

SW 86th Ave. Pump Station

Construction Management Plan

City of Portland Environmental Services

March 2012

SW 86th Ave. Pump Station

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April 2012

BES has developed this Construction Management Plan specifically for the SW 86th Ave. Pump Station project. The purpose of this plan is to improve construction quality on this project. Previous projects for the Fanno Basin system have not had a written Construction Management Plan developed specifically for that project. The Construction Management Plan includes public outreach measures that will be conducted during construction, conservation measures to minimize impacts to sensitive resources on the site, and general construction measures to ensure the project is constructed in the way it was designed and permitted.

CONSTRUCTION MANAGEMENT

The primary contact during construction will be BES's Project Manager Daniel J. Hebert, P.E. The BES Construction Services Division will assign a Construction Manager who will be responsible for administering the construction contracts. The SW 86th Avenue Pump Station Project (which includes these project elements) will be publicly advertised or construction bids, and construction contracts will be awarded to the lowest responsive, responsible bidder. Construction activities for the proposed project are expected to begin in the late summer/early fall of 2013. The construction of the new pump station buildings is expected to begin in or about late May 2014, and be completed by about late November 2014.

Selective clearing, grubbing, and rough grading of the site will occur in the late summer/early fall 2013, prior to construction of the site yard piping, valve vaults, foundations, and structural improvements. Required erosion and sediment control measures and exclusion zone fencing will be installed prior to any site disturbance.

Construction of the new diversion manhole and outfall to Fanno Creek will occur during the low-flow conditions of summer 2014, within the Oregon Department of Fish and Wildlife's recommended in-water work window of July 15th to September 30th. The work area for the outfall structure will be isolated from the actively flowing portion of Fanno Creek prior to any disturbance below OHW. The contractor will be required to use an approved dewatering structure, such as a coffer dam, to accomplish the work area isolation. Incidental seepage water entering the isolated work area (e.g., through groundwater flow) will be pumped from the work area and retained or discharged in an upland area for filtration/infiltration prior to any re-entry into Fanno Creek.

The following is an estimated general sequence of construction activities for portions of the project involving in-water work elements:

BES Project Manager

Daniel J. Hebert, P.E.
Sr. Engineer
503.823.2689

The following is an estimated general sequence of construction activities:

Late Summer/Fall 2013

- Contractor mobilization
- Install temporary erosion and sediment control measures

Winter/Spring 2013-2014

- Construct new pump station caisson

Summer 2014

- Install temporary work isolation area for diversion manhole & new outfall to Fanno Creek

It is expected that planting of the site will largely occur when grading work is complete and may continue into Fall 2014. Construction of the new pump station buildings will likely occur in Summer and Fall 2014.

GRADING

The grading plan includes existing and proposed contour lines at 1-foot vertical intervals. The object of the design is to accommodate the proposed project elements and to balance the cut and fill quantities that will be required for the diversion/flow control manhole construction in the 100-year floodplain so as to not cause an increase in water elevations during storm events. Excavation and placement of fill will be required for construction of the project. The project will result in the net cut of material. Excess excavated material will be hauled off-site to a disposal site selected by the contractor and approved by BES. Specific grading activities include permanent excavation for the service yard, caisson, diversion/flow control manhole and outfall; and temporary excavation to provide working space for construction activities with subsequent replacement of fill to re-create the existing site grade,

Public Outreach Continues Through Construction

- ✓ *Weekly email updates will include the type of work planned, dates and times of construction, and traffic operations.*
- ✓ *Project website will be updated weekly with project timeline and 'big picture concepts.'*
- ✓ *Open house during construction.*
- ✓ *Advanced notification of any night work that may be required.*
- ✓ *Advanced notification of closures to Fanno Creek Trail.*
- ✓ *Outreach coordinator will be on-site weekly to answer any questions. Time and day will be publicized.*

BES Outreach Coordinator

*Stephen Sykes
Stephen.sykes@portlandoregon.gov
503-823-7989 office
503-823-8341 cell*

configuration, and topographic characteristics.

Work area limits are defined on the Grading Plans. Vegetation that is to be retained will be fenced for protection during grading and construction. Protected vegetation will be regularly monitored for signs of stress or degradation.

