Board of Directors Agenda

September 14, 2023

Click link to access the meeting:

https://us02web.zoom.us/j/98288032362

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.
CC	▶	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).

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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) 398-9681** or by mail at **1255 Imperial Ave. Suite 1000, San Diego CA 92101.**

Agenda de la Junta de Directores

14 de septiembre de 2023

Haga clic en el enlace para acceder a la reunión:

https://us02web.zoom.us/j/98288032362

ID de la reunión en Zoom

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.

Funciones del Seminario En Línea:

Levantar la mano	▶	Use la herramienta de **levantar la mano** cada vez que desee hacer un comentario público.
CC	▶	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).

Descarga en el App Store

Obténla en Google Play

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) 398-9681** o por correo postal en **1255 Imperial Ave. Suite 1000, San Diego CA 92101.**

Metropolitan Transit System

Board of Directors

Agenda

September 14, 2023 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) 444-9171; Webinar ID: 982 8803 2362, https://zoom.us/j/98288032362

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 July 27, 2023 Board of Directors meeting minutes.	Approve
4.	**Investment Report – Quarter Ending June 30, 2023**	Informational
5.	**Fiscal Year (FY) 2022-2023 and FY 2023-2024 California Senate Bill (SB) 1 State of Good Repair Funding** Action would approve Resolution No. 23-10 in order to: 1) Authorize the use of, and application for, $5,272,017 in FY 2023-24 State of Good Repair (SGR) funding to be used for the SD100 Light Rail Vehicle (LRV) Replacement Project; 2) Approve the acceptance of additional FY 2023-24 SB1-SGR funding if made available to MTS; and 3) Approve the reprogramming of FY 2022-23 SB1 SGR funding in the amount of $5,095,907 to the FY24 Bus Procurement Project as approved in the FY 2024 Capital Improvement Program (CIP).	Approve
6.	**Policy 44: MTS Travel Expense – Policy Revision** Action would 1) Approve the proposed revisions to MTS Board Policy No. 44, "MTS Travel Expense Policy" (Attachment A, B); 2) Authorize the Chief Executive Officer (CEO) to modify MTS Board Policy No. 44, "MTS Travel Expense Policy" Attachment A, B, C, D, E and F as necessary to reflect	Approve

changes in annual IRS mileage reimbursement rates and IRS determinations of High Cost Localities, and to make minor changes to document design or formatting; and 3) Repeal MTS Board Policy No. 29, "Attendance at Transit-Related Conferences" (Attachment C);

7. **Grantville Transit Center Hardscape and Landscape Improvements – Work Order Agreement** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute Work Order MTSJOC347-05 under Job Order Contract (JOC) MTS Doc. No. PWG347.0-22 with ABC General Contracting, Inc. (ABCGC), in the amount of $968,743.63, for rehabilitating the hardscape and landscape currently present at the Grantville Transit Center.

8. **Grantville Transit-Oriented Development (TOD) Painting – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to: 1) Rescind the award and direction to execute MTS Doc. No. PWL370.0-23 to Prime Painting Contractors Inc. for Grantville Station Painting Improvements, approved by Agenda Item No. 13 at the July 27, 2023 MTS Board of Directors Meeting; 2) Execute MTS Doc. No. PWL370.0-23 , with All Source Coatings Inc., a certified Small Business, for the Grantville Station Painting Improvements in the amount of $1,746,000.00; and 3)Authorize the CEO to execute amendments or change orders up to a 20% contingency ($349,200) for this construction contract, bringing total expenditure authority to $2,095,200.00.

9. **San Diego State University (SDSU) Tunnel Smoke Control Upgrades – Sole Source Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWL378.0-24, a Sole Source agreement, with Drake Integrations LLC (Drake Integrations), for provision of Smoke Control Upgrades at the SDSU tunnel, for a five (5) year period, in the amount of $299,000.

10. **Construction Management (CM) Services for South Bay Zero Emission Bus (ZEB) Overheard (OH) Charging Infrastructure Installation – Work Order Amendment** — Approve

Action would 1)Ratify Work Order WOA2501-CM01.2 under MTS Doc No. G2501.0-21 with TRC Engineers, Inc. (TRC) totaling $40,305.00, to provide additional survey and inspection staff; 2)Ratify Work Order WOA2501-CM01.3 under MTS Doc No. G2501.0-21 with TRC totaling a savings adjustment of $6,942.44, for the revision of the estimated work hours for each task; and 3) Authorize the Chief Executive Officer (CEO) to execute Work Order WOA2501-CM01.4 under MTS Doc. No. G2501.0-21, with TRC, for additional CM services for the ZEB OH Charging Infrastructure Construction Project in the amount of $421,142.48.

11. **South Bay Maintenance Facility (SBMF) Building 3620 Roofing Replacement – Work Order Agreement** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute Work Order MTSJOC324-35 under Job Order Contract (JOC) to MTS Doc. No. PWG324.0-21, with ABC General Contractor, Inc. (ABCGC), in the amount of $193,236.34 for replacing the roofing at Building 3620 at the SBMF.

12. **Municipal Separate Storm Sewer System (MS4) Support and As-Needed Best Management Practices (BMP) Repair and Consulting Services – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc No. PWG367.0-23, with WSP USA (WSP), in the amount of $1,079,270.68 for a period of five (5) years to provide MTS support and as-needed repair and consulting services related to Phase II MS4 General Order.

13. **Light Rail Vehicle (LRV) Tire Kits - Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1648.0-23 with Penn Machine, in the amount of $5,142,681.23 for LRV Tire Kits.

14. **Mobile Column Lifts – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1643.0-23, with Southwest Lift & Equipment, Inc., a Small Business (SB) in the amount of $182,382.56 for mobile column lifts.

15. **Tenable Software Renewal Service – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. G2748.0-23, with Data Impressions Technology Group, in the amount of $368,725.00, for a period of three (3) years for the provision of Tenable Software subscriptions.

16. **Legal Services – Tort Liability – Contract Award** — Approve

Action would 1) Authorize the Chief Executive Officer (CEO) to execute MTS Doc. G2782.0-24 with Kahana & Feld, LLP (Kahana & Feld) to provide legal services through December 31, 2026 in the amount of $677,725; and 2) Authorize the CEO to execute MTS Doc. G2783.0-24 with McDougal Boehmer Foley Lyon Mitchell & Erickson (McDougal) to provide legal services through December 31, 2026 in the amount of $677,725.

17. **On-Call Marketing and Communication Services – Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to: 1) Execute MTS Doc. No. G2719.0-23, with Nuffer, Smith, Tucker, Inc. (Nuffer, Smith, Tucker), a Small Business (SB), for On-Call Marketing and Communication Services for a three (3) base year period in the amount of $1,217,060, plus three (3) 1-year options in the amount of $1,264,880 for a total contract amount of $2,481,940; and 2) Exercise the option years at the CEO's discretion.

18. **Clean Transit Advancement Campus (CTAC), Advanced Planning Services – Work Order Amendment** — Approve

Action would 1) Ratify Work Order WOA353-AE-20, under MTS Doc No. PWL353.0-22, with Dokken Engineering (Dokken), in the amount of $37,323.27 for design services to perform a Phase II Environmental Site Assessment (ESA); and 2) Authorize the Chief Executive Officer (CEO) to execute Work Order Amendment WOA353-AE-20.01, under MTS Doc No. PWL353.0-22, with Dokken, in the amount of $1,238,671.08 to provide advanced planning services for a new MTS bus maintenance facility for the Clean Transit Advancement Campus (CTAC) Project, formally known as Division 6.

19. **Communications (Comm) Cabinets HVAC Maintenance - Contract Award** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. PWG365.0-23 with Comfort Mechanical, a Small Business (SB), at $889,846, for HVAC preventative maintenance and inspection services for comm cabinets.

20. **Additional Staffing – One (1) PRONTO Support Specialist and three (3) Call/Service Center Representatives** — Approve

Action would authorize the Chief Executive Officer (CEO) to add one (1) PRONTO Support Specialist and three (3) Call/Service Center Representatives to the position tables previously approved in the Fiscal Year 2024 budget.

DISCUSSION AND REPORT ITEMS

21. **PRONTO Fare Collection System – Contract Amendment (Israel Maldonado)** — Approve

Action would authorize the Chief Executive Officer (CEO) to execute Amendment 17 to MTS Doc. No. G2091.0-18, with Innovations in Transportation, Inc. (INIT), for Open Payment and Inspection App Solution, in the amount of $1,224,387.98.

22. **Transit Security and Passenger Safety Department Expansion (Al Stiehler)** — Approve

Action would approve the addition of 34 new Code Compliance Inspectors (CCIs), six (6) Code Compliance Supervisors, one (1) Assistant Field Operations Manager, one (1) Administrative Support Professional and create five (5) Code Compliance Dispatcher positions.

23. **Grants Administration Report (Kena Teon and Julia Tuer)** — Informational

24. **MTS Access Services Overview (Michael Wygant and Jay Washburn)** — Informational

OTHER ITEMS

25. Chair's Report Informational

26. Chief Executive Officer's Report Informational

27. Board Member Communications Informational

28. 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.

CLOSED SESSION: TIME CERTAIN AT 11:00AM

29. Closed Session – Conference with Legal Counsel – Existing Litigation Pursuant to California Government Code Section 54956.9(d)(1) Possible Action
Grecia Figueroa v Nathan Fletcher, San Diego Metropolitan Transit System, et al. San Diego Superior Court Case No. 37-2023-00012828-CU-OE-CTL

ADJOURNMENT

30. Next Meeting Date
The next Board of Director's meeting is scheduled for October 19, 2023 at 9:00am.

31. Adjournment

MINUTES

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM

BOARD OF DIRECTORS

July 27, 2023

[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 9:03 a.m. A roll call sheet listing Board member attendance is attached.

2. Public Comment

David Roger – Provided a verbal statement to the Board during the meeting. Roger expressed concern for safety and health issues at the 5th Avenue Trolley Station and expressed dissatisfaction with the cleaning and security measures at the station.

Louis Pruitt – Provided a verbal statement to the Board during the meeting. Pruitt expressed dissatisfaction with the current Sunday schedule and asked if the Saturday schedule could replace the Sunday schedule.

Matthew Snyder – Representing Teamsters Local Union 542 made a verbal statement to the Board during the meeting. Snyder asked for conversations to continue on having Copley Park as part of the MTS operations. Snyder asked the Board what stage of the consolidation process the agency was in; if there was a formed ad hoc committee; when the meeting would take place; and who would compose the membership. Snyder asked for Local 542 representatives to be part of the membership and urged the subcommittee to be composed of MTS representatives, similar industries, San Diego Association of Governments (SANDAG) and service area representatives. Snyder noted the lack of sanitation and security at employee restrooms.

The Original DRA – Provided a verbal statement to the Board during the meeting. The Original DRA commented on the MTS vs Figueroa case and the financial severance option offered. They also commented on the recent strike and the increase in funding provided to Transdev. The Original DRA expressed dissatisfaction with these incidents and how MTS handled the situations.

Alex Wong – Provided a verbal statement to the Board during the meeting. Wong supported a people mover over the airport trolley in an effort to maximize high frequency service.

CONSENT ITEMS:

3. Approval of Minutes

Action would approve the June 8, 2023 Special Board of Directors and the June 15, 2023 Board of Directors meeting minutes.

4. Adoption of 2023 Conflict of Interest Code – Amendment

Action would 1) Adopt Resolution No. 23-09 amending the MTS Conflict of Interest Code pursuant to the Political Reform Act of 1974; 2) Adopt the amended 2023 MTS Conflict of Interest Code and 3) Forward the amended 2023 MTS Conflict of Interest Code to the County of San Diego (the designated code-reviewing body) (Gov. Code § 82011) requesting approval of the amendment as required under Government Code section 87303.

DRAFT

5. Proposed Revisions to The Accessible Services Advisory Committee Membership Guidelines

Action would approve the proposed revisions to the Accessible Services Advisory Committee (ASAC) Membership Guidelines.

6. Additional Staffing – One (1) Planning – Transportation Planner

Action would authorize the Chief Executive Officer (CEO) to add one (1) Transportation Planner to the position tables previously approved in the Fiscal Year 2024 budget.

7. Trolley Track Improvement – Construction Management (CM) Services - Work Order

Action would authorize the Chief Executive Officer (CEO) to execute Work Order WOA2499-CM01 under MTS Doc. No. G2499.0-21 with PGH Wong, a Minority Business Enterprise (MBE), in the amount of $149,474.37 for CM services for Trolley Track Improvements.

8. Orange/Blue/Green Lines Variable Message Sign (VMS) Installation Project – Work Order Agreement

Action would authorize the Chief Executive Officer (CEO) to execute Work Order No. WOA355-AE-17, under MTS Doc. No. PWL355.0-22 with Psomas in the amount of $410,078.68 to prepare plans, specifications, and estimates (PS&E) for the Orange/Blue/Green Lines VMS Installation Project.

9. J Street Corrugated Metal Pipe Emergency Repair – Work Order Agreement

Action would authorize the Chief Executive Officer (CEO) to execute Work Order MTSJOC347-16 under Job Order Contract (JOC) to MTS Doc. No. PWG347.0-22, with ABC General Contractor, Inc. (ABCGC) in the amount of $146,929.97 for the repair of the corrugated metal pipe located at J Street along the Blue Line right-of-way.

10. Motorola Solutions, Inc. Radio System Maintenance Services – Contract Award

Action would authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. B0759.0-23, a Sole Source agreement, with Motorola Solutions, Inc. (Motorola) for provision of Regional Transit Management System (RTMS) radio system maintenance services for a four (4) year period effective August 1, 2023 in the amount of $1,185,954.08.

11. Blue Line Bridge Repair – Work Order Agreement

Action would authorize the Chief Executive Officer (CEO) to execute Work Order MTSJOC347-08 under Job Order Contract (JOC) to MTS Doc. No. PWG347.0-22, with ABC General Contractor, Inc. (ABCGC), in the amount of $149,887.28 for the repair of the bridges located at 8th Street and 18th Street along the Blue Line right-of-way.

12. Microsoft Enterprise Licensing and Software Assurance – Contract Amendment

Action would authorize the Chief Executive Officer (CEO) to execute Amendment No. 4 to MTS Doc. No G2378.4-20, with Crayon Software Experts, LLC (Crayon) in the amount of $160,874.78 bringing the contract total to $1,150,551.61.

13. Grantville Transit-Oriented Development (TOD) Painting – Contract Award

Action would authorize the Chief Executive Officer (CEO) to: 1) Execute MTS Doc. No. PWL370.0-23 with Prime Painting Contractors Inc. for Grantville Station Painting Improvements in the amount of $1,330,000; and 2) Authorize the CEO to execute

amendments or change orders up to a 20% contingency ($266,000) for this construction contract bringing total expenditure authority to $1,596,000.

14. Grantville Transit-Oriented Development (TOD) Painting Construction Management Services – Work Order Agreement

Action would authorize the Chief Executive Officer (CEO) to execute Work Order No. WOA2496-CM01 under MTS Doc. No. G2496.0-21 with AECOM Technical Services (AECOM) for the Grantville TOD Painting Construction Management (CM) Services in the amount of $190,425.76.

15. Bayside Double Track Imperial Avenue Transit Center (IMT) Construction Management (CM) Services – Work Order Amendment

Action would authorize the Chief Executive Officer (CEO) to execute Work Order No. WOA2498-CM05 under MTS Doc. No. G2498.0-21 with Kleinfelder Construction Services, Inc., to provide Construction Management (CM) Services for the Bayside Double Track IMT Project in the amount of $500,027.93.

16. Modernization of Stadium Trolley Station Elevator – Work Order Agreement

Action would authorize the Chief Executive Officer (CEO) to execute Work Order MTSJOC347-21 to MTS Doc. No. PWG347.0-22 with ABC General Contractor, Inc. (ABCGC) in the amount of $296,562.53 to modernize the Stadium Trolley Station elevator.

17. Billboard Lease Contract Renewals – Master Lease Agreement and Individual Site Leases

Action would authorize the Chief Executive Officer (CEO) to execute new Master Lease Agreements (MLA) and Location Specific Leases (LSL) (collectively Leases) (in substantially the same format as Attachment A and B) for thirteen (13) existing billboards on MTS property with Clear Channel Outdoor, LLC (CCO) and Outfront Media, LLC (OUT) (collectively Lessees) for a twenty (20) year term with a minimum annual revenue of $458,559.

18. Additional Staffing – One (1) Bus Operations Training Instructor

Action would authorize the Chief Executive Officer (CEO) to add one (1) Bus Operations Training Instructor to the position tables previously approved in the Fiscal Year 2024 budget.

Public Comment

The Original DRA – Provided a verbal statement to the Board during the meeting. They expressed dissatisfaction with the meeting minutes. The Original DRA did not support item number 4 and urged the Board to join in partnerships where revenue from advertisement companies fund restroom maintenance costs.

Truth – Provided a verbal statement to the Board during the meeting. They believed that conflict of interest disclosure should include political interests. They commented about the vacant Caltrans position in the ASAC. They disapproved of various projects such as items: 8, 10, 11, 13, 14, 16, 17.

Action on Recommended Consent Items

Board Member Hall moved to approve Consent Agenda Item Nos. 3 to 18. Chair Whitburn seconded the motion, and the vote was 14 to 0 in favor with Board Member Vargas absent.

DISCUSSION ITEMS AND REPORT ITEMS:

19. San Ysidro Transit Center Improvements Project Update (Denis Desmond, Beverly Neff)

Beverly Neff, MTS Senior Planner, and Zack Hernandez, with SANDAG, presented on San Ysidro Transit Center Improvements Project Update. They outlined: challenges impacting San Ysidro, approach to solutions, various concepts, stakeholder and community outreach.

Public Comment

Truth – Provided a verbal statement to the Board during the meeting. Truth believed that not many people rode transit and suggested various design possibilities to maximize efficiency and safety for the project. Truth did not support the design C option.

The Original DRA – Provided a verbal statement to the Board during the meeting. They did not support any efforts to assist the Mexican Government. They did not agree with the survey strategies used, electric vehicle (EV) incentives, and an elevated platform design.

Committee Comment

Sharon Cooney, MTS Chief Executive Officer, alerted the Board that Concept C required the San Ysidro Station service to be suspended for 2-3 years during the construction period. She noted the importance to grade separate from pedestrian and vehicle crossings for maximizing trolley efficiency.

Board Member Moreno liked the San Ysidro Boulevard design concept and was excited about the plaza, bike, and restroom opportunities. She complemented staff on the user experience portion of the survey and highlighted the importance of rider survey participation to provide best service. She reminded the Board and audience of the highly trafficked border crossing the system services and urged planning for future growth not solely current demand. She noted the ongoing growth of Tijuana and recent San Ysidro point of entry improvement as markers for high cross border mobility and as incentives to use transit rather than cars. She noted that a previous San Ysidro Mobility Hub Project obstacle was a lack of space and encouraged continuous creative engineering solutions and supported Concept B as the best option for the area. She stated that this project should not be a solely MTS funded project and will require State and Federal funding. She stated that the agency could have addressed the project sooner with federal project infrastructure money. She supported the overall project and Concept B.

Board Member Hall asked if staff had performed cost estimates for the projects. Mr. Hernandez replied that traditionally, elevated structures were costlier and planners did not have definitive estimates at the current point of the project. Board Member Hall encouraged cost associations for the Board to be able to make fiscally appropriate decisions. He asked if traffic studies had been performed for the bus only lane concept. Mr. Hernandez replied that the agency has only looked at conceptual level assessments of what the area could support. He noted that there was a level of implementation feasibility within the next phase of engineering and design. Board Member Hall cautioned Mr. Hernandez about pricing themselves out of the market. Ms. Neff noted that both concepts would solicit costs whether it involved elevating the platform or implementing at grade separation. Board Member Hall asked how the Cross-Border Trolley concept integrated to the proposed project designs. Mr. Hernandez classified the project as a near term project that does not impact the addition or expansion of an alternative project such as the Cross-Border Trolley.

Board Member Chavez cautioned the consideration of Concept C due to the station requiring to be out of service for a 2-3-year timeline. She encouraged focus groups and supported the construction of restrooms in the area. She supported Concept B design. She noted that the area was a 24-hour crossing and encouraged a designated pick up and drop off zone. She cautioned about the highly dense traffic that causes congestion, limited pick up zones and bike related accidents. She encouraged rush hour connections to facilitate the transfer point from Ped West.

Board Member Elo-Rivera asked if there could be a temporary station nearby to consider Concept C as an option. Ms. Neff replied that temporary stations have been assessed but no satisfactory locations were identified and would have to be addressed with bus shuttles. He noted the efficient, effective and welcoming space the project will be for the region. He supported the bus only lane, flex curve opportunities, public space and the incorporation of restrooms. Board Member Elo-Rivera was curious about the survey engagement and if the survey captured riders throughout different times of day and he highlighted the needs of students. Mr. Hernandez cited a comprehensive travel behavior survey at the border that SANDAG finalized in 2019/2020 that showed work and school as large reasons for border crossings. He noted that additional outreach could be conducted to better serve communities, including schools. Board Member Elo-Rivera encouraged SANDAG to connect with community colleges. He agreed that the agency should anticipate the crossing demand growth.

Board Member Chavez suggested the construction of the project at night to reduce impacts.

Action Taken

Informational item only. No action taken.

20. State of California Budget – Transportation Funding (Sharon Cooney and Julia Tuer)

Julia Tuer, MTS Manager of Government Affairs, presented on State of California budget transportation funding. She provided details on: the state budget transportation funding, accountability requirements, statutory relief measures, transit transformation task force and next steps.

Public Comment

Truth – Provided a verbal statement to the Board during the meeting. Truth did not support funding of the various programs.

The Original DRA – Provided a verbal statement to the Board during the meeting. The Original DRA did not support funding, its various programs and the organization itself.

Committee Comment

Ms. Cooney added that Board Member Montgomery Steppe previously raised discussions about reinstating the Transportation Development Act (TDA) task force as part of a decision-making body. Ms. Cooney noted that it would be likely she is appointed the Chair of the California Transit Association and will likely be on the Transit Transformation Task Force.

Board Member Montgomery Steppe was happy to hear that the committee would be reinstated. She praised the additional funding that would be allocated to the region and looked forward to seeing the ideas that are created from the task force and the MTS Budget Development Committee. Board Member Montgomery Steppe asked about how funding would be distributed

over the following four years. Ms. Tuer explained that the majority of the funding would be allocated in the first two fiscal years (FY).

Board Member Donovan asked how the estimated FY 24 funding aligns with the projected budget. Ms. Cooney clarified that the funding presented on today was not reflected in the budget and noted that staff had not yet received full funding guidelines from the state.

Board Member Moreno thanked staff for their advocacy work at the state level. She noted that as Cahir of the MTS Budget Development Committee, they would allocate the funds appropriately and hoped to fund Youth Opportunity Passes (YOP) and a restroom study. Board Member Moreno asked who would compose the task force. Ms. Tuer replied that representatives would include: transit operators, Caltrans, local governments, regional planning agencies, transportation advocacy organizations, labor organizations, academic institutions, state/assembly transportation committees and additional stakeholders. Board Member Moreno claimed that this was MTS's opportunity for San Diego to be a leading transit agency in the state.

Action Taken

Informational item only. No action taken.

21. Transit Security and Passenger Safety Department Staffing Options (Al Stiehler)

Al Stiehler, MTS Director of Transit Security and Passenger Safety, presented on department staffing options. He presented on: the department's vision, mission & values, management department size, code compliance inspector (CCI) department size, INTERCON department size, K9 department size, homeless outreach team (HOT), bus enforcement support team (B.E.S.T.), camp team, passenger safety team, special details / community outreach, current department operations, trolley system, deployment, CCI inspections and enforcement, CCI total hand held unit (HHU) inspections, citations, challenges, light rail security issues survey, re-imagining security, department expansion, benefits to expanding the department, additional expansion considerations, contracting with local law enforcement, and benefits of creating a transit police department.

Public Comment

David Roger – Provided a verbal statement to the Board during the meeting. Roger expressed dissatisfaction with MTS security and claimed lack of safety on the system.

The Original DRA – Provided a verbal statement to the Board during the meeting. The Original DRA critiqued the agency's perception of safety efforts presented.

Truth – Provided a verbal statement to the Board during the meeting. Truth expressed dissatisfaction with MTS security and claimed lack of safety on the system and provided anecdotal accounts.

Committee Comment

Board Member Dillard asked about the additional Transportation Security Association (TSA) K9 unit teams allocated to San Diego during Comic Con and the internal K9 unit. Mr. Stiehler replied that the agency has three K9 teams. She asked staff to describe how the unit is used. Mr. Stiehler stated that the unit is deployed when there is an unattended package to detect explosives. She invited staff's recommendations on La Mesa's HOME program.

Board Member Montgomery Steppe asked what staff's recommendation was based off of the three proposals. Mr. Stiehler suggested that they be considered as phases rather than options. He believed that the first phase should include a staff increase for visibility. Then, concurrently, the agency could contract with law enforcement, and while the contract was in place, the agency could begin to build an internal police department. Board Member Montgomery Steppe emphasized that a strategic plan would continue to be defined by existing principles, if the department were to be expanded. She encouraged the continuation of outreach workers, the ambassador program, along with additional cleanliness and lighting infrastructure. She noted that a partnership with the City Police Department or the Sheriff's department would be cumbersome as they are experience staffing impacts. She was wary of facing similar staffing issues, but preferred to have the services in-house rather than contracting them out. She emphasized a diverse police workforce and is open to exploring options to make the system safer. She cited the American Public Transportation Association (APTA) peer review, the Homelessness community plan and the balance between social impacts and safety.

Board Member Elo-Rivera noted the diverse ridership and finding balance of the perception of safety is a difficult task. He urged the Board to keep that framework present throughout the conversation. He validated the safety concerns expressed by the community. He believed that the agency needed the right tools to address arising issues. He asked to confirm that MTS is the only agency that does not have a law enforcement component and asked about the significant safety outcomes. Mr. Stiehler replied that transit as a whole is addressing similar issues, including: nuisances, loitering, drug use and mental health. Board Member Elo-Rivera suggested that the issues listed did not necessarily seem like they were law enforcement concerns and believed there were more appropriate resources to address the issues. He did not want to replicate traditional enforcement structures at MTS. He encouraged staff to continue to work with the MTS Security and Passenger Safety Community Advisory Group (CAG)? and expand staffing that trained to work with people experiencing homelessness. He asked staff how homelessness services were offered. Mr. Stiehler clarified that CCIs provide information on resources, and the Downtown Partnership has an unhoused CARE team who can facilitate better access opportunities than MTS. Board Member Elo-Rivera noted the importance of bridging folks with resources. He expressed reservations with contracting the Sheriff's department to yield the results the agency is looking for. He believed that the conversation should be had in a measured approach to ensure that MTS hosts a safe transit system for everyone who uses it.

Board Member Chavez asked what the cost difference would be to contract services versus hosting the program internally. Mr. Stiehler noted that the amount presented was a broad estimate and that to better assess the cost, the agency should higher a consultant. Board Member Chavez noted the prioritization of reliable, clean and safe service as well as continuing to solicit rider focus groups to better enhance the system. She also advocated for real time response. Mr. Stiehler noted the emergency buttons on the inside of each trolley car, and the agency's Ride Assured service where passengers can call or text to report an incident. He noted that the agency is currently working to introduce an application alert feature. Board Member Chavez acknowledged that MTS hosted elderly and disabled passengers on the system and suggested real time camera systems as a reliability tool. Mr. Stiehler replied that there are bandwidth and cost limitations to project a live feed.

Board Member Ortiz was concerned about distinguishing calls for service on MTS transit property and the various jurisdictions. Mr. Stiehler noted that there have been cases where 911 calls are not necessarily directed to jurisdictional dispatch centers and is rather transferred once

the caller disclosed their location. He noted that based off of that information, tracking the calls for service could be confusing where incidents are occurring on a trolley. He noted that law enforcement needs were defined by call for service metrics and asked if there was a way to track trolley specific call for services. Mr. Stiehler replied that the agency has recently created a Crime and Data Analyst position to appropriately deploy security to those areas. He added that once the agency has key data, they are able to accurately locate trolley cars because the dispatch center is within the trolley operator control center. Board Member Ortiz emphasized the importance of keeping accurate data to decision-making. He supported on-board, real-time cameras for accurate data collection.

Chair Whitburn liked the safety organizational goals. He was surprised by the number of MTS employees assaulted and believed that the agency should be able to protect its staff and respond effectively and efficiently. He believed that future conversations about this topic should be thoughtful and inclusive. He also commended the HOT for connecting people with shelters, benefits and family members.

Action Taken

No action taken. Informational item only.

22. Zero Emission Bus (ZEB) Program and Transition Plan Update (Mike Wygant, Kyle Whatley, and Heather Furey)

Mike Wygant, MTS Chief Operating Officer for Bus, and Kyle Whatley, Zero Emission Vehicle and Sustainability Manager, presented on ZEB Program and Transition Plan Update. They provided details on: policy history, timeline, ZEB program performance report, monthly fleet efficiency, average efficiency by route, efficiencies vs temperatures, compressed natural gas (CNG) vs battery electric bus (BEB) monthly millage, efficiency summary, CNG vs BEB fuel and maintenance, availability, ZEB program, summary, ZEB deployment, construction at bus division, South Bay bus maintenance facility, Imperial Ave division, Kearney Mesa and East County, new all-ZEB Division, funding, transition costs, upcoming milestones, upcoming ZEB procurement timeline, early adoption pathway, and final summary.

Public Comment

Truth – Provided a verbal statement to the Board during the meeting. Truth did not support the program due to cost, environmental and safety concerns.

The Original DRA – Provided a verbal statement to the Board during the meeting. The Original DRA did not support the program due to radiation health concerns.

Committee Comment

Board Member Montgomery Steppe noted that the Clean Transit Advancement Campus (CTAC) project's design build allows smaller businesses to be part of the construction process.

Action Taken

No action taken. Informational item only.

23. Grants Administration Report (Kena Teon and Julia Tuer)

The Board deferred the staff report for this item to the next meeting.

24. Operations Budget Status Report for May 2023 (Gordon Meyer)

The Board deferred the staff report for this item to the next meeting.

OTHER ITEMS:

25. Chair Report

There was no Chair report.

26. Chief Executive Officer's Report

There was no Chief Executive Officer's Report.

27. Board Member Communications

There were no Board Member communications.

28. Remainder of Public Comments Not on The Agenda

Truth – Provided a verbal statement to the Board during the meeting. Truth disagreed with the Comic-Con, homeless and YOP populations to be included as ridership metrics. They requested the Purple line pass through Kearney Mesa up to Mira Mesa in order to create major transit connections. Truth cited topics in the SANDAG June 23rd Agenda Packet and the Eno Center for Transportation.

William Moore – Provided a verbal statement to the Board during the meeting. Moore spoke about Circulate San Diego's support of Open Loop Payments and upcoming events on the subject.

ADJOURNMENT

29. Next Meeting Date

The next regularly scheduled Board meeting is September 14, 2023 at 9:00am.

30. Adjournment

The meeting was adjourned at: 12:03pm.

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: Roll Call Sheet

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS
ROLL CALL

MEETING OF (DATE): July 27, 2023 CALL TO ORDER (TIME): 9:03 am

RECESS: _____ RECONVENE: _____

CLOSED SESSION: _____ RECONVENE: _____

PUBLIC HEARING: _____ RECONVENE: _____

ORDINANCES ADOPTED: _____ ADJOURN: 12:03pm

JURISDICTION	BOARD MEMBER		ALTERNATE		PRESENT (TIME ARRIVED)	ABSENT (TIME LEFT)
City of Chula Vista	Chavez	☒	Cardenas	☐	9:03am	12:03pm
City of Chula Vista	McCann	☒	Cardenas	☐	9:03am	10:05am
City of Coronado	Donovan	☒	Duncan	☐	9:03am	12:03pm
County of San Diego	Vacant	☐	Vargas	☐	ABSENT	ABSENT
City of El Cajon	Goble (Vice-Chair)	☐	Ortiz	☒	9:03am	12:03pm
City of Imperial Beach	Leyba-Gonzalez	☒	Aguirre	☐	9:03am	12:03pm
City of La Mesa	Dillard	☒	Arapostathis	☐	9:03am	12:03pm
City of Lemon Grove	Gastil	☐	Mendoza	☒	9:03am	12:03pm
City of National City	Bush	☐	Rodriguez	☒	9:07am	10:17am
City of Poway	Frank	☒	Pepin	☐	9:03am	11:46am
City of San Diego	Montgomery Steppe	☒	Von Wilpert	☐	9:03am	12:03pm
City of San Diego	Elo-Rivera	☒	LaCava	☐	9:03am	11:41am
City of San Diego	Gloria	☐	Moreno	☒	9:03am	12:03pm
City of San Diego	Whitburn (Chair)	☒	Campillo	☐	9:03am	11:28am
City of Santee	Hall	☒	Koval Minto	☐ ☐	9:03am	12:03pm

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

September 14, 2023

SUBJECT:

Investment Report – Quarter Ending June 30, 2023

INFORMATIONAL ONLY

Budget Impact

None.

DISCUSSION:

Attachment A comprises a report of the San Diego Metropolitan Transit System (MTS) investments as of June 30, 2023. The combined total of all investments has increased quarter to quarter from $233.5M to $260.3M. This $26.8M increase is attributable to $41.4M in American Rescue Plan Act (ARPA) of 2021 revenue, $12.4M in Federal Transit Administration (FTA) capital draws, partially offset by $27.2M in capital expenditures, as well as normal timing differences between other payments and receipts.

The first column provides details about investments restricted for Capital Improvement Projects (CIP) 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 and is able to meet expenditure requirements for a minimum of the next six months as required.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. Investment Report for the Quarter Ending June 30, 2023

San Diego Metropolitan Transit System
Investment Report
June 30, 2023

Institution / Issuer	Function	Investment Type	Restricted	Unrestricted	Total	Avg. Rate of Return		Benchmark
J.P. Morgan Chase	Operating Funds	Depository Bank	-	29,469,139	29,469,139	2.46%	*	0.550% WSJ Money Market
U.S. Bank - Retention Trust Account	Restricted for Capital Support	Depository Bank	8,531,874	-	8,531,874	N/A	**	-
Local Agency Investment Fund (LAIF)	Restricted (Stored Value)	Investment Pool	6,017,970		6,017,970	3.167%		3.666% S&P US T-Bill 0-3 Mth Index
San Diego County Treasurer's Office	State Grant Funds	Investment Pool	18,814,663	-	18,814,663	3.380%		3.666% S&P US T-Bill 0-3 Mth Index
Subtotal: Restricted for Capital Support / Stored Value			**33,364,506**	-	**33,364,506**			
Local Agency Investment Fund (LAIF)	Investment of Surplus Funds	Investment Pool	-	37,338,074	37,338,074	3.167%		3.666% S&P US T-Bill 0-3 Mth Index
San Diego County Treasurer's Office	Investment of Surplus Funds	Investment Pool	-	160,154,174	160,154,174	3.380%		3.666% S&P US T-Bill 0-3 Mth Index
Subtotal: Investment Surplus Funds			-	**197,492,248**	**197,492,248**			
Grand Total Cash and Investments			**$ 33,364,506**	**$ 226,961,387**	**$ 260,325,894**			

*-The 2.46% is an annual percentage yield on the average daily balance that exceeds $30 million
** - Per trust agreements, interest earned on retention account is allocated to trust beneficiary (contractor)

Metropolitan Transit System

Agenda Item No. 5

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Fiscal Year (FY) 2022-2023 and FY 2023-2024 California Senate Bill (SB) 1 State of Good Repair Funding

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors approve Resolution No. 23-10 (in substantially the same format as Attachment A) in order to:

1) Authorize the use of, and application for, $5,272,017 in FY 2023-24 State of Good Repair (SGR) funding to be used for the SD100 Light Rail Vehicle (LRV) Replacement Project;

2) Approve the acceptance of additional FY 2023-24 SB1-SGR funding if made available to MTS; and

3) Approve the reprogramming of FY 2022-23 SB1 SGR funding in the amount of $5,095,907 to the FY24 Bus Procurement Project as approved in the FY 2024 Capital Improvement Program (CIP).

Budget Impact

The State Controller's Office estimates that MTS will receive $5,272,017 in FY2023-24 SB1-SGR funding. There are no matching requirements.

DISCUSSION:

The Road Repair and Accountability Act of 2017, Senate Bill (SB) 1 (Chapter 5, Statues of 2017), signed by the Governor on April 28, 2017, includes a program that will provide additional revenues for transit infrastructure repair and service improvements. This investment in public transit is referred to as the SGR Program. This program provides funding of approximately $105 million annually to the State Transit Assistance (STA) Account. These funds are to be made available for eligible transit maintenance, rehabilitation, and capital projects.

The SGR Program is funded from a portion of a Transportation Improvement Fee on vehicle registrations due on or after January 1, 2018. A portion of this fee is transferred to the State

Controller's Office (SCO) for the SGR Program. These funds are allocated under the STA Program formula to eligible agencies pursuant to Public Utilities Code (PUC) section 99312.1. Half is allocated based on population and half according to transit operator revenues.

The SGR funding program requires agencies to agree to comply with all conditions and requirements set forth in the SGR Program Recipient Certifications and Assurances. The SGR program also requires that the agencies' governing body authorize the Chief Executive Officer or designated representative to execute all required documents of the SGR program.

MTS staff has identified the SD100 LRV Replacement Project as a project meeting the SGR funding requirements. The project will replace 47 LRVs between 2021 and 2027. The Board approved a contract with Siemens Mobility, Inc. on June 13, 2019 (Agenda Item 34) for the purchase of these vehicles. The total budget for this procurement is currently estimated at $216.4 million. MTS has identified a combination of Federal 5307, Federal 5337, Federal RSTP, and local funding to fund this project.

The FY 2024 CIP approved by the Board on April 20, 2023 (Agenda Item 12), included $174,606,000 in funding through FY 2024, and identified sufficient funding to complete the project for inclusion in the FY 2023 through FY 2025 CIPs. The FY 2023-2024 SGR funding identified in Resolution No. 23-10 will be included in the FY 2025 CIP funding allocation presented to the Board in or around April 2024.

The FY 2022-23 SB1 SGR funding was initially programmed to fund the SD100 LRV Replacement Project. However, during the FY 2024 CIP process, the funding was recommended to be reprogrammed for the FY2024 Bus Procurement Project. Today's action would also approve the reprogramming of FY 2022-23 SB1 SGR funding in the amount of $5,095,907 from the SD100 LRV Replacement project to the FY 2024 Bus Procurement Project as approved in the FY 2024 CIP.

Therefore, staff recommends that the MTS Board of Directors approve Resolution No. 23-10 in order to:

1) Authorize the use of, and application for, $5,272,017 in FY 2023-24 State of Good Repair funding to be used for the SD100 Light Rail Vehicle (LRV) Replacement Project;

2) Approve the acceptance of additional FY 2023-24 SB1-SGR funding if made available to MTS; and

3) Approve the reprogramming of FY 2022-23 SB1 SGR funding in the amount of $5,095,907 to the FY24 Bus Procurement Project as approved in the FY 2024 Capital Improvement Program (CIP).

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. Resolution No. 23-10

SAN DIEGO METROPOLITAN TRANSIT SYSTEM

RESOLUTION NO. 23-10

Resolution Approving the Fiscal Year (FY) 2022-2023 and
FY 2023-2024 SB1 State of Good Repair Claim

WHEREAS the San Diego Metropolitan Transit System (MTS) is an eligible project sponsor and may receive State Transit Assistance (STA) funding from the State of Good Repair Account (SGR) 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 1 (2017) named the Department of Transportation (Caltrans) as the administrative agency for the SB1-SGR program; and

WHEREAS, the Department has developed guidelines for the purpose of administering and distributing SGR funds to eligible project sponsors (local agencies); and

WHEREAS, MTS wishes to delegate authorization to execute these documents and any amendments there to the Chief Executive Officer; and

WHEREAS, in order to qualify for the SB1-SGR funding allocation, MTS is required to submit a proposed project list to Caltrans on an annual basis and for FY 2023-2024, MTS propose to fund the ongoing SD100 Light Rail Vehicle (LRV) Replacement Project; and

WHEREAS, MTS wishes to authorize the use of, and application for, $5,272,017 in FY 2023-2024 SB1-SGR funding to be used for the SD100 LRV Replacement Project; and

WHEREAS, MTS wishes to change the originally proposed project, SD100 LRV Replacement Project, for the use of, and application for, $5,095.907 in FY 2022-2023 SB1-SGR funding to be used for the FY24 Bus Procurement Project; and

NOW, THEREFORE, BE IT RESOLVED, DETERMINED, AND ORDERED that the MTS Board does hereby direct and empower MTS staff to prepare and transmit allocation instructions to the County Auditor to disburse to MTS the FY 2023-2024 SGR amounts totaling $5,272,017 for the SD100 LRV Replacement Project, and authorize the move of FY 2022-2023 SGR amounts totaling $5,095.907 to the FY24 Bus Procurement Project

PASSED AND ADOPTED, by the Board of Directors this 14th day of September 2023, by the following vote:

AYES:

NAYS:

ABSENT:

ABSTAINING:

Chairperson
San Diego Metropolitan Transit System

Filed by:

Clerk of the Board
San Diego Metropolitan Transit System

Approved as to form:

General Counsel
San Diego Metropolitan Transit System

Resolution No.23-10

Metropolitan Transit System

Agenda Item No. 6

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Board Policy No. 44, "MTS Travel Expense Policy" and Repeal of MTS Board Policy No. 29, "Attendance at Transit-Related Conferences" – Policy Revision

RECOMMENDATION:

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

1) Approve the proposed revisions to MTS Board Policy No. 44, "MTS Travel Expense Policy" (Attachment A, B);

2) Authorize the Chief Executive Officer (CEO) to modify MTS Board Policy No. 44, "MTS Travel Expense Policy" Attachment A, B, C, D, E and F as necessary to reflect changes in annual IRS mileage reimbursement rates and IRS determinations of High Cost Localities, and to make minor changes to document design or formatting; and

3) Repeal MTS Board Policy No. 29, "Attendance at Transit-Related Conferences" (Attachment C);

Budget Impact

None.

DISCUSSION:

Attendance at relevant industry and professional conferences is an important facet of employee and Board member understanding of transit issues, emerging trends, and the ongoing professional development of staff. MTS currently has two (2) Board Policies that provide the guidelines for travel by employees and Board members:

- MTS Board Policy No. 29, "Attendance at Transit-Related Conferences" (governing employee and Board member attendance at transit-related conferences)

- MTS Board Policy No. 44, "MTS Travel Expense Policy" (governing travel expense reimbursement limits and procedures)

To better organize and ensure consistency, it is recommended that we combine these two (2) Board Policies into one (1) Board Policy. In order to merge these documents, staff recommends the repeal of MTS Board Policy No. 29 "Attendance at Transit-Related Conferences" and to merge its language accordingly into MTS Board Policy No. 44 "MTS Travel Expense Policy", now to be referred to as, MTS Board Policy No. 44 "Travel". The redline version of Policy No. 44 in Attachment A shows the language being added from Policy No. 29, plus some additional revisions since the policy was last revised in 2017.

Staff completed a substantive review of the language in both policies. The proposed revisions include minor, non-substantive changes, as well as the changes described below. Most of the changes simply document the process that has been followed for travel approvals and reimbursements.

Proposed Policy Updates from 2017 Version

Updated Hotel and Meal Reimbursement Limits

The revisions include an update to the hotel and meal maximum reimbursement rates for employee travel, based on an internal survey of submitted travel expense reports as well as current market rates and costs of hotel and meals. Hotel rates are increasing as follows:

- From $220 per night for large U.S. Cities / International to $275 per night for High Cost Localities as identified in IRS Notice 2022-44, and
- From $170 per night for Small / Medium U.S. Cities to $200 per night for Medium / Low Cost Localities (localities not identified in IRS Notice 2022-44).

The policy revisions also clarify the reasons the CEO may authorize a waiver of the maximum limits, which include if (1) the conference hotel is fully booked and the traveler stays at a nearby hotel with a rate reasonably comparable to the conference hotel rate; or (2) a safe and convenient hotel within the maximum rates is not identified within reasonable proximity to the meeting or event necessitating the business travel.

Meal caps and total daily caps have also been modified:

- The daily cap on meal reimbursements are increasing from $65 for Small / Medium U.S. Cities and $80 for Large U.S. Cities / International to $90 for all Localities.

Rental Car Reservations

Due to the varying charges and promotions for rental cars, which do not always follow the type of vehicle rented, the rental car provisions in Section 44.11(g) have been updated to permit a "reasonably priced standard-size sedan, unless the nature of the travel or the number of employees traveling warrants a larger vehicle." This language replaces the previous mandate that MTS would "only reimburse the least expensive compact -size vehicle."

Therefore, staff recommends that the San Diego Metropolitan Transit System (MTS) Board of Directors: 1) Approve the proposed revisions to MTS Board Policy No. 44, "MTS Travel Expense Policy" (Attachment A, B); 2) Authorize the Chief Executive Officer (CEO) to modify

MTS Board Policy No. 44, “MTS Travel Expense Policy” Attachment A, B, C, D, E and F as necessary to reflect changes in annual IRS mileage reimbursement rates and IRS determinations of High Cost Localities, and to make minor changes to document design or formatting; and 3) Repeal MTS Board Policy No. 29, “Attendance at Transit-Related Conferences” (Attachment C);

_____

Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. Proposed Revisions to MTS Board Policy No. 44 (red-lined version)
B. Proposed Revisions to MTS Board Policy No. 44 (clean version)
C. Repealed MTS Board Policy No. 29 (watermarked to show repeal)

Metropolitan Transit System

Policies and Procedures No. 44

Board Approval: ~~1/19/17~~ 9/14/23

SUBJECT:

~~MTS~~ TRAVEL ~~EXPENSE~~ POLICY

PURPOSE:

To establish guidelines for San Diego Metropolitan Transit System (MTS) employees and MTS Board of Director (Board) members ~~who have been approved to travel~~travelling on behalf of MTS. Attendance at relevant industry and professional conferences is an important facet of employee and Board member understanding of transit issues, emerging trends, and the ongoing professional development of staff.

POLICY:

44.1 ~~Agencies~~Applicability. This policy applies to all MTS agencies including MTS, San Diego Transit Corporation, San Diego Trolley, Inc., and San Diego ~~Vintage Trolley, Inc.~~and Arizona Eastern Railway Co.

~~44.2 Travel Authorization. Persons~~44.2 Board Member Attendance. MTS and its customers benefit from Board member engagement in state and national transit-related association activities such as those organized by the California Transit Association (CTA) and the American Public Transit Association (APTA). Each Board member is encouraged to attend one transit-related conference annually. The Chief Executive Officer (CEO) will survey the Board members annually to ascertain their interest in attending conferences. Budget, Brown Act, and other considerations may limit the number of Board members who may attend any given conference or meeting.

44.3 Travel by Board Member Alternate. Board alternates may attend one of the transit-related conferences, conditioned on the following:

a. They are attending in the place of the regular member.

b. They attended 50 percent or more of the Board meetings in the past 12 months, or since appointment, whichever time is shortest.

44.4 Employee Attendance. Employees are encouraged to attend transit conferences, seminars, and training classes pertaining to their respective disciplines.

44.5 Other Meetings. Consistent with 44.2 through 44.4, full reimbursement will be provided to any Board member or employee who is active on a CTA or APTA committee for travel and expenses related to a committee meeting. Other transit-related conferences or meetings may also merit attendance. Examples include meetings of the California Transportation Commission and legislative hearings. In such cases, the Chairperson (in the case of Board members) or the CEO (in the case of employees) will determine whether attendance is desirable, consider the remaining available travel budget, and decide who should attend.

44.6 Board Member Travel Arrangements. Board members will be notified in advance of conference details and basic travel arrangements such as arrival and departure dates and times, cost of the trip, date that members need to notify MTS of their interest in attending, and any potential cost impacts for changes made after that date. Board members desiring different travel arrangements will be financially responsible for any costs over and above those determined for the basic trip. Board members shall be notified in sufficient time to make changes with advance reservation discounts.

44.7 Travel Authorization. Employees traveling for work relating to or for the benefit of MTS must request advance approval through a "Travel Authorization Form" (Attachment A). ~~–~~The form must be completed and approved ~~based on when~~as soon as the need for travel is known, and if possible, at least two weeks prior to the trip. The requests ~~can~~shall be approved as follows: department managers or directors~~ can approve requests up to $500, the~~, Chief Operating Officer(s) (COO), Chief Financial Officer~~,~~ (CFO), and/or General Counsel~~ can approve up to $1,500, and all amounts in excess of $1,500~~. All requests must be approved by the ~~Chief Executive Officer. The Chief Executive Officer must also approve all travel authorizations for his/her direct reports~~ CEO regardless of amount. ~~The top-level approver will route the~~After CEO approval, the request form will be routed back to the Finance Department. Finance will send a copy of the "Travel Authorization Form" to the traveler and keep the original as backup for a pending "Travel Expense Report."

This authorization form is a required step for reimbursement of travel expenses but will not by itself serve as the basis for reimbursement of travel costs, as reimbursement requests shall be made on a "Travel Expense Report" ~~(~~described in Section 44.8 and shown in Attachment C~~). All Board member and employee travel shall be consistent with Policy No. 29, "Attendance at Transit-Related Conferences."~~ . Travel reservations will be made by the individual traveler~~, the Clerk of the Board for Board of Director travel,~~ or individuals as designated by the ~~Chief Operating Officers~~COO or ~~Chief Executive Officer~~CEO.

44.~~3~~8 Expense Report. The "Travel Expense Report" portion of the form will be used to record actual trip expenses, and ~~must~~should be completed within ~~one week~~two weeks from the return date. ~~The~~For employees, a department manager or director must indicate approval of the ~~submitted~~ expenses (~~Chief Executive Officer~~CEO approval for direct report travel; ~~Chief Executive Officer~~CEO, General Counsel, or ~~Chief Financial Officer~~CFO approval for Board ~~of Director~~member travel; and General Counsel approval of ~~Chief Executive Officer~~CEO travel). The form is routed to the Finance Department for processing, with a personal check attached for any funds due to MTS (if MTS direct expenses or travel advances exceed the total amount due). Failure to

submit expense reports within this timeframe may result in not being reimbursed or collection actions taken if money is owed to MTS. Extensions may be granted by the ~~Chief Executive Officer.~~CEO. For Board members, MTS will work with the Board member or their staff to assist them in preparing and approving this report.

All expenses should be itemized, including items MTS may have paid for in advance (e.g., airfare, conference registration) so that the report provides a complete record of all expenses. It is the traveler's responsibility to submit a completed report in order to receive prompt reimbursement.

44.~~4~~9 Receipts. Itemized receipts for expenditures must be attached to the "Travel Expense Report" for all expenses where a receipt is practically attainable (mandatory, unless a written satisfactory explanation is provided for expenses in excess of $10). Such written explanations may be subjected to approval by the ~~Chief Executive Officer.~~CEO. Hotel charges must be evidenced by an itemized hotel bill, as a credit card receipt is not sufficient.

44.~~5~~10 Travel Advances. Travel advances are provided on a case-by-case basis ~~as determined by need~~ and approved by the ~~Chief Financial Officer~~CFO and/or ~~Chief Executive Officer~~CEO. A travel advance is a loan that provides cash resources to assist the employee while traveling and is not a payment by MTS for travel expenses. Persons requesting that MTS provide advance proceeds must request approval using the "Travel Advance Request" (Attachment B). This form must be completed and approved at least two weeks prior to the trip taking place, and ~~these~~ advances will typically be distributed one week prior to the departure date. Any travel advance shall not exceed the total estimated amount of the trip less any items paid by MTS.

Travel costs incurred prior to departure may be reimbursed when paid. An example is a traveler paying for conference registration or booking and paying for air travel personally several weeks in advance. Reimbursements for these costs are not considered an advance. These items should be included on a "Request for Payment/Payment Voucher" or "Travel Expense Report" and only after the "Travel Authorization Request" has been approved.

44.~~6~~ 11 Reasonable Travel Expenses. MTS ~~does not reimburse employees based on per diem but rather~~ reimburses ~~employees~~ for reasonable costs necessarily incurred for work travel in accordance with the terms of this policy and does not provide a per diem allowance. ~~Employees must provide l~~itemized receipts for all meals, hotel, airfare, registration, etc must be provided. The following expenditure guidelines and the Annual Travel Cost Rates set by MTS (rates for the current calendar year are attached as Attachment E) should be observed as upper limits unless particular circumstances reasonably dictate otherwise:

a. Upper Limits. Upper limits for meals, hotels, and similar costs will be updated, approved by the ~~Chief Executive Officer~~CEO, and published annually. See Attachment E for the current calendar year rates.

b. Air Travel. Air travel ~~is to~~should be coach class for the most direct route. Traveler arrangements should be made as far as possible in advance in order to secure the most favorable rates. MTS will cover the cost if it is

more cost effective (i.e., difference in airfare as compared to the additional cost for hotel and meals) to include a Saturday stay. Travelers should consider this option when practical. Refundable airfares may be purchased if warranted.

c. Personal Auto Use. In the event that a private auto is used for the trip, mileage will be paid in accordance with the current IRS Mileage Reimbursement Rates. Maximum reimbursement shall not exceed the cost of a comparable coach airfare to the same location.

d. Ground Transportation. In using surface transportation, the most practical, least expensive alternative ~~must~~should be utilized. Such transportation includes travel to and from the airport and reasonable business-related trips at the location. ~~Employees and Board members~~Travelers are encouraged to utilize public transportation where available.

1. ~~e.~~ Parking. MTS will reimburse the lesser of the parking cost for a personal auto left at the airport or the cost of a shuttle service, taxi, or ~~cab~~ride share service to and from the airport. If a specific option is not feasible given the time of travel or other personal circumstances, a waiver should be requested.

f. Personal Travel. A traveler may wish to combine MTS-related travel with personal travel or include family members in the trip. If personal travel is included within the trip, ~~prior authorization and approval of this request~~it must be notated on the "Travel Authorization Form~~," and~~." For trips that include personal travel, MTS will reimburse the cost equivalent to a single-person ~~trip. Under no circumstances~~ roundtrip for the most direct route between San Diego and the business travel location. MTS will ~~MTS~~not advance any payments to cover ~~such~~ personal travel.

g. Rental Car. The use of rental cars must be preapproved as part of the "Travel Authorization Form~~".~~." In the event a rental car is required, MTS will ~~only~~ reimburse ~~the least expensive compact~~rental car charges for up to a reasonably priced standard-size sedan, unless the nature of the travel or the number of employees traveling warrants a larger vehicle. The traveler will be responsible for the cost difference, if any, for any vehicle upgrades over a standard-size sedan. MTS will not reimburse for rental car insurance coverage ~~due to the fact that~~since employees are included under MTS's general automobile insurance coverage.

h. Meals (While in Travel Status). Meals, including tip, shall generally average no more than the maximum rate approved and published annually. Alcohol consumed with a meal is not reimbursable, including applicable taxes and tips related to the alcohol cost. The amount per day applies to each 24-hour day of travel, and partial days would be prorated accordingly. Exceptions to the maximum rates must be approved by the ~~Chief Executive Officer~~CEO or General Counsel.

i. Business Meal. Reasonable business (involving outside persons or when necessary to conduct MTS-related business) meals are permitted. All

such meals must be itemized, including the names of all attendees, with justification.

j. Hotel. Travelers will be reimbursed for the cost of a ~~moderate and~~ reasonably priced single-occupancy hotel room. The maximum reimbursement is limited to the rate approved and published ~~annually. Hotel stays in high-cost cities shall be approved by the Chief Executive Officer. These maximum limits may be waived if the traveler is staying at a hotel where a conference is being held and approved by the Chief Executive Officer. Baggage-handling service fees are reimbursable at standard rates.~~ in this Policy (Attachment E). IRS Notice 2022-44 (Attachment F) provides high-cost localities and timeframes in which maximum limits are eligible for reimbursement. However, travelers are not required to stay in unsafe locations or locations that would result in long commutes to their meetings simply to meet those limits. These maximum limits do not apply if the traveler is staying at a hotel where a conference is being held. The CEO may authorize a waiver of the maximum limits in the event (1) the conference hotel is fully booked and the traveler stays at a nearby hotel with a rate reasonably comparable to the conference hotel rate; or (2) a safe and convenient hotel within the maximum rates is not identified within reasonable proximity to the meeting or event necessitating the business travel.

k. Other Business-Related Expenses. Other business-related expenses while traveling such as supplies, equipment rental, reprographics, facsimiles, internet access, and other documented business-related expenses may be reimbursed when traveling on MTS business and used for MTS purposes.

l. Travel Outside of the U.S. Reimbursement for travel ~~to a foreign country~~outside the U.S. will be calculated at the average exchange rate during the trip. All reimbursement for any Value Added Taxes charged for hotel accommodations must be returned to MTS.

~~m. Telephone Calls (While in Travel Status). Reimbursements for telephone calls are permitted provided that such calls are directly related to MTS business. Travelers are required to provide an itemized list of all calls detailing the person(s) called and the reason for the call(s) for which reimbursement is requested. Personal calls are permitted up to a maximum of $10 per day.~~

~~n~~m. Registration. Travelers requesting to attend a conference or training that requires registration should do so in sufficient time to take advantage of any discounts.

~~o. Conferences.~~n. Additional Conference Events or Costs. Conference luncheons, special banquets, or other set-price official affairs that exceed the actual cost listed under meals may be reimbursed if they are necessary to the attendance of the conference and must be authorized in advance with the submission of the “Travel Authorization Form”.

o. Cancellation Penalties. In the event that registration, airfare, hotel deposit, or any other such items that require prepayment are paid and the traveler is unable to attend and the prepayment is nonrefundable, then the traveler may be responsible for reimbursing MTS for the full cost unless the inability to attend is for valid business reasons, medical conditions, or personal emergencies, as approved by the ~~Chief Executive Officer~~CEO for employees or by the Executive Committee for Board members.

p. Non-allowable Expenses. MTS will not provide any reimbursement for personal entertainment expenses, alcoholic beverages, movies in hotels, personal items, charitable contributions, air travel insurance, any travel expenses for family members (including but not limited to transportation, hotels, and meals), or any other expenses not deemed necessary for business purposes.

q. Political Events. MTS will not provide reimbursement for expenses incurred for the purpose of attending political events. An event shall be considered "political" if it is held for the purpose of supporting, opposing, or raising money to support or oppose any candidate, ballot measure, or political party.

r. Non-Discrimination. MTS will not provide any reimbursement for expenses incurred with any private club or establishment that discriminates on the basis of race, color, national origin, disability, gender, religion, sexual orientation, or other ~~invidious criteria~~legally protected characteristic or class in its membership policy.

Exceptions to these guidelines must be approved by the ~~Chief Executive Officer~~CEO for employees and by the Executive Committee for Board members.

44.~~7~~12 Within-Area Expenses. The form entitled "Expense Report (within area expenses)" (see Attachment D) must be used to record any ~~potential~~ eligible expenses. This report applies to expenses incurred within the San Diego County area only.

a. Submittal of Form. Employees must submit this form together with receipts after applicable expenses are incurred. ~~This report applies to expenses incurred within the San Diego County area only.~~

b. Eligible Expenses. Eligible expenses must be related to and necessary for carrying out MTS business. They may include, but not be limited to, business meals or meetings, mileage, parking, or other miscellaneous out-of-pocket expenses related to MTS business. The ~~Chief Executive Officer~~CEO or ~~Chief Financial Officer~~CFO may, in their judgment, disallow any extraordinary or inappropriate expenses. Whenever possible, local travel should be by public transportation. If it is impractical to use public transit, an MTS vehicle or private auto should be used.

c. Description and Purpose. The report should include the date, description / purpose (including destination), and the applicable department / account code (if operations) or the applicable project / task detail (if capital).

d. Approvals. All necessary approvals must be obtained in advance and the completed form must be submitted to the Finance Department within one week after expenses are incurred.

~~44.8~~

44.13 Non-Exempt Employee Travel Time Compensation Guidelines

a. Travel Time. MTS pays non-exempt employees for travel time in accordance with the Fair Labor Standards Act (FLSA).

b. ~~a.~~ Home to Work Travel. In general, the time an employee spends commuting from home to work and from work to home is not work time and is not compensable.

c. ~~b.~~ Single-Day Travel. Time spent by a non-exempt employee in travel as part of his or her normal work activities (travel is performed for the benefit of MTS and at its request), such as travel to a seminar during regular working hours, is considered hours worked. If the employee is required to travel to another city and return home in the same day, the travel time to and from the other city is considered hours worked regardless whether the travel occurs within the employee's normal work schedule or by common carrier. However, meal periods and the travel time between the employee's home and the point of public transportation (i.e. airport, train station) are not considered hours worked.

d. ~~c.~~ Overnight Travel. Travel by a non-exempt employee who (at the request and for the benefit of MTS) will be away from home overnight is work time only during those periods that coincide with the employee's regular working hours (i.e. Monday through Friday 9 a.m. to 5 p.m.). Such time is counted as hours worked even if it occurs on a non-working day (i.e. Saturday or Sunday between 9 a.m. and 5 p.m.). Travel outside regular working hours as a passenger in a plane, train, boat, bus or automobile is not considered hours worked. Driving a vehicle, regardless of whether the travel takes place within or outside normal work hours, counts as hours worked if it is for the benefit of MTS. (If an employee drives a car as a matter of personal preference in lieu of a different authorized mode of travel, only the estimated travel time associated with the authorized mode will be counted as hours worked.) To the extent that an employee performs work while traveling (i.e. preparing for a meeting, reviewing documents, making telephone calls), this time constitutes hours worked even if the travel time would otherwise not be compensable. Regular meal periods and time spent at a hotel with freedom to use time for the employee's own purposes is not compensable. The employee will not be compensated for time not working even if it occurs within the employee's regular work schedule (~~i~~i.e. employee goes sightseeing).

e. Non-exempt employees shall record and report all hours worked in accordance with the above guidelines. Overtime will be paid to the extent that hours worked, including travel hours specified above, exceed 40 hours in a workweek. If you have any questions, please contact Human Resources.

POLICY.44.TRAVEL EXPENSE POLICY

Attachments: A. Travel Authorization Form
B. Travel Advance Request
C. Travel Expense Report
D. Expense Report (within-area expenses)
E. Annual Travel Cost Rates
F. IRS Notice 2022-44

Original Policy approved on 8/12/93.
Policy amended on 10/27/94.
Policy revised on 4/29/04.
Policy revised on 1/26/06.
Policy revised on 7/19/07.
Policy revised on 6/24/10.
Attachments updated by Staff 1/16/13.
Policy and attachments revised on 9/12/13.
Attachments updated by Staff 7/24/14.
Attachments updated by Staff 5/18/15.
Attachments updated by Staff 2/2/16.
Policy and attachments revised on 1/19/17.
Attachments updated by Staff 6/21/17.

~~Attachment A~~

Metropolitan Transit System

TRAVEL AUTHORIZATION FORM

(complete this form first, before any travel expenses are incurred)

☐ MTS
☐ SDTC
☐ SDTI

PART I - EMPLOYEE INFORMATION

Report Date: 6/21/2017

Employee Name:

Title:

Department Name:

Travel Dates:

Meeting Name/Purpose:

Costs to be charged to:

Department/Acct Code:
OPERATIONS ONLY

Project/Task Detail:
CIP ONLY

Location:

PART II - TOTAL ESTIMATED EXPENSES

Transportation

Air
Train
Car *Mileage rate = 53.5¢ / mile* *Rental car insurance is not reimbursable*

Total Transportation	$	-

Shuttles / Taxi / Parking

Lodging

Days
Rate

Total Lodging	$	-

Meals

Days
Rate

Total Meals	$	-

Other Costs

Registration
Other
Other

Total Other	$	-

Grand Total Estimated Expenses	$	-
Less: Amount To Be Paid Directly By MTS	$	-
Maximum Amount To Be Paid By Traveler	$	-

PART III - SIGNATURES and APPROVALS

	Signature	Date
Traveler:		
Department Manager / Director:		
COO / CFO / General Counsel:		
Budget Manager:		
CFO / General Counsel:		
Chief Executive Officer:		

~~Attachment B~~

(Revised 2.2.2016)

TRAVEL ADVANCE REQUEST

(complete this form, if needed, to request cash for travel)

☐ MTS
☐ SDTC
☐ SDTI

PART I - EMPLOYEE INFORMATION

Report Date: 2/2/2016

Employee Name: _____ Title: _____

Department Name: _____ Travel Dates: _____

Meeting Name/Purpose: _____

PART II - TOTAL ESTIMATED EXPENSES

Grand Total Estimated Expenses (from travel authorization form)	$	-
Less: Amount To Be Paid Directly By MTS (from travel authorization form)	$	-
Maximum Amount To Be Paid By Traveler (from travel authorization form)	$	-
Total Advance Requested	**$**	**-**

PART III - SIGNATURES and APPROVALS

	Signature	Date
Traveler:		
Department Manager / Director:		
COO:		
CFO / General Counsel:		
~~Chief Executive Officer:~~		

~~Attachment C~~

(Revised 1.4.2017)

TRAVEL EXPENSE REPORT

(complete this form no later than 1 week after return from travel)

☐ MTS
☐ SDTC
☐ SDTI

PART I - EMPLOYEE INFORMATION

Report Date: 1/4/2017

Employee Name: _____

Title: _____

Department Name: _____

Costs to be charged to:

Department/Acct Code: _____
OPERATIONS ONLY

Project/Task Detail: _____
CIP ONLY

Meeting Name/Purpose: _____

PART II - TOTAL EXPENSES

		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	Total
Travel Dates								
Location (City, State)								
Transportation**								$ -
Shuttles/Taxis								$ -
Parking								$ -
Lodging								$ -
Meals (Use Detail Tabs)	Breakfast ($20 daily limit)*	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Lunch ($25 daily limit)*	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Dinner ($50 daily limit)*	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other:	Registration							$ -
Other:								$ -
Other:								$ -
Other:								$ -
Total		$ -	$ -	$ -	$ -	$ -	$ -	$ -

1. Travel expense report must be filled within one week after completing trip.

2. Attach receipts for all purchases over $10. Explain all items over $10 not having receipts.

3. Include related trip items paid separately by MTS; mark with an asterisk.

***There is an overall daily cap of $65 for Small / Medium U.S. Cities and $80 for Large U.S. Cities / International**

****Rental car insurance is not reimbursable.**

Total Expenses	$ -
Less MTS Paid Items (please enter a + number)	
Subtotal	$ -
Less Cash Advanced (please enter a + number)	
Amount Due	$ -

PART III - SIGNATURES and APPROVALS

☐ I certify that the above report is true and correct.

CEO approval of exception(s) from the Travel Policy: _____

	Printed Name	Signature	Date
Traveler:			
Manager/Supervisor (Up to $3000):			
Department Director (Up to $5000):			
Chief Financial Officer:			

~~Attachment D~~

Metropolitan Transit System

EXPENSE REPORT
(within-area expenses)

☐ MTS
☐ SDTC
☐ SDTI

Finance Use Only:

PEID

PART I - EMPLOYEE INFORMATION

Employee Name: _____ Period: _____ to _____

Employee Signature: _____

☐ I certify that the expenses reported are true and correct.

PART II - EXPENSES AND MILEAGE DETAIL

Date	OPERATIONS ONLY Dept./Acct Code	CIP ONLY Project/Task Detail	Description / Purpose	Telephone 555100	Meeting Exp. 575230	Mileage (53.5¢/mile) 575230	Other
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
			TOTALS	$ -	$ -	$ -	$ -
						GRAND TOTAL	**$ -**

PART III - APPROVALS

Department Director (Up to $500): _____

Chief Financial Officer (Up to $1500): _____

Chief Executive Officer (CEO): _____

Expense Report Instructions

1. Employees must submit this form when requesting reimbursement. This report applies to expenses incurred within the San Diego metropolitan area only.
2. Eligible expenses must be related to and necessary for carrying out MTS business. They may include, but are not limited to, business meals, or meetings, parking, or other miscellaneous out-of-pocket expenses related to MTS business. The CFO or CEO may, in their judgment, disallow any extraordinary or inappropriate expenses. Attach receipts for all out-of-pocket expenses.
3. Briefly describe the item or the destination and the purpose.

Policy and attachments revised on XX/XX/XXXX

Attachment A

(Revised 6.14.23)

Metropolitan Transit System

TRAVEL AUTHORIZATION FORM

(complete this form first, before any travel expenses are incurred)

☐ MTS
☐ SDTC
☐ SDTI

PART I - EMPLOYEE INFORMATION

Report Date: 6/14/2023

Employee Name:

Title:

Department Name:

Travel Dates:

Meeting Name/Purpose:

Costs to be charged to:

Department/Acct Code:
OPERATIONS ONLY

Project/Task Detail:
CIP ONLY

Location:

PART II - TOTAL ESTIMATED EXPENSES

Transportation

Air
Train
Car
Mileage rate = $.655 / mile
Rental car insurance is not reimbursable

Total Transportation	$	-

Shuttles / Taxi / Parking

Lodging

Days
Rate

Total Lodging	$	-

Meals

Days
Rate

Total Meals	$	-

Other Costs

Registration
Other
Other

Total Other	$	-
Grand Total Estimated Expenses	$	-
Less: Amount To Be Paid Directly By MTS	$	-
Maximum Amount To Be Paid By Traveler	$	-

PART III - SIGNATURES and APPROVALS

	Signature	Date
Traveler:		
Department Manager / Director:		
COO / CFO / General Counsel:		
Budget Manager:		
CFO / General Counsel:		
Chief Executive Officer:		

Attachment B

(Revised 06.14.2023)

Metropolitan Transit System

TRAVEL ADVANCE REQUEST

(complete this form, if needed, to request cash for travel)

☐ MTS
☐ SDTC
☐ SDTI

PART I - EMPLOYEE INFORMATION

Report Date: 6/14/2023

Employee Name: _____ Title: _____

Department Name: _____ Travel Dates: _____

Meeting Name/Purpose: _____

PART II - TOTAL ESTIMATED EXPENSES

Grand Total Estimated Expenses (from travel authorization form)	$	-
Less: Amount To Be Paid Directly By MTS (from travel authorization form)	$	-
Maximum Amount To Be Paid By Traveler (from travel authorization form)	$	-
Total Advance Requested	**$**	**-**

PART III - SIGNATURES and APPROVALS

	Signature	Date
Traveler:		
Department Manager / Director:		
COO:		
CFO / General Counsel:		
Chief Executive Officer:		

Attachment C

(Revised 06.14.2023)

Metropolitan Transit System

TRAVEL EXPENSE REPORT

(complete this form no later than 1 week after return from travel)

☐ MTS
☐ SDTC
☐ SDTI

PART I - EMPLOYEE INFORMATION

Report Date: 6/14/2023

Employee Name:

Title:

Department Name:

Costs to be charged to:

Department/Acct Code:
OPERATIONS ONLY

Project/Task Detail:
CIP ONLY

Meeting Name/Purpose:

PART II - TOTAL EXPENSES

		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	Total
Travel Dates								
Location (City, State)								
Transportation**								$ -
Shuttles/Taxis								$ -
Parking								$ -
Lodging								$ -
Meals (Use Detail Tabs)	Breakfast ($30 daily limit)*	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Lunch ($30 daily limit)*	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Dinner ($50 daily limit)*	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other:	Registration							$ -
Other:								$ -
Other:								$ -
Other:								$ -
Total		$ -	$ -	$ -	$ -	$ -	$ -	$ -

1. Travel expense report must be filled within two weeks after completing trip.

2. Attach receipts for all purchases over $10. Explain all items over $10 not having receipts.

3. Include related trip items paid separately by MTS; mark with an asterisk.

****There is an overall daily cap of $90.00***

*****Rental car insurance is not reimbursable.***

Total Expenses	$ -
Less MTS Paid Items (please enter a +number)	
Subtotal	$ -
Less Cash Advanced (please enter a +number)	
Amount Due	$ -

PART III - SIGNATURES and APPROVALS

☐ I certify that the above report is true and correct.

CEO approval of exception(s) from the Travel Policy: _____

	Printed Name	Signature	Date
Traveler:			
Manager/Supervisor (Up to $3000):			
Department Director (Up to $5000):			
Chief Financial Officer:			

Attachment D

(Revised 06.14.23)

Metropolitan Transit System

EXPENSE REPORT
(within-area expenses)

☐ MTS
☐ SDTC
☐ SDTI

Finance Use Only:

PEID

PART I - EMPLOYEE INFORMATION

Employee Name: _____ Period: _____ to _____

Employee Signature: _____

☐ I certify that the expenses reported are true and correct.

PART II - EXPENSES AND MILEAGE DETAIL

Date	OPERATIONS ONLY Dept./Acct Code	CIP ONLY Project/Task Detail	Description / Purpose	Telephone 555100	Meeting Exp. 575230	Mileage ($.655/mile) 575230	Other
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
			TOTALS	$ -	$ -	$ -	$ -
						GRAND TOTAL	**$ -**

PART III - APPROVALS

Department Director (Up to $500): _____

Chief Financial Officer (Up to $1500): _____

Chief Executive Officer (CEO): _____

Expense Report Instructions

1. Employees must submit this form when requesting reimbursement. This report applies to expenses incurred within the San Diego metropolitan area only.
2. Eligible expenses must be related to and necessary for carrying out MTS business. They may include, but are not limited to, business meals, or meetings, parking, or other miscellaneous out-of-pocket expenses related to MTS business. The CFO or CEO may, in their judgment, disallow any extraordinary or inappropriate expenses. Attach receipts for all out-of-pocket expenses.
3. Briefly describe the item or the destination and the purpose.

Attachment E

Annual Travel Cost Rates
Calendar Year 2017

Hotel Maximum (quoted price - not including taxes or fees)

Small/Medium US Cities	$170.00
Large US Cities/International	$220.00

Average Daily Meal Maximum

Small/Medium US Cities	$ 65.00
Large US Cities/International	$ 80.00

Mileage Reimbursement Rate

As set by the IRS, effective January 1, 2017

per mile	$ 0.535

NOTES:

1. These are maximum rates. A higher cap may be obtained if pre-authorized by the CEO. Rates must be reasonable and necessary under the circumstances and will customarily be lower.

2. Meal caps are detailed out below, with an overall daily cap of $65.00 for Small / Medium U.S. Cities and $80.00 for Large U.S. Cities / International.

   Breakfast - $20.00
   Lunch - $25.00
   Dinner - $50.00

3. If a conference registration fee covers meals, employees are to participate in those meals.

4. Small / Medium U.S. Cities are defined for this rate structure as those with less than 1 million persons in the metropolitan area.

   Large U.S. Cities are defined for this rate structure as those with more than 1 million persons in the metropolitan area.

5. The Mileage Rate is directly tied to the rate set by the IRS and will be revised more frequently than annually if done so by the IRS.

Annual Travel Cost Rates
Calendar Year 2023

Hotel Maximum (quoted price - not including taxes or fees)

Medium/Low Cost Localities	$200.00
High Cost Localities (IRS Notice 2022-44)	$275.00

Average Daily Meal Maximum

All Localities	$ 90.00

Mileage Reimbursement Rate

As set by the IRS, effective January 1, 2023	
per mile	$ 0.655

NOTES:

1. These are maximum rates. A higher cap may be obtained if pre-authorized by the CEO. Rates must be reasonable and necessary under the circumstances and will customarily be lower.

2. Meal caps are detailed out below, with an overall daily cap of $90.00

   Breakfast - $30.00
   Lunch - $30.00
   Dinner - $50.00

3. If a conference registration fee covers meals, employees are to participate in those meals.

4. Small / Medium U.S. Cities are defined for this rate structure as those with less than 1 million persons in the metropolitan area.

   Large U.S. Cities are defined for this rate structure as those with more than 1 million persons in the metropolitan area.

5. The Mileage Rate is directly tied to the rate set by the IRS and will be revised more frequently than annually if done so by the IRS.

Attachment F

High-Cost Localities (IRS Notice 2022-44)

Key City	County or Other Defined Location	State	Portion of Calendar Year
Gulf Shores	Baldwin	Alabama	June 1 – July 31
Phoenix/Scottsdale	Maricopa	Arizona	February 1 – March 31
Sedona	City limits of Sedona	Arizona	October 1 – September 30
California	Los Angeles, Orange, and Ventura, and Edwards AFB,	California	October 1 – October 31 and June 1 – September 30
Mill Valley/San Rafael/Novato	Marin	California	October 1 – October 31 and June 1 – September 30
Monterey	Monterey	California	June 1 – August 31
Napa	Napa	California	October 1 –September 30
Oakland	Alameda	California	October 1 – September 30
San Diego	San Diego	California	February 1 – August 31
San Francisco	San Francisco	California	October 1 – September 30
San Luis Obispo	San Luis Obispo	California	June 1 – August 31
San Mateo/Foster City/Belmont	San Mateo	California	October 1 – September 30
Santa Barbara	Santa Barbara	California	October 1 – September 30
Santa Monica	City limits of Santa Monica	California	October 1 – September 30
Sunnyvale/Palo Alto/San Jose	Santa Clara	California	October 1 – September 30
Aspen	Pitkin	Colorado	October 1 – March 31 and June 1 – September 30
Denver/Aurora	Denver, Adams, Arapahoe, and Jefferson	Colorado	October 1 – October 31 and April 1 – September 30
Durango	La Plata	Colorado	June 1 – September 30
Grand Lake	Grand	Colorado	December 1 – March 31
Silverthorne/Brecken ridge	Summit	Colorado	October 1 – March 31 and June 1 – September 30
Steamboat Springs	Routt	Colorado	December 1 – March 31
Telluride	San Miguel	Colorado	October 1 – September 30
Vail	Eagle	Colorado	October 1 – September 30
Lewes	Sussex	Delaware	July 1 – August 31
Washington D.C. (also the cities of Alexandria, Falls Church, and Fairfax, and the counties of		District of Columbia	October 1 – September 30
Boca Raton/Delray Beach/Jupiter	Palm Beach and Hendry	Florida	December 1 – April 30
Bradenton	Manatee	Florida	February 1 – March 31
Cocoa Beach	Brevard	Florida	February 1 – March 31
Fort Lauderdale	Broward	Florida	October 1 – April 30
Fort Myers	Lee	Florida	February 1 – March 31
Fort Walton Beach/DeFuniak Springs	Okaloosa and Walton	Florida	October 1 – October 31 March 1 – September 30
Gulf Breeze	Santa Rosa	Florida	June 1 – July 31
Key West	Monroe	Florida	October 1 – September 30
Miami	Miami-Dade	Florida	December 1 – March 31
Naples	Collier	Florida	December 1 – April 30
Panama City	Bay	Florida	June 1 – July 31
Pensacola	Escambia	Florida	June 1 – July 31
Punta Gorda	Charlotte	Florida	February 1 – March 31
Sarasota	Sarasota	Florida	February 1 – April 30
Sebring	Highlands	Florida	February 1 – March 31
Stuart	Martin	Florida	February 1 – March 31
Vero Beach	Indian River	Florida	December 1 – April 30
Jekyll Island/ Brunswick	Glynn	Georgia	March 1 – July 31
Sun Valley/Ketchum	Blaine and Elmore	Idaho	December 1 – March 31 and June 1 – September 30
Chicago	Cook and Lake	Illinois	October 1 – November 30 and April 1 – September 30
Bar Harbor/ Rockport	Hancock and Knox	Maine	October 1 – October 31 and July 1 – September 30
Kennebunk/Kittery/S anford	York	Maine	July 1 – August 31
Portland	Cumberland and Sagadahoc	Maine	July 1 – August 31
Ocean City	Worcester	Maryland	July 1 – August 31
Washington, DC Metropolitan Area	Montgomery and Prince George's	Maryland	October 1 – September 30
Boston/Cambridge	Suffolk and City of Cambridge	Massachusetts	October 1 – September 30
Falmouth	City limits of Falmouth	Massachusetts	May 1 – August 31
Hyannis	Barnstable less the city of Falmouth	Massachusetts	July 1 – August 31
Martha's Vineyard	Dukes	Massachusetts	October 1 – September 30
Nantucket	Nantucket	Massachusetts	October 1 –September 30
Mackinac Island	Mackinac	Michigan	July 1 – August 31
Petoskey	Emmet	Michigan	July 1 – August 31
Traverse City	Grand Traverse	Michigan	July 1 – August 31
Duluth	St. Louis	Minnesota	October 1 – October 31 and June 1 – September 30
Big Sky/West Yellowstone/Gardiner	Gallatin and Park	Montana	June 1 – September 30
Kalispell/Whitefish	Flathead	Montana	July 1 – August 31
Carlsbad	Eddy	New Mexico	October 1 – September 30
Toms River	Ocean	New Jersey	July 1 – August 31
Glens Falls	Warren	New York	July 1 – August 31
Lake Placid	Essex	New York	July 1 – August 31
New York City	Bronx, Kings, New York, Queens, and Richmond	New York	October 1 – December 31 and March 1 – September 30
Kill Devil Hills	Dare	North Carolina	April 1 – September 30
Lincoln City	Lincoln	Oregon	July 1 – August 31
Portland	Multnomah	Oregon	October 1 – October 31 and June 1 – September 30
Seaside	Clatsop	Oregon	July 1 – August 31
Hershey	Hershey	Pennsylvania	June 1 – August 31
Philadelphia	Philadelphia	Pennsylvania	October 1 – November 30, March 1 – June 30, and September 1 – September 30
Jamestown/Middleto wn/Newport	Newport	Rhode Island	October 1 – October 31 and June 1 – September 30
Charleston	Charleston, Berkeley, and Dorchester	South Carolina	October 1 –September 30
Hilton Head	Beaufort	South Carolina	June 1 – August 31
Myrtle Beach	Horry	South Carolina	June 1 – August 31
Nashville	Davidson	Tennessee	October 1 – September 30
Moab	Grand	Utah	October 1 – October 31 and March 1 – September 30
Park City	Summit	Utah	October 1 – September 30
Virginia Beach	City of Virginia Beach	Virginia	June 1 – August 31
Wallops Island	Accomack	Virginia	July 1 – August 31
Washington, DC Metro Area	Cities of Alexandria, Falls Church, and Fairfax; Counti	Virginia	October 1 – September 30
Manchester	Bennington	Vermont	October 1 – September 30
Port Angeles/Port Townsend	Clallam and Jefferson	Washington	July 1 – August 31
Seattle	King	Washington	October 1 – September 30
Vancouver	Clark, Cowlitz, and Skamania	Washington	October 1 – October 31 and June 1 – September 30
Cody	Park	Wyoming	June 1 – September 30
Jackson/Pinedale	Teton and Sublette	Wyoming	October 1 – September 30

Metropolitan Transit System

Policies and Procedures No. 44

Board Approval: 9/14/23

SUBJECT:

TRAVEL POLICY

PURPOSE:

To establish guidelines for San Diego Metropolitan Transit System (MTS) employees and MTS Board of Director (Board) members travelling on behalf of MTS. Attendance at relevant industry and professional conferences is an important facet of employee and Board member understanding of transit issues, emerging trends, and the ongoing professional development of staff.

POLICY:

44.1 Applicability. This policy applies to all MTS agencies including MTS, San Diego Transit Corporation, San Diego Trolley, Inc., and San Diego and Arizona Eastern Railway Co.

44.2 Board Member Attendance. MTS and its customers benefit from Board member engagement in state and national transit-related association activities such as those organized by the California Transit Association (CTA) and the American Public Transit Association (APTA). Each Board member is encouraged to attend one transit-related conference annually. The Chief Executive Officer (CEO) will survey the Board members annually to ascertain their interest in attending conferences. Budget, Brown Act, and other considerations may limit the number of Board members who may attend any given conference or meeting.

44.3 Travel by Board Member Alternate. Board alternates may attend one of the transit-related conferences, conditioned on the following:

a. They are attending in the place of the regular member.

b. They attended 50 percent or more of the Board meetings in the past 12 months, or since appointment, whichever time is shortest.

44.4 Employee Attendance. Employees are encouraged to attend transit conferences, seminars, and training classes pertaining to their respective disciplines.

44.5 Other Meetings. Consistent with 44.2 through 44.4, full reimbursement will be provided to any Board member or employee who is active on a CTA or APTA committee for travel and expenses related to a committee meeting. Other transit-related conferences or meetings may also merit attendance. Examples include meetings of the California Transportation Commission and legislative hearings. In such cases, the Chairperson (in the case of Board members) or the CEO (in the case of employees) will determine whether attendance is desirable, consider the remaining available travel budget, and decide who should attend.

44.6 Board Member Travel Arrangements. Board members will be notified in advance of conference details and basic travel arrangements such as arrival and departure dates and times, cost of the trip, date that members need to notify MTS of their interest in attending, and any potential cost impacts for changes made after that date. Board members desiring different travel arrangements will be financially responsible for any costs over and above those determined for the basic trip. Board members shall be notified in sufficient time to make changes with advance reservation discounts.

44.7 Travel Authorization. Employees traveling for work relating to or for the benefit of MTS must request advance approval through a “Travel Authorization Form” (Attachment A). The form must be completed and approved as soon as the need for travel is known, and if possible, at least two weeks prior to the trip. The requests shall be approved as follows: department managers or directors, Chief Operating Officer(s) (COO), Chief Financial Officer (CFO), and/or General Counsel. All requests must be approved by the CEO regardless of amount. After CEO approval, the request form will be routed back to the Finance Department. Finance will send a copy of the “Travel Authorization Form” to the traveler and keep the original as backup for a pending “Travel Expense Report.”

This authorization form is a required step for reimbursement of travel expenses but will not by itself serve as the basis for reimbursement of travel costs, as reimbursement requests shall be made on a “Travel Expense Report” described in Section 44.8 and shown in Attachment C. Travel reservations will be made by the individual traveler or individuals as designated by the COO or CEO.

44.8 Expense Report. The “Travel Expense Report” portion of the form will be used to record actual trip expenses, and should be completed within two weeks from the return date. For employees, a department manager or director must indicate approval of the expenses (CEO approval for direct report travel; CEO, General Counsel, or CFO approval for Board member travel; and General Counsel approval of CEO travel). The form is routed to the Finance Department for processing, with a personal check attached for any funds due to MTS (if MTS direct expenses or travel advances exceed the total amount due). Failure to submit expense reports within this timeframe may result in not being reimbursed or collection actions taken if money is owed to MTS. Extensions may be granted by the CEO. For Board members, MTS will work with the Board member or their staff to assist them in preparing and approving this report.

All expenses should be itemized, including items MTS may have paid for in advance (e.g., airfare, conference registration) so that the report provides a complete record of all expenses. It is the traveler's responsibility to submit a completed report in order to receive prompt reimbursement.

44.9 Receipts. Itemized receipts for expenditures must be attached to the "Travel Expense Report" for all expenses where a receipt is practically attainable (mandatory, unless a written satisfactory explanation is provided for expenses in excess of $10). Such written explanations may be subjected to approval by the CEO. Hotel charges must be evidenced by an itemized hotel bill, as a credit card receipt is not sufficient.

44.10 Travel Advances. Travel advances are provided on a case-by-case basis and approved by the CFO and/or CEO. A travel advance is a loan that provides cash resources to assist the employee while traveling and is not a payment by MTS for travel expenses. Persons requesting that MTS provide advance proceeds must request approval using the "Travel Advance Request" (Attachment B). This form must be completed and approved at least two weeks prior to the trip taking place, and advances will typically be distributed one week prior to the departure date. Any travel advance shall not exceed the total estimated amount of the trip less any items paid by MTS.

Travel costs incurred prior to departure may be reimbursed when paid. An example is a traveler paying for conference registration or booking and paying for air travel personally several weeks in advance. Reimbursements for these costs are not considered an advance. These items should be included on a "Request for Payment/Payment Voucher" or "Travel Expense Report" and only after the "Travel Authorization Request" has been approved.

44.11 Reasonable Travel Expenses. MTS reimburses for reasonable costs necessarily incurred for work travel in accordance with the terms of this policy and does not provide a per diem allowance. Itemized receipts for all meals, hotel, airfare, registration, etc must be provided. The following expenditure guidelines and the Annual Travel Cost Rates set by MTS (rates for the current calendar year are attached as Attachment E) should be observed as upper limits unless particular circumstances reasonably dictate otherwise:

a. Upper Limits. Upper limits for meals, hotels, and similar costs will be updated, approved by the CEO, and published annually. See Attachment E for the current calendar year rates.

b. Air Travel. Air travel should be coach class for the most direct route. Traveler arrangements should be made as far as possible in advance in order to secure the most favorable rates. MTS will cover the cost if it is more cost effective (i.e., difference in airfare as compared to the additional cost for hotel and meals) to include a Saturday stay. Travelers should consider this option when practical. Refundable airfares may be purchased if warranted.

c. Personal Auto Use. In the event that a private auto is used for the trip, mileage will be paid in accordance with the current IRS Mileage Reimbursement Rates. Maximum reimbursement shall not exceed the cost of a comparable coach airfare to the same location.

d. Ground Transportation. In using surface transportation, the most practical, least expensive alternative should be utilized. Such transportation includes travel to and from the airport and reasonable business-related trips at the location. Travelers are encouraged to utilize public transportation where available.

1. Parking. MTS will reimburse the lesser of the parking cost for a personal auto left at the airport or the cost of a shuttle service, taxi, or ride share service to and from the airport. If a specific option is not feasible given the time of travel or other personal circumstances, a waiver should be requested.

f. Personal Travel. A traveler may wish to combine MTS-related travel with personal travel or include family members in the trip. If personal travel is included within the trip, it must be notated on the "Travel Authorization Form." For trips that include personal travel, MTS will reimburse the cost equivalent to a single-person roundtrip for the most direct route between San Diego and the business travel location. MTS will not advance any payments to cover personal travel.

g. Rental Car. The use of rental cars must be preapproved as part of the "Travel Authorization Form." In the event a rental car is required, MTS will reimburse rental car charges for up to a reasonably priced standard-size sedan, unless the nature of the travel or the number of employees traveling warrants a larger vehicle. The traveler will be responsible for the cost difference, if any, for any vehicle upgrades over a standard-size sedan. MTS will not reimburse for rental car insurance coverage since employees are included under MTS's general automobile insurance coverage.

h. Meals (While in Travel Status). Meals, including tip, shall generally average no more than the maximum rate approved and published annually. Alcohol consumed with a meal is not reimbursable, including applicable taxes and tips related to the alcohol cost. The amount per day applies to each 24-hour day of travel, and partial days would be prorated accordingly. Exceptions to the maximum rates must be approved by the CEO or General Counsel.

i. Business Meal. Reasonable business (involving outside persons or when necessary to conduct MTS-related business) meals are permitted. All such meals must be itemized, including the names of all attendees, with justification.

j. Hotel. Travelers will be reimbursed for the cost of a reasonably priced single-occupancy hotel room. The maximum reimbursement is limited to the rate approved and published in this Policy (Attachment E). IRS Notice 2022-44 (Attachment F) provides high-cost localities and timeframes in which maximum limits are eligible for reimbursement. However, travelers are not required to stay in unsafe locations or locations that would result in long commutes to their meetings simply to meet those limits. These maximum limits do not apply if the traveler is staying at a hotel where a conference is being held. The CEO may

authorize a waiver of the maximum limits in the event (1) the conference hotel is fully booked and the traveler stays at a nearby hotel with a rate reasonably comparable to the conference hotel rate; or (2) a safe and convenient hotel within the maximum rates is not identified within reasonable proximity to the meeting or event necessitating the business travel.

k. Other Business-Related Expenses. Other business-related expenses while traveling such as supplies, equipment rental, reprographics, facsimiles, internet access, and other documented business-related expenses may be reimbursed when traveling on MTS business and used for MTS purposes.

l. Travel Outside of the U.S. Reimbursement for travel outside the U.S. will be calculated at the average exchange rate during the trip. All reimbursement for any Value Added Taxes charged for hotel accommodations must be returned to MTS.

m. Registration. Travelers requesting to attend a conference or training that requires registration should do so in sufficient time to take advantage of any discounts.

n. Additional Conference Events or Costs. Conference luncheons, special banquets, or other set-price official affairs that exceed the actual cost listed under meals may be reimbursed if they are necessary to the attendance of the conference and must be authorized in advance with the submission of the “Travel Authorization Form”.

o. Cancellation Penalties. In the event that registration, airfare, hotel deposit, or any other such items that require prepayment are paid and the traveler is unable to attend and the prepayment is nonrefundable, then the traveler may be responsible for reimbursing MTS for the full cost unless the inability to attend is for valid business reasons, medical conditions, or personal emergencies, as approved by the CEO for employees or by the Executive Committee for Board members.

p. Non-allowable Expenses. MTS will not provide any reimbursement for personal entertainment expenses, alcoholic beverages, movies in hotels, personal items, charitable contributions, air travel insurance, any travel expenses for family members (including but not limited to transportation, hotels, and meals), or any other expenses not deemed necessary for business purposes.

q. Political Events. MTS will not provide reimbursement for expenses incurred for the purpose of attending political events. An event shall be considered “political” if it is held for the purpose of supporting, opposing, or raising money to support or oppose any candidate, ballot measure, or political party.

r. Non-Discrimination. MTS will not provide any reimbursement for expenses incurred with any private club or establishment that discriminates on the basis of race, color, national origin, disability, gender, religion, sexual orientation, or other legally protected characteristic or class in its membership policy.

Exceptions to these guidelines must be approved by the CEO for employees and by the Executive Committee for Board members.

44.12 Within-Area Expenses. The form entitled "Expense Report (within area expenses)" (see Attachment D) must be used to record any eligible expenses. This report applies to expenses incurred within the San Diego County area only.

a. Submittal of Form. Employees must submit this form together with receipts after applicable expenses are incurred.

b. Eligible Expenses. Eligible expenses must be related to and necessary for carrying out MTS business. They may include, but not be limited to, business meals or meetings, mileage, parking, or other miscellaneous out-of-pocket expenses related to MTS business. The CEO or CFO may, in their judgment, disallow any extraordinary or inappropriate expenses. Whenever possible, local travel should be by public transportation. If it is impractical to use public transit, an MTS vehicle or private auto should be used.

c. Description and Purpose. The report should include the date, description / purpose (including destination), and the applicable department / account code (if operations) or the applicable project / task detail (if capital).

d. Approvals. All necessary approvals must be obtained in advance and the completed form must be submitted to the Finance Department within one week after expenses are incurred.

44.13 Non-Exempt Employee Travel Time Compensation Guidelines

a. Travel Time. MTS pays non-exempt employees for travel time in accordance with the Fair Labor Standards Act (FLSA).

b. Home to Work Travel. In general, the time an employee spends commuting from home to work and from work to home is not work time and is not compensable.

c. Single-Day Travel. Time spent by a non-exempt employee in travel as part of his or her normal work activities (travel is performed for the benefit of MTS and at its request), such as travel to a seminar during regular working hours, is considered hours worked. If the employee is required to travel to another city and return home in the same day, the travel time to and from the other city is considered hours worked regardless whether the travel occurs within the employee's normal work schedule or by common carrier. However, meal periods and the travel time between the employee's home and the point of public transportation (i.e. airport, train station) are not considered hours worked.

d. Overnight Travel. Travel by a non-exempt employee who (at the request and for the benefit of MTS) will be away from home overnight is work time only during those periods that coincide with the employee's regular working hours (i.e. Monday through Friday 9 a.m. to 5 p.m.). Such time is counted as hours worked even if it occurs on a non-working day (i.e. Saturday or Sunday between 9 a.m. and 5 p.m.). Travel outside regular working hours as a passenger in a plane, train, boat, bus or automobile is not considered hours worked. Driving a vehicle, regardless of whether the travel takes place within or outside normal work hours, counts as hours worked if it is for the benefit of MTS. (If an employee drives a car as a matter of personal preference in lieu of a different authorized mode of travel, only the estimated travel time associated with the authorized mode will be counted as hours worked.) To the extent that an employee performs work while traveling (i.e. preparing for a meeting, reviewing documents, making telephone calls), this time constitutes hours worked even if the travel time would otherwise not be compensable. Regular meal periods and time spent at a hotel with freedom to use time for the employee's own purposes is not compensable. The employee will not be compensated for time not working even if it occurs within the employee's regular work schedule (i.e. employee goes sightseeing).

e. Non-exempt employees shall record and report all hours worked in accordance with the above guidelines. Overtime will be paid to the extent that hours worked, including travel hours specified above, exceed 40 hours in a workweek. If you have any questions, please contact Human Resources.

POLICY.44.TRAVEL EXPENSE POLICY

Attachments: A. Travel Authorization Form
B. Travel Advance Request
C. Travel Expense Report
D. Expense Report (within-area expenses)
E. Annual Travel Cost Rates
F. IRS Notice 2022-44

Original Policy approved on 8/12/93.
Policy amended on 10/27/94.
Policy revised on 4/29/04.
Policy revised on 1/26/06.
Policy revised on 7/19/07.
Policy revised on 6/24/10.
Attachments updated by Staff 1/16/13.
Policy and attachments revised on 9/12/13.
Attachments updated by Staff 7/24/14.
Attachments updated by Staff 5/18/15.
Attachments updated by Staff 2/2/16.
Policy and attachments revised on 1/19/17.
Attachments updated by Staff 6/21/17.
Policy and attachments revised on XX/XX/XXXX

Attachment A

(Revised 6.14.23)

Metropolitan Transit System

TRAVEL AUTHORIZATION FORM

(complete this form first, before any travel expenses are incurred)

☐ MTS
☐ SDTC
☐ SDTI

PART I - EMPLOYEE INFORMATION

Report Date: 6/14/2023

Employee Name:

Title:

Department Name:

Travel Dates:

Meeting Name/Purpose:

Costs to be charged to:

Department/Acct Code:
OPERATIONS ONLY

Project/Task Detail:
CIP ONLY

Location:

PART II - TOTAL ESTIMATED EXPENSES

Transportation

Air
Train
Car
Mileage rate = $.655 / mile
Rental car insurance is not reimbursable

Total Transportation	$	-

Shuttles / Taxi / Parking

Lodging

Days
Rate

Total Lodging	$	-

Meals

Days
Rate

Total Meals	$	-

Other Costs

Registration
Other
Other

Total Other	$	-

Grand Total Estimated Expenses	$	-
Less: Amount To Be Paid Directly By MTS	$	-
Maximum Amount To Be Paid By Traveler	$	-

PART III - SIGNATURES and APPROVALS

	Signature	Date
Traveler:		
Department Manager / Director:		
COO / CFO / General Counsel:		
Budget Manager:		
CFO / General Counsel:		
Chief Executive Officer:		

Attachment B

(Revised 06.14.2023)

Metropolitan Transit System

TRAVEL ADVANCE REQUEST

(complete this form, if needed, to request cash for travel)

☐ MTS
☐ SDTC
☐ SDTI

PART I - EMPLOYEE INFORMATION

Report Date: 6/14/2023

Employee Name: _____ Title: _____

Department Name: _____ Travel Dates: _____

Meeting Name/Purpose: _____

PART II - TOTAL ESTIMATED EXPENSES

Grand Total Estimated Expenses (from travel authorization form)	$	-
Less: Amount To Be Paid Directly By MTS (from travel authorization form)	$	-
Maximum Amount To Be Paid By Traveler (from travel authorization form)	$	-
Total Advance Requested	**$**	**-**

PART III - SIGNATURES and APPROVALS

	Signature	Date
Traveler:		
Department Manager / Director:		
COO:		
CFO / General Counsel:		
Chief Executive Officer:		

Attachment C

(Revised 06.14.2023)

Metropolitan Transit System

TRAVEL EXPENSE REPORT

(complete this form no later than 1 week after return from travel)

☐ MTS
☐ SDTC
☐ SDTI

PART I - EMPLOYEE INFORMATION

Report Date: 6/14/2023

Employee Name: _____

Title: _____

Department Name: _____

Costs to be charged to:

Department/Acct Code: _____
OPERATIONS ONLY

Project/Task Detail: _____
CIP ONLY

Meeting Name/Purpose: _____

PART II - TOTAL EXPENSES

		DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	Total
Travel Dates								
Location (City, State)								
Transportation**								$ -
Shuttles/Taxis								$ -
Parking								$ -
Lodging								$ -
Meals (Use Detail Tabs)	Breakfast ($30 daily limit)*	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Lunch ($30 daily limit)*	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Dinner ($50 daily limit)*	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other:	Registration							$ -
Other:								$ -
Other:								$ -
Other:								$ -
Total		$ -	$ -	$ -	$ -	$ -	$ -	$ -

1. Travel expense report must be filled within two weeks after completing trip.

2. Attach receipts for all purchases over $10. Explain all items over $10 not having receipts.

3. Include related trip items paid separately by MTS; mark with an asterisk.

****There is an overall daily cap of $90.00***

*****Rental car insurance is not reimbursable.***

Total Expenses	$ -
Less MTS Paid Items (please enter a +number)	
Subtotal	$ -
Less Cash Advanced (please enter a +number)	
Amount Due	$ -

PART III - SIGNATURES and APPROVALS

☐ I certify that the above report is true and correct.

CEO approval of exception(s) from the Travel Policy: _____

	Printed Name	Signature	Date
Traveler:			
Manager/Supervisor (Up to $3000):			
Department Director (Up to $5000):			
Chief Financial Officer:			

Attachment D

(Revised 06.14.23)

Metropolitan Transit System

EXPENSE REPORT (within-area expenses)

☐ MTS
☐ SDTC
☐ SDTI

Finance Use Only:

PEID

PART I - EMPLOYEE INFORMATION

Employee Name: _____ Period: _____ to _____

Employee Signature: _____

☐ I certify that the expenses reported are true and correct.

PART II - EXPENSES AND MILEAGE DETAIL

Date	OPERATIONS ONLY Dept./Acct Code	CIP ONLY Project/Task Detail	Description / Purpose	Telephone 555100	Meeting Exp. 575230	Mileage ($.655/mile) 575230	Other
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
				$ -	$ -	$ -	$ -
			TOTALS	$ -	$ -	$ -	$ -
						GRAND TOTAL	**$ -**

PART III - APPROVALS

Department Director (Up to $500): _____

Chief Financial Officer (Up to $1500): _____

Chief Executive Officer (CEO): _____

Expense Report Instructions

1. Employees must submit this form when requesting reimbursement. This report applies to expenses incurred within the San Diego metropolitan area only.
2. Eligible expenses must be related to and necessary for carrying out MTS business. They may include, but are not limited to, business meals, or meetings, parking, or other miscellaneous out-of-pocket expenses related to MTS business. The CFO or CEO may, in their judgment, disallow any extraordinary or inappropriate expenses. Attach receipts for all out-of-pocket expenses.
3. Briefly describe the item or the destination and the purpose.

Attachment E

Annual Travel Cost Rates
Calendar Year 2023

Hotel Maximum (quoted price - not including taxes or fees)

Medium/Low Cost Localities	$200.00
High Cost Localities (IRS Notice 2022-44)	$275.00

Average Daily Meal Maximum

All Localities	$ 90.00

Mileage Reimbursement Rate

As set by the IRS, effective January 1, 2023

per mile	$ 0.655

NOTES:

1. These are maximum rates. A higher cap may be obtained if pre-authorized by the CEO. Rates must be reasonable and necessary under the circumstances and will customarily be lower.

2. Meal caps are detailed out below, with an overall daily cap of $90.00

   Breakfast - $30.00
   Lunch - $30.00
   Dinner - $50.00

3. If a conference registration fee covers meals, employees are to participate in those meals.

4. Small / Medium U.S. Cities are defined for this rate structure as those with less than 1 million persons in the metropolitan area.

   Large U.S. Cities are defined for this rate structure as those with more than 1 million persons in the metropolitan area.

5. The Mileage Rate is directly tied to the rate set by the IRS and will be revised more frequently than annually if done so by the IRS.

Attachment F
High-Cost Localities (IRS Notice 2022-44)

Key City	County or Other Defined Location	State	Portion of Calendar Year
Gulf Shores	Baldwin	Alabama	June 1 – July 31
Phoenix/Scottsdale	Maricopa	Arizona	February 1 – March 31
Sedona	City limits of Sedona	Arizona	October 1 – September 30
California	Los Angeles, Orange, and Ventura, and Edwards AFB,	California	October 1 – October 31 and June 1 – September 30
Mill Valley/San Rafael/Novato	Marin	California	October 1 – October 31 and June 1 – September 30
Monterey	Monterey	California	June 1 – August 31
Napa	Napa	California	October 1 –September 30
Oakland	Alameda	California	October 1 – September 30
San Diego	San Diego	California	February 1 – August 31
San Francisco	San Francisco	California	October 1 – September 30
San Luis Obispo	San Luis Obispo	California	June 1 – August 31
San Mateo/Foster City/Belmont	San Mateo	California	October 1 – September 30
Santa Barbara	Santa Barbara	California	October 1 – September 30
Santa Monica	City limits of Santa Monica	California	October 1 – September 30
Sunnyvale/Palo Alto/San Jose	Santa Clara	California	October 1 – September 30
Aspen	Pitkin	Colorado	October 1 – March 31 and June 1 – September 30
Denver/Aurora	Denver, Adams, Arapahoe, and Jefferson	Colorado	October 1 – October 31 and April 1 – September 30
Durango	La Plata	Colorado	June 1 – September 30
Grand Lake	Grand	Colorado	December 1 – March 31
Silverthorne/Brecken ridge	Summit	Colorado	October 1 – March 31 and June 1 – September 30
Steamboat Springs	Routt	Colorado	December 1 – March 31
Telluride	San Miguel	Colorado	October 1 – September 30
Vail	Eagle	Colorado	October 1 – September 30
Lewes	Sussex	Delaware	July 1 – August 31
Washington D.C. (also the cities of Alexandria, Falls Church, and Fairfax, and the counties of		District of Columbia	October 1 – September 30
Boca Raton/Delray Beach/Jupiter	Palm Beach and Hendry	Florida	December 1 – April 30
Bradenton	Manatee	Florida	February 1 – March 31
Cocoa Beach	Brevard	Florida	February 1 – March 31
Fort Lauderdale	Broward	Florida	October 1 – April 30
Fort Myers	Lee	Florida	February 1 – March 31
Fort Walton Beach/DeFuniak Springs	Okaloosa and Walton	Florida	October 1 – October 31 March 1 – September 30
Gulf Breeze	Santa Rosa	Florida	June 1 – July 31
Key West	Monroe	Florida	October 1 – September 30
Miami	Miami-Dade	Florida	December 1 – March 31
Naples	Collier	Florida	December 1 – April 30
Panama City	Bay	Florida	June 1 – July 31
Pensacola	Escambia	Florida	June 1 – July 31
Punta Gorda	Charlotte	Florida	February 1 – March 31
Sarasota	Sarasota	Florida	February 1 – April 30
Sebring	Highlands	Florida	February 1 – March 31
Stuart	Martin	Florida	February 1 – March 31
Vero Beach	Indian River	Florida	December 1 – April 30
Jekyll Island/ Brunswick	Glynn	Georgia	March 1 – July 31
Sun Valley/Ketchum	Blaine and Elmore	Idaho	December 1 – March 31 and June 1 – September 30
Chicago	Cook and Lake	Illinois	October 1 – November 30 and April 1 – September 30
Bar Harbor/ Rockport	Hancock and Knox	Maine	October 1 – October 31 and July 1 – September 30
Kennebunk/Kittery/S anford	York	Maine	July 1 – August 31
Portland	Cumberland and Sagadahoc	Maine	July 1 – August 31
Ocean City	Worcester	Maryland	July 1 – August 31
Washington, DC Metropolitan Area	Montgomery and Prince George's	Maryland	October 1 – September 30
Boston/Cambridge	Suffolk and City of Cambridge	Massachusetts	October 1 – September 30
Falmouth	City limits of Falmouth	Massachusetts	May 1 – August 31
Hyannis	Barnstable less the city of Falmouth	Massachusetts	July 1 – August 31
Martha's Vineyard	Dukes	Massachusetts	October 1 – September 30
Nantucket	Nantucket	Massachusetts	October 1 –September 30
Mackinac Island	Mackinac	Michigan	July 1 – August 31
Petoskey	Emmet	Michigan	July 1 – August 31
Traverse City	Grand Traverse	Michigan	July 1 – August 31
Duluth	St. Louis	Minnesota	October 1 – October 31 and June 1 – September 30
Big Sky/West Yellowstone/Gardiner	Gallatin and Park	Montana	June 1 – September 30
Kalispell/Whitefish	Flathead	Montana	July 1 – August 31
Carlsbad	Eddy	New Mexico	October 1 – September 30
Toms River	Ocean	New Jersey	July 1 – August 31
Glens Falls	Warren	New York	July 1 – August 31
Lake Placid	Essex	New York	July 1 – August 31
New York City	Bronx, Kings, New York, Queens, and Richmond	New York	October 1 – December 31 and March 1 – September 30
Kill Devil Hills	Dare	North Carolina	April 1 – September 30
Lincoln City	Lincoln	Oregon	July 1 – August 31
Portland	Multnomah	Oregon	October 1 – October 31 and June 1 – September 30
Seaside	Clatsop	Oregon	July 1 – August 31
Hershey	Hershey	Pennsylvania	June 1 – August 31
Philadelphia	Philadelphia	Pennsylvania	October 1 – November 30, March 1 – June 30, and September 1 – September 30
Jamestown/Middleto wn/Newport	Newport	Rhode Island	October 1 – October 31 and June 1 – September 30
Charleston	Charleston, Berkeley, and Dorchester	South Carolina	October 1 –September 30
Hilton Head	Beaufort	South Carolina	June 1 – August 31
Myrtle Beach	Horry	South Carolina	June 1 – August 31
Nashville	Davidson	Tennessee	October 1 – September 30
Moab	Grand	Utah	October 1 – October 31 and March 1 – September 30
Park City	Summit	Utah	October 1 – September 30
Virginia Beach	City of Virginia Beach	Virginia	June 1 – August 31
Wallops Island	Accomack	Virginia	July 1 – August 31
Washington, DC Metro Area	Cities of Alexandria, Falls Church, and Fairfax; Counti	Virginia	October 1 – September 30
Manchester	Bennington	Vermont	October 1 – September 30
Port Angeles/Port Townsend	Clallam and Jefferson	Washington	July 1 – August 31
Seattle	King	Washington	October 1 – September 30
Vancouver	Clark, Cowlitz, and Skamania	Washington	October 1 – October 31 and June 1 – September 30
Cody	Park	Wyoming	June 1 – September 30
Jackson/Pinedale	Teton and Sublette	Wyoming	October 1 – September 30

Metropolitan Transit System

1255 Imperial Avenue, Suite 1000
San Diego, CA 92101-7490
619.231.1466 Fax: 619.234.3407

Policies and Procedures No. 29

SUBJECT: **Board Approval:** 3/11/04

ATTENDANCE AT TRANSIT-RELATED CONFERENCES

PURPOSE:

To establish a basis for budgeting Board member and employee attendance at transit-related conferences. Attendance at relevant industry and professional conferences is an important facet of Board member understanding of transit issues and state-of-the-art changes and the ongoing professional development of staff.

POLICY:

29.1 Board Member Attendance. It is desirable and beneficial to MTS and the constituents it represents that Board members actively participate in state and national transit-related association activities. Such activities are normally associated with the California Transit Association (CTA) and the American Public Transit Association (APTA). Each Board member is encouraged to attend one transit-related conference annually. Each year, the Chief Executive Officer will survey the Board members to ascertain their interest in attending one of the following conferences:

CTA Annual	(November)
CTA Legislative	(March)
APTA Annual	(Fall)
APTA Rapid Transit	(June)
APTA Board Members Seminar	(July)
APTA Bus	(Spring)
APTA Legislative	(March)

29.2 Employee Attendance. Employees are encouraged to attend conferences related to transit in general (as listed above in 29.1) and/or their respective disciplines. Each year, the department directors will submit to the Chief Executive Officer a list of desired conferences and other meetings to be attended. Upon return, employees attending conferences will submit a written

RETIRED

Metropolitan Transit System (MTS) is a California public agency and is comprised of San Diego Transit Corporation and San Diego Trolley, Inc. nonprofit public benefit corporations, in cooperation with Chula Vista Transit and National City Transit. MTS is the taxicab administrator for eight cities and the owner of the San Diego and Arizona Eastern Railway Company.

MTS member agencies include: City of Chula Vista, City of Coronado, City of El Cajon, City of Imperial Beach, City of La Mesa, City of Lemon Grove, City of National City, City of Poway, City of San Diego, City of Santee, and the County of San Diego.

trip report to the Chief Executive Officer in order to share the knowledge obtained from their attendance.

29.3 Annual Budgeting. Board member and employee attendance will be funded (i.e., full reimbursement for travel expenses and conference fees in accordance with MTS Policy No. 44) in the annual budget subject to the availability of funds and based on the survey results from 29.1 and 29.2 above. As part of this budgeting process, the Chief Executive Officer of MTS and the General Managers of SDTC and SDTI will meet and coordinate the lists of desired travel to out-of-town conferences resulting from 29.1 and 29.2. Their objectives will be to ensure minimum representation at key industry conferences and to make sure that the cumulative attendance at any one conference is not excessive.

29.4 Other Meetings. In addition to the above conferences and consistent with 29.1 through 29.2, full reimbursement will be provided to any Board member or employee who is active on a CTA or APTA committee for travel and expenses related to a committee meeting. In addition, other transit-related conferences or meetings may come up from time to time that deserve attendance. For such conferences or meetings, the Chairman (in the case of Board members) or the Chief Executive Officer (in the case of employees) will determine whether attendance is desirable, consider remaining available budget for travel, and decide who should attend. This definition includes meetings such as those of the California Transportation Commission or legislative hearings, for example.

29.5 Expense Reporting. Standard MTS expense reports will be used for all out-of-town travel in accordance with MTS Policy No. 44.

29.6 Maximum Board Member Attendance. The number of Board members attending any transit-related conference should not exceed seven (i.e., less than a quorum) unless this provision is specifically waived by the Board.

29.7 Board Member Travel Arrangements. Basic travel arrangements for a conference will be determined and Board members will be notified in advance of the details, such as: arrival and departure dates and times, cost of the trip, date that members need to notify MTS of their interest in attending, and any potential cost impacts for changes made after that date. Board members desiring to attend a conference using the basic arrangements will notify MTS. Board members desiring different travel arrangements will contact the Board's travel agent to make those arrangements and be financially responsible for any costs over and above those determined for the basic trip. Board members shall be notified in sufficient time to make changes with advance reservation discounts. If a Board member has a change in plans subsequent to having a basic trip arranged for him/her, the Board member will be responsible for contacting the Board's travel agent, handling the changes, and be financially responsible for any costs associated with the changes.

REPEALED

29.8 Board Member/Employee Financial Responsibility. If a Board member or employee initiates a change in plans, then the individual will equally share the financial responsibility with MTS for the cost impacts of the changes, unless a medical/death emergency occurs personally or with the individual's immediate family. The "immediate family" is defined to include only husband/wife, children, brother, sister, father, mother, father-in-law, mother-in-law, or any of the aforementioned step or adopted relatives.

29.9 Travel by Board Member Alternate. Board alternates may attend one of the transit-related conferences conditioned on the following:

a. He/she is attending in the place of the regular member.

b. He/she attended 50 percent or more of the Board meetings in the past 12 months, or since appointment, whichever time is shortest.

DDarro/SChamp/JGarde
POLICY.29.ATTENDANCE TRANSIT CONFERENCES
7/14/06

Original Policy was adopted on 8/22/85.
Policy was amended on 12/8/88.
Policy was amended on 10/27/94.
Policy was amended on 4/29/99.
Policy was amended on 3/11/04.

REPEALED

Metropolitan Transit System

Agenda Item No. 7

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Grantville Transit Center Hardscape and Landscape Improvements – 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 MTSJOC347-05 under Job Order Contract (JOC) MTS Doc. No. PWG347.0-22 (in substantially the same format as Attachment A) with ABC General Contracting, Inc. (ABCGC), in the amount of $968,743.63, for rehabilitating the hardscape and landscape currently present at the Grantville Transit Center.

Budget Impact

The total cost for this project is estimated at $968,743.63. Under separate MTS Doc No. L1282.0-16, with The Gordian Group, MTS will pay a 1.95% JOC software license fee in the amount of $18,890.50. This project is funded by MTS Grantville Station Improvements Work Breakdown Structure Element (WBSE) #2006116301.

DISCUSSION:

Grantville Transit Center – MTS Improvement Projects

On June 13, 2019 (AI 33) and as amended on April 8, 2021 (AI 18), the MTS Board of Directors authorized Disposition and Development Agreements for two transit-oriented developments at the Grantville Transit Station. The two developments included a 100% affordable housing development of 125 apartment homes with Grantville Trolley Family Housing, L.P. (an affiliate of Affirmed Housing Group, Inc., collectively “Affirmed”), and another with Greystar for a market rate multi-residential development of 250 apartment homes. As part of the project, 100 transit replacement transit parking spots were constructed as part of the Greystar development.

In January 2021, the California Department of Housing & Community Development (HCD) awarded a total of $11,995,000 to Affirmed for their affordable housing development at the Grantville Trolley Station. The HCD grant was divided into two parts: a $10,000,000 loan for construction of the affordable housing development, to be managed by Affirmed, and a $1,995,000 grant for Infrastructure Projects, to be managed by MTS.

Of the $1,995,000 in Infrastructure Grant Funds, $599,000 of it is allocated to pay for Affirmed's cost share for 33 trolley replacement parking spaces constructed in the Greystar development. The remaining $1,396,000 was available for MTS to implement various improvement projects at the Grantville Transit Center. During the Capital Improvement Program (CIP) Budgeting process, the MTS Board also allocated additional funds to complete the identified Grantville Transit Center projects. Identified projects include painting, hardscape, landscaping, lighting, closed circuit surveillance cameras, and additional variable message signs and PRONTO validators. The total CIP budget estimates for all projects is $3.4 million. By timing the projects to be completed close to the opening of the Affirmed and Greystar apartment projects, riders will enjoy a fully refurbished station experience.

Today's proposed action relates to the hardscape and landscaping improvements portion of the project. Upon review of needed MTS improvement projects at the Grantville Transit center, it was determined that the current hardscape and landscape at the station was no longer in a state of good repair. The intent of this project is to rehabilitate existing walkways and common areas by demolishing and removing existing concrete benches and flatwork, replacing it with new concrete and landscaping to create a cohesive passenger flow between the transit center, the newly opened Greystar building, and the pending Affirmed building. This will include replacement and rehabilitation of the existing irrigation systems as well as all planting areas. Planting areas will receive new trees, plants, and mulch in order to return the landscaping at the station to a visually appealing state, as well as a state of good repair.

The project was funded with Fiscal Year (FY) 2023 annual CIP and HCD grant funds.

JOC Work Order Award Process & Recommendation

On October 6, 2020, MTS issued an Invitation for Bids (IFB) seeking a contractor to provide JOC civil construction services that primarily consists of repair, remodeling, or other repetitive work, and general building and facility contracting services. These services include, but are not limited to, demolition, maintenance, and modification of existing buildings and facilities, as well as any required incidental professional and technical services.

JOC is a procurement method under which public agencies may accomplish frequently encountered repairs, maintenance, and construction projects through a single, competitively procured long-term agreement.

The JOC program includes a catalog of pricing for a variety of potential tasks to be performed under the contract that have been pre-priced by the contractor, the Gordian Group. All potential contractors are subject to the pricing within this catalog. Each contractor then includes an adjustment factor, escalating their proposed price from the catalog price, to determine the total cost of the task order. The adjustment factor represents an average percentage increase over the catalog price (i.e. 1.25 adjustment factor represents 25% above the catalog price) for that respective task within the project. In order to select the lowest responsive and responsible bidder, MTS staff compares each contractor's proposed adjustment factor.

Nine (9) bids were received and MTS determined that ABCGC was the lowest responsive and responsible bidder. On December 10, 2020, the MTS Board authorized the CEO to execute MTS Doc. No. PWG347.0-22 with ABCGC for Civil Construction Services.

Today's proposed action would issue a work order to ABCGC under this JOC master agreement. Pricing for this repair work order was reviewed and determined to be fair and reasonable. Work is expected to be completed by January 2024. Harborside Construction Inc., Electro Specialty Systems, Titan Steel, The Doctor of Electricity and Koch General Engineering will be used as subcontractors for this work order.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order MTSJOC347-05 under JOC MTS Doc. No. PWG347.0-22 (in substantially the same format as Attachment A) with (ABCGC, in the amount of $968,743.63, for rehabilitating the hardscape and landscape currently present at the Grantville Transit Center.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Work Order MTSJOC347-05

JOB ORDER CONTRACT
WORK ORDER

PWG347.0-22
CONTRACT NUMBER

MTSJOC347-05
WORK ORDER NUMBER

THIS AGREEMENT is entered into this _____ day of _____ 2023, 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: ABC General Contractor, Inc. Address: 3120 National Avenue

Form of Business: Corporation San Diego, CA 92113
(Corporation, partnership, sole proprietor, etc.)

Telephone: 619.937.1010

Authorized person to sign contracts: Travis Brozowski President
Name Title

Pursuant to the existing Job Order Contract (MTS Doc. No. PWG347.0-22), MTS issues a Work Order to Contractor to complete the detailed Scope of Work (attached as Exhibit A.), the Cost Breakdown for the Scope of Work (attached as Exhibit B.), and the subcontractor listing form applicable to this Work Order (attached as Exhibit C.)

TOTAL PAYMENTS TO CONTRACTOR SHALL NOT EXCEED $968,743.63

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	ABC GENERAL CONTRACTOR, INC.
By: _____ Sharon Cooney, Chief Executive Officer	Firm: _____
Approved as to form:	By: _____ Signature
By: _____ Karen Landers, General Counsel	Title: _____

DRAFT

EXHIBIT A
(Scope of Work)

DRAFT

San Diego Metropolitan Transit System
1255 Imperial Ave
San Diego, California 92101

Final Scope of Work

Date: 8/15/2023

Job Order Contracting

To: **From:**

Contract No:	PWG347.0-22
Job Order No:	MTSJOC347-05
Job Order Title:	Grantville Hardscape and Landscape Improvements
Location:	Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120
Brief Scope of Work:	

The following items detail the scope of work as discussed at the site. All requirements necessary to accomplish the items set forth below shall be considered part of this scope of work.

SECTION 7- SCOPE OF WORK/MINIMUM TECHNICAL SPECIFICATIONS

SECTION 7-1 GENERAL

The Grantville Transit Center is currently undergoing multiple redevelopment projects. A large portion of that work is improvements to both the landscape and hardscape currently existing at the station, including landscape irrigation.

All work is to occur within 4510 Alvarado Canyon Road, San Diego, CA 92120.

SECTION 7-2 STAGING

Contractor is to keep and store all materials and equipment within the work area as possible. Any further staging would have to be coordinated with the MTS Project Manager. There may be some available space within or adjacent to the Grantville Transit Center. All property stored onsite is the responsibility of the contractor and MTS shall not be held liable for any and all equipment, material, tools, etc.

SECTION 7-3 TEMP FACILITIES

The contractor is to provide their own temporary restrooms and wash facilities as needed. Contractor is responsible for temp power and water.

Contractor will also be responsible for providing appropriate and adequate temporary barricades (fencing) to ensure clear delineation between phases and to ensure public does not enter active construction zone during or after work hours.

SECTION 7-4 SAFETY AND ACCESS

Diligent caution must be taken during the undertaking of this work. All work will occur within an active transit center surrounded by the general public. Special precautions must be taken in order to ensure public safety and usability of the station for the duration of the project. There is extremely limited parking, and no equipment or materials may impede bus traffic at any point during revenue hours.

SECTION 7-5 WASTE

The contractor is responsible for legally disposing of any and all waste in relation to the work. The contractor shall not use any onsite receptacles to dispose of material generated during the performance of this contract. Contractor is responsible for general cleanup at the end of each work day.

SECTION 7-6 SCHEDULE AND SEQUENCING

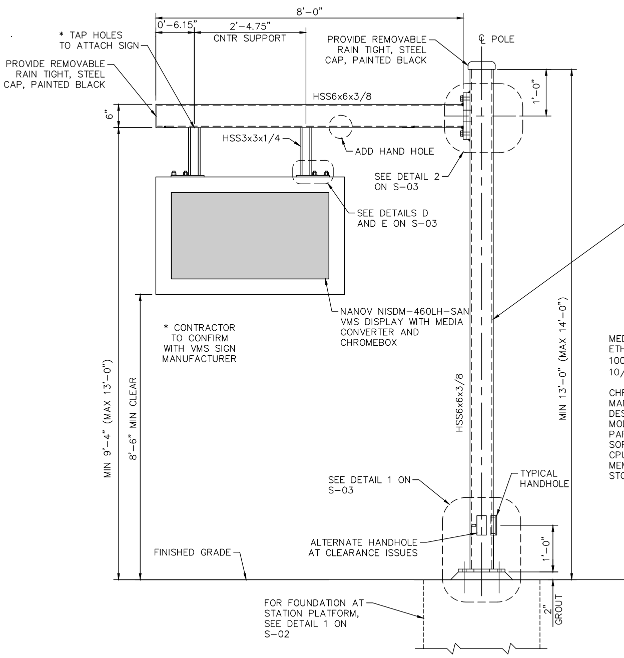
All work shall be completed within Ninety (90) calendar days from issuance of Notice to Proceed. It is assumed there will be some lead time for some items, which is included in the duration. The work shall commence once all material is available and the work can proceed without stoppages. Phasing of this project will be necessary to ensure that there is always access to at least One (1) TVM, (2) Validators, and (1) Stair/elevator tower. A proposed phasing plan is attached. Contractor will be responsible for providing phasing plan for approval. MTS will ensure full completion of phase 1 prior to releasing the contractor to being phase 2 work.

SECTION 7-7 DETAILED SCOPE OF WORK:

Contractor will be responsible for any and all scope in provided renderings. Scope includes but is not limited to: demo and replacement of existing concrete flat work, movement of existing utilities to new locations to receive MTS TVMs and validators, removal and replacement of landscaping and associated irrigation, removal of old wall facia and application of new stucco, placement of new VMS poles with power and data service loops to receive new VMS signs to be installed by MTS, and new area lighting. Refer to provided renderings for full scope of work.

Contractor will also be responsible for delivery and installation of 1 bus shelter and 2 stone benches from MTS yard. Contractor will be responsible for extending existing legs of 2 shelters (1 delivered, 1 existing on site) in order to allow for new footings. Contractor will be responsible for installation of 2 shelters (1 delivered, 1 existing on site) with new footings and (4) total benches with footings.

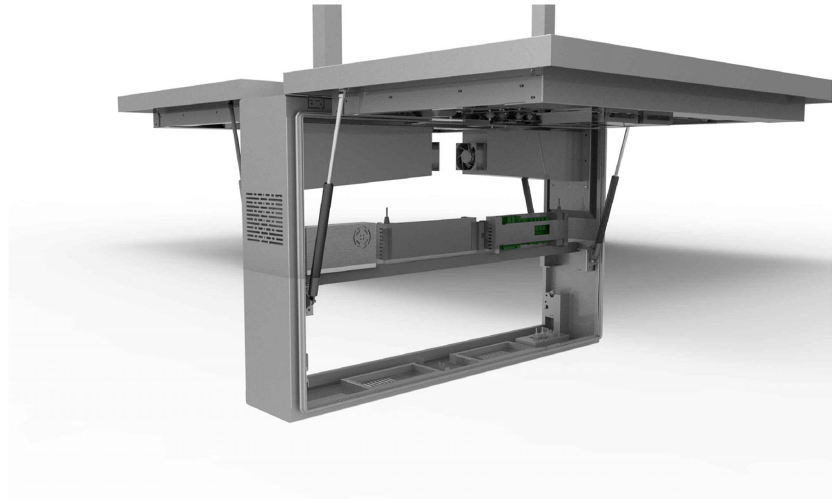
Eli Belknap, Manager of Capital Projects	**Date**
Noah Cappadocia, Project Manager	**Date**

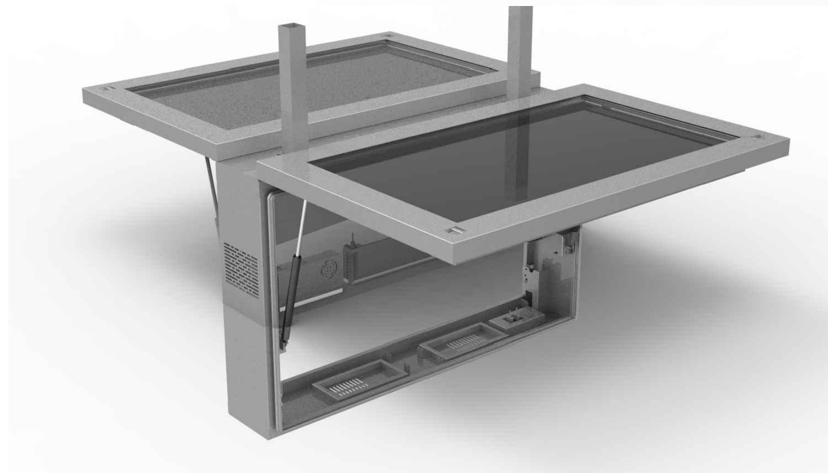


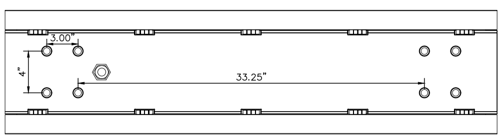
MEDIA CONVERTER BOX:
ETHERWAN XPRESSO MEDIA CONVERTER
1000BASE-SX/LX ON FIBER LINK
10/100/1000 ON ETHERNET PORT

CHROMEBOX
MANUFACTURER: AOPEN
DESCRIPTION: CHROMEBOX COMMERCIAL
MODEL NO: DE3255
PART NUMBER 91.DED00.GA10
SOFTWARE: CHROME OS
CPU: INTEL CELERON N2930
MEMORY: 4 GB
STORAGE 32 GB eMMC

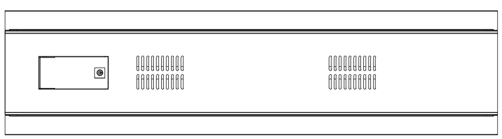
1 NEW VMS DATA DISPLAY & STRUCTURE ELEVATION
NOT TO SCALE







DISPLAY ENCLOSURE - TOP PANEL DETAIL (TOP VIEW)
NOT TO SCALE



DISPLAY ENCLOSURE - BOTTOM PANEL DETAIL (BOTTOM VIEW)
NOT TO SCALE

PERMIT NUMBER ________
CO__ RTE__ PM____
AS-BUILT PLANS FOR ROADWAY GEOMETRIC AND ABOVE GROUND FEATURES
STATE REPRESENTATIVE DATE
SHEET _ OF _

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

Kimley»Horn Kimley-Horn and Associates, Inc. ©2018
401 B Street, Suite 600, San Diego, California 92101
Phone: 619.234.9411 / www.kimley-horn.com

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED BY SK	DATE 01/20
DRAWN BY MV	01/20
CHECKED BY PR	01/20
PRJ. ENG. ELI BELKNAP	01/20

MTS Metropolitan Transit System

100% PLANS
NOT FOR CONSTRUCTION
SEPTEMBER 2018

811 Know what's below. Call before you dig.

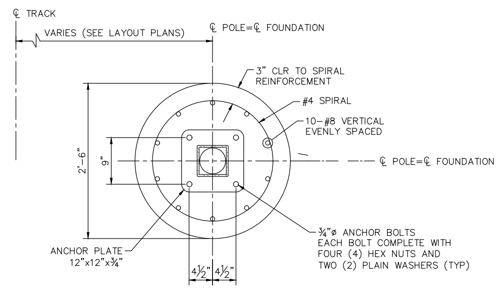
PRIVATE CONTRACT KHA: 095697218 S-01

OLD TOWN WEST TRANSIT CENTER
VMS DETAILS

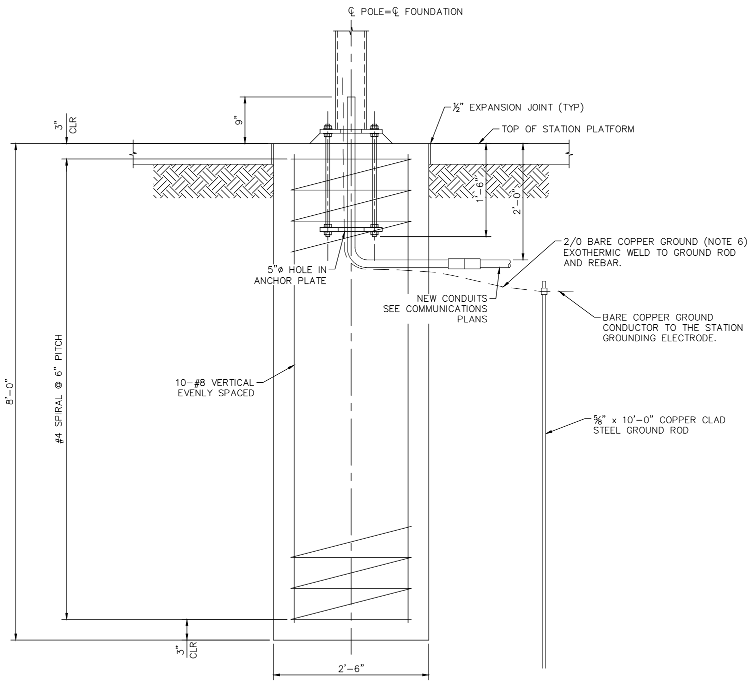
SHEET 40 OF 57 SHEETS

1780-6347
NAD83 COORDINATES
140-1787
LAMBERT COORDINATES

Drawing name: K:\SND_TRANS\095697218 - Old Town West TC\Design\Plan Sheets\097218S-03.dwg VMS DETAILS Jan 08, 2020 7:15pm by: Andrew.Clemente



SECTION



ELEVATION

1 FOUNDATION DETAIL
SCALE: 1" = 1'-0"

A. STRUCTURAL DESIGN CRITERIA

1. APPLICABLE CODE: 2013 CBC (CALIFORNIA BUILDING CODE)
2. MINIMUM LOADING REQUIREMENTS PER CHAPTER 16 OF THE CBC. SEE SPECIFIC FACILITY PLANS FOR LIVE LOADS NOT INDICATED BELOW.
3. RISK CATEGORY II.
4. LIVE LOADS:
   ROOF – 20 PSF (UNREDUCED)
5. WIND LOAD:
   WIND SPEED = 110–MPH (3 SECOND GUST)
   EXPOSURE C
   TOPOGRAPHIC FACTOR = 1.00
   GUST FACTOR = 0.85
6. SEISMIC LOAD:
   SEISMIC PARAMETERS (DESIGN)
   Sds = 1.07
   Sd1 = 0.64
   SOIL SITE CLASS D
   IMPORTANCE FACTOR = 1.25
   SEISMIC DESIGN CATEGORY D
7. GEOTECHNICAL DESIGN PARAMETERS: (PENDING GEOTECHNICAL REPORT)
   A. NET ALLOWABLE BEARING PRESSURES (MAY BE INCREASED BY 1/3 FOR LOAD COMBINATIONS THAT INCLUDE WIND OR SEISMIC LOADS): 1500 PSF
8. LATERAL EARTH PRESSURES: PENDING GEOTECHNICAL REPORT.
   PASSIVE = 250 PSF/FT

B. GENERAL STRUCTURAL INFORMATION

1. FOR ABBREVIATIONS NOT LISTED, SEE ASME Y14.38 "ABBREVIATIONS AND ACRONYMS" PUBLICATION AS DISTRIBUTED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO ALL SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE KEYED IN EACH LOCATION.
3. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS A GUARANTOR OF THE CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE CONTRACTOR'S OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, NOR SAFETY AT THE JOB SITE.
4. SPECIAL INSPECTION (OWNER FURNISHED) IS REQUIRED IN ACCORDANCE WITH 2013 CBC CHAPTER 17 AND SECTION 108 ON THE FOLLOWING PORTIONS OF THE WORK:
   CONCRETE PLACEMENT
   REINFORCING STEEL PLACEMENT
   STRUCTURAL WELDING
   ANCHORS, EMBEDS AND BOLTS INSTALLED IN CONCRETE
5. ALL SPECIFIED CONCRETE TESTING DURING CONSTRUCTION WILL BE OWNER FURNISHED. ALL SPECIFIED LABORATORY TEST MIXES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

GENERAL NOTES

1. SEE STRUCTURAL STEEL AND CONCRETE NOTES HEREON FOR GENERAL STRUCTURAL NOTES.
2. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 55 SPECIFICATION.
3. REFER TO ELECTRICAL AND COMMUNICATION PLANS FOR POWER AND COMMUNICATIONS CONDUIT QUANTITY AND SIZES AND PULL BOX LOCATIONS,
4. INSTALL VINYL TAPED SCHEDULE 40 PVC CONDUIT IN CONCRETE FOUNDATION WITH COUPLET TO SCHEDULE 40 PVC CONDUIT UNDER PLATFORM.
5. ANCHOR BOLTS AND ANCHOR PLATE SHALL BE GALVANIZED, CONFORMING TO THE PROVISIONS OF SECTION 75, "GALVANIZING" OF THE STANDARD SPECIFICATIONS.
6. THE BARE GROUND CABLE SHALL HAVE A TAIL OF 2'-6" ABOVE TOP OF FOUNDATION.
7. SEE SHEET S-01 AND S-03 FOR VMS POLE DETAILS.

D. CONCRETE

1. ALL CONCRETE FOR STRUCTURES SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 POUNDS PER SQUARE INCH AT 28 DAYS EXCEPT AS NOTED.
2. REINFORCING BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM DESIGNATION A615, GRADE 60, DEFORMED. REINFORCING BARS SHOWN ON THE PLANS TO BE WELDED SHALL BE NEW BILLET STEEL CONFORMING TO ASTM DESIGNATION A706, GRADE 60, DEFORMED.
3. CONCRETE DESIGN IS IN CONFORMANCE WITH "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318–10). AND 2013 CBC.
4. DETAIL, FABRICATE AND ERECT REINFORCEMENT BARS, INCLUDING BAR SUPPORTS, SPACERS, ETC. IN ACCORDANCE WITH "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT (ACI SP–66(04)).
5. CONCRETE COVER FOR REINFORCEMENT BARS SHALL CONFORM TO THE FOLLOWING, UNLESS INDICATED OTHERWISE ON THE DRAWINGS.
   A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . 3 INCHES
   B. CONCRETE EXPOSED TO EARTH OR WEATHER . . . . 2 INCHES
   C. PEDESTALS . . . . 1½ INCHES
   NOTE: CLEARANCES MAY BE REDUCED ½ INCH FOR STIRRUPS AND TIES.
6. CHAMFER EXPOSED CONCRETE EDGES ¾ INCH X ¾ INCH UNLESS NOTED OTHERWISE. CONCRETE PEDESTALS SHALL NOT RECEIVE CHAMFERS.
7. CONCRETE JOINT LOCATIONS NOT SHOWN ON STRUCTURAL DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE ENGINEER PRIOR TO START OF WORK.
8. UNLESS NOTED ON THE DRAWINGS, CONCRETE FORMED AND UNFORMED SURFACES SHALL RECEIVE FINISH NOTED IN SPECIFICATIONS.

E. STRUCTURAL STEEL

1. PLATES, BARS, AND ANGLES SHALL CONFORM TO ASTM A36 UNLESS NOTED OTHERWISE.
2. HSS RECTANGULAR MEMBERS SHALL CONFORM TO ASTM A500, GRADE B (46 KSI).
3. DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE LATEST AISC CODES AND SPECIFICATIONS. INCLUDING THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS.
4. EXPOSED OR PARTIALLY EXPOSED STRUCTURAL STEEL SHALL BE FABRICATED AND INSTALLED PER THE "ARCHITECTURALLY EXPOSED STRUCTURAL STEEL" SECTION OF THE AISC MANUAL AND THE AISC CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS. STEEL NOT CONFORMING TO THESE TOLERANCES WILL BE REJECTED AND REFABRICATED AT NO EXPENSE TO THE OWNER. SEE DRAWINGS FOR LOCATIONS OF ARCHITECTURALLY EXPOSED STEEL.
5. SHOP CONNECTIONS SHALL BE MADE WITH HIGH–STRENGTH BOLTS OR BY WELDING. FIELD CONNECTIONS SHALL BE MADE WITH HIGH–STRENGTH BOLTS, EXCEPT WHERE WELDING IS INDICATED ON THE DRAWINGS. HIGH–STRENGTH BOLTS SHALL CONFORM TO ASTM DESIGNATION A325 BEARING TYPE CONNECTION WITH THREADS INCLUDED IN SHEAR PLANE UNLESS NOTED OTHERWISE. ALL BOLTS SHALL BE ¾ INCH DIAMETER UNLESS NOTED OTHERWISE.
6. ALL WELD SIZES, NOT INDICATED SHALL COMPLY WITH THE LATEST AWS D1.1 BUT IN NO CASE SHALL WELD SIZE BE LESS THAN 3/16 INCH.
7. NATURAL MILL CAMBER OF BEAMS SHALL BE PLACED UP.
8. THE STRUCTURAL BEAMS ARE NOT DESIGNED FOR USE AS LIFT BEAMS.
9. ADEQUATE TEMPORARY BRACING SHALL BE PROVIDED DURING CONSTRUCTION.
10. MINIMUM THICKNESS OF STRUCTURAL STEEL SHALL BE ¼ INCH UNLESS NOTED OTHERWISE.

PERMIT NUMBER ____________
CO__ RTE__ PM____
AS-BUILT PLANS FOR ROADWAY GEOMETRIC AND ABOVE GROUND FEATURES
STATE REPRESENTATIVE DATE
SHEET _ OF _

Drawing name: K:\SND_TRANS\095697218 – Old Town West TC\Design\Plan Sheets\095697218S–03.dwg VMS POLE FOUNDATION DETAILS Jan 08, 2020 7:15pm by: Andrew.Clemente

CONSTRUCTION CHANGE TABLE

CHANGE	DATE	AFFECTED OR ADDED SHEET NUMBERS	APPROVAL NO.

Kimley»Horn Kimley-Horn and Associates, Inc. ©2018
401 B Street, Suite 600, San Diego, California 92101
Phone: 619.234.9411 / www.kimley-horn.com

PRELIMINARY NOT FOR CONSTRUCTION

DESIGNED BY SK	DATE 01/20
DRAWN BY MV	01/20
CHECKED BY PR	01/20
PRJ. ENG. ELI BELKNAP	01/20

MTS Metropolitan Transit System

100% PLANS
NOT FOR CONSTRUCTION
SEPTEMBER 2018

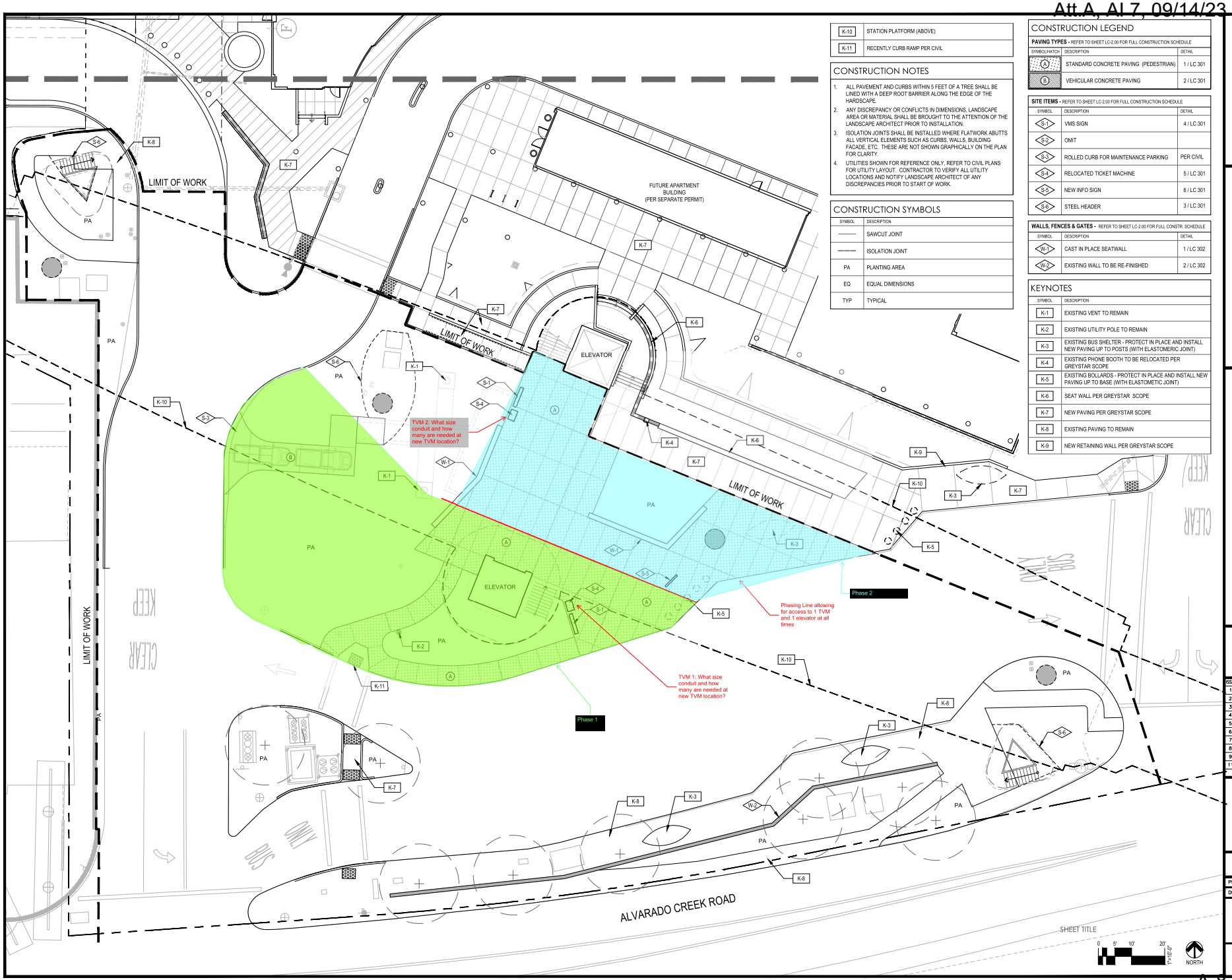
811 Know what's below. Call before you dig.

PRIVATE CONTRACT KHA: 095697218 S-02

OLD TOWN WEST TRANSIT CENTER
VMS POLE FOUNDATION DETAILS

SHEET 41 OF 57 SHEETS

1780–6347
NAD83 COORDINATES
140–1787
LAMBERT COORDINATES



K-10	STATION PLATFORM (ABOVE)
K-11	RECENTLY CURB RAMP PER CIVIL

CONSTRUCTION NOTES

1. ALL PAVEMENT AND CURBS WITHIN 5 FEET OF A TREE SHALL BE LINED WITH A DEEP ROOT BARRIER ALONG THE EDGE OF THE HARDSCAPE.
2. ANY DISCREPANCY OR CONFLICTS IN DIMENSIONS, LANDSCAPE AREA OR MATERIAL SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
3. ISOLATION JOINTS SHALL BE INSTALLED WHERE FLATWORK ABUTTS ALL VERTICAL ELEMENTS SUCH AS CURBS, WALLS, BUILDING FACADE, ETC. THESE ARE NOT SHOWN GRAPHICALLY ON THE PLAN FOR CLARITY.
4. UTILITIES SHOWN FOR REFERENCE ONLY, REFER TO CIVIL PLANS FOR UTILITY LAYOUT. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.

CONSTRUCTION SYMBOLS

SYMBOL	DESCRIPTION
———	SAWCUT JOINT
———	ISOLATION JOINT
PA	PLANTING AREA
EQ	EQUAL DIMENSIONS
TYP	TYPICAL

CONSTRUCTION LEGEND

PAVING TYPES - REFER TO SHEET LC-2.00 FOR FULL CONSTRUCTION SCHEDULE

SYMBOL/HATCH	DESCRIPTION	DETAIL
A	STANDARD CONCRETE PAVING (PEDESTRIAN)	1 / LC 301
B	VEHICULAR CONCRETE PAVING	2 / LC 301

SITE ITEMS - REFER TO SHEET LC-2.00 FOR FULL CONSTRUCTION SCHEDULE

SYMBOL	DESCRIPTION	DETAIL
S-1	VMS SIGN	4 / LC 301
S-2	OMIT	
S-3	ROLLED CURB FOR MAINTENANCE PARKING	PER CIVIL
S-4	RELOCATED TICKET MACHINE	5 / LC 301
S-5	NEW INFO SIGN	6 / LC 301
S-6	STEEL HEADER	3 / LC 301

WALLS, FENCES & GATES - REFER TO SHEET LC-2.00 FOR FULL CONSTR. SCHEDULE

SYMBOL	DESCRIPTION	DETAIL
W-1	CAST IN PLACE SEATWALL	1 / LC 302
W-2	EXISTING WALL TO BE RE-FINISHED	2 / LC 302

KEYNOTES

SYMBOL	DESCRIPTION
K-1	EXISTING VENT TO REMAIN
K-2	EXISTING UTILITY POLE TO REMAIN
K-3	EXISTING BUS SHELTER - PROTECT IN PLACE AND INSTALL NEW PAVING UP TO POSTS (WITH ELASTOMERIC JOINT)
K-4	EXISTING PHONE BOOTH TO BE RELOCATED PER GREYSTAR SCOPE
K-5	EXISTING BOLLARDS - PROTECT IN PLACE AND INSTALL NEW PAVING UP TO BASE (WITH ELASTOMETIC JOINT)
K-6	SEAT WALL PER GREYSTAR SCOPE
K-7	NEW PAVING PER GREYSTAR SCOPE
K-8	EXISTING PAVING TO REMAIN
K-9	NEW RETAINING WALL PER GREYSTAR SCOPE

SHEET TITLE

0 5' 10' 20' 1"=10'-0"

NORTH

MTS

Metropolitan Transit System

GROUNDLEVEL

Landscape Architecture

PROJECT DESIGN CONSULTANTS
Civil | Land Development | Landscape Architecture | Engineering | Survey
Planning | Landscape Architecture
701 B Street, Suite 800
San Diego, CA 92101
619.235.6471 Tel
619.235.0048 Fax

GRANTVILLE TRANSIT CENTER IMPROVEMENTS

4510 ALVARADO CANYON ROAD
SAN DIEGO, CA 92120

MTS PO NO.: 4500049463
MTS WO NO.: WOA1949-AE-76
JACOBS PO NO.: 148037478
PROJECT NO.: JLXMTDGV
WBS CODE: C.PN.TPE.PDC

ISSUE	DATE	DESCRIPTION
1	3-14-23	MTS 1ST SUBMITTAL
2		
3		
4		
5		
6		
7		
8		
9		
11		

PROJECT: 4383.30

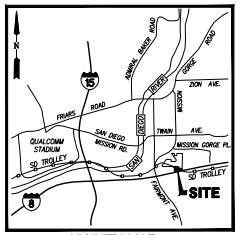
DRAWN: CHECKED:

LANDSCAPE CONSTRUCTION PLAN

LC101

PRECISE GRADING PLANS FOR:

MTS GRANTVILLE TRANSIT CENTER IMPROVEMENTS



VICINITY MAP

NOT TO SCALE

LEGEND

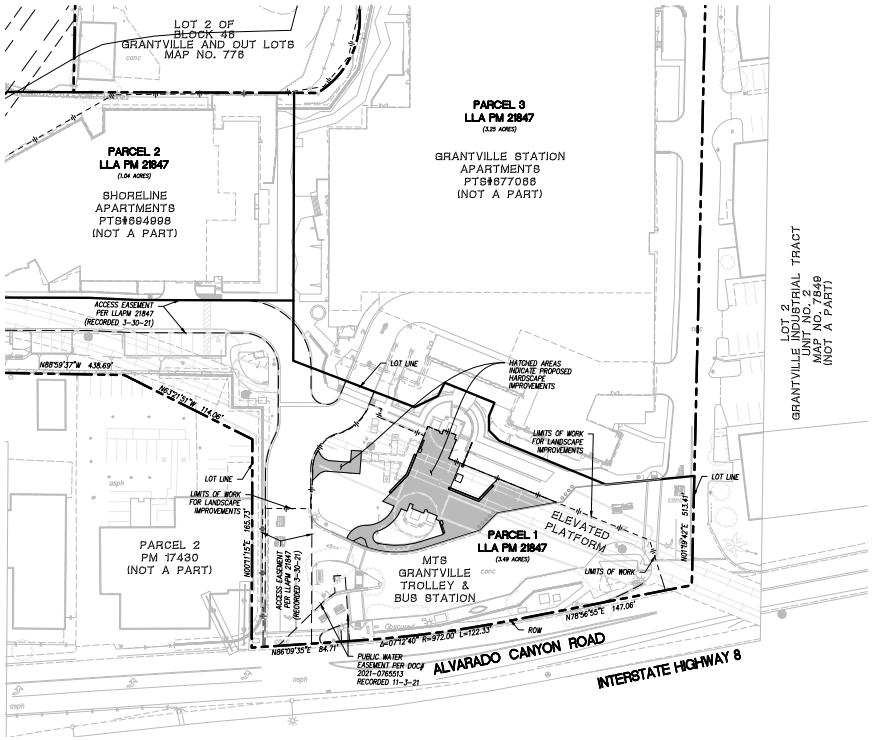
PROPOSED IMPROVEMENTS

SYMBOL	IMPROVEMENT
	INDICATES PROPOSED PEDESTRIAN CONCRETE (DETAILS PER LANDSCAPE PLANS)
	INDICATES PROPOSED SEAT WALL (DETAILS PER LANDSCAPE PLANS)
— –|– – —	INDICATES PROPOSED LIMITS OF LANDSCAPE WORK (SEE LANDSCAPE PLANS)

ABBREVIATIONS

AC	ASPHALT CONCRETE	MH	MANHOLE
BLDG	BUILDING	MIN	MINIMUM
BMP	BEST MANAGEMENT PRACTICES	MOD	MODIFIED
BVC	BEGIN VERTICAL CURVE	PCC	PORTLAND CEMENT CONCRETE
BW	BACK OF WALK	PL	PROPERTY LINE
DWG	DRAWING	PVI	POINT OF VERTICAL INTERSECTION
EG	EXISTING GRADE	PVT	PRIVATE
EX	EXISTING	R/W	RIGHT-OF-WAY
EVC	END VERTICAL CURVE	SD	STORM DRAIN
FF	FINISHED FLOOR	SDG&E	SAN DIEGO GAS & ELECTRIC
FH	FIRE HYDRANT	SSMH	SEWER MANHOLE
FL	FLOW LINE	SS	SANITARY SEWER
FS	FINISH SURFACE	STA	STATION
HH	HANDHOLE	TC	TOP OF CURB
HP	HIGH POINT		
LP	LOW POINT		

SHEET INDEX



VICINITY MAP

SCALE: 1" = 40'

OWNER/APPLICANT

METROPOLITAN TRANSIT DEVELOPMENT BOARD
1255 IMPERIAL AVENUE, SUITE 1000
SAN DIEGO, CA 92101

SITE ADDRESS

4520 ALVARADO CANYON ROAD
SAN DIEGO, CA 92120

ASSESSORS PARCEL NUMBER

461-320-29

TOPOGRAPHY SOURCE

PROJECT DESIGN CONSULTANTS SURVEYS
701 B STREET, SUITE 800,
SAN DIEGO, CA 92101
TOPOGRAPHY SHOWN ON THIS SURVEY IS BASED UPON AN AERIAL SURVEY BY PROJECT DESIGN CONSULTANTS IN NOVEMBER 28, 2018.

BENCHMARK

CITY OF SAN DIEGO BRASS PLUG AT THE SOUTHEAST CORNER OF MISSION GORGE PLACE AND MISSION GORGE ROAD PER CITY OF SAN DIEGO VERTICAL CONTROL BENCHBOOK.

ELEVATION: 78.033 M.S.L. DATUM (N.G.V.D. 29)

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THESE PLANS IS THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 6, EPOCH 1991.35 GRID BEARING BETWEEN 1ST ORDER G.P.S. STATION 217 AND 1ST ORDER G.P.S. STATION 160 PER ROS 14492.

I.E., NORTH 84°31'59" WEST

DISTANCES SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00000291. QUOTED BEARINGS FROM REFERENCE DEEDS/MAPS MAY OR MAY NOT BE IN TERMS OF SAID SYSTEM.

