

Selected Oregon Standard Specifications for Construction 2008

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00140.50 Environmental Pollution Changes, (prevention of environmental pollution and the preservation of natural resources)

ORS 279C.525 will apply to any increases in the scope of the Work required as a result of environmental or natural resources laws enacted or amended after the submission of Bids for the Contract. The Contractor shall comply with the applicable notice and other requirements of ORS 279C.525. The applicable rights and remedies of that statute will also apply.

In addition to ORS 279C.525, the Agency has compiled a list at 00170.01 of those federal, State, and local agencies, of which the Agency has knowledge, that have enacted ordinances, rules, or regulations dealing with the prevention of environmental pollution and the preservation of natural resources that may affect the performance of Agency contracts.

00140.90 Final Trimming and Cleanup

Before Final Inspection as described in 00150.90, the Contractor shall neatly trim and finish the Project and remove all remaining unincorporated Materials and debris. Final trimming and cleanup shall include without limitation the following:

- The Contractor shall retrim and reshape earthwork, and shall repair deteriorated portions of the Project Site.
- Where the Work has impacted existing facilities or devices, the Contractor shall restore or replace those facilities to their pre-existing condition.
- The Contractor shall clean all drainage facilities and sanitary sewers of excess Materials or debris resulting from the Work.
- The Contractor shall clean up and leave in a neat, orderly condition, Rights-of-Way, Materials sites, and other property occupied in connection with performance of the Work.
- The Contractor shall remove temporary buildings, construction plants, forms, falsework and scaffolding, surplus and discarded Materials, and rubbish.
- The Contractor shall dispose of Materials and debris including without limitation forms, falsework, scaffolding, and rubbish resulting from clearing, grubbing, trimming, clean-up, removal, and other Work. These Materials and debris become the property of the Contractor. The Contractor shall dispose of these Materials and debris immediately.

Unless the Contract specifically provides for payment for this item, the Agency will make no separate or additional payment for final trimming and cleanup.

00150.10 Coordination of Specifications and Plans

00150.10 Coordination of Specifications and Plans - The Contract Documents, including but not limited to Contract Change Orders, the Special Provisions, the Plans, Supplemental Specifications, and the Standard Specifications are intended to collectively describe all of the items of Work necessary to complete the Project.

(a) Order of Precedence - The Engineer will resolve any discrepancies between these documents in the following order of precedence:

- Contract Change Orders;
- Special Provisions;
- Agency-prepared drawings specifically applicable to the Project and bearing the Project title;
- Reviewed and accepted, stamped Working Drawings;
- Standard Drawings;
- Approved Unstamped Working Drawings;
- Supplemental Specifications;
- Standard Specifications; and
- All other contract documents not listed above.

Notes on a drawing shall take precedence over drawing details.

Dimensions shown on the drawings, or that can be computed, shall take precedence over scaled dimensions.

(b) Immaterial Discrepancies - The Specifications and Plans specify details for the construction and completion of the Work. If Specifications or Plans describe portions of the Work in sufficient detail but are silent in some minor respect, the Contractor may proceed utilizing the current best industry practices.

(c) Material Discrepancies - If the Contractor identifies a discrepancy, error, or omission in the Specifications or Plans that cannot be resolved by the approach specified in (b) above, the Contractor shall immediately request clarification from the Engineer.

00150.15 Construction Stakes, Lines, and Grades

(a) General - The Contractor shall perform no Work until the Engineer establishes field controls. Work performed without field controls will be subject to removal at the Contractor's expense.

(b) Agency Responsibilities - The Engineer will:

- Lay out and set construction stakes and marks to establish the lines, grades, Slopes, Cross Sections, and curve super-elevations for roadwork;
- Provide one set of construction stakes for line and grade for each additional phase of the Work;
- Set bench marks and stakes for centerline of Bridges and bents;
- Calculate and provide finish deck grades; and
- Deduct from payments due the Contractor all costs incurred to replace stakes and marks negligently or intentionally damaged, removed, or destroyed by the Contractor.

