

PART 2 – PRODUCTS (Not used)**PART 3 – EXECUTION****3.1 CONSTRUCTION SUPERVISION AND METHODS**

The Contractor is solely responsible for all construction means, methods, techniques, and procedures and for coordinating all portions of the Work under the Contract. This shall include the following:

- A. The Contractor shall establish, implement and maintain an effective IIPP in accordance with CCR Title 8 Section 3203. Contractor shall at all times conduct its operations in accordance with the IIPP and in such a manner as to avoid risk of bodily harm to persons or damage to property and shall promptly take all reasonable precautions to safeguard against such risks and shall make regular safety inspections of its operations. Contractor shall be solely responsible for the discovery, determination and correction of any unsafe conditions related to Contractor's performance of the Work.
- B. The Contractor shall secure all Work areas by barricade in accordance with local and State requirements as applicable at the end of each day. All excavations shall be covered to prevent tripping hazard.
- C. In the event the Authority discovers that the Contractor has created an unsafe condition or has failed to restore the track to service at the specified time, SCRRA with its own forces may perform the remedial Work to secure the required safety and train performance. Such remedial Work will be at the sole discretion of the Authority; however, Contractor may perform such Work if agreed to by SCRRA. If this action is required, the Authority may unilaterally terminate Work under the Contract, and will pay only for the quantities of Work actually performed, less the cost of SCRRA's remedial Work. In the event Work is halted under this circumstance, the Mobilization line item will not be paid. In the event that Work is not halted, the Contractor must take immediate steps to correct the situation. There will be no extra payment for Work required to correct unsafe conditions or to promptly restore track to service. For purposes of this Section, an unsafe condition is defined as creating a track condition which does not meet the FRA Track Safety Standards for Class of Track, willful damage to facilities or material, or any other unsafe condition for trains, employees, passengers or the public, at the sole determination of the Authority and/or SCRRA.
- D. Prior to operating cranes on the Site, all crane operators shall have successfully completed testing that verifies the crane operator's ability to read and understand the load chart for the equipment to be operated. This testing may be performed by an independent certifying agency or a qualified member of the Contractor's supervisory staff who is acceptable to the Authority, has a minimum of five years heavy civil construction experience, and can satisfactorily demonstrate the ability to read and understand load charts and rigging tables to the Authority when requested, without prior notice. Written records of this testing shall be maintained on the Site and made available to the Authority for review without prior notice. Re-certification is required for any crane involved in an incident involving upset, overloading, side pulling, shock loading, or support failure. Re-certification and

written acceptance by the manufacturer is also required for any modification to a crane. All crane operators shall be licensed by the Authority having jurisdiction for the equipment type to be operated and copies of said licenses shall be submitted to the Authority. All crane operations where the load is beyond the direct view of the operator shall be observed by a signal person who can directly observe the load and be observed by the operator. The Contractor shall stop load movement in the event the signal Person is unable to observe the load or fails to continuously observe the load and signal the operator.

- E. All excavation operations shall be under the immediate supervision of a competent person, as defined in CCR Title 8, who is fully familiar with the requirements for safe excavation procedures and capable of enforcing strict compliance with the ground support system plan.
- F. If required by regulation, the Contractor shall provide air monitoring including operating and maintaining a gas monitoring system with equipment capable of providing printed logs of gas tests. Begin testing for toxic and explosive gases as soon as the excavation or drilled hole has progressed to a level of five feet below surface level. Test air quality in the most stagnant portions of excavation to ensure there is no accumulation of explosive or other dangerous gases. The Contractor shall provide training to construction personnel, subject to exposure during the course of excavation, prior to entering any excavation sites and provide necessary yearly refresher training.

PART 4 – MEASUREMENT AND PAYMENT

Work of this Section is considered incidental to Work under other payment items and no separate measurement or payment will be made to the Contractor for Work of this Section.

END OF SECTION 01 35 23

SECTION 01 35 44
ENVIRONMENTAL SAFETY AND HEALTH PROGRAM

PART 1 - GENERAL

1.1 SUMMARY

Contaminated and Hazardous Soils may be encountered during the Work. The Contractor shall be solely responsible for ensuring that all Work performed when these Soils are present complies with all applicable Federal, State, local occupational safety regulations and SCRRRA rules and requirements. In order to properly handle these types of soil, the Contractor shall prepare and implement an Environmental Safety and Health Program and require that all its Subcontractors perform excavation and handling of soils in full compliance with the requirements of the Environmental Safety and Health Program.

1.2 RELATED REQUIREMENTS

- A. Section 01 14 00, Work Restrictions
- B. Section 01 35 23, OCTA Site Safety Requirements
- C. California Code of Regulations (CCR) Titles 4 & 8, and the Code of Federal Regulations (CFR) Title 29
- D. CalOSHA: California State Occupational Safety and Health Administration
- E. OSHA: Federal Occupational Safety and Health Administration

1.3 PROCEDURE

- A. If the Contractor encounters substances during performance of the Work that are reasonably believed to be hazardous as defined by the California Health and Safety Code, the Contractor shall notify the Authority immediately, submitting written documentation of the incident and notification within 24 hours. Excavation in the immediate area of the suspected hazardous substances shall be suspended until authorization to resume is received. Equitable adjustments, if any, for time lost or costs incurred as a result of such encounters will be made in accordance with Contract Change Order Procedures. The Authority reserves the right to use other labor forces for exploratory work to determine the nature and extent of the hazardous substances and to remove the substances from the area.
- B. For contaminated soils the Contractor shall be responsible for coordination with regulatory agencies, sampling, loading, unloading, transporting all soils to a designated site for testing and to a stockpile with proper protection, and legal disposal of the contaminated soil. All import and backfill with suitable material shall be done by the Contractor to restore the site as directed by the Authority associated Change Order approved by the Authority.

- C. For lead-containing materials, the Contractor shall submit a Work plan to the Authority for review and approval prior to any demolition work. All Work shall be done in full compliance with requirements of the California Code of Regulations, Title 8 specifically Section 5192, Hazardous Waste Operations and Emergency Response.
- D. For asbestos containing materials, the Contractor shall submit a Work plan to the Authority for review and approval prior to any disturbance or removal work. All Work shall be done in full compliance with Federal and State environmental health and safety requirements and requirements of the Southern California Air Quality Management District (SCAQMD), Rule 1403.

1.4 SUBMITTALS

- A. An effectively written and coherent Site Specific Safety and Health Plan, as defined in CCR Title 8, prior to the start of construction.
- B. Certificates of training (minimum initial 24-hour hazardous waste training and eight-hour annual refresher), respiratory protection and fit-testing, and medical clearance, before start-up of excavation and drilling activities if required.
- C. Certificate of training (Hazardous Waste Training and eight-hour supervisory training), experience, and credentials of the Site Safety and Health Officer.
- D. Monthly status report of contaminated soil management, including excavated quantities of contaminated soil and work performed using Personal Protective Equipment (PPE). This report must include updated quantities of excavated contaminated soils, and the date, time, number of affected workers, and total number of hours the Contractor performed work in Level C Protection.
- E. The Work plan for removal of lead-contained material shall include the following:
 - 1. A state lead-licensed Contractor and persons shall perform demolition, handling, removal, and monitoring of lead-contained materials.
 - 2. Air monitoring shall be performed before and during each lead-related activity. The Contractor performing demolition work shall not conduct monitoring work, during or after the completion of all lead-related activities.