LEGAL DESCRIPTION

PARCEL 1 OF LLA PARCEL MAP NO. 21847

REFERENCE DRAWINGS

7248-R, 26215-D, 12496-D, 17065-D, 21647-D, 22201-D,
MTS GRANTVILLE STATION MTDB CONTRACT NO. LRT-426.3

PROJECT DESIGN CONSULTANTS
a BOWMAN company
Planning | Landscape Architecture | Engineering | Survey
San Diego, CA 92101
619.235.6471 Tel

GRANTVILLE TRANSIT CENTER IMPROVEMENTS
4510 ALVARADO CANYON ROAD
SAN DIEGO, CA 92120

MTS PO NO.: 4500049463
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JACOBS PO NO.: 148037478
PROJECT NO.: JLXMTDGV
WBS CODE: C.PN.TPE.PDC

ISSUE	DATE	DESCRIPTION
1	3-14-23	MTS 1ST SUBMITTAL
2		
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8		
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11		

PROJECT: 4383.30
DRAWN: CHECKED:

TITLE SHEET

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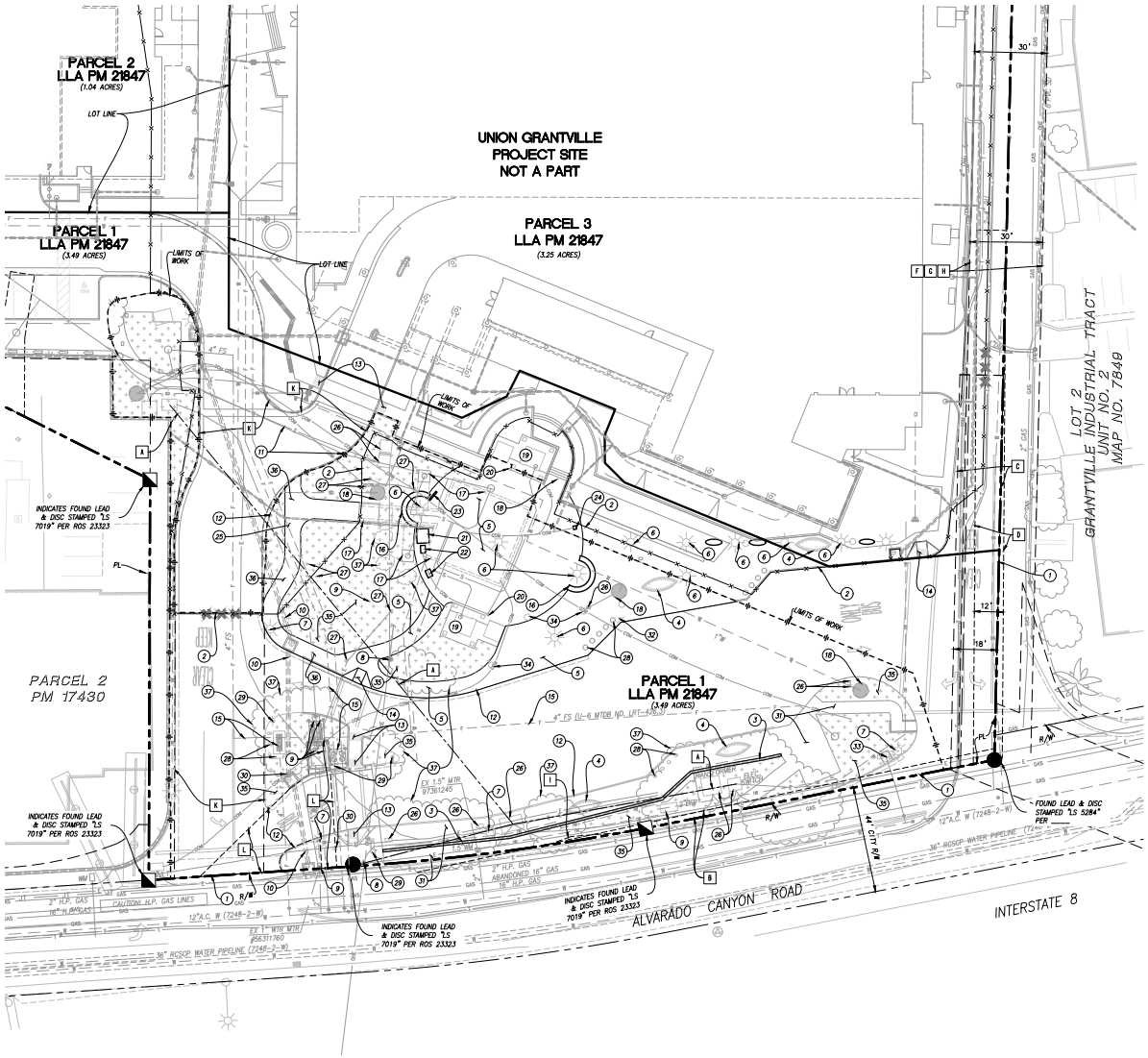

CONSTRUCTION NOTES

1. EXISTING MTS GRANTVILLE TROLLEY STATION PROPERTY BOUNDARY
2. EXISTING CONSTRUCTION FENCE FOR THE GREYSTAR UNION GRANTVILLE PROJECT
3. EXISTING RETAINING WALL TO REMAIN. PLASTER FACADE TO BE REMOVED AND REPLACED.
4. EXISTING BUS SHELTER TO REMAIN
5. EXISTING HARDSCAPE TO BE REMOVED AND REPLACED WITH ENHANCED PAVING
6. EXISTING PRIVATE MTS TROLLEY STATION LIGHT TO BE REMOVED & SALVAGED. ATTACHED SIGNAGE TO BE SALVAGED. ITEMS OUTSIDE LIMITS OF WORK TO BE DONE PER GREYSTAR PROJECT.
7. EXISTING PRIVATE MTS TROLLEY STATION LIGHT TO REMAIN
8. EXISTING SIGNAGE POLE, ASSOCIATED OVERHEAD LINES, AND GUY WIRE TO REMAIN
9. EXISTING WATER SERVICE AND ASSOCIATED METERS & BACKFLOW DEVICES TO REMAIN
10. EXISTING STORM DRAIN PIPE AND ASSOCIATED INLETS TO REMAIN
11. EXISTING SEWER MAIN, LATERAL, AND MANHOLE TO REMAIN
12. EXISTING CURB AND GUTTER TO REMAIN
13. EXISTING PEDESTRIAN CURB RAMP TO REMAIN
14. EXISTING PEDESTRIAN CURB RAMP TO BE REMOVED AND REPLACED
15. EXISTING FIRE WATER SERVICE AND ASSOCIATED HYDRANTS & BACKFLOW DEVICES TO REMAIN
16. EXISTING CONCRETE SEAT WALLS TO BE REMOVED
17. EXISTING UNDERGROUND MECHANICAL ROOM, HATCH, AND VENT TO REMAIN
18. EXISTING MTS SUPPORT COLUMNS, STAIR TOWERS, AND UTILITY CONDUITS/RISERS TO REMAIN
19. EXISTING ELEVATOR STAIR TOWER STRUCTURE TO REMAIN
20. EXISTING TICKET "TAPARIDE" BOX TO BE RELOCATED PER LANDSCAPE ARCHITECT PLANS
21. EXISTING INFO BOOTH TO BE RELOCATED PER LANDSCAPE ARCHITECT PLANS
22. EXISTING TICKET STATION TO BE RELOCATED PER LANDSCAPE ARCHITECT PLANS
23. EXISTING MAP CASE TO BE RELOCATED PER LANDSCAPE ARCHITECT PLANS
24. EXISTING PAYPHONE TO BE RELOCATED PER LANDSCAPE ARCHITECT PLANS
25. EXISTING MAINTENANCE PARKING ROLLED CURB (PENDING CONSTRUCTION PER GREYSTAR PROJECT.
26. EXISTING ELECTRICAL PULLBOX/HANDHOLE/VAULT TO REMAIN
27. EXISTING UTILITY PULLBOX/HANDHOLE TO BE REMOVED
28. EXISTING BOLLARDS TO REMAIN, TYP.
29. EXISTING MTS SIGNAGE TO REMAIN
30. EXISTING UTILITY PULLBOX/HANDHOLE TO REMAIN
31. EXISTING HARDSCAPE TO REMAIN
32. EXISTING MTS SIGNAGE TO BE RELOCATED (TYP. FOR PLAZA AREA)
33. EXISTING FIRE HYDRANT TO REMAIN
34. EXISTING PLAZA TRASH RECEPTACLE TO BE RELOCATED PER LANDSCAPE ARCHITECT PLANS
35. EXISTING LANDSCAPING TO BE REMOVED AND REPLACED PER LANDSCAPE ARCHITECT PLANS
36. EXISTING SIDEWALK TO BE REMOVED AND REPLACED PER SHEET 2.0 & LANDSCAPE ARCHITECT PLANS
37. EXISTING PRIVATE TREE TO REMAIN

NOTE – CONTRACTOR TO OBTAIN SEPARATE PERMITS FOR DEMOLITION, TREE REMOVALS, AND NECESSARY PERMITS WITH UTILITY OWNERS.

EASEMENTS/ENCUMBRANCES

- A EXISTING EASEMENT GRANTED TO SAN DIEGO GAS AND ELECTRIC COMPANY FOR PUBLIC UTILITIES, INGRESS, EGRESS AND INCIDENTAL PURPOSES, RECORDED APRIL 18, 2003 AS INSTRUMENT NO. 2003-0447578 OF O.R.
- B EXISTING EASEMENT GRANTED TO SAN DIEGO GAS AND ELECTRIC COMPANY FOR PUBLIC UTILITIES, INGRESS, EGRESS AND INCIDENTAL PURPOSES, RECORDED JULY 05, 1972 AS INSTRUMENT NO. 172665 OF O.R.
- C EXISTING EASEMENT GRANTED TO PACIFIC BELL TELEPHONE COMPANY FOR PUBLIC UTILITIES, INGRESS, EGRESS AND INCIDENTAL PURPOSES, RECORDED MARCH 20, 2002 AS INSTRUMENT NO. 2002-0231774 OF O.R. (AFFECTS PARCELS 1 AND 3).
- D EXISTING EASEMENT GRANTED TO SAN DIEGO GAS AND ELECTRIC COMPANY FOR PUBLIC UTILITIES, INGRESS, EGRESS AND INCIDENTAL PURPOSES, RECORDED MAY 23, 1952 AS BOOK 4476, PAGE 516 OF O.R. (AFFECTS EASEMENT PARCEL 2).
- F EXISTING EASEMENT GRANTED TO UNIVERSITY PARTNERS FOR INGRESS AND EGRESS FOR ROAD AND PUBLIC UTILITY AND INCIDENTAL PURPOSES IN THE DOCUMENT RECORDED JULY 09, 1985 AS INSTRUMENT NO. 85-244924 OF O.R. (AFFECTS EASEMENT PARCELS 2 AND 3)
- G EXISTING EASEMENT GRANTED TO BALBOA SERVICE CORPORATION FOR INGRESS, EGRESS, ROAD, PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED OCTOBER 05, 1955 AS BOOK 5819, PAGE 10 OF O.R.
- H EXISTING EASEMENT GRANTED TO SOUTHERN TITLE & TRUST COMPANY FOR ROAD AND PUBLIC UTILITIES AND INCIDENTAL PURPOSES, RECORDED JUNE 05, 1950 AS BOOK 3646, PAGE 91 OF O.R.
- I EXISTING EASEMENT GRANTED TO SAN DIEGO GAS AND ELECTRIC COMPANY FOR PUBLIC UTILITIES, INGRESS AND EGRESS, RECORDED OCTOBER 29, 1948 AS INSTRUMENT NO. 108618 IN BOOK 3002, PAGE 13 OF O.R.
- K EXISTING ACCESS EASEMENT GRANTED PER PARCEL MAP 21847, RECORDED MARCH 30, 2021 AS FILE NO. 2021-7000085 OF O.R.
- L EXISTING WATER EASEMENT GRANTED TO THE CITY OF SAN DIEGO PER WATER EASEMENT GRANT DEED, RECORDED NOVEMBER, 3, 2021 AS DOCUMENT NO. 2021-0765513 OF O.R.

LEGEND

EXISTING MTS BOUNDARY
EXISTING PUBLIC R/W
EXISTING EASEMENT
EXISTING PARCEL LINE PER LLA PM 21847

INDICATES FOUND 3/4" IRON PIPE W/DISC STAMPED "LS 4593" PER ROS 10178, OR AS NOTED

INDICATES FOUND 1" IRON PIPE W/DISC STAMPED "L.S. 7019" PER ROS 23323.

INDICATES FOUND LEAD & DISC STAMPED "L.S. 7019" PER ROS 23323

PROJECT DESIGN CONSULTANTS
a BOWMAN company
Planning | Landscape Architecture | Engineering | Surveying
San Diego, CA 92101
619.235.6471 tel
619.235.0346 fax

GRANTVILLE TRANSIT
CENTER IMPROVEMENTS
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SAN DIEGO, CA 92120

MTS PO NO.: 4500049463
MTS WO NO.: WOA1949-AE-76
JACOBS PO NO.: 148037478
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1	3-14-23	MTS 1ST SUBMITTAL
2		
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8		
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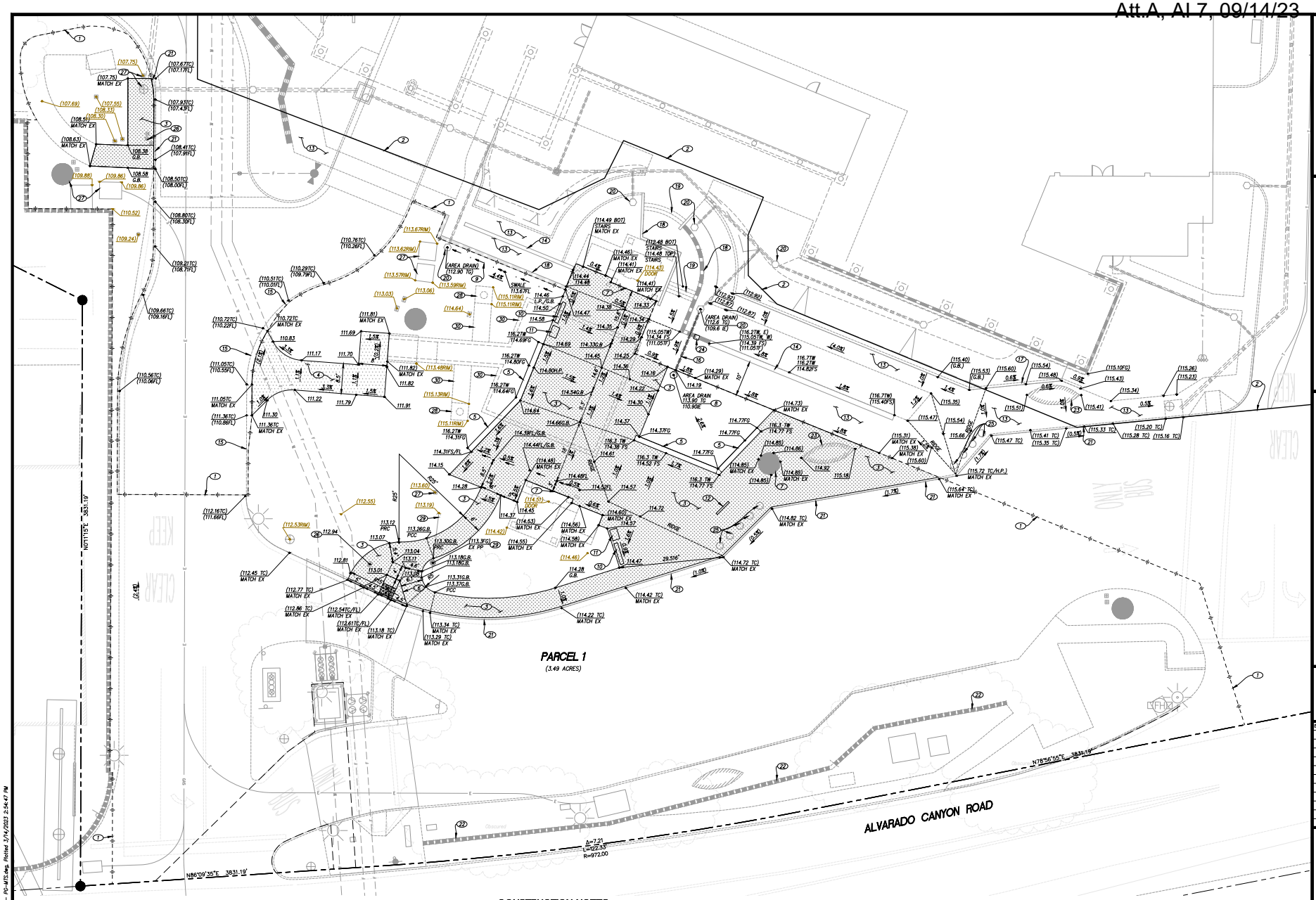
11		

PROJECT: 4383.30
DRAWN: CHECKED:

DEMO PLAN

C1.0



CONSTRUCTION NOTES

1. LIMITS OF WORK.
2. PARCEL LINE.
3. NEW PEDESTRIAN HARDSCAPE PER LANDSCAPE DETAIL 1/LC 301.
4. NEW VEHICULAR PAVEMENT PER LANDSCAPE DETAIL 2/LC 301.
5. NEW CIP SEAT WALL PER LANDSCAPE DETAIL 7/LC 302.
6. NEW CURB RAMP TYPE 'B' PER SDG-133 W/ DETECTIBLE WARNING TILES PER SDG-130.
7. NEW PAVEMENT JOINT TO EXISTING STRUCTURE WITH ELASTOMERIC JOINT.
8. NEW 6" ATRIUM AREA DRAIN (NDS OR EQUAL), CONNECT TO STORM DRAIN STUB.
9. NEW GRADED EARTHEN SWALE MIN. 2FT WIDE & 4IN DEEP.
10. NEW VMS SIGN PER LANDSCAPE DETAIL 4/LC 301.
11. RELOCATED TICKET MACHINE PER LANDSCAPE DETAIL 5/LC 301.
12. NEW INFO SIGN PER LANDSCAPE DETAIL 6/LC 301.
13. NEW PAVEMENT IMPROVEMENTS PER GREYSTAR'S SCOPE.
14. NEW SEAT WALL IMPROVEMENTS PER GREYSTAR'S SCOPE.
15. NEW ROLLED CURB IMPROVEMENT PER GREYSTAR'S SCOPE.
16. NEW 6" PVC STORM DRAIN PIPE STUB PER GREYSTAR'S SCOPE.
17. NEW GRAVITY RETAINING WALL TYPE 'A' (2FT MAX HEIGHT) PER STD DWG C-09 & C-10 PER GREYSTAR'S SCOPE.
18. NEW RETAINING WALL PER GREYSTAR'S SCOPE.
19. NEW STAIRS PER GREYSTAR'S SCOPE.
20. NEW AREA DRAIN/ INLET PER PER GREYSTAR'S SCOPE.
21. EXISTING CURB TO REMAIN – NEW PAVEMENT TO MATCH BACK OF CURB ELEVATION.
22. EXISTING RETAINING WALL TO RE-FINISHED, SEE LANDSCAPE PLAN LC 101.
23. EXISTING BUS SHELTER – PROTECT IN PLACE AND INSTALL NEW PAVING UP TO BASE WITH ELASTOMERIC JOINT.
24. EXISTING PHONE BOOTH TO BE RELOCATED PER GREYSTAR SCOPE.
25. EXISTING BOLLARDS – PROTECT IN PLACE AND INSTALL NEW PAVING UP TO BASE WITH ELASTOMERIC JOINT.
26. EXISTING UTILITY COVER – ADJUST TO GRADE.
27. EXISTING UTILITY – PROTECT IN PLACE.
28. EXISTING VENT TO REMAIN, GRADE TO BE SET MINIMUM 6" BELOW RIM ELEVATION.
29. EXISTING POWER POLE & GUY WIRE TO REMAIN – PROTECT IN PLACE.
30. EXISTING UNDERGROUND MECHANICAL ROOM – PROTECT IN PLACE.

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PROJECT DESIGN CONSULTANTS
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San Diego, CA 92101
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GRANTVILLE TRANSIT CENTER IMPROVEMENTS

4510 ALVARADO CANYON ROAD
SAN DIEGO, CA 92120

MTS PO NO.: 4500049463
MTS WO NO.: WOA1949-AE-76
JACOBS PO NO.: 148037478
PROJECT NO.: JLXMTDGV
WBS CODE: C.PN.TPE.PDC

ISSUE	DATE	DESCRIPTION
1	3-14-23	MTS 1ST SUBMITTAL
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PROJECT: 4383.30
DRAWN: CHECKED:

PRECISE GRADING PLAN
TITLE SHEET

C2.0

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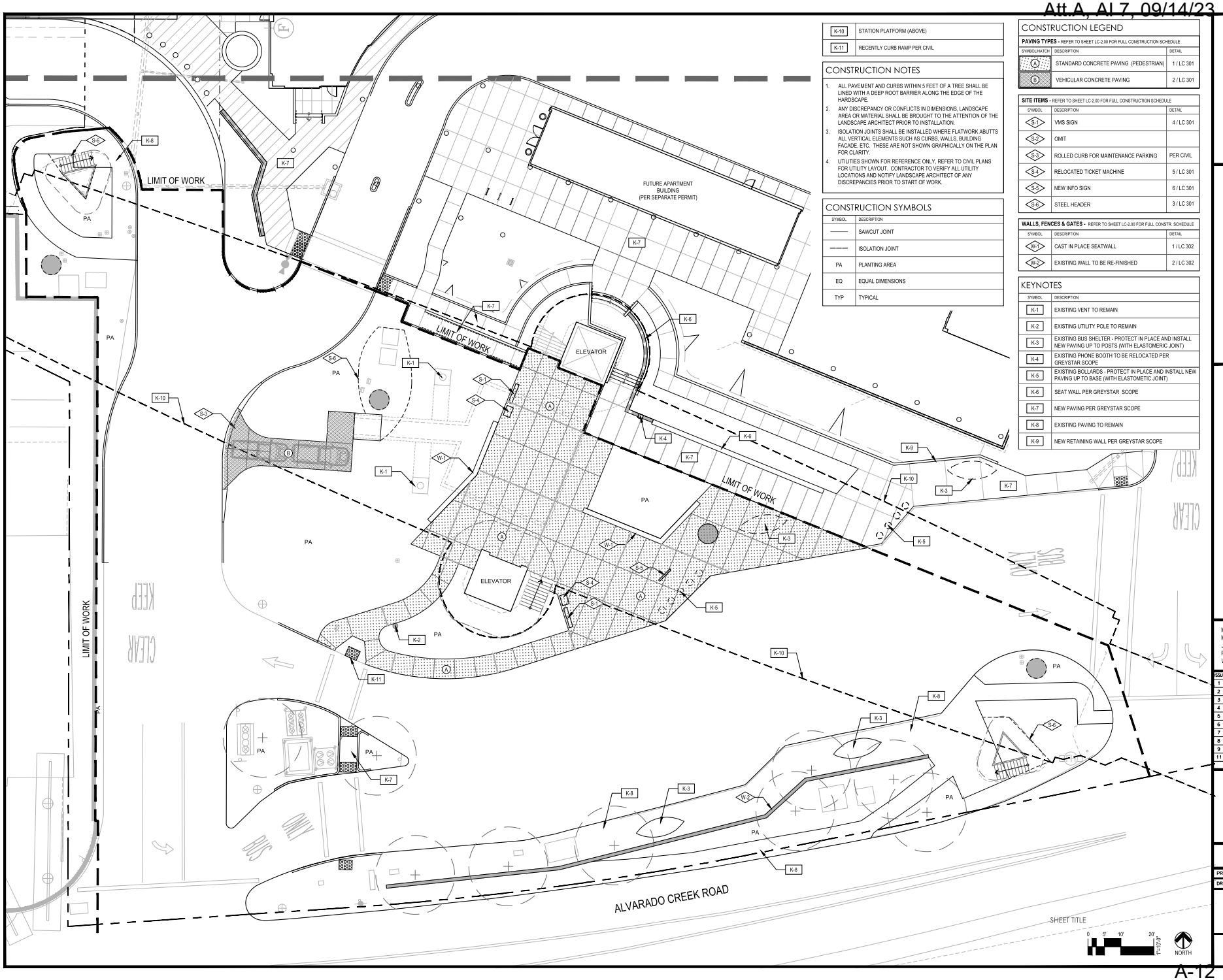

K-10	STATION PLATFORM (ABOVE)
K-11	RECENTLY CURB RAMP PER CIVIL

CONSTRUCTION NOTES

1. ALL PAVEMENT AND CURBS WITHIN 5 FEET OF A TREE SHALL BE LINED WITH A DEEP ROOT BARRIER ALONG THE EDGE OF THE HARDSCAPE.
2. ANY DISCREPANCY OR CONFLICTS IN DIMENSIONS, LANDSCAPE AREA OR MATERIAL SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
3. ISOLATION JOINTS SHALL BE INSTALLED WHERE FLATWORK ABUTTS ALL VERTICAL ELEMENTS SUCH AS CURBS, WALLS, BUILDING FACADE, ETC. THESE ARE NOT SHOWN GRAPHICALLY ON THE PLAN FOR CLARITY.
4. UTILITIES SHOWN FOR REFERENCE ONLY, REFER TO CIVIL PLANS FOR UTILITY LAYOUT. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.

CONSTRUCTION SYMBOLS

SYMBOL	DESCRIPTION
———	SAWCUT JOINT
———	ISOLATION JOINT
PA	PLANTING AREA
EQ	EQUAL DIMENSIONS
TYP	TYPICAL

CONSTRUCTION LEGEND

PAVING TYPES - REFER TO SHEET LC-2.00 FOR FULL CONSTRUCTION SCHEDULE

SYMBOL/HATCH	DESCRIPTION	DETAIL
A	STANDARD CONCRETE PAVING (PEDESTRIAN)	1 / LC 301
B	VEHICULAR CONCRETE PAVING	2 / LC 301

SITE ITEMS - REFER TO SHEET LC-2.00 FOR FULL CONSTRUCTION SCHEDULE

SYMBOL	DESCRIPTION	DETAIL
S-1	VMS SIGN	4 / LC 301
S-2	OMIT	
S-3	ROLLED CURB FOR MAINTENANCE PARKING	PER CIVIL
S-4	RELOCATED TICKET MACHINE	5 / LC 301
S-5	NEW INFO SIGN	6 / LC 301
S-6	STEEL HEADER	3 / LC 301

WALLS, FENCES & GATES - REFER TO SHEET LC-2.00 FOR FULL CONSTR. SCHEDULE

SYMBOL	DESCRIPTION	DETAIL
W-1	CAST IN PLACE SEATWALL	1 / LC 302
W-2	EXISTING WALL TO BE RE-FINISHED	2 / LC 302

KEYNOTES

SYMBOL	DESCRIPTION
K-1	EXISTING VENT TO REMAIN
K-2	EXISTING UTILITY POLE TO REMAIN
K-3	EXISTING BUS SHELTER - PROTECT IN PLACE AND INSTALL NEW PAVING UP TO POSTS (WITH ELASTOMERIC JOINT)
K-4	EXISTING PHONE BOOTH TO BE RELOCATED PER GREYSTAR SCOPE
K-5	EXISTING BOLLARDS - PROTECT IN PLACE AND INSTALL NEW PAVING UP TO BASE (WITH ELASTOMETIC JOINT)
K-6	SEAT WALL PER GREYSTAR SCOPE
K-7	NEW PAVING PER GREYSTAR SCOPE
K-8	EXISTING PAVING TO REMAIN
K-9	NEW RETAINING WALL PER GREYSTAR SCOPE

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GROUNDLEVEL

LANDSCAPE ARCHITECTURE

PROJECT DESIGN CONSULTANTS
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GRANTVILLE TRANSIT CENTER IMPROVEMENTS

4510 ALVARADO CANYON ROAD
SAN DIEGO, CA 92120

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PROJECT: 4383.30
DRAWN: CHECKED:

LANDSCAPE CONSTRUCTION PLAN

LC101

LANDSCAPE CONSTRUCTION SCHEDULE

PAVING TYPES

SYMBOL	DESCRIPTION	MANUFACTURER / SUPPLIER	MATERIAL / PRODUCT NO.	COLOR	FINISH	NOTES	DETAIL
A	STANDARD CONCRETE PAVING (PEDESTRIAN)	LOCAL BATCH PLANT	TYPE 2 CONCRETE	NATURAL GREY (MATCH GREYSTAR)	TOPCAST - LIGHT (MATCH GREYSTAR)	MATCH GREYSTAR INSTALLATION PROVIDE MOCK-UP FOR REVIEW & APPROVAL	1 / LC 301
B	VEHICULAR CONCRETE PAVING	LOCAL BATCH PLANT	TYPE 2 CONCRETE - INTEGRAL COLOR	DAVIS "ADOBE" #61078	HEAVY ETCH	PROVIDE 4X4 MOCKUP FOR REVIEW	2 / LC 301

SITE ITEMS

SYMBOL	DESCRIPTION	MANUFACTURER / SUPPLIER	MATERIAL / PRODUCT NO.	COLOR	FINISH	NOTES	DETAIL
S-1	VMS SIGN	PER MTS STANDARDS				PROVIDE SHOP DRAWINGS FOR REVIEW & APPROVAL BY MTS	4 / LC 301
S-2	OMIT						-
S-3	MAINTENANCE PARKING WITH ROLLED CURB	PER CIVIL					PER CIVIL
S-4	RELOCATED TICKET MACHINE	EXISTING; PRESERVE & RELOCATE				RE-PAINT & REFURBISH PER MTS DIRECTION	5 / LC 301
S-5	NEW INFO SIGN	PER MTS STANDARDS				PROVIDE SHOP DRAWINGS FOR REVIEW & APPROVAL BY MTS	4 / LC 301
S-6	STEEL HEADER	J.D.RUSSELL	DURAEDGE, HEAVE DUTY 1/4" THICKNESS X 5" DEPTH	NATURAL	UNFINISHED	STAKES SHALL BE INSTALLED ON PLANTING SIDE OF EDGING	3 / LC 301

WALL, FENCES, & GATES

SYMBOL	DESCRIPTION	MANUFACTURER / SUPPLIER	MATERIAL / PRODUCT NO.	COLOR	FINISH	NOTES	DETAIL
W-1	CAST IN PLACE SEATWALL	LOCAL BATCH PLANT	TYPE 2 CONCRETE	NATURAL GREY	LIGHT ETCH	PROVIDE MOCK-UP (4' LONG) FOR REVIEW & APPROVAL PRIOR TO INSTALL	1 / LC 302
W-2	EXISTING WALL TO BE RE-FINISHED	PLASTER	OMEGA	INTEGRAL COLOR PLASTER	TBD	TBD	PROVIDE MOCK-UP FOR REVIEW & APPROVAL PRIOR TO INSTALL	2 / LC 302
		ANTI-GRAFFITI COATING	PER MTS STANDARDS	TBD	N/A	N/A		

CONSTRUCTION NOTES

1. THE LANDSCAPE ARCHITECT SHALL REVIEW ALL HARDSCAPE FORM WORK PRIOR TO CONCRETE POURS. NOTIFY THE LANDSCAPE ARCHITECT (72) HOURS PRIOR TO POUR AT A MINIMUM.
2. ALL PAVEMENT AND CURBS WITHIN 5 FEET OF A TREE SHALL BE LINED WITH A DEEP ROOT BARRIER ALONG THE EDGE OF THE HARDSCAPE.
3. ANY DISCREPANCY OR CONFLICTS IN DIMENSIONS, LANDSCAPE AREA OR MATERIAL SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
4. ISOLATION JOINTS SHALL BE INSTALLED WHERE FLATWORK ABUTTS ALL VERTICAL ELEMENTS SUCH AS CURBS, WALLS, BUILDING FACADE, ETC. THESE ARE NOT SHOWN GRAPHICALLY ON THE PLAN FOR CLARITY.
5. UTILITIES SHOWN FOR REFERENCE ONLY, REFER TO CIVIL PLANS FOR UTILITY LAYOUT. CONTRACTOR TO VERIFY ALL UTILITY LOCATIONS AND NOTIFY LANDSCAPE ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.
6. "OR APPROVED EQUAL" SUBSTITUTION PROPOSALS WILL BE EVALUATED BASED ON THE PROVISIONS DETAILED IN THE CONTRACT SPECIFICATIONS. SPECIFIC EVALUATION CRITERIA INCLUDING PRODUCT AND PERFORMANCE CHARACTERISTICS BY WHICH SUBSTITUTIONS WILL BE EVALUATED IS INCLUDED IN APPLICABLE SPECIFICATION SECTIONS.
7. DEFINITIONS: "C.I.P." = CAST - IN - PLACE I "W." = WIDTH OR WIDE I "L" = LONG
8. A PRE-CONSTRUCTION MEETING SHALL BE ESTABLISHED PRIOR TO START OF WORK WITH ALL CONTRACTORS, LANDSCAPE ARCHITECT AND OWNER'S REPRESENTATIVE PRIOR TO START OF ANY WORK.
9. ALL HARDSCAPES ELEMENTS (INCLUDING FORMWORK) SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT. WORK SHOULD NOT PROGRESS FURTHER UNTIL LANDSCAPE ARCHITECT VERIFIED ELEMENTS / LAYOUT
10. ALL EXISTING CONCRETE TO REMAIN SHALL BE PRESSURE-WASHED TWICE AND RESEALED.

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GRANTVILLE TRANSIT
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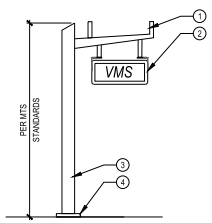
PROJECT: 4383.30
DRAWN: CHECKED:

LANDSCAPE CONSTRUCTION LEGEND

LC 200



ELEVATION DIAGRAM
NOT TO SCALE

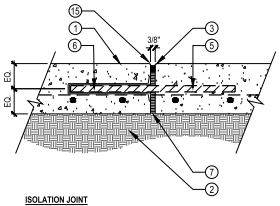
LEGEND
1. CUSTOM STEEL ARMATURE PER MTS STANDARD DETAILS
2. VMS SIGN (PROVIDED BY OWNER, INSTALLED BY INSTALLATION CONTRACTOR).
3. HSS COLUMN WITH ANGLED TOP CAP, PER MTS STANDARD DETAILS
4. ANCHORING DESIGN BY OTHERS

NOTES
A. PROVIDE SHOP DRAWINGS FOR REVIEW & APPROVAL PRIOR TO FABRICATION.
B. ALL CONDUIT SHALL BE ROUTED WITHIN STEEL STRUCTURE.
C. STRUCTURAL ENGINEERING TO TO BE PROVIDED BY FABRICATOR.

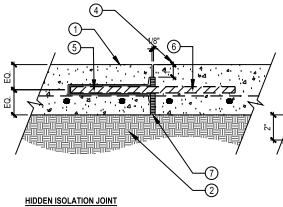
4 NEW VMS SIGN
NTS

NOTE
A. INSTALLER SHALL SNAP CHALK LINES TO ENSURE THE SAWCUT ALIGNS WITH THE JOINT FILLER
B. AT COLD JOINT AT EXISTING PAVING CONDITION. VERIFY EXISTING SLAB DEPTH IS A MINIMUM OF 4" THICKNESS. REPORT DISCREPANCIES TO OWNER AND LANDSCAPE ARCHITECT PRIOR FOR DOWEL INSTALLATION.

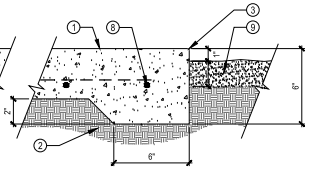
LEGEND
1. CONCRETE PAVING PER DETAIL X / LC-___
2. BASE AND SUBGRADE PREPARATION PER CONCRETE PAVING DETAIL
3. 1/8" RADIUS TOOLED EDGE TYPICAL
4. 1/8" WIDTH SAWCUT SCORE LINE TO INTERSECT TOP OF ISOLATION JOINT FILLER
5. SPEED DOWEL PER SPECIFICATIONS
6. INSTALLATION TEMPLATE / DOWEL POCKET PER SPECIFICATIONS
SPEED DOWEL PER SPECIFICATIONS
7. PRE-MOLDED ISOLATION JOINT FILLER PER SPECIFICATIONS
8. REINFORCING PER GEOTECHNICAL REPORT
9. MULCH LAYER PER MULCH PLANS
10. FACE OF VERTICAL SURFACE (BUILDING, PLANTER WALL, CURB, ETC.)
11. ISOLATION JOINT
12. 1/8" WIDE SAWCUT JOINT. DEPTH SHALL BE 25% OF THE CONCRETE THICKNESS
13. CORE AND EPOXY SET SMOOTH REBAR DOWELS @ 12" O.C. INTO EXISTING CONCRETE WITH A MINIMUM OF 2" OF CONCRETE OVER ABOVE.
14. EXISTING CONCRETE PAVING
15. JOINT SEALANT PER SPECIFICATIONS



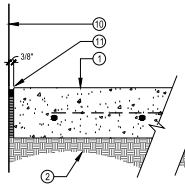
ISOLATION JOINT



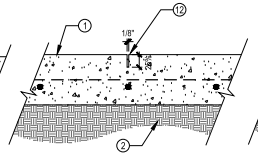
HIDDEN ISOLATION JOINT



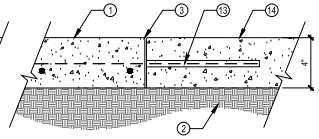
PAVING WITH THICKENED EDGE



ISOLATION JOINT AT VERTICAL SURFACE

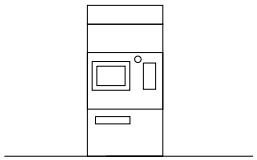


SAWCUT JOINT

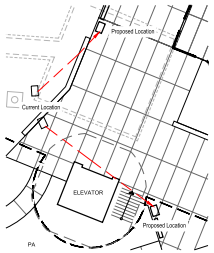


COLD JOINT AT EXISTING PAVING

1 CAST IN PLACE CONCRETE PAVING
3" = 1'-0"



ELEVATION DIAGRAM
NOT TO SCALE

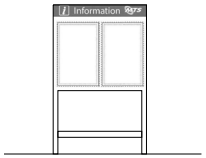


PLAN VIEW
NOT TO SCALE

NOTES
A. ALL ENGINEERING & STRUCTURAL ASPECTS TO BE COORDINATED WITH MTS PRIOR TO COMMENCEMENT OF WORK.
B. ELECTRICAL & DATA CONNECTIONS TO BE RELOCATED AS REQUIRED.

Reference Photo

5 TICKET BOOTH TO RELOCATE
3/8" = 1'-0"



ELEVATION DIAGRAM
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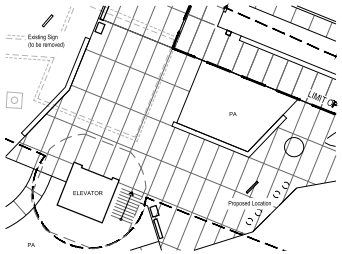
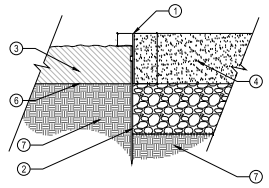


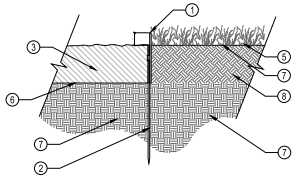
PLAN VIEW
NOT TO SCALE

NOTES
A. ALL ENGINEERING & STRUCTURAL ASPECTS TO BE COORDINATED WITH MTS PRIOR TO COMMENCEMENT OF WORK.

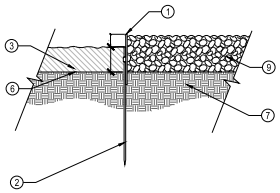
6 NEW INFORMATION SIGN
3/8" = 1'-0"



STEEL EDGING @ MULCH AND STABILIZED DECOMPOSED GRANITE



STEEL EDGING @ MULCH AND NATURAL TURF



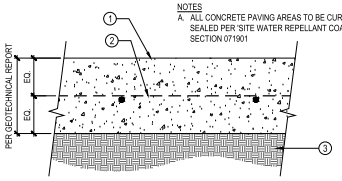
STEEL EDGING @ MULCH AND GRAVEL AREA

LEGEND
1. STEEL EDGING PER SPECIFICATIONS
2. # 2 STEEL EDGING STAKE PER MANUFACTURE RECOMMENDATIONS
3. MULCH (REFER TO MULCH PLAN FOR TYPE)
4. STABILIZED DECOMPOSED GRANITE
5. NATURAL TURF
6. FINISH GRADE
7. BASE AND SUBGRADE PREPARATION PER GEOTECHNICAL REPORT
8. BACKFILLED PLANTING SOIL
9. DECORATIVE GRAVEL PER MULCH PLAN

3 STEEL EDGING
3" = 1'-0"

LEGEND
1. CAST-IN-PLACE CONCRETE. TYPE, COLOR, AND FINISH PER CONSTRUCTION SCHEDULE.
2. REINFORCING PER GEOTECHNICAL REPORT (MINIMUM REINFORCEMENT SHALL BE #4 REBAR @ 24" ON CENTER, EACH WAY, WITH 24" LAP SPLICE). HOLD 3" FROM EDGE OF CONCRETE.
3. BASE AND SUBGRADE PREPARATION PER GEOTECHNICAL REPORT.

NOTES
A. ALL CONCRETE PAVING AREAS TO BE CURED AND SEALED PER 'SITE WATER REPELLANT COATINGS' SECTION 071901



2 CONCRETE PAVING (VEHICULAR)
3" = 1'-0"

PROJECT DESIGN CONSULTANTS
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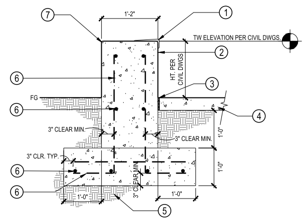
PROJECT: 4.38.3.30
DRAWN: CHECKED:

LANDSCAPE CONSTRUCTION DETAILS

LC301

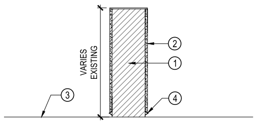
NOTES
A. VERTICAL SAWCUT JOINTS - 8'-0" O.C. BOTH SIDES & TOP OF WALL



LEGEND
1. SAW CUT AND EPOXY SET SKATEBOARD DETERRENT @ 48" O.C.
2. FINISH PER CONSTRUCTION SCHEDULE
3. ISOLATION JOINT AT VERT. SURFACE
4. FINISH PAVING PER PLANS
5. BASE AND SUBGRADE PREPERATION PER GEOTECHNICAL REPORT
6. STEEL REINFORCING #4 @ 24" E.W.
7. TOOLED EDGES @ 1/2" RADIUS, TYP.

1 18" HEIGHT CAST IN PLACE CONCRETE SEAT WALL
3/4" = 1'-0"

LEGEND
1. EXISTING C.M.U. WALL
2. EXISTING VENNER TO BE REMOVED AND REPLACED WITH PLASTER / ANTI-GRAFFITTI COATING
3. ADJACENT PAVING PER CIVIL
4. WEEP SCREED



Reference Photo

2 EXISTING WALL TO BE REFINISHED
3/4" = 1'-0"

MTS Metropolitan Transit System

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GRANTVILLE TRANSIT CENTER IMPROVEMENTS
4510 ALVARADO CANYON ROAD
SAN DIEGO, CA 92120

MTS PO NO.: 4500049463
MTS WO NO.: WOA1949-AE-76
JACOBS PO NO.: 148037478
PROJECT NO.: JLXMTDGV
WBS CODE: C.PN.TPE.PDC

ISSUE	DATE	DESCRIPTION
1	3-14-23	MTS 1ST SUBMITTAL
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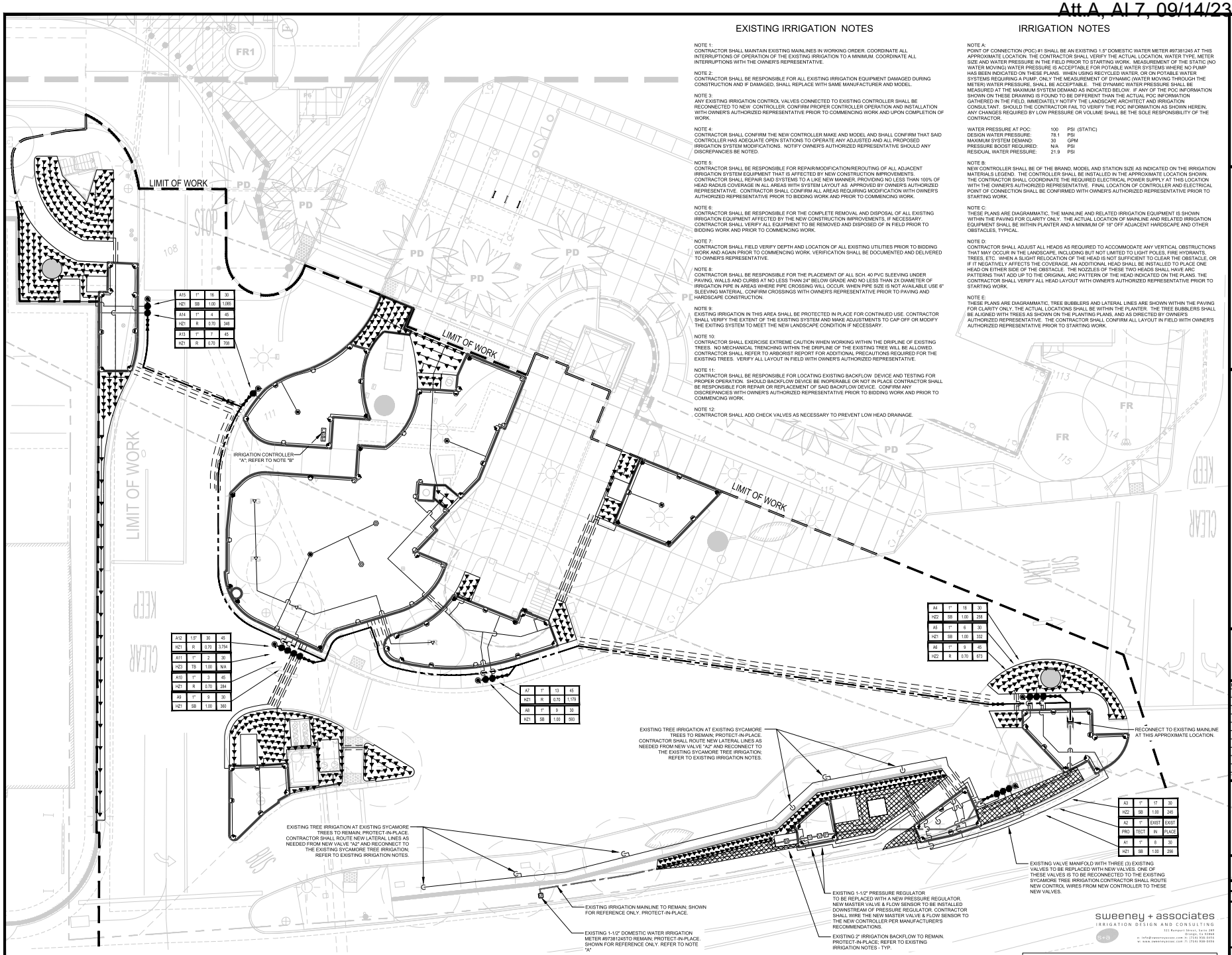
PROJECT: 4383.30
DRAWN: CHECKED:

LANDSCAPE CONSTRUCTION DETAILS

LC 302



EXISTING IRRIGATION NOTES

NOTE 1:
CONTRACTOR SHALL MAINTAIN EXISTING MAINLINES IN WORKING ORDER. COORDINATE ALL INTERRUPTIONS OF OPERATION OF THE EXISTING IRRIGATION TO A MINIMUM. COORDINATE ALL INTERRUPTIONS WITH THE OWNER'S REPRESENTATIVE.

NOTE 2:
CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXISTING IRRIGATION EQUIPMENT DAMAGED DURING CONSTRUCTION AND IF DAMAGED, SHALL REPLACE WITH SAME MANUFACTURER AND MODEL.

NOTE 3:
ANY EXISTING IRRIGATION CONTROL VALVES CONNECTED TO EXISTING CONTROLLER SHALL BE RECONNECTED TO NEW CONTROLLER. CONFIRM PROPER CONTROLLER OPERATION AND INSTALLATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING WORK AND UPON COMPLETION OF WORK.

NOTE 4:
CONTRACTOR SHALL CONFIRM THE NEW CONTROLLER MAKE AND MODEL AND SHALL CONFIRM THAT SAID CONTROLLER HAS ADEQUATE OPEN STATIONS TO OPERATE ANY ADJUSTED AND ALL PROPOSED IRRIGATION SYSTEM MODIFICATIONS. NOTIFY OWNER'S AUTHORIZED REPRESENTATIVE SHOULD ANY DISCREPANCIES BE NOTED.

NOTE 5:
CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR/MODIFICATION/REROUTING OF ALL ADJACENT IRRIGATION SYSTEM EQUIPMENT THAT IS AFFECTED BY NEW CONSTRUCTION IMPROVEMENTS. CONTRACTOR SHALL REPAIR SAID SYSTEMS TO A LIKE NEW MANNER, PROVIDING NO LESS THAN 100% OF HEAD RADIUS COVERAGE IN ALL AREAS WITH SYSTEM LAYOUT AS APPROVED BY OWNER'S AUTHORIZED REPRESENTATIVE. CONTRACTOR SHALL CONFIRM ALL AREAS REQUIRING MODIFICATION WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

NOTE 6:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE REMOVAL AND DISPOSAL OF ALL EXISTING IRRIGATION EQUIPMENT AFFECTED BY THE NEW CONSTRUCTION IMPROVEMENTS, IF NECESSARY. CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE REMOVED AND DISPOSED OF IN FIELD PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

NOTE 7:
CONTRACTOR SHALL FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES PRIOR TO BIDDING WORK AND AGAIN PRIOR TO COMMENCING WORK. VERIFICATION SHALL BE DOCUMENTED AND DELIVERED TO OWNER'S REPRESENTATIVE.

NOTE 8:
CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ALL SCH. 40 PVC SLEEVING UNDER PAVING, WALLS AND CURBS AT NO LESS THAN 24" BELOW GRADE AND NO LESS THAN 2X DIAMETER OF IRRIGATION PIPE IN AREAS WHERE PIPE CROSSING WILL OCCUR. WHEN PIPE SIZE IS NOT AVAILABLE USE 6" SLEEVING MATERIAL. CONFIRM CROSSINGS WITH OWNER'S REPRESENTATIVE PRIOR TO PAVING AND HARDSCAPE CONSTRUCTION.

NOTE 9:
EXISTING IRRIGATION IN THIS AREA SHALL BE PROTECTED IN PLACE FOR CONTINUED USE. CONTRACTOR SHALL VERIFY THE EXTENT OF THE EXISTING SYSTEM AND MAKE ADJUSTMENTS TO CAP OFF OR MODIFY THE EXITING SYSTEM TO MEET THE NEW LANDSCAPE CONDITION IF NECESSARY.

NOTE 10:
CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING WITHIN THE DRIPLINE OF EXISTING TREES. NO MECHANICAL TRENCHING WITHIN THE DRIPLINE OF THE EXISTING TREE WILL BE ALLOWED. CONTRACTOR SHALL REFER TO ARBORIST REPORT FOR ADDITIONAL PRECAUTIONS REQUIRED FOR THE EXISTING TREES. VERIFY ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE.

NOTE 11:
CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING BACKFLOW DEVICE AND TESTING FOR PROPER OPERATION. SHOULD BACKFLOW DEVICE BE INOPERABLE OR NOT IN PLACE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF SAID BACKFLOW DEVICE. CONFIRM ANY DISCREPANCIES WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO BIDDING WORK AND PRIOR TO COMMENCING WORK.

NOTE 12:
CONTRACTOR SHALL ADD CHECK VALVES AS NECESSARY TO PREVENT LOW HEAD DRAINAGE.

IRRIGATION NOTES

NOTE A:
POINT OF CONNECTION (POC) #1 SHALL BE AN EXISTING 1.5" DOMESTIC WATER METER #97381245 AT THIS APPROXIMATE LOCATION. THE CONTRACTOR SHALL VERIFY THE ACTUAL LOCATION, WATER TYPE, METER SIZE AND WATER PRESSURE IN THE FIELD PRIOR TO STARTING WORK. MEASUREMENT OF THE STATIC (NO WATER MOVING) WATER PRESSURE IS ACCEPTABLE FOR POTABLE WATER SYSTEMS WHERE NO PUMP HAS BEEN INDICATED ON THESE PLANS. WHEN USING RECYCLED WATER, OR ON POTABLE WATER SYSTEMS REQUIRING A PUMP, ONLY THE MEASUREMENT OF DYNAMIC (WATER MOVING THROUGH THE METER) WATER PRESSURE, SHALL BE ACCEPTABLE. THE DYNAMIC WATER PRESSURE SHALL BE MEASURED AT THE MAXIMUM SYSTEM DEMAND AS INDICATED BELOW. IF ANY OF THE POC INFORMATION SHOWN ON THESE DRAWING IS FOUND TO BE DIFFERENT THAN THE ACTUAL POC INFORMATION GATHERED IN THE FIELD, IMMEDIATELY NOTIFY THE LANDSCAPE ARCHITECT AND IRRIGATION CONSULTANT. SHOULD THE CONTRACTOR FAIL TO VERIFY THE POC INFORMATION AS SHOWN HEREIN, ANY CHANGES REQUIRED BY LOW PRESSURE OR VOLUME SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

WATER PRESSURE AT POC:	100	PSI (STATIC)
DESIGN WATER PRESSURE:	78.1	PSI
MAXIMUM SYSTEM DEMAND:	30	GPM
PRESSURE BOOST REQUIRED:	N/A	PSI
RESIDUAL WATER PRESSURE:	21.9	PSI

NOTE B:
NEW CONTROLLER SHALL BE OF THE BRAND, MODEL AND STATION SIZE AS INDICATED ON THE IRRIGATION MATERIALS LEGEND. THE CONTROLLER SHALL BE INSTALLED IN THE APPROXIMATE LOCATION SHOWN. THE CONTRACTOR SHALL COORDINATE THE REQUIRED ELECTRICAL POWER SUPPLY AT THIS LOCATION WITH THE OWNER'S AUTHORIZED REPRESENTATIVE. FINAL LOCATION OF CONTROLLER AND ELECTRICAL POINT OF CONNECTION SHALL BE CONFIRMED WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE C:
THESE PLANS ARE DIAGRAMMATIC, THE MAINLINE AND RELATED IRRIGATION EQUIPMENT IS SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATION OF MAINLINE AND RELATED IRRIGATION EQUIPMENT SHALL BE WITHIN PLANTER AND A MINIMUM OF 18" OFF ADJACENT HARDSCAPE AND OTHER OBSTACLES, TYPICAL.

NOTE D:
CONTRACTOR SHALL ADJUST ALL HEADS AS REQUIRED TO ACCOMMODATE ANY VERTICAL OBSTRUCTIONS THAT MAY OCCUR IN THE LANDSCAPE, INCLUDING BUT NOT LIMITED TO LIGHT POLES, FIRE HYDRANTS, TREES, ETC. WHEN A SLIGHT RELOCATION OF THE HEAD IS NOT SUFFICIENT TO CLEAR THE OBSTACLE, OR IF IT NEGATIVELY AFFECTS THE COVERAGE, AN ADDITIONAL HEAD SHALL BE INSTALLED TO PLACE ONE HEAD ON EITHER SIDE OF THE OBSTACLE. THE NOZZLES OF THESE TWO HEADS SHALL HAVE ARC PATTERNS THAT ADD UP TO THE ORIGINAL ARC PATTERN OF THE HEAD INDICATED ON THE PLANS. THE CONTRACTOR SHALL VERIFY ALL HEAD LAYOUT WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

NOTE E:
THESE PLANS ARE DIAGRAMMATIC, TREE BUBBLERS AND LATERAL LINES ARE SHOWN WITHIN THE PAVING FOR CLARITY ONLY. THE ACTUAL LOCATIONS SHALL BE WITHIN THE PLANTER. THE TREE BUBBLERS SHALL BE ALIGNED WITH TREES AS SHOWN ON THE PLANTING PLANS, AND AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE. THE CONTRACTOR SHALL CONFIRM ALL LAYOUT IN FIELD WITH OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO STARTING WORK.

I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

sweeney + associates
IRRIGATION DESIGN AND CONSULTING

MTS
GROUNDLEVEL

PROJECT TEAM CONSULTANTS
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PROJECT: 4.38.3.30
DRAWN: CHECKED:

LANDSCAPE IRRIGATION PLAN

LI 101

IRRIGATION NOTES

1. ALL LOCAL MUNICIPAL AND STATE LAWS, RULES AND REGULATIONS GOVERNING OR RELATING TO ANY PORTION OF THIS WORK ARE HEREBY INCORPORATED INTO AND MADE A PART OF THESE SPECIFICATIONS AND THEIR PROVISIONS SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE.
3. THE CONTRACTOR SHALL OBTAIN THE PERTINENT ENGINEERING OR ARCHITECTURAL PLANS BEFORE BEGINNING WORK.
4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS REQUIRED TO PERFORM THE WORK INDICATED HEREIN BEFORE BEGINNING WORK.
5. THIS DESIGN IS DIAGRAMMATIC. ALL EQUIPMENT SHOWN IN PAVED AREAS IS FOR DESIGN CLARITY ONLY AND IS TO BE INSTALLED WITHIN PLANTING AREAS.
6. THE CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY EQUIPMENT AS SHOWN ON THE PLANS WHEN IT IS OBVIOUS IN THE FIELD THAT UNKNOWN CONDITIONS EXIST THAT WERE NOT EVIDENT AT THE TIME THESE PLANS WERE PREPARED. ANY SUCH CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO ANY WORK OR THE IRRIGATION CONTRACTOR SHALL ASSUME ALL RESPONSIBILITY FOR ANY FIELD CHANGES DEEMED NECESSARY BY THE OWNER.
7. INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLY WITH LOCAL CITY, COUNTY AND STATE REQUIREMENTS FOR BOTH EQUIPMENT AND INSTALLATION.
8. ACTUAL LOCATION FOR THE INSTALLATION OF THE EXISTING IRRIGATION BACKFLOW PREVENTER IS TO BE FIELD VERIFIED WITH THE OWNER'S AUTHORIZED REPRESENTATIVE.
9. ACTUAL LOCATION FOR THE INSTALLATION OF THE NEW AUTOMATIC CONTROLLER IS TO BE DETERMINED IN THE FIELD BY THE OWNER'S AUTHORIZED REPRESENTATIVE.
9. CONTRACTOR IS TO PROVIDE AN FIVE (5) PILOT WIRES FROM CONTROLLER ALONG ENTIRETY OF MAIN LINE TO THE LAST RCV ON EACH AND EVERY LEG OF MAIN LINE. LABEL SPARE WIRES AT BOTH ENDS.
10. ALL PIPE UNDER PAVED AREAS TO BE INSTALLED IN SLEEVING TWICE THE DIAMETER OF THE PIPE CARRIED. SEE LEGEND FOR TYPE. ALL WIRE UNDER PAVED AREAS TO BE INSTALLED IN A SCH. 40 SLEEVE THE SIZE REQUIRED TO EASILY PULL WIRE THROUGH. ALL SLEEVES TO BE INSTALLED WITH A MINIMUM DEPTH AS SHOWN ON THE SLEEVING DETAILS. SLEEVES TO EXTEND AT LEAST 12" PAST THE EDGE OF THE PAVING.
11. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED IN SHRUB OR GROUND COVER AREAS WHERE POSSIBLE. ALL QUICK COUPLER AND REMOTE CONTROL VALVES TO BE INSTALLED AS SHOWN ON THE INSTALLATION DETAILS. INSTALL ALL QUICK COUPLER AND REMOTE CONTROL VALVES WITHIN 18" OF HARDSCAPE.
12. ALL HEADS ARE TO BE INSTALLED WITH THE NOZZLE, SCREEN AND ARCS SHOWN ON THE PLANS. ALL HEADS ARE TO BE ADJUSTED TO PREVENT OVERSPRAY ONTO BUILDINGS, WALLS, FENCES AND HARDSCAPE. THIS INCLUDES, BUT NOT LIMITED TO, ADJUSTMENT OF DIFFUSER PIN OR ADJUSTMENT SCREW, REPLACEMENT OF PRESSURE COMPENSATING SCREENS, REPLACEMENT OF NOZZLES WITH MORE APPROPRIATE RADIUS UNITS AND THE REPLACEMENT OF NOZZLES WITH ADJUSTABLE ARC UNITS.
13. CONTRACTOR SHALL INSTALL ADDITIONAL CHECK VALVES TO HEADS AND LATERALS AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.
14. THE CONTRACTOR SHALL USE PROPER GROUNDING TECHNIQUES FOR GROUNDING THE CONTROLLER AND RELATED EQUIPMENT PER MANUFACTURERS SPECIFICATIONS. SWEENEY AND ASSOCIATES RECOMMENDS MEASURING FOR PROPER GROUND AT LEAST ONCE ANNUALLY, AND NECESSARY ADJUSTMENTS MADE TO COMPLY WITH MANUFACTURER SPECIFICATIONS.
15. THE CONTRACTOR IS REQUIRED TO CONTACT DIGALERT OR 811 A MINIMUM OF TWO (2) DAYS PRIOR TO THE START OF ANY EXCAVATIONS ON THE PROJECT AND SPECIFICALLY PRIOR TO THE INSTALLATION OF ANY GROUNDING RODS. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG TO START A PROJECT TICKET. DIGALERT AND 811 IS A FREE SERVICE PROVIDED TO THE PROJECT. FAILURE TO CONTACT AND HAVE THE EXISTING UTILITIES IDENTIFIED, LOCATED AND MARKED SHALL MAKE THE CONTRACTOR SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGES.

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package

Project Name: Grantville Transit Center Improvements
Project Address: 4510 Alvarado Canyon Road, San Diego, CA 92120

sweeney + associates — IRRIGATION DESIGN AND CONSULTING

Reference Evapotranspiration (ETo) 46.5 In./Yr. **Residential Project?** No

Hydrozone # / Planting Description[a]	Plant Factor	Irrigation Method[b]	Irrigation Efficiency (IE)[c]	ETAF (PF / IE)	Landscape Area (Sq. Ft.)	ETAF x Area	Estimated Total Water Use (ETWU)[d]
Regular Landscape Areas							
1. Low Water Use Plantings	0.20	Overhead	0.75	0.27	8,897	2,402	69,255
2. Moderate Water Use Plantings	0.40	Overhead	0.75	0.54	1,176	635	18,308
				Totals:	10,073	3,037	
Special Landscape Areas							
				Totals:	0	0	
		Estimated Total Water Use (ETWU) Total:					87,563
		Maximum Applied Water Allowance (MAWA)[e]:					130,682

[a] **Hydrozone # / Planting Description** — *E.g. 1.) Front Lawn 2.) Low Water Use Plantings 3.) Medium Water Use Plantings*

[b] **Irrigation Method** — *Overhead Spray of Drip*

[c] **Irrigation Efficiency** — *0.75 for Spray 0.81 for Drip*

[d] ***ETWU (Annual Gallons Required)** = ETo x 0.62 x ETAF x Area*
Where 0.62 is a conversion factor that converts acre-inches/acre/year to gallons/square foot/year.

[e] ***MAWA (Annual Gallons Allowed)** = ETo x 0.62 x [(ETAF x LA) + ((1 - ETAF) x SLA)]*
Where 0.62 is a conversion factor that converts acre-inches/acre/year to gallons/square foot/year, LA is the total landscape area in square feet, SLA is the total special landscape area in square feet, and ETAF is 0.55 for residential projects and 0.45 for non-residential projects.

Evapotranspiration Adjustment Factor (ETAF) Calculations

This non-residential project complies with the WELO and its average ETAF is less than 0.45

Regular Landscape Areas	
Total ETAF x Area	3,037
Total Area	10,073
Average ETAF	0.3

All Landscape Areas	
Total ETAF x Area	3,037
Total Area	10,073
Average ETAF	0.3

WATER PRESSURE LOSS CALCULATIONS

WATER METER NUMBER	1	EXISTING WATER METER SIZE (Inches)	1.50
HYDRAULIC GRADE LINE (FT)		WATER METER ELEVATION (FT)	
ELEVATION DIFFERENCE (FT)		MIN. REQ. STATIC PRESSURE (PSI)	100.0
REMOTE CONTROL VALVE #	A12	REMOTE CONTROL VALVE SIZE (In.)	1.50
R.C.V. DEMAND (GPM)	30	TOTAL DEMAND (GPM)	30
HIGHEST HEAD SERVED (FT)		STATIC PRESSURE AT HIGHEST HEAD	

sweeney + associates — IRRIGATION DESIGN AND CONSULTING

PRESSURE LOSS CALCULATION IS PROVIDED FOR THIS PROJECT BY SWEENEY & ASSOCIATES, INC. UNAUTHORIZED USE BY ANY OTHER PERSON, COMPANY OR PROJECT IS FORBIDDEN WITHOUT WRITTEN PERMISSION.

SIZE (Inches)	DESCRIPTION	FLOW	#	LOSS	
2.00	BACKFLOW PREVENTER (R/P TYPE)	30	3	13.50	PSI
2.00	FILTRATION (WYE FILTER)	30	4	0.25	PSI
2.00	PRESSURE REGULATOR (WILKINS 500HLR)	30	5	4.00	PSI
2.00	BFD ASSEMBLY PIPING (BRASS W/ 4 ELLS)	30	6	0.53	PSI
1.50	MASTER CONTROL VALVE	30	7	1.00	PSI
1.50	FLOW SENSOR	30	8	1.00	PSI
2.00	ISOLATION VALVES (BALL TYPE)	30	9	1.00	PSI
2.00	450 FEET OF MAINLINE: CL. 315 PVC	30	10	3.38	PSI
2.00	5 - 90 DEGREE ELBOWS	30	13	0.41	PSI
1.50	REMOTE CONTROL VALVE ASSEMBLY	30	14	2.90	PSI
10%	LATERAL LINE LOSSES	30	15	4.50	PSI
20%	FITTING LOSS (IN ADDITION TO ELBOWS SHOWN)	N/A	16	0.68	PSI
0.00	ELEVATION CHANGE (P.O.C. TO HIGHEST HEAD)	N/A	17	0.00	PSI
	TOTAL SYSTEM PRESSURE LOSS (SUM OF #1 THRU #17)		18	33.1	PSI
	PRESSURE REQUIRED AT HEAD (OPERATING PRESSURE)		19	45.0	PSI
	TOTAL PRESSURE REQUIRED (SUM OF #18 AND #19)		20	78.1	PSI
	STATIC WATER PRESSURE (FROM ABOVE)		21	100.0	PSI
	RESIDUAL PRESSURE (SUBTRACT #20 FROM #21)		22	21.9	PSI
	SET PRV OR MCV AT (#20 PLUS 10 PSI)		23	N/A	PSI
	PRESSURE BOOST, IF REQUIRED (SET TO ACHIEVE 20 PSI RESIDUAL)		24	N/A	PSI

IRRIGATION CONTROLLER RUN TIMES

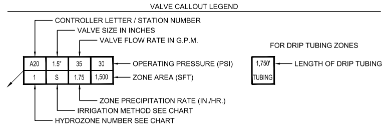
POC or Controller				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total / Avg.
A	ETo / Month (Inches):			2.10	2.40	3.40	4.60	5.10	5.30	5.70	5.60	4.30	3.60	2.40	2.00	46.50
	ETo / Day (Inches):			0.07	0.09	0.11	0.15	0.16	0.18	0.18	0.18	0.14	0.12	0.08	0.06	0.13
	Irrigation Days / Week:			2	2	3	3	5	5	6	6	5	3	2	2	
Plant / Irrig. Type	AKc	Pr Rate	IE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
Low Shrubs	0.20	0.70	0.75	5.4	6.9	5.8	8.2	5.3	5.7	4.9	4.8	4.6	6.2	6.4	5.2	Min./Day/Zone
Rotary Heads	Number of Zones:		5	27.1	34.3	29.2	40.9	26.3	28.3	24.5	24.1	22.9	31.0	32.0	25.8	Total Min./Day
Low Shrubs	0.20	1.00	0.75	3.8	4.8	4.1	5.7	3.7	4.0	3.4	3.4	3.2	4.3	4.5	3.6	Min./Day/Zone
Shrub Bubblers	Number of Zones:		5	19.0	24.0	20.5	28.6	18.4	19.8	17.2	16.9	16.1	21.7	22.4	18.1	Total Min./Day
Moderate Shrubs	0.40	0.70	0.75	10.8	13.7	11.7	16.4	10.5	11.3	9.8	9.6	9.2	12.4	12.8	10.3	Min./Day/Zone
Rotary Heads	Number of Zones:		1	10.8	13.7	11.7	16.4	10.5	11.3	9.8	9.6	9.2	12.4	12.8	10.3	Total Min./Day
Moderate Shrubs	0.40	1.00	0.75	7.6	9.6	8.2	11.4	7.4	7.9	6.9	6.7	6.4	8.7	9.0	7.2	Min./Day/Zone
Shrub Bubblers	Number of Zones:		2	15.2	19.2	16.4	22.9	14.7	15.8	13.7	13.5	12.8	17.3	17.9	14.5	Total Min./Day
Moderate Trees	0.50	1.00	0.75	9.5	12.0	10.2	14.3	9.2	9.9	8.6	8.4	8.0	10.8	11.2	9.0	Min./Day/Zone
Bubblers	Number of Zones:		2	19.0	24.0	20.5	28.6	18.4	19.8	17.2	16.9	16.1	21.7	22.4	18.1	Total Min./Day
	Total Number of Zones:		15	91	115	98	137	88	95	82	81	77	104	108	87	Total Min./Day
	Total Controller Run Time in Hours:			1.52	1.92	1.64	2.29	1.47	1.58	1.37	1.35	1.28	1.73	1.79	1.45	Total Hrs./Day
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	

Note: These schedules are intended only for compliance with local municipal codes and the water efficient landscape ordinance. These calculations represent the MAXIMUM REASONABLE run times and are used to ensure that all irrigation may be completed during the specific watering window allowed. These schedules do not include rainfall, site soil types, specicic exposures (shade versus sun), actual irrigation days, or specific slope position. It is solely the responsibility of the irrigation contractor to program the controller as required to apply the correct amount of irrigation water for the landscape. All smart controllers shall be programmed using the specified ET or weather sensing equipment, satellite provided ET data, soil moisture sensors, and rain shut off devices as required. Contractor shall provide a controller schedule inside the controller cabinet prior to final turnover of the project to the owner.

IRRIGATION MATERIAL LEGEND

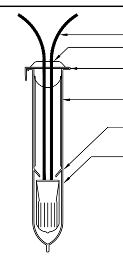
SYMBOL (Q T H F)	MANUFACTURER	MODEL NO. / DESCRIPTION	FLOW RATE (GPM)	PSI	RADIUS	P.R. (TRI.)	DETAIL
	RAIN BIRD	RD-12-S-P45-F 12" POP-UP SHRUB HEAD WITH R-VAN14 (Q/T/H) / R-VAN14-360 NOZZLES	.32, .42, .63, 1.27	45	14 FT	0.70 IN./HR.	A
	RAIN BIRD	RD-12-S-P45-F 12" POP-UP SHRUB HEAD WITH R-VAN18 (Q/T/H) / R-VAN18-360 NOZZLES	.50, .62, 1.17, 1.85	45	18 FT	0.70 IN./HR.	A
	RAIN BIRD	RD-12-S-P45-F 12" POP-UP SHRUB HEAD WITH R-VAN24 (Q/T/H) / R-VAN24-360 NOZZLES	.84, 1.16, 1.68, 3.48	45	24 FT	0.70 IN./HR.	A
	RAIN BIRD / GPH	RD-04-S-P30-F 4" POP-UP BUBBLER WITH A PA-80 SHRUB ADAPTER AND A GPH SPEC-CHECK GPSTCV4 BUBBLER NOZZLE. EACH SYMBOL REPRESENTS ONE BUBBLER PER SHRUB. FINAL BUBBLER QUANTITY SHALL BE BASED ON FINAL PLANT QUANTITIES WITHIN EACH PLANTER	.07	30	1 FT	1.00 IN./HR.	A
	RAIN BIRD	RD-06-S 6" POP-UP BUBBLER HEAD WITH A HUNTER MSBN-25Q STREAM BUBBLER NOZZLE EACH SYMBOL REPRESENTS TWO (2) BUBBLER TO PROVIDE A TOTAL OF TWO (2) BUBBLERS PER TREE. PLACE THE BUBBLER HEADS SIX (6) INCHES FROM THE ROOT BALL OF THE TREE AND ON OPPOSITE SIDES OF TREE. ADJUST BUBBLER STREAMS TO WET THE ROOT BALL AND ADJACENT AMENDED SOIL WITHOUT HITTING THE TRUNK OF THE TREE.	.25 (0.50 TOTAL)	30	1 FT	1.00 IN./HR.	A,B
M	EXISTING	EXISTING 1-1/2" POTABLE (DOMESTIC) DEDICATED IRRIGATION WATER METER #97381245 TO REMAIN; PROTECT-IN-PLACE					N/A
B	EXISTING	EXISTING 2" R/P IRRIGATION BACK FLOW PREVENTION DEVICE TO REMAIN; PROTECT-IN-PLACE. SHOWN FOR REFERENCE ONLY					N/A
PV	WILKINS	500XL-HLR 2" BRONZE, HIGH LOW RANGE (10-125 PSI) PRESSURE REGULATOR, WITH SINGLE UNION FIPT X FIPT CONNECTIONS, INSTALL PRESSURE REGULATOR INSIDE A STANDARD RECTANGULAR VALVE BOX. SET WATER PRESSURE TO 10 PSI ABOVE DESIGN PRESSURE SHOWN ON POC NOTES.					C
V	BUCKNER	3300-XX0 1-1/2" NORMALLY OPEN, BRASS MASTER CONTROL VALVE. WIRE MCV TO THE CONTROLLER USING A SEPARATE PILOT AND GROUND WIRE, ROUTE INSIDE CONDUIT WITH FLOW SENSOR WIRE. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					D
F	CREATIVE SENSOR TECH.	1-1/2" PVC TEE, IMPELLER TYPE FLOW SENSOR INCLUDED AS PART OF CONTROLLER ASSEMBLY SPECIFIED BELOW, WIRE TO CONTROLLER USING TWO (2) #14UF AWG WIRES INSIDE A 1 1/4" SCH. 40 PVC (GRAY) ELECTRICAL CONDUIT, WITH MASTER CONTROL VALVE WIRES. INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND INSIDE A STANDARD RECTANGULAR VALVE BOX.					E
	NIBCO	T-113 CLASS 125, BRONZE GATE VALVE WITH HAND WHEEL (UP TO 2" SIZE) FOR MAINLINE & VALVE MANIFOLD ISOLATION, LINE SIZE PER MAINLINE. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					F
Q	RAIN BIRD	33LRC 1" QUICK COUPLER VALVE WITH LOCKING VINYL COVER AND A LASCO G13S-218 SWING JOINT. INSTALL INSIDE A 10" ROUND VALVE BOX.					G
	RAIN BIRD	XXX-EFB-CP-PRS-D PRESSURE REGULATING, BRASS REMOTE CONTROL VALVE (RCV), SIZE AS SHOWN (1", 1 1/2" AND 2" SIZES), SET PRS-D PRESSURE REGULATOR TO PROVIDE THE OPERATING PRESSURE OF THE SPRINKLER / BUBBLER HEAD AT THE HIGHEST OR FARTHEST HEAD ON THE CONTROL VALVE ZONE (MEASURE PSI AT HEAD). INSTALL THE RCV INSIDE A STANDARD RECTANGULAR VALVE BOX.					H
C	IRRITROL / ITS	ICA6-IR1-24/SP/IRCL/P/IFS-100 (MC-E BLUE SERIES) 24-STATION CONTROLLER ASSEMBLY. CONTROLLER TO BE INSTALLED WITHIN A IMPERIAL ASSEMBLED TOP-ENTRY STAINLESS STEEL ENCLOSURE. FOR FURTHER ASSISTANCE CONTACT DARYL GREEN WITH I.T.S. AT 949-584-7311					I,J
NO SYMBOL	PAIGE ELECTRIC	THE CONTROLLER SHALL BE GROUNDED USING A #182000 5/8" X 8 FOOT COPPER CLAD GROUND ROD, A #182005 CAST BRONZE ROD CLAMP AND THE REQUIRED LENGTH OF #6AWG BARE, SINGLE STRAND COPPER GROUND WIRE. INSTALL INSIDE A 10" ROUND VALVE BOX.					J
R	ITS	RAIN SENSOR MOUNTED TO SIDE OF CONTROLLER ENCLOSURE. INCLUDED AS PART OF CONTROLLER ASSEMBLY LISTED ABOVE					N/A
E	N/A	120 VOLT ELECTRICAL POWER FOR CONTROLLER, PROVIDED BY ELECTRICIAN, VERIFY ACTUAL LOCATION IN FIELD					N/A
	AS APPROVED	PVC PIPE 3/4" - 3" SCH. 40, SOLVENT WELD WITH SCH. 40 PVC FITTINGS, AS LATERAL LINES INSTALLED 12" BELOW FINISHED GRADE					K
	AS APPROVED	PVC PIPE 1 1/2" SCH. 40, SOLVENT WELD WITH SCH. 80 PVC FITTINGS, AS MAINLINES INSTALLED 18" BELOW FINISHED GRADE					K
	AS APPROVED	PVC PIPE 2" CL. 315, SOLVENT WELD WITH SCH. 80 PVC FITTINGS, AS MAINLINES INSTALLED 18" BELOW FINISHED GRADE					K
	AS APPROVED	PVC PIPE SCH. 40 AS SLEEVING, 2.5 TIMES THE DIAMETER OF PIPE OR WIRE BUNDLE CARRIED (2" MINIMUM SIZE) INSTALL ALL PIPE AND WIRE UNDER PAVING, HARDSCAPE, ETC. (OR AS DIRECTED BY OWNER'S AUTHORIZED REPRESENTATIVE) INSIDE SLEEVES. SLEEVES UNDER PEDESTRIAN PAVING SHALL BE INSTALLED 24" BELOW FINISHED GRADE. SLEEVES UNDER VEHICULAR PAVING SHALL BE INSTALLED 36" BELOW FINISHED GRADE.					L
NO SYMBOL	LASCO	ALL FITTINGS USED WITH SOLVENT WELD MAINLINE PIPE SHALL BE SCH. 80 PVC FITTINGS, GRAY IN COLOR, AND SIZED TO MATCH THE MAINLINE PIPE. ALL FITTINGS USED WITH SOLVENT WELD LATERAL LINE PIPE SHALL BE SCH. 40 PVC, WHITE IN COLOR, AND SIZED TO MATCH THE LATERAL LINE PIPE. ALL THREADED PVC NIPPLES SHALL BE SCH. 80 PVC PIPE, DARK GRAY IN COLOR, WITH MOLDED THREADS.					N/A
NO SYMBOL	AS APPROVED	ALL SOLVENT WELD CONNECTIONS FOR BOTH MAINLINE AND LATERAL LINE SHALL BE MADE USING THE TWO-STEP PROCESS OF PRIMER AND SOLVENT CEMENT. PRIMER SHALL BE LOW VOC "PURPLE PRIMER". SOLVENT CEMENT SHALL BE LOW VOC, GRAY OR BLUE COLORED "MEDIUM BODIED" CEMENT. USE DAUBERS SIZED AT LEAST ONE-HALF THE SIZE OF THE LARGEST PIPE BEING JOINED. ALL SOLVENT CEMENTED JOINTS SHALL BE MADE PER THE PIPE AND FITTING MANUFACTURER'S RECOMMENDATIONS.					N/A
NO SYMBOL	AS APPROVED	11/4" SCH. 40 PVC, GRAY ELECTRICAL CONDUIT FOR FLOW SENSOR / MASTER VALVE WIRES OR CENTRAL CONTROL COMMUNICATION CABLE, PROVIDE PULL BOX AT A MAXIMUM OF 200 FEET ON CENTER FOR A 3 FOOT WIRE LOOP OR ANY SPLICES. INSTALL INSIDE A STANDARD RECTANGULAR VALVE BOX.					N/A
NO SYMBOL	PAIGE ELECTRIC	P7079D POLYETHYLENE INSULATED, SOLID COPPER CONDUCTOR IRRIGATION CONTROL WIRE #14UF AWG DIRECT BURIAL (U.L. APPROVED). PILOT WIRES SHALL BE RED IN COLOR, COMMON GROUND WIRE SHALL BE WHITE IN COLOR, SPARE WIRES SHALL BE YELLOW IN COLOR. THE CONTRACTOR SHALL ROUTE TWO (2) SPARE CONTROL WIRES (YELLOW) FROM THE CONTROLLER ALONG THE MAINLINE IN ALL DIRECTIONS AWAY FROM THE CONTROLLER. LOOP SPARE WIRES UP AND INTO EACH VALVE BOX ALONG THE MAINLINE, PROVIDING A 3 FOOT MINIMUM LOOP. WHERE MULTIPLE CONTROLLERS ARE USED ON THE PROJECT, EACH CONTROLLER SHALL HAVE A DIFFERENT COLOR FOR PILOT WIRES.					K,L,M
NO SYMBOL	GPH IRRIGATION	GDBRY6 DIRECT BURIAL, 100% SILICONE GEL, WATER-PROOF WIRE CONNECTORS FOR USE ON ALL WIRE SPLICES AND CONNECTIONS					M
NO SYMBOL	NDS (K.B.I.)	KSC-XXX-S SWING CHECK VALVE, LATERAL LINE SIZE, INSTALL ONE (1) ON THE DOWNSTREAM SIDE OF EACH RCV WHEN THE RCV IS LOWER THAN THE SPRINKLERS, BUBBLERS OR DRIP EMITTERS. INSTALL WITHIN SPRINKLER / BUBBLER / DRIP ZONES AS REQUIRED TO PREVENT LOW HEAD DRAINAGE.					N/A
NO SYMBOL	NDS (K.B.I.)	KC-XXX-S SPRING CHECK VALVE, LATERAL LINE SIZE, INSTALL ONE (1) ON THE DOWNSTREAM SIDE OF EACH RCV WHEN THE RCV IS HIGHER THAN					N/A
NO SYMBOL	EISEL	ALL IRRIGATION EQUIPMENT REQUIRING A VALVE BOX (BOTH CONCRETE AND LANDSCAPE) SHALL BE INSTALLED WITHIN A TRAFFIC-RATED CONCRETE VALVES BOX WITH HINGED METAL LIDS. ALL VALVE BOX LIDS SHALL BE EMBOSSED WITH THE INITIALS OF ITS CONTENTS IN MIN. 1-1/2" HIGH LETTERS: RCV, QCV, BV, MV, FS, ETC. IRRIGATION EQUIPMENT INCLUDES REMOTE CONTROL VALVES, MASTER VALVE, FLOW SENSOR, QUICK COUPLER VALVES, BALL VALVES, ETC. CONCRETE WITH LOCKING CAST IRON COVERS: FOR ROUND VALVE BOXES USE 10" MODEL WITH LOCKING CAST IRON COVER FOR RECTANGULAR VALVE BOXES USE 12" X 20" MODEL WITH LOCKING CAST IRON COVER					N/A

VALVE CALLOUT LEGEND



HYDROZONE DESCRIPTION CHART			
NUMBER	DESCRIPTION OF THE HYDROZONE	WUCOLS	PLANT FACTOR
HZ 1	LOW WATER USE PLANTINGS	L	0.20
HZ 2	MODERATE WATER USE PLANTINGS	M	0.40
HZ 3	MODERATE WATER USE TREES	M	0.50

IRRIGATION METHOD DESCRIPTION CHART			
LETTERS	DESCRIPTION OF THE IRRIGATION	TYPE	IR. EFFICIENCY
R	ROTARY HEADS	ROTOR	0.75
TB	TREE BUBBLERS	BUBBLER	0.75
SB	SHRUB BUBBLERS	BUBBLER	0.75



NOTE:
WIRE CONNECTOR SHALL BE A GPH IRRIGATION GDBRY6 DIRECT BURY SPLICE KIT.

KIT SHALL INCLUDE A SCOTCHLOK SPRING CONNECTOR, A POLYPROPYLENE TUBE AND A 100% SILICONE WATERPROOF SEALING GEL. TUBE SHALL BE SUPPLIED PRE-FILLED WITH GEL.

SECTION VIEW - N.T.S.
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(M) WIRE CONNECTION

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I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN

MTS Metropolitan Transit System

GROUNDLEVEL
LANDSCAPE ARCHITECTURE

PROJECT DESIGN CONSULTANTS
a BOWMAN company
Planning | Landscape Architecture | Engineering | Survey
701 B Street, Suite 800 San Diego, CA 92101
619.235.6471 Tel 619.234.0349 Fax

GRANTVILLE TRANSIT CENTER IMPROVEMENTS
4510 ALVARADO CANYON ROAD
SAN DIEGO, CA 92120

MTS PO NO.: 4500049463
MTS WO NO.: WOA1949-AE-76
JACOBS PO NO.: 148037478
PROJECT NO.: JLXMTDGV
WBS CODE: C.PN.TPE.PDC

ISSUE	DATE	DESCRIPTION
1	3-14-23	MTS 1ST SUBMITTAL
2		
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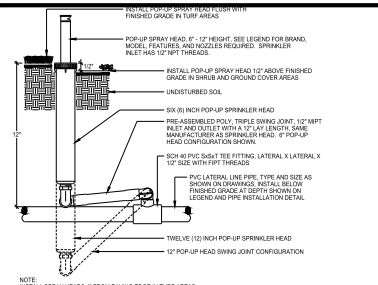
PROJECT: 4383.30
DRAWN: CHECKED:

IRRIGATION LEGEND & NOTES

LI 201

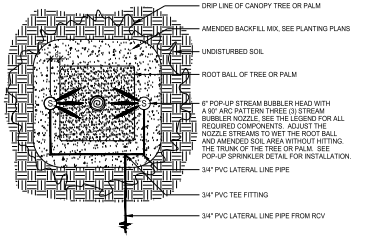


NOTE:
INSTALL SPRAY HEADS 4" FROM PAVING EDGE IN TURF AREAS.
INSTALL SPRAY HEADS 6" FROM PAVING EDGE IN SHRUB AND GROUND COVER AREAS.
INSTALL SPRAY HEADS 12" FROM THE FACE OF BUILDING WALLS OR WINDOWS.

INSTALL SPRAY HEADS PLUMB. ADJUST NOZZLE STREAM TO COVER THE LANDSCAPE AREA WITHOUT OVERSPRAY ONTO PAVING, FENCES, WALLS OR BUILDINGS.

SECTION VIEW - N.T.S.

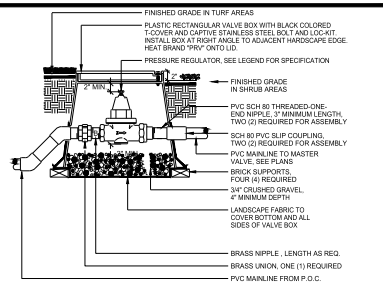
Ⓐ POP-UP SPRAY / BUBBLER HEAD



NOTE:
POSITION MSBN-50Q STREAM BUBBLER HEADS 6" FROM THE ROOT BALL.
POSITION MSBN-25Q STREAM BUBBLER HEADS 1" FROM THE ROOT BALL.

PLAN VIEW - N.T.S.

Ⓑ TREE BUBBLER LAYOUT

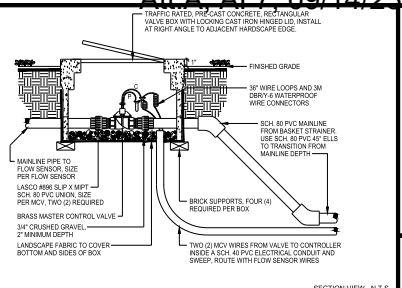


NOTE:
INSTALL CONTROL VALVES A MINIMUM OF ONE FOOT APART IN SHRUB AREAS UNLESS OTHERWISE NOTED.

USE 45 DEGREE ELLS TO ACHIEVE MAINLINE DEPTH FROM UPSTREAM SIDE OF THE PRESSURE REGULATOR ASSEMBLY.

SECTION VIEW - N.T.S.

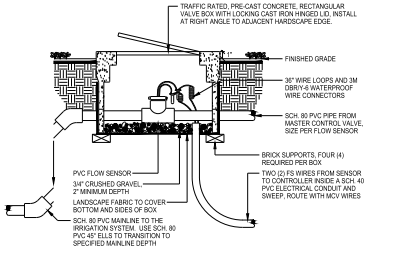
Ⓒ PRESSURE REGULATOR



NOTE:
USE AN APPROVED, NON-HARDENING, TEFLON ASSEMBLY PASTE ON ALL THREADED FITTINGS.
USE STANDARD BOX OPENINGS FOR ALL PIPING INTO THE BOX, DO NOT CUT THE BOX.

SECTION VIEW - N.T.S.

Ⓓ MASTER CONTROL VALVE

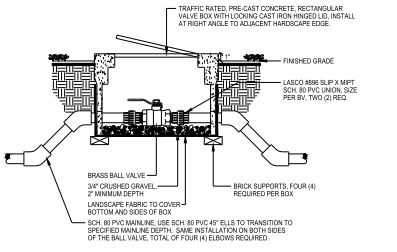


NOTE:
NO FITTINGS SHALL BE ALLOWED UPSTREAM OF THE FLOW SENSOR FOR A DISTANCE OF TEN (10) PIPE DIAMETERS OR DOWNSTREAM FOR A DISTANCE OF FIVE (5) PIPE DIAMETERS.

USE STANDARD BOX OPENINGS FOR ALL PIPING INTO THE BOX, DO NOT CUT THE BOX.

SECTION VIEW - N.T.S.

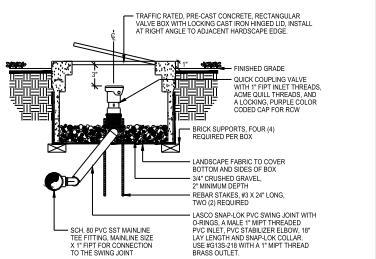
Ⓔ FLOW SENSOR



NOTE:
USE AN APPROVED, NON-HARDENING, TEFLON ASSEMBLY PASTE ON ALL THREADED FITTINGS.
USE STANDARD BOX OPENINGS FOR ALL PIPING INTO THE BOX, DO NOT CUT THE BOX.

SECTION VIEW - N.T.S.

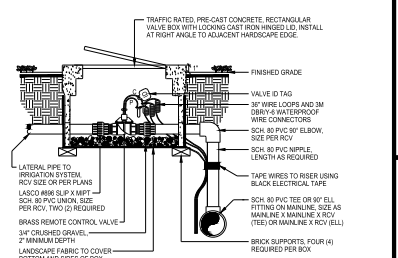
Ⓕ BALL VALVE



NOTE:
USE AN APPROVED, NON-HARDENING, TEFLON ASSEMBLY PASTE ON ALL THREADED FITTINGS.
USE STANDARD BOX OPENINGS FOR ALL PIPING INTO THE BOX, DO NOT CUT THE BOX.

SECTION VIEW - N.T.S.

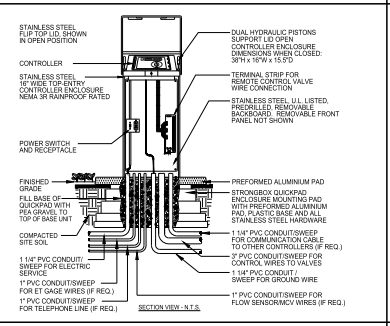
Ⓖ QUICK COUPLER VALVE



NOTE:
USE AN APPROVED, NON-HARDENING, TEFLON ASSEMBLY PASTE ON ALL THREADED FITTINGS.
USE STANDARD BOX OPENINGS FOR ALL PIPING INTO THE BOX, DO NOT CUT THE BOX.

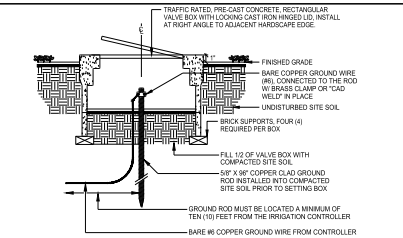
SECTION VIEW - N.T.S.

Ⓗ REMOTE CONTROL VALVE



SECTION VIEW - N.T.S.

Ⓘ CONTROLLER ENCLOSURE



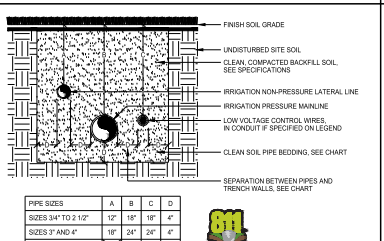
NOTE:
CONTRACTOR IS REQUIRED TO CONTACT 811 OR DIGALERT A MINIMUM OF TWO (2) DAYS PRIOR TO ANY EXCAVATION ON THE PROJECT AND SPECIFICALLY PRIOR TO THE INSTALLATION OF ANY GROUNDING RODS. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG.

EACH CONTROLLER SHALL HAVE A MINIMUM OF ONE (1) GROUND ROD INSTALLED.

GROUND ROD SHALL BE INSTALLED A MINIMUM OF TEN (10) FEET AWAY FROM THE IRRIGATION CONTROLLER OR ANY CONTROL WIRE PATH.

SECTION VIEW - N.T.S.

Ⓙ CONTROLLER GROUND - ROD

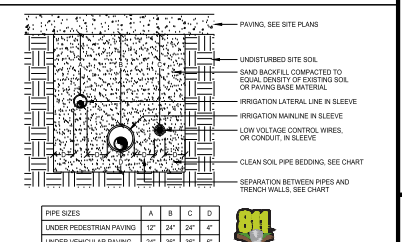


PIPE SIZES	A	B	C	D
SIZES 3/4" TO 2 1/2"	12"	18"	18"	4"
SIZES 3" AND 4"	18"	24"	24"	4"
SIZES 6" AND LARGER		30"	24"	6"

NOTE:
CONTRACTOR IS REQUIRED TO CONTACT 811 OR DIGALERT A MINIMUM OF TWO (2) DAYS PRIOR TO ANY EXCAVATION ON THE PROJECT. DIAL 811 OR LOG ONTO WWW.DIGALERT.ORG.

SECTION VIEW - N.T.S.

Ⓚ PIPE INSTALLATION



PIPE SIZES	A	B	C	D
UNDER PEDESTRIAN PAVING	12"	24"	24"	4"
UNDER VEHICULAR PAVING	24"	36"	36"	6"

NOTE:
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SLEEVES SHALL BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED WITHIN, EXCEPT WHEN USING BELL AND GASKET PIPING WHERE MAINLINE SLEEVES SHALL BE 2.5 TIMES THE SIZE OF THE PIPE.

SLEEVES SHALL EXTEND 12" PAST THE EDGE OF PAVING INTO THE PLANTER.

SECTION VIEW - N.T.S.

Ⓛ SLEEVE INSTALLATION

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TRANSPORTATION CONSULTANTS

PROJECT DESIGN CONSULTANTS
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Planning | Landscape Architecture
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GRANTVILLE TRANSIT CENTER IMPROVEMENTS
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ISSUE	DATE	DESCRIPTION
1	3-14-23	MTS 1ST SUBMITTAL
2		
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11		

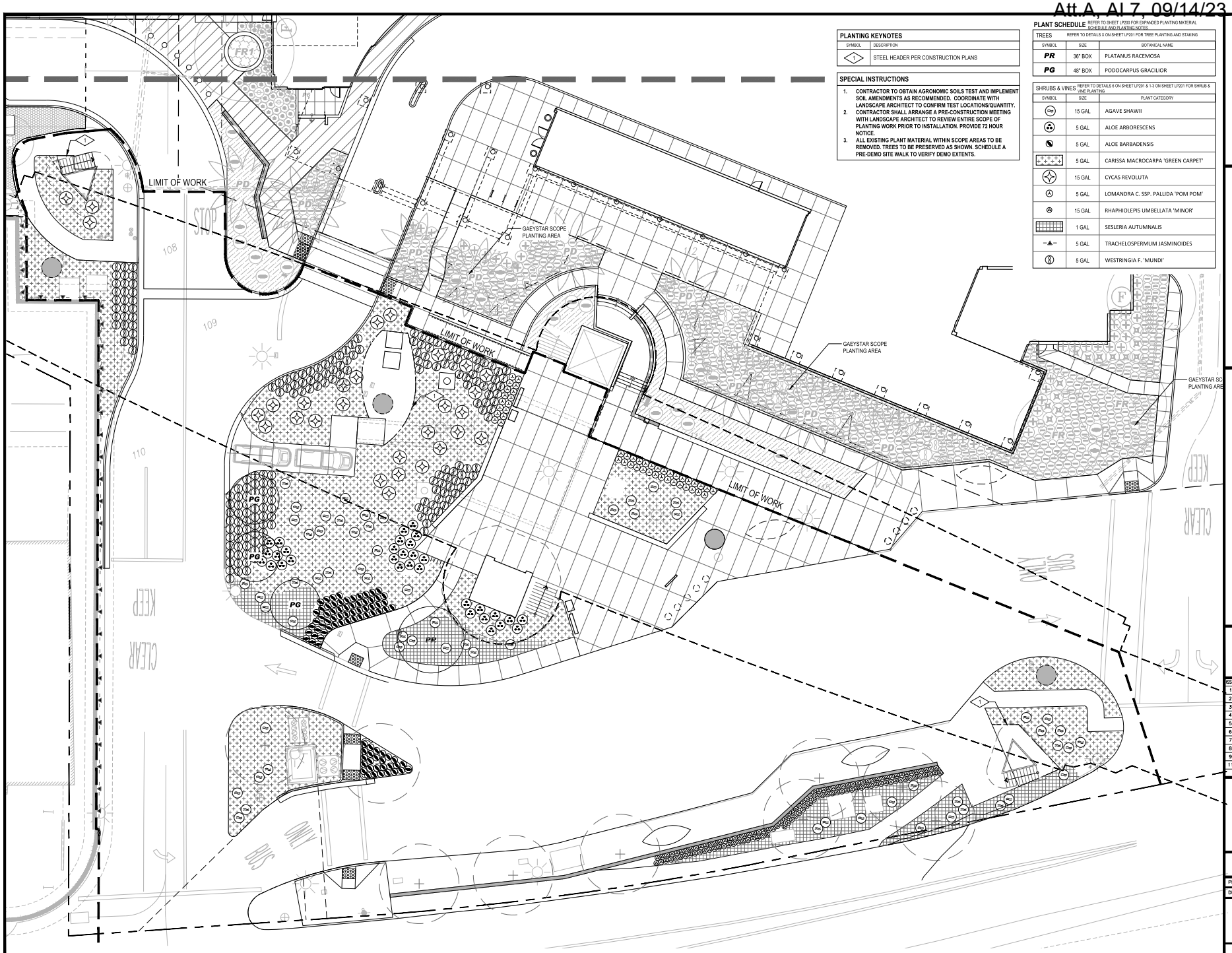
PROJECT: 4.38.3.30
DRAWN:
CHECKED:

IRRIGATION DETAILS

LI 301

sweeney + associates
IRRIGATION DESIGN AND CONSULTING
321 Newport Street, Suite 209
Escondido, CA 92029
e: info@sweeneyassoc.com | t: (714) 938-0456
w: www.sweeneyassoc.com | f: (714) 938-0456

I HAVE COMPLIED WITH THE CRITERIA OF THE IRRIGATION GUIDELINES AND APPLIED THEM ACCORDINGLY FOR THE EFFICIENT USE OF WATER IN THE IRRIGATION DESIGN PLAN



PLANTING KEYNOTES

SYMBOL	DESCRIPTION
1	STEEL HEADER PER CONSTRUCTION PLANS

SPECIAL INSTRUCTIONS

1. CONTRACTOR TO OBTAIN AGRONOMIC SOILS TEST AND IMPLEMENT SOIL AMENDMENTS AS RECOMMENDED. COORDINATE WITH LANDSCAPE ARCHITECT TO CONFIRM TEST LOCATIONS/QUANTITY.
2. CONTRACTOR SHALL ARRANGE A PRE-CONSTRUCTION MEETING WITH LANDSCAPE ARCHITECT TO REVIEW ENTIRE SCOPE OF PLANTING WORK PRIOR TO INSTALLATION. PROVIDE 72 HOUR NOTICE.
3. ALL EXISTING PLANT MATERIAL WITHIN SCOPE AREAS TO BE REMOVED. TREES TO BE PRESERVED AS SHOWN. SCHEDULE A PRE-DEMO SITE WALK TO VERIFY DEMO EXTENTS.

PLANT SCHEDULE REFER TO SHEET LP200 FOR EXPANDED PLANTING MATERIAL SCHEDULE AND PLANTING NOTES

TREES — REFER TO DETAILS X ON SHEET LP201 FOR TREE PLANTING AND STAKING

SYMBOL	SIZE	BOTANICAL NAME
PR	36" BOX	PLATANUS RACEMOSA
PG	48" BOX	PODOCARPUS GRACILIOR

SHRUBS & VINES — REFER TO DETAILS 8 ON SHEET LP201 & 1-3 ON SHEET LP201 FOR SHRUB & VINE PLANTING

SYMBOL	SIZE	PLANT CATEGORY
	15 GAL	AGAVE SHAWII
	5 GAL	ALOE ARBORESCENS
	5 GAL	ALOE BARBADENSIS
	5 GAL	CARISSA MACROCARPA 'GREEN CARPET'
	15 GAL	CYCAS REVOLUTA
	5 GAL	LOMANDRA C. SSP. PALLIDA 'POM POM'
	15 GAL	RHAPHIOLEPIS UMBELLATA 'MINOR'
	1 GAL	SESLERIA AUTUMNALIS
	5 GAL	TRACHELOSPERMUM JASMINOIDES
	5 GAL	WESTRINGIA F. 'MUNDI'

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11		

PROJECT: 4383.30
DRAWN: CHECKED:

LANDSCAPE PLANTING PLAN

LP 101

PLANTING NOTES

NUMBER	DESCRIPTION
1	TREES ARE STANDARD FORM UNLESS NOTED OTHERWISE.
2	TRIPLE STAKE TREES, UNLESS NOTED OTHERWISE.
3	TREE ROOT BARRIERS SHALL BE INSTALLED WHERE TREES ARE PLACED WITHIN 5 FEET OF PUBLIC IMPROVEMENTS INCLUDING WALKS, CURBS, OR STREET PAVEMENTS OR WHERE NEW PUBLIC IMPROVEMENTS ARE PLACED ADJACENT TO EXISTING TREES. THE ROOT BARRIER WILL NOT WRAP AROUND THE ROOT BALL.
4	WHERE SPREADING GROUNDCOVERS ARE SHOWN TO BE PLANTED ADJACENT TO A CURB OR WALKWAY EDGE, SET CENTER OF PLANT 24" OFF HARD SURFACE.
5	MINIMUM TREE SEPARATION DISTANCE: TRAFFIC SIGNALS / STOP SIGNS.....20 FT. UNDERGROUND UTILITY LINES.....5 FT (10' FOR SEWER). ABOVE GROUND UTILITY STRUCTURES.....10 FT. DRIVEWAYS (ENTRIES).....10 FT. INTERSECTIONS.....25 FT. (INTERSECTING CURB LINES OF TWO STREETS)
6	EXISTING TREES TO REMAIN ON SITE WITHIN THE AREA OF WORK WILL BE PROTECTED IN PLACE. THE FOLLOWING PROTECTION MEASURES WILL BE PROVIDED: 1. A BRIGHT YELLOW OR ORANGE TEMPORARY FENCE WILL BE PLACED AROUND EXISTING TREES AT THE DRIP LINE. 2. STOCKPILING, TOPSOIL DISTURBANCE, VEHICLE USE, AND MATERIAL STORAGE OF ANY KIND IS PROHIBITED WITHIN THE DRIP LINE. 3. A TREE WATERING SCHEDULE WILL BE MAINTAINED AND DOCUMENTED DURING CONSTRUCTION. 4. ALL DAMAGED TREES WILL BE REPLACED WITH ONE OF EQUAL OR GREATER SIZE.
7	ALL PLANTING AREA TO RECIEVE 3" LAYER OF BAMK MULCH (AGNSENICE "FROST FINES") UNLESS OTHERWISE NOTED.
8	MULCH: ALL REQUIRED PLANTING AREAS AND ALL EXPOSED SOIL AREAS WITHOUT VEGETATION SHALL BE COVERED WITH MULCH TO A MINIMUM DEPTH OF 3", EXCLUDING SLOPES REQUIRING REVEGETATION PER SDMC 142.0411.
9	IF ANY REQUIRED LANDSCAPE INDICATION ON THE APPROVED CONSTRUCTION DOCUMENT PLANS IS DAMAGED OR REMOVED DURING DEMOLITION OR CONSTRUCTION, IT SHALL BE REPAIRED AND/OR REPLACED IN KIND AND EQUIVALENT SIZE PER THE APPROVED DOCUMENTS TO THE SATISFACTION OF THE DEVELOPMENT SERVICES DEPARTMENT WITHIN 30 DAYS OF DAMAGE.
10	SOIL SAMPLES SHALL BE TAKEN FROM THE SITE AT THE LANDSCAPE ARCHITECT'S DIRECTIVE AND SENT TO A SOIL ANALYSIS LABORATORY TO PERFORM / PROVIDE SOIL AGRONOMIC TEST REPORT(S) PER SPECIFICATIONS. THIS REPORT SHALL BE PERFORMED PRIOR TO START OF PLANTING.

PLANT SCHEDULE

TREES — REFER TO DETAILS 1-4 ON SHEET LP301 FOR TREE PLANTING AND STAKING

SYMBOL	SIZE	BOTANICAL NAME	COMMON NAME	WUCOLS	HEIGHT @DELIVERY	SPREAD @DELIVERY	SPACING	REMARKS
PR	36" BOX	PLATANUS RACEMOSA	CALIFORNIA SYCAMORE	MID	14'	8'	AS SHOWN	MULTI
PG	48" BOX	PODOCARPUS GRACILIOR	AFRICAN FERN PINE	MID	15'	6'	AS SHOWN	STANDARD

SHRUBS & VINES — REFER TO DETAILS ON SHEET LP 3.01 FOR SHRUB & VINE PLANTING

SYMBOL	SIZE	BOTANICAL NAME	COMMON NAME	WUCOLS	DIMENSIONS @ TIME OF INSTALL HEIGHT	WIDTH	O.C OFFSET FROM EDGE
	15 GAL	AGAVE SHAWII	SHAW'S AGAVE	LOW	18"	-	@3' O.C. SPACING
	5 GAL	ALOE ARBORESCENS	TORCH ALOE	LOW	2'	-	@3' O.C. SPACING
	5 GAL	ALOE BARBADENSIS	ALOE VERA	LOW	12"	10"	@1' O.C. SPACING
	5 GAL	CARISSA MACROCARPA 'GREEN CARPET'	COMPACT NATAL PLUM	LOW	1'	-	@2' O.C. SPACING
	15 GAL	CYCAS REVOLUTA	SAGO PALM	MID	2'	-	@4' O.C. SPACING
	5 GAL	LOMANDRA C. SSP. PALLIDA 'POM POM'	SHORTY MAT RUSH	MID	10"	-	@2' O.C. SPACING
	15 GAL	RHAPHIOLEPIS UMBELLATA 'MINOR'	DWARF YEDDO HAWTHORN	LOW	2'	-	@18" O.C. SPACING
	1 GAL	SESLERIA AUTUMNALIS	AUTUMN MOOR GRASS	MID	6"	-	@1' O.C. SPACING
	5 GAL	TRACHELOSPERMUM JASMINOIDES	STAR JASMINE	MID	6' L	-	AS SHOWN
	5 GAL	WESTRINGIA F. 'MUNDI'	LOW COAST ROSEMARY	LOW	1'	-	@30" O.C. SPACING

MTS Metropolitan Transit System

GROUNDLEVEL Landscape Architecture

PROJECT DESIGN CONSULTANTS
A SDVOSB Company
Architecture | Landscape Architecture | Engineering | Survey
701 B Street, Suite 800 San Diego, CA 92101
619.235.6471 Tel 619.234.4349 Fax

GRANTVILLE TRANSIT CENTER IMPROVEMENTS
4510 ALVARADO CANYON ROAD
SAN DIEGO, CA 92120

MTS PO NO.: 4500049463
MTS WO NO.: WOA1949-AE-76
JACOBS PO NO.: 148037478
PROJECT NO.: JLXMTDGV
WBS CODE: C.PN.TPE.PDC

ISSUE	DATE	DESCRIPTION
1	3-14-23	MTS 1ST SUBMITTAL
2		
3		
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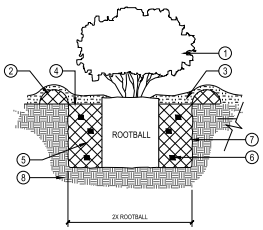
PROJECT: 4383.30
DRAWN: CHECKED:

LANDSCAPE PLANTING LEGEND

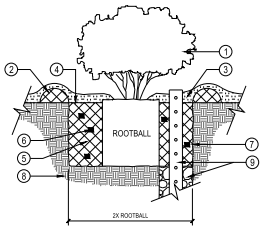
LP 200



1. CONTAINER PLANT PER PLANTING SCHEDULE SHEET LP2.00
2. 3" HEIGHT WATERING BASIN FORMED WITH BACKFILL SOIL MIX AROUND THE PLANT PIT
3. MULCH LAYER, PER MULCH PLANS KEEP 2"-3" FROM STEM
4. FINISH GRADE
5. AMENDED BACKFILL MIX PER SECTION 329113 'SOIL PREPERATION' &329300 'PLANTS'
6. FERTILIZER TABLETS PER SECTION 329300 'PLANTS'
7. SCARIFY SIDES OF PIT
8. NATIVE SOIL

NOTES:
A. INSTALL ROOTBALL 1"ABOVE FINISHED GRADE

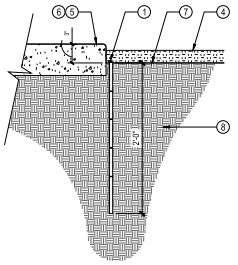
6 SHRUB PLANTING
1" = 1'-0"



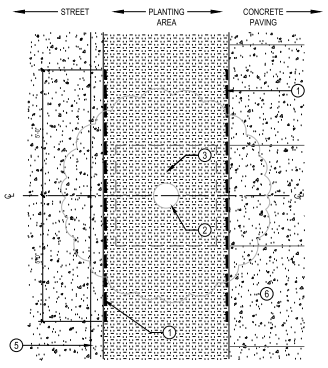
1. CONTAINER PLANT PER PLANTING SCHEDULE SHEET LP200
2. 3" HEIGHT WATERING BASIN FORMED WITH BACKFILL SOIL MIX AROUND THE PLANT PIT
3. MULCH LAYER PER MULCH PLANS KEEP 2"-3" FROM STEM
4. FINISH GRADE
5. AMENDED BACKFILL MIX PER SECTION 329113 'SOIL PRESERVATION' &329300 'PLANTS'
6. FERTILIZER TABLETS PER SECTION 329300 'PLANTS'
7. SCARIFY SIDES OF PIT
8. NATIVE SOIL
9. BREATHER TUBE WITH SUMP PER DETAIL _/LP___ FOR 15 GALLON SIZE PLANTS AND LARGER IF INDICATED ON PLANTING SCHEDULE SHEET LP200

NOTES:
A. INSTALL ROOTBALL 1" ABOVE FINISHED GRADE

7 SHRUB PLANTING WITH BREATHER TUBE
1" = 1'-0"



SECTION ENLARGEMENT
SCALE: 1 1/2" = 1'-0"

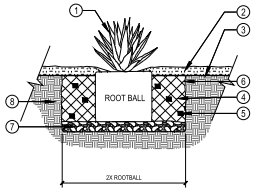


PLAN (TYPICAL)

ISOMETRIC VIEW

1. ROOT BARRIER PER SECTION 329453 'TREE ROOT BARRIERS' SPECIFICATIONS
2. TREE TRUNK
3. TREE BOX
4. MULCH LAYER PER MULCH PLAN
5. PAVING, CURB, OR HEADER PER CONSTRUCTION PLAN
6. ADJACENT PAVING PER CONSTRUCTION PLAN
7. FINISHED GRADE
8. PLANTING BACKFILL MIX PER SPECS

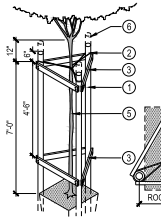
1 ROOT BARRIER
1/2" = 1'-0"



NOTES
A. INSTALL ROOTBALL 1" ABOVE FINISH GRADE
B. STAKE ALL POLE TYPE CACTUS PER DETAIL _/LP___
C. SOIL PREPARATION & AMENDMENTS PER SPECIFICATIONS SECTION 329113 SOIL PREPARATION, (SUCCULENT / CACTUS SOIL)
D. INSTALL 3" HEIGHT WATERING BASIN FORMED ON THE DOWNHILL SIDE OF SLOPE CONDITIONS

1. 1 OR 5 GALLON CONTAINER SUCCULENT OR CACTUS PER PLANTING SCHEDULE SHEET LP200
2. MULCH LAYER PER MULCH PLANS, KEEP 2"-3" FROM STEM
3. FINISH GRADE
4. BACKFILL MIX PER SECTION 329300 'PLANTS' & SECTION 329113 SOIL PREPARATION, (SUCCULENT / CACTUS SOIL)
5. FERTILIZER TABLETS PER SECTION 329300 'PLANTS' SPECIFICATIONS. INSTALL SO TABLETS DO NOT TOUCH ROOT BALL
6. SCARIFY SIDES OF PIT
7. 3" DEPTH LAYER OF 1" WASHED CLEAN LAVA ROCK IN BOTTOM PLANT PIT
8. NATIVE SOIL

8 SUCCULENT PLANTING
1" = 1'-0"

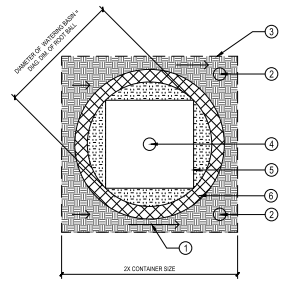


NOTES
A. BRACES AND TOPS OF ALL STAKES TO BE LEVEL WITH EACH OTHER.
B. SEE SECTION 329300 'PLANTS SPECIFICATIONS' FOR TREE STAKING METHODS & MATERIALS

1. WOOD TREE STAKES (3) PER SECTION 329300 'PLANTS SPECIFICATIONS'
2. INSTALL (3) TREE TIES ON EACH TREE PER SECTION 329300 'PLANTS SPECIFICATIONS'
3. 1"x 3" WOOD BRACE, (6) PER TREE, SECURE TO STAKES WITH (2) 2" GALVANIZED WOOD SCREWS AT EACH END. PRE-DRILL 1"x 3" WOOD BRACE TO PREVENT SPLITTING
4. TREE ROOT BALL
5. TREE TRUNK
6. CUT OFF STAKES TO CLEAR BRANCHES AND PROVIDE UNIFORM STAKE HEIGHT

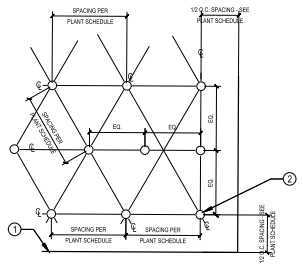
PLAN

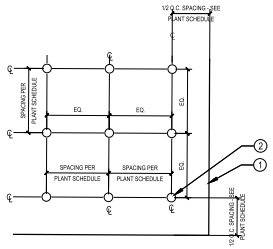
4 TREE STAKING TRIPLE (36" & 24" BOX)
3/8" = 1'-0"



1. BOTTOM OF TREE PIT SLOPES TO SUMP DRAINS
2. BREATHER TUBE / SUMP DRAIN, SEE DETAIL _/LP___
3. EDGE OF TREE PIT
4. TREE TRUNK
5. ROOT BALL
6. BERM AROUND WATERING BASIN PER TREE PLANTING DETAIL _/LP___

2 TREE PLANTING PLAN
3/4" = 1'-0"

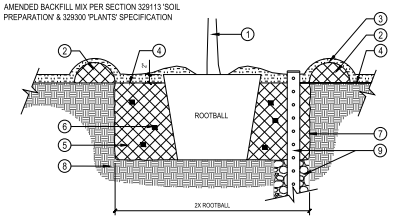




1. PLANTING EDGE (I.E., EDGE OF CURB / EDGE OF PAVING / FACE OF WALL / EDGE OF HEADER, ETC.)
2. CENTER OF PLANT MATERIAL

NOTES
A. PLANT SPACING SHALL BE ADJUSTED TO BEGIN AND END SPACING WITH A PLANT AT CORNERS / CHANGES IN DIRECTION OF PLANTING EDGE
B. ℄ = CENTERLINE

5 SHRUB AND GROUNDCOVER PLANTING LAYOUT
3/8" = 1'-0"



1. BOXED TREE PER PLANTING SCHEDULE SHEET LP200
2. 3" HEIGHT WATERING BASIN FORMED WITH BACKFILL SOIL MIX AROUND TREE PIT
3. MULCH LAYER PER MULCH PLANS, KEEP 6" AWAY FROM TRUNK
4. FINISH GRADE
5. AMENDED BACKFILL MIX PER SECTION 329113 'SOIL PREPARATION' & 329300 'PLANTS' SPECIFICATION
6. FERTILIZER TABLETS PER SECTION 329300 'PLANTS' SPECIFICATIONS, INSTALL SO TABLETS DO NOT TOUCH ROOTBALL
7. SCARIFY SIDES OF PIT
8. NATIVE SOIL
9. BREATHER TUBE WITH SUMP PER DETAIL _/LP___

3 TREE PLANTING
1" = 1'-0"

PROJECT DESIGN CONSULTANTS
A SDVOSB Company
Landscape Architecture | Civil Engineering | Land Development | Surveying
701 B Street, Suite 800 San Diego, CA 92101
619.235.6471 Tel 619.234.4349 Fax

GRANTVILLE TRANSIT CENTER IMPROVEMENTS
4510 ALVARADO CANYON ROAD
SAN DIEGO, CA 92120

MTS PO NO.: 4500049463
MTS WO NO.: WOA1949-AE-76
JACOBS PO NO.: 148037478
PROJECT NO.: JLXMTDGV
WBS CODE: C.PN.TPE.PDC

ISSUE	DATE	DESCRIPTION
1	3-14-23	MTS 1ST SUBMITTAL
2		
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11		

PROJECT: 4.383.30
DRAWN: CHECKED:

LANDSCAPE PLANTING DETAILS

LP 301

EXHIBIT B
(Cost Breakdown)

Price Proposal Detail Report

By Division

Version: 2.0
Approved
Proposal Value: $968,743.63
Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

Division		Install Total	NPP Total	Demo Total	Division Total
01	General Requirements	$228,296.64	$0.00	$0.00	$228,296.64
02	Existing Conditions	$85,414.48	$0.00	$0.00	$85,414.48
03	Concrete	$38,454.40	$0.00	$0.00	$38,454.40
04	Masonry	$0.00	$0.00	$11,283.43	$11,283.43
09	Finishes	$4,648.05	$0.00	$0.00	$4,648.05
26	Electrical	$22,947.06	$0.00	$2,452.48	$25,399.54
31	Earthwork	$114,003.10	$0.00	$642.51	$114,645.61
32	Exterior Improvements	$380,138.69	$0.00	$0.00	$380,138.69
34	Transportation	$52,882.62	$0.00	$0.00	$52,882.62
50	Custom Standards And Assemblies	$27,580.17	$0.00	$0.00	$27,580.17
Line Count: 149				**Proposal Total:**	**$968,743.63**

The Percentage of Non Pre-Priced on this Proposal: 0.0%

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
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Proposal Value: $968,743.63
Approved Date: August 2, 2023

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Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

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Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

01 General Requirements **$228,296.64**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
1	012216000004	Reimbursable Fees	Installation	4,510.00	$1.00	EA	1.0000	$4,510.00
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0000	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: CONCRETE PLANT
Prevailing Wage set up fee (1 per project) - $550
Prevailing Wage truck fee $220 per truck x 18 trucks = $3,960

Item Note: Reimbursable Fees will be paid to the contractor for eligible costs as directed by Owner. Insert the appropriate quantity to adjust the base cost to the actual Reimbursable Fee. If there are multiple Reimbursable Fees, list each one separately and add a comment in the "note" block to identify the Reimbursable Fee (e.g. sidewalk closure, road cut, various permits, extended warranty, expedited shipping costs, etc.). A copy of each receipt shall be submitted with the Price Proposal.

Total: $4,510.00

2	012220000059	Senior Surveyor (Party Chief)	Installation	40.00	$109.21	HR	1.0890	$4,757.19
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	HR	1.0890	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: office calculation for onsite survey

Item Note:

Total: $4,757.19

3	012220000060	Surveyor (Instrument person)	Installation	72.00	$104.57	HR	1.0890	$8,199.12
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	HR	1.0890	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: Survey Layout onsite as needed, 3 days per phase

Item Note:

Total: $8,199.12

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
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Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

4	012220000061	Surveyor (Rod person)	Installation	72.00	$103.65	HR	1.0890	$8,126.99
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	HR	1.0890	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: Survey Layout onsite as needed

Item Note:

Total:	**$8,126.99**

5	012223000289	3,000 LB Capacity, 78" Wide, Tracked Skid-Steer Loader With Full-Time Operator	Installation	4.00	$1,287.24	DAY	1.0890	$5,607.22
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	DAY	1.0890	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: Drilling foundations
Phase 1 - 3 days
Phase 2 - 1 day

Item Note:

Total:	**$5,607.22**

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
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Proposal Value: $968,743.63
Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

6	012223000290	3,000 LB Capacity, 78" Wide, Tracked Skid-Steer Loader With Full-Time Operator	Installation	6.00	$5,463.52	WK	1.0890	$35,698.64
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Modified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	WK	1.0890	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

Owner Comments: *V:1.2-6 weeks of sweeping is extremely excessive and equipment will already be on-site. There will not be a dedicated sweeping skid steer*

User Note: BMP's - Sweeping or vehicular travel ways during construction
12 Weeks total @ 50%

Item Note:

Total: $35,698.64

7	012223000290	For Equipment Without Operator, Deduct **MOD: 0039**	Installation	3.00	-$3,852.53	WK	1.0890	-$12,586.22
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Modified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: 1/2 time deduct for when in not use.

Item Note:

Total: -$12,586.22

8	012223000302	Broom Attachment For Skid-Steer Loaders	Installation	5.00	$258.37	WK	1.0890	$1,406.82
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	WK	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: BMP's - Sweeping or vehicular travel ways during construction
12 Weeks total @ 50%

Item Note:

Total: $1,406.82

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $968,743.63
Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

9	012223000307	Auger Attachment (Excludes Bits And Extensions) For Skid-Steer Loaders	Installation	4.00	$83.08	DAY	1.0890	$361.90
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	DAY	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: Drilling foundations
Phase 1 - 3 days
Phase 2 - 1 day

Item Note:

Total: $361.90

10	012223000905	20 To 25 Ton Lift, Truck Mounted Hydraulic Crane With Full-Time Operator	Installation	4.00	$1,470.31	DAY	1.0890	$6,404.67
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	DAY	1.0890	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: Crane used to erect light poles, camera pole and 2 VMS

Item Note:

Total: $6,404.67

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $968,743.63
Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

11	012223001333	18 CY Rear Dump Truck With Full-Time Truck Driver	Installation	36.00	$1,726.52	DAY	1.0890	$67,686.49
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Modified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	DAY	1.0890	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

Owner Comments: *V:1.2-you will not have a dedicated truck driver sitting in his truck for 36 days*

User Note: End Dumps for Import and Export
Demo Flatwork - 3 trucks x 4 days
Demo Seat walls - 1 truck x 2 days
Demo Existing Foundations - 1 truck x 2 days
Demo Existing Veneer - 1 truck x 3 days
Spoils Haul Off from Grading - 2 trucks x 4 days
Removal of Existing Landscape - 2 trucks x 4 days
Import new DG - 1 truck x 1 day

Item Note:

Total:	**$67,686.49**

12	012223001333	For Equipment Without Operator, Deduct **MOD: 0029**	Installation	0.00	-$573.42	DAY	1.0890	$0.00
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Modified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor No **Includes Equipment No** **Includes Materials No**

User Note: No deduct as a truck driver is no working as any other trade onsite, sitting waiting for truck to be loaded of driving truck.

Item Note:

Total:	**$0.00**

13	015626000143	Temporary 6' High Chain Link Fence Panels (Portable), Up To 6 Months	Installation	1,060.00	$6.93	LF	1.0890	$7,999.58
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	LF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Total:	**$7,999.58**

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $968,743.63
Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

14	015626000158	Temporary Chain Link Fence Panels (Portable) Sandbag	Installation	400.00	$5.70	BAG	1.0890	$2,482.92
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Modified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	BAG	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Owner Comments: *V:1.2-Will not be re-purchasing sandbags per phase*

User Note: 200 bags per phase, replaced 1 time over 12 weeks from deterioration

Item Note: Includes placement and removal.

							Total:	**$2,482.92**
15	015626000162	Relocate Temporary 6' High Chain Link Fence And Posts	Installation	1,060.00	$4.10	LF	1.0890	$4,732.79
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	LF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

							Total:	**$4,732.79**

** Includes Price Changes due to Construction Task Catalog update*

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

16	017113000004	First 25 Miles, Equipment Delivery, Pickup, Mobilization And Demobilization Using A Tractor Trailer With Up To 53' Bed	Installation	19.00	$715.07	EA	1.0890	$14,795.51
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Modified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-You will not de-mobilize then re-mobilize 3 times*

User Note: Equipment Mobilization

Demo: (Move off & On 6ea)
-Bobcat
-Loader
-Saw Cutter

Trenching & Grading: (Move off & On 6ea)
-Excavator
-Skid Steer
-Roller

Landscaper/Irr: (Move off & On 6ea)
-Trencher
-Skid Steer

Misc.
-Rough Terrain Fork Lift (1 Move on leave)

Total: 19

Item Note: Includes loading, tie-down of equipment, delivery of equipment, off loading on site, rigging, dismantling, loading for return and transporting away. For equipment such as bulldozers, motor scrapers, hydraulic excavators, gradalls, road graders, loader-backhoes, heavy duty construction loaders, tractors, pavers, rollers, bridge finishers, straight mast construction forklifts, telescoping boom rough terrain construction forklifts, telescoping and articulating boom man lifts with >40' boom lengths, etc.

							Total:	**$14,795.51**
17	017113000008	20 To 30 Ton Lift Move On/Off Cost, Hydraulic Crane	Installation	4.00	$598.68	EA	1.0890	$2,607.85
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Move on for Crane used to erect light poles, camera pole and 2 VMS

Item Note: Includes delivery and pickup.

							Total:	**$2,607.85**

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

18	017123160019	Survey Clear Area For Underground Utilities	Installation	0.50	$5,567.02	ACR	1.0890	$3,031.24
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	ACR	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Owner Comments: *V:1.2-1 acre excessive*

User Note: "KNOWN" Utility Mark out (CPL)

Item Note:

Total: $3,031.24

19	017136000005	>4 To 8 Hours On Site, Electromagnetic (SIR/GPR) Survey, Earth, Concrete, Masonry Or Asphalt	Installation	2.00	$1,951.92	EA	1.0890	$4,251.28
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: GPR/X-Ray existing prior to demo (especially over a raised)

Item Note:

Total: $4,251.28

20	017419000021	Rampless Concrete Washout Bin	Installation	3.00	$555.08	MO	1.0890	$1,813.45
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	MO	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: BMP's - Concrete Washout for duration of Project Est 12 weeks

Item Note: Includes delivery.

Total: $1,813.45

** Includes Price Changes due to Construction Task Catalog update*

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

21	017419000023	Interim Vacuum Service, Concrete Washout Bin	Installation	12.00	$358.02	EA	1.0890	$4,678.61
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: BMP's - Weekly washout service, Est 12 weeks of construction

Item Note: Includes vacuum and recycle excess clear liquid from the unfilled bin to allow additional space for washout material.

Total: $4,678.61

22	017419000036	General Refuse	Installation	1,067.00	$44.52	TON	1.0890	$51,730.59
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	TON	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: Landfill Fees for removed materials
-472 Tons of concrete
-365 Tons of Misc. dirt
-150 Tons of greens
-80 Tons of Misc.
Total: 1,067 Tons

Item Note:

Total: $51,730.59

02 Existing Conditions **$85,414.48**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
23	023213000020	Excavation For Test Pit, Light Soil, Hand Excavation	Installation	30.00	$165.66	CY	1.0890	$5,412.11
Accepted		***History: 1.1 Added, 1.2 Clarification Requested, 1.3 Clarified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-What requires this volume of potholes?*

Contractor Comments: *V:1.3-Potholing as needed after mark to establish demo control and depth with existing utility and structures*

User Note: Pot Holing, Est

Item Note:

Total: $5,412.11

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

24	024113130011	>3" To 6" By Machine, Break-up And Remove Welded Wire Reinforced Concrete Paving		Installation	900.00	$22.17	SY	1.0890	$21,728.82
Accepted		***History: 1.1 Added, 1.2 Clarification Requested, 1.3 Clarified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$0.00	SY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-Justify 900 sy of hand demo*

Contractor Comments: *V:1.3-Demo of existing*

User Note: Demo existing sidewalk

Item Note:

Total: $21,728.82

25	024113130011	For Additional Cost Of Hand Held Equipment Usage (Around Existing Structures And Obstructions), Add	**MOD: 0012**	Installation	900.00	$6.65	SY	1.0890	$6,517.67
Accepted		***History: 1.1 Added, 1.2 Clarification Requested, 1.3 Clarified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***							

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total: $6,517.67

26	024113130018	>19" To 24" By Machine, Break-up And Remove Rod Reinforced Concrete Paving		Installation	31.00	$88.32	SY	1.0890	$2,981.59
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$0.00	SY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Demo existing seat wall

Item Note:

Total: $2,981.59

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
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Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

27	024113130018	>19" To 24" By Machine, Break-up And Remove Rod Reinforced Concrete Paving	Installation	62.00	$88.32	SY	1.0890	$5,963.19
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Demo misc. foundations

Item Note:

Total:	**$5,963.19**

28	024116130018	By Machine, Wood Frame Construction Building Demolition	Installation	150.00	$28.00	CCF	1.0890	$4,573.80
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CCF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Demo existing ticket booth

Item Note:

Total:	**$4,573.80**

29	024116130018	For Up To 500, Add **MOD: 0004**	Installation	150.00	$8.40	CCF	1.0890	$1,372.14
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total:	**$1,372.14**

** Includes Price Changes due to Construction Task Catalog update*

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

30	024116130020	Sorting Of Material Debris For Recycling Prior To Hauling Off		Installation	1,418.00	$8.19	CCF	1.0890	$12,647.01
Accepted		***History: 1.1 Added, 1.2 Removed, 1.3 Retained, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$0.00	CCF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-Item unnecessary*

Contractor Comments: *V:1.3-We will need to sort debris as demo'd and load out similar for removal.*

User Note: Recycling Requirements; Sorting of all demo'd/Removed materials
534CY = 14,418CF

Item Note:

Total: $12,647.01

31	024116130020	For >1,000 To 2,000, Add	**MOD: 0006**	Installation	1,418.00	$0.82	CCF	1.0890	$1,266.25
Accepted		***History: 1.1 Added, 1.2 Removed, 1.3 Retained, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***							

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

Total: $1,266.25

32	024116130061	Concrete Footing For Fence, Gate Or Playground Equipment Post, Etc. Demolition		Installation	616.00	$12.82	CF	1.0890	$8,599.96
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$0.00	CF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Misc. Footing Demo
Seatwall - 237SFx18" = 356CF
Light Poles - 16SFx5' x3 = 240CF
Ticket Stations - 4SFx12" x2 = 8CF
Information Kiosk - 12SFx12" = 12CF
Total: 616CF

Item Note: Includes excavation.

Total: $8,599.96

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

33	024119130062	Welded Wire Reinforced Concrete Slab Up To 4" Depth, Saw Cut	Installation	1,500.00	$2.99	LF	1.0890	$4,884.17
Accepted		***History: 1.1 Added, 1.2 Clarification Requested, 1.3 Clarified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	LF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Owner Comments: *V:1.2-Justify modifier. Saw cutting will not be 10" thick.*

Contractor Comments: *V:1.3-Saw cutting existing concrete before demo*

							Total:	**$4,884.17**
34	024119130062	For Each Additional Pass (Depth To 3"), Add **MOD: 0031**	Installation	3,000.00	$1.14	LF	1.0890	$3,724.38
Accepted		***History: 1.1 Added, 1.2 Clarification Requested, 1.3 Clarified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

							Total:	**$3,724.38**
35	024119130284	1" Diameter Drilling In Concrete Per Inch Of Depth	Installation	1,800.00	$2.93	IN	1.0890	$5,743.39
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	IN	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Estimate 150 Dowels at 12"

Item Note:

							Total:	**$5,743.39**
03 Concrete								**$38,454.40**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

36	030513000021	Premium Color (See Davis Colors Color Card), Concrete Admixture	Installation	72.00	$77.33	CY	1.0890	$6,063.29
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: Colors per Plans

Item Note:

Total: $6,063.29

37	031519000038	3/4" Diameter x 12" Length, Plain Steel, L-Type Cast In Place Anchor Bolt	Installation	32.00	$12.37	EA	1.0890	$431.07
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Anchor bolts for light poles, ticket station and VMS signs

Item Note:

Total: $431.07

38	031519000038	For Galvanized, Add **MOD: 0142**	Installation	32.00	$2.27	EA	1.0890	$79.10
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

Total: $79.10

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

39	032111000124	#4, Grade 50, Slab On Grade, Steel Reinforcement Bar	Installation	8,650.00	$0.83	LF	1.0890	$7,818.48
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	LF	1.0890	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: Rebar for new Concrete
sidewalk 7300 lf
seal wall 550 lf
seat wall footing 550 lf
foundation 250 lf

Item Note:

							Total:	**$7,818.48**
40	032111000243	5/8" Diameter x 24" Long, Deformed Straight Dowel	Installation	150.00	$3.17	EA	1.0890	$517.82
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Estimated 150 Dowels

Item Note:

							Total:	**$517.82**
41	033113000027	Direct Chute, Place 3,000 PSI Concrete Spread Footings	Installation	20.00	$203.47	CY	1.0890	$4,431.58
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: New seat wall footing

Item Note:

							Total:	**$4,431.58**

** Includes Price Changes due to Construction Task Catalog update*

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Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

42	033113000074	15" Thick, By Direct Chute, Place 3,000 PSI Concrete Walls	Installation	30.00	$192.11	CY	1.0890	$6,276.23
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: New seat wall

Item Note:

Total: $6,276.23

43	033113000099	6" Equipment Pad With Rebar	Installation	24.00	$23.45	SF	1.0890	$612.89
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: New ticket station

Item Note:

Total: $612.89

44	033716000010	35 CY/HR, 66 HP Trailer Mounted Concrete Pump	Installation	80.00	$97.56	HR	1.0890	$8,499.43
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	HR	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Concrete Pump, Estimated

Item Note: Includes hoses

Total: $8,499.43

45	036423000002	Pressure Injected Epoxy Grout	Installation	3.00	$1,140.04	CF	1.0890	$3,724.51
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: For the New Dowels, 150 ea

Item Note:

Total: $3,724.51

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Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

04 Masonry **$11,283.43**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
46	044316000020	4" Ashlar Veneer Limestone, Random Sizes	Installation	0.00	$51.44	SF	1.0890	$0.00
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	516.000000	$20.08	SF	1.0890	$11,283.43

Includes Labor No **Includes Equipment No** **Includes Materials No**

User Note: Removal of Existing Veneer from Wall

Item Note:

Total: **$11,283.43**

09 Finishes **$4,648.05**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $968,743.63
Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

47	092423000004	Scratch/Finish, Two Coat Troweled Stucco		Installation	516.00	$5.17	SF	1.0890	$2,905.15
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$1.23	SF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: New Stucco

Item Note: Excludes lath and felt. Interior or exterior, one side.

								Total:	**$2,905.15**
48	092423000004	For Smooth Float Finish, Add	**MOD: 0034**	Installation	0.00	$1.24	SF	1.0890	$0.00
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***							

Includes Labor No **Includes Equipment No** **Includes Materials No**

								Total:	**$0.00**
49	092423000004	For >100 To 500, Add	**MOD: 0037**	Installation	430.00	$1.13	SF	1.0890	$529.15
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***							

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

								Total:	**$529.15**
50	099113000086	Paint Exterior Stucco Wall Surfaces 1 Coat Primer, Brush Work		Installation	516.00	$1.03	SF	1.0890	$578.78
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$0.00	SF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

								Total:	**$578.78**

** Includes Price Changes due to Construction Task Catalog update*

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

51	099113000087	Paint Exterior Stucco Wall Surfaces 1 Coat Paint, Brush Work	Installation	516.00	$1.13	SF	1.0890	$634.97
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Total:	**$634.97**

26 Electrical **$25,399.54**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
52	260120910002	Lock Out/Tag Out Local Disconnect	Installation	10.00	$19.77	EA	1.0890	$215.30
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total:	**$215.30**

53	260120910007	Lighting, Existing Circuit Tracing Per Circuit	Installation	10.00	$16.45	EA	1.0890	$179.14
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: 2 light poles, booth, 2 ticket machine, 2 tap and go,

Item Note:

Total:	**$179.14**

54	260519160004	Pull String Installed To Remain In Place, In New Conduits	Installation	600.00	$0.13	LF	1.0890	$84.94
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	LF	1.0890	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

Total:	**$84.94**

** Includes Price Changes due to Construction Task Catalog update*

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

55	260519160018	#12 AWG, Type XHHW, 600 Volt, Copper, Single Solid Cable, Installed In Conduit	Installation	3.00	$749.18	MLF	1.0890	$2,447.57
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$205.85	MLF	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$2,447.57**
56	260533131440	3/4" Schedule 40 Polyvinyl Chloride (PVC) Conduit With Coupled End	Installation	850.00	$3.50	LF	1.0890	$3,239.78
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	250.000000	$1.30	LF	1.0890	$353.93
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$3,593.71**
57	260533131441	1" Schedule 40 Polyvinyl Chloride (PVC) Conduit With Coupled End	Installation	750.00	$4.15	LF	1.0890	$3,389.51
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	250.000000	$1.52	LF	1.0890	$413.82
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$3,803.33**
58	260533131453	3/4" Schedule 40 Polyvinyl Chloride (PVC) Conduit 90 Degree Elbow	Installation	6.00	$16.87	EA	1.0890	$110.23
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$6.38	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$110.23**

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

59	260533131454	1" Schedule 40 Polyvinyl Chloride (PVC) Conduit 90 Degree Elbow	Installation	6.00	$19.56	EA	1.0890	$127.81
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$7.24	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$127.81**
60	260533131466	3/4" Schedule 40 Polyvinyl Chloride (PVC) Conduit 45 Degree Elbow	Installation	6.00	$16.82	EA	1.0890	$109.90
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$6.38	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$109.90**
61	260533131467	1" Schedule 40 Polyvinyl Chloride (PVC) Conduit 45 Degree Elbow	Installation	6.00	$19.49	EA	1.0890	$127.35
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$7.24	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$127.35**
62	265568000004	25' Steel Tapered Pole With Precast Concrete Foundation Sleeve	Installation	3.00	$1,031.37	EA	1.0890	$3,369.49
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	3.000000	$515.68	EA	1.0890	$1,684.73
		Includes Labor Yes Includes Equipment Yes Includes Materials No						
		Owner Comments: *V:1.2-Should not include material costs for re-using material*						
		User Note: Reuse 2 for lights ad 1 for Camera						
		Item Note:						
							Total:	**$5,054.22**

** Includes Price Changes due to Construction Task Catalog update*

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

63	265619000159	40 LEDs, 89 Watt, Pole Mount, LED Architectural Area Fixture (Lithonia DSXO LED)	Installation	4.00	$2,191.47	EA	1.0890	$9,546.04
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$80.01	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: new lights

Item Note:

Total:	**$9,546.04**

31 Earthwork **$114,645.61**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
64	310516000026	Graded Aggregate Base Fill (3/4" Minus) Class II Base	Installation	5.00	$50.37	CY	1.0890	$274.26
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: DG in between steel header

Item Note:

Total:	**$274.26**

65	310516000026	For Up To 8, Add **MOD: 0053**	Installation	5.00	$10.07	CY	1.0890	$54.83
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Total:	**$54.83**

** Includes Price Changes due to Construction Task Catalog update*

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Job Order: MTSJOC347-05
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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

66	311100000017	Hand Loading Of Cleared And Grubbed Material	Installation	230.00	$33.89	CY	1.0890	$8,488.43
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Estimated:
-150 Tons of greens
-80 Tons of Misc.
Total: 230 Tons

Item Note:

Total: $8,488.43

67	311313000004	>12" To 24" D.B.H. (Diameter At Breast Height) Tree Removal	Installation	4.00	$1,000.49	EA	1.0890	$4,358.13
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Demo existing

Item Note: Includes cutting up tree, chipping and loading.

Total: $4,358.13

68	311313000014	>12" To 24" Diameter Stump Removal	Installation	4.00	$204.74	EA	1.0890	$891.85
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Demo existing

Item Note: Includes excavation necessary to remove stump and loading.

Total: $891.85

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Job Order Name: Grantville Hardscape and Landscape Improvements
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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

69	311313000052	Removal Of 18" To 24" Shrub, Deciduous	Installation	40.00	$30.13	EA	1.0890	$1,312.46
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Demo existing

Item Note:

Total:	**$1,312.46**

70	312316130003	Over 12" Wide, Excavation for Trenching by Machine in Soil	Installation	45.00	$5.73	CY	1.0890	$280.80
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: 600 lf electrical trench

Item Note:

Total:	**$280.80**

71	312316130003	For >20 To 50, Add **MOD: 0061**	Installation	30.00	$2.87	CY	1.0890	$93.76
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total:	**$93.76**

72	312316130007	Excavation For Trenching By Hand In Soil	Installation	259.00	$111.82	CY	1.0890	$31,538.94
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: 3500 lf irrigation trenching

Item Note: Includes stockpiling excess materials and trimming sides and bottom of trench.

Total:	**$31,538.94**

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Contractor: ABC General Inc.
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Contract Name: JOC CIVIL CONSTRUCTION SERVICES

73	312316130011	Backfilling or Placing Subbase for Trenches with Imported or Stockpiled Materials by Hand	Installation	259.00	$31.06	CY	1.0890	$8,760.50
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials No						

User Note: 190 cy irrigation trench

Item Note:

							Total:	**$8,760.50**
74	312316130011	Backfilling or Placing Subbase for Trenches with Imported or Stockpiled Materials by Hand	Installation	45.00	$31.06	CY	1.0890	$1,522.10
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials No						

User Note: 30 cy electrical

Item Note:

							Total:	**$1,522.10**
75	312316130014	Compaction of Fill or Subbase for Trenches by Hand	Installation	259.00	$35.04	CY	1.0890	$9,883.07
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials No						
							Total:	**$9,883.07**
76	312316130014	Compaction of Fill or Subbase for Trenches by Hand	Installation	45.00	$35.04	CY	1.0890	$1,717.14
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials No						
							Total:	**$1,717.14**

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Job Order Name: Grantville Hardscape and Landscape Improvements
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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

77	312316360003	Excavation For Building Foundations And Other Structures By Skid-Steer Loader In Soil	Installation	137.00	$7.74	CY	1.0890	$1,154.75
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: landscape 3" 10500 sf = 97 cy x 1.42 swell = 137

Item Note:

Total: $1,154.75

78	312316360003	For >50 To 250, Add **MOD: 0016**	Installation	137.00	$3.09	CY	1.0890	$461.01
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total: $461.01

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

79	312316360003	Excavation For Building Foundations And Other Structures By Skid-Steer Loader In Soil	Installation	147.00	$7.74	CY	1.0890	$1,239.04
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Excavation per plans
-sidewalk 5,100SF
-vehicle parking 450SF
103CY x 1.42 swell =147CY

Item Note:

Total: $1,239.04

80	312316360003	For >50 To 250, Add **MOD: 0016**	Installation	100.00	$3.09	CY	1.0890	$336.50
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total: $336.50

81	312316360009	Excavation For Building Foundations And Other Structures By Hand in Soil	Installation	85.00	$111.82	CY	1.0890	$10,350.62
Accepted		***History: 1.1 Added, 1.2 Clarification Requested, 1.3 Clarified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Owner Comments: *V:1.2-Please provide justification for 10K worth of "misc. hand work"*

Contractor Comments: *V:1.3-Hand digging as needed as there are many 'existing" items, edges etc.*

User Note: Misc. Hand Work

Item Note:

Total: $10,350.62

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

82	312316360019	Backfilling Around Building Foundations And Other Structures By Hand		Installation	5.00	$53.25	CY	1.0890	$289.95
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$0.00	CY	1.0890	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**							

User Note: DG

Item Note:

								Total:	**$289.95**
83	312316360021	Compaction Of Fill Or Subbase For Building Foundations and Other Structures by Vibratory Plate, Air Tamper, Etcetera		Installation	195.00	$10.25	CY	1.0890	$2,176.64
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$0.00	CY	1.0890	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**							

User Note: landscape 3" 10500 sf x 6"subgrade 195 cy

Item Note:

								Total:	**$2,176.64**
84	312316360021	For >50 To 250, Add	**MOD: 0024**	Installation	195.00	$4.10	CY	1.0890	$870.66
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***							
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**							

Total:	**$870.66**

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Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

85	312316360021	Compaction Of Fill Or Subbase For Building Foundations and Other Structures by Vibratory Plate, Air Tamper, Etcetera	Installation	103.00	$10.25	CY	1.0890	$1,149.71
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: For new Subbase
-sidewalk 5,100SF
-vehicle parking 450SF
@6" =103CY

Item Note:

Total: $1,149.71

86	312316360021	For >50 To 250, Add **MOD: 0024**	Installation	103.00	$4.10	CY	1.0890	$459.88
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total: $459.88

87	312316360024	Rough Grading For Building Foundations And Other Structures by Machine	Installation	1,167.00	$1.01	SY	1.0890	$1,283.57
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: landscape 3" 10500 sf

Item Note:

Total: $1,283.57

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $968,743.63
Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

88	312316360024	Rough Grading For Building Foundations And Other Structures by Machine	Installation	617.00	$1.01	SY	1.0890	$678.63
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: For new Subbase
-sidewalk 5,100SF
-vehicle parking 450SF

Item Note:

Total:	**$678.63**

89	312316360025	Finish Grading For Building Foundations And Other Structures by Machine	Installation	1,784.00	$1.62	SY	1.0890	$3,147.30
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: landscape 3" 10500 sf

Item Note:

Total:	**$3,147.30**

** Includes Price Changes due to Construction Task Catalog update*

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

90	312316360028	Load Excess Material For Removal From Excavation For Building Foundations and Other Structures by Machine	Installation	137.00	$4.79	CY	1.0890	$714.63
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: landscape 3" 10500 sf = 97 cy x 1.42 swell = 137

Item Note:

							Total:	**$714.63**
91	312316360028	For >50 To 250, Add **MOD: 0028**	Installation	137.00	$1.92	CY	1.0890	$286.45
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

							Total:	**$286.45**

** Includes Price Changes due to Construction Task Catalog update*

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

92	312316360028	Load Excess Material For Removal From Excavation For Building Foundations and Other Structures by Machine		Installation	534.00	$4.79	CY	1.0890	$2,785.51
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Loading out removed materials
-472 Tons of concrete
-365 Tons of Misc. dirt
-150 Tons of greens
-80 Tons of Misc.
Total: 1,067 Tons

Item Note:

Total:	**$2,785.51**

93	312316360028	For >50 To 250, Add	**MOD: 0028**	Installation	100.00	$1.92	CY	1.0890	$209.09
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***							

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total:	**$209.09**

94	312316360032	Spread Excess Or Imported Material On Site By Hand		Installation	5.00	$45.25	CY	1.0890	$246.39
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: DG 5 cy

Item Note:

Total:	**$246.39**

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

95	312316360032	Spread Excess Or Imported Material On Site By Hand	Installation	190.00	$45.25	CY	1.0890	$9,362.68
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: landscape trench 190 cy

Item Note:

Total: $9,362.68

96	312316360032	Spread Excess Or Imported Material On Site By Hand	Installation	45.00	$45.25	CY	1.0890	$2,217.48
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: elec trench 30 cy

Item Note:

Total: $2,217.48

97	312413000019	Finish Grade For Curb	Installation	25.00	$0.98	LF	1.0890	$26.68
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	LF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total: $26.68

98	312514230014	50 LB Capacity Gravel Bag With Gravel	Installation	250.00	$8.40	BAG	1.0890	$2,286.90
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Modified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	250.000000	$2.36	BAG	1.0890	$642.51

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Owner Comments: *V:1.2-Gravel bags will not be purchased 3 times*

User Note: BMP's - Estimated 250/phase

Item Note:

Total: $2,929.41

** Includes Price Changes due to Construction Task Catalog update*

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Job Order: MTSJOC347-05
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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

99	312514260028	8" Diameter Fiber Roll, (Sterile Straw Filled Rolls, With Natural Fiber Wrapping), CALTRANS Type 1	Installation	500.00	$5.68	LF	1.0890	$3,092.76
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Modified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	500.000000	$0.00	LF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Owner Comments: *V:1.2-Waddle will not be purchased 3 times*

User Note: BMP's As needed, Est 500lf/phase

Item Note:

Total: $3,092.76

32 Exterior Improvements **$380,138.69**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
100	321613130003	6" x 12" Cast In Place Concrete Curb - Radius (Type A1-6)	Installation	25.00	$18.68	LF	1.0890	$508.56
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$9.69	LF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: rolled curb

Item Note:

Total: $508.56

101	321613130003	For >20 To 50, Add **MOD: 0078**	Installation	25.00	$6.54	LF	1.0890	$178.05
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Total: $178.05

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Price Proposal Detail Report

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

102	321623000002	4" Cast In Place Concrete Sidewalk	Installation	5,100.00	$7.61	SF	1.0890	$42,265.18
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: New PCC Phased

Item Note:

Total:	**$42,265.18**

103	321623000004	6" Cast In Place Concrete Sidewalk	Installation	465.00	$8.94	SF	1.0890	$4,527.08
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: New vehicle parking

Item Note:

Total:	**$4,527.08**

104	321623000004	For >100 To 500, Add **MOD: 0094**	Installation	465.00	$1.04	SF	1.0890	$526.64
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

Total:	**$526.64**

105	328423000005	6" Pop-Up Height, Spray Sprinkler Head (Rain Bird® 1806P)	Installation	4.00	$30.32	EA	1.0890	$132.07
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$10.68	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Total:	**$132.07**

** Includes Price Changes due to Construction Task Catalog update*

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

106	328423000009	12" Pop-Up Height, Spray Sprinkler Head With Check Valve (Rain Bird® 1812-SAM)	Installation	104.00	$36.05	EA	1.0890	$4,082.88
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$10.68	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$4,082.88**
107	328423000017	Pressure Compensating Bubbler With Screen, 1/2" NPT (Rain Bird® 1400)	Installation	698.00	$26.79	EA	1.0890	$20,363.67
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$10.68	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$20,363.67**
108	328423000098	2" Glass-Filled Nylon Remote Control Valve With Flow Control And Captured Solenoid (Rain Bird® PEB) And Box (Carson 1419-12)	Installation	15.00	$452.96	EA	1.0890	$7,399.10
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$111.29	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$7,399.10**
109	328423000109	21.8" x 16.6" x 12" Depth, Rectangular Irrigation Valve Box With Lid (Rain Bird® VB-STD)	Installation	25.00	$179.89	EA	1.0890	$4,897.51
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$61.60	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$4,897.51**

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

110	328423000179	24-Station, Four Program, Indoor/Outdoor Mount, Modular Irrigation Controller (Rain Bird® ESP-LXME Series)	Installation	1.00	$914.11	EA	1.0890	$995.47
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$59.64	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$995.47**
111	328423000205	Wireless Rain Sensor And Controller Interface For Irrigation Controllers (Rain Bird® WR2RC)	Installation	1.00	$208.38	EA	1.0890	$226.93
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$22.37	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$226.93**
112	328423000252	2" Brass Tee Mounted Flow Meter (Calsense FM 2B)	Installation	1.00	$1,264.88	EA	1.0890	$1,377.45
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$74.56	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$1,377.45**
113	328423000287	15 Amp, Circuit Breaker With Enclosure For Irrigation Controllers (Calsense SSE-BREAKER)	Installation	1.00	$322.35	EA	1.0890	$351.04
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$55.91	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$351.04**

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

114	328423000292	Heavy-Duty Stainless Steel Enclosure For Irrigation Controllers (Calsense SSE-R)	Installation	1.00	$3,368.15	EA	1.0890	$3,667.92
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$27.96	EA	1.0890	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**						
							Total:	**$3,667.92**
115	328423000450	3/4" Threaded Reduced Pressure Zone Assembly With Quarter Turn Shut-offs (Watts 009M3 QT series)	Installation	9.00	$546.17	EA	1.0890	$5,353.01
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$36.74	EA	1.0890	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**						
							Total:	**$5,353.01**
116	328423000459	1", 2-Piece Brass Body, Quick-Coupling Irrigation Valve (Rain Bird® 44LRC)	Installation	6.00	$163.49	EA	1.0890	$1,068.24
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$32.05	EA	1.0890	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**						
							Total:	**$1,068.24**
117	328423000496	2" Brass Threaded Gate Valve And Box (Carson 910-10)	Installation	7.00	$394.62	EA	1.0890	$3,008.19
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$59.80	EA	1.0890	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**						
							Total:	**$3,008.19**

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Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

118	328423000502	3/4" Male NPT, 12" Length, Polyvinyl Chloride (PVC) Irrigation Swing Joint (Rain Bird® TSJ12075)	Installation	805.00	$44.05	EA	1.0890	$38,616.21
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$17.72	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$38,616.21**
119	328423000515	1 - Single Conductor, 12 AWG, Irrigation Control Wire, Buried In Trench	Installation	1.00	$518.13	MLF	1.0890	$564.24
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$13.35	MLF	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$564.24**
120	328423000517	1 - Single Conductor, 10 AWG, Irrigation Control Wire, Buried In Trench	Installation	1.00	$664.37	MLF	1.0890	$723.50
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$13.35	MLF	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$723.50**
121	328423000534	3/4" Schedule 40 Polyvinyl Chloride (PVC) Pipe With Fittings, On Grade With Pipe Stabilizers	Installation	3,500.00	$3.06	LF	1.0890	$11,663.19
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$1.12	LF	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$11,663.19**

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Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

122	328423000537	2" Schedule 40 Polyvinyl Chloride (PVC) Pipe With Fittings, On Grade With Pipe Stabilizers	Installation	731.00	$6.21	LF	1.0890	$4,943.53
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$2.12	LF	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$4,943.53**
123	328423000679	Thrust Block For 1-1/2" Pipe Size And Smaller	Installation	155.00	$30.11	EA	1.0890	$5,082.42
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Modified, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$5,082.42**
124	328423000680	Thrust Block For 2" Pipe	Installation	25.00	$51.82	EA	1.0890	$1,410.80
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$1,410.80**
125	329113160003	Hardwood Bark Nugget Mulch	Installation	97.00	$104.46	CY	1.0890	$11,034.42
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$11,034.42**

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $968,743.63
Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

126	329113260006	Prepare And Mix Plant Bed By Hand, 9" To 13" Deep	Installation	10,500.00	$4.95	SF	1.0890	$56,600.78
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SF	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials No						
							Total:	**$56,600.78**
127	329113260013	Excavate Planting Pit By Hand, Sandy Soil	Installation	75.00	$74.56	CY	1.0890	$6,089.69
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials No						
							Total:	**$6,089.69**
128	329113260018	Backfill Planting Pit By Hand With Contractor Furnished Planting Mix	Installation	75.00	$99.86	CY	1.0890	$8,156.07
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$8,156.07**
129	329113260023	4 Oz/SY Woven, Polypropylene Weed Barrier	Installation	1,167.00	$2.04	SY	1.0890	$2,592.56
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SY	1.0890	$0.00
		Includes Labor Yes Includes Equipment No Includes Materials Yes						
							Total:	**$2,592.56**

** Includes Price Changes due to Construction Task Catalog update*

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By Division
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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

130	329113360003	Rake Topsoil By Hand	Installation	10.00	$59.64	MSF	1.0890	$649.48
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	MSF	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials No						
							Total:	**$649.48**
131	329119130012	Furnish And Place Amended Topsoil	Installation	75.00	$35.84	CY	1.0890	$2,927.23
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						
							Total:	**$2,927.23**
132	329119130017	Up To 5,000 SF Scarify >8" To 12" Soil With Machine	Installation	10.00	$80.37	MSF	1.0890	$875.23
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	MSF	1.0890	$0.00
		Includes Labor Yes Includes Equipment Yes Includes Materials No						
							Total:	**$875.23**
133	329313000012	1 Gallon, Koeleria glauca - Blue Hair Grass	Installation	1,620.00	$18.99	EA	1.0890	$33,501.78
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor No Includes Equipment No Includes Materials Yes						
		User Note: autumin moor grass						
		Item Note:						
							Total:	**$33,501.78**

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

134	329313000019	5 Gallon, Miscanthus sinensis 'Zebrinus' - Zebra Grass	Installation	50.00	$45.02	EA	1.0890	$2,451.34
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor No Includes Equipment No Includes Materials Yes						

User Note: shorty mat rush

Item Note:

Total:	**$2,451.34**

135	329313000035	15 Gallon Agave Attenuata - Century Plant	Installation	250.00	$63.38	EA	1.0890	$17,255.21
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor No Includes Equipment No Includes Materials Yes						

User Note: shaw agave

Item Note:

Total:	**$17,255.21**

136	329313000048	5 Gallon Trachelospermum Jasminoides - Star Jasmine	Installation	35.00	$13.46	EA	1.0890	$513.03
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor No Includes Equipment No Includes Materials Yes						

Total:	**$513.03**

137	329313000050	5 Gallon Westringia Fruticosa - Coast Rosemary	Installation	200.00	$13.11	EA	1.0890	$2,855.36
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor No Includes Equipment No Includes Materials Yes						

Total:	**$2,855.36**

** Includes Price Changes due to Construction Task Catalog update*

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Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

138	329313000207	15 Gallon Agave americana - Century Plant	Installation	120.00	$60.60	EA	1.0890	$7,919.21
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: dwarf hawthorn

Item Note:

Total:	**$7,919.21**

139	329333000389	5 Gallon Ligustrum lucidum - Glossy Privet	Installation	32.00	$31.11	EA	1.0890	$1,084.12
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: torch aloe

Item Note:

Total:	**$1,084.12**

140	329333000746	5 Gallon Border Forsythia - Goldenbells	Installation	85.00	$44.17	EA	1.0890	$4,088.60
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: aloe vera

Item Note:

Total:	**$4,088.60**

141	329343000949	15 Gallon Phoenix roebelenii - Pygmy Date Palm	Installation	35.00	$72.97	EA	1.0890	$2,781.25
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: sago palm

Item Note:

Total:	**$2,781.25**

** Includes Price Changes due to Construction Task Catalog update*

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Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

142	329383000034	1 Gallon Container Shrub Planting	Installation	1,620.00	$15.85	EA	1.0890	$27,962.25
Accepted		***History:***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**						

User Note: Planting of the 1,620 1-gals
Item Note:

							Total:	**$27,962.25**
143	329383000038	5 Gallon Container Shrub Planting	Installation	402.00	$46.60	EA	1.0890	$20,400.45
Accepted		***History:***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**						

User Note: Planting of the 402 5-gals
Item Note:

							Total:	**$20,400.45**
144	329383000041	15 Gallon Container Shrub Planting	Installation	45.00	$115.56	EA	1.0890	$5,663.02
Accepted		***History:***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**						

User Note: Planting of the 405 15-gals
Item Note:

							Total:	**$5,663.02**
145	329449000005	Tree Guying 3" To 4" Caliper, 3 Stakes, Guy Wire And Wrap	Installation	12.00	$61.58	EA	1.0890	$804.73
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**						

User Note: 4 trees x 3 guying post per trees
Item Note:

							Total:	**$804.73**
34 Transportation								**$52,882.62**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total

** Includes Price Changes due to Construction Task Catalog update*

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Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

146	344113000200	Pole Base Foundation for Type 15 and 21 Poles	Installation	13.00	$3,735.44	EA	1.0890	$52,882.62
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Modified, 1.4 Modified, 1.5 Modified, 2.0 Accepted***	**Demo:**	0.000000	$1.15	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Owner Comments: *V:1.2-There is not a stand alone camera pole*
V:1.4-should only be 4, there is not an independent camera pole

User Note: 2 light pole foundation
2 VMS pole foundation
10 Shelter

Item Note:

Total: $52,882.62

50 Custom Standards And Assemblies **$27,580.17**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
147	508982120002	CALTRANS 120116 TYPE II BARRICADE	Installation	720.00	$27.42	EA	1.0890	$21,499.47
Accepted		***History: 1.1 Added, 1.2 Clarification Requested, 1.3 Clarified, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Owner Comments: *V:1.2-Justify, you will not be purchasing new barricades every day.*

Contractor Comments: *V:1.3-TC*
12 set up every day for 12 weeks (Estimated construction duration)

User Note: 12 set up every day for 12 weeks

Item Note:

Total: $21,499.47

148	508982120012	CALTRANS 120182 PORTABLE DELINEATOR	Installation	300.00	$15.70	EA	1.0890	$5,129.19
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: 50 set up every day for 12 weeks
(12 weeks x 5 days 5 50/day = 3000)

Item Note:

Total: $5,129.19

** Includes Price Changes due to Construction Task Catalog update*

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Proposal Value: $968,743.63
Approved Date: August 2, 2023

Job Order: MTSJOC347-05
Job Order Name: Grantville Hardscape and Landscape Improvements
Location: Grantville Station 4510 Alvarado Canyon Rd San Diego, CA 92120

Contractor: ABC General Inc.
Contract Number: PWG347.0-22
Contract Name: JOC CIVIL CONSTRUCTION SERVICES

149	508983200035	CALTRANS 206005 EDGING	Installation	75.00	$11.65	LF	1.0890	$951.51
Accepted		*History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 1.4 Accepted, 1.5 Accepted, 2.0 Accepted*	**Demo:**	0.000000	$0.00	LF	1.0890	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Total:	**$951.51**
Proposal Total:	**$968,743.63**
The Percentage of Non Pre-Priced on this Proposal:	**0.0%**

Div

** Includes Price Changes due to Construction Task Catalog update*

EXHIBIT C
(Subcontractor Listing)

San Diego Metropolitan Transit System
1255 Imperial Ave
San Diego, CA 92101

Subcontractor Report

Date: 8/15/2023

Job Order Contracting

Contract #: PWG347.0-22
Job Order #: MTSJOC347-05
Job Order Title: Grantville Hardscape and Landscape Improvements
Job Order Value: $968,743.63
Location: Grantville Station
Contractor: ABC General Inc.
Subcontractors: ELECTRO SPECIALTY SYSTEMS (ESS)
Harborside Construction Inc
Koch General Engineering
the doctor of electricity
Titan Steel

Subcontractor Name	License Number	Describe Nature of Work (Trade)	Certifications	Subcontractor Total	%
ELECTRO SPECIALTY SYSTEMS (ESS) 7940 Convoy Ct, San Diego, CA 92111	524465	VMS Data		$12,886.00	1.33%
Harborside Construction Inc 2010 Garrison Way, El Cajon, CA 92019	730817	New Stucco		$36,000.00	3.72%
Koch General Engineering PO Box 1190, Lakeside, CA 92040	1023489A	Place Concrete & Landscape		$718,832.95	74.20%
the doctor of electricity 41815 Hawthorne Street, Murrieta, CA 92562	517763	Electrician		$21,575.00	2.23%
Titan Steel 955 VERNON WAY, El Cajon, CA 92020	537924	VMS Offsite Fabrication		$15,331.95	1.58%

Summary

Certification Name	Value	%
	$804,625.90	74.20%
Total	**$804,625.90**	**83.06%**

Metropolitan Transit System

Agenda Item No. 8

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Grantville Transit-Oriented Development (TOD) Painting – Contract Award

RECOMMENDATION:

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

1) Rescind the award and direction to execute MTS Doc. No. PWL370.0-23 to Prime Painting Contractors Inc. for Grantville Station Painting Improvements, approved by Agenda Item No. 13 at the July 27, 2023 MTS Board of Directors Meeting;

2) Execute MTS Doc. No. PWL370.0-23 (in substantially the same format as Attachment A), with All Source Coatings Inc., a certified Small Business, for the Grantville Station Painting Improvements in the amount of $1,746,000.00; and

3) Authorize the CEO to execute amendments or change orders up to a 20% contingency ($349,200) for this construction contract, bringing total expenditure authority to $2,095,200.00.