(c) Contractor Responsibilities - The Contractor shall:

- Inform the Engineer of staking requirements at least five Calendar Days before the staking needs to begin;
- Coordinate construction to provide sufficient area for the Engineer to perform surveying work efficiently and safely;
- Accurately measure detailed dimensions, elevations, and Slopes from the Engineer's stakes and marks;
- Perform the Work in such a manner as to preserve stakes and marks; and

- Set any reference lines for automatic control from the control stakes provided by the Engineer.

00150.20 Inspection

(a) Inspection by the Engineer - The Engineer may test Materials furnished and inspect Work performed by the Contractor to ensure Contract compliance.

If the Contractor performs Work without the Engineer's inspection or uses Materials that the Engineer has not approved, the Engineer may order affected portions of the Work removed at the Contractor's expense. The foregoing sentence shall not apply if the Engineer fails to inspect the Work within a specific period of time required in the Contract, or in the absence of a specific period of time, within a reasonable period of time after receiving the Contractor's timely written request for inspection or testing.

At the Engineer's direction, any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore these portions of Work to the standard required by the Contract. If the Engineer rejects Work due to Materials or workmanship, or if the Contractor performed such Work without providing sufficient advance request for inspection to the Engineer, the Contractor shall bear all costs of uncovering and restoring the Work. If the Engineer accepts the uncovered Work, and the Contractor performed the Work only after providing the Engineer with sufficient advance notice, the costs of uncovering and restoring the Work will be paid for by the Agency as Extra Work.

(b) Inspection Facilities - The Contractor shall furnish walkways, railings, ladders, shoring, tunnels, platforms, and other facilities necessary to permit the Engineer to have safe access to the Work to be inspected. The Contractor shall require producers and fabricators to provide safe inspection access as requested by the Engineer.

(c) Sampling - The Contractor shall furnish the Engineer with samples of Materials that the Engineer will test. All of the Contractor's costs related to this required sampling are Incidental.

(d) Inspection by Third Parties - Where third parties have the right to inspect the Work, the Contractor shall coordinate with the Engineer and shall provide safe inspection access.

(e) Contractor's Duty to Make Corrections - The Contractor shall perform all Work according to the Specifications and Plans. The Contractor shall correct Work that does not comply with the Specifications and Plans at its own

expense. Inspection of the Work by the Engineer does not relieve the Contractor of responsibility for improper prosecution of the Work.

00150.35 Plans and Working Drawings

(a) Plans - The Plans will show details of lines, grades, and Typical Section of the Roadway, and locations and design details of Structures.

(b) Working Drawings - The Contractor shall supplement the Agency-prepared Plans with stamped or unstamped Working Drawings that show all information necessary to complete the Work. The applicable Section or Subsection of the Standard Specifications will indicate the supplemental information required and whether the drawings are to be stamped or unstamped. Stamped and unstamped Working Drawings are defined as follows:

(1) Stamped Working Drawings - Working Drawings, calculations, and other data which are prepared by or under the direction of a Professional Engineer licensed in the State of Oregon, and which bear the engineer's signature, seal, and expiration date.

(2) Unstamped Working Drawings - Working Drawings, calculations, and other data that do not bear an engineering seal.

(c) Number and Size of Drawings - The Contractor shall submit seven copies of Working Drawings for steel Structures and six copies of Working Drawings for other Structures to the Engineer. The submitted copies shall be clear and readable. Drawing dimensions shall be 8 1/2 inches by 11 inches, 11 inches by 17 inches, or 22 inches by 36 inches in size. One copy of the submitted Working Drawings will be returned to the Contractor after processing. The Contractor shall submit such additional number of copies to the Engineer for processing that the Contractor would like to have returned.

(d) Processing Working Drawings - The Engineer will process Working Drawings and include all comments on them as follows:

(1) Stamped Working Drawings - Stamped Working Drawings will be designated as "reviewed and accepted" by the Engineer.

(2) Unstamped Working Drawings - Unstamped Working Drawings will be designated on the face of the Drawing, as "approved", "approved as noted", "returned for correction", or "rejected" by the Engineer.

The Contractor shall not fabricate or construct any structural components until the stamped or unstamped Working Drawings are returned by the Engineer with written notation of approval or review, as applicable, of the Working Drawings.

The Engineer's processing of the Working Drawings does not amend any contractual obligations of the parties.