PART 2 - PRODUCTS

2.1 MATERIALS

PPE and monitoring equipment is to conform to requirements set forth by CAL/OSHA, Federal-OSHA, SCAQMD, DTSC, other agencies having jurisdiction, and the Contractor's Environmental Safety and Health Program.

2.2 HEPA FILTERS

Provide high-efficiency particulate air (HEPA) filters for persons working on lead-contained materials.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Implement an Environmental Safety and Health Plan for removal of lead-containing material, and excavation and handling of Contaminated and California Hazardous Soils certified by a Certified Industrial Hygienist (CIH) licensed by the American Board of Industrial Hygiene.
- B. Select a team of individuals to be included in the Environmental Safety and Health Program. These individuals must be hazardous-waste trained, medically qualified, and fit-tested with an appropriate respirator to drill, excavate, and handle Contaminated and California Hazardous Soils. Prior to drilling, excavation, or handling of Contaminated and California Hazardous Soils, submit a list of individuals that are part of this team, including their current certificates (training, medical clearance, and respiratory fit-testing). Include their names and titles/positions. Any additional individuals that may handle Contaminated and California Hazardous Soils shall be included in the Environmental Safety and Health Program, including replacement individuals and any new position that require Contaminated and California Hazardous Soil handling. Any handling of Contaminated and California Hazardous Soils must be performed by qualified individuals enrolled in the Environmental Safety and Health Program.
- C. Designate a full-time Site Safety and Health Officer to recognize hazards, and implement and manage the Environmental Safety and Health Program. The Safety and Health Officer can be a Safety Engineer, provided the individual is qualified to conduct air monitoring and identify environmental hazards, and meets all training requirements set forth in 8 CCR 5192 (e), in addition to the qualifications set forth in the Construction Safety and Security Manual. As a minimum, the Safety and Health Officer shall (a) monitor air quality and hazards to personnel and the Work area during removal of lead-containing material and excavation and handling of Contaminated and California Hazardous Soils and Groundwater, and (b) assign PPE and other equipment necessary for the implementation of the Safety and Health Program.
- D. Supply a direct reading Organic Volatile Analyzer equipped with a Photo-ionization Detector (PID) and an initial supply of PPE readily available for use by the team. Replenish the PPE to ensure a supply of PPE is always available to prevent any delays.
- E. Supply high efficiency particulate air (HEPA) filters for persons working on removal of lead-contained materials.
- F. The Contractor is responsible for any delays associated with lack of preparation, PPE, trained and qualified personnel.

3.2 PERFORMANCE

- A. Provide, without delay to Work, hazardous waste-trained, medically qualified, and respirator-fitted workers, and PPE and other equipment, as necessary for implementation and maintenance of the Environmental Safety and Health Program.
- B. The Authority at its cost will have sole right and responsibility to perform soil monitoring and sampling for disposal purposes. If the sampled soil is found to be clean, the Contractor shall dispose of it in the same manner and location as used for other clean soil removed from the site. The Contractor shall be responsible for loading, unloading, and transporting all soils to the designated area. The contaminated and clean soils shall be stored in separated piles. The designated area shall be protected with Visquene sheets covering the ground, and fenced off to prevent trespassing. The soils shall be covered with Visquene sheets prior to legally disposing of them from the site.
- C. In the event the Contractor encounters or suspects contamination, promptly implement measures described in the Contractor Site-Specific Safety and Health Plan, and immediately notify the Authority or its designee. The Contractor must use the team; that is, those individuals enrolled in the Environmental Safety and Health Program. Ventilation shall be modified, if necessary or if directed by the Authority, to increase airflow and effectively reduce air contaminants prior to and during removal of lead-containing materials, excavation, and handling of Contaminated and California Hazardous Soils. If Excluded Hazardous Waste Operations are required, the Contractor shall adequately protect the safety and health of its employees, and Subcontractors' employees while working in areas not affected.
- D. The Contractor shall be responsible for legal removal of lead-containing materials. The Contractor shall employ a state lead-licensed Contractor for performing such work including demolition, handling, removal, and monitoring of lead-contained materials. All work shall be done in full compliance with requirements of the California Code of Regulations, Title 8, Sections 1532.1 and 5198.
- E. The wet method for removal of lead-contained materials shall be used to prevent dust. Lead dust shall be properly disposed of. Air monitoring shall be performed before, during, and after each lead-related activity. A third party without conflict of interest with the Contractor shall conduct the air and clearance monitoring. Surface clearance monitoring shall be conducted after completion of the removal of lead materials. The purpose of the air monitoring is to ascertain that the building air quality is maintained during and after the completion of the Project. All air monitoring results shall be submitted to the Authority's Corporate Safety representative for review within 24 hours of receipt from the laboratory.
- F. The Contractor is responsible for the safety and health of its employees and its Subcontractors. The Contractor shall conduct air monitoring to ensure compliance with monitoring requirements under the Environmental Safety and Health Program, the Site-Specific Safety and Health Plan, CAL/OSHA, and any other local, state, or federal requirements.

- G. Dust control and suppression mitigation measures shall be employed by the Contractor. The Authority reserves the right to conduct air sampling and monitoring to determine the required minimum level of protection.

PART 4 – MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Contaminated Materials Removal will be measured by the unit or fraction thereof completed in accordance with the Contract Documents, as agreed in the executed Change Directive or Change Order and as measured by the Engineer.
- B. All other Work of this Section is considered incidental to Work under other payment items and no separate measurement or payment will be made to the Contractor therefor.

4.02 PAYMENT

- A. Contaminated Materials Removal completed in accordance with the Contract the Contract Documents, will be paid as agreed in the executed Change Directive or Change Order. This price shall include full compensation for furnishing all labor, Materials, tools, equipment, supplies, supervision, and incidentals, and doing all work, as shown on the Plans, and as specified in these Specifications.

END OF SECTION 01 35 44

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SECTION 01 40 00 QUALITY REQUIREMENTS

Part 1 - GENERAL

1.1 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with specified or indicated Work requirements. These services do not relieve the Contractor of responsibility for compliance with Contract Documents requirements.
- C. Specific tests and inspection requirements are not specified in this Section but rather indicated or included elsewhere in the Contract Drawings (Plans) and Specifications.

1.2 RELATED REQUIREMENTS

- A. Specific quality assurance and quality control requirements for individual construction activities are specified in the Specifications Sections that specify those activities and may also cover production of standard products.
- B. Requirements for the Contractor to provide quality assurance and quality control services required by the Authority, or authorities having jurisdiction, are not limited by provisions of this Section.
- C. Specified tests, inspections and related actions do not limit Contractor's other quality-assurance and quality-control procedures that facilitate compliance with the Contract Documents requirements.

1.3 DEFINITIONS

- A. Quality Assurance: Activities, actions, and procedures performed prior to and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with the Contract Documents' requirements.
- B. Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and that completed construction comply with the Contract Documents' requirements. Services do not include contract enforcement activities performed by the Authority.
- C. Mockups: Full-size, physical assemblies constructed on-site to verify selections made under submittals, to demonstrate aesthetic effects and, the expected qualities of products and materials, and to review details of construction,

coordination, testing, or operation; mockups are not Samples. Approved mockups establish the standard by which the Work will be judged.

