE – 12TH & IMPERIAL (BAYSIDE) B16RC (BROADWAY) MAIN TERMINAL BOARD 2 POWER LOOPS		SCALE NTS		CONTRACT NO. _____		DRAWING NO. _____ SHT NO. _____ SAB0016RC_57 57	
---	--	--	--	--	--	---	--	---	--	---	--	---	--	--------------	--	--------------------	--	--	--

REVISIONS

0

NEW SIG. HOUSE & CKTS THAT REPLACE ORIGINAL B016RC/RCA CASES

10/31/02

KNZ

1

AS BUILT CHANGES PER CONTRACT #LRT-10834/10879

8/28/03

2

AS BUILT CHANGES PER CONTRACT #LRT-1108100/CIP11378

5/31/07

SECA

3

BROADWAY WYE REHAB CONTRACT JOC 1338-04

11/14/11

HMS

4

C STREET CROSSOVERS SANDAG CIP1210070

6/24/12

HMS

5

QUETZONE UPGRADES CITY OF SD

8/30/12

SELECT

6

RECORDED AS-IN-SERVICE

8/8/18

DESIGNED BY

GK

DRAWN BY

GK

CHECKED BY

PRJ. ENG.

DATE

12/23

12/23

EXP. 09/30/24

STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ELECTRICAL ENGINEER

JOHN G. JALOWSKI

14766

MTS

GLOBAL SIGNALS GROUP INC

C STREET & BROADWAY WYE CONVERSION

B16RC (BROADWAY) RACK 1 RELAY LAYOUT

SCALE

NTS

CONTRACT NO.

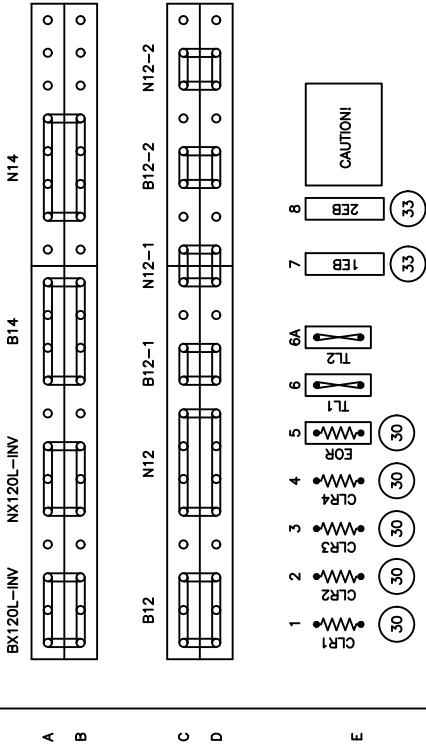
DRAWING NO.

SAB0016RC-58T

SHT NO.

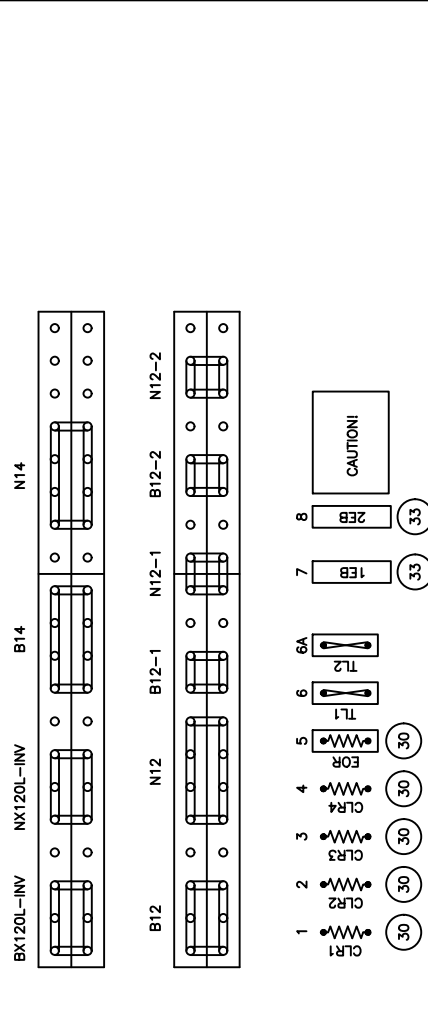
58T

RACK 1




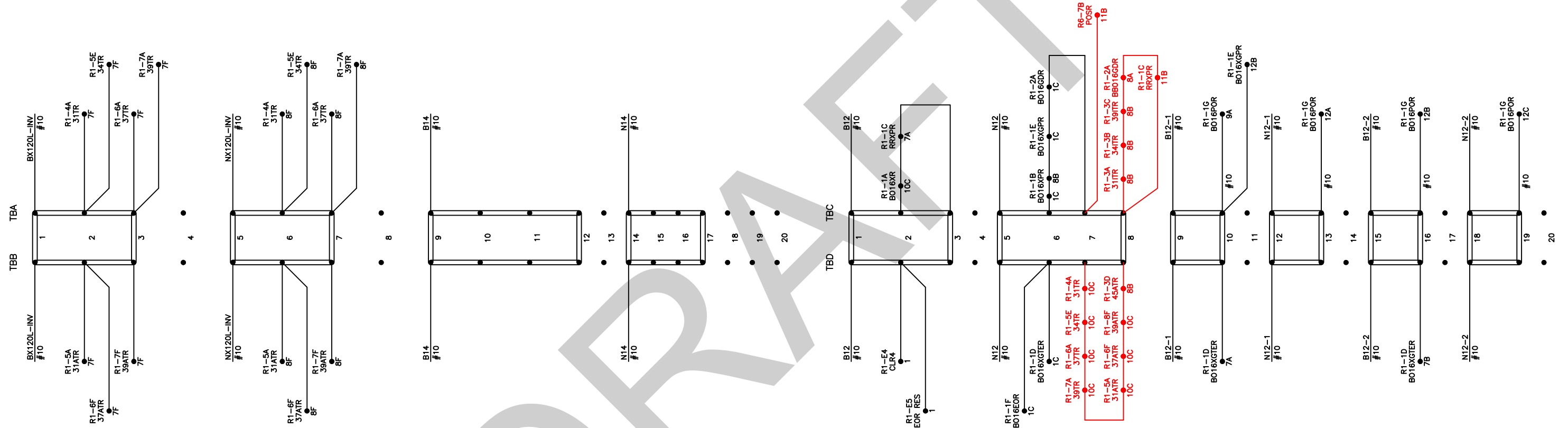
	A	B	C	D	E	F	G	H	
ROW 1	<div><div>1</div><div>B016 XR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>	<div><div>1</div><div>B016 XPR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>	<div><div>1</div><div>RR XPR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>	<div><div>1</div><div>KETT- PR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>				<div><div>17</div><div>B016 POR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>	<div><div>1</div><div>RVGR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>
ROW 2	<div><div>1</div><div>B016 GDR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>	<div><div>1</div><div>B016 GVR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>							
ROW 3	<div><div>1</div><div>31TR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>	<div><div>1</div><div>34TR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>	<div><div>1</div><div>39TR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>	<div><div>1</div><div>45ATR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>C B A C B A</div></div>					
ROW 4	<div><div>23</div><div>31 TR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>F E D C B A</div></div>								
ROW 5	<div><div>23</div><div>31A TR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>F E D C B A</div></div>	<div><div>23</div><div>34 TR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>F E D C B A</div></div>							
ROW 6	<div><div>23</div><div>37 TR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>F E D C B A</div></div>	<div><div>23</div><div>37A TR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>F E D C B A</div></div>							
ROW 7	<div><div>23</div><div>39 TR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>F E D C B A</div></div>								
ROW 8							<div><div>23</div><div>39A TR</div><div>V V V V V V V V</div><div>- - - - -</div><div>8 9 10 11 12</div><div>8 9 10 11 12</div><div>F E D C B A</div></div>		



RACK 1





A	B	C	D	E	F	G	H
(1) 38 B016 XR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A	(1) 27 B016 XPR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A	(1) 27 RR XPR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A	(1) 38 KETT- PR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A			(17) 44 B016 POR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A	(1) 27 RVGR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A
(1) 28 B016 GDR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A	(1) 28 B016 GVR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A						
(1) 10 31TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A	(1) 10 34TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A	(1) 10 39TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A	(1) 9 45ATR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 C B A				
(23) 9 31A TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 F E D C B A	(23) 10 31A TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 F E D C B A				(23) 9 34 TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 F E D C B A		
(23) 9 37 TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 F E D C B A	(23) 9 37 TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 F E D C B A					(23) 10 37A TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 F E D C B A	
(23) 9 39 TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 F E D C B A	(23) 9 39 TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 F E D C B A						
						(23) 10 39A TR V ▼▼ 7 — — 8 ▲▲ 9 ▼▼ 10 — — 11 ▲▲ 12 F E D C B A	

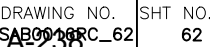
REVISIONS		DESIGNED BY GK DATE 12/23		<div><div>GLOBAL SIGNALS GROUP INC</div></div>		C STREET & BROADWAY WYE CONVERSION		SCALE NTS	
DRAWN BY GK DATE 12/23		B16RC (BROADWAY) RACK 1 RELAY LAYOUT				CONTRACT NO.			
CHECKED BY		DRAWING NO. SAB0016RC-58 A-233				SHT NO. 58			
PRJ. ENG.									





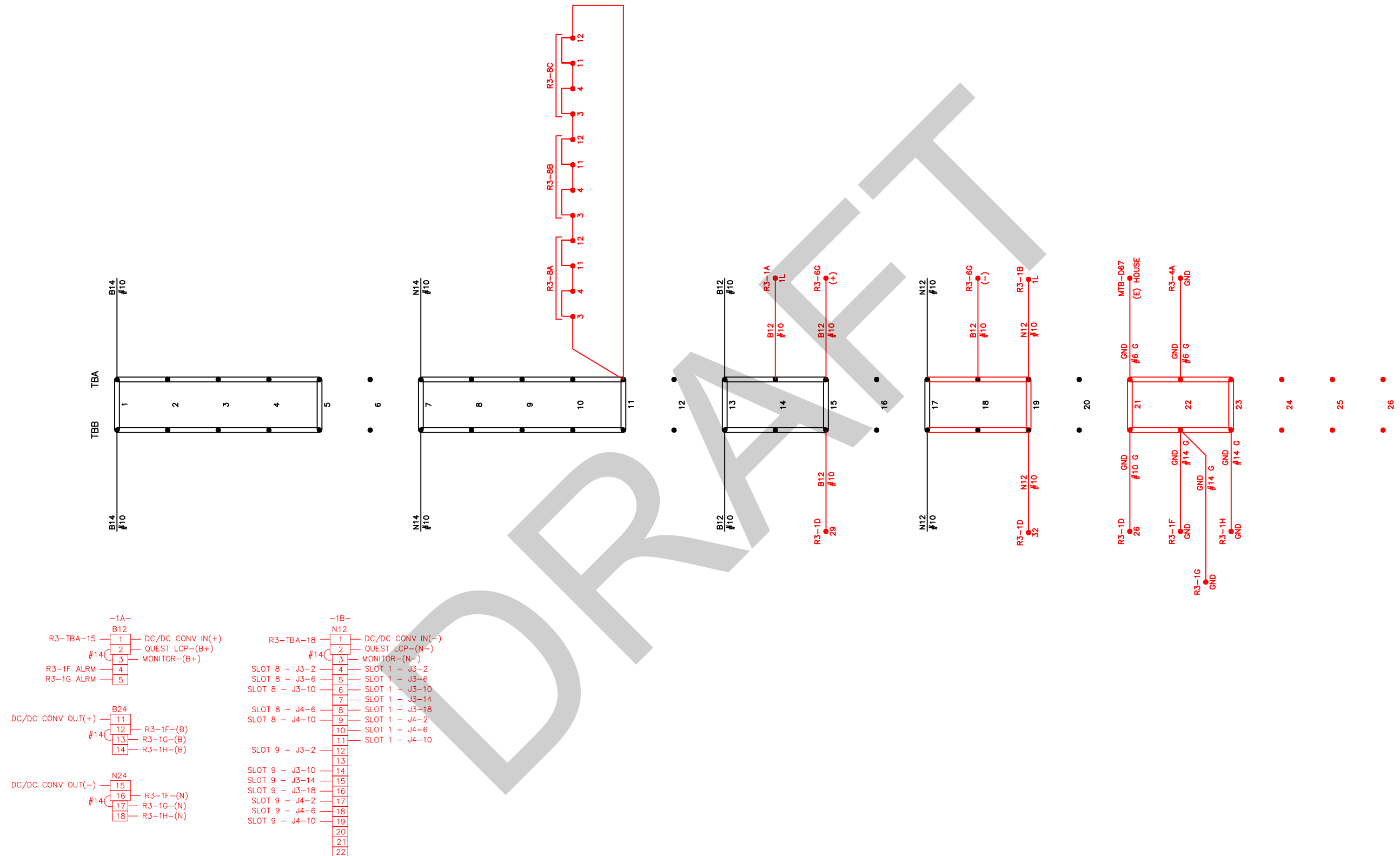
REVISIONS		NEW SIG HOUSE, & ORIGINAL B016RC/RCA CASES 10/31/02 KMZ 1 AS BUILT CHANGES PER CONTRACT #LRT-10834/10879 8/28/03 2 AS BUILT CHANGES PER CONTRACT #LRT-1108100/GP11378 5/31/07 SECA 3 BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HWS 4 C STREET CROSSOVERS SANDAG CP1210070 6/24/12 HWS 5 QUARTZITE UPGRADES CITY OF SD 8/30/12 SELECT 6 RECORDED AS-IN-SERVICE 8/8/18		 DESIGNED BY GK DRAWN BY GK CHECKED BY PRJ. ENG.		DATE 12/23 DATE 12/23		 GLOBAL SIGNALS GROUP INC		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) RACK 1 POWER LOOPS		SCALE NTS CONTRACT NO. DRAWING NO. S180016RC_59 SHT NO. 59	
-----------	--	--	--	--	--	--------------------------	--	--	--	---	--	---	--





REVISIONS				DESIGNED BY GK	DATE 12/23		C STREET & BROADWAY WYE CONVERSION		SCALE NTS
0 NEW SIG HOUSE & CRTS THAT REPLACE EXISTING B16RC/RCA CASES 10/31/02 KMZ				DRAWN BY GK	12/23		B16RC (BROADWAY) RACK 3 RELAY LAYOUT		CONTRACT NO.
1 AS BUILT CHANGES PER CONTRACT #LRT-10834/10879 8/28/03				CHECKED BY					DRAWING NO. SAB00167C_621
2 AS BUILT CHANGES PER CONTRACT #LRT-1106100/CP11378				PRJ. ENG.					SHT NO. 621
3 BROADWAY WYE REHAB CONTRACT JOC 1338-04									
4 C STREET CROSSOVERS SANDING CP1210070									
5 QUIETZANE UPGRADES CITY OF SD									
6/24/12 HMS									
8/30/12 SELECT RECORDED AS-IN-SERVICE									
8/8/18									

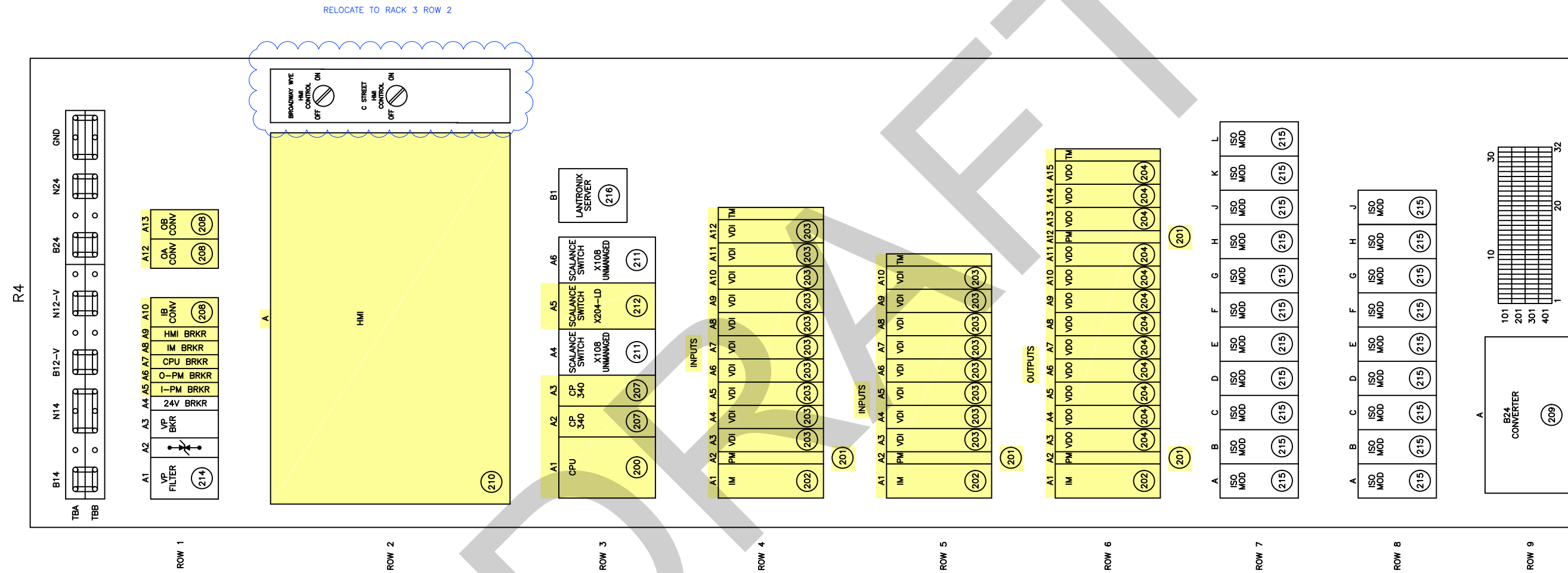




REVISIONS	0 NEW SIG HOUSE & CKTS THAT REPLACE ORIGINAL B016RC/RCA CASES 10/31/02 KMZ 1 AS BUILT CHANGES PER CONTRACT #LRT-10834/10879 8/28/03 2 AS BUILT CHANGES PER CONTRACT #LRT-108100/CP11378 5/31/07 SECA 3 BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 4 C STREET CROSSOVERS SANDBO CP1210070 6/24/12 HMS 5 QUIETZONE UPGRADES CITY OF SD 8/30/12 SELECT 6 RECORDED AS-IN-SERVICE 8/8/18	 <div> DESIGNED BY GK DRAWN BY GK CHECKED BY PRJ. ENG. </div> <div> DATE 12/23 DATE 12/23 </div> <div>  </div>	C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) RACK 3 RELAY LAYOUT	SCALE NTS CONTRACT NO. DRAWING NO. SAB0016RC_62 SHT NO. 62
-----------	--	--	---	---



RED = IN YELLOW = OUT

REVISIONS		0 NEW SIG HOUSE & CKTS THAT REPLACE EXISTING SIGNAL BOARDS/CASES 10/31/02 KMZ 1 AS BUILT CHANGES PER CONTRACT #LRT-10834/10879 8/28/03 2 AS BUILT CHANGES PER CONTRACT #LRT-1106100/CP11378 5/31/07 SECA 3 BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 4 C STREET CROSSOVERS SANJAG CP1210070 6/24/12 HMS 5 QUIETZANE UPGRADES CITY OF SD 8/30/12 SELECT RECORDED AS-IN-SERVICE 8/8/18		 DESIGNED BY GK 12/23 DRAWN BY GK 12/23 CHECKED BY PRJ. ENG.		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) RACK 3 POWER LOOPS	SCALE NTS CONTRACT NO. DRAWING NO. SAB0010RC_63 SHT NO. 63
-----------	--	---	--	--	---	--	---



REVISIONS		DESIGNED BY GK		DATE 12/23				C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) RACK 4 LAYOUT		SCALE NTS	
0 BROADWAY WYE 11/14/11 HMS 1 C STREET CROSSOVERS 8/30/12 SELECT 3 RECORDED 8/8/18 2 QUIETZONE UPGRADES CITY OF SD 8/30/12 SELECT 3 RECORDED 8/8/18		DRAWN BY GK CHECKED BY PRJ. ENG.		CONTRACT NO.						DRAWING NO. S40016RC-64T SHT NO. 64T	
											

REVISIONS

0	BROADWAY WYE REHAB CONTRACT JOC 1.338-04	11/14/11	HMS
1	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS
2	GUETZTONE UPGRADES CITY OF SD	8/30/12	SELECT
3	RECORDED AS-IN-SERVICE	8/8/18	

DESIGNED BY
GK

DRAWN BY
GK

CHECKED BY

PRJ. ENG.

DATE
12/23

12/23

REGISTERED PROFESSIONAL ENGINEER
JAMES G. JALOWSKI
ELECTRICAL
CITY OF CALIFORNIA
Sign Date: 02/25/24

MTS

GLOBAL SIGNALS GROUP INC

GLOBAL SIGNALS GROUP INC

C STREET & BROADWAY WYE CONVERSION

B16RC (BROADWAY)
RACK 4 LAYOUT

SCALE
NTS

CONTRACT NO.

DRAWING NO.
SAB0016RC_64

SHT NO.
64

VP
FILTER

VP
BKRR

24V
BRKR

214

B14

N14

B12-V

N12-V

B24

N24

GND

TBA

TBB

A1

A2

A3

A4

VP
FILTER

VP
BKRR

24V
BRKR

214

A4

SCALE
SWITCH
X108
UNMANGED

211

A6

SCALE
SWITCH
X108
UNMANGED

211

B1

LANTRONIX
SERVER

216

A

ISO
MOD

215

B

ISO
MOD

215

C

ISO
MOD

215

D

ISO
MOD

215

E

ISO
MOD

215

F

ISO
MOD

215

G

ISO
MOD

215

H

ISO
MOD

215

J

ISO
MOD

215

K

ISO
MOD

215

L

ISO
MOD

215

A

ISO
MOD

215

B

ISO
MOD

215

C

ISO
MOD

215

D

ISO
MOD

215

E

ISO
MOD

215

F

ISO
MOD

215

G

ISO
MOD

215

H

ISO
MOD

215

J

ISO
MOD

215

A

B24
CONVERTER

209

101

201

301

401

1

20

30

32

ROW 1

ROW 2

ROW 3

ROW 4

ROW 5

ROW 6

ROW 7

ROW 8

ROW 9

VP
FILTER

VP
BKRR

24V
BRKR

214

B14

N14

B12-V

N12-V

B24

N24

GND

TBA

TBB

A1

A2

A3

A4

VP
FILTER

VP
BKRR

24V
BRKR

214

A4

SCALE
SWITCH
X108
UNMANGED

211

A6

SCALE
SWITCH
X108
UNMANGED

211

B1

LANTRONIX
SERVER

216

A

ISO
MOD

215

B

ISO
MOD

215

C

ISO
MOD

215

D

ISO
MOD

215

E

ISO
MOD

215

F

ISO
MOD

215

G

ISO
MOD

215

H

ISO
MOD

215

J

ISO
MOD

215

K

ISO
MOD

215

L

ISO
MOD

215

A

ISO
MOD

215

B

ISO
MOD

215

C

ISO
MOD

215

D

ISO
MOD

215

E

ISO
MOD

215

F

ISO
MOD

215

G

ISO
MOD

215

H

ISO
MOD

215

J

ISO
MOD

215

A

B24
CONVERTER

209

101

201

301

401

1

20

30

32

ROW 1

ROW 2

ROW 3

ROW 4

ROW 5

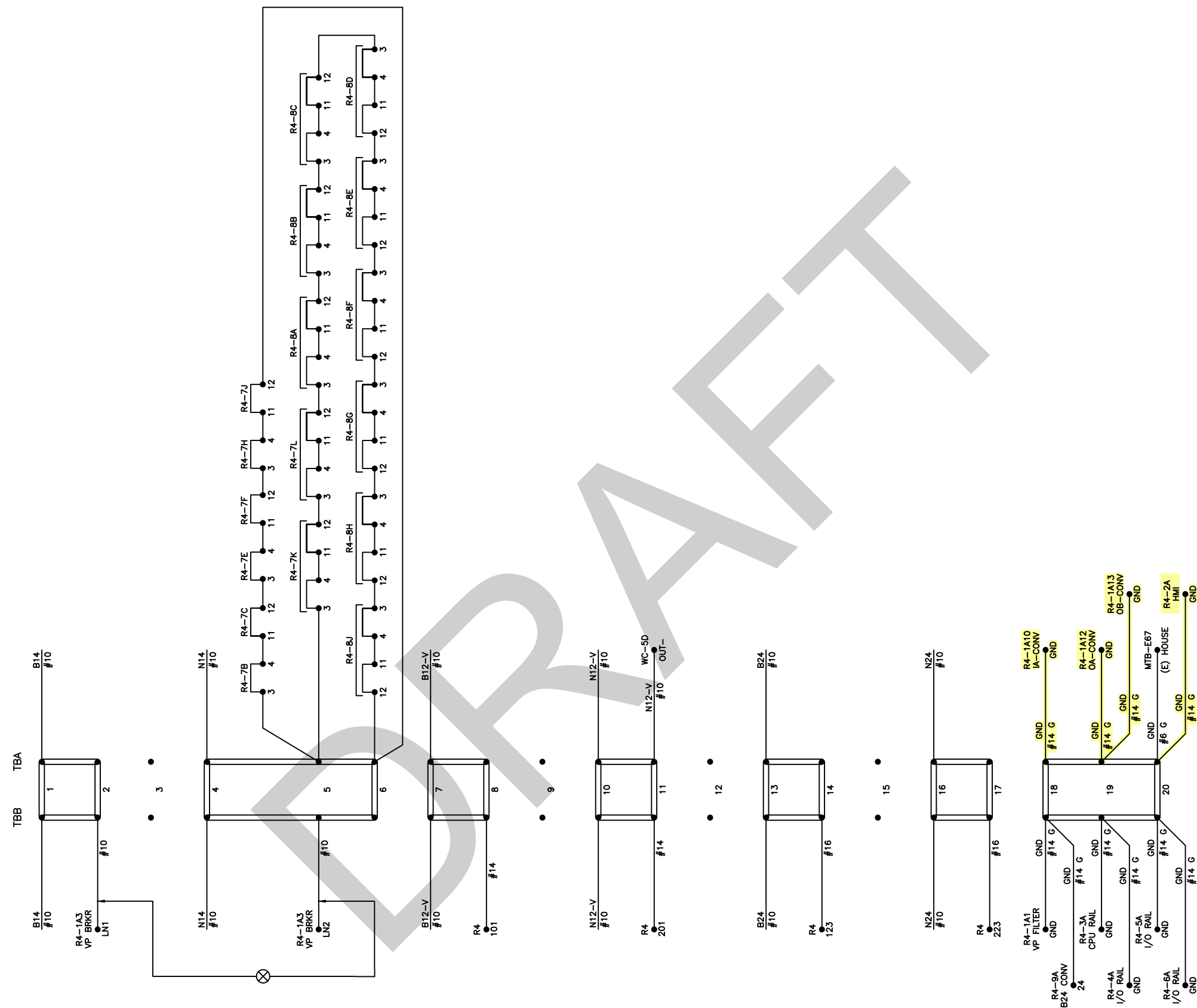
ROW 6

ROW 7



ROW 8

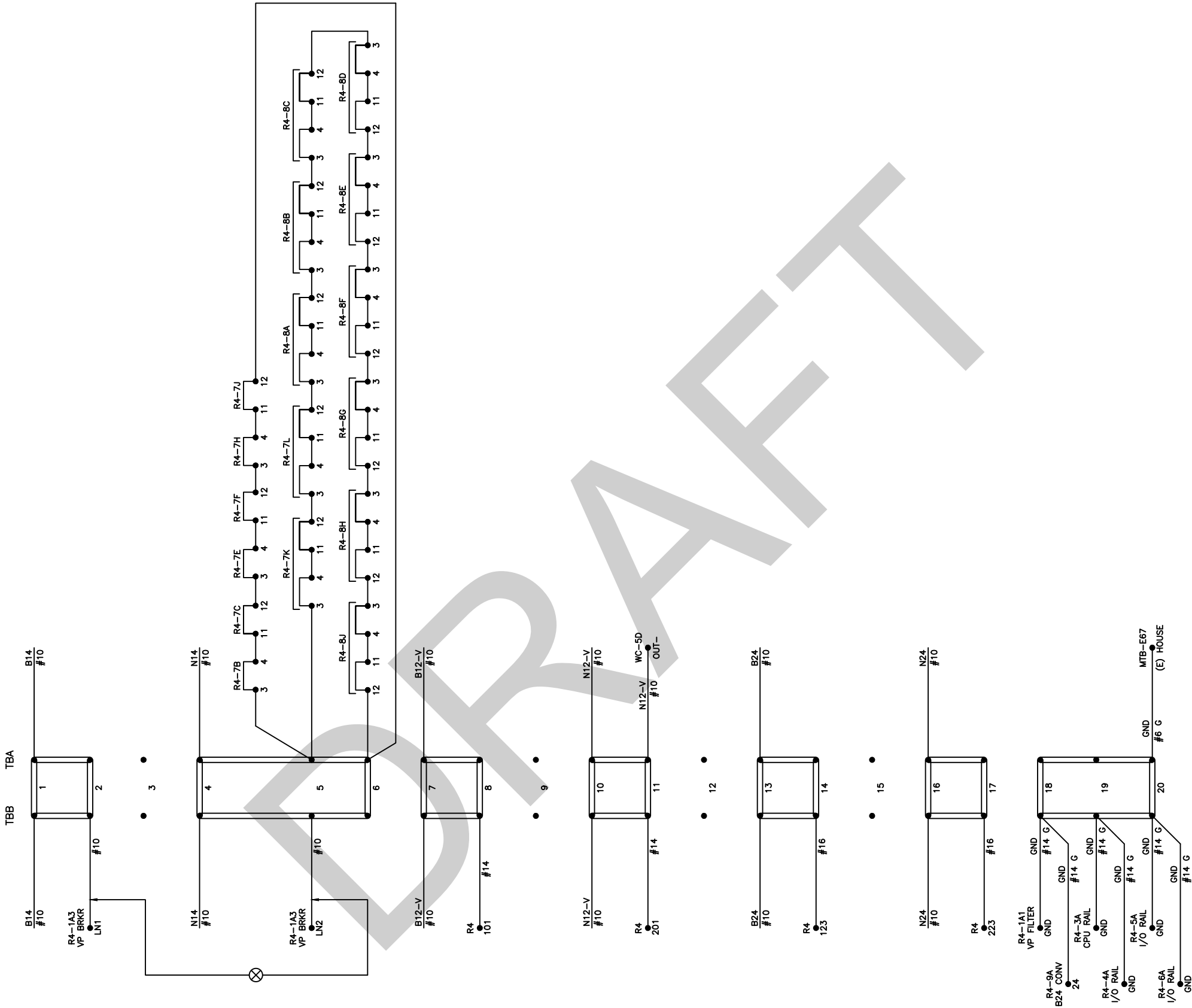
ROW 9

RED = IN YELLOW = OUT



RED = IN YELLOW = OUT

REVISIONS 0 BROADWAY WYE REMAIN CONTRACT JOC 1338-04 11/14/11 HMS 1 C STREET CROSSOVERS SANGAM CP1210070 6/24/12 HMS 2 QUIETZONE UPGRADES CITY OF SD 8/30/12 SELECT 3 RECORDED HAS IN-SERVICE 8/8/18			DESIGNED BY GK 12/23 DRAWN BY GK 12/23 CHECKED BY PRJ. ENG.		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) RACK 4 POWER LOOPS	SCALE NTS CONTRACT NO. DRAWING NO. SAC00165 SHT NO. 651
--	--	---	--	---	--	---



REVISIONS		
0	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11 HMS
1	C STREET CROSSOVERS SANDAG CP1210070	6/24/12 HMS
2	QUIETSTONE UPGRADES CITY OF SD	8/30/12 SELECT
3	RECORDED AS-IN-SERVICE	8/8/18

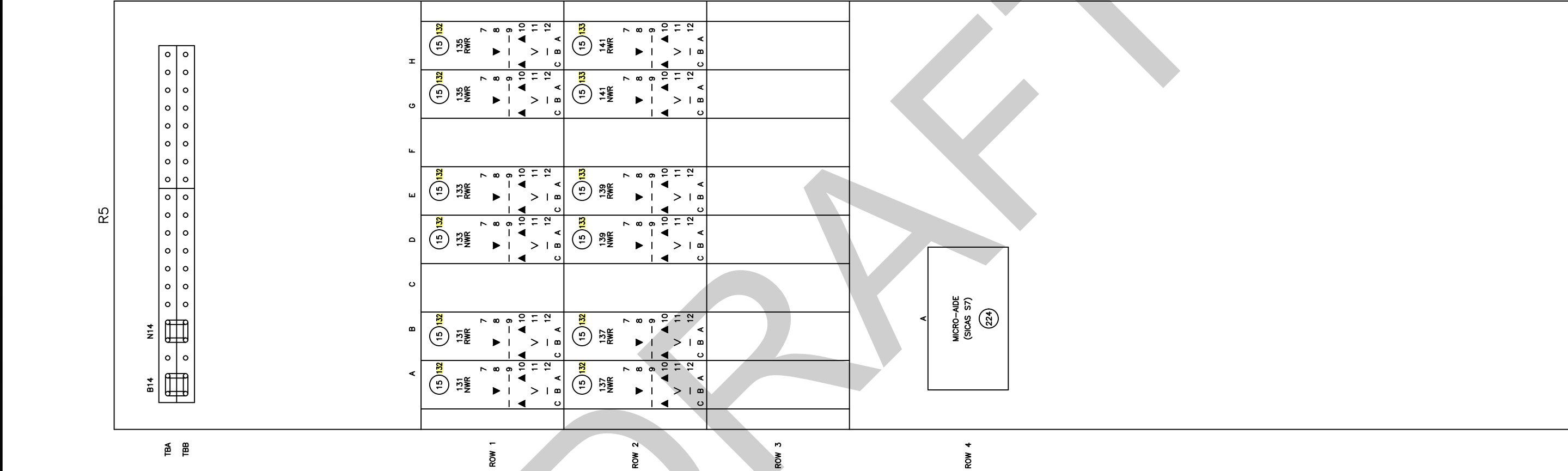


DESIGNED BY	GK	DATE	12/23
DRAWN BY	GK		12/23
CHECKED BY			
PRJ. ENG.			

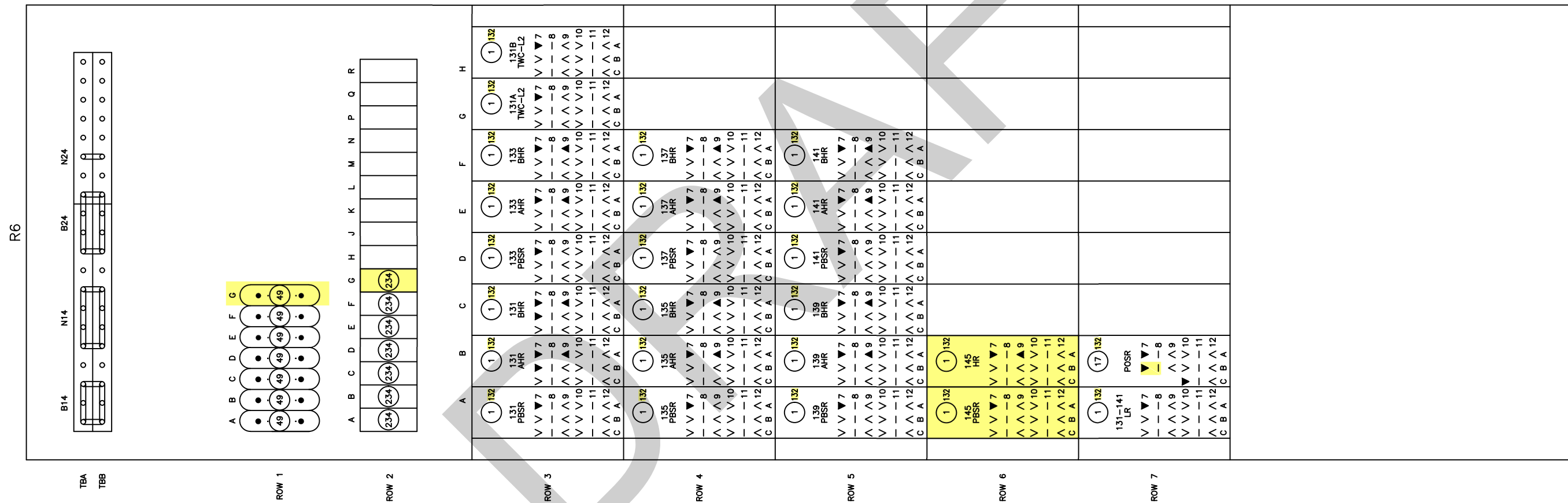


C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
B16RC (BROADWAY) RACK 4 POWER LOOPS		CONTRACT NO.	
		DRAWING NO.	SHT NO.
A-243		SAB0018RC_65	65

RED = IN YELLOW = OUT

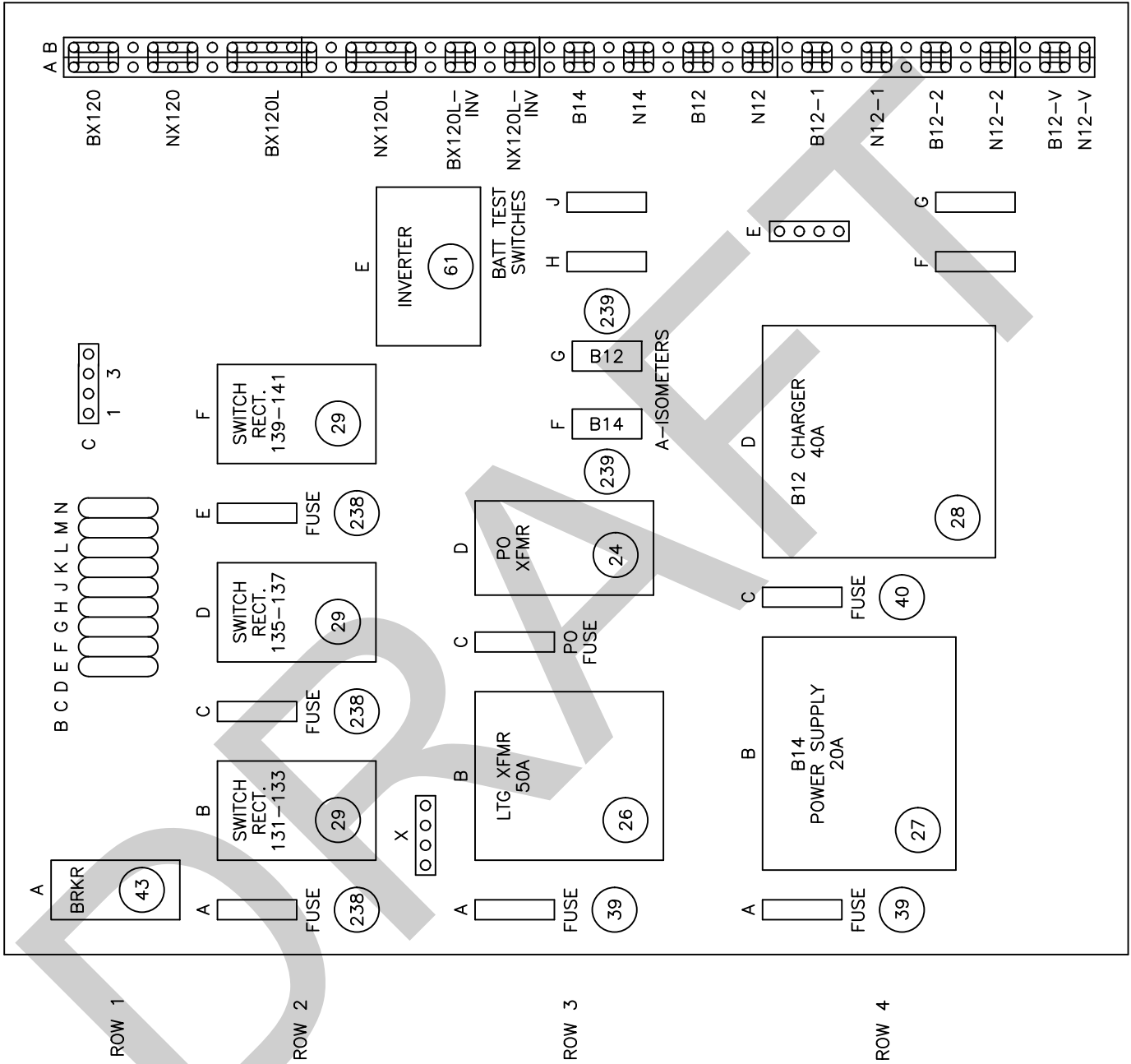


REVISIONS										DESIGNED BY GK										DATE 12/23										<div>GLOBAL SIGNALS GROUP INC</div>										C STREET & BROADWAY WYE CONVERSION										SCALE NTS																																																											
0 BROADWAY WYE REHAB CONTRACT JOC 1338-04										11/14/11 HMS										1 C STREET CROSSOVERS SANDAG CP1210070																				6/24/12 HMS										2 QUIETZONE UPGRADES CITY OF SD										8/30/12 SELECT										3 RECORDED AS-IN-SERVICE										8/8/18										CONTRACT NO.										DRAWING NO. S400016RC_66T									



[illegible]

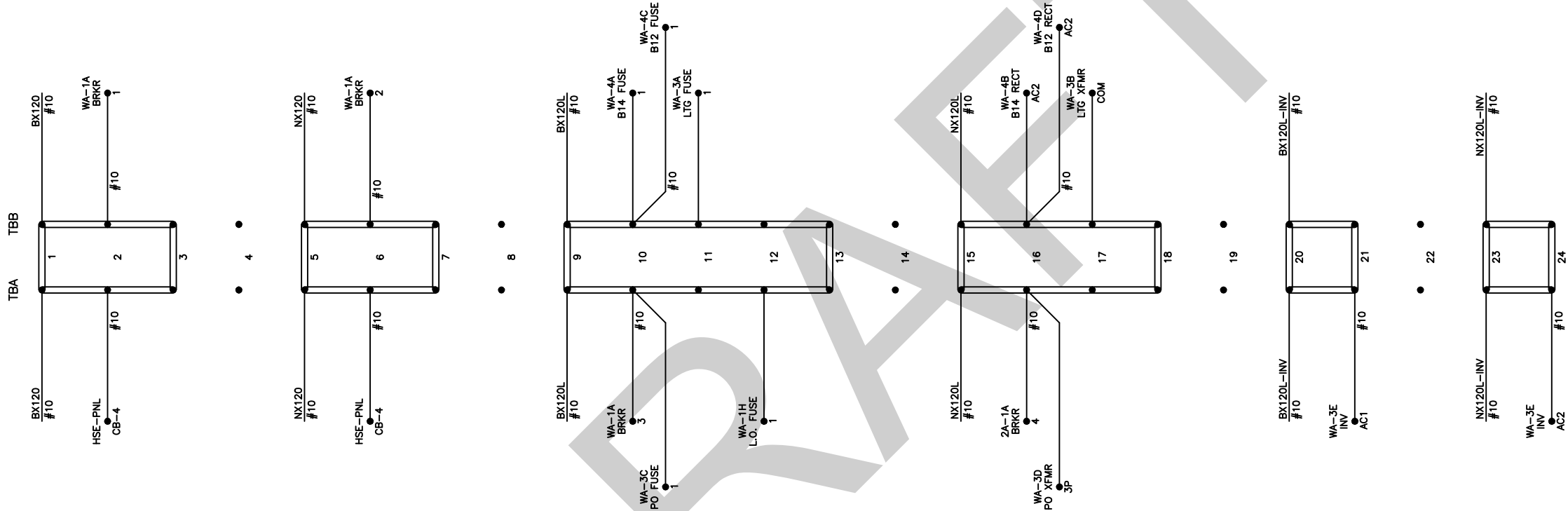
CONTACT LOCATIONS		RELAY	COIL	AVAILABLE CONTACTS	
				1	8
NAME					
	131UNLKR	2A	133	109	
	133UNLKR	2B	133	110	
	135UNLKR	2C	133	110	
	137UNLKR	2D	133	109	
	139UNLKR	2E	133	109	
	141UNLKR	2F	133	110	
	145UNLKR	2G	133		

WALL "A"



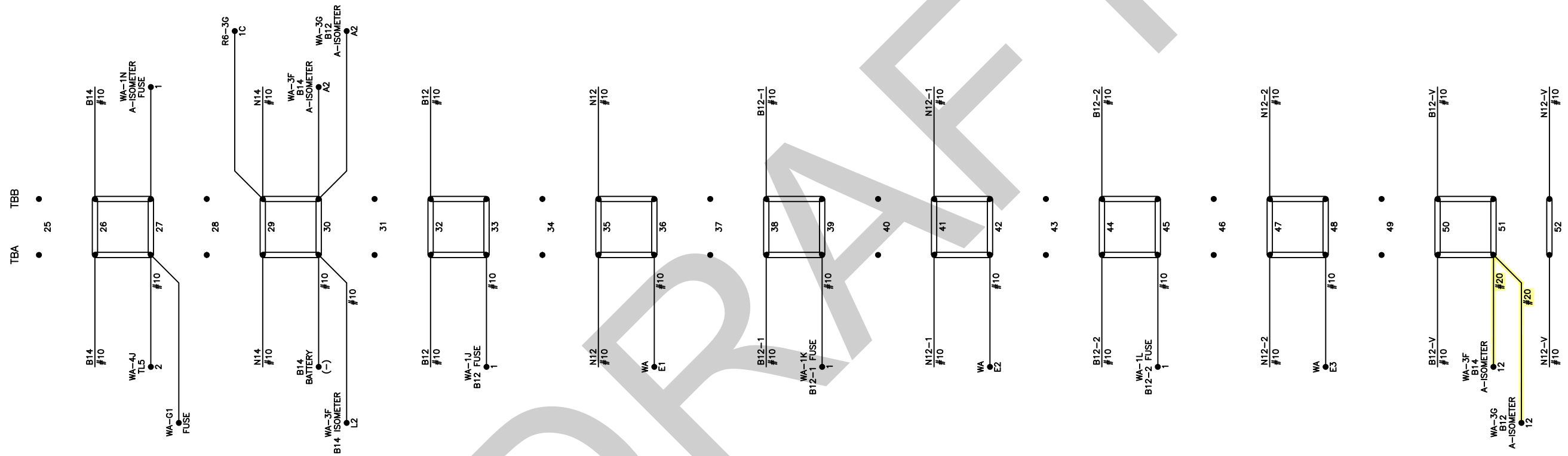
NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY


REVISIONS				DESIGNED BY		DATE		<div></div>										SANTA FE – 12TH & IMPERIAL (BAYSIDE)		SCALE	
				DRAWN BY														CONTRACT NO.			
0. NEW SIG HOUSE & CKTS THAT REPLACE ORIGINAL B016RC/RCA CASES				10/31/02		KNZ		<div></div>										B16RC (BROADWAY) WALL "A" RACK LAYOUT		DRAWING NO. SHT NO. SAB0016RC-70 70 A-250	
1. AS BUILT CHANGES PER CONTRACT #LRT-10834/10879				8/28/03																	
2. AS BUILT CHANGES PER CONTRACT #LRT-1106100/CIP11378				5/31/07		SECA															
3. BROADWAY WYE REHAB CONTRACT JOC 1338-04				11/14/11		HMS															
4. C STREET CROSSEOVERS SANDAG CIP1210070				6/24/12		HMS															
5. QUIETZONE UPGRADES CITY OF SD				8/30/12		SELECT															
6. RECORDED AS-IN-SERVICE				8/8/18																	

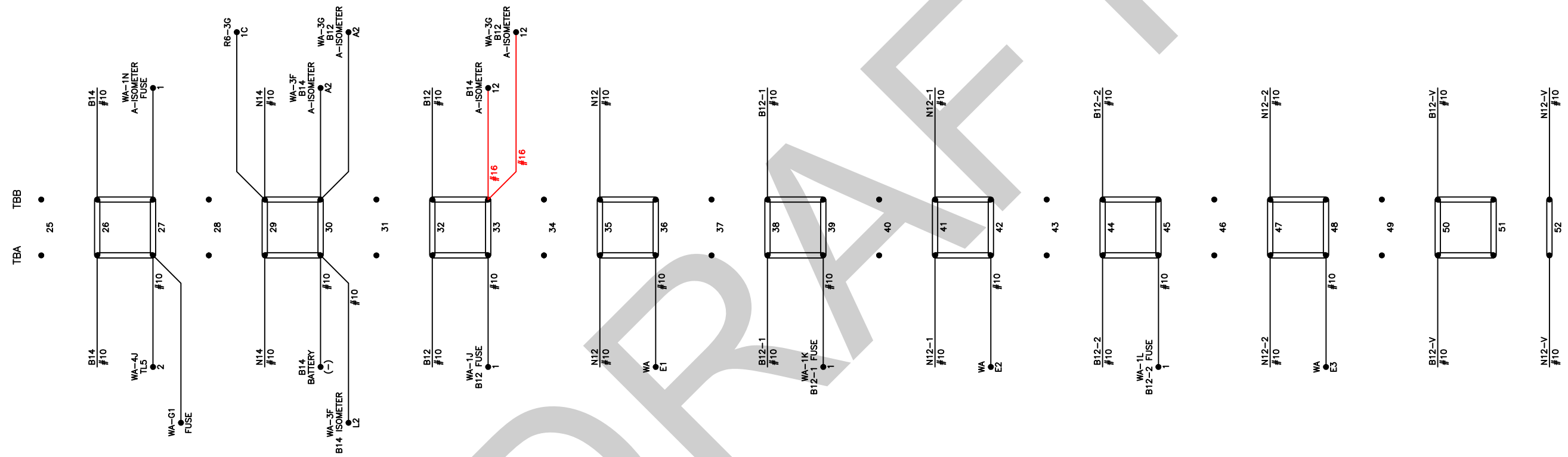




NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

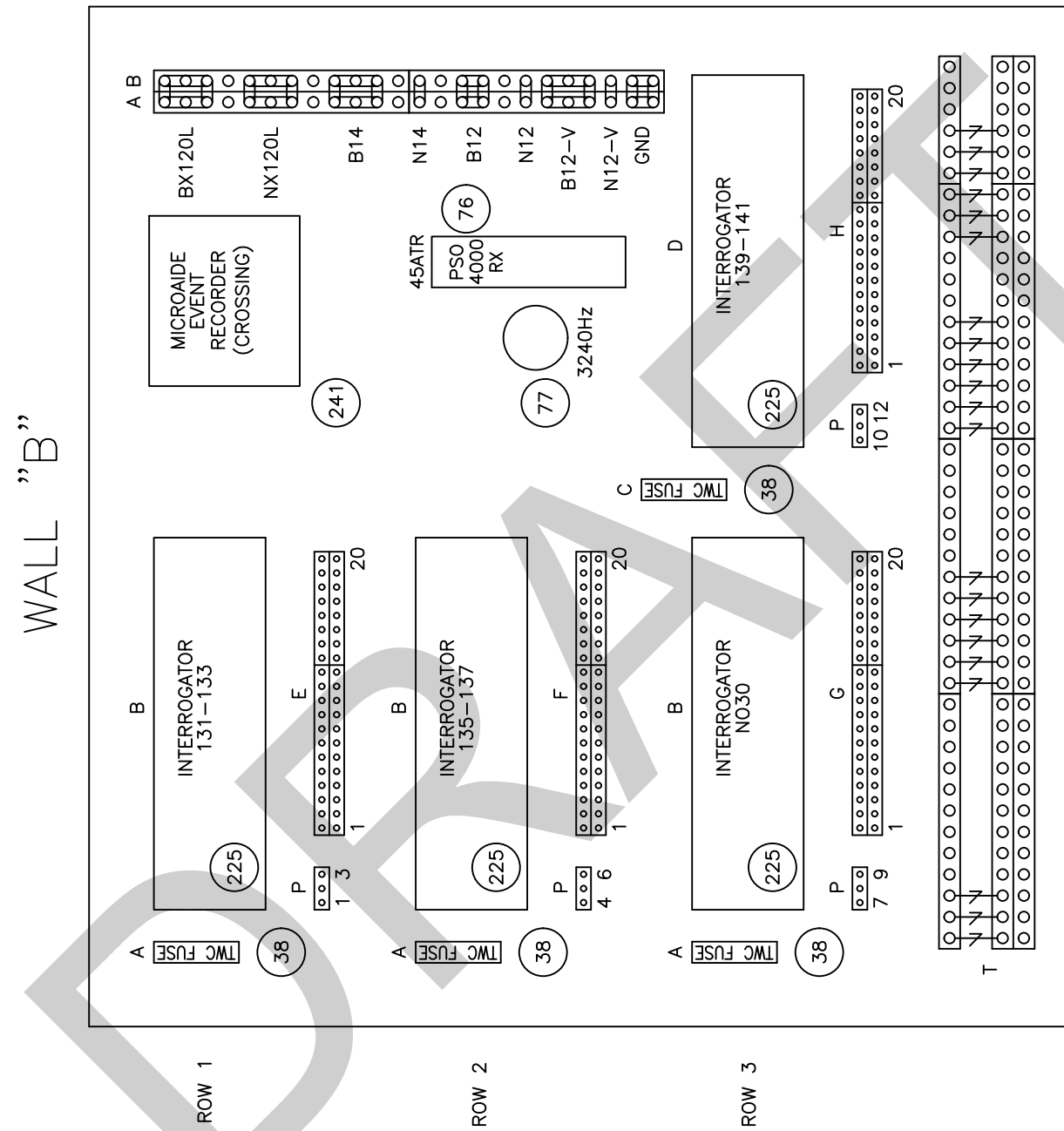
REVISIONS	0. NEW SIG. HOUSE & CKTS THAT REPLACE ORIGINAL B016RC/RCA CASES	10/31/02	KNZ
	1. AS BUILT CHANGES PER CONTRACT #LRT-10834/10879		
8/28/03	2. AS BUILT CHANGES PER CONTRACT #LRT-1108100/CIP11378		
	5/31/07	SECA	
3. BROADWAY WYE REHAB CONTRACT JOC 1338-04			
	11/14/11	HMS	
4. STREET CROSSEOVERS SANDAG CIP1210070			
	6/24/12	HMS	
5. QUIETZONE UPGRADES CITY OF SD			
	8/30/12	SELECT	
6. RECORDED AS-IN-SERVICE			
	8/8/18		
DESIGNED BY			
	DRAWN BY		
CHECKED BY			
	PRJ. ENG.		
DATE			
SANTA FE – 12TH & IMPERIAL (BAYSIDE)			
B16RC (BROADWAY) WALL "A" POWER LOOPS			
SCALE		NTS	
CONTRACT NO.			
DRAWING NO.	SHT NO.		
A-251	71		



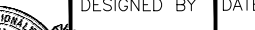

REVISIONS		DESIGNED BY GK		DATE 12/23				C STREET & BROADWAY WYE CONVERSION		SCALE NTS	
0 NEW SIG HOUSE & CKTS THAT REPLACE ORIGINAL BU GRG/RCA CASES		DRAWN BY GK		12/23				CONTRACT NO.			
10/31/02 KMZ PER CONTRACT #LRT-10834/10879		CHECKED BY						DRAWING NO. S400156C_72T		SHT NO. 72T	
8/28/03		PRJ. ENG.						B16RC (BROADWAY) WALL "A" POWER LOOPS			
2. AS BUILT CHANGES PER CONTRACT #LRT-106100/CP11378											
5/31/07 SECA											
3 BROADWAY WYE REHAB CONTRACT JOC 1338-04											
11/14/11 HMS											
4. C STREET CROSSOVERS SANDAG CP1210070											
6/24/12 HMS											
5. SUTZKNE UPGRADES CRT OF SB											
8/30/12 SELECT											
6. RECORDED AS-IN-SERVICE											
8/8/18											

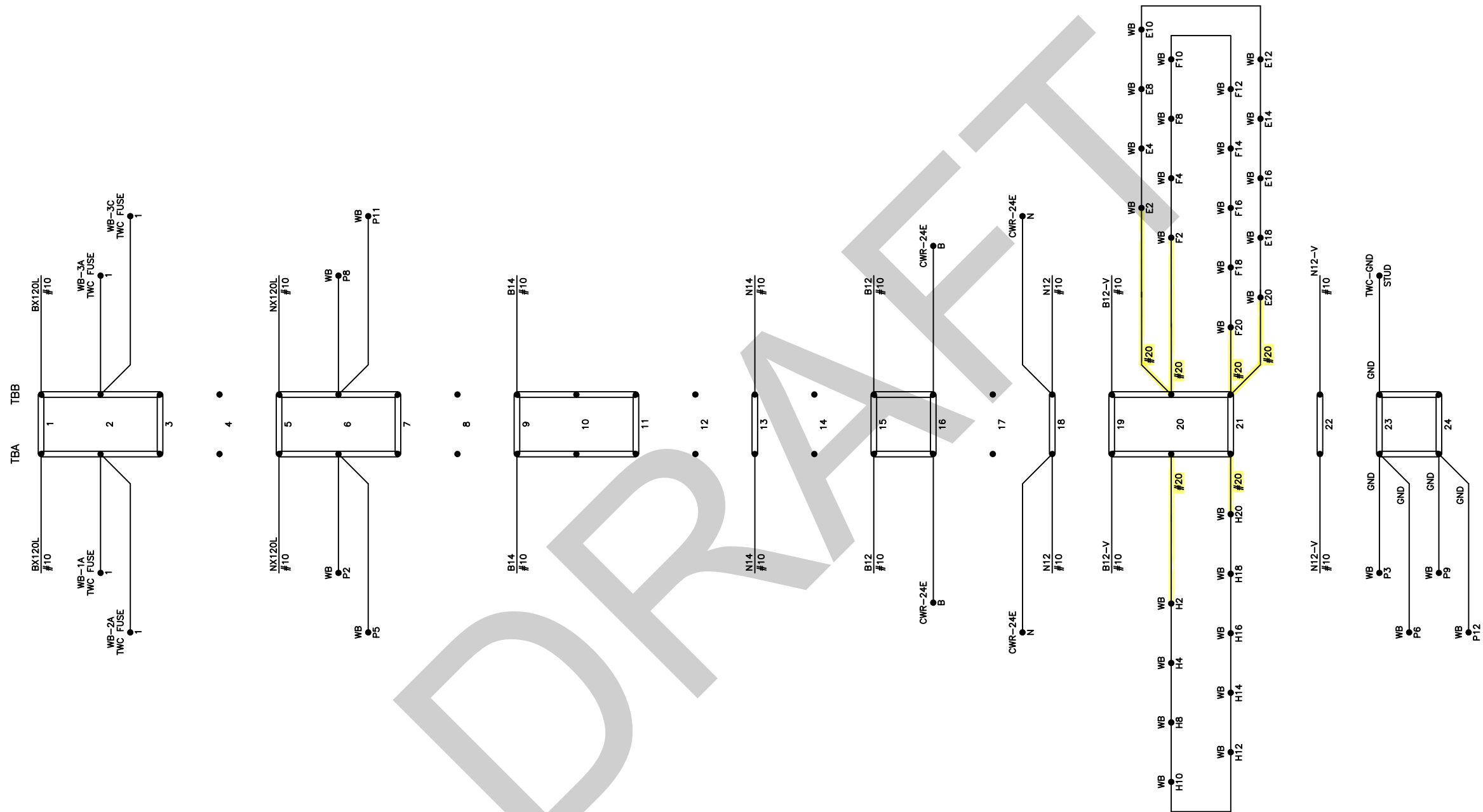


REVISIONS		0 NEW SIG HOUSE & CKTS THAT REPLACE ORIGINAL B06RC/RCA CASES 10/31/02 KMZ 1 AS BUILT CHANGES PER CONTRACT #LRT-10834/10879 8/28/03 2 AS BUILT CHANGES PER CONTRACT #LRT-106100/CIP11378 5/31/07 SECA 3 BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 4 C STREET CROSSOVERS SANADG CIP1210070 6/24/12 HMS 5 SUEZTANK UPGRADES CIP10750 8/30/12 SELECT RECORDED AS-IN-SERVICE 8/8/18			DESIGNED BY GK DRAWN BY GK CHECKED BY PRJ. ENG.	DATE 12/23 DATE 12/23		C STREET & BROADWAY WYE CONVERSION B16RC (BROADWAY) WALL "A" POWER LOOPS	SCALE NTS CONTRACT NO. DRAWING NO. SAB0016RC_72 SHT NO. 72
-----------	--	---	--	---	--	--------------------------	---	---	---



NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS 0. NEW SIG HOUSE & CKTS THAT REPLACE ORIGINAL B16RC/RCA CASES 10/31/02 KHZ 1. AS BUILT CHANGES PER CONTRACT #LRT-10834/10879 8/28/03 2. AS BUILT CHANGES PER CONTRACT #LRT-108100/CP11378 5/31/07 SECA 3. BROADWAY WYE CONTRACT W/TRACT JOC 1338-04 11/14/11 HMS 4. C STREET CROSSOVERS SAVING CP210070 6/24/12 HMS 5. QUIETZONE UPGRADES CITY OF SD 8/30/12 SELECT 6. RECORDED AS-IN-SERVICE 8/8/18		 DESIGNED BY _____ DATE _____ DRAWN BY _____ CHECKED BY _____ PRJ. ENG. _____		SANTA FE – 12TH & IMPERIAL (BAYSIDE) B16RC (BROADWAY) WALL "B" RACK LAYOUT	SCALE NTS CONTRACT NO. DRAWING NO. SFPD-B16RC-73 SHT NO. 73
--	--	---	---	--	---

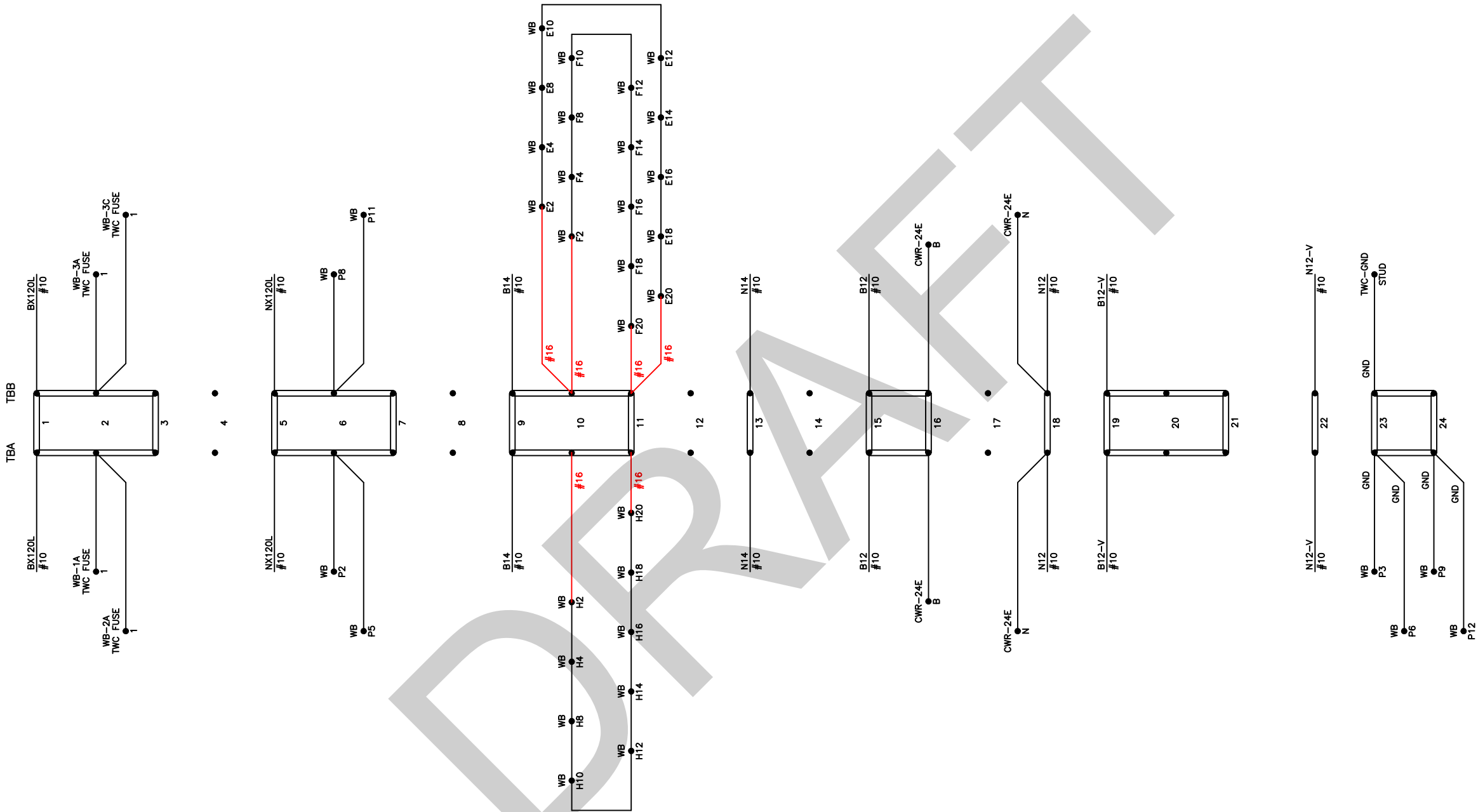


REVISIONS	0	NEW SIG. HOUSE & CKTS THAT REPLACE ORIGINAL B016RC/RCA CASES	10/31/02	KNZ
	1	AS BUILT CHANGES PER CONTRACT #LRT-10834/10879		
	2	AS BUILT CHANGES PER CONTRACT #LRT-1108100/CIP11378		
	3	BROADWAY WYE REHAB CONTRACT JOC 1338-04		
	4	C STREET CROSSEDRAVERS SANDAG CIP1210070	11/14/11	HMS
	5	6/24/12 HMS CITY OF SD		
	6	8/30/12 SELECT RECORDED AS-IN-SERVICE		
	7	8/8/18		
	8			
	9			
	10			
	11			
	12			
	13			
	14			
	15			
	16			
	17			
	18			
	19			
	20			
	21			
	22			
	23			
	24			

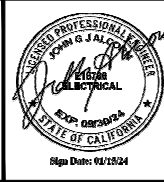
	DESIGNED BY GK DRAWN BY GK CHECKED BY PRJ. ENG.	DATE 12/23 12/23

C STREET & BROADWAY WYE CONVERSION		SCALE NTS
B16RC (BROADWAY) WALL "B" POWER LOOPS		CONTRACT NO.
DRAWING NO. A-255	SHT NO. 747	



RED = IN YELLOW = OUT



REVISIONS	
0	NEW SIG. HOUSE & CKTS THAT REPLACE ORIGINAL B016RC/RCA CASES
10/31/02	KNZ
1	AS BUILT CHANGES PER CONTRACT #LRT-10834/10879
8/28/03	
2	AS BUILT CHANGES PER CONTRACT #LRT-1108100/CIP11378
5/31/07	SECA
3	BROADWAY WYE REHAB CONTRACT JOC 1338-04
11/14/11	HMS
4	C STREET CROSSOVERS SAVING CIP1210070
6/24/12	HMS
5	QUETZONE UPGRADES CITY OF SD
8/30/12	SELECT
6	RECORDED AS-IN-SERVICE
8/8/18	

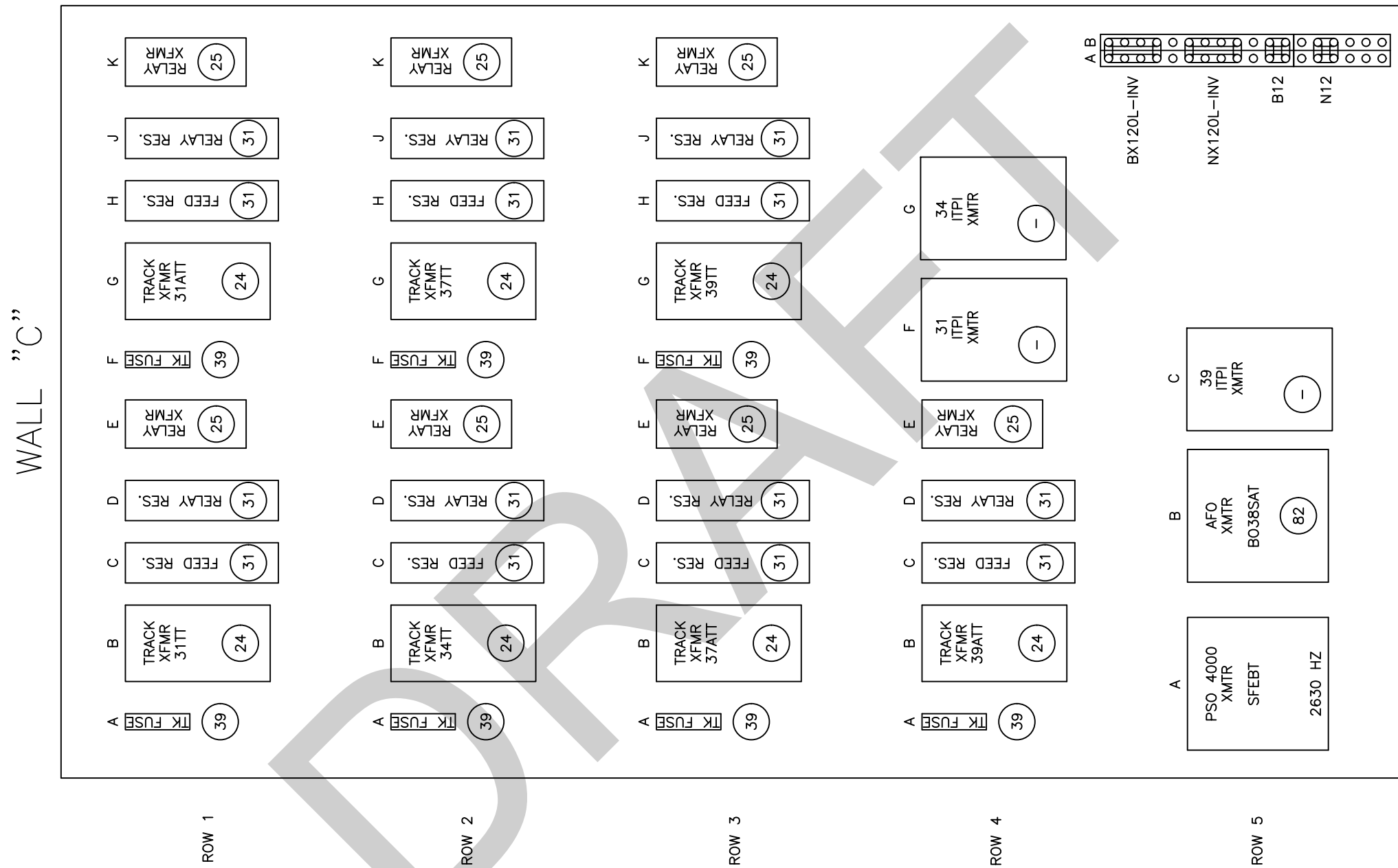


DESIGNED BY	GK	DATE	12/23
DRAWN BY	GK		12/23
CHECKED BY			
PRJ. ENG.			

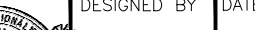



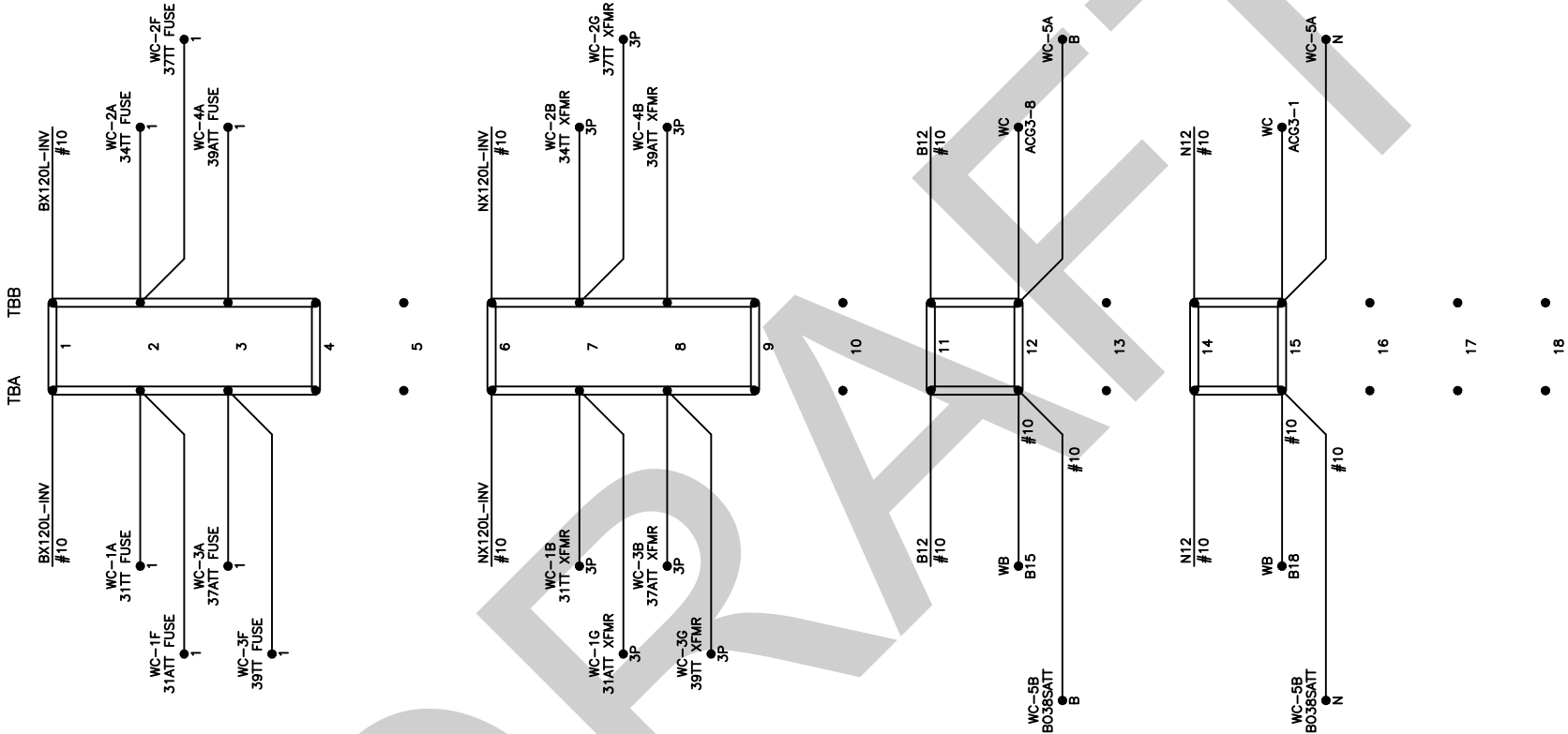
C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
B16RC (BROADWAY) WALL "B" POWER LOOPS		CONTRACT NO.	
		DRAWING NO.	SHT NO.
A-256		74	74

RED = IN YELLOW = OUT




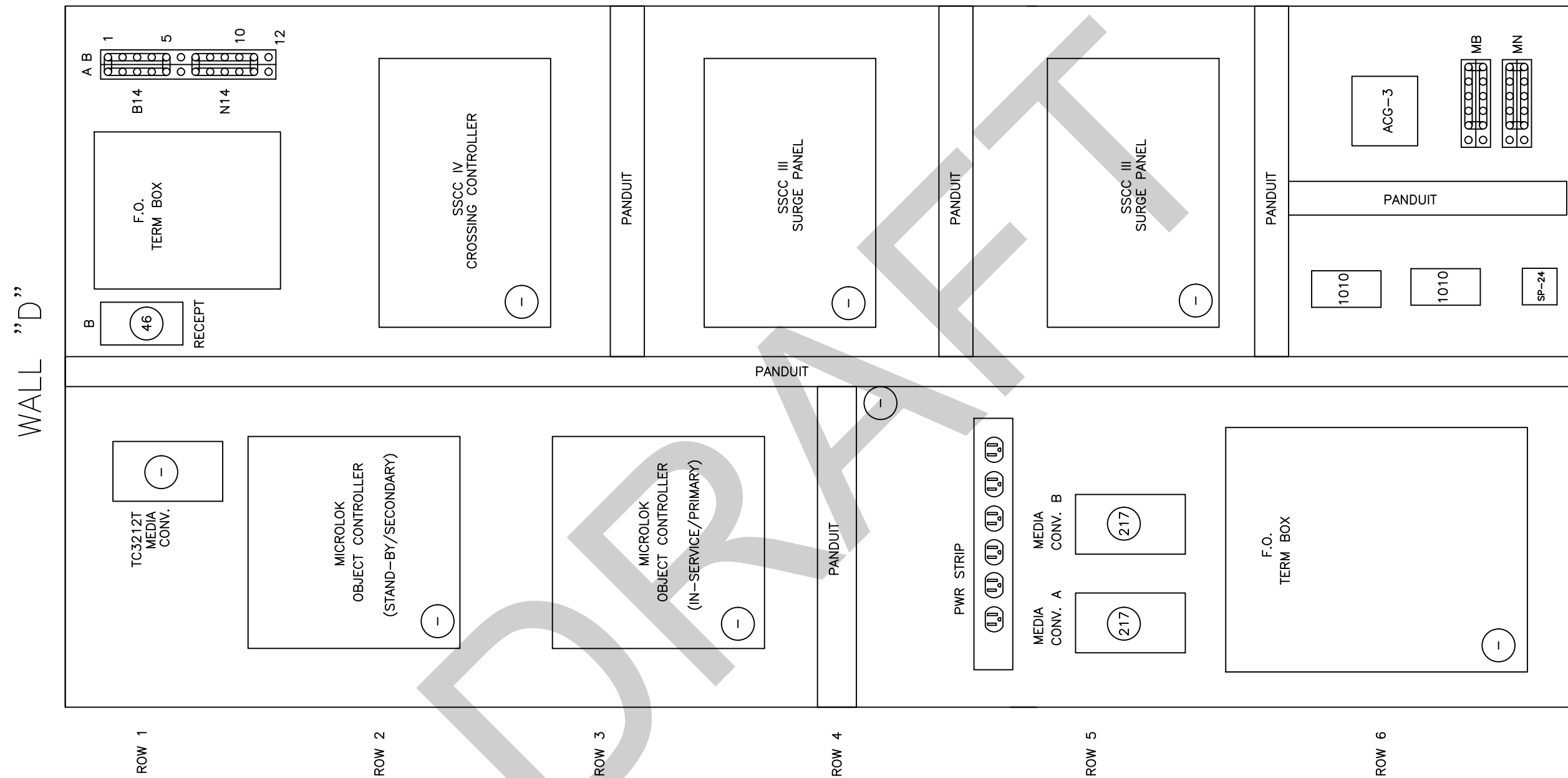
NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS 0. NEW SIG HOUSE & CKTS THAT REPLACE ORIGINAL B16RC/RCA CASES 10/31/02 KHZ 1. AS BUILT CHANGES PER CONTRACT #LRT-10834/10879 8/28/03 2. AS BUILT CHANGES PER CONTRACT #LRT-108100/CP11378 5/31/07 SECA 3. BROADWAY WYE CONTRACT W/TRACT JOC 1338-04 11/14/11 HMS 4. C STREET CROSSOVERS SANDING CP1210070 6/24/12 HMS 5. QUIETZONE UPGRADES CITY OF SD 8/30/12 SELECT 6. RECORDED 7. AS-IN-SERVICE 8/8/18			DESIGNED BY DRAWN BY CHECKED BY PRJ. ENG.	DATE			SANTA FE – 12TH & IMPERIAL (BAYSIDE) B16RC (BROADWAY) WALL "C" RACK LAYOUT		SCALE NTS		CONTRACT NO.		DRAWING NO. SBB0040RC_75		SHT NO. 75	
--	--	---	--	------	---	--	--	--	--------------	--	--------------	--	-----------------------------	--	---------------	--

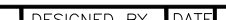



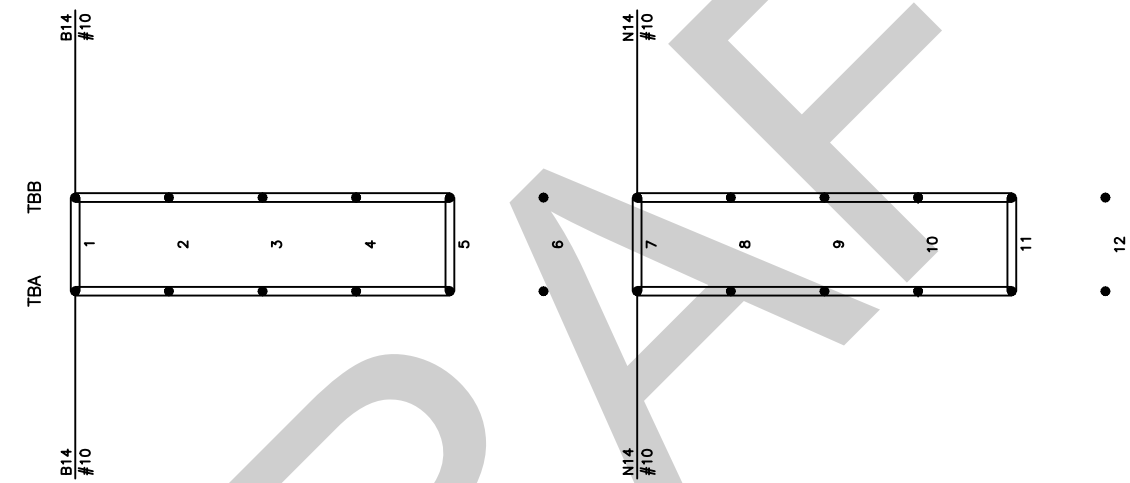
NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS										DESIGNED BY		DATE				SANTA FE – 12TH & IMPERIAL (BAYSIDE)		SCALE			
0	NEW SIG. HOUSE & CKTS THAT REPLACE ORIGINAL B016RC/RCA CASES	10/31/02	KNZ							DRAWN BY								NTS			
1	AS BUILT CHANGES PER CONTRACT #LRT-10834/10879									CHECKED BY								CONTRACT NO.			
2	AS BUILT CHANGES PER CONTRACT #LRT-1108100/CIP11378									PRJ. ENG.						B16RC (BROADWAY) WALL "C" POWER LOOPS		DRAWING NO. SHT NO.			
3	BROADWAY WYE REHAB CONTRACT JOC 1338-04																	A-258 76			
4	STREET CROSSEOVERS SANDAG CIP1210070																				
5	QUETZONE UPGRADES CITY OF SD																				
6	RECORDED AS-IN-SERVICE																				
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					
17																					
18																					





NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 1. STREET CROSSOVERS SANJOE CP121070		6/24/12 HMS 2. QUIETZONE UPGRADES CITY OF SD		8/30/12 SELECT 3. RECORDED AS-IN-SERVICE 8/8/18				DESIGNED BY _____ DATE _____ DRAWN BY _____ CHECKED BY _____ PRJ. ENG. _____				SANTA FE – 12TH & IMPERIAL (BAYSIDE) B16RC (BROADWAY) WALL "D" RACK LAYOUT		SCALE NTS CONTRACT NO. _____ DRAWING NO. _____ SHT NO. _____ SAB004RC_77 77	
--	--	--	--	--	--	---	--	---	--	---	--	--	--	---	--



NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 1. 10 STREET CROSSOVERS SADDAG C-11070		6/24/12 HMS 2. QUIETZONE UPGRADES CITY OF SD		8/30/12 SELECT 3. RECORDED AS-IN-SERVICE 8/9/18		 DESIGNED BY _____ DATE _____ DRAWN BY _____ CHECKED BY _____ PRJ. ENG. _____				SANTA FE - 12TH & IMPERIAL (BAYSIDE) B16RC (BROADWAY) WALL "D" POWER LOOPS		SCALE NTS CONTRACT NO. DRAWING NO. SADDAG-78 SHT NO. 78	
--	--	--	--	--	--	---	--	---	--	--	--	---	--

WALL "E"



ROW 1

ROW 2


ROW 3

ROW 4

ROW 5

ROW 6

NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY

REVISIONS	0	BROADWAY WYE REPAIR CONTRACT JOC 1338-04	11/14/11	HMS		DESIGNED BY	DATE		SANTA FE – 12TH & IMPERIAL (BAYSIDE)		SCALE	NTS
	1	C STREET CROSSOVERS SANDAG CP1210070	6/24/12	HMS		DRAWN BY			B16RC (BROADWAY) WALL "E" RACK LAYOUT		CONTRACT NO.	
	2	QUIETSTONE UPGRADES CITY OF SD	8/30/12	SELECT		CHECKED BY			DRAWING NO.		SHT NO.	
	3	RECORDED AS-IN-SERVICE	8/8/18			PRJ. ENG.			SAB0016RC_79		79	

Sample	TBA	TBB
1	•	•
2	•	•
3	•	•
4	•	•
5	•	•
6	•	•
7	•	•
8	•	•
9	•	•
10	•	•
11	•	•
12	•	•

NOTE: THIS SHEET PROVIDED FOR REFERENCE ONLY



REVISIONS 0. BROADWAY WYE REHAB CONTRACT JOC 1338-04 11/14/11 HMS 1. STREET CROSSOVERS SADDAG CT-11070		6/24/12 HMS 2. QUIETZONE UPGRADES CITY OF SD		8/30/12 SELECT 3. RECORDED AS-IN-SERVICE 8/9/18				DESIGNED BY _____ DATE _____ DRAWN BY _____ CHECKED BY _____ PRJ. ENG. _____				SANTA FE – 12TH & IMPERIAL (BAYSIDE) B16RC (BROADWAY) WALL "E" POWER LOOPS		SCALE NTS CONTRACT NO. _____ DRAWING NO. SADDAGRC_80 SHT NO. 80	
--	--	--	--	--	--	---	--	---	--	---	--	--	--	---	--

Exhibit C
Broadway Drawings

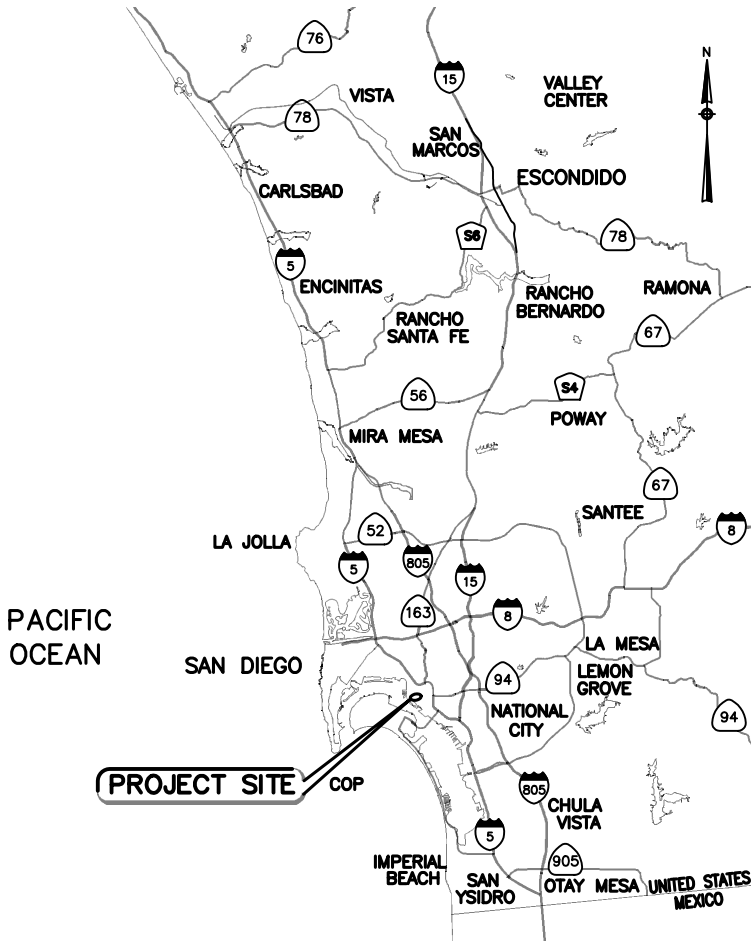
DRAFT

METROPOLITAN TRANSIT SYSTEM

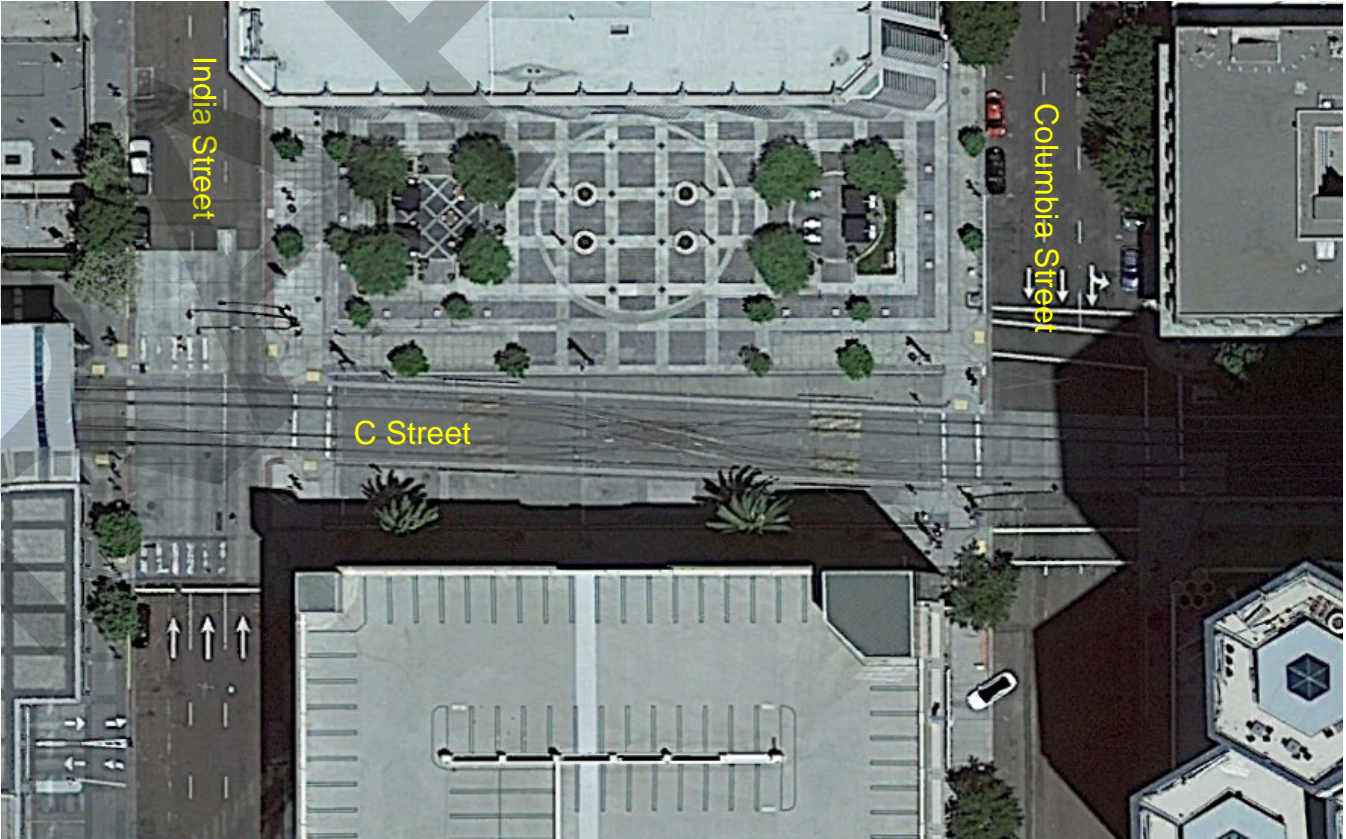
C STREET (CSRC)

INTERLOCKING & WHEEL SESNOR

UPGRADE DESIGN



VICINITY MAP



LOCATION MAP

ATTENTION!

BEFORE ANY ALTERATIONS ARE CARRIED OUT TO EXISTING WIRING, A CORRELATION CHECK MUST BE CONDUCTED BETWEEN THE CIRCUIT CHANGES SHOWN AND THE ON-SITE WIRING TO ENSURE THEY ARE THE SAME.

THIS MUST BE DONE BY HAND TRACING THE WIRING AND WIRE-COUNTING EACH TERMINATION POINT WITHIN THE AFFECTED AREA. THIS CHECK IS TO EXTEND TO ONE UNALTERED "CLEAN" TERMINATION POINT ON EACH SIDE OF THE ALTERATION.

ANY DISCREPANCIES MUST IMMEDIATELY BE BROUGHT TO THE ATTENTION OF M.T.S. MAINTENANCE OF WAY.



