

DIVISION 01 – GENERAL REQUIREMENTS

SECTION 01 1100

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - b. Project information.
 - c. Work covered by Contract Documents.
 - d. Phased construction.
 - e. Work by Owner.
 - f. Work under separate contracts.
 - g. Future work.
 - h. Purchase contracts.
 - i. Owner-furnished products.
 - j. Contractor-furnished, Owner-installed products.
 - k. Access to site.
 - l. Coordination with occupants.
 - m. Work restrictions.
 - n. Specification and drawing conventions.
 - o. Miscellaneous provisions.
- B. Related Requirements:
 - p. Section 01 50 00 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.3 PROJECT INFORMATION

- A. Project Identification: Customer Service Center Tenant Improvement, AC Transit Contract 2019-1454.
q. Project Location: 1600 Franklin Street, Oakland, CA 94612.

- B. Owner: AC Transit, 1600 Franklin Street, Oakland, CA 94612
Michael Hass, PE
Capital Projects Planning, Engineering and Construction
Alameda-Contra Costa Transit District | 1600 Franklin Street |Oakland, CA 94612
mhass@actransit.org

As Owner representative, also referred hereafter as either Owner or Project Manager.

- C. Architect: Interactive Resources, Inc., 117 Park Place, Richmond, CA 94801.
D. Construction Manager: AC Transit Construction Manager.
E. Project Web Site: A project Web site administered by ACTRANSIT [PMWEB] , will be used for purposes of managing communication and documents during the construction stage.

1. See Section 01 31 00 "Project Management and Coordination." for requirements for establishing, administering and using the Project Web site.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of Project is defined by the Contract Documents and consists of the following:
1. Selective Demolition of Customer Service Center.
 2. Renovation of Customer Service Center (tenant improvement).
- B. Type of Contract:
Project will be constructed under a single prime contract.
- C. Contractor shall include in its bid all costs associated with coordinating, scheduling and sequencing its Work with the Work of the contracts listed herein. Contractor shall consider, accept fully and account for in its bid prices, for the risk that these Contracts may not be complete or be performed in the scope, time or duration anticipated.
1. In the event that the performance of Work on contracts other than those listed herein shall occur and the performance of Work on such other contracts materially increases or decreases the Contractor's costs, the work and the amount to be paid therefore will be appropriately adjusted as determined by the Project Manager.

1.5 WORK SEQUENCE

- A. Construct work in stages and at times to accommodate the District's operational requirements during the construction period and coordinate the construction schedule with the Project Manager, or District Representative.

- B. The Contractor shall phase the Work in stages and at times such that the milestone dates for completion are achieved in accordance with the approved schedule submitted pursuant to the Agreement Section 005200 and Section Construction Progress Documentation Section 013200.

1.6 ACCESS TO SITE

- A. General: Contractor shall have limited use of Project site for construction operations as indicated on Drawings by the Contract limits and as indicated by requirements of this Section.
- B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Parking: During construction, the District will not be providing any parking. The Contractor shall make arrangements to use the parking spaces in front of the Parking Lot at 1600 Franklin for dumpster locations and parking for construction.
 - 2. Except as described above, keep driveways parking garage, loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a secure and weathertight condition throughout construction period. Repair damage caused by inclement weather and construction operations.

1.7 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site and existing building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
 - 2. Notify Owner not less than 72 hours in advance of activities that will affect Owner's operations.

1.8 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.

- b. Comply with limitations on use of public streets and with other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 7:00 a.m. to 5:00 p.m., Monday through Friday, unless otherwise indicated.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - a. Notify Owner not less than two days in advance of proposed utility interruptions.
 - b. Obtain Owner's written permission before proceeding with utility interruptions.
- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
 - a. Notify Owner not less than two days in advance of proposed disruptive operations.
 - b. Obtain Owner's written permission before proceeding with disruptive operations or perform disruptive operations that result in noise of 60 dba or more in any occupied area on weekends or between 5:00 p.m. and 6:00 a.m. on weekdays.
- E. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet (8 m) of entrances, operable windows, or outdoor-air intakes.
- F. Employee Identification: Owner will provide identification tags for Contractor personnel working on Project site. Require personnel to use identification tags at all times.
- G. The Contracting Officer or Contracting Officer's Representative will conduct a pre-construction survey with the Contractor to review and document the existing conditions surrounding the project premises prior to the beginning of any construction activity.
- H. The Contractor shall limit use of the premises to the work in areas indicated, to allow for District occupancy and public use.
 - 1. Confine operations at the site to areas indicated. Do not disturb portions of the site beyond the areas in which Work is indicated, in the plans.
 - 2. Schedule deliveries to minimize space and time requirements for storage of material and equipment on site.
 - 3. Maintain existing building in a safe and weathertight condition throughout the construction period. Repair damage caused by construction operations. Take precautions to protect the building, its occupants and the public during the construction period.
 - 4. Keep public areas, such as hallways, stairs, lobbies and toilet rooms, **free** from accumulation of waste material, rubbish, construction debris and construction materials.
 - 5. Space on the premises will not be made available for the Contractor's storage and related activities.
 - 6. Access through the parking lots and garage to the work site will be limited to 1hr before and after the General Office operation times. Material delivery shall happen primarily from the street directly to the work areas through the frontage.

7. Existing materials and equipment that are removed as part of the construction operations, and that are not reused or designated to be salvaged as District or other's property, shall become the property of the Contractor and shall be removed from the site. Storage or sale of excess salvageable materials and equipment is not permitted on site.
8. Pollution producing equipment shall not be located near air intakes where airborne smoke or fumes could be drawn into the building.
9. No additional parking will be available on site during working hours of the building occupants. The Contractor and Contractor's employees shall make their own arrangements for vehicle parking off site.

1.9 DISTRICT OCCUPANCY

- A. The District will occupy the site and the existing building during the entire period of construction. Cooperate with the District's representatives during construction operations to minimize conflicts and facilitate District usage. Perform the Work in a manner that does not interfere with the District's operations.

1.10 WORKING HOURS

- A. District Occupied Hours: District personnel are scheduled to occupy the building during the following hours on weekdays, Monday through Friday, except for established District Holidays: 7:00 AM to 5:00 PM. With a minimum 2-week lead time on request, weekends work hours available by written approval by AC Transit Project Manager.
- B. District Unoccupied Hours: District personnel are not scheduled to occupy the building during times not indicated as District Occupied Hours.
- C. Contractor's General Working Hours: The Contractor working hours shall be generally established to occur during District Occupied Hours.
- D. Work accomplished during District Unoccupied Hours shall be performed at no additional cost to the District. Contractor shall submit a proposed schedule and gain the Contracting Officer's approval at least 48 hours before proceeding with any work during District Unoccupied Hours.

1.11 SPECIFICATION AND DRAWING CONVENTIONS

- A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:
 - a. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
 - b. Specification requirements are to be performed by Contractor unless specifically stated otherwise.
- B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
- C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

- a. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
- b. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.
- c. Keynoting: Materials and products are identified by reference keynotes referencing Specification Section numbers found in this Project Manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 2 - GENERAL

2.1 SECTION INCLUDES

- A. Contract description.
- B. Definitions.
- C. Licenses and Permits.
- D. Contractor's use of site and premises.
- E. Holidays and Working Hours

2.2 CONTRACT DESCRIPTION

Customer Service Renovation project will consist of renovation of the Customer Service Center, at the ACTransit General Building, in Downtown Oakland, the project will include all existing functions (ticket counter, photo ID area, storage, lost & found pass-thru, breakroom, unisex toilet, storage, clipper machine area & customer lobby) expanding ticket counter area to include ADA accessible counter and additional space for ease of use and comfort at all employee work stations. Please see below for the sequence of work:

2.3 LICENSES, PERMITS, INSPECTIONS, AND MONUMENT PRESERVATION

2.3.1 Licenses

The prime Contractor shall possess a valid Class "A" California General AC Transit Project Manager or their designating Contractor License. The prime Contractor or a subcontractor of the prime contractor shall hold a valid:

2.3.1.1 "C10" California Electrical Contractor License

2.3.1.2 The Contractor will also be required to ensure that all subcontractors working on this project are holding valid licenses suitable for their trade.

2.3.2 Permits, Inspections and Monument Preservation

The Contractor will not be responsible for applying, paying fees that are required by City or "Authority Having Jurisdiction" (AHJ) as AC Transit will be the responsible party. Coordination for the execution of the Building Permit with the City or other AHJ including all associated inspection work required by the AHJ will be the responsibility of the Contractor. The Contractor must maintain records of inspections associated with all permits and for inspections of and for the completion of work, and submit them to AC Transit as part of the Contract Closeout documents. Any and all encroachment permits will be the responsibility of the Contractor to obtain if needed.

2.4 SEQUENCE OF THE WORK

- 2.4.1 Customer Service Renovation project will consist of renovation of the Customer Service Center, at the AC Transit General Building at 1600 Franklin Street in Downtown Oakland, California. The project will include all existing functions (ticket counter, photo ID area, storage, lost & found pass-thru, breakroom, unisex toilet, storage, clipper machine area & customer lobby) expanding ticket counter area to include ADA accessible counter and additional space for ease of use and comfort at all employee work stations. Please see below for the sequence of work:

The work consists, in general, of furnishing all materials, labor, tools, plants, supplies, equipment, transportation and superintendence necessary to provide for:

- A. Remodel the Customer Service Center for AC Transit, located in the General Offices location, 1600 Franklin Street, Oakland, California. Area of work 1,600 s.f. with new wall enclosing lobby and teller stations, relocate some walls, new finishes, ducting, lighting. EXTERIOR WORK: New entry door to lobby.
- B. Provide improvements to a space in the basement at the above address to repurpose the space for an information and technology center for the remodeled Customer Service Center.
- C. An allowance is included in the project documents to install a new restroom, and/or remodel existing restroom(s).

- 2.4.2 The execution of other work on the project will be at the discretion of the Contractor with the exception of any and all shut downs of utilities or other interruptions to the normal business operations of the project site. The execution of any work that has any impact to the normal business operations of the project site must be scheduled with and approved by the AC Project Manager or their designate. At a minimum, suitable notice consisting of a minimum 72 hours' notice must be given in advance of any utility shutdown or activity that curtails ongoing AC Transit Operations.

2.5 CONTRACTOR'S USE OF SITE AND PREMISES

- 2.5.1 Contractor will limit construction access and work to normal workdays and work hours which are defined as Monday thru Friday from 7:00 am to 5:00 pm.
- 2.5.2 Contractor has use of the interior spaces of the Customer Service Center on the ground level of

1600 Franklin Street. Only the interior spaces of the Customer Services Center will be available for laydown activities and to store materials and perform work as needed as follows:

- 2.5.2.1 Permission to access the Customer Service Center space only at AC Transit general building ground level, during the period of construction, and within the permitted construction hours, stated above.
- 2.5.2.2 Contractor shall also maintain vehicular access to a minimum on the project throughout the duration of the contract.
 - 1. The Contractor shall be required to access the work site from Franklin Street.
 - 2. The Contractor shall be responsible for providing parking legal and approved spaces for workers and sub-contractor's vehicles and refuse containers.
 - 3. The Contractor is free to apply for and to pay for encroachment permits from the City of Oakland to use spaces in the Right-of-Way on Franklin Street.
- 2.5.2.3 Provide emergency vehicle access at all time, to all areas of the project, and site, as required by the fire department, and other authorities having jurisdiction (AHJ).

2.6 HOLIDAYS AND WORKING HOURS

The following are the designated holidays;

January 1st (New Year's Day - Observed)
3rd Monday in January (ML King Jr. Day)
3rd Monday in February (President's Day)
Last Monday in May (Memorial Day)
July 4th (Independence Day)
1st Monday in September (Labor Day)
4th Thursday in November (Thanksgiving)
The Friday after Thanksgiving
December 24th (Christmas Eve)
December 25th (Christmas Day)

If a designated holiday falls on a Sunday, the following Monday is a designated holiday.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

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SECTION 01 14 00

TIME FOR COMPLETION, LIQUIDATED DAMAGES, CONTRACTOR'S LICENSE

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Overall Time for Completion.
- B. Liquidated Damages and Classification of.
- C. Contractor's License.

1.2 OVERALL TIME FOR COMPLETION AND LIQUIDATED DAMAGES

- A. This Section describes the Contract Time for the overall completion of the entire Work and this section describes the Contract Time for the overall completion of the entire Project and Intermediate milestones and their associated liquidated Damages.
- B. Contractor shall complete the entire Work under this Contract in 180 calendar days beginning with the date specified in the Notice-to-Proceed. This includes satisfactory completion of all contract work, inspections, testing, documentation, as-built drawings, Punch list Items, final clean-up and full demobilization. Failure to complete by this number of days will result in the assessment of Liquidated Damages in the amount of \$3,000 per calendar day until the Work is completed to the satisfaction of the ACTRANSIT Project Manager or their designate.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

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SECTION 01 20 00

PRICE AND PAYMENT PROCEDURES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Allowances and Alternates.
- B. Lump Sum Prices.
- C. Schedule of Values.
- D. Stored Material.
- E. Applications for Payment

1.2 RELATED SECTIONS

- A. Section 01 33 00 - Submittal Procedures.

1.3 ALLOWANCES AND ALTERNATES

- A. Any Allowances that are part of the Grand Total Bid Price (Refer to Bid Form) are Owner controlled Allowances. The Contractor must have an Allowance Draw Authorization approved by the Owner prior to requesting payment on any part of these Allowances requiring a Contract Amendment prior to project Closeout in addition to the Allowance Draw Authorization.
- B. The Contractor must submit an estimate with a detail supporting documentation showing how the requested Allowance Draw value was determined to obtain an Allowance Draw Authorization and/or Contract Amendment. The Owner will evaluate this request and advise the Contractor if the value and documentation are acceptable. The owner may require additional documentation or remove unwarranted items from the request; Or, AC Transit may issue a Field Instruction to the Contractor to start work as soon as possible. The Contractor will then be required to submit daily work reports that are to be signed by the Owners Project AC Transit Project Manager or their designate/Construction Manager to confirm equipment used in the course of this work, work hours of all tradesmen, and for all materials used daily.
- C. If Project has included Alternate Bid Components that must be priced out as a part of the Project Bid. These Alternate Bid Items will be under consideration with the Contractor providing this bid showing comprehensive pricing for equipment and installation and will include labor pricing for a full and complete system. Project Alternates will be considered during the early construction phase and are designed to be executed via an AC Transit Change Order process. Each shall be priced separately and will be considered in the Base Bid.

1.4 SCHEDULE OF VALUES

- A. Submit Schedule of Values to the Project Manager for approval immediately after contract award. If there is a Schedule of Values contained in the Contract Documents, it may be revised to reflect the Contractor's work scope but must reflect the bid pricing submitted including Allowances and any Alternates which will be single line items.
- B. Obtain the AC Transit Project Manager's approval of the Schedule of Values before Notice to Proceed.

- C. Format: Identify each line item with number and title of bid item along with an additional sub-number or letter and description as appropriate.
- D. Contractor must be responsible for accuracy of quantities and subtotals submitted for approval on the Schedule of Values.
- E. No adjustment will be made in the Contract lump sum prices paid due to any difference between the quantities shown in the Schedule of Values furnished by the Contractor and the quantities required to complete the Work.
- F. The sum of the amounts (subtotals) of the units of work listed for each lump sum item must be equal to the Contract lump sum price bid for the work. Include a direct proportional amount of Contractor's overhead, profit, and all other expenses in each individual unit listed in the Schedule of Values.
- G. Approved Schedule of values will be used to determine partial payments during the progress of the Work.
- H. Identify bonds and insurance.
- I. Include in each line item, the amount of Allowances identified by AC Transit specified in this section.
- J. Revise schedule to list approved Change Orders as a unique line item, with each Application for Payment.

1.3 STORED MATERIAL

- A. Invoice for Stored Materials: Partial payments for Contractor-furnished materials not yet installed may be made only after such materials have been furnished and stored for use in the Work, provided they are stored in an area approved by the AC Transit Project Manager or their designate. All such material must be covered by insurance and once paid for must have a Contractor Letter identifying said materials as belonging to AC Transit. Said invoice may include the amount and value of such acceptable material as has been furnished and delivered to the site and such acceptable material as has been furnished and stored for use in the Work, provided it is stored within the San Francisco Bay Area and is segregated and designated for exclusive use of the Owner.
- B. Invoices from suppliers and proof of payment by Contractor must be furnished to substantiate the cost.

1.4 APPLICATIONS FOR PAYMENT

- A. Submit each application on the form provided by the AC Transit Project Manager. The District typically requires AIA form 702/703 for payment application and the continuation sheet containing the schedule of values.
- B. Content and Format: Utilize Schedule of Values for listing items in Application for Payment. Contractor must meet with the Owner's AC Transit Project Manager or their designate/Construction Manager prior to submittal of Applications for Payment to agree on percent of work complete with total dollar sums of each item of work being agreed upon before final submittal.
- C. Payment Period: Submit application for payment monthly prior to the tenth day of the subsequent month.

- D. Submit with transmittal letter AIA form 702/703 "Application for Payment" to the AC Transit Project Manager or their designate.
- E. Submit with an unconditional release for work for which payment has been received.
- F. Submit a conditional release for work completed in the current period billing.
- G. Substantiating Data: Submit substantiating information, as required by the AC Transit Project Manager, including the following with the application:
 - 1. Current construction photographs specified in Section 01 33 00.
 - 2. Conditional release of liens from major subcontractors and vendors.
 - 3. Submit certification signed by the Contractor and verified by the AC Transit Project Manager or their designate that Record Documents, as specified in Section 01 70 00, are being kept current with construction activities.
 - 4. Affidavits and invoices attesting to off-site stored products.
 - 5. Construction progress schedules, revised and current as specified in Section 01 30 00, Administrative Requirements.
 - 6. Certified payroll records to support compliance with Prevailing Wages requirements.
 - 7. Copies of the following logs: Requests for Information; Quality and Non-Conformances; submittals and shop drawings, and Change Orders.
 - 8. Copies of subcontractor and vendor invoices.
 - 9. Copies of safety briefing notes and inspections.
 - 10. Buy America Certifications and Certificate of Compliance for all materials installed.