- D. Preconstruction Testing: Tests and inspections that are performed specifically for the Project, before products and materials are incorporated into the Work in order to verify performance or compliance with specified criteria.
- E. Product Testing: Tests and inspections that are performed by a Nationally Recognized Testing Laboratory (NRTL), a National Voluntary Laboratory Accreditation Program (NVLAP), or other testing agency qualified to conduct product testing and acceptable to the Authority and all other authorities having jurisdiction, to establish product performance and compliance with specified requirements.
- F. Source Quality Control Testing: Tests and inspections that are performed at the source (e.g., plant, mill, factory, or shop).
- G. Field Quality Control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- H. Testing Agency: An entity engaged to perform specific tests, inspections, or both. "Testing laboratory" shall mean the same as testing agency.
- I. Installer/Applicator/Erector: The Contractor or another entity engaged by the Contractor as an employee, or Subcontractor, to perform a particular construction operation, including installation, erection, application, or similar operations.
 - 1. Use of trade-specific terminology in referring to a trade or entity does not require that certain construction activities be performed by an accredited or unionized individual, or that requirements specified apply exclusively to specific trade(s).
- J. Experienced: When used with an entity of individual, 'experienced' means having successfully completed a minimum of five previous projects similar in nature, size, and extent of the Work; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.4 CONFLICTING REQUIREMENTS

- A. Referenced Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. The Contractor shall refer conflicting requirements to the Authority for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed by the Contractor. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. The Contractor shall refer uncertainties to the Authority for a decision before proceeding.

- C. Items indicated on the Contract Drawings (Plans) but not included in the Specifications, or included in the Specifications but not indicated on the Plans, shall have the same effect as if indicated or included in both the Plans and Specifications.
 - 1. In case of conflict or inconsistency between the Plans and Specifications, Contractor shall request additional information or interpretation; any adjustment by Contractor without such official determination shall be at Contractor's own risk and expense.

1.5 REGULATORY REQUIREMENTS

- A. Comply with all applicable requirements of the laws, codes, ordinances, and regulations of Federal, State, and Municipal authorities having jurisdiction, and obtain necessary approvals from all such authorities.

1.6 INFORMATIONAL SUBMITTALS

- A. Contractor Quality Control Plan
 - 1. Contractor plan shall include the elements below:
 - a. Management Responsibility
 - b. Documented Quality Management System
 - c. Design Control
 - d. Document Control
 - e. Purchasing
 - f. Product Identification and Traceability
 - g. Process Control
 - h. Inspection and Testing
 - i. Inspection, Measuring, and Test Equipment
 - j. Inspection and Test Status
 - k. Nonconformance
 - l. Corrective Action
 - m. Quality Records
 - n. Quality Audits
 - o. Training

1.7 QUALITY ASSURANCE

- A. Contractor's responsibilities include all of the following:
 - 1. Provide test samples that are representative of proposed products and construction.
 - 2. Submit specimens in a timely manner with sufficient time for testing and

analyzing results to prevent delaying the Work.

3. Provide sizes and configurations of site-assembled test assemblies and mockups, as well as laboratory mockups to adequately demonstrate the capability of products to comply with specified performance requirements.
4. Build site-assembled test assemblies and mockups using installers who will perform the same tasks for the completed Work.
5. Build laboratory mockups at testing facility using personnel, mockups and methods of construction indicated for the completed Work.
6. When testing is complete, remove test specimens, assemblies, and mockups. Do not reuse such products on the Project.

1.8 QUALITY CONTROL

- A. Contractor Responsibilities: Quality Control tests and inspections shall be the sole responsibility of the Contractor. The Contractor shall perform additional quality control activities necessary to verify that the Work complies with specified requirements.
 1. Unless otherwise indicated elsewhere in the Contract Documents, Contractor shall provide quality control services required to verify that the Work complies with the Contract Document requirements, whether Specified or not, in addition to testing and inspections required by Authorities having jurisdiction (e.g. fire marshal, building official, Caltrans, OCTA, SCRRRA, BNSF, etc.).
 2. Where quality control services are indicated as the Contractor's responsibility, the Contractor shall engage a qualified testing agency to perform the required quality control services.
 - a. Contractor shall not employ same entity engaged by Owner for testing and inspection unless agreed to, in writing, by Owner.
 - b. Contractor shall notify testing agencies at least 48 hours in advance of time when the Work that requires testing or inspecting will be performed.
 - c. Contractor shall submit a certified report, in duplicate, of each quality-control service performed.
 - d. Contractor shall submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.

3. Any testing or inspecting requested by Contractor but not required by the Contract Documents shall be Contractor's responsibility and sole expense.
- B. **Manufacturer Field Services:** Where indicated, engage a factory-authorized service representative to observe and inspect field-assembled components and equipment installation, including connections to utilities/services. Report all results in writing.
- C. **Manufacturer Technical Services:** Where indicated, engage a manufacturer's technical representative to observe and inspect the Work. Such services include participation in pre-installation conferences, examination of substrates and conditions, verification of materials used, observation of installer's activities, inspection of completed portions of the Work, and submission of written reports.
- D. **Re-Testing and Re-Inspection:** Regardless of whether original tests or inspections were Contractor's responsibility, Contractor shall provide quality control services, including re-testing and re-inspection, for any construction that replaced portions of the Work that failed to comply with the Contract Documents.
- E. **Testing Agency Responsibilities:** Testing Agency shall cooperate with all parties in performance of Testing Agency's duties. Testing Agency shall provide qualified personnel to perform required tests and inspections.
 1. Notify the Construction Manager and Contractor promptly of irregularities or deficiencies observed in the Work during the performance of Testing Agency's services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections, and state in each report whether the tested and inspected work complies with or deviates from the specified requirements.
 4. Submit a certified test report, in duplicate, of each test, inspection, and similar quality-control service through the Contractor.
 5. Do not release, revoke, alter, or increase the Contract Documents requirements, or approve or accept any portion of the Work.
 6. Do not, in any way, perform any duties of the Contractor.
- F. **Associated Services:** Cooperate with testing agencies performing required tests, inspections, and similar quality control services, and provide reasonable auxiliary services as requested.

1. See also Quality Coordination procedures for further description of associated quality-control services.

1.9 QUALITY COORDINATION

- A. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Section 01 33 00, Submittal Procedures.
- B. Notify the Authority at least 48 hours in advance of time when Work that requires testing or inspecting will be performed. Also provide the following in support of testing and inspection services:
 1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist testing agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Preliminary design mix proposed for use for material mixes that may require production control by testing agency.
 6. Security and protection for samples and for testing and inspecting equipment at Project site.
- C. Coordination: The Authority may engage a qualified testing agency to perform certain testing and inspection services for purposes of verifying quality and accepting completed portions of the Work. Contractor shall coordinate the sequence of activities to accommodate required quality assurance and quality control services with a minimum of delay and to avoid the necessity of removing and replacing construction to accommodate testing and inspecting. Cooperate with agencies performing required tests, inspections, and similar quality control services, and provide reasonable auxiliary services as requested.
- D. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents, which shall be submitted for information purposes. Submit the schedule within 30 days of the Authority's Notice to Proceed.

1.10 SOURCE OF SUPPLY AND QUALITY OF MATERIALS

- A. The Authority shall approve the source of supply of each type of the materials supplied by the Contractor before the Contractor or subcontractor purchases or delivers these materials to the Project. Promptly after receiving the Contract award, the Contractor shall notify the Authority of all proposed material sources. If it is found after trial that sources of supply previously approved do not produce

uniform and satisfactory products, or if the product from any source proves unacceptable at any time, the Contractor shall furnish materials from other sources as approved by the Authority.

