

**WAC 197-11-960: SEPA Environmental Checklist*****Purpose of checklist:***

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

**A. Background****1. Name of proposed project, if applicable:**

Coal Creek Bridge 3035A Replacement Project #1135997

**2. Name of applicant/lead agency:**

King County Department of Local Services (DLS), Road Services Division (RSD)

**3. Address and phone number of applicant and contact person:**Contact Person:

Brent Champaco, Public Information Officer  
206-477-9094, [Brent.Champaco@kingcounty.gov](mailto:Brent.Champaco@kingcounty.gov)  
King Street Center (Mail Stop: KSC-LS-0824)  
201 South Jackson Street  
Seattle, WA 98104-3856

Project website address: <https://kingcounty.gov/depts/local-services/roads/coal-creek-bridge.aspx>

**4. Date checklist prepared:** November 2019**5. Agency requesting checklist:** King County DLS, RSD**6. Proposed timing or schedule (including phasing, if applicable):**

Project construction schedule is dependent on acquisition of permits, approvals, and property needs. Work is anticipated to start in 2021 and be completed in 2022. Construction work will be performed by a Contractor.

**7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

There are no future plans for additions, expansion or further activity related to or connected with this proposal.

**8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

Environmental information prepared for this project includes the following:

- Cardno. *Cultural Resources Survey*. October 2019
- King County. *Geotechnical Report*. February 6, 2019
- King County. *Critical Areas Memo*. March 4, 2019

- King County. *Cultural Resources Screening*. February 14, 2017

Environmental information that will be prepared for this project includes the following:

- *Technical Information Report* per the *King County Surface Water Design Manual*
- *Hydraulic Design Memo*

**9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

No other applications are known that are pending government approval for proposals directly affecting the property covered by the proposed project.

**10. List any government approvals or permits that will be needed for your proposal, if known.**

The following permits, approvals, reviews, and file documentation are anticipated for the project:

Federal:

- National Environmental Policy Act Documented Categorical Exclusion
- United States Coast Guard Navigability Jurisdictional Determination
- Endangered Species Act Review
- United States Army Corps of Engineers Section 404 of the Clean Water Act (CWA) Nationwide Permit
- Tribal: Coordinate Design Review and Comments

Federal/State: National Historic Preservation Act Section 106 Concurrence by the Washington State Department of Historic Preservation, and Tribal Review

State:

- State Environmental Policy Act (SEPA) Determination of Non-significance and Notice of Action Taken
- Washington State Department of Fish and Wildlife Hydraulic Project Approval
- Washington State Department of Ecology:
  - Coastal Zone Management Certification
  - Section 401 of the CWA Programmatic Water Quality Certification

Local:

- King County Department of Local Services Permitting Division
  - Shoreline Substantial Development Permit
  - Clearing and Grading Permit
  - Flood Hazard Certification
- King County Green Building Ordinance: Green Building Assessment, Equity and Social Justice Review

**11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

The Coal Creek Bridge #3035A Replacement Project is presently in the Design Phase. The following project description reflects known information as of November 2019.

The existing bridge is a two-lane single-span structure that is 41 feet long and 18 feet wide. The 61-year-old timber support structure (piles) is decaying, the 107-year-old steel girder and floor beams are severely rusting, the paint is peeling, and the road geometry (curve in the road and bridge) does not provide adequate sightlines (visibility to oncoming traffic). The bridge has been categorized as structurally deficient, functionally obsolete, and load limited.

The bridge replacement will be constructed with a longer clear span (approximately 54 feet) over the creek. The new bridge's spread footings will be on new abutments constructed landward of the creek to accommodate the bankfull width of the creek channel. The bridge width will increase to 30 feet to meet or exceed the 2018 American Association of State Highway and Transportation Officials (AASHTO) roadway standards. The bridge width includes two eleven-foot-wide vehicular lanes, one two-foot-wide shoulder on the north side and one six-foot-wide non-motorized shoulder on the south side of the bridge. The existing bridge piles will be removed to the extent possible; if full removal of in-water piles is not possible, the piles will be cut below the mudline of the creek and capped with streambed gravel substrate. The project will implement a structural earth wall to provide support and reduce the area of impacts. The project will also realign the approach roadway leading to and from the bridge to meet the AASHTO horizontal and vertical geometry requirements.

#### Anticipated Project Impacts

The total site area including potential staging areas is approximately 1.47 acre (64,200 square feet). Of that, 0.88 acre (38,400 square feet) will be impacted, which is approximately 59.8 percent of the site. The project will require riparian area disturbance and over-water and in-water work to complete the following:

- Tree removal, vegetation clearing, fish exclusion, stream bypass/diversion, pile removal, and excavation.
- Install/remove a temporary bridge for the project detour. The project will require that at least one traffic lane be available at all times because this is a sole-access route. Please see the discussion in Section 14 (Transportation) regarding the detour analysis.
- Construct the new bridge, abutments, structural earth wall, and bridge approaches, which create new impervious surfaces that impact stormwater/water quality.
- Private property temporary construction easements and personal property relocation.

#### Anticipated Project Mitigation

Mitigation methods will be implemented on-site to the extent possible to avoid, minimize, and compensate for unavoidable project impacts. The following mitigation is anticipated for the project:

- Temporary and permanent erosion and sediment control (TESC) best management practices; e.g., native planting and erosion-control seed mix, natural fiber blankets, etc.
- Removal of the old bridge and associated fill/riprap.
- Streambanks will be stabilized and reshaped to be less steep to the extent possible. Use of new riprap will be avoided.
- New bridge supports will be constructed below the stream channel scour line.
- In-water large woody debris will be provided as habitat and to create stream channel roughness.
- New streambed material will be added as needed to disturbed areas.
- Stormwater mitigation is being evaluated to minimize impacts to water quality.

#### Anticipated Project Benefits

The project will provide the following benefits:

- Accommodate natural stream processes including improved flood flow conveyance, sediment and wood transport.
- Less debris accumulation at the bridge, minimizing the potential for scour.
- Localized water quality improvement by removing creosote-treated timber and stormwater treatment.
- Elimination of the load limit on the bridge.
- Improved safety for the traveling public.

#### Construction Timing and Duration

Construction is anticipated to begin in 2021 and be completed in 2022. The temporary detour bridge is anticipated to be needed for approximately five months in 2021.

Funding

The project is partially funded by the Federal Highway Administration and King County. The total project cost is estimated at \$4,708,000.

- 12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The proposed project is located at the Coal Creek Bridge #3035A, which is in unincorporated King County on SE Lake Walker Road, at the Coal Creek crossing near the intersection with 320th Avenue SE, and near the community of Cumberland. The project site is approximately four miles east of the City of Black Diamond, within the NE Quarter of Section 33, Township 21N, Range 07E, and can be found on page 779 (Row 4, Column C) of the Thomas Brothers Guide. The site is located at N47.26867 and W-121.91551.

**B. Environmental Elements****1. Earth**

- a. **General description of the site (circle one): flat, rolling, hilly, steep slopes, mountainous, other \_\_\_\_\_**

- b. **What is the steepest slope on the site (approximate percent slope)?**

The steepest slope on the site is approximately 45 percent.

- c. **What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.**

Online geologic mapping (scale 1:24,000) of the project area was accessed from the Washington State Department of Natural Resources (DNR) Subsurface Geology Portal and the United States Geologic Survey (USGS) databases. Geologic mapping indicates the surficial soils in the general site vicinity consist of the following:

- Quaternary alluvium (Qal): Moderately sorted deposits of cobble gravel, pebbly sand, and sandy silt along major rivers and stream channels. Mapping indicates alluvium is the primary surficial deposit underlying the bridge site.
- Quaternary mass-wasting deposits (QI): Mass wasting is the geomorphic process by which soil and rock move downslope typically as a solid, continuous or discontinuous mass, largely under the force of gravity, but frequently with characteristics of a flow as in debris flows and mudflows.
- Puget Group (Tp): Middle to late Eocene bedrock consisting of sedimentary bedrock of the Puget Group but also includes local outcrops of volcanic rock. In the Cumberland quadrangle, the sedimentary bedrock consists of arkosic and felspathic micaceous sandstone, siltstone, clay-stone, and coal. Exposures of Tp bedrock can be seen east of the project site on the uphill side of SE Lake Walker Road.
- Intrusive Rock (Ti): Oligocene igneous rock consisting chiefly of porphyritic andesite and basalt in the Cumberland quadrangle. Exposures of Ti bedrock can be seen east of the project site on the uphill side of SE Lake Walker Road.

No agricultural soils were mapped or observed on-site.

**d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

The project’s Geotechnical Report characterizes the soil and groundwater conditions for the project. The project is in a mapped Seismic Hazard Critical Area, which is an area that is at risk for severe earthquake damage due to seismically induced settlement, soil liquefaction, or lateral spread. The stream banks are heavily armored, which indicate a history of unstable streambank soils in the immediate vicinity of the bridge.

**e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.**

The table below provides a preliminary estimate of the purpose, type, total area, approximate quantities, and total affected area of filling, excavation, and grading proposed for the project. Excavated material that is not suitable for reuse on-site will be hauled off-site and appropriately disposed of. King County’s Materials Lab will confirm that all fill is from approved sources.

Purpose of Ground Disturbance	Square Feet	Cubic Yards	
	Grading Area	Excavation/Cut	Fill
Detour	6,500	30	360
Bridge demolition	2,000	100	0
Stream work	1,000	90	<10
Bridge, approaches, and roadway construction	35,000	20	2,400
Mitigation	5,920	N/A	NA
<b>TOTAL</b>	<b>50,420</b>	<b>240</b>	<b>2,760</b>

**f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.**

Erosion could occur as a result of vegetation removal, ground-disturbing activities during construction, and the severity would depend on seasonal weather. Appropriate temporary and permanent erosion and sedimentation control Best Management Practices (BMPs) and stormwater controls will be implemented to minimize potential erosion. Please see B.1.h for proposed measures to reduce and control erosion.

**g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

The area of existing impervious surface at the project site is approximately 0.44 acre (19,111 square feet). After construction, the approximate impervious surface area will be 0.63 acre (27,658 square feet), which is approximately a 44.7 percent increase in impervious surfaces. This increase is due to constructing roadway shoulders to match the wider bridge.

**h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:**

Construction: Existing vegetation will be preserved to the extent practicable. During construction, disturbed areas will be isolated from other wetted areas, incoming surface flows will be bypassed around the work zone, and TESC and BMPs will be implemented as required in the King County Surface Water Design Manual (SWDM). The BMPs include, but are not limited to the use of check dams, temporary sediment traps, compost, dust control, inlet protection, straw wattles, and seeding areas that are temporarily disturbed by construction.

Operation: Permanent seeding and native planting installation will be implemented at project completion. Plants will be monitored and maintained to ensure survival. All exposed surfaces will be stabilized. The bridge and roadway will be monitored and maintained.

## 2. Air

### a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.

Greenhouse Gas Emissions: Construction, operations, and maintenance of the roadway will result in greenhouse gas (GHG) emissions that contribute to global warming and related climate-change concerns. Life cycle GHG emissions for the project include embodied, operational, and construction emissions that are defined as follows:

- Embodied emissions are the emissions released during the extraction, processing, and transportation of the materials used in construction.
- Construction emissions are released during project construction and primarily come from fuel burned in the equipment used to build the project elements, such as bulldozers, pavers, and rollers. Emissions are also released during chip-and-seal paving.
- Operational and maintenance emissions are released by vehicles at the site and during vehicular roadway travel.

Fugitive Dust Emissions: Demolition of concrete, excavation, or placement of imported aggregates may result in sources of fugitive dust that can reduce roadway visibility, cause respiratory health problems in humans/animals, and negatively impact aquatic life, vegetation, and water quality.

### b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

No off-site sources of emissions or odors have been identified that may affect this proposal.

### c. Proposed measures to reduce or control emissions or other impacts to air, if any:

During construction, the contractor will implement a Fugitive Dust Control Plan. During construction, operation, and maintenance of the roadway, mitigation measures for project impacts to air quality and GHG emissions could include, but are not limited to, the following:

- Spraying water, when necessary, during construction operations to reduce emissions of fugitive dust.
- Covering dirt, gravel, and debris piles as needed to reduce fugitive dust and wind-blown debris.
- Covering open-bodied trucks in accordance with RCW 46.61.655, wetting materials in trucks or providing adequate space from the top of the material to the top of the truck to reduce fugitive dust emissions.
- Sweeping public roadways, when necessary, to remove mud and dirt deposits.
- Using biodiesel or ultra-low-sulfur diesel fuels for vehicles and equipment to reduce diesel exhaust emissions.
- Conservation and reuse of construction materials on-site, to reduce exhaust emissions and traffic delays.
- Enforcing King County's no-idling policy for county vehicles.

## 3. Water

### a. Surface Water:

#### 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

Basin: The project is located within Water Resource Inventory Area (WRIA) 07 – Duwamish/Green River watershed and within the Coal Creek sub-basin.

Stream:

Coal Creek is a fish-bearing Type S (Shorelines of the State) aquatic area stream at the project location. Coal Creek is a perennial water body that has a minimum of a 165-foot-wide King County critical area buffer. Shoreline jurisdiction extends 200 feet landward of the ordinary high water mark (OHWM) of the stream channel. Coal Creek is approximately 9.2 miles long and is within the upper Coal Creek sub-basin of WRIA 07, which eventually drains to Puget Sound. The

main stem of Coal Creek empties into Fish Lake. This lake does not have a surface connection to the main stem of the Green River; however, it is likely that water from Fish Lake flows underground and surfaces as perched springs and/or riverbed springs in the Green River streambed in the vicinity of River Mile 48 – 50. The stream channel within the project vicinity is approximately 40 feet wide.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

The adjacent project waters, described in Section 3.a.1., are within 200 feet of the project. See attached plans.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

Additional fill proposed in Coal Creek will be minimal (less than 10 cubic yards) to address areas disturbed during installation of large woody debris and other incidental impacts related to the bridge abutment removal. Existing bank protection (rip rap) at the northeast corner of the existing bridge that is disturbed during construction of the new foundations will be removed, stockpiled and reinstalled at its current location. It is anticipated that 90 cubic yards of dredging is needed to remove bridge supports within the stream channel. No fill or dredge material will be placed in, or removed from wetlands because wetlands are not present within the project area.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

The project does not require surface water withdrawals. It is possible that the stream will be bypassed/diverted temporarily during construction to avoid the work area.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

The project is not within a mapped FEMA 100-year floodplain, but the project is within the 100-year floodplain of Coal Creek.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

No waste materials will be discharged to surface waters. BMPs will be implemented following the King County and Washington State Department of Ecology stormwater manual guidance.

**b. Groundwater:**

- 1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

Groundwater will not be withdrawn from a well for drinking water for this project. Water will not be discharged to groundwater for this project.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

No waste material will be discharged into the ground from septic tanks or other sources.

**c. Water runoff (including stormwater):****1) Describe the source of runoff (including stormwater) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

The source of runoff is precipitation. Stormwater presently discharges as sheet flow from the impervious roadway surface to the roadway fill prisms and from the bridge deck to Coal Creek. East of the bridge, the roadway is super elevated with runoff draining to a ditch along the south side of the roadway that also drains to the creek. The project will evaluate if flow control and treatment is needed for stormwater for the project.

**2) Could waste materials enter ground or surface waters? If so, generally describe.**

It is unlikely, but possible, that fuel, hydraulic fluid or paving materials spills could occur from construction machinery. King County and Washington Department of Ecology spill prevention BMPs will be followed to avoid such spills. King County and the Contractor are required to implement a Spill Prevention Control and Countermeasures Plan (SPCC) for the project prior to beginning construction.

**3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

The project will not change the general existing drainage patterns. There will be a minor increase in the stormwater flows from the site due to the increase in impervious surfaces. Stormwater mitigation options are being evaluated.

**d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:**

Depending on the weather, some work areas may need to be dewatered during construction to minimize impacts to ground, surface, and stormwater. If needed, water will be intercepted and pumped around the work area. Sediment-laden water that does not meet water-quality standards will be discharged to a vegetated upland infiltration area, and if needed, to a Baker tank and hauled off-site. Check dams and sediment traps may be used during construction to help slow stormwater runoff and capture sediment.

**4. Plants****a. Check the types of vegetation found on the site:**

Check the types of vegetation found on the site:

deciduous tree

evergreen tree

shrubs

grass

pasture

crop or grain

orchards, vineyards or other permanent crops

wet soil plants

other types of vegetation: weeds

**b. What kind and amount of vegetation will be removed or altered?**

The vegetation that will be removed/altered consists of trees, shrubs, and grass. Approximately 0.25 acre (10,800 square feet) of vegetation will be removed or altered for this project. Of this, 42 trees greater than four-inch-diameter at breast height will be cut. Of those trees, 22 are larger (i.e., eight inches or greater for evergreen trees and 12 inches or greater for deciduous trees). Of the 22 larger trees, approximately 15 are within the stream buffer that will possibly be affected. The trees are a mixture of native, nonnative, and ornamental fruit trees.

**c. List threatened and endangered species known to be on or near the site.**

According to the June 2018 Washington State Department of Natural Resources, Natural Heritage Program data, there are no special status plant species known to occur in the project area.

**d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

During construction, existing vegetation within the project area will be temporarily disturbed or removed. After construction, impacted areas will be planted with native species and soils will be stabilized per the project’s mitigation plan sheet. Native cut trees will be evaluated for retention on-site and repurposed as woody debris habitat features.