1.5 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements as identified by the AC Transit Project Manager or their designate/Construction Manager.
- B. If, in the opinion of the AC Transit Project Manager or their designate, it is not practical to remove and replace the work, the AC Transit Project Manager or their designate will direct an appropriate remedy or adjust payment.
- C. If the AC Transit Project Manager or their designate determines that the defective work may remain or if, the AC Transit Project Manager or their designate allows defective work to remain and requires that the defective Work be partially repaired, the Contract Price will be adjusted to a new sum at the discretion of the Owner.
- D. The individual specification sections may modify these options or may identify a specific formula or percentage sum reduction.
- E. The authority of the Owner to assess the defect and identify payment adjustment is final.
- F. Non-Payment for Rejected Products: Payment will not be made for rejected products for any

of the following. Products are used in this paragraph include materials, products, and completed items of work.

1. Products wasted or disposed of in a manner that is not acceptable.
2. Products determined as unacceptable before or after placement.
3. Products not completely unloaded from the transporting vehicle.
4. Products placed beyond the lines and levels of the required Work.
5. Products remaining on hand after completion of the Work.
6. Loading, hauling, and disposing of rejected products.
7. Work installed and not passing inspections.
8. Products with incomplete certifications (for which certifications are specified or otherwise required).

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01 21 00

ALLOWANCES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Allowances as may be described on the Bid Form.
 - 1. Administrative and procedural requirements governing allowances.
 - 2. Certain items are specified in the contract documents by allowances. Allowances may have been established in lieu of additional requirements.
 - 3. Types of allowances include the following:
 - a. Lump-sum allowances.
 - b. Unit-cost allowances.
 - c. Contingency allowances.
 - d. Testing and inspection allowances.
 - e. Permit and fees allowances.

1.2 SUBMITTALS

- A. Submit proposals for purchase of products or systems included in allowances, in the form specified for change orders in the General Conditions and in accordance with Section 01 26 00, Contract Modification Procedures.
- B. Submit invoices to show actual costs incurred in fulfillment of each allowance.
- C. Coordinate and process submittals for allowance items in same manner as for other portions of the work.

1.3 GENERAL

- A. Costs of services not required by the contract documents are not included in allowances.
- B. At project closeout, credit unused amounts remaining in each allowance to AC TRANSIT by change order.

1.4 LUMP-SUM AND UNIT-COST ALLOWANCES

- A. Allowance shall include cost to Contractor of specific products and materials under allowance and shall include taxes, freight, and delivery to project site.

- B. Unless otherwise indicated, Contractor's costs for receiving and handling at project site, labor, installation, overhead and profit, and similar costs related to products and materials under allowance shall be included as part of the contract sum and not part of the allowance.

1.5 CONTINGENCY ALLOWANCES

- A. Use the contingency allowance only as directed by AC Transit Project Manager or their designate for AC Transit's purposes and only by change orders that indicate amounts to be charged to the allowance.
- B. Contractor's overhead, profit, and related costs for work under the contingency allowance are part of the contract sum and not part of the allowance.

1.6 TESTING AND INSPECTING ALLOWANCES

- A. Testing and inspecting allowances include the cost of engaging testing agencies, actual tests and inspections, and reporting results.
- B. The allowance does not include incidental labor required to assist the testing agency or costs for retesting if previous tests and inspections result in failure. The cost for incidental labor to assist the testing agency shall be included in the contract sum.
- C. Costs of services not required by the contract documents are not included in the allowance.

1.7 PERMIT AND FEES ALLOWANCES

- A. This allowance is to provide for the actual cost of the building permit or any permits that may be required by the AHJ.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 PERMITS AND FEES ALLOWANCE

- A. The permits and fees allowance includes the costs of required permits and fees, in accordance with Section 01 41 00, Regulatory Requirements.
- B. Type: Lump sum.
- C. Amount: TBD

3.2 REMOVAL OF UNSUITABLE MATERIAL ALLOWANCE

- A. The removal of unsuitable material allowance includes the costs of earthwork, transportation, and disposal associated with unsuitable material in accordance with Section 31 20 00, Earth Moving.
- B. Type: Contingency.

AC TRANSIT PROJECT 2071
IFB NO. 2019-1454

C. Amount: TBD

PART 4 - MEASUREMENT AND PAYMENT (Not Used)

END OF SECTION

SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Administrative and procedural requirements for handling and processing contract modifications.

B. Related Sections:

1. Section 01 60 00, Product Requirements, for procedures for approving comparable products.
2. Section 01 60 00 (1.7), Substitution Procedures, for procedures for proposing substitutions.

1.2 MINOR CHANGES IN THE WORK / FIELD ORDERS

- A. Supplemental Instruction: AC Transit Project Manager may issue supplemental instructions authorizing minor changes in the work, not involving adjustment to the Contract Price or the Contract Time, in written form.
- B. Field Order: Field Orders may be issued for the purpose of relaying information in a timely manner that directs a course of action to be taken immediately by the Contractor. Field Orders may or may not have cost impacts that will be negotiated after the direction of the AC Transit Project Manager is completed.

1.3 PROPOSAL REQUESTS

- A. AC Transit-Initiated Proposal Requests: AC Transit Project Manager or their designate may issue a detailed description of proposed changes in the work that may require adjustment to the Contract Sum or the Contract Time. If necessary, the description will include supplemental or revised drawings and specifications.
1. Proposal Requests issued by AC Transit Project Manager or their designate are not instructions either to stop work in progress or to execute the proposed change.
 2. Within time specified in Proposal Request or 7 days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Sum and the Contract Time necessary to execute the change.
 - a. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - c. Include costs of labor and supervision directly attributable to the change.

- d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - e. Quotation Form: Use forms acceptable to AC Transit Project Manager.
 - B. Contractor-Initiated Proposals: If latent, unforeseen, or changed conditions require modifications to the contract, Contractor may initiate a claim by submitting a request for a change to AC Transit Project Manager or their designate.
 - 1. Include a statement outlining reasons for the change and the effect of the change on the work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and the Contract Time.
 - 2. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
 - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
 - 4. Include costs of labor and supervision directly attributable to the change.
 - 5. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
 - 6. Comply with requirements in Section 01 60 00 (1.7), Substitution Procedures, if the proposed change requires substitution of a product or system for product or system specified.
 - 7. Proposal Request Form: Use form acceptable to AC Transit Project.

1.4 ADMINISTRATIVE CHANGE ORDERS

- A. Allowance Adjustment: Refer to Section 01 21 00, Allowances, for administrative procedures for preparation of Change Order Proposal for adjusting the Contract Sum to reflect actual costs of allowances.
- B. The Contractor shall not accept direction for additional work unless issued by the AC Transit Project Manager or their designate. Additional work will be issued via Field Order, Work Change Directive, or approved Change Orders that have been negotiated and executed. The Contractor will not be compensated for additional work without the formal Administrative Change Order procedure being followed as issued by the Construction Manager.

1.5 CHANGE ORDER PROCEDURES

- A. Upon AC Transit approval of a Proposal Request, AC Transit Project Manager will issue a Change Order for signatures from AC TRANSIT and submitted to the Contractor for final processing.

1.6 WORK CHANGE DIRECTIVE

- A. Work Change Directive: AC Transit Project Manager or their designate may issue a Work Change Directive. A Work Change Directive instructs Contractor to proceed with a change in the work, for subsequent inclusion in a Change Order.
 - 1. Work Change Directive contains a complete description of change in the work. It also designates method to be followed to determine change in the Contract Sum or the Contract Time.
 - 2. Contractor is to proceed with Extra Work as directed by the AC Transit Project Manager or their designate on a Time and Material Basis until a Change Order can be approved. Contractor will submit a daily work record of Manpower, Equipment, and Materials for said Extra Work for the AC Transit Project Manager or their designatee's signature until a lump sum or unit price is agreed upon and a Change Order is issued
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive.
 - 1. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT (Not Used)

END OF SECTION

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SECTION 01 30 00

ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Submittals.
- B. Coordination and Project Conditions.
- C. Preconstruction Meeting.
- D. Progress Meetings.
- E. Pre-installation Meetings.
- F. Construction Progress Documentation.

1.2 SUBMITTALS

- A. Submit Traffic Control Plan where needed.
- B. Submit progress photographs (electronic) with application for payment.
- C. Submit Baseline Schedule within 15 Calendar Days of Notice of Award, as well 3 weeks ahead schedules weekly , and daily work schedule detail
- D. Submit List and Schedule of Required Project Submittals. Refer to Section 01 33 00 for additional Submittal requirements.

1.3 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and Work of the various sections of the specifications to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Verify utility requirements and characteristics of operating equipment are compatible. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate space requirements, supports, and installation of work that are indicated diagrammatically on Drawings. Follow routing shown for pipes, ducts, and conduit, as closely as practicable; place runs parallel with property lines. Note that there are possible unidentified utilities within the project site. Contractor will be responsible for any and all damage to these utilities and or infrastructure. Potholing operations will be required where excavation of below slab-on-grade work begins without exception.
- D. Coordinate completion and clean-up of work of separate Sections in preparation for Substantial Completion.
- E. Owner will occupy the premises during construction or before Substantial Completion and Contractor must coordinate access to site as requested. For correction of defective Work and Work not in accordance with Contract Documents Contractor must minimize disruption of Owner's activities.

- F. Coordinate activities included in various Sections to assure efficient and orderly installation of each component. Coordinate operations included under different Sections that are dependent on each other for proper installation and operation.

1.4 PRECONSTRUCTION MEETING

- A. The AC Transit Project Manager will schedule a meeting after Notice of Award, execution of the Contract Agreement, and submission of executed bonds and insurance certificate.
- B. Attendance Required: AC Transit Project Manager, Construction Manager, Architect/Engineer of Records, and Contractor.
- C. Preconstruction Requirements:
 - 1. Introduce parties, roles, and responsibilities and review communications protocols.
 - 2. Distribution of Contract Documents.
 - 3. Submission of list of the final Subcontractors, list of all products, a final schedule of values, and baseline progress schedule.
 - 4. Designation of personnel representing the parties in Contract and the Architect/Engineer.
 - 5. Procedures and processing of field decisions, submittals, substitutions, RFI's, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 - 6. Scheduling activities of independent testing laboratory.
 - 7. Environmental requirements and procedures:
 - a. Waste Reduction and Recycling Plan (WRRP)
- D. AC Transit Project Manager or their designate will prepare meeting report and distribute copies within five days after meeting to participants. Contractor must distribute copies to Contractor's team members affected by decisions made.
- E. AC Transit Project Manager will issue Notice to Proceed.
- F. Contractor must not mobilize on site until satisfying the Preconstruction Requirements listed herein.

1.5 PROGRESS MEETINGS

- A. Attend progress meetings throughout progress of the Work at minimum weekly intervals or as required by the AC Transit Project Manager or their designate.
- B. Attendance Required: Contractor's Superintendent, major subcontractors and suppliers, as appropriate to agenda topics for each meeting.
- C. Agenda:
 - 1. Safety Report
 - 2. Submittal Log Review
 - 3. RFI Log Review
 - 4. Three Week Look Ahead Schedule

- a. Review of Work progress
 - b. Corrective measures to regain projected schedule.
 - 5. Long Lead Procurement Items
 - a. Review of off-site fabrication and delivery schedules.
 - 6. Change Order Log Review
 - 7. Potential Change Orders
 - 8. Inspections
 - 9. Coordination
 - 10. Other Issues
 - a. Field observations or problems.
 - b. Discussion of issues or problems which impede planned progress.
 - c. Review environmental requirements and procedures. Review status of Solid Waste Management.
 - d. Other business relating to Work.
- D. AC Transit Project Manager or their designate will prepare meeting report and distribute copies to participants. Contractor must distribute copies to Contractor's team members affected by decisions made.

1.6 PREINSTALLATION MEETING

- A. When required in individual specification sections, convene a pre-installation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, Work of the specific section.
- C. Notify AC Transit Project Manager five days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
 - 1. Review conditions of installation, preparation and installation procedures.
 - 2. Review coordination with related work.
 - 3. Review specific safety plan as appropriate.
- E. Record minutes and distribute copies within five days after meeting to participants, with copies to AC Transit Project Manager, participants, and those affected by any decisions made.

1.7 CONSTRUCTION PROGRESS DOCUMENTATION

- A. Progress Photographs:
 - 1. Photographically document site conditions prior to start of construction operations.

2. Take weekly photographs throughout entire project. Take photographs more frequently if required to document the work. Photographs must be provided for unrestricted use by AC Transit Project Manager. Indicate photographs demonstrating environmental procedures.
3. Submit photographs on USB drive with each application for payment. Organize photographs by date and description. Files are to be named "YYYYMMDD_Location_Work Description". Format of pictures to be jpg files.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 5 - GENERAL

5.2 SUMMARY

A. Section Includes:

2. Administrative provisions for coordinating construction operations on project including, but not limited to, the following:

- b. General project coordination procedures.
- c. Administrative and supervisory personnel.
- d. Coordination drawings.
- e. Requests for Information (RFIs).
- f. Project meetings.

B. Contractor is responsible for coordination with goods contractors and other contractors involved in the project.

C. Related Sections:

- 1. Section 01 32 00, Construction Progress Documentation, for preparing and submitting Contractor's construction schedule.
- 2. Section 01 70 00, Execution and Closeout Procedures, for coordinating closeout of the contract.
- 3. Individual specification sections for normal startup, testing, and adjusting procedures required independently of the commissioning process.

5.3 DEFINITIONS

- A. RFI: Request from AC Transit, AC Transit Project Manager or their designate, or Contractor seeking information, specifically interpretation of the contract documents.
- B. Construction Manager, Resident Engineer, AC Transit Project Manager, and Construction Management Team are all used interchangeably throughout the body of the project specifications.

5.4 COORDINATION

- A. Coordination: Coordinate construction operations with those of other contractors and entities. Coordinate construction operations included in different sections of the specifications to ensure efficient and orderly installation of each part of the work. Coordinate construction operations, included in different sections that depend on each other for proper installation, connection, and operation. Contractor is responsible for progress and performance of the work and shall provide direction to others as required to properly coordinate trades and processes.

2. Schedule construction operations in sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation.
 3. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
 4. Make adequate provisions to accommodate items scheduled for later installation.
 5. Coordinate equipment installation requirements with equipment contractors to prevent delays and facilitate proper installation. Acknowledge, accommodate, and respect equipment contractors' needs for access to the work for the periods required to complete equipment installation. Incorporate these periods into the construction progress schedule and work plan before commencing work.
- B. Prepare memoranda for distribution to each party involved (including AC Transit and separate contractors) outlining special procedures required for coordination. Include such items as required notices, actions, reports, and list of attendees at meetings.
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the work. Such administrative activities may include, but are not limited to, the following:
2. Preparation of Contractor's construction schedule.
 3. Preparation of the schedule of values.
 4. Installation and removal of temporary facilities and controls.
 5. Delivery and processing of submittals.
 6. Progress meetings.
 7. Pre-installation conferences.
 8. Startup and adjustment of systems.
 9. Training activities.
 10. Project closeout activities.
- D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.
1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the work. Refer to other sections for disposition of salvaged materials that are designated as AC TRANSIT's property.

5.5 COORDINATION DRAWINGS

- A. Coordination Drawings, General: Included in this contract are items that have Performance elements identified in the respective Specification Sections. Prepare coordination drawings in accordance with requirements in individual sections, where installation is not completely shown on shop drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or

installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable:
 - b. Use applicable drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
 - c. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
 - d. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
 - e. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
 - f. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
 - g. Indicate required installation sequences.
 - h. Indicate dimensions shown on the drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to AC Transit Project Manager or their designate indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the contract.

B. Coordination Drawing Organization: Organize coordination drawings as follows:

2. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire protection, fire alarm, and electrical work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the work.
3. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on drawings. Indicate areas of conflict between light fixtures and other components.

4. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire protection, fire alarm, and electrical equipment.
5. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
6. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
7. Mechanical and Plumbing Work: Show the following:
 - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
 - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
 - c. Fire-rated enclosures around ductwork.
8. Electrical Work: Show the following:
 - a. Runs of vertical and horizontal conduit 1-1/4 inch diameter and larger.
 - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire alarm locations.
 - c. Panel board, switchboard, switchgear, transformer, busway, generator, and motor control center locations.
 - d. Location of pull boxes and junction boxes dimensioned from column centerlines.
9. Fire Protection System: Show the following:
 - a. Locations of fire alarm panels, standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
10. Review: AC Transit AC Transit Project Manager or their designate will review coordination drawings to confirm that the work is being coordinated, but not for the details of the coordination, which are the Contractor's responsibility. If the AC Transit Project Manager or their designate determines that the coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, the AC Transit Project Manager or their designate will so inform the Contractor, who shall make changes as directed and resubmit.
11. Coordination Drawing Prints: Prepare coordination drawing prints in accordance with requirements of Section 01 33 00, Submittal Procedures.

5.6 KEY PERSONNEL

- A. Key Personnel Names: Following the Specification Sections, before starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at project site. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and email addresses. Provide names, addresses, and telephone

numbers of individuals assigned as standbys in the absence of individuals assigned to project.

2. Post copies of list in project meeting room and in temporary field office. Keep list current at all times.

5.7 REQUESTS FOR INFORMATION (RFIs)

- A. General: Immediately on discovery of the need for additional information or interpretation of the contract documents, Contractor shall prepare and submit an RFI in the form specified.
1. AC Transit Project Manager or their designate will return RFIs submitted to AC Transit Project Manager or their designate by other entities controlled by Contractor with no response.
 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Frivolous RFIs: Frivolous RFIs include requests for information shown in the contract documents or resulting from Contractor's failure to study and compare contract documents or to coordinate its own work; requests for approval of submittals, substitutions, changes in the work, or adjustment of the contract price or the contract time; and RFIs that are incomplete, contain errors, or include unrelated items. If reviewed, the cost in time and materials on the part of AC Transit Project Manager or their designate and related design professionals to review unnecessary or frivolous RFIs will be assessed to the Contractor.
- C. All RFI transmittals shall be submitted via email to the AC Transit Project Manager AND Architect (AOR). Transmittals on paper shall be accompanied by email submissions with the email submission being considered primary.
- D. **Item ID:** use the following format:
Number[revision letter][-Section][-File number]
Brackets indicate an element of the name may not appear if naming does not apply.
1. *Number: three-digit sequential number.* Begin serial order with 001. Assign individual number to each. Do not combine several items from one trade or subcontractor into one submittal without prior approval of AC Transit Project Manager or their designate. Submittals and RFIs have two separate number sequences. Do not omit the preceding zeros in a number.
 2. *Revision Letter:* Revision submittals with original number and a sequential alphabetic suffix for how many times this submittal has been resubmitted, with "A" indicating the first resubmittal.
 3. For Submittals: *Dash symbol "-"* *Section:* Five or six-digit number reflecting section to which the item belongs.
 4. *File sequence number:* For image sequences related to a single subject or RFI.
- E. **EMAIL identification (Subject line):** All correspondence and submittals transmitted via email shall always use the following format:
topic; project name; project number [contractor's project number]
1. Topic:
 - b. general concept the a semicolon ";"
 - c. for submittals, use Submittal numbering
 - d. for RFIs, use RFI numbering
 2. **Project Name:** AC Transit CSC P2071
 3. **Contractor's Project Number:** this element of the subject line is optional as

indicated by the [brackets].