GLOBAL
SIGNALS
GROUP INC

C STREET & BROADWAY WYE CONVERSION

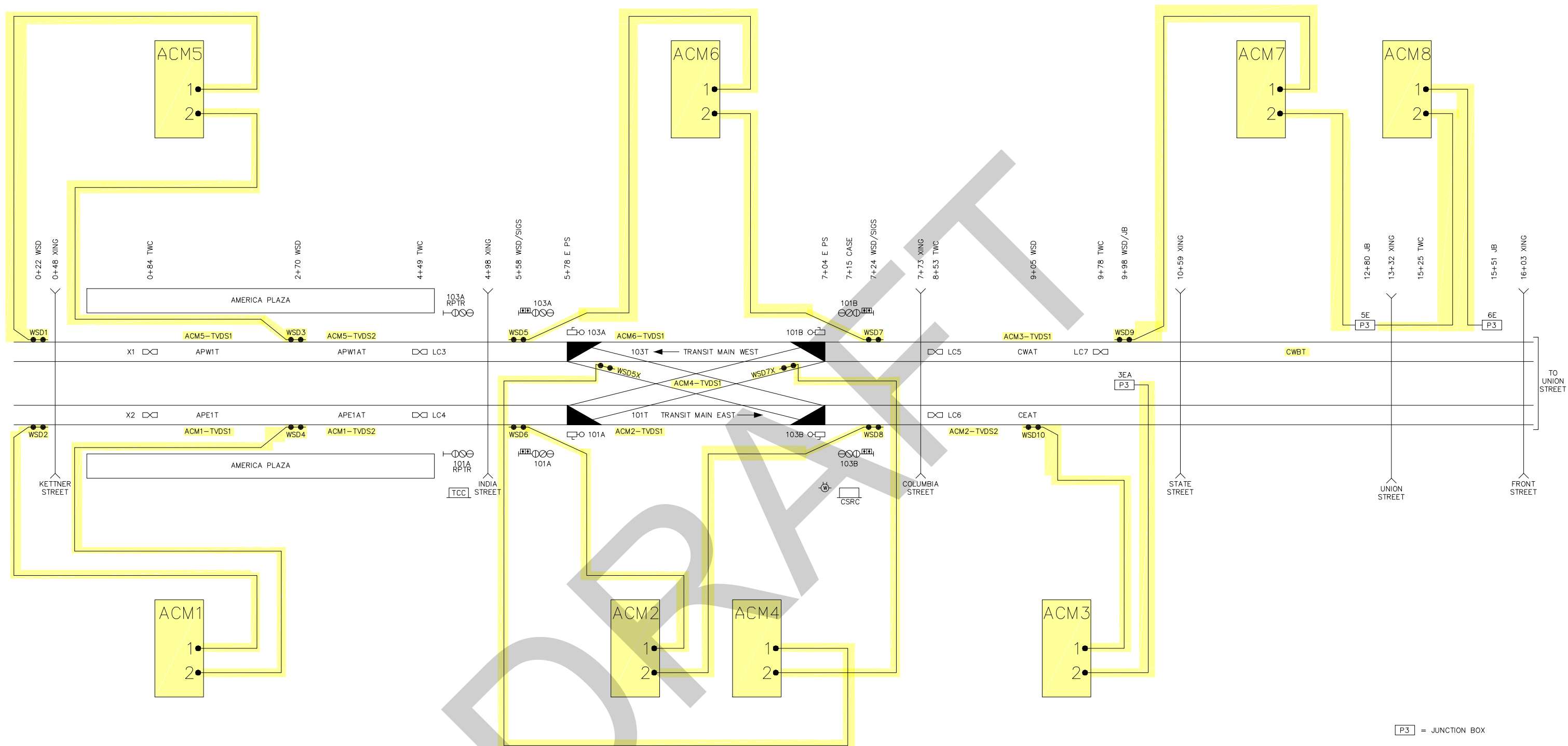
CSRC (C STREET)
COVER SHEET



DESCRIPTION	DWG. NO.	SHT. NO.	REVISION	DATE	DESCRIPTION	DWG. NO.	SHT. NO.	REVISION	DATE
SHEET INDEX	CSRC	00	0	02/12/24					
WSD ASSIGNMENTS	CSRC	01	2	02/12/24	ACM/WSD ASSIGNMENTS	CSRC	01T	1	04/22/18
WHEEL SENSOR CONNECTIONS	CSRC	02	2	02/12/24	WSD DETAIL	CSRC	02T	1	04/22/18
WHEEL SENSOR CONNECTIONS	CSRC	03	2	02/12/24	WSD DETAIL	CSRC	03T	1	04/22/18
SYSTEM CONFIGURATION	CSRC	04	2	02/12/24	SYSTEM CONFIGURATION	CSRC	04T	1	04/22/18
FRAUSCHER RACK LAYOUT	CSRC	05A	1	02/12/24	I/O CONNECTIONS	CSRC	05T	0	01/11/18
FAdC AXLE COUNTER BACKPLANE CODING PINS	CSRC	05B	0	02/12/24	ACM I/O CONNECTIONS	CSRC	06T	1	01/11/18
FAdC AXLE COUNTER AEB DIP SWITCH SETTINGS	CSRC	06A	2	02/12/24	ACM I/O CONNECTIONS	CSRC	07T	0	01/11/18
FAdC AXLE COUNTER AEB DIP SWITCH SETTINGS	CSRC	06B	0	02/12/24	ACM I/O CONNECTIONS	CSRC	08T	1	04/22/18
FAdC AXLE COUNTER AEB DIP SWITCH SETTINGS	CSRC	06C	0	02/12/24	ACM/S7 CONNECTIONS	CSRC	09T	0	01/11/18
FAdC AXLE COUNTER AEB DIP SWITCH SETTINGS	CSRC	06D	0	02/12/24	INPUT CONNECTIONS	CSRC	10T	1	04/22/18
FAdC AXLE COUNTER COM DIP SWITCH SETTINGS	CSRC	06E	0	02/12/24	INPUT/OUTPUTS	CSRC	11T	0	01/11/18
FAdC POWER CONNECTION	CSRC	07	1	02/12/24	PUSH BUTTON CONNECTIONS	CSRC	12T	0	01/11/18
FAdC CAN BUS CONNECTIONS	CSRC	08	2	02/12/24	SIGNAL LIGHTING CIRCUITS	CSRC	13T	0	01/11/18
POWER WIRING	CSRC	09	1	02/12/24	SWITCH CONTROL CIRCUITS	CSRC	14T	0	01/11/18
INPUT/OUTPUT CONNECTIONS	CSRC	10	2	02/12/24	TWC SYSTEM	CSRC	15T	0	01/11/18
INPUT/OUTPUT CONNECTIONS	CSRC	11	1	02/12/24	POWER & COMM. DISTRIBUTION	CSRC	16T	0	01/11/18
PUSH BUTTON CONNECTIONS	CSRC	12	1	02/12/24	CASE LAYOUT	CSRC	17T	1	02/12/24
SIGNAL LIGHTING CIRCUITS	CSRC	13	1	02/12/24	DOUBLE DOOR CASE (REAR)	CSRC	18T	2	02/12/24
SWITCH CONTROL CIRCUITS	CSRC	14	1	02/12/24	RELAY DETAIL	CSRC	19T	0	01/11/18
TWC SYSTEM	CSRC	15	1	02/12/24	WAGO DETAIL	CSRC	20T	1	04/22/18
POWER & COMM. DISTRIBUTION	CSRC	16	1	02/12/24	CABLE SHEET	CSRC	21T	1	04/22/18
CASE LAYOUT (FRONT)	CSRC	17	1	02/12/24	CONDUIT LAYOUT	CSRC	22T	1	04/22/18
CASE LAYOUT (REAR)	CSRC	18	1	02/12/24					
RELAY DETAIL	CSRC	19	1	02/12/24					
WAGO DETAIL	CSRC	20	2	02/12/24					
CABLE SHEET	CSRC	21	2	02/12/24					
CONDUIT LAYOUT	CSRC	22	2	02/12/24					
PARKING GARAGE CONDUIT LAYOUT	CSRC	23	1	01/11/18					
DETAIL PLAN AND TYPICAL SECTIONS	CSRC	24	1	01/11/18					
HMI PANEL	CSRC	25	0	02/12/24					

RED = IN YELLOW = OUT



[illegible]

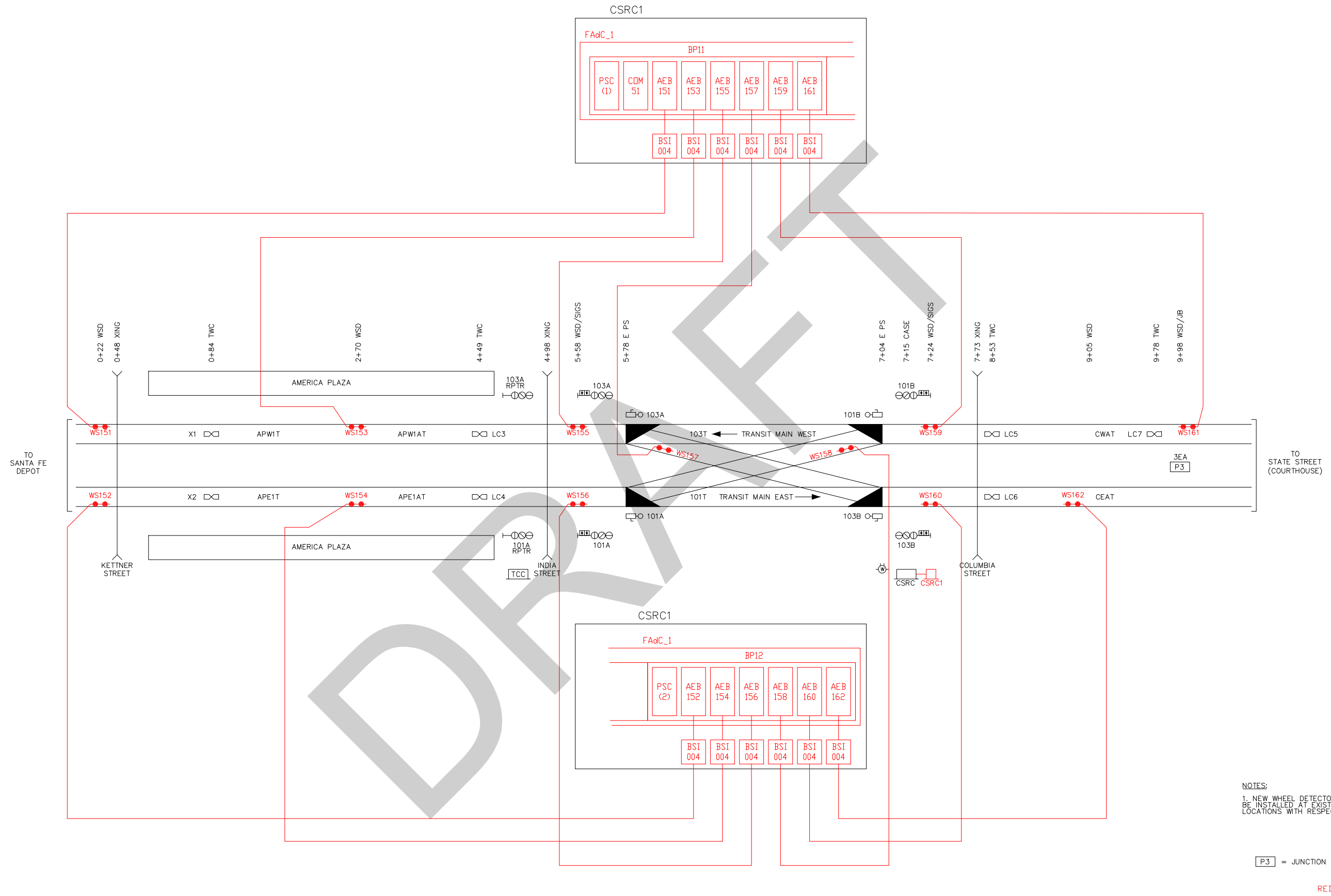


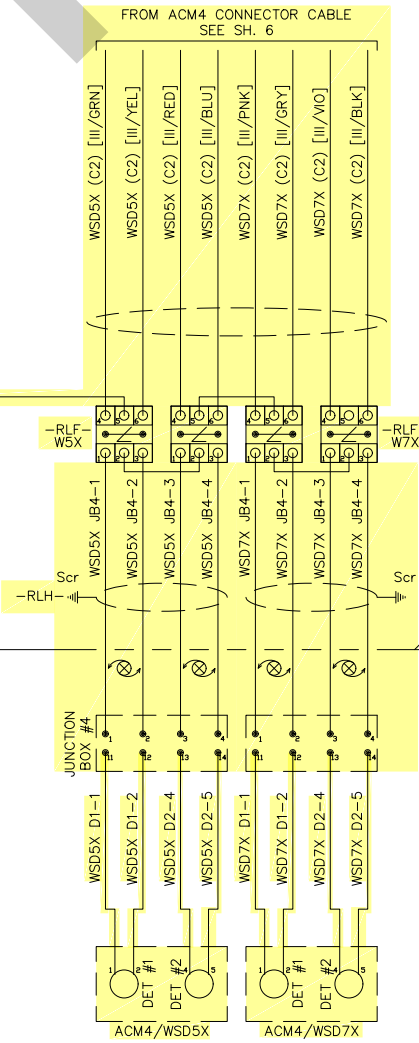
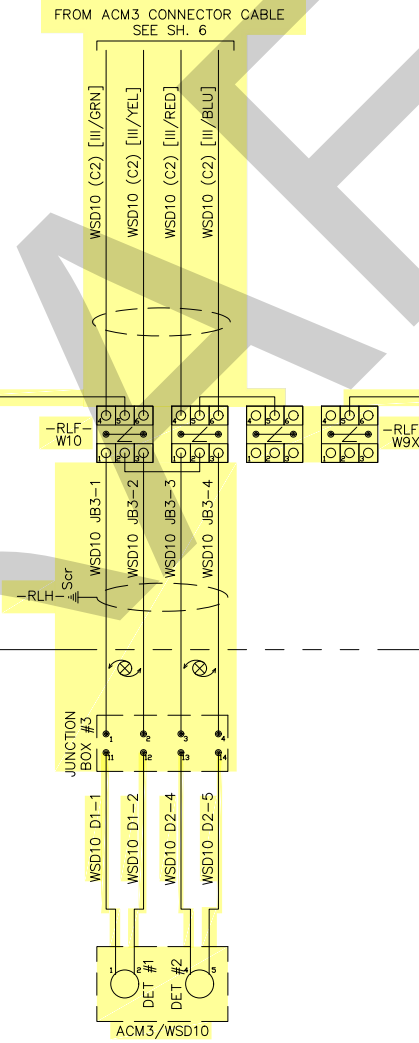
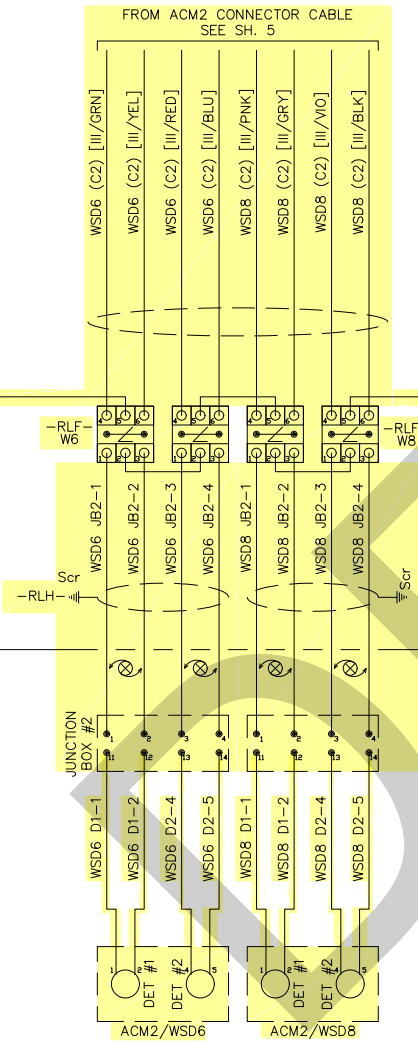
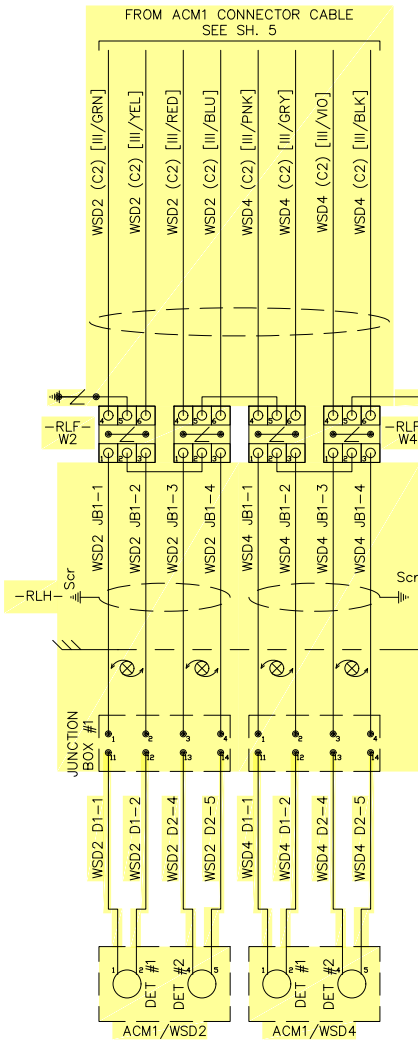
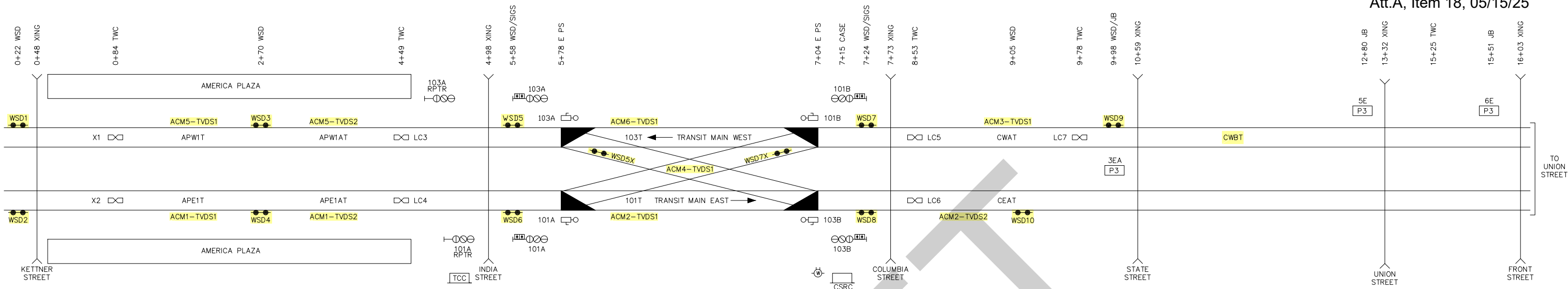
ACM	WSD #1	WSD #2
ACM1	WSD2	WSD4
ACM2	WSD6	WSD8
ACM3	WSD10	
ACM4	WSD5X	WSD7X

ACM	WSD #1	WSD #2
ACM5	WSD1	WSD3
ACM6	WSD5	WSD7
ACM7	WSD9	
ACM8		

RED = IN YELLOW = OUT

REVISIONS		1/11/13 SIEMENS				DESIGNED BY		DATE				C STREET & BROADWAY WYE CONVERSION		SCALE	
AS-IN-SERVICE						GK		2/24						NTS	
1 COURTHOUSE AS-INSTALLED						DRAWN BY		2/24		GLOBAL SIGNALS GROUP INC		CSRC ACM/WSD ASSIGNMENTS		CONTRACT NO.	
4/22/18 PRE						CHECKED BY								DRAWING NO.	
						PRJ. ENG.		2/24						A-268-01T 1T	
						RB									

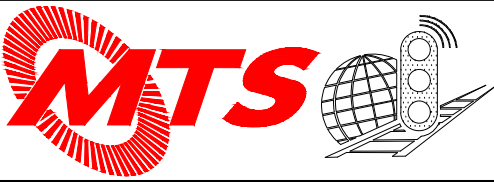
[illegible]



REVISIONS		AS-IN-SERVICE		1/11/13 SIEMENS		COURTHOUSE AS-INSTALLED		4/22/18 PRE															
0																							
1																							



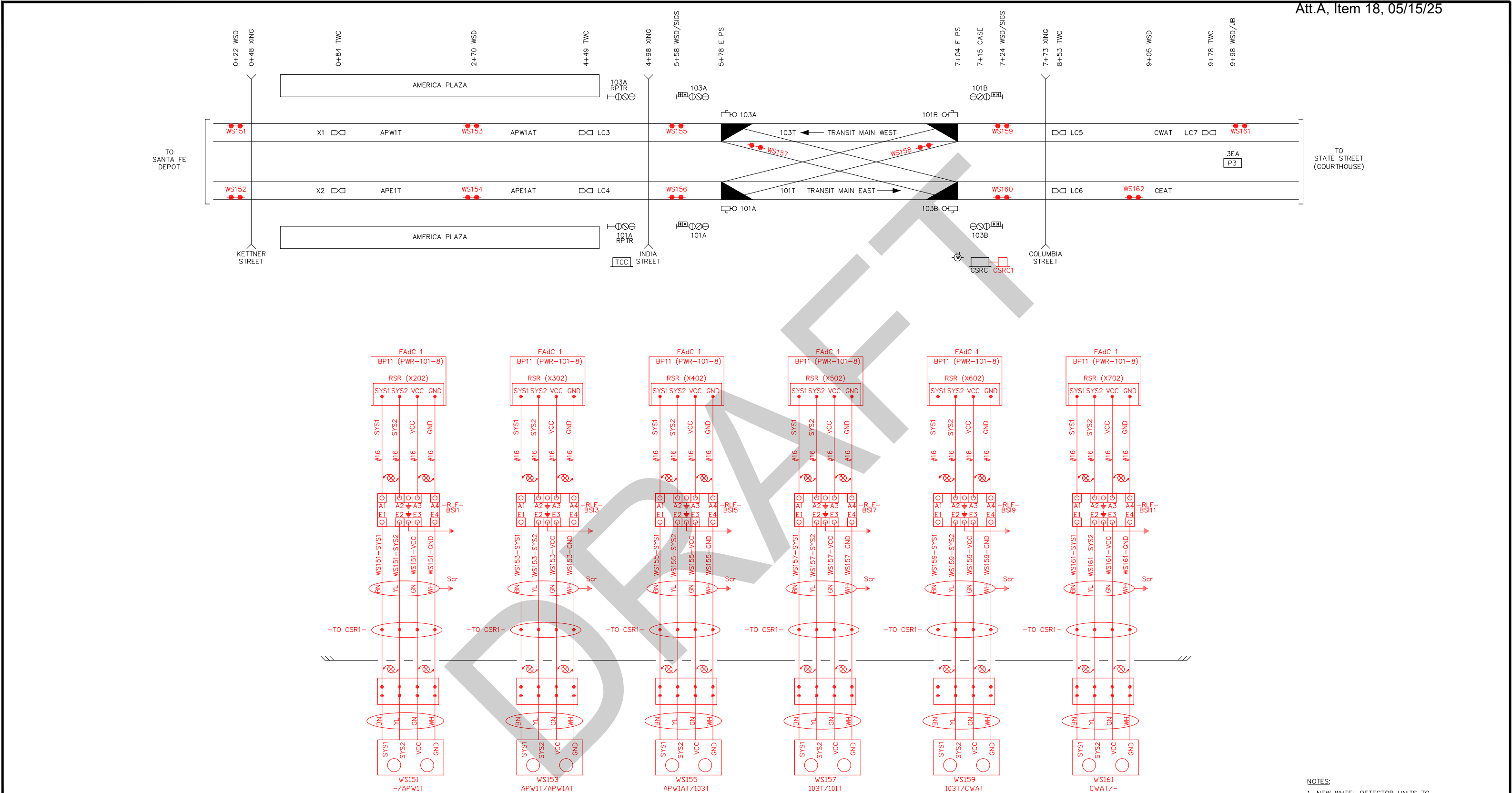
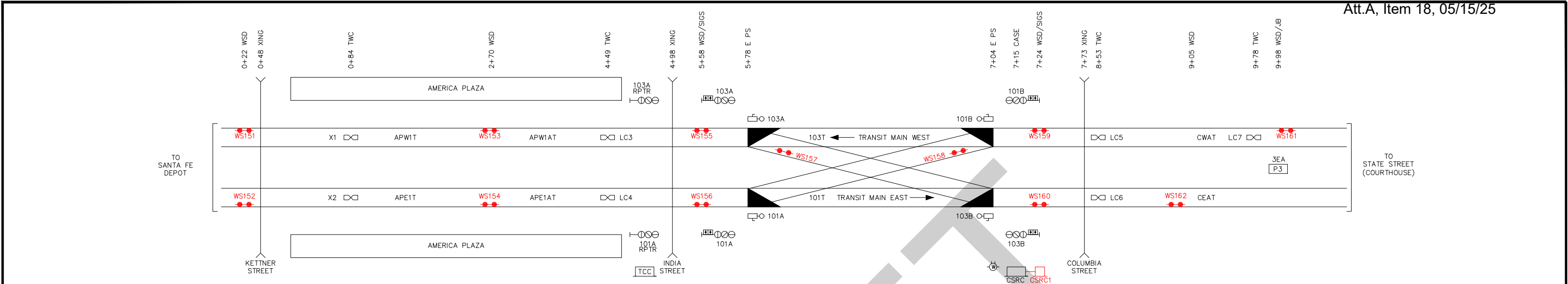
DESIGNED BY	GK	DATE	2/24
DRAWN BY	GK		2/24
CHECKED BY			
PRJ. ENG.	RB		2/24



GLOBAL
SIGNALS
GROUP INC

C STREET & BROADWAY WYE CONVERSION		SCALE		NTS	
CSRC WSD DETAILS		CONTRACT NO.			
DRAWING NO.	A-270	SHT NO.	02T		
			2T		



RED = IN YELLOW = OUT

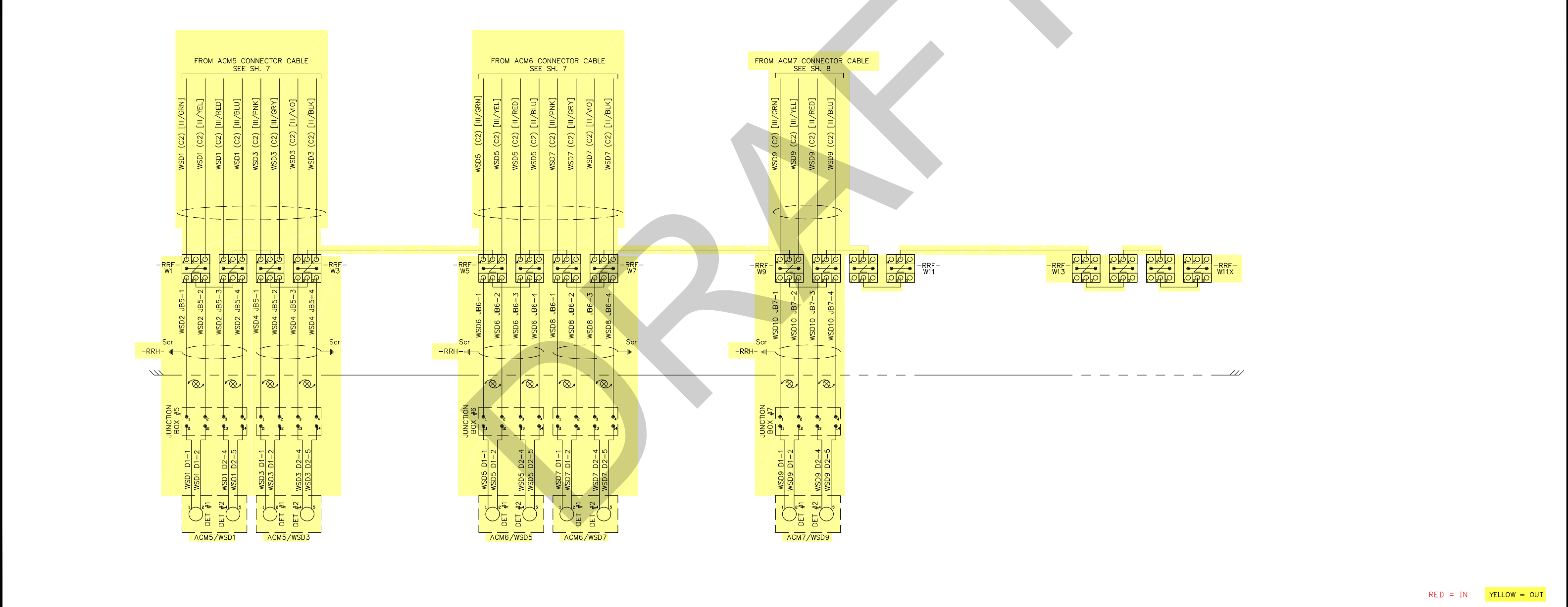
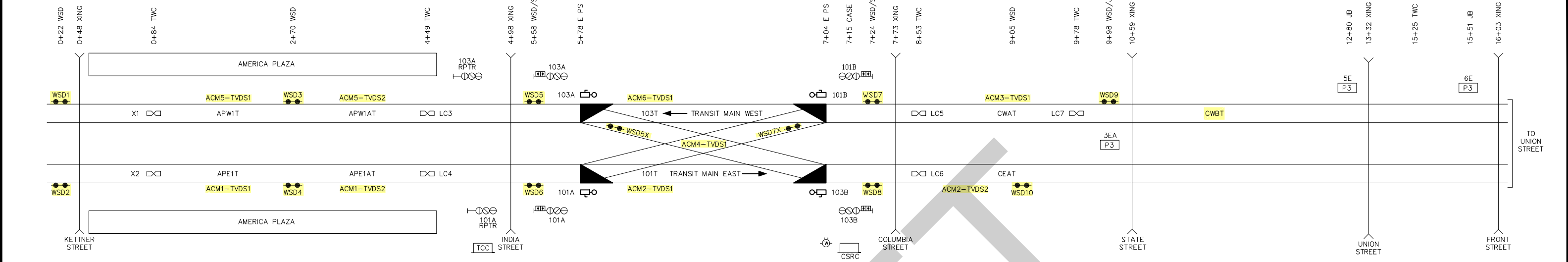


NOTE:
1. CABLE CONNECTOR TH400 IP68 RATED

NOTE: ALL NEW AND EXISTING RAIL LOCATIONS WITH RESPECT TO RAIL

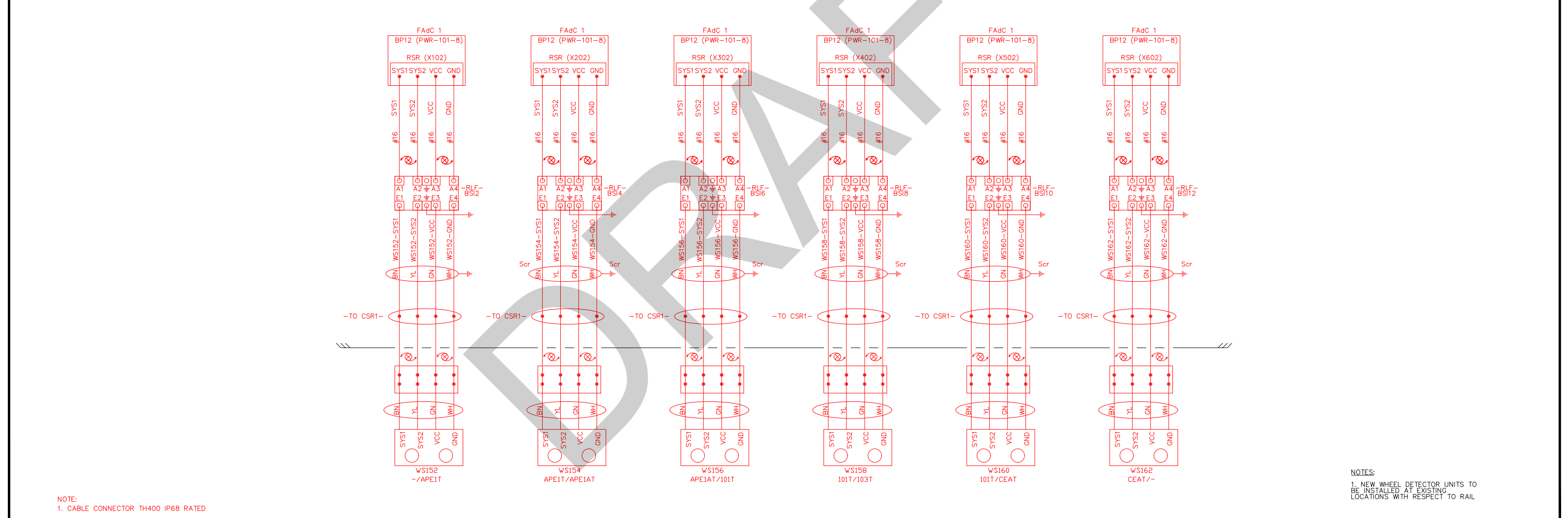
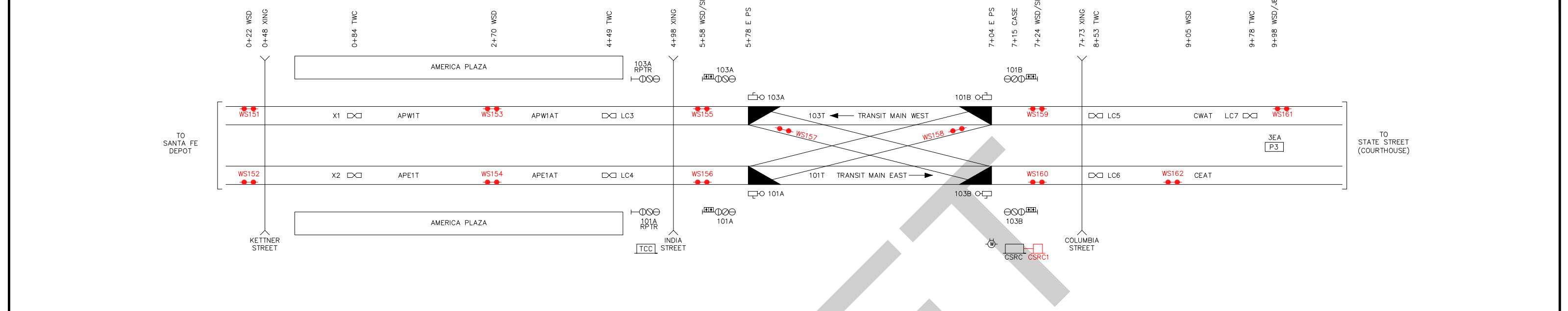
RED = IN YELLOW = OUT

REVISIONS		1/11/13 SIEMENS		DESIGNED BY GK		DATE 2/24				C STREET & BROADWAY WYE CONVERSION		SCALE NTS			
0	AS-IN-SERVICE			DRAWN BY GK		2/24				CONTRACT NO.		DRAWING NO. A-271-02		SHT NO. 2	
1	COURTHOUSE AS-INSTALLED			CHECKED BY											
2	BROADWAY & C STREET UPGRADE	2/12/24 CSG		PRJ. ENG. RB		2/24									
										CSRC WHEEL SENSOR CONNECTIONS					



																DESIGNED BY	DATE			C STREET & BROADWAY WYE CONVERSION		SCALE
--	--	--	--	--	--	--	--	--	--	--	--	--	--	---	--	-------------	------	---	--	------------------------------------	--	-------

[illegible]

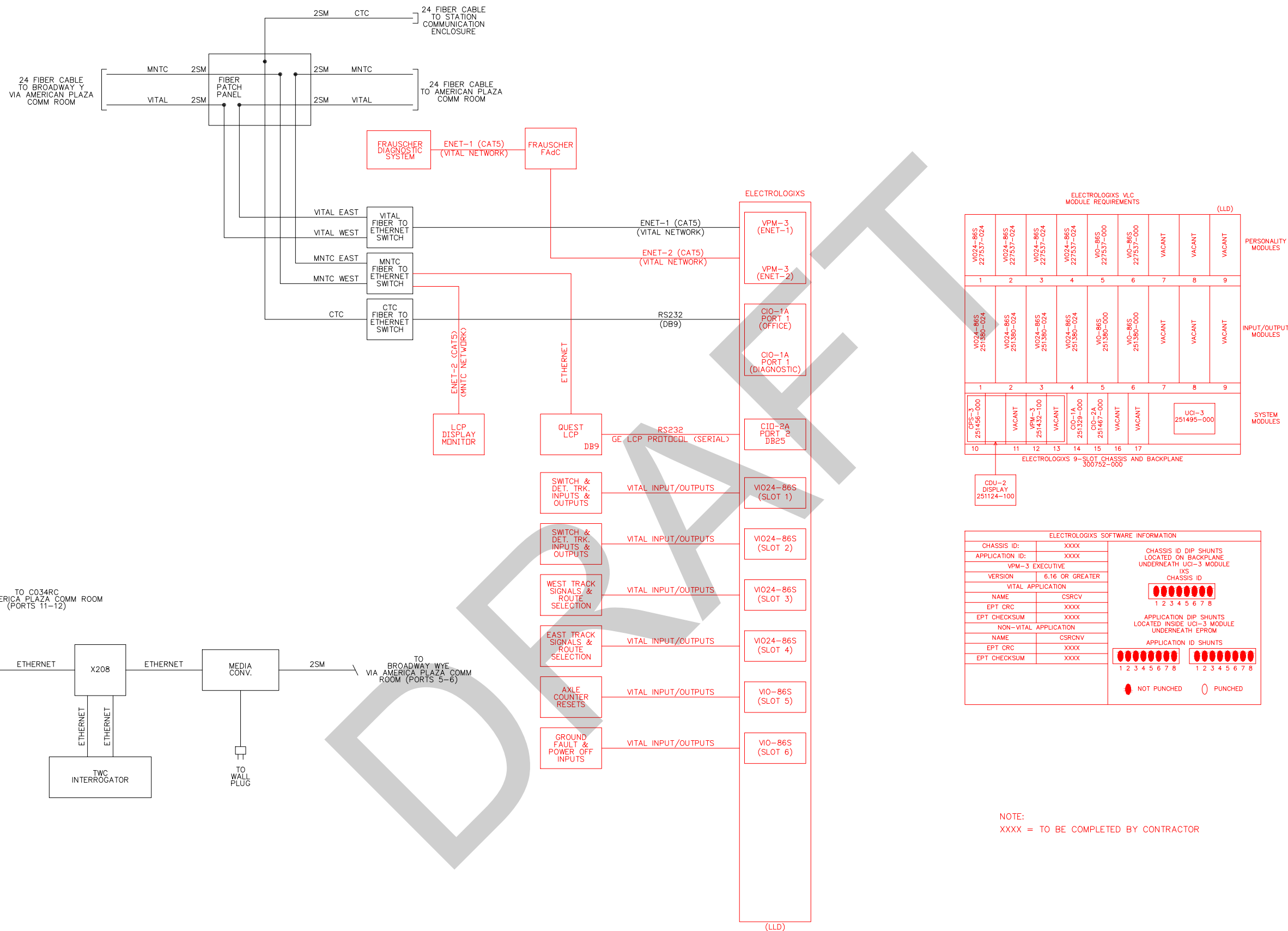


RED = IN YELLOW = OUT

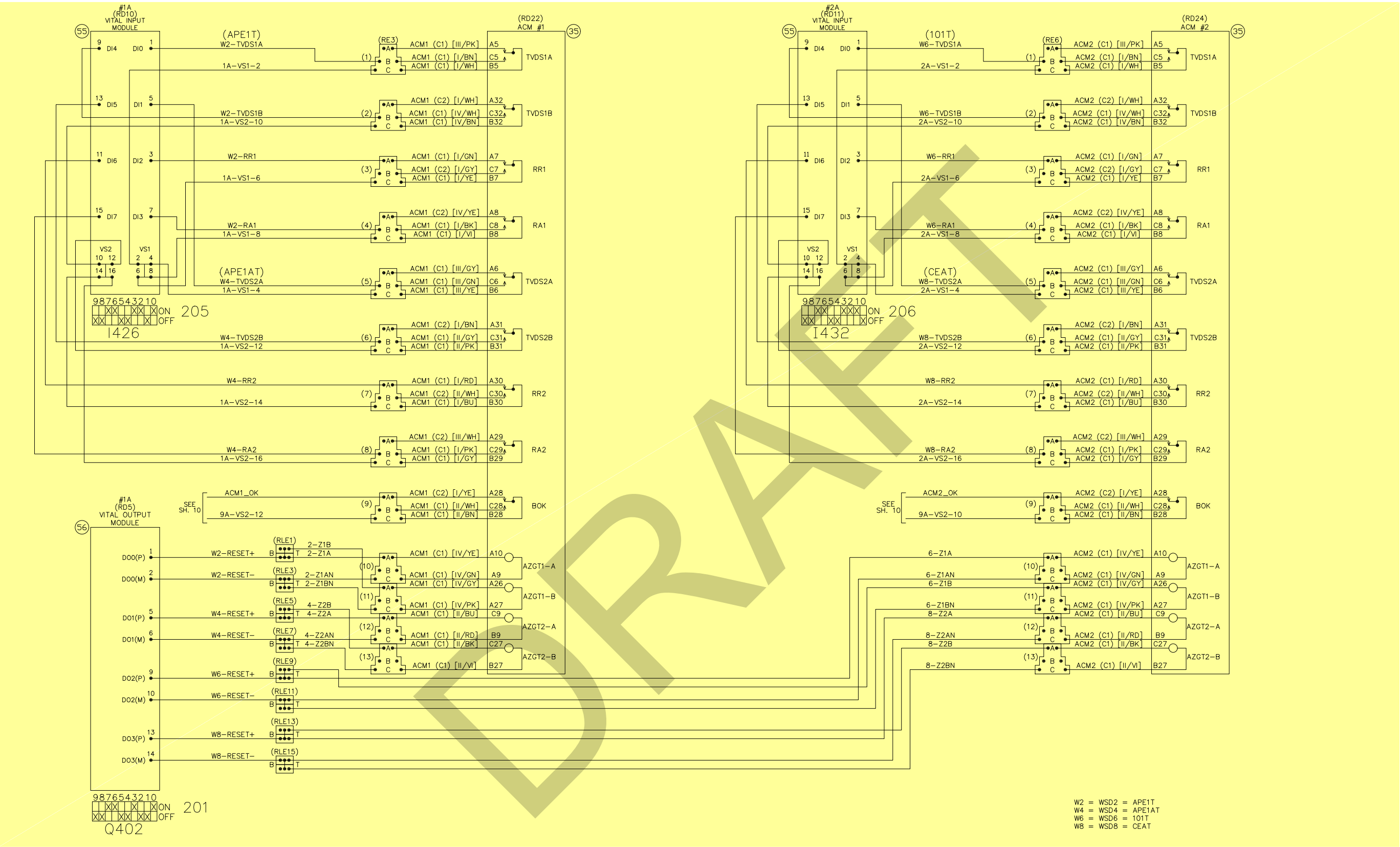
DESIGNED BY	GK	DATE	2/24		C STREET & BROADWAY WYE CONVERSION	SCALE NTS
DRAWN BY						


 CSRC
 CONTRACT NO.

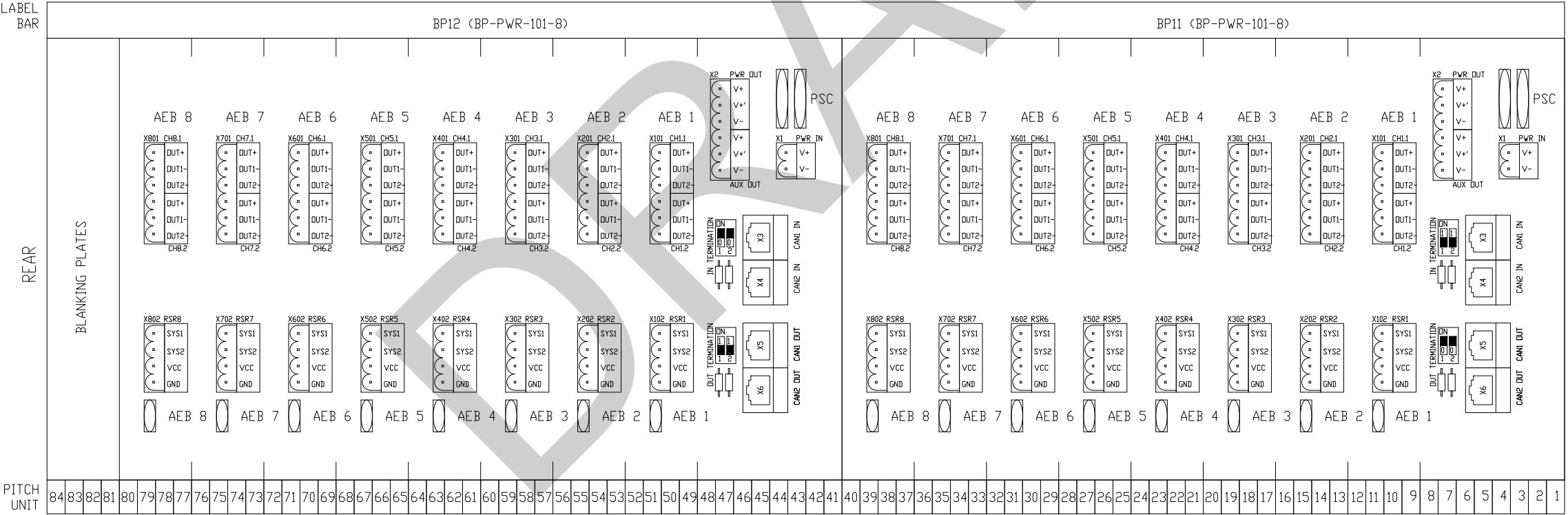
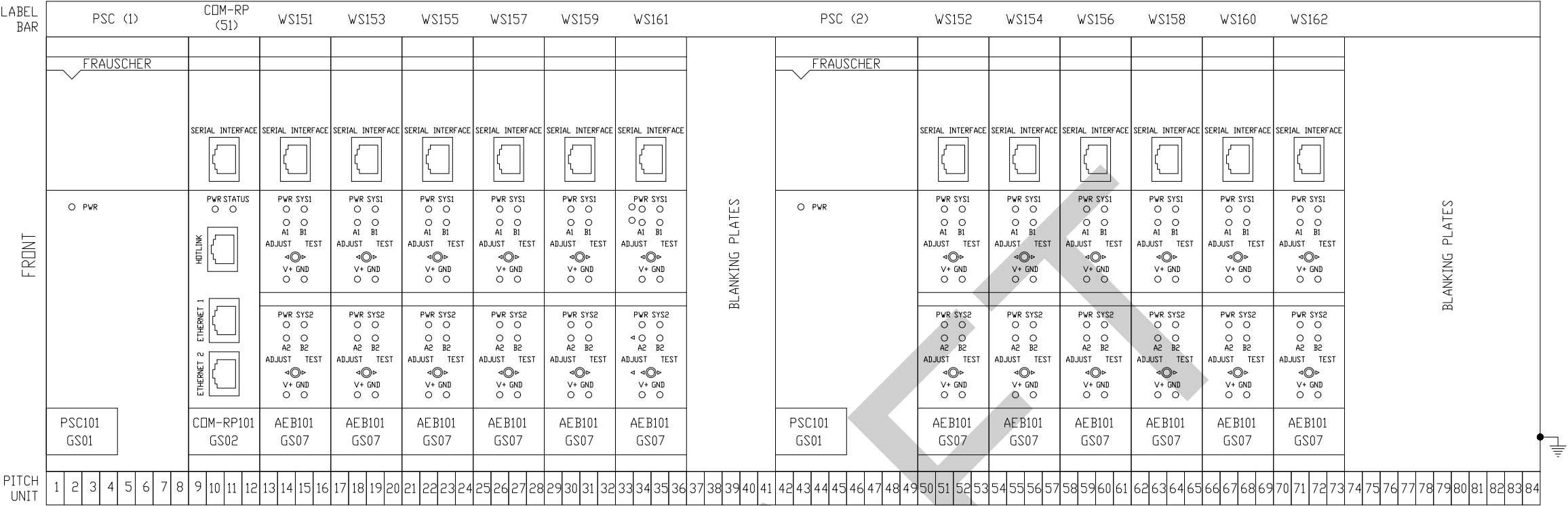
[illegible]



NOTE:
XXXX = TO BE COMPLETED BY CONTRACTOR

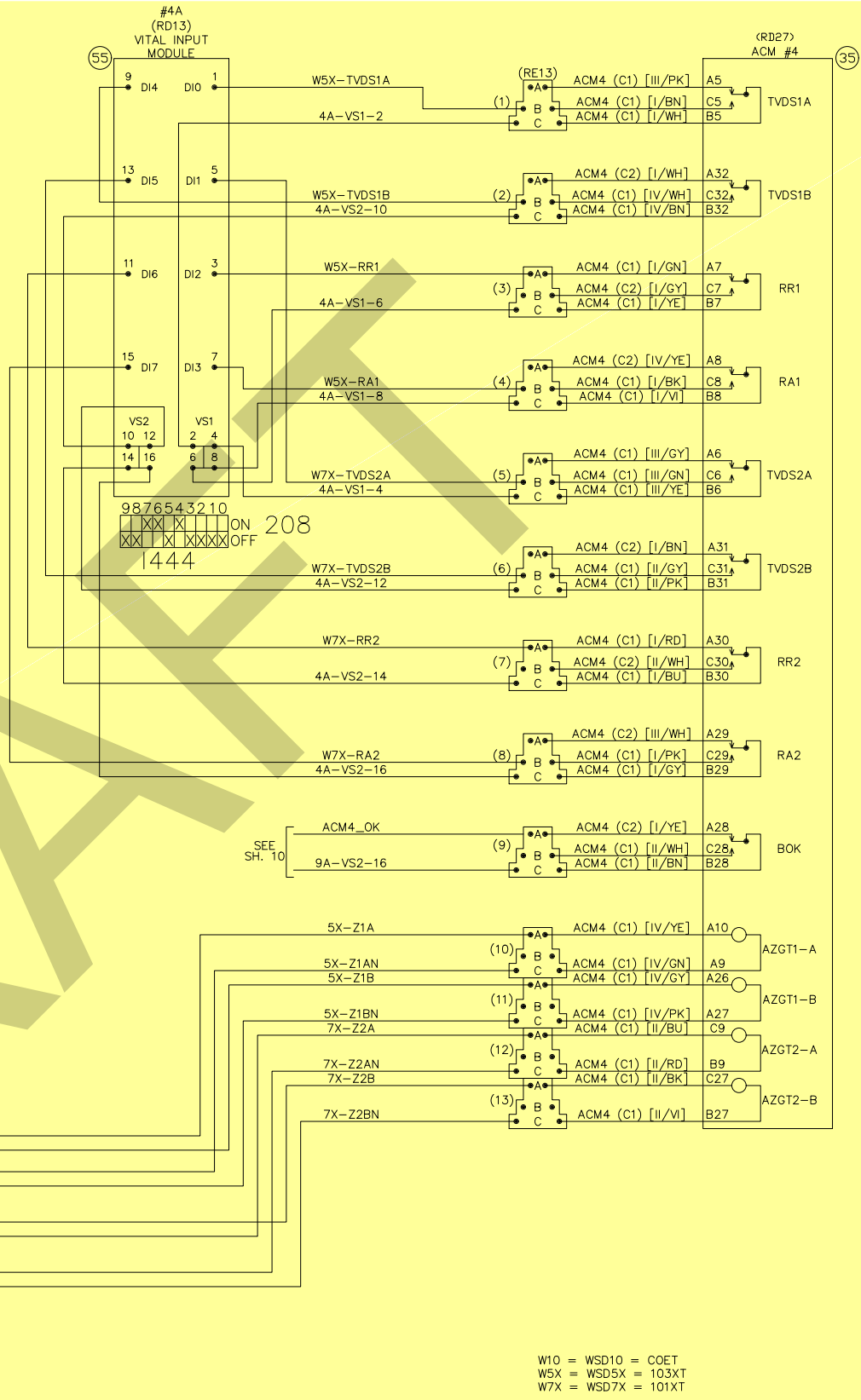
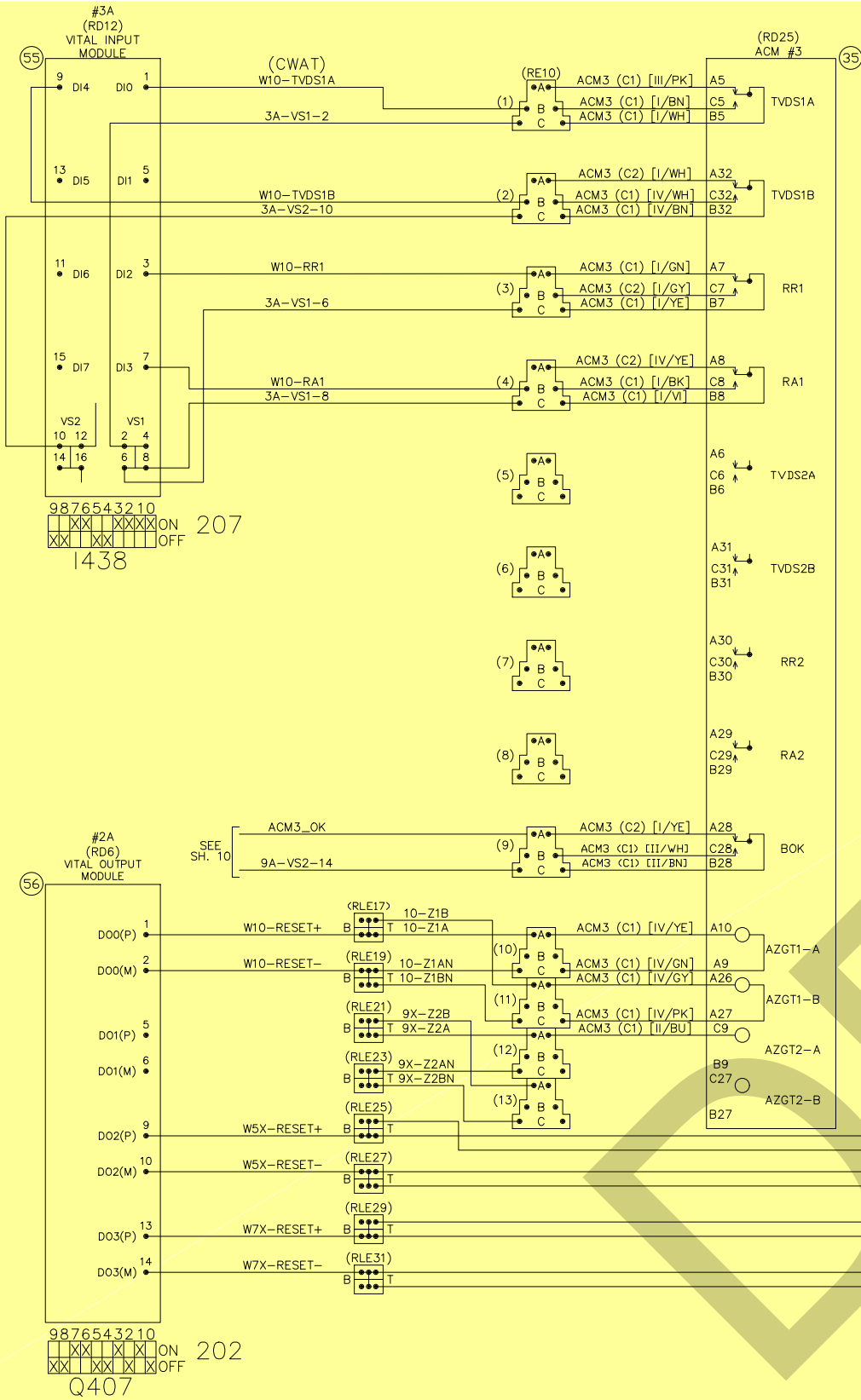


NOTE:
ALL WIRING #16 AWG UNLESS OTHERWISE NOTED.



FAdC 1
BOARD RACK: BGT07

ALL NEW



NOTE:
ALL WIRING #16 AWG UNLESS
OTHERWISE NOTED.

REVISIONS

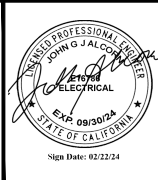
0 AS-IN-SERVICE

1/11/13 SIEMENS

COURTHOUSE

AS-INSTALLED

4/22/18 PRE



DESIGNED BY
GK
DRAWN BY
GK
CHECKED BY
PRJ. ENG.
RB

DATE
2/24
2/24
2/24
2/24

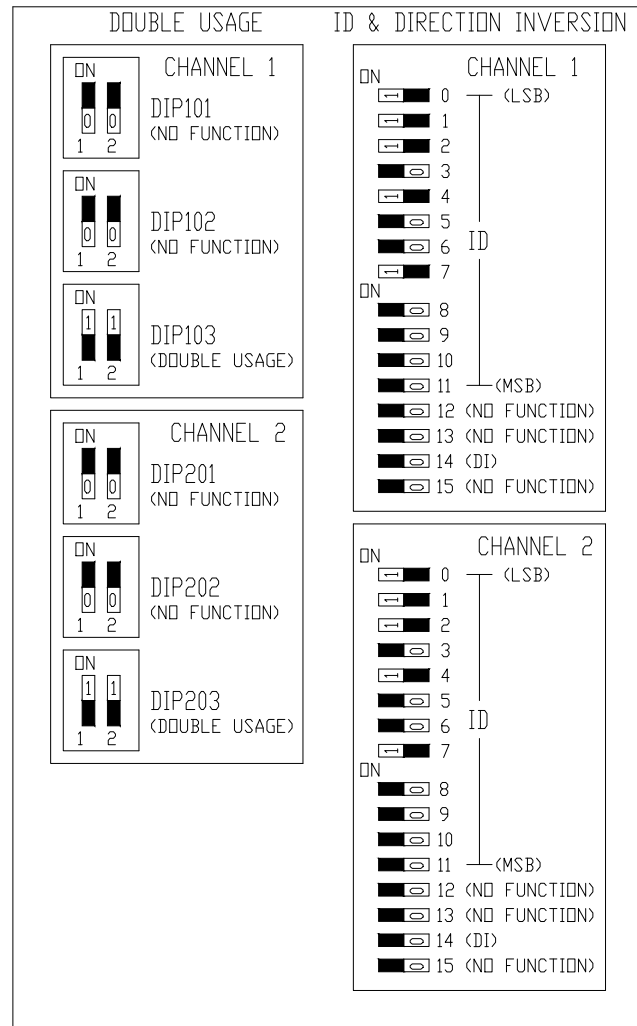


GLOBAL
SIGNALS
GROUP INC

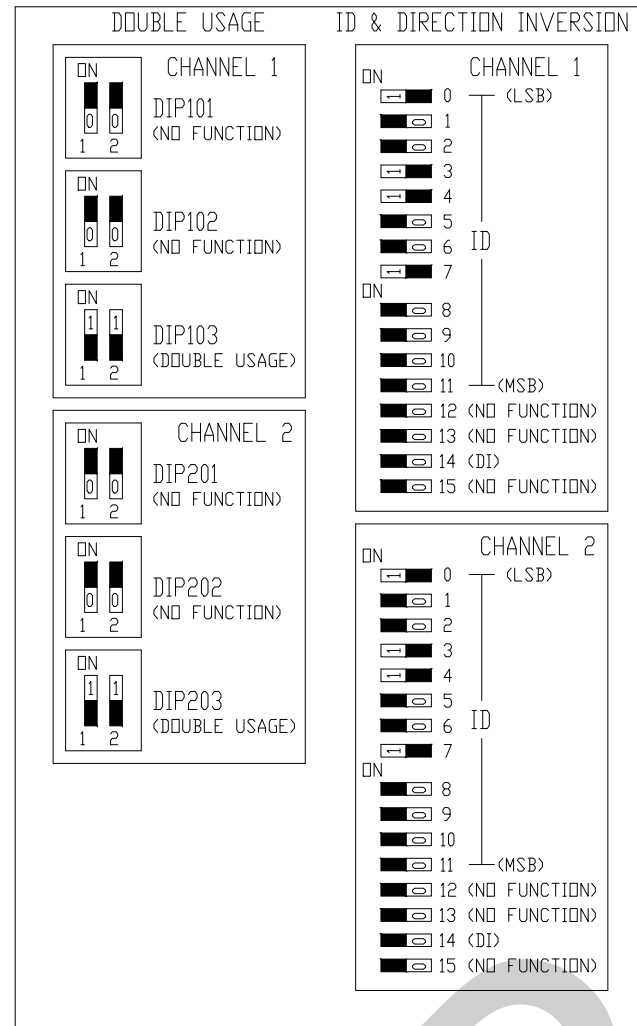
C STREET & BROADWAY WYE CONVERSION
CSRC
ACM I/O CONNECTIONS

SCALE
NTS
CONTRACT NO.
DRAWING NO.
A-279
SHT NO.
6T

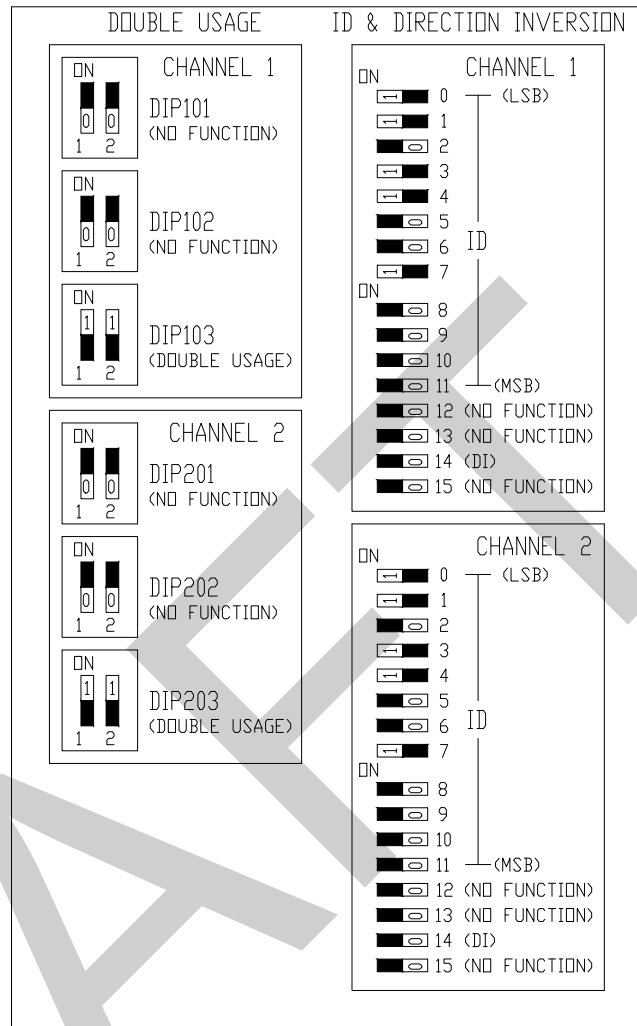
AEB 151 DIP SWITCHES



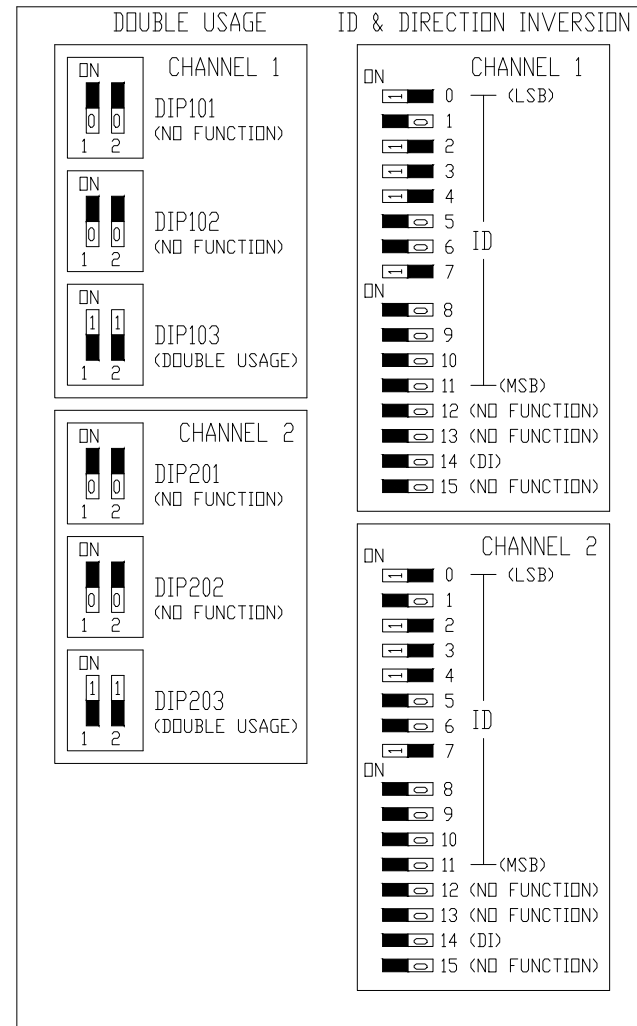
AEB 153 DIP SWITCHES



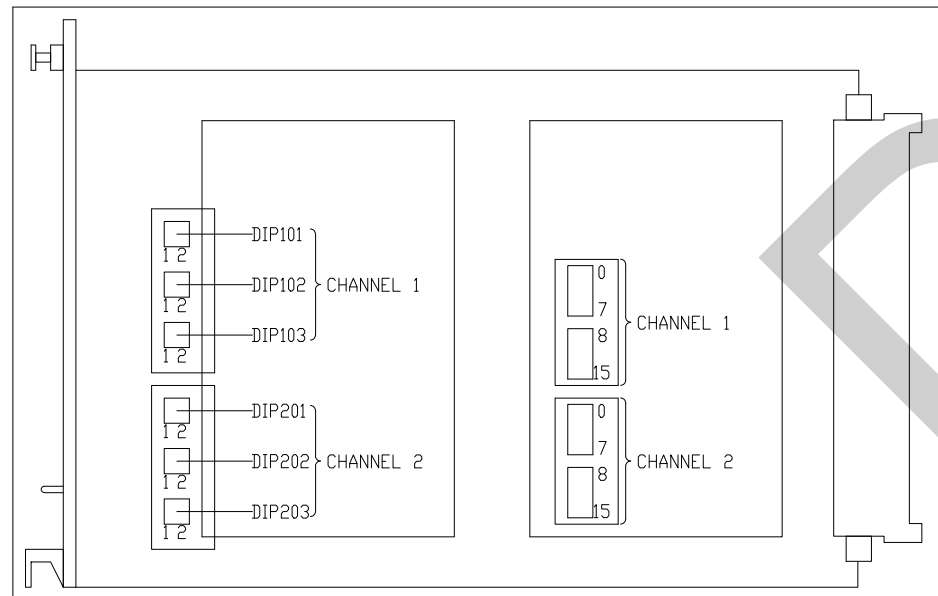
AEB 155 DIP SWITCHES



AEB 157 DIP SWITCHES



GENERAL AEB CARD DIP SWITCH LAYOUT



NOTES:

DIP SWITCH SETTINGS:
1 = ON
0 = OFF

SWITCH POSITIONS:

ON OFF DIP SWITCH OFF

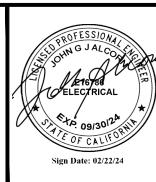
ON OFF DIP SWITCH ON

AEB DIP SWITCH ID SET TO CORRESPONDING
BINARY NUMBER OF AXC ID

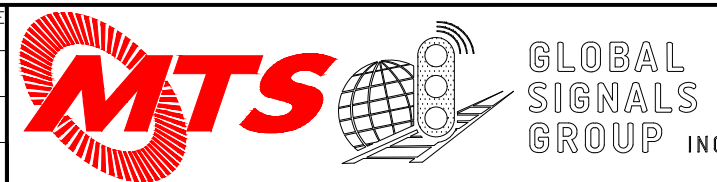
ABBREVIATIONS:
LSB - LEAST SIGNIFICANT BIT
MSB - MOST SIGNIFICANT BIT
DI - DIRECTION INVERSION
(ON = DIRECTION INVERSION)
(OFF = NO DIRECTION INVERSION)

ALL NEW

REVISIONS	AS-IN-SERVICE	1/11/13 SIEMENS	COURTHOUSE	AS-INSTALLED	4/22/18 PRE	BROADWAY & C STREET UPGRADE	2/12/24 GSG												
0																			
1																			
2																			

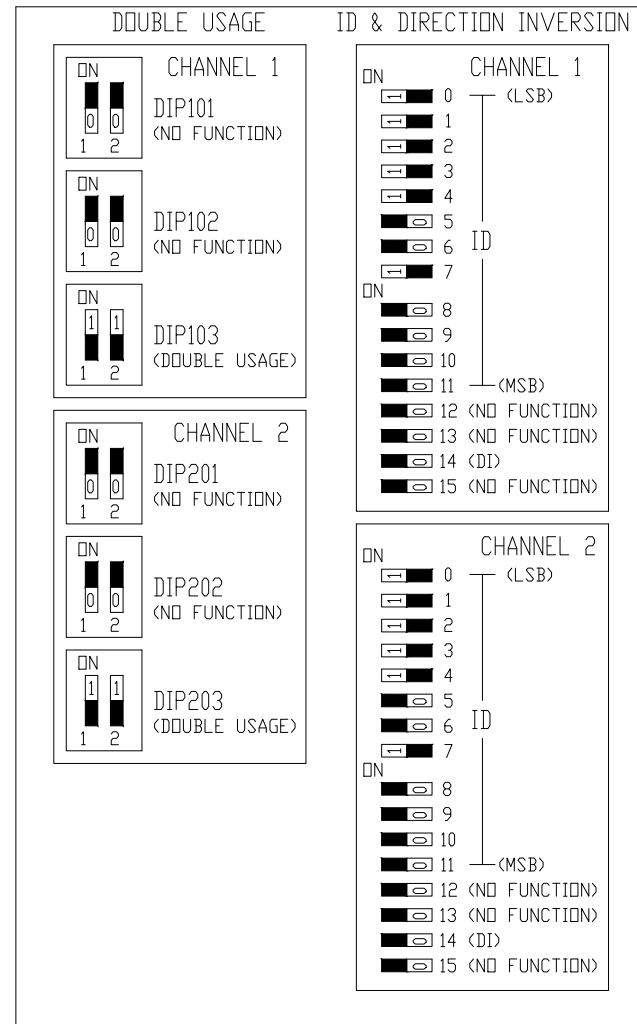


DESIGNED BY	GK	DATE	2/24
DRAWN BY	GK		2/24
CHECKED BY			
PRJ. ENG.	RB		2/24

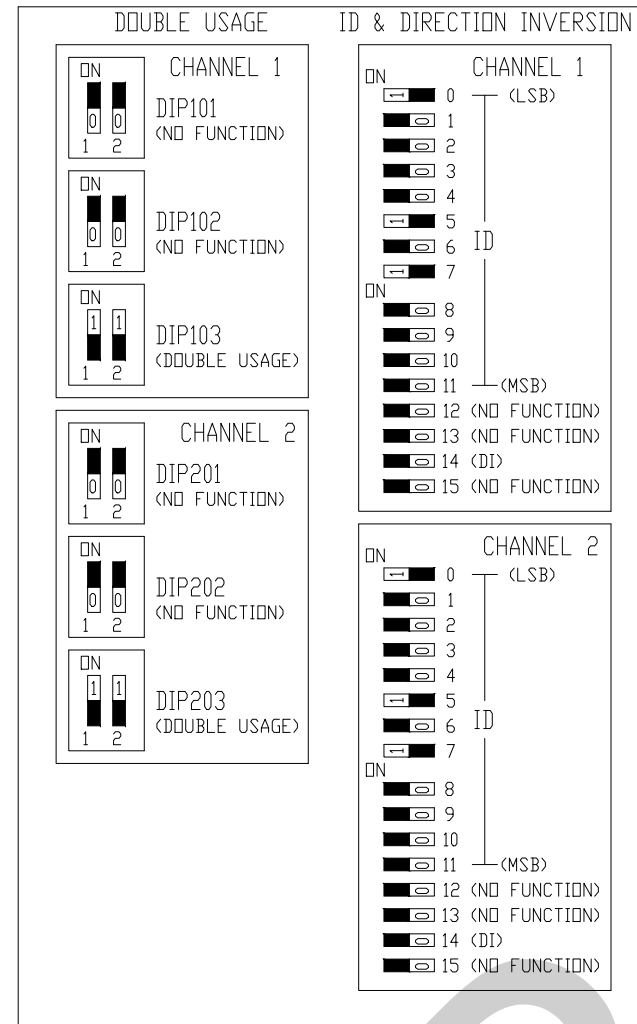


C STREET & BROADWAY WYE CONVERSION		SCALE NTS	
CSRC		CONTRACT NO.	
FAdC AXLE COUNTER		DRAWING NO. A-280	
AEB DIP SWITCH SETTINGS		SHT NO. 6A	

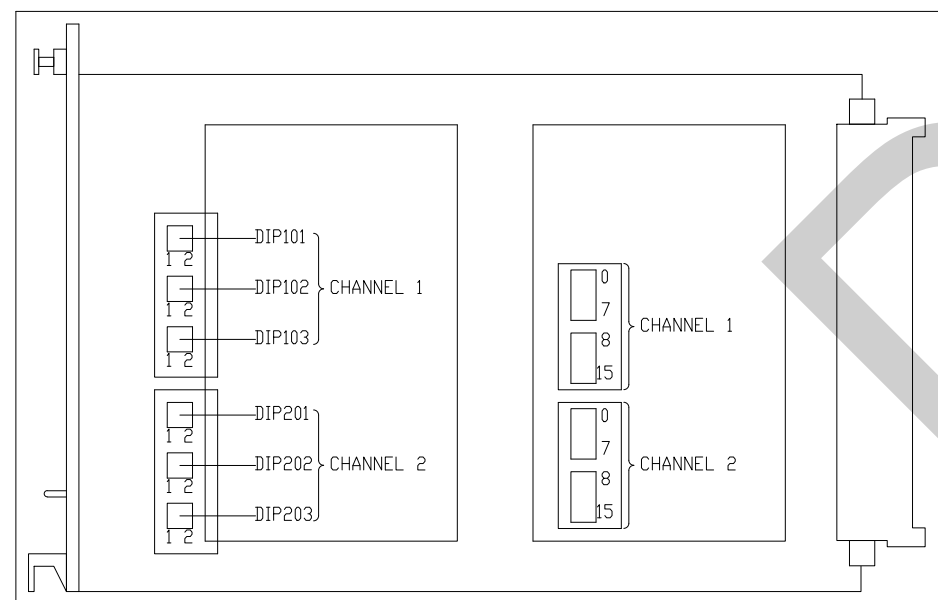
AEB 159 DIP SWITCHES



AEB 161 DIP SWITCHES





GENERAL AEB CARD DIP SWITCH LAYOUT





NOTES:

DIP SWITCH SETTINGS:
1 = ON
0 = OFF

SWITCH POSITIONS:

ON  DIP SWITCH OFF
OFF 

ON  DIP SWITCH ON
OFF 

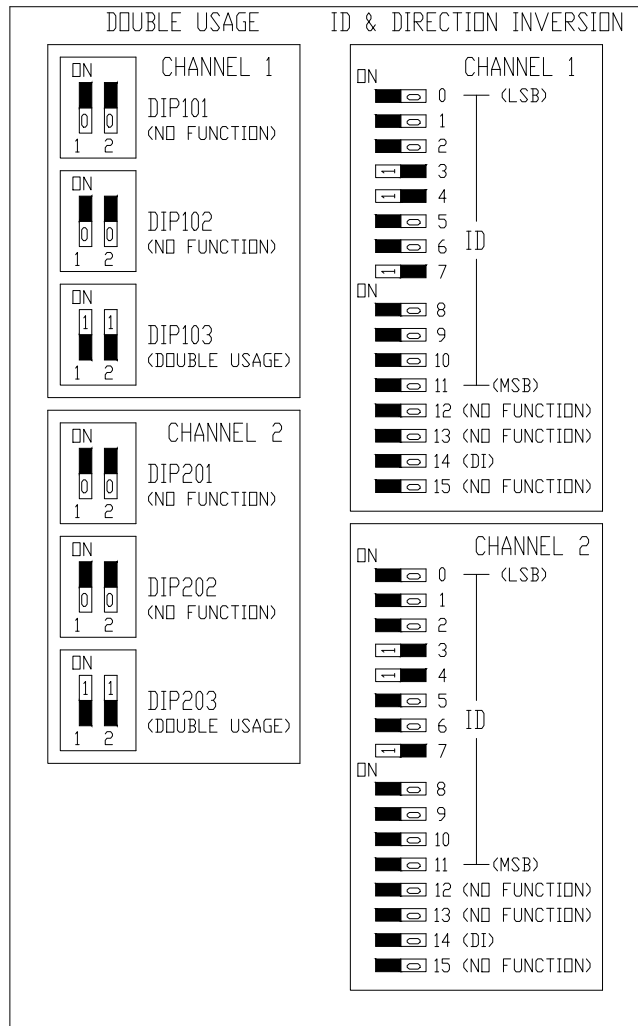
AEB DIP SWITCH ID SET TO CORRESPONDING
BINARY NUMBER OF AXC ID

ABBREVIATIONS:
LSB - LEAST SIGNIFICANT BIT
MSB - MOST SIGNIFICANT BIT
DI - DIRECTION INVERSION
(ON = DIRECTION INVERSION)
(OFF = NO DIRECTION INVERSION)

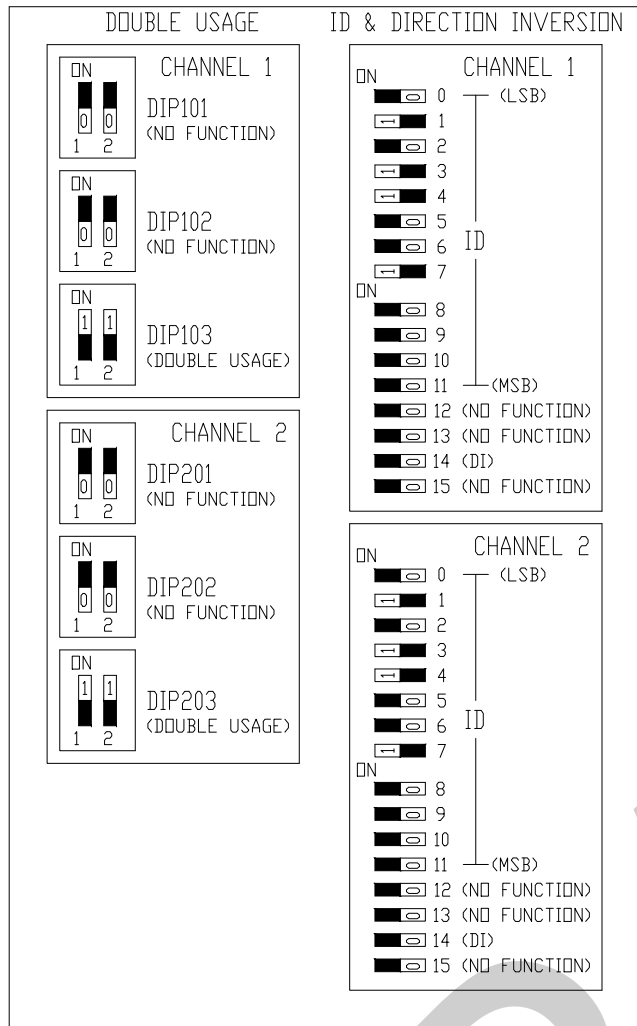
ALL NEW

[illegible]

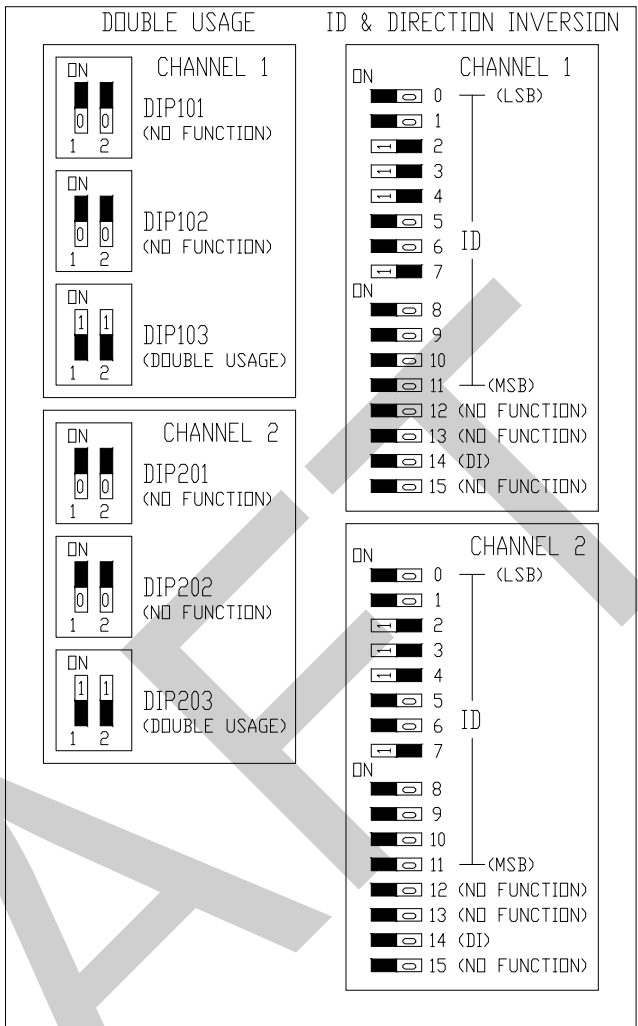
AEB 152 DIP SWITCHES



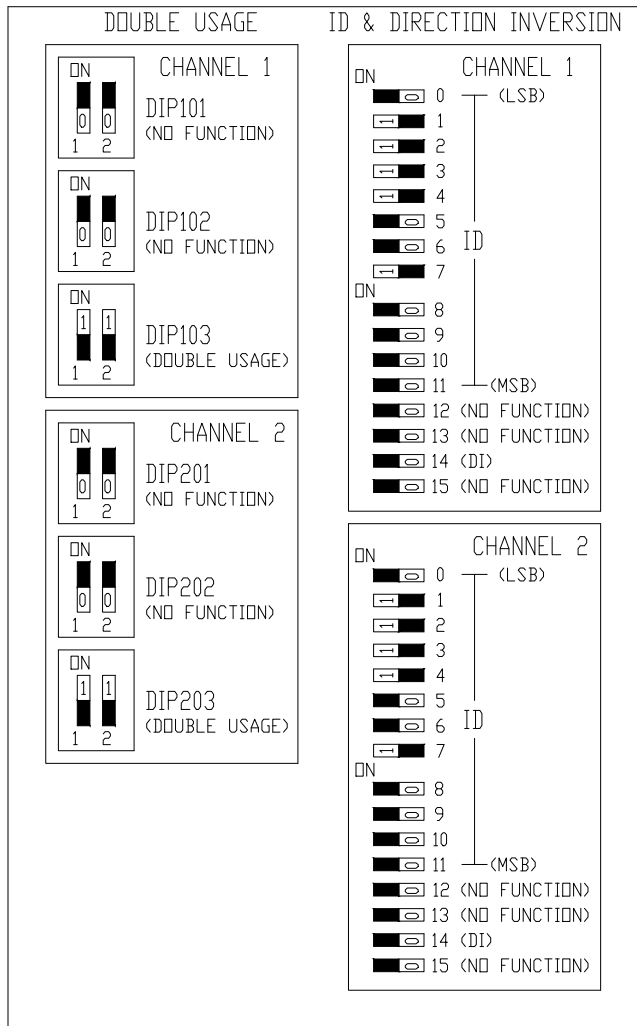
AEB 154 DIP SWITCHES



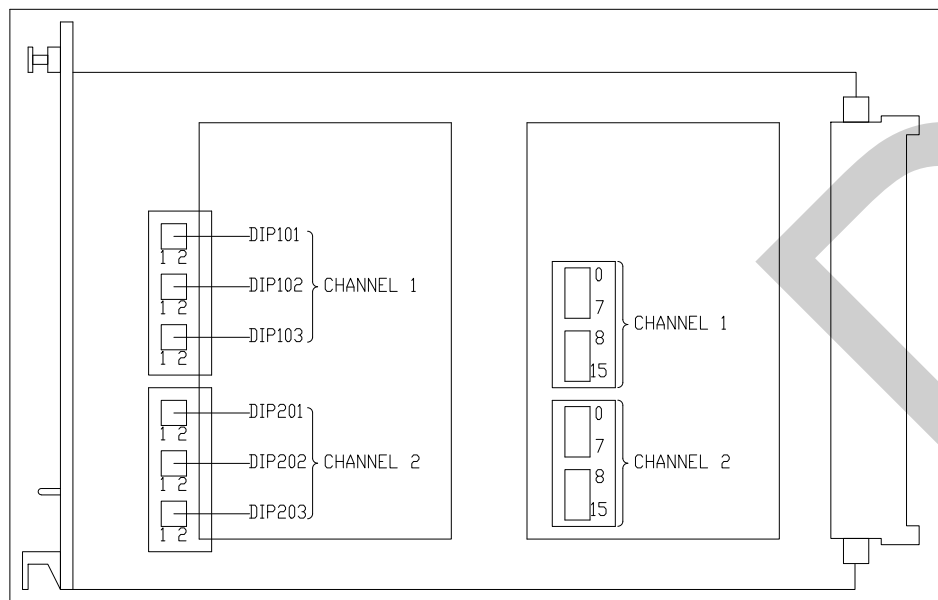
AEB 156 DIP SWITCHES



AEB 158 DIP SWITCHES



GENERAL AEB CARD DIP SWITCH LAYOUT



NOTES:

DIP SWITCH SETTINGS:
1 = ON
0 = OFF

SWITCH POSITIONS:

ON 1 DIP SWITCH OFF
OFF 0
ON 1 DIP SWITCH ON
OFF 0

AEB DIP SWITCH ID SET TO CORRESPONDING
BINARY NUMBER OF AXC ID

ABBREVIATIONS:
LSB - LEAST SIGNIFICANT BIT
MSB - MOST SIGNIFICANT BIT
DI - DIRECTION INVERSION
<ON = DIRECTION INVERSION>
<OFF = NO DIRECTION INVERSION>

ALL NEW

REVISIONS

0 BROADWAY & C STREET UPGRADE
2/12/24 GSG



DESIGNED BY GK 2/24
DRAWN BY GK 2/24
CHECKED BY
PRJ. ENG. RB 2/24



GLOBAL SIGNALS GROUP INC

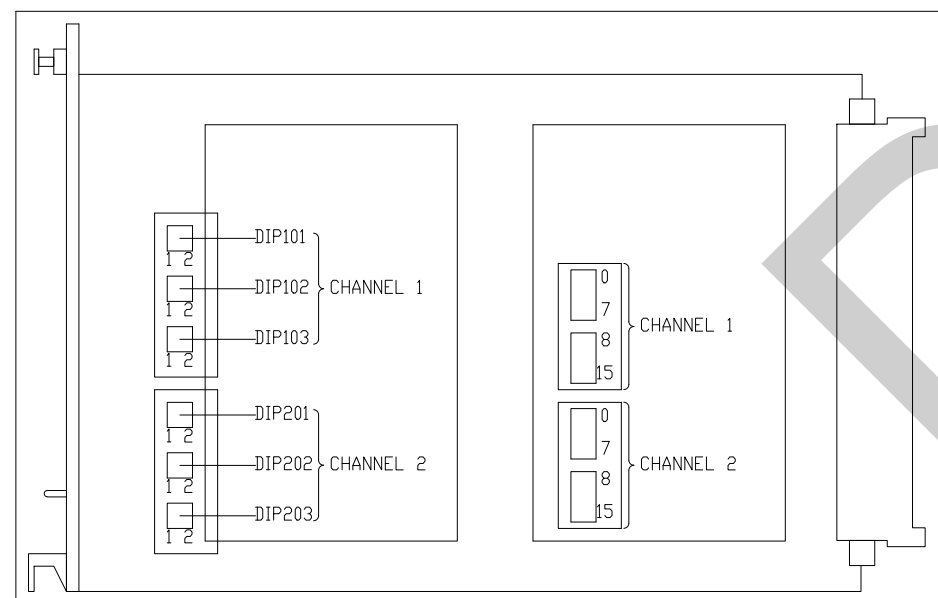
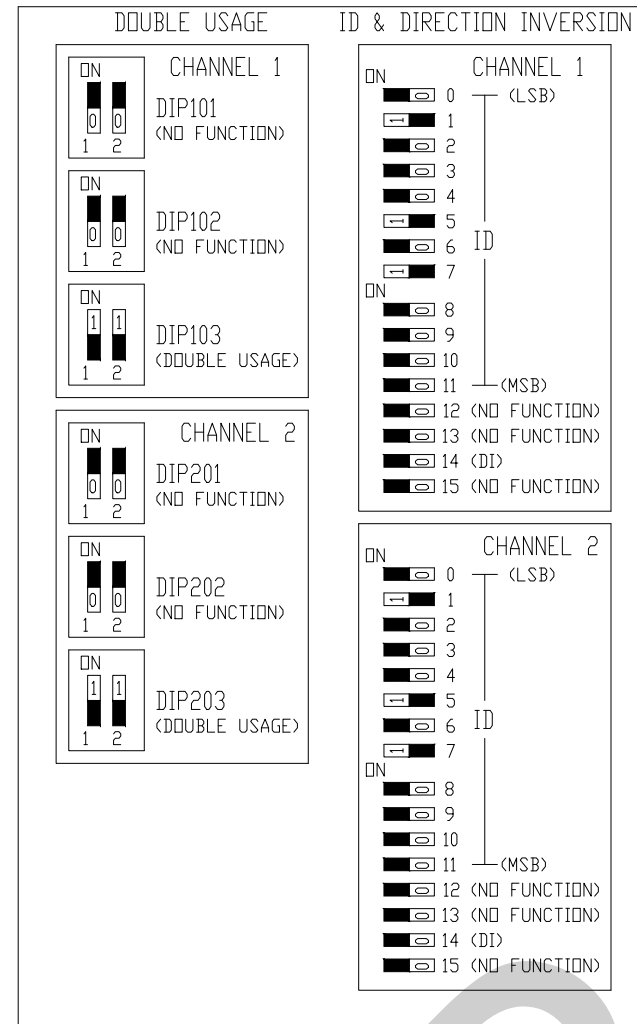
C STREET & BROADWAY WYE CONVERSION

CSRC
FAdC AXLE COUNTER
AEB DIP SWITCH SETTINGS

SCALE NTS

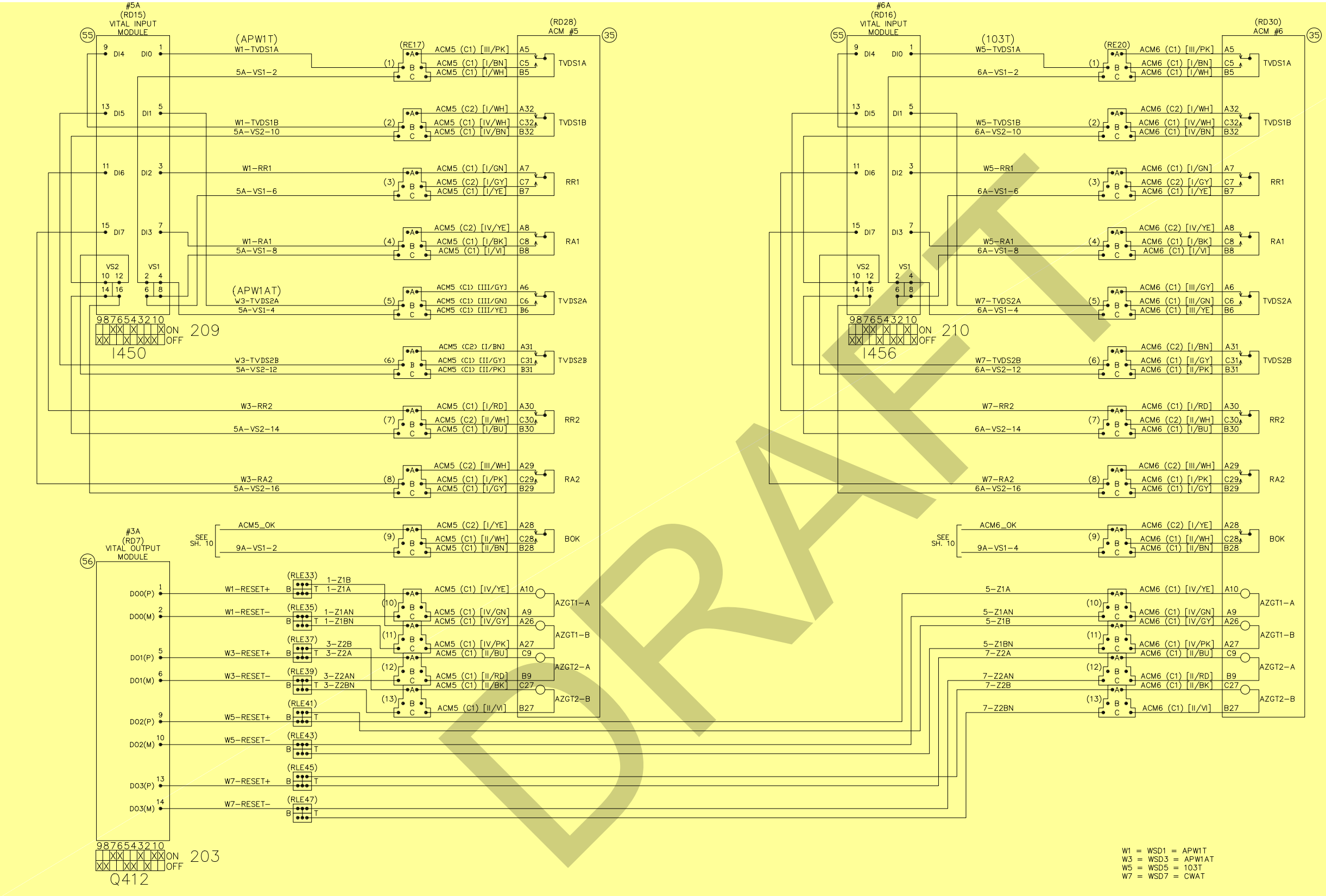
CONTRACT NO.

DRAWING NO. A-282 06C SHT NO. 6C



ALL NEW

[illegible]



NOTE:
ALL WIRING #16 AWG UNLESS
OTHERWISE NOTED.

REVISIONS	DATE	BY	REASON
0	1/11/13	SIEMENS	AS-IN-SERVICE



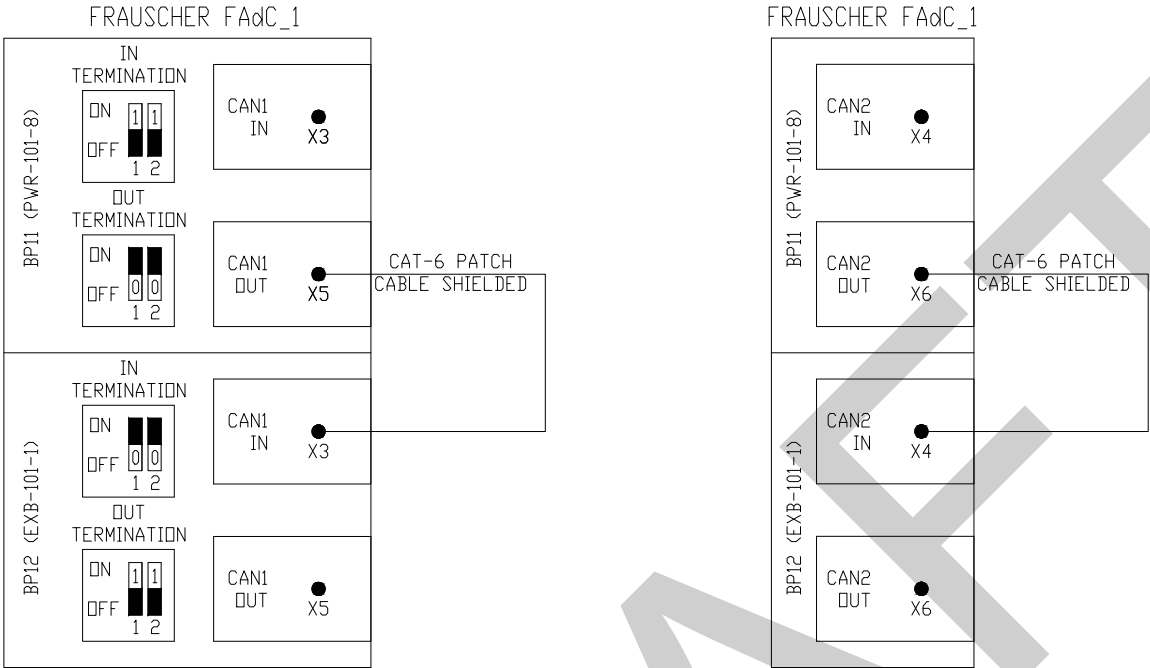
DESIGNED BY	DATE
GK	2/24
DRAWN BY	DATE
GK	2/24
CHECKED BY	
PRJ. ENG.	DATE
RB	2/24



C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
CSRC		CONTRACT NO.	
ACM I/O CONNECTIONS		DRAWING NO.	A-285
		SHT NO.	7T



C STREET & BROADWAY WYE CONVERSION	SCALE NTS	
CSRC ACM I/O CONNECTIONS	CONTRACT NO.	
	DRAWING NO. AC28708T	SHT NO. 8T



NOTES:

1. FAdC_1: BP11 CAN IN TERMINATION DIP SWITCHES SET TO ON
2. FAdC_1: BP12 CAN OUT TERMINATION DIP SWITCHES SET TO ON
3. ALL OTHER CAN IN/OUT TERMINATIONS DIP SWITCHES SET TO OFF


LEGEND:


DIP SWITCH SETTINGS:


1 = ON


0 = OFF

SWITCH POSITIONS:



ON  DIP SWITCH OFF

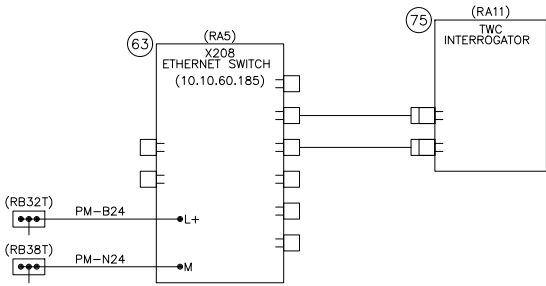
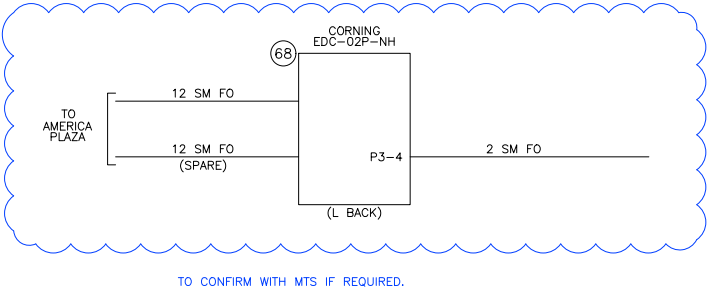
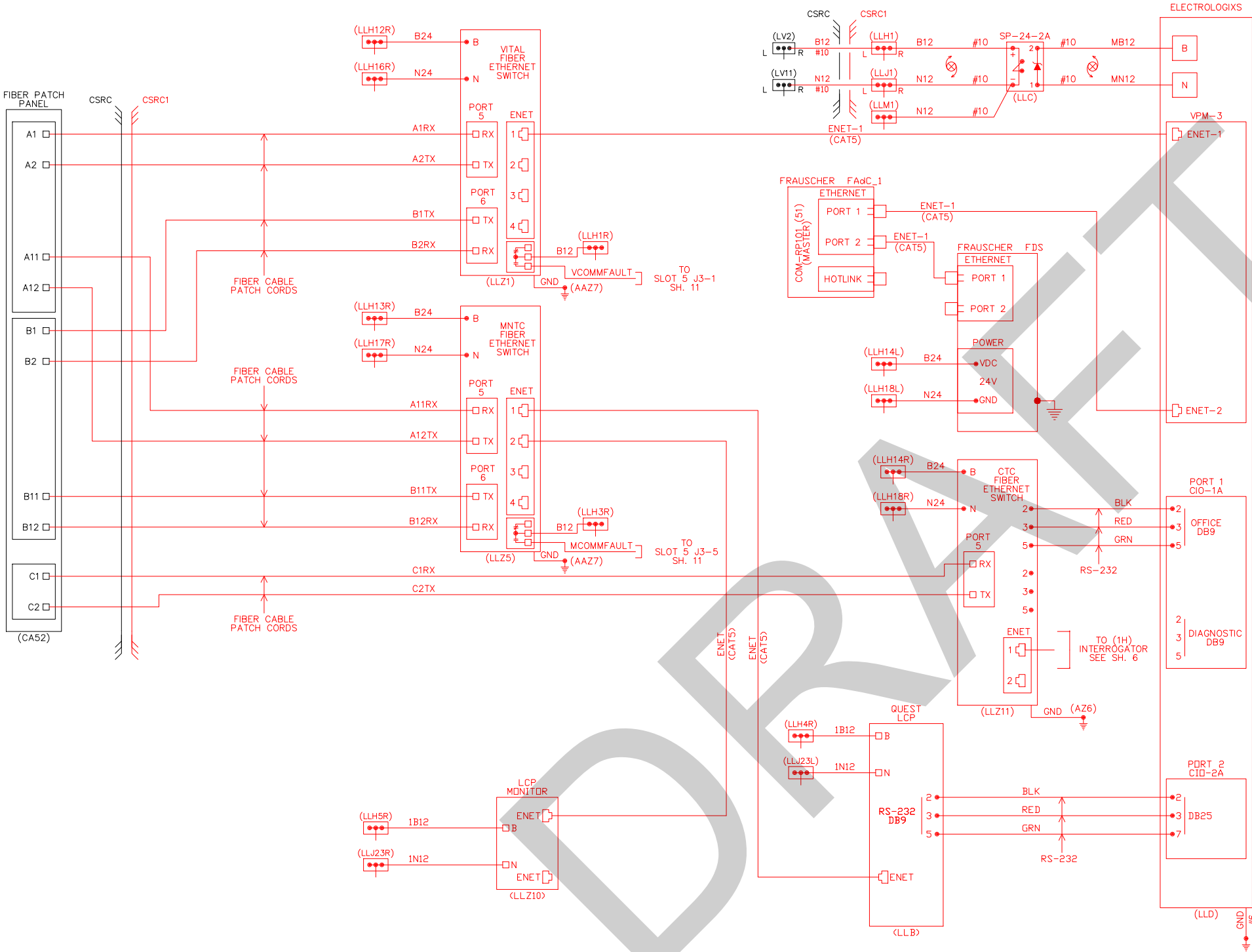
OFF  DIP SWITCH ON

ON  DIP SWITCH ON

OFF  DIP SWITCH OFF

ALL NEW

REVISIONS														<div><div><div>DESIGNED BY GK</div><div>DRAWN BY GK</div><div>CHECKED BY</div><div>PRJ. ENG. RB</div></div><div><div>DATE 2/24</div><div>2/24</div><div></div><div>2/24</div></div></div> <div><div><div>GLOBAL SIGNALS GROUP INC</div><div></div></div></div>		C STREET & BROADWAY WYE CONVERSION		SCALE NTS	
1/11/13 SIEMENS COURTHOUSE AS-INSTALLED																CONTRACT NO.			
4/22/18 PRE																			
2/ BROADWAY & C STREET UPGRADE																			
2/12/24 GSG																			



NOTE:
ALL WIRE #16 AWG FLEX UNLESS OTHERWISE NOTED.

RED = IN
YELLOW = OUT

REVISIONS	DATE	BY	REASON
0	AS-IN-SERVICE		
1	1/11/13	SIEMENS	BROADWAY & C STREET UPGRADE
2	2/12/24	GSG	

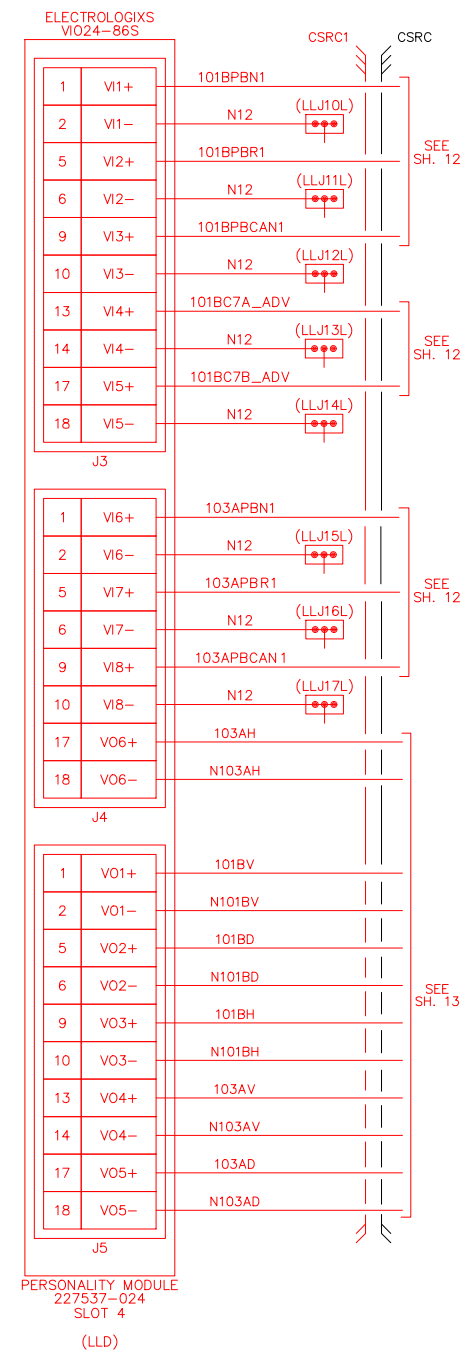
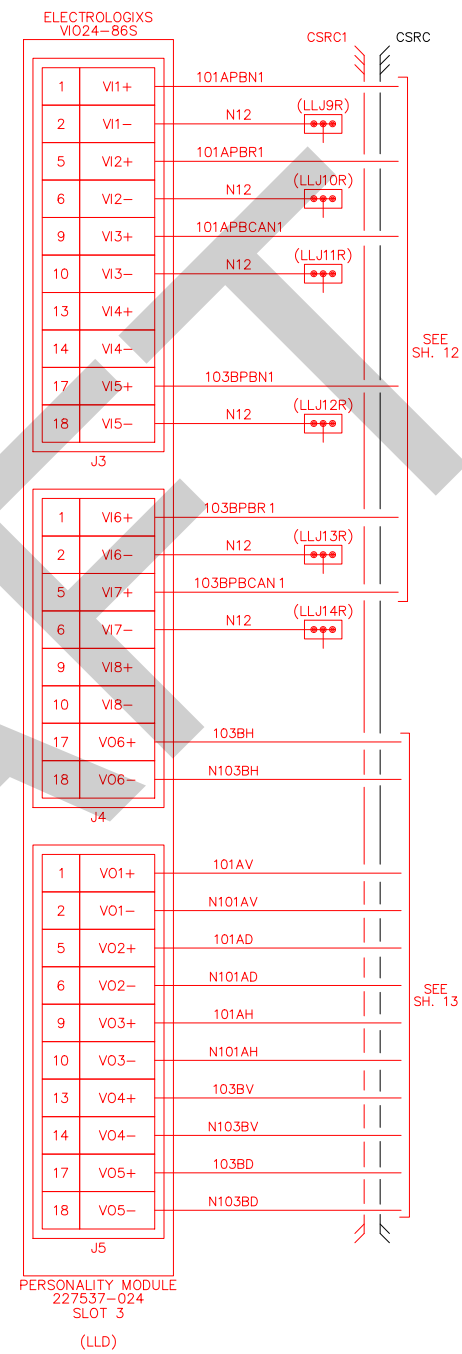
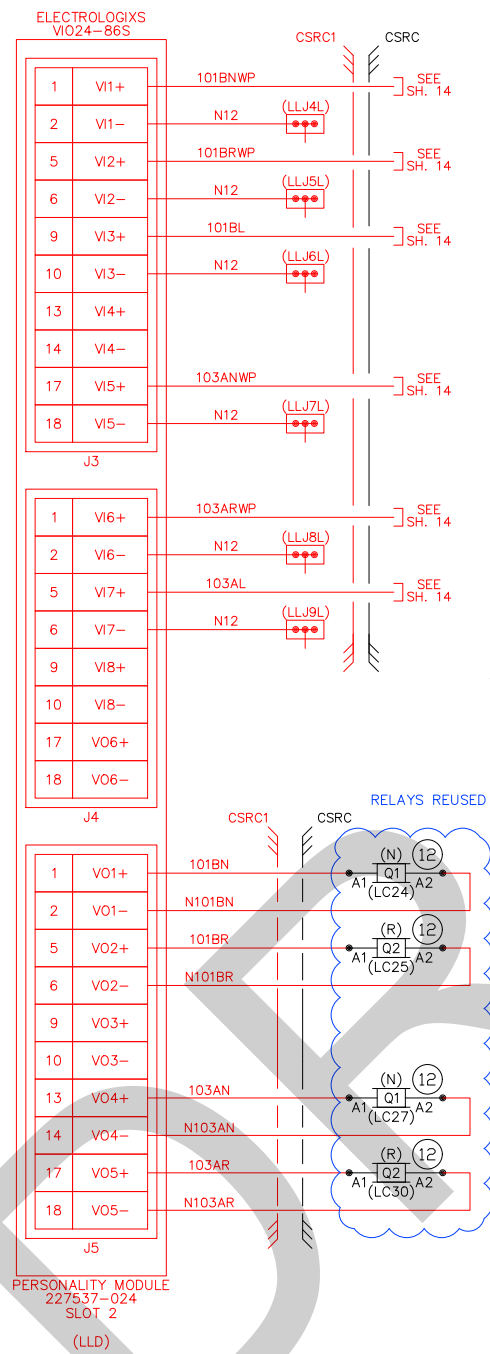
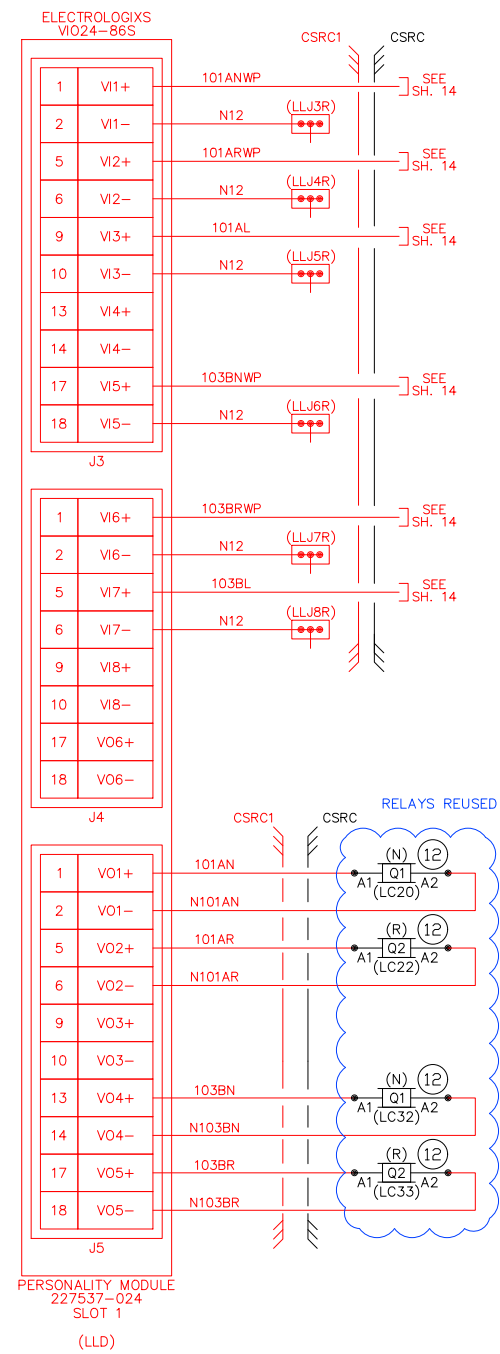


DESIGNED BY	DATE
GK	2/24
DRAWN BY	DATE
GK	2/24
CHECKED BY	
PRJ. ENG.	
RB	2/24



C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
CSRC POWER AND COMMUNICATIONS WIRING		CONTRACT NO.	
DRAWING NO.	SHT NO.		
A-290-09	9		

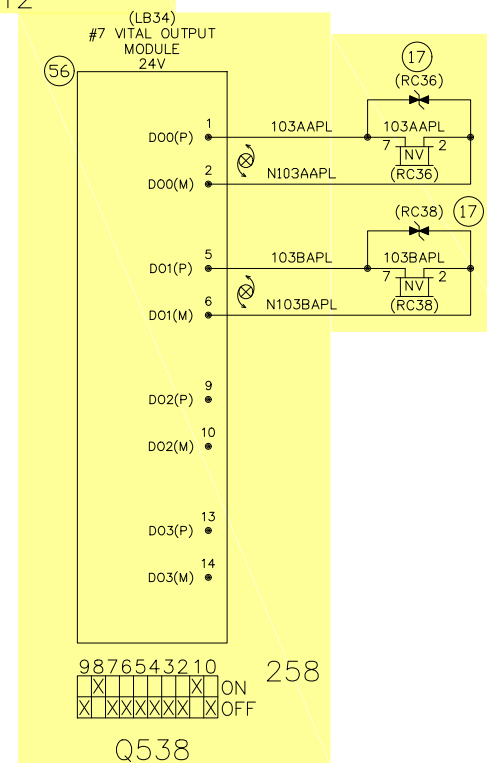
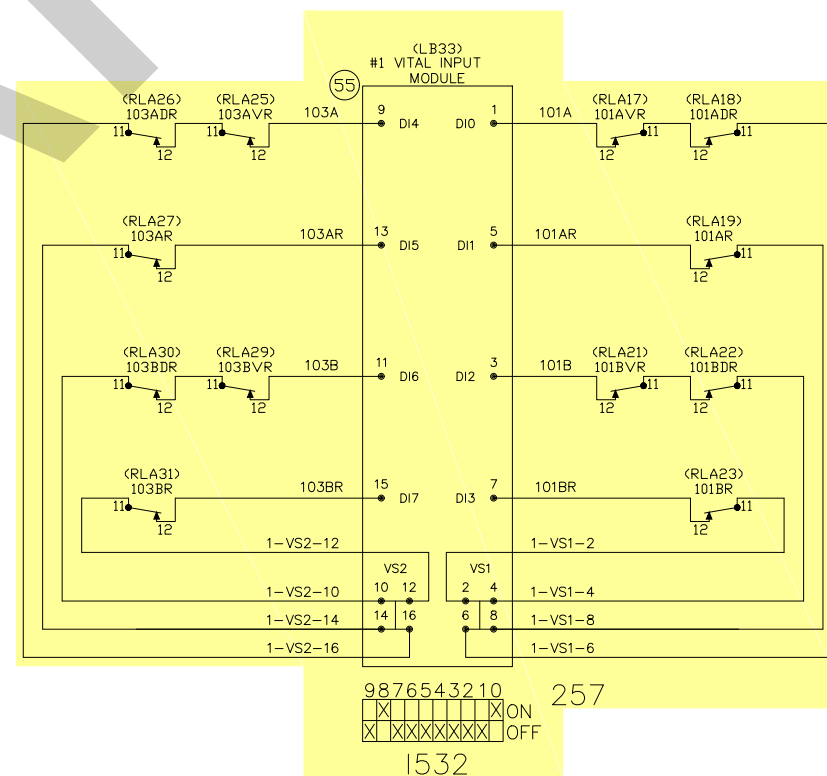
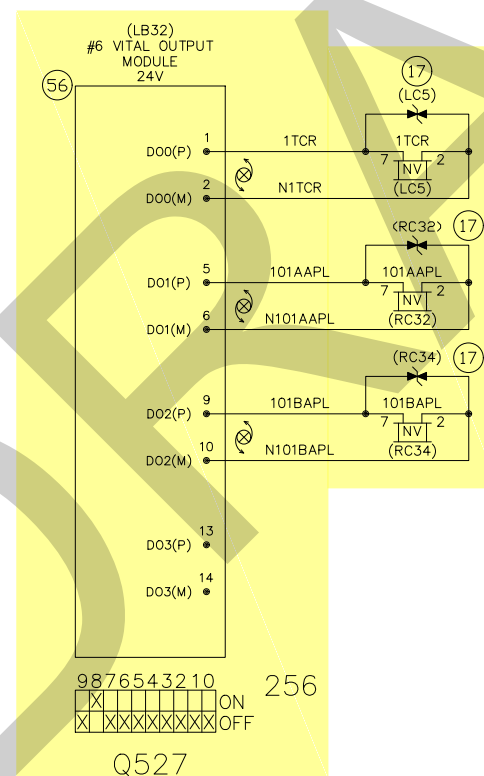
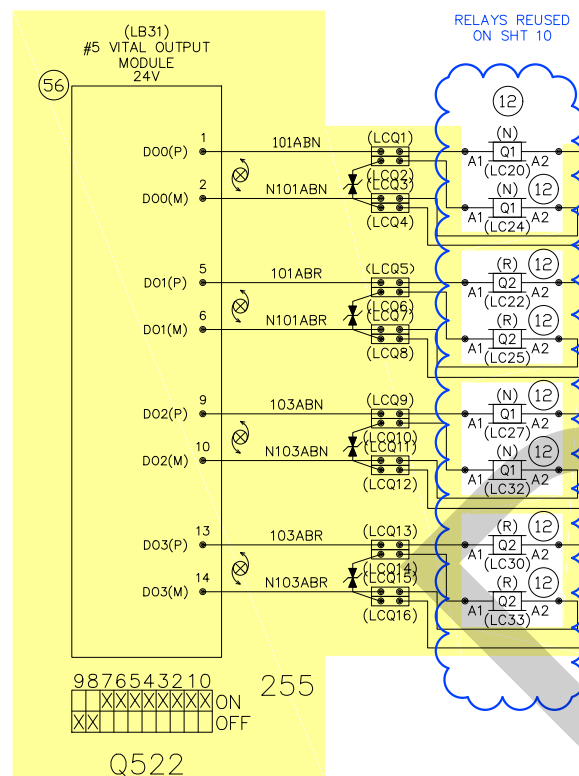
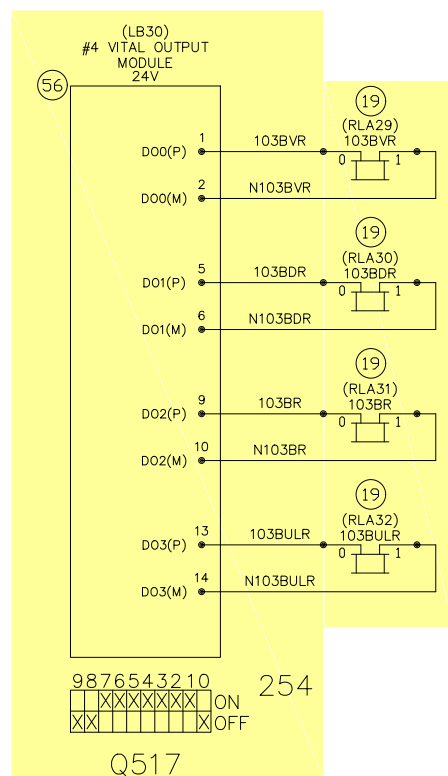
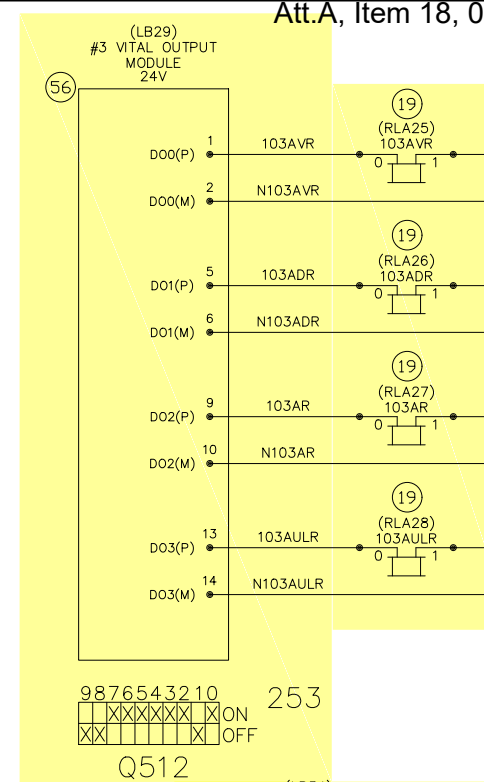
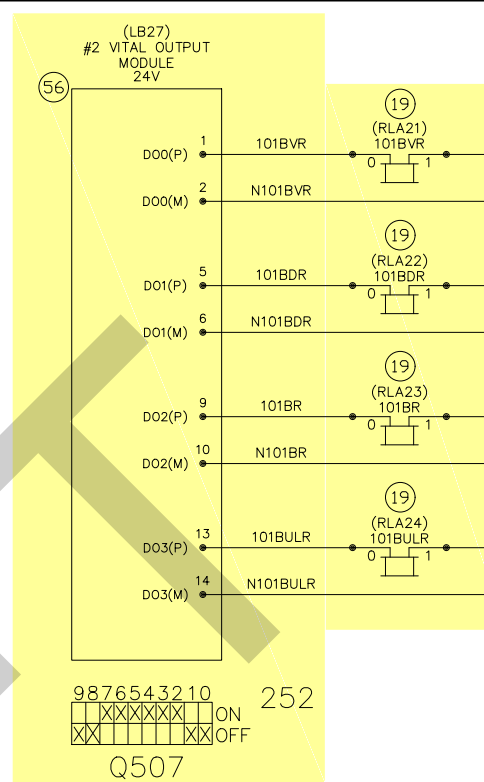
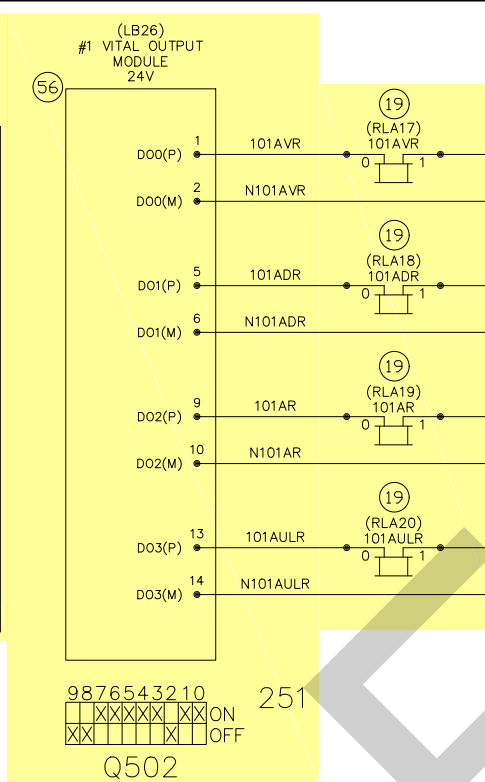
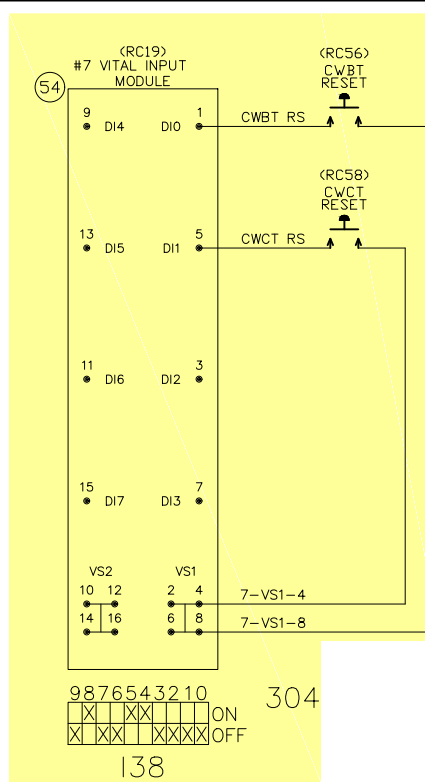
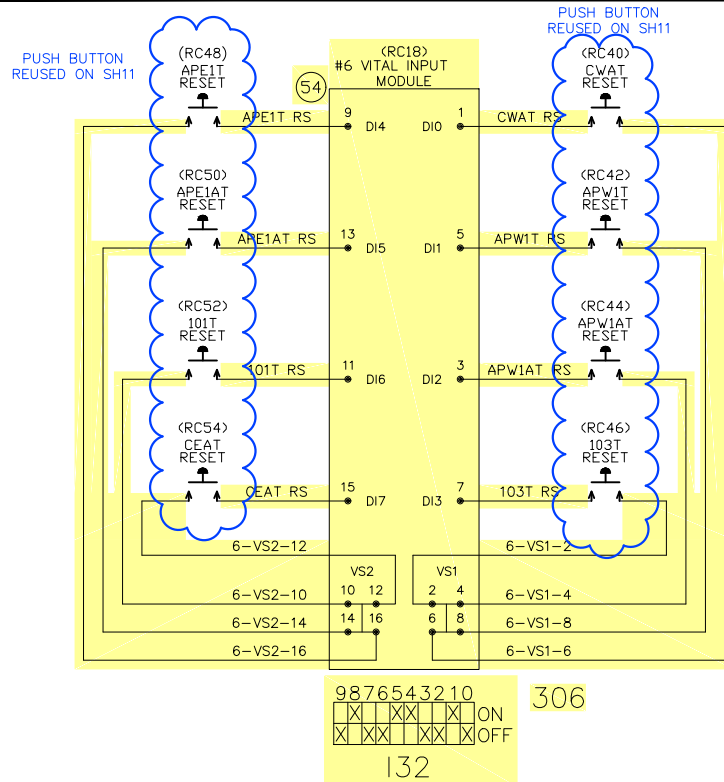
DRAWING NO. A-291	SHT NO. 10T
----------------------	----------------



NOTE:
ALL WIRE #16 AWG FLEX UNLESS OTHERWISE NOTED.