**e. List all noxious weeds and invasive species known to be on or near the site.**

Common Name	Scientific Name	King County Noxious Weed Class
Himalayan blackberry	<i>Rubus bifrons</i>	Non-regulated, Class C Noxious Weed
English ivy	<i>helix</i> 'Pittsburgh', <i>Hedera helix</i> 'Star'	Non-regulated, Class C Noxious Weed
Reed canary grass	<i>Phalaris arundinacea</i>	Non-regulated, Class C Noxious Weed

**5. Animals**

**a. List any birds and other animals which have been observed on or near the site or are known to be on or near the site. Examples include:**

birds: hawk, heron, eagle, songbirds, other: crows  
 mammals: deer, bear, elk, beaver, coyote, other: raccoons, squirrels  
 fish: bass, salmon, trout, herring, shellfish, other: amphibians

**b. List any threatened and endangered species known to be on or near the site.**

There are no threatened and endangered species known to be on or near the site.

**c. Is the site part of a migration route? If so, explain.**

The project area is not a mapped wildlife species corridor; however, fish (likely cutthroat trout) utilize the stream within the project vicinity.

The project site is within the Pacific Flyway, which is a major north-south route of travel for migratory birds, extending from Alaska to Patagonia. Every year, migratory birds travel some or all of this distance both in spring and in fall, following food sources, heading to breeding grounds, or travelling to overwintering sites. Migrating and nesting birds within the project area will be protected as required under the Migratory Bird Treaty Act.

**d. Proposed measures to preserve or enhance wildlife, if any:**

Proposed measures to preserve or enhance wildlife include, but are not limited to:

- Avoiding the impact altogether by not taking a certain action or parts of an action.
  - The project was sited to have the minimal footprint possible. Clearing limits will be marked on-site to preserve existing vegetation outside of the project limits.

- The project will be constructed in compliance with regulations and permit conditions for allowable work windows.
- Minimizing impacts by limiting the degree or magnitude of the action and its implementation, by using appropriate technology, or by taking affirmative steps to avoid or reduce impacts. The project minimizes impacts by implementing the following:
  - Appropriate BMPs for TESC required by the King County SWDM.
  - Groundwater BMPs: If groundwater is within work areas during construction it will be discharged to a vegetated upland area to infiltrate, or hauled off-site. This will prevent turbid water from discharging outside of the project limits.
  - A Fugitive Dust Control Plan.
  - An SPCC Plan.
  - Staging and stockpiling on existing paved areas.
- Rectifying
  - Restoring disturbed vegetation areas and providing cover measures to minimize erosion.
  - Retaining cut trees on-site for habitat.

**e. List any invasive animal species known to be on or near the site.**

No invasive animal species are anticipated to be on or near the site.

## 6. Energy and Natural Resources

**a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

Gas, diesel, or other fossil fuels will be utilized by heavy equipment during project construction.

**b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

The project will not affect the potential use of solar energy by adjacent properties.

**c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

Measures to reduce energy use during construction will be encouraged (e.g., efficient scheduling, material transport and staging).

## 7. Environmental Health

**a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe.**

The accidental leakage of petroleum products (e.g., gasoline, diesel fuel, hydraulic fluid, anti-freeze, grease, etc.) from construction equipment could occur but is not likely. These substances can be toxic to nearby aquatic systems, to humans upon prolonged exposure, and can pose a fire hazard. King County inspectors will monitor the site during construction. Spill control and cleanup kits will be provided by the contractor and available on-site.

During construction, community health could be affected by dust and vehicle exhaust. Construction activities will intermittently generate particulate matter and odors, and construction equipment will generate diesel engine exhaust. Any air-quality impacts associated with construction activities are most noticeable at sensitive land uses, such as schools or parks; however, there are not any sensitive land uses near the construction site, so these impacts are

unlikely. In addition, air-quality impacts will be short-term, occurring only while construction is in progress. BMPs will be employed to reduce fugitive dust, odors, and exhaust emissions; see Section 2.c. for more information.

**1) Describe any known or possible contamination at the site from present or past uses.**

The bridge is over 100 years old and was painted with lead-based paint and the bridge also has creosote-treated support timbers; therefore, there is potential for the surrounding soil to contain these contaminants. Based on a review of the Washington State Department of Ecology's website, there are no historical or active cleanup sites within a half-mile radius from the project area. The project area falls outside the predicted arsenic contamination zone, which is based on the modeled Asarco Tacoma plume.

**2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**

There are no known existing hazardous chemicals/conditions at the project site that might affect project development and design.

**3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

During construction, petroleum products will be used on-site to power construction equipment and as a component of asphalt pavement. At completion of the project, toxic or hazardous chemicals will not be stored, used, or produced at the project site.

**4) Describe special emergency services that might be required.**

The need for special emergency services is not anticipated.

**5) Proposed measures to reduce or control environmental health hazards, if any:**

The contractor will likely sample areas for contaminants prior to construction where excavation will occur. Worker health and safety will be addressed as required by Washington State and federal regulations. Waste material generated from construction will be properly managed and disposed of at permitted facilities.

During construction, the project will implement an SPCC plan that provides BMPs that will be used during construction to minimize the potential for hazardous spills from fuels and materials used on-site. Spill control and cleanup kits will be available on-site to be used in the rare event of a spill.

The Contractor will be required to submit a Fugitive Dust Control Plan to King County for approval. The plan will provide BMPs that will be used to minimize the amount of particulate matter (i.e., dust) generated during construction.

**b. Noise**

**1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

Existing noise in the area emanates from roadway traffic on SE Lake Walker Road and surrounding parcels along the roadway. The existing noise levels in the area will not increase due to completion of the proposed project.

- 2) **What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

On a short-term basis, noise will be generated from the construction equipment (e.g., truck traffic hauling materials to and from the site: backhoe, bulldozer, mounted impact hammer, and asphalt-paving operations). On a long-term basis, there will be no increase in noise.

According to King County Code 12.94.020, Part B-1, the following sounds are exempt from the provisions of the noise ordinance: "Sounds created by construction equipment, including special construction vehicles, and emanating from temporary construction-sites, if the receiving property is located in a rural or residential district of King County."

- 3) **Proposed measures to reduce or control noise impacts, if any:**

Standard mufflers will be used on all construction equipment. The construction crew will work during hours in accordance with the requirements of King County Code and permit conditions.

## 8. Land and Shoreline Use

- a. **What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

The present use for the site is as King County roadway infrastructure. The surrounding neighborhood is residential. The project will not affect the present land uses on nearby or adjacent properties.

- b. **Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

There are no agricultural areas of long-term commercial significance within or adjacent to the project area. Areas adjacent the project site are mapped as a forest production district to the north, east, and south. An area to the west of the project area is a mapped rural forest focus area for the Green River. No agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal. No farmland or forest land tax status will be converted to nonfarm or non-forest use as a result of this proposal.

- 1) **Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how?**

The proposal will not affect or be affected by working farms or forest land.

- c. **Describe any structures on the site.**

On-site structures within the transportation corridor include the bridge, overhead and buried utilities, roadway fill prism, paved traveled roadway surface, and guardrails.

- d. **Will any structures be demolished? If so, what?**

The existing bridge will be demolished for the project.

- e. **What is the current zoning classification of the site?**

King County's public road rights-of-way are not subject to zoning. The project area is adjacent to an area zoned as RA-10: rural area with 10 dwelling units per acre.

**f. What is the current comprehensive plan designation of the site?**

According to the *King County Comprehensive Plan (2017)*, the project is within a rural area.

**g. If applicable, what is the current shoreline master program designation of the site?**

The site is located in two King County Shoreline Master Program areas: Aquatic and Conservancy.

**h. Has any part of the site been classified as a critical area by the city or county? If so, specify.**

The following critical areas were identified by the County as adjacent to the site:

- Coal Creek is a Type S Aquatic Area that is a Shoreline of the State. The creek has a Critical Area buffer that is a minimum of 165 feet wide. The Shoreline jurisdiction extends 200 feet landward of the stream's OHWM.
- The project is within a Critical Aquifer Recharge Area that is highly susceptible to groundwater contamination. Groundwater was encountered at a depth of approximately 13 feet below road grade during geotechnical boring, which is about the same level as the approximate streambed elevation.
- The project is in a mapped Seismic Hazard area, which is an area that is at risk for severe earthquake damage due to seismically induced settlement, soil liquefaction, or lateral spread.

**i. Approximately how many people would reside or work in the completed project?**

No people will reside or work in the completed project.

**j. Approximately how many people would the completed project displace?**

No people will be displaced by the project.

**k. Proposed measures to avoid or reduce displacement impacts, if any:**

No measures will be implemented to avoid or reduce displaced people because no one will be displaced.

**l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

This project is listed in the *King County Transportation Needs Report (2016)* and complies with the *King County Comprehensive Plan (2017)*. The proposed project is consistent with existing and projected land uses in the areas that are potentially affected by the project. The project requires land use permits from the King County DLS Permitting Division to further ensure the project is compatible with existing and projected land uses and plans.

**m. Proposed measures to ensure the proposal is compatible with nearby agricultural and forest lands of long-term commercial significance, if any:**

This project proposes to improve safety, preserve the roadway, and provide drainage improvements that are compatible with adjacent uses. Forest land activities near the project site are not anticipated to be affected by the proposal.

## 9. Housing

**a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

No housing units are being provided by the project.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

No housing units are being eliminated by the project.

- c. Proposed measures to reduce or control housing impacts, if any:**

Protective measures for housing impacts are not needed because housing will not be impacted.

## 10. Aesthetics

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

The tallest height of the proposed structure is the proposed bridge railing that will be approximately 42 inches tall from the bridge deck. The materials proposed include steel and concrete.

- b. What views in the immediate vicinity would be altered or obstructed?**

In the immediate vicinity of the project, views will be altered slightly by removal/replacement of the bridge, associated roadway improvements, and vegetation/tree clearing for the project.

- c. Proposed measures to reduce or control aesthetic impacts, if any:**

The project proposes to minimize aesthetic impacts by choosing a bridge type, roadway improvements, and native planting that blend with the existing rural character of the landscape.

## 11. Light and Glare

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?**

The project will not produce light or glare.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?**

The finished project will not produce any additional light or glare that will be a safety hazard or interfere with views.

- c. What existing off-site sources of light or glare may affect your proposal?**

No off-site sources of light or glare have been identified that will affect the proposed project.

- d. Proposed measures to reduce or control light and glare impacts, if any:**

No light and glare impacts are proposed, so no measures are needed to prevent or minimize light and glare impacts.

## 12. Recreation

- a. What designated and informal recreational opportunities are in the immediate vicinity?**

Within the immediate vicinity of the project, informal activities include walking, hiking, and biking.

**b. Would the proposed project displace any existing recreational uses? If so, describe.**

No existing recreational uses will be displaced.

**c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

No measures are necessary to reduce or control impacts on recreation.

### 13. Historic and Cultural Preservation

**a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers located on or near the site? If so, specifically describe.**

The cultural resources screening of the project identified an ethnographically recorded trail within the project vicinity. There are no other recorded, reported, or suspected cultural resources at the project location. There are two cultural resource sites within a half mile of the project. The Sunset Mine is an abandoned shaft feature that was recorded in 2015. Mountain Crest Memorial Park is also within a half mile of the project and is a maintained cemetery. There are no other recorded, reported, or suspected cultural resources within a half mile of the project location. Buildings, structures, and sites located on or near the project site were assessed by a cultural resources survey.

**b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.**

The cultural resources screening described that the general setting of the project, on a freshwater stream in the vicinity of a historically mapped trail, suggests a high likelihood for unknown buried intact prehistoric archaeological deposits. In addition, the project area was historically mined for coal, as the name of the creek suggests. Unrecorded historic mining features and artifacts may be present in the project area. The project location includes a previously installed bridge and existing structural roadway fill prism. These factors reduce the likelihood of intact prehistoric archaeological deposits somewhat. However, federal funding and federal permits are required for this project and Section 106 of the National Historic Preservation Act (NHPA) procedures will be followed.

Soil investigations, including geotechnical sampling received a Section 106 exemption from the State. Then, the project's Area of Potential Effects (APE) was defined and the State and Tribes were consulted. The APE included the footprint of existing and new bridge, temporary by-pass bridge, staging areas, and mitigation areas. A survey was conducted within the project limits following concurrence of the APE from the State and Tribe.

The existing bridge was evaluated for historical significance during the archaeological survey that included screened shovel probes in the project footprint. As for all RSD projects, if cultural resources or human remains are encountered during construction all work will cease and RSD policies will be followed.

**c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archaeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.**

The project began with an initial project screening using the King County Cultural Resource Protection Project (CRPP) and Department of Archaeology and Historic Preservation (DAHP) Washington Information System for Architectural and Archaeological Records Data (WISAARD) databases. These geographic information

system (GIS)-based databases utilize historic maps, ethno-historic accounts, and professional site records. An archaeological survey will be conducted and submitted to the State and Tribes for review. See Section 13.a. and b. for more information.

**d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.**

There is always a remote possibility that as-yet unidentified archaeological resources may be discovered during construction. Construction-site inspectors, or other designated personnel, will monitor the site for indications of possible resources discovered during construction.

If resources are identified during construction, then work in the vicinity of the identified resources will cease and the RSD Archaeologist, WSDOT, DAHP, the King County Historic Preservation Program, and other appropriate agencies will be notified immediately. Work will not be allowed to resume at the site in the vicinity of the identified resources until appropriate archaeological investigations are complete.

## 14. Transportation

**a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on-site plans, if any.**

SE Lake Walker Road is the public roadway that provides the sole access to the project area. No new permanent roadway accesses to the site are proposed. Project plans are appended to this document as a reference.

**b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

The site is not presently served by public transit. The approximate distances to the nearest public transit stops are as follows:

- In Enumclaw, approximately eight miles to the south, at Griffin Avenue and Wells Street.
- In Black Diamond, approximately 12 miles to the northwest at Baker Street and 3rd Avenue.

**c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?**

The completed project will not include parking spaces, nor eliminate any existing parking spaces.

**d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

The proposal requires an improved public bridge that will meet current load-rating standards. In addition, the surrounding roadway within the project limits will be improved to meet current King County Road Design and Construction Standards.

**e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

The project will not use water, rail, or air transportation and is not in the immediate vicinity of rail and air transportation.

- f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?**

The completed project will not generate additional vehicular trips.

- g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

A short detour/bypass next to the bridge is proposed, which will not interfere with, affect, or be affected by the movement of agricultural and forest products on roads in the area. A possible detour was analyzed that connected from a private road, Weyerhaeuser Mainline Road to a King County public road, SE Kuzak Road; however, this detour involves private property access that was not attainable, would be costly to implement, be lengthy for motorists, and disrupt the movement of forest products on roads in the area.

- h. Proposed measures to reduce or control transportation impacts, if any:**

To reduce or control transportation impacts, the project proposes a short detour/bypass next to the bridge for traffic control to minimize the time needed to construct the new bridge, and reduce the length of the detour to the traveling public. Construction of the bridge one lane at a time was also evaluated and determined unfavorable due to its longer construction duration, which required three shifts in the traffic patterns during the staging construction, which may impact area traffic. Furthermore, this alternative provides the least amount of construction stockpiling/staging area as the first phase of roadway and bridge construction occurs immediately adjacent to the detour roadway/bridge.

In addition, a variety of notifications will be provided to the traveling public by the King County Public Communications Team in advance of traffic disruptions. Temporary traffic-control devices for the detour route will include signs, barricades, signals, and flaggers to reduce impacts to the traveling public. A Temporary Traffic Control Plan will be prepared by the contractor for review and approval before construction starts.

## 15. Public Services

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

No increased needs for public services are anticipated as a result of the proposed project.

- b. Proposed measures to reduce or control direct impacts on public services, if any.**

Because there will be no direct impacts on public services, no proposed measures will be needed.

## 16. Utilities

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other: cable**

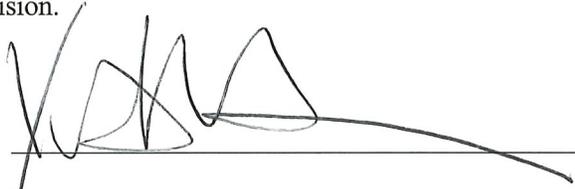
- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

No utilities are proposed for the project.