4. Example:
"meeting moved; AC Transit CSC P2071"
5. Example for RFI003 third revision:
"RFI003C; AC Transit CSC P2071".
6. Example for Submittal with second revision:
"Submittal002B-233300 air duct accessories; AC Transit CSC P2071"
7. **DO NOT** INCLUDE A SPACE BETWEEN the identifier, "Submittal" or "RFI" and the number. Doing so significantly reduces the effectiveness of searches in both email and file systems.
8. Using a Subject Line from a previous email where the topic is incorrect can be cause for delay or rejection of the submission. Always provide a Subject that is pertinent to content.
9. Subject lines, body text and file names shall be written in upper and lower case. (Not all caps).

F. **ELECTRONIC FILE identification (File Names):** transmitted files shall have the following name structure:

1. Format:
 - a. [Submittal/RFI Number] [revision letter] [Section] [File number] Abbreviated topic of file extension
 - b. Abbreviated topic: of file attempt to use three words or less.
 - c. extension: three or four character file extension such as .jpg or .pdf
2. Examples:
 - d. Submittal002b-233300.pdf
 - e. RFI006 Spray Fireproofing.pdf
 - f. Submittal002b-233300 air duct accessories.pdf
 - g. RFI006-03 Electrical, separation wall above ACT.jpg
 - h. RFI006B-02 Electrical, solution location.png
3. **Do not include project name or number in file name.** The PDF and JPG files are electronically stored in named project folders and have the project name and project number in the file content.
4. In PDF or image files, place an opaque label or title block on each submittal page/image for identification; include name of firm or entity that authored.

G. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. Project name.
2. Project number.
3. Date.
4. Name of Contractor.
5. Name of AC Transit Project Manager or their designate.
6. RFI number, numbered sequentially.
7. RFI subject.

8. Specification section number, title, and related paragraphs, as appropriate.
 9. Drawing number and detail references, as appropriate.
 10. Field dimensions and conditions, as appropriate.
 11. Contractor's suggested resolution. If Contractor's solution(s) impacts the Contract Time or the Contract Price, Contractor shall state impact in the RFI.
 12. Contractor's signature.
 13. Attachments: Include sketches, descriptions, measurements, photos, product data, shop drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
 - b. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.
- H. RFI Forms: Software-generated form with substantially the same content as indicated above, acceptable to AC Transit Project Manager.
- I. AC Transit Project's Response: AC Transit Project Manager or their designate will review each RFI, determine action required, and respond. Allow seven working days for AC Transit Project Manager or their designee's response for each RFI. RFIs received by AC Transit Project Manager or their designate after 1:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - b. Requests for approval of submittals.
 - c. Requests for approval of substitutions.
 - d. Requests for coordination information already indicated in the contract documents.
 - e. Requests for adjustments in the Contract Time or the Contract Price.
 - f. Requests for interpretation of AC Transit Project Manager or their designee's actions on submittals.
 - g. Incomplete RFIs or inaccurately prepared RFIs.
 2. AC Transit Project Manager or their designee's action may include a request for additional information, in which case AC Transit Project Manager or their designee's time for response will date from time of receipt of additional information.
 3. AC Transit Project Manager or their designee's action on RFIs that may result in a change to the Contract Time or the Contract Price may be eligible for Contractor to submit a Change Proposal according to Section 01 26 00, Contract Modification Procedures.
 - b. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Price, notify AC Transit Project Manager or their designate in writing within 10 days of receipt of the RFI response.
- J. On receipt of AC Transit Project Manager or their designee's response, update the RFI log and immediately distribute the RFI response to affected parties. Review response and

notify AC Transit Project Manager or their designate within seven days if Contractor disagrees with response.

- K. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly. Use a software log with not less than the following:

1. Project name.
2. Name and address of Contractor.
3. Name and address of AC Transit Project Manager or their designate.
4. RFI number including RFIs that were dropped and not submitted.
5. RFI description.
6. Date the RFI was submitted.
7. Date AC Transit Project Manager or their designatee's response was received.
8. Identification of related Minor Change in the Work/Field Order, Work Change Directive, and Proposal Request, as appropriate.

5.8 PROJECT MEETINGS

- A. General: AC Transit and the Contractor shall schedule and conduct meetings and conferences at project site as needed or unless otherwise indicated.

1. Attendees: Inform participants and others involved, and individuals whose presence is required, of date and time of each meeting. Notify AC Transit and AC Transit Project Manager or their designate of scheduled meeting dates and times.
2. Agenda: Prepare the meeting agenda. Distribute the agenda to all invited attendees.
3. Minutes: Entity responsible for conducting meeting will record significant discussions and agreements achieved. Distribute the meeting minutes to everyone concerned, including AC Transit, Contractor, and AC Transit Project Manager or their designate, within three days of the meeting.

- B. Preconstruction Conference: Schedule and conduct a preconstruction conference before mobilization, at a time convenient to AC Transit and AC Transit Project Manager, but no later than 15 days after execution of the Agreement.

1. Conduct the conference to review responsibilities and personnel assignments.
2. Attendees: Authorized representatives of AC Transit, AC Transit's Commissioning Authority, AC Transit Project, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. Participants at the conference shall be familiar with project and authorized to conclude matters relating to the work.
3. Agenda: Discuss items of significance that could affect progress, including the following:
 - b. Safety Plan
 - c. Tentative construction schedule.
 - d. Phasing.

- e. Critical work sequencing and long-lead items.
- f. Designation of key personnel and their duties.
- g. Lines of communications.
- h. Procedures for processing field decisions and Change Orders.
- i. Procedures for RFIs.
- j. Procedures for testing and inspecting.
- k. Procedures for processing Applications for Payment.
- l. Distribution of the contract documents.
- m. Submittal procedures.
- n. Preparation of record documents.
- o. Use of the premises.
- p. Work restrictions.
- q. Working hours.
- r. AC Transit's occupancy requirements.
- s. Responsibility for temporary facilities and controls.
- t. Procedures for moisture and mold control.
- u. Procedures for disruptions and shutdowns.
- v. Construction waste management and recycling.
- w. Parking availability.
- x. Office, work, and storage areas.
- y. Equipment deliveries and priorities.
- z. First aid.
- aa. Security.
- bb. Progress cleaning.

4.Minutes: AC Transit and the Construction Management Team are responsible for conducting meeting and will record and distribute meeting minutes.

- C. Pre-installation Conferences: Conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction, as required in individual specification sections.

1.Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advise the

Construction Management Team, AC Transit Project Manager or their designate, and AC Transit's Commissioning Authority of scheduled meeting dates.

2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

- a. Contract Documents.
- b. Options.
- c. Related RFIs.
- d. Related Change Orders.
- e. Purchases.
- f. Deliveries.
- g. Submittals.
- h. Review of mockups.
- i. Possible conflicts.
- j. Compatibility problems.
- k. Time schedules.
- l. Weather limitations.
- m. Manufacturer's written recommendations.
- n. Warranty requirements.
- o. Compatibility of materials.
- p. Acceptability of substrates.
- q. Temporary facilities and controls.
- r. Space and access limitations.
- s. Regulations of authorities having jurisdiction.
- t. Testing and inspecting requirements.
- u. Installation procedures.
- v. Coordination with other work.
- w. Required performance results.
- x. Protection of adjacent work.
- y. Protection of construction and personnel.

3. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.

4. Reporting: Distribute minutes of the meeting to each party present and to other parties requiring information.
 5. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the work and reconvene the conference at earliest feasible date.
- D. Project Closeout Conference: Schedule and conduct a project closeout conference, at a time convenient to AC TRANSIT and AC Transit Project Manager, but no later than **30 days** prior to the scheduled date of Substantial Completion.
1. Conduct the conference to review requirements and responsibilities related to project closeout.
 2. Attendees: Authorized representatives of AC Transit, AC Transit's Commissioning Authority, AC Transit Project Manager or their designate, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with project and authorized to conclude matters relating to the work.
 3. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
 - a. Preparation of record documents.
 - b. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
 - c. Submittal of written warranties.
 - d. Requirements for preparing operations and maintenance data.
 - e. Requirements for demonstration and training.
 - f. Preparation of Contractor's punch list.
 - g. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
 - h. Submittal procedures.
 - i. Coordination of separate contracts.
 - j. AC Transit's partial occupancy requirements.
 - k. Installation of AC Transit's furniture, fixtures, and equipment.
 - l. Responsibility for removing temporary facilities and controls.
 4. Minutes: Entity conducting meeting will record and distribute meeting minutes.
- E. Progress Meetings: Conduct progress meetings at weekly intervals.
1. Coordinate dates of meetings with preparation of payment requests.
 2. Attendees: In addition to representatives of AC Transit, AC Transit's Commissioning Authority, and AC Transit Project Manager, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination,

or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with project and authorized to conclude matters relating to the work.

3. Agenda: Review and correct or approve minutes of previous progress meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of project.

- a. Safety Report
- b. Submittal Log Review
- c. RFI Log Review
- d. Schedule Review – Three Week Look Ahead
 - 1) Review progress since the last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
 - 2) Look ahead for next three weeks.
- e. Long Lead Time Procurement
- f. Change Order Log Review
 - 1) Known Changes
 - 2) Potential Changes
- g. Inspections
- h. Coordination Issues
- i. Other Issues
 - 1) Review present and future needs of each entity present, including the following:
 - i. Interface requirements.
 - ii. Sequence of operations.
 - iii. Deliveries.
 - iv. Off-site fabrication.
 - v. Access.
 - vi. Site utilization.
 - vii. Temporary facilities and controls.
 - viii. Progress cleaning.
 - ix. Quality and work standards.
 - x. Status of correction of deficient items.
 - xi. Field observations.
 - xii. Pending claims and disputes.
 - xiii. Documentation of information for payment requests.

4. Minutes: Entity responsible for conducting the meeting will record and distribute the meeting minutes to each party present and to parties requiring information.

- b. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

F. Coordination Meetings: Conduct multiple contract coordination meetings as needed. Project coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and pre-installation conferences.

1. Attendees: In addition to representatives of AC Transit, AC Transit's Commissioning Authority and AC Transit Project Manager or their designate, each contractor, subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at

these meetings. All participants at the meetings shall be familiar with project and authorized to conclude matters relating to the work.

2. Agenda: Review and correct or approve minutes of the previous coordination meeting. Review other items of significance that could affect progress. Include topics for discussion as appropriate to status of project.

- a. Combined Contractor's Construction Schedule: Review progress since the last coordination meeting. Determine whether each contract is on time, ahead of schedule, or behind schedule, in relation to combined Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
- b. Schedule Updating: Revise combined Contractor's construction schedule after each coordination meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with report of each meeting.
- c. Review present and future needs of each contractor present, including the following:
 - 1) Interface requirements.
 - 2) Sequence of operations.
 - 3) Status of submittals.
 - 4) Deliveries.
 - 5) Off-site fabrication.
 - 6) Access.
 - 7) Site utilization.
 - 8) Temporary facilities and controls.
 - 9) Work hours.
 - 10) Hazards and risks.
 - 11) Progress cleaning.
 - 12) Quality and work standards.
 - 13) Change Orders.

3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

PART 6 - PRODUCTS (Not Used)

PART 7 - EXECUTION (Not Used)

PART 8 - MEASUREMENT AND PAYMENT (Not Used)
CUSTOMER SERVICE RENOVATION

END OF SECTION

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SECTION 01 32 00

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Related Sections.
- B. References.
- C. Definitions.
- D. General.
- E. Contractor's Scheduling Personnel and Their Qualifications.
- F. Schedules.
- G. Contractors Schedule Technical Requirements.
- H. Four-Week Work Plan.

1.2 RELATED SECTIONS

- A. Section 01 11 00 - Summary.
- B. Section 01 30 00 - Administrative Requirements.
- C. Section 01 33 00 - Submittal Procedures.

1.3 REFERENCES

- A. The Use of CPM in Construction - A Manual for General Contractors and the Construction Industry, Washington, D.C., The Associated General Contractors of America (AGC).

1.4 DEFINITIONS

- A. Activity: A task, event or other Contract element on a schedule that contributes to completing the Contract. Activities have a description, duration, and one or more logic ties.
- B. Activity Duration: The total number of working days or calendar days required to perform that Activity. They may be planned or actual.
- C. Actual Dates: The actual start or finish date of an Activity which occurs prior to the Data Date. Dates occurring after the Data Date are not Actual Dates.
- D. Contract Schedule: A computer-produced schedule in the Critical Path Method (CPM) format. The Contract Schedule includes all activities necessary to clearly establish the Critical Path and to demonstrate complete and accurate planning and sequencing of the Contract and to permit monitoring and evaluation of progress time impacts. The Interim Contract Schedule, Baseline Contract Schedule, Contract Update Schedule, and Revised Baseline Contract Schedule are all versions of the Contract Schedules.

- E. Critical Path Method (CPM) A network-based planning technique using Activity Durations and the relationships between activities to mathematically calculate a schedule for the entire Contract.
- F. Current Schedule: The most recently AC Transit accepted Contract Schedule, (i.e. Interim Contract Schedule, Baseline Contract Schedule, Contract Update Schedule, or Revised Baseline Schedule) shall constitute the "Current Schedule".
- G. Data Date: The work date after the date through which a schedule is current. Everything occurring earlier than the Data Date is "actual" and everything on or after the Data Date is "planned".
- H. Early Completion Date: A Planned Completion Date for a scope of work that is earlier than the contractually required date.
- I. Free Float: The amount of time an Activity can be delayed before affecting a successor Activity.
- J. Level of Effort: Level of Effort (LOE) Activities represents tasks performed in support of other Work which do not lend themselves to measurement of a discrete accomplishment. Examples of LOE tasks include project accounting, customer liaison, project controls, maintaining traffic control etc. The durations of LOE Activities are defined by the work they support.
- K. Milestone: A marker in a network which is typically used to mark a point in time or denote the beginning or end of a sequence of activities. A Milestone has zero duration, but will otherwise function in the network as if it is an Activity, including either a start or finish date.
- L. Near Critical Path: A chain of activities with Total Float exceeding that of the Critical path but with Total Float not significantly greater than the Critical Path. The amount of Total Float in a path considered near critical is 14 calendar days or less.
- M. Open-Ended Activity: An Activity without at least one predecessor or without at least one successor.
- N. Out-of-Sequence Activity: Any activity that actually starts in a sequence other than shown in the Current Schedule. Any type of invalid sequencing will be deemed out of sequence.
- O. Revision: A change in the schedule that modifies logics, adds or deletes activities, or alters activities, sequences, or durations.
- P. Recovery Schedule: A modified Current Schedule prepared to show how delay can be recovered in the event that a delay to a Contract Milestone Date is projected in the Current Schedule.
- Q. Total Float: The amount of time that an Activity can be delayed before delaying the Contract Milestone Dates.

1.5 GENERAL

- A. Incorporation of Contract Requirements: Project Progress Schedules shall represent a practical plan to complete the Work within the Contract Milestone Dates, and shall convey the Contractor's intent in the manner of prosecution and progress of Work. All Project Progress Schedules prepared by the Contractor shall meet the Contract requirements

including, but not limited to access, sequencing, construction staging, and Contract Milestone Dates.

- B. Contractor's Representation: The submittal of Project Progress Schedules shall be understood to be the Contractor's representation that the Project Progress Schedule meets the requirements of the Contract Documents and that the Work will be executed in the sequence and duration indicated.
- C. Contractor Responsibility: The execution of the Work in accordance with the Contract Documents is the responsibility of the Contractor. Responsibility for developing the Contract Schedule and monitoring actual progress of the Work. The Contractor shall involve and coordinate all Subcontractors and Material Suppliers in the development and updating of Contract Schedules.
- D. Schedule Adjustments: AC Transit reserves the right to require that the Contractor modify, adjust, add to, or clarify any portion of the Project Progress Schedules which may later be discovered to be insufficient or inaccurate for planning, monitoring, or executing the Work. The first of each type of schedule or report submitted by the Contractor will be reviewed for format, as well as content. Once the format has been approved, all subsequent Contract Schedules shall be submitted in the approved format. AC Transit may request format changes as the Contract progresses. No additional compensation shall be provided for such modifications, adjustments, additions, or clarifications.
- E. Submittal Format: The Contractor shall submit one original and two additional copies of all Contract Schedule and report submittals described in this Technical Specifications Section; and an electronic copy file, including the Oracle Primavera 6 (P6) .xer file on compact disk or other AC Transit-approved electronic medium in a format acceptable to AC Transit.
- F. Withholding Payment: AC Transit may withhold all or part of a monthly progress payment if the contractor does not submit or fails to get approval of a contractual schedule.

1.6 CONTRACTOR'S SCHEDULING PERSONNEL AND THEIR QUALIFICATIONS

- A. Schedule must be prepared and maintained by personnel specializing in CPM scheduling.
- B. Scheduler: A person specializing in CPM scheduling must possess a five years minimum experience in Primavera P6 scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request. AC Transit must provide formal approval of the Scheduler before the Interim Contract Schedule (ICS) is approved.

1.7 SCHEDULES

- A. Interim Contract Schedule
 - 1. Submittal: Within 10 calendar days of the established Notice to Proceed (NTP), the Contractor shall submit an Interim Contract Schedule (ICS).
 - 2. Content:
 - a. The ICS shall detail the Contractor's activities and planned sequence of Work for the first 60 calendar days of the Contract, and summarize the remainder of the Work.
 - b. The initial Data Date shall be the NTP date.

- c. The ICS is exempt from resource and cost loading requirements.
- d. The initial ICS shall meet all Contract Milestone Dates.
- 3. Review, Acceptance, and Implementation:
 - a. AC Transit will review the ICS upon submittal by the Contractor.
 - b. AC Transit will notify the Contractor of either “No Exceptions Taken” (NET), “Make Corrections Noted” (MCN), or “Amend and Resubmit” (AR) of the ICS.
 - c. If notification from AC Transit indicates NET, no additional action by the Contractor is required for the submittal.
 - d. If notification from AC Transit indicates MCN or AR, the Contractor will have seven calendar days after the comment(s) are provided in writing to revise and resubmit the package for AC Transit’s review. Contract shall include with the re-submittal a line-by-line response to each AC Transit comment indicating how it has been addressed by the Contractor.
 - e. AC Transit will review re-submittals if AC Transit has further comments the Contractor will have an additional seven calendar days from the date the comments are returned by AC Transit to revise and resubmit for AC Transit’s review.
 - f. The ICS shall serve as the Current Schedule until the Baseline Contract Schedule is approved.