RED = IN YELLOW = OUT

[illegible]



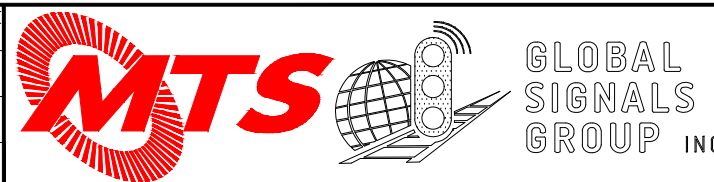
NOTE:
ALL WIRING #16 AWG UNLESS OTHERWISE NOTED.

RED = IN
YELLOW = OUT

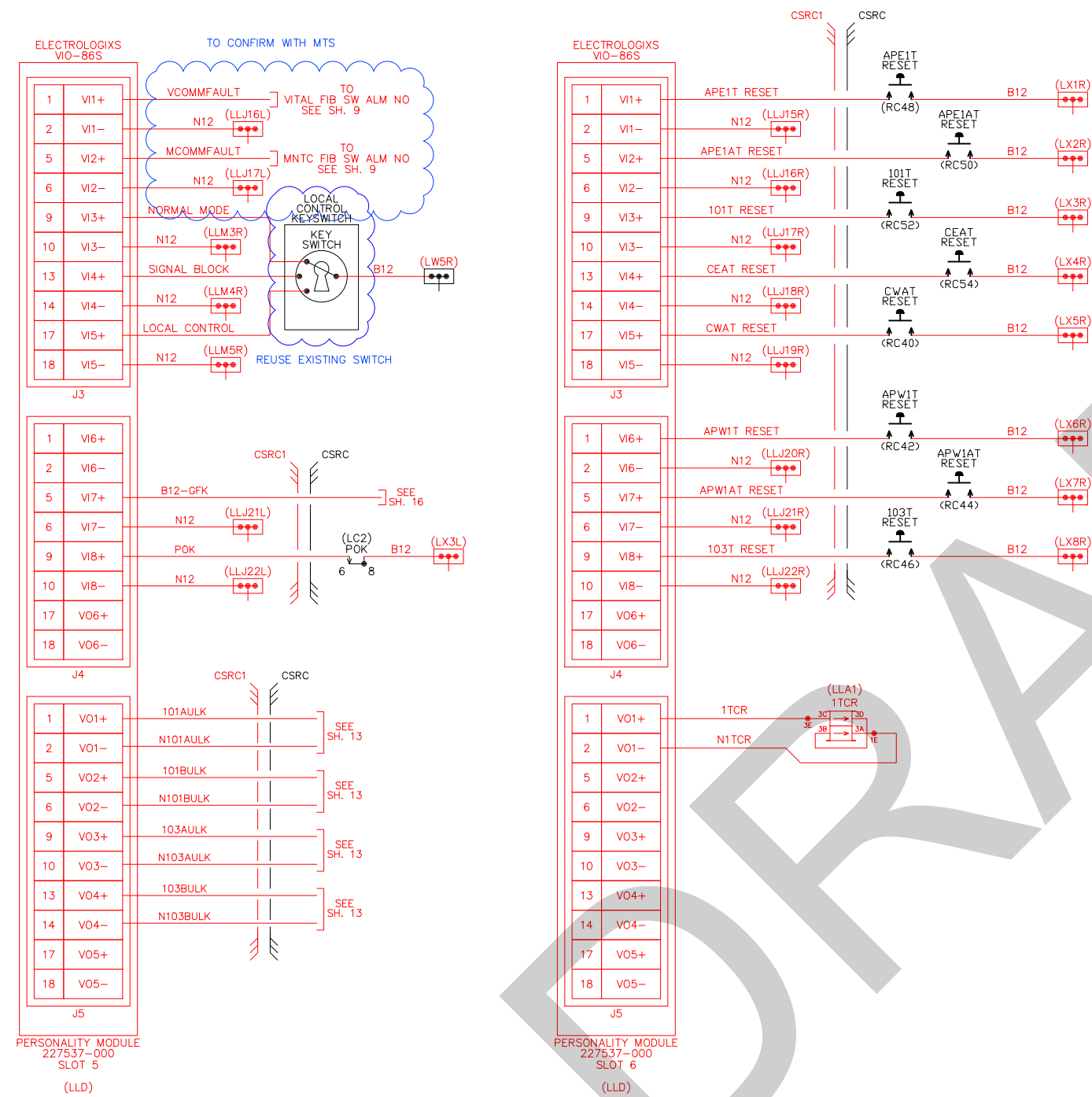
REVISIONS	DATE	BY	REASON
0	1/11/13	SIEMENS	AS-IN-SERVICE



DESIGNED BY	DATE
GK	2/24
DRAWN BY	DATE
GK	2/24
CHECKED BY	
PRJ. ENG.	
RB	2/24




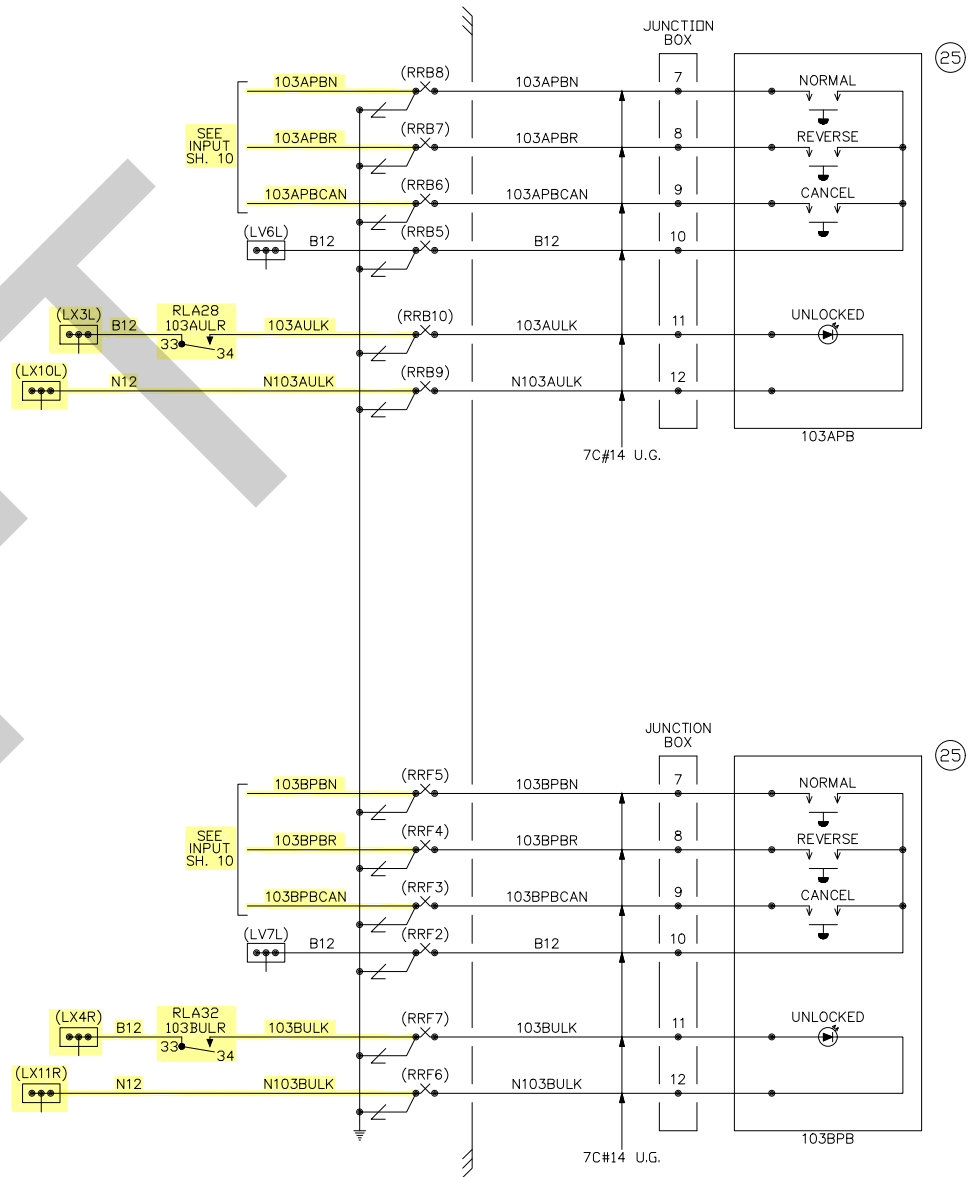
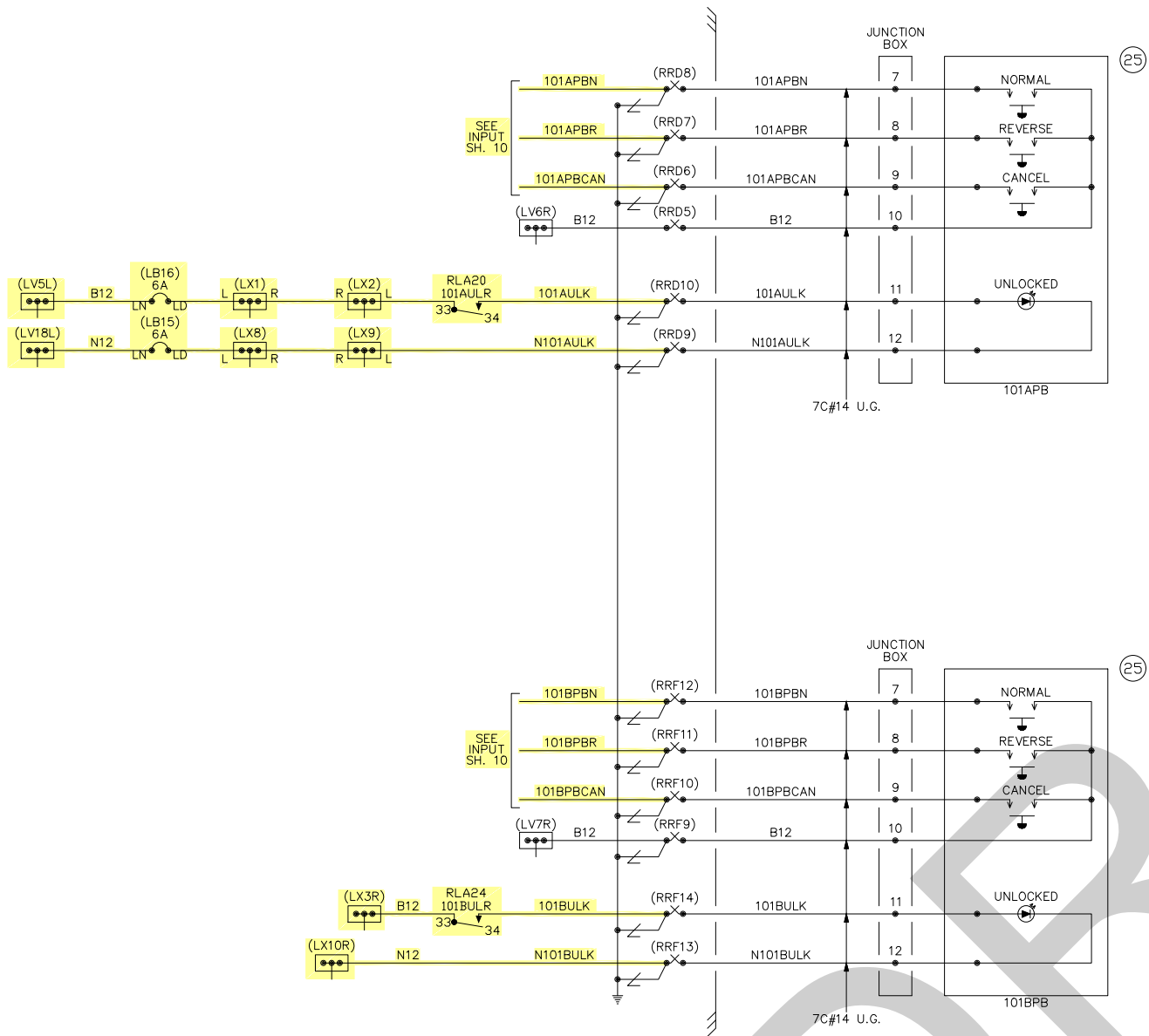
C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
CSRC INPUT/OUTPUTS		CONTRACT NO.	
DRAWING NO.	SHT NO.		
A-293	11T		



NOTE:
ALL WIRE #16 AWG FLEX UNLESS OTHERWISE NOTED.

RED = IN YELLOW = OUT

REVISIONS		1/11/13 SIEMENS										DESIGNED BY		DATE				C STREET & BROADWAY WYE CONVERSION		SCALE			
AS-IN-SERVICE												DRAWN BY		2/24						CONTRACT NO.			
1. BROADWAY & C STREET UPGRADE												CHECKED BY								DRAWING NO.		SHT NO.	
2/12/24 GSG												PRJ. ENG.		2/24						A-294		11	



NOTE:
ALL WIRING #16 AWG UNLESS
OTHERWISE NOTED.

RED = IN YELLOW = OUT

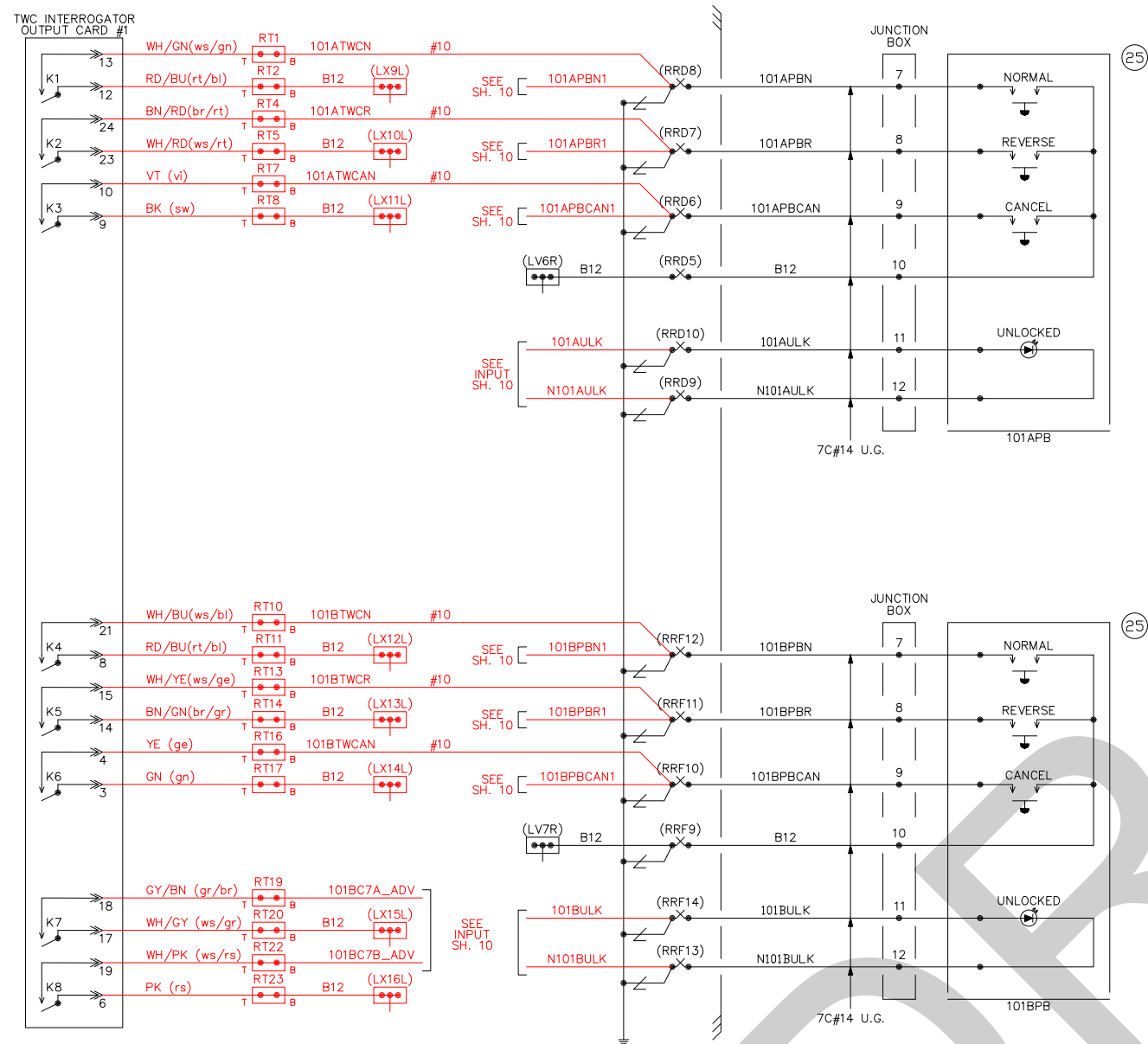
REVISIONS	DATE	BY	DESCRIPTION
0	1/11/13	SIEMENS	AS-IN-SERVICE

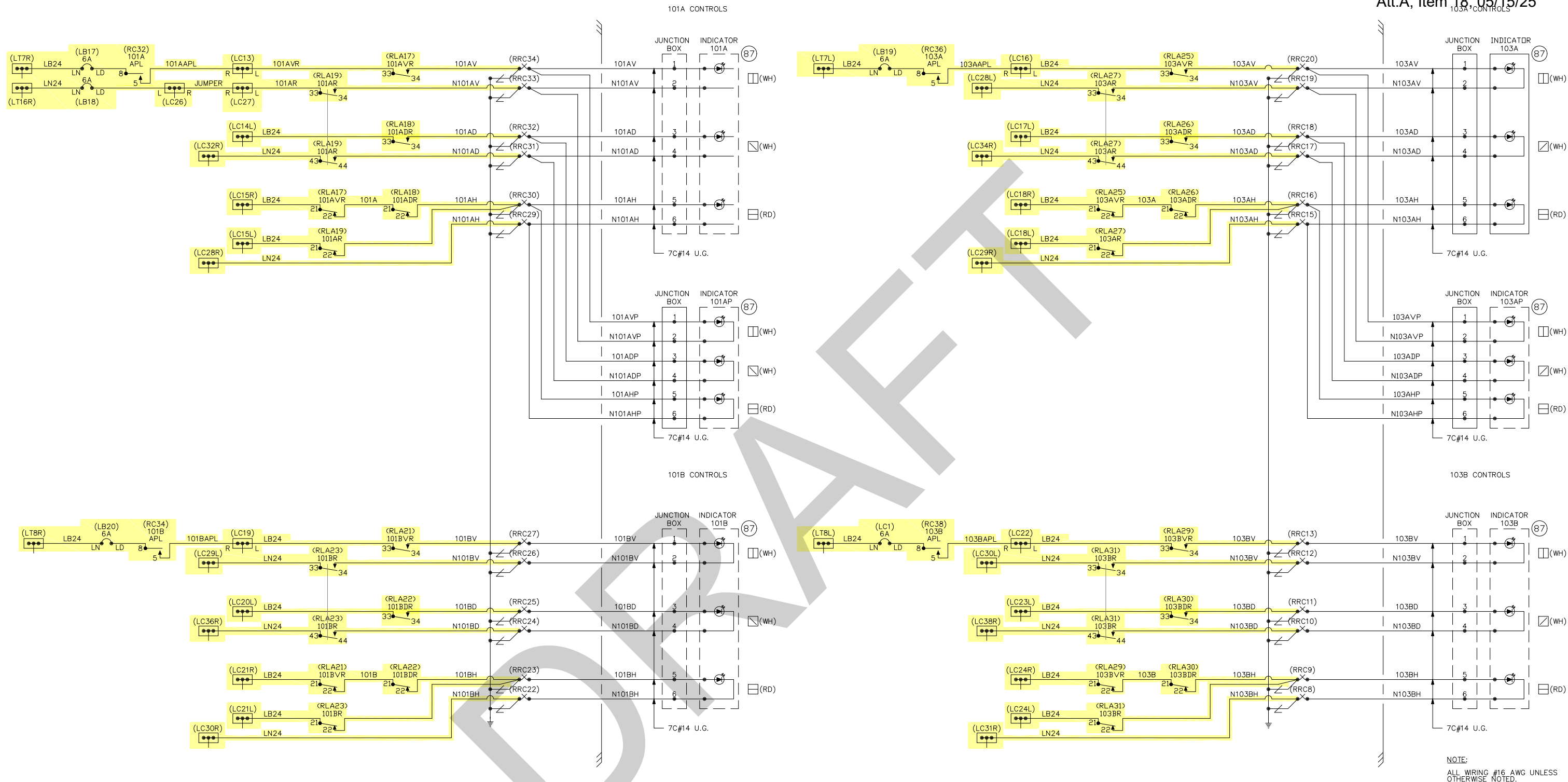


DESIGNED BY	DATE
GK	2/24
DRAWN BY	DATE
GK	2/24
CHECKED BY	
PRJ. ENG.	DATE
RB	2/24



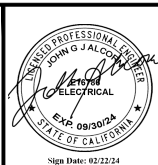
C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
CSRC PUSH BUTTON CONNECTIONS		CONTRACT NO.	
DRAWING NO.	SHT NO.		
A-295	12T		12T





RED = IN YELLOW = OUT

REVISIONS	DATE	BY	REASON
0	1/11/13	SIEMENS	AS-IN-SERVICE



DESIGNED BY	DATE
GK	2/24
DRAWN BY	
GK	2/24
CHECKED BY	
PRJ. ENG.	
RB	2/24

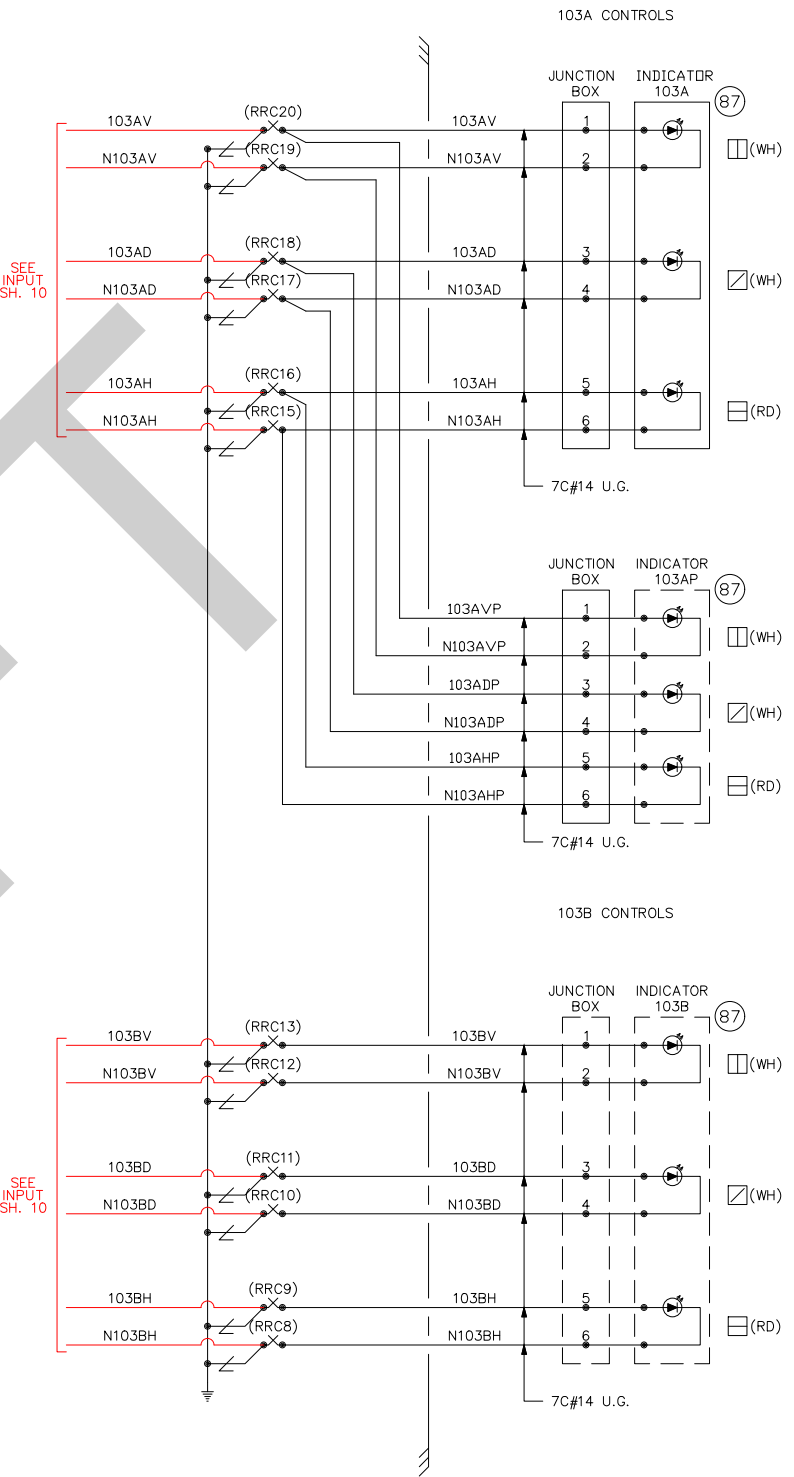
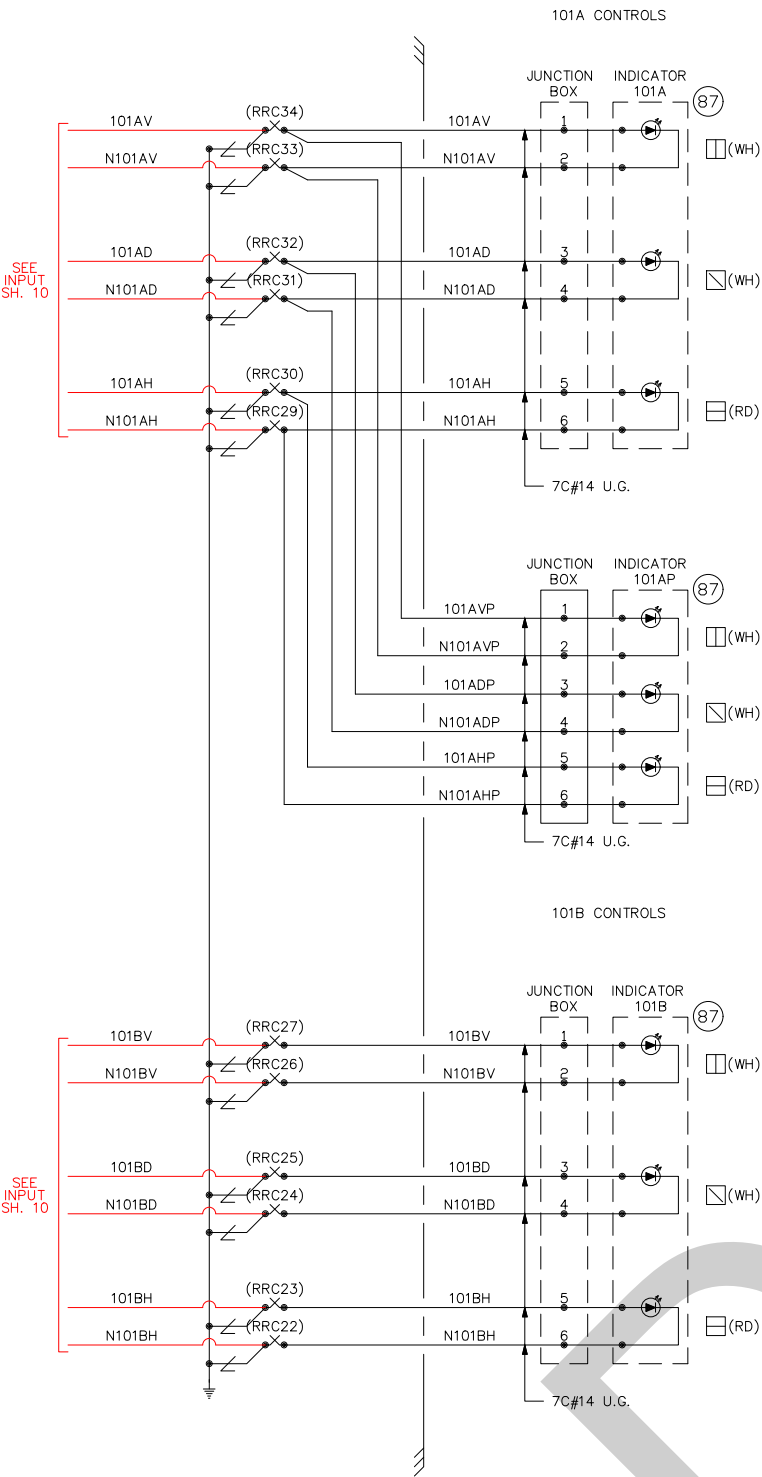


GLOBAL
SIGNALS
GROUP INC

C STREET & BROADWAY WYE CONVERSION

CSRC
SIGNAL LIGHTING CIRCUITS

SCALE	NTS
CONTRACT NO.	
DRAWING NO.	SHT NO.
A-297	13T



NOTE:
ALL WIRING #16 AWG UNLESS
OTHERWISE NOTED.

RED = IN YELLOW = OUT

REVISIONS

1/11/13 SIEMENS
1 BROADWAY & C
STREET UPGRADE
2/12/24 GSG

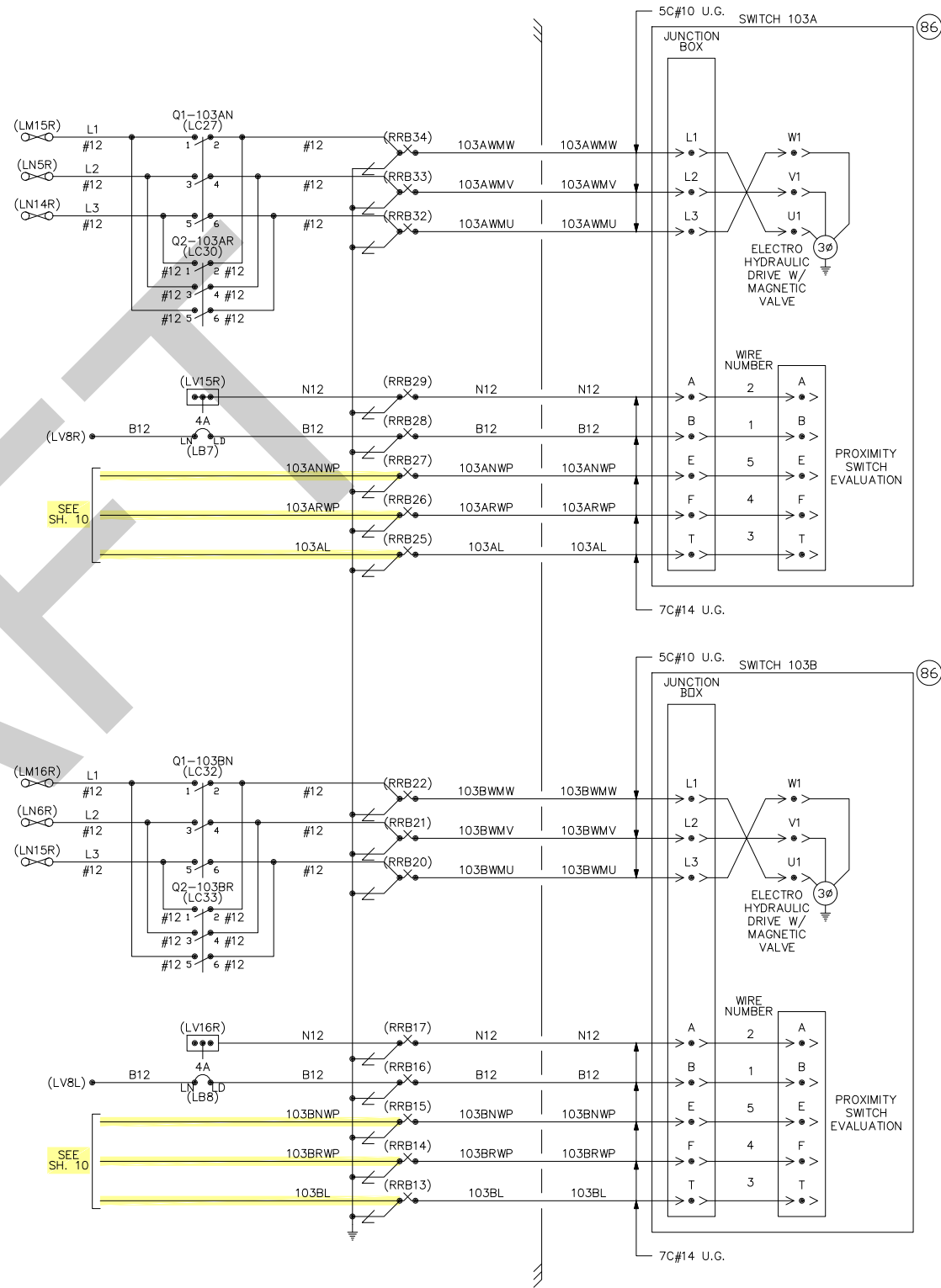
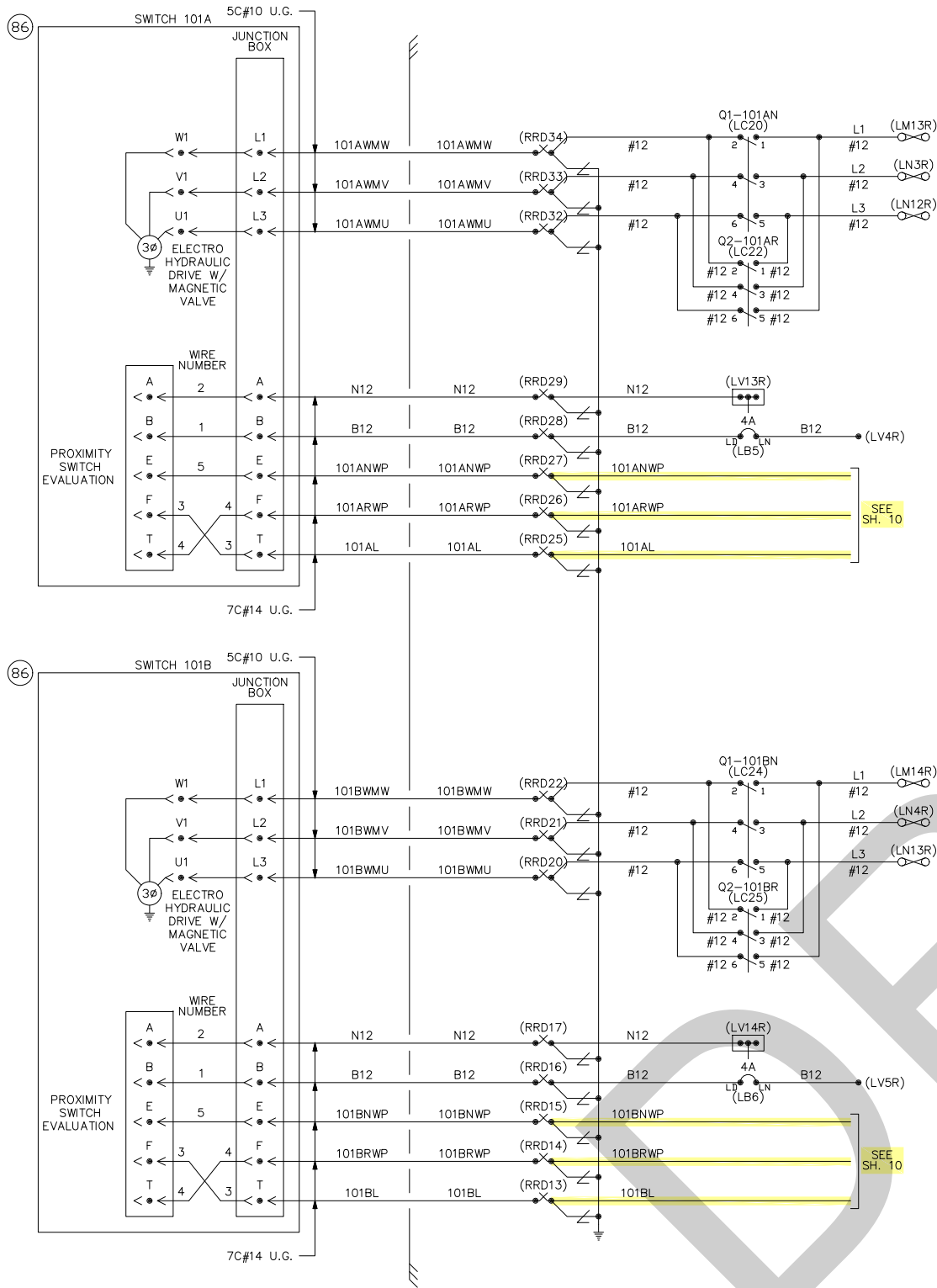


DESIGNED BY
GK 2/24
DRAWN BY
GK 2/24
CHECKED BY
PRJ. ENG.
RB 2/24



C STREET & BROADWAY WYE CONVERSION
CSRC
SIGNAL LIGHTING CIRCUITS

SCALE
NTS
CONTRACT NO.
DRAWING NO.
A-298-13
SHT NO.
13



- NOTES :
- 1. ALL SWITCHES ARE H&K HW(E) 61 (A)VV-ZVV, 208-30.
 - 2. OPEN HEATER CIRCUIT AT CASE WAGO LINKS PER CUSTOMER REQUEST.
 - 3. ALL WIRING #16 AWG UNLESS OTHERWISE NOTED.

RED = IN YELLOW = OUT

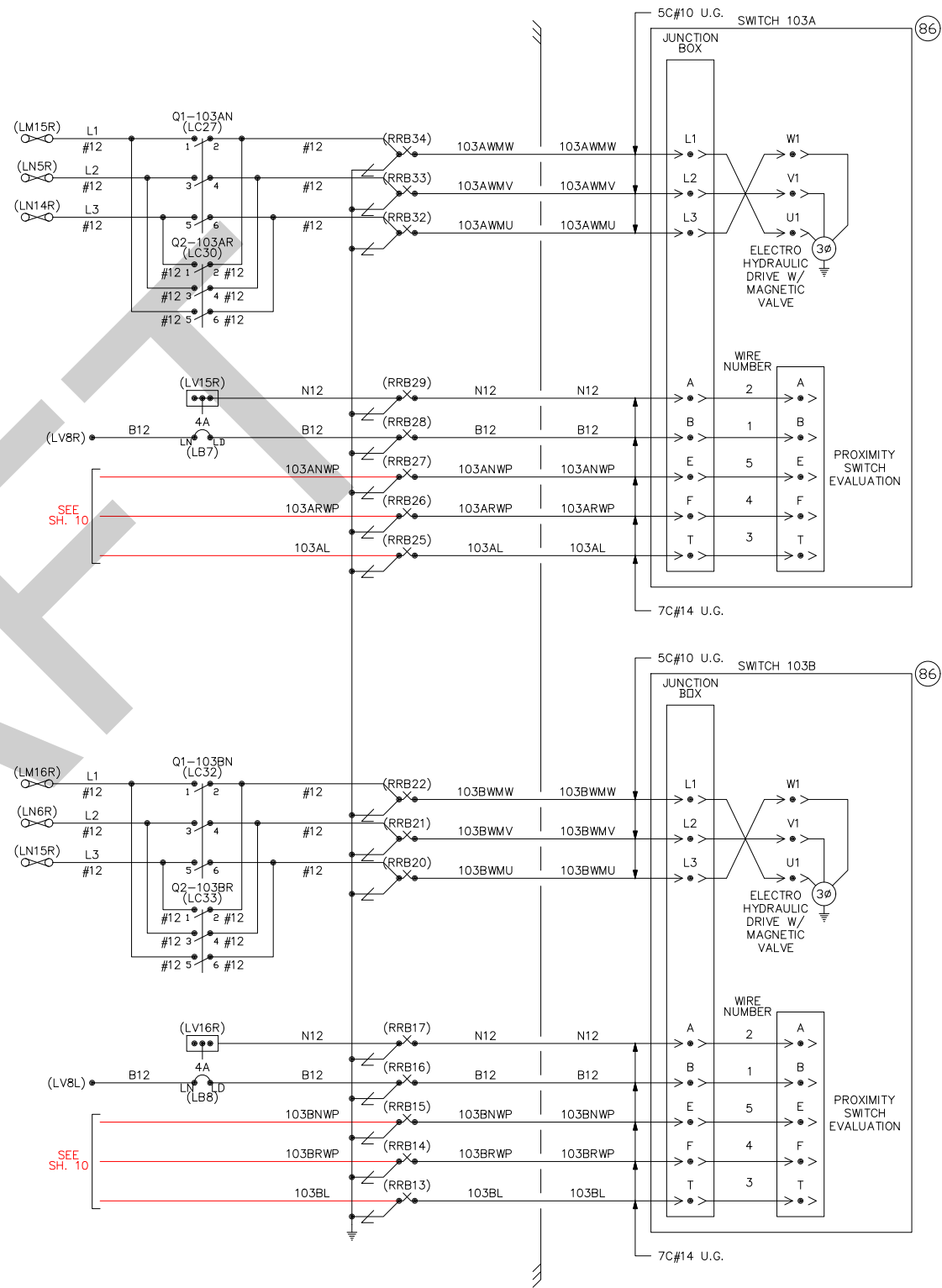
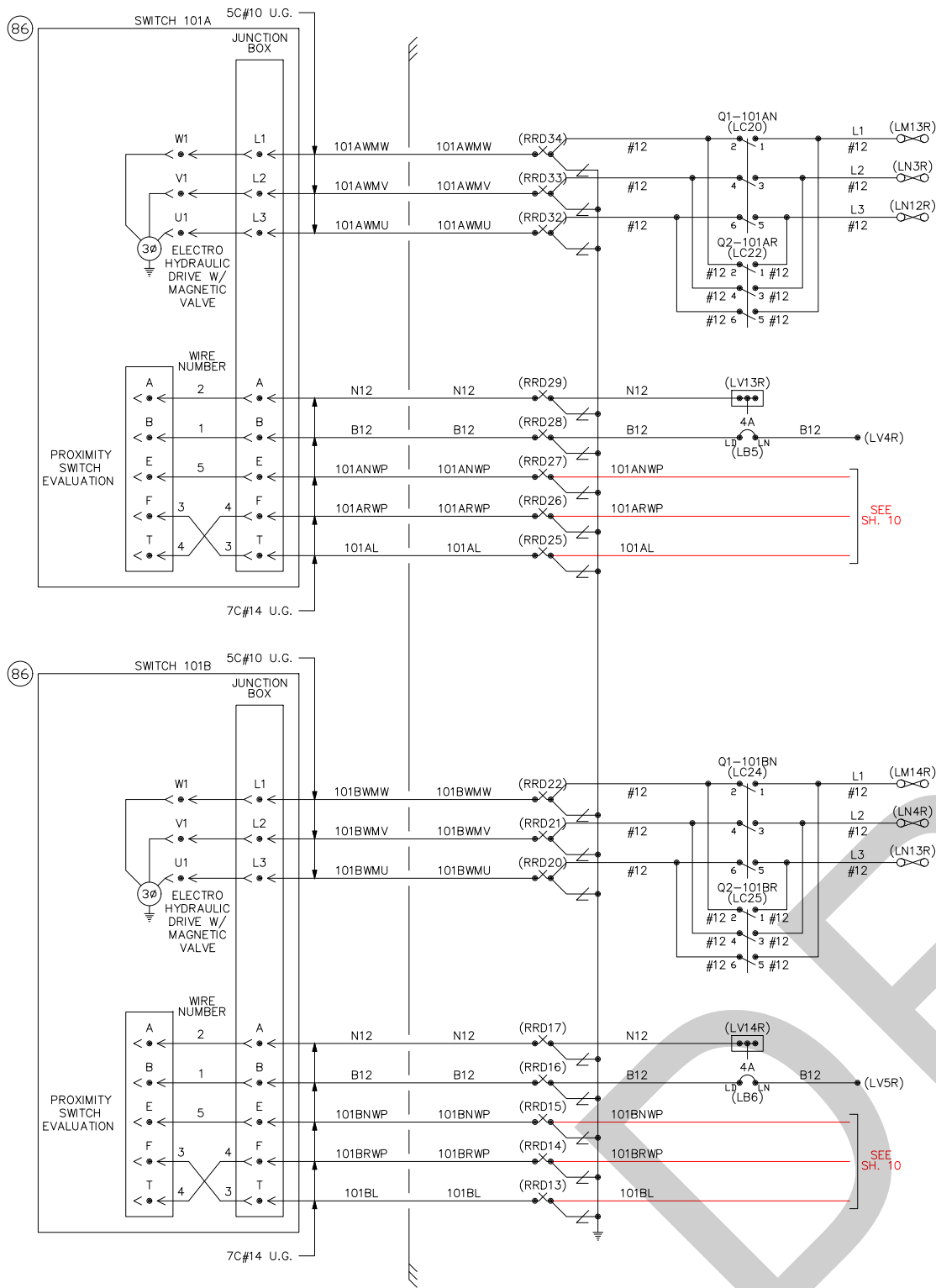
REVISIONS		1/11/13 SIEMENS									
0	AS-IN-SERVICE										



DESIGNED BY	GK	DATE	2/24
DRAWN BY	GK		2/24
CHECKED BY			
PRJ. ENG.	RB		2/24



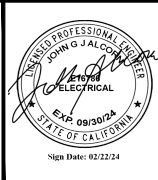
C STREET & BROADWAY WYE CONVERSION		SCALE NTS	
CSRC SWITCH CONTROL CIRCUITS		CONTRACT NO.	
DRAWING NO. A-299	SHT NO. 14T		



- NOTES :
1. ALL SWITCHES ARE H&K HW(E) 61 (A)VV-ZVV, 208-30.
 2. OPEN HEATER CIRCUIT AT CASE WAGO LINKS PER CUSTOMER REQUEST.
 3. ALL WIRING #16 AWG UNLESS OTHERWISE NOTED.

RED = IN YELLOW = OUT

REVISIONS	DATE	DESCRIPTION
0	AS-IN-SERVICE	
1	1/11/13	SIEMENS BROADWAY & C STREET UPGRADE
2	2/12/24	GSG

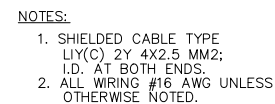
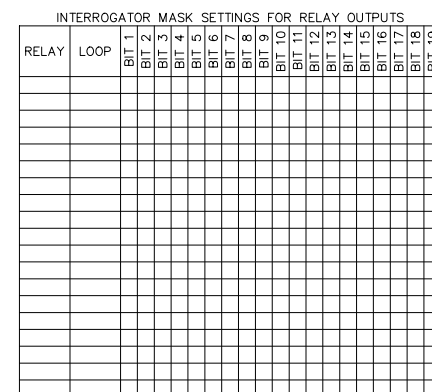


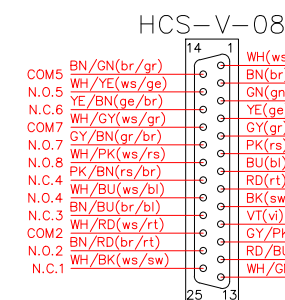
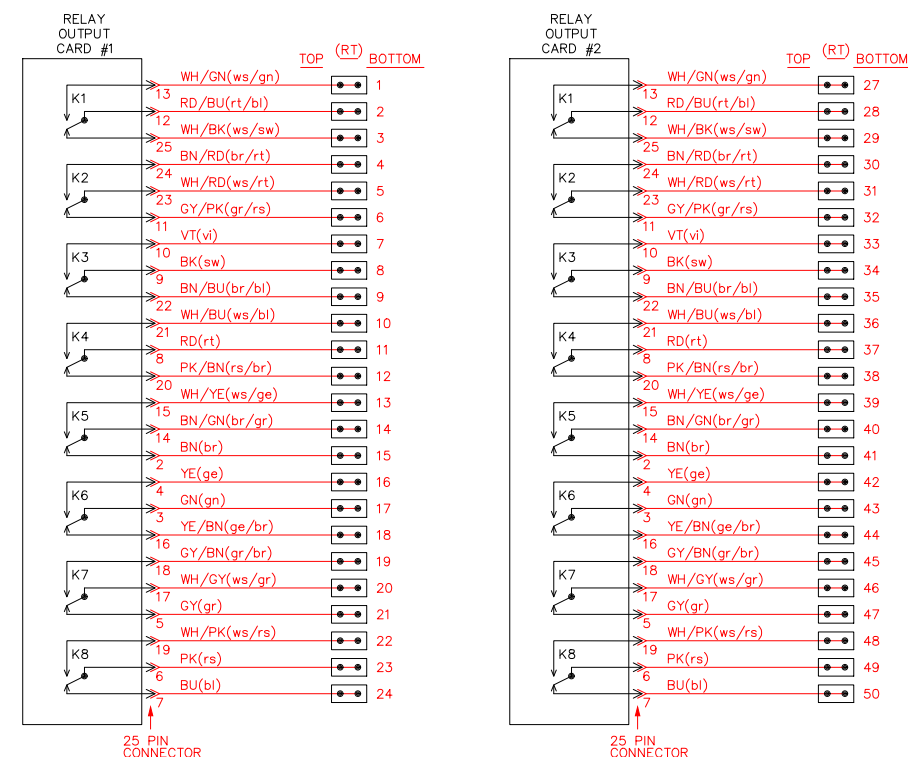
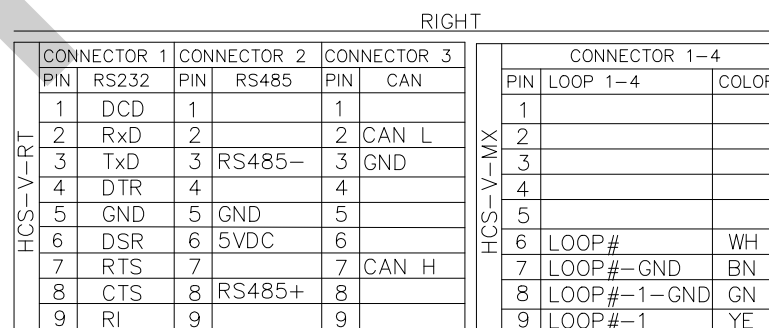
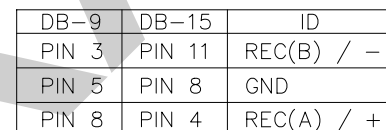
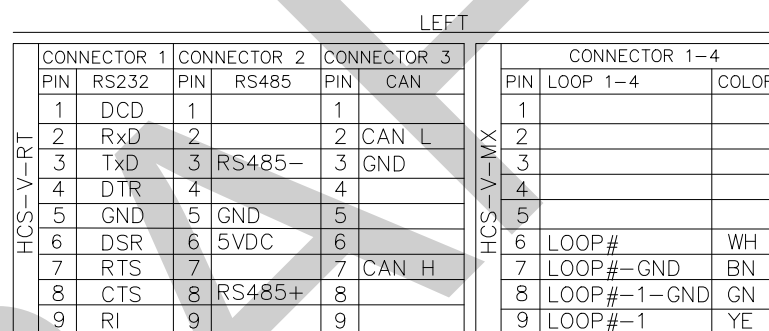
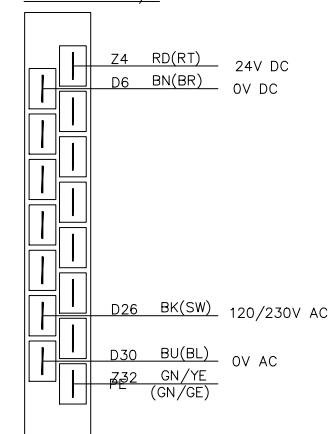
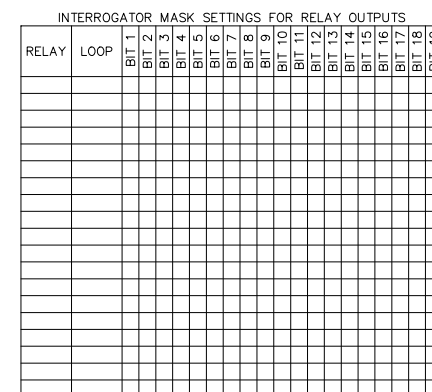
DESIGNED BY	GK	DATE	2/24
DRAWN BY	GK		2/24
CHECKED BY			
PRJ. ENG.	RB		2/24



GLOBAL SIGNALS GROUP INC

C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
CSRC SWITCH CONTROL CIRCUITS		CONTRACT NO.	
DRAWING NO.	A-300-14	SHT NO.	14





RED = IN YELLOW = OUT

1. SHIELDED CABLE TYPE
LIY(C) 2Y 4X2.5 MM2;
I.D. AT BOTH ENDS.
2. ALL WIRING #16 AWG UNLESS
OTHERWISE NOTED.

[illegible]

DESIGNED BY GK	DATE 2/24
DRAWN BY GK	2/24
CHECKED BY	
PRJ. ENG. RR	2/24

GLOBAL
SIGNALS
GROUP INC.

C STREET & BROADWAY WYE CONVERSION

CSRC
TWC SYSTEM

SCALE NTS

CONTRACT NO.	
--------------	--

DRAWING NO. A-362	SHT NO 15
-----------------------------	--------------

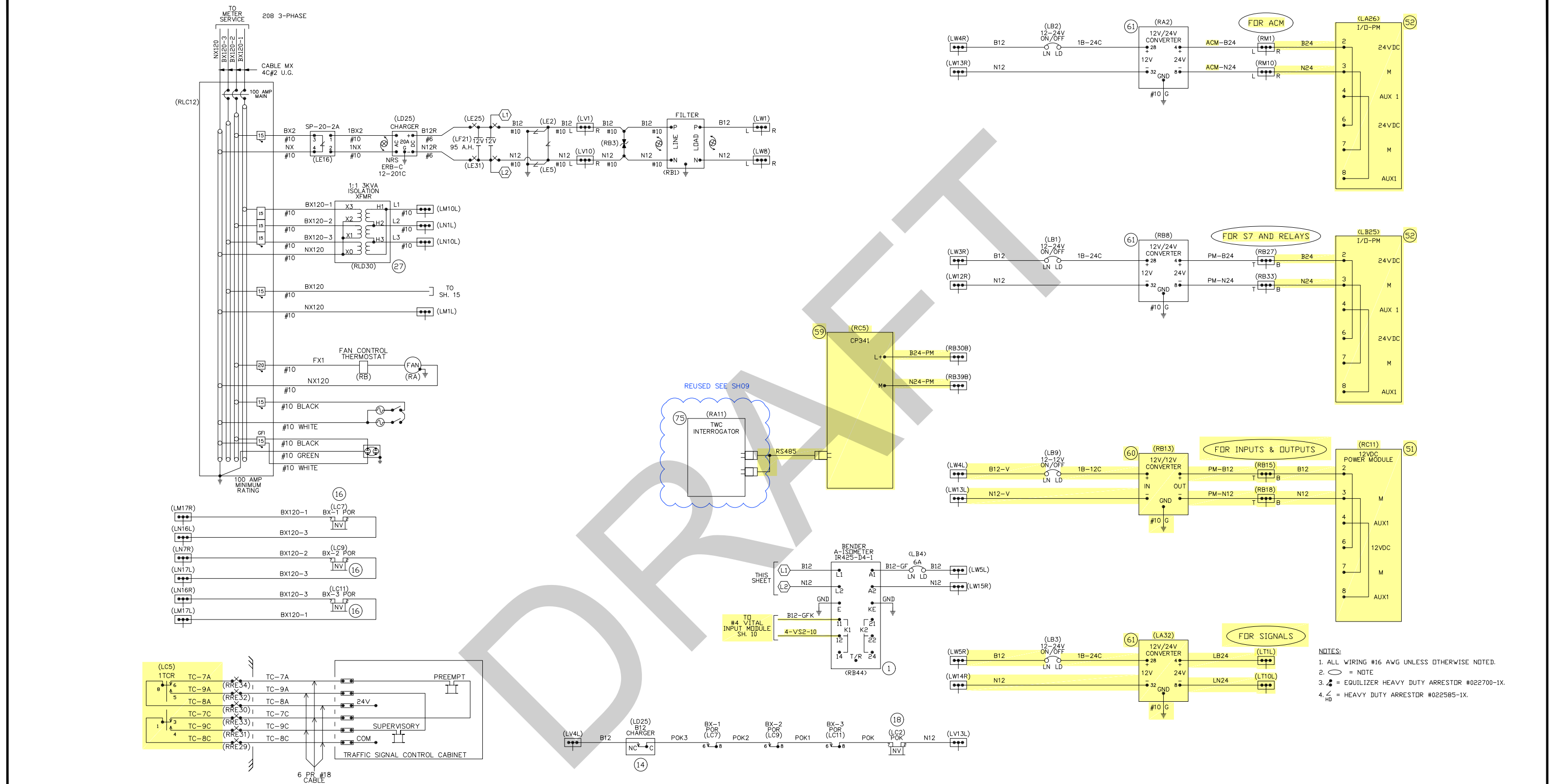


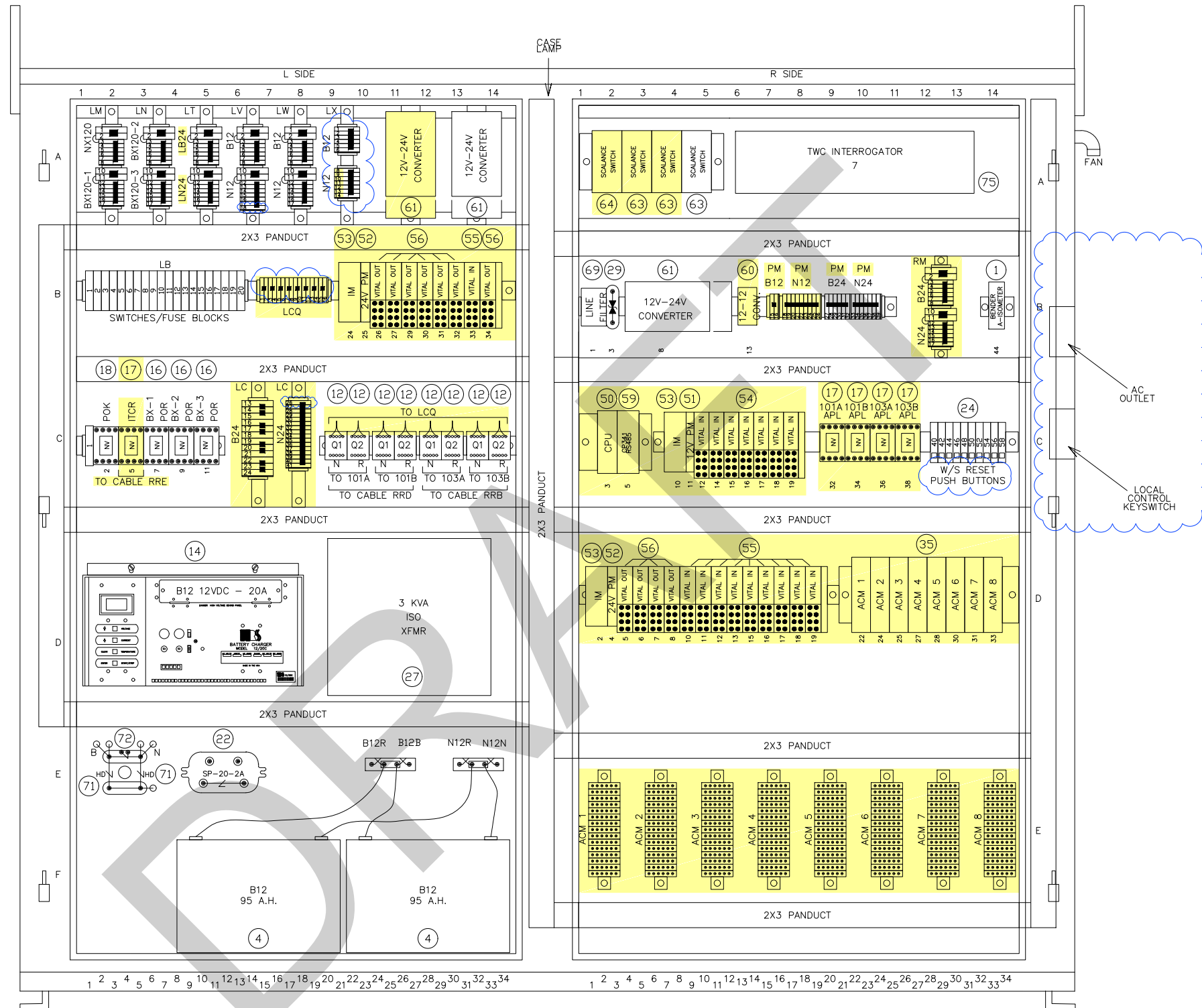
Diagram illustrating the electrical wiring for the vehicle's lighting system, including components like (LCS) 1TCR, TC-7A, TC-9A, (RRE34), (RRE32), PREEMPT, (RB44), (LW5R) B12, (LW14R) N12, (LT1L) LB24, and (LT10L) LN24. The diagram shows connections to a 12V/24V converter, 12V and 24V power sources, and ground (GND).

NOTES:

1. ALL WIRING #16 AWG UNLESS OTHERWISE NOTED.
2. ○ = NOTE
3. ⚡ = EQUALIZER HEAVY DUTY ARRESTOR #022700-1X.
4. ⚡ = HEAVY DUTY ARRESTOR #022585-1X.

RED = IN YELLOW = OUT

[illegible]



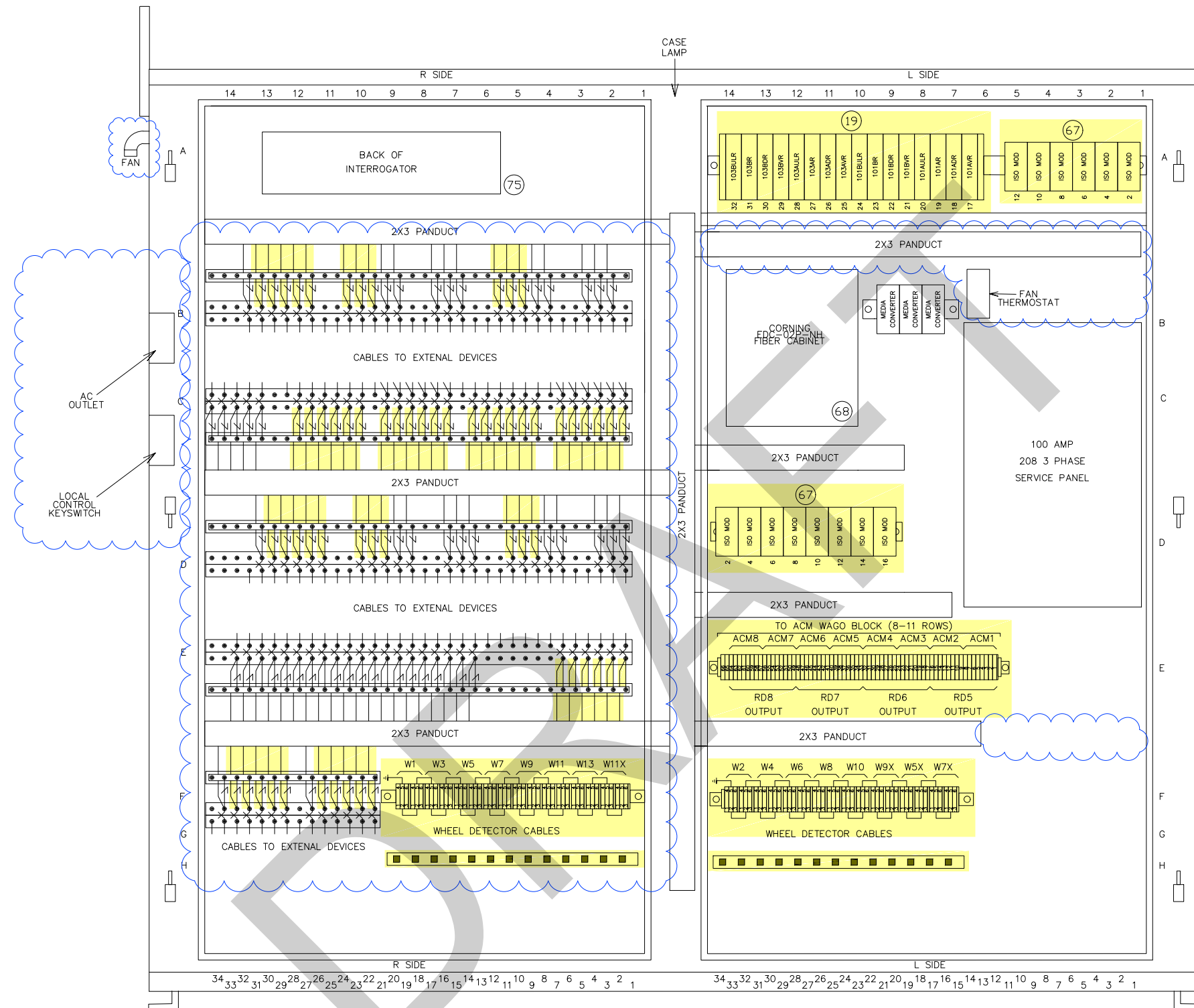
NOTES:

1. SHIELDED CABLE TYPE
LIY(C) 2Y 4X2.5 MM2;
I.D. AT BOTH ENDS.
2. WAGO PLUGGABLE BREAKER.

 CORRECTION TO
EXISTING DETAILS

RED = IN YELLOW = OUT

[illegible]



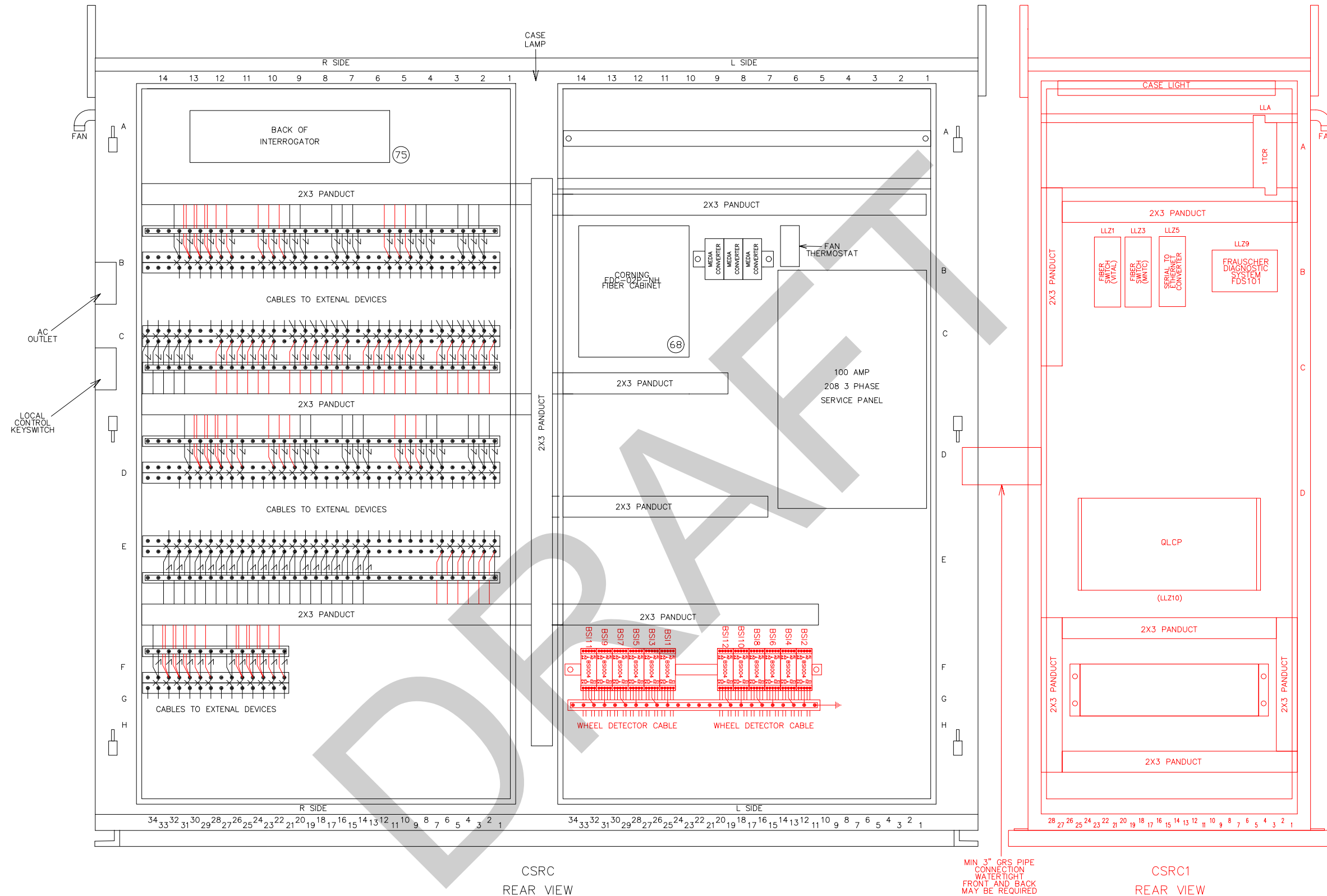
NOTES:

1. SHIELDED CABLE TYPE LIY(C) 2Y 4X2.5 MM2; I.D. AT BOTH ENDS.
2. WAGO PLUGGABLE BREAKER.

 CORRECTION TO
EXISTING DETAILS

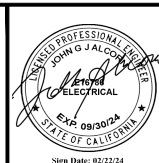
RED = IN YELLOW = OUT

[illegible]



NOTES:

1. SHIELDED CABLE TYPE
LIY(C) 2Y 4X2.5 MM2;
I.D. AT BOTH ENDS.
2. CONTRACTOR TO ENSURE ALL CSRC1
EQUIPMENT BE MOUNTED FREE FROM
INTERFERENCE FROM CASE DOOR

[illegible]

DESIGNED BY GK	DATE 2/24
DRAWN BY GK	2/24
CHECKED BY	
PRJ. ENG. RR	2/24



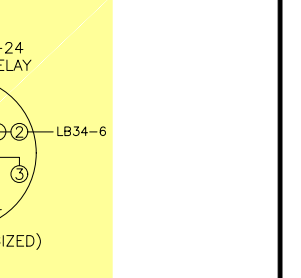
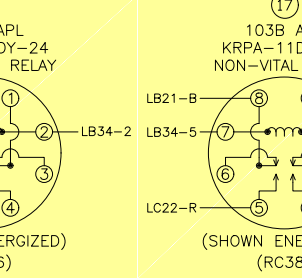
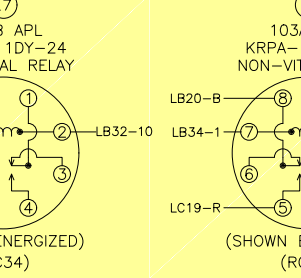
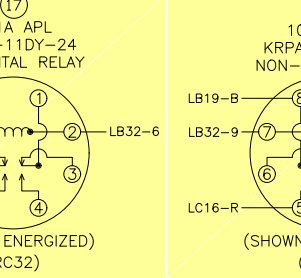
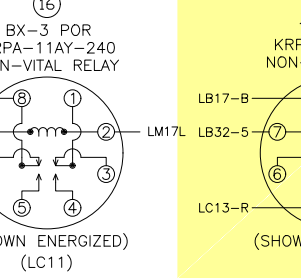
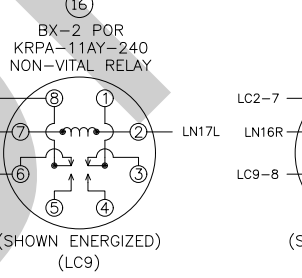
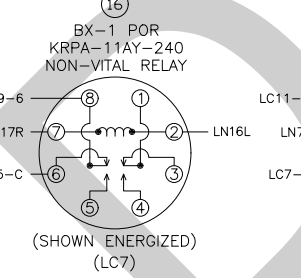
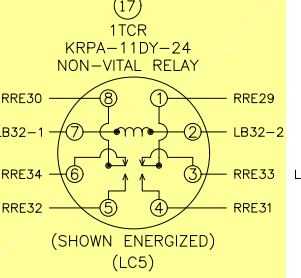
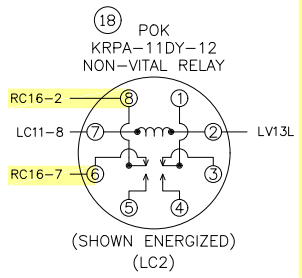
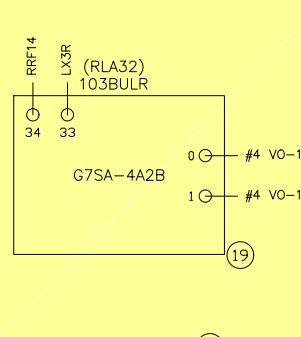
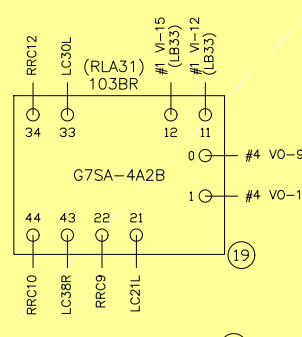
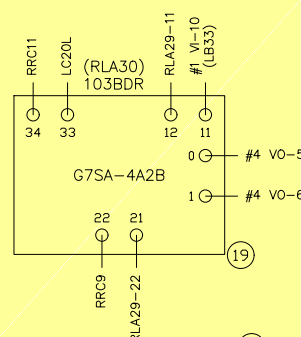
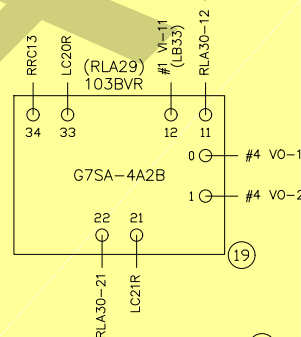
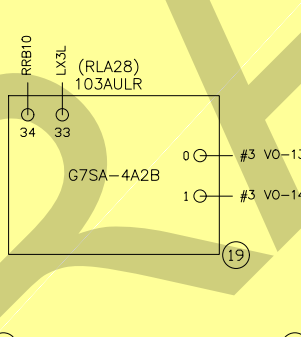
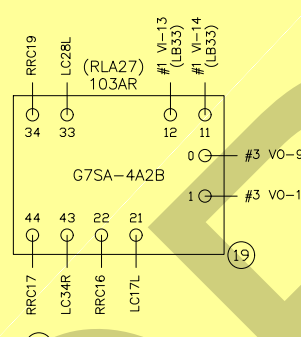
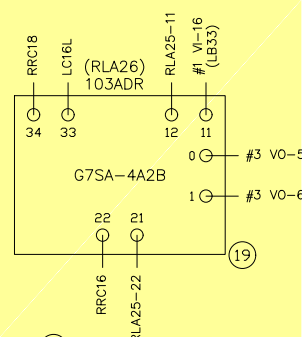
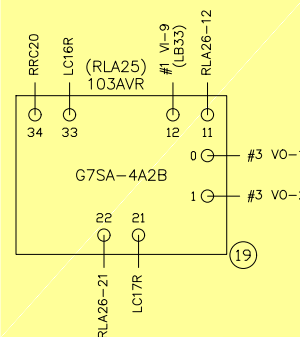
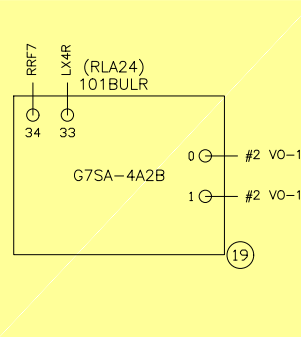
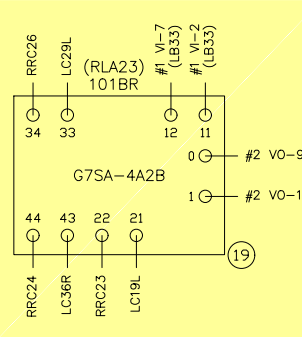
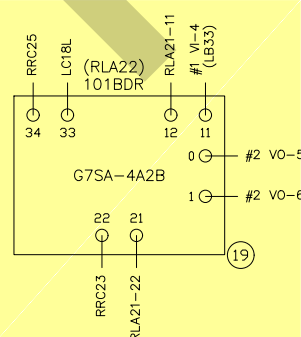
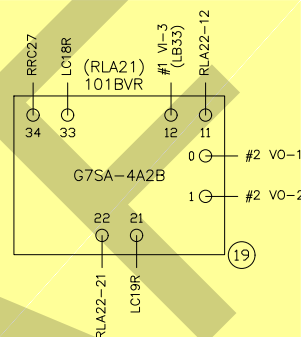
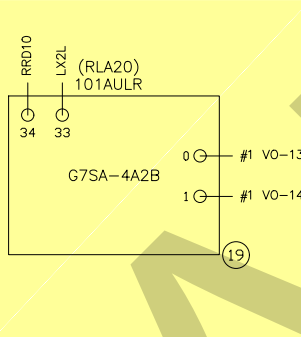
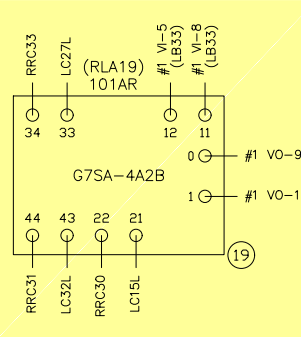
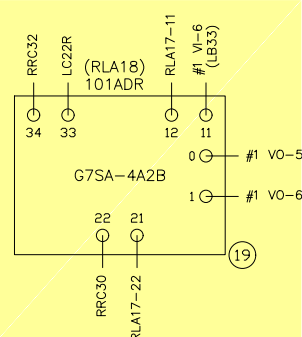
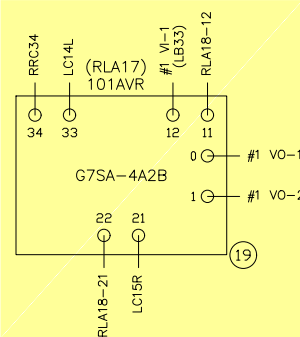
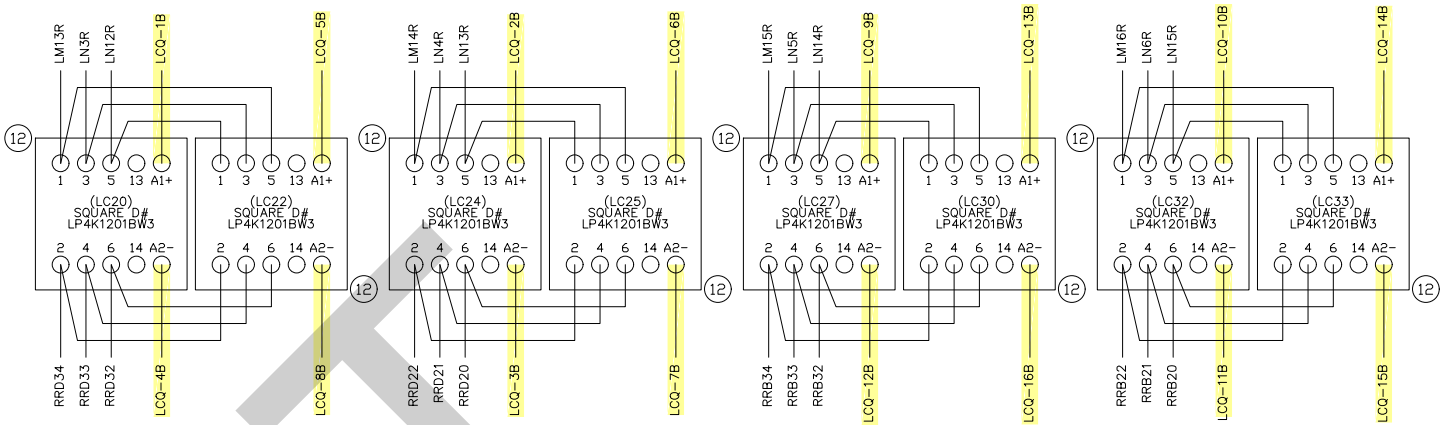
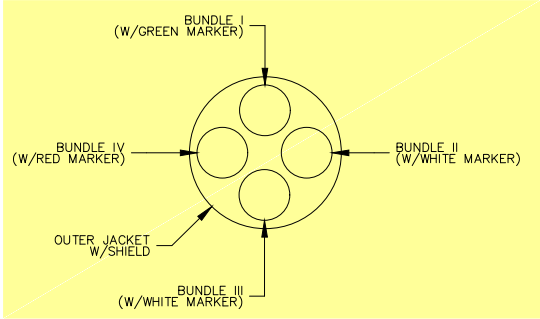
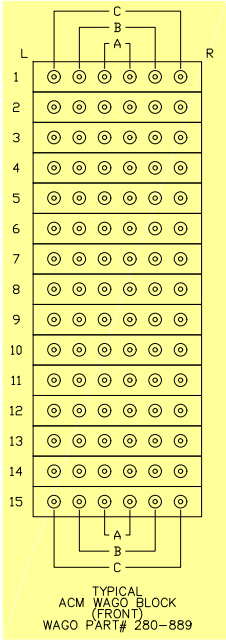
GLOBAL
SIGNALS
GROUP INC

C STREET & BROADWAY WYE CONVERSION

CSRC
CASE LAYOUT (REAR)

SCALE NTS	
CONTRACT NO.	
DRAWING NO. A-308-18	SHT NO. 18

RED = IN YELLOW = OUT



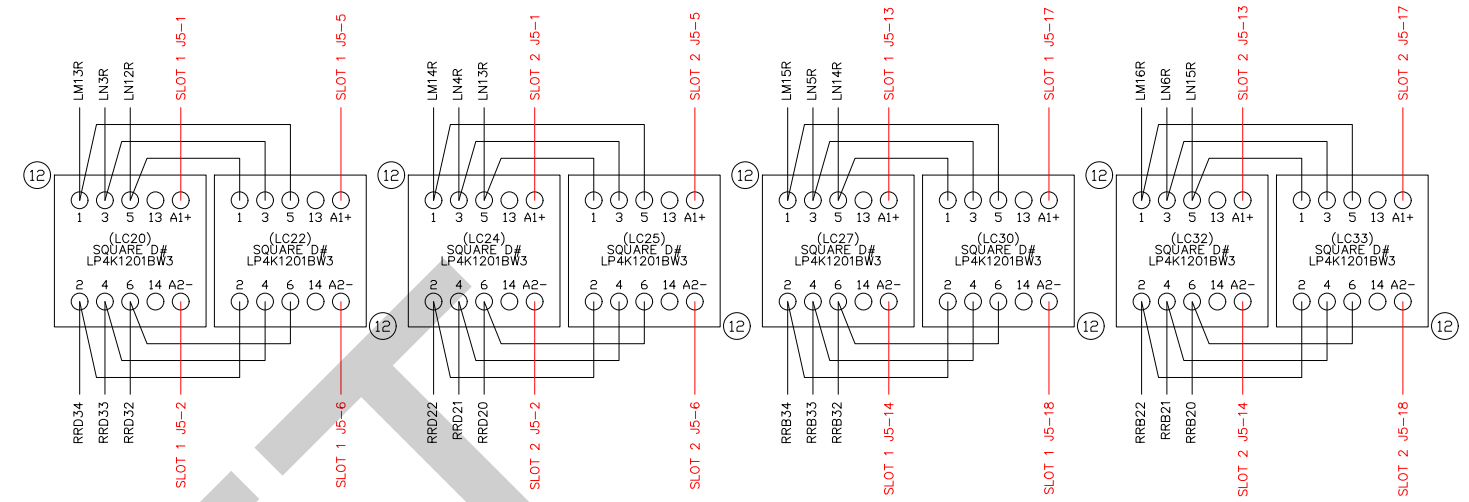
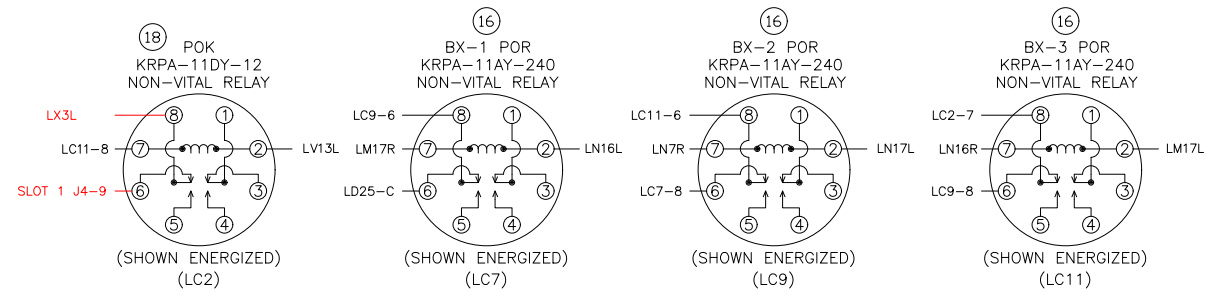
REVISIONS	DATE	BY	DESCRIPTION
0	1/11/13	SIEMENS	AS-IN-SERVICE



DESIGNED BY	DATE
GK	2/24
DRAWN BY	DATE
GK	2/24
CHECKED BY	
PRJ. ENG.	
RB	2/24



C STREET & BROADWAY WYE CONVERSION		SCALE NTS	
CSRC RELAY DETAIL		CONTRACT NO.	
DRAWING NO. A-309	SHT NO. 19T	DRAWING NO.	SHT NO.