- B. Only materials conforming to Specifications and approved in advance by the Authority shall be used in the Work. All material being used shall be subject to inspection or test at any time during their preparation or use. NO materials or products determined to be unsatisfactory can be used in the Work.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.1 INSPECTION AND TESTING PROCEDURES

- A. The Contractor shall provide the Authority with full access to the Work and reasonable time for inspection for ascertaining whether or not the Work is performed in accordance with the requirements and intent of the Contract. No Work shall be covered or materials used without making the Work products or materials available for inspection by the Authority and any Work that is required to be uncovered, removed or replaced shall be at the Contractor's expense. Inspection will not relieve the Contractor from the responsibility of the quality of this Work and obligation to perform the Work in accordance with the requirements of these Contract Documents.
- B. All materials and every process of manufacture and construction shall be subject to inspection at all times. The Authority and his designated representatives shall have free access to all such operations. The Contractor shall furnish necessary materials and the Authority shall have the right to select suitable samples of materials for testing or examination which the Contractor shall supply without charge. In case such samples must be shipped to some other point for inspection or testing, the Contractor shall box or crate samples as necessary and shall deliver them to points designated for shipment without charge. Omission of inspection shall not relieve the Contractor of its obligations to perform the Work required by the Plans and Specifications. Non-conforming or defective materials not in compliance with Contract requirements shall be removed promptly from the vicinity of the Worksite, and the Contractor, at its sole expense, shall promptly remove, reconstruct, replace, and make good any defective Work. Oversight or error in the judgment of inspectors, or previous acceptance of the Work shall not relieve the Contractor from the obligation to correct any defects whenever discovered at the Contractor's sole expense. Authority and the other authorized agencies may inspect at any time the Contractor's production of Goods at off-site facilities, including any manufacturer's plant.
- C. Adequate facilities shall be made available for the necessary inspections and free access to all parts of the Work shall be available at all reasonable times. The Contractor shall have appropriate provisions inserted into each Subcontract it enters into providing for document, facility or in-plant Inspection by the Authority.

- D. In the event the Contractor does not correct nonconforming Work or remove rejected materials within a reasonable time fixed by written notice, the Authority may direct removals and corrections be performed by other Contractors. The charges for such removals and corrections shall be deducted from the Contractor's payment due under this Contract or may be paid for by the Contractor's bonds held for this Contract.
- E. All inspection by the Engineer is for the protection of the Authority and its interest and shall not relieve the Contractor of responsibility for performing work in accordance with the Contract Documents. After completing the Work, a final inspection will be made and any previous inspection or acceptance will not preclude rejection at the time of final inspection for any item that is not satisfactory to the Authority or not in accordance with the Contract Documents.
- F. In the event, within such period of time as may be prescribed by law or by the terms of any applicable special warranty required by the Contract Document, whichever is longer, any of the Work is found to be defective or not in accordance with the Contract Documents, the Contractor shall correct it promptly after receipt of a written notice from the Authority. This obligation shall survive acceptance of the Work or termination of the Contract. In the event the Authority prefers to accept or not require correction of defective or nonconforming Work, the Authority may do so instead of requiring its removal and correction, in which case the Authority shall determine an appropriate sum to be deducted from the Contract price or otherwise charged against the Contractor, which determination shall be final and binding upon the Parties. Such monetary adjustment shall be effected whether or not final payment has been made.
- G. All defective Work, which has been rejected, shall be remedied or removed and replaced by the Contractor at its own expense in a manner acceptable to the Authority.
- H. The Authority may charge the Contractor for any additional costs it incurs for tests and Inspections, wherever and whenever Work is not ready at the time indicated by the Contractor's notice or when an additional reinspection is necessitated by prior rejection.
- I. The Authority will have access, at all reasonable times, to the Contractor's documents, calculations, supporting materials, data, and information concerning the Work, including computer programs and printouts, which supportive information Authority may determine is required to review the Work properly and expeditiously.

3.2 TEST AND INSPECTION LOG

- A. Contractor shall prepare a record of tests and inspections, and shall include the following:
 - 1. Date test or inspection was conducted
 - 2. Description of the Work tested or inspected

3. An Inspection Checklist appropriate to the portion of Work
 4. Date test or inspection results were transmitted to Authority
 5. Identification of testing agency or special inspector conducting the particular test or inspection service
- B. Maintain log at Project site. The Contractor shall post changes and modifications as they occur. The Contractor shall provide access to the test and inspection log for the Authority's reference during normal working hours. No notice will be required for Authority's access to Contractor's test and inspection the logs and associated documents.

3.3 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, the Contractor shall repair damaged construction and restore substrates and finishes.
- B. The Contractor shall provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as nearly invisible as possible.
- C. The Contractor shall protect construction exposed by or for quality-control service activities.
- D. Repair and protection are the sole responsibility of the Contractor, regardless of the assignment of responsibility for quality-control services.

3.4 AUTHORITY'S REMEDIES FOR DEFICIENT WORK

If any Work provided by the Contractor is determined to be deficient, the Authority shall provide written notice to the Contractor of enumerating such deficiencies, and may thereafter do one or more of the following:

- A. Require the Contractor to promptly segregate and remove rejected Work from the Project at Contractor's own expense and without any extension of Contract Time;
- B. Require the Contractor re-perform repair or replace Work, products, materials or other items or items at Contractor's own expense;
- C. Withhold payments otherwise due to Contractor hereunder;
- D. Have remedial Work performed and products or materials provided by others at the sole expense of the Contractor.
- E. Terminate the Contract and obtain the remedies provided for therein.

- F. Corrected or remedial Work and replaced or repaired products or materials shall be subject to all of the Contract Documents requirements, including without limitation all standards of performance set forth in this Contract.
- G. Costs for re-testing and re-inspecting construction that replaces or is necessitated by work that failed to comply with the Contract Documents will be charged to Contractor and the Contract Price will be adjusted by Change Order.

PART 4 – MEASUREMENT AND PAYMENT

- A. Work of this Section (including testing) is considered incidental to Work under other payment items and no separate measurement or payment will be made to the Contractor for Work of this Section.
- B. Testing and inspection performed by the Contractor and/or the Contractor's approved Testing Agency shall be Contractor's responsibility and sole expense; and considered incidental to Work requiring testing and inspection. No separate measurement or payment will be made to the Contractor for testing and inspection.

END OF SECTION 01 40 00

SECTION 01 43 23
CONTRACTOR QUALIFICATIONS AND REQUIREMENTS

PART 1 GENERAL

1.1 SUMMARY

This Section outlines requirements and provisions to which the Contractor shall provide professional construction staff and equipment capable of safely executing the Work required by these Contract Documents part of which are on an operating railroad system, with little or no disruption to the passenger/commuter and freight operations, as well as other public facilities.

1.2 RELATED REQUIREMENTS

- A. Section 01 14 16, Coordination with SCRRA
- B. Section 01 31 00, Project Management and Coordination
- C. Section 01 35 23, OCTA Site Safety Requirements

1.3 GOVERNING REGULATIONS

- A. SCRRA: General Code of Operating Rules for Maintenance of Way
- B. SCRRA: Track Maintenance, Right-of-Way and Structures Engineering Instructions
- C. FRA: Title 49 CFR Part 213 and Part 214
- D. OSHA: Occupational Safety and Health Administration Regulations
- E. CPUC: California Public Utility Commission General Orders

1.4 SUBMITTALS

- A. The Contractor shall submit the resumes for all personnel listed herein to the Authority within 15 days after the Notice to Proceed. Each resume shall provide sufficient detail to demonstrate compliance with the appropriate specifications. Submit the number of each classification of employee to be assigned to the Work and the duration of their assignments.
- B. The Authority will review the submitted personnel resumes to determine the acceptability of qualifications and experience. The Contractor shall not resubmit personnel that are deemed unacceptable by the Authority.