The Engineer will process and return Working Drawings within 21 Calendar Days (65 Calendar Days if Railroad approval is required) after receipt by the Engineer. If the Engineer fails to return such drawings within this period of time, the Engineer will consider granting a Contract Time extension according to 00180.80.

00150.40 Cooperation and Superintendence by the Contractor

(a) General - The Contractor shall:

- Keep one complete set of Contract Documents available on the Project Site at all times.
- Cooperate in good faith with the Engineer, Inspectors, and other contractors in performance of the Work.
- Designate, from the Contractor's organization, a competent single representative responsible for the Project, experienced in the type of Work being performed, and capable of reading and thoroughly understanding the Plans and Specifications.
- Provide access, facilities and assistance to the Engineer in establishing such lines, grades and points as the Engineer requires.
- Carefully protect and preserve the Engineer's marks and stakes.
- Provide all assistance reasonably required by the Engineer to obtain information regarding the nature, quantity, and quality of any part of the Work.
- Allow the Engineer reasonable access to the Contractor's books and records at all times. To the extent permitted by public records laws, the Engineer will make reasonable efforts to honor the Contractor's request for protection of confidential information.
- Furnish the Engineer all data necessary to determine the actual cost of all, or any part, of the Work. Diligently pursue progress of the Work according to the schedule requirements of Section 00180.
- Coordinate and control all Work performed under the Contract, including without limitation the Work performed by Subcontractors.

(b) Superintendence - The Contractor shall appoint a single designated representative responsible for the Project described under 00150.40(a), in writing. The single designated representative responsible for the Project shall:

- Have full authority and responsibility to promptly execute orders or directions of the Engineer;
- Have full authority and responsibility to promptly supply the Materials, Equipment, labor, and Incidentals required for performance of the Work;
- Be available during the hours of work on the Project Site for communication with the Engineer; and
- Be present for all On-Site Work except as provided in the Contract Documents, or approved by the Agency.

For short periods of time during the performance of minor or Incidental portions of the Work, the Contractor may designate a person to act on behalf of the single designated representative responsible for the Project. The Contractor shall submit the designation in writing to the Engineer. The form of designation shall state the designee's name, duration of appointment, and scope of authority. The single designated representative responsible for the Project shall be available to the Engineer at all times for contact by telephone or radio. The Engineer expressly reserves the right to require the single designated representative responsible for the Project to be on the Project Site by giving 48 hours advance verbal or written notice thereof to the Contractor.

The Contractor's failure to provide the superintendence required by these provisions constitutes a material breach of the Contract, and the Engineer may impose any remedies available under the Contract, including but not limited to Contract termination or suspension of Contract performance.

00150.50 Cooperation with Utilities

(a) General - Unless otherwise specified in any Supplemental Specifications, in the Special Provisions, or on the Plans, existing Utilities requiring adjustment may be adjusted by the Utility before, during, or after Project construction. "Adjustment of Utilities" shall mean the alteration, improvement, connection, disconnection, relocation, or removal of existing Utility lines, facilities, or systems in temporary or permanent manner.

(b) Agency Responsibilities - Before Bids are received, the Agency will make preliminary arrangements for planned Adjustment of Utilities. The Agency will list in the Special Provisions the estimated completion dates or times for adjustment work by the Utility owner, and will include a general statement describing any relocation. The Plans will not normally show the anticipated new location of Utilities that have been or will be adjusted.

(c) Contractor's Responsibilities - The Contractor shall:

- Follow applicable rules adopted by the Oregon Utility Notification Center;
- Contact Utility owners during Bid preparation and after the Contract is awarded to verify all Utilities' involvement on the Project Site;
- Coordinate Project construction with the Utilities' planned adjustments, take all precautions necessary to prevent disruption of Utility service, and perform its Work in the manner that results in the least inconvenience to the Utility owners; include all Utility adjustment work, whether to be performed by the Contractor or the Utilities, on the Contractor's Project Work schedule submitted under 00180.41;
- Protect from damage or disturbance any Utility that remains within the area in which Work is being performed;
- Not disturb an existing Utility if it requires an unanticipated adjustment, but shall protect it from damage or disturbance and promptly notify the Engineer; and
- Report to the Engineer any Utility owner who fails to cooperate or fails to follow the planned Utility adjustment.

