San Diego Metropolitan Transit System

Plan Requirement Guidelines For MTS
Right of Entry (ROE) Permit

REVISION: 3 DATE: March 31, 2026

Plans submitted to MTS for a Right of Entry (ROE) permit must comply with the applicable requirements that are listed on this document. For clarification purposes or for any questions regarding plan requirements, general consultant (RailPros) may be contacted via email at MTSPlanReview@sdmts.com.

Determining Agency Jurisdiction

Determining which agencies have jurisdiction within the project area is the first step towards determining which requirements will apply. The trolley tracks are owned by San Diego Trolley Inc, (SDTI); which is a subsidiary corporation of MTS. MTS owns the railroad right of way where the trolley tracks are located, except for the tracks on C Street, Park Boulevard, 12th Avenue, Commercial Street, Cuyamaca Street, and at public street grade crossings. MTS does not own the right of way in downtown San Diego between E Street and Ash Street, this right of way is owned by Catellus. In these areas, the entire width of the public or Catellus right of way is considered MTS operational limits.

MTS owns the railroad right of way on which the North County Transit District (NCTD) tracks are located between Downtown San Diego and the southern boundary of Del Mar. NCTD has jurisdiction over its tracks, and a Joint ROE Permit with MTS and NCTD is required where the MTS and NCTD tracks parallel each other between Rose Canyon and Downtown San Diego.

The MTS subsidiary corporation, San Diego and Arizona Eastern Railway (SD&AE), owns the tracks and right of way on the Coronado Branch within National City and Chula Vista, as well as the Desert Line from Division to Plaster City in East San Diego County and Imperial County. The Trolley Blue Line south of 12th & Imperial Station and the Trolley Orange Line from 12th & Imperial Station to Main Street in El Cajon are also considered part of the SD&AE.

Certain non-rail MTS facilities such as bus maintenance facilities may also require an (ROE) Permit.

Plan Requirements

General

1	Plans must include **MTS Standard Construction Notes** dated September 2020. For the joint MTS-NCTD Right of Entry segment and NCTD-only segment, plans must also include **NCTD General Notes** dated December 2018. (**MTS Standard Construction Notes** can be found Here)
2	Plans must be date stamped with a CAD date & time stamp at the time of plotting.

Plan Information

3	For projects that have a potential to impact MTS Bus Services, improvement plans and/or traffic control plans must show and label all MTS Bus Stops within the vicinity. If the permittee foresees the need to temporarily close an MTS Bus Stop, then the proposed Bus Stop closure must also labeled on plans.
4	The MTS Right of Way lines must be shown and dimensioned as **"XX' MTS R/W"** on all plan views and profile views in the plan set. If the project is located on C St, Park Blvd, 12th Ave, Commercial St, Cuyamaca St, or any other public street, show the city Right of Way lines, dimension the city right of way and label it as **"MTS OPERATIONAL LIMITS"** for all plan and profile views in the plan set.
5	Plans must provide enough information to locate oneself on the track; including street names, adequate topography, buildings, and landmarks. If a Trolley station is near the project site, Trolley station must be labeled on all plan views showing the station.
6	On projects in which the proposed improvements may impact the drainage patterns, or where the hydrology of the site needs to be considered for any reason, the plans must provide adequate information to determine the drainage patterns. Projects shall not change existing drainage patterns on the MTS R/W.
7	When work is taking place within the MTS Right of Way, plan and profile views must include dimensioning of clearances from the nearest track C/L to the proposed work limits. Dimension must be perpendicular to track.
8	Plan and profile views must include dimensioning of the offsets from the MTS R/W to the proposed work limits. Dimension must be perpendicular to R/W.
9	Plans including proposed improvements within the MTS R/W must provide adequate detail in the form of enlarged plans, cross sections and profiles along with any additional information required such as calculations, equipment layout, specifications and traffic control plans.
10	Traffic Control Plans for work at or adjacent to a railroad grade crossing must include the following note on the TCP cover sheet: **"NOTE: FOR ANY WORK ADJACENT TO RAILS, CONTRACTOR TO REFER TO THE REQUIREMENTS NOTED IN THE CALIFORNIA MUTCD PART 8, TRAFFIC CONTROL FOR RAILROAD AND LIGHT RAIL TRANSIT GRADE CROSSINGS".**

Plan Information Continued

11	If the project is near the Trolley tracks, include a caution note that points to each trolley track in plan and profile views. The note shall be in bold text and/or in a bold rectangular box. Caution note must read: **"CAUTION! HIGH VOLTAGE 650V DC TROLLEY OVERHEAD CATENARY SYSTEM"**
12	If the project is near the Trolley tracks, show the trolley catenary poles and label one as typical on each sheet or include the catenary poles in the legend. Use a unique symbol to differentiate the catenary poles from other power poles.
13	Plans with improvements within the R/W must show and label all existing underground and overhead utilities. Include whether they should be protected in place, relocated, or removed.
14	Where proposed work crosses the tracks or excavation is being performed within or directly adjacent to the MTS R/W, provide cross sections through the R/W showing proposed improvements, rails, ties, shoring zones, and influence lines from track loading. The shoring zones and influence lines from track loading must be based on the **MTS Excavation Requirements**, in order to determine whether underground improvement is within shoring zones 1, 2, 3, or 4. If excavation falls within one of the shoring zones, provide shoring plans and calculations per the requirements. (**MTS Excavation Requirements** can be found Here)

