SP00290 (2018 Specifications: 0~~8~~9-01-20)

(This Section requires SP00245 when temporary water management is required. Requires SP00253 when a temporary work access/containment system is required.)

SECTION 00290 - ENVIRONMENTAL PROTECTION

(Follow all instructions. If there are no instructions above a subsection, paragraph, sentence, or bullet, then include it in the project. The specifications may be modified to include project specific specifications, but all additions, deletions, or modifications must be sent to the ODOT Technical Resource and State Specifications Engineer for review and approval. Modify these subsections only for site specific conditions.)

Comply with Section 00290 of the Standard Specifications modified as follows:

(The following subsection .10 is not to be modified without the State Specifications Engineer's approval.)

00290.10 Staging and Disposal Sites –

Replace the paragraph that begins "Locate staging areas and disposal…" with the following paragraphs:

Locate staging areas and disposal sites in previously improved or disturbed sites, including existing Roadways, pullouts, turnouts, parking lots, and storage yards that have been compacted, and graveled or paved unless otherwise specified in Section 00236 or Section 00237 or approved, in writing, by the Engineer,

Do not stage Equipment, park Equipment or store Materials in any City, County, State, or Federal park, wayside or recreational facility.

00290.20(c)(1) General - Replace the paragraph that begins "Segregate all demolition debris according to…" with the following paragraph:

Segregate all demolition and construction debris according to its intended end use (reuse, recycle, or dispose). If required, store in designated areas in a manner that prevents contamination to Soil and water and prevents fugitive dust emissions. Remove all waste materials recovered from the site unless otherwise approved, in writing. Retain disposal and recycling facility receipts for wastes generated on site for at least 1 year after completion of the Project. Provide copies of the receipts to the Engineer within 7 Calendar Days of the disposal or recycling.

(Use the following subsection .20(c)(2) only when Section 00294 is included in the Special Provisions.)

00290.20(c)(2) Clean Fill - Add the following paragraph to the end of this subsection:

Manage all excavated soil that does not meet the definition of clean fill according to Section 00294.

00290.20(c)(3) Reuse, Recycle and Dispose of Materials - Replace the title of this subsection with "**Reuse, Recycle, Compost and Dispose of Materials**".

(3) Reuse, Recycle, Compost and Dispose of Materials – Replace the three bullets with the following bullets:

- Reuse demolition and construction debris.
- Recycle demolition and construction debris.
- Compost or mulch yard waste material from lawn and landscape maintenance.
- If it is not feasible to reuse, recycle, or compost, ("feasible" is defined as a facility that is capable of handling the material, will take the material and the cost of transportation plus the cost to reuse or recycle the material is equal to or less than the costs of disposal) dispose of waste material according to the following:

~~(Use the following subsection .30(a) when either subsections (7) or (8) are required)~~

~~00290.30(a) Pollution Control Measures~~ ~~- Add the following subsections and bullets:~~

(Use the following lead-in paragraph and subsection .30(a)(7) when there is work in, adjacent to, or over a Regulated waterway, even if there is no direct in-water work. Modify as needed for site-specific circumstances and project-specific permit conditions. Obtain information from the Environmental Coordinator.)

~~[Begin subsection (7)]~~

Add the following subsection:

00290.30(a)(7) Water Quality:

- Do not discharge contaminated or sediment-laden water, including drilling fluids and waste, or water contained within a work area isolation, directly into any waters of the State or U.S. until it has been satisfactorily treated (using a best management practice such as a filter, settlement pond, bio-bag, dirt-bag, or pumping to a vegetated upland location).
- Do not use permanent stormwater quality treatment facilities to treat construction runoff unless prescribed by an ESCP approved under Section 00280
- If construction discharge water is released using an outfall or diffuser port, do not exceed velocities more than 4 feet per second, and do not exceed an aperture size of 1 inch.
- Do not use explosives under water.
- Implement containment measures adequate to prevent pollutants or construction and demolition materials, such as waste spoils, fuel or petroleum products, concrete cure water, silt, welding slag and grindings, concrete saw cutting by-products and sandblasting abrasives, from entering waters of the State or U.S.
- Implement containment measures adequate to prevent flowing stream water from coming into contact with concrete or grout within the first 24 hours after placement.

- Do not end-dump riprap into the waters of the State or U.S. Place riprap from above the ordinary high water line.
- Cease Pproject operations under high flow conditions that may result in inundation of the Pproject area, except for efforts to avoid or minimize resource damage.
- The Engineer retains the authority to temporarily halt or modify the Work in case of excessive turbidity or damage to natural resources.
- If Work activities violate permit conditions or any requirement of this subsection, stop all in-water work activities and notify the Engineer.

(Add the following bullet if subsection (8)turbidity monitoring is not usedrequired.)

- Do not cause a visible sediment plume in waters of the State or U.S.

[End subsection (7)]

(Use the following lead-in paragraph and subsection .30(a)(8) when turbidity monitoring is required during in-water work. Select one of the following subsection (8)'s Use one of the following three options as instructed below. Delete the options that do not apply. This Ssubsection (8) must be modified for consistency with applicable regulatory approvals including but not limited to: Clean Water Act Section 401 water quality certification, a programmatic or individual biological opinion, and any applicable local approvals. If necessary, check with Regional Environmental Coordinator for correct one to use. Delete the ones that do not apply.)

[Begin subsection (8)]

Add the following subsection:

[Option 1 - Use this the following subsection (8) when visual turbidity monitoring is required during in-water work, but the project does not have a Clean Water Act 401 water quality certification.]

[Begin visual turbidity monitoring]

00290.30(a)**(8) Visual Turbidity Monitoring** - In addition to any turbidity monitoring required by 00280.62(c) to comply with NPDES 1200 series requirements, monitor turbidity visually during in-water work according to the following:

- Before beginning Wwork, make upcurrent and downcurrent in stream turbidity observations.
- Every four hours, make observations at an upcurrent location outside the influence of the Pproject, and at a downcurrent location that indicates any turbidity caused by the pProject.
- Document all turbidity monitoring observations including date, time, and location on form 734-2755, “Turbidity Monitoring Form” or another form approved by the Agency. Submit reports to the Engineer weekly during in-water work and keep copies of the reports at the Project Site.