- C. The Contractor shall submit a list of the equipment proposed to be used to the Authority for approval. This list shall have sufficient detail to demonstrate compliance with the appropriate Specification Sections.

1.5 RAILROAD CONSTRUCTION PROJECT MANAGER

- A. The Contractor shall have a Railroad Construction Project Manager who will manage and coordinate the overall aspects of the track, station, grade crossing, site civil, systems, and bridge construction. The Railroad Construction Project Manager's qualifications and experience must include the following:
 - 1. At least five years of progressively more responsible engineering, construction, and maintenance experience on a wide variety of Railroad projects for a Class 1 or Commuter Railroad. A major portion of the individual's experience should include construction and maintenance work on a freight or commuter railroad with moderate to heavy traffic and limited work windows.
 - 2. Knowledge of FRA standards and qualified under FRA Track Safety Standards, Part 213.7, applicable CPUC General Orders, the General Code of Operating Rules, SCRRA Track Maintenance, Right-of-Way, and Structures Engineering Instructions, SCRRA Standard Plans, and Railroad Roadway Worker Protection rules and regulations.
 - 3. A demonstrated ability to work safely and supervise individuals in safe work.
 - 4. Previous positions and experience supervising and planning work activities of construction superintendents, project engineers, and support personnel foreman and crews.
 - 5. The ability to read and understand track, bridge, station, construction plans and specifications, and SSWPs, and to develop and work from construction schedules.
- B. The Railroad Construction Project Manager must be located at the Contractor's construction field office; be on the job during the work week a minimum of 40 hours for the full duration of the Project; and be able to respond immediately to emergency or problem calls, seven days a week, 24 hours a day.
- C. The Railroad Construction Project Manager shall be dedicated only to this Project. He or she shall not work on other projects on behalf of the Contractor. This Railroad Construction Project Manager shall have the necessary Authority to receive and promptly execute instructions and orders from the Authority or his authorized representatives. The Project Manager shall not be replaced without advance approval by the Authority. Any replacement Project Manager shall be subject to the approval of the Authority.

1.6 RAILROAD TRACK CONSTRUCTION MANAGERS

- A. The Contractor shall have at least one Railroad Track Construction Manager who will direct the day-to-day operations of the Track Foreman, and assist in managing and coordinating the overall aspects of the track, station, grade crossing, and bridge construction. The Railroad Track Construction Manager's qualifications and experience must include the following:
1. Thorough knowledge of railroad methods of track construction and maintenance under traffic.
 2. Knowledge of FRA standards, and qualified under FRA Track Safety Standards, Part 213.7, applicable CPUC General Orders, the General Code of Operating Rules, SCRRA Track Maintenance, Right-of-Way and Structures Engineering Instructions, SCRRA Standard Plans, and Railroad Roadway Worker Protection rules and regulations.
 3. The ability to work safely and supervise individuals in safe work.
 4. Previous positions/experience that include supervising and planning work activities of foreman and crews.
 5. The ability to read and understand track, site civil, systems, and construction plans.
 6. Five years' railroad track construction experience, with a minimum three years of railroad management experience. Must have at least three years' experience as a Roadmaster or equivalent position for a Class I Freight or Commuter Railroad in the last 15 years.
 7. The ability to identify FRA or other defects in track for the given class, and to prescribe appropriate remedial measures.
- B. The Railroad Track Construction Manager(s) must be located at the Contractor's construction field office, and must be on the job full time during the workweek for the full duration of any track or associated construction work. The Railroad Track Construction Manager shall be able to respond immediately to emergency or problem calls on a seven-day-a-week, 24-hour basis. The Railroad Track Construction Manager will manage and directly oversee the safety, condition, and quality of track that has been modified by the Contractor, and shall direct corrective and maintenance measures to keep the track operating safely at the designated class.
- C. The Railroad Track Construction Managers shall be solely dedicated to this Project and not permitted to work on other projects.

1.7 MAINTENANCE CONTRACT MANAGER (MCM)

- A. The Contractor shall have a MCM to plan, direct, and coordinate the activities of the Contractor (including all Subcontractors) in performance of the Work to assure compliance with Contract terms and conditions, applicable regulations, SCRRA

standards, coordination with other Authority and SCRRA Contractors and public agencies, and provision of quality railroad service by the SCRRA. Serves as the point of contact for Authority staff for all matters relating to the Agreement and performs regular consultation and planning meetings with the SCRRA's Manager of Maintenance. The MCM shall review, revise, and develop contract submittal documents including annual budgets and work plans, training schedule and curriculums, CTOs, inspections, and invoices. The MCM shall assist training managers in developing training schedule and curriculum and shall supervise, promote, manage, transfer, and discipline Contractor staff and arrange with Authority for replacement personnel in the event of vacancies. The MCM is required to respond immediately to extraordinary conditions and to initiate inspections or repairs to track or facilities as required to maintain SCRRA facilities and operations.

B. MCM qualifications and experience shall include the following:

1. Twenty years of progressively responsible experience in railroad track maintenance or construction in an operating railroad environment including at least 10 years experience in supervising or directing the work of others engaged in railroad track maintenance and five years experience in managing construction or maintenance contracts.
2. A minimum of ten years of supervisory skills in a similar position supervising and managing employees engaged in railroad track maintenance in an operating railroad environment.
3. Desirable to have an associate degree from a College in Business, Construction or a related field.
4. Knowledge of the safe and proper procedures for operating railroad maintenance hand and power tools and railroad maintenance equipment.
5. Must be able to demonstrate ability to communicate in written and verbal English language with prior record keeping experience.
6. Must possess strong leadership interpersonal skills.
7. Detailed knowledge of FTSS and FRWS and the ability to be Qualified on SCRRA's examinations for 49 CFR Part 213.7 of FTSS and the GCOR related to these regulations at NTP.
8. Previously qualified with a railroad to provide workplace protection under FRWS and to inspect track and supervise restoration of track under FTSS.
9. Knowledge of the physical layout and operation of a commuter rail system similar to SCRRA's.
10. Knowledge of the time for completion and the cost of repair for track and Right-of-Way facilities, and the ability to make value judgments regarding economic repair and/or replacement of these facilities.

11. Knowledge of the adjustment of thermal stress in continuously welded rail per 49 CFR Part 213.119 of the FTSS.
12. Ability to read and interpret drawings, plans, and specifications for railroad track and civil construction and to inspect track and supervise the work of others for compliance with these documents.
13. Ability to complete work under time pressures and to maintain composure under the stress of emergency situations.
14. Ability to perform scheduled and unscheduled repair or construction work at any time on any day of the week.
15. Must have, or obtain within six weeks of Limited NTP, a valid California driver's license with no more than three moving violations and no Driving Under the Influence (DUI) in any state within the last three years.
16. Must pass a pre-employment physical examination including a drug and alcohol test.
17. Ability to work outdoors in all weather conditions, to lift objects weighing a minimum of 50 lbs. and must have the ability to distinguish colors and to hear warning signals and radio and telephone devices.
18. Shall be on-call 24 hours each day, 365 days a year, with allowances for vacations, sick leave, and related time off with duties assigned to the Assistant Contract Manager when off duty.

