

**SPECIFICATIONS - DETAILED PROVISIONS**  
**Section 02210 - Site Grading**

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**SECTION 02210  
SITE GRADING**

**PART 1 - GENERAL**

1.01 REQUIREMENT

- A. Verification of Existing Conditions. It shall be the responsibility of the Contractor to examine the site of the work and to make all investigation necessary, both surface and subsurface, to determine the character of materials to be encountered and all other existing conditions affecting the work.
- B. Site Grading. Grading of site shall include all excavation, fill construction, access roads, and final grading, all in accordance with these specifications, and as shown on the drawings and as directed by the Engineer. The entire site within the area affected by construction shall be cleared and bladed. Surfaces shall be cut or filled, to the extent indicated, to finish grade stakes set by the Engineer. Finish surfaces shall slope uniformly between spot elevations or finish contour lines shown on the drawings and away from structures. Grading tolerance will be plus or minus .05 feet from surface elevations indicated.

Clearing and Grubbing. All surfaces to receive compacted fill should be cleared of existing vegetation, debris, and other unsuitable materials. Abandoned underground utility lines should be traced out, securely capped at their entrance and exit to the site, and removed from the site. Concrete irrigation lines may be capped at their entrance and exit to the site, crushed in place and distributed throughout the fill as directed by the Soil Engineer. Soils which are loosened due to the removal of trees should be removed and replaced as controlled compacted fill under the direction of the Soil Engineer.

- C. Lines, Grades and Measures. All lines and grades will be established by the Engineer and the Contractor shall provide him with such assistance and materials as may be required. The Contractor shall carefully preserve all survey stakes and reference points so far as possible. Should any stakes or points be removed or destroyed unnecessarily by any act of the Contractor or his employees, they may be reset at the Contractor's expense.

The Contractor shall inform the Engineer a reasonable length of time in advance of the times and places at which he intends to work in order that lines and grades may be furnished, inspection provided, and necessary measurements for records and payments may be made with minimum inconvenience.

- D. Compliance with Regulations. The Contractor shall familiarize himself, and comply with all applicable state, county and municipal rules and regulations pertaining to sanitation, fire protection and safety.

- E. Contractor's Equipment. The Contractor shall provide such modern plant and equipment as may be necessary in the opinion of the Engineer to perform in a satisfactory and acceptable manner, and in accordance with the specifications, all the work required of the Contractor.
- F. Representatives for Emergencies. The Contractor shall file with the District a written list giving the names, addresses, and telephone numbers of at least two (2) of his representatives who can be contacted at any time in case of emergency. The representatives shall be fully authorized and equipped to correct unsafe or inconvenient conditions on short notice. The Contractor shall promptly notify the District of all changes in the listing.
- G. Power and Water Supply. The Contractor shall provide at his own expense all necessary power required for his operations under the contract. The Contractor shall provide and maintain in good order such modern power equipment as shall be adequate in the opinion of the Engineer to perform in a safe and satisfactory manner the work required by the contract.

The Contractor may obtain water for work under this specification from the source(s) described in the Special Provisions and Requirements of this specification.

## 1.02 STRUCTURE PROTECTION

- A. Contract Drawings. The drawings show the position of various pipes and conduits and other structures as they are supposed to exist in construction areas, but no error or omission on said drawings shall be construed to relieve the Contractor from the responsibility of protecting any such pipe, conduit, or other structure.

When deemed necessary by the Engineer, revisions of the contract drawings and additional detailed drawings will be issued to the Contractor during the progress of the work.

- B. Notification of Underground Service Alert of Southern California. When performing underground work, the Contractor shall call Underground Service Alert (USA), the one-call underground facility locating service two (2) working days prior to making an excavation. Contractor shall be responsible for such notification of subcontractor's work, or shall require subcontractor or assume this responsibility.
- C. Operation of Utilities. No District valves or appurtenances of other utility facilities shall be operated by the Contractor without approval and/or instruction from the District or the utility, as appropriate.