Budget Impact

The total cost of this contract is estimated to be $2,095,200.00; total bid amount of $1,746,000.00 plus 20% contingency. This project is funded by MTS Capital Improvement Projects (CIP) 2006116301 Grantville Station Improvements. A portion of this work is funded by the California Department of Housing & Community Development (HCD) TOD Infrastructure grant.

DISCUSSION:

As further explained below, on July 27, 2023 (AI 13), the MTS Board of Directors authorized the CEO to execute a contract with Prime Painting Contractors Inc. for the Grantville Station Painting Improvements. After further review of their bid in anticipation of executing the contract, staff identified that the bid was not responsive because it did not comply with a material requirement related to minimum self-performance. Therefore, it is recommended to award to

the second lowest responsive and responsible bidder, All Source Coatings, Inc. The following provides overall background on this project and the history of this solicitation.

Grantville Transit Center – MTS Improvement Projects

On June 13, 2019 (AI 33) and as amended on April 8, 2021 (AI 18), the MTS Board of Directors authorized Disposition and Development Agreements for two transit-oriented developments at the Grantville Transit Station. The two developments included a 100% affordable housing development of 125 apartment homes with Grantville Trolley Family Housing, L.P. (an affiliate of Affirmed Housing Group, Inc., collectively "Affirmed"), and another with Greystar for a market rate multi-residential development of 250 apartment homes. As part of the project, 100 transit replacement transit parking spots were constructed as part of the Greystar development.

In January 2021, the California Department of Housing & Community Development (HCD) awarded a total of $11,995,000 to Affirmed for their affordable housing development at the Grantville Trolley Station. The HCD grant was divided into two parts: a $10,000,000 loan for construction of the affordable housing development, to be managed by Affirmed, and a $1,995,000 grant for Infrastructure Projects, to be managed by MTS.

Of the $1,995,000 in Infrastructure Grant Funds, $599,000 of it is allocated to pay for Affirmed's cost share for 33 trolley replacement parking spaces constructed in the Greystar development. The remaining $1,396,000 was available for MTS to implement various improvement projects at the Grantville Transit Center. During the Capital Improvement Program (CIP) Budgeting process, the MTS Board also allocated additional funds to complete the identified Grantville Transit Center projects. Identified projects include painting, hardscape, landscaping, lighting, closed circuit surveillance cameras, and additional variable message signs and PRONTO validators. The total CIP budget estimates for all projects is $3.4 million. By timing the projects to be completed close to the opening of the Affirmed and Greystar apartment projects, riders will enjoy a fully refurbished station experience.

Today's proposed action relates to the painting portion of the identified Grantville Transit Center improvement projects. Painting is the largest individual project. Today's action would award a contract to paint the elevated steel guideway structure at the trolley station. The existing paint has faded due to sun exposure and as a result the station appearance is not up to MTS standards. With the joint developments under construction and more than 375 apartments with occupancy planned in the next 12 months, now is the time to improve the appearance of the structure. In addition to the station paint, the project will also remove and upgrade the bird deterrents around the structure.

This contract would cover the paint and related work portion of the Grantville Station Improvements CIP. The contract includes:

- Full preparation of all existing metals (currently painted teal/green/blue), priming, and application of high-performance coating system to help preserve existing metals, as well as improve appearance of station and state of repair, including the existing bus shelters.
- Full removal and replacement of bird deterrent systems to ensure cleanliness and state of good repair at the station.

Procurement Process – Grantville Transit Center Paint Project

On May 1, 2023, staff issued an Invitation for Bids (IFB). A total of three (3) bids were received:

GRANTVILLE TOD PAINTING IFB		
COMPANY NAME	FIRM CERTIFICATION	BID AMOUNT
MTS – Independent Cost Estimate (ICE)		*$1,772,810*
Prime Painting Contractors Inc. *(Deemed Non Responsive)*	SB	$1,330,000
All Source Coatings Inc.	**SB**	**$1,746,000**
U.S National Corp	SB	$2,293,700

On July 3, 2023, MTS issued a Notice of Intent to Award to Prime Painting Contractors Inc. No protests were received. On July 27, 2023 (AI 13), the MTS Board of Directors approved a contract award to Prime Painting Contractors Inc., for $1,596,000, which was comprised of a total bid amount of $1,330,000 plus 20% contingency of $266,000.

After further review, and before contract execution, MTS staff discovered that Prime Painting Contractors Inc. did not fulfill a material requirement in the IFB to self-perform a minimum of 30% of the work. Prime Painting Contractors Inc. had subcontracted out $1,177,000 (88.50%) of the work amongst three (3) subcontractors, meaning the percentage to be self-performed was only 11.50%. MTS includes a self-perform minimum requirement on MTS's construction projects, consistent with industry standards. A self-perform minimum requirement helps to ensure the prime contractor's workforce is one that is experienced and qualified to perform a portion of the work and that the prime contractor will have sufficient control over schedule and performance of the project. Further, a self-perform requirement helps to ensure that the prime contractor is not merely being paid to oversee the work of its subcontractors.

MTS deemed the bid to be non-responsive on August 29, 2023 for not meeting a material requirement of the IFB, and moved to the 2nd lowest responsive, responsible bidder, All Source Coatings Inc. On August 29, 2023, MTS issued a Notice of Intent to Award to All Source Coatings Inc. There is a 15-day protest period which ends on September 13, 2023 (one day before the September 14, 2023 MTS Board of Directors Meeting). If a protest is received, MTS will review and as necessary, may pull this agenda item.

Based on the bids received, and in comparison, with the ICE at $1,772,810, MTS staff deems All Source Coatings Inc. bid at $1,746,000 to be price to be fair and reasonable.

All Source Coatings Inc. will not be utilizing any subcontractors as shown in Attachment C.

Therefore, staff recommends that the MTS Board of Directors:

1) Rescind the award and direction to execute MTS Doc. No. PWL370.0-23 to Prime Painting Contractors Inc. for Grantville Station Painting Improvements, approved by Agenda Item No. 13 at the July 27, 2023 MTS Board of Directors Meeting;

2) Execute MTS Doc. No. PWL370.0-23 (in substantially the same format as Attachment A), with All Source Coatings Inc., a certified SB, for the Grantville Station Painting Improvements in the amount of $1,746,000.00; and

3) Authorize the CEO to execute amendments or change orders up to a 20% contingency ($349,200) for this construction contract, bringing total expenditure authority to $2,095,200.00.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Agreement MTS Doc No.PWL370.0-23
B. Bid Price Form
C. All Source Coatings Subcontractor Form

Metropolitan Transit System

STANDARD CONSTRUCTION AGREEMENT

FOR

MTS DOC. NO. PWL370.0-23

GRANTVILLE TOD PAINTING

THIS AGREEMENT is entered into this _____ day of _____ 2023, 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: ALL SOURCE COATINGS, INC. Address: 10625 SCRIPPS RANCH BLVD. SUITE A, SAN DIEGO, CA 92131

Form of Business: CORP
(Corporation, Partnership, Sole Proprietor, etc.)

Email: jerry@allsourceco.com

Telephone: 858-586-0903

Authorized person to sign contracts Jerry Zumbro (Name) President (Title)

The specified Contract Documents are part of this Agreement. The Contractor agrees to furnish to MTS services and materials, as follows:

Contractor shall furnish all necessary management, supervision, labor, materials, tools, supplies, equipment, plant, services, engineering, testing and/or any other act or thing required to diligently and fully perform and complete the Project as specified in accordance with the Standard Agreement and General Conditions (Exhibit A), Scope of Work, Special Conditions and Attachments (Exhibit B), Bid Price Form (Exhibit C), and Forms (Exhibit D)

SCOPE OF WORK

Contractor, for and in consideration of the payment to be made to Contractor as hereinafter provided, shall furnish all plant, labor, technical and professional services, supervision, materials and equipment, other than such materials and equipment as may be specified to be furnished by MTS, and perform all operations necessary to complete the Work in strict conformance with the Contract Documents (defined below) for the following public work of improvement:

GRANTVILLE TOD PAINTING

Contractor is an independent contractor and not an agent of MTS. The Contractor and its surety shall be liable to MTS for any damages arising as a result of the Contractor's failure to comply with this obligation.

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.

CONTRACT TIME.

Time is of the essence in the performance of the Work. The Work shall be commenced by the date stated in MTS's Notice to Proceed. The Contractor shall complete all Work required by the Contract Documents within **180 calendar days** from the commencement date stated in the Notice to Proceed. By its signature hereunder, Contractor agrees the Contract Time is adequate and reasonable to complete the Work.

CONTRACT PRICE.

MTS shall pay the Contractor as full compensation for the performance of the Contract, subject to any additions or deductions as provided in the Contract Documents, and including all applicable taxes and costs, the sum of one million three hundred thirty three thousand Dollars ($ 1,330,000.00). Payment shall be made as set forth in the General Conditions.

PROVISIONS REQUIRED BY LAW.

Each and every provision of law required to be included in these Contract Documents shall be deemed to be included in these Contract Documents. The Contractor shall comply with all requirements of the California Labor Code applicable to this Project.

INDEMNIFICATION.

Contractor shall provide indemnification as set forth in the General Conditions.

PREVAILING WAGES.

Contractor shall be required to pay the prevailing rate of wages in accordance with the Labor Code which such rates shall be made available at MTS's Administrative Office or may be obtained online at http://www.dir.ca.gov and which must be posted at the job site.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	ALL SOURCE COATINGS, INC.
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

GRANTVILLE TOD PAINTING (PWL370.0-23)

BIDDER: ALL SOURCE COATINGS, INC.

Item Num	Description	Unit of Measure	Quantity	All Source Coatings Inc - Unit Price	All Source Coatings Inc - Line Total
1	Mobilization	EA	1	$35,000.00	$35,000.00
2	Demobilization	EA	1	$35,000.00	$35,000.00
3	Supervision	LS	1	$50,000.00	$50,000.00
4	Temporary Facilities	LS	1	$5,000.00	$5,000.00
5	Temporary Controls	LS	1	$5,000.00	$5,000.00
6	Surface Preparation	LS	1	$80,000.00	$80,000.00
7	Surface Painting	LS	1	$850,000.00	$850,000.00
8	Elevated work plan (Rolling scaffold, stationary scaffold, man lift	LS	1	$350,000.00	$350,000.00
9	Bird Netting/ Bird Spikes/Deterrents	LS	1	$300,000.00	$300,000.00
10	Payment and Performance Bond	LS	1	$18,000.00	$18,000.00
11	Bid Bond	LS	1	$18,000.00	$18,000.00
			Bid Total		**$1,746,000.00**
			Contingency	20%	$349,200.00
			Total After Contingency		**$2,095,200.00**

Subcontractor							Any time there is a change to a Subcontractor resubmit this attachment. Any change to these forms after bid submittal must be made in accordance with Public Contract Code sections 4100 et seq., as applicable, and as permitted by MTS.						
Company Name	Type of DBE	% of Work	DIR Number	Dollar Value	Description of Work	Point of Contact First Name	Point of Contact Last Name	Email	Phone Number	Street Address	City	State	Zip
Self Performed - All Source Coatings Inc													

Metropolitan Transit System

Agenda Item No. 9

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

San Diego State University (SDSU) Tunnel Smoke Control Upgrades – 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. PWL378.0-24, a Sole Source agreement (in substantially the same format as Attachment A), with Drake Integrations LLC (Drake Integrations), for provision of Smoke Control Upgrades at the SDSU tunnel, for a five (5) year period, in the amount of $299,000.

Budget Impact

The total cost of this contract is estimated to be $299,000 and will be funded by Capital Improvements Program (CIP) funding #2008122101.

DISCUSSION:

The MTS SDSU Transit Center tunnel requires a smoke control system, which provides emergency ventilation if smoke is ever identified. Prior to 2018, MTS utilized a LonWorks Networking Management (LonWorks) smoke control system, that was maintained by MTS Maintenance of Way staff. In early 2018, it was identified that the LonWorks system was obsolete and would need to be decommissioned. MTS reviewed the system peripherals, and available products on the market, and determined that the Distech Management System (Distech) smoke control system should replace it, which is the smoke control system currently in use.

Distech was identified as the only product that could meet all of the following requirements: (a) meets minimum California Department of Forestry and Fire Protection (CalFire) life and safety requirements; (b) meets MTS's operational needs, based on its computer graphic interface so MTS can review the systems functions at the operational control center (OCC) and at the SDSU Transit Center; (c) Distech's ability to connect to the Sapphire Novec 1230 Fire Suppression system, which again not only allows OCC to monitor, but also MTS's fire alarm maintenance contractor. Both of these connections are imperative so that MTS and MTS's contractors can be notified immediately if there is any smoke in the tunnel, and to provide subsequent notice to CalFire.

Recently MTS has been made aware of some programming updates related to the current Distech fire management system controller, which is a component of the overall Distech system. The currently used fire management system controller will be decommissioned. To ensure the fire management system controller is in good working repair, the current Version 9 fire management system controller needs to be upgraded to Version 10. This controller is a critical component of the smoke control system. MTS cannot allow it to not be functioning or supported, as the smoke control system must be in good operational condition at all times to ensure the safety of passengers if there is ever smoke identified in the tunnel.

This is a proprietary system and to ensure MTS complies with Distech's warranty, Distech requires that only Distech certified vendors, and their qualified engineers, can program and upgrade the controller to Version 10. MTS is of the understanding there is no other Distech certified vendor that works in this area besides Drake Integrations.

In 2017, Drake Integrations was awarded the contract to replace the LonWorks system and to procure, install and program the Distech system (MTS Doc No. PWL237.0-17). Drake Integration's engineer is the designer of record for MTS's Distech smoke control system. Since Drake Integrations installed and programmed the Distech system for MTS, they are uniquely knowledgeable of the codes and requirements needed for the project and also the existing programming and functionality of Distech. If there were any other known certified Distech vendors available, those vendors would not be able to upgrade this controller without significant time and costs, as they would need to develop an understanding and knowledge of all of MTS's smoke control system components and functionalities and layout from scratch, including redoing the control drawings (as-builts), training programs and operation and maintenance procedures. In other words, reverse engineering all of the programming built into the system, which likely would take hundreds of hours of engineering time that has already been completed from the 2017 installation by Drake Integrations.

Maintaining compliance, continuity and functionality of the system is a critical and urgent matter. Drake Integrations has the necessary experience with the system, requisite certifications, security clearances, and necessary understanding of the overall requirements of the SDSU tunnel.

Per MTS Board Policy No. 52, "Procurement of Goods and Services", MTS is permitted to utilize a documented Sole Source procurement method when goods or services needed are available from only one responsible and responsive source and no other goods or services will satisfy its requirements. MTS staff finds that Drake is the only vendor that can install the upgrades for the Distech.

The costs are as follows:

Service Description	Price
Smoke Control System Upgrade 10th Edition	$220,000
Uninterruptible Power Supply (UPS) & Inverter System Upgrades	$79,000
Contract Total	**$299,000**

MTS's Independence Cost Estimate (ICE) is $290,977.00, a difference of 3%, a price that staff deems to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. PWL378.0-24, a Sole Source agreement (in substantially the same format as Attachment A), with Drake Integrations LLC (Drake Integrations), for provision of Smoke Control Upgrades at the SDSU tunnel for a five (5) year period, in the amount of $299,000.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Agreement, MTS Doc. No. PWL378.0-24
B. Scope of Work and Costs

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. PWL378.0-24

SDSU TUNNEL SOMKE CONTROL SYSTEM UPGRADE

THIS AGREEMENT is entered into this __ day of _____, 2023 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: Drake Integrations LLC

Address: 500 S. 8th Street

Boise ID 83702
City State Zip

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.)

Email: finlay@drakeintegrations.com

Telephone: 760-707-7379

Authorized person to sign contracts: Finlay L. Drake (Name) — President (Title)

The Contractor agrees to provide services with goods as specified in the Contractor's Statement of Work and Pricing (Exhibit A), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit B) and Forms (Exhibit C).

The contract term is for a five year period effective October 1, 2023 through September 30, 2028.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $299,000.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	DRAKE INTEGRATIONS LLC
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

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SCOPE OF WORK

Smoke Control System Upgrade

UL® 864 UUKL Smoke Control System – 10th Edition

Date	Services to be Performed by:	Services to be Performed for:
August 17, 2023	**Drake Integrations LLC** 500 S. 8th Street Boise, ID 83702	**Metropolitan Transit System – SDSU Transit Center** 1255 Imperial Avenue, Suite 1000 San Diego, CA 92101

PROJECT DESCRIPTION

The MTS SDSU Transit Center smoke control system was upgraded in early 2018 from a LonWorks based system to a Distech Controls UUKL Smoke Control Niagara^{AX}-based system that complied with UL 864 UUKL 9th Edition utilizing EC-BOS-6^{AX} UUKL embedded controller/servers and UUKL BACnet programmable controllers and I/O extension modules. The End of Life (EOL) support for the Niagara^{AX}-based system was July 2021 and has been replaced by UL 864 UUKL 10th Edition that is based on the Niagara 4 Framework and EC-BOS-8 UUKL embedded controller/servers (see attached datasheet). Fortunately, the existing UUKL BACnet programmable controllers and I/O extension modules would only need a firmware upgrade to be following the 10th edition. Note that there is currently no EOL date determined yet for the 10th Edition based system but will notify MTS as soon as this has been provided by Distech Controls.

In order to maintain the most reliable and resilient system possible, it is recommended to upgrade the current 9th edition-based system to the latest 10th edition. It should be noted that in the interim, should an existing EC-BOS-6^{AX} controller fail, the new EC-BOS-8 hardware can be utilized temporarily as it can be downgraded to the "AX" firmware to function with the existing system until the entire system is fully upgraded.

Additionally, the Distech Controls Niagara EC-Net Supervisor and the graphical user interface (GUI) software, expressEnvysion, is hosted on a physical server located in the Security Office. This server is running an older Windows Server Operating System (OS) and is recommended to be replaced with an upgraded server running Windows Server 2019 OS. Utilizing a new server versus just upgrading the existing server OS will allow for much of the upgrade process to occur "offline", which will allow the field cutover transition time to be much shorter. Note that the expressEnvysion GUI software is in the process of being replaced by a new GUI software, which has yet to be officially released. Therefore, it will be recommended to be upgraded in a future project.

One further recommendation is to replace all of the existing CTRLink EIS fiber-to-ethernet converters as it was discovered during a preventative maintenance visit on May 12, 2021, that some were found to be leaking oil (see attached site visit/field report by Performance Automation Solutions).

UL® 864 UUKL SMOKE CONTROL SYSTEM UPGRADE 10TH EDITION

The following outlines the scope required to upgrade the system from 9th edition to 10th edition:

- Update the Smoke Control System Drawings as necessary, including:
  - Network Architecture
  - Panel Layouts
  - Wiring Diagrams
  - Installation Details
- Replace all twelve (12) EC-BOS-6AX with EC-BOS-8 UUKL embedded controller/servers
- Replace all CTRLink EIS fiber-to-ethernet converters with new
- Install Distech Niagara 4 EC-Net Supervisor and expressEnvysion software on a new MTS-provided server with Windows Server 2019 OS. Niagara 4 EC-Net Supervisor to be provided with a 5-year software maintenance agreement (SMA) (see attached datasheet). Labor costs for the implementation of future software updates is to be covered under the "Software & Firmware Updates" section below.
- Upgrade existing AX database to Niagara 4
- Upgrade the firmware of UUKL BACnet programmable controllers and I/O extension modules
- Provide one (1) of each for additional spare stock:
  - EC-BOS-8 UUKL
  - ECB-600 UUKL
  - ECX-400 UUKL
- Provide onsite testing and validation with MTS representative (~2-3 days)
- Provide updated as-built drawings (3 hard copies)
- Provide updated operation & maintenance manuals (3 hard copies)
- Provide updated training agendas & documentation
- Provide onsite training (1 day)

EXCLUSION & CLARIFICATIONS

- Drake Integrations is not responsible or liable for any damages, injuries, or loss of life as a result of the existing or upgraded Smoke Controls System.
- Pricing Includes Night/Weekend Work, as necessary
- Excludes any additional labor or materials required to achieve a fully code compliant smoke control system other than what is listed above.
- Excludes the addition of a Firefighter's Smoke Control Station (FSCS), if required.
- Excludes replacement/repair of any field devices such as dampers, sensors, switches, etc.
- Excludes costs associated with Fire Watch
- Excludes controls for any equipment or system not listed above.
- Excludes bond
- Excludes UL certification of existing control enclosures.
- Excludes any new fiber optic cables or repair of fiber optic cable.
- Warranty covers labor and material for one (1) year after acceptance of the system.

PRICING SCHEDULE & TERMS

Description	Fee
Materials	*$120,000*
Labor	*$100,000*
TOTAL	***$220,000***

Invoicing will be submitted monthly or after each phase of completion. Payment terms will be 30 days upon receipt of invoices.

UPS & INVERTER SYSTEM UPGRADES

The MTS SDSU Transit Center will be upgrading the Uninterruptible Power System (UPS) and Inverters in the East & West Electrical Rooms to remain in compliance with the National Fire Protection Association (NFPA). These components provide power to critical infrastructure and lighting at SDSU. As part of this upgrade, the Distech system will be expanded to monitor the new equipment. The new controls will be on the non-UUKL portion of the Smoke Control System which currently monitors and controls the existing Lonworks Lighting Control Panels (East & West).

The following outlines the scope required to monitor the new equipment:

- Update the Smoke Control System Drawings as necessary, including:
  - Network Architecture
  - Panel Layouts
  - Wiring Diagrams
  - Installation Details
- Provide new Modbus or BACnet communication to new UPS' & Inverters:
  - West:
    - INV-W serving CHWM
    - UPS-W serving CLWM1&2, CLWP1
  - East:
    - INV-E serving CHEM
    - UPS-E serving CLEM1&2, CLEP1
- Provide new non-UUKL BACnet programmable controllers to monitor the Hydrogen Alarm System. Will provide new Modbus or BACnet communication to the Hydrogen Alarm System if it is equipped with the proper communication module. Hydrogen Alarm System is to be provided and installed by others.
- Upgrade existing AX database to Niagara 4
- Provide new graphics pages & alarms for the new equipment
- Provide one (1) of each for additional spare stock:
  - ECB-600 non-UUKL
- Coordinate with UPS, Inverter and Hydrogen Technicians for proper integration and testing
- Provide onsite testing and validation with MTS representative (~2-3 days)
- Provide updated as-built drawings (3 hard copies)

- Provide updated operation & maintenance manuals (3 hard copies)
- Provide updated training agendas & documentation
- Provide onsite training (1 day)

EXCLUSION & CLARIFICATIONS

- Drake Integrations is not responsible or liable for any damages, injuries, or loss of life as a result of the existing or upgraded Smoke Controls System.
- Pricing Includes Night/Weekend Work, as necessary
- Excludes any additional labor or materials required to achieve a fully code compliant smoke control system other than what is listed above.
- Excludes the addition of a Firefighter's Smoke Control Station (FSCS), if required.
- Excludes replacement/repair of any field devices such as dampers, sensors, switches, etc.
- Excludes costs associated with Fire Watch
- Excludes controls for any equipment or system not listed above.
- Excludes bond
- Excludes UL certification of existing control enclosures.
- Excludes any new fiber optic cables or repair of fiber optic cable.
- Warranty covers labor and material for one (1) year after acceptance of the system.

PRICING SCHEDULE & TERMS

Description	Fee
Materials	*$19,000*
Labor	*$60,000*
TOTAL	***$79,000***

Invoicing will be submitted monthly or after each phase of completion. Payment terms will be 30 days upon receipt of invoices.

COMPENSATION FOR ADDITIONAL SERVICES - In addition to the payments made to the Drake Integrations LLC, the "Client" shall pay Drake Integrations LLC for any additional services provided by Drake Integrations LLC above and beyond those listed above.

ARBITRATION. Any controversies or disputes arising out of or relating to this Contract shall be resolved by binding arbitration in accordance with the then-current Commercial Arbitration Rules of the American Arbitration Association. The parties shall select a mutually acceptable arbitrator knowledgeable about issues relating to the subject matter of this Contract. In the event the parties are unable to agree to such a selection, each party will select an arbitrator and the two arbitrators in turn shall select a third arbitrator, all three of whom shall preside jointly over the matter. The arbitration shall take place at a location that is reasonably centrally located between the parties, or otherwise mutually agreed upon by the parties. All documents, materials, and information in the possession of each party that are in any way relevant to the dispute shall be made available to the other party for review and copying no later than 30 days after the notice of arbitration is served. The arbitrator(s) shall not have the authority to modify any provision of this Contract or to award punitive damages. The arbitrator(s) shall have the power to issue mandatory orders and restraint orders in connection with the arbitration. The decision rendered by the arbitrator(s) shall be final and binding on the parties, and judgment may be entered in conformity with the decision in any court having jurisdiction. The agreement to arbitration shall be specifically enforceable under the prevailing arbitration law. During the continuance of any arbitration proceeding, the parties shall continue to perform their respective obligations under this Contract.

ENTIRE AGREEMENT. This Contract contains the entire agreement of the parties, and there are no other promises or conditions in any other agreement whether oral or written concerning the subject matter of this Contract. This Contract supersedes any prior written or oral agreements between the parties.

SEVERABILITY. If any provision of this Contract will be held to be invalid or unenforceable for any reason, the remaining provisions will continue to be valid and enforceable. If a court finds that any provision of this Contract is invalid or unenforceable, but that by limiting such provision it would become valid and enforceable, then such provision will be deemed to be written, construed, and enforced as so limited.

AMENDMENT. This Contract may be modified or amended in writing, if the writing is signed by the party obligated under the amendment.

GOVERNING LAW. This Contract shall be construed in accordance with the laws of the State of California.

NOTICE. Any notice or communication required or permitted under this Contract shall be sufficiently given if delivered in person or by certified mail, return receipt requested, to the address set forth in the opening paragraph or to such other address as one party may have furnished to the other in writing.

WAIVER OF CONTRACTUAL RIGHT. The failure of either party to enforce any provision of this Contract shall not be construed as a waiver or limitation of that party's right to subsequently enforce and compel strict compliance with every provision of this Contract.

AGREEMENT

Drake Integrations appreciates the opportunity to service your company and if you accept this proposal and the terms above, please sign and date in the space below

CLIENT ACCEPTANCE:	DRAKE INTEGRATIONS:
Signature	*Signature*
	Finlay L. Drake, PE, CxA
Print Name	*Print Name*
	President
Title	*Title*
Date	*Date*

Metropolitan Transit System

Agenda Item No. 10

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Construction Management (CM) Services for South Bay Zero Emission Bus (ZEB) Overheard (OH) Charging Infrastructure Installation – Work Order Amendment

RECOMMENDATION:

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

1) Ratify Work Order WOA2501-CM01.2 under MTS Doc No. G2501.0-21 (Attachment A) with TRC Engineers, Inc. (TRC) totaling $40,305.00, to provide additional survey and inspection staff;

2) Ratify Work Order WOA2501-CM01.3 under MTS Doc No. G2501.0-21 (Attachment B) with TRC totaling a savings adjustment of $6,942.44, for the revision of the estimated work hours for each task; and

3) Authorize the Chief Executive Officer (CEO) to execute Work Order WOA2501-CM01.4 under MTS Doc. No. G2501.0-21 (in substantially the same format as Attachment C), with TRC, for additional CM services for the ZEB OH Charging Infrastructure Construction Project in the amount of $421,142.48.

Budget Impact

The total budget for this contract shall not exceed $1,825,070.96 over the duration of the CM services. This project is funded by MTS Capital Improvement Program (CIP) 1009113101 – Iris Rapid – Charging Infrastructure at South Bay Maintenance Facility (SBMF), and CIP 1009113001 – Iris Rapid – Route & Stations Infrastructure.

DISCUSSION:

On December 16, 2021 (AI 16), the MTS Board approved a construction contract with Palm Engineering Construction for the ZEB OH Charging Infrastructure Construction project at the South Bay Bus Maintenance Facility. The South Bay ZEB OH Charging Construction project

consists of the construction of a new overhead gantry system capable of providing charging to Battery Electric Buses (BEB's). The project consists of civil, electrical, and structural site improvements as well as new service from the local electrical utility to provide new primary switchgear for future BEB projects. New primary electric switchgear and duct banks are being installed with latency to provide future growth opportunities for anticipated expansion of BEB fleet growth at the facility, current duct bank design includes spare conduits capable of expanding the entire yard to BEB vehicles. Once complete, the South Bay facility will have the ability to charge twenty-four (24) battery electric buses as well as expand as needed for future overhead charging projects. The project is necessary to support MTS's overall ZEB Transition Plan, and the more immediate Iris Rapid Project, which will include 12 BEBs operating on a new Rapid 227 route between the Otay Mesa Transit Center and Imperial Beach.

In conjunction with the construction contract award, at the same meeting on December 16, 2021 (AI 12), the MTS Board of Directors authorized an agreement with TRC to provide construction management services for the SBMF ZEB OH Charging Infrastructure project. Construction management services are needed to assist MTS staff with the coordination, control, and oversight of the project from beginning of the work through completion and closeout.

The South Bay ZEB OH Charging Infrastructure Construction project is currently in construction and has experienced several delays including, but not limited to, supply chain issues, manufacturer delays, design changes and a work stoppage that has pushed the completion date of the project. Today's proposed action would authorize additional funding to maintenance sufficient construction management services throughout the expanded project timeline.

Under the proposed work order Amendment 4, TRC will continue to provide construction management services to augment MTS staff and provide oversight of the construction contractor and overall project. TRC will extend their construction management services as necessary to meet the revised completion date including resident engineering, field inspection, office engineering, project scheduling analysis, geotechnical testing and observations, hazardous materials testing, quality assurance (QA) source and field inspections to ensure the project is safely and successfully completed.

The Work Order, and subsequent Amendments are summarized below:

Work Order No.	Purpose	Amount	Board Approval Date
WOA2501-CM01	Original Work Order for the SBMF ZEB overhead charging infrastructure project.	$796,363.18	12/16/21 (AI 12)
WOA2501-CM01.1	Additional CM services for the Iris Rapid Route construction project.	$574,202.74	3/10/23 (AI 9)
WOA2501-CM01.2	Provide additional survey and inspection staff	$40,305.00	CEO approval 2/14/23 per Board Policy No. 41
WOA2501-CM01.3	Revision of the estimated work hours for each task	($6,942.44)	CEO approval 2/24/21 per Board Policy No. 41
WOA2501-CM01.4	Provide additional CM services due to project delays	$421,142.48	Today's proposed action
	TOTAL	**$1,825,070.96**	

TRC's proposed amount of $421,142.48 is less than MTS's Independent Cost Estimate (ICE) ($423,060.72) and determined to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors:

1) Ratify Work Order WOA2501-CM01.2 under MTS Doc No. G2501.0-21 (Attachment A) with TRC Engineers, Inc. (TRC) totaling $40,305.00, to provide additional survey and inspection staff;

2) Ratify Work Order WOA2501-CM01.3 under MTS Doc No. G2501.0-21 (Attachment B) with TRC totaling a savings adjustment of $6,942.44, for the revision of the estimated work hours for each task; and

3) Authorize the CEO to execute Work Order WOA2501-CM01.4 under MTS Doc. No. G2501.0-21 (in substantially the same format as Attachment C), with TRC, for additional construction management (CM)services for the ZEB OH Charging Infrastructure Construction Project in the amount of $421,142.48.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Executed Work Order WOA2501-CM01.2
B. Executed Work Order WOA2501-CM01.3
C. Draft Work Order WOA2501-CM01.4

Metropolitan Transit System

Amendment 2

January 16, 2023

MTS Doc No. G2501.0-21
WOA2501-CM01.2

ZEB IRIS CM AMENDMENT

TRC Engineers Inc
Jim Devey
Project/Task Order Manager
4393 Viewridge Ave. Ste. A
San Diego, CA 92123

This shall serve as Amendment No.2 to the original agreement WOA2501-CM01 as further described below.

SCOPE OF SERVICES

Provide additional survey and inspection staff for the ZEB / Iris Rapid Construction work (see MTS contract PWB342.0-22 and PWB333.0-21), in accordance with MTS and SANDAG policies and procedures. This Amendment shall replace *Attachment A, Scope of Services*, with Attachment A, Scope of Services Amendment 2 for a detailed summary of the services to be provided.

SCHEDULE

The project schedule shall follow MTS Project ZEB Construction (PWB333.0-21) and Iris Rapid Construction (PWB342.0-22).

PAYMENT

Payment for this Amendment shall authorize additional costs not to exceed $40,305.00. The total value of this contract including this amendment shall be $1,423,214.40. This amount shall not be exceeded without prior written approval from MTS.

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

Sincerely,

Sharon Cooney

Sharon Cooney, Chief Executive Officer

Agreed:

Jim Devey, Project Manager
TRC Engineers Inc.

Date: 2/14/2023

Attachments: A - Scope of Services Amendment 2
B - Negotiated Fee Proposal Amendment 2

Metropolitan Transit System

Contract No.:G2501.0-21
Work Order No.: WOA2501-CM01.2
Attachment A

WORK ORDER TITLE: SBMF ZEB Overhead Charging Facility and Iris Rapid Corridor and Station Construction: Amendment 2

I. PROJECT DESCRIPTION

This Work order is comprised of two projects broken down into two separate construction phases.

SBMF ZEB OH Charging Phase 1:

Addition of Quality Assurance Surveying for South Bay Maintenance Facility ZEB Overhead Charging Facility.

Iris Rapid Corridor and Stations Phase 2:

Addition of Quality Assurance Surveying for 'Rapid" Bus Route between Otay Mesa Transit Center, the Iris Transit Center and Imperial Communities.

II. EXPECTED RESULTS

The Contractor is expected to provide the scope of work and deliverables.

III. SCOPE OF WORK

Additional scope of work added as an amendment includes:

Construction Management and Inspection Services

- Monitor construction activities performed by the contractor per project plans and specifications, including periodic job site safety reviews.
  - QA Surveying and Construction Staking

IV. PERIOD OF PERFORMANCE

Phase 1 ZEB: Follows the Zeb Construction schedule PWB333.0-21

Phase 2 IRIS: Follows the Iris Construction schedule. PWB342.0-22

V. DELIVERABLES

Deliverables will consist of the work products produced under direct supervision by MTS management which include:

1. Survey Staking in field with provided Staking Reports

VI. SCHEDULE OF SERVICES/MILESTONES/DELIVERABLES

A. Tasks Schedule

Task	Begin/End Dates
Construction Management Services	See Zeb and Iris Rapid Construction
Project Closeout and Final Records Transmittal	See Zeb and Iris Rapid Construction

VII. MATERIALS TO BE PROVIDED BY MTS AND/OR SANDAG

1. Project drawings, specifications, and other pertinent project documents.
2. Necessary forms for project flaggers.
3. Flagging personnel for work alongside the MTS right-of-way.
4. MTS Roadway Worker training (if not current) for personnel to be working on the project, at all sites, alongside the MTS right-of-way.
5. Access to all signal and highway grade crossing facilities as required.

VIII. SPECIAL CONDITIONS

Not Applicable.

IX. MTS ACCEPTANCE OF SERVICES:

Firm shall not be compensated at any time for unauthorized work outside of this Work Order. Firm 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 Firm provides final service(s) or final work product(s) which are found to be unacceptable due to Firms and/or Firms subcontractors negligence and thus not 100% complete by MTS' Project Manager, Firm 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. Firm 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.

X. DEFICIENT WORK PRODUCT:

Throughout the design and/or implementation phases associated with the services rendered by the Firm, if MTS finds any work product provided by Firm to be deficient and the deficiently delays any portion of the project, Firm 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 shall MTS be required to correct any portion of the Firms deficient work product and shall bear no costs or burden associated with Firms deficient performance and/or work product.

XI. DELIVERABLE REQUIREMENTS

Firm shall 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 shall become the property of MTS. MTS reserves the right to disclose any reports or material provided by the Firm to any third party.

Firm shall provide with each task, a work plan showing the deliverables schedule as well as other relevant date needed for Firm's work control, when and as requested by MTS.

Firm'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. Firm shall maintain backup copies of all data conveyed to MTS.

Firm shall provide MTS with hard copy or electronic versions of reports and/or other material as requested by MTS.

XII. ADDITIONAL INFORMATION

List additional information as applicable to the specific Work Order scope of services.

- Services Not included in Scope of Work:
  - Labor Compliance Monitoring
  - Skilled and Trained Workforce requirements do not apply to consultant services

Work Order Estimate Summary

MTS Doc. No.	G2501.0-22
Work Order No.	WOA2501-CMO1.2
Attachment:	B

Work Order Title: Phase 1 ZEB OH - Ammendment 1
Phase 2 Iris Rapid Corridor - Ammendment 1

Project No:

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes	Cost Codes Description	Total Costs
1		PHASE 1 Construction Management and Inspection Services - Surveying	$7,755.00
2		PHASE 2 Construction Management and Inspection Services - Surveying	$32,550.00
		Totals =	**$40,305.00**

Table 2 - TASKS/WBS Summary (Costs & Hours)

Item	TASKS/WBS	TASKS/WBS Description	Labor Hrs	Total Costs
1		PHASE 1 Construction Management and Inspection Services	45.0	$7,755.00
2		PHASE 2 Construction Management and Inspection Services	190.0	$32,550.00
		Totals =	**235.0**	**$40,305.00**

Table 3 - Consultant/Subconsultant Summary (Costs & Hours)

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
				PHASE 1 Rick Engineering	45.0	$7,755.00
				PHASE 2 Rick Engineering	190.0	$32,550.00
				Totals =	**235.0**	**$40,305.00**

Work Order Estimate Summary

Consultant/Subconsultant: **Rick Engineering**

MTS Doc. No.:

Work Order No.: **WOA2501-CMO1.2**

Work Order Title: **PHASE 1: South Bay Maintenance Facility - ZEB OH Charging**

Attachment: B

Total Hours = **45**

Total Costs = **$7,755.00**

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Associate Principal Surveying	Surveyor	Survey Assistant									Total Hours	Totals
				$ 240.00	$ 167.50	$ 167.50								$ -		
1	**Task 1**	**QA Surveying**														
	ODCs															
	Project Management and Communications			3											3	$720.00
	Lead Surveyor				21	21									42	$7,035.00
	Assistant Surveyor															
		Subtotals (Hours) =	N/A	3	21	21									45	$7,755.00
		Subtotals (Costs) =		$720.00	$3,517.50	$3,517.50									**45**	**$7,755.00**
		Subtotals (Hours) =	N/A													
		Subtotals (Costs) =														

Totals (Summary) = **Totals =** **45** **$7,755.00**

Total (Hours) =	N/A	3	21	21	45	
Total (Costs) =		$720.00	$3,517.50	$3,517.50		$7,755.00
Percentage of Total (Hours) =	N/A	7%	47%	47%	100%	
Percentage of Total (Costs) =		9%	45%	45%		100%

Work Order Estimate Summary

Consultant/Subconsultant: **Rick Engineering**

MTS Doc. No.:

Work Order No.: **WOA2501-CMO1.2**

Work Order Title: **PHASE 1: South Bay Maintenance Facility - ZEB OH Charging**

Attachment: B

Total Hours = **190**

Total Costs = **$32,550.00**

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Associate Principal Surveying	Surveyor	Survey Assistant									Total Hours	Totals
				$ 240.00	$ 167.50	$ 167.50								$ -		
1	**Task 1**	**QA Surveying**														
	ODCs															
	Project Management and Communications			10											10	$2,400.00
	Lead Surveyor				90	90									180	$30,150.00
	Assistant Surveyor															
		Subtotals (Hours) =	N/A	10	90	90									190	$32,550.00
		Subtotals (Costs) =		$2,400.00	$15,075.00	$15,075.00									**190**	**$32,550.00**
		Subtotals (Hours) =	N/A													
		Subtotals (Costs) =														

Totals (Summary) =						**Totals =**	**190** / 190	**$32,550.00** / $32,550.00
Total (Hours) =	N/A	10	90	90				
Total (Costs) =		$2,400.00	$15,075.00	$15,075.00				
Percentage of Total (Hours) =	N/A	5%	47%	47%			100%	
Percentage of Total (Costs) =		7%	46%	46%				100%

Metropolitan Transit System

Amendment 3

June 19, 2023

MTS Doc No. G2501.0-21
WOA2501-CM01.3

ZEB IRIS CM AMENDMENT

TRC Engineers Inc.
Jim Devey
Project/Task Order Manager
4393 Viewridge Ave. Ste. A
San Diego, CA 92123

This shall serve as Amendment No.3 to the original agreement WOA2501-CM01 as further described below.

SCOPE OF SERVICES

This Amendment revises the estimated work hours for each task and replaces in its entirety previous Pricing and Negotiated Fee Proposal attachments, with Attachment B Negotiated Fee Proposal, showing corrected rates.

SCHEDULE

There shall be no change to the schedule.

PAYMENT

This Amendment shall authorize a cost reduction not to exceed ($6,942.44). The total value of this contract including this amendment shall be $1,416,271.96. This amount shall not be exceeded without prior written approval from MTS.

Sincerely,

Sharon Cooney Digitally signed by Sharon Cooney Date: 2023.06.20 11:52:59 -07'00'

Sharon Cooney, Chief Executive Officer

Agreed:

Charlene Palmer

Charlene Palmer, Vice President,
TRC Engineers Inc.

Date: 6/20/2023

Attachments: B - Negotiated Fee Proposal

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.

Work Order Estimate Summary

MTS Doc. No.

Work Order No. WOA2501-CM01.3

Attachment: B

Work Order Title: Phase 1 Project South Bay Maintenance Facility ZEB OH
Phase 2 Project Iris Rapid Corridor Bus Stations

Project No:

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes	Cost Codes Description	Total Costs
1		PHASE 1 Construction Management and Inspection Services	$821,520.98
2		PHASE 2 Construction Management and Inspection Services	$594,750.98
		Totals =	**$1,416,271.96**

Table 2 - TASKS/WBS Summary (Costs & Hours)

Item	TASKS/WBS	TASKS/WBS Description	Labor Hrs	Total Costs
1		PHASE 1 Construction Management and Inspection Services	3,758.5	$821,520.98
2		PHASE 2 Construction Management and Inspection Services	2,702.0	$594,750.98
3				
4				
5				
		Totals =	**6,460.5**	**$1,416,271.96**

Table 3 - Consultant/Subconsultant Summary (Costs & Hours)

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
				PHASE 1 TRC Engineers	3,216.5	$711,993.28
				PHASE 2 TRC Engineers	2,438.0	$542,116.08
				PHASE 1 Leighton Consulting	392.0	$76,170.00
				PHASE 2 Leighton Consulting	264.0	$52,634.90
				PHASE 1&2 Rick Engineering	150.0	$33,357.70
				Totals =	**6,460.5**	**$1,416,271.96**

Work Order Estimate Summary

Consultant/Subconsultant: **TRC Engineers**

MTS Doc. No.:

Work Order No.: **WOA2501-CM01.3**

Total Hours = **3,217**

Total Costs = **$711,993.28**

Work Order Title: **PHASE 1: South Bay Maintenance Facility - ZEB OH Charging**

Attachment: B

Item	TASKS/WBS	TASKS/WBS Description		Task Order Manager	Engineer, Supervising	Engineer, Senior	(PW)Field Inspector, Civil, Mechanical	(PW)Field Inspector, Electrical	Techincal Expert - Other (Electrical)	QA/QC, Senior	QA/QC, Senior	Scheduler, Senior	Project Controls III	Stormwater Compliance, Senior		Total Hours	Totals
			MSA Field Rates Effective Execution until June 30, 2022 (See Attachment)	Charlene Palmer	Jim Devey, PE	Mike Moen, PE	Mel Jacobo, Mahlon Lindenmuth or Rob Hehman	Al Perez, PE	Jesse Sandhu, PE	Brian Murray	TBD	Dagher Dagher	Linda Abu-Hamid	Amy Comte			
				$ 223.32	$ 260.54	$ 210.91	$ 199.91	$ 169.26	$ 310.16	$ 223.32	$ 223.32	$ 235.72	$ 136.47	$ 173.69			
			July 1,2022 Rates with increase	$ 229.35	$ 267.57	$ 216.60	$ 205.31	$ 173.83	$ 318.54	$ 229.35	$ 229.35	$ 242.09	$ 140.16	$ 178.38			
			July 1,2023 Rates with increase	$ 235.54	$ 274.79	$ 222.45	$ 210.85	$ 178.52	$ 327.14	$ 235.54	$ 235.54	$ 248.62	$ 143.94	$ 183.20			
			Rates from first WO	$ 226.33	$ 264.10	$ 204.40	$ 200.00	$ 213.76	$ 314.35	$ 180.00	$ 160.00	$ 238.90	$ 151.87	$ 176.00			
1	**Task 1**	**Construction Management and Inspection**															
	Task Order Management		$19,871.32	44									14			58	$31,607.98
	Resident Engineering				860											860	$224,064.40
	Office Engineering					790										790	$166,618.90
	Field Inspection						590	584	1							1,175	$216,949.82
	Electrical Submittal and Shop Drawing Reviews																
	QA/QC - Source and Specialty Inspection									80	152					232	$51,810.24
	Scheduling Analysis											52				52	$12,257.44
	Labor Compliance Monitoring																
	Stormwater Compliance Monitoring													50		50	$8,684.50
		Subtotals (Hours) =	N/A	44	860	790	590	584	1	80	152	52	14	50		3,217	$711,993.28
		Subtotals (Costs) =	$19,871.32	$9,826.08	$224,064.40	$166,618.90	$117,946.90	$98,847.84	$155.08	$17,865.60	$33,944.64	$12,257.44	$1,910.58	$8,684.50		**3,217**	**$711,993.28**
		Subtotals (Hours) =	N/A														
		Subtotals (Costs) =															
	Totals (Summary) =													**Totals =**		**3,217**	**$711,993.28**
	Total (Hours) =		N/A	44	860	790	590	584	1	80	152	52	14	50		3217	
	Total (Costs) =		$19,871.32	$9,826.08	$224,064.40	$166,618.90	$117,946.90	$98,847.84	$155.08	$17,865.60	$33,944.64	$12,257.44	$1,910.58	$8,684.50			$711,993.28
	Percentage of Total (Hours) =		N/A	1%	27%	25%	18%	18%	0%	2%	5%	2%	0%	2%		100%	
	Percentage of Total (Costs) =		3%	1%	31%	23%	17%	14%	0%	3%	5%	2%	0%	1%			100%

Work Order Estimate Summary

Consultant/Subconsultant: **Leighton Consulting**

MTS Doc. No.:

Total Hours = **392**

Work Order No.: **WOA2501-CM01.3**

Total Costs = **$76,170.00**

Work Order Title: **PHASE 1: South Bay Maintenance Facility - ZEB OH Charging**

Attachment: B

Item	TASKS/WBS	TASKS/WBS Description		Engineer, Supervising	Engineer, Senior	Geologist, Senior	Geologist III	PW Tech II	PW Tech III	PW Field Soil & Material Tester Inspector Grp 1	PW Inspector Senior	PW Field Soil & Material Tester Inspector Grp 2	CADD III	Admin III	Admin II	Total Hours	Totals
			MSA Field Rates Effective Execution until June 30, 2022 (See Attachment)	$ 288.07	$ 201.64	$ 179.62	$ 144.03	$ 88.44	$ 115.42	$ 215.38	$ 162.89	$ 249.20	$ 127.73	$ 96.50	$ 66.91		
			July 1,2022 Rates with increase	$ 295.85	$ 207.08	$ 184.47	$ 147.92	$ 90.83	$ 118.53	$ 221.20	$ 167.29	$ 255.93	$ 131.18	$ 99.10	$ 98.71		
			July 1,2023 Rates with increase	$ 303.83	$ 212.67	$ 189.45	$ 151.92	$ 93.28	$ 121.73	$ 227.17	$ 171.80	$ 262.84	$ 134.72	$ 101.78	$ 70.57		
			Rates from first WO	$ 264.53	$ 185.16	$ 164.94	$ 132.27	$ 188.60	$ 193.13	$ 232.03	$ 232.03	$ 232.88	$ 117.30	$ 88.62	$ -		
1	**Task 1**	**QA Material Testing**															
	ODCs		$7,558.00														$7,558.00
	Project Management and Communications			8	12	20										40	$8,316.64
	Geotechnical Sampling and Testing				4			40	46							90	$9,653.48
	Environmental Sampling					4	24									28	$4,175.20
	Special Inspection									50	50	80				180	$38,849.50
	Document Control				8	12	8						6	10		44	$6,652.18
	Project Accounting and Labor Compliance													10		10	$965.00
		Subtotals (Hours) =	N/A	8	24	36	32	40	46	50	50	80	6	20		392	$76,170.00
		Subtotals (Costs) =	$7,558.00	$2,304.56	$4,839.36	$6,466.32	$4,608.96	$3,537.60	$5,309.32	$10,769.00	$8,144.50	$19,936.00	$766.38	$1,930.00		**392**	**$76,170.00**
		Subtotals (Hours) =	N/A														
		Subtotals (Costs) =															
	Totals (Summary) =													**Totals =**		**392**	**$76,170.00**
	Total (Hours) =		N/A	8	24	36	32	40	46	50	50	80	6	20		392	
	Total (Costs) =		$7,558.00	$2,304.56	$4,839.36	$6,466.32	$4,608.96	$3,537.60	$5,309.32	$10,769.00	$8,144.50	$19,936.00	$766.38	$1,930.00			$76,170.00
	Percentage of Total (Hours) =		N/A	2%	6%	9%	8%	10%	12%	13%	13%	20%	2%	5%		100%	
	Percentage of Total (Costs) =		10%	3%	6%	8%	6%	5%	7%	14%	11%	26%	1%	3%			100%

Work Order Estimate Summary

Consultant/ Subconsultant: **TRC Engineers**

Work Order Title: **PHASE 1: South Bay Maintenance Facility - ZEB OH Charging**

Contract No:

Task Order No. **WOA2501-CM01.3**

Attachment: **B**

TASKS/WBS (1-5)

ODC Item	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	Vehicles	Monthly	$709.69	28	$19,871.32								
2	QA Surveying (If Required) Invoice												
3													
4													
5													
6													
7													
8													
9													
10													
			Subtotal =		**$19,871.32**	Subtotal =		Subtotal =		Subtotal =		Subtotal =	

TASKS/WBS (6-10)

ODC Item	Description	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Totals Quantity	Totals Total
1	Vehicles											**28**	**$19,871.32**
2	QA Surveying (If Required) Invoice												
3													
4													
5													
6													
7													
8													
9													
10													
		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		**Totals =**	**$19,871.32**

Work Order Estimate Summary

Consultant/ Subconsultant: **Leighton Consulting**

Contract No:

Task Order No. **WOA2501-CM01.3**

Work Order Title: **PHASE 1: South Bay Maintenance Facility - ZEB OH Charging**

Attachment: B

TASKS/WBS (1-5)

ODC Item	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	Mileage	MI	$0.575	600	$345.00								
2	Modified Proctor	EA	$220.00	2	$440.00								
3	Modified Proctor (6 inch)	EA	$245.00	2	$490.00								
4	Sieve Analysis	EA	$175.00	2	$350.00								
5	Sand Equivalent	EA	$105.00	2	$210.00								
6	Durability Index	EA	$200.00	2	$400.00								
7	Specific Gravity	EA	$130.00	2	$260.00								
8	R-Value	EA	$310.00	2	$620.00								
9	HMA Theoretical Max Density	EA	$130.00	2	$260.00								
10	Concrete/CLSM Testing	EA	$25.00	35	$875.00								
11	Sample Pick Up	EA	$90.00	7	$630.00								
12	PID and PPE	EA	$150.00	1	$150.00								
13	CA Title 22 Metals	EA	$128.00	8	$1,024.00								
14	TPH ext.	EA	$83.00	8	$664.00								
15	VOCs	EA	$105.00	8	$840.00								
				Subtotal =	**$7,558.00**	Subtotal =		Subtotal =		Subtotal =		Subtotal =	

TASKS/WBS (6-10)

ODC Item	Description	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Totals Quantity	Totals Total
1	Mileage											**600**	**$345.00**
2	Modified Proctor											**2**	**$440.00**
3	Modified Proctor (6 inch)											**2**	**$490.00**
4	Sieve Analysis											**2**	**$350.00**
5	Sand Equivalent											**2**	**$210.00**
6	Durability Index											**2**	**$400.00**
7	Specific Gravity											**2**	**$260.00**
8	R-Value											**2**	**$620.00**
9	HMA Theoretical Max Density											**2**	**$260.00**
10	Concrete/CLSM Testing											**35**	**$875.00**
11	Sample Pick Up											**7**	**$630.00**
12	PID and PPE											**1**	**$150.00**
13	CA Title 22 Metals											**8**	**$1,024.00**
14	TPH ext.											**8**	**$664.00**
15	VOCs											**8**	**$840.00**
		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		**Totals =**	**$7,558.00**

Work Order Estimate Summary

Consultant/ Subconsultant: **David Evans and Associates**

Work Order Title: **PHASE 1: South Bay Maintenance Facility - ZEB OH Charging**

Contract No:

Task Order No. **WOA2501-CM01.3**

Attachment: B

TASKS/WBS (1-5)

ODC Item	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	Mileage	MI	$0.575										
2													
3													
4													
5													
6													
7													
8													
9													
10													
			Subtotal =			Subtotal =		Subtotal =		Subtotal =		Subtotal =	

TASKS/WBS (6-10)

ODC Item	Description	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Totals Quantity	Totals Total
1	Mileage												
2													
3													
4													
5													
6													
7													
8													
9													
10													
		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		**Totals =**	

Work Order Estimate Summary

Consultant/Subconsultant: **TRC Engineers**

MTS Doc. No.:

Work Order No.:

Total Hours = **2,438**

Total Costs = **$542,116.08**

Work Order Title: **Iris Rapid Corridor and Station Design**

Attachment: B

Item	TASKS/WBS	TASKS/WBS Description		Task Order Manager	Engineer, Supervising	Engineer, Senior	(PW)Field Inspector, Civil, Mechanical	(PW)Field Inspector, Electrical	Techincal Expert - Other (Electrical)	QA/QC, Senior	QA/QC, Senior	Scheduler, Senior	Project Controls III	Stormwater Compliance, Senior		Total Hours	Totals
			MSA Field Rates Effective Execution until June 30, 2022 (See Attachment)	**Charlene Palmer**	**Jim Devey, PE**	**Mike Moen, PE**	**Mel Jacobo, Mahlon Lindenmuth or Rob Hehman**	**Al Perez, PE**	**Jesse Sandhu, PE**	**TBD**	**TBD**	**Dagher Dagher**	**Linda Abu-Hamid**	**Amy Comte**			
				$ 223.32	$ 260.54	$ 210.91	$ 199.91	$ 169.26	$ 310.16	$ 223.32	$ 223.32	$ 235.72	$ 136.47	$ 173.69			
			July 1,2022 Rates with increase	$ 229.35	$ 267.57	$ 216.60	$ 205.31	$ 173.83	$ 318.54	$ 229.35	$ 229.35	$ 242.09	$ 140.16	$ 178.38			
			July 1,2023 Rates with increase	$ 235.54	$ 274.79	$ 222.45	$ 210.85	$ 178.52	$ 327.14	$ 235.54	$ 235.54	$ 248.62	$ 143.94	$ 183.20			
			Rates from first WO	$ 226.33	$ 264.10	$ 204.40	$ 200.00	$ 213.76	$ 314.35	$ 180.00	$ 160.00	$ 238.90	$ 151.87	$ 176.00			
1	**Task 1**	**Construction Management and Inspection**															
		Task Order Management	$9,935.66	16									14			30	$15,419.36
		Resident Engineering			468											468	$121,932.72
		Office Engineering				612										612	$129,076.92
		Field Inspection					636	232	136							1,004	$208,592.84
		Electrical Submittal and Shop Drawing Reviews															
		QA/QC - Source and Specialty Inspection								30	78					108	$24,118.56
		Scheduling Analysis										88				88	$20,743.36
		Labor Compliance Monitoring															
		Stormwater Compliance Monitoring												128		128	$22,232.32
		Subtotals (Hours) =	N/A	16	468	612	636	232	136	30	78	88	14	128		2,438	$542,116.08
		Subtotals (Costs) =	$9,935.66	$3,573.12	$121,932.72	$129,076.92	$127,142.76	$39,268.32	$42,181.76	$6,699.60	$17,418.96	$20,743.36	$1,910.58	$22,232.32		**2,438**	**$542,116.08**
		Subtotals (Hours) =	N/A														
		Subtotals (Costs) =															

Totals (Summary) =													**Totals =**		**2,438**	**$542,116.08**
Total (Hours) =	N/A	16	468	612	636	232	136	30	78	88	14	128		2438	
Total (Costs) =	$9,935.66	$3,573.12	$121,932.72	$129,076.92	$127,142.76	$39,268.32	$42,181.76	$6,699.60	$17,418.96	$20,743.36	$1,910.58	$22,232.32			$542,116.08
Percentage of Total (Hours) =	N/A	1%	19%	25%	26%	10%	6%	1%	3%	4%	1%	5%		100%	
Percentage of Total (Costs) =	2%	1%	22%	24%	23%	7%	8%	1%	3%	4%	0%	4%			100%

Work Order Estimate Summary

Total Hours = **264**

Total Costs = **$52,634.90**

Consultant/Subconsultant: **Leighton Consulting**

MTS Doc. No.:

Work Order No.:

Work Order Title: **Iris Rapid Corridor and Station Design**

Attachment: B

Item	TASKS/WBS	TASKS/WBS Description		Engineer, Supervising	Engineer, Senior	Geologist, Senior	Geologist III	PW Tech II	PW Tech III	PW Field Soil & Material Tester Inspector Grp 1	PW Inspector Senior	PW Field Soil & Material Tester Inspector Grp 2	CADD III	Admin III	Admin II	Total Hours	Totals
			MSA Field Rates Effective Execution until June 30, 2022 (See Attachment)	$ 288.07	$ 201.64	$ 179.62	$ 144.03	$ 88.44	$ 115.42	$ 215.38	$ 162.89	$ 249.20	$ 127.73	$ 96.50	$ 66.91		
			July 1,2022 Rates with increase	$ 295.85	$ 207.08	$ 184.47	$ 147.92	$ 90.83	$ 118.53	$ 221.20	$ 167.29	$ 255.93	$ 131.18	$ 99.10	$ 98.71		
			July 1,2023 Rates with increase	$ 303.83	$ 212.67	$ 189.45	$ 151.92	$ 93.28	$ 121.73	$ 227.17	$ 171.80	$ 262.84	$ 134.72	$ 101.78	$ 70.57		
			Rates from first WO	$ 264.53	$ 185.16	$ 164.94	$ 132.27	$ 188.60	$ 193.13	$ 232.03	$ 232.03	$ 232.88	$ 117.30	$ 88.62	$ -		
1	**Task 1**	**QA Material Testing**															
	ODCs		$7,665.00														$7,665.00
	Project Management and Communications			4	20											24	$5,185.08
	Geotechnical Sampling and Testing				4	20	56									80	$12,464.64
	Environmental Sampling							20	20	20	20					80	$11,642.60
	Special Inspection											44				44	$10,964.80
	Document Control				10								6	10		26	$3,747.78
	Project Accounting and Labor Compliance													10		10	$965.00
		Subtotals (Hours) =	N/A	4	34	20	56	20	20	20	20	44	6	20		264	$52,634.90
		Subtotals (Costs) =	$7,665.00	$1,152.28	$6,855.76	$3,592.40	$8,065.68	$1,768.80	$2,308.40	$4,307.60	$3,257.80	$10,964.80	$766.38	$1,930.00		**264**	**$52,634.90**
		Subtotals (Hours) =	N/A														
		Subtotals (Costs) =															

Totals (Summary) = **Totals =** **264** **$52,634.90**

Total (Hours) =	N/A	4	34	20	56	20	20	20	20	44	6	20	264	
Total (Costs) =	$7,665.00	$1,152.28	$6,855.76	$3,592.40	$8,065.68	$1,768.80	$2,308.40	$4,307.60	$3,257.80	$10,964.80	$766.38	$1,930.00		$52,634.90
Percentage of Total (Hours) =	N/A	2%	13%	8%	21%	8%	8%	8%	8%	17%	2%	8%	100%	
Percentage of Total (Costs) =	15%	2%	13%	7%	15%	3%	4%	8%	6%	21%	1%	4%		100%

Work Order Estimate Summary

Consultant/ Subconsultant: **TRC Engineers**

Work Order Title: **Iris Rapid Corridor and Station Design**

Contract No:

Task Order No.

Attachment: **B**

TASKS/WBS (1-5)

ODC Item	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	Vehicles	Monthly	$709.69	14	$9,935.66								
2	QA Surveying (If Required) Invoice												
3													
4													
5													
6													
7													
8													
9													
10													
			Subtotal =		**$9,935.66**	Subtotal =		Subtotal =		Subtotal =		Subtotal =	

TASKS/WBS (6-10)

ODC Item	Description	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Totals Quantity	Totals Total
1	Vehicles											**14**	**$9,935.66**
2	QA Surveying (If Required) Invoice												
3													
4													
5													
6													
7													
8													
9													
10													
		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		**Totals =**	**$9,935.66**

Work Order Estimate Summary

Consultant/ Subconsultant: **Leighton Consulting**

Work Order Title: **Iris Rapid Corridor and Station Design**

Contract No:

Task Order No.

Attachment: **B**

TASKS/WBS (1-5)

ODC Item	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	Mileage	MI	$0.575	400	$230.00								
2	Modified Proctor	EA	$220.00	4	$880.00								
3	Modified Proctor (6 inch)	EA	$245.00	4	$980.00								
4	Sieve Analysis	EA	$175.00	2	$350.00								
5	Sand Equivalent	EA	$105.00	2	$210.00								
6	Durability Index	EA	$200.00	2	$400.00								
7	Specific Gravity	EA	$130.00	2	$260.00								
8	R-Value	EA	$310.00	2	$620.00								
9	HMA Theoretical Max Density	EA	$130.00	2	$260.00								
10	Concrete/CLSM Testing	EA	$25.00	85	$2,125.00								
11	Sample Pick Up	EA	$90.00	15	$1,350.00								
12	PID and PPE	EA	$150.00										
13	CA Title 22 Metals	EA	$128.00										
14	TPH ext.	EA	$83.00										
15	VOCs	EA	$105.00										
				Subtotal =	**$7,665.00**	Subtotal =		Subtotal =		Subtotal =		Subtotal =	

TASKS/WBS (6-10)

ODC Item	Description	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Totals Quantity	Totals Total
1	Mileage											**400**	**$230.00**
2	Modified Proctor											**4**	**$880.00**
3	Modified Proctor (6 inch)											**4**	**$980.00**
4	Sieve Analysis											**2**	**$350.00**
5	Sand Equivalent											**2**	**$210.00**
6	Durability Index											**2**	**$400.00**
7	Specific Gravity											**2**	**$260.00**
8	R-Value											**2**	**$620.00**
9	HMA Theoretical Max Density											**2**	**$260.00**
10	Concrete/CLSM Testing											**85**	**$2,125.00**
11	Sample Pick Up											**15**	**$1,350.00**
12	PID and PPE												
13	CA Title 22 Metals												
14	TPH ext.												
15	VOCs												
		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		**Totals =**	**$7,665.00**

Work Order Estimate Summary

Consultant/Subconsultant: **Leighton Consulting**

MTS Doc. No.:

Work Order No.: **WOA2501-CM01.3**

Work Order Title: **Phase 1 Project South Bay Maintenance Facility ZEB OH**
Phase 2 Project Iris Rapid Corridor Bus Stations

Attachment: B

Total Hours = **150**

Total Costs = **$33,357.70**

Item	TASKS/WBS	TASKS/WBS Description	MSA Field Rates Effective Execution until June 30, 2023 (See Attachment)	Contract Manger	Chief of Party (Lead)	Chief of Party (Lead)	Chief of Party (Lead)	Chief of Party (Lead)	Chainman/Rodman (Assistant)	Chainman/Rodman (Assistant)	Chainman/Rodman (Assistant)	Chainman/Rodman (Assistant)				Total Hours	Totals
				Geff Dye	Josh Bueche (PW)	Chris Kilma (PW)	Chance Ferguson (PW)	Steven Peace (PW)	Carl Luhring (PW)	Alfredo Gonzalea (PW)	Eliot Molina (PW)	Daniel Ordaz Huerta (PW)					
				$ 207.38	$ 168.84	$ 169.09	$ 169.39	$ 170.34	$ 167.13	$ 169.38	$ 172.82	$ 169.09					
			July 1,2023 Rates with increase	$ 212.98	$ 171.43	$ 171.68	$ 171.98	$ 172.93	$ 169.72	$ 171.97	$ 175.41	$ 171.68					
			July 1,2024 Rates with increase	$ 218.73	$ 174.09	$ 174.34	$ 174.64	$ 175.59	$ 172.38	$ 174.63	$ 178.07	$ 174.34					
1	Task 1 & 2	QA Surveying															
		ODCs	$7,558.00														$7,558.00
		Project Management and Communications		10												10	$2,073.80
		Lead Surveyor			15	25	15	15								70	$11,855.80
		Assistant Surveyor							15.0	25.0	15.0	15.0				70	$11,870.10
		Subtotals (Hours) =	N/A	10	15	25	15	15	15	25	15	15				150	$33,357.70
		Subtotals (Costs) =	$7,558.00	$2,073.80	$2,532.60	$4,227.25	$2,540.85	$2,555.10	$2,506.95	$4,234.50	$2,592.30	$2,536.35				**150**	**$33,357.70**
		Subtotals (Hours) =	N/A														
		Subtotals (Costs) =															
		Totals (Summary) =													**Totals =**	**150**	**$33,357.70**
		Total (Hours) =	N/A	10	15	25	15	15	15	25	15	15				150	
		Total (Costs) =	$7,558.00	$2,073.80	$2,532.60	$4,227.25	$2,540.85	$2,555.10	$2,506.95	$4,234.50	$2,592.30	$2,536.35					$33,357.70
		Percentage of Total (Hours) =	N/A	7%	10%	17%	10%	10%	10%	17%	10%	10%				100%	
		Percentage of Total (Costs) =	23%	6%	8%	13%	8%	8%	8%	13%	8%	8%					100%

Metropolitan Transit System

Amendment 4

September 14, 2023

MTS Doc No. G2501.0-21
WOA2501-CM01.4

ZEB IRIS CM AMENDMENT

TRC Engineers Inc
Jim Devey
Project/Task Order Manager
4393 Viewridge Ave. Ste. A
San Diego, CA 92123

This shall serve as Amendment No.4 to the original agreement WOA2501-CM01 as further described below.

SCOPE OF SERVICES

There shall be no change to the Scope of Work, as a result of this Amendment. This Amendment shall provide additional time and funding for construction management services for the ZEB Overhead and Iris Rapid construction projects (see MTS contracts PWB333.0-21 and PWB342.0-22 respectively).

SCHEDULE

This Amendment shall add four hundred seventy-six (476) calendar days to the Schedule. The Schedule shall remain in effect through the completion construction ZEB Overhead and Iris Rapid construction projects (see MTS contracts PWB333.0-21 and PWB342.0-22 respectively).

PAYMENT

As a result of this Amendment, the Payment shall be increased by $421,142.48 (Attachment B). The revised total value of this contract including this amendment shall be $1,825,070.96. This amount shall not be exceeded without prior written approval from MTS.

DRAFT

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

Agreed:

Jim Devey, Project Manager
TRC Engineers Inc.

Date:

Attachments: B - Negotiated Fee Proposal

DRAFT

ATTACHMENTS B
NEGOTIATED FEE PROPOSAL

DRAFT

Work Order Estimate Summary

MTS Doc. No.	**G2501.0-21**
Work Order No.	**WOA2501-CM01.4**
Attachment:	**B**

Work Order Title: **PHASE 1 ZEB OH - AMMENDMENT NO 4**

Project No:

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes	Cost Codes Description	Total Costs
1		PHASE 1 Construction Management and Inspection Services (Extension)	$421,142.48
		Totals =	**$421,142.48**

Table 2 - TASKS/WBS Summary (Costs & Hours)

Item	TASKS/WBS	TASKS/WBS Description	Labor Hrs	Total Costs
1		PHASE 1 Construction Management and Inspection Services	1,928.0	$421,142.48
2				
3				
4				
5				
		Totals =	**1,928.0**	**$421,142.48**

Table 3 - Consultant/Subconsultant Summary (Costs & Hours)

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
				TRC - PHASE 1 Construction Management and Inspection Services	1,928.0	$421,142.48
				Totals =	**1,928.0**	**$421,142.48**

DRAFT

Work Order Estimate Summary

Consultant/Subconsultant: **TRC Engineers**

MTS Doc. No.:

Work Order No.: **OA2501-CM01**

Work Order Title: **PHASE 1: South Bay Maintenance Facility - ZEB OH Charging**

Attachment: B

Total Hours = **1,928**

Total Costs = **$421,142.48**

Item	TASKS/WBS	TASKS/WBS Description		Task Order Manager	Engineer, Supervising	Engineer, Senior	(PW)Field Inspector, Civil, Mechanical	(PW)Field Inspector, Electrical	Techincal Expert - Other (Electrical)	QA/QC, Senior	QA/QC, Senior	Scheduler, Senior	Project Controls III	Stormwater Compliance, Senior		Total Hours	Totals
			MSA Field Rates Effective Execution until June 30, 2022 (See Attachment)	**Charlene Palmer**	**Jim Devey, PE**	**Mike Moen, PE**	**Mel Jacobo, Mahlon Lindenmuth or Rob Hehman**	**Al Perez, PE**	**Jesse Sandhu, PE**	**Brian Murray**	**TBD**	**Dagher Dagher**	**Linda Abu-Hamid**	**Amy Comte**			
				$ 223.32	**$ 260.54**	**$ 210.91**	**$ 199.91**	**$ 169.26**	**$ 310.16**	**$ 223.32**	**$ 223.32**	**$ 235.72**	**$ 136.47**	**$ 173.69**			
			July 1,2022 Rates with increase	**$ 229.35**	**$ 267.57**	**$ 216.60**	**$ 205.31**	**$ 173.83**	**$ 318.54**	**$ 229.35**	**$ 229.35**	**$ 242.09**	**$ 140.16**	**$ 178.38**			
			July 1,2023 Rates with increase	**$ 235.54**	**$ 274.79**	**$ 222.45**	**$ 210.85**	**$ 178.52**	**$ 327.14**	**$ 235.54**	**$ 235.54**	**$ 248.62**	**$ 143.94**	**$ 183.20**			
			Rates from first WO	**$ 226.33**	**$ 264.10**	**$ 204.40**	**$ 200.00**	**$ 213.76**	**$ 314.35**	**$ 180.00**	**$ 160.00**	**$ 238.90**	**$ 151.87**	**$ 176.00**			
1	**Task 1**	**Construction Management and Inspection**															
	Task Order Management			16												16	$3,573.12
	Resident Engineering				600											600	$156,324.00
	Office Engineering																
	Field Inspection					560		680								1,240	$233,206.40
	Electrical Submittal and Shop Drawing Reviews																
	QA/QC - Source and Specialty Inspection																
	Scheduling Analysis											72				72	$16,971.84
	Labor Compliance Monitoring																
	Stormwater Compliance Monitoring																
		Subtotals (Hours) =	N/A	16	600	560		680				72				1,928	$410,075.36
		Subtotals (Costs) =		$3,669.60	$160,542.00	$121,296.00		$118,204.40				$17,430.48				**1,928**	**$421,142.48**
		Subtotals (Hours) =	N/A														
		Subtotals (Costs) =															

Totals (Summary) =								**Totals =**	**1,928**	**$421,142.48**
Total (Hours) =	N/A	16	600	560	680	72			1928	
Total (Costs) =		$3,669.60	$160,542.00	$121,296.00	$118,204.40	$17,430.48				$421,142.48
Percentage of Total (Hours) =	N/A	1%	31%	29%	35%	4%			100%	
Percentage of Total (Costs) =		1%	38%	29%	28%	4%				100%

DRAFT

Metropolitan Transit System

Agenda Item No. 11

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

South Bay Maintenance Facility (SBMF) Building 3620 Roofing Replacement – Work Order Agreement

RECOMMENDATION:

That the San Diego Metropolitan System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Work Order MTSJOC324-35 under Job Order Contract (JOC) to MTS Doc. No. PWG324.0-21 (in substantially the same format as Attachment A), with ABC General Contractor, Inc. (ABCGC), in the amount of $193,236.34 for replacing the roofing at Building 3620 at the SBMF.

Budget Impact

The total budget for this work order shall not exceed $193,236.34. Under separate MTS Doc No. L1282.0-16 with The Gordian Group, MTS will pay a 1.95% JOC software license fee in the amount of $3,768.11. This project is funded by the MTS Capital Improvement Program (CIP) Work Breakdown Structure Element (WBSE) #1006117701 – SBMF 3620 Roofing Replacement.

DISCUSSION:

SBMF Building 3620 Roof Repair Project

The existing roofing at SBMF Building 3620 (located at 3620 Main Street, Chula Vista, CA) is beyond its useful life, and thus, needs to be replaced. This project will generally consist of the removal of approximately 8,100 square feet of existing bitumen roofing system, replacing with Thermoplastic-Polyolefin (TPO), and replacing existing sheet metal flashing. This work will improve the current condition of the building and help bring it to a state of good repair, thus mitigating potential risks and costs to MTS in the future.

JOC Procurement Process

On October 6, 2020, MTS issued an Invitation for Bids (IFB) seeking a contractor to provide JOC building and facilities construction services that primarily consists of repair, remodeling, or other repetitive work, and general building and facility contracting services. These services include, but are not limited to, demolition, maintenance, and modification of existing buildings and facilities, as well as any required incidental professional and technical services.

JOC is a procurement method under which public agencies may accomplish frequently encountered repairs, maintenance, and construction projects through a single, competitively procured long-term agreement.

The JOC program includes a catalog of pricing for a variety of potential tasks to be performed under the contract that have been pre-priced by the contractor, the Gordian Group. All potential contractors are subject to the pricing within this catalog. Each contractor then includes an adjustment factor, escalating their proposed price from the catalog price, to determine the total cost of the task order. The adjustment factor represents an average percentage increase over the catalog price (i.e. 1.25 adjustment factor represents 25% above the catalog price) for that respective task within the project. In order to select the lowest responsive and responsible bidder, MTS staff compares each contractor's proposed adjustment factor.

Nine (9) bids were received and MTS determined that ABCGC was the lowest responsive and responsible bidder. On December 10, 2020 (AI 11), the MTS Board authorized the CEO to execute MTS Doc. No. PWG324.0-21 with ABCGC for General Building Construction Services.

Proposed Action – JOC Work Order for SBMF Building 3620 Roof Repair Project

Today's proposed action would issue a work order to ABCGC under this JOC master agreement. Pricing for this work order was reviewed and determined to be fair and reasonable. ABCGC will provide all materials, labor, and equipment for the removal and replacement of the roofing system at SBMF Building 3620. Work is expected to be completed by November 2023. Premier Roofing of California will be used as a subcontractor for this work order.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute Work Order MTSJOC324-35 under Job Order Contract (JOC) to MTS Doc. No. PWG324.0-21 (in substantially the same format as Attachment A), with ABC General Contractor, Inc. (ABCGC), in the amount of $193,236.34 for replacing the roofing at SBMF Building 3620.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Work Order MTSJOC324-35

JOB ORDER CONTRACT
WORK ORDER

PWG324.0-21
CONTRACT NUMBER

MTSJOC324-35
WORK ORDER NUMBER

THIS AGREEMENT is entered into this _____ day of _____ 2023, 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: ABC General Contractor, Inc. Address: 3120 National Avenue

Form of Business: Corporation San Diego, CA 92113
(Corporation, partnership, sole proprietor, etc.)

Telephone: 619.937.1010

Authorized person to sign contracts: Travis Brozowski President
Name Title

Pursuant to the existing Job Order Contract (MTS Doc. No. PWG324.0-21), MTS issues a Work Order to Contractor to complete the detailed Scope of Work (attached as Exhibit A.), the Cost Breakdown for the Scope of Work (attached as Exhibit B.), and the subcontractor listing form applicable to this Work Order (attached as Exhibit C.)

TOTAL PAYMENTS TO CONTRACTOR SHALL NOT EXCEED $193,236.34

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	ABC GENERAL CONTRACTOR, INC.
By: _____ Sharon Cooney, Chief Executive Officer	Firm: _____
Approved as to form:	By: _____ Signature
By: _____ Karen Landers, General Counsel	Title: _____

DRAFT

EXHIBIT A
(Scope of Work)

DRAFT

San Diego Metropolitan Transit System
1255 Imperial Ave
San Diego, California 92101

Final Scope of Work

Date: 8/16/2023

Job Order Contracting

To: **From:**

Contract No:	PWG324.0-21
Job Order No:	MTSJOC324-35
Job Order Title:	SMBF 3620 Roofing Replacement
Location:	SBMF Building 3620 3620 Main Street Chula Vista, CA 91911
Brief Scope of Work:	

The following items detail the scope of work as discussed at the site. All requirements necessary to accomplish the items set forth below shall be considered part of this scope of work.

Owner Project Manager **Date**

SCOPE OF WORK/MINIMUM TECHNICAL SPECIFICATIONS

SECTION 1-1 GENERAL

This project is for the South Bay Maintenance Facility ("SBMF") improvements at the Training Building, located at 3620 Main Street in Chula Vista. The improvements will consist removal of approximately 8,100 SF of existing bitumen roofing system and replacing with Thermoplastic-Polyolefin (TPO) and replacing existing sheet metal flashing.

All work is to occur within the 3620 building at SBMF located at 3620 Main St. Chula Vista, CA 91911.

SECTION 1-2 STAGING

Contractor is to keep and store all materials and equipment within the work area as possible. Any further staging would have to be coordinated with the MTS Project Manager. There may be some available space adjacent to the work area. All property stored onsite is the responsibility of the contractor and MTS shall not be held liable for any and all equipment, material, tools, etc.

SECTION 1-3 TEMP FACILITIES

The contractor may use MTS' restroom facilities. Contractor is responsible for temp power and water if there is not a close or local source.

SECTION 1-4 SAFETY AND ACCESS

Diligent caution must be taken during the undertaking of this work. All work will occur within the building and on the roof. MTS will coordinate daily access to driver training area. MTS will coordinate parking spots for the contractor. Only vehicles necessary for the performance of the work shall be parked within the lot adjacent to the work. All other parking can be offsite. Roof access can consist of using the roof hatch and ladder or attaching an exterior ladder of scaffolding as necessary. Staff will vacate the training area, but may still use the adjacent lounge area. Contractor to coordinate any days of picking material that for safety purposes would require MTS staff to vacate the lounge area.

SECTION 1-5 WASTE

The contractor is responsible for legally disposing of any and all waste in relation to the work. The contractor shall be responsible for properly disposing all removed materials and old equipment as specified herein. The contractor shall not use any onsite receptacles to dispose of material generated during the performance of this contract. Contractor is responsible for general cleanup at the end of each work day.

SECTION 1-6 SCHEDULE AND SEQUENCING

All work shall be completed within thirty (30) calendar days from issuance of Notice to Proceed. It is assumed there will be some lead time for some items, which is included in the duration. The work shall commence once all material is available and the work can proceed without stoppages. Contractor is to provide a schedule for the work.

SECTION 1-7 SUBMITTALS

Contractor is to provide the following submittals including, but not limited to:

Roofing
-TPO Roofing Membrane(s)
-Insulation
-Cover Board
-Roofing Materials Certificates of Compliance
-Roof Application Compounds, including MSDS
-Skylight Product Data

Sheet Metal Flashing
-Flashing Product Data with Certificates of Compliance
-Elastomeric Sealant and Epoxy Seam Sealer
-Shop Drawing Details for Sheet Metal Flashing Design
-Sheet Metal Finish Samples

Construction Schedule

SECTION 1-8 ROOFING SCOPE OF WORK

1. **Replace Roofing System**
   a. Provide all labor, tools, equipment, and materials to replace the existing skylights and roofing system with new TPO at Building 3620 as shown in drawings A-5.0.
   b. Remove thirteen (13) existing skylights; remove and replace nine (9) skylights in-kind, remove the four (4) southerly skylights and replace with TPO roofing.
   c. Remove existing bitumen asphalt roofing system to expose substrate.
   d. Substrate conditions to be inspected with the Contractor and MTS and may be replaced at the direction of MTS at an additional cost.
   e. Protect in place existing roof vents pipes, gas line, roof access hatch, skylights, roof curbing for HVAC utilities, and etc. All penetrations shall be re-sealed as needed.
   f. TPO roofing system shall be constructed to resist wind uplift.
   g. TPO Sheets shall meet ASTM D6878/D6878M, internally fabric- or scrim-reinforced with 60 mils nominal thickness with exposed face color in white.
      i. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
         Carlisle SynTec Incorporated.
         Flex Membrane International Corp.
         GAF.
         Johns Manville; a Berkshire Hathaway company.
   h. Provide preformed roof insulation boards manufactured or approved by TPO roof membrane manufacturer. Polyisocyanurate Board insulation must comply with ASTM C1289, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.
   i. Provide roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with other roofing system components.
   j. Cover board: Provide glass-mat, water-resistant gypsum boards that meet ASTM C1177/C1177M or fiber-reinforced gypsum board that meets ASTM C1278/C1278M
   k. Provide manufacturer’s recommended adhesive formulated to attach roof insulation substrate or to another insulation layer as follows:
      i. Modified asphaltic, asbestos-free cold-applied adhesive.
      ii. Bead applied, low-rise, one-component or multicomponent urethane adhesive.
      iii. Full-spread, spray applied, low-rose, two component urethane adhesive.
   l. Contractor to provide 20-year quality assurance warranty.

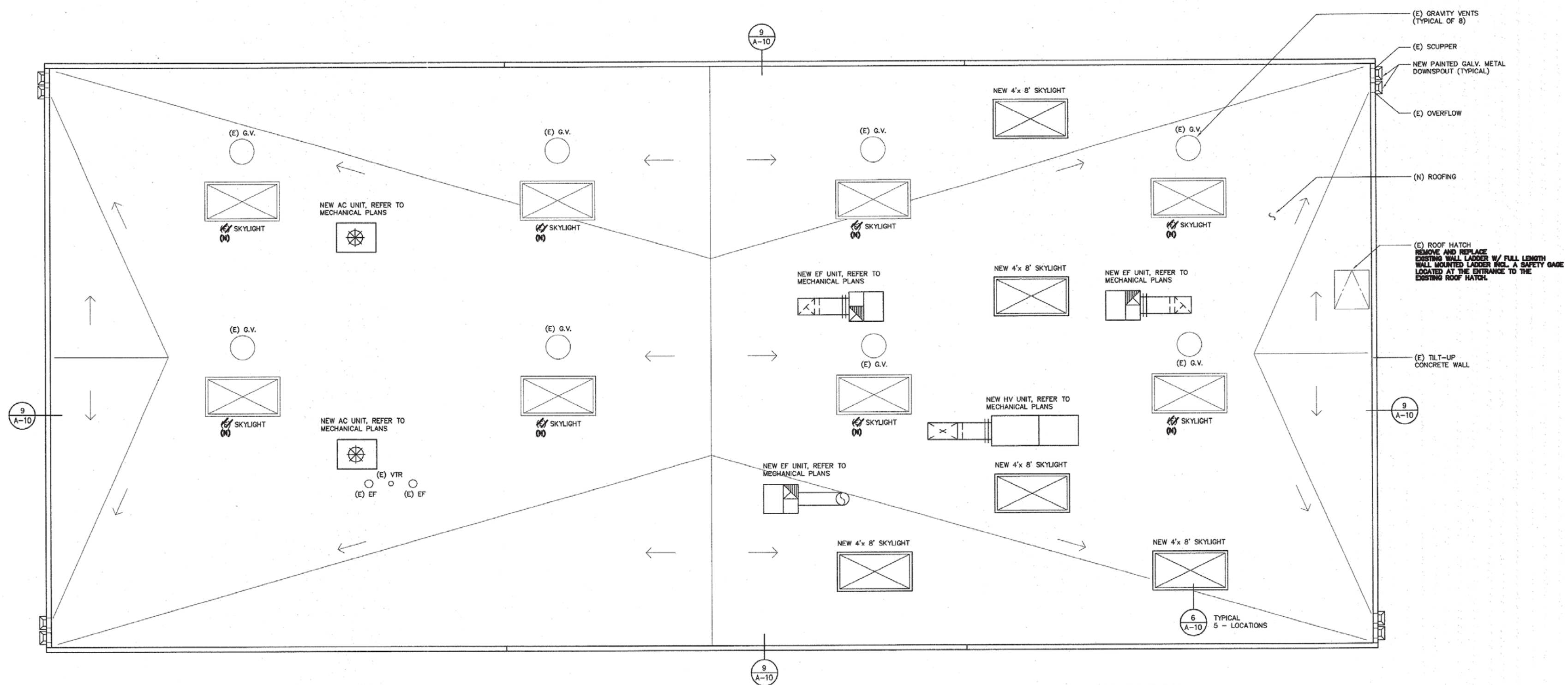
m. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.
    i. Special warranty includes roof membrane, base flashings, roof insulation, fasteners, cover boards, and other components of roofing system.

2. Remove/Replace Flashing In-Kind

a. Provide all labor, tools, equipment, and materials to remove and replace the existing flashing at Building 3620.
b. Flashing at existing expansion joint shall be kept in place with tucker metal to counter flash at expansion joint. Cutting of existing protective flashing at expansion joint shall be coated with cold galvanized coated spray. Expansion joint on west edge shall be protected in place during flashing installation.
c. Coordinate sheet metal flashing and trim layout and seams with sizes and locations of penetrations to be flashed, and joints and seams in adjacent materials.
d. Coordinate sheet metal flashing and trim installation with adjoining roofing and wall materials, joints, and seams to provide leakproof, secure, and noncorrosive installation.
e. Install new base flashing:
    i. Install sheet flashings and preformed flashing accessories and adhere to substrates according to roofing system manufacturer's written instructions.
    ii. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
    iii. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
    iv. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
    v. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.
f. Sheet metal flashing and trim assemblies, including cleats, anchors, and fasteners, shall withstand wind loads, structural movement, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Completed sheet metal flashing and trim shall not rattle, leak, or loosen, and shall remain watertight.
g. Manufacture and install copings roof edge flashings approved for windstorm classification, Class 1-60 Class 1-75 Class 1-90 Class 1-105 Class 1-120.
h. Aluminum sheeting shall meet ASTM B209, color to match existing.
i. Sealant Tape: Pressure-sensitive, 100 percent solids, polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.
j. Elastomeric Sealant: ASTM C920, elastomeric polysulfide silicone polymer sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and trim and remain watertight.
k. Epoxy Seam Sealer: Two-part, noncorrosive, aluminum seam-cementing compound, recommended by aluminum manufacturer for exterior nonmoving joints, including riveted joints.
l. Where dissimilar metals contact each other, or where metal contacts pressure-treated wood or other corrosive substrates, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating or by other permanent separation as recommended by sheet metal manufacturer.
m. Conceal fasteners and expansion provisions where possible in exposed work and locate to minimize possibility of leakage. Cover and seal fasteners and anchors as required for a tight installation.

n. Install work with laps, joints, and seams that are permanently watertight and weather resistant.
o. Install roof edge flashings in accordance with ANSI/SPRI/FM 4435/ES-1.
p. Anchor flashings to resist uplift and outward forces.
q. Contractor to provide 20-year quality assurance warranty.

Attachment(s): South Bay Maintenance Facility Roof Plan As-Builts



ROOFING NOTES

1. ALL ROOF COVERING MATERIALS SHALL HAVE CLASS 'A' OR 'B' RATING,
2. ALL BUILT-UP ROOF AREAS SHALL BE SLOPED AT 1/4" PER LINEAR FOOT. PROVIDE ROOF CRICKETS TO DIVERT WATER AROUND EQUIPMENT BASE, CRICKETS OVER 1'-0" IN LENGTH SHALL BE TAPERED PERLITE BOARD INSULATION WITH 1/4" P.L.F. TOP SLOPE
3. ALL FLASHING SHALL BE MINIMUM 24 GA. GALVANIZED STEEL PAINTED TO MATCH THE ADJACENT SURFACE
4. INSTALL ALL ROOFING MATERIALS INCLUDING SUBSTRATE MATERIALS IN STRICT ACCORDANCE WITH THE MANUFACTURER REQUIREMENTS AND DETAILS
5. ALL PENETRATIONS OF BOLTS, LAGS SCREWS, ETC. THROUGH THE ROOF MEMBRANES SHALL BE WATERPROOFED BETWEEN THE EXISTING MEMBRANE AND ATTACHMENT WITH JIFFY SEAL WATERPROOFING MEMBRANE, ADHESIVE SELF-SEALING NEOPRENE PADS, OR EQUAL WATERPROOF MEMBRANE. ADDITIONALLY, FASTENERS SHALL BE FITTED WITH NEOPRENE GASKETS BETWEEN THE FASTENER AND THE ATTACHMENT.
6. **REPLACE EXISTING TURBINE VENTS WITH NEW VENTS 4'x8' QTY. (8)**

ROOF PLAN

SCALE: 3/16" = 1'-0"

NORTH

AS-BUILT
Brad Helgason
Contract No. BUS-10485
Date: FEB. 2006

XREFS:
FILE NAME:
R-14
JOB NUMBER

NO.	DATE	REVISIONS	BY	CHK	APRV
	FEB 13 2003	CONFORMED			

EARTH TECH
A tyco INTERNATIONAL LTD. COMPANY

LICENSED ARCHITECT CRAIG A. WOODS C-15507 REN 6-30-03 STATE OF CALIFORNIA

	DATE
DESIGNED BY J. CALDERON	9/02
DRAWN BY J. CALDERON	9/02
CHECKED BY C. WOODS	9/02
MTDB PRJ. ENG.	9/02

MTDB
Metropolitan Transit Development Board
1255 Imperial Avenue, Suite 1000, San Diego, Ca. 92101-7490 (619)231-1466

SOUTH BAY MAINTENANCE FACILITY EXPANSION
3620 Main Street, Chula Vista, CA. 91911

ROOF PLAN

SCALE 3/16" = 1'-0"
MTDB CONTRACT NO. BUS-10485
DRAWING NO. A-6.0
SHEET NO. 7

FOR REDUCED PLANS ORIGINAL SCALE IS IN INCHES 0 1 2 3

EXHIBIT B
(Cost Breakdown)

Price Proposal Detail Report

By Division

Version: 2.0
Approved
Proposal Value: $193,236.34
Approved Date: August 14, 2023

Job Order: MTSJOC324-35
Job Order Name: SMBF 3620 Roofing Replacement
Location: SBMF Building 3620 3620 Main Street Chula Vista, CA 91911

Contractor: ABC General Inc.
Contract Number: PWG324.0-21
Contract Name: JOC Building and Facilities Construction Services. - Option 2

Division		Install Total	NPP Total	Demo Total	Division Total
01	General Requirements	$23,477.38	$0.00	$0.00	$23,477.38
06	Wood, Plastics, and Composites	$4,388.44	$0.00	$377.17	$4,765.61
07	Thermal And Moisture Protection	$129,185.20	$0.00	$16,452.56	$145,637.76
08	Openings	$15,669.24	$0.00	$1,168.75	$16,837.99
23	Heating, Ventilating, And Air-Conditioning (HVAC)	$2,103.57	$0.00	$414.03	$2,517.60
Line Count: 34				**Proposal Total:**	**$193,236.34**

The Percentage of Non Pre-Priced on this Proposal: 0.0%

** Includes Price Changes due to Construction Task Catalog update*

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Contract Name: JOC Building and Facilities Construction Services. - Option 2

01 General Requirements **$23,477.38**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
1	012223000962	10,000 LB Telescopic Boom, Hi-Reach, Rough Terrain Construction Forklift With Full-Time Operator	Installation	2.00	$5,784.41	WK	1.0715	$12,395.99
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	WK	1.0715	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: Hi-Reach
1 week of demo, 1 week of new

Item Note:

Total: $12,395.99

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
2	012223001331	13 CY Rear Dump Truck With Full-Time Truck Driver	Installation	1.00	$5,287.91	WK	1.0715	$5,666.00
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	WK	1.0715	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: 1 Week of Demo

Item Note:

Total: $5,666.00

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
3	017113000002	First 25 Miles, Equipment Delivery, Pickup, Mobilization And Demobilization Using A Rollback Flatbed Truck	Installation	1.00	$230.26	EA	1.0715	$246.72
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0715	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Hi-Reach Delivery

Item Note: Includes loading, tie-down of equipment, delivery of equipment, off loading on site, rigging, dismantling, loading for return and transporting away. For equipment such as trenchers, skid-steer loaders (bobcats), industrial warehouse forklifts, sweepers, scissor platform lifts, telescoping and articulating boom man lifts with up to 40' boom lengths, etc.

Total: $246.72

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Job Order Name: SMBF 3620 Roofing Replacement
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Contractor: ABC General Inc.
Contract Number: PWG324.0-21
Contract Name: JOC Building and Facilities Construction Services. - Option 2

4	017413000003	Collect Existing Debris And Load Into Truck Or Dumpster	Installation	119.00	$21.83	CY	1.0715	$2,783.51
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	CY	1.0715	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

User Note: Demo'd/Removed Materials

Item Note: Per CY of debris removed.

Total: $2,783.51

5	017419000036	General Refuse	Installation	50.00	$44.52	TON	1.0715	$2,385.16
Accepted		***History: 1.1 Added, 1.2 Modified, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	TON	1.0715	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

Owner Comments: *V:1.2-Approx. 50 tons for general construction debris for 119 CY of waste. Factor for general construction debris is .37 yards/ton.*

User Note: Demo'd/Removed Materials

Item Note:

Total: $2,385.16

06 Wood, Plastics, and Composites **$4,765.61**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
6	061116000178	2" x 8" Pressure Treated Lumber, For Roofing Nailers	Installation	440.00	$3.37	LF	1.0715	$1,588.82
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	440.000000	$0.80	LF	1.0715	$377.17

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Nailer under new coping

Item Note:

Total: $1,965.99

7	061116000178	2" x 8" Pressure Treated Lumber, For Roofing Nailers	Installation	240.00	$3.37	LF	1.0715	$866.63
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.80	LF	1.0715	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Frame in existing skylight

Item Note:

Total: $866.63

** Includes Price Changes due to Construction Task Catalog update*

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Job Order: MTSJOC324-35
Job Order Name: SMBF 3620 Roofing Replacement
Location: SBMF Building 3620 3620 Main Street Chula Vista, CA 91911

Contractor: ABC General Inc.
Contract Number: PWG324.0-21
Contract Name: JOC Building and Facilities Construction Services. - Option 2

8	061633000006	3/4" Thick CDX Plywood Roof Decking	Installation	440.00	$2.00	SF	1.0715	$942.92
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.62	SF	1.0715	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Frame in existing skylight, double layer

Item Note: Applied to wood rafters.

Total: $942.92

9	061633000006	For Exterior CC Grade Plywood, Add **MOD: 0006**	Installation	440.00	$0.10	SF	1.0715	$47.15
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***						

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

Total: $47.15

10	061633000006	For Selective Replacement <400 (Includes Removal Of Damaged Plywood And Fitting New Plywood To Size), Add **MOD: 0011**	Installation	440.00	$2.00	SF	1.0715	$942.92
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment Yes** **Includes Materials No**

Total: $942.92

07 Thermal And Moisture Protection **$145,637.76**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
11	070150190003	Removal Of Gravel Ballast From Roof, Vacuum And Disposal	Installation	94.00	$37.10	SQ	1.0715	$3,736.75
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SQ	1.0715	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: Existing Ballast Removal

Item Note:

Total: $3,736.75

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Job Order: MTSJOC324-35
Job Order Name: SMBF 3620 Roofing Replacement
Location: SBMF Building 3620 3620 Main Street Chula Vista, CA 91911

Contractor: ABC General Inc.
Contract Number: PWG324.0-21
Contract Name: JOC Building and Facilities Construction Services. - Option 2

12	070150810009	Mastic Sealer, 1/4" Bead At Joint	Installation	960.00	$3.07	LF	1.0715	$3,157.92
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	960.000000	$1.32	LF	1.0715	$1,357.80
		Includes Labor Yes Includes Equipment Yes Includes Materials Yes						

User Note: At termination bar
Item Note:

							Total:	**$4,515.72**
13	071313000006	5 Ply, 15 LB Asphalt Saturated Organic Felt Sheet Waterproofing, Hot-Mopped	Installation	0.00	$373.57	CSF	1.0715	$0.00
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	96.000000	$111.98	CSF	1.0715	$11,518.71
		Includes Labor No Includes Equipment No Includes Materials No						

User Note: Bituminous Demo
Item Note:

							Total:	**$11,518.71**
14	072216000147	1" Thick, R2.5, High-Density Fiberboard, Roof Board Insulation, Mechanically Fastened	Installation	9,600.00	$1.90	SF	1.0715	$19,544.16
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SF	1.0715	$0.00
		Includes Labor Yes Includes Equipment No Includes Materials Yes						

User Note: New Insulation
Item Note:

							Total:	**$19,544.16**

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Job Order: MTSJOC324-35
Job Order Name: SMBF 3620 Roofing Replacement
Location: SBMF Building 3620 3620 Main Street Chula Vista, CA 91911

Contractor: ABC General Inc.
Contract Number: PWG324.0-21
Contract Name: JOC Building and Facilities Construction Services. - Option 2

15	072216000390	3.5" Average Thickness (20.0 Average R-Value), 1/2" Slope, Tapered Polyisocyanurate Board, Mechanically Fastened	Installation	960.00	$4.35	SF	1.0715	$4,474.58
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SF	1.0715	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Install crickets system as necessary to allow for proper drainage at mechanical units.

Item Note:

							Total:	**$4,474.58**
16	072216000467	Demolish Up To 1/2" Average Thickness, Rigid Board Roofing Insulation	Installation	9,600.00	$0.41	SF	1.0715	$4,217.42
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	SF	1.0715	$0.00

Includes Labor Yes **Includes Equipment No** **Includes Materials No**

User Note: Remove existing insulation under the Bituminous Roofing.

Item Note:

							Total:	**$4,217.42**
17	075113000129	Polyroof SF Flashing Mastic	Installation	440.00	$17.28	LF	1.0715	$8,146.83
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	LF	1.0715	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Coping Seal

Item Note: A solvent free, one part elastomeric roof mastic. Used to seal edges or as a repair mastic for split or cracked seals.

							Total:	**$8,146.83**
18	075113000133	TremSEAL S Silicone Sealant	Installation	880.00	$4.18	LF	1.0715	$3,941.41
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	LF	1.0715	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Misc. Joint sealant

Item Note:

							Total:	**$3,941.41**

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Job Order: MTSJOC324-35
Job Order Name: SMBF 3620 Roofing Replacement
Location: SBMF Building 3620 3620 Main Street Chula Vista, CA 91911

Contractor: ABC General Inc.
Contract Number: PWG324.0-21
Contract Name: JOC Building and Facilities Construction Services. - Option 2

19	075113000143	36" Wide, Fiberglass Reinforced Asphaltic Walkway Protection Pad (Tremco Trem-Tred®)	Installation	480.00	$20.57	LF	1.0715	$10,579.56
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	LF	1.0715	$0.00

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Misc. Protection Pad "walkway Pads" Estimated 5%
Item Note:

Total: $10,579.56

20	075113000193	Up To 10,000 SF 20 Year Roofing System Warranty	Installation	1.00	$2,000.00	EA	1.0715	$2,143.00
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	0.000000	$0.00	EA	1.0715	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: 20 Year NDL Labor and Material Warranty
Item Note:

Total: $2,143.00

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Contractor: ABC General Inc.
Contract Number: PWG324.0-21
Contract Name: JOC Building and Facilities Construction Services. - Option 2

21	075423000003	60 Mil, Single Ply TPO Roofing Membrane, Fully Adhered		Installation	96.00	$245.44	SQ	1.0715	$25,246.94
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$60.53	SQ	1.0715	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**							
		User Note: New TPO							
		Item Note: Includes adhesive.							
								Total:	**$25,246.94**
22	075423000003	For Low VOC Adhesive, Add	**MOD: 0141**	Installation	89.00	$59.26	SQ	1.0715	$5,651.24
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***							
		Includes Labor No **Includes Equipment No** **Includes Materials Yes**							
								Total:	**$5,651.24**
23	075423000003	For Integral Polyester Fleece-Backing, Add	**MOD: 0149**	Installation	89.00	$33.25	SQ	1.0715	$3,170.84
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***							
		Includes Labor No **Includes Equipment No** **Includes Materials Yes**							
								Total:	**$3,170.84**
24	075423000009	Acrylic, Thermoplastic Polyolefin (TPO) Roofing Primer, Price Per Coat		Installation	96.00	$50.95	SQ	1.0715	$5,240.92
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***		**Demo:**	0.000000	$0.00	SQ	1.0715	$0.00
		Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**							
		User Note: Under new TPO							
		Item Note:							
								Total:	**$5,240.92**

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Contract Name: JOC Building and Facilities Construction Services. - Option 2

25	075423000013	6" Diameter, Prefabricated TPO Penetration Pocket	Installation	15.00	$75.52	EA	1.0715	$1,213.80
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	15.000000	$7.70	EA	1.0715	$123.76

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: New Pipe/Penetration Boots

Item Note: Includes attaching the pocket to the membrane, sealing around the penetration and filling the pocket with pourable sealer.

Total: $1,337.56

26	075423000015	Thermoplastic Polyolefin Membrane Base Flashing	Installation	600.00	$5.03	SF	1.0715	$3,233.79
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	600.000000	$1.10	SF	1.0715	$707.19

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

User Note: Misc. base/counter flashing

Item Note:

Total: $3,940.98

27	075423000017	Thermoplastic Polyolefin Clad Edge Metal Or Base Flashing	Installation	880.00	$7.27	SF	1.0715	$6,855.03
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	880.000000	$1.10	SF	1.0715	$1,037.21

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

Total: $7,892.24

28	075900000002	Membrane Roofing Termination Bar	Installation	440.00	$3.18	LF	1.0715	$1,499.24
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	440.000000	$1.06	LF	1.0715	$499.75

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: New Termination Bar

Item Note: Includes fasteners and caulking.

Total: $1,998.99

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division
Version: 2.0
Approved
Proposal Value: $193,236.34
Approved Date: August 14, 2023

Job Order: MTSJOC324-35
Job Order Name: SMBF 3620 Roofing Replacement
Location: SBMF Building 3620 3620 Main Street Chula Vista, CA 91911

Contractor: ABC General Inc.
Contract Number: PWG324.0-21
Contract Name: JOC Building and Facilities Construction Services. - Option 2

29	076213000038	Install 24 Gauge Galvanized Scupper To 12" Square	Installation	6.00	$155.91	EA	1.0715	$1,002.35
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	6.000000	$0.00	EA	1.0715	$0.00

Includes Labor No **Includes Equipment No** **Includes Materials Yes**

User Note: Scupper replacement

Item Note: Primed, set in mastic and nailed off at flange 2 rows 3" on center and five (5) coursed to roof membrane.

Total: $1,002.35

30	077113000004	>14" To 16" Wide (Stretch-out), 24 Gauge, KYNAR 500® Finish, Galvanized Steel Coping System With Galvanized Steel Cleats	Installation	440.00	$21.30	LF	1.0715	$10,042.10
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	440.000000	$1.82	LF	1.0715	$858.06

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: New Coping

Item Note:

Total: $10,900.16

31	077223000008	21" Neck Diameter, 26 Gauge, Galvanized Steel, Outside Braced, Wind Driven Turbine Ventilator	Installation	8.00	$434.03	EA	1.0715	$3,720.51
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	8.000000	$40.84	EA	1.0715	$350.08

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Replace 8 Whirlybird vents

Item Note:

Total: $4,070.59

32	077223000008	For Curb Or Flange Base, Add **MOD: 0214**	Installation	8.00	$276.11	EA	1.0715	$2,366.81
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***						

Includes Labor Yes **Includes Equipment No** **Includes Materials Yes**

Total: $2,366.81

** Includes Price Changes due to Construction Task Catalog update*

Price Proposal Detail Report

By Division

Version: 2.0
Approved
Proposal Value: $193,236.34
Approved Date: August 14, 2023

Job Order: MTSJOC324-35
Job Order Name: SMBF 3620 Roofing Replacement
Location: SBMF Building 3620 3620 Main Street Chula Vista, CA 91911

Contractor: ABC General Inc.
Contract Number: PWG324.0-21
Contract Name: JOC Building and Facilities Construction Services. - Option 2

08 Openings **$16,837.99**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
33	086313000177	52-1/4" x 100-1/4" Inside Frame Dimensions, 10 LB Uplift Rated, Polycarbonate/Polycarbonate Double Glazed Prismatic Lens, Industrial Style Smoke Vent Dome, Aluminum Framed Skylight	Installation	9.00	$1,624.85	EA	1.0715	$15,669.24
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	11.000000	$99.16	EA	1.0715	$1,168.75

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: 11 Total demo, 2 to be abandon, 9 remaining

Item Note:

Total: $16,837.99

23 Heating, Ventilating, And Air-Conditioning (HVAC) **$2,517.60**

Record #	CSI Number	Description	Type	Quanity	Unit Price	UOM	Factor	Line Total
34	230529000539	5" x 6" x 9.6" Rooftop Support Base With 14 Gauge Galvanized Channel (Cooper B-Line Dura-Blok DB10)	Installation	40.00	$49.08	EA	1.0715	$2,103.57
Accepted		***History: 1.1 Added, 1.2 Accepted, 1.3 Accepted, 2.0 Accepted***	**Demo:**	40.000000	$9.66	EA	1.0715	$414.03

Includes Labor Yes **Includes Equipment Yes** **Includes Materials Yes**

User Note: Misc. Durablocks

Item Note:

Total: $2,517.60

Proposal Total: $193,236.34

Div **The Percentage of Non Pre-Priced on this Proposal: 0.0%**

** Includes Price Changes due to Construction Task Catalog update*

EXHIBIT C
(Subcontractor Listing)

San Diego Metropolitan Transit System
1255 Imperial Ave
San Diego, CA 92101

Subcontractor Report

Date: 8/16/2023

Job Order Contracting

Contract #: PWG324.0-21
Job Order #: MTSJOC324-35
Job Order Title: SMBF 3620 Roofing Replacement
Job Order Value: $193,236.34
Location: SBMF Building 3620
Contractor: ABC General Inc.
Subcontractor: Permier Roofing of California

Subcontractor Name	License Number	Describe Nature of Work (Trade)	Certifications	Subcontractor Total	%
Permier Roofing of California 9134 Olive Drive, Spring Valley, CA 91977	874943	roofer		$125,632.00	65.01%

Summary

Certification Name	Value	%
	$125,632.00	65.01%
Total	**$125,632.00**	**65.01%**

Metropolitan Transit System

Agenda Item No. 12

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Municipal Separate Storm Sewer System (MS4) Support and As-Needed Best Management Practices (BMP) Repair and Consulting 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. PWG367.0-23 (in substantially the same format as Attachments A), with WSP USA (WSP), in the amount of $1,079,270.68 for a period of five (5) years to provide MTS support and as-needed repair and consulting services related to Phase II MS4 General Order.

Budget Impact

The total budget for this project shall not exceed $1,079,270.68. This project is funded by Storm Water Operations Budget 122010 – 571140.

DISCUSSION:

State law gives the State Water Resources Control Board (SWRCB) authority to regulate water quality. The SWRCB does this partially by establishing regulations and requiring public agencies to obtain a permit for storm water discharges. MTS was enrolled as a permittee under the SWRCB's Phase II MS4 General Order. As a permittee, MTS is required to have a formal plan committing to various storm water management, monitoring, reporting, education/outreach, illegal discharge detection and elimination, construction site requirements, and pollution prevention measures (Plan). Because of the specialized expertise needed to oversee MTS's Phase II MS4 program, MTS contracts with a consultant firm to assist MTS with its compliance and documentation efforts required by the Plan. The current contract for such services expires on October 31, 2023.

Today's proposed action would award a contract to WSP to assist MTS with implementing the Plan, so as to comply with the Phase II MS4 General Order. The general services include program management tasks, project team coordination and management, preparation of draft annual report on stormwater multiple application and report tracking system (SMARTS), Stormwater Pollution Prevention Plans (SWPPP)/Water Quality Technical Report (WQTR)

review, treatment BMP inspections and maintenance, training and development of MTS staff, tracking of MS4 permit requirements, annual guidance updates, total maximum daily loads (TMDL) compliance implementation, update and implement comprehensive education and outreach program, review and update templates for construction SWPPP and erosion and sediment control plan, and as-needed BMP repair and consulting services. The services are necessary to ensure that MTS remains in compliance with the MS4 General Order.

On May 17, 2023, MTS issued a Request for Proposals (RFP) solicitation for support and as-needed repair and consulting services related to Phase II MS4 General Order.

On June 16, 2023, MTS received a proposal from each of the following firms.

#	Firm Name	Certifications
1	Socal Stormwater Runoff Solution Services Inc. (Socal)	Women Business Enterprise (WBE), Small Business (SB)
2	Whitson Contracting & Management, Inc. (Whitson)	SB
3	WSP	None

All firms were deemed responsive and responsible by MTS. A selection committee, consisting of representatives from Environmental Health and Safety, Facilities Management, and Finance departments met for initial evaluations and scored the proposals based on the criteria below:

Criteria	%
Qualifications of the Firm or Individual	20%
Staffing, Organization, and Management Plan	25%
Work Plan	30%
Cost and Price	25%
Total Possible Score	**100%**

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

Rank	Firm Name	Technical (Max 75%)	Cost (Max 25%)	Proposed Cost	Total Score
1.	WSP	68.33	19.05	$1,116,622.09	87.38
2.	Socal	56.00	25.00	$850,714.68	81.00
3.	Whitson	38.33	9.99	$2,129,890.00	48.32

As a result of the initial evaluation, the panel deemed WSP and Socal to be within the competitive range, and eliminated Whitson from further consideration.

Following the initial evaluations, the selection committee requested clarifications/revised proposals from both WSP and Socal. After receipt of the revised proposals, the panel reconvened, and using the aforementioned evaluation criteria, re-evaluated the proposals from WSP and Socal.

Rank	Firm Name	Technical (Max 75%)	Cost (Max 25%)	Proposed Cost	Total Score
1.	WSP	68.33	19.05	$1,116,622.09	88.71
2.	Socal	56.00	25.00	$850,714.68	73.00

After the second evaluation, the selection committee determined that only WSP remained in the competitive range, and commenced negotiations with the firm. As a result of negotiations, WSP reduced their proposed pricing by $37,351.41 from the original offer of $1,116,622.09 to a revised offer of $1,079,270.68.

After considering the technical and price factors and price analysis, the selection committee deemed that WSP provided the best value to MTS.

Therefore, staff recommends that the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the CEO to execute MTS Doc No. PWG367.0-23 (in substantially the same format as Attachments A), with WSP, in the amount of $1,079,270.68 for a period of five (5) years to provide MTS support and as-needed repair and consulting services related to Phase II MS4 General Order.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. Draft Agreement, MTS Doc No. PWG367.0-23

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. PWG367.0-23

MS4 SUPPORT AND AS-NEEDED BMP REPAIR AND CONSULTING SERVICES

THIS AGREEMENT is entered into this _____ day of _____, 2023 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: WSP USA Inc. Address: 401 B St., Ste. 1650

San Diego, CA 92101
City State Zip

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.)

Email: Patti.Boekamp@wsp.com

Telephone: 619.338.9376

Authorized person to sign contracts Patti Boekamp Senior Director / Local Business Leader
Name Title

The Contractor agrees to provide services as specified in the conformed Scope of Work/Technical Specification (Exhibit A), Contractor's Technical Proposal (Exhibit A1), Contractor's Cost/Pricing Form (Exhibit B), and in accordance with the Standard Agreement, including Standard Conditions (Exhibit C), Forms (Exhibit D), and Policy 44C Travel Guidelines for Contractors (Exhibit F).

The contract term is for up to (5) years effective November 1, 2023 through October 31, 2028.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $1,079,270.68 without the express written consent of MTS.

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

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EXHIBIT A

SCOPE OF WORK/TECHNICAL SPECIFICATION

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SCOPE OF WORK/TECHNICAL SPECIFICATIONS

5.1. BACKGROUND

The State Water Resources Control Board (SWRCB) promulgated new requirements for stormwater discharges for small Municipal Separate Storm Sewer System (MS4) on July 1, 2013 by Order No. 2013-0001-DWQ 2013, hereinafter referred to as the "General Order" (ATT 2_GENERAL ORDER). The San Diego Metropolitan Transit System (MTS) was not originally designated as a new Non-Traditional Small MS4 Permittee that was required to enroll under the General Order. However, the San Diego Regional Water Quality Control Board (Regional Board) informed MTS that the Regional Board intended to exercise its authority, and required MTS to enroll under the General Order as a new Non-Traditional Small MS4 Permittee by the end of 2016. Therefore, MTS developed a plan to complete the tasks set forth in the provisions of the General Order in the appropriate time frame (ATT 3_MS4 OPERATIONS & MAINTENANCE ACTIVITY GUIDANCE MANUAL.). Selected Consultant shall assist MTS with implementing plan to comply with the Phase II (MS4) General Order.

5.2. PERIOD OF PERFORMANCE

The term of the agreement shall be for a five (5) year base period from the date of the Notice to Proceed.

5.3. MINIMUM REQUIREMENTS

A) At least five (5) years of experience conducting services of similar scope.
B) Consultant shall obtain Roadway Worker Safety Training certification before access is authorized to MTS rail property.
C) Consultant shall provide evidence of permit-required confined space entry training for employees tasked with BMP maintenance, cleaning and/or installation.
D) Any work within fifteen (15) feet of active rail, or as otherwise identified by MTS, shall require a 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 be subject to SDTI labor reporting costs.
E) Contractor shall have certified Qualified SWPPP Designer (QSD) or Qualified Stormwater Practitioner (QSP) certification(s) on staff to review MTS construction project(s).

5.4. DETAILED SCOPE OF WORK

5.4.1 PROGRAM MANAGEMENT - Consultant shall perform the following services:

5.4.1.1 Monthly Meetings

- Prepare draft agenda for review
- Submit final agenda
- Participate in meeting

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5.4.1.2 Invoice/Progress Report

- Submit monthly invoice and progress report to MTS

5.4.1.3 Project Team Coordination and Management

- Prepare quarterly progress reports

5.4.2 MS4 SUPPORT SERVICES

Consultant shall provide regulatory support associated with the Small MS4 General Permit Water Quality Order 2013-0001-DWQ and amendments. Regulatory support may include but is not limited to the following:

5.4.2.1 Annual Report

- Prepare draft Annual Report on Stormwater Multiple Application and Report Tracking System (SMARTS)
- Download in PDF file format for review by MTS and outside legal counsel
- Incorporate MTS comments and prepare final Annual Report
- Submit final Annual Report to MTS approved signatory for certification on SMARTS
- Program Effectiveness Assessment and Improvement Plan

5.4.2.2 Stormwater Pollution Prevention Plans (SWPPP)/Water Quality Technical Report (WQTR) Review

- Review SWPPP and WQTRs as requested
- Submit comment matrix to MTS
- Review MTS's response to comments
- Attend meetings with various regulatory agencies, and MTS staff, as needed for final comment resolution

5.4.2.3 Treatment Best Management Practice (BMP) Inspections and Maintenance (See ATT 4 MTS STATIONS WITH TREATMENT BMPS.)

- Inspect biannual Treatment BMPs at Trolley and Transit stations to comply with MTS MS4 permit requirements.
- Complete MTS inspection form and submit with photos to MTS within five (5) days after the inspection
- Schedule and provide oversight of treatment BMP's maintenance, replacement and/or minor repairs (as approved by MTS)
- Inspect treatment BMPs per weather related requirements

5.4.2.4 Training and Development

- Update and provide slide decks on training pertaining to MS4 Permit compliance, such as Illicit Discharge Detection and Elimination Training, as requested by MTS.
- Update and provide slide decks on training pertaining to MS4 Permit compliance, such as Good Housekeeping Training, as requested by MTS.
- Deliver training to MTS as requested

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- Review and update annual training materials, if needed.

5.4.2.5 Track MS4 Permit Requirements

- Track required training, inspections and permit reporting requirements on a monthly basis
- Provide updates to MTS Environmental Health Specialist to ensure MTS compliance with MS4 Permit reporting requirements

5.4.2.6 Annual Guidance Updates

- Update MTS MS4 Guidance documents based on changes to MTS facilities or modifications to the MS4 Permit
- Submit changes in draft form to MTS, and submit final guidance based on comments from MTS

5.4.2.7 Total Maximum Daily Loads (TMDL) Compliance Implementation

- Support MTS with implementation of TMDL monitoring requirements
- Support MTS with any coordination for sampling and analysis of TMDL pollutants of concern such as, but not limited to, total suspended solids and bacteria
- Update and maintain GIS Data base of MTS Stormwater infrastructure.
- Conduct field inspections and sampling to investigate illicit discharges and report to MTS.

5.4.2.8 Public Education and Outreach Program

- Update and implement comprehensive education and outreach program
- Disseminate education materials to target audiences and translate to multiple non-English languages as appropriate
- Promote reporting of illicit discharge
- Provide water efficient/ stormwater friendly landscaping information.

5.4.2.9 Construction General Permit

- Review and update templates for Construction SWPPP and Erosion and Sediment Control Plan ensure compliance with MS4 and MTS's Stormwater Management Plan.
- Review and provide comments of construction projects to ensure compliance with MTS MS4 permits.
- Perform annual facility assessment of MTS leasing properties and submit inspection result matrix back to MTS.
- Post Construction Stormwater Management Program/ Trash compliance implementation/ Factsheet

5.5 AS-NEEDED REPAIR SERVICES

Consultant shall provide minor, routine, or reoccurring construction or renovation, alteration or repair of existing BMPs catch basins, storm drains, swales, or conveyance, or implement new BMPs on an as-needed basis. Consultant shall supply all labor materials necessary to provide as needed repair services on a Time and Materials basis.

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5.6.1 General Requirements

1. Consultant shall comply with all City, County, State, or Federal building laws, regulations, and code requirements in the performance of their work.

2. Consultant shall be responsible for diagnosing the problem and making the necessary repairs.

3. Consultant shall only perform work that is approved by MTS. Approval by the MTS Project Manager or designee is required prior to any work being performed.

    - Prior to performing any repair services, Consultant shall provide a quote for the services to be performed. The quote shall include at minimum the following information:
        - Estimated hour(s) and hourly rate
        - At cost part(s) amount
        - Part percentage mark up
        - Date the service is to be performed and completed
    - Any work requires approval from MTS Procurement prior to commencement of services.

        I. Consultant shall perform and complete each work order in the agreed upon manner and time period.

        II. In the event of accidental site damage by the Consultant, Consultant shall be responsible to return the site to its original condition at no cost to MTS.

        III. Consultant shall remove all debris generated while making repairs, replacement, or installation and leave the work area clean, “broom swept” state.

        IV. Unless otherwise stated, Consultant shall remove all equipment, materials, etc. as directed by MTS.

        V. Consultant is responsible for clarifying with the MTS Project Manager or designee any questions regarding the work that is to be performed.

        VI. All parts furnished in connection with repair of equipment shall be new and at least equal quality to the parts being replaced, and must be unconditionally guaranteed for a minimum period of one (1) year or manufacturer’s warranty, whichever is longer.

        VII. All equipment removed or salvaged in conjunction with replacements (other than cabling and wires) must be returned to MTS Storeroom within five (5) days, along with a packaging slip describing where the parts were taken from, who replaced them under what work order number(s), and what parts were being replaced. MTS parts clerk must receive and sign off on all packing slips in person. Upon award MTS will inform the Consultant the location and contact information for the returns.

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VIII. Consultant shall be paid only for time spent on the premises performing the services required under the contract. Travel time, or related expenses, such as fuel, etc. will not be reimbursed.

A. Service Calls

1. MTS expects the Consultant to give “priority” to service requests. Consultant is responsible for contacting MTS within twenty-four (24) hours of call, or at the beginning of the next business day.

2. Service calls shall be provided Monday through Friday, 7:00 am and 4:00 pm (excluding MTS holidays,).

3. All repairs must be made at the time of the service call, unless otherwise agreed upon by MTS. Equipment cannot be removed without leaving a replacement that will keep the systems operational.

B. Hourly Rates

All estimated travel subsistence costs (i.e. mileage, fuel surcharge, etc.), project management and administration projected to be utilized by the Consultant during the term of performance of any resultant contract are to be absorbed, amortized, and incorporated into the Proposer’s fully burdened unit per hour rates.

1. Call Back Services shall be billed at the labor rates as set forth in the Consultant’s quote.

C. Replacement Parts

In the event that the Consultant need to purchase replacement parts (not covered in the scope of the contract) to repair equipment parts, materials and supplies shall be reimbursed by MTS based on actual cost plus the mark up expense provided herein. All pass-through expenses must be authorized by the designated MTS Project. The maximum cost-plus mark-up expense allowed shall not be more than 3%.

5.6 CONSULTANT DELIVERABLES

a) Consultant shall provide copies of reports to the MTS Project Manager for review and comment. Once approved by the MTS Project Manager, Consultant shall upload all necessary reports to SMARTS.
b) Consultant shall perform annual Program Effectiveness Assessment and Improvement Plan.
c) Consultant shall provide copy of Annual Report for MTS review and comment. Consultant shall upload final copy of the annual report to the SMARTS system.
d) Consultant shall provide detailed justification for any BMP recommendations, and cost estimates for any maintenance, replacement, upgrade or additions to existing BMPs, for approval by the MTS Project Manager or designee, prior to commencing work.
e) Consultant shall provide regulatory storm water training materials, such as Illicit Discharge Detection and Elimination and Good Housekeeping as stated above.

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f) Consultant shall submit the Treatment BMP Inspection Form(s)1 (Electronic PDF Format) for every treatment BMP to MTS Project Manager, inclusive of photographic documentation.
g) Consultant shall perform monthly review of GIS storm water infrastructure, and update GIS database.

5.7 MTS DELIVERABLES:

A) Access shall be provided to facilities for applicable services such as inspections, audits and site evaluation, and sampling locations.
B) Designation shall be authorized as a Data Entry Person on SWRCB's SMARTS database for the specific facility where service is provided.
C) Current TMDL Compliance Plan shall be provided to the selected Consultant for rationale and sampling procedures for TMDL compliance.

5.8 SCHEDULE OF SERVICES

A) The Annual Report shall be submitted within fifteen (15) working days of the end of reporting period.
B) Additional reports shall be delivered as agreed to by the Parties.

5.9 ACCEPTANCE AND ACCURACY OF DATA

Consultant shall be solely responsible for providing timely and accurate QSE sampling throughout the term of the agreement. Consultant shall be responsible for all additional costs due to inaccurate and/or incorrect sampling due to Consultant negligence. At no time shall MTS pay for Consultant negligence and Consultant shall be solely responsible for re-sampling and re-testing of any and all samples which are found to be contaminated, inaccurate, outside hold times, or not capable of testing in a lab.

5.10 CHANGES/ADDITIONAL SERVICES

SRWQCB occasionally mandates for additional constituents to be analyzed from rain samples collected at industrial facilities. At the time of the contract award, the existing sampling requirements shall be identified in the SWPPP, however MTS may require on-call inspections by the Consultant as a result of mandate revisions for tasks including but not limited to permit revisions, TMDL requirements/amendments or new SWPPP requirements.

Thus, during the term of the agreement, MTS reserves the right to add services and locations based on regulatory and agency need.

5.11 STANDARD OF CARE

Proposer's services shall be performed in accordance with generally accepted professional practices and principles and in a manner consistent with the level of care and skill ordinarily exercised by members of the profession currently practicing under similar conditions.

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5.12 PRICING

Pricing shall be firm and fixed for the duration of the Contract and any subsequent Change Orders/Amendments to the Contract, and shall be inclusive all costs, including but not limited to overhead, profit, travel, etc., incurred in the performance of said services. There shall be no escalation of rates or fees allowed.

Specific Rates of Compensation:

Consultant shall be paid at an agreed upon and supported specific fixed hourly blended rate for each class of employee engaged directly in the work.

5.13 PERSONNEL CHANGES

Consultant Contract Manager shall keep the MTS Contract Manager informed of any changes to the Consultant's key personnel as identified in the Consultant's proposal. The Consultant shall provide MTS's designee, a new Statement of Qualifications (SOQ) within thirty (30) days of any changes. The SOQ shall include at a minimum key personnel's resume, and relevant experience for the services in this agreement.

MTS reserves the right to reject Consultant's change of key personnel, should MTS deem the replacement personnel not qualified to perform the services in this agreement.

5.14 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.

5.15 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.

5.16 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.

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ATTACHMENTS

ATT 2_GENERAL ORDER

ATT3_MS4 OPERATIONS & MAINTENANCE ACTIVITY GUIDANCE MANUAL

ATT 4 MTS STATIONS WITH TREATMENT BMPS

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STATE WATER RESOURCES CONTROL BOARD
WATER QUALITY ORDER NO. 2013-0001-DWQ
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
GENERAL PERMIT NO. CAS000004

WASTE DISCHARGE REQUIREMENTS (WDRs)
FOR
STORM WATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4s) (GENERAL PERMIT)

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FINDINGS

The State Water Resources Control Board (State Water Board) finds that:

1. Storm water is a resource and an asset and should not be treated as a waste product. Managing rainwater and storm water at the source is a more effective and sustainable alternative to augmenting water supply, preventing impacts from flooding, mitigating storm water pollution, creating green space, and enhancing fish and wildlife habitat. California encourages alternative, innovative, multi-objective solutions to help use and protect this valuable resource, while at the same time controlling pollution due to urban runoff.

2. As human population increases, urban development creates new pollution sources and brings with it proportionately higher levels of car emissions, car maintenance wastes, municipal sewage, pesticides, household hazardous wastes, pet wastes, trash, etc. which can either be washed or directly dumped into the municipal separate storm sewer system (MS4). As a result, the runoff leaving the developed urban area is greater in pollutant load than the pre-development runoff from the same area. Also, when natural vegetated pervious ground cover is converted to impervious surfaces such as paved highways, streets, rooftops, walkways and parking lots, the natural absorption and infiltration abilities of the land are lost. Therefore, runoff leaving developed urban area is significantly greater in runoff volume, velocity, peak flow rate, and duration than pre-development runoff from the same area. The increased volume, velocity, rate, and duration of runoff greatly accelerate the erosion of downstream natural channels. In addition, the greater the impervious cover the greater the significance of the degradation.

3. Pollutants of concern found in urban runoff include sediments, non-sediment solids, nutrients, pathogens, oxygen-demanding substances, petroleum hydrocarbons, heavy metals, floatables, polycyclic aromatic hydrocarbons (PAHs), trash, pesticides and herbicides.

4. Trash and litter are a pervasive problem in California. Controlling trash is a priority, because trash adversely affects our use of California's waterways. Trash impacts aquatic life in streams, rivers, and the ocean as well as terrestrial species in adjacent riparian and shore areas. Trash, particularly plastics, persists for years. It concentrates organic toxins, entangles and ensnares wildlife, and disrupts feeding when animals mistake plastic for food and ingest it. Additionally, trash creates aesthetic impacts, impairing our ability to enjoy our waterways.

5. The State Water Resources Control Board (State Board) is developing a statewide policy for trash control in California's waterways. The draft Trash Policy will identify trash as a separate pollutant and establish methods to control trash pollution in waterways, statewide. Following adoption of the draft Trash Policy, the State Water Board may re-open this Order to incorporate water body trash pollution control methods and introduce Trash Reduction Program requirements.

6. A higher percentage of impervious area in urban areas correlates to a greater pollutant loading, resulting in turbid water, nutrient enrichment, bacterial contamination, organic matter loads, toxic compounds, temperature increases, and increases in trash or debris.

7. Conventional landscaping features large lawns, non-native plants, abundant irrigation, and heavy use of fertilizers, herbicides, and pesticides. It frequently requires significant mowing,

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blowing, trimming, and removal of plants debris. Adopting more storm water-friendly landscape practices reduces pollutants and also provides tangible water conservation, wildlife habitat, and energy saving benefits.

8. The State Water Board recognizes that this Order affects varied and diverse entities, including agencies that are required to carry out water conservation regulations, wastewater discharge regulations, and land use regulations that may implement, all or in part, provisions of this Order. The State Water Board seeks to minimize duplicate efforts and maximize resources to achieve the greatest water quality benefit; thus the State Water Board recognizes specified related regulations, cited in the body of this Order, as equivalent to implementing designated provisions of this Order.

9. When water quality impacts are considered during the planning stages of a project, new development and many redevelopment projects can more efficiently incorporate measures to protect water quality.

10. In California, urban storm water is listed as the primary source of impairment for ten percent of all rivers, ten percent of all lakes and reservoirs, and 17 percent of all estuaries (2010 Integrated Report). Although these numbers may seem low, urban areas cover just six percent of the land mass of California and so their influence is disproportionately large. Urbanization causes changes in the landscape, including increased loads of chemical pollutants, increased toxicity, changes to flow magnitude, frequency, and seasonality of various discharges, physical changes to stream, lake, or wetland habitats, changes in the energy dynamics of food webs, sunlight, and temperature; and biotic interactions between native and exotic species. In addition to surface water impacts, urbanization can alter the amount and quality of storm water that infiltrates and recharges groundwater aquifers.

11. Education and awareness programs help change human behavior with respect to reducing the amount of pollution generated from storm water sources within the Permittee's MS4 system. In addition to education, encouraging public participation in local storm water programs can lead to program improvement as well as enabling people to identify and report a pollution-causing activity, such as spotting an illicit discharge.

12. Field experience in conducting outfall surveys indicates that illicit discharges may be present at 2 to 5 percent of all outfalls at any given time. Given that pollutants are being introduced into the receiving water during dry weather, illicit discharges may have an amplified effect on water quality and biological diversity.[1] Therefore, implementation of an effective Illicit Discharge and Detection Elimination program in conjunction with focused wet weather monitoring, as necessary, is an essential component of an effective municipal storm water program.

13. In 1990, the U.S. Environmental Protection Agency (U.S. EPA) promulgated rules establishing Phase I of the National Pollutant Discharge Elimination System (NPDES) storm water program. The Phase I program for MS4s requires operators of "medium" and "large" MS4s, that is, those that generally serve populations of 100,000 or greater, to implement a storm water management program as a means to control polluted discharges from these MS4s.

[1] Urban Stormwater Management in the United States, National Research Council, 2008

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14. A MS4 is a conveyance or system of conveyances that is: 1) owned by a state, city, town, village, or other public entity that discharges to waters of the United States; 2) designed or used to collect or convey storm water (including storm drains, pipes, ditches, etc.); 3) not a combined sewer; and 4) not part of a Publicly Owned Treatment Works or sewage treatment plant.

15. On December 8, 1999, U.S. EPA promulgated Phase II storm water regulations under authority of the Clean Water Act section 402(p)(6). The Phase II Storm Water requires State Water Board to issue NPDES storm water permits to operators of Small MS4s.

16. On April 30, 2003, the State Water Board adopted Water Quality Order No. 2003-0005-DWQ, NPDES General Permit CAS000004 WDRs for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (General Permit) to comply with Clean Water Act section 402(p)(6).

17. Title 40 of the Code of Federal Regulations (40 C.F.R.) section122.26(b)(16) defines Small MS4s as those not defined as "large" or "medium" MS4s under section122.26(b)(4) or (b)(7) or designated under 40 Code of Federal Regulations section122.26(a)(1)(v). The term Small MS4s includes systems similar to separate storm sewer systems in municipalities, such as systems at military bases, large hospital or prison complexes, and highways and other thoroughfares. (40 C.F.R. §122.26(b)(16)(iii).) These latter subsets of Small MS4s are referred to herein as Non-traditional Small MS4s. Non-traditional Small MS4s discharge the same types of pollutants that are typically associated with urban runoff. Separate storm sewers in very discrete areas, such as individual buildings, are not defined as Small MS4s.

18. Of the Small MS4s defined by federal regulations, only "Regulated Small MS4s" (also referred to as "Permittees" herein) must obtain an NPDES permit. Small MS4s are designated as Regulated Small MS4s in this Order in accordance with the criteria described in Findings 19-25.[2]

19. Under 40 Code of Federal Regulations section 122.32(a)(1) all Small MS4s located within an "urbanized area" as determined by the latest Decennial Census by the Bureau of the Census (Urbanized Area) are automatically designated as Regulated Small MS4s.

20. Under 40 Code of Federal Regulations sections 122.32(a)(2) and 123.35(b) the State Water Board is directed to develop a process, as well as criteria, to designate Small MS4s located outside of an Urbanized Area as Regulated Small MS4s. These criteria are to evaluate whether a storm water discharge results in or has the potential to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.

21. Under guidance provided in 40 Code of Federal Regulations secton123.35(b)(1)(ii), for determining other significant water quality impacts, U.S. EPA recommends a balanced consideration of the following designation criteria on a watershed or other local basis: discharge to sensitive waters, high growth or growth potential, high population density,

[2] In addition to the designation criteria specified in this Order, the State Water Board may designate a Small MS4 as a Regulated Small MS4 in response to a petition received under 40 Code of Federal Regulations section 122.26(f). Any person may petition the State Water Board to require an NPDES permit for a discharge composed entirely of storm water that contributes to a violation of a water quality standard or is a significant contributor of pollutants to the waters of the United States. (*Id.*). The State Water Board must make a final determination on any petition within 180 days after receiving the petition. (40 C.F.R. §123.35(c).)

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contiguity to an urbanized area, significant contributor of pollutants to waters of the U.S., and ineffective protection of water quality by other programs.

22. The State Water Board is required to apply the designation criteria at a minimum to all Small MS4s located outside of Urbanized Areas serving jurisdictions with a population density of at least 1,000 people per square mile and a population of at least 10,000. (40 C.F.R. §123.35(b)(2).) The State Water Board has discretion to apply the criteria to jurisdictions with smaller population or lower density. All such jurisdictions are then Regulated Small MS4s.

23. In developing the designation criteria, the State Water Board included factors indicative of the potential to result in exceedances of water quality standards and other significant water quality impacts. The following criteria are used to designate Small MS4s outside of Urbanized Areas as Regulated Small MS4s in this Order.

    a. The Small MS4 has high population *and* high population density – High population means a population of 10,000 or more. High population density means a density of 1,000 residents per square mile or greater. Also to be considered in this definition is a high density created by a non-residential population, such as tourists or commuters.

    b. The Small MS4 discharges to Areas of Special Biological Significance (ASBS) as defined in the California Ocean Plan.

24. Designation of additional Small MS4s as Regulated Small MS4s may be made by the Regional Water Boards on a case by case basis. Case by case determinations of designation shall be based on the potential of a Small MS4's discharges to result in exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts. Where such case by case designations have been recommended by the Regional Water Boards prior to adoption of this Order, the designated Small MS4s are listed on the relevant Attachments to the Order and the reasons for designation are laid out in the Fact Sheet. The Regional Water Boards may continue to make case by case determinations of designation during the permit term. Such designations must be approved by the Regional Water Board after public review and comment.

25. 40 Code of Federal Regulations section 123.35(b)(4) requires designation as a Regulated Small MS4 of any Small MS4 outside an Urbanized Area that contributes substantially to the pollutant loadings of a physically interconnected MS4 regulated by the NPDES storm water program. A Small MS4 is interconnected with a separately permitted MS4 if storm water that has entered the Small MS4 is allowed to flow directly into a permitted MS4. In general, if the Small MS4 discharges more than ten percent of its storm water to the permitted MS4, or its discharge makes up more than ten percent of the permitted MS4's total storm water volume, it is a significant contributor of pollutants to the permitted MS4. In specific cases, the MS4s involved or third parties may show that the ten percent threshold is inappropriate for the MS4 in question.

26. Regulated Small MS4s may seek a waiver from Phase II requirements if they meet criteria specified in 40 Code of Federal Regulations sections 122.32(c)-(e).[3] The State

[3] Waiver criteria also found at 40 C.F.R. 123.35(d).

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Water Board has additionally provided for a waiver for those communities outside of urbanized areas with a population of 20,000 or less with an annual median household income (MHI) that is less than 80 percent of the statewide annual MHI. (Wat. Code, § 79505.5, subd. (a)).

27. Small MS4s face highly variable conditions both in terms of threats to water quality from their storm water discharges and resources available to manage those discharges. Therefore, one set of prescriptive requirements is not an appropriate regulatory approach for all Regulated Small MS4s. This Order distinguishes between New and Renewal Traditional Small MS4 Permittees. Additionally, this Order addresses differences between Traditional and Non-traditional Small MS4s by detailing Non-traditional Small MS4 specific provisions in Section F Non-Traditional Small MS4 Provisions. Provisions are tailored to address the diverse program structures of Non-traditional Small MS4s to allow for an appropriate regulatory approach.

28. There are variable levels of resources available to Regulated Small MS4s for public outreach and education and water quality monitoring. Recognizing this, the Order gives Permittees numerous compliance options in these two program areas. However, all Regulated Small MS4s that discharge to ASBS or impaired water bodies[4] must conduct monitoring as specified in Attachment C and Attachment G, respectively. All Regulated Small MS4s with a population of 50,000 or more must conduct monitoring specified in Sections E.13.d.1. or E.13.d.2. of the Order or as approved by the Executive Officer of the applicable Regional Board. Additionally, for the public outreach program, the Regional Water Boards may require the Regulated Small MS4s to utilize the approach of Community-Based Social Marketing.

29. Renewal Traditional Small MS4 Permittees shall comply with Section E. Certain provisions within Section E contain compliance dates that are past the effective date of this Order, in these cases, the Permittee shall implement its existing program until that date.

30. This Order modifies the existing General Permit, Order 2003-0005-DWQ by establishing the storm water management program requirements in the Order and defining the minimum acceptable elements of the municipal storm water management program. Minimum permit requirements are known at the time of permit issuance and not left to be determined later through Regional Water Board review and approval of Storm Water Management Plans (SWMPs).

31. The State Water Board recognizes the necessity of a storm water program guidance document specific to each Permittee to provide planning and guidance for each program area and to identify responsible implementing parties. Permittees must develop and implement a storm water program guidance document and must submit the document during the application process.

32. The State Water Board recognizes that in some instances Renewal Permittees' SWMPs that were approved under the prior General Permit, Order 2003-0005-DWQ have incorporated BMPs designed to address locality-specific storm water issues and that in some cases these

[4] A waterbody that has been determined under state policy and federal law not meet water quality standards. An impaired water is a water that has been listed on the California 303(d) list or has not yet been listed but otherwise meets the criteria for listing. A water is a portion of a surface water of the state, including ocean, estuary, lake, river, creek, or wetland. The water currently may not be meeting state water quality standards or may be determined to be threatened and have the potential to not meet standards in the future. The State of California's 303(d) list can be found at http://www.swrcb.ca.gov/quality.html.

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BMPs may, because of locality-specific factors, be more protective of water quality than the minimum requirements established by this Order. Renewal Permittees will additionally include in the guidance document the following: identification and brief description of each BMP and associated measurable goal included in the Permittee's previously approved SWMP under the prior General Permit, Order 2003-0005-DWQ, that constitutes a more specific local or tailored level of implementation that may be more protective of water quality than the minimum requirements of this Order; and identification of whether the Permittee proposes to maintain, reduce, or cease implementation for each more protective, locally-tailored BMP. In no instance may a BMP be reduced or ceased if it is required by the minimum standards set by this Order.

33. Minimum measures have been established in this Order to simplify assessment of compliance and allow the public to more easily assess each Permittee's compliance.

34. Each provision establishes the required task description, minimum implementation levels (i.e., escalating enforcement, reporting requirements for tracking projects, number of monitoring sites, etc.), and reporting elements to substantiate that the Permittee meets these implementation levels. Regional Water Board staff will be able to evaluate each individual Permittee's compliance through Annual Report review and the program evaluation (audit) process.

35. The provisions contained in this Order were derived from two main U.S. EPA documents: MS4 Program Evaluation Guide[5] and the MS4 Permit Improvement Guide[6] along with interviews and information gathered from a lengthy collaborative stakeholder process.

36. Consistent with Clean Water Act section 402(p)(3)(B)(iii), this Order requires controls to reduce pollutants from the MS4 to the maximum extent practicable (MEP). The MEP standard requires Permittees to apply Best Management Practices (BMPs) that are effective in reducing or eliminating the discharge of pollutants to the waters of the U.S. MEP emphasizes pollutant reduction and source control BMPs to prevent pollutants from entering storm water runoff. MEP may require treatment of the storm water runoff if it contains pollutants. The MEP standard is an ever-evolving, flexible, and advancing concept, which considers technical and economic feasibility. BMP development is a dynamic process and may require changes over time as the Permittees gain experience and/or the state of the science and art progresses. To do this, the Permittees must conduct and document evaluation and assessment of each relevant element of its program, and their program as a whole, and revise activities, control measures/BMPs, and measurable goals, as necessary to meet MEP. MEP is the cumulative result of implementing, evaluating, and creating corresponding changes to a variety of technically appropriate and economically feasible BMPs, ensuring that the most appropriate BMPs are implemented in the most effective manner.

37. The Order's Receiving Water Limitations language is consistent with State Water Board Order WQ 99-05 (*Orange County)* adopted by the State Water Board on June 17, 1999. Receiving Water Limitations apply to all Permittees subject to this Order. The State Water Board held a workshop on November 20, 2012, to hear comments on the receiving water limitations provisions in MS4 permits. This Order has a reopener clause that will allow the State Water Board to reopen the Order if the Board directs changes to the Receiving Water Limitations language based on comments received.

38. Non-storm water discharges consist of all discharges from an MS4 that do not originate from precipitation events. This Order effectively prohibits non-storm water discharges through an

[5] Municipal Separate Storm Sewer System (MS4) Program Evaluation Guidance, USEPA, EPA-833-R-07-003, January 1, 2007
[6] MS4 Permit Improvement Guide, USEPA, April 1, 2010

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MS4 into waters of the U.S. Certain categories of non-storm water discharges are conditionally exempt as specified at 40 Code of Federal Regulations section 122.26(d)(2)(iv)(B)(1). Non-storm water discharges that are regulated by a separate NPDES permit are not subject to the discharge prohibition. Prohibited non-storm water discharges include conditionally exempt discharges that are found to be a significant source of pollutants to waters of the U.S.

39. Non-storm water discharges to ASBS are prohibited except as specified in the General Exception. Certain enumerated non-storm water discharges are allowed under the General Exception if essential for emergency response purposes, structural stability, slope stability, or if occur naturally. In addition, an NPDES permitting authority may authorize non-storm water discharges to an MS4 with a direct discharge to an ASBS to the extent the NPDES permitting authority finds that the discharge does not alter natural ocean water quality in the ASBS. This Order allows utility vault discharges to an MS4 with a direct discharge to an ASBS, provided the discharge is authorized by the General NPDES Permit for Discharges from Utility Vaults and Underground Structures to Surface Water, NPDES No. CAG 990002. The State Water Board is in the process of reissuing the General NPDES Permit for Utility Vaults. As part of the renewal, the State Water Board will require a study to characterize representative utility vault discharges to an MS4 with a direct discharge to an ASBS and will impose conditions on such discharges to ensure the discharges do not alter natural ocean water quality in the ASBS. Given the limited number and intermittent nature of utility vault discharges to MS4s that discharge directly to an ASBS, the State Water Board finds that discharges from utility vaults and underground structures to an MS4 with a direct discharge to an ASBS are not expected to result in a substantial alteration of natural ocean water quality in the ASBS in the interim period while the General NPDES Permit for Discharges from Utility Vaults is renewed and the study is completed. Other short-duration, intermittent non-storm water discharges related to LUPs (e.g. groundwater dewatering, potable water system flushing, hydrotest discharges) are regulated under NPDES permits issued by the Regional Water Boards. Although such discharges are not specifically enumerated in the General Exception as essential for emergency response purposes, structural stability, or slope stability, they may be required to ensure the safety and stability of the utility systems or for operations and maintenance and for extending these essential services. For this reason, and because the short-duration and intermittent nature of these discharges renders them unlikely to result in substantial alteration of natural ocean water quality in the ASBS, this Order permits such discharges to a segment of the MS4 with a direct discharge to an ASBS provided they are authorized by an NPDES permit issued by the State Water Board or relevant Regional Water Board. However, if a Regional Water Board determines a specific discharge from a utility vault or underground structure does alter the natural ocean water quality in an ASBS, the Regional Water Board may prohibit the discharge as specified in this Order.

40. Total Maximum Daily Loads (TMDL) are numerical calculations of the maximum amount of a pollutant that a water body can assimilate and still meet water quality standards. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point sources (waste load allocations) and non-point sources (load allocations), background contribution, plus a margin of safety. Discharges from Small MS4s are point source discharges subject to TMDLs. This Order requires Permittees to comply with all applicable TMDLs approved pursuant to 40 Code of Federal Regulations section 130.7 that assign a Waste Load Allocation to Permittee and that have been identified in Attachment G. The high variance in the level of detail and specificity of TMDLs necessitates the development of more specific permit requirements in many cases to provide clarity to the Permittees regarding responsibilities for compliance. The Regional Water Boards have submitted TMDL-specific permit requirements to the State Water Board, for applicable TMDLs, along with statements explaining how the requirements are designed to achieve the goals of the TMDLs (incorporated into the Fact Sheet). The TMDL-specific permit requirements are summarized

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in Attachment G and are an enforceable component of this Order. The Regional Water Boards are additionally being directed through this Order to review the TMDL-specific permit requirements of Attachment G in consultation with the Permittees and the State Water Board staff and propose any revisions to the State Water Board within one year of the effective date of this Order. TMDLs applicable to non-traditional dischargers in the region of the Los Angeles Regional Water Board are listed in Attachment G without TMDL-specific permit requirements. The Los Angeles Water Board is being directed to develop and propose TMDL-specific permit requirements for Attachment G in consultation with the Permittees and the State Water Board staff within one year of the effective date of this Order. Any such revisions will be incorporated into the permit through a reopener.

41. Degraded watershed processes lead to degraded water quality. To fully protect beneficial uses, post-construction runoff retention and hydromodification control criteria for individual projects must be derived with a knowledge of dominant watershed processes. Watershed management zones will be delineated by the State Board during this permit term. The Watershed management zones will be used to identify applicable areas and appropriate criteria for runoff retention and hydromodification control to be incorporated into the next permit. Regional Water Boards that approve watershed process-based criteria for post-construction during this permit term will be permitted to require Permittees to implement these criteria.

42. The post-construction requirements and design standards contained in this Order are consistent with State Water Board Order WQ 2000-11 (*Bellflower)*.

43. State Water Board, California State Parks and the State Historic Preservation Officer may coordinate efforts to manage post-construction projects involving historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

44. Permittees will submit Annual Reports electronically using the State Water Board's Storm Water Multi-Application Reporting and Tracking System (SMARTS). The purpose of the Annual Report is to evaluate (1) the implementation of Permittees' storm water program; (2) the effectiveness of BMPs and Measurable Goals, (3) the Permittee's improvement opportunities to achieve MEP, and (4) any supplemental information required by a Regional Water Board in accordance with the Regional Water Board's specific requirements.

45. To apply for General Permit coverage authorizing storm water discharges to surface waters pursuant to this Order, the Permittees shall electronically file a Notice of Intent (NOI) using SMARTS and mail the appropriate permit fee to the State Water Board. The NOI represents the Permittee's commitment to comply with the BMPs specified in this Order to achieve compliance with the minimum control measures specified at 40 Code of Federal Regulations sections122.34 (b)(1) through (b)(6).

46. Under 40 Code of Federal Regulations section 122.35, a Separate Implementing Entity (SIE) can implement a storm water management program for another entity such as a municipality, agency, or special district. The SIE implements parts or all of a storm water program for a Permittee. Permittees relying on a SIE to implement their entire program must electronically file an NOI using SMARTS and mail appropriate fee to the State Water Board.

47. Each Permittee is individually responsible for adoption and enforcement of ordinances and/or policies, implementation of identified control measures/BMPs needed to prevent or reduce pollutants in storm water and operation and maintenance (O&M). Enforcement actions concerning this Order will be pursued only against the individual Permittee responsible for specific violations of this Order.

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48. In accordance with 40 Code of Federal Regulations section122.28(b)(3), a Regional Water Board may issue an individual MS4 NPDES Permit to a Permittee otherwise subject to this Order, or adopt an alternative general permit that covers storm water discharges regulated by this Order. In accordance with Code of Federal Regulations section 122.34(b)(3), a Regulated Small MS4 in the same urbanized area as a medium or large MS4 may jointly with the medium or large MS4 seek a modification of the other MS4s permit to be added as a limited co-permittee. The applicability of this Order is automatically terminated on the effective date of the individual permit or joint permit or the date of approval for coverage under the alternative general permit.

49. Certain BMPs implemented or required by Permittees for urban runoff management may create a habitat for vectors (e.g., mosquitoes and rodents) if not properly designed or maintained. Close collaboration and cooperation among the Permittees, local vector control agencies, Regional Water Board staff, and the California Department of Public Health is necessary to identify and implement appropriate vector control measures that minimize potential nuisances and public health impacts resulting from vector breeding.

50. 40 Code of Federal Regulations section 131.12 requires that state water quality standards include an anti-degradation policy consistent with the federal policy. The State Water Board established California's anti-degradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal anti-degradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Water Quality Control Plans (Basin Plans) implement, and incorporate by reference, both the State and federal anti-degradation policies.

51. This action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (Public Resources Code § 21100, et seq.) in accordance with Water Code section13389. (*County of Los Angeles v. Cal. Water Boards*, (2006), 143 Cal.App.4th 985.)

52. Following public notice in accordance with State and federal laws and regulations, the State Water Board, in a public hearing on August 8, 2012, heard and considered all comments. The State Water Board has prepared written responses to all significant comments.

53. The State Water Board has considered the costs of complying with this Order and whether the required BMPs meet the minimum MEP Standard required by federal law. Further discussion of cost of compliance is included in the Fact Sheet.

54. This Order shall serve and become effective as an NPDES permit and the Permitees shall comply with all its requirements pursuant to the timeframes identified within the permit.

IT IS HEREBY ORDERED that operators of Small MS4s subject to this Order shall comply with the following:

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A. APPLICATION REQUIREMENTS FOR ALL SMALL MS4 PERMITTEES

Any Small MS4s designated under this Order that chooses to apply for an individual permit or request to join the permit of a Phase I Permittee must notify the Regional Water Board of its intent to do so by July 1, 2013. Census Designated Places (CDPs) listed on Attachment A that are located within an existing NPDES permit area are not required to file for separate coverage and pay separate fees.

A.1. Small MS4 Permittees (Except for Department of Defense and Department of Corrections and Rehabilitation Permittees)

a. New Permittees shall electronically file an NOI via SMARTS and mail the appropriate fee to the State Water Board by July 1, 2013. Renewal Permittees shall electronically file an NOI via SMARTS and pay the appropriate application fee to the State Water Board. Any Renewal Permittees with paid 2013 application fee invoices shall receive a prorated refund. If the Permittee is designated as a Regulated Small MS4 by a Regional Water Board after adoption of this Order, the Permittee shall file the NOI and mail the appropriate fee within six months of the date of designation.

b. General Permit coverage will be in effect upon receipt of the following:
   1) NOI via SMARTS
   2) Appropriate Fee (in accordance with the most recent fee schedule[7])
   3) Permit boundary map delineating permit jurisdiction: At a minimum the map shall include the following:

      (a) Phase II MS4 permit boundary based on 2010 Census data. For cities, the permit area boundary is the city boundary. For Counties, permit boundaries must include urbanized areas and places identified in Attachment A located within their jurisdictions. The boundaries must be proposed in the permit boundary map and may be developed in conjunction with the applicable Regional Water Board
      (b) City/County Boundaries
      (c) Main Arterial Streets
      (d) Highways
      (e) Waterways
      (f) Phase I MS4 Permit Boundary (if applicable)

   4) Guidance document: The document shall at least include the following:

      New Permittees:
      (a) Overall program planning
      (b) Identifification of all permit requirements and responsible implementing parties

      Renewal Permittees:
      (a) Overall program planning
      (b) Identification of all permit requirements and responsible implementing parties

[7] California Code of Regulations. Title 23. Division 3. Chapter 9 Waste Discharge Reports and Requirements. Article 1 Fees.

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(c) Identification and brief description of each BMP and associated measurable goal included in the Permittee's most current SWMP that constitutes a more specific local or tailored level of implementation that may be more protective of water quality than the minimum requirements of this Order.
(d) Identification of whether the Permittee will maintain, reduce, or cease implementation for each more protective, locally-tailored BMP.
(e) For any more protective, locally-tailored BMP and associated measurable goal for which the Renewal Permittee will reduce or cease implementation, the Renewal Permittee shall demonstrate to the Executive Officer of the relevant Regional Water Board that the reduction or cessation is in compliance with this Order and the maximum extent practicable standard, and will not result in increased pollutant discharges. The demonstration by the Permittee will be subject to public comment before any approval by the Executive Officer of reduction or cessation of BMPs In no instance may the Renewal Permittee reduce or cease a BMP if it is required by the minimum standards set by this Order.

The guidance document may be in spreadsheet, tabular or narrative format.

A.2. Department of Defense and Department of Corrections and Rehabilitation Permittees

a. Permittee shall electronically file an NOI via SMARTS and mail the appropriate fee to the State Water Board by July 1, 2013. If the Permittee is designated as a Regulated Small MS4 by a Regional Water Board after adoption of this Order, the Permittee shall file the NOI and mail the appropriate fee within six months of the date of designation.

b. General Permit coverage will be in effect upon receipt of the following:
   1) NOI via SMARTS
   2) Appropriate fee (in accordance with the most recent fee schedule[8])
   3) Permit boundary map as developed by the Permittee

Renewal MS4s must continue implementing their current storm water management programs until submittal of a NOI via SMARTS.

A.3. Waiver Certification

Regulated Small MS4s may seek a waiver from the General Permit requirements if they meet criteria specified in 40 C.F.R. §122.32(c)-(e) or additional criteria specified in A.3.b.(3) below.

In order for a Regional Water Board to waive requirements for a Regulated Small MS4, (1) the Regulated Small MS4 must certify that its discharges do not cause or contribute to, or have the potential to cause or contribute to, a water quality impairment, and (2) the Regulated Small MS4 must meet one of the waiver options in Section b below:

a. Waiver Certification Application Requirements - A Waiver Certification will only be in effect upon completion of the following:

[8] California Code of Regulations. Title 23. Division 3. Chapter 9 Waste Discharge Reports and Requirements. Article 1 Fees.

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1) Annual Waiver Certification submitted via SMARTS.
2) Annual Waiver Certification renewal fee of $200 plus any applicable surcharge.
3) Letter via SMARTS from Regional Water Board or its Executive Officer waiving requirements.

Requirements are automatically waived if the Regional Water Board does not respond within six months.

b. Waiver Criteria

(1) Option 1

(a) The jurisdiction served by the system is less than 1,000 people;
(b) The system is not contributing substantially (as defined in Finding 25) to the pollutant loadings of a physically interconnected regulated MS4; and
(c) If the small MS4 discharges any pollutants identified as a cause of impairment of any water body to which it discharges, storm water controls are not needed based on WLAs that are part of a U.S.EPA approved or established TMDL that addresses the pollutant(s) of concern.