1.8 RAILROAD MACHINE OPERATORS

The Contractor shall provide qualified Railroad Machine Operators and the Contractor will not be allowed to operate any equipment within the Authority Right-of-Way until the following requirements are met:

- A. Railroad Machine Operators qualifications and experience must include the following:
 1. Knowledge of railroad methods of track construction and maintenance under traffic,
 2. A Production/Switch Tamper Operator with at least two years of experience operating the make and model of the production/switch tamper assigned to this Contract Work. The tamper operators must fully understand the principles and practices of lining horizontal, spiral, curves, and tangents and vertical curves, and know how to read and utilize "cut sheets" and "alignment sheets" provided by a survey crew.
 3. At least one full-time production/switch tamper operator shall be assigned to each tamper, with three years' experience in railroad track construction

and/or maintenance, two years' experience as a machine operator, and one year of experience operating machinery in use on this Contract Work, specifically including the following:

- a. Ballast Regulator
 - b. Backhoe Tractor
 - c. Ballast Stabilizer
 - d. Pettibone Speed Swing
- B. Railroad Machine Operators shall be qualified under SCRRA's General Code of Operation Rules (GCOR) and Roadway Worker Protection rules.
- C. Must have a valid California Class "CA" driver's license with no more than three moving violations and no DUI's in any state within the last three years.
- D. Must pass a pre-employment physical examination including a drug and alcohol test.
- E. Ability to work outdoors in all weather conditions, to lift objects weighing a minimum of 50 lbs. and must have ability to distinguish colors and to hear warning signals and radio and telephone devices.

1.9 TRACK FOREMAN

The Contractor shall have a Track Foreman with the following qualifications and experience:

- A. Knowledge of railroad methods of track construction and maintenance under traffic.
- B. Knowledge of FRA standards, and qualified under FRA Track Safety Standards, Part 213.7, and SCRRA Track Maintenance, Right-of-Way and Structures Engineering Instructions.
- C. Previous qualification with a railroad to obtain track and time and working time; to place and remove restrictions for train movement; and the ability to qualify under all SCRRA requirements.
- D. The ability to work safely and supervise individuals in safe work.
- E. The ability to read and understand track and construction plans.
- F. Five years' railroad track experience, with a minimum two years' track foreman experience.
- G. Track foremen shall be dedicated full time to the Project.
- H. Must have a valid California Class "CA" driver's license with no more than three moving violations and no DUI's in any state within the last three years.

- I. Must pass a pre-employment physical examination including a drug and alcohol test.
- J. Ability to work outdoors in all weather conditions, to lift objects weighing a minimum of 50 lbs. and must have ability to distinguish colors and to hear warning signals and radio and telephone devices.

1.10 RAILROAD TRACK EQUIPMENT REPAIRER

- A. The Contractor shall have a Railroad Track Equipment Repairer to perform inspection, analysis, repair and maintenance of several types of heavy equipment including rail-mounted tamping and surfacing machines, ballast regulators, compactors, and brooms, rail mounted all-terrain cranes, rail mounted heavy duty trucks equipped with hydraulic cranes and log loaders, and all-terrain construction equipment including end loaders, backhoe tractors, bulldozers, and road graders. The Railroad Track Equipment Repairer shall lubricate working parts, change engine and hydraulic oil and filters, clean and change air filters, tighten bolts, inspect and adjust fluid levels, belt tension, and dimensioned measurements (e.g. cross level of track), and perform safety inspections of equipment per FRWS using wrenches, screwdrivers, and other small hand and power tools. The Railroad Track Equipment Repairer shall performs heavy repair, analysis, and component exchanges in accordance with manufacturer's recommendations using power and hand tools, hydraulic booms and jacks, and electronic measuring and testing devices and shall establish and implement a schedule of preventive maintenance for equipment, order repair components and parts, and maintain an inventory of consumable parts and supplies that minimizes the time equipment is out of service for repairs and maintenance.
- B. Railroad Track Equipment Repairer qualifications and experience must include the following:
 - 1. Five years experience in maintenance of heavy equipment and three years experience in the maintenance of railroad track construction and/or maintenance equipment including diesel engine, hydraulic system, electronic control, surfacing tamping machine, and rail guide wheel equipment.
 - 2. Knowledge of safe and proper procedures for operating this equipment in accordance with both the FRWS and the manufacturer's recommendations.
 - 3. Knowledge of FRWS and the ability to be Qualified on SCRRA's examinations for the GCOR related to these regulations within two weeks of Limited NTP.
 - 4. Ability to complete work under time pressures and to maintain composure under the stress of emergency situations.
 - 5. Must have a valid California Class "A" driver's license with no more than 3 moving violations and no DUI's in any state within the last 3 years.

6. Must pass a pre-employment physical examination including a drug and alcohol test.
7. Ability to work outdoors in all weather conditions, to lift objects weighing a minimum of 50 lbs and must have the ability to distinguish colors and to hear warning signals and radio and telephone devices.
8. Ability to communicate in the written and verbal English language.

1.11 RAILROAD TRACK EQUIPMENT REPAIRER HELPER

- A. The Contractor shall have a Railroad Track Equipment Repairer Helper (Helper) to work under the supervision of the Railroad Track Equipment Repairer. The Helper may work independently or as a member of a crew as directed only for the purpose of servicing and maintaining equipment.
- B. Railroad Track Equipment Repairer Helper qualifications and experience must include the following:
 1. One to three years experience in the maintenance and repair of construction equipment or small work equipment.
 2. Knowledge of safe and proper procedures for operating this equipment in accordance with both FRWS and the manufacturer's recommendations.
 3. Knowledge of safe and efficient manipulation of equipment and tools to assist in track, structures or right-of-way related maintenance tasks.
 4. Knowledge of FTSS and FRWS and the ability to be Qualified on SCRRRA's examinations for the GCOR related to these regulations within two weeks of Start Date.
 5. Ability to complete work under time pressures and to maintain composure under the stress of emergency situations.
 6. Must have, or obtain within two weeks of Start Date, a valid California Class "A" driver's license with no more than 3 moving violations and no DULs within the last 3 years.
 7. Must pass a pre-employment physical examination including a drug and alcohol test.
 8. Ability to work outdoors in all weather conditions, to lift objects weighing a minimum of 50 lbs and must have the ability to distinguish colors and to hear warning signals and radio and telephone devices.
 9. Ability to communicate in the written and verbal English language.

1.12 RAILROAD TRACK WELDERS

- A. The Contractor shall provide Railroad Track Welder with the following qualifications and experience:
 - 1. Knowledge of railroad methods of track construction and maintenance under traffic.
 - 2. The ability to work safely and supervise individuals in safe work.
- B. The Contractor shall provide Railroad Track Welder trained and qualified to perform the following procedures:
 - 1. Qualified in writing by the manufacturer of the thermite process rail welding kits to install field welds
 - 2. Weld cast manganese steel frogs
 - 3. Grind, dress and trim frogs, points and stock rails
 - 4. Weld and grind rail ends to correct mismatch
 - 5. Perform light fabrication arc welding
 - 6. Knowledge of FRA standards, and qualified under FRA Track Safety Standards, Part 213.7
 - 7. Five years' railroad track experience with a minimum two years of track welding experience
- C. Railroad track welders shall be dedicated full time to the Project for the duration of track-welding activities.

1.13 TRACK AND STRUCTURES LABORER/WELDER HELPER

The Contractor shall provide Mandatory Track and Structures Laborer/Welder Helper with the following qualifications and experience:

- A. Knowledge of railroad methods of track construction and maintenance under traffic.
- B. The ability to work safely at heights.
- C. The ability to work safely on operating railroad right of way.
- D. All Welder Helpers and 50 percent of the Track and Structures Laborers must have a minimum of one year of general track construction or maintenance experience.