- D. Maintenance of Utilities. Insofar as practical during the progress of the work, the property of any owner of a public utility pipeline or conduit, sewer, culvert, storm drain, drainage ditch, flood control channel, overhead wires or cables, or underground wires or cables, or any other structure or facility shall not be disturbed but shall be supported and protected against injury and maintained in good operating condition at the expense of the Contractor. In no case shall any such property be disturbed or removed without the consent of the owner and approval of the Engineer. The Contractor shall be responsible for making good all damage due to his operations, and the provisions of this section shall not be abated even in the event such damage occurs after backfilling, or is not discovered until after completion of backfilling.

The locations of existing underground utilities and structures, insofar as they are known from information furnished by the respective utility companies and agencies, have been shown on the Drawings. It shall be the responsibility of the Contractor to verify the locations of these obstructions and to locate any other underground utilities and structures which might necessitate a change in the line and grade of the new work. If the Contractor, while performing the work of construction, discovers utility facilities not identified by the District in contract plans or specifications, he shall immediately notify the District in writing.

In no case shall any utility that has been damaged, whether shown or not shown on the plans, be backfilled without the Contractor notifying the utility company of the damage.

- E. Utility Construction. The District may require the moving, altering or reconstructing of obstructing underground facilities, sewers, or storm drains, and compensation therefore will come under extra work where such work is ordered in writing by the Engineer.

Pipelines determined to be abandoned may be destroyed if conflicting with the contract work and properly disposed of. Exposed ends of abandoned pipelines shall be plugged for water tightness as approved by the Engineer.

### 1.03 JOB CONDITIONS

- A. Rights-of-Way and Land. The District will provide the rights-of-way and acquire the land necessary for the construction of the work under this specification. Neither the terms hereof nor anything shown on the drawings shall be construed to entitle the Contractor to conduct operations off the site in violation of any public agency ordinance or regulation restricting interference with water courses, drainage channels, roads, alleys or streets, until he has obtained permits therefore from the proper authorities.

In any street in which his work may interfere with ingress or egress of the occupants of the abutting property or of their vehicles, the Contractor shall maintain temporary practicable means of ingress and egress, or shall make satisfactory arrangements with the occupants for the obstructing of ways to their properties for the duration of the interference. Nothing herein shall be construed to entitle the Contractor to the exclusive use of any public street or way during the performance of the contract work, and he shall so conduct his operations as not to interfere unnecessarily with the authorized work of other agencies in such streets and ways.

- B. Safeguarding Excavations and Property. Excavations shall be adequately shored and braced so that the earth will not slide or settle and so that all existing improvements of any kind will be fully protected from damage. Any damage resulting from a lack of adequate shoring and bracing shall be the responsibility of the Contractor. The Contractor shall affect all necessary repairs or reconstructions at the Contractor's own expense as directed by the Engineer and shall bear all other expense result-directed by the Engineer and shall bear all other expense resulting from such damage.
  
- C. Waste Water. The Contractor shall take care of drainage water on construction operations and of storm water and waste water reaching the right of way from any source so that no damage will be done to the materials or work under construction. The Contractor shall be responsible for any damage to persons or property on or off the right of way due to such diversion of such storm or waste water on account of his operations. Adequate flumes shall be provided for conveying storm water around the work wherever runoff from tributary drainage areas exists.

## **PART 2 - PRODUCTS**

### 2.01 MATERIALS

The Contractor shall furnish all materials not specifically called for as furnished by the District.

## **PART 3 - EXECUTION**

### 3.01 WEATHER LIMITATIONS

Excavating and grading shall be performed only when the weather conditions do not adversely affect the quality of the finished product. Any graded or excavated areas that are damaged by the effect of rain, or other weather conditions, during any phase of the construction, shall be re-excavated, regraded, and recompact to conform to the herein-specified requirements, without additional cost to the District.

### 3.02 PREPARATION

It shall be the responsibility of the Contractor to meet with the Engineer regarding the equipment and methods to be used in the construction of the work, and for approval of the order and schedule of work.

Dust Abatement. The Contractor shall furnish all labor, equipment and means required and shall carry out protective measures wherever and as often as necessary to prevent his operations from producing dust in amounts damaging to property or causing nuisance. The Contractor shall be responsible for any damage resulting from dust originating from his operations. The dust abatement measures shall be continued until all required resurfacing is completed or until the Contractor has completed arrangements with the proper authorities whereby he is relieved of further responsibility. All compensation to be received for dust abatement shall be included in the prices named for appropriate items of the bidding sheet.