**C. Signature**

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

**Signature:**



**Date:** 11.22.19

**Name of Signee:**

Kathi Murata

**Position/title:**

Acting Assistant Maintenance Section Manager  
Road Services Division, Maintenance Section

**Attached:**

- Project Plan Sheets
- GHG Emissions Worksheet



# LEGEND

## GAS/POWER/TELEPHONE

## SYMBOLS

# ABBREVIATIONS

## LINETYPES

EXIST.	DESCRIPTION
	BUILDING LINE (EXIST.)
	CANAL[SCALEABLE](EXIST.)
	CREEK/DITCH CENTERLINE (EXIST.)
	CURB/PAVEMENT/SIDEWALK (EXIST.)
	FENCE (EXIST.)
	GUARDRAIL (EXIST.)
	LAKE/POND
	MARSH/SWAMP PERIMETER
	WETLAND PERIMETER (DELINEATED BY BIOLOGIST)
	WETLAND BUFFER (DELINEATED BY BIOLOGIST)
	RETAINING WALL (EXIST.)
	RIVERBANK/ShORELINE
	SHOULDER (EXIST.)
	ROCK FACING (EXIST.)
<b>SURVEY:</b>	
	CENTERLINE (EXIST.)
	CONTOUR (DEPRESSION)
	CONTOUR (INTERVAL) (EXIST.)
	CONTOUR (INDEX) (EXIST.)
	EASEMENT (TEMPORARY)
	MATCH LINE
	MEANDER LINE
	PROPERTY LINE (EXIST.)
	RANGE/TOWNSHIP LINE
	RESERVATION/PARK/FOREST (EXIST.)
	RIGHT-OF-WAY (EXIST.)
	CITY-LIMITS
	SECTION LINE
	QUARTER SECTION LINE
	SIXTEENTH SECTION LINE
	STATE/COUNTY/CORPORATE LIMIT
<b>UTILITIES (EXIST.):</b>	
	CABLE TELEVISION (AERIAL)
	CABLE TELEVISION (BURIED)
	FIBER OPTIC
	FORCE MAIN
	GAS
	6" GAS LINE
	OIL
	POWER (AERIAL)
	POWER (BURIED)
	SANITARY SEWER
	STEAM
	STORM DRAIN
	(12" CMP) STORM DRAIN
	TELEPHONE (AERIAL)
	TELEPHONE (BURIED)
	UTILITY SERVICE LINE (GENERAL)
	WATER
	12" WATER

CONSTRUCT	DESCRIPTION
	BUILDING LINE
	CREEK/DITCH
	CREEK/DITCH CENTERLINE
	CURB(PROP) 2/7
	CURB/PAVEMENT/SIDEWALK
	SILT FENCE
	HIGH VISIBILITY FENCE
	STRAW WATTLE
	TURBIDITY CURTAIN
	FLAGS & STAKES
	GUARDRAIL
	LAKE/POND
	MARSH/SWAMP PERIMETER
	WETLAND PERIMETER
	WETLAND BUFFER
	RETAINING WALL (CONC. BLOCK)
	RETAINING WALL (GABION)
	RETAINING WALL (MODULAR BLOCK)
	RETAINING WALL (MSE)
	ROCK FACING
	CENTERLINE
	CONTOUR (INTERVAL)
	CONTOUR (INDEX)
	EASEMENT (PERMANENT)
	PROPERTY LINE
	RIGHT-OF-WAY (EXIST. DURING DESIGN REVIEW ONLY)
	RIGHT-OF-WAY
	RIGHT-OF-WAY (LIMITED ACCESS) COINCIDENTAL
	CUT LINE
	FILL LINE

SYMBOL	DESCRIPTION
	GAS METER
	GAS VALVE
	PAD MOUNTED TRANSFORMER
	POWER VAULT
	TRANSMISSION TOWER (SCALEABLE)
	UTILITY POLE
	POWER POLE
	UTILITY POLE ANCHOR
	TELEPHONE RISER
	TELEPHONE VAULT
<b>SURVEY</b>	
	ANGLE POINT
	BENCH MARK
	BLOCK CORNER
	IRON PIPE
	MONUMENT (IN CASE)
	MONUMENT (SURFACE)
	OWNERSHIP TIE
	SECTION CENTER
	SECTION CORNER
	QUARTER CORNER
	SIXTEENTH CORNER
	CLOSING CORNER
	MEANDER CORNER
	WITNESS CORNER
	SOIL BORING
	SPOT ELEVATION
	TAX LOT / PARCEL NUMBER
	INTERSTATE
	ASSESSOR'S CODE

	CHECK DAM
	STABILIZED CONSTRUCTION ENTRANCE
	CLEARING LIMIT
	COMPOST
	DUST CONTROL MEASURES
	TEMPORARY DITCH
	HAND CLEARING LIMIT
	FLAGS & STAKES
	GRADING LIMITS
	CATCH BASIN AND CULVERT/INLET PROTECTION
	MATting (EROSION CONTROL BLANKET)
	PLASTIC COVERING
	PERMANENT SEEDING
	QUARRY SPALL PROTECTION
	SAND BAG
	SEEDING
	SILT FENCE
	"STRAW MULCH" FOR TEMPORARY COVER
	SURFACE ROUGHING
	SEDIMENT TRAP
	STRAW BALE BARRIER
	STRAW WATTLE
	TURBIDITY CURTAIN
	TEMPORARY SEEDING
	HIGH VISIBILITY FENCE
	VEGETATION PRESERVATION
	VEGETATED FILTER STRIP
	VEGETATED STREAM BANK STABILIZATION
	WATER QUALITY SAMPLING LOCATION

ABUT	ABUTMENT	PVI	POINT OF VERTICAL INTERSECTION
ABAND	ABANDONED	PVRC	POINT OF VERTICAL REVERSE CURVE
AC	ASPHALT CONCRETE	QTY	QUANTITY
ACP	ASPHALT CONCRETE PAVEMENT	R	RADIUS
ADJ	ADJUST	RD	ROAD
AH	AHEAD	REINF	REINFORCED
AP	ANGLE POINT	REQ'D	REQUIRED
APPROX.	APPROXIMATELY	ROW	RIGHT-OF-WAY
ARD	AGREEMENT TO RECONSTRUCT DWY	RT	RIGHT
AVE	AVENUE	R/W	RIGHT-OF-WAY
AVG	AVERAGE	S	SOUTH/SLOPE
BK	BACK	SAN	SANITARY
B	BASELINE	SCHED	SCHEDULE
BLDG	BUILDING	SD	STORM DRAIN
BLVD	BOULEVARD	SECT	SECTION
BM	BENCH MARK	SERV	SERVICE
BMP	BEST MANAGEMENT PRACTICE	SF	SQUARE FEET/FOOT
BRG	BEARING	SHLD	SHOULDER
BTWN	BETWEEN	SHT	SHEET
BVCE	BEGINNING OF VERTICAL CURVE ELEVATION	SP	1 SHIELDED PAIR IN SHINGLE CABLE
BVCS	BEGINNING OF VERTICAL CURVE STATION	SPEC	SPECIAL
C	CONDUCTOR	SPECS	SPECIFICATIONS
CATV	CABLE TV	SQ	SQUARE
CB	CATCH BASIN	SR	STATE ROUTE
CIP	CAST-IN-PLACE	SS	SANITARY SEWER
CL	CLASS	ST	STREET
CL	CENTERLINE	STA	STATION
CLR	CLEAR	S/W	SIDEWALK
CMP	CORRUGATED METAL PIPE	T	TELEPHONE, TANGENT, TON
COMPT	COMPACTED	TAN	TANGENT
CONC	CONCRETE	TBM	TEMPORARY BENCHMARK
CONN	CONNECT	TCE	TEMPORARY CONSTRUCTION EASEMENT
CONST	CONSTRUCTION	TEMP	TEMPORARY
CSTC	CRUSHED SURFACING TOP COURSE	TP	TELEPHONE POLE
CU	CUBIC	TYP	TYPICAL
CM	CUBIC METER	UD	UNDERDRAIN PIPE
D	DRAIN PIPE	UG	UNDERGROUND
DEG OR	DEGREE	VAR	VARIABLE
DIAM	DIAMETER	VC	VERTICAL CURVE
DIST	DISTANCE	VERT.	VERTICAL
DWG	DRAWING	W	WEST, WATER
DWY	DRIVEWAY	WSEL	WATER SURFACE ELEVATION
E	EAST, ELECTRICAL	W/	WITH
EA	EACH	WM	WATER METER
EL	ELEVATION	WM	WATERMAIN
ELEC	ELECTRICAL	W/O	WITHOUT
EMB	EMBANKMENT	WV	WATER VALVE
EP	EDGE OF PAVEMENT	Y	YELLOW (FLASH)
EQ	EQUATION	YDS	YARDS
EST	ESTIMATE	&	AND
EVCE	END OF VERTICAL CURVE ELEVATION		
EVCS	END OF VERTICAL CURVE STATION		
EXCL	EXCLUDE		
EXIST	EXISTING		
FH	FIRE HYDRANT		
FT OR	FEET/FOOT		
G	GAS LINE, GREEN		
GALV	GALVANIZED		
GB	GRADE BREAK		
GE	GRATE ELEVATION		
GR	GUARDRAIL		
GRD	GROUND		
GV	GAS VALVE		
HORIZ	HORIZONTAL		
HPS	HIGH PRESSURE SODIUM		
HT	HEIGHT		
HUND	HUNDRED		
HWY	HIGHWAY		
ID	INSIDE DIAMETER		
IE	INVERT ELEVATION		
INV	INVERT		
JB	JUNCTION BOX		
JTS, JT	JOINTS, JOINT		
JUD	JOINT USE DRIVEWAY		
L	LENGTH OF ARC		
LF	LINEAL FOOT/FEET		
LT	LEFT		
LUMIN	LUMINAIRE		
M	METER		
MAX	MAXIMUM		
MH	MANHOLE		
MIN	MINIMUM		
MISC	MISCELLANEOUS		
MON	MONUMENT		
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DIVICES		
N	NORTH		
NO	NUMBER		
NST	NOT STEEPER THAN		
NTS	NOT TO SCALE		
O-XING	OVERHEAD CROSSING		
O.C.	ON CENTER		
OD	OUTSIDE DIAMETER		
OHWM	ORDINARY HIGH WATER MARK		
OP	OVERHEAD POWER		
OT	OVERHEAD TELEPHONE		
OTV	OVERHEAD CABLE TELEVISION		
P	POLE, POWER		
PAR	PARK ACCESS ROAD		
PAVT	PAVEMENT		
PC	POINT OF CURVATURE		
PCC	POINT OF COMPOUND CURVE		
P-E	PRE-EMPTY		
PED	PEDESTRIAN		
PI	POINT OF INTERSECTION		
P	PROPERTY LINE		
PP	POWER POLE		
PR	PAIR		
PRC	POINT OF REVERSE CURVE		
PSI	FOUND PER SQ		
PT	POINT OF TANGENT		
PVC	POLYVINYL CHLORIDE		
PVCC	POINT OF VERTICAL COMPOUND CURVE		

## DRAINAGE

SYMBOL	DESCRIPTION
	STORM DRAIN CATCH BASIN
	STORM DRAIN INLET (NO CATCH)
	STORM DRAIN CULVERT
	STORM DRAIN MANHOLE
	STORM PIPE (PROPOSED) DOUBLE LINE TO SIZE OF PIPE DIAMETER
	STRUCTURE DETAILS NO.
	CALL OUT DESIGNATION SHEET NO.

## WATER

SYMBOL	DESCRIPTION
	GUARD POST
	WATER VALVE

## FIRE HYDRANTS:

	FH
	WATER VALVE

## ROAD PLAN

SYMBOL	DESCRIPTION
	CUT SLOPE CATCH POINTS(OPTIONAL) (SCALEABLE)
	FILL SLOPE CATCH POINTS(OPTIONAL) (SCALEABLE)
	SHOULDER

MERIDIAN  
WASHINGTON STATE  
LAMBERT GRID  
NORTH ZONE  
NAD 83/91  
VERTICAL DATUM  
NAVD88

CONTRACTOR SHALL VERIFY LOCATION AND DEPTHS OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION

30% DESIGN  
PROGRESS COPY  
08/02/2019



Know what's below.  
Call before you dig.

Name: samimq Date: Aug 09, 2019--12:43:21pm File: V:\1800398 (Coal Creek Bridge Replacement)\Design\1135997\_02\_LEGAB.dwg

SURVEY JOB NO:	18069	10/18
CHECKED:	J. EVANS	10/18
CAD ENTERED:	S. QAYOONI	07/19
DESIGNED:	R. LIBERTY	07/19
CHECKED:	W. G. HESS	07/19
SUPERVISOR:	A. OLSON	07/19

NUM.	REVISION	BY	DATE

**kpff**  
1601 5th Avenue, Suite 1600  
Seattle, WA 98101  
206.622.5822  
www.kpff.com

FED. AID No. BROS-2017(148)  
PROJECT No. 1135997  
MAINTENANCE DIVISION No. 4

KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A REPLACEMENT**  
LEGEND & ABBREVIATIONS

**King County**  
SHEET **2** OF **15** SHEETS  
**320-67 (2)**

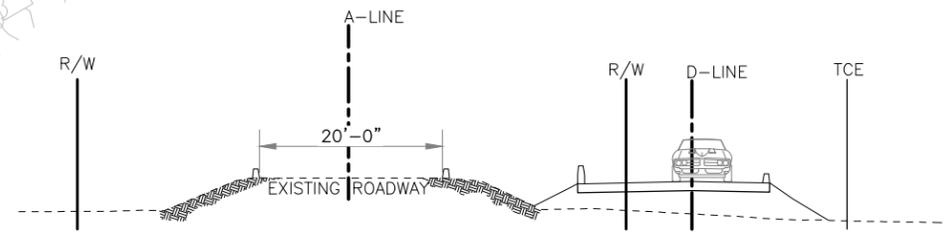
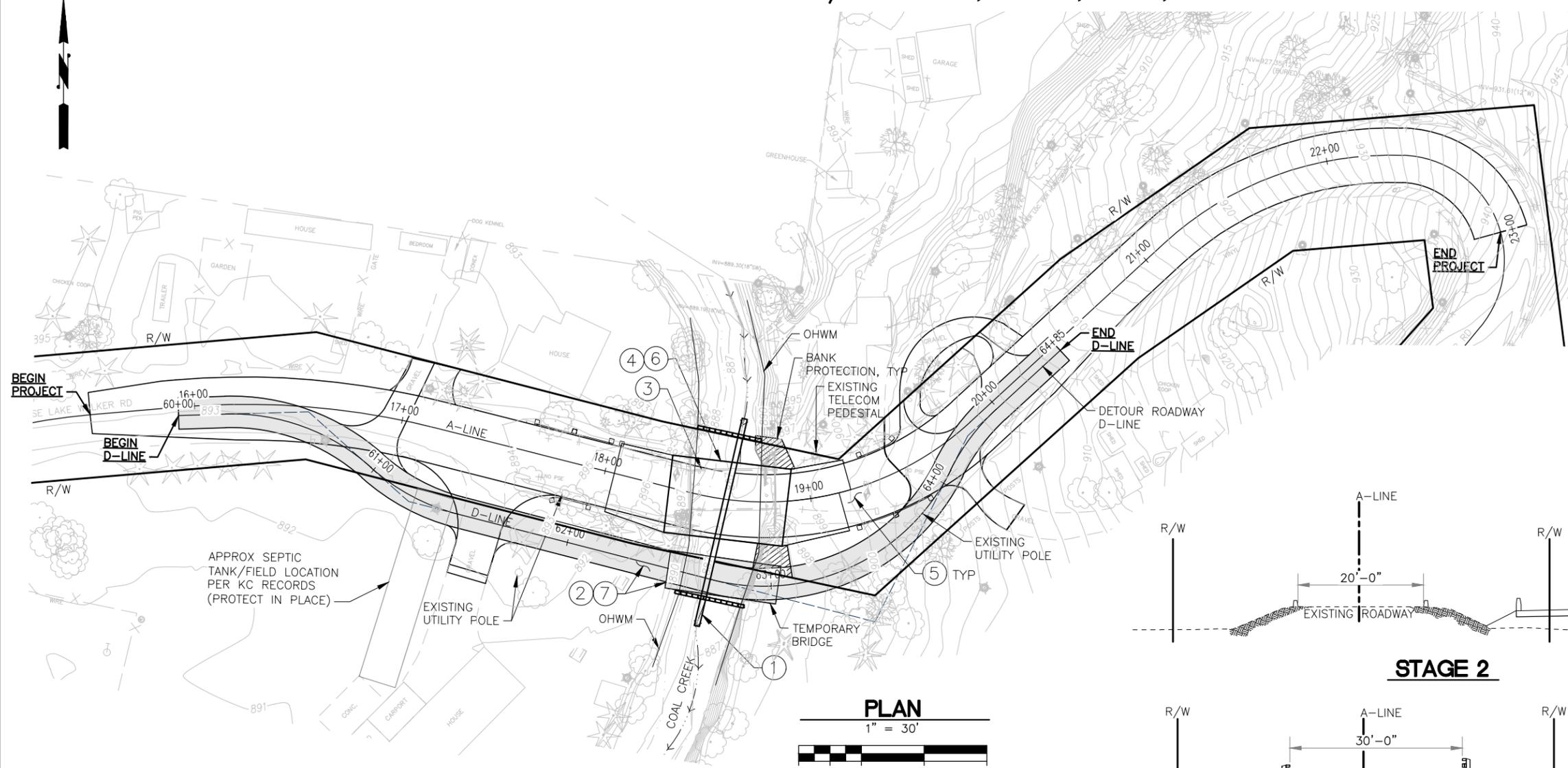
NE 1/4 SEC. 33, T.21N., R.7E., W.M.

**CONSTRUCTION STAGING**

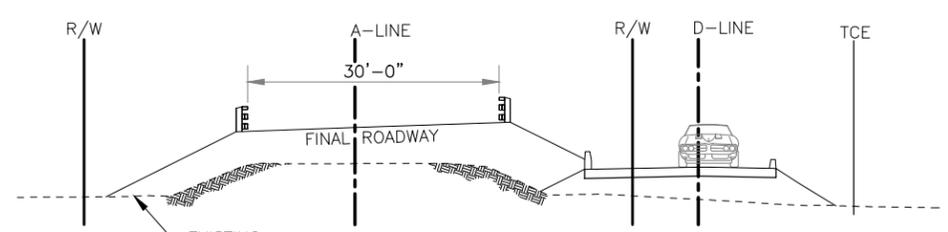
- ① INSTALL CREEK BYPASS.
- ② CONSTRUCT DETOUR ROADWAY INCLUDING TEMPORARY BRIDGE. DIVERT TRAFFIC TO DETOUR ROADWAY.
- ③ REMOVE EXISTING COAL CREEK BRIDGE NO. 3035A AND FOUNDATIONS. (SEE BRIDGE PROPOSED CONSTRUCTION SEQUENCE ON SHEET 4)
- ④ CONSTRUCT NEW BRIDGE AND RETAINING WALLS. (SEE BRIDGE PROPOSED CONSTRUCTION SEQUENCE ON SHEET 4)
- ⑤ CONSTRUCT ROADWAY AND INSTALL GUARDRAILS.
- ⑥ OPEN NEW BRIDGE TO TRAFFIC.
- ⑦ REMOVE DETOUR ROADWAY AND TEMPORARY BRIDGE, PLACE BANK PROTECTION, RESTORE EMBANKMENT, REMOVE CREEK BYPASS, AND PLANT.