(2) Option 2

(a) The jurisdiction served by the system is less than 10,000 people;
(b) The Regional Water Board has evaluated all waters of the U.S. that receive a discharge from the system;
(c) The Regional Water Board has determined that storm water BMPs are not needed based on WLAs that are part of a U.S. EPA approved or established TMDL that addresses the pollutant(s) of concern or an equivalent analysis; and
(d) The Regional Water Board has determined that future discharges from the Regulated Small MS4 do not have the potential to result in exceedances of water quality standards.

(3) Option 3 (applicable to Small MS4s outside an Urbanized Area only)

Small Disadvantaged Community – The Regulated Small MS4 certifies that it is a community with a population of 20,000 or less with an annual median household income (MHI) that is less than 80 percent of the statewide annual MHI. (Wat. Code, § 79505.5 , subd.(a)).

If the Waiver Certification Application Requirements or conditions of any waiver option are not met by the Regulated Small MS4, then the Regulated Small MS4 must submit a NOI via SMARTS and appropriate fee for coverage under this General Permit or apply for an individual NPDES permit.

The State Water Board or a Regional Water Board can, at any time, require a previously waived Regulated Small MS4 to comply with this General Permit or an individual NPDES permit if circumstances change so that the conditions of the waiver are no longer met. Changed circumstances can also allow a Regulated Small MS4 to request a waiver at any time.

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B. DISCHARGE PROHIBITIONS

1. Discharges of waste from the MS4 that are prohibited by Statewide Water Quality Control Plans or applicable Regional Water Quality Control Plans (Basin Plans) are prohibited.

2. Discharges of storm water from the MS4 to waters of the U.S. in a manner causing or threatening to cause a condition of pollution or nuisance as defined in Water Code § 13050 are prohibited.

3. Discharges through the MS4 of material other than storm water to waters of the U.S. shall be effectively prohibited, except as allowed under this Provision or as otherwise authorized by a separate NPDES permit. The following non-storm water discharges are not prohibited provided any pollutant discharges are identified and appropriate control measures to minimize the impacts of such discharges, are developed and implemented under the Permittee's storm water program. This provision does not obviate the need to obtain any other appropriate permits for such discharges.

    a. water line flushing;
    b. individual residential car washing;
    c. diverted stream flows;
    d. rising ground waters;
    e. uncontaminated ground water infiltration (as defined at 40 C.F.R. §35.2005(20)) to separate storm sewers;
    f. uncontaminated pumped ground water;
    g. discharges from potable water sources;
    h. foundation drains;
    i. air conditioning condensation;
    j. springs;
    k. water from crawl space pumps;
    l. footing drains;
    m. flows from riparian habitats and wetlands;
    n. dechlorinated swimming pool discharges; and
    o. incidental runoff from landscaped areas(as defined and in accordance with Section B.4 of this Order).

    Discharges or flows from fire-fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the U.S.

    If a Permittee or a Regional Water Board Executive Officer determines that any individual or class of non-storm water discharge(s) listed above may be a significant source of pollutants to waters of the U.S. or physically interconnected MS4, or poses a threat to water quality standards (beneficial uses), the Regional Water Board Executive Officer may require the appropriate Permittee to monitor and submit a report and to implement BMPs on the discharge.

4. Discharges in excess of an amount deemed to be incidental runoff shall be controlled. Regulated Small MS4s shall require parties responsible for such to implement Sections B.4.a-d below. Incidental runoff is defined as unintended amounts (volume) of runoff,

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such as unintended, minimal over-spray from sprinklers that escapes the area of intended use. Water leaving an intended use area is not considered incidental if it is part of the facility design, if it is due to excessive application, if it is due to intentional overflow or application, or if it is due to negligence.

Parties responsible for controlling runoff in excess of incidental runoff shall:

a. Detect leaks (for example, from broken sprinkler heads) and correct the leaks within 72 hours of learning of the leak;

b. Properly design and aim sprinkler heads;

c. Not irrigate during precipitation events; and

d. Manage pond containing recycled water such that no discharge occurs unless the discharge is a result of a 25-year, 24-hour storm event or greater, and the appropriate Regional Water Board is notified by email no later than 24 hours after the discharge. The notification is to include identifying information, including the Permittee's name and permit identification number.

Non-storm water runoff discharge that is not incidental is prohibited, unless otherwise specified in Section B.3 above.

Incidental runoff may be regulated by waste discharge requirements or, where necessary, waste discharge requirements that serve as a NPDES permit, including MS4 permits.

5. Discharge to Areas of Special Biological Significance (ASBS) is prohibited except in compliance with the ASBS Special Protection Provisions in Attachment C. Regulated Small MS4s that discharge to an ASBS are listed in Attachment D and are subject to the ASBS Special Protection Provisions.

C. EFFLUENT LIMITATIONS

1. Permittees shall implement controls as required by this Order to reduce the discharge of pollutants from their MS4s to waters of the U. S. to the MEP. Permittees shall additionally reduce the discharge of pollutants (1) to achieve TMDL waste load allocations (WLAs) established for discharges by the MS4s and (2) to comply with the Special Protections for discharges to ASBS.

2. Storm water discharges regulated by this Order shall not contain a hazardous substance in amounts equal to or in excess of a reportable quantity listed in 40 C.F.R. Part 117 or 40 C.F.R. Part 302.

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D. RECEIVING WATER LIMITATIONS

Discharges shall not cause or contribute to an exceedance of water quality standards contained in a Statewide Water Quality Control Plan, the California Toxics Rule (CTR), or in the applicable Regional Water Board Basin Plan.

The Permittee shall comply with Receiving Water Limitations through timely implementation of control measures/BMPs and other actions to reduce pollutants in the discharges and other requirements of this Order including any modifications. The storm water program shall be designed to achieve compliance with Receiving Water Limitations. If exceedance(s) of water quality objectives or water quality standards persist notwithstanding implementation of other storm water program requirements of this Order, the Permittee shall assure compliance with Receiving Water Limitations by complying with the following procedure:

1. Upon a determination by either the Permittee or the Regional Water Board that MS4 discharges are causing or contributing to an exceedance of an applicable water quality standard, the Permittee shall promptly notify and thereafter submit a report to the Regional Water Board that describes BMPs that are currently being implemented and additional BMPs that will be implemented to prevent or reduce any pollutants that are causing or contributing to the exceedance of water quality standards. The report shall include an implementation schedule. The Regional Board may require modifications to the report;

2. Submit any modifications to the report required by the Regional Water Board within 30 days of notification;

3. Implement the actions specified in the report in accordance with the approved schedule;

4. So long as the Permittee has complied with the procedure set forth above and is implementing the actions, the Permittee does not have to repeat the same procedure for continuing or recurring exceedances of the same receiving water limitations unless directed by the State Water Board or the Regional Water Board to develop additional BMPs.

E. PROVISIONS FOR ALL TRADITIONAL SMALL MS4 PERMITTEES

E.1. RENEWAL TRADITIONAL SMALL MS4 PERMITTEES

All Renewal Traditional Small MS4s Permittees shall comply with this Section. Where the requirements of a certain subsection provide a compliance date that is past the effective date of this Order, the Renewal Traditional Small MS4 shall implement its existing program until that date.

E.2. NEW TRADITIONAL SMALL MS4 PERMITTEES

New Traditional Small MS4s shall comply with this Section.

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E.3. NON-TRADITIONAL SMALL MS4S PERMITTEES

E.3.a. All Renewal Non-Traditional Small MS4 Permittees shall comply with Section F of this Order. Where the requirements of a certain subsection provide a compliance date that is past the effective date of this Order, the Renewal Non-Traditional Small MS4 shall implement its existing program until that date.

E.3.b. New Non-Traditional Small MS4s Permittees shall comply with Section F of this Order.

E.4. SMALL MS4 ASBS PERMITTEES

Both Traditional and Non-traditional Small MS4s Permittees that discharge to ASBS as listed on Attachment D shall comply with Attachment C in addition to all other applicable provisions of this Order.

E.5. SEPARATE IMPLEMENTING ENTITY (SIE)

Permittees, both Traditional and Non-traditional Small MS4s, may rely on a SIE to satisfy one or more of the permit obligations, if the SIE can appropriately and adequately address the storm water issues of the Permittee. The SIE must agree to implement the BMPs, or components thereof, to achieve compliance with this Order. If the SIE fails to implement the BMPs, the Permittee remains responsible for compliance with this Order.

E.6. PROGRAM MANAGEMENT ELEMENT

To effectively implement a coordinated storm water program, the Permittee shall have an overarching Program Management element in its storm water management program. The Program Management element shall include the following:

E.6.a. Legal Authority

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall review and revise relevant ordinances or other regulatory mechanisms, or adopt any new ordinances or other regulatory mechanisms, to obtain adequate legal authority, to the extent allowable under state or local law, to control pollutant discharges into and from, as applicable, its MS4, and to meet the requirements of this Order.

(ii) **Implementation Level** –At a minimum, the Permittee shall have adequate legal authority to:

(a) Effectively prohibit non-storm water discharges through the MS4. Exceptions to this prohibition are NPDES-permitted discharges of non-storm water and non-storm water discharges in B.3 that are considered non-significant contributors of pollutants. Where the non-storm water discharge is to a segment of an MS4 that discharges directly to an ASBS, exceptions to the non-storm water prohibition are specified in Attachment C.

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(b) Detect and eliminate illicit discharges and illegal connections to the MS4. Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4. Illicit discharges include all non-storm water discharges not otherwise authorized in this Order, including discharges from organized car washes, mobile cleaning and pressure wash operations,

(c) Respond to the discharge of spills, and prohibit dumping or disposal of materials other than storm water into the MS4.

(d) Require parties responsible for runoff in excess of incidental runoff to implement Discharge Prohibition B.4.a-e.

(e) Require operators of construction sites, new or redeveloped land; and industrial and commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, or maintenance of BMPs consistent with the California Storm Water Quality Association (CASQA) Best Management Practice Handbooks or equivalent.

(f) Require information deemed necessary to assess compliance with this Order. The Permittee shall only require information in compliance with the Homeland Security Act or any other federal law that concerns security in the United States. The Permittee shall also have the authority to review designs and proposals for new development and redevelopment to determine whether adequate BMPs will be installed, implemented, and maintained during construction and after final stabilization (post-construction).

(g) Enter private property for the purpose of inspecting, at reasonable times, any facilities, equipment, practices, or operations for active or potential storm water discharges, or non-compliance with local ordinances/standards or requirements in this Order, as consistent with any applicable state and federal laws.

(h) Require that dischargers promptly cease and desist discharging and/or cleanup and abate a discharge, including the ability to:

1) Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within 72 hours of notification; high risk spill should be cleaned up as soon as possible.

2) Require abatement within 30 days of notification, for uncontrolled sources of pollutants that could pose an environmental threat;

3) Perform the clean-up and abatement work and bill the responsible party, if necessary;

4) Provide the option to order the cessation of activities until such problems are adequately addressed if a situation persists where pollutant-causing sources or activities are not abated;

5) Require a new timeframe and notify the appropriate Regional Water Board when all parties agree that clean-up activities cannot be completed within the original timeframe and notify the appropriate Regional Water Board in writing within five business days of the determination that the timeframe requires revision.

(i) When warranted, have the ability to:

1) Levy citations or administrative fines against responsible parties either immediately at the site, or within a few days.

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2) Require recovery and remediation costs from responsible parties.

(j) Impose more substantial civil or criminal sanctions (including referral to a city or district attorney) and escalate corrective response, consistent with its Enforcement Response Plan developed pursuant to Section E.6.c., for persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm.

E.6.b. Certification

(i) **Task Description –** Within the second year of the effective date of the permit, the Permittee shall certify by its Principal Executive Officer, Ranking Elected Official, or Duly Authorized Representative as described in 40 Code of Federal Regulations section 122.22(b) that the Permittee has and will maintain full legal authority to implement and enforce each of the requirements contained in this Order.

(ii) **Implementation Level** – The Permittee's certification statement shall include the following:

(a) Identification of all departments within the Permittee's jurisdiction that conduct storm water-related activities and their roles and responsibilities under this Order.

(b) Citation of storm water runoff related ordinances, identification of the topics each ordinance addresses;

(c) Identification of the local administrative and legal procedures and ordinances available to mandate compliance with storm water-related ordinances and therefore with the conditions of this Order.

(d) A description of how storm water related-ordinances are reviewed and implemented.

(e) A statement that the municipality will implement enforcement actions consistent with its Enforcement Response Plan developed pursuant to Section E.6.c.

(iii) **Reporting** – All Permittees shall submit in the second year online Annual Report, a statement signed by an authorized signatory certifying the Permittee has adequate legal authority to comply with all Order requirements.

E.6.c. Enforcement Measures and Tracking

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement an Enforcement Response Plan. The Enforcement Response Plan shall contain enforcement procedures and actions and identify the Permittee's responses to violations and describe how the Permittee will address repeat and continuing violations by implementing progressively stricter responses as needed to achieve compliance.

(ii) **Implementation Level -** The Enforcement Response Plan shall describe how the Permittee will use each of the following types of enforcement responses based on the type of violation:

(a) Verbal Warnings – Verbal warnings are primarily consultative in nature. At a minimum, verbal warnings shall specify the nature of the violation and required corrective action.

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(b) Written Notices – Written notices shall include nature of the violation and the required corrective action, with deadlines for taking such action.

(c) Escalated Enforcement Measures – The Permittee shall establish legal authority to employ any combination of the enforcement actions below (or their functional equivalent), and to escalate enforcement responses where necessary to correct persistent non-compliance, repeat or escalating violations, or incidents of major environmental harm:

1) Citations (with Fines) – The Enforcement Response Plan shall describe when the Permittee will assess monetary fines, which may include civil and administrative penalties.

2) Stop Work Orders – The Enforcement Response Plan shall describe when the Permittee will issue stop work orders that require construction activities to be halted, except for those activities directed at cleaning up, abating discharge, and installing appropriate BMPs.

3) Withholding of Plan Approvals or Other Authorizations – Where a facility is in non-compliance, the Enforcement Response Plan shall describe how the Permittee's own approval or authorization processes that affect the facility's ability to discharge to the MS4 can be used to abate the violation.

4) Additional Measures – The Enforcement Response Plan may also describe other escalated measures the Permittee has under its local legal authorities. For example, the Permittee may need to improve erosion control measures and collect the funds to pay for work and materials from the responsible party by either collecting against the project's bond or directly billing the responsible party.

(d) NPDES Permit Referrals–For those construction projects or industrial facilities subject to the State's Construction General Permit (CGP) or Industrial General Permit (IGP), the Permittee shall:

1) Refer non-filers (i.e., those facilities that cannot demonstrate that they obtained permit coverage) to the appropriate Regional Water Board within 30 days of making that determination, or file a complaint on the State Water Board's website: http://www.dtsc.ca.gov/database/CalEPA_Complaint/index.cfm. In making such referrals, at a minimum include the following documentation:

a) Construction project or industrial facility location.

b) Name of owner or operator.

c) Estimated construction project size or type of industrial activity (including the Standard Industrial or the North American Industry Classification, if known).

d) Records of communication with the owner or operator regarding filing requirements.

2) Refer ongoing violations to the appropriate Regional Water Board provided that the Permittee has made a good faith effort of progressive enforcement to achieve compliance with its own ordinances. At a minimum, the Permittee's good faith effort shall include documentation

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of two follow-up inspections and two warning letters or notices of violation. In making such referrals, the Permittee shall include, at a minimum, the following information:

a) Construction project or industrial facility location

b) Name of owner or operator

c) Estimated construction project size or type of industrial activity (including Standard Industrial Classification or North American Industry Classification System if known)

d) Records of communication with the owner or operator regarding the violation, including at least two follow-up inspections, two warning letters or notices of violation, and any response from the owner or operator

e) Enforcement Tracking –Track instances of non-compliance via hard-copy files or electronically. The enforcement tracking documentation shall include, at a minimum, the following:

(1) Name of owner/operator

(2) Location of construction project or industrial facility

(3) Description of violation

(4) Required schedule for returning to compliance

(5) Description of enforcement response used, including escalated responses if repeat violations occur or violations are not resolved within the time specified in the enforcement action.

(6) Accompanying documentation of enforcement response (e.g., notices of noncompliance, notices of violations, etc.)

(7) Any referrals to different departments or agencies

f) Recidivism Reduction – The Permittee shall identify chronic violators of any provision of this Order or of any related local ordinance or regulation and reduce the rate of noncompliance recidivism. The Permittee shall develop incentives, disincentives, or increase inspection frequency at the operator's sites to prevent chronic violations.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.7. EDUCATION AND OUTREACH PROGRAM

Traditional Small MS4 Permittees may be required to implement Community-Based Social Marketing (CBSM) requirements as detailed in Attachment E upon determination by a Regional Board Executive Officer. The Regional Board Executive Officer shall notify Permittees within

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three months of the permit adoption date of their determination to require CBSM.[9] The notification shall include a statement of reasons why the Executive Officer finds that implementation of CBSM is appropriate. If the Permittee disagrees with the Executive Officer determination, the Permittee may bring the dispute to the State Water Board Executive Director or his designee as specified under the Dispute Resolution provision of this Order.

E.7.a. Public Education and Outreach

Within the first year of the effective date of the permit, all Permittees shall comply with the requirements in this Section by selecting one or more of the following Public Education and Outreach options:

1) Contributing to a countywide storm water program, as determined appropriate by the Permittee members, so that the countywide storm water program conducts outreach and education on behalf of its members; or
2) Contributing to a regional outreach and education collaborative effort (a regional outreach and education collaborative effort occurs when all or a majority of the Permittees collaborate to conduct regional outreach and education. Regional outreach and education collaboration includes Permittees defining a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes, then collaboratively apply what is learned through local jurisdiction groups, pooling resources and skills.); or
3) Fulfilling outreach and education requirements within their jurisdictional boundaries on their own; or
4) A combination of the previous options, so that all requirements are fulfilled.

Reporting – By the first year Annual Report, the Permittee shall submit information indicating which Public Education and Outreach option(s) it will use to comply with this Section. For each option involving a contribution to a countywide storm water program or regional outreach and education collaborative effort, the Permittee shall complete and have available in the first year Annual Report documentation, such as a written agreement, letter or similar document, which confirms the collaboration with other MS4s.

(i)**Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop and implement a comprehensive storm water public education and outreach program. The public education and outreach program shall be designed to reduce pollutant discharges in storm water runoff and non-storm water discharges to the MS4 through increased storm water knowledge and awareness in target communities. The Public Education and Outreach Program shall be designed to measurably increase the knowledge and awareness of targeted audience regarding the municipal storm drain system, impacts of urban runoff and non-storm water discharges on receiving waters, and potential BMP solutions for the target audiences, thereby reducing pollutant releases to the MS4 and the environment.

[9] Getting in Step, A Guide to, Conducting Watershed Outreach Campaigns, 3rd Edition, November 2010, EPA 841-B-10-002, USEPA, Office of Water.

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(ii) **Implementation Level** –The Permittee shall, at a minimum:

(a) Develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The strategy must include identification of who is responsible for implementing specific tasks and a schedule for task implementation. The strategy must demonstrate how specific high priority storm water quality issues in the community or local pollutants of concern are addressed.

(b) Implement surveys at least twice during the permit term to gauge the level of awareness in target audiences and effectiveness of education tasks.

(c) Develop and convey a specific storm water message that focuses on the following:
1) Local pollutants of concern
2) Target audience
3) Regional water quality issues

(d) Develop and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);
(e) Utilize public input (e.g., the opportunity for public comment, or public meetings) in the development of the program;
(f) Distribute the educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy;
(g) Convey messages to explain the benefits of water-efficient and storm water-friendly landscaping[10], using existing information if available;
(h) Develop and convey messages specific to reducing illicit discharges with information about how the public can report incidents to the appropriate authorities. The Permittee must promote, publicize, and facilitate public reporting of illicit discharges or water quality impacts associated with discharges into or from MS4s through a central contact point, including phone numbers for complaints and spill reporting, and publicize to both internal Permittee staff and the public. If 911 is selected, the Permittee must also create, maintain, and publicize a staffed, nonemergency phone number with voicemail, which is checked daily;
(i) Develop and convey messages specific to proper application of pesticides, herbicides, and fertilizers;
(j) Within the Permittee's jurisdiction, provide independent, parochial, and public schools with materials to effectively educate school –age children about storm water runoff and how they can help protect water quality habitat in their local watershed (s). The Permittee is encouraged to use environmental and place-based, experiential learning materials that are integrated into school curricula and school facility management[11]. In the case that an environmental and place-

[10] For example, Surfrider's Ocean Friendly Garden Program (http://www.surfrider.org/programs/entry/ocean-friendly-gardens) and the Water Efficient Landscape Ordinance (WELO)
[11] For example, Splash (*www.sac**splash**.org/*),Effie Yeaw Nature Center (www.sacnature.net) or Yolo Basin (www. yolobasin.org)

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based, experiential learning local program does not exist, the Permittee may use California's Education and Environment Initiative Curriculum[12] or equivalent.

(k) Develop (or coordinate with existing, effective programs) and convey messages specific to reducing discharges from organized car washes, mobile cleaning and pressure washing operations, and landscape irrigation.

(l) Conduct storm water-friendly education for organized car wash participants and provide information pertaining to car wash discharge reduction. The Permittee may use the Sacramento Stormwater Quality Partnership's River Friendly Carwash Program[13], or equivalent, for guidance.

(m) Develop and convey messages specific to mobile cleaning and pressure wash businesses.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.7.b. Staff and Site Operator Training and Education

E.7.b.1. Illicit Discharge Detection and Elimination Training

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement a training program for all Permittee staff who, as part of their normal job responsibilities, may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection to the storm drain system.

(ii) **Implementation Level** – The training program shall include at a minimum:

(a) Identification of an illicit discharge or illegal connection.

(b) Proper procedures for reporting and responding to the illicit discharge or illegal connection.

(c) Follow-up training shall be provided as needed to address changes in procedures, techniques, or staffing.

(d) An annual assessment of their trained staff's knowledge of illicit discharge response and refresher training as needed.

(e) Training for new staff who, as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection shall be trained no later than six months after the start of employment.

(f) Contact information, including the procedure for reporting an illicit discharge, shall be included in each of the Permittee's fleet vehicles that are used by field staff.

(g) Focused education on identified illicit discharges and associated illicit discharge locations.

[12] http://www.californiaeei.org/
[13] http://www.beriverfriendly.net/riverfriendlycarwashing/

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(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.7.b.2. Construction Outreach and Education

(a) Permittee Staff Training

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall ensure that all staff implementing the construction site storm water runoff control program are adequately trained.

(ii) **Implementation Level** – The Permittee may conduct in-house training or contract with consultants. Training shall be provided to the following staff positions of the MS4:

(a) Plan Reviewers and Permitting Staff - The Permittee shall ensure plan reviewers and permitting staff are qualified individuals, knowledgeable in the technical review of local erosion and sediment control plans, (including proper control measure selection, installation, implementation, and maintenance, as well as administrative requirements such as inspection reporting/tracking and the use of the Permittee's enforcement responses), and are certified pursuant to a State Water Board sponsored program as a Qualified Storm Water Pollution Prevention Plan (SWPPP) Developer (QSD), or a designated person on staff possesses the QSD credential.

(b) Erosion Sediment Control/Storm Water Inspectors - The Permittee shall ensure inspectors are qualified individuals, knowledgeable in inspection procedures, and are certified pursuant to a State Water Board sponsored program as either (1) a Qualified SWPPP Developer (QSD); (2) a Qualified SWPPP Practitioner (QSP); or (3) a designated person on staff possesses each credential (QSD to supervise plan review, QSP to supervise inspection operations).

(c) Third-Party Plan Reviewers, Permitting Staff, and Inspectors - If the Permittee utilizes outside parties to review plans and/or conduct inspections, the Permittee shall ensure these staff are trained.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

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(b) Construction Site Operator Education

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and distribute educational materials to construction site operators.

(ii) **Implementation Level** – The Permittee shall do the following:

(a) Each year, provide information on training opportunities for construction operators on BMP selection, installation, implementation, and maintenance as well as overall program compliance.

(b) Develop or utilize existing outreach tools (i.e. brochures, posters, etc.) aimed at educating construction operators on appropriate selection, installation, implementation, and maintenance of storm water BMPs, as well as overall program compliance.

(c) Distribute appropriate outreach materials to all construction operators who will be disturbing land within the MS4 boundary. The Permittee's contact information and website shall be included in these materials.

(d) Update the existing storm water website, as necessary, to include information on appropriate selection, installation, implementation, and maintenance of BMPs.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element . The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.7.b.3. Pollution Prevention and Good Housekeeping Staff Training

The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations.

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop a biennial employee training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices as specified in Section E.11. Pollution Prevention/Good Housekeeping for Permittee Operations of this Order. The Permittee shall determine the need for interim training during alternate years when training is not conducted, through an evaluation of employee Pollution Prevention/Good Housekeeping knowledge. All new hires whose jobs include implementation of pollution prevention and good housekeeping practices must receive this training within the first year of their hire date.

(ii) **Implementation Level** – The training program shall include the following:

(a) Biennial training for all employees implementing this program element. This biennual training shall include a general storm water education component, any new technologies, operations, or responsibilities that arise during the year, and the permit requirements that apply to the staff being trained. Employees shall

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receive clear guidance on appropriate storm water BMPs to use at municipal facilities and during typical O&M activities.

(b) A biennual assessment of trained staff's knowledge of pollution prevention and good housekeeping and shall revise the training as needed.

(c) A requirement that any contractors hired by the Permittee to perform O&M activities shall be contractually required to comply with all of the storm water BMPs, good housekeeping practices, and standard operating procedures described above.

(d) The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices and following standard operating procedures.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.8. PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall involve the public in the development and implementation of activities related to the program. The public participation and involvement program shall encourage volunteerism, public comment and input on policy, and activism in the community. The Permittee shall also be involved in their Integrated Regional Water Management Plan (IRWMP) or other watershed-level planning effort, if applicable.

(ii) **Implementation Level** – At a minimum, the Permittee shall:

(a) Develop a public involvement and participation strategy that establishes who is responsible for specific tasks and goals.

(b) Consider development of a citizen advisory group (either a stand-alone group or utilize an existing group or process). The advisory group may consist of a balanced representation of all affected parties, including residents, business owners, and environmental organizations in the MS4 service area and/or affected watershed. The Permittee may invite the citizen advisory group to participate in the development and implementation of all parts of the community's storm water program.

(c) Create opportunities for citizens to participate in the implementation of BMPs through sponsoring activities (e.g., stream/beach/lake clean-ups, storm drain stenciling, volunteer monitoring and educational activities).

(d) Ensure the public can easily find information about the Permittee's storm water program.

(e) Actively engage in the Permittee's IRWMP or other watershed-level planning effort.

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(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.9. ILLICIT DISCHARGE DETECTION AND ELIMINATION

The Permittee shall develop an Illicit Discharge Detection and Elimination program to detect, investigate, and eliminate illicit discharges, including illegal dumping, into its system, to the extent allowable under law.[14] The Permittee may utilize the CWP's guide on Illicit Discharge Detection and Elimination as guidance.

E.9.a. Outfall Mapping

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall create and maintain an up-to-date and accurate outfall map[15]. The map may be in hard copy and/or electronic form or within a geographic information system (GIS) the development of the outfall map shall include a visual outfall inventory involving a site visit to each outfall. Renewal Permittees that have an existing up-to-date outfall map that includes the minimum requirements specified in Section E.9.a.(ii)(a-e) are not required to re-create the outfall map. This does not exempt Renewal Permittees with an existing outfall map from conducting the field sampling specified in Section E.9.c.

(ii) **Implementation Level** - The outfall map shall at a minimum show:

(a) The location of all outfalls[16] that are operated by the Permittee within the urbanized area, drainage areas, and land use(s) contributing to those outfalls that are operated by the Permittee, and that discharge within the Permittee's jurisdiction to a receiving water. Each mapped outfall shall be located using coordinates obtained from a global positioning system (GPS) and given an individual alphanumeric identifier, which shall be noted on the map. Photographs or an electronic database shall be utilized to provide baseline information and track operation and maintenance needs over time.

(b) The location (and name, where known to the Permittee) of all water bodies receiving direct discharges from those outfall pipes.

(c) Priority areas, including, but not limited to the following:

[14] The Permittee shall use the Center for Watershed Protection's guide on Illicit Discharge Detection and Elimination (IDDE): A Guidance Manual for Program Development and Technical Assistance (available at www.cwp.org) or equivalent when developing an IDDE program. Guidance can also be found at: http://cfpub.epa.gov/npdes/stormwater/idde.cfm.

[15] The Permittee may utilize existing forms such as the CWP Outfall Reconnaissance Inventory/Sample Collection Field Sheet while conducting the mapping inventory and Field Sampling as specified below, in Section E.9.c.(http://cfpub.epa.gov/npdes/stormwater/idde.cfm).

[16] Submerged outfalls or other outfalls that may pose a threat to public safety and/or that are inaccessible are not required to be inventoried.

1) Areas with older infrastructure that are more likely to have illegal connections and a history of sewer overflows or cross-connections
2) Industrial, commercial, or mixed use areas;
3) Areas with a history of past illicit discharges;
4) Areas with a history of illegal dumping;
5) Areas with onsite sewage disposal systems;
6) Areas upstream of sensitive water bodies;
7) Areas that drain to outfalls greater than 36 inches that directly discharge to the ocean; and
8) Other areas that are likely to have illicit discharges

The priority area list shall be updated annually.

(d) Field sampling stations

(e) The permit boundary

Submerged outfalls or other outfalls that may pose a threat to public safety and/or that are inaccessible are not required to be inventoried.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.9.b. Illicit Discharge Source/Facility Inventory

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall maintain an inventory of all industrial/commercial facilities/sources within the Permittee's jurisdiction (regardless of ownership) that could discharge pollutants in storm water to the MS4. The Permittee shall utilize the inventory to identify facilities for inspections of potential illicit discharges.

(ii) **Implementation Level** - The inventory shall include the following:
(a) Minimum information for each industrial facility/source:

- Facility name;
- Address;
- Nature of business or activity;
- Physical location (decimal latitude-longitude) of storm drain receiving discharge;
- Name of receiving water and if the facility/source is tributary to a Clean Water Act Section 303(d) listed water body segment or water body segment subject to a TMDL;
- Incorporation of facility information into GIS is optional.

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(b) At a minimum, the following industrial and commercial facilities/sources shall be included in the inventory.

- Vehicle salvage yards
- Metal and other recycled materials collection facilities
- Waste transfer facilities
- Vehicle mechanical repair, maintenance or cleaning
- Building trade central facilities or yards
- Corporation yards
- Landscape nurseries and greenhouses
- Building material retailers and storage
- Plastic manufacturers
- Other facilities designated by the Permittees or Regional Water Boards to have reasonable potential to contribute to pollution of storm water runoff

(c) The Permittee shall determine if the facilities that are required to be covered under the Statewide Industrial General Permit have done so. Upon discovering any facilities requiring permit coverage but are not yet permitted, the Permittee shall notify the appropriate Regional Water Board, and include copies of the notification in the online Annual Report.

(d) The Permittee shall update the inventory annually. The update shall be accomplished through collection of new information obtained during inspections and contacts with commercial and industrial facility operators and owners, or through other readily available intra-agency informational databases (e.g., business licenses, pretreatment permits, sanitary sewer hook-up permits, and SMARTS database.

(e) The Permittee shall develop and implement procedures to proactively identify illicit discharges originating from priority areas identified in Section E.9.a.(ii).(c). The Permittee shall implement the procedures to assess priority areas for the presence of illicit discharges at least once over the length of the permit term. The procedures shall include field observations, field screening, inspections, and any other appropriate and effective survey methods. Alternatively, Permittees may establish a self--certification program where Permittees require reports from authorized parties demonstrating the prevention and elimination of illicit discharges at their facilities in priority areas at least once over the length of the permit term.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.9.c. Field Sampling to Detect Illicit Discharges

(i) **Task Description** – Within the second year of the effective date of the permit (e.g. while conducting the outfall inventory under Section E.9.a.), the Permittee shall sample

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any outfalls that are flowing or ponding more than 72 hours after the last rain event. The Permittee shall also conduct dry weather sampling (more than 72 hours since the last rain event) of outfalls annually identified as priority areas.

(ii) **Implementation Level** – The Permittee shall:

(a) Conduct monitoring[17] for the following indicator parameters identified in Table 1 to help determine the source of the discharge. Alternatively, the Permittee may select parameters based on local knowledge of pollutants of concern in lieu of sampling for the parameters listed in Table 1. Modifications and associated justifications shall be identified within SMARTS prior to conducting field sampling as specified in Section E.9.c.(i).

Table 1. Indicator Parameters

Indicator Parameters Used to Detect Illicit Discharges					
Parameter	**Discharge Types It Can Detect**				
	Sewage	**Washwater**	**Tap Water**	**Industrial or Commercial Liquid Wastes**	**Laboratory/Analytical Challenges**
Ammonia	●	◉	○	◉	Can change into other nitrogen forms as the flow travels to the outfall
Color	◉	◉	○	◉	
Conductivity	◉	◉	○	◉	Ineffective in saline waters
Detergents – Surfactants	●	●	○	◉	Reagent is a hazardous waste
Fluoride*	○	○	●	◉	Reagent is a hazardous waste Exception for communities that do not fluoridate their tap water
Hardness	◉	◉	◉	◉	
pH	○	◉	○	◉	
Potassium	◉	○	○	●	May need to use two separate analytical techniques, depending on the concentration
Turbidity	◉	◉	○	◉	

● Can almost always (>80% of samples) distinguish this discharge from clean flow types (e.g., tap water or natural water). For tap water, can distinguish from natural water.
◉ Can sometimes (>50% of samples) distinguish this discharge from clean flow types depending on regional characteristics, or can be helpful in combination with another parameter
○ Poor indicator. Cannot reliably detect illicit discharges, or cannot detect tap water
N/A: Data are not available to assess the utility of this parameter for this purpose.
Data sources: Pitt (
*Fluoride is a poor indicator when used as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and wash water.

[17] A description of indicator parameter sampling equipment is described in Chapter 12: Indicator Monitoring in the CWP IDDE: Guidance Manual found at: http://www.epa.gov/npdes/pubs/idde_manualwithappendices.pdf. Sampling may be conducted using field test kits.

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(b) Verify that indicator parameters, as specified in Table 2. Action Level Concentrations for Indicator Parameters are not exceeded. Alternatively, the Permittee may tailor Table 2 to align with parameters based on local knowledge of pollutants of concern. Modifications and associated justifications shall be identified within SMARTS prior to conducting field sampling as specified in Section E.9.c.(i).

Table 2. Action Level Concentrations for Indicator Parameters

Indicator Parameter	Action Level Concentration
Ammonia	>= 50 mg/L
Color	>= 500 units
Conductivity	>= 2,000 µS/cm
Hardness	<= 10 mg/L as CaCO3 or >= 2,000 mg/L as CaCO3
pH	<= 5 or >=9
Potassium	>= 20 mg/L
Turbidity	>= 1,000 NTU

(c) Conduct follow up investigations per Section E.9.d. if the action level concentrations are exceeded.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.9.d. Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop written procedures for conducting investigations into the source of all non-storm water discharges suspected to be illicit discharges, including approaches to requiring such discharges to be eliminated, and procedures to implement corrective actions (e.g., BMPs). These procedures shall be included as part of the Illicit Discharge Detection and Elimination program. The Permittee may leverage existing inspection procedures and personnel to conduct illicit discharge detection and elimination source investigations and corrective actions.

(ii) **Implementation Level -** At a minimum, the Permittee shall conduct an investigation(s) to identify and locate the source of any suspected illicit discharge within 72 hours of becoming aware of the suspected illicit discharge. For investigations that require more than 72 hours, the Permittee shall identify the actions being taken to identify and locate the source of the suspected illicit discharge.

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(a) Non-storm water discharges suspected of being sanitary sewage and/or significantly contaminated shall be investigated within 24 hours.

(b) The Permittee shall prioritize investigations of suspected sanitary sewage and/or significantly contaminated discharges over investigations of non-storm water discharges suspected of being cooling water, wash water, or natural flows.

(c) Report immediately the occurrence of any flows believed to be an immediate threat to human health or the environment to local Health Department.

(d) Determine and document through its investigations the source of all non-storm water discharges. If the source of the non-storm water discharge is found to be a discharge authorized under this General Permit, or authorized under another NPDES permit, no further action is required.

(e) Corrective Action to Eliminate Illicit Discharge – Once the source of the illicit discharge has been determined, the Permittee shall immediately notify the responsible party of the problem, and require the responsible party to conduct all necessary corrective actions to eliminate the non-storm water discharge within 72 hours of notification. Upon being notified that the discharge has been eliminated, conduct a follow-up investigation and field screening to verify that the discharge has been eliminated using BMPs or some other corrective action. The Permittee shall document its follow-up investigation. The Permittee may seek recovery and remediation costs from responsible parties or require compensation for the cost of field screening and investigations. Resulting enforcement actions shall follow the program's Enforcement Response Plan as specified in E.6.c.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.9.e. Spill Response Plan

(i) **Task Description** – Within the first year of the effective date of the permit, the Permittee shall develop and implement a spill response plan.

(ii) **Implementation Level** - At a minimum, the spill response plan will incorporate the information from Section E.9.c. and outline the following:

(a) Agency roles and responsibilities (e.g. County Department of Environmental Health, local police department, local fire department, etc.)
(b) The procedures for responding to complaints
(c) How investigations are to be conducted
(d) How clean up is initiated or conducted
(e) How reporting is completed and what information is required

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this

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program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.10. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL PROGRAM

The Permittee shall develop, implement, and enforce a program to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The program shall include the development of an enforceable construction site storm water runoff control ordinance for all projects that disturb less than one acre of soil. The construction site storm water runoff control ordinance shall include, at a minimum, requirements for erosion and sediment controls, soil stabilization, dewatering, source controls, pollution prevention measures and prohibited discharges.

Projects that disturb one acre or more of soil or disturb less than one acre but are part of a larger common plan or development or sale are subject to the CGP in addition to the construction site storm water runoff control ordinance.

E.10.a. Construction Site Inventory

(i) **Task Description -** Within the first year of the effective date of the permit, the Permittee shall maintain an inventory of all projects subject to the local construction site storm water runoff control ordinance within its jurisdiction.

(ii) **Implementation Level** –The Permittee shall maintain an inventory of all construction projects and continuously update as new projects are permitted and projects are completed. The inventory shall address all projects subject to the local construction site storm water runoff control ordinance. For projects subject to the CGP the Permittee may obtain the inventory from the SMARTS database and shall supplement as needed by the Permittee.

The inventory shall contain, at a minimum:
(a) Relevant contact information for each project (e.g., name, address, phone, email, etc. for the owner and contractor);
(b) The basic site information including location, status, size of the project and area of disturbance;
(c) The location of the project with respect to all waterbodies, waterbodies listed as impaired by sediment-related pollutants, and waterbodies listed as impaired for sediment or turbidity under the CWA Section 303(d) and approved by U.S. EPA;
(d) Project threat to water quality;
(e) Current construction phase;
(f) The required inspection frequency per the local construction site storm water runoff control ordinance;
(g) The project start and anticipated completion dates; and
(h) The date the Permittee approved the erosion and sediment control plan in accordance with this Section.

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(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.10.b. Construction Plan Review and Approval Procedures

(i) **Task Description** – Within the first year of the effective date of the permit, the Permittee shall develop procedures to review and approve relevant construction plan documents.

(ii) **Implementation Level** – The review procedures shall meet the following minimum requirements:

(a) Prior to issuing a grading or building permit, the Permittee shall require each operator of a construction activity within its jurisdiction to prepare and submit an erosion and sediment control plan for the Permittee's review and written approval. The Permittee shall not approve any erosion and sediment control plan unless it contains appropriate site-specific construction site BMPs that meet the minimum requirements of the Permittee's construction site storm water runoff control ordinance. If the erosion and sediment control plan is revised, the Permittee shall review and approve those revisions.

(b) Require that the erosion and sediment control plan include the rationale used for selecting BMPs including supporting soil loss calculations, if necessary.

(c) Require that the erosion and sediment control plan list applicable permits directly associated with the grading activity, including, but not limited to the State Water Board's CGP, State Water Board 401 Water Quality Certification, U.S. Army Corps 404 permit, and California Department of Fish and Game 1600 Agreement. Include as a condition of the grading permit that the operator submit evidence to the MS4 that all permits directly associated with the grading activity have been obtained prior to commencing the soil disturbing activities authorized by the grading permit.

(d) Conduct and document review of each erosion and sediment control plan using a checklist or similar process.

(e) The SWPPP developed pursuant to the CGP may substitute for the erosion and sediment control plan for projects where a SWPPP is developed. The Permittee is responsible for reviewing applicable portions of the SWPPP for compliance with the Permittee's construction site storm water runoff control ordinance and this Order.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

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E.10.c. Construction Site Inspection and Enforcement

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall use legal authority to implement procedures for inspecting public and private construction projects and conduct enforcement if necessary. The Permittee may leverage existing inspection procedures and personnel to conduct construction site inspections and enforcement.

(ii) **Implementation Level –** The inspection procedures shall be implemented to verify compliance with the Permittee's construction site storm water control ordinance. At a minimum, inspections must be conducted at priority construction sites (defined below) prior to land disturbance (during the rainy season), during active construction and following active construction. Construction site inspections shall include assessment of compliance with the Permittee's construction site storm water runoff control ordinance, and other applicable ordinances. A Permittee may propose, for Regional Water Board Executive Officer approval, an alternative approach for construction site oversight, provided the Permittee demonstrates the approach will be equally effective at reducing the discharge of pollutants from construction sites to the maximum extent practicable.

Prior to allowing an operator to commence land disturbance during the rainy season, the Permittee must perform an inspection, to ensure all necessary sediment controls are in place. During active construction, the Permittee shall conduct inspections, based on prioritization of construction sites. Active construction inspections shall include at a minimum: inspection of maintenance of BMPs, effectiveness of BMPs installed and verification that pollutants of concern are not discharged into receiving water bodies.

Prioritization criteria shall be based on project threat to water quality. Project threat to water quality includes soil erosion potential, site slope, projects size and type, sensitivity of receiving water bodies, proximity to receiving water bodies, non-storm water discharges, projects more than one acre that are not subject to the CGP (sites that have obtained an Erosivity Waiver) and past record of non-compliance by the operator of the construction site. Inspection frequencies shall be conducted based on the prioritization criteria described above.

At the conclusion of the project, the Permittee must inspect to ensure that all disturbed areas have been stabilized and that all temporary erosion and sediment control measures that are no longer needed have been removed as required by the local construction site storm water control ordinance.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

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E.11. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM

The Permittee shall develop and implement a program to prevent or reduce the amount of pollutant runoff from Permittee operations. The Permittee shall implement appropriate BMPs for preventing or reducing the amount of storm water pollution generated by Permittee operations.

E.11.a. Inventory of Permittee-Owned and Operated Facilities

(i) **Task Description** - Within the second year of the effective date of the permit, the Permittee shall develop and maintain an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality, if applicable.

(ii) **Implementation Level** - The inventory shall include all Permittee-owned or operated facilities within their jurisdiction that are potential significant sources of pollution in storm water, including the following if applicable:

- Airports
- Animal control facilities
- Chemical storage facilities
- Composting facilities
- Equipment storage and maintenance facilities (including landscape-related operations)
- Fuel farms
- Hazardous waste disposal facilities
- Hazardous waste handling and transfer facilities
- Incinerators
- Landfills
- Materials storage yards
- Pesticide storage facilities
- Public buildings, including schools, libraries, police stations, fire stations, Permittee (municipal) buildings, restrooms, and similar buildings (i.e., buildings with a similar potential to be sources of storm water pollution as the examples provided)
- Public parking lots
- Public golf courses
- Public swimming pools
- Public parks
- Public works yards
- Public marinas
- Recycling facilities
- Salt or de-icing storage facilities
- Solid waste handling and transfer facilities
- Transportation hubs (e.g. bus transfer stations)
- Vehicle storage and maintenance areas
- Vehicle fueling facilities
- Other (as directed by appropriate Regional Water Board)

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(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.b. Map of Permittee-Owned or Operated Facilities

(i) **Task Description –** Within the second year of the effective date of the permit, submit a map of the area within the permit boundary and identify where the inventoried Permittee-owned or operated facilities are located.

(ii) **Implementation Level** - The map identifying the location of the inventoried Permittee-owned or operated facilities shall identify the storm water drainage system (e.g., storm water outfalls or other mechanisms in which storm water leaves the site) corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The map shall also show the facility and the manager of each facility, including contact information.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.c. Facility Assessment

(i) **Task Description** – Within the third year of the effective date of the permit, for all the inventoried Permittee-owned or operated facilities, the Permittee shall conduct a comprehensive inspection and assessment of pollutant discharge potential and identification of pollutant hotspots using the Center for Watershed Protection's (CWP) guide on Urban Subwatershed and Site Reconnaissance, or equivalent.[18]

(ii) **Implementation Levels** - Conduct an annual review and assessment of all municipally owned or operated facilities to determine their potential to impact surface waters. The assessment shall include the following:

(a) Identification of pollutant hotspots:

Based on the annual assessment, the Permittee shall identify those facilities that have a high potential to generate storm water and non-storm water pollutants as pollutant hotspots and assign them a high priority. Among the factors to be considered are the type and volume of pollutants stored at the site, the presence of improperly stored materials,

[18] The Permittee shall use the Center for Watershed Protection's Restoration Manual Series guide on Urban Subwatershed and Site Reconnaissance: a User's Manual (available as a free download at www.cwp.org) or equivalent when identifying priority areas. Hotspots are specific operations in a subwatershed that may generate high storm water pollution.

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activities that should not be performed outside (e.g., changing automotive fluids, vehicle washing), proximity to water bodies, poor housekeeping practices, and the discharge of pollutant(s) of concern to receiving water(s). Pollutant hotspots shall include, at a minimum, the Permittee's maintenance yards, hazardous waste facilities, fuel storage and/or dispensing locations, airports marinas, and any other facilities at which chemicals or other materials have a high potential to be discharged in storm water.

(b) Documentation of the comprehensive assessment procedures and results:

The Permittee shall document the procedures it uses for conducting the comprehensive assessment along with a copy of any site evaluation checklists used to conduct the comprehensive assessment.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.d. Storm Water Pollution Prevention Plans

(i) **Task Description** – Within the fourth year of the effective date of the permit, the Permittee shall develop and implement SWPPPs for pollutant hotspots. If a Permittee has an existing document such as Hazardous Materials Business Plan, Spill Prevention Plan, or other equivalent document the Permittee is not required to develop a SWPPP.

(ii) **Implementation Level** – The Permittee shall implement the following:

(a) The Permittee shall develop and implement a site-specific SWPPP that identifies existing storm water BMPs and a set of storm water BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants to protect water quality. The Permittee may utilize the CWP guide on Urban Subwatershed and Site Reconnaissance, or equivalent, as guidance.

(b) The SWPPP(s) shall be kept on-site at each of the Permittee-owned or operated facilities' offices for which it was completed. The SWPPP shall be updated as necessary.

(c) At a minimum the SWPPP will address the following:

1) Facility specific information (location, owner, address, etc.)
2) Purpose of the document
3) Key staff/contacts at the facility
4) Site map with drainage identified

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5) Identification of significant materials that are handled and stored at the facility that may be exposed to storm water
6) Description of potential pollutant sources
7) Facility BMPs
8) Spill control and cleanup – response to spills
9) Inspection schedule
10) Inspection procedures and checklist for inspections conducted to ensure proper selection, implementation, and maintenance of all BMPs

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.e. Inspections, Visual Monitoring and Remedial Action

(i) **Task Description** – Within the fifth year of the effective date of the Permit, the Permittee shall conduct regular inspections of Permittee-owned and operated facilities.

(ii) **Implementation Level** – Inspections shall be conducted as follows:

(a) Quarterly visual hotspot inspections – Perform quarterly visual inspections, in accordance with the inspection procedures and inspection checklist developed for each Permittee-owned or operated hotspot, to ensure materials and equipment are clean and orderly; to minimize the potential for pollutant discharge; and to ensure effective selection, implementation, and maintenance of BMPs. The Permittee shall look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The quarterly inspections shall be tracked in a log for every facility, and records kept with the SWPPP (records may be kept electronically). The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(b) Annual Hotspot comprehensive inspections – At least once per year, the Permittee shall conduct a comprehensive inspection of each hotspot facility, including all storm water BMPs, in accordance with the facility-specific inspection procedures and inspection checklist. The Permittee shall pay specific attention, without limiting its attention, to: waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The annual inspection results shall be documented and records kept with the SWPPP. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct deficiencies.

(c) Quarterly Hotspot visual observation of storm water and non-storm water discharges – At least once per quarter visually observe discharge locations from hotspot facilities. Where discharges are observed identify any observed

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problems (e.g., color, foam, sheen, turbidity) associated with pollutant sources or BMPs shall be remedied as soon as practicable or before the next storm event, whichever is sooner. Visual observations shall be documented, and records kept with the SWPPP. This inspection shall be done in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(d) Non-Hotspot Inspection – At a minimum, inspect each inventoried municipal facility that is not a hotspot, once per permit term.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.f. Storm Drain System Assessment and Prioritization

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop and implement procedures to assess and prioritize MS4 storm drain system maintenance, including but not limited to, catch basins, pipe and pump infrastructure, above-ground conveyances, including receiving water bodies within the Permittee's urbanized area and detention basins.

If flood conveyance maintenance is undertaken by another entity, the Permittee shall coordinate with the flood conveyance management entity by year three to assess and prioritize maintenance of the MS4 storm drain system.

(ii) **Implementation Level** – The Permittee shall:

Assess/prioritize storm drain system facilities for cleanout – Assign a priority to MS4 storm drain facilities within the Permittee's urbanized areas based on accumulation of sediment, trash and/or debris. In particular, assign high priority to catch basin meeting any of the following criteria:

1) Catch basins known to accumulate a significant amount of sediment, trash, and/or debris;
2) Catch basins collecting large volumes of runoff;
3) Catch basin collecting runoff from area that do not receive regular sweet sweeping;
4) Catch basins collecting runoff from drainage areas with exposed or disturbed soil; or
5) Catch basins that receive citizen complaints/reports.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment

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and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.g. Maintenance of Storm Drain System

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall begin maintenance of all high priority storm drain systems on an ongoing schedule.

(ii) **Implementation Level** – The Permittee shall begin maintenance of storm drain systems according to the procedures and priorities developed according to this Section. At a minimum the Permittee shall:

(a) Inspect storm drain systems – Based on the priorities assigned above in Section E.11.f.(ii)(a), develop and implement a strategy to inspect storm drain systems within the Permittee's jurisdiction. At a minimum, inspect all high priority catch basins and systems annually.

(b) Clean storm drains – Develop and implement a schedule to clean high priority catch basins and other systems. Cleaning frequencies shall be based on priority areas, with higher priority areas receiving more frequent maintenance.

(c) Labeling catch basins – Ensure that each catch basin in high foot traffic areas includes a legible storm water awareness message (e.g., a label, stencil, marker, or pre-cast message such as “drains to the creek” or “only rain in the drain”). Catch basins with illegible or missing labels shall be recorded and re-labeled within one month of inspection.

(d) Maintain surface drainage structures – High priority facilities, such as those with recurrent illegal dumping, shall be reviewed and maintained annually as needed. Non-priority facilities shall be reviewed as needed. Removal of trash and debris from high priority areas shall occur annually prior to the rainy season.

(e) Dispose of waste materials – Develop and implement a procedure to dewater and dispose of materials extracted from catch basins. This procedure shall ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.h. Permittee Operations and Maintenance Activities (O&M)

(i) **Task Description –** Within the third year of the effective date of the permit, the Permittee shall assess their O&M activities for potential to discharge pollutants in storm water and inspect all O&M BMPs on a quarterly basis.

(ii) **Implementation Level** - The Permittee shall:

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(a) Develop and implement a program to assess O&M activities and subsequently develop applicable BMPs. The following Permittee O&M activities shall be included in the assessment for their potential to discharge pollutants in storm water:

1) Road and parking lot maintenance, including sidewalk repair, curb and gutter repair, pothole repair, pavement marking, sealing, and re-paving
2) Bridge maintenance, including re-chipping, grinding, saw cutting, and painting
3) Cold weather operations, including plowing, sanding, and application of deicing compounds and maintenance of snow disposal areas
4) Right-of-way maintenance, including mowing, herbicide and pesticide application, and planting vegetation
5) Storm water relevant Permittee-sponsored or sanctioned events such as large outdoor festivals, parades, or street fairs (eg. Earth Day, Coastal Cleanup Day, Creek Week)
6) Green waste deposited in the street
7) Graffiti removal
8) Hydrant flushing

(b) Identify all materials that could be discharged from each of these O&M activities, and which materials contain pollutants. Typical pollutants associated with these activities include metals, chlorides, hydrocarbons (e.g. benzene, toluene, ethylbenzene, and xylene), sediment, green waste, herbicide, pesticide, dried paint, and trash.

(c) Develop and implement a set of BMPs that, when applied during Permittee O&M activities, will reduce pollutants in storm water and non-storm water discharges. The Permittee shall use the CASQA Municipal Handbook or equivalent.

(d) Evaluate BMPs – All BMPs implemented during O&M activities shall be evaluated quarterly.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.i. Incorporation of Water Quality and Habitat Enhancement Features in New Flood Management Facilities

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement a process for incorporating water quality and habitat enhancement features into new and rehabilitated flood management facilities.

(ii) **Implementation Level** – The Permittee shall develop and implement a process to incorporate water quality and habitat enhancement features in the design of all new

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and rehabilitated flood management projects that are associated with the MS4 or that discharge to the MS4.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.11.j. Landscape Design and Maintenance

(i) **Task Description** – Within the second year of the effective date of the permit**,** the Permittee shall implement a landscape design and maintenance program to reduce the amount of water, pesticides, herbicides and fertilizers used during Permittee operations and activities[19].

(ii) **Implementation Tasks** – At a minimum, the Permittee shall:

(a) Evaluate pesticides, herbicides and fertilizers used and application activities performed and identify pollution prevention and source control opportunities.

(b) Implement practices that reduce the discharge of pesticides, herbicides and fertilizers. At a minimum the Permittee shall:

1) Implement educational activities for municipal applicators and distributors.

2) Implement landscape management measures that rely on non-chemical solutions, including:

a) Create drought-resistant soils by amending soils with compost;
b) Create soil microbial community through the use of compost, compost tea, or inoculation;
c) Use native and/or climate appropriate plants to reduce the amount of water, pesticides, herbicides and fertilizers used;
d) Practice grasscycling on decorative turf landscapes to reduce water use and the need for fertilizers;
e) Keeping grass clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling;
f) Preventing application of pesticides, herbicides and fertilizers during irrigation or within 48 hours of predicted rainfall with greater than 50% probability as predicted by National Oceanic and Atmospheric Administration (NOAA)[20];
g) Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal);
h) Prohibiting application of pesticides, herbicides and fertilizers as required by the regulations DPR 11-004 Prevention of Surface Water Contamination by Pesticides enacted by the Department of Pesticide Regulation;

[19] Water Efficient Landscape Ordinance can be found at: http://www.water.ca.gov/wateruseefficiency/docs/MWELO09-10-09.pdf
[20] www.srh.noaa.gov/forecast

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i) Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing public safety.

3) Collect and properly dispose of unused pesticides, herbicides, and fertilizers.

4) Minimize irrigation run-off by using an evapotranspiration-based irrigation schedule and rain sensors.

(c) Record the types and amounts of pesticides, herbicides and fertilizers used in the permit area.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12. POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM

E.12.a. Post-Construction Measures

Permittees shall regulate development to comply with the following Sections:

- E.12.b Site Design Measures
- E.12.c. Regulated Projects
- E.12.d. Source Control Measures
- E.12.e. Low Impact Development (LID) Design Standards
- E.12.f. Hydromodification Measures
- E.12.g. Enforceable Mechanisms
- E.12.h. Operation and Maintenance of Storm Water Control Measures
- E.12.i. Post-Construction Best Management Practice Condition Assessment
- E.12.j. Planning and Development Review Process
- E.12.k. Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes
- E.12.l. Alternative Post-Construction Storm Water Management Program

E.12.b. Site Design Measures

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall require implementation of site design measures for all projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet of impervious surface, including detached single family homes that create and/or replace 2,500 square feet or more of impervious surface and are not part of a larger plan of development. Site design measures as specified in this section are not applicable to linear underground/overhead projects (LUPs).

(ii) **Implementation Level** - Projects shall implement one or more of the following site design measures to reduce project site runoff:

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(a) Stream Setbacks and Buffers - a vegetated area including trees, shrubs, and herbaceous vegetation, that exists or is established to protect a stream system, lake reservoir, or coastal estuarine area;
(b) Soil Quality Improvement and Maintenance - improvement and maintenance soil through soil amendments and creation of microbial community;
(c) Tree Planting and Preservation - planting and preservation of healthy, established trees that include both evergreens and deciduous, as applicable;
(d) Rooftop and Impervious Area Disconnection - rerouting of rooftop drainage pipes to drain rainwater to rain barrels, cisterns, or permeable areas instead of the storm sewer;
(e) Porous Pavement - pavement that allows runoff to pass through it, thereby reducing the runoff from a site and surrounding areas and filtering pollutants;
(f) Green Roofs - a vegetative layer grown on a roof (rooftop garden);
(g) Vegetated Swales - a vegetated, open-channel management practice designed specifically to treat and attenuate storm water runoff;
(h) Rain Barrels and Cisterns - system that collects and stores storm water runoff from a roof or other impervious surface.

Project proponents shall use the State Water Board SMARTS Post-Construction Calculator[21], or equivalent to quantify the runoff reduction resulting from implementation of site design measures.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12.c. Regulated Projects

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall implement standards to effectively reduce runoff and pollutants associated with runoff from Regulated Projects as defined below.

(ii) **Implementation Level** - The Permittee shall regulate all projects that create and/or replace 5,000 square feet or more of impervious surface (Regulated Projects). The Permittee shall require these Regulated Projects to implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management as defined in this Order.

Regulated Projects do not include:

- Detached single family home projects that are not part of a larger plan of development;
- Interior remodels;

[21] The State Water Board SMARTS Post-Construction Calculator can be found at: https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

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- Routine maintenance or repair such as: exterior wall surface replacement, pavement resurfacing within the existing footprint.
- LUPs - Unless the LUP has a discrete location that has 5,000 square feet or more of newly constructed contiguous impervious surface. When the LUP has a discrete location that has 5,000 sq-ft or more of new contiguous impervious surface, only that specific discrete location is subject to Section E.12.c.

Regulated Projects include development projects. Development includes new and redevelopment projects on public or private land that fall under the planning and permitting authority of a Permittee. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. Redevelopment does not include trenching, excavation and resurfacing associated with LUPs; pavement grinding and resurfacing of existing roadways; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway. The following (a-c) describe specific Regulated Project requirements for redevelopment, road projects and LUPs:

(a) Where a redevelopment project results in an increase of more than 50 percent of the impervious surface of a previously existing development, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included to the extent feasible.

(b) Where a redevelopment project results in an increase of less than 50 percent of the impervious surface of a previously existing development, only runoff from the new and/or replaced impervious surface of the project must be included.

(c) Road Projects and LUPs - Any of the following types of road projects and LUPs that create 5,000 square feet or more of newly constructed contiguous impervious surface and that are public road projects and/or fall under the building and planning authority of a Permittee shall comply with Section E.12.e. Low Impact Development Standards except that treatment of runoff of the 85th percentile that cannot be infiltrated onsite shall follow U.S. EPA guidance regarding green infrastructure to the extent feasible. Types of projects include:

1) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads.
2) Widening of existing streets or roads with additional traffic lanes.
    a) Where the addition of traffic lanes results in an alteration of more than 50 percent of the impervious surface of an existing street or road, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design.
    b) Where the addition of traffic lanes results in an alteration of less than 50 percent (but 5,000 square feet or more) of the impervious surface

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of an existing street or road, only the runoff from new and/or replaced impervious surface of the project must be included in the treatment system design.

3) Construction of linear underground/overhead projects (LUPs)
4) Specific exclusions are:
   a) Sidewalks built as part of new streets or roads and built to direct storm water runoff to adjacent vegetated areas.
   b) Bicycle lanes that are built as part of new streets or roads that direct storm water runoff to adjacent vegetated areas.
   c) Impervious trails built to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.
   d) Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.
   e) Trenching, excavation and resurfacing associated with LUPs; pavement grinding and resurfacing of existing roadways and parking lots; construction of new sidewalks, pedestrian ramps, or bike lanes on existing roadways; or routine replacement of damaged pavement such as pothole repair or replacement of short, non-contiguous sections of roadway.

Effective Date for Applicability of Low Impact Development Runoff Standards to Regulated Projects: By the second year of the effective date of the permit, the Permittee shall require these Post-Construction Standards be applied on applicable new and redevelopment Regulated Projects, both private development requiring municipal permits and public projects, to the extent allowable by applicable law. These include discretionary permit projects that have not been deemed complete for processing and discretionary permit projects without vesting tentative maps that have not requested and received an extension of previously granted approvals. Discretionary projects that have been deemed complete prior to the second year of the effective date of this Order are not subject to the Post-Construction Standards herein. For the Permittee's Regulated Projects, the effective date shall be the date their governing body or designee approves initiation of the project design.

Permittee's Development Projects - The Permittee shall develop and implement an equivalent approach, to the approach used for private development projects, to apply the most current version of the low impact development runoff standards to applicable public development projects, to the extent allowable by applicable law.

E.12.d. Source Control Measures

(i) **Task Description** – Regulated Projects with pollutant-generating activities and sources shall be required to implement standard permanent and/or operation source control measures as applicable.

(ii) **Implementation Level** - Measures for the following pollutant generating activities and sources shall be designed consistent with recommendations from the CASQA

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Stormwater BMP Handbook for New Development and Redevelopment or equivalent manual, and include:

(a) Accidental spills or leaks
(b) Interior floor drains
(c) Parking/storage areas and maintenance
(d) Indoor and structural pest control
(e) Landscape/outdoor pesticide use
(f) Pools, spas, ponds, decorative fountains, and other water features
(g) Restaurants, grocery stores, and other food service operations
(h) Refuse areas
(i) Industrial processes
(j) Outdoor storage of equipment or materials
(k) Vehicle and equipment cleaning
(l) Vehicle and equipment repair and maintenance
(m) Fuel dispensing areas
(n) Loading docks
(o) Fire sprinkler test water
(p) Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources
(q) Unauthorized non-storm water discharges
(r) Building and grounds maintenance

E.12.e. Low Impact Development (LID) Design Standards

(i) **Task Description –** The Permittee shall require all Regulated Projects to implement low impact development (LID) standards designed to reduce runoff, treat storm water, and provide baseline hydromodification management to the extent feasible, to meet the Numeric Sizing Criteria for Storm Water Retention and Treatment under Section E.12.e(ii)(c).

(ii) **Implementation Level –** The Permittee shall adopt and implement requirements and standards to ensure design and construction of development projects achieve the following LID Design Standards.

(a) **Site Assessment**

At the earliest planning stages, the Permittee shall require Regulated Projects to assess and evaluate how site conditions, such as soils, vegetation, and flow paths, will influence the placement of buildings and paved surfaces. The evaluation will be used to meet the goals of capturing and treating runoff and assuring these goals are incorporated into the project design. The Permittee may adopt or reference an existing LID site assessment methodology[22]Permittees shall require Regulated Projects to consider optimizing the site layout through the following methods:

1) Define the development envelope and protected areas, identifying areas that are most suitable for development and areas to be left undisturbed.

[22] Low Impact Development Manual for Southern California (Low Impact Development Center – See CASQA's LID website at: http://www.casqa.org/LID/tabid/240/Default.aspx.

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2) Concentrate development on portions of the site with less permeable soils and preserve areas that can promote infiltration.
3) Limit overall impervious coverage of the site with paving and roofs.
4) Set back development from creeks, wetlands, and riparian habitats.
5) Preserve significant trees.
6) Conform the site layout along natural landforms.
7) Avoid excessive grading and disturbance of vegetation and soils.
8) Replicate the site's natural drainage patterns.
9) Detain and retain runoff throughout the site.

(b) **Drainage Management Areas**

The Permittee shall require each Regulated Project to provide a map or diagram dividing the developed portions of the project site into discrete Drainage Management Areas (DMAs), and to manage runoff from each DMA using Site Design Measures, Source Controls and/or Storm Water Treatment and Baseline Hydromodification Measures.

(c) **Numeric Sizing Criteria for Storm Water Retention and Treatment**

The Permittees shall require facilities designed to evapotranspire, infiltrate, harvest/use, and biotreat storm water to meet at least one of the following hydraulic sizing design criteria:

1) Volumetric Criteria:

   a) The maximized capture storm water volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998) pages 175-178 (that is, approximately the 85th percentile 24-hour storm runoff event); or

   b) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of the CASQA's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.

2) Flow-based Criteria:

   a) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or

   b) The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records.

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(d) **Site Design Measures**

The Permittee shall implement Site Design Measures (as defined in Section E.12.b. Site Design Measures and Section E.12.e(ii)(a) Site Assessment), site layout and design measures, based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile 24-hour storm runoff event. Site design measures shall be used to reduce the amount of runoff, to the extent technically feasible, for which retention and runoff is required . Any remaining runoff from impervious DMAs may then be directed to one or more bioretention facilities as specified in Section E.12.e.(ii)(f), below.

(e) **Source Controls**

The Permittee shall implement Source Controls as defined in Section E.12.d. Source Control Measures.

(f) **Storm Water Treatment Measures and Baseline Hydromodification Management Measures**

After implementation of Site Design Measures, remaining runoff from impervious DMAs must be directed to one or more facilities designed to infiltrate, evapotranspire, and/or bioretain the amount of runoff specified in Section E.12.e(ii)(c) Numeric Sizing Criteria for Storm Water Retention and Treatment. The facilities must be demonstrated to be at least as effective as a bioretention system with the following design parameters:

1) Maximum surface loading rate of 5 inches per hour, based on the flow rates calculated. A sizing factor of 4% of tributary impervious area may be used.
2) Minimum surface reservoir volume equal to surface area times a depth of 6 inches.
3) Minimum planting medium depth of 18 inches. The planting medium must sustain a minimum infiltration rate of 5 inches per hour throughout the life of the project and must maximize runoff retention and pollutant removal. A mixture of sand (60%-70%) meeting the specifications of American Society for Testing and Materials (ASTM) C33 and compost (30%-40%) may be used.
4) Subsurface drainage/storage (gravel) layer with an area equal to the surface area and having a minimum depth of 12 inches.
5) Underdrain with discharge elevation at top of gravel layer.
6) No compaction of soils beneath the facility, or ripping/loosening of soils if compacted.
7) No liners or other barriers interfering with infiltration.
8) Appropriate plant palette for the specified soil mix and maximum available water use.

(g) **Alternative Designs —** Facilities, or a combination of facilities, of a different design than in Section E.12.e.(ii)(f) may be permitted if all of the following

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measures of equivalent effectiveness are demonstrated:

1) Equal or greater amount of runoff infiltrated or evapotranspired;
2) Equal or lower pollutant concentrations in runoff that is discharged after biotreatment;
3) Equal or greater protection against shock loadings and spills;
4) Equal or greater accessibility and ease of inspection and maintenance.

(h) **Allowed Variations for Special Site Conditions** - The bioretention system design parameters in Section E.12.e.(ii)(f) may be adjusted for the following special site conditions:

1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate an impervious cutoff wall between the bioretention facility and the structure or other geotechnical hazard.
2) Facilities with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a “flow-through planter”).
3) Facilities located in areas of high groundwater, highly infiltrative soils or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.
4) Facilities serving high-risk areas such as fueling stations, truck stops, auto repairs, and heavy industrial sites may be required to provide additional treatment to address pollutants of concern unless these high-risk areas are isolated from storm water runoff or bioretention areas with little chance of spill migration.

(i) **Exceptions to Requirements for Bioretention Facilities** - Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, other types of biotreatment or media filters (such as tree-box-type biofilters or in-vault media filters) may be used for the following categories of Regulated Projects:

1) Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district (i.e., smart growth projects), and having at least 85% of the entire project site covered by permanent structures;
2) Facilities receiving runoff solely from existing (pre-project) impervious areas;and
3) Historic sites, structures or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

By the second year of the effective date of the permit, each Permittee shall adopt or reference appropriate performance criteria for such biotreatment and media filters.

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(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12.f. Hydromodification Management

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall develop and implement Hydromodification Management procedures. Hydromodification management projects are Regulated Projects that create and/or replace one acre or more of impervious surface. A project that does not increase impervious surface area over the pre-project condition is not a hydromodification management project.

(ii) **Implementation Level** - The Permittee shall implement the following Hydromodification Standard:

(a) Post-project runoff shall not exceed estimated pre-project flow rate for the 2-year, 24-hour storm in the following geomorphic provinces (Figure 1):

- Coast Ranges
- Klamath Mountains
- Cascade Range
- Modoc Plateau
- Basin and Range
- Sierra Nevada
- Great Valley

(b) Post-project runoff shall not exceed estimated pre-project flow rate for the 10-year, 24-hour storm in the following geomorphic provinces (Figure 1):

- Transverse Ranges
- Peninsular Ranges
- Mojave Desert
- Colorado Desert

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Figure 1. California Geomorphic Provinces

Alternatively, the Permittee may use a geomorphically based hydromodification standard or set of standards and analysis procedures designed to ensure that Regulated Projects do not cause a decrease in lateral (bank) and vertical (channel bed) stability in receiving stream channels. The alternative hydromodification standard or set of standards and analysis procedures must be reviewed and approved by the Regional Board Executive Officer.

(iii) **Reporting** –The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

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E.12.g. Enforceable Mechanisms

(i) **Task Description** - Within the third year of the effective date of the permit, the Permittee shall develop and/or modify enforceable mechanisms that will effectively implement the requirements in Section E.12.b through f (if necessary).

(ii) **Implementation Level** - The Permittee shall develop and/or modify enforceable mechanisms that will effectively implement the requirements in Section E.12.b through E.12.f and may include municipal codes, regulations, standards, and specifications. The Permittee shall:

(a) Conduct an analysis of all applicable codes, regulations, standards, and/or specifications to identify modifications and/or additions necessary to fill gaps and remove impediments to effective implementation of project-scale development requirements.
(b) Approve new and/or modified enforceable mechanisms that effectively resolve regulatory conflicts and implement the requirements in Sections E.12.b through E.12.f (if necessary)
(c) Apply new and/or modified enforceable mechanisms to all applicable new and redevelopment projects. Develop and make available specific guidance for LID BMP design
(d) Complete a Tracking Report indicating the Permittee's accomplishments in education and outreach supporting implementation of LID requirements for new and redevelopment projects.

E.12.h. Operation and Maintenance of Post-Construction Storm Water Management Measures

(i) **Task Description** –Within the second year of the effective date of the permit, the Permittee shall implement an O&M Verification Program for storm water treatment and baseline hydromodification management structural control measures defined in Section E.12.e(ii)(f). Storm Water Treatment Measures and Baseline Hydromodification Management Measures on all Regulated Projects.

(ii) **Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:

(a) All Regulated Projects shall at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:

1) The project proponent's signed statement accepting responsibility for the O&M of structural control measure(s) until such responsibility is legally transferred to another entity;
2) Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity;

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3) Written text in project deeds, or conditions, covenants and restrictions for multi-unit residential projects that require the homeowners association or, if there is no association, each individual owner to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity; or
4) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed treatment system(s) and hydromodification control(s) (if any) to the project owner(s) or the Permittee.

(b) Coordination with the appropriate mosquito[23] and vector control agency with jurisdiction to establish a protocol for notification of installed treatment systems and hydromodification management controls. On an annual basis, before the wet season, prepare a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. The Permittee may submit the list of Regulated Projects as described in Section E.12.h.(ii)(e). This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed.

(c) Conditions of approval or other legally enforceable agreements or mechanisms for all Regulated Projects that require the granting of site access to all representatives of the Permittee for the sole purpose of performing O&M inspections of the installed treatment system(s) and hydromodification control(s) (if any).

(d) A written implementation plan that describes O&M (including inspection) of all Regional Projects and regional controls that are Permittee-owned and/or operated.

(e) A database or equivalent tabular format of all Regulated Projects (public and private) that have installed treatment systems. This database or equivalent tabular format shall include the following information for each Regulated Project:

1) Name and address of the Regulated Project;
2) Specific description of the location (or a map showing the location) of the installed treatment system(s) and hydromodification control(s) (if any);
3) Date(s) that the treatment system(s) and hydromodification controls (if any) is/are installed;
4) Description of the type and size of the treatment system(s) and hydromodification control(s) (if any) installed;
5) Responsible operator(s) of each treatment system and hydromodification control (if any);
6) Dates and findings of inspections (routine and follow-up) of the treatment system(s) and hydromodification control(s) (if any) by the Permittee; and
7) Any problems and corrective or enforcement actions taken.

[23] California Department of Public Health. (2012). Best Management Practices for Mosquito Control in California. Retrieved on July 20, 2012 from http://www.westnile.ca.gov/resources.php

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8) Maintenance Approvals: The Permittee shall ensure that systems and hydromodification controls installed at Regulated Projects are properly operated and maintained for the life of the projects. In cases where the responsible party for a treatment system or hydromodification control has worked diligently and in good faith with the appropriate state and federal agencies and the Permittee to obtain approvals necessary to complete maintenance activities for the treatment system or hydromodification management control, but these approvals are not granted, the Permittee shall be deemed to be in compliance with this Provision.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12.i. Post-Construction Best Management Practice Condition Assessment

(i) **Task Description** – Within the third year of the effective date of the permit, the Permittee shall inventory and assess the maintenance condition of structural post-construction BMPs (including BMPs used for flood control) within the Permittee's jurisdiction.

(ii) **Implementation Level** – The Permittee shall develop and implement a plan to inventory, map, and determine the relative maintenance condition of structural post-construction BMPs. Maintenance condition shall be determined through a self-certification program where Permittees require annual reports from authorized parties demonstrating proper maintenance and operations. The plan shall include:

(a) An inventory and map of existing structural post-construction BMPs, in GIS if available.
(b) Assessments of the self-certification program annual reports. Assessment shall include a ranking of structural BMPs and verification that BMPs are operating to remove pollutants as designed. Regional BMPs should receive higher priority than lot-scale BMPs, and BMPs designed to remove pollutants for which receiving water is impaired should receive priority attention over other BMPs.
(c) Appropriate escalating enforcement based on the Permittee Enforcement Response Plan to ensure proper maintenance of BMPs and submittal of self-certification annual reports.
(d) Self-Certification Annual Reports. At a minimum, the self-certification annual reports shall include:

1) Field observations to determine the effectiveness of the structural post construction BMPs in removing pollutants of concern from storm water runoff and/or reducing hydromodification impacts as designed.

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2) Long-term plan for conducting regular maintenance of BMPs, including the frequency of such maintenance.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section E.16.a.for compliance directions.

E.12.j. Planning and Development Review Process

(i) **Task Description** – The Permittee shall review their planning and permitting process to assess any gaps or impediments impacting effective implementation of these post-construction requirements specified in Section E.12, and where these are found to exist, seek solutions to promote implementation of these requirements within the context of public safety and community goals for land use. The Permittee shall prioritize review of the landscape code (code detailing landscaping requirements and considerations which should be implemented to protect environmental quality) to correct gaps and impediments impacting effective implementation of post-construction requirements.

(ii) **Implementation Level** – During years 1 – 3, the Permittee shall conduct the review using an existing guide or template already developed for MS4s (such as the Municipal Regulatory Update Assistance Program (MRUAP)[24] conducted by AHBL, Inc. for the Low Impact Development Initiative (LIDI) on the Central Coast). By the fourth year of the effective date of the permit, any changes to the planning and permitting process will be completed to effectively administer these provisions. Priority shall be placed on review of the landscape code, with the following implementation level.

(a) Within the first year of the effective date of this permit, the Permittee shall conduct an analysis of the landscape code to correct gaps and impediments impacting effective implementation of post-construction requirements.

(b) Within the second year of the effective date of the permit, the Permittee shall complete any changes to the landscape code to effectively administer post-construction requirements.

(iii) **Reporting** – By the second year Annual Report and annually thereafter, complete and have available a summary of the review process, and any proposed or completed changes to the Permittee's program.

[24] http://www.casqa.org/LIDDemo/LIDTraining/tabid/246/Default.aspx

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E.12.k. Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes

Small MS4s subject to Section E of this Order, in place of complying with the requirements set forth in Section E.12, except for Sections E.12.j. Planning and Development Review Process and E.12.e(ii)(e) Source Control Requirements, shall comply with post-construction storm water management requirements based on a watershed-process approach developed by Regional Water Board that include the following:

- Completion of a comprehensive assessment of dominant watershed processes affected by urban storm water
- LID site design and runoff reduction measures, numeric runoff treatment and retention controls, and hydromodification controls that will maintain watershed processes and protect water quality and beneficial uses.
- A process by which Regional Board staff will actively engage Permittees to adaptively manage requirements as determined by the assessment of watershed processes.
- An annual reporting program that involves Regional Board staff and State Board staff to inform statewide watershed process based criteria.

The regional watershed-process based approach must be approved by the Regional Water Board following a public process.

E.12.l. Alternative Post-Construction Storm Water Management Program

A Permittee may propose alternative post-construction measures in lieu of some or all of Section E.12. requirements for multiple benefit projects. Multiple-benefit projects include projects that may address any of the following, in addition to water quality: water supply, flood control, habitat enhancement, open space preservation, recreation, climate change. Multiple-benefit projects may be applied at various scales including project site, municipal or sub-watershed level. Multiple-benefit projects may include, but are not limited to, projects developed under Watershed Improvement Plans (Water Code §16100 et seq.), IRWMP implementation and green infrastructure projects. Multiple benefit projects must be equally or more protective of water quality than Section E.12. requirements.

The Regional Water Board or the Executive Officer, may approve alternative post-construction measures for multiple-benefit projects, as described above, after an opportunity for public comment, if the Regional Water Board or Executive Officer finds that the alternative measures are consistent with the MEP standard.

E.13. WATER QUALITY MONITORING

Traditional Small MS4 Permittees that are required to conduct monitoring of discharges to ASBS, TMDL, or 303(d) impaired water bodies, as described in Sections E.13.(a)-(c), are not required to perform additional monitoring as specified in Sections E.13.d.1. and E.13.d.2.

Permittees are encouraged to participate in a regional monitoring program in order to cost-effectively combine resources and water quality information. Regional monitoring is the

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collaboration of local and regional monitoring programs that are designed to create a more comprehensive picture of water quality conditions within a watershed. The following management questions may be used to assist in guiding the development of a regional monitoring program, as applicable[25]:

1) Are water quality standards being met in receiving waters?
2) What is the extent and magnitude of the current or potential receiving water problems[26]?
3) What is the relative urban runoff contribution to the receiving water problem(s)?
4) What are the sources to urban runoff that contribute to the receiving water problem(s)?
5) Are conditions in receiving waters getting better or worse?

Regional monitoring programs shall be reviewed and approved by the Executive Officer of the applicable Regional Water Board[27].

Where a regional monitoring group has initiated plans, before the effective date of this Order, to conduct monitoring that achieves Section E.13. compliance, the Permittee may request the Executive Officer of the applicable Regional Board tailor compliance dates to synchronize with such efforts. Additionally, existing regional water monitoring efforts shall be reviewed and approved by a Regional Water Board Executive Officer.

Where a Permittee receives grant funding to conduct monitoring that achieves Section E.13. compliance, the Permittee may request the Regional Water Board Executive Officer tailor compliance dates to synchronize with such efforts.

E.13.a. ASBS Monitoring

All Permittees that discharge to an ASBS and are covered by an Ocean Plan exception shall comply with the monitoring requirements described in the terms, prohibitions and special conditions in Attachment C.

E.13.b. TMDL Monitoring

All Permittees that are assigned a wasteload allocation or identified as a responsible party in a TMDL approved by the U.S. EPA where urban runoff is listed as the source, shall comply with the monitoring requirements included in Attachment G and consult with the Regional Water Board within one year of the effective date of the permit to determine the monitoring study design and a monitoring implementation schedule. Where a TMDL is limited to a single

[25] The five core management questions are based on the Stormwater Monitoring Coalition's Model Monitoring Technical Committee Technical Report # 419: Model Monitoring Program for Municipal Separate Storm Sewer Systems in Southern California.
[26] Water quality problems include exceedances of water quality standards, including impairment of designated uses, or other significant water quality impacts, including habitat and biological impacts.
[27] The regional monitoring programs may deviate from the specific requirements in Section E.13.a. to the extent approved by the Executive Officer, except that the regional monitoring program shall be SWAMP comparable and that all data shall be placed in the California Environmental Data Exchange Network (CEDEN).

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constituent within a single reach of the watershed, the Regional Water Board Executive Officer may require additional monitoring, per Water Code § 13383. Permittees shall implement TMDL monitoring as specified by the Regional Water Board Executive Officer.

E.13.c. 303(d) Monitoring

All Permittees that discharge to waterbodies listed as impaired on the 303(d)[28] list where urban runoff is listed as the source, shall consult with the Regional Water Board within one year of the effective date of the permit to assess whether monitoring is necessary and if so, determine the monitoring study design and a monitoring implementation schedule. Permittees shall implement monitoring of 303(d) impaired water bodies as specified by the Regional Water Board Executive Officer.

E.13.d. Receiving Water Monitoring and Special Studies

Traditional Small MS4 Permittees with a population greater than 50,000 listed in Attachment A that are not already conducting ASBS, TMDL or 303(d) monitoring efforts shall participate in one of the following monitoring programs, subject to Regional Water Board Executive Officer approval:

- E.13.d.1. Receiving Water Monitoring
- E.13.d.2. Special Studies

E.13.d.1. Receiving Water Monitoring

(i) **Task Description –** Within the second year of the effective date of the permit, the Permittee shall develop and implement a receiving water monitoring program to (1) Monitor receiving water quality at upstream location in an area undergoing development and evaluate changes in receiving water quality over time, and (2) Monitor receiving water quality at a downstream location in an urban area and evaluate changes in receiving water quality over time. Permittees may, to the extent allowed by law, establish a monitoring fund into which all new development contributes on a proportional basis (% development fee, size/number of lots, etc.). Monitoring funding may be overseen by municipalities or coalition of municipalities.

(ii) **Implementation Level -** By the first year of the permit, the Permittee shall select one (1) urban/rural interface monitoring site to monitor receiving water quality at an upstream location in an area undergoing development and evaluate changes in receiving water quality over time, and; one (1) urban area monitoring site to monitor receiving water quality at a downstream location in an urban area and evaluate changes in receiving water quality over time. Site selection shall include the following:

(a) Urban/Rural Interface. Identify one characteristic waterway at the top, or upstream, of a HUC 12 level watershed planned for development in the near future that traverses an urban/rural interface, using the 2010 Census Data and urban area maps, and establish a permanent monitoring location at the

[28] http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

identified urban/rural interface[29]. Monitoring at the urban/rural interface shall address the question: Does receiving water quality change as LID BMPs are integrated into new development?

(b) Urban Downstream. Identify one characteristic waterway at the bottom, or downstream, of the same HUC 12 watershed as the urban/rural interface monitoring location and within an urbanized area and establish a permanent monitoring location at the identified urbanized area waterway. Monitoring at the urban area site shall address the question: Does receiving water quality improve as a result of efforts to control the sources of pollution and educate the public?

By the second year of the permit term and after establishment of site selection, the Permittee shall monitor the urban/rural interface site to address the hypothesis that receiving water quality will remain the same as new development proceeds, and the urban area site to address the hypothesis that receiving water quality will improve over time as storm water and other water quality programmatic efforts are implemented. Monitoring shall be implemented in accordance with Table 3. Receiving Water Monitoring Parameters and Protocols.

Table 3: Receiving Water Monitoring Parameters and Protocol

Urban/Rural Interface:

Objective: Monitor receiving water quality at upstream location in an area undergoing development. Evaluate changes in receiving water quality over time.

Question: Does receiving water quality change as LID BMPs are integrated into new development?

Hypothesis: Receiving water quality will remain the same as new development proceeds.

Urban Downstream:

Objective: Monitor receiving water quality at a downstream location in an urban area. Evaluate changes in receiving water quality over time.

Question: Does receiving water quality improve as a result of efforts to control the sources of pollution and educate the public?

Hypothesis: Receiving water quality will improve over time as storm water and other water quality programmatic efforts are implemented.

PARAMETER	ENDPOINT	BENEFICIAL USED PROTECTED	JUSTIFICATION	PROTOCOL
Water Quality	Pyrethroids* (sediment)	Aquatic Life	Pyrethroids** among the most ubiquitous urban contaminant in storm water. Highly toxic to aquatic life.	Method with detection limit of 1 pptr (5 pptr for permethrin only) such as the GC-MS-MS method of Water Pollution Control Lab. Yearly in spring at urban/rural interface only. Refer to pending SWAMP guidelines.
	Dissolved oxygen (DO)	Aquatic life, recreation	DO reports on presence of excessive nutrients (N, P) and effects of organic matter loading into a waterbody. High DO during day, low DO at night suggests algae overgrowth.	Option 1: One week of evening grab samples (a minimum of 2 hours after dusk or 2 hours before sunrise) in spring (as soon as safe to get into waterway), summer, & fall. OR Option 2: Continuous sampling. 1

[29] The urban/rural interface is identified as the geographical location at which urban land use and rural land use interact

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				week in spring summer, fall. In rivers or lakes, 2 samplers to obtain depth-integrated values.
	Temperature	Aquatic life	Aquatic life can survive within a temperature window, exceedances lethal. If loggers are deployed, DO probes often also measure temperature.	Option 1: Daytime measurement between noon – 5 pm, at the same time of day, for 2 weeks in the spring, summer, and fall. Option 2: Continuous sample. Same as for dissolved oxygen.
	Bacteria	Recreation	Increase cell count linked to poor management practices, high bacteria levels limit recreational use of waterways.	Once yearly in later summer or fall. Collect 1 sample weekly x 4 weeks. Calculate geometric mean. Measure e. coli.
	Nutrients	Aquatic life Recreation Other	Excess nutrients can cause eutrophication of waterways leading to low dissolved oxygen which harms aquatic life. Algal overgrowth can also impair flows, adversely affect aesthetics, limiting recreation.	Benthic algal biomass and % cover (benthic chlorophyll a) from sediment in wadeable and non-wadeable streams or planktonic algal biomass (water column chlorophyll) from non-wadeable rivers and lakes. 3 times per year at beginning, middle, and end of growing season. Use SWAMP protocol.
Physical Habitat	PHAB assessment	Aquatic life	Expect to see few changes in habitat with effective LID implementation	Once yearly in spring. Use SWAMP protocol.
	Channel cross sections	Aquatic life	Reports on stability of creek/river channel	Once yearly in spring.
	Flow	Aquatic life	Expect minimal changes in flow rate if LID practices minimizes changes in hydrograph usually seen with urbanization	Option 1: Pressure transducer. Use channel cross sections put in same time as DO probe. Measure spring, summer, and fall Option 2: Install stage gage, develop rating curve. Evaluate spring, summer, and fall for 2 weeks.
	Photo documentation	Overall conditions	Pictures and flood prone area will aid in the interpretation of the data	Once yearly in spring.
Aquatic Life	Bioassessment	Aquatic life	BMIs integrate the sum of all conditions. Use early measurements as the baseline. In some cases, expect improved BMIs, depending on previous use of land.	In spring as soon as safe to enter water, use SWAMP protocol

* Pyrethroid monitoring is required at the urban/rural interface site only.

**Currently, pyrethroids are the pesticide of greatest concern and abundance in urban/suburban waterways. However, new regulations enacted by the Dept. of Pesticide Regulation restrict how pyrethroids may be applied. Initial models by UC Davis researchers suggest that this could result in a runoff reduction of 80-90%, depending on the amount of impervious cover in the watershed. In the future, other pesticides may become more of a threat to aquatic life in urban waterways. One pesticide that is being used with greater frequency is fipronil, a phenylpyrazole insecticide, that is more water soluble than pyrethroids. In order to use the resources of the permittees most efficiently, the State Water Resource Control Board reserves the right to modify the terms and conditions of the permit based on new information on pesticide use and toxicity. This could include substituting another pesticide for monitoring or eliminating this endpoint.

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(iii) **Reporting –** By the second year Annual Report, the Permittee shall complete and have available a report (50 page maximum) that includes a summary of baseline data collections and discussion of monitoring program results;

By the fifth year Annual Report, the Permittee shall complete and have available a report (50 page maximum) that includes a comparison of data collection to baseline data, and discussion of monitoring program results.

At a minimum, the second and fifth year Annual Reports shall include the following information:

(a) The purpose of the monitoring, brief contextual background and a brief description of the study design and rationale.
(b) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable. Sampling design, including sampling protocol, time of year, sampling frequency and length of sampling.
(c) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable.
(d) Results of data collection, including concentration detected, measurement units, and detection limits if applicable.
(e) Quantifiable assessment, analysis and interpretation of data for each monitoring parameter.
(f) Comparison to reference sites (if applicable), guidelines or targets
(g) Discussion of whether data collected addresses the objective(s) or question(s) of study design
(h) Quantifiable discussion of program/study pollutant reduction effectiveness.

Where applicable, the Permittee shall prepare, maintain, and implement a Quality Assurance Project Plan (QAPP) in accordance with the Surface Water Ambient Monitoring Program. All monitoring samples shall be collected and analyzed according to the Program QAPP developed for the purpose of compliance with this Order. SWAMP Quality Assurance Program Plan (2008) is available at:

http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/qaprp082209.pdf

A formatted Microsoft Word document that includes guidelines and boilerplate language for developing the permit QAPP is available at:

http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa

Water quality data shall be uploaded to SMARTS and must conform to California Environmental Data Exchange Network (CEDEN) Minimum Data Templates format. CEDEN Minimum Data Templates are also available at: http://ceden.org/

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E.13.d.2. Special Studies

(i) **Task Description –** Within the first year of the effective date of the permit, the Permittee, as an alternative to Section E.13.d.1. Receiving Water Monitoring, may develop and implement a special study monitoring program to assess and evaluate the effectiveness of water quality projects or storm water program elements designed to reduce specific water quality pollutants that are causing or contributing to beneficial use impairment. The special studies must demonstrate the nexus between storm water program implementation, water quality protection and pollutant reduction effectiveness and may include, but are not limited to:

(a) Assessment of effectiveness of habitat enhancement efforts and assessment of effectiveness of stream restoration projects (i.e., stream channel restoration as related to implementation of hydromodification standards);
(b) Assessment of effectiveness of low impact development pilot projects, and assessment of storm water program components through pollutant load reduction quantification and/or discharge water quality monitoring (i.e., reduction of impervious surface related to implementation of Post-Construction Storm Water Management Program).

(ii) **Implementation Level** – By the first year of the permit, the Permittee shall develop and implement a special study plan and shall submit to an applicable Regional Board for review and approval. Within the second year of the effective date of the permit, the Permittee shall begin implementation of the approved special study plan. The study plan shall include, at a minimum:

(a) Purpose/objective of the monitoring (sampling rationale), including reasoning to implement a special study in lieu of the Receiving Water Monitoring described in Section E.13.d.1.
(b) Brief project background information and overall study design (i.e., surrounding land uses, reference monitoring data, if applicable, and site conditions)
(c) Parameters that are being measured, how parameters are measured and rationale for parameter selection.
(d) Frequency that parameters are being measured (sampling frequency)
(e) Sampling site location
(f) Description of how the data will be managed, analyzed (including statistical analysis) and reported
(g) Expected results based on study plan design and hypothesis

(iii) **Reporting –** By the second year Annual Report, the Permittee shall complete and have available a report (50 page maximum) that includes a summary of baseline data collections and discussion of monitoring program results.

By the fifth year Annual Report, the Permittee shall complete and have available a report (50 page maximum) that includes a comparison of data collection to baseline data, and discussion of monitoring program results.

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At a minimum, the second and fifth year Annual Reports shall include the following information:

(a) The purpose of the monitoring, contextual background and a description of the study design and rationale.
(b) Sampling site(s) locations, including latitude and longitude coordinates, water body name and water body segment if applicable. Sampling design, including sampling protocol, time of year, sampling frequency and length of sampling.
(c) Methods used for sample collection: list methods used for sample collection, sample or data collection identification, collection date, and media if applicable.
(d) Results of data collection, including concentration detected, measurement units, and detection limits if applicable.
(e) Quantifiable assessment analysis and interpretation of data for each monitoring parameter or other data type.
(f) Comparison to reference sites (if applicable), guidelines or targets
(g) Discussion of whether data collected addresses the objective(s) or question(s) in the study plan
(h) Quantifiable discussion of program/study pollutant reduction effectiveness.

Where applicable, the Permittee shall prepare, maintain, and implement a QAPP in accordance with SWAMP. All monitoring samples shall be collected and analyzed according to the Program QAPP developed for the purpose of compliance with this Order. SWAMP Quality Assurance Program Plan (2008) is available at:

http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/qapp/qaprp082209.pdf

A formatted Microsoft Word document that includes guidelines and boilerplate language for developing the permit QAPP is available at:

http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#qa

Water quality data shall be uploaded to the Storm Water Multi-Application Reporting and Tracking System (SMARTS) and must conform to “CEDEN Minimum Data Templates” format. CEDEN Minimum Data Templates are also available at: http://ceden.org/

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E.14. PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT

E.14.a. Program Effectiveness Assessment and improvement Plan

(i) **Task Description -** The Permittee shall develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. The Program Effectiveness Assessment and Improvement Plan will assist the Permittee to document compliance with permit conditions and to adaptively manage its storm water program and make necessary modifications to the program to improve program effectiveness at reducing pollutants of concern, achieving the MEP standard, and protecting water quality. The Program Effectiveness Assessment and Improvement Plan shall identify the strategy used to gauge the effectiveness of prioritized BMPs and program implementation as a whole. Prioritized BMPs include BMPs implemented based on pollutants of concern. Where pollutants of concern are unidentified, prioritized BMPs are based on common urban pollutants (i.e., sediment, bacteria, trash, nutrients). The annual effectiveness assessments will help identify potential modifications to the program to ensure long-term effectiveness.

(ii) **Implementation Level** - The Program Effectiveness Assessment and Improvement Plan may be modeled upon the most recent version (if applicable) Municipal Storm Water Program Effectiveness Assessment Guidance (CASQA, May 2007) or equivalent.

(a) The Program Effectiveness Assessment and Improvement Plan shall include the following elements, at a minimum as applicable:

1) Identification of overall program goals including pollutants of concern and prioritized BMPs
2) Documentation of the level of implementation of storm water program elements
3) Identification and targeting of target audience(s)
4) Assessment of BMP performance at achieving outcome levels
5) Assessment of pollutant source reductions achieved by individual BMPs
6) Quantification of pollutant loads and pollutant load reductions achieved by the program as a whole
7) MS4 discharge quality, where available, including analysis of the data
8) Receiving water quality data, including analysis of the data
9) Identification of long-term effectiveness assessment, to be implemented beyond the permit term

(b) The Program Effectiveness Assessment and Improvement Plan shall assess BMP and program effectiveness in terms of the following Outcome Levels:

1) Storm water program activities
2) Awareness
3) Behavior
4) Pollutant load reductions
5) MS4 discharge quality (where assessment is supported by MS4 discharge quality data)

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6) Receiving water conditions

(c) The Program Effectiveness Assessment and Improvement Plan shall identify assessment methods for privately owned BMPs.

(d) The Program Effectiveness Assessment and Improvement Plan shall identify assessment methods the Permittee will use to quantitatively assess BMP performance at reducing pollutant loads wherever feasible, using the following or equivalent methods:

1) Direct quantitative measurement of pollutant load removal for BMPs that lend themselves to such measurement (e.g., measuring sediment collected through street-sweeping activities);
2) Science-based estimates of pollutant load removal for BMPs where direct measurement of pollutant removal is overly challenging (e.g., removal of heavy metals through a bioswale);
3) Direct quantitative measurement of behaviors that serve as proxies of pollutant removal or reduction (e.g., the percentage of construction sites demonstrated by inspection to be in compliance with permit conditions); or
4) Visual comparison (e.g., using photographs to compare the amount of trash in a creek between one year and the next).

(e) The Program Effectiveness Assessment and Improvement Plan shall ask and answer the following Management Questions for prioritized BMPs for which answers to management questions can be based on quantitative data appropriate to the question being answered.

1) Were prioritized BMPs or group of BMPs implemented in accordance with the permit requirements? The Permittee shall develop quantitative data using the following or equivalent methods:
   a) Confirmation – Documenting whether an activity or task has been completed, expressed as positive or negative outcome (i.e., yes or no)
   b) Tabulation – Simple accounting expressed in absolute (e.g., number of people participating), or relative terms (e.g. percent increase in recycled household hazardous waste)
2) To what extent did prioritized BMPs or group of BMPs change the target audience's behavior? The Permittee shall develop quantitative data using the following or equivalent methods:
   a) Surveys or interviews to discern knowledge, attitudes, awareness, behavior of specific population, etc.
   b) Interviews of site personnel to discern awareness and behavior
   c) Inspections or site visits to directly observe or assess a practice.
3) To what extent did prioritized BMPs or group of BMPs reduce pollutant loads from their sources to the storm drain system?

(f) The Program Effectiveness Assessment and Improvement Plan shall include water quality monitoring data, where available, to answer the following long-term management questions, effectiveness of BMPs and the overall storm water program will be assessed in future permit terms.

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1) To what extent did implementation of the BMP, group of BMPs, or storm water program enhance or change the urban runoff and discharge quality?
2) To what extent did implementation of the BMP, group of BMPs, or storm water program enhance or change receiving water quality?
3) Did exceedance(s) of water quality objectives or water quality standards persist notwithstanding implementation of the storm water program?

The Program Effectiveness Assessment and Improvement Plan shall include documentation of the effectiveness of BMPs implemented to reduce the discharge of pollutants to the MS4 to the MEP and protect water quality.

(iii) **Reporting** – By the second year Annual Report complete and submit the Program Effectiveness Assessment and Improvement Plan. The Plan shall include the strategy the Permittee will use to assess the effectiveness of the program, the specific measures the Permittee will use to assess the effectiveness of BMPs and/or groups of BMPs, and how the Permittee will use the information obtained through effectiveness assessment to modify individual BMPs and the program as a whole to increase short and long-term effectiveness. In subsequent Annual Reports, describe implementation of the Program Effectiveness Assessment and Improvement Plan, summarize data obtained through effectiveness assessment measures and the short and long-term progress of the storm water program, and provide an analysis of the data to improve program effectiveness, to achieve the MEP standard, protect water quality, and to document the Permittee's compliance with permit conditions. Permittees that have a Program Effectiveness Assessment and Improvement Plans, or equivalent, approved by the applicable Regional Board, or that have a schedule approved by the applicable Regional Board to develop and implement such a Plan, shall adhere to the Plan and/or schedule approved by the Regional Board unless otherwise directed by the Regional Board. By the fifth year annual report, complete and submit an analysis of the effectiveness of modifications made at improving BMP and/or program effectiveness.

E.14.b. Storm Water Program Modifications

(i) **Task Description** –The Permittee shall modify BMPs and/or the program as a whole to improve compliance with permit conditions and improve program effectiveness at reducing pollutant loads, achieving the MEP standard, and protecting water quality. The Permittee shall use information gained through effectiveness assessment and MS4 discharge and receiving water monitoring to identify priority areas for program improvement. In addition, the Permittee shall identify and make modifications to BMPs, including new BMPs or modification to existing BMPs, to improve effectiveness in each priority area. The Permittee shall consult with the applicable Regional Water Board in setting expectations for the scope, timing, and frequency of BMP modifications.

(ii) **Implementation Level** – Within the fifth year of the effective date of the permit, the Permittee shall identify and summarize BMP and/or program modifications identified in priority program areas. Modifications shall include:

(a) Improving upon BMPs that are underperforming

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(b) Continuing and expanding upon BMPs that proved to be effective, including identifying new BMPs or modifications to existing BMPs designed to increase pollutant load reductions;
(c) Discontinuing BMPs that may no longer be productive and replacing with more effective BMPs; and
(d) Shifting priorities to make more effective use of resources

(iii) **Reporting –** By the fifth year Annual Report, complete and submit the list of BMP and/or program modifications, as specified in E.14.c(ii), the Permittee will make for priority program areas, including identification of priority program areas and the schedule the Permittee will follow to complete identified modifications during the next permit term. The modifications shall be aimed at the goal of reducing pollutant loads, achieving the MEP standard and protecting water quality.

E.15. TOTAL MAXIMUM DAILY LOADS COMPLIANCE REQUIREMENTS

E.15.a. The Permittee shall comply with all applicable TMDLs approved pursuant to 40 Code of Federal Regulations section 130.7 that assign a Waste Load Allocation to the Permittee and that have been identified in Attachment G.

E.15.b. WLA, Load Allocations (LA), effluent limitations, implementation requirements, and monitoring requirements are specified in the adopted and approved Regional Water Board Basin Plans and authorizing resolutions which are incorporated herein by reference as enforceable parts of this Order. Applicable Basin Plan amendments and resolutions are identified in Attachment G. Attachment G additionally contains a list of TMDL-specific permit requirements developed by the Regional Water Boards for compliance with the implementation requirements of the relevant TMDLs. These requirements are an enforceable component of this Order. In some cases, dates are given that fall outside the term of this Order. Compliance dates that have already passed are enforceable on the effective date of this Order. Compliance dates that exceed the term of this Order are included for reference, and become enforceable in the event that this Order is administratively extended.

E.15.c. The Regional Water Boards are directed to review, within one year of the effective date of this Order, the TMDL-specific permit requirements contained in Attachment G and to develop or propose revisions, as appropriate, to TMDL-specific permit requirements to the State Water Board after consultation with the Permittees and State Water Board staff. Any proposed revisions by the Regional Water Boards shall be supported by an explanation of how the proposed TMDL-specific permit requirements are consistent with the assumptions and requirements of applicable WLAs and with the goals of the TMDL. Where a TMDL is limited to a single constituent within a single reach of the watershed, the Regional Water Board Executive Officer may require additional monitoring, per Water Code § 13383. The State Water Board will incorporate any necessary revisions through a reopener. The State Water Board may additionally revise this Order through a reopener to incorporate any modifications or revisions to the TMDLs in Attachment G, or to incorporate any new TMDLs adopted during the term of this Order that assign a WLA to a Regulated Small MS4 or that identify a Regulated Small MS4 as a responsible

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party. In revising Attachment G, the State Water Board will allow adequate notice and public review.

E.15.d. The Permittee shall complete and report the status of their implementation of the specific TMDL implementation requirements that have been incorporated into the permit with each Annual Report via SMARTS. Reporting on TMDL implementation shall include the following information:

(i) A description of BMPs implemented, including types, number, and locations
(ii) An assessment of the effectiveness of implemented BMPs in progressing towards attainment of wasteload allocations within the TMDLs' specified timeframes
(iii) All monitoring data, including a statistical analysis of the data to assess progress towards attainment of wasteload allocations within the TMDLs' specified timeframes
(iv) Based on results of the effectiveness assessment and monitoring, a description of the additional BMPs that will be implemented to attain wasteload allocations within the TMDLs specified timeframes

E.15.e. The Permittee shall comply with implementation requirements specified in Category 4b demonstrations associated with Clean Water Act Sections 303d, 306b, and 314 Integrated Reporting and Listing Decisions. Implementation requirements described in Category 4b demonstrations are effective upon Regional Water Board approval of that region's Integrated Reporting and Listing Decisions and associated Category 4b demonstrations. The most recent Integrated Reporting and Listing Decisions and associated Category 4b demonstrations are available at http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml.

E.16. ANNUAL REPORTING PROGRAM

E.16.a. The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities for each program element and certify compliance with all requirements of this permit. If a Permittee is unable to certify compliance with a requirement, the Permittee must submit in SMARTS the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

E.16.b. Permittees shall complete and retain all Annual Report information on the previous fiscal year beginning July 1 and ending June 30. The Annual Reporting requirements are set forth in Provisions E. The Permittee shall retain documentation as necessary to support their Annual Report. The Permittee shall make this supporting information available during normal business hours, unless agreed to by the applicable Regional Water Board's Executive Officer.

E.16.c. The Permittee shall submit when requested by the Executive Officer of the applicable Regional Water Board a detailed written online annual report or in-

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person presentation of the annual report that addresses the activities described in Provision E. The detailed Annual Report must clearly refer to the permit requirements and describe in quantifiable terms, the status of activities undertaken to comply with each requirement.

E.16.d. Permittees involved in regional programs may coordinate with the members to identify reporting responsibility. The one report submitted on behalf of Permittees involved in a regional program must include a summary of the past year activities for each program element and certification of compliance with all requirements of this Order for each of the Permittees in the regional program.

F. NON – TRADITIONAL SMALL MS4 PERMITTEE PROVISIONS

F.1. Non-Traditional Small MS4 Categories

The Non-Traditional Small MS4s identified in Attachment B or by a Regional Water Board Executive Officer shall comply with the specific provisions in this Section. For military installations, this permit applies to areas, where the activities and population density resemble that of a traditional small MS4, as defined in the permit boundary map in Section A.2.b.(3). For Department of Corrections and Rehabilitation Permittees, this permit applies to facilities that are in active operation (i.e., does not apply to closed facilities lacking management oversight).

F.2. Security Concerns

Department of Defense, Department of Corrections and Rehabilitation Permittees, ports and transportation agencies are exempt from Annual Reporting of any provision in this section that could pose a security risk and/or compromise facility security.

F.3. Maximize Efficiency

Permittees may incorporate the required storm water provisions into already existing programs and leverage existing staff to implement BMPs during its day to day business and operations.

F.4. Equivalent or Existing Document

A Permittee may utilize an equivalent or existing document such as a Standard Operations and Procedures manual, Operation and Maintenance Plan, or Spill Response Plan if that document includes the necessary information required to comply with the provisions of this section.

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F.5. PROVISIONS

F.5.a. PROGRAM MANAGEMENT ELEMENT

F.5.a.1. Legal Authority

(i) **Task Description** - Permittee shall have adequate legal authority to meet the requirements of this Order

(ii) **Implementation Level** – Within the second year of the effective date of the permit, the Permittee shall review, revise or adopt new relevant policies, contractual provisions, base orders, resolutions or other regulatory mechanisms, to the extent allowable under state or local law, to ensure it has at a minimum the legal authority to:

(a) Effectively prohibit non-storm water discharges through the MS4. Exceptions to this prohibition are NPDES-permitted discharges of non-storm water and non-storm water discharges from B.3 that are considered non-significant contributors of pollutants. Where the non-storm water discharge is to a segment of an MS4 that discharges directly to an ASBS, exceptions to the non-storm water prohibition are specified in Attachment C.

(b) Detect and eliminate illicit discharges and illegal connections to the MS4. Illicit connections include pipes, drains, open channels, or other conveyances that have the potential to allow an illicit discharge to enter the MS4. Illicit discharges include all non-storm water discharges not otherwise authorized in this Order, including, but not limited to discharges from mobile cleaning and pressure washing operations.

(c) Respond to spills, and prohibit dumping or disposal of materials other than storm water into the MS4.

(d) Require vendors, contractors and operators of commercial facilities to minimize the discharge of pollutants to the MS4 through the installation, implementation, and maintenance of BMPs consistent with the CASQA Best Management Practice Handbooks or equivalent.

(e) Ensure construction site or industrial facility operators provide a Waste Discharge Identification Number for coverage under the CGP and IGP and comply with the appropriate permit.

(f) Review designs and proposals for new development and redevelopment to determine whether adequate BMPs will be installed, implemented, and maintained during construction and after final stabilization (post-construction).

(g) Promptly cease and desist discharges and/or cleanup and abate a discharge, including the ability to:

1) Effectively require the discharger to abate and clean up their discharge, spill, or pollutant release within 72 hours of notification;

2) Require abatement, within 30 days of notification, for uncontrolled sources of pollutants that could pose an environmental threat;

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3) Perform the cleanup and abatement work and bill the responsible party, if necessary;
4) Provide the option to order the cessation of activities until such problems are adequately addressed if a situation persists where pollutant-causing sources or activities are not abated;
5) Require a new timeframe and notify the appropriate Regional Water Board when all parties agree that clean-up activities cannot be completed within the original timeframe and notify the appropriate Regional Water Board in writing within five business days of the determination that the timeframe requires revision.

(iii) **Reporting** – All Permittees shall submit by the second year online Annual Report, a statement signed by both the Permittee's legal counsel and an authorized signatory certifying the Permittee has adequate legal authority to comply with all Order requirements.

F.5.b. EDUCATION AND OUTREACH PROGRAM

F.5.b.1. Compliance Participation Options

All Permittees shall comply with the requirements in this Section by participating in one or more of the following:

(a) Contributing to a countywide storm water program, as determined appropriate by the Permittee members, so that the countywide storm water program conducts education and outreach on behalf of its members; or
(b) Contributing to a regional education and outreach collaborative effort (a regional education and outreach collaborative effort occurs when all or a majority of the Permittees collaborate to conduct regional education and outreach. Regional education and outreach collaboration includes Permittees defining a uniform and consistent message, deciding how best to communicate the message, and how to facilitate behavioral changes. Then collaboratively apply what is learned through local jurisdiction groups, pooling resources and skills.); or
(c) Fulfilling education and outreach requirements within their jurisdictional boundaries on their own. Some level of coordination of education and outreach efforts with an adjacent Phase I MS4 Permittee is recommended/anticipated for watershed/region-wide consistency.; or
(d) A combination of the previous options, so that all requirements are fulfilled.

Reporting – By the first year online Annual Report, the Permittee shall submit information indicating which compliance participation option it will use to comply with the public education and outreach requirements in this Section. For each public education and outreach requirement in this Section that the Permittee will comply with through contribution to a countywide storm water program or regional education and outreach collaborative effort, the Permittee shall include in the first year online Annual Report documentation, such as a written agreement, letter or similar document, which confirms the collaboration with other MS4s.

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F.5.b.2. Public Education and Outreach

The public for a Non-traditional MS4 Permittee is considered the following, if applicable:

- Faculty
- Inmates
- Military personnel
- Residents
- Students
- Staff
- Visitors

(i) **Task Description –** Within the second year of the effective date of the permit, the Permittee shall develop and implement a comprehensive storm water public education and outreach program. The public education and outreach program shall be designed to inform the public about storm water pollution and steps that can be taken to reduce storm water pollution. The Public Education and Outreach Program shall measurably increase the public's knowledge regarding the storm drain system, impacts of urban runoff and illicit discharges on receiving waters, and potential BMP solutions for the target audiences.

(ii) **Implementation Level** –The Permittee shall, at a minimum:

(a) Develop and implement a public education strategy that establishes education tasks based on water quality problems, target audiences, and anticipated task effectiveness. The strategy must include identification of who is responsible for implementing specific tasks and a schedule for task implementation. The strategy must demonstrate how specific high priority storm water quality issues in their jurisdiction or local pollutants of concern are addressed.

(b) Implement BMPs that gauge level of awareness in target audiences and effectiveness of education tasks.

(c) Develop and convey a specific storm water message that focuses on the following:
1) Local pollutants of concern
2) Target audience
3) Regional water quality issues

(d) Develop and disseminate appropriate educational materials to target audiences and translate into applicable languages when appropriate (e.g. the materials can utilize various media such as printed materials, billboard and mass transit advertisements, signage at select locations, stenciling at storm drain inlets, radio advertisements, television advertisements, and websites);

(e) Distribute educational materials, using whichever methods and procedures determined appropriate during development of the public education strategy;

(f) Develop and convey messages to explain the benefits of water-efficient landscaping (if appropriate);

(g) Utilize information from storm water-friendly landscaping[30] programs (if appropriate);

[30] For example, Surfrider's Ocean Friendly Garden Program (http://www.surfrider.org/programs/entry/ocean-friendly-gardens)

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(h) Develop and convey messages specific to reducing illicit discharges with information about how the public can report incidents to the appropriate authorities;
(i) Develop and convey of messages specific to proper application of pesticides, herbicides, and fertilizers;
(j) Within the Permittee's jurisdiction, provide independent, parochial and public schools with materials to effectively educate school-age children, if applicable, about storm water and how they can help to protect water quality habitat in their local watersheds. The Permittee is encouraged to use environmental and place-based, experiential learning materials that are integrated into school curricula and school facility management[31]. In the case that a local program does not exist, the Permittee may use California's Education and Environment Initiative Curriculum[32] or equivalent;
(k) Develop (or coordinate with existing effective programs) and convey messages specific to reducing discharges from pressure washing operations and landscape irrigation;
(l) If applicable, utilize storm water-friendly education for organized car wash participants and provide information pertaining to car wash discharge reduction. The Permittee may use the Sacramento Stormwater Quality Partnership's River Friendly Carwash Program[33], or equivalent, for guidance;
(m) The Permittee shall conduct focused education in identified illicit discharge flow areas based on identified illicit discharge(s).

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance directions.

F.5.b.3. Staff and Site Operator Training and Education: Illicit Discharge Detection and Elimination Training

(i) **Task Description** – Permittees shall develop and implement a training program for all Permittee staff, who, as part of their normal job responsibilities, may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection to the storm drain system.

(ii) **Implementation Level** – Within the third year of the effective date of the permit, the Permittee shall develop the training program. The training program shall include at a minimum:

(a) Identification of an illicit discharge or illegal connection;
(b) Proper procedures for reporting and responding to the illicit discharge or illegal connection;
(c) Follow-up training provided as needed to address changes in procedures, techniques, or staffing;

[31] For example, Splash (*www.sac**splash**.org/*),Effie Yeaw Nature Center (www.sacnature.net) or Yolo Basin (www.yolobasin.org)
[32] http://www.californiaeei.org/
[33] http://www.beriverfriendly.net/riverfriendlycarwashing/

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(d) Annual assessment of their trained staff's knowledge of illicit discharge response and shall provide refresher training as needed;
(e) Training of new staff who, as part of their normal job responsibilities may be notified of, come into contact with, or otherwise observe an illicit discharge or illegal connection;
(f) Contact information, including the procedure for reporting an illicit discharge, shall be included in each of the Permittee's fleet vehicles that are used by field staff.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance directions.

F.5.b.4. Staff Pollution Prevention and Good Housekeeping

The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations.

(i) **Task Description** – The Permittee shall provide a biennial training program for appropriate employees involved in implementing pollution prevention and good housekeeping practices in the Pollution Prevention/Good Housekeeping for Permittee Operations sections of this permit. The Permittee shall determine the need for interim training during alternate years when training is not conducted, through an evaluation of employee Pollution Prevention/Good Housekeeping knowledge.

(ii) **Implementation Level** – The biennial training program shall include the following:

(a) General storm water education component, any new technologies, operations, or responsibilities that arise during the year and the permit requirements which apply to the staff being trained. Clear guidance on appropriate storm water BMPs to use at Permittee owned facilities and during typical Operation and Maintenance activities.

(b) An assessment of trained staff's knowledge of pollution prevention and good housekeeping and shall revise the training as needed.

(c) A requirement that any contractors hired by the Permittee to perform Operation and Maintenance activities shall be contractually required to comply with all of the storm water BMPs, good housekeeping practices, and standard operating procedures described above.

(d) The Permittee shall provide oversight of contractor activities to ensure that contractors are using appropriate BMPs, good housekeeping practices and following standard operating procedures.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of

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this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance directions.

F.5.c. PUBLIC INVOLVEMENT AND PARTICIPATION PROGRAM

(i) **Task Description -** Within the third year of the effective date of the permit, the Permittee shall involve its public in the development and implementation of activities related to the program. The public participation and involvement program shall encourage volunteerism, public comment and input on policy, and activism in the community.

(ii) **Implementation Level** – The Permittee shall, at a minimum:

(a) Ensure that high priority storm drain inlets include a labeled, stenciled or other effective method (e.g., clearly visible sign strategically placed in area of high pedestrian activity) of communicating a storm water awareness message such as “drains to creek” or “only rain in the drain”.
(b) Integrate storm water awareness messages and information on a publicly accessible website

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance

F.5.d. ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM

The Permittee shall develop an Illicit Discharge Detection and Elimination program to detect, investigate, and eliminate illicit discharges, including illegal dumping, into its system or coordinate with an adjacent Phase I MS4 Permittees existing program. The existing program, at a minimum, must include the provisions in this section.

F.5.d.1 Outfall Mapping

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall maintain an up-to-date and accurate outfall map. The map may be in hard copy and/or electronic form or within a geographic information system (GIS). The development of the outfall map shall include a visual outfall inventory involving a site visit to each outfall. It is recommended the Permittee coordinate with an adjacent Phase I MS4 Permittee to collect outfall data for which they may discharge to. Renewal Permittees that have an existing and up-to-date outfall map that includes the minimum requirements specified in Section F.5.d.1.(ii)(a-b) are not required to re-create the outfall map. This does not exempt renewal Permittees with an existing outfall map from conducting the field sampling specified in Section F.5.d.2.

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(ii) **Implementation Level** - The outfall map shall at a minimum show:

(a) The location of all outfalls and drainage areas within the urbanized area, contributing to those outfalls that are operated by the Permittee, and that directly discharge within the Permittee's jurisdiction to a receiving water. Each mapped outfall shall be given an individual alphanumeric identifier, which shall be noted on the map. Photographs shall be taken or an electronic database shall be utilized to provide baseline information and track operation and maintenance needs over time.

(b) The location (and name, where known to the Permittee) of all water bodies receiving direct discharges from those outfall pipes.

Submerged outfalls or other outfalls that may pose a threat to public safety are not required to be inventoried.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.d.2. Field Sampling to Detect Illicit Discharges

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall conduct field sampling to detect potential illicit discharges while conducting the outfall inventory specified in Section F.5.d. Outfall Inventory. If while conducting the outfall inventory specified in Section F.5.d., an outfall is flowing or ponding and it has been more than 72 hours since the last rain event, then the Permittee shall sample the discharge.

(ii) **Implementation Level** – If an outfall is flowing or ponding and it has been more than 72 hours since the last rain event, the Permittee shall:

(a) Conduct monitoring for the following indicator parameters identified in Table 1. Field Sampling Indicator Parameters (following page) to help determine the source and identification of the discharge. Alternatively, the Permittee may select parameters based on local knowledge of pollutants of concern in lieu of sampling for the parameters listed in Table 1. Modifications and associated justifications shall be identified within SMARTS prior to conducting field sampling as specified in Section F.5.d.2.

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Table 1. Field Sampling Indicator Parameters

Indicator Parameters Used to Detect Illicit Discharges					
Parameter	**Discharge Types It Can Detect**				
	Sewage	**Washwater**	**Tap Water**	**Industrial or Commercial Liquid Wastes**	**Laboratory/Analytical Challenges**
Ammonia	●	◉	○	◉	Can change into other nitrogen forms as the flow travels to the outfall
Color	◉	◉	○	◉	
Conductivity	◉	◉	○	◉	Ineffective in saline waters
Detergents – Surfactants	●	●	○	◉	Reagent is a hazardous waste
Fluoride*	○	○	●	◉	Reagent is a hazardous waste Exception for communities that do not fluoridate their tap water
Hardness	◉	◉	◉	◉	
pH	○	◉	○	◉	
Potassium	◉	○	○	●	May need to use two separate analytical techniques, depending on the concentration
Turbidity	◉	◉	○	◉	

● Can almost always (>80% of samples) distinguish this discharge from clean flow types (e.g., tap water or natural water). For tap water, can distinguish from natural water.
◉ Can sometimes (>50% of samples) distinguish this discharge from clean flow types depending on regional characteristics, or can be helpful in combination with another parameter
○ Poor indicator. Cannot reliably detect illicit discharges, or cannot detect tap water
N/A: Data are not available to assess the utility of this parameter for this purpose.
Data sources: Pitt (this study)
*Fluoride is a poor indicator when used as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and wash water.

(c) Verify that indicator parameters with the following action level concentrations specified in Table 2. Action Level Concentrations for Indicator Parameters are not exceeded. Alternatively, the Permittee may tailor Table 2 to align with parameters based on local knowledge of pollutants of concern. Modifications and associated justifications shall be identified within SMARTS prior to conducting field sampling as specified in Section F.5.d.2.:

Table 2. Action Level Concentrations for Indicator Parameters

Indicator Parameter	**Action Level Concentration**
Ammonia	>= 50 mg/L
Color	>= 500 units
Conductivity	>= 2,000 µS/cm
Hardness	<= 10 mg/L as CaCO3 or >= 2,000 mg/L as CaCO3
pH	<= 5 or >=9
Potassium	>= 20 mg/L
Turbidity	>= 1,000 NTU

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(d) Conduct follow up investigations per Section F.5.d.3. if the action level concentrations are exceeded.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance

F.5.d.3. Illicit Discharge Detection and Elimination Source Investigations and Corrective Actions

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall develop written procedures for conducting investigations into the source of all non-storm water discharges suspected to be illicit discharges, including approaches to requiring such discharges to be eliminated, and procedures to implement corrective actions (e.g., BMPs). These procedures shall be included as part of the Illicit Discharge Detection and Elimination program.

(ii) **Implementation Level -** At a minimum, the Permittee shall conduct an investigation(s) to identify and locate the source of any suspected illicit discharge within 72 hours of becoming aware of the suspected illicit discharge. For investigations that require more than 72 hours, the Permittee shall identify the actions being taken to identify and locate the source of the suspected illicit discharge. The Permittee shall prioritize investigations of suspected sanitary sewage and/or significant contributors over investigations of non-storm water discharges suspected of being cooling water, wash water, or natural flows.

(a) Report immediately the occurrence of any dry weather flows believed to be an immediate threat to human health or the environment to local Health Department.

(b) Determine and document through its investigations the source of all non-storm water discharges. If the source of the non-storm water discharge is found to be a discharge authorized under this permit, or authorized under another NPDES permit, no further action is required.

(c) Corrective Action to Eliminate Illicit Discharge – Once the source of the illicit discharge has been determined, the Permittee shall immediately notify the responsible party of the problem.

(d) Report immediately to the owners/operators of the downstream MS4 a non-storm water discharge suspected of being sanitary sewage and/or significantly contaminated.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of

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this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance

F.5.e. CONSTRUCTION SITE RUNOFF CONTROL PROGRAM

The Permittee shall develop, implement, and enforce a program to prevent Construction site discharges of pollutants and impacts on beneficial uses of receiving waters. The program shall include the development of contract language ensuring the Permittee's in-house construction operators or outside contractors comply with the CGP.

(i) **Task Description –** Within the first year of the effective date of the permit, each Permittee shall develop and implement contract language ensuring all outside contractors comply with the CGP and implement appropriate BMPs. Contract language shall apply to all projects that result in a total land disturbance of either one acre or more or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.

(ii) **Implementation Level** – The Permittee shall include CGP compliance requirements in construction contract language for all projects one acre or more or that result in a total land disturbance of less than one acre if part of a larger common plan or development or sale.

(iii) **Reporting –** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f. POLLUTION PREVENTION/GOOD HOUSEKEEPING FOR PERMITTEE OPERATIONS PROGRAM

The Permittee shall develop and implement a program to prevent or reduce the amount of pollutant runoff from Permittee operations. The Permittee shall train employees on how to incorporate pollution prevention/good housekeeping techniques into Permittee operations. Permittee shall implement appropriate BMPs for preventing or reducing the amount of storm water pollution generated by Permittee operations.

F.5.f.1. Inventory of Permittee-Owned or Operated Facilities

(i) **Task Description** - Prepare an inventory of Permittee-owned or operated facilities within their jurisdiction that are a threat to water quality, and are not covered by another storm water General Permit.

(ii) **Implementation Level** - Within the second year of the effective date of the permit, the Permittee shall develop and maintain an inventory that shall include facilities that may impact storm water.

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(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.2. Map of Permittee-Owned or Operated Facilities

(i) **Task Description –** Within the second year of the effective date of the permit, prepare and submit a map of the urban area covered by the MS4 permit and identify where the Permittee-owned or operated facilities are located.

(ii) **Implementation Level** - The Permittee shall complete and have available a map that identifies the storm water drainage system corresponding to each of the facilities as well as the receiving waters to which these facilities discharge. The map shall also show the facility and the manager of each facility, including contact information. Historic storm water collection facilities, conveyances and drainages located at historic places that are being operated for public interpretation and education shall be noted on this map so that the Regional Water Board can differentiate between modern and historic during site reviews or audits.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.3. Facility Assessment

(i) **Task Description** –Within the third year of the effective date of the permit, conduct an inspection and assessment of pollutant discharge potential and pollutant hotspots.

(ii) **Implementation Levels** - The Permittee shall conduct an annual review and assessment of all Permittee-owned or operated facilities to determine their potential to impact surface waters. The assessment shall include the following:

(a) Identification of pollutant hotspots based on the assessment, the Permittee shall identify as pollutant hotspots those facilities that have a high potential to generate storm water and non-storm water pollutants. Among the factors to be considered are the type and volume of pollutants stored at the site, the presence of improperly stored materials, activities that should not be performed outside (e.g., changing automotive fluids, vehicle washing), proximity to water bodies, poor housekeeping practices, and the discharge of pollutant(s) of concern to receiving water(s). Pollutant hotspots shall include, at a minimum, the Permittee’s maintenance yards, hazardous waste facilities, fuel storage

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locations, and any other facilities at which chemicals or other materials have a high potential to be discharged in storm water.

(b) Documentation of the assessment procedures and results. The Permittee shall document the procedures it uses for conducting the assessment along with a copy of any site evaluation checklists used to conduct the assessment.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.4. Storm Water Pollution Prevention Plans

(i) **Task Description** – the Permittee shall develop and implement SWPPPs for pollutant hotspots at high priority sites. If a Permittee has an existing or equivalent document such as Hazardous Materials Business Plan or Spill Prevention Plan, the Permittee is not required to develop a SWPPP if that document includes the necessary information required within a SWPPP.

(ii) **Implementation Level** – Within the fourth year of the effective date of this permit, the Permittee shall implement the following:

(a) The Permittee shall develop and implement a site-specific SWPPP that identifies a set of storm water BMPs to be installed, implemented, and maintained to minimize the discharge of pollutants in storm water.

(b) The SWPPP(s) shall be kept on-site at each of the Permittee-owned or operated facilities' offices for which it was completed. The SWPPP shall be updated as necessary.

(c) At a minimum the SWPPP will address the following:

1) Facility specific information (location, owner, address, etc.)
2) Purpose of the document
3) Key staff/contacts at the facility
4) Site map with drainage identified
5) Identification of significant materials that are handled and stored at the facility that may be exposed to storm water
6) Description of potential pollutant sources
7) BMPs employed at facility
8) Spill control and cleanup – response to spills

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment

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and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.5. Inspections, Visual Monitoring and Remedial Action

(i) **Task Description** –Within the fifth year of the effective date of the permit, the Permittee shall conduct regular inspections of Permittee-owned and operated facilities not covered by another storm water General Permit. The Permittee may incorporate storm water inspections into existing, routine facility inspections.

(ii) **Implementation Level** – The Permittee shall conduct inspections as follows:

(a) Quarterly hotspot visual inspections – Perform quarterly visual inspections in accordance with the developed standing operating procedures of all hotspot Permittee-owned or operated facilities to ensure materials and equipment are clean and orderly, to minimize the potential for pollutant discharge, and to ensure implementation of BMPs. The Permittee shall look for evidence of spills and immediately clean them up to prevent contact with precipitation or runoff. The quarterly inspections shall be tracked in a log for every facility, and records kept with the SWPPP. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(b) Quarterly Hotspot comprehensive inspections – At least once per quarter, a comprehensive inspection of hotspot facilities, including all storm water BMPs, shall be performed, with specific attention paid to the following, but not limited to waste storage areas, dumpsters, vehicle and equipment maintenance/fueling areas, material handling areas, and similar potential pollutant-generating areas. The quarterly inspection results shall be documented and records kept with the SWPPP. This inspection shall be performed in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct deficiencies.

(c) Quarterly Hotspot visual observation of storm water and non-storm water discharges – At least once per quarter, visually observe discharge location from hotspot facilities. Where discharges are observed identify any observed problems (e.g., color, foam, sheen, turbidity) associated with pollutant sources or BMPs shall be remedied within seven days or before the next storm event, whichever is sooner. Visual observations shall be documented, and records kept with the SWPPP. This inspection shall be done in accordance with the developed standard operating procedures. The inspection report shall also include any identified deficiencies and the corrective actions taken to correct the deficiencies.

(d) Non-Hotspot Inspection – At a minimum, inspect each inventoried facility that is not a hotspot, once per permit term. The inspection shall investigate and assess each of the items identified above.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the

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program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.6. Storm Drain System Assessment and Prioritization

(i) **Task Description** –Within the second year of the effective date of the permit, the Permittee shall develop and implement procedures to assess and prioritize the MS4 storm drain system, including but not limited to catch basins, pipe and pump infrastructure, above-ground conveyances, including receiving waterbodies within the Permittee's urbanized area and detention basins.

(ii) **Implementation Level** – The Permittee shall:

Assess/prioritize storm drain system facilities for cleanout– Assign a priority to all storm drain system facilities within the Permittee's urbanized areas based on accumulation of sediment, trash and/or debris. In particular, assign high priority to catch basins meeting the following criteria:

1) Catch basins known to accumulate a significant amount of sediment, trash, and/or debris;
2) Catch basins collecting large volumes of runoff;
3) Catch basin collecting runoff from area that do not receive regular sweet sweeping;
4) Catch basins collecting runoff from drainage areas with exposed or disturbed soil; and
5) Catch basins that receive citizen complaints/reports.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.7. Maintenance of Storm Drain System

(i) **Task Description** –The Permittee shall begin maintenance of all high priority storm drain systems at least annually prior to the rainy season.

(ii) **Implementation Level** – Within the third year of the effective date of the permit, the Permittee shall begin a maintenance program of high priority storm drain systems that, at a minimum includes:

(a) Storm drain systems inspection – Based on the priorities assigned above, in Section F.5.f.6, develop a strategy to inspect storm drain systems within the Permittee's jurisdiction. At a minimum, inspect all catch basins of high priority systems annually, prior to the rainy season.

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(b) Storm drain cleaning – Develop and implement a schedule to clean high priority catch basins and other systems. Cleaning frequencies shall be based on priority areas, with higher priority areas receiving more frequent maintenance.

(c) Maintenance of surface drainage structures –Visually monitor all Permittee-owned open channels, detention basins, and other drainage structures for debris at least once per year and identify and prioritize problem areas. At a minimum, removal of trash and debris from open channels and other drainage structures shall occur annually.

(d) Disposal of waste materials - Develop a procedure to dewater and dispose of materials extracted from catch basins. This procedure shall ensure that water removed during the catch basin cleaning process and waste material will not reenter the MS4.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.8. Permittee Operations and Maintenance Activities (O&M)

(i) **Task Description –**The Permittee shall assess their O&M activities for potential to discharge pollutants in storm water and inspect all BMPs on a quarterly basis.

(ii) **Implementation Level** - Within the third year of the effective date of the permit, the Permittee shall:

(a) Develop and implement O&M activity assessment. The O&M activities assessment shall include, but not be limited to, the potential to discharge pollutants in storm water.

(b) Identify all materials that could be discharged from each of these O&M activities.

(c) Develop and implement a set of BMPs that, when applied during Permittee O&M activities, will reduce the discharge of pollutants in storm water. The Permittee shall use the CASQA Municipal Handbook or equivalent.

(d) Evaluate annually all BMPs implemented during O&M activities.

(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm

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water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.f.9. Pesticide, Herbicide, and Fertilizer Application and New Landscape Design and Maintenance Management

(i) **Task Description** –The Permittee shall implement a program which focuses on pollution prevention, source control BMPs, and landscape design and maintenance to reduce the amount of pesticides, herbicides and fertilizers used during their Permittee operations and activities. The Permittee shall implement the landscape design and maintenance on new or decorative landscapes.

(ii) **Implementation Tasks** – Within the second year of the effective date of the permit, the Permittee shall implement the following:

(a) Evaluate pesticides, herbicides and fertilizers used and application activities performed to identify pollution prevention and source control opportunities.

(b) Implement practices that reduce the discharge of pesticides, herbicides and fertilizers. At a minimum the Permittee shall do the following, but not limited to:

1) Educate applicators and distributors of storm water issues.

2) Implement integrated pest management measures that rely on non-chemical solutions, including:

a) Use of native and climate appropriate plants (reduces water usage and fertilization) for decorative landscape applications

b) Keeping clippings and leaves away from waterways and out of the street using mulching, composting, or landfilling

c) Preventing application of pesticides and fertilizers when two or more consecutive days with greater than 50% chance of rainfall are predicted by NOAA[34]

d) Limiting or replacing herbicide and pesticide use (e.g., conducting manual weed and insect removal)

e) Limiting or eliminating the use of fertilizers, including prohibiting application within five feet of pavement, 25 feet of a storm drain inlet, or 50 feet of a water body

f) Reducing mowing of grass to allow for greater pollutant removal, but not jeopardizing public safety

3) Collect and properly dispose of unused pesticides, herbicides, and fertilizers.

4) Minimize irrigation run-off.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm

[34] www.srh.noaa.gov/forecast

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water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.g. POST CONSTRUCTION STORM WATER MANAGEMENT PROGRAM

Permittees shall regulate development to comply with the following Sections:

- F.5.g.1. Site Design Measures
- F.5.g.2. Low Impact Development Design Standards
- F.5.g.3. Alternative Post-Construction Storm Water Management Program
- F.5.g.4. Operation and Maintenance of Post Construction Storm Water Management Measures

Non-traditional Permittees with Regional Water Board approved post-construction storm water management requirements based on a watershed process approach, as described in Section E.12.j. Post-Construction Storm Water Management Requirements Based on Assessment and Maintenance of Watershed Processes, shall implement those post-construction requirements in lieu of Section F.5.g. Post Construction Storm Water Management Program.

F.5.g.1. Site Design Measures

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall require implementation of site design measures for all projects that create and/or replace (including projects with no net increase in impervious footprint) between 2,500 square feet and 5,000 square feet of impervious surface, including detached single family homes that are not part of a larger plan of development.

(ii) **Implementation Level** - Projects shall implement one or more of the following site design measures to reduce project site runoff:

(a) Stream Setbacks and Buffers – a vegetated area including trees, shrubs, and herbaceous vegetation, that exists or is established to protect a stream system, lake reservoir, or coastal estuarine area;
(b) Soil Quality Improvement and Maintenance - improvement and maintenance soil through soil amendments and creation of microbial community;
(c) Tree planting and preservation – planting and preservation of healthy, established trees that include both evergreens and deciduous, as applicable;
(d) Rooftop and Impervious Area Disconnection - rerouting of rooftop drainage pipes to drain rainwater to rain barrels, cisterns, or permeable areas instead of the storm sewer;
(e) Porous Pavement - pavement that allows runoff to pass through it, thereby reducing the runoff from a site and surrounding areas and filtering pollutants;
(f) Green Roofs – a vegetative layer grown on a roof (rooftop garden);
(g) Vegetated Swales - a vegetated, open-channel management practice designed specifically to treat and attenuate storm water runoff;
(h) Rain Barrels and Cisterns - system that collects and stores storm water runoff from a roof or other impervious surface.

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Project proponents shall use the State Water Board SMARTS Post-Construction Calculator[35], or equivalent to quantify the runoff reduction resulting from implementation of site design measures.

(iii) **Reporting** - The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.g.2. Low Impact Development (LID) Design Standards

(i) **Task Description** – Within the second year of the effective date of the permit, the Permittee shall implement standards to effectively reduce runoff and pollutants associated with runoff from development projects.

(ii) **Implementation Level** - The Permittee shall regulate all development projects that create and/or replace 5,000 square feet or more of impervious surface (Regulated Projects). The Permittee shall require these Regulated Projects to implement measures for site design, source control, runoff reduction, storm water treatment and baseline hydromodification management as defined in this Order.

Regulated Projects do not include:

(a) Interior remodels;
(b) Routine maintenance or repair such as: exterior wall surface replacement, roof replacement or pavement resurfacing within the existing footprint.

Regulated Projects include development projects. Development includes new and redevelopment projects on public or private land that fall under the planning and permitting authority of a Permittee. Redevelopment is any land-disturbing activity that results in the creation, addition, or replacement of exterior impervious surface area on a site on which some past development has occurred. The following (a-c) describe specific Regulated Project requirements for redevelopment and road projects:

(a) Where a redevelopment project results in an increase of more than 50 percent of the impervious surface of a previously existing development, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included to the extent feasible.

(b) Where a redevelopment project results in an increase of less than 50 percent of the impervious surface of a previously existing development, only runoff from the new and/or replaced impervious surface of the project must be included.

[35] The State Water Board SMARTS Post-Construction Calculator can be found at: https://smarts.waterboards.ca.gov/smarts/faces/SwSmartsLogin.jsp

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(c) Road Projects - Any of the following types of road projects that create 5,000 square feet or more of newly constructed contiguous impervious surface and that are public road projects and/or fall under the building and planning authority of a Permittee shall comply with Low Impact Development Standards except that treatment of runoff of the 85th percentile 24-hour storm runoff event) that cannot be infiltrated onsite shall follow U.S. EPA guidance regarding green infrastructure to the extent feasible. Types of projects include:

(1) Construction of new streets or roads, including sidewalks and bicycle lanes built as part of the new streets or roads which create 5,000 square feet or more of impervious surface.

(2) Widening of existing streets or roads with additional traffic lanes.

a) Where the addition of traffic lanes results in an alteration of more than 50 percent of the impervious surface (5,000 square feet or more) of an existing street or road, runoff from the entire project, consisting of all existing, new, and/or replaced impervious surfaces, must be included in the treatment system design.

b) Where the addition of traffic lanes results in an alteration of less than 50 percent (but 5,000 square feet or more) of the impervious surface of an existing street or road, only the runoff equivalent from new and/or replaced impervious surface of the project must be included in the treatment system design.

(3) Specific exclusions are:

a) Sidewalks built as part of new streets or roads and built to direct storm water runoff to adjacent vegetated areas.

b) Bicycle lanes that are built as part of new streets or roads that direct storm water runoff to adjacent vegetated areas.

c) Impervious trails built to direct storm water runoff to adjacent vegetated areas, or other non-erodible permeable areas, preferably away from creeks or towards the outboard side of levees.

(d) Sidewalks, bicycle lanes, or trails constructed with permeable surfaces.

Effective Date for Applicability of Low Impact Development Runoff Standards to Regulated Projects: By the second year of the effective date of the permit, the Permittee shall require these Post-Construction Standards be applied on applicable new and redevelopment Regulated Projects. These include Regulated Projects that have not been deemed complete for processing, Regulated Projects without vesting tentative maps that have not requested and received an extension of previously granted approvals, and Regulated Projects that have received Project Planning Guide funding. Discretionary projects that have been deemed complete prior to the second year of the effective date of this permit are not subject to the Post-Construction Standards herein. For the Permittee's Regulated Projects, the effective date shall be the date their governing body or designee approves initiation of the project design.

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Permittee's Development Projects - The Permittee shall develop and implement an equivalent approach, to the approach used for private development projects, to apply the most current version of the low impact development runoff standards to applicable public development projects.

Where Project Planning Guide funding is applicable, Permittees shall ensure that adequate funding is available to implement post-construction treatment measures for Regulated Projects approved after the effective date of this permit.

Where State of California project approvals are applicable, Permittees shall implement post-construction treatment measures for Regulated Projects approved after the effective date of this permit.

F.5.g.2.a. Source Control Measures

(i) **Task Description** – Regulated Projects with pollutant-generating activities and sources shall be required to implement standard permanent and/or operational source control measures as applicable.

(ii) **Implementation Level** - Measures for the following pollutant-generating activities and sources shall be designed consistent with recommendations from the CASQA Stormwater BMP Handbook for New Development and Redevelopment or equivalent manual, and include:

(a) Accidental spills or leaks
(b) Interior floor drains
(c) Parking/Storage area maintenance
(d) Indoor and structural pest control
(e) Landscape/outdoor pesticide use
(f) Pools, spas, ponds, decorative fountains, and other water features
(g) Restaurants, grocery stores, and other food service operations
(h) Storage and handling of solid waste
(i) Outdoor storage of equipment or materials
(j) Vehicle and equipment cleaning
(k) Vehicle and equipment repair and maintenance
(l) Fuel dispensing areas
(m) Loading docks
(n) Fire sprinkler test water
(o) Drain or wash water from boiler drain lines, condensate drain lines, rooftop equipment, drainage sumps, and other sources
(p) Unauthorized non-storm water discharges
(q) Building and grounds maintenance

F.5.g.2.b. Numeric Sizing Criteria for Storm Water Retention and Treatment

The Permittees shall require facilities designed to evapotranspire, infiltrate, harvest/use, and biotreat storm water to meet at least one of the following hydraulic sizing design criteria:

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(1) Volumetric Criteria:

a) The maximized capture storm water volume for the tributary area, on the basis of historical rainfall records, determined using the formula and volume capture coefficients in Urban Runoff Quality Management, WEF Manual of Practice No. 23/ASCE Manual of Practice No. 87 (1998) pages 175-178 (that is, approximately the 85th percentile 24-hour storm runoff event); or

b) The volume of annual runoff required to achieve 80 percent or more capture, determined in accordance with the methodology in Section 5 of CASQA's Stormwater Best Management Practice Handbook, New Development and Redevelopment (2003), using local rainfall data.

(2) Flow-based Criteria

a) The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or

b) The flow of runoff produced from a rain event equal to at least 2 times the 85th percentile hourly rainfall intensity as determined from local rainfall records.

F.5.g.2.c. Site Design Measures as defined in Section F.5.g.1. shall be based on the objective of achieving infiltration, evapotranspiration and/or harvesting/reuse of the 85th percentile rainfall event, to the extent feasible, to meet Section F.5.g.2.b. Numeric Sizing Criteria for Storm Water Retention and Treatment. Site design measures shall be used to reduce the amount of runoff, to the extent technically feasible, for which retention and runoff is required. Any remaining runoff from impervious DMAs may then be directed to one or bioretention facility as specified in Section F.5.g.2.d. Storm Water Treatment Measures and Baseline Hydromodification Management Measures, described below.

F.5.g.2.d. Storm Water Treatment Measures and Baseline Hydromodification Management Measures After implementation of Site Design Measures in F.5.g.2.c., runoff from remaining impervious DMAs must be directed to one or more facilities designed to infiltrate, evapotranspire, and/or biotreat the amount of runoff specified in Section F.5.g.2.b. Numeric Sizing Criteria for Storm Water Retention and Treatment. The facilities must be demonstrated to be at least as effective as a bioretention system with the following design parameters.

(1) Maximum surface loading rate of 5 inches per hour, based on the flow rates calculated. A sizing factor of 4% of tributary impervious area may be used.
(2) Minimum surface reservoir volume equal to surface area times a depth of 6 inches.
(3) Minimum planting medium depth of 18 inches. The planting medium must sustain a minimum infiltration rate of 5 inches per hour throughout the life of the project and must maximize runoff retention and pollutant removal. A mixture of sand (60%-70%) meeting the specifications of American Society for Testing and Materials (ASTM) C33 and compost (30%-40%) may be used.

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(4) Subsurface drainage/storage (gravel) layer with an area equal to the surface area and having a minimum depth of 12 inches.
(5) Underdrain with discharge elevation at top of gravel layer.
(6) No compaction of soils beneath the facility, or ripping/loosening of soils if compacted.
(7) No liners or other barriers interfering with infiltration.
(8) Appropriate plant palette for the specified soil mix and maximum available water use.

a) **Alternative Designs for Bioretention Facilities —** Facilities, or a combination of facilities, of a different design than in Section F.5.g.2.d. may be permitted if the following measures of equivalent effectiveness are demonstrated:

(1) Equal or greater amount of runoff infiltrated or evapotranspired
(2) Equal or lower pollutant concentrations in runoff that is discharged after bioretention
(3) Equal or greater protection against shock loadings and spills
(4) Equal or greater accessibility and ease of inspection and maintenance

b) **Allowed Adjustments for Bioretention Facilities for Special Site Conditions** - The bioretention design parameters as specified in Section F.5.g.2.d. may be adjusted for the following special site conditions:

(1) Facilities located within 10 feet of structures or other potential geotechnical hazards established by the geotechnical expert for the project may incorporate an impervious cutoff wall between the bioretention facility and the structure or other geotechnical hazard.
(2) Facilities in areas with documented high concentrations of pollutants in underlying soil or groundwater, facilities located where infiltration could contribute to a geotechnical hazard, and facilities located on elevated plazas or other structures may incorporate an impervious liner and may locate the underdrain discharge at the bottom of the subsurface drainage/storage layer (this configuration is commonly known as a “flow-through planter”).
(3) Facilities located in areas of highly infiltrative soils or high groundwater, or where connection of underdrain to a surface drain or to a subsurface storm drain are infeasible, may omit the underdrain.

c) **Exceptions to Requirements for Bioretention Facilities** - Contingent on a demonstration that use of bioretention or a facility of equivalent effectiveness is infeasible, other types of biotreatment or media filters (such as tree-box-type biofilters or in-vault media filters) may be used for the following:

(1) Projects creating or replacing an acre or less of impervious area, and located in a designated pedestrian-oriented commercial district (i.e., smart growth projects), and having at least 85% of the entire project site covered by permanent structures;
(2) Facilities receiving runoff solely from existing (pre-project) impervious areas;
(3) Historic sites, structures, or landscapes that cannot alter their original configuration in order to maintain their historic integrity.

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(iii) **Reporting** – The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

F.5.g.3. Alternative Post-Construction Storm Water Management Program

A Permittee may propose alternative post-construction measures in lieu of some or all of Section F.5.g. requirements for multiple benefit projects. Multiple-benefit projects include projects that may address any of the following, in addition to water quality: water supply, flood control, habitat enhancement, open space preservation, recreation, climate change. Multiple-benefit projects may be applied at various scales including project site, municipal or sub-watershed level. Multiple-benefit projects may include, but are not limited to, projects developed under Watershed Improvement Plans (Water Code §16100 et seq.), IRWMP implementation and green infrastructure projects. Multiple benefit projects must be equally or more protective of water quality than Section E.12. requirements.

The Regional Water Board or the Executive Officer may approve alternative post-construction measures for multiple-benefit projects, as described above, after an opportunity for public comment, if the Regional Water Board or Executive Officer finds that the alternative measures are consistent with the MEP standard.

F.5.g.4. Operation and Maintenance (O&M) of Post-Construction Storm Water Management Measures

(i) **Task Description** –Within the third year of the effective date of the permit, the Permittee shall implement an O&M Verification Program for new development projects regulated under this Order.

(ii) **Implementation Level** – At a minimum, the O&M Verification Program shall include the following elements:

(a) Projects shall at a minimum, require at least one of the following from all project proponents and their successors in control of the Project or successors in fee title:

(1)Written conditions in the sales or lease agreements or deed for the project that requires the buyer or lessee to assume responsibility for the O&M of the installed treatment system(s) and hydromodification control(s) (if any) until such responsibility is legally transferred to another entity;

(2) Any other legally enforceable agreement or mechanism, such as recordation in the property deed, that assigns the O&M responsibility for the installed treatment system(s) and hydromodification control(s) (if any) to the project owner(s) or the Permittee.

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(b) Coordination with the appropriate mosquito[36] and vector control agency with jurisdiction to establish a protocol for notification of installed treatment systems and hydromodification management controls. On an annual basis, before the wet season, prepare a list of newly installed (installed within the reporting period) storm water treatment systems and hydromodification management controls to the local mosquito and vector control agency and the appropriate Regional Water Board. This list shall include the facility locations and a description of the storm water treatment measures and hydromodification management controls installed.

(c) A database or equivalent tabular format of all projects that have installed treatment systems. This database or equivalent tabular format shall include the following information for each project:

(1) Name and address of the project;
(2) Specific description of the location (or a map showing the location) of the installed treatment system(s) and hydromodification control(s) (if any);
(3) Date(s) that the treatment system(s) and hydromodification controls (if any) is/are installed;
(4) Description of the type and size of the treatment system(s) and hydromodification control(s) (if any) installed;
(5) Responsible operator(s) of each treatment system and hydromodification control (if any);
(6) Dates and findings of inspections (routine and follow-up) of the treatment system(s) and hydromodification control(s) (if any) by the Permittee; and
(7) Any problems and corrective or enforcement actions taken.

(d) Maintenance Approvals: The Permittee shall ensure that systems and hydromodification controls installed at projects are properly operated and maintained for the life of the projects. In cases where the responsible party for a treatment system or hydromodification control has worked diligently and in good faith with the appropriate State and federal agencies and the Permittee to obtain approvals necessary to complete maintenance activities for the treatment system or hydromodification management control, but these approvals are not granted, the Permittee shall be deemed to be in compliance with this Provision.

(iii) **Reporting -** The Permittee shall use State Water Board SMARTS to submit a summary of the past year activities and certify compliance with all requirements of this program element. The summary shall also address the relationship between the program element activities and the Permittee's Program Effectiveness Assessment and Improvement Plan that tracks annual and long-term effectiveness of the storm water program. If a Permittee is unable to certify compliance with a requirement in this program element see Section F.5.j.2.for compliance.

[36] "Best Management Practices for Mosquito Control on California State Properties" are available from the California West Nile virus website at http://www.westnile.ca.gov/resources.php. Please see Table 1, page 22, for a list of California mosquito control agencies or visit http://mvcac.org .

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F.5.h. PROGRAM EFFECTIVENESS ASSESSMENT AND IMPROVEMENT

F.5.h.1. Program Effectiveness Assessment and Improvement Plan

(i) **Task Description -** The Permittee shall develop and implement a Program Effectiveness Assessment and Improvement Plan that tracks short and long-term progress of the storm water program. The Program Effectiveness Assessment and Improvement Plan will assist the Permittee to adaptively manage its storm water program and make necessary modifications to the program to improve program effectiveness, reduce pollutants of concern, achieve the MEP standard, and protect water quality, and to document the Permittee's compliance with permit conditions. The Program Effectiveness Assessment and Improvement Plan shall identify the strategy used to gauge the effectiveness of prioritized BMPs and program implementation as a whole. Prioritized BMPs include BMPs implemented based on pollutants of concern. Where pollutants of concern are unidentified, prioritized BMPs are based on common pollutants of concern (i.e., sediment, bacteria, trash, nutrients). The effectiveness assessments will build upon each other from one year to the next and shall identify modifications to the program the Permittee must undertake to improve effectiveness.

(ii) **Implementation Level** - The Program Effectiveness Assessment and Improvement Plan may be modeled upon the most recent version (if applicable) Municipal Storm Water Program Effectiveness Assessment Guidance (CASQA, May 2007) or equivalent.

(a) The Program Effectiveness Assessment and Improvement Plan shall include the following minimum elements:

(1) Implementation of storm water program elements
(2) Identification and targeting of Target Audience(s)

(iii) **Reporting -** By the second year Annual Report complete and submit the Program Effectiveness Assessment and Improvement Plan. At a minimum, the Plan shall include implementation of storm water program elements and identification of the Targeted Audience(s).

F.5.h.2 Storm Water Program Modifications

(i) **Task Description** – Within the fifth year of the effective date of the permit, based on the information gained from the effectiveness assessment, the Permittee shall identify modifications to control measures/significant activities, including new BMPs or modification to existing BMPs. The Permittee shall consult with the Regional Water Board in setting expectations for the scope, timing, and frequency of BMP modifications for the next permit cycle.

(ii) **Implementation Level** –The Permittee shall identify program modifications to include:

(a) Improving upon BMPs that did not accomplish goals;
(b) Continuing and expanding upon BMPs that proved to be effective, including identifying new BMPs or modifications to existing BMPs designed to increase pollutant load reductions;

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(c) Discontinuing BMPs that may no longer be productive and replacing with more effective BMPs; and
(d) Shifting priorities to make more effective use of resources

(iii) **Reporting** – By the fifth year Annual Report complete and have available a list of maintenance activities of highest priority BMPs. By the fifth year Annual Report, complete and have available a summary of proposed modifications to the storm water program to improve program effectiveness, to achieve the MEP standard, and to protect water quality.

F.5.i. TOTAL MAXIMUM DAILY LOADS COMPLIANCE REQUIREMENTS

F.5.i.1. The Permittee shall comply with all applicable TMDLs approved pursuant to 40 Code of Federal Regulations § 130.7 that assign a Waste Load Allocation to the Permittee and that have been identified in Attachment G.

F.5.i.2. Waste Load Allocations (WLA), Load Allocations (LA), effluent limitations, implementation requirements, and monitoring requirements are specified in the adopted and approved Regional Water Board Basin Plans and authorizing resolutions which are incorporated herein by reference as enforceable parts of this Order. Applicable Basin Plan amendments and resolutions are identified in Attachment G. With the exception of the TMDLs for the Los Angeles Regional Water Board, Attachment G additionally contains a list of TMDL-specific permit requirements developed by the Regional Boards for compliance with the implementation requirements of the relevant TMDLs. These requirements are an enforceable component of this Order. In some cases, dates are given that fall outside the term of this Order. Compliance dates that have already passed are enforceable on the effective date of this Order. Compliance dates that exceed the term of this Order are included for reference, and become enforceable in the event that this Order is administratively extended.

F.5.i.3. The Regional Water Boards are directed to review, within one year of the effective date of this Order, the TMDL-specific permit requirements contained in Attachment G and to propose to the State Water Board any appropriate revisions after consultation with the Permittees and State Water Board staff. The Los Angeles Regional Water Board will develop TMDL-specific permit requirements within one year of the effective date of this Order in consultation with the Permittees and State Water Board staff. Any proposed revisions by the Regional Water Boards shall be supported by a statement of reasons explaining how the proposed TMDL-specific permit requirements are consistent with the assumptions and requirements of applicable WLAs and with the goals of the TMDL. The State Water Board will incorporate into this Order any necessary revisions, including the statements of reasons through a reopener. The State Water Board may additionally revise this Order through a reopener to incorporate any modifications or revisions to the TMDLs in Attachment G, or to incorporate any new TMDLs adopted during the term of this General Permit that assign a WLA to the Permittee or that identify the Permittee as a responsible party. Where a TMDL is limited to a single constituent within a single reach of the watershed, the Regional Water Board Executive Officer may require additional monitoring, per Water Code § 13383. In revising Attachment G, the State Water Board will allow adequate notice and public review.

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F.5.i.4. The Permittee shall complete and have available a report that includes the status of their implementation of the specific TMDL implementation requirements that have been incorporated into the Order with each Annual Report. The TMDL implementation report shall include the following information:

(a) A description of BMPs implemented, including types, number, and locations
(b) An assessment of the effectiveness of implemented BMPs in progressing towards attainment of wasteload allocations within the TMDLs' specified timeframes
(c) All monitoring data, including a statistical analysis of the data to assess progress towards attainment of wasteload allocations within the TMDLs' specified timeframes
(d) Based on results of the effectiveness assessment and monitoring, a description of the additional BMPs that will be implemented to attain wasteload allocations within the TMDLs/ specified timeframes

F.5.i.5. The Permittee shall comply with implementation requirements specified in Category 4b demonstrations associated with Clean Water Act Sections 303d, 306b, and 314 Integrated Reporting and Listing Decisions. Implementation requirements described in Category 4b demonstrations are effective upon Regional Water Board approval of that region's Integrated Reporting and Listing Decisions and associated Category 4b demonstrations.

F.5.j. ONLINE ANNUAL REPORTING

F.5.j.1. Department of Defense and Department of Corrections, ports, transportation agencies and Rehabilitation Permittees are exempt from Annual Reporting of any provision that could pose a security risk and compromise facility security. Any requested information to determine compliance with this Order [40 C.F.R. 122.41(h)] by the Water Boards or U.S. EPA shall be furnished during normal business hours.

F.5.j.2. The Permittee shall use State Water Board's SMARTS to submit a summary of the past year activities for each program element and certify compliance with all requirements of this permit. If a Permittee is unable to certify compliance with a requirement, it must submit in SMARTS the reason for failure to comply, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance.

F.5.j.3. Permittees shall complete and retain all Annual Report information on the previous fiscal year beginning July 1 and ending June 30. The Annual Reporting requirements are set forth in Provisions E. The Permittee shall retain documentation as necessary to support their Annual Report. The Permittee shall make this supporting information available during normal business hours, unless agreed to by the Regional Water Board's Executive Officer.

F.5.j.4. The Permittee shall submit when requested by the Executive Officer of the applicable Regional Water Board a detailed written online annual report or in-person presentation of the annual report that addresses the activities described in Provision F. The detailed Annual Report must clearly refer to the permit

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requirements and describe in quantifiable terms, the status of activities undertaken to comply with each requirement.

F.5.j.5. Permittees involved in regional programs may coordinate with the members to identify reporting responsibility. The one report submitted on behalf of Permittees involved in a regional program must include a summary of the past year activities implemented for each program element and certification of compliance for each of the Permittees in the regional program.

G. REGIONAL WATER BOARD AUTHORITIES

Regional Water Boards are responsible for overseeing compliance with this Order. Oversight may include, but is not limited to, reviewing reports, requiring modification to storm water program components and various submissions, imposing region-specific monitoring requirements, conducting inspections and program evaluations (audits), taking enforcement actions against violators of this Order. Permittees shall modify and implement their storm water management programs and monitoring as required by the Regional Water Board Executive Officer. The Regional Water Board may designate additional Small MS4s as Regulated Small MS4s under this Order consistent with the criteria articulated in Finding 24 of this Order. Such designations must be approved by the Regional Water Board following public review and comment. The Executive Director of the State Water Board may amend Attachments A and B to add Regional Water Board designations. The Regional Water Boards may also issue individual permits to Regulated Small MS4s, and alternative general permits to categories of Regulated Small MS4s. Upon issuance of such permits by a Regional Water Board, this Order shall no longer regulate the affected Small MS4(s).

H. DISPUTE RESOLUTION

In the event of a disagreement between a Permittee or other interested party and a Regional Water Board over the interpretation or implementation of any provision of this Order, a Permittee or interested party shall first attempt to resolve the issue with the Executive Officer of the Regional Water Board. If a satisfactory resolution is not obtained at the Regional Water Board level, a Permittee or interested party may submit the issue in writing to the Executive Director of the State Water Board or his designee for resolution, with a copy to the Executive Officer of the Regional Water Board. The issue must be submitted to the Executive Director within thirty days of any final determination by the Executive Officer of the Regional Water Board; after thirty days the Permittee or interested party will be deemed to have accepted the Regional Water Board Executive Officer's determination. The Executive Officer of the Regional Water Board will be provided an opportunity to respond. The Executive Director or his/her designee shall make a determination on the request within 60 days. Determinations of the Regional Water Board Executive Officers in interpreting and implementing this permit are considered actions of the State Water Board except where the Regional Water Board itself acts or the Executive Officer acts under Water Code Sections 13300, 13304, or 13383.

