

SECTION 01 71 33

PROTECTION OF ADJACENT CONSTRUCTION

PART 1 – GENERAL

1.01 SUMMARY

- A. Section includes the following topics:
 - 1. Existing Utilities and Improvements
 - 2. Rights-of-Way
 - 3. Restoration of Pavement damaged by Contractor's operations
 - 4. Trees within Project Limits
 - 5. Joint Survey to Establish Authenticity of Possible Claims
- B. Related Sections:
 - 1. Section 00 72 00 – General Conditions
 - 2. Section 00 73 20 – Existing Utility Facilities
 - 3. Section 01 11 00 – Summary of Work
 - 4. Section 01 50 00 – Temporary Facilities and Controls

1.02 EXISTING UTILITIES AND IMPROVEMENTS

- A. The Contractor shall perform all work in such a manner as to avoid damage to existing concrete stairways and drainage trenches, fire hydrants, power poles, lighting standards, and all other existing utilities, facilities and structures, public or private, whether or not they are shown on the Drawings. Contractor shall be responsible for and shall repair all damage caused by its operations.
 - 1. Contractor shall notify and coordinate with the utility owners as specified in Section 01 31 00 – Project Management and Coordination.
- B. Governmental Utilities: If directed by the City, removal, adjustment, relocation, or repair of governmental facilities, such as traffic control, lighting, police communication and fire alarm systems, water lines, low pressure hydrant facilities of the Auxiliary Water Supply System for fire protection, the Municipal Railway and Hetch Hetchy Water and Power facilities shall be made by Contractor under the provisions for Force Account work as set forth under Section 00 72 00 General Conditions.
- C. Non-governmental Utilities: Contractor shall immediately notify the owner of an interfering non-governmental utility facility which is required to be relocated or removed. Removal, adjustment, relocation, or repair of the non-governmental facilities shall be performed in accordance with the appropriate Utility Crossing Specifications and shall be paid for by the owner of the non-governmental utility in

accordance with the Cost of Utility Crossing Schedule included therein (refer to Appendix B of the Section 00 73 21).

- D. Overhead Contact System: Work on or under the overhead contact system shall be performed with lines and feeders energized unless shutdown of the system is granted. Notify the City Representative at least 10 days prior to performing work on energized overhead trolley wires, feeder circuits, or at substations, so that the City Representative may arrange for any necessary clearances and inspections.
 - 1. Contractor is alerted to the condition that overhead trolley wires and feeder cables distribute electrical energy at up to 700 Volts dc. Comply with the "High Voltage" provisions of the California Code of Regulations (Title 8, Division 1, Chapter 4, Subchapter 5).
 - 2. Contractor shall take precautions to avoid accidents and damage to the overhead contact wires, and riser and feeder cables.
- E. Potential Horizontal Conflict: The Contractor shall comply with applicable provisions of California Government Code 4216 including the new requirements that become effective Jan. 1, 2007. Section 4216 addresses the potential horizontal conflict and not the potential vertical conflict (depth).
- F. Potential Vertical Conflict: The Contractor shall explore the depths of subsurface facilities using the same excavation methods as permitted by California Government Code 4216 that may interfere with the Work sufficiently in advance of construction to avoid possible delays to the contract.
 - 1. Notify the City when such exploratory excavations show the utility location as shown or as marked to be in error.
- G. Underground Utilities Indicated: The Contractor shall support, work around, and protect so as to provide for uninterrupted service of all existing utility lines, sewers, conduits, or other existing utilities and improvements that are indicated, marked or otherwise made known to Contractor prior to excavation and not designated for removal.
 - 1. If the Contractor damages utility facilities: The Contractor shall immediately contact the facility owners to repair damaged facilities or temporarily relocate their facilities.
 - 2. Contractor shall be responsible for all costs to repair damaged utilities, restore service and compensate to, as applicable, utility owners and residents for all damages caused by the Contractor.
- H. Underground Utilities Not Indicated: In the event that Contractor discovers and has to support/work around any existing utility line that is not indicated or the location is marked in error or not made known to Contractor, the Contractor shall be compensated as stipulated in Section 00 73 20, Appendix B. In the event that Contractor damages any existing utility line that is not indicated or the location of

which is not made known to Contractor prior to excavation, the Contractor shall immediately make a written report thereof to the City.

1. If directed by the City, removal, adjustment, relocation, or repair of governmental facilities, such as lighting, police communication and fire alarm systems, sewers and sewer structures, and Hetch Hetchy Water and Power facilities shall be made by Contractor under the provisions for Force Account Change Order as set forth in Section 00 72 00 General Conditions.
2. Contractor shall immediately notify the owner of an interfering non-governmental utility facility, which is required to be relocated or removed. The responsibility for relocating or removing such facilities is with the utility owners.