**NOTE**

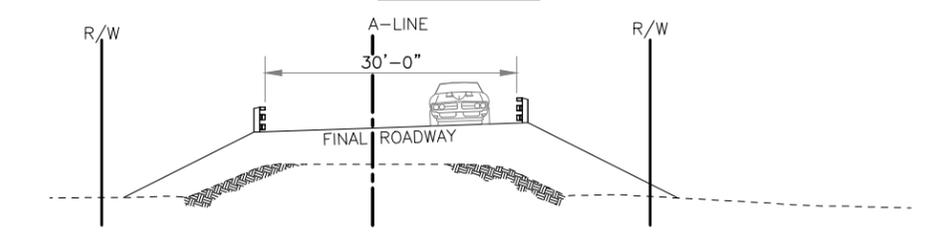
1. SEE SPECIAL PROVISIONS FOR OTHER REQUIREMENTS.



**STAGE 2**



**STAGE 5**



**STAGE 6 AND 7**

30% DESIGN  
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08/02/2019



Know what's below.  
Call before you dig.

Name: samimq Date: Aug 09, 2019 - 12:43:49pm File: V:\1800398 (Coal Creek Bridge Replacement)\Design\1135997\_03\_BCNSTACCSS.dwg

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NUM.	REVISION	BY	DATE

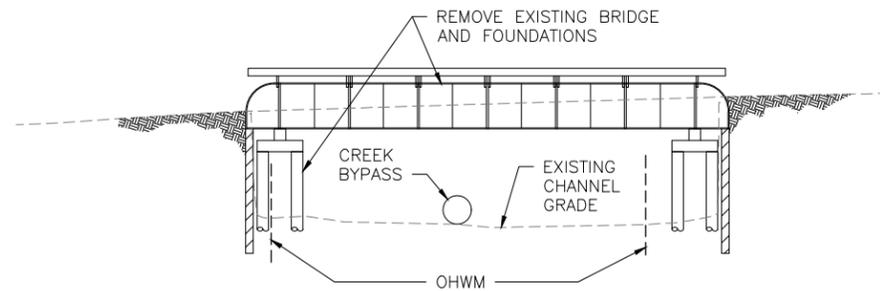
**kpff**  
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FED. AID No. BROS-2017(148)  
PROJECT No. 1135997  
MAINTENANCE DIVISION No. 4

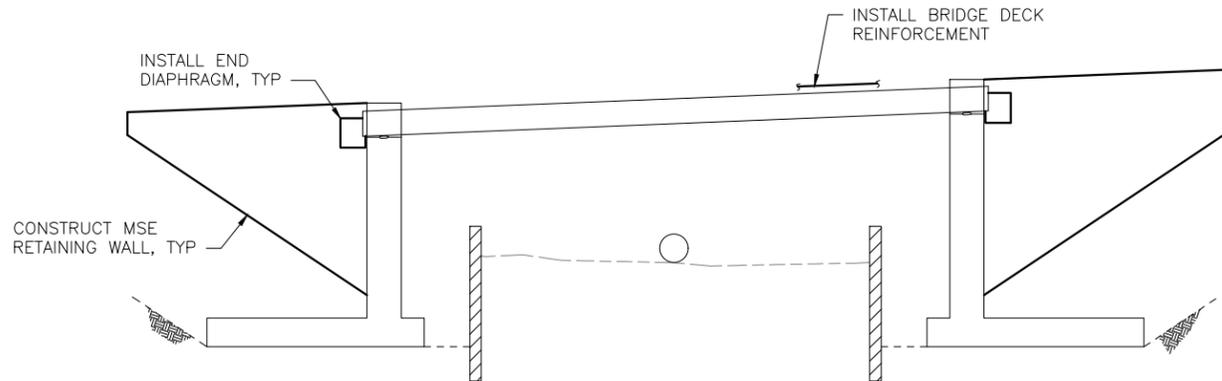
KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A REPLACEMENT**  
PROJECT PROPOSED CONSTRUCTION STAGING

SHEET  
**3**  
OF  
**15**  
SHEETS  
**320-67 (3)**

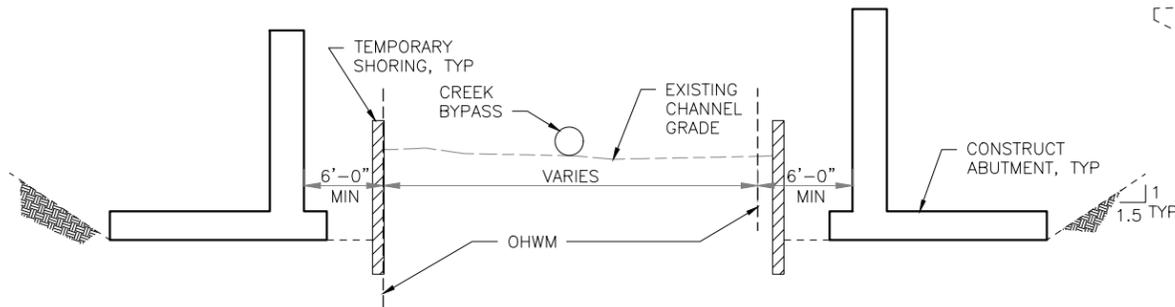
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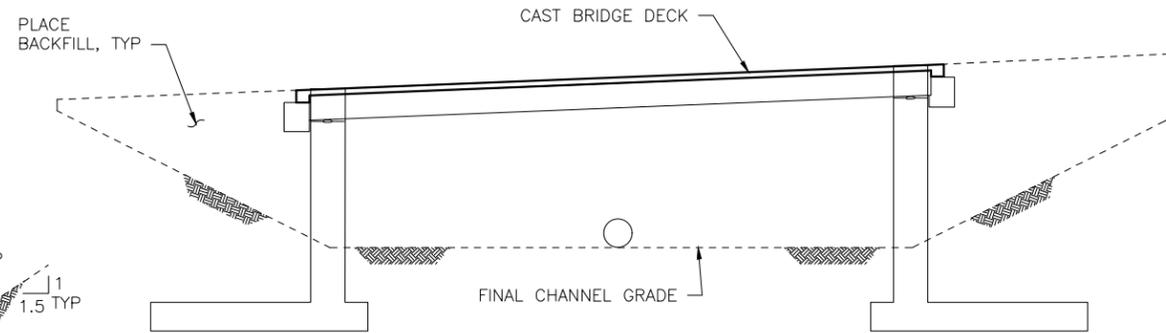
**STAGE 3**



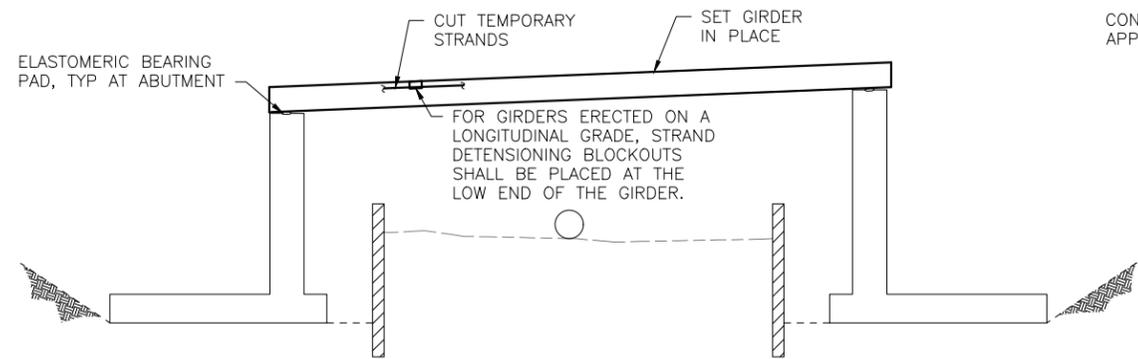
**STAGE 4C**



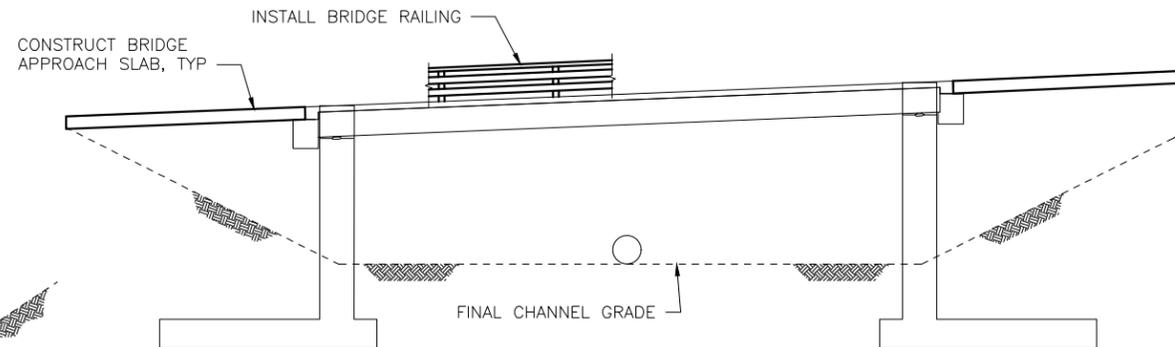
**STAGE 4A**



**STAGE 4D**



**STAGE 4B**



**STAGE 4E**

**BRIDGE CONSTRUCTION SEQUENCE**

- 4A. CONSTRUCT ABUTMENTS.
- 4B. SET GIRDERS IN PLACE. CUT TEMPORARY STRANDS. SEE "TEMPORARY STRAND CUTTING SEQUENCE" NOTES THIS SHEET.
- 4C. CAST END DIAPHRAGMS AND PLACE BRIDGE DECK REINFORCEMENT. CONSTRUCT RETAINING WALLS.
- 4D. CAST BRIDGE DECK WHEN END DIAPHRAGM CONCRETE COMPRESSIVE STRENGTH HAS REACHED A MINIMUM OF 3000 PSI. PLACE BACKFILL BEHIND ABUTMENTS.
- 4E. CAST APPROACH SLABS. INSTALL BRIDGE RAIL WHEN DECK CONCRETE HAS REACHED A MINIMUM OF 3000 PSI.

**TEMPORARY STRAND CUTTING SEQUENCE**

1. ERECT AND BRACE GIRDERS.
2. JUST PRIOR TO CUTTING THE TEMPORARY STRANDS, REMOVE EXPANDED POLYSTYRENE IN BLOCKOUTS IN TOP FLANGE OF GIRDERS. ONCE THE EXPANDED POLYSTYRENE HAS BEEN REMOVED FROM THE STRAND DETENSIONING BLOCKOUT. PREVENT MOISTURE FROM ENTERING THE BLOCKOUT UNTIL THE TEMPORARY TOP STRAND IS CUT AND THE BLOCKOUT FILLED WITH GROUT.
3. CUT STRANDS IN BLOCKOUTS. STRANDS MAY BE CUT BY USING A CUTTING TORCH AND MOVING THE FLAME BACK AND FORTH OVER THE LENGTH OF EXPOSED STRAND TO LET INDIVIDUAL WIRES BREAK ONE AT A TIME TO LESSEN THE SHOCK TO THE GIRDER. STRANDS SHALL BE RELEASED IN A SYMMETRICAL MANNER ABOUT THE GIRDER CENTERLINE STARTING WITH THOSE FURTHEST FROM CENTERLINE AND WORKING INWARDS. FOR POST-TENSIONED TEMPORARY TOP STRANDS, ACTIVELY RESTRAIN THE STRAND CHUCKS AT THE GIRDER ENDS DURING CUTTING.
4. WITHIN 24 HOURS OF CUTTING THE TEMPORARY STRANDS, FILL THE BLOCKOUTS WITH A GROUT CONFORMING TO STD. SPEC. 9-20.3(2). REMOVE ALL MOISTURE IN BLOCKOUTS PRIOR TO FILLING THEM WITH GROUT.

30% DESIGN  
PROGRESS COPY  
08/02/2019



Know what's below.  
Call before you dig.

SURVEY JOB NO:	18069	10/18
CHECKED:	J. EVANS	10/18
CAD ENTERED:	S. QAYOOMI	07/19
DESIGNED:	R. LIBERTY	07/19
CHECKED:	W. G. HESS	07/19
SUPERVISOR:	A. OLSON	07/19

NUM.	REVISION	BY	DATE



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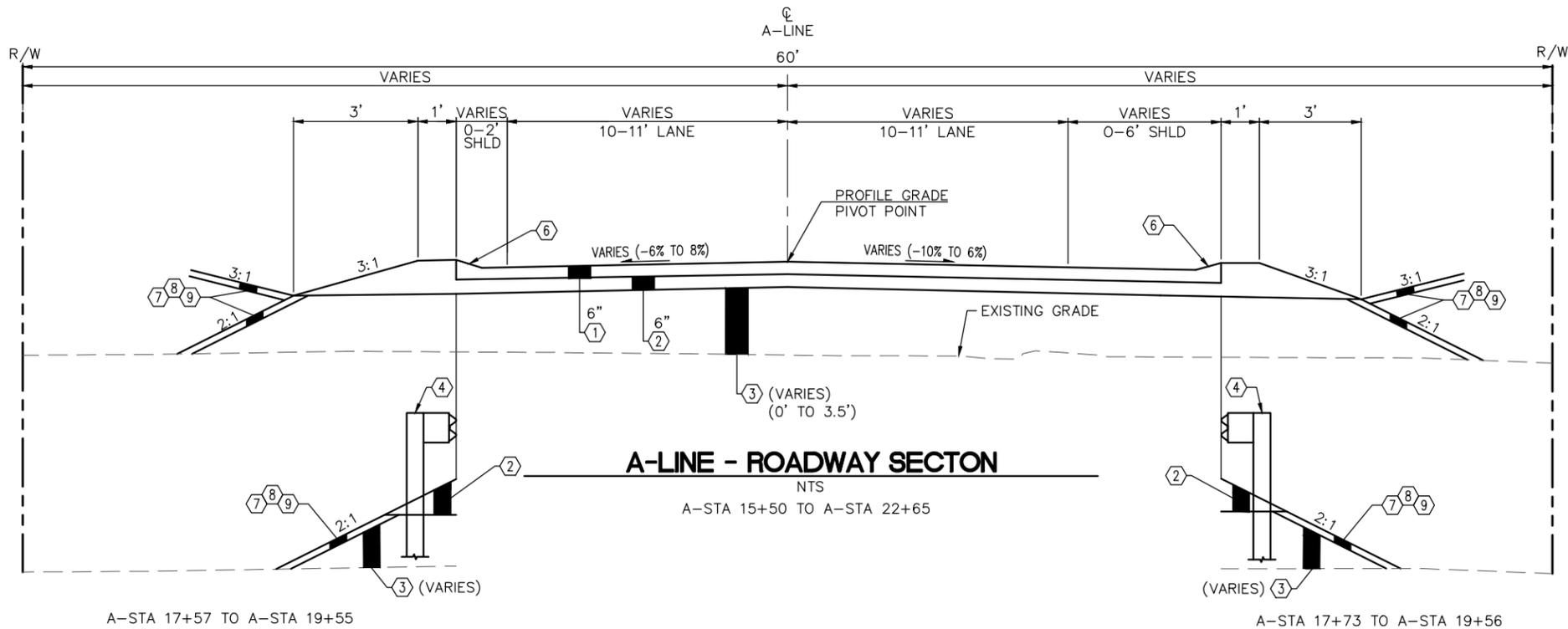