B. Baseline Contract Schedule

- 1. Submittal: Within 30 calendar days of the Effective Date, the Contract shall submit a detailed Baseline Contract Schedule (BCS) and report for review and acceptance.
- 2. Content:
 - a. The initial Data Date shall be the NTP date.
 - b. The initial version of the BCS shall meet all Contract Milestone Dates.
 - c. The sequencing of activities in the BCS may vary from the ICS.
- 3. Narrative Report: A narrative report shall be submitted with the BCS containing the following information:
 - a. A narrative report describing the basis (including Activity Duration basis), assumptions, Critical Path analysis, productivity and installation rates, crew sizes, shifts per day, shift hours, construction staging plans, planned sequence of work operations, and constraints used to develop the BCS.
 - b. Non-manual labor staffing plan shown as general conditions on one activity.

- c. Manual labor staffing plan by craft (including Subcontractors) showing start and end date, crew sizes, shifts per day, shift hours, and number of each craft per month.
 - d. Equipment usage plan for major equipment by equipment type showing start and end date and number of each equipment type per month.
4. Review, Acceptance, and Implementation:
- a. AC Transit will review the BCS upon submittal by the Contractor.
 - b. AC Transit will notify the Contractor of either “No Exceptions Taken” (NET), “Make Corrections Noted” (MCN), or “Amend and Resubmit” (AR) of the ICS.
 - c. If notification from AC Transit indicates NET, no additional action by the Contractor is required for the submittal.
 - d. If notification from AC Transit indicates MCN or AR, the Contractor will have seven calendar days after the comment are provided in writing to revise and resubmit the package for AC Transit's review. Contract shall include with the re-submittal a line-by-line response to each AC Transit comment indicating how it has been addressed by the Contractor.
 - e. AC Transit will review re-submittals if AC Transit has further comments the Contractor will have an additional seven calendar days from the date the comments are returned by AC Transit to revise and resubmit for AC Transit's review.

C. Contract Update Schedule

- 1. Submittal: Following acceptance of the BCS, including acceptance with comments, Contractor shall prepare and submit each month a Contract Update Schedule (CUS) inclusive of the report described below. CUS shall be submitted by the 5th of month following the reporting month.
- 2. Content: Each CUS shall include all work activities including those already completed.
 - a. The Data Date shall be the first working day of the month following the reporting month.
 - b. Completed activities shall incorporate “As-Built” information including when activities were actually started and actually completed.
 - c. In-progress activities shall be updated with remaining duration/projected finish.
 - d. Minor schedule revisions shall be incorporated to reflect anticipated changes to planned activities such that the schedule reflects the Contractor's current forecast of the reporting period cut-off date for the entirety of the Work.

- e. All out-of-sequence activities shall be reviewed and their relationships either verified or changed.
 - f. AC Transit reserves the right to request a recovery schedule. Upon acceptance by AC Transit it shall be incorporated into the CUS including resource and cost loading changes.
3. Narrative Report: A report shall be submitted with the CUS containing the following information:
- a. Description of the current Critical Path and Near Critical Paths, including for each:
 - (1) Description of change in Critical Path and Near Critical Paths, if any.
 - (2) Amount of Float associated with each, and progress made on each during the reporting period, including explanation for lack of progress on Critical Path activities that were planned to be performed.
 - (3) Description of critical activities schedule to be performed in the next reporting period.
 - b. Status of major project components (including percent complete, amount of time ahead or behind schedule).
 - c. Listing of current and potential delays including cause of delay, actual/estimated impact of delay on Contract Milestones Dates or other Milestone completion dates, and discussion of current/potential corrective/mitigate action(s) to address the issues/delays.
 - d. Status of major material and equipment procurement.
 - e. Explanation for any schedule revisions organized by Work grouping, including identification of logic changes, Activity Duration changes, and Activity additions/deletions along with reasons for the changes.
 - f. List of approved Change Orders incorporated or pending incorporation into the Current Schedule and a report identifying the resultant changes in resource and/or cost loading.
 - g. Identification of unplanned restriction or conditions regarding labor, equipment or material. Update of manual labor staffing plan, crew sizes, shifts per day, shift hours, and major equipment usage plan showing actual "head count" and major equipment use for the reporting period versus the most recently approved BCS.
4. Review, Acceptance, and Implementation:
- a. AC Transit will review the CUS upon submittal by the Contractor.
 - b. PROGRESS REVIEW POINT

- b. AC Transit will notify the Contractor of either “No Exceptions Taken” (NET), “Make Corrections Noted” (MCN), or “Amend and Resubmit” (AR) of the ICS.
- c. If notification from AC Transit indicates NET, no additional action by the Contractor is required for the submittal.
- d. If notification from AC Transit indicates MCN or AR, the Contractor will have seven calendar days after the comment are provided in writing to revise and resubmit the package for AC Transit’s review. Contract shall include with the re-submittal a line-by-line response to each AC Transit comment indicating how it has been addressed by the Contractor.
- e. AC Transit will review re-submittals if AC Transit has further comments the Contractor will have an additional seven calendar days from the date the comments are returned by AC Transit to revise and resubmit for AC Transit’s review. Only one CUS re-submittal per month will be reviewed by AC Transit.

D. Revised Baseline Contract Schedule

- 1. Submittal: Revised Baseline Contract Schedule (Revised BCS) shall be prepared by Contractor, and submitted to AC Transit for its acceptance if one or more of the following conditions occur and AC Transit specifically requests, or approves Contractor requires to prepare such a revised schedule:
 - a. A change or delay significantly affects the Critical Path for a Contract Milestone
 - b. Contractor elects to change any sequence of activities affecting the Critical Path(s) for Contract Milestone Dates or to significantly change the previously approved work plan
 - c. In the opinion of AC Transit, or at the request of the Contractor with AC Transit approval, the status of the Work is such that the network and supporting analyses no longer demonstrate complete and accurate planning and sequencing of the Work to permit monitoring and evaluation of progress and time impacts.
- 2. Content: Contractor shall submit any Revised BCS, including report, in the same form and detail as the BCS with the following clarifications:
 - a. Revised BCS shall be based upon the actual progress for Work completed and shall reestablish a baseline for the Work yet to be performed.
 - b. For a Revised BCS necessitated by Change Orders, the Data Date shall be the date mutually agreed by the Contractor and AC Transit, but shall generally be the date of the start of the Revised BCS development effort using the Current Schedule as a starting point for development.
- 3. Review, Acceptance, and Implementation:
 - a. AC Transit will review the Revised BCS upon submittal by the Contractor.

- b. AC Transit will notify the Contractor of either “No Exceptions Taken” (NET), “Make Corrections Noted” (MCN), or “Amend and Resubmit” (AR) of the ICS.
- c. If notification from AC Transit indicates NET, no additional action by the Contractor is required for the submittal.
- d. If notification from AC Transit indicates MCN or AR, the Contractor will have seven calendar days after the comment are provided in writing to revise and resubmit the package for AC Transit’s review. Contract shall include with the re-submittal a line-by-line response to each AC Transit comment indicating how it has been addressed by the Contractor.
- e. AC Transit will review re-submittals if AC Transit has further comments the Contractor will have an additional seven calendar days from the date the comments are returned by AC Transit to revise and resubmit for AC Transit’s review.
- f. Prior to AC Transit acceptance of the Revised BCS, the monthly Contract Update Schedule remains the Current Schedule.
- g. After AC Transit acceptance of the Revised Baseline, it shall be used as the basis for the next monthly Contract Update Schedule and is the “Current Schedule”.

1.8 CONTRACT SCHEDULE TECHNICAL REQUIREMENTS

- A. The Contract Schedules shall comply with the Technical requirements for content and scheduling principles as described below.
- B. Content
 - 1. The Schedule shall be comprehensive to include the entire scope of the contract. The Schedule shall include all activities necessary to clearly establish the Critical Path(s) and to demonstrate complete and accurate planning and sequencing of the Contract and to permit monitoring and evaluation of progress and time impacts.
 - 2. Activity Durations shall not exceed 21 calendar days unless “Level of Effort” (LOE) or unless specifically approved by AC Transit upon Contractor request.
 - 3. Include all Contract Milestone Dates.
 - 4. Depict all internal and external interfaces that could impact Contractor progress, including dependencies.
 - 5. Schedule activities shall be resource and cost loaded as follows:
 - a. The budgeted cost loaded in the schedule must be consistent with the Schedule of Values and bid price.
 - b. Labor loading shall be consistent with the Contractor’s overall planned workforce.

Contract Update Schedules.

C. Scheduling Principles

1. The Contract Schedule shall be computer-produced utilizing the Critical Path Method (CPM), using the latest AC Transit approved version of Primavera P6 software.
2. Contractor's Primavera Contract Schedule database shall comply with specific schedule set-up, data inclusion, technical standards, and formats requirements defined by AC Transit to ensure compatibility with the overall AC Transit Program Schedule. The details of these Contractor Schedule Development Requirements will be provided to AC Transit to the Contractor within fifteen calendar days of the NTP date. Requirements will include direction regarding, but not limited to, the following items:
 - a. Schedule format/organization
 - b. Calendars
 - c. Activity Codes
 - d. WBS: Includes application of AC Transit WBS to all schedule activities
 - e. Resources
 - f. Activity Types
 - g. Activity Times
 - h. Activity ID
 - i. Schedule, Cost, and Resource Calculation Rules
3. The schedule shall contain activity coding such that activities can be grouped to correspond directly to the Schedule of Values.
4. Identify all activity to be performed by Subcontractors by name of Subcontractor through use of an activity code.
5. All activities in the Schedule, with the exception of the first and last activities, shall have a minimum of one predecessor and a minimum of one successor.
6. Activity Durations shall be expressed in whole days.
7. For activities in progress that are forecast to have durations different than planned, the remaining durations shall be revised. After acceptance of the BCS by AC Transit, the original durations of activities shall not be changed.
8. Lags shall not be used when the creation of an Activity will perform the same function (e.g., concrete cure time). Use of lag must be minimized and restricted to only those situations where it is not possible to properly define the start or finish of an Activity by the use of a normal relationship. Negative

lags will not be permitted. Contractor shall identify any lag proposed and provide an explanation for the purpose of the lag in the narrative report.

9. Include the number of abnormal weather days identified in Section 00700-Part 8.01F. These abnormal weather delays shall be shown as the next-to-last activity in the schedule as an allowance. In the event that the project experiences favorable weather for a particular month, the additional float resulting from the favorable weather becomes a project owned float.
10. Include the Holidays listed in Section 01 11 00 (1.7).

1.9 FOUR-WEEK WORK PLAN

- A. Submittal: The Contractor shall submit a Four-Week Work Plan (FWWP) due one day prior to the Weekly Progress Meeting. Failure to submit and update an acceptable FWWP will be cause for AC Transit to withhold all or part of a Progress Payment.
- B. Content: The FWWP shall show the actual progress for the previous week and planned activities for the upcoming four weeks. The Contractor is encouraged to use the form provided by the AC Transit Project Manager. It is a more detailed subset of the activities contained within the Contract Schedule. The activities in the FWWP shall be based upon and correlated by Activity ID to the Contract Schedule. The Plan shall provide sufficient detail to address all activities being performed on a daily basis, generally be prepared by work discipline/crew, identify issues requiring AC Transit action or input, highlighted critical work (activities on the critical path and note any pending labor, material, or equipment constraints to performing the Work planned in the next three weeks. The actual progress data incorporated into the Contract Update Schedule shall be consistent with the actual data previously shown in the FWWP.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

SECTION 01 33 00
SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.2 SECTION INCLUDES

- A. Submittal Procedures.
- B. Submittal Review.
- C. Progress Schedules.
- D. Submittal Schedule.
- E. Proposed Products List.
- F. Product Data.
- G. Shop Drawings.
- H. Samples.
- I. Design data.
- J. Test reports.
- K. Certificates.
- L. Manufacturer's instructions.
- M. Manufacturer's field reports.

1.3 RELATED SECTIONS

- A. Section 01 70 00 - Execution and Closeout Requirements.

1.4 SUBMITTAL PROCEDURES

- A. Submittals to the AC Transit Project Manager or their designate: The Contractor must prepare a list of submittals for the AC Transit Project Manager or their designee's review/approval. Submittals of product data, shop drawings, and samples are for approval unless otherwise noted; submittal of manufacturer's instructions, qualifications, certifications, and test reports are for the AC Transit Project Manager or their designee's information unless otherwise noted.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit a submittal log that specifies when all transmittals will be provided within 20 working days of the Notice to Proceed and sufficiently in advance of performance of related construction activities to avoid delay.
 - 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, or other submittals and related activities that require sequential activity.

2. Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals concurrently for coordination.
 - C. The AC Transit Project Manager or their designate reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- D. Transmit each submittal with form included at the end of this Section.
- E. **Item ID:** use the following format:
[Number][revision letter][-Section][-File number]
Brackets indicate an element of the name may not appear if naming does not apply.
 1. **Number: three-digit sequential number.** Begin serial order with 001. Assign individual number to each. Do not combine several items from one trade or subcontractor into one submittal without prior approval of AC Transit Project Manager or their designate. Submittals and RFIs have two separate number sequences. Do not omit the preceding zeros in a number.
 2. **Revision Letter:** Revision submittals with original number and a sequential alphabetic suffix for how many times this submittal has been resubmitted, with "A" indicating the first resubmittal.
 3. For Submittals: **Dash symbol** "-" **Section:** Five or six-digit number reflecting section to which the item belongs.
 4. **File sequence number:** For image sequences related to a single subject or RFI.
- F. **EMAIL identification (Subject line):** All correspondence and submittals transmitted via email shall always use the following format:
topic; project name; project number [contractor's project number]
 1. **Topic:**
 - a. general concept, use a semicolon ";"
 - b. for submittals, use Submittal numbering
 - c. for RFIs, use RFI numbering
 2. **Project Name:** AC Transit CSC P2071
 3. **Contractor's Project Number:** this element of the subject line is optional as indicated by the [brackets].
 4. **Example:**
"meeting moved; AC Transit CSC P2071"
 5. **Example for RFI003 third revision:**
"RFI003C; AC Transit CSC P2071".
 6. **Example for Submittal with second revision:**
"Submittal002B-233300 air duct accessories; AC Transit CSC P2071"
 7. **DO NOT INCLUDE A SPACE BETWEEN** the identifier, "Submittal" or "RFI" and the number. Doing so significantly reduces the effectiveness of searches in both email and file systems.
 8. Using a Subject Line from a previous email where the topic is incorrect can be cause for delay or rejection of the submission. Always provide a Subject that is pertinent to content.
 9. Subject lines, body text and file names shall be written in upper and lower case. (Not all caps).
- G. **ELECTRONIC FILE identification (File Names):** transmitted files shall have the following name structure:
 1. **Format:**

2. [Submittal|RFI]Number[revision letter][-Section][-File number] Abbreviated topic of file.ext
3. Abbreviated topic: of file attempt to use three words or less.
4. .ext: three or four character file extension such as .jpg or .pdf
5. Examples:
 - a. Submittal002b-233300.pdf
 - b. RFI006 Spray Fireproofing.pdf
 - c. Submittal002b-233300 air duct accessories.pdf
 - d. RFI006-03 Electrical, separation wall above ACT.jpg
 - e. RFI006B-02 Electrical, solution location.png
6. **Do not include project name or number in file name.** The PDF and JPG files are electronically stored in named project folders and have the project name and project number in the file content.
- H. In PDF or image files, place an opaque label or title block on each submittal page/image for identification; include name of firm or entity that authored.
- I. Submittals shall be transmitted via email in PDF format, with the exception of any item that requires choice or confirmation of color or texture. For color and texture related submittals, both email, paper submittal and product sample (such as paint chip) shall be submitted.
- J. All correspondence and submittals transmitted via email shall always use the project name and architect's project number in the **subject line** as follows:
Format: *brief topic of email; Project Name, Project Number*
Example: "next meeting; AC Transit CSC [IR 2016-077-01]" Appending the Contractors project number at the end is acceptable.
Example: "Submittal021 Door Hardware; AC Transit CSC [IR 2016-077-01]"
Using a subject line from a previous email where the topic is incorrect can be cause for delay. Please always provide a topic that is pertinent.
Discussion: Due to the prevalence of email software utilization, it is important to use labeling that makes search queries efficient. Though we do not require that any contractor or consultant use a particular email software, using the following practices is the current best practice considering the weaknesses of multiple editions. Example: it is important to remove the space between the word "submittal" or "RFI" and the three digit number.
- K. Subject lines, body text and file names shall be written in upper and lower case. (Not all caps).
- L. Action Submittals: Submit electronic submittal files unless otherwise indicated. Architect will respond, directing an email copy to Project Manager
- M. Informational Submittals: Submit unless otherwise indicated. Architect and Owner Project Manager will not return nor respond.
- N. Identify Project, Contractor, subcontractor, supplier; manufacturer; pertinent drawing number, detail references, and specification section number, as appropriate.
- O. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect and Owner Project Manager on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.
- P. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, work of other trades, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract

Documents. Submittals without Contractor's stamp (or electronic equivalent) will be returned without action.

- Q. Schedule submittals to expedite the Project, and deliver to address indicated in the Preconstruction Meeting. Coordinate submission of related items.
- R. For each submittal for review, allow 21 days for initial review excluding delivery time to and from Contractor. Allow additional time if processing must be delayed to permit coordination with subsequent submittals.
- S. Identify variations and deviations from Contract Documents and identify product or system limitations which may be detrimental to successful performance of the completed Work.
- T. Provide space for Contractor and AC Transit Project Manager or their designate review stamps.
- U. When revised for resubmission, identify all changes made since previous submission.
- V. Distribute copies of reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- W. Submittals not requested will not be recognized or processed. Duplication of Contract Documents or portions of Contract Documents for purpose of submittals will not be recognized or processed.
- X. Where a submittal involves AC Transit Project Manager or their designee's computations or original design work is depicted, show the name, the California state registration number, seal, and signature of the Professional AC Transit Project Manager or their designee hired by the Contractor certifying that such computations or design work are correct and in conformance with standards, codes, and acceptable AC Transit Project Manager or their designee's practice.