- If a downcurrent turbidity plume is observed, modify work procedures and repair or implement in-water best management practices (BMP). If a turbidity plume is still observed at the next four-hour observation, stop all in-water work and repair or implement additional BMP. Resume in-water work when there is no longer a visible turbidity plume.

[End ~~visual turbidity monitoring~~Option 1]

[Option 2 - Use ~~this~~ the following subsection ~~(8)~~ when meter turbidity monitoring is required during in-water work by a Clean Water Act 401 water quality certification.]

~~[Begin meter turbidity monitoring]~~

00290.30(a)**(8) Meter Turbidity Monitoring** - In addition to any turbidity monitoring required by 00280.62(c) to comply with NPDES 1200 series requirements, monitor turbidity using a turbidity meter every two hours during in-water work according to the following:

- Use a turbidity meter that has been maintained and calibrated according to the manufacturer's specifications.
- Measure stream turbidity before beginning each day's in-water work to establish pre-construction turbidity levels.
- Measure upcurrent and downcurrent turbidity at two-hour intervals during in-water work and perform work based on turbidity measurements according to the following:
  - Take upcurrent samples at a location representative of background turbidity approximately 100 feet from the in-water work area.
  - Take downcurrent samples at a location approximately 100 feet from the in-water work area at approximately mid-depth of the water body and within any visible turbidity plume.
  - If the downcurrent reading is less than 5 nephelometric turbidity units (NTU) higher than the upcurrent reading, continue to work and take readings every two hours.
  - If the downcurrent reading is greater than or equal to 5 and less than 30 NTU higher than the upcurrent reading, modify work procedures and repair or implement best management practices (BMP), continue work, and continue to take readings every two hours. If after four hours the downcurrent reading is still greater than or equal to 5 NTU higher than the upcurrent reading, stop all in-water work and repair or implement additional BMP. Resume in-water work activities only after the downcurrent reading is less than 5 NTU above the upcurrent reading.
  - If the downcurrent reading is greater than or equal to 30 and less than 50 NTU higher than the upcurrent reading, modify work procedures, repair or implement BMP and continue work. If, at the subsequent two-hour reading, the downcurrent reading is still more than 30 NTU higher than the upcurrent reading, stop all in-water work and repair or implement additional BMP. Resume in-water work activities only after the downcurrent reading is less than 5 NTU above the upcurrent NTU reading.

- If the downcurrent reading is 50 NTU or more higher than the upcurrent reading, stop all in-water work, repair or implement additional BMP, and inform the Agency. Resume in-water work activities only after the downcurrent reading is less than 5 NTU above the upcurrent NTU, as determined by continued readings made at least every two hours, or the next day's initial turbidity reading.
- Document all turbidity monitoring observations on form 734-2755, "Turbidity Monitoring Report", or another form approved by the Agency. Submit reports to the Engineer weekly during in-water work and keep copies of the reports at the Project Site.

[End ~~meter turbidity monitoring~~Option 2]

[Option 3 - Use ~~this~~ the following subsection ~~(8)~~ when customized turbidity monitoring specifications are required that are not accommodated by the first two options, such as projects covered by a SLOPES or individual biological opinion, or an individual Clean Water Act 401 water quality certification with non-standard conditions.]

~~[Begin custom turbidity monitoring]~~

00290.30(a)**(8) Turbidity Monitoring** - In addition to any turbidity monitoring required by 00280.62(c) to comply with the NPDES 1200 series permit requirements, perform turbidity monitoring during in-water work according to the following:

(Insert permit turbidity monitoring frequency and requirements here. Only include project specific information. Use bullets to list information. Write in imperative mood and write in plain language.)

- _____
- _____

[End ~~custom turbidity monitoring~~Option 3]

~~[End subsection (8)]~~

00290.30(b) Pollution Control Plan - Replace the paragraph that begins "Develop and submit a PCP…" with the following:

Develop a PCP using ODOT Form 734-2445 and submit it for approval at least 10 Calendar Days before the preconstruction conference. Maintain a copy of the PCP on-site at all times during construction activities, readily available to employees and Inspectors. Ensure that all employees comply with the provisions of the PCP.

Delete the paragraph that begins "A Pollution Control Plan…".

(Use the following subsection .32 on City of Portland projects where applicable.)

00290.32 Noise Control - Add the following paragraphs to the end of this subsection:

Review City of Portland Title 18 which describes noise control regulations. Comply with the applicable noise control requirements of the permit for project work.

Copies of the noise variance permit for this Project are available from the Engineer.

(Use the following subsection .32 on projects within Local Agency boundaries where applicable. Replace the examples in parenthesis and delete parenthesis)

00290.32 Noise Control - Add the following paragraphs to the end of this subsection:

Review *(City / County) (list code or title)* which describes noise control regulations. Comply with the applicable noise control requirements of the permit for project work.

Copies of the noise variance permit for this Project are available from the Engineer.

(Use the following subsection .34 when fish or fish habitat resources require protection. Modify as needed for site-specific conditions. Check to make sure applicable and consistent with project permit conditions. Obtain information from the Environmental Coordinator.)

00290.34 Protection of Fish and Fish Habitat - Add the following paragraph:

Meet with the Agency Biologist, Resource Representative, Project Manager, and inspector on site, before moving equipment on-site or beginning any work, to ensure that all parties understand the locations of sensitive biological sites and the measures that are required to be taken to protect them.

(Use the following subsections .34(a) when regulated work areas are required. Fill in the blanks as necessary. Obtain information from the Environmental Coordinator.)

00290.34(a) Regulated Work Areas - Add the following to the end of this subsection:

The regulated work area is the area at or below the ordinary high water (OHW) elevation shown on the plans.

(Use one of the following three options as instructed. Delete the option that does not apply.)

[Begin Options]

[Option 1 - Use the following paragraph when the Agency will delineate the regulated work area on the plans]

The regulated work area is the area at or below the ordinary high water (OHW) elevation shown on the plans.

[Option 2 - Use the following paragraph when the Agency will identify and mark the regulated work area in the field.]