CSRC1

LLA1

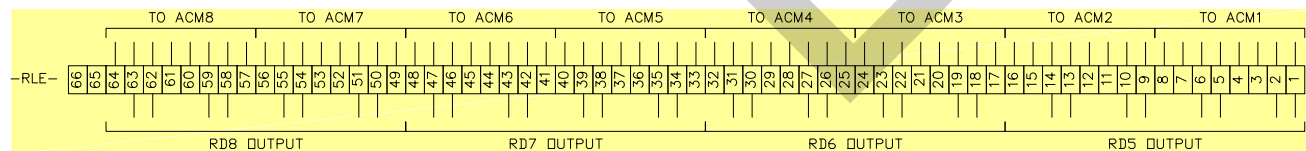
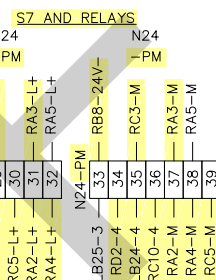
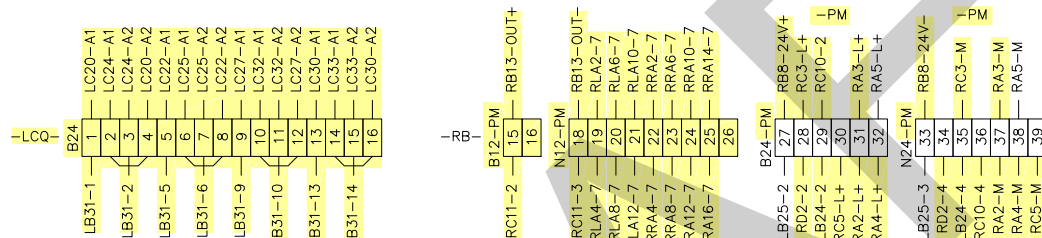
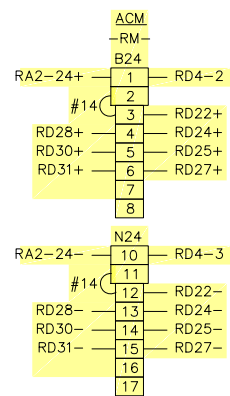
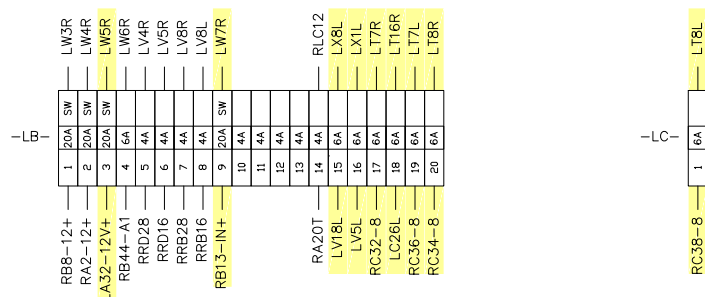
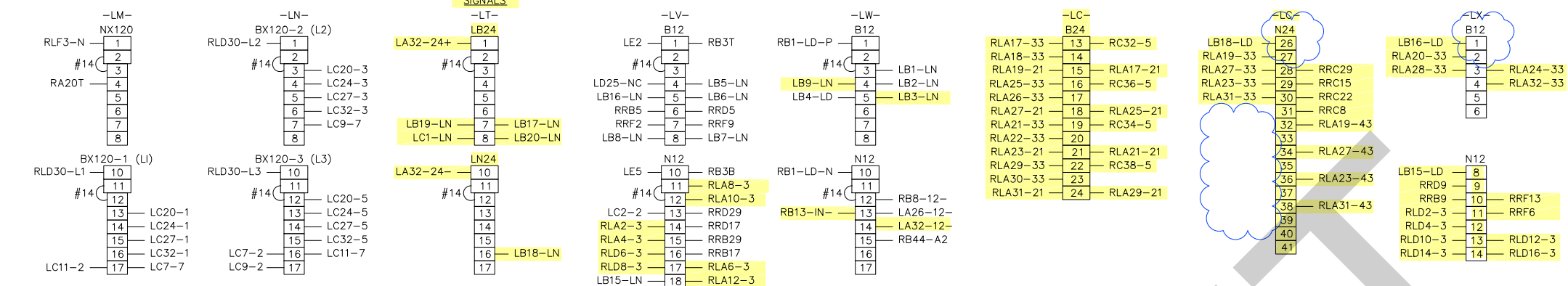
400500
A62-125


1TCR

▼	▽	▼	6
—	—	—	5
▲	△	▲	4
▽	▽	▽	3
—	—	—	2
△	△	△	1
3	2	1	

RED = IN YELLOW = OUT

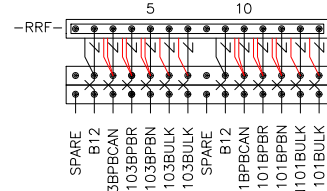
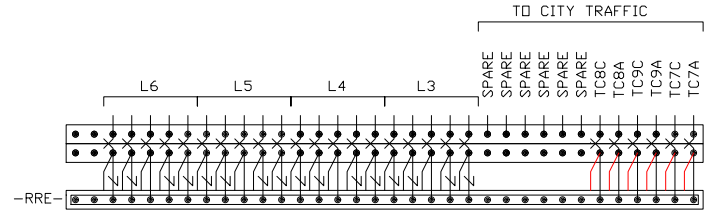
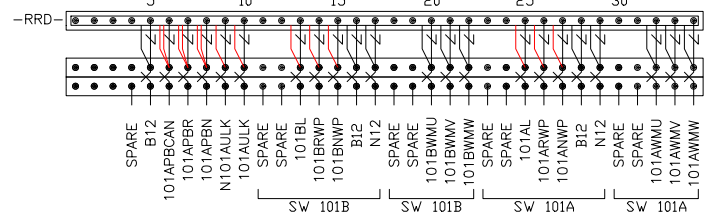
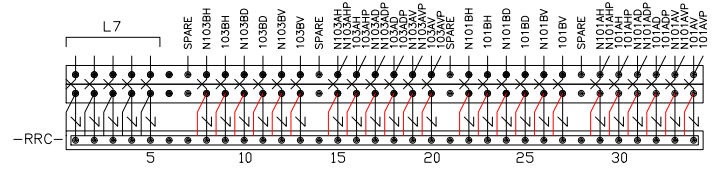
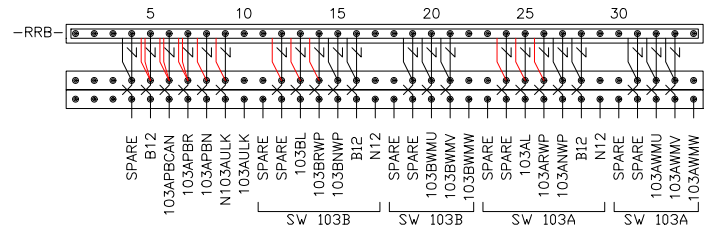
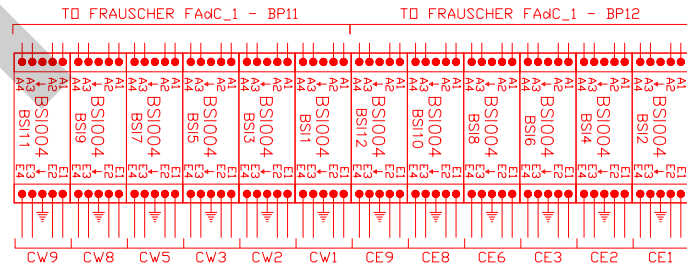
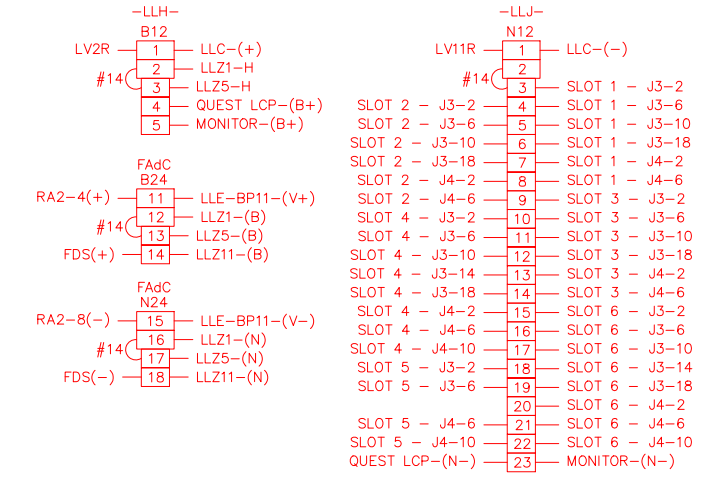
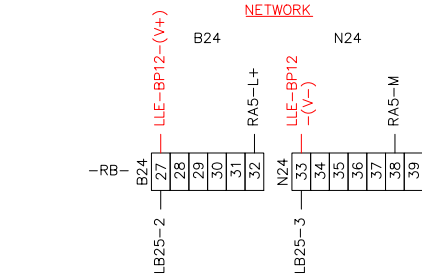
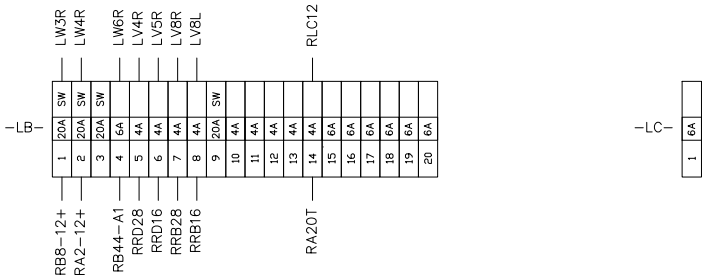
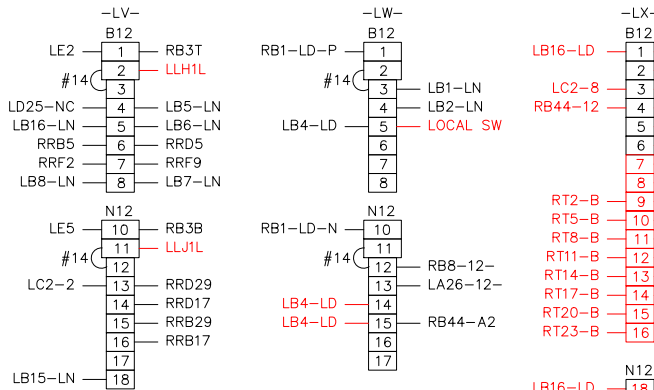
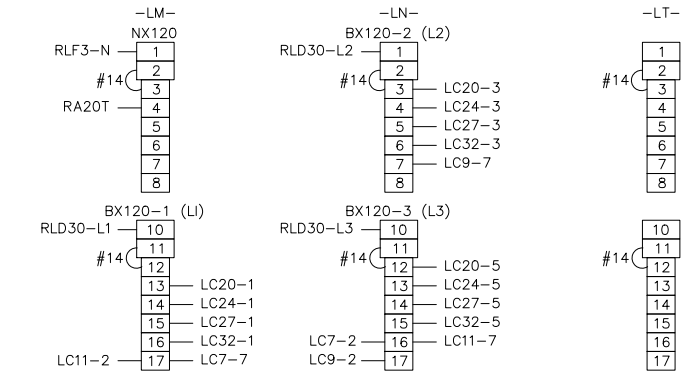
[illegible]



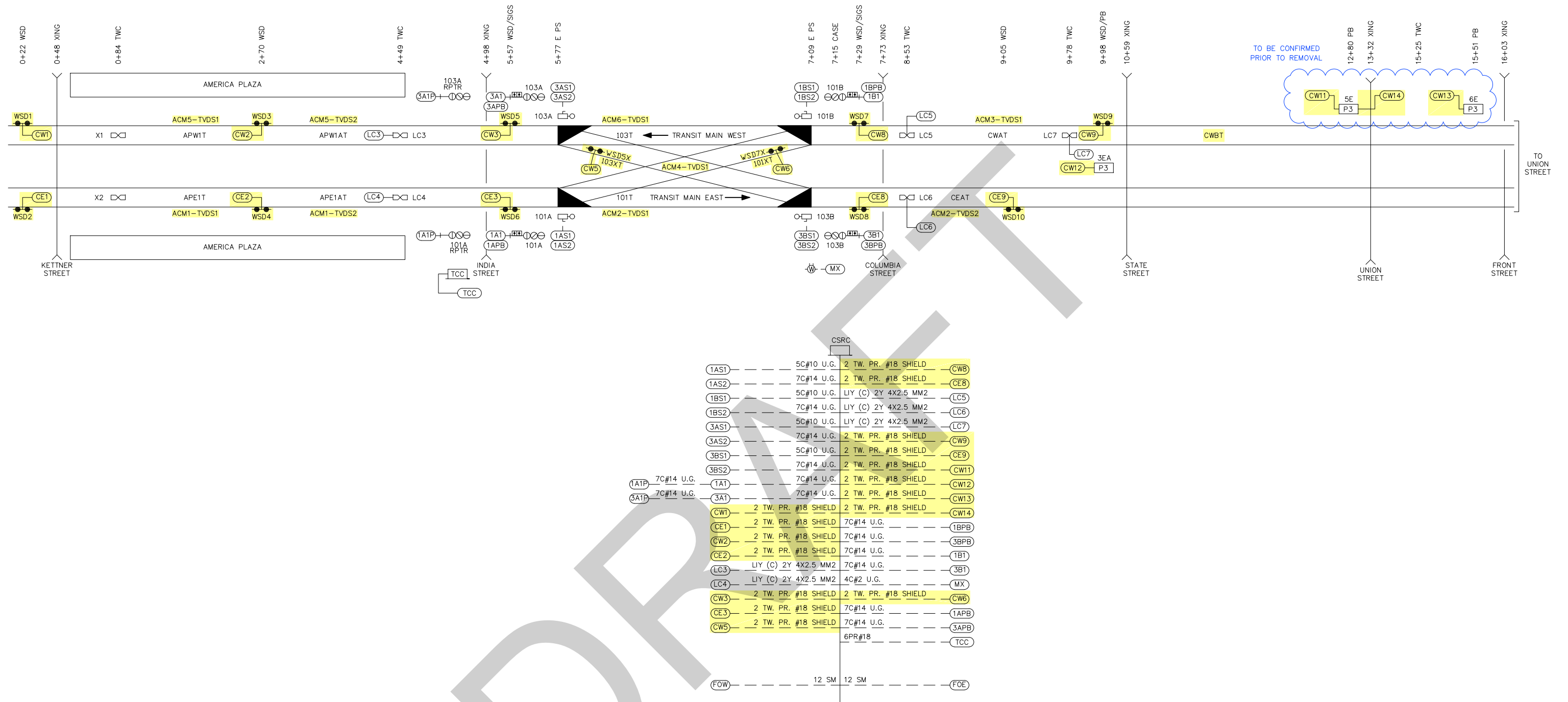
 — CORRECTION TO
— EXISTING DETAILS

RED = IN YELLOW = OUT

[illegible]

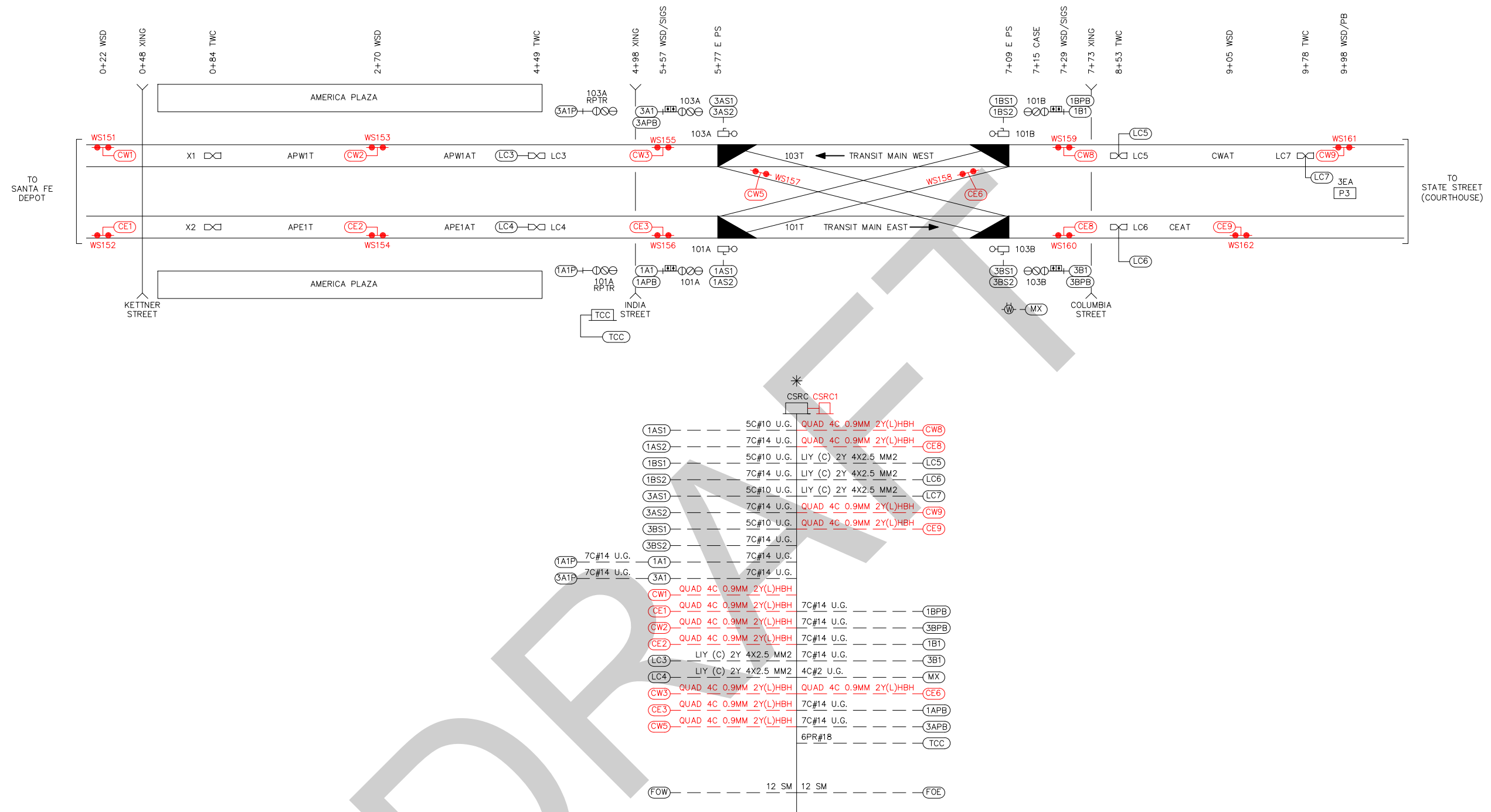


RED = IN YELLOW = OUT




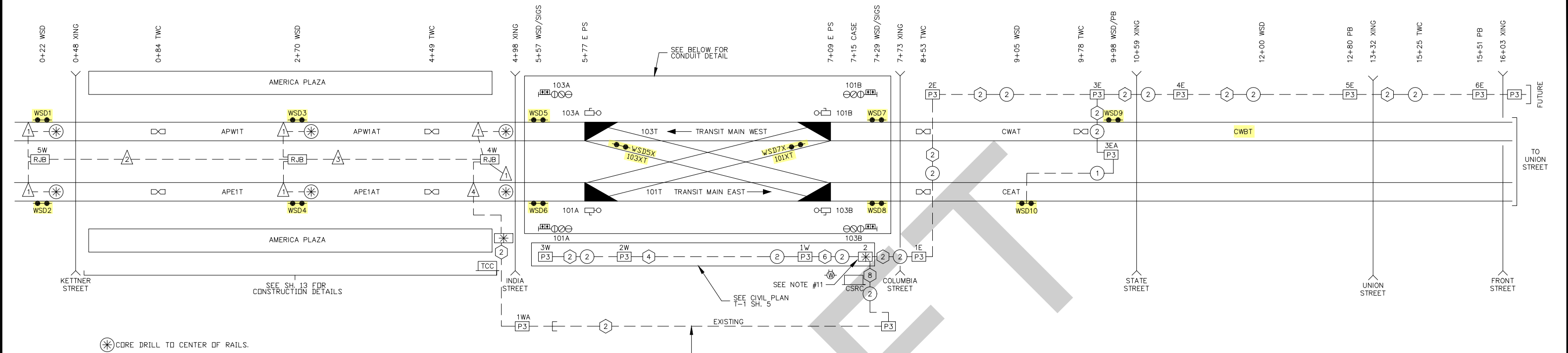
RED = IN YELLOW = OUT

[illegible]



RED = IN YELLOW = OUT

REVISIONS		1/11/13 SIEMENS		DESIGNED BY		DATE		<div></div>		C STREET & BROADWAY WYE CONVERSION		SCALE	
0	AS-IN-SERVICE			GK	2/24					NTS			
1	COURTHOUSE AS-INSTALLED			GK	2/24					CONTRACT NO.			
2	BROADWAY & C STREET UPGRADE			CHECKED BY						DRAWING NO.		SHT NO.	
	4/22/18 PRE			PRJ. ENG.	2/24					A-314		21	
	2/12/24 GSG			RB								21	



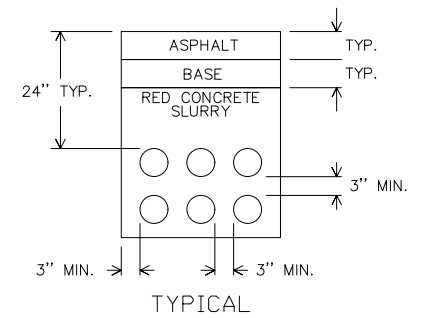
⊗ CORE DRILL TO CENTER OF RAILS.

EXISTING 4" CONDUITS UNKNOWN ENDING
NEAR INDIA STREET EAST CURB.
CONTRACTOR TO MANDREL CONDUITS
AND EXTEND ACROSS INDIA STREET TO
CORE DRILL LOCATION.

NOTES:

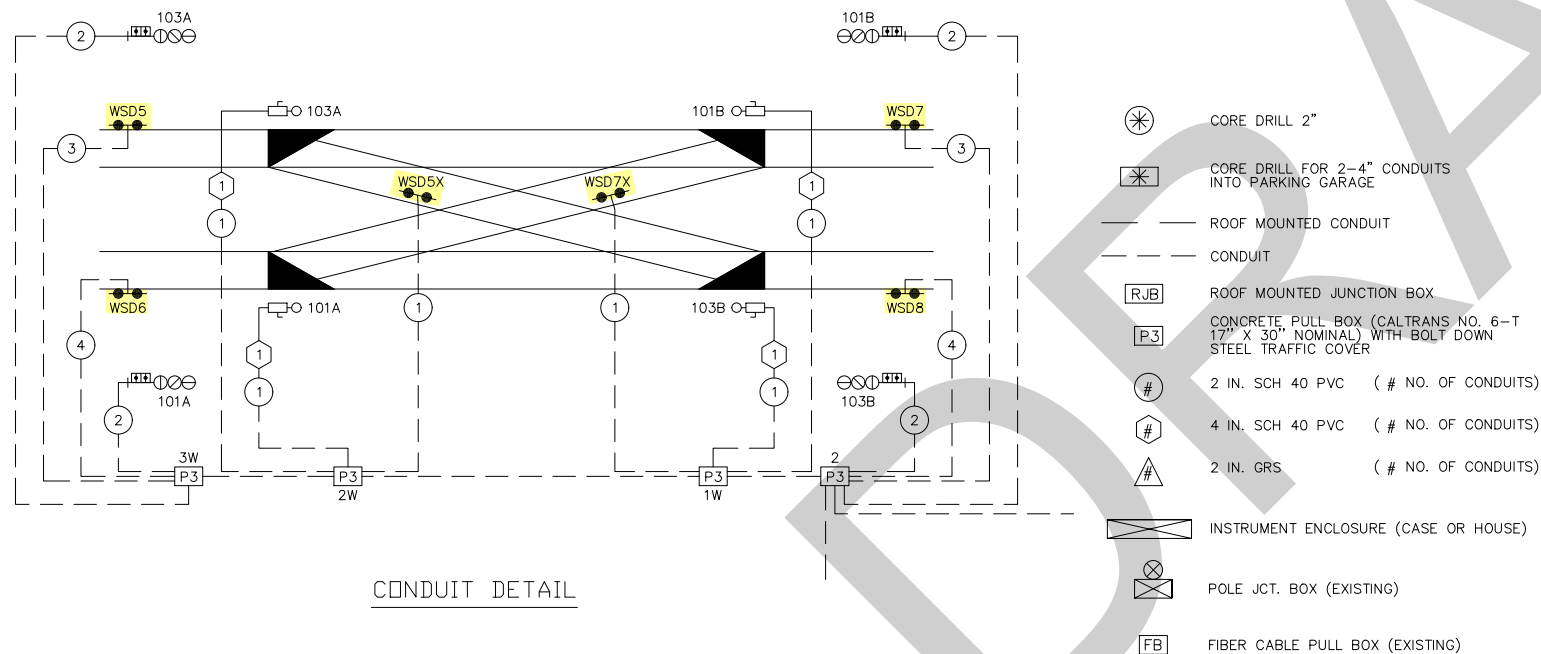
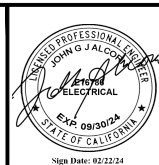
1. THE TYPICAL CONDUIT LAYOUT CONFIGURATIONS SHOWN HEREIN SHALL BE USED AS A GUIDE BY THE CONTRACTOR IN THE DEVELOPMENT OF THE FINAL CONDUIT LAYOUT ARRANGEMENTS.
2. CONDUIT INSTALLATION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
3. CONDUITS PASSING UNDER ROADWAYS SHALL BE ENCASED IN RED COLORED CONCRETE.
4. ALL CABLES AND WIRES FROM THE INSTRUMENT ENCLOSURE TO EACH APPARATUS SHALL BE HOUSED IN CONDUIT. MINIMUM 2" TO ANY TRACKSIDE DEVICE.
5. CONTRACTOR SHALL FURNISH AND INSTALL CONCRETE PULL BOXES OF SUFFICIENT SIZE TO ENSURE THE BEND RADIUS OF CABLE AND WIRE IS NOT COMPROMISED.
6. CONDUITS SHALL BE A MINIMUM DEPTH OF 30 INCHES BELOW FINAL GRADE UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
7. LONG CONDUIT SWEEPS SHALL BE INSTALLED WHEN A CHANGE IN DIRECTION OCCURS. PULL BOXES SHALL BE INSTALLED AT MAJOR TRANSITION POINTS.
8. SPARE CONDUIT ENDS SHALL BE CAPPED TO PREVENT ACCESS BY RODENTS OR DEBRIS. CONDUITS IN PULL BOXES AND ENCLOSURES CONTAINING CABLE AND WIRE SHALL BE SEALED WITH AN APPROVED SEALANT.
9. PULL BOX DIMENSIONS SHOWN ARE MINIMUM ACCEPTABLE SIZE. CONTRACTOR SHALL FURNISH LARGER PULL BOXES BASED ON MINIMUM CABLE BEND RADIUS AND CONDUIT ENTRANCE REQUIREMENTS. MINIMUM DISTANCE MEASURED FROM THE TOP TO THE BOX TO THE BOTTOM EDGE SHALL BE AS FOLLOWS:

P3 = 36 INCHES
10. UNDERGROUND GARAGE CONDUIT IS GRS 2" MINIMUM.
11. 3 X 3 X 4 SPLIT LID
12. WSD RAIL BOXES SHALL BE MEASURED TO FIT WACH WSD.



TYPICAL

CONDUIT DETAIL

[illegible]

DESIGNED BY GK	DATE 2/24
DRAWN BY GK	2/24
CHECKED BY	
PRJ. ENG. RB	2/24



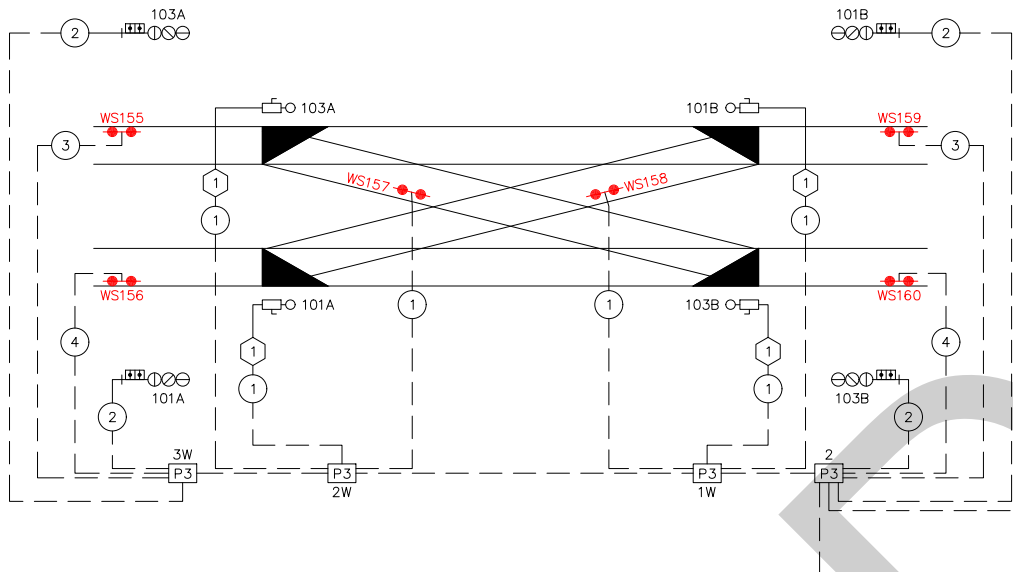
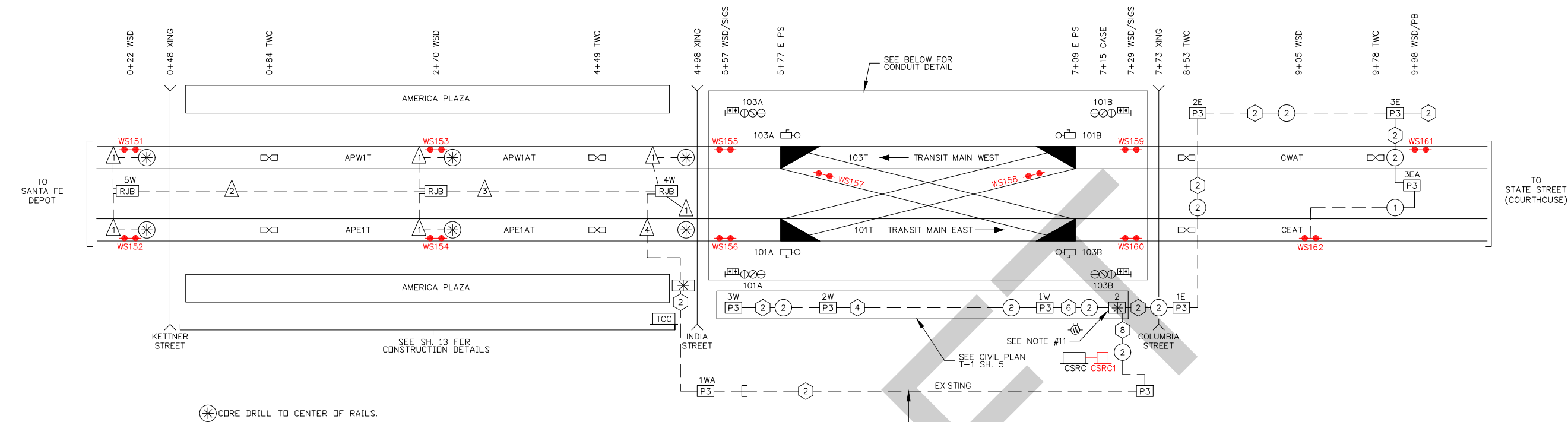
GLOBAL
SIGNALS
GROUP INC

C STREET & BROADWAY WYE CONVERSION

CSRC
CONDUIT LAYOUT

SCALE	
NTS	
CONTRACT NO.	
DRAWING NO.	SHT NO.
A-315 CPC-22T	22T

RED = IN YELLOW = OUT

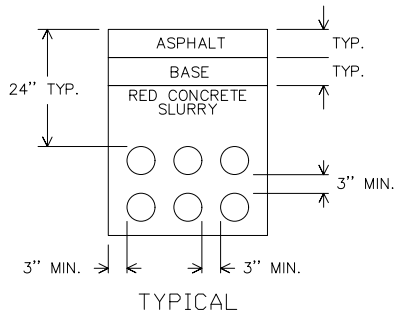


CONDUIT DETAIL

EXISTING 4" CONDUITS UNKNOWN ENDING NEAR INDIA STREET EAST CURB. CONTRACTOR TO MANDREL CONDUITS AND EXTEND ACROSS INDIA STREET TO CORE DRILL LOCATION.

NOTES:

1. THE TYPICAL CONDUIT LAYOUT CONFIGURATIONS SHOWN HEREIN SHALL BE USED AS A GUIDE BY THE CONTRACTOR IN THE DEVELOPMENT OF THE FINAL CONDUIT LAYOUT ARRANGEMENTS.
2. CONDUIT INSTALLATION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
3. CONDUITS PASSING UNDER ROADWAYS SHALL BE ENCASED IN RED COLORED CONCRETE.
4. ALL CABLES AND WIRES FROM THE INSTRUMENT ENCLOSURE TO EACH APPARATUS SHALL BE HOUSED IN CONDUIT. MINIMUM 2" TO ANY TRACKSIDE DEVICE.
5. CONTRACTOR SHALL FURNISH AND INSTALL CONCRETE PULL BOXES OF SUFFICIENT SIZE TO ENSURE THE BEND RADIUS OF CABLE AND WIRE IS NOT COMPROMISED.
6. CONDUITS SHALL BE A MINIMUM DEPTH OF 30 INCHES BELOW FINAL GRADE UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
7. LONG CONDUIT SWEEPS SHALL BE INSTALLED WHEN A CHANGE IN DIRECTION OCCURS. PULL BOXES SHALL BE INSTALLED AT MAJOR TRANSITION POINTS.
8. SPARE CONDUIT ENDS SHALL BE CAPPED TO PREVENT ACCESS BY RODENTS OR DEBRIS. CONDUITS IN PULL BOXES AND ENCLOSURES CONTAINING CABLE AND WIRE SHALL BE SEALED WITH AN APPROVED SEALANT.
9. PULL BOX DIMENSIONS SHOWN ARE MINIMUM ACCEPTABLE SIZE. CONTRACTOR SHALL FURNISH LARGER PULL BOXES BASED ON MINIMUM CABLE BEND RADIUS AND CONDUIT ENTRANCE REQUIREMENTS. MINIMUM DISTANCE MEASURED FROM THE TOP TO THE BOX TO THE BOTTOM EDGE SHALL BE AS FOLLOWS:
P3 = 36 INCHES
10. UNDERGROUND GARAGE CONDUIT IS GRS 2" MINIMUM.
11. 3 X 3 X 4 SPLIT LID
12. WSD RAIL BOXES SHALL BE MEASURED TO FIT WACH WSD.



RED = IN YELLOW = OUT

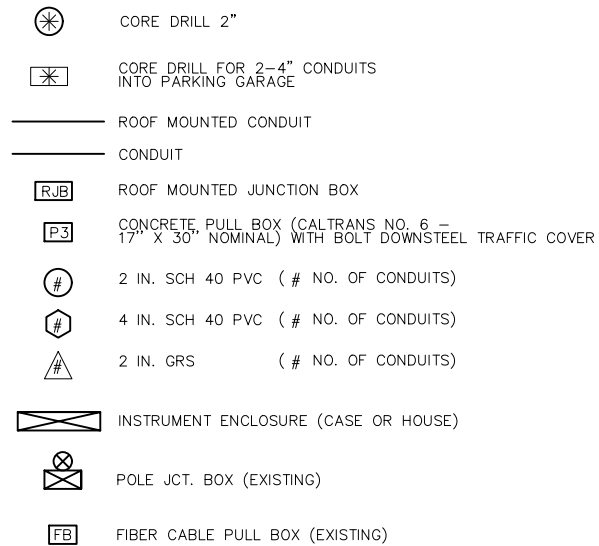
REVISIONS	DATE	DESCRIPTION
0	AS-IN-SERVICE	
1	1/11/13 SIEMENS	
1	COURTHOUSE	
1	AS-INSTALLED	
4	22/18 PRE	
2	BROADWAY & C STREET UPGRADE	
2	2/12/24 GSG	



DESIGNED BY	DATE
GK	2/24
DRAWN BY	
GK	2/24
CHECKED BY	
PRJ. ENG.	
RB	2/24

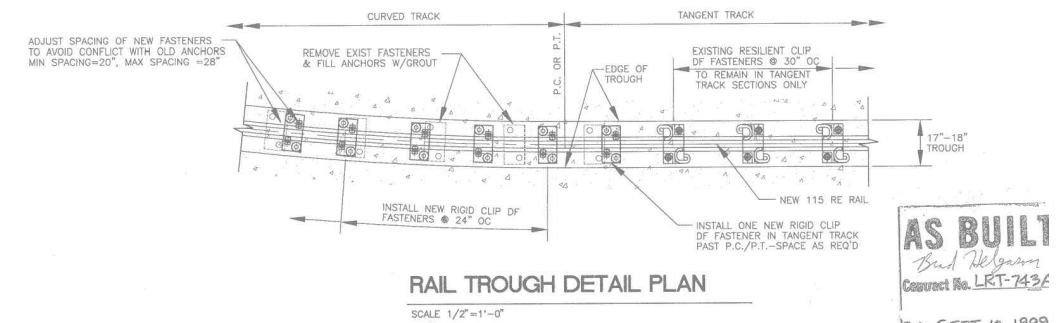
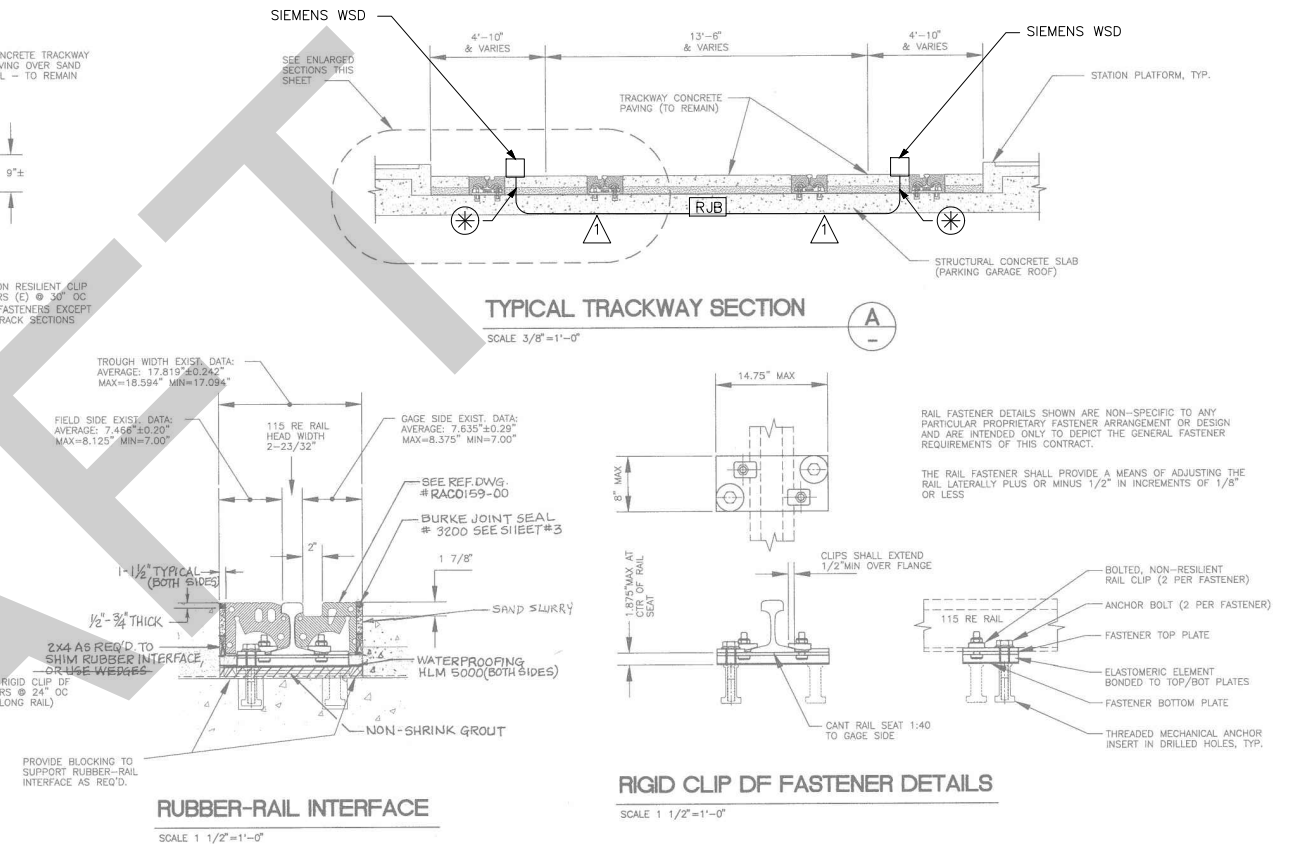
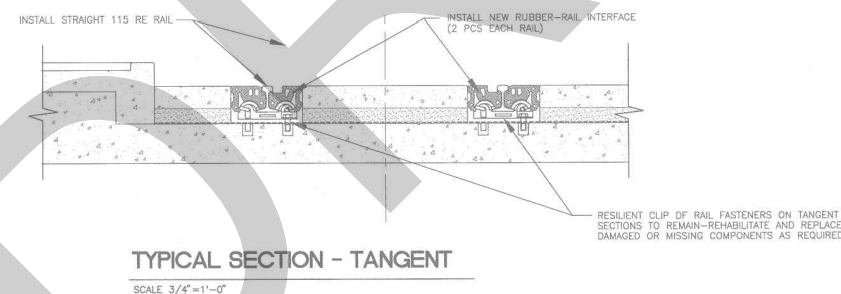
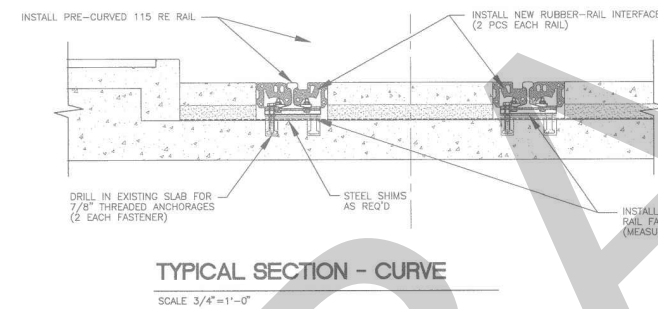
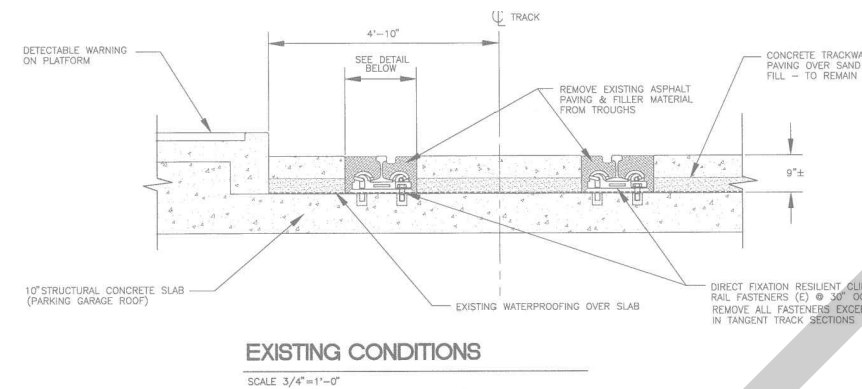


C STREET & BROADWAY WYE CONVERSION		SCALE	NTS
CSRC CONDUIT LAYOUT		CONTRACT NO.	
DRAWING NO.	SHT NO.		
A-316	22		



NOTES:

1. THE TYPICAL CONDUIT LAYOUT CONFIGURATIONS SHOWN HEREIN SHALL BE USED AS A GUIDE BY THE CONTRACTOR IN THE DEVELOPMENT OF THE FINAL CONDUIT LAYOUT ARRANGEMENTS.
2. CONDUIT INSTALLATION SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
3. CONDUITS PASSING UNDER ROADWAYS SHALL BE ENCASED IN RED COLORED CONCRETE.
4. ALL CABLES AND WIRES FROM THE INSTRUMENT ENCLOSURE TO EACH APPARATUS SHALL BE HOUSED IN CONDUIT.
5. CONTRACTOR SHALL FURNISH AND INSTALL CONCRETE PULL BOXES OF SUFFICIENT SIZE TO ENSURE THE BEND RADIUS OF CABLE AND WIRE IS NOT COMPROMISED.
6. CONDUITS SHALL BE A MINIMUM DEPTH OF 30 INCHES BELOW FINAL GRADE UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
7. LONG CONDUIT SWEEPS SHALL BE INSTALLED WHEN A CHANGE IN DIRECTION OCCURS. PULL BOXES SHALL BE INSTALLED AT MAJOR TRANSITION POINTS.
8. SPARE CONDUIT ENDS SHALL BE CAPPED TO PREVENT ACCESS BY RODENTS OR DEBRIS. CONDUITS IN PULL BOXES AND ENCLOSURES CONTAINING CABLE AND WIRE SHALL BE SEALED WITH AN APPROVED SEALANT.
9. PULL BOX DIMENSIONS SHOWN ARE MINIMUM ACCEPTABLE SIZE. CONTRACTOR SHALL FURNISH LARGER PULL BOXES BASED ON MINIMUM CABLE BEND RADIUS AND CONDUIT ENTRANCE REQUIREMENTS. MINIMUM DISTANCE MEASURED FROM THE TOP TO THE BOX TO THE BOTTOM EDGE SHALL BE AS FOLLOWS: P3 = 36 INCHES
10. UNDERGROUND GARAGE CONDUIT IS GRS 2" MINIMUM.

[illegible]

ATTACHMENTS A1
CONSULTANT'S PROPOSAL

DRAFT



Construction Management Services for *Broadway and C Street Wheel Counter and SICA S7 Replacement*



CONSTRUCTION SERVICES

Kleinfelder Construction Services, Inc.

5761 Copley Drive, San Diego, CA 92111

P: 858-223-8500 | F: 858-223-8499

March 21, 2025

Tyler Woller, Contract Officer
San Diego Metropolitan Transit System
1255 Imperial Avenue
San Diego, CA 92101

RE: Submittal for Construction Management Services for Broadway and C Street Wheel Counter and SICA S7 Replacement (WOXXXX-CM30)

Mr. Woller:

Kleinfelder Construction Services, Inc. (KCS) appreciates the opportunity to present our qualifications to San Diego Metropolitan Transit System (MTS) for the above referenced project. We have carefully reviewed the request for proposal and offer MTS a team with the expertise, depth of experience, and resources required to serve on this task order. We are proud of our successful history working with MTS and look forward to continuing our relationship by serving on this important project.

We are pleased to present an exceptionally qualified, local team with in-depth knowledge gained through our diverse experience on MTS and SANDAG projects and an unparalleled record providing management and inspection on similar contracts. This experience includes projects such as the Blue Line Signal and Crossover project, Orange Line Stations Modifications, Orange Line Courthouse Station, Green Line Station Platform Modifications, Downtown Stations Platform Modifications, Civic Center Track Replacement, and the Blue Line Station Rehabilitation and Rail Replacement projects to name a few. We are familiar with MTS' standards and procedures as well as local regulations, infrastructure, and transportation improvement plans. This insight means the KCS team will be able to start work immediately with no learning curve—benefiting MTS by providing valuable time and cost savings.

Our experienced and accomplished staff members are available and ready to serve on this contract. Key team members Hank Gentile, Charles Wehsener, Mark Crowley, and Marty Maggard have extensive experience providing services on local rail and transit station projects with scopes of work similar to those anticipated for this project. Together they bring a combined total of over 150 years of industry experience and expertise. With the experience and lessons learned from our previous work on similar trolley station and signal projects, coupled with our team's expansive research and preparation, KCS will be able to provide an efficient approach to the Broadway and C Street Wheel Counter and SICA S7 Replacement project. KCS and our subconsultants, CA Wehsener Engineering and Destination Enterprises have committed our resources and are eager to start work on this exciting project.

We want to serve MTS! We believe there is no better group of local individuals who will seamlessly work with MTS to provide high quality, professional construction management and inspection than the KCS team. We appreciate the opportunity to be of service and look forward to hearing from you. If you have any questions or need any additional information, please contact me any time.

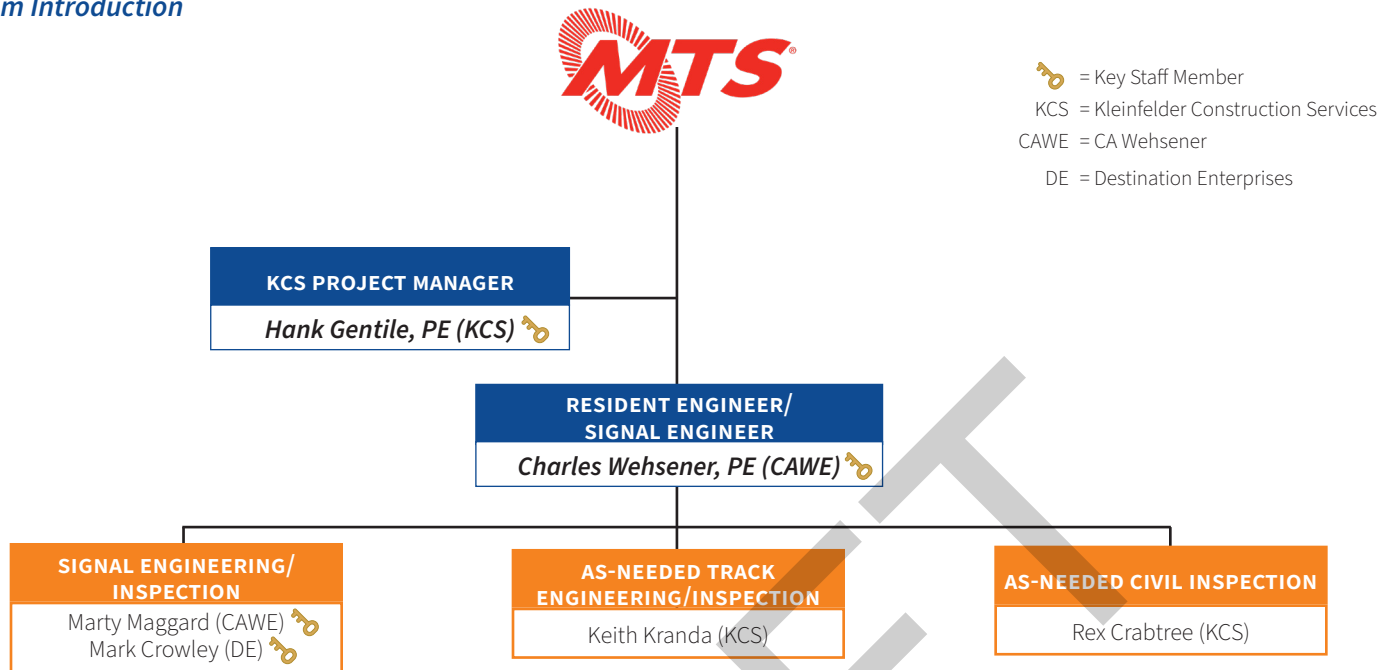
Sincerely,



Hank Gentile, PE
Project Manager
M: 858-705-0076
E: hgentile@kleinfelder.com

1. PROJECT TEAM

Team Introduction



Kleinfelder Construction Services, Inc. (KCS) is proud to propose an exceptionally qualified, local team for San Diego Metropolitan Transportation System's (MTS) Broadway and C Street Wheel Counter and SICA S7 Replacement project. Based on our experience and understanding of MTS' needs for this project, we have assembled a team of skilled technical experts and inspectors with experience on similar projects and extensive experience working on MTS projects.

KCS along with our subconsultant teaming partners, CA Wehsener Engineering (CAWE) and Destination Enterprises (DE), have unparalleled experience providing services on the MTS Trolley system over the last two decades. Most relevantly, our proposed staff members have worked on most if not all of the award-winning Trolley Improvement Program projects as well as the various Station Improvement projects to support the Low Floor Trolley Renewal Program, including the Blue Line Station Rehabilitation and Rail Replacement, Green Line and Orange Line Station Platform Modifications, Orange Line Courthouse Station, Bayside IMT Double Track, El Cajon Third Track, and Downtown Stations Platform Modifications. **Our work on these projects provides our team with a unique knowledge of the MTS Trolley System, the systems that make it work, how MTS operates, and the expectations MTS has of its Contractors and Consultants when working around a live trolley system.** We provided a brief introduction to our key staff members below. *Full resumes for all of our team members have been included in Exhibit A of this proposal.*

Key Staff and Commitment to the Proposed Project

Led by accomplished key staff members, our team collaboratively has the drive, expertise, and experience needed to deliver the Broadway and C Street Wheel Counter and SICA S7 Replacement project. We are pleased to introduce you to the following key team members:

Hank Gentile, PE will serve as KCS' Project Manager and will be responsible for coordinating overall project activities and performance. He has 34 years of professional experience, including over 20 years of experience managing on-call/as-needed construction management contracts with numerous task orders and multidimensional teams. Most importantly, Hank has had direct involvement on MTS and SANDAG transit projects, including serving as Project Manager for Orange Line Courthouse Station project and Validator Infrastructure Construction Management and Inspection Services; Resident Engineer for the Green Line Stations Platform Modification, Orange Line Station Platform Modifications, East County Bus Maintenance Facility, and South Bay Bus Maintenance Facility Demolition project; and Structures and Stations Representative on the Mid-Coast Trolley Extension. His management style is responsive, hands-on, personal, and detail oriented with a focus on client satisfaction. *As our Project Manager, we estimate Hank's utilization to be 15%. However, he is fully committed to MTS and will be available as needed throughout the project duration.*

We are proposing **Charles Wehsener, PE** from SBE firm CAWE as Resident Engineer/Signal Engineer. Charles Wehsener, PE brings 35 years of experience and is the President and Founder of CAWE. Charles and his staff have been providing expert electrical and signaling services to SANDAG and MTS since 2007 on various projects including the \$47M San Diego Trolley Mission Valley East extension project, the \$40M Blue Line Signaling and Crossover project, and \$1B MidCoast Trolley Extension. They have an expert understanding of the systems, procedures, and requirements of San Diego transportation projects, and have served not only as inspectors but also as project electricians. This insight and practical experience provides a direct benefit to SANDAG by eliminating the typical “learning curve,” and increasing our ability to execute quickly and efficiently, saving both time and money. We estimate *Charles’ utilization will be 90% with additional availability as needed.*

Marty Maggard will serve as Signal Engineer/Inspector. Marty has over 40 years of experience specializing in railroad signal systems. He has served as signal engineer on numerous local SANDAG/MTS and NCTD construction projects. His experience includes SANDAG’s Oceanside Transit Center Third Track project, where he played a key role in the planning and execution of numerous signal cutovers, which also included the testing of multiple grade crossing warning systems with multiple tracks, performed under AWWs, Blue Line Station Rehabilitation and Rail Replacement project, and Mid-Coast Transit project. Marty’s extensive experience with train control and signals makes him a key asset for our team and MTS on the Broadway and C Street Wheel Counter and SICA S7 Replacement project. We estimate *Marty’s utilization will be 75% with additional availability as needed.*

Mark Crowley will serve as Signal Engineer/Inspector. Mark is an accomplished signal engineer with 24 years of experience in the railroad industry. He has extensive experience reviewing submittals, construction work plans and cutover plans for signal installations, performing field inspections for all aspects of track signal work. He has recently performed signal and communication work for MTS on the Bayside IMT Double Track and El Cajon Third Track projects, demonstrating his familiarity of the MTS system and its requirements. Mark has an excellent technical knowledge of the existing MTS signal and communication systems as well as the new system that is being implemented. Mark has built and continues to maintain an exceptional working relationship with MTS. We estimate *Mark’s utilization will be 50% with additional availability as needed.*

Full resumes for our proposed staff members have been provided in Exhibit A of this proposal. KCS is proud to propose an exceptionally qualified team to support our key staff in delivering the Broadway and C Street Wheel Counter and SICA S7 Replacement project. Based on our experience and understanding of MTS’ needs for this project, we have assembled a team of skilled engineers and technical experts with extensive experience in transit construction and experience working on MTS/SANDAG projects. Together, our team will perform as part of an integrated team with MTS, providing cost effective and functional solutions for a successful project delivered on time and on budget.

2. PROJECT UNDERSTANDING AND APPROACH

The project aims to replace existing Siemens equipment at the C Street crossovers with new Axle Counters (AC) and a vital logic processor (VLP) system. The new AC system is the Frauscher FAdC Axle Counter System, which is currently installed and in-service at the Imperial Station. The existing Siemens ACM 100 system is to be removed entirely from the relay case (RC) to the track. The new FAdC system includes new RC devices and new ACs in the track, including new cable from the RC to the track. The existing Siemens S7 Controller will be retired and replaced with a new ElectrologiXS VLP. Wiring changes within the RC are required and extensive testing will be performed as the work progresses. An example of in-progress testing is a “Point-to-Point” test to verify correct wiring. Point-to-Point verification verifies that the system is connected per the approved plans. There are several other tests required that can be accomplished



prior to the cutover date. Testing is a systematic process that strives to accomplish a final static verification prior to field-RC verification. The testing progresses to the final cutover when all devices are proven and testing is complete to the level that allows dynamic testing, including all wayside equipment, OCC functionality, and train operability through the new system.

The work at the Broadway Wye location includes the removal of the existing Siemens S7 controller and replacing it with a new ElectrologiXS VLP. This will result in wiring and tagging changes within the house and several additional new devices installed. The plans provided show ample space available within the house so the final configuration is attainable without requiring temporary relocation of existing devices. The field or trackside device work primarily involves the removal of the existing components at the eastbound platform.

There is final testing and performance demonstration required prior to acceptance. This testing will prove the functioning and safety elements of the system. The extended period of ‘downtime’ allowed for the cutover will provide the Contractor with a working opportunity to cutover both C Street and Broadway Wye locations with very few interruptions. Test documentation and plan sets, including software, are due to the client within three working days upon completion. All documentation will be subject to a conventional submittal process that provides a smooth and functional method for closing out the project.

Approach to the Work

Our approach to providing effective construction management services for the Broadway and C Street Wheel Counter and SICA S7 Replacement project is described below:

The signaling portion of this project involves complex work with the field device removals and new installations. Much of the work will be performed during operational hours, and will require great attention to safety in an operational environment that includes street traffic as well as trains. Planning the work will require one or two-week ‘look ahead’ schedules that can be reviewed and modified if needed. MTS operations will have a large influence on how and when work can be performed, so it is important as construction managers to verify the Contractor’s work requests or other ROW activities are understood and requested in the proper manner. Anytime the Contractor is on-site, the construction management team will be present. This is not simply headcounts or measurements, but actual documentation of work performed through photography and inspection report summaries.



Our approach to construction management is proactive, that means there are active reviews and discussion with the entire team on a regular basis with weekly or bi-weekly progress meetings as required. Ad hoc discussions can be called to work on solutions to any issues that may arise during the project construction and testing. Of course, there are platforms we use that don’t require face-to-face meetings and these will be used to save time for those on the project that can’t attend in person.

One area of work that requires specialized knowledge is the signal testing and commissioning, including the SCADA (office) elements. Carefully checking that test plans are written and submitted on time is important. The documentation for validating test results, the actual steps required to perform the testing, and the sequencing of testing are critical to a successful project completion. As construction managers, our goal is to ensure that the Contractor has provided the proper documentation and resources to complete the project cutover successfully in the time frame allotted.

Innovation: Our approach to construction management includes proactive and solution-based methods. Within the construction management team there is open discussion to identify issues prior to the project experiencing a problem. This internal process is important since we can often find solutions to potential issues before the project experiences a delay or requires a ‘work around’ to prevent delays. Sometimes a problem or challenge will occur that is brought to the construction management team by the Contractor. This type of problem requires construction management expertise in the solution-based methods approach. Our mindset is to provide solutions to challenges whether identified by our team or brought to the construction management by the Contractor. In most instances, the problem or challenge is identified and categorized to help the team assign the correct person(s) to work on the solution. The solution process may include other team members, including the Client or Contractor, which can further add innovation into the process with knowledge and experience. The Project Team will include many people with various Knowledge, Skills, and Abilities (KSAs) which enhances the process. The CM’s role in this process includes leadership and decision making. Decisions are typically made with the focus towards the Project cost and schedule. Cost and schedule are a primary focus from the construction management perspective and is always considered during project discussions. Solution-based problem solving ultimately saves the project from cost overages through scheduling efficiencies and effective/efficient construction methods.

Identified Risks and Proposed Solutions to Mitigate These Risks

A high-risk element on this project is the Contractor's 'key personnel' requirement. Having a Signal Engineer and/or Signal Supervisor on-site during all working activity is sometimes difficult. We will remain vigilant and diligent throughout the projects planning, construction, testing, and cutover. Having key personnel present at all times will give the Contractor and the project the best opportunity for adhering to the schedule and successfully carrying out the work.

The bustling environment of trains and vehicular traffic traveling in proximity of workers is a risk. The proper warning signs and familiarity demarcations are a requirement that is easy to obey or follow, however, both workers and drivers can become distracted or complacent which may cause a dangerous situation. MTS does an exemplary job at providing warning to workers when trains are approaching. However, the C Street corridor is particularly challenging due to the many pedestrians, cars, buses, and other modes of transportation that can cause problems. As construction managers we will enforce all safety elements and verify that fencing, delineators, and other traffic signage are kept in working order.



3. SCHEDULE

Ability to Meet MTS' Proposed Schedule

KCS has proposed a construction management team with broad experience in delivering rail improvement projects for MTS, SANDAG, and other regional transportation agencies. Our team possesses expertise in the disciplines that will be the focus of this Project, particularly RR signal and electrical. We can also provide expertise in track, civil, structural, and other specialty systems, if called upon. Backed by our record over the last 15 years of successfully delivering the largest and most challenging projects on the MTS system, our team's knowledge and experience with the MTS system is unparalleled.

The construction management team members are local San Diego residents with extensive experience on MTS and SANDAG projects. Several of the team members have worked as designers, contractors, or construction management on projects dating back 20 years or more. This experience on the property lends to understanding and recognizing important aspects of the project that may not be apparent to other teams. Established working relationships across the groups involved help to recognize possible conflicts with schedules. The construction management team's knowledge of the project and our scheduling experience make a great formula for ensuring the project's delivery is on time and on budget.

4. SUBCONSULTANTS

We truly believe it is the people who ultimately make a project successful. This is why we not only carefully choose each individual we employ, but each and every person we propose to our clients. KCS is proud to team with outstanding subconsultant firms for this project who are not only some of the best in the region—they are also ready, available, and excited to the Broadway and C Street Wheel Counter and SICA S7 Replacement project.

KCS has had the privilege of working with our proposed subconsultant team members on a variety of public works projects, including transit projects for MTS and SANDAG. This shared experience provides a high level of understanding, respect, and mutual trust among team members. Our team's strong relationships will benefit MTS by providing seamless team integration and quality, resulting in a more efficient and cost-effective project delivery.



CA Wehsener Engineering, Inc. (CAWE): Headquartered in San Diego, CAWE is an SBE firm founded by Charles Wehsener in 2007 to provide electrical construction management, inspection, and engineering services. CAWE provides expert staff members with over 150 years of combined experience. CAWE staff not only have years of experience inspecting electrical construction work, but all of them at one time or another worked as electricians performing the actual installations, which provides them with a greater knowledge and understanding of the work they are inspecting. With over 15 years of working on local transit project, CAWE has established strong working relationships with MTS staff, including maintenance-of-way, operations, systems leads, IT, and fare collection personnel. CAWE's knowledge of the system and the project site will allow them to quickly and effectively address technical issues to keep the project moving.



Destination Enterprises, Inc. (DE): DBE firm DE will provide railroad signal and OCS inspection services for this project. DE is a certified woman owned SBE construction management firm that has provided services to a wide variety of mass transit agencies in California, including MTS, SANDAG, and LA Metro. Most notably, DE was a key member of the construction management team on the SANDAG/MTS on the Mid-Coast Trolley project, providing the Lead Railway Signal Engineer, constructability reviews, cost estimating, schedule evaluation, inspection, testing and startup oversight, and punchlist of the traction power and signal systems. DE also provided signal and systems oversight for the MTS Middletown Double Crossover and Orange Line Track Improvements projects (known as the Middletown 9 and 11 project), Beech Street, El Cajon Third Track, and Imperial Station Double Track projects. DE is well versed in the logistics of MTS projects including those at the southern and northern terminuses of the new Orange Line project. Their staff's technical knowledge and experience with previous and current MTS, NCTD, and SANDAG projects perfectly positions DE to understand the agency's expectations and to support the overall project to completion within budget and on schedule.

EXHIBIT A

STAFF RESUMES

DRAFT

Hank Gentile, PE (KCS) **Project Manager**

EDUCATION/PROFESSIONAL CREDENTIALS

B.S., Civil Engineering
Civil Engineer in California, No. 57280

Hank Gentile will serve as KCS' Project Manager and will be responsible for coordinating overall project activities and performance. He has managed several on-call construction management and inspection contracts and has had years of direct involvement on MTS projects, including serving as Project Manager for the Orange Line Courthouse Station project and Resident Engineer for the Orange Line Stations Platform Modification, Green Line Stations Platform Modification, East County Bus Maintenance Facility, and South Bay Bus Maintenance Facility. Mr. Gentile also had significant roles on the recently completed, award-winning MidCoast Trolley Extension. His management style is responsive, hands-on, personal, and detail oriented. Hank knows the kind of person and skill set it takes to successfully perform inspection and management duties for all types of projects, and he will ensure MTS gets the right person for each assignment.

MTS On-call Construction Management, Various Projects

Mr. Gentile has served as Project Manager for KCS' two consecutive prime as-needed construction management contracts, included our current 5 year, NTE \$10M contract. Through these contracts, KCS has worked on several task orders, including the Blue Line Traction Power Substation Installation and the current Bayside Double Track IMT - nearing completion, and El Cajon Third Track projects – also expected to be completed by mid-2024. As Project Manager, Mr. Gentile is responsible for implementing and managing all task orders, as well as assembling and overseeing KCS and subconsultant staff providing construction management, inspection, constructability review, document controls, and scheduling services to MTS on simultaneous projects. In addition, he provides quality control, staff management, and technical oversight.

MTS On-call Construction Management, Orange Line Courthouse Station

Mr. Gentile served as KCS' Project Manager for the \$6.8M Orange Line Courthouse Station project in San Diego, California. The project included construction of a new trolley station in downtown San Diego on C Street between Columbia Street and 1st Avenue, and the relocation of the Orange Line terminus from the Santa Fe Depot to the new station. The new station provides direct access to the new 22-story courthouse building, helps to relieve congestion at the Santa Fe Depot station, and improves overall service to the Downtown area. As Project Manager, Mr. Gentile was responsible for providing oversight to the construction management team, implementing and executing our team's quality control procedures, verifying team members were adequately equipped and trained to perform their job function, and monitoring our performance on a frequent basis with MTS. The MTS Courthouse Station project was the recipient of the "2019 CMAA Project Achievement Award for Transportation Projects less than \$15M."

SANDAG/MTS Mid-Coast Corridor Transit Project

Mr. Gentile served as the Structures/Stations Representative for SANDAG overseeing the Construction Management team for the construction of construction of the Genessee Viaduct Bridge, then for the nine trolley Stations being constructed on the Genessee Viaduct Bridge, nine trolley Stations being constructed on the Mid-Coast Corridor Project. Work included the construction of nine new stations; including four at-grade stations—Tecolote Road, Clairemont Drive, Balboa Avenue, and VA Medical Center; and five stations with elevated passenger platforms and at grade plazas—Nobel Drive, Pepper Canyon, Voigt Drive, Executive Drive, and the UTC Transit Center. The stations construction was critical path work, and required significant coordination with MTS Operations and Facilities Management. Mr. Gentile was instrumental in issue resolution in getting the Stations certified by the City Fire Marshal, the UCSD Campus Fire Marshall, and the State Elevator Inspector. He was also heavily involved in the documentation for the CPUC Start-up and Safety Certification. Additionally, Mr. Gentile was assigned a coordination and oversight role for the construction of two multi-level parking structures at the Nobel Drive and UTC Transit Center Stations. His work on this part of the project includes oversight and coordination with the Construction Management/Quality Assurance group, close coordination with the Contractor, change order development and negotiation, and coordination with the Systems group and other disciplines, including the design team. The Mid-Coast Corridor Transit project has been selected for over 20 awards, including the ASCE Outstanding Transportation Project and Project of the Year awards, CMAA Transportation Project Greater than \$15M and Project of the Year awards, APWA Project of the Year award, and the 2023 Associated General Contractors' Build America Grand Award.

SANDAG On-call Construction Management Services, Mid-Coast Corridor Transit, Segment 4, Genessee Viaduct

Mr. Gentile served as Structures Representative for Genessee Viaduct portion of Segment 4 of SANDAG's \$2.1B Mid-Coast Corridor Transit project. With a construction value of \$60M, the 12-frame, 5,700-foot-long Genessee Viaduct incorporated multiple structure types, including the first use of spliced precast bathtub girders in California and two frames of cast-in-place/prestressed concrete box girders (CIP/PS) with extended platform slabs to accommodate passenger loading at stations. The construction process utilized self-weight prestressing, as well as splice and continuity prestressing. Mr. Gentile led the quality assurance efforts for this complex and innovative bridge that was constructed down the middle of Genessee Avenue, a main thoroughfare in one of San Diego's busiest commercial areas. The Mid-Coast project extends Blue Line trolley service north from the Santa Fe Depot

in downtown San Diego to the University City community. Segments 3 and 4 includes five stations and is largely comprised of elevated guideway. Additional work includes widening Genesee Avenue from Regents Road to La Jolla Village Drive, barrier installation, road restriping, utility relocations, median and sidewalk demolition, and traffic control.

SANDAG On-call Construction Management Services, Low-Floor Stations Downtown

Mr. Gentile serviced as Principal-in-Charge/Constructability Reviewer for SANDAG's Low-Floor Stations Downtown (LFSDT) project. LFSDT was part of the SANDAG/MTS \$660M Trolley Renewal Project, an endeavor to rebuild aging trolley infrastructure on the Blue, Orange, and Green lines that included upgrading track, signaling, and communications, and modifying platforms at 35 stations to support the deployment of 65 new low-floor trolley vehicles. The LFSDT project includes a suite of improvements to meet low floor program objectives at five signature trolley stops throughout the heart of downtown San Diego's East Village, Gaslamp, and Civic Core neighborhoods where existing stations were reconstructed to accommodate the new low-floor trolley vehicles. Project elements included demolition and reconstruction of five trolley stations; station paving; platform shelter structures; site furnishings and signage; lighting; landscaping; traffic signal modification; and signal, communications, and electrical infrastructure. Accessibility improvements were a primary feature of the LFSDT project. Platform crossfall, slope, new code compliant curb ramps, seating, and signage were all incorporated into the platform improvements. Aesthetic improvements included steel fabricated shelters to minimize view blockage and to provide maximum shelter from the elements, and also included built-in seating. Each station was constructed with new precast architectural pavers, Lithocrete architectural concrete, and architectural barrier railings. The 12th and Imperial Transfer Station included the installation of two new 115 RE No. 6 turnouts and 150 feet of new track work.

SANDAG On-call Construction Management Services, Green Line Station Platform Modifications

Mr. Gentile served as the Resident Engineer on the Green Line Station Platform Modifications project. This \$8.5M project consisted of modifications to eight stations that can accommodate the new low floor vehicles. The original Green Line Contractor was unable to perform. Mr. Gentile worked with SANDAG to reduce the contract scope to two stations, which were completed by subcontractors at Mr. Gentile's direction. He managed the construction of the remaining six stations through three separate JOCs. Mr. Gentile coordinated with active MTS trolley lines as well as NCTD operations and had the overall responsibility for quality assurance inspection, administration, and lead a team of field engineers, office engineers, and administrative support staff to complete this project. Mr. Gentile also participated in the constructability reviews by providing comments on the plans and specifications and identifying potential claims before they arise during construction.

SANDAG On-call Construction Management Services, Orange Line Stations Modifications, Downtown

Mr. Gentile served as the Resident Engineer for the Orange Line Station Modifications project, responsible for issue resolution, project completion, and closeout. As part of the Trolley Renewal project, the Orange Line Modifications included replacing older vehicles with new low-floor vehicles and the raising of platforms to accommodate faster and level boarding. Station improvements included larger shelters with new furnishings, digital next arrival signs, and upgrades to the track and train signaling system. At SANDAG's request, Mr. Gentile took over as Resident Engineer for the project and negotiated many outstanding change orders with the Contractor, bringing the job to completion. These projects were all constructed under active trolley operations and required constant coordination with MTS and NCTD. Mr. Gentile's responsibilities included leading a team of field engineers/inspectors, office engineers, and administrative support staff, and contract administration.

SANDAG On-call Construction Management Services, MTS East County Bus Maintenance Facility

Mr. Gentile served as the Resident Engineer for SANDAG's \$45M East County Bus Maintenance Facility (ECBMF) project in El Cajon, California. This expansion and renovation project included a new 34,500-square-foot steel moment-frame high-bay maintenance building, a new state-of-the art compressed natural gas (CNG) fueling station, a new 10,275-square-foot administrative building, and reconfiguration of staff and bus parking. The project required significant interface and communication with MTS management and staff, the City of El Cajon, as well as utility coordination efforts. The project was constructed in phases to maintain existing bus operations, fueling, and bus and employee parking. Extensive coordination with MTS was required upon completion of the new structure to transfer and resume operations in the new facility. Once completed, the old facility was demolished, and the site paved to accommodate additional bus parking. Prior to construction, Mr. Gentile participated in a multi-disciplinary constructability review, which included working with project designers to resolve comments developed during the review. During construction, Mr. Gentile was responsible for project management, contract administration – including negotiating change orders and resolving disputes, construction engineering, and project communication and coordination. The result was a successful project closeout with no claims or unresolved issues, and a completed facility that is major upgrade for the bus operations and maintenance personnel.

Charles Wehsener, PE (CAWE)
Resident Engineer/Signal Engineer**EDUCATION/PROFESSIONAL CREDENTIALS**

B.S., Electrical Engineering

Electrical Engineer in California, No. E14977

Charles Wehsener has over 32 years of experience in construction management and design of electrical facilities, including 13 years at Caltrans District 11 where he spent six years in the electrical design department and served as a Resident Engineer and Senior Construction Engineer in charge of all electrical construction in District 11. He has also had three years of experience with SANDAG where he was the Systems Engineer. Chuck founded C.A. Wehsener Engineering, Inc. over 10 years ago and serves as a consultant to numerous public agencies providing electrical construction management on rail and freeway projects.

SANDAG On-call Construction Management Services, Mid-Coast Trolley Extension Project

Mr. Wehsener serves as Senior Construction Systems Manager on the \$2.1B Mid-Coast Corridor Transit project that will extend Trolley service from the Santa Fe Depot in downtown San Diego to the University City community, serving major activity centers such as Old Town, University of California San Diego, and the Westfield UTC mall. Project elements include nine stations, elevated structures, traction power and overhead catenary, railroad signal and systems communications, cut and cover, and two freeway crossings. Mr. Wehsener is responsible for providing quality assurance on over \$150M worth of work, including dry utility relocations; City of San Diego traffic signals and lighting; fiber optic communication systems for NCTD and MTS; and station electrical systems including buildings, elevators, and fire life safety systems.

SANDAG On-call Construction Management Services, Various Projects

Mr. Wehsener's work through this on-call contract has included a \$40M Railroad Signaling and Crossover project; \$5M Aerial Fiber Optic and Signal Cable Installation project; and six job order contracts installing fiber optic, electrical, and communication systems at trolley stations. Additionally, Mr. Wehsener assisted with coordinating the electrical work on the MTS Trolley's low floor improvement projects, which included more than 10 different contracts involving new stations and modifications to the signaling system. He has also done constructability reviews on station electrical and communications, fiber optic systems, roadway lighting and signalization, and building electrical systems.

SANDAG Mission Valley East Track and Systems Contract

Mr. Wehsener served as Project Manager/Resident Engineer on the \$47M Mission Valley East extension project, which involved installation of track and systems, including signaling, traction power, communications, and surveillance. Mr. Wehsener coordinated the systems work on the San Diego State University (SDSU) underground station which included intrusion protection, local operating network (LON), closed circuit television (CCTV), fire life safety, and radio communication. This required extensive coordination with SDSU, San Diego Fire Department, and San Diego Sheriff's Department.

Caltrans District 11 On-call Construction Management Services, I-15 Corridor

Mr. Wehsener served as Assistant Resident Engineer on 11 construction contracts along the I-15 corridor. His duties included negotiating change orders, reviewing design changes, coordinating tolling equipment installation, working with SDG&E on new service installations, testing fiber optic systems, working with Transportation Management Center (TMC) and IT staff on installation of network equipment, and assisting with the overall commissioning of electrical and communication systems. Mr. Wehsener also assisted with layout and design of the moveable barrier system guide wire and inspected the electrical systems associated with the Barrier Transfer Machine Maintenance Facility.

Caltrans District 11 Electrical Construction Engineer, Various Projects

Mr. Wehsener served as the District Electrical Construction Engineer supervising electrical inspectors assigned to all construction projects in District 11. His responsibilities included constructability reviews, cost estimating, change order concurrence and approval, and supervision. His staff provided all inspection on electrical systems and overhead sign installations. Mr. Wehsener also assisted the material department with inspection of electrical components.

Caltrans District 11 Electrical Construction Engineer, Fiber Optic Communication Projects

Mr. Wehsener served as Electrical Construction Engineer on various fiber optic communication projects totaling over \$20M. The projects included changeable message signs, traffic monitoring stations, and closed-circuit television camera systems all linked to the Caltrans Transportation Management Center through fiber optic communications. Mr. Wehsener also supervised inspection staff on Caltrans electrical projects including traffic signals, highway lighting, ramp metering, highway advisory radios, weigh-in-motion stations, and facilities electrical distribution systems.

Marty Maggard (CAWE)
Signal Engineer/Inspector**EDUCATION/PROFESSIONAL CREDENTIALS**

Metro General Railway Signal Circuit Designs
Training; Santa Fe Railway Railway Signaling
NCTD Roadway Worker Protection Training SDMTS
Roadway Worker Safety Training

Marty Maggard has extensive experience in the design, construction, inspection, testing and maintenance of railroad signal and highway rail grade crossing systems, including 40 years of experience with train control and signaling on Class 1 railroads and rapid transit in the USA. He began with Santa Fe Railway from 1978 to 1989 in the signal department, and from 1989 to 2006 he held management and technical positions with the Los Angeles County Metropolitan Transportation Authority (LA Metro). Mr. Maggard is uniquely qualified as having successfully implemented numerous Class 1 railroad as well as transit projects.

SANDAG On-call Construction Management Services, Oceanside Transit Center Third Track and Platform Improvements

Mr. Maggard served as a Senior Signal Engineer on this \$17.5M project to expand the Oceanside Transit Center. Primary work elements included construction of a new rail track, a new 1,000-foot-long boarding platform and existing platform extension, a new passenger walkway, and new track crossovers to improve operations, as well as railroad signals, electrical, and communications installations and modifications. Mr. Maggard was responsible for overseeing and testing the installation of rail signal facilities, including wayside and grade crossing protection equipment. Additionally, he provided oversight for the removal of an existing turnout, raising the elevation of the existing main track, construction of a new 136 RE continuous welded rail, and removal and replacement of baggage cart grade crossing. Mr. Maggard also assisted the Resident Engineer with reviewing Contractor's signal and cutover drawings, signal RFIs, and other signal submittals for compliance with contract documents.

SANDAG Mid-Coast Transit Project

Mr. Maggard served as Project Signal Engineer representing the Construction Management team for SANDAG. The Project included several miles of MTS Trolley signaling rehabilitation at highway grade crossings, existing Interlockings, plus additional wayside signals and one new Interlocking near Noel Street. The tie-in at Old Town to Morena features coordination with revenue Green Line operations and construction of a new junction. The project consisted of all new construction north of the San Diego River, including nine new stations and eight new interlockings. Mr. Maggard was responsible for answering RFIs, submittal review and approval, testing procedure review and recommendations, and coordinating with MTS Operations.

SANDAG Blue Line Station Rehabilitation and Rail Replacement

Mr. Maggard served as a Senior Signal Engineer on the \$69M Blue Line Station project, which consisted of replacing all 11 stations in their entirety to accommodate new low floor vehicles, as well as the reconstruction of five transit centers and six parking lots. The project included 190,000 feet of track replacement, grade crossing reconstruction, and upgrades to the signal, overhead catenary, traction power, and communications system. Work was performed to meet specified contract milestones for various segments of the work while maintaining San Diego Trolley and MTS operations. In this role, Mr. Maggard provided field engineering services during track rehabilitation and station platform work. This project included highway crossings, interlockings, and other wayside signaling equipment affected during the trackwork, in particular systems affected during revenue operations.

RCTC Perris Valley Line

Mr. Maggard served as the Lead Signal Designer on the \$150M Perris Valley Line project, a 24-mile extension of the Metrolink 91 Line from Riverside to Perris, California. Project elements included two railroad bridge replacements, upgrade of existing siding tracks, and construction of new track and control points to provide future Metrolink passenger service between Perris and Riverside on the former BNSF San Jacinto Industrial Spur.

SANDAG NCTD/LOSSAN Corridor, Various Projects

Mr. Maggard served as lead designer for several SANDAG projects on the NCTD LOSSAN Corridor including new crossovers, highway crossing enhancements, and PTC. Design and DSDC for Blue Line signaling upgrades on the oldest LRT system in San Diego. Lead designer for San Diego's downtown improvements to enhance train control and station amenities in the field and interface to SCADA.

MTS Middletown/9-11 Crossover and Beech Street Projects

Mr. Maggard is served as the Senior Signal Inspector and was responsible for providing inspections and in-service testing at the rehabilitation of the street-running crossover. The project included a new relay case, new switch machines, and indicators for signaling. The project required street closures and major excavations, as well as complete track removal and installation of new turnouts. Rail boxes were modified where needed and efficient solutions given to MTS insured the install of remaining rail boxes without modifications. The Middletown portion of the project is an entirely new double crossover in signalized territory with highway grade crossings. Four new turnouts and signal interlocking arrangement included tie-in to existing systems. The Beech Street portion of the project consists of upgraded double crossover in street running territory to a full interlocking tied into the existing MidCoast system on one end and existing street running on the other end.

Mark Crowley (DE) **Signal Engineer/Inspector**

EDUCATION/PROFESSIONAL CREDENTIALS

A.A., Electronics Technology
Engineering AutoCAD, Rancho Santiago College
Certified Fiber Optic Technician; Hanning & Kahl
Product Training; GCOR Qualified

Mark Crowley is an accomplished signal engineer with 24 years of experience in the railroad industry, specializing in design, quality assurance, and signal system commissioning. He has worked on numerous projects with a variety of agencies, including MTS, SANDAG, NCTD, LOSSAN Rail Corridor Agency, and Metrolink. Mr. Crowley has working knowledge of American Maintenance of Way practices (AREMA) and Federal Railroad Administration (FRA) rules and regulations pertaining to signal and highway grade crossing warning systems.

MTS Imperial Terminal Doubletrack Construction

Mr. Crowley serves as a Senior Signal Inspector responsible for constructability review and oversight of signal construction and modification of signal systems on this project, located at 12th and Imperial Avenue Transit Center, which is currently occupied by 12th and Imperial Station and MTS Maintenance Yard A. The project scope consists of new second track tie-in to existing T-1 track and new platform and associated signal system modifications, relocation of existing pedestrian canopy structures, removal and replacement of asphalt concrete pavement, and related improvements.

RCTC Moreno Valley/March Field Metrolink Station Improvements

Mr. Crowley serves as a Senior Signal Inspector for RCTC's \$15.7M Moreno Valley March Field Station project. He is responsible for oversight of the communications and signal construction crews and subcontractors on installation of new side platform and lengthening of existing Metrolink Station platform, upgrading of 2.5 miles of existing wood double tracks to Continuous Welded Rail (CWR), and associated signal improvements. Signal improvements include relocation of existing signals, new turnouts, signals, cabling, conduit, switches, wayside instrument cases, Phase Shift Overlay (PSO) circuit, and new Positive Train Control (PTO) SUBDIV upgrades. Mr. Crowley ensures all communications and signal cable and equipment is installed in accordance with approved drawings; performs inspection to confirm that all cable is tested before pulled, after pulled, and after splicing and termination; oversees signal construction scheduling, installation, and all testing including Factory Acceptance Testing (FATs); as well as all field testing, cutover plans, and cutovers. Additionally, he reviews all signal equipment and associated submittals and RFIs to ensure lessons learned are implemented and long lead submittals prioritized. Mr. Crowley also reviews test procedures, cutover plans, and ensures approvals are in place before testing and cutovers. He performs back-office coordination on indication verification and testing.

SANDAG Poinsettia Station Improvement Project and Mid-Coast Light Rail Transit Project

Mr. Crowley served as Systems Inspector on this project, responsible for signal, electrical, and communication systems. He was also responsible for test procedures and witnessing of all testing of the Poinsettia Station Improvement project. The station was updated to improve traveler wait times, reduce train delays, provide easier access, enhance pedestrian safety, and upgrade station amenities. The project is a key part of the larger effort to improve and modernize rail infrastructure along the Los Angeles-San Diego-San Luis Obispo (LOSSAN) rail corridor as part of the North Coast Corridor (NCC) Program.

SANDAG/MTS South Line Rail Freight Improvement Project

Mr. Crowley served as Lead Signal Engineer on this project, which consisted of improvements on the South Line (MTS Blue Line) in the City of Chula Vista, between J Street and the Otay River Bridge. Improvements included rail and tie replacement, signal enhancements, and construction of a new railroad bridge and new retaining walls. The SD&AE South Line Rail projects enables expanded freight operations to meet existing and future growth of freight rail in the region. Mr. Crowley's responsibilities included leading test teams and signal construction resources under phasing and final works, writing test plans and procedures for Final As-in-Service Testing (FAT), and performing QA/QC for field installation and signal houses.

SANDAG LOSSAN Early Works, Control Point (CP) Rose Track Crossovers

Mr. Crowley served on the Signals Lead Inspection team for this project, which included new crossovers near Regents Road (CP Rose) in the railroad right-of-way, upgrading and building bridges at five locations to accommodate double track operations, signal improvements, and ancillary utility and drainage improvements along this segment of the corridor. Mr. Crowley's responsibilities included oversight and inspection of signal contractor, performing contractor submittal review and providing comments, and performing QA/QC on field installation and signal houses.

SANDAG/MTS, Signal Engineer for Various Projects

Mr. Crowley served as Signal Engineer for various projects with SANDAG and MTS, including MTS Southline Freight Improvement project; MTS Ballpark Village; and SANDAG NCTD Mid-Coast Project/LOSSAN. Mr. Crowley was responsible for development of cut-over documentation; directing all commissioning activities of the new systems; and product and work plan submittal review. The SANDAG MTS Southline Freight Improvement project included three new interlockings on mixed-use territory with combined light rail and freight. MTS Ballpark Village included modification to the Siemens S7 controller, switch indicators, AC vane track circuit, and a new switch machine. SANDAG NCTD Midcoast Project LOSSAN included a new double track bridge and signal modifications.

Keith Kranda (KCS)
As-Needed Track Engineer/Inspector

EDUCATION/PROFESSIONAL CREDENTIALS

SCRRRA Operating Rules and GCOR Certified; NCTD Contractor Safety Training; SDMTS Contractor Safety Training; LACMTA Transportation Leadership Academy; DuPont Safety First; LACMTA Human Resources Development Training Programs; USDOT Transportation Safety Institute; LACMTA Front Line Supervision Training; General Railway Signal: Elements of Railway Signaling; Union Pacific Technical Training Phases I and II; FRA Training, Safety Trained Observer Program (STOP)

(CPUC) General Orders, and Federal Railroad Administration (FRA), Federal Transit Administration (FTA), and American Public Transportation Association (APTA) track requirements and track safety standards. Additionally, Keith is efficient in developing goals, establishing plans and priorities, and monitoring the work of all employees in multi-mode rail transportation systems. He is organized, sets priorities, and exercises sound, independent judgment within established guidelines. Keith has demonstrated the ability to maintain effective interpersonal relationships at all organizational levels and with the public.

Keith Kranda possesses over 40 years of experience and is a leader in the industry for railroad construction management, track inspection, track maintenance, and safety compliance. He has extensive experience and knowledge in inspecting and monitoring all aspects of track work including, but not limited to, field weld testing, tie installation, open plinth, paved trackwork construction, and special trackwork installation. Having worked directly for railways and public transportation agencies, Keith brings a distinct insight and understanding of the critical requirements and procedures for rail construction projects. He has a thorough understanding of applicable industry standards and regulations including American Railway Engineering and Maintenance-of-Way Association (AREMA), California Public Utilities Commission

MTS On-call Construction Management Services, Bayside Double Track IMT

Mr. Kranda serves as the Assistant Resident Engineer responsible for Rail Operations Coordination and Trackwork on MTS' Bayside Double Track IMT Project located at the 12th and Imperial Station in San Diego, CA. The project consists of a new second track on the Bayside Trolley Line, a new station platform, a new double crossover, upgrades to the overhead catenary system (OCS), modifications to the existing train signal system, reconstructing an access road, upgrades to drainage, and relocation of pedestrian canopy structures. Bid alternatives for other improvements include replacing several track turnouts, and upgrades to other site facilities. Mr. Kranda is currently providing constructability support to MTA and the design team for the process of rebidding the project with a base portion of the project and two add alternatives to meet budget requirements. Construction is anticipated to begin in late 2021, at which time Mr. Kranda will lead the inspection team, working directly for the MTS Project Engineer (Rail), and will be responsible for all elements associated with track construction including submittal review, inspection, daily coordination with MTS Operations, coordination of Absolute Work Windows (AWWs), and reviewing Site Specific Work Plans.

MTS On-call Construction Management Services, El Cajon Third Track

Mr. Kranda is currently serving as the Assistant Resident Engineer for the MTS El Cajon Third Track project. The project consists of constructing an additional track and station platform modifications that enable both the Green and Orange Lines to terminate at the El Cajon Transit Center. These modifications will allow MTS to operate with ease over an intermittently delayed one-mile track segment between Gillespie Field Station and Santee, by introducing a two-car trolley shuttle at the El Cajon Transit Center. The El Cajon Transit Center currently has at grade tracks at Palm Avenue and are grade separated at Main Street. Mr. Kranda's responsibilities include review of submittals, RFIs, Workplans, and AWW Coordination.

MTS/SANDAG Orange Line Courthouse Station

Mr. Kranda served as Assistant Resident Engineer and Track/Station Inspector for the San Diego Metropolitan Transit System (MTS) Orange Line Courthouse Station project in downtown San Diego, California. The \$6.4M project constructed a new trolley station in downtown San Diego on C Street between Columbia Street and 1st Avenue, and relocated the Orange Line terminus from the Santa Fe Depot to the new station. The new station provides direct access to the new 22-story courthouse building, helps relieve congestion at the Santa Fe Depot station, and improves overall service to the Downtown area. In these roles, Mr. Kranda was responsible for quality assurance inspection and documentation related to all trackwork including verifying that rail bonding was maintained at all times to preserve negative return track circuits; that concrete/wood ties were uniformly supported and properly spaced; that the rail had proper alignment, cross level and gage; that rail ends were cut square, beveled, and hardened; that thermite rail welds were properly located and inspected; and that the track was lined and surfaced per plan. He performed inspection for special trackwork elements such as turnouts, crossovers, and Iron Horse track to confirm compliance with the plans and specifications. Mr. Kranda assisted with inspection and documentation of the station construction including shelters, information kiosks, VMS sign structures, signage, and security fencing removals.

Rex Crabtree (KCS)
As-Needed Civil Inspector

EDUCATION/PROFESSIONAL CREDENTIALS

CAL/OSHA 10-Hour Construction Safety and Health Training
Caltrans Construction Division Field Office Procedures Training
MTS Roadway Worker Protection Training; NCTD
Railroad Worker Protection Training; BNSF/UPRR
Railroad Worker Protection Training

Rex Crabtree is a construction professional with over 45 years of experience. He has overseen all tasks of construction from traffic signal and streetlight installation; mass dirt, rock excavation; underground, including dry, wet, and relocation of existing utilities; finished roadways; international and military airports, including asphalt and concrete paving; trolley line installation. Mr. Crabtree has extensive experience with local agencies, Caltrans, DelDot, Cities and Counties. He has experience with portable Soil Cement, CTB, Lime Treatment plants, crushing and screening equipment. He has been responsible for pay estimates, change orders, job scheduling and estimating. He is respected by agencies, owners, subcontractors, and personnel by being professional, respectful and problem solving. Mr. Crabtree maintains or will beat the time schedule of the project and work to come in under budget.

MTS IRIS Rapid Corridor and Station Design

Mr. Crabtree serves as a Civil/Structures/Underground Inspector for this \$4.4M MTS Rapid Corridor and Station Design. The project work includes traffic control; demolition; concrete, asphalt roadway reconstruction; curb, gutter, sidewalk, earthwork, and concrete placement; AC repair and or replacement; traffic signal and streetlight installation; fabricated fencing removal and reinstallation; traffic signage and striping. Mr. Crabtree is responsible for providing general supervision of construction activities to verify work is performed in compliance with plans, specification, and special provisions; developing reports reflecting construction details; and reporting deficiencies to the Resident Engineer. He also produces quantity sheets for monthly contract pay quantities, verifying certifications for materials and verifies those quantities with the General Contractor prior to being reviewed by the Resident Engineer. Scheduled soils and concrete testing to ensure that the work performed is to industry standards and contract requirements. Additionally, Mr. Crabtree reviewed project plans and work with and in conjunction with MTS to modify issues with the plans to facilitate a working situation due to project changes. Furthermore, he led project walks to review project completion to date with the representatives of MTS. As the Lead Inspector for the project, Mr. Crabtree worked with the general contractor and other specialty inspectors to confirm all aspects of the project were completed to contract requirements.

MTS El Cajon Transit Center Third Track

Mr. Crabtree serves as a Civil/Structures/Underground Inspector for this \$10.1M MTS Station improvement and additional track installation project. The work includes demolition; traffic control; wall footing excavation, poured in place concrete wall construction including backfill; curb, gutter, sidewalk earthwork and concrete placement; RCP and plastic pipe excavation and placement; ballast placement for track work; AC repair and or replacement; fabricated fencing and handrail installation; traffic signage and striping. Mr. Crabtree is responsible for providing general supervision of construction activities to verify work was performed in compliance with plans, specification, and special provisions; developing reports reflecting construction details; and reporting deficiencies to the Resident Engineer. He also produces quantity sheets for monthly contract pay quantities, verifying certifications for materials and verifies those quantities with the General Contractor prior to being reviewed by the Resident Engineer. Scheduled soils and concrete testing to ensure that the work performed is to industry standards and contract requirements. Mr. Crabtree reviews project plans and work in conjunction with MTS as well as the design team to modify issues with the plans to facilitate a working situation due to project changes. Furthermore, he leads project walks to review project completion to date with the representatives of MTS. As the Lead Inspector for the project, Mr. Crabtree works with the general contractor and other specialty inspectors to confirm all aspects of the project are completed to contract requirements.

Diamond Lane Contractors, Various Projects

Mr. Crabtree served as the General Superintendent and Project Manager on various projects for Diamond Lane Construction. He was responsible for all field operations including excavation, dry, wet utilities, fine grade, base, asphalt, and concrete paving. He supervised and coordinated moving, erecting and operating portable CTB plants soil cement plants, lime treatment plants and crushing equipment/screening equipment. He implemented and maintained company health and safety programs. He developed and maintained equipment maintenance procedures. He was responsible for field operations and individual projects up to \$6M and total annual projects up to \$10M. Diamond Lane won an award from the "American Society of Civil Engineers", San Diego Section, the 2006 Outstanding Civil Engineering Project for Improved Runway Safety Area, (Engineered Material Arresting System), San Diego International Airport.

Lekos Electric, Inc., Various Projects

Mr. Crabtree served as the General Manager on various projects at Lekos Electric. He was responsible for directing all field operations including scheduling, and coordinating all activities, equipment, and material acquisition. He interacted with state, city and private agencies from inception to completion of projects. He implemented and maintained company health and safety programs and company fleet equipment programs.



Kleinfelder Construction Services, Inc.

5761 Copley Drive, San Diego, CA 92111
P: 858-223-8500 | F: 858-223-8499

ATTACHMENT B
NEGOTIATED FEE PROPOSAL

DRAFT

Work Order Estimate Summary

Att.A, Item 18, 05/15/25

MTS Doc. No. G2498.0-21

Work Order No. WOA2498-CM30

Attachment: B

Work Order Title: BROADWAY AND C ST WHEEL COUNTER AND SICA S7 REPLACEMENT

Project No: WOA2498-CM30

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes	Cost Codes Description	Total Costs
1	0270	Project / Work Order Management	\$3,922.14
2	0270	Construction Management and Inspection Services	\$152,347.44

Totals = **\$156,269.58**

Table 2 - TASKS/WBS Summary (Costs & Hours)

Item	TASKS/WBS	TASKS/WBS Description	Labor Hrs	Total Costs
1	0270	Project / Work Order Management	16.0	\$3,922.14
2	0270	Construction Management and Inspection Services	558.0	\$152,347.44

Totals = **574.0** **\$156,269.58**

Table 3 - Consultant/Subconsultant Summary (Costs & Hours)

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
			X	Kleinfelder Construction Services	64.0	\$14,375.88
		X		CA Wehsener Engineering	262.0	\$62,971.06
X		X		Destination Enterprises	280.0	\$78,922.64

Totals = **606.0** **\$156,269.58**

Work Order Estimate
Summary

Total Hours =

64

Total Costs =

\$14,375.88

Consultant/Subconsultant:

Kleinfelder Construction Services

Work Order Title:

BROADWAY AND C ST WHEEL COUNTER AND SICA S7 REPLACEMENT

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Hank Gentile	Keith Kranda	Taylor Wilson								Total Hours	Totals
				Contract Manager 25/26	Inspector - PW Grp 2	Project Controls II 25/26									
				\$ 315.97	\$ 209.18	\$ 112.73									
1	Task 1	Project / Work Order Management													
1.0	Project / Work Order Management		\$86.06	10		6								16	\$3,922.14
		Subtotals (Hours) =	N/A	10		6								16	\$3,922.14
		Subtotals (Costs) =	\$86.06	\$3,159.70		\$676.38								16	\$3,922.14
2	Task 2	Construction Management and Inspection Services													
2.1.2.1	Civil / Track - Field Inspection Services		\$413.10		48									48	\$10,453.74
		Subtotals (Hours) =	N/A		48									48	\$10,453.74
		Subtotals (Costs) =	\$413.10		\$10,040.64									48	\$10,453.74
		Totals (Summary) =												64	\$14,375.88
		Total (Hours) =	N/A	10	48	6								64	
		Total (Costs) =	\$499.16	\$3,159.70	\$10,040.64	\$676.38									\$14,375.88
		Percentage of Total (Hours) =	N/A	16%	75%	9%								100%	
		Percentage of Total (Costs) =	3%	22%	70%	5%									100%

Work Order Estimate Summary

Att.A, Item 18, 05/15/25

Consultant/ Subconsultant: **Kleinfelder Construction Services**

Work Order Title: **BROADWAY AND C ST WHEEL COUNTER AND SICA S7 REPLACEMENT**

ODC Item	TASKS/WBS (1-5)												
	Description	Unit	Unit Cost	Task 1		Task 2		Task 3		Task 4		Task 5	
				Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Monthly Field Vehicle - Hank Gentile, Keith Kranda	Hours/Total Working Hours Per Month	\$1,377.00	0.06	\$86.06	0.30	\$413.10						
2													
3													
4													
5													
6													
7													
8													
9													
10													

Subtotal = **\$86.06** Subtotal = **\$413.10** Subtotal = Subtotal = Subtotal =

ODC Item	Description	TASKS/WBS (6-10)											
												Totals	
		Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Monthly Field Vehicle - Hank Gentile, Keith Kranda											0	\$499.16
2													
3													
4													
5													
6													
7													
8													
9													
10													

Subtotal = Subtotal = Subtotal = Subtotal = Subtotal = Totals = **\$499.16**

Work Order Estimate
Summary

Total Hours =

262

Total Costs =

\$62,971.06

Consultant/Subconsultant:

CA Wehsener Engineering

Work Order Title:

BROADWAY AND C ST WHEEL COUNTER AND SICA S7 REPLACEMENT

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Chuck Wehsener	Marty Maggard	Thomas Wehsener									Total Hours	Totals
				Engineering, Supervisor 25/26	Engineering, Supervisor 25/26	QA/QC Associate 25/26										
				\$ 249.31	\$ 249.31	\$ 175.93										
2	Task 2	Construction Management and Inspection Services														
2.1.1	Resident Engineering			90	140										230	\$57,341.30
2.1.2.2	Electrical - Field Inspection Services					32									32	\$5,629.76
		Subtotals (Hours) =	N/A	90	140	32									262	\$62,971.06
		Subtotals (Costs) =		\$22,437.90	\$34,903.40	\$5,629.76									262	\$62,971.06
		Totals (Summary) =													262	\$62,971.06
		Total (Hours) =	N/A	90	140	32									262	
		Total (Costs) =		\$22,437.90	\$34,903.40	\$5,629.76										\$62,971.06
		Percentage of Total (Hours) =	N/A	34%	53%	12%									100%	
		Percentage of Total (Costs) =		36%	55%	9%										100%

Work Order Estimate
Summary

Total Hours =

280

Total Costs =

\$78,922.64

Consultant/Subconsultant:

Destination Enterprises

Work Order Title:

BROADWAY AND C ST WHEEL COUNTER AND SICA S7 REPLACEMENT

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Mark Crowley	Mark Crowley	Mark Crowley								Total Hours	Totals
				Signal Inspector - PW REG 25/26	Signal Inspector - PW OT 25/26	Signal Inspector - PW DT 25/26									
				\$ 224.21	\$ 336.32	\$ 448.43									
2	Task 2	Construction Management and Inspection Services													
2.1.2.2	Electrical - Field Inspection Services		168	80	32								280	\$78,922.64	
		Subtotals (Hours) =	N/A	168	80	32							280	\$78,922.64	
		Subtotals (Costs) =		\$37,667.28	\$26,905.60	\$14,349.76							280	\$78,922.64	
		Totals (Summary) =											280	\$78,922.64	
		Total (Hours) =	N/A	168	80	32							280		
		Total (Costs) =		\$37,667.28	\$26,905.60	\$14,349.76								\$78,922.64	
		Percentage of Total (Hours) =	N/A	60%	29%	11%							100%		
		Percentage of Total (Costs) =		48%	34%	18%								100%	



**Metropolitan
Transit
System**

Agenda Item No. 19

**MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS**

May 15, 2025

SUBJECT:

Fiscal Year (FY) 2024-2025 Low Carbon Transit Operations Program (LCTOP) Funding

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors:

- 1) Rescind MTS Resolution No. 25-02 adopted on April 17, 2025; and**
- 2) Adopt MTS Resolution No. 25-04 to:**
 - a) Agree to comply with all conditions and requirements set forth in the Certification and Assurances Document, and applicable statutes, regulations, and guidelines for all LCTOP funded transit projects;**
 - b) Authorize the Chief Executive Officer (CEO), or designated representative, to execute all required documents of the LCTOP and any amendments thereto with the California Department of Transportation;**
 - c) Authorize the allocation of \$8,527,008 in Fiscal Year (FY) 2024-2025 LCTOP funding for the procurement of Battery Electric Buses (BEBs), which will reduce greenhouse gas emissions and improve mobility with a priority on serving Disadvantaged Communities (DAC); and**
 - d) Certify that at least 50% of the total LCTOP funds received will be spent on projects or services that will benefit DACs identified in Section 39711 of the Health and Safety Code.**

Budget Impact

Resolution No. 25-04 would authorize the allocation of \$8,527,008 in FY 2024-2025 LCTOP funding for future BEB Procurement Projects. This increases MTS's funding allocation by \$150,302 over the rescinded Resolution No. 25-02.



DISCUSSION:

On April 17, 2025 (Agenda Item No. 11), the MTS Board of Directors adopted Resolution No. 25-02 and took other action necessary to accept FY 2024–2025 LCTOP funding for the purchase of BEBs. This is formula funding designated for MTS that must be spent on qualifying projects. After the April 17, 2025 board meeting, MTS was notified that our allocation of FY 2024–2025 LCTOP formula funding had increased from \$8,376,706 to \$8,527,008.

Today's proposed action would rescind Resolution No. 25-02 and replace it with Resolution No. 25-04 accepting the higher allocation of \$8,527,008, and increase of \$150,302.

LCTOP Program Funding

The LCTOP is one of several programs that are part of the Transit, Affordable Housing, and Sustainable Communities Program established by the California Legislature in 2014 by Senate Bill 862. The LCTOP is a formula-based program, which provides operating and capital assistance for transit agencies to reduce greenhouse gas emissions and improve mobility, with a priority on serving disadvantaged communities.

As a condition of the LCTOP, MTS must agree to comply with specific terms and conditions outlined in the LCTOP Certification and Assurances Form. In addition, the Board must authorize the CEO, or their designated representative, to execute all required documents of the LCTOP and amendments thereto with the California Department of Transportation.

Upon approval by the MTS Board, MTS will use the requested FY 2024-25 LCTOP apportionment of \$8,527,008 along with the previous LCTOP apportionment in FY22-23 and FY23-24 in the amounts of \$8,100,849 and \$8,657,564, respectively, to fund future BEB procurement projects.

The LCTOP requires that the Board Resolution state DAC requirements if the service area of the implementing agency includes any DACs as identified by the California Environmental Protection Agency (CalEPA). The MTS service area includes 37 DACs as identified by CalEPA. Hence, MTS is required to certify that at least 50% of the total LCTOP funds received will be spent on projects or services that benefit DACs identified in Section 39711 of the Health and Safety Code. MTS staff has conducted an analysis of the project areas and determined that both projects will provide direct and meaningful benefits to DACs in the MTS service area, indicating that one hundred percent of the allocated funds will provide benefits to DACs.

Therefore, staff recommends the MTS Board of Directors:

1. Rescind MTS Resolution No. 25-02 adopted on April 17, 2025; and
2. Adopt MTS Resolution No. 25-04 to:
 - a. Agree to comply with all conditions and requirements set forth in the Certification and Assurances Document, and applicable statutes, regulations, and guidelines for all LCTOP funded transit projects;
 - b. Authorize the Chief Executive Officer (CEO), or designated representative, to execute all required documents of the LCTOP and any amendments thereto with the California Department of Transportation;

- c. Authorize the allocation of \$8,527,008 in Fiscal Year (FY) 2024-2025 LCTOP funding for the procurement of Battery Electric Buses (BEBs), which will reduce greenhouse gas emissions and improve mobility with a priority on serving Disadvantaged Communities (DAC); and
- d. Certify that at least 50% of the total LCTOP funds received will be spent on projects or services that will benefit DACs identified in Section 39711 of the Health and Safety Code.

/S/ Sharon Cooney

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, Mark.Olson@sdmts.com

Attachment: A. Resolution No. 25-04

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

Resolution No. 25-04

Resolution Authorizing the Execution of the
Certifications and Assurances and Authorized
Agent Forms for the 2024-2025 Low Carbon Transit
Operations Program (LCTOP), and the Application
of \$8,527,008 FY 2024-2025 LCTOP funding for
future Battery Electric Bus Procurement Projects

WHEREAS, the San Diego Metropolitan Transit System (MTS) is an eligible project sponsor and may receive state funding from the LCTOP now or sometime in the future for transit projects; and

WHEREAS, the statutes related to state-funded transit projects require a local or regional implementing agency to abide by various regulations; and

WHEREAS, Senate Bill 862 named the California Department of Transportation as the administrative agency for the LCTOP; and

WHEREAS, the Department has developed guidelines for the purpose of administering and distributing LCTOP funds to eligible project sponsors (local agencies); and

WHEREAS, MTS wishes to delegate authorization to execute these documents and any amendments thereto to the Sharon Cooney, Chief Executive Officer (CEO), and designated representatives; and

WHEREAS, MTS wishes to allocate \$8,527,008 from FY 2024-2025 LCTOP funds for future Battery Electric Bus Procurement Project.

NOW THEREFORE, BE IT RESOLVED, DETERMINED, AND ORDERED by the MTS Board of Directors (Board), that MTS agrees to comply with all conditions and requirements set forth in the Certification and Assurances document, and applicable statutes, regulations, and guidelines for all LCTOP funded transit projects.

BE IT FURTHER RESOLVED by the Board that the CEO, or designated representative, be authorized to execute all required documents of the LCTOP program and any Amendments thereto with the California Department of Transportation.

BE IT FURTHER RESOLVED by the Board that MTS be authorized to apply for and use the FY 2024-2025 LCTOP funds, for a future BEB procurement project.

BE IT FURTHER RESOLVED by the Board that MTS agrees to spend at least 50% of all LCTOP funds received on projects or services that benefit SB535 Disadvantaged Communities.

PASSED AND ADOPTED, by the Board of Directors this 15th day of May, 2025 by the following vote:

AYES:

NAYS:

ABSENT:

ABSTAINING:

Chairperson
San Diego Metropolitan Transit System

Filed by:

Approved as to form:

Clerk of the Board
San Diego Metropolitan Transit System

General Counsel
San Diego Metropolitan Transit System

Resolution No. 25-04



Agenda Item No. 20

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Fiscal Year (FY) 2026 Operating Budget Discussion (Gordon Meyer)

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors:

- 1) Receive testimony, review, and comment on the FY 2026 MTS Operating Budget at a public hearing; and
- 2) Enact Resolution No. 25-03 (in substantially the same format as Attachment B) adopting the FY 2026 operating budget for the MTS, San Diego Transit Corporation (SDTC), San Diego Trolley (SDTI), MTS Contract Services, and the Coronado Ferry.

Budget Impact

Board adoption would establish the FY 2026 operating budget totaling \$473.1 million.

DISCUSSION:

Fiscal Year 2026 Budget Recap

The following is a recap of the FY 2026 budget process:

- MTS uses a zero-based budgeting process that begins in January each year. In MTS's process, every budget line-item is reviewed and approved each year. Department managers complete budget templates in which they propose amounts for each line item, submitted with the appropriate supporting details for each assumption (in contrast, with a traditional historic budgeting process, managers only justify variances versus prior year budget; the assumption is that the baseline is automatically approved). Meetings are held with each department to validate their assumptions, review proposals versus existing spending trends, and review any new initiatives. This collaborative process results in the assumptions that are then presented to and reviewed by senior management at MTS, the Executive Committee, and ultimately the MTS Board.
- On February 6, 2025, staff presented a forecast of the FY 2025 operating budget amendment as well as a current five-year forecast of the operating budget. The five-year

1255 Imperial Avenue, Suite 1000, San Diego, CA 92101-7490 • (619) 231-1466 • sdmts.com

San Diego Metropolitan Transit System (MTS) is a California public agency comprised of San Diego Transit Corp., San Diego Trolley, Inc. and San Diego and Arizona Eastern Railway Company (nonprofit public benefit corporations). MTS member agencies include the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, San Diego, Santee, and the County of San Diego. MTS is also the For-Hire Vehicle administrator for multiple cities in San Diego County.



forecast estimated that MTS would hit the “fiscal cliff” and run out of budget balancing funds early in FY 2028. In the same presentation, staff presented a range of potential short-term and long-term options for addressing the structural deficit. Staff recommended exercising off-ramp provisions of the Innovative Clean Transit (ICT) mandate for purchasing electric buses, shifting funding from capital to operations in FY 2026 (\$25M), FY 2027 (\$35M), and FY 2028 (\$50M), and delaying all planned service enhancements after the January 2025 service change. These short-term solutions were proposed to extend the timing of the fiscal cliff while MTS waits to see the results of potential revenue increases including a possible tax measure pursued by MTS or changes to the state-wide Transportation Development Act (TDA) tax that could dramatically increase MTS revenues. Other solutions discussed, but not part of the recommendation, were fare increases and minor/major service cuts. In this meeting the Planning department also recommended conducting a Comprehensive Operating Analysis (COA) to evaluate existing service and guide strategic decisions on service reductions (or increases) as necessary.

- On February 13, 2025, staff presented the same presentation to the Board. In this meeting, the Board approved the recommendation to exercise off-ramp provisions of the ICT mandate for purchasing electric buses, shift funding from capital to operations in FY 2026 (\$25M), FY 2027 (\$35M), and FY 2028 (\$50M), and delay all planned service enhancements after the January 2025 service change.
- On March 6, 2025, staff met with the Executive Committee and reviewed and recommended approval of the FY 2025 midyear operating budget amendment and the FY 2026 Capital Improvement Program (CIP).
- On March 13, 2025, staff met with the Board of Directors. During this meeting, staff reviewed and received Board approval of the FY 2025 amended operating budget and the FY 2026 CIP.
- On April 10, 2025, staff presented an initial draft of the operating budget to the Executive Committee meeting.
- Staff has continued to refine the proposed operating budget since the initial draft was presented in April. Expenses in the final proposed budget decreased by \$2.5 million from the prior draft, primarily due to finalizing energy expense assumptions. Other operating revenue decreased by \$923,000, primarily due to updated Low Carbon Fuel Standard (LCFS) energy credit assumptions.

Fiscal Year 2026 Operating Budget

The FY 2026 total budgeted revenue is projected at \$473.1 million, and total expenses are projected at \$473.1 million, resulting in a balanced budget for FY 2026. Attachment A is the proposed FY 2026 Operating Budget.

Fiscal Year 2026 Revenues

Section 3.02 of Attachment A summarizes the total operating and non-operating revenues in a schedule format. As indicated within the schedule, FY 2026 combined revenues total \$473.1 million, an increase from the FY 2025 amended budget of \$24.9 million (5.6%).