Track Representation

15	All plan views including railroad tracks must show each track as two lines representing rails with cross lines representing ties. Cross lines must be continuous across the two rails.
16	For all small-scale plan views, such as vicinity maps, tracks must be represented as one line representing rails and cross lines representing ties.
17	For all profile views, each track must be shown as a true scale cross section with rails through a tie.

Track Labeling Convention

18	For tracks used by the MTS trolley only, tracks must be labeled as **"MTS/SDTI TROLLEY TRACKS"**. For tracks used by the MTS trolley and SD&AE, label tracks as **"MTS/SDTI/SD&AE RR TRACKS"**. For tracks used by SD&AE only, label tracks as **"MTS/SD&AE RR TRACKS"**. For all NCTD tracks, label tracks as: **"NCTD OPERATIONS RR TRACKS"**. For the SD&AE Desert Line tracks, label tracks as **"SD&AE RR TRACKS"**. Label tracks on every sheet where they appear.

Improvements Crossing Tracks

19	Improvements crossing the tracks, (at grade, under or above), must include a station equation for the intersection of the proposed work with the Track Stationing and Milepost. **Example: SEWER STATION 10+00 = RR ES 100+00/MP 15.0**. For crossing under the track see the **Jack & Bore and other Trenchless Construction Plans** checklist section below. For improvements without stationing, omit the stationing portion of the label and retain the Track Stationing and Milepost portion.

Improvements Under a Trolley Bridge

20	Show a true cross section of the Trolley bridge and dimension and label vertical clearances between the bridge soffit and the proposed improvement's top surface. Also include equipment height and clearance from top of equipment to bridge soffit, if equipment is to be used under the bridge.

Entitlements and License Agreements

21	MTS requires all third parties installing permanent facilities in the MTS Right of Way or Operational Limits to have an entitlement or license agreement in addition to a right of entry permit. If permittee does not have an existing entitlement or license agreement with MTS at the project location, one must be obtained prior to permit issuance. Label existing or proposed entitlement or license agreement and provide width, type of work/improvements, and Recorded Document number**.** If no document number is available because the entitlement/license documentation has not yet been executed, include statement "ON FILE" in place of the document number. **Example 1: "EXISTING 20' SEWER ENTITLEMENT PER MTS DOC NO. ##-###-###" OR "20' SEWER ENTITLEMENT PER MTS DOC NO. ON FILE."** **Example 2: "20' SEWER PER LICENSE AGREEMENT MTS DOC NO.##-###-###" OR "20' SEWER PER MTS DOC NO. ON FILE"**

Utility Pole Relocation and Replacement

22	Plans that propose to relocate utility poles within the MTS R/W or poles that would affect the alignment of overhead lines within the MTS R/W must provide dimensions showing the offset from the original poles(s) to the new poles(s).

City of San Diego Plans

23	In the MTS-NCTD Joint ROE segment between E Street and Gilman Drive in Rose Canyon, add **RR Relations Specifications for NCTD relations with MTS** to the plans or specifications. (**RR Relations Specifications for NCTD relations with MTS** can be found Here)
24	If the project is outside the Joint ROE segment and is within one of the SD&AE segments, add **RR Relation Specifications for SD&AE relations with MTS** to the plans or specifications. (**RR Relation Specifications for SD&AE relations with MTS** can be found Here)

Jack & Bore and other Trenchless Construction Plans

25	For plans at all tracks, plans must include **MTS Jack and Bore Construction Notes** dated March 2026. (**MTS Jack and Bore Construction Notes** can be found Here)
26	For plans within the MTS-NCTD Joint ROE Segment or at NCTD Tracks only, plans must also include "**Additional Jack and Bore Construction Notes within NCTD Operations**" dated January 2014. (**Additional Jack and Bore Construction Notes within NCTD Operations** can be found Here)