For this Project, the regulated work area is defined as the area at or below the OHW elevation. The Engineer will identify and mark the regulated work area.

[Option 3 - Use the following paragraph when the Agency will NOT identify and mark the regulated work area in the field. Fill in the blanks. If the project has any gradient change through the project area, the elevation could be different from station to station. If gradient is significant this option should not be used.]

For this Project, the regulated work area is the area at or below _____ feet elevation and between stations _____ and _____.

[End Options]

(Delete the following paragraph if it does not apply. Fill in the blanks with dates.)

Perform work within the regulated work area only during the in-water work period. The in-water work period is from ___(date)___ to ___(date)___.

(Delete the following paragraph if it does not apply. Fill in the blank.)

The total volume of material filled or discharged into waters of the state and waters of the U.S. shall not exceed ____ cubic yards.

(Delete the following paragraph if it does not apply. Fill in the blank.)

The total volume of material excavated from the waters of the state and waters of the U.S. shall not exceed _____ cubic yards.

Submit a schedule to complete all work within the regulated work area within the in-water work period at least 10 days prior to the preconstruction conference.

(Use the following subsections .34(b) when regulated work areas are required.)

00290.34(b) Prohibited Operations - Replace this subsection, except for the subsection number and title, with the following:

Except where allowed by the Contract or by permit, do not:

- Blast underwater.
- Use water jetting.
- Release petroleum products or chemicals in the water.
- Disturb spawning beds.
- Obstruct stream channels.
- Cause silting or sedimentation of waters of the State or waters of the U.S.
- Use treated timbers within the regulated work area.
- Impede adult and juvenile fish passage, including intermittent streams.

(Use the following two bullets when regulated work areas are required. Fill in the blanks as necessary. Delete what does not apply. Obtain information from the Environmental Coordinator.)

- Allow entry within the regulated work area or between stations _____ and _____.
- Allow equipment to enter or work in or on the water.

(Use the following bullet for projects permitted under the Endangered Species Act Consultation (ESA) on the Federal-Aid Highway Program (FAHP) or the Standard Local Operating Procedures for Endangered Species (SLOPES), unless modified by consultation with NMFS.)

- Install steel piles greater than 24 inches in diameter or H-pile larger than designation HP 24 within the regulated work area.

(Use the following lead-in paragraph and subsection .34(c) to list required environmental permits. Edit buffer distances as relevant to project permits. Obtain information from the Environmental Coordinator. (Include paragraphs (1) through (14) as necessary. When paragraphs are NOT included, renumber the remaining paragraphs beginning with the appropriate number.)

[Begin subsection .34(c)]

Add the following subsection:

00290.34(c) Aquatic Species Protection Measures Required by Environmental Permits:

(1) General Requirements:

- Do not install fish ladders (for example: pool and weirs, vertical slots, fishways) or fish trapping systems.
- Do not apply surface fertilizer within 50 feet of any stream channel.

Use heavy equipment as follows:

- Choice of equipment must have the least adverse effects on the environment (for example: minimally sized, low ground pressure).
- Secure absorbent material around all stationary power equipment (for example: generators, cranes, drilling equipment) operated within 150 feet of wetlands, waters of the State, waters of the U. S., drainage ditches, or water quality facilities to prevent leaks, unless suitable containment is provided to prevent spills from entering waters of the state or waters of the U.S.
- Do not cross directly through a stream for construction access, unless shown or approved. If shown or approved, cross perpendicular to the stream and do not block stream flow. When a crossing is no longer needed, completely remove the crossing and restore the soils and vegetation to the original condition.
- Store fuel and maintain all equipment in staging areas that are at least 150 feet away from any waters of the State, waters of the U.S., or storm inlet or on an impervious

surface that is isolated from any waters of the State, waters of the U.S., or storm inlet.

- If temporary access roads are needed within 150 feet of any body of water, use existing routes unless new routes are shown or approved.
- Before beginning work on temporary access routes that are not shown, submit a proposal to the Engineer for approval.

(Use this subsection (2) when Section 00245 is required.)

(2) Work Area Isolation - Provide work isolation according to Section 00245. Provide safe passage around or through the isolated work area for adult and juvenile migratory fish unless passage did not previously exist.

(3) Water Intake Screening - Install, operate, and maintain fish screens on each water intake used for project construction, including pumps used to isolate an in-water work area. When drawing or pumping water from any stream, protect fish by equipping intakes with screens having a minimum 27% open area and meeting the following requirements:

- Perforated plate openings shall be 3/32 inch or smaller.
- Mesh or woven wire screen openings shall be 3/32 inch or smaller in the narrowest direction.
- Profile bar screen or wedge wire openings shall be 1/16 inch or smaller in the narrow direction.

Choose size and position of screens to meet the following criteria:

Type	Approach Velocity [1] (Ft./Sec.)	Sweeping Velocity [2] (Ft./Sec.)	Wetted Area of Screen (Sq. Ft.)	Comments
Ditch Screen	≤ 0.4	Shall exceed approach velocity	Divide max. water flow rate (cfs) by 0.4 fps	If screen is longer than 4 feet, angle 45° or less to stream flow
Screen with proven self-cleaning system	≤ 0.4	–	Divide max. water flow rate (cfs) by 0.4 fps	–
Screen with no cleaning system other than manual	≤ 0.2	–	Divide max. water flow rate (cfs) by 0.2 fps	Pump rate 1 cfs or less
[1] Velocity perpendicular to screen face at a distance of approximately 3 inches [2] Velocity parallel to screen				

Provide ditch screens with a bypass system to transport fish safely and rapidly back to the stream.

(Use the following subsection (4) when special aquatic habitats are required. Obtain information from the Environmental Coordinator.)

(4) Special Aquatic Habitats - The following exploration or construction activities are not allowed in special aquatic habitats:

- Use of pesticides and herbicides, unless allowed according to Section 01030.
- Use of short pieces of plastic ribbon to determine flow patterns.
- Temporary roads or drilling pads built on steep slopes, where grade, soil type, or other features suggest a likelihood of excessive erosion or slope failure.
- Exploratory drilling in estuaries that cannot be conducted from a work barge, or an existing bridge, dock, or wharf.
- Installation of a fish screen on any permanent water diversion or intake that is not already screened.
- Drilling or sampling in an EPA-designated Superfund Site, a state-designated clean-up area, or the likely impact zone of a significant contaminant source, as identified by historical information, U. S. Army Corps of Engineers representative, or the Agency.