Subject to the Engineer's approval, the Contractor may adjust the Utilities by asking the Utility owners to move, remove, or alter their facilities in ways other than as shown on the Plans, in any Supplemental Specifications, or in the Special Provisions. The Contractor shall conduct all negotiations, make all arrangements, and assume all costs that arise from such changes.

(d) Delays - If the Contractor complies with Subsection (c) above, and if Utility adjustments are completed later than the date specified in the Special Provisions, thus causing Project completion to be delayed (provide notification under 00180.60), additional Contract Time will be considered under 00180.80, and additional compensation, if applicable, will be considered under 00195.40.

(e) Notification - If the Project is located within the area served by the Oregon Utility Notification Center, the Contractor shall notify owners of Utilities prior to the performance of Work in the vicinity of their facilities. The Utilities notification system telephone number is 1-800-332-2344.

The Contractor shall comply with the rules of the Oregon Utility Notification Center, OAR 952-001-0010 through OAR 952-001-0090, and ORS 757.993. The Contractor may contact the Oregon Utility Notification Center at 503-232-1987 about these rules.

00150.70 Detrimental Operations

The Contractor shall avoid operations whose methods, conditions, or timing may injure people or damage property or the Work. Damage may include without

limitation, staining surfaces with mud or asphalt. (also see 00150.60, 00150.75, and Section 00170)

When any such damage occurs, the Engineer will determine if it is to be corrected by repair, replacement, or compensatory payment by the Contractor. If compensatory payment is required, the Engineer will determine the amount. Compensatory payment may be deducted from monies due or to become due to the Contractor under the Contract.

00150.75 Protection and Maintenance of Work During Construction

The Contractor shall protect and maintain the Work during construction and until Third Notification has been issued, unless otherwise provided in the Contract. For the purposes of this Subsection, "maintenance" shall include measures to prevent deterioration of Roadway and Structures at the Project Site, and to keep them in good condition at all times during the prosecution of the Work. The Contractor shall continuously allocate sufficient Equipment and workers to achieve such maintenance.

If the Contract requires the placement of a Course upon a previously constructed Course or Subgrade, the Contractor shall maintain the previous Course or Subgrade during all construction operations.

The Contractor shall include costs of protecting and maintaining the Work during construction in the unit prices bid for the various Pay Items. The Contractor will not be paid an additional amount for this Work, unless otherwise specified.

The Engineer will immediately notify the Contractor of Contractor's noncompliance with this Subsection. If the Contractor fails to remedy unsatisfactory protection or maintenance within 24 hours after receipt of such notice, the Engineer may proceed immediately to remedy the deficiency, and deduct the entire cost from monies due or to become due the Contractor under the Contract.

00160.50 Agency-Controlled Land; Limitations and Requirements

(a) General - The Contractor shall have no property rights in, or right of occupancy on, Agency-Controlled Land. Nor shall the Contractor have the right to sell, use, remove, or otherwise dispose of any material from Agency-Controlled Land, areas, or property, except as specified in the Special Provisions or by the written authorization of the Engineer.

Unless authorized in the Contract, the Contractor shall not disturb any material within Rights-of-Way without written authorization from the Engineer.

Unless otherwise specified in the Contract, the ownership of all materials originating on Agency-Controlled Lands will at all times vest in, and remain within the control of, the Agency.

(b) Waste, Excess, and By-Product Materials - All waste, excess, and by-product materials, collectively referred to in this Subsection as "By-Products", from the manufacture or production of Materials shall remain Agency property. Unless otherwise ordered by the Engineer in writing, By-Products shall be placed as required by the development plan:

- In stockpiles at designated locations;
- At locations and in shapes that are readily accessible; and
- In such a manner as to avoid fouling areas containing useable materials, or interfering with future plant setups to use materials from the property.

The Agency will not compensate the Contractor for handling and stockpiling By-Products according to the development plan requirements. If by written order the Engineer directs the Contractor to stockpile or place designated By-Products at alternate sites, the By-Products designated shall be loaded, hauled, and placed as directed, and this work will be paid for as Extra Work.