Operating revenue totals \$121.1 million, an increase from the FY 2025 amended budget of \$6.1 million (5.3%). Passenger revenues are projected to increase by \$9.4 million (11.7%) based on

projected ridership of 86.2 million passengers and an average fare of \$1.04. The ridership target represents 6.0% growth over ridership in the FY 2025 amended budget. The average fare of \$1.04 represents a \$0.05 (5.4%) increase over the FY 2025 amended budget, based on the preliminary results of the fare enforcement changes that began in February 2025. Other operating revenues are projected to decrease by \$3.2 million (-9.2%), primarily due to projected interest revenue decreasing by \$3.1M (-32.1%). MTS is expected to generate significantly less interest next year as MTS will no longer be receiving federal stimulus funds and plans to deplete the operating deficit reserve in FY 2026, resulting in lower cash balances. Advertising revenue is expected to decrease by \$226,000 (-3.5%), primarily to reflect recent decreases in vehicle advertising revenue. Real estate lease is expected to decrease by \$457,000 (-11.9%) due to declining occupancy at the Grantville development as well as the continued non-renewals of Clean Transit Advancement Campus (CTAC) property tenants. These decreases are projected to be partially offset by an increase of \$585,000 (5.9%) in energy credit revenue. The Low Carbon Fuel Standard (LCFS) program is expected to implement changes to credit generation for fixed guideway electricity reported for January 2026 and later. The new changes are expected to result in approximately 2.3 times the number of credits previously generated for fixed guideway electricity by MTS. Beginning in January 2026, pre-2011 sub-stations (all except Mid-Coast sub-stations) will generate as many credits as post-2010 sub-stations (Mid-Coast), representing a significant increase in credit generation for MTS going forward.

Non-operating revenue totals \$352.0 million, an increase from the FY 2025 amended budget of \$18.7 million (5.6%). Non-operating revenue includes both subsidy revenue and other revenue (reserves) as detailed in Section 3.02 of Attachment A.

Federal Transit Administration (FTA) funding is structured on a reimbursement basis (after expenses are incurred), and funds both the CIP and operating budgets. MTS's share of recurring federal revenue in the operating budget is expected to increase by \$1.3 million (1.7%) from the FY 2025 amended budget to \$79.1 million in total. This is due to increasing preventive maintenance funds in the operating budget by \$2.0 million.

On March 27, 2020, President Trump signed the Coronavirus Aid, Relief, and Economic Security (CARES) Act, which provided \$25 billion to the transit industry nationwide. MTS received \$220 million in CARES Act funding over multiple fiscal years to supplement lost revenues and increased expenses related to the pandemic. On March 11, 2021, President Biden signed the American Rescue Plan (ARP) Act into law, providing \$140 million in additional stimulus funding for MTS. In total, MTS was awarded \$360.0 million in stimulus funds. The final \$47.4M of stimulus funds were drawn and received during FY 2025, and there are no additional stimulus funds available for FY 2026. Stimulus funds that were drawn and contributed to the operating deficit reserve in prior years will be available and spent in FY 2026, but are represented as reserves revenue in Section 3.02 of Attachment A.

Regional sales tax revenues (TDA and TransNet) in the MTS operating budget are expected to increase by \$12.1 million (7.4%) year over year for FY 2026, but only after shifting \$25.0 million in TDA revenue from the capital budget to operations. Regional sales tax receipts are projected to decline overall in FY 2026 with very modest growth projected for future years in the San Diego Association of Government's (SANDAG) most recent forecasts. This is a concerning trend that has the potential to dramatically affect the short-term financial outlook for MTS.

Regional TDA cash receipts are projected to decline -3.6% versus FY 2025 projected cash receipts. MTS files an annual TDA claim based on SANDAG projections, and that claim amount is the amount received, regardless of actual sales tax performance. If sales tax receipts end up

higher than the claim amount, excess funds are stored in a reserve at the County. If sales tax receipts come in lower than the claim amount, funds are drawn from the County reserve. The overall amount of TDA projected for FY 2026, available for both capital and operations, is decreasing by \$7.7 million (-5.7%) from the FY 2025 amended budget based on projected sales tax receipts by SANDAG. The overall decrease is higher than the -3.6% decrease in receipts projected by SANDAG, because MTS had claimed an additional \$3.0 million from the County TDA reserve in the FY 2025 claim. TDA revenue in the operating budget is increasing by \$10.3 million (11.5%) from the FY 2025 amended budget, after shifting \$25.0 million from the FY 2026 capital budget to the FY 2026 operating budget.

TransNet revenue is projected to increase by \$1.7 million (2.3%) versus the FY 2025 amended budget. Unlike TDA, TransNet revenues are not based on an annual claim process and are instead disbursed as the sales tax revenue is generated. The formula share of TransNet funding is expected to increase by \$153,000 (0.4%) versus last year, based on economic growth assumptions provided by SANDAG. MTS also receives TransNet as operating assistance for TransNet funded services, which includes Superloop, I-15 BRT, Mid-City Rapid, South Bay BRT, and Mid-Coast. TransNet operating assistance is projected to be \$34.7 million in FY 2026, an increase of \$1.6 million (4.7%) from the FY 2025 amended budget. This is primarily due to increases in net subsidy for TransNet-funded services based on higher expenses for these services.

In the FY 2025 fiscal year to date, MTS has received \$17.2 million of the projected \$33.9 million of State Transit Assistance (STA) funding. This funding is primarily programmed in the CIP due to its volatile history, but a portion is also allocated to operations to fund service increases, replace lost Medi-Cal revenue, and address the structural deficit. The amount in the operating budget is typically static at \$11.3 million but was reduced to \$6.2 million in the FY 2025 budget to keep the capital budget whole while reflecting an anticipated \$5.1 million shortfall in overall STA revenue. The share of STA in the operating budget is increasing back to \$11.3 million in FY 2026, an increase of \$5.1 million from the FY 2025 amended budget.

Other state revenue is projected to be \$20.9 million in FY 2026, an increase of \$11.9 million from the FY 2025 operating budget. Senate Bill 125 (SB 125), approved by the Governor on July 10, 2023, guides the distribution of \$4 billion in General Fund through the TIRCP on a population-based formula to regional transportation planning agencies, which can use the funds for either capital or operations. MTS is expected to receive \$237.3 million in SB 125 TIRCP funds over multiple fiscal years, including both capital and operations. The FY 2026 operating budget includes \$3.5 million for security enhancements, \$4.9 million for Route 227 (Iris Rapid) operations, \$826,000 for Route 910 (Overnight Express) operations, \$1.5 million for Trolley service enhancements (15-minute service on all lines), and \$10.2 million for balancing the structural deficit.

Other local funding is projected to be \$3.1 million in FY 2026, a decrease of \$1.2 million (-27.6%) from the FY 2025 amended budget. MTS historically received \$5.74 per student per quarter for operating the Route 201 and 202 shuttle service at the University of California, San Diego (UCSD). This revenue, which was projected to generate \$690,000 in FY 2025, will be included in the new U-PASS agreement and reported as passenger revenue beginning in FY 2026 (marking a reduction in subsidy revenue). Other local funding is also decreasing due to a \$500,000 reduction in the amount of FasTrak revenue being provided by SANDAG in FY 2026. The decrease in FasTrak revenue is part of a revenue swap with SANDAG and is being offset by an equal increase in TransNet reimbursement for BRT services.

Consolidated subsidy revenue totals \$289.9 million, a decrease of \$18.2 million (-5.9%) from the FY 2025 amended budget.

Section 3.06 details the other non-operating revenues by funding source. Reserve revenue totals \$62.1 million. For-Hire Vehicle (FHV) Administration and San Diego & Arizona Eastern (SD&AE) are self-funded activities. The FHV Administration is projected to use \$162,000 of reserves to balance its operating budget in FY 2026, as expenses are projected to exceed revenues. SD&AE is projected to contribute \$73,000 to its reserves, as revenues are projected to exceed expenses. The creation of an operating budget deficit reserve was approved by the Board in April 2023. MTS contributed \$57.0 million in excess revenues over expenses to the Operating Budget deficit reserve in FY 2023 and contributed an additional \$30.2 million at the end of FY 2024. The current balance of the operating deficit reserve is \$87.1 million and is expected to be \$62.0 million at the end of FY 2025, based on the projected usage of \$25.2 million in the FY 2025 amended budget. The FY 2026 proposed operating budget assumes that the entire \$62.0 million reserve balance will be used to balance the operating budget in FY 2026, at which point MTS will start using SB 125 TIRCP funds to balance the operating budget.

Fiscal Year 2026 Expenses

Section 2.01 contains the total revenues as detailed above and the total proposed expenses for FY 2026. FY 2026 combined expenses totaled \$473.1 million, an increase from the FY 2025 amended budget of \$24.9 million (5.6%). The proposed budget reflects planned service levels across all modes. Rail operations service levels are expected to increase by 1.3% with a full year of 15-minute system-wide service implemented in January 2025. Directly operated bus service levels are expected to remain flat at FY 2025 levels. The contracted fixed route bus service levels are expected to increase by 0.3% to reflect a full year of Route 910 Overnight Express service. Paratransit service levels, based on demand, are projected to increase by 8.4% in FY 2026 as demand continues to increase toward pre-pandemic levels.

Within operating expenses, personnel expenses are projected to increase from the FY 2025 amended budget by \$11.0 million (5.6%). Wages are expected to increase by \$6.7 million (5.7%) overall. Wages within Administration are projected to increase by \$1.1 million (4.6%), primarily due to the planned merit increase of 4.0% for management employees in FY 2026 and higher security staffing levels assumed in the FY 2026 budget. Wages within Trolley operations are projected to increase by \$3.1 million (7.8%) over FY 2025, primarily due to 7.0% wage increases for all SMART union members effective April 2025. Wages within Bus operations are increasing by \$2.4 million (4.6%), primarily due to a full year of increased wages which ranged from 7.0% to over 12% for IBEW and ATU employees effective January 2025. Fringe expenses are projected to increase by \$4.3 million (5.5%) versus the FY 2025 amended budget. This is primarily due to increasing healthcare expenses and pension expenses. Healthcare expenses are increasing by \$1.9 million (9.1%) due to premium increases as well as increases to employer contributions in the recently approved collective bargaining agreements. Pension costs are increasing by \$1.8 million (5.6%) overall. Within pension costs, the employer share of the SDTC defined benefit plan is increasing by \$1.1 million (5.7%) based on the most recent actuarial valuation and projected employee contributions. CalPERS employer contributions are projected to increase by \$626,000 (5.6%).

Purchased transportation costs are projected to increase from the FY 2025 amended budget by \$5.3 million (4.8%). This is primarily due to rate increases for both the fixed route contract and paratransit/minibus contract, both operated by Transdev. Both contracts have fixed and variable rate components which determine total contract costs. The fixed cost rate is not dependent on service levels and is a fixed monthly fee, whereas the variable rate is dependent

on the volume of service operated. Transdev fixed costs in the fixed route contract are increasing by 4.2% over the FY 2025 amended budget. The variable rate for Transdev is increasing by 4.0% in FY 2026, including an additional \$0.08 per revenue mile budgeted for potential Transdev collective bargaining increases as approved by the Board in FY 2025 (the additional \$0.08 will only be incurred as Transdev collective bargaining raises are agreed to and confirmed by MTS). Overall Transdev fixed route contract costs are projected to increase by \$3.7 million (4.4%). Fixed costs on the paratransit/minibus contract are increasing by 2.1% in FY 2026. The minibus per-mile rate is staying flat for FY 2026, and the paratransit per-hour rate is increasing by 2.8%. Overall, minibus costs are projected to decrease by \$90,000 (-1.4%) and paratransit costs are expected to increase by \$1.7M (9.1%). Paratransit costs are increasing due to the contract increases and a projected increase of 8.4% in service demand for FY 2026.

Excluding purchased transportation, outside service expenses are projected to increase from the FY 2025 amended budget by \$1.9 million (3.5%). Within outside services, security costs are increasing by 4.1%, primarily due to contractual 4.0% wage increases. Repair and maintenance costs are projected to increase by \$2.1 million (18.0%), primarily due to rail tie replacement, bridge repairs, and a new contract for light rail vehicle body repairs with price increases. Other outside services are decreasing by \$639,000 (-2.3%) due to a variety of changes. Decreases within other outside services primarily represent one-time expenditures in FY 2025 that are not continuing into FY 2026. These one-time expenses included emergency track repairs, Baltimore/Euclid Avenue planning studies, a variety of bus facility repair projects, and security equipment purchases for new staff (radios, handheld units). These decreases are partially offset by increases for the Planning department COA, fare system upgrades (mobile app enhancements), and increasing Information Technology department expenses for rail maintenance software upgrades and contractual increases.

Materials and supplies costs are projected to increase by \$2.1 million (10.6%), primarily due to an increase of \$1.3 million for SD8 light rail vehicle (LRV) drive unit overhauls within the LRV maintenance budget, and \$1.2 million for upgrading the credit card module on all existing ticket vending machines within the Revenue Maintenance department budget.

Energy costs are projected to increase by \$3.1 million (6.3%). Electricity costs are projected to increase by \$2.1 million (6.8%) due a projected 3.5% increase in rates combined with a 3.2% increase in projected usage for trolley traction power electricity stemming from a full year of 15-minute Trolley service across the entire system. Compressed natural gas (CNG) costs are projected to increase by \$887,000 (6.6%), primarily due to a projected increase of 6.6% in the rate per therm. The forecasted CNG commodity rate increase is being driven by increased demand (primarily exports), extreme weather events, and storage and pipeline issues.

Risk management costs are increasing by \$2.0 million (18.6%). The increase is primarily driven by an increase of \$1.5 million (16.4%) in insurance premiums, with property and excess liability insurance premiums driving the increase. Claim payments are projected to increase by \$555,000 in FY 2026, based on pending litigation as well as contingency for unplanned events.

General and Administrative costs are decreasing by \$409,000 (-5.5%) over the FY 2025 amended budget. The FY 2025 operating budget included one-time expenses for bus radio equipment and handheld units for security staff, expenses that will not be necessary in FY 2026.

Vehicle and Facility Lease costs are projected to decrease by \$35,000 (-1.6%), primarily due to non-revenue vehicle leasing expenses.

Debt service costs are zero in FY 2026. There are no outstanding debt service obligations.

In total, expenses are projected to increase by \$24.9 million or 5.6% versus the FY 2025 amended budget.

FY 2026 Other Information

Section 10 of Attachment A provides detail on the five-year forecast, key operating statistics, positional table information as well as the list of audited reserve balances as of June 30, 2024.

Five-Year Operating Forecast

Section 10.01 provides a look at MTS operations through FY 2030. Operating revenues are projected to increase by 4.7% in FY 2027 and then by an average of 3.4% from FY 2028 through FY 2030. These increases are primarily due to projected passenger revenue increases as ridership is expected to continue to grow by 6.0% in FY 2027, 5.0% in both FY 2028 and FY 2029, and then 4.0% in FY 2030. Within operating revenues, other revenues are projected to average negative growth of -0.2% over the forecast period, primarily reflecting decreasing interest revenue as interest rates and cash balances are projected to decline significantly. Declining interest is partially offset by projected increases in energy credit revenue over the forecast period.

Recurring subsidy revenue in the operating budget, which is primarily composed of sales tax revenues and federal formula funding, are projected to increase by an average of 2.2% from FY 2027 through FY 2030. This relatively low growth rate is primarily due to slow sales tax growth assumptions provided by SANDAG, particularly in FY 2027 and FY 2028 with TDA and TransNet expected to grow by an average of only 1.8% in FY 2027 and 2.7% in FY 2028, before returning to more normal growth trends in FY 2029 and beyond. This forecast also assumes federal revenues remain at FY 2026 levels throughout FY 2030 with zero projected growth due to the uncertainty regarding federal funding levels in the future.

Overall subsidy revenue in the operating budget, including both recurring and non-recurring sources, is projected to grow 26.1% in FY 2027, primarily due to shifting \$35.0 million from the capital budget as approved by the Board in February 2025, as well as including \$83.2 million in non-recurring SB 125 funding which will primarily be used to balance the structural deficit but also fund the recent service enhancements that are already in place. Total subsidy revenue is projected to grow by 4.0% in FY 2028, including the final approved shift of \$50.0 million from the capital budget to operations, and the projected usage of \$77.7 million in SB 125 funds to balance the structural deficit and keep implemented service enhancements in place. Without assuming any additional shifts from the capital budget to operations past FY 2028, subsidy revenue in the operating budget is projected to decrease -27.7% in FY 2029, reflecting the decrease of \$50.0 million that was shifted from capital to operations in FY 2028 as well as the projected decrease of \$61.8 million in available SB 125 funding in FY 2029 as the final \$15.9 million is projected to be spent in FY 2029. The total subsidy is then expected to decrease by -3.3% in FY 2030, due to having no SB 125 funds available since the entire balance of projected SB 125 awards will have already been depleted. It is worth noting that MTS has received approximately half of the \$237.3 million in planned SB 125 funds and is expecting two additional payments over multiple fiscal years. Any changes to the timing or the amount of these funds has the potential to significantly impact the MTS short-term financial outlook as these funds are being used to balance the operating budget until the anticipated fiscal cliff early in FY 2029.

Total recurring revenues, including operating revenues and recurring subsidy, are projected to grow by an average of 2.7% from FY 2027 through FY 2030. During that period, expenses are

projected to grow by an average of 3.9%, primarily reflecting annual inflation and growth in labor costs, with no service additions or decreases included.

With projected expense growth exceeding projected growth in recurring revenues, the current five-year operating forecast includes projected structural deficits in each subsequent fiscal year, beginning with a structural deficit of \$118.4 million in FY 2027 and growing to \$145.9 million in FY 2030. Non-recurring revenues, in the form of one-time shifts from the capital to budget (\$25.0 million in FY 2026, \$35.0 million in FY 2027, and \$50.0 million in FY 2028) and SB 125 funding are projected to balance the operating budget through FY 2028. In the current forecast, MTS will hit the fiscal cliff early in FY 2029, with a projected revenue shortfall of \$120.1 million.

Outcomes of potential revenue increases (tax measure, TDA reform, additional SB 125 allocations, etc.) will ultimately determine the outlook of the MTS operating budget in the near-term and determine whether major service cuts, fare increases, etc. will be necessary as MTS prepares for the looming fiscal cliff. MTS is currently procuring the services of a consulting firm to conduct a COA to develop alternative strategic plans for either major service increases (if MTS secures a tax initiative) or major service reductions (if there are no significant revenue increases). The COA is expected to be completed by September 2026, prior to the November 2026 election. Upon determination of a potential tax measure, MTS would begin working on the implementation of service increases or decreases immediately with service changes being implemented as early as January 2027.

Therefore, staff recommends that the MTS Board of Directors:

- 1) Receive testimony, review, and comment on the FY 2026 MTS Operating Budget at a public hearing; and
- 2) Enact Resolution No. 25-03 (in substantially the same format as Attachment B) adopting the FY 2026 operating budget for MTS, SDTC, SDTI, MTS Contract Services, and the Coronado Ferry.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, mark.olson@sdmts.com

Attachments: A. Proposed FY 2026 Operating Budget
B. Resolution No. 25-03



Fiscal Year 2026

Proposed Budget

Draft for Public Hearing

May 15, 2025

Metropolitan Transit System



This page intentionally left blank.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
TABLE OF CONTENTS
BUDGET FISCAL YEAR 2026

Table of Contents.....	i
Section 1, Introduction	
1.02 Service Area.....	1
1.03 Description of Operator Activities.....	3
1.04 Organization Chart.....	11
Section 2, Functional Budgets	
2.01 Operating Budget Summary.....	13
2.02 Operations Budget.....	14
2.03 Administrative Budget.....	15
2.04 Other Activities Budget.....	16
2.05 Capital Budget - Summary.....	17
Section 3, Revenues	
3.01 Summary of Significant Revenue Activities.....	19
3.02 Revenue Summary.....	25
3.03 Passenger Revenue.....	26
3.04 Other Operating Revenue.....	27
3.05 Subsidy Operating Revenue.....	28
3.06 Other Non Operating Revenue.....	29
Section 4, Operations Budgets	
4.01 Operations Budget.....	31
4.02 Bus Operations.....	32
4.03 Rail Operations.....	33
4.04 Contract Bus Operations - Fixed Route.....	34
4.05 Contract Bus Operations - Para Transit.....	35
4.06 Coronado Ferry.....	36
4.07 Administrative Pass Through.....	37
4.08 Administrative Pass Through Detail.....	38
Section 5, Administrative Budgets	
5.01 Administrative Budget.....	39
5.02 Board of Directors.....	40
5.03 Board of Directors Administration.....	41
5.04 Bus Bench / Bus Shelter.....	42
5.05 Capital Projects.....	43
5.06 Executive.....	44
5.07 Fare System.....	45
5.08 Finance.....	46
5.09 Fringe Benefits.....	47

Section 5, Administrative Budgets (continued)

5.10 General Expenses.....	48
5.11 Human Resources.....	49
5.12 Information Technology.....	50
5.13 Land Management.....	51
5.14 Legal.....	52
5.15 Marketing.....	53
5.16 Planning.....	54
5.17 Purchasing.....	55
5.18 Revenue.....	56
5.19 Risk.....	57
5.20 Security.....	58
5.21 Stores.....	59
5.22 Telephone Information Services.....	60
5.23 Transit Store.....	61

Section 6, Other Activities Budgets

6.01 Other Activities Budget.....	63
6.02 For-Hire Vehicle Administration.....	64
6.03 San Diego & Arizona Eastern Railroad.....	65

Section 7, Debt Service Budget

7.01 Summary of Significant Debt Service Activities.....	67
--	----

Section 8, Capital Budget

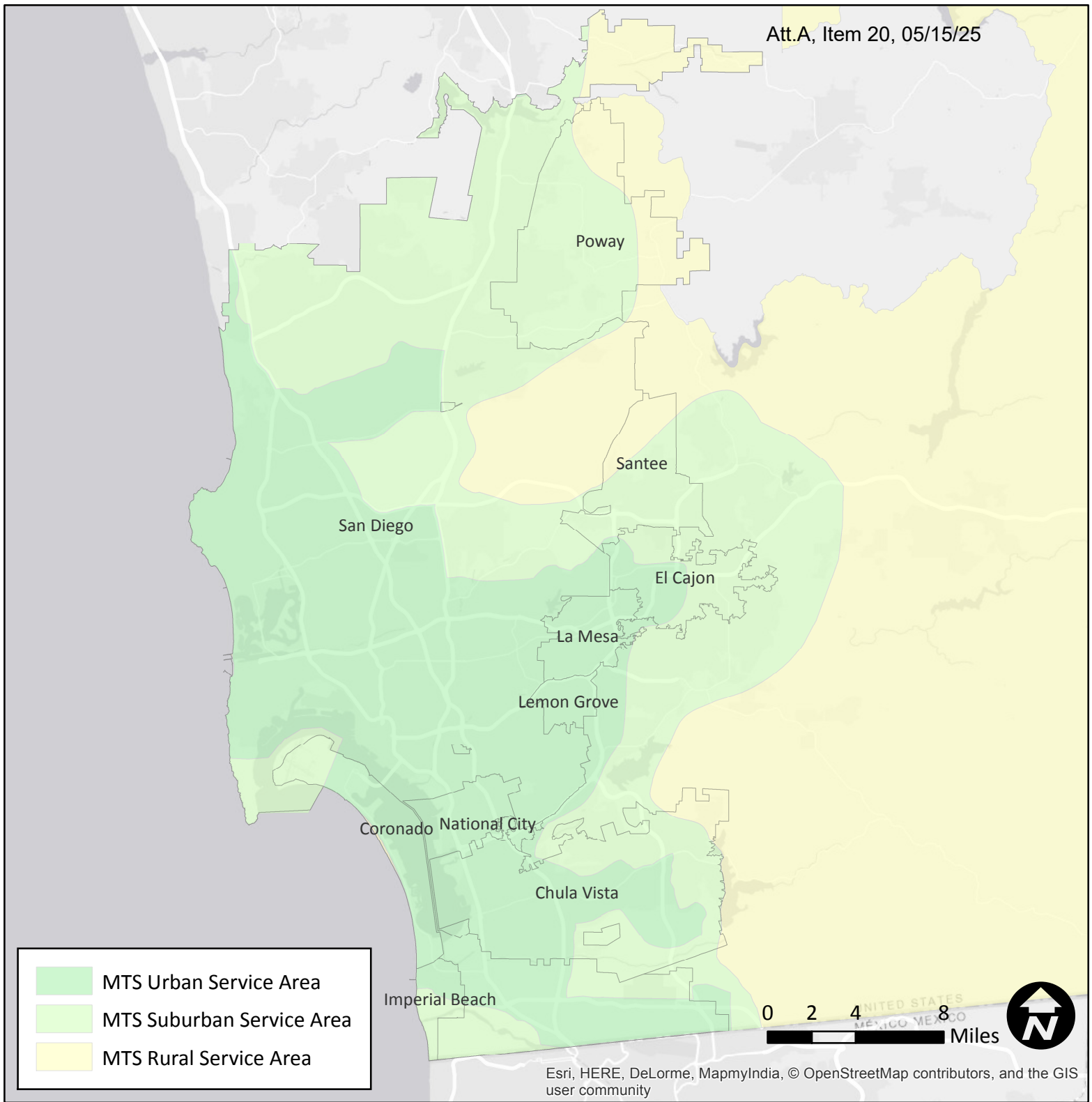
8.01 Summary of Significant Capital Activities.....	69
8.02 Capital Budget Revenue	71
8.03 Capital Budget Projects.....	72
8.04 Cumulative Capital Budget.....	74
8.05 Capital Project Descriptions.....	75
8.06 Five Year Capital Projection.....	77

Section 9, Funding Sources by Activity

9.01 Funding Sources by Activity - Summary Matrix.....	79
9.02 Funding Sources by Activity - Detail Matrix.....	80
9.03 Funding Sources by Activity - Detail Schedules..	83

Section 10, Appendix

10.01 Five Year Financial Projections.....	111
10.02 Statistical Summary.....	112
10.03 Position Information Summary.....	118
10.04 Position Information Detail.....	119
10.05 Salary Grade Ranges.....	129
10.06 Reserve Summary.....	130



San Diego Metropolitan Transit System

Area of Jurisdiction

June 2026



This page intentionally left blank.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
System Summary
Fiscal Year 2026
Section 1.03

The San Diego Metropolitan Transit System was created to provide the policy setting and overall management coordination of the public transportation system in the San Diego metropolitan service area. This service area encompasses approximately 3 million people residing in a 570 square mile area of San Diego County, including the cities of Chula Vista, Coronado, El Cajon, Imperial Beach, La Mesa, Lemon Grove, National City, Poway, Santee, San Diego and the unincorporated area of the County of San Diego. A number of fixed-route operating entities provide the service and have banded together to form a federation of transit service providers called the Metropolitan Transit System (MTS). The purpose of MTS is to provide coordinated routes, fares and transfers among the different operating entities.

Rail Operations

MTS Rail Operations (SDTI) operate and maintain a fleet of 168 light rail vehicles (LRVs) to provide transit service over four separate operating line segments. The Blue Line operates from the San Ysidro Transit Center through downtown San Diego and terminates at the University Towne Center (UTC) Transit Center. As of September 1, 2024, the Orange Line serves East County communities from the Courthouse Station in downtown San Diego through El Cajon Transit Center. The Green Line also connects passengers from downtown San Diego to El Cajon, but it starts at 12th & Imperial Transit Center and operates through the Bayside corridor (serving the Convention Center, major hotels, and Petco Park), before serving Old Town, Mission Valley, and SDSU on its alignment. At El Cajon, passengers from the Orange/Green Lines transfer to the Copper Line, which serves the stations between El Cajon and Santee.

Regular trolley service is provided virtually around the clock with a 22-hour service window, and increased service is provided during special events throughout the year. FY26 ridership for the MTS rail system is projected at approximately 46.4 million passengers.

Bus Operations

MTS Bus Operations are a consolidation of services operated by San Diego Transit Corporation (SDTC) and MTS Contracted Services. These entities operate and maintain a fleet of 755 buses in total, of which 76.2% are powered by renewable compressed natural gas, 3.3% are electric, 3.2% are gas-powered, and 17.4% are light/medium duty propane buses. In fiscal year (FY) 2026, MTS bus services will operate over 100 fixed routes, including traditional urban shuttle-type routes, express routes and bus rapid transit routes, plus paratransit services. These bus services will log over 2.0 million revenue hours while traveling over 24 million revenue miles across San Diego County in FY26. FY26 ridership for all MTS bus services is projected at 39.8 million passengers.

Other Operations

The City of Coronado sponsors a peak-period, fare-free commuter ferry service operating between downtown San Diego, Naval Air Station North Island, and Coronado. The service currently operates on weekdays only in the mornings for six trips departing from Broadway between the hours of 4:50 a.m. and 8:10 a.m. and six trips departing from Coronado Ferry Landing between the hours of 5:10 a.m. and 8:35 a.m. In the afternoons there are five trips departing from Broadway between 2:00 p.m. and 6:00 p.m. and five trips departing from Coronado Ferry Landing between 2:30 p.m. and 6:30 p.m.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
Rail Operations Description of Activities
Fiscal Year 2026
Section 1.03

General System Summary

San Diego Trolley, Inc. opened for revenue service on July 26, 1981, with the initial operating line extending from Centre City San Diego, to San Ysidro Station at the Mexican border. The system, now referred to as the MTS Rail Division, has enjoyed a very successful 44-year operating history, maturing through ten service expansions to one of the largest LRT systems in North America at over 65 miles in length.

The LRT operation consists of four separate operating lines. The Blue Line operates from the San Ysidro Transit Center through downtown San Diego and terminates at the University Towne Center (UTC) Transit Center. As of September 1, 2024, the Orange Line serves East County communities from the Courthouse Station in downtown San Diego through El Cajon Transit Center. The Green Line also connects passengers from downtown San Diego to El Cajon, but it starts at 12th & Imperial Transit Center and operates through the Bayside corridor (serving the Convention Center, major hotels, and Petco Park), before serving Old Town, Mission Valley, and SDSU on its alignment. At El Cajon, passengers from the Orange/Green Lines transfer to the Copper Line, which serves the stations between El Cajon and Santee.

The entire system provides low-floor service where on-time performance and service efficiencies continue to enhance the ridership experience.

The system operates and maintains a fleet of 168 Siemens light rail vehicles. Of the original 52 Siemens SD100 high-floor light rail vehicles, 13 have been decommissioned and recycled. 21 of 39 SD100 light rail vehicles have been decommissioned and delivered to the Province of Mendoza, Argentina and the remaining 18 will be delivered by December 2025. One Siemens U-2 light rail vehicle has been retained for delivery to the Karl Strauss Brewery ("original Red Trolley Ale") for use at their newly planned facility in the City of Santee. The 1001 has been fully restored and recommissioned by MTS for heritage purposes. Two PCC cars have been fully restored and provide service as part of the MTS Vintage fleet on the Silver Line (Centre City Loop). The standard train consist is primarily S70-S70-S70 (low-floor). The general operating environment includes a combination of open stations at-grade with standard railroad crossing protection, downtown mixed street traffic operation, elevated guideways with aerial stations, open-cut sub-grade tracks and one 4,100-ft long tunnel and underground station at SDSU.

The MTS Rail System is projected to carry 46.4 million passengers in FY26. Light rail service is provided to 64 stations and transit centers across seven local jurisdictions, each with separate emergency response (police, fire and paramedic) services. Currently, MTS Rail Operations runs 585 weekday scheduled trips and many more during special events. While average weekday ridership is approximately 120,000, this number increases substantially when event service is provided. Major special events include those at PETCO Park (Padres), ComicCon, Oktoberfest, etc. Regular LRT service is provided virtually around the clock with a 22-hour service window.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
 Directly Operated Bus Services Description of Activities
 Fiscal Year 2026
 Section 1.03

General System Summary

Founded in 1886, San Diego Transit Corporation (SDTC) has been providing the citizens of San Diego with safe, efficient, and reliable public transportation for over 130 years. Its fleet of 255 buses is projected to carry 18.6 million passengers in FY26.

SDTC, now referred to as MTS Bus, directly operates 26 routes, 17 Urban/Local routes, 3 Express routes, and 6 Rapid routes. Three of the urban routes operate with a limited-stop component, serving only major stops for a faster trip. Service is offered throughout the City of San Diego and into surrounding communities in an area that stretches from National City in the South Bay as far north as the City of Escondido and from the Pacific Ocean to the College area. These routes meet a variety of customer needs providing transportation to work, school, shopping, medical appointments, and recreational activities.

Effective June 2014, MTS Bus initiated services for the Bus Rapid Transit (BRT) project. The BRT platform is based on a priority operating environment through the use of managed bus lanes and signal priority. MTS Bus operates the branded "Rapid" routes (215, 235, & 237) featuring high frequency, longer service duration, articulated buses and enhanced passenger facilities. Rapid services operate along several corridors, including: the I-15 corridor between Downtown San Diego and Escondido, the El Cajon Blvd corridor between San Diego State University (SDSU) and Downtown San Diego and along Mira Mesa Blvd corridor between I-15 (Miramar College) and University of California San Diego (UCSD). The Super-Loop, a locally branded form of BRT and part of the Rapid family, provides service to the community of University City, serving UCSD, UTC shopping center and La Jolla Colony on Routes 201, 202, and 204. These BRT services provide an entire new network of premium level services for the community.

The entire MTS Bus fleet is fully ramp accessible to persons with mobility impairments. Every bus has two securement areas to accommodate and secure wheelchairs. All buses also have a "kneeling" feature, which lowers the front of the bus for easier access to/from the curb. The entire fleet is comprised of low-floor buses, making entry and exit easier and faster. The fleet is also equipped with an Automatic Voice Annunciation (AVA) system, automating on-board passenger announcements and an onboard video camera system. All MTS buses are equipped with bicycle racks that allow cyclists to combine their modes of travel.

MTS Bus is committed to providing safe transportation with an emphasis on defensive driving. This commitment has resulted in a significant reduction in the preventable accident rate (AFR) over the last five years. APTA recognized MTS Bus with the top safety award among all large transit agencies in the US in 2015 and 2017. MTS Bus maintains an aggressive Preventive Maintenance Program to ensure the safety and reliability of its equipment and ensures fewer customers are inconvenienced due to bus malfunctions. MTS Bus is committed to providing its customers with a quality riding experience, employing programs to monitor driver performance, following through on customer input and provide continuous training to refresh drivers' operating and customer service skills.

MTS Bus staff operates three customer call centers, assisting over 385,000 callers each year. The MTS Information & Trip Planning office provides complete route, schedule, and system information for all the fixed route bus and trolley services. The PRONTO Support Center provides customer support for the entire San Diego region for PRONTO, including pass sales, troubleshooting, and account information. The Customer Service call center processes all customer feedback, including website submittals, phone calls, and emails, and assigns cases for further investigation by the appropriate divisions.

MTS Bus staff also operates the Transit Store, a downtown retail facility that assists with fare media sales, lost and found retrieval, ID cards for seniors/disabled/youth, as well as passenger education on our system.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
Contract Bus Services' Description of Activities
Fiscal Year 2026
Section 1.03

General System Summary

MTS Contracted Bus Services directly contracts with private transportation providers to operate fixed-route, shuttle, minibus, and paratransit services. MTS manages this service through contract administration, operational, maintenance and fiscal performance management, incorporating a variety of operation service contracts. MTS began contracting bus operations in the region in the early 1980s. Various fixed-route and shuttle type services have been added over the past four decades.

Operationally, FY26 ridership for MTS contracted fixed routes is estimated at 20.8 million passengers. In FY26, contract bus services will operate a total of 77 traditional fixed and shuttle-type routes, logging approximately 1.1 million revenue hours while traveling approximately 11.7 million fixed-route revenue miles across San Diego County. Currently, MTS contracted bus operations have two long-term service contracts with Transdev North America, one for fixed route bus services, and another for paratransit and minibus services (formerly operated by First Transit Inc. which was acquired by Transdev in March of 2023).

Transdev North America – Fixed Route Services

Transdev North America, Inc. is headquartered in Lombard, Illinois near Chicago. Transdev North America is the largest private sector operator of multiple modes of transit in North America, providing bus, rail, paratransit, shuttle, sedan and taxi services. They manage over 200 transportation contracts for cities, transit authorities and airports, providing safe and sustainable mobility solutions. Their mission is to improve public transportation, to enhance quality of life and combat global warming. In California, Transdev operates 20+ contracts including San Francisco, Oakland, Los Angeles, San Diego, Napa, Sonoma, and more.

Transdev has developed a suite of specialized business procedures, processes, programs and proprietary technology in each area of transit operations. It is dedicated to providing safe, reliable, efficient and sustainable mobility that passengers, transit authorities and cities can trust.

Transdev is a global leader in passenger transportation and operates in 20 countries on five continents with 83,000 employees and provides more than 3.5 billion passenger trips annually in bus, paratransit, taxi, rail, and ferry services. Transdev is owned by Caisse des Dépôts, a financial institution that is a long-term investor in projects that serve the public interest, including affordable housing, energy efficiency, renewable energy, public transportation, and infrastructure.

Transdev has been a private transportation provider for MTS since July 1992. In early 2021, Transdev was awarded a renewal of its fixed-route contract by the MTS Board of Directors. Transdev operates MTS's South Bay Division located in Chula Vista, and MTS's East County Division located in El Cajon.

The South Bay, East County, Commuter Express, Rural and BRT bus service contract, effective June 27, 2021, has a value estimated to be \$932 million over the full 10-year contract term (6 base years with two 2-year options available to MTS).

South Bay Division

MTS's South Bay Division operates 45 fixed routes in the south and central areas of San Diego County, including the South Bay Rapid, which was launched in January of 2019. These routes utilize 236 MTS-owned compressed natural gas (CNG) fueled transit buses and 14 MTS-owned battery electric buses (BEB). All of these buses are operated, serviced, fueled and charged at the MTS-owned South Bay Division located at 3650 A Main Street in Chula Vista. In 2024, MTS erected an expansive overhead charging system that supports large scale battery electric bus operations and MTS's zero emissions bus program. Additionally, this division has two (2) pedestal battery electric bus chargers.

From MTS' South Bay Division, Transdev operates the new South Bay Rapid (Route 225) and Iris Rapid (Route 227), all of the 700-series routes and the majority of the 900-series routes provides service to many communities within the City of San Diego, Ocean Beach, Point Loma, Kearny Mesa, Mission Valley, Serra Mesa, Emerald Hills, College Area, Valencia Park, Oak Park, Southcrest, City Heights, Hillcrest, Old Town, Mission Hills, South San Diego, Barrio Logan, Otay Mesa, Mira Mesa and San Ysidro. Transdev operates service in Coronado, Imperial Beach, National City, Chula Vista, Lemon Grove and some additional areas in the County of San Diego. Transdev also operates service between downtown San Diego and the airport.

South Bay Weekend/Holiday Service

On Sundays and holidays, South Bay operates six additional routes in the East County area. These routes utilize the same 244 MTS-owned CNG fueled transit buses as above and are serviced and fueled at the MTS South Bay Division.

East County Division

MTS's East County Division operates 19 fixed routes, 4 rural routes, and 2 express routes in the eastern, northern and rural areas of San Diego County. These routes utilize 69 MTS-owned CNG transit buses, 2 MTS-owned BEB transit buses, 24 MTS-owned CNG over-the-road type coaches and 3 MTS-owned gasoline minibuses. All of these buses are operated, serviced and fueled at the MTS-owned East County Division located at 544 Vernon Way in El Cajon. The division also has two (2) battery electric bus chargers and an overhead gantry charging system to support the transition to zero emission buses.

Transdev mainly operates the 800 series fixed routes, but also operates a handful of 900 series fixed routes in the eastern areas of the county. The East County service operates within the cities of El Cajon, Santee, La Mesa, Lemon Grove and unincorporated areas of Lakeside, Alpine, Rancho San Diego, Casa de Oro, Spring Valley, La Mesa and the City of San Diego. Rural service operates in communities from Ramona to Borrego Springs, Jacumba, Pine Valley, Descanso, Viejas, Alpine, Tecate, Rancho San Diego and Campo.

Transdev's East County Division also operates two 200-series rapid express routes. These rapid express routes operate during peak periods only along Interstate 15 (I-15) between the communities of Escondido, Poway, Rancho Bernardo, Rancho Penasquitos/Sabre Springs, Carmel Mountain Ranch, and downtown San Diego. Service is provided on commuter type over-the-road style buses and use dedicated high-occupancy vehicle (HOV) lanes and limited stops to provide quick and easy travel along the corridor.

Transdev – Paratransit and Minibus Services

Prior to March of 2023, paratransit and minibus services were operated by First Transit, Inc. In March of 2023, Transdev completed the acquisition of First Transit, Inc. and it is now operating under the

Transdev brand. In addition to providing fixed route bus services for MTS, Transdev now operates ADA paratransit service and minibuses fixed route services.

Copley Park Division

ADA Paratransit Service

Transdev operates 107 propane and 14 gasoline powered paratransit buses, to provide ADA paratransit service throughout the entire MTS service area. All of these buses are owned by MTS and operated, serviced and fueled at the MTS-owned/leased Copley Park Division located at 7490/7550 Copley Park Place in Kearny Mesa. In addition, Transdev operates the reservation call center, scheduling, dispatching and maintenance for MTS's ADA paratransit services which provides approximately 492,000 annual trips but decreased to approximately 288,000 in FY24 due to COVID impacts.

Transdev (formerly First Transit Inc.) has been the contracted provider of Paratransit services to MTS since 2000 and was awarded a new contract for six base years and 4 option years in June 2020.

Fixed Route Service

Minibus service operates from the MTS Copley Park Division in Kearny Mesa. MTS will continue to achieve significant cost savings over the duration of this contract by taking advantage of economies of scales presented by the opportunity to operate the ADA service contract jointly with the minibus operation at the same location, thus, taking full advantage of the many operating synergies.

Transdev began minibus operations on June 12, 2011, serving Mira Mesa, Linda Vista, Kearny Mesa, Poway, Tierrasanta, El Cajon, Santee, Spring Valley, and Mid-City. First Transit operates 24 propane and 7 MTS-owned gasoline powered minibuses on 14 weekday fixed routes and 6 weekend fixed routes.

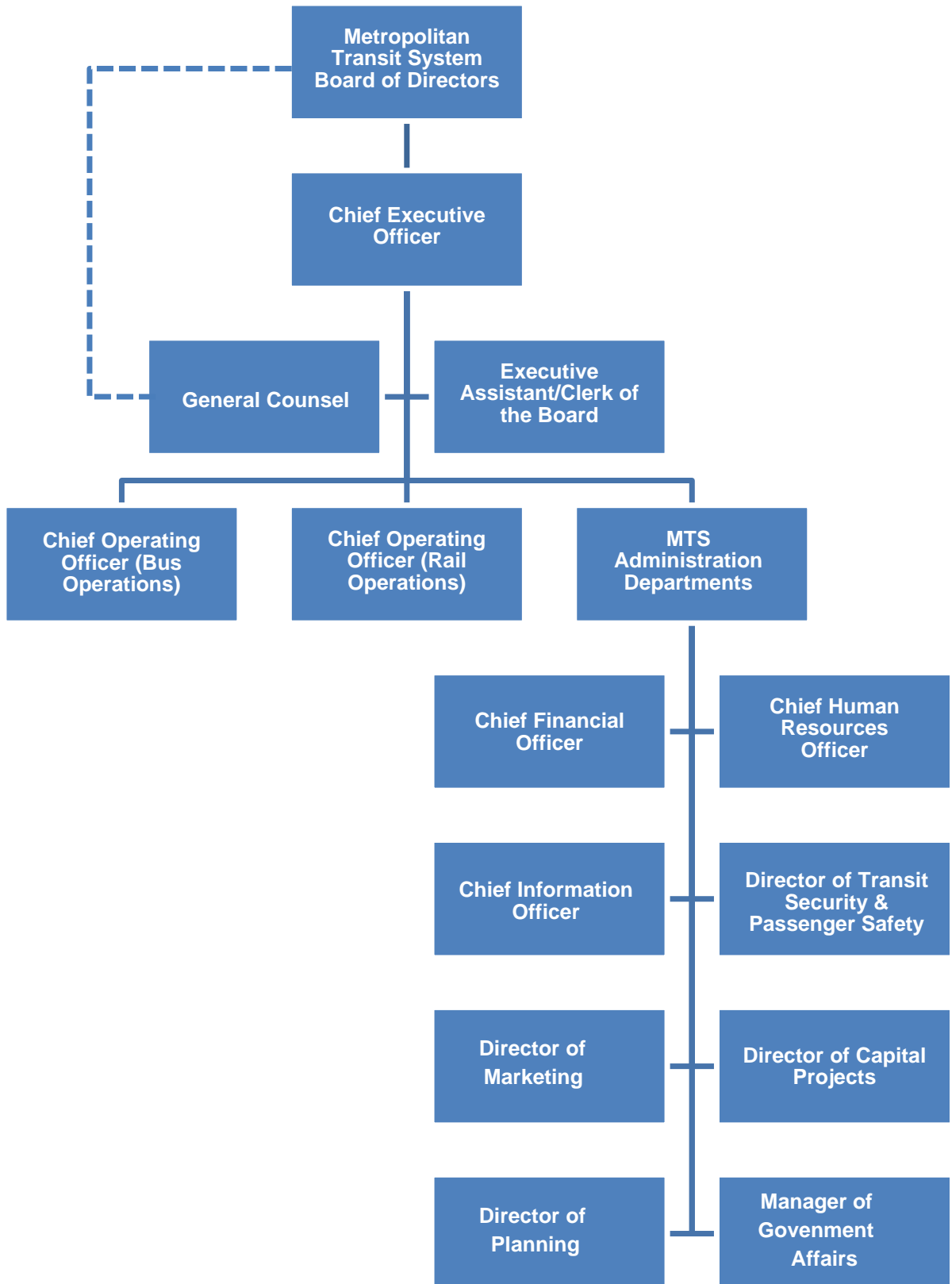
SAN DIEGO METROPOLITAN TRANSIT SYSTEM
Coronado Ferry Description of Activities
Fiscal Year 2026
Section 1.03

General System Summary

The City of Coronado with the Port of San Diego sponsors a peak -period, fare-free commuter ferry service operating between downtown San Diego and Coronado. This ferry service transports approximately 89,000 passengers per year. The City of Coronado contracts with Flagship Cruises and Events to provide this peak period, fare-free commuter ferry service.

The service currently operates on weekdays only in the mornings for six trips departing from Broadway between the hours of 4:50 a.m. and 8:10 a.m. and six trips departing from Coronado Ferry Landing between the hours of 5:10 a.m. and 8:30a.m. In the afternoons there are six trips departing from Broadway between 2:00 p.m. and 7:00 p.m. and six trips departing from Coronado Ferry Landing between 2:30 p.m. and 7:30 p.m.

**San Diego Metropolitan Transit System
Executive Level Organization Chart
Fiscal Year 2026
Section 1.04**



This page intentionally left blank.

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATING BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 2.01**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	72,403,501	79,850,726	89,204,799	9,354,073	11.7%
OTHER OPERATING REVENUE	34,505,395	35,098,213	31,885,564	(3,212,649)	-9.2%
TOTAL OPERATING REVENUES	106,908,896	114,948,939	121,090,363	6,141,424	5.3%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	339,947,127	308,115,776	289,902,445	(18,213,331)	-5.9%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	(30,504,844)	25,125,699	62,086,076	36,960,377	147.1%
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	(30,504,844)	25,125,699	62,086,076	36,960,377	147.1%
TOTAL NON OPERATING REVENUE	309,442,282	333,241,475	351,988,521	18,747,045	5.6%
TOTAL COMBINED REVENUES	416,351,179	448,190,414	473,078,884	24,888,470	5.6%
OPERATING EXPENSES					
LABOR EXPENSES	105,297,103	117,104,634	123,784,416	6,679,782	5.7%
FRINGE EXPENSES	71,585,490	78,775,506	83,106,346	4,330,840	5.5%
TOTAL PERSONNEL EXPENSES	176,882,593	195,880,140	206,890,762	11,010,622	5.6%
SECURITY EXPENSES	13,678,073	14,667,881	15,267,864	599,983	4.1%
REPAIR/MAINTENANCE SERVICES	13,119,522	11,510,694	13,579,748	2,069,054	18.0%
ENGINE AND TRANSMISSION REBUILD	1,223,377	1,182,750	1,079,800	(102,950)	-8.7%
OTHER OUTSIDE SERVICES	22,163,426	27,703,371	27,063,898	(639,473)	-2.3%
PURCHASED TRANSPORTATION	101,919,151	108,709,174	113,973,522	5,264,348	4.8%
TOTAL OUTSIDE SERVICES	152,103,549	163,773,870	170,964,832	7,190,962	4.4%
LUBRICANTS	435,638	476,020	588,020	112,000	23.5%
TIRES	1,296,191	1,363,500	1,383,500	20,000	1.5%
OTHER MATERIALS AND SUPPLIES	16,877,101	18,014,749	19,980,959	1,966,210	10.9%
TOTAL MATERIALS AND SUPPLIES	18,608,930	19,854,269	21,952,479	2,098,210	10.6%
GAS/DIESEL/PROPANE	2,685,693	2,982,755	3,028,921	46,166	1.5%
CNG	13,387,053	13,481,895	14,369,015	887,120	6.6%
TRACTION POWER	22,504,905	25,592,612	27,568,747	1,976,135	7.7%
UTILITIES	5,911,332	6,336,699	6,481,959	145,260	2.3%
TOTAL ENERGY	44,488,982	48,393,961	51,448,642	3,054,681	6.3%
RISK MANAGEMENT	8,122,036	10,637,984	12,616,550	1,978,566	18.6%
GENERAL AND ADMINISTRATIVE	5,986,321	7,456,581	7,047,137	(409,444)	-5.5%
DEBT SERVICE	36,327	-	-	-	-
VEHICLE / FACILITY LEASE	1,705,779	2,193,611	2,158,482	(35,129)	-1.6%
TOTAL OPERATING EXPENSES	407,934,516	448,190,416	473,078,884	24,888,468	5.6%
NET OPERATING SUBSIDY	(301,025,620)	(333,241,477)	(351,988,521)	18,747,044	5.6%
OVERHEAD ALLOCATION	(0)	0	0	(0)	0.0%
ADJUSTED NET OPERATING SUBSIDY	(301,025,620)	(333,241,477)	(351,988,521)	18,747,044	5.6%
TOTAL REVENUES LESS TOTAL EXPENSES	8,416,663	(1)	0	(1)	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS BUDGET
FISCAL YEAR 2026
SECTION 2.02**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	72,403,501	79,850,726	89,204,799	9,354,073	11.7%
OTHER OPERATING REVENUE	3,000,970	1,108,695	974,400	(134,295)	-12.1%
TOTAL OPERATING REVENUES	75,404,471	80,959,421	90,179,199	9,219,778	11.4%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	292,506,213	300,872,551	285,880,142	(14,992,410)	-5.0%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	25,151,191	61,996,847	36,845,655	146.5%
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	25,151,191	61,996,847	36,845,655	146.5%
TOTAL NON OPERATING REVENUE	292,506,213	326,023,743	347,876,989	21,853,246	6.7%
TOTAL COMBINED REVENUES	367,910,684	406,983,164	438,056,188	31,073,024	7.6%
OPERATING EXPENSES					
LABOR EXPENSES	84,512,654	92,580,875	98,107,577	5,526,702	6.0%
FRINGE EXPENSES	62,298,488	68,434,593	72,287,483	3,852,890	5.6%
TOTAL PERSONNEL EXPENSES	146,811,142	161,015,468	170,395,060	9,379,592	5.8%
SECURITY EXPENSES	1,193,339	1,239,810	1,297,060	57,250	4.6%
REPAIR/MAINTENANCE SERVICES	12,899,037	11,246,294	13,291,348	2,045,054	18.2%
ENGINE AND TRANSMISSION REBUILD	1,223,377	1,182,750	1,079,800	(102,950)	-8.7%
OTHER OUTSIDE SERVICES	7,495,020	10,762,942	8,857,295	(1,905,647)	-17.7%
PURCHASED TRANSPORTATION	101,919,151	108,709,174	113,973,522	5,264,348	4.8%
TOTAL OUTSIDE SERVICES	124,729,923	133,140,970	138,499,025	5,358,055	4.0%
LUBRICANTS	435,638	476,020	588,020	112,000	23.5%
TIRES	1,296,191	1,363,500	1,383,500	20,000	1.5%
OTHER MATERIALS AND SUPPLIES	16,835,323	17,964,426	19,931,202	1,966,776	10.9%
TOTAL MATERIALS AND SUPPLIES	18,567,152	19,803,946	21,902,722	2,098,776	10.6%
GAS/DIESEL/PROPANE	2,458,948	2,727,055	2,772,221	45,166	1.7%
CNG	13,387,053	13,481,895	14,369,015	887,120	6.6%
TRACTION POWER	22,504,905	25,592,612	27,568,747	1,976,135	7.7%
UTILITIES	4,890,027	5,274,921	5,373,214	98,293	1.9%
TOTAL ENERGY	43,240,932	47,076,483	50,083,197	3,006,714	6.4%
RISK MANAGEMENT	7,397,817	9,533,443	11,342,903	1,809,460	19.0%
GENERAL AND ADMINISTRATIVE	1,022,936	1,480,171	1,158,345	(321,826)	-21.7%
DEBT SERVICE	36,327	-	-	-	-
VEHICLE / FACILITY LEASE	1,319,807	1,720,955	1,628,369	(92,586)	-5.4%
TOTAL OPERATING EXPENSES	343,126,035	373,771,436	395,009,621	21,238,185	5.7%
NET OPERATING SUBSIDY	(267,721,565)	(292,812,015)	(304,830,422)	12,018,407	4.1%
OVERHEAD ALLOCATION	(27,018,000)	(33,211,729)	(43,046,567)	(9,834,838)	29.6%
ADJUSTED NET OPERATING SUBSIDY	(294,739,564)	(326,023,744)	(347,876,989)	21,853,245	6.7%
TOTAL REVENUES LESS TOTAL EXPENSES	(2,233,351)	(1)	-	(1)	-100.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
ADMINISTRATIVE BUDGET
FISCAL YEAR 2026
SECTION 2.03**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	30,491,772	32,977,748	29,897,183	(3,080,565)	-9.3%
TOTAL OPERATING REVENUES	30,491,772	32,977,748	29,897,183	(3,080,565)	-9.3%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	47,440,913	7,243,225	4,022,303	(3,220,922)	-44.5%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	(30,182,046)	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	(30,182,046)	-	-	-	-
TOTAL NON OPERATING REVENUE	17,258,868	7,243,225	4,022,303	(3,220,922)	-44.5%
TOTAL COMBINED REVENUES	47,750,639	40,220,973	33,919,486	(6,301,487)	-15.7%
OPERATING EXPENSES					
LABOR EXPENSES	20,424,712	24,106,759	25,205,100	1,098,341	4.6%
FRINGE EXPENSES	9,079,160	10,115,573	10,599,985	484,412	4.8%
TOTAL PERSONNEL EXPENSES	29,503,872	34,222,332	35,805,085	1,582,753	4.6%
SECURITY EXPENSES	12,484,734	13,428,071	13,970,804	542,733	4.0%
REPAIR/MAINTENANCE SERVICES	218,335	259,400	283,400	24,000	9.3%
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	14,656,463	16,811,953	18,055,763	1,243,810	7.4%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	27,359,532	30,499,424	32,309,967	1,810,543	5.9%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	41,291	49,823	49,257	(566)	-1.1%
TOTAL MATERIALS AND SUPPLIES	41,291	49,823	49,257	(566)	-1.1%
GAS/DIESEL/PROPANE	221,917	249,700	249,700	-	0.0%
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	1,021,305	1,061,778	1,108,745	46,967	4.4%
TOTAL ENERGY	1,243,222	1,311,478	1,358,445	46,967	3.6%
RISK MANAGEMENT	674,374	997,514	1,161,180	163,666	16.4%
GENERAL AND ADMINISTRATIVE	4,905,354	5,899,346	5,824,678	(74,668)	-1.3%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	379,051	452,052	501,256	49,204	10.9%
TOTAL OPERATING EXPENSES	64,106,695	73,431,969	77,009,868	3,577,899	4.9%
NET OPERATING SUBSIDY	(33,614,924)	(40,454,221)	(47,112,685)	6,658,464	16.5%
OVERHEAD ALLOCATION	27,006,070	33,210,996	43,090,382	9,879,386	29.7%
ADJUSTED NET OPERATING SUBSIDY	(6,608,854)	(7,243,225)	(4,022,303)	(3,220,922)	-44.5%
TOTAL REVENUES LESS TOTAL EXPENSES	10,650,014	(0)	-	(0)	-100.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OTHER ACTIVITIES BUDGET
FISCAL YEAR 2026
SECTION 2.04**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	1,012,654	1,011,770	1,013,981	2,211	0.2%
TOTAL OPERATING REVENUES	1,012,654	1,011,770	1,013,981	2,211	0.2%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	(322,799)	(25,492)	89,229	114,721	-450.0%
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	(322,799)	(25,492)	89,229	114,721	-450.0%
TOTAL NON OPERATING REVENUE	(322,799)	(25,492)	89,229	114,721	-450.0%
TOTAL COMBINED REVENUES	689,855	986,278	1,103,210	116,932	11.9%
OPERATING EXPENSES					
LABOR EXPENSES	359,737	417,000	471,739	54,739	13.1%
FRINGE EXPENSES	207,843	225,340	218,878	(6,462)	-2.9%
TOTAL PERSONNEL EXPENSES	567,580	642,340	690,617	48,277	7.5%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	2,150	5,000	5,000	-	0.0%
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	11,944	128,476	150,840	22,364	17.4%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	14,094	133,476	155,840	22,364	16.8%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	486	500	500	-	0.0%
TOTAL MATERIALS AND SUPPLIES	486	500	500	-	0.0%
GAS/DIESEL/PROPANE	4,828	6,000	7,000	1,000	16.7%
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	4,828	6,000	7,000	1,000	16.7%
RISK MANAGEMENT	49,845	107,027	112,467	5,440	5.1%
GENERAL AND ADMINISTRATIVE	58,031	77,064	64,114	(12,950)	-16.8%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	6,921	20,604	28,857	8,253	40.1%
TOTAL OPERATING EXPENSES	701,785	987,011	1,059,395	72,384	7.3%
NET OPERATING SUBSIDY	310,869	24,759	(45,414)	70,173	-283.4%
OVERHEAD ALLOCATION	11,930	733	(43,815)		-6074.6%
ADJUSTED NET OPERATING SUBSIDY	322,799	25,492	(89,229)	114,721	-450.0%
TOTAL REVENUES LESS TOTAL EXPENSES	0	0	-	0	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
CAPITAL IMPROVEMENT PROGRAM
FY 2026 FUNDING SOURCES (\$000s)
SECTION 2.05**

Funding Description	FY24	FY25	FY26
Federal Funding Estimate	\$ 107,714	\$ 113,590	\$ 115,707
Transportation Development Act	42,935	45,781	52,726
California State Transit Assistance (STA)	34,992	32,972	28,016
California Cap and Trade (TIRCP, LCTOP)	22,599	43,605	50,658
California Senate Bill 125 (TIRCP, ZETCP)	-	43,265	-
TransNet	-	15,000	-
Other Funding	32,653	25,423	17,930
Total Available Funding	\$ 240,893	\$ 319,636	\$ 265,037
Preventive Maintenance	\$ (60,000)	\$ (63,000)	\$ (70,000)
SANDAG Planning Study	(279)	(291)	(297)
ADA Operations	(6,008)	(6,269)	(6,400)
Total Preventative Maintenance/SANDAG Planning	\$ (66,287)	\$ (69,560)	\$ (76,696)
Funding Shift to Operations (TDA)	-	-	(25,000)
Total Other Adjustments	\$ -	\$ -	\$ (25,000)
Available Funding for Capital Program	\$ 174,606	\$ 250,076	\$ 163,341

Capital Project Categories	FY24	FY25	FY26
Bus Revenue Vehicles	\$ 60,917	\$ 60,577	\$ 53,906
Rail Revenue Vehicles	22,000	21,000	-
Facility & Construction Projects	10,913	21,938	6,026
Rail Infrastructure	19,080	69,472	85,410
Other Equipment & Installations	5,580	22,252	7,212
Other Initiatives	56,116	54,839	10,787
Grand Total	\$ 174,606	\$ 250,076	\$ 163,341

This page intentionally left blank.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
Summary of Significant Revenue Activities
Proposed Budget Fiscal Year 2026
Section 3.01

Fare Revenue

Fare revenue is detailed in Section 3.03.

Passenger fares make up approximately 18.9 percent of the system's \$473.1 million operating budget. Passenger fare revenue is projected at \$89.2 million for FY26, an increase of \$9.4 million (11.7 percent) compared to amended FY25 levels. Total passenger levels for all operators are projected to total 86.2 million, an increase of 4.9 million (6.0 percent) from amended FY25 levels. Average fare is assumed at \$1.04 per passenger, representing a \$0.05 (5.4 percent) increase over the FY25 amended budget, based on the preliminary results of the fare enforcement changes that began in February 2025.

Other Operating Revenues

Other revenue is detailed in Section 3.04.

MTS receives a variety of operating revenues that are not received directly from passenger fares. The sources of these revenues are advertising, interest income, rental income, land management income, energy credits, income related to the For-Hire Vehicle (FHV) Administration, income from the San Diego and Arizona Eastern (SD&AE) Railway Company and other miscellaneous income.

Total other revenue is budgeted to decrease by \$3.2 million (-9.2 percent) compared to amended FY25 levels, primarily due to projected interest revenue decreasing by \$3.1M (-32.1 percent). MTS is expected to generate significantly less interest next year as MTS will no longer be receiving stimulus funds and plans to deplete the operating deficit reserve in FY26, resulting in lower cash balances. Advertising revenue is expected to decrease by \$226,000 (-3.5 percent), primarily to reflect recent decreases in vehicle advertising revenue. Real estate lease is expected to decrease by \$457,000 (-11.9 percent) due to declining occupancy at the Grantville development as well as the continued non-renewals of Clean Transit Advancement Campus (CTAC) property tenants. These decreases are projected to be partially offset by an increase of \$585,000 (5.9 percent) in energy credit revenue resulting Low Carbon Fuel Standard (LCFS) program changes that will result in higher credit generation for MTS.

Non-operating Revenues

MTS receives a variety of non-operating revenues that primarily consist of federal, state and local subsidy funds. These revenues fund both the operating and capital improvement program (CIP) budget. Additionally, there are reserve revenues, which reflect projected changes to the reserve balances of the For-Hire Vehicle (FHV) Administration and San Diego & Arizona Eastern (SD&AE), both self-funded entities.

Subsidy Revenue

Subsidy revenue included in the operating budget is detailed in Section 3.05. MTS is budgeting \$289.9 million, a decrease of \$18.2 million (-5.9 percent) in subsidy revenue for FY26.

Subsidy revenue included in the CIP budget is detailed in Section 8.02. MTS is budgeting \$163.3 million in subsidy revenue in the FY26 CIP.

Federal Transit Administration (FTA) Recurring Revenues

On November 15, 2021, President Biden signed the Bipartisan Infrastructure Law, reauthorizing surface transportation programs through Federal FY (FFY) 2026. The legislation establishes the legal authority to commence and continue Federal Transit Administration (FTA) programs. Each reauthorization amends the Federal Transit Laws codified in 49 USC Chapter 53. FTA funding is structured on a reimbursement basis (after expenses are incurred), and funds both the CIP and operating budgets.

The reauthorization provides for the following funding streams MTS commonly receives:

- 5307 Urban Area Formula Grants for capital improvements and preventive maintenance
- 5337 State of Good Repair Funding for capital improvements and preventive maintenance
- 5339 Bus and Bus Facilities Funding for capital improvements
- 5311 Formula Grants for Rural Areas Funding for rural service operations
- 5311(f) Inter-City Bus Program Funding for rural service operations connecting to inter-city network

MTS's share of these recurring federal revenues in the operating budget is expected to increase by \$2.0 million from the FY25 amended budget to \$79.0 million in total.

Section 5307 / 5337 / 5339 Capital and Preventive Maintenance

As the region's Metropolitan Planning Organization (MPO), SANDAG apportions the 5307, 5337, and 5339 formula funds between MTS and the North County Transit District (NCTD) based on service area populations. Prior to the apportionments, SANDAG deducts funds from Section 5307 for funding the region's vanpool program. MTS receives approximately 70 percent while NCTD receives approximately 30 percent of these federal formula funds. The funding levels for each section are estimates.

The FY25 MTS operating and CIP budgets will serve as the basis for the federal formula grant applications. The FTA requires submission of grant applications to obligate annual appropriations under Sections 5307, 5337, and 5339.

Section 5307 Urbanized Area Formula Program is a block grant program in which each urbanized area over 50,000 in population receives financial assistance to provide public transit. The formula for determining each metropolitan area's share of funds is based on an urbanized area's population, population density, levels of existing fixed-guideway service, and levels of existing bus service and ridership. The Section 5307 program is designed to meet routine capital needs and may not be used for operating assistance. However, the Transportation Equity Act for the 21st Century (TEA 21) expanded the definition of capital to include preventative maintenance, thereby, in effect, mitigating the relative lack of federal assistance for operations. In addition to the expanded definition of capital, the Section 5307 Urbanized Area Formula Program also allows for a 10 percent maximum of the allocation to support operations of ADA complementary paratransit service. For FFY 2025, the estimated allocation for the MTS Section 5307 program is \$64.0 million.

Section 5337 State of Good Repair is also a formula-based program dedicated to repairing and upgrading the nation's rail transit systems, along with high-intensity motor bus systems, that use high-occupancy vehicle lanes, including bus rapid transit (BRT). Section 5337 includes funding previously provided through Section 5309 Fixed Guideway Rail Modernization Formula Program. Projects are limited to replacement and rehabilitation or capital projects that are required to maintain public

transportation systems in a state of good repair. For FFY 2025, the Section 5337 funds MTS allocation estimate is \$47.4 million.

Section 5339 funding provides capital funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities. For FFY 2025, the Section 5339 funds MTS allocation estimate is \$4.3 million.

In FY26, MTS will use both Section 5307 and 5337 funds for preventive maintenance totaling \$72.0 million. The FTA also allows the utilization of up to 10 percent of Section 5307 funding for ADA operations, resulting in an allocation of \$6.4 million in FY26.

The remaining federal formula funding will fund the FY26 CIP.

FTA Stimulus Funding

On March 27, 2020, the President signed the Coronavirus Aid, Relief, and Economic Security (CARES) Act, which provided \$25 billion to the transit industry nationwide. MTS was apportioned \$220 million in CARES Act funding, which allowed MTS to supplement lost revenues and increased expenses related to the pandemic.

On March 11, 2021, the President signed American Rescue Plan Act of 2021 (ARP) Act, which provided \$30.5 billion to support the nation's public transportation systems as they responded to the COVID-19 pandemic. MTS was apportioned \$140 million in ARP Act funding, which was used to supplement lost revenues and increased expenses related to the pandemic.

In total, MTS was awarded \$360.0 million in stimulus funds. The final \$47.4M of stimulus funds were drawn and received during FY25, and there are no additional stimulus funds available for FY26. Stimulus funds that were drawn and contributed to the operating deficit reserve in prior years will be available and spent in FY26, but are represented as reserves as detailed in Section 3.06.

Other Federal Revenue

Section 5311 formula funding is allocated to the state of California Department of Transportation, who then awards it to sub-recipients for rural capital improvements and to supplement operating costs. Funding for FY26 is projected to be \$620,000.

MTS was awarded \$750,000 in FTA Route Planning Restoration Program funds provided through a competitive grant award. The award is included in the FY25 operating budget and is providing funding for two planning studies in the Baltimore Junction and Euclid service areas. The majority of the \$750,000 award is expected to be spent in FY25, with \$50,000 planned in the FY26 operating budget to finish the two planning studies.

Approximately \$2 billion dollars in Inflation Reduction Act (IRA) funds were available for Environmental and Climate Justice Program (ECJ Program) activities to benefit communities through projects that reduce pollution, increase community climate resilience, and build community capacity to address challenges. The grant program is referred to as the Community Change Grants Program and is administered by the Environmental Protection Agency (EPA). The FY26 CIP includes \$3.9 million in FFY 2024 Community Change Grants Program funding for the purchase of zero-emission buses.

Transportation Development Act (TDA) Revenue

TDA provides funding for public transit operators. This state fund is one-quarter of a percent of the 7.75 percent sales tax assessed in the region. SANDAG is responsible for apportionment of these funds within the San Diego region.

Regional TDA cash receipts are projected to decline -3.6% versus FY25 projected cash receipts. MTS files an annual TDA claim based on San Diego Association of Governments (SANDAG) projections, and that claim amount is the amount received, regardless of actual sales tax performance. If sales tax receipts outperform the claim amount, excess funds are stored in a reserve at the County. If sales tax receipts underperform the claim amount, funds are drawn from the County reserve.

The overall amount of TDA projected for FY26, available for both capital and operations, is decreasing by \$7.7 million (-5.7%) from the FY25 amended budget based on projected sales tax receipts by SANDAG. The overall decrease is higher than the -3.6% decrease in receipts projected by SANDAG, because MTS had claimed an additional \$3.0 million from the County TDA reserve in the FY25 claim. TDA revenue in the operating budget is increasing by \$10.3 million (11.5%) from the FY25 amended budget, after Board direction to shift \$25.0 million from the FY26 capital budget to the FY26 operating budget.

State Transit Assistance (STA) Revenue

STA funding comes from the Public Transportation Act (PTA), which derives its revenue from the state sales tax on diesel fuel. This funding was augmented by the Road Repair and Accountability Act of 2017, or Senate Bill 1 (SB1), which was signed by the Governor on April 28, 2017. For FY26, the estimated STA funding is \$33.5 million, of which \$22.2 million is planned in the CIP with the remaining \$11.3 million included in the operating budget.

MTS also receives a separate STA allocation for State of Good Repair (SGR) program funding from SB1, which is funded from a portion of a new transportation improvement fee on vehicle registration. Receipts for FY25 will provide \$5.8 million to MTS's FY26 CIP.

Other State Revenue

The 2014-15 State of California Budget provides \$832 million to the Greenhouse Gas Reduction Fund (GHGRF) from Cap-and-Trade auction proceeds to support existing and pilot programs that will reduce GHG emissions and benefit disadvantaged communities. Transit operators are eligible recipients for several of the programs which will be funded from the GHGRF, most of which are competitive programs.

Senate Bill (SB) 125 amended the Budget Act of 2023 to appropriate \$4 billion of General Funds to the Transit and Intercity Rail Capital Program (TIRCP) over multiple fiscal years. SB125 also establishes a \$1.1 billion Zero-Emission Transit Capital Program (ZETCP) over multiple fiscal years. MTS is estimated to receive approximately \$284 million in total over multiple fiscal years, comprised of \$237.3 million in TIRCP funding and \$46.3 million in ZETCP funding. TIRCP funding can be used for both capital and operations. Of the \$237.3 million in TIRCP funding, \$26.0 million was programmed in the FY25 CIP for the Orange Line Modernization Project, and the remainder will be used in the operating budget over multiple fiscal years. TIRCP revenue is projected to be \$20.9 million in the FY26 operating budget, an increase of \$11.9 million from the FY25 operating budget. The FY26 operating budget includes \$3.5 million for security enhancements, \$4.9 million for Route 227 (Iris Rapid) operations, \$826,000 for Route 910 (Overnight Express) operations, \$1.5 million for Trolley service enhancements (15-minute service on all lines), and \$10.2M for balancing the structural deficit. ZETCP funding, which

can only be used for eligible capital purchases, is not included in the FY26 CIP, as the first payment of \$17.3M was programmed in the FY25 CIP and the remaining \$29.0 million future payments will be programmed as the cash is received.

The Low Carbon Transit Operations Program (LCTOP) is an annual funding program that is distributed by the same formula as STA funding. The FY26 CIP includes \$8.7 million in LCTOP funds for zero emission bus purchases.

Over the last few years, MTS has received multiple competitive grant awards from the Transit and Intercity Rail Capital Program (TIRCP). The FY26 CIP includes \$42.0 million for the Orange Line Modernization project.

TransNet Revenue

In November of 2004, area voters approved a 40-year extension of the one-half cent sales tax original ordinance that was set to expire in 2008 (TransNet II). This approval had two impacts; first, it assured and slightly improved the original TransNet funding beyond 2008; second, the Bus Rapid Transit (BRT), Superloop, and Midcoast Programs will receive most of its funding from TransNet II.

For FY26, TransNet operating support funding is \$39.1 million and ADA funding is \$1.2 million. This totals \$40.3 million for FY26, which is an increase of \$153,000 (0.4 percent increase) from the FY25 amended budget. This increase is due to the projected increases in regional sales tax revenues.

MTS also receives TransNet as operating assistance for TransNet funded services, which includes Superloop, I-15 BRT, Mid-City Rapid, South Bay BRT, and Mid-Coast. TransNet operating assistance is projected to be \$34.7 million in FY26, an increase of \$1.6 million from the FY25 amended budget. This is primarily due to increased reimbursement for TransNet-funded services based on higher expenses for these services. In total, TransNet revenues are projected to increase by \$1.7 million (2.3 percent) from the FY25 amended budget.

Other Local Subsidies

The City of San Diego provides Maintenance of Effort funds to aid ADA efforts. For FY26, these funds total \$120,000.

SANDAG provides funding, through FasTrak tolls, to operate services along the Interstate 15 corridor. The budgeted FasTrak funding supporting this operation totals \$3.0 million, a decrease of \$500,000 from the FY25 amended budget.

In December 2018, MTS and the University of California, San Diego (UCSD) executed a contract in which the UCSD-operated City Shuttle service would be replaced by expanded frequency and span on MTS routes 201 and 202 between the La Jolla Colony area and the Gilman Transit Center on the UCSD campus. UCSD provided reimbursement to MTS of \$5.74 per student per quarter. Beginning in FY26, operations of the shuttle service will be included in the new UPASS agreement and reported as passenger revenue. Therefore, subsidy revenue for shuttle reimbursement will be \$0 for FY26, a decrease of \$690,000 from the FY25 amended budget.

Other Non-Operating Revenue

Other non-operating revenue is detailed in Section 3.06. Non-operating revenue utilized in the FY26 operating budget is expected to increase by \$37.0 million versus the prior year, particularly due to utilizing additional funds from the Operating Deficit Reserve to balance the proposed budget.

Reserve Revenues

The creation of an operating budget deficit reserve was approved by the Board in April 2023. MTS contributed \$57.0 million in excess revenues over expenses to the Operating Budget deficit reserve in FY23 and contributed an additional \$30.2 million at the end of FY24. The current balance of the operating deficit reserve is \$87.1 million and is expected to be \$62.0 million at the end of FY25. The FY26 proposed operating budget assumes that the entire \$62.0 million reserve balance will be used to balance the operating budget in FY26, at which point MTS will start using SB125 TIRCP funds to balance the operating budget.

The FY26 operating budget does not include any usage of or contribution to the MTS Contingency Reserve.

FHVA and SD&AE are self-funded entities who must balance their operating expenses with operating revenues or their contingency reserve revenue. FHVA is projected to utilize \$162,000 from its contingency reserves as total FY26 projected expenses exceed projected revenues. SD&AE is projected to add \$73,000 to its contingency reserves as total FY26 projected revenues exceed projected expenses.

A full schedule of all contingency reserves is detailed in Section 10.06.

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
REVENUE BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 3.02**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE AMENDED/ ORIGINAL	% CHANGE AMENDED/ ORIGINAL
OPERATING REVENUE					
PASSENGER REVENUE	72,403,501	79,850,726	89,204,799	9,354,073	11.7%
OTHER INCOME	34,505,395	35,098,213	31,885,564	(3,212,649)	-9.2%
TOTAL OPERATING REVENUE	106,908,896	114,948,939	121,090,363	6,141,424	5.3%
NON OPERATING REVENUE					
SUBSIDY REVENUE					
FEDERAL REVENUE	70,140,685	77,719,613	79,067,133	1,347,521	1.7%
FEDERAL REVENUE - CARES/ARP	85,000,000	47,394,233	-	(47,394,233)	-100.0%
TRANSPORTATION DEVELOPMENT ACT (TDA)	92,972,439	90,194,289	100,538,352	10,344,063	11.5%
STATE TRANSIT ASSISTANCE (STA)	10,088,619	6,246,579	11,300,000	5,053,421	80.9%
STATE REVENUE - OTHER	4,521,334	9,000,000	20,918,631	11,918,631	132.4%
TRANSNET	72,661,543	73,251,381	74,958,329	1,706,948	2.3%
OTHER LOCAL SUBSIDIES	4,562,507	4,309,683	3,120,000	(1,189,683)	-27.6%
TOTAL SUBSIDY REVENUE	339,947,127	308,115,777	289,902,445	(18,213,333)	-5.9%
OTHER REVENUE					
OTHER FUNDS	-	-	-	-	-
RESERVES REVENUE	(30,505,035)	25,125,699	62,086,076	36,960,377	147.1%
TOTAL OTHER REVENUE	(30,505,035)	25,125,699	62,086,076	36,960,377	147.1%
TOTAL NON OPERATING REVENUE	309,442,092	333,241,476	351,988,521	18,747,044	5.6%
GRAND TOTAL REVENUES	416,350,988	448,190,415	473,078,884	24,888,469	5.6%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
PASSENGER REVENUE BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 3.03**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
PASSENGER REVENUE					
BUS OPERATIONS	19,675,153	20,535,178	20,710,954	175,776	0.9%
RAIL OPERATIONS	29,880,848	33,792,404	42,027,824	8,235,420	24.4%
MCS - FIXED ROUTE	21,403,676	23,920,157	24,731,324	811,167	3.4%
MCS - PARATRANSIT	1,443,824	1,602,987	1,734,698	131,711	8.2%
TOTAL PASSENGER REVENUE	72,403,501	79,850,726	89,204,799	9,354,073	11.7%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OTHER OPERATING REVENUE BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 3.04**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OTHER INCOME					
BUS OPERATIONS	116,763	50,000	50,000	-	0.0%
RAIL OPERATIONS	2,884,206	1,058,695	924,400	(134,295)	-12.7%
MCS - FIXED ROUTE	-	-	-	-	-
MCS - PARATRANSIT	-	-	-	-	-
CORONADO FERRY	-	-	-	-	-
ADMINISTRATIVE	30,491,772	32,977,748	29,897,183	(3,080,565)	-9.3%
TAXICAB	775,527	771,770	771,770	-	0.0%
SD&AE	237,127	240,000	242,211	2,211	0.9%
TOTAL OTHER INCOME	34,505,395	35,098,213	31,885,564	(3,212,649)	-9.2%
TOTAL OTHER OPERATING INCOME	34,505,395	35,098,213	31,885,564	(3,212,649)	-9.2%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
SUBSIDY REVENUE BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 3.05**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
FEDERAL					
FEDERAL OTHER	78,593	700,000	50,000	(650,000)	-92.9%
FTA 5307/5337/5339 - PREVENTITIVE MAINTENANCE	63,070,368	70,000,000	72,000,000	2,000,000	2.9%
FTA 5307 - PREVENTITIVE MAINTENANCE ADA	6,268,543	6,399,613	6,397,133	(2,479)	0.0%
FTA 5311 / 5311(f) - RURAL	723,181	620,000	620,000	-	0.0%
TOTAL FEDERAL FUNDS	70,140,685	77,719,613	79,067,133	1,347,521	1.7%
FEDERAL					
FTA 5307 - CARES ACT	85,000,000	47,394,233	-	(47,394,233)	-100.0%
TOTAL FEDERAL FUNDS	85,000,000	47,394,233	-	(47,394,233)	-100.0%
TRANSPORTATION DEVELOPMENT ACT (TDA)					
TDA - ARTICLE 4.0 MTS AREA	84,760,539	82,627,640	93,160,584	10,532,944	12.7%
TDA - ARTICLE 4.5 (ADA)	6,790,544	6,650,049	6,414,097	(235,952)	-3.5%
TDA - ARTICLE 8.0	1,421,356	916,600	963,671	47,071	5.1%
TOTAL TDA FUNDS	92,972,439	90,194,289	100,538,352	10,344,063	11.5%
STATE TRANSIT ASSISTANCE (STA)					
STA - FORMULA	10,088,619	6,246,579	11,300,000	5,053,421	80.9%
TOTAL STA FUNDS	10,088,619	6,246,579	11,300,000	5,053,421	80.9%
STATE REVENUE - OTHER					
CALTRANS	4,500,000	9,000,000	20,918,631	11,918,631	132.4%
MEDICAL	21,334	-	-	-	-
TOTAL STATE FUNDS	4,521,334	9,000,000	20,918,631	11,918,631	132%
TRANSNET					
TRANSNET - 40% OPERATING SUPPORT	39,796,267	38,948,620	39,099,000	150,380	0.4%
TRANSNET - ACCESS ADA	1,201,491	1,180,602	1,183,000	2,398	0.2%
TRANSNET - SUPERLOOP	3,110,447	3,377,462	3,512,702	135,240	4.0%
TRANSNET - BRT	28,553,337	29,744,697	31,163,627	1,418,930	4.8%
TOTAL TRANSNET FUNDS	72,661,543	73,251,381	74,958,329	1,706,948	2.3%
OTHER LOCAL					
CITY OF SAN DIEGO	120,526	120,000	120,000	-	0.0%
SANDAG - INLAND BREEZE	3,500,000	3,500,000	3,000,000	(500,000)	-14.3%
OTHER	941,981	689,683	-	(689,683)	-100.0%
OTHER LOCAL FUNDS	4,562,507	4,309,683	3,120,000	(1,189,683)	-27.6%
TOTAL SUBSIDY REVENUE	339,947,127	308,115,777	289,902,445	(18,213,333)	-5.9%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OTHER NON OPERATING REVENUE BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 3.06**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
RESERVES REVENUE					
MTS CONTINGENCY RESERVE	-	-	-	-	-
OPERATING DEFICIT RESERVE	(30,182,046)	25,151,191	61,996,847	36,845,655	146.5%
TAXICAB RESERVES	(151,650)	44,193	162,223	118,030	267.1%
SD&AE RESERVE	<u>(171,339)</u>	<u>(69,685)</u>	<u>(72,994)</u>	<u>(3,309)</u>	<u>4.7%</u>
TOTAL RESERVES REVENUE	(30,505,035)	25,125,699	62,086,076	36,960,377	147.1%
TOTAL OTHER NON OPERATING REVENUE	<u>(30,505,035)</u>	<u>25,125,699</u>	<u>62,086,076</u>	<u>36,960,377</u>	<u>147.1%</u>

This page intentionally left blank.

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OPERATIONS BUDGET
FISCAL YEAR 2026
SECTION 4.01**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	72,403,501	79,850,726	89,204,799	9,354,073	11.7%
OTHER OPERATING REVENUE	3,000,970	1,108,695	974,400	(134,295)	-12.1%
TOTAL OPERATING REVENUES	75,404,471	80,959,421	90,179,199	9,219,778	11.4%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	292,506,213	300,872,551	285,880,142	(14,992,410)	-5.0%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	25,151,191	61,996,847	36,845,655	146.5%
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	25,151,191	61,996,847	36,845,655	146.5%
TOTAL NON OPERATING REVENUE	292,506,213	326,023,743	347,876,989	21,853,246	6.7%
TOTAL COMBINED REVENUES	367,910,684	406,983,164	438,056,188	31,073,024	7.6%
OPERATING EXPENSES					
LABOR EXPENSES	84,512,654	92,580,875	98,107,577	5,526,702	6.0%
FRINGE EXPENSES	62,298,488	68,434,593	72,287,483	3,852,890	5.6%
TOTAL PERSONNEL EXPENSES	146,811,142	161,015,468	170,395,060	9,379,592	5.8%
SECURITY EXPENSES	1,193,339	1,239,810	1,297,060	57,250	4.6%
REPAIR/MAINTENANCE SERVICES	12,899,037	11,246,294	13,291,348	2,045,054	18.2%
ENGINE AND TRANSMISSION REBUILD	1,223,377	1,182,750	1,079,800	(102,950)	-8.7%
OTHER OUTSIDE SERVICES	7,495,020	10,762,942	8,857,295	(1,905,647)	-17.7%
PURCHASED TRANSPORTATION	101,919,151	108,709,174	113,973,522	5,264,348	4.8%
TOTAL OUTSIDE SERVICES	124,729,923	133,140,970	138,499,025	5,358,055	4.0%
LUBRICANTS	435,638	476,020	588,020	112,000	23.5%
TIRES	1,296,191	1,363,500	1,383,500	20,000	1.5%
OTHER MATERIALS AND SUPPLIES	16,835,323	17,964,426	19,931,202	1,966,776	10.9%
TOTAL MATERIALS AND SUPPLIES	18,567,152	19,803,946	21,902,722	2,098,776	10.6%
GAS/DIESEL/PROPANE	2,458,948	2,727,055	2,772,221	45,166	1.7%
CNG	13,387,053	13,481,895	14,369,015	887,120	6.6%
TRACTION POWER	22,504,905	25,592,612	27,568,747	1,976,135	7.7%
UTILITIES	4,890,027	5,274,921	5,373,214	98,293	1.9%
TOTAL ENERGY	43,240,932	47,076,483	50,083,197	3,006,714	6.4%
RISK MANAGEMENT	7,397,817	9,533,443	11,342,903	1,809,460	19.0%
GENERAL AND ADMINISTRATIVE	1,022,936	1,480,171	1,158,345	(321,826)	-21.7%
DEBT SERVICE	36,327	-	-	-	-
VEHICLE / FACILITY LEASE	1,319,807	1,720,955	1,628,369	(92,586)	-5.4%
TOTAL OPERATING EXPENSES	343,126,035	373,771,436	395,009,621	21,238,185	5.7%
NET OPERATING SUBSIDY	(267,721,565)	(292,812,015)	(304,830,422)	12,018,407	4.1%
OVERHEAD ALLOCATION	(27,018,000)	(33,211,729)	(43,046,567)	(9,834,838)	29.6%
ADJUSTED NET OPERATING SUBSIDY	(294,739,564)	(326,023,744)	(347,876,989)	21,853,245	6.7%
TOTAL REVENUES LESS TOTAL EXPENSES	(2,233,351)	(1)	-	(1)	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BUS OPERATIONS BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 4.02**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	19,675,153	20,535,178	20,710,954	175,776	0.9%
OTHER OPERATING REVENUE	116,763	50,000	50,000	-	0.0%
TOTAL OPERATING REVENUES	19,791,916	20,585,178	20,760,954	175,776	0.9%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	93,369,739	97,724,781	83,638,591	(14,086,190)	-14.4%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	8,151,191	31,996,847	23,845,655	292.5%
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	8,151,191	31,996,847	23,845,655	292.5%
TOTAL NON OPERATING REVENUE	93,369,739	105,875,972	115,635,438	9,759,466	9.2%
TOTAL COMBINED REVENUES	113,161,655	126,461,150	136,396,392	9,935,242	7.9%
OPERATING EXPENSES					
LABOR EXPENSES	47,076,206	52,381,191	54,793,491	2,412,300	4.6%
FRINGE EXPENSES	44,372,252	46,672,805	48,824,423	2,151,618	4.6%
TOTAL PERSONNEL EXPENSES	91,448,457	99,053,996	103,617,914	4,563,918	4.6%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	922,273	952,628	959,233	6,605	0.7%
ENGINE AND TRANSMISSION REBUILD	237,602	260,000	265,800	5,800	2.2%
OTHER OUTSIDE SERVICES	1,234,371	1,842,636	1,340,166	(502,470)	-27.3%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	2,394,246	3,055,264	2,565,199	(490,065)	-16.0%
LUBRICANTS	127,910	203,000	203,000	-	0.0%
TIRES	1,280,400	1,341,500	1,361,500	20,000	1.5%
OTHER MATERIALS AND SUPPLIES	6,267,042	6,181,379	6,122,074	(59,305)	-1.0%
TOTAL MATERIALS AND SUPPLIES	7,675,352	7,725,879	7,686,574	(39,305)	-0.5%
GAS/DIESEL/PROPANE	255,113	251,300	196,353	(54,947)	-21.9%
CNG	6,695,259	6,929,112	7,388,360	459,248	6.6%
TRACTION POWER	103,644	121,000	124,966	3,966	3.3%
UTILITIES	750,053	862,700	885,760	23,060	2.7%
TOTAL ENERGY	7,804,068	8,164,112	8,595,439	431,327	5.3%
RISK MANAGEMENT	3,222,810	3,654,594	4,335,176	680,582	18.6%
GENERAL AND ADMINISTRATIVE	476,367	839,302	541,664	(297,638)	-35.5%
DEBT SERVICE	36,327	-	-	-	-
VEHICLE / FACILITY LEASE	423,405	553,747	507,685	(46,062)	-8.3%
TOTAL OPERATING EXPENSES	113,481,032	123,046,894	127,849,651	4,802,757	3.9%
NET OPERATING SUBSIDY	(93,689,116)	(102,461,716)	(107,088,697)	4,626,981	4.5%
OVERHEAD ALLOCATION	(1,525,621)	(3,414,256)	(8,546,740)	(5,132,484)	150.3%
ADJUSTED NET OPERATING SUBSIDY	(95,214,737)	(105,875,972)	(115,635,438)	9,759,465	9.2%
TOTAL REVENUES LESS TOTAL EXPENSES	(1,844,998)	(0)	0	(0)	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
RAIL OPERATIONS BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 4.03**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	29,880,848	33,792,404	42,027,824	8,235,420	24.4%
OTHER OPERATING REVENUE	2,884,206	1,058,695	924,400	(134,295)	-12.7%
TOTAL OPERATING REVENUES	32,765,055	34,851,099	42,952,224	8,101,125	23.2%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	101,490,927	99,222,741	93,490,992	(5,731,749)	-5.8%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	17,000,000	30,000,000	13,000,000	76.5%
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	17,000,000	30,000,000	13,000,000	76.5%
TOTAL NON OPERATING REVENUE	101,490,927	116,222,741	123,490,992	7,268,251	6.3%
TOTAL COMBINED REVENUES	134,255,982	151,073,840	166,443,216	15,369,376	10.2%
OPERATING EXPENSES					
LABOR EXPENSES	36,920,907	39,612,484	42,717,086	3,104,602	7.8%
FRINGE EXPENSES	17,510,349	21,120,573	22,831,993	1,711,420	8.1%
TOTAL PERSONNEL EXPENSES	54,431,256	60,733,057	65,549,079	4,816,022	7.9%
SECURITY EXPENSES	204,199	215,000	222,220	7,220	3.4%
REPAIR/MAINTENANCE SERVICES	11,908,141	10,229,466	12,294,115	2,064,649	20.2%
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	2,986,913	4,675,805	3,603,205	(1,072,600)	-22.9%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	15,099,253	15,120,271	16,119,540	999,269	6.6%
LUBRICANTS	307,728	273,020	385,020	112,000	41.0%
TIRES	15,791	22,000	22,000	-	0.0%
OTHER MATERIALS AND SUPPLIES	10,471,451	11,652,067	13,708,716	2,056,649	17.7%
TOTAL MATERIALS AND SUPPLIES	10,794,971	11,947,087	14,115,736	2,168,649	18.2%
GAS/DIESEL/PROPANE	508,599	533,865	413,913	(119,952)	-22.5%
CNG	-	-	-	-	-
TRACTION POWER	22,208,926	25,195,612	27,125,682	1,930,070	7.7%
UTILITIES	3,291,191	3,506,156	3,509,930	3,774	0.1%
TOTAL ENERGY	26,008,716	29,235,633	31,049,525	1,813,892	6.2%
RISK MANAGEMENT	4,160,007	5,863,849	6,992,677	1,128,828	19.3%
GENERAL AND ADMINISTRATIVE	506,388	620,049	595,152	(24,897)	-4.0%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	543,121	734,388	713,368	(21,020)	-2.9%
TOTAL OPERATING EXPENSES	111,543,711	124,254,334	135,135,077	10,880,743	8.8%
NET OPERATING SUBSIDY	(78,778,657)	(89,403,235)	(92,182,853)	2,779,618	3.1%
OVERHEAD ALLOCATION	(23,108,136)	(26,819,506)	(31,308,139)	(4,488,634)	16.7%
ADJUSTED NET OPERATING SUBSIDY	(101,886,792)	(116,222,741)	(123,490,992)	7,268,251	6.3%
TOTAL REVENUES LESS TOTAL EXPENSES	(395,865)	0	(0)	1	0.0%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
CONTRACTED BUS OPERATIONS - FIXED ROUTE BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 4.04

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	21,403,676	23,920,157	24,731,324	811,167	3.4%
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	21,403,676	23,920,157	24,731,324	811,167	3.4%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	79,350,157	82,942,824	86,207,328	3,264,504	3.9%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	79,350,157	82,942,824	86,207,328	3,264,504	3.9%
TOTAL COMBINED REVENUES	100,753,832	106,862,981	110,938,652	4,075,671	3.8%
OPERATING EXPENSES					
LABOR EXPENSES	416,668	449,200	459,000	9,800	2.2%
FRINGE EXPENSES	381,974	273,100	276,334	3,234	1.2%
TOTAL PERSONNEL EXPENSES	798,643	722,300	735,334	13,034	1.8%
SECURITY EXPENSES	989,140	1,024,810	1,074,840	50,030	4.9%
REPAIR/MAINTENANCE SERVICES	68,623	64,200	38,000	(26,200)	-40.8%
ENGINE AND TRANSMISSION REBUILD	985,774	922,750	814,000	(108,750)	-11.8%
OTHER OUTSIDE SERVICES	2,234,808	2,883,841	2,717,415	(166,426)	-5.8%
PURCHASED TRANSPORTATION	85,030,794	90,082,570	93,689,448	3,606,878	4.0%
TOTAL OUTSIDE SERVICES	89,309,139	94,978,171	98,333,703	3,355,532	3.5%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	96,829	130,980	100,412	(30,568)	-23.3%
TOTAL MATERIALS AND SUPPLIES	96,829	130,980	100,412	(30,568)	-23.3%
GAS/DIESEL/PROPANE	722,041	711,242	762,595	51,353	7.2%
CNG	6,691,794	6,552,783	6,980,655	427,872	6.5%
TRACTION POWER	192,335	276,000	318,099	42,099	15.3%
UTILITIES	848,782	906,065	977,524	71,459	7.9%
TOTAL ENERGY	8,454,953	8,446,090	9,038,873	592,783	7.0%
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	5,694	9,555	9,950	395	4.1%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	10,757	89,820	64,316	(25,504)	-28.4%
TOTAL OPERATING EXPENSES	98,676,016	104,376,916	108,282,588	3,905,672	3.7%
NET OPERATING SUBSIDY	(77,272,340)	(80,456,759)	(83,551,264)	3,094,505	3.8%
OVERHEAD ALLOCATION	(2,070,305)	(2,486,067)	(2,656,064)	(169,997)	6.8%
ADJUSTED NET OPERATING SUBSIDY	(79,342,645)	(82,942,826)	(86,207,328)	3,264,502	3.9%
TOTAL REVENUES LESS TOTAL EXPENSES	7,511	(2)	0	(2)	0.0%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
CONTRACTED BUS OPERATIONS - PARA TRANSIT BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 4.05

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	1,443,824	1,602,987	1,734,698	131,711	8.2%
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	1,443,824	1,602,987	1,734,698	131,711	8.2%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	17,777,370	20,143,541	21,752,667	1,609,126	8.0%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	17,777,370	20,143,541	21,752,667	1,609,126	8.0%
TOTAL COMBINED REVENUES	19,221,194	21,746,528	23,487,365	1,740,837	8.0%
OPERATING EXPENSES					
LABOR EXPENSES	98,874	138,000	138,000	-	0.0%
FRINGE EXPENSES	75,231	80,000	83,142	3,142	3.9%
TOTAL PERSONNEL EXPENSES	174,105	218,000	221,142	3,142	1.4%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	802,901	1,124,186	973,598	(150,588)	-13.4%
PURCHASED TRANSPORTATION	16,565,044	18,312,528	19,988,012	1,675,484	9.1%
TOTAL OUTSIDE SERVICES	17,367,945	19,436,714	20,961,610	1,524,896	7.8%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	973,194	1,230,648	1,399,360	168,712	13.7%
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	973,194	1,230,648	1,399,360	168,712	13.7%
RISK MANAGEMENT	15,000	15,000	15,050	50	0.3%
GENERAL AND ADMINISTRATIVE	34,487	11,265	11,579	314	2.8%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	342,524	343,000	343,000	-	0.0%
TOTAL OPERATING EXPENSES	18,907,256	21,254,627	22,951,741	1,697,114	8.0%
NET OPERATING SUBSIDY	(17,463,431)	(19,651,640)	(21,217,043)	1,565,403	8.0%
OVERHEAD ALLOCATION	(313,938)	(491,900)	(535,624)	(43,723)	8.9%
ADJUSTED NET OPERATING SUBSIDY	(17,777,369)	(20,143,540)	(21,752,667)	1,609,127	8.0%
TOTAL REVENUES LESS TOTAL EXPENSES	1	1	0	1	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
CORONADO FERRY BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 4.06**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	323,313	314,076	296,062	(18,014)	-5.7%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	323,313	314,076	296,062	(18,014)	-5.7%
TOTAL COMBINED REVENUES	323,313	314,076	296,062	(18,014)	-5.7%
OPERATING EXPENSES					
LABOR EXPENSES	-	-	-	-	-
FRINGE EXPENSES	-	-	-	-	-
TOTAL PERSONNEL EXPENSES	-	-	-	-	-
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	-	-	-	-	-
PURCHASED TRANSPORTATION	323,313	314,076	296,062	(18,014)	-5.7%
TOTAL OUTSIDE SERVICES	323,313	314,076	296,062	(18,014)	-5.7%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	-	-	-	-	-
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	323,313	314,076	296,062	(18,014)	-5.7%
NET OPERATING SUBSIDY	(323,313)	(314,076)	(296,062)	(18,014)	-5.7%
OVERHEAD ALLOCATION	-	-	-	-	-
ADJUSTED NET OPERATING SUBSIDY	(323,313)	(314,076)	(296,062)	(18,014)	-5.7%
TOTAL REVENUES LESS TOTAL EXPENSES	-	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
ADMINISTRATIVE PASS THROUGH BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 4.07**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	194,708	524,589	494,502	(30,087)	-5.7%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	194,708	524,589	494,502	(30,087)	-5.7%
TOTAL COMBINED REVENUES	194,708	524,589	494,502	(30,087)	-5.7%
OPERATING EXPENSES					
LABOR EXPENSES	-	-	-	-	-
FRINGE EXPENSES	(41,319)	288,115	271,591	(16,524)	-5.7%
TOTAL PERSONNEL EXPENSES	(41,319)	288,115	271,591	(16,524)	-5.7%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	236,027	236,474	222,911	(13,563)	-5.7%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	236,027	236,474	222,911	(13,563)	-5.7%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	-	-	-	-	-
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	194,708	524,589	494,502	(30,087)	-5.7%
NET OPERATING SUBSIDY	(194,708)	(524,589)	(494,502)	(30,087)	-5.7%
OVERHEAD ALLOCATION	-	-	-	-	-
ADJUSTED NET OPERATING SUBSIDY	(194,708)	(524,589)	(494,502)	(30,087)	-5.7%
TOTAL REVENUES LESS TOTAL EXPENSES	-	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
ADMINISTRATIVE PASS THROUGH BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 4.08**

	AVAILABLE FUNDING FY26
City of Poway	86,407
City of El Cajon	130,820
City of Lemon Grove	174,415
City of La Mesa	74,127
City of Coronado	28,733
Grand Total	<u>494,502</u>

Transportation Development Act (TDA) funding passed through to the above cities can be used for all purposes necessary and convenient to the operation and maintenance of the MTS public transportation system.