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I. PERMIT RE-OPENER

This Order may be modified, revoked and reissued, or terminated for cause due to promulgation of amended regulations, receipt of U.S. EPA guidance concerning regulated activities, judicial decision, or in accordance with 40 Code of Federal Regulations 122.62, 122.63, 122.64, and 124.5. The State Board may additionally reopen and modify this Order at any time prior to its expiration under any of the following circumstances:

1. Present or future investigations demonstrate that the discharge(s) regulated by this Order may have the potential to cause or contribute to adverse impacts on water quality and/or beneficial uses.

2. New or revised Water Quality Objectives come into effect, or any TMDL is adopted or revised that is applicable to the Permittees

3. TMDL-specific permit requirements for adopted TMDLs are developed or revised by a Regional Water Board for incorporation into this Order.

4. The State Water Board determines, after opportunity for public comment and a public workshop, that revisions are warranted to those provisions of the Order addressing compliance with water quality standards in the receiving water or those provisions of the Order laying out an iterative process for implementation of management practices to achieve compliance with water quality standards in the receiving water.

5. The State Board completes the delineation of statewide watershed management zones based on watershed processes and the development of watershed based criteria for hydromodification measures.

6. The State Water Board completes the statewide policy for trash control in California's waterways.

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J. PERMIT EXPIRATION

This Order expires on June 30, 2018. If this Order is not reissued or replaced prior to the expiration date, it will be administratively continued in accordance with 40 Code of Federal Regulations section 122.6 and remain in full force and effect. If you wish to continue an activity regulated by this Order after the expiration date of this Order, you must apply for and obtain authorization as required by the new permit once it is issued.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of an order duly and regularly adopted at a meeting of State Water Board held on February 5, 2013.

AYE:	Chairman Charles R. Hoppin Vice Chair Frances Spivy-Weber Board Member Tam M. Doduc Board Member Steven Moore Board Member Felicia Marcus
NAY:	None
ABSENT:	None
ABSTAIN:	None

Jeanine Townsend

Jeanine Townsend
Clerk to the Board

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OPERATIONS & MAINTENANCE ACTIVITY GUIDANCE MANUAL

MS4 PERMITTING PROGRAM COMPLIANCE AND IMPLEMENTATION

METROPOLITAN TRANSIT SYSTEM

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FINAL

PROJECT NO.: 12113A
DATE: MARCH 2020

WSP
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SIGNATURES

PREPARED BY

Chris Koury
Civil Engineer

Veronica Seyde
Water Quality Manager

REVIEWED BY

Richard Bottcher, PE
Senior Engineering Manager

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ACKNOWLEDGEMENT FORM

I _____(full name of MTS employee or contractor)

hereby confirm that I have read the Operations and Maintenance Activity Guidance Manual and understand the procedures and actions expected of me when conducting Operations and Maintenance (O&M) activities as an employee/contractor of Metropolitan Transit System.

I further acknowledge that, where necessary, I have received training on and understand the elements of the MTS storm water pollution prevention program provided by MTS as part of its' Pollution Prevention/Good Housekeeping training program. The training consisted of implementing source control, maintenance facility and field source control best management practices when conducting O&M activities. The training included information on appropriate storm water BMPs to use during O&M activities conducted at MTS owned facilities by MTS employees and contractors.

I confirm that as a MTS employee/contractor, I shall comply with all of MTS' storm water best management practices (BMPs), good housekeeping practices, and standard operating procedures while performing O&M activities at MTS facilities and/or within their right of way.

_____

Employee/Contractor (signature)

_____

Date

_____

Employee ID No./Contract No.

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TABLES

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1 INTRODUCTION

This Operations and Maintenance Activities Guidance Manual (Manual) is developed to provide information and guidance to the employees of the Metropolitan Transit Service (MTS) and their vendors. The information provided in this Manual is for guidance purposes only. Although the information is intended to be current, due to the variety of services, programs and projects, the guidance may not reflect current, actual conditions and could possibly be subject to change. The purpose of the guidance described herein is to assist MTS personnel and their vendors in complying with the National Pollutant Discharge and Elimination System (NPDES) permit issued by the State Water Resources Control Board and the San Diego Regional Water Quality Control Board. It is MTS' goal to reduce stormwater pollution to the maximum extent practicable through the implementation of the Best Management Practices (BMPs) referenced in this Manual.

1.1 PURPOSE AND SCOPE

MTS has developed this Manual as a handbook for the protection of water resources. This Manual provides detailed operational procedures on applying a BMP to an operational or maintenance (O&M) activity at a maintenance facility, MTS-owned property, offsite at a transit station or bus shelter, or within the right-of-way. For each O&M activity, the implementation of multiple BMPs may be required. Because it may not be efficient to review all the potentially applicable BMPs for each O&M activity, the Maintenance Fact Sheets have been organized according to the three categories listed below:

- Source Control Measures
- Field Program Source Control Measures
- Storm Drain Maintenance Measures

Each Maintenance Fact Sheet summarizes the purpose of the O&M activity, the pollutants of concern that may be encountered during the activity, detailed operational procedures related to inspection and maintenance along with training guidance. The intent of this Manual is to assist the user in understanding the water quality concerns that need to be considered when implementing O&M activities. The purpose of applying Maintenance BMPs is to implement water quality controls that will minimize pollutant discharges during O&M activities. For example, pollutants of concern associated with graffiti removal at a transit station are summarized in Table 1-1.

Table 1-1. Graffiti Removal and Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Painting over graffiti	Paint	Heavy metals, organic compounds
Fuel for mechanical equipment	Fuel	Total petroleum hydrocarbons, diesel range organics
Leaking maintenance vehicles	Vehicle Fluids	Oil and grease
Water associated with cleaning products	Non-stormwater	Chlorine, phosphate, VOCs, SVOCs
Graffiti removal products	Acids, bleaches, detergents, solvents, paint strippers	Chlorine, phosphate, VOCs, SVOCs, acetic acid, nitric acid
Mixing paint	Paint Thinner/Mineral Spirits	Organic compounds, sulfuric compounds

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Potential impacts to water quality can be minimized by adhering to the operational procedures provided in the Maintenance Fact Sheet. O&M activities along with Maintenance BMPs would be applied by both MTS employees and vendors. All the Maintenance BMPs implemented would be consistent with the guidelines presented in the Maintenance Fact Sheets provided in the appendices. Table 1-2 displays typical MTS O&M activities along with some of the Maintenance BMPs that would be implemented.

Table 1-2. Maintenance BMPs

Maintenance Activity	BMP No.	Maintenance BMP
Catch Basin Maintenance	SDM-2 SDM-1 SDM-3	Storm Drain and Catch Basin Maintenance Drainage System Maintenance Storm Drain Inlet Protection
Landscaping	FSC-2 SC-3 SC-9	Grounds Maintenance and Landscaping Non-Stormwater Discharges Safer Alternative Products
Graffiti Removal	FSC-1 SC-9 SDM-3	Graffiti and Paint Removal Safer Alternative Products Storm Drain Inlet Protection

MTS employees or their contactors also inspect and maintain stormwater treatment measures referenced in the Post Construction Stormwater Management Manual (WSP, 2020). The objective of stormwater treatment measure maintenance is to ensure that a BMP functions as designed over its useful life. If stormwater treatment measures are maintained, their performance generally does not decline with age, assuming their original physical dimensions and influent quality remain constant. The potential, however, does exist for poorly maintained treatment measures to bypass influent, or in extreme cases, contribute pollutant load to the effluent. For example, a detention basin that has an excessive amount of accumulated sediment may bypass a portion of the influent due to lack of storage volume, and in an extreme case, contribute sediment to the effluent due to the creation of a high-energy environment in the sedimentation area from lack of storage volume. Overall, lack of, or deferred maintenance of treatment measures will negatively affect the effluent water quality from the stormwater treatment measure. To ensure continued effectiveness of stormwater treatment measures, this Manual provides guidance on the inspection and maintenance requirements associated with MTS-approved stormwater treatment measures. This information is provided in Section 2.4.

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2 BEST MANAGEMENT PRACTICES

2.1 SOURCE CONTROL

Source Control BMPs are measures that can be implemented to avoid water quality impacts by managing pollutants at their source. Source control measures apply to both stormwater and non-stormwater discharges. Non-stormwater discharges are discharges of any substance (e.g., excess irrigation, leaks and drainage from trash dumpsters, cooling water and process wastewater) that is not comprised entirely of stormwater runoff. Any stormwater runoff that is mixed or comingled with non-stormwater flow is considered non-stormwater.

MTS has identified potential sources that require source control measures that must be implemented to the extent technically feasible to mitigate pollutant mobilization in stormwater and non-stormwater runoff from MTS facilities. These sources and measures are summarized in Table 2-1. Implementation of these BMPs would reduce or eliminate pollutants in stormwater runoff at their source through runoff reduction and by keeping pollutants and stormwater segregated. Some of the source control measures that are particularly important for MTS maintenance facilities and stations include the measures listed in Table 2-1. Source Control BMP fact sheets are provided in Appendix A.

Table 2-1. Source Control BMPs

BMP No.	BMP Name
SC-1	Housekeeping Practices
SC-2	Near-Water Activities
SC-3	Non-Stormwater Discharges
SC-4	Outdoor Loading and Unloading
SC-5	Outdoor Storage
SC-6	Outdoor Vehicle and Equipment Cleaning
SC-7	Outdoor Vehicle and Equipment Maintenance
SC-8	Parking and Storage Area Maintenance
SC-9	Safer Alternative Products
SC-10	Spill Prevention and Response
SC-11	Vehicle and Equipment Fueling
SC-12	Waste Handling and Disposal

2.2 FIELD PROGRAM SOURCE CONTROL

Field Program Source Control BMPs are measures that focus on water quality strategies that will be applied at offsite facilities such as bus rapid transit stations, bus shelters and trolley stations. Field Program BMPs are practices that can be implemented to avoid water quality impacts by managing pollutants at their source. The Field Program Source control measures that apply to both stormwater and non-stormwater discharges are listed in Table 2-2. Detailed fact sheets for each Field Program Source Control BMP are provided in Appendix B.

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Table 2-2. Field Source Control BMPs

BMP No.	BMP Name
FSC-1	Graffiti and Paint Removal
FSC-2	Grounds Maintenance and Landscaping[1]
FSC-3	Painting
FSC-4	Pressure Washing
FSC-5	Sanitary Septic Waste Management
FSC-6	Surface Repair
FSC-7	Vegetation Control/Mowing

2.3 STORM DRAIN MAINTENANCE

In addition to Source Control and Field Program Source Control BMPs, three BMPs were developed to address the storm drain system. These BMPs have been termed Storm Drain Maintenance BMPs in this Manual and include catch basin maintenance, dewatering procedures along with storm drain inlet protection which is likely required during all O&M activities such as painting, landscaping and pressure washing. Storm Drain Maintenance BMPs are listed in Table 2-3 and the fact sheets are provided in Appendix C.

Table 2-3. Storm Drain Maintenance BMPs

BMP No.	BMP Name
SDM-1	Drainage System Maintenance
SDM-2	Storm Drain and Catch Basin Maintenance
SDM-3	Storm Drain Inlet Protection

2.4 STORMWATER TREATMENT MEASURES

Stormwater treatment measures are BMPs that improve water quality. Table 2-4 displays the stormwater treatment measures that MTS has approved. BMP Design fact sheets for these treatment measures are provided in the Post Construction Storm Water Management Manual (WSP, 2020). These stormwater treatment measures are implemented to minimize the long-term potential impacts associated with new development and redevelopment. The quality of stormwater entering the waters of the state relies heavily on the proper operation and maintenance of stormwater treatment measures. Stormwater treatment measures must be periodically inspected to ensure that they function as designed. The inspection will determine the appropriate maintenance that is required for the facility. In some cases, the maintenance responsibility may be assigned to vendors or contractors through special agreements.

[1] Landscaping activities and associated MTS guidelines for the use of chemicals and safer alternative products for pest management and vegetation control are provided in the Landscape Design and Maintenance Plan (WSP 2019).

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Table 2-4. Stormwater Treatment Measures

BMP No.	BMP Name
INF-2	Bioretention
Proprietary*	Drain Inlet Insert
FT-4	Extended Detention Basin
Proprietary*	Gravity Separators
INF-1	Infiltration Basin/ Infiltration Trench/Dry Well
FT-2 /FT-3	Media/Sand Filter
SD-5	Sidewalk Planter/Flow-Through Planter
Proprietary*	Stormwater Filter
SD-1	Tree-Well Filter/Tree Wells
PR-1	Vegetated Buffer/Filter Strip
BF-1	Vegetated Swale

*Check with manufacturer for inspection and maintenance specifications for proprietary devices

2.4.1 INSPECTING STORMWATER TREATMENT MEASURES

All stormwater treatment measures are required to be inspected by a qualified individual at a minimum of once per year. In addition, all BMPs should be inspected after a significant precipitation event to ensure the facility is draining appropriately and to identify any damage that occurred as a result of the increased runoff. The stormwater treatment measures inspection form provides a record of the BMP inspection. Inspection forms for each BMP are provided in Appendix D.

2.4.2 MAINTAINING STORMWATER TREATMENT MEASURES

Stormwater treatment measures must be properly maintained to ensure that they operate correctly and provide the water quality treatment for which they were designed. Routine maintenance performed on a frequently scheduled basis, can help avoid more costly rehabilitative maintenance that results when facilities are not adequately maintained. Required maintenance for stormwater treatment measures are separated into two broad categories of work: 1) Normal Expected Maintenance and 2) Non-Standard Maintenance of BMP Failure. Appendix D provides BMP Maintenance Fact Sheets for non-proprietary stormwater treatment measures. These Fact Sheets were developed for the San Diego County[2] Project Clean Water Program and are applicable to the MTS-approved stormwater treatment measures. Each fact sheet provides details regarding the two categories of work that should be anticipated for each BMP. The inspection forms in Appendix D also allow documentation of the maintenance performed at each BMP. Maintenance forms shall be completed by either the MTS employee or vendor completing the required maintenance items.

[2] http://www.projectcleanwater.org/

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BIBLIOGRAPHY

- WSP. 2019. Landscape Design and Maintenance Plan. April 2019.
- WSP. 2020. Post Construction Stormwater Management Manual. January 2020.

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APPENDIX

A SOURCE CONTROL MEASURES

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SC-1
HOUSEKEEPING PRACTICES

Purpose

Promote efficient and safe housekeeping practices (storage, use, and cleanup) when handling potentially harmful materials such as fertilizers, pesticides, cleaning solutions, paint products, and automotive products.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Waste handling and storage	Trash	Bacteria, plastics, sediment, heavy metals, organic compounds, solids
Landscaping	Fertilizers – organic	Nitrate
	Fertilizers – inorganic	Nitrate, Phosphate
	Natural Earth (Sand, Gravel and Topsoil)	Turbidity, Sediment
	Lime	Alkalinity, pH
	Aluminum Sulfate	Total Dissolved Solids
	Sulfur-Elemental	Sulfate
	Soil Amendments	BOD, COD, Sulfate, Total Organic Carbon, Calcium, Sulfate
Chemical, hazardous, and automotive liquids handling and storage	Pesticides and Herbicides	Organic compounds
	Fertilizers	Nitrates, phosphates
	Oil	Oils and greases
	Fuel	Hydrocarbons
	Cleaning supplies, degreasers	Organic compounds, antimicrobials, endocrine disruptors
	Paints and Coatings	Organic compounds

Application

Implementing precautions learned from the related BMP fact sheets to the everyday handling of materials and operations and maintenance activities will prevent and reduce contamination of stormwater.

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Operational Procedures

General Operations & Maintenance

- Purchase only the amount of material necessary for the foreseeable future to minimize inventories therefore reducing risk of leaks and spills. In most cases this will result in cost savings in both purchasing and disposal. See SC-9 Safer Alternative Products fact sheet for additional information.
- Stay current with new products that are as effective with less environmental risk for less or the equivalent cost. Total cost must be used here including purchase price, transportation costs, storage costs, use related costs, cleanup costs and disposal costs.
- Keep work sites clean and orderly. Remove debris in a timely fashion and sweep areas consistently.
- Dispose of wash water, sweepings, and sediments, properly.
- Recycle or dispose of fluids properly.
- Establish a daily checklist of office, yard, hazardous material storage areas, and maintenance areas to confirm cleanliness and adherence to proper storage and security. Specific employees should be assigned specific inspection responsibilities and given the authority to remedy any problems found.
- Post waste disposal charts in appropriate locations detailing for each waste its hazardous nature (poison, corrosive, flammable), prohibitions on its disposal (dumpster, drain, sewer) and the recommended disposal method (recycle, sewer, burn, storage, landfill).
- Summarize the chosen BMPs applicable to your operation and post them in appropriate and conspicuous places.
- Follow the Facility Warehouse procedures regarding hazardous material use. This includes:
  - Signed checklists from every user of any hazardous material detailing amount taken, used, returned, and disposed;
  - 'Before audits of your site to establish baseline conditions and regular subsequent audits to note any changes and whether conditions are improving or deteriorating;
  - Documentation of records detailing water, air, soil, and solid waste quantities, qualities, and their disposition; and
  - Maintenance of the mass balance of incoming, outgoing, and on hand materials to determine unknown losses that need to be tracked down and accounted for.
- Use and reward employee suggestions related to BMPs, hazards, pollution reduction, work place safety, cost reduction, alternative materials and procedures, recycling and disposal.
- Have and review regularly, a contingency plan for spills, leaks, weather extremes, natural or manmade disasters, etc. Ensure all employees are aware of the plan and their specific role.
- Train all employees, including management, office, yard, and field in BMPs and stormwater pollution prevention and make them accountable.

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SC-2
NEAR-WATER ACTIVITIES

Purpose

Near-water activities occur on roads, platforms, and terminals near rivers, lagoons, estuaries, and creeks. Given the proximity to natural waterways, near-water activities have a high risk of discharging pollutants directly to the environment.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Concrete channel maintenance	Heavy equipment fuel and fluids; Mobilization of sediment	Oil and grease Diesel range organics or total petroleum hydrocarbons
Power washing	Non-stormwater	Chlorine
Sand blasting	Dust	Particulate matter
Waste handling and storage	Trash	Bacteria, plastics, sediment, heavy metals, organic compounds, solids
Chemical, hazardous, and automotive liquids handling and storage	Pesticides Fertilizers Oil Fuel Cleaning supplies, degreasers Paints, coatings, thinners	Organic compounds Nitrates, phosphates Oils and greases Hydrocarbons Organic compounds, antimicrobials, endocrine disruptors Organic compounds, heavy metals, sulfuric compounds
Sweeping and handling of debris, litter and sediment	Trash, debris and sediment	Plastics, suspended solids, organic matter, heavy metals

Application

Minimizing near-water maintenance, keeping wastes contained within the working area, cleaning up spills and wastes immediately, and training employees about the specific risk prevents and reduces the discharge of pollutants from near-water activities. The procedures outlined in this fact sheet are extra safety measures in addition to the other BMP fact sheets that pertain to the specific Operations and Maintenance (O&M) activity.

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Operational Procedures

General O&M

- Refer to the 'Storm Drain Inlet Protection' fact sheet for further BMPs to protect the stormwater drainage system.
- Perform all near-water activities in dry weather, with no rain in the forecast.
- Switch to non-toxic Safer Alternative Products for O&M when possible.
- Choose recyclable and biodegradable cleaning agents.
- Handle chemicals and materials in an area temporarily designed to contain spills and leaks if one were to occur, and select a work area that is the furthest away as possible from the watercourse.
- Ensure all employees performing O&M activities near-water are fully trained in the extra precautions to take to prevent pollution.
- Dry sweep prior to and following O&M activities.
- Provide regular training to employees and contractors regarding stormwater BMPs for near-water activities.
- Refer to SC-10 Spill Prevention and Response fact sheet for guidance regarding any leaks or spills, and the immediate clean-up of leaks and spills.

Cleaning, Power Washing, and Painting

- In addition to guidance provided in the 'Paint Removal', 'Graffiti Removal', 'Painting', and 'Pressure Washing' fact sheets, shelter any blasting, power washing, and spray painting activities by hanging wind blocking tarps to prevent sand blasting dust and overspray from escaping.
- Use secondary containment on paint cans and cleaning materials.
- Paint mixing should occur in a contained area that can hold the full volume of mixed paint if a spill were to occur.
- Vacuuming loose paint chips and paint dust as they are produced helps prevent paint and other chemical substances from entering waters.
- Properly dispose of surface chips, used blasting sand, residual paints, and other materials. Use temporary storage that is not exposed to rain or run-on.
- Select nontoxic Safer Alternative Products for cleaning that do not harm the environment.

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SC-3
NON-STORMWATER DISCHARGES

Purpose

Any flow entering the storm drain conveyance system that does not entirely consist of stormwater is considered a non-stormwater discharge. The two sources of non-stormwater discharges are fixed facilities owned and/or operated by MTS or contracted operator, and public discharges discovered during normal field program operations. Some non-stormwater discharges are permitted, however, other non-stormwater discharges contaminated with pollutants that pose environmental concerns. These discharges originate from: illegal dumping, internal floor drains, industrial activities, sinks, and toilets illegally connected to nearby drains as referenced in the MTS Illicit Discharge Detection and Elimination (IDDE) Plan (WSP, 2019).

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Waste handling and storage	Trash	Bacteria, plastics, sediment, heavy metals, organic compounds, solids
Chemical, hazardous, and automotive liquids handling and storage	Pesticides	Organic compounds
	Fertilizers	Nitrates, phosphates
	Oil	Oils and greases
	Fuel	Hydrocarbons
	Cleaning supplies, degreasers	Organic compounds, antimicrobials, endocrine disruptors
	Paints, coatings, thinners	Organic compounds, heavy metals, sulfuric compounds
Illicit Connection/Illegal Discharge	Source specific: wastewater, chemical spill, industrial process water, etc.	Bacteria, VOCs, SVOCs, chlorine, etc.
Chemical applications	Fertilizers	Nitrates, phosphates
	Pesticides and Herbicides	Organic compounds
Unstable earth from dying or damaged vegetation	Soil from erosion and runoff	Sediment, particulate matter, turbidity
Irrigation of landscaped areas	Soil from runoff	Sediment, particulate matter, turbidity
	Fertilizers	Nitrates, phosphates
	Pesticides and Herbicides	Organic compounds
Fueling equipment	Petroleum products	Organic compounds
		Oils and grease

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Washing equipment	Soil Fertilizers Pesticides Vegetation Clippings Cleaning products	Sediment, suspended solids Nitrates, phosphates Organic compounds Nitrates, phosphates, invasive species Chlorine, acids, phosphate, VOCs, SVOCs
Painting activities	Paint, thinners, mineral spirits	Heavy metals, organic compounds, sulfuric compounds

Application

Prevention of non-stormwater discharges by MTS is achieved through implementation of the operational procedures described in the BMP fact sheets and the procedures outlined within this document. In addition, MTS employees in the field will be trained to identify non-stormwater discharges or areas that a future discharge may occur and report to the appropriate authority.

Operational Procedures

MTS Facility

- Post "No Dumping" signs with a phone number for reporting dumping and disposal. Signs should also indicate fines and penalties for illegal dumping.
- Stencil storm drains with messages such as "Dump No Waste Drains to Stream".
- Discourage dumping with beautification, lighting, and barriers in problem areas.
- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs.
- Clean up spill on paved surfaces with dry methods whenever possible, or minimal water usage. Use rags for small spills, a damp mop for general cleanup, and absorbent material for larger spills. If the spilled material is hazardous or unknown, then the used cleanup materials are also hazardous and must be disposed of as hazardous waste.
- See the Spill Prevention and Response fact sheet (SC-10) for further guidance regarding large spills, hazardous spills, and proper reporting and disposal.
- When illicit connections are suspected, follow the Illicit Discharge Detection Process diagram at the end of this document regarding sampling, testing, and reporting.
  - Level I sampling and testing (pH, temperature, ammonia and flow; analyze "as built" piping schematics, notes, and photos) to be completed by MTS employees.
  - Level II sampling and testing (smoke testing, lab analysis, video inspection, dye testing) to be completed by the relevant third party as directed by a manager or the Environmental Health Specialist.

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Field Operations

- Develop clear protocols and lines of communication for effectively prohibiting and reporting non-stormwater discharges, especially those not classified as hazardous, which are often not reported and/or responded to as effectively as necessary.
- Regularly inspect and clean up hot spots and other storm drainage areas where illegal dumping and disposal occurs
- During routine field program O&M activities, staff should look for evidence of illegal discharges or illicit connection:
  - Is there evidence of spills (i.e. paint, discoloration, foam, oil/rainbow sheen, etc.)?
  - Are there any odors associated with the drainage system?
  - Record locations of apparent illegal discharges/illicit connections and notify appropriate investigating agency.

Reporting

- A database is useful for defining and tracking the magnitude and location of the problem.
- Report prohibited non-stormwater discharges observed during daily activities so they can be investigated, contained, and cleaned up or eliminated.
- Document that non-stormwater discharges have been eliminated through observations of onsite drainage points.
- Maintain documentation of illicit connection and illegal dumping incidents, including repetitive but normally exempt discharges that are not properly managed.

Education and Enforcement

- When an illicit discharge is identified:
  - Educate the responsible party on the impacts of their actions regarding polluting the environment and potentially causing blockages or damages to the system.
  - Explain what is considered stormwater, and is an allowable discharge to the stormwater drainage system.
  - Provide information regarding Best Management Practices as appropriate.
  - Initiate follow-up and/or enforcement procedures
- If an illegal discharge is traced to a commercial or industrial activity, coordinate information on the discharge to the Environmental Health & Safety Specialist.

Training

- Train staff to identify, document, and report illegal dumping and non-stormwater discharge incidents.
- Employees should have a thorough understanding of this document, the Illicit Discharge Detection Process diagram (see diagram on page 4), and other MTS fact sheets.
- The Spill Prevention and Response Plan should be familiar to all employees.
- Train employees in Level 1 sampling and testing procedures.
- Ensure all staff know who to contact when a non-stormwater discharge is identified.
- Educate the identified responsible party on the impacts of their actions.

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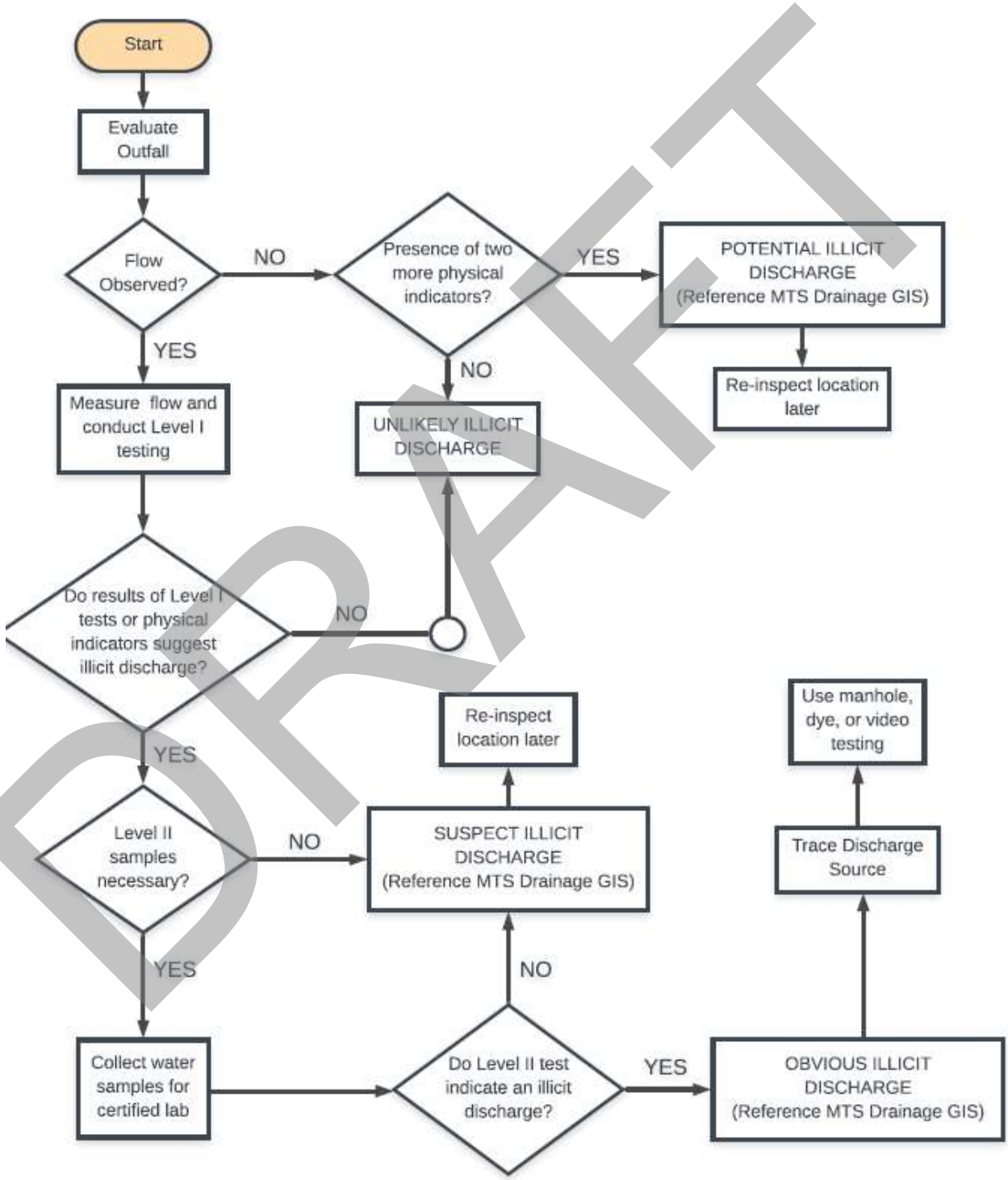
Illicit Discharge Detection Process



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SC-4
OUTDOOR LOADING & UNLOADING

Purpose

When loading, and unloading of materials takes place outside on docks, materials may be spilled, leaked or lost in the soil or on other surfaces with the potential of transporting with stormwater runoff or cleaning water to storm drains. Rainfall may also wash pollutants from machinery used to unload or move materials.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Spills and leaks from chemical and hazardous material loading, unloading, and pumping	Pesticides	Organic compounds
	Fertilizers	Nitrates, phosphates
	Oil	Oils and greases
	Fuel	Hydrocarbons
	Cleaning supplies, degreasers	Organic compounds, biocides, endocrine disruptors
	Paints, coatings, thinners	Organic compounds, heavy metals, sulfuric compounds
Sweeping and handling of litter/sediment	Trash and sediment	Plastics, suspended solids, organic matter, heavy metals

Application

The following procedures are used where loading and unloading of materials occurs. Implementing these procedures will minimize the risk of loading/unloading activities polluting stormwater runoff and discharging into the stormwater drainage system and watercourses.

Operational Procedures

- Protect drain inlets and watercourses from potential spills (see Storm Drain Inlet Protection fact sheet) and when flooded water is pumped, convey to a landscaped area.
- Park, unload, and load delivery vehicles only in designated and covered areas.
- Prevent stormwater run-on to loading docks with proper grading, berming, and by directing runoff from roof downspouts away from the designated loading/unloading areas.
- Pave loading and unloading areas with concrete instead of asphalt.
- Grade and/or berm the loading and unloading areas to a drain connected to a dead-end sump.
- Do not conduct loading and unloading during wet weather, whenever possible.
- Tarps and similar control measures should be used to prevent spills or material drift from being deposited into storm water drainage system or watercourses.
- Use drip pans underneath hose and pipe connections during fluid transfer operations including making and breaking connections. Store drip pans in a covered location away from precipitation, and clean periodically while disposing of waste properly.

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SC-4
OUTDOOR LOADING & UNLOADING

- Regularly check machinery used to load and unload materials for leaks; including valves, pumps, flanges, and connections.
- Regularly dry-sweep and/or vacuum areas to minimize pollutant discharge.
- Refer to SC-10 Spill Prevention and Response fact sheet for control and cleanup of spills, and always have a trained employee present during unloading and loading operations.
- Solid waste should be collected by vacuum or sweeping and secured in an appropriate container and reused, recycled or disposed of properly.
- Water used for cleaning and decontamination shall not be allowed to enter the storm water drainage system or watercourses.
- The MTS Environmental Health and Safety Specialist must approve safer alternative products.
- Approved safer alternative products should be used where practical and effective.
- While safer alternative products may be less harmful to the environment, they are not harmless. Use the materials per the manufacturer's instructions and keep the materials out of the storm water drainage system and watercourses.

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SC-5
OUTDOOR STORAGE

Purpose

Raw materials, by-products, finished products, containers, and material storage areas exposed to rain, run-on, and runoff can pollute stormwater. Improper storage can result in accidental spills and leaks, that can accumulate in soils or on surfaces to then be carried away by rainfall runoff into the stormwater drainage system.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Waste storage	Trash	Bacteria, plastics, sediment, heavy metals, organic compounds, solids
Chemical, hazardous, and automotive liquids storage	Pesticides	Organic compounds
	Fertilizers	Nitrates, phosphates
	Oil	Oils and greases
	Fuel	Hydrocarbons
	Cleaning supplies, degreasers	Organic compounds, antimicrobials, endocrine disruptors
	Paints, coatings, thinners	Organic compounds, heavy metals, sulfuric compounds
Sweeping and handling of litter/sediment	Trash and sediment	Plastics, suspended solids, organic matter, heavy metals

Application

Implementation of pollution prevention and source control methods such as, minimizing inventory of raw and/or hazardous materials; storing materials in a designated area that is enclosed, covered, and has secondary containment; training employees and subcontractors in standard operating procedures (SOP) and spill cleanup techniques; and conducting regular inspections to ensure efficacy of pollution prevention measures and to make improvements, will minimize the risk of polluting stormwater runoff and discharging into the stormwater drainage system and watercourses.

Operational Procedures

Storage Areas

- Follow the SOP for loading and unloading, and refer to the SC-4 Outdoor Loading and Unloading fact sheet for related BMP information.
- Keep a current and accurate inventory of stored materials. Re-evaluate inventory needs and consider purchasing Safer Alternative Products. Properly recycle and dispose expired products.
- Store materials in their original containers that describe their contents and specific spill response actions, or if a transfer container is used then properly label in compliance with the globally

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harmonized system GHS). Maintain associated Safety Data Sheets (SDS) in the MTS online SDS database.

- When inside storage is not feasible, ensure storage areas are protected from rainfall, run-on, runoff, and wind dispersal:
  - Cover the designated storage areas with a roof to protect from rain. At the very minimum use a temporary waterproof covering made of polyethylene, polypropylene or a similar material.
  - Minimize run-on by enclosing the area and using berms.
  - Use covered dumpsters for waste product containers.
- Keep liquids in a designated area on a paved impervious surface within a secondary containment system using dikes, liners, vaults, or double walled tanks.
- Employ safeguards against accidental releases:
  - Provide overflow protection devices to warn operator or automatic shutdown transfer pumps.
  - Provide protection guards around tanks and piping to prevent vehicle or forklift damage
  - Provide clear tagging or labeling, with valve restrictions to reduce human error.
  - Provide secure storage to prevent vandalism and theft.
  - Ensure container lids are tight fitting and secure.
- Ensure storage containers are in good condition, lacking corrosion, leaks, cracks, scratches, and other physical damage that may weaken the container system.
- Keep storage containers off the ground using pallets, racks, or a similar method.
- Place drip pans or absorbent materials beneath all mounted container taps and at all potential drip and spill locations during filling and unloading of containers. Clean drip pans periodically and all collected liquids and soiled absorbent materials must be reused, recycled, or properly disposed.
- Storage of hazardous materials (reactive, ignitable, or flammable) must comply with the environmental, fire, and hazardous waste codes.
  - Surround stored hazardous materials and waste with a curb or dike to provide the volume to contain 10% of the volume of all the containers, or 110% of the volume of the largest container, whichever is greater. The area inside the curb should slope to a drain leading to a dead-end sump.
  - Store corrosive materials in appropriate containers resistant of corrosion.

Inspection

- Provide routinely scheduled, and 'as necessary' inspections with thorough record keeping and reporting, checking for:
  - Evidence of leaks, spills, or drips due to faulty containers, operator error, or failure of piping systems and valves.
  - External corrosion, cracks, or other structural failures of material containers, tank foundations, connections, coatings, and tank walls.
  - Leaks or spills during pumping of liquids or gases from delivery trucks to a storage facility or vice versa.
  - Loose fittings, poor welding, and improper or poorly fitted gaskets on new tank or container installations.
  - Improperly labelled new or secondary containers.
- Following inspections, take immediate corrective actions including replacement of faulty or at-risk equipment and containers, further training of employees, and process adjustments to prevent leaks and spills and record all inspection findings and responses in a log.

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Training

- Train employees to have a full understanding of the current Spill Prevention and Response plan and fact sheet so employees have the tools and knowledge to immediately begin cleaning up a spill and taking corrective actions if one should occur.
- Educate employees about the risks of improper storage described within this fact sheet related to stormwater pollution prevention.
- Use a training log or similar method to document initial and ongoing training, including further training following inspections.

Further Details on Dikes and Curbs

Dikes

One of the best protective measures against contamination of stormwater is diking. Containment dikes are berms or retaining walls that are designed to hold spills. Diking is an effective pollution prevention measure for above ground storage tanks and tank truck loading and unloading areas. The dike surrounds the area of concern and holds the spill, keeping spill materials separated from the stormwater side of the dike area.

- For single-wall tanks, containment dikes should be large enough to hold the contents of the storage tank for the facility plus rainwater.
- For trucks, diked area volume should equal the volume of the largest tank truck compartment that makes deliveries.
- Diked material should be strong enough to safely hold spilled materials.
- Dike materials can consist of earth, concrete, synthetic materials, metal, or other impervious materials.
- Strong acids or bases may react with metal containers, concrete, and some plastics.
- Where strong acids or bases are stored, alternative dike materials should be considered. More active organic chemicals may need certain special liners for dikes.
- Dikes may also be designed with impermeable materials to increase containment capabilities.
- Inspect dikes during or after significant storms or spills to check for washouts or overflows.
- Regularly inspect dikes to ensure they can contain spills based on potential spill volume (e.g. tank replacement, new material)
- Inability of a structure to retain stormwater, dike erosion, soggy areas, or changes in vegetation indicate problems with dike structures. Damaged areas should be patched and stabilized immediately.
- Accumulated stormwater in the containment area should be analyzed for pollutants before it is released to surface waters. If pollutants are found or if stormwater quality is not determined, then methods other than discharging to the MS4 or surface waters should be employed (e.g., discharge to sanitary sewer).
- Earthen dikes may require special maintenance of vegetation such as mulching and irrigation.

Curbing

Curbing is a barrier that surrounds an area of concern. Curbing is like containment diking in the way that it prevents spills and leaks from being released into the environment. Curbing is usually small scaled and does not contain large spills like diking. Curbing is common at many facilities in small areas where handling and transfer liquid materials occur. Curbing can redirect stormwater away from the storage area. It is useful in areas where liquid materials are transferred from one container to

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another. Asphalt is a common material used for curbing; however, curbing materials include earth, concrete, synthetic materials, metal, or other impenetrable materials.

- Spilled materials should be removed immediately from curbed areas to allow space for future spills.
- Curbs should have manually-controlled pump systems rather than common drainage systems for collection of spilled materials.
- The curbed area should be inspected regularly to clear clogging debris.
- Maintenance should also be conducted frequently to prevent overflow of any spilled materials as curbed areas are designed only for smaller spills.
- Curbing has the following advantages:
  - Excellent run-on control,
  - Inexpensive,
  - Ease of installment,
  - Provides option to recycle materials spilled in curb areas, and
  - Common industry practice.

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SC-6 OUTDOOR VEHICLE AND EQUIPMENT CLEANING

Purpose

Vehicle and equipment cleaning outdoors can contribute toxic hydrocarbons and other organic compounds, oils and greases, nutrients, phosphates, heavy metals, and suspended solids to stormwater runoff.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Wash water from outdoor vehicle and equipment cleaning	Chlorinated water	Chlorine
	Detergents	Phosphates
	Solids (dirt and metal fragments)	Sediment and Metals
	Pesticides	Organic compounds
	Fertilizers	Nitrates, phosphates
	Vehicle Fluids	Oils and greases
	Fuel	Hydrocarbons
	Cleaning liquids, degreasers	Organic compounds, antimicrobials, endocrine disruptors

Application

Utilizing the procedures outlined below can prevent and reduce the potential for pollutant discharge through source control prevention, storm drain inlet protection (see fact sheet SDM-3), and BMP implementation. Thorough and continuous employee training is paramount in effective implementation of stormwater pollution prevention methods related to vehicle and equipment cleaning.

Operational Procedures

Vehicle and Equipment Cleaning

- Use properly maintained off-site washing and steam cleaning businesses whenever possible as these businesses are specifically designed to manage contaminated water.
- Implement good housekeeping practices to minimize wash water's exposure to contaminants.
- Sweep wash areas frequently to remove solid debris.
- Provide waste containers in the wash area per the SC-12 Waste Handling and Disposal fact sheet.
- Map on-site storm drain locations and follow procedures outlined in the 'Storm Drain Inlet Protection' fact sheet to protect the drainage system.
- Biodegradable and approved safer alternative products without phosphates should be used where practical and effective.
- The MTS Environmental Health and Safety Specialist must approve safer alternative products.

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- While safer alternative products may be less harmful to the environment, they are not harmless. Use the materials per the manufacturer's instructions and keep the materials out of the storm water drainage system and watercourses.
- Designate and clearly mark a wash area with signs stating that only washing is allowed in that area and that discharges to the storm drain are prohibited.
- Design wash areas to completely collect and dispose of wash water when chemical additives, solvents, or degreasers are used. Installation of sumps, drain lines, berms, and grading can segregate, direct, and collect wash water and prevent stormwater run-on to wash areas.
- Cover the outdoor wash area, and post signs indicating washing procedures specific to that area and that no other activities are permitted in the wash area. Placing tarps over the pavement when not in use will help deter other activities occurring in the area and will prevent contact with rain water.
- Use automatic shutoff nozzles when hoses are left unattended.
- Perform power washing and steam cleaning in specifically designated areas as this runoff has higher pollutant concentrations. No power washing or steam cleaning in areas designated as wellhead protection areas for public potable water supply.

Disposal

- Consider filtering and recycling wash water whenever possible.
- Discharge all equipment wash water to a holding tank or a primary clarifier treatment system.
- Discharge vehicle wash water to a holding tank, a primary clarifier treatment system, or to an enclosed recycling system.
- Discharge wash water to the sanitary sewer only where allowable/permitted by the local sewer authority; pretreatment may be necessary. If in doubt, ask your Supervisor.
- Refer to the 'Spill Prevention and Response' fact sheet in the event of large spills or leaks from holding tanks, treatment systems, and wash area containment areas.
  - Keep the spill and response plan for each facility current and easily accessible.
  - Stock adequate spill cleanup materials and check supplies with routine inspections.
  - All employees shall have the tools and knowledge to immediately begin cleaning up a spill if one should occur.

Training

- Train employees to have a thorough understanding of this fact sheet and conduct continuous refresher training sessions.
- Train staff on only performing washing activities in the wash area, and for proper housekeeping and maintenance of the wash area.
- Conduct inspections to ensure effective implementation of vehicle and equipment cleaning procedures and address instances immediately when a procedure is not followed, or potential contamination pathways are identified.

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SC-7
OUTDOOR VEHICLE AND EQUIPMENT MAINTENANCE

Purpose

Vehicle and equipment maintenance includes bus, LRV, and operational equipment maintenance and repair. Pollutants from routine maintenance and repairs (e.g. parts cleaning, part replacements, oil changes) can impact water quality if stormwater runoff comingles with leaked fluids or equipment stored outside.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Vehicle and Equipment Cleaning	Chlorinated water	Chlorine
	Detergents	Phosphates
	Solids (dirt and metal fragments)	Sediment and Metals
	Vehicle Fluids	Oils and greases
	Cleaning liquids, degreasers	SVOCs, VOCs, Acids
Vehicle and Equipment Repair	Vehicle and Equipment Fluids	Ethylene glycol, propylene glycol, sulfuric acid, lead, oil and grease, total petroleum hydrocarbons, diesel range organics

Application

Utilization of the following procedures where maintenance of vehicles and MTS assets occurs will prevent or greatly reduce the discharge of pollutants to the stormwater drainage system.

Operational Procedures

- Keep accurate maintenance logs, inventory, and associated Safety
- Data Sheets (SDS) so current use and storage of materials is known.
- Switch to non-toxic, solvent free, and potentially recyclable materials for maintenance and cleaning whenever possible.
- Recycle used oils, vehicle fluids, and equipment parts whenever possible.
- Avoid hosing down work areas, alternatively dry sweep the MTS facility routinely to keep litter and sediment out of drainage systems. If work areas are washed, collect and direct wash water to a designated area (i.e., holding tank, recycled water system, or treatment system).
- Use a vehicle maintenance area designed to prevent stormwater pollution and minimize contact of stormwater with outside operations through berming, and appropriate drainage routing (see Storm Drain Inlet Protection fact sheet).
- Keep equipment clean by not allowing excessive build-up of oil and grease whenever possible to reduce waste and discharge.
- Refer to FSC-3 Pressure Washing BMP fact sheet for appropriate cleaning protocols while using pressure washers and steam cleaners.
- Use signage on storm drain inlets indicating they are not to receive liquid or solid wastes.

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- Use signage at sinks to remind employees that pouring wastes down the drain is prohibited.
- Clean all MTS facility storm drain inlets regularly using dry methods of sweeping, litter removal, and vacuums; and cover during dry weather, where applicable.
- Permanently cover outdoor maintenance and repair areas, or move activities inside to limit exposure to rainfall.
- If equipment or vehicles are stored outside, (e.g. temporarily/permanently out of use, wrecked/damaged vehicles or machinery) ensure oil and other fluids are drained first.
- Collect leaking or dripping fluids in drip pans or containers. Fluids are more easily recycled if kept separate.
- Drain pans are generally too small to contain antifreeze, plan accordingly by purchasing larger drip pans or fabricate appropriately sized and shaped pans.
- Promptly transfer fluids to the proper waste or recycling drums and store in an appropriately designed area that can contain spills. Drip pans are used temporarily, and should never act as storage containers.
- Dispose oil filters properly by draining into a waste oil recycling drum and then recycle filters with your oil supplier or recycler.
- Store cracked and/or dead batteries in a non-leaking covered secondary container and dispose of properly at recycling or hazardous waste facilities.
- Place permanent curbs around the immediate boundaries of the process equipment.
- Do not remove original product label from chemical containers as it contains important spill cleanup and disposal information.
  - If a product is concentrated and must be diluted before use, transfer the diluted product to a secondary container. Ensure that the secondary container label complies with the labelling requirements of the globally harmonized system (GHS).
- Use the entire product before disposing of the container.
- Do not locate stockpiles near drain inlets or watercourses.
- Refer to the Parking and Storage Area Maintenance fact sheet for more storage area considerations.
- Refer to the Spill Prevention and Response fact sheet in the event of spills or leaks.
  - Keep the spill and response plan for each facility current, with updates from incidents, regulation changes, and inspections.
  - Stock adequate spill cleanup materials readily accessible to the specific MTS facility and routinely check storage areas for sufficient supplies.
- All wastes should be put into containers and stored appropriately until it can be recycled or disposed of properly.
- All materials of environmental concern shall be properly stored in appropriate secure containment.
- Recycling materials is always preferable to disposal, and purchasing products (e.g. engine oil, transmission fluid, antifreeze, hydraulic fluid) made of recycled materials is preferred.
- Separating wastes allows for easier recycling and may reduce disposal costs by separating hazardous and non-hazardous wastes. Do not mix oil and solvents and separate chlorinated solvents from other solvents.
- The MTS Environmental Health and Safety Specialist must approve safer alternative products.
- Approved safer alternative products should be used where practical and effective.
- While safer alternative products may be less harmful to the environment, they are not harmless. Use the materials per the manufacturer's instructions and keep the materials out of the storm water drainage system and watercourses.

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SC-8
PARKING AND STORAGE AREA MAINTENANCE

Purpose

The risk of pollutants like trash, suspended solids, hydrocarbons, oil, grease, and heavy metals entering the storm drain system from parking and storage areas through stormwater runoff or non-stormwater discharges is high and must be mitigated.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Parking and storage area surfaces	Runoff	Suspended Solids/Sediment, polycyclic aromatic hydrocarbons, trash
	Brake pad dust	Metals
	Chlorinated water for pressure washing	Chlorine
	Vehicle Fluids	Oil and Grease
Landscape areas	Fertilizers	Nutrients
	Pesticides	Organics
	Irrigation runoff	Sediment and turbidity
Storage Area	Spills and leaks	Source specific

Application

The following procedures reduce the risk of pollutant discharge into the stormwater system from parking and storage areas. Using proper housekeeping practices, following appropriate cleaning BMPs, training employees, and incorporating alternative designs and maintenance strategies for impervious parking lots will prevent water quality impacts.

Operational Procedures

- Protect storm drain inlets and watercourses from potential spills (see 'Storm Drain Inlet Protection' and 'Spill Response and Prevention' fact sheets).
- Ensure employees understand common spill response and protection practices.
- Allow sheet runoff to flow into biofilters (vegetated strip and swale) and/or infiltration devices and utilize sand filters or oleophilic collectors for low concentrations of oily waste.
- Prevent stormwater run-on to parking lots and storage areas with proper grading, berming, and by directing runoff from roof downspouts away from the paved surfaces and storage areas.
- Design lot to include semi-permeable hardscape and innovative bio filters.
- Post "No Littering" signs and enforce anti-litter laws and provide adequate litter receptacles in walking and parking areas.
- Empty and clean out litter receptacles frequently to prevent spillage, and anticipate high traffic times during events for more frequent clean outs.

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SC-8
PARKING AND STORAGE AREA MAINTENANCE

- Regularly dry-sweep, shovel, and vacuum areas to minimize litter and pollutant discharge into the stormwater conveyance system.
- Establish frequency of parking lot sweeping based on usage and field observations of waste accumulation and inspect sweepers for leaks on a regular basis.
- If there is evidence of illegal dumping, bag and load the material onto an MTS vehicle and return to a MTS facility for disposal.
- Sweep all parking and storage areas before the onset of the wet season.
- When water is used during surface cleaning, follow the procedures below:
  - Completely block the storm drain or contain runoff.
  - Wash water should be collected and reused, pumped to the sanitary sewer, or discharged to a pervious (vegetated) surface, do not allow water to enter storm drains during cleaning.
  - Dispose of parking lot sweeping debris and dirt at a landfill.
- When cleaning heavy oil deposits, use absorbent materials on oil spots prior to sweeping and dispose of used absorbents properly.
- Tarps and similar control measures should be used to prevent spills or material drift from storage areas.
- Solid waste should be collected by vacuum or sweeping and secured in an appropriate container and reused, recycled or disposed of properly.
- Water used for cleaning and decontamination shall not be allowed to enter storm water drainage system or watercourses.
- Refer to the 'Surface Repair' fact sheet for procedural requirements during surface repair.
- The MTS Environmental Health & Safety Specialist must approve safer alternative products.
- Approved safer alternative products should be used where practical and effective.
- While safer alternative products may be less harmful to the environment, they are not harmless. Use the materials according to the manufacturer's instructions and keep the materials out of the storm water drainage system and watercourses.

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SC-9
SAFER ALTERNATIVE PRODUCTS

Purpose

Promote the use of less harmful products. Alternatives exist for most product classes including chemical fertilizers, pesticides, cleaning solutions, janitorial chemicals, automotive and paint products, and consumables (e.g. batteries, fluorescent lamps).

Pollutants of Concern

This BMP encourages the replacement of chemicals and consumables with safer alternative products, therefore, this BMP has no pollutants of concern. Follow the procedures in the Landscape Design and Maintenance Plan (WSP, 2019), available on the MTS Intranet, or from the Environmental Health and Safety Specialist regarding disposal of pesticide containers and unusable pesticides or other chemicals that are replaced with a safer alternative product. It is important to note that although alternative products are safer, they are not completely safe and BMPs should be followed per usual.

Application

The usage of Safer Alternative Products reduces the harm to the environment that O&M materials and products have if they come into contact and contaminate stormwater. Although Safer Alternative Products are not 100% safe, they are less harmful, in many cases cheaper, and readily available.

Operational Procedures

Approach

Develop a comprehensive program based on the:

- "Precautionary Principle," which is an alternative to the "Risk Assessment" model that says it's acceptable to use a potentially harmful product until physical evidence of its harmful effects are established and deemed too costly from an environmental or public health perspective. For instance, a risk assessment approach might say it's acceptable to use a pesticide until there is direct proof of an environmental impact. The Precautionary Principle approach is used to evaluate whether a given product is safe, whether it is necessary, and whether alternative products would perform just as well.
- Environmentally Preferable Purchasing Program, which minimizes the purchase of products containing hazardous ingredients used in the facility's custodial services, fleet maintenance, and facility maintenance in favor of using alternate products that pose less risk to employees and to the environment.
- Integrated Pest Management (IPM) or Less-Toxic Pesticide Program, which uses a pest management approach that minimizes the use of toxic chemicals and gets rid of pests by methods that pose a lower risk to employees, the public, and the environment.
- Energy Efficiency Program, which includes a no-cost and low-cost energy conservation and efficiency actions, that can reduce both energy consumption and electricity bills, along with long-term energy efficiency investments.
- Consider the following mechanisms for developing and implementing a comprehensive program:
  - Policies
  - Procedures

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  - Landscape Design and Maintenance Plan
  - Standard operating procedures (SOPs)
  - Purchasing guidelines and procedures
  - Bid packages (services and supplies)
- Materials
  - Preferred or approved product and supplier lists
  - Product and supplier evaluation criteria
  - Training sessions and manuals
  - Fact sheets for employees

- Purchasing departments should be encouraged to procure less hazardous materials and products that contain little or no harmful substances or TMDL pollutants.
- This BMP has no regulatory requirements. Existing regulations already encourage facilities to reduce the use of hazardous materials through incentives such as reduced:
  - Specialized equipment storage and handling requirements,
  - Stormwater runoff sampling requirements,
  - Training and licensing requirements, and
  - Record keeping and reporting requirements.

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SC-10
SPILL PREVENTION AND RESPONSE

Purpose

Given that MTS has an existing Spill Prevention, Control, and Countermeasure (SPCC) Plan which is updated regularly; MTS provides SPCC training annually; and each MTS department has a Spill Response standard operating procedure (SOP), this BMP Maintenance Fact Sheet has been developed in support of the existing MTS SPCC Plan, training and existing departmental spill prevention SOPs. Improperly controlled spills and leaks can adversely impact the storm drain conveyance system, and ultimately the receiving waters. Proper spill prevention and response training of municipal employees can minimize the impact of spills to the environment and prevent common spills before they happen.

Pollutants of Concern

This BMP provides guidance regarding small and large non-hazardous spills as well as hazardous spills. Any spill more than 42 gallons is managed by the MTS hazmat vendor. MTS is only responsible for containing a spill to prevent it from entering a storm drain. Pollutants of concern are contaminant specific based on the nature of the spilled material. In addition to responding to the spill using the guidelines provided with this BMP, MTS employees shall protect all drain inlets and watercourses from spills during the response activity.

Application

The following procedures will help minimize the possibility of spills occurring and establish effective spill response measures when they do happen. In combination with thorough training of MTS staff the risk of spill pollutants entering the stormwater system and receiving waters is greatly reduced.

Operational Procedures

- Major steps in the Spill Prevention and Response plan are as follows:
  - Thorough training of employees of prevention, response, and reporting techniques.
  - Follow spill and leak prevention measures to minimize the risk of spills.
  - When a spill occurs, follow the spill response procedures outlined in the SPCC Plan.
  - Proper reporting and record keeping of employee training, spill prevention successes and failures, and spill response activities will provide data to improve the process in the future.

Prevention

- Implement the procedural guidelines as indicated in the MTS SPCC Plan and/or appropriate department Spill Prevention SOP.
- In combination with the measures referenced in the SPCC Plan, the following records will help minimize spills and provide supplementary information if one occurs.
  - Facility description including the address, activities, and materials involved.
  - Identification of key spill response personnel beginning with the MTS Environmental Health and Safety Specialist
    - MTS Environmental Health and Safety Specialist and onsite “Designated Person(s) Accountable for Discharge Prevention”

(1) Depending on the facility this may be the Facilities Supervisor, Foreman, Maintenance Manager, etc.

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  - Hazmat Contractor/Vendor
  - Local Fire Department
  - Local Police Department
  - Nearest Hospital
  - Hazardous Materials Division/Certified Unified Program Agency 858-505-6880
- Identification of the potential spill areas or operations prone to spills and leaks.
- Identification of which areas should be or are bermed to contain spills and leaks.
- Facility map identifying the key locations of areas, activities, materials, structural BMPs all with risks of spills and leaks.

Material Handling Procedures

Spill response procedures for each at risk area, activity, material, etc.:

- Assess the site and potential impacts including proper identification and labeling of all containers
- Material containment
- Proper personnel notification and evacuation procedures
- Site clean up
- Waste material disposal
- Record keeping
- Product substitution with approved safer alternative products where practical and effective. Safer alternative products are less harmful to the environment, but not harmless. Always use the materials per the manufacturer's instructions and continue to follow BMPs to keep the materials out of the stormwater drainage system and watercourses.
- Recycle, reclaim, or reuse of materials whenever possible to reduce the amount of materials transferred into the facility or into the field.
- If possible, move material handling indoors, under cover, and away from storm drains or watercourses.
- Properly label all containers so the contents are easily identifiable.
- Berm storage areas to contain material if a spill or leak occurs.
- Cover outside storage areas with a permanent structure, or if not feasible then cover with a tarp to protect from rainfall and pollutant discharge.
- Check containers, berms, and at-risk areas often for leaks and spills. Replace containers that are leaking, corroded, or otherwise deteriorating with containers in good condition. Collect and spilled and leaked materials by dry methods if possible and properly dispose of them.
- Store, contain and transfer liquid materials in such a manner that if the container is ruptured or the contents spilled, they will not discharge, flow, or mix with rainfall and end up in the stormwater drainage system.
- Place drip pans or absorbent materials beneath all mounted taps and at all potential drip and spill locations during the filling and unloading of containers. Collected liquids or soiled absorbent materials should be reused and recycled or properly disposed.
- For field programs and maintenance activities, only transport the minimum amount of material needed for the daily activities and transfer materials between containers at a designated area within MTS yard areas that are designed to contain spills and leaks.
- If paved, sweep and clean storage areas monthly, and do not use water unless all the water will be collected and disposed of properly.

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- Install a spill control device (such as a tee section) in any catch basins that collect runoff from storage areas containing oil, gas, or other materials that separate and float on water. This allows for easier cleanup if a spill occurs.
- Protect catch basins and storm drains (see 'Storm Drain Inlet Protection' fact sheet) while conducting field activities to contain materials if a spill occurs during operation and maintenance.
- Ensure each potential risk area and maintenance activity area always has spill cleanup materials readily available, supplies are routinely checked, and all employees are familiar with their location.

Training

- Provide initial and continued spill prevention, spill response, and cleanup training on an annual basis.
- Review past incidents from filed records to provide relatable examples to employees
- Well-trained employees can reduce human errors that lead to leaks and spills, and can give insight on how to prevent future problems.
- Each employee should immediately have the resources, tools and education to prevent, contain, and clean up leaks and spills.
- Employees should be familiar with this fact sheet, all relevant MTS Source Control Fact Sheets pertaining to maintenance activities they are responsible for, and the MTS Illicit Discharge Detection and Elimination Plan, SOPs and SPCC Plan.
- Focus training on recognizing and reporting potential or current spills and leaks, steps taken to mitigate risk, and where employees can find more help if necessary when a spill or leak occurs.
- Employees responsible for aboveground storage tanks and liquid transfers from large bulk containers should be thoroughly and routinely trained with the Spill Prevention and Control procedures and the plan should be readily available for reference on site and/or within their MTS vehicle.
- Employees should understand where spill cleanup materials are available for each at risk activity and at every facility where leaks and spills may occur.

Definition

Minor Spill poses no significant harm or threat to human health and safety or to the environment:

- Less than 42 gallons
- Is easily stopped
- Localized near sources
- Has not entered storm drain and has not left the property
- Little risk to human health or safety
- Little risk of fire or explosion

Major Spill cannot be safely controlled or cleaned up by facility personnel:

- Exceeds 42 gallons in amount of spillage
- Requires special equipment or training to clean up
- Large enough to spread beyond immediate discharge area
- Material enters storm drain or leaves the property
- Danger of fire or explosion
- Material is highly toxic, corrosive, flammable, or reactive and poses a significant hazard to human health or safety

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Spill Cleanup Procedures

- If a spill occurs, stop the spill (if needed).
- Notify the key spill response personnel immediately.
    - If safe to do so, take steps below to contain the material and block any nearby storm drains. If the material is unknown or hazardous wait for instruction from properly trained personnel (i.e., Immediate Supervisor or onsite "Designated Person(s) Accountable for Discharge Prevention" to contain the materials.
    - Minor Spills and leaks
        - Use a rag, damp cloth or absorbent materials for general cleanup of liquids
        - Use brooms or shovels for the general cleanup of dry materials
        - If water is used, it must be collected and properly disposed of; wash water cannot enter the storm drain.
        - Dispose of any waste materials properly
        - Clean or dispose of any equipment used to clean up the spill properly
    - Major Spills
        - Foreman should direct Mechanics and Servicers to stop the spill (if safe to do so)
        - All Mechanics and Servicers should immediately evacuate the area of the spill
        - and report to the Foreman at the designated muster point.
        - The Foreman shall direct Mechanics and Servicers to pass the word to evacuate
        - any areas, at MTS or at nearby properties, that would be potentially endangered
        - by, or exposed to the spill.
            1. For liquid spill, give particular attention to the downhill movement; and
            2. For gas, pay attention to direction of wind movement.
        - The Foreman shall contact the Facilities Manager and Communication
        - Supervisor, who in turn shall contact the Maintenance/Transportation Directors
        - and C.O.O.
        - Foreman shall contact emergency spill response vendor for assistance, then
        - notify MTS' Environmental Health & Safety Specialist.
        - Every effort must be made to prevent spilled liquids from entering the storm drain
        - or leaving the property – block storm drains in the event of a liquid spill.
        - The Foreman and emergency response personnel shall direct Mechanics and
        - Servicers to perform specific functions to assist in stopping and cleaning up the
        - spill
        - The Foreman shall follow and comply with requirements set forth in the yellow
        - Emergency Procedures Binder located in the Shop Foreman's office.
    - For any sized hazardous or major spill, a private cleanup company or Hazmat team may need to be contacted to assess and control the situation, at the decision of the onsite "Designated Person(s) Accountable for Discharge Prevention".
        - Absorbents, gels, and foams are potential chemical adsorbents used to clean up hazardous spills, and proper disposal per regulations is required
        - If the spill material is hazardous, then any cleanup materials are also deemed hazardous and proper disposal or transfer to a certified laundry is required.

Reporting

- Report any spills and leaks immediately to the identified key spill response personnel as each event can be used as a learning opportunity to prevent future spills. Report spills in accordance

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with applicable reporting laws. Significant releases that put human health or the environment at risk must be reported immediately to:
  - 9-1-1, then notify
  - California Office of Emergency Services (OES) State Warning Center at 800-852-7550, and the
  - Unified Program Agency
- Federal regulations require immediate notification of any oil spill into a water body or onto an adjoining shoreline to the following agencies:
  - Coast Guard, San Diego Sector 619-278-7033
  - San Diego Regional Water Quality Control Board and
  - Department of Fish and Wildlife, Office of Spill Prevention and Response (OSPR).

For reportable quantities of an oil spill, Federal regulations require immediate notification to the
- National Response Center (NRC) at 800-424-8802 (available 24/7)

Following containment and cleanup of the spill, a detailed report about the incident should be generated and kept on file; briefing staff about the incident can help with training and preventing future spills.

Reports should include:
  - Date and time of the incident
  - Weather conditions (temperature, rain, cloud cover)
  - Duration of the event
  - Cause of the spill, leak, and/or discharge (if unknown give all known information surrounding the before, during, and after of the incident)
  - All response procedures implemented and persons notified from the moment the spill was noticed in a timeline format
  - Environmental Problems associated with the incident
  - Additional field notes, timed and dated photos or videos, drawings, and maps are highly encouraged

- Establish separate record keeping systems to document all housekeeping, routine preventative maintenance inspections and training logs.

  Inspection documentation should contain:
  - The date and time the inspection was performed
  - Name of the inspector and employees present
  - Items, activities, or areas inspected
  - At risk storage, process, or activity thoroughly explained
  - Corrective action taken (relocate materials, alter a process, further training)
  - Date of corrective action
  - Additional field notes, timed and dated photos or videos, drawings, and maps are highly encouraged

Special Considerations

- Facilities with a storage capacity of 10,000 gallons or more of petroleum are required by Federal regulation (40 CFR Part 112) to prepare a Spill Prevention Control and Countermeasure (SPCC) Plan.
- The state regulates hazardous material storage (Health & Safety Code Chapter 6.95), including the preparation of area and business plans for emergency response to the release or potential release of hazardous materials.
- If permitted, consider requiring a connection of smaller secondary containment areas (less than 200 sq. ft.) to the sanitary sewer while hard connections to the storm drain are prohibited.

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- Prevention of leaks and spills is inexpensive and achieved simply with continued training, education, and continued updates to procedures to best fit each specific at-risk activity or area. Containment, treatment, and disposal of soil, water, and material wastes from spills and leaks is exponentially more expensive than prevention.

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SC-11
VEHICLE AND EQUIPMENT FUELING

Purpose

Vehicle and equipment fueling includes fueling of MTS fleet vehicles, busses, street sweepers, generators, and any other fuel transfer activity. When stormwater mixes with fuel transfer leaks and spills, hydrocarbons, oil and grease, and heavy metals can be discharged into the stormwater drainage system and watercourses. The possibility of discharging pollutants into stormwater is mitigated when the following procedures are incorporated into fueling operations.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Leaks and Spills	Fuel	Total Petroleum Hydrocarbons
		Diesel Range Organics
		Metals
		Oil and Grease

Application

A reduction of pollutant discharge is achievable through effective implementation of the BMPs laid out within this document. Thorough and regular training of employees on the operational procedures for fuel transfer activities and general pollution prevention strategies will encourage effective implementation.

Operational Procedures

General Upkeep

- "Spot clean" small spills, leaks, and drips routinely. Leaks are not cleaned up until the absorbent is picked up and disposed of properly.
- Use officially maintained offsite fueling stations whenever possible as these businesses are better equipped to handle fuel leaks and spills properly.
- Educate employees about pollution prevention measures and goals.
- Focus pollution prevention education on minimizing or eliminating leaks and spills and proper containment during liquid transfer activities.
- Post signs that ban changing engine oil or other fluids at fueling stations.
- Immediately report leaking vehicles and ensure that they are taken out of service.
- Install and routinely maintain inlet catch basins equipped with a small sedimentation basin or grit chamber to remove large particles from stormwater in highly impervious areas.
- Releasing non-contaminated stormwater in secondary containment/storage will increase capacity prior to rain events.
- Ensure overflow protection devices on tank systems warn the operator to automatically shut down transfer pumps when the tank reaches full capacity.
- Inspect protective guards around tanks and piping to prevent vehicle or forklift damage.
- Clearly tag and label all valves to reduce human error.
- Ensure all fuel hoses will automatically shut off if severed or detached.

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- Address repairs and maintenance as soon as possible to prevent putting fueling station out of service.

Onsite Fuel Dispensing Areas

- Maintain clean fuel-dispensing areas using dry cleanup methods routinely, such as sweeping for removal of litter, debris, sediment, and absorbents, and use rags and absorbents for leaks and spills. Do not wash down areas with water.
- Fit underground storage tanks with spill containment and overfill prevention systems meeting the requirements of Section 2635(b) of Title 23 of the California Code of Regulations.
- Fit fuel dispensing nozzles with hold-open latches that act as automatic shutoffs except where prohibited by local fire departments. Install vapor recovery nozzles to help control drips and minimize air pollution from volatile organic compounds (VOCs).
- Post signs at fueling locations warning vehicle operators “No Topping Off Fuel Tanks.”
- Design fueling areas to prevent stormwater run-on and runoff to/from fueling areas respectively using berms, curbs, and sloping and pave areas with concrete (Portland cement concrete is preferred) or an equivalent smooth impervious surface rather than asphalt.
- Cover fueling area while routing roof runoff directly to storm drains and avoiding fuel dispensing areas.
- Use a perimeter drain around the covered fueling area or slope pavement inward with drainage to a dead-end sump. Proper maintenance and disposal of water in dead-end sump is required. Use of extruded curbs along the upstream side of fueling areas to prevent stormwater run-on is another option.
- Where asphalt is already in use, apply a suitable sealant that decreases the porosity of the surface therefore creating a more easily cleaned surface when leaks or spills occur.
- Keep equipment clean by not allowing excessive build-up of oil and grease without the use of liquid cleaners whenever possible to reduce waste and discharge.
- Use signage on storm drain inlets indicating they are not to receive liquid or solid wastes.
- Use secondary containment when transferring fuel from the tank truck to the fuel tank.
- Seal off storm drains in the vicinity during fuel transfer.
- Use only watertight waste receptacles, keep the lids closed, and implement one of the following: a cover, a low containment berm, or use and maintain drip pans under the waste receptacles. Always dispose of collected water properly and if drip pans are in use, keep several stored nearby in a covered location.
- All wastes should be put into containers and stored appropriately until it can be recycled or disposed of properly.
- Use signage at sinks to remind persons that pouring wastes down the drain is prohibited.
- Clean all MTS facility storm drain inlets regularly using dry methods of sweeping, litter removal, and vacuums.
- Collect leaking or dripping fluids in drip pans or containers. Fluids are more easily recycled if kept separate.
- Promptly transfer fluids to the proper waste or recycling drums and store in an appropriately designed area that can contain spills. Drip pans are used temporarily, and should never act as storage containers.
- Appropriately label all secondary containers.
- Follow all federal and state requirements regarding underground storage tanks, or install above ground tanks also per regulations.
- Refer to the ‘Spill Prevention and Response’ fact sheet in the event of large spills or leaks.

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  - Keep the spill and response plan for each facility current, with updates from incidents, regulation changes, and inspections.
  - Stock adequate spill cleanup materials and ensure that they are readily accessible to the specific MTS facility. Routinely inspect storage areas for sufficient supplies.
  - Store portable absorbent brooms in unbermed fueling areas.
  - Install and maintain an oil and water separator (clarifier) and connect to the sanitary sewer, not the stormwater drainage system.
- Approved safer alternative products should be used where practical and effective.
- The MTS Environmental Health and Safety Specialist must approve safer alternative products.
- While safer alternative products may be less harmful to the environment, they are not harmless. Use the materials per the manufacturer's instructions and keep the materials out of the storm water drainage system and watercourses.

Design Considerations of New Installations

- Fuel dispensing areas must be paved with Portland cement concrete or an equivalent smooth impervious surface, with a 2-4% slope to prevent ponding. To prevent stormwater run-on to the extent practicable, the fueling area must be separated from the rest of the site by a grade break. The fuel dispensing area extends 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus 1 foot, whichever is less. The paving around the fuel dispensing area may exceed the minimum dimensions of the "fuel dispensing area" stated above.
- A permanent cover is required over the fuel dispensing area, with minimum dimensions equal to or greater than the area within the grade break or the fuel dispensing area, as defined above. The cover must not drain stormwater onto the fuel dispensing area. Convey stormwater runoff from the permanent cover away from the fueling area to avoid contamination from leaks and spills outside of the fueling area.
- If necessary install and maintain an oil control device (e.g. clarifier) in the appropriate catch basins to treat runoff from the fueling area.
- To the extent practicable, grade and pave the outdoor waste receptacle area to prevent stormwater run-on to the fueling area.
- To the extent practicable, grade and pave the air/water supply area to prevent run-on of stormwater to the fueling area.

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SC-12
WASTE HANDLING AND DISPOSAL

Purpose

Toxic compounds, oils and greases, heavy metals, nutrients, suspended solids, and other pollutants may enter the stormwater drainage system through improper storage, handling, and disposal of solid wastes.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Waste handling and storage	Trash	Bacteria, plastics, sediment, heavy metals, organic compounds, solids
Chemical and hazardous materials/waste	Pesticides and Herbicides	Organic compounds
	Fertilizers	Nitrates, phosphates
	Cleaning supplies	Organic compounds, antimicrobials, endocrine disruptors
	Treated Wood Products	Arsenic, Total Chromium, Copper and Zinc
Landscaping and other products	Aluminum Sulfate	Aluminum, TDS, Sulfate
	Sulfur – Elemental	Sulfate
	Fertilizers – Inorganic	Nitrate, phosphate, TKN, potassium
	Fertilizers – Organic	Nitrate, TOC, COD, organic nitrogen (TKN)
	Natural Earth (Sand, Gravel and Topsoil)	Sediment
	Herbicide	Chemical specific; check SDS
	Pesticide	Chemical specific; check SDS
	Lime	pH altering substance

Application

Prevention and reduction of pollutant discharge from waste handling starts with tracking current waste generation, storage and disposal methods. Establishing a thorough understanding of current habits reveals methods of reducing waste generation and disposal through source reduction, re-use, and recycling. Preventing run-on to and runoff from waste storage areas in combination with reducing waste production and modifying current waste disposal methods will prevent and reduce pollutant discharge to stormwater.

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Operational Procedures

- Reduce waste generation by continuing to implement the following source controls:
  - Production planning and sequencing
  - Process and equipment modification
  - Raw material substitution or elimination
  - Material reuse and recycle
  - Loss prevention and housekeeping
  - Waste segregation and separation
  - Close loop recycling
- Utilize the MTS material tracking system (i.e. SAP) to increase awareness about material usage and disposal, and encourage material reuse and recycle whenever possible through awareness and training.
- Identify problem areas through inspections and respond with further training, employee awareness, and process modification.
- Switch to non-toxic, solvent free, reusable and recyclable materials and use the entire product before disposing the container.

Waste Receptacle Area Maintenance

- Use leak proof containers with lids for storage. Cover waste piles except when in use (tarps are acceptable) and prevent stormwater run-on and runoff with a berm.
- Use drip pans or absorbent materials whenever grease containers are emptied by vacuum trucks or other means. Grease cannot be left on the ground. Properly dispose of grease, oil, and absorbents as garbage.
- Inspect storage containers weekly for leaks and to ensure lids prevent stormwater from entering the containers. Remove from service and replace any containers that are leaking, corroded, or otherwise deteriorating.
- Transfer waste from damaged containers into safe containers immediately.
- Do not hose down work areas, alternatively dry sweep the MTS facility routinely to keep litter and sediment out of drainage systems. If work areas are washed, collect and direct wash water to a primary clarifier or a oil/water separator and not to the street or storm drain.
- Take special care when loading or unloading wastes to minimize losses and pollution. Loading systems can minimize spills and fugitive emission losses from dust, mist, etc. Vacuum transfer systems can minimize waste loss.
- Clean up spills immediately and refer to the Spill Prevention, Control and Countermeasure (SPCC) Plan, department SOP or the SC-10 Spill Prevention and Response fact sheet for thorough procedural actions to follow when leaks and spills occur.
- Stencil prohibitive dumping and no littering messages on the facility's property near storm drains (e.g. "Dump No Waste, Drains to River").

Litter Control

- Post "No Littering" signs, enforce anti-litter laws, and encourage awareness of pollution from litter and wastes to employees.
- Provide enough litter receptacles in multiple locations for each facility based on waste tracking inspections and logging.

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- Empty litter receptacles frequently and ensure covers are operational to prevent spillage.

Waste Collection

- Keep waste collection areas clean using dry methods whenever possible.
- Secure and close lids of waste containers tightly when not in use or during transfer.
- Place waste containers under cover whenever possible.
- Do not fill waste containers with washout water or any other liquid.
- Ensure only appropriate solid wastes are added to the waste container. Hazardous wastes, fluorescent lamps, pesticides, etc. are not permitted in solid waste containers.
- Do not mix wastes as this can cause chemical reactions, makes reuse or recycle impossible, and complicates disposal.
- Ensure vehicles transporting wastes are supplied with spill prevention equipment that secures waste during transport, and spill response materials in the event a spill occurs.
  - Vehicles equipped with baffles and sealed gates can prevent liquid waste spills. Vehicles equipped with spill guards prevents solid waste spills.

Chemical and Hazardous Wastes

- Designate separate hazardous waste collection areas at each facility.
- Store hazardous materials and wastes per local, state, and federal codes including fire hazard compliance.
- Place hazardous waste containers in secondary containment.
- Ensure hazardous waste is collected, removed, and disposed of only at authorized disposal areas.
- Reusing or recycling hazardous wastes is not permitted and proper disposal is required by a licensed hazardous waste handler.

Run-on and Runoff Prevention

- Prevent stormwater run-on from entering the waste management area by enclosing the area or building a berm, and covering the area to prevent contact with rain.
- Acceptable covers are permanent structures or temporary covers like reinforced tarpaulin, polyethylene, polyurethane, or chlorosulfonated polyethylene (CSPE) sheets.
- Cover waste piles, waste receptacle areas, and dumpsters.
- Inspect covers and waste receptacles for holes, cracks and damage and take out of use, repair, and replace to prevent stormwater contact with waste.
- Move waste management activities indoors when all safety concerns such as fire hazard and ventilation are addressed.

Inspection Considerations

- Establish a routine inspection schedule of all waste management activities and equipment including:
  - Pumps, hoses, and machinery used for waste collection and transfer
  - Dumpsters, waste receptacles, and cleaning equipment
  - Spill prevention and response supplies
  - Valves, lines, seals, and pumps

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  - Temporary and permanent waste pile and waste area covers
  - Schedules of waste collection from receptacles to prevent overflow
  - Note areas with litter problems
- Take out of use, repair whenever possible, and replace before using damaged equipment.
- Correct waste receptacle schedules when overflow occurs.
- Place additional “No Littering” signage where litter problems occur and rethink waste receptacle placements and quantities.

Training

- Train new and existing staff continuously about pollution prevention and waste handling/disposal.
- Provide employees and contractors with proper spill containment and cleanup procedure training as outlined in the ‘Spill Prevention and Response’ fact sheet. Each employee should have the tools and knowledge to immediately initiate a response to a spill if one should occur.
- Train employees and contractors in proper hazardous waste management.
- Train employees to complete thorough inspections to identify issues before they become a leak, spill, or safety concern.
- Educate employees about which materials are reusable, recyclable, or single-use, and other waste reduction techniques as outlined in this fact sheet.
- Ensure all employees have a working knowledge of this document.

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APPENDIX

B FIELD PROGRAM SOURCE CONTROL MEASURES

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FSC-1
GRAFFITI AND PAINT REMOVAL

Purpose

Graffiti and paint are removed from portable toilets, bus shelters and interior walls of transit stations. Graffiti and paint removal includes using support equipment and graffiti and paint removal products or sanding to clean concrete walls, portable toilets, buses and LRVs. This activity may be performed indoors at an MTS Maintenance facility or onsite at a transit station or bus shelter.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Paint removal	Paint Strippers	VOCs, SVOCs
Graffiti removal products	Acids, bleaches, detergents, solvents, paint strippers	Chlorine, phosphate, VOCs, SVOCs, acetic acid, nitric acid
Painting over graffiti	Paint	Heavy metals, organic compounds
Fuel for mechanical equipment	Fuel	Total petroleum hydrocarbons, diesel range organics
Leaking maintenance vehicles	Vehicle Fluids	Oil and grease
Water associated with cleaning products	Non-stormwater	Chlorine, phosphate, VOCs, SVOCs
Sanding equipment	Fugitive Dust	Particulates (PM_{10} $PM_{2.5}$)
Graffiti removal products	Acids, bleaches, detergents, solvents, paint strippers	Chlorine, phosphate, VOCs, SVOCs, acetic acid, nitric acid
Mixing paint	Paint thinner/Mineral Spirits	Organic compounds, sulfuric compounds

Application

The following procedures are used where graffiti or paint removal is required at bus shelters and interior walls of transit stations. These procedures are required when grit and non-stormwater may pollute stormwater runoff or discharge to storm water drainage systems and watercourses

Limitations

The BMPs presented for this activity provide operating methods or measures only for storm water pollution prevention. The applicable local, state and federal hazardous materials, employee safety and fire prevention requirements are not presented.

Operational Procedures

- This activity shall not be performed during rain events or prior to predicted rain events.
- Secure paint while transporting to avoid spills.

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- Protect drain inlets and watercourses from potential spills (see Storm Drain Inlet Protection fact sheet).
- Tarps and similar control measures should be used to prevent spills or material drift from being deposited into storm water drainage system or watercourses.
- Only MTS pre-approved graffiti removal products should be used.
- Mix paint indoors or in a containment area away from drain inlets.
- Water used for cleaning and decontamination shall not be allowed to enter storm water drainage system or watercourses.
- Waste from cleaning paint equipment or brushes should be collected and put into a bucket or drum with a secure lid for transport back to the maintenance facility to be reused, recycled or disposed of properly.
- Paint waste, especially if it is oil based or contains paint thinner, would need approval from the publicly owned treatment works to dispose of in sewer.
- Solid waste should be collected by vacuum or sweeping and secured in an appropriate container for transport back to the Maintenance facility to be reused, recycled or disposed of properly.
- The MTS Environmental Health and Safety Specialist must approve safer alternative products.
- Approved safer alternative products should be used where practical and effective.
- While safer alternative products may be less harmful to the environment, they are not harmless. Use the materials according to the manufacturer's instructions and keep the materials out of the storm water drainage system and watercourses.
- The following operational procedures shall be used for graffiti and paint removal from portable toilets, buses and LRVs
  - Remove paint from buses and LRVs inside the paint booth building at the Maintenance facility
  - Remove paint from portable toilets onsite, wherever the portable toilet is located
  - Protect internal drain inlets; inspect drains every 2 to 3 weeks
  - Clean surface of buses, LRV and portable toilet with a damp cloth
  - Use suction sanders for paint and graffiti removal
  - Any remaining solid waste should be collected by sweeping and secured in an appropriate container with a lid

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FSC-2
GROUNDS MAINTENANCE AND LANDSCAPING

Purpose

Grounds maintenance at MTS facilities includes care of landscaped areas and sweeping pavements. As referenced in the MTS Landscape Design and Maintenance Plan (WSP, 2019), trees and shrubs of planted landscape vegetation along the MTS right-of-way are pruned to preserve their health, protect utilities, maintain sight distances, preserve aesthetics and prevent property damage. Remove dead or diseased branches, trees and shrubs to protect public safety.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Sweeping and handling of vegetation, litter and sediment	Trash, vegetation debris and sediment	Plastics, suspended solids, organic matter, invasive species
Chemical vegetation control	Fertilizers – organic and inorganic Pesticides and Herbicides Lime Aluminum Sulfate Sulfur-Elemental Soil Amendments	Nitrates, phosphates Organic compounds Alkalinity, pH Total Dissolved Solids Sulfate BOD, COD, Sulfate, Total Organic Carbon, Calcium, Sulfate
Unstable earth from dying or damaged vegetation	Soil from erosion and runoff Natural Earth (Sand, Gravel and Topsoil)	Sediment, particulate matter Turbidity, Sediment
Irrigation of landscaped areas	Non-stormwater runoff Fertilizers – organic and inorganic Pesticides	Suspended solids, particulate matter, turbidity Nitrates, phosphates Organic compounds
Washing equipment	Soil Non-stormwater Fertilizers Pesticides Vegetation Clippings	Sediment, suspended solids Chlorine Nitrates, phosphates Organic compounds

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		Nitrates, phosphates, invasive species
Fueling of mowing, blowing, and other motorized groundskeeping equipment	Petroleum products	Organic compounds, oils and grease, diesel range organics

Application

The following procedures are used where grounds maintenance may pollute storm water runoff or discharge to storm water drainage system and watercourses.

Operational Procedures

- The MTS facility should be routinely swept to keep litter and sediment out of drainage systems.
- Apply fertilizers and pesticides sparingly and in accordance with the label instructions and the Landscape Design and Maintenance Plan (WSP, 2019). Refer to the Safety Data Sheet (SDS).
- Do not remove original product label from chemical containers as it contains important spill cleanup and disposal information.
- Use the entire product before disposing of the container.
- If a product is concentrated and must be diluted, before use, transfer the diluted product to a secondary container. Ensure that the secondary label complies with the labelling requirements of the globally harmonized system (GHS).
- Avoid excessive irrigation of landscaped areas to minimize potential runoff.
- Control erosion and sediment runoff by referencing the BMPs in the MTS Storm Water Management Plan (WSP, 2019) or the Post Construction Stormwater Management Manual (WSP, 2020)
- Preserve existing vegetation and replace damaged vegetation as needed.
- Do not locate stockpiles near drain inlets or watercourses.
- Brush cuttings that are not chipped should be transported to the maintenance facility for proper disposal.
- All wastes should be put into containers and stored appropriately until it can be recycled or disposed of properly.
- All materials of environmental concern shall be properly stored in appropriate secure containment, in accordance with applicable state and federal regulations.
- If possible, fuel equipment at the maintenance facility before heading out to the job site. If equipment must be fueled at the job site, then do not fuel equipment near drain inlets or watercourses.
- Use the guidance provided in the SDM-3 Storm Drain Inlet Protection fact sheet to identify drain inlets and protect them from potential spills and vegetative debris.
- Keep vegetation debris, clippings and mulch out of the storm water drainage system and watercourses. Brush cuttings chipped into wood mulch should not be used at locations prone to washout.
- If rinsing equipment is necessary, wait until the end of the day. Return the equipment to the maintenance facility and rinse the equipment at yard. Sediment from equipment rinsing shall not

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be discharged to the storm water drainage system or watercourses. Rinse equipment in designated rinsing areas to prevent discharge to the storm water drainage system

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FSC-3
PAINTING

Purpose

Painting operations apply to the painting of buses or LRVs but may also include painting of surfaces to cover graffiti at facilities away from MTS Maintenance facilities. Routine maintenance of painting equipment is also included in this activity.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Painting	Paint, Thinners, Resins, Sealants, Solvents, Lacquers, Varnish, Enamels and Turpentine	COD, VOC, SVOC
Paint removal	Paint Strippers	VOCs, SVOCs
Fuel for mechanical equipment	Fuel	Total petroleum hydrocarbons, diesel range organics
Water associated with cleaning	Non-stormwater	Chlorine, phosphate, VOCs, SVOCs
Sanding equipment	Fugitive Dust	Particulates (PM_{10} $PM_{2.5}$)

Application

The following procedures are used where paint may pollute storm water runoff or discharge to storm water drainage system and watercourses.

Operational Procedures – Offsite Facilities

- This activity shall not be performed during rain events or prior to predicted rain events, unless required by emergency conditions.
- Make sure paint containers are secure during transport to prevent spillage to the roadway.
- Mix paint indoors away from drain inlets or in a containment area.
- Protect drain inlets and watercourses from potential spills including painting products.
- Monitor weather and wind when using spray equipment.
- Use tarps or canvas under work area to capture excess paint or paint chips. Tarps and other control measures should be used to prevent spills or material drift to watercourse (e.g., when working adjacent to water courses).
- Transfer material captured into a waste container for proper disposal at a Maintenance facility.
- Do not remove original product label from paint or other hazardous materials containers as it contains important spill cleanup and disposal information. Use the entire product before disposing of the container.
- Appropriately label all secondary containers.
- Collect all paint equipment wash water and return it to a Maintenance facility for proper disposal.

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Operational Procedures – Paint Booth(s) at MTS Maintenance Facilities

- Protect internal drain inlets from potential spills including painting products.
- Close all doors of paint booth prior to implementing any painting operation
- Clean affected surface of vehicle with a damp cloth
- Perform painting in a contained area within booth and ensure downdraft is conveyed to the filtration chamber
  - Dispose of filter at a frequency recommended by the manufacturer
  - Discard VOC waste in designated drum with secondary containment
- Use shop vac at rails to remove any water
  - Dispose of water in designated drum in the containment area
  - Ensure contractor removes drum for disposal on a weekly basis
- Sweep up solid waste daily and place in trash can with lid

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FSC-4
PRESSURE WASHING

Purpose

BRT Stations, trolley platforms, MTS O&M facilities and bus shelters are cleaned by power washing regularly. Tasks include the operation of washing equipment, vacuums, storm drain inlet protection devices and sweeper vehicles.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Pressure washing	Runoff	Suspended Solids/Sediment, Debris, Trash
	Cleaning products	Acids, Chlorine, Phosphate
	Chlorinated water	Chlorine

Application

The following procedures are used at MTS BRT Stations, trolley platforms and bus shelters. Cleaning activities may pollute stormwater runoff or discharge to storm water drainage systems and watercourses.

Operational Procedures

- If possible, check the pressure washing unit prior to heading out to the job site. This includes:
  - Removing dirt or debris from the screen on the intake hose
  - Checking all hoses and connections for water leaks
  - Replenishing oil levels in the motor and pump mechanism
  - Fueling the motor with unleaded gasoline
  - Fueling the burner tank on the hot pressure washer with diesel
- If outdoor cleaning is required, this activity shall not be performed during rain events or prior to predicted rain events.
- Identify all drain inlets, watercourses and manholes and protect from potential spills including sediment, debris and wash water (See 'Storm Drain Inlet Protection' fact sheet).
- Do not use sand bags in lieu of other storm drain inlet protection devices as they create sediment loads in the drainage system when ruptured.
- Prior to power washing, dry clean the area (sweep, collect, and dispose of debris and trash).
  - Use a street sweeper to remove sediment and debris from transit driveways and paved concrete areas.
- For power washing MTS bus shelters and benches, identify the low point in the gutter and install a temporary trap using a sand snake.
  - Use a wet vac to collect the accumulated wash water from the temporary trap
    - Filter and recycle wash water, or
    - Transfer wash water to a tank on the truck for reuse or proper disposal
    - Ensure all surfaces are dry prior to leaving the job site
- Water used for cleaning shall not be allowed to enter storm water drainage system or watercourses.

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  - At BRT Stations, recycle wash water back through the washing system or convey water to a landscaped area.
  - If detergent is required for heavily soiled areas at MTS bus shelters
    - Use safer alternative products approved by MTS Environmental Health & Safety Specialist
    - Collect accumulated wash water and transfer to a tank on the truck for proper disposal
    - At times, wash water is transferred to a clarifier at the Maintenance Facility for offsite discharge.
- The MTS Environmental Health & Safety Specialist Supervisor must approve safer alternative products.
- Approved safer alternative products should be used where practical and effective.
- While safer alternative products may be less harmful to the environment, they are not harmless.
- Use the materials according to the manufacturer's instructions and keep the materials out of the storm water drainage system and watercourses.

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FSC-5
SANITARY/SEPTIC WASTE MANAGEMENT

Purpose

Portable toilet units are used at locations where permanent bathrooms are unavailable. Sanitary/septic waste management procedures and practices are designed to minimize or eliminate the discharge of sanitary/septic waste to storm drain systems or watercourses.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Spills	Wastewater	E. coli, fecal coliform, bacteria and pathogens
	Biocides	Chlorine most common; check SDS
	Detergents	Surfactant

Application

Sanitary/septic waste management practices shall be implemented at all MTS facilities that use portable toilet units. Proper sanitary and septic waste management requires providing well-maintained facilities and arranging for regular service and disposal.

Implementation

MTS contracts with a vendor for portable toilet service and maintenance. The vendor is responsible for ensuring that the sanitary wastes are properly disposed per local and state requirements for sewage disposal or as a hazardous waste. Temporary toilet units are serviced three times per week; permanent toilet units are serviced daily.

Operational Procedures

- Locate portable toilets away from drainage facilities, watercourses and from traffic circulation.
- If site conditions allow, locate portable toilets at least 50 feet away from drainage conveyances, gutters and traffic areas. When subjected to risk of high winds, portable toilets shall be secured to prevent overturning.
- Portable toilets shall be equipped with double containment and an undertray to prevent the discharge of pollutants to the stormwater drainage system or receiving water.
- To prevent leakage, inspect portable toilet units during maintenance.
  - If graffiti is observed, the unit shall be cleaned immediately.
- Vacuum all waste and liquid onsite by pumping liquid waste into the tank of the vacuum truck.
  - Vacuum truck is designed with a holding capacity of 900 gallons for waste and 400 gallons of water
- Inspect hose and connections to prevent leaks during vacuum operations
- Sanitary/septic waste should be discharged to a sanitary sewer or disposed of as a hazardous waste by a licensed hauler.

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- Sanitary/septic waste storage and the disposal procedures should be managed to prevent non-storm water discharge.
  - If there is a spill, use bleach, pump accumulated liquid waste into the tank of the vacuum truck and follow the procedures in SC-10, Spill Prevention and Response fact sheet.

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FSC-6
SURFACE REPAIR

Purpose

Minimizing the risk of pollutants such as silica, hydrocarbons, oil, grease, and heavy metals from entering the storm drain system by implementing surface repair operations.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Surface Repair	Hot Asphalt	Polycyclic Aromatic Hydrocarbons, Silica, and Total Petroleum Hydrocarbons
	Asphalt Emulsion	
	Liquid Asphalt (tack coat)	
	Seal Coat	
	Cold Mix	
	Crumb Rubber	
	Asphalt Concrete (Any type)	

Application

The following procedures are used to reduce the risk of stormwater pollution during surface repair operations that MTS employees and subcontractors conduct at MTS maintenance facilities, bus and trolley terminals and parking lots.

Operational Procedures

- Protect nearby storm drain inlets, manholes and watercourses with waterproof material or mesh before applying seal coat, slurry seal, etc., where applicable. Leave covers in place until the entire job is complete and until all water from emulsified oil sealants has drained or evaporated. Using dry methods if possible, clean any debris from these covered manholes and drains for proper disposal.
- Schedule concrete, asphalt, and seal coat repairs during dry weather and not prior to predicted rain events to prevent contamination by contacting stormwater runoff.
- Pre-heat, transfer, and load hot bituminous material away from storm drain inlets.
- Catch drips from paving equipment that is not in use with pans or absorbent material placed under the machines. Dispose of collected material and absorbents properly.
- When working on a bridge or platform, use suspended netting, tarps, additional vacuums and/or berms to contain materials.
- Store materials away from streets, gutter areas, storm drain inlets, watercourses, and irrigation (sprinklers). During wet weather, inspect stored materials to ensure stormwater is not transporting pollutants into the storm system.
- Tarps and similar control measures should be used to prevent spills or material drift from storage areas in wet and dry weather.
- If dust control is required, completely block the storm drain and use only as much water to achieve dust control and to avoid runoff.

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- Dry-sweep and never hose down streets during cleanup. Use a hand broom, street sweeper or vacuum truck. Never dump vacuumed liquid into storm drains. Reuse, recycle or properly dispose waste materials.
- When cleaning heavy oil deposits, use absorbent materials on oil spots prior to sweeping or washing and dispose of used absorbents properly.
- Water used for cleaning and decontamination shall not be allowed to enter storm water drainage system or watercourses.
- The MTS Environmental Health and Safety Specialist must approve safer alternative products.
- Approved safer alternative products should be used where practical and effective.
- While safer alternative products may be less harmful to the environment, they are not harmless. Use the materials per the manufacturer's instructions and keep the materials out of the storm water drainage system and watercourses.
- Ensure employees understand common spill prevention and response practices (see 'Spill Prevention and Response' fact sheet).

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FSC-7
VEGETATION CONTROL/MOWING

Purpose

Mowing includes removal of grasses and weeds at facilities, and within the MTS right-of-way using machinery and mobile equipment. Mowing is used to protect preferred vegetation, to maintain unobstructed views and to improve MTS facility appearance.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Vegetation	Clippings, Fertilizers	Invasive Species, Sediment, Debris, Nitrates
Vehicles and Equipment	Leaks, Brake Dust	Oil and Grease, Metals
Equipment fueling	Fuel	Total Petroleum Hydrocarbons, Diesel Range Organics
Equipment Rinsing	Non-stormwater	Sediment, Debris, Chlorine

Application

The following procedures are used to prevent releases of clippings, sediment and equipment fluids to the storm water drainage system and watercourses.

Operational Procedures

- If possible, fuel equipment at the maintenance facility before heading out to the job site. If equipment must be fueled at the job site, then do not fuel equipment near drain inlets or watercourses.
- Identify drain inlets and protect them from potential spills and vegetative debris.
- Keep vegetation and clippings out of the storm water drainage system and watercourses. Collect vegetation and clippings and transfer them to the maintenance facility for disposal as a solid waste.
- If rinsing equipment is necessary, wait until the end of the day. Return the equipment to the maintenance facility and rinse the equipment at yard. Sediment from equipment rinsing shall not be discharged to the storm water drainage system or watercourses. Rinse equipment in designated rinsing areas, such as wash bays, to prevent discharge to the storm water drainage system.

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APPENDIX

C STORM DRAIN MAINTENANCE MEASURES

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SDM-1
DRAINAGE SYSTEM MAINTENANCE

Purpose

The stormwater conveyance system collects and transports urban runoff that contains contaminants, therefore debris, litter, and pollutants collect within the drainage system.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Catch Basin Debris	Urban runoff	Suspended Solids/Sediment, Trash and Debris, Pathogens
	Brake pad dust	Metals
	Pesticides	Organics
	Chlorinated water for flushing	Chlorine
	Fertilizers	Nutrients
	Vehicle Fluids	Oil and Grease

Application

Routine maintenance of catch basins, stormwater inlets, and other stormwater conveyance structures will remove pollutants and debris from the system resulting in prevention of clogging the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system flows properly to avoid flooding. In combination with the source control methods of storm water pollution prevention outlined in the other BMP fact sheets, cleaning and maintenance is a critical part of a successful stormwater pollution prevention plan.

Operational Procedures

- Utilizing methods outlined in the 'Storm Drain Inlet Protection' fact sheet will prevent and greatly reduce the frequency and volume of waste in the drainage system.
- MTS staff shall regularly inspect facilities to ensure the following activities are performed in a timely manner:
  - Inspect catch basins, sumps, inlet structures and pipes, and clarifiers for deterioration threatening structural or performance integrity.
  - Clean sumps before they are 40% full. Clean catch basins frequently and when debris is noticed during inspection to lengthen time between sump cleanings due to 40% capacity.
  - Ensure stenciled warnings (see Waste Handling and Disposal fact sheet) remain visible and legible (e.g. "Dump No Waste, Drains to River").
- Clean catch basins, storm drain inlets structures, and clarifiers before the wet season to remove sediments and debris accumulated during summer.
- Conduct inspections more often during the wet season, and clean and repair as soon as an issue or problem arises.
- Keep accurate logs of inspections; detailing cleanings, repairs, and high sediment or trash accumulation areas and the amount of waste collected at each specific location.

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- Handle and store wastes as outlined in the 'Waste Handling and Disposal' fact sheet to prevent discharge back to the storm drain through run-on, runoff, or mishandling.
- Cleaning of small devices may be done manually, but many will need mechanical cleaners like eductors, vacuums, or bucket loaders.

Conveyance System

- In pipes with deposit problems, develop a flushing schedule that keeps the pipe clear of excessive buildup.
- Collect flushed effluent with a vacuum truck and ensure proper disposal.
- Clean conveyance systems and any pumps prior to the wet season to remove silt and trash, and ensure proper disposal.
- Conduct routine inspections of pumps and the conveyance system and clean and repair as necessary in addition to the scheduled cleanings.

Chemical and Hazardous Waste

- If what is suspected to be hazardous waste is found, immediately dispose of any contaminated water and debris properly per local, state and federal codes including fire hazard compliance.
- Refer to the 'Spill Prevention and Response' fact sheet for thorough steps in managing leaks, spills, and waste within the stormwater system.

Training

- Train MTS maintenance staff and MTS vendors for a thorough understanding of this fact sheet, and associated fact sheets pertaining to drainage system maintenance activities.
- Only properly trained individuals can handle hazardous materials and wastes.
- Train all employees (drivers, maintenance workers, painters, etc.) to recognize and report illegal dumping and illicit discharges to supervisor and Environmental Health and Safety Specialist.
- Train staff as to what is permitted to go down the drain, and what needs filtration, sedimentation, conveyance to the sanitary sewer, or is considered waste to be disposed of.

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SDM-2
STORM DRAIN & CATCH BASIN MAINTENANCE

Purpose

Catch basins trap trash, sediment, decaying debris and other solids from stormwater runoff. Catch basin cleaning reduces foul odors, prevents clogs in the storm drain system, and reduces the loading of suspended solids, nutrients and bacteria to receiving waters.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Catch Basin Debris	Urban runoff	Suspended Solids/Sediment, Trash and Debris, Bacteria and Pathogens
	Brake pad dust	Metals
	Pesticides	Organics
	Fertilizers	Nutrients
	Chlorinated water for flushing	Chlorine
	Vehicle Fluids	Oil and Grease

Application

Routine maintenance of catch basins and storm drains will remove pollutants and debris from the system resulting in prevention of clogging the downstream conveyance system, restore catch basins' sediment trapping capacity, and ensure the system flows properly to avoid flooding. In combination with the source control methods of storm water pollution prevention outlined in the other BMP fact sheets, cleaning and maintenance is a critical part of a successful stormwater pollution prevention plan (SWPPP).

Operational Procedures

Inspection

- Conduct catch basin inspections more often during the wet season, and clean and repair as soon as an issue or problem arises.
- Inspect storm drains twice per year (biannually).
- During the inspection, if the drainage facility has trapped sediment and/or debris and the level is at approximately 20 percent or more, maintenance is required.
- During the inspection MTS staff shall regularly check for evidence of illicit discharges and deterioration threatening structural or performance integrity.
- Report any suspected illegal connections, illicit discharges or illegal dumping to the Environmental Health and Safety Specialist at: 619-446-4920
- Ensure stenciled warnings (see Waste Handling and Disposal fact sheet) remain visible and legible (e.g. "Dump No Waste, Drains to River").
- Keep accurate logs of inspections; detailing cleanings, repairs, and high sediment or trash accumulation areas and the amount of waste collected at each specific location.

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STORM DRAIN & CATCH BASIN MAINTENANCE

Maintenance

- Clean catch basins frequently and when observations indicate that basin is more than 40 percent full.
- Clean storm drains when observations indicate that the drainage facility is more than 20 percent full.
- Clean filter units in the Continuous Deflector System (CDS) and the filters associated with the catch basin inserts.
- Clean catch basins before the wet season to remove sediments and debris accumulated during summer.
- Using a shovel or clamshell bucket, remove solid waste (e.g., sediment, leaves, twigs, sand, trash) from the catch basin and dispose of as a solid waste. No solid waste material may re-enter the MS4.
- Using a mini-vactor truck dewater standing liquid in catch basin and storm drainage facility. Transfer liquid waste to an appropriate disposal facility. Liquid waste may not re-enter the MS4.
- If flushing is required, use water from a fire hydrant and ensure water from jetting and flushing inlets and lines is not discharged into the storm drain system.

Solid and Liquid Waste Handling

- Use a mini-vacuum truck to vacuum flush water downstream while jetting and flushing inlets and lines upstream.
- Decant wastewater from the vactor truck into the sanitary sewer, if permitted. Water may need to be filtered prior to discharge to sanitary sewer.
- If discharge to sanitary sewer is not allowed, pump or vacuum to a tank for proper disposal. Do not dewater near a storm drain.
- Solids and/or debris shall be sent to a waste disposal facility.
- If necessary, stockpile debris removed from catch basin and storm drain in an area that has an impervious surface or liner or in a temporary/satellite storage area or container. Follow stockpile management guidelines for debris stockpiles (see Figure 1).
- Always inspect and maintain the debris storage area. Check area for run-on, run-off and debris scattering.
- Remove debris from the temporary storage area and transfer to the permanent disposal site regularly.
- Sample collected sediments for waste profiling or if illicit discharges in the watershed have occurred.

Chemical and Hazardous Waste

- MTS requires waste profiling of any soil or sediment.
  - Contact the Environmental Health and Safety Specialist if a chemical spill is suspected.
  - If the solid or liquid waste is suspected to be a hazardous waste, immediately dispose of any contaminated water and debris properly per local, state and federal codes including fire hazard compliance.
- Refer to SC-10 Spill Prevention and Response fact sheet for thorough steps in managing leaks, spills, and waste within the stormwater system.

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Training

- Train MTS maintenance staff and MTS vendors for a thorough understanding of this fact sheet, and associated fact sheets pertaining to drainage system maintenance activities.
- Only properly trained individuals can handle hazardous materials and wastes.
- Train all employees (drivers, operations staff, maintenance workers, facility crews, painters, etc.) to recognize and report illegal dumping.
- Train staff as to what is permitted to go down the drain, and what needs filtration, sedimentation, conveyance to the sanitary sewer, or is considered waste to be disposed of.

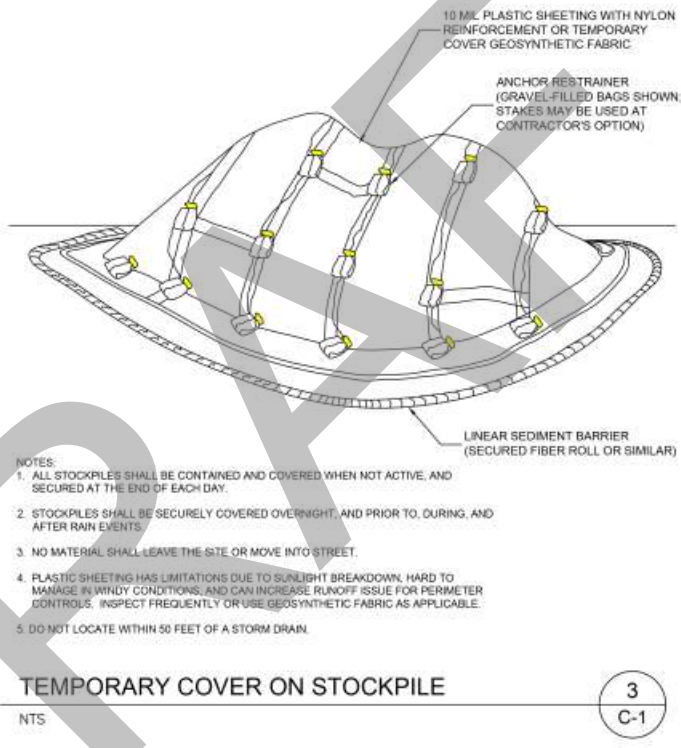

Figure 1. Stockpile Management for Temporary Storage of Solids and Debris

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SDM-3
STORM DRAIN INLET PROTECTION

Purpose

Every storm drain inlet receiving runoff from active work areas should be protected. Inlet protection is used for maintenance activities, such as hot and cold pressure washing, to capture solid materials and prevent pollutants from entering the storm drain system.

Pollutants of Concern

Source	Material(s)	Pollutant(s) of Concern
Catch Basin Debris	Runoff from active work area	Suspended Solids/Sediment; oil and grease; trash and debris; metals; nitrate; phosphate; organics
Pressure Washing	Non-stormwater	Chlorine
	Cleaning products	Acids, chlorine, phosphate

Limitations

- Drainage area should not exceed 1 acre.
- Straw bales or sandbags should not be used.
- Requires an adequate area for water to pond without flooding structures and property or creating a hazard.
- Frequent maintenance may be required during extended periods of O&M to remove captured materials and pollutant build up and to ensure the efficacy of the inlet protection.

Design and Layout

Identify existing storm drain inlets that have the potential to receive runoff from the O&M activity.

- Anticipate where ponding and diversion may occur when selecting the most effective and safe use of storm drain inlet protection.
  - Determine the acceptable location and extent of ponding near the drain inlet. The acceptable location and extent of ponding will influence the type and design of the storm drain inlet protection without flooding structures and property or creating a hazard.
  - Determine the extent of potential runoff diversion caused by the type of inlet protection. Ponded runoff may flow around the device towards the next downstream inlet and in some cases, this is acceptable; in other cases, downstream property damage may occur. The possibility of runoff diversions will influence if storm drain inlet protection is suitable; and, if suitable, the type and design of the device.
- Appropriate placement of the inlet protection device(s) usually controls the location and extent of ponding, and the extent of diversion. In some cases, moving the inlet protection a short distance upstream of the inlet can reduce flow velocity and increase the efficiency of sediment control, limit ponding to desired areas, and prevent or control diversions.
  - Placement of protection upstream of the inlet creates the possibility of using secondary protection downstream to handle anticipated runoff diverted by the primary device or when space is too limited for the primary device to handle anticipated flow.
- Four types of inlet protection are presented below.

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Type 1: Gravel bag barrier: Used to create a small sediment trap upstream of inlets. Appropriate for sheet flow or when concentrated flow may exceed 0.5 cfs, and where overtopping is required to prevent flooding.
Type 2: Temporary Geotextile Storm Drain Inserts: Different products provide different features. Refer to the manufacturer's specifications for targeted pollutants, additional features and installation guidelines.
Type 3: Biofilter Bag Barrier: Used to create a small retention area upstream of inlets and can be located on pavement or soil. Biofilter bags slowly filter runoff allowing sediment to settle out. Appropriate for flows under 0.5 cfs.
Type 4: Fiber Roll: Allow filtered run-off to pass through the roll while retaining sediment and potentially other pollutants.

- Regardless of the type of storm drain inlet protection chosen, removal of all devices shall occur immediately following completion of O&M, and all materials shall be stored for reuse and recycled whenever possible while waste is disposed of properly. Remove sediment accumulation using dry methods.

Installation

- Type 1 - Gravel bag – Gravel bags should be used due to their high permeability and capability to handle flows greater than 0.5 cfs. Construct the gravel bag berm per typical installation details below.
  - Construct on gently sloping street.
  - Leave room upstream of barrier for water to pond and solid materials to settle.
  - Place two layers of gravel bags – overlapping the bags and packing them tightly together.
  - Leave a gap of one bag on the top row to serve as a spillway.
  - Turn the ends of the gravel bag barriers up slope to minimize runoff diversion around the berm.
  - Bag Material: Bags should be woven polypropylene, polyethylene or polyamide fabric or burlap, minimum unit weight of 4 ounces/yd^2, Mullen burst strength exceeding 300 lb/in^2 in conformance with ASTM D3786, and UV stability exceeding 70% in conformance with ASTM D4355.
  - Bag Size: Each gravel-filled bag should have a length of 18 in., width of 12 in., thickness of 3 in., and weight of approximately 33 lbs.
  - Fill Material: Fill material should be 0.5 to 1.0 in. crushed rock, clean and free from clay, organic matter, and other deleterious material, or other suitable open graded, non-cohesive, porous gravel.
- Type 2 – Temporary Geotextile Insert (proprietary) – Many types of temporary inserts are available. Most inserts fit underneath the grate of a drop inlet or inside of a curb inlet and are fastened to the outside of the grate or curb. These inserts are removable, and many can be cleaned and reused. Installation of these inserts differs between manufacturers. Please refer to manufacturer's specifications for installation. Following the O&M activity, the insert shall be cleaned and stored per manufacturer's instructions and stored at the maintenance facility. These can be used in tandem with the other BMPs, or as a stand-alone device when minimal ponding is expected due to light sediment collection.
- Type 3 - Biofilter bags – Biofilter bags may be used as a substitute for gravel bags in low-flow situations. Biofilter bags should conform to specifications detailed below.
  - Construct in a gently sloping area.
  - Biofilter bags should be placed around inlets to intercept runoff flows.

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  - All bag joints should overlap by 6 in., not abutted.
  - Bags are filled with 100% recycled wood product waste.
  - Leave room upstream for water to pond and for solid materials to settle out.
  - Stake bags to the ground if possible. Stakes may be omitted if bags are placed on a paved surface.
  - Bags will rapidly fill with sediment and reduce permeability.
  - Not effective where water velocities or volumes are high, as the Biofilter bag is potentially buoyant during high flow rates.
  - When staked into ground:
    - Lay into a 1 to 2 in. deep trench with a width equal to the bag.
    - Drive one stake at each end of the bag.
    - Use wood stakes with a nominal classification of 0.75 by 0.75 in. and minimum length of 24 in.
  - Biofilter media may be used on-site, if allowed.
- Type 4 – Fiber Rolls – Fiber rolls are biodegradable material wrapped by netting. Some fiber rolls are weighted with gravel cores for use on paved areas.
  - Not intended for use when high flows are expected above 0.5 cfs.
  - Effective when anchored with gravel bags or when gravel core fiber rolls are used for paved applications.
  - Fiber rolls are prefabricated, and may contain polyacrylamide (PAM), a flocculating agent, to provide additional sediment removal. PAM fiber rolls are used in areas with fine, clayey, or silty soils to provide additional sediment removal capabilities.
  - All bag joints should overlap by 6 in., not abutted.

Operational Procedure

- Sediment that accumulates in the BMP should be periodically inspected and removed to maintain BMP effectiveness, and no later than when accumulation reaches one-third the designated sediment storage depth.
- Remove storm drain inlet protection after the O&M activity is completed.
- Clean area around the inlet and clean the inside of the storm drain inlet, as it should be free of sediment and debris after the O&M activity is completed.
- If wash water was conveyed to a dead-end sump, the sump should be serviced regularly.
- Wash water containing cleaning solutions such as detergents, degreasers or hydrocarbons shall be prevented from entering the storm water drainage system or watercourses.
- While safer alternative products may be less harmful to the environment, they are not harmless. Use the materials per the manufacturer's instructions and keep the materials out of the storm water drainage system and watercourses using the storm drain inlet design and installation specifications.

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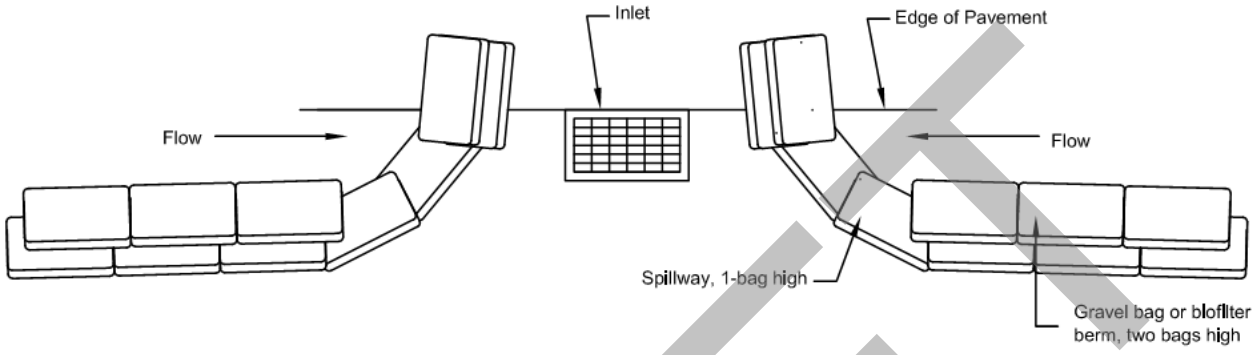
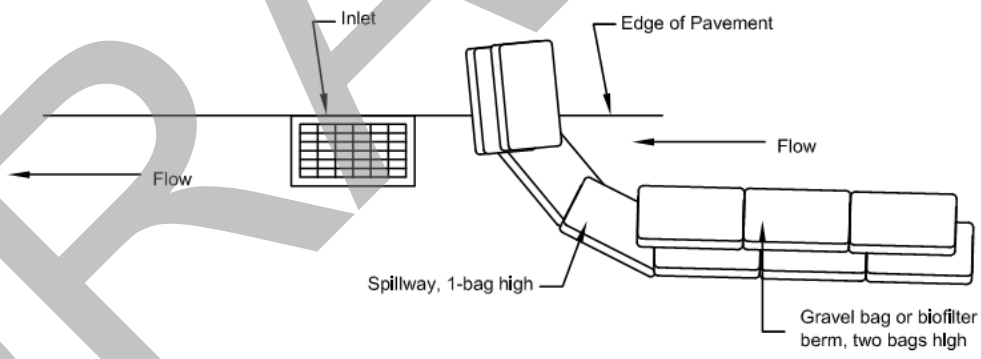
SDM-3
STORM DRAIN INLET PROTECTION

BMP Protection Type 1 and 3



TYPICAL PROTECTION FOR INLET ON SUMP



TYPICAL PROTECTION FOR INLET ON GRADE

NOTES:
1. Intended for short-term use.
2. Use to inhibit non-storm water flow.
3. Allow for proper maintenance and cleanup.
4. Bags must be removed after adjacent operation is completed.
5. Not applicable in areas with high silts and clays without filter fabric.
6. Protection can be effective even though it is not immediately adjacent to the inlet.

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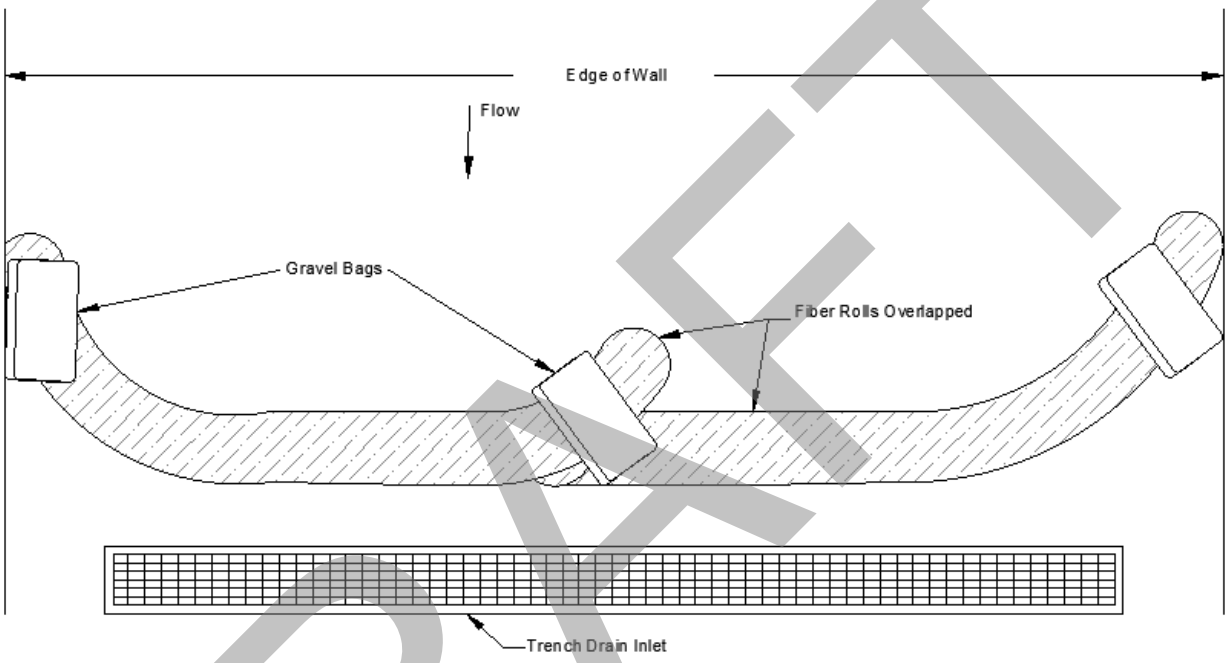
BMP Protection Type 2

Refer to the manufacturer's specifications for targeted pollutants, additional features and installation guidelines.

BMP Protection Type 4



TYPICAL FIBER ROLL INSTALLATION ON GRADE

NOTES:
1. Intended for short-term use.
2. Use to inhibit non-storm water flow and prevent stormwater pollution.
3. Allow for proper maintenance and cleanup.
4. Rolls must be removed after adjacent operation is completed.
5. Gravel bags are placed to anchor the fiber roll and at overlap locations.

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APPENDIX

D STORMWATER TREATMENT MEASURES

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INF-1
Infiltration Basin

BMP MAINTENANCE FACT SHEET
FOR
STRUCTURAL BMP INF-1 INFILTRATION BASIN

An **infiltration basin** typically consists of an earthen basin with a flat bottom constructed in uncompacted native soils. An infiltration basin retains storm water and allows it to evaporate and/or percolate into the underlying soils. Infiltration basins can also be constructed as linear trenches or as underground infiltration galleries. Typical infiltration basin components include:

- Inflow distribution mechanisms (e.g., perimeter flow spreader or filter strips)
- Energy dissipation mechanism for concentrated inflows (e.g., splash blocks or riprap)
- Forebay to provide pretreatment, or other pretreatment device (e.g., drainage inlet inserts, hydrodynamic separator installed within storm drain system)
- Surface ponding for captured flows
- Vegetation or other surface cover such as mulch or rocks selected based on basin use, climate, and ponding depth
- Uncompacted native soils at the bottom of the facility
- Overflow structure

Normal Expected Maintenance

Infiltration basins require routine maintenance to: remove accumulated materials such as sediment, trash or debris from the forebay and the basin; maintain vegetation health if the BMP includes vegetation; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure

If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface or subsurface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the underlying native soils, or clogging of covers applied at the basin surface such as topsoil, mulch, or rock layer. The specific cause of the drainage issue must be determined and corrected. For surface-level basins (i.e., not underground infiltration galleries), surface cover materials can be removed and replaced, and/or native soils can be scarified or tilled to help reestablish infiltration. If it is determined that the underlying native soils have been compacted or do not have the infiltration capacity expected, or if the infiltration surface area is not accessible (e.g., an underground infiltration gallery) the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.
- Sediment, trash, or debris accumulation has filled the forebay or other pretreatment device within one month, or if no forebay or other pretreatment device is present, has filled greater than 25% of the surface ponding volume within one maintenance cycle. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require adding a forebay or other pretreatment measures within the tributary area draining to the BMP to intercept the materials if no pretreatment component is present, or increased maintenance frequency for an existing forebay or other pretreatment device. Pretreatment components, especially for sediment, will extend the life of the infiltration basin.

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- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations

If the infiltration basin is vegetated: Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the potential to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural BMP, **routine maintenance is key to preventing this scenario**.

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INF-1
Infiltration Basin

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR INF-1 INFILTRATION BASIN		
The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district. Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Accumulation of sediment, litter, or debris in forebay and/or basin	Remove and properly dispose of accumulated materials, (without damage to vegetation when applicable).	• Inspect monthly. If the forebay is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found within the infiltration area at each inspection. • When the BMP includes a forebay, materials must be removed from the forebay when the forebay is 25% full*, or if accumulation within the forebay blocks flow to the infiltration area.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Poor vegetation establishment (when the BMP includes vegetated surface by design)	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Dead or diseased vegetation (when the BMP includes vegetated surface by design)	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Overgrown vegetation (when the BMP includes vegetated surface by design)	Mow or trim as appropriate.	• Inspect monthly. • Maintenance when needed.

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

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Infiltration Basin

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR INF-1 INFILTRATION BASIN (Continued from previous page)		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintenance when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.
Standing water in infiltration basin without subsurface infiltration gallery for longer than 24-96 hours following a storm event	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, or removing/replacing clogged or compacted surface treatments and/or scarifying or tilling native soils. Always remove deposited sediments before scarification, and use a hand-guided rotary tiller. If it is determined that the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Standing water in subsurface infiltration gallery for longer than 24-96 hours following a storm event	This condition requires investigation of why infiltration is not occurring. If feasible, corrective action shall be taken to restore infiltration (e.g., flush fine sediment or remove and replace clogged soils). BMP may require retrofit if infiltration cannot be restored. The [City Engineer] shall be contacted prior to any repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.

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Infiltration Basin

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR INF-1 INFILTRATION BASIN (Continued from previous page)		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. For subsurface infiltration galleries, ensure access covers are tight fitting, with gaps or holes no greater than 1/16 inch, and/or install barriers such as inserts or screens that prevent mosquito access to the subsurface storage. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria because the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintenance when needed.

References

American Mosquito Control Association.
http://www.mosquito.org/

California Storm Water Quality Association (CASQA). 2003. Municipal BMP Handbook.
https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook

County of San Diego. 2014. Low Impact Development Handbook.
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid.html

San Diego County Copermittees. 2016. Model BMP Design Manual, Appendix E, Fact Sheet INF-1.
http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=250&Itemid=220

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Infiltration Basin

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INF-1
Infiltration Basin

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	
Property / Development Name:	Responsible Party Name and Phone Number:	
Property Address of BMP:	Responsible Party Address:	

INSPECTION AND MAINTENANCE CHECKLIST FOR INF-1 INFILTRATION BASIN PAGE 1 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Accumulation of sediment, litter, or debris Materials must be removed from the forebay when the forebay is 25% full*. In any case, materials must be removed if accumulation blocks flow to the infiltration area. Materials must be removed from the infiltration area any time accumulation is observed in the infiltration area. Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose of accumulated materials, (without damage to the vegetation when applicable) ☐ If accumulation within the forebay is greater than 25% in one month, increase the inspection and maintenance frequency** ☐ Other / Comments:		

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).
**If no forebay is present, if sediment, litter, or debris accumulation exceeds 25% of the surface ponding volume within one month, add a forebay or other pre-treatment measures within the tributary area draining to the BMP to intercept the materials.

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INF-1
Infiltration Basin

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR INF-1 INFILTRATION BASIN PAGE 2 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Poor vegetation establishment (when the BMP includes vegetated surface by design) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		
Dead or diseased vegetation (when the BMP includes vegetated surface by design) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		
Overgrown vegetation (when the BMP includes vegetated surface by design) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Mow or trim as appropriate ☐ Other / Comments:		

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INF-1
Infiltration Basin

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR INF-1 INFILTRATION BASIN PAGE 3 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Erosion due to concentrated irrigation flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas and adjust the irrigation system ☐ Other / Comments:		
Erosion due to concentrated storm water runoff flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan ☐ If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction ☐ Other / Comments:		

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INF-1
Infiltration Basin

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR INF-1 INFILTRATION BASIN PAGE 4 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Obstructed inlet or outlet structure Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		
Damage to structural components such as weirs, inlet or outlet structures Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair or replace as applicable ☐ Other / Comments:		

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INF-1
Infiltration Basin

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR INF-1 INFILTRATION BASIN PAGE 5 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Standing water in infiltration basin without subsurface infiltration gallery for longer than 24-96 hours following a storm event* Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, or removing/replacing clogged or compacted surface treatments and/or scarifying or tilling native soils. ☐ Other / Comments:		
Standing water in subsurface infiltration gallery for longer than 24-96 hours following a storm event* Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ If feasible, take corrective action to restore infiltration (e.g., flush fine sediment or remove and replace clogged soils). BMP may require retrofit if infiltration cannot be restored. The [City Engineer] shall be contacted prior to any repairs or reconstruction. ☐ Other / Comments:		
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Apply corrective measures to remove standing water in BMP when standing water occurs for longer than 24-96 hours following a storm event.** ☐ Other / Comments:		

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INF-1

Infiltration Basin

*Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface or subsurface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the underlying native soils, or clogging of covers applied at the basin surface such as topsoil, mulch, or rock layer. The specific cause of the drainage issue must be determined and corrected. If it is determined that the underlying native soils have been compacted or do not have the infiltration capacity expected, or if the infiltration surface is not accessible (e.g., an underground infiltration gallery) the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.

**If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria because the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

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INF-2
Bioretention

BMP MAINTENANCE FACT SHEET
FOR
STRUCTURAL BMP INF-2 BIORETENTION

Bioretention (bioretention without underdrain) facilities are vegetated surface water systems that filter water through vegetation and soil, or engineered media prior to infiltrating into native soils. Bioretention facilities are designed to infiltrate the full design capture volume (DCV) into native soils. They have no underdrain, and no impermeable liner. Typical bioretention components include:

- Inflow distribution mechanisms (e.g., perimeter flow spreader or filter strips)
- Energy dissipation mechanism for concentrated inflows (e.g., splash blocks or riprap)
- Shallow surface ponding for captured flows
- Side slope and basin bottom vegetation selected based on climate and ponding depth
- Non-floating mulch layer
- Media layer (planting mix or engineered media) capable of supporting vegetation growth
- Filter course layer consisting of aggregate to prevent the migration of fines into uncompacted native soils or the optional aggregate storage layer
- Optional aggregate storage layer for additional infiltration storage
- Uncompacted native soils at the bottom of the facility
- Overflow structure

Normal Expected Maintenance

Bioretention requires routine maintenance to: remove accumulated materials such as sediment, trash or debris; maintain vegetation health; maintain infiltration capacity of the media layer; replenish mulch; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure

If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underlying native soils, or outlet structure. The specific cause of the drainage issue must be determined and corrected. If it is determined that the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.
- Sediment, trash, or debris accumulation greater than 25% of the surface ponding volume within one month. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require pretreatment measures within the tributary area draining to the BMP to intercept the materials. Pretreatment components, especially for sediment, will extend the life of components that are more expensive to replace such as media, filter course, and aggregate layers.

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- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations

Bioretention is a vegetated structural BMP. Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the potential to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural BMP, **routine maintenance is key to preventing this scenario**.

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INF-2
Bioretention

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR INF-2 BIORETENTION		
The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district. Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation or compaction of the media layer.	• Inspect monthly. If the BMP is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintenance when needed.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintenance when needed.
2/3 of mulch has decomposed, or mulch has been removed	Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches.	• Inspect monthly. • Replenish mulch annually, or more frequently when needed based on inspection.

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

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SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR INF-2 BIORETENTION (Continued from previous page)		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintenance when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.
Standing water in BMP for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, or repairing/replacing clogged or compacted soils. If it is determined that the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria because the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.

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Bioretention

References

American Mosquito Control Association.
http://www.mosquito.org/

California Storm Water Quality Association (CASQA). 2003. Municipal BMP Handbook.
https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook

County of San Diego. 2014. Low Impact Development Handbook.
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid.html

San Diego County Copermittees. 2016. Model BMP Design Manual, Appendix E, Fact Sheet INF-2.
http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=250&Itemid=220

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Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	
Property / Development Name:	Responsible Party Name and Phone Number:	
Property Address of BMP:	Responsible Party Address:	

INSPECTION AND MAINTENANCE CHECKLIST FOR INF-2 BIORETENTION PAGE 1 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Accumulation of sediment, litter, or debris Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose of accumulated materials, without damage to the vegetation ☐ If sediment, litter, or debris accumulation exceeds 25% of the surface ponding volume within one month (25% full*), add a forebay or other pre-treatment measures within the tributary area draining to the BMP to intercept the materials. ☐ Other / Comments:		
Poor vegetation establishment Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

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Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR INF-2 BIORETENTION PAGE 2 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Dead or diseased vegetation Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		
Overgrown vegetation Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Mow or trim as appropriate ☐ Other / Comments:		
2/3 of mulch has decomposed, or mulch has been removed Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches ☐ Other / Comments:		

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Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR INF-2 BIORETENTION PAGE 3 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Erosion due to concentrated irrigation flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas and adjust the irrigation system ☐ Other / Comments:		
Erosion due to concentrated storm water runoff flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan ☐ If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction ☐ Other / Comments:		

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Bioretention

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR INF-2 BIORETENTION PAGE 4 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Obstructed inlet or outlet structure Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		
Damage to structural components such as weirs, inlet or outlet structures Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair or replace as applicable ☐ Other / Comments:		

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Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR INF-2 BIORETENTION PAGE 5 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Standing water in BMP for longer than 24 hours following a storm event* Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, or repairing/replacing clogged or compacted soils. ☐ Other / Comments:		
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Apply corrective measures to remove standing water in BMP when standing water occurs for longer than 24-96 hours following a storm event.** ☐ Other / Comments:		

*Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underdrain, or outlet structure. The specific cause of the drainage issue must be determined and corrected. If it is determined that the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.

**If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria because the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

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Biofiltration with Partial Retention

BMP MAINTENANCE FACT SHEET
FOR
STRUCTURAL BMP PR-1 BIOFILTRATION WITH PARTIAL RETENTION

Biofiltration with partial retention facilities are vegetated surface water systems that filter water through vegetation and soil or engineered media prior to infiltrating into native soils, discharge via underdrain, or overflow to the downstream conveyance system. These BMPs have an elevated underdrain discharge point that creates storage capacity in the aggregate storage layer. Typical biofiltration with partial retention components include:

- Inflow distribution mechanisms (e.g., perimeter flow spreader or filter strips)
- Energy dissipation mechanism for concentrated inflows (e.g., splash blocks or riprap)
- Shallow surface ponding for captured flows
- Side slope and basin bottom vegetation selected based on climate and ponding depth
- Non-floating mulch layer
- Media layer (planting mix or engineered media) capable of supporting vegetation growth
- Filter course layer consisting of aggregate to prevent the migration of fines into uncompacted native soils or the aggregate storage layer
- Aggregate storage layer with underdrain(s)
- Uncompacted native soils at the bottom of the facility
- Overflow structure

Normal Expected Maintenance

Biofiltration with partial retention requires routine maintenance to: remove accumulated materials such as sediment, trash or debris; maintain vegetation health; maintain infiltration capacity of the media layer; replenish mulch; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure

If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underdrain, or outlet structure. The specific cause of the drainage issue must be determined and corrected.
- Sediment, trash, or debris accumulation greater than 25% of the surface ponding volume within one month. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require pretreatment measures within the tributary area draining to the BMP to intercept the materials. Pretreatment components, especially for sediment, will extend the life of components that are more expensive to replace such as media, filter course, and aggregate layers.

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- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.

Other Special Considerations

Biofiltration with partial retention is a vegetated structural BMP. Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the potential to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural BMP, **routine maintenance is key to preventing this scenario**.

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Biofiltration with Partial Retention

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR PR-1 BIOFILTRATION WITH PARTIAL RETENTION		
The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district. Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation or compaction of the media layer.	• Inspect monthly. If the BMP is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintenance when needed.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintenance when needed.
2/3 of mulch has decomposed, or mulch has been removed	Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches.	• Inspect monthly. • Replenish mulch annually, or more frequently when needed based on inspection.

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

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Biofiltration with Partial Retention

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR PR-1 BIOFILTRATION WITH PARTIAL RETENTION (Continued from previous page)		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintenance when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.
Standing water in BMP for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, clearing underdrains, or repairing/replacing clogged or compacted soils.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Underdrain clogged	Clear blockage.	• Inspect if standing water is observed for longer than 24-96 hours following a storm event. • Maintenance when needed.

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Biofiltration with Partial Retention

References

American Mosquito Control Association.
http://www.mosquito.org/

California Storm Water Quality Association (CASQA). 2003. Municipal BMP Handbook.
https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook

County of San Diego. 2014. Low Impact Development Handbook.
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid.html

San Diego County Copermittees. 2016. Model BMP Design Manual, Appendix E, Fact Sheet PR-1.
http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=250&Itemid=220

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Biofiltration with Partial Retention

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Biofiltration with Partial Retention

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	
Property / Development Name:	Responsible Party Name and Phone Number:	
Property Address of BMP:	Responsible Party Address:	

INSPECTION AND MAINTENANCE CHECKLIST FOR PR-1 BIOFILTRATION WITH PARTIAL RETENTION PAGE 1 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Accumulation of sediment, litter, or debris Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose of accumulated materials, without damage to the vegetation ☐ If sediment, litter, or debris accumulation exceeds 25% of the surface ponding volume within one month (25% full*), add a forebay or other pre-treatment measures within the tributary area draining to the BMP to intercept the materials. ☐ Other / Comments:		
Poor vegetation establishment Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

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Biofiltration with Partial Retention

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR PR-1 BIOFILTRATION WITH PARTIAL RETENTION PAGE 2 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Dead or diseased vegetation Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		
Overgrown vegetation Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Mow or trim as appropriate ☐ Other / Comments:		
2/3 of mulch has decomposed, or mulch has been removed Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches ☐ Other / Comments:		

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Biofiltration with Partial Retention

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR PR-1 BIOFILTRATION WITH PARTIAL RETENTION PAGE 3 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Erosion due to concentrated irrigation flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas and adjust the irrigation system ☐ Other / Comments:		
Erosion due to concentrated storm water runoff flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan ☐ If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction ☐ Other / Comments:		

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Biofiltration with Partial Retention

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR PR-1 BIOFILTRATION WITH PARTIAL RETENTION PAGE 4 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Obstructed inlet or outlet structure Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		
Underdrain clogged (inspect underdrain if standing water is observed for longer than 24-96 hours following a storm event) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		
Damage to structural components such as weirs, inlet or outlet structures Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair or replace as applicable ☐ Other / Comments:		

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Biofiltration with Partial Retention

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR PR-1 BIOFILTRATION WITH PARTIAL RETENTION PAGE 5 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Standing water in BMP for longer than 24 hours following a storm event* Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, clearing underdrains, or repairing/replacing clogged or compacted soils ☐ Other / Comments:		
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Apply corrective measures to remove standing water in BMP when standing water occurs for longer than 24-96 hours following a storm event.** ☐ Other / Comments:		

*Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underdrain, or outlet structure. The specific cause of the drainage issue must be determined and corrected.

**If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

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BF-1
Biofiltration

BMP MAINTENANCE FACT SHEET
FOR
STRUCTURAL BMP BF-1 BIOFILTRATION

Biofiltration facilities are vegetated surface water systems that filter water through vegetation, and soil or engineered media prior to discharge via underdrain or overflow to the downstream conveyance system. Biofiltration facilities have limited or no infiltration. They are typically designed to provide enough hydraulic head to move flows through the underdrain connection to the storm drain system. Typical biofiltration components include:

- Inflow distribution mechanisms (e.g., perimeter flow spreader or filter strips)
- Energy dissipation mechanism for concentrated inflows (e.g., splash blocks or riprap)
- Shallow surface ponding for captured flows
- Side slope and basin bottom vegetation selected based on climate and ponding depth
- Non-floating mulch layer
- Media layer (planting mix or engineered media) capable of supporting vegetation growth
- Filter course layer consisting of aggregate to prevent the migration of fines into uncompacted native soils or the aggregate storage layer
- Aggregate storage layer with underdrain(s)
- Impermeable liner or uncompacted native soils at the bottom of the facility
- Overflow structure

Normal Expected Maintenance

Biofiltration requires routine maintenance to: remove accumulated materials such as sediment, trash or debris; maintain vegetation health; maintain infiltration capacity of the media layer; replenish mulch; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure

If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underdrain, or outlet structure. The specific cause of the drainage issue must be determined and corrected.
- Sediment, trash, or debris accumulation greater than 25% of the surface ponding volume within one month. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require pretreatment measures within the tributary area draining to the BMP to intercept the materials. Pretreatment components, especially for sediment, will extend the life of components that are more expensive to replace such as media, filter course, and aggregate layers.
- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.

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Biofiltration

Other Special Considerations

Biofiltration is a vegetated structural BMP. Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the potential to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural BMP, **routine maintenance is key to preventing this scenario**.

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Biofiltration

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR BF-1 BIOFILTRATION		
The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district. Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Accumulation of sediment, litter, or debris	Remove and properly dispose of accumulated materials, without damage to the vegetation or compaction of the media layer.	• Inspect monthly. If the BMP is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable	• Inspect annually. • Maintenance when needed.
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintenance when needed.
2/3 of mulch has decomposed, or mulch has been removed	Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches.	• Inspect monthly. • Replenish mulch annually, or more frequently when needed based on inspection.

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

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SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR BF-1 BIOFILTRATION (Continued from previous page)		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintenance when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.
Standing water in BMP for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, clearing underdrains, or repairing/replacing clogged or compacted soils.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Underdrain clogged	Clear blockage.	• Inspect if standing water is observed for longer than 24-96 hours following a storm event. • Maintenance when needed.

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BF-1
Biofiltration

References

American Mosquito Control Association.
http://www.mosquito.org/

California Storm Water Quality Association (CASQA). 2003. Municipal BMP Handbook.
https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook

County of San Diego. 2014. Low Impact Development Handbook.
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid.html

San Diego County Copermittees. 2016. Model BMP Design Manual, Appendix E, Fact Sheet BF-1.
http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=250&Itemid=220

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Biofiltration

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	
Property / Development Name:	Responsible Party Name and Phone Number:	
Property Address of BMP:	Responsible Party Address:	

INSPECTION AND MAINTENANCE CHECKLIST FOR BF-1 BIOFILTRATION PAGE 1 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Accumulation of sediment, litter, or debris Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose of accumulated materials, without damage to the vegetation ☐ If sediment, litter, or debris accumulation exceeds 25% of the surface ponding volume within one month (25% full*), add a forebay or other pre-treatment measures within the tributary area draining to the BMP to intercept the materials. ☐ Other / Comments:		
Poor vegetation establishment Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

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Biofiltration

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR BF-1 BIOFILTRATION PAGE 2 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Dead or diseased vegetation Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		
Overgrown vegetation Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Mow or trim as appropriate ☐ Other / Comments:		
2/3 of mulch has decomposed, or mulch has been removed Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove decomposed fraction and top off with fresh mulch to a total depth of 3 inches ☐ Other / Comments:		

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Biofiltration

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR BF-1 BIOFILTRATION PAGE 3 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Erosion due to concentrated irrigation flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas and adjust the irrigation system ☐ Other / Comments:		
Erosion due to concentrated storm water runoff flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan ☐ If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction ☐ Other / Comments:		

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Biofiltration

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR BF-1 BIOFILTRATION PAGE 4 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Obstructed inlet or outlet structure Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		
Underdrain clogged (inspect underdrain if standing water is observed for longer than 24-96 hours following a storm event) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		
Damage to structural components such as weirs, inlet or outlet structures Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair or replace as applicable ☐ Other / Comments:		

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BF-1
Biofiltration

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR BF-1 BIOFILTRATION PAGE 5 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Standing water in BMP for longer than 24-96 hours following a storm event* Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, clearing underdrains, or repairing/replacing clogged or compacted soils ☐ Other / Comments:		
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Apply corrective measures to remove standing water in BMP when standing water occurs for longer than 24-96 hours following a storm event.** ☐ Other / Comments:		

*Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the media layer, filter course, aggregate storage layer, underdrain, or outlet structure. The specific cause of the drainage issue must be determined and corrected.

**If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

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FT-2
Media Filter

BMP MAINTENANCE FACT SHEET
FOR
FLOW-THRU STRUCTURAL BMP FT-2 MEDIA FILTER

Media filters are manufactured devices that consist of a series of modular filters packed with engineered media that can be contained in a catch basin, manhole, or vault that provide treatment through filtration and sedimentation. The manhole or vault may be divided into multiple chambers where the first chamber acts as a presettling basin for removal of coarse sediment while the next chamber acts as the filter bay and houses the filter cartridges. A variety of configurations and media types are available from various manufacturers. Typical media filter components include:

- Vault for flow storage and media housing
- Inlet and outlet
- Media filters

Normal Expected Maintenance

Media filters require routine maintenance to: remove accumulated materials such as sediment, trash, and debris; replace filter cartridges; and maintain integrity of any internal components such as weirs and piping. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure

The normal expected maintenance described above ensures the BMP functionality. Lapses in the normal expected maintenance can lead to clogging of the BMP and potentially blocking the storm drain system. If clogging is observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. In addition, clogged BMPs can lead to flooding, standing water and mosquito breeding habitat. Maintenance is critical to ensure the flood protection capacity of the storm drain system is not compromised. If proper routine maintenance is not performed, corrective maintenance and increased inspection and maintenance will be required. For persistent clogging or presence of mosquitos, contact the [City Engineer] to determine a permanent solution. For example, adding pretreatment measures within the tributary area draining to the BMP to intercept sediment, trash, and debris. Pretreatment components, especially for sediment, will extend the life of the filter media. For mosquitos, a Vector Management Plan, prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

Other Special Considerations

Media filters are proprietary systems that include proprietary media that must be replaced as part of normal expected maintenance. They are typically installed underground and may require entry into the underground vault to perform the maintenance. The BMP owner is responsible to hire a maintenance operator qualified to service the units. The maintenance operator must obtain the appropriate filter media and/or any parts that need to be replaced. If maintenance conditions require maintenance personnel to enter the underground structure, the maintenance personnel must be trained and certified in confined space entry. To find a qualified maintenance operator, the BMP owner shall contact the manufacturer of the proprietary BMP.

The design of media filters includes consideration of the specific pollutants expected from the area tributary to the media filter and the specific pollutants of concern for the downstream waterways. Therefore, it is expected that the filter media selected during design of the project will not be substituted. If a need arises to substitute a different filter configuration or filter media, the [City Engineer] shall be contacted prior to any changes.

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FT-2
Media Filter

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR FT-2 MEDIA FILTER		
The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district. Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Accumulation of sediment, litter, or debris. The threshold for removal of materials depends on the specific type of proprietary filter and configuration and shall be based on the manufacturer's recommendation. In any case, materials must be removed if accumulation blocks flow through the BMP.	Remove and properly dispose of accumulated materials.	• Inspect monthly. • Remove materials annually (minimum), or more frequently when BMP reaches manufacturer's threshold for removal of materials in less than one year, or if accumulation blocks outlet.
Spent or clogged filter media. The threshold for changing media depends on the specific type of proprietary media and shall be based on the manufacturer's recommendation. In any case, media must be replaced if flow cannot pass through the media or passes through at less than the design capacity.	Remove and properly dispose filter media, and replace with fresh media.	• Inspect condition of media annually or more frequently if recommended by manufacturer. • Inspect BMP drainage monthly and after every 0.5-inch or larger storm event. If standing water has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed based on manufacturer's threshold/indicator for the specific media, or if standing water in the BMP indicates flow cannot pass through the media.
Any other recommendations pursuant to the proprietary filter manufacturer's maintenance guide.	Any other actions pursuant to the proprietary filter manufacturer's maintenance guide.	• As recommended by the proprietary filter manufacturer's maintenance guide
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.

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FT-2
Media Filter

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR FT-2 MEDIA FILTER (Continued from previous page)		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove and properly dispose any standing water; second, remove any accumulated materials that obstruct flow through the BMP to restore BMP drainage to prevent standing water. Ensure access covers are tight fitting, with gaps or holes no greater than 1/16 inch, and/or install barriers such as inserts or screens that prevent mosquito access to the subsurface storage. If the BMP includes a permanent sump, contact the [City Engineer] to determine a permanent solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Damage to structural components of the filtration system such as weirs, underdrains, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintenance when needed.

References

American Mosquito Control Association.
http://www.mosquito.org/

California Storm Water Quality Association (CASQA). 2003. Municipal BMP Handbook.
https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook

County of San Diego. 2014. Low Impact Development Handbook.
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid.html

San Diego County Copermittees. 2016. Model BMP Design Manual, Appendix E, Fact Sheet FT-2.
http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=250&Itemid=220

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Media Filter

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FT-2
Media Filter

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	
Property / Development Name:	Responsible Party Name and Phone Number:	
Property Address of BMP:	Responsible Party Address:	

INSPECTION AND MAINTENANCE CHECKLIST FOR FT-2 MEDIA FILTER PAGE 1 of 2			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Accumulation of sediment, litter, or debris Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose of accumulated materials ☐ Other / Comments:		
Spent or clogged filter media Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose filter media, and replace with fresh media ☐ Other / Comments:		
Obstructed inlet or outlet structure Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		

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FT-2
Media Filter

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR FT-2 MEDIA FILTER PAGE 2 of 2			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose standing water ☐ Remove accumulated materials that obstruct flow through the BMP* ☐ Other / Comments:		
Damage to structural components of the filtration system such as weirs, underdrains, inlet or outlet structures Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair or replace as applicable ☐ Other / Comments:		
Any other recommendations pursuant to the proprietary filter manufacturer's maintenance guide Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Any other recommendations pursuant to the proprietary filter manufacturer's maintenance guide ☐ Other / Comments:		

*If the BMP includes a permanent sump, contact the [City Engineer] to determine a permanent solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

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FT-3
Sand Filter

BMP MAINTENANCE FACT SHEET
FOR
FLOW-THRU STRUCTURAL BMP FT-3 SAND FILTER

Sand filters operate by filtering storm water through a constructed sand bed with an underdrain system. Runoff enters the filter and spreads over the surface. As flows increase, water backs up on the surface of the filter where it is held until it can percolate through the sand. The treatment pathway is downward (vertical) through the media to an underdrain system that is connected to the downstream storm drain system. Sand filter beds can be enclosed within concrete structures or within earthen containment. There is usually a forebay at the inlet to trap sediment, trash and debris so that only the runoff is passed through the sand bed without the solid materials. Typical sand filter components include:

- Forebay for pretreatment / energy dissipation
- Surface ponding for captured flows
- Sand filter bed
- Aggregate storage layer with underdrain(s)
- Overflow structure

Normal Expected Maintenance

Sand filters require routine maintenance to: remove accumulated materials such as sediment, trash, and debris from the forebay; and clear the underdrain(s). To ensure runoff is passed through the sand bed, sand at the top of the sand bed (approximately 2 inches, or more if necessary) must be removed and replaced to restore flow when the drain time exceeds 24-96 hours. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure

The normal expected maintenance described above ensures the BMP functionality. Lapses in the normal expected maintenance can lead to clogging of the BMP and runoff bypassing the filter. If clogging is observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. In addition, clogged BMPs can lead to flooding, standing water and mosquito breeding habitat. Corrective maintenance and increased inspection and maintenance will be required. For persistent clogging or presence of mosquitos, contact the [City Engineer] to determine a permanent solution. For example, adding pretreatment measures within the tributary area draining to the BMP to intercept sediment, trash, and debris. Pretreatment components, especially for sediment, will extend the life of the sand bed. For mosquitos, a Vector Management Plan, prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

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FT-3
Sand Filter

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR FT-3 SAND FILTER		
The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district. Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Accumulation of sediment, litter, or debris in forebay and/or filter bed	Remove and properly dispose of accumulated materials.	• Inspect monthly. If the forebay is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found within the filter bed at each inspection. • When the BMP includes a forebay, materials must be removed from the forebay when the forebay is 25% full*, or if accumulation within the forebay blocks flow to the filter bed.
Standing water in BMP for longer than 24-96 hours following a storm event	Make appropriate corrective measures to restore drainage such as removing obstructions of debris from the forebay, clearing underdrains or repairing/replacing clogged sand bed.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Clogged sand bed This is indicated when the drain time of the surface of the sand bed exceeds 24-96 hours.	Remove and properly dispose sand from the top of the sand bed (approximately 2 inches of sand, or as much as needed to restore flow). Restore sand depth to the design depth.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.

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FT-3
Sand Filter

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR FT-3 SAND FILTER		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove and properly dispose any standing water by dispersing to nearby landscaping; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. If mosquitos persist following corrective measures to remove standing water, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed
Damage to structural components of the BMP such as weirs, underdrains, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintenance when needed.

References

American Mosquito Control Association.
http://www.mosquito.org/

California Storm Water Quality Association (CASQA). 2003. Municipal BMP Handbook.
https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook

County of San Diego. 2014. Low Impact Development Handbook.
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid.html

San Diego County Copermittees. 2016. Model BMP Design Manual, Appendix E, Fact Sheet FT-3.
http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=250&Itemid=220

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Sand Filter

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Sand Filter

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	
Property / Development Name:	Responsible Party Name and Phone Number:	
Property Address of BMP:	Responsible Party Address:	

INSPECTION AND MAINTENANCE CHECKLIST FOR FT-3 SAND FILTER PAGE 1 of 3			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Accumulation of sediment, litter, or debris Materials must be removed from the forebay when the forebay is 25% full*. In any case, materials must be removed if accumulation blocks flow through the filter bed. Materials must be removed from the filter bed any time accumulation is observed in the filter bed. Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose of accumulated materials ☐ If accumulation within the forebay is greater than 25% in one month, increase the inspection and maintenance frequency** ☐ Other / Comments:		

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).
**If no forebay is present, if sediment, litter, or debris accumulation exceeds 25% of the surface ponding volume within one month, add a forebay or other pre-treatment measures within the tributary area draining to the BMP to intercept the materials.

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Sand Filter

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR FT-3 SAND FILTER PAGE 2 of 3			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Standing water in BMP for longer than 24-96 hours following a storm event* Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Make appropriate corrective measures to restore drainage such as removing obstructions of debris from the forebay, clearing underdrains, or repairing/replacing clogged sand bed ☐ Other / Comments:		
Clogged sand bed This is indicated when the drain time of the surface of the sand bed exceeds 24-96 hours. Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose sand from the top of the sand bed (approximately 2 inches of sand, or as much as needed to restore flow) ☐ Restore sand depth to the design depth ☐ Other / Comments:		
Obstructed inlet or outlet structure Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		

*Surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the sand bed, underdrain, or outlet structure. The specific cause of the drainage issue must be determined and corrected. For persistent clogging, the [City Engineer] shall be contacted to determine a solution.

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FT-3
Sand Filter

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR FT-3 SAND FILTER PAGE 3 of 3			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose standing water** ☐ Remove accumulated materials that obstruct flow through the BMP** ☐ Other / Comments:		
Damage to structural components of the filtration system such as weirs, underdrains, inlet or outlet structures Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair or replace as applicable ☐ Other / Comments:		

**If mosquitos persist following corrective measures to remove standing water, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

DRAFT

FT-4

Dry Extended Detention Basin

BMP MAINTENANCE FACT SHEET
FOR
FLOW-THRU STRUCTURAL BMP FT-4 DRY EXTENDED DETENTION BASIN

Dry extended detention basins are basins that have been designed to detain storm water for an extended period to allow sedimentation and typically drain completely between storm events. The slopes, bottom, and forebay of above-ground dry extended detention basins are typically vegetated. Dry extended detention basins may serve multiple uses including parks, playing fields, tennis courts, open space, and overflow parking lots. This BMP category also includes detention basins that serve a purpose of flow control for hydromodification management only, which may or may not include vegetation. They can be underground structures, in many possible configurations, including both proprietary and non-proprietary systems. They may be constructed of a single large vault, one or multiple large pipes, or other modular units. Outlet structures control outflow from either above-ground or underground detention systems; outlet structures may be weirs, orifice plates, risers, or other control structures. Typical dry extended detention basin components include:

- Forebay for pretreatment
- Surface ponding for captured flows
- Vegetation selected based on basin use, climate and ponding depth (above-ground basins)
- Low flow channel, outlet, and overflow device
- Impermeable liner or uncompacted native soils at the bottom of the facility

Normal Expected Maintenance

Dry extended detention basins require routine maintenance to: remove accumulated materials such as sediment, trash or debris; maintain vegetation health; and maintain integrity of side slopes, inlets, energy dissipators, and outlets. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure

If any of the following scenarios are observed, the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance, increased inspection and maintenance, BMP replacement, or a different BMP type will be required.

- The BMP is not drained between storm events. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface or underground ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of underlying native soils and/or the outlet structure. The specific cause of the drainage issue must be determined and corrected. If it is determined that the drainage of the basin relies on infiltration and the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.
- Sediment, trash, or debris accumulation greater than 25% of the surface ponding volume within one month. This means the load from the tributary drainage area is too high, reducing BMP function or clogging the BMP. This would require pretreatment measures within the tributary area draining to the BMP to intercept the materials.
- Erosion due to concentrated storm water runoff flow that is not readily corrected by adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.

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FT-4

Dry Extended Detention Basin

Other Special Considerations

Some above-ground dry extended detention basins are vegetated structural BMPs. Vegetated structural BMPs that are constructed in the vicinity of, or connected to, an existing jurisdictional water or wetland could inadvertently result in creation of expanded waters or wetlands. As such, vegetated structural BMPs have the potential to come under the jurisdiction of the United States Army Corps of Engineers, SDRWQCB, California Department of Fish and Wildlife, or the United States Fish and Wildlife Service. This could result in the need for specific resource agency permits and costly mitigation to perform maintenance of the structural BMP. Along with proper placement of a structural BMP, **routine maintenance is key to preventing this scenario**.

Underground dry extended detention basins are typically designed to be cleaned from above-ground using a vactor. If maintenance conditions require maintenance personnel to enter the underground structure, the maintenance personnel must be trained and certified in confined space entry.

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FT-4

Dry Extended Detention Basin

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR FT-4 DRY EXTENDED DETENTION BASIN		
The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district. Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Accumulation of sediment, litter, or debris in forebay and/or basin	Remove and properly dispose of accumulated materials, (without damage to vegetation when applicable).	• Inspect monthly. If the forebay is 25% full* or more in one month, increase inspection frequency to monthly plus after every 0.1-inch or larger storm event. • Remove any accumulated materials found within the basin area at each inspection. • When the BMP includes a forebay, materials must be removed from the forebay when the forebay is 25% full*, or if accumulation within the forebay blocks flow to the basin.
Obstructed inlet or outlet structure	Clear blockage.	• Inspect monthly and after every 0.5-inch or larger storm event. • Remove any accumulated materials found at each inspection.
Poor vegetation establishment (when the BMP includes vegetated surface by design)	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Dead or diseased vegetation (when the BMP includes vegetated surface by design)	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Overgrown vegetation (when the BMP includes vegetated surface by design)	Mow or trim as appropriate.	• Inspect monthly. • Maintenance when needed.

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).

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Dry Extended Detention Basin

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR FT-4 DRY EXTENDED DETENTION BASIN (Continued from previous page)		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Erosion due to concentrated irrigation flow	Repair/re-seed/re-plant eroded areas and adjust the irrigation system.	• Inspect monthly. • Maintenance when needed.
Erosion due to concentrated storm water runoff flow	Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.	• Inspect after every 0.5-inch or larger storm event. If erosion due to storm water flow has been observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed. If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.
Standing water in above-ground BMP for longer than 24-96 hours following a storm event	Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, or removing/replacing clogged or compacted surface treatments and/or scarifying or tilling native soils. Always remove deposited sediments before scarification, and use a hand-guided rotary tiller. If it is determined that the drainage of the basin relies on infiltration and the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Standing water in underground BMP for longer than 24-96 hours following a storm event	Make appropriate corrective measures such as removing obstructions at the outlet, clearing underdrains, or flushing fine sediment from aggregate layer when applicable. If it is determined that the drainage of the basin relies on infiltration and the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.

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Dry Extended Detention Basin

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR FT-4 DRY EXTENDED DETENTION BASIN (Continued from previous page)		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	If mosquitos/larvae are observed: first, immediately remove and properly dispose any standing water; second, make corrective measures as applicable to restore BMP drainage to prevent standing water. For underground detention basins, ensure access covers are tight fitting, with gaps or holes no greater than 1/16 inch, and/or install barriers such as inserts or screens that prevent mosquito access to the subsurface storage. If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed
Damage to structural components such as weirs, inlet or outlet structures	Repair or replace as applicable.	• Inspect annually. • Maintenance when needed.

References

American Mosquito Control Association.
http://www.mosquito.org/

California Storm Water Quality Association (CASQA). 2003. Municipal BMP Handbook.
https://www.casqa.org/resources/bmp-handbooks/municipal-bmp-handbook

County of San Diego. 2014. Low Impact Development Handbook.
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid.html

San Diego County Copermittees. 2016. Model BMP Design Manual, Appendix E, Fact Sheet FT-4.
http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=250&Itemid=220

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Dry Extended Detention Basin

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FT-4

Dry Extended Detention Basin

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	
Property / Development Name:	Responsible Party Name and Phone Number:	
Property Address of BMP:	Responsible Party Address:	

INSPECTION AND MAINTENANCE CHECKLIST FOR FT-4 DRY EXTENDED DETENTION BASIN PAGE 1 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Accumulation of sediment, litter, or debris Materials must be removed from the forebay when the forebay is 25% full*. In any case, materials must be removed if accumulation blocks flow to the basin area. Materials must be removed from the basin area any time accumulation is observed in the basin area. Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove and properly dispose of accumulated materials, (without damage to the vegetation when applicable) ☐ If accumulation within the forebay is greater than 25% in one month, increase the inspection and maintenance frequency* ☐ Other / Comments:		

*"25% full" is defined as ¼ of the depth from the design bottom elevation to the crest of the outflow structure (e.g., if the height to the outflow opening is 12 inches from the bottom elevation, then the materials must be removed when there is 3 inches of accumulation – this should be marked on the outflow structure).
**If no forebay is present, if sediment, litter, or debris accumulation exceeds 25% of the surface ponding volume within one month, add a forebay or other pre-treatment measures within the tributary area draining to the BMP to intercept the materials.