1.14 SAFETY REPRESENTATIVE

- A. The Contractor shall provide a Safety Representative with minimum qualifications as set forth in the Contract and the Level 3 Health, Safety, and Environmental

Specification, as well as knowledge of FRA standards and qualified under FRA Track Safety Standards, Part 213, Railroad Workplace Safety, Part 214, applicable CPUC General Orders, the General Code of Operating Rules, SCRRA and railroad physical characteristics, SCRRA Track Maintenance, Right-of-Way, and Structures Engineering Instructions, and Roadway Worker Protection rules and regulations.

- B. The Safety Representative must be located at the Contractor's construction field office and must be on the Work Site full time.
- C. The Safety Representative will be required to train and test the Contractor's employees after receiving the initial training from SCRRA as further described in Section 01 35 23, OCTA Site Safety Requirements.
- D. Must have a valid California Class "CA" driver's license with no more than three moving violations and no DUI's in any state within the last three years.
- E. Must pass a pre-employment physical examination including a drug and alcohol test.
- F. Ability to work outdoors in all weather conditions, to lift objects weighing a minimum of 50 lbs. and must have ability to distinguish colors and to hear warning signals and radio and telephone devices.
- G. Ability to communicate in the written and verbal and Spanish language.

PART 2 - PRODUCTS (Not used)

PART 3 - EXECUTION

3.1 PERSONNEL QUALIFICATIONS

- A. Once personnel are deemed acceptable by the Authority, the Authority will make arrangements to provide the training and testing required for personnel to be qualified under subject areas described in Part 1 of this Specification Section.
 - 1. The SCRRA will provide an approximately 40 hour training course held over five days. The training course will cover the SCRRA's General Code of Operating Rules for Maintenance-of-Way Employees and Roadway Worker Protection. The Contractor's managers and key personnel listed above in Subparts 1.5 through 1.8, 1.10, 1.11, 1.14, and 1.16 shall attend and successfully complete this course within 45 days after the Limited NTP. Successful completion shall be defined as becoming Qualified under these subject areas.
 - 2. The Contractor will be notified of test results in writing. The SCRRA will make arrangements for retesting if personnel fail the initial test. Retesting of the course material will be allowed one time within 55 days after the Limited NTP.
- B. Substitutions. If the Contractor needs to replace any of the personnel described in Part 1, the above procedure shall be used. This process, including proficiency

testing, shall be completed prior to the vacancy. The allowance of substitutions does not relieve the Contractor of his responsibility to provide the personnel in accordance with Part 1.

- C. The Contractor shall provide the required personnel in accordance with Part 1. If the Contractor fails to provide the appropriate personnel due to a substitution or if the personnel described in Part 1 are not available within 30 days as specified in these Contract Documents, and the Contractor has not acted in good faith to secure replacement personnel, the Authority is entitled to implement one of the following options, at his sole discretion:
 - 1. Option 1: Suspend the portion of the Contractor's operation, which was under the direct supervision of the subject personnel, until the appropriate personnel are provided. All costs relating to this suspension of the Work will be the responsibility of the Contractor.
 - 2. Option 2: Allow the Contractor's operation to proceed and deduct \$500 per day for each operation that was under the direct supervision of the subject personnel. If this option is used, this deduction shall be taken until the construction operation is completed or until the appropriate personnel are provided.
- D. Immediately remove from the Work, when so ordered by the Authority, and not re-employ on any of the Work, without written permission from the Authority, any Contractor or Subcontractor employee doing unsafe, improper, and defective Work; who, in the Authority's judgment, refuses or neglects the direction of the Authority given to the Contractor; who is deemed incompetent or disorderly; or who commits any trespassing on any public or private property in the vicinity of the Work.

3.2 RAILROAD CONSTRUCTION EQUIPMENT QUALIFICATIONS

- A. The Contractor shall make the railroad construction equipment available for inspection a minimum of 30 days prior to its first use on the project, or as otherwise agreed upon with the Authority.
- B. The Contractor shall make arrangements for initial inspection of the equipment by the Authority. The railroad construction equipment shall not be operated on the SCRRA's Operating System until the initial inspection and approval is completed.
- C. The Contractor shall inspect all railroad construction equipment daily to ensure compliance with manufacturer instructions, FRA regulations, CPUC regulations, and the SCRRA's Operating and Safety Rules. The equipment not in compliance shall not be used on the SCRRA's Operating System.
- D. The Contractor shall provide the required equipment described in Part 1 to perform the work specified in these Contract Documents. Permission given by the Authority to use any particular methods, equipment, or appliances shall not be so construed to relieve the Contractor from furnishing other equipment or other appliances or adopting other methods when those in use prove unsatisfactory or as to bind the Authority to accept Work which does not comply with the Contract. Compliance

with determinations by the Authority shall not relieve the Contractor from other obligations imposed by law or regulation nor serve as the basis of a Request for Change Order to the Work. Once mobilization is paid, if the Contractor fails to provide the appropriate equipment in accordance with Part 1, and if the Contractor has not acted in good faith in providing and maintaining the equipment, the Authority shall be entitled, at his own discretion, to implement one of the following options:

1. Option 1: Suspend the Contractor's operation until the appropriate equipment is provided. All costs relating to this suspension of the Work will be the responsibility of the Contractor.
2. Option 2: Allow the Contractor's operation to proceed and deduct \$500 per day for each piece of equipment not on the job site. If this option is used, this deduction shall be taken until the construction operation is completed or until the appropriate equipment is provided.

3.3 RAILROAD CONSTRUCTION EQUIPMENT

- A. The Contractor shall have roadway work equipment used to move other railcars or equipment that is fully compliant with the FRA power brake, safety appliance, and wheel requirements, and shall be fully stenciled to indicate such compliance. The inspection and testing of the equipment, and the approval of the Contractor's operators, will be done by the Authority's Manager, Rules, and Training as scheduled by the Authority. The Contractor shall demonstrate to the Authority that the operator can make an initial brake test before moving any equipment or railcars, and obtain approval by inspection from the SCRRA, that equipment meets all safety appliance, maintenance, and clearance requirements.
- B. Unless amended by the Specifications, the Contractor shall have on hand and use the minimum equipment or approved equal listed below in performing the Work of the Contract Documents.
 1. A minimum of one Production/Switch Tamper—using models from the list below that are no older than 10 years from manufacture date—with all applicable attachments for construction surfacing:
 - a. Pandrol Jackson 6700 with Laser Liner
 - b. Tamper Mark IV with Laser Liner
 - c. Plasser American Roadmaster 2000 or equivalent with Laser Liner
 2. Metrolink will perform ballast stabilization work and will provide the Ballast Stabilizer as required for use by their own forces. Contractor shall schedule ballast stabilization with SCRRA at least three weeks in advance of performance of work requiring ballast stabilization.
 3. A minimum of one Ballast Regulator or equivalent from the list below, using a model no older than 10 years from manufacture date:
 - a. Kershaw Model 26, or
 - b. Tamper Model BEB-15