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
ADMINISTRATIVE BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 5.01**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	30,491,772	32,977,748	29,897,183	(3,080,565)	-9.3%
TOTAL OPERATING REVENUES	30,491,772	32,977,748	29,897,183	(3,080,565)	-9.3%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	47,440,913	7,243,225	4,022,303	(3,220,922)	-44.5%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	(30,182,046)	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	(30,182,046)	-	-	-	-
TOTAL NON OPERATING REVENUE	17,258,868	7,243,225	4,022,303	(3,220,922)	-44.5%
TOTAL COMBINED REVENUES	47,750,639	40,220,973	33,919,486	(6,301,487)	-15.7%
OPERATING EXPENSES					
LABOR EXPENSES	20,424,712	24,106,759	25,205,100	1,098,341	4.6%
FRINGE EXPENSES	9,079,160	10,115,573	10,599,985	484,412	4.8%
TOTAL PERSONNEL EXPENSES	29,503,872	34,222,332	35,805,085	1,582,753	4.6%
SECURITY EXPENSES	12,484,734	13,428,071	13,970,804	542,733	4.0%
REPAIR/MAINTENANCE SERVICES	218,335	259,400	283,400	24,000	9.3%
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	14,656,463	16,811,953	18,055,763	1,243,810	7.4%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	27,359,532	30,499,424	32,309,967	1,810,543	5.9%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	41,291	49,823	49,257	(566)	-1.1%
TOTAL MATERIALS AND SUPPLIES	41,291	49,823	49,257	(566)	-1.1%
GAS/DIESEL/PROPANE	221,917	249,700	249,700	-	0.0%
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	1,021,305	1,061,778	1,108,745	46,967	4.4%
TOTAL ENERGY	1,243,222	1,311,478	1,358,445	46,967	3.6%
RISK MANAGEMENT	674,374	997,514	1,161,180	163,666	16.4%
GENERAL AND ADMINISTRATIVE	4,905,354	5,899,346	5,824,678	(74,668)	-1.3%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	379,051	452,052	501,256	49,204	10.9%
TOTAL OPERATING EXPENSES	64,106,695	73,431,969	77,009,868	3,577,899	4.9%
NET OPERATING SUBSIDY	(33,614,924)	(40,454,221)	(47,112,685)	6,658,464	16.5%
OVERHEAD ALLOCATION	27,006,070	33,210,996	43,090,382	9,879,386	29.7%
ADJUSTED NET OPERATING SUBSIDY	(6,608,854)	(7,243,225)	(4,022,303)	(3,220,922)	-44.5%
TOTAL REVENUES LESS TOTAL EXPENSES	10,650,014	(0)	-	(0)	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS BUDGET
FISCAL YEAR 2026
SECTION 5.02**

	<u>ACTUAL FY24</u>	<u>AMENDED BUDGET FY25</u>	<u>PROPOSED BUDGET FY26</u>	<u>\$ CHANGE BUDGET/ AMENDED</u>	<u>% CHANGE BUDGET/ AMENDED</u>
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL NON OPERATING REVENUE	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL COMBINED REVENUES	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
OPERATING EXPENSES					
LABOR EXPENSES	-	-	-	-	-
FRINGE EXPENSES	-	-	-	-	-
TOTAL PERSONNEL EXPENSES	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	6,020	-	-	-	-
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	<u>6,020</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
RISK MANAGEMENT	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
GENERAL AND ADMINISTRATIVE	<u>63,959</u>	<u>70,500</u>	<u>67,425</u>	<u>(3,075)</u>	<u>-4.4%</u>
DEBT SERVICE	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
VEHICLE / FACILITY LEASE	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL OPERATING EXPENSES	<u>69,979</u>	<u>70,500</u>	<u>67,425</u>	<u>(3,075)</u>	<u>-4.4%</u>
NET OPERATING SUBSIDY	<u>(69,979)</u>	<u>(70,500)</u>	<u>(67,425)</u>	<u>(3,075)</u>	<u>-4.4%</u>
OVERHEAD ALLOCATION	<u>81,400</u>	<u>70,500</u>	<u>67,425</u>	<u>(3,075)</u>	<u>-4.4%</u>
ADJUSTED NET OPERATING SUBSIDY	<u>11,421</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
TOTAL REVENUES LESS TOTAL EXPENSES	<u>11,421</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>0.0%</u>

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS ADMINISTRATION BUDGET
FISCAL YEAR 2026
SECTION 5.03**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	195,652	203,185	194,997	(8,188)	-4.0%
FRINGE EXPENSES	35,550	34,492	33,819	(673)	-2.0%
TOTAL PERSONNEL EXPENSES	231,202	237,677	228,816	(8,861)	-3.7%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	-	-	-	-	-
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	-	-	-	-	-
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	29	-	-	-	-
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	231,231	237,677	228,816	(8,861)	-3.7%
NET OPERATING SUBSIDY	(231,231)	(237,677)	(228,816)	(8,861)	-3.7%
OVERHEAD ALLOCATION	225,329	237,677	228,816	(8,861)	-3.7%
ADJUSTED NET OPERATING SUBSIDY	(5,902)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(5,902)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BUS BENCH/SHELTER BUDGET
FISCAL YEAR 2026
SECTION 5.04**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	1,902,029	2,304,658	2,205,109	(99,549)	-4.3%
TOTAL OPERATING REVENUES	1,902,029	2,304,658	2,205,109	(99,549)	-4.3%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	1,902,029	2,304,658	2,205,109	(99,549)	-4.3%
OPERATING EXPENSES					
LABOR EXPENSES	62,449	66,000	66,000	-	0.0%
FRINGE EXPENSES	57,317	48,400	47,906	(494)	-1.0%
TOTAL PERSONNEL EXPENSES	119,766	114,400	113,906	(494)	-0.4%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	16,686	10,000	10,000	-	0.0%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	16,686	10,000	10,000	-	0.0%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	-	-	-	-	-
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	136,452	124,400	123,906	(494)	-0.4%
NET OPERATING SUBSIDY	1,765,576	2,180,258	2,081,203	99,055	-4.5%
OVERHEAD ALLOCATION	(1,576,032)	(2,180,258)	(2,081,203)	99,055	-4.5%
ADJUSTED NET OPERATING SUBSIDY	189,544	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	189,544	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
CAPITAL PROJECTS
FISCAL YEAR 2026
SECTION 5.05**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	923,223	1,060,000	1,141,491	81,491	7.7%
FRINGE EXPENSES	(232,540)	(225,544)	(238,595)	(13,051)	5.8%
TOTAL PERSONNEL EXPENSES	690,683	834,456	902,896	68,440	8.2%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	1,238	1,500	500	(1,000)	-66.7%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	1,238	1,500	500	(1,000)	-66.7%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	288	7,200	1,600	(5,600)	-77.8%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	692,208	843,156	904,996	61,840	7.3%
NET OPERATING SUBSIDY	(692,208)	(843,156)	(904,996)	61,840	7.3%
OVERHEAD ALLOCATION	692,200	843,156	904,996	61,840	7.3%
ADJUSTED NET OPERATING SUBSIDY	(8)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(8)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
EXECUTIVE BUDGET
FISCAL YEAR 2026
SECTION 5.06**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	632,506	653,122	675,127	22,005	3.4%
FRINGE EXPENSES	106,598	114,283	91,584	(22,699)	-19.9%
TOTAL PERSONNEL EXPENSES	739,104	767,405	766,711	(694)	-0.1%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	31,660	189,800	287,000	97,200	51.2%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	31,660	189,800	287,000	97,200	51.2%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	18,303	24,000	15,500	(8,500)	-35.4%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	789,067	981,205	1,069,211	88,006	9.0%
NET OPERATING SUBSIDY	(789,067)	(981,205)	(1,069,211)	88,006	9.0%
OVERHEAD ALLOCATION	734,808	981,205	1,069,211	88,006	9.0%
ADJUSTED NET OPERATING SUBSIDY	(54,259)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(54,259)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
FARE SYSTEM BUDGET
FISCAL YEAR 2026
SECTION 5.07**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	1,158,864	1,725,548	1,808,000	82,452	4.8%
TOTAL OPERATING REVENUES	1,158,864	1,725,548	1,808,000	82,452	4.8%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	461,991	522,303	60,312	13.1%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	461,991	522,303	60,312	13.1%
TOTAL COMBINED REVENUES	1,158,864	2,187,539	2,330,303	142,764	6.5%
OPERATING EXPENSES					
LABOR EXPENSES	858,705	940,932	973,753	32,821	3.5%
FRINGE EXPENSES	313,132	148,446	121,976	(26,470)	-17.8%
TOTAL PERSONNEL EXPENSES	1,171,837	1,089,378	1,095,729	6,351	0.6%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	1,488,843	1,827,005	2,353,466	526,461	28.8%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	1,488,843	1,827,005	2,353,466	526,461	28.8%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	60,391	72,778	70,000	(2,778)	-3.8%
TOTAL ENERGY	60,391	72,778	70,000	(2,778)	-3.8%
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	1,833,129	2,124,810	2,152,352	27,542	1.3%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	4,554,200	5,113,971	5,671,547	557,576	10.9%
NET OPERATING SUBSIDY	(3,395,337)	(3,388,423)	(3,863,547)	475,124	14.0%
OVERHEAD ALLOCATION	3,309,187	2,926,432	3,341,244	414,812	14.2%
ADJUSTED NET OPERATING SUBSIDY	(86,150)	(461,991)	(522,303)	60,312	13.1%
TOTAL REVENUES LESS TOTAL EXPENSES	(86,150)	(0)	-	(0)	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
FINANCE BUDGET
FISCAL YEAR 2026
SECTION 5.08**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	1,915,092	2,101,000	2,358,195	257,195	12.2%
FRINGE EXPENSES	348,163	364,000	331,856	(32,144)	-8.8%
TOTAL PERSONNEL EXPENSES	2,263,255	2,465,000	2,690,051	225,051	9.1%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	10,405	40,500	40,500	-	0.0%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	10,405	40,500	40,500	-	0.0%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	16,264	12,320	9,020	(3,300)	-26.8%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	2,289,924	2,517,820	2,739,571	221,751	8.8%
NET OPERATING SUBSIDY	(2,289,924)	(2,517,820)	(2,739,571)	221,751	8.8%
OVERHEAD ALLOCATION	2,260,500	2,517,820	2,739,571	221,751	8.8%
ADJUSTED NET OPERATING SUBSIDY	(29,424)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(29,424)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
FRINGE BENEFITS BUDGET
FISCAL YEAR 2026
SECTION 5.09**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	28,750	(185,000)	-	185,000	-100.0%
FRINGE EXPENSES	6,921,879	7,774,653	8,259,115	484,462	6.2%
TOTAL PERSONNEL EXPENSES	6,950,629	7,589,653	8,259,115	669,462	8.8%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	-	-	-	-	-
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	-	-	-	-	-
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	11,724	22,000	15,400	(6,600)	-30.0%
GENERAL AND ADMINISTRATIVE	(65)	(100)	(100)	-	0.0%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	6,962,288	7,611,553	8,274,415	662,862	8.7%
NET OPERATING SUBSIDY	(6,962,288)	(7,611,553)	(8,274,415)	662,862	8.7%
OVERHEAD ALLOCATION	6,637,870	7,611,553	8,274,415	662,862	8.7%
ADJUSTED NET OPERATING SUBSIDY	(324,418)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(324,418)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
GENERAL EXPENSES BUDGET
FISCAL YEAR 2026
SECTION 5.10**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	1,295	2,000	1,500	(500)	-25.0%
FRINGE EXPENSES	(701,761)	(640,000)	(650,714)	(10,714)	1.7%
TOTAL PERSONNEL EXPENSES	(700,466)	(638,000)	(649,214)	(11,214)	1.8%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	157,745	181,400	181,400	-	0.0%
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	1,074,030	1,419,400	1,188,108	(231,292)	-16.3%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	1,231,774	1,600,800	1,369,508	(231,292)	-14.4%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	3,171	3,020	2,468	(552)	-18.3%
TOTAL MATERIALS AND SUPPLIES	3,171	3,020	2,468	(552)	-18.3%
GAS/DIESEL/PROPANE	3,835	4,000	4,000	-	0.0%
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	929,004	955,000	1,004,743	49,743	5.2%
TOTAL ENERGY	932,839	959,000	1,008,743	49,743	5.2%
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	2,005,257	2,270,776	2,389,327	118,551	5.2%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	379,051	452,052	501,256	49,204	10.9%
TOTAL OPERATING EXPENSES	3,851,626	4,647,648	4,622,088	(25,560)	-0.5%
NET OPERATING SUBSIDY	(3,851,626)	(4,647,648)	(4,622,088)	(25,560)	-0.5%
OVERHEAD ALLOCATION	3,627,562	4,647,648	4,622,088	(25,560)	-0.5%
ADJUSTED NET OPERATING SUBSIDY	(224,064)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(224,064)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
HUMAN RESOURCES BUDGET
FISCAL YEAR 2026
SECTION 5.11**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	1,507,133	1,723,000	1,767,858	44,858	2.6%
FRINGE EXPENSES	232,061	278,000	281,153	3,153	1.1%
TOTAL PERSONNEL EXPENSES	1,739,193	2,001,000	2,049,011	48,011	2.4%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	1,122,107	1,128,704	1,177,357	48,653	4.3%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	1,122,107	1,128,704	1,177,357	48,653	4.3%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	5,136	275	271	(4)	-1.5%
TOTAL MATERIALS AND SUPPLIES	5,136	275	271	(4)	-1.5%
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	25,836	71,260	55,899	(15,361)	-21.6%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	2,892,272	3,201,239	3,282,538	81,299	2.5%
NET OPERATING SUBSIDY	(2,892,272)	(3,201,239)	(3,282,538)	81,299	2.5%
OVERHEAD ALLOCATION	2,733,736	3,201,239	3,282,538	81,299	2.5%
ADJUSTED NET OPERATING SUBSIDY	(158,536)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(158,536)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
INFORMATION TECHNOLOGY BUDGET
FISCAL YEAR 2026
SECTION 5.12**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	3,040,421	3,406,000	3,489,173	83,173	2.4%
FRINGE EXPENSES	425,603	466,373	481,906	15,533	3.3%
TOTAL PERSONNEL EXPENSES	3,466,024	3,872,373	3,971,079	98,706	2.5%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	7,128,626	8,469,652	9,363,332	893,680	10.6%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	7,128,626	8,469,652	9,363,332	893,680	10.6%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	6,704	10,000	10,000	-	0.0%
TOTAL MATERIALS AND SUPPLIES	6,704	10,000	10,000	-	0.0%
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	5,636	1,500	1,500	-	0.0%
TOTAL ENERGY	5,636	1,500	1,500	-	0.0%
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	310,296	541,750	607,050	65,300	12.1%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	10,917,286	12,895,275	13,952,961	1,057,686	8.2%
NET OPERATING SUBSIDY	(10,917,286)	(12,895,275)	(13,952,961)	1,057,686	8.2%
OVERHEAD ALLOCATION	10,871,429	12,895,275	13,952,961	1,057,686	8.2%
ADJUSTED NET OPERATING SUBSIDY	(45,857)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(45,857)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
LAND MANAGEMENT BUDGET
FISCAL YEAR 2026
SECTION 5.13**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	3,082,203	3,005,000	2,600,000	(405,000)	-13.5%
TOTAL OPERATING REVENUES	3,082,203	3,005,000	2,600,000	(405,000)	-13.5%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	3,082,203	3,005,000	2,600,000	(405,000)	-13.5%
OPERATING EXPENSES					
LABOR EXPENSES	212,542	217,000	220,619	3,619	1.7%
FRINGE EXPENSES	29,581	37,142	32,905	(4,237)	-11.4%
TOTAL PERSONNEL EXPENSES	242,123	254,142	253,524	(618)	-0.2%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	206	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	1,525,258	659,873	725,700	65,827	10.0%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	1,525,464	659,873	725,700	65,827	10.0%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	23,076	29,500	29,502	2	0.0%
TOTAL ENERGY	23,076	29,500	29,502	2	0.0%
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	113,934	100,570	103,735	3,165	3.1%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	1,904,597	1,044,085	1,112,461	68,376	6.5%
NET OPERATING SUBSIDY	1,177,606	1,960,915	1,487,539	473,376	-24.1%
OVERHEAD ALLOCATION	(675,618)	(1,960,915)	(1,487,539)	473,376	-24.1%
ADJUSTED NET OPERATING SUBSIDY	501,988	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	501,988	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
LEGAL BUDGET
FISCAL YEAR 2026
SECTION 5.14**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	367,636	520,000	633,677	113,677	21.9%
FRINGE EXPENSES	59,291	78,533	74,645	(3,888)	-5.0%
TOTAL PERSONNEL EXPENSES	426,927	598,533	708,322	109,789	18.3%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	878,205	810,500	870,500	60,000	7.4%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	878,205	810,500	870,500	60,000	7.4%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	126,241	124,860	118,560	(6,300)	-5.0%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	1,431,373	1,533,893	1,697,382	163,489	10.7%
NET OPERATING SUBSIDY	(1,431,373)	(1,533,893)	(1,697,382)	163,489	10.7%
OVERHEAD ALLOCATION	1,366,518	1,533,893	1,697,382	163,489	10.7%
ADJUSTED NET OPERATING SUBSIDY	(64,855)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(64,855)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
MARKETING BUDGET
FISCAL YEAR 2026
SECTION 5.15**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	778,103	852,000	850,523	(1,477)	-0.2%
FRINGE EXPENSES	126,722	128,111	129,752	1,641	1.3%
TOTAL PERSONNEL EXPENSES	904,825	980,111	980,275	164	0.0%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	757,853	1,213,419	849,000	(364,419)	-30.0%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	757,853	1,213,419	849,000	(364,419)	-30.0%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	1,396	1,728	1,718	(10)	-0.6%
TOTAL MATERIALS AND SUPPLIES	1,396	1,728	1,718	(10)	-0.6%
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	274,882	218,400	210,800	(7,600)	-3.5%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	1,938,955	2,413,658	2,041,793	(371,865)	-15.4%
NET OPERATING SUBSIDY	(1,938,955)	(2,413,658)	(2,041,793)	(371,865)	-15.4%
OVERHEAD ALLOCATION	1,811,135	2,413,658	2,041,793	(371,865)	-15.4%
ADJUSTED NET OPERATING SUBSIDY	(127,820)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(127,820)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
PLANNING BUDGET
FISCAL YEAR 2026
SECTION 5.16**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	700,035	840,000	871,755	31,755	3.8%
FRINGE EXPENSES	133,768	137,218	136,901	(317)	-0.2%
TOTAL PERSONNEL EXPENSES	833,803	977,218	1,008,656	31,438	3.2%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	47,203	68,500	515,000	446,500	651.8%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	47,203	68,500	515,000	446,500	651.8%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	(100)	(100)	-	0.0%
TOTAL MATERIALS AND SUPPLIES	-	(100)	(100)	-	0.0%
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	6,770	22,950	9,350	(13,600)	-59.3%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	887,776	1,068,568	1,532,906	464,338	43.5%
NET OPERATING SUBSIDY	(887,776)	(1,068,568)	(1,532,906)	464,338	43.5%
OVERHEAD ALLOCATION	906,649	1,068,568	1,532,906	464,338	43.5%
ADJUSTED NET OPERATING SUBSIDY	18,873	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	18,873	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
PURCHASING BUDGET
FISCAL YEAR 2026
SECTION 5.17**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	1,134,782	1,390,000	1,392,591	2,591	0.2%
FRINGE EXPENSES	165,502	182,314	187,843	5,529	3.0%
TOTAL PERSONNEL EXPENSES	1,300,284	1,572,314	1,580,434	8,120	0.5%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	51,109	85,500	85,500	-	0.0%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	51,109	85,500	85,500	-	0.0%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	500	500	-	0.0%
TOTAL MATERIALS AND SUPPLIES	-	500	500	-	0.0%
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	32,646	23,120	23,530	410	1.8%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	1,384,039	1,681,434	1,689,964	8,530	0.5%
NET OPERATING SUBSIDY	(1,384,039)	(1,681,434)	(1,689,964)	8,530	0.5%
OVERHEAD ALLOCATION	1,465,400	1,681,434	1,689,964	8,530	0.5%
ADJUSTED NET OPERATING SUBSIDY	81,361	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	81,361	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
REVENUE BUDGET
FISCAL YEAR 2026
SECTION 5.18**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	24,341,782	25,942,542	23,279,108	(2,663,434)	-10.3%
TOTAL OPERATING REVENUES	24,341,782	25,942,542	23,279,108	(2,663,434)	-10.3%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	47,362,320	6,781,234	3,500,000	(3,281,234)	-48.4%
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	(30,182,046)	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	(30,182,046)	-	-	-	-
TOTAL NON OPERATING REVENUE	17,180,274	6,781,234	3,500,000	(3,281,234)	-48.4%
TOTAL COMBINED REVENUES	41,522,056	32,723,776	26,779,108	(5,944,668)	-18.2%
OPERATING EXPENSES					
LABOR EXPENSES	-	-	-	-	-
FRINGE EXPENSES	-	-	-	-	-
TOTAL PERSONNEL EXPENSES	-	-	-	-	-
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	-	-	-	-	-
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	-	-	-	-	-
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	-	-	-	-	-
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	-	-	-	-	-
NET OPERATING SUBSIDY	24,341,782	25,942,542	23,279,108	2,663,434	-10.3%
OVERHEAD ALLOCATION	(31,809,004)	(32,723,776)	(26,779,108)	5,944,668	-18.2%
ADJUSTED NET OPERATING SUBSIDY	(7,467,222)	(6,781,234)	(3,500,000)	(3,281,234)	-48.4%
TOTAL REVENUES LESS TOTAL EXPENSES	9,713,052	0	-	0	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
RISK BUDGET
FISCAL YEAR 2026
SECTION 5.19**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	346,116	360,000	351,544	(8,456)	-2.3%
FRINGE EXPENSES	60,546	77,040	75,721	(1,319)	-1.7%
TOTAL PERSONNEL EXPENSES	406,662	437,040	427,265	(9,775)	-2.2%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	1,492	-	-	-	-
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	1,492	-	-	-	-
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	585,613	897,514	1,063,780	166,266	18.5%
GENERAL AND ADMINISTRATIVE	300	430	2,930	2,500	581.4%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	994,066	1,334,984	1,493,975	158,991	11.9%
NET OPERATING SUBSIDY	(994,066)	(1,334,984)	(1,493,975)	158,991	11.9%
OVERHEAD ALLOCATION	1,182,575	1,334,984	1,493,975	158,991	11.9%
ADJUSTED NET OPERATING SUBSIDY	188,509	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	188,509	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
SECURITY BUDGET
FISCAL YEAR 2026
SECTION 5.20**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	78,593	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	78,593	-	-	-	-
TOTAL COMBINED REVENUES	78,593	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	5,425,845	7,484,000	7,685,786	201,786	2.7%
FRINGE EXPENSES	643,754	747,574	823,075	75,501	10.1%
TOTAL PERSONNEL EXPENSES	6,069,599	8,231,574	8,508,861	277,287	3.4%
SECURITY EXPENSES	12,484,734	13,428,071	13,970,804	542,733	4.0%
REPAIR/MAINTENANCE SERVICES	60,384	78,000	102,000	24,000	30.8%
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	344,288	704,000	406,000	(298,000)	-42.3%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	12,889,406	14,210,071	14,478,804	268,733	1.9%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	20,042	23,900	23,900	-	0.0%
TOTAL MATERIALS AND SUPPLIES	20,042	23,900	23,900	-	0.0%
GAS/DIESEL/PROPANE	217,406	245,000	245,000	-	0.0%
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	3,198	3,000	3,000	-	0.0%
TOTAL ENERGY	220,605	248,000	248,000	-	0.0%
RISK MANAGEMENT	77,037	78,000	82,000	4,000	5.1%
GENERAL AND ADMINISTRATIVE	59,568	258,500	33,700	(224,800)	-87.0%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	19,336,256	23,050,045	23,375,265	325,220	1.4%
NET OPERATING SUBSIDY	(19,336,256)	(23,050,045)	(23,375,265)	325,220	1.4%
OVERHEAD ALLOCATION	20,765,592	23,050,045	23,375,265	325,220	1.4%
ADJUSTED NET OPERATING SUBSIDY	1,429,336	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	1,507,929	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
STORES BUDGET
FISCAL YEAR 2026
SECTION 5.21**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	1,227,876	1,336,957	1,333,958	(2,999)	-0.2%
FRINGE EXPENSES	199,962	178,914	191,524	12,610	7.0%
TOTAL PERSONNEL EXPENSES	1,427,838	1,515,871	1,525,482	9,611	0.6%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	158,116	180,000	180,000	-	0.0%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	158,116	180,000	180,000	-	0.0%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	4,842	10,500	10,500	-	0.0%
TOTAL MATERIALS AND SUPPLIES	4,842	10,500	10,500	-	0.0%
GAS/DIESEL/PROPANE	676	700	700	-	0.0%
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	676	700	700	-	0.0%
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	10,822	15,500	12,500	(3,000)	-19.4%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	1,602,294	1,722,571	1,729,182	6,611	0.4%
NET OPERATING SUBSIDY	(1,602,294)	(1,722,571)	(1,729,182)	6,611	0.4%
OVERHEAD ALLOCATION	1,601,263	1,722,571	1,729,182	6,611	0.4%
ADJUSTED NET OPERATING SUBSIDY	(1,031)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(1,031)	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
TELEPHONE INFORMATION SERVICES BUDGET
FISCAL YEAR 2026
SECTION 5.22**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	-	-	-	-	-
TOTAL OPERATING REVENUES	-	-	-	-	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	-	-	-	-	-
OPERATING EXPENSES					
LABOR EXPENSES	685,695	737,500	778,333	40,833	5.5%
FRINGE EXPENSES	94,761	113,300	114,581	1,281	1.1%
TOTAL PERSONNEL EXPENSES	780,456	850,800	892,914	42,114	4.9%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	-	-	-	-	-
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	-	-	-	-	-
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	869	2,000	2,000	-	0.0%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	781,325	852,800	894,914	42,114	4.9%
NET OPERATING SUBSIDY	(781,325)	(852,800)	(894,914)	42,114	4.9%
OVERHEAD ALLOCATION	821,400	852,800	894,914	42,114	4.9%
ADJUSTED NET OPERATING SUBSIDY	40,075	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	40,075	-	-	-	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
TRANSIT STORE BUDGET
FISCAL YEAR 2026
SECTION 5.23**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	6,894	-	4,966	4,966	-
TOTAL OPERATING REVENUES	6,894	-	4,966	4,966	-
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	-	-	-	-	-
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	-	-	-	-	-
TOTAL NON OPERATING REVENUE	-	-	-	-	-
TOTAL COMBINED REVENUES	6,894	-	4,966	4,966	-
OPERATING EXPENSES					
LABOR EXPENSES	380,858	399,063	418,220	19,157	4.8%
FRINGE EXPENSES	59,270	72,324	73,032	708	1.0%
TOTAL PERSONNEL EXPENSES	440,128	471,387	491,252	19,865	4.2%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	13,325	3,600	3,800	200	5.6%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	13,325	3,600	3,800	200	5.6%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	-	-	-	-	-
GENERAL AND ADMINISTRATIVE	6,028	10,500	9,500	(1,000)	-9.5%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	459,481	485,487	504,552	19,065	3.9%
NET OPERATING SUBSIDY	(452,587)	(485,487)	(499,586)	14,099	2.9%
OVERHEAD ALLOCATION	(27,829)	485,487	499,586	14,099	2.9%
ADJUSTED NET OPERATING SUBSIDY	(480,417)	-	-	-	-
TOTAL REVENUES LESS TOTAL EXPENSES	(480,417)	-	-	-	0.0%

This page intentionally left blank.

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
OTHER ACTIVITIES BUDGET SUMMARY
FISCAL YEAR 2026
SECTION 6.01**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	1,012,654	1,011,770	1,013,981	2,211	0.2%
TOTAL OPERATING REVENUES	1,012,654	1,011,770	1,013,981	2,211	0.2%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	(322,799)	(25,492)	89,229	114,721	-450.0%
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	(322,799)	(25,492)	89,229	114,721	-450.0%
TOTAL NON OPERATING REVENUE	(322,799)	(25,492)	89,229	114,721	-450.0%
TOTAL COMBINED REVENUES	689,855	986,278	1,103,210	116,932	11.9%
OPERATING EXPENSES					
LABOR EXPENSES	359,737	417,000	471,739	54,739	13.1%
FRINGE EXPENSES	207,843	225,340	218,878	(6,462)	-2.9%
TOTAL PERSONNEL EXPENSES	567,580	642,340	690,617	48,277	7.5%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	2,150	5,000	5,000	-	0.0%
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	11,944	128,476	150,840	22,364	17.4%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	14,094	133,476	155,840	22,364	16.8%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	486	500	500	-	0.0%
TOTAL MATERIALS AND SUPPLIES	486	500	500	-	0.0%
GAS/DIESEL/PROPANE	4,828	6,000	7,000	1,000	16.7%
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	4,828	6,000	7,000	1,000	16.7%
RISK MANAGEMENT	49,845	107,027	112,467	5,440	5.1%
GENERAL AND ADMINISTRATIVE	58,031	77,064	64,114	(12,950)	-16.8%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	6,921	20,604	28,857	8,253	40.1%
TOTAL OPERATING EXPENSES	701,785	987,011	1,059,395	72,384	7.3%
NET OPERATING SUBSIDY	310,869	24,759	(45,414)	70,173	-283.4%
OVERHEAD ALLOCATION	11,930	733	(43,815)	(44,548)	-6074.6%
ADJUSTED NET OPERATING SUBSIDY	322,799	25,492	(89,229)	114,721	-450.0%
TOTAL REVENUES LESS TOTAL EXPENSES	0	0	-	0	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
FOR-HIRE VEHICLE (FHV) ADMINISTRATION BUDGET
FISCAL YEAR 2026
SECTION 6.02**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	775,527	771,770	771,770	-	0.0%
TOTAL OPERATING REVENUES	775,527	771,770	771,770	-	0.0%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	(151,650)	44,193	162,223	118,030	267.1%
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	(151,650)	44,193	162,223	118,030	267.1%
TOTAL NON OPERATING REVENUE	(151,650)	44,193	162,223	118,030	267.1%
TOTAL COMBINED REVENUES	623,877	815,963	933,993	118,030	14.5%
OPERATING EXPENSES					
LABOR EXPENSES	359,737	415,000	469,739	54,739	13.2%
FRINGE EXPENSES	205,201	221,640	215,178	(6,462)	-2.9%
TOTAL PERSONNEL EXPENSES	564,938	636,640	684,917	48,277	7.6%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	2,150	5,000	5,000	-	0.0%
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	11,944	93,476	115,840	22,364	23.9%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	14,094	98,476	120,840	22,364	22.7%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	486	500	500	-	0.0%
TOTAL MATERIALS AND SUPPLIES	486	500	500	-	0.0%
GAS/DIESEL/PROPANE	4,828	6,000	7,000	1,000	16.7%
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	4,828	6,000	7,000	1,000	16.7%
RISK MANAGEMENT	9,475	10,412	11,000	588	5.6%
GENERAL AND ADMINISTRATIVE	35,065	44,064	37,064	(7,000)	-15.9%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	6,921	20,604	28,857	8,253	40.1%
TOTAL OPERATING EXPENSES	635,807	816,696	890,178	73,482	9.0%
NET OPERATING SUBSIDY	139,720	(44,926)	(118,408)	73,482	163.6%
OVERHEAD ALLOCATION	11,930	733	(43,815)	(44,548)	-6074.6%
ADJUSTED NET OPERATING SUBSIDY	151,650	(44,193)	(162,223)	118,030	267.1%
TOTAL REVENUES LESS TOTAL EXPENSES	0	0	-	0	0.0%

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
SAN DIEGO AND ARIZONA EASTERN RAILROAD BUDGET
FISCAL YEAR 2026
SECTION 6.03**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	\$ CHANGE BUDGET/ AMENDED	% CHANGE BUDGET/ AMENDED
OPERATING REVENUE					
PASSENGER REVENUE	-	-	-	-	-
OTHER OPERATING REVENUE	237,127	240,000	242,211	2,211	0.9%
TOTAL OPERATING REVENUES	237,127	240,000	242,211	2,211	0.9%
NON OPERATING REVENUE					
TOTAL SUBSIDY REVENUE	-	-	-	-	-
OTHER NON OPERATING REVENUE					
RESERVE REVENUE	(171,149)	(69,685)	(72,994)	(3,309)	4.7%
OTHER INCOME	-	-	-	-	-
TOTAL OTHER NON OPERATING REVENUE	(171,149)	(69,685)	(72,994)	(3,309)	4.7%
TOTAL NON OPERATING REVENUE	(171,149)	(69,685)	(72,994)	(3,309)	4.7%
TOTAL COMBINED REVENUES	65,978	170,315	169,217	(1,098)	-0.6%
OPERATING EXPENSES					
LABOR EXPENSES	-	2,000	2,000	-	0.0%
FRINGE EXPENSES	2,641	3,700	3,700	-	0.0%
TOTAL PERSONNEL EXPENSES	2,641	5,700	5,700	-	0.0%
SECURITY EXPENSES	-	-	-	-	-
REPAIR/MAINTENANCE SERVICES	-	-	-	-	-
ENGINE AND TRANSMISSION REBUILD	-	-	-	-	-
OTHER OUTSIDE SERVICES	-	35,000	35,000	-	0.0%
PURCHASED TRANSPORTATION	-	-	-	-	-
TOTAL OUTSIDE SERVICES	-	35,000	35,000	-	0.0%
LUBRICANTS	-	-	-	-	-
TIRES	-	-	-	-	-
OTHER MATERIALS AND SUPPLIES	-	-	-	-	-
TOTAL MATERIALS AND SUPPLIES	-	-	-	-	-
GAS/DIESEL/PROPANE	-	-	-	-	-
CNG	-	-	-	-	-
TRACTION POWER	-	-	-	-	-
UTILITIES	-	-	-	-	-
TOTAL ENERGY	-	-	-	-	-
RISK MANAGEMENT	40,371	96,615	101,467	4,852	5.0%
GENERAL AND ADMINISTRATIVE	22,966	33,000	27,050	(5,950)	-18.0%
DEBT SERVICE	-	-	-	-	-
VEHICLE / FACILITY LEASE	-	-	-	-	-
TOTAL OPERATING EXPENSES	65,978	170,315	169,217	(1,098)	-0.6%
NET OPERATING SUBSIDY	171,149	69,685	72,994	(3,309)	4.7%
OVERHEAD ALLOCATION	-	-	-	-	-
ADJUSTED NET OPERATING SUBSIDY	171,149	69,685	72,994	(3,309)	4.7%
TOTAL REVENUES LESS TOTAL EXPENSES	-	(0)	-	(0)	0.0%

This page intentionally left blank.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
Summary of Debt-Service Activities
Proposed Budget Fiscal Year 2026
Section 7.01

Overview

This section reviews the debt service activities of MTS's operating budget. The final payment on the 2004 pension obligation bonds was made in FY24. There are no further debt service payments scheduled for FY26.

This page intentionally left blank.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
Summary of Significant Capital Activities
Proposed Budget Fiscal Year 2026
Section 8.01

Development of the MTS Fiscal Year 2026 Capital Improvement Program (CIP)

The creation of the annual CIP and operating budgets involve a multitude of decisions that impact the agency's assets and the ability to keep these assets in a State of Good Repair (SGR). This requires a delicate balance between funding capital and operations in order to effectively, efficiently, and safely provide transit services for the region. In accordance with Board policy 65 - Transit Asset Management Policy, MTS maintains both a Transit Asset Management plan and a 20-year CIP forecast in order to facilitate these decision-making processes. On a yearly basis, the CIP is constructed under this framework, subject to the funding that is available in the current year.

The CIP process began in September 2023 with the "call for projects". Each MTS agency, MTS Administration, San Diego Transit Corporation, San Diego Trolley, Inc., and SANDAG, submitted its capital project requests in priority order. The lists were consolidated for review by Finance staff. A meeting of members of the CIP Budget Development Committee was held to review and to develop a CIP recommendation for FY26 ensuring that operationally critical projects were funded. The Chief Executive Officer (CEO) approved the prioritization of those capital requests. The FY26 MTS CIP was approved by the MTS Board of Directors on March 13, 2025.

The approved budget included funding \$70.0 million for preventative maintenance, \$6.4 million for ADA Operations, and \$297,000 in SANDAG planning studies. Available CIP funding was also reduced by \$25.0 million which will be utilized in the Operating Budget per Board direction. The remaining projects compete for the balance of available funding after the preventive maintenance has been taken into consideration.

CIP Revenues

For FY26, there is \$163.3 million in federal, state, and local funding sources available for the CIP, which are detailed in Section 8.02. Recurring revenue sources total \$98.1 million in the FY26 CIP in the form of federal formula revenues, TDA, STA, and LCTOP. Descriptions of these recurring revenue sources are included in Section 3.01.

Non-recurring funding of \$65.2 million makes up the balance of the CIP revenues. Non-recurring funding includes \$42.0 million in TIRCP competitive grant awards, \$3.9 million in Environmental Protection Agency (EPA) Community Change grant funding, \$3.6 million in alternative fuel credits that are issued by the IRS to MTS for utilizing compressed natural gas to power its vehicles, \$3.3 million in land sales proceeds, \$5.3 million in Congestion Mitigation and Air Quality (CMAQ) funding provided by SANDAG, and \$7.1 million in transfers from completed projects.

Section 8.04 details the cumulative funding by revenue source for the approved projects. Final decisions on the funding sources were made during the FY26 CIP implementation process in order to maximize the availability and flexibility of funding.

CIP Project List

The capital project list in Section 8.03 represents the five-year, unconstrained need for the MTS operators. After the most critical projects for FY26 were funded, the remaining projects were deferred; however, it is recognized that the continued deferral of some projects could have negative

impacts on system infrastructure in future years. The FY26 funding level represents 67.8 percent of the total project needs after funding preventive maintenance and the one-time shift of \$25.0 million from capital to operations.

Section 8.05 lists the descriptions of MTS administered projects that were determined to be the most critical to fund for the upcoming fiscal year. Of the \$163.3 million available funding for capital projects, \$53.9 million (or 33 percent) has been dedicated to Revenue Vehicle replacement for the ongoing upkeep of the MTS fleet of service vehicles; \$6.0 million (or 4 percent) has been dedicated to Facility & Construction projects; \$85.4 million (or 52 percent) has been dedicated to Rail Infrastructure projects; \$7.2 million (or 4 percent) has been dedicated to Other Equipment & Installations; and another \$10.8 million (or 17 percent) dedicated to Major Initiatives projects.

Five-Year Capital Program Projections

Section 8.06 summarizes a high-level look at the five-year capital program. The federal 5307 and 5337 funding levels are projected by SANDAG to be flat through FY 2030 resulting in a decrease in recurring revenue projections year by year. Added to that is \$99.3 million in already identified non-recurring revenues, resulting in a total revenue projection of \$624.1 million for the CIP. Total project needs over the five-year term are projected to be \$1.4 billion, which exceeds the projected revenue available for CIP. Projected deficits from FY 2026 to FY 2030 total \$748.8 million. The ratio of total funding to total capital needs over the five-year term is projected at 45.5%.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
APPROVED CAPITAL BUDGET - REVENUES (in 000's)
FISCAL YEAR 2026
SECTION 8.02

Funding Description	Total
Federal FFY24 - 5307 Funding Estimate	\$ 63,996
Federal FFY24 - 5337 Funding Estimate	47,439
Federal FFY24 - 5339 Funding Estimate	4,272
California Transportation Development Act (TDA)	52,726
California State Transit Assistance (STA)	22,200
California State of Good Repair (SGR)	5,816
California Cap and Trade (TIRCP)	42,000
California Cap and Trade (LCTOP)	8,658
Other Funds	17,930
Total Available Funding	\$ 265,037
Preventive Maintenance - Federal 5307	\$ (30,000)
Preventive Maintenance - Federal 5337	(40,000)
ADA Operation - Federal 5307	(6,400)
SANDAG Planning Study - Local Match	(297)
Total Preventative Maintenance/SANDAG Planning	\$ (76,696)
Funding Shift to Operations (TDA)	\$ (25,000)
Total Other Adjustments	\$ (25,000)
Available Funding for Capital Program	\$ 163,341

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
APPROVED CAPITAL BUDGET - PROJECTS (in 000's)
FISCAL YEAR 2026
SECTION 8.03

PROJECT SUBMITTALS:

Division	Project Name	Funded Thru FY 2025	FY26 Request	FY 2026 Funded	FY 2027	FY 2028	FY 2029	FY 2030	BUDGET FY26 - FY30	TOTAL BUDGET
SDTC	Bus Procurement - FY26	119,493,673	53,905,836	53,905,836	70,000,000	60,000,000	62,000,000	70,000,000	315,905,836	435,399,509
SDTC	Southbay Maintenance Facility BEB Charging Phase II - Construction	1,457,000	16,783,000	-	36,783,000	20,000,000	-	-	56,783,000	58,240,000
SDTC	Southbay Maintenance Facility Backup Power Charging Infrastructure	1,638,047	6,068,000	6,068,000	-	-	-	-	6,068,000	7,706,047
SDTC	Imperial Avenue Division BEB Charging Infrastructure	20,410,000	2,110,000	2,110,000	-	-	-	-	2,110,000	22,520,000
SDTC	Copley Park Division New Admin Building	411,000	1,824,000	1,824,000	-	-	-	-	1,824,000	2,235,000
SDTC	East County Division BEB Charging Phase I - Design	1,705,263	1,609,000	1,609,000	-	-	-	-	1,609,000	3,314,263
SDTC	Kearney Mesa & Imperial Avenue Division Roof Hatch Replacements and Fall Protection	-	452,000	452,000	-	-	-	-	452,000	452,000
SDTC	Kearney Mesa & Imperial Avenue Division Vacuum Equipment Replacement	-	284,000	284,000	-	-	-	-	284,000	284,000
SDTC	All Division ZEB Rolling Scaffold	-	212,000	212,000	-	-	-	-	212,000	212,000
SDTC	New Transit Facility (CTAC)	85,666,366	50,000,000	-	50,000,000	50,000,000	50,000,000	40,000,000	190,000,000	275,666,366
SDTC	Kearney Mesa Division Elevator Rehabilitation	-	599,000	-	-	-	-	-	-	-
SDTC	Kearney Mesa Division Service Lane and Brake Pit Roof Replacement	-	195,000	-	-	-	-	-	-	-
SDTC	Southbay Maintenance Facility 3620 Building Exhaust Fan Replacement	-	109,000	-	-	-	-	-	-	-
SDTC	BEB Infrastructure All Divisions	-	-	-	35,165,000	2,505,000	17,051,000	68,000,000	122,721,000	122,721,000
SDTC	Copley Park Division Upgrades	-	-	-	8,030,000	250,000	-	-	8,280,000	8,280,000
SDTC	Imperial Avenue Division Upgrades	-	-	-	1,400,000	7,500,000	5,450,000	-	14,350,000	14,350,000
SDTC	RTMS & Hastus Upgrades	-	-	-	750,000	2,100,000	-	300,000	3,150,000	3,150,000
SDTC	Kearney Mesa Division Upgrades	-	-	-	650,000	750,000	-	-	1,400,000	1,400,000
SDTC	Southbay Maintenance Facility Upgrades	-	-	-	300,000	-	-	-	300,000	300,000
SDTC	East County Division Upgrades	-	-	-	-	150,000	-	-	150,000	150,000
SDTI	SD7 LRV Replacement	-	-	-	10,566,000	10,566,000	10,566,000	10,566,000	42,264,000	42,264,000
SDTI	SD8 LRV Replacement	-	-	-	-	-	-	26,000,000	26,000,000	26,000,000
SDTI	Elevator Modernization	1,500,000	2,500,000	2,500,000	1,500,000	350,000	2,500,000	-	6,850,000	8,350,000
SDTI	Washington Pedestrian Enhancements	250,000	1,250,000	1,250,000	-	-	-	-	1,250,000	1,500,000
SDTI	HVAC Replacement	-	200,000	200,000	100,000	100,000	100,000	100,000	600,000	600,000
SDTI	Station Cleaning Equipment	342,000	150,000	150,000	100,000	100,000	100,000	100,000	550,000	892,000
SDTI	Fence Replacement	627,000	400,000	400,000	350,000	350,000	350,000	350,000	1,800,000	2,427,000
SDTI	Second Elevator at Stadium Station	350,000	2,500,000	-	-	-	-	-	-	350,000
SDTI	Stadium Station Platform	250,000	2,500,000	-	-	-	-	-	-	250,000
SDTI	Yard Tower & Paint Booth Upgrade	-	-	-	1,600,000	400,000	-	-	2,000,000	2,000,000
SDTI	Yard Tower Roof Replacement	-	-	-	1,200,000	-	-	-	1,200,000	1,200,000
SDTI	Yard Tower interior upgrades	-	-	-	400,000	-	-	-	400,000	400,000
SDTI	Building A Roof Replacement	-	-	-	1,200,000	-	-	-	1,200,000	1,200,000
SDTI	Building A Rollup Door Replacement	-	-	-	350,000	350,000	-	-	700,000	700,000
SDTI	Building C Roof Replacement	-	-	-	-	2,000,000	-	-	2,000,000	2,000,000
SDTI	Paint Booth Roof Replacement	-	-	-	-	400,000	-	-	400,000	400,000
SDTI	Paint Booth Blowers	-	-	-	-	-	175,000	-	175,000	175,000
SDTI	Fashion Valley Elevator Replacement	-	-	-	-	350,000	2,500,000	-	2,850,000	2,850,000
SDTI	Morena Linda Vista Shelter Replacement	-	-	-	-	-	-	650,000	650,000	650,000
SDTI	Signal Replacement	1,300,000	500,000	500,000	1,500,000	2,000,000	-	685,000	4,685,000	5,985,000
SDTI	A-yard Catenary Replacement	1,448,234	1,000,000	-	1,000,000	2,000,000	-	-	3,000,000	4,448,234
SDTI	Sicas S7 System Wide Replacement - BL	1,300,000	-	-	3,500,000	2,000,000	2,000,000	2,000,000	9,500,000	10,800,000
SDTI	Sicas S7 System Wide Replacement	-	-	-	6,000,000	6,000,000	6,000,000	6,000,000	24,000,000	24,000,000
SDTI	Grade Crossing Warning System	-	-	-	-	-	300,000	2,300,000	2,600,000	2,600,000
SDTI	SDSU Underground Station	-	-	-	-	-	-	2,200,000	2,200,000	2,200,000
SDTI	System Wide UPS and Batteries Replacement	-	-	-	-	-	200,000	-	200,000	200,000
SDTI	Grade Crossing Replacement	3,525,000	3,850,000	3,850,000	4,243,000	4,055,000	4,028,000	4,710,000	20,886,000	24,411,000
SDTI	Special Trackwork Replacement	3,350,000	3,835,000	3,835,000	3,300,000	-	1,750,000	1,200,000	10,085,000	13,435,000
SDTI	Beyer Blvd Track and Slope	7,292,000	1,850,000	1,850,000	-	-	-	-	1,850,000	9,142,000
SDTI	On-Track Equipment Replacement	750,000	625,000	625,000	-	-	-	650,000	1,275,000	2,025,000
SDTI	Station Trackway Replacement	1,239,996	1,975,000	1,975,000	1,500,000	100,000	1,200,000	1,300,000	6,075,000	7,314,996
SDTI	Drainage Improvements	900,000	800,000	800,000	3,750,000	5,350,000	4,500,000	1,000,000	15,400,000	16,300,000
SDTI	Street Trackage Pavement Replacement	-	-	-	3,000,000	1,500,000	3,000,000	6,000,000	13,500,000	13,500,000
SDTI	Rio Vista Platform Construction	-	-	-	3,000,000	-	-	-	3,000,000	3,000,000

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
APPROVED CAPITAL BUDGET - PROJECTS (in 000's)
FISCAL YEAR 2026
SECTION 8.03

PROJECT SUBMITTALS:

Division	Project Name	Funded Thru FY 2025	FY26 Request	FY 2026 Funded	FY 2027	FY 2028	FY 2029	FY 2030	BUDGET FY26 - FY30	TOTAL BUDGET
SDTI	Rail Replacement	-	-	-	-	-	250,000	800,000	1,050,000	1,050,000
SDTI	Substation Replacement	9,800,000	13,000,000	13,000,000	16,000,000	16,000,000	16,000,000	8,000,000	69,000,000	78,800,000
SDTI	OL Improvement Project Phase 1	43,347,000	12,000,000	12,000,000	-	-	-	-	12,000,000	55,347,000
SDTI	OL Improvement Project Phase 2	3,000,000	42,000,000	42,000,000	42,000,000	-	-	-	84,000,000	87,000,000
SDTI	Downtown Parallel Feeder Cable - Phase 1&2	1,010,000	800,000	800,000	5,000,000	5,000,000	5,000,000	5,000,000	20,800,000	21,810,000
SDTI	AC Switchgear Replacement	675,000	500,000	500,000	-	-	-	-	500,000	1,175,000
SDTI	Overhead Catenary System (OCS)	-	300,000	300,000	-	-	1,500,000	10,000,000	11,800,000	11,800,000
SDTI	Substation Siemens 1st Gen Monitoring Devices	-	1,500,000	1,500,000	5,000,000	-	-	-	6,500,000	6,500,000
SDTI	Yard Switch Automation	-	500,000	500,000	-	-	-	-	500,000	500,000
SDTI	C Building Crane Upgrade	-	500,000	500,000	5,000,000	-	-	-	5,500,000	5,500,000
SDTI	65th Street Retaining Wall	-	1,600,000	1,600,000	-	-	-	-	1,600,000	1,600,000
SDTI	Substation Replacement Design	-	3,000,000	-	500,000	-	-	-	500,000	500,000
MTS Admin	PRONTO Mobile App Enhancement	-	1,100,000	1,100,000	-	-	-	-	1,100,000	1,100,000
MTS Admin	ERP System Upgrade	-	1,000,000	1,000,000	1,000,000	-	-	-	2,000,000	2,000,000
MTS Admin	Network Communication Equipment Replacement	-	500,000	500,000	600,000	600,000	800,000	950,000	3,450,000	3,450,000
MTS Admin	Trolley Station Network Communication Equipment	-	400,000	400,000	600,000	800,000	950,000	950,000	3,700,000	3,700,000
MTS Admin	MTS Data Storage Replacement	-	300,000	300,000	540,000	170,000	155,000	45,000	1,210,000	1,210,000
MTS Admin	Signal & Track Inspection Solution Implementation	-	275,000	275,000	-	-	-	-	275,000	275,000
MTS Admin	Operation Control Center UPS Replacement	-	200,000	200,000	-	-	-	-	200,000	200,000
MTS Admin	Security Records Management System & Computer Aided Dispatch	-	402,400	402,400	603,600	-	-	-	1,006,000	1,006,000
MTS Admin	Comprehensive Regional Parking Solution	-	-	-	1,000,000	1,000,000	-	-	2,000,000	2,000,000
MTS Admin	MTS Server Refresh	-	-	-	800,000	800,000	800,000	800,000	3,200,000	3,200,000
MTS Admin	Bus Yard Wireless Network Equipment	-	-	-	400,000	400,000	400,000	400,000	1,600,000	1,600,000
MTS Admin	BRT Station Network Replacement	-	-	-	300,000	-	-	300,000	600,000	600,000
MTS Admin	Rail Yard Management System	-	-	-	290,000	-	-	-	290,000	290,000
MTS Admin	Bus Operations Paperless Shop Implementation	-	-	-	225,000	-	-	-	225,000	225,000
MTS Admin	Boardroom and Executive Room Upgrade	-	-	-	-	-	-	500,000	500,000	500,000
MTS Admin	Davra System Enhancements	-	-	-	-	600,000	-	600,000	1,200,000	1,200,000
MTS Admin	Fare System Analysis: Refresh vs Replace	-	-	-	-	-	763,414	-	763,414	763,414
MTS Admin	Southbay and East County Garage Genfare Lane Refresh	-	-	-	-	-	-	600,000	600,000	600,000
MTS Admin	Variable Message System Modernization Project	-	-	-	-	-	-	2,214,000	2,214,000	2,214,000
MTS Admin	System Sign Upgrades	-	-	-	3,500,000	3,500,000	3,500,000	3,500,000	14,000,000	14,000,000
MTS Admin	Trolley Onboard Monitors - Systemwide	-	-	-	-	2,000,000	2,000,000	-	4,000,000	4,000,000
MTS Admin	Bus Stop Shelters	-	-	-	1,200,000	1,200,000	1,300,000	1,300,000	5,000,000	5,000,000
MTS Admin	ADA Bus Stop Improvements	-	-	-	500,000	600,000	700,000	-	1,800,000	1,800,000
MTS Admin	El Cajon Transit Center Bus Improvements	-	-	-	500,000	500,000	12,000,000	-	13,000,000	13,000,000
MTS Admin	Transit Enforcement Office Expansion	-	-	-	200,000	2,000,000	2,000,000	2,000,000	6,200,000	6,200,000
MTS Admin	Copier Replacement	-	-	-	-	200,000	340,000	140,000	680,000	680,000
MTS Admin	Social Equity Listening Tour	-	-	-	-	2,000,000	-	-	2,000,000	2,000,000
MTS Admin	Kearny Mesa Transit Center	-	-	-	2,000,000	10,000,000	10,000,000	-	22,000,000	22,000,000
MTS Admin	Transit Amenity Improvement	-	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000	5,000,000
MTS Admin	Miscellaneous Capital	-	1,844,908	1,063,659	-	2,000,000	-	2,000,000	5,063,659	5,063,659
MTS Admin	San Ysidro Transit Center Planning & Design	-	-	-	15,000,000	15,000,000	-	-	30,000,000	30,000,000
MTS Admin	Southwestern Rapid	-	-	-	1,000,000	5,000,000	6,000,000	-	12,000,000	12,000,000
	Totals	\$ 313,037,579	\$ 240,808,144	\$ 163,340,895	\$ 357,995,600	\$ 251,596,000	\$ 237,228,414	\$ 285,210,000	\$ 1,295,370,909	\$ 1,608,408,488

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
APPROVED CAPITAL BUDGET - CUMMULATIVE THROUGH FISCAL YEAR 2026 (in 000's)
FISCAL YEAR 2026
SECTION 8.04

Project Name	Funded thru FY25	FY26 Funded	FUNDING SOURCES							
			5307	5337	5339	TDA	STA/SB1 SGR	LCTOP	TIRCP	Other
Bus Procurement - FY26	\$ 119,493,673	\$ 53,905,836	\$ 27,596,512	\$ -	\$ 4,271,639	\$ 360,337	\$ 505,004	\$ 8,657,564	\$ -	\$ 12,514,780
Southbay Maintenance Facility Backup Power Charging Infrastructure	1,638,047	6,068,000	\$ -	\$ -	\$ -	\$ -	\$ 6,068,000	\$ -	\$ -	\$ -
Imperial Avenue Division BEB Charging Infrastructure	20,410,000	2,110,000	\$ -	\$ -	\$ -	\$ 295,000	\$ 1,815,000	\$ -	\$ -	\$ -
Copley Park Division New Admin Building	411,000	1,824,000	\$ -	\$ -	\$ -	\$ 1,824,000	\$ -	\$ -	\$ -	\$ -
East County Division BEB Charging Phase I - Design	1,705,263	1,609,000	\$ -	\$ -	\$ -	\$ 1,609,000	\$ -	\$ -	\$ -	\$ -
Kearney Mesa & Imperial Avenue Division Roof Hatch Replacements	-	452,000	\$ -	\$ -	\$ -	\$ 452,000	\$ -	\$ -	\$ -	\$ -
Kearney Mesa & Imperial Avenue Division Vacuum Equipment Replacement	-	284,000	\$ -	\$ -	\$ -	\$ 284,000	\$ -	\$ -	\$ -	\$ -
All Division ZEB Rolling Scaffold	-	212,000	\$ -	\$ -	\$ -	\$ 212,000	\$ -	\$ -	\$ -	\$ -
Elevator Modernization	1,500,000	2,500,000	\$ -	\$ -	\$ -	\$ -	\$ 2,500,000	\$ -	\$ -	\$ -
Washington Pedestrian Enhancements	250,000	1,250,000	\$ -	\$ -	\$ -	\$ 1,250,000	\$ -	\$ -	\$ -	\$ -
HVAC Replacement	-	200,000	\$ -	\$ -	\$ -	\$ 200,000	\$ -	\$ -	\$ -	\$ -
Station Cleaning Equipment	342,000	150,000	\$ -	\$ -	\$ -	\$ 150,000	\$ -	\$ -	\$ -	\$ -
Fence Replacement	627,000	400,000	\$ -	\$ -	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -
Signal Replacement	1,300,000	500,000	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ -
Grade Crossing Replacement	3,525,000	3,850,000	\$ -	\$ -	\$ -	\$ -	\$ 3,850,000	\$ -	\$ -	\$ -
Special Trackwork Replacement	3,350,000	3,835,000	\$ -	\$ -	\$ -	\$ -	\$ 3,835,000	\$ -	\$ -	\$ -
Beyer Blvd Track and Slope	7,292,000	1,850,000	\$ -	\$ -	\$ -	\$ 1,850,000	\$ -	\$ -	\$ -	\$ -
On-Track Equipment Replacement	750,000	625,000	\$ -	\$ -	\$ -	\$ 625,000	\$ -	\$ -	\$ -	\$ -
Station Trackway Replacement	1,239,996	1,975,000	\$ -	\$ -	\$ -	\$ 1,975,000	\$ -	\$ -	\$ -	\$ -
Drainage Improvements	900,000	800,000	\$ -	\$ -	\$ -	\$ 800,000	\$ -	\$ -	\$ -	\$ -
Substation Replacement	9,800,000	13,000,000	\$ -	\$ 7,439,247	\$ -	\$ 1,428,753	\$ 4,132,000	\$ -	\$ -	\$ -
OL Improvement Project Phase 1	43,347,000	12,000,000	\$ -	\$ -	\$ -	\$ 1,273,733	\$ -	\$ -	\$ -	\$ 10,726,267
OL Improvement Project Phase 2	3,000,000	42,000,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 42,000,000	\$ -
Downtown Parallel Feeder Cable - Phase 1&2	1,010,000	800,000	\$ -	\$ -	\$ -	\$ 800,000	\$ -	\$ -	\$ -	\$ -
AC Switchgear Replacement	675,000	500,000	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ -
Overhead Catenary System (OCS)	-	300,000	\$ -	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -
Substation Siemens 1st Gen Monitoring Devices	-	1,500,000	\$ -	\$ -	\$ -	\$ 1,500,000	\$ -	\$ -	\$ -	\$ -
Yard Switch Automation	-	500,000	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ -
C Building Crane Upgrade	-	500,000	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ -
65th Street Retaining Wall	-	1,600,000	\$ -	\$ -	\$ -	\$ 1,600,000	\$ -	\$ -	\$ -	\$ -
PRONTO Mobile App Enhancement	-	1,100,000	\$ -	\$ -	\$ -	\$ 1,100,000	\$ -	\$ -	\$ -	\$ -
ERP System Upgrade	-	1,000,000	\$ -	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -
Network Communication Equipment Replacement	-	500,000	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ -
Trolley Station Network Communication Equipment	-	400,000	\$ -	\$ -	\$ -	\$ 400,000	\$ -	\$ -	\$ -	\$ -
MTS Data Storage Replacement	-	300,000	\$ -	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ -	\$ -
Signal & Track Inspection Solution Implementation	-	275,000	\$ -	\$ -	\$ -	\$ 275,000	\$ -	\$ -	\$ -	\$ -
Operation Control Center UPS Replacement	-	200,000	\$ -	\$ -	\$ -	\$ 200,000	\$ -	\$ -	\$ -	\$ -
Security Records Management System & Computer Aided Dispatch	-	402,400	\$ -	\$ -	\$ -	\$ 402,400	\$ -	\$ -	\$ -	\$ -
Transit Amenity Improvement	-	1,000,000	\$ -	\$ -	\$ -	\$ 1,000,000	\$ -	\$ -	\$ -	\$ -
Miscellaneous Capital	-	1,063,659	\$ -	\$ -	\$ -	\$ 1,063,659	\$ -	\$ -	\$ -	\$ -
Totals	\$ 222,565,979	\$ 163,340,895	\$ 27,596,512	\$ 7,439,247	\$ 4,271,639	\$ 27,429,882	\$ 22,705,004	\$ 8,657,564	\$ 42,000,000	\$ 23,241,000

Att A, Item 20, 05/15/25

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

CAPITAL BUDGET - INDIVIDUAL PROJECT DESCRIPTION FOR FISCAL YEAR 2026 (in 000's)

Section 8.05

The Capital Improvement Program includes improvements and replacement projects related to MTS, SDTC, and SDTI Capital Assets. The projects below are funded with Federal funds where indicated and are matched with the required amount of local funds. The projects listed are implemented by the project manager of the coinciding agency and monitored by MTS administration.

Form ID	Title	FY26 Budget	Federal	State/Local	Other
1000	<u>Bus Ops - Bus Procurement - FY26</u> Fiscal Year 2026 Bus Procurement	53,906	35,774	3,659	14,473
2377	<u>Bus Ops - Southbay Maintenance Facility Backup Power Charging Infrastructure</u> Southbay Maintenance Facility Backup Power Charging Infrastructure	6,068	-	6,068	-
2375	<u>Bus Ops - Imperial Avenue Division BEB Charging Infrastructure</u> Imperial Avenue Division BEB Charging Infrastructure	2,110	-	2,110	-
2386	<u>Bus Ops - Copley Park Division New Admin Building</u> Copley Park Division New Admin Building	1,824	-	1,824	-
2380	<u>Bus Ops - East County Division BEB Charging Phase I - Design</u> East County Division BEB Charging Phase I - Design	1,609	-	1,609	-
2396	<u>Bus Ops - Kearney Mesa & Imperial Avenue Division Roof Hatch Replacements and Fall Protection</u> Kearney Mesa & Imperial Avenue Division Roof Hatch Replacements and Fall Protection	452	-	452	-
2374	<u>Bus Ops - Kearney Mesa & Imperial Avenue Division Vacuum Equipment Replacement</u> Kearney Mesa & Imperial Avenue Division Vacuum Equipment Replacement	284	-	284	-
2373	<u>Bus Ops - All Division ZEB Rolling Scaffold</u> Procurement of ZEB Rolling Scaffold for All Division	212	-	212	-
2354	<u>Rail Ops - Elevator Modernization</u> Elevator Modernization	2,500	-	2,500	-
2387	<u>Rail Ops - Washington Pedestrian Enhancements</u> Washington Pedestrian Enhancements	1,250	-	1,250	-
2384	<u>Rail Ops - HVAC Replacement</u> HVAC Replacement	200	-	200	-
2356	<u>Rail Ops - Station Cleaning Equipment</u> Station Cleaning Equipment Replacement	150	-	150	-
2352	<u>Rail Ops - Fence Replacement</u> Fence Replacement	400	-	400	-
2342	<u>Rail Ops - Signal Replacement</u> Signal Replacement at 12th/Imperial and Commercial Street	500	-	500	-
2330	<u>Rail Ops - Grade Crossing Replacement</u> Grade Crossing Replacement	3,850	-	3,850	-
2332	<u>Rail Ops - Special Trackwork Replacement</u> Special Trackwork Replacement	3,835	-	3,835	-
2397	<u>Rail Ops - Beyer Blvd Track and Slope</u> Beyer Blvd Track and Slope Improvement	1,850	-	1,850	-
2334	<u>Rail Ops - On-Track Equipment Replacement</u> On-Track Equipment Replacement	625	-	625	-
2331	<u>Rail Ops - Station Trackway Replacement</u> Station Trackway Replacement	1,975	-	1,975	-
2329	<u>Rail Ops - Drainage Improvements</u> Drainage Improvements	800	-	800	-
2337	<u>Rail Ops - Substation Replacement</u>	13,000	7,439	5,561	-

Att.A, Item 20, 05/15/25

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

CAPITAL BUDGET - INDIVIDUAL PROJECT DESCRIPTION FOR FISCAL YEAR 2026 (in 000's)

Section 8.05

The Capital Improvement Program includes improvements and replacement projects related to MTS, SDTC, and SDTI Capital Assets. The projects below are funded with Federal funds where indicated and are matched with the required amount of local funds. The projects listed are implemented by the project manager of the coinciding agency and monitored by MTS administration.

Form ID	Title	FY26 Budget	Federal	State/Local	Other
	Substation Replacement				
2340	<u>Rail Ops - OL Improvement Project Phase 1</u> Orange Line Improvement Project Phase 1	12,000	-	12,000	-
2341	<u>Rail Ops - OL Improvement Project Phase 2</u> Orange Line Improvement Project Phase 2	42,000	-	-	42,000
2345	<u>Rail Ops - Downtown Parallel Feeder Cable - Phase 1&2</u> Downtown Parallel Feeder Cable Replacement - Phase 1&2	800	-	800	-
1002	<u>Rail Ops - AC Switchgear Replacement</u> AC Switchgear Replacement	500	-	500	-
2346	<u>Rail Ops - Overhead Catenary System (OCS)</u> Overhead Catenary System (OCS) Upgrade	300	-	300	-
2339	<u>Rail Ops - Substation Siemens 1st Gen Monitoring Devices</u> Substation Siemens 1st Gen Monitoring Devices	1,500	-	1,500	-
2351	<u>Rail Ops - Yard Switch Automation</u> Yard Switch Automation	500	-	500	-
2447	<u>Rail Ops - C Building Crane Upgrade</u> C Building Crane Upgrade	500	-	500	-
1003	<u>Rail Ops - 65th Street Retaining Wall</u> 65th Street Retaining Wall Improvement	1,600	-	1,600	-
2327	<u>Admin - PRONTO Mobile App Enhancement</u> PRONTO Mobile App Enhancement	1,100	-	1,100	-
2420	<u>Admin - ERP System Upgrade</u> ERP System Upgrade	1,000	-	1,000	-
2423	<u>Admin - Network Communication Equipment Replacement</u> Network Communication Equipment Replacement	500	-	500	-
2424	<u>Admin - Trolley Station Network Communication Equipment</u> Trolley Station Network Communication Equipment Replacement	400	-	400	-
2411	<u>Admin - MTS Data Storage Replacement</u> MTS Data Storage Replacement	300	-	300	-
2406	<u>Admin - Signal & Track Inspection Solution Implementation</u> Signal & Track Inspection Solution Implementation	275	-	275	-
2422	<u>Admin - Operation Control Center UPS Replacement</u> Operation Control Center UPS Replacement	200	-	200	-
2408	<u>Admin - Security Records Management System & Computer Aided Dispatch</u> Security Records Management System & Computer Aided Dispatch	402	-	402	-
1004	<u>Admin - Transit Amenity Improvement</u> Transit Amenity Improvement	1,000	-	1,000	-
1005	<u>Admin - Miscellaneous Capital</u> Miscellaneous Capital	1,064	-	1,064	-
	Totals	163,341	43,213	63,654	56,473

Att.A, Item 20, 05/15/25

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
APPROVED CAPITAL BUDGET - FIVE YEAR PROJECTION (000's)
FISCAL YEARS 2026-2030
SECTION 8.06

	Proposed FY26	Projected FY27	Projected FY28	Projected FY29	Projected FY30	Total FY26 to FY30
Total Revenues						
Recurring Dedicated CIP Revenues	\$ 205,107	\$ 204,601	\$ 208,067	\$ 209,533	\$ 210,998	\$ 1,038,305
Other Non Recurring Revenues	59,930	20,000	9,685	9,685	-	99,302
Total Capital Revenues	\$ 265,037	\$ 224,601	\$ 217,752	\$ 219,218	\$ 210,998	\$ 1,137,607
Less: "Off the Top" Expenses						
SANDAG Planning Studies	\$ (297)	\$ (303)	\$ (309)	\$ (316)	\$ (322)	\$ (1,546)
Funding Shift to Operations	(25,000)	(35,000)	(50,000)			(110,000)
ADA Operations	(6,400)	(6,397)	(6,395)	(6,392)	(6,389)	(31,973)
Preventative Maintenance	(70,000)	(72,000)	(74,000)	(76,000)	(78,000)	(370,000)
Total "Off The Top" Expenses	\$ (101,696)	\$ (113,700)	\$ (130,704)	\$ (82,708)	\$ (84,712)	\$ (513,519)
Adjusted Available CIP Revenues	\$ 163,341	\$ 110,901	\$ 87,049	\$ 136,511	\$ 126,286	\$ 624,088
Project Needs						
State of Good Repair	\$ 164,238	\$ 236,048	\$ 179,091	\$ 170,177	\$ 177,210	\$ 926,764
Other Initiatives	76,570	121,948	72,505	67,051	108,000	446,074
Total Project Needs	\$ 240,808	\$ 357,996	\$ 251,596	\$ 237,228	\$ 285,210	\$ 1,372,838
Total Deficit	\$ (77,467)	\$ (247,094)	\$ (164,547)	\$ (100,718)	\$ (158,924)	\$ (748,750)
% of Funding / Needs	67.8%	31.0%	34.6%	57.5%	44.3%	45.5%

This page intentionally left blank.

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
FISCAL YEAR 2026
SECTION 9.01**

	Federal	TDA	STA	State - Other	TransNet	Other Local	Other Non Operating	Reserves/ Carryovers	Total
SDTC	21,500,000	2,840,813	11,300,000	4,771,873	41,225,904	2,000,000	-	31,996,847	115,635,438
SDTI	40,550,000	25,218,043	-	3,569,968	24,152,981	-	-	30,000,000	123,490,992
MCS 801 - South Central	10,000,000	34,405,338	-	3,161,497	-	-	-	-	47,566,835
MCS 802 - South Bay BRT	-	1,155,719	-	-	4,586,885	-	-	-	5,742,604
MCS 803 - South Bay Iris Rapid	-	-	-	4,900,000	-	-	-	-	4,900,000
MCS 820 - East County	-	14,440,326	-	710,705	-	-	-	-	15,151,030
MCS 825 - Rural	420,000	686,590	-	-	-	-	-	-	1,106,590
MCS 830 - Commuter Express	-	667,609	-	-	-	1,000,000	-	-	1,667,609
MCS 831 - Murphy Canyon	-	-	-	-	-	-	-	-	-
MCS 835 - Central Routes 961-965	200,000	5,744,291	-	304,588	-	-	-	-	6,248,878
MCS 840 - Regional Transit Center Maintenance	-	596,525	-	-	-	-	-	-	596,525
MCS 841 - Iris Rapid Transit Center Maintenance	-	-	-	-	-	-	-	-	-
MCS 845 - BRT Superloop	-	-	-	-	411,210	-	-	-	411,210
MCS 846 - I15 Transit Center Maintenance	-	-	-	-	1,241,738	-	-	-	1,241,738
MCS 847 - Mid City Transit Center Maintenance	-	-	-	-	319,144	-	-	-	319,144
MCS 848 - South Bay BRT Transit Center Maintenance	-	-	-	-	1,255,164	-	-	-	1,255,164
MCS 850 - ADA Access	6,397,133	13,304,039	-	-	1,243,000	120,000	-	-	21,064,172
MCS 856 - ADA Certification	-	688,495	-	-	-	-	-	-	688,495
Coronado Ferry	-	296,062	-	-	-	-	-	-	296,062
Administrative Pass Thru	-	494,502	-	-	-	-	-	-	494,502
Subtotal Operations	79,067,133	100,538,352	11,300,000	17,418,631	74,436,026	3,120,000	-	61,996,847	347,876,989
FHV Administration	-	-	-	-	-	-	-	162,223	162,223
SD&AE	-	-	-	-	-	-	-	(72,994)	(72,994)
Subtotal Other Activities	-	-	-	-	-	-	-	89,229	89,229
Administrative	-	-	-	3,500,000	522,303	-	-	-	4,022,303
Grand Total	79,067,133	100,538,352	11,300,000	20,918,631	74,958,329	3,120,000	0	62,086,076	351,988,521

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
FISCAL YEAR 2026
SECTION 9.02**

	FTA 5307 Preventative Maintenance	FTA 5307 CARES/ARP Act	Federal Other	FTA 5311/ 5311(f) Rural	TDA Article 4.0	TDA Article 4.5 ADA
SDTC	21,500,000	-	-	-	2,840,813	-
SDTI	40,500,000	-	50,000	-	25,218,043	-
MCS 801 - South Central	10,000,000	-	-	-	34,405,338	-
MCS 802 - South Bay BRT	-	-	-	-	1,155,719	-
MCS 803 - South Bay Iris Rapid	-	-	-	-	-	-
MCS 820 - East County	-	-	-	-	14,440,326	-
MCS 825 - Rural	-	-	-	420,000	686,590	-
MCS 830 - Commuter Express	-	-	-	-	-	-
MCS 835 - Central Routes 961-965	-	-	-	200,000	5,744,291	-
MCS 840 - Regional Transit Center Maintenance	-	-	-	-	596,525	-
MCS 841 - Iris Rapid Transit Center Maintenance	-	-	-	-	-	-
MCS 845 - BRT Superloop	-	-	-	-	-	-
MCS 846 - I15 Transit Center Maintenance	-	-	-	-	-	-
MCS 847 - Mid City Transit Center Maintenance	-	-	-	-	-	-
MCS 848 - South Bay BRT Transit Center Maintenance	-	-	-	-	-	-
MCS 850 - ADA Access	6,397,133	-	-	-	7,578,437	5,725,602
MCS 856 - ADA Certification	-	-	-	-	-	688,495
Coronado Ferry	-	-	-	-	-	-
Administrative Pass Thru	-	-	-	-	494,502	-
Subtotal Operations	78,397,133	-	50,000	620,000	93,160,584	6,414,097
FHV Administration	-	-	-	-	-	-
SD&AE	-	-	-	-	-	-
Subtotal Other Activities	-	-	-	-	-	-
Administrative	-	-	-	-	-	-
Grand Total	<u>78,397,133</u>	<u>0</u>	<u>50,000</u>	<u>620,000</u>	<u>93,160,584</u>	<u>6,414,097</u>

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
FISCAL YEAR 2026
SECTION 9.02

	TDA Article 8.0	STA Formula	TIRCP	Medical	TransNet Operating	TransNet Access ADA	TransNet Other
SDTC	-	11,300,000	4,771,873	-	24,761,274	-	16,464,630
SDTI	-	-	3,569,968	-	14,337,726	-	9,815,255
MCS 801 - South Central	-	-	3,161,497	-	-	-	-
MCS 802 - South Bay BRT	-	-	-	-	-	-	4,586,885
MCS 803 - South Bay Iris Rapid	-	-	4,900,000	-	-	-	-
MCS 820 - East County	-	-	710,705	-	-	-	-
MCS 825 - Rural	-	-	-	-	-	-	-
MCS 830 - Commuter Express	667,609	-	-	-	-	-	-
MCS 835 - Central Routes 961-965	-	-	304,588	-	-	-	-
MCS 840 - Regional Transit Center Maintenance	-	-	-	-	-	-	-
MCS 841 - Iris Rapid Transit Center Maintenance	-	-	-	-	-	-	-
MCS 845 - BRT Superloop	-	-	-	-	-	-	411,210
MCS 846 - I15 Transit Center Maintenance	-	-	-	-	-	-	1,241,738
MCS 847 - Mid City Transit Center Maintenance	-	-	-	-	-	-	319,144
MCS 848 - South Bay BRT Transit Center Maintenance	-	-	-	-	-	-	1,255,164
MCS 850 - ADA Access	-	-	-	-	-	1,183,000	60,000
MCS 856 - ADA Certification	-	-	-	-	-	-	-
Coronado Ferry	296,062	-	-	-	-	-	-
Administrative Pass Thru	-	-	-	-	-	-	-
Subtotal Operations	963,671	11,300,000	17,418,631	-	39,099,000	1,183,000	34,154,026
FHV Administration	-	-	-	-	-	-	-
SD&AE	-	-	-	-	-	-	-
Subtotal Other Activities	-	-	-	-	-	-	-
Administrative	-	-	3,500,000	-	-	-	522,303
Grand Total	<u>963,671</u>	<u>11,300,000</u>	<u>20,918,631</u>	<u>0</u>	<u>39,099,000</u>	<u>1,183,000</u>	<u>34,676,329</u>

Att A, Item 20, 05/15/25

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
FISCAL YEAR 2026
SECTION 9.02

	City of San Diego	SANDAG FasTrak	Other Local	Reserves/ Carryovers	Total
SDTC	-	2,000,000	-	31,996,847	115,635,438
SDTI	-	-	-	30,000,000	123,490,992
MCS 801 - South Central	-	-	-	-	47,566,835
MCS 802 - South Bay BRT	-	-	-	-	5,742,604
MCS 803 - South Bay Iris Rapid	-	-	-	-	4,900,000
MCS 820 - East County	-	-	-	-	15,151,030
MCS 825 - Rural	-	-	-	-	1,106,590
MCS 830 - Commuter Express	-	1,000,000	-	-	1,667,609
MCS 835 - Central Routes 961-965	-	-	-	-	6,248,878
MCS 840 - Regional Transit Center Maintenance	-	-	-	-	596,525
MCS 841 - Iris Rapid Transit Center Maintenance	-	-	-	-	-
MCS 845 - BRT Superloop	-	-	-	-	411,210
MCS 846 - I15 Transit Center Maintenance	-	-	-	-	1,241,738
MCS 847 - Mid City Transit Center Maintenance	-	-	-	-	319,144
MCS 848 - South Bay BRT Transit Center Maintenance	-	-	-	-	1,255,164
MCS 850 - ADA Access	120,000	-	-	-	21,064,172
MCS 856 - ADA Certification	-	-	-	-	688,495
Coronado Ferry	-	-	-	-	296,062
Administrative Pass Thru	-	-	-	-	494,502
Subtotal Operations	120,000	3,000,000	-	61,996,847	347,876,989
FHV Administration	-	-	-	162,223	162,223
SD&AE	-	-	-	(72,994)	(72,994)
Subtotal Other Activities	-	-	-	89,229	89,229
Administrative	-	-	-	-	4,022,303
Grand Total	<u>120,000</u>	<u>3,000,000</u>	<u>0</u>	<u>62,086,076</u>	<u>351,988,521</u>

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
MTS CONSOLIDATED

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>MTS Consolidated</u>		
Operating Revenue		
Passenger Revenue	89,204,799	401100-409235
Other Income	31,885,564	409150-429900
Total Operating Revenue	121,090,363	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning	-	451100
FTA 5307/5309 - Preventative Maintenance	78,397,133	451250
FTA 5307 - CARES/ARP	-	459900
FTA - Other	50,000	451800
FTA 5311 - Rural	520,000	451900
FTA 5311(f) - Rural	100,000	451950
Total Federal Revenue	79,067,133	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	93,160,584	461100
TDA - Article 4.5 (ADA)	6,414,097	461200
TDA - Article 8.0	963,671	461300
Total TDA Revenue	100,538,352	
TransNet Revenue		
TransNet - Operating Support	39,099,000	471100
TransNet - Access ADA	1,183,000	471300
TransNet - SuperLoop, Other	34,676,329	471400
Total TransNet Revenue	74,958,329	
State Transit Assistance (STA) Revenue		
STA - Formula	11,300,000	462200
Total STA Revenue	11,300,000	
Other State Revenue		
TIRCP	20,918,631	463910
MediCal	-	463400
Total Other State Revenue	20,918,631	
Other Local Revenue		
SANDAG - FasTrak	3,000,000	481100
City of San Diego	120,000	481200
Other Local	-	481400
CNG Credits	-	424100
Total Other Local Revenue	3,120,000	
Total Subsidy Revenue	289,902,445	
Other Funds / Reserves		
Contingency Reserves	-	491100
Other Reserves	62,086,076	491100
Carryovers	-	
Total Other Funds / Reserves	62,086,076	
Total Non Operating Revenue	351,988,521	
Total Revenue	473,078,884	
Total Expenses	473,078,884	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
ADMINISTRATIVE

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Administrative</u>		
Operating Revenue		
Passenger Revenue		401100-409235
Other Income	29,897,183	409150-429900
Total Operating Revenue	29,897,183	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other	-	451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area		461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	-	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other	522,303	471400
Total TransNet Revenue	522,303	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP	3,500,000	463910
MediCal		463400
Total Other State Revenue	3,500,000	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local	-	481400
CNG Credits	-	424100
Total Other Local Revenue	-	
Total Subsidy Revenue	4,022,303	
Other Funds / Reserves		
Contingency Reserves	-	491100
Other Reserves		491100
Carryovers	-	
Total Other Funds / Reserves	-	
Total Non Operating Revenue	4,022,303	
Total Revenue	33,919,486	
Total Expenses	33,919,486	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Operations Consolidated</u>		
Operating Revenue		
Passenger Revenue	89,204,799	401100-409235
Other Income	974,400	409150-429900
Total Operating Revenue	90,179,199	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning	-	451100
FTA 5307/5309 - Preventative Maintenance	78,397,133	451250
FTA 5307 - CARES/ARP	-	459900
FTA - Other	50,000	451800
FTA 5311 - Rural	520,000	451900
FTA 5311(f) - Rural	100,000	451950
Total Federal Revenue	79,067,133	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	93,160,584	461100
TDA - Article 4.5 (ADA)	6,414,097	461200
TDA - Article 8.0	963,671	461300
Total TDA Revenue	100,538,352	
TransNet Revenue		
TransNet - Operating Support	39,099,000	471100
TransNet - Access ADA	1,183,000	471300
TransNet - SuperLoop, Other	34,154,026	471400
Total TransNet Revenue	74,436,026	
State Transit Assistance (STA) Revenue		
STA - Formula	11,300,000	462200
Total STA Revenue	11,300,000	
Other State Revenue		
TIRCP	17,418,631	463910
MediCal	-	463400
Total Other State Revenue	17,418,631	
Other Local Revenue		
SANDAG - FasTrak	3,000,000	481100
City of San Diego	120,000	481200
Other Local	-	481400
CNG Credits	-	424100
Total Other Local Revenue	3,120,000	
Total Subsidy Revenue	285,880,142	
Other Funds / Reserves		
Contingency Reserves	-	491100
Other Reserves	61,996,847	491100
Carryovers	-	
Total Other Funds / Reserves	61,996,847	
Total Non Operating Revenue	347,876,989	
Total Revenue	438,056,188	
Total Expenses	438,056,188	
Net of Revenues over Expense	(0)	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Bus Operations (San Diego Transit Corp)</u>		
Operating Revenue		
Passenger Revenue	20,710,954	401100-409235
Other Income	50,000	409150-429900
Total Operating Revenue	20,760,954	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance	21,500,000	451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	21,500,000	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	2,840,813	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0	-	461300
Total TDA Revenue	2,840,813	
TransNet Revenue		
TransNet - Operating Support	24,761,274	471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other	16,464,630	471400
Total TransNet Revenue	41,225,904	
State Transit Assistance (STA) Revenue		
STA - Formula	11,300,000	462200
Total STA Revenue	11,300,000	
Other State Revenue		
TIRCP	4,771,873	463910
MediCal		463400
Total Other State Revenue	4,771,873	
Other Local Revenue		
SANDAG - FasTrak	2,000,000	481100
City of San Diego	-	481200
Other Local	-	481400
CNG Credits	-	424100
Total Other Local Revenue	2,000,000	
Total Subsidy Revenue	83,638,591	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves	31,996,847	491100
Carryovers	-	
Total Other Funds / Reserves	31,996,847	
Total Non Operating Revenue	115,635,438	
Total Revenue	136,396,392	
Total Expenses	136,396,391	
Net of Revenues over Expense	-	

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS**

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Rail Operations (San Diego Trolley)</u>		
Operating Revenue		
Passenger Revenue	42,027,824	401100-409235
Other Income	924,400	409150-429900
Total Operating Revenue	42,952,224	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance	40,500,000	451250
FTA 5307 - CARES/ARP		459900
FTA - Other	50,000	451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	40,550,000	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	25,218,043	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	25,218,043	
TransNet Revenue		
TransNet - Operating Support	14,337,726	471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other	9,815,255	471400
Total TransNet Revenue	24,152,981	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP	3,569,968	463910
MediCal		463400
Total Other State Revenue	3,569,968	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	93,490,992	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves	30,000,000	491100
Carryovers		
Total Other Funds / Reserves	30,000,000	
Total Non Operating Revenue	123,490,992	
Total Revenue	166,443,216	
Total Expenses	166,443,216	
Net of Revenues over Expense	(0)	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations Consolidated</u>		
Operating Revenue		
Passenger Revenue	26,466,021	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	26,466,021	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning	-	451100
FTA 5307/5309 - Preventative Maintenance	16,397,133	451250
FTA 5307 - CARES/ARP	-	459900
FTA - Other	-	451800
FTA 5311 - Rural	520,000	451900
FTA 5311(f) - Rural	100,000	451950
Total Federal Revenue	17,017,133	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	64,607,226	461100
TDA - Article 4.5 (ADA)	6,414,097	461200
TDA - Article 8.0	667,609	461300
Total TDA Revenue	71,688,932	
TransNet Revenue		
TransNet - Operating Support	-	471100
TransNet - Access ADA	1,183,000	471300
TransNet - SuperLoop, Other	7,874,141	471400
Total TransNet Revenue	9,057,141	
State Transit Assistance (STA) Revenue		
STA - Formula	-	462200
Total STA Revenue	-	
Other State Revenue		
TIRCP	9,076,789	463910
MediCal	-	463400
Total Other State Revenue	9,076,789	
Other Local Revenue		
SANDAG - FasTrak	1,000,000	481100
City of San Diego	120,000	481200
Other Local	-	481400
CNG Credits	-	424100
Total Other Local Revenue	1,120,000	
Total Subsidy Revenue	107,959,995	
Other Funds / Reserves		
Contingency Reserves	-	491100
Other Reserves	-	491100
Carryovers	-	
Total Other Funds / Reserves	-	
Total Non Operating Revenue	107,959,995	
Total Revenue	134,426,016	
Total Expenses	134,426,016	
Net of Revenues over Expense	0	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations - Fixed Route Consolidated</u>		
Operating Revenue		
Passenger Revenue	24,731,324	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	24,731,324	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning	-	451100
FTA 5307/5309 - Preventative Maintenance	10,000,000	451250
FTA 5307 - CARES/ARP	-	459900
FTA - Other	-	451800
FTA 5311 - Rural	520,000	451900
FTA 5311(f) - Rural	100,000	451950
Total Federal Revenue	10,620,000	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	57,028,789	461100
TDA - Article 4.5 (ADA)	-	461200
TDA - Article 8.0	667,609	461300
Total TDA Revenue	57,696,398	
TransNet Revenue		
TransNet - Operating Support	-	471100
TransNet - Access ADA	-	471300
TransNet - SuperLoop, Other	7,814,141	471400
Total TransNet Revenue	7,814,141	
State Transit Assistance (STA) Revenue		
STA - Formula	-	462200
Total STA Revenue	-	
Other State Revenue		
TIRCP	9,076,789	463910
MediCal	-	463400
Total Other State Revenue	9,076,789	
Other Local Revenue		
SANDAG - FasTrak	1,000,000	481100
City of San Diego	-	481200
Other Local	-	481400
CNG Credits	-	424100
Total Other Local Revenue	1,000,000	
Total Subsidy Revenue	86,207,328	
Other Funds / Reserves		
Contingency Reserves	-	491100
Other Reserves	-	491100
Carryovers	-	
Total Other Funds / Reserves	-	
Total Non Operating Revenue	86,207,328	
Total Revenue	110,938,652	
Total Expenses	110,938,652	
Net of Revenues over Expense	0	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (801 - South Bay)</u>		
Operating Revenue		
Passenger Revenue	17,293,549	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	17,293,549	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance	10,000,000	451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	10,000,000	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	34,405,338	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	34,405,338	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP	3,161,497	463910
MediCal		463400
Total Other State Revenue	3,161,497	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	47,566,835	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	47,566,835	
Total Revenue	64,860,383	
Total Expenses	64,860,383	
Net of Revenues over Expense	0	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (802 - South Bay BRT)</u>		
Operating Revenue		
Passenger Revenue	863,743	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	863,743	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other	-	451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	1,155,719	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	1,155,719	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other	4,586,885	471400
Total TransNet Revenue	4,586,885	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	5,742,604	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	5,742,604	
Total Revenue	6,606,347	
Total Expenses	6,606,347	
Net of Revenues over Expense	0	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (803 - South Bay Iris Rapid Operations)</u>		
Operating Revenue		
Passenger Revenue	922,458	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	922,458	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area		461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	-	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP	4,900,000	463910
MediCal		463400
Total Other State Revenue	4,900,000	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	4,900,000	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	4,900,000	
Total Revenue	5,822,458	
Total Expenses	5,822,458	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (820 - East County)</u>		
Operating Revenue		
Passenger Revenue	4,175,416	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	4,175,416	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	14,440,326	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	14,440,326	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP	710,705	463910
MediCal		463400
Total Other State Revenue	710,705	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	15,151,030	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	15,151,030	
Total Revenue	19,326,446	
Total Expenses	19,326,446	
Net of Revenues over Expense	0	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (825 - Rural)</u>		
Operating Revenue		
Passenger Revenue	213,415	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	213,415	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural	320,000	451900
FTA 5311(f) - Rural	100,000	451950
Total Federal Revenue	420,000	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	686,590	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	686,590	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	1,106,590	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	1,106,590	
Total Revenue	1,320,006	
Total Expenses	1,320,006	
Net of Revenues over Expense	(0)	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (830 - Commuter Express)</u>		
Operating Revenue		
Passenger Revenue	375,718	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	375,718	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP	-	459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area		461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0	667,609	461300
Total TDA Revenue	667,609	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak	1,000,000	481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	1,000,000	
Total Subsidy Revenue	1,667,609	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	1,667,609	
Total Revenue	2,043,327	
Total Expenses	2,043,327	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (835 - Minibus)</u>		
Operating Revenue		
Passenger Revenue	887,025	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	887,025	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural	200,000	451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	200,000	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	5,744,291	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	5,744,291	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP	304,588	463910
MediCal		463400
Total Other State Revenue	304,588	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	6,248,878	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	6,248,878	
Total Revenue	7,135,903	
Total Expenses	7,135,903	
Net of Revenues over Expense	(0)	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (840 - Transit Center Maintenance)</u>		
Operating Revenue		
Passenger Revenue	-	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	-	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	596,525	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	596,525	
TransNet Revenue		
TransNet - Operating Support	-	471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other	-	471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	596,525	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	596,525	
Total Revenue	596,525	
Total Expenses	596,525	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (841 - Iris Rapid Transit Center Maintenance)</u>		
Operating Revenue		
Passenger Revenue	-	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	-	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	-	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	-	
TransNet Revenue		
TransNet - Operating Support	-	471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	-	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	-	
Total Revenue	-	
Total Expenses	-	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (845 - BRT Superloop)</u>		
Operating Revenue		
Passenger Revenue	-	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	-	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	-	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	-	
TransNet Revenue		
TransNet - Operating Support	-	471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other	411,210	471400
Total TransNet Revenue	411,210	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	411,210	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	411,210	
Total Revenue	411,210	
Total Expenses	411,210	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (846 - I15 Transit Center Maintenance)</u>		
Operating Revenue		
Passenger Revenue	-	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	-	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	-	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	-	
TransNet Revenue		
TransNet - Operating Support	-	471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other	1,241,738	471400
Total TransNet Revenue	1,241,738	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	1,241,738	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	1,241,738	
Total Revenue	1,241,738	
Total Expenses	1,241,738	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (847 - Mid City Transit Center Maintenance)</u>		
Operating Revenue		
Passenger Revenue	-	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	-	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	-	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	-	
TransNet Revenue		
TransNet - Operating Support	-	471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other	319,144	471400
Total TransNet Revenue	319,144	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	319,144	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	319,144	
Total Revenue	319,144	
Total Expenses	319,144	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (848 - South Bay BRT Transit Center Maintenance)</u>		
Operating Revenue		
Passenger Revenue	-	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	-	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area		461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	-	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other	1,255,164	471400
Total TransNet Revenue	1,255,164	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	1,255,164	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	1,255,164	
Total Revenue	1,255,164	
Total Expenses	1,255,164	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations - Paratransit Consolidated</u>		
Operating Revenue		
Passenger Revenue	1,734,698	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	1,734,698	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning	-	451100
FTA 5307/5309 - Preventative Maintenance	6,397,133	451250
FTA 5307 - CARES/ARP	-	459900
FTA - Other	-	451800
FTA 5311 - Rural	-	451900
FTA 5311(f) - Rural	-	451950
Total Federal Revenue	6,397,133	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	7,578,437	461100
TDA - Article 4.5 (ADA)	6,414,097	461200
TDA - Article 8.0	-	461300
Total TDA Revenue	13,992,534	
TransNet Revenue		
TransNet - Operating Support	-	471100
TransNet - Access ADA	1,183,000	471300
TransNet - SuperLoop, Other	60,000	471400
Total TransNet Revenue	1,243,000	
State Transit Assistance (STA) Revenue		
STA - Formula	-	462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal	-	463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak	-	481100
City of San Diego	120,000	481200
Other Local	-	481400
CNG Credits	-	424100
Total Other Local Revenue	120,000	
Total Subsidy Revenue	21,752,667	
Other Funds / Reserves		
Contingency Reserves	-	491100
Other Reserves	-	491100
Carryovers	-	
Total Other Funds / Reserves	-	
Total Non Operating Revenue	21,752,667	
Total Revenue	23,487,365	
Total Expenses	23,487,365	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (850 - ADA Access)</u>		
Operating Revenue		
Passenger Revenue	1,734,698	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	1,734,698	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance	6,397,133	451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	6,397,133	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	7,578,437	461100
TDA - Article 4.5 (ADA)	5,725,602	461200
TDA - Article 8.0		461300
Total TDA Revenue	13,304,039	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA	1,183,000	471300
TransNet - SuperLoop, Other	60,000	471400
Total TransNet Revenue	1,243,000	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal	-	463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego	120,000	481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	120,000	
Total Subsidy Revenue	21,064,172	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	21,064,172	
Total Revenue	22,798,870	
Total Expenses	22,798,870	
Net of Revenues over Expense	0	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Contracted Bus Operations (856 - ADA Certification)</u>		
Operating Revenue		
Passenger Revenue	-	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	-	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area		461100
TDA - Article 4.5 (ADA)	688,495	461200
TDA - Article 8.0		461300
Total TDA Revenue	688,495	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	688,495	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	688,495	
Total Revenue	688,495	
Total Expenses	688,495	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Coronado Ferry</u>		
Operating Revenue		
Passenger Revenue	-	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	-	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area		461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0	296,062	461300
Total TDA Revenue	296,062	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	296,062	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	296,062	
Total Revenue	296,062	
Total Expenses	296,062	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OPERATIONS

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Administrative Pass Thru</u>		
Operating Revenue		
Passenger Revenue	-	401100-409235
Other Income	-	409150-429900
Total Operating Revenue	-	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	494,502	461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	494,502	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	494,502	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves		491100
Carryovers		
Total Other Funds / Reserves	-	
Total Non Operating Revenue	494,502	
Total Revenue	494,502	
Total Expenses	494,502	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OTHER ACTIVITIES

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>Other Activities - Consolidated</u>		
Operating Revenue		
Passenger Revenue	-	401100-409235
Other Income	1,013,981	409150-429900
Total Operating Revenue	1,013,981	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning	-	451100
FTA 5307/5309 - Preventative Maintenance	-	451250
FTA 5307 - CARES/ARP	-	459900
FTA - Other	-	451800
FTA 5311 - Rural	-	451900
FTA 5311(f) - Rural	-	451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area	-	461100
TDA - Article 4.5 (ADA)	-	461200
TDA - Article 8.0	-	461300
Total TDA Revenue	-	
TransNet Revenue		
TransNet - Operating Support	-	471100
TransNet - Access ADA	-	471300
TransNet - SuperLoop, Other	-	471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula	-	462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal	-	463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak	-	481100
City of San Diego	-	481200
Other Local	-	481400
CNG Credits	-	424100
Total Other Local Revenue	-	
Total Subsidy Revenue	-	
Other Funds / Reserves		
Contingency Reserves	-	491100
Other Reserves	89,229	491100
Carryovers	-	
Total Other Funds / Reserves	89,229	
Total Non Operating Revenue	89,229	
Total Revenue	1,103,210	
Total Expenses	1,103,210	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OTHER ACTIVITIES

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>FHV Administration</u>		
Operating Revenue		
Passenger Revenue		401100-409235
Other Income	771,770	409150-429900
Total Operating Revenue	771,770	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area		461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	-	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	-	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves	162,223	491100
Carryovers		
Total Other Funds / Reserves	162,223	
Total Non Operating Revenue	162,223	
Total Revenue	933,993	
Total Expenses	933,993	
Net of Revenues over Expense	-	

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
NON OPERATING FUNDING SOURCES BY ACTIVITY
SECTION 9.03 - FUNDING SOURCES BY ACTIVITY
OTHER ACTIVITIES

FUNDING SOURCE DESCRIPTION	AMOUNT	INTERNAL MTS CODE
<u>San Diego and Arizona Eastern Railroad</u>		
Operating Revenue		
Passenger Revenue		401100-409235
Other Income	242,211	409150-429900
Total Operating Revenue	242,211	
Non Operating/Subsidy Revenue		
Federal Revenue		
FTA 5307 - Planning		451100
FTA 5307/5309 - Preventative Maintenance		451250
FTA 5307 - CARES/ARP		459900
FTA - Other		451800
FTA 5311 - Rural		451900
FTA 5311(f) - Rural		451950
Total Federal Revenue	-	
Transportation Development Act (TDA Revenue)		
TDA - Article 4.0 MTS Area		461100
TDA - Article 4.5 (ADA)		461200
TDA - Article 8.0		461300
Total TDA Revenue	-	
TransNet Revenue		
TransNet - Operating Support		471100
TransNet - Access ADA		471300
TransNet - SuperLoop, Other		471400
Total TransNet Revenue	-	
State Transit Assistance (STA) Revenue		
STA - Formula		462200
Total STA Revenue	-	
Other State Revenue		
TIRCP		463910
MediCal		463400
Total Other State Revenue	-	
Other Local Revenue		
SANDAG - FasTrak		481100
City of San Diego		481200
Other Local		481400
CNG Credits		424100
Total Other Local Revenue	-	
Total Subsidy Revenue	-	
Other Funds / Reserves		
Contingency Reserves		491100
Other Reserves	(72,994)	491100
Carryovers		
Total Other Funds / Reserves	(72,994)	
Total Non Operating Revenue	(72,994)	
Total Revenue	169,217	
Total Expenses	169,217	
Net of Revenues over Expense	-	

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
FIVE YEAR FINANCIAL PROJECTIONS (\$000s)
FISCAL YEAR 2026
SECTION 10.01**

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	PROJECTED FY27	PROJECTED FY28	PROJECTED FY29	PROJECTED FY30
TOTAL OPERATING REVENUES	\$ 106,909	\$ 114,949	\$ 121,090	\$ 126,790	\$ 130,718	\$ 135,812	\$ 139,992
RECURRING SUBSIDY FUNDING	250,426	251,722	243,984	247,282	252,369	258,766	265,676
TOTAL RECURRING REVENUES	\$ 357,335	\$ 366,670	\$ 365,074	\$ 374,071	\$ 383,087	\$ 394,578	\$ 405,667
PERSONNEL EXPENSES	\$ 176,883	\$ 195,880	\$ 206,891	\$ 215,843	\$ 225,210	\$ 235,100	\$ 245,537
OUTSIDE SERVICES	152,104	163,774	170,965	177,720	183,054	188,235	193,430
MATERIALS AND SUPPLIES	18,609	19,854	21,952	22,763	23,460	24,184	24,879
ENERGY	44,489	48,394	51,449	53,611	56,200	59,596	63,370
RISK MANAGEMENT	8,122	10,638	12,617	13,058	13,450	13,853	14,234
OTHER	7,728	9,650	9,206	9,445	9,658	9,877	10,084
TOTAL OPERATING EXPENSES	\$ 407,935	\$ 448,190	\$ 473,079	\$ 492,440	\$ 511,033	\$ 530,844	\$ 551,535
RECURRING OPERATING INCOME (DEFICIT)	\$ (50,600)	\$ (81,520)	\$ (108,005)	\$ (118,369)	\$ (127,946)	\$ (136,266)	\$ (145,868)
FEDERAL STIMULUS REVENUES	85,000	47,394					
SB 125 FUNDING	4,521	9,000	20,919	83,245	77,745	15,900	
SHIFT OF FLEXIBLE FUNDING FROM CAPITAL TO OPS			25,000	35,000	50,000		
NON RECURRING REVENUES	(30,505)	25,126	62,086	124	201	246	297
TOTAL OPERATING INCOME (DEFICIT)	\$ 8,417	\$ -	\$ -	\$ -	\$ -	\$ (120,120)	\$ (145,571)

Att.A, Item 20, 05/15/25

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
STATISTICAL SUMMARY
FISCAL YEAR 2026
SECTION 10.02

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	VARIANCE	% CHANGE BUDGET/ AMENDED
PASSENGER REVENUE					
BUS OPERATIONS	19,675,153	20,535,178	20,710,954	175,776	0.9%
RAIL OPERATIONS	29,880,848	33,792,404	42,027,824	8,235,420	24.4%
CONTRACTED SERVICES - FIXED ROUTE	21,403,676	23,920,157	24,731,324	811,167	3.4%
CONTRACTED SERVICES - PARATRANSIT	1,443,824	1,602,987	1,734,698	131,711	8.2%
TOTAL PASSENGER REVENUES	72,403,501	79,850,726	89,204,799	9,354,073	11.7%
PASSENGERS					
BUS OPERATIONS	17,819,019	18,432,406	18,590,196	157,790	0.9%
RAIL OPERATIONS	39,648,455	42,470,294	46,406,317	3,936,023	9.3%
CONTRACTED SERVICES - FIXED ROUTE	17,900,191	20,035,934	20,767,821	731,886	3.7%
CONTRACTED SERVICES - PARATRANSIT	314,099	362,554	392,417	29,863	8.2%
TOTAL PASSENGERS	75,681,764	81,301,188	86,156,751	4,855,563	6.0%
AVERAGE FARE					
BUS OPERATIONS	1.104	1.114	1.114	-	0.0%
RAIL OPERATIONS	0.754	0.796	0.906	0.110	13.8%
CONTRACTED SERVICES - FIXED ROUTE	1.196	1.194	1.191	-	0.0%
CONTRACTED SERVICES - PARATRANSIT	4.597	4.421	4.421	-	0.0%
TOTAL AVERAGE FARE	0.957	0.982	1.035	0.050	5.4%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
STATISTICAL SUMMARY
FISCAL YEAR 2026
SECTION 10.02

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	VARIANCE	% CHANGE BUDGET/ AMENDED
REVENUE MILES					
BUS OPERATIONS	9,052,237	9,145,565	9,147,044	1,480	0.0%
RAIL OPERATIONS	12,155,901	12,411,765	12,569,200	157,435	1.3%
CONTRACTED SERVICES - FIXED ROUTE	11,297,726	11,648,974	11,684,078	35,104	0.3%
CONTRACTED SERVICES - PARATRANSIT	3,267,530	3,337,519	3,502,433	164,914	4.9%
TOTAL REVENUE MILES	35,773,394	36,543,822	36,902,755	358,934	1.0%
TOTAL MILES					
BUS OPERATIONS	10,279,323	10,398,173	10,399,713	1,540	0.0%
RAIL OPERATIONS	12,449,967	12,825,849	13,016,785	190,936	1.5%
CONTRACTED SERVICES - FIXED ROUTE	13,294,823	13,729,382	13,747,279	17,898	0.1%
CONTRACTED SERVICES - PARATRANSIT	4,485,288	4,094,559	4,153,760	59,201	1.4%
TOTAL MILES	40,509,401	41,047,963	41,317,537	269,574	0.7%
REVENUE HOURS					
BUS OPERATIONS	783,784	793,358	792,884	(474)	-0.1%
RAIL OPERATIONS	668,789	701,928	718,952	17,024	2.4%
CONTRACTED SERVICES - FIXED ROUTE	1,073,161	1,107,665	1,109,696	2,031	0.2%
CONTRACTED SERVICES - PARATRANSIT	172,158	179,182	194,219	15,037	8.4%
TOTAL REVENUE HOURS	2,697,892	2,782,133	2,815,750	33,618	1.2%
TOTAL HOURS					
BUS OPERATIONS	840,346	839,037	838,580	(457)	-0.1%
RAIL OPERATIONS	690,830	716,558	727,035	10,477	1.5%
CONTRACTED SERVICES - FIXED ROUTE	1,167,067	1,180,244	1,181,565	1,321	0.1%
CONTRACTED SERVICES - PARATRANSIT	224,304	245,319	266,876	21,557	8.8%
TOTAL HOURS	2,922,547	2,981,159	3,014,058	32,899	1.1%

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
STATISTICAL SUMMARY
FISCAL YEAR 2026
SECTION 10.02

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	VARIANCE	% CHANGE BUDGET/ AMENDED
TOTAL OPERATING COSTS *					
BUS OPERATIONS	113,481,032	123,046,894	127,849,651	4,802,757	3.9%
RAIL OPERATIONS	111,543,711	124,254,334	135,135,077	10,880,743	8.8%
CONTRACTED SERVICES - FIXED ROUTE	98,676,016	104,376,916	108,282,588	3,905,672	3.7%
CONTRACTED SERVICES - PARATRANSIT	18,907,256	21,254,627	22,951,741	1,697,114	8.0%
CORONADO FERRY	313,435	323,313	320,110	(3,203)	-1.0%
ADMINISTRATIVE PASS THROUGH	345,069	523,597	534,749	11,152	2.1%
TOTAL OPERATING COSTS	343,266,519	373,779,681	395,073,916	21,294,235	5.7%
TOTAL PASSENGERS / REVENUE HOUR					
BUS OPERATIONS	22.7	23.2	23.4	0.2	0.9%
RAIL OPERATIONS	59.3	60.5	64.5	4.0	6.7%
CONTRACTED SERVICES - FIXED ROUTE	16.7	18.1	18.7	0.6	3.5%
CONTRACTED SERVICES - PARATRANSIT	1.8	2.0	2.0	(0.0)	-0.1%
TOTAL PASSENGERS / REVENUE HOUR	28.1	29.2	30.6	1.4	4.7%
TOTAL FAREBOX RECOVERY					
BUS OPERATIONS	17.3%	16.7%	16.2%	-0.5%	-2.9%
RAIL OPERATIONS	26.8%	27.2%	31.1%	3.9%	14.4%
CONTRACTED SERVICES - FIXED ROUTE	21.7%	22.9%	22.8%	-0.1%	-0.3%
CONTRACTED SERVICES - PARATRANSIT	7.6%	7.5%	7.6%	0.0%	0.2%
TOTAL FAREBOX RECOVERY	21.1%	21.4%	22.6%	1.2%	5.7%

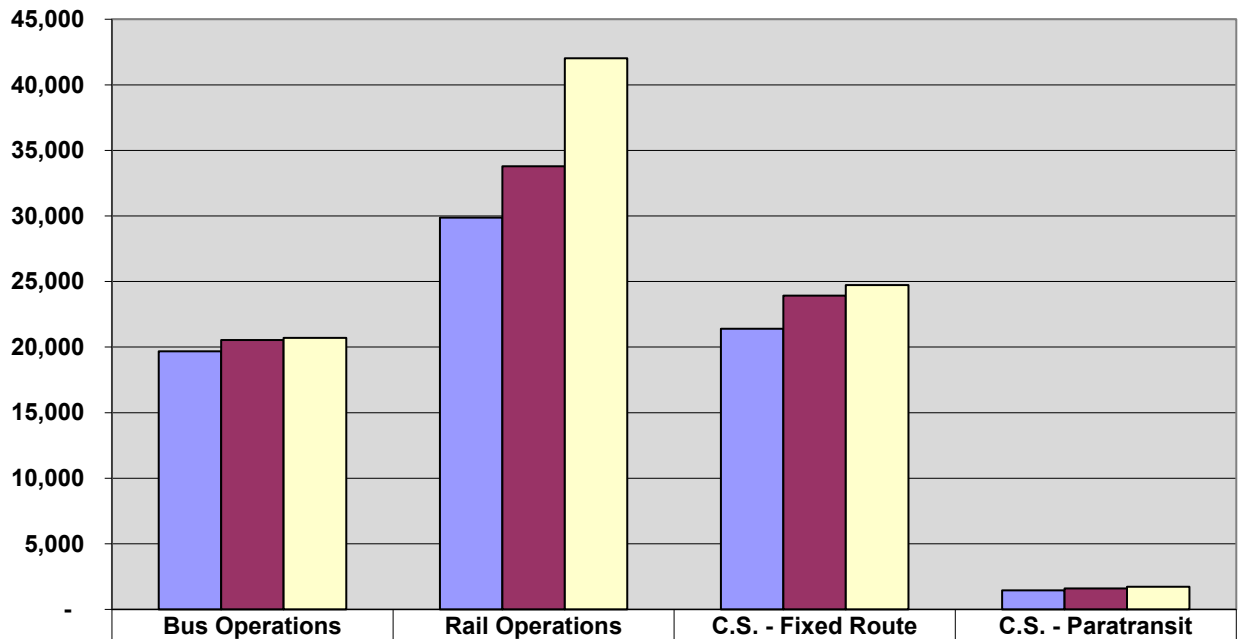
* Includes the administrative overhead allocation of expenses.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
STATISTICAL SUMMARY
FISCAL YEAR 2026
SECTION 10.02