Jack & Bore and other Trenchless Construction Plans Continued

27	All underground utilities under railroad tracks shall be encased in a larger pipe or conduit called the "casing pipe." For construction of pipelines and utilities with a non-steel casing pipe, submit structural calculations for the casing pipe showing that the casing can withstand Cooper E80 track surcharge loading per the AREMA Manual for Railway Engineering. Include AREMA Plan Data Table on the same sheet as pipe construction with all data including casing thickness, casing depth, casing slope, casing length, and casing vents (applicable to carrier pipes carrying flammable or hazardous substances) filled out.
28	For construction of pipelines and utilities with a steel casing pipe, casing pipe must have a wall thickness that meets or exceeds the minimum thickness per AREMA Table 1-5-2. Include AREMA Plan Data Table on the same sheet as pipe construction with all data including casing thickness, casing depth, casing slope, casing length, and casing vents (applicable to carrier pipes carrying flammable or hazardous substances) filled out.
29	Casing pipes under MTS/SD&AE Tracks only must have a minimum depth of 5.5' below the base of rail for the entire length of R/W and 10' beyond. Casing pipes under the MTS-NCTD Joint ROE Segment or under NCTD Tracks only must have a minimum depth of 6' below the base of rail for the entire length of R/W and 10' beyond.
30	Casing pipes must have a minimum slope of 1% unless the fluid being carried requires a shallower slope based on jurisdictional design. Casing pipes must extend the full length of the R/W plus 10' beyond. Casing pipes must have vents if flammable or hazardous fluids are being carried. For casing pipes under the MTS-NCTD Joint ROE Segment or under NCTD Tracks only, sewer pipes are included in the hazardous fluid category.
31	Jacking and receiving pits are not allowed within the RR R/W unless approved by MTS.
32	Pit sizes must be shown and dimensioned from RR R/W to the nearest pit edge.
33	Proposed underground improvements must be properly stationed and a station equation must be provided, as shown on note 19 under **Improvements Crossing Tracks** on this document.
34	Test borings or other soil investigations, analysis, and recommendations, approved by MTS, shall be made to determine the nature of the underlying material for all pipe crossings with casing pipe sizes greater than or equal to 24 inches in diameter under track(s) and where the casing pipe depth is 15 feet or less below the base of rail elevation, or when, in the judgment of MTS, they are necessary to determine the adequacy of the design and construction of pipe crossings. See **MTS Jack and Bore Design Criteria** for comprehensive geotechnical requirements.

Note on Traffic Control at Railroad Grade Crossings

35	Traffic Control Plans at an at-grade crossing shall not propose to reroute traffic into oncoming lanes where it will not be protected by crossing warning devices.

Bikeway Projects

36	Projects proposing to construct new bikeways across the MTS Right of Way or Operational Limits at grade must first perform a grade separation analysis to determine the feasibility of grade-separating the crossing. If grade separation is feasible, an at-grade bikeway crossing will not be permitted. If grade separation is not feasible, the at-grade bikeway must cross the tracks at a 90-degree angle. The project may be responsible for performing maintenance or upgrades at an existing crossing to ensure a safe crossing surface for bikes.

Excavation and shoring adjacent to tracks

37	Projects proposing excavation in MTS Right of Way, MTS Railroad Operational Limits, or otherwise in proximity to tracks must provide detailed plans showing all grading, excavation, trenching, and shoring within the vicinity. In plan views, dimension the minimum offset from the nearest edge of grading, excavation, trenching, or shoring to the nearest track centerline. In the case of trenching, also dimension width of trench.
38	Projects requiring detailed plans per note 37 on this document must also provide section views through the tracks and proposed excavation, trenching, and/or shoring. Tracks must be shown per note 17 under **Track Representation** on this document and labeled per note 18 under **Track Labeling Convention** on this document. Dimension the horizontal offset from the nearest excavation, trenching, or shoring to the nearest track centerline. Dimension the vertical elevation difference from the bottom of excavation or trenching to the top of rail of the nearest track. For trenching, dimension the width and depth of the trench. Show the track loading influence lines and shoring zones lines from the nearest track per note 14 under **Plan Information** on this document. If the excavation or trenching falls within the shoring or sheet piling zones, provide shoring plans and calculations to MTS for review. Shoring design must meet the requirements of the **MTS Excavation Requirements**. (**MTS Excavation Requirements** can be found Here)
39	In all cases where excavation, trenching, or shoring will be taking place in the shoring zones, MTS will require track settlement monitoring during construction. Exact track monitoring requirements will be determined during the plan review process. When track monitoring is required, it must meet the following guidelines: Rail elevations must be surveyed prior to, during, and immediately after shoring installation, excavation, and shoring removal. Both rails of each track shall be monitored at 10’ intervals along the entire length of the excavation, trenching, or shoring and at 10’ and 20‘ out from either end of the excavation, trenching, or shoring, unless otherwise directed by MTS. For trenchless utility construction under tracks, both rails of each track shall be monitored at the point of crossing and at 10’ and 20‘ out in each direction, from the crossing point, unless otherwise directed by MTS. Top of rail elevations shall be recorded with an accuracy of one (1) one-hundredth of a foot (0.01’) and shall be submitted to MTS for review within 24 hours of the measurement being taken. Surveys shall be conducted: a. Prior to construction to establish a baseline, no greater than 2 weeks before start of construction. b. Three times a day for the duration of the construction. Times shall be spread uniformly during the work period. c. Once per day for 1 week following 'stable' condition with completion of all construction activities. If no movement, no further monitoring is needed. MTS may require more frequent monitoring at certain locations such as bridge and grade crossing approaches, or locations with soft soil conditions See **MTS Excavation Requirements** for contractor obligations regarding development of contingency plans, track displacement threshold values, and reporting requirements.