(5) Site Restoration - Restore damaged streambanks to a natural slope, pattern, and profile suitable for establishment of permanent woody vegetation unless precluded by pre-project conditions (for example: natural rock substrate):

- Replant all damaged streambanks before the first April 15 following construction.
- If use of large wood, native topsoil, or native channel material is required for the site restoration according to the roadside development plans, stockpile all large wood, native vegetation, weed-free topsoil, and native channel material displaced by construction. Cut trees or large wood and trees into pieces of no less than 20 feet in length, or as shown on the roadside development plans or as directed. Stockpiled native wood and vegetation remain the property of the Agency.
- Stabilize all disturbed soils, including obliteration of temporary access roads, following any break in work unless construction will resume in 4 Calendar Days.

(6) Surface Water Diversions - Surface water may be diverted to meet construction needs other than work area isolation, consistent with Oregon law, only if water from sources that are already developed, such as municipal supplies, small ponds, reservoirs, or tank trucks, is unavailable or inadequate, and meeting the following conditions:

- When alternative surface sources are available, divert from the stream with the greatest flow.
- Install, operate, and maintain a temporary fish screen.
- Do not exceed a pumping rate and volume of 10% of the available flow. For streams with less than 5 cubic feet per second, do not exceed drafting of 18,000 gallons per day. Do not use more than one pump for each site.

(7) Hydro-Acoustic - Unless otherwise shown or approved, steel piling may be installed below the ordinary high water as follows:

- Minimize the number and diameter of pilings, as feasible.

- Repairs, upgrades, and replacement of existing pilings consistent with these conditions are allowed. In addition, up to five single pilings or one dolphin consisting of three to five pilings may be added to an existing facility.
- Whenever feasible, use vibratory hammer for piling installation. Otherwise, use the smallest drop or impact hammer necessary to complete the job, and set the drop height to the minimum necessary to drive the piling.
- For all pile installed or removed, maintain a pile installation and removal log and submit the log when the related work is completed. Include types, sizes, locations, installation or removal methods, and dates in the log.
- When using an impact hammer to drive or proof steel piling within a body of water, or as directed, use one of the following sound attenuation devices to effectively dampen sound:

  - Completely isolate the pile from the waters of the state and waters of the U.S. by dewatering the area around the pile according to Section 00245.
  - If water velocity is 1.6 feet per second or less, surround the pile being driven with a bubble curtain that distributes small air bubbles around 100% of the piling perimeter for the full depth of the water column and is in accordance with the guidance in Appendix 10 of The ODOT-FHWA Programmatic Endangered Species Act Consultation on the Federal-Aid Highway Program (FAHP) User's Guide. The FAHP User's Guide is available on the Agency's website at:

    https://www.oregon.gov/ODOT/GeoEnvironmental/Pages/Manuals.aspx

  - If water velocity is greater than 1.6 feet per second, surround the piling being driven by a confined bubble curtain (for example: a bubble ring surrounded by a fabric or metal sleeve) that will distribute air bubbles around 100% of the piling perimeter for the full depth of the water column and is in accordance with the guidance in Appendix 10 of The ODOT-FHWA FAHP User's Guide.

(8) Drilling, Boring, or Jacking - If drilling, boring, or jacking is used, the following conditions apply:

- Design, build, and maintain facilities to collect and treat all construction and drilling discharge water using the best available technology applicable to site conditions. Provide treatment to remove debris, nutrients, sediment, petroleum hydrocarbons, metals, and other pollutants likely to be present. An alternate to treatment is collection and proper disposal offsite.
- Isolate drilling operations from wetted stream to prevent drilling fluids from contacting waters of the state or waters of the U.S.
- Use casing to prevent loss of drilling fluid to the subsurface formation. Do not drill open hole.
- If it is necessary to drill through an over-water bridge deck, use containment measures to prevent drilling debris from entering the stream channel.
- If drilling fluid or waste is released to surface water, wetland or other sensitive environment, cease all drilling pending written approval from appropriate regulatory agencies through the Project Manager to resume drilling.

- Recover all waste and spoils if precipitation is falling or imminent. Recover, recycle, or dispose of all drilling fluids and waste to prevent entry into flowing water.

  - Recycle drilling fluids using a tank instead of drill recovery/recycling pits, whenever feasible.
  - When drilling is completed, make attempts to remove the remaining drilling fluid from the sleeve (for example: by pumping) to reduce turbidity when the sleeve is removed.

(9) Treated Wood - Treated wood includes any wood treated with any pesticide or wood preservatives. Do not use lumber, pilings, or other wood products that are treated or preserved with pesticidal compounds below the ordinary high water (OHW) or as part of an in-water or over-water structure, except as described below:

- Store treated wood shipped to the Project out of contact with standing water and wet soil, and protected from precipitation.
- Visually inspect each load and piece of treated wood. Reject for use in or above aquatic environments if visible residues, bleeding of preservative, preservative-saturated sawdust, contaminated soil, or other matter is present.
- Use pre-fabrication to the extent feasible. When field fabrication is necessary, all cutting and drilling of treated wood, and field preservative treatment of wood exposed by cutting and drilling, shall occur above the OHW. Use tarps, plastic tubs, or similar devices to contain the bulk of any fabrication debris, and wipe off any excess field preservative.
- All treated wood structures, including pilings, shall have design features to avoid or minimize impacts and abrasion by livestock, pedestrians, vehicles, vessels, and floats.
- Treated wood may be used to construct a bridge, over-water structure or an in-water structure, with the exception of the work containment system, provided that all surfaces exposed to leaching by precipitation, overtopping waves, or submersion are coated with a water-proof seal or barrier are maintained. Apply and contain coatings and paint-on field treatment to prevent contamination. Surfaces that are not exposed to precipitation or wave attack, such as parts of a timber bridge completely covered by the bridge deck, are exempt from this requirement.
- During demolition of treated wood, ensure that no treated wood debris falls into the water. If treated wood debris does fall into the water, remove it immediately.
- Store removed treated wood debris in appropriate dry storage areas, at least 150 feet away from the regulated work area.