1.5 SUBMITTAL REVIEW

- A. Submittals will be reviewed for conformance with requirements of the Contract Documents. Review of a separate item will not constitute review of an assembly in which the item functions. Review will not relieve the Contractor from Contractor's responsibility for accuracy of submittals; for conformity of submittals to requirements of Contract Documents; for coordinating Work with that of other trades; for compatibility of described product with contiguous products and the rest of the system; for conforming and correlating quantities and dimensions; for selecting fabrication processes and techniques of construction; for performing Work in a safe and satisfactory manner; and for prosecution and completion of the Contract in accordance with the Contract Documents.
- B. It must be understood that the provisions herein apply to AC Transit Project Manager or their designee's review, A/E's review, Owner review, and review by other Owner representatives.
- C. Review is only for the limited purpose of checking for general conformance with the information given and the design concept expressed in the Contract Documents.
 - 1. Review is not conducted for the purpose of determining the accuracy and completeness of details such as dimensions and quantities, or for substantiating instructions of installation or performance. Compliance with specified characteristics is the Contractor's responsibility. Submittals which do not include the Contractor's certification that the information complies with the Contract Documents will be returned without action.
 - 2. Review of submittals does not authorize variation from Contract Documents

unless approval of proposed variation has been expressly requested and specifically noted as a variation on the submittal.

3. Review is only for items to be furnished by the submitting supplier and does not constitute approval of any assemblage of which the submitted item is a component nor approval of construction sequence or method.
- D. The AC Transit Project Manager or their designate will indicate its reviews of submittals and the action taken by means of its review stamp or Review Report (Coversheet for responses). The review stamp will be affixed by the AC Transit Project Manager or their designate, the action block will be marked, and the stamp will be signed and dated. The review-stamp action-block marks will have the following meanings:
1. The mark FURNISH AS SUBMITTED – NO EXCEPTIONS TAKEN is an acceptance, and means that every illustration and description appears to conform to the respective requirements of the Contract Documents; that fabrication, assembly, manufacture, installation, application, and erection of the illustrated and described product may proceed; and that the submittal need not be resubmitted.
 2. The mark FURNISH AS CORRECTED - RESUBMISSION NOT REQUIRED is an acceptance, and means that every illustration and description appears to conform to the respective requirements of the Contract Documents upon incorporation of the reviewer's corrections, and that fabrication, assembly, manufacture, installation, application, and erection of the illustrated and described product may proceed. Submittals so marked need not be resubmitted unless the Contractor challenges the reviewer's exception.
 3. The mark REVISE AND RESUBMIT - RESUBMISSION REQUIRED WITHIN DAYS is an acceptance, and means that every illustration and description appears to conform to the respective requirements of the Contract Documents, and that fabrication, assembly, manufacture, installation, application, and erection of the illustrated and described product may proceed after incorporation of the reviewer's corrections and verification by the AC Transit Project Manager or their designate that the reviewer's corrections have been properly incorporated in the submittal. Resubmission within the time period specified is also required if the Contractor challenges the reviewer's corrections.
 4. The mark SUBMIT SPECIFIED ITEM or REJECTED is a disapproval, and means that the submittal does not comply with Contract Documents or is deficient to the degree that the reviewer cannot correct the submittal with a reasonable degree of effort, has not made a thorough review of the submittal, and that the submittal needs revision and is to be corrected and resubmitted. Do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Contractor must make a new submittal. Submittals stamped SUBMIT SPECIFIED ITEM or REJECTED are not to be used and not permitted on the job site.

1.6 PROGRESS SCHEDULE

- A. Submit progress schedules in accordance with Section 01 32 00, Construction Progress Documentation.
- B. Submit Update Schedule monthly with Narrative Report.

1.7 SUBMITTAL SCHEDULE

- A. In conjunction with the development of the Contractor's construction schedule, prepare a complete schedule of submittals. The schedule of submittals must be submitted to the AC Transit Project Manager or their designate at the pre-construction meeting.
1. Coordinate submittal schedule with the list of subcontracts, and the list of products, as well as the Contractor's construction schedule.
 2. Prepare the schedule in chronological order. Provide the following information:
 - a. Scheduled date for the first submittal.
 - b. Related Section number.
 - c. Submittal category.
 - d. Name of subcontractor.
 - e. Description of the part of the Work covered.

- f. Scheduled date for resubmittal.
 - g. Scheduled date the AC Transit Project Manager or their designatee's final release or approval.
- B. Distribution: Following response to initial submittal, print and distribute copies to the AC Transit Project Manager or their designate, subcontractors, and other parties required to comply with submittal dates indicated.
- C. Update submittal schedule, if necessary.
- D. The contractor must provide a Short Interval Schedule showing the work planned for at least three weeks in advance and the completed activities for the preceding week. The Short Interval Schedule must indicate each working and non-working day for the period shown in the schedule. The Short Interval Schedule will have activity durations not longer than 5 working days and not less than one working day. The short interval schedule must indicate the planned time of performance of the various activities for the period covered by the schedule. It must also have a brief description of the activity. The Short Interval Schedule must indicate the Activity ID of the Progress Schedule Activity that encompasses the Short Interval Schedule activity. The short interval schedule may be in bar chart format.

The Short Interval Schedule must be updated every week and submitted one day prior to the Weekly Progress Meeting. Failure to submit and update an acceptable Short Interval Schedule will be cause for the AC Transit Project Manager or their designate to withhold all or part of a Progress Payment.

1.8 PRODUCT DATA

- A. Submit for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents. Provide copies and distribute in accordance with Article entitled "Submittal Procedures" herein and for record documents purposes described in Section 01 70 00, Execution and Closeout Requirements.
- B. Submit PDF formatted product data documents for digital review.
- C. Product data that includes finish or color selection information shall be submitted separately as described for samples.
- D. Mark each copy to identify applicable products, models, options, and other data. Cross out provisions that are not applicable. Supplement manufacturers' standard data to provide information specific to this Project.
- E. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- F. When specified in individual specification sections, submit printed instructions (manufacturer's instructions or installation instructions) for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for Product Data. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.
- G. After review distribute in accordance with the Submittal Procedures article above and provide copies for record documents described in Section 01 70 00 – Execution and Closeout Requirements.

1.9 SHOP DRAWINGS

- A. Submit for review for the limited purpose of checking for conformance with information given and the design concept expressed in the Contract Documents. Produce copies and distribute in accordance with Article entitled "Submittal Procedures" herein and for record documents purposes described in Section 01 70 00.
- B. Submit PDF formatted shop drawings for digital review.
- C. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- D. Submit newly prepared information, drawn to accurate scale. Do not reproduce Contract Documents or copy standard information as the basis for shop drawings. Standard information prepared without specific reference to the Project is not considered shop drawings.
- E. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings. Include the following information:
 - 1. Shop drawings must be drawn to scale sufficient for clarity and coordination, must show necessary working and erection dimensions and necessary details, section, plans and elevations, must be properly cross-referenced, as necessary, by specific reference to the appropriate Section, paragraphs and pages of the Specifications and Drawings to clearly delineate arrangement, construction and connection with other work and must illustrate work contiguous to and having a bearing on work shown.
 - 2. Identification of products and materials included.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
 - 6. Highlight, encircle, or otherwise clearly indicate deviations from the Contract Documents.
 - 7. Sheet Size: Except for templates, patterns and similar full-size Drawings, submit Shop Drawings on sheets at least 8-1/2" x 11" but no larger than 30" x 42".
 - 8. Initial Submittal: Unless otherwise indicated, submit opaque reproductions for the AC Transit Project Manager or their designee's review; if one of the copies is submitted as a reproducible transparency, it will be one of the copies returned to the Contractor.
 - 9. Do not use shop drawings without an appropriate final submittal review stamp indicating action taken in connection with construction.
 - 10. Final Submittal: From the reproducible print returned with the initial or intermediate submittals, make prints for the Final Submittal. Mark the prints "Final Submittal". Produce copies and distribute in accordance with Article entitled "Submittal Procedures" herein and for record documents purposes described in Section 01 70 00.

1.10 SAMPLES

- A. Submit for review for limited purpose of checking for conformance with information given and design concept expressed in Contract Documents. Produce duplicates and distribute in accordance with Article entitled "Submittal Procedures" herein and for record documents purposes described in Section 01 70 00.
- B. Samples for Selection as Specified in Product Sections:
 - 1. Submit for aesthetic, color, or finish selection.
 - 2. For Color Selection: Submit samples of finishes from the full range of manufacturers' standard colors, textures, and patterns for AC Transit Project Manager or their designate selection.
 - 3. For AC Transit Project Manager or their designate Approval of Specified Color: Submit samples of finish in selected standard or custom color as specified for AC Transit Project Manager or their designate review and approval.
 - 4. After review, produce duplicates and distribute in accordance with Article entitled "Submittal Procedures" herein and for record documents purposes described in Section 01 70 00.
- C. Submit samples to illustrate functional and aesthetic characteristics of product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- D. Include identification on each sample, with full Project information.
- E. Submit number of samples (no fewer than two) specified in individual specification sections; one of which will be retained by AC Transit Project Manager or their designate.
- F. Reviewed samples which may be used in the Work are indicated in individual specification sections.
- G. Samples will not be used for testing purposes unless specifically stated in specification section.

1.11 DESIGN DATA

- A. Submit design data for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.
- B. Submit PDF formatted data for digital review and record keeping.

1.12 TEST REPORTS

- A. Submit test reports for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.
- B. Submit PDF formatted reports for digital review and record keeping.

1.13 CERTIFICATES

- A. When specified in individual specification sections, submit certification by the manufacturer, installation/application subcontractor, or Contractor to AC Transit Project Manager or their designate, in quantities specified for Product Data.
- B. Submit certificates for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.
- C. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- D. Submit PDF formatted certificates for digital review and record keeping.
- E. Certificates may be recent or previous test results on material or product, but must be acceptable to AC Transit Project Manager or their designate.

1.14 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, to AC Transit Project Manager or their designate for delivery to Owner in quantities specified for Product Data.
- B. Submit manufacturer's instructions for information for the limited purpose of assessing conformance with information given and the design concept expressed in the Contract Documents.
- C. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.15 MANUFACTURER'S FIELD REPORTS

- A. Submit report in duplicate within 15 days of observation to AC Transit Project Manager or their designate for information.
- B. Submit manufacturer's field reports for information for the limited purpose of assessing conformance with information given and the design concept expressed in Contract Documents.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF SECTION

SUBMITTAL REVIEW TRANSMITTAL

TO: Attn:	RECEIVED BY DISTRICT: (stamp here)	SUBMITTAL NO: (filled in by Contractor) PREVIOUS SUB. NO: (filled in by Contractor)
PROJECT NUMBER AND NAME:		
CONTRACTOR/SUPPLIER: (Name/address/phone & fax no.) DATE SENT: SIGNATURE:	REVIEWED BY: (CM or designee) DATE RETURNED: (assigned by construction admin dept after review)	ACTION: 1 For Information Only 2 Approved 3 Approved As Noted 4 Revise and Resubmit - Resubmission Required Within _ Days 5 Submit Specified Item 6 Rejected

We are sending you these items via:

SPECIFICATION SECTION NUMBER AND TITLE:				
ITEM NO: (based on sub. schedule)	NO. OF COPIES:	DESCRIPTION:	ACTION: (assigned by CM)	IDENTIFICATION NO: (CM log no.)
REMARKS:				
<p>Corrections and comments made on the shop drawings during this review do not relieve Contractor from compliance with requirements of the Drawings and Specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. The Contractor is responsible for: conforming and correlating quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating Work with that of other trades; and performing Work in a safe and satisfactory manner.</p>				

Shaded areas reserved for AC Transit Project Manager or their designatee's use

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SECTION 01 40 00

QUALITY REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Quality Control and Control of Installation.
- B. Tolerances.
- C. Testing and Inspection Services.
- D. Manufacturers' Field Services.
- E. Examination.
- F. Preparation.

1.2 RELATED SECTIONS

- A. Section 01 20 00 - Price and Payment Procedures.
- B. Section 01 33 00 - Submittal Procedures.

1.3 REFERENCED STANDARDS

- A. Section 6, "Control of Materials" of the State Standard Specifications must apply to work within the State right of way and City of Richmond and modifications as provided in Division 2.2.
- B. Section 4, "Control of Materials" of the 2009 Edition of the Standard Specifications for Public Works Construction (Greenbook) must apply to work within the City of Richmond and modifications as provided in Division 2.1.
- C. ASTM E329 Standard Specifications for Agencies Engaged in the Testing and/or Inspection of Materials used in Construction

1.4 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality. Material and equipment to be incorporated into the Work must be new and unused unless otherwise approved and must bear the manufacturer's stamp or marking. In case a reference is not clear as to which of several grades is desired, the highest quality material must be used.
- B. Where articles or materials are specified by brand or trade name, alternate materials or articles equal to those specified may be approved provided the request for approval is in writing accompanied by supporting data, in ample time as determined by the AC Transit Project Manager or their designate to permit investigations without delaying the Work. Unless substitutions are approved, no deviation from the standards will be allowed.
- C. Comply with manufacturers' instructions, including each step in sequence.

- D. Should manufacturers' instructions conflict with Contract Documents, request clarification from AC Transit Project Manager or their designate before proceeding.
- E. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- F. Perform Work by persons qualified to produce required and specified quality, under competent supervision and in a manner to the AC Transit Project Manager or their designee's complete satisfaction as specified in Section 00 72 00 - General Conditions, "Superintendence by the Contractor" in these Specifications and Section 5-1.17, "Character of Workers," of the State Standard Specifications.
- G. Verify that field measurements are as indicated on Shop Drawings or as instructed by the manufacturer.
- H. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.
- I. Make arrangements with permitting agencies and special inspections agency for required inspections and tests. Inform AC Transit Project Manager or their designate at least 24 hours before event to allow witnessing of inspection or test.

1.5 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from AC Transit Project Manager or their designate before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

1.6 TESTING AND INSPECTION SERVICES – OWNER-HIRED TESTING AGENCY

- A. Owner will employ and pay an independent firm to perform testing and inspection services where such testing and inspections are specified to be performed by testing agency under the employ of the Owner.
- B. Cooperate with Owner-hired testing agency; furnish samples of materials, design mix, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
 - 1. Notify AC Transit Project Manager or their designate and Owner-hired testing agency 48 hours prior to expected time for operations requiring services.
 - 2. Make arrangements with the Owner-hired testing agency.
- C. Testing and employment of testing agency or laboratory must not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- D. Payment for re-testing or re-inspection required because of non-conformance to specified requirements by the Owner-hired testing agency will be charged to the Contractor by deducting testing charges from the Contract Price.

1.7 TESTING AND INSPECTION SERVICES – CONTRACTOR-HIRED TESTING AGENCY

- A. Contractor must employ and pay for services of an independent testing agency or laboratory acceptable to the Owner to perform all other testing and inspections including inspections and tests which are required as conditions for permits. Wherever testing is required, it must be performed by Contractor-Hired Testing Agency unless specifically specified as performed by Owner-Hired Testing Agency. The Contractor-Hired Testing Agency must be deemed included in the price paid for other items of work, and no additional payment should be made therefor.
 - 1. Prior to start of Work, submit testing laboratory name, address, and telephone number, and names agency contacts.
 - 2. Submit evidence that testing agency complies with the recommended requirements of ASTM E329. Testing agency must be acceptable to Owner and permitting agency.
- B. The independent firm must perform tests, inspections and other services specified in individual specification sections and as required by the AC Transit Project Manager or their designate and jurisdictional authority. Tests and special inspections must be paid for by the CONTRACTOR for the associated contract bid items, and no additional payment must be made therefor.
- C. Testing, inspections and source quality control may occur on or off the project site. Perform off-site testing as required by the AC Transit Project Manager or their designate or the Owner.
- D. Four copies of reports must be submitted by the independent firm to the AC Transit Project Manager or their designate, indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents. Copies of reports must be wet stamped by authorized representative of testing agency.
- E. Testing and employment of testing agency or laboratory must not relieve Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- F. Notify the AC Transit Project Manager or their designate or notify the AC Transit Project Manager or their designate and permitting agency, if applicable, prior to each scheduled test.
- G. Re-testing or re-inspection required because of non-conformance to specified requirements must be performed by the same independent firm on instructions by the AC Transit Project Manager or their designate.
- H. Testing Agency Responsibilities:
 - 1. Test samples of mixes submitted by Contractor.
 - 2. Provide qualified personnel at site. Cooperate with AC Transit Project Manager or their designate and Contractor in performance of services.
 - 3. Perform specified sampling and testing of products in accordance with specified standards.
 - 4. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 5. Promptly notify AC Transit Project Manager or their designate and Contractor of observed irregularities or non- conformance of Work or products.

6. Perform additional tests required by AC Transit Project Manager or their designate.
 7. Attend pre-construction meetings and progress meetings.
- I. Testing Agency Reports: After each test, promptly submit copies of report to AC Transit Project Manager or their designate, as specified herein. When requested by AC Transit Project Manager or their designate, provide interpretation of test results. At minimum, include the following in reports:
1. Date issued.
 2. Project title and number.
 3. Name of inspector.
 4. Date and time of sampling or inspection.
 5. Identification of product and specifications section.
 6. Location in the Project.
 7. Type of inspection or test.
 8. Date of test.
 9. Results of tests.
 10. Conformance or Non-Conformance with Contract Documents.
- J. Limits On Testing Agency's Authority:
1. Agency or laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency or laboratory may not approve or accept any portion of the Work.
 3. Agency or laboratory may not assume any duties of Contractor.
 4. Agency or laboratory has no authority to stop the Work.

1.8 MANUFACTURERS' FIELD SERVICES

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, and adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to AC Transit Project Manager or their designate 30 days in advance of required observations. Observer subject to approval of Owner.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D. Refer to Section 01 33 00 - Submittal Procedures

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent Work. Beginning new Work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new Work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify that utility services are available, of the correct characteristics, and in the correct locations.

3.2 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

END OF SECTION

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SECTION 01 42 00

REFERENCES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Specifications for construction industry standards of industry associations, trade associations, societies, organizations, and regulatory agencies as they are invoked and used in these Specifications.