### 3.03 CONSTRUCTION

- A. Excavation. The Contractor shall perform all excavations necessary or required for the construction covered by these specifications. Excavations may be performed by either hand or machine methods and shall be of sufficient size to provide adequate space for working there, in accordance with safety regulations and practice and the Contract Drawings. Excavations shall include the removal and disposal of all materials of whatever nature and quantity including water, rock, decomposed granite or any other type of soil or material, subsurface obstructions and also overhead obstructions which may interfere with the operation of equipment used on the work.
- B. Blasting. The use of explosives on the work shall be subject to the approval of the Engineer. All operations involving the handling and storage and use of explosives shall be conducted with every precaution prescribed by the Construction Safety Orders of the Division of Industrial Safety of the State of California and by local laws and regulations. Only competent, reliable persons, working under experienced supervision, shall be permitted to use explosives. The Contractor will be held responsible for and shall make good any damage caused by blasting or otherwise resulting from disposition or use of explosives on the work. All such work involved in blasting shall be included in the prices bid for site grading.
- C. Structure Backfill. The Contractor shall place all fill to the lines shown on the drawings or prescribed by the Engineer. The material used for backfill around structures, the amount thereof, and the manner of depositing the material shall be subject to approval of the Engineer.
- D. Fill, Backfill and Grading shall include all scarifying, moistening, compacting, and other manipulations of the soil necessary to obtain the required densities, cross-sections, lines, grades and surface finish indicated or specified.

Imported materials necessary for fill or backfill to meet the specified compaction requirements shall be provided by the Contractor from areas outside the site at his own expense. Such material shall be as herein specified and must be approved by the District before delivery to the site.

All backfill around structures shall be placed in layers not more than six (6) inches thick prior to compaction, which shall be moistened to optimum moisture content prior to placing and compacting to maximum compaction by use of suitable equipment approved by the Engineer.

The Contractor shall take all necessary precautions to protect any structures and/or underground facilities during the placement, compacting or consolidating, and grading or backfill.

### 3.04 FIELD QUALITY CONTROL

- A. Disposal of Excavated Materials. Insofar as space is available in the right of way, such space may be used for temporary storage of excavated material, to be used for fill or backfill, provided that no material shall be stored or deposited in violation of any ordinance or regulation prohibiting the filling or obstructing of water courses in drainage channels. Storage of excavated material in any street or highway shall conform to the regulations of the public authority having jurisdiction thereover.

All materials removed from the excavations in excess of that stored temporarily as above specified shall be immediately hauled away and used in backfilling elsewhere, or, if not used, shall be disposed of by the Contractor. The disposal area shall be acquired by the Contractor.

No materials shall be disposed of either temporarily or permanently on privately or publicly owned property unless the Contractor shall first obtain permission therefore from the owner or agency concerned. The Contractor shall furnish satisfactory evidence to the Engineer that such consent has been obtained and shall be responsible for all damages and claims that may arise in connection therewith.

- B. Cleanup During Construction. The Contractor shall keep the premises occupied by him in a neat and clean condition, and free from unsightly accumulation of rubbish. Upon completion of the work and before the final estimate is submitted, the Contractor shall, at his own cost and expense, satisfactorily dispose of or remove from the vicinity of the work all plants, buildings, rubbish, rock, unused and excavated materials belonging to him or used under his direction during the construction, and in the event of his failure to do so, the same may be removed and disposed of by the District at the Contractor's expense.

Fences on the right of way shall be removed by the Contractor where necessary for the performance of the work, and where required shall be rebuilt in as good condition as found. Where designated, fences shall be maintained until the work is completed or their removal is authorized. Where the Contractor removes existing fences to facilitate the work, temporary fence protection for lands adjacent to the right of way shall be provided at all times during the continuation of the contract. Such temporary fence protection shall be adequate to prevent livestock from straying from or onto adjacent lands and shall be constructed complete with gates and/or cattle guards. The cost of all work described in this article shall be included in the prices bid in this specification for other items of work.

**END OF SECTION 02210**

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