All on-site construction debris will be contained. A regularly scheduled trash removal and recycling service shall be hired to remove this debris.

CONSTRUCTION OPERATION

All construction activities shall be restricted to the hours of 7:00 am to 7:00 pm on non-holiday weekdays, and 7:00 am to 6:00 pm on Saturdays only, unless otherwise authorized. Construction equipment that generates noise at a noise level greater than that of a normal pick-up truck cannot be operated prior to 7 am or after 7 pm.

CONSTRUCTION STAGING, ACCESS, AND TRAFFIC MANAGEMENT

Construction staging will occur on the City-owned property, utilizing existing paved surfaces when possible (i.e., when construction activities are not occurring within the paved areas). When not in use, construction equipment will be situated to minimize the potential for hazardous materials exposure to Fanno Creek. All parked construction equipment will be located as far as possible from the top of bank of Fanno Creek, and a distance of not less than 100-feet will be maintained where possible. Section 01 35 43 Environmental Procedures in the final project specifications will require the contractor to implement oil spill prevention and control measures, which will include the following specific provisions:

- A. The Contractor shall, at a minimum, take the following measures regarding oil spill prevention, containment, and clean-up:
 1. The contractor will be required to prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan prior to beginning construction. The SPCC Plan will identify appropriate spill containment materials, which will be required to be maintained on-site at all times when construction equipment is present.
 2. Fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums, and other equipment and facilities shall be inspected regularly for drips, leaks or signs of damage, and shall be maintained and stored properly

to prevent spills. Proper security shall be maintained to discourage vandalism.

3. All storage tanks shall be diked or located so as to prevent spills from escaping to the water. Diking and subsoils shall be lined with impervious material to prevent oil from seeping through the ground and dikes.
4. All visible floating oils shall be immediately contained with booms, dikes, or other appropriate means and removed from the water prior to discharge into state waters. All visible oils on land shall be immediately contained using dikes, draw bales, or other appropriate means and removed using sand, ground clay, sawdust, or other absorbent material, which shall then be properly disposed of by the contractor. Waste materials shall be temporarily stored in drums or other leak proof containers after cleanup and during transport to disposal.
5. In the event of any oil or product discharges into public waters, or onto land with a potential for entry into public waters, or onto land with a potential for entry into Fanno Creek, the Contractor shall immediately notify the following agencies at their listed 24-hour response numbers:

Spill Response Numbers

DEQ, Northwest Region Office	(503) 229-6931
24-Hour Number	1-800452-4011
Oregon Emergency Response System	1-800-452-0311
City of Portland BES	(503) 823-7180
National Response Center	1-800-424-8802

6. Maintain the following materials on the job site:
 - a. Oil-absorbent booms: 4 each, 5 feet long
 - b. Oil-absorbent pads or bulk material, adequate for coverage of 200 square feet of surface area.
 - c. Oil-skimming system, if appropriate
 - d. Hay bales
 - e. Oil dryall, gloves and plastic bags
 - f. Oil absorbent material, such as kitty litter or sawdust, for material spills on land.

Construction equipment and vehicle access to the site will be from the pump station's existing paved driveway that extends from SW 86th Avenue to the north. This will include deliveries of construction materials, off-haul of excavated soil, and general construction vehicle traffic. The contractor will be responsible for repairing any damage

to public streets or adjacent properties. Building materials will be delivered to the site on an as-needed basis, thus keeping large material stockpiles located on the site to a minimum. All construction traffic will be road legal, or conforming to Oregon Department of Transportation overweight, oversize permit restrictions. Only rubber tired vehicles will be permitted on SW 86th Avenue.

The Contractor and all subcontractors, as part of their regular clean-up, will be required to keep the project's entire haul routes clean of dirt and construction debris on a daily basis. The Contractor will be required to install and maintain a rock entry/exit point with integral wheel wash to limit tracking dirt/dust onto SW 86th Avenue, and a program for dust control will be instituted. The final project specifications will require the Contractor to provide a wet vacuum sweeping apparatus for sweeping and cleaning haul routes, and will include the following specific provisions with regard to air pollution control in general:

- A. Smoke, Dust and Other Contaminants – The Contractor shall not discharge smoke, dust, and other contaminants into the atmosphere that violate the regulations of legally constituted authorities. Minimize dust nuisance by cleaning, sweeping, and sprinkling with water, or other means. The use of water in amounts that result in mud on public streets is not acceptable as a substitute for sweeping or other methods.
- B. Engine Idling – The Contractor shall minimize idling of vehicles and equipment to reduce vehicle emissions.
 1. The Contractor shall ensure employees and sub-contractors:
 - a. Limit idle time of diesel or gasoline powered vehicles or equipment to no more than five minutes during warm-up or when the vehicle is being restarted after a prolonged period of shut down.
 - b. Do not idle diesel vehicles more than five minutes of gasoline vehicles more than one minute when vehicle is stopped for a period of time expected to exceed five minutes.
 - c. Allow appropriate time for cool-down of diesel vehicles prior to shutting them off, not to exceed five minutes.
 - d. Restrict idle time to less than three minutes for gasoline vehicles making frequent stops.
 2. This rule does not apply to:
 - a. Circumstances where the following may be compromised if the engine in any motor vehicle is turned off. The health and safety of employees and sub-contractors or the safe and efficient use of vehicles and tools

including excavators engaged in trench excavation, pipe laying or backfilling operations, and where men are working in the trench.

- b. Situations where engine power is necessary for an associated power need such as electrical or hydraulic power generation, inverter or tool use; hoist, winch, lift gate or boom operation.
 - c. Defogging, defrosting, or de-icing windows – Idling must end once fog, frost, or ice conditions have been eliminated. When window ice or frost conditions are present, ice or frost shall be removed from windows with a scraper.
 - d. Idling a vehicle for up to 15 minutes for the purpose of getting warm or dry if indoor accommodations are not available in the immediate work area. Adequate ventilation must be present.
 - e. Testing, servicing, or inspecting vehicles or equipment for repair.
- C. Ultra-Low Sulfur Fuel – All diesel vehicles, construction equipment, and generators on the site shall be fueled with ultra-low sulfur fuel (ULSD) or a ULSD blend with sulfur content of 15 ppm or less.
 - D. Each internal combustion engine used on the job shall be required to have a muffler of a typed recommended by the manufacturer. No internal combustion engine shall be operated on the project without a muffler.
 - E. No person shall operate any equipment or appurtenances that exceed the Washington County standards for allowable noise levels during construction. Equipment that cannot meet these levels shall be quieted by use of improved exhaust mufflers or other means.

Access to houses along SW 86th Avenue during construction will be maintained through normal traffic control procedures. Access to homes on SW 86th Avenue will be maintained throughout the construction process with minimal wait times in the event of cross-traffic from the construction. The Fanno Creek Trail will have temporary closures that will be coordinated with THPRD. The trail will be put back to pre-construction conditions as agreed to with THPRD.

The Contract will not be able to perform work on or otherwise occupy private properties without obtaining separate agreements with those owners, except as allowed by any construction easements obtained by BES from property owners.

IMPACT AVOIDANCE AND MINIMIZATION MEASURES

The following list summarizes the measures that will be employed as part of this project to avoid and minimize impacts to the environment and listed species and habitat.

- An Erosion and Sediment Control Plan (ESCP) will be implemented to minimize erosion and prevent sediment entry into surface waters. Erosion and sediment control devices (i.e, silt fences, etc.) will be installed and maintained throughout the construction period to prevent migration of sediment and soil and to protect vegetation and water bodies. A comprehensive ESCP will be developed in accordance with the District's standards. The ESCP will be submitted to the District for review and approval prior to construction starting. In addition, the Contractor will be required to secure and protect soil stockpiles throughout the project with temporary or permanent soil stabilization measures.
- Work below the OHW level of Fanno Creek will be performed during the ODFW recommended in-water work period for Fanno Creek of July 15 to September 30.
- Exclusion fencing will be established on the site prior to construction to prevent disturbance to vegetation not targeted for removal.
- Materials are not exposed, leaks are not present, and the equipment is functioning properly.
- A Planting Plan will be implemented to re-establish vegetation in disturbed areas following construction, minimizing site exposure to erosion and preventing long-term loss of riparian habitat.
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- The Contractor will not be able to work within the floodway of Fanno Creek or adjacent floodplain areas except as allowed by contract and permits.