1.2 REFERENCE STANDARDS

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. The effective date of referenced standards is stated in Section 00 72 00, General Conditions.
- C. Contractor must have access to the reference standards. Referenced standards must be made readily available, when requested, for use by the AC Transit Project Manager or their designate or designated Owner representative in carrying out the quality assurance and quality control programs specified in the Contract Documents, and to assure compliance with the requirements of the codes, specifications, test methods, practices, and other standards referenced in the Contract Documents.
- D. Should specified reference standards conflict with other Contract Document requirements, request clarification from the AC Transit Project Manager or their designate before proceeding.
- E. References are made to the 2010 State Standard Specifications (STATE), except as noted otherwise, the City of Richmond Standard Details for Public Works Construction and these special provisions. Where the State or City are referenced, AC Transit Project Manager or their designate must be understood to mean the Owner's AC Transit Project Manager or their designate.

1.3 ABBREVIATIONS

- A. Wherever in the Contract Documents an organization's abbreviation or acronym is used, it must be understood to mean the full name of the respective organization. Abbreviations of the State Standard Specifications., and as follows:

AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disability Act
ABAG	Association of Bay Area Governments
ACI	American Concrete Institute
ACP	Asbestos Cement Pipe
AISC	American Institute of Steel Construction
ANSI	American National Standards Institute

ASA	American Standards Association
ASTM	American Society for Testing and Materials (Also known as ASTM International)
AWWA	American Water Works Association
BASMAA	Bay Area Storm Water Management Agencies Association
BMP	Best Management Practices
CEDA	Community and Economic Development Agency, Department of Development of the City of Richmond
CSA	Canadian Testing Association
C	Celsius (temperature)
Caltrans	State of California, Department of Transportation
CCRM	Construction Community Relations Manager
CPM	Critical Path Method
CTC	Copper Tube Size
DOHS	Department of Health Services
DOT	United States Department of Transportation
EBMUD	East Bay Municipal Utility District
EDA	Economic Development Administration
F	Fahrenheit (temperature)
FTA	Federal Transit Administration
HR	Hour
HUD	United States Department of Housing and Urban Development
IEEE	Institute of Electrical and Electronics' AC Transit Project Manager or their designates
ISA	International Society of Arboriculture
ITE	Institute of Traffic AC Transit Project Manager or their designates
MSDS	Material Safety Data Sheets
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association

OSHA	Occupational Safety and Health Administration
OMC	Oakland Municipal Code
PAV	Pressure Aging Vessel
PCA	Portland Cement Association
PG	Performance Graded
PG&E	Pacific Gas and Electric Company
PS	U. S. Product Standard
PSI	Pounds per Square Inch
PVC	Polyvinyl Chloride
PWA	Public Works Agency of the City of Richmond
QJ	Queue Jump
RTFO	Rolling Thin Film Oven
RWQCB	Regional Water Quality Control Board – State of California
SDR	Standard Dimension Ratio
SFRWQCB	San Francisco Regional Water Quality Control Board
TSP	Transit Signal Priority
UBC	Uniform Building Code of the International Conference of Building Officials
UL	Underwriters Laboratories
USA	Underground Service Alert
VCP	Vitrified Clay Pipe
Zone 7	Alameda County Flood Control and Water Conservation District, Drainage Area 7-1

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

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SECTION 01 48 00
CONTROL OF WORK

PART 1 – GENERAL

1.1 SUMMARY

A. Section Includes:

1. Authority of the AC Transit Project Manager or their designate.
2. Responsibilities of the Contractor.
3. Inspection and testing by the AC Transit Project Manager or their designate.

B. Related Sections:

1. Section 01 40 00, Quality Requirements.

1.2 AUTHORITY OF CONSTRUCTION MANAGER AND RESIDENT AC TRANSIT PROJECT MANAGER OR THEIR DESIGNATE

- A. The Construction Manager and Resident AC Transit Project Manager or their designate/AC Transit Project Manager or their designate will determine whether the work is completed in accordance with the contract documents. The Construction Management Team will decide any questions that may arise as to the quality or acceptability of materials furnished and work performed, and interpretations of the contract documents.
- B. Under special conditions the Construction Manager/Resident AC Transit Project Manager or their designate may require the Contractor to finish a section on which work is in progress before work is started on any additional section.

1.3 RESPONSIBILITIES OF THE CONTRACTOR

- A. Cooperate with the Construction Management Team and with others.
- B. Perform the work to achieve the level of quality prescribed in the contract documents.
- C. Perform the work in the proper sequence in relation to the requirements of the AC Transit and other contractors.
- D. Contractor shall be responsible for any damage done by the Contractor or its agents to the work performed by the AC Transit or another contractor.

1.4 SUPERVISION AND CONSTRUCTION PROCEDURES

- A. Contractor shall give the work the constant attention necessary to facilitate the progress of the work.
- B. Contractor shall have present and available on the worksite a competent Construction Project Manager capable of supervising the work and reading and thoroughly understanding the drawings and specifications. See Sections 00 21 13 & 00 11 00.

- C. Be solely responsible for all construction means, methods, techniques, and procedures and for coordinating all portions of the work under the contract. Permission given by the AC Transit Project Manager or their designate to use any particular methods, equipment, or appliances shall not be 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 AC Transit Project Manager or their designate to accept work which does not comply with the contract.
- D. Immediately remove from the work, when so ordered by the AC Transit Project Manager or their designate, and not re-employ on any of the work, without written permission from the AC Transit Project Manager or their designate, any contractor or subcontractor employee doing unsafe, improper, or defective work; who, in the AC Transit Project Manager or their designate's judgment, refuses or neglects the direction of the AC Transit Project Manager or their designate given to the Contractor; who is deemed incompetent or disorderly; or who commits trespassing on public or private property in the vicinity of the work.
- E. Be responsible for securing all work areas by barricade in accordance with local and State requirements as applicable at the end of each day.

1.5 INSPECTION AND TESTING

- A. The work is to be completed in accordance with the specifications, the drawings, and such instructions or directions as the Construction Manager and/or Resident AC Transit Project Manager or their designate may give to supplement drawings and specifications. Wherever the words "directed," "permitted," "approved," "acceptable," "satisfactory to," or similar words or phrases occur in the contract documents, they shall be understood to be functions of the AC Transit Project Manager or their designate to be exercised at his discretion.
- B. AC Transit shall not be responsible for and shall not have control or charge over the acts or omissions of the Contractor, subcontractors, or any of their agents or employees, or any other persons performing any of the work.
- C. Contractor shall provide the AC Transit Project Manager or their designate 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 or materials available for inspection by the Construction Manager and/or Resident AC Transit Project Manager or their designate. If the Construction Manager and/or Resident AC Transit Project Manager or their designate so requests, the Contractor shall, at any time before acceptance of the work, remove or uncover such portions of the finished work as may be directed.
- D. After examination, Contractor shall restore the work to the standard required by the contract documents. If the work examined proves acceptable, uncovering, removal, and replacement of the work in question shall be paid for by change order; but if the work proves unacceptable, the uncovering or removal and replacement of the work in question shall be at the Contractor's expense. Inspection will not relieve the Contractor from the responsibility for the quality of this work and to perform the work in accordance with the requirements of the contract documents.
- E. All materials and every process of manufacture and construction shall be subject to inspection at all times. The Construction Manager and/or Resident AC Transit Project Manager or their designate and his designated representatives shall have free access to all operations. Contractor shall provide necessary materials and the AC Transit Project Manager or their designate 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, Contractor shall box or crate samples as necessary and shall deliver them at points designated for

shipment without charge. Omission of inspection shall not relieve the Contractor of its obligations to produce the work required by the contract documents.

Materials not in compliance with contract requirements shall be removed promptly from the vicinity of the work, and the Contractor, at its expense, shall promptly remove, reconstruct, replace, and make good any defective work as directed in writing by the AC Transit Project Manager or their designate. Oversight or error in judgment of inspectors, or previous acceptance of the work, shall not relieve Contractor from the obligation to correct defects whenever discovered.

- F. If the Contractor does not correct nonconforming work or remove rejected materials within a reasonable time fixed by written notice, the Construction Manager and/or Resident AC Transit Project Manager or their designate may direct that removals and corrections be performed by other contractors. 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.
- G. All inspection by the Construction Manager and/or Resident AC Transit Project Manager or their designate is for the protection of AC Transit and its interest and shall not relieve the Contractor of responsibility for providing work in accordance with the contract documents. After completion of the work, a final inspection will be made and any previous inspection or acceptance will not preclude rejection at the final inspection of any item that is not satisfactory to the AC Transit Project Manager or their designate or not in accordance with the contract documents.
- H. If, within the period of time prescribed by law or by the terms of any applicable special warranty required by the contract documents, 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 AC Transit Project Manager or their designate. This obligation shall survive acceptance of the work or termination of the contract. In the event AC Transit prefers to accept or not require correction of defective or nonconforming work, AC Transit may do so instead of requiring its removal and correction, in which case the Construction Manager and/or Resident AC Transit Project Manager or their designate 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 adjustment shall be effected whether or not final payment has been made.
- I. All defective work which has been rejected shall be remedied or removed and replaced by the Contractor at its own expense as accepted by the AC Transit Project Manager or their designate.
- J. Whenever all of the work provided for in the contract or authorized as force account work has been completed and the final cleaning-up performed, the Construction Manager and/or Resident AC Transit Project Manager or their designate will make the final inspection, and, if the work is found to be satisfactory, Contractor will be notified in writing of the acceptance. All portions of the work shall be maintained by the Contractor at the standards required by the contract documents until final acceptance.
- K. At the AC Transit Project Manager or their designatee's discretion, portions of the work that are determined to be substantially complete may be accepted before all the project work is completed. After acceptance of substantially completed work, Contractor shall not use the finished product for any purpose without permission of the AC Transit Project Manager or their designate.

PART 2 – PRODUCTS

Not Used

AC TRANSIT PROJECT 2071
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PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

SECTION 015000 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 SECTION INCLUDES

A. Construction Facilities:

1. Progress cleaning and waste removal; cleaning requirements during construction operations.
2. Contractor will be allotted construction offices in the existing facility. Contractor will be responsible for network connections, copier/printer, phone, computers and office furniture.

B. Temporary Controls:

1. Water Quality Control Plan
2. Water Pollution Control
3. Dust, Erosion, and Sediment Control
4. Air Quality Specific Measures
5. Noise Control

C. Removal of temporary facilities, and controls.

D. Bird Protection.

E. Hazardous Materials.

1.2 RELATED SECTIONS

- A. Traffic Control System in the Division 1 Section 01 55 26.

1.3 REGULATORY REQUIREMENTS

- A. Refer to the requirements for Water Quality Control Plan and implementation in this Section
- B. Refer to requirements for Water Pollution Control and implementation in this Section.
- C. Refer to the City of Oakland requirement for waste reduction and recycling. The Contractor is required to prepare a project Waste Reduction and Recycling Plan (WRRP).

1.4 SUBMITTALS

- A. Waste Reduction and Recycling Plan (WRRP), and permit, if required in accordance with the City of Oakland.

1.5 PROGRESS CLEANING AND WASTE REMOVAL

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Collect and remove waste materials, debris, and rubbish from site daily and dispose off- site and as specified elsewhere in these special provisions.
- C. For work within the City of Oakland, the Contractor must comply with the city requirements.
- D. For work within the State right of way, refer to Section 14-10 Solid Waste Disposal and Recycling of the State Standard Specifications
- E. Excess excavated material from trenches, structures, general excavation and manholes and similar structures must be removed from the site immediately.

1.6 WATER QUALITY CONTROL PLAN

- A. The Contractor must comply with all appropriate BMP's and applicable design recommendations of the State Water Quality Control Board (SWQCB) for preventing and removing pollutants, specifying erosion control measures, including sedimentation basins, infiltration basins, and re-vegetation of graded slopes.
 - 1. The Contractor must submit a Water Quality Control Plan (also referred to as the Stormwater Pollution Prevention Plan (SWPPP)) that identifies the specific facilities and slopes to be protected, BMP's to be implemented, and meets all NPDES requirements. The cost associated with preparation and submittal of the Water Quality Control Plan, installation, maintenance and removal of WQCP facilities and materials must be included in the price paid for various items of work, and no additional payment will be allowed therefor.
- B. Construction water quality control measures must include the following:
 - 1. Existing vegetation must be retained where possible,
 - 2. Grading activities will be limited to the immediate area required for construction,
 - 3. Erosion control measures such as silt fences, staked straw bales, temporary inlet protection and temporary re-vegetation must be employed for disturbed areas to prevent soil, dirt and debris from entering the storm drain system;
 - 4. No disturbed surfaces must be left without erosion control measures in place during the winter and spring months; Sediment must be retained onsite by a system of sediment basins, traps, or other appropriate measures;
 - 5. Measures must be taken to ensure proper collection and disposal of all pollutants handled or produced on the site during construction, including sanitary wastes, cement, and petroleum products;
 - 6. All storm water conveyance and discharge facilities that will be the responsibility of the City of Oakland must be designed and constructed in accordance with City of Oakland Standard Specifications and Details.
 - 7. Inspect earthwork to detect evidence of erosion and sedimentation as directed by the Engineer; promptly apply corrective measures.

- C. If groundwater is encountered during construction activity, the Contractor must comply with the provisions of the RWQCB's General Permit for Dewatering and Other Low Threat Discharges to Surface Waters. Compliance must include preparation of a monitoring and reporting program and implementation of Best Management Practices associated with the dewatering activities.

1.7 WATER POLLUTION CONTROL

- A. For the construction work within the City of Oakland, the Contractor must comply with the city requirements.
- B. For construction work within the State of California right of way and the City of Oakland, the contractor must comply with the requirements in Section 13, Water Pollution Control of the State Standard Specifications and the special provisions.

1.8 DUST, EROSION, AND SEDIMENT CONTROL

- A. Dust control measures must be implemented in accordance with Bay Area Air Quality Management District (BAAQMD) standards and city requirements". Construction contractors must implement the Bay Area Air Quality Management District (BAAQMD) Basic Construction Mitigation Measures, and the applicable Additional Construction Mitigation Measures. The following controls should be implemented at all construction sites:
- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) must be watered two times per day.
 - All haul trucks transporting soil, sand, or other loose material off-site must be covered.
 - All visible mud or dirt track-out onto adjacent public roads must be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
 - All vehicle speeds on unpaved roads must be limited to 15 mph.
 - All roadways, driveways, and sidewalks to be paved must be completed as soon as possible.
 - Building pads must be laid as soon as possible after grading unless seeding or soil binders are used.
 - Idling times must be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]).
 - Clear signage must be provided for construction workers at all access points.
 - All construction equipment must be maintained and properly tuned in accordance with manufacturer's specifications. All equipment must be checked by a certified mechanic and determined to be running in proper condition prior to operation.
 - Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person must respond and take corrective action within 48 hours. The Air District's phone number also must be visible to ensure compliance with applicable regulations.

The following measures are recommended for projects with construction emissions above the threshold:

- All exposed surfaces must be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.
- All excavation, grading, and/or demolition activities must be suspended when average wind speeds exceed 20 mph.
- Wind breaks (e.g., trees and fences) must be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.
- Vegetative ground cover (e.g., fast-germinating native grass seed) must be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time must be limited. Activities must be phased to reduce the amount of disturbed surfaces at any one time.
- All trucks and equipment, including their tires, must be washed off prior to leaving the site.
- Site accesses to a distance of 100 feet from the paved road must be treated with a 6 inch to 12 inch compacted layer of wood chips, mulch, or gravel.
- Sandbags or other erosion control measures must be installed to pre-vent silt runoff to public roadways from sites with a slope greater than 1 percent.
- Minimize the idling time of diesel powered construction equipment to two minutes.
- The project must develop a plan demonstrating that the off-road equipment (more than 50 horse-power) to be used in the construction project (e.g., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOX reduction and 45 percent PM reduction compared to the most recent ARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low- emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.
- Use low volatile organic compound (VOC) (i.e., reactive organic gases) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).
- All construction equipment, diesel trucks, and generators must be equipped with best available control technology for emission reductions of NOx and PM.
- All contractors must use equipment that meets California Air Resources Board's most recent certification standard for off-road heavy duty diesel engines.

Construction contractors must comply with BAAQMD Regulation 11 (Hazardous Pollutants) Rule 2 (Asbestos Demolition, Renovation, and Manufacturing). The requirements for demolition activities include removal standards, reporting requirements, and mandatory monitoring and record keeping. The following avoidance, minimization and control measures to reduce air emissions associated with project construction:

- All active construction areas must be watered at least twice daily;
- All trucks hauling soil, sand, and other loose materials must be covered and must maintain at least two feet of freeboard.
- All unpaved access roads, parking areas, and staging areas in the construction area must be watered at least three times daily or must be applied with non-toxic soil stabilizers.
- All paved access roads, parking areas, and staging areas in the construction area must be swept daily with water sweepers.
- Streets must be swept daily with water sweepers if visible soil material is carried

- onto adjacent public streets.
 - Non-toxic soil stabilizers must be applied to inactive construction areas (previously graded areas that are inactive for 10 days or more).
 - Exposed stockpiles of dirt, sand, or debris must be enclosed, covered, watered at least twice daily, or applied with non-toxic soil binders.
 - Traffic speeds on unpaved roads must be limited to 15 mph.
 - Wheel washers must be installed on all trucks or tires/tracks of all trucks, and equipment leaving the construction area must be washed.
 - Excavation and grading activities must be suspended when winds exceed 25 mph.
 - Construction equipment must use cool exhaust gas recirculation.
 - Construction equipment must use aqueous diesel fuel.
 - Construction contracts must explicitly stipulate that all construction equipment must be properly tuned and maintained.
- B. Grade site to drain. Maintain excavations free of water. Provide, operate, and maintain pumping equipment, as required.
- C. Protect site from puddling or running water.
- D. Materials must be stockpiled off the jobsite.

1.9 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise from noise produced by construction operations.
1. Conduct noise and vibration testing, and monitor and inspect equipment to ensure they meet noise standards;
 2. Place temporary noise barriers for asphalt cutting and other noisy activities;
 3. Turn off idling equipment;
 4. Choose haul routes and conduct loading and unloading operations to minimize noise in residential and other sensitive areas;
 5. Use newer equipment with improved noise muffling and ensure that all equipment items have the manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators intact and operational. All construction equipment should be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices (e.g., mufflers, shrouding, etc.);
 6. Perform all construction in a manner to minimize noise and vibration. Use construction methods or equipment that will provide the lowest level of noise and ground vibration impact;
 7. During asphalt cutting, a temporary noise barrier should be placed between the cutting area and noise sensitive sites;
 8. Conduct truck loading, unloading and hauling operations so that noise is kept to a minimum by carefully selecting routes to avoid going through residential

neighborhoods to the greatest possible extent;

9. Construction lay-down or staging areas should be selected in industrially zoned districts. If industrially zoned areas are not available, commercially zoned areas may be used, or locations that are at least 90 feet from any noise sensitive land use such as residences, hotels, and motels. Ingress and egress to and from the staging areas should be on collector streets or greater (higher street designations are preferred);
10. Turn off idling equipment;
11. Minimize construction activities during evening, nighttime, week-end, and holiday periods;
12. Limit the use of construction equipment that creates high vibration levels, such as vibratory rollers and hammers, operating within 130 feet of residential structures;
13. Require vibration monitoring during vibration-intensive activities;
14. Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).