(10) Piling Removal - Remove temporary or permanent piling according to the following:

- Dislodge the piling with a vibratory hammer, whenever feasible.
- Once loose, place the piling onto the construction barge or other appropriate dry storage site.

(Use the following bullet when future river dredging is anticipated where piles are being removed.)

- When piles are not completely removed, locate each unremoved pile and submit the locations to the Agency. Submitted pile locations shall be accurate to within 10 feet of the actual pile location.

a. Non-Treated Piling - Use the following methods to remove non-creosote piling:

(Use the following bullet when piling will be removed from uncontaminated sediment. Check with the Region HazMat Coordinator.)

- If a pile in uncontaminated sediment cannot be removed or breaks, cut or push the pile or stump off at least 3 feet below the surface of the sediment and cover with a cap of clean, native substrates that match surrounding streambed materials.

(Use the following bullet when piling will be removed from contaminated sediment. Check with the Region HazMat Coordinator.)

- If a pile in contaminated sediment cannot be removed or breaks above the sediment line, cut the pile or stump off at the sediment line. If the pile breaks below the sediment line, make no further effort to remove it.
- Fill holes left by each pile with clean, native sediments whenever feasible.
- Do not excavate to remove piling.

b. Treated Piling - To minimize toxic release, sediment disturbance, and total suspended solids, use the following methods to remove treated piling:

- Install a floating surface boom to capture floating surface debris.
- Keep all equipment out of the water, grip piles above the waterline, and complete all work during low water and low current conditions.
- Dislodge the piling with a vibratory hammer, whenever feasible. Do not intentionally break a pile by twisting or bending.
- Slowly lift the pile from the sediment and through the water column.
- Place the pile in a containment basin on a barge deck, pier, or shoreline without attempting to clean or remove any adhering sediment.

(Use the following bullet when piling will be removed from uncontaminated sediment. Check with the Region HazMat Coordinator.)

- If a pile in uncontaminated sediment cannot be removed or breaks, cut or push the pile or stump at least 3 feet below the surface of the sediment and cover with a cap of clean, native substrates that match surrounding streambed materials.

(Use the following bullet when piling will be removed from contaminated sediment. Check with the Region HazMat Coordinator.)

- If a pile in contaminated sediment cannot be removed or breaks above the sediment line, cut the pile or stump off at the sediment line. If the pile breaks below the sediment line, make no further effort to remove it.

- Fill the hole left by each removed or partially removed pile with clean, native sediments and cap with clean, native substrates that match surrounding streambed materials immediately after removal.
- Dispose of all removed piles, floating surface debris, contaminated supplies, and sediment spilled on work surfaces at a permitted upland disposal site.

(11) Ditch and Culvert Cleaning - Complete ditch cleaning, culvert and trash rack cleaning by working from the top of bank, unless work area isolation would result in less habitat disturbance.

- Do not work more than 20 feet upstream or downstream of the culvert or trash rack.
- Remove only the minimum amount of wood, sediment, or other natural debris necessary to maintain the facility's function, without disturbing spawning gravel or changing the configuration of the original ditch, unless the new configuration is part of the project design.
- Place all large wood, cobbles, and gravels recovered during culvert and trash rack cleaning downstream from the structure.
- Complete drift removal in the following priority, as directed:

  - Pull and release whole logs or trees downstream.
  - Pull whole logs and trees and place in the riparian area, as directed.
  - Remove whole logs or trees only if roadside development plans have been developed for replacement in-kind.
  - Pull, cut only as necessary, and release logs and trees downstream.

(12) Floating Structures - The following types of over-water or in-water structures are not allowed:

- boat house
- boat ramp made of asphalt
- buoy or float in an active anchorage or fleeting area
- covered moorage
- floating storage unit
- houseboat
- marine
- pier
- non-water related facilities (including staging areas) inside riparian management areas
- any other over-water structure more than 6-feet wide unless otherwise approved in writing by appropriate regulatory agencies through the Project Manager

The following conditions apply to floatation structures:

- Concrete boat ramps that consist of pre-cast concrete slabs below the ordinary high water elevation, and higher elevation portions that are completed in the dry so that

no wet concrete that has cured less than 24 hours is allowed to contact any wetland or waters of the state or waters of the U.S.

- Rock may be used to construct a boat ramp footing, or other protection necessary to prevent scouring, down-cutting, or failure of the boat ramp, provided that the rock does not extend further than 4 feet from the edge of the ramp in any direction.
- Any replacement roof, wall, or garage door for covered moorages and boat houses must be made of translucent materials or skylights. In addition, each side, except the door, of the boat house shall have windows at least 4 feet wide installed the length of the boat house, subject to breaks only for structural support.
- An existing marina may be modified within the existing footprint of the moorage, or in the water more than 50 feet from the shoreline and more than 20 feet deep, except that structures may not be placed in areas that support aquatic vegetation or areas where boat operations may damage aquatic vegetation.
- Fit all pilings, mooring buoys, and navigational aids with devices to prevent perching by piscivorous birds.
- Permanently encapsulate all synthetic flotation material to prevent breakup into small pieces and dispersal in water.
- Install small temporary floats less than 7 Calendar Days before a scheduled event, remove them five days after a scheduled event is concluded, and do not leave them in place longer than 21 Calendar Days.
- Install mooring buoys and temporary floats (for example: shellfish traps) more than 300 feet from native submerged aquatic vegetation, more than 50 feet from the shoreline, and in water deeper than 20 feet deep at all times, or as necessary to ensure that gear does not ground out unnecessarily, and boats do not prop wash the bottom.

(Use the following barge language when using a barge. Delete bullets within the barge language that do not apply to the project.)

[Begin barge language.]

(Use one of following two bullets depending on permit conditions. Fill in the blank with the barge location (stream, pier, bridge, etc.) and reference the plan sheet(s) that show restricted areas. Delete "(s)" or parentheses as applicable.)