4. A minimum of one dust control tanker capable of spraying water with dust control additive in advance and during surfacing and brooming and regulating activities. The water tank shall have a capacity of at least 3,000 gallons.
 5. One Teleweld Series diesel or propane Fueled Heater Car.
 6. Three High-Speed Rail Drills – Geismar PR-8.
 7. Three Abrasive Rail Saws – Geismar MTX-50-S.
 8. Four Portable Hydraulic Toe Tampers – Geismar Model TT-1.
 9. Six Units Hydraulic Track Jacks – Simplex Model JJ1093.
 10. Hydraulic Rail Puller 100 tons+.
- C. The Contractor shall furnish all other on-track and off-track equipment necessary to complete the work.
- D. The Contractor shall maintain the equipment such that is operational and in proper working order. Measures that may be necessary, include, but are not limited to, the following:
1. Efficient scheduling and performance of required inspections, preventative maintenance, and service
 2. Promptly making any necessary repairs
 3. Containing hydraulic and other spills
 4. Keeping equipment owner's manual on board at all times
- E. Use of backup equipment not meeting the requirements listed above will be permitted subject to the following conditions:
1. The Authority approves the use of the proposed backup equipment, in advance.
 2. The backup equipment is not used to perform contract work except as needed to return the tracks to service following an unforeseen breakdown of the required equipment. Use of backup equipment is considered a temporary measure until such reasonable time that the main equipment is repaired. This shall not exceed two consecutive workweeks.

PART 4 - MEASUREMENT AND PAYMENT

Work of this Section is considered incidental to work under other payment items and no separate measurement or payment will be made to the Contractor for Work of this Section.

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SECTION 01 55 26
MAINTENANCE AND PROTECTION OF TRAFFIC

PART 1 – GENERAL

1.1 SUMMARY

This Section specifies provisions for the Contractor furnishing, erecting and maintaining temporary barricades, changeable message signs, signs, flaggers, lights, road surfaces, pavement markings for detours, object markers and other safeguards necessary to protect the safety of the public during performance of the Project Work.

Unless otherwise directed by the City of Anaheim or modified by the final City of Anaheim encroachment permit, the Contractor shall comply with the requirements as shown in the Traffic Control Plans included in the Contract Drawings and as further detailed in the Transportation Management Plan (TMP) included in the Construction Contract.

1.2 RELATED REQUIREMENTS

- A. Section 01 35 23, OCTA Site Safety Requirements
- B. Section 01 56 37, Worksite Security Requirements
- C. Section 01 71 13, Mobilization and Demobilization and Controls

1.3 REFERENCE STANDARDS

- A. The Contractor shall comply with provisions of the most recent edition, including all addenda, of the following codes, specifications, standards, and recommended practices, except as otherwise indicated:
 - 1. CPUC - California Public Utilities Commission General Orders
 - 2. CALTRANS - State of California Department of Transportation Standard Specifications and Standard Plans, current edition
 - 3. CA MUTCD - California Manual on Uniform Traffic Control Devices
 - 4. SSPWC - Standard Specifications for Public Works Construction of the Joint Cooperative Committee
 - 5. WATCH - Work Area Traffic Control Handbook, current edition

1.4 SUBMITTALS

The Contractor shall comply with City of Anaheim (www.anaheim.net/229/Public-Works) requirements including the preparation of all traffic control plans for the Grade Crossing Work, any advance message signs required by the local agencies. **The Contractor shall coordinate approval for the traffic control plans and obtain traffic control and encroachment permits from the City of Anaheim.** The temporary warning devices shall be designed to minimize the inconvenience to the general public and shall comply with the regulations of the California Public Utilities Commission (CPUC) and governmental agencies having jurisdiction.

1.5 PROCEDURAL REQUIREMENTS

- A. The Contractor shall furnish construction signs, barricades, delineators, warning lights, CMS messages in advance of and during construction and all other devices used to implement the plan shall comply with California Manual on Uniform Traffic Control Devices or WATCH Manual latest edition, and local agency permit requirements. Providing all temporary warning devices in the incorporated areas of the project, as necessary, to convey traffic through the Project and as required by the permits.
- B. Flashing yellow beacons shall be used on all W20-1 signs and all Type II barricades guarding the work area overnight.
- C. The Contractor shall have all signs, delineators, barricades, and other devices properly installed prior to commencing construction. All signs shall be reflectorized and standard size. All delineators shall be 28" minimum portable, reflectorized and maintained erect in indicated position at all times, and shall be repaired, or cleaned as necessary to preserve their appearance and continuity.
- D. Additional traffic controls, signs, delineators or barricades may be required in the field. The Contractor shall be responsible for the placement of any additional devices necessary to assure safety to the public at all times during construction.
- E. Post "Temporary No Parking Tow Away" signs defining the time and date of any such restriction 72 hours prior to work.
- F. The Contractor shall be responsible for location and protection of traffic signal loop-sensors and signal and interconnect conduits. Where damage is caused by the Contractor's operation, the Contractor shall replace damaged City facility at no cost to the Authority or local jurisdiction.

1.6 DETOUR COORDINATION AND APPROVAL

- A. The Contractor shall be responsible for all required permitting associated with work performed within the City right-of-way. This includes, but is not limited to, permitting and approval of maintenance and protection of traffic during lane closures on Tustin Avenue and La Palma Avenue.
- B. Detour: In no case shall traffic be diverted from the existing traveled way without prior approval of the Authority and appropriate municipalities and local agencies. The following representatives of appropriate local agencies shall be notified 48 hours in advance of any detour or construction activities:
 - City of Anaheim Field Engineer/Inspection (714) 765-5126
 - City of Anaheim Traffic Management Center (714) 765-5202
 - City of Anaheim Police Department (714) 765-1881, Fax (714) 765-1554 (provide location and duration of detour)
 - City of Anaheim Fire Department (714) 765-4079
 - Orange County Transportation Authority (714) 265-4332
- C. Detour striping will not be permitted on any finish course of asphalt concrete pavement.

PART 2 – PRODUCTS

All striping and marking shall conform to Section 310-5.6 of the Standard Specification for Public Works Construction. Temporary removable striping tape (detour grade) may be used in lieu of painted striping.

PART 3 - EXECUTION

- A. All traffic control devices shall be installed in accordance with the current editions of the Caltrans Standard Specifications, WATCH, Caltrans Standard Plans, and CA MUTCD. In addition to work included above, the Contractor shall furnish and install guide markers and delineators at the locations indicated on the Contract Documents and where directed by the Authority.
- B. The Contractor shall provide for access to all adjacent properties during working hours. Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to abutting property owners/operators. The Contractor shall provide access to pedestrian all times. Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to pedestrian. Pedestrian shall be protected as required by CA MUTCD, Part 6D-1 or WATCH Manual Latest Edition, Section 11.
- C. The Contractor shall maintain on a 24-hour basis all signs, delineators, barricades, etc., to ensure proper flow and safety of traffic.

PART 4 - MEASUREMENT AND PAYMENT

- A. Traffic control work completed in accordance with the contract documents will be paid for at the contract unit price, as listed in the Schedule of Quantities and Prices. This price shall be full compensation for furnishing all labor, materials, tools and equipment including furnishing, erecting, maintaining and removing barricades, traffic flaggers, construction area signs, temporary railing (Type K), portable changeable message signs, channelizers, supplies, supervision including preparing traffic control plans and obtaining traffic control and encroachment permits, and incidental materials and work necessary for controlling traffic during construction as described by the Contract Documents or required by the local jurisdiction.
- B. Full Compensation for furnishing and installing construction area traffic control devices as ordered by the Engineer, for the sole convenience and direction of public traffic shall be considered as included in the prices and no additional compensation will be allowed.

END OF SECTION 01 55 26