B. Comply with the following noise regulations:

1. In the City of Oakland, the Contractor shall comply with following noise regulations:
 - a. Construction related noise which is adjacent to or across a street or right of way from a residential use shall not be permitted between 7:00 PM to 7:00 AM on weekdays, between 7:00 PM to 8:00 AM on weekends, or on holidays.
 - b. Maximum allowable receiving noise level standards in residential and civic area shall be 70 dB for five minutes within a one-hour period between 7:00 AM to 10:00 PM and shall be 55 Db for five minutes within a one-hour period between 10:00 PM to 7:00 AM.
 - c. Maximum allowable receiving noise level standards in commercial area shall be 75 dB for five minutes within a one-hour period anytime.
 - d. Maximum allowable receiving noise level standards for construction operations less than 10 days shall be 80 dB in residential areas and 85 dB in commercial and industrial areas between 7:00 AM to 7:00 PM on weekdays.
 - e. Maximum allowable receiving noise level standards for construction operations less than 10 days shall be 65 dB in residential areas and 70 dB in commercial and industrial areas between 8:00 AM to 8:00 PM on weekend.
 - f. Maximum allowable receiving noise level standards for construction operations 10 days or more shall be 65 dB in residential areas and 70 dB

in commercial and industrial areas between 7:00 AM to 7:00 PM on weekdays.

- g. Maximum allowable receiving noise level standards for construction operations 10 days or more shall be 55 dB in residential areas and 60 dB in commercial and industrial areas between 8:00 AM to 8:00 PM on weekend.

1.10 PUBLIC INFORMATION

A. General

- 1. The Contractor must conduct all work necessary to meet the requirements of public information when needed.

B. Administrative Requirements

- 1. When needed the District's Media Affairs Manager and the Director of Legislative Affairs & Community Relations will lead the development and implementation of the Public Information Plan through the consultant Community Construction Relations Manager (CCRM). The District staff will oversee the preparation of the various components of the plan including:
 - a. Brochures and mailers;
 - b. Public service ads to the general public.
- 2. The duties of the Outreach Team Manager (OTM) and the CCRM will include assisting the District's Media Affairs Manager and the Director of Legislative Affairs & Community Relations in managing periodic press releases that will keep the public informed about the status of the construction.
- 3. The Public Information Plan may also include placing public service ads on the air or other media to announce project updates. The ads would remind the users of this corridor to consider alternate means of transportation or alternate routes to the construction zones. The OTM and CCRM, with assistance from the Contractor, will lead pre-construction information meetings in specific neighborhoods to present upcoming construction activity and illustrate methods for minimizing impacts to congestion and parking.

C. Contractor Requirements

- 1. The Contractor must maintain a system to ensure a flow of information from the Contractor to the AC Transit. The Resident Engineer and the CCRM (PMCM) will supervise public information efforts.
- 2. The Contractor must be accessible 24 hours a day, seven days a week and must respond within two hours of contact to address project issues. The Contractor's Representative must provide contact information, including home, fax, and mobile phone numbers to the District.
- 3. The Contractor, CCRM and PMCM must meet weekly, or as deemed necessary by the PMCM, and must communicate regularly by phone and e-mail.

D. Crisis Communications

1. The Contractor must be available to assist the CCRM and PMCM in addressing issues that may include the following:
 - a. Formulating approaches to address specific emergencies
 - b. Identifying cause of specific disruptions (i.e., whether construction-related or not)
 - c. Providing information on:
 - (1) Actions being taken to alleviate the problem
 - (2) Impact to the public and notification procedures
 - (3) Anticipated duration of the disruption
 - d. Notifying the CHP, BART, City of Oakland Police and Fire and City of Oakland Police and Fire of crises or emergency closures in the Project area

E. Construction Schedule

1. The Contractor shall communicate to Engineer and CCRM construction events that must occur at least seven days before beginning in any discrete area and include the following:
 - a. Description of the activity;
 - b. Start of the activity;
 - c. End of the activity.
2. The Contractor must provide current construction information to the Engineer and CCRM as an input to incident management strategies to prevent traffic from being rerouted into areas of construction-related congestion.

F. Traffic Conditions

1. The Contractor must inform the Engineer and CCRM of any unusual traffic conditions, such as road obstructions, and likely duration within 15 minutes of detection.

G. Bicycle, Pedestrian, Handicapped Mobility, and Access

1. The Contractor must clearly define and communicate to Engineer, PMCM and CCRM accommodations for access by bicycles, pedestrians, and handicapped persons, including alternate routes and detours, where access currently exists. The Contractor must make every effort to accommodate and maintain accessibility throughout the duration of the project.

H. Utility Shut-Offs

1. The Contractor must provide start time and duration of utility shut-offs early enough so the AC Transit may provide written notice to the affected parties at least 72 hours in advance of any outages.
2. The Contractor must be responsible for keeping the emergency utility contact list updated on at least a quarterly basis.

3. The Contractor must develop contingency plans in coordination with utility providers to address unanticipated encounters with buried utilities and/or unscheduled interruptions in service.
- I. Construction Noise due to Nighttime work Approved by Engineer
 1. The Contractor must continually inform PMCM of planned and potential nighttime construction noise impacts to enable the AC Transit to notify affected residents in writing at least seven days in advance. The Contractor must communicate to PMCM any changes in planned noise impacts early enough that residents may be notified one day in advance.
 - J. Public Contact
 1. AC Transit will be the primary contact with all members of the public, with the Contractor available to assist, as needed. The PMCM will work closely with Contractor to facilitate coordinated and consistent efforts when contacting and disseminating information to the public.
 - K. Public Meetings and Open Houses
 1. The PMCM will conduct public meetings to update affected audiences, resolve complaints, etc. The Contractor must attend meetings at the request of PMCM. The Contractor must meet with PMCM in advance to assist in planning meetings at the PMCM's request.
 - L. Noise
 1. Should any of the Contractor's operations generate complaints by the public about noise, CCRM will investigate the complaints and attempt to address the problem. At minimum, Contractor shall explain the necessity, schedule, and duration of the noise generating activities to the CCRM.
 - M. Payment for public information coordination is included in the payment for traffic control systems.

1.11 REMOVAL OF TEMPORARY FACILITIES, AND CONTROLS

- A. Remove temporary equipment, facilities, and materials, prior to Substantial Completion inspection.
- B. Remove underground installations as required. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing and permanent facilities used during construction to original condition. Restore permanent facilities used during construction to specified condition.

1.12 HAZARDS AND HAZARDOUS MATERIALS

- A. The Contractor must develop and implement a Worker Health and Safety Plan (WH&SP) to address the handling and storage of hazardous construction materials.
 - 1. Walk-through level site reconnaissance must be conducted at sites where contamination is possible in order to determine if contamination is present or likely.
 - 2. Site evaluation must be made of any known or suspected contaminated sites before soil is removed.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Provide undamaged materials in serviceable conditions and suitable for use intended.
- B. Tarpaulins: Waterproof, fire-resistant UL labeled with flame spread rating of 15 or less. For temporary enclosures, provide translucent, nylon-reinforced, laminated polyethylene or polyvinyl chloride, fire-retardant tarpaulins.
- C. Water: Potable and approved by local health authorities.
- D. Wood: Lumber complying with DOC PS 20 and applicable grading rules of an inspection agency certified by ALSC's Board of Review for specific use. Provide preservative treated lumber where partially or fully in contact with the earth, concrete or masonry.
- E. Sign, Directory and Other Graphic Panel Materials: Unless otherwise indicated, products shall comply as follows:
 - 1. Panels: Exterior type Grade B-B high density concrete-form-overlay plywood.
 - 2. Paint: Exterior primer and exterior grade alkyd gloss enamel top coat.
- F. Safety Barrier and Covered Walkway Materials: Unless otherwise indicated, products shall comply as follows.
 - 1. Panels: Minimum 5/8 inch (16 mm) thick exterior plywood.
 - 2. Paint: Exterior primer and exterior grade acrylic-latex emulsion top coat.

2.2 EQUIPMENT

- A. Provide undamaged equipment in serviceable conditions and suitable for use intended.
- B. Water Hoses: inch (19 mm) heavy duty abrasive-resistant flexible rubber hoses, 100 feet (30 m) long with pressure rating greater than the maximum pressure of the water distribution system. Provide adjustable shutoff nozzles at hose discharge.
- C. Electric Outlets: Properly configured NEMA-polarized outlets to prevent insertion of 110 to 120 Volt plugs into higher voltage outlets. Provide receptacle outlets equipped with ground

fault circuit interrupters, reset button and pilot light for connection of power tools and equipment.

D. Electric Power Cords: Grounded extension cords.

1. Provide hard-service cords where exposed to abrasion or traffic.
2. Provide waterproof connectors to connect separate lengths of electric cords where single lengths will not reach areas of construction activity.
3. Do not exceed safe length-voltage ratio.

E. Lamps and Light Fixtures: General service incandescent lamps of wattage required for adequate illumination.

1. Provide guard cages or tempered glass enclosures where exposed to breakage.
2. Provide exterior fixtures where exposed to moisture.

F. Heating Units: Temporary heating units that have been tested and labeled by UL, FM or another recognized trade association related to the type of fuel consumed.

G. Self-Contained Toilet Units: Temporary single-occupant toilet units of the chemical, aerated recirculation, or combustion type for use by all construction personnel. Units shall be properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.

H. Fire Extinguishers: Hand-carried portable UL-rated fire extinguishers.

1. Class A extinguishers for temporary offices and similar spaces.
2. Class ABC dry chemical extinguishers or a combination of extinguishers of NFPA recommended classes for the exposures in other locations.
3. Comply with NFPA 10 and NFPA 241 for classification, extinguishing agent and size required by location and class of fire exposure.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Use qualified personnel for installation of temporary facilities.

B. Locate facilities where they will serve the project adequately and result in minimum interference with performance of construction activities. Maintain, relocate and modify facilities as required during the construction period.

3.2 TEMPORARY UTILITIES

A. Temporary Water Service: Install temporary water service and distribution piping of sizes and pressures adequate for construction needs. Sterilize water piping prior to use.

B. Temporary Electric Power Service: Provide weatherproof grounded electric power service and distribution system of sufficient size, capacity and power characteristics for construction needs. Include meters, transformers, overload-protected disconnects, automatic ground-fault interrupters and main distribution switch gear.

- C. Temporary Lighting: Install and operate temporary lighting that will fulfill security and protection requirements without operating the entire system. Provide lighting that provides adequate illumination for construction operations and traffic conditions.
- D. Temporary Heat and Ventilation: Provide temporary heat and ventilation required for the construction activities, including but not limited to curing or drying completed installations and protecting construction from adverse effects of low temperatures and high humidity. Use safe equipment that will not have a harmful effect on elements being installed and on completed installations. Coordinate ventilation requirements to produce the ambient condition required for the work and to minimize energy consumption, and to protect personnel from fumes and other harmful effects.
- E. Heating Facilities: Provide vented self-contained heaters with individual space thermostatic control. Do not use gasoline-burning space heaters, open flame or salamander-type heating units.
- F. Sewers and Drainage: Where sewers are available, provide temporary connections to remove effluent that can be discharged lawfully. If sewers are not available, provide containers to remove and dispose of effluent off-site in a lawful manner.
 - 1. Filter out excessive amounts of soil, construction debris, chemicals, oils and similar contaminants that might clog sewers or pollute waterways.
 - 2. Connect temporary sewers as directed by sewer utility officials.
 - 3. Maintain temporary sewers and facilities in a clean, sanitary condition. Following heavy use, promptly restore sewers and facilities to normal conditions.

3.3 TEMPORARY SUPPORT FACILITIES

- A. Provide incombustible construction for offices, shops and sheds located within the construction area or within 30 feet (9 m) of building lines. Comply with NFPA 241.
- B. Temporary Enclosures: Provide temporary enclosures for protection of construction, in progress or completed, from exposure, inclement weather, other construction operations and similar conditions.
 - 1. Where heat is needed and the building enclosure is not complete, provide temporary enclosures where there is no other provision for containment of heat. Coordinate enclosure with ventilating and material drying or curing requirements to avoid dangerous conditions or unacceptable effects.
 - 2. Install tarpaulins securely with incombustible framing. Close openings of 25 sq. ft. (2.3 sq. m.) or less with plywood or similar materials.
 - 3. Close openings through floor or roof decks and other horizontal surfaces with load-bearing wood-framed construction.
 - 4. Where enclosure exceeds 100 sq. ft. (9.2 sq. m) in area, use UL labeled fire-retardant-treated wood and plywood for framing and sheathing.
- C. Temporary Lifts and Hoists: Provide facilities for hoisting materials and personnel.
- D. Project Identification and Other Temporary Signs: Provide project identification and other signs of sizes, layout, content, graphics and colors indicated. Locate signs where best to inform public and instruct persons seeking entrance to the project. Support signs on posts or framing of steel or preservative-treated wood.
 - 1. Project Identification Sign: Comply with sign design provided at the end of this section. Engage an experienced sign painter to apply graphics.

2. Other Temporary Signs: Prepare signs to provide directional information to construction personnel and visitors.
 3. Install exterior yard and sign lights so signs are visible at all times when work is being performed.
 4. Do not permit installation of unauthorized signs.
- E. Collection and Disposal of Waste: Collect waste from construction areas and elsewhere daily. Enforce requirements strictly and dispose of material lawfully.
1. Comply with NFPA 241 for removal of combustible waste material and debris.
 2. Do not hold waste materials more than 7 days during periods when the ambient temperature remains continuously less than 80 degF (27 degC), or more than 3 days when the temperature exceeds or is expected to rise above 80 degF (27 degC).
 3. Handle and properly containerize hazardous, dangerous or unsanitary waste materials separately from other waste.

3.4 TEMPORARY PROTECTION FACILITIES

- A. Temporary Facility Changeover: Except for using permanent fire protection facilities as soon as available, do not change over from temporary protection facilities until authorized by the Contracting Officer's Representative.
- B. Temporary Fire Protection: Until fire protection needs are supplied by permanent facilities, install and maintain temporary fire protection facilities of types needed to protect against reasonably predictable and controlled fire losses.
1. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations".
 2. Locate fire extinguishers where convenient and effective for their intended purpose, but not less than one extinguisher at or near each access route exit or entrance.
 3. Store combustible materials in containers in fire-safe locations.
 4. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire protection facilities and access routes. Prohibit smoking in hazardous fire-exposure areas.
 5. Provide supervision of welding operations, combustion-type temporary heating units and other sources of fire ignition.
- C. Permanent Fire Protection: At the earliest feasible date in each area of the Project, complete installation of the permanent fire protection facilities, including connected services, and place into operation and use. Instruct key personnel in the use of the facilities.
- D. Barricades, Warning Signs, and Lights: Comply with standards and code requirements for erecting structurally adequate barricades. Paint with appropriate colors, graphics, and warning signs to inform personnel and the public of the hazard involved. Where appropriate and needed, provide lighting, including flashing red or amber lights.
- E. Security Enclosure and Lockup: Install substantial temporary enclosure of partially completed areas of construction. Provide locking entrances to prevent unauthorized entrance, vandalism, theft and similar violations of security.
1. Storage: Provide a secure lockup for valuable stored materials and equipment.
 2. Enforce discipline in connection with the installation and release of material to minimize the opportunity for theft and vandalism.

- F. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations, and minimize the possibility that air, waterways, and subsoil might be contaminated or polluted or that other undesirable effects might result. Avoid using tools and equipment that produce harmful noise. Restrict use of noise-making tools and equipment to hours that will minimize complaints from persons near the site.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. Limit availability of temporary facilities to essential and intended uses to minimize waste and abuse.
- B. Maintenance: Maintain facilities in good operating condition until removal. Protect from damage by freezing temperatures and similar elements.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
 - 2. Protection: Prevent water-filled piping from freezing. Maintain markers for underground lines. Protect underground lines from damage during excavation operations.
- C. Termination and Removal: Unless the Contracting Officer's Representative requests that a temporary facility be maintained longer, each temporary facility shall be removed when the need for its service has ended and can be replaced by authorized use of a permanent facility. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with the temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are the property of the Contractor.
 - 2. Prior to project completion, replace clean and restore permanent facilities used during the construction period including, but not limited to, the following:
 - a. Replace air filters and clean inside of ductwork and housings.
 - b. Replace significantly worn parts and parts subject to unusual operating conditions.
 - c. Replace lamps burned out or noticeably dimmed by hours of use.

END OF SECTION 015000

SECTION 01 60 00
PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Product Delivery Requirements.
- C. Product Storage and Handling Requirements.
- D. Product Warranties.
- E. Product Options.
- F. Product Substitution Procedures.

1.2 PRODUCTS

- A. Provide products of qualified manufacturers suitable for intended use. Provide products of each type by a single manufacturer unless specified otherwise.
- B. Provide items that have not previously been incorporated into another project or facility. Products salvaged or recycled from other projects will not be considered new products.

1.3 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. For exterior storage of fabricated products, place on sloped supports above ground.
- E. Provide bonded off-site storage and protection when site does not permit on-site storage or protection.
- F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

- G. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

1.5 PRODUCT WARRANTIES

- A. Warranties specified in other Sections must be in addition to, and run concurrent with, other warranties required by Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of Contract Documents.
 - 1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for particular product and specifically endorsed by manufacturer to Owner.
 - 2. Special Warranty: Written warranty required by or incorporated into Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Special Warranties: Prepare written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
 - 1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 - 2. Specified Form: When specified forms are included with Specifications, prepare written document using appropriate form properly executed.
 - 3. Refer to Divisions 2 through 16 for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 01 70 00, Execution and Closeout Requirements.

1.6 PRODUCT OPTIONS

- A. Products specified by reference standards or by description only: Any product meeting those standards or description, by any manufacturer.
- B. Products specified by naming one or more trade names of products or the names of manufacturer with catalog information and not qualified by the words "Designated Matching Product": One of the products named which meets the specifications or an equal approved under the Product Substitution Procedures specified herein.
- C. Products specified by naming one product or manufacturer followed by the words "Designated Matching Product". There is no option.