FED. AID No. BROS-2017(148)  
PROJECT No. 1135997  
MAINTENANCE DIVISION No. 4

KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A  
REPLACEMENT**  
BRIDGE PROPOSED CONSTRUCTION SEQUENCE

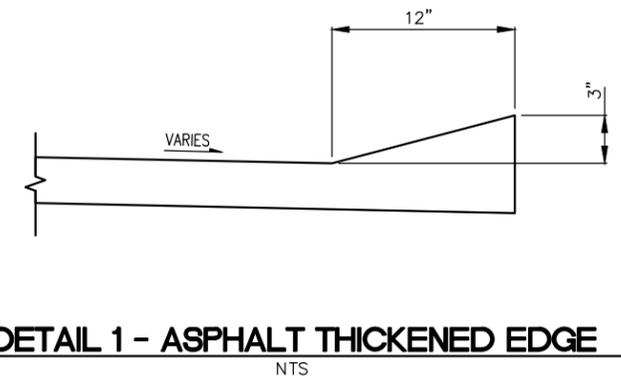
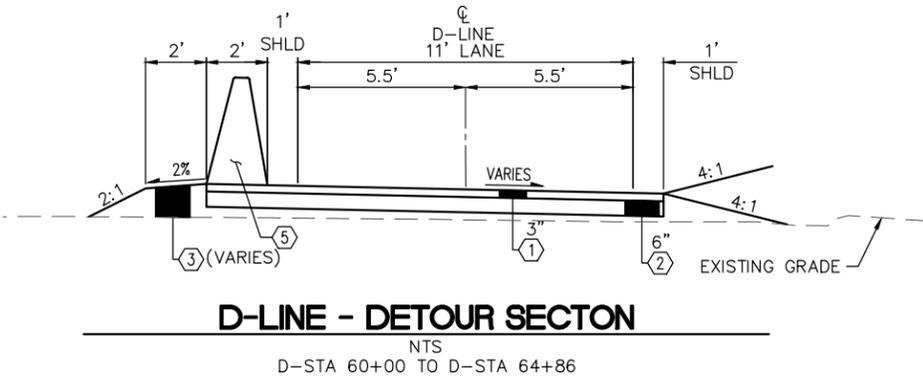
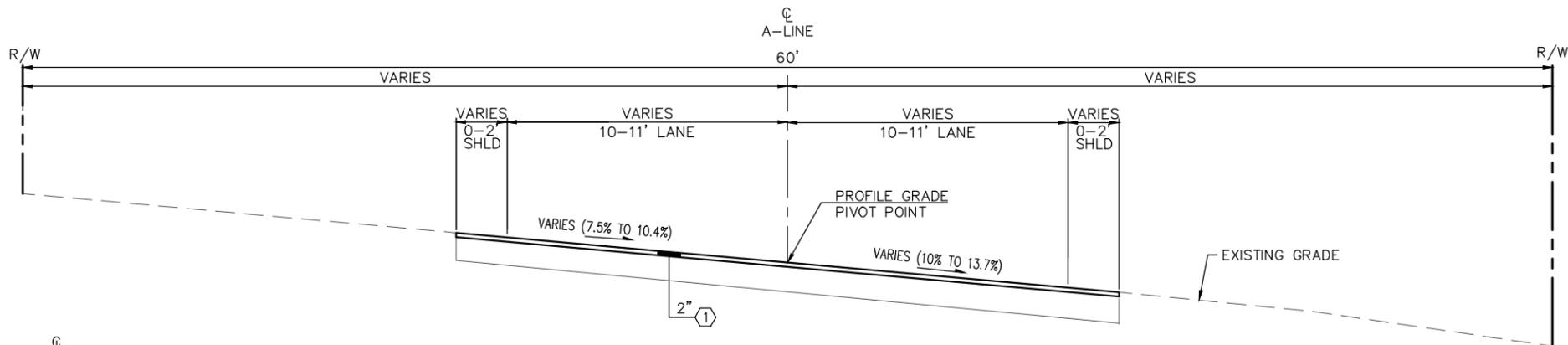
**King County**  
SHEET **4** OF **15** SHEETS  
**320-67(4)**

Name: DanielW Date: Aug 09, 2019-11:49:51am File: Z:\1800001-1800999\1800398\_Cool\_Creek\_Bridge\_3035A\CADD\Design\1135997\_RDSEC.dwg



**CONSTRUCTION NOTES:**

- ① HMA CL 1/2 IN PG 58H-22.
- ② CRUSHED SURFACING BASE COURSE.
- ③ GRAVEL BORROW INCL. HAUL.
- ④ BEAM GUARDRAIL TYPE 31 WITH 8-FOOT POSTS IN ACCORDANCE WITH WSDOT STD PLAN C-20.10-04, C-22.45-03, C-23.60-04, AND C25.30-00.
- ⑤ CONC. BARRIER TYPE 2 IN ACCORDANCE WITH WSDOT STD PLAN C-8.
- ⑥ SEE ASPHALT THICKENED EDGE DETAIL 1 ON THIS SHEET
- ⑦ MEDIUM COMPOST
- ⑧ SEEDING AND MULCHING
- ⑨ EROSION CONTROL BLANKET



30% DESIGN  
PROGRESS COPY  
07/15/2019



Know what's below.  
Call before you dig.

SURVEY JOB NO:	18069	10/18
CHECKED:	J. EVANS	10/18
CAD ENTERED:	M. VU	07/19
DESIGNED:	D. WORTHEN	07/19
CHECKED:	P. SLOAN	07/19
SUPERVISOR:	R. LEIMKUHLER	07/19

NUM.	REVISION	BY	DATE



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FED. AID No.	BROS-2017(148)
PROJECT No.	1135997
MAINTENANCE DIVISION No.	4

KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A REPLACEMENT**  
ROADWAY TYPICAL SECTION

SHEET  
**5**  
OF  
**15**  
SHEETS

320-67 (5)

Name: DanielW Date: Aug 09, 2019-11:48:57am File: Z:\18000001-1800999\1800398\_Coal\_Creek\_Bridge\_3035A\CADD\Design\1135997\_RDPPP.dwg

A-LINE CURVE TABLE						
CURVE NO.	LENGTH	BEARING	PI STATION	DELTA	RADIUS	TANGENT
A-L1	232.79'	N51°15'59"E				
A-C1	136.57'		14+82.76, 7.94' LT	26°04'59"	300'	69.49'
A-L2	41.02'	N77°20'58"E				
A-C2	125.11'		16+54.63, 5.20' LT	19°06'57"	375'	63.14'
A-L3	124.98'	S83°32'05"E				
A-C3	143.73'		19+14.03, 19.83' RT	56°47'42"	145'	78.39'

NE 1/4 SEC. 33, T.21 N., R. 7E., W.M.

BEGIN PROJECT  
A-STA. 15+50  
MATCH EXISTING GRADE

A-STA 15+50.00, 9.35' RT  
MATCH EXISTING  
BEGIN ROADWAY TAPER

A-STA 15+50.00, 10.63' LT  
MATCH EXISTING  
BEGIN ROADWAY TAPER

A-STA 15+85.00, 13.00' LT  
END ROADWAY TAPER  
BEGIN 2FT SHOULDER

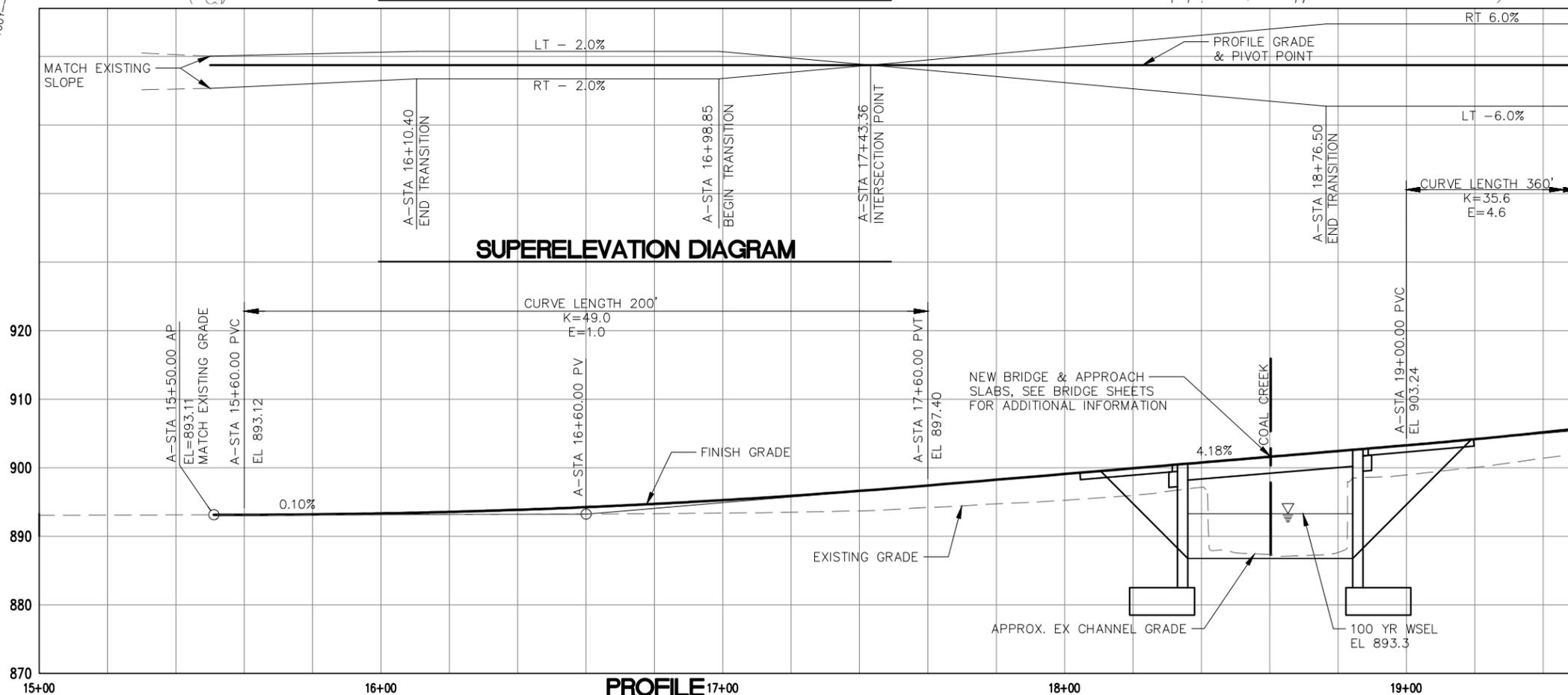
STIEG, JAMES A  
#332107-9027

A-STA 16+20.00, 17.00' RT  
END ROADWAY TAPER  
BEGIN 6FT SHOULDER  
APPROX. SEPTIC TANK/FIELD LOCATION  
PER KC RECORDS  
(PROTECT IN PLACE)

PLAN

**CONSTRUCTION NOTES:**

- ① CONSTRUCT GUARDRAIL NON-FLARED TERMINAL IN ACCORDANCE WITH WSDOT STD PLAN C-22.45-03
- ② CONSTRUCT GUARDRAIL TRANSITION TYPE 24 IN ACCORDANCE WITH WSDOT STD PLAN C-25.30-00
- ③ CONSTRUCT GUARDRAIL ANCHOR TYPE 10 IN ACCORDANCE WITH WSDOT STD PLAN C-23.60-04
- ④ ATTACH THRE BEAM TO BRIDGE RAILING



MERIDIAN WASHINGTON STATE LAMBERT GRID NORTH ZONE NAD 83/91 VERTICAL DATUM NAVD88

SCALE IN FEET

HORIZONTAL SCALE: 1 inch = 20 ft.

SCALE IN FEET

VERTICAL SCALE: 1 inch = 10 ft.

30% DESIGN  
PROGRESS COPY  
07/15/2019



Know what's below.  
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SURVEY JOB NO:	18069	10/18
CHECKED:	J. EVANS	10/18
CAD ENTERED:	M. VU	07/19
DESIGNED:	D. WORTHEN	07/19
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PROJECT No. 1135997  
MAINTENANCE DIVISION No. 4

KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A  
REPLACEMENT**

ROADWAY PLAN AND PROFILE  
ALIGNMENT A



SHEET  
**6**  
OF  
**15**  
SHEETS

320-67 (6)

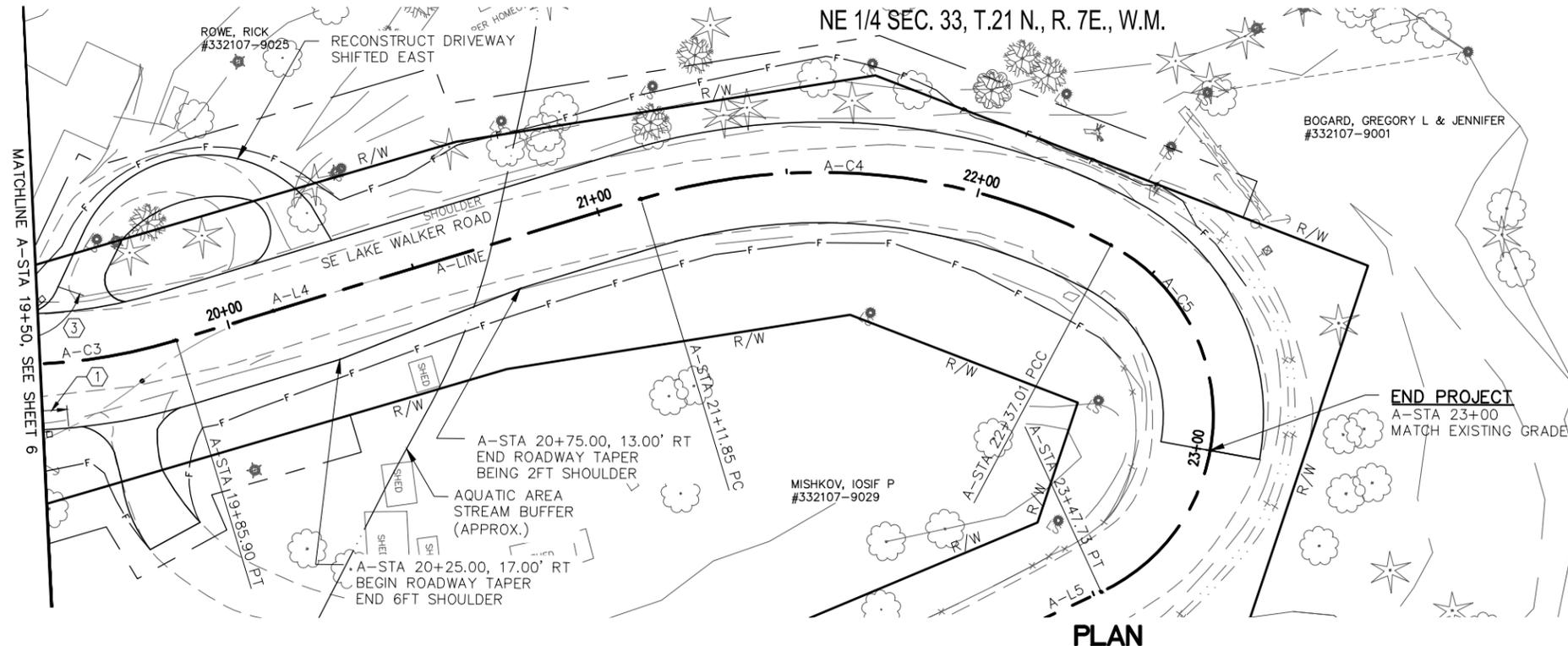
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NE 1/4 SEC. 33, T.21 N., R. 7E., W.M.

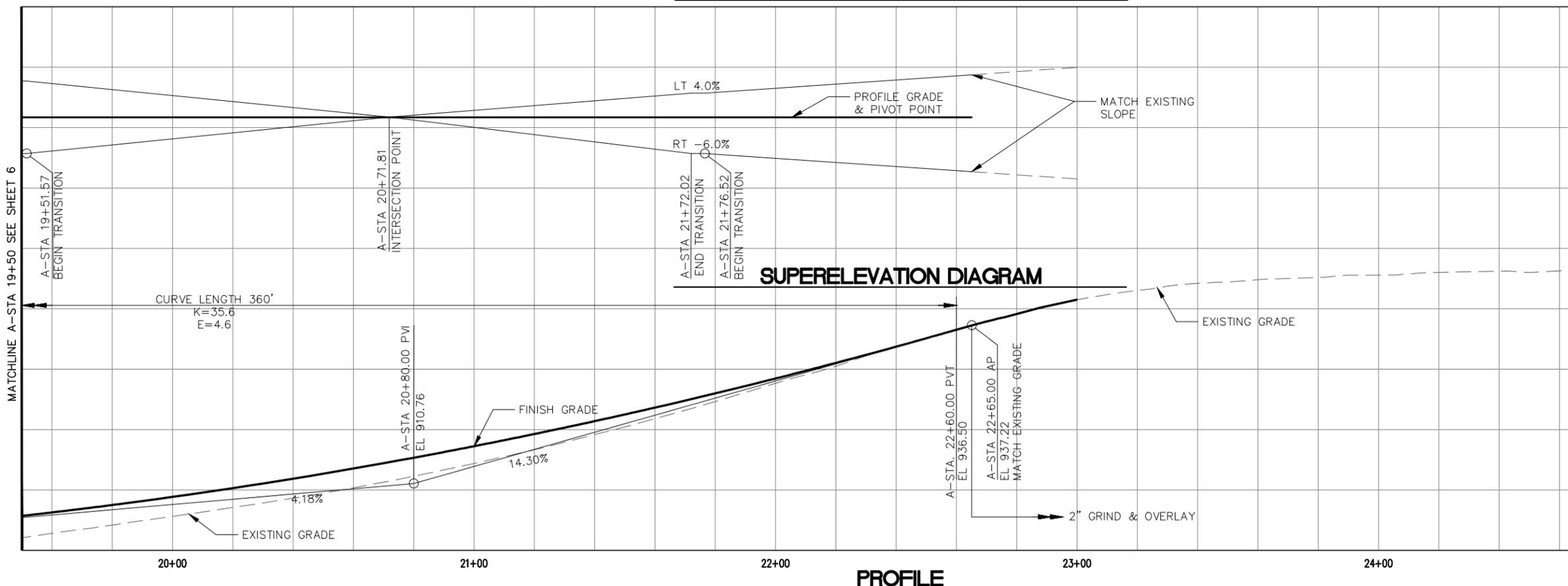
**CONSTRUCTION NOTES:**

- ① CONSTRUCT GUARDRAIL NON-FLARED TERMINAL IN ACCORDANCE WITH WSDOT STD PLAN C-22.45-03
- ③ CONSTRUCT GUARDRAIL ANCHOR TYPE 10 IN ACCORDANCE WITH WSDOT STD PLAN C-23.60-04

A-LINE CURVE TABLE						
CURVE NO.	LENGTH	BEARING	PI STATION	DELTA	RADIUS	TANGENT
A-L4	125.68'	N39°40'13"E				
A-C4	125.43'		22+72.03, 901.04' LT	19°06'57"	160'	63.14'
A-C5	110.93'			56°47'32"	50'	78.39'
A-L5	119.31'	S31°42'15"W				



**PLAN**



**PROFILE**

**SUPERELEVATION DIAGRAM**

MERIDIAN WASHINGTON STATE LAMBERT GRID NORTH ZONE NAD 83/91 VERTICAL DATUM NAVD88

SCALE IN FEET

SCALE IN FEET

HORIZONTAL SCALE: 1 inch = 20 ft.  
 VERTICAL SCALE: 1 inch = 10 ft.