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Dry Extended Detention Basin

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR FT-4 DRY EXTENDED DETENTION BASIN PAGE 2 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Poor vegetation establishment (when the BMP includes vegetated surface by design) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		
Dead or diseased vegetation (when the BMP includes vegetated surface by design) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		
Overgrown vegetation (when the BMP includes vegetated surface by design) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Mow or trim as appropriate ☐ Other / Comments:		

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Dry Extended Detention Basin

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR FT-4 DRY EXTENDED DETENTION BASIN PAGE 3 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Erosion due to concentrated irrigation flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas and adjust the irrigation system ☐ Other / Comments:		
Erosion due to concentrated storm water runoff flow Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair/re-seed/re-plant eroded areas, and make appropriate corrective measures such as adding erosion control blankets, adding stone at flow entry points, or minor re-grading to restore proper drainage according to the original plan ☐ If the issue is not corrected by restoring the BMP to the original plan and grade, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction ☐ Other / Comments:		

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Dry Extended Detention Basin

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR FT-4 DRY EXTENDED DETENTION BASIN PAGE 4 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Obstructed inlet or outlet structure Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Clear blockage ☐ Other / Comments:		
Damage to structural components such as weirs, inlet or outlet structures Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Repair or replace as applicable ☐ Other / Comments:		

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Dry Extended Detention Basin

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR FT-4 DRY EXTENDED DETENTION BASIN PAGE 5 of 5			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Standing water in above-ground BMP for longer than 24-96 hours following a storm event*	☐ Make appropriate corrective measures such as adjusting irrigation system, removing obstructions of debris or invasive vegetation, or repairing/replacing clogged or compacted soils.* ☐ Other / Comments:		
Standing water in underground BMP for longer than 24-96 hours following a storm event*	☐ Make appropriate corrective measures such as removing debris obstructions, clearing underdrains, or flushing fine sediment from aggregate layer when applicable.* ☐ Other / Comments:		
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Apply corrective measures to remove standing water in BMP when standing water occurs for longer than 24-96 hours following a storm event.** ☐ Other / Comments:		

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Dry Extended Detention Basin

*Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging of the outlet structure or the underlying soils. The specific cause of the drainage issue must be determined and corrected. If it is determined that the drainage of the basin relies on infiltration and the underlying native soils have been compacted or do not have the infiltration capacity expected, the [City Engineer] shall be contacted prior to any additional repairs or reconstruction.

**If mosquitos persist following corrective measures to remove standing water, or if the BMP design does not meet the 96-hour drawdown criteria due to release rates controlled by an orifice installed on the underdrain, the [City Engineer] shall be contacted to determine a solution. A different BMP type, or a Vector Management Plan prepared with concurrence from the County of San Diego Department of Environmental Health, may be required.

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SD-1
Tree Wells

BMP MAINTENANCE FACT SHEET
FOR
SITE DESIGN BMP SD-1 TREE WELLS

Tree wells as site design BMPs are trees planted in configurations that allow storm water runoff to be directed into the soil immediately surrounding the tree. The tree may be contained within a planter box or structural cells. The surrounding area will be graded to direct runoff to the tree well. There may be features such as tree grates, suspended pavement design, or shallow surface depressions designed to allow runoff into the tree well. Typical tree well components include:

- Trees of the appropriate species for site conditions and constraints
- Available growing space based on tree species, soil type, water availability, surrounding land uses, and project goals
- Entrance/opening that allows storm water runoff to flow into the tree well (e.g., a curb opening, tree grate, or surface depression)
- Optional suspended pavement design to provide structural support for adjacent pavement without requiring compaction of underlying layers
- Optional root barrier devices as needed; a root barrier is a device installed in the ground, between a tree and the sidewalk, intended to guide roots down and away from the sidewalk in order to prevent sidewalk lifting from tree roots
- Optional tree grates; to be considered to maximize available space for pedestrian circulation and to protect tree roots from compaction related to pedestrian circulation; tree grates are typically made up of porous material that will allow the runoff to soak through
- Optional shallow surface depression for ponding of excess runoff
- Optional planter box drain

Normal Expected Maintenance

Tree health shall be maintained as part of normal landscape maintenance. Additionally, ensure that storm water runoff can be conveyed into the tree well as designed. That is, the opening that allows storm water runoff to flow into the tree well (e.g., a curb opening, tree grate, or surface depression) shall not be blocked, filled, re-graded, or otherwise changed in a manner that prevents storm water from draining into the tree well. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure

Tree wells are site design BMPs that normally do not require maintenance actions beyond routine landscape maintenance. The normal expected maintenance described above ensures the BMP functionality. If changes have been made to the tree well entrance / opening such that runoff is prevented from draining into the tree well (e.g., a curb inlet opening is blocked by debris or a grate is clogged causing runoff to flow around instead of into the tree well, or a surface depression has been filled so runoff flows away from the tree well), the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance will be required to restore drainage into the tree well as designed.

Surface ponding of runoff directed into tree wells is expected to infiltrate/evapotranspirate within 24-96 hours following a storm event. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging or compaction of the soils surrounding the tree. Loosen or replace the soils to restore drainage.

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SD-1
Tree Wells

Other Special Considerations

Site design BMPs, such as tree wells, installed within a new development or redevelopment project are components of an overall storm water management strategy for the project. The presence of site design BMPs within a project is usually a factor in the determination of the amount of runoff to be managed with structural BMPs (i.e., the amount of runoff expected to reach downstream retention or biofiltration basins that process storm water runoff from the project as a whole). When site design BMPs are not maintained or are removed, this can lead to clogging or failure of downstream structural BMPs due to greater delivery of runoff and pollutants than intended for the structural BMP. Therefore, the [City Engineer] may require confirmation of maintenance of site design BMPs as part of their structural BMP maintenance documentation requirements. Site design BMPs that have been installed as part of the project should not be removed, nor should they be bypassed by re-routing roof drains or re-grading surfaces within the project. If changes are necessary, consult the [City Engineer] to determine requirements.

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SD-1
Tree Wells

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR SD-1 TREE WELLS		
The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district. Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Tree health	Routine actions as necessary to maintain tree health.	• Inspect monthly. • Maintenance when needed.
Dead or diseased tree	Remove dead or diseased tree. Replace per original plans.	• Inspect monthly. • Maintenance when needed.
Standing water in tree well for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to tree health	Loosen or replace soils surrounding the tree to restore drainage.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	Disperse any standing water from the tree well to nearby landscaping. Loosen or replace soils surrounding the tree to restore drainage (and prevent standing water).	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed
Entrance / opening to the tree well is blocked such that storm water will not drain into the tree well (e.g., a curb inlet opening is blocked by debris or a grate is clogged causing runoff to flow around instead of into the tree well; or a surface depression is filled such that runoff drains away from the tree well)	Make repairs as appropriate to restore drainage into the tree well.	• Inspect monthly. • Maintenance when needed.

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SD-1
Tree Wells

References

American Mosquito Control Association.
http://www.mosquito.org/
County of San Diego. 2014. Low Impact Development Handbook.
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid.html
San Diego County Copermittees. 2016. Model BMP Design Manual, Appendix E, Fact Sheet SD-1.
http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=250&Itemid=220

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SD-1
Tree Wells

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	
Property / Development Name:	Responsible Party Name and Phone Number:	
Property Address of BMP:	Responsible Party Address:	

INSPECTION AND MAINTENANCE CHECKLIST FOR SD-1 TREE WELLS PAGE 1 of 2			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Dead or diseased tree Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove dead or diseased tree ☐ Replace per original plans ☐ Other / Comments:		
Standing water in tree well for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to tree health Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Loosen or replace soils surrounding the tree to restore drainage ☐ Other / Comments:		

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SD-1
Tree Wells

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR SD-1 TREE WELLS PAGE 2 of 2			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Disperse any standing water from the tree well to nearby landscaping ☐ Loosen or replace soils surrounding the tree to restore drainage (and prevent standing water) ☐ Other / Comments:		
Entrance / opening to the tree well is blocked such that storm water will not drain into the tree well (e.g., a curb inlet opening is blocked by debris or a grate is clogged causing runoff to flow around instead of into the tree well; or a surface depression is filled such that runoff drains away from the tree well) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Make repairs as appropriate to restore drainage into the tree well ☐ Other / Comments:		

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SD-5

Impervious Area Dispersion

BMP MAINTENANCE FACT SHEET
FOR
SITE DESIGN BMP SD-5 IMPERVIOUS AREA DISPERSION

Impervious area dispersion (dispersion) refers to the practice of effectively disconnecting impervious areas from directly draining to the storm drain system by routing runoff from impervious areas such as rooftops (through downspout disconnection), walkways, and driveways onto the surface of adjacent pervious areas. The intent is to slow runoff discharges, and reduce volumes. Typical dispersion components include:

- An impervious surface from which runoff flows will be routed with minimal piping to limit concentrated inflows
- Splash blocks, flow spreaders, or other means of dispersing concentrated flows and providing energy dissipation as needed
- Dedicated pervious area, typically vegetated, with in-situ soil infiltration capacity for partial or full infiltration
- Optional soil amendments to improve vegetation support, maintain infiltration rates and enhance treatment of flows
- Overflow route for excess flows to be conveyed from dispersion area to the storm drain system or discharge point

Normal Expected Maintenance

Vegetated area shall be maintained as part of normal landscape maintenance. Additionally, ensure that storm water runoff can be conveyed into the vegetated area as designed. That is, the mechanism that allows storm water runoff from impervious area to flow into the pervious area (e.g., a curb cut allows runoff from a parking lot to drain onto adjacent landscaping area, or a roof drain outlet is directed to a lawn) shall not be removed, blocked, filled, or otherwise changed in a manner that prevents storm water from draining into the pervious area. A summary table of standard inspection and maintenance indicators is provided within this Fact Sheet.

Non-Standard Maintenance or BMP Failure

Impervious area dispersion is a site design BMP that normally does not require maintenance actions beyond routine landscape maintenance. If changes have been made to the area, such as the vegetated area has been replaced with impervious area, or the mechanism that allows storm water runoff from impervious area to flow into the pervious area has been removed (e.g., roof drains previously directed to vegetated area have been directly connected to the street or storm drain system), the BMP is not performing as intended to protect downstream waterways from pollution and/or erosion. Corrective maintenance will be required to restore drainage into the pervious area as designed. If the pervious area has been removed, contact the [City Engineer] to determine a solution.

Runoff directed into vegetated areas is expected to be drained within 24-96 hours following a storm event. Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health, and surface ponding longer than approximately 96 hours following a storm event poses a risk of vector (mosquito) breeding. Poor drainage can result from clogging or compaction of the soils. Loosen or replace the soils to restore drainage.

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SD-5
Impervious Area Dispersion

Other Special Considerations

Site design BMPs, such as impervious area dispersion, installed within a new development or redevelopment project are components of an overall storm water management strategy for the project. The presence of site design BMPs within a project is usually a factor in the determination of the amount of runoff to be managed with structural BMPs (i.e., the amount of runoff expected to reach downstream retention or biofiltration basins that process storm water runoff from the project as a whole). When site design BMPs are not maintained or are removed, this can lead to clogging or failure of downstream structural BMPs due to greater delivery of runoff and pollutants than intended for the structural BMP. Therefore, the [City Engineer] may require confirmation of maintenance of site design BMPs as part of their structural BMP maintenance documentation requirements. Site design BMPs that have been installed as part of the project should not be removed, nor should they be bypassed by re-routing roof drains or re-grading surfaces within the project. If changes are necessary, consult the [City Engineer] to determine requirements.

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SD-5
Impervious Area Dispersion

SUMMARY OF STANDARD INSPECTION AND MAINTENANCE FOR SD-5 IMPERVIOUS AREA DISPERSION		
The property owner is responsible to ensure inspection, operation and maintenance of permanent BMPs on their property unless responsibility has been formally transferred to an agency, community facilities district, homeowners association, property owners association, or other special district. Maintenance frequencies listed in this table are average/typical frequencies. Actual maintenance needs are site-specific, and maintenance may be required more frequently. Maintenance must be performed whenever needed, based on maintenance indicators presented in this table. The BMP owner is responsible for conducting regular inspections to see when maintenance is needed based on the maintenance indicators. During the first year of operation of a structural BMP, inspection is recommended at least once prior to August 31 and then monthly from September through May. Inspection during a storm event is also recommended. After the initial period of frequent inspections, the minimum inspection and maintenance frequency can be determined based on the results of the first year inspections.		
Threshold/Indicator	**Maintenance Action**	**Typical Maintenance Frequency**
Poor vegetation establishment	Re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Dead or diseased vegetation	Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans.	• Inspect monthly. • Maintenance when needed.
Overgrown vegetation	Mow or trim as appropriate.	• Inspect monthly. • Maintenance when needed.
Standing water in vegetated pervious area for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health	Disperse any areas of standing water to nearby landscaping (i.e., spread it out to another portion of the pervious area so it drains into the soil). Make appropriate corrective measures such as adjusting irrigation system, or repairing/replacing clogged or compacted soils.	• Inspect monthly and after every 0.5-inch or larger storm event. If standing water is observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed.
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology	Disperse any areas of standing water to nearby landscaping (i.e., spread it out to another portion of the pervious area so it drains into the soil). Loosen or replace soils to restore drainage (and prevent standing water)	• Inspect monthly and after every 0.5-inch or larger storm event. If mosquitos are observed, increase inspection frequency to after every 0.1-inch or larger storm event. • Maintenance when needed
Entrance / opening to the vegetated pervious area is blocked such that storm water from impervious area will not drain into the pervious area (e.g., a curb cut opening is blocked by debris or a roof drain outlet has been directly connected to the storm drain system)	Make repairs as appropriate to restore drainage into the vegetated pervious area.	• Inspect monthly. • Maintenance when needed.

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SD-5
Impervious Area Dispersion

References

American Mosquito Control Association.
http://www.mosquito.org/
County of San Diego. 2014. Low Impact Development Handbook.
http://www.sandiegocounty.gov/content/sdc/dpw/watersheds/susmp/lid.html
San Diego County Copermittees. 2016. Model BMP Design Manual, Appendix E, Fact Sheet SD-5.
http://www.projectcleanwater.org/index.php?option=com_content&view=article&id=250&Itemid=220

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SD-5

Impervious Area Dispersion

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	
Property / Development Name:	Responsible Party Name and Phone Number:	
Property Address of BMP:	Responsible Party Address:	

INSPECTION AND MAINTENANCE CHECKLIST FOR SD-5 IMPERVIOUS AREA DISPERSION PAGE 1 of 3			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Poor vegetation establishment Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		
Dead or diseased vegetation Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Remove dead or diseased vegetation, re-seed, re-plant, or re-establish vegetation per original plans ☐ Other / Comments:		
Overgrown vegetation Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Mow or trim as appropriate ☐ Other / Comments:		

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SD-5

Impervious Area Dispersion

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR SD-5 IMPERVIOUS AREA DISPERSION PAGE 2 of 3			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Standing water in vegetated pervious area for longer than 24 hours following a storm event Surface ponding longer than approximately 24 hours following a storm event may be detrimental to vegetation health Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Disperse any areas of standing water to nearby landscaping (i.e., spread it out to another portion of the pervious area so it drains into the soil). Make appropriate corrective measures to prevent standing water such as adjusting irrigation system, or repairing/replacing clogged or compacted soils ☐ Other / Comments:		
Presence of mosquitos/larvae For images of egg rafts, larva, pupa, and adult mosquitos, see http://www.mosquito.org/biology Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Disperse any areas of standing water to nearby landscaping (i.e., spread it out to another portion of the pervious area so it drains into the soil) ☐ Make corrective measures (see above) to restore drainage (and prevent standing water) ☐ Other / Comments:		

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SD-5

Impervious Area Dispersion

Date:	Inspector:	BMP ID No.:
Permit No.:	APN(s):	

INSPECTION AND MAINTENANCE CHECKLIST FOR SD-5 IMPERVIOUS AREA DISPERSION PAGE 3 of 3			
Threshold/Indicator	**Maintenance Recommendation**	**Date**	**Description of Maintenance Conducted**
Entrance / opening to the vegetated pervious area is blocked such that storm water from impervious area will not drain into the pervious area (e.g., a curb cut opening is blocked by debris or a roof drain outlet has been directly connected to the storm drain system) Maintenance Needed? ☐ YES ☐ NO ☐ N/A	☐ Make repairs as appropriate to restore drainage into the vegetated pervious area* ☐ Other / Comments:		

*If the pervious area has been removed, contact the [City Engineer] to determine a solution.

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ATT 4 MTS STATIONS WITH TREATMENT BMPS

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MTS BMP LOCATIONS AND INSPECTION DATES

#	Station	BMPs	INSPECTION DATES			
			22-Nov	22-Dec	23-Jan	23-Feb
1	8th Street	6 Bioretention Basins, 1 Biofiltration Strip, 15 Drain Inserts (DI)	11/02/2022 11/22/2022		1/20/2023	
2	24th Street	7 Bioretention Basins, 13 DI	11/10/2022 11/22/2022			
3	Balboa Avenue Station	7 Bioretention Basins, 13 DI		12/2/2022	1/31/2023	
4	Barrio Logan	2 Bioretention Basins, 3 DI	11/10/2022		1/20/2023	
5	Beyer Blvd.	4 Bioretention Basins, 4 DI, 1 Water Quality Vault (WQV)	11/22/2022			
6	Del Lago	1 Biofiltration swale, 6 DI				
7	E Street	3 Bioretention Basins, 9 DI		12/2/2022		
8	East Palomar Transit Center	2 Bioretention Basins, 3 DI		12/2/2022		
9	Executive Drive	6 Bioretention Basins, 6 DI				
10	Grossmont Transit Center	2 DI				
11	H Street	3 Bioretention Basins, 4 DI, 1 WQV		12/2/2022		
12	Iris Avenue	4 DI		12/2/2022		
13	Miramar College	4 DI		12/14/2022		
14	Old Town Transit Center	13 DI	11/9/2022	12/2/2022		
15	Pacific Fleet	2 Biostrips	11/8/2022			
16	Palm Avenue	6 DI, 1 WQV			1/20/2023	
17	Palomar Street	4 Bioretention Basins, 10 DI		12/2/2022		
18	Rancho Bernardo TC	2 Biofiltration Swale, 4 DI, 1 WQV	12/14/2022	12/14/2022		
19	Sabre Springs	1 Biofiltration Swale, 3 Bioretention Basins, 7 DI		12/14/2022		
20	Santa Fe Depot	2 DI	11/9/2022			2/27/2023
21	Seaport Village	1 Biofiltration strip, 7 DI	12/2/2022	12/2/2022		
22	Tecolote Road	3 Bioretention Basins, 8 DI		12/2/2022	1/31/2023	
23	UTC	6 Bioretention Basins, 5 DI				
24	VA Medical Drive Station	1 Bioretention Basin, 4 Biofiltration Swales, 4 DI	12/2/2022	12/2/2022		
25	Voigt Drive Station/ UCSD Health La Jolla	3 Bioretention Basins, 1 Biofiltration Swales, 7 DI	11/10/2022		1/10/2023	

* During the term of the agreement, locations and BMPs are subject to change.

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EXHIBIT A1

CONTRACTOR'S TECHNICAL PROPOSAL

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PREPARED FOR

MTS Metropolitan Transit System

MS4 Support and As-Needed BMP Repair and Consulting Services

MTS DOC. NO. PWG367.0-23

DUE DATE: JUNE 23, 2023

PREPARED BY

wsp

TABLE OF CONTENTS

DRAFT

June 23, 2023

Attn: Steve Augustyn, Senior Procurement Specialist
Metropolitan Transit System
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101

RE: MS4 SUPPORT AND AS-NEEDED BMP REPAIR AND CONSULTING SERVICES

Dear Mr. Augustyn;

San Diego Metropolitan Transit System (MTS) is seeking assistance with managing their existing Stormwater Management Program required under the Small MS4 General Permit with the California State Water Resources Control Board (SWRCB) Order No. 2013-0001-DWQ. The intent of this effort is to provide MTS with ongoing implementation with the Non-Traditional Small MS4 Permittee provisions outlined in Section F of the Small MS4 Permit.

The team we are offering under this opportunity is the same team that has been delivering the MTS Stormwater Management Program over the last six years. This began in 2016 with Richard "Rick" Bottcher serving as the Project Manager and Veronica Seyde serving as the Deputy Project Manager. Our initial effort began with the Small MS4 Permit enrollment phase and then developing the various Stormwater Management Program elements. In 2019, as the Project Manager, Veronica has been working with MTS with successfully implementing the multiple aspects of the MTS Stormwater Management Program. As such, our team offers the strongest value to MTS given our legacy working knowledge of MTS staff, facilities and projects as well as your processes, procedures, and standards. Moreover, WSP has specific working knowledge of the MTS Stormwater Management Program and offers the same key technical team members to continue working collaboratively with MTS to achieve compliance with the current MS4 Permit as well as the proposed reissuance of the Statewide Phase II Small MS4 Permit.

Based on our working knowledge of the MTS Stormwater Management Program WSP has organized our Work Plan strategy into three elements:

Program Management: Veronica Seyde will continue to lead this effort as the Project Manager for MTS, she has an effective working relationship with the MTS Environmental Health and Safety (EHS) Specialist. Their open communication style, either through text messages, email or telephone calls, has enabled MTS to respond to multiple inquiries from both internal MTS department leads along with time-sensitive questions and information requests from the San Diego Regional Water Quality Control Board (RWQCB).

Veronica has hands-on experience designing cost-efficient stormwater programs. For the MTS Public Outreach Campaign, Veronica connected MTS to the California Department of Transportation (Caltrans) Stormwater representative in Sacramento. ***This partnership provided public outreach materials at no cost to MTS. This effort led to the Clean Water Starts with Clean Stations tag line that MTS advertised at bus shelter kiosks, the Rider Insider and bus cards in 2020. This no-cost program resulted in 1,000's of impressions in 2020 and allowed MTS to achieve compliance with the Public Education Outreach Compliance Strategy.***

MS4 Support Services: Our team knows your MS4 system better than any other firm. We have an excellent understanding of your transit infrastructure network and water quality features. We intend to build on our existing knowledge, relationships, experience and lessons learned to assist you with continuing the implementation of

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your MS4 Stormwater Management Program. ***A key value of WSP to MTS is our familiarity with Treatment Best Management Practice (BMP) inspection and maintenance. Under this agreement, we have developed a strategy for performing this work that protects MTS' assets.*** As indicated in the MTS Operations & Maintenance Activity Guidance Manual, all Treatment BMPs are required to be inspected by a qualified individual. Furthermore, Treatment BMPs must be properly maintained to ensure that they operate correctly and provide the water quality treatment for which they were designed.

Our goal for this contract is to protect the investment MTS has made with the design and construction of Treatment BMPs located along their light rail corridor and at their Bus Rapid Transit (BRT) stations. To achieve that goal, we have assembled a qualified and experienced inspection team. Our inspectors will identify maintenance requirements and then schedule the maintenance activity with our subcontractor, San Diego Stormwater Solutions (SDSS). SDSS has eight years' experience performing Treatment BMP maintenance and has been providing this service to MTS since 2021. After the maintenance is performed, our inspectors will verify that the work performed ensures that the Treatment BMP operates correctly and provides the water quality treatment for which it was designed. Again, performing inspection and maintenance by two separate parties eliminates bias, protects MTS' investment and ensures that MTS can avoid more costly rehabilitative maintenance that results when facilities are not adequately maintained.

As-Needed Repair Services: Regarding As-Needed Repair Services, as noted in the MTS Operations & Maintenance Activity Guidance Manual, required maintenance for Treatment BMPs is separated into two broad categories:

1. Normal Expected Maintenance
2. Non-Standard Maintenance of BMP Failure

Our cost proposal for maintenance considers maintenance referenced in Section 5.4.2.3 as applicable to Normal Expected Maintenance. Any Non-Standard Maintenance of BMP Failure will be provided per the terms and conditions set forth in Section 5.5 of PWG367.0-23. Our sub-contractor, SDSS, will provide Treatment BMP maintenance for both Treatment BMP maintenance categories.

We are enthusiastic about this opportunity and hereby dedicate the technical resources to complete this effort. As a senior business leader I am legally authorized to bind this proposal on behalf of WSP. Our proposal will remain valid for a period of no less than one hundred and twenty (120) days from the date of submittal. We acknowledge the receipt of Addendum No. 1 dated June 8, 2023. We have provided proof in Appendix V that the required insurance coverage contained in the Sample Agreement can be obtained by WSP. As part of WSP's Health, Safety and Environment program, all field employees are required to take mandatory training related to roadway and work zone field safety and we are ready to gain certification under any MTS-required Roadway Worker Safety Training. We look forward to continuing to work collaboratively with MTS to achieve compliance with the Small MS4 permit. If you have any questions, please contact me or our project manager, Veronica Seyde.

Sincerely,

Patti Boekamp
Senior Director | Local Business Leader
T-619 338-9376
M-619-937-1930
Patti.Boekamp@wsp.com
401 B Street Ste 1650
San Diego CA 92101-4245

Veronica Seyde
Project Manager | Environmental Science
T-714-564-2745
M-949-637-8912
Veronica.Seyde@wsp.com
1100 W. Town and Country Road, Suite 200
Orange, CA 92868

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TECHNICAL PROPOSAL

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QUALIFICATIONS, RELATED EXPERIENCE AND REFERENCES OF PROPOSER

FIRM PROFILE

WSP USA Inc. (WSP) is a nationally recognized firm and a global leader in engineering and water infrastructure. We are ranked No. 2 globally in Pure Engineering Design and No. 8 in Water by Engineering News Record, we offer breadth and depth of water and drainage design services. We have more than 63,000 engineers, technicians, scientists and environmental experts, planners, modeling specialists, program and construction management professionals across 40 countries. In the last five years, the San Diego office managed and provided over $2 billion in infrastructure-related project design services. We have worked in San Diego for the last 35 years and with MTS for the last 6 years. Our San Diego experience includes stormwater infrastructure design, inspection and maintenance projects.

Work of a Similar Nature

As referenced in the Related Experience section of this proposal, we have stormwater management project experience with many of the MS4 Permittees in the San Diego region, including Caltrans, County of San Diego, City of San Diego, City of Chula Vista, University of California San Diego (UCSD), San Diego Airport Authority and Naval Base San Diego (NAVFAC Southwest). Our in-depth knowledge garnered from these local projects includes an understanding of the Phase I and Phase II MS4 permits as well as Treatment BMP design standards referenced in the White Book, Drainage Design Manual, City Standard Plans, and the MTS Post Construction Stormwater Management Manual. We know how to execute these standards for MTS. **Exhibit 1** highlights our years of experience for the services requested in PWG367.0-23. **Exhibit** 2 summarizes our related experience, demonstrates our public agency experience and how we have performed technical work of a similar nature.

Competence in the Types of Services Offered

WSP is a talented group of individuals with professional work experience in municipal and industrial stormwater management, flood control and stormwater quality treatment. Our MTS team possesses advanced degrees in coastal and civil engineering, environmental sciences and natural resources. We can offer MTS a team of stormwater experts that can assist in stormwater management program implementation. Our team includes Qualified Industrial Stormwater Practitioners and Qualified SWPPP Developers (some of which have been licensed by the State to train inspectors and engineers on the requirements for stormwater pollution prevention), and can thereby provide assurance that regulatory requirements will be implemented correctly (see **Exhibit 4** and **Exhibit** 5 in Proposed Staffing, Organization, and Management Plan). Proposed Staffing, Organization, and Management Plan). Our team focuses on BMPs, project design features, avoidance, minimization protection and mitigation for aquatic resources and offers guidance in selecting specific operational measures which serve as valuable input into terms and conditions for permits addressing water quality.

Financial Condition (Strength and Stability)

WSP has no bankruptcies, pending litigation, planned office closures or impending mergers that may impede our ability to complete the project. WSP USA Inc.'s average revenue over the past three years exceeds $1 billion, with the expectation of continued growth. The firm's ultimate parent company, WSP Global Inc., is a publicly traded company on the Toronto Stock Exchange. The financial statements of the subsidiaries of WSP Global Inc., which include WSP USA Inc., are consolidated in the audited financial statements of WSP Global Inc. Current copies of these financial statements, as well as information regarding mergers and acquisitions, stock details, and dividends, are all available in Appendix I or for download at https://www.wsp.com/en-gl/investors/reports-and-

WSP
AT A GLANCE

Corporation
FOUNDED IN 1933

ENVIRONMENTAL INFRASTRUCTURE • ENGINEERING • DESIGN
MULTIDISCIPLINARY FIRM

86+
YEARS IN THE U.S.

15,000+
NUMBER OF U.S. EMPLOYEES

200+
U.S. OFFICES

63,000+
NUMBER EMPLOYEES WORLDWIDE

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filings/annual-report. The financial questionnaire form is located the Forms section of this Proposal.

Staffing Capability

The WSP team we offer to MTS, is immediately available to begin work on this project. In addition to our ability to be extremely responsive, our network of offices throughout California as well as our local staff in San Diego gives us the resources and regional expertise necessary to implement cost-effective and technically excellent solutions that manage stormwater. Our Stormwater Management experts have many years of experience working in this field of expertise and have written guidelines for municipal stormwater management including municipal guidelines for Green Streets, Permanent BMPs, Construction BMPs, and Erosion and Sediment Control. We have certified Qualified SWPPP Designer (QSD), Qualified SWPPP Practitioner (QSP), and Qualified Industrial Storm Water Practitioner (QISP) personnel on staff along with personnel who have developed MS4 programs for various agencies and who understand the proper facilities to be used given site and regulatory conditions including TMDL compliance, groundwater recharge requirements, and infiltration basin constraints. Our staff's capacity to support MTS's workload is featured in the resumes in Appendix II. Please note, staffing capability is also indicated by the percentage of availability symbol displayed on every team member's resume.

Workload Concurrent with the Performance Period Under this Solicitation

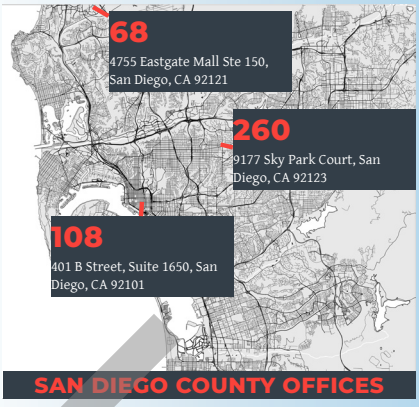
Exhibit 5 displays our staffing availability and demonstrates how our current workload will not impact our ability to deliver the services required under PWG367.0-23. WSP's well-established network of San Diego offices—incorporating hundreds of professionals and technicians—and unique depth of experience throughout the San Diego area provides MTS with a proven, flexible and responsive team with a local and regional understanding and extensive experience level. WSP's comprehensive coverage, understanding of day-to-day MTS operations and facilities, and ability to plan for and react to all of MTS's stormwater management, environmental, engineering, emergency and program support needs will be critical to the success of this contract.

Record of Meeting Performance Standards on Similar Agreements

For over 20 years, WSP's stormwater team has delivered pragmatic, innovative, and outstanding technical solutions to our clients. Our local client base includes MTS, County of San Diego, City of San Diego, City of Chula Vista, UCSD, San Diego Airport Authority and Naval Base San Diego (NAVFAC Southwest). WSP combines expertise in all facets of stormwater quality and water quality mitigation with local experience, engineering, and planning expertise in assisting transportation agencies and municipal clients to achieve Phase I and Phase II NPDES permit compliance.

Supportive Client References

Contact information for our client references is presented with our selected projects. We have identified three specific references, as requested. These references can be found in the Status of Current and Past Contracts Form found in the Form section and are also displayed in **Exhibit 2** our strongest indicator of support from our clients is the volume of repeat business we have achieved over the years. This includes a two year extension on our current MTS MS4 contract. As another proof of supportive client references, we offer the following testimonials from the County of San Diego for our work under their Treatment BMP inspection and QSD/QSP services under our San Bernardino County Transportation Authority (SBCTA) contract. Please note, the work under the San Diego County contract is the same type of services requested under PWG367.0-23.



SAN DIEGO COUNTY OFFICES

"The team I worked with for TO32 (Brenda Stevens, Omar Arredondo, and Tess Holmes) have been invaluable. I was struggling with the next steps for how to reach out and engage customers who were not responding to our program. With this team's help, as well as their strategy, enthusiasm, and passion for the work they do, we were able to reach 14% more customers than the previous year. This milestone is amazing as we had never reached this goal in this early of the process. I strongly believe that it was due to this team's hard work and dedication to their craft that we were able to get there, and I cannot say enough about the support and help we have received from them over the years."

Annica Ly, San Diego County, Project Manager

"... Veronica did an excellent job at keeping me informed of required reporting and potential issues with Risk Level changes on the project and did an excellent job staying on top of the permit reporting requirements and managing the Contract Task Order budget."

Victor Lopez , Director Of Transit And Rail Programs, SBCTA

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YEARS OF RELATED EXPERIENCE IN EACH SERVICE AREA

MTS REQUESTED SERVICES	YEARS OF EXPERIENCE
Program Management: Monthly Meetings, Invoice/Progress Report and Project Team Coordination and Management	20
Annual Report	15
Stormwater Pollution Prevention Plans (SWPPP)/Water Quality Technical Report (WQTR) Review	15
Treatment BMP Inspections and Maintenance	23
Training and Development	23
Track MS4 Permit Requirements	6
Annual Guidance Updates	23
Total Maximum Daily Loads (TMDL) Compliance Implementation: • geographic information system (GIS) • IDDE	6 15 6
Public Education and Outreach Programs	15
Construction General Permit: • Erosion and Sediment Control Plans • Facility Assessments • Post-Construction Stormwater Management Programs • Trash Compliance Implementation • Fact Sheets	20 30 23 23 23 10
As-Needed Repair Services	8

Exhibit 1 Years Of Related Experience In Each Service Area

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SAN DIEGO STORMWATER SOLUTIONS

FIRM PROFILE

Contact Name: Gregg Brenner

Address: 130 Smilax Road
San Marcos, CA 92069

Phone Number: 858-397-1001

Email: gregg@sdstormwater.com

Project Function: Treatment BMP Maintenance

Our teaming partner for this solicitation, San Diego Stormwater Solutions (SDSS), has been carefully selected for their extensive experience performing maintenance on stormwater Treatment BMPs for MTS. They are a small company and a local vendor, in San Marcos, California. Their expertise ranges from inspection, installation, removal and replacement, general maintenance, and reporting. In addition, they have experience working within "Live" traveled roadways and light rail ROW. SDSS has experience performing the requested scope of services at the MTS Trolley, IAD, and KMD facilities since July of 2021, and the transit locations since September of 2021. They specialize in Treatment BMP maintenance on devices such as bioretention and detention basins, stormwater vaulted units and installation and maintenance of filtration inserts for modular wetland systems. SDSS can provide light traffic control, confined space entry and has the necessary equipment for the job which includes mini-vacs and full vac trucks. SDSS will be performing maintenance on MTS Treatment BMPs.

SDSS will be in charge of Treatment BMP maintenance given their experience maintaining Treatment BMPs at the MTS BRT facilities, SDSS brings MTS assurance that maintenance needs will be addressed based on regular maintenance triggers as well as when an immediate corrective action is required. WSP will schedule and provide oversight of SDSS's Treatment BMP maintenance.

SDSS
AT A GLANCE

Corporation
FOUNDED IN 2015

8
YEARS IN SAN DIEGO

9
NUMBER OF U.S. EMPLOYEES

1
U.S. OFFICES

4
NUMBER OF VACTOR TRUCKS

3
NUMBER OF HYDRO-JETTING DEVICES

11
NUMBER OF FLEET VEHICLES/ TRUCKS

10,000 sq ft
YARD AREA FOR STAGING DEBRIS PRIOR TO DISPOSAL.

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Firm Experience

Exhibit 2 provides a snapshot of the projects that we selected to feature our related experience to the services requested. Our three selected references are noted below and in the MTS Status in the Forms section provided after Appendix V.

WSP PROJECTS THAT MEET MTS CRITERIA			
WSP PROJECT	TECHNICAL WORK OF A SIMILAR NATURE	PUBLIC AGENCY EXPERIENCE	REFERENCES
San Diego Metropolitan Transit System, MS4 Phase II Permit Program	✓	✓	Karen Landers - Reference listed in the Status of Current and Past Contracts Form
County of San Diego, Watershed Protection Program Structural BMP Inspections	✓	✓	Christopher Lawrance - Reference listed in the Status of Current and Past Contracts Form
California High Speed Rail Authority (CHSRA), California High Speed Rail (CHSR) GIS	✓	✓	
San Diego Association of Governments (SANDAG), Mid-Coast Corridor Transit Project	✓	✓	
City of San Diego Transportation and Stormwater Department, Total Maximum Daily Loads (TMDL)	✓	✓	Andre Sonksen - Reference listed in the Status of Current and Past Contracts Form
SANDAG, Border to Bayshore Stormwater Management	✓	✓	
Government of Guam Department of Public Works (DPW), Guam Island-wide Program Management Services	✓	✓	
City of San Juan Capistrano, San Juan Capistrano Riding Park BMP Implementation	✓	✓	

Exhibit 2 WSP Projects that Meet MTS Criteria

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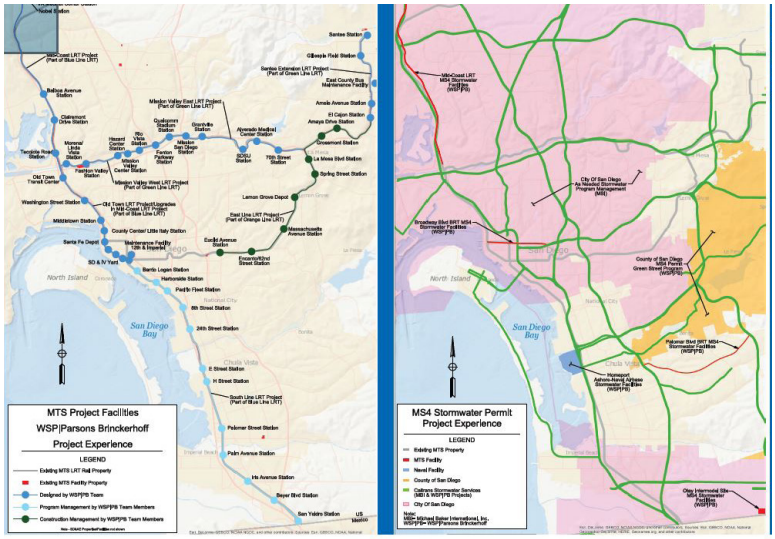

MS4 Phase II Permit Program Development

San Diego Metropolitan Transit System | San Diego, CA

WSP has worked in various capacities on a significant portion of the MTS transit network, as shown on the map above (left side). This experience affords us a unique familiarity with the properties and facilities we will be concerned with as part of this project. WSP has assisted numerous local clients with MS4 permit compliance, as shown in the map above (right side). This experience provided us with substantial insight into the requirements of the small MS4 Phase II Permit and the most effective means by which to assist MTS with continuing their stormwater management program.

Over the last six years, WSP provided program management services for the development and implementation of the MTS MS4 Phase II Permit. This effort included the development of documents and compliance programs required for enrollment as a Non-Traditional Small MS4 Discharger in accordance with the California State Water Resources Control Board Order No. 2013-0001-DWQ. The project lies throughout the County of San Diego, with the MTS jurisdiction traversing and sometimes connecting to the drainage systems of other MS4 permittees including the Cities of La Mesa, San Diego, Chula Vista, National City, Santee, El Cajon, Lemon Grove, and Poway, the Port of San Diego, Caltrans, UCSD and the County of San Diego. Agency coordination for the various stormwater management project elements included coordination with these MS4 Permittees and with San Diego RWQCB.

This six-year effort provided MTS with an implementation plan, jurisdictional map encompassing all facilities within MTS jurisdiction including: 114 miles of rail, 53 stations, and eight maintenance facilities, a stormwater system inventory, treatment BMP and facility inspections, design and implementation of the MTS Public Outreach and Education program, county wide mapping of their entire drainage system and adjacent agency drainage systems on geographic information system (GIS), and TMDL compliance. Guidelines for Construction and Post-Construction Stormwater Management BMP Design, Inspection and Operation and Maintenance (O&M), Illicit Discharge Detection Monitoring and a PEAIP over the 6-year implementation period were also prepared. All program elements were documented in a Stormwater Management Plan prepared for MTS.

Details

Firm: *WSP*

Technical Staff:

- *Rick Bottcher*
- *Veronica Seyde*
- *Christian Herencia*
- *Jessica Li*
- *Chris Koury*
- *Hessam Tavakoldavani*
- *Debby Reece*

Client Contact Information:

Karen Landers

1255 Imperial Avenue, Suite 1000 San Diego, CA 92101

karen.landers@sdmts.com

Telephone: 619-557-4512

Contracting Agency:
Metropolitan Transit System

Service Provided: *MS4 Phase II Municipal Permit documents and development of comprehensive compliance programs as required under the small MS4 permit as outlined in the General Order.*

Contract Period:
July 2016 – Ongoing

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Inspection of a Bioretention Basin with Hydromodification Flow Control Orifice

Watershed Protection Program Structural BMP Inspections

County of San Diego | San Diego County, CA

BMP Program Support, to confirm inventoried Treatment BMPs are maintained and operational prior to the wet season annually. WSP conducts annual onsite inspections of projects with high priority BMPs (619 BMPs on 113 projects). Inspections confirm the BMP was installed per specifications on plans and are being maintained in a manner to keep the BMP operational and providing water quality treatment benefits. Inspection findings and recommended maintenance activities per BMP type are recorded in inspection reports issued to responsible parties. When necessary, follow-up inspections are conducted to ensure that maintenance deficiencies are corrected. Clear communication, education, and outreach are built into the inspection process to help ensure compliance.

Inspection of a Hydrodynamic Separator Unit

WSP also inspected and field verified publicly (County) maintained Treatment BMPs to verify that the GIS BMP inventory accurately reflects the Department of Public Works Transportation BMP inventory. Information recorded during inspections resulted in a list of recommended maintenance activities to increase BMP performance in the public right-of-way (ROW). For any BMPs not inventoried, WSP's GIS experts created project and BMP delineations with data attribute tables to be uploaded into GIS to ensure BMPs will be inspected and maintained in the future.

The WSP team's strong local expertise and familiarity with project sites, the BMP design manual and permit requirements, as well as access to a network of BMP effectiveness experts, increases efficiency and consistency during inspections though internal training and defined processes.

Details

Firm: *WSP*

Technical Staff:

- *Brenda Stevens*
- *Omar Arredondo*
- *Jenna Mencarelli*
- *Tess Holmes*
- *Dylan Cawthorne*
- *Luis de la Torre*

Client Contact Information:

Christopher Lawrance

5510 Overland Ave. Suite 310, San Diego, CA 92123-1239

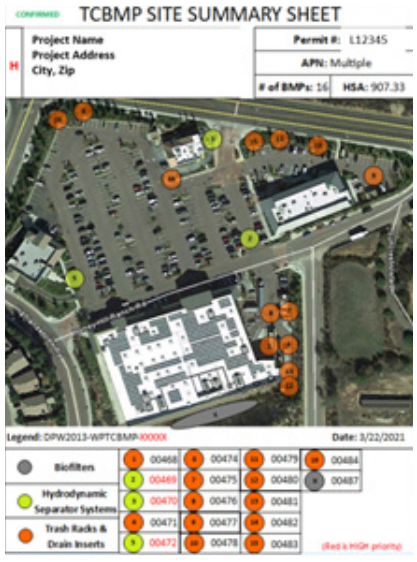
christopher.lawrance@sdcounty.ca.gov

619-433-7225

Contracting Agency: *County of San Diego*

Service Provided: *Service support efforts to comply with water quality regulations included in the Municipal Stormwater Permit Order No. R9-2013-0001 (and future updates), TMDLs, and other water quality-related as needed tasks.*

Contract Period: *August 2018 – August 2023*



Site summary maps for each PDP orients users with an overview map with searchable BMP location(s)

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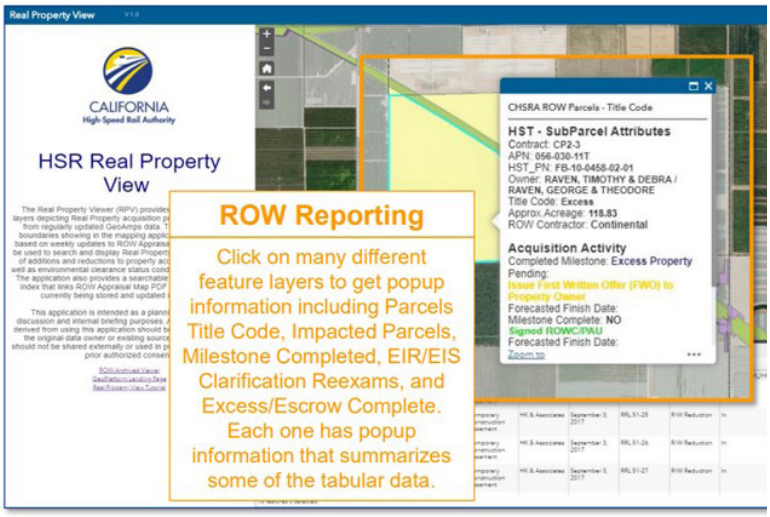


California High Speed Rail GIS

California High-Speed Rail Authority | Sacramento, CA

WSP has been acting as the program managing contractor in partnership with the CHSRA since 2013. Once constructed, the 800 miles of high-speed rail (HSR) will connect California's major cities, contribute to economic development and opportunity, support the state's climate change policies and initiatives, and preserve agricultural and protected lands.

WSP has been providing Geo Spatial support for the project to help track changes to proposed rail designs, monitor environmental clearances, manage assets, and archive property acquisitions along the HSR corridor. In addition, many GIS applications have been developed to share real time spatial intelligence with the various teams working on the project.

This GIS application is widely used by the CHSRA and the various partnering contractors to track property acquisitions and potential constraints that may hinder project construction. Other milestones included development of an effective GIS training module for CHSRA staff and their contractors to ensure ease of use for all GIS users. By merging multiple programs, WSP provided CHSRA with a single, coherent GIS that was then capable of efficiently managing all CHSRA activities.

Details

Firm: *WSP*

Technical Staff:

- *Matthew Porter*

Client Contact Information:

David Kwalwasser
(Senior Land Surveyor)

770 L Street, Suite 800

david.kwalwasser@hsr.ca.gov

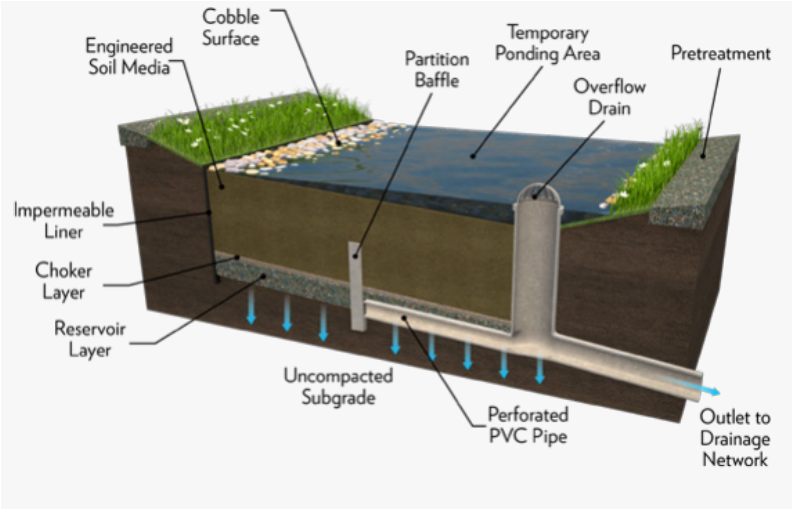
559-835-5884

Contracting Agency: *California High-Speed Rail Authority*

Service Provided: *Development of ROW GIS Tracking Web Application, Development of Existing and Proposed Utility intersections, Development of Various Environmental Footprints, Development of Asset Management GIS using Ready for Construction and As-Built documentation.*

Contract Period: *January 2013 – Ongoing*

DRAFT



Details

Firm: *WSP*

Technical Staff:

- *Rick Bottcher*
- *Veronica Seyde*
- *Jessica Li*
- *Chris Koury*
- *Hessam Tavakoldavani*

Client Contact Information:

Sharon Humphreys

401 B Street, Suite 800, San Diego, CA 92101

Sharon. Humphreys@sandag.org

858-776-9402

Contracting Agency: *SANDAG*

Service Provided: *Engineering, and environmental services in support of the Mid-Coast Corridor Transit Project this includes water quality management plan development and Treatment BMP design in compliance with applicable MS4 Permits*

Contract Period: *November 2017 – July 2021*

Mid-Coast Corridor Transit Project

SANDAG | San Diego, CA

WSP provided engineering, and environmental services in support of the Mid-Coast Corridor Transit Project, a 10.9 mile extension of the existing San Diego Trolley Blue Line from Downtown San Diego to University City. The project included eight bridge crossings; two viaducts; 6.87 miles of at-grade alignment in, or adjacent to, existing railroad ROW; and 4.05 miles of aerial structure in new ROW or within existing street ROW. Of the nine proposed stations, four are at-grade and five are aerial. The stormwater facilities for the project included over 43,000-ft of track underdrain for the at-grade track sections and over 9000-ft of storm drain with 80 storm drain structures intercepting and conveying flow to numerous treatment and flow control facilities designed in accordance with MS4 Permit requirements. These included 10 bioretention facilities, two infiltration devices, two biofiltration swales, two media filters, and two hydromodification vaults. The overall design included stormwater treatment and hydromodification control for nine track stations, four parking lots, three parking structures, eight traction power substations, the City of San Diego Rose Creek Maintenance Yard, and 17,000-ft of track viaduct.

The project lies within various jurisdictions in San Diego, each with their own MS4 permit dictating much of the overall drainage design. The design includes facilities that satisfy the water quality and hydromodification requirements set forth in the MS4 permits for UCSD, City of San Diego and Caltrans. The project incorporated a variety of approved Treatment BMPs using low impact design (LID) measures. General site BMPs and control measures included conserving natural areas, protecting slopes and channels, minimizing impervious areas, and utilizing LID and Treatment BMPs which include infiltration devices, biofiltration devices, bioretention devices, sidewalk planters, and detention devices. In addition, the facilities cross major streams including the San Diego River, Tecolote Creek and Rose Creek requiring design of appropriate scour, flood control, and embankment stabilization along with satisfying regulatory agency concerns. Agency coordination for the various stormwater management project elements included coordination with the San Diego RWQCB, California DFW, California Coastal Commission, U.S. DFW, Army Corps of Engineers, FEMA, City and County of San Diego, UCSD, Caltrans, SANDAG, BNSF, Amtrak, Friends of Rose Canyon, and Rose Canyon Watershed Alliance.

DRAFT

Details

Firm: *WSP*

Technical Staff:

- *Kristina Hysler*

Client Contact Information:

Andre Sonksen

9370 Chesapeake Drive, Suite 100

San Diego, CA 92123

Asonksen@sandiego.gov

858-541-4317

Contracting Agency: *City of San Diego*

Service Provided: *WSP supports the County WPP by conducting a range of inspection services for ongoing compliance with MS4 Permit requirements and County Watershed Protection Ordinances (WPOs).*

Contract Period: *September 2019 – August 2023*

Total Maximum Daily Loads

City of San Diego Transportation and Stormwater Department | San Diego, CA

WSP has provided planning, water quality monitoring, and reporting services for the City of San Diego (City) since 2011. Our effective and efficient approach to water quality monitoring results in maintaining City compliance requirements with the MS4 Permit, TMDLs, Areas of Special Biological Significance (ASBS), and Bacteria and Trash policies. Since our original contract in 2011, we successfully executed more than 150 task orders, including annual compliance monitoring for the Chollas Creek and Los Peñasquitos WMA TMDL compliance monitoring programs and many other special studies in support of emerging policies. In executing these projects with a continued focus on efficiency and streamlined project delivery, WSP has reduced monitoring budgets for three of the four long-term monitoring programs. We also provided regulatory support services, ranging from comment letter development, technical analysis, and interpretation to support for legal lines of evidence and participation in policy development at state and regional levels. Each task requires in-depth knowledge of the applicable science and policy. WSP has successfully managed more than 120 as-needed requests for the City. We provided the appropriate industry experts and technical support to advance the scientific basis of water quality regulations for toxicity, trash, and bacteria.

Adaptive, Highly Qualified Team: WSP provided the City with a full-service team to meet its contract, including engineers, scientists, project managers, field technicians, and regulatory and policy experts. WSP has successfully helped the City navigate wide-ranging policies, making sure that the City's concerns are heard while achieving 100% permit compliance and remaining a regional leader in emerging studies and policy development. The WSP team has worked with the City and seven other jurisdictions since the 2013 Phase I MS4 Permit was adopted to develop and implement WQIP for the San Dieguito River, Los Peñasquitos, and Mission Bay Water Resources Mission Area (WMA). The WSP team identified the highest priority water quality conditions, set goals for meeting water quality objectives, and developed strategies to meet the goals. Furthermore, an adaptive management plan developed by qualified professionals encouraged continual improvement.

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Border to Bayshore Stormwater Management

SANDAG | San Diego, CA

The Border to Bayshore Bikeway project consists of approximately 6.47 miles of on-street bikeway that will provide safe biking connections within and between Imperial Beach, the San Ysidro community of San Diego, and the world's busiest land border crossing at the San Ysidro Port of Entry. Special intersection and traffic calming treatments included protected intersections, bend-out treatments, bike boxes, two-stage queue boxes, neighborhood traffic circles, pedestrian curb extensions (pop-outs), raised crosswalks, speed cushions, and landscaping and aesthetic improvements. Additional proposed improvements include minor roadway alterations, road restriping, signal modifications, median modifications, stormwater improvements, parking reconfiguration, utility relocation, installation of signage and stenciling, lighting and similar minor physical improvements.

The project involved close coordination with the City of San Diego Stormwater Department and preparation of a Stormwater Quality Management Plan to satisfy their MS4 permit requirements. To minimize water quality impacts, the Border to Bayshore Bikeway project was designed to direct stormwater runoff to Green Gutter BMPs. According to the City of San Diego Stormwater Standards BMP Design Manual (developed as part of the City's MS4 permit program), Green Gutters are shallow, narrow strips of landscaping in a typical curb and gutter location with a lower elevation than the street gutter elevation to allow capture and treatment of poor-quality stormwater from the sidewalk and street. Once low flows carrying pollutants are captured in the green gutter, high flows outlet or divert to a concrete gutter for ultimate discharge into the offsite storm drain facilities. incorporating a green gutter along the Border to Bayshore Bikeway.

Bend out roadway treatment incorporating a green gutter

Details

Firm: *WSP*

Technical Staff:

- *Veronica Seyde*
- *Rick Bottcher*
- *Debby Reece*
- *Jessica Li*

Client Contact Information:

Madai Parra

401 B St Ste 800, San Diego, California, 92101

Madai.Parra@sandag.org

(619) 699-1924

Contracting Agency: *SANDAG*

Service Provided: *Developed PS&E plans along with a Storm Water Quality Management Plan - Green Street Exemption and a Conceptual SWPPP*

Contract Period: *March 2019 – Ongoing*

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Guam Island-Wide Program Management Services

Government of Guam Department of Public Works (DPW) | Tamuning, Guam

WSP continued their role as program manager and provided engineering and program management services for highway projects managed by the Guam (DPW). Our team provided support to the DPW and the Federal Highway Administration (FHWA) by developing an island-wide stormwater management program (SWMP) for the island of Guam as required by the U.S. Environmental Protection Agency (USEPA) for compliance with the Phase II MS4 Permit. Under Phase II of the NPDES MS4 Permit, Guam is required to develop and implement a SWMP to reduce the contamination of stormwater runoff and prohibit illicit discharges through the municipal separate storm sewer system (MS4) to waters of the United States. Commonly referred to as an "MS4 Permit" under the NPDES regulations. This work is necessary to comply with U.S. federal water quality regulation requirements and to remain eligible for future federal funds for roadway and related infrastructure projects. The scope of work included preparation of the individual NPDES permit application for stormwater discharges from the small MS4 operated by DPW, development of the draft and final SWMP, and preliminary design related services as defined in 23 Code of Federal Regulations (CFR) § 172.3 for submittal to the USEPA and other jurisdictional agencies as required. Other scope of work items included:

- Evaluating storm drain systems and developing a systematic approach for prioritizing Treatment BMP implementation
- Developed and delivered water quality training programs to agency staff
- Inspected Treatment BMPs and provided maintenance recommendations
- Developed and updated the Guam DPW Stormwater Management Program
- Negotiated MS4 requirements with local, state and federal agencies

Details

Firm: *WSP*

Technical Staff:

- *Veronica Seyde*
- *Rick Bottcher*
- *Chris Koury*
- *Hessam Tavakoldavani*
- *Debby Reece*
- *Jessica Li*

Client Contact Information:

Vincent P. Arriola

542 N. Marine Corps Drive. Tamuning, Guam

Vince.arriola@dpw.guam.gov

671-649-3121

Contracting Agency: *Government of Guam Department of Public Works (DPW)*

Service Provided: *Engineering, program management, MS4 Phase II Municipal Permit documents, and development of comprehensive compliance programs as required under the Small MS4 Phase II permit*

Contract Period: *July 2007 – Ongoing*

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Existing Conditions at Toe of Slope

San Juan Creek Streambank Restoration at Riding Park

City of San Juan Capistrano | San Juan Capistrano, CA

Along the west bank of San Juan Creek, in the vicinity of Riding Park in San Juan Capistrano, CA, WSP prepared hydraulic and scour analyses, design of rip rap revetment and vegetation restoration to stabilize a portion of the embankment exhibiting erosive behavior. These analyses and the PS&E documents required for construction were recently completed by WSP. The project was conducted for the City of San Juan Capistrano. WSP was responsible for design, bid and construction support services including preparation of a SWPPP and associated Water Pollution Control Drawings. The streambank restoration project includes:

- Excavating the embankment and placing and compacting the soils to establish an engineered slope
- Installing riprap at the toe of the slope to protect against scour and erosion up to the water surface elevation of the 10-year flood event (10% recurrence interval)
- Revegetating with native plant and tree species along the streambank within and above the proposed riprap armor. The engineered slope above the riprap will be covered with a layer of jute mesh to provide protection of the slope while the vegetation is being established
- Preparing a Dewatering Plan and Clear Water Diversion Plan for construction
- Coordination with the San Diego RWQCB and California Department of Fish and Wildlife (DFW)
- Preparing construction documents under the guidelines of the City of San Juan Capistrano
- Preparing a SWPPP for contractor use along with preparing the Notice of Intent (NOI) and submitting to the State Board via the SMARTS database

Under existing conditions, the embankment was devoid of vegetation in certain locations and was comprised of very erosive soils. Under high water conditions, the restored streambank requires erosion control protection, in the form of riprap, while the newly planted vegetation is being established. When the erosive force of the flowing water acts upon the streambank, the erosion will be countered by the riprap armoring. Later, the trees and bushes will take hold along this modified section of the creek and provide additional erosion protection. In addition to streambank erosion, the flowing water will scour the streambed. Scour at the toe of the slope and along the edge of the stream could undercut and undermine the engineered slope prior to the vegetation taking hold. The proposed riprap armoring minimizes the potential for erosion. The project also includes a mitigation and monitoring program and tree survey for preservation of well-established trees along the bank of the stream. WSP prepared the environmental documentation, engineering design, construction staging plans and SWPPP for the overall project.

Details

Firm: *WSP*

Technical Staff:

- *Rick Bottcher*
- *Chris Koury*

Client Contact Information:

Joe Parco, PE, CFM

30448 Rancho Viejo Road
San Juan Capistrano, CA 92675

Jparco@sanjuancapistrano.org

949-443-6353

Contracting Agency: *City of San Juan Capistrano*

Service Provided: *Design, bid, and construction support services, including PS&E documents, a SWPPP, erosion and sediment control plans and a Dewatering and Clear Water Diversion Plan.*

Contract Period: *March 2023 – Ongoing*

DRAFT

Innovative sampling solutions

Details

Firm: *WSP*

Technical Staff:

- *Brenda Stevens*
- *Omar Arrendondo*
- *Tess Holmes*
- *Dylan Cawthrone*
- *Luis De La Torre*

Client Contact Information:

Cara Nager

3225 North Harbor Drive
San Diego, California 92101

cnager@san.org

619-400-2790

Contracting Agency: *San Diego County Regional Airport Authority*

Service Provided: *Stormwater program implementation, compliance, management review, NPDES Construction and industrial inspections. Enforcement, report preparation, feasibility studies, alternative analyses, database development and management. Project design, implementation plan reviews, sustainability, stewardship program studies, plans, outreach, education, stormwater sampling and analysis.*

Contract Period: *01/2022 – 01/2027*

On-Call Stormwater Program Management Services

San Diego International Airport | San Diego, CA

Our team's collective experience in providing inspections, BMP evaluations, and storm observations is unmatched. During storm events that meet mobilization criteria, WSP mobilized more than 30 badged staff for various storm events. Our staff were available on a 24/7 basis to conduct observations, BMP evaluations, and BMP installation and maintenance at multiple sites, including industrial, municipal, construction, transportation, maintenance, military, San Diego Bay and other receiving water, and area of special biological significance (ASBS) sites.

WSP provided on-site construction oversight of the Austin Sand Filter retrofit to ensure that the treatment BMP was installed per plan.

We are experienced using U.S. EPA methods and field techniques for evaluations of stormwater BMPs, source identification studies, TMDL monitoring/calculations, and other water quality studies. Most of our team has been providing similar services at the San Diego Airport and on other stormwater projects since 2004. Our inspectors have QISP certifications under the IGP and QSP certifications under the CGP, and are Certified Erosion, Sediment, and Storm Water Inspectors (CESSWIs) and Certified Inspectors of Sediment and Erosion Control (CISECs). Under the MS4 Permit, WSP has continued to use our experience of the following to identify and address water quality issues for the San Diego International Airport:

- SWMP BMP category development and updates
- Site-specific BMP recommendations and evaluations
- Site audits

Balancing the design need for a large stormwater conveyance system to alleviate flooding with aesthetics.

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PROPOSED STAFFING, ORGANIZATION AND MANAGEMENT PLAN

PROPOSED STAFFING, ORGANIZATION AND MANAGEMENT PLAN

ORGANIZATION

WSP personnel and our subconsultant SDSS will be available to perform the proposed services for the duration of the contract, we acknowledge that no person designated as "key" to the proposed service shall be removed or replaced without the prior written concurrence of MTS. Our proposed team will be organized as shown in Appendix III, with team resumes provided in Appendix II. As the Project Manager, Veronica Seyde will lead the effort on this contract. Veronica is a certified Project Manager with experience in stormwater quality and NPDES permit compliance for various public works and transportation agencies including MTS, Caltrans and San Bernardino County Transportation Agency. Veronica is very familiar with the MTS stormwater management program requirements as she has worked side by side with the MTS EHS specialist as well as MTS trolley, maintenance of way and bus teams for over 6 years.

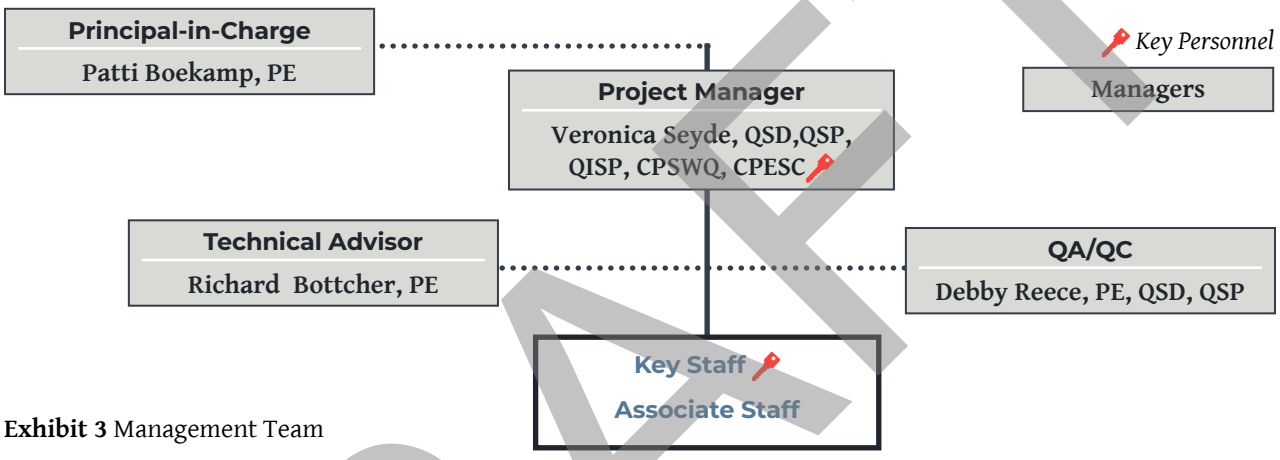

Exhibit 3 Management Team

MANAGEMENT PLAN

For this contract, Veronica has selected a management team to support both the administrative, technical and quality control aspects for this contract as presented in **Exhibit 3**. Patti Boekamp as the Principal in Charge brings 38 years of capital improvement project delivery experience within the San Diego region and managing the delivery of the City of San Diego's multi-million dollar CIP (including all infrastructure types). As the Principal in Charge, Patti will be available to Veronica for administrative support regarding contract terms and conditions. Rick Bottcher will serve as the Technical Advisor on this contract and has over 30 years experience as a stormwater manager and working with MTS on both the Mid-Coat Corridor Transit Project and the MTS Phase II Implementation Plan. All WSP team members are trained to adhere to quality assurance/quality control procedures and Debby Reece will be responsible for the Quality Control of all deliverables to MTS. Collectively, this management team will support Veronica to ensure that all facets of the MTS stormwater program are delivered on schedule, within budget and meet the needs and requirements specified in the small MS4 Permit.

PROPOSED STAFFING

Our Staffing Plan is presented in **Exhibit 4** Veronica selected key team members based upon their area of technical expertise, working with MTS on the Small MS4 permit contract, or on projects that have similar services to what MTS is requesting. Every key team member is considered an expert in their area of technical expertise and as presented in **Exhibit 4** and have the required availability to effectively deliver the work products referenced in PWG367.0-23.

All key personnel for this contract have a team of associates, with the required experience to deliver the final work product on schedule and within budget. This combination of key team members and experienced associates ensures that all work products and services are delivered to MTS in a cost-efficient manner. Our Management Team Veronica Seyde, Patti Boekamp, Rick Bottcher and Debby Reece are available to the key team members and associates when a higher level of expertise is required.

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PROJECT MANAGEMENT PLAN (PMP)

Veronica will be the contract point of contact and will develop a project-specific PMP, including a project work plan and quality control (QC) plan, which will be submitted for MTS approval. It will be kept online for easy access by MTS. Access will be provided to our SharePoint or to Microsoft OneDrive for: deliverables, reference materials, invoices and progress reports. With this online system, our document control will be transparent, easily auditable and maintain MTS's confidentiality, per the Records Retention requirements referenced in PWG367.0-23 and discussed in our Work Plan. The PMP will be tailored to size and level of effort. WSP's management tools include:

- WSPs online information system, allows project key personnel to monitor progress on individual tasks and subtasks, individual staff charges to projects, as well as budget and milestone completions.
- Biweekly and monthly staff forecasting records to ensure adequate resources will be available when needed.
- Professional scheduling software such as Primavera and Microsoft Project. Primavera may be used for larger, time sensitive tasks.
- Monitoring of critical path items for large tasks.

FIRM PROCEDURES

Our process for attracting qualified personnel and office staff is provided in Appendix IV.

WSP STAFFING PLAN FOR MS4 SERVICES SERVICES	VERONICA SEYDE	BRENDA STEVENS	CHRISTIAN HERENCIA	MARK RILEY	HESSAM TAVAKOLDAVANI	CHRIS KOURY	GABRIELA GONZALEZ	KRISTINA HYSLER	MATTHEW PORTER	ANGELICA QUINTERO	JESSICA LI	OMAR ARRENDONDO	JENNA MENCARELLI	TESS HOLMES	DYLAN CAWTHORNE	LUIS DE LA TORRE	SDSS
PROGRAM MANAGEMENT																	
Monthly Meetings	✓																
Invoice/Progress Report	✓																
Project Team Coordination and Management	✓																
MS4 SUPPORT SERVICES																	
Annual Report							✓										
SWPPP/Water Quality Technical Report (WQTR) Review																	
Treatment BMP Inspection		✓			✓	✓						✓	✓	✓	✓	✓	
Treatment BMP Maintenance		✓															✓
Training and Development			✓							✓							
Track MS4 Permit Requirements							✓										
Annual Guidance Updates			✓		✓	✓				✓	✓						
TMDL Compliance Implementation								✓									
IDDE Inspection and Sampling		✓			✓							✓	✓	✓	✓	✓	
GIS				✓			✓		✓								
Public Education and Outreach Program							✓			✓							
Construction General Permit						✓	✓				✓						
Erosion and Sediment Control Plans						✓	✓				✓						
Facility Assessment		✓			✓	✓	✓				✓		✓	✓	✓	✓	
Post Construction Stormwater Management Program						✓	✓				✓						
Trash Compliance Implementation	✓										✓						
Fact Sheets						✓	✓				✓						
As-Needed Repair Services		✓															✓

Exhibit 4 WSP Staffing Plan for MTS MS4 Support Services

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MANAGEMENT TEAM

Patti Boekamp, PE

PRINCIPAL-IN-CHARGE — 10%

Extensive experience in delivering CIP, managing 3rd party coordination, and ensuring stormwater compliance for San Diego region public agencies.

EDUCATION: BS, Civil Engineering, San Diego State University
CREDENTIALS: Traffic Engineer CA (1446)

Veronica Seyde, QSD,QSP, QISP, CPSWQ, CPESC

PROJECT MANAGER — 100%

Skilled and knowledgeable project manager specializing in stormwater quality and compliance for transportation projects, with expertise in BMP design, implementation, and training; brings current MTS MS4 contract experience to hit the ground running.

EDUCATION: BA, Biology, University of San Diego & MS, Environmental Studies, Cal State Fullerton
CREDENTIALS: SWPPP Developer and Practitioner (2011), Trainer of Record QSD and QSP (2011), Qualified Industrial Stormwater Practioner (2016)

Richard Bottcher, PE

TECHNICAL ADVISOR — 20%

Coastal adaptation, water resource resiliency, and regulatory compliance expert, stormwater drainage design experience for transportation projects in Southern California; historical MTS knowledge will streamline processes and reduces risk.

EDUCATION: ME, Engineering, Cornell University & BS, Engineering, Cornell University
CREDENTIALS: Professional Engineer CA (47080)

Debby Reece, PE, QSD, QSP

QUALITY ASSURANCE — 20%

Seasoned civil and stormwater engineer who has managed the design of transportation projects in California.

EDUCATION: BSCE, Water Resources, Lehigh University & MS, Hydrology/ Hydraulics, University of California-Berkeley
CREDENTIALS: Professional Engineer CA (56148)
Qualified SWPPP Developer/ Practitioner

KEY PERSONNEL

Brenda Stevens, QISP

TREATMENT BMP INSPECTION & MAINTENANCE — 50%

Proficient and reliable stormwater manager with extensive experience in conducting inspections surveys, and investigations for various permit programs at San Diego facilities.

EDUCATION: BS Earth Sciences, Geology, University of California, San Diego
CREDENTIALS: QISP (Industrial General Permit (IGP)Qualified Industrial SWPPP Practitioner (QISP 01059)OSHA 40-Hour Hazwoper CRAM Trained Practitioner SWAMP Bioassessment

Christian Herencia, PE, QSD, QSP, QISP

PUBLIC EDUCATION & OUTREACH / TRAINING & DEVELOPMENT — 50%

Over three decades of experience in designing, implementing, and monitoring effective stormwater solutions for public agencies; brings legacy knowledge with delivery of MTS MS4 training programs.

EDUCATION: BSCE, Civil Engineering, New Jersey Institute of Technology
CREDENTIALS: Professional Engineer CA (54987)
Qualified SWPPP Developer & Practitioner (QSD/QSP) (0038)
Qualified Industrial Stormwater Practitioner (QISP), (54987)

Gregg Brenner

TREATMENT BMP MAINTENANCE — 100%

Experience in maintaining Treatments BMPs, such as bioretention and detention basins, stormwater vaulted units, and filtration inserts, for MTS Trolley, Transit and BRT stations.

EDUCATION: BA in Political Science Sonoma State University

Matthew Porter, GISP

GIS — 100%

Skilled GIS analyst with experience in web development, data analysis, system integration, and mapping for transportation projects and clients, including MTS.

EDUCATION: BA, Physical Geography, California State University, Sacramento
CREDENTIALS: Certified Geographic Information Systems Professional: US

Kristina Hysler, PE

TMDL COMPLIANCE AND IMPLEMENTATION — 50%

Successfully managed and executed TMDL monitoring projects for the City of San Diego, Caltrans, and the County of San Diego.

EDUCATION: MS, Environmental and Water Resources Engineering, University of Texas & BS, Civil Engineering, University of Maryland
CREDENTIALS: Professional Engineer CA (70204)

Chris Koury, PE,QSD

SWPPP/WQTR REVIEWS — 60%

Brings experience in designing stormwater BMPs and related documents: SWMP, SWPPP, WPCPs and WQTRs, to allow MTS and UCSD achieve regulatory compliance.

EDUCATION: BS Environmental Engineering, University of Colorado at Boulder
CREDENTIALS: Professional Engineer CA (94708)

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ASSOCIATES

Hessam Tavakoldavani, PE

TREATMENT BMP INSPECTOR — 80%

Experience in drainage network and Treatment BMP design projects in California; brings MTS legacy knowledge with SWPPP site map development and BMP inspections.

EDUCATION: MS, Civil And Environmental Engineering, University of Utah & BS, Civil Engineering, Iran University of Science & Technology
CREDENTIALS: Professional Engineer CA (91842)

Gabriela Gonzales, APA,YPT

ANNUAL REPORT/TRACK MS4 PERMIT REQUIREMENTS AND ANNUAL REPORTS — 80%

Planner with experience in active transportation, and sustainable infrastructure, as well as proven ability for MTS SWMP and PEAIP updates and draft and final Annual Reports on SMARTS.

EDUCATION: MS of Urban and Regional Planning, University of California, Irvine
CREDENTIALS: American Planning Association (APA) & Young Professionals in Transportation (YPT)

Jenna Mencarelli, QISP

TREATMENT BMP INSPECTOR — 50%

A QISP-trained stormwater inspector who can verify, and report on BMPs, and pollution prevention.

EDUCATION: BS, Environmental Systems, University of California, San Diego
CREDENTIALS: QISP No. (01396)

Luis De La Torre, QISP

TREATMENT BMP INSPECTOR — 20%

Offers MTS proven water quality monitoring, flow modeling, and stormwater BMP inspections for various municipalities and compliance programs.

EDUCATION: MS, Watershed Science, San Diego State University & BS, Environmental Science (Watershed Science), San Diego State University
CREDENTIALS: QISP No. (00946)

Jessica Li, PE

CONSTRUCTION GENERAL PERMIT — 50%

Supported design and construction of Mid-Coast Corridor, San Diego International Airport, Del Mar Coastal Connections, and UCSD Voigt/ Lyman Improvements.

EDUCATION: MS, Civil Engineering, San Diego State University California State University, BA, Applied Mathematics, University of California-San Diego
CREDENTIALS: Professional Engineer CA (83402)

Omar Arredondo, QISP

TREATMENT BMP INSPECTOR — 40%

A QISP-certified stormwater professional with experience in inspecting BMPs, facilities, and outfalls for San Diego County.

EDUCATION: BS, Environmental Chemistry, University of California San Diego
CREDENTIALS: QISP No. 01323

Angelica Quintero

TRAINING & DEVELOPMENT/ PUBLIC EDUCATION AND OUTREACH PROGRAM — 50%

Experience delivering MTS MS4 IDDE and Good Housekeeping training to MTS MOW staff.

EDUCATION: BS, Civil Engineering, Rutgers University-The State University of New Jersey

Mark Riley

GIS — 40%

Extensive knowledge with GIS and data management services for projects in San Diego.

EDUCATION: AS, Geographic Information Systems (GIS), Mt. San Jacinto College

Dylan Cawthorne, PE

TREATMENT BMP INSPECTOR — 20%

Developed and maintained BMP inventories, and technical documents for MS4 Permit compliance.

EDUCATION: MS, Civil and Environmental Engineering, University of California, Davis & BS, Civil and Environmental Engineering, North Carolina State University
CREDENTIALS: Professional Engineer CA (94919)

Tess Holmes, QISP

TREATMENT BMP INSPECTOR — 30%

A stormwater expert with Treatment BMP inspection ability.

EDUCATION: Masters of Public Health, Purdue
CREDENTIALS: QISP No. (01380)

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WORK PLAN

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Work Plan

Since 2016 WSP has been working with MTS to implement their stormwater management program. The existing MTS stormwater management program follows Order No. 2013-0001-DWQ. Under PWG367.0-23, the major labor effort will be associated with Treatment BMP inspection and maintenance. The remaining level of effort will be to continue to support MTS with the other elements of their stormwater management program on an as-needed basis, as we have been doing for the last four years. Therefore, the level of effort estimated in our Cost Proposal and our Work Plan reflect a strategy to deliver the services described under PWG367.0-23. WSP also understands that the Small MS4 Permit will be reissued, most likely in 2024. Once reissued, we anticipate that there will be a need for a more robust level of effort, especially for TMDLs, Stormwater Asset Management and the PEAIP. Once the Small MS4 Permit is reissued, we will continue to utilize the same work delegation procedures referenced below to provide stormwater management services to MTS in a cost-effective manner. Our Work Delegation Procedures will serve as a road map for managing the Scope of Services per Section 5.4 of PWG367.0-23.

MS4 SUPPORT SERVICES WORK DELEGATION PROCEDURE

Our plan to deliver the services described under PWG367.0-23 is simple. It begins with a key team member supported by associates. Every key team member selected for this RFP is considered a technical expert within their field of discipline. The associates are supported by Key team members that possess the necessary skills, knowledge and experience to deliver the services under the guidance, support and management of the management team. We have developed work delegation procedures for Treatment BMP Inspection and Maintenance and for providing MS4 Support Services on an as-needed basis. This work delegation plan ensures that the required services are delivered to MTS in a cost-efficient manner. Our work delegation process is as follows:

TREATMENT BMP INSPECTION & MAINTENANCE WORK DELEGATION PROCEDURE

TREATMENT BMP MAINTENANCE RESPONSE METHODOLOGY

Brenda Stevens, our key team member managing the Treatment BMP Inspection and Maintenance services, will coordinate with SDSS according to the following process:

- Inspection results indicate maintenance is required or a special request is submitted by MTS.
- Internal team discussion to determine need, services and assignments.
- If services requested are considered an "Emergency", WSP will contact SDSS and request them to deploy for services (within 24-hours). Upon their acknowledgment the assignment will be issued.
- If services requested are considered "Non-Emergency, but priority", WSP will contact SDSS and request that services are scheduled within 72-hours. Upon their acknowledgment the assignment will be issued.
- If services requested are considered "Non-Emergency", WSP will contact SDSS and request that they schedule the service within one (1) week. Upon their acknowledgment the assignment will be issued.

MOBILIZATION, DEPLOYMENT AND DE-MOBILIZATION

SDSS is well versed in performing work in "LIVE" traffic situations and is permitted for a confined space entry. Therefore, before any work begins, the following process will take place:

- Notification to EHS Specialist with estimated labor effort and cost to complete task
- Notification to facility (Regional Maintenance Crew Chief)
- Determine if light or heavy traffic control is required and secure permits as needed
- Schedule time and date of deployment
- Secure authorization in advance from EHS Specialist
- Mobilize and deploy forces to repair or replace BMP
- Conduct clean-up prior to de-mobilization

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FOLLOW-UP

WSP will verify maintenance and document findings in the MTS MS4 Permit Requirement Tracking spreadsheet and/or GIS.

RECORDS RETENTION

The WSP team is well versed in utilizing a variety of platforms to store and maintain data. For this contract, we recommend using MS SharePoint which we currently utilize as part of our company standard operating programs. In daily operations WSP uses MS SharePoint for file storage, sharing and collaborative document development on projects. Under PWG367.0-23, WSP is prepared to develop a SharePoint site for MTS records retention that ensures their confidentiality. Additionally, our team has in-depth of experience with other available platforms and is prepared to work with MTS to identify other appropriate tools and programs to foster collaboration whether it be for internal coordination, stakeholder workshops or public engagement activities.

CULTURE OF QUALITY

- ✓ WSP is among the first and only transportation engineering firms to adhere to ISO-9001 Quality Standards—requiring regular stringent document auditing— and maintain our certification company-wide.

PROGRAM MANAGEMENT

MONTHLY MEETINGS

The success of this project is highly dependent on communication. As Project Manager (PM), Veronica Seyde, will be the primary point of contact for MTS. Veronica has already served as a PM for MTS and has established a great relationship with MTS's PM and MTS's legal counsel. She has assembled a tight-knit team of experts who bring the regulatory and technical expertise, innovation and adaptability, and high standards of quality to the project. As directed by MTS, WSP will schedule and attend monthly progress meetings with MTS staff and consultant staff, as appropriate, to review Small MS4 permit Permit compliance tracking, status and implementation progress. WSP will prepare a draft meeting agenda which will be submitted to MTS for review and approval. Upon approval from MTS the final agenda will be distributed to attendees before the meeting. Meeting minutes will be recorded by WSP and provided to MTS within three business days for review and approval prior to being distributed to all attendees.

INVOICE/PROGRESS REPORT

Veronica understands the importance of keeping this project within budget. She will review all tasks and corresponding charge rates and obtain approval with the EHS Specialist, Veronica will regularly monitor the project schedule and expenditures versus the individual task budgets. She will review individual tasks with the EHS Specialist and identify resources to delegate tasks to appropriate staff, and monitor work progress, rates and charges. Techniques to keep projects on schedule include regular project and task meetings; weekly progress vs. budget reviews; meetings with core team members and the subconsultant; and constant attention to completing all tasks contributing to project milestone deliverables. Internal budget tracking systems will facilitate early warnings to prevent budget overruns and will be a sustained part of our project management. One of WSP's unique tools to monitor expenditures and progress is the Project Management Information System (PMIS), our in-house proprietary web-based financial software which collects data from multiple systems, provides tools to monitor expenditures and progress, and presents reports in easy-to-read dashboard formats. If any issues are identified, Veronica will review them and if needed escalate it to other management staff. Adjustments will be made accordingly to keep the project on-budget. WSP will prepare and submit progress reports to MTS with the monthly invoice. The Progress Report shall include a list of activities that are being billed as part of the invoice.

PROJECT TEAM COORDINATION AND MANAGEMENT

Our approach to the management and coordination of the services requested under PWG367.0-23 recognizes that MTS is engaged with the day-to-day workload of running a busy public transportation agency and that

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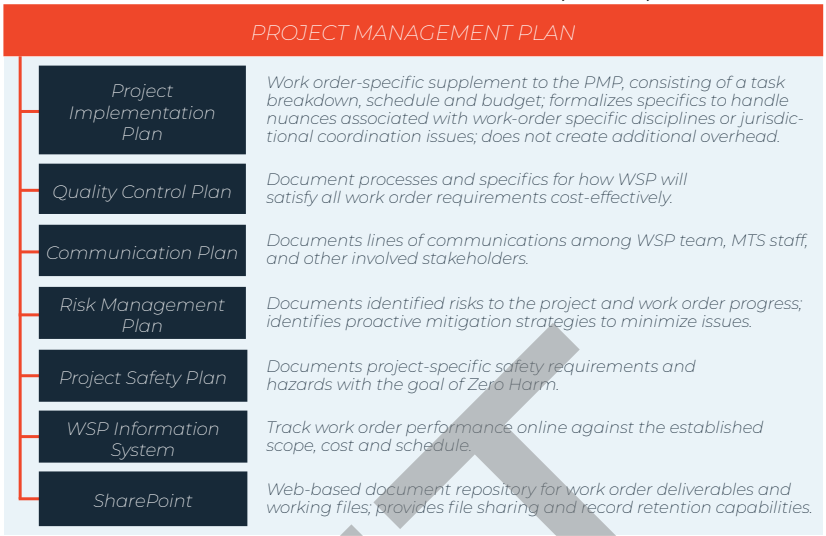
implementing a stormwater management program has the potential to add further workload. We designed a coordination and management approach to provide MTS with both complete control over tasks assigned for this opportunity while avoiding unnecessary effort on its part. In our experience this is best achieved through a two-tier project management team and communication protocol: periodic MTS briefings and more frequent internal WSP team meetings:



1. MTS briefings would be short, 10-20 minutes maximum to inform MTS only of items they wish to be kept apprised. These could include:
   - Decisions/approvals needed, upcoming decisions, any upcoming potentially controversial items, items that could negatively affect users or citizens, or be perceived as such, and any other potentially major project or contract issues (e.g., schedule deviations). The main point of these meetings is to avoid surprises and provide need-to-know information only.
   - Project management meetings with key and associate WSP team members.
2. Project management meetings would be more comprehensive and cover routine project progress updates on all ongoing work, status of subconsultant activities, upcoming tasks, information requests, etc.

In addition to coordination with MTS, internal team coordination meetings would occur at least weekly and serve to keep all team members abreast of Phase II Permit deadlines. WSP will prepare and submit quarterly progress reports to MTS that provide an update regarding the Phase II MS4 tasks related to Treatment BMP inspection and maintenance, as well as updates related to the remaining Small MS4 Permit Support Services described in Section 5.4.2 of RFP PWG367.0-23.

MS4 SUPPORT SERVICES

ANNUAL REPORT

Per the Phase II MS4 General Permit, MTS is required to use the SWRCB Stormwater Multiple Application and Report Tracking System (SMARTS) to submit a summary of the past year activities for each program element and certify compliance with all requirements of the Permit. WSP has supported MTS with management of their Phase II MS4 SMARTS account as their data submitter for the past six years. WSP will continue to be the data submitter and coordinate submittal and review of the draft Annual Report with the EHS Specialist, Legally Responsible Person, and the MTS outside legal counsel. WSP will incorporate draft comments from MTS and develop the final Annual Report, such that the Annual Report is certified in SMARTS and submitted to the SWRCB within fifteen (15) working days of the end of the reporting period of a given year. This effort includes the time to complete the draft Annual Report, incorporate comments from MTS, provide brief explanations or documentation required, prepare and submit the final Annual Report to the MTS approved signatory for certification on SMARTS.

ANNUAL REPORT

✓ WSP has multiple SMARTS data submitters that are linked to the MTS account and can readily facilitate reporting requirements.

Given our established relationship with MTS's outside legal counsel, MTS can be assured that WSP will deliver the draft and final versions of the Annual Report in a cost-efficient manner. Information provided in the Annual Report will reference how MTS continues to implement their stormwater management program to ensure compliance with the Phase II MS4 General Permit. The Executive Officer (EO) of the San Diego RWQCB may request a detailed written online Annual Report or in-person presentation of the Annual Report that addresses the activities described in Provision F. The detailed Annual Report must clearly refer to the Phase II Small MS4 Permit requirements and

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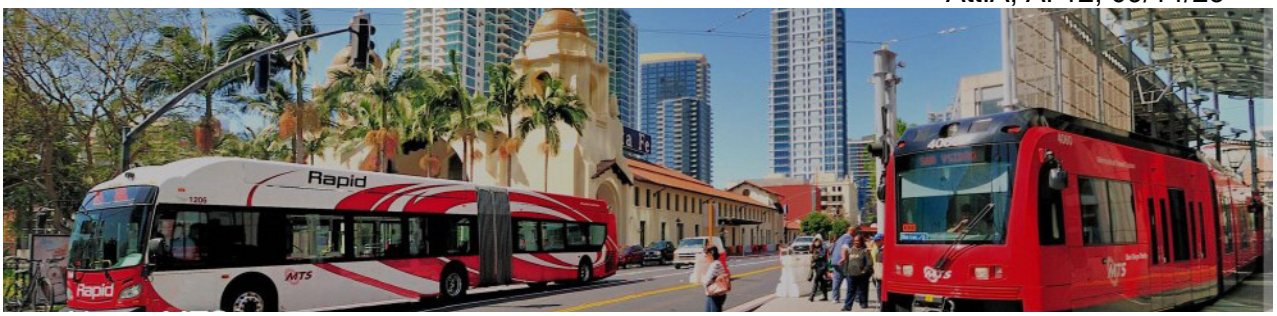

describe in quantifiable terms, the status of activities undertaken to comply with each requirement. If requested by the EO, WSP is available to provide the detailed written report or in-person presentation.

PEAIP

Per section F.5.h.1 of the Small MS4 Phase II Permit, WSP worked with MTS and developed a PEAIP as a guidance document for its stormwater staff to assist them in conducting program effectiveness assessments (EAs). The PEAIP was modeled after the methodology described within the California Stormwater Quality Association (CASQA) document, A Strategic Approach to Planning for and Assessing the Effectiveness of Stormwater Programs (February 2015). The PEAIP outlined the approach that MTS utilized to adaptively manage its stormwater program to improve its effectiveness at reducing the identified high priority Proof of Concepts including sediment and trash, and thereby achieving the maximum extent practicable (MEP) standard and protecting water quality.

During Permit Year 2, MTS submitted the PEAIP as an attachment to the Annual Report. During Permit Year 3, Year 4, and Year 5, WSP worked with MTS to implement the PEAIP and then summarized the data obtained and provided an analysis of the data with the Annual Report. During Year 5, WSP worked with MTS to modify the PEAIP with a revision of the MTS BMP Fact Sheet No. FSC-4 Pressure Washing and updated the MTS Stormwater Training Program by developing and delivering a new module directed at Treatment BMP inspection and maintenance.

These program modifications were also summarized and uploaded onto SMARTS as part of the MTS 2022 Annual Report. Going forward, under PWG367.0-23, WSP will continue to work with MTS and update the PEAIP annually. The PEAIP update will identify program modifications based on the effectiveness assessment to improve BMPs and shift priorities to make more effective use of resources. All modifications will be incorporated into the existing MTS PEAIP document, and if required can be uploaded to SMARTS as an attachment to the Annual Report. The MTS EHS Specialist will be provided a copy of all documentation, i.e., Annual Report and PEAIP, that is uploaded to SMARTS.

SWPPP / WQTR REVIEW

During Permit Year 1, WSP determined changes needed in MTS's existing Construction Stormwater Runoff Program (Program). This included following up and refining the Program to track, file, inspect, make recommendations for enforcement and compile the SWPPP construction documents for ongoing construction projects. For this Program, WSP developed the MTS Construction Stormwater Standard Specifications and Special Provisions, MTS Standard Plans for BMP Details, and templates for SWPPPs and Water Pollution Control Program (WPCP) plans. Going forward, during Permit Year 2 through to Permit Year 6, WSP has provided QSDs, and WPCP and Water Quality Technical Report (WQTR) reviews for projects such as the Park Boulevard Grade Crossing, Bayside Track and the El Cajon Transit Center. Under PWG367.0-23, WSP will continue to provide QSDs for WQTR and WPCP reviews as requested. Our comments will be summarized in a matrix and submitted to MTS. WSP assumes that our review will include one round to review comments from MTS and that final comment resolution will be achieved after one review coordination meeting with regulatory agencies and MTS staff .

SWPPP REVIEWS

- ✓ Our team includes QSDs and QSPs that understand the Construction Stormwater Permit and can therefore provide cost-efficient SWPPP reviews.

TREATMENT BMP INSPECTION AND MAINTENANCE

During the current contract, WSP has provided Treatment BMP inspection services for vegetated and structural site features such as Bioretention Basins, Water Quality Vaults, various water quality drain inserts and other newly constructed Treatment BMPs at light rail stations and platforms as referenced on Addendum No.1 of PWG367.0-23. Our team of qualified inspectors fully understand the function of the Treatment BMPs (infiltration, separation of solids, temporary storage) and are versed in maintenance schedules (that may vary due to site conditions) so that recommendations for maintenance can be provided on a timely basis for optimal operation of the Treatment BMP.

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During 2022-2023, our inspectors tracked Treatment BMP function using MTS approved Treatment BMP Inspections forms that document exterior and interior site conditions, identify potential maintenance issues, and provide maintenance recommendations with an overall rating using the MTS Key. In addition, our team provided photographic documentation that correlated maintenance requirements with rain events to gauge if the maintenance/site clean-up frequency needs to be modified.

Under PWG367.0-23, WSP will inspect every Treatment BMP at trolley and transit stations biannually – pre- and post-rainy season. Treatment BMP inspection forms will be submitted as a PDF to the MTS EHS Specialist within five (5) days of the inspection. Prior to submittal, all forms will undergo a thorough QA/QC to confirm that the final site rating is consistent with the photographic documentation and corresponds with the rating system designed by MTS. As directed by MTS, WSP will schedule and provide oversight of Treatment BMP maintenance as referenced below. Further maintenance which may include replacement and/or minor repairs is detailed on the following pages.

WEATHER RELATED INSPECTION

MTS is responsible for ensuring that Treatment BMPs installed at their light rail and bus operation facilities are properly maintained such that they function as designed. To verify that the permanent treatment BMPs function as designed, in addition to the biannual inspections which includes pre- and post-rainy season inspections, it is imperative that weather related inspections are also performed. Our level of effort includes a weather-related inspection after 0.5-inch storm events. Weather related inspections are recommended to ensure the Treatment BMP is operating correctly during heavy storm events and provides the water quality treatment for which it was designed. Our inspection will focus on typical maintenance triggers such as ponding, offsite flooding, erosion, and slope failure that need to be verified after heavy storm events.

INSPECTION AND MAINTENANCE

- ✓ No learning curve required given our MTS inspection and maintenance experience as well as our San Diego County experience.

WSP will complete a MTS inspection form for every Treatment BMP. WSP will submit the form with photographic documentation as a PDF to the MTS Project Manager within five (5) days after the inspection. Prior to submittal, all forms will undergo a thorough QA/QC to confirm that the final site rating is consistent with the photographic documentation and corresponds with the rating system designed by MTS. As referenced below, WSP will schedule and provide oversight of Treatment BMP maintenance upon approval from MTS. These as-needed repairs may include replacement, renovation, and/or reoccurring construction are detailed on the following pages.

TREATMENT BMP MAINTENANCE

WSP understands that Treatment BMP maintenance requires more resources that go beyond routine maintenance activities at light rail stations, platforms and BRT stations. WSP is also aware that MTS may not have sufficient resources to provide immediate maintenance needs beyond their scheduled routine maintenance operations. WSP also understands that MTS may require maintenance services to be provided at a regular frequency as well as in response to an immediate need in the event of a slope failure or flooding after an unprecedented storm event or damage due to vandalism. Therefore, as a response to meet these needs, WSP has expanded our inspection and maintenance team with a qualified and experienced sub-contractor SDSS. SDSS has 8 years of experience performing the requested scope of services and has been providing MTS with Treatment BMPs maintenance at their BRT facilities since 2021. SDSS will bring MTS assurance that maintenance needs will be addressed based on regular maintenance triggers as well as when an immediate corrective action is required.

TREATMENT BMP LEVEL OF EFFORT

- ✓ Our costs for Treatment BMP inspection and maintenance is based on information provided as MTS Addendum No. 1, page 6: MTS BMP Locations and Inspection Dates. We acknowledge, as noted by MTS, that these locations and BMPs are subject to change during the term of the agreement. As such, WSP anticipates that there could be a modification to the Treatment BMP data and we are prepared to adjust our level of effort and associated costs.

WSP will schedule and provide oversight of Treatment BMP maintenance. Under this agreement, we have developed a strategy for performing this work that protects MTS' assets. As indicated in the MTS Operations & Maintenance Activity Guidance Manual, all Treatment BMPs are required to be inspected by a qualified individual. Furthermore, Treatment BMPs must be properly maintained to ensure that they operate correctly and provide the water quality treatment for which they were designed.

Our goal for this contract is to protect the investment MTS has made with the design and construction of Treatment BMPs located along their light rail corridor and at their BRT stations. To achieve that goal, we have assembled a qualified and experienced inspection team. Our inspectors will identify maintenance requirements and then schedule the maintenance activity with our subcontractor SDSS. After the maintenance is performed, our inspectors

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will verify that the work performed ensures that the Treatment BMP operates correctly and provides the water quality treatment for which it was designed. Again, performing inspection and maintenance by two separate parties eliminates bias, protects MTS' investment and ensures that MTS can avoid more costly rehabilitative maintenance that results when facilities are not adequately maintained.

TRAINING AND DEVELOPMENT

Beginning in Permit Year 3, WSP developed and implemented the illicit discharge detection and elimination (IDDE) training program. The training program was presented to MTS staff and site operators (e.g., Maintenance of Way and contractors) that may come in contact or observe an illicit discharge or illegal connection. The training program included: Small MS4 Permit overview; MTS Field Program and reporting procedures and storm drain maintenance. To supplement the training program, WSP developed an Illicit Discharge Detection and Elimination (IDDE) Plan (Plan) that described the standard operating procedures utilized by MTS to comply with the Phase II General Permit requirements. The Plan included detailed information on types of discharges, outfall inspections, IDDE indicators, source tracking, reporting and response. The Plan was appended with inspection forms and an IDDE Sampling and Analysis Plan. During Permit Year 4 through to Permit Year 6, WSP responded to the training needs of MTS and answered questions regarding training of new staff, annual assessments, and follow-up training.

TRAINING AND DEVELOPMENT

- ✓ Our team includes CA-Trainers of Record that are certified in delivering stormwater training workshops.

Likewise, in 2020, WSP developed and implemented a biennial training program for applicable MTS staff and site operators (Maintenance of Way and contractors) on pollution prevention/ good housekeeping techniques. The Biennial Training Program included clear guidance on appropriate stormwater Best Management Practices (BMPs) at MTS facilities during typical operation and maintenance activities. As a supplement to this training, WSP developed the MTS Operations and Maintenance Activity Guidance Manual (O&M Manual). The purpose of the O&M Manual was to assist MTS personnel and their vendors in complying with the Phase II National Pollutant Discharge and Elimination System (NPDES) permit issued by the SWRCB and the San Diego RWQCB. The O&M Manual provided detailed operational procedures on applying a BMP to an O&M activity at a maintenance facility, MTS-owned property, offsite at a transit station or bus shelter, or within the right-of-way. The O&M Manual included a set of Maintenance Fact Sheets that were organized based on the following categories: Source Control Measures; Field Program Source Control Measures; and Storm Drain Maintenance Measures. An assessment was also developed as part of the Biennial Training Program such that the EHS Specialist at MTS could determine the need for refresher training or tail gate sessions.

Given our familiarity with the MTS IDDE program, the Biennial Training Program, and the worker assessments, WSP will continue to support MTS with their training program. This includes reviewing and updating annual training materials such as IDDE and Good Housekeeping slide decks to assist MTS with meeting their goal to reduce stormwater pollution to the maximum extent practicable. WSP will also deliver the training if requested by MTS. The MTS EHS Specialist will be provided with a final digital version – both original file format and PDF of all training materials, i.e., slide decks, handouts, and assessments, developed under PWG367.0-23.

TRACK MS4 PERMIT REQUIREMENTS

TRACK MS4 PERMIT REQUIREMENTS

- ✓ WSP Team members include CASQA members that serve on CASQA committees and are up to date on revisions to multiple SWRCB Stormwater NPDES permits.

Under our current contract, WSP developed an implementation plan in Microsoft Excel format that comprehensively addressed all requirements of the Phase II Permit such that MTS could achieve the Permit objectives in the most methodical but efficient manner. Under PWG367.0-23, WSP will update the existing implementation plan to track the required training, inspection and permit reporting requirements on a monthly basis. WSP will provide updates to the MTS EHS Specialist regularly to demonstrate MTS' compliance with the Small MS4 Permit requirements. The tracking tool will be updated annually. Utilization of this tracking tool will allow MTS to achieve successful completion of the various tasks set forth in the Small MS4 Permit based on the annual reporting time frame of July 1 through to June 30.

ANNUAL GUIDANCE UPDATES

As directed by MTS, WSP will assess changes needed in MTS's existing Small MS4 Permit guidance documents. This includes following up and refining the MTS MS4 program related to training, inspection, BMP maintenance, SWPPP updates at MTS Hot Spot facilities, post-construction as it relates to MTS facilities or modifications to the Small MS4 Permit. Guidance document updates will be submitted to MTS in draft format using tracked changes. Review comments from MTS will be incorporated into the Final version which will be submitted to MTS in PDF.

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TMDL COMPLIANCE IMPLEMENTATION

WSP understands that MTS is enrolled under the Small MS4 Permit, which was amended on December 19, 2017, to incorporate TMDL requirements applicable to Small MS4 Permit permittees. Section F.5.i of the Phase II MS4 Permit requires MTS to comply with all applicable, approved TMDLs that assign a WLA to MTS and which have been identified in Attachment G of the Phase II MS4 Permit.

In 2020 WSP developed the MTS TMDL Compliance Plan, Attachment G of the Phase II MS4 Permit did not identify MTS as an entity required to comply with any WLAs in any of the TMDLs in the San Diego RWQCB's jurisdiction. Thus, the Small MS4 Permit does not require MTS to comply with any TMDL. MTS, however, elected to develop a TMDL Compliance Plan based on the expectation that when the Small MS4 Permit is reissued, the reissued Small MS4 Permit will most likely identify MTS as a point source discharger who must implement measures consistent with the adopted TMDLs. Given our familiarity with the TMDL requirements listed in the Small MS4 Permit and our familiarity with the MTS TMDL Compliance Plan, WSP is prepared to support MTS with implementation of any TMDL monitoring requirements applicable to areas within MTS's MS4 jurisdiction when the Phase II Permit is reissued. Under PWG367.0-23, these services include:

- Implement TMDL monitoring requirements;
- Coordinate sampling and analysis of TMDL pollutants of concern, including total suspended solids and bacteria;
- Update and maintain the MTS GIS database which includes infrastructure mapping and data management; and
- Conduct field inspections and sampling to investigate illicit discharges and submit reports to MTS.

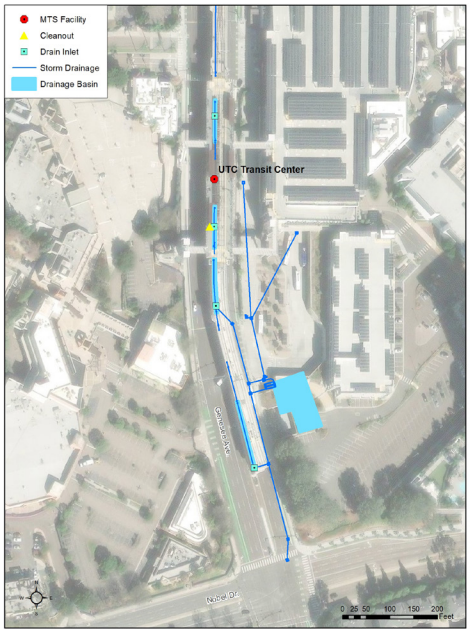
TMDL LEVEL OF EFFORT

✓ Cost Proposal labor hours reflect coordinating with MTS to develop a TMDL strategy that will comply with the MS4 permit when it is re-issued.

WSP has unparalleled experience supporting the implementation of TMDLs. The WSP team is proud to bring together an adaptive, highly qualified, full-service team of experts to partner with MTS. The WSP team includes engineers, scientists, project managers, field technicians, and regulatory and policy experts. All have extensive TMDL experience. WSP's TMDL recognized technical capabilities include:

- Implementation of TMDL monitoring requirements
- Sampling and analysis of TMDL pollutants of concern, including total suspended solids and bacteria
- GIS infrastructure mapping and data management
- Conducting field inspections and sampling to investigate illicit discharges
- Watershed Management Plans
- Wetlands design and construction
- Integration of stormwater infrastructure and recreational amenities
- Hydraulic/hydrologic and watershed/water quality modeling
- Ecosystem restoration

The WSP Team will optimize the use of public resources, promote sustainable solutions, and develop innovative and cost-effective strategies to meet MTS's TMDL compliance requirements.



GIS SERVICES

As part of the MTS MS4 Implementation Plan, WSP was responsible for leading geospatial centric tasks including GIS data review, validation, preparation, and development of municipal separate storm sewer systems (MS4) jurisdictional boundary maps, synthesis of drainage GIS feature class polylines, MTS property boundaries, light rail alignments, and facilities linked to Stormwater Factsheets showing existing and proposed Treatment BMPs. Tasks also included

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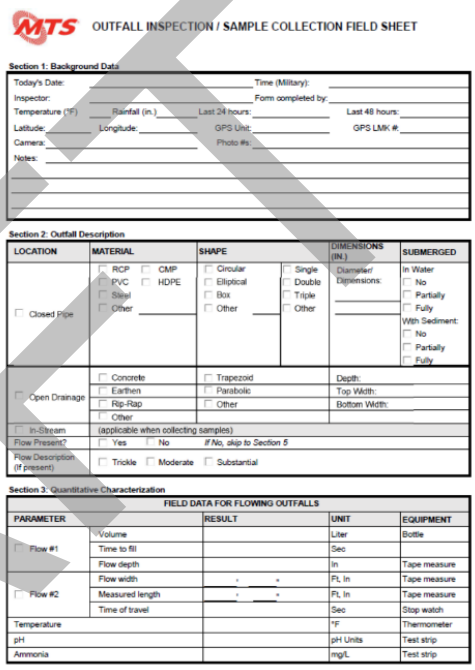
the conversion, manipulation, maintenance, geospatial data organization, geodatabase management, creation of spatial queries, and quality control of new and existing MTS spatial features and attribute tables; utilization of rectified orthophotography to aid in digitizing features; and performance of spatial joins, topology, advanced editing, geoprocessing calculations and georeferencing data.

Recently, WSP has been providing GIS services remotely. This has been achieved with MTS granting WSP access to their GIS portal and ArcGIS accounts. It has proven to be cost effective for MTS to have WSP continue to perform GIS development and data management duties remotely. As directed by MTS, and as reflected in our cost proposal, under PWG367.0-23, WSP will provide monthly reviews of the GIS stormwater infrastructure data and provide weekly updates to the GIS to ensure that the GIS reflects MTS facilities, stormwater infrastructure and water quality features.

ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PROGRAM

During Permit Year 2, WSP developed the Jurisdicitonal Map in GIS and designed the program to perform field sampling to detect illicit discharges and conduct monitoring for water quality indicators per the Small MS4 Permit. Given this experience, WSP is prepared to assist MTS and conduct investigations of all non-stormwater discharges suspected to be illicit. As directed, WSP will determine, document, and report the source of all non-stormwater discharges discovered through investigations.



MTS OUTFALL INSPECTION / SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Today's Date: Time (Military):
Inspector: Form completed by:
Temperature (°F) Rainfall (in.) Last 24 hours: Last 48 hours:
Latitude: Longitude: GPS Unit: GPS LMK #:
Camera: Photo #s:
Notes:

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
Closed Pipe	RCP CMP PVC HDPE Steel Other	Circular Elliptical Box Other	Single Double Triple Other	Diameter/ Dimensions:	In Water: No Partially Fully; With Sediment: No Partially Fully
Open Drainage	Concrete Earthen Rip-Rap Other	Trapezoid Parabolic Other		Depth: Top Width: Bottom Width:	
In-Stream	(applicable when collecting samples)				
Flow Present?	Yes No	*If No, skip to Section 5*			
Flow Description (if present)	Trickle Moderate Substantial				

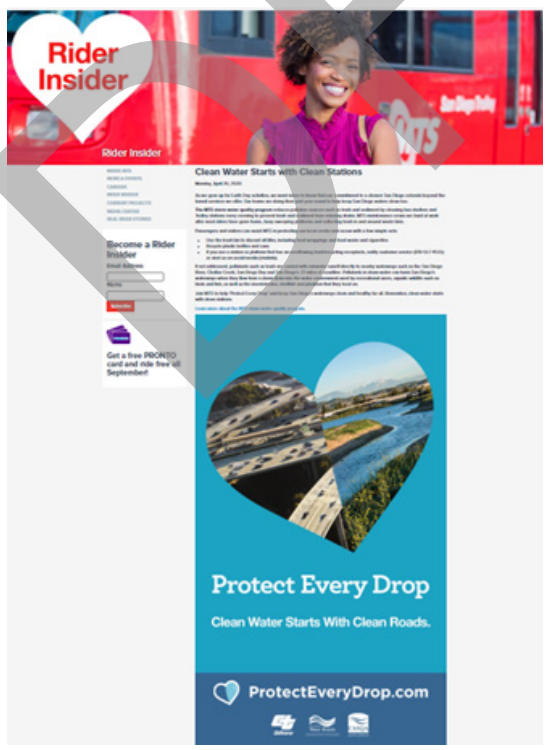
Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS

PARAMETER		RESULT	UNIT	EQUIPMENT
Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
	Flow depth		In	Tape measure
	Flow width		Ft, In	Tape measure
Flow #2	Measured length		Ft, In	Tape measure
	Time of travel		Sec	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip
Ammonia			mg/L	Test strip

PUBLIC EDUCATION AND OUTREACH PROGRAM

Beginning in Permit Year 2, WSP worked with MTS to develop and implement a comprehensive and cost-effective stormwater public education and outreach program. The MTS Public Outreach program was designed to help contribute to the improvement of stormwater quality and the preservation of San Diego's water resources while also encouraging changes in attitudes and behaviors. The program entailed educating the public on the importance of water quality and the impact of their activities on MTS' stormwater drainage system. Facets of the MTS public education program were implemented in Year 2 with the remaining outreach advertised in Years 3-6 as described below.



With the assistance of WSP, MTS developed an outreach campaign that mirrored the Protect Every Drop campaign developed by the Caltrans. At no cost to MTS, Caltrans provided graphics and artwork that MTS reformatted to design their Protect Every Drop/Clean Water Starts With Clean Stations campaign. Beginning in Permit Year 3, this campaign was featured on digital displays, the Rider Insider newsletter and over seventy digital bus shelter kiosks resulting in over 500,000 impressions.

Annually, WSP coordinates with MTS and their marketing team to develop outreach materials and then summarize the success of their public outreach campaign. Specifically, WSP submits updates with the Annual Report by documenting number of impressions with each type of outreach material. Under PWG367.0-23, WSP will continue to coordinate with MTS on their Public Outreach effort to update and implement a comprehensive education and outreach program. This will include recommendations to disseminate education materials to target audiences and translating to multiple non-English languages, as requested. Under the Outreach campaign, as requested by MTS, WSP will promote reporting of illicit discharges and feature water efficient/ stormwater friendly landscaping information. Again, to deliver the campaign in a cost-effective manner, the WSP Team will optimize the use of

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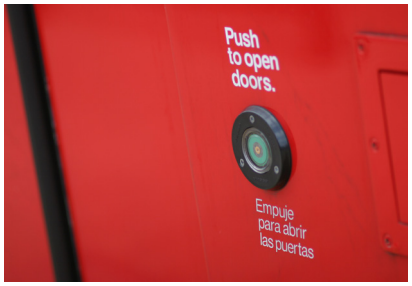

public resources, such as no-fee stormwater quality educational materials that may be available from Caltrans or other Phase I permittees.

CONSTRUCTION GENERAL PERMIT

CONSTRUCTION SWPPP AND EROSION AND SEDIMENT CONTROL PLAN UPDATES

To comply with Section F.5.e. of the Phase II MS4 General Permit, in collaboration with MTS, WSP developed a program to prevent construction site discharges of pollutants and impacts on beneficial uses of receiving waters from construction activities that result in a land disturbance of greater than or equal to one acre. Under this task, WSP developed the MTS SWPPP template, Construction Stormwater Standard Specifications and Special Provisions, and Standard Plans for BMP Details which included erosion and sediment control plans. Under PWG367-0.23, WSP will offer MTS the same team of stormwater experts and QSDs that can assist in SWPPP and erosion and sediment control plan updates as well as review and provide comments on active construction projects to ensure compliance with the Small MS4 Permit and the MTS Stormwater Management Plan. Our team includes Qualified SWPPP Developers (some of which have been licensed by the State to train inspectors and engineers on the requirements for stormwater pollution prevention) and can thereby provide assurance that the SWPPP template will be designed to ensure stormwater quality and meet Construction General Permit requirements, both CGP 2009-0009-DWQ which has been administratively extended and CGP 2022-0057-DWQ which becomes effective in September 2023.

Under PWG367.0-23, our team will review and provide comments on construction projects to ensure compliance with the Small MS4 Permit. During these reviews, our team will focus on erosion and sediment control BMPs, project design features, avoidance, minimization protection and mitigation for aquatic resources and offer guidance in selecting specific construction BMPs to again ensure compliance with the terms and conditions for MTS Small MS4 Permits addressing water quality. Veronica Seyde serves as the California State Representative for Envirocert's Certified Professional in Storm Water Quality program, as a recognized water quality leader, and with over 30 years' experience, she has managed facility water resource issues, including sampling; water quality analysis; visual monitoring (inspection); and documentation and reporting for SWPPP compliance. Veronica is often sought out to identify specific BMPs, and other mitigation actions for stormwater runoff management strategies that address suspended sediments, erosion, sediment deposition, and the minimization of oil, grease and other chemical constituents.

STORMWATER MANAGEMENT PLAN (SWMP) UPDATES

In close coordination with the MTS EHS Specialist and designated MTS staff, WSP prepared the Stormwater Management Plan (SWMP) in June 2018. The SWMP was prepared to address stormwater management practices conducted by the MTS and their contractors to comply with the requirements of federal, state and local stormwater regulations, including the Small MS4 Permit which is administered for the State of California by the SWRCB and by the RWQCBs. The MTS Stormwater Management Plan (SWMP) addressed the requirements of the Small MS4 Permit regulations adopted by the SWRCB known as the "Small Municipal Separate Storm Sewer System (MS4) General Permit". The SWMP identified implementation actions to be developed and those that are already developed by MTS. It also describes future requirements of other program elements that will be developed, implemented, and enforced by MTS over the duration of the Small MS4 Permit. Since 2018, WSP has prepared annual updates to the MTS SWMP. The annual SWMP revisions were based on changes to MTS facilities, completed Small MS4 Permit requirements and/or amendments. Under PWG367.0-23, WSP will continue to provide SWMP updates that document progress of MS4 program elements requirements completed during the annual reporting time frame of July 1 through to June 30 of every year.

FACILITY ASSESSMENT

In 2020, WSP prepared a Memorandum that documented the results of an annual review and assessment of all MTS-owned facilities and property to determine their potential impact to surface waters, per Section F.5.f.3 and Section F.5.f.6 of the Small MS4 Permit. Per the Small MS4 Permit, the annual assessment included the identification

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of pollutant hotspots and prioritization of storm drain facilities for cleanout. For this analysis all MTS-owned or operated facilities that have a potential to generate stormwater and non-stormwater pollutants were evaluated.

These MTS-owned facilities included: 1) BRT facilities; 2) storage yards; 3) transit stations; 4) traction power sub station sites; and 5) MTS-owned property within the San Diego River watershed. These facilities were evaluated using the criteria referenced in Section F.5.f.3 of the Small MS4 Permit. Our findings and recommendations were submitted to MTS and WSP provided as-needed support related to Hot Spot SWPPP development and follow up regulatory inspections.

As part of our as-needed services under PWG367.0-23 WSP will, as directed, implement the on-going MTS Facility Assessment Program, and inspect potential pollutant hot spots at non-IGP facilities. Throughout the Small MS4 Permit term, WSP has been supporting MTS with site inspection and reporting services on an as-needed basis. This has included visual site inspections along the right-of-way, Hot Spots, light rail stations, transit centers, heavy rail yards and equipment storage facilities. As ongoing support under PWG367.0-23 for the Small MS4 Permit Program, WSP will continue to provide facility assessments and reporting services of MTS leased properties to ensure pollution prevention methods that can be used by MTS staff, contractors, and other responsible parties are utilized within the MTS right-of-way to minimize pollutants in stormwater runoff to MTS storm drain systems to the maximum extent practicable (MEP); and prevent site discharges from MTS storm drain systems from causing or contributing to a violation of water quality standards.

Before a site visit, WSP will review existing record drawings available from MTS and evaluate how the features on the record drawings relate to drainage systems and BMPs. WSP will then conduct a field visit with available MTS staff to evaluate existing conditions, identify existing facilities including catch basins, Treatment BMPs and other onsite and offsite drainage features. WSP will then summarize our findings with photographic documentation and our recommendations from a stormwater and non-stormwater quality perspective. Our inspections will focus on potential pollutant discharges, pollutant sources, BMPs, and storm drain outfalls. Our findings will be summarized in an inspection report that includes photographic documentation along with recommendations to ensure conformance to the Small MS4 Permit provisions. Under PWG367.0-23, facility assessments will be conducted annually and inspection results will be summarized in a matrix that will be submitted to MTS.

POST CONSTRUCTION STORMWATER MANAGEMENT PROGRAM

The WSP team brings a multitude of experience implementing post construction BMP strategies for numerous clients, including the development of BMP standards and guidelines for the State of Hawaii, treatment and flow control BMPs and associated hydraulic calculations for the Island of Guam, the Green Streets Guidelines for the County of San Diego, and over 15 Treatment BMP Corridor Studies for Caltrans District 7 as part of court ordered design documents for BMP sizing and placement along their District-wide (Los Angeles and Ventura County) freeway corridors. In 2020, our team prepared the MTS Post Construction Stormwater Management Manual (Manual) which provided a roadmap for implementing the MTS Post Construction Stormwater Management Program. WSP is very familiar with regulations that have changed since then such as the requirements for statewide trash control. Under PWG367.0-23, WSP will assist MTS with the ongoing implementation of their Post Construction Stormwater Management Program. This includes documentation and tracking of any pertinent information about a Regulated Project, treatment system, hydromodification control measure and responsible operators. Additionally, WSP will manage the program to ensure that all treatment systems and hydromodification controls are installed and maintained properly.

TRASH COMPLIANCE IMPLEMENTATION

In May 2023, the SWRCB released an informal has released an informal draft of selected sections of the revised Small MS4 Permit towards the end of May 2023. This included language for the 2023 Phase II Trash Provisions. Under the existing contract with MTS and based on a decision by MTS to comply with these provisions as a Non-Traditional Track 1 Permittee, WSP developed a trash compliance BMP strategy and cost estimate for all storm drains within the jurisdiction of MTS that capture runoff from locations and land uses that generate substantial amounts of trash. Furthermore, in early May 2023, WSP provided an informal review and submitted comments on the draft Trash Provisions. This comment review cycle was coordinated with MTS external legal counsel and comments were subsequently submitted to SWRCB for their consideration. Given our familiarity with the draft language and our understanding of the MTS full capture program, WSP will continue to support MTS with implementation of the full capture program when the Phase II Permit is reissued. This includes providing support during the bid, design and build phases of this BMP program that has a 2030 compliance deadline.

TRASH PROVISIONS

- ✓ WSP is very familiar with the Statewide Trash Provisions and has designed effective BMP strategies for MTS and other MS4 permittees

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STORMWATER QUALITY FACT SHEET UPDATES

Documentation of Small MS4 permitted facilities are included in Stormwater Quality Fact Sheets which are appended to the SWMP. These fact sheets, developed by WSP, consist of an evaluation of pollutant sources, and provide a description of the practices and program elements to reduce pollutants in areas identified as being potential pollutant sources to the stormwater system. They also identify overall drainage systems that may exist at the facility site and locations of outfalls adjacent to the Small MS4 permitted drainages systems.

Given our familiarity with these fact sheets, WSP can continue to offer our team of drainage design experts and GIS specialists to provide updates to the fact sheets based on maintenance agreements, final as-built drawings and site conditions. The Stormwater Quality Fact Sheets have proven to be an effective tool that has supported Treatment BMP inspections as well as during the preliminary design phase of MTS capital improvement projects.

AS-NEEDED REPAIR SERVICES

During the results of our inspection and maintenance services, there may additional repairs that involve the replacement of media filters for water quality inserts and/or the replacement of damaged structural parts. Under PWG367.0-23, WSP will provide MTS with a detailed justification including a cost estimate for maintenance, replacement, upgrade, or additional features, such as a pre-treatment device, recommended based on our inspection and maintenance results. The justification narrative and cost estimate will be submitted to MTS for their review and approval, prior to commencing work.

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July 28, 2023

Steve Augustyn
Senior Procurement Specialist
Metropolitan Transit System
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101-7490

Subject: Request for Clarification: MS4 Support and As-Needed BMP Repair and Consulting Services Request for Proposals (RFP), MTS Doc No. PWG367.0-23

Dear Steve,

Our response to your request to clarify sections of our proposal is provided below.

1) Staffing levels to perform training, inspection, and GIS services: overall our work plan and allocation of staff to deliver any requested service is described on page 27 of 174 in our proposal, and the staffing process is illustrated in a graphic format on the same page.

    a. Our team includes two California Trainers of Record that are certified in delivering stormwater training workshops. If specific training related to the current Construction General Permit or the 2022 Construction General Permit were requested, WSP would recommend that one of our Trainers of Record develop and deliver that type of training. For training other than construction stormwater, we would rely on team members that have already developed and delivered training programs to MTS under our current contract.

    Our approach for Training and Development is described on page 32 of 174 in the proposal. Specifically, our plan to deliver training would begin with Christian Herencia, a senior level staff member that was identified as the training lead. Based on the type of training requested, Christian would use the mid-level staff identified in the proposal to develop and deliver the training based on their knowledge and experience. This includes Angelica Quintero, Chris Koury and Hessam Tavakoldavani. Christian would then develop a scope of work and budget and submit to Veronica Seyde, our project manager, for review and approval. After her review, the scope of work and budget would be submitted to MTS for their review and approval. We propose to have mid-level staff develop and deliver the training with oversight by Christian. Overall, this demonstrates that mid-level staff are responsible for 90 percent of the work and the remaining 10 percent of the labor is associated with time for Christian, our key team member.

    b. Brenda Stevens is our key team member that will manage Treatment BMP inspections and oversee mid- to junior-level staff performing the fieldwork. She brings 14 years of experience in Treatment BMP inspections. Her inspection team is illustrated in our Organizational Chart on page 130 of 174 in Appendix III of our proposal. Brenda will be supported by six junior inspectors; her team

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provides 3 times more capacity than estimated to complete the required inspections. Having a broad base of qualified staff ensures we will be able to perform the work within the proposed staff categories.

Brenda leads an annual team training and calibration exercise to review critical design features per BMP type, typical maintenance indicators and recommended corrective actions to ensure high quality, consistent results amongst inspectors. Additionally, inspectors will collect photos of each BMP during the inspection, which will be reviewed by Brenda with the completed inspection forms to validate the accuracy of final site ratings prior to submitting to MTS. This process allows us to deliver these services in a cost-efficient manner by using mid-level staff to perform most of the work with a lower level of effort from our key team member to provide oversight and quality control. Brenda would also be available to her inspection team if they have any questions regarding Treatment BMP drainage structures, operational features, or maintenance triggers.

To allocate staff, key team members begin with proactive communication both internally and externally. During the development of a task order, Brenda will meet with the MTS project team to understand the project schedule and the drivers of the project deadlines. Brenda will then meet with qualified inspection staff to obtain their commitment to meeting the schedule and thus create the project team. Brenda will then work with staff to lay out a detailed internal schedule assigned geographically to optimize efficiency. This includes each individual task, the date and time by which it needs to be accomplished, and the staff member responsible for the work. Qualified staff volunteer for each task, reducing the headaches involved in top-down scheduling, but more importantly it greatly increases the commitment level of the staff. The increased commitment allows us to prepare schedules weeks ahead and complete them with very few changes. Ultimately this staffing allocation process ensures that projects are completed on-time and meet agreed schedules.

This proven team is experienced and has successfully performed over 4,800 BMP operation and maintenance inspections for the County of San Diego alone since 2013 with zero compliance issues.

c. Matt Porter developed the MTS GIS database and recently has been updating the ArcGIS accounts remotely through the MTS GIS portal. This approach has proven to be cost-effective and reliable. Given Matt's familiarity and experience, any request for GIS services would be provided by Matt. Matt can also rely on a team of junior level staff to support him with data entry tasks and cross checking data. Junior level staff supporting Matt include Gabriela Gonzalez and an intern, Sophia Olmeda, who recently joined our San Diego office. If Matt becomes unavailable for some reason, such as a family emergency or other health-related issue, then Mark Riley would be available to provide GIS and data management services to MTS. Mark's resume is on page 128 of 174 in our proposal. Mark is a senior GIS analysis with over 10 years of experience and is based in our San Diego office. The hours allocated for Matt in our cost proposal would be re-allocated to Mark.

2) In our cost proposal the equation in question refers to the Ops Manager's fully burdened hourly rate (T9) multiplied by the total number of labor hours for Treatment BMP maintenance (T29). This equates to a total annual cost of $78,400. Given that the Ops Manager is our Subconsultant, San Diego Stormwater Solutions, (SDSS), a 10 percent markup was applied. For Year 1, this equated to a total cost of $86,240. The same equation was applied for Year 2, 3, 4, and 5. This markup covers administrative efforts, general oversight, risk, and a modest contribution to our margin.

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Thank you for this opportunity to clarify sections within our proposal. If you have additional questions, please let us know. We look forward to hearing from you.

Kind regards,

Patti Boekamp
Senior Director, Local Business Line Leader

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APPENDIX III
ORGANIZATIONAL CHART

Organizational Chart

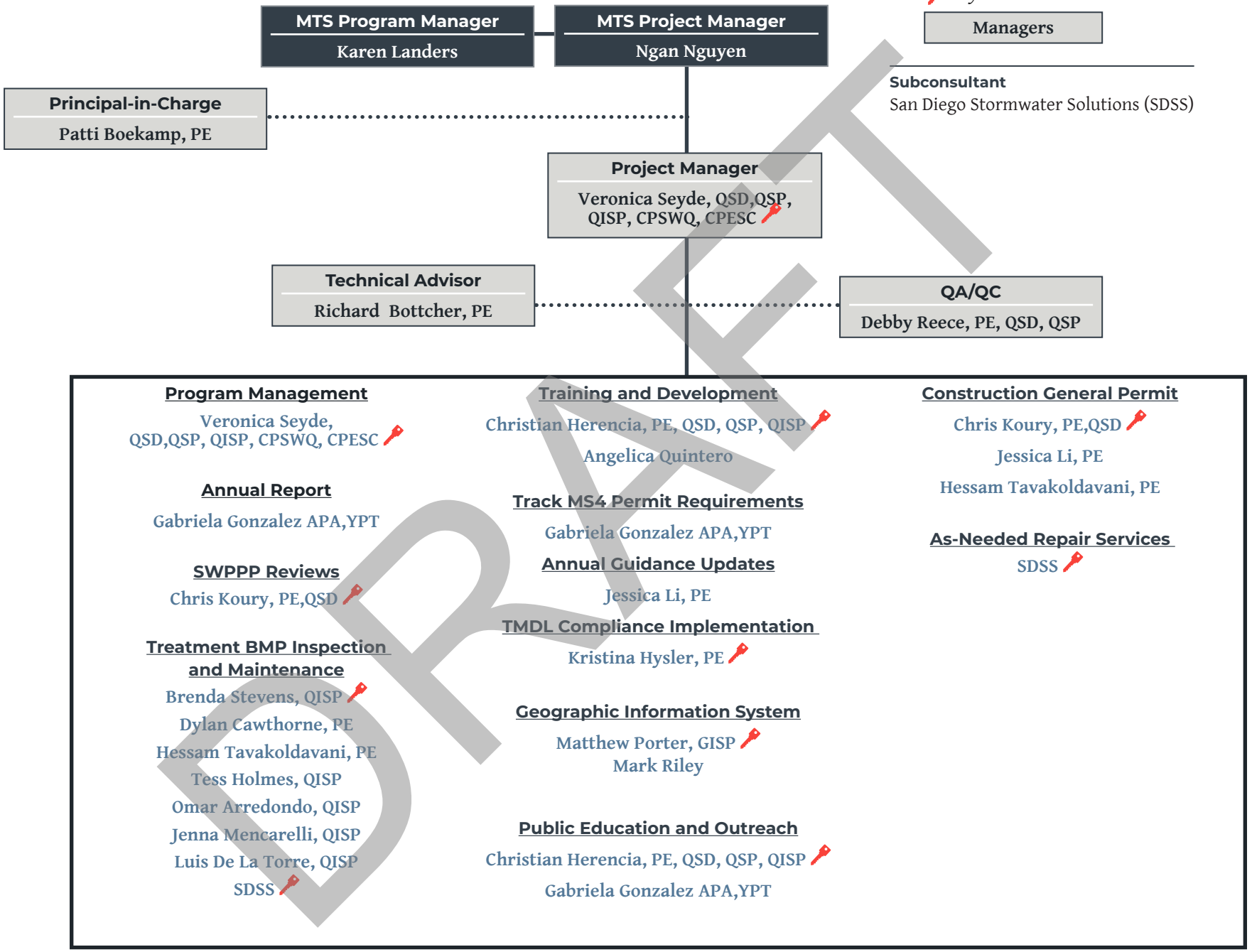

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EXHIBIT B

CONTRACTOR'S COST/PRICING FORM

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Work Order Estimate Summary

MTS Doc. No. PWG367.0-23

Work Order Title: MS4 SUPPORT AND AS-NEEDED BMP REPAIR AND CONSULTING SERVICES

Table 1 - Tasks Summary (Costs & Hours)

Item	Task	Task Description	Year 1 - Total Costs	Year 2 - Total Costs	Year 3 - Total Costs	Year 4 - Total Costs	Year 5 - Total Costs	
1	5.4.1	PROGRAM MANAGEMENT	$ 6,570.00	$ 6,767.22	$ 6,970.24	$ 7,179.34	$ 7,394.72	
2	5.4.2	MS4 SUPPORT SERVICES	$ 190,338.67	$ 197,439.50	$ 202,806.66	$ 210,606.74	$ 218,197.60	
3	Assumption	Gallagher RPL direct cost will be determined after contract execution.	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	$ 5,000.00	
								GRAND TOTAL
		Totals =	**$ 201,908.67**	**$ 209,206.72**	**$ 214,776.89**	**$ 222,786.08**	**$ 230,592.32**	**$ 1,079,270.68**

Table 2 - Tasks Summary (Costs & Hours)

Item	Task	Task Description	Year 1 - Labor Hrs	Year 1 - Total Costs	Labor Hrs	Year 2 - Total Costs	Labor Hrs	Year 3 - Total Costs	Labor Hrs	Year 4 - Total Costs	Labor Hrs	Year 5 - Total Costs
1	5.4.1.1	MONTHLY MEETINGS	6.0	$ 1,642.50	6.0	$ 1,691.80	6.0	$ 1,742.56	6.0	$ 1,794.84	6.0	$ 1,848.68
2	5.4.1.2	INVOICE/PROGRESS REPORT	6.0	$ 1,642.50	6.0	$ 1,691.80	6.0	$ 1,742.56	6.0	$ 1,794.84	6.0	$ 1,848.68
3	5.4.1.3	PROJECT TEAM COORDINATION AND MANAGEMENT	12.0	$ 3,285.00	12.0	$ 3,383.61	12.0	$ 3,485.12	12.0	$ 3,589.67	12.0	$ 3,697.36
4	5.4.2.1	ANNUAL REPORT	14.0	$ 1,704.66	14.0	$ 1,755.87	14.0	$ 1,808.55	14.0	$ 1,862.80	14.0	$ 1,918.69
5	5.4.2.2	STORMWATER POLLUTION PREVENTION PLANS (SWPPP)/WATER QUALITY TECHNICAL REPORT (WQTR) REVIEW	17.0	$ 2,727.67	17.0	$ 2,809.47	9.0	$ 1,592.09	9.0	$ 1,639.86	9.0	$ 1,689.05
6	5.4.2.3	TREATMENT BEST MANAGEMENT PRACTICE (BMP) INSPECTIONS AND MAINTENANCE	627.0	$ 145,107.50	627.0	$ 151,418.33	627.0	$ 158,099.90	627.0	$ 165,154.88	627.0	$ 172,439.06
7	5.4.2.4	TRAINING AND DEVELOPMENT	14.0	$ 2,725.22	14.0	$ 2,806.97	14.0	$ 2,891.18	14.0	$ 2,977.92	14.0	$ 3,067.26
8	5.4.2.5	TRACK MS4 PERMIT REQUIREMENTS	14.0	$ 1,704.66	14.0	$ 1,755.87	14.0	$ 1,808.55	14.0	$ 1,862.80	14.0	$ 1,918.69
9	5.4.2.6	ANNUAL GUIDANCE UPDATES	38.0	$ 5,557.62	42.0	$ 6,354.12	34.0	$ 5,243.07	26.0	$ 4,310.77	26.0	$ 4,440.09
10	5.4.2.7	TOTAL MAXIMUM DAILY LOADS (TMDL) COMPLIANCE IMPLEMENTATION	124.0	$ 23,998.68	124.0	$ 24,785.49	124.0	$ 25,598.61	124.0	$ 26,438.55	124.0	$ 27,306.22
11	5.4.2.8	PUBLIC EDUCATION AND OUTREACH PROGRAM	14.0	$ 1,704.66	10.0	$ 1,358.56	10.0	$ 1,399.31	10.0	$ 1,441.29	10.0	$ 1,484.53
12	5.4.2.9	CONSTRUCTION GENERAL PERMIT	32.0	$ 5,108.00	28.0	$ 4,394.81	24.0	$ 4,365.40	28.0	$ 4,917.87	20.0	$ 3,934.03
				$ -		$ -		$ -		$ -		$ -
		Totals =	**918.0**	**$ 196,908.67**	**914.0**	**$ 204,206.72**	**894.0**	**$ 209,776.89**	**890.0**	**$ 217,786.08**	**882.0**	**$ 225,592.32**

Table 3 - Consultant/Subconsultant Summary (Costs & Hours)

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs	Labor Hrs	Total Costs	Labor Hrs	Total Costs	Labor Hrs	Total Costs	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other											
				WSP USA Environment & Infrastructure (E&I), Inc.	533.0	$ 75,680.00	533.0	$ 78,328.80	533.0	$ 81,070.31	533.0	$ 83,907.77	533.0	$ 86,844.54
				San Diego Stormwater Solutions (SDSS)	140.0	$ 82,320.00	140.0	$ 86,436.00	140.0	$ 90,846.00	140.0	$ 95,550.00	140.0	$ 100,401.00
				WSP USA, Inc.	245.0	$ 38,908.67	241.0	$ 39,441.92	221.0	$ 37,860.58	217.0	$ 38,328.31	209.0	$ 38,346.78
				Gallagher RPL direct cost will be determined after contract execution.		$ 5,000.00		$ 5,000.00		$ 5,000.00		$ 5,000.00		$ 5,000.00
				Totals =	**918.0**	**$ 201,908.67**	**914.0**	**$ 209,206.72**	**894.0**	**$ 214,776.89**	**890.0**	**$ 222,786.08**	**882.0**	**$ 230,592.32**

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Work Order Estimate Summary

Total Hours = **918**
Total Costs = **$196,908.67**

Consultant/Subconsultant: **WSP USA, Inc. / WSP E&I / San Diego Stormwater Solutions**

Contract Title: **MS4 SUPPORT AND AS-NEEDED BMP REPAIR AND CONSULTING SERVICES**

MTS Doc. No.: **PWG367.0-23**
Year 1
11/1/23 - 10/31/24

Item	TASKS/WBS	Employee Name	VERONICA SEYDE	CHRISTIAN HERENCIA	Matthew Porter	Jessica Li	Chris Koury	HESSAM TAVAKOLDAVANI	GABRIELA GONZALEZ	ANGELICA QUINTERO	Kristina Hysler	Brenda Stevens	Omar ARREDONDO	JENNA MENCARELLI	TESS HOLMES	DYLAN CAWTHORNE	LUIS DE LA TORRE	Mark Riley	JASON BINGHAM	Total Hours	Totals
		Classification/Title	PM	TRAINING	GIS PLANNER	CGP	SWPPP/WPCP	ENGINEER I	PLANNER	TRAINING	Senior Principal	Project Manager	Staff 2 Engineer/ Scientist	Staff 1 Engineer/ Scientist	Staff 1 Engineer/ Scientist	Staff 3 Engineer/ Scientist	Staff 3 Engineer/ Scientist	Senior 1 Engineer/ Scientist	OPS MANAGER		
		Firm	WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	SD STORMWATER		
		Hourly Rate	$ 273.75	$ 238.73	$ 131.44	$ 196.91	$ 154.87	$ 151.87	$ 96.43	$ 152.85	$ 280.00	$ 205.00	$ 120.00	$ 110.00	$ 110.00	$ 145.00	$ 145.00	$ 175.00	$ 588.00		
1	Task 1	5.4.1 - PROGRAM MANAGEMENT																			
		5.4.1.1 - Monthly Meetings	6																	6	$ 1,642.50
		5.4.1.2 - Invoice/Progress Report	6																	6	$ 1,642.50
		5.4.1.3 - Project Team Coordination and Management	12																	12	$ 3,285.00
																					$ -
		Subtotals (Hours) =	24																	24	$ 6,570.00
		Subtotals (Costs) =	$6,570.00																	**24**	**$ 6,570.00**
2	Task 2	5.4.2 - MS4 SUPPORT SERVICES																			
		5.4.2.1 - Annual Report	2						12											14	$ 1,704.66
		5.4.2.2 - Stormwater Pollution Prevention Plans (SWPPP)/Water	1				8	8												17	$ 2,727.67
		5.4.2.3 - Treatment Best Management Practice (BMP) Inspections and Maintenance	2									44	149	100	100	40	52		140	627	$ 145,107.50
		5.4.2.4 - Training and Development	2	4						8										14	$ 2,725.22
		5.4.2.5 - Track MS4 Permit Requirements	2						12											14	$ 1,704.66
		5.4.2.6 - Annual Guidance Updates	2			4	8	8	12	4										38	$ 5,557.62
		5.4.2.7 - Total Maximum Daily Loads (TMDL) Compliance Implementation	4		72						48									124	$ 23,998.68
		5.4.2.8 - Public Education and Outreach Program	2						12											14	$ 1,704.66
		5.4.2.9 - Construction General Permit	4			4	8	8	8											32	$ 5,108.00
																					$ -
		Subtotals (Hours) =	21	4	72	8	24	24	56	12	48	44	149	100	100	40	52		140	894	$ 190,338.67
		Subtotals (Costs) =	$5,748.75	$954.92	$9,463.68	$1,575.28	$3,716.88	$3,644.88	$5,400.08	$1,834.20	$13,440.00	$9,020.00	$17,880.00	$11,000.00	$11,000.00	$5,800.00	$7,540.00		$82,320.00	**894**	**$ 190,338.67**

Totals (Summary) = **Totals =** **918** **$ 196,908.67**

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Work Order Estimate Summary

Total Hours = **914**
Total Costs = **$204,206.72**

Consultant/Subconsultant: **WSP USA, Inc. / WSP E&I / San Diego Stormwater Solutions**
Contract Title: **MS4 SUPPORT AND AS-NEEDED BMP REPAIR AND CONSULTING SERVICES**

MTS Doc. No.: **PWG367.0-23**
Year 2
11/1/24 - 10/31/25

Item	TASKS/WBS	Employee Name	VERONICA SEYDE	CHRISTIAN HERENCIA	Matthew Porter	Jessica Li	Chris Koury	HESSAM TAVAKOLDAVANI	GABRIELA GONZALEZ	ANGELICA QUINTERO	Kristina Hysler	Brenda Stevens	Omar ARREDONDO	JENNA MENCARELLI	TESS HOLMES	DYLAN CAWTHORNE	LUIS DE LA TORRE	Mark Riley	JASON BINGHAM	Total Hours	Totals
		Classification/Title	PM	TRAINING	GIS PLANNER	CGP	SWPPP/WPCP	ENGINEER I	PLANNER	TRAINING	Senior Principal	Project Manager	Staff 2 Engineer/ Scientist	Staff 1 Engineer/ Scientist	Staff 1 Engineer/ Scientist	Staff 3 Engineer/ Scientist	Staff 3 Engineer/ Scientist	Senior 1 Engineer/ Scientist	OPS MANAGER		
		Firm	WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	SD STORMWATER		
		Hourly Rate	$ 281.97	$ 245.89	$ 135.38	$ 202.81	$ 159.51	$ 156.42	$ 99.33	$ 157.44	$ 289.80	$ 212.18	$ 124.20	$ 113.85	$ 113.85	$ 150.08	$ 150.08	$ 181.13	$ 617.40		
1	Task 1	5.4.1 - PROGRAM MANAGEMENT																			
	5.4.1.1 - Monthly Meetings		6																	6	$ 1,691.80
	5.4.1.2 - Invoice/Progress Report		6																	6	$ 1,691.80
	5.4.1.3 - Project Team Coordination and Management		12																	12	$ 3,383.61
																					$ -
		Subtotals (Hours) =	24																	24	$ 6,767.22
		Subtotals (Costs) =	$6,767.22																	**24**	**$ 6,767.22**
2	Task 2	5.4.2 - MS4 SUPPORT SERVICES																			
	5.4.2.1 - Annual Report		2						12											14	$ 1,755.87
	5.4.2.2 - Stormwater Pollution Prevention Plans (SWPPP)/Water		1				8	8												17	$ 2,809.47
	5.4.2.3 - Treatment Best Management Practice (BMP) Inspections and Maintenance		2									44	149	100	100	40	52		140	627	$ 151,418.33
	5.4.2.4 - Training and Development		2	4						8										14	$ 2,806.97
	5.4.2.5 - Track MS4 Permit Requirements		2						12											14	$ 1,755.87
	5.4.2.6 - Annual Guidance Updates		2			4	8	8	12	8										42	$ 6,354.12
	5.4.2.7 - Total Maximum Daily Loads (TMDL) Compliance Implementation		4		72						48									124	$ 24,785.49
	5.4.2.8 - Public Education and Outreach Program		2						8											10	$ 1,358.56
	5.4.2.9 - Construction General Permit		4			4	4	4	12											28	$ 4,394.81
																					$ -
		Subtotals (Hours) =	21	4	72	8	20	20	56	16	48	44	149	100	100	40	52		140	890	$ 197,439.50
		Subtotals (Costs) =	$5,921.32	$983.56	$9,747.22	$1,622.51	$3,190.29	$3,128.48	$5,562.36	$2,518.97	$13,910.40	$9,335.70	$18,505.80	$11,385.00	$11,385.00	$6,003.00	$7,803.90		$86,436.00	**890**	**$ 197,439.50**

Totals (Summary) = **Totals =** **914** **$ 204,206.72**

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Work Order Estimate
Summary

Total Hours = **894**
Total Costs = **$209,776.89**

Consultant/Subconsultant: **WSP USA, Inc. / WSP E&I / San Diego Stormwater Solutions**
Contract Title: **MS4 SUPPORT AND AS-NEEDED BMP REPAIR AND CONSULTING SERVICES**

MTS Doc. No.: **PWG367.0-23**
Year 3
11/1/25 - 10/31/26

Item	TASKS/WBS	Employee Name	VERONICA SEYDE	CHRISTIAN HERENCIA	Matthew Porter	Jessica Li	Chris Koury	HESSAM TAVAKOLDAVANI	GABRIELA GONZALEZ	ANGELICA QUINTERO	Kristina Hysler	Brenda Stevens	Omar ARREDONDO	JENNA MENCARELLI	TESS HOLMES	DYLAN CAWTHORNE	LUIS DE LA TORRE	Mark Riley	JASON BINGHAM	Total Hours	Totals
		Classification/Title	PM	TRAINING	GIS PLANNER	CGP	SWPPP/WPCP	ENGINEER I	PLANNER	TRAINING	Senior Principal	Project Manager	Staff 2 Engineer/ Scientist	Staff 1 Engineer/ Scientist	Staff 1 Engineer/ Scientist	Staff 3 Engineer/ Scientist	Staff 3 Engineer/ Scientist	Senior 1 Engineer/ Scientist	OPS MANAGER		
		Firm	WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	SD STORMWATER		
		Hourly Rate	$ 290.43	$ 253.27	$ 139.44	$ 208.90	$ 164.30	$ 161.12	$ 102.31	$ 162.16	$ 299.94	$ 219.60	$ 128.55	$ 117.83	$ 117.83	$ 155.33	$ 155.33	$ 187.46	$ 648.90		
1	Task 1	5.4.1 - PROGRAM MANAGEMENT																			
	5.4.1.1 - Monthly Meetings		6																	6	$ 1,742.56
	5.4.1.2 - Invoice/Progress Report		6																	6	$ 1,742.56
	5.4.1.3 - Project Team Coordination and Management		12																	12	$ 3,485.12
																					$ -
		Subtotals (Hours) =	24																	24	$ 6,970.24
		Subtotals (Costs) =	$6,970.24																	**24**	**$ 6,970.24**
2	Task 2	5.4.2 - MS4 SUPPORT SERVICES																			
	5.4.2.1 - Annual Report		2						12											14	$ 1,808.55
	5.4.2.2 - Stormwater Pollution Prevention Plans (SWPPP)/Water		1				4	4												9	$ 1,592.09
	5.4.2.3 - Treatment Best Management Practice (BMP) Inspections and Maintenance		2									44	149	100	100	40	52		140	627	$ 158,099.90
	5.4.2.4 - Training and Development		2	4						8										14	$ 2,891.18
	5.4.2.5 - Track MS4 Permit Requirements		2						12											14	$ 1,808.55
	5.4.2.6 - Annual Guidance Updates		2			4	4	4	12	8										34	$ 5,243.07
	5.4.2.7 - Total Maximum Daily Loads (TMDL) Compliance Implementation		4		72						48									124	$ 25,598.61
	5.4.2.8 - Public Education and Outreach Program		2						8											10	$ 1,399.31
	5.4.2.9 - Construction General Permit		4			4	8	4	4											24	$ 4,365.40
																					$ -
		Subtotals (Hours) =	21	4	72	8	16	12	48	16	48	44	149	100	100	40	52		140	870	$ 202,806.66
		Subtotals (Costs) =	$6,098.96	$1,013.06	$10,039.64	$1,671.19	$2,628.80	$1,933.40	$4,910.77	$2,594.53	$14,397.26	$9,662.45	$19,153.50	$11,783.48	$11,783.48	$6,213.11	$8,077.04		$90,846.00	**870**	**$ 202,806.66**

Totals (Summary) = **Totals =** **894** **$ 209,776.89**

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Work Order Estimate Summary

Total Hours = **890**
Total Costs = **$217,786.08**

Consultant/Subconsultant: **WSP USA, Inc. / WSP E&I / San Diego Stormwater Solutions**

Contract Title: **MS4 SUPPORT AND AS-NEEDED BMP REPAIR AND CONSULTING SERVICES**

MTS Doc. No.: **PWG367.0-23**
Year 4
11/1/26 - 10/31/27

Item	TASKS/WBS	Employee Name	VERONICA SEYDE	CHRISTIAN HERENCIA	Matthew Porter	Jessica Li	Chris Koury	HESSAM TAVAKOLDAVANI	GABRIELA GONZALEZ	ANGELICA QUINTERO	Kristina Hysler	Brenda Stevens	Omar ARREDONDO	JENNA MENCARELLI	TESS HOLMES	DYLAN CAWTHORNE	LUIS DE LA TORRE	Mark Riley	JASON BINGHAM	Total Hours	Totals
		Classification/Title	PM	TRAINING	GIS PLANNER	CGP	SWPPP/WPCP	ENGINEER I	PLANNER	TRAINING	Senior Principal	Project Manager	Staff 2 Engineer/ Scientist	Staff 1 Engineer/ Scientist	Staff 1 Engineer/ Scientist	Staff 3 Engineer/ Scientist	Staff 3 Engineer/ Scientist	Senior 1 Engineer/ Scientist	OPS MANAGER		
		Firm	WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	SD STORMWATER		
		Hourly Rate	$ 299.14	$ 260.86	$ 143.62	$ 215.17	$ 169.23	$ 165.95	$ 105.38	$ 167.02	$ 310.44	$ 227.29	$ 133.05	$ 121.96	$ 121.96	$ 160.76	$ 160.76	$ 194.03	$ 682.50		
1	**Task 1**	**5.4.1 - PROGRAM MANAGEMENT**																			
	5.4.1.1 - Monthly Meetings		6																	6	$ 1,794.84
	5.4.1.2 - Invoice/Progress Report		6																	6	$ 1,794.84
	5.4.1.3 - Project Team Coordination and Management		12																	12	$ 3,589.67
																					$ -
		Subtotals (Hours) =	24																	24	$ 7,179.34
		Subtotals (Costs) =	$7,179.34																	**24**	**$ 7,179.34**
2	**Task 2**	**5.4.2 - MS4 SUPPORT SERVICES**																			
	5.4.2.1 - Annual Report		2						12											14	$ 1,862.80
	5.4.2.2 - Stormwater Pollution Prevention Plans (SWPPP)/Water		1				4	4												9	$ 1,639.86
	5.4.2.3 - Treatment Best Management Practice (BMP) Inspections and Maintenance		2									44	149	100	100	40	52		140	627	$ 165,154.88
	5.4.2.4 - Training and Development		2	4						8										14	$ 2,977.92
	5.4.2.5 - Track MS4 Permit Requirements		2						12											14	$ 1,862.80
	5.4.2.6 - Annual Guidance Updates		2			4	4	4	8	4										26	$ 4,310.77
	5.4.2.7 - Total Maximum Daily Loads (TMDL) Compliance Implementation		4		72						48									124	$ 26,438.55
	5.4.2.8 - Public Education and Outreach Program		2						8											10	$ 1,441.29
	5.4.2.9 - Construction General Permit		4			4	8	4	8											28	$ 4,917.87
																					$ -
		Subtotals (Hours) =	21	4	72	8	16	12	48	12	48	44	149	100	100	40	52		140	866	$ 210,606.74
		Subtotals (Costs) =	$6,281.92	$1,043.45	$10,340.83	$1,721.33	$2,707.66	$1,991.40	$5,058.09	$2,004.28	$14,901.17	$10,000.64	$19,823.88	$12,195.90	$12,195.90	$6,430.56	$8,359.73		$95,550.00	**866**	**$ 210,606.74**

Totals (Summary) = **Totals =** **890** **$ 217,786.08**

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Work Order Estimate Summary

Total Hours = **882**
Total Costs = **$225,592.32**

Consultant/Subconsultant: **WSP USA, Inc. / WSP E&I / San Diego Stormwater Solutions**

Contract Title: **MS4 SUPPORT AND AS-NEEDED BMP REPAIR AND CONSULTING SERVICES**

MTS Doc. No.: **PWG367.0-23**
Year 5
11/1/27 - 10/31/28

Item	TASKS/WBS	Employee Name	VERONICA SEYDE	CHRISTIAN HERENCIA	Matthew Porter	Jessica Li	Chris Koury	HESSAM TAVAKOLDAVANI	GABRIELA GONZALEZ	ANGELICA QUINTERO	Kristina Hysler	Brenda Stevens	Omar ARREDONDO	JENNA MENCARELLI	TESS HOLMES	DYLAN CAWTHORNE	LUIS DE LA TORRE	Mark Riley	JASON BINGHAM	Total Hours	Totals
		Classification/Title	PM	TRAINING	GIS PLANNER	CGP	SWPPP/WPCP	ENGINEER I	PLANNER	TRAINING	Senior Principal	Project Manager	Staff 2 Engineer/ Scientist	Staff 1 Engineer/ Scientist	Staff 1 Engineer/ Scientist	Staff 3 Engineer/ Scientist	Staff 3 Engineer/ Scientist	Senior 1 Engineer/ Scientist	OPS MANAGER		
		Firm	WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	WSP E&I	SD STORMWATER		
		Hourly Rate	$ 308.11	$ 268.69	$ 147.93	$ 221.62	$ 174.31	$ 170.93	$ 108.54	$ 172.03	$ 321.31	$ 235.24	$ 137.70	$ 126.23	$ 126.23	$ 166.39	$ 166.39	$ 200.82	$ 717.15		
1	Task 1	5.4.1 - PROGRAM MANAGEMENT																			
		5.4.1.1 - Monthly Meetings	6																	6	$ 1,848.68
		5.4.1.2 - Invoice/Progress Report	6																	6	$ 1,848.68
		5.4.1.3 - Project Team Coordination and Management	12																	12	$ 3,697.36
																					$ -
		Subtotals (Hours) =	24																	24	$ 7,394.72
		Subtotals (Costs) =	$7,394.72																	**24**	**$ 7,394.72**
2	Task 2	5.4.2 - MS4 SUPPORT SERVICES																			
		5.4.2.1 - Annual Report	2						12											14	$ 1,918.69
		5.4.2.2 - Stormwater Pollution Prevention Plans (SWPPP)/Water	1				4	4												9	$ 1,689.05
		5.4.2.3 - Treatment Best Management Practice (BMP) Inspections and Maintenance	2									44	149	100	100	40	52		140	627	$ 172,439.06
		5.4.2.4 - Training and Development	2	4						8										14	$ 3,067.26
		5.4.2.5 - Track MS4 Permit Requirements	2						12											14	$ 1,918.69
		5.4.2.6 - Annual Guidance Updates	2			4	4	4	8	4										26	$ 4,440.09
		5.4.2.7 - Total Maximum Daily Loads (TMDL) Compliance Implementation	4		72						48									124	$ 27,306.22
		5.4.2.8 - Public Education and Outreach Program	2						8											10	$ 1,484.53
		5.4.2.9 - Construction General Permit	4			4	4	4	4											20	$ 3,934.03
																					$ -
		Subtotals (Hours) =	21	4	72	8	12	12	44	12	48	44	149	100	100	40	52		140	858	$ 218,197.60
		Subtotals (Costs) =	$6,470.38	$1,074.76	$10,651.05	$1,772.96	$2,091.67	$2,051.14	$4,775.68	$2,064.41	$15,422.71	$10,350.66	$20,517.71	$12,622.75	$12,622.75	$6,655.63	$8,652.32		$100,401.00	**858**	**$ 218,197.60**

Totals (Summary) = **Totals =** **882** **$ 225,592.32**

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EXHIBIT C

STANDARD AGREEMENT, INCLUDING STANDARD CONDITIONS

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STANDARD CONDITIONS

7.1. COMPLETE AGREEMENT

This Agreement, including all applicable terms, conditions, and specifications, is the entire agreement of the parties and no attempted modification shall be binding unless in writing and signed by MTS and the Contractor.
MTS reserves the right to use alternative vendors/contractors at any time for any reason.

7.2. COUNTERPARTS

This Agreement may be executed in any number of counterparts. All such counterparts shall be deemed to constitute one and the same instrument, and each of said counterparts shall be deemed an original thereof.

7.3. SURVIVAL

Notwithstanding MTS's acceptance of the services and payment therefore, Contractor shall remain obligated under all clauses of this Agreement which expressly, or by their nature, extend beyond and survive such acceptance and payment.

7.4. DUTY TO CLARIFY OBVIOUS AMBIGUITY

The Contractor is required to seek clarification of any obvious ambiguity contained in the contract documents. Failure to do so will result in an interpretation of the ambiguous provision favorable to MTS should a dispute later arise concerning that provision.

7.5. NOTICES

All notices or other communications to either party by the other shall be deemed given when made in writing and deposited in the United States Post Office, addressed as follows:

To MTS:

San Diego Metropolitan Transit System (MTS)
Attention: Chief Executive Officer
1255 Imperial Avenue, Suite 1000
San Diego, CA 92101-7490

To Contractor:

As shown on front page.

7.6. CHANGES IN WORK

No payment for changed or additional work shall be made unless the changed or additional work has first been approved in writing by the MTS Project Manager and the parties have agreed upon the appropriate adjustment, if any, to the payment schedule and maximum payment amount for the changed or additional work. The written notice of potential change in work be given to MTS prior to the time Contractor shall have performed the work within fifteen (15) days after the happening of the event, thing, occurrence, or other cause, giving rise to the potential change in work.

The MTS Project Manager may order changes or additions to the scope of work. Whether a change or addition to the scope of work is proposed by the Contractor or ordered by the MTS

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Project Manager, the parties shall in good faith negotiate an appropriate adjustment, if any, to the payment schedule and maximum payment for the changed or additional work. An approved change or addition, along with the payment adjustment, if any, will be effective upon an amendment to this contract executed by both parties. The amendment shall not render ineffective or invalidate unaffected portions of this contract.

7.7. SEVERABILITY

If any term, provision, or condition of this Agreement is held to be invalid, void or otherwise unenforceable, to any extent, by any court of competent jurisdiction, the remainder of this Agreement shall not be affected thereby, and each term, provision, or condition of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

7.8. TERMINATION OF AGREEMENT

7.8.1. TERMINATION FOR CONVENIENCE

Performance under this agreement may be terminated by MTS in accordance with this clause in whole or, from time-to-time, in part, whenever MTS shall elect. Any such termination shall be affected by delivery to Contractor of a Notice of Termination specifying the extent to which performance under this agreement is terminated, and the date upon which such termination becomes effective. Upon receipt of any such notice, Contractor shall, unless the notice requires otherwise:

A. immediately discontinue performance on the date and to the extent specified in the notice;

B. place no further orders for materials other than as may be necessarily required for completion of such portion of the agreement that is not terminated;

C. promptly make every reasonable effort to either obtain cancellation on terms satisfactory to MTS of all orders to Contractor's suppliers to the extent they relate to the performance of that portion terminated, or upon MTS concurrence assign to MTS those orders; and

D. assist MTS, upon request, in the maintenance, protection and disposition of property acquired by MTS under this agreement.

If claimed in writing within 30 calendar days after Notice of Termination, MTS will pay to Contractor an equitable adjustment to include (without duplication of any item):

A. all amounts due and not previously paid to Contractor for goods completed in accordance with this agreement prior to such notice;

B. a reasonable amount for any goods and materials then in production; provided that no such adjustment be made in favor of Contractor with respect to any goods which are Contractor's standard stock;

C. costs of settling and paying supplier's claim arising out of the canceled orders; and

D. a reasonable profit for costs incurred in the performance of that portion terminated; provided, however, that if it appears that Contractor would have sustained a loss on the entire agreement had it been completed, no profit shall be included.

The total sum to be paid to Contractor under this clause, shall not exceed the total order price as reduced by the amount of payments otherwise made, and as further

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reduced by the order price of that portion not terminated, and will not include any consideration for loss of anticipated profits on the terminated portion all claims for which seller agrees to waive.