- Prohibit barge use at _____, as shown on sheet***(***s***)*** _____ of the Plans.
- Barge use is allowed only at _____, as shown on sheet***(***s***)*** _____ of the Plans.

When using a barge:

- Before moving the barge to the Project Site, unless the barge is transported solely by water and entirely within the State, inspect the barge and ballast for invasive species to ensure that invasive species are not brought to the Project Site. Notify the Oregon State Marine Board if invasive species are found.
- Before moving the barge to the Project Site, clean and pressure wash the barge deck.
- Do not use impact hammers for spud placement.

- Install and maintain containment measures to prevent barge surface runoff from flushing oil, fuel, or other contaminants into the water.
- Secure all equipment, portable toilet facilities, and containers with fuel, hazardous materials, or waste to the barge deck.
- If the barge is equipped with a toilet facility, pump it out into an approved waste removal system when work requiring a barge is complete, or as often as is necessary. Move temporary toilet facilities to shore before pumping them out.
- If a fuel container is used on the barge, provide a double-walled fuel container and place an absorbent containment boom around the container when it is on the barge.
- Remove hand carried fuel containers from the barge at the end of each work shift unless containers are secured to the barge and stored within a secondary containment vessel of sufficient capacity to hold the entire volume of liquid available.
- Refill hand carried fuel containers within a secondary containment vessel of sufficient capacity to hold the entire volume of liquid available.
- Provide individual containment for each piece of equipment on the barge, including containment pans or absorbent booms to locally contain minor spills.
- Remove waste material from the barge at least every 3 working days and:
  - Before any pause in work that is longer than 1 day; or
  - Before reaching the calculated safe load weight of the barge according to Section 00253.

[End barge language.]

(13) Temporary Power, Communication and Water Lines - Before installing temporary power, communication, or water lines across streams or bodies of water, submit a proposed plan to the Engineer for approval. Do not begin installation before receiving approval from the Engineer. Proposed plans for installation of temporary power, communication, and water lines and stream crossings shall utilize the following design methods in the listed order of priority:

1. Aerial lines, including lines hung from existing bridges.

2. Directional drilling, boring and jacking that spans the channel migration zone and any associated wetland.

3. Trenching, which is restricted to intermittent streams and may only be used when the stream is naturally dry. For all sections of trenches below the ordinary high water line, backfill with native material and cap with clean gravel suitable for fish use in the project area.

Align each crossing as perpendicular to the watercourse as possible. For drilled, bored, or jacked crossings, ensure that the line is below the total scour prism. Return any large wood displaced by trenching or plowing as nearly as possible to its original position, or otherwise arranged to restore habitat functions.

(14) Injured Fish Notification - If a dead or injured fish is found in the project area, immediately notify the Agency. If the injured fish is in a location where further injury or stress may take place, attempt to move the fish to a safer location, if one is available, near

the capture site while keeping the fish in the water and reducing its stress as much as possible. Do not disturb the fish after it has been moved. If the fish is dead or dies while being captured or moved, save the fish and any tags. The Agency will notify appropriate regulatory agencies about the injured or dead fish and provide additional direction to the Contractor.

[End subsection .34(c)]

(Use the following lead-in paragraph and subsection .35 when the Marine Mammal Protection Act applies to the project. Check with the Environmental Coordinator and the ODOT NMFS Liaison.)

Add the following subsection:

00290.35 Protection of Marine Mammals - ***[Coordinate with the ODOT NMFS Liaison to develop appropriate specification language.]***

(Use the following subsection .36(a) when migratory birds may be encountered. Check with the ODOT Region Environmental Coordinator.)

00290.36(a) Migratory Birds - Replace this subsection, except for the subsection number and title, with the following:

00290.36(a) Migratory Birds - Comply with the Migratory Bird Treaty Act (16 U.S.C. 703-712) which protects most species of birds in Oregon and prohibits the removal of nests containing eggs or dependent young (i.e., active nest) without a permit. Migratory birds include most birds in Oregon; the few exceptions include rock pigeons, house sparrows, and European starlings.

Except where allowed by the Contract and by permit, do not disturb an active migratory bird nest, do not inhibit the ability of adult birds to care for eggs or dependent young, and do not impact the supporting structure on which an active nest is built.

If active migratory bird nests are encountered stop all actions that may disrupt the nest and its occupants (including visual and auditory impacts) and contact the Engineer. Do not resume Work that may disrupt nesting until approved by the Engineer.

(Use the following paragraph when nesting habitat is within the project limits. Obtain information from the Environmental Coordinator.)

Do not disturb migratory bird nesting habitat (shrubs, trees, and structures), or clear vegetation from March 1 to September 1 of each year without prior written approval from the Engineer. Notify the Engineer, in writing, a minimum of 10 calendar days prior to starting activities that could harm nesting birds.

(Use one of the following options as instructed below. Delete the options that do not apply. Obtain information from the Environmental Coordinator.)

[Option 1 - Use this option when the project will be covered under the ODOT Migratory Bird Treaty Act (MBTA) permit and ODOT Biological Staff or USDA APHIS Wildlife Services will oversee bird management on the project.

[Begin Option 1]

(1) Bird Management - Bird management activities to comply with the Migratory Bird Treaty Act (16 U.S.C. 703 712) will be performed by the Agency. Ensure that the Agency and its permitted agents have access to the project area, as needed to prevent migratory bird nesting. Nesting prevention may include daily bird harassment and the installation and maintenance of devices that exclude birds.

Do not disturb migratory bird nesting habitats (shrubs, trees, and structures), or clear vegetation from March 1 to September 1 of each calendar year without prior written approval from the Engineer. Notify the Engineer, in writing, a minimum of 10 Calendar Days prior to starting activities that could harm nesting birds.

[End Option 1]

[Option 2 - Use this option when the project will be covered under the ODOT Migratory Bird Treaty Act (MBTA) permit but ODOT Biological Staff or USDA APHIS Wildlife Services requires contractor assistance with bird management because of the large size and/or complexity of the project. Modify as needed. This option requires approval by the Technical Resource.]

[Begin option 2]

(1) Bird Management - Submit a migratory bird protection plan and implementation schedule for review and approval at least 10 Calendar Days before the pre-construction conference. Do not begin work until the Migratory Bird Protection Plan and implementation schedule are approved.

