



**US Army Corps  
of Engineers®**

Seattle District

# Notice of Preparation

Planning and Project Management Division  
Environmental and Cultural Resource Branch  
P.O. Box 3755  
Seattle, WA 98124-3755  
ATTN: Amanda Ogden (PM-ER)

Public Notice Date: 19 April 2012  
Expiration Date: 19 May 2012  
Reference: PM-ER-12-4  
Name: Startup Levee Rehabilitation  
Project

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Interested parties are hereby notified that the U.S. Army Corps of Engineers, Seattle District (Corps) plans to prepare, pursuant to the National Environmental Policy Act (NEPA) Section 102(C), an environmental assessment (EA) for proposed levee repairs on the Startup Federal Levee near the Town of Startup, Snohomish County, Washington. The Startup levee system is a 7000-foot Federal flood control system designed for to provide protection from periodic, recurring floods from the Wallace and Skykomish Rivers. The main levee was completed in 1965 by the Seattle, District, U.S. Army Corps' of Engineers (Corps). A 2700 foot training levee was added in 1969 to provide this additional protection, extending downstream from the main levee. When the Startup training levee was constructed, it was setback from the river a minimum of 200 feet. Repairs are intended to address damage to flood control works caused by flooding.

## AUTHORITY

The proposed levee repair is authorized by Public Law 84-99 (33 U.S. Code Section 701n). Corps rehabilitation and restoration work under this authority is limited to flood control works damaged or destroyed by floods. The statute authorizes rehabilitation to the level of protection exhibited by the flood control work prior to the damaging event. Snohomish County Surface Water Management is the local sponsor for this project.

## NEED

During the January 2009 flood event, the Skykomish River exceeded flood stage. The National Weather Service Flood Stage for this station is 15.0 feet. According to the USGS gage on the Skykomish River near Gold Bar (USGS 12134500) the river peaked at 16.74 ft on 7 January 2009 with the river staying above flood stage for 2 days. The high velocity flows resulted in toe scour and loss of riverward embankment armor along the Startup Levee. In the current condition, the levee offers a 2-year level of flood protection. The levee is located on the right bank of the Skykomish River near Sultan, Washington. The project area consists of a damaged Federal training levee known as the Startup levee. Construction of the Skykomish River-Wallace River Project was completed in October 1965 and was modified by adding the Startup training levee in September 1969. Pre-damage, the Startup Levee provided a 7-year level of protection. There are 12 residential structures that are protected by this levee.

## PURPOSE

The purpose of the project is to provide the level of flood protection found prior to the January 2009 flood event in order to protect lives and property from subsequent flooding.

## PROPOSED ACTION

Multiple alternatives for the levee repair will be considered, including the No-Action Alternative, the Repair In Kind Alternative, the Setback Alternative and the Non-Structural Alternative. Prospective work is expected to be completed during approved in-water work windows during summer 2012 (prospective work are being considered as follows.

- No-Action. No levee repairs would be completed. The damaged levee would remain and there would be a high likelihood of failure of the levee during floods greater than the 2-year event. The results of a failure would include damages to existing residences.
- Repair In Kind. This alternative repairs the levee by returning it to the pre-flood condition with minimal or no change to the character, scope, or size of the levee. This alternative maintains the status quo of the river and levee at the repair location as existed prior to the flood damage.
- Repair In Place. This alternative repairs the levee by returning it to the pre-flood condition. Changes to the levee character may be needed to meet current design standards or river conditions. This alternative is being evaluated as the current preferred alternative. For this alternative, there are four distinct areas of repair along the 310 ft identified at the downstream end of the Federal project (See design drawings). The upstream section from 23+81 to 24+81 (100 ft) would consist of re-grading and replacing lost armor rock along the levee slope only. The next section from 24+81 to 25+20 (39 ft) would repair full bank armoring including a full weighted toe. The next section from 25+20 to approximately 26+00 (80 ft) would transition from a complete levee section to a sloped bank with a buried toe installed in the existing bench to the end of the project at 26+91. The existing silt bench would be excavated and stockpiled onsite to an elevation equivalent to the bottom elevation of the river channel to accommodate the weighted toe volume. In order to protect the earthen slope at the downstream tie-in a bulb of riprap would be placed on top of the weighted toe. Currently, this section is forested with an overstory of alders and an understory of blackberry, grass, bamboo, and willow. Following the placement of riprap for the weighted toe, the soil would be replaced and planted with two rows of shrubs at 3-foot spacing (150 ft). Shrub plantings would be nootka rose (*Rosa nutkana*) and snowberry (*Symphoricarpos albus*). Trees would be removed to complete the repairs. Salvaged trees with rootballs intact would be placed unanchored between 25+00 to 26+91. Materials for the repair would come from existing quarries. All disturbed areas would be hydro seeded with native grasses upon completion. The proposed plan would slightly shift the crown of the levee at the downstream end from the original design. Where the original project ended in a landward curve, the proposed project instead curves slightly riverward to connect to a non-federal earthen berm downstream of the project. This berm has a mown grassy crown and back slope and is highly vegetated on the riverward side.
- Setback. This alternative removes all or part of the existing levee and builds a new levee landward of the existing location. This alternative maintains the level of flood protection but increases floodplain access for the river.