00170.00 Legal Relations and Responsibilities: General

The Contractor shall comply with all laws, ordinances, codes, regulations and rules, (collectively referred to as "Laws" in this Section), that relate to the Work or to those engaged in the Work. Where the provisions of the Contract are inconsistent or in conflict, the Contractor shall comply with the more stringent standard.

The Contractor shall indemnify, defend, and hold harmless the Agency and its representatives from liability arising from or related to the violation of Laws by those engaged in any phase of the Work. This provision does not apply to Work performed by Agency employees.

00170.82 Responsibility for Damage to Property and Facilities

(a) In General - As used in this Subsection, the term "Contractor" shall include the Contractor's agents, Subcontractors, and all workers performing Work under the Contract; and the term "damage" shall include without limitation soiling or staining surfaces by tracking or splashing mud, asphalt, and other materials, as well as damage of a more serious nature.

The Contractor shall be solely responsible for damages arising from:

- The Contractor's operations;

- The Contractor's negligence, gross negligence, or intentional wrongful acts; and
- The Contractor's failure to comply with any Contract provision. The Agency may withhold funds due the Contractor or the Contractor's Surety until all lawsuits, actions, and claims for injuries or damages are resolved, and satisfactory evidence of resolution is furnished to the Agency.

(b) Protection and Restoration of Agency Property and Facilities - The following requirements apply to highways, highway Structures and other improvements that are existing, under construction, or completed. The Contractor shall:

- Provide adequate protection to avoid damaging Agency property and facilities;
- Be responsible for damage to Agency property and facilities caused by or resulting from the Contractor's operations; and
- Clean up and restore such damage by repair, rebuilding, replacement, or compensation, as determined by the Engineer.

(c) Protection and Restoration of Non-Agency Property and Facilities - The Contractor shall determine the location of properties and facilities that could be damaged by the Contractor's operations, and shall protect them from damage. The Contractor shall protect monuments and property marks until the Engineer has referenced their location and authorized their removal. The Contractor shall restore property or facilities damaged by its operations to the condition that existed before the damage, at no additional compensation.

The Contractor shall provide temporary facilities when needed, e.g., to maintain normal service or as directed by the Engineer, until the required repair, rebuilding, or replacement is accomplished.

The Contractor shall protect specific service signs, e.g., business logos, and tourist-oriented directional signs (TODS) from damage, whether the signs are to remain in place or be placed on temporary supports. The Contractor shall repair or replace damaged signs at no cost to the Agency. Liquidated damages will be assessed against the Contractor in the amount of \$200 per day for each sign out of service for more than five Calendar Days because of the Contractor's operations.

00180.50 Contract Time to Complete Work

(a) General - The time allowed to complete the Work or Pay Item is stipulated in the Solicitation Documents, and will be known as the "Contract Time". (see 00110.20)

(b) Kinds of Contract Time - The Contract Time will be expressed in one or more of the following ways:

(1) Fixed Date Calculation - The calendar date on which the Work or Pay Item shall be completed; or

(2) Calendar Day Calculation - The number of Calendar Days from a specified beginning point in which the Work or Pay Item shall be completed.

(c) Beginning of Contract Time - When the Contract Time is stated in Calendar Days, counting of Contract Calendar Days will begin with the fifteenth Calendar Day following the date of the Notice to Proceed.

(d) Recording Contract Time - All Contract Time will be recorded and charged to the nearest one-half Day.

On Contracts with Calendar Day counts, the Engineer will furnish the Contractor a weekly statement of Contract Time charges. The statement will show the number of Calendar Days counted for the preceding week and the number of Calendar Days remaining prior to the established completion date for that Pay Item.

For Contracts with fixed completion dates for Pay Items, the Engineer will furnish the Contractor a weekly statement of Contract Time charges only after expiration of the Contract Time. The statement will show the number of Calendar Days of liquidated damages that have been assessed, if any. These statements will include any exclusions from, or adjustments to, Contract Time.