The Migratory Bird Protection Plan shall include the following elements:

(a) The name of the individual who will oversee bird management activities for the project and a summary of their qualifications. This individual must have a Biology or related Natural Resources degree and a minimum of 2 years of work experience identifying nesting birds, preferably in the Pacific Northwest.

(b) A description of measures to prevent birds from nesting on structures or vegetation at the project site, from March 1 to September 1 of each calendar year, that could result in project conflicts; include the timing, intensity and location of the activities. If exclusionary devices will be used (e.g., netting), install them prior to March 1 and remove them at the completion of the project or by September 1 each calendar year, whichever comes first. Include how exclusionary devices will be installed and document their inspection schedule. Exclusionary devices must be inspected daily to ensure their functionality. Repair damaged exclusionary devices as soon as the damage is discovered. Document inspections and maintain documentation on site.

(c) A description of measures to avoid disturbing active migratory bird nests if they are encountered. The typical avoidance measure is to move project activities away from the active nest until the young have left the nest.

[End option 2]

[Option 3 - Use this option when the Project is covered under a non-ODOT Migratory Bird Treaty Act permit, typically a Local Government permit. Insert the name of the permit holder and delete the parentheses.]

[Begin option 3]

(1) Bird Management - Bird management activities to comply with the Migratory Bird Treaty Act will be performed by ***(*** name of the permit holder ***)*** and its permitted agents, as documented in the ***(*** name of the permit holder ***)*** MBTA permit. Ensure that ***(*** name of the permit holder ***)*** and its permitted agents have access to the project area as needed to prevent migratory bird nesting. Nesting prevention may include daily bird harassment and the installation and maintenance of devices that exclude birds.

Do not disturb migratory bird nesting habitat (shrubs, trees and structures) or clear vegetation from March 1 to September 1 each calendar year without prior written approval from the Engineer. Notify the Engineer, in writing, a minimum of 10 Calendar Days prior to starting activities that could harm nesting birds.

[End option 3]

(Use the following subsection .36(b) when there is potential disturbance to bat colonies. Delete what does not apply. Obtain information from the Environmental Coordinator.)

00290.36(b) Bats -
Replace this subsection, except for the subsection number and title, with the following:

If bats are encountered, stop all actions in the area and contact the Engineer. Do not disturb bat colonies. In the event that a bat colony is encountered during construction, the Engineer may suspend Work according to 00180.70. Do not resume Work until approved by the Engineer.

Protect bats by doing the following:

- Prevent destruction of bat colonies as shown.
- Schedule Bridge Work that may disturb resident bats, including demolition activities, between (__Insert dates outside of maternity roosting/ hibernation _(date)___ to ___(date)___).
- If bats gain access to excluded areas, stop actions in the area and contact the Engineer. Do not resume Work until approved by the Engineer.

(Use one of the following options when bat management is performed.)

[Option 1 – Use the following bullet when bat management is performed by the Agency.]

- Ensure that the Agency and its agents have access to the project area, as needed, to perform bat management activities to prevent bat conflicts.

[Option 2 – Use the following bullets in the event that bat management cannot be performed by the Agency. Modify as needed.]

- Install exclusionary devices to prevent bats from accessing suitable Bridge habitat. An exclusionary device is any item that denies bats physical access to an area (e.g., netting, hole blockers, one-way valves). Exclusionary devices must be approved by the Engineer prior to installation.
- Install exclusionary devices a minimum of 15 days prior to (_(Insert the date of the beginning of maternity roosting/hibernation_). Do not remove exclusionary devices until approved by the Engineer.
- Regularly inspect, maintain, and repair or replace exclusionary devices to prevent bridge occupancy by bats during the period listed above.

(Use the following lead-in paragraph and subsection .36(c) when there is high noise production work near listed birds. Obtain information from the Environmental Coordinator.)

[Begin subsection .36(c)]

Add the following subsection:

00290.36(c) Wildlife Avoidance/Harassment (High Noise) - For purposes of this project, "high noise" is defined as sound pressure levels greater than 10 dBA above the ambient as measured by the L_{AFmax} and L_{AFeq} at sensitive habitat as shown:

(Use the following bullets when suitable habitat for marbled murrelet is located within one mile of the project.)

- Non-blasting high-noise producing construction activities are not allowed between April 1 and August 5. Blasting activities within one mile of sensitive habitat shall be conducted only between September 15 and March 31.
- Non-blasting high noise producing construction activities conducted from August 6 to September 15 shall implement a daily limited operating period of daytime work being conducted from two hours after sunrise to two hours before sunset. If night construction is needed, then activity shall be conducted one hour after sunset to one hour before sunrise.

(Use the following bullet when nesting or communal roosting sites for bald and/or golden eagles are within one mile of blasting activities, 0.5 mile line of sight of construction activities, or 0.25 mile of construction activities.)

- Blasting and high-noise producing activities are allowed only between September 1 and October 31.

(Use the following bullets when there is suitable habitat for northern spotted owl near the project site. Delete bullets that do not apply.)

- Blasting and high-noise producing activities shall be prohibited during the following critical nesting period:

- March 1 to July 7 for the North Coast Province.
- March 1 to June 30 for the Rogue/Siskiyou National Forest (NF) and Medford District of U.S. Bureau of Land Management (BLM) in the Southwest Province.
- March 1 to July 15 for the Umpqua NF in the Southwest Province.
- March 1 to July 15 for the Willamette Province.
- March 1 to September 30 for the Deschutes NF, Fremont, and Winema NF and unlisted areas.

[End subsection .36(c)]

00290.41 Protection of Wetlands – Replace the title of this subsection with "**Protection of Waters of the U.S. or State"**

Delete the paragraph that begins with "For the purposes of this Section…".

00290.41(a) Identifying Wetlands – Replace the title of this subsection with "**Identifying Waters of the U.S. or State, Including Wetlands"**

(Use the following subsection .41(b) when required by relevant permits. Obtain information from the Environmental Coordinator. Delete the language in orange parentheses that does not apply and delete all orange parentheses.)