US Army Corps of Engineers, Seattle District  
Notice of Preparation – Startup Levee Rehabilitation

- Non-Structural. This alternative would include no repairs to the damaged levee and would instead relocate all existing structures, utilities and infrastructure protected by the levee beyond the flood inundation zone.

There are two groin-type structures on site from the crown to the bench created by the toe (near/at OHW). The two groins are at 23+81 and 24+81. The current preferred alternative does not include replacement or retention of these structures.

A pipe/culvert runs through the levee as drainage for an interior ponding/wetland area. This pipe is non-functional. The current preferred alternative would not replace this drainage pipe.

Final selection of the preferred alternative and finalization of the design will occur during the NEPA process and before construction.

### ANTICIPATED IMPACTS

Impacts anticipated at this point are discussed below.

Wetlands. The proposed project has been evaluated for potential impacts to wetlands. There are wetlands adjacent to the levee; however the repair site, construction access and staging areas would be along the existing levee. No direct impacts to wetlands are anticipated.

Biological Resources. The following species listed as threatened (T) and their associated critical habitat (CH) are located in the project area:

- Puget Sound Chinook salmon (T) (CH)
- Puget Sound steelhead (T) (CH)
- Coastal/Puget Sound bull trout (T) (CH)
- Marbled Murrelet (T) (CH)

Bald and golden eagles may also be found utilizing the project area. These species are not listed under the Endangered Species Act, but are protected under the Bald and Golden Eagle Protection Act. A known bald eagle nest is within 1.5 miles of the site. The closest recorded golden eagle siting is approximately 7.5 miles from the site.

Potential effects of the proposed work on threatened or endangered species and designated critical habitat will be addressed per Section 7 of the Endangered Species Act. Critical habitat for the marbled murrelet is designated within 1.5 miles northeast of the project area. No known sitings of spotted owls or marbled murrelet at the project site exist. The repair of the levee is not expected to affect prey populations on which the owls or murrelets depend, or foraging by these species, and will not affect their designated critical habitat (old growth forests). The distance between the levee repair work and nesting territories spatially separates the owls and murrelets from any disturbance to their nesting or reproductive success. Effects to spotted owls and marbled murrelets would be temporary, limited to the immediate vicinity of the repair work, and not expected to significantly disrupt normal behavior patterns. As such, the project is not likely to adversely affect these species..

Other listed species including the grizzly bear, Canada lynx and gray wolf may occur or historically occurred in Snohomish County; however, they are not expected to be present in the project area due to specialized habitat requirements, lack of tolerance for human activity, or both.

US Army Corps of Engineers, Seattle District  
Notice of Preparation – Startup Levee Rehabilitation

Salmonids use this reach, and it is part of designated critical habitat for Puget Sound Chinook salmon and Coastal/Puget Sound bull trout. Chinook, steelhead and bull trout are listed as threatened under the Endangered Species Act, so are resources of concern for this project. Other salmon species using the river at the project site include pink salmon, fall chum salmon, resident cutthroat trout, and rainbow trout.