(e) Exclusions from Contract Time - Regardless of the way Contract Time is expressed in the Contract, certain Calendar Days will not be charged against Contract Time. These exclusions will be allowed when the Contractor is prevented from performing Work due to one of the following reasons, resulting in delay:

- Acts of God or Nature;
- Court orders enjoining prosecution of the Work;
- Strikes, labor disputes or freight embargoes that, despite the Contractor's reasonable efforts to avoid them, cause a shutdown of the entire Project or one or more major operations. "Strike" and "labor dispute" may include union action against the Contractor, a Subcontractor, a Materials supplier, or the Agency; or
- Suspension of the Work by written order of the Engineer for reasons other than the Contractor's failure or neglect.

(f) Time Calculation Protest - In the event the Contractor disputes the accuracy of the statement of Contract Time charges, it shall immediately contact the Engineer and attempt to resolve the dispute. If the dispute cannot be resolved informally, the Contractor shall submit a formal written protest to the Engineer within seven Calendar Days of the date the Engineer mailed or delivered the statement. Failure to submit a formal written protest within the seven Calendar Day period constitutes the Contractor's approval of the time charges, or adjusted time charges, itemized in the statement.

(g) End of Contract Time - When the Engineer determines that the On-Site Work has been completed, except for the items listed below, the Engineer will issue a Second Notification.

The Second Notification will list:

- The date the time charges stopped;
- Final trimming and cleanup tasks (see 00140.90);
- Equipment to be removed from the Project Site;
- Minor corrective work not involving additional payment to be completed; and
- Submittals, including without limitation all required certifications, bills, forms, warranties, certificate of insurance coverage (00170.70(b)), and other documents, required to be provided to the Engineer before Third Notification will issue.

The Contractor shall complete all tasks listed in the Second Notification in an expeditious manner within the time frame proposed by the Contractor and accepted by the Engineer. Unless otherwise agreed by the Agency, failure of the Contractor to complete all tasks listed in the Second Notification within the time frame accepted, will result in the Agency rescinding the Second Notification. Counting of time charges will resume upon expiration of the accepted time frame.

00220.02 Public Safety and Mobility

Provide for the safety and mobility of the public and:

- Be responsible for damages according to 00170.80.
- Conduct work at all times so that there is the least possible interference with or hazard to the traveling public and the affected community.
- Locate stockpile materials and park construction equipment and vehicles that are not in active use a minimum of 30 feet from the traveled way. If this is not possible, protect the stockpile materials, equipment, and vehicles, with barrier or as directed.

- Provide and maintain safe temporary access to business and residence driveways, temporary intersections, and temporary connections with roads, streets, and bicycle and pedestrian facilities.
- Provide approved protection and delineation between each work area and public traffic.
- Allow emergency vehicles immediate passage at all times.
- When included in the Contract Schedule of Items, use portable changeable message signs to provide appropriate work zone information to the public.
- For all sidewalk or sidewalk ramp closures, install signs as shown on the standard drawings. Mount signs between the panels of the type II barricade or, if installed on a single-post TSS, locate the signs behind type II barricades. Close the sidewalk at a point where there is an alternate way to proceed or provide an alternate pedestrian route. Pave the alternate pedestrian route surface or provide an approved, non-slip 36 inch minimum wide surface meeting the requirements of the Americans with Disabilities Act (ADA). If appropriate, delineate this route and protect pedestrians by placing pedestrian work zone delineation fencing. Fencing is to remain in place, except as required for actual work, until the sidewalk is reopened to pedestrian traffic. Reopen the sidewalk during non-work hours or continue to provide an alternate route for pedestrians. Provide alternate pedestrian routes that match existing facilities and provide additional TCM to meet the accessibility requirements in Part VI of the MUTCD.
- Do not impede the flow of traffic or close any lanes of traffic except as listed in 00220.40(e).
- Do not stop or hold vehicles on the traveled way, at intersections, or other connecting roadways within the Project limits for more than 20 minutes.
- Do not block driveways for more than two hours unless otherwise authorized in writing.
- Do not close any lanes until the area is signed according to the plans and the requirements of this Section and Section 00225
- Do not perform work which would restrict or interrupt traffic movement on opposite sides of the traveled way at the same time.

Do not use temporary steel plating within the roadway or shoulder having a pre-construction posted speed zone greater than 35 mph.