**30% DESIGN  
PROGRESS COPY  
07/15/2019**



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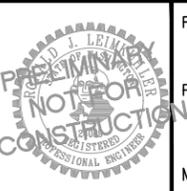
SURVEY JOB NO:	18069	10/18
CHECKED:	J. EVANS	10/18
CAD ENTERED:	M. VU	07/19
DESIGNED:	D. WORTHEN	07/19
CHECKED:	P. SLOAN	07/19
SUPERVISOR:	R. LEIMKUHLE	07/19

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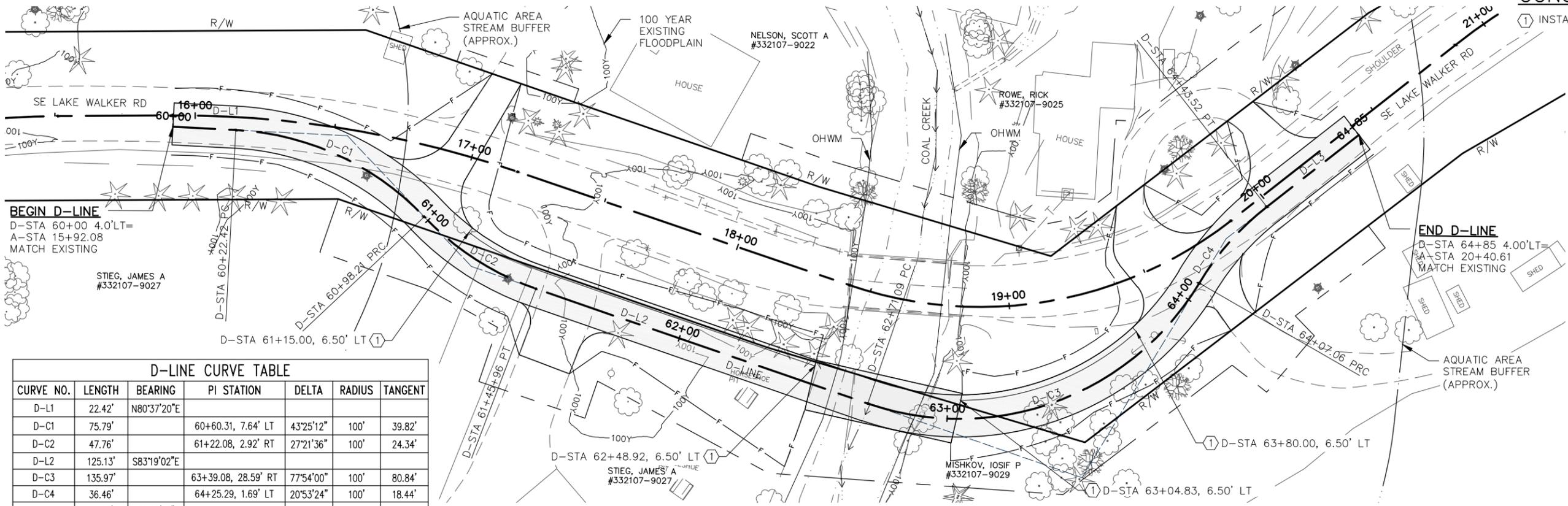
PROJECT No. 1135997

MAINTENANCE DIVISION No. 4

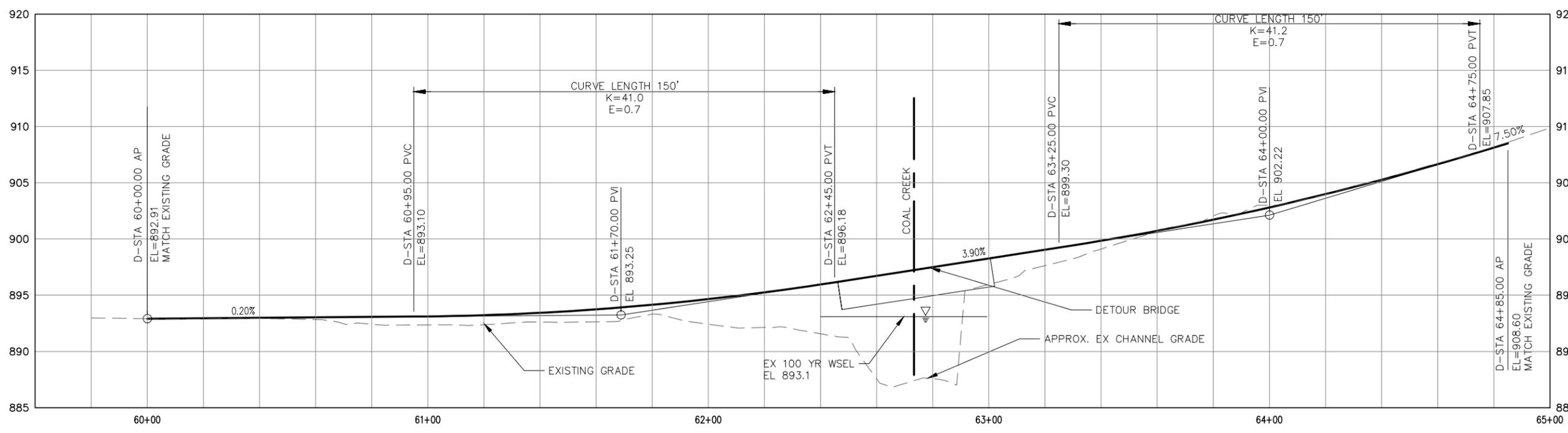
**KING COUNTY DEPT. OF LOCAL SERVICES**  
 JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A REPLACEMENT**  
 ROADWAY PLAN AND PROFILE  
 ALIGNMENT A

SHEET **7** OF **15** SHEETS  
**320-67 (7)**

1 INSTALL TEMPORARY CONCRETE BARRIERS



CURVE NO.	LENGTH	BEARING	PI STATION	DELTA	RADIUS	TANGENT
D-L1	22.42'	N80°37'20"E				
D-C1	75.79'		60+60.31, 7.64' LT	43°25'12"	100'	39.82'
D-C2	47.76'		61+22.08, 2.92' RT	27°21'36"	100'	24.34'
D-L2	125.13'	S83°19'02"E				
D-C3	135.97'		63+39.08, 28.59' RT	77°54'00"	100'	80.84'
D-C4	36.46'		64+25.29, 1.69' LT	20°53'24"	100'	18.44'
D-L3	41.60'	N39°40'13"E				



MERIDIAN  
WASHINGTON STATE  
LAMBERT GRID  
NORTH ZONE  
NAD 83/91  
VERTICAL DATUM  
NAVD88

20 10 0 20 40  
SCALE IN FEET

HORIZONTAL SCALE: 1 inch = 20 ft.

5 2.5 0 5 10  
SCALE IN FEET

VERTICAL SCALE: 1 inch = 5 ft.

30% DESIGN  
PROGRESS COPY  
07/15/2019



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Name: DanielW Date: Aug 09, 2019-11:48:20am File: Z:\1800001-1800999\1800398\_Coal\_Creek\_Bridge\_3035A\CADD\Design\1135997\_TEMP.dwg

SURVEY JOB NO:	18069	10/18
CHECKED:	J. EVANS	10/18
CAD ENTERED:	M. VU	07/19
DESIGNED:	D. WORTHEN	07/19
CHECKED:	P. SLOAN	07/19
SUPERVISOR:	R. LEIMKUHLE	07/19

NUM.	REVISION	BY	DATE

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PROFESSIONAL ENGINEER  
NOT FOR CONSTRUCTION

FED. AID No. BROS-2017(148)

PROJECT No. 1135997

MAINTENANCE DIVISION No. 4

KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A  
REPLACEMENT**  
DETOUR ROADWAY PLAN AND PROFILE  
ALIGNMENT D

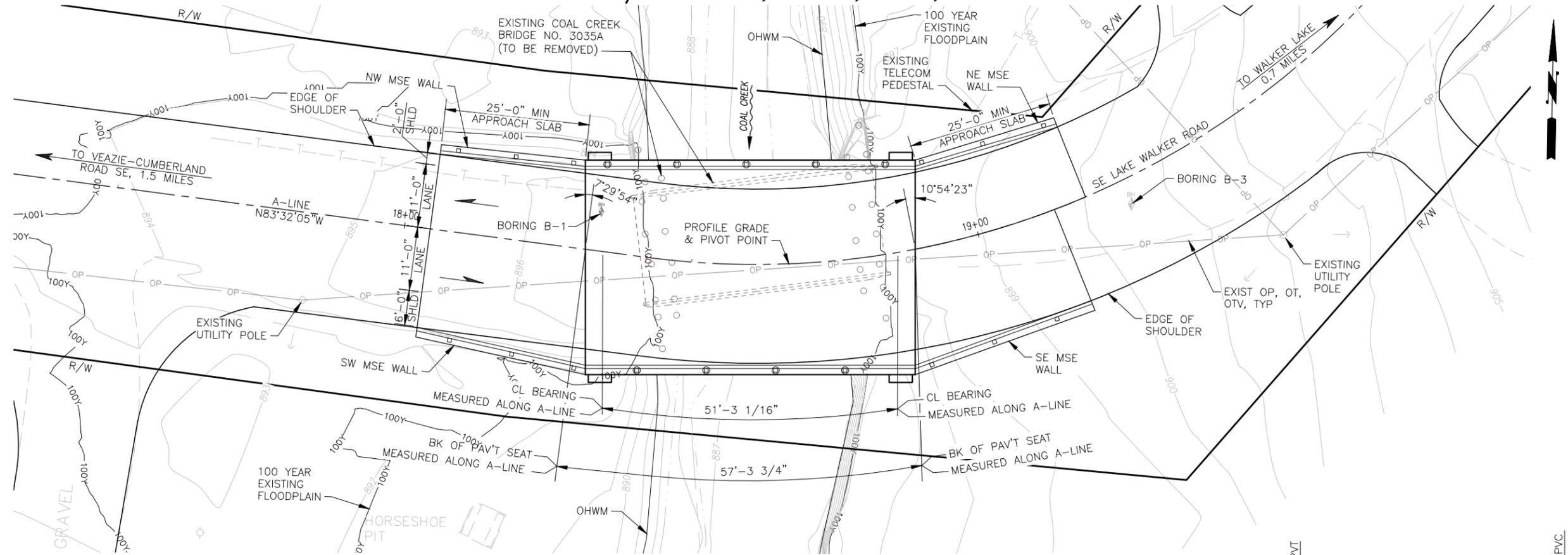
SHEET  
**8**  
OF  
**15**  
SHEETS

King County

**320-67 (8)**



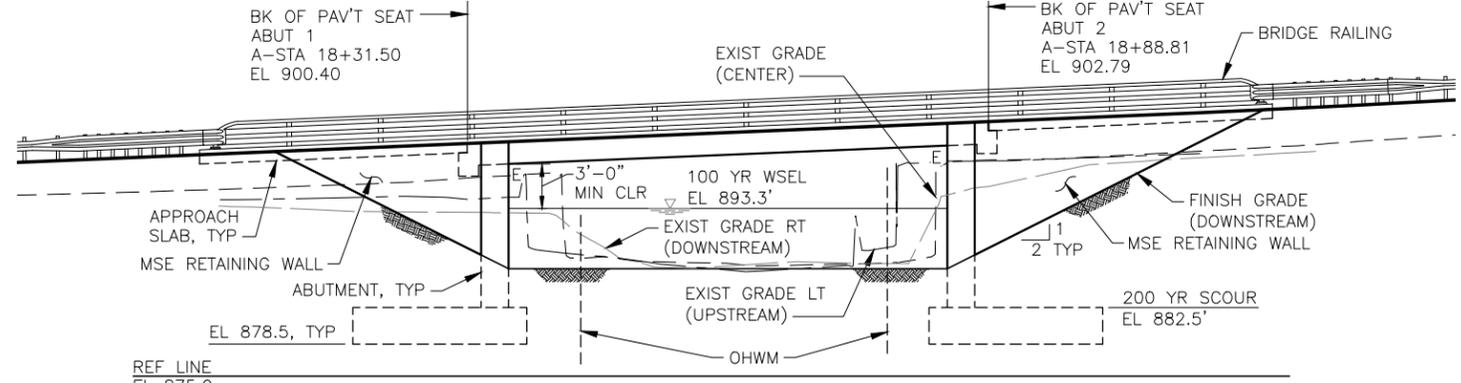
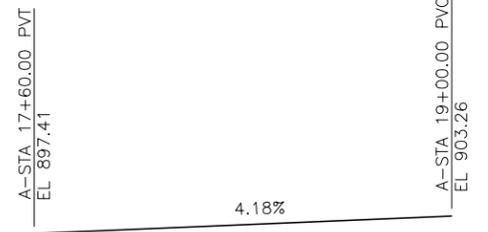
NE 1/4 SEC. 33, T.21N., R.7E., W.M.



PLAN

1"=10'

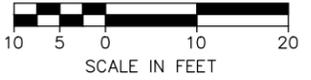
BEARING OF ALL ABUTMENTS IS N01°01'58"W  
DETOUR BRIDGE NOT SHOWN



ELEVATION

1"=10'

GRADE ELEVATIONS SHOWN ARE FINISH GRADES  
AND ARE EQUAL TO PROFILE GRADE



ROADWAY PROFILE AT BRIDGE

MERIDIAN  
WASHINGTON STATE  
LAMBERT GRID  
NORTH ZONE  
NAD 83/91  
VERTICAL DATUM  
NAVD88

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PROGRESS COPY  
08/02/2019

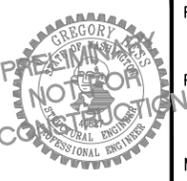


Know what's below.  
Call before you dig.

24" PRECAST PRESTRESSED  
CONCRETE SLAB UNITS  
LOADING: HL-93

SURVEY JOB NO:	18069	10/18
CHECKED:	J. EVANS	10/18
CAD ENTERED:	S. QAYOONI	07/19
DESIGNED:	R. LIBERTY	07/19
CHECKED:	W. G. HESS	07/19
SUPERVISOR:	A. OLSON	07/19

NUM.	REVISION	BY	DATE



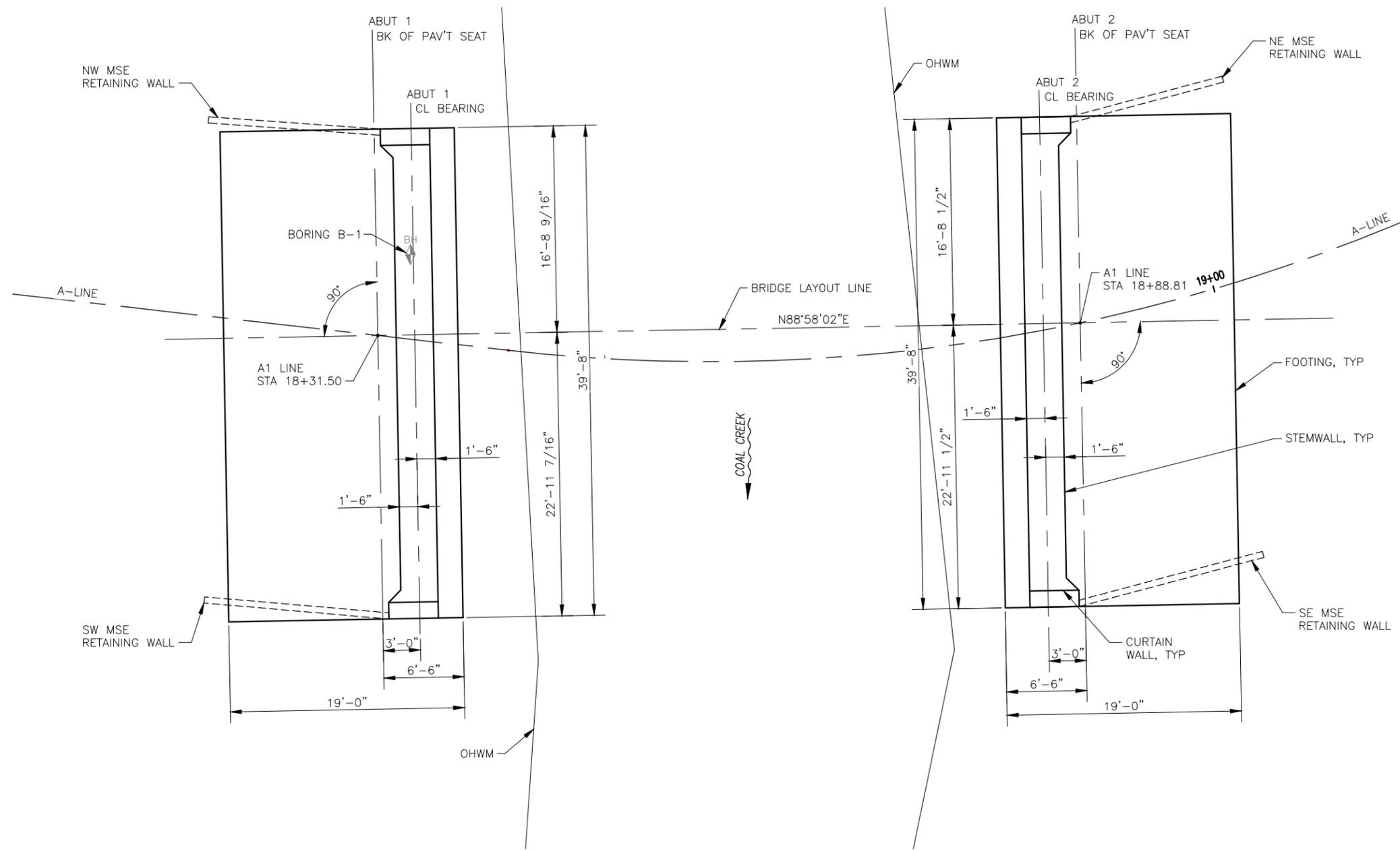
FED. AID No. BROS-2017(148)  
PROJECT No. 1135997  
MAINTENANCE DIVISION No. 4

KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A  
REPLACEMENT**  
BRIDGE PLAN AND ELEVATION

SHEET  
10  
OF  
15  
SHEETS  
**320-67 (10)**

Name: samimq Date: Aug 09, 2019-12:44:08pm File: V:\1800398 (Coal Creek Bridge Replacement)\Design\1135997\_10\_BPLAN.dwg

Name: samimq Date: Aug 09, 2019 12:44:13pm File: V:\1800398 (Coal Creek Bridge Replacement)\Design\1135997\_11\_BFDNPLN.dwg



**FOUNDATION LAYOUT PLAN**

1"=5'  
BEARING OF ALL ABUTMENTS IS N01°01'58"W



30% DESIGN  
PROGRESS COPY  
08/02/2019

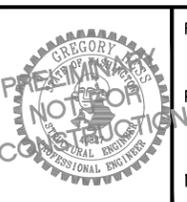


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CHECKED:	J. EVANS	10/18
CAD ENTERED:	S. QAYOONI	07/19
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KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A  
REPLACEMENT**  
FOUNDATION LAYOUT

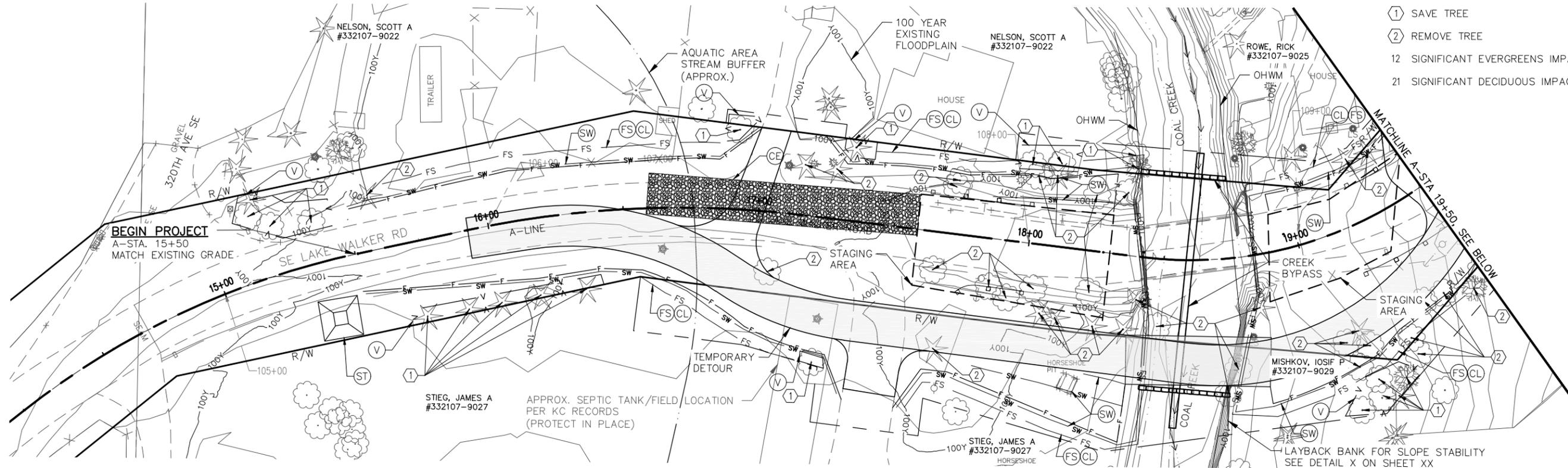
**King County**  
SHEET **11** OF **15** SHEETS  
**320-67 (11)**

Name: DanielW Date: Aug 09, 2019-11:50:33am File: Z:\18000001-1800999\1800398\_Coal\_Creek\_Bridge\_3035A\CADD\Design\1135997\_TESC.dwg

NE 1/4 SEC. 33, T.21 N., R. 7E., W.M.

**TREE LEGEND**

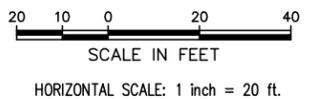
- ① SAVE TREE
- ② REMOVE TREE
- 12 SIGNIFICANT EVERGREENS IMPACTED
- 21 SIGNIFICANT DECIDUOUS IMPACTED



**BMP LEGEND:**

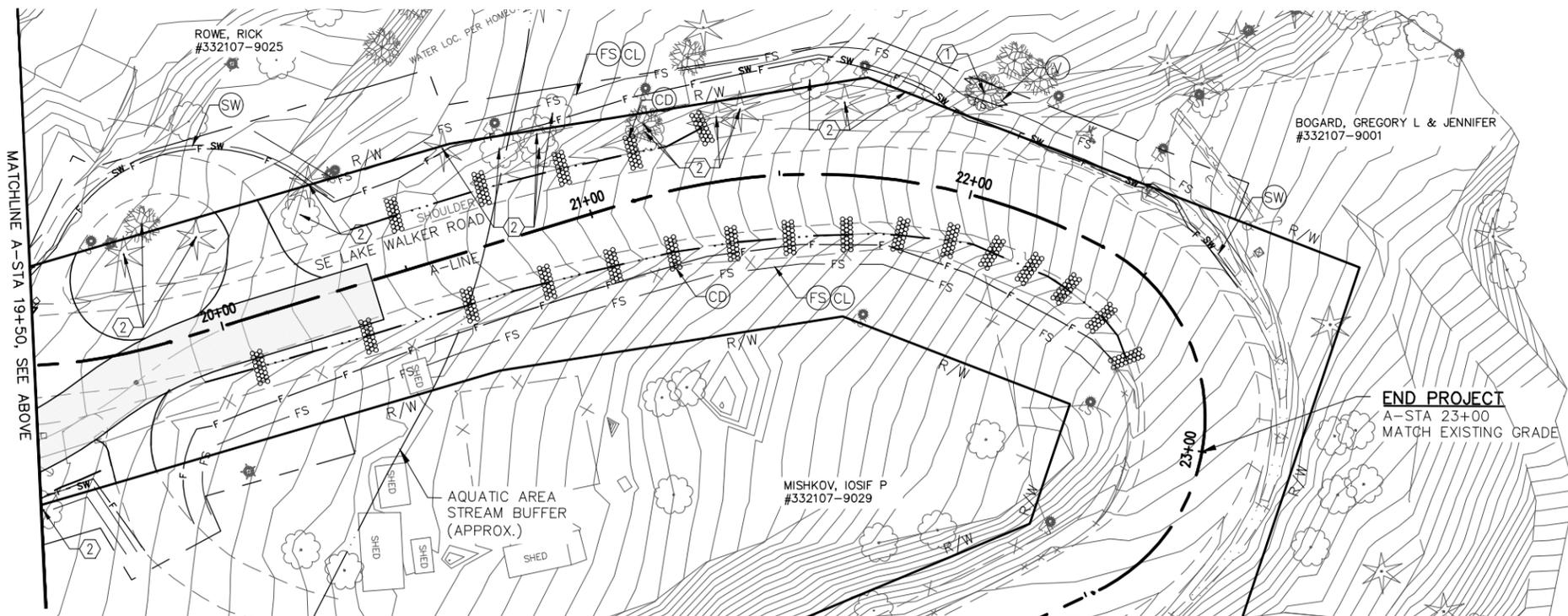
- Ⓞ CD CHECK DAM
- Ⓞ CE STABILIZED CONSTRUCTION ENTRANCE
- Ⓞ CL CLEARING LIMITS
- Ⓞ FS FLAGS & STAKES
- Ⓞ ST SEDIMENT TRAP
- Ⓞ SW STRAW WATTLE
- Ⓞ V HIGH VISIBILITY FENCE

MERIDIAN WASHINGTON STATE LAMBERT GRID NORTH ZONE NAD 83/91 VERTICAL DATUM NAVD88



**CONSTRUCTION NOTES:**

1. INSTALL CSBC AS DUST CONTROL ONCE ROADWAY GRADING HAS BEEN COMPLETED.



**30% DESIGN  
PROGRESS COPY  
08/02/2019**



Know what's below.  
Call before you dig.

SURVEY JOB NO:	18069	10/18			
CHECKED:	J. EVANS	10/18			
CAD ENTERED:	M. VU	08/19			
DESIGNED:	D. WORTHEN	08/19			
CHECKED:	P. SLOAN	08/19			
SUPERVISOR:	R. LEIMKUHLE	08/19			
NUM.	REVISION	BY	DATE		



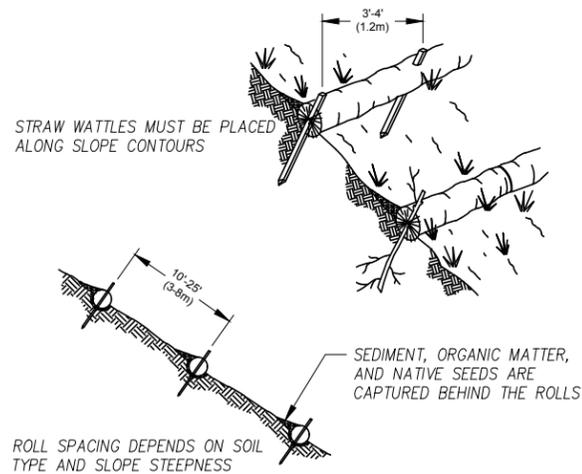
FED. AID No. BROS-2017(148)  
PROJECT No. 1135997  
MAINTENANCE DIVISION No. 4

KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A REPLACEMENT**  
TEMPORARY EROSION/SEDIMENT CONTROL PLAN (T.E.S.C.)

**811**  
SHEET **12** OF **15** SHEETS  
**320-67 (12)**

**T.E.S.C. NOTES:**

1. FLAG CLEARING LIMITS PRIOR TO CONSTRUCTION. DESIGNATE TREES TO BE SAVED.
2. MAINTAIN T.E.S.C. MEASURES AND UPGRADE BMPS AS WEATHER AND SITE CONDITIONS WARRANT, OR UNTIL THE ENGINEER DESIGNATES THE MEASURE FOR REMOVAL.
3. COVER DISTURBED AREAS AND STOCKPILES AT THE END OF EACH WORKING DAY WITH CLEAR PLASTIC SHEETING OR WITH 2-INCH OF STRAW MULCH DURING THE WET SEASON.
4. EXTRA STRAW MULCH, PLASTIC SHEETING, SPILL KITS AND OIL ABSORBENT MATERIAL SHALL BE ONSITE AT ALL TIMES AND USED AS NEEDED.
5. NO SEDIMENT OR TURBIDITY SHALL BE ALLOWED TO ENTER WATERS OF THE STATE.
6. ANY ACCUMULATED SEDIMENT SHALL BE REMOVED IN ACCORDANCE WITH APPROVED T.E.S.C. PLAN AND/OR AS ORDERED BY THE ENGINEER.
7. SWEEP AND CLEAN ROADWAY IN ACCORDANCE WITH APPROVED T.E.S.C. AND FUGITIVE DUST CONTROL PLANS AND/OR AS ORDERED BY THE ENGINEER.
8. STAGING AREA SHALL BE SECURED TO CONTAIN ALL CONSTRUCTION MATERIALS, FUEL, ETC. FROM LEAVING THAT AREA, IN ACCORDANCE WITH APPROVED SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN.
9. THE T.E.S.C. FACILITIES SHOWN ON THIS PLAN REPRESENT A PRELIMINARY DEPICTION OF THE WATER POLLUTION AND AND EROSION CONTROL ITEMS THAT MAY BE NEEDED TO ADDRESS ANTICIPATED SITE CONDITIONS. THE CONTRACTOR'S CESCL, IN CONJUNCTION WITH THE ENGINEER, SHALL MODIFY AND UPDATE THE T.E.S.C. PLAN AS NEEDED TO ADDRESS THE ACTUAL SITE AND WEATHER CONDITIONS ENCOUNTERED DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL REMOVE ALL NON-BIODEGRADABLE BMPS UPON SITE STABILIZATION.

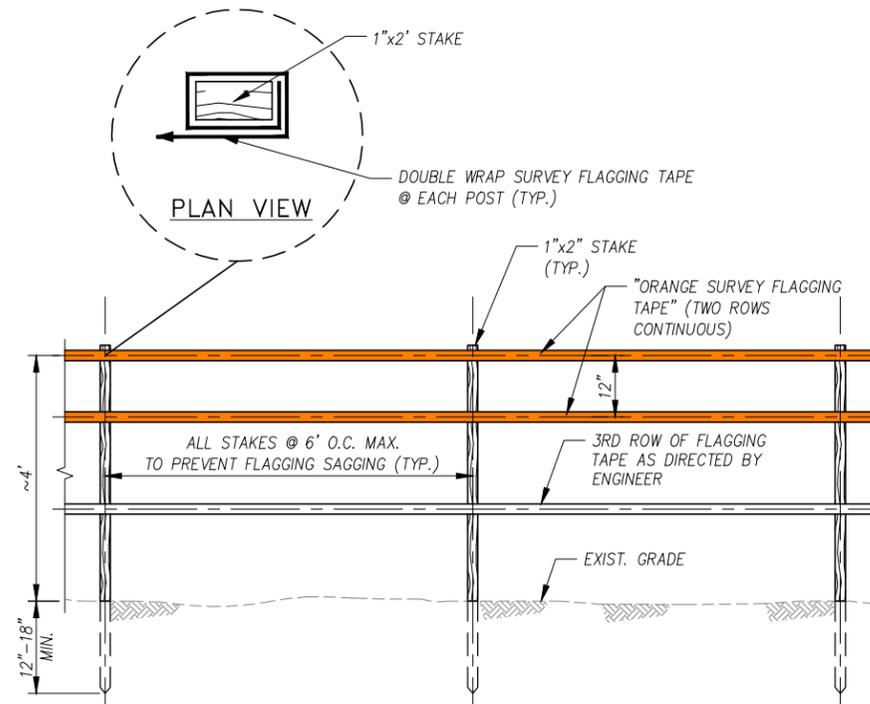


**NOTES:**

1. STRAW WATTLE INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" x 5" (75-125mm) DEEP, DUG ON CONTOUR.
2. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND WATTLE.

**STRAW WATTLE DETAIL**

NTS



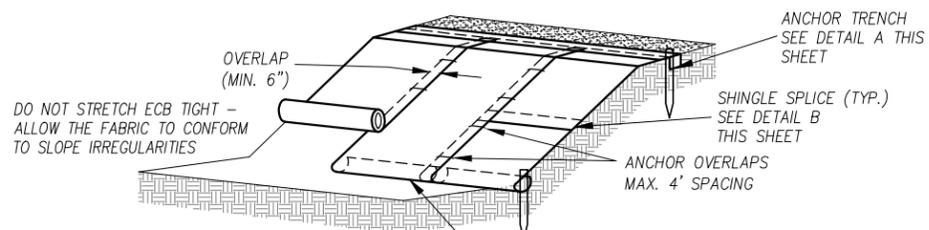
**FLAGS AND STAKES DETAIL AT CLEARING LIMITS DETAIL**

NTS



SECURE WITH 10" LONG, 8-GAUGE WIRE STAPLES USING PATTERN SPECIFIED IN THE MANUFACTURER'S INSTALLATION GUIDELINES.

IF THERE IS A BERM AT THE TOP OF THE SLOPE, ANCHOR UPSLOPE OF THE BERM



\*\* SLOPE SURFACE SHALL BE GRADED AND RAKED SMOOTH BEFORE BECB PLACEMENT FOR PROPER SOIL CONTACT. PLACE TOPSOIL AND SEED BEFORE BECB INSTALLATION. PLANT SHRUBS, TREES, ETC., AFTER INSTALLATION OF BECB AS REQUIRED BY THE CONTRACT.

BRING ECB DOWN TO A LEVEL AREA, TURN THE END UNDER 6" TO FORM A SOIL ENCASED CUFF, AND ANCHOR WITH 18" WOOD STAKES AT 36" MAX. CENTERS.

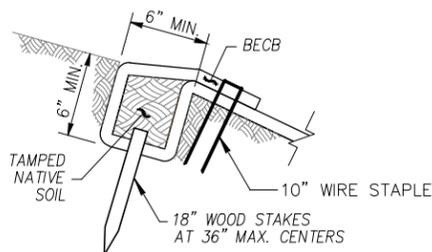
**EROSION CONTROL BLANKET (ECB) DETAIL**

NTS



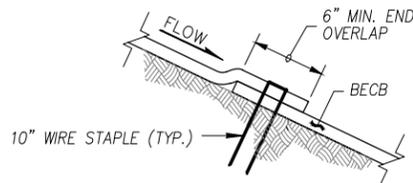
**NOTES:**

1. SEE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION STANDARD PLAN I-60.10-00.
2. WOOD STAKES SHALL BE DOUGLAS FIR, 1"x2"x18", WITH A POINTED TIP.
3. STAPLES SHALL BE 8-GAUGE WIRE, U-SHAPED, AND 10" LONG.
4. REBAR STAKES MAY BE SUBSTITUTED FOR WOOD STAKES WHEN APPROVED BY THE ENGINEER (SEE SPECIAL PROVISIONS FOR DETAILS).



