



## King County

### ENVIRONMENTAL CHECKLIST

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#### Lower Tolt River Floodplain Reconnection Project

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#### *Purpose of the Checklist:*

The State Environmental Policy Act (SEPA), Chapter 43.21 RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

#### *Instructions for Applicants:*

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write “**do not know**” or “**does not apply.**” Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be a significant adverse impact.

#### *Use of Checklist for Nonproject Proposals:*

Complete this checklist for nonproject proposals, even though questions may be answered “**does not apply.**” In addition, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (PART D).

For nonproject actions, the references in the checklist to the words “**project,**” “**applicant,**” and “**property or site**” should be read as “**proposal,**” “**proposer,**” and “**affected geographic area,**” respectively.

**A. BACKGROUND**

1. *Name of the proposed project, if applicable:*

Lower Tolt River Floodplain Reconnection Project

2. *Name of Applicant:*

King County Department of Natural Resources and Parks  
Water and Land Resources Division  
Parks and Recreation Division

And

City of Seattle  
Seattle Public Utilities  
Seattle City Light

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

Jon Hansen, Senior Ecologist  
King County Water and Land Resources Division  
201 South Jackson Street, Suite 600  
Seattle, WA 98104-3855  
Phone: 206-296-1966  
Fax: 206-296-0192

4. *Date checklist prepared:*

June 2006

5. *Agency requesting checklist:*

King County Department of Natural Resources and Parks  
Water and Land Resources Division

6. *Proposed timing or schedule (include phasing, if applicable):*

Construction is expected to take two years beginning in the summer of 2007. Clearing and grading in or adjacent to streams, wetlands, or other bodies of water will only occur during the summer months (June through September), when the chance of precipitation is very low and river levels are at their lowest. The first phase of planting will be completed in the fall of 2007, but additional planting in the floodplain will continue for several years after construction is complete.

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

Not at this time. Future levee setback projects may be pursued elsewhere on the lower Tolt River, but no definitive plans have been made, nor has funding been allocated for such activities.

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

Parametrix, Inc. January 2003. *Lower Tolt River Floodplain Reconnection Alternatives and Analysis.*

Parametrix, Inc. June 2001. *Lower Tolt River Floodplain Reconnection Site Analysis Characterization of Existing Conditions.*

Herrera Environmental Consultants. January 2006. *Draft Basis of Design Report. Lower Tolt Floodplain Reconnection Project.*

King County Department of Natural Resources and Parks. September 2006 (estimated completion date). *Final Wetland Delineation Report for the Tolt Floodplain Reconnection Project.*

King County Department of Natural Resources and Parks. September 2006 (estimated completion date). *Final Aquatic Areas Special Study for the Tolt Floodplain Reconnection Project.*

King County Department of Transportation, Materials Laboratory. August 2005. *Lower Tolt Floodplain Reconnection Project, Preliminary Geotechnical Investigation.*

King County Department of Transportation, Materials Laboratory. March 2006. *Draft Geotechnical Investigation, Lower Tolt Floodplain Reconnection Project.*

Northwest Archaeological Associates, Inc. August, 2004. *Archaeological Resource Assessment – Lower Tolt River Floodplain Reconnection Project, King County, Washington.*

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 permits or other authorizations are currently pending.

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

- Clean Water Act Section 404 Permit (U.S. Army Corps of Engineers)
- Endangered Species Act (ESA) Section 7 Consultation (National Oceanic and Atmospheric Administration Fisheries and United States. Fish and Wildlife Service)
- National Historic Preservation Act Section 106 Review

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- National Pollutant Discharge Elimination System (NPDES) Permit for Construction (Washington State Department of Ecology)
- Coastal Zone Management Consistency
- Section 401 Water Quality Certification (Washington State Department of Ecology)
- Washington Department of Fish and Wildlife Hydraulic Project Approval
- Washington State Department of Natural Resources Aquatic Use Authorization
- Washington State Department of Transportation, General Permit for Work in Right of Way
- King County Clearing and Grading Permit
- Shoreline Management Substantial Development Permit
- Flood Hazard Certification

11. *Give a 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 the project description.)*

King County and the City of Seattle propose to restore natural river processes and improve fish and wildlife habitat along the lower 0.5 mile of the Tolt River in the Tolt River-John MacDonald Park. Levees constructed in the 1940s on both sides of the river from State Route 203 to its confluence with the Snoqualmie River have dramatically altered the physical and biological character of the river in this area, degraded fish and wildlife habitat, and reduced salmon productivity in this reach. The project will:

1. Remove approximately 2460 feet of existing levee along the north (right) bank of the river to allow the river to reoccupy its historic floodplain;
2. Construct a new setback levee and revetment system roughly 800 feet north of the existing levee to provide at least the same level of flood and erosion protection for the park and adjacent properties as the existing levee currently provides;
3. Place large woody debris (LWD) in the floodplain to direct river water to desired flow routes within the floodplain, to diffuse energy from the flowing water, and to encourage the formation of desired habitat features;
4. Excavate a new outlet channel in the floodplain;
5. Plant native vegetation in the floodplain and in all areas disturbed during project construction; and
6. Provide trails and parking to enhance recreational use in the area.

The levees and their riprapped banks have changed the way the Tolt River moves and deposits sediment, shortened the river's length, reduced access to side channels and floodplain wetlands, reduced the quality of riparian habitat for fish and aquatic species as well as other riparian wildlife, and have reduced the supply of LWD to the active river

channel. Reconnecting the lower river with its floodplain will dramatically improve habitat conditions within the river and floodplain area, especially habitat for salmonids such as Chinook, coho, pink, and chum salmon and cutthroat, rainbow, and steelhead trout, as new, more complex habitats form, and as existing habitats within the floodplain area have a more direct connection to the river.

The proposed project will also maintain the current level of flood and erosion protection to the park and adjacent public and private properties and possibly provide longer term protection than is afforded by the current levee. Presently, sediment accumulates in this reach of the Tolt River, causing the bed of the river to rise and reducing the overall capacity of the river channel for floodwaters. Removing the levee and allowing the river to access more floodplain area also increases the amount of area available for sediment storage, and thereby will decrease the average vertical rate of sediment accumulation. This will prolong the ability of the Tolt River levee system to contain floodwaters.

Details of each of the project elements and additional background information are provided below. Figure 1 shows the location of each of the elements.

### Background

To prevent the river from flooding adjacent lands and meandering across the floodplain, levees were constructed along the lower Tolt in the 1940s. While successful with respect to those goals, the levees dramatically changed the behavior of the river and its habitat-forming processes. In a more natural condition, the river is connected to its floodplain, has more room to move back and forth, and creates meander bends and split channels. A natural river also captures large pieces of wood from trees along the bank. Together, these processes result in a complex mix of large and small channels, riffles and pools, and instream wood and overhanging vegetation. These habitat features are necessary for salmon and other aquatic species at one or more of the stages of their life cycle. This complexity is also necessary to provide food, cover, and refuge to species using the river across a wide range of flow conditions. Lacking these elements, areas of the lower Tolt flanked by levees have limited salmon habitat value.

In contrast with historic conditions, the lower Tolt today is very simple, primarily consisting of fast-water habitats (referred to as runs) with very few pools. The current conditions report (Parametrix, 2001) identified no pools in the lower 0.5 mile and almost no LWD interacting with the river at low to moderate flows. During stream survey work in 2004, King County ecologists identified two pools in the project reach. What limited cover does exist is found in those pools and along the edge of the channel, where flow velocities are reduced by roughness of vegetation and/or the armored banks. These conditions provide very little cover for juvenile salmon, making the lower river less productive for many species at critical life stages. Looking upstream at unconfined reaches of the river, the number of pools per mile is significantly higher as is the amount and complexity of other habitat types.

Aerial photographs taken of the lower Tolt before the levees were constructed show that the river was much more complex and similar in character to unconfined reaches upstream. By removing the levee, the river will be allowed to re-establish those habitats in almost

50 acres of previously inaccessible floodplain, dramatically improving current habitat conditions.

Project Elements

*Levee Removal and Construction of the Outlet Channel*

Approximately 2460 linear feet of the existing levee on the north side of the river below State Route 203 will be removed. Approximately 700 feet of the existing north side levee immediately downstream of the State Route 203 bridge will be left intact to ensure that the existing bridge is not harmed by the project. Removal of the levee will allow the river to find alternate paths to the Snoqualmie River through the floodplain in the undeveloped portion of the Tolt River-John MacDonald Park. The Tolt would not be directed into a single, constructed channel, but would have restored access during high water events to abandoned side channels that have been cut off from the river by the existing levee. An outlet channel will be constructed south of the campground to guide initial flows back into the Snoqualmie River, but this is likely to expand and move as more flow enters the floodplain area. Because the bottom elevation of the Tolt has been rising as gravel accumulates within the confined channel, it is anticipated that the mainstem of the Tolt will at some point in the future abandon its current channel and flow into one or more of these abandoned side channels.

Although the river would choose its own path, and would continue to meander over time across the floodplain, it would be prevented from damaging the campground and other developed areas of the park by the installation of the new “setback” levee and revetment system (described below).

Heavy equipment operating from the top of the levee will remove fill material and large rock placed in and adjacent to the river. This will necessitate removal of the vegetation growing on the levee. Wherever possible, however, large trees north of the levee will be left undisturbed. Trees that are removed will be utilized either as part of the engineered logjams (ELJs) or placed as habitat features elsewhere on the site. Much of the excavated rock and fill material will be used to build the new setback levee or other new project features. Excess and unusable material will be disposed of off-site, outside of the floodplain.

*Construction of the Setback Levee and Revetment*

A new setback levee and protective revetment will be constructed between the developed areas of the park and the undeveloped floodplain area. The proposed project will provide the same level of flood and erosion protection for developed areas of the park and the surrounding community as currently exists, and may provide more long-term protection than the present levee system.

The new levee will be approximately 2140 feet long and extend from State Route 203 near the baseball field (Mariner Field) to the edge of the existing campground (Figures 1 and 2). The elevation of the top of the new levee will match the elevation of the existing levee (Figure 3). The height of the levee ranges from one to five feet above the existing ground surface.

Using bioengineering techniques, the new levee and revetment utilize rock, soil, LWD, and native plants and are designed to withstand the erosive power of the Tolt. Bioengineered levees and revetments provide better fish and wildlife habitat than traditional rock levees. Large rock will be buried at the toe of the levee and placed on the levee face in areas where scour and erosion may occur during future flows. Installation of the levee, including the buried toe rock, will require disturbance of an area approximately 85 feet wide along the proposed alignment. A paved trail (described below) will be constructed on top of the levee for its entire length. Construction of the new levee will require crossing an abandoned side channel and relocating a section of another channel near the baseball field. A revetment will be constructed along the campground to protect this area from erosion and scour.

Unlike a levee that is built higher than surrounding areas to prevent flooding, a revetment is a reinforcement of a bank using rock, LWD, or other hard materials to prevent erosion and bank failure. The elevation of the existing ground surface along the campground is as high as the elevation of the existing levee, so a new setback levee is not needed in this area. The revetment structure will be constructed using a large number of logs placed along the existing banks and held in place by wooden piles driven deep into the bed of the floodplain and by the weight of rock, soil, and other logs (Figure 4). Like the other bioengineered structures, the revetment will disperse energy and direct flows downstream, while still providing habitat benefits.

#### *Large Woody Debris and Engineered Logjams*

Large woody debris (LWD) and engineered logjams (ELJs) will be built to dissipate energy, reduce flow velocities, and deflect flow to desired flow pathways within the newly accessible floodplain area. Both use wood to create hard points within the floodplain to help guide the river and prevent undesirable channel migration and/or erosion. The design places ELJs where they are likely to divide concentrated flood flows into smaller separate flows that are less likely to cause damage, and are more likely to add significant habitat value by forming and preserving channels along each flow path. Further, the ELJs will cause turbulent flow patterns that will tend to dissipate the river's energy. This will reduce energy and thus slow erosive river flows elsewhere, protecting the new levee and revetment structures.

The LWD and ELJ structures will consist of strategically placed clusters of large logs, soil, and rock along the river bank (for erosion protection) or within the floodplain (to slow flood flows and promote the formation of side channels). These structures mimic natural wood accumulations in river systems. Natural wood accumulations are valuable habitat features that slow river flows and provide complex habitat and hydraulic features such as pools, riffles, bars, braids, and side channels. One key difference between natural and engineered structures is that the engineered structures are strategically placed to limit and control the natural movement of the mainstem and side channels of a river. For the Tolt River project, these ELJs will be designed to be denser than many natural logjams in order to reduce flows and straining through the structure and limit wood accumulation at the upstream face of the structure. Engineered and denser structures can also be more stable and longer-lived than more loosely structured, natural logjams.

The ELJs will be larger, more complex structures than the smaller LWD structures. The ELJs proposed will typically be 50 to 90 feet wide and consist of a densely packed mosaic of large logs and rock that form a structurally solid core. Figure 5 shows a typical ELJ structure. The upstream face(s) of each ELJ structure will be racked with smaller logs. These logs are not part of the stable core structure and can be dynamically replaced by other wood moving through the river system. The base of the structure core will likely be placed at a depth 15 to 20 feet below the ground surface, but the exposed part of the structure will only extend six to eight feet above grade. Soil will be placed atop the ELJ structures to serve as a medium for vegetation growth on the structures. In the future, each ELJ structure will appear to be a small island with trees on top, tightly packed exposed logs on the sides, with a scour hole at the upstream side, and a low-velocity gravel depositional zone downstream of the structure (shaped like a teardrop).

*Construction of Trails and Parking Lots for Recreational Use*

Trails and designated parking areas shown in Figure 1 are important elements of the project. A new paved trail will be constructed on top of the setback levee and will connect to several unpaved “soft” trails to provide access within the park, to the floodplain, and to the river’s edge. The paved trail will leave the levee near the existing baseball field (Mariner Field) and continue to the south roughly parallel to State Route 203, where it will connect to the Snoqualmie River trail at the southeast corner of the park property. A pedestrian bridge will be built over an abandoned side channel just south of Mariner Field. Trail access beneath the existing State Route 203 bridge will be improved by lowering the trail bed and creating greater clearance for bike riders, joggers, and pedestrians. These improvements will be coordinated with the Washington State Department of Transportation and will not affect the integrity of the bridge or roadway. The west end of the trail will lead to the developed portion of the park and will provide access to the campground, the mouth of the Tolt River, play areas, park administrative buildings, and the footbridge over the Snoqualmie River.

The paved trail will vary in width from 10 to 12 feet, depending on location and anticipated level of use, and will meet ADA (Americans with Disabilities Act) requirements. The paved trail will be designed and constructed to accommodate occasional use by maintenance and emergency vehicles and will include three turnarounds. The soft trails will be four to six feet wide and either be mowed grass or delineated with woodchips. Because of their location in the active floodplain, the soft trails may need periodic maintenance and may need to be relocated in the future as new channels form in the floodplain.

Three new parking areas will be constructed to provide adequate parking for both existing and anticipated park uses. These areas will provide 120 new parking stalls to replace the spaces on the existing levee road to be removed by the project. The proposed new spaces have been strategically located to allow different user groups to access the trail, the camping areas, and potential future locations of the river most conveniently (Figure 2). Stormwater treatment facilities will be constructed to treat stormwater generated by the paved areas and to protect water quality in the project area. One of the parking lots will use pervious, grass-paved surfacing to facilitate infiltration and reduce stormwater runoff.



*Floodplain Revegetation*

Once construction is complete, approximately 20 acres of the newly accessible floodplain will be planted with native species. Planting will occur in phases over several years. The initial planting will focus on: (1) stabilizing areas disturbed by construction; (2) restoring and enhancing degraded wetland areas to mitigate for unavoidable construction impacts; and (3) installing fast-growing pioneer tree species to create floodplain roughness. This latter effort will utilize species such as black cottonwood, which grow quickly and are adapted to the dynamic environment of riparian areas. Subsequent planting three to five years after the initial effort will focus on improving species and structural habitat diversity. The delayed planting will enable biologists to observe the new hydrologic and soil conditions created after flooding so that plant species can be matched to the new site conditions.

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 plan, 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 project is located along the north bank of the lower 0.5 mile of the Tolt River on the Tolt River-John MacDonald Park, just south of Carnation (Figure 6). This location is otherwise described as the north half of Section 21, Township 25 North, Range 7 East (Willamette Meridian).

**B. ENVIRONMENTAL ELEMENTS**

**1. Earth**

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

The project site is located at the western edge of the Snoqualmie Valley and is characterized by flat topography with only modest changes in elevation across the site. Steep slopes are present on the opposite side of the Snoqualmie River where elevations rise rapidly, forming the valley wall.

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

The steepest slopes in the work area range between 5 and 10 percent. Slopes west of the Snoqualmie River in places exceed 40 percent. No work is proposed west of the Snoqualmie River or near steep slopes.

- 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 prime farmland.*

The park property contains a wide variety of soil types ranging from the well-drained Everett series on the slopes west of the river to the silts and clays associated with the abandoned side channels found in the floodplain. Typical soils found in the proposed work area consist of gravel and cobbles (riverwash) along the edge of the Tolt River and silt loam (Oridia silt loam) in much of the floodplain.

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

The site lies within the historic channel migration zone of the Tolt River, as evidenced by the presence of abandoned side channels located within the park property and by historic maps and photos. Placement of the levees on the lower Tolt River, however, have confined the river to its current alignment and eliminated natural channel migration. Steep, potentially unstable slopes are present across the Snoqualmie River from the proposed project site. No work is proposed in or near areas of steep or unstable slopes.

- e. *Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate the source of fill.*

Construction of the proposed project will involve extensive grading, including both fill and excavation, within the project area. The proposed project will place approximately 25,500 cubic yards of fill to construct the new setback levee and revetment, construct the ELJs, cross an abandoned side channel, connect the proposed paved trail to an existing contiguous trail, and accommodate additional parking proposed along the existing levee road. Approximately 36,000 cubic yards of material will be excavated to remove the existing levee, create a new outlet channel, construct the large woody debris and engineered logjams, and relocate a portion of an abandoned side channel near the baseball field. Where possible, material removed from the existing levee will be used to construct the new levee, the ELJ structures, and associated floodplain roughening elements. Overall, there will be a net reduction of fill within the floodplain of approximately 5,000 to 10,000 cubic yards.

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

Yes. The various phases of construction will involve extensive earthwork in and adjacent to wetland and stream areas and along the Tolt River. Although great care will be taken to minimize the potential for construction-related impacts, soil erosion is always a possibility during construction, particularly around wetlands and streams.

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

The project will generate a net gain of 0.7 acre of new impervious surface. Approximately 1.6 acres of impervious surface created by the existing levee road will be removed and 2.3 acres of new paved trail and parking area will be constructed. This amounts to less than 1 percent of the park property.

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

The project will use a combination of timing, construction sequencing, and erosion control measures to minimize the risk of sediment transport and the release of turbid water. A detailed sediment and erosion control plan will be created prior to construction, and all necessary water quality permits will be obtained. Some of the techniques that will be used to help reduce potential impacts from erosion during construction include:

- Construction in or adjacent to streams, wetlands, or other bodies of water will only occur during the summer construction season when the chance of precipitation is very low and river levels are at their lowest.
- The work areas will remain isolated from flowing water in the Tolt and Snoqualmie Rivers until the very end of construction.
- Turbid water created during excavation below groundwater levels will be isolated, will not be in contact with surface water, and will be filtered, if necessary. Groundwater pumped from work areas will be discharged to appropriate temporary filtration facilities.
- Clearing and grading will be minimized to limit opportunities for erosion.
- The new outlet channel will not be connected to the Snoqualmie River until the channel and overall site are stabilized.
- All disturbed areas will be stabilized using mulch, grass seeding, and native plants before the onset of the rainy season so that the possibility of erosion and sediment transport is limited.

## 2. Air

- a. *What types of emissions to the air would result from the proposal (for example, dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities, if known.*

During construction, exhaust from construction equipment and vehicles delivering or removing materials to or from the construction areas will be the primary source of emissions to the air. This includes emissions from trucks, excavators, bulldozers, backhoes, pile drivers, and similar equipment. The exhaust will consist mainly of carbon monoxide, various hydrocarbons, and related substances. Construction may also generate dust in the work area.

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

No.

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

Short-term construction-related impacts to the air could be reduced or controlled by several means:

- Avoid prolonged periods of vehicle idling.
- Use vehicles and machinery in good operating condition.
- Clean truck and machinery tires before leaving the staging areas to keep dirt and dust from entering the air and from being tracked onto paved streets. If necessary, local streets will be cleaned to remove dust, dirt, and/or mud.
- Control dust by using watering trucks as necessary during construction.

### 3. Water

- a. *Surface:*

- 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 the type and provide names. If appropriate, state what stream or river it flows into.*

Yes. The Tolt and Snoqualmie Rivers as well as several abandoned side channels and wetland features are within and/or immediately adjacent to the proposed work area. The Tolt and Snoqualmie Rivers are both Type S aquatic areas under King County's classification system. The abandoned side channels and associated wetland are considered Category I wetlands.

- 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.*

Yes. The project will include work immediately adjacent to both the Tolt and Snoqualmie Rivers to remove the existing levee, install LWD structures, construct a new levee, and create a new section of stream channel. Work will occur within the abandoned side channels and associated wetlands to construct the levee, install engineered logjams, and place essential bank protection.

- 3) *Estimate the amount of fill and dredge material that could 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.*

Approximately 4000 cubic yards of material will be placed within the abandoned side channels/wetland. This includes the filling of approximately 240 lineal feet of the south channel along the edge of the baseball field and an additional 80 lineal feet where the levee will cross the north channel. This estimate also

includes fill that will be placed in the wetland/channel area along the eastern edge of the existing campground to install the revetment. These areas will be filled with rock, gravel, and native soils found on-site or imported from a local gravel mine.

Approximately one acre of wetland and side channel habitat will be filled or otherwise permanently impacted during construction of the project. Approximately 0.55 acre of wetland/side channel will be filled to construct the levee. An additional 0.2 acre of wetland/side channel may also be filled to construct the revetment along the east side of the campground. Approximately 0.25 acre will be modified to create the new outlet channel and the channel near Mariner Field. Temporary impacts will occur around the ELJ structures during construction and for the placement of a toe rock where the levee skirts the perimeter of the existing north channel. New channel and wetland areas totaling approximately 2.1 acres will be created to replace the area lost.

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

The project will not involve any consumptive use of surface or groundwater. The goal of the project, however, is to set back an existing levee and allow the river to meander through the restored floodplain area. These changes are consistent with what the site experienced prior to construction of the levees.

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

Yes. The entire project area lies within the 100-year floodplain of both the Tolt and Snoqualmie Rivers.

- 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. The project will not generate or discharge any waste material.

*b. Ground:*

- 1) *Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities, if known.*

No groundwater will be withdrawn, nor will there be any discharge to groundwater. During construction of the ELJ structures, groundwater may collect in areas of excavation. Some pumping of water out of these excavated areas may be necessary to allow construction to proceed. Water pumped will be discharged into temporary holding areas where sediment can settle before the water is released. These temporary settling basins will likely be constructed of straw bales, plastic sheeting, and/or filter fabric and be placed in adjacent uplands.

- 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 generated by the project. Visitors to the park use the existing restroom facilities in the park.

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.

Stormwater runoff from the new paved trail and parking areas will be managed to ensure that it is properly treated and discharged in appropriate locations. For the most part, runoff from the paved trail will disperse into the adjacent vegetation where it will infiltrate. Runoff from the parking areas, however, will be collected and treated for water quality consistent with the 2005 *King County Surface Water Design Manual* prior to release into native vegetation in the surrounding area.

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

No waste material will be generated or discharged by the project.

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

Because the project is located immediately adjacent to a designated receiving body (Snoqualmie River), no volume control (detention) is required. Water quality treatment, however, will be provided for all new pollution-generating impervious surfaces. Runoff from the parking areas will be treated using biofiltration and/or filter strips consistent with the 2005 *King County Surface Water Design Manual*. Because the trail will not have regular vehicular traffic, the runoff can be dispersed into the native vegetation adjacent to the trail without treatment or detention.

#### 4. Plants

a. *Check or underline types of vegetation found on the site:*

- Deciduous trees: alder, maple, aspen, cottonwood, other
- Evergreen trees: fir, cedar, pine, other
- Shrubs
- Grass
- Pasture
- Crop or grain
- Wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other

- Water plants: water lily, eelgrass, milfoil, other
- Other types of vegetation: Japanese knotweed, Himalayan blackberry, evergreen blackberry, invasive weed species

The vegetation present in the project area varies across the floodplain. Young cottonwood, willow, and alder saplings grow along the fringe of the Tolt River channel. Blackberry and other invasive species are also present along banks of the levee prism. The top of the levee is maintained for access and is not vegetated. Mature deciduous trees, including cottonwood, big-leaf maple, and red alder, grow on the north side of the levee. This area supports a variety of understory plants, including salmonberry, sword fern, Indian plum, snowberry, lady fern, holly, stinging nettles, to name a few. Very few conifers are present in the project area. Other areas of the floodplain are open fields dominated by thistle and pasture grasses, with young alders pioneering along the fringes. Common horsetail and Himalayan blackberry are the dominant vegetation along the abandoned side channels. A few small areas of young alders are also present along the proposed setback levee alignment.

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

Approximately 14 acres of the site will be disturbed during construction of the project. Roughly two-thirds of this is located in areas of high disturbance that are either unvegetated (existing levee surface), are dominated by invasive species such as Himalayan blackberry, thistle, and weedy grass species, or occur in areas maintained as turf grasses within the park. Japanese knotweed is also present in places along the existing levee. Approximately five acres of clearing, however, will occur in areas that support native vegetation, including red alders, black cottonwoods, and big-leaf maples along with shrubs and groundcover.

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

No threatened or endangered plant species are known to exist on or near the project site.

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

Native tree and shrub species will be planted in all disturbed areas to stabilize the site and increase plant diversity. Additional and more extensive planting will be undertaken several years after project construction in the newly connected floodplain between the existing Tolt alignment and the new setback levee to re-establish a diverse native floodplain and riparian forest, improve fish and wildlife habitat, create floodplain roughness, and recruit future LWD.

## 5. Animals

*a. Check or underline any birds or animals that have been observed on or near the site, or are known to be on or near the site:*

- Birds: hawk, heron, eagle, songbirds, other

- Mammals: deer, bear, elk, beaver, other
- Fish: bass, salmon, trout, herring, shellfish, other

The Tolt River-John MacDonald Park property is home to a large variety of wildlife species, including birds, mammals, reptiles, amphibians, and fish. The site provides habitat for a variety of wildlife common to Puget Sound lowland forests and riparian areas. Birds include red-tailed hawks, bald eagles, herons, and a variety of songbirds. Large mammals include black-tailed deer, beaver, coyotes, and raccoons, and many small mammals such as rabbits, chichories, gray squirrels, and other rodents are common. Black bear have also been reported to be in the vicinity of the project site.

The Tolt and adjacent reaches of the Snoqualmie River are used by nine species of salmonids: Chinook, chum, pink, coho, and sockeye salmon; steelhead, cutthroat, and bull trout; and mountain whitefish.

The value of the Snoqualmie River downstream of the confluence with the Tolt River as a high-use/high-quality spawning area for Chinook, chum, and pink salmon and steelhead trout is well known. The *Catalog of Washington Streams and Salmon Utilization* (Washington Department of Fisheries, 1975) described fish use in this reach and noted it as having good to excellent gravel composition. Because of its value for spawning, the Washington Department of Fish and Wildlife has been using this reach as an index area to assess salmonid spawning and run size abundance for several decades.

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

The United States Fish and Wildlife Service and the National Marine Fisheries Service identify bull trout, Puget Sound Chinook salmon, and wintering and nesting bald eagles to be within the vicinity of the project site. Steelhead trout, a species recently proposed for listing (threatened), also utilize the Tolt and Snoqualmie systems. Chinook juveniles have been observed using off-channel areas in the project vicinity, but they have not been found to be present in the abandoned side channels on the project site. The adjacent reaches of the Snoqualmie and the Tolt Rivers are designated critical habitat for Chinook salmon.

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

Juvenile and adult anadromous and resident fish migrate through the project area. The site is also located in the Pacific Flyway used by waterfowl and other migratory bird species.

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

The primary goal of the project is to improve habitat for both fish and wildlife by restoring natural riverine processes in the lower Tolt River. This will allow the river to meander through approximately 50 acres of its historic floodplain, creating complex and diverse habitat, and connecting isolated floodplain habitat to the river. Extensive areas within the floodplain will also be reforested to restore floodplain roughness, structural diversity, and riparian functions lost to historic clearing of these areas.



Construction of the project will cause some temporary impacts to wildlife that reside in the immediate project area and to habitat disturbed during construction. Much of the area to be disturbed is currently occupied by the levee, which is poor habitat for wildlife. Construction of the ELJs, setback levee and revetment, parking areas, and outlet channel will displace mobile wildlife species, temporarily destroy some habitat, and may harm less mobile species. Every effort will be made to remove wildlife from the direct impact areas. Only the areas covered by pavement, the levee trail and the parking areas, will be permanently lost as wildlife habitat. These areas, however, are small compared to the vast improvements in the quality of fish and wildlife habitat that will result from this restoration project.

## 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.*

The project will not create a new demand for energy of any kind. Existing power hook-ups available at each of the campsites along the eastern side of the RV campground loop road may be temporarily disconnected during construction, but this will not change the energy demand. Energy demands caused by recreational uses in the park are not expected to change as a result of the project.

- 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 for solar energy.

- 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:*

Not applicable.

## 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.*

There are no environmental hazards present, nor will the project generate any hazardous or toxic chemicals.

During construction, it is possible that gasoline, oil, or diesel fuel could be spilled from construction equipment. To deal with that possibility, the construction contractor will be required to have an appropriate spill prevention and response plan and have appropriate spill containment supplies on hand to deal with potential spills.

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

It is not anticipated that emergency services will be required, but construction crews will maintain a list of emergency contact numbers, including fire and rescue, police, and agency contacts. They will also adhere to a safety plan outlining precautions to be followed while on-site, near heavy equipment, and in or near excavations.

After construction, the paved trail on the new setback levee will be wide enough to accommodate emergency vehicles and includes three vehicle turnaround points. Larger vehicles, such as fire trucks, can also drive on the levee trail. The soft trails will facilitate pedestrian access to interior floodplain areas for emergency personnel.

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

The contractor will be required to refuel construction equipment in designated areas well outside of streams, wetlands, or other highly sensitive locations. In addition, the contractor selected will be required to have spill response supplies on the construction site to deal with the possibility of fuel spills.

b. *Noise:*

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

There is no existing noise at the project site that would affect project construction or operation.

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

Construction of the project will create some short-term noise impacts associated with operation of heavy equipment. The most intensive noise levels will occur at the construction site where the noise levels will typically range from 75 to 95 decibels. Noise cause by construction activity will occur between 7 a.m. and 7 p.m. on weekdays and 9 a.m. to 5 p.m. on Saturdays.

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

Construction noise will comply with the provisions of the King County noise ordinance (King County Code 12.88). Equipment operation will be limited to the hours from 7 a.m. to 7 p.m., Monday through Friday. Work on Saturday will be limited to the hours from 9 a.m. to 5 p.m.

## 8. Land and Shoreline Use

*a. What is the current use of the site and adjacent properties?*

The property is publicly owned and operated as a County park. The site provides both active and passive recreational opportunities, including camping, hiking, biking, baseball, soccer, fishing, bird watching, etc. The site is a popular recreation site for boaters, floaters, swimmers, sunbathers, and picnics, particularly during the summer months. Campsites on the park property include traditional tent campsites as well as more modern sites providing power and water hook-ups. Active recreation facilities for baseball and informal soccer fields are also present and regularly used.

*b. Has the site been used for agriculture? If so, describe.*

Consistent with the rural setting and surrounding uses, some of the site was likely used for agriculture at some time in the past. Since being acquired as a park site, however, agricultural uses have been excluded.

*c. Describe any structures on the site.*

In addition to the levee already described and the state highway bordering the east end of the project area, the park has several park buildings, including an office, a barn, maintenance sheds, restroom facilities, picnic tables, and both RV and tent camping sites. A pedestrian bridge crosses the Snoqualmie River downstream of the project site and provides access to the park area on the west side of the Snoqualmie River. A baseball field (Mariner Field) has been developed on the park just west of State Route 203.

The project area within the park has several internal access/service roads, including the road on top of the existing levee, and parking lots.

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

No buildings will be demolished, but most of the existing levee north of the Tolt River and the road on top of it will be removed, as described in detail previously. There will be improvements made to the pedestrian trail beneath the State Route 203 bridge to improve overhead clearance for trail users, but not to the bridge structure itself. The baseball field will not be directly affected by the project, but the improved parking and trail system will benefit users of the field.

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

The site is zoned Rural Area, one dwelling unit per 10 acres, RA-10.

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

The current comprehensive plan designation of the site is Rural Residential (RR).

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

The shoreline master program designation of the site is "Conservancy."

- h. Has any part of the site been classified as an “environmentally sensitive” area? If so, specify.*

Yes. The site contains a number of critical areas as defined by local, state, and federal regulations. Those include the Tolt and Snoqualmie Rivers, former side channels of the Tolt, and associated wetlands. The site is also within floodplain and seismic hazard areas. Park property on the east side of the Snoqualmie River is also mapped as a steep slope and landslide hazard areas; however, this is not within the project area.

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

The project will not create any additional residential or commercial structures that would house or employ people.

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

The project may temporarily prevent access to and use of nine recreational campsites during construction, but will not impact permanent housing or eliminate any existing camp sites.

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

Work and access along the perimeter of the campground will be limited to minimize the disturbance of existing campsites and allow unaffected sites to remain in use.

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

The property is part of the King County Park System and provides both recreational facilities and opportunities for the public to enjoy the beauty of natural habitats. Consistent with those goals, the project proposes to enhance and restore natural processes, while protecting existing and future recreational facilities. Representatives of the King County Parks and Recreation Division have also been consulted on the project design to ensure that the project is consistent with current and future park uses.

The project proponents have also met with adjacent property owners, members of the Carnation City Council, affected tribal interests, park user groups (particularly recreational groups), and the general public to discuss the project and how it will affect use of the site.

## **9. Housing**

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

The project will not create any permanent housing.

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

Not applicable.

- c. *Proposed measures to reduce or control housing impacts, if any:*  
Not applicable.

## 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 levee and revetment will be approximately five feet higher than the surrounding ground for the majority of its length. The levee will be composed of soil, with large angular rock facing on the river side in areas with a high potential for scour. The banks of the levee will be planted with native species. The ELJs will be approximately eight feet high above the surrounding floodplain, but will be tapered and planted to blend in with the surrounding topography and vegetation.

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

Removal of the levee and construction of the new setback levee, revetment, and ELJs will temporarily change those parts of the project area; however, over time the native plantings in those disturbed areas will be mature and native riparian forest will develop. The character of the Tolt River in the project reach will change from that of the artificially confined, single channel to a more natural alluvial river floodplain with several channels carrying river flow. The placement of the trail along the edge of the park property has the potential to affect the views currently enjoyed by the adjacent property owner as well as those from the baseball field. Pedestrians and other users may be visible or audible from off-site. Additionally, the specific view of the Tolt confluence from one nearby home will change, although this view will continue to include river and beach areas in the park and their associated human and wildlife uses.

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

Construction disturbance will be minimized to the greatest extent practicable; this will reduce the amount of area where vegetation will be lost. All disturbed areas will be planted with native plants that will grow and mature over time. The levee and trail were placed in the proposed location to help minimize the aesthetic impacts of the active trail use on the adjacent property owner. The area along the trail corridor will also be planted with native vegetation to screen the trail from the adjacent property, minimize disturbance of the trail users on wildlife, and enhance the natural character of the corridor.

## 11. Light and Glare

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

Not applicable. The project will not create any glare.

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

Not applicable.

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

None.

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

Not applicable.

## 12. Recreation

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

The Tolt River-John MacDonald Park is a popular recreational area providing opportunities for a wide variety of both active and passive activities. A recreational consultant was hired to evaluate existing park uses and provide detailed information about the type, amount, and locations of recreational uses in this portion of Tolt River-John MacDonald Park. This reach of the Tolt River is a key attraction, drawing swimmers, waders, floaters, sunbathers, picnickers, and family gatherings along the broad cobble beaches in the summer. Many types of floating and boating occur with people using more formal equipment such as inflatable kayaks, rafts, and small boats to inner tubes and many smaller inflatable water toys. Anglers use the lower Tolt and the adjacent Snoqualmie during the summer, fall, and into the winter both for practice and as they pursue trout, steelhead, and other species. Users of the Tolt River have easy access off the existing levee road, making it a convenient recreational area for a broad range of user groups. The levee road is also used by hikers, joggers, bike riders, dog walkers, and nature enthusiasts over the course of the year. The most popular location for recreational users is the confluence area at the southwest corner of the project area.

Elsewhere in the park, but outside of the project area, the park offers camping, baseball and soccer fields, picnic shelters, and playground equipment. Campsites provide power and water hook-ups. A boat launch, operated by the Washington Department of Fish and Wildlife, is located on the Snoqualmie River, south of the project area, just upstream of its confluence with the Tolt River. Extensive hiking and biking trails are present throughout the 438-acre park.

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

The project is anticipated to affect but not eliminate existing recreational uses in the park areas transformed by the project. These effects come from removal of most of the current north bank levee, installation of LWD within the floodplain, and alteration of the channel area of the lower Tolt River.

During Construction:

Recreational use within the immediate work areas will be restricted during construction for safety reasons; when heavy equipment is present, public access to work areas will be prohibited. Use of the campsites along the proposed revetment area may be restricted during construction for safety reasons and to provide access points for heavy equipment. Parking near the baseball diamond (Mariner Field) may be affected by construction of the levee and trail behind the backstop and through the overflow (grass) parking area. Work will be scheduled to minimize disruption of the field, but the field will need to be closed during construction in that area. Floaters and other users wanting to recreate in the lower reach of the river during construction will need to go elsewhere, such as upriver on the Tolt or to the Snoqualmie River. Immediately after construction, a schedule of renewed access to project areas will be developed in collaboration with Park staff to ensure safe conditions for park users.

Long-Term (After Construction):

The current popular recreational activities described in 12a. above will change as follows:

*Campground Use*

Future use of all campsites will continue as it exists now, dependent on future operational plans by the King County Parks and Recreation Division. The current aesthetics, amenities, and access to other areas of the park will remain primarily the same, though the new paved levee-top trail will provide greater trail access to other areas in the park and in the Snoqualmie Valley from the campground.

*Baseball Diamond and Sports Field Use*

These facilities will remain unchanged by the project. Parking for these areas will be improved by the new facilities included in the project.

*River Recreation (floating, picnicking, sunbathing, nature watching, etc.)*

By removing most of the current north bank levee, fewer park users will be able to park along a reduced length of roadway immediately adjacent to the current Tolt River channel. However, nearby new parking will allow enjoyment of trails accessing the old and expected new river channels for both passive and active recreation. A paved trail will be constructed on top of the new setback levee. The paved trail leads directly to the Snoqualmie River on its west end and to the lower Tolt River on its east end; however, much of the paved trail lies within the interior park area bordering the floodplain. A series of informal soft trails provide access to the interior floodplain area. In addition, the parking lot on the east side of the project area near State Route 203 will provide good access to the lower Tolt River, as well as for the Tolt River trail.

It is likely that the more natural mix of meandering and multiple channels will create a greater diversity of “beach” substrate than currently exists. Areas of sand and finer gravels will be more broadly distributed across the floodplain and will be accessible for beach users to sit or play near the river.

It is also anticipated that the river will split into two or more channels downstream of the removed levee area. This should result in a mix of channel flows, depths, and bank conditions that will change over time. The addition of LWD will also create conditions within the channel that are not currently present. Both are expected to affect uses of the river through the park property. The lack of a single, confined river channel with concentrated flow during the summer months may make floating and boating less appealing in this immediate area because of reduced flow velocities. In place of the single channel with flows conducive to floating, users may find the combination of shallower depths, multiple channels, and accumulations of LWD to be impractical for floating and boating. In some areas, it may be necessary to restrict use.

Users seeking opportunities to recreate in more natural riverine habitat, especially for activities such as hiking and bird and other wildlife watching, will enjoy the habitat improvement benefits. Users will also have greater opportunities to view aquatic species that are difficult to see in large river channels, such as migrating, spawning, and rearing (juvenile) salmon and trout.

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

All facilities disrupted during project construction will be replaced with similar, and in all cases, improved facilities in appropriate locations. To maintain access and reduce the impacts on recreation, the project includes a system of trails, paved and unpaved, which will allow park users to reach the edge of the river and improve internal access within the park. This should increase opportunities for certain recreational activities, including bird watching, fishing, and generally enjoying the natural environment. Additional parking will be provided to replace spaces on top of the existing levee road that will be removed. The number of parking spaces being proposed is commensurate with the number lost, but the proposed new spaces have been strategically placed to allow access to the both existing uses and to the future alignment of the Tolt. Both the paved trails and the parking facilities are formal facilities compared to the informal structures being used for these purposes currently, i.e., parking and hiking on the existing, badly deteriorated levee road.

King County and the City of Seattle recognize that aquatic recreation in the Tolt River is important to many park visitors in the summertime. While the river and recreation within it are not formally owned, managed, or overseen by the King County Parks and Recreation Division, it is important to the sponsors of the project that the use of the river for recreation continue.

King County and City of Seattle staff members have met with various user groups to solicit their input and to incorporate their issues and concerns into the project design. A focus group comprised of local park users, emergency responders (the King County Sheriff's Office and Eastside Fire and Rescue) and river safety experts was formed to review the proposed design and provide input regarding aquatic uses and concerns about specific project elements, such as the LWD and expected changes in the character of the river channel.



Additional efforts to address project impacts and safety concerns include both environmental and river safety education through signage and presentations at local schools, monitoring of the river in the project area to track changes in the river's character, and monitoring of the levee and other structures associated with the project to determine if further maintenance or modifications are needed. A King County-maintained web site (<http://dnr.metrokc.gov/wlr/flood/boaters/boaters.html>) provides general information on boating and on river-related recreation and recommended safety practices on King County rivers. This web site will include updated information regarding this project. Safety practices include:

- Scout the condition of the river before entering the water.
- Be aware of the effects of cold water, including the risks associated with hypothermia.
- Always wear a properly fitted personal flotation device.
- Be a competent swimmer.
- Know how to handle your watercraft with the proper use of paddles and oars.
- Never boat or swim beyond your skill level.
- Always stay alert for unexpected hazards.
- Never use alcohol or drugs when boating, swimming, or floating in a river.
- Children should never boat, swim, or float in a river without the close supervision of an adult.
- Know and practice river rescue techniques.

All river users should be mindful of the inherent risks associated with all aquatic recreation. Signs will be posted upstream of the site during project construction, advising boaters, swimmers, and floaters of the work ahead. In the event of extreme circumstances or conditions, the King County Sheriff's Office retains the authority to close a section of a river deemed too dangerous for recreational uses.

### **13. Historical and Cultural Preservation**

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.*

No places or objects listed on, or proposed for, national, state, or local preservation registers are known to occur in the project area. However, there is a home located on an adjacent parcel that is listed on the National Register of Historic Places. The building, constructed in the 1920s, was listed on the National Register because of its unique architectural character and because it illustrates the economic success of early 20th century family dairy farm operation in the Snoqualmie Valley.

- b. *Generally describe any landmarks or evidence of historical, archaeological, scientific, or cultural importance known to be on or next to the site.*

Evidence of past use of the site and surrounding areas by early native people has been documented in the vicinity of the project. There are reports of extensive use of the area by the Snoqualmie Tribe near the confluence of the Tolt and Snoqualmie Rivers. Fire modified rock and charcoal staining have been found in buried contexts during archaeological sampling and during past construction activities.

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

Following discussions with the landowner, the project has been designed to avoid crossing the parcel containing the historic structure. In addition, native plants are being installed along the levee to screen the trail from the building and adjacent parcel.

An archaeological consultant has been retained to assist with site investigation and project planning, and the County's Preservation Planner has been consulted. In addition, tribal authorities have been contacted to discuss the project and methods of avoiding impacts to as-yet undiscovered culturally significant resources. This information has been used to modify the project design to avoid or minimize disturbance.

For example, excavation, which is the primary mode of construction-related impacts to cultural resources, has been significantly reduced by using driven piles and fill material to limit the extent and depth of excavation. In addition, the levee and revetment locations were selected to occur in areas that allowed the maximum floodplain area to be made available to the river, but are also located at the fringe of historically active channel areas where past channel migration may have already disturbed any cultural artifacts that may have been left in the area. These modifications are particularly notable along the campground revetment. Based on archaeological data indicating the area within the campground loop has a relatively high likelihood of containing cultural resources, the location and construction techniques for the revetment have been modified to avoid or minimize disturbance in this area.

King County and the City of Seattle will continue to coordinate with tribal interests regarding the project design and the protection of potentially significant artifacts and archaeological materials. These issues will also be addressed in more detail as part of the permitting process through Section 106 of the National Historic Preservation Act.

The site will be monitored during construction to ensure that cultural resources, if encountered, will be protected. If cultural or archaeological resources are uncovered or encountered during construction, work will cease immediately, and appropriate steps will be taken to protect those resources. The Washington State Office of Archaeology and Historic Preservation, the King County Historic Preservation Program, and affected tribal groups will be notified immediately, and an on-site inspection will be conducted by a state-certified archaeologist and other qualified

resource professionals. A mitigation plan will be prepared prior to construction resuming at the site.

#### 14. Transportation

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

The main access to the Tolt River-John MacDonald Park is from Northeast 40th Street, which runs west from State Route 203 in Carnation. Access to the Park site via the existing levee road is located off State Route 203, just north of where the highway crosses the Tolt River.

- b. *Is the site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?*

No. The park is not a designated transit stop. The nearest bus stop is located approximately 0.4 mile away, at the intersection of State Route 203 and Northeast 40th Street.

- c. *How many parking spaces would the completed project have? How many would the project eliminate?*

The project will create approximately 120 new parking spaces to mitigate the loss of informal parking that currently exists along the edge of the levee road, which will be removed as part of this project. The number of new spaces is approximately equivalent to the number of spaces eliminated by removal of the levee.

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

The project will not require any new roads, but will create an internal trail system on top of the new levee to replace the access provided by the existing levee road being removed. Except for very limited maintenance use and emergency access, the trail will not be used as a road.

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

The project will not utilize nor is it near any commercial rail, air, or water transport facilities. Recreational boating on the Snoqualmie and the Tolt, however, is common in the project vicinity.

- f. *How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.*

The completed project is not expected to change the number or timing of vehicle trips to or from the existing park property.

During construction, additional trips to the site will occur to transport and deliver equipment and supplies, remove and export unsuitable excavated material, etc. Peak volumes are expected to add six trips per hour Monday through Saturday during the 2007 summer construction season (June through September). In 2008, the number of trips per hour during that same summer period is expected to decrease, but the peak would not exceed six per hour.

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

The creation of the new parking areas will offset the loss of informal parking currently available on the existing levee access. The new trail system will also improve internal pedestrian access within the park. During construction, the project will place flaggers at entrance and exit points to minimize conflicts with traffic on State Route 203 and other public roads. An internal haul route will also be set up to minimize the need to access State Route 203 or Northeast 40th Street to move materials from one side of the park to the other. Additional measures, including limiting the location and number of ingress and egress points onto public streets, will also be discussed with the Washington State Department of Transportation, the King County Department of Development and Environmental Services, and the City of Carnation.

**15. Public Services**

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

The project will not increase the demand for public services beyond the level already required or utilized by the existing park facilities.

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

Construction of the paved trail between Mariner Field, the campground, and other active uses near the park administration buildings should improve internal access within the park. In an emergency, improved access could allow faster response times.

**16. Utilities**

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

The site is currently served by electricity, water, and telephone services. The park administration buildings are connected to an existing septic system.

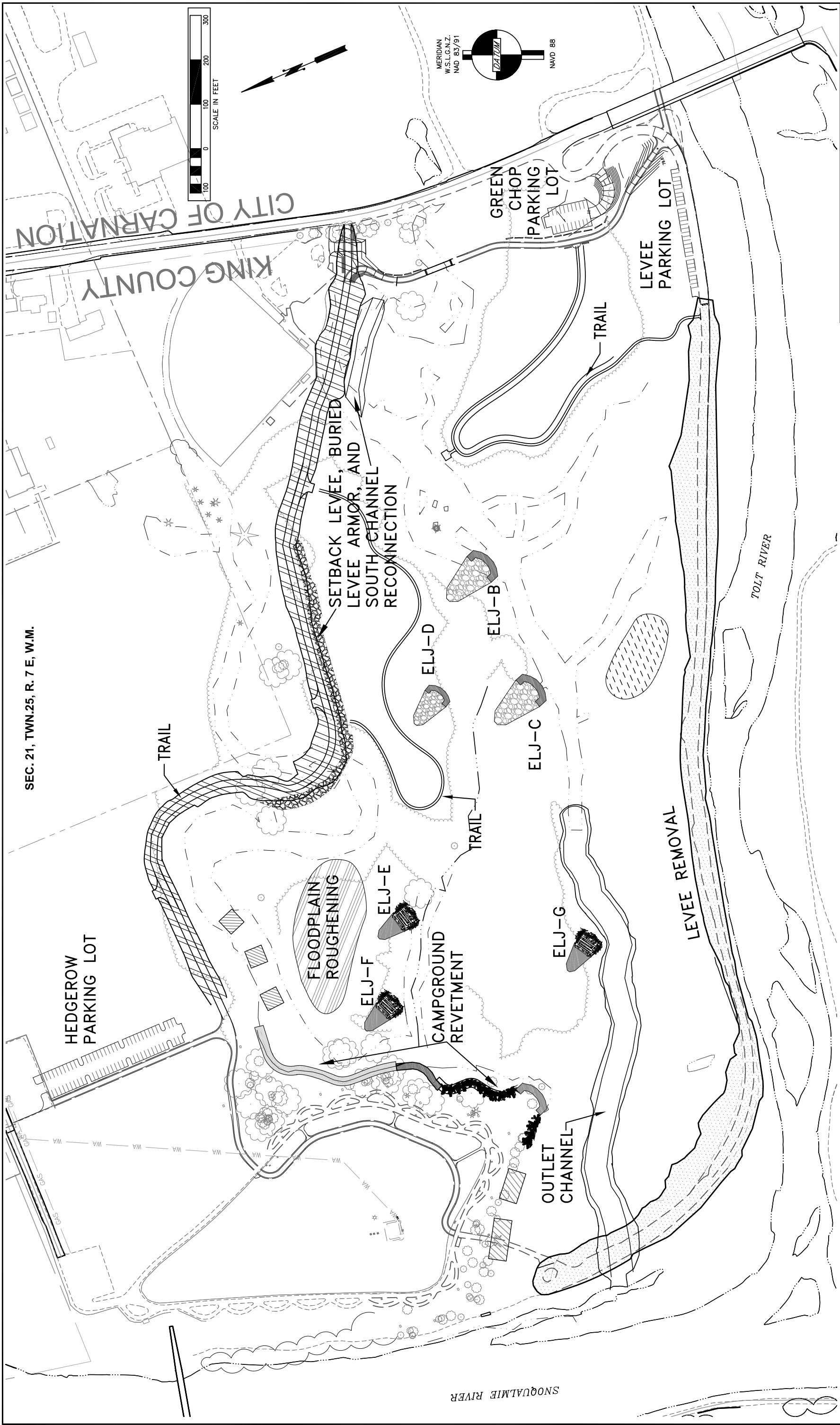
*b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity that might be needed.*

No new utilities will be installed. It may be necessary to temporarily disconnect some existing utilities to some of the campsites during construction, but no permanent change in service is anticipated.

**C. SIGNATURE**

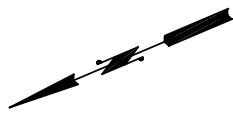
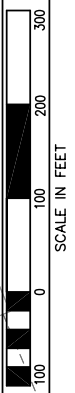
*The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.*

Signature: Jon Hinc  
Title: Senior Ecologist  
Date Submitted: 6/21/06



SEC. 21, TWN. 25, R. 7 E, W.M.

KING COUNTY  
CITY OF CARNATION



HEDGEROW  
PARKING LOT

FLOODPLAIN  
ROUGHENING

CAMPGROUND  
REVETMENT

OUTLET  
CHANNEL

SETBACK LEVEE, BURIED  
LEVEE ARMOR, AND  
SOUTH CHANNEL  
RECONNECTION

ELJ-D

ELJ-B

ELJ-C

ELJ-F

ELJ-E

ELJ-G

LEVEE REMOVAL

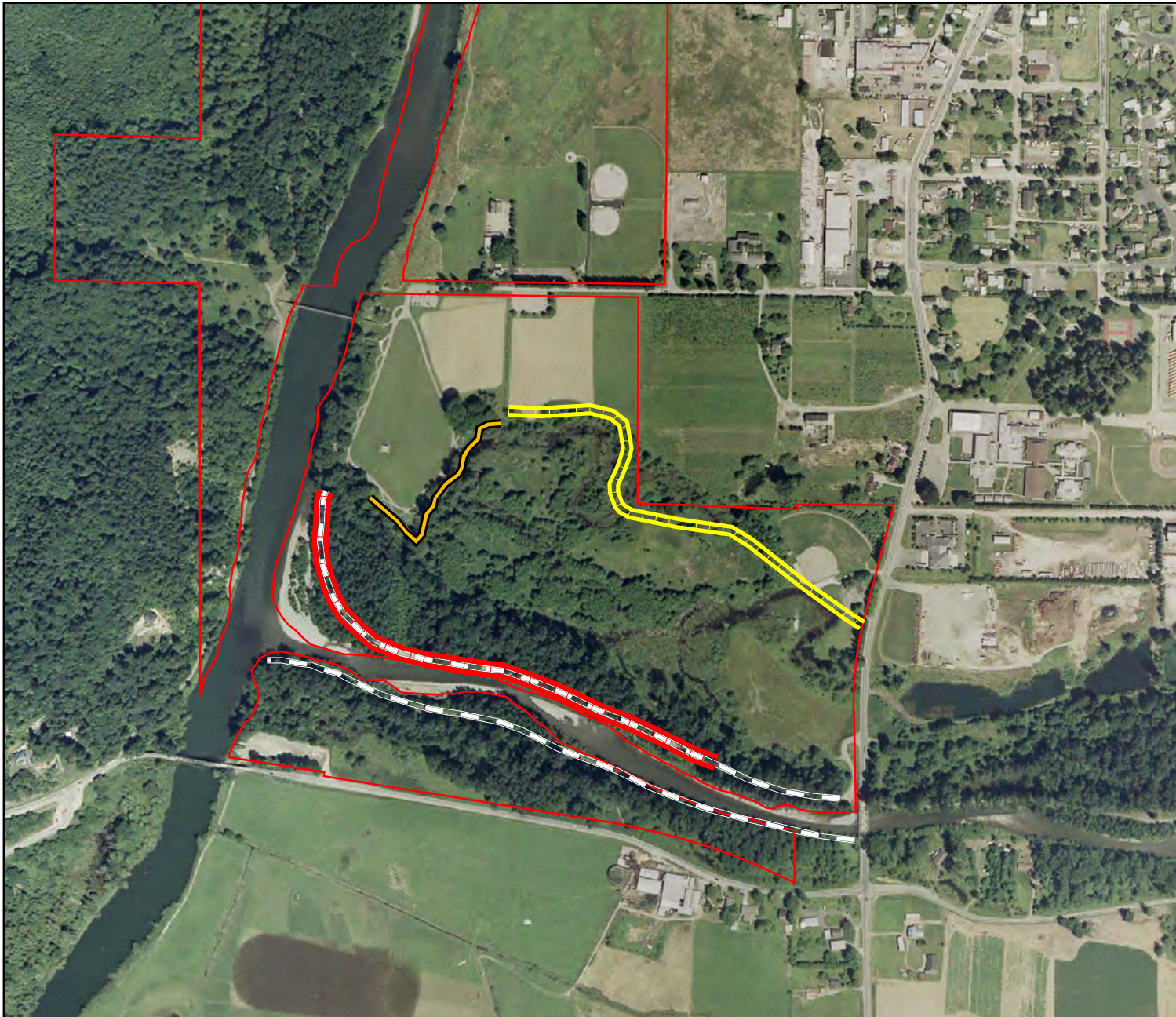
GREEN  
CHOP  
PARKING  
LOT

LEVEE  
PARKING LOT






TOLT RIVER


SNOQUALMIE RIVER


**FIGURE 1**  
PROJECT OVERVIEW




### Legend

-  Existing Levees
-  Levee Section to be Removed
-  Proposed Levee Alignment
-  Proposed Revetment
-  Tolt-MacDonald Park Boundaries

N  
  
 June 21, 2006

200 0 200 400 600 800 1000 Feet  


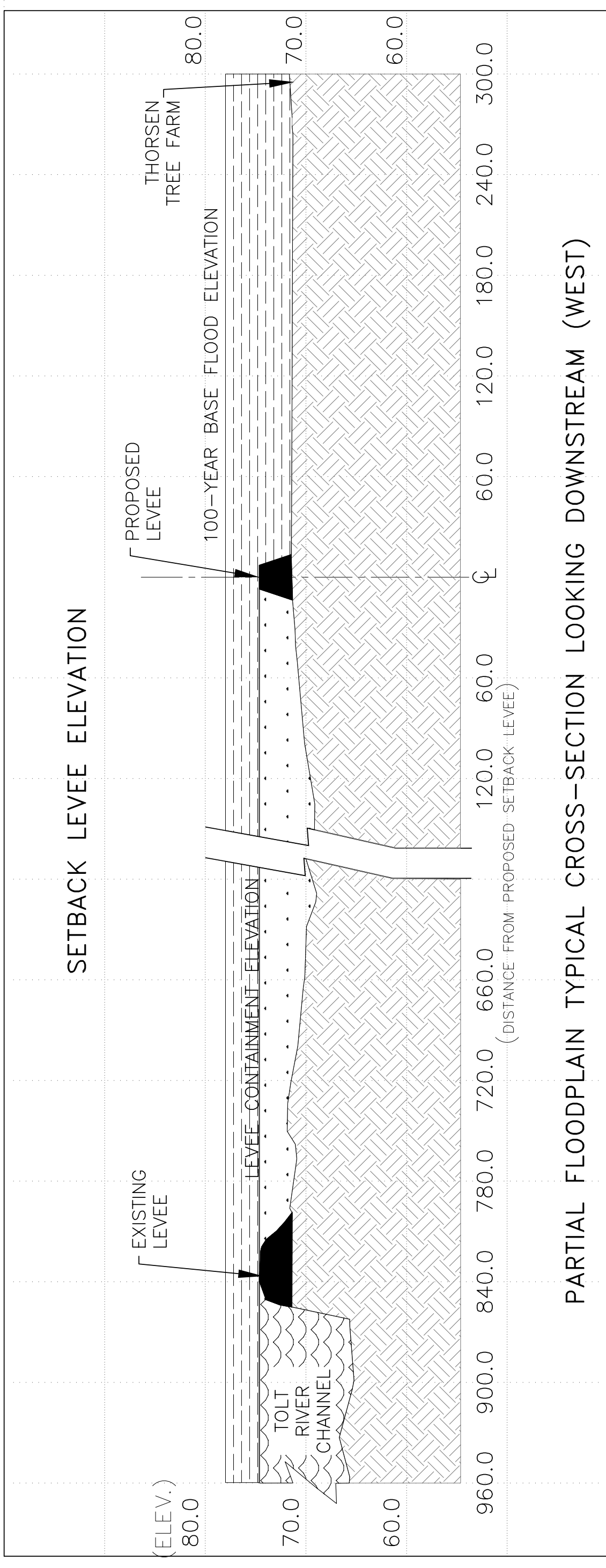
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**King County**

File Name: LO \\wim4\everyonetolt\gs\tolt.apr

**Figure 2: Existing and Proposed Levees and Revetments**

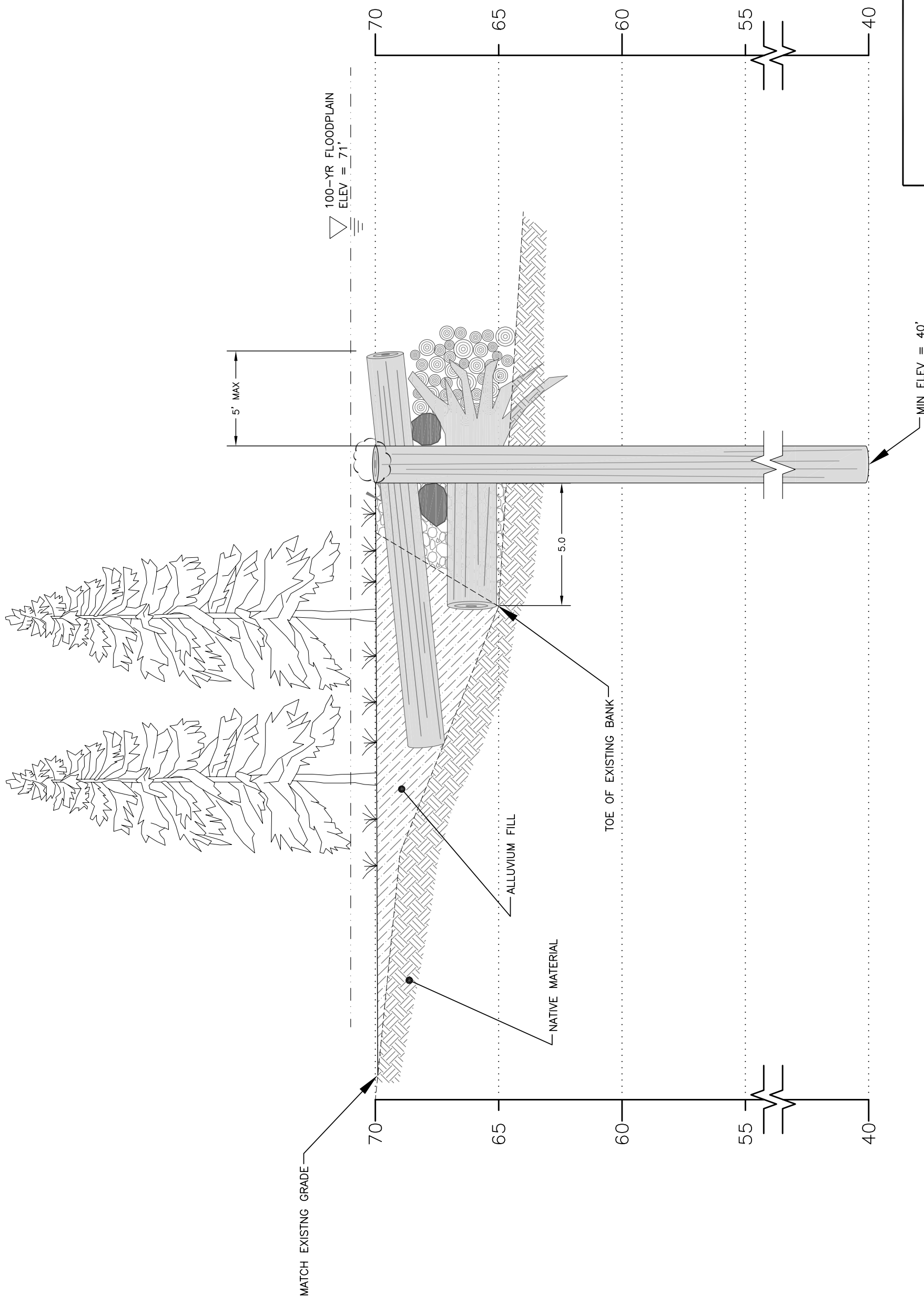
*Lower Tolt River Floodplain Reconnection Project*



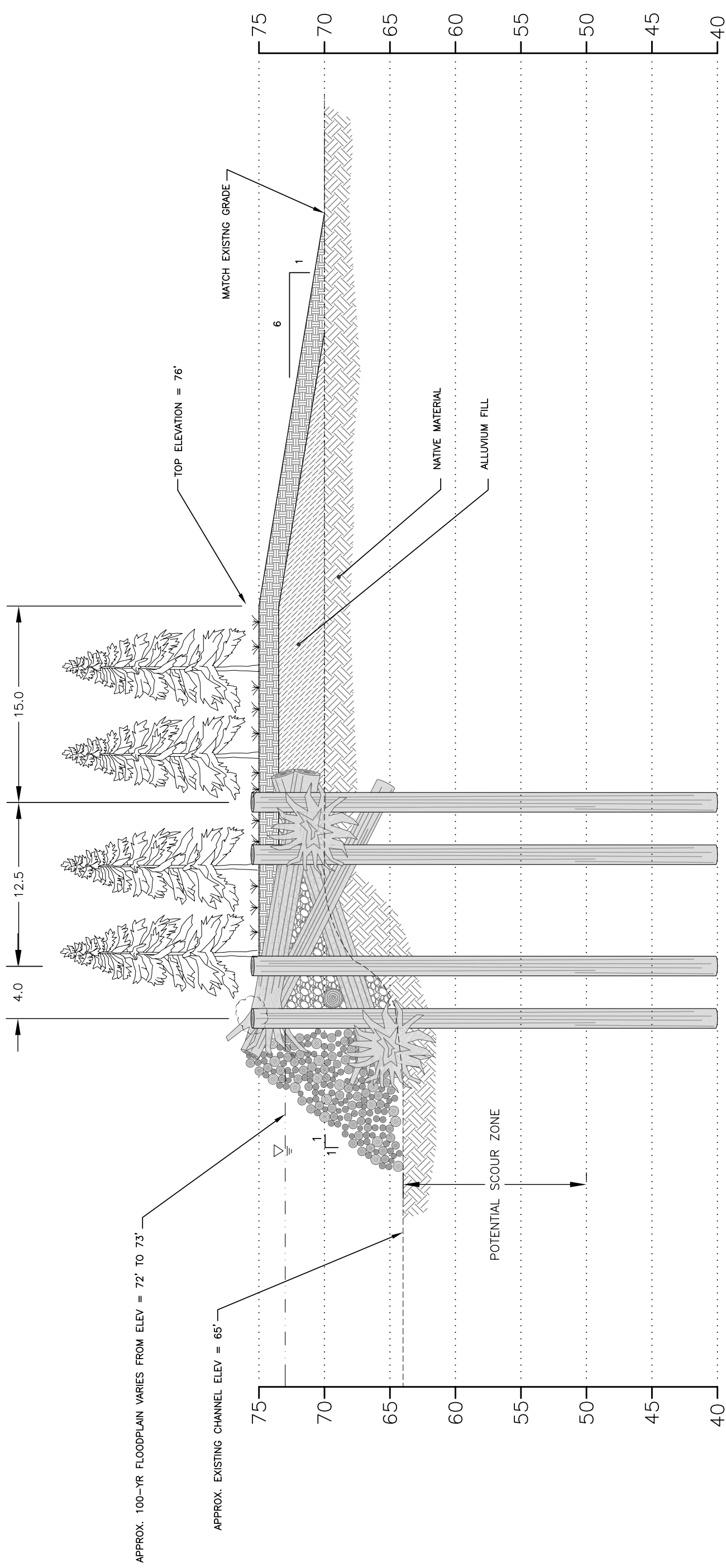
PARTIAL FLOODPLAIN TYPICAL CROSS-SECTION LOOKING DOWNSTREAM (WEST)

**FIGURE 3**  
FLOODPLAIN  
TYPICAL CROSS-SECTION

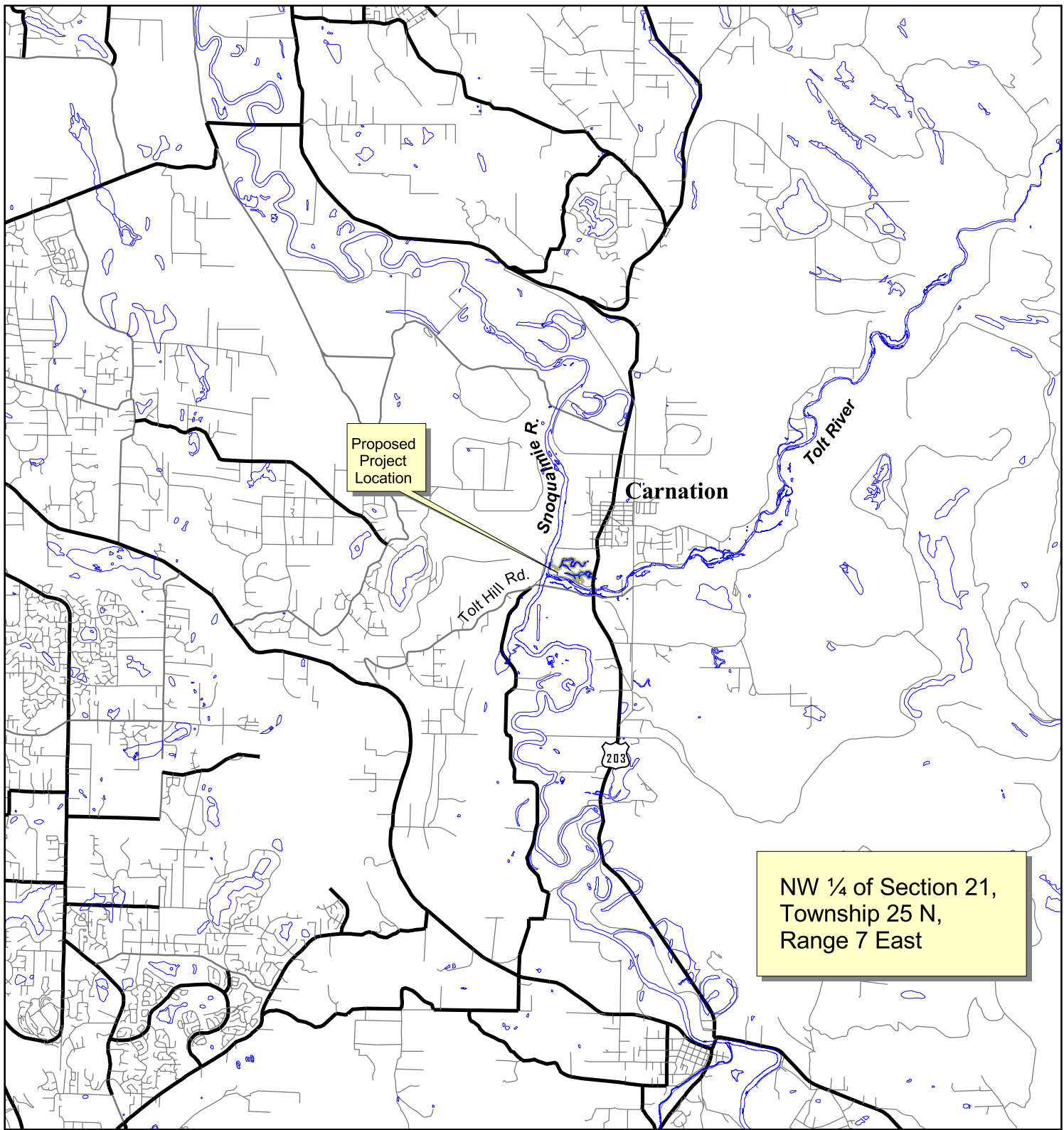




**FIGURE 4**  
**REVETMENT**  
**CROSS-SECTION**



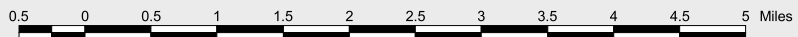
**FIGURE 5**  
**ENGINEERED LOGJAMS**  
**TYPICAL SECTION VIEW**



**Figure 6: Vicinity Map**  
*Lower Tolt River Floodplain Reconnection Project*



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