1.03 RIGHTS-OF-WAY

- A. Contractor shall not do any work that would affect any oil, gas, sewer, or water pipeline; any telephone, telegraph, or electric transmission line; any fence; or any other structure, nor shall Contractor enter upon the rights-of-way involved until the owner of the structure or facility has been properly notified and authority has been secured therefor.
- B. After receiving authorization, Contractor shall give said party due notice of intention to begin work, and shall give said party convenient access for removing, shoring, supporting, or otherwise protecting such facility or structure.

1.04 PAVEMENT AFFECTED BY WORK

- A. General: All paved areas cut or damaged during construction shall be replaced with similar materials and of equal thickness to match the existing undisturbed areas, except where specific resurfacing requirements are called for in the Contract Documents or in the permit requirements of the agency issuing the permit. All pavements that are subject to partial removal shall be neatly saw cut in straight lines. The Contractor shall contain all debris generated by saw cutting operations and dispose of properly. Saw cutting debris shall not be allowed to flow in gutters or enter into any storm water collection basin.
- B. Temporary Resurfacing: Whenever required by the public authorities having jurisdiction, place temporary surfacing promptly after backfilling and maintain such surfacing in a satisfactory condition for the required period of time before proceeding with the final restoration.
- C. Permanent Resurfacing: Damaged edges of pavement along excavations and elsewhere shall be trimmed back by saw cutting in neat straight lines. All pavement restoration shall be constructed to finished grades compatible with undisturbed adjacent pavement.

- D. Restoration of Sidewalks or Driveways: Wherever sidewalks, curbs and gutters, or driveways have been removed for construction purposes, place suitable temporary sidewalks, curbs and gutters, or driveways promptly after backfilling and maintain them in satisfactory condition for the period of time before the final restoration is been made.

1.05 TREES WITHIN PROJECT LIMITS

- A. General: Exercise all necessary precautions so as not to damage or destroy any trees or shrubs, including those lying within the Contract limits. Immediately notify the City Representative if any tree is damaged by Contractor's operations. If, in the opinion of the City Representative, the damage is such that replacement is necessary, replace the tree at the direction of the City Representative and at no cost to the City.

1.06 JOINT SURVEY TO ESTABLISH AUTHENTICITY OF POSSIBLE CLAIMS

- A. The Contractor shall use reasonable methods and shall take adequate precautions to prevent damage to existing buildings, structures, and other improvements during the prosecution of the Work.
- B. The Contractor shall retain a photographer experienced in performing preconstruction and post-construction documentation of all existing nearby structures. The survey shall be made using still photographs and digital video.
- C. After the Contract is awarded and before the commencement of Work, the City Representative will arrange for a joint examination of existing buildings, structures, other improvements, and environmental conditions in the vicinity of the Work, as applicable, which might be damaged or affected by the Contractor's operations.
- D. The examination of the exterior of existing buildings, structures, and other improvements located within 25 feet of the construction excavation will be made jointly by authorized representatives of the Contractor, the City, and property owners under the supervision of the City Representative. The scope of each examination shall include, but is not limited to, recording of cracks in structures, settlement, leakage, and any other physical features that may be appropriate. If vibration monitoring is also included in the contract, the information in this article shall complement, not supersede, the requirements of the vibration monitoring section.
- E. Records in triplicate of all still photographs and video will be prepared by the photographer. One copy shall be delivered to the Contractor, one copy will be kept on file at the office of the City Representative, and the third copy will be retained by the City. The photographer may be required to attest to the fact that he/she took the subject photographs or video on certain dates in the presence of

the individuals named above; however, in no case, will he/she offer an opinion as to the cause of cracks, settlement, leakage, or other physical conditions.

- F. The above records and photographs are intended for use as indisputable evidence in ascertaining the extent of any damage which may occur as a result of the Contractor's operations and are for the protection of the adjacent property owners, the Contractor, and the City, and will be a means of determining whether and to what extent damage, resulting from the Contractor operations, occurred during the Contract Work.
- G. The photographic survey records shall have a vicinity map showing general location of buildings, a map showing the location of each picture with reference to the general layout of the building, and photograph log by number and description of observation. The still photographs shall be in color, medium format, and contact print. Each photograph shall have a sequential photo number for each property, date, address, and true scale. Photographs may be taken as close as 2 feet and as far as 20 feet.

PART 2 – PRODUCTS (Not Used)

PART 3 – EXECUTION (Not Used)

END OF SECTION