7.8.2. TERMINATION FOR DEFAULT

In case of Contractor breach or failure to perform, MTS reserves the right to terminate the contract for default. MTS may award the contract to the next lowest responsive, responsible Proposer, solicit new bids, or pursue any other remedy authorized by law.

In addition to any remedy authorized by law, money due to the Contractor under and by virtue of contract, as shall be considered necessary by MTS, may be retained by MTS until disposition has been made of such suits or claims for damages. The retention of money due to the Contractor shall be subject to the following:

A. MTS will give the Contractor ten (10) days' notice of its intention to retain funds from any partial payment, which may become due to the Contractor prior to acceptance by MTS of the contract. Retention of funds from any payment made after acceptance may be made without such prior notice to the Contractor.

B. No retention of additional amounts out of partial payments will be made if the amount to be retained does not exceed the amount being withheld from partial payments.

C. If MTS has retained funds, and it is subsequently determined that MTS is not entitled to be indemnified and saved harmless by the Contractor in connection with the matter for which such retention was made, MTS shall be liable for interest earned on the amount retained for the period of such retention.

MTS may terminate the contract by serving a notice of termination on the Contractor. Notice shall set forth the manner in which the Contractor is in default, and provide the Contractor with ten (10) days' time to cure the default to the satisfaction of MTS. This cure period may be adjusted if the parties so agree in writing. If MTS determines after the cure period that the default is not cured, MTS will issue a "show cause" letter to the Contractor requesting from the Contractor reasons why this contract should not be terminated. If MTS does not find that the Contractor has demonstrated sufficient reason for its failure to cure, the contract shall be deemed terminated. The Contractor shall only be paid the contract price for supplies received and accepted, or services performed in accordance with the manner set forth in the contract. If MTS determines that the Contractor had an excusable reason for not performing such as a strike, fire, flood, or other events, which are not the fault of, or beyond the control of the Contractor, MTS may allow the Contractor to continue work or terminate the contract for convenience.

7.9. ASSIGNABILITY

A. By MTS. This contract is assignable, in whole or in part, to any other government agency, including the North County Transit District and/or the San Diego Association of Governments and/or the Metropolitan Transit System. The party wishing to exercise the assignment (also known as a "piggyback") shall perform an independent cost estimate to determine fair and reasonable pricing, and shall enter into its own contract with the vendor based upon the terms and conditions of this Request for Proposal. Any assignment or piggyback shall comply with Federal Transit Administration (FTA) requirements if

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applicable. MTS shall have no responsibility or liability for any such assignment or piggyback.

B. By Contractor. Any attempt by Contractor to assign, subcontract, or transfer all or part of this Agreement shall be void and unenforceable without MTS' prior written consent; which consent shall not be unreasonably withheld. Any such consent shall not relieve Contractor from full and direct responsibility for all services performed prior to the date of assigning, subcontracting, or transferring this Agreement. In the event of an authorized assignment by MTS or applicable law, all terms, conditions, and provisions of this contract shall apply to and bind the respective heirs, executors, administrators, successors, and assigns of the parties.

Any assignment of this Agreement or of any rights hereunder of hypothecation thereof in any manner, in whole or in part, without the prior written consent of MTS shall be null and void. Notwithstanding the foregoing, Contractor may assign monies due or to become due under this Agreement, and such assignments will be recognized by MTS, provided that written notice thereof is given to MTS at least ten (10) calendar days before payment is due. Any assignment of monies shall be subject to proper setoffs in favor of MTS to all deductions provided for in this Agreement. All money withheld, whether assigned or not, shall be subject to being used by MTS for the completion of the Agreement, in the event Contractor should be in default therein.

In the event of an authorized assignment by MTS or applicable law, all terms, conditions, and provisions hereof shall inure to and bind hereto their and each of their respective heirs, executors, administrators, successors, and assigns.

7.10. STANDARD OF PERFORMANCE

Contractor's services shall be performed in accordance with generally accepted professional practices and principles and in a manner consistent with the level of care and skill ordinarily exercised by members of Contractor's profession currently practicing under similar conditions. By delivery of completed work, Contractor certifies that the work conforms to the requirements of this contract and all applicable federal, state and local laws. If Contractor is retained to perform services requiring a license, certification, registration or other similar requirement under California law, Contractor shall maintain that license, certification, registration or other similar requirement throughout the term of this Contract.

7.11. TIME

The Contractor acknowledges that timely performance is an important element of this Agreement. Accordingly, the Contractor shall put forth its best professional effort to complete its services in accordance with the agreed-upon schedule.

7.12. EXCUSABLE DELAYS / FORCE MAJEURE

Timely performance and deliveries are essential to this Agreement. However, Contractor will not be liable for delays in performing its obligations to the extent the delay is caused by an unforeseeable condition, which is beyond Contractor's reasonable control, without Contractor's fault or negligence. Acts of God, such as storms or floods, as well as government priorities, acts of civil or military authorities, fires, strikes, epidemics, war or riot, are examples of events which will be excusable for being beyond Contractor's reasonable control only upon fulfillment of the

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following conditions: (a) within seven (7) calendar days of the commencement of any excusable delay, Contractor shall provide MTS with written notice of the cause and extent thereof, as well as request for a schedule extension for the estimated duration thereof; and (b) within seven (7) calendar days of the cessation of the event causing delay, Contractor shall provide MTS with written notice of the actual delay incurred, upon receipt of which the date of promised delivery shall be extended for the time actually lost by reason of an excusable delay.

7.13. SUSPENSION OF WORK

MTS may at any time and for any reason within its sole discretion issue a written order to the Contractor suspending, delaying or interrupting all or any part of the Work for a specified period of time. The Contractor shall comply immediately with any such written order and take all reasonable steps to minimize costs allocable to the Work covered by the suspension during the period of work stoppage. Contractor shall continue the Work that is not included in the suspension and shall continue such ancillary activities as are not suspended. The Contractor shall resume performance of the suspended Work upon expiration of the notice of suspension, or upon direction from MTS. The Contractor shall be allowed an equitable adjustment in the Contract price and/or an extension of the Contract time, to the extent that cost or delays are shown by the Contractor to be directly attributable to any suspension. However, no adjustment shall be made under this section for any suspension, delay or interruption due to the fault or negligence of the Contractor, or for which an equitable adjustment is provided for, or excluded under any other term or condition of the Contract. As soon as reasonably possible but no later than forty-five (45) calendar days, or any other period of time agreed to by the parties, after receipt of the written suspension of work notice, the Contractor shall submit to the Contracting Officer a detailed price and schedule Proposal for the suspension, delay or interruption.

7.14. INSPECTION AND TESTING

Except as otherwise expressly provided herein, Contractor shall be responsible for all inspection and testing, and agrees to strictly follow the standards of quality specified by MTS in addition to those customary in the industry. MTS shall be afforded free access to plants of Contractor and its suppliers in order to make surveillance inspections to monitor compliance with contractual quality requirements, and MTS's right to inspect, examine, and test the goods shall extend through the manufacturing process, the time and shipment, and a reasonable time after arrival at the ultimate destination. Contractor's failure to adhere to the standards of quality required under this Agreement shall be deemed to be reasonable grounds for insecurity justifying a written demand from MTS that Contractor provide adequate assurance of Contractor's ability to meet said standards.

Goods shall not be deemed accepted until finally inspected and examined at final destination.

The making or failure to make any surveillance inspection or examination of, payment for, or acceptance of the goods shall in no way impair MTS's right to reject nonconforming goods, or to avail itself of any other remedies to which MTS may be entitled, notwithstanding MTS's knowledge of the nonconformity, its substantiality, or the ease of its discovery.

7.15. [NOT APPLICABLE] EXPEDITING

7.16. INDEPENDENT CONTRACTOR

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Contractor hereby declares that it is engaged in an independent business and agrees that in the performance of this Agreement it shall act as an independent contractor and not as an employee of MTS. Contractor has and hereby retains full control of all the employment, compensation, and discharge of all employees of Contractor assisting in its performance hereunder. Contractor shall be fully responsible for all matters relating to payment of its employees, including compliance with Social Security, withholding tax, and all other laws and regulations governing such matters. Contractor shall be responsible for its own acts and those of its agents and employees during the term of this Agreement. MTS shall be responsible for its own acts and those of its agents and employees during the term of this Agreement. Except as otherwise specifically provided, as an independent contractor, Contractor is solely responsible for determining the means and methods of performing the services described in the scope of work. Contractor shall perform the work contemplated with resources available within its own organization.

7.17. THIRD PARTY BENEFICIARIES

No provisions of the Contract shall in any way inure to the benefit of any third party, including the public at large, so as to constitute such person a third-party beneficiary of the Contract or of any one or more of the terms and conditions of the Contract or otherwise give rise to any cause of action in any person not a party to the Contract, except as expressly provided elsewhere in the Contract

7.18. SUBCONTRACTORS

Contractor 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. Contractor 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 Contractor is for acts and omissions of persons directly employed by Contractor. 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 Contractor of its obligations under this Agreement.

7.19. INDEMNITY

As between MTS and Contractor, Contractor shall indemnify and hold harmless, MTS, SDTI, SDTC, SD&AE, SD&IV and any and all of its directors, officers, agents or employees from and against any and all claims, loss, damage, charge, or expense, whether direct, which MTS, SDTI, SDTC, SD&AE, SD&IV or such directors, officers, agents or employees may be put or subjected, by reason of any damage, loss, or injury of any kind or nature whatever to persons or property caused by any negligent act, omission, in its or their performance under this Agreement. In addition to any other remedy authorized by law, so much of the money due Contractor under this Agreement as shall be considered necessary by MTS may be retained until disposition has been made of any claim for damages.

7.20. DISPUTES, CLAIMS, AND RESOLUTION

MTS and the Contractor agree that every effort shall be made to resolve any dispute arising under this Agreement informally through their designated representatives. If the informal efforts are unsuccessful, then either party may request mediation by submitting a written request signed by an officer with the authority to bind the Contractor or MTS. Within five (5) business days of the request of any party, the parties shall mutually agree on the person or alternative dispute

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resolution agency to conduct the mediation. If the parties are unable to agree on the person or alternative dispute resolution agency to conduct the mediation, the initiating party may arrange for the office of the American Arbitration Association in downtown San Diego, California, to perform the mediation. The initiating party shall then schedule the mediation so that it is conducted within fifteen (15) business days of the mediator's appointment. The costs of the mediation and fees of the mediator, if any, shall be borne by the requesting party. Any dispute not resolved through the mediation may proceed to litigation in a court of competent jurisdiction in the County of San Diego, State of California, unless the parties agree in writing to submit the dispute to binding arbitration.

Should the Contractor suffer any injury or damage to person or property because of any alleged act or omission of MTS, or if any of Contractor's employees, agents, or others for whose acts the Contractor is legally liable suffers any injury or damages to person or property because of any alleged act or omission of MTS, a written claim for damages shall be filed with the MTS Office of General Counsel in accordance with the provisions of California Government Code section 900 et seq.

The duties and obligations imposed by this Agreement and the rights and remedies available hereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law. No action or failure to act by MTS or Contractor shall constitute a waiver of any right or duty afforded any of them under this Agreement, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder except as may be specifically agreed to in writing.

7.21. NONWAIVER

Failure of MTS to insist upon strict performance of any of the terms and conditions hereof, or failure or delay to exercise any rights or remedies provided herein, or by law, or to properly notify Contractor in the event of breach, or the acceptance of payment for any goods hereunder, or review of design, shall not release Contractor from any of the warranties or obligations of this agreement, and shall not be deemed a waiver of any right of MTS to insist regardless when shipped, received, or accepted or as to any prior or subsequent default hereunder, nor shall any revision of this agreement by MTS operate as a waiver of any of the terms hereof. A requirement that a Contractor's document be submitted for or subject to "authorization to proceed," "approval," "acceptance," "review," "comment," or combinations of such words or words of like import shall mean, unless the context clearly indicates otherwise, that Contractor shall, before implementing the information in the document, submit the document, obtain resolution of any comments, and obtain written authorization from MTS to proceed, and shall mean that a complete check will be performed. Authorization to proceed shall not constitute acceptance or approval of design details, calculations, analyses, test methods, or materials developed or selected by Contractor and shall not relieve Contractor from full compliance with contractual obligations.

7.22. GOVERNING LAW AND CHOICE OF FORUM

The definition of terms used, interpretation of this Agreement, and rights of all parties hereunder shall be determined in accordance with the laws of the State of California.

Any action or proceeding to enforce or relating to this Agreement shall be brought exclusively in the federal or state courts located in San Diego County, California, and the Contractor and MTS

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hereto consent to the exercise of personal jurisdiction over them by any such courts for purposes of any such action or proceeding.

7.23. LITIGATION EXPENSES

Should litigation be necessary to enforce any term or provision of this Agreement, or to collect any portion of the amount payable under this Agreement, then all litigation and collection expenses, witness fees, court costs, and attorney's fees shall be paid to the prevailing party.

7.24. INSURANCE

Contractor will include the contract number on all insurance-related correspondence, i.e., the insurance certificate itself.

All policies required shall be issued by companies who are licensed or approved to do business in the State of California and hold a current policyholder's alphabetic and financial-size category rating of not less than A-VI, in accordance with A.M. Best.

MTS utilizes the services of a third-party insurance monitoring company. As a condition of contract award, Contractor shall submit any required insurance policies to the third-party monitoring company of MTS' choosing.

7.24.1. COVERAGE REQUIRED - ALL CONTRACTS

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 include 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

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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.

7.24.2. 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 or Equivalent

Any exclusions relating to performance of operations within the vicinity of any railroad, bridge, trestle, track, roadbed, tunnel, underpass, or crossing must be deleted. Option: purchase separate Railroad Protective Liability Policy as required.

☒ (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

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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 a 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 Vendor 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

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7.24.3. 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

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

☒	B (1) Primary and Non-Contributory Insurance	
☐	B (2) Owner Provided Builder's Risk	Replacement Cost
☒	B (3) Railroad Protective or Equivalent	$4,000,000
☒	B (4) Professional Liability	$2,000,000
☐	B (5) Pollution and Legal Liability	$
☐	B (6) Contractor Equipment	Replacement Cost
☐	B (7) Installation Floater	Replacement Cost
☐	B (8) Garage Keeper's Legal Liability & Automobile Portion (Combined Single Limit (CSL)	(Per Occurrence)
☐	B (9) Crime Fidelity Insurance	$
☐	B (10) Umbrella or Excess Liability (if required to meet liability limits above)	$
☐	B (11) Property Insurance	$
☐	B (12) Cyber Security Liability Insurance (per occurrence or claim)	$
	(Aggregate)	$

7.24.4. NOTICE OF POLICY CHANGES

Contractor shall not amend or cancel the insurance policy and coverage required by this Agreement without providing MTS with at least thirty (30) days prior written notice. Contractor shall notify MTS within ten (10) days of insurer-initiated material amendments or cancellations to the insurance coverage required by this Agreement. Under no circumstances shall these notice provisions be deemed a waiver of the insurance requirements set for herein. Any material changes in or cancellation of the insurance policy on file with MTS pursuant to the insurance requirements will result in an immediate stop work order until proof of substitute coverage meeting the requirements of this Agreement is provided to MTS. In the alternative, in MTS' sole discretion, MTS retains the right to declare Contractor in default and immediately terminate this Agreement if the insurance coverage required is cancelled, otherwise lapses or fails to meet the coverage limits at any time, and for any duration, during the term of this Agreement.

7.24.5. EVIDENCE REQUIRED

Within ten (10) working days following receipt of notice that a contract has been awarded, Contractor shall have provided the MTS Contracts Specialist with satisfactory certification

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by a qualified representative of the Insurer(s) that Contractor's insurance complies with all provisions in this insurance section.

7.24.6. SPECIAL PROVISIONS

The foregoing requirements as to the types and limits of insurance coverage to be maintained by Contractor, and any approval of said insurance by MTS, SDTI, SD&AE, SD&IV, and SDTC, or their insurance Contractor(s) are not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by Contractor pursuant to this Agreement, including but not limited to the provisions concerning indemnification.

MTS reserves the right to withhold payments to Contractor in the event of material noncompliance with the insurance requirements outlined above.

7.25. [NOT APPLICABLE] LIQUIDATED DAMAGES

7.26. PRICE AND PAYMENT

The total price herein specified, unless otherwise expressly stated, shall include all taxes of any kind which either party is required to pay with respect to the sale of the goods covered by this Agreement, including sales and use taxes, and shall include all charges and expenses for customs duties, freight charges, inspection, testing, packaging and loading unless specifically excluded.

Payment will be made as set forth in this Agreement; however, payments may be withheld or portions thereof may be deducted or setoffs may be made against Contractor if Contractor is not performing work in accordance with the applicable provisions of this Agreement. The time for payment of invoices or for accepting any discounts offered shall run only from the date of receipt of correct invoices with required certification documents by MTS.

ADVANCE PAYMENT IS NOT ALLOWABLE.

7.27. CONSIDERATION PAID

MTS shall reimburse the Contractor for actual costs (including labor costs, employee benefits, overhead, and other direct costs) incurred by the Contractor in performance of the work, in an amount not to exceed $1,079,270.68. Actual costs shall not exceed the estimated wage rates and other costs set forth in the Contractor’s proposal.

Fees and all other charges will be billed monthly as the work progresses, and the net amount shall be due at the time of billing.

Payment will be made as set forth in this Agreement; however, payments may be withheld or portions thereof may be deducted or setoffs may be made against Contractor if Contractor is not performing work in accordance with the applicable provisions of this Agreement. The time for payment of invoices or for accepting any discounts offered shall run only from the date of receipt of correct invoices with required certification documents by MTS.

MTS does not reimburse travel expenses unless expressly permitted within the scope. If travel expense reimbursement is permitted within the scope, reimbursement for transportation and subsistence costs shall be in accordance with MTS Board Policy No. 44-C.

7.28. COST PRINCIPLES

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The Contractor agrees that the Contract Cost Principles and Procedures, 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31, shall be used to determine the allowability of individual items of cost.

The Contractor also agrees to comply with federal procedures in accordance with 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to state and local governments.

Any costs for which payment has been made to the Contractor that are determined by subsequent audit to be unallowable under 48 CFR, Federal Acquisition Regulations System, Chapter 1, Part 31, or 49 CFR, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to state and local governments, are subject to repayment by the Contractor to MTS.

7.29. PROMPT PROGRESS PAYMENT AND RETENTION

Contractor 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 Contractor. Any retainage kept by the Contractor 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 Contractor or Subcontractor in the event of a dispute involving late or nonpayment by the Contractor, deficient Subcontractor performance or noncompliance by a Subcontractor.

Prime Contractor 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 prime contractor 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 a Prime Contractor and a Subcontractor.

7.30. RECORDS RETENTION

The Contractor 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 Contractor that are pertinent to the contract for audit examination, excerpts, and transactions, and copies thereof shall be furnished if requested.

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7.31. WARRANTIES-GUARANTEES

Contractor represents that the goods shall be in conformance with the standard of care. Unless the representation period is otherwise extended, the warranty shall apply. If, within one year from the date of commercial operation for the purpose for which the goods were purchased, or 18 months from the date of final delivery, whichever comes first, it appears that the goods, or any part thereof, do not conform to these warranties, and MTS so notifies Contractor within a reasonable time after its discovery, Contractor shall thereupon promptly correct such nonconformity to the satisfaction of MTS, at Contractor's sole expense, failing which MTS may reject and cover by purchasing substitute goods or MTS may proceed to make corrections or accomplish Contractor's performance by the most expeditious means available, the costs of cover or correction shall be for Contractor's account.

7.32. INTELLECTUAL PROPERTY WARRANTY

MTS shall advise the Contractor of any impending patent suit related to this Contract against MTS and provide all information available. The Contractor shall defend any suit or proceeding brought against MTS based on a claim that any services or goods furnished under this Contract constitutes an infringement of any patent, and the Contractor shall pay all damages and costs awarded therein, excluding incidental and consequential damages against MTS. In case said services or good, or any part thereof, is in such suit held to constitute infringement and use of said services or goods is enjoined, the Contractor shall, at its own expense and at its option, either procure for MTS the right to continue using said services or goods, or replace same with non-infringing services or goods, or modify it so it becomes non-infringing.

7.33. DATA RIGHTS

The term “subject data” used in this clause means recorded information, whether or not copyrighted, that is delivered or specified to be delivered under the Agreement. It includes the proprietary rights of the following:

- Shop drawings and working drawings
- Technical data including manuals or instruction materials, computer or microprocessor software
- Patented materials, equipment, devices or processes
- License requirements

MTS shall protect proprietary information provided by the Contractor to the fullest extent of the law. The Contractor shall grant a non-exclusive license to allow MTS to utilize such information. In the event that the Contractor no longer provides the information, MTS has the right to reverse engineer patented parts and software.

MTS reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish or otherwise use, and to authorize others to use, the following subject data for its purposes: (1) any subject data required to be developed and first produced in the performance of the Contract and specifically paid for as such under the Contract, whether or not a copyright has been obtained; and (2) any rights of copyright to which the Contractor, Subcontractor or Supplier purchases ownership for the purpose of performance of the Contract and specifically paid for as such under the Contract. The Contractor agrees to include the requirements of this clause, modified as

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necessary to identify the affected parties, in each subcontract and supply order placed under the Contract.

7.34. EXCLUSIVE USE

The services hereunder are provided for the exclusive use of MTS and such services, data, recommendations, proposals, reports, design criteria, and similar information provided by Contractor, are not to be used or relied upon by other parties except as authorized by MTS.

7.35. OWNERSHIP OF DOCUMENTS

Tracings, plans, specifications, and maps prepared or obtained under the terms of this Agreement shall be delivered to and become the property of MTS. Basic survey notes and sketches, charts, computations, and other data prepared or obtained under this Agreement shall be made available, upon request, to MTS without restriction or limitation on its use.

7.36. LANGUAGE AND MEASURE UNITS

Unless specified otherwise, manuals, specifications, drawings, plans, purchase orders, subcontract documents, and invoices submitted in accordance with this Agreement shall be in metric ("Systems International d' Units," or "SI units") with the United States equivalents clearly shown.

7.37. STANDARDS AND CODES

Whenever references are made in the Agreement to standards or codes in accordance with which the goods are to be manufactured or tested, the edition or revision of the standards or codes current on the effective date of this Agreement shall apply, unless otherwise expressly set forth. Unless otherwise specified, reference to such standards or codes is solely for implementation of the technical portions of such standards and codes.

In case of conflict among any referenced standards and codes, or between any referenced standards and codes and the Technical Specifications, MTS will determine which will govern.

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, 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, 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 Samantha.Leslie@sdmts.com for more information.

7.39. AMERICANS WITH DISABILITIES ACT

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The Contractor shall comply with all applicable requirements of the Americans with Disabilities Act of 1990 (ADA), 42 U.S.C. §§ 12101 et seq.; section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794; as well as all applicable regulations and guidelines issued pursuant to the ADA.

7.40. SUBSTANCE ABUSE

Pursuant to the rules and regulations of the Department of Transportation to the extent applicable to this Contract, Contractor will be required to comply with all applicable drug and alcohol testing requirements, including the amendments to 49 C.F.R. parts 655.

As a condition of this Contract, the following are the Contractor's Drug and Alcohol Testing Obligations:

7.42.1. CONTRACTORS CERTIFICATION:

Contractor certifies that it will comply with all applicable drug and alcohol testing requirements provided by law, including, but not limited to, the drug and alcohol testing requirements set forth in the Department of Transportation's regulations.

7.42.2. INDEMNIFICATION OF MTS:

Contractor agrees to indemnify, defend and hold harmless MTS, SDTI and SDTC, and their directors, employees and agents from and against any loss, damage, expense and liability that MTS, SDTI or SDTC, may incur as a result of Contractor's failure to comply with any applicable drug and alcohol testing obligations.

7.42.3. SURVIVAL OF MTS' INDEMNIFICATION RIGHTS:

The rights and obligations contained in "B" (Indemnification of MTS) will survive any termination or expiration of this Agreement.

7.42.4. FAILURE TO COMPLY WITH DRUG AND ALCOHOL TESTING OBLIGATIONS MAY RESULT IN TERMINATION OF CONTRACT:

If, at any time during the period of this Agreement, Contractor fails to comply with any applicable drug and alcohol testing requirements, MTS will consider such failure a material breach of this Agreement, and MTS may terminate this Agreement immediately.

7.41. EQUAL EMPLOYMENT OPPORTUNITY PROGRAM

7.43.1. 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).

7.43.2. 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

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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.

7.43.3. 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.

7.42. PUBLIC WORKS

Pursuant to Labor Code sections 1725.5 and 1771.1, all contractors 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.

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Hours of Work: Eight (8) hours of work shall constitute a legal day's work. Contractor and each subcontractor shall forfeit, as penalty to MTS, twenty-five dollars ($25) for each worker employed in the execution of Work by the Contractor 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 Contractor 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 Contractor 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, Contractor agrees to fully comply with such Prevailing Wage Laws. The Contractor shall obtain

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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 Contractor'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 Contractor 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 Contractor.

Contractor 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, Contractor 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. Contractor shall certify under penalty of perjury that records maintained and submitted by Contractor are true and accurate. Contractor shall also require subcontractor(s) to certify weekly payroll records under penalty of perjury.

In accordance with Labor Code section 1771.4, the Contractor 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. Contractor 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 Contractor shall have ten (10) calendar days in which to comply subsequent to receipt of written notice specifying in what respects the Contractor must comply with this section. Should noncompliance still be evident after such 10-day period, the Contractor 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.

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Employment of Apprentices: Contractor'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. Contractor 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 Contractor 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 Contractor will take affirmative action to insure 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.

7.43. IDENTIFICATION OF PERSONNEL/SECURITY

MTS shall provide all Contractor personnel assigned to work under this Agreement with Contractor Identification Badges ("MTS ID Card"). Requests for MTS ID Cards will be made to and processed by the MTS-designated project manager or contracting officer. Approved requests for MTS ID Card(s) will be processed within two business days. All Contractor personnel must obtain MTS ID Cards prior to entering MTS property. Valid MTS ID Cards must be displayed prominently on the uniform of all of Contractor's employees while on MTS property. Contractors are required to provide their employees uniforms prominently bearing the name of the Contractor's business entity. MTS will allow only properly credentialed personnel of the Contractor who are wearing the appropriate uniform on its property. Contractor personnel who enter MTS property without valid MTS ID Cards may be arrested and/or cited by MTS Code Enforcement and/or other law enforcement for trespassing and violation of MTS Ordinance 13. Contractor must collect MTS ID Cards from all Contractor personnel separating from employment with the Contractor and return them to MTS for destruction. Contractor is strictly liable for the use of all MTS ID Cards issued to its employees under this Agreement.

Required Background Checks

MTS requires that all Contractor personnel assigned to work on MTS property pass comprehensive background checks (Investigative Consumer Report), conducted by the Contractor, prior to beginning work on MTS property or under this Agreement. At a minimum, the background check must, (1) positively establish the employee's identity, (2) search all common databases for criminal offenses (e.g., Federal District Court Databases), (3) verify the social security number or tax ID provided by the employee, (4) search sex offender databases, and (5) search the local criminal databases of every County in which the employee has lived in the last seven years. Contractor must conduct background checks in accordance with applicable law,

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including but not limited to, the Fair Credit Reporting Act and California Civil Code Sections 1785 and 1786.

Contractor personnel meeting any of the conviction criteria outlined below **are not eligible** for issuance of an MTS ID Card and may not be assigned to work on MTS property:

Permanent Disqualification:

1. Registered sex offenders are ineligible.
2. Espionage or conspiracy to commit espionage.
3. Sedition or conspiracy to commit sedition.
4. Treason or conspiracy to commit treason.
5. A federal crime of terrorism as defined in 18 U.S.C. 2332b(g), or comparable State law, or conspiracy to commit such crime.
6. A crime involving a TSI (transportation security incident). Note: A transportation security incident is a security incident resulting in a significant loss of life, environmental damage, transportation system disruption, or economic disruption in a particular area, as defined in 46 U.S.C. 70101. The term "economic disruption" does not include a work stoppage or other employee-related action not related to terrorism and resulting from an employer-employee dispute.
7. Improper transportation of a hazardous material under 49 U.S.C. 5124 or a comparable state law.
8. Unlawful possession, use, sale, distribution, manufacture, purchase, receipt, transfer, shipping, transporting, import, export, storage of, or dealing in an explosive or explosive device. An explosive or explosive device includes an explosive or explosive material as defined in 18 U.S.C. 232(5), 841(c) through 841(f), and 844(j); and a destructive device, as defined in 18 U.S.C. 921(a)(4) and 26 U.S.C. 5845(f).
9. Murder.
10. Threat or maliciously conveying false information knowing the same to be false, concerning the deliverance, placement, or detonation of an explosive or other lethal device in or against a place of public use, a state or government facility, a public transportations system, or an infrastructure facility.
11. Violations of the Racketeer Influenced and Corrupt Organizations Act, 18 U.S.C. 1961, et seq., or a comparable State law, where one of the predicate acts found by a jury or admitted by the defendant, consists of one of the permanently disqualifying crimes.
12. Attempt to commit the crimes in items (2)-(5) of this section.
13. Conspiracy or attempt to commit the crimes in items (6)-(11) of this section.
14. Any offense that is still pending in the courts (without official legal disposition) that will disqualify the individual if they are convicted.

Disqualification for seven years from the date of the offense or five years from the date of release from prison for the offense (whichever is later):

1. Unlawful possession, use, sale, manufacture, purchase, distribution, receipt, transfer, shipping, transporting, delivery, import, export of, or dealing in a firearm or other weapon. A firearm or other weapon includes, but is not limited to, firearms as defined in 18 U.S.C. 921(a)(3) or 26 U.S.C. 5 845(a), or items contained on the U.S. Munitions Import List at 27 CFR 447.21.
2. Extortion.
3. Dishonesty, fraud, or misrepresentation, including identity fraud and money laundering, where the money laundering is related to a crime listed in Parts A or B (except welfare fraud and passing bad checks).

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4. Bribery.
5. Smuggling.
6. Immigration violations.
7. Distribution, possession w/ intent to distribute, or importation of a controlled substance.
8. Arson.
9. Kidnapping or hostage taking.
10. Rape or aggravated sexual abuse.
11. Assault with intent to kill.
12. Robbery.
13. Fraudulent entry into a seaport as described in 18 U.S.C. 1036, or a comparable State law.
14. Violations of the Racketeer Influenced and Corrupt Organizations Act under 18 U.S.C. 1961, et seq., or a comparable state law, other than any permanently disqualifying offenses.
15. Voluntary manslaughter.
16. Conspiracy or attempt to commit crimes in this section.
17. Any offense that is still pending in the courts (without official legal disposition) that will disqualify the individual if they are convicted.

The term conviction includes being found guilty, pleading guilty, pleading no contest, or being found guilty by reason of insanity.

This section sets forth minimum standards Contractors must uphold through their background checking process, when assigning employees to work on an MTS contract. These disqualifying criteria are minimum standards to promote public safety/security. Contractor may choose to exceed these standards and is otherwise unrestricted in its employment decisions. Contractor may choose to employ individuals who do not meet these standards, as long as they are not assigned to work under this Agreement or on MTS property. Questions regarding the application of MTS's background checking standards should be directed to the MTS Manager of Human Resources.

Upon request of MTS, Contractor will provide sufficient documentation for MTS to audit Contractor's compliance with MTS's background checking standards. MTS reserves the right to delay provision of MTS ID Cards until contractor documents completion of appropriate background checks on employee(s) for whom Contractor is requesting MTS ID Card(s). MTS's oversight of Contractor's background checking process is not intended to replace Contractors judgement or ability to manage its workforce and operation. MTS's oversight, or lack thereof, shall not limit Contractor's liabilities and/or obligations as set forth in this Agreement.

MTS reserves the right to suspend or revoke the MTS ID Cards of Contractor's employees at its sole and absolute discretion.

If, with MTS's consent, Contractor subcontracts all or part of the services within this Agreement, Contractor will remain directly responsible and liable for ensuring subcontractor(s) adhere to MTS background checking and ID Card standards.

If MTS determines that Contractor has breached its obligations as defined in this section, MTS may immediately terminate this Agreement by providing written notice to Contractor. If this Agreement is terminated, Contractor will be paid its costs for work performed up to the time of termination.

7.44. ROADWAY WORKERS PROTECTION (RWP) TRAINING

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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 "Roadway Workers Protection" 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.

7.45. FLAGGING

Any work within fifteen (15) feet of active rail, or as otherwise identified by MTS, shall require a 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 a 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.

7.46. [NOT APPLICABLE] SIGNALING

7.47. COVENANT AGAINST CONTINGENT FEES

Contractor warrants that it has not employed or retained any company or person, other than a bona fide employee working for the Contractor, to solicit or secure this Agreement, and that she or he has not agreed to pay any company or person, other than a bona fide employee, any fee, commission, percentage, brokerage fee, gift, or any other consideration, contingent upon or resulting from the award or formation of this Agreement. For breach or violation of this warranty, MTS shall have the right to annul this Agreement without liability or, at its discretion, to deduct from the Agreement a price or consideration, or otherwise recover the full amount of such fee, percentage, brokerage fee, gift, or contingent fee.

7.48. CALIFORNIA POLITICAL REFORM ACT

Contractor acknowledges that the California Political Reform Act ("Act"), Government Code section 81000 et seq., provides that Contractors hired by a public agency, such as MTS, may be deemed to be a "public official" subject to the Act if the Contractor advises MTS on decisions or actions to be taken by MTS. The Act requires such public officials to disqualify themselves from participating in any way in such decisions if they have any one of several specified "conflicts of interest" relating to the decision. To the extent the Act applies to Contractor, Contractor shall abide by the Act and the conflict of interest restrictions imposed on public officials by Government Code section 1090 et seq.

7.49. WATER QUALITY MANAGEMENT AND COMPLIANCE

1. 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.

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2. 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.

3. 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.

4. Liability for Non-compliance.

   A. 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.

   B. 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.

   C. 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.

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7.50. CONFLICT OF INTEREST LAWS FOR MTS CONSULTANT

A. Background & Applicability to Consultants

These procedures are intended to assist MTS consultants with complying with conflict of interest language in their contract with MTS. Pursuant to state regulations enforced by the California Fair Political Practices Commission (FPPC), the MTS Standard Agreement/Standard Conditions requires consultant employees to file a disclosure of financial interests known as a Form 700 if required by the MTS Conflict of Interest Code. The relevant Standard Agreement/Standard Conditions language. Additional information on Form 700s can be found on the FPPC website.

B. Definitions and Persons Covered by the MTS Conflict of Interest Code

MTS has adopted a Conflict of Interest Code for its officers, employees and consultants pursuant to Government Code § 87300 *et seq.* According to the law, an agency's Conflict of Interest Code must list those employees, officers or consultants who are required to file a Form 700. The persons identified in the Conflict of Interest Code are designated as "Conflict Code Filers" because they "participate in the making of governmental decisions" that foreseeably could have a material financial effect on any of their economic interests. (2 Cal. Code of Regulations Section 18730.) MTS's Conflict of Interest Code can be found on the MTS website. In general, a Form 700 discloses the types of interests in real property, investments, business positions, and sources of income and gifts that could potentially affect the Conflict Code Filer. The Form 700 serves as a reminder to the Conflict Code Filer and the public of the financial interest decision-makers need to consider as they could cause an actual, potential or perceived conflict of interest.

"Participating in making a governmental decision" includes negotiating, providing advice by way of research, investigation, or preparation of reports or analyses for the MTS decision-maker, if these functions are performed without significant intervening review. MTS consultants who, pursuant to a contract with MTS, perform the same functions that would otherwise be performed by MTS employees by carrying out functions such as project management and oversight decisions (including recommendations that are likely to be approved by a MTS employee without significant intervening review); preparing contract scopes of work, specifications, cost estimates or contract negotiations; crafting evaluation factors to be used in a procurement, or deciding whether the policies, standards, or guidelines for MTS have been met, are considered to have "project manager responsibilities" that would otherwise be carried out by a MTS employee and are therefore required to fill out and submit a Form 700.

A consultant's employee participates in making a governmental decision for MTS when, s/he negotiates without significant and substantive intervening review, with a third party (someone other than their employer or MTS) regarding a governmental or contract decision; or advises or makes recommendations to the MTS decision maker either directly or without significant and substantive intervening review. "Significant and substantive intervening review" means a review of someone else's work during which the reviewer independently verifies the information, recommendation, advice, etc. that constitutes project manager responsibilities that lead to a governmental decision.

Form 700s are public records.

C. Steps for Compliance

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Step 1: Identify who on your team will need to fill out a Form 700

The prime consultant will need to identify its own employees and the employees of its subconsultants (the consultant team) who have project manager responsibilities. Keep in mind, however, that even if a person has project manager responsibilities, if someone above that person in the decision-making process, whether a MTS employee or another consultant employee, is a Conflict Code Filer and that person conducts significant and substantive intervening reviews of the decision, recommendation or work in question, then not everyone prior to the Conflict Code Filer in the decision process needs to fill out a Form 700. If a consultant believes a member of its team with project management responsibilities for MTS is going to have his/her work undergo a significant and substantive intervening review by an MTS employee, the consultant must first check with the MTS Clerk of the Board ClerkoftheBoard@sdmts.com to confirm that MTS agrees with this allocation of responsibility.

Step 2: Notify MTS of Consultant's Conflict Code Filers

It is up to the consultant to notify MTS of the names of the individuals on its team (whether prime or subconsultant) who should be Conflict Code Filers based on the parameters provided by MTS above in Section B. Designated persons must file statements of economic interests with MTS when assuming or leaving their position and annually while holding the position. It is important that the consultant maintains a list of its Conflict Code Filers and notify the MTS Clerk of the Board as soon as possible when the Consultant's employees who are performing project management responsibilities for MTS change. Filers must submit their assuming and leaving office form within 30 days and an annual form before April 1st of each year. Consultant employees who have been designated as Conflict Code Filers may not work on MTS projects if they do not have an updated Form 700 on file with MTS.

New Filers/Assuming Office

The consultant will need to notify MTS of its new Conflict Code Filers to the MTS Clerk of the Board by email at ClerkoftheBoard@sdmts.com. As a reminder, the consultant will need to update the filer list of employees throughout the life of the contract as new individuals are identified as Conflict Code Filers for MTS, use the designated *consultant form 700 filer contact information* form to submit the information for each applicable employee.

B. For Existing Filers:

It is important that the consultant notify MTS when those individuals previously identified as Conflict Code Filers are no longer performing project management responsibilities for MTS. Once an individual is identified as a Conflict Code Filer and completes a Form 700 in the eDisclosure system, they are required by law to continue to complete a Form 700 each year or be subject to fines and penalties by the FPPC. In order to remove a Conflict Code Filer, the consultant must notify MTS of the date the individual stopped performing project management responsibilities for MTS so the individual can complete a Leaving Office Statement. Until a Leaving Office Statement is filed, the individual is still considered a Conflict Code Filer and must continue to file annual statements.

Step 3: Notification by MTS & Establishment of Account with eDisclosure System

Once MTS receives notification by a consultant of a new Conflict Code Filer, the Clerk of the Board will send an email to the individual notifying them of their obligation to complete

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a Form 700 and what to expect. The Clerk will create an account with the eDisclosure system and the individual will receive instructions about how to complete registration from email MTSClerkoftheBoard@southtechhosting.com (please whitelist this email). Once the account is established, the individual can complete and file their Form 700.

Step 4: Instructions for Completing the Form 700

General instructions for completing a Form 700 can be found on the FPPC website, and clicking on the Form 700 itself. When filling out the Form 700, the financial interests that consultant employees need to report are only those which are listed in disclosure category 1 and 2 of the MTS Conflict of Interest Code.

Questions regarding how to fill out the forms can be answered by calling the FPPC's toll free advice hotline 1-866-ASK-FPPC (1-866-275-3772*1), Monday-Thursday, 9-11:30 a.m.

A. Assuming Office Statement

The first time a consultant employee is asked to complete a Form 700, s/he will complete an Assuming Office Statement. The assuming office statement must be completed no later than 30 days after the date the employee first started performing project management responsibilities for MTS. The reporting period will be the 12 months prior to the date the office was assumed. For example, if a consultant assumed office on 5/1/2019, they will complete the statement disclosing information for the period 5/1/2018-4/30/2019.

B. Annual Statement

Once an individual completes an assuming office statement, they are required to complete an annual statement no later than April 1 of each year. Individuals that do not complete a Form 700 by the deadline may be subject to a fine up to $5,000 by the FPPC. Typically, reminder notices are sent by email from MTS and the eDisclosure system in January each year.

C. Leaving Office Statement

Once an individual is no longer performing project management responsibilities for MTS, they must complete a Leaving Office Statement within 30 days. To do this, the consultant or individual needs to notify the MTS Clerk of the Board that the individual is no longer performing project management responsibilities for MTS and therefore should no longer be a Conflict Code Filer. The date the employee stopped performing project management responsibilities for MTS will become the leaving office date. When completing a leaving office statement, the individual will disclose its interest for the calendar period leading up to the leaving office date. For example, if an individual leaves office on 5/15/2019, they will complete the statement disclosing information for the period 1/1/2019-5/15/2019. An active email will be provided to the Clerk in order to assure proper filer access.

Step 5: Review of Form 700s

Consultant employees are strongly cautioned not to simply mark the box indicating they have no disclosures to report on the form. Consultant employees always have their own employment income to report and many times have spousal income to report as well. The FPPC has prosecuted and fined persons who have failed to disclose income and gifts.

Form 700s should be used by the consultant to ensure its employees do not have prohibited conflicts. MTS also will use the forms to check whether the assignments given

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to consultant employees conflict with reported financial interests. If a conflict is found, the individual will not be permitted to work on the project in a project manager role.

Consultants will need to provide training to their employees who are identified as Conflict Code Filers on how to avoid prohibited conflicts of interest. Information regarding prohibited conflicts can be found here in Sections I, II, III, VII and XIII of the California Attorney General's handbook entitled Conflicts of Interest.

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EXHIBIT D

FORMS

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RETURN THIS FORM WITH YOUR PROPOSAL

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:	WSP USA Inc.
Doing Business As:	Not Applicable
Legal Structure (Corp./Partner/Proprietor):	Corporation
Company Mailing Address:	401 B St Ste 1650 (Street)
	San Diego (City) CA (State) 92101 (Zip)

Person Authorized to sign:

Point of Contact:	Patti Boekamp
Title:	Senior Director | Local Business Leader
E-Mail Address:	Patti.Boekamp@wsp.com
Phone Number:	619-338-9376

Accounts Receivable

Point of Contact:	Jessica Gilbert
Title:	Corporate Cash Supervisor
E-Mail Address:	USAccountsReceivable@wsp.com
Phone Number:	717-859-7590

Labor Compliance

Point of Contact:	Tisha Loyd
Title:	Senior Project Accountant
E-Mail Address:	tisha.loyd@wsp.com
Phone Number:	916-576-2661

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RETURN THIS FORM WITH YOUR BID

Proposer to describe technical services readily available from said representative.

Location of Nearest Technical Service Representative to MTS:

Name: Richard Bottcher

Telephone: 619-849-5424

Company Mailing Address: 401 B St Suite 1650
Street

San Diego CA 92101
City State Zip

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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.

	Subcontractor 1
Company Name:	San Diego Stormwater Solutions
Contractor License or Certificate Number	N/A
DBE, DVBE LGBT, MBE, SB, WBE:	N/A
% of Work:	44%
Department of Industrial Relations (DIR) Number:	1000059431
Point of Contact	Gregg Brenner
Email:	Gregg@sdstormwater.com
Phone Number:	858-397-1001
Address:	130 Smilax Road
	Street
	San Marcos / CA / 92069
	City / State / Zip

Description of Work:

Perform Maintenance on MTS Treatment BMPs.

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RETURN THIS FORM WITH YOUR BID

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? WSP USA Inc.
2. What is your company's address? 401 B St Ste 1650, San Diego, CA 92101
3. What type of work does your company perform ? (list NAICS Codes if known) Engineering Services (NAICS Code: 541330)

Is your company a certified DBE WBE, DVBE, SB or LGBT? If yes, please check the applicable box and state the corresponding certification number.

- ☐ DBE
- ☐ DVBE
- ☐ MBE
- ☐ SB
- ☐ WBE
- ☐ LGBT

5. How many years has your company been in business? 89 Years
6. What are the annual gross receipts of your company (please check the applicable bracket)?

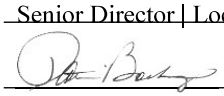
- ☐ Less than $1,000,000
- ☐ $1,000,001 – $15,000,000
- ☐ $15,000,001 - $26,290,000*
- ☐ $26,290,001– $50,000,000
- ☐ $50,000,001 - $100,000,000
- ☒ Greater than $100,000,000

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.

7. Do you want MTS to provide your company additional guidance on how to become DBE certified?

- ☐ Yes
- ☒ No

ACKNOWLEDGED AND AGREED

SUBCONTRACTOR (Copy this form if needed for additional subcontractors)		**PRIME CONTRACTOR**	
Print Name:		Print Name:	Patti Boekamp
Title :		Title :	Senior Director | Local Business Leader
Signature:		Signature:	
Date:		Date:	June 16th, 2023

DRAFT

RETURN THIS FORM WITH YOUR BID

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?
2. What is your company's address?

SAN DIEGO STORMWATER SOLUTIONS INC.
130 SMILAX ROAD SAN MARCOS, CA 92069

3. What type of work does your company perform ?
(list NAICS Codes if known)

Is your company a certified DBE WBE, DVBE, SB or LGBT? If yes, please check the applicable box and state the corresponding certification number.

- ☐ DBE
- ☐ DVBE
- ☐ MBE
- ☐ SB
- ☐ WBE
- ☐ LGBT

5. How many years has your company been in business?

8 YEARS

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.

7. Do you want MTS to provide your company additional guidance on how to become DBE certified?

- ☑ Yes
- ☐ No

ACKNOWLEDGED AND AGREED

SUBCONTRACTOR
(Copy this form if needed for additional subcontractors)

Print Name: GREGG BRENNER
Title : PRESIDENT
Signature:
Date: 5/23/23

PRIME CONTRACTOR

Print Name: Patti Boekamp
Title : Senior Director | Local Business Leader
Signature:
Date: 06/16/2023

DRAFT

RETURN THIS FORM WITH YOUR BID

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)

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)		PRIME CONTRACTOR	
Business Name:		Business Name:	WSP USA Inc.
License No. (if applicable):		License No. (if applicable):	B1992001908
DUNS No.:		DUNS No.:	05-666-8700

ACKNOWLEDGED AND AGREED

Print Name:		Print Name:	Patti Boekamp
Title:		Title:	Senior Director | Local Business Leader
Signature:		Signature:	
Date:		Date:	June 16th, 2023

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RETURN THIS FORM WITH YOUR BID

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)

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)		PRIME CONTRACTOR	
Business Name:	SAN DIEGO STORMWATER SOLUTIONS, INC.	Business Name:	WSP USA Inc.
License No. (if applicable):		License No. (if applicable):	B1992001908
DUNS No.:		DUNS No.:	05-666-8700

ACKNOWLEDGED AND AGREED

Print Name:	GREGG BRENNAN	Print Name:	Patti Boekamp
Title:	PRESIDENT	Title:	Senior Director | Local Business Leader
Signature:		Signature:	
Date:	5/23/23	Date:	06/16/2023

DRAFT

RETURN THIS FORM WITH YOUR BID

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: WSP USA Inc.
2. Doing Business As: Not Applicable.
3. Legal Structure (Corp./Partner/Proprietor):
4. Address of Establishment in San Diego County: 401 B Street, Suite 1650 (Street); San Diego (City) CA (State) 92101 (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: Not Applicable to WSP USA Inc. (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: Patti Boekamp
Title: Senior Director | Local Business Leader
Phone Number
Address: 401 B street Suite 1650 (Street); San Diego (City) CA (State) 92101 (Zip)
Name of Signee: Patti Boekamp
Authorized Signature:
Date: June 16th, 2023

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RETURN THIS FORM WITH YOUR BID

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	2		5	4	10	2			60	26	77	32
Engineers/Architects/ Surveyors												
Professionals (N.E.C.)		1	12	6	12	9			69	68	93	84
Technicians		1	3	2	3	4			39	15	45	22
Sales												
Administrative Support		2		2	2	4			3	21	5	29
Protective Services												
Services (N.E.C.)												
Craft Workers (Skilled)												
Machine Operators, Assemblers & Inspectors												
Transportation and Material Moving												
Laborers (Unskilled)												
TOTALS FOR EACH COLUMN	2	4	20	14	27	19	0	0	171	130	220	167

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

DISABLED	0	1	1	0	0	1	0	0	12	6	13	8

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RETURN THIS FORM WITH YOUR PROPOSAL

CALIFORNIA PUBLIC RECORD ACT (CPRA) 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 Public Records Act (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 CPRA 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 CPRA, 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 CPRA.

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 Public Records Act (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 CPRA.

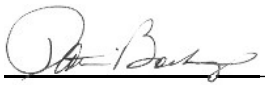
INCLUDES ☑

DOES NOT INCLUDE ☐

ACKNOWLEDGED AND AGREED

Company Name: WSP USA Inc.

Title: Patti Boekamp - Senior Director | Local Business Leader

Signature: 

Date: June 16, 2023

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RETURN THIS FORM WITH YOUR PROPOSAL

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 Principal-in-Charge of WSP USA Inc., the party making the foregoing offer.

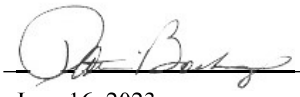
The offer is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The offer is genuine and not collusive or sham. The proposer has not directly or indirectly induced or solicited any other proposer to put in a false or 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 June 16th, 2023 (date), at San Diego (city), California (state).

ACKNOWLEDGED AND AGREED

Name of Contractor: WSP USA Inc.

Signature: 

Date: June 16, 2023

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RETURN THIS FORM WITH YOUR PROPOSAL

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.

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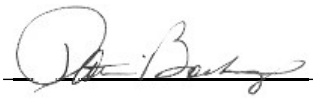
ACKNOWLEDGED AND AGREED

Company Name: WSP USA Inc.

Title: Patti Boekamp - Senior Director | Local Business Leader

Signature: 

Date: June 16, 2023

RETURN THIS FORM WITH YOUR PROPOSAL

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.

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RETURN THIS FORM WITH YOUR PROPOSAL

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.

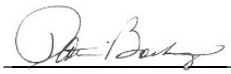
C. Machinery and Vehicles (when required)

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:	WSP USA Inc.
Print Name:	Patti Boekamp
Title:	Senior Director | Local Business Leader
Signature:	
Date:	June 16, 2023

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RETURN THIS FORM WITH YOUR PROPOSAL

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.

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PRIME CONTRACTOR

Business Name:	WSP USA Inc.
Registration No. (if applicable):	1000012182
DUNS No.:	05-666-8700
Company Name:	WSP USA Inc.
Print Name:	Patti Boekamp
Title:	Senior Director | Local Business Leader

RETURN THIS FORM WITH YOUR PROPOSAL

MTS CONSULTANT FORM 700 FILER CONTACT INFORMATION

MTS CONSULTANT FORM 700 FILER CONTACT INFORMATION

Include contractor and subcontractor contact information along with the date the individual began or ended performing project management responsibilities. Refer to the *conflict of interest laws for MTS consultant* clause for additional information. Return this form clerkoftheboard@sdmts.com.

COPY THIS FORM IF NEEDED FOR ADDITIONAL ENTRIES.

Contract No.: MTS DOC. NO. PWG367.0-23 Contract Name: MS4 Support and As-Needed BMP Repair and Consulting Services

700 FORM FILER	
Filer's Full Legal Name:	Patti Boekamp
Title:	Senior Director | Local Business Leader
E-Mail Address:	Patti.Boekamp@wsp.com
Phone Number:	619-338-9376
Address:	401 B St. Suite 1650 San Diego, CA 92101
Company Name:	WSP USA Inc.
Assuming Office Effective Date: (contract start date)	TBD
	☑ Prime Contractor
	☐ Subconsultant

700 FORM FILER	
Filer's Full Legal Name:	Veronica Seyde
Title:	Project Manager
E-Mail Address:	Veronica.Seyde@wsp.com
Phone Number:	949-637-8912
Address:	1100 W. Town & Country Rd, Suite 200
Company Name:	WSP USA Inc.
Assuming Office Effective Date: (contract start date)	TBD
	☑ Prime Contractor
	☐ Subconsultant

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EXHIBIT F

POLICY 44C TRAVEL GUIDELINES FOR CONTRACTORS

DRAFT

Metropolitan Transit System

Travel Guidelines Applicable to MTS Contractors No. 44-C

SUBJECT:

TRAVEL EXPENSE GUIDELINES APPLICABLE TO MTS CONTRACTORS

PURPOSE:

To provide travel expense guidelines for MTS Contractors in accordance with MTS policies.

GUIDLINE:

44.1 Contractors. This policy applies to all MTS Contractors and their subcontractors or authorized agents when travel expenses are stated as a line item with a prospective or current Contractors' quote, bid, proposal, or other offering. These guidelines are not intended to imply or authorize additional travel related not expressly authorized in a contract with MTS. The following expense guidelines apply to any requests for travel reimbursement submitted to MTS with a Contractor's invoice. All travel related expenses intended to be invoiced to MTS should have written approval or agreement with MTS prior to incurring such expenses.

44.2 Expense Report. Invoices including requests for travel reimbursement shall include an expense report for the travel expenses incurred and billed to MTS. All expenses should be itemized, including items the Contractor may have paid for in advance (e.g., airfare, or other travel expenses) so that the report provides a complete record of all expenses.

44.3 Receipts. Itemized receipts for expenditures must be attached to the Expense Report for all expenses where a receipt is practically attainable (mandatory, unless a written satisfactory explanation is provided for expenses in excess of $10). Such written explanations may be subject to review and approval of MTS. Hotel charges must be evidenced by an itemized hotel bill. A credit card receipt is not sufficient.

44.4 The following expenditure guidelines should be observed as upper limits unless particular circumstances reasonably dictate otherwise, and prior MTS approval is obtained:

a. Upper Limits. Upper limits for meals, hotels, and similar costs will be updated annually (Exhibit A, Annual Travel Cost Rates). The same rates apply to MTS employee travel

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b. Air Travel. Air travel is to be coach class for the most direct route. Travelers are encouraged to take advantage of the minimum 14-day advance ticket pricing.

c. Personal Auto Use. In the event that a private auto is used for the trip, mileage will be paid in accordance with the current IRS Mileage Reimbursement Rates. Maximum reimbursement shall not exceed the cost of a comparable coach airfare to the same location.

d. Ground Transportation. Contractors are encouraged to utilize public transportation where available.

e. Parking. MTS will reimburse the lesser of the parking cost for a personal auto left at the airport or the cost of a shuttle service or cab to and from the airport.

f. Rental Car. In the event a rental car is required, MTS will only reimburse for the least expensive compact-size vehicle. MTS will not reimburse for rental car insurance coverage.

g. Meals (While in Travel Status). Meals, including tip, shall generally average no more than the maximum rate approved and published annually in Exhibit A. **Alcohol consumed with a meal is not reimbursable.** The amount per day applies to each 24-hour day of travel.

h. Hotel. Travelers will be reimbursed for the cost of a moderate and reasonably priced single-occupancy hotel room. The maximum reimbursement is limited to the rate approved and published annually in Exhibit A.

p. Cancellation Penalties. In the event a Contractor representative is unable to travel and nonrefundable travel payments have been made, the Contractor is responsible for all prepaid deposits or cancellation penalties for airfare, hotel deposit, or any other such items, unless the inability to travel/attend is the result of a late cancellation or schedule change by MTS.

q. Nonallowable Expenses. MTS will not provide any reimbursement for personal entertainment expenses, alcoholic beverages, travel expenses for family members, movies in hotels, personal items, charitable contributions, air travel insurance, or any other expenses not deemed necessary for business purposes.

MTS will not provide reimbursement for expenses incurred for the purpose of attending political events. An event shall be considered "political" if it is held for the purpose of supporting, opposing, or raising money to support or oppose any candidate, ballot measure, or political party. MTS will not provide any reimbursement for expenses incurred with any private club that discriminates on the basis of race, gender, religion, sexual orientation, or other invidious criteria in its membership policy.

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EXHIBIT A

ANNUAL TRAVEL COST RATES CALENDAR YEAR 2023

Hotel Maximum (quoted price – not including taxes or fees)

Small / Medium U.S. Cities	$170.00
Large U.S. Cities / International	$220.00

Average Daily Meal Maximum

Small / Medium U.S. Cities	$65.00
Large U.S. Cities / International	$80.00

Mileage Reimbursement Rate

As set by the IRS, effective January 1, 2023 per mile	$0.655

NOTES:

1. These are maximum rates. A higher cap may be obtained if pre-authorized by the CEO. Rates must be reasonable and necessary under the circumstances and will customarily be lower.

2. Meal caps are detailed out below, with an overall daily cap of $65.00 for Small / Medium U.S. Cities and $80.00 for Large U.S. Cities / International.

   Breakfast - $20.00
   Lunch - $25.00
   Dinner - $50.00

3. If a conference registration fee covers meals, employees are to participate in those meals.

4. Small / Medium U.S. Cities are defined for this rate structure as those with less than 1 million persons in the metropolitan area.

   Large U.S. Cities are defined for this rate structure as those with more than 1 million persons in the metropolitan area.

5. The Mileage Rate is directly tied to the rate set by the IRS and will be revised more frequently than annually if done so by the IRS.

POLICY.44.TRAVEL EXPENSE POLICY
Attachments: Annual Travel Cost Rates Original
Guideline approved on January 13,2022.
Revised on January 10,2023

DRAFT

Metropolitan Transit System

Agenda Item No. 13

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Light Rail Vehicle (LRV) Tire Kits - 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. L1648.0-23 (in substantially the same format as Attachment A) with Penn Machine, in the amount of $5,142,681.23 for LRV Tire Kits.

Budget Impact

The total cost for this project is estimated to be $5,142,681.23. The project will be funded by the Light Rail Vehicle Maintenance Operating Budget 350016-545100.

DISCUSSION:

San Diego Trolley Inc. (SDTI) will need approximately 1,350 tire kits to support its S70 light rail maintenance and repair programs over the next five (5) years. The tire kits must meet all technical requirements and specifications as outlined by the project manager.

San Diego Metropolitan Transit System (MTS) Policy No. 52, “Procurement of Goods and Services”, requires a formal competitive process for procurements exceeding $150,000.

On July 12, 2023, MTS solicited an Invitation for Bids (IFB) for LRV Tire Kits, for a five (5) year base contract period. MTS received two (2) bids by the due date of August 4, 2023. The bids results were as follows (tax included):

LRV Tire Kits			
COMPANY NAME	BID AMOUNT	Meets Buy America Requirements	Classification
Siemens Mobility	$5,429,242.35	Y	N/A
Penn Machine	$5,142,681.23	Y	N/A

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.

Penn Machine was found to be the lowest responsive and responsible bidder at $5,142,681.23 (tax included) for the entire five (5) year contract period. Staff determined Penn's bid to be fair and reasonable based on a comparison of all bids.

Therefore, staff recommends that the MTS Board of Directors authorize the Chief Executive Officer (CEO) to execute MTS Doc. No. L1648.0-23 (in substantially the same format as Attachment A) with Penn Machine, in the amount of $5,142,681.23 for LRV Tire Kits.

/S/ Sharon Cooney_____
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Agreement MTS Doc. No. L1648.0-23
B. Scope of Work
C. Bid Form

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. L1648.0-23

LIGHT RAIL VEHICLE (LRV) TIRE KITS

THIS AGREEMENT is entered into this 1st day of October, 2023 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: Penn Machine Company

Address: 106 Station Street

Johnstown, PA 15905
City State Zip

Form of Business: LLC

Email: jwhaley@pennmach.com

Telephone: (814) 288-1547 ext. 221

Authorized person to sign contracts: Judith L. Whaley (Name) — Controller (Title)

The Contractor agrees to provide 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), Federal Requirements (Exhibit D), and Forms (Exhibit E).

The contract term is for up to (5) years effective October 1, 2023 through September 30, 2028.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $5,142,681.23 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	PENN MACHINE COMPANY
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

SCOPE OF WORK/TECHNICAL SPECIFICATIONS

4.1. GENERAL OVERVIEW

San Diego Metropolitan Transit System (MTS) is looking for capable Contracted Suppliers (CS) that are able to provide LRV Tire Kits to support its S70 Light Rail Vehicles (LRV) maintenance.

It is expected that each Supplier will supply only Original Equipment Manufacturer (OEM) parts under this program by sourcing these parts from approved manufacturers.

The minimum technical description provided for all items, under this solicitation, represent MTS's exact requirements. Nothing less than parts described will be accepted, whilst MTS will do its best to provide the most accurate quantity forecast for the duration of this contract. MTS reserves the right to purchase more or less quantities across each item at its sole discretion, depending on actual usage and pricing.

4.2. CONTRACT TERMS

The period of performance under the resultant agreement shall be for a (5) year base period effective approximately October 1, 2023 – September 30, 2028.

4.3. DESCRIPTION AND MINIMUM SPECIFICATION OF MATERIALS

The intent of this section is to ensure MTS receives equipment that is globally proven across same or like service as operated by MTS for each material under this contract that account for existing vehicle loads, dynamics and extended brake and tire life. All LRV Tire Kits shall be compatible with existing installation equipment and manuals. All kits must include the appropriate the necessary shunts and appropriate hardware designed for current capacity.

To be considered service-proven, the following materials and criteria is required:

MTS Stock Code	Material Description	Manufacturer Part Number
70168658	Tires, Tire Kit – SD7, SD8	704702

- A minimum quantity of three thousand (3,000) of the proposed steel forgings, and a minimum quantity of 10,000 of both styles of rubber elements must have been operated by any global transit agency or other similar agencies for a minimum of three (3) years. In addition, the Contractor must have produced at least one thousand (1,000) steel tires for these resilient wheel applications and tread designs.

- The CS shall provide steel LRV Tires, which shall be constructed in accordance with the Association of American Railroads (AAR) Standard M107 for a "Class C" Tire; or, ATSM's Standard A551 for a Class DHT Tire. For this procurement, the carbon content shall be limited to 0.72 maximum. An acceptable alternate tire is one made of Excelsior Stahl material, forged to yield a Brinell Hardness of 238-280BHN.

- LRV Tire Kits shall be suitable for mounting with existing PMC/Bochum 2000 equipment. Rubber Blocks shall be in batched sets and included with each kit.

- The CS shall provide spare parts for the kits as identified below in addition to an as need basis. Spare parts shall be subject to the same materials and quality standards as those supplied with complete kits.

LRV Tire Kits shall consist of the following:

Bochum 2000 Wheels –PMC 704702 / PN A3773100

Description	Quantity
Tire	1
Rubber Blocks	2
Socket Head Screws, M8x14, DIN912, GR8.8	12
M-8 Washers, DIN 125-A8.4	12
O-Rings, dia. 2mm x 137mm, 72nbr 872	2
External Shunts Copper	6
10ml Loctite*	.25
Anti-Corrosive Paste*	.25

***Note**: One (1) ounce of anti-corrosive paste and 10ml of Loctite, to be provided with each four (4) kits.

Spare Parts shall be available as follows:

Spare Parts OEM (Penn Machine) Part Numbers:

Description	Quantity
LD126349 Q-2L Rubber Block	22
00701578 External Shunt PM-10050	3
00704704 M100 Rubber Block	21
00625663 External Shunt PM-9195	3

The failure to meet any of the above required specifications, may result in the Bidder's proposal being declared non-responsive.

4.4. CERTIFICATION AND TESTS

In all cases, materials must be furnished as specified in the technical specifications with part numbers permanently stamped or etched onto each part. They shall be provided with OEM material certifications and marked in accordance to OEM details and requirements.

Production tests, ultrasonic and Brinell Hardness tests shall be conducted on one-hundred (100%) percent of the LRV tires produced. Each LRV tire shall be stamped with the Brinell Hardness on the tire face.

One (1) LRV Tire Kit of each type shall be mounted on OEM wheel centers. Upon assembly, each LRV tire shall be compliant and fully approved for concentricity and

resistance value not to exceed 0.005 ohm, as measured from the wheel center to the tire flange.

All rubber components shall be guaranteed suitable for installation for a minimum of 2 years from the delivery date to MTS.

For all items provided under this contract, the CS is required to provide all inspections, certifications and test results shall be furnished to the MTS Project Manager for approval prior to shipment.

4.5. ESTIMATED FORECAST

The below forecast is MTS's best estimate of consumption for the duration of the contract.

As all items under this contract are wearable items, usage across each item under the contract may fluctuate and as such, MTS may purchase more or less than the estimated annual contract forecast to an amount not to exceed the aggregated quantity specified under this solicitation for the duration of the contract period.

CS's must ensure all identified parts are shipped out within 24 hours of the receipt of the Purchase Order, thus allowing MTS to minimize our stock holdings and meet the service level requirements of our Customer. The successful CS's shall also assess MTS's consumption analysis and provide feedback and recommendations on how best to optimize inventory management.

(Material Descriptions and Manufacturer Part Numbers are listed in Section 4.3)

Stock Code	2024	2025	2026	2027	2028	Total
70168658	250	250	250	300	300	1,350

4.6. FEDERAL REQUIREMENTS AND REFERENCES

MTS requires all items under this contract to be fully compliant with all Federal Rail Administration (FRA) and California Public Utilities Commission's rail requirements.

The Bidder's attention is directed to the "Buy America" requirements set forth in Section 165 of the Federal Surface Transportation Act of 1982, and the FTA requirements implementing Section 165 (49 C.F.R., part 661).

4.7. PACKAGING

Each LRV Tire Kit shall be stacked and banded on either treated hard wood or plastic pallets and shipped in sets of four (4) matched to within 0.012" diameter and packaged as per the below requirements

All Tire Kits shall be coupled with OEM material certifications, marked in accordance with OEM requirements, and stacked and banded on treated hardwood or plastic pallets in a way that prevents any damage arising from shipment and exposure to natural elements.

4.8. LABELING

Each item is required to have a label across each package containing the following information:

- MTS Purchase Order Reference
- MTS Stock Code
- OEM Part Number
- Part Description
- Serial Number (where applicable)
- Shelf Life Expiry Date (where applicable)
- Quantity
- Unit of Issue

4.9. DAMAGED OR DEFECTIVE ITEMS

All items delivered damaged or with a defect in packaging or manufacturing shall be returned to the CS. The CS shall provide a replacement in full within fifteen (15) business days of the receipt of the defective material. All cost incurred as a result of the return of the defective material and redelivery of the replacement material including but not limited to freight, insurance, re-stocking, and packaging arising from the defective item shall be borne by the CS.

4.10. BID PRICING

Bidders shall use the Bid Forms provided herein. Bidders shall provide pricing for all line items on the bid form, failure to do so may deem your bid non-responsive. All bids shall include all materials, delivery fees, and all applicable taxes required to complete the items as described on the bid forms.

4.11. 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.

4.12. SAFETY DATA SHEETS (SDS)

MTS retains the safety data sheets on an electronic database (currently CloudSDS). Upon award, Contractors shall email the SDS 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 SDS during the term of the contract to ensure the MTS database is kept updated throughout the contract

4.13. WARRANTY

CS warrants all items delivered under this contract will be in factory new condition, free from liens and defects in design, materials, workmanship and title and shall conform in all respects to the terms of this Agreement and to the drawings issued for manufacture by the CS, and shall be of the best quality, if no quality is specified. Unless the warranty period is otherwise extended, the following minimum warranty shall apply.

If within one (1) year from the date of commercial operation for the purpose for which the goods are purchased, or within eighteen (18) months from the date of receipt by MTS, whichever comes first, it appears that goods, or any part thereof, do not conform to these warranties, and MTS so notifies the CS within thirty (30) days after discovery, CS shall thereupon promptly correct such non-conformity to the satisfaction of MTS at the CS's sole expense.

MTS may reject and cover the discrepancy if it is not satisfied with the CS's attempt to remedy the discrepancy by purchasing substitute goods or make corrections or accomplish the CS's performance by the most expeditious means available where all costs related to the correction shall be charged to the CS.

CS's liability hereunder shall extend to all damages such as demand inspection, cost of return or warehousing. CS shall not be liable for any consequential damages, such as loss of revenue or profit, loss of use or production or costs of capital. NO IMPLIED WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR PURPOSE SHALL APPLY.

4.14. REPLACEMENT PARTS

Replacement parts and technical support for the specified equipment must be guaranteed by the manufacturer; to be available for a fifteen (15) year period from the date of purchase. Manufacturer shall keep parts books and maintenance manuals up-to-date for that period.

4.15. DELIVERY AND ACCEPTANCE

Equipment or any deliverable provided under this contract shall be delivered F.O.B. to SDTI, 1341 Commercial Street, San Diego, California 92113 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).

4.16. LIQUIDATED DAMAGES

General

Liquidated damage requirements are appropriate if the parties to a contract may reasonably expect to incur damages in the form of increased Project costs resulting from the late completion of the contract, and if the extent or amount of such damages would be difficult or impossible to determine after the delay has occurred. Accordingly, any liquidated damages for this contract shall be at a specific rate per day for each day of overrun in contract time; and the rate will be specified in the third-party contract, and will comply with any other special liquidated damages restrictions FTA might impose. Any liquidated damages recovered shall be credited to the Project account involved unless the Federal Government permits otherwise.

Rates

MTS has established a liquidated damage rate of $750 / day.

Appeal Process

If the Contractor feels liquidated damages are being imposed unjustly, the Contractor can file an appeal with the Contract Officer within twenty-four (24) hours of the notification of impending liquidated damages. The letter must provide details of the situation and why the Contractor feels the liquidated damages are unjust. The Contract Officer shall review the situation, and if necessary, meet with the Contractor to provide an opportunity to state their reasons why liquidated damages should not be assessed. The Contract Officer shall render a decision.

If the Contractor feels the decision is not acceptable and the situation warrants further consideration, appeal reconsideration may be filed with the Manager of Procurement. The Manager of Procurement shall review the reconsideration, and a final determination shall be made. The decision of the Manager of Procurement shall be final. No other appeals shall be heard for this particular incident.

4.17. KEY PERFORMANCE INDICATORS (KPI)

The CS performance shall be measured by a set of Key Performance Indicators (KPI). Each KPI shall be produced and reviewed monthly between MTS and the CS to assess the status of service level achievements and areas of improvement. The initial KPI shall be created at 2 months after the conclusion of any ramp up period where required. The review shall be conducted through a conference call between the parties and may be

changed to quarterly once the service levels reach a rolling 3 months of reaching the expected target.

1. Purchase Order On-Time Delivery:

    a. Purchase Order On-Time Delivery measures the lapsed period for the actual delivery time for all Purchase orders and Line Items in full from the date of the order placement to the MTS receipt.
    b. The target service level for on time delivery shall be 60 days which is aligned to the contract delivery time.
    c. The measurement shall be for an order quantity not to exceed 125% of the average monthly estimated forecast quantity and may be aggregated to a higher monthly quantity if orders are not placed in previous months.
    d. The success target will be set at 98% across the volume of orders and line items that meet these criteria.

2. Purchase Order Recovery

    a. Purchase Order Recovery measures the delivery time of Purchase Orders and Line Items that failed the Purchase Order On-Time Delivery. Where an On-Time Delivery has failed, the CS shall have an additional 10 days to ship the items to fully fulfil the failed order. Similarly, the target service level will be consistent at 98%.

MTS Material #	Manufacturer Part #	Item Description	Annual Usage	Year 1 Bid	Year 1 Total	Year 2 Bid	Year 2 Total
70168658	704702	Tires, Tire Kit - SD7/SD8	270	$ 3,014.00	$ 813,780.00	$ 3,252.00	$ 878,040.00
			Subtotals Per Year		$ 813,780.00		$ 878,040.00
			Annual Sales Tax @ 7.75%		$ 63,067.95		$ 68,048.10
			Subtotals Per Year w/Sales Tax		$ 876,847.95		$ 946,088.10

MTS Material #	Manufacturer Part #	Manufacturer Part #	Annual Usage	Year 3 Bid	Year 3 Total	Year 4 Bid	Year 4 Total
70168658	704702	704702	270	$ 3,511.00	$ 947,970.00	$ 3,797.00	$ 1,025,190.00
			Subtotals Per Year		$ 947,970.00		$ 1,025,190.00
			Annual Sales Tax @ 7.75%		$ 73,467.68		$ 79,452.23
			Subtotals Per Year w/Sales Tax		$ 1,021,437.68		$ 1,104,642.23

MTS Material #	Manufacturer Part #	Manufacturer Part #	Annual Usage	Year 5 Bid	Year 5 Total
70168658	704702	704702	270	$ 4,103.00	$ 1,107,810.00
			Subtotals Per Year		$ 1,107,810.00
			Annual Sales Tax @ 7.75%		$ 85,855.28
			Subtotals Per Year w/Sales Tax		$ 1,193,665.28

Bid Grand Total	**$ 5,142,681.23**

Metropolitan Transit System

Agenda Item No. 14

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Mobile Column Lifts – 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. L1643.0-23 (in substantially the same format as Attachment A), with Southwest Lift & Equipment, Inc., a Small Business (SB) in the amount of $182,382.56 for mobile column lifts.

Budget Impact

The total cost of this contract shall not exceed $182,382.56, and will be funded through FY21 Miscellaneous Capital WBS – 1009111201.

DISCUSSION:

MTS requires a contractor to purchase and deliver a set of wireless mobile column lifts for San Diego Trolley, Inc. (SDTI) Light Rail Vehicle (LRV) Maintenance Department. These mobile column lifts will replace the 20-year-old set of mobile column lifts that are nearing the end of their useful life. The LRV Maintenance Department uses the mobile column lifts in place of the in-floor lifts, when needed, to complete routine undercarriage maintenance on the LRV fleet.

On May 17, 2023, MTS issued an Invitation for Bids (IFB) seeking a contractor to provide mobile column lifts. Two (2) bids were received by the deadline of June 28, 2023, and are summarized as follows:

Company Name	Bid Amount	Firm Certification
Southwest Lift & Equipment Inc.	$182,382.56	SB
Technology International, Inc.	$280,000.00	N/A

Based on the bids received, and in comparison, with the MTS Independent Cost Estimate (ICE) of $173,549.92, staff determined the bid price to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. L1643.0-23 (in substantially the same format as Attachment A), with Southwest Lift & Equipment, Inc., a SB, in the amount of $182,382.56 for mobile column lifts.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachment: A. Draft Agreement, MTS Doc. No. L1643.0-23
B. Scope of Work
C. Bid Form

Metropolitan Transit System

STANDARD AGREEMENT
FOR

MTS DOC. NO. L1643.0-23

MOBILE COLUMN LIFTS

THIS AGREEMENT is entered into this _____ day of _____, 2023 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: Southwest Lift & Equipment, Inc. Address: 254 E Valley Street
San Bernardino, CA 92408

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.) Email: jana@southwestlift.com

Telephone: (909) 867-9820

Authorized person to sign contracts Jana Wingenfeld (Name) Treasurer (Title)

The Contractor agrees to provide 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), Federal Requirements (Exhibit D), and Forms (Exhibit E).

Delivery shall be 180 calendar days or less from the date of Notice to Proceed (NTP). Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $182,382.56 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	SOUTHWEST LIFT & EQUIPMENT, INC.
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

DRAFT

SCOPE OF WORK/TECHNICAL SPECIFICATIONS

1. DESCRIPTION OF WORK

At the San Diego Metropolitan Transit System (MTS), LRV Maintenance Facility, there is a set of mobile column lifts used for the necessary lifting and maintenance of light rail vehicles. The lifts are at the end of their useful life, having been in service since 2003.

MTS Rail LRV Maintenance is looking to purchase up to eight (8) wireless mobile column lifts to replace its current lifts. A wireless system is being sought for ease of use in different locations. By being wireless, there is less likelihood of tripping hazards or failure points such as accidental damage to cables. The lifts shall be delivered to San Diego Trolley, Inc. (SDTI) Building C Maintenance shop and will be used to support the day-to-day operations of the maintenance department. These mobile lifts will provide support in lifting MTS light rail vehicles (LRVs) for work that is required underneath the vehicle.

MINIMUM SPECIFICATIONS

A. General Description

1. Lifting system shall consist of eight (8) columns and all shall be completely identical and interchangeable. The operator shall be able to configure the columns at the time of set up, without the need to modify the operating system. These lifts should have the ability to operate in any single column, a pair of columns or as a complete set of eight (8).

2. Each column shall contain a battery power supply, so that the system can operate wirelessly.

3. The main power shall be fused between the primary power switch and the motor/ control circuits to protect against overload.

4. When fully charged, the battery powered system shall be able to allow for a minimum or 12 complete lifting and lowering cycles at 100% lifting capacity.

5. The battery recharging system shall use 110 VAC, with lamp indicators that show when system is recharging and when system is fully charged.

6. The base frame of the lifting column shall be of a rectangular design. To ensure uniform contact with the lifting foundation, the pattern to the foundation under the column shall be triangular in design.

B. Lifting Capacity

Each individual column should be rated at a minimum of 10 kN or 22,000 lbs., with the total system capacity being 80kN or 176,000 lbs.

C. Dimensions

Maximum column height with carriage in the fully lowered position cannot exceed 11’ (132”) or 335 cm. With the carriage in the fully raised position, total maximum height cannot exceed 12’ (144”) or 365.75 cm due to shop clearances.

D. Pallet Jack Mechanism

Jack mechanism should be equipped with a safety system that will not allow the mobile column to lift if the operator fails to lower the pallet jack after positioning column.

E. Wheels

Column shall be fitted with fixed front roller wheels made of material that is non-destructive to the foundation on which the columns rest on. Lifts will be used on reinforced concrete floors.

F. Drive Mechanism

1. Drive system may be hydraulic or screw driven and shall permit lifting without any pulsation, jerks, or unsteady lifting. Lifting shall be smooth.
2. Lifting carriage shall ride on durable guide rollers, that require no maintenance or lubrication.
3. Hydraulic lift systems shall employ a check valve or other means of preventing lowering of the lift in the event of a ruptured hydraulic line.

G. Controls

1. Each column should allow for various functions of the lifting system. Such as “UP”, “DOWN”, and “LOCK” as appropriate for the system as well as an “emergency stop” push button.

2. Each column shall be equipped with a system to identify battery charge status. As well as a system to identify faults for troubleshooting, if system failure concurs during the lifting or lowering of columns. This can be by a display screen or light status system.

3. Columns shall have an automatic synchronization system that can detect if any of the columns are not lifting or lowering at the same rate as the rest of the columns.

4. Columns shall be set up to communicate and function wirelessly during use. Systems employing Cables connecting columns to one another shall not be considered.

5. Mobile column battery charging system shall operate at the following voltages: 110 VAC.

H. Safety Devices

1. Columns shall be equipped with independent fail-safe locking system.

2. Locking system shall have an integrated design that ensures proper and automatic locking at any height, at all times. This safety lock should automatically engage when lift is not operating.

I. Lifting Nose for Rail Cars

1. The lifting column shall be equipped with a detachable lifting nose or noses and lifting adapters suitable to lift the rail cars by the inserted lifting units supplied by the rail car manufacturer.

2. The guide block for the lifting column shall include a receiver with pin to allow for the affixing and interchanging of lifting nose to the column.
3. Lifting nose, when all the way down, should be able to fit under the MTS Z bar lifting insert which sits at 14 ½" off the floor. See photos of the MTS lifting inserts that are used for lifting.

Included in Section 3.25 of the General Provisions is the Request for Approved equal (RFA) information. Complete documentation should be provided in support of any RFAs submitted by Bidders for MTS' review and response, and must be submitted by the deadline provided in the calendar of events. Any RFAs submitted with the bid package at bid opening will not be accepted.

2. QUALITY ASSURANCE

2.1. Manufacturer Qualifications:

The lift company selling the product shall have ISO-9001 certification and proof of current certification.

2.2. Set-up Qualifications:

For warranty validation, set-up shall be performed by qualified factory authorized and trained personnel.

2.3. Product Requirements:

The drive system shall permit lifting without any pulsation, jerks or unsteady lifting. Lifting shall be smooth. A synchronization system shall ensure smooth alignment of each lifting assembly based on variances in vehicle weight. A microprocessor shall control all lift movement for ultimate operator safety and convenience. Troubleshooting codes shall facilitate service and repair.

3. HANDLING AND DELIVERY

All materials are to be delivered to the Building C LRV Maintenance shop located at:

San Diego Trolley, Inc. (SDTI)
1535 Newton Ave.
San Diego, CA 92113

Contractor to notify MTS 48 hours prior to delivery. Contact info will be released upon contract award.

Delivery of all orders must be shipped in a timely manner. MTS has determined that 180 calendar days or less from the date of Notice to Proceed (NTP) is a satisfactory time for delivery.

4. 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. WARRANTY

Manufacturer’s warranty: Lift system shall be warranted for a minimum period of two (2) years for parts and one (1) year for labor. For mobile lift systems using Hydraulics, hydraulic cylinders shall have a part only warranty of an additional four (4) years.

6. REPLACEMENT PARTS

Replacement parts and technical support for the specified equipment must be guaranteed by the manufacturer; to be available for a five (5) year period from the date of purchase. Manufacturer shall keep parts books and maintenance manuals up-to-date for that period.

7. MANUALS

Operation and Maintenance manual: Operation and maintenance manual to include system operation, maintenance and troubleshooting, spare part numbers, drawings and schematics.

8. SET-UP

Set-up at the MTS LRV maintenance facility in accordance with manufacturer's instructions shall be completed by the Contractor. Tests for proper operation and re-test if necessary until satisfactory results are obtained shall be completed at that time.

9. TRAINING

Operations and Maintenance training shall be provided at the MTS LRV maintenance facility for six (6) technicians upon delivery to MTS at a time to be coordinated with the MTS Project Manager or designee. Proper use to lift an LRV and periodic maintenance shall be demonstrated.

10. DELIVERY AND ACCEPTANCE

Equipment or any deliverable provided under this contract shall be delivered F.O.B. to the address above, 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).

11. BUY AMERICA

This scope of work triggers 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.

10.1. [NOT APPLICABLE] CONSTRUCTION MATERIALS

10.2. MANUFACTURED PRODUCT

Per IIJA Section 70912 (2)(B), all manufactured products used in the project must be produced in the United States. Examples for manufactured products provided per Appendix A to 49 CFR 661.3 include: Infrastructure projects not made primarily of steel or iron, including structures (terminals, depots, garages, and bus shelters), ties and ballast; contact rail not made primarily of steel or iron; fare collection systems; computers; information systems; security systems; data processing systems; and mobile lifts, hoists, and elevators.

10.3. [NOT APPLICABLE] ROLLING STOCK

10.4. IRON OR STEEL

Per IIJA Section 70912 (2)(A), all iron and steel used in the project must be produced in the United States. This means all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. Examples of iron and steel provided per Appendix A to 49 CFR 661.3 include: Items made primarily of steel or iron such as structures, bridges, and track work, including running rail, contact rail, and turnouts.

12. [NOT APPLICABLE] MATERIAL SAFETY DATA SHEETS (MSDS)

13. [NOT APPLICABLE] LIQUIDATED DAMAGES

14. [NOT APPLICABLE] ACQUISITION OF ROLLING STOCK

L1643.0-23
Mobile Column Lifts IFB
ATT 1 - Bid Form
** Fill in the Green Cells **

Delivery shall be one-hundred eighty (180) after MTS issues the Notice to Proceed.	Yes?	No? Provide lead time (in calendar days)
Would you be able to meet this timeline?	Yes	180

QTY	Item Description	Unit of Measure	Unit Price for Item	Total Price*
8	Mobile column lifts	Each	$ 20,288.00	$ 162,304.00
		Delivery Cost (One-time cost)	$ 7,500.00	
			Total (Without Taxes)	$ 169,804.00

*Bidders should not include sales tax. MTS will add tax at purchase order issuance.

Costs must be all-inclusive including but not limited to labor, training, insurance, and all other related costs necessary to purchase and deliver the mobile lifts to MTS.

In order to be considered responsive, Bidders must provide pricing on all the line items. Charges not described on the bid form will not be considered valid and MTS will not pay additional costs. Bidder accepts responsibility for accuracy and presentation of the above numbers and must complete the bid forms as provided. Failure to do so may deem the bid non-responsive.

Tax (7.75%)	$12,578.56
Overall Total (Basis for Award)	**$182,382.56**

Metropolitan Transit System

Agenda Item No. 15

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Tenable Software Renewal Service – 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. G2748.0-23 (in substantially the same format as Attachment A), with Data Impressions Technology Group, in the amount of $368,725.00, for a period of three (3) years for the provision of Tenable Software subscriptions.

Budget Impact

The total cost of this project is estimated to be $368,725.00. This project will be funded by Information Technology (IT) Operations Budget 661010-571250 account.

DISCUSSION:

MTS, in common with other government agencies, is an increasingly attractive target for cyber-criminals and terrorists. As more devices are connected to our network, the dangers of data theft, vandalism and real-world damage are constantly increasing. In order to mitigate these risks, in 2018 and 2019, after a period of research, MTS IT successfully evaluated and implemented the market-leading Vulnerability Management solution, Tenable Security Center (SC) and Operational Technology (OT). It is vital that we renew the subscription to continue to help MTS identify, prioritize, and manage vulnerabilities in Information Technologies systems and infrastructure.

On June 20, 2023, MTS issued an Invitation for Bid (IFB) to renew its Tenable Software subscription. A total of eight (8) bids were received on the due date of August 3, 2023. Three of the eight bids were deemed non-responsive due to incomplete bid pricing and/or missing forms.

Below is a summary of the bids received, inclusive of delivery charges and CA sales tax:

Bidder Name	Reason for Non-Responsiveness	Firm Certifications	Overall Bid Total
Data Impressions (DI) Technology Group		None	$368,725.00
Zones LLC.		Minority Owned Business Enterprise (MBE)	$458,749.02
Saitech Inc.		MBE	$459,422.49
AlxTel	MTS Bid Form showing all 4 lines not submitted. Bidder only provided a lumpsum total on the PlanetBids profile	None	$459,742.49
TEC-LINK	MTS Bid Form showing all 4 lines not submitted. Bidder only provided a lumpsum total on the PlanetBids profile	Disadvantaged Business Enterprise (DBE), MBE	$461,995.21
vPrime Tech Inc.	Bidder submitted a company quote that was not per the IFB instructions	None	$464,232.49
Draycor Inc.		MBE	$471,569.59
Smart IT Pros Inc.		MBE	$494,016.29
MTS Independent Cost Estimate (ICE)			*$444,809.67*

MTS staff has deemed Data Impressions (DI) Technology Group the lowest responsive and responsible bidder. Based on a comparison of all bids, including MTS's ICE, staff deemed DI Technology Group's pricing to be fair and reasonable.

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc No. G2748.0-23, with Data Impressions Technology Group, in the amount of $368,725.00, for a period of three (3) years for the provision of Tenable Software subscriptions.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Agreement, MTS Doc. No. G2748.0-23
B. Scope of Work
C. Bid Summary

Metropolitan Transit System

STANDARD AGREEMENT
FOR

MTS DOC. NO. G2748.0-23

TENABLE SOFTWARE SUBSCRIPTION

THIS AGREEMENT is entered into this _____ day of _____, 2023 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: Data Impressions Technology Group Address: 17418 Studebaker Rd.
Cerritos, CA 90703

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.)

Email: fcerna@dataimpressions.com

Telephone: 800-777-6488 x255

Authorized person to sign contracts Francisco Cerna (Name) Account Manager (Title)

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

The contract term is for the software purchase with an expected delivery date of October 1st, 2023 after purchase order (PO) issuance and order confirmation. This includes three (3) years of software subscription effective October 1, 2023 through September 30, 2026.

Payment terms shall be net 30 days from invoice date. The total cost of this contract (inclusive of CA 7.75% sales tax) shall not exceed $368,725.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	DATA IMPRESSIONS TECHNOLOGY GROUP
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

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4. SCOPE OF WORK/TECHNICAL SPECIFICATIONS

4.1. INTRODUCTION

The San Diego Metropolitan Transit System (MTS) Information Security and Intelligence (ISI) Group would like to continue its subscription to Tenable Software for 3 years (36 months).

4.2. BACKGROUND

MTS, as is common with other government agencies, is an increasingly attractive target for cyber-criminals and terrorists. As more devices are connected to our network, the dangers of data theft, vandalism and real-world damage, e.g. overloading power sub-stations are constantly increasing. In order to mitigate these risks, in 2018/19, after a period of research, MTS IT successfully evaluated and implemented the market-leading vulnerability management solution called Tenable SC and OT. Tenable SC and OT subscription will end 05/14/2023 and it is vital that we renew the subscription to continue to help MTS identify, prioritize and manage vulnerabilities in their IT systems and infrastructure. Tenable SC and OT are specifically capable of:

A. Identifying vulnerabilities: A vulnerability management system can scan an organization's IT and OT systems to identify vulnerabilities in applications, systems, and network devices.

B. Prioritizing remediation: Vulnerability management systems help organizations prioritize vulnerabilities based on their risk and potential impact, so they can focus on remediating the most critical issues first.

C. Streamlining remediation: A vulnerability management system can integrate with other IT and OT systems and help automate the remediation process, saving time and effort.

D. Compliance: A vulnerability management system can help organizations comply with industry and regulatory standards such as the Payment Card Industry Data Security Standard (PCI DSS) General Data Protection Regulation (GDPR) and any Federal mandates.

E. Risk reduction: By identifying and remediating vulnerabilities, a vulnerability management system can help reduce the risk of a security breach, data loss, or downtime.

F. MTS' current subscription will expire on September 30, 2023.

4.3. SCOPE OF SERVICES

A software license and service for the following Tenable products for a three-year period beginning October 1, 2023 and expiring September 30, 2026, as further itemized below.

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ITEM	PART NUMBER	ITEM DESCRIPTION	QTY	UOM
1	TSCCV	Tenable.sc+ includes scanners, 1GB NNM. Must match T.sc license count if upgrading - Annual Subscription - 8000 IP Count	1	EA
2	TSC-STNDC	Standard Tenable.sc Console(s) included with Tenable.sc+ purchase	1	EA
3	AGT-OPS	Tenable.sc Agents - On Premise (For Subscription SC/SCCV)	2	EA
4	TOT	Tenable.OT includes asset inventory, active querying, passive monitoring, vulnerability management, NNM sensors, and configuration control. Annual Subscription is licensed per Asset. - Assets: 1000	1	EA

DRAFT

Bid Summary

Tenable Renwal Services

MTS IFB G2748.0-23

ITEM	PART NUMBER	Item Description	QTY	UOM	Data Impressions Technology Group	
					UNIT PRICE	EXT. PRICE
1	TSCCV	Tenable.sc+ includes scanners, 1GB NNM. Must match T.sc license count if upgrading - Annual Subscription - 8000 IP Count	1	EA	$ 286,230.00	$ 286,230.00
2	TSC-STNDC	Standard Tenable.sc Console(s) included with Tenable.sc+ purchase	1	EA	$ -	$ -
3	AGT-OPS	Tenable.sc Agents - On Premise (For Subscription SC/SCCV)	2	EA	$ -	$ -
4	TOT	Tenable.OT includes asset inventory, active querying, passive monitoring, vulverability management, NNM sensors, and configuration control. Annual Subscription is licensed per Asset. - Assets: 1000	1	EA	$ 82,495.00	$ 82,495.00
					$	**368,725.00**

Metropolitan Transit System

Agenda Item No. 16

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Legal Services – Tort Liability – 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. G2782.0-24 (in substantially the same format as Attachment A) with Kahana & Feld, LLP (Kahana & Feld) to provide legal services through December 31, 2026 in the amount of $677,725; and

2) Authorize the CEO to execute MTS Doc. G2783.0-24 (in substantially the same format as Attachment B) with McDougal Boehmer Foley Lyon Mitchell & Erickson (McDougal) to provide legal services through December 31, 2026 in the amount of $677,725.

Budget Impact

The total estimated funding authority for both agreements is $1,355,450. Costs will only be incurred when legal cases are assigned to each firm. Depending on legal case assignments, these agreements will be funded by the Risk Department budget for the Transit, Trolley, Administration, or San Diego & Arizona Eastern Railway accounts. If additional funding is necessary because the case loads are larger than anticipated, contract amendments will be approved by the CEO or the Board according to Board Policy 41.

DISCUSSION:

On October 11, 2018 (Agenda Item 12), the Board established a panel of 25 qualified law firms to assist MTS, San Diego Trolley, Inc. (SDTI) and San Diego Transit Corporation (SDTC) with various legal matters on an as-needed basis. In 2022, two firms specializing in tort liability announced retirements. Additionally, a third firm experienced the sudden death of an attorney who had been representing the Agency on various liability matters. These events necessitated seeking additional firms that specialize in tort liability.

On May 17, 2023, MTS issued a Request for Proposal (RFP) for Legal Services – Tort Liability and posted on Planet Bids. MTS received a total of seven (7) proposals from the following firms:

Proposer	Firm DBE or SB Certification
Aleshire & Wynder, LLP	N/A
Alvarez-Glasman & Colvin	N/A
Clark Hill PLC	N/A
Jones Mayer	N/A
Kahana & Feld, LLP	N/A
Manning & Kass, Ellrod, Ramirez, Trester LLP	N/A
McDougal, Boehmer, Foley, Lyon, Mitchell & Erickson APC	N/A

All proposals were deemed responsive and responsible and were evaluated by a committee comprised of representatives from the MTS Legal, Risk, and Finance Departments. The proposals were evaluated on the following:

1. Qualifications of the Firm or Individual 30%
2. Staffing, Organization, and Management Plan 15%
3. Work Plan 25%
4. Cost and Price 30%

100%

The following table illustrates the initial total scores of the proposers:

PROPOSER	AVG TECHNICAL SCORE	AVG COST SCORE	TOTAL SCORE (TECH + COST)	RANKING
Kahana & Feld, LLP	56.75	27.00	83.25	1
McDougal, Boehmer, Foley, Lyon, Mitchell & Erickson APC	48.75	28.50	77.25	2
Jones Mayer	48.25	21.75	70.00	3
Alvarez-Glasman & Colvin	52.50	15.75	68.25	4
Aleshire & Wynder, LLP	43.38	15.00	58.38	5
Clark Hill PLC	48.00	9.00	57.00	6
Manning & Kass, Ellrod, Ramirez, Trester LLP	37.25	6.00	43.25	7

As a result of the initial review, Kahana & Feld and McDougal were considered to be within the competitive range. MTS invited Kahana & Feld and McDougal for an interview, which were held virtually on July 12, 2023. During the interview process, MTS staff learned more about each firm's qualifications and work plan for new cases. The evaluation committee rescored both firms after the interviews as follows:

PROPOSER	AVG TECHNICAL SCORE	AVG COST SCORE	TOTAL SCORE (TECH + COST)	RANKING
Kahana Feld, LLP	57.50	27.00	84.50	1
McDougal, Boehmer, Foley, Lyon, Mitchell & Erickson APC	55.75	28.50	84.25	2

MTS did not request for a revised proposal from either firm. Based on the objectives of the procurement, consideration of the evaluation criteria and Kahana & Feld and McDougal's technical and cost proposals, the evaluation committee determined Kahana & Feld and McDougal presented the best overall value to MTS.

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

1) Authorize the CEO to execute MTS Doc. G2782.0-24 (in substantially the same format as Attachment A) with Kahana & Feld, LLP (Kahana & Feld) to provide legal services through December 31, 2026 in the amount of $677,725; and

2) Authorize the CEO to execute MTS Doc. G2783.0-24 (in substantially the same format as Attachment B) with McDougal Boehmer Foley Lyon Mitchell & Erickson (McDougal) to provide legal services through December 31, 2026 in the amount of $677,725.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft MTS Doc. No. G2782.0-24
B. Draft MTS Doc. No. G2783.0-24
C. Kahana & Feld Cost Form
D. McDougal Boehmer Foley Lyon Mitchell & Erickson Cost Form

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. G2782.0-24

LEGAL SERVICES – TORT LIABILITY

THIS AGREEMENT is entered into this _____ day of _____, 2023 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: Kahana & Feld, LLP

Address: 12520 High Bluff Drive, Suite 150

San Diego, (City) CA (State) 92130 (Zip)

Form of Business: Limited Liability Partnership
(Corporation, Partnership, Sole Proprietor, etc.)

Email: tvail@kahanafeld.com

Telephone: 858-397-5550

Authorized person to sign contracts: Tami G. Vail (Name) Managing Partner – San Diego (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), Federal Requirements (Exhibit D), and Forms (Exhibit E), and Policy 44C Travel Guidelines for Contractors (Exhibit F).

The contract term is from October 1, 2023 through December 31, 2026.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $677,725.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	KAHANA & FELD, LLP
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

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.

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. G2783.0-23

LEGAL SERVICES – TORT LIABILITY

THIS AGREEMENT is entered into this _____ day of _____, 2023 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: McDougal Boehmer Foley Lyon Mitchell & Erickson

Address: 8100 La Mesa Blvd., Suite 200

La Mesa, CA 91942
City State Zip

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.)

Email:

Telephone: 619-440-4444

Authorized person to sign contracts Steven E. Boehmer (Name) Principal/President (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), Federal Requirements (Exhibit D), and Forms (Exhibit E), and Policy 44C Travel Guidelines for Contractors (Exhibit F).

The contract term is from October 1, 2023 through December 31, 2026.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $677,725.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	MCDOUGAL BOEHMER FOLEY LYON MITCHELL & ERICKSON
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

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RETURN THIS FORM WITH YOUR BID

COST/PRICING FORM

PROPOSER/FIRM: Kahana Feld, LLP

TYPE OF LAW / ROLE			HOURLY LABOR RATES	
#	CATEGORY	Personnel to Perform Category	Year 1 (July 1, 2023 – December 31, 2023	YEARS 2-4 (January 1, 2024 – December 31, 2026)
		Title	Fixed Hourly Rate	
1	Liability	Tami G. Vail, Managing Partner	$ 250	TBD – to be calculated by MTS
		Dane J. Bitterlin, Partner	$ 250	
		Adrianna C. Paige, Senior Attorney	$ 225	
		Ariana Mayr, Paralegal	$ 125	
		Leilani Edmonds, Paralegal	$ 125	
			$	
			$	
			$	

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 year of service.

Estimated quantities are for proposal purposes only. The quantities do not reflect guaranteed usage by MTS and may be more or less than indicated.

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.

COST/PRICING FORM

PROPOSER/FIRM: McDougal Boehmer Foley Lyon Mitchell & Erickson

TYPE OF LAW / ROLE			HOURLY LABOR RATES	
#	CATEGORY	Personnel to Perform Category	Year 1 (July 1, 2023 – December 31, 2023	YEARS 2-4 (January 1, 2024 – December 31, 2026)
		Title	Fixed Hourly Rate	
1	Liability	Steven E. Boehmer, Principal	$ 225.00	TBD – to be calculated by MTS
		Carrie L. Mitchell, Principal	$ 225.00	
		Matthew A. Thurmer, Associate	$ 225.00	
		Mark-Robert Bluemel, Associate	$ 225.00	
			$	
			$	
			$	
			$	

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 year of service.

Estimated quantities are for proposal purposes only. The quantities do not reflect guaranteed usage by MTS and may be more or less than indicated.

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.

Metropolitan Transit System

Agenda Item No. 17

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

On-Call Marketing and Communication Services – 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. No. G2719.0-23 (in substantially the same format as Attachment A), with Nuffer, Smith, Tucker, Inc. (Nuffer, Smith, Tucker), a Small Business (SB), for On-Call Marketing and Communication Services for a three (3) base year period in the amount of $1,217,060, plus three (3) 1-year options in the amount of $1,264,880 for a total contract amount of $2,481,940; and

2) Exercise the option years at the CEO's discretion.

Budget Impact

The total cost of this contract is estimated to be $2,481,940. Funding would come from the Marketing Department operating budget 571140-551010.

DISCUSSION:

MTS is seeking a qualified firm for on-call professional services to develop a variety of marketing, branding, communications, and public outreach strategies as part of a five-year customer experience campaign and ongoing marketing efforts to rebuild ridership. The Contractor will provide strategic counsel to the Marketing and Communications Department throughout the term of the agreement and incorporate new initiatives that come up each year into the overall marketing plan.

MTS recently introduced major initiatives to our ridership and the region, including an entirely new fare system and the opening of the largest transit infrastructure project in the San Diego region (the Mid-Coast Project extending the University of California (UC) San Diego Blue Line Trolley north to University of Towne Center (UTC)). While ridership has recovered faster than

expected following the COVID-19 pandemic, ridership is still about 20% lower than pre-pandemic levels. Recovering ridership and farebox funding will be crucial within the next four (4) years in order for MTS to avoid continued budget shortfalls and subsequent service challenges. To help MTS market its service, promote transit to target audiences, and advance ridership recovery, the selected consultant will assist MTS with various marketing disciplines including:

- Advertising strategies and media buying
- Customer experience strategy and campaign
- Graphic design support
- Market research
- Media and public relations strategy
- On-call marketing campaign support
- Public outreach planning and support
- Special event planning and support

Below are projects that the Contractor could assist MTS with including, but not limited to:

- PRONTO payment enhancements
- Zero-emission bus transition
- Clean Transit Advancement Campus education
- Customer experience initiatives
- Rapid 227 launch
- Employee recruitment/retention strategies
- Social Equity Listening Tour implementation
- PRONTO tapping and scanning rider education
- Holiday rider appreciation events
- Service enhancements
- College semester pass growth
- PRONTO employer program growth
- Continued research to understand attitudes, behaviors and beliefs of riders and potential riders

On March 17, 2023, MTS issued a Request for Proposal (RFP) for On-Call Marketing and Communication Services on Planet Bids. MTS received a total of four (4) proposals on the proposal due date of April 21, 2023 from the following:

Proposer	Firm Certification
Brown Marketing Strategies, Inc. dba Centric	SB
D2 Creative LLC	N/A
Here & Now Marketing, LLC	N/A
Nuffer, Smith, Tucker, Inc.	SB

All proposals were deemed responsive and responsible and were evaluated by a committee comprised of representatives from the MTS Marketing, Finance, Support Services, and Executive Offices Departments. The proposals were evaluated on the following:

1. Qualifications of the Firm or Individual	20%
2. Staffing, Organization, and Management Plan	20%
3. Work Plan	30%
4. Cost and Price	30%
	100%

The following table illustrates the initial total score of the proposers:

PROPOSER	TOTAL AVG TECH SCORE	TOTAL COST (BASE + OPTION)	COST SCORE	TOTAL AVG SCORE **TOTAL POSSIBLE: 100**	RANKING
Centric	50.20	$2,259,047.07	28.78	78.98	1
Nuffer, Smith, Tucker	51.40	$2,642,300.00	24.60	76.00	2
Here & Now Marketing	44.20	$2,415,500.00	26.91	71.11	3
D2 Creative	40.80	$2,166,850.00	30.00	70.80	4

As a result of the initial review, all four (4) firms were determined to be within the competitive range. MTS invited these firms to participate in the interview process and requested additional clarifications to be provided before each firm's interview. Interviews were held on May 16, 2023 and May 17, 2023. Subsequent to the interviews, the evaluation committee rescored the proposals as follows:

PROPOSER	TOTAL AVG TECH SCORE	TOTAL COST (BASE + OPTION)	COST SCORE	TOTAL AVG SCORE **TOTAL POSSIBLE: 100**	RANKING
Nuffer, Smith, Tucker	53.80	$2,642,300.00	24.60	78.40	1
Centric	46.60	$2,259,047.07	28.78	75.38	2
Here & Now Marketing	45.40	$2,415,500.00	26.91	72.31	3
D2 Creative	38.40	$2,166,850.00	30.00	68.40	4

Based on the updated scores and information gained during the interviews, Nuffer, Smith, Tucker and Centric remained the highest-ranked proposers. MTS identified items that required further discussions with both firms. After negotiations and clarifications, staff was able to reduce Nuffer, Smith, Tucker's cost proposal by $160,360 (6.26%) and Centric's by $67,826.86 (1.35%). Final scores are as follows:

PROPOSER	TOTAL AVG TECH SCORE	TOTAL COST (BASE + OPTION)	COST SCORE	TOTAL AVG SCORE **TOTAL POSSIBLE: 100**	RANKING
Nuffer, Smith, Tucker	54.40	$2,481,940.00	26.49	80.89	1
Centric	44.80	$2,191,220.21	30.00	74.80	2

Based on the objectives of this procurement, consideration of the evaluation criteria and Nuffer, Smith, Tucker's technical and cost proposals, and the independent cost estimate, the evaluation committee determined Nuffer, Smith, Tucker presented the best overall value to MTS.

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

1) Execute MTS Doc. No. G2719.0-23 (in substantially the same format as Attachment A), with Nuffer, Smith, Tucker, a SB, for On-Call Marketing and Communication Services for a three (3) base year period in the amount of $1,217,060, plus three (3) 1-year options in the amount of $1,264,880 for a total contract amount of $2,481,940; and

2) Exercise the option years at the CEO's discretion.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Agreement MTS Doc No. G2719.0-23
B. Cost Proposal

Metropolitan Transit System

STANDARD AGREEMENT

FOR

MTS DOC. NO. G2719.0-23

ON-CALL MARKETING & COMMUNICATION SERVICES

THIS AGREEMENT is entered into this _____ day of _____, 2023 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: Nuffer, Smith, Tucker, Inc. Address: 4045 Third Avenue, Suite 200

San Diego CA 92103
City State Zip

Form of Business: Corporation
(Corporation, Partnership, Sole Proprietor, etc.)

Email: pa@nstpr.com

Telephone: 714-313-4636

Authorized person to sign contracts Price Adams Executive Vice President & Partner
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), Federal Requirements (Exhibit D), and Forms (Exhibit E).

The contract term is for up to three (3) base years and three (3) 1- year options, exercisable at MTS's sole discretion, for a total of six (6) years. Base period shall be effective October 1, 2023 through September 30, 2026 and option years shall be effective October 1, 2026 through September 30, 2029, if exercised by MTS.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $1,217,060.00 for the base years and $1,264,880.00 for the option years, for a contract total not to exceed $2,481,940.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	NUFFER, SMITH, TUCKER, INC.
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

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.

Nuffer, Smith, Tucker
Public Relations - V3 -
7/28/23

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
COST PROPOSAL FORM
ON-CALL MARKETING AND COMMUNICATION SERVICES - MTS DOC NO. G2719.0-23

BASE YEAR 1				
Services	**Total Hours**	**Fully Burdened Hourly Rate**	**Extended Cost**	**Adversiting Comission %**
Advertising Strategies and Planning	40	$ 180.00	$ 7,200.00	
MTS' Advertising Budget			*$ 200,000.00*	
Advertising Commission			$ 6,000.00	3%
Customer Experience Strategies-Campaign	240	$ 180.00	$ 43,200.00	
Graphic Design Support	40	$ 180.00	$ 7,200.00	
Market Research			$ 60,000.00	
Media and Public Relations Strategy	80	$ 180.00	$ 14,400.00	
On-Call Marketing Campaign Support	*320*	$ 180.00	$ 57,600.00	
Public Outreach Planning and Execution	60	$ 180.00	$ 10,800.00	
Special Event Planning and Support	100	$ 180.00	$ 18,000.00	
General Administration	100	$ 150.00	$ 15,000.00	
TOTAL COST:	**980**		**$ 439,400.00**	

BASE YEAR 2				
Services	**Total Hours**	**Fully Burdened Hourly Rate**	**Extended Cost**	**Advertising Comission %**
Advertising Strategies and Planning	40	$ 184.00	$ 7,360.00	
MTS' Advertising Budget			*$ 200,000.00*	
Advertising Commission			$ 6,000.00	3%
Customer Experience Strategies-Campaign	240	$ 184.00	$ 44,160.00	
Graphic Design Support	40	$ 184.00	$ 7,360.00	
Media and Public Relations Strategy	80	$ 184.00	$ 14,720.00	
On-Call Marketing Campaign Support	*320*	$ 184.00	$ 58,880.00	
Public Outreach Planning and Execution	100	$ 184.00	$ 18,400.00	
Special Event Planning and Support	100	$ 184.00	$ 18,400.00	
General Administration	60	$ 154.00	$ 9,240.00	
TOTAL COST:	**980**		**$ 384,520.00**	

BASE YEAR 3				
Services	**Total Hours**	**Fully Burdened Hourly Rate**	**Extended Cost**	**Advertising Comission %**
Advertising Strategies and Planning	40	$ 189.00	$ 7,560.00	
MTS' Advertising Budget			*$ 200,000.00*	
Advertising Commission			$ 6,000.00	3%
Customer Experience Strategies-Campaign	240	$ 189.00	$ 45,360.00	
Graphic Design Support	40	$ 189.00	$ 7,560.00	
Media and Public Relations Strategy	80	$ 189.00	$ 15,120.00	
On-Call Marketing Campaign Support	*320*	$ 189.00	$ 60,480.00	
Public Outreach Planning and Execution	120	$ 189.00	$ 22,680.00	
Special Event Planning and Support	100	$ 189.00	$ 18,900.00	
General Administration	60	$ 158.00	$ 9,480.00	
TOTAL COST:	**1000**		**$ 393,140.00**	

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7/28/23

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
COST PROPOSAL FORM
ON-CALL MARKETING AND COMMUNICATION SERVICES - MTS DOC NO. G2719.0-23

OPTION YEAR 1				
Services	**Total Hours**	**Fully Burdened Hourly Rate**	**Extended Cost**	**Advertising Comission %**
Advertising Strategies and Planning	40	$ 194.00	$ 7,760.00	
MTS' Advertising Budget			*$ 200,000.00*	
Advertising Commission			$ 6,000.00	3%
Customer Experience Strategies-Campaign	240	$ 194.00	$ 46,560.00	
Graphic Design Support	40	$ 194.00	$ 7,760.00	
Media and Public Relations Strategy	80	$ 194.00	$ 15,520.00	
On-Call Marketing Campaign Support	*320*	$ 194.00	$ 62,080.00	
Public Outreach Planning and Execution	120	$ 194.00	$ 23,280.00	
Special Event Planning and Support	100	$ 194.00	$ 19,400.00	
Market Research			$ 60,000.00	
General Administration	60	$ 162.00	$ 9,720.00	
TOTAL COST:	**1000**		**$ 458,080.00**	

OPTION YEAR 2				
Services	**Total Hours**	**Fully Burdened Hourly Rate**	**Extended Cost**	**Advertising Comission %**
Advertising Strategies and Planning	40	$ 199.00	$ 7,960.00	
MTS' Advertising Budget			*$ 200,000.00*	
Advertising Commission			$ 6,000.00	3%
Customer Experience Strategies-Campaign	240	$ 199.00	$ 47,760.00	
Graphic Design Support	40	$ 199.00	$ 7,960.00	
Media and Public Relations Strategy	80	$ 199.00	$ 15,920.00	
On-Call Marketing Campaign Support	*320*	$ 199.00	$ 63,680.00	
Public Outreach Planning and Execution	120	$ 199.00	$ 23,880.00	
Special Event Planning and Support	120	$ 199.00	$ 23,880.00	
General Administration	60	$ 166.00	$ 9,960.00	
TOTAL COST:	**1020**		**$ 407,000.00**	

OPTION YEAR 3				
Services	**Total Hours**	**Fully Burdened Hourly Rate**	**Extended Cost**	**Advertising Comission %**
Advertising Strategies and Planning	40	$ 204.00	$ 8,160.00	
MTS' Advertising Budget			*$ 200,000.00*	
Advertising Commission			$ 6,000.00	3%
Customer Experience Strategies-Campaign	240	$ 204.00	$ 48,960.00	
Graphic Design Support	40	$ 204.00	$ 8,160.00	
Media and Public Relations Strategy	80	$ 204.00	$ 16,320.00	
On-Call Marketing Campaign Support	*320*	$ 204.00	$ 65,280.00	
Public Outreach Planning and Execution	80	$ 204.00	$ 16,320.00	
Special Event Planning and Support	100	$ 204.00	$ 20,400.00	
General Administration	60	$ 170.00	$ 10,200.00	
TOTAL COST:	**960**		**$ 399,800.00**	

Nuffer, Smith, Tucker
Public Relations - V3 -
7/28/23

SAN DIEGO METROPOLITAN TRANSIT SYSTEM
COST PROPOSAL FORM
ON-CALL MARKETING AND COMMUNICATION SERVICES - MTS DOC NO. G2719.0-23

Description	Total	
Base Year 1	$	439,400.00
Base Year 2	$	384,520.00
Base Year 3	$	393,140.00
Option Year 1	$	458,080.00
Option Year 2	$	407,000.00
Option Year 3	$	399,800.00
Grand Total	**$**	**2,481,940.00**

Metropolitan Transit System

Agenda Item No. 18

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Clean Transit Advancement Campus (CTAC), Advanced Planning Services – Work Order Amendment

RECOMMENDATION:

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

1) Ratify Work Order WOA353-AE-20, under MTS Doc No. PWL353.0-22 (Attachment A), with Dokken Engineering (Dokken), in the amount of $37,323.27 for design services to perform a Phase II Environmental Site Assessment (ESA); and

2) Authorize the Chief Executive Officer (CEO) to execute Work Order Amendment WOA353-AE-20.01, under MTS Doc No. PWL353.0-22 (in substantially the same format as Attachment B), with Dokken, in the amount of $1,238,671.08 to provide advanced planning services for a new MTS bus maintenance facility for the Clean Transit Advancement Campus (CTAC) Project, formally known as Division 6.

Budget Impact

The total budget for this contract shall not exceed $1,275,994.35. Including the work orders issued under the prior on-call master agreement, the total amount authorized for Dokken design services is $1,485,418.31. The project is funded by Capital Improvement Program (CIP) 3004100801 – New Transit Facility, and by a FY23 Community Project Funding/Congressionally Directed Spending transit infrastructure grant in the amount of $1,000,000 for the planning phase.

DISCUSSION:

MTS, in partnership with SANDAG, is developing its sixth bus division, the Clean Transit Advancement Campus (CTAC), to support electrification of the bus fleet and to allow future service expansion. On October 20, 2022 (AI 30), the MTS Board of Directors selected “Site 7” on Federal Boulevard near 47th Street as the preferred site for the CTAC Project, and adopted a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Program. Following that approval, MTS and SANDAG commenced the National Environmental Policy Act (NEPA)

review process with the Federal Transit Administration (FTA). On July 18, 2023, the FTA issued a letter confirming that the CTAC Project is categorically excluded from NEPA. This NEPA approval letter allowed MTS to formally commence negotiations with the Site 7 property owners and take additional action to move forward with the project.

As part of the environmental review and site selection process, on March 10, 2022 (AI 14), the MTS Board of Directors authorized a Work Order WOA2075-AE-73 with Dokken to provide facility planning studies to determine the feasibility of constructing and operating a maintenance facility at the proposed site. The study resulted in a set of conceptual layouts with building block diagrams confirming the site contained adequate room to accommodate the required maintenance/administration facilities and bus parking /charging positions. The feasibility study also determined a combination of soil balancing and retaining walls could be implemented to support the two-level facility. Once Site 7 was selected as the preferred site, Dokken developed a Final Technical Memo to document the findings of the feasibility study. Additional amendments adding funding for certain tasks are shown in the chart below.

The CTAC Project is not fully funded and MTS is actively seeking funding opportunities at the local, state and federal level. To improve the competitiveness of our grant applications, MTS is seeking to further develop the planning details of the project with the support of Dokken Engineering. The additional scope to be provided includes detailed equipment lists, advanced planning on the phased site electrical requirements, coordination with SDG&E, refinement of the facility space program, and more detailed cost estimates for the project.

On-Call A&E Work Order Process

On September 15, 2021, MTS issued a solicitation for On-Call 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
- Category B: Small Business (SB) Set Aside - prime contracts awarded to a certified SB or a Disadvantage Business Enterprise (DBE) certified firm (which is also considered to be an SB)
- Category C: Specialty Prime – specialty service contracts

As a result of the RFSQ, on May 12, 2022 (AI 10), the MTS Board selected seven (7) to perform various Architectural Engineering (A&E) services under Categories A, B, and C. For projects requiring A&E Services, work orders are issued to these firms.

MTS staff reviewed the four approved A&E firms in Category A, and utilizing a direct award process, selected Dokken to perform the requisite services. Dokken had previously completed a portion of this project. Based on the level of effort and the design work involved for this project, staff determined the contract price to be fair and reasonable.

The work by Dokken on CTAC related tasks has spanned two master On-Call A&E Design Services contracts at MTS, one covering the period of December 1, 2017 to March 30, 2022 (MTS Doc. No. G2075.018; WOA2075-AE-73) and a second covering the period of July 1, 2022 to June 30, 2027 (MTS Doc. No. PWL353.0-22; WOA353-AE-20). To keep track of the total

A&E On-Call costs paid to Dokken for the CTAC project, the work orders from both contracts are listed in the chart below.

Today's proposed action will approve Work Order WOA353-AE-20.1 with Dokken to create a formalized programming phase of the project that further defines the necessary space requirements, the adjacencies required to efficiently operate, and further develop the conceptual plans, thereby allowing MTS and the design team to refine the Opinions of Probable Cost. The documentation resulting from this programming phase will be used to inform the future design and construction teams about the needs of the project.

The Work Order and amendments issued to Dokken under MTS's prior on-call panel process are summarized below:

Work Order No.	Purpose	Amount	Board Approval Date
WOA2075-AE-73	Original Work Order – Data Collection & Analysis, Conceptual Layouts, Technical Summary Memo, Conceptual Capital Cost Estimates	$206,043.16	3/10/23, Item 14
WOA2075-AE-73.01	Amendment 1 – Add funds for Survey work and other direct costs	$3,380.80	Approved by the CEO 1/11/2023
WOA353-AE-20	New work order agreement under new A&E master agreement for Phase II ESA	$37,323.27	Approved by the CEO 4/24/23
WOA354-AE-20.1	Formalized Programming Phase - Design	$1,238,671.08	Today's proposed action
	Total	**$1,485,418.31**	

For this Work Order, Dokken will be using the following subcontractors:

Subconsultant Name	Firm Certification	Value of Services
WSP	None	$896,547.65

Therefore, staff recommends that the MTS Board of Directors:

1) Ratify Work Order WOA353-AE-20, under MTS Doc No. PWL353.0-22 (Attachment A), with Dokken, in the amount of $37,323.27 for design services to perform a Phase II Environmental Site Assessment (ESA); and

2) Authorize the CEO to execute Work Order Amendment WOA353-AE-20.01, under MTS Doc No. PWL353.0-22 (in substantially the same format as Attachment B), with Dokken, in the amount of $1,238,671.08 to provide advanced planning services for a new MTS bus maintenance facility for the CTAC Project, formally known as Division 6.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Executed Work Order, WOA353-AE-20
B. Draft Work Order, WOA353-AE-20.01

Metropolitan Transit System

April 3, 2023

MTS Doc. No. PWL353.0-22
WOA353-AE-20

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-20, TO MTS DOC. NO. PWL353.0-22, ENGINEERING SERVICES FOR MTS DIVISION 6 CONCEPTUAL LAYOUT & REPORT –PHASE II ESA

This letter shall serve as Work Order WOA353-AE-20, 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 to perform a Phase II Environmental Site Assessment (ESA) to support the Clean Transit Advancement Campus Project (CTAC), formally known as Division 6 (Attachment A).

(This work order agreement is continuation of services under Consultant's previous work order number WOA2075-AE-73, to MTS Doc No. G2075.0-18.)

SCHEDULE

The Scope of Services shall remain in effect for a period of nine (9) weeks from the date of the Notice to Proceed.

PAYMENT

Payment shall be based on actual costs in the amount of $37,323.27, and shall not be exceeded without prior authorization of MTS (Attachment B).

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.

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

Sharon Cooney
Chief Executive Officer

Accepted:

John Klemunes, PE
~~Regional Manager~~ President, Dokken Engineering

Date: April 25, 2023

Attachments: Attachment A, Scope of Services
Attachment B, Negotiated Fee Proposal

ATTACHMENT A
SCOPE OF SERVICES

MTS Doc. No. PWL353.0-22 **Work Order No. WOA353-AE-20**

WORK ORDER TITLE: MTS Division 6 Conceptual Layout & Report –Phase II ESA

I. PROJECT DESCRIPTION

The San Diego Metropolitan Transit System, (referred to hereafter as "MTS") seeks a proposal for consultant services to perform a Phase II Environmental Site Assessment (ESA) to support the Clean Transit Advancement Campus Project (CTAC), formally known as Division 6, located northwet of the intersection of Federal Boulevard and 47th Street (Site) in San Diego, California.

II. SCOPE OF WORK

This task order is for the completion of a Phase II ESA, including borings, sample collection, testing, and document findings and recommendations into a report.

TASK 1: PROJECT MANAGEMENT

Dokken Engineers shall provide project management services that will include monthly progress reports, invoicing, and administration of the project.

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.

TASK 2: Phase II Environmental Site Assessment (ESA)

A previous Phase I ESA was performed by Allied Geotechnical Engineers, Inc. dated May 24, 2022, recommended a Phase II ESA be performed to assess for the potential presence of hazardous waste materials due to the past and present uses of the Site. In addition, the Final Initial Study/Mitigated Declaration, prepared by Helix Environmental Planning, Inc. dated October 2022 stated that "a Phase II ESA shall be constructed to include collection and analysis of soil and groundwater samples to determine the presence or absence of hazardous substances…". Based on these documents, a Phase II will be performed on the Site.

The Site is located on five (5) separate parcels and property owners. We assume MTS will coordinate access to the sites as part of this investigation. We have assumed three mobilizations would be required to perform the field work.
The collection of groundwater samples is not necessary since the depth to groundwater has been estimated to be at least 100 below the ground surface. In addition, we have assumed a boring permit is not needed for our study since the proposed borings would be less than 20 feet in depth and groundwater is not anticipated.

Work Elements:

Marking out proposed boring locations, calling Underground Service Alert (USA) and, if necessary, meet with utility locators on-site prior to performing the fieldwork. A private geophysical company would also be retained to locate potential utility conflicts near the proposed borings.

Advancing 11 hollow-stem borings to a depth of approximately 10 feet below the existing grade to collect soil samples (2 samples per boring) for analytical testing. Soil samples will also be

screened with a photoionization detector (PID) for an initial indication of the presence of petroleum hydrocarbons and volatile organic compounds during collection and prior to backfilling the boring with the cuttings. The borings would be capped with an asphalt concrete cold patch.

Performing analytical tests (standard turnaround time; 7-10 business days) on selected soil samples (assumed 11 composited samples) to assess for volatile organic compounds (EPA Method 8260B), semi-volatile organic Compounds (EPA Method 8270C), total petroleum hydrocarbons (EPA Method 8015M), polychlorinated biphenyls (EPA Method 8082), heavy metals (EPA Method 6010B and 7471A). Additional laboratory analysis (i.e., STLC, TCLP) may be required depending on analytical results and/or site conditions encountered, which would be invoiced on a time and materials basis.

Presenting findings, conclusions, and recommendations from our assessment into a report.

III. PERIOD OF PERFORMANCE

Services shall be completed within nine (9) weeks from the date of the NTP.

IV. DELIVERABLES

Based on an assumed NTP start date of March 2023, the final Phase II ESA report will be prepared and anticipated to be delivered within the schedule shown in Section III.

V. SCHEDULE OF SERVICES/MILESTONES/DELIVERABLES

A. Tasks Schedule

Task	Begin/End Dates
TASK 1: PROJECT MANAGEMENT	NTP/9 WEEKS
TASK 2: PHASE II ENVIRONMENTAL SITE ASSESSMENT (ESA)	NTP/9 WEEKS

B. Milestones/Deliverables Schedule

Milestone/Deliverable	Due Date
Monthly Progress Reports	MONTHLY
1. Phase II Environmental Site Assessment (ESA)	NTP/9 WEEKS

VI. MATERIALS TO BE PROVIDED BY MTS AND/OR THE OTHER AGENCY

MTS will grant or obtain free access to the Site for all equipment and personnel necessary for Consultant to perform the work set forth in this Agreement. MTS will notify any and all possessors of the Site that MTS has granted Consultant free access to the Site.

VII. SPECIAL CONDITIONS

Any condition listed below applies solely to this Work Order and does not otherwise alter the Agreement or other Work Orders. The Scope and Fees are based on the following assumptions.

A. This task order will be limited to the time and materials fee budget negotiated as shown in Attachment B.
B. All deliverables will be provided in electronic format.

C. MTS will grant or obtain free access to the Site for all equipment and personnel necessary for Consultant to perform the work set forth in this Agreement. MTS will notify any and all possessors of the Site that MTS has granted Consultant free access to the Site.
D. This scope of services assumes access to the Site during regular business hours. Saturday, night work, and overtime hours are available upon prior written request and for an additional fee.
E. Boring number and locations are based on the exhibit included in the previous Phase I ESA performed by Allied Geotechnical Engineers, Inc. and provided by MTS. Changes to boring number and locations are subject to additional fees.
F. Sampling, inspection, test locations, depths, and elevations will be based on field estimates. Surveying services for the precise location of sampling, inspection or test locations, depths and elevations is not included in the scope of services.
G. Consultant will dispose of remaining soil and rock samples sixty (60) days after submission of the report covering those samples. Further storage or transfer of samples can be made upon prior written request for an additional fee.
H. Consultant will notify MTS immediately of any changed conditions or circumstances prior to proceeding with the work.

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

Work Order Estimate Summary

MTS Doc. No.	**PWL353.0-22**
Work Order No.	**WOA353-AE-20**
Attachment:	**B**

Work Order Title: **Division 6 Conceptual Layout & Report**

Project No:

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes	Cost Codes Description	Total Costs
1		LABOR	$16,975.44
2		OTHER DIRECT COSTS	$20,347.83
		Totals =	**$37,323.27**

Table 2 - TASKS/WBS Summary (Costs & Hours)

Item	TASKS/WBS	TASKS/WBS Description	Labor Hrs	Total Costs
1		Project Management	10.0	$2,217.70
2		Phase II Environmental Site Assessment (ESA)	111.0	$35,105.57
		Totals =	**121.0**	**$37,323.27**

Table 3 - Consultant/Subconsultant Summary (Costs & Hours)

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
				DOKKEN ENGINEERING	10.0	$2,217.70
				GEOCON INCORPORATED	111.0	$35,105.57
				Totals =	**121.0**	**$37,323.27**

Work Order Estimate Summary

		Consultant/Subconsultant:	MTS Doc. No.: **PWL353.0-22**
Total Hours =	**10**		Work Order No.: **WOA353-AE-20**
Total Costs =	**$2,217.70**	Work Order Title:	**Attachment:** **B**

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Mark Tarrall Contract Manager	Engineer - Senior		Total Hours	Totals
				$ 299.01	$ 202.46			
1	**TASK 1**	**Project Management**						
1.1	Project Management			2	8		10	$2,217.70
		Subtotals (Hours) =	N/A	2	8		10	$2,217.70
		Subtotals (Costs) =		$598.02	$1,619.68		**10**	**$2,217.70**
2	**TASK 2**	**Phase II Environmental Site Assessment (ESA)**						
2.1	Borings, Samplings, Testing, and Reports							
		Subtotals (Hours) =	N/A					
		Subtotals (Costs) =						
						TOTALS:	**10**	**$ 2,217.70**
	Subtask 1			2	8		10	$2,217.70
	Subtask 2							
	Subtask 3							
	Subtask 4							
	Subtask 5							
	Subtask 6							
	Subtask 7							
	Subtask 8							
		Subtotals (Hours) =	N/A	2	8		10	
		Subtotals (Costs) =		$ 598.02	$ 1,619.68	$ -	10	$ 2,217.70
		Totals (Summary) =				**TOTALS:**	**10**	**$2,217.70**
		Total (Hours) =	N/A	2	8		10	
		Total (Costs) =		$598.02	$1,619.68			$2,217.70
		Percentage of Total (Hours) =	N/A	20%	80%		100%	
		Percentage of Total (Costs) =		27%	73%			100%

Work Order Estimate Summary

Consultant/ Subconsultant: **DOKKEN ENGINEERING**

Contract No: **PWL353.0-22**

Task Order No. **WOA353-AE-20**

Work Order Title: **Division 6 Conceptual Layout & Report**

Attachment: **B**

TASKS/WBS (1-5)

ODC Item	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													
2													
3													
4													
5													
6													
7													
8													
9													
10													
			Subtotal =			Subtotal =		Subtotal =		Subtotal =		Subtotal =	

TASKS/WBS (6-10)

ODC Item	Description	TASK 6		TASK 7		TASK 8		TASK 9		TASK 10		Totals	
		Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													
		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		**Totals =**	

Work Order Estimate Summary

Consultant/Subconsultant: **GEOCON INCORPORATED**

MTS Doc. No.: **PWL353.0-22**

Work Order No.: **WOA353-AE-20**

Total Hours = **111**

Total Costs = **$35,105.57**

Work Order Title: **Division 6 Conceptual Layout & Report**

Attachment: B

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Engineer - Principal	Engineer - Senior	Engineer - 2	Geologist - Senior	Geologist - 3	Geologist - 2	Technician - 2		Total Hours	Totals
				$ 259.85	$ 159.02	$ 113.36	$ 193.70	$ 119.42	$ 108.48	$ 80.73			
1	**TASK 1**	**PROJECT MANAGEMENT AND COORDINATION**											
1.1	Project Management												
		Subtotals (Hours) =	N/A										
		Subtotals (Costs) =											
2	**TASK 2**	**Phase II Environmental Site Assessment (ESA)**											
2.1	Borings, Samplings, Testing, and Reports		$20,347.83	2	42	18	4	28	1	16		111	$35,105.57
		Subtotals (Hours) =	N/A	2	42	18	4	28	1	16		111	$35,105.57
		Subtotals (Costs) =	$20,347.83	$519.70	$6,678.84	$2,040.48	$774.80	$3,343.76	$108.48	$1,291.68		**111**	**$35,105.57**
											TOTALS:	**111**	**$ 35,105.57**
	Subtask 1												
	Subtask 2		$20,347.83	2	42	18	4	28	1	16		111	$35,105.57
	Subtask 3												
	Subtask 4												
	Subtask 5												
	Subtask 6												
	Subtask 7												
	Subtask 8												
		Subtotals (Hours) =	N/A	2	42	18	4	28	1	16		111	
		Subtotals (Costs) =	20347.82609	$ 519.70	$ 6,678.84	$ 2,040.48	$ 774.80	$ 3,343.76	$ 108.48	$ 1,291.68	$ -	111	$ 35,105.57
		Totals (Summary) =									**TOTALS:**	**111**	**$35,105.57**
		Total (Hours) =	N/A	2	42	18	4	28	1	16		111	
		Total (Costs) =	$20,347.83	$519.70	$6,678.84	$2,040.48	$774.80	$3,343.76	$108.48	$1,291.68			$35,105.57
		Percentage of Total (Hours) =	N/A	2%	38%	16%		25%	1%	0.144144144		96%	
		Percentage of Total (Costs) =	58%	1%	19%	6%		10%	0%	0.036794165			98%

Work Order Estimate Summary

Consultant/ Subconsultant: **GEOCON INCORPORATED**

Contract No: **PWL353.0-22**

Task Order No. **WOA353-AE-20**

Work Order Title: **Division 6 Conceptual Layout & Report**

Attachment: B

TASKS/WBS (1-5)

ODC Item	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	Mark out and Private Utility Locator (3 mobilizaions)	Item	$3,304.35			1	$3,304.35						
2	Drilling Operations, Sample Collection and Supplies (3 mobilizations)	Item	$8,608.70			1	$8,608.70						
3	Analytical Testing of Soil Samples	Item	$8,434.78			1	$8,434.78						
4													
5													
6													
7													
8													
9													
10													
			Subtotal =			Subtotal =	**$20,347.83**	Subtotal =		Subtotal =		Subtotal =	

TASKS/WBS (6-10)

ODC Item	Description	TASK 6		TASK 7		TASK 8		TASK 9		TASK 10		Totals	
		Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Mark out and Private Utility Locator (3 mobilizaions)											**1**	**$3,304.35**
2	Drilling Operations, Sample Collection and Supplies (3 mobilizations)											**1**	**$8,608.70**
3	Analytical Testing of Soil Samples											**1**	**$8,434.78**
4													
5													
6													
7													
8													
9													
10													
		Subtotal =		Subtotal =		Subtotal =		Subtotal =		Subtotal =		**Totals =**	**$20,347.83**

Metropolitan Transit System

September 14, 2023

MTS Doc. No. PWL353.0-22
WOA353-AE-20.01

Mr. John Klemunes, PE
Regional Manager
Dokken Engineering
1450 Frazee Road, Suite 100
San Diego, CA 92108

Dear Mr. Klemunes:

Subject: AMENDMENT NO. 1 TO WORK ORDER WOA353-AE-20, TO MTS DOC. NO. PWL353.0-22, ENGINEERING SERVICES FOR MTS DIVISION 6 CONCEPTUAL LAYOUT & REPORT – 15% CONCEPT PLAN DESIGN SERVICES

This letter shall serve as Amendment No. 1 to Work Order WOA353-AE-20, under the General Engineering Consultant Agreement, MTS Doc. No. PWL353.0-22, as further described below.

SCOPE OF SERVICES

As a result of this Amendment, the Scope of Services shall provide 15% design services to support the Clean Transit Advancement Campus Project (CTAC), formally known as Division 6 (Attachment A).

(This work order agreement is continuation of services under Consultant's previous work order number WOA2075-AE-73, to MTS Doc No. G2075.0-18.)

SCHEDULE

As a result of this Amendment, the Schedule shall be increased by thirty-four (34) weeks. The Schedule shall be revised from a period of nine (9) weeks to a period of forty-three (43) weeks from the date of the Notice to Proceed.

PAYMENT

As a result of this Amendment, Payment shall be increased by an amount of $1,238,671.08 (Attachment B). The revised Payment amount shall be revised from $37,323.27 to $1,275,994.35. Payment shall be based on actual costs, and shall not be exceeded without prior authorization of MTS.

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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:

John Klemunes, PE
Regional Manager, Dokken Engineering

Date: _____

Attachments: Attachment A, Scope of Services
Attachment B, Negotiated Fee Proposal

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ATTACHMENT A
SCOPE OF SERVICES

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MTS Doc. No. PWL353.0-22 **Work Order No. WOA353-AE-20.01**

WORK ORDER TITLE: MTS Clean Transit Advancement Campus (CTAC), formerly known as Division 6 – Amendment 3 - 15% Concept Plan Design Services

I. PROJECT DESCRIPTION

The San Diego Metropolitan Transit System, (referred to hereafter as "MTS") seeks a proposal for consultant services to continue planning and design of the Clean Transit Advancement Campus Project (CTAC), formally known as Division 6, located northwest of the intersection of Federal Boulevard and 47th Street (Site) in San Diego, California. MTS and the Consultant, previously developed a Technical Summary Memorandum, providing MTS with a roadmap for development of the existing land into the envisioned CTAC. As part of the Technical Study, a preliminary space program was developed to prepare several site test fits. At the conclusion of the study two (2) options were recommended for further refinement on the Primary Lot, and two (2) phases were recommended for the "Coca-Cola Lot". For this phase, MTS has elected to move forward with Option 1, full grade of the primary lot, and phase improvements to the Coca Cola Lot, starting with surface parking and ultimately a parking structure.

Additional programmatic elements that affect the test fit and were discussed with MTS during development of the project include but are not limited to the following:

- Bus capacity of at least 250 buses.
- The facility will be designed to provide electric charging infrastructure for the full capacity of battery electric buses (BEBs) and provide potential expansion of hydrogen fueling infrastructure for fuel cell electric buses (FCEBs). Of the approximately 250 buses, about 75 are assumed to be FCEBs. FCEB fueling is assumed to be delivery and on-site storage of liquid hydrogen which is then converted into gaseous hydrogen for bus fueling. On-site hydrogen generation is not assumed.
- Staff and non-revenue vehicle (NRV) parking to be accounted for as well as parking for drivers, maintenance personnel, and administration staff.
- Maintenance shall be performed on site for both types of buses, so necessary maintenance bays, shops, tire repair, body repair, parts storage, and maintenance personnel support spaces will be required to perform routine and preventive maintenance. A common work area for component repair shall be included. A paint booth shall be accounted for. Additional space for nightly washing and servicing of buses is also required.
- Adequate space for administration, operations, and drivers to be provided. Additionally, building space for training and a daycare space for personnel to bring their children shall be allocated.
- Daycare services would ideally have separate vehicle access from the maintenance and charging portion of the facility.

The project has completed CEQA and is the process of completing NEPA, done by others.

The goal of this next phase is to make key decisions on design elements that will allow MTS to be more competitive with future funding opportunities, advance the project design and further

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develop the engineer's opinion of probable cost. This next phase of design includes a formalized Programming Phase of the project to further define the necessary space and functional requirement details of the onsite facilities and further develop the conceptual plans, thereby allowing MTS and the design team to refine the Opinions of Probable Cost.

The programming phase of the project sets the foundation for preliminary and final design of the project. This phase will document the criteria for design and defines the necessary spaces and requirements for operational efficiencies based on discussions and coordination with the owner and their specific needs, wants and budget constraints. The final product will be a Final Programming Document. The document may include chapters such as:

- General Consideration – lists pertinent information that influences design such as daily activities, project goals

- Space needs Program – delineates the space requirements for offices, maintenance bays & shops, support spaces, parts storage, vehicle/equipment storage, parking, and fuel and wash facilities

- Functional Requirements – presents detailed functional requirements for offices, maintenance bays & shops, support spaces, parts storage, vehicle/equipment storage, parking, and fuel and wash facilities

- Site and Building Requirements – general design criteria relating to architecture, structure, mechanical, electrical, plumbing, facility maintenance, civil, landscaping, as well as security, signage, and waste handling issues.

- Graphical representations on how the spaces can be organized by providing sketches of the overall site plan showing traffic flow, maintenance bays, internal building layout.

II. SCOPE OF WORK

TASK 1: Project Management
Consultant shall provide project management services that will 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 workshops, development of a final programming document, conceptual plans and opinion of probable cost as part of this task order.

1.1. Provide project management services including the requirements for invoicing, scheduling, monthly project progress reports, and administration of the Consultant's team.

1.1.1. 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. It is assumed there will be one hour bi-weekly meetings for the duration of the task order.

1.1.2. Develop and implement a project schedule to complete the Scope of Work and manage the project to eliminate or minimize supplemental agreements.

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1.1.3. Provide coordination between MTS and outside agencies and stakeholders, this includes manage decision making and communication with MTS, community/agency, and the stakeholder team.

1.1.4. 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

1.2.1. Consultant shall begin coordination with outside agencies, including SDG&E and the City of San Diego. Two (2) coordination meetings with both agencies are anticipated to understand steps needed for the project when ready for the construction document phase. Information collected during these meetings will be included in the final programming document delivered in Task 4.

Task 1 Deliverables: Progress Reports, Project Delivery Schedule, Attend and Facilitate biweekly design team meetings, Meeting Agendas, Meeting Minutes

TASK 2: MTS Workshops

2.1 Establish detailed design requirements including space program and function requirements upon which future schematic and design development phases can be built. Below is a general list of facilities but is not inclusive:

- Administration Building
- Administration – Drivers' Areas
- Maintenance – Support Areas
- Maintenance – Vehicles
- Maintenance – Body Shop
- Maintenance – Tire Shop
- Maintenance – Stores
- Maintenance – Infrastructure
- Bus Service – Cleaning & Brake
- Bus Service – Vault Pull
- Site – Other Site Spaces / Areas
- Site – Agency Vehicle Parking
- Site – Employee / Visitor Parking
- Daycare
- Fueling and charging infrastructure

2.2 Workshops

Setup in-person meetings to facilitate discussions on space and function. Assume four (4) day, in-person, workshops organized by site function. The meetings will include interviews with staff and site personnel. Workshop #1 is assumed to be 2 days to meet with MTS staff, kick-off this stage of the project and develop the program. Workshop #2 is assumed to be 1 day to present the concept space and function program to MTS staff and obtain feedback/comments. Workshop #3 is assumed to be 1 day to show the final space and function program. The goal of the workshop(s) is to identify detailed operational characteristics of the proposed facility, detailed space requirements for all administrative, maintenance, and

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operations functions, and determine detailed functional requirements for the project including but not limited to:

- Requirements for offices, mechanic areas, and operator areas.
- Review and confirmation of proposed fleet size, mix, and fueling.
- Quantity, size, and type of repair bays.
- Requirements for all shops (i.e. brake, tire, chassis wash, component rebuild, welding)
- Requirements for parts storage and warehousing.
- Storage requirements for tool boxes and portable equipment.
- Requirements for mechanical and electrical support space
- Fueling operations, safety, fire protection
- Equipment schedules
- Back up power, BMS System, UPS, emergency vs Standby

Task 2 Deliverables: Develop space and function design requirements, Attend and Facilitate workshops with MTS, Develop Workshop Materials, Compile MTS comments/feedback.

TASK 3: Space and Function Programming

3.1 Space Needs Program

Complete Space Needs Program based on workshop input for the facilities defined in Task 2. There may be additional spaces required that are not identified above. The Space Needs Program will record dimensions for each space, quantities of each space type, and other pertinent details needed to calculate an overall building and site area. Identify parking requirements for buses, non-revenue, employee, visitor, and delivery vehicles.

3.2 Functional Requirements Document

Complete functional requirements will be developed for each space, based on workshop input. These requirements will include specific information on lighting needs, paint / finish needs, airflow/exhaust needs, and other pertinent information for specialized spaces. These requirements will be assembled into the Design Criteria document that will inform future project development and design.

Develop preliminary equipment lists based on the draft Design Criteria. Equipment shall be listed by functional area and include a description, quantity, dimensions, and general utility requirements for each equipment item.

Task 3 Deliverables: Complete Space Needs Program Sheets, Complete Functional Requirements Diagram Sheets, Preliminary Equipment List

TASK 4: Draft and Final Programming Document

The draft and final programming document will summarize the findings of the workshops, document decisions made, and include the final space needs program sheets and the final functional requirement sheets. The document would establish functional area relationships both between areas and between workstations within areas. Diagrams showing these relationships will be included in the Design Criteria Document.

The report will also include:

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4.1 Design Criteria Document will be identify detailed functional requirements for the building systems as follows;

- Codes, Standards, LEED Certificate, and Permit
- Civil
- Architectural
- Structural
- Electrical
- Single line diagram
- Lighting/Lighting Control
- Comms/Security/PA System
- Landscape
- Mechanical
- Plumbing
- Fire protection
- Battery Backup
- Generator
- Solar
- Alternative Fuel Impacts
- Battery Electric Bus Impacts
- Sustainability requirements

4.2 Prepare summary of probable material and system types anticipated to be applied on the project where known.

4.3 The programming document will summarize the environmental requirements and commitments from CEQA and NEPA to be incorporated into the projects future design phases. The project has completed CEQA and is in the process of completing NEPA, done by others.

4.4 The programming document will include a description of the purpose and need for the project, identifying key goals and objectives for the final constructed facility.

4.5 The draft programming document will summarize the findings of the workshops, document decisions made, and include the final space needs program sheets and the final functional requirement sheets. The document would establish functional area relationships both between areas and between workstations within areas. Diagrams showing these relationships will be included in the Design Criteria Document.

4.6 Dokken will incorporate comments from MTS and issue a Final programming document.

Task 4 Deliverables: Draft and Final Programming Document

TASK 5: 15% Schematic Design

Further refine the concept drawings developed under a previous task order to show all the programmed spaces and functions developed under Task 3 are accounted for, and what spaces / functions defined in design criteria may need to be adjusted. This includes 2 meetings with MTS to review the concept plans and receive comments and assumes up to 3 revisions to the conceptual site plans. A final review meeting will be held with MTS to select a single Conceptual Plan to be further developed during this stage of 15% Schematic Design. Assumes these final review meetings will be held virtual. The following is an example of the plans sheets that will be provided:

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5.1 Site

- Existing Conditions
- Demolition
- Onsite + Offsite Utilities
- Grading and Drainage Masterplan
- Retaining wall profiles
- Circulation Exhibits
- Parking and Service Areas
- Charging Infrastructure
- Hardscape
- Site Lighting

5.2 Buildings

The following schematic plans (15%) will include architectural renderings (floor plan, building elevations, miscellaneous details) and structural concept plans (preliminary foundation plans, framing plan, and sections) by facility:

- Administration Building
- Administration – Drivers' Areas
- Maintenance – Support Areas
- Maintenance – Vehicles
- Maintenance – Paint/Body Shop
- Maintenance – Tire Shop
- Maintenance – Storage
- Maintenance – Infrastructure
- Bus Service – Brake service
- Bus Service – Bus Wash
- Bus Service – Vault Pull
- DayCare and Parking garage
- Training room/offices
- Typical accessible details

1. Includes code analysis (CBC, CalGreen and municipal requirements), coordination with other Disciplines, floor plans, sections and elevations.

2. Code analysis will be based on 2022 CBC, 2022 CalGreen and Municipal guidelines.

3. Site parking analysis will only include employee and NRV parking

4. Excludes specifications

5. The Mechanical, Plumbing, Fire Protection, and Communications will be narrative and tabular descriptions and criteria. Drawings will be limited to diagrammatic illustrations to clarify intent of criteria and not to define systems and equipment.

6. Structural will include analysis to determine the most effective structural system for the design (i.e., precast, post tension, steel frame) as well as preliminary foundation and framing plans

Task 5 Deliverables: 15% Conceptual Plans

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TASK 6: Programming Level Cost Estimate

Refine the cost estimate prepared during the Division 6 conceptual layout and report phase with updated quantities based on the more detailed programming and conceptual plan developed as part of this scope of work. This assumes two estimates will be prepared to support the project, one with the surface parking on the Coca Cola Lot, and the second to include a parking structure. This includes providing more detailed quantities for each major component.

6.1 Draft Cost Estimate for MTS review and comment. Assumes minor variations of project components to address MTS comments.

6.2 Final Programming Level Cost Estimate

Task 6 Deliverables: Draft and Final Programming Level Cost Estimates

OPTIONAL TASK 7: Grant support/Benefit Cost Analysis

7.1 Consultant will coordinate with MTS to provide strategic advice on the appropriate grants and funding opportunities that would apply to this project. The consultant will identify the pros and cons for each grant, provide guidance on elements needed to complete the grant applications, and determine the project readiness for each grant. Consultant will provide MTS with a summary of potential funding sources for the project. Sources will include available federal programs, state grant programs, and County, City, and other local sources, including revenues administered by MTS. The objective is to provide an understanding of the applicability of a wide range of funding opportunities to design and construct the project.

Once funding sources are identified for the project, we will rank each potential funding source by need and create funding scenarios for each project. Ranking will take into consideration timeline, competitiveness award amount, etc. These funding scenarios will include the recommended combinations of the various funding sources identified for the project. An additional piece of the funding scenarios will be pros and cons of applying for and receiving funding for each of the funding sources. Consultant shall also include a funding timeline for project that shows what grant programs should be applied for over a 3-year timeline (timeline is flexible based on project schedule).

Service excludes preparing the grant applications; however, this can be added for an additional fee.

7.2 Prepare Ridership model using the SANDAG ABM2+. The current queue for using this model is approximately 6 months and requires WSP to contract with SANDAG once a scope is defined.

7.3 Benefit Cost Analysis

For those grant applications that require a BCA or a similar technical analysis, the process that will be followed is described herein. The Consultant will develop one (1) BCA for MTS grant applications. Using data collected from MTS and found in publicly accessible places, the Consultant shall conduct the necessary data processing and technical analyses required to complete the BCA for MTS grant applications, focusing on supporting transportation, economic and other benefits at local, regional, and national levels in accordance with revised BCA guidance issued by USDOT. A separate BCA report will be produced.

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Data Collection
Our team will develop a list of data, documentation, and information needed to produce a BCA and will meet with MTS as needed to coordinate and compile data. To the extent the data are available from MTS (or public sources), we will incorporate capital and operations/maintenance costs, traffic data, etc. to make the most compelling case for the project's overall cost-effectiveness. The data collection and initial modeling processes will be iterative as the team works together to ensure that all project benefits are quantified to generate objective, evidence-supported results.

Data Analysis and Methodology
Our team will develop one (1) BCA models (Excel format) which will incorporate the most up-to-date input values provided in USDOT's BCA Guidance for Discretionary Grant Programs. We will also document all updated data sources and assumptions directly in the model and technical memorandum to facilitate review by USDOT economists.

Where applicable, we will quantify and monetize the following benefits:

- Travel time savings
- Vehicle operating cost savings
- Safety benefits
- Emissions cost savings
- Operations and maintenance cost savings.

Our team will meet with MTS to discuss the extent to which additional benefits may be quantified or monetized depending on the project and the grant programs for which MTS is seeking funding. Benefits for which USDOT does not have an established methodology to quantify or monetize will be described qualitatively in the BCA report.

Our team will compute the project cost-effectiveness metrics, including benefit-cost ratio, net present value, internal rate of return (i.e., the break-even discount rate), and payback period. We will also conduct a sensitivity analysis to identify key parameters of the model for USDOT reviewers.

The BCA model will be reviewed by a separate WSP economist for QA/QC. The person responsible for QA/QC will review the model ensuring that all inputs are sourced appropriately and that all calculations are operating correctly. The reviewer will also consider the fundamental logic of the model assumptions, identifying concerns that USDOT reviewers could raise.

BCA Report
Our team will summarize the BCA results for the grant application narrative as well as provide a detailed technical memorandum describing the results and methodology to be included as an appendix. The technical memorandum will clearly explain all assumptions used, how they were derived, and will cite sources where appropriate. We will include qualitative descriptions of benefits that could not be quantified or monetized due to lack of sufficient data or guidance from USDOT to make the most compelling case for the project's benefits.

The person responsible for QA/QC will review the technical memorandum, ensuring that all information from the model is correctly conveyed and described. The reviewer will also consider concerns that USDOT reviewers could raise and ensure they are documented appropriately in the memo.

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Additional economic analyses may be undertaken to help convey a more compelling case for the project grant applications that conforms to Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program criteria (e.g., regional and national economic vitality, potential for innovation). The draft BCA Reports will undergo review by the applicable MTS personnel and the draft document will be revised to address comments and recommendations by the reviewing team. We will update the BCA Reports to bring the applications to a final draft status. The applicable MTS personnel will participate in meetings and conference calls to address and clarify comments and revisions, and review tasks and materials needed to complete the application. It is anticipated WSP will attend up to two (2) debrief meetings with the USDOT to gain feedback on review of application and BCA.

OPTIONAL Task 7 Deliverables: BCA Model, BCA Report

OPTIONAL TASK 8: ROW SUPPORT

It is understood that five (5) parcels will be require acquisition of right of way for this project (APNs 541-611-04, 541-611-31, 541-611-34, 541-611-35, 541-611-27). In addition to acquisitions, relocation assistance services will be necessary for 14 businesses and 2 personal property displacements. Due to the complexity of the acquisitions and relocations, a Right of Way Acquisition Impact Report and a Relocation Impact Report will be necessary in order to determine both the capital and support costs required for the effort, and to identify any potential concerns that may need to be addressed during the acquisition and relocation phases of the project. It is anticipated the following parcels and business operations will require acquisition and relocation services as part of this project, and will be addressed in the proposed reports:

APN 541-611-04: There are 8 operating businesses and 1 potential vacant suite with personal property being stored inside. The businesses include:

1. San Diego Scale Company - 4510 Federal
2. Half Off Wholesale - 4520A Federal
3. Cal Auctions - 4514 Federal
4. Sanwood Fine Carpentry - 4514 Federal, Ste D
5. Proactive Concrete (didn't see an address)
6. H & H Investments - 4506 Federal, Ste B
7. Allpro Stickers - 4506 Federal, Ste C
8. Dropkick Brew - 4506 Federal, Ste D
9. No operating business but appears to be full of personal property - 4506 Federal, Ste A

APN 541-611-31: There are 2 businesses and a lot of personal property on site. These businesses include:

1. Pacific Insulation
2. Distribution International

APN 541-611-34: There are 3 businesses on this parcel. These businesses include:

1. Antonio's Metal Works - 4582 Federal
2. Mixed Media Gallery - 4576 Federal
3. Business with personal property being stored outside

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APN 541-611-35: This is a smaller parcel within parcel 541-611-34. It is owned by Airtouch Cellular-San Diego H & H Investment Co.

APN 541-611-27: This is a parking lot but does not appear to be used for parking at this time. There is personal property being stored on site which includes but is not limited to: large amounts of dirt, shipping containers, and heavy equipment. This property is under the same ownership as properties located on the opposite of Federal Boulevard and may pose potential severance damages to the larger parcel. As the project affected parcel's use is directly related to the parcel located opposite of Federal Boulevard which is currently being used as a distribution center.

Dokken will perform the services listed below for the project:

8.1 Right of Way Acquisition Impact Report
Using recorded data, an assessment of impacts including both capital and support costs will be documented in a right of way acquisition impact report. This report will accurately describe all right-of-way impacts for one preferred proposed alignment. Additionally, Dokken will prepare a draft and final Right of Way Impact Report and will present recommendations to MTS for review and comment. Dokken will obtain updated preliminary title reports, as necessary.

8.2 Relocation Impact Report
A Relocation Impact Report will be prepared as this project will require complex nonresidential relocations, potential lack of available replacement property, and special considerations due to business operations. There are 14 operating businesses and two potential personal property displacements that will require relocation assistance services.

This report will include the following information:

- Project Description that includes: project location map, project limits and alignment map, and project summary sheet
- Number of displacement units
- Types of nonresidential units displaced and estimated size of operations
- Survey/Interview of displaces
- Identification of special problems
- Proposed solutions for noted problems
- Cost Estimates for capital and support costs

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OPTIONAL Task 8 Deliverables: Draft and Final Right of Way Acquisition Report, Updated Preliminary Title Reports, Draft and Final Relocation Impact Report

III. PERIOD OF PERFORMANCE

Services shall be completed within twenty-seven (34) weeks from the date of execution.

IV. DELIVERABLES

Final programming and concept plan documents will be prepared and anticipated to be delivered within 34 weeks of NTP.

V. SCHEDULE OF SERVICES/MILESTONES/DELIVERABLES

A.	TASK	Begin/End Dates
TASK 1:	Project Management	1 Week

TASK 2:	Workshops	1 Week
TASK 3:	Final Space and Function Programming	3 Weeks
TASK 4:	Final Programming Document	8 Weeks
TASK 5:	Schematic Design (15%)	34 Weeks
TASK 6:	Programming Level Cost Estimate	34 Weeks
OPTIONAL Task 7: Grant Support/Benefit Cost Analysis		TBD
OPTIONAL Task 8: ROW Support		TBD

B. Milestone/Deliverable Schedule	Begin/End Dates
Monthly Progress Reports	Monthly
Final Programming Document	8 Weeks
Schematic Design (15%)	34 Weeks
Programming Level Cost Estimate	34 Weeks

VI. MATERIALS TO BE PROVIDED BY MTS AND/OR THE OTHER AGENCY

Project documentation and background reports from prior work efforts will be provided by Dokken/MTS.

VII. SPECIAL CONDITIONS

Any condition listed below applies solely to this Work Order and does not otherwise alter the Agreement or other Work Orders. The Scope and Fees are based on the following assumptions.

A. This task order will be limited to the time and materials fee budget negotiated as shown in Attachment B.

B. All deliverables will be provided in electronic PDF format unless otherwise noted.

C. Aerial survey and boundary from record obtained during the previous phase will be suitable for this next phase of design. If field topography, plats/legals or other survey is requested, it can be provided for an additional fee.

D. It was discussed with MTS that geotechnical explorations and recommendations would likely occur six to eight months after NTP. Scope and fee for these services are excluded and can be provided at a later date.

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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.