	ACTUAL FY24	AMENDED BUDGET FY25	PROPOSED BUDGET FY26	VARIANCE	% CHANGE BUDGET/ AMENDED
TOTAL OPERATING SUBSIDY					
BUS OPERATIONS	93,369,739	97,724,781	83,638,591	(14,086,190)	-14.4%
RAIL OPERATIONS	101,490,927	99,222,741	93,490,992	(5,731,749)	-5.8%
CONTRACTED SERVICES - FIXED ROUTE	79,350,157	82,942,824	86,207,328	3,264,504	3.9%
CONTRACTED SERVICES - PARATRANSIT	17,777,370	20,143,541	21,752,667	1,609,126	8.0%
CORONADO FERRY	323,313	314,076	296,062	(18,014)	-5.7%
ADMINISTRATIVE PASS THROUGH	194,708	524,589	494,502	(30,087)	-5.7%
TOTAL OPERATING SUBSIDY	292,506,213	300,872,551	285,880,142	(14,992,410)	-5.0%
TOTAL SUBSIDY / PASSENGER					
BUS OPERATIONS	5.24	5.30	4.50	(0.80)	-15.1%
RAIL OPERATIONS	2.56	2.34	2.01	(0.32)	-13.8%
CONTRACTED SERVICES - FIXED ROUTE	4.43	4.14	4.15	0.01	0.3%
CONTRACTED SERVICES - PARATRANSIT	56.60	55.56	55.43	(0.13)	-0.2%
TOTAL SUBSIDY / PASSENGER	3.86	3.70	3.32	(0.38)	-10.3%

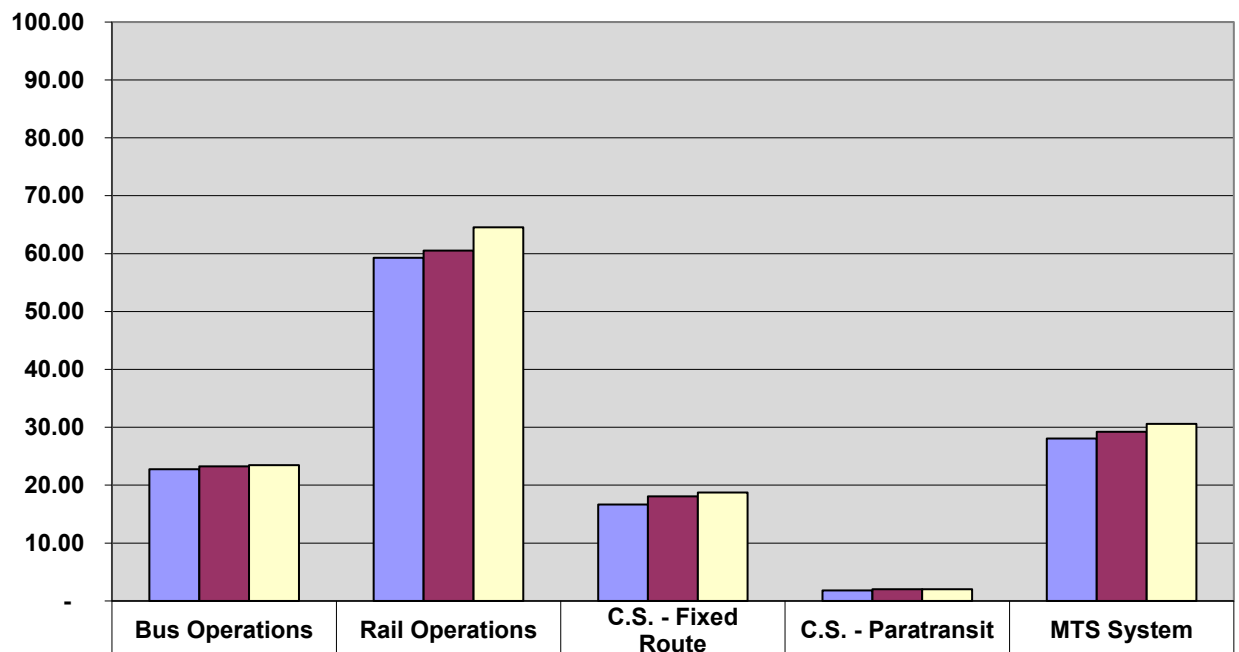
**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
STATISTICAL SUMMARY
FISCAL YEAR 2026**

Passenger Revenue (in 000's)



Actual FY24	19,675	29,881	21,404	1,444
Amended FY25	20,535	33,792	23,920	1,603
Budget FY26	20,711	42,028	24,731	1,735

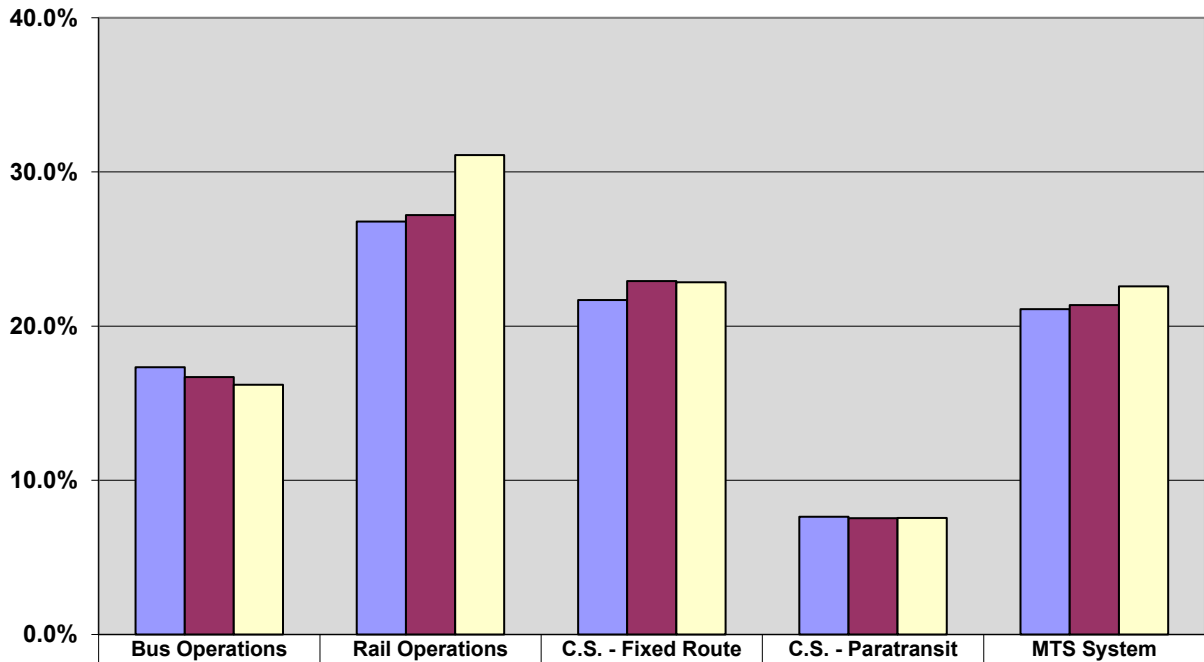
Passengers Per Revenue Hour



Actual FY24	22.73	59.28	16.68	1.82	28.05
Amended FY25	23.23	60.51	18.09	2.02	29.22
Budget FY26	23.45	64.55	18.71	2.02	30.60

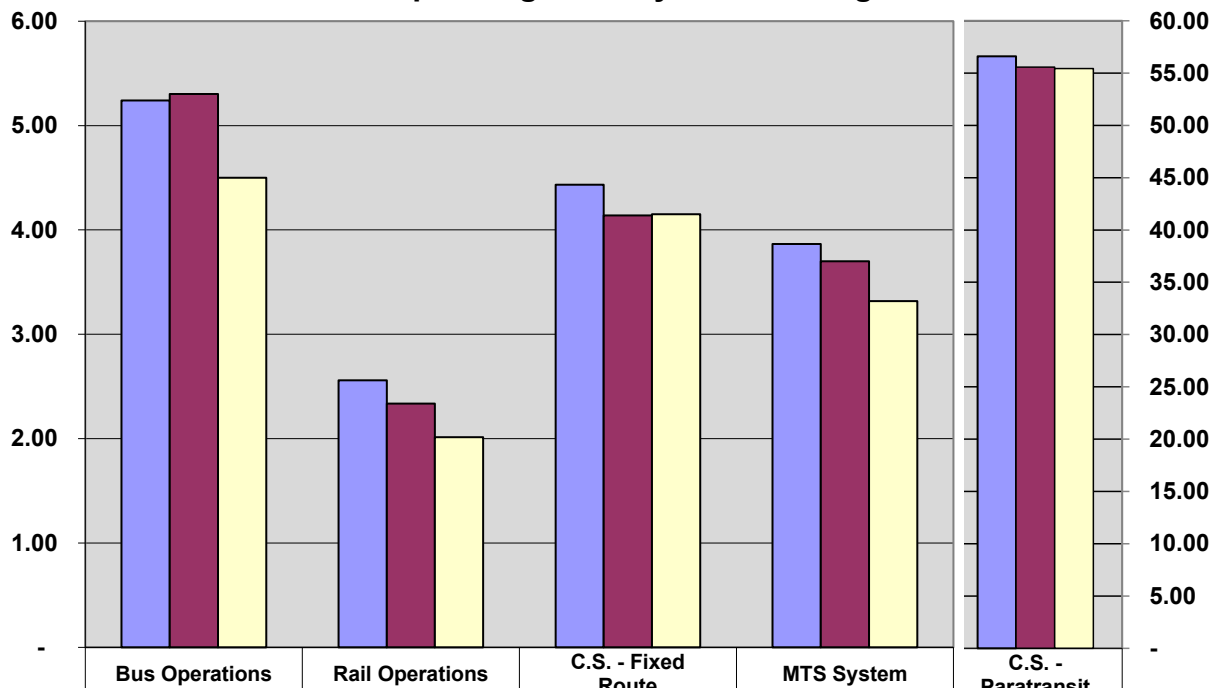
**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
STATISTICAL SUMMARY
FISCAL YEAR 2026**

Farebox Recovery Ratio



Actual FY24	17.3%	26.8%	21.7%	7.6%	21.1%
Amended FY25	16.7%	27.2%	22.9%	7.5%	21.4%
Budget FY26	16.2%	31.1%	22.8%	7.6%	22.6%

Operating Subsidy Per Passenger



Actual FY24	5.24	2.56	4.43	3.86	56.60
Amended FY25	5.30	2.34	4.14	3.70	55.56
Budget FY26	4.50	2.01	4.15	3.32	55.43

Att.A, Item 20, 05/15/25

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (SUMMARY FORMAT)
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.03

	Amended Budget	Position	Net Positons Requiring	Proposed	Frozen
	FY 2025	Shifts	Funding Adjs	FY 2026	Positions
	FTE's	FTE's	FTE's	FTE's	FTE's
<u>MTS Administration</u>					
BOD ADMINISTRATION	2.0	0.0	0.0	2.0	0.0
CAPITAL PROJECTS	10.5	0.0	0.0	10.5	0.0
COMPASS CARD	0.0	0.0	0.0	0.0	0.0
EXECUTIVE	5.0	0.0	0.0	5.0	0.0
FARE SYSTEM	14.5	0.0	0.0	14.5	0.0
FINANCE	25.5	0.0	0.0	25.5	0.0
HUMAN RESOURCES	19.0	0.0	0.0	19.0	0.0
INFORMATION SECURITY	3.0	0.0	0.5	3.5	0.0
INFORMATION TECHNOLOGY	32.0	0.0	0.0	32.0	0.0
LEGAL	4.5	0.0	0.0	4.5	0.0
MARKETING	11.0	0.0	0.0	11.0	0.0
PLANNING	9.5	0.0	0.0	9.5	0.0
PROCUREMENT	16.0	0.0	0.0	16.0	0.0
RIGHT OF WAY	2.0	0.0	0.0	2.0	0.0
RISK	4.0	0.0	0.0	4.0	0.0
SECURITY	139.0	0.0	0.0	139.0	0.0
STORES (ADMIN)	2.0	0.0	0.0	2.0	0.0
STORES (BUS)	13.0	0.0	0.0	13.0	0.0
STORES (RAIL)	7.0	0.0	0.0	7.0	0.0
TELEPHONE INFORMATION SERVICES	17.0	0.0	0.0	17.0	0.0
TRANSIT STORES	8.0	0.0	0.0	8.0	0.0
Subtotal MTS Administration	344.5	0.0	0.5	345.0	0.0
<u>Bus Operations</u>					
CONTRACT SERVICES	8.5	0.0	0.0	8.5	0.0
EXECUTIVE (BUS)	2.0	0.0	0.0	2.0	0.0
MAINTENANCE	189.0	0.0	0.0	189.0	0.0
MAINTENANCE-FACILITY	5.0	0.0	0.0	5.0	0.0
PASSENGER SERVICES	9.0	0.0	0.0	9.0	0.0
REVENUE (BUS)	6.0	0.0	0.0	6.0	0.0
SAFETY	2.0	0.0	0.0	2.0	0.0
TRAINING	11.0	0.0	0.0	11.0	0.0
TRANSPORTATION (BUS)	581.0	0.0	-17.0	564.0	0.0
Subtotal Bus Operations	813.5	0.0	-17.0	796.5	0.0
<u>Rail Operations</u>					
EXECUTIVE (RAIL)	4.0	0.0	0.0	4.0	0.0
FACILITIES	81.0	0.0	0.0	81.0	0.0
LIGHT RAIL VEHICLES	107.0	0.0	0.0	107.0	0.0
MAINTENANCE OF WAYSIDE	46.0	0.0	0.0	46.0	0.0
PASSENGER SUPPORT (RAIL)	22.5	0.0	0.0	22.5	0.0
REVENUE (RAIL)	20.0	0.0	0.0	20.0	0.0
REVENUE OPERATIONS (RAIL)	13.0	0.0	0.0	13.0	0.0
TRACK	22.0	0.0	0.0	22.0	0.0
TRANSPORTATION (RAIL)	282.2	0.0	0.0	282.2	0.0
Subtotal Rail Operations	597.7	0.0	0.0	597.7	0.0
<u>Other MTS Operations</u>					
FHV ADMINISTRATION	7.0	0.0	0.0	7.0	0.0
Subtotal Other MTS Operations	7.0	0.0	0.0	7.0	0.0
<u>Grand Total</u>	<u>1,762.7</u>	<u>0.0</u>	<u>-16.5</u>	<u>1,746.2</u>	<u>0.0</u>

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (DETAILED POSITION FORMAT) Att.A, Item 20, 05/15/25
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.04

		Amended Budget	Position	Net Positons	Proposed	Frozen
	Salary	FY 2025	Shifts	Requiring	FY 2026	Positions
	Grade	(FTE's)	(FTE's)	Funding Adjs	(FTE's)	(FTE's)
<u>MTS Administration</u>						
<u>BOD ADMINISTRATION</u>						
Exec Asst GC/Asst Board Clrk	8	1.0	0.0	0.0	1.0	0.0
Internal Auditor	12	1.0	0.0	0.0	1.0	0.0
BOD ADMINISTRATION TOTAL		2.0	0.0	0.0	2.0	0.0
<u>CAPITAL PROJECTS</u>						
Director of Capital Projects	17	1.0	0.0	0.0	1.0	0.0
Engineering Intern	0	0.5	0.0	0.0	0.5	0.0
Project Engineer	12	2.0	0.0	0.0	2.0	0.0
Project Manager	13	2.0	0.0	0.0	2.0	0.0
Regulatory Liaison&Permit Asst	7	1.0	0.0	0.0	1.0	0.0
Senior Project Manager	14	3.0	0.0	0.0	3.0	0.0
Sr. Project Manager - Rail Sys	14	1.0	0.0	0.0	1.0	0.0
CAPITAL PROJECTS TOTAL		10.5	0.0	0.0	10.5	0.0
<u>COMPASS CARD</u>						
COMPASS CARD TOTAL		0.0	0.0	0.0	0.0	0.0
<u>EXECUTIVE</u>						
Chief Executive Officer		1.0	0.0	0.0	1.0	0.0
Exec Asst/Clerk of the Board	9	1.0	0.0	0.0	1.0	0.0
Grants Administrator	9	1.0	0.0	0.0	1.0	0.0
Grants Analyst	8	1.0	0.0	0.0	1.0	0.0
Manager of Government Affairs	13	1.0	0.0	0.0	1.0	0.0
EXECUTIVE TOTAL		5.0	0.0	0.0	5.0	0.0
<u>FARE SYSTEM</u>						
Call/Service Center Rep (FT)	1	4.0	0.0	0.0	4.0	0.0
Call/Service Center Rep (PT)	1	1.5	0.0	0.0	1.5	0.0
Director of Fare Technology &	14	1.0	0.0	0.0	1.0	0.0
Fare Systems Administrator	9	1.0	0.0	0.0	1.0	0.0
Mgr of PRONTO & Passenger Supp	9	1.0	0.0	0.0	1.0	0.0
Service Center Specialist (FT)	2	5.0	0.0	0.0	5.0	0.0
Supervisor of Pronto Support	7	1.0	0.0	0.0	1.0	0.0
FARE SYSTEM TOTAL		14.5	0.0	0.0	14.5	0.0
<u>FINANCE</u>						
Chief Financial Officer	20	1.0	0.0	0.0	1.0	0.0
Accounting Assistant	3	3.0	0.0	0.0	3.0	0.0
Accounting Manager	12	1.0	0.0	0.0	1.0	0.0
Accounting Supervisor	9	1.0	0.0	0.0	1.0	0.0
Assistant Controller	13	1.0	0.0	0.0	1.0	0.0
Controller	17	1.0	0.0	0.0	1.0	0.0
Deputy Chief Financial Officer	18	1.0	0.0	0.0	1.0	0.0
Executive Assistant (CFO)	8	1.0	0.0	0.0	1.0	0.0
Finance Intern	1	0.5	0.0	0.0	0.5	0.0
Financial Analyst	9	1.0	0.0	0.0	1.0	0.0
Manager of Financial Planning	13	1.0	0.0	0.0	1.0	0.0
Payroll Coordinator	7	3.0	0.0	0.0	3.0	0.0
Payroll Manager	12	1.0	0.0	0.0	1.0	0.0
Payroll Supervisor	10	1.0	0.0	0.0	1.0	0.0
Senior Financial Analyst	10	1.0	0.0	0.0	1.0	0.0
Staff Accountant I	7	2.0	0.0	0.0	2.0	0.0
Staff Accountant II	8	4.0	0.0	0.0	4.0	0.0
Transit Asset Mgmt Program Mgr	11	1.0	0.0	0.0	1.0	0.0
FINANCE TOTAL		25.5	0.0	0.0	25.5	0.0

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (DETAILED POSITION FORMAT) Att.A, Item 20, 05/15/25
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.04

		Amended Budget	Position	Net Positons		
	Salary	FY 2025	Shifts	Requiring	Proposed	Frozen
	Grade	(FTE's)	(FTE's)	Funding Adjs	FY 2026	Positions
		(FTE's)	(FTE's)	(FTE's)	(FTE's)	(FTE's)
<u>HUMAN RESOURCES</u>						
Benefits & Comp Analyst	10	3.0	0.0	0.0	3.0	0.0
Chief Human Resources Officer	19	1.0	0.0	0.0	1.0	0.0
Director of Human Resources	16	1.0	0.0	0.0	1.0	0.0
Human Resources Assistant	3	2.0	0.0	0.0	2.0	0.0
Human Resources Specialist	6	3.0	0.0	0.0	3.0	0.0
Leadership Dev Specialist	12	1.0	0.0	0.0	1.0	0.0
Manager of Benefits & Comp	13	1.0	0.0	0.0	1.0	0.0
Manager of Talent Acquisition	13	1.0	0.0	0.0	1.0	0.0
Office Support Coordinator	2	1.0	0.0	0.0	1.0	0.0
Senior Human Resources Analyst	11	1.0	0.0	0.0	1.0	0.0
Talent Acquisition Specialist	10	4.0	0.0	0.0	4.0	0.0
HUMAN RESOURCES TOTAL		19.0	0.0	0.0	19.0	0.0
<u>INFORMATION SECURITY</u>						
Info Security & Intel Eng	12	2.0	0.0	0.0	2.0	0.0
Info Security and Intel Intern	PT	0.0	0.0	0.5	0.5	0.0
Information Security Manager	14	1.0	0.0	0.0	1.0	0.0
INFORMATION SECURITY TOTAL		3.0	0.0	0.5	3.5	0.0
<u>INFORMATION TECHNOLOGY</u>						
Business Systems Analyst (SAP)	13	1.0	0.0	0.0	1.0	0.0
Chief Information Officer	19	1.0	0.0	0.0	1.0	0.0
Executive Assistant (CIO)	8	1.0	0.0	0.0	1.0	0.0
IT Development Manager	14	1.0	0.0	0.0	1.0	0.0
IT Enterprise Architect (IoT)	13	1.0	0.0	0.0	1.0	0.0
IT Operations Manager	14	1.0	0.0	0.0	1.0	0.0
IT Support Specialist	7	4.0	0.0	0.0	4.0	0.0
Network Engineer I	10	2.0	0.0	0.0	2.0	0.0
Network Engineer II	11	2.0	0.0	0.0	2.0	0.0
Network Engineer III	12	1.0	0.0	0.0	1.0	0.0
Network Operations Manager	14	1.0	0.0	0.0	1.0	0.0
Project Administrator	8	1.0	0.0	0.0	1.0	0.0
Report Development Analyst	10	1.0	0.0	0.0	1.0	0.0
SAP Software Developer	13	1.0	0.0	0.0	1.0	0.0
Senior Systems Administrator	12	3.0	0.0	0.0	3.0	0.0
Service Desk Supervisor	10	1.0	0.0	0.0	1.0	0.0
Software Developer	13	3.0	0.0	0.0	3.0	0.0
Sr Data Warehouse Engineer	13	1.0	0.0	0.0	1.0	0.0
Systems Administrator	11	4.0	0.0	0.0	4.0	0.0
Technical Project Manager	13	1.0	0.0	0.0	1.0	0.0
INFORMATION TECHNOLOGY TOTAL		32.0	0.0	0.0	32.0	0.0
<u>LEGAL</u>						
General Counsel	19	1.0	0.0	0.0	1.0	0.0
Deputy General Counsel	15	1.0	0.0	0.0	1.0	0.0
Env Health & Safety Manager	13	1.0	0.0	0.0	1.0	0.0
Envi Health & Safety Intern	1	0.5	0.0	0.0	0.5	0.0
Staff Attorney	13	1.0	0.0	0.0	1.0	0.0
LEGAL TOTAL		4.5	0.0	0.0	4.5	0.0
<u>MARKETING</u>						
Dir Marketing & Communications	16	1.0	0.0	0.0	1.0	0.0
Community Engagement Specialis	8	1.0	0.0	0.0	1.0	0.0
Creative Design Manager	11	1.0	0.0	0.0	1.0	0.0
Digital Content Developer	8	1.0	0.0	0.0	1.0	0.0
Graphic Designer	7	2.0	0.0	0.0	2.0	0.0
Marketing Coordinator	3	1.0	0.0	0.0	1.0	0.0
Mgr of Marketing & Communicati	12	1.0	0.0	0.0	1.0	0.0
Multimedia Designer	8	1.0	0.0	0.0	1.0	0.0

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (DETAILED POSITION FORMAT) Att.A, Item 20, 05/15/25
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.04

		Amended Budget	Position	Net Positons Requiring	Proposed	Frozen
	Salary	FY 2025	Shifts	Funding Adjs	FY 2026	Positions
	Grade	(FTE's)	(FTE's)	(FTE's)	(FTE's)	(FTE's)
Public Relations Specialist	10	1.0	0.0	0.0	1.0	0.0
Social Media Coordinator	3	1.0	0.0	0.0	1.0	0.0
MARKETING TOTAL		11.0	0.0	0.0	11.0	0.0

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (DETAILED POSITION FORMAT) Att.A, Item 20, 05/15/25
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.04

		Amended Budget	Position	Net Positons		
	Salary	FY 2025	Shifts	Requiring	Proposed	Frozen
	Grade	(FTE's)	(FTE's)	Funding Adjs	FY 2026	Positions
		(FTE's)	(FTE's)	(FTE's)	(FTE's)	(FTE's)
<u>PLANNING</u>						
Assoc Transportation Planner	8	1.0	0.0	0.0	1.0	0.0
Dir of Planning & Scheduling	15	1.0	0.0	0.0	1.0	0.0
Manager of Scheduling	13	1.0	0.0	0.0	1.0	0.0
Planning Intern	1	0.5	0.0	0.0	0.5	0.0
Senior Scheduler	8	2.0	0.0	0.0	2.0	0.0
Senior Transportation Planner	10	2.0	0.0	0.0	2.0	0.0
Transit Services Data Analyst	8	2.0	0.0	0.0	2.0	0.0
PLANNING TOTAL		9.5	0.0	0.0	9.5	0.0
<u>PROCUREMENT</u>						
Manager of Procurement	13	1.0	0.0	0.0	1.0	0.0
Buyer	7	1.0	0.0	0.0	1.0	0.0
Contract Specialist	7	1.0	0.0	0.0	1.0	0.0
Contracts Administrator	9	1.0	0.0	0.0	1.0	0.0
Director of Supply Chain & Ops	15	1.0	0.0	0.0	1.0	0.0
Principal Contract Admin	11	1.0	0.0	0.0	1.0	0.0
Procurement Specialist	10	9.0	0.0	0.0	9.0	0.0
Senior Procurement Specialist	11	1.0	0.0	0.0	1.0	0.0
PROCUREMENT TOTAL		16.0	0.0	0.0	16.0	0.0
<u>RIGHT OF WAY</u>						
Manager of Real Estate Assets	14	1.0	0.0	0.0	1.0	0.0
Right of Way Permit Coord	9	1.0	0.0	0.0	1.0	0.0
RIGHT OF WAY TOTAL		2.0	0.0	0.0	2.0	0.0
<u>RISK</u>						
Claims Specialist	7	1.0	0.0	0.0	1.0	0.0
Liability Claims Supervisor	10	1.0	0.0	0.0	1.0	0.0
Manager of Risk and Claims	13	1.0	0.0	0.0	1.0	0.0
Workers' Compensation Analyst	8	1.0	0.0	0.0	1.0	0.0
RISK TOTAL		4.0	0.0	0.0	4.0	0.0
<u>SECURITY</u>						
Asst Mgr of Field Operations	10	1.0	0.0	0.0	1.0	0.0
Clerk Typist/Data Entry TSS	BU	2.0	0.0	0.0	2.0	0.0
Code Compl Insp-Canine Handler	BU	3.0	0.0	0.0	3.0	0.0
Code Compliance Inspector	BU	95.0	0.0	0.0	95.0	0.0
Code Compliance Investigator	10	1.0	0.0	0.0	1.0	0.0
Code Compliance Supervisor	8	20.0	0.0	0.0	20.0	0.0
Code Compliance Train Sup (MC)	9	1.0	0.0	0.0	1.0	0.0
Dep Dir of Transit Sec & Pass	13	1.0	0.0	0.0	1.0	0.0
Dir of Transit Security & Pass	17	1.0	0.0	0.0	1.0	0.0
Dispatch Sup - Transit Enf	8	2.0	0.0	0.0	2.0	0.0
Dispatcher - Transit Enf	BU	5.0	0.0	0.0	5.0	0.0
Mgr of Ops-Transit Sec & Pass	11	1.0	0.0	0.0	1.0	0.0
Operational and Crime Data Ana	8	1.0	0.0	0.0	1.0	0.0
Professional Standards Manager	10	1.0	0.0	0.0	1.0	0.0
Records Manager	10	1.0	0.0	0.0	1.0	0.0
Records Specialist	7	2.0	0.0	0.0	2.0	0.0
Security Systems Administrator	9	1.0	0.0	0.0	1.0	0.0
SECURITY TOTAL		139.0	0.0	0.0	139.0	0.0
<u>STORES (ADMIN)</u>						
Inventory Planning and Forecas	9	1.0	0.0	0.0	1.0	0.0
Manager of Inventory Ops	12	1.0	0.0	0.0	1.0	0.0
STORES (ADMIN) TOTAL		2.0	0.0	0.0	2.0	0.0

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (DETAILED POSITION FORMAT) Att.A, Item 20, 05/15/25
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.04

		Amended Budget	Position	Net Positons	Proposed	Frozen
	Salary	FY 2025	Shifts	Requiring	FY 2026	Positions
	Grade	(FTE's)	(FTE's)	Funding Adjs	(FTE's)	(FTE's)
<u>STORES (BUS)</u>						
Storeroom Clerks - IAD	BU	5.0	0.0	0.0	5.0	0.0
Storeroom Clerks - KMD	BU	6.0	0.0	0.0	6.0	0.0
Supervisor of Warehouse Ops	8	2.0	0.0	0.0	2.0	0.0
STORES (BUS) TOTAL		13.0	0.0	0.0	13.0	0.0
<u>STORES (RAIL)</u>						
Storekeeper	BU	6.0	0.0	0.0	6.0	0.0
Supervisor of Warehouse Ops	8	1.0	0.0	0.0	1.0	0.0
STORES (RAIL) TOTAL		7.0	0.0	0.0	7.0	0.0
<u>TELEPHONE INFORMATION SERVICES</u>						
Asst Supvr of Info & Trip Plan	7	1.0	0.0	0.0	1.0	0.0
Info & Trip Planning Supvr	8	1.0	0.0	0.0	1.0	0.0
Info and Trip Planning Clerk	BU	15.0	0.0	0.0	15.0	0.0
TELEPHONE INFORMATION SERVICES TO		17.0	0.0	0.0	17.0	0.0
<u>TRANSIT STORES</u>						
Transit Store Supervisor	7	1.0	0.0	0.0	1.0	0.0
Asst Transit Store Supervisor	7	1.0	0.0	0.0	1.0	0.0
Senior Transit Store Clerk	BU	1.0	0.0	0.0	1.0	0.0
Transit Store Clerk	BU	5.0	0.0	0.0	5.0	0.0
TRANSIT STORES TOTAL		8.0	0.0	0.0	8.0	0.0
Subtotal MTS Administration		344.5	0.0	0.5	345.0	0.0

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (DETAILED POSITION FORMAT) Att.A, Item 20, 05/15/25
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.04

		Amended Budget	Position	Net Positons	Proposed	Frozen
	Salary	FY 2025	Shifts	Requiring	FY 2026	Positions
	Grade	(FTE's)	(FTE's)	Funding Adjs	(FTE's)	(FTE's)
<u>Bus Operations</u>						
<u>CONTRACT SERVICES</u>						
Director of Contract Services	15	1.0	0.0	0.0	1.0	0.0
Contract Operations Administra	6	1.0	0.0	0.0	1.0	0.0
Intern - Transit Services	0	0.5	0.0	0.0	0.5	0.0
Mgr of Paratransit & Mini Bus	13	1.0	0.0	0.0	1.0	0.0
Passenger Facilities Coord.	2	2.0	0.0	0.0	2.0	0.0
Sr Contract Operations Adminis	9	1.0	0.0	0.0	1.0	0.0
Supervisor of Para-Transit	7	1.0	0.0	0.0	1.0	0.0
Supvr of Passenger Facilities	10	1.0	0.0	0.0	1.0	0.0
CONTRACT SERVICES TOTAL		8.5	0.0	0.0	8.5	0.0
<u>EXECUTIVE (BUS)</u>						
Chief Op Officer-Transit Servs	20	1.0	0.0	0.0	1.0	0.0
Executive Assistant (COO Bus)	8	1.0	0.0	0.0	1.0	0.0
EXECUTIVE (BUS) TOTAL		2.0	0.0	0.0	2.0	0.0
<u>MAINTENANCE</u>						
Admin Asst II - Maintenance	3	1.0	0.0	0.0	1.0	0.0
Administrative Assistant - Mai	2	1.0	0.0	0.0	1.0	0.0
Body Shop Apprentice I - KMD	BU	1.0	0.0	0.0	1.0	0.0
Body Shop Apprentice II - KMD	BU	2.0	0.0	0.0	2.0	0.0
Bus Maintenance Trainer	11	1.0	0.0	0.0	1.0	0.0
Communications Tech - IAD	BU	2.0	0.0	0.0	2.0	0.0
Dir of Fleet & Facility Maint	16	1.0	0.0	0.0	1.0	0.0
Division Manager (Maint) - IAD	13	1.0	0.0	0.0	1.0	0.0
Division Manager (Maint) - KMD	13	1.0	0.0	0.0	1.0	0.0
Electronics Apprentice I - IAD	BU	2.0	0.0	0.0	2.0	0.0
Foreman - IAD	11	9.0	0.0	0.0	9.0	0.0
Foreman - KMD	11	7.0	0.0	0.0	7.0	0.0
Maintenance Analyst	7	1.0	0.0	0.0	1.0	0.0
Mechanic A - IAD	BU	20.0	0.0	0.0	20.0	0.0
Mechanic A - KMD	BU	26.0	0.0	0.0	26.0	0.0
Mechanic Apprentice I - IAD	BU	8.0	0.0	0.0	8.0	0.0
Mechanic Apprentice I - KMD	BU	9.0	0.0	0.0	9.0	0.0
Mechanic Apprentice II - IAD	BU	3.0	0.0	0.0	3.0	0.0
Mechanic Apprentice II - KMD	BU	2.0	0.0	0.0	2.0	0.0
Mechanic C - IAD	BU	17.0	0.0	0.0	17.0	0.0
Mechanic C - KMD	BU	9.0	0.0	0.0	9.0	0.0
Quality Assurance Inspector	10	1.0	0.0	0.0	1.0	0.0
Quality Assurance Supervisor	11	1.0	0.0	0.0	1.0	0.0
Servicer A - IAD	BU	48.0	0.0	0.0	48.0	0.0
Servicer A - KMD	BU	12.0	0.0	0.0	12.0	0.0
Sign Truck Operator	BU	1.0	0.0	0.0	1.0	0.0
Sup of Maintenance Training	12	1.0	0.0	0.0	1.0	0.0
ZEV and Sustainability Manager	13	1.0	0.0	0.0	1.0	0.0
MAINTENANCE TOTAL		189.0	0.0	0.0	189.0	0.0

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (DETAILED POSITION FORMAT) Att.A, Item 20, 05/15/25
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.04

		Amended Budget	Position	Net Positons		
	Salary	FY 2025	Shifts	Requiring	Proposed	Frozen
	Grade	(FTE's)	(FTE's)	Funding Adjs	FY 2026	Positions
				(FTE's)	(FTE's)	(FTE's)
<u>MAINTENANCE-FACILITY</u>						
Bldng Maint Apprentice - IAD	BU	2.0	0.0	0.0	2.0	0.0
Facilities Supervisor - Bus	7	1.0	0.0	0.0	1.0	0.0
Mechanic A - Facilities - IAD	BU	2.0	0.0	0.0	2.0	0.0
MAINTENANCE-FACILITY TOTAL		5.0	0.0	0.0	5.0	0.0
<u>PASSENGER SERVICES</u>						
Customer Service Supervisor	6	2.0	0.0	0.0	2.0	0.0
Asst Passenger Support Sup	5	1.0	0.0	0.0	1.0	0.0
Director of Support Services	14	1.0	0.0	0.0	1.0	0.0
Operations Asst - Ride Checker	0	1.0	0.0	0.0	1.0	0.0
Passenger Support Supervisor	7	1.0	0.0	0.0	1.0	0.0
Support Services Analyst	6	1.0	0.0	0.0	1.0	0.0
Support Services Coordinator	2	2.0	0.0	0.0	2.0	0.0
PASSENGER SERVICES TOTAL		9.0	0.0	0.0	9.0	0.0
<u>REVENUE (BUS)</u>						
Asst Rev Technicians - IAD	BU	2.0	0.0	0.0	2.0	0.0
Asst Rev Technicians - KMD	BU	1.0	0.0	0.0	1.0	0.0
Revenue Technicians - IAD	BU	2.0	0.0	0.0	2.0	0.0
Revenue Technicians - KMD	BU	1.0	0.0	0.0	1.0	0.0
REVENUE (BUS) TOTAL		6.0	0.0	0.0	6.0	0.0
<u>SAFETY</u>						
Manager of Safety (Bus)	13	1.0	0.0	0.0	1.0	0.0
Transit Safety Specialist	9	1.0	0.0	0.0	1.0	0.0
SAFETY TOTAL		2.0	0.0	0.0	2.0	0.0
<u>TRAINING</u>						
Bus Op Training Instructor	8	8.0	0.0	0.0	8.0	0.0
Manager of Training (Transp)	11	1.0	0.0	0.0	1.0	0.0
Training Administrator	5	1.0	0.0	0.0	1.0	0.0
Training Development Specialis	8	1.0	0.0	0.0	1.0	0.0
TRAINING TOTAL		11.0	0.0	0.0	11.0	0.0
<u>TRANSPORTATION (BUS)</u>						
Director of Transportation	17	1.0	0.0	0.0	1.0	0.0
Admin Asst II - Operations	3	1.0	0.0	0.0	1.0	0.0
Bus Operators - F/T	BU	537.0	0.0	-17.0	520.0	0.0
Comm/Ops Supv-Dispatch IAD	10	8.0	0.0	0.0	8.0	0.0
Comm/Ops Supv-Radio	10	8.0	0.0	0.0	8.0	0.0
Dispatch Clerk	BU	4.0	0.0	0.0	4.0	0.0
Dispatch Clerk - KMD	BU	2.0	0.0	0.0	2.0	0.0
Manager of Service Operations	12	1.0	0.0	0.0	1.0	0.0
Manager of Transp Comm & Tech	12	1.0	0.0	0.0	1.0	0.0
Service Operations Supervisor	10	14.0	0.0	0.0	14.0	0.0
Trans Div Manager - IAD	13	1.0	0.0	0.0	1.0	0.0
Trans Div Manager - KMD	13	1.0	0.0	0.0	1.0	0.0
Transp Comm & Technology Supvr	11	1.0	0.0	0.0	1.0	0.0
Transp Service Quality Spec	7	1.0	0.0	0.0	1.0	0.0
TRANSPORTATION (BUS) TOTAL		581.0	0.0	-17.0	564.0	0.0
Subtotal Bus Operations		813.5	0.0	-17.0	796.5	0.0

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (DETAILED POSITION FORMAT) Att.A, Item 20, 05/15/25
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.04

		Amended Budget	Position	Net Positons	Proposed	Frozen
	Salary	FY 2025	Shifts	Requiring	FY 2026	Positions
	Grade	(FTE's)	(FTE's)	Funding Adjs	(FTE's)	(FTE's)
<u>Rail Operations</u>						
<u>EXECUTIVE (RAIL)</u>						
Chief Operating Officer (Rail)	20	1.0	0.0	0.0	1.0	0.0
Manager of Special Operations	12	1.0	0.0	0.0	1.0	0.0
System Safety Manager (Rail)	13	1.0	0.0	0.0	1.0	0.0
System Safety Specialist	10	1.0	0.0	0.0	1.0	0.0
EXECUTIVE (RAIL) TOTAL		4.0	0.0	0.0	4.0	0.0
<u>FACILITIES</u>						
Admin Asst II - Facilities	3	1.0	0.0	0.0	1.0	0.0
Director of Rail Facilities	16	1.0	0.0	0.0	1.0	0.0
Facilities Supervisor	7	6.0	0.0	0.0	6.0	0.0
Manager of Rail Facilities	11	1.0	0.0	0.0	1.0	0.0
Serviceperson	BU	72.0	0.0	0.0	72.0	0.0
FACILITIES TOTAL		81.0	0.0	0.0	81.0	0.0
<u>LIGHT RAIL VEHICLES</u>						
Assistant Training Sup - LRV	11	1.0	0.0	0.0	1.0	0.0
Clerk Typist/Data Entry LRV	BU	2.0	0.0	0.0	2.0	0.0
Director of LRV Maintenance	16	1.0	0.0	0.0	1.0	0.0
LRV Asst Lineman	BU	27.0	0.0	0.0	27.0	0.0
LRV Electromechanic	BU	48.0	0.0	0.0	48.0	0.0
LRV Lineman	BU	14.0	0.0	0.0	14.0	0.0
LRV Maint Supervisor	11	10.0	0.0	0.0	10.0	0.0
LRV Project Cordinator/Analyst	10	1.0	0.0	0.0	1.0	0.0
Maintenance Analyst (LRV)	6	1.0	0.0	0.0	1.0	0.0
Manager of LRV Maintenance	13	1.0	0.0	0.0	1.0	0.0
Training Supervisor - LRV	12	1.0	0.0	0.0	1.0	0.0
LIGHT RAIL VEHICLES TOTAL		107.0	0.0	0.0	107.0	0.0
<u>MAINTENANCE OF WAYSIDE</u>						
Asst Training Supervisor - MOW	11	1.0	0.0	0.0	1.0	0.0
Director of MOW	16	1.0	0.0	0.0	1.0	0.0
Manager of MOW	13	1.0	0.0	0.0	1.0	0.0
MOW Contracts & Budget Analyst	9	1.0	0.0	0.0	1.0	0.0
Training Supervisor - MOW	12	1.0	0.0	0.0	1.0	0.0
Wayside Assistant Lineman	BU	13.0	0.0	0.0	13.0	0.0
Wayside Electromechanic	BU	15.0	0.0	0.0	15.0	0.0
Wayside Lineman	BU	8.0	0.0	0.0	8.0	0.0
Wayside Maintenance Supervisor	11	5.0	0.0	0.0	5.0	0.0
MAINTENANCE OF WAYSIDE TOTAL		46.0	0.0	0.0	46.0	0.0
<u>PASSENGER SUPPORT (RAIL)</u>						
Lead Passenger Support Rep	2	1.5	0.0	0.0	1.5	0.0
Passenger Support Rep	1	21.0	0.0	0.0	21.0	0.0
PASSENGER SUPPORT (RAIL) TOTAL		22.5	0.0	0.0	22.5	0.0

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (DETAILED POSITION FORMAT) Att.A, Item 20, 05/15/25
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.04

		Amended Budget	Position	Net Positons	Proposed	Frozen
	Salary	FY 2025	Shifts	Requiring	FY 2026	Positions
	Grade	(FTE's)	(FTE's)	Funding Adjs	(FTE's)	(FTE's)
<u>REVENUE (RAIL)</u>						
Lead Revenue Maint Supervisor	12	1.0	0.0	0.0	1.0	0.0
Revenue Maintainer I	BU	3.0	0.0	0.0	3.0	0.0
Revenue Maintainer II	BU	3.0	0.0	0.0	3.0	0.0
Revenue Maintainer III	BU	12.0	0.0	0.0	12.0	0.0
Revenue Maintenance Supervisor	11	1.0	0.0	0.0	1.0	0.0
REVENUE (RAIL) TOTAL		20.0	0.0	0.0	20.0	0.0
<u>REVENUE OPERATIONS (RAIL)</u>						
Collector / Processor	BU	8.0	0.0	0.0	8.0	0.0
Revenue Analyst (Rail)	7	1.0	0.0	0.0	1.0	0.0
Revenue Operations Assistant	1	1.0	0.0	0.0	1.0	0.0
Revenue Operations Manager	10	1.0	0.0	0.0	1.0	0.0
Ridership Surveyor	BU	2.0	0.0	0.0	2.0	0.0
REVENUE OPERATIONS (RAIL) TOTAL		13.0	0.0	0.0	13.0	0.0
<u>TRACK</u>						
Manager of Track and Structure	12	1.0	0.0	0.0	1.0	0.0
Track Supervisor	11	2.0	0.0	0.0	2.0	0.0
Trackperson	BU	16.0	0.0	0.0	16.0	0.0
Trackperson Equip Op	BU	3.0	0.0	0.0	3.0	0.0
TRACK TOTAL		22.0	0.0	0.0	22.0	0.0
<u>TRANSPORTATION (RAIL)</u>						
Assignments Supervisor	10	5.0	0.0	0.0	5.0	0.0
Central Control Info Rep	7	1.0	0.0	0.0	1.0	0.0
Central Control Supervisor	11	2.0	0.0	0.0	2.0	0.0
Construction Safety Flagperson	PT	42.5	0.0	0.0	42.5	0.0
Construction Safety Supervisor	7	4.0	0.0	0.0	4.0	0.0
Dir of Rail Transportation	17	1.0	0.0	0.0	1.0	0.0
Lead Transportation Sup	11	1.0	0.0	0.0	1.0	0.0
Manager of Rail Transportation	13	1.0	0.0	0.0	1.0	0.0
Train Operator	BU	137.0	0.0	0.0	137.0	0.0
Train Operator - PT	BU	52.7	0.0	0.0	52.7	0.0
Training Supervisor - Trans	11	3.0	0.0	0.0	3.0	0.0
Transportation Controller	10	16.0	0.0	0.0	16.0	0.0
Transportation Supervisor	10	16.0	0.0	0.0	16.0	0.0
TRANSPORTATION (RAIL) TOTAL		282.2	0.0	0.0	282.2	0.0
Subtotal Rail Operations		597.7	0.0	0.0	597.7	0.0

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
POSITION INFORMATION (DETAILED POSITION FORMAT) Att.A, Item 20, 05/15/25
FISCAL YEAR 2026 PROPOSED BUDGET
SECTION 10.04

		Amended Budget	Position	Net Positons Requiring	Proposed	Frozen
	Salary	FY 2025	Shifts	Funding Adjs	FY 2026	Positions
	Grade	(FTE's)	(FTE's)	(FTE's)	(FTE's)	(FTE's)
<u>Other MTS Operations</u>						
<u>FHV ADMINISTRATION</u>						
For-Hire Vehicle Administratio	11	1.0	0.0	0.0	1.0	0.0
Regulatory Analyst	7	1.0	0.0	0.0	1.0	0.0
Regulatory Assistant	7	1.0	0.0	0.0	1.0	0.0
Regulatory Inspector	3	3.0	0.0	0.0	3.0	0.0
Regulatory Supervisor	8	1.0	0.0	0.0	1.0	0.0
FHV ADMINISTRATION TOTAL		7.0	0.0	0.0	7.0	0.0
Subtotal Other MTS Operations		7.0	0.0	0.0	7.0	0.0
Grand Total		1,762.7	0.0	-16.5	1,746.2	0.0

**SAN DIEGO METROPOLITAN TRANSIT SYSTEM
SALARY GRADE RANGES
PROPOSED FISCAL YEAR 2026 BUDGET
SECTION 10.05**

Range	FTE Count	Minimum	Midpoint	Maximum
BU	-	Bargaining Unit Position, Not Applicable		
00	4.0	\$ 36,450	\$ 44,104	\$ 51,759
01	53.0	\$ 44,629	\$ 54,001	\$ 63,374
02	14.0	\$ 46,861	\$ 56,702	\$ 66,542
03	13.0	\$ 49,204	\$ 59,537	\$ 69,869
04	-	\$ 51,664	\$ 62,513	\$ 73,363
05	2.0	\$ 55,280	\$ 66,889	\$ 78,498
06	8.0	\$ 59,150	\$ 71,572	\$ 83,993
07	40.0	\$ 63,291	\$ 76,582	\$ 89,873
08	56.0	\$ 68,987	\$ 83,474	\$ 97,961
09	13.0	\$ 75,196	\$ 90,987	\$ 106,778
10	102.0	\$ 81,963	\$ 99,175	\$ 116,388
11	60.0	\$ 90,979	\$ 110,085	\$ 129,190
12	22.0	\$ 100,987	\$ 122,194	\$ 143,401
13	32.0	\$ 112,095	\$ 135,635	\$ 159,175
14	11.0	\$ 124,426	\$ 150,555	\$ 176,685
15	4.0	\$ 138,113	\$ 167,116	\$ 196,120
16	6.0	\$ 153,305	\$ 185,499	\$ 217,693
17	5.0	\$ 170,169	\$ 205,904	\$ 241,640
18	1.0	\$ 188,887	\$ 228,554	\$ 268,220
19	3.0	\$ 209,665	\$ 253,694	\$ 297,724
20	3.0	\$ 232,728	\$ 281,601	\$ 330,474

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
RESERVE BALANCES
AS OF JUNE 30, 2024
SECTION 10.06

Title	Amount	Explanation
Contingency	\$ 48,770,348	For ongoing operations, future matching of grants; target is 12.5% of operating budget per Policy 36
Operating Deficit	\$ 87,148,038	For balancing structural deficits in operating budget
FHV Administration	1,000,686	For ongoing operations and future capital improvement needs
SD&AE	1,229,609	Established from 1984 state payments for storm damage, restricted for repair/improvement of line
Insurance	7,500,000	Established for potential future liability claims, minimum \$2 million per Policy 46
Billboard San Diego	548,073	Per agreement with city, used for improvements to right of way
Billboard Chula Vista	2,825,634	Per agreement with city, used for improvements to right of way
Total	<u>\$ 149,022,388</u>	

This page intentionally left blank.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

Resolution No. 25-03

Resolution Approving the Fiscal Year 2026 Budget

WHEREAS, San Diego Metropolitan Transit System (MTS) staff has coordinated with the staff of San Diego Transit Corporation (SDTC), San Diego Trolley, Inc. (SDTI), MTS Contract Services and Coronado Ferry (hereafter collectively referred to as MTS Operators) throughout the budget preparation process to ensure consistent budget assumptions; and

WHEREAS, the budgets have been prepared using the budget assumptions approved by the MTS Board of Directors;

NOW THEREFORE, BE IT RESOLVED, by the MTS Board of Directors, hereinafter "Board," as follows:

1. That the Budget for fiscal year (FY) 2026, on file with the Clerk of the Board, is hereby adopted (including MTS, SDTC, SDTI, MTS Contract Services and Coronado Ferry); and
2. That the Chief Executive Officer (CEO) is authorized to transfer appropriate amounts up to \$500,000 between object accounts, so long as the total amount authorized to be spent for an object account by the FY 2026 Budget is not exceeded by more than \$500,000, the total amount authorized to be spent by the FY 2026 Budget is not exceeded, and all such transfers are reported to the Board in the monthly Budget Monitoring Report; and
3. That the CEO is authorized to approve expenditures up to a maximum of \$150,000; and
4. That the check-signing authority on behalf of the Board shall be governed by MTS Policy No. 41, Signature Authority; and
5. That the annual lease and debt service payments are included in the FY 2026 Budget as set forth in Section 7.02; and
6. That the MTS Budget establishes absolute spending limits, and that the budgeted expenditures cannot be exceeded without prior written approval of the Board; and
7. That any budget variances will be reported to the Board; and
8. That MTS is authorized to withhold monthly subsidy payments to those operators who do not provide the information according to an established schedule; and
9. That the salary grade ranges and position schedules of MTS, SDTC and SDTI as contained in the FY 2026 budget Section 10 are approved.

PASSED AND ADOPTED, by the Board of Directors this 15th day of May, 2025 by the following vote:

Chairperson
San Diego Metropolitan Transit System

Filed by:

Approved as to form:

Clerk of the Board
San Diego Metropolitan Transit System

General Counsel
San Diego Metropolitan Transit System

Resolution No. 25-03



Metropolitan
Transit
System

Item No. 20, 5/15/2025

FY 2026 Operating Budget Overview

Board of Directors

Fiscal Year 2026 Operating Budget

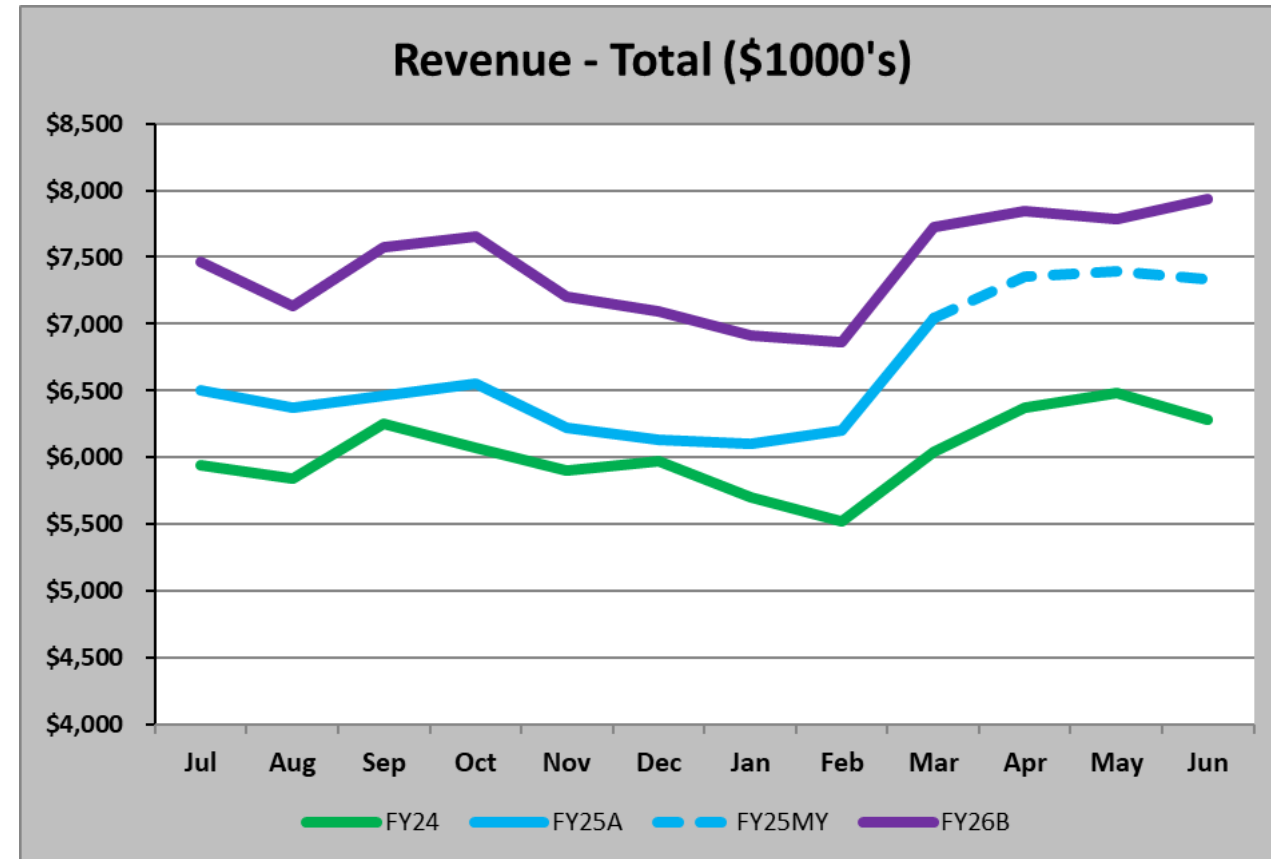
Budget Development Process

- MTS uses a zero-based budgeting process:
 - In traditional historic budgeting, managers only justify variances versus prior year
 - The assumption is that the baseline is automatically approved
 - By contrast, in zero-based budgeting, every line item must be approved each year
 - In Board presentations, typically talk about what is changing, but it is built from the ground up
- Operating Budget process begins in January
 - Budget Office meets with management from every discipline of the organization to:
 - Review current expense/revenue trends
 - Discuss and justify each line item in budget requests for current and upcoming fiscal year
 - Roll-up of current year (midyear) budget amendment (approved by Board in March)
 - Roll-up of the new fiscal year budgets (following year's budget)
 - Presented initial draft of operating budget to Executive Committee on April 10th
 - Final draft being presented today along with updated 5-year forecast

Fiscal Year 2026 Operating Budget

Revenue Assumptions - Passenger Fare Revenue

- Fare revenue forecast
 - Ridership
 - Assuming 6.0% growth over FY 2025 projected ridership
 - 8.0% YoY growth so far in FY 2025
 - 86.2M passengers projected
 - Average Fare
 - Assuming \$1.04 for FY 2026
 - \$0.05 (5.4%) higher than FY 2025
 - February fare enforcement changes
 - Passenger Revenue
 - \$89.2M projected
 - \$9.4M (11.7%) increase over FY 2025 amended budget
 - YOP funding not identified past FY 2026



Fiscal Year 2026 Operating Budget

Revenue Assumptions – Other Operating Revenue

- Variety of miscellaneous revenues:
 - Energy credit update
 - Higher LCFS credit generation for fixed guideway beginning January 2026 (pre-2011 infrastructure)
 - Net increase of \$585K (5.9%)
 - Advertising Revenue
 - Vehicle advertising decreasing \$264K (-11.2%)
 - Real Estate Related Revenues
 - Grantville vacancy remains high
 - Non-renewals of CTAC tenants
 - Interest
 - Decreasing \$3.1M (-32.1%) due to declining cash balances as reserves utilized

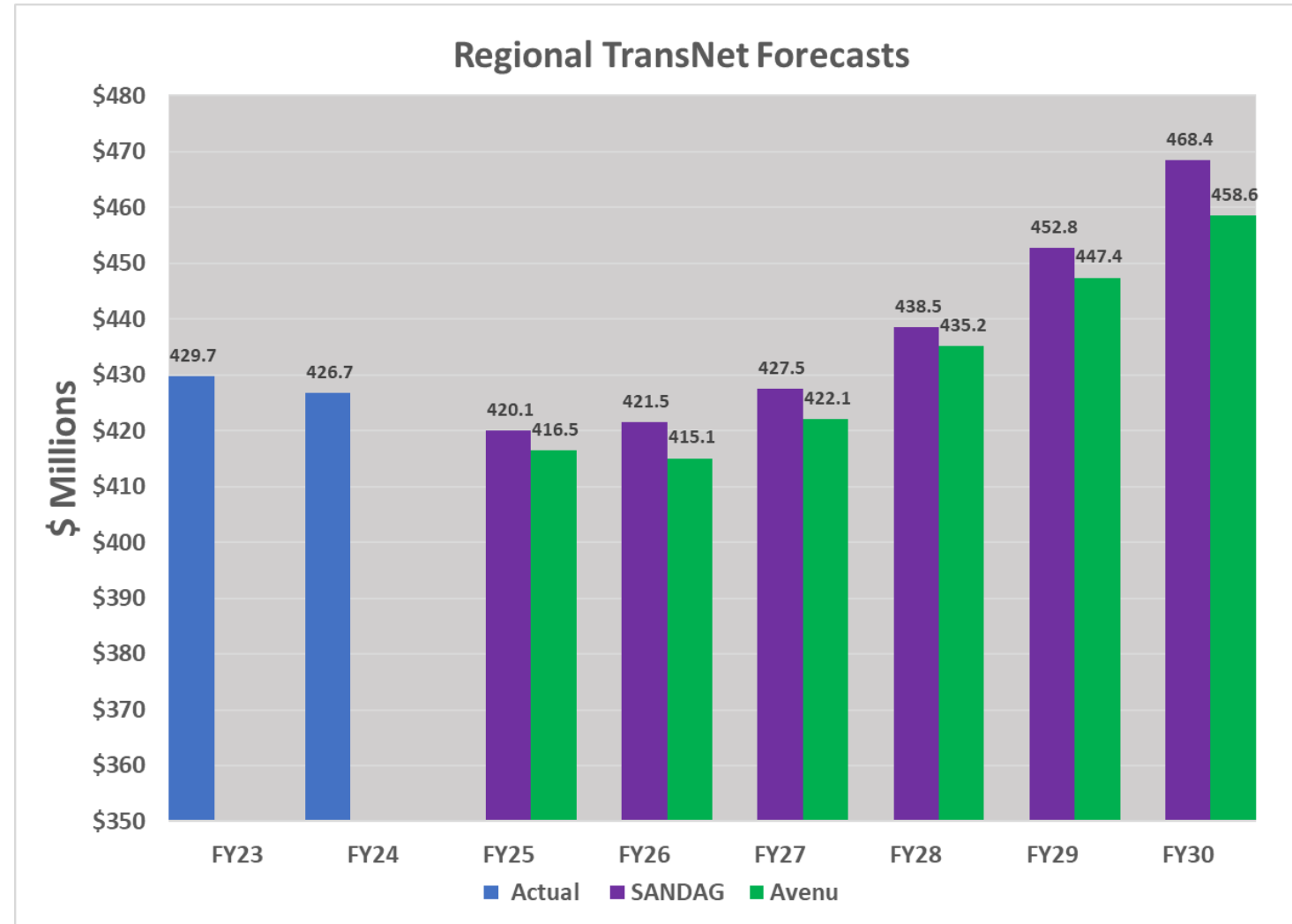
Other Revenue (\$000s)	FY 2025 Amended	FY 2026 Proposed	Var.	Var. %
Energy Credits	\$ 9,945	\$ 10,530	\$ 585	5.9%
Advertising	6,385	6,159	\$ (226)	-3.5%
Real Estate Related	3,835	3,378	\$ (457)	-11.9%
Interest	9,613	6,523	\$ (3,090)	-32.1%
Other	5,320	5,296	\$ (24)	-0.5%
Total	\$ 35,098	\$ 31,886	\$ (3,213)	-9.2%

Fiscal Year 2026 Operating Budget

Revenue Assumptions - Sales Tax Revenues

- TransNet

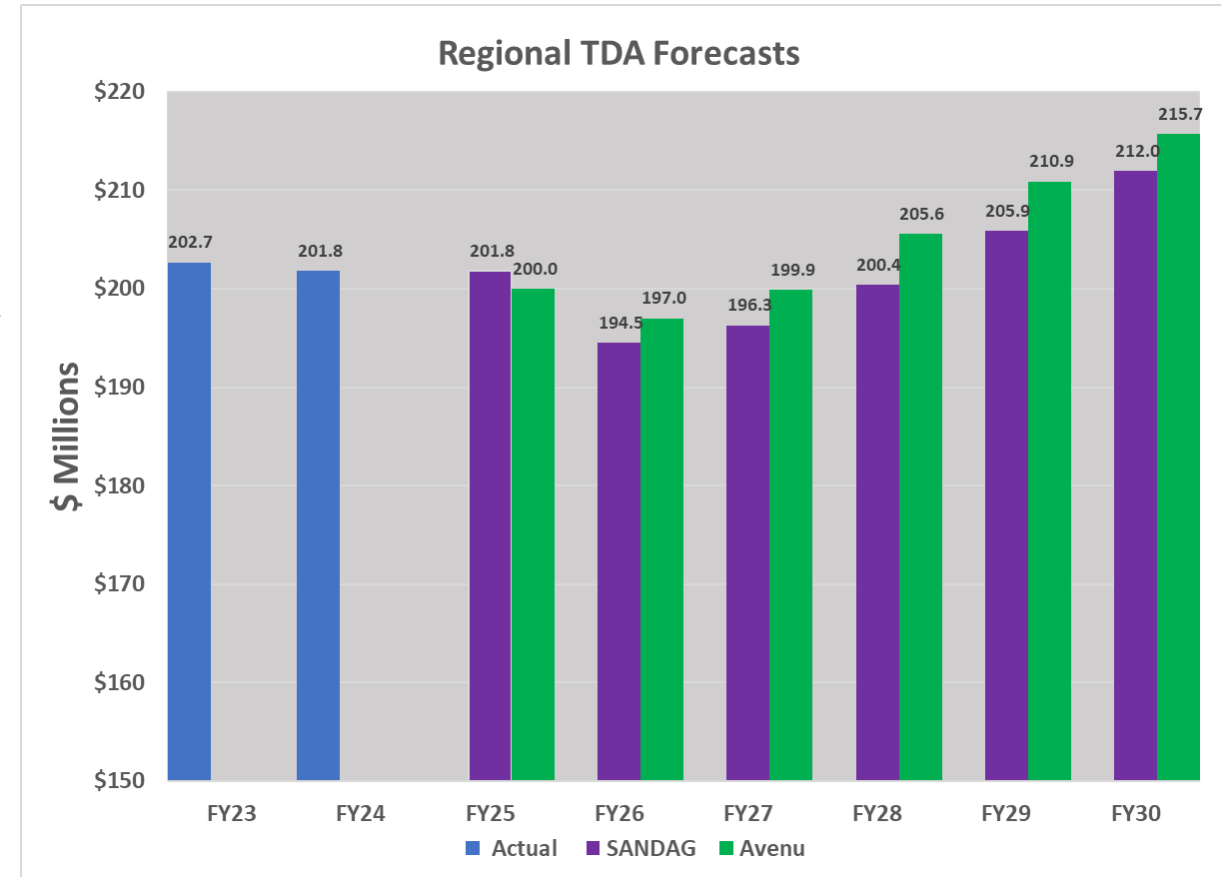
- ½ cent sales tax assessed in region
 - Administered by SANDAG
- \$421.5M projected for region in FY 2026 SANDAG budget
 - Growth assumption of 0.3%
- MTS receives formula share based on cash receipts and direct reimbursement from SANDAG for BRT/Midcoast:
 - Formula share: \$40.3M for FY 2026
 - \$153K (0.4%) increase
 - BRT/Midcoast: \$34.7M for FY 2026
 - \$1.6M (4.7%) increase



Fiscal Year 2026 Operating Budget

Revenue Assumptions - Sales Tax Revenues

- Transportation Development Act (TDA)
 - Statewide, ¼ cent sales tax
 - SANDAG forecasts and apportions each year
 - Claim process determines MTS revenue
 - MTS submits a claim based on the SANDAG budget
 - San Diego County receives the cash, holds a reserve that balances over/under amounts versus the budget
 - Provides funding for both Operating Budget and Capital Improvement Program (CIP)
 - Total region pool of \$194.5M in FY 2026
 - -3.6% regional growth assumption over FY 2025
 - -1.2% due to maintaining County reserve target
 - Total MTS apportionment: \$128.0M
 - \$100.5M in Operating Budget
 - \$27.4M in CIP (reflects shift of \$25M)
 - Decrease of \$7.7M (-5.7%) in overall TDA for MTS
 - Claimed \$3.0M from TDA reserve last year



Fiscal Year 2026 Operating Budget

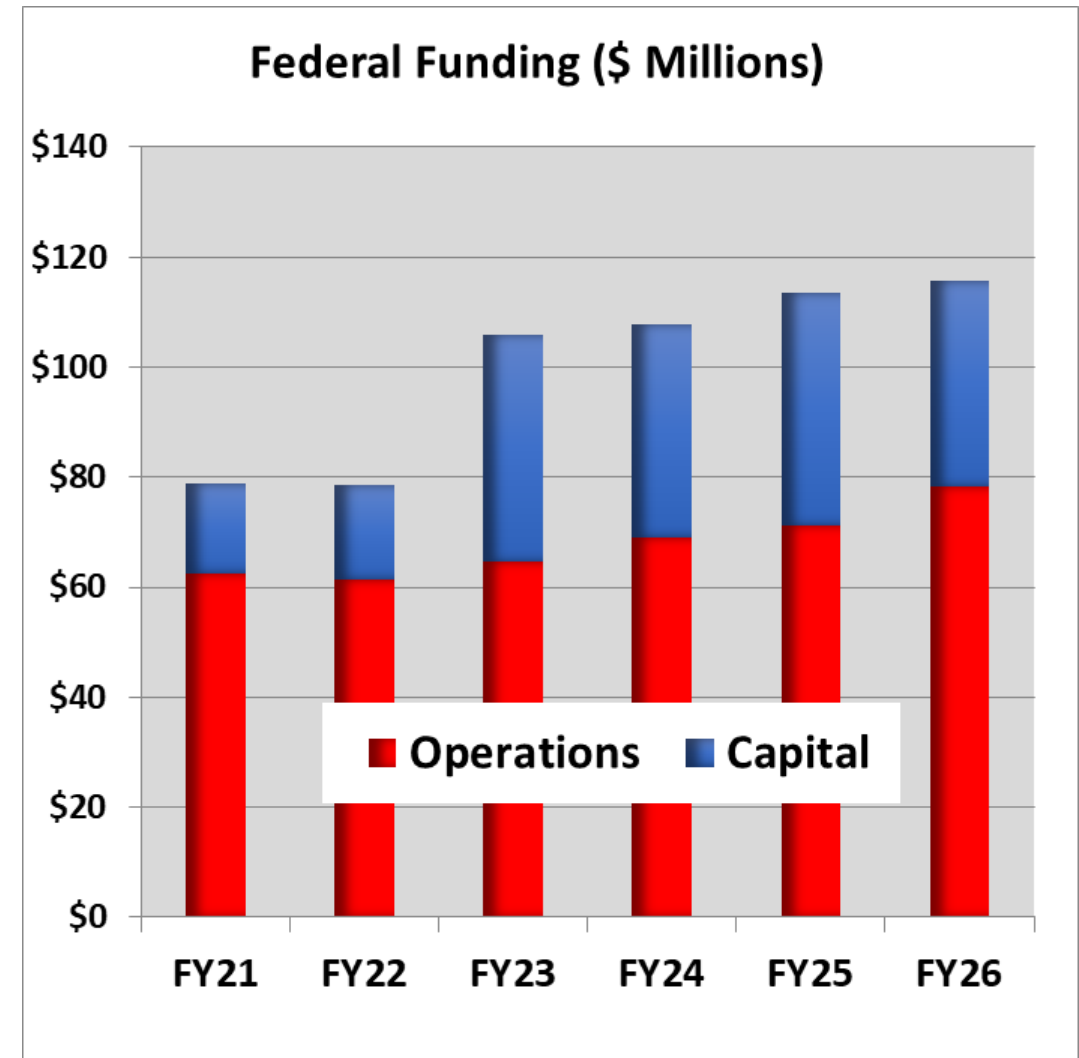
Revenue Assumptions - Sales Tax Revenues

- **State Transit Assistance (STA)**
 - Revenues derived from State sales tax on diesel fuel
 - Recurring formula funding administered by the State Controller's Office
 - Historically volatile funding source
 - State of CA diverting dollars for General Fund obligations
 - Tied to Diesel fuel sales, which has been a declining commodity
- **Funding can be used for Operations and Capital**
 - \$33.5M in total allocations for FY 2026
 - \$11.3M in operations
 - Remainder allocated to Capital

Fiscal Year 2026 Operating Budget

Revenue Assumptions - Federal Transit Administration (FTA)

- Surface Transportation Reauthorization
 - Bipartisan Infrastructure Law passed in December 2021
 - Legislation in place through 9/30/2026
 - 5307: Urban Area Formula funding
 - 5337: State of Good Repair funding
 - 5339: Bus and Bus Facilities funding
- Funding can be used for Capital or Operating Budgets for Preventive Maintenance (PM)
 - Funding received on a reimbursement basis, after costs are incurred
 - MTS seeks to maximize the amount for PM for cash flow purposes
 - Swap with TDA to preserve Capital share
- Increase in Operating Budget of \$1.3M



Fiscal Year 2026 Operating Budget

Revenue Assumptions – Senate Bill (SB) 125

- Senate Bill (SB) 125 Funding
 - \$4 billion in state funding distributed to transit agencies through TIRCP program
 - Distribution based on population
 - Funds operations or capital, but must meet criteria for increasing service, preventing service reductions, reducing GHGs, serving disadvantaged communities, etc.
 - \$237.3 million planned for MTS over multiple fiscal years
 - \$118.5M received to date (1st of 3 anticipated payments)
 - \$118.8M to be received in future payments (assuming we receive, but subject to state budgeting process)
 - Including \$20.9 million in FY 2026 budget:
 - \$3.5M for security enhancements
 - \$4.9M for Iris Rapid (Route 227) operations
 - \$826K for Overnight Express (Route 910) operations
 - \$1.5M for Trolley service enhancements (15-minute service across entire system)
 - \$10.2M for structural deficit balancing



Fiscal Year 2026 Operating Budget Revenue Summary (\$000s)

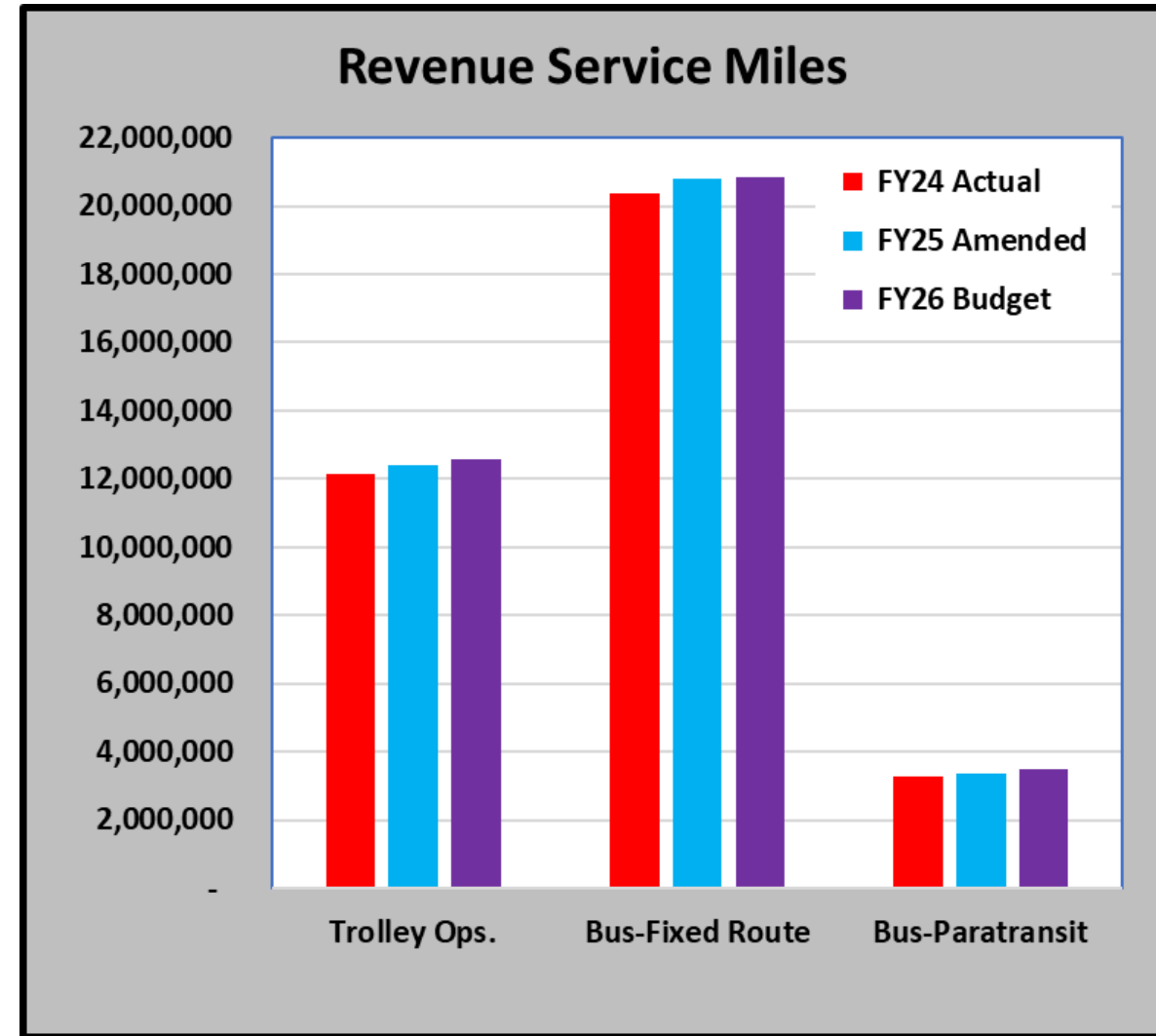
	FY 2025 Amended	FY 2026 Proposed	Var.	Var. %
Passenger Revenue	\$ 79,851	\$ 89,205	\$ 9,354	11.7%
Other Operating Revenue	35,098	31,886	(3,213)	-9.2%
Total Operating Revenue	\$ 114,949	\$ 121,090	\$ 6,141	5.3%
Federal	\$ 77,720	\$ 79,067	\$ 1,348	1.7%
Federal Stimulus Funds	47,394	-	(47,394)	-100.0%
TDA	90,194	100,538	10,344	11.5%
TransNet Formula	40,129	40,282	153	0.4%
TransNet Operating	33,122	34,676	1,554	4.7%
STA	6,247	11,300	5,053	80.9%
SB 125 TIRCP	9,000	20,919	11,919	132.4%
Other	4,310	3,120	(1,190)	-27.6%
Total Subsidy	\$ 308,116	\$ 289,902	\$ (18,213)	-5.9%
Reserves	\$ 25,126	\$ 62,086	\$ 36,960	-
Total Revenue	\$ 448,190	\$ 473,079	\$ 24,888	5.6%

- Reserves include Operating Deficit Reserve as well as reserves for SD&AE and FHV Administration

Fiscal Year 2026 Operating Budget

Service Levels

- Service Level Assumptions:
 - Rail:
 - Full year of increased frequency to 15-minute service on all lines
 - 1.3% increase over FY 2025 budget
 - Bus-Fixed Route:
 - Full year of Route 910 “Overnight Express”
 - 0.3% increase over FY 2025 budget
 - Bus-Paratransit:
 - Planning for increases in demand
 - 8.4% higher than FY 2025 budget

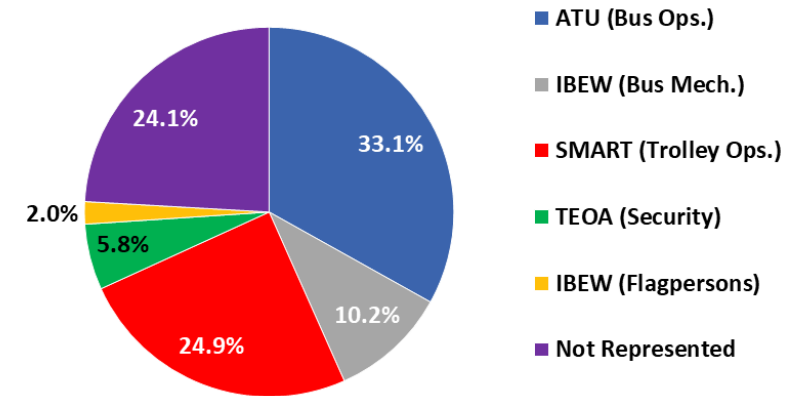


Fiscal Year 2026 Operating Budget Expense Assumptions - Personnel

• Wages

- 1,746.2 total MTS Full Time Equivalents (FTEs)
 - Reducing bus operator target from 537 to 520
 - Adding 0.5 FTE for Info Security and Intel. Intern
- Wage increases
 - CBAs in place for ATU, IBEW, and SMART
 - IBEW/ATU had 7% to 12% increases in January 2025, with next increase at start of FY 2027
 - SMART wages increased 7% April 2025 with 4% increases in April 2026
 - Negotiations starting with TEOA (Code Compliance Inspectors) and IBEW for Flagpersons
 - Budget reflects preliminary negotiations
 - Assuming 4.0% merit increase for non-union
 - No Performance Improvement Program (PIP) Bonuses in FY 2026

% of FTEs - Representation



Wages (\$000s)	FY 2025 Amended	FY 2026 Proposed	Var.	Var. %
Administration	\$ 24,107	\$ 25,205	\$ 1,098	4.6%
Trolley Operations	39,612	42,717	\$ 3,105	7.8%
Bus Operations	52,381	54,793	\$ 2,412	4.6%
Contracted Services	587	597	\$ 10	1.7%
Other Activities	417	472	\$ 55	13.1%
Total	\$ 117,105	\$ 123,784	\$ 6,680	5.7%

Fiscal Year 2026 Operating Budget Expense Assumptions - Personnel

- Fringe Benefits

- Pension

- Pension plan costs increasing by \$1.8M (5.6%)
 - CalPERS costs increasing \$626K (5.6%)
 - SDTC defined benefit costs increasing \$1.1M (5.7%)
 - SDTC defined contribution costs increasing \$108K (5.0%)

- Healthcare

- CY 2025 insurance premium rates known, assuming 10% increase for CY 2026
 - Reflects new CBAs for ATU/IBEW/SMART
 - Increasing \$1.9M (9.1%)

- Total fringe costs of \$83.1M, increasing \$4.3M (5.5%)

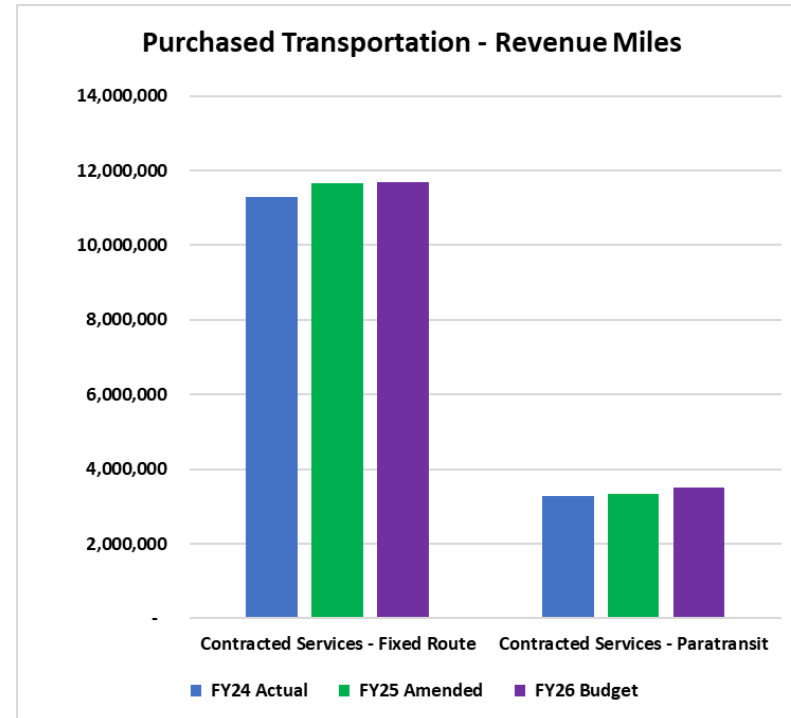
Category (\$000s)	FY 2025 Amended	FY 2026 Proposed	Var.	Var. %
Pension	\$ 32,362	\$ 34,179	\$ 1,817	5.6%
Healthcare	20,423	22,285	\$ 1,862	9.1%
Paid Absences	14,774	15,400	\$ 626	4.2%
Worker's Compensation	5,254	5,309	\$ 55	1.0%
Other	5,963	5,934	\$ (28)	-0.5%
Total	\$ 78,776	\$ 83,106	\$ 4,331	5.5%

Fiscal Year 2026 Operating Budget

Expense Assumptions - Purchased Transportation

- Purchased Transportation Budget
 - Transdev - Fixed Route Contract
 - Revenue miles increasing 0.3%
 - Fixed costs increasing 4.2%
 - Variable rate increasing by 4.0%
 - Transdev - Paratransit/Minibus Contract
 - Fixed costs increasing by 2.1%
 - ADA Paratransit service per hour rate increases by 2.8%
 - Projected demand increasing 8.4%
 - Minibus fixed route service per mile rate staying flat for FY 2026
 - Revenue miles staying flat

Category (\$000s)	FY 2025 Amended	FY 2026 Proposed	Var.	Var. %
Transdev - Fixed Route	\$ 83,794	\$ 87,490	\$ 3,697	4.4%
Transdev - Minibus	6,289	6,199	\$ (90)	-1.4%
Transdev - Paratransit	18,313	19,988	\$ 1,675	9.1%
Total	\$ 108,395	\$ 113,677	\$ 5,282	4.9%



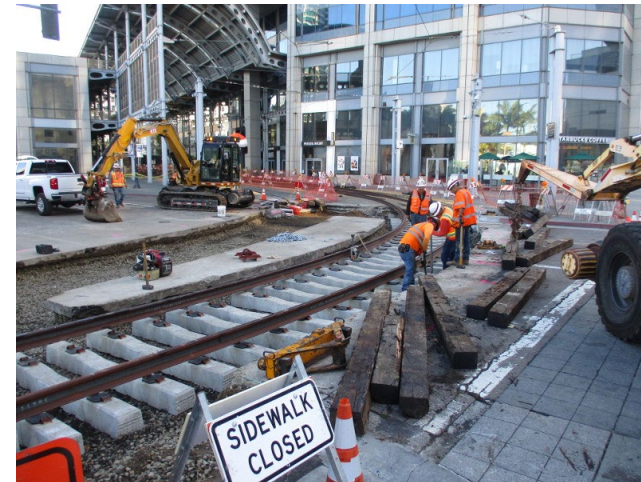
Fiscal Year 2026 Operating Budget

Expense Assumptions - Outside Services

• Outside Services Budget

- Security
 - Contract rate increasing 4.0%
 - Increase in special events
- Repair & Maintenance
 - New contract for LRV body repairs
 - \$1.0M for tie replacement
 - \$1.3M for bridge repairs
- Other Outside Services
 - Track emergency repairs (-\$462K)
 - SDTI planning studies (-\$750K)
 - Bus facility maintenance projects (-\$1.0M)
 - Security equipment purchases (-\$298K)
 - Marketing services (-\$364K)
 - Planning COA (+\$446K)
 - Fare System (+\$526K)
 - Information Technology (+\$765K)

Category (\$000s)	FY 2025 Amended	FY 2026 Proposed	Var.	Var. %
Security	\$ 14,668	\$ 15,268	\$ 600	4.1%
Repair & Maint.	11,511	13,580	\$ 2,069	18.0%
Engines/Trans.	1,183	1,080	\$ (103)	-8.7%
Other Services	27,703	27,064	\$ (639)	-2.3%
Total	\$ 55,065	\$ 56,991	\$ 1,927	3.5%



Plan trips, find nearby transit, view real-time arrivals and save your favorites.



Fiscal Year 2026 Operating Budget

Expense Assumptions - Energy

- Energy Budget
 - Electricity Costs
 - Electricity commodity - market index rates through Direct Access, 0.8% increase projected
 - Transmission/demand - SDG&E rates, 10.0% increase assumed
 - \$0.390 per kWh for FY 2026 (3.5% increase)
 - Consumption increasing 2.9% due to full year of added Trolley service
 - Compressed Natural Gas
 - Natural gas commodity - Market index rates through third party provider, 30.0% increase projected
 - Increased demand (primarily exports), extreme weather events, and storage/pipeline issues
 - Transportation - SDG&E rates, -7.5% decrease
 - \$1.39 per therm for FY 2026 (6.6% increase)
 - Consumption flat

Category (\$000s)	FY 2025 Amended	FY 2026 Proposed	Var.	Var. %
Electricity	\$ 30,338	\$ 32,403	\$ 2,065	6.8%
CNG	13,482	14,369	\$ 887	6.6%
Gas/Propane	2,780	2,825	\$ 46	1.6%
Other	1,794	1,851	\$ 57	3.2%
Total	\$ 48,394	\$ 51,449	\$ 3,055	6.3%



Fiscal Year 2026 Operating Budget

Expense Assumptions - Other

- **Materials & Supplies**
 - \$1.3M increase for LRV drive unit overhauls
 - \$1.2M for TVM credit card module upgrades
- **Risk Management**
 - Insurance premiums continue to increase
 - Excess Liability premiums increasing 12.5%
 - Property insurance premiums increasing 22%
 - Projected claims increasing \$555K
- **General & Administrative**
 - One-time equipment purchases in FY 2025 for bus RTMS system and security handheld units
 - Decreasing \$409K

Category (\$000s)	FY 2025	FY 2026	Var.	Var. %
	Amended	Proposed		
Materials & Supplies	\$ 19,854	\$ 21,952	\$2,098	10.6%
Risk Management	10,638	12,617	\$1,979	18.6%
General & Administration	7,457	7,047	\$ (409)	-5.5%
Other	2,194	2,158	\$ (35)	-1.6%
Total	\$ 40,142	\$ 43,775	\$3,632	9.0%

Fiscal Year 2026 Operating Budget Expenses Summary (\$000s)

	FY 2025 Amended	FY 2026 Proposed	Var.	Var. %
Personnel Expenses	\$ 195,880	\$ 206,891	\$ 11,011	5.6%
Purchased Transportation	108,709	113,974	5,264	4.8%
Outside Services	55,065	56,991	1,927	3.5%
Materials and Supplies	19,854	21,952	2,098	10.6%
Energy	48,394	51,449	3,055	6.3%
Risk Management	10,638	12,617	1,979	18.6%
Other	9,650	9,206	(445)	-4.6%
Total Expenses	\$ 448,190	\$ 473,079	\$ 24,888	5.6%

Fiscal Year 2026 Operating Budget

Consolidated Revenues less Expenses (\$000s)

	FY 2025 Amended	FY 2026 Proposed	Var.	Var. %
Operating Revenues	\$ 114,949	\$ 121,090	\$ 6,141	5.3%
Recurring Subsidy	251,722	243,984	(7,738)	-3.1%
Total Recurring Revenues	\$ 366,670	\$ 365,074	\$ (1,596)	-0.4%
Total Expenses	448,190	473,079	\$ 24,888	5.6%
Structural Deficit	\$ (81,520)	\$ (108,005)	\$ (26,485)	-32.5%
Reserves	25,126	62,086	36,960	-147.1%
Shift TDA from Capital		25,000	25,000	
Federal Stimulus	47,394	-	(47,394)	-100.0%
SB-125 Funding	9,000	20,919	11,919	132.4%
Revenues Less Expenses	\$ -	\$ -	\$ -	

- Depleting operating deficit reserve in FY 2026, then SB-125 funds used to balance

Fiscal Year 2026 Operating Budget

5-Year Projection (\$000s)

- Major Themes

- Revenue Assumptions

- Passenger revenue growth averages 5% from FY 2027 through FY 2030
 - Other operating revenue declines on average due to interest revenue
 - Federal revenue remains flat
 - Sales tax revenue projections from SANDAG for TDA/TransNet, ranges from 1.0% to 3.7%
 - Reflects non-recurring shifts from capital (\$25M in FY 2026, \$35M in FY 2027, and \$50M in FY 2028) but no further shifts after FY 2028
 - SB 125 TIRCP funding used to balance until funds are exhausted
 - Overall average growth ranges from 2.4% to 3.0%

- Expense Assumptions

- Service levels remain at current levels
 - Continued recovery of ADA paratransit volumes
 - Beginning in FY27, inflation returns to more historical norms
 - Wage and benefit growth assumed to be 4.0% per year
 - Overall average growth ranges from 3.8% to 4.1%

Fiscal Year 2026 Operating Budget 5-Year Projection (\$000s)

	FY 2026 Budget	FY 2027 Projected	FY 2028 Projected	FY 2029 Projected	FY 2030 Projected
Operating Revenues	\$ 121,090	\$ 126,790	\$ 130,718	\$ 135,812	\$ 139,992
Recurring Subsidy	243,984	247,282	252,369	258,766	265,676
Total Recurring Revenues	\$ 365,074	\$ 374,071	\$ 383,087	\$ 394,578	\$ 405,667
Total Expenses	473,079	492,440	511,033	530,844	551,535
Structural Deficit	\$ (108,005)	\$ (118,369)	\$ (127,946)	\$ (136,266)	\$ (145,868)
Reserves	62,086	124	201	246	297
Federal Stimulus	-	-	-	-	-
Shift from Capital to Ops	25,000	35,000	50,000	-	-
SB-125 Funding	20,919	83,245	77,745	15,900	-
Revenues Less Expenses	\$ -	\$ -	\$ -	\$ (120,120)	\$ (145,571)

- Balanced through FY 2028, hit fiscal cliff in early FY 2029

Fiscal Year 2026 Operating Budget

Ongoing Concerns

- Ongoing Concerns
 - Operational structural deficit / upcoming fiscal cliff
 - Board approved short-term recommendation in February 2025 to extend timing of fiscal cliff:
 - Exercise Innovative Clean Transit (ICT) off-ramp provisions to delay implementation of ZEBs
 - Shift funding from capital to operations: \$25M in FY 2026, \$35M in FY2027, \$50M in FY 2028
 - Maintain service at January 2025 levels (delay future Bus and Trolley enhancements in SB125 plan)
 - Forecasted sales tax revenues to remain below historical averages
 - Federal discretionary revenue opportunities under new administration
 - FTA reauthorization on horizon
 - Significant capital needs over the next 5 years
 - Accumulated 5-year deficit reaching \$749M (45.5% funded) includes SGR and ICT mandates
 - ICT mandates: Includes cost of ZEB implementation and compliance with the ICT regulation
 - ZEB purchase requirement increases to 50% in 2026 and 100% in 2029
 - Electric charging infrastructure at five existing divisions and new CTAC facility

Fiscal Year 2026 Operating Budget

Ongoing Concerns

- MTS's continued short-term focus:
 - Ridership increases
 - Fare enforcement – higher average fare (\$1.04 forecasted), although still below historic rates
 - Non-fare revenue opportunities (advertising, naming rights, etc.)
 - Fare Study
 - Ballot measure (polling and outreach), TDA reform, and other revenue increases
 - COA study: Service reductions and/or increases pending revenue outcomes
 - Orange Line Improvement Project
 - ZEB charging infrastructure construction at Imperial Ave and Kearny Mesa divisions

Staff Recommendation

That the MTS Board of Directors:

- 1) Receive testimony, review, and comment on the FY 2026 MTS Operating Budget at a public hearing
- 2) Enact Resolution 25-03 (in substantially the same format as Attachment B) adopting the FY 2026 operating budget for the MTS, San Diego Transit Corporation (SDTC), San Diego Trolley (SDTI), MTS Contract Services, and the Coronado Ferry



**Metropolitan
Transit
System**

Agenda Item No. 21

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Fiscal Year (FY) 2025 Q3 Monitoring Report (Brent Boyd and Matthew Grace)

INFORMATIONAL ONLY

Budget Impact

None.

DISCUSSION:

MTS Board Policy No. 42, "Transit Service Evaluation and Adjustment," establishes a process for evaluating existing transit services to achieve the objective of developing a customer-focused, competitive, integrated, and sustainable system. Additionally, federal Title VI guidance requires that certain performance measures be evaluated and reported to the Board periodically.

Staff from the Planning and Scheduling Department will provide a summary of service performance for Q3 (January through March) of FY 2025, including the status of ridership recovery from the COVID-19 pandemic.

/S/ Sharon Cooney

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, mark.olson@sdmts.com

Attachment: A. FY 2025 Q3 Performance Monitoring Report



OBJECTIVE | Develop a Customer-Focused and Competitive System

The following measures of productivity and service quality are used to ensure that services are focused on providing competitive and attractive transportation that meets our customers' needs.

Total Passengers

Route Categories	FY 2024 Q3	FY 2025 Q3	% Change FY24 - FY25
Urban Frequent	5,527,955	5,800,749	4.7%
Urban Standard	1,370,922	1,453,477	5.7%
Rapid	1,732,047	1,794,827	3.5%
Express	107,707	122,973	12.4%
Circulator	134,355	137,587	2.3%
Premium/Rapid Express	27,893	28,714	2.9%
Rural	9,336	14,786	36.9%
Fixed-Bus Subtotal	8,910,215	9,353,113	4.7%
Light Rail (Blue, Orange, Green, Copper)	9,433,064	9,941,143	5.1%
Light Rail (Silver)	404	273	-48.0%
Light Rail Subtotal	9,433,468	9,941,416	5.1%
ALL Fixed Route	18,343,683	19,294,529	4.9%
Demand-Resp. (MTS Access)	51,872	71,079	27.0%
Demand-Resp. (Access Taxi)	24,996	14,063	-77.7%
Demand-Resp. Subtotal	76,868	85,142	9.7%
System	18,420,551	19,379,671	4.9%

NOTES: Sub-Contractors for Taxi (Care7, UZURV) ended in Q4 FY2024, reducing "Access Taxi" trips in FY2025. Access trips increased to offset the difference in service.
Rural route increased with Rte 894 (Steele Canyon HS students).

Average Weekday Passengers

Route Categories	FY 2024 Q3	FY 2025 Q3	% Change FY24 - FY25
Urban Frequent	72,109	75,260	4.2%
Urban Standard	18,805	19,904	5.5%
Rapid	23,478	23,971	2.1%
Express	1,483	1,651	10.2%
Circulator	2,051	2,101	2.4%
Premium/Rapid Express	443	462	4.1%
Rural	148	236	37.3%
Fixed-Bus Subtotal	118,517	123,585	4.1%
Light Rail (Blue, Orange, Green, Copper)	116,405	121,858	4.5%
Light Rail (Silver)	N/A	N/A	N/A
Light Rail Subtotal	116,405	121,858	4.5%
ALL Fixed Route	234,922	245,443	4.3%
Demand-Resp. (MTS Access)	745	1,018	26.8%
Demand-Resp. (Access Taxi)	359	199	-80.8%
Demand-Resp. Subtotal	1,104	1,216	9.3%
System	236,026	246,659	4.3%

Passengers Per Revenue Hour

The 'passengers per revenue hour' metric shows how any added or removed **revenue hours** (in-service hours plus layover hours) relate to ridership increases or decreases. Increasing riders per revenue hour would indicate that the system is more efficient, for example, carrying more passengers with the same number of buses.

Route Categories	FY 2024 Q3	FY 2025 Q3	% Change FY24 - FY25
Urban Frequent	20.2	21.0	3.4%
Urban Standard	13.7	14.6	6.2%
Rapid	26.3	27.9	5.5%
Express	10.9	11.5	5.2%
Circulator	8.5	9.7	12.5%
Premium/Rapid Express	15.2	15.7	3.0%
Rural	7.1	11.9	40.3%
Fixed-Bus Subtotal	19.0	20.0	4.6%
Light Rail (Blue, Orange, Green, Copper)	163.9	164.0	0.1%
Light Rail (Silver)	16.8	18.2	7.5%
Light Rail Subtotal	163.8	163.9	0.1%
ALL Fixed Route	34.9	36.5	4.2%
Demand-Resp. (MTS Access)	1.5	1.4	-6.4%
Demand-Resp. (Access Taxi)	2.8	2.6	-6.0%
Demand-Resp. Subtotal	1.8	1.5	-15.7%
System	32.4	33.1	2.3%

NOTES: Circulator showed decrease in revenue hours (SVCC ended in June 2024), but increase in ridership. Rural route ridership increased with Route 894 (Steele Canyon HS students).

Weekday Passengers per In-Service Hour

The 'passengers per in-service hour' measure is related to the above 'passengers per revenue hour,' but shows how many passengers are carried while the vehicle is in-service picking up passengers, excluding layover time. Analyzing this figure helps MTS to understand how effective it is at providing the right level of service (instead of how efficiently MTS is grouping trips and breaks together for a vehicle to operate [revenue hours]).

Route Categories	FY 2024 Q3	FY 2025 Q3	% Change FY24 - FY25
Urban Frequent	39.8	41.2	3.3%
Urban Standard	29.0	31.2	7.0%
Rapid	54.6	58.5	6.7%
Express	20.6	21.2	2.7%
Circulator	20.4	21.4	4.5%
Premium/Rapid Express	27.2	28.8	5.9%
Rural	15.4	22.3	30.8%
Fixed-Bus Subtotal	38.4	40.1	4.4%
Light Rail (Blue, Orange, Green, Copper)	303.4	316.5	4.2%
Light Rail (Silver)	-	-	N/A
Light Rail Subtotal	303.4	316.5	4.1%
ALL Fixed Route	67.7	70.9	4.5%
Demand-Resp. (MTS Access)	1.5	1.4	-7.7%
Demand-Resp. (Access Taxi)	5.2	2.6	-100.9%
Demand-Resp. Subtotal	2.0	1.5	-29.5%
System	58.6	58.0	-1.1%

NOTES: The Weekday Passengers per In-Service Hour metric generally followed the same trends as Passengers per Revenue Hour.

On-Time Performance

On-time performance (OTP) is measured at each bus & Trolley timepoint for every trip; departing timepoints within 0-5 minutes of the scheduled time are considered to be "on-time." OTP is measured by service change period in order to show the results of scheduling changes. MTS's goal for on-time performance is 85% for Urban Frequent and Rapid bus routes, and 90% for Trolley and all other bus route categories. Each route is continually evaluated to determine if performance below the target is a result of issues that MTS controls, such as driver performance or scheduling, or situations outside MTS' direct control, such as construction, traffic congestion, and passenger issues. **Performance of fixed bus routes is heavily impacted by construction, stop signs and stop lights, and traffic when they travel through high density corridors.**

Route Categories	Service Change Period				GOAL
	Jan. 2024	June 2024	Sept. 2024	Jan. 2025	
Urban Frequent	82.1%	82.8%	82.1%	84.9%	85.0%
Urban Standard	84.5%	84.9%	83.8%	86.6%	90.0%
Rapid	87.4%	86.8%	86.8%	89.5%	85.0%
Express	90.2%	90.6%	84.0%	83.7%	90.0%
Circulator	85.2%	84.9%	84.4%	85.3%	90.0%
Premium/Rapid Express	88.5%	90.0%	86.7%	94.4%	90.0%
Rural	N/A	N/A	N/A	N/A	
Demand-Resp. (Access & Taxi)	N/A	N/A	N/A	N/A	
Light Rail (Blue, Orange, Green, Copper)	92.8%	92.3%	93.0%	96.3%	90.0%
Light Rail (Silver)	N/A	N/A	N/A	N/A	90.0%
System	84.3%	84.8%	83.4%	83.9%	

NOTES:

OBJECTIVE | Develop a Sustainable System

The following measures are used to ensure that transit resources are deployed efficiently and do not exceed budgetary constraints. These resources may be increased over the budgeted amounts in order to respond to heavy passenger loads, special events, or unplanned detours due to construction or route changes. They may be lower than budgeted if underperforming services are reduced, or if not all of the planned capacity is required to meet the ridership demand.

Scheduled In-Service Hours (Weekly Total)

Operator	Jan. 2024	Jan. 2025	# Diff	% Diff
MTS Directly-Operated Bus	12,267	12,255	(12)	-0.1%
MTS Contracted Fixed-Route Bus	16,355	16,631	276	1.7%
MTS Rail	3,827	3,985	157	4.1%
System	32,449	32,871	421	1.3%

Scheduled In-Service Miles (Weekly Total)

Operator	Jan. 2024	Jan. 2025	# Diff	% Diff
MTS Directly-Operated Bus	178,154	178,188	34	0.0%
MTS Contracted Fixed-Route Bus	227,590	229,598	2,008	0.9%
MTS Rail	82,029	85,311	3,282	4.0%
System	487,773	493,097	5,324	1.1%

Scheduled Weekday Peak-Vehicle Requirement

This measure shows the maximum number of buses and railcars that are scheduled in service at any one time (a weekday peak period) in order to demonstrate the levels of service that are planned.

Operator	Jan. 2024	Jan. 2025	# Change FY24 - FY25
MTS Directly-Operated Bus	205	205	0
MTS Contracted Fixed-Route Bus	283	286	3
MTS Rail	114	113	(1)

Scheduled In-Service Speed (MPH) (Weekday)

Operator	Jan. 2024	Jan. 2025	% Change FY24 - FY25
MTS Directly-Operated Bus	14.5	14.5	0.1%
MTS Contracted Fixed-Route Bus	13.9	13.8	-0.8%
MTS Rail	21.5	21.4	-0.2%

Scheduled In-Service Miles/Total Miles (Weekday)

The 'in-service miles per total miles' ratio is only calculated for MTS in-house operations, as contractors are responsible for bus and driver assignments (runcutting) for MTS Contract Services.

Operator	Jan. 2024	Jan. 2025	% Change FY24 - FY25
MTS Directly-Operated Bus	87.0%	87.0%	0.0%
MTS Contracted Fixed-Route Bus	N/A	N/A	N/A
MTS Rail	98.2%	96.7%	-1.5%

Scheduled In-Service Hours/Total Hours (Weekday)

As with the mileage statistic, 'in-service hours' per total hours are only calculated for MTS in-house operations.