00290.41(b) Disturbing Wetlands – Replace the title of this subsection with "**Disturbing Waters of the U.S. or State, Including Wetlands"**

Replace the bullet that begins "Fence off no work zones…" with the following bullet:

- Fence off no work zones using work zone fencing, from section 00225.12 of the QPL.

- Add the following to the end of this subsection:

Permits have been obtained for this project from the ***(***US Army Corps of Engineers (Corps)***)*** ***(***and the***)*** ***(***Department of State Lands (DSL)***)***. Keep a copy of ***(***Corps***)*** ***(***and***)*** ***(***DSL***)*** permit***(***s***)*** at the project site during construction. Changes to the project that may increase the amount of fill placed or material removed in waters of the U.S. or State, or the acreage of waters impacted are not authorized. The following waters of the U.S. or State are present and have been determined to be unavoidable:

(Use the following table to list the information in the table below for each type of water resource, e.g. Waters 1, waters 2, wetlands A, etc. Temporary impacts are restored in less than 24 months. Obtain information from the Environmental Coordinator. Add or delete rows in the table as necessary to list all applicable resources.

Example:

Deer Creek	***20***	***20***	***1+00 Lt. to 2+00 Rt.***	***Temporary***	***0.1***

)

Impact Waters of the US or State	Removal Volume (cu yds.)	Fill Volume (Cu yds)	Station	Duration of Impact (Temporary or Permanent)	Area of impact (Acres)

(Use the following lead-in paragraph and subsection .42 when a work containment plan and Section 00253 are required. Obtain information from the Environmental Coordinator and Structural Designer.)

[Begin subsection .42]

Add the following subsection:

00290.42 Work Containment Plan - A Work Containment Plan (WCP) is required on this Project for _____ activity(ies).

Develop and submit a WCP for approval at least 28 Calendar Days prior to mobilization for ____ activity(ies). Maintain a copy of the WCP on the Project Site at all times during construction, readily available to employees and inspectors. Ensure that all employees comply with the provisions of the WCP. Design the WCP to avoid or minimize disturbance to protected features (sensitive cultural or natural resources, regulated work areas, aquatic life or habitat in regulated work areas) related to Contractor operations.

Before developing the WCP, meet with Agency to review the Contractor's activities that require the WCP to ensure that all parties understand the locations of protected features to be avoided and the measures needed to avoid and protect them.

Notify the Project Manager at least 10 Calendar Days before beginning work access or containment construction activities.

The Agency reserves the right to stop work and require the Contractor to change the WCP methods and equipment before any additional Contract work, at no additional cost to the Agency, if and when, in the opinion of the Agency, such methods jeopardize sensitive cultural or natural resources, regulated work areas, or aquatic life or habitat in regulated work areas.

The WCP shall identify how the Contractor's construction operations will protect regulated features during mobilization, construction, maintenance, and demolition. Include a narrative describing compliance with Section 00290 as related to construction, operation, and demolition activities specified in Section 00253.

Design, construct, maintain, and remove temporary work access and containment systems according to Section 00253.

[End subsection .42]

(Use the following subsection .51 when there are known sensitive cultural sites on the project.)

00290.51 Protection of Sensitive Cultural Sites - Add the following to the end of this subsection:

(Fill in the blank with the number of sensitive cultural sites. Select either "sites were" or "site was" depending on the number of sites. Delete the language in orange parentheses that does not apply and delete all orange parentheses.)

There are sensitive cultural sites on this Project. At the time of preparation of the Plans, _____ ***(***sites were***) (***site was***)*** identified.

The Region Environmental Coordinator for this Project is _____.

The Agency Archaeology Representative for this Project is _____.

All contact with the Agency Archaeology Representative and the Region Environmental Coordinator shall be through the Engineer.

(Use the following paragraph if an Inadvertent Discovery Plan is required for the project.)

An Inadvertent Discovery Plan (IDP) has been developed for this project. The IDP is available from the Engineer.

(Use the following paragraphs and bullet list when sensitive cultural sites require protection during construction.)

Meet with the Engineer at least 10 Calendar Days prior to beginning ground disturbing activities to discuss sensitive cultural sites on the Project. Required attendees include:

- The Contractor's supervisory personnel.
- Any Subcontractors (including contract archaeological monitors) and supervisory personnel who will be involved in ground disturbing activities.
- Agency archaeology representative or region environmental coordinator.
- When applicable, tribal representative(s) or monitor(s).

Prior to beginning On-Site Work, install work zone fencing from section 00225.12 of the QPL, or lath and flagging, around no work zones, as shown or as directed.

(Use the following paragraph when Archaeological and/or Tribal Monitors are required during ground-disturbing activities. Delete the language in orange parentheses that does not apply and delete all parentheses.)

(Archaeological***)(*** and ***)(***Tribal***)*** Monitors are required to be on-site during all ground-disturbing activities for this Project, unless otherwise notified. Notify the Engineer 10 Calendar Days

before beginning ground-disturbing activities, or 14 Calendar Days if ground-disturbing activities are anticipated to occur simultaneously in more than two locations.

(Use the following subsection .90 when a work containment plan and a work containment system are required, when staging areas are required, when there are known sensitive cultural sites on the project, or when turbidity monitoring is required. Remove the parentheses in "paragraph(s)" when more than one paragraph below is used. Remove "(s)" when only the plastic mesh fencing paragraph is used.)

00290.90 Payment - Add the following paragraph(s) to the end of this subsection:

(Use the following paragraphs when a work containment plan and a work containment system are required.)

The Work Containment Plan will be paid for at the Contract lump sum amount for the item "Work Containment Plan".

Payment will be payment in full for furnishing all materials, equipment, labor, and incidentals necessary to complete the work as specified. Payment includes providing and updating the Work Containment Plan.

(Use the following paragraphs when turbidity monitoring is required.)

The accepted quantities of turbidity monitoring will be paid for at the Contract lump sum amount for the item "Turbidity Monitoring".

Payment for turbidity monitoring will be payment in full for furnishing and placing all materials and for furnishing all equipment, labor, and incidentals necessary to complete the work as specified.

(Use the following paragraph when staging areas are required or when there are known sensitive cultural sites on the project.)

No separate or additional payment will be made for work zone fencing.