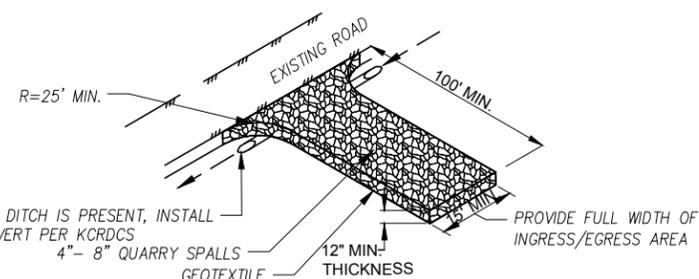
**DETAIL A - ANCHOR TRENCH**

NTS



**DETAIL B - SINGLE SPLICE**

NTS

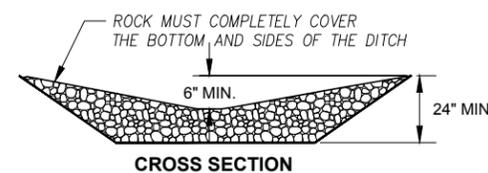


**NOTES:**

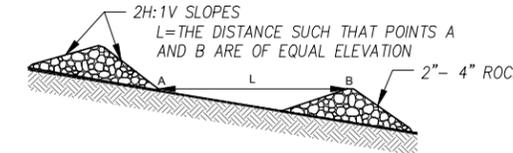
- PER KING COUNTY ROAD DESIGN AND CONSTRUCTION STANDARDS (KCRDCS), DRIVEWAYS SHALL BE PAVED TO EDGE OF R-O-W PRIOR TO INSTALLATION OF THE CONSTRUCTION ENTRANCE TO AVOID DAMAGING OF THE ROADWAY.
- IT IS RECOMMENDED THAT THE ENTRANCE BE CROWNED SO THAT RUNOFF DRAINS OFF THE PAD.

**STABILIZED CONSTRUCTION ENTRANCE DETAIL**

NTS



**CROSS SECTION**



**CHECK DAM SPACING**

**CHECK DAM DETAIL**

NTS



**30% DESIGN  
PROGRESS COPY  
08/02/2019**



**Know what's below.  
Call before you dig.**

Name: DanielW Date: Aug 09, 2019-11:51:04am File: Z:\1800001-1800999-1800398\_Cool Creek Bridge\_3035A\CADD\Design\1135997\_TESC\_DET.dwg

SURVEY JOB NO:	18069	10/18			
CHECKED:	J. EVANS	10/18			
CAD ENTERED:	M. VU	08/19			
DESIGNED:	D. WORTHEN	08/19			
CHECKED:	P. SLOAN	08/19			
SUPERVISOR:	R. LEIMKUHLE	08/19			
NUM.	REVISION	BY	DATE		

**kpff**  
1601 5th Avenue, Suite 1600  
Seattle, WA 98101  
206.622.5822  
www.kpff.com

**PROFESSIONAL ENGINEER**  
R. LEIMKUHLE

FED. AID No. BROS-2017(148)

PROJECT No. 1135997

MAINTENANCE DIVISION No. 4

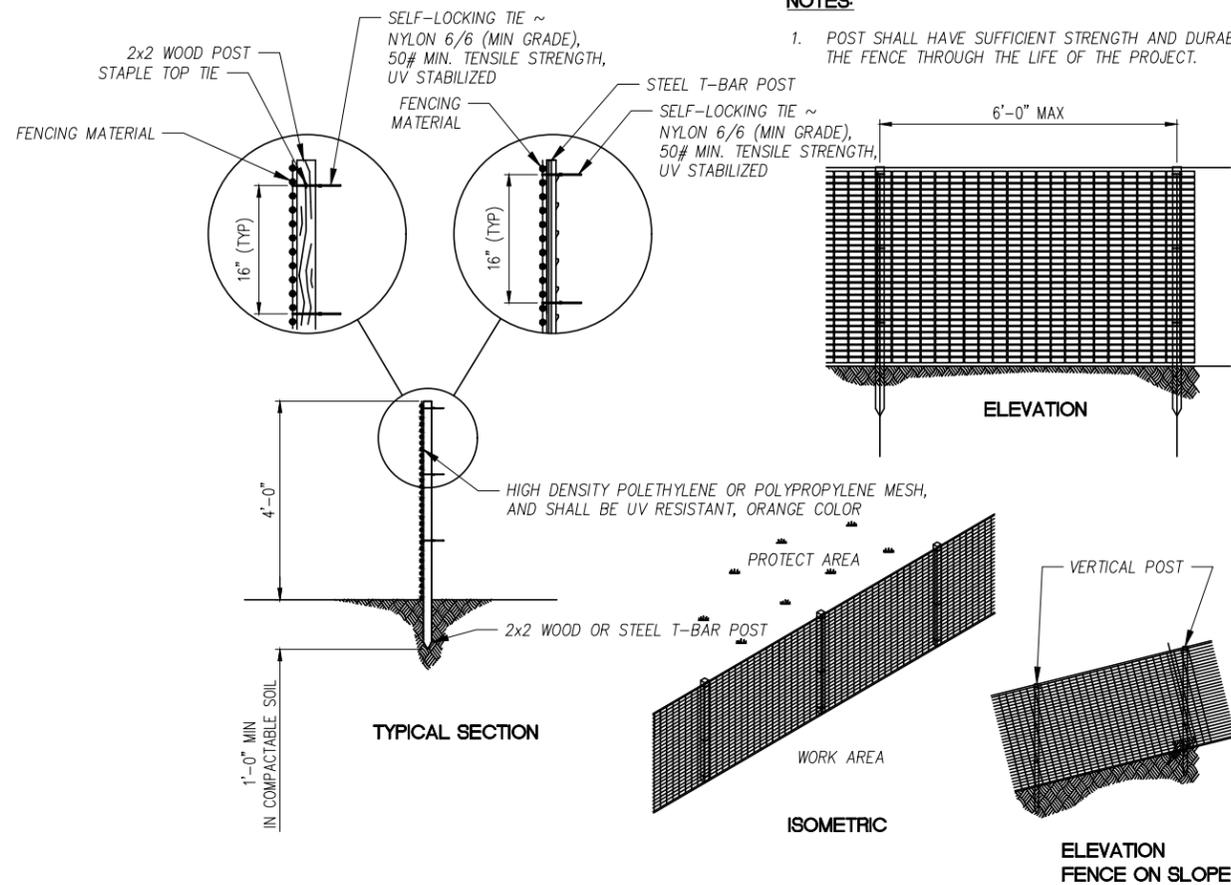
**KING COUNTY DEPT. OF LOCAL SERVICES**  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A REPLACEMENT**  
TEMPORARY EROSION AND SEDIMENT CONTROL (T.E.S.C.) DETAIL

**King County**

SHEET **13** OF **15** SHEETS

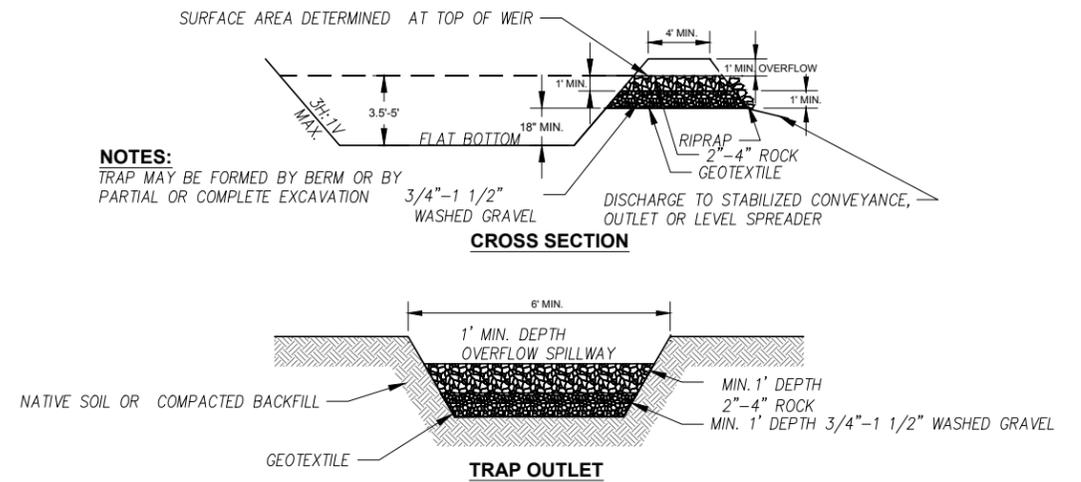
**320-67 (13)**

Name: DanielW Date: Aug 09, 2019-11:51:15am File: Z:\1800001-1800999\1800398 Coal Creek Bridge\_3035A\CADD\Design\1135997\_TESC\_DET.dwg



HIGH VISIBILITY FENCE DETAIL  
NTS

6



TEMPORARY SEDIMENT TRAP DETAIL  
NTS

7

30% DESIGN  
PROGRESS COPY  
08/02/2019



Know what's below.  
Call before you dig.

SURVEY JOB NO:	18069	10/18			
CHECKED:	J. EVANS	10/18			
CAD ENTERED:	M. VU	08/19			
DESIGNED:	D. WORTHEN	08/19			
CHECKED:	P. SLOAN	08/19			
SUPERVISOR:	R. LEIMKUHLE	08/19			
NUM.	REVISION	BY	DATE		



FED. AID No. BROS-2017(148)  
PROJECT No. 1135997  
MAINTENANCE DIVISION No. 4

KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A  
REPLACEMENT**  
TEMPORARY EROSION AND SEDIMENT CONTROL (T.E.S.C.) DETAIL

SHEET  
**14**  
OF  
**15**  
SHEETS  
**320-67 (14)**

Name: DanielW Date: Aug 09, 2019-01:31:56pm File: Z:\1800001-1800999\1800398 Coal Creek Bridge 3035A\CADD\Design\1135997\_MITG.dwg

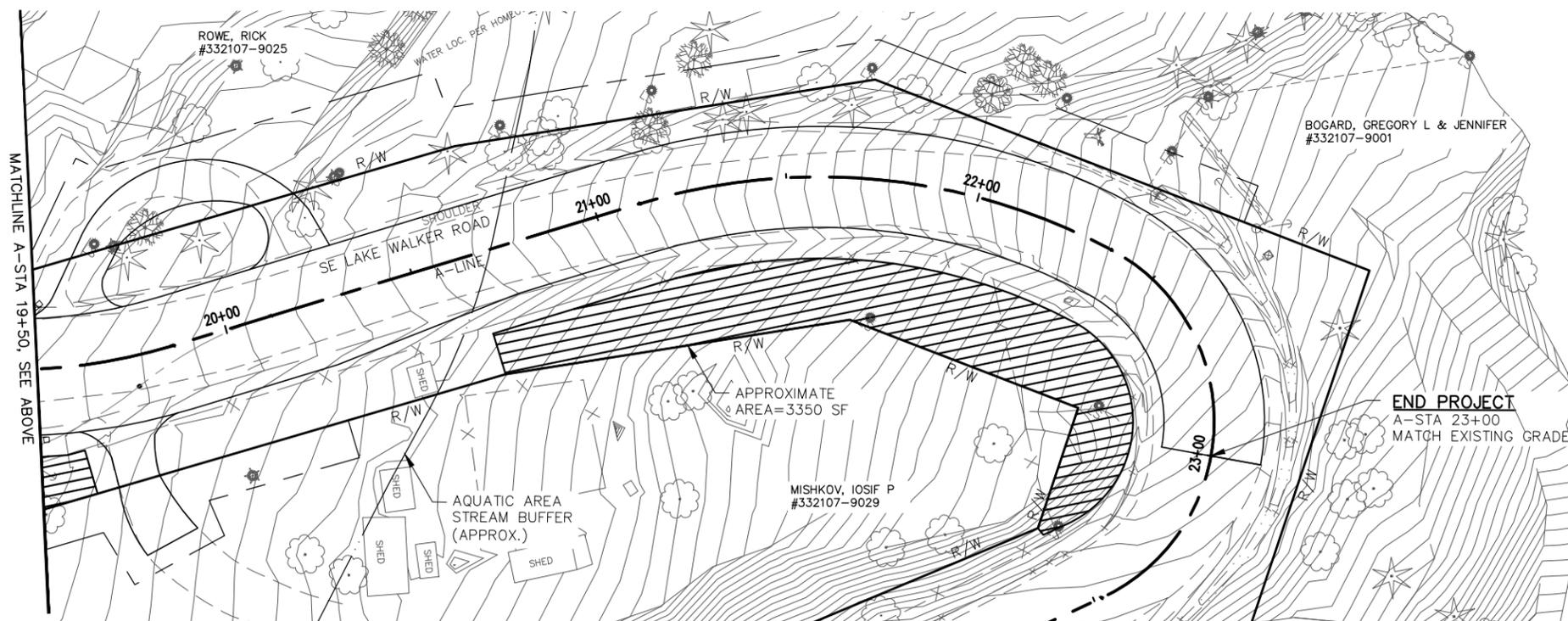
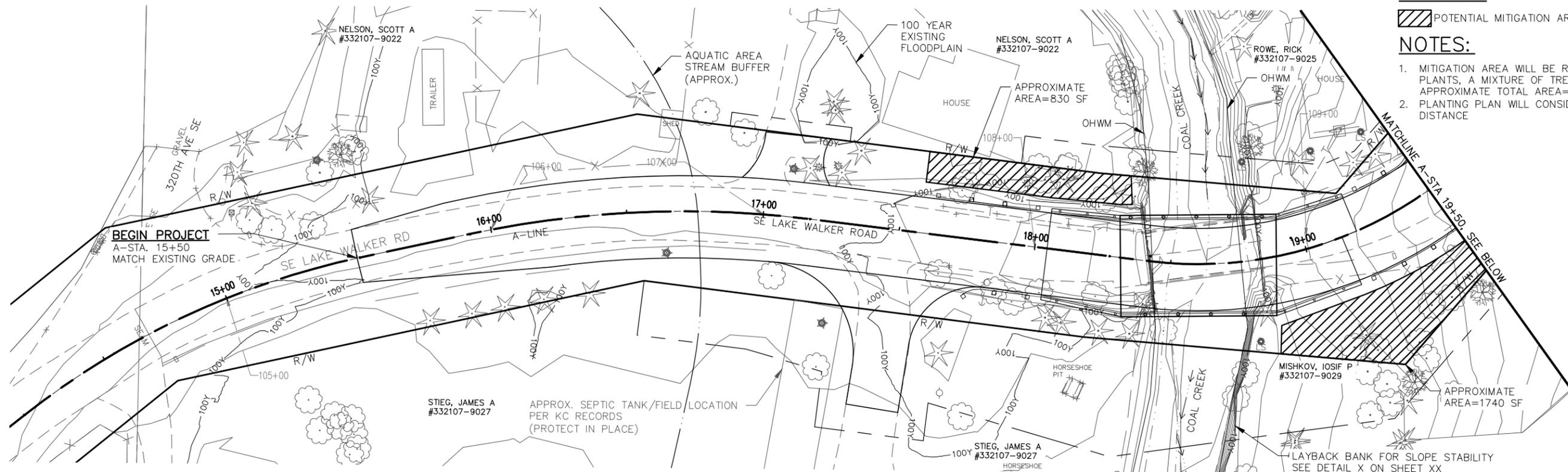
NE 1/4 SEC. 33, T.21 N., R. 7E., W.M.

LEGEND:

POTENTIAL MITIGATION AREA

NOTES:

1. MITIGATION AREA WILL BE RESTORED WITH NATIVE PLANTS, A MIXTURE OF TREES AND SHRUBS. APPROXIMATE TOTAL AREA=5920 SF
2. PLANTING PLAN WILL CONSIDER DRIVERS' SIGHT DISTANCE



MERIDIAN  
WASHINGTON STATE  
LAMBERT GRID  
NORTH ZONE  
NAD 83/91  
VERTICAL DATUM  
NAVD88

20 10 0 20 40  
SCALE IN FEET  
HORIZONTAL SCALE: 1 inch = 20 ft.

30% DESIGN  
PROGRESS COPY  
08/09/2019



Know what's below.  
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KING COUNTY DEPT. OF LOCAL SERVICES  
JOHN TAYLOR, DIRECTOR  
**COAL CREEK BRIDGE NO. 3035A  
REPLACEMENT**

MITIGATION PLAN

SHEET  
**15**  
OF  
**15**  
SHEETS  
King County

320-67 (15)



**Section I: Buildings**

Type (Residential) or Principal Activity (Commercial)	# Units	Square Feet (in thousands of square feet)	Emissions Per Unit or Per Thousand Square Feet (MTCO2e)			Lifespan Emissions (MTCO2e)
			Embodied	Energy	Transportation	
Single-Family Home.....	0		98	672	792	0
Multi-Family Unit in Large Building .....	0		33	357	766	0
Multi-Family Unit in Small Building .....	0		54	681	766	0
Mobile Home.....	0		41	475	709	0
Education .....		0.0	39	646	361	0
Food Sales .....		0.0	39	1,541	282	0
Food Service .....		0.0	39	1,994	561	0
Health Care Inpatient .....		0.0	39	1,938	582	0
Health Care Outpatient .....		0.0	39	737	571	0
Lodging .....		0.0	39	777	117	0
Retail (Other Than Mall).....		0.0	39	577	247	0
Office .....		0.0	39	723	588	0
Public Assembly .....		0.0	39	733	150	0
Public Order and Safety .....		0.0	39	899	374	0
Religious Worship .....		0.0	39	339	129	0
Service .....		0.0	39	599	266	0
Warehouse and Storage .....		0.0	39	352	181	0
Other .....		0.0	39	1,278	257	0
Vacant .....		0.0	39	162	47	0

**Section II: Pavement.....**

Pavement.....		0.85				43
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**Total Project Emissions:**

**43**

Data entry fields