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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

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ATTACHMENT B
NEGOTIATED FEE PROPOSAL

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Work Order Estimate Summary

MTS Doc. No.	**PWL353.0-22**
Work Order No.	**WOA353-AE-20.01**
Attachment:	**B**

Work Order Title: **MTS Clean Transit Advancement Campus (CTAC), formerly known as Division 6 – Amendment 1 - 15% Concept Plan Design Services**

Project No:

Table 1 - Cost Codes Summary (Costs & Hours)

Item	Cost Codes	Cost Codes Description	Total Costs
1	Labor	Direct Labor	$1,200,279.08
2	ODC	Other Direct Costs	$38,392.00
		Totals =	**$1,238,671.08**

Table 2 - TASKS/WBS Summary (Costs & Hours)

Item	TASKS/WBS	TASKS/WBS Description	Labor Hrs	Total Costs
1	Task 1	Project Management	496	$117,881.20
2	Task 2	MTS Workshops	613	$132,476.84
3	Task 3	Space and Function Programming	84	$63,052.52
4	Task 4	Draft and Final Programming Document	952	$163,197.12
5	Task 5	15% Schematic Design	3,063	$463,452.69
6	Task 6	Programming Level Cost Estimate	531	$100,943.32
7	OPTIONAL Task 7	Benefit Cost Analysis	490	$114,125.04
8	OPTIONAL Task 8	Right of Way Support	505	$83,542.35
		Totals =	**6,734**	**$1,238,671.08**

Table 3 - Consultant/Subconsultant Summary (Costs & Hours)

(If Applicable, Select One)				Consultant	Labor Hrs	Total Costs
DBE	DVBE	SBE	Other			
				Dokken Engineering	1,921	$342,123.43
				WSP	5,037	$896,547.65
				Totals =	**6,958**	**$1,238,671.08**

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Work Order Estimate
Summary

Total Hours = **1,921**

Total Costs = **$342,123.43**

Consultant/Subconsultant: **Dokken Engineering**

Work Order Title: **MTS Clean Transit Advancement Campus (CTAC), formerly known as Division 6 – Amendment 1 - 15% Concept Plan Design Services**

MTS Doc. No.: **PWL353.0-22**

Work Order No.: **WOA353-AE-20.01**

Attachment: B

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Engineer - Principal $ 403.65	Contract Manager $ 299.01	Project Manager $ 289.30	Task Manager $ 212.00	Engineer - Senior $ 202.46	Engineer - 3 $ 169.80	Engineer - 2 $ 150.11	Engineer - 1 $ 111.07	Technical Expert $ 161.47	Environmentalist - 1 $71.76	Total Hours	Totals
1	**Task 1**	**Project Management**													
1.1	Project Management					68		136						204	$47,206.96
1.2	Agency Coordination					4		8						12	$2,776.88
		Subtotals (Hours) =	N/A			72		144						216	$49,983.84
		Subtotals (Costs) =				$20,829.60		$29,154.24						**216**	**$49,983.84**
2	**Task 2**	**MTS Workshops**													
2.1	Establish Detailed Design Requirements					20		40	40					100	$20,676.40
2.2	Workshops					56		68	45		60			229	$44,273.28
		Subtotals (Hours) =	N/A			76		108	85		60			329	$64,949.68
		Subtotals (Costs) =				$21,986.80		$21,865.68	$14,433.00		$6,664.20			**329**	**$64,949.68**
3	**Task 3**	**Space and Function Programming**													
3.1	Space Needs Program Sheets					12		30						42	$9,545.40
3.2	Complete Functional Requirements Sheets					12		30						42	$9,545.40
		Subtotals (Hours) =	N/A			24		60						84	$19,090.80
		Subtotals (Costs) =				$6,943.20		$12,147.60						**84**	**$19,090.80**
4	**Task 4**	**Draft and Final Programming Document**													
4.1	Design Criteria					4		8	24					36	$6,852.08
4.2	Equipment Lists					4		6						10	$2,371.96
4.3	Environmental Requirements/comitments					2		12						14	$3,008.12
4.4	Project Objective					2		6						8	$1,793.36
4.5	Draft Report					4		12	20		40			76	$11,425.52
4.6	Final Report					4		20	20		40			84	$13,045.20
		Subtotals (Hours) =	N/A			20		64	64		80			228	$38,496.24
		Subtotals (Costs) =				$5,786.00		$12,957.44	$10,867.20		$8,885.60			**228**	**$38,496.24**
5	**Task 5**	**15% Schematic Design**													
5.1	Site					24		48	120		210			402	$60,361.98
5.2	Buildings					8		12	12		24			56	$9,447.20
		Subtotals (Hours) =	N/A			32		60	132		234			458	$69,809.18
		Subtotals (Costs) =				$9,257.60		$12,147.60	$22,413.60		$25,990.38			**458**	**$69,809.18**
6	**Task 6**	**Programming Level Cost Estimate**													
6.1	Draft Estimate					2		12	16		32			62	$9,279.16
6.2	Final Estimate					1		6	8		12			27	$4,195.30
		Subtotals (Hours) =	N/A			3		18	24		44			89	$13,474.46
		Subtotals (Costs) =				$867.90		$3,644.28	$4,075.20		$4,887.08			**89**	**$13,474.46**
7	**OPTIONAL**	**Benefit Cost Analysis**													
7.1	Grant Support														
7.2	Ridership model														
7.3	Benefit Cost Analysis					4		8						12	$2,776.88
		Subtotals (Hours) =	N/A			4		8						12	$2,776.88
		Subtotals (Costs) =				$1,157.20		$1,619.68						**12**	**$2,776.88**
8	**OPTIONAL**	**Right of Way Support**													
8.1	Right of Way Acquisition Impact Report											205		205	$33,101.35
8.2	Relocation Impact Report		$2,000.00									300		300	$50,441.00
		Subtotals (Hours) =	N/A									505		505	$83,542.35
		Subtotals (Costs) =	$2,000.00									$81,542.35		**505**	**$83,542.35**
														1,921	**$342,123.43**
		Totals (Summary) =											Totals =	**1,921**	**$342,123.43**
		Total (Hours) =	N/A			231		462	305		418	505		1921	$342,123.43
		Total (Costs) =	$2,000.00			$66,828.30		$93,536.52	$51,789.00		$46,427.26	$81,542.35			
		Percentage of Total (Hours) =	N/A			12%		24%	16%		22%	26%			
		Percentage of Total (Costs) =	1%			20%		27%	15%		14%	24%			

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Work Order Estimate Summary

Consultant/ Subconsultant: **Dokken Engineering**

Contract No: **PWL353.0-22**

Task Order No. **WOA353-AE-20.01**

Work Order Title: **MTS Clean Transit Advancement Campus (CTAC), formerly known as Division 6 – Amendment 1 - 15% Concept Plan Design Services**

Attachment: B

TASKS/WBS (1-5)

ODC Item	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	Preliminary Title Reports	EA											
2													
3													
4													
5													
6													
7													
8													
9													
10													
			Subtotal =			Subtotal =		Subtotal =		Subtotal =		Subtotal =	

TASKS/WBS (6-10)

ODC Item	Description	Task 6		Task 7		Task 8						Totals	
		Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Preliminary Title Reports					4	$2,000.00					**4**	**$2,000.00**
2													
3													
4													
5													
6													
7													
8													
9													
10													
		Subtotal =		Subtotal =		Subtotal =	**$2,000.00**	Subtotal =		Subtotal =		**Totals =**	**$2,000.00**

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Work Order Estimate
Summary

Total Hours = **5,037**

Total Costs = **$896,547.65**

Consultant/Subconsultant: **WSP**

Work Order Title: **MTS Clean Transit Advancement Campus (CTAC), formerly known as Division 6 – Amendment 1 - 15% Concept Plan Design Services**

MTS Doc. No.: **PWL353.0-22**

Work Order No.: **WOA353-AE-20.01**

Attachment: B

Item	TASKS/WBS	TASKS/WBS Description	ODCs (See Attachment)	Contract Manager	Project Controls 3	Project Controls 3	Project Controls Senior	Project Manager	Engineer - Principal	Engineer - Senior	Engineer - Senior	Engineer - Senior	Engineer - Senior	Engineer - Senior	Engineer - Senior	Engineer - Senior	Engineer - 3	Engineer - 2	Engineer - 2	engineer 2	Engineer - 2	Engineer - 2	Engineer - 1	Engineer - 2	Project Controls - 2	Architect - Senior	Architect - Senior	Architect - Senior	Engineer 1	Engineer - 2	Engineer - 2	Admin-1	Engineer Principal	Planner 2	Planner 1	task manager	Technician 3	Scientist 2	task Manager	task manager	Total Hours	Totals
				PV, Mech	structures	comm	Fire/plumbing	mechanical/ventilation	generator	Electrical	Electrical	Equipment	structures	Structures	Mechanical	generator	electrical	PV	accounting	Equipment-facilites	Architect	Architect	Architect/CADD	architect/CADD	architect/CADD																	
				$ 333.03	$ 192.99	$ 192.99	$ 250.00	$ 306.46	$ 298.55	$ 233.38	$ 233.38	$ 233.38	$ 233.38	$ 233.38	$ 233.38	$ 233.38	$ 171.49	$ 149.95	$ 149.95	$ 149.95	$ 149.95	$ 149.95	$ 89.81	$ 149.95	$ 156.32	$ 232.25	$ 232.25	$ 232.25	$ 89.81	$ 149.95	$ 149.95	$ 63.62	$ 298.55	$ 170.53	$ 106.00	$ 230.00	$ 125.00	140.07	$ 230.00	$ 230.00		
							Rate Pending Verification																											Rate Pending Verification	Rate Pending Verification	Rate Pending Verification		Rate Pending Verification	Rate Pending Verification		
1	**Task 1**	**Project Management**																																							
1.1	Project Management			24				90		16						8	16	10	20	8					28	30		8												258	$62,819.64
1.2	Agency Coordination							6								8	8																							22	$5,077.72
		Subtotals (Hours) =	N/A	24				96		16						16	24	10	20	8					28	30		8												280	$67,897.36
		Subtotals (Costs) =		$7,992.72				$29,420.16		$3,734.08						$3,734.08	$4,115.76	$1,499.50	$2,999.00	$1,199.60					$4,376.96	$6,967.50		$1,858.00												**280**	**$67,897.36**
2	**Task 2**	**MTS Workshops**																																							
2.1	Establish Detailed Design Requirements		$9,592.00					8			4	4	4			4	16	16					16			8	12													92	$27,002.76
2.2	Workshops							24			8	8	8			8	16	32					16			32	40													192	$40,524.40
		Subtotals (Hours) =	N/A					32			12	12	12			12	32	48					32			40	52													284	$67,527.16
		Subtotals (Costs) =	$9,592.00					$9,806.72			$2,800.56	$2,800.56	$2,800.56			$2,800.56	$5,487.68	$7,197.60					$2,873.92			$9,290.00	$12,077.00													**284**	**$67,527.16**
3	**Task 3**	**Space and Function Programming**																																							
3.1	Space Needs Program Sheets		$500.00					6										40								20	40													106	$22,271.76
3.2	Complete Functional Requirements Sheets							6			12	12	16			4	8					8	16				24													106	$21,689.96
		Subtotals (Hours) =	N/A					12			12	12	16			4	8	40				8	16			20	64													212	$43,961.72
		Subtotals (Costs) =	$500.00					$3,677.52			$2,800.56	$2,800.56	$3,734.08			$933.52	$1,371.92	$5,998.00				$1,199.60	$1,430.96			$4,645.00	$14,864.00													**212**	**$43,961.72**
4	**Task 4**	**Draft and Final Programming Document**																																							
4.1	Design Criteria		$500.00					8			72	50	50	12	8	60	100	20	20	12			100	20		20					20									572	$98,739.84
4.2	Equipment Lists							4						12	8	20	60				8		20			20														152	$25,961.04
4.3	Environmental Requirements/comitments																																								
4.4	Project Objective																																								
4.5	Draft Report																																								
4.6	Final Report																																								
		Subtotals (Hours) =	N/A					12			72	50	50	24	16	80	160	20	20	12	8		120	20		40					20									724	$124,700.88
		Subtotals (Costs) =	$500.00					$3,677.52			$16,803.36	$11,669.00	$11,669.00	$5,601.12	$3,734.08	$13,719.20	$23,992.00	$2,999.00	$2,999.00	$1,799.40	$1,199.60		$10,777.20	$2,999.00		$9,290.00					$1,272.40									**724**	**$124,700.88**
5	**Task 5**	**15% Schematic Design**																																							
5.1	Site		$1,000.00					12						4	4	16	30						16			10	10	20	20	10	10									162	$29,309.06
5.2	Buildings							12	10	16	4	6	8	4	2	16	80	425	425	18	8		24	10		20	60	120	400	475	300									2,443	$364,334.45
		Subtotals (Hours) =	N/A					24	10	16	4	6	8	8	6	32	110	425	425	18	8		40	10		30	70	140	420	485	310									2,605	$393,643.51
		Subtotals (Costs) =	$1,000.00					$7,355.04	$2,985.50	$3,734.08	$933.52	$1,400.28	$1,867.04	$1,867.04	$1,400.28	$5,487.68	$16,494.50	$63,728.75	$63,728.75	$2,699.10	$1,199.60		$3,592.40	$1,499.50		$6,967.50	$16,257.50	$32,515.00	$37,720.20	$72,725.75	$46,484.50									**2,605**	**$393,643.51**
6	**Task 6**	**Programming Level Cost Estimate**																																							
6.1	Draft Estimate		$300.00		48	48	100	12			8	8	8	4		16	20	40		12			40	8		4	2	2												380	$74,229.44
6.2	Final Estimate				8	8	12	8	2							4	4	4					4			4	2	2												62	$13,239.42
		Subtotals (Hours) =	N/A		56	56	112	20	2		8	8	8	4		20	24	44		12			44	8		8	4	4												442	$87,468.86
		Subtotals (Costs) =	$300.00		$10,807.44	$10,807.44	$28,000.00	$6,129.20	$597.10		$1,867.04	$1,867.04	$1,867.04	$933.52		$3,429.80	$3,598.80	$6,597.80		$1,799.40			$3,951.64	$1,199.60		$1,858.00	$929.00	$929.00												**442**	**$87,468.86**
7	**OPTIONAL**	**Benefit Cost Analysis**																																							
7.1	Grant Support			4				8	4																						10		30			30			116	$21,380.10
7.2	Ridership model		$24,500.00																												10	13	21	34					78	$36,202.48
7.3	Benefit Cost Analysis			4				6	2									12									12								80		160		20	296	$53,765.58
		Subtotals (Hours) =	N/A	8				14	6									12									12				20	13	51	34	80	30	160	30	20	490	$111,348.16
		Subtotals (Costs) =	$24,500.00	$2,664.24				$4,290.44	$1,791.30									$1,799.40									$2,787.00				$1,272.40	$3,881.15	$8,697.03	$3,604.00	$18,400.00	$3,750.00	$22,411.20	$6,900.00	$4,600.00	**490**	**$111,348.16**
8	**OPTIONAL**	**Right of Way Support**																																							
8.1	Right of Way Acquisition Impact Report																																							
8.2	Relocation Impact Report																																							
		Subtotals (Hours) =	N/A																																						
		Subtotals (Costs) =																																							
																																							5,037	**$896,547.65**
		Totals (Summary) =																																					**5,037**	**$896,547.65**
		Total (Hours) = N/A		32	56	56	112	210	18	32	108	88	94	36	54	196	404	509	453	50	16	252	38	28	168	202	152	420	485	310	40	13	51	34	80	30	160	30	20	5037	$896,547.65
		Total (Costs) =	$36,392.00	$10,656.96	$10,807.44	$10,807.44	$28,000.00	$64,356.60	$5,373.90	$7,468.16	$25,205.04	$20,537.44	$21,937.72	$8,401.68	$12,602.52	$33,612.04	$60,579.80	$76,324.55	$67,927.35	$7,497.50	$2,399.20	$22,632.12	$5,698.10	$4,376.96	$39,018.00	$46,914.50	$35,302.00	$37,720.20	$72,725.75	$46,484.50	$2,544.80	$3,881.15	$8,697.03	$3,604.00	$18,400.00	$3,750.00	$22,411.20	$6,900.00	$4,600.00		
		Percentage of Total (Hours) = N/A		1%	1%	1%	2%	4%	0%	1%	2%	2%	2%	1%	1%	4%	8%	10%	9%	1%	0%	5%	1%	1%	3%	4%	3%	8%	10%	6%		0%	1%	1%	2%	1%	3%	1%	0%		
		Percentage of Total (Costs) =	4%	1%	1%	1%	3%	7%	1%	1%	3%	2%	2%	1%	1%	4%	7%	9%	8%	1%	0%	3%	1%	0%	4%	5%	4%	4%	8%	5%		0%	1%	0%	2%	0%	2%	1%	1%		

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Work Order Estimate Summary

Consultant/ Subconsultant: **WSP**

Contract No: **PWL353.0-22**

Task Order No. **WOA353-AE-20.01**

Work Order Title: **MTS Clean Transit Advancement Campus (CTAC), formerly known as Division 6 – Amendment 1 - 15% Concept Plan Design Services**

Attachment: **B**

TASKS/WBS (1-5)

ODC Item	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	Repro & Graphics	EA	$1.00					500	$500.00	500	$500.00	1,000	$1,000.00
2	Parking	EA	$20.00			4	$80.00						
3	SANDAG MODEL	LS	$24,000.00										
4	RT Air - Houston-SD	EA	$500.00			2	$1,000.00						
5	RT Air - Atlanta-SD	EA	$700.00			1	$700.00						
6	RT Air - Seattle-SD	EA	$400.00			2	$800.00						
7	Hotel	EA	$220.00			20	$4,400.00						
8	Rental Car	Day	$75.00			12	$900.00						
9	Meals	Day	$80.00			20	$1,600.00						
10	mileage	MI	$0.56			200	$112.00						
				Subtotal =		Subtotal =	**$9,592.00**	Subtotal =	**$500.00**	Subtotal =	**$500.00**	Subtotal =	**$1,000.00**

TASKS/WBS (6-10)

ODC Item	Description	Task 6		Task 7								Totals	
		Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total	Quantity	Total
1	Repro & Graphics	300	$300.00	500	$500.00							**2,800**	**$2,800.00**
2	Parking											**4**	**$80.00**
3	SANDAG MODEL			1	$24,000.00							**1**	**$24,000.00**
4	RT Air - Houston-SD											**2**	**$1,000.00**
5	RT Air - Atlanta-SD											**1**	**$700.00**
6	RT Air - Seattle-SD											**2**	**$800.00**
7	Hotel											**20**	**$4,400.00**
8	Rental Car											**12**	**$900.00**
9	Meals											**20**	**$1,600.00**
10	mileage											**200**	**$112.00**
		Subtotal =	**$300.00**	Subtotal =	**$24,500.00**	Subtotal =		Subtotal =		Subtotal =		**Totals =**	**$36,392.00**

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Metropolitan Transit System

Agenda Item No. 19

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Communications (Comm) Cabinets HVAC Maintenance - 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. PWG365.0-23 (in substantially the same format as Attachment A) with Comfort Mechanical, a Small Business (SB), at $889,846, for HVAC preventative maintenance and inspection services for comm cabinets.

Budget Impact

The total cost for this project is estimated to be $889,846. The project will be funded by the Light Rail Vehicle (LRV) Maintenance Operating Budget 350016-545100.

DISCUSSION:

MTS requires preventive maintenance services, including, but not limited to, inspection, testing, parts replacement, repairs of equipment, and heating ventilation air conditioning (HVAC) servicing for comm cabinets at various MTS facilities and locations. MTS operates comm cabinets that houses and organizes the agency's communication, Information Technology (IT) and security equipment. These organizational assets are susceptible to damage by heat and debris if their HVAC systems are not properly maintained at an optimum efficiency.

On June 9, 2023, MTS issued a Request for Proposals (RFP) for Comm Cabinet HVAC Maintenance, for a five (5) year period. MTS received two (2) proposals by the due date of July 10, 2023 from the following firms:

Firm Name	Certifications
Comfort Mechanical	SB
Paradigm Mechanical	Disadvantaged Business Enterprise (DBE)

Both firms were deemed responsive and responsible by MTS. A selection committee, consisting of representatives from Bus Rapid Transit (BRT), Maintenance of Way (MOW), and Finance departments met for initial evaluations and scored the proposals based on the criteria below:

Criteria	%
Qualifications of the Firm or Individual	25
Staffing, Organization, and Management Plan	20
Work Plan	20
Cost and Price	35
Total Possible Score	**100**

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

Rank	Firm Name	Technical (Max 65%)	Cost (Max 35%)	Proposed Cost	Total Score
1	Paradigm Mechanical	40.67	35.00	$ 528,385.76	75.67
2	Comfort Mechanical	46.33	20.78	$ 890,138.00	67.11

Following the initial evaluations, the selection committee requested clarifications/revised proposals from both firms. After receipt of the revised proposals, the panel reconvened, and using the aforementioned evaluation criteria, re-evaluated the proposals from both firms.

Rank	Firm Name	Technical (Max 75%)	Cost (Max 35%)	Proposed Cost	Total Score
1	Comfort Mechanical	55.00	20.78	$889,846.00	75.78
2	Paradigm Mechanical	39.00	35.00	$780,580.00	74.00

During the second evaluation, the selection committee noticed that Paradigm increased their pricing by $252,194.24. This was in response to MTS's requests for clarifications verifying if their initial proposal included prevailing wage rates. Their qualifications in HVAC maintenance, based on their references, were only in the installation of HVAC systems rather than the maintenance of HVAC systems.

The selection committee determined Comfort's overall proposal to be the most advantageous to MTS due to past and current performance with MTS, knowledge of the HVAC systems infrastructure throughout the agency, and their reliable staffing and services. The selection committee commenced negotiations with the firm. Comfort Mechanical proposed the option to increase preventative maintenance from quarterly to bi-monthly citing that in the long run, it would curb out-of-scope costs based on their experience working on MTS comm cabinets. Comfort lowered their proposal to $889,846 and will perform preventative maintenance six times per year (bi-monthly).

Therefore, staff recommends that the MTS Board of Directors authorize the CEO to execute MTS Doc. No. PWG365.0-23 (in substantially the same format as Attachment A) with Comfort Mechanical, a SB, at $889,846 for HVAC preventative maintenance and inspection services for comm cabinets.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft MTS Doc. No. PWG365.0-23
B. Scope of Work
C. Cost Form

STANDARD AGREEMENT

FOR

MTS DOC. NO. PWG365.0-23

THIS AGREEMENT is entered into this 1st day of October, 2023 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: Comfort Mechanical

Address: 10740 Kenney Street, Ste. 405

Santee, CA 92071
City State Zip

Form of Business: Corporation

Email: sean@comfortmechanical.org

Telephone: (619) 449-3886

Authorized person to sign contracts Sean Caviness (Name) President (Title)

The Contractor agrees to provide 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), Federal Requirements (Exhibit D), and Forms (Exhibit E).

The contract term is for five (5) years effective October 1, 2023 through September 30, 2028.

Payment terms shall be net 30 days from invoice date. The total cost of this contract shall not exceed $889,846.00 without the express written consent of MTS.

SAN DIEGO METROPOLITAN TRANSIT SYSTEM	COMFORT MECHANICAL
By: _____ Sharon Cooney, Chief Executive Officer	By _____
Approved as to form:	
By: _____ Karen Landers, General Counsel	Title: _____

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SCOPE OF WORK/TECHNICAL SPECIFICATIONS

5.1. INTRODUCTION

The San Diego Metropolitan Transit System ("MTS") is seeking proposals for preventive maintenance services, including, but not limited to, inspection, testing, parts replacement, repairs of equipment, and heating ventilation air conditioning (HVAC) servicing for communications (comm) cabinets at various MTS facilities and locations.

5.2. BACKGROUND

Located within various bus and trolley stations, MTS operates comm cabinets that houses and organizes the agency's communication, IT and security equipment. These organizational assets are susceptible to damage by heat and debris if their HVAC systems are not properly maintained at an optimum efficiency. With that said, the Contractor shall furnish all labor, equipment, materials, parts, permits, insurance, supervision and transportation necessary to maintain HVAC systems and provide full maintenance service. This agreement does not include work in new construction.

5.3. PERIOD OF PERFORMANCE

The term of the agreement shall be for a five (5) year period. The period of performance shall commence on October 1, 2023 through September 30, 2028.

5.4. PREVENTIVE MAINTENANCE

For the purpose of this contract, routine preventive HVAC maintenance shall be defined as scheduled routine inspection, adjustments, cleaning, minor repairs, testing and inspecting equipment to reduce or avoid service interruption in strict compliance with the relevant equipment manufacturer's recommendations. MTS requires the contractor to have spare parts and units on-hand if replacement parts and units are required.

Routine preventive maintenance and repairs shall be provided in accordance with the highest standards of the industry, skill, workmanship, applicable trade practices, meet warranties and in conformance to all applicable laws, codes and regulations. Contractor shall provide oversight and documentation of preventive maintenance on all HVAC systems and provide quarterly data to the MTS PM. In addition, Contractor must provide a maintenance checklist for approval prior to the contract performance. In consultation with the MTS PM, the Contractor's maintenance program and repairs shall, at a minimum, include, but not limited to, the specifications outlined herein:

A. Provide quarterly inspections and maintenance to all air conditioner units, for all station locations (see Attachment 2).
B. Maintain all HVAC units per manufacturer specifications, including filter cleaning and/or replacement of any parts during each inspection. Spec sheets for the HVAC units will be provided by MTS (see Attachment 3).
C. Provide an appropriate level of on-site staffing as needed, with appropriate tools, equipment, and vehicles necessary to support all facility HVAC maintenance functions.

D. Staffing shall be certified and proficient in the complete maintenance and repair of McLean T-Series Air Conditioners and various HVAC units.
E. Prior to beginning any repair or replacement, Contractor shall troubleshoot the system to diagnose any problems.
F. Services are to be compliant with all Federal, State, County, City, CARB, OSHA, and all other applicable regulatory requirements, including MTS safety requirements. All required forms must be provided by the Contractor but approved by MTS.
G. Repair or replace, at no additional charge to the contract, failed or worn moving parts including, but not limited to: compressor, fittings, air filters, grilles, blower/impeller motors, bearings, shafts, thermostat, capacitor, relay, valves, overload switch, breaker/fuse, and condenser coils. Repaired or replacement parts must be installed by the contractor. Faulty parts must be disposed by Contractor.
H. Itemize the equipment list covered under repair or replacement.
I. Clean and vacuum any dirt/debris inside the communication cabinet without damaging any other electronic equipment/components.
J. Make a general inspection of the unit and related system for any unusual sound or condition, leak, etc., then investigate and correct them.
K. Cycle the unit through a sequence of operation in order to determine if the operating conditions and sequences are correct; make any necessary adjustments and calibrations to insure proper operation of equipment.
L. Check electrical circuits, check all terminals, tighten all lugs as needed, ensure fans are operational.
M. Check control system for proper response and operation. Adjust, as required, to maintain energy conservation measured as directed by the State of California.
N. Examine air conditioning system for leaks in soldered and flange joints; repair as needed.
O. Clean heating and cooling coils; repair as needed.
P. Check motor and fan blades for cleanliness and balance, remove dirt or grease and lubricate motor if bearings are not sealed type.
Q. Assist with all service calls from MTS required to keep the equipment operating at an optimal level.
R. Test and/or calibrate all thermostat and/or sensors annually for proper temperature reporting.
S. Inspection and/or repair records must be submitted, within one (1) week of completion, to the MTS PM.
T. Advise MTS of the availability of generic HVAC control system upgrades, as they become available.
U. Provide MSDS sheets to MTS in a complete “Right to Know” binder for all products used in MTS facilities. MTS will determine location of “Right to Know” binders.

5.5. AS-NEEDED REPAIRS

As-needed repairs is defined as unscheduled work, other than preventive maintenance, that requires immediate action to restore equipment or system operations. It also involves

correcting mechanical problems that will cause imminent interruption of operations or will cause damage to operating equipment.

Contractor shall provide 24-hour emergency services, as needed, in all aspects of HVAC emergency repairs included in these specifications. Contractor shall have working personnel on-site within two (2) hours of the call-out. Failure of the Contractor to provide as-needed repairs within the stated time frame, may be cause to consider the Contractor in default of the contract.

As-needed repairs will be capped at $4,999.99 per instance, unless there is a prior arrangement with the MTS Project Manager (MTS PM) or designee, and an approval was granted. A quote must be submitted and approved by the MTS PM before any unscheduled work is started. Contractor must provide proof of material costs when submitting invoices.

If temporary measures are taken to restore operation, then permanent repair service shall be completed within five (5) working days.

MTS is not responsible for parts for as-needed repairs that are due to misuse or negligence by the Contractor.

5.6. MAJOR REPAIRS

After a report is made, the Contractor has two (2) days from the report to correct an equipment or system failure that results in the loss of essential services. To assist in the two (2) day repair, the Contractor shall procure a standby unit. In the event repairs are going to take longer than two (2) days, the Contractor must install the standby unit. The bad unit must be returned to the shop and once repaired, it will become the standby unit.

Repairs includes locating the trouble, obtaining parts, installation of parts and placing of the equipment back into complete operational services. Every effort shall be made to expedite any and all repairs in accordance with set limits. Inability to obtain parts or special technical or engineering services will not be considered reason to extend this time period.

MTS reserves the right to seek competitive bids for all major overhauls and repairs as may be required during the term of the contract. The Contractor shall work cooperatively with any other Contractor that MTS may have to perform any major repairs. If MTS elects to use the contractor, the parts and labor rates included in this contract shall apply.

Major repairs may be excluded from the scope of the Contract at the discretion of the agency. However, the MTS may direct the Contractor to perform a major repair and the Contractor will be bound to the rates on the contract. For this instance, only freight charges will be billed direct to MTS and reimbursed to the Contractor. The invoice shall contain the necessary allocation of costs with supporting documentation.

MTS is not responsible for parts for major repairs that are due to misuse or negligence by the Contractor.

5.7. SERVICE REPORTS

A separate log must be maintained for preventive maintenance, as-needed repairs and major repairs, each time the Contractor performs work at the communications cabinet locations.

The Contractor shall submit service reports to MTS PM for each visit to the site, whether for preventive maintenance, as-needed repairs or major repair services. The service reports shall be prepared in sufficient detail and description with the date, equipment location, job hours and specific work performed. The MTS PM or designee will review the work with the service personnel and sign the service report to acknowledge satisfactory completion of the work as described. Report will be generated on a nonproprietary software program and emailed to the MTS PM within one (1) week.

5.8. BILLABLE WORK

All work beyond, and in addition to the scope of the contract, shall be considered billable and will require that an estimate for that proposed work be provided to MTS PM for consideration and approval prior to work being completed. It is Contractor's sole responsibility to obtain written prior approval from MTS for all work otherwise MTS may not be responsible for payment of work not approved.

5.9. PROFESSIONAL REQUIREMENTS

Contractor shall hold current C10 and/or C20 licenses. Employees shall possess a State of California Joint Journeyman Apprentice Training Center certification. Automation specialists are to be continually factory-trained on a variety of HVAC control systems. Contractor shall provide operator coaching and on-site training of their select personnel as needed. Contractor shall supply its staff with a company uniform and photo identification tags that will be worn at all times. Uniforms shall display the Contractor logo and employee first or last name shall be clearly visible.

5.10. MTS RIGHT TO INSPECT

MTS reserves the right to make such evaluations and tests as are necessary to ascertain that the requirements of this contract are being fulfilled. The MTS PM will conduct such evaluations and tests. Contractor shall furnish personnel and tools necessary to conduct such tests at no additional cost to MTS. These evaluations may be made on a quarterly basis (or on a more frequent basis as reasonably determined by MTS) during the term of this contract. Any deficiencies found during any such evaluations shall be reported in writing to Contractor, and Contractor shall promptly correct any such deficiency at its own expense. If Contractor fails to diligently perform any required corrective work in a manner satisfactory manner to MTS within thirty (30) calendar days of Contractor's receipt of any such deficiency report (or sooner if the deficiency is, in MTS's opinion, of a nature that requires immediate correction), MTS may, in addition to any other remedies MTS may have, after thirty (30) calendar days written notice to Contractor, perform or cause to be performed all or any part of the corrective work described in the deficiency notice. Contractor shall reimburse MTS for any expenses incurred by MTS in exercising its rights under this section within ten (10) business days of receipt of MTS invoice therefor unless MTS elects to deduct the costs from any sum owed to Contractor.

Any requested tests will be provided, and any reported deficiencies will be corrected at Contractor's expense, so long as the tests and deficiencies relate to the equipment being maintained by Contractor under this contract.

5.11. INVOICES

Invoices must be sent quarterly 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.

Contractor shall be required to submit an inspection form with its quarterly invoices. Inspection records must be submitted before payment. **Additional compensation will be allowed by contractor's markup percentage.** Contractor must provide supporting documentation to show actual cost paid for parts or material that they obtained from their suppliers.

5.12. 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.

5.13. 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.

MTS Cost Pricing Form - COMM CABINET HVAC MAINTENANCE (MOW & BRT)

Table I: HVAC PREVENTATIVE MAINTENANCE SERVICES						Year One (10/1/23 to 9/30/24)		Year Two (10/1/24 to 9/30/25)		Year Three (10/1/25 to 9/30/26)		Year Four (10/1/26 to 9/30/27)		Year Five (10/1/27 to 9/30/28)	
Group	Item	Manufacturer	Description	Qty *	Annual Service Frequency	Unit Price	Item Total	Unit Price	Item Total	Unit Price	Item Total	Unit Price	Item Total	Unit Price	Item Total
MOW	1	First Company	Comm Cabinet	1	6	$ 103.00	$ 618.00	$ 111.00	$ 666.00	$ 111.00	$ 666.00	$ 123.00	$ 738.00	$ 123.00	$ 738.00
	2	McLean	Comm Cabinet	34	6	$ 103.00	$ 21,012.00	$ 111.00	$ 22,644.00	$ 111.00	$ 22,644.00	$ 123.00	$ 25,092.00	$ 123.00	$ 25,092.00
	3	Pentair	Comm Cabinet	11	6	$ 103.00	$ 6,798.00	$ 111.00	$ 7,326.00	$ 111.00	$ 7,326.00	$ 123.00	$ 8,118.00	$ 123.00	$ 8,118.00
	4	Carrier	Comm Cabinet	1	6	$ 103.00	$ 618.00	$ 111.00	$ 666.00	$ 111.00	$ 666.00	$ 123.00	$ 738.00	$ 123.00	$ 738.00
	5	N Vent	Comm Cabinet	2	6	$ 103.00	$ 1,236.00	$ 111.00	$ 1,332.00	$ 111.00	$ 1,332.00	$ 123.00	$ 1,476.00	$ 123.00	$ 1,476.00
	6	Data Air	Comm Room	2	6	$ 103.00	$ 1,236.00	$ 111.00	$ 1,332.00	$ 111.00	$ 1,332.00	$ 123.00	$ 1,476.00	$ 123.00	$ 1,476.00
	7	Bard	Comm Room	4	6	$ 103.00	$ 2,472.00	$ 111.00	$ 2,664.00	$ 111.00	$ 2,664.00	$ 123.00	$ 2,952.00	$ 123.00	$ 2,952.00
	8	Marvair	Comm Room	3	6	$ 103.00	$ 1,854.00	$ 111.00	$ 1,998.00	$ 111.00	$ 1,998.00	$ 123.00	$ 2,214.00	$ 123.00	$ 2,214.00
	9	Mitsubishi	Comm Room	2	6	$ 103.00	$ 1,236.00	$ 111.00	$ 1,332.00	$ 111.00	$ 1,332.00	$ 123.00	$ 1,476.00	$ 123.00	$ 1,476.00
	10	Johnson Control	Comm Room	4	6	$ 103.00	$ 2,472.00	$ 111.00	$ 2,664.00	$ 111.00	$ 2,664.00	$ 123.00	$ 2,952.00	$ 123.00	$ 2,952.00
	11	N Vent	Comm Room	2	6	$ 103.00	$ 1,236.00	$ 111.00	$ 1,332.00	$ 111.00	$ 1,332.00	$ 123.00	$ 1,476.00	$ 123.00	$ 1,476.00
	12	Compu Aire	Comm Room	2	6	$ 103.00	$ 1,236.00	$ 111.00	$ 1,332.00	$ 111.00	$ 1,332.00	$ 123.00	$ 1,476.00	$ 123.00	$ 1,476.00
	13	Bard	Substation	34	6	$ 103.00	$ 21,012.00	$ 111.00	$ 22,644.00	$ 111.00	$ 22,644.00	$ 123.00	$ 25,092.00	$ 123.00	$ 25,092.00
	14	Cook	Exhaust Fan	1	6	$ 103.00	$ 618.00	$ 111.00	$ 666.00	$ 111.00	$ 666.00	$ 123.00	$ 738.00	$ 123.00	$ 738.00
	15	TCF	Exhaust Fan	3	6	$ 103.00	$ 1,854.00	$ 111.00	$ 1,998.00	$ 111.00	$ 1,998.00	$ 123.00	$ 2,214.00	$ 123.00	$ 2,214.00
	16	Green Heck	Exhaust Fan	17	6	$ 103.00	$ 10,506.00	$ 111.00	$ 11,322.00	$ 111.00	$ 11,322.00	$ 123.00	$ 12,546.00	$ 123.00	$ 12,546.00
BRT	17	Pentair	Comm Cabinet	13	6	$ 103.00	$ 8,034.00	$ 111.00	$ 8,658.00	$ 111.00	$ 8,658.00	$ 123.00	$ 9,594.00	$ 123.00	$ 9,594.00
	18	Mitsubishi	Comm Room	2	6	$ 103.00	$ 1,236.00	$ 111.00	$ 1,332.00	$ 111.00	$ 1,332.00	$ 123.00	$ 1,476.00	$ 123.00	$ 1,476.00
	19	Kooltronic	Mini AC Box	4	6	$ 103.00	$ 2,472.00	$ 111.00	$ 2,664.00	$ 111.00	$ 2,664.00	$ 123.00	$ 2,952.00	$ 123.00	$ 2,952.00
	20	Fujitsu	Mini-split AC	4	6	$ 103.00	$ 2,472.00	$ 111.00	$ 2,664.00	$ 111.00	$ 2,664.00	$ 123.00	$ 2,952.00	$ 123.00	$ 2,952.00
					Table I Subtotals		$ 90,228.00		$ 97,236.00		$ 97,236.00		$ 107,748.00		$ 107,748.00

Table II: AS-NEEDED LABOR				Year One (10/1/23 to 9/30/24)		Year Two (10/1/24 to 9/30/25)		Year Three (10/1/25 to 9/30/26)		Year Four (10/1/26 to 9/30/27)		Year Five (10/1/27 to 9/30/28)	
	Item	Description	Estimated Annual Hours *	Unit Price	Item Total	Unit Price	Item Total	Unit Price	Item Total	Unit Price	Item Total	Unit Price	Item Total
	1	Straight Time Hourly Rate	280	$ 140.00	$ 39,200.00	$ 150.00	$ 42,000.00	$ 150.00	$ 42,000.00	$ 160.00	$ 44,800.00	$ 160.00	$ 44,800.00
	2	After Hours Hourly Rate (evenings, weekends and holidays)	40	$ 210.00	$ 8,400.00	$ 225.00	$ 9,000.00	$ 225.00	$ 9,000.00	$ 240.00	$ 9,600.00	$ 240.00	$ 9,600.00
			Table II Subtotals:		$ 47,600.00		$ 51,000.00		$ 51,000.00		$ 54,400.00		$ 54,400.00

Table III: AS-NEEDED REPLACEMENT PARTS			Year One (10/1/23 to 9/30/24)		Year Two (10/1/24 to 9/30/25)		Year Three (10/1/25 to 9/30/26)		Year Four (10/1/26 to 9/30/27)		Year Five (10/1/27 to 9/30/28)	
	Item	Description	% Mark Up	Item Total	% Mark Up	Item Total	% Mark Up	Item Total	% Mark Up	Item Total	% Mark Up	Item Total
	1	Annual Materials/Parts Allowance	5%	$ 25,000.00	5%	$ 25,000.00	5%	$ 25,000.00	5%	$ 25,000.00	5%	$ 25,000.00
	2	Materials markup		$ 1,250.00		$ 1,250.00		$ 1,250.00		$ 1,250.00		$ 1,250.00
		Table III Subtotals:		$ 26,250.00		$ 26,250.00		$ 26,250.00		$ 26,250.00		$ 26,250.00

Grand Total	$ 889,846.00

***Prices are firm-fixed and all inclusive. MTS will not pay additional costs. These quantities are for evaluation purposes and do not reflect guranteed usage by MTS.**

Metropolitan Transit System

Agenda Item No. 20

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Additional Staffing – One (1) PRONTO Support Specialist and three (3) Call/Service Center Representatives

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to add one (1) PRONTO Support Specialist and three (3) Call/Service Center Representatives to the position tables previously approved in the Fiscal Year 2024 budget.

Budget Impact

The PRONTO Support Specialist will be in Salary Grade #3 ($28,832 - $56,746), and the Call/Service Center Representatives will be in Salary Grade #2 ($30,160 - $49,344). PRONTO Support Center costs are shared with San Diego Association of Governments and North County Transit District per the PRONTO Memorandum of Understanding (MOU), and thus the total net cost of the additional positions (including both wage and benefits) for MTS would be approximately $143,000 annually. The expense would be added into the annual PRONTO Support budget, and first reflected in the Fiscal Year 2024 mid-year budget amendment.

DISCUSSION:

The PRONTO Support Center provides customer and institutional support for the region's fare collection system. Since the transition to PRONTO, this support center has significantly expanded in terms of customer requests as well as fulfilment functions. Unlike the Compass system that had extensive waiting periods for transactions processed through the call center, PRONTO is a real-time, account-based system, and support center transactions are instantly available to the customer, providing a higher level of service.

Online card orders for customers and institutional partners, bulk social service day passes, and Access paratransit ticket book sales are all processed/fulfilled through the PRONTO Support Center, which are new functions for this staff since the transition to PRONTO. PRONTO Support Specialists provide dedicated oversight, training, and support for the PRONTO Partners

and Partners+ institutional accounts, in addition to assisting the Call/Service Center Representatives with the rest of the PRONTO Support Center functions.

The PRONTO Support Center has experienced call volume increases of more than 90% compared to volumes from Compass (pre-Covid), and has been unable to achieve the service metrics of the other MTS call centers since the launch of PRONTO in August 2021. PRONTO call handle times have also been extended with the integration of more compliant credit card processing standards, causing riders long wait times to receive assistance (nearly ten times longer than the waits in the other MTS call centers). The upcoming addition of the online reduced fare portal will also require PRONTO Support staff to validate documentation pertaining to reduced fare eligibility. These additional positions will help improve the customer experience when calling PRONTO Support, as well as better prepare the PRONTO Support Center to support the online reduced fare portal.

Today's proposed action would authorize the CEO to create additional full-time employment positions for one PRONTO Support Specialist and three Call/Service Center Representatives, and to fund them in the Fiscal Year 2024 budget.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Agenda Item No. 21

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

PRONTO Fare Collection System – Contract Amendment (Israel Maldonado)

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors authorize the Chief Executive Officer (CEO) to execute Amendment 17 to MTS Doc. No. G2091.0-18 (in substantially the same format as Attachment A), with Innovations in Transportation, Inc. (INIT), for Open Payment and Inspection App Solution, in the amount of $1,224,387.98.

Budget Impact

The total cost of this amendment is estimated to be $1,224,387.98, bringing the total Board approved amount to $46,824,395.85. This project is funded by Capital Improvement Program (CIP) 1009004902 – Fare System Upgrades and Operations 535010.

Amendment details are shown on next page.

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Date Issued	Board Approval Date	Document	Description	Amount
01/1/19	12/13/18	Original Agreement	Fare collection system (Capital only)	$23,155,348.02
12/12/19	12/13/18	AM 1	Commence work on options previously approved on 12/13/18	$1,416,531.01
12/18/19	12/12/19	AM 2	Commence work on new options	$1,093,731.49
05/26/20	09/17/20	AM 3	Change Order - Integrate Conduent's CAD/AVL solution	$57,681.00
09/17/20	09/17/20	AM 4	Change Order - Rail validator masts (design change and equipment order)	$907,267.08
1/13/21	12/10/20	AM 5	Adds California (CA) sales tax; and Change Orders - revises TVM spare parts & cashless conversion kits, and adds gateway services	$2,478,990.86
03/18/21	03/11/21	AM 6	Change Orders - Adds customer and institution website scope updates, adds a new reduced fares program enrollment, adds driver control unit screen flow changes, adds SAGE operator separation, adds Customer Relationship Module (CRM) payment encryption changes and applies the fare media capital credit	$765,271.76
06/28/21	06/17/21	AM 7	Change Orders – Adds transfer and business rule changes to website and CRM; modified 2 phase bus validator and Driver Control Unit (DCU) installation; installation of modified ticket validator arm	$270,050.09
09/13/21	11/18/21	AM 8	Change Orders - Additional SAGE software; and Salesforce licenses	$37,816.95
11/18/21	11/18/21	AM 9	Change Order – PRONTO fare media card order	$166,624.60
05/10/22	06/16/22	AM 10	Amend gateway services to add security and fraud prevention features at no additional cost; add new/revised federal requirements; and credit back to MTS $902.11 from Amendment 9's incorrect tax amount	($902.11)
06/22/22	06/16/22	AM 11	Purchase 60 validators with polycarbonate; purchase 750K extended use cards & 150K limited use cards	$1,768,948.64
06/22/22	09/15/22	AM 12	Change Orders - Display prepayments on invoices and monthly capping report	$14,012.50
09/15/22	09/15/22	AM 13	Purchase twenty (20) permanent salesforce licenses, 36-month renewal period, from 8/24/2022 to 8/23/2025	$129,600.00
09/15/22	09/15/22	AM 14	Adds TVM fare validation functionality	$91,941.44
01/26/23	01/26/23	AM 15	Adds PRONTO In-App Messaging and annual maintenance	$151,246.00
02/03/23	12/13/18	AM 16	Notice to Proceed the Operations and Maintenance phase per the original agreement; & approval of the start of the 10-year maintenance services that have been issued via various amendments	$11,004,315.94
TBD	*09/14/23*	*AM 17*	*Open Payment and Inspection App Solution*	*$1,224,387.98*
			Total Contract Authorized Amount	**$44,732,863.25**
n/a	12/13/18	n/a	Unexecuted Options Remaining from Original Contract Approval (to be executed at a later date)	$2,091,532.60
			Total Board Approval Amount	**$46,824,395.85**

DISCUSSION:

On December 13, 2018 (AI 31), the MTS Board approved MTS Doc. No. G2091.0-18 with INIT for the design and implementation of a new fare collection system. This includes provision of services, equipment, software, parts, and support. The new fare system, PRONTO, was launched in September 2021, with the conversion from the prior Compass Card system completed on October 1, 2021.

Amendments 1-16 have subsequently been Board-approved to provide additional functionality, integration, and scope modifications.

Today's proposed action will approve Amendment 17 for Open Payment Validation and 10-year annual maintenance services.

Open Payment Validation has been in the PRONTO roadmap since the original core contract procurement with INIT, but was initially deferred due to the core project's schedule constraints in addition to the slow adoption of open payment validation across the United States pre COVID-19 pandemic. Since then, card issuers have replaced most credit cards in the United States with contactless capability.

Key stakeholders from MTS, North County Transit District (NCTD), California Integrated Travel Project, fare system vendor INIT, credit card gateway provider NMI and payment processor Chase met over several workshops to discuss the minimum viable product for open payment validation implementation. The goal was to identify a phase one product that could be expedited. The minimum viable product would support the following:

1. Ability for customers to simply tap their physical credit card or smart device enabled credit card on any PRONTO validator at MTS or NCTD.

2. Each initial tap would get charged an adult one-way fare for the respective mode of service and would include a two-hour transfer.

3. Ability for MTS and NCTD to inspect open payment validation transactions.

4. Include the necessary software and interface modifications to the Customer Relationship Module, Website and Validators.

MTS staff's Independent Cost Estimate (ICE) compared the open payment implementation and operating costs of three other agencies that use INIT fare payment technologies: the Interurban Transit Partnership (ITP) Grand Rapids, WeGo Nashville and Hillsborough Area Regional Transit Authority, Tampa. The ICE considered the fleet size of each agency in comparison to the San Diego region and prorated the operating costs over ten years in order to have an adequate comparison.

The aforementioned agencies paid on average $1,602.75 per fleet unit for the implementation and operation of open payment validation. By comparison, MTS average per fleet cost in the proposed amendment is $996.25. The average per fleet unit cost includes capital and operating costs over 10 years. These costs do not include merchant fees associated with the processing of credit card payments, which will vary by agency depending on their respective merchant contracts.

Therefore, MTS staff deemed INIT's proposal at $1,224,387.98, which is 37.8% less than MTS ICE at $1,969,778.85, to be fair and reasonable.

Therefore, MTS staff recommends that the MTS Board of Directors authorize the CEO to execute Amendment 17 to MTS Doc. No. G2091.0-18 (in substantially the same format as Attachment A), with INIT, for Open Payment and Inspection App Solution, in the amount of $1,224,387.98.

/S/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Attachments: A. Draft Amendment MTS Doc. No. G2091.17-18
B. Proposal Open Payments & Inspection App

Amendment 17

September 14, 2023 MTS Doc No. G2091.17-18

ACCOUNT BASED FARE COLLECTION SYSTEM

INIT Innovations in Transportation, Inc.
Roland Staib
President and CEO
424 Network Station
Chesapeake, VA 23320

This shall serve as Amendment No.17 to the original agreement G2091.0-18 as further described below.

SCOPE

Contractor has been providing fare collection services (implementation and design) since January 2, 2019. The implementation phase has now been completed. Public launch was September 1, 2021.

This amendment authorizes Open Payment Validation and 10-year annual maintenance services as shown in Attachment 1.

SCHEDULE

There are no changes to the contract termination date which remains to December 31, 2032.

PAYMENT

The amendment total is $1,224,387.98. This brings the total contract authorized amount to $44,732,863.25. This amount shall not be exceeded without prior written approval from MTS.

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

Sincerely,

Sharon Cooney, Chief Executive Officer

Agreed:

Roland Staib, President and CEO
INIT Innovations in Transportation, Inc.

Date: _____

Attachment: A. Cost page from original agreement
B. Annual Operations and Maintenance (Start/End Dates and Price Summary)
C. Monthly payment schedule

DRAFT

INIT Innovations in Transportation, Inc.
424 Network Station
Chesapeake, VA, 23320

Phone: 757-413-9100
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MTS | Open Payment and Inspection App Solution

Customer: MTS San Diego, CA
Requested by: Israel Maldonado
Prepared by: Jenny Wallman
Proposal #: 2022-119-03
Date: 7/25/2023
Validity: 60 days

Warranty: 1 year hw warranty on inspection adapters included; 10 years extended sw maintenance quoted below; Optional extended hw warranty quoted below
Delivery: See below
Invoicing Milestones: See below
Existing Contract G2091.0-18 Terms & Conditions apply

Description:

MTS launched a NEW Fare System PRONTO on September 1, 2021. PRONTO provides customers with a variety of ways to pay for transit. As part of the Agency's continued effort to provide more innovative and efficient ways of paying for transit, MTS has requested a formal proposal from INIT for the implementation of Open Payment Validation across the PRONTO system.

Open Payment Validation has been in the PRONTO roadmap since the original core contract procurement with INIT but was initially deferred due to the core project's schedule constraints added to the slow adoption of open payment validation across the United States pre COVID-19 pandemic. Since then, card issuers have replaced most credit cards in the United States with contactless capability.

Key stakeholders from the San Diego Metropolitan Transit System, North County Transit District, California Integrated Travel Project, credit card gateway provider NMI, payment processor Chase and INIT met over several workshops to discuss the minimum viable product for open payment validation implementation. The goal was to identify a phase one product that could be expedited.

Scope of Work:

INIT's proposal to implement the minimum viable product for Open Payment Validation includes the following:

- Ability for customers to simply tap their physical credit card on any PRONTO validator at MTS or NCTD.
- Ability for customers to simply tap the credit card associated with their smart device's mobile wallet via Near Field Communication (NFC).
- Each initial tap would get charged an adult one-way fare for the respective mode of service and would include a two-hour transfer.
- 25 open payment fare inspection adapters that will integrate with the agency's current android Zebra devices. The current android Zebra devices already utilize the closed loop fare inspection solution from INIT for PRONTO card inspections and validations.
- Development to support all of the necessary modifications to validators to add credit card issuer required visual messaging.

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- Development to support all of the necessary modifications to the Customer Relationship Module (CRM) that would allow customer service representatives to support customer inquiries into open payment card history associated with a transit ride.

- Development to support modifications to the customer website that would provide customers the ability to review their payment and ridership history.

Notes:

All modifications will follow Payment Card Industry Data Security Standards (PCI-DSS) and should include a roadmap to achieve Point to Point Encryption.

Pricing - Open Payments:

Item	Description	Qty	Price Per Unit USD from calc	Price Total USD from calc
1	**Open Payments | One-Time Costs**	**1**	**$307,340.88**	**$307,340.88**
	• MOBILEvario extensions for open payments • PROXmobil software extensions for open payments • PCI Conformance including technical clarifications • Development			
2	**Open Payments | Per Device License**	**1229**		
	Open Payment License per vehicle - first 800 devices	**800**	**$220.00**	**$176,000.00**
	Open Payment License per vehicle - 429 devices	**429**	**$176.00**	**$75,504.00**
3	**INIT Project Management / System Engineering**	**1**	**$88,000.00**	**$88,000.00**
	• Requirement analysis and documentation • Software design • System Integration • Installation and test • Acceptance			
	Subtotal*			**$ 646,844.88**

*California taxes do not apply to software licenses.

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Pricing - Inspection:

Item	Description	Qty	Price Per Unit USD from calc	Price Total USD from calc
4	**Fare Inspection Device Hardware**	**25**	**$3,800.00**	**$95,000.00**
	PROXbluetooth External proximity reader			
	Hardware Sales Tax 7.75%			**$7,362.50**
5	**Fare Inspection Software**	**1**	**$54,334.60**	**$54,334.60**
	EBROS App Software Software Configuration			
6	**INIT Project Services**	**1**	**$46,200.00**	**$46,200.00**
	• Requirement analysis and documentation • System Integration • Installation and test • Acceptance			
	Subtotal			**$ 202,897.10**

Software Maintenance:

Item	Option	Yrs	Price Per Unit USD	Price Total USD
7	**Open Payment Validation Software Maintenance**	**10**	**$33,884.04**	**$338,840.40**
8	**Open Payment Inspection Software Maintenance**	**10**	**$3,580.56**	**$35,805.60**

Optional Extended Hardware Warranty Inspection Adapter:

Item	Option	Qty	Price Per Unit USD	Price Total USD
9	**Extended Hardware Warranty**	**25**	**$672.00**	**$16,800.00**
	PROXbluetooth External proximity reader			
	Total			**$ 16,800.00**

	Grand Total w/o Option			**$ 1,224,387.98**

Proposal is valid only in its entirety.

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Extended Software Maintenance Breakdown per Year:

Maintenance Year	Open Payment	Inspection	Total Per Year
Year 1	33,884.04	3,580.56	37,464.60
Year 2	33,884.04	3,580.56	37,464.60
Year 3	33,884.04	3,580.56	37,464.60
Year 4	33,884.04	3,580.56	37,464.60
Year 5	33,884.04	3,580.56	37,464.60
Year 6	33,884.04	3,580.56	37,464.60
Year 7	33,884.04	3,580.56	37,464.60
Year 8	33,884.04	3,580.56	37,464.60
Year 9	33,884.04	3,580.56	37,464.60
Year 10	33,884.04	3,580.56	37,464.60
Total Software Maintenance	$ 338,840.40	$ 35,805.60	$ 374,646.00

Delivery:
Final schedule will be determined after the notice to proceed and PO from MTS is received.

High-level schedule:

NTP		October 1
Design	NTP + 45 days	November 14
Project Specific Development	+60 days	November 15-January 14
Configuration	+30 days	January 15-February 14
Testing / Contingency	+45 days	February 15-March 31

Note: Delivery of all inspection device hardware is a risk in the above schedule. Testing is possible with an Android smart phone and INIT will make best efforts to deliver as many inspection devices as possible before end of March 2024.

Invoice Milestones:

Milestone	**Percentage**	**Dollar Amount**
Design approval	20%	$169,948.40
UAT	40%	$339,896.79
Fleetwide delivery	40%	$339,896.79
TOTAL Capital Costs (includes HW tax)	**100%**	**$849,741.98**

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INIT Contact:
Name: Jennifer Wallman
Title: Account Manager
Phone: 757-413-9100 x421
Email: jwallman@initusa.com

Signature:

Julie Allison
Director, Account Management

Carl Commons
Chief Sales Officer

Metropolitan Transit System

Agenda Item No. 22

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Transit Security and Passenger Safety Department Expansion (Al Stiehler)

RECOMMENDATION:

That the San Diego Metropolitan Transit System (MTS) Board of Directors approve the addition of 34 new Code Compliance Inspectors (CCIs), six (6) Code Compliance Supervisors, one (1) Assistant Field Operations Manager, one (1) Administrative Support Professional and create five (5) Code Compliance Dispatcher positions.

Budget Impact

Salaries, benefits and recurring communications fees would cost approximately $3,700,000 annually. Initial expenses for equipment, uniforms, etc. would be approximately $540,000.

DISCUSSION:

At the May 18, 2023 Board of Directors meeting, the Board received a report on the recent public safety focus groups results. In 2022, the MTS Customer Satisfaction Survey indicated an overwhelming response noting concerns of safety and request for more security to improve the transit experience. The focus groups were conducted to better understand and define what “more security” means to passengers and to obtain a better understanding of perceptions of personal safety while using transit. The results and feedback of the focus groups included requests such as more visible security, more consistent application of MTS policies (such as fare evasion, inappropriate behavior, and loitering), improved awareness of Ride-Assured Program, and improvement of cleanliness and lighting.

After receiving this report, the Board of Directors discussed various concerns related to security and safety throughout the system. The Board directed staff to assess the cost of additional security staff for the potential expansion of the Transit Security and Passenger Safety Department. At the July 27, 2023 Board of Directors meeting, the Board received a report on the current size and structure of the department and estimated costs to expand. Based on the feedback received, staff has put together a proposal for official approval.

The additional requested CCI personnel would include 27 CCIs assigned to Train Teams, four (4) CCIs to the Passenger Safety Teams, two (2) CCIs to the Bus Enforcement Team, and one (1) CCI to the Homeless Outreach Team. The additional Code Compliance Supervisors, Assistant Field Operations Manager and Administrative Support Professional will be needed to manage, supervise and support the additional field positions. The creation of five (5) Code Compliance Dispatcher positions will allow the Transit Security and Passenger Safety Department to have professional dispatchers who will go through a California Peace Officer Standards and Training (POST) dispatcher course. The dispatchers will be full-time MTS employees rather than the current practice of contracted security officers working as minimally trained dispatchers.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

Metropolitan Transit System

Agenda Item No. 23

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Grants Administration Report (Kena Teon and Julia Tuer)

INFORMATIONAL ONLY

Budget Impact

None.

DISCUSSION:

In April 2021, the San Diego Metropolitan Transit System (MTS) created a new Grants Team, which includes the following positions: Grants Administrator, Financial Analyst, Manager of Government Affairs, and Transit Asset Management Program Manager. The Grants Team manages all federal and state programs for both formula and competitive grants.

Staff will provide a report of all grant administration activities over the past year.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@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.

Metropolitan Transit System

Agenda Item No. 24

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

MTS Access Services Overview (Michael Wygant and Jay Washburn)

INFORMATIONAL ONLY

Budget Impact

None at this time.

DISCUSSION:

"MTS Access" is the name used for MTS's Federal Transit Administration (FTA)-required complementary paratransit service. Complementary paratransit service is a shared ride service for passengers whose disability prevents them from riding fixed route service. Under FTA rules, paratransit service must be comparable to MTS fixed-route service.

MTS Access service deploys several types of vehicles, including minivans and smaller buses, taxicabs, and adaptive transportation network company vehicles. All passengers must be certified in order to utilize MTS Access services.

MTS staff will be providing an overview of MTS Access services.

/s/ Sharon Cooney
Sharon Cooney
Chief Executive Officer

Key Staff Contact: Julia Tuer, 619.557.4515, Julia.Tuer@sdmts.com

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Metropolitan Transit System

Agenda Item No. 26

MEETING OF THE SAN DIEGO METROPOLITAN TRANSIT SYSTEM
BOARD OF DIRECTORS

September 14, 2023

SUBJECT:

Chief Executive Officer's 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 July 19, 2023 – September 5, 2023.

CEO TRAVEL REPORT (since last Board meeting)

N/A

BOARD MEMBER TRAVEL REPORT (since last Board meeting)

N/A

EXPENSE CONTRACTS				
Doc #	**Organization**	**Subject**	**Amount**	**Day**
PWL354.0-22WAE22	MM	OM INSPECTIONS COPLEY	$68,130.66	7/28/2023
G2414.2-21	WATTS & HARTMANN	EXERCISE OPT YEARS AND ADD EXHIBIT D	$67,800.00	8/3/2023
G1947.0-17WOAAE1609	HDR	ADD FUNDS	$17,825.45	8/8/2023
PWG347.0-22JOC347-16	ABCGC	J ST CMP EMERGENCY REPAIR	$146,929.97	8/8/2023
PWL356.0-22W356AE32	PRE	ADD FUNDS AND TIME	$7,411.65	8/9/2023
G2541.0-22W2541-AE21	BRI	ADD FUNDS	$62,488.50	8/9/2023
PWL354.0-22W354AE131	MM	ADD FUNDS	$18,115.58	8/11/2023
G2785.0-24	MCCS	CAREER AND EDUCATION FAIR	$150.00	8/18/2023
G2755.0-23	MONMOUTH SOLUTIONS, INC	MOBILE TRAILERS	$107,945.00	8/22/2023
PWG347.0-22JOC347-08	ABCGC	BL BRIDGE REPAIR	$149,887.28	8/23/2023
PWL353.0-22WOAAE191	DOKKEN ENG	ADD TASK	$16,813.67	8/29/2023
PWG324.01-21JOC324-3	ABCGC	NOBEL PKG BOLLARD REPAIR	$9,813.47	9/5/2023
PWL337.4-21CCO 12	WEST COAST GENERAL	CCO12 OCS BACKBONE	$66,397.32	9/5/2023
PWG324.0-21JOC324-32	ABCGC	PACKAGE UNITS BUILDING C AND RAIL YARD TOWER	$130,035.44	9/5/2023

REVENUE CONTRACTS AND MOUs				
Doc #	**Organization**	**Subject**	**Amount**	**Day**
G2772.0-24	SPOILER MEDIA	COMIC CON RADIP ACTIVATION	$0.00	7/20/2023
M6790.0-23	SD ZOO WILDLIFE ALLIANCE	TROLLEY FILMING ROE	$0.00	7/25/2023
L5848.1-22	SDCRAA	SASSAFRAS CM ACTIVITIES JROE	$750.00	7/26/2023
G2764.0-23	NCTD	DEL MAR THOROUGHBRED CLUB & MTS MOU	$0.00	7/26/2023
G2669.0-23	SDSU	PRONTO COLLEGE PASS PROGRAM	$0.00	7/27/2023
G2653.0-23	BRICEHOUSE	MASTER CONCESSIONAIRE SERVICES V2	$0.00	8/2/2023
S200-23-823	SD COUNTY BICYCLE COALITION	ROE BIKE THE BAY 2023	$750.00	8/18/2023
S200-24-828	RDZ	ROE PLUMBING SEWER REPAIR SY STATION	$750.00	8/18/2023
L6839.0-24	SD DANCE THEATER	ROE TROLLEY DANCES 2023	$0.00	8/18/2023
L6808.1-22	MCIM	257.2-257.3-0823-JROE TIME EXT	$750.00	8/23/2023
G2683.2-23	SANDAG S964752	YOP AMENDMENT	$11,548,300.00	8/24/2023
G0868.20-03	NCTD	COST SHARE FOR RTMS CP LICENSING	$186,162.00	9/5/2023

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4400002475	7/19/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 554.43	-	-
4400002476	7/19/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 20.04	-	-
4400002477	7/19/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 91.14	-	-
4400002478	7/19/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 128.06	-	-
4400002479	7/20/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 59.23	-	-
4400002480	7/21/2023	ODP Business Solutions, LLC		I110-INFORMATION TECH	$ 3,437.67	-	-
4400002481	7/21/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 73.01	-	-
4400002482	7/21/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 698.21	-	-
4400002483	7/21/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 421.85	-	-
4400002484	7/24/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 233.85	-	-
4400002485	7/24/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 107.74	-	-
4400002486	7/25/2023	Mcmaster-Carr Supply Co		G150-FASTENERS	$ 63.45	-	-
4400002487	7/26/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 227.23	-	-
4400002488	7/26/2023	Mcmaster-Carr Supply Co		G140-SHOP SUPPLIES	$ 103.70	-	-
4400002489	7/26/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 67.87	-	-
4400002490	7/27/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 353.85	-	-
4400002491	7/27/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 86.63	-	-
4400002492	7/28/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 83.31	-	-
4400002493	7/28/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 180.44	-	-
4400002494	7/28/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 69.07	-	-
4400002495	7/31/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 311.15	-	-
4400002496	8/1/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 226.94	-	-
4400002497	8/2/2023	W.W. Grainger Inc		F160-BLDG HVAC EQUIP	$ 1,186.82	-	-
4400002498	8/3/2023	W.W. Grainger Inc		G190-SAFETY/MED SUPPLIES	$ 2,665.10	-	-
4400002499	8/3/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 596.11	-	-
4400002500	8/3/2023	Mcmaster-Carr Supply Co		G150-FASTENERS	$ 59.77	-	-
4400002501	8/4/2023	Mcmaster-Carr Supply Co		M140-WAYSIDE SIGNALS	$ 1,054.90	-	-
4400002502	8/4/2023	Mcmaster-Carr Supply Co		G130-SHOP TOOLS	$ 495.75	-	-
4400002503	8/4/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 183.34	-	-
4400002504	8/4/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 33.51	-	-
4400002505	8/4/2023	Mcmaster-Carr Supply Co		G140-SHOP SUPPLIES	$ 135.62	-	-
4400002506	8/7/2023	W.W. Grainger Inc		G120-SECURITY	$ 47.69	-	-
4400002507	8/7/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 775.31	-	-
4400002508	8/8/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 1,195.22	-	-
4400002509	8/9/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 318.50	-	-
4400002510	8/9/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 343.50	-	-
4400002511	8/10/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 937.91	-	-
4400002512	8/10/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 226.26	-	-
4400002513	8/11/2023	Mcmaster-Carr Supply Co		G130-SHOP TOOLS	$ 167.35	-	-
4400002514	8/14/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 602.64	-	-
4400002515	8/14/2023	Mcmaster-Carr Supply Co		G190-SAFETY/MED SUPPLIES	$ 832.18	-	-
4400002516	8/14/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 700.16	-	-
4400002517	8/14/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 320.17	-	-
4400002518	8/16/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 79.30	-	-
4400002519	8/17/2023	W.W. Grainger Inc		G190-SAFETY/MED SUPPLIES	$ 56.75	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4400002520	8/17/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 137.07	-	-
4400002521	8/17/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 326.10	-	-
4400002522	8/17/2023	ODP Business Solutions, LLC		I110-INFORMATION TECH	$ 468.70	-	-
4400002523	8/17/2023	W.W. Grainger Inc		F130-VEH HOISTS, JACKS	$ 134.93	-	-
4400002524	8/17/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 249.96	-	-
4400002525	8/18/2023	W.W. Grainger Inc		M110-SUB STATION	$ 65.68	-	-
4400002526	8/21/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 106.76	-	-
4400002527	8/23/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 267.98	-	-
4400002528	8/23/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 198.58	-	-
4400002529	8/25/2023	W.W. Grainger Inc		M110-SUB STATION	$ 1,070.94	-	-
4400002530	8/28/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 1,226.63	-	-
4400002531	8/29/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 586.34	-	-
4400002532	8/30/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 520.67	-	-
4400002533	8/30/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 116.34	-	-
4400002534	8/30/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 322.18	-	-
4400002535	8/30/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 878.83	-	-
4400002536	8/31/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 350.18	-	-
4400002537	8/31/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 164.15	-	-
4400002538	8/31/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 401.71	-	-
4400002539	8/31/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 389.70	-	-
4400002540	8/31/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 539.95	-	-
4400002541	9/2/2023	W.W. Grainger Inc		T110-TRACK, RAIL	$ 270.33	-	-
4400002542	9/2/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 386.66	-	-
4400002543	9/5/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 475.66	-	-
4400002544	9/5/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 618.00	-	-
4400002545	9/5/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 155.15	-	-
4400002546	9/5/2023	W.W. Grainger Inc		T110-TRACK, RAIL	$ 2,601.48	-	-
4500055528	7/19/2023	Muncie Reclamation and Supply Co		B200-BUS PWR TRAIN EQUIP	$ 90.90	-	-
4500055529	7/19/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 2,496.39	-	-
4500055530	7/19/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 2,916.05	-	-
4500055531	7/19/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 792.19	-	-
4500055532	7/19/2023	Kurt Morgan		G230-PRINTED MATERIALS	$ 424.10	-	-
4500055533	7/19/2023	ColorID LLC	Small Business	G200-OFFICE SUPPLIES	$ 703.07	-	-
4500055534	7/19/2023	Neyenesch Printers Inc	Small Business	G230-PRINTED MATERIALS	$ 3,563.78	-	-
4500055535	7/19/2023	Robcar Corporation	Woman Owned Business	G110-BUS/TROLLEY SIGNAGE	$ 479.49	-	-
4500055536	7/19/2023	Myers & Sons Hi-Way Safety Inc		M130-CROSSING MECHANISM	$ 361.18	-	-
4500055537	7/19/2023	National Association of Government		P490-MANAGEMENT TRAINING	$ 225.00	-	-
4500055538	7/19/2023	Fastenal Company		G190-SAFETY/MED SUPPLIES	$ 344.16	-	-
4500055539	7/19/2023	Professional Contractors Supplies		G140-SHOP SUPPLIES	$ 523.72	-	-
4500055540	7/19/2023	Reid and Clark Screen Arts Co		R120-RAIL/LRV CAR BODY	$ 278.00	-	-
4500055541	7/19/2023	Annex Warehouse Company, Inc		F120-BUS/LRV PAINT BOOTHS	$ 2,862.35	-	-
4500055542	7/19/2023	Applied Industrial		G170-LUBRICANTS	$ 1,283.53	-	-
4500055543	7/19/2023	Gillig LLC		B130-BUS BODY	$ 2,954.95	-	-
4500055544	7/19/2023	Harbor Diesel & Equipment, Inc		G170-LUBRICANTS	$ 3,288.71	-	-
4500055545	7/19/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 69.13	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500055546	7/19/2023	Fehr Brothers Industries, Inc.		G140-SHOP SUPPLIES	$ 69.24	-	-
4500055547	7/19/2023	Motion Industries, Inc.		B120-BUS MECHANICAL PARTS	$ 427.60	-	-
4500055548	7/19/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 3,086.17	-	-
4500055549	7/19/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 185.23	-	-
4500055550	7/20/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 151.00	-	-
4500055551	7/20/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 190.17	-	-
4500055552	7/20/2023	Muncie Reclamation and Supply Co		B120-BUS MECHANICAL PARTS	$ 60.17	-	-
4500055553	7/20/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 3,495.30	-	-
4500055554	7/20/2023	Transit Holdings Inc		B130-BUS BODY	$ 274.06	-	-
4500055555	7/20/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 4,697.04	-	-
4500055556	7/20/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 67.52	-	-
4500055557	7/20/2023	Motion Industries, Inc.		B120-BUS MECHANICAL PARTS	$ 2,869.87	-	-
4500055558	7/20/2023	ezCater, Inc		P440-CATERING SERVICES	$ 895.36	-	-
4500055559	7/20/2023	Siemens Mobility, Inc.		R120-RAIL/LRV CAR BODY	$ 32,758.16	-	-
4500055560	7/20/2023	Asbury Environmental Services		B200-BUS PWR TRAIN EQUIP	$ 1,842.53	-	-
4500055561	7/20/2023	Hi-Tec Enterprises		G170-LUBRICANTS	$ 14,303.82	-	-
4500055562	7/20/2023	Knorr Brake Company, LLC		R160-RAIL/LRV ELECTRICAL	$ 2,705.61	-	-
4500055563	7/20/2023	Canada Ticket Inc.		G280-FARE MATERIALS	$ 12,542.10	-	-
4500055564	7/20/2023	Siemens Mobility, Inc.		M140-WAYSIDE SIGNALS	$ 14,998.52	-	-
4500055565	7/21/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 3,174.10	-	-
4500055566	7/21/2023	Siemens Mobility, Inc.		R180-RAIL/LRV LIGHTING	$ 411.52	-	-
4500055567	7/21/2023	Waxie's Enterprises, LLC		G180-JANITORIAL SUPPLIES	$ 645.86	-	-
4500055569	7/21/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 2,631.47	-	-
4500055570	7/21/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 782.28	-	-
4500055571	7/21/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 22.79	-	-
4500055572	7/23/2023	Mouser Electronics Inc		G150-FASTENERS	$ 1,384.64	-	-
4500055573	7/23/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 374.14	-	-
4500055574	7/23/2023	Hi-Tec Enterprises		R160-RAIL/LRV ELECTRICAL	$ 1,476.18	-	-
4500055575	7/23/2023	B & S Graphics Inc		B130-BUS BODY	$ 21.55	-	-
4500055576	7/23/2023	Vern Rose Inc		G160-PAINTS & CHEMICALS	$ 514.13	-	-
4500055577	7/23/2023	CDW LLC		I110-INFORMATION TECH	$ 3,954.91	-	-
4500055578	7/23/2023	JKL Cleaning Systems	Small Business	F110-SHOP/BLDG MACHINERY	$ 103.38	-	-
4500055579	7/23/2023	W.W. Grainger Inc		B120-BUS MECHANICAL PARTS	$ 246.38	-	-
4500055580	7/23/2023	Mcmaster-Carr Supply Co		P540-MAINTENANCE TRAINING	$ 95.53	-	-
4500055581	7/23/2023	Inland Kenworth (US) Inc		B200-BUS PWR TRAIN EQUIP	$ 91.01	-	-
4500055582	7/23/2023	Muncie Reclamation and Supply Co		B130-BUS BODY	$ 98.45	-	-
4500055583	7/23/2023	AirSupply Tools, Inc		G140-SHOP SUPPLIES	$ 34.21	-	-
4500055584	7/23/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 210.42	-	-
4500055585	7/23/2023	San Diego Friction Products, Inc.		B250-BUS REPAIR PARTS	$ 1,304.57	-	-
4500055586	7/23/2023	Mcmaster-Carr Supply Co		F110-SHOP/BLDG MACHINERY	$ 185.17	-	-
4500055587	7/23/2023	R.S. Hughes Co Inc		G160-PAINTS & CHEMICALS	$ 1,975.03	-	-
4500055588	7/23/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 728.10	-	-
4500055589	7/23/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 251.23	-	-
4500055590	7/23/2023	Mcmaster-Carr Supply Co		P540-MAINTENANCE TRAINING	$ 364.15	-	-
4500055591	7/23/2023	W.W. Grainger Inc		B250-BUS REPAIR PARTS	$ 88.77	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500055592	7/23/2023	Waxie's Enterprises, LLC		G180-JANITORIAL SUPPLIES	$ 2,123.69	-	-
4500055593	7/23/2023	TK Services Inc		B250-BUS REPAIR PARTS	$ 650.95	-	-
4500055594	7/23/2023	W.W. Grainger Inc		G180-JANITORIAL SUPPLIES	$ 1,373.30	-	-
4500055595	7/23/2023	Transit Holdings Inc		G130-SHOP TOOLS	$ 999.45	-	-
4500055596	7/23/2023	W.W. Grainger Inc		F110-SHOP/BLDG MACHINERY	$ 185.82	-	-
4500055597	7/23/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 41.92	-	-
4500055598	7/23/2023	Mcmaster-Carr Supply Co		P540-MAINTENANCE TRAINING	$ 97.50	-	-
4500055599	7/23/2023	Kurt Morgan		G200-OFFICE SUPPLIES	$ 306.68	-	-
4500055600	7/23/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 2,135.00	-	-
4500055601	7/23/2023	Transit Holdings Inc		P540-MAINTENANCE TRAINING	$ 999.45	-	-
4500055602	7/23/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 1,200.00	-	-
4500055603	7/23/2023	Prochem Specialty Products Inc	Small Business	G180-JANITORIAL SUPPLIES	$ 1,718.62	-	-
4500055604	7/23/2023	Transit Holdings Inc		B130-BUS BODY	$ 197.28	-	-
4500055605	7/23/2023	San Diego Friction Products, Inc.		B110-BUS HVAC SYSTEMS	$ 281.62	-	-
4500055606	7/23/2023	VGP Holdings LLC		B120-BUS MECHANICAL PARTS	$ 14,010.95	-	-
4500055607	7/23/2023	Harbor Diesel & Equipment, Inc		G170-LUBRICANTS	$ 9,305.40	-	-
4500055608	7/23/2023	Motion Industries, Inc.		G160-PAINTS & CHEMICALS	$ 114.53	-	-
4500055609	7/23/2023	Cummins Inc		B120-BUS MECHANICAL PARTS	$ 6,383.57	-	-
4500055610	7/23/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 175.00	-	-
4500055611	7/24/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 473.24	-	-
4500055612	7/24/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 3,220.55	-	-
4500055613	7/24/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 33.29	-	-
4500055614	7/24/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 2,409.79	-	-
4500055615	7/24/2023	Matthias Moos		M120-OVRHEAD CATENARY SYS	$ 4,011.54	-	-
4500055616	7/24/2023	Transit Holdings Inc		B130-BUS BODY	$ 1,361.26	-	-
4500055617	7/24/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 2,922.21	-	-
4500055618	7/24/2023	Supreme Oil Co.		A120-AUTO/TRUCK GASOLINE	$ 13,983.27	-	-
4500055619	7/24/2023	San Diego Friction Products, Inc.		G140-SHOP SUPPLIES	$ 757.80	-	-
4500055620	7/24/2023	Alpine Fence Inc.		F180-BUILDING MATERIALS	$ 2,219.66	-	-
4500055621	7/24/2023	Comfort Mechanical Inc	Small Business	M110-SUB STATION	$ 1,805.55	-	-
4500055622	7/24/2023	Staples Contract & Commercial LLC		P280-GENERAL SVC AGRMNTS	$ 352.34	-	-
4500055623	7/24/2023	Fastenal Company		G150-FASTENERS	$ 67.89	-	-
4500055624	7/24/2023	Reid and Clark Screen Arts Co		P210-NON-REV VEH REPAIRS	$ 81.42	-	-
4500055625	7/24/2023	Graybar Electric Co Inc		G140-SHOP SUPPLIES	$ 185.54	-	-
4500055626	7/24/2023	Day Management Corp		P210-NON-REV VEH REPAIRS	$ 275.00	-	-
4500055627	7/24/2023	Raphael's Party Rentals Inc		P310-ADVERTISING SERVICES	$ 962.37	-	-
4500055628	7/24/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 82.28	-	-
4500055629	7/24/2023	Reg-A-Car Inc		B250-BUS REPAIR PARTS	$ 300.00	-	-
4500055630	7/24/2023	Dimensional Silk Screen Inc		G230-PRINTED MATERIALS	$ 206.88	-	-
4500055631	7/24/2023	AirSupply Tools, Inc		G140-SHOP SUPPLIES	$ 324.59	-	-
4500055632	7/24/2023	Gillig LLC		B120-BUS MECHANICAL PARTS	$ 245.98	-	-
4500055633	7/25/2023	Southern Counties Lubricants LLC		G170-LUBRICANTS	$ 3,430.76	-	-
4500055634	7/25/2023	Muncie Reclamation and Supply Co		B200-BUS PWR TRAIN EQUIP	$ 18.77	-	-
4500055635	7/25/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 1,476.90	-	-
4500055636	7/25/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 3,947.21	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500055637	7/25/2023	Transit Holdings Inc		B130-BUS BODY	$ 6,543.37	-	-
4500055638	7/25/2023	Transit Holdings Inc		B130-BUS BODY	$ 610.56	-	-
4500055639	7/25/2023	Custom Glass Solutions		R120-RAIL/LRV CAR BODY	$ 9,824.07	-	-
4500055640	7/25/2023	Adios Pest Control, Inc.	Small Business	P280-GENERAL SVC AGRMNTS	$ 150.00	-	-
4500055641	7/25/2023	Mohawk Mfg & Supply Co		B200-BUS PWR TRAIN EQUIP	$ 103.55	-	-
4500055642	7/25/2023	AirSupply Tools, Inc		G200-OFFICE SUPPLIES	$ 55.26	-	-
4500055643	7/25/2023	Clarran Inc.	DBE	G130-SHOP TOOLS	$ 202.93	-	-
4500055644	7/25/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 3,705.53	-	-
4500055645	7/25/2023	Harbor Diesel & Equipment, Inc		B120-BUS MECHANICAL PARTS	$ 187.93	-	-
4500055646	7/25/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 64.41	-	-
4500055647	7/25/2023	W.W. Grainger Inc		G170-LUBRICANTS	$ 91.53	-	-
4500055648	7/25/2023	Compressed Air Systems		F180-BUILDING MATERIALS	$ 1,982.61	-	-
4500055649	7/25/2023	Muncie Reclamation and Supply Co		B200-BUS PWR TRAIN EQUIP	$ 1,970.10	-	-
4500055650	7/25/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 3,340.25	-	-
4500055651	7/25/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 683.60	-	-
4500055652	7/26/2023	Muncie Reclamation and Supply Co		B160-BUS ELECTRICAL	$ 16.68	-	-
4500055653	7/26/2023	Cummins Inc		B120-BUS MECHANICAL PARTS	$ 165.77	-	-
4500055654	7/26/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 33.29	-	-
4500055655	7/26/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 1,699.95	-	-
4500055656	7/26/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 438.98	-	-
4500055657	7/26/2023	Zen Industrial Services LLC	DBE	B160-BUS ELECTRICAL	$ 48.65	-	-
4500055658	7/26/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 1,874.20	-	-
4500055659	7/26/2023	Transit Holdings Inc		B130-BUS BODY	$ 1,602.81	-	-
4500055660	7/26/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 846.92	-	-
4500055661	7/26/2023	Jamison Professional Services, LLC	DBE	G170-LUBRICANTS	$ 1,538.41	-	-
4500055662	7/26/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 61.96	-	-
4500055663	7/26/2023	Fastenal Company		G140-SHOP SUPPLIES	$ 2,139.66	-	-
4500055664	7/26/2023	Fastenal Company		G170-LUBRICANTS	$ 3,794.40	-	-
4500055665	7/26/2023	Simmons-Boardman Books, Inc.		P540-MAINTENANCE TRAINING	$ 1,697.62	-	-
4500055666	7/26/2023	Comfort Mechanical Inc	Small Business	M110-SUB STATION	$ 983.00	-	-
4500055667	7/26/2023	Shilpark Paint Corporation		G160-PAINTS & CHEMICALS	$ 130.71	-	-
4500055669	7/26/2023	Robcar Corporation	Woman Owned Business	G190-SAFETY/MED SUPPLIES	$ 484.88	-	-
4500055670	7/26/2023	Virginia Electronic & Lighting LLC		M140-WAYSIDE SIGNALS	$ 1,912.57	-	-
4500055671	7/26/2023	Airgas Inc		G190-SAFETY/MED SUPPLIES	$ 506.91	-	-
4500055672	7/26/2023	Arizona Machinery LLC		A110-AUTO/TRUCK TIRES	$ 769.95	-	-
4500055673	7/26/2023	Western-Cullen-Hayes Inc		M130-CROSSING MECHANISM	$ 287.85	-	-
4500055674	7/26/2023	Schunk Carbon Technology LLC		R190-RAIL/LRV PANTOGRAPH	$ 1,022.64	-	-
4500055675	7/26/2023	TK Services Inc		B110-BUS HVAC SYSTEMS	$ 67.82	-	-
4500055676	7/26/2023	Professional Contractors Supplies		G140-SHOP SUPPLIES	$ 1,267.11	-	-
4500055677	7/26/2023	Waxie's Enterprises, LLC		G180-JANITORIAL SUPPLIES	$ 3,469.74	-	-
4500055678	7/26/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 131.58	-	-
4500055679	7/26/2023	Home Depot USA Inc		G180-JANITORIAL SUPPLIES	$ 987.69	-	-
4500055680	7/26/2023	Datex Instruments, Inc.	Minority Owned Business	R150-RAIL/LRV COMM EQUIP	$ 2,478.25	-	-
4500055681	7/26/2023	Winzer Franchise Company		G150-FASTENERS	$ 528.69	-	-
4500055682	7/26/2023	Hitachi Rail STS USA, Inc.		M130-CROSSING MECHANISM	$ 837.87	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500055683	7/26/2023	Hi-Tec Enterprises		R160-RAIL/LRV ELECTRICAL	$ 678.83	-	-
4500055684	7/26/2023	Fastenal Company		G180-JANITORIAL SUPPLIES	$ 1,555.64	-	-
4500055685	7/26/2023	OneSource Distributors, LLC		G190-SAFETY/MED SUPPLIES	$ 970.43	-	-
4500055686	7/26/2023	Facility Solutions Group, Inc.		M140-WAYSIDE SIGNALS	$ 4,403.75	-	-
4500055687	7/26/2023	State of California		P450-PERSONNEL SVCS	$ 5,000.00	-	-
4500055688	7/26/2023	Siemens Mobility, Inc.		R120-RAIL/LRV CAR BODY	$ 7,997.21	-	-
4500055689	7/26/2023	Willy's Electronic Supply Co Inc	Small Business	G270-ELECTRICAL/LIGHTING	$ 390.54	-	-
4500055690	7/26/2023	Brand Makers LLC	Small Business	G200-OFFICE SUPPLIES	$ 252.10	-	-
4500055691	7/26/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 60.61	-	-
4500055692	7/26/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 6.86	-	-
4500055693	7/26/2023	Charter Industrial Supply Inc	Small Business	G150-FASTENERS	$ 155.65	-	-
4500055694	7/26/2023	Conisa Oropeza Enterprises Inc		G120-SECURITY	$ 401.89	-	-
4500055695	7/26/2023	R.S. Hughes Co Inc		G190-SAFETY/MED SUPPLIES	$ 230.96	-	-
4500055696	7/26/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 2,947.17	-	-
4500055697	7/26/2023	Carmine Bausone DVM Inc.		G120-SECURITY	$ 1,521.00	-	-
4500055698	7/26/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 300.63	-	-
4500055699	7/26/2023	Gillig LLC		G140-SHOP SUPPLIES	$ 53.76	-	-
4500055700	7/26/2023	711 Print Enterprises Inc		G230-PRINTED MATERIALS	$ 2,153.93	-	-
4500055701	7/26/2023	Mcmaster-Carr Supply Co		R230-RAIL/LRV MECHANICAL	$ 210.66	-	-
4500055702	7/26/2023	Waxie's Enterprises, LLC		G180-JANITORIAL SUPPLIES	$ 864.24	-	-
4500055703	7/26/2023	Reid and Clark Screen Arts Co		M130-CROSSING MECHANISM	$ 2,203.38	-	-
4500055704	7/26/2023	Total Filtration Services Inc		F120-BUS/LRV PAINT BOOTHS	$ 183.82	-	-
4500055705	7/26/2023	Facility Solutions Group, Inc.		G120-SECURITY	$ 1,551.34	-	-
4500055706	7/26/2023	Waxie's Enterprises, LLC		G180-JANITORIAL SUPPLIES	$ 8,638.86	-	-
4500055707	7/26/2023	San Diego Compressed Air Power LLC		F180-BUILDING MATERIALS	$ 646.51	-	-
4500055708	7/26/2023	Muncie Reclamation and Supply Co		B130-BUS BODY	$ 14.82	-	-
4500055709	7/26/2023	Vern Rose Inc		G160-PAINTS & CHEMICALS	$ 145.51	-	-
4500055710	7/26/2023	Genfare, LLC		G290-FARE REVENUE EQUIP	$ 168.18	-	-
4500055712	7/27/2023	Jamison Professional Services, LLC	DBE	G170-LUBRICANTS	$ 1,442.99	-	-
4500055713	7/27/2023	Siemens Mobility, Inc.		R180-RAIL/LRV LIGHTING	$ 1,280.33	-	-
4500055714	7/27/2023	Transit Holdings Inc		B130-BUS BODY	$ 2,526.25	-	-
4500055715	7/27/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 808.03	-	-
4500055716	7/27/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 35.34	-	-
4500055717	7/27/2023	Cummins Inc		B120-BUS MECHANICAL PARTS	$ 78.98	-	-
4500055718	7/27/2023	San Diego Friction Products, Inc.		B140-BUS CHASSIS	$ 808.59	-	-
4500055721	7/27/2023	Alliant Insurance Services, Inc.		P370-RISK MANAGEMENT	$ 19,204.00	-	-
4500055722	7/27/2023	Public Risk, Innovation, Solutions,		P370-RISK MANAGEMENT	$ 76,807.00	-	-
4500055723	7/28/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 27.80	-	-
4500055724	7/28/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 64.01	-	-
4500055725	7/28/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,012.68	-	-
4500055726	7/28/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 1,752.50	-	-
4500055727	7/28/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 4,572.85	-	-
4500055728	7/28/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 3,511.43	-	-
4500055729	7/28/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 366.62	-	-
4500055730	7/28/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 3,337.07	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500055731	7/28/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 127.10	-	-
4500055732	7/28/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 84.43	-	-
4500055733	7/28/2023	M.A. Stewarr & Sons (USA) LTD.	Small Business	F110-SHOP/BLDG MACHINERY	$ 203.84	-	-
4500055734	7/28/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 63.33	-	-
4500055735	7/28/2023	Harbor Diesel & Equipment, Inc		B250-BUS REPAIR PARTS	$ 595.77	-	-
4500055736	7/28/2023	W.W. Grainger Inc		F110-SHOP/BLDG MACHINERY	$ 27.18	-	-
4500055737	7/28/2023	Gillig LLC		B130-BUS BODY	$ 2,684.85	-	-
4500055738	7/28/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 120.53	-	-
4500055739	7/28/2023	AirSupply Tools, Inc		G150-FASTENERS	$ 168.84	-	-
4500055740	7/28/2023	Mohawk Mfg & Supply Co		B200-BUS PWR TRAIN EQUIP	$ 155.03	-	-
4500055741	7/28/2023	W.W. Grainger Inc		G170-LUBRICANTS	$ 66.78	-	-
4500055742	7/28/2023	Motion Industries, Inc.		B120-BUS MECHANICAL PARTS	$ 892.35	-	-
4500055743	7/28/2023	Genfare, LLC		B250-BUS REPAIR PARTS	$ 543.06	-	-
4500055744	7/28/2023	San Diego Community		P540-MAINTENANCE TRAINING	$ 26.94	-	-
4500055745	7/28/2023	Waxie's Enterprises, LLC		G180-JANITORIAL SUPPLIES	$ 2,585.35	-	-
4500055746	7/28/2023	R.S. Hughes Co Inc		G200-OFFICE SUPPLIES	$ 800.00	-	-
4500055747	7/28/2023	Freeby Signs		B130-BUS BODY	$ 105.95	-	-
4500055748	7/28/2023	B & S Graphics Inc		B130-BUS BODY	$ 393.83	-	-
4500055749	7/28/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,121.48	-	-
4500055750	7/28/2023	Kenneth Place		G130-SHOP TOOLS	$ 2,733.09	-	-
4500055751	7/28/2023	Vinyard Doors, Inc.	Woman Owned Business	P120-BLDG/FACILITY REPRS	$ 2,988.00	-	-
4500055752	7/31/2023	Muncie Reclamation and Supply Co		B120-BUS MECHANICAL PARTS	$ 82.10	-	-
4500055753	7/31/2023	Muncie Reclamation and Supply Co		B120-BUS MECHANICAL PARTS	$ 82.10	-	-
4500055754	7/31/2023	Transit Holdings Inc		B110-BUS HVAC SYSTEMS	$ 18,112.25	-	-
4500055755	7/31/2023	Transit Holdings Inc		B130-BUS BODY	$ 875.64	-	-
4500055756	7/31/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 428.66	-	-
4500055757	7/31/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 2.80	-	-
4500055758	7/31/2023	Vehicle Maintenance Program, Inc.	Woman Owned Business	B140-BUS CHASSIS	$ 894.33	-	-
4500055759	7/31/2023	Jamison Professional Services, LLC	DBE	G170-LUBRICANTS	$ 407.30	-	-
4500055760	7/31/2023	Siemens Mobility, Inc.		R220-RAIL/LRV TRUCKS	$ 18,297.03	-	-
4500055761	7/31/2023	Siemens Mobility, Inc.		R120-RAIL/LRV CAR BODY	$ 25,704.84	-	-
4500055762	7/31/2023	Home Depot USA Inc		G130-SHOP TOOLS	$ 4,293.84	-	-
4500055763	7/31/2023	Continental Locks		P120-BLDG/FACILITY REPRS	$ 170.00	-	-
4500055764	7/31/2023	D's Kustom Sales & Services, LLC		T110-TRACK, RAIL	$ 3,954.90	-	-
4500055765	7/31/2023	Charter Industrial Supply Inc	Small Business	R220-RAIL/LRV TRUCKS	$ 522.91	-	-
4500055766	7/31/2023	Hani Toma		P280-GENERAL SVC AGRMNTS	$ 1,521.63	-	-
4500055767	7/31/2023	Home Depot USA Inc		G270-ELECTRICAL/LIGHTING	$ 682.58	-	-
4500055768	7/31/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 8,727.14	-	-
4500055769	7/31/2023	Vern Rose Inc		G140-SHOP SUPPLIES	$ 406.60	-	-
4500055770	7/31/2023	Gillig LLC		B150-BUS COMM EQUIP.	$ 3,061.24	-	-
4500055771	7/31/2023	Wesco Distribution Inc		F110-SHOP/BLDG MACHINERY	$ 358.81	-	-
4500055772	7/31/2023	The Sherwin-Williams Company		B130-BUS BODY	$ 231.49	-	-
4500055773	7/31/2023	Compressed Air Systems		F110-SHOP/BLDG MACHINERY	$ 211.19	-	-
4500055774	7/31/2023	Muncie Reclamation and Supply Co		B110-BUS HVAC SYSTEMS	$ 17.16	-	-
4500055775	7/31/2023	Romaine Electric Corporation	Small Business	B160-BUS ELECTRICAL	$ 3,359.90	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500055776	7/31/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 172.78	-	-
4500055777	7/31/2023	Professional Contractors Supplies		G130-SHOP TOOLS	$ 211.11	-	-
4500055778	7/31/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 1,439.14	-	-
4500055779	7/31/2023	EDCO Disposal Corporation		P280-GENERAL SVC AGRMNTS	$ 4,869.00	-	-
4500055780	7/31/2023	AirSupply Tools, Inc		G130-SHOP TOOLS	$ 258.60	-	-
4500055781	7/31/2023	Clarran Inc.	DBE	G130-SHOP TOOLS	$ 425.84	-	-
4500055782	7/31/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 3,033.18	-	-
4500055783	7/31/2023	Supreme Oil Co.		A120-AUTO/TRUCK GASOLINE	$ 14,785.39	-	-
4500055784	7/31/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 343.52	-	-
4500055785	7/31/2023	USSC Acquisition Corp		B130-BUS BODY	$ 625.53	-	-
4500055787	7/31/2023	Barry Sandler Enterprises		G180-JANITORIAL SUPPLIES	$ 1,770.22	-	-
4500055788	7/31/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 245.24	-	-
4500055789	7/31/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 442.38	-	-
4500055790	7/31/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 311.62	-	-
4500055791	7/31/2023	Cembre Inc		G130-SHOP TOOLS	$ 1,951.50	-	-
4500055792	7/31/2023	Willy's Electronic Supply Co Inc	Small Business	G270-ELECTRICAL/LIGHTING	$ 1,340.24	-	-
4500055793	7/31/2023	TK Services Inc		R170-RAIL/LRV HVAC	$ 8,327.48	-	-
4500055794	7/31/2023	Knorr Brake Company, LLC		R160-RAIL/LRV ELECTRICAL	$ 12,701.57	-	-
4500055795	7/31/2023	GMT International Corporation		R230-RAIL/LRV MECHANICAL	$ 35,066.16	-	-
4500055796	7/31/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 7,859.37	-	-
4500055797	7/31/2023	Motion Industries, Inc.		B140-BUS CHASSIS	$ 205.85	-	-
4500055798	7/31/2023	Allied Refrigeration Inc		F110-SHOP/BLDG MACHINERY	$ 762.07	-	-
4500055799	7/31/2023	Mcmaster-Carr Supply Co		F110-SHOP/BLDG MACHINERY	$ 240.30	-	-
4500055800	7/31/2023	Cart Mart Inc		F110-SHOP/BLDG MACHINERY	$ 120.00	-	-
4500055801	7/31/2023	ConstructConnect, Inc.		I140-IT CAPITAL SOFTWARE	$ 530.00	-	-
4500055802	7/31/2023	Mott MacDonald Group Inc		P280-GENERAL SVC AGRMNTS	$ 68,130.66	-	$ 59,416.75
4500055803	8/1/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 3,776.86	-	-
4500055804	8/1/2023	Cummins Inc		B160-BUS ELECTRICAL	$ 6,076.84	-	-
4500055805	8/1/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 27.41	-	-
4500055806	8/1/2023	Muncie Reclamation and Supply Co		B200-BUS PWR TRAIN EQUIP	$ 121.38	-	-
4500055807	8/1/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 3,122.32	-	-
4500055808	8/1/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 2,155.99	-	-
4500055809	8/1/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 12.59	-	-
4500055810	8/1/2023	Vehicle Maintenance Program, Inc.	Woman Owned Business	B140-BUS CHASSIS	$ 862.00	-	-
4500055811	8/1/2023	Canada Ticket Inc.		G280-FARE MATERIALS	$ 10,344.00	-	-
4500055812	8/1/2023	La Mesa Glass, Inc.	Small Business	F110-SHOP/BLDG MACHINERY	$ 3,095.27	-	-
4500055813	8/1/2023	Rambuilt Glass LLC		P280-GENERAL SVC AGRMNTS	$ 1,550.00	-	-
4500055814	8/1/2023	Madden Construction Inc		P280-GENERAL SVC AGRMNTS	$ 433.70	-	-
4500055815	8/1/2023	Madden Construction Inc		P280-GENERAL SVC AGRMNTS	$ 925.50	-	-
4500055816	8/1/2023	Dimensional Silk Screen Inc		G230-PRINTED MATERIALS	$ 2,763.79	-	-
4500055817	8/1/2023	CBT Nuggets, LLC		I110-INFORMATION TECH	$ 3,474.00	-	-
4500055818	8/1/2023	Norman Industrial Materials Inc.		G140-SHOP SUPPLIES	$ 62.76	-	-
4500055819	8/1/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 152.62	-	-
4500055820	8/1/2023	Gillig LLC		B140-BUS CHASSIS	$ 537.64	-	-
4500055821	8/1/2023	Neyenesch Printers Inc	Small Business	G230-PRINTED MATERIALS	$ 1,505.88	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500055822	8/2/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 775.04	-	-
4500055823	8/2/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 1,486.15	-	-
4500055824	8/2/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 4,308.40	-	-
4500055825	8/2/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 26.70	-	-
4500055826	8/2/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 1,362.95	-	-
4500055827	8/2/2023	Neyenesch Printers Inc	Small Business	G230-PRINTED MATERIALS	$ 2,355.00	-	-
4500055828	8/2/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 3,387.82	-	-
4500055829	8/2/2023	Carmine Bausone DVM Inc.		G120-SECURITY	$ 1,241.38	-	-
4500055830	8/3/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 54.24	-	-
4500055831	8/3/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 3,817.40	-	-
4500055832	8/3/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 142.83	-	-
4500055833	8/3/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 2,344.56	-	-
4500055834	8/3/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 125.74	-	-
4500055835	8/3/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 1,476.14	-	-
4500055836	8/3/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 2,327.56	-	-
4500055837	8/3/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 22.79	-	-
4500055838	8/3/2023	Trolley Support LLC		B250-BUS REPAIR PARTS	$ 4,509.34	-	-
4500055839	8/3/2023	Parts Authority, LLC		B160-BUS ELECTRICAL	$ 22,475.90	-	-
4500055840	8/3/2023	The Janek Corporation		B250-BUS REPAIR PARTS	$ 323.25	-	-
4500055841	8/3/2023	W. Baker Management Inc		R160-RAIL/LRV ELECTRICAL	$ 15,822.01	-	-
4500055842	8/3/2023	Facility Solutions Group, Inc.		M140-WAYSIDE SIGNALS	$ 37.58	-	-
4500055843	8/3/2023	Fastenal Company		G190-SAFETY/MED SUPPLIES	$ 3,466.36	-	-
4500055844	8/3/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 4,155.09	-	-
4500055845	8/3/2023	Compressed Air Systems		F110-SHOP/BLDG MACHINERY	$ 896.49	-	-
4500055846	8/3/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 34.65	-	-
4500055847	8/3/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 126.55	-	-
4500055848	8/3/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 215.45	-	-
4500055849	8/3/2023	Mohawk Mfg & Supply Co		B120-BUS MECHANICAL PARTS	$ 110.95	-	-
4500055850	8/3/2023	W.W. Grainger Inc		G180-JANITORIAL SUPPLIES	$ 180.48	-	-
4500055851	8/3/2023	R.S. Hughes Co Inc		G140-SHOP SUPPLIES	$ 328.06	-	-
4500055852	8/3/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 66,176.00	-	-
4500055853	8/3/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 801.17	-	-
4500055854	8/3/2023	Waxie's Enterprises, LLC		G140-SHOP SUPPLIES	$ 2,484.97	-	-
4500055855	8/3/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 4,004.11	-	-
4500055856	8/3/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 100.66	-	-
4500055857	8/3/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 70.53	-	-
4500055859	8/3/2023	California Air Compressor Company		F110-SHOP/BLDG MACHINERY	$ 2,009.17	-	-
4500055860	8/3/2023	Cembre Inc		G130-SHOP TOOLS	$ 1,008.63	-	-
4500055861	8/3/2023	Mouser Electronics Inc		R150-RAIL/LRV COMM EQUIP	$ 274.11	-	-
4500055863	8/3/2023	Norman Industrial Materials Inc.		R120-RAIL/LRV CAR BODY	$ 148.16	-	-
4500055864	8/3/2023	ON-LINE STAMPCO INC	Small Business	G250-NOVELTIES & AWARDS	$ 381.44	-	-
4500055865	8/3/2023	White Cap, LP		G140-SHOP SUPPLIES	$ 194.37	-	-
4500055866	8/3/2023	Home Depot USA Inc		G140-SHOP SUPPLIES	$ 447.12	-	-
4500055867	8/3/2023	AirSupply Tools, Inc		G150-FASTENERS	$ 575.88	-	-
4500055869	8/4/2023	Transit Holdings Inc		B130-BUS BODY	$ 1,987.88	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500055870	8/4/2023	Siemens Mobility, Inc.		R180-RAIL/LRV LIGHTING	$ 411.52	-	-
4500055871	8/4/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 6,379.74	-	-
4500055872	8/4/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 20.51	-	-
4500055873	8/4/2023	Muncie Reclamation and Supply Co		B200-BUS PWR TRAIN EQUIP	$ 83.57	-	-
4500055874	8/4/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 4,081.49	-	-
4500055875	8/4/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 127.84	-	-
4500055876	8/4/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 4,583.17	-	-
4500055877	8/4/2023	Norman Industrial Materials Inc.		G140-SHOP SUPPLIES	$ 1,350.43	-	-
4500055878	8/4/2023	Uline Inc		G140-SHOP SUPPLIES	$ 746.71	-	-
4500055879	8/4/2023	Winzer Franchise Company		G140-SHOP SUPPLIES	$ 635.73	-	-
4500055880	8/4/2023	Brady Industries of California, LLC		G180-JANITORIAL SUPPLIES	$ 444.79	-	-
4500055881	8/4/2023	United Laboratories, Inc.		G180-JANITORIAL SUPPLIES	$ 384.15	-	-
4500055882	8/4/2023	Fastenal Company		G170-LUBRICANTS	$ 409.88	-	-
4500055883	8/4/2023	Prochem Specialty Products Inc	Small Business	G180-JANITORIAL SUPPLIES	$ 859.31	-	-
4500055884	8/7/2023	Home Depot USA Inc		G130-SHOP TOOLS	$ 1,884.42	-	-
4500055885	8/7/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 2,631.47	-	-
4500055886	8/7/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 4,387.32	-	-
4500055887	8/7/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 33.29	-	-
4500055888	8/7/2023	Transit Holdings Inc		B130-BUS BODY	$ 2,438.33	-	-
4500055889	8/7/2023	Madden Construction Inc		P280-GENERAL SVC AGRMNTS	$ 545.50	-	-
4500055890	8/7/2023	Madden Construction Inc		P280-GENERAL SVC AGRMNTS	$ 329.25	-	-
4500055891	8/7/2023	Madden Construction Inc		P280-GENERAL SVC AGRMNTS	$ 979.25	-	-
4500055892	8/7/2023	Taymark		G250-NOVELTIES & AWARDS	$ 843.82	-	-
4500055893	8/7/2023	Madden Construction Inc		P280-GENERAL SVC AGRMNTS	$ 455.20	-	-
4500055894	8/7/2023	SAP Public Services, Inc.		I120-INFO TECH, SVCS	$ 648.00	-	-
4500055895	8/7/2023	Siemens Mobility, Inc.		R120-RAIL/LRV CAR BODY	$ 2,569.19	-	-
4500055896	8/7/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 113.95	-	-
4500055897	8/7/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 5,352.12	-	-
4500055898	8/7/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 118.72	-	-
4500055899	8/7/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 4,961.98	-	-
4500055900	8/7/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 3,033.18	-	-
4500055901	8/7/2023	Supreme Oil Co.		A120-AUTO/TRUCK GASOLINE	$ 14,652.15	-	-
4500055902	8/7/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 103.18	-	-
4500055903	8/7/2023	Winzer Franchise Company		G150-FASTENERS	$ 237.53	-	-
4500055904	8/7/2023	San Diego Seal, Inc.	Small Business	R220-RAIL/LRV TRUCKS	$ 1,177.67	-	-
4500055905	8/7/2023	Harbor Diesel & Equipment, Inc		B200-BUS PWR TRAIN EQUIP	$ 18,963.03	-	-
4500055906	8/7/2023	Gillig LLC		B130-BUS BODY	$ 3,883.57	-	-
4500055907	8/7/2023	Emilia P. Ringpis		P160-EQUIPMENT RENTALS	$ 703.00	-	-
4500055908	8/7/2023	Cummins Inc		B120-BUS MECHANICAL PARTS	$ 604.15	-	-
4500055909	8/7/2023	Romaine Electric Corporation	Small Business	B160-BUS ELECTRICAL	$ 3,608.55	-	-
4500055910	8/7/2023	Muncie Reclamation and Supply Co		B130-BUS BODY	$ 1,464.50	-	-
4500055911	8/7/2023	Fastenal Company		G190-SAFETY/MED SUPPLIES	$ 2,861.87	-	-
4500055912	8/7/2023	Annex Warehouse Company, Inc		F120-BUS/LRV PAINT BOOTHS	$ 3,617.17	-	-
4500055913	8/7/2023	AirSupply Tools, Inc		G200-OFFICE SUPPLIES	$ 190.48	-	-
4500055914	8/7/2023	Mohawk Mfg & Supply Co		B160-BUS ELECTRICAL	$ 49.58	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500055915	8/7/2023	W.W. Grainger Inc		G120-SECURITY	$ 2,900.26	-	-
4500055916	8/7/2023	Transit Holdings Inc		B130-BUS BODY	$ 1,542.08	-	-
4500055917	8/7/2023	Freeby Signs		B130-BUS BODY	$ 128.33	-	-
4500055918	8/8/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 387.51	-	-
4500055919	8/8/2023	Transit Holdings Inc		B130-BUS BODY	$ 6,743.71	-	-
4500055920	8/8/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 857.33	-	-
4500055921	8/8/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 2,434.10	-	-
4500055922	8/8/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 5,615.92	-	-
4500055923	8/8/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 2,296.81	-	-
4500055925	8/9/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 50.34	-	-
4500055926	8/9/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 4,183.89	-	-
4500055927	8/9/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 2,276.07	-	-
4500055928	8/9/2023	Muncie Reclamation and Supply Co		B160-BUS ELECTRICAL	$ 472.16	-	-
4500055929	8/9/2023	Transit Holdings Inc		G140-SHOP SUPPLIES	$ 705.30	-	-
4500055930	8/9/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 2,078.26	-	-
4500055931	8/9/2023	Siemens Mobility, Inc.		R220-RAIL/LRV TRUCKS	$ 3,103.20	-	-
4500055932	8/9/2023	Robcar Corporation	Woman Owned Business	G160-PAINTS & CHEMICALS	$ 300.63	-	-
4500055933	8/9/2023	CTOS, LLC		P210-NON-REV VEH REPAIRS	$ 1,032.85	-	-
4500055934	8/9/2023	Shilpark Paint Corporation		G160-PAINTS & CHEMICALS	$ 380.90	-	-
4500055935	8/9/2023	Daniels Tire Service, Inc		P210-NON-REV VEH REPAIRS	$ 123.76	-	-
4500055936	8/9/2023	Shilpark Paint Corporation		G160-PAINTS & CHEMICALS	$ 208.65	-	-
4500055937	8/9/2023	Shilpark Paint Corporation		G160-PAINTS & CHEMICALS	$ 281.06	-	-
4500055938	8/9/2023	Cintas Corporation No 2		P280-GENERAL SVC AGRMNTS	$ 4,500.00	-	-
4500055939	8/9/2023	Cembre Inc		G130-SHOP TOOLS	$ 1,117.42	-	-
4500055940	8/9/2023	Simmons-Boardman Books, Inc.		P540-MAINTENANCE TRAINING	$ 380.55	-	-
4500055941	8/9/2023	Daniels Tire Service, Inc		P210-NON-REV VEH REPAIRS	$ 528.04	-	-
4500055942	8/9/2023	Kenneth Place		G130-SHOP TOOLS	$ 2,886.28	-	-
4500055943	8/9/2023	Radwell International LLC		M180-STATION ELECTRICAL	$ 873.68	-	-
4500055944	8/9/2023	Daniels Tire Service, Inc		A110-AUTO/TRUCK TIRES	$ 322.83	-	-
4500055945	8/9/2023	Carlos Guzman Inc		G160-PAINTS & CHEMICALS	$ 2,045.35	-	-
4500055946	8/9/2023	Winzer Franchise Company		G140-SHOP SUPPLIES	$ 183.04	-	-
4500055947	8/9/2023	Professional Contractors Supplies		G140-SHOP SUPPLIES	$ 784.58	-	-
4500055948	8/9/2023	Charter Industrial Supply Inc	Small Business	G130-SHOP TOOLS	$ 548.72	-	-
4500055949	8/9/2023	Access Professional Inc.	Small Business	M200-YARD FACILITIES	$ 6,087.00	-	-
4500055950	8/9/2023	Uline Inc		G210-OFFICE FURNITURE	$ 409.83	-	-
4500055951	8/9/2023	Mouser Electronics Inc		B160-BUS ELECTRICAL	$ 189.22	-	-
4500055952	8/9/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 1,070.97	-	-
4500055953	8/9/2023	W.W. Grainger Inc		G180-JANITORIAL SUPPLIES	$ 1,611.98	-	-
4500055954	8/9/2023	B&H Foto & Electronics Corp		G220-OFFICE EQUIPMENT	$ 32.31	-	-
4500055955	8/9/2023	Annex Warehouse Company, Inc		F120-BUS/LRV PAINT BOOTHS	$ 1,402.84	-	-
4500055956	8/9/2023	Trentman Corp	Small Business	P280-GENERAL SVC AGRMNTS	$ 1,168.45	-	-
4500055957	8/10/2023	Transit Holdings Inc		B130-BUS BODY	$ 1,103.75	-	-
4500055958	8/10/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 2,423.58	-	-
4500055959	8/10/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 2,879.93	-	-
4500055960	8/10/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 416.29	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500055961	8/10/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 205.49	-	-
4500055963	8/10/2023	The Gordian Group, Inc.		C130-CONSTRUCTION SVCS	$ 6,467.27	-	-
4500055964	8/10/2023	Annex Warehouse Company, Inc		F120-BUS/LRV PAINT BOOTHS	$ 8,810.43	-	-
4500055965	8/10/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 37.17	-	-
4500055966	8/10/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 2,484.61	-	-
4500055967	8/10/2023	Southern Counties Oil Co, LP		A120-AUTO/TRUCK GASOLINE	$ 35,371.69	-	-
4500055968	8/10/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 148.29	-	-
4500055969	8/10/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,580.56	-	-
4500055970	8/10/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 197.13	-	-
4500055971	8/10/2023	Uline Inc		F110-SHOP/BLDG MACHINERY	$ 1,333.35	-	-
4500055972	8/10/2023	Harbor Diesel & Equipment, Inc		B250-BUS REPAIR PARTS	$ 17,191.66	-	-
4500055973	8/10/2023	Fox Medical Case Management PC		G260-MEDIA	$ 66,181.50	-	-
4500055974	8/10/2023	W.W. Grainger Inc		B160-BUS ELECTRICAL	$ 135.39	-	-
4500055975	8/10/2023	Waxie's Enterprises, LLC		G140-SHOP SUPPLIES	$ 2,870.90	-	-
4500055976	8/10/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 3,206.83	-	-
4500055977	8/10/2023	Mohawk Mfg & Supply Co		B110-BUS HVAC SYSTEMS	$ 44.88	-	-
4500055978	8/10/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 97.55	-	-
4500055979	8/10/2023	R.S. Hughes Co Inc		G160-PAINTS & CHEMICALS	$ 732.04	-	-
4500055980	8/10/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 2,190.74	-	-
4500055981	8/10/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 6,962.00	-	-
4500055982	8/10/2023	Genfare, LLC		B190-BUS FARE EQUIP	$ 127.87	-	-
4500055983	8/10/2023	Fastenal Company		R230-RAIL/LRV MECHANICAL	$ 3,585.92	-	-
4500055984	8/10/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 264.92	-	-
4500055985	8/10/2023	Jacobs Engineering Group Inc		C120-SPECIALTY CONTRACTOR	$ 937.20	-	-
4500055986	8/11/2023	TK Services Inc		B250-BUS REPAIR PARTS	$ 518.61	-	-
4500055987	8/11/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 1,543.25	-	-
4500055988	8/11/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 1,090.51	-	-
4500055989	8/11/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 1,900.76	-	-
4500055990	8/11/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 186.80	-	-
4500055991	8/11/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 252.94	-	-
4500055992	8/11/2023	Siemens Mobility, Inc.		R190-RAIL/LRV PANTOGRAPH	$ 5,445.15	-	-
4500055993	8/11/2023	Siemens Mobility, Inc.		R200-RAIL/LRV SEATING	$ 7,202.01	-	-
4500055994	8/11/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 310.32	-	-
4500055995	8/11/2023	Gillig LLC		B110-BUS HVAC SYSTEMS	$ 712.21	-	-
4500055996	8/11/2023	Home Depot USA Inc		G130-SHOP TOOLS	$ 1,053.97	-	-
4500055997	8/11/2023	Home Depot USA Inc		F190-LANDSCAPING MAT'LS	$ 998.98	-	-
4500055998	8/11/2023	SiteOne Landscape Supply Holding		F190-LANDSCAPING MAT'LS	$ 781.71	-	-
4500055999	8/11/2023	Morrison Metalweld Process Corp	Small Business	P540-MAINTENANCE TRAINING	$ 4,634.55	-	-
4500056000	8/11/2023	SDSU Foundation		P310-ADVERTISING SERVICES	$ 2,225.00	-	-
4500056001	8/11/2023	Steven R Timme		G230-PRINTED MATERIALS	$ 79.27	-	-
4500056002	8/11/2023	LinguaLinx Language Solutions, Inc.		G260-MEDIA	$ 57.87	-	-
4500056003	8/14/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 28.38	-	-
4500056004	8/14/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 2,215.36	-	-
4500056005	8/14/2023	Muncie Reclamation and Supply Co		B140-BUS CHASSIS	$ 5.45	-	-
4500056006	8/14/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 740.72	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500056007	8/14/2023	Cummins Inc		B160-BUS ELECTRICAL	$ 12,241.34	-	-
4500056008	8/14/2023	Muncie Reclamation and Supply Co		B200-BUS PWR TRAIN EQUIP	$ 387.15	-	-
4500056009	8/14/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 2,660.30	-	-
4500056010	8/14/2023	Transit Holdings Inc		B110-BUS HVAC SYSTEMS	$ 4,544.19	-	-
4500056011	8/14/2023	Trolley Support LLC		B250-BUS REPAIR PARTS	$ 3,006.23	-	-
4500056012	8/14/2023	Synco Chemical Corporation		G170-LUBRICANTS	$ 16,426.27	-	-
4500056013	8/14/2023	U.S. Train Products LLC		R120-RAIL/LRV CAR BODY	$ 12,445.13	-	-
4500056014	8/14/2023	Siemens Mobility, Inc.		M130-CROSSING MECHANISM	$ 464.51	-	-
4500056015	8/14/2023	Hi-Tec Enterprises		R140-RAIL/LRV DOORS/RAMP	$ 143,949.69	-	-
4500056016	8/14/2023	Canada Ticket Inc.		G280-FARE MATERIALS	$ 13,281.20	-	-
4500056017	8/14/2023	W.W. Grainger Inc		M120-OVRHEAD CATENARY SYS	$ 229.18	-	-
4500056018	8/14/2023	Hi-Tec Enterprises		R160-RAIL/LRV ELECTRICAL	$ 1,357.65	-	-
4500056019	8/14/2023	SMC Electrical Products Inc		M110-SUB STATION	$ 5,333.63	-	-
4500056020	8/14/2023	CDW LLC		R160-RAIL/LRV ELECTRICAL	$ 112.55	-	-
4500056021	8/14/2023	Sid Tool Co., Inc.		R230-RAIL/LRV MECHANICAL	$ 7,359.75	-	-
4500056022	8/14/2023	Sid Tool Co., Inc.		G130-SHOP TOOLS	$ 456.17	-	-
4500056023	8/14/2023	Dimensional Silk Screen Inc		G230-PRINTED MATERIALS	$ 109.91	-	-
4500056024	8/14/2023	Conisa Oropeza Enterprises Inc		G120-SECURITY	$ 300.86	-	-
4500056025	8/14/2023	BriceHouse Outdoor Inc.		G230-PRINTED MATERIALS	$ 3,600.00	-	-
4500056026	8/14/2023	Custom Glass Solutions		R120-RAIL/LRV CAR BODY	$ 9,824.07	-	-
4500056027	8/14/2023	The Carpenter Group		M120-OVRHEAD CATENARY SYS	$ 3,313.32	-	-
4500056028	8/14/2023	City Treasurer		G120-SECURITY	$ 282.00	-	-
4500056029	8/14/2023	Constant Contact, Inc.		G260-MEDIA	$ 3,612.00	-	-
4500056030	8/14/2023	Ace Uniforms LLC	Small Business	C120-SPECIALTY CONTRACTOR	$ 433.14	-	-
4500056031	8/14/2023	W.W. Grainger Inc		R170-RAIL/LRV HVAC	$ 2,132.10	-	-
4500056032	8/14/2023	The Sherwin-Williams Company		F120-BUS/LRV PAINT BOOTHS	$ 377.78	-	-
4500056033	8/14/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 3,088.67	-	-
4500056034	8/14/2023	W.W. Grainger Inc		G130-SHOP TOOLS	$ 2,194.96	-	-
4500056035	8/14/2023	Supreme Oil Co.		A120-AUTO/TRUCK GASOLINE	$ 15,129.96	-	-
4500056036	8/14/2023	Ace Uniforms LLC	Small Business	C120-SPECIALTY CONTRACTOR	$ 235.98	-	-
4500056037	8/14/2023	Professional Contractors Supplies		G160-PAINTS & CHEMICALS	$ 992.78	-	-
4500056038	8/14/2023	Dimensional Silk Screen Inc		G230-PRINTED MATERIALS	$ 4,777.64	-	-
4500056039	8/14/2023	Home Depot USA Inc		G160-PAINTS & CHEMICALS	$ 2,359.23	-	-
4500056040	8/14/2023	Virginia Electronic & Lighting LLC		M140-WAYSIDE SIGNALS	$ 2,020.32	-	-
4500056041	8/14/2023	RS Americas, Inc.		R160-RAIL/LRV ELECTRICAL	$ 829.68	-	-
4500056042	8/14/2023	Airgas Inc		R160-RAIL/LRV ELECTRICAL	$ 1,961.74	-	-
4500056043	8/14/2023	Sunbelt Rentals, Inc		P160-EQUIPMENT RENTALS	$ 1,498.79	-	-
4500056044	8/14/2023	CRH California Water, Inc.		M140-WAYSIDE SIGNALS	$ 21.00	-	-
4500056045	8/14/2023	Home Depot USA Inc		G130-SHOP TOOLS	$ 4,282.29	-	-
4500056046	8/14/2023	Knorr Brake Company, LLC		G130-SHOP TOOLS	$ 976.22	-	-
4500056047	8/14/2023	Behlman Electronics Inc.		M140-WAYSIDE SIGNALS	$ 9,563.90	-	-
4500056048	8/14/2023	TK Services Inc		R170-RAIL/LRV HVAC	$ 949.54	-	-
4500056049	8/14/2023	Winzer Franchise Company		G140-SHOP SUPPLIES	$ 84.05	-	-
4500056050	8/14/2023	Charter Industrial Supply Inc	Small Business	B140-BUS CHASSIS	$ 1,233.36	-	-
4500056051	8/14/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 7,859.37	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500056052	8/14/2023	TK Services Inc		B110-BUS HVAC SYSTEMS	$ 845.14	-	-
4500056053	8/14/2023	B & S Graphics Inc		B130-BUS BODY	$ 64.65	-	-
4500056054	8/14/2023	Motion Industries, Inc.		R160-RAIL/LRV ELECTRICAL	$ 452.27	-	-
4500056055	8/14/2023	Annex Warehouse Company, Inc		G160-PAINTS & CHEMICALS	$ 4,424.77	-	-
4500056056	8/14/2023	Allied Refrigeration Inc		B250-BUS REPAIR PARTS	$ 73.38	-	-
4500056057	8/14/2023	Kurt Morgan		G200-OFFICE SUPPLIES	$ 475.88	-	-
4500056058	8/14/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 3,236.92	-	-
4500056059	8/14/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 323.31	-	-
4500056060	8/15/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 1,947.02	-	-
4500056061	8/15/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 866.12	-	-
4500056062	8/15/2023	Momentive Inc		G260-MEDIA	$ 372.00	-	-
4500056063	8/15/2023	Pressnet Express Inc		G230-PRINTED MATERIALS	$ 721.93	-	-
4500056064	8/15/2023	SANDAG		C120-SPECIALTY CONTRACTOR	$ 5,000.00	-	-
4500056065	8/15/2023	ISC Applied Systems Corp		R150-RAIL/LRV COMM EQUIP	$ 19,125.63	-	-
4500056066	8/15/2023	Prochem Specialty Products Inc	Small Business	G180-JANITORIAL SUPPLIES	$ 1,718.62	-	-
4500056067	8/15/2023	Flyers Energy LLC		G170-LUBRICANTS	$ 9,011.59	-	-
4500056068	8/15/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 77.58	-	-
4500056069	8/15/2023	R.S. Hughes Co Inc		B250-BUS REPAIR PARTS	$ 1,302.74	-	-
4500056070	8/15/2023	Gillig LLC		G140-SHOP SUPPLIES	$ 2,187.06	-	-
4500056071	8/15/2023	San Diego Friction Products, Inc.		B110-BUS HVAC SYSTEMS	$ 171.53	-	-
4500056072	8/15/2023	Waxie's Enterprises, LLC		G170-LUBRICANTS	$ 873.58	-	-
4500056073	8/15/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 72.41	-	-
4500056074	8/15/2023	San Diego Friction Products, Inc.		B120-BUS MECHANICAL PARTS	$ 131.22	-	-
4500056075	8/15/2023	Gillig LLC		R120-RAIL/LRV CAR BODY	$ 7,019.74	-	-
4500056076	8/15/2023	County of San Diego		P130-EQUIP MAINT REPR SVC	$ 180.00	-	-
4500056077	8/15/2023	Transit Finance Learning Exchange		P400-FINANCIAL & AUDIT	$ 1,200.00	-	-
4500056078	8/15/2023	Cummins Inc		B160-BUS ELECTRICAL	$ 648.44	-	-
4500056079	8/15/2023	NantaMedia Holdings LLC		G230-PRINTED MATERIALS	$ 1,368.09	-	-
4500056080	8/15/2023	Adios Pest Control, Inc.	Small Business	P280-GENERAL SVC AGRMNTS	$ 300.00	-	-
4500056081	8/15/2023	NantaMedia Holdings LLC		G230-PRINTED MATERIALS	$ 1,143.60	-	-
4500056082	8/16/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 3,694.69	-	-
4500056083	8/16/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 1,820.27	-	-
4500056084	8/16/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 67.52	-	-
4500056085	8/16/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 657.28	-	-
4500056086	8/16/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 2,238.76	-	-
4500056087	8/16/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 435.19	-	-
4500056088	8/16/2023	Vehicle Maintenance Program, Inc.	Woman Owned Business	B140-BUS CHASSIS	$ 894.33	-	-
4500056089	8/16/2023	Sunbelt Rentals, Inc		F190-LANDSCAPING MAT'LS	$ 407.04	-	-
4500056090	8/16/2023	SANDAG		C120-SPECIALTY CONTRACTOR	$ 30,000.00	-	-
4500056091	8/16/2023	Ahlee Backflow Service, Inc	Small Business	P280-GENERAL SVC AGRMNTS	$ 410.84	-	-
4500056092	8/16/2023	Siemens Mobility, Inc.		R230-RAIL/LRV MECHANICAL	$ 50,896.73	-	-
4500056093	8/16/2023	Bakers Man	DBE	G260-MEDIA	$ 20,375.00	-	-
4500056094	8/16/2023	Transit Holdings Inc		B130-BUS BODY	$ 3,880.24	-	-
4500056095	8/16/2023	Duncan Bolt Co	Small Business	G140-SHOP SUPPLIES	$ 142.95	-	-
4500056096	8/16/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,753.40	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500056097	8/16/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,449.08	-	-
4500056098	8/16/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 42.76	-	-
4500056099	8/16/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,993.00	-	-
4500056100	8/16/2023	Superior Cleaning Equipment, Inc.		P280-GENERAL SVC AGRMNTS	$ 378.85	-	-
4500056101	8/16/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 88.02	-	-
4500056102	8/16/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 111.24	-	-
4500056103	8/16/2023	Inland Kenworth (US) Inc		B250-BUS REPAIR PARTS	$ 1,928.51	-	-
4500056104	8/16/2023	Kaeser & Blair, Inc		G260-MEDIA	$ 2,419.28	-	-
4500056105	8/16/2023	MCI Carrillo Inc	Small Business	P210-NON-REV VEH REPAIRS	$ 44.20	-	-
4500056106	8/17/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 262.48	-	-
4500056107	8/17/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 1,726.77	-	-
4500056108	8/17/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 902.78	-	-
4500056109	8/17/2023	Muncie Reclamation and Supply Co		B200-BUS PWR TRAIN EQUIP	$ 46.93	-	-
4500056110	8/17/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 349.53	-	-
4500056111	8/17/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 611.06	-	-
4500056112	8/17/2023	Day Management Corp		R150-RAIL/LRV COMM EQUIP	$ 4,302.26	-	-
4500056113	8/17/2023	Day Management Corp		R150-RAIL/LRV COMM EQUIP	$ 1,861.75	-	-
4500056114	8/17/2023	ODP Business Solutions, LLC		G200-OFFICE SUPPLIES	$ 246.08	-	-
4500056115	8/17/2023	Keys & Engraving Inc		G140-SHOP SUPPLIES	$ 431.00	-	-
4500056116	8/17/2023	Alpine Fence Inc.		F190-LANDSCAPING MAT'LS	$ 414.29	-	-
4500056117	8/17/2023	Facility Solutions Group, Inc.		R180-RAIL/LRV LIGHTING	$ 117.90	-	-
4500056118	8/17/2023	Aztec Global Solutions, Inc.		M140-WAYSIDE SIGNALS	$ 2,275.49	-	-
4500056119	8/17/2023	Staples Contract & Commercial LLC		P280-GENERAL SVC AGRMNTS	$ 46.97	-	-
4500056120	8/17/2023	W.W. Grainger Inc		P280-GENERAL SVC AGRMNTS	$ 19.12	-	-
4500056121	8/17/2023	San Diego Hydraulics, Inc.		P210-NON-REV VEH REPAIRS	$ 250.00	-	-
4500056122	8/17/2023	National Carwash Solutions Inc		G160-PAINTS & CHEMICALS	$ 1,933.75	-	-
4500056123	8/17/2023	Romaine Electric Corporation	Small Business	B160-BUS ELECTRICAL	$ 3,608.55	-	-
4500056124	8/17/2023	Southern Counties Lubricants LLC		G170-LUBRICANTS	$ 4,601.40	-	-
4500056125	8/17/2023	Brady Industries of California, LLC		G180-JANITORIAL SUPPLIES	$ 2,442.34	-	-
4500056126	8/17/2023	Freeby Signs		B130-BUS BODY	$ 78.44	-	-
4500056127	8/17/2023	AirSupply Tools, Inc		G140-SHOP SUPPLIES	$ 681.03	-	-
4500056128	8/17/2023	San Diego Friction Products, Inc.		B110-BUS HVAC SYSTEMS	$ 137.22	-	-
4500056129	8/17/2023	Fastenal Company		G190-SAFETY/MED SUPPLIES	$ 420.23	-	-
4500056130	8/17/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 1,097.78	-	-
4500056131	8/17/2023	Mohawk Mfg & Supply Co		B110-BUS HVAC SYSTEMS	$ 433.30	-	-
4500056132	8/17/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 38.94	-	-
4500056133	8/17/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 196.20	-	-
4500056134	8/17/2023	American Battery Corporation	Small Business	P280-GENERAL SVC AGRMNTS	$ 2,344.85	-	-
4500056135	8/17/2023	ABC General Contractor, Inc.		C110-GENERAL CONTRACTORS	$ 146,929.97	-	$ 85,865.87
4500056136	8/17/2023	The Gordian Group, Inc.		C130-CONSTRUCTION SVCS	$ 2,865.13	-	-
4500056137	8/17/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 7,750.00	-	-
4500056138	8/17/2023	Harbor Diesel & Equipment, Inc		G170-LUBRICANTS	$ 6,203.60	-	-
4500056139	8/17/2023	Vern Rose Inc		G140-SHOP SUPPLIES	$ 252.14	-	-
4500056140	8/17/2023	Allied Refrigeration Inc		F110-SHOP/BLDG MACHINERY	$ 641.12	-	-
4500056141	8/17/2023	Waxie's Enterprises, LLC		G180-JANITORIAL SUPPLIES	$ 817.07	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500056142	8/17/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 1,385.25	-	-
4500056143	8/17/2023	Aztec Fire & Safety, Inc.		G140-SHOP SUPPLIES	$ 3,879.00	-	-
4500056144	8/17/2023	Kurt Morgan		G200-OFFICE SUPPLIES	$ 321.48	-	-
4500056145	8/17/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 321.21	-	-
4500056146	8/17/2023	Romaine Electric Corporation	Small Business	B160-BUS ELECTRICAL	$ 3,608.55	-	-
4500056147	8/17/2023	Muncie Reclamation and Supply Co		B120-BUS MECHANICAL PARTS	$ 210.12	-	-
4500056148	8/17/2023	Delphin Computer Supply	Small Business	G200-OFFICE SUPPLIES	$ 363.98	-	-
4500056149	8/17/2023	Genfare, LLC		B190-BUS FARE EQUIP	$ 296.05	-	-
4500056150	8/17/2023	Compressed Air Systems		F180-BUILDING MATERIALS	$ 1,713.23	-	-
4500056151	8/17/2023	Mcmaster-Carr Supply Co		B160-BUS ELECTRICAL	$ 23.52	-	-
4500056152	8/17/2023	Trentman Corp	Small Business	P280-GENERAL SVC AGRMNTS	$ 1,435.56	-	-
4500056153	8/18/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 1,904.46	-	-
4500056154	8/18/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 1,835.95	-	-
4500056155	8/18/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 66.59	-	-
4500056156	8/18/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 3,556.91	-	-
4500056157	8/18/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 1,539.56	-	-
4500056158	8/18/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 107.83	-	-
4500056159	8/18/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 138.03	-	-
4500056160	8/18/2023	Siemens Mobility, Inc.		R120-RAIL/LRV CAR BODY	$ 1,481.57	-	-
4500056161	8/18/2023	Siemens Mobility, Inc.		M130-CROSSING MECHANISM	$ 2,733.40	-	-
4500056162	8/18/2023	Ace Uniforms LLC	Small Business	C120-SPECIALTY CONTRACTOR	$ 60.35	-	-
4500056163	8/18/2023	General Signals Inc		M130-CROSSING MECHANISM	$ 6,341.75	-	-
4500056164	8/18/2023	Dimensional Silk Screen Inc		G230-PRINTED MATERIALS	$ 3,293.93	-	-
4500056165	8/18/2023	Dimensional Silk Screen Inc		G230-PRINTED MATERIALS	$ 2,751.60	-	-
4500056166	8/18/2023	Sunbelt Rentals, Inc		P160-EQUIPMENT RENTALS	$ 2,974.79	-	-
4500056167	8/18/2023	Marine Corps Comm. Srvcs.		P450-PERSONNEL SVCS	$ 150.00	-	-
4500056168	8/18/2023	Docker, Inc		I120-INFO TECH, SVCS	$ 120.00	-	-
4500056169	8/20/2023	Genfare, LLC		G290-FARE REVENUE EQUIP	$ 365.44	-	-
4500056170	8/20/2023	Genfare, LLC		B250-BUS REPAIR PARTS	$ 326.00	-	-
4500056171	8/20/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 8,110.44	-	-
4500056172	8/20/2023	TK Services Inc		B250-BUS REPAIR PARTS	$ 1,307.65	-	-
4500056173	8/20/2023	Siemens Mobility, Inc.		R120-RAIL/LRV CAR BODY	$ 201.71	-	-
4500056174	8/21/2023	Fastenal Company		G150-FASTENERS	$ 3,477.35	-	-
4500056175	8/21/2023	Ababa Bolt		G130-SHOP TOOLS	$ 109.67	-	-
4500056176	8/21/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 13,249.78	-	-
4500056177	8/21/2023	Transit Holdings Inc		B130-BUS BODY	$ 1,635.25	-	-
4500056178	8/21/2023	Zen Industrial Services LLC	DBE	B160-BUS ELECTRICAL	$ 41.70	-	-
4500056179	8/21/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 4,761.15	-	-
4500056180	8/21/2023	Muncie Reclamation and Supply Co		B140-BUS CHASSIS	$ 405.18	-	-
4500056181	8/21/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 4,204.23	-	-
4500056182	8/21/2023	White Cap, LP		G130-SHOP TOOLS	$ 1,813.87	-	-
4500056183	8/21/2023	Daniels Tire Service, Inc		P210-NON-REV VEH REPAIRS	$ 386.06	-	-
4500056184	8/21/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 3,088.67	-	-
4500056185	8/21/2023	Supreme Oil Co.		A120-AUTO/TRUCK GASOLINE	$ 15,066.25	-	-
4500056186	8/21/2023	Linde Gas & Equipment Inc.		G140-SHOP SUPPLIES	$ 463.88	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500056187	8/21/2023	SiteOne Landscape Supply Holding		F190-LANDSCAPING MAT'LS	$ 1,490.82	-	-
4500056188	8/21/2023	Professional Contractors Supplies		G180-JANITORIAL SUPPLIES	$ 1,525.57	-	-
4500056189	8/21/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 3,144.15	-	-
4500056190	8/21/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 345.33	-	-
4500056191	8/21/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 4,347.26	-	-
4500056192	8/21/2023	VGP Holdings LLC		B120-BUS MECHANICAL PARTS	$ 7,783.86	-	-
4500056193	8/21/2023	Siemens Mobility, Inc.		R120-RAIL/LRV CAR BODY	$ 1,680.90	-	-
4500056194	8/21/2023	W.W. Grainger Inc		G180-JANITORIAL SUPPLIES	$ 380.02	-	-
4500056195	8/21/2023	R.S. Hughes Co Inc		G140-SHOP SUPPLIES	$ 2,888.09	-	-
4500056196	8/21/2023	Compressed Air Systems		F110-SHOP/BLDG MACHINERY	$ 498.89	-	-
4500056197	8/21/2023	Staples Contract & Commercial LLC		P280-GENERAL SVC AGRMNTS	$ 169.29	-	-
4500056198	8/21/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 577.09	-	-
4500056199	8/21/2023	Transit Holdings Inc		B130-BUS BODY	$ 436.58	-	-
4500056200	8/22/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 10.08	-	-
4500056203	8/22/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 1,900.35	-	-
4500056204	8/22/2023	Transit Holdings Inc		B130-BUS BODY	$ 1,228.57	-	-
4500056205	8/22/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 94.28	-	-
4500056206	8/22/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 1,135.79	-	-
4500056207	8/22/2023	Jamison Professional Services, LLC	DBE	G170-LUBRICANTS	$ 1,538.41	-	-
4500056208	8/22/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 81.33	-	-
4500056209	8/22/2023	Conisa Oropeza Enterprises Inc		G120-SECURITY	$ 163.10	-	-
4500056210	8/22/2023	CDW LLC		I110-INFORMATION TECH	$ 1,427.20	-	-
4500056211	8/22/2023	Inland Kenworth (US) Inc		B130-BUS BODY	$ 589.53	-	-
4500056212	8/22/2023	The Sherwin-Williams Company		B130-BUS BODY	$ 910.66	-	-
4500056213	8/22/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 88.21	-	-
4500056214	8/22/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 100.98	-	-
4500056215	8/22/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 30.73	-	-
4500056216	8/22/2023	Mcmaster-Carr Supply Co		F110-SHOP/BLDG MACHINERY	$ 49.36	-	-
4500056217	8/22/2023	Inland Kenworth (US) Inc		B250-BUS REPAIR PARTS	$ 86.92	-	-
4500056218	8/22/2023	Gillig LLC		G140-SHOP SUPPLIES	$ 4,551.27	-	-
4500056219	8/22/2023	CDW LLC		B150-BUS COMM EQUIP.	$ 1,486.95	-	-
4500056220	8/22/2023	Dimensional Silk Screen Inc		G230-PRINTED MATERIALS	$ 15,898.83	-	-
4500056221	8/22/2023	Carmine Bausone DVM Inc.		G120-SECURITY	$ 234.00	-	-
4500056222	8/22/2023	Luminator Technology Group Global		R120-RAIL/LRV CAR BODY	$ 3,238.56	-	-
4500056223	8/22/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 14,703.03	-	-
4500056224	8/22/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 24.30	-	-
4500056225	8/22/2023	TK Services Inc		B110-BUS HVAC SYSTEMS	$ 64.17	-	-
4500056226	8/23/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 502.01	-	-
4500056227	8/23/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 2,736.74	-	-
4500056228	8/23/2023	Transit Holdings Inc		B130-BUS BODY	$ 1,053.27	-	-
4500056229	8/23/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 252.94	-	-
4500056230	8/23/2023	Monmouth Solutions, Inc.		C120-SPECIALTY CONTRACTOR	$ 107,945.00	-	-
4500056231	8/23/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 620.72	-	-
4500056232	8/23/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 2.20	-	-
4500056233	8/23/2023	Vehicle Maintenance Program, Inc.	Woman Owned Business	B140-BUS CHASSIS	$ 894.33	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500056234	8/23/2023	AEP California, LLC		G120-SECURITY	$ 475.00	-	-
4500056235	8/23/2023	Siemens Mobility, Inc.		M110-SUB STATION	$ 526.90	-	-
4500056236	8/23/2023	Duncan Bolt Co	Small Business	G140-SHOP SUPPLIES	$ 125.88	-	-
4500056237	8/23/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 19.61	-	-
4500056238	8/23/2023	Trentman Corp	Small Business	P280-GENERAL SVC AGRMNTS	$ 886.20	-	-
4500056239	8/23/2023	Continental Locks		A140-AUTO/TRUCK REPAIR	$ 145.00	-	-
4500056240	8/23/2023	Mouser Electronics Inc		R160-RAIL/LRV ELECTRICAL	$ 202.61	-	-
4500056241	8/23/2023	OneSource Distributors, LLC		G190-SAFETY/MED SUPPLIES	$ 222.00	-	-
4500056242	8/23/2023	Willy's Electronic Supply Co Inc	Small Business	G140-SHOP SUPPLIES	$ 1,317.78	-	-
4500056243	8/23/2023	Schunk Carbon Technology LLC		R190-RAIL/LRV PANTOGRAPH	$ 1,022.64	-	-
4500056244	8/23/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 2,680.67	-	-
4500056245	8/23/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 742.91	-	-
4500056246	8/23/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 713.90	-	-
4500056247	8/23/2023	Quality Logo Products, Inc.		G250-NOVELTIES & AWARDS	$ 1,920.20	-	-
4500056248	8/23/2023	Fastenal Company		G190-SAFETY/MED SUPPLIES	$ 1,382.99	-	-
4500056249	8/23/2023	Professional Contractors Supplies		G190-SAFETY/MED SUPPLIES	$ 180.63	-	-
4500056250	8/23/2023	Shilpark Paint Corporation		F180-BUILDING MATERIALS	$ 180.32	-	-
4500056251	8/23/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 206.35	-	-
4500056252	8/23/2023	R.S. Hughes Co Inc		G190-SAFETY/MED SUPPLIES	$ 586.85	-	-
4500056253	8/23/2023	W.W. Grainger Inc		B160-BUS ELECTRICAL	$ 423.36	-	-
4500056254	8/23/2023	Mouser Electronics Inc		R160-RAIL/LRV ELECTRICAL	$ 1,934.90	-	-
4500056255	8/23/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 91.26	-	-
4500056256	8/23/2023	Siemens Mobility, Inc.		R230-RAIL/LRV MECHANICAL	$ 19,356.21	-	-
4500056257	8/24/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 1,393.06	-	-
4500056258	8/24/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 1,445.73	-	-
4500056259	8/24/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 14.01	-	-
4500056260	8/24/2023	DS Services of America, Inc.		G200-OFFICE SUPPLIES	$ 3,072.69	-	-
4500056261	8/24/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 473.24	-	-
4500056262	8/24/2023	Muncie Reclamation and Supply Co		B250-BUS REPAIR PARTS	$ 1,299.40	-	-
4500056263	8/24/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 3,605.77	-	-
4500056264	8/24/2023	Clear Sign & Design Inc	Small Business	P280-GENERAL SVC AGRMNTS	$ 738.75	-	-
4500056265	8/24/2023	Freeby Signs		B130-BUS BODY	$ 82.75	-	-
4500056266	8/24/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 279.94	-	-
4500056267	8/24/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 52.91	-	-
4500056268	8/24/2023	Waxie's Enterprises, LLC		G180-JANITORIAL SUPPLIES	$ 8,638.86	-	-
4500056269	8/24/2023	Recaro Automotive North America Inc		R200-RAIL/LRV SEATING	$ 23,455.03	-	-
4500056270	8/24/2023	AECOM Technical Services, Inc		C140-CONSTRUCTION MGT SRV	$ 131,568.88	-	$ 91,900.86
4500056271	8/24/2023	Transit Products and Services		B130-BUS BODY	$ 6,896.00	-	-
4500056272	8/24/2023	AirSupply Tools, Inc		G200-OFFICE SUPPLIES	$ 350.09	-	-
4500056273	8/24/2023	Airgas Inc		G200-OFFICE SUPPLIES	$ 274.23	-	-
4500056274	8/24/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 821.08	-	-
4500056275	8/24/2023	Veterans Solutions Inc	Minority Owned Business	C120-SPECIALTY CONTRACTOR	$ 19,039.04	-	-
4500056277	8/25/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 10,740.87	-	-
4500056278	8/25/2023	Prochem Specialty Products Inc	Small Business	G180-JANITORIAL SUPPLIES	$ 1,718.62	-	-
4500056279	8/25/2023	Reid and Clark Screen Arts Co		M130-CROSSING MECHANISM	$ 909.95	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500056280	8/25/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 36.55	-	-
4500056281	8/25/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 3,250.84	-	-
4500056282	8/25/2023	Zen Industrial Services LLC	DBE	B160-BUS ELECTRICAL	$ 34.75	-	-
4500056283	8/25/2023	Brady Industries of California, LLC		G190-SAFETY/MED SUPPLIES	$ 775.80	-	-
4500056284	8/25/2023	Laird Plastics, Inc		P280-GENERAL SVC AGRMNTS	$ 2,559.17	-	-
4500056285	8/25/2023	Charter Industrial Supply Inc	Small Business	R230-RAIL/LRV MECHANICAL	$ 324.07	-	-
4500056286	8/25/2023	Citywide Auto Glass Inc		P280-GENERAL SVC AGRMNTS	$ 1,044.41	-	-
4500056287	8/25/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 286.50	-	-
4500056288	8/25/2023	Flyers Energy LLC		G170-LUBRICANTS	$ 9,011.59	-	-
4500056289	8/25/2023	Waxie's Enterprises, LLC		G140-SHOP SUPPLIES	$ 3,980.16	-	-
4500056290	8/25/2023	Compressed Air Systems		F180-BUILDING MATERIALS	$ 2,608.63	-	-
4500056291	8/25/2023	Cummins Inc		B250-BUS REPAIR PARTS	$ 1,124.99	-	-
4500056292	8/25/2023	Muncie Reclamation and Supply Co		B140-BUS CHASSIS	$ 47.20	-	-
4500056293	8/25/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 4,291.72	-	-
4500056294	8/25/2023	Kurt Morgan		G200-OFFICE SUPPLIES	$ 1,645.90	-	-
4500056295	8/25/2023	Home Depot USA Inc		G130-SHOP TOOLS	$ 123.06	-	-
4500056296	8/25/2023	Fastenal Company		G180-JANITORIAL SUPPLIES	$ 1,447.52	-	-
4500056297	8/25/2023	Airgas Inc		G140-SHOP SUPPLIES	$ 607.90	-	-
4500056298	8/25/2023	Gillig LLC		B130-BUS BODY	$ 4,848.75	-	-
4500056299	8/25/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 16.00	-	-
4500056300	8/25/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 651.35	-	-
4500056301	8/25/2023	Home Depot USA Inc		G140-SHOP SUPPLIES	$ 1,948.72	-	-
4500056302	8/25/2023	W.W. Grainger Inc		G140-SHOP SUPPLIES	$ 454.34	-	-
4500056303	8/28/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 205.75	-	-
4500056304	8/28/2023	Mohawk Mfg & Supply Co		B140-BUS CHASSIS	$ 33.29	-	-
4500056305	8/28/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 2,212.25	-	-
4500056306	8/28/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 14.76	-	-
4500056307	8/28/2023	Jamison Professional Services, LLC	DBE	G170-LUBRICANTS	$ 1,442.99	-	-
4500056308	8/28/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 3,363.12	-	-
4500056309	8/28/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 1,736.21	-	-
4500056310	8/28/2023	Siemens Mobility, Inc.		R230-RAIL/LRV MECHANICAL	$ 2,675.70	-	-
4500056311	8/28/2023	IFE North America, LLC		R140-RAIL/LRV DOORS/RAMP	$ 2,004.15	-	-
4500056312	8/28/2023	Carlos Guzman Inc		R120-RAIL/LRV CAR BODY	$ 47,456.50	-	-
4500056313	8/28/2023	W.W. Grainger Inc		F110-SHOP/BLDG MACHINERY	$ 64.63	-	-
4500056314	8/28/2023	Day Management Corp		R150-RAIL/LRV COMM EQUIP	$ 59,383.84	-	-
4500056315	8/28/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 3,144.15	-	-
4500056316	8/28/2023	Supreme Oil Co.		A120-AUTO/TRUCK GASOLINE	$ 18,096.33	-	-
4500056317	8/28/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 1,210.47	-	-
4500056318	8/28/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 118.10	-	-
4500056319	8/28/2023	Transit Holdings Inc		B130-BUS BODY	$ 319.59	-	-
4500056320	8/28/2023	Charter Industrial Supply Inc	Small Business	G150-FASTENERS	$ 429.82	-	-
4500056321	8/28/2023	Barry Sandler Enterprises		G180-JANITORIAL SUPPLIES	$ 1,011.55	-	-
4500056322	8/28/2023	R.S. Hughes Co Inc		B130-BUS BODY	$ 282.97	-	-
4500056323	8/28/2023	Cummins Inc		B130-BUS BODY	$ 262.76	-	-
4500056324	8/28/2023	Ascendancy Corp		R230-RAIL/LRV MECHANICAL	$ 3,511.90	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500056325	8/28/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 539.19	-	-
4500056326	8/28/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 172.78	-	-
4500056327	8/28/2023	W.W. Grainger Inc		G170-LUBRICANTS	$ 499.42	-	-
4500056328	8/28/2023	Fastenal Company		G190-SAFETY/MED SUPPLIES	$ 4,098.39	-	-
4500056329	8/28/2023	CDW LLC		I110-INFORMATION TECH	$ 3,046.22	-	-
4500056330	8/28/2023	Winzer Franchise Company		G130-SHOP TOOLS	$ 403.13	-	-
4500056331	8/28/2023	Continental Locks		P120-BLDG/FACILITY REPRS	$ 95.00	-	-
4500056332	8/29/2023	Muncie Reclamation and Supply Co		B250-BUS REPAIR PARTS	$ 56.03	-	-
4500056333	8/29/2023	Siemens Mobility, Inc.		R120-RAIL/LRV CAR BODY	$ 384.67	-	-
4500056334	8/29/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 2,550.30	-	-
4500056335	8/29/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 821.90	-	-
4500056336	8/29/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 67.52	-	-
4500056337	8/29/2023	San Diego Convention & Tourist Bure		G260-MEDIA	$ 1,133.00	-	-
4500056338	8/29/2023	Neyenesch Printers Inc	Small Business	G230-PRINTED MATERIALS	$ 1,331.40	-	-
4500056339	8/29/2023	Kaeser & Blair, Inc		G260-MEDIA	$ 754.25	-	-
4500056340	8/29/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 1,593.81	-	-
4500056341	8/29/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 3.37	-	-
4500056342	8/29/2023	W.W. Grainger Inc		I110-INFORMATION TECH	$ 1,254.34	-	-
4500056343	8/29/2023	Reid and Clark Screen Arts Co		P210-NON-REV VEH REPAIRS	$ 70.86	-	-
4500056344	8/29/2023	Carlos Guzman Inc		R120-RAIL/LRV CAR BODY	$ 47,456.50	-	-
4500056345	8/29/2023	APD Incorporated		G140-SHOP SUPPLIES	$ 487.03	-	-
4500056346	8/30/2023	Carmine Bausone DVM Inc.		G120-SECURITY	$ 138.76	-	-
4500056347	8/30/2023	San Diego Community		P490-MANAGEMENT TRAINING	$ 69.00	-	-
4500056348	8/30/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 144.14	-	-
4500056349	8/30/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 3,401.17	-	-
4500056350	8/30/2023	Donald Bengel		P440-CATERING SERVICES	$ 2,175.00	-	-
4500056351	8/30/2023	Romaine Electric Corporation	Small Business	B160-BUS ELECTRICAL	$ 6,719.81	-	-
4500056352	8/30/2023	El Tigre Enterprise Inc		P160-EQUIPMENT RENTALS	$ 2,750.00	-	-
4500056353	8/30/2023	Home Depot USA Inc		G130-SHOP TOOLS	$ 4,282.29	-	-
4500056354	8/30/2023	Shilpark Paint Corporation		G160-PAINTS & CHEMICALS	$ 800.03	-	-
4500056355	8/30/2023	DIRECTV, LLC		P280-GENERAL SVC AGRMNTS	$ 749.81	-	-
4500056356	8/30/2023	SiteOne Landscape Supply Holding		F190-LANDSCAPING MAT'LS	$ 1,600.22	-	-
4500056357	8/30/2023	JKL Cleaning Systems	Small Business	F110-SHOP/BLDG MACHINERY	$ 200.00	-	-
4500056358	8/30/2023	Mouser Electronics Inc		R160-RAIL/LRV ELECTRICAL	$ 93.14	-	-
4500056359	8/30/2023	Recaro Automotive North America Inc		R200-RAIL/LRV SEATING	$ 178.87	-	-
4500056360	8/30/2023	Shilpark Paint Corporation		F180-BUILDING MATERIALS	$ 85.24	-	-
4500056361	8/30/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 578.35	-	-
4500056362	8/30/2023	El Tigre Enterprise Inc		P440-CATERING SERVICES	$ 850.00	-	-
4500056363	8/30/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 4,705.03	-	-
4500056364	8/30/2023	Mcmaster-Carr Supply Co		B250-BUS REPAIR PARTS	$ 131.45	-	-
4500056365	8/30/2023	Inland Kenworth (US) Inc		B250-BUS REPAIR PARTS	$ 42.96	-	-
4500056366	8/30/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 328.30	-	-
4500056367	8/30/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 49,047.84	-	-
4500056368	8/30/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 972.83	-	-
4500056369	8/30/2023	AirSupply Tools, Inc		G130-SHOP TOOLS	$ 12.55	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500056370	8/30/2023	Motion Industries, Inc.		B120-BUS MECHANICAL PARTS	$ 1,477.96	-	-
4500056371	8/30/2023	R.S. Hughes Co Inc		G190-SAFETY/MED SUPPLIES	$ 258.60	-	-
4500056372	8/30/2023	D's Kustom Sales & Services, LLC		T110-TRACK, RAIL	$ 1,354.96	-	-
4500056373	8/30/2023	W.W. Grainger Inc		R180-RAIL/LRV LIGHTING	$ 6,716.33	-	-
4500056374	8/30/2023	W.W. Grainger Inc		G180-JANITORIAL SUPPLIES	$ 848.55	-	-
4500056375	8/30/2023	Fastenal Company		G140-SHOP SUPPLIES	$ 551.04	-	-
4500056376	8/30/2023	Waxie's Enterprises, LLC		G180-JANITORIAL SUPPLIES	$ 2,223.09	-	-
4500056377	8/30/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 103.65	-	-
4500056378	8/30/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 500.00	-	-
4500056379	8/30/2023	Professional Contractors Supplies		G130-SHOP TOOLS	$ 853.77	-	-
4500056380	8/30/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 275.02	-	-
4500056381	8/30/2023	Init Innovations in Transportation		B190-BUS FARE EQUIP	$ 425.00	-	-
4500056382	8/31/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 3,174.10	-	-
4500056383	8/31/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 2,631.47	-	-
4500056385	8/31/2023	Transit Holdings Inc		B140-BUS CHASSIS	$ 1,476.40	-	-
4500056386	8/31/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 428.66	-	-
4500056387	8/31/2023	Vehicle Maintenance Program, Inc.	Woman Owned Business	B140-BUS CHASSIS	$ 517.20	-	-
4500056388	8/31/2023	Siemens Mobility, Inc.		R160-RAIL/LRV ELECTRICAL	$ 122.06	-	-
4500056389	8/31/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 5,913.67	-	-
4500056390	8/31/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 67.52	-	-
4500056391	8/31/2023	Vinyard Doors, Inc.	Woman Owned Business	F110-SHOP/BLDG MACHINERY	$ 952.00	-	-
4500056392	8/31/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 5,360.97	-	-
4500056393	8/31/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 85.37	-	-
4500056394	8/31/2023	Uline Inc		P540-MAINTENANCE TRAINING	$ 86.20	-	-
4500056395	8/31/2023	San Diego Hydraulics, Inc.		F110-SHOP/BLDG MACHINERY	$ 249.04	-	-
4500056396	8/31/2023	Waxie's Enterprises, LLC		G180-JANITORIAL SUPPLIES	$ 1,870.25	-	-
4500056397	8/31/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 47.44	-	-
4500056398	8/31/2023	Transit Holdings Inc		B110-BUS HVAC SYSTEMS	$ 62.92	-	-
4500056399	8/31/2023	W.W. Grainger Inc		G170-LUBRICANTS	$ 886.80	-	-
4500056400	8/31/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 1,635.01	-	-
4500056401	9/1/2023	Transit Holdings Inc		B130-BUS BODY	$ 827.81	-	-
4500056402	9/1/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 6,126.00	-	-
4500056403	9/1/2023	Muncie Reclamation and Supply Co		B200-BUS PWR TRAIN EQUIP	$ 7.87	-	-
4500056404	9/1/2023	Transit Holdings Inc		B160-BUS ELECTRICAL	$ 1,411.30	-	-
4500056405	9/1/2023	Transit Holdings Inc		B200-BUS PWR TRAIN EQUIP	$ 93.88	-	-
4500056406	9/1/2023	San Diego Friction Products, Inc.		B140-BUS CHASSIS	$ 808.59	-	-
4500056407	9/1/2023	Kenneth Place		F190-LANDSCAPING MAT'LS	$ 108.60	-	-
4500056408	9/1/2023	Home Depot USA Inc		G130-SHOP TOOLS	$ 814.12	-	-
4500056409	9/5/2023	Muncie Reclamation and Supply Co		B200-BUS PWR TRAIN EQUIP	$ 9.65	-	-
4500056410	9/5/2023	Parts Authority, LLC		B160-BUS ELECTRICAL	$ 3,210.84	-	-
4500056411	9/5/2023	Maintex Inc		G170-LUBRICANTS	$ 1,230.27	-	-
4500056412	9/5/2023	Muncie Reclamation and Supply Co		B200-BUS PWR TRAIN EQUIP	$ 88.96	-	-
4500056413	9/5/2023	Transit Holdings Inc		B120-BUS MECHANICAL PARTS	$ 365.81	-	-
4500056414	9/5/2023	Transit Holdings Inc		B130-BUS BODY	$ 8,299.08	-	-
4500056415	9/5/2023	Staples Contract & Commercial LLC		G200-OFFICE SUPPLIES	$ 437.50	-	-

Purchase Orders							
PO Number	PO Date	Name	Prime Business Certification	Material Group	PO Value	DBE Subcontracted Amount	Non DBE Subcontracted Amount
4500056416	9/5/2023	Freeby Signs		B250-BUS REPAIR PARTS	$ 84.10	-	-
4500056417	9/5/2023	Gillig LLC		B250-BUS REPAIR PARTS	$ 94.80	-	-
4500056418	9/5/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 2,862.78	-	-
4500056419	9/5/2023	Transit Holdings Inc		B250-BUS REPAIR PARTS	$ 892.42	-	-
4500056420	9/5/2023	Fastenal Company		R230-RAIL/LRV MECHANICAL	$ 3,585.92	-	-
4500056421	9/5/2023	Brown & Bigelow Inc		G250-NOVELTIES & AWARDS	$ 545.22	-	-
4500056422	9/5/2023	Brown & Bigelow Inc		G250-NOVELTIES & AWARDS	$ 2,055.11	-	-
4500056423	9/5/2023	Home Depot USA Inc		F110-SHOP/BLDG MACHINERY	$ 20.91	-	-
4500056424	9/5/2023	Clarran Inc.	DBE	G150-FASTENERS	$ 147.34	-	-
4500056425	9/5/2023	Gillig LLC		B160-BUS ELECTRICAL	$ 3,654.81	-	-
4500056426	9/5/2023	W.W. Grainger Inc		G190-SAFETY/MED SUPPLIES	$ 1,292.35	-	-
4500056427	9/5/2023	SC Commercial, LLC		A120-AUTO/TRUCK GASOLINE	$ 3,193.47	-	-
4500056428	9/5/2023	Supreme Oil Co.		A120-AUTO/TRUCK GASOLINE	$ 12,535.50	-	-
4500056429	9/5/2023	R.S. Hughes Co Inc		B130-BUS BODY	$ 552.00	-	-
4500056430	9/5/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 5,250.00	-	-
4500056431	9/5/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 9,000.00	-	-
4500056432	9/5/2023	Albertsons Companies, Inc.		P440-CATERING SERVICES	$ 99.98	-	-
4500056433	9/5/2023	Neyenesch Printers Inc	Small Business	G230-PRINTED MATERIALS	$ 3,040.32	-	-
4500056434	9/5/2023	Block, Inc.		I110-INFORMATION TECH	$ 768.00	-	-
4500056435	9/5/2023	Init Innovations in Transportation		G290-FARE REVENUE EQUIP	$ 7,860.50	-	-
4500056437	9/5/2023	Fastenal Company		G140-SHOP SUPPLIES	$ 1,905.45	-	-
4500056438	9/5/2023	Transit Holdings Inc		G150-FASTENERS	$ 1,013.70	-	-
4500056439	9/5/2023	Hector Genaro Solano Ramirez		P160-EQUIPMENT RENTALS	$ 845.00	-	-
4500056440	9/5/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 411.45	-	-
4500056441	9/5/2023	Mohawk Mfg & Supply Co		B160-BUS ELECTRICAL	$ 339.87	-	-
4500056442	9/5/2023	BriceHouse Outdoor Inc.		G230-PRINTED MATERIALS	$ 1,800.00	-	-
4500056443	9/5/2023	National Carwash Solutions Inc		G180-JANITORIAL SUPPLIES	$ 1,458.90	-	-
4500056444	9/5/2023	The Sherwin-Williams Company		F120-BUS/LRV PAINT BOOTHS	$ 686.78	-	-
4500056445	9/5/2023	TK Services Inc		B160-BUS ELECTRICAL	$ 138.66	-	-
4500056446	9/5/2023	Madden Construction Inc		P280-GENERAL SVC AGRMNTS	$ 995.95	-	-
4500056448	9/5/2023	Cummins Inc		B200-BUS PWR TRAIN EQUIP	$ 207.42	-	-