00225.00 Work Zone Traffic Control: Scope

This work consists of providing temporary traffic control measures (TCM) and furnishing, installing, moving, operating, maintaining, inspecting, and removing traffic control devices (TCD) throughout the Project area according to the standard drawings, the traffic control plan (TCP) for the Project, these Specifications, or as directed.

00225.05 Contractor Traffic Control Plan

Submit for approval, the Contractor TCP in writing five days before the pre-construction conference. If modifying or if not using the Agency TCP, submit the following:

- Proposed TCP showing all TCM and quantities of all TCD.
- Proposed order and duration of the TCM.
- Two copies of a sketch map of the Project showing all existing tourist-oriented directional (TOD) and business logo signs and a written narrative describing how these signs will be kept in service and protected throughout all the construction stages.
- A detailed temporary striping plan.

Further TCP revisions will be subject to a Contract change order before implementation.

00320.40 Clearing Operations

(a) Clearing Trees and Other Vegetation - Remove and dispose of noxious weeds and Specified Weeds according to Section 01030 prior to beginning clearing of trees and other vegetation.

Cut trees and brush so they fall into the areas specified to be cleared.

Cut off tree stumps, not required to be grubbed under 00320.41 as follows:

- Flush with the ground surface if within the clear zone.
- No higher than 4 inches above the ground surface if between the clear zone and the clearing line.

Remove all evidence of clearing matter and debris. This work includes removal of:

- Sod, weeds and dead vegetation.
- Down timber, brush and other vegetation.
- Sticks and branches with diameters greater than 1/2 inch.
- Dead trees, down timber, stumps, and specified trimmings from areas where live trees and other vegetation are designated to remain.

(b) Preserving and Trimming Vegetation:

(1) Within the Work Areas - Avoid injuring vegetation designated to remain in place. Preservation of this vegetation includes protection and special care.

(2) Outside the Work Areas - Avoid injuring any vegetation. Confine operations which may injure vegetation to areas that have no vegetation or to the work areas.

Remove hazardous, dead and damaged trees outside the clearing limit as directed.

(3) Tree Trimming - Trim trees according to good tree surgery practices and as directed to remove safety hazards such as:

- Unsound branches of trees to remain in place.
- Branches over roadways and bridges to provide at least 20 feet of clearance above the roadway surface.
- Branches over walks to provide at least 8 feet of clearance above the walk surface.
- Branches obstructing sight distance at intersections or impairing visibility of signs.

Preserving vegetation includes keeping equipment and materials off of the critical root zone as directed.

00330.10 Selected Materials

When the Contract contains a pay item "Extra for Selected _____ Material", furnish the material from required excavations. The Specifications for the selected materials will be in the Special Provisions, if different than specified in these Specifications. If other provisions of this Section call for selecting or sorting material for various parts of the work, select and sort the materials to meet the directed requirements.

00330.41 Excavations

Perform excavation of earthwork as indicated on the plans, as directed and according to the following:

(a) General:

(1) Selection and Sorting of Excavated Materials - All materials available from excavations, including borrow materials, are subject to selection and separate handling for their best utilization in various parts of the work. Select the types of materials to be used according to 00330.42, 00330.44, 00330.45, 00330.47, the Special Provisions, and as directed. Select and sort excavated materials, as necessary, to meet Contract requirements.

(2) Selected Topsoil - Stockpile and place selected topsoil according to 01040.43.

(3) Unsuitable Materials - Unsuitable materials encountered in required excavations shall be classed as waste material and disposed of according to 00330.41(a-5).

(4) Excess Materials - If the quantities of excavated materials are greater than required to construct embankments and to do all filling and backfilling, the remaining materials shall be classed as waste materials and be disposed of according to 00330.41(a-5).

(5) Waste Materials - Waste materials under 00330.41(a-3) and 00330.41(a-4) become the property of the Contractor at the point of origin. Unless otherwise specifically allowed and subject to the requirements of 00280.03, dispose of waste materials outside and beyond the limits of the Project and Agency controlled property according to 00290.20(c). Do not dispose of any materials on any wetland, either public or private or within 300 feet of any river or stream.

(6) Excavation of Existing Surfaces - Unless otherwise specified, earthwork includes excavating, hauling and depositing of existing surfacings which are within the limits of the excavation work.

