US Army Corps of Engineers
Seattle District

Public Notice of Application for Permit

Regulatory Branch
Post Office Box 3755
Seattle, Washington 98124-3755
Telephone (206) 764-3495
ATTN: Jonathan Freedman, Project Manager

Public Notice Date: 27 December 2000
Expiration Date: 16 February 2001
Reference: 1996-4-02325
Name: Seattle, Port of

SECOND REVISED PUBLIC NOTICE

Interested parties are hereby notified that a revised application has been received for a Department of the Army permit in accordance with Section 404 of the Clean Water Act for certain work described below and shown on the enclosed drawings. The work has been circulated twice previously for public comment under the same application reference number (1996-4-02325), 19 December 1997 and 30 September 1999. The Corps and the Washington State Department of Ecology (Ecology) have held joint public hearings in connection with each public comment period, the first on 9 April 1998; and the second on 3 November 1999. Copies of the public notices and transcripts of the public hearings are available at the U.S. Army Corps of Engineers (Corps) office as noted on page 3 of this public notice. Revisions to the applicant's proposed project are described below and shown on sheets 1 – 38.

Comments should be restricted to revisions in the applicant's proposal since the previous public comment periods of December 1997 - April 1998, and September through November 2000, or to update previously submitted comments. All written comments received by the Corps during these previous comment periods remain a part of the record for this application and will be given full consideration in making a permit decision.

APPLICANT - Port of Seattle
17900 International Blvd., Suite 402
Seattle-Tacoma International Airport
SeaTac, Washington 98188-4236
ATTN: Ms. Elizabeth Leavitt
Telephone: (206) 433-7203

LOCATION - In the Miller Creek, Walker Creek, and Des Moines Creek watersheds and in wetlands at Seattle-Tacoma International Airport (STIA), located in and within the vicinity of the city of SeaTac, King County, Washington; and in wetlands at the mitigation site in Auburn, King County, Washington.

WORK - Fill all or portions of 50 wetlands totaling approximately 18.37 acres[1], and temporarily impact 12 wetlands totaling 2.05 acres. Fill 14.23 acres of wetlands to construct an 8,500-foot parallel third

runway west of the existing runways at STIA, and relocate the South 154th/S. 156th Way bridge. Excavate and perform land clearing on 1.10 acres of jurisdictional wetlands at onsite borrow sources located south of the existing runways to provide fill material for the third runway. Fill 0.14 of an acre to construct two new Runway Safety Areas (RSAs) on the north end of the existing runways. An additional 2.78 acres of fill will be placed in wetlands 1 mile

[1] At the date of the 1997 and 1999 public notices for this project, the applicant did not have access to all parcels impacted by the applicant's proposed action. Accordingly, the Corps was unable to complete verification of all wetlands in the project area. The applicant has since gained access to all acquired properties and delineated new wetland areas impacted by the project. The Corps has verified these new wetland boundaries. The verification of all wetland boundaries impacted by the applicant's proposal in this public notice is, therefore, complete.

south of the existing terminal to construct the South Aviation Support Area (SASA) for airport support and maintenance facilities.

Implementation of the work involves development and/or redevelopment of approximately 700 acres in uplands outside Corps jurisdiction. Fill in wetlands will include about 8.17 acres of forested wetlands, 2.98 acres of scrub-shrub wetlands, and 7.22 acres of emergent wetlands. This impact represents an increase of 0.04 of an acre from the first revised public notice of 3 November 1999.

The proposed work would also require filling and reconstruction of approximately 980 linear feet of Miller Creek (0.25 of an acre), about 1,290 linear feet (0.13 of an acre) of drainage channels in the Miller Creek basin, and 100 linear feet (0.01 of an acre) of drainage channel in the Des Moines Creek basin. The amount of creek and channel impacts is unchanged since the 1999 public notice.

In addition to permanent impacts totaling 18.37 acres, up to 2.05 acres of wetlands (1.15, 0.46, and 0.44 acres of forest, shrub, and emergent wetlands, respectively) would be subjected to temporary impacts during construction of the Master Plan improvement projects. Temporary wetland impacts would result from construction of stormwater management facilities (sediment fencing, conveyance channels, and sedimentation ponds) to protect downslope water quality. Wetland areas impacted by construction would be restored to shrub and or forested wetlands following construction. These potential temporary impacts have been reduced from 2.17 acres as cited in the first revised public notice of 1999, due to design refinements which have resulted in the elimination of impacts to Wetlands 3, 48, and B15.

Construction of onsite wetland and stream mitigation (described in the Mitigation section below) would occur in about 17.2 acres of jurisdictional wetlands. Modification of these wetlands would be temporary and, following implementation of the mitigation, are intended to result in restoring or enhancing water quality, flood storage and other wetland functions to the areas.

Implementation of offsite mitigation in the city of Auburn would result in temporary impacts to 21.64 acres of historically farmed and emergent wetlands. These impacts would include temporary disturbances related to installing enhancement plantings, a temporary irrigation system, temporary access, construction staging, excavation of low quality emergent wetlands to provide a connection to the 100-year floodplain, and excavation to create a diversity of wetland types and functions. About 0.12 of an acre of wetlands would be considered permanently filled due to the construction of an access road to the mitigation site.

The location of wetlands and the extent and nature of wetland impacts are discussed in: (a) *Wetland Delineation Report, Seattle-Tacoma International Airport Master Plan Update Improvements* (December *2000*) and (b) *the Wetland Functional Assessment and Impact Analysis Report- Master Plan Update Improvements, Seattle-Tacoma International Airport (December 2000)*. Copies of these and other documents referenced in this notice are available at the following locations:

- The Port of Seattle Neighborhood Field Office at 19639 28th Avenue South, SeaTac WA 98188. Building E, Room SC4-1011A;
- Burien Public Library, 14700 - 6th Avenue Southwest, Burien WA 98166.
- Des Moines Public Library at 21620 11th South, Des Moines WA 98198.
- U.S. Army Corps of Engineers, Seattle District Law Library, Room 2131A; 4735 East Marginal Way South, Seattle,WA 98124-2255

More Detailed Information on Other Projects in the Vicinity: Since circulation of the previous public notices,

more detailed information on other proposed projects at and in the vicinity of Sea-Tac airport is now available to the Corps. This information is cited because it may be relevant to the consideration of potential cumulative impacts. Projects sponsored primarily by entities other than the Port of Seattle (Port) include, among others, the Des Moines Creek Regional Detention Facility; the State Route 509 extension/South Access roadway; the Regional Transit Authority Light Rail Project; and city of SeaTac land use planning activities. Projects sponsored by the FAA, independent of the Master Plan projects include navigation improvements (an air traffic control tower and Terminal Radar Approach Control (TRACON). Projects sponsored primarily by the Port, apart from Master Plan Update projects include, among others, Industrial Wastewater