Operator	Jan. 2024	Jan. 2025	% Change FY24 - FY25
MTS Directly-Operated Bus	74.9%	74.8%	-0.1%
MTS Contracted Fixed-Route Bus	N/A	N/A	N/A
MTS Rail	83.7%	80.3%	-4.1%

FY 2025 ROUTE STATISTICS (Q3)																						
BASE STATISTICS													TITLE VI MONITORING (FY 2025 Annual Statistics) ~									
Route	Cat	Jurisdiction (#SD Dist.)	Q3 Passengers	FY24-25 % Change	Avg. Wkdy. Psgs.	Psgrs./ Rev. Hr.	Cost/ Psgr.	Average Fare	Subsidy/ Psgr.	Farebox Recovery	Budgeted Rev.Svc.		Route	Minority Route	On-Time Perf.		Weekday Headway			Vehicle Load Factor ~		
											Hours	Miles			Goal	Actual	Goal	Peak	Base	Goal	% trips over VLF	> 20%?
Blue	LRT	3,8,NC,CV	6,101,864	5.3%	76,042	68.5	\$ 3.73	\$ 0.75	\$ 2.99	20.0%	60,361	1,104,146	Blue	✓	90%	91%	15 min.	7.5	15	3.00	0%	No
Orange	LRT	3,4,8,9,LG,LM,EC	1,635,818	4.1%	20,410	131.5	\$ 1.94	\$ 0.75	\$ 1.20	38.4%	25,096	456,579	Orange	✓	90%	84%	15 min.	15	15	3.00	0%	No
Green	LRT	2,3,7,9,LM,EC	2,036,732	(1.5%)	23,393	62.9	\$ 4.07	\$ 0.75	\$ 3.32	18.3%	30,820	567,190	Green		90%	93%	15 min.	15	15	3.00	0%	No
Copper	LRT	EC,ST	166,729		2,014	49.8	\$ 5.13	\$ 0.75	\$ 4.39	14.5%	11,108	47,326	Copper		90%	100%	15 min.	15	15	3.00	0%	No
Silver	LRT	3	273	(32.4%)	-	18.2	\$ 13.87	\$ 0.75	\$ 13.12	5.4%	21	86	Silver		90%	100%	15 min.	30	30	3.00	0%	No
1	Frq	3,7,9,LM	237,803	21.8%	3,154	30.0	\$ 4.22	\$ 1.22	\$ 3.00	29.0%	20,674	185,237	1	✓	85%	81%	15 min.	15	15	1.50	0%	No
2	Frq	3	136,924	(3.1%)	1,765	27.5	\$ 9.17	\$ 1.25	\$ 7.92	13.7%	13,008	102,261	2		85%	92%	15 min.	12	15	1.50	0%	No
3	Frq	3,4,8,9	268,139	7.7%	3,586	31.0	\$ 3.60	\$ 1.43	\$ 2.17	39.7%	22,389	178,003	3	✓	85%	77%	15 min.	12	12	1.50	0%	No
4	Std	3,4,8,9	115,515	(16.6%)	1,535	28.9	\$ 8.70	\$ 1.05	\$ 7.65	12.0%	10,379	109,460	4	✓	85%	77%	30 min.	30	30	1.50	0%	No
5	Frq	3,4,8,9	113,885	1.4%	1,556	31.5	\$ 3.44	\$ 1.28	\$ 2.15	37.3%	9,459	72,470	5	✓	85%	85%	15 min.	12	12	1.50	0%	No
6	Frq	3,7	52,627	0.5%	640	21.4	\$ 11.73	\$ 1.38	\$ 10.36	11.7%	6,368	54,403	6		85%	88%	15 min.	15	15	1.50	0%	No
7	Frq	3,4,9	450,015	(5.1%)	5,409	42.9	\$ 5.85	\$ 1.17	\$ 4.68	20.0%	27,190	211,474	7	✓	85%	83%	15 min.	10	10	1.50	0%	No
8	Frq	2,3	130,974	2.2%	1,422	24.4	\$ 10.29	\$ 1.35	\$ 8.94	13.1%	14,210	146,939	8		85%	86%	15 min.	20	20	1.50	0%	No
9	Frq	2,3	54,235	2.8%	582	19.2	\$ 13.06	\$ 1.25	\$ 11.81	9.6%	7,318	65,688	9		85%	93%	15 min.	20	20	1.50	0%	No
10	Frq	2,3,4,9	248,108	7.3%	3,305	38.4	\$ 6.56	\$ 1.31	\$ 5.25	20.0%	16,830	145,910	10	✓	85%	81%	15 min.	12	15	1.50	0%	No
11	Frq	3,9	121,845	4.2%	1,566	24.2	\$ 10.41	\$ 1.35	\$ 9.06	13.0%	13,121	128,741	11		85%	84%	15 min.	15	15	1.50	0%	No
12	Frq	3,4,8,9	220,655	(6.7%)	2,917	31.4	\$ 8.02	\$ 0.95	\$ 7.07	11.9%	18,289	175,496	12	✓	85%	85%	15 min.	7.5/15	15	1.50	0%	No
13	Frq	4,7,9,NC	460,178	4.3%	6,129	48.2	\$ 5.22	\$ 1.13	\$ 4.09	21.7%	24,873	247,838	13	✓	85%	84%	15 min.	12	12	1.50	0%	No
14	Circ	7,9,LM	12,877	12.1%	204	12.6	\$ 10.64	\$ 1.09	\$ 9.55	10.2%	2,698	27,211	14		90%	85%	60 min.	60	60	1.00	0%	No
18	Circ	3,7	4,107	5.4%	65	9.9	\$ 13.56	\$ 1.37	\$ 12.19	10.1%	1,093	16,509	18		90%	91%	60 min.	30	30	1.00	0%	No
20	Exp	3,5,6,7	94,636	5.7%	1,252	17.1	\$ 14.67	\$ 1.31	\$ 13.36	9.0%	14,351	272,242	20	✓	90%	84%	30 min.	15/30	30	1.50	0%	No
25	Circ	6,7	14,249	14.5%	226	14.5	\$ 9.30	\$ 1.13	\$ 8.17	12.1%	2,615	32,723	25		90%	86%	60 min.	60	60	1.00	0%	No
27	Std	2,6	68,099	8.9%	821	20.4	\$ 0.67	\$ 0.15	\$ 0.53	21.6%	8,786	77,050	27		85%	83%	30 min.	30	30	1.50	0%	No
28	Std	2,3	62,385	6.3%	808	31.6	\$ 3.06	\$ 1.17	\$ 1.89	38.3%	5,108	34,935	28		85%	88%	30 min.	15/30	30	1.50	0%	No
30	Frq	1,2,3	274,684	(4.5%)	3,301	30.1	\$ 8.38	\$ 1.22	\$ 7.16	14.5%	23,897	300,595	30		85%	78%	15 min.	15	15	1.50	0%	No
31	Std	1,6	20,949	2.1%	332	27.8	\$ 9.15	\$ 1.51	\$ 7.64	16.5%	1,994	24,656	31		85%	78%	30 min.	30	-	1.50	0%	No
35	Frq	2,3	91,533	23.0%	1,131	25.4	\$ 3.46	\$ 1.34	\$ 2.12	38.7%	9,402	58,543	35		85%	86%	15 min.	15	15	1.50	0%	No
41	Frq	1,6,7	207,283	1.1%	2,893	34.9	\$ 7.26	\$ 1.04	\$ 6.22	14.3%	15,115	191,262	41		85%	83%	15 min.	7.5/15	15	1.50	0%	No
43	Frq	2,6	107,257	1.2%	1,354	27.3	\$ 9.23	\$ 1.20	\$ 8.04	13.0%	10,237	103,713	43	✓	85%	88%	15 min.	15	15	1.50	0%	No
44	Frq	2,3,6,7	197,496	3.1%	2,610	35.5	\$ 6.97	\$ 1.13	\$ 5.84	16.1%	14,399	150,433	44	✓	85%	88%	15 min.	7.5/15	15	1.50	0%	No
60	Exp	1,3,4,6,9	12,119	(7.0%)	192	23.0	\$ 11.07	\$ 1.36	\$ 9.71	12.3%	1,395	24,671	60	✓	90%	76%	30 min.	20/30	-	1.50	0%	No
83	Circ	3	4,839	16.2%	77	9.6	\$ 14.05	\$ 1.49	\$ 12.57	10.6%	1,340	10,815	83		90%	91%	60 min.	60	60	1.00	0%	No
84	Circ	2	3,866	9.6%	61	8.2	\$ 16.31	\$ 1.53	\$ 14.79	9.4%	1,247	14,828	84		90%	88%	60 min.	60	60	1.00	0%	No
88	Circ	3,7	19,998	4.5%	273	16.9	\$ 5.77	\$ 1.52	\$ 4.25	26.3%	3,066	21,493	88		90%	94%	60 min.	30	30	1.00	0%	No
105	Std	1,2,3,6	50,858	4.5%	738	21.2	\$ 11.93	\$ 1.15	\$ 10.78	9.7%	6,308	76,102	105		85%	86%	30 min.	30	30	1.50	0%	No
110	Exp	3,6	4,733	(7.9%)	75	15.7	\$ 16.27	\$ 1.32	\$ 14.95	8.1%	802	16,770	110	✓	90%	95%	30 min.	20/30	-	1.50	0%	No
115	Std	7,9,LM,EC	53,213	6.1%	761	19.8	\$ 8.24	\$ 1.16	\$ 7.08	14.1%	7,092	83,034	115		85%	83%	30 min.	30	30	1.50	0%	No
120	Frq	3,6,7	121,289	3.8%	1,571	22.6	\$ 11.12	\$ 1.31	\$ 9.81	11.8%	13,938	144,597	120	✓	85%	85%	15 min.	15/30	15/30	1.50	0%	No
201/202^	Rpd	1	704,360	4.6%	10,030	101.6	\$ 2.49	\$ 0.96	\$ 1.53	38.6%	17,352	158,706	201/202^	✓	85%	93%	15 min.	5	10	1.50	0%	No
204^	Rpd	1	18,006	(8.9%)	284	28.1	\$ 9.05	\$ 1.00	\$ 8.05	11.1%	1,696	11,893	204^		85%	96%	15 min.	30	30	1.50	0%	No
215^	Rpd	3,9	354,918	0.9%	4,310	35.4	\$ 7.10	\$ 1.23	\$ 5.86	17.4%	26,090	243,734	215^	✓	85%	88%	15 min.	10	15	1.50	0%	No
225^	Rpd	3,8,CV	155,490	11.4%	1,988	25.3	\$ 9.96	\$ 1.34	\$ 8.62	13.4%	15,635	301,224	225^	✓	85%	86%	15 min.	15	30	1.50	0%	No
227~	Rpd	8,IB	220,319	28.6%	2,822	39.4	\$ 6.33	\$ 1.07	\$ 5.26	17.0%	17,033	312,466	227~	✓	85%	82%	15 min.	15	30	1.50	0%	No

FY 2025 ROUTE STATISTICS (Q3)																						
BASE STATISTICS													TITLE VI MONITORING (FY 2025 Annual Statistics) ~									
Route	Cat	Jurisdiction (#=SD Dist.)	Q3 Passengers	FY24-25 % Change	Avg. Wkdy. Psgs.	Psgs./ Rev. Hr.	Cost/ Psgr.	Average Fare	Subsidy/ Psgr.	Farebox Recovery	Budgeted Rev.Svc.		Route	Minority Route	On-Time Perf.		Weekday Headway			Vehicle Load Factor ~		
											Hours	Miles			Goal	Actual	Goal	Peak	Base	Goal	% trips over VLF	> 20%?
235^	Rpd	3,5,6,9,Esc	298,898	7.4%	3,858	28.3	\$ 8.92	\$ 1.36	\$ 7.55	15.3%	27,625	651,613	235^		85%	86%	15 min.	15	15	1.50	0%	No
237^	Rpd	1,6	42,836	(9.6%)	679	23.2	\$ 10.97	\$ 1.19	\$ 9.78	10.9%	4,894	60,676	237^	✓	85%	89%	15 min.	15	-	1.50	0%	No
280	RpEx	3,5,Esc	13,247	1.2%	210	22.1	\$ 20.95	\$ 3.72	\$ 17.24	17.7%	1,619	50,796	280		90%	84%	30 min.	15	-	1.00	0%	No
290	RpEx	3,5	15,467	4.5%	245	27.5	\$ 13.38	\$ 3.17	\$ 10.22	23.7%	1,521	37,891	290		90%	90%	30 min.	10	-	1.00	0%	No
701	Frq	CV	80,227	1.6%	1,148	24.9	\$ 5.84	\$ 1.02	\$ 4.82	17.5%	8,432	87,074	701	✓	85%	78%	15 min.	15	15	1.50	0%	No
704	Std	CV	86,883	4.9%	1,223	25.8	\$ 5.88	\$ 1.21	\$ 4.67	20.6%	8,791	94,159	704	✓	85%	79%	30 min.	30	30	1.50	0%	No
705	Std	CV,NC,Cty	41,940	5.5%	598	23.5	\$ 5.45	\$ 1.19	\$ 4.26	21.9%	4,640	42,035	705	✓	85%	89%	30 min.	30/60	30/60	1.50	0%	No
707	Std	CV	21,824	(5.1%)	345	20.1	\$ 6.97	\$ 1.09	\$ 5.88	15.6%	2,882	28,517	707	✓	85%	85%	30 min.	30	30	1.50	0%	No
709	Frq	CV	165,147	8.9%	2,342	32.5	\$ 4.82	\$ 1.10	\$ 3.71	22.9%	13,008	143,671	709	✓	85%	80%	15 min.	7.5/15	15	1.50	0%	No
712	Frq	CV	129,098	6.9%	1,831	36.9	\$ 3.96	\$ 1.01	\$ 2.95	25.5%	9,103	94,287	712	✓	85%	86%	15 min.	15	15	1.50	0%	No
815	Frq	EC	82,815	22.4%	1,092	30.4	\$ 3.40	\$ 1.43	\$ 1.98	41.9%	7,225	53,618	815		85%	88%	15 min.	15	15	1.50	0%	No
816	Std	EC,Cty	25,147	10.8%	398	18.1	\$ 8.27	\$ 1.23	\$ 7.04	14.9%	3,746	40,318	816		85%	85%	30 min.	30	30	1.50	0%	No
832	Std	ST	10,168	11.2%	146	22.8	\$ 5.78	\$ 1.04	\$ 4.74	18.0%	1,138	11,866	832		85%	81%	30 min.	60	60	1.50	0%	No
833	Std	EC,ST	19,976	14.4%	278	16.9	\$ 7.86	\$ 1.04	\$ 6.82	13.3%	3,065	30,459	833		85%	83%	30 min.	35-45	35-45	1.50	0%	No
834	Std	ST	6,085	9.0%	97	14.3	\$ 8.92	\$ 1.25	\$ 7.67	14.0%	1,031	10,508	834		85%	69%	30 min.	60	60	1.50	0%	No
838	Std	Cty	23,472	(2.3%)	270	14.1	\$ 9.38	\$ 1.36	\$ 8.02	14.5%	4,323	64,987	838		85%	80%	30 min.	60	60	1.50	0%	No
848	Std	EC,Cty	65,641	10.1%	867	25.9	\$ 5.22	\$ 1.33	\$ 3.89	25.4%	6,694	65,165	848		85%	85%	30 min.	30	30	1.50	0%	No
851	Circ	LM,Cty	17,829	26.6%	282	32.2	\$ 5.03	\$ 0.84	\$ 4.18	16.8%	1,489	17,313	851	✓	90%	93%	60 min.	60	60	1.00	0%	No
852	Std	4,9,LM	58,536	5.6%	743	19.6	\$ 6.46	\$ 1.28	\$ 5.18	19.8%	7,869	71,273	852	✓	85%	85%	30 min.	30	30	1.50	0%	No
854	Std	7,LM	14,516	15.1%	228	13.1	\$ 11.77	\$ 1.38	\$ 10.39	11.8%	2,643	29,049	854		85%	95%	30 min.	30/60	30/60	1.50	0%	No
855	Std	LM,Cty	56,059	20.9%	788	38.5	\$ 3.42	\$ 0.96	\$ 2.46	28.0%	3,867	36,466	855	✓	85%	89%	30 min.	30	30	1.50	0%	No
856	Std	4,9,LG,Cty	118,001	14.9%	1,703	32.8	\$ 4.65	\$ 1.15	\$ 3.50	24.7%	9,554	104,362	856	✓	85%	78%	30 min.	30	30	1.50	0%	No
864	Std	EC,Cty	68,671	11.1%	879	28.7	\$ 4.30	\$ 1.37	\$ 2.93	31.9%	6,308	56,243	864		85%	85%	30 min.	30	30	1.50	0%	No
872	Std	EC	9,285	6.3%	147	17.4	\$ 5.40	\$ 1.39	\$ 4.01	25.7%	1,443	9,712	872		85%	92%	30 min.	30	30	1.50	0%	No
874/875	Std	EC	61,764	11.9%	825	22.4	\$ 5.98	\$ 1.38	\$ 4.60	23.1%	7,297	70,151	874/875		85%	87%	30 min.	30	30	1.50	0%	No
888	Rural	EC,Cty	156	30.0%	3	1.8	\$ 210.65	\$ 2.99	\$ 207.66	1.4%	246	7,123	888									
891	Rural	EC,Cty	63	(32.3%)	1	1.4	\$ 343.11	\$ 2.50	\$ 340.61	0.7%	140	3,995	891									
892	Rural	EC,Cty	49	(22.2%)	1	1.1	\$ 382.99	\$ 2.22	\$ 380.78	0.6%	137	3,870	892									
894	Rural	EC,Cty	14,518	60.2%	228	22.9	\$ 15.67	\$ 3.30	\$ 12.37	21.1%	1,700	40,227	894									
901	Frq	3,8,IB,Cor	138,929	9.2%	1,737	22.1	\$ 8.25	\$ 1.36	\$ 6.90	16.4%	16,355	212,181	901	✓	85%	77%	15 min.	15	30	1.50	0%	No
904*	Circ	Cor	3,541	4.8%	39	6.7	\$ 10.55	\$ 1.43	\$ 9.11	13.6%	2,442	12,250	904*		90%	81%	60 min.	60	60	1.50	0%	No
905	Std	8	52,996	(6.4%)	774	22.0	\$ 8.97	\$ 1.18	\$ 7.79	13.2%	6,597	91,727	905	✓	85%	86%	30 min.	15/30	30	1.50	0%	No
906/907	Frq	8	275,774	10.8%	3,556	38.5	\$ 2.52	\$ 1.15	\$ 1.38	45.5%	17,722	130,481	906/907	✓	85%	82%	15 min.	15	15	1.50	0%	No
909	Circ	8	10,554	(0.3%)	168	17.9	\$ 9.76	\$ 1.10	\$ 8.67	11.2%	1,576	19,394	909	✓	90%	85%	60 min.	60+	60+	1.5	0%	No
910**	Exp	3,8,CV,NC	11,485	N/A	133	13.3	\$ 21.42	\$ 1.42	\$ 20.00	6.6%	1,576	19,394	910		90%	85%	60 min.	60+	60+	1.5	0%	No
916/917	Std	4,LG	31,306	3.3%	442	16.8	\$ 9.70	\$ 1.16	\$ 8.54	11.9%	4,785	55,469	916/917	✓	85%	84%	30 min.	30/60	30/60	1.50	0%	No
921	Std	1,6	54,604	8.7%	682	21.6	\$ 6.34	\$ 1.69	\$ 4.65	26.6%	6,729	65,554	921	✓	85%	81%	30 min.	30	30	1.50	0%	No
923	Std	2,3	34,886	3.8%	552	16.4	\$ 7.85	\$ 1.30	\$ 6.54	16.6%	5,635	51,440	923		85%	84%	30 min.	30	30	1.50	0%	No
928	Std	6,7	39,180	15.7%	554	16.7	\$ 9.49	\$ 1.40	\$ 8.09	14.7%	6,251	71,109	928		85%	87%	30 min.	30	30	1.50	0%	No
929	Frq	3,8,CV,NC	352,327	3.4%	4,540	30.5	\$ 4.30	\$ 1.22	\$ 3.07	28.4%	29,169	277,599	929	✓	85%	77%	15 min.	12	15	1.00	0%	No
932	Frq	8,CV,NC	200,065	18.8%	2,738	31.0	\$ 4.47	\$ 1.21	\$ 3.26	27.0%	16,741	164,406	932	✓	85%	79%	15 min.	15	15	1.50	0%	No
933/934	Frq	8,IB	299,013	3.0%	3,957	35.2	\$ 4.52	\$ 1.03	\$ 3.49	22.8%	22,162	247,940	933/934	✓	85%	77%	15 min.	12	15	1.50	0%	No
936	Std	4,9,LG,Cty	89,187	15.4%	1,030	27.3	\$ 4.11	\$ 1.36	\$ 2.75	33.2%	8,593	69,040	936	✓	85%	84%	30 min.	30	30	1.50	0%	No
944	Std	5,PW	12,837	20.3%	187	10.3	\$ 12.86	\$ 1.30	\$ 11.56	10.1%	3,224	34,754	944		85%	87%	30 min.	30	30	1.00	0%	No
945	Std	5,PW	26,368	17.1%	388	13.6	\$ 9.75	\$ 1.13	\$ 8.62	11.6%	5,025	70,056	945		85%	80%	30 min.	30	30	1.50	0%	No
945A	Std	PW	3,660	41.4%	59	12.0	\$ 11.31	\$ 0.22	\$ 11.09	1.9%	711	10,007	945A		85%	78%	30 min.	30	30	1.50	0%	No
955	Frq	4,8,9,NC	256,773	8.9%	3,396	37.5	\$ 3.43	\$ 1.08	\$ 2.34	31.6%	17,807	161,987	955	✓	85%	81%	15 min.	12	12	1.50	0%	No

FY 2025 ROUTE STATISTICS (Q3)																						
BASE STATISTICS												TITLE VI MONITORING (FY 2025 Annual Statistics) ~										
Route	Cat	Jurisdiction (#=SD Dist.)	Q3 Passengers	FY24-25 % Change	Avg. Wkdy. Psgrs.	Psgrs./ Rev. Hr.	Cost/ Psgr.	Average Fare	Subsidy/ Psgr.	Farebox Recovery	Budgeted Rev.Svc.		Route	Minority Route	On-Time Perf.		Weekday Headway			Vehicle Load Factor ~		
											Hours	Miles			Goal	Actual	Goal	Peak	Base	Goal	% trips over VLF	> 20%?
961	Frq	4,NC	120,225	11.2%	1,542	31.4	\$ 4.59	\$ 1.11	\$ 3.47	24.2%	9,931	101,388	961	✓	85%	84%	15 min.	15/30	15/30	1.50	0%	No
962	Frq	4,NC,Cty	116,753	12.4%	1,497	28.3	\$ 5.07	\$ 1.22	\$ 3.84	24.1%	10,736	109,491	962	✓	85%	80%	15 min.	15	15	1.50	0%	No
963	Std	4,NC	28,173	4.7%	369	18.7	\$ 6.21	\$ 1.22	\$ 5.00	19.6%	3,938	32,507	963	✓	85%	85%	30 min.	30	30	1.50	0%	No
964	Circ	5,6	26,685	2.1%	422	16.5	\$ 8.16	\$ 1.16	\$ 7.01	14.2%	4,296	40,749	964	✓	90%	79%	60 min.	30	30	1.00	0%	No
965	Circ	9	10,832	4.9%	153	14.2	\$ 9.25	\$ 1.12	\$ 8.13	12.1%	1,956	19,913	965	✓	90%	66%	60 min.	35-45	35-45	1.00	0%	No
967	Std	4,NC	9,248	30.6%	146	16.3	\$ 7.71	\$ 1.23	\$ 6.48	16.0%	1,505	13,398	967	✓	85%	85%	30 min.	60	60	1.50	0%	No
968	Std	NC	12,045	5.7%	191	18.2	\$ 7.73	\$ 1.14	\$ 6.59	14.7%	1,751	17,484	968	✓	85%	86%	30 min.	60+	60+	1.50	0%	No
985	Circ	1	8,210	10.4%	130	15.2	\$ 8.85	\$ 1.73	\$ 7.12	19.6%	1,437	16,119	985	✓	90%		15 min.	15	15			
992	Frq	2,3	88,673	22.2%	995	23.1	\$ 4.87	\$ 1.34	\$ 3.52	27.6%	9,821	77,578	992		85%	71%	15 min.	15	15	1.50	0%	No
Access	D.R.	ALL	71,079	37.0%	1,018	1.4	\$ 66.34	\$ 4.36	\$ 61.98	6.6%			FTA defines Minority persons to include the following: (1) American Indian and Alaska Native, (2) Asian, (3) Black or African American, (4) Hispanic or Latino, (5) Native Hawaiian or Other Pacific Islander.									
Taxi	D.R.	ALL	14,063	(43.7%)	199	2.6	\$ 35.50	\$ 4.66	\$ 30.84	13.1%			FTA defines Minority Route as one with at least 1/3 of its total mileage in a census block(s) with a percentage of minority population that exceeds the percentage of minority population in the entire MTS service area.									
TOTAL			19,379,671	5.2%	246,649	38.9	\$ 5.05	\$ 0.98	\$ 4.08	19.3%	925,105	10,920,295	Source: https://www.transit.dot.gov/sites/fta.dot.gov/files/dovs/FTA_Title_VI_FINAL.pdf									

Route Category	Q3 Passengers	FY24-25 % Change	Avg. Wkday. Psgrs.	Psgrs./ Rev. Hr.	Cost/ Psgr.	Average Fare	Subsidy/ Psgr.	Farebox Recovery
Urban Frequent	5,800,749	4.9%	75,260	32.0	\$ 5.85	\$ 1.19	\$ 4.66	20.4%
Urban Standard	1,453,477	6.0%	19,904	22.5	\$ 6.50	\$ 1.19	\$ 5.30	18.4%
Rapid ^	1,794,827	3.6%	23,971	43.0	\$ 5.86	\$ 1.14	\$ 4.73	19.4%
Express	122,973	14.2%	1,651	17.1	\$ 15.01	\$ 1.33	\$ 13.68	8.9%
Circulator	137,587	2.4%	2,101	15.0	\$ 8.01	\$ 1.11	\$ 6.90	13.9%
Premium/Rapid Express	28,714	2.9%	454	24.7	\$ 16.88	\$ 3.42	\$ 13.46	20.3%
Rural ^^	14,786	58.4%	233	18.3	\$ 20.34	\$ 3.29	\$ 17.05	16.2%
Fixed Bus Subtotal	9,353,113	5.0%	123,574	30.6	\$ 6.16	\$ 1.19	\$ 4.97	19.3%
Light Rail (B,O,G,C) ~	9,941,143	5.4%	121,859	72.5	\$ 3.53	\$ 0.75	\$ 2.78	21.1%
Light Rail (Silver)	273	-32.4%	-	18.2	\$ 13.87	\$ 0.75	\$ 13.12	5.4%
Light Rail Subtotal	9,941,416	5.4%	121,859	72.4	\$ 3.53	\$ 0.75	\$ 2.78	21.1%
ALL Fixed-Route	19,294,529	5.2%	245,432	43.6	\$ 4.81	\$ 0.96	\$ 3.84	20.0%
MTS Access	71,079	37.0%	1,018	1.4	\$ 66.34	\$ 4.36	\$ 61.98	6.6%
Access Taxi	14,063	-43.7%	199	2.6	\$ 35.50	\$ 4.66	\$ 30.84	13.1%
Demand-Resp Subtotal	85,142	10.8%	1,216	1.5	\$ 61.25	\$ 4.41	\$ 56.84	7.2%
System Total	19,379,671	5.2%	246,649	38.9	\$ 5.11	\$ 0.98	\$ 4.13	19.1%

* City of Coronado subsidized fares for summer service on Route 904.

^ SANDAG reimburses MTS for net operating costs for Routes 201-237 with TransNet funds (except Route 227).

^^ Routes 888, 891, 892, and 894 receive federal rural operating subsidy.

** New 910 Express route started service on Jan 26, 2025.

NC=National City, CV=Chula Vista

IB=Imperial Beach, LG=Lemon Grove, LM=La Mesa

EC=El Cajon, ST=Santee, PW=Poway

Cor=Coronado, Cty=County Uninc., Esc=Escondido

SD Dist.=City of San Diego Council District

SERVICE AVAILABILITY			
Goal		Actual	
80% of residents or jobs within ½ mile of a bus stop or rail station in urban area		% of residents within 1/2 mile of a bus stop or rail station in urban areas:	% of jobs within 1/2 mile of a bus stop or rail station in urban areas:
		99.2%	95.9%
100% of suburban residences within 5 miles of a bus stop or rail station.		% of suburban residents within 5 miles of a bus stop or rail station:	
		100.0%	
One return trip at least 2 days/week to destinations from rural villages (defined as Lakeside and Alpine).		Available Service:	
		Route 848 serves Lakeside seven days a week and Route 838 serves Alpine seven days a week.	

See attached map entitled 'Metropolitan Transit System Area of Jurisdiction.'

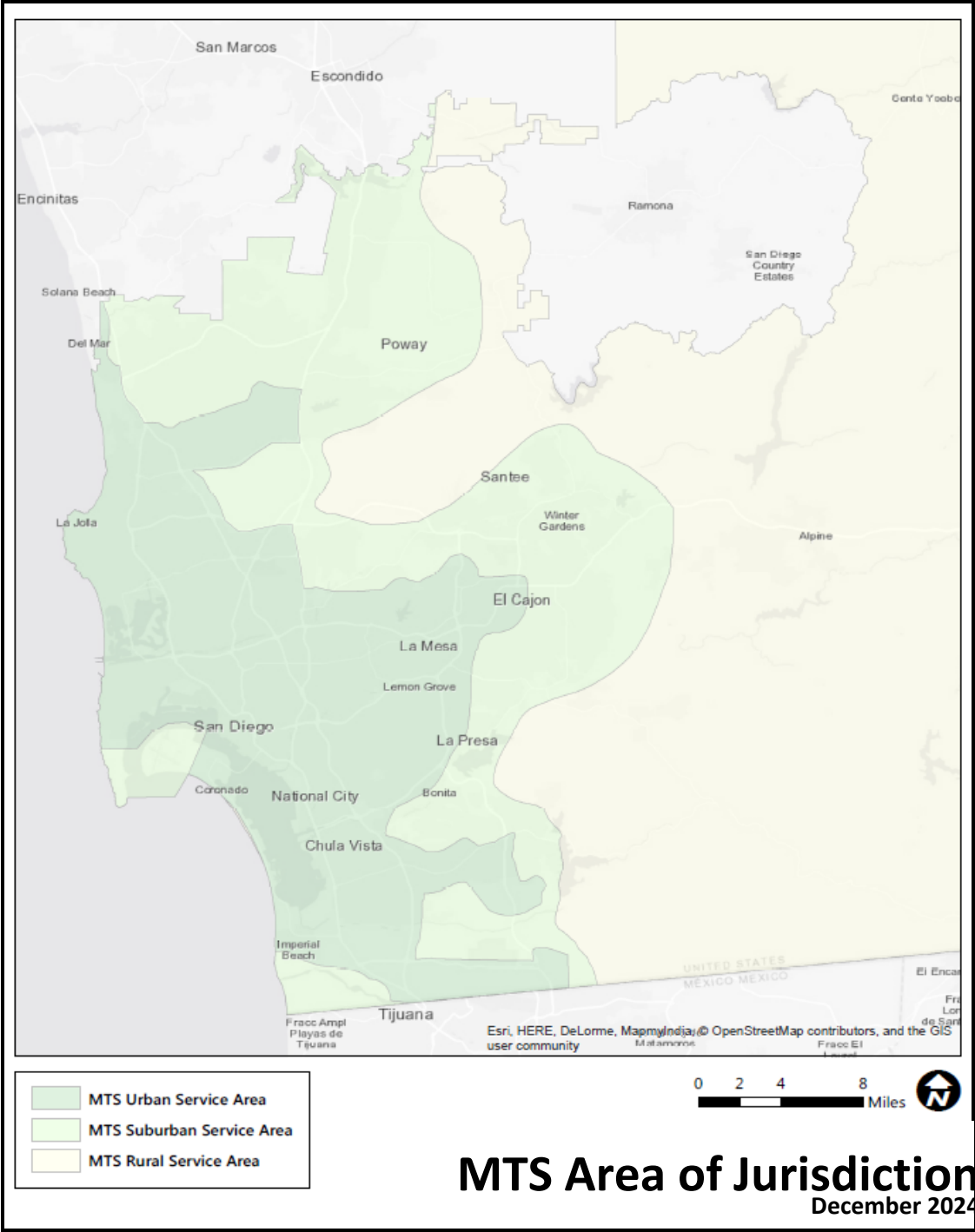
Percentage Sources: American Community Survey (2019) and 2020 U.S. Census Bureau

^ Minority Route report updated using ACS 2021 (10/26/2023)

~ Title VI Monitoring statistics are updated on an annual basis

~~ No trips averaged above the vehicle load factor target (1.5 for most bus routes, 3.0 for Trolley).

NOTE: Rural and Demand Response services have no specific Policy 42 goals for OTP, headway, or vehicle load.





Metropolitan
Transit
System

Item No. 21, 5/15/2025

FY 2025 Q3 Performance Monitoring Report

Board of Directors

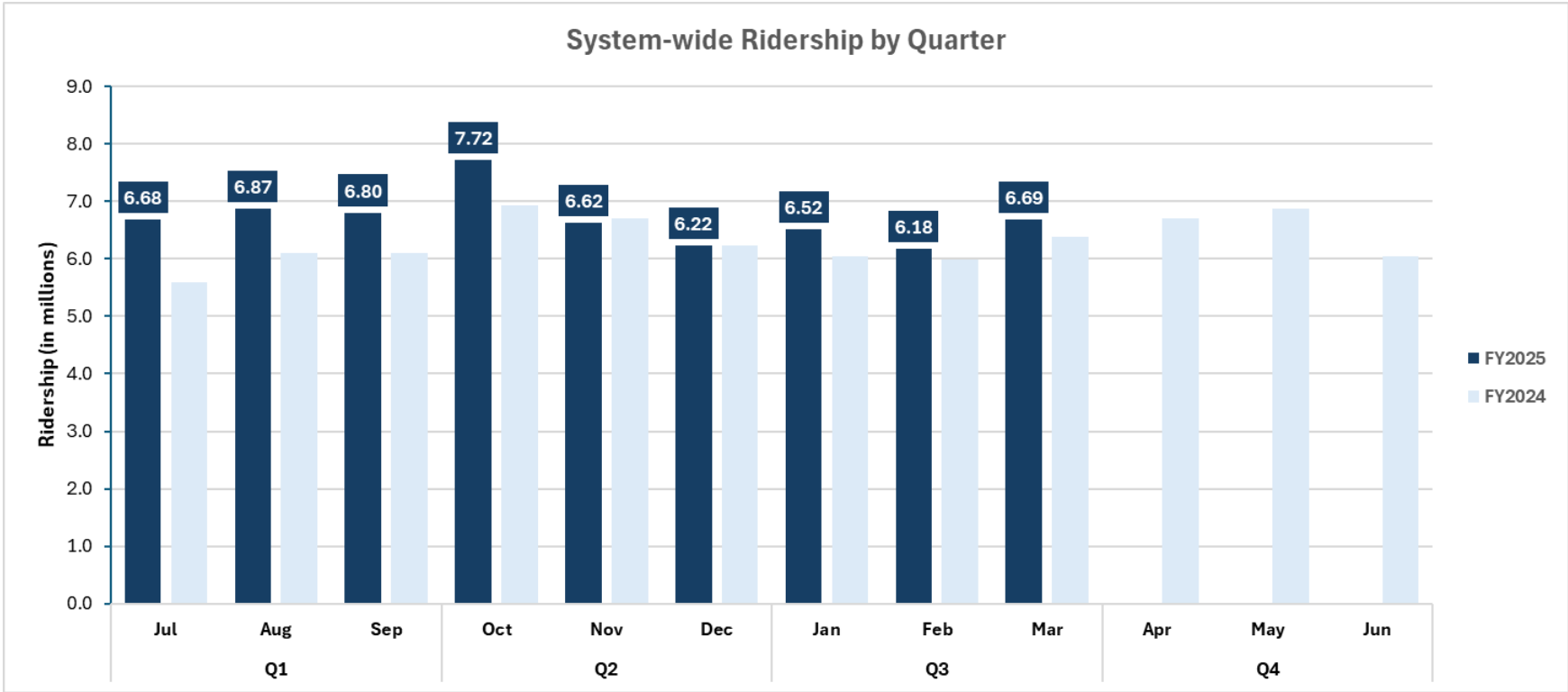
Board Policy 42

- Board policy to establish:
 - A process for evaluating and adjusting existing transit services to improve performance
 - Procedures for implementing service changes
- Adopted vision is for a customer-focused, competitive, integrated, and sustainable system
- Categorizes services by types:
 - Bus: premium express, express, Rapid, urban frequent, urban standard, circulator, Rural
 - Light Rail (Trolley)
 - Demand Response
- Performance indicators are analyzed with performance targets established
- Board receives annual and quarterly updates

Policy 42 Evaluation Criteria

CUSTOMER FOCUSED/COMPETITIVE		INTEGRATED	SUSTAINABLE	
PRODUCTIVITY	QUALITY	CONNECTIVITY	RESOURCES	EFFICIENCY
<ul style="list-style-type: none"> • Total Passengers • Average Weekday Passengers • Passengers/ Revenue Hour • Passengers/ In-Service Hour 	<ul style="list-style-type: none"> • Passenger Load Factor • On-Time Performance • Accidents/ 100,000 Miles • Comments/ 100,000 Passengers • Mean Distance Between Failures 	<ul style="list-style-type: none"> • Route Headway • Span-of- Service Consistency • Service Availability 	<ul style="list-style-type: none"> • In-Service Miles • In-Service Hours • Peak Vehicle Requirement 	<ul style="list-style-type: none"> • In-Service Speed • In-Service/Total Miles • In-Service/Total Hours • Farebox Recovery Ratio • Subsidy/Passenger

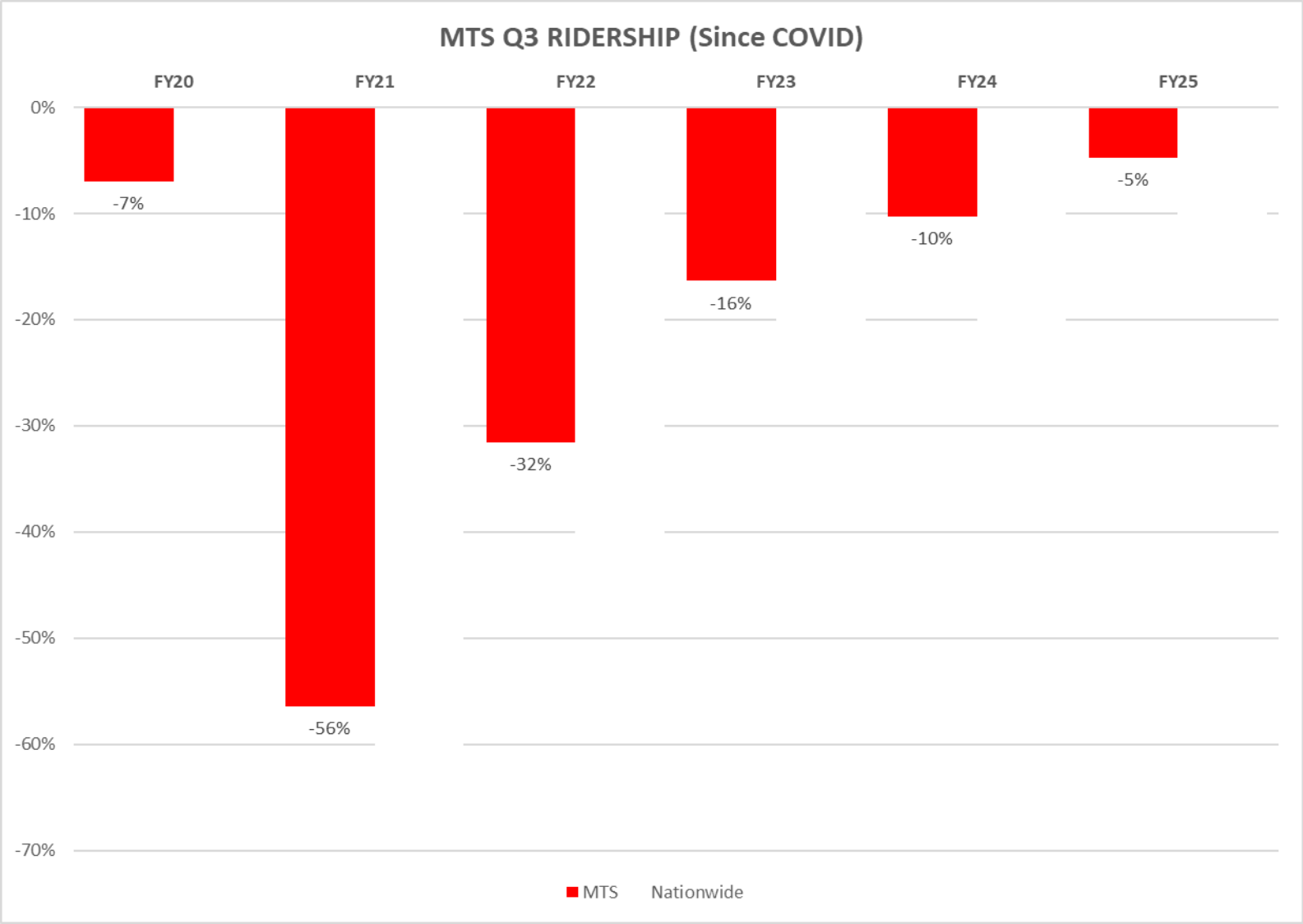
Total Ridership by Month



Overall Trends

- Comparing month to month vs. FY2024, January 2025 showed an increase of 8%, February 2025 showed an increase of 3% and March 2025 showed an increase of 8%
- Q3 FY2025 system wide ridership increased 5% vs. Q3 FY2024

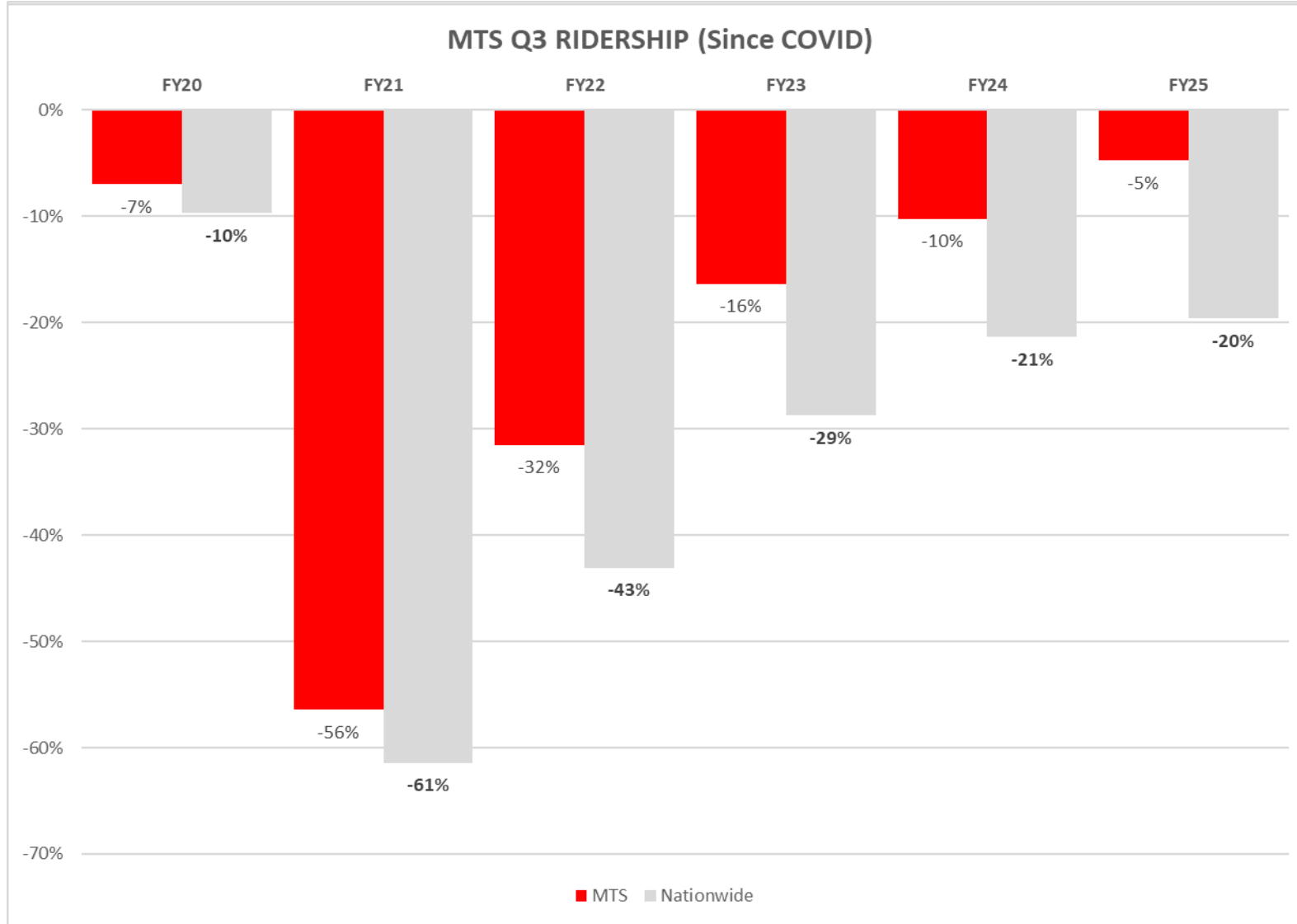
Ridership Recovery from COVID



Overall Trends

- Ridership recovery is improving each year; almost back to pre-COVID levels

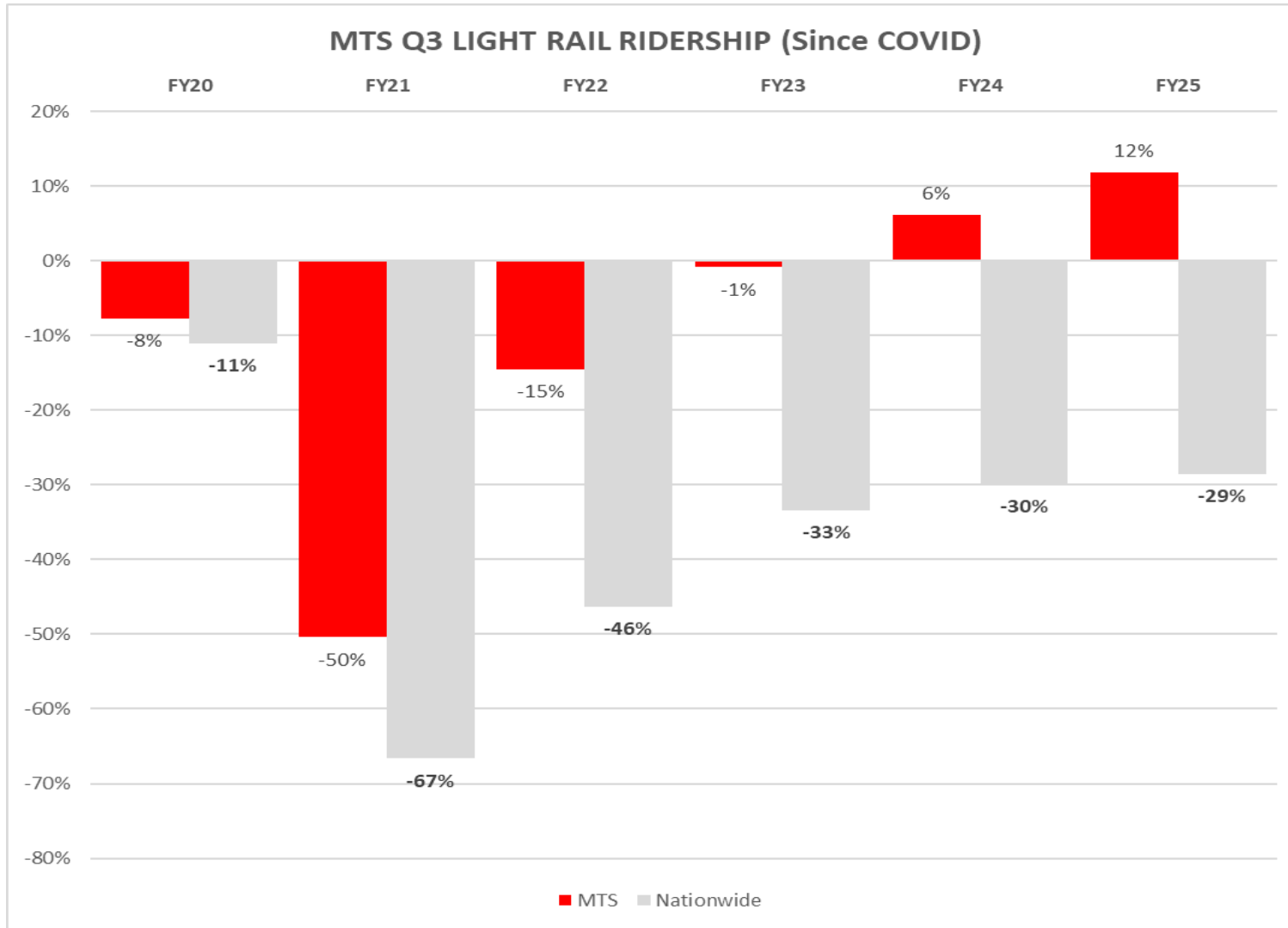
Ridership Recovery from COVID



Overall Trends

- Ridership recovery is improving each year; almost back to pre-COVID levels
- Strongly outpacing national trends

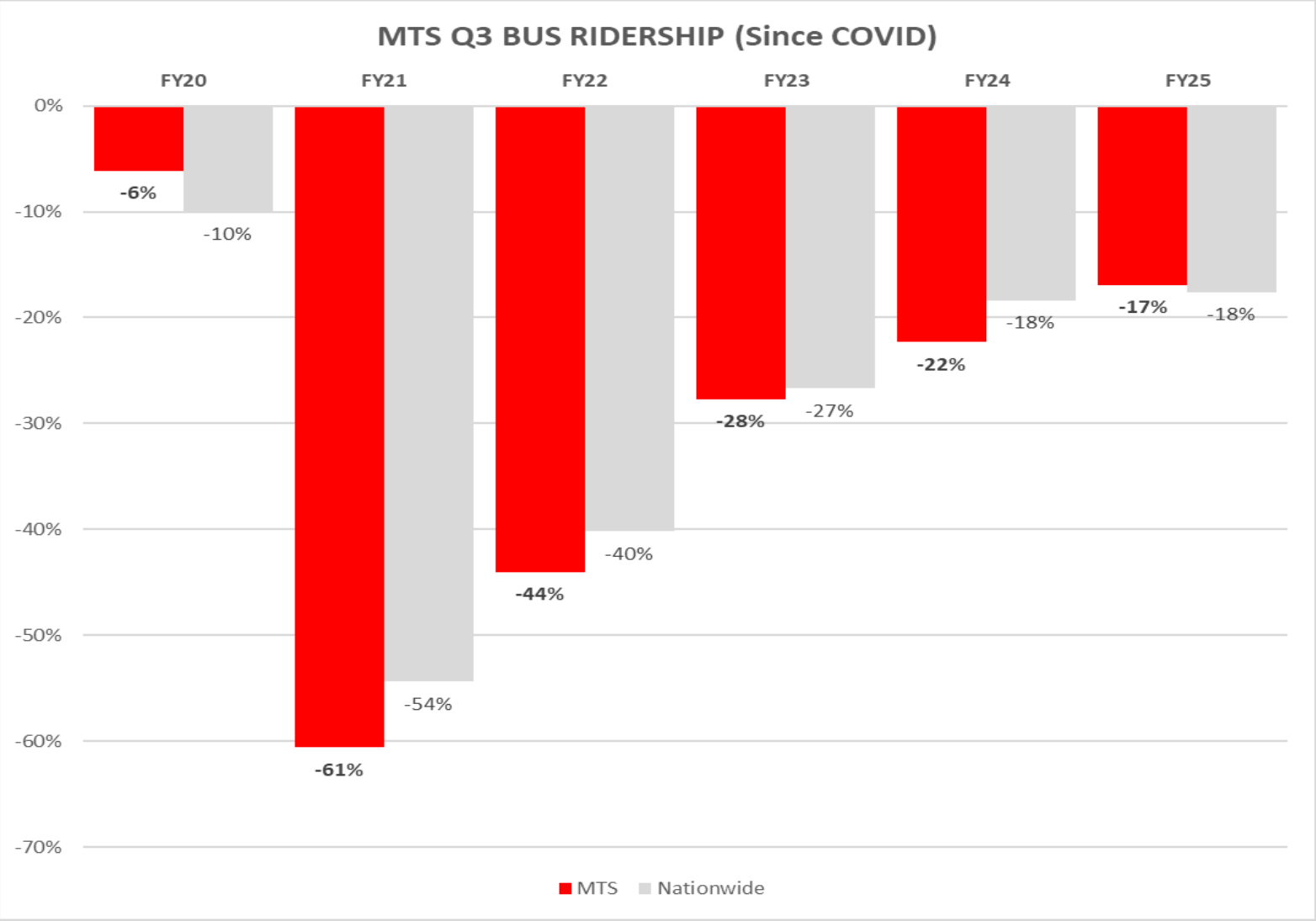
Ridership Recovery from COVID (Light Rail)



Overall Trends

- Actual increase in light rail ridership; compared to national decrease
- Mid-Coast extension played a role, but trends were better than nationwide trends, even before implementation

Ridership Recovery from COVID (Bus)



Overall Trends

- While slower to recover than light rail (also influenced by Mid-Coast extension), ridership growth has surpassed nationwide growth in last year

Passengers per Revenue Hour

- Metric measures how well service provided is used
- Policy 42 goal is to improve the route category average
- Metric has improved on all categories of service, other than demand response

Route Categories	FY 2024 <i>Jan-Mar.</i>	FY 2025 <i>Jan-Mar.</i>	% Change FY24-FY25
Urban Frequent	20.2	21.0	3.4%
Urban Standard	13.7	14.6	6.2%
Rapid	26.3	27.9	5.5%
Express	10.9	11.5	5.2%
Circulator	8.5	9.7	12.5%
Premium/Rapid Express	15.2	15.7	3.0%
Rural	7.1	11.9	40.3%
Fixed-Route Bus	19.0	20.0	4.6%
Light Rail	163.8	164.0	0.1%
All Fixed-Route	34.9	36.5	4.2%
MTS Access	1.8	1.5	-15.7%
System	32.4	33.1	2.3%

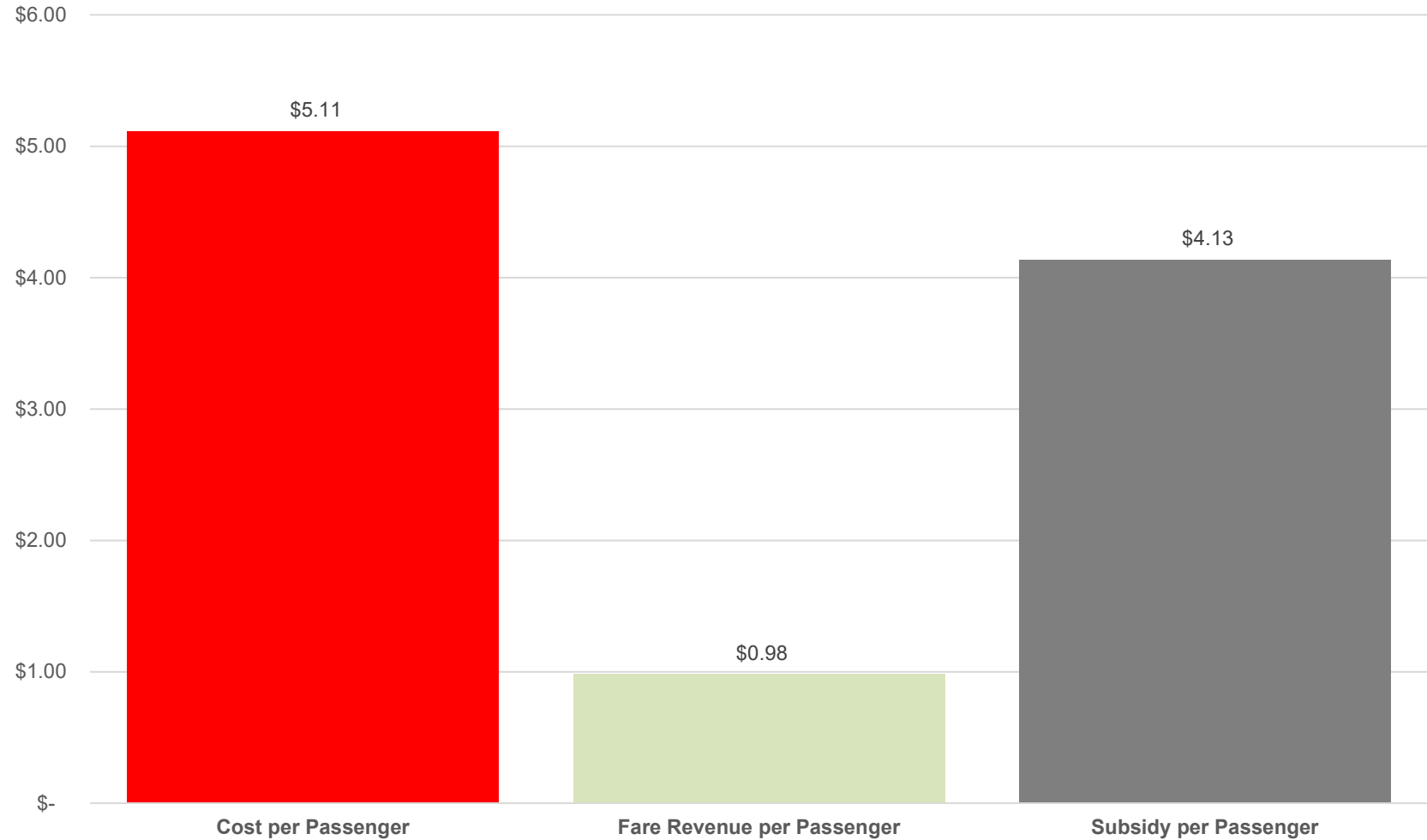
On-Time Performance

- Policy 42 goal is 85% for Urban Frequent & Rapid, 90% for all other categories
- Increasing ridership and resuming traffic congestion are impacting on-time performance figures, with results returning to levels similar to pre-pandemic periods.

Route Categories	Service Change Period					GOAL
	Sept. 2023	Jan. 2024	June 2024	Sept. 2024	Jan. 2025	
Urban Frequent	82.4%	82.1%	82.8%	82.1%	84.9%	85.0%
Urban Standard	83.8%	84.5%	84.9%	83.8%	86.6%	90.0%
Rapid	85.9%	87.4%	86.7%	86.8%	89.5%	85.0%
Express	91.1%	90.2%	90.5%	84.0%	83.7%	90.0%
Circulator	84.4%	85.2%	84.9%	84.4%	85.3%	90.0%
Premium/Rapid Express	90.2%	88.5%	90.0%	86.7%	94.4%	90.0%
Rural	N/A	N/A	N/A	N/A	N/A	
Demand-Resp. (Access & Taxi)	N/A	N/A	N/A	N/A	N/A	
Light Rail (Blue, Orange, Green)	95.7%	92.8%	92.3%	93.0%	96.3%	90.0%
Light Rail (Silver)	N/A	N/A	N/A	N/A	N/A	90.0%
System	84.4%	84.3%	84.8%	83.4%	83.9%	

Financial Metrics


- Analysis of:
 - (a) costs of providing service
 - (b) fare revenue from service
 - (c) net subsidy



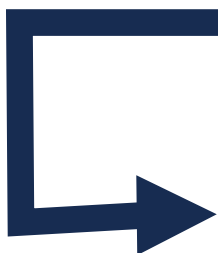
Subsidy per Passenger

- Analyze by mode and type of service
- Also analyze by route and COA will help us analyze by segment and time of day/day of week

	Q3
Cost per Passenger	\$ 5.11
Fare Revenue per Passenger	\$ 0.98
Subsidy per Passenger	\$ 4.13



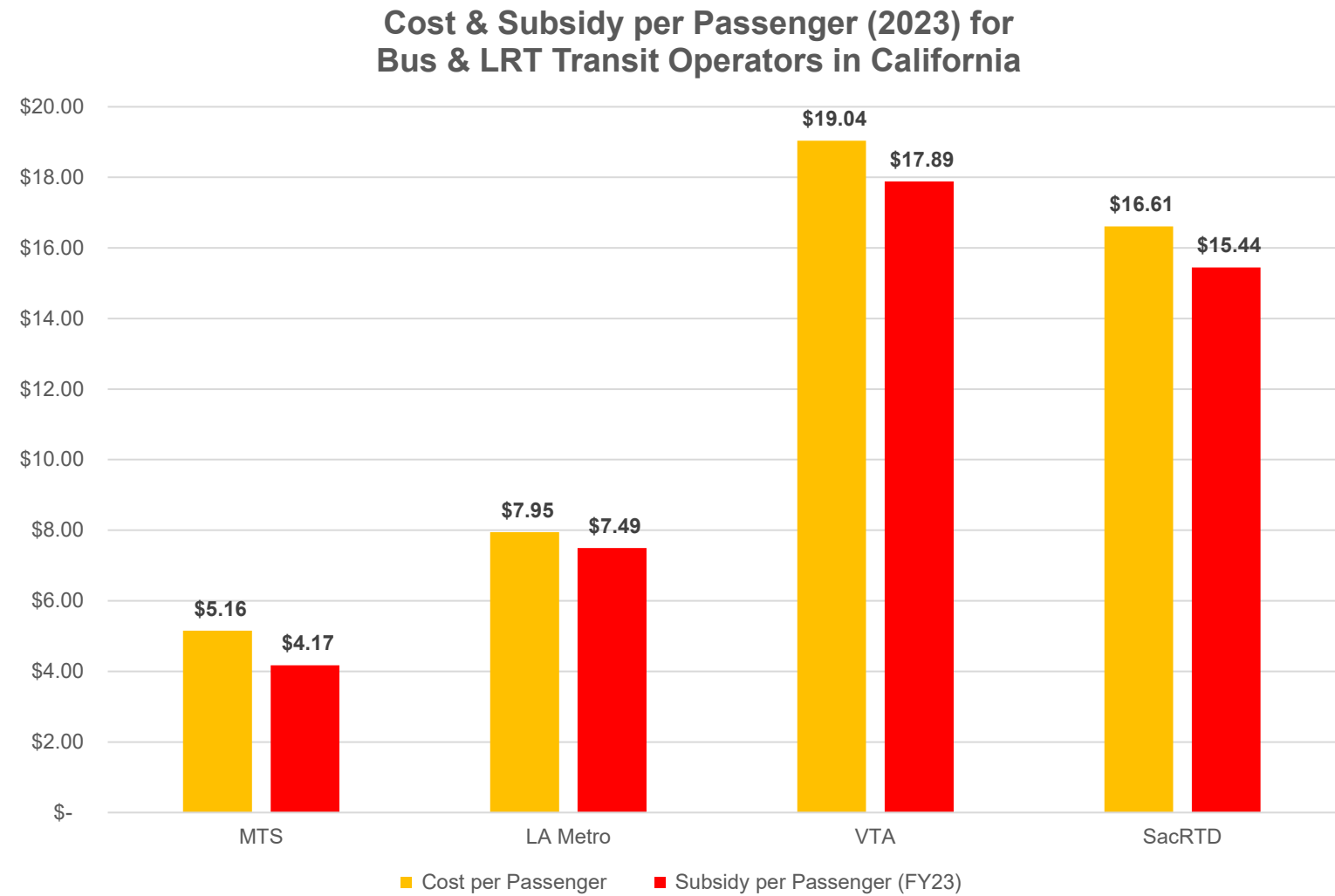
Subsidy per Passenger	Q3
Light Rail	\$ 2.78
Bus	\$ 4.97
Demand Response	\$ 56.84



Subsidy per Passenger (Bus)	Q3
Urban Frequent	\$ 4.66
Rapid	\$ 4.73
Urban Standard	\$ 5.30
Circulator	\$ 6.90
Express	\$ 13.68
Premium/Rapid Express	\$ 13.46
Rural	\$ 17.05

Subsidy per Passenger

- Most recent National Transit Database data is from FY23
- MTS has most efficient service among Bus & LRT operators in California



Questions/Comments



Agenda Item No. 22

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM BOARD OF DIRECTORS

May 15, 2025

SUBJECT:

Comprehensive Operational Analysis – Contract Award (Brent Boyd and Brianda Diaz)

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G3042.0-25 (in substantially the same format as Attachment A) with Transportation Management & Design, Inc. (TMD), a Disadvantaged Business Enterprise (DBE), for a Comprehensive Operational Analysis for a two (2) year period, for a total amount of \$682,576.31.

Budget Impact

The total contract cost of services is estimated to be in the amount of \$682,576.31 (Attachment C). This project will be funded by the MTS Planning Operating Budget account 451010-571250.

DISCUSSION:

MTS requested proposals from qualified and responsible transit planning firms to complete a Comprehensive Operational Analysis (COA), including its bus, light rail, and paratransit services. The goal of this update is to evaluate MTS' current performance, and restructure transit services as necessary to more efficiently and effectively serve the region's travel needs within the projected financial and operating constraints.

On February 6, 2025, MTS issued a Request for Proposals (RFP) for a COA and posted on PlanetBids. MTS received a total of five (5) proposals on the due date of March 20, 2025, from the following firms:

Proposer	Firm Certification
Alvarez & Marsal Infrastructure and Capital Projects LLC	N/A
Efeso Management Consulting, Inc.	N/A
Financial Management Consulting	DBE
Jarrett Walker + Associates	N/A
Transportation Management & Design, Inc.	DBE



All proposals were deemed responsive and responsible and were forwarded to the evaluation committee. The evaluation committee was comprised of representatives from the MTS Bus Operations, Planning, Marketing, and Finance Departments. The proposals were evaluated on the following:

- | | |
|--|-------------|
| 1. Qualifications of the Firm or Individual | 25% |
| 2. Staffing, Organization, and Management Plan | 25% |
| 3. Work Plan | 30% |
| 4. Cost and Price | <u>20%</u> |
| Total: | 100% |

The following table illustrates the initial scores of Proposers:

PROPOSER	TOTAL COST	COST SCORE	AVG TECH SCORE	TOTAL AVG SCORE (TOTAL POSSIBLE: 100)	RANKING
Jarrett Walker + Associates	\$579,470.00	20.00	68.43	88.43	1
Transportation Management & Design, Inc.	\$714,660.99	16.22	72.07	88.29	2
Efeso Management Consultants, Inc.	\$969,949.30	11.95	32.79	44.74	3
Alvarez & Marsal Infrastructure and Capital Projects LLC	\$2,110,000.00	5.49	32.86	38.35	4
Financial Management Consulting	\$941,255.50	12.31	14.36	26.67	5

As a result of the initial review, Jarrett Walker + Associates and TMD were the highest-ranked proposers and were deemed to be within the competitive range. MTS invited both firms for an in-person interview, which was held on April 16, 2025. During the interview staff learned more about the proposed staff and work plan. After interviews, the staff decided it would be beneficial to the project to add three (3) subtasks to the scope of work of the project. As a result, MTS requested a revised technical and cost proposal.

The following table illustrates the final scores and ranking:

PROPOSER	TOTAL COST	COST SCORE	AVG TECH SCORE	TOTAL AVG SCORE (TOTAL POSSIBLE: 100)	RANKING
Transportation Management & Design, Inc.	\$682,576.31	18.32	73.14	91.46	1
Jarrett Walker + Associates	\$625,212.00	20.00	69.86	89.86	2

In comparison to MTS's Independent Cost Estimate (ICE) in the amount of \$742,900.00 and proposals received, staff determined TMD's revised pricing to be fair and reasonable. Based on the objectives of this procurement, consideration of the evaluation criteria and TMD's technical and cost proposals, the evaluation committee determined that TMD presented the best overall value to MTS.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. G3042.0-25 (in substantially the same format as Attachment A) with TMD for a Comprehensive Operational Analysis for a two (2) year period, for a total amount of \$682,576.31.

/S/ Sharon Cooney

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Mark Olson, 619.557.4588, mark.olson@sdmts.com

Attachments: A. Draft Agreement MTS Doc. No. G3042.0-25
B. Scope of Work
C. Cost Proposal

**STANDARD AGREEMENT
FOR
MTS DOC. NO. G3042.0-25**

COMPREHENSIVE OPERATIONAL ANALYSIS

THIS AGREEMENT is entered into this _____ day of _____, 2025 in the State of California by and between San Diego Metropolitan Transit System ("MTS"), a California public agency, and the following, hereinafter referred to as "Contractor":

Name: <u>Transportation Management & Design, Inc.</u>	Address: <u>2701 Loker Ave, Suite 110</u>
	<u>Carlsbad CA 92010</u>
	<u>City State Zip</u>
Form of Business: <u>Corporation</u> (Corporation, Partnership, Sole Proprietor, etc.)	Email: <u>clanger@tmdinc.net</u>
Telephone: <u>760-476-9600 x107</u>	
Authorized person to sign contracts <u>China Langer</u>	<u>President</u>
	<u>Name Title</u>

The Contractor agrees to provide services as specified in the conformed Scope of Work/Technical Specification (Exhibit A), Contractor's Cost/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), and Forms (Exhibit D).

The contract term is for two (2) years effective June 1, 2025 through May 31, 2027.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed \$682,576.31 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	TRANSPORTATION MANAGEMENT & DESIGN, INC.
By: <u>Sharon Cooney, Chief Executive Officer</u>	By _____
Approved as to form:	
By: <u>Karen Landers, General Counsel</u>	Title: _____

5.1. INTRODUCTION

San Diego Metropolitan Transit System (MTS) is requesting proposals from qualified and responsible transit planning firms to complete a Comprehensive Operational Analysis (COA), including its bus, light rail, and paratransit services. The goal of this update is to evaluate MTS' current performance, and restructure transit services as necessary to more efficiently and effectively serve the region's travel needs within the projected financial and operating constraints.

Starting in FY28, MTS is anticipating an operating budget shortfall of roughly \$100 million (on a current \$448 million budget). Consequently, MTS is assessing the feasibility of placing an agency-sponsored sales tax measure on the ballot in Fall 2026. While discussions of the sales tax measure are preliminary, it is estimated that the half-cent sales tax would generate about an additional \$75 million annually to improve current transit services. It is expected that more than \$75 million annually would be generated as part of the sales tax measure, but an estimated \$75 million annually would be focused on service enhancements to the current network.

The purpose of this contract is to assist MTS with developing a regional service concept to address current travel demands and plan for two distinct scenarios:

- 1) **Passing of ballot measure:** An estimated \$75 million in additional revenues expected to increase frequencies and spans (or realigning services) on the existing transit network.
- 2) **No increase in regional transit funding:** This would result in a budget shortfall of \$100 million, with an estimated \$30-\$50 million in savings required to come from service reductions/changes (a specific target will be provided to consultant upon project award).

A separate simultaneous process will analyze other efforts that would help ensure a successful sales tax measure. A ballot measure was also considered in 2020, before being canceled due to COVID (Elevate 2020). The resultant consultant will have the benefit of using the Elevate 2020 efforts in its development of the second scenario.

STUDY GOALS

The goals of this study are to evaluate and restructure MTS services as necessary to meet future budget constraints as described above.

Objectives:

- Develop strategies to address current travel demand with projected funding levels
- Integration with the region's current and future multimodal transportation system
- Realign existing services and operational frequency and span of services based on proposed service strategies
- Develop phasing plans and financial programs to support implementation of the service plans
- Ensure that community input is considered throughout the study

5.2. PROJECT AREA

MTS is governed by a 15-member Board of Directors, and operates fixed-route and paratransit bus service, as well as light rail services within the central, south, and eastern parts of San Diego County. Transit services within the MTS jurisdiction are provided by MTS's operating entities, San Diego Transit Corporation (SDTC), San Diego Trolley, Inc.

(SDTI), and MTS Contract Services (MCS). MTS provides service to over 75 million passengers with an operating budget over \$400 million.

The project area for this study is the MTS area of jurisdiction. The study is inclusive of all bus, light rail, and paratransit service within the study area. To ensure regional coordination and consistency between services, the consultant should consider North County Transit District (NCTD) services and facilities when developing the service concepts and proposed transit networks.

5.3. TIMELINE

The bulk of the project shall be completed by September 30, 2026, with assistance provided for November 2026 MTS Board of Directors meeting.

Critically, Task 4 (develop service plan for increased service) should be completed by January 31, 2026 in order to prepare materials for a public hearing in March 2026 for a potential measure (MTS staff will lead the public hearing presentation).

Task 5 (develop service reduction plan) shall be completed by September 30, 2026 in order to prepare for a potential public hearing as soon as November 2026, if additional funding is not approved by November 2026. MTS staff will lead the public hearing presentation.

Task List	2025							2026											
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Project Award/Kick-Off																			
Task 1 – Data Collection/Review of Existing Conditions																			
Task 2 - System and Service Evaluation																			
Task 3 - Evaluation of Recommendations from Elevate 2020																			
Task 4 – Develop Service Implementation Plan for Increased Service																			
Task 5 – Develop Service Reduction Plan																			

5.4. PROJECT STAFFING

MTS will be the lead for this project. Consultant staff will collaborate with MTS staff throughout this effort. Proposer shall submit the staff, hours and other direct costs for each task.

MTS staff will manage the public outreach portion of the project, with assistance from the consultant in developing material for those efforts.

5.5. SCOPE OF WORK

Below is a draft list of tasks to be completed by the consultant. Although sequentially ordered to reflect a standard planning process, MTS may request that some tasks be completed in tandem or in advance of other tasks. All deliverables will be reviewed and accepted by MTS staff. Consultants are encouraged to propose alternatives and revisions to the tasks in order to improve the quality or deliverability of the work products. This shall be done via the written Questions and Answers phase of the RFP so that MTS can respond via an addendum to add/revise/delete task/s accordingly prior to receipt of proposals.

Ownership of Data

All data, including but not limited to demographic information, transit service statistics, and files created specifically for MTS as part of this project, shall remain the property of MTS in perpetuity.

Task 1 – Data Collection and Review of Existing Conditions

Collect and review data, reports, documents, and other information pertinent to the COA, including, but not limited to, the following:

Reports:

- SANDAG 2050 Regional Transportation Plan (San Diego Forward)
- SANDAG Coordinated Plan
- Relevant Community Plans, Community Plan Updates, and Mobility Plans
- MTS Annual Budgets
- 2018 MTS Transit Optimization Plan
- Elevate 2020 (previous effort at developing sales tax measure)
- Others as determined

Data:

- Demographic and socioeconomic data (census and SANDAG forecasts)
- Federal and state-defined disadvantaged communities
- MTS rider outreach and survey results
- Employment and land-use data (SANDAG)
- Transit passenger counts
- PRONTO fare data
- Operating statistics and performance
- Average daily trips on highways and major arterials
- Level of service on highways and major arterials
- SANDAG 2018 Commute Behavior Survey
- SANDAG 2023 Onboard Passenger Survey (available early 2025)
- MTS 2022 Customer Satisfaction Survey
- MTS 2024 Customer Satisfaction Survey (available in spring 2025)
- Other market research and comments from drivers, riders, and nonriders collected by MTS

Propose additional data collection efforts necessary for the project.

Divide the MTS jurisdiction into subregional areas based on common travel characteristics and demand. Identify travel markets within each subregional area with the greatest potential for capturing transit ridership (e.g., basic mobility, school, peak commute, tourist, seniors, etc.). Assess existing and future transit demand and travel patterns for each market by subregional area, based on, but not limited to:

- Population density by demographic variables (e.g., age, income, and auto ownership)
- Federal and state-defined disadvantaged communities
- Employment: including density, major employment centers, employment size, business/operation hours, shift schedules, etc.
- Location of other major trip generators: including schools, retail centers, medical centers, recreation and tourism hot spots, regional destinations, etc.
- Regional travel demand for each travel market to and from each subregional area by time of day: a.m. peak, mid-day, p.m. peak, and evening; and, day of week (weekday/Saturday/Sunday)

- Local travel demand for each travel market within each subregional area by time of day and day of week
- Existing transit ridership by route, segment, and/or stop by time of day, day of week
- Transit origin and destination travel pairs based on most recent SANDAG onboard survey

Identify and briefly evaluate opportunities and challenges facing transit service provision in the region over the next five years, including, but not limited to:

- Traffic congestion
- New transportation facilities
- Financial constraints / opportunities
- Land-use densities/orientation
- Public perceptions of transit
- Changing demographics (age, income)
- New transportation modes
- New federal/state/local requirements
- Zero-emission bus requirements

Inclusion of feedback from MTS passengers and the general public is essential to the success of the COA. MTS staff will lead the public participation process, including an extensive marketing and public information component to support the development and implementation of the COA.

The consultant will provide support materials and assistance to MTS staff including, but not limited to:

- Presentation at up to two (2) MTS Board or Executive Committee Meetings
- Development of digital art for displays, presentations, and public information (printing/production to be done by MTS)

Task 1 Deliverables:

(1) Technical report on review of relevant information and existing conditions.

(2) Additional data collection, as necessary, dependent on MTS approval.

(3) Prepare materials to present to up to two (2) MTS Board of Directors or Executive Committee meetings.

Task 2 - System and Service Evaluation

Evaluate how well the transit system is addressing the travel markets identified in Task 1. How well do schedules, routes, and stops meet the needs of passengers? Where and when are passengers transferring through the system, and how efficient are these transfers? Where and when are there redundancies, duplications, or deficiencies in routing, stops, and schedules? Is stop spacing adequate? Where and when are there service gaps and deficiencies? Where and when is there excess service given the demand? Is the transit service equitable according to federal and state-defined disadvantaged areas?

Evaluate existing services and schedules based on the service guidelines of MTS Policy 42: Transit Service Evaluation and Adjustment (Attachment 1). Policy 42 was last updated in 2016 and some revisions may occur prior to the project start date. Services should be evaluated based on segments (geographic, time of day, day of week, and season). Services that are inconsistent with MTS Policy 42's vision of a largely productivity-based

system, should be identified for reduction, discontinuation, or restructuring. Services that have potential for exceeding existing performance should be identified for possible enhancements.

The consultant will provide support materials and assistance to MTS staff including, but not limited to:

- Presentation at up to two (2) MTS Board or Executive Committee Meetings
- Development of digital art for displays, presentations, and public information (printing/production to be done by MTS)

Task 2 Deliverables:

(1) Technical report evaluating the existing system and services, identifying trips, segments, and routes that do not meet or have the potential to exceed performance expectations.

(2) Prioritized list of service gaps, deficiencies, and opportunities.

(3) Prepare materials to present to up to two (2) MTS Board of Directors or Executive Committee meetings.

Task 2A – Board Workshop (Required)

As such a Board educational component will be added to the end of Task 2. The consultant will provide one (1) board workshop. This Board workshop will explain the tradeoffs between productivity and coverage and receive directions from the Board in preparation of Tasks 4 and 5.

Task 3 – Evaluation of Recommendations from Elevate 2020

The consultant should analyze the recommendations of service enhancements and adjustments from the Elevate 2020 project to determine if the recommendations are as relevant in 2025 as they were in 2019 (pre-COVID).

These recommendations include frequency enhancements on all Trolley lines, 21 new Rapid bus lines, and general frequency enhancements to fixed-route bus service. The recommendations can be found as part of **Attachment 2** (Draft Elevate 2020 Expenditure Plan). The analysis should be focused on projected changes in ridership and operating costs.

Task 3 Deliverables:

(1) Technical report evaluating the proposed service enhancements in Elevate 2020 with assessments of projected changes in ridership and operating costs.

Task 4 - Develop Service Implementation Plan for Increased Services

MTS is considering a ballot measure with an estimated \$75 million annually to increase frequencies and spans (or realigning services) on the existing transit network. While more than \$75 million is expected to be generated by a sales tax measure, the \$75 million is the estimated portion that would be allocated to network enhancements. MTS may revise that estimated figure before the start of Task 4.

The consultant will develop a plan for addressing service gaps and opportunities, based on the analysis in Tasks 1-3, with this increased funding of approximately \$75 million annually.

The consultant should include services in the transit component of SANDAG's 2050 Regional Transportation Plan (currently in draft form) and the adopted 2021 Regional Plan (San Diego Forward) that are applicable in the near-to-mid-term, as well as the service enhancements identified in Elevate 2020 that were analyzed as part of Task 3.

The strategy should build upon the “core-network” service concept developed during the previous COA/TOP efforts and offer appropriate service strategies for fixed-route bus (local, express, Rapid, limited stop), light rail, demand response, and other flexible services, for each geographic area based on its travel markets. It should promote seamless, efficient, and effective travel. The service concepts should consider the current financial and operating constraints within the MTS area and propose an appropriate balance between productivity and coverage (geographic and temporal).

Evaluate the benefits and costs of the proposed service strategy and any differences compared to the existing transit network structure. This evaluation should provide a general comparison to the existing transit system, including, but not limited to, ridership, capital and operating resource requirements, effectiveness and productivity, quality of service, and operational efficiency. Any anticipated challenges to implementation should also be identified.

Identify transit-supportive facilities and programs that either exist, could, or will be developed within the next five (5) years that would complement and enhance the proposed service concepts, including:

- Advanced technology
- Transportation demand management (employer-sponsored shuttles, carpools/vanpools, etc.)
- Stop/station enhancements (bicycle facilities at transit centers, mobility centers, way finding and public information, security and lighting, etc.)
- Zero-emission vehicle requirements

Briefly evaluate the effectiveness of each support facility and program in enhancing transit use, including a general discussion of costs, benefits, implementation steps, and challenges.

Evaluate the restructured services with quantitative performance standards established in MTS Board Policy 42 (productivity, cost-effectiveness, schedule adherence, overcrowding, financial, etc.), and qualitative service parameters (headways/service span, streamline vs. better access, number of transfers, service duplications on major corridors, coordination with other services, etc.).

Each service adjustment proposed should be described with the following information, at minimum:

- Description of service, including rationale for service
- Route map showing routing, exact layover locations, and stops (consideration of stop spacing)
- Service span

- Headways / frequencies per hour per direction (and by day)
- Estimated ridership and greenhouse gas reductions
- Financial, operating, and performance statistics
- Vehicle requirements

Describe any supporting facilities and programs recommended as part of the service restructuring. Evaluate the restructuring plan, focusing on impacts to ridership, costs, productivity, cost-effectiveness, and quality of service (e.g. on-time performance and travel time), vehicle requirements, staffing requirements, and operational efficiencies.

Ultimately the final plan will be presented to the MTS Board of Directors (as part of a public hearing). The presentation will be led by MTS staff with assistance from the consultant.

No scheduling efforts are expected as part of this task. Scheduling will be the responsibility of MTS staff.

Task 4 Deliverables:

(1) Technical report outlining the proposed transit service strategy and implementation plan for increased service, including supportive facilities and programs, explaining the benefits and costs associated with the concept relative to the MTS operating environment.

(2) Detailed service restructuring plan which will include one-page factsheets for each proposed and existing route

(3) Prepare materials to present to up to three (3) MTS Board of Directors or Executive Committee meetings.

Task 4A: Public Online Mapping Tool (Optional)

Consultant shall develop and deploy an interactive online tool that enables the public to easily visualize, explore, and understand the impacts of the proposed transit service changes. The online tool should allow the public to explore changes based on their specific location and should include geographic visualization of travel-time based changes within their individual commute; users should be able to see a boundary of all points reachable within a certain travel time currently and with the proposed service plan.

Task 5 - Develop Service Implementation Plan for Service Reductions

While Task 4 will look at the possibility of service enhancements due to a successful ballot measure, MTS must also consider the possibility that no additional funding is forthcoming, resulting in the aforementioned budget shortfall of \$100 million. An estimated \$30-\$50 million worth of service reductions is anticipated to help bridge the funding gap (a specific target will be provided prior to the start of Task 5).

Using similar strategies as Task 4, the consultant will develop strategies for these service cuts that will minimize impacts to the regional transit service as much as feasible.

The consultant should include services in the transit component of SANDAG's 2050 Regional Transportation Plan (currently in draft form) and the adopted 2021 Regional Plan (San Diego Forward) that are applicable in the near-to-mid-term, as well as the service enhancements identified in Elevate 2020 that were analyzed as part of Task 3.

The strategy should build upon the “core-network” service concept developed during the previous COA/TOP efforts and offer appropriate service strategies for fixed-route bus (local, express, Rapid, limited stop), light rail, demand response, and other flexible services, for each geographic area based on its travel markets. It should promote seamless, efficient, and effective travel. The service concepts should consider the current financial and operating constraints within the MTS area and propose an appropriate balance between productivity and coverage (geographic and temporal).

Evaluate the benefits and costs of the proposed service strategy and any differences compared to the existing transit network structure. This evaluation should provide a general comparison to the existing transit system, including, but not limited to, ridership, capital and operating resource requirements, effectiveness and productivity, quality of service, and operational efficiency. Any anticipated challenges to implementation should also be identified.

Identify transit-supportive facilities and programs that either exist, could, or will be developed within the next five years that would complement and enhance the proposed service concepts, including:

- Advanced technology
- Transportation demand management (employer-sponsored shuttles, carpools/vanpools, etc.)
- Stop/station enhancements (bicycle facilities at transit centers, mobility centers, way finding and public information, security and lighting, etc.)
- Zero-emission vehicle requirements

Briefly evaluate the effectiveness of each support facility and program in enhancing transit use, including a general discussion of costs, benefits, implementation steps, and challenges.

Evaluate the restructured services with quantitative performance standards established in MTS Board Policy 42 (productivity, cost-effectiveness, schedule adherence, overcrowding, financial, etc.), and qualitative service parameters (headways/service span, streamline vs. better access, number of transfers, service duplications on major corridors, coordination with other services, etc.).

Each service adjustment proposed should be described with the following information, at minimum:

- Description of service, including rationale for service
- Route map showing routing, exact layover locations, and stops (consideration of stop spacing)
- Service span
- Headways / frequencies per hour per direction (and by day)
- Estimated ridership and greenhouse gas reductions
- Financial, operating, and performance statistics
- Vehicle requirements

Describe any supporting facilities and programs recommended as part of the service restructuring. Evaluate the restructuring plan, focusing on impacts to ridership, costs, productivity, cost-effectiveness, and quality of service (e.g. on-time performance and travel time), vehicle requirements, staffing requirements, and operational efficiencies.

Ultimately the final plan will be presented to the MTS Board of Directors (as part of a public hearing). The presentation will be led by MTS staff with assistance from the consultant.

No scheduling efforts are expected as part of this task. Scheduling will be the responsibility of MTS staff.

Task 5 Deliverables:

(1) Technical report outlining the proposed transit service strategies and implementation plans for budget constrained \$30-\$50 million reduction (with exact figure to be determined prior to beginning of Task 5), including supportive facilities and programs, explaining the benefits and costs associated with the concepts relative to the MTS operating environment

(2) Detailed service restructuring plan which will include one-page factsheets for each proposed and existing route

(3) Prepare materials to present to up to three (3) MTS Board of Directors or Executive Committee meetings.

Task 5A: Public Online Mapping Tool (Optional)

Consultant shall develop and deploy an interactive online tool that enables the public to easily visualize, explore, and understand the impacts of the proposed transit service changes. The online tool should allow the public to explore changes based on their specific location and should include geographic visualization of travel-time based changes within their individual commute; users should be able to see a boundary of all points reachable within a certain travel time currently and with the proposed service plan (and the proposed service plan developed in Task 4).

5.6. PAYMENT MILESTONES

TASK	ALL DELIVERABLES	1ST PAYMENT	FINAL PAYMENT
Task 1: Data Collection/Review of Existing Conditions	<p><i>(1) Technical report on review of relevant information and existing conditions.</i></p> <p><i>(2) Additional data collection, as necessary, dependent on MTS approval.</i></p> <p><i>(3) Prepare materials to present to up to two (2) MTS Board of Directors or Executive Committee meetings.</i></p>	Upon 50% completion of deliverables	Upon 50% completion of deliverables
Task 2: System and Service Evaluation	<p><i>(1) Technical report evaluating the existing system and services, identifying trips, segments, and routes that do not meet or have the potential to exceed performance expectations.</i></p> <p><i>(2) Prioritized list of service gaps, deficiencies, and opportunities.</i></p>	Upon 50% completion of deliverables	Upon 50% completion of deliverables

	<i>(3) Prepare materials to present to up to two (2) MTS Board of Directors or Executive Committee meetings.</i>		
Task 3: Evaluation of Recommendations from Elevate 2020	<i>(1) Technical report evaluating the proposed service enhancements in Elevate 2020 with assessments of projected changes in ridership and operating costs.</i>	Upon 50% completion of deliverables	Upon 50% completion of deliverables
Task 4: Develop Service Implementation Plan for Increased Service	<i>(1) Technical report outlining the proposed transit service strategy and implementation plan for increased service, including supportive facilities and programs, explaining the benefits and costs associated with the concept relative to the MTS operating environment.</i> <i>(2) Detailed service restructuring plan which will include one-page factsheets for each proposed and existing route</i> <i>(3) Prepare materials to present to up to three (3) MTS Board of Directors or Executive Committee meetings.</i>	Upon 50% completion of deliverables	Upon 50% completion of deliverables
Task 5: Develop Service Reduction Plan	<i>(1) Technical report outlining the proposed transit service strategies and implementation plans for budget constrained \$30-\$50 million reduction (with exact figure to be determined prior to beginning of Task 5), including supportive facilities and programs, explaining the benefits and costs associated with the concepts relative to the MTS operating environment</i> <i>(2) Detailed service restructuring plan which will include one-page factsheets for each proposed and existing route</i> <i>(3) Prepare materials to present to up to three (3) MTS Board of Directors or Executive Committee meetings.</i>	Upon 50% completion of deliverables	Upon 50% completion of deliverables

5.7. INVOICES

Invoices must be sent to the MTS Accounting Department, via email, at ap@sdmts.com. All invoices must have the Purchase Order and contract number clearly displayed to ensure timely payment. MTS will not pay on packing slips, receiving documents, delivery documents, or other similar documents. Invoices must be submitted for payment.

Payment terms shall be net 30 days from invoice date.

Contractors must also indicate if any of the invoiced amount(s) is for service or work provided by a subcontractor and indicate the amount that will be paid to the subcontractor. Contractors must also comply with the prompt payment requirements in the *Prompt Progress Payments* section of the Standard Conditions.

REVISED_COST/PRICING FORM

Firm Name: Transportation Management & Design, Inc. _____

TASK #	ESTIMATED # OF HOURS	FIXED FEE AMOUNT
Task #1: Data Collection/Review of Existing Conditions	660 590	\$76,785.03
Task #2: System and Service Evaluation	1150 964	\$125,227.46
Task# 2A: Board Workshop (Required)	50 48	\$9,617.58
Task #3: Evaluate Elevate 2020	360 332	\$64,002.88
Task #4: Develop Service Enhancement Plan	1500 1365	\$196,857.43
Task #4A: Public Online Mapping Tool (Optional)	30 26	\$4,118.65
Task #5: Develop Service Reduction Plan	1500 1405	\$203,691.67
Task #5A: Public Online Mapping Tool (Optional)	30 14	\$2,275.61
TOTAL CONTRACT AMOUNT		\$682,576.31

Proposer shall submit pricing for all the work described in the Scope of Work section. In preparing a cost proposal, Proposers are requested to provide a total all-inclusive cost for each task. As part of supporting document, Proposer shall provide a supplemental cost breakdown for each task.

Read attached General Provisions carefully. They are a part of your proposal. Unit prices will prevail regardless of extensions submitted by the Proposer.

All proposers must complete proposal forms as provided, failure to do so will deem the proposal non-responsive.

Proposer accepts responsibility for accuracy and presentation of the numbers included in the cost/price form.

Submit the proposal following instructions as specified in Submission Requirements section.

MTS COA
Project Cost Proposal - Revised Proposal II

TRANSPORTATION MANAGEMENT & DESIGN, INC.	Labor/Tasks	Task 1 Data Collection & Review of Existing Conditions	Task 2 System & Service Evaluation	Task 2A Board Workshop	Task 3 Evaluation of Recommendations from Elevate 2020	Task 4 Develop Service Implementation Plan for Increased Services	Task 4A Public Online Mapping Tool	Task 5 Develop a Service Implementation Plan for Service Reductions	Task 5A Public Online Mapping Tool	Labor Hours	Labor Rate	Total Cost
	Melissa Sather - Project Manager	40	44	16	32	100	2	120	2	356	\$241.50	\$85,974.00
	Russ Chisholm - Project Principal	20	22	8	12	57		67		186	\$270.00	\$50,220.00
	James Gerken - Project Coordinator	84	86	12	44	82	4	92	4	408	\$142.00	\$57,936.00
	Gary Hewitt - Senior Data Analyst	80	48				12		4	144	\$159.76	\$23,005.44
	Britney Tran - GIS Associate	80	160			200		240		680	\$92.02	\$62,573.60
	Associate Planners (2-3 Planners)	240	400		80	480		480		1,680	\$83.67	\$140,565.60
	Bobbi Duley - Graphic Designer	40	80	12		160	8	120	4	424	\$119.30	\$50,583.20
	Tim Baker - Principal Scheduler		80							80	\$177.61	\$14,208.80
	Contract Manager	6	4		4	4		4		22	\$190.90	\$4,199.80
	LABOR HOURS	590	924	48	172	1,083	26	1,123	14	3,980		
	LABOR COST	\$73,128.60	\$109,154.08	\$9,159.60	\$24,673.20	\$129,601.20	\$3,922.52	\$137,460.00	\$2,167.24			\$489,266.44
	OTHER DIRECT COSTS	Task 1	Task 2	Task 2A	Task 3	Task 4	Task 4A	Task 5	Task 5A	Total Cost		
	Travel									\$0.00		
	Lodging									\$0.00		
	Per Diem									\$0.00		
	Communications									\$0.00		
	Printing									\$0.00		
	Software Fees									\$0.00		
	Materials & Supplies									\$0.00		
	Miscellaneous									\$0.00		
	OTHER DIRECT COSTS	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
	TOTAL TMD	\$73,128.60	\$109,154.08	\$9,159.60	\$24,673.20	\$129,601.20	\$3,922.52	\$137,460.00	\$2,167.24	3,980		\$489,266.44

DB E.C.O	Labor/Tasks	Task 1 Data Collection & Review of Existing Conditions	Task 2 System & Service Evaluation	Task 2A Board Workshop	Task 3 Evaluation of Recommendations from Elevate 2020	Task 4 Develop Service Implementation Plan for Increased Services	Task 4A Public Online Mapping Tool	Task 5 Develop a Service Implementation Plan for Service Reductions	Task 5A Public Online Mapping Tool	Labor Hours	Labor Rate	Total Cost
	Ted Rosenbaum, PM		24		80	40		40		184	\$246.59	\$45,372.56
	Victoria Harris-Maciunas, Technical Lead		12		32	80		80		204	\$246.59	\$50,304.36
	Peter Son, Analyst				40	150		150		340	\$154.95	\$52,683.00
	Michael Cuthbert, CPM		4		8	12		12		36	\$308.23	\$11,096.28
	Labor Hours	\$0.00	\$40.00	\$0.00	\$160.00	\$282.00	\$0.00	\$282.00	\$0.00	764		
	Labor Cost	\$0.00	\$10,110.16	\$0.00	\$36,281.92	\$56,532.06	\$0.00	\$56,532.06	\$0.00			\$159,456.20
	OTHER DIRECT COSTS	Task 1	Task 2	Task 2A	Task 3	Task 4	Task 4A	Task 5	Task 5A	Total Cost		
	Travel					\$400.00				\$400.00		
	Lodging					\$800.00				\$800.00		
	Per Diem					\$150.00				\$150.00		
	Communications									\$0.00		
	Printing									\$0.00		
	Software Fees									\$0.00		
	Materials & Supplies									\$0.00		
	Miscellaneous									\$0.00		
	OTHER DIRECT COSTS	\$0.00	\$0.00	\$0.00	\$0.00	\$1,350.00	\$0.00	\$0.00	\$0.00	\$1,350.00		
	TOTAL	\$0.00	\$10,110.16	\$0.00	\$36,281.92	\$57,882.06	\$0.00	\$56,532.06	\$0.00	764		\$160,806.20

TOTAL	Labor/Tasks	Task 1	Task 2	Task 2A	Task 3	Task 4	Task 4A	Task 5	Task 5A	Total Hours	Total Cost
	Project Fee	\$3,656.43	\$5,963.22	\$457.98	\$3,047.76	\$9,374.17	\$196.13	\$9,699.61	\$108.37		\$32,503.67
		\$76,785.03	\$125,227.46	\$9,617.58	\$64,002.88	\$196,857.43	\$4,118.65	\$203,691.67	\$2,275.61	4,744	\$682,576.31



Metropolitan
Transit
System

Item No. 22, 05/15/2025

Comprehensive Operational Analysis: Contract Award

Board of Directors

What is a COA?

A comprehensive operational analysis (COA) is a project that features an examination and evaluation of a transit system to determine where improvements could be made to make transit service more effective and efficient.



What is a COA?

Analysis of:

- Current and potential ridership
- Travel patterns
- Demographics
- Current and future land use
- Operating Costs
- Performance in relation to Board Policy 42

Recommendations for:

- Changes to the transit network to improve transit productivity and availability, with realistic funding scenarios

Goals of the COA

- Develop strategies to address current travel demand with projected funding levels
- Integration with the region's current and future multimodal transportation system
- Realign existing services and operational frequency and span of services based on proposed service strategies
- Develop phasing plans and financial programs to support implementation of the service plans
- Ensure that community input is considered throughout the study



Planning Scenarios of the COA

- **Scenario 1 – Additional funding procured:**
 - \$75 million in additional revenues expected to increase frequencies and spans (or realigning services) on the existing transit network.
- **Scenario 2 - No increase in regional transit funding:**
 - Budget shortfall of \$100 million annually, with an estimated \$30-\$50 million in savings required to come from service reductions/changes.

COA Tasks

- Data Collection / Review of Existing Conditions
- System and Service Evaluation
- Evaluation of Recommendations from Elevate 2020
- Develop Service and Implementation Plan for Increased Service (Ballot measure or other funding)
- Develop Service Reduction Plan (for no increase in funding)



Solicitation Process

- RFP was posted in early February. Five (5) proposals were received by the due date of March 20, 2025 from the following:
 - Alvarez & Marsal Infrastructure and Capital Projects LLC
 - Efeso Management Consultants, Inc.
 - Financial Management Consulting
 - Jarrett Walker + Associates
 - Transportation Management & Design, Inc.
- All proposals were deemed responsible and responsive
- The process and schedule was presented to MTS Executive Committee on March 6, 2025

Solicitation Process

- **Evaluations**

- Selection Committee: MTS Planning, Bus Operations, Marketing, and Finance Departments
- Proposals were evaluated on the following:

Qualifications of the Firm or Individual	25%
Staffing, Organization, and Management Plan	25%
Work Plan	30%
Cost and Price	<u>20%</u>
Total:	100%

Initial Review

PROPOSER	TOTAL COST	COST SCORE	AVG TECH SCORE	TOTAL AVG TOTAL SCORE (TOTAL POSSIBLE: 100)	RANKING
Jarrett Walker + Associates	\$579,470.00	20.00	68.43	88.43	1
Transportation Management & Design, Inc.	\$714,660.99	16.22	72.07	88.29	2
Eteso Management Consultants, Inc.	\$969,949.30	11.95	32.79	44.74	3
Alvarez & Marsal Infrastructure and Capital Projects LLC	\$2,110,000.00	5.49	32.86	38.35	4
Financial Management Consulting	\$941,255.50	12.31	14.36	26.67	5

- Jarrett Walker + Associates (JWA) and Transportation Management & Design, Inc. (TMD) were deemed to be within the competitive range and invited them for in-person interviews on April 16, 2025.

Final Scores and Ranking

- After interviews, three subtasks were added to the scope of work, and revised technical and cost proposals were received.
- The final results:

PROPOSER	TOTAL COST	COST SCORE	AVG TECH SCORE	TOTAL AVG TOTAL SCORE (TOTAL POSSIBLE: 100)	RANKING
Transportation Management & Design, Inc.	\$682,576.31	18.32	73.14	91.46	1
Jarrett Walker + Associates	\$625,212.00	20.00	69.86	89.86	2

- MTS's ICE was \$742,900; pricing was deemed to be fair and reasonable
- Based on objectives of procurement, consideration of evaluation criteria and TMD's technical and cost proposals, the evaluation committee determined that TMD presented the best overall value to MTS

Transportation Management & Design, Inc

- TMD has completed similar projects throughout the United States



Transportation Management & Design, Inc

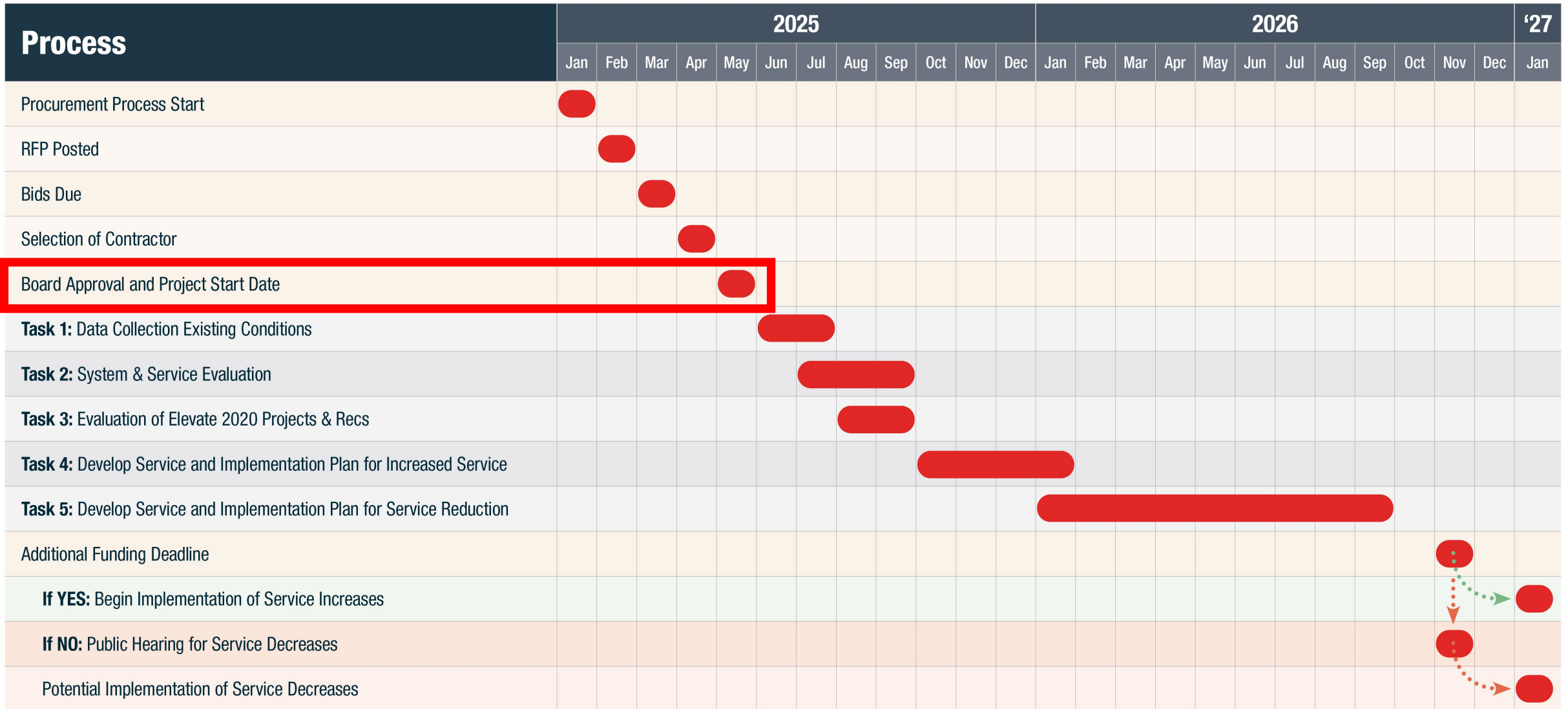
- TMD is well-versed in MTS service and operations and has assisted MTS in many important efforts, including:
 - Comprehensive Operational Analysis (2006)
 - Transit Optimization Plan (2017)
 - Elevate SD 2020 (2020)
 - In-sourcing study (ongoing)

Transportation Management & Design, Inc

- Melissa Sather (Project Manager), Executive Vice President
 - Project Manager of Elevate SD 2020 efforts
 - Designed service changes as part of Transit Optimization Plan
 - Managed COAs across the country; including Los Angeles, Orange County, Nashville, and Newark
- Russ Chisholm (Project Principal),
 - Over four decades of experience
 - Managed more than 150 transit network redesign and implementation projects across the country
 - Over 50 projects for MTS/SANDAG/NCTD
- DB E.C.O. North America (Subconsultant) 
 - Rail and transit consultant that offers specialized management and technical consulting services to agencies, private companies, and operators in rail and public transportation.
 - Leverages Deutsche Bahn's global expertise in service planning & operations, infrastructure management, customer service, and revenue strategies



Overall COA Timeline



Staff Recommendation

Item No. 22, 05/15/2025

- That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G3042.0-25 (in substantially the same format as Attachment A) with Transportation Management & Design, Inc. (TMD), a Disadvantaged Business Enterprise (DBE), for a Comprehensive Operational Analysis for a two (2) year period, for a total amount of \$682,576.31.