1.7 PRODUCT SUBSTITUTION PROCEDURES

- A. Comply with the following procedures to obtain approval of a proposed “equal” product and under other circumstances such as when a product becomes unavailable through no fault of the Contractor.
- B. The AC Transit Project Manager or their designate will consider requests for Substitutions only within 30 days after date of Notice to Proceed. Substitutions may be considered later than 30 days after the date of the Notice to Proceed when a product becomes unavailable through no fault of the Contractor.
- C. Failure to propose the substitution of any article or service within 30 days after date of Notice to Proceed will be deemed sufficient cause for denial of request for substitution.
- D. A Request for Substitution constitutes a representation that the Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Has determined that proposed product has proof of operation in similar application.
 - 3. Will provide the same warranty for the Substitution as for the specified product.
 - 4. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to Owner.
 - 5. Waives claims for additional costs or time extension which may subsequently become apparent.
 - 6. Will reimburse Owner for review or redesign services associated with re-approval by authorities.
- E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Approval of any substitute indicates only that the product apparently meets the requirements of the Drawings and Specifications on the basis of the information or samples submitted. The Contractor must assume full responsibility for the performance of any substitutions.
- G. Substitution Submittal Procedure:
 - 1. Submit five copies of Request for Substitution included at the end of this Section. Limit each Request form to one proposed Substitution.
 - 2. Submit Shop Drawings, Product Data, and certified test results attesting to the proposed product equivalence.
 - 3. AC Transit Project Manager or their designate will notify Contractor in writing of decision to accept or reject request.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used

END OF SECTION

REQUEST FOR SUBSTITUTION FORM FOLLOWS

REQUEST FOR SUBSTITUTION

Project: To: Re:	Substitution Request Number: From: Date: CM Project Number: Contract For:
--------------------------------	---

Specification Title:

Description:

Section:

Page:

Article/Paragraph:

Proposed Substitution:

Manufacturer:

Address:

Phone:

Trade Name:

Model No.:

Installer:

Address:

Phone:

History: ☐ New Product ☐ 2-5 years old ☐ 5-10 years old ☐ More than 10 years old

Differences between proposed substitution and specified product:

- ☐ Point-by-point comparative data attached - REQUIRED BY AC TRANSIT PROJECT MANAGER OR THEIR DESIGNATE

Reason for not providing specified item:

Similar Installation:

Project:

Architect:

Address:

Owner:

Date Installed:

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain

Savings to Owner for accepting substitution: _____ (\$ _____)
Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] _____ days

- Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports
☐ Evidence of Proven Operation

SUBSTITUTION REQUEST
(Continued)

The Undersigned certifies:

PART 4 - PROPOSED SUBSTITUTION HAS BEEN FULLY INVESTIGATED AND DETERMINED TO BE EQUAL OR SUPERIOR IN ALL RESPECTS TO SPECIFIED PRODUCT.

PART 5 - SAME WARRANTY WILL BE FURNISHED FOR PROPOSED SUBSTITUTION AS FOR SPECIFIED PRODUCT.

PART 6 - SAME MAINTENANCE SERVICE AND SOURCE OF REPLACEMENT PARTS, AS APPLICABLE, IS AVAILABLE.

PART 7 - PROPOSED SUBSTITUTION WILL HAVE NO ADVERSE EFFECT ON OTHER TRADES AND WILL NOT AFFECT OR DELAY PROGRESS SCHEDULE.

PART 8 - COST DATA AS STATED ABOVE IS COMPLETE. CLAIMS FOR ADDITIONAL COSTS RELATED TO ACCEPTED SUBSTITUTION WHICH MAY SUBSEQUENTLY BECOME APPARENT ARE TO BE WAIVED.

PART 9 - PROPOSED SUBSTITUTION DOES NOT AFFECT DIMENSIONS AND FUNCTIONAL CLEARANCES.

PART 10 - PAYMENT WILL BE MADE FOR CHANGES TO BUILDING DESIGN, INCLUDING A/E DESIGN, DETAILING, AND CONSTRUCTION COSTS CAUSED BY THE SUBSTITUTION.

PART 11 - COORDINATION, INSTALLATION, AND CHANGES IN THE WORK AS NECESSARY FOR ACCEPTED SUBSTITUTION WILL BE COMPLETE IN ALL RESPECTS.

Submitted by:

Signed by:

Firm:

Address:

Telephone:

Attachments:

AC TRANSIT PROJECT MANAGER OR THEIR DESIGNATE REVIEW AND ACTION

- ☐ Substitution approved - Make submittals in accordance with Section 01 33 00.
 - ☐ Substitution approved as noted - Make submittals in accordance with Section 01 33 00.
 - ☐ Substitution rejected - Use specified materials.
 - ☐ Substitution Request received too late - Use specified materials. Signed by: _____ Date: _____
-

Additional Comments: ☐ Contractor ☐ Subcontractor ☐ Supplier ☐ Manufacturer ☐ A/E
☐ AC Transit Project Manager or their designate

SECTION 01 70 00

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Cutting and patching.
- B. Final cleaning prior to turning project over to Owner.
- C. Starting of systems.
- D. Demonstration and instructions.
- E. Protecting installed construction.
- F. Closeout procedures.
- G. Maintenance service.
- H. Operations and Maintenance Manual and Data.
- I. Product warranties and product bonds.
- J. Record Documents.
- K. Spare parts and maintenance products.

1.2 CUTTING AND PATCHING

- A. Coordinate work through shop drawings and through proper sequencing of installation to ensure that cutting and patching specified herein is prevented. In case cutting and patching is required, submit written request in advance of cutting or altering any element.
- B. Employ skilled and experienced installer to perform cutting and patching.
- C. Execute cutting, fitting, and patching including excavation and fill, to complete Work, and to:
 - 1. Fit the several parts together, to integrate with other Work.
 - 2. Uncover Work to install or correct ill-timed Work.
 - 3. Remove and replace defective and non-conforming Work.
 - 4. Remove samples of installed Work for testing.
 - 5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- D. Execute work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.

- E. Cut masonry and concrete materials using masonry saw or core drill.
- F. Restore Work with new products in accordance with requirements of Contract Documents.
- G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Maintain integrity of construction; completely seal voids.
- I. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for an assembly, refinish entire unit.

1.3 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. At completion of Work, remove remaining waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean exposed surfaces; leave Project clean and ready for occupancy.
- C. Clean surfaces exposed to view; remove temporary labels, stains and foreign substances, and polish transparent and glossy surfaces.
- D. Clean debris from drainage systems.
- E. Clean site; sweep paved areas, rake clean landscaped surfaces.
- F. Remove waste and surplus materials, rubbish, and construction facilities from the site.

1.4 STARTING OF SYSTEMS

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Notify AC Transit Project Manager or their designate seven days prior to start-up of each item.
- C. Verify that each piece of equipment or system has been checked for proper lubrication, if applicable, and for conditions that may cause damage.
- D. Verify that wiring and support components for equipment are complete and tested.

1.5 DEMONSTRATION AND INSTRUCTIONS

- A. Demonstrate operation and maintenance of products to Owner's personnel no later than 30 days prior to Final Completion at an agreed upon time.
- B. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.
- C. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment.

1.6 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.

- B. Prohibit traffic from landscaped areas.

1.7 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for AC Transit Project Manager or their designatee's review.
- B. Provide submittals that are required by governing or other authorities to AC Transit Project Manager or their designate.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.8 MAINTENANCE SERVICE

- A. Maintenance service, if applicable, must not be assigned or transferred to any agent or Subcontractor without prior written consent of the Owner.

1.9 OPERATION AND MAINTENANCE DATA

- A. Submit data bound in 8-1/2 by 11 inch (A4) text pages, three D side ring binders with durable plastic covers in addition to electronic copies.
- B. Prepare binder cover with printed title "OPERATION AND MAINTENANCE INSTRUCTIONS", title of project, and subject matter of binder when multiple binders are required.
- C. Internally subdivide the binder contents with permanent page dividers, logically organized as described below; with tab titling clearly printed under reinforced laminated plastic tabs.
- D. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- E. Contents: Prepare a Table of Contents for each volume, with each product or system description identified, typed on white paper, in three parts as follows:
 - 1. Part 1: Directory, listing names, addresses, and telephone numbers of A/E, Contractor, Subcontractors, and major equipment suppliers.
 - 2. Part 2: Operation and maintenance instructions. Identify the following:
 - a. List of equipment.
 - b. Parts list for each component.
 - c. Operating instructions.
 - d. Maintenance instructions for equipment and systems.
 - e. Maintenance instructions for special finishes, including recommended cleaning methods and materials, and special precautions identifying detrimental agents.
 - 3. Part 3: Project documents and certificates, including the following, as applicable:

- a. Shop drawings and product data.
 - b. Certificates.
 - c. Photocopies of warranties and bonds.
- F. Submit draft copy of completed volumes 30 days prior to Final Inspection. This copy will be reviewed and returned after Final Inspection, with AC Transit Project Manager or their designate comments. Revise content of all document sets as required prior to final submission.
- G. Submit two sets of revised final volumes, within 15 days after Final Inspection.

1.10 PRODUCT WARRANTIES AND PRODUCT BONDS

- A. Obtain warranties and bonds executed in duplicate by responsible subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.
- B. Execute and assemble transferable warranty documents and bonds from subcontractors, suppliers, and manufacturers.
- C. Verify that documents are in proper form, contain full information, and are notarized.
- D. Co-execute submittals when required.
- E. Provide Table of Contents and assemble in three D-side ring binder with durable plastic cover in addition to electronic copies.
- F. Submit prior to final Application for Payment.
- G. Time Of Submittals:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 15 days after acceptance.
 - 2. Make other submittals within 15 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 15 days after acceptance, listing the date of acceptance as the beginning of the warranty or bond period.

1.11 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.
 - 3. Addenda.
 - 4. Change Orders and other modifications to the Contract.

5. Reviewed Shop Drawings, Product Data, and Samples.
 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
1. Measured depths of foundations in relation to permanent surface improvements.
 2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 3. Field changes of dimension and detail.
 4. Details not on original Contract drawings.
- G. Submit all aforementioned documents to AC Transit Project Manager or their designate, two (2) copies, with request for final Application for Payment.

1.12 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra products in quantities specified in individual specification sections prior to Substantial Completion.
- B. Deliver to and place in location as directed by the AC Transit Project Manager or their designate; obtain receipt prior to final payment.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

END OF SECTION

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SECTION 01 71 13

MOBILIZATION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. The work under this Bid Item consists of preparatory work including, but not limited to, work necessary for the mobilizing and furnishing at the site, equipment, materials, supplies and incidentals; for the establishment of all offices, buildings and other temporary facilities necessary for work on the project; cost for pre-paid bonds and insurances; and for all other work and operations which must be performed or costs incurred to begin work on the various Bid Items at the project site. Compensation for mobilization includes, but is not limited to, the following principal items:
1. Moving onto the site of all Contractors' equipment required for operations.
 2. Installing temporary construction power and wiring.
 3. Providing all on-site communication devices, as necessary.
 4. Obtaining and paying for all required bonds and insurances including the bond required by Article 2.4 of the Public Works Code.
 5. Posting all OSHA-required notices and establishing safety programs.
 6. Having the Contractor's superintendent at the job site full time, whenever construction is in progress.
 7. Preparing, updating, and submitting preconstruction submittals, including
 - a. Construction Schedule as specified in Section 01 32 16, Network Analysis Schedules.
- B. Owner will not approve a Schedule of Values that indicates a value for Mobilization that exceeds 10% of the Grand Total Bid Price, excluding the Mobilization and Allowance Bid Items themselves. Should the Mobilization amount exceed 10% of the Grand Total Bid Price, less the allowance items and mobilization items. Owner's maximum payment for Mobilization will be 10% of the grand total bid price less the Allowance items and Mobilization items. 75% will be paid after mobilization, the remaining 25% will be paid after demobilization.

1.2 RELATED SECTIONS

- A. Division 0 – General Conditions and Supplemental General Conditions
- B. Section 01 33 00 – Submittals
- C. Section 01 50 00 – Temporary Facilities and Controls

1.3 PAYMENT PROCEDURES

- A. The Bid Item "Mobilization" will be paid as a Lump Sum after Mobilization is complete. Any extension of the contract time that may be granted will not of itself constitute grounds for a claim for additional payment under the Bid Item "Mobilization."

PART 2 - PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

END OF SECTION

SECTION 01 79 00

DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Administrative and procedural requirements for instructing AC TRANSIT's personnel, including the following:
 - a. Demonstration of operation of systems, subsystems, and equipment.
 - b. Training in operation and maintenance of systems, subsystems, and equipment.
 - c. Demonstration and training video recordings.

B. Related Sections:

1. Divisions 02 through 45 sections for specific requirements for demonstration and training for products in those sections.

1.2 **INFORMATIONAL SUBMITTALS**

- A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.
1. Indicate proposed training modules utilizing manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.
- B. Qualification Data: For facilitator and instructor.
- C. Attendance Record: For each training module, submit list of participants and length of instruction time.
- D. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.3 **CLOSEOUT SUBMITTALS**

- A. Demonstration and Training Video Recordings: Submit two copies within seven days of end of each training module.
1. Identification: On each copy, provide an applied label with the following information:
 - a. Name of Project.

- b. Name and address of videographer.
 - c. Name of AC Transit Project Manager or their designate.
 - d. Name of Contractor.
 - e. Date of video recording.
2. Transcript: Prepared on 8-1/2-by-11-inch paper, punched and bound in heavy-duty, three-ring, vinyl-covered binders. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as the corresponding video recording. Include name of project and date of video recording on each page.
3. At completion of training, submit complete training manual(s) for AC TRANSIT's use.

1.4 QUALITY ASSURANCE

- A. Facilitator Qualifications: A firm or individual experienced in training or educating maintenance personnel in a training program similar in content and extent to that indicated for this Project, and whose work has resulted in training or education with a record of successful learning performance.
- B. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 01 40 00, Quality Requirements, experienced in operation and maintenance procedures and training.
- C. Videographer Qualifications: A professional videographer who is experienced photographing demonstration and training events similar to those required.
- D. Preinstruction Conference: Conduct conference at project site to comply with requirements in Section 01 31 00, Project Management and Coordination. Review methods and procedures related to demonstration and training including, but not limited to, the following:
 - 1. Inspect and discuss locations and other facilities required for instruction.
 - 2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.
 - 3. Review required content of instruction.
 - 4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.5 COORDINATION

- A. Coordinate instruction schedule with AC Transit operations. Adjust schedule as required to minimize disrupting AC Transit's operations.
- B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.

- C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by AC Transit Project Manager or their designate.

PART 2 - PRODUCTS

2.1 INSTRUCTION PROGRAM

- A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual specification sections.
- B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:
 - 1. Basis of System Design, Operational Requirements, and Criteria: Include the following:
 - a. System, subsystem, and equipment descriptions.
 - b. Performance and design criteria if Contractor is delegated design responsibility.
 - c. Operating standards.
 - d. Regulatory requirements.
 - e. Equipment function.
 - f. Operating characteristics.
 - g. Limiting conditions.
 - h. Performance curves.
 - 2. Documentation: Review the following items in detail:
 - a. Emergency manuals.
 - b. Operations manuals.
 - c. Maintenance manuals.
 - d. Project record documents.
 - e. Identification systems.
 - f. Warranties and bonds.
 - g. Maintenance service agreements and similar continuing commitments.

3. Emergencies: Include the following, as applicable:
 - a. Instructions on meaning of warnings, trouble indications, and error messages.
 - b. Instructions on stopping.
 - c. Shutdown instructions for each type of emergency.
 - d. Operating instructions for conditions outside of normal operating limits.
 - e. Sequences for electric or electronic systems.
 - f. Special operating instructions and procedures.
4. Operations: Include the following, as applicable:
 - a. Startup procedures.
 - b. Equipment or system break-in procedures.
 - c. Routine and normal operating instructions.
 - d. Regulation and control procedures.
 - e. Control sequences.
 - f. Safety procedures.
 - g. Instructions on stopping.
 - h. Normal shutdown instructions.
 - i. Operating procedures for emergencies.
 - j. Operating procedures for system, subsystem, or equipment failure.
 - k. Seasonal and weekend operating instructions.
 - l. Required sequences for electric or electronic systems.
 - m. Special operating instructions and procedures.
5. Adjustments: Include the following:
 - a. Alignments.
 - b. Checking adjustments.
 - c. Noise and vibration adjustments.
 - d. Economy and efficiency adjustments.

6. Troubleshooting: Include the following:
 - a. Diagnostic instructions.
 - b. Test and inspection procedures.
7. Maintenance: Include the following:
 - a. Inspection procedures.
 - b. Types of cleaning agents to be used and methods of cleaning.
 - c. List of cleaning agents and methods of cleaning detrimental to product.
 - d. Procedures for routine cleaning
 - e. Procedures for preventive maintenance.
 - f. Procedures for routine maintenance.
 - g. Instruction on use of special tools.
8. Repairs: Include the following:
 - a. Diagnosis instructions.
 - b. Repair instructions.
 - c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
 - d. Instructions for identifying parts and components.
 - e. Review of spare parts needed for operation and maintenance.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 01 70 00, Execution and Closeout Requirements.
- B. Set up instructional equipment at instruction location.

3.2 INSTRUCTION

- A. Facilitator: Engage a qualified facilitator to prepare instruction program and training modules, to coordinate instructors, and to coordinate between Contractor and AC TRANSIT for number of participants, instruction times, and location.

- B. Engage qualified instructors to instruct AC TRANSIT's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.
 - 1. AC Transit will furnish Contractor with names and positions of participants.
- C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.
 - 1. Schedule training with AC Transit, through AC Transit Project Manager or their designate, with at least seven days' advance notice.
- D. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of [an oral] [a written] [a demonstration] performance-based test.
- E. Cleanup: Collect used and leftover educational materials and remove from project site. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

3.3 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

- A. General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.
 - 1. At beginning of each training module, record each chart containing learning objective and lesson outline.
- B. Video Recording Format: Provide high-quality color video recordings with menu navigation in format acceptable to AC Transit Project Manager or their designate.
- C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to show area of demonstration and training. Display continuous running time.
- D. Narration: Describe scenes on video recording by audio narration by microphone while video recording is recorded. Include description of items being viewed.
- E. Transcript: Provide a transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.
- F. Pre-Produced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

PART 4 - MEASUREMENT AND PAYMENT (Not Used)

END OF SECTION

AC TRANSIT PROJECT 2071
IFB NO. 2019-1454
NO. 2019-1454

CUSTOMER SERVICE RENOVATION