If an abutting roadway or structure, or part of a roadway or structure, is to be left in place, make cuts according to 00310.41(a).

(7) Abandoned Pipes and Miscellaneous Matter - Remove and dispose of abandoned pipes and miscellaneous matter encountered in the work as a part of the earthwork, unless otherwise specified.

Remove ends of remaining abandoned pipe or portions of other miscellaneous matter remaining exposed in slopes or at subgrade after excavation work to at least 2 feet back of the finished slope or below subgrade.

Place a watertight cap or plug in the inlet ends of remaining abandoned pipes. Leave outlet ends open. Place free draining cover material and/or take other measures as directed to allow for free passage of drainage at remaining outlet ends. Shape and finish the affected area so no evidence of their existence is apparent upon completion of the work.

(8) Ditches, Channel Changes, Approaches, Connection, Etc. - Perform excavations to construct ditches, channel changes, approach roadways, road connections, and other items, as required.

(9) Excavation Below Grade:

a. Rock - If directed, excavate rock found in roadbed excavation to a depth of 12 inches below subgrade or as directed. Backfill to subgrade elevation with selected granular backfill material as directed.

b. Selected Material - Where the plans indicate the placement of a selected material below subgrade in excavation areas, excavate to the depth necessary to place the material to its specified compacted thickness.

c. Unstable Subgrade Material - Where unstable material is encountered below subgrade in roadbed excavations, excavate such material below subgrade as directed. Dispose of these unstable materials according to 00330.41(a-5). Backfill with selected general backfill, or selected granular backfill material to provide a firm roadbed as directed. A geotextile may be required before backfilling.

(10) Protection of Excavation Side Slopes - Use methods in making roadbed excavations that will not shatter or loosen excavation slopes, avoid overbreaks, and leave slopes accurately and smoothly trimmed. As far as practical, excavate materials without previous loosening and in limited layers or thickness to avoid breaking the material back of the established slope line. Overbreak is incidental to the work except in cases where the Engineer determines that such overbreak was unavoidable.

After the main excavation in rock or rocky cuts is completed, thoroughly test the slopes with bars or by other approved means and remove all loose, detached, broken, or otherwise unstable material. Remove jutting points and bring the entire cut slope area to a safe, trim, neat and stable condition. Dispose of the materials removed under this provision in the same manner as other excavated material. Remove all exposed roots, debris and all stones more than 3 inches in size which are loose or could become loosened.

(11) Rounding of Cutbanks - As part of the earthwork, blend the tops of cutbanks with the adjacent ground by rounding as called for by the plans. Rounding will not be required when rock requiring blasting to excavate extends to the top of cutbanks, and makes rounding impractical.

(12) Outside Earthwork Limits - Outside earthwork limits but within the clear zone, (see 00320.02(c)), remove partially buried natural objects, such as boulders, which the Engineer determines would be dangerous to an errant vehicle. Place them within embankments as specified or dispose of them as directed.

(b) Foundation Excavation - Excavate unsuitable materials in embankment foundations and elsewhere as designated. This work will be classed as "Foundation Excavation". Dispose of these materials according to 00330.41(a-5) and replace with selected general backfill, selected granular backfill or other suitable materials as directed.

(c) Toe Trench Excavation - Excavate trenches at the toe of slopes that are to be protected with stone embankment, riprap or other protective material, as shown or directed, to provide a suitable foundation. Maintain the toe trenches until the geotextile or filter blanket, if any, and stone embankment, riprap or other protective materials are placed.

(d) Borrow Excavation - Whenever the Specifications or Contract plans call for an Agency furnished borrow source for earthwork materials, the material excavated from such source and used in the work as earthwork materials will be classed as "Borrow Excavation". Excavate and use these materials according to the Contract provisions, or as directed.

(e) Blasting - Avoid the use of explosives as far as practical. If blasting is necessary and is not included in the Contract Schedule of Items, perform blasting according to following:

(1) General - Use blasting methods that do not shatter or loosen backslopes, that produces smooth and uniform excavation slopes at the specified slope angles, and satisfactorily loosens the rock for excavation. Do not use tunnel blasting methods.

(2) Methods - Follow the requirements of 00335.40(b) through 00335.40(h) and 00335.43.