The in-water work window for this reach is July 1-August 31. Any in-water work will be within the work window to avoid negative and possibly prolonged effects. Riparian vegetation will be retained to the extent possible, and any trees removed would be salvaged and placed unanchored along the riverward bank following the completion of construction. Trees will be retained in front of the repair area within the vegetated bench to the extent possible. As the area of impact and number of trees lost is small and the riparian corridor of the Skykomish River north of the Town of Sultan is quite robust, this loss of vegetation is not expected to greatly impact the aquatic environment.

When completed, this levee repair is not intended or expected to generate appreciable change in habitat conditions as compared with conditions pre-existing the flood event. Repair construction work may result in short-term impacts to fish and wildlife. If present, adult and juvenile salmonids may be temporarily displaced from the project area. Construction noise may temporarily disturb any wildlife in the project area. No long-term effects to fish and wildlife are expected.

Water Quality. There may be a temporary increase in turbidity due to construction and fill placement. Turbidity would be monitored during construction. If turbidity exceeds water quality maximum standards, construction would be halted, and would recommence when turbidity returns to acceptable levels. No long-term impacts to water quality are expected.

Cultural Resources. Any potential effects of the proposed work to cultural resources will be addressed in separate compliance documentation in accordance with Section 106 of the National Historic Preservation Act (NHPA). Prior to levee repairs, a Corps archeologist will conduct a cultural resources survey of the project area to determine whether there is a potential for the proposed repairs to cause effects to historic properties that may be located in or adjacent to the project area. The NHPA Section 106 cultural resources report will include the findings of the investigation, recommendations which may include archaeological monitoring during construction and a determination of effects to archaeological and historic properties (if any are present). If archaeological monitoring is recommended, the report will include a monitoring plan and protocols to be followed including an inadvertent discovery clause. The Corps' determinations of effects to historic properties, the cultural resources report, and monitoring plan will be submitted to the Washington State Historic Preservation Office (SHPO) and the appropriate Tribes for their review and comment.

Air Quality. Construction vehicles and heavy equipment would temporarily and locally generate gasoline and diesel exhaust fumes, carbon dioxide (CO<sub>2</sub>), carbon monoxide, and dust on roadways. These emissions would be exempt from the conformity requirements under the Clean Air Act, because the project constitutes a routine facility repair activity generating an increase in emissions that is clearly *de minimis*, under 40 CFR 93.153(c)(2)(iv). Unquantifiable but insignificant exacerbation of effects of CO<sub>2</sub> emissions on global climate change is also anticipated.

US Army Corps of Engineers, Seattle District  
Notice of Preparation – Startup Levee Rehabilitation

Noise. Temporary local increases in noise would occur as a result of construction activities. Private residences are in the vicinity of the work site. Work would be done during daylight hours to minimize the adverse effects of noise on residents.

Traffic. Construction-related traffic may cause disruption of local traffic during construction. Efforts would be made to minimize disturbances to local traffic patterns through signage, notifications, and proper traffic controls.

Cumulative Effects. The training levee was originally composed of earthen embankment material and stabilized in select locations by a 3x5-foot toe. Training levees are not intended to receive constant, high velocity flows, but rather to guide the direction of occasional floodwaters. Channel migration since 1969 resulted in a shift of the main river channel and thalweg to run directly into/against the training levee structure causing scour and erosion. In May of 1996, the Corps completed its first maintenance of the training levee through placement of heavy armor rock in a trench 20 feet wide, 15 feet deep, and approximately 250 feet long. The trench was located 40 feet landward from the top riverbank.

In 2002, flood events between 7-9 January and on 22 February resulted in additional scour at the Startup training levee. In response, the Corps and Snohomish County, as the non-federal sponsor, constructed a levee rehabilitation project between 19 and 30 August 2002. The Corps, under Public Law 84-99, repaired this damage by placing 450-feet of class IV riprap and spalls and enforcing with a rock toe. Two hundred and fifty feet (250) of the earlier 1996 repair was also rehabilitated with additional rock material due to flood damage

A flood event on 18 January 2005 eroded a large portion of the levee prism at the upstream end of the 2002 repairs. This erosion was severe enough to warrant a declaration of emergency and immediate response which resulted in armoring approximately 200 feet of levee. This work was completed only to the upstream end of immediate erosion damage and in the current alignment of the levee.

## EVALUATION

The Corps has made a preliminary determination that the environmental impacts of the proposal can be adequately evaluated under the National Environmental Policy Act through preparation of an EA. Preparation of an EA addressing potential environmental impacts associated with the levee rehabilitation project is currently underway.

In accordance with Section 7(a)(2) of the Endangered Species Act, the Corps will draft a Biological Evaluation and will seek consultation with the National Marine Fisheries Service and/or the U.S. Fish and Wildlife Service, regarding the impact of the project on listed species and/or designated critical habitat. The Corps has made a preliminary determination that the project may affect but is not likely to adversely affect Puget Sound Chinook, Puget Sound steelhead, coastal/Puget Sound bull trout, marbled murrelet or their designated critical habitat.

The project will involve a discharge of fill material into waters of the US that will be evaluated for substantive compliance with guidelines promulgated by the Environmental Protection Agency under authority of Section 404(b)(1) of the Clean Water Act (CWA). The Corps will seek Certification under CWA Section 401 from the Washington Department of Ecology that the project provides a reasonable assurance of compliance with State water quality standards.

The Corps has reviewed the latest published version of the National Register of Historic Places (NRHP), lists of properties deemed eligible, and other sources of information. The Corps will

US Army Corps of Engineers, Seattle District  
Notice of Preparation – Startup Levee Rehabilitation

document the current state of knowledge regarding the presence or absence of historic properties and the effects of the undertaking upon the properties.

In preparation of the environmental documentation for this project, coordination has been conducted or is ongoing with the following public agencies:

- (1) U.S. Fish and Wildlife Service
- (2) NOAA Fisheries;
- (3) Washington Department of Fish and Wildlife;
- (4) Washington Department of Ecology;
- (5) Tulalip Tribe
- (6) Snohomish County;
- (7) State Historic Preservation Office.

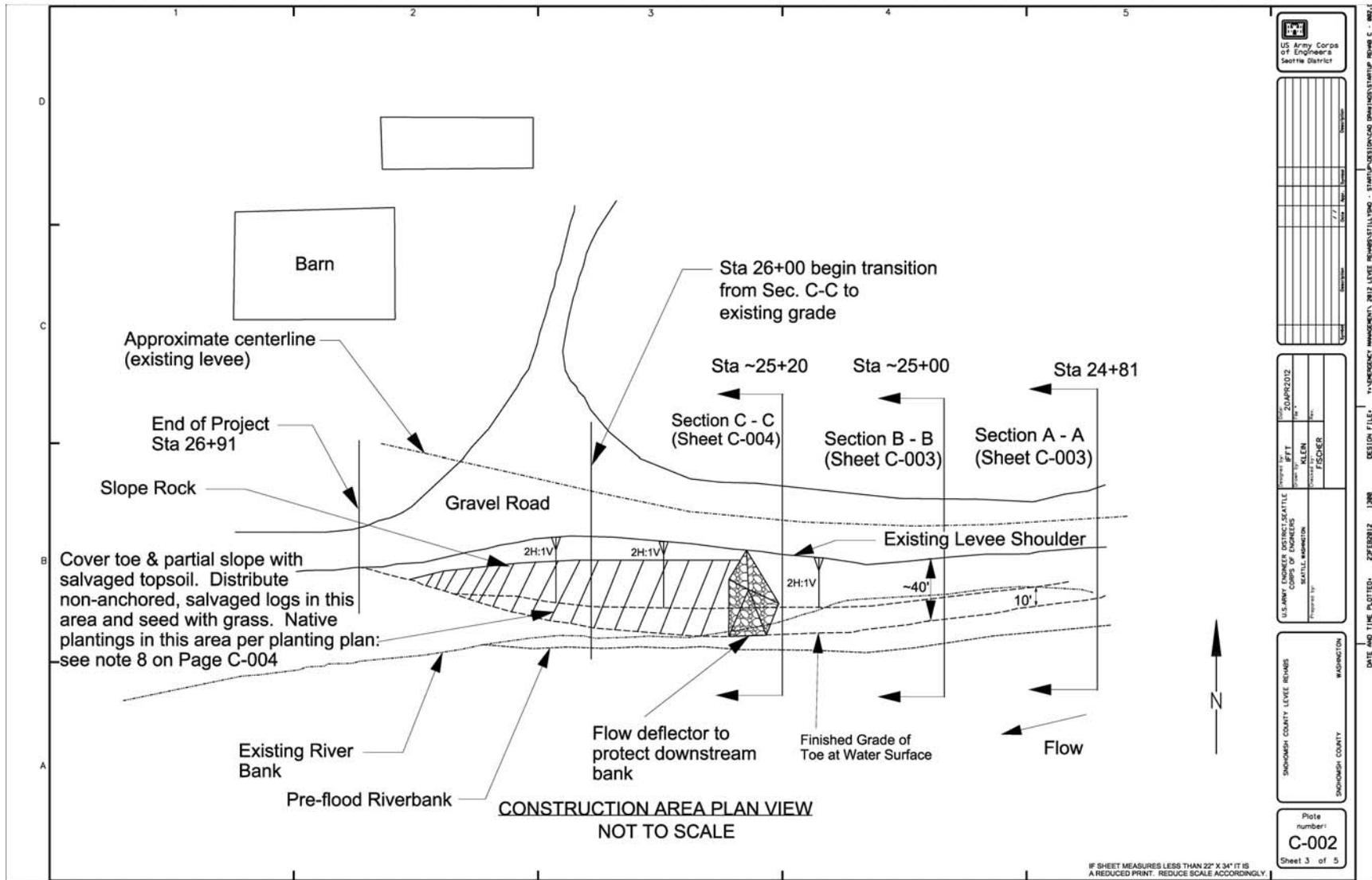
The Corps invites submission of factual comment on the environmental impact of the proposal. The Corps will consider all submissions received before the expiration date of this notice. The nature or scope of the proposal may be changed upon consideration of the comments received. The Corps will initiate an Environmental Impact Statement (EIS), and afford the appropriate public participation opportunities attendant to an EIS, if significant effects on the quality of the human environment are identified and cannot be mitigated.

Submit comments to this office, Attn: Environmental Resources Branch, no later than *19 May 2012* to ensure consideration. In addition to sending comments via mail, comments may be e-mailed to [amanda.ogden@usace.army.mil](mailto:amanda.ogden@usace.army.mil). This Notice of Preparation can be found at the following website: [http://www.nws.usace.army.mil/ers/doc\\_table.cfm](http://www.nws.usace.army.mil/ers/doc_table.cfm) under “Startup Levee Rehabilitation.” Requests for additional information should be directed to Ms. Amanda Ogden at 206-764-3628 or the above e-mail address.



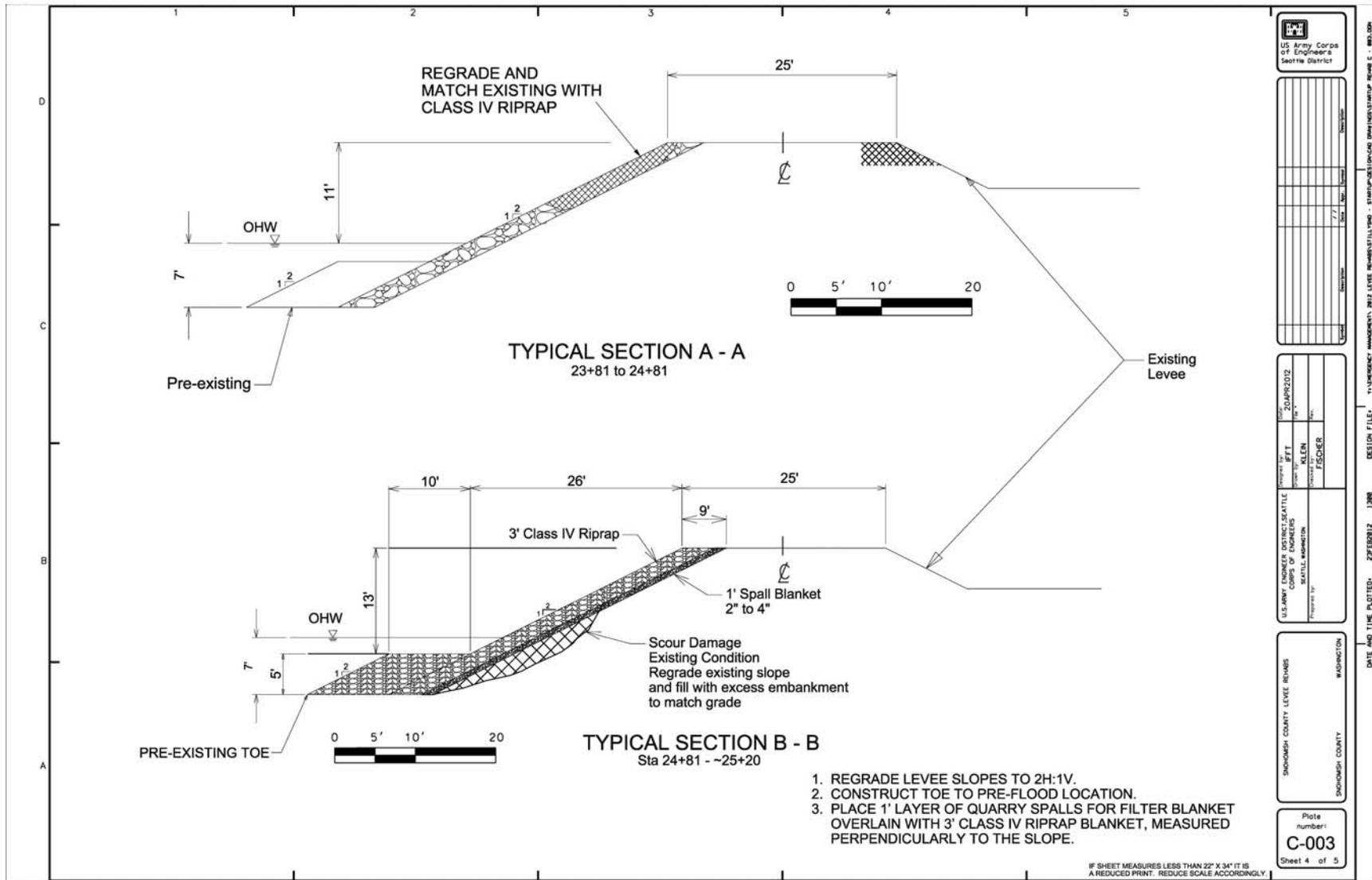


US Army Corps of Engineers, Seattle District  
 Notice of Preparation – Startup Levee Rehabilitation



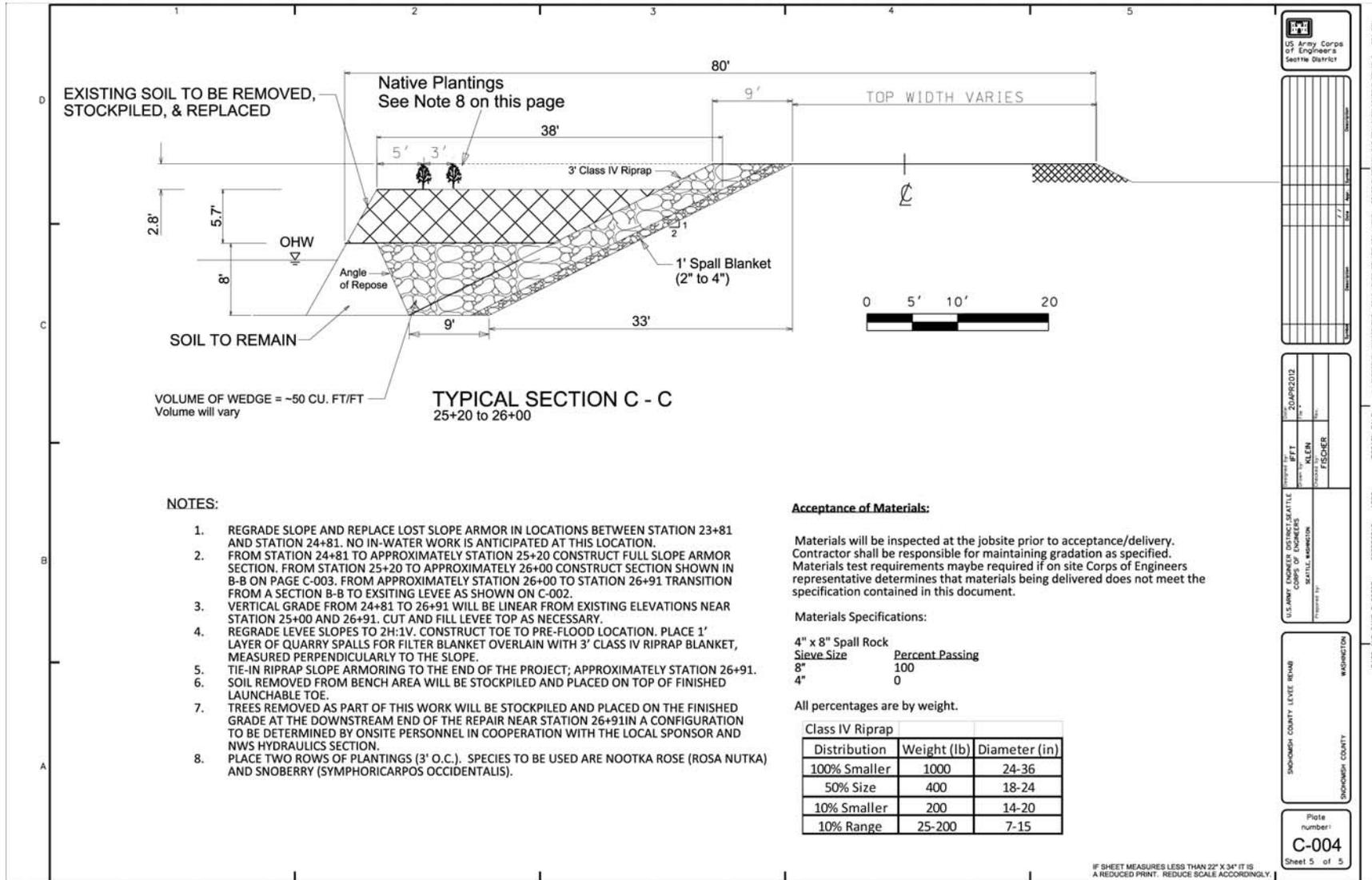
DESIGNED BY PROJECT NO. DRAWING NO. DATE	CHECKED BY DATE
PROJECT TITLE LOCATION	DRAWN BY DATE
U.S. ARMY ENGINEER DISTRICT SEATTLE CORPS OF ENGINEERS SEATTLE DIVISION	PROJECT NO. 11-00000000 DRAWING NO. 11-00000000 DATE 11/11/00
KING COUNTY LEVEE REHAB KING COUNTY	WASHINGTON
Plate number <b>C-002</b> Sheet 3 of 5	DATE AND TIME PLOTTED: 2/FEB/02 1:00 PM DESIGN FILE: 11-00000000-DRAWING-STARTUP-REHAB-C-002

US Army Corps of Engineers, Seattle District  
 Notice of Preparation – Startup Levee Rehabilitation



US Army Corps of Engineers Seattle District	
PROJECT NO. 13-00000000	DRAWING NO. 13-00000000
PROJECT NAME STARTUP LEVEE REHABILITATION	SHEET NO. 4 OF 5
DESIGNED BY J. FISCHER	CHECKED BY J. FISCHER
DRAWN BY J. FISCHER	DATE 7/7
PROJECT LOCATION SPOKANE COUNTY LEVEE REHAB	COUNTY SPOKANE COUNTY
STATE WASHINGTON	DATE AND TIME PLOTTED 2/FEB/2013 1:00
DESIGN FILE 13-LEVEE-REHAB-STARTUP-NOV-13-13.DWG	PLANNING MANAGEMENT UNIT LEVEE REHABILITATION - STARTUP LEVEE REHABILITATION - NOV-13-13.DWG
Plate Number C-003	Sheet 4 of 5

US Army Corps of Engineers, Seattle District  
 Notice of Preparation – Startup Levee Rehabilitation



PROJECT PHOTOS



Photo 1. Project location looking downstream from approximately 25+00.

US Army Corps of Engineers, Seattle District  
Notice of Preparation – Startup Levee Rehabilitation



Photo 2. Silt bench looking upstream near the downstream tie-in location.



Photo 3. Looking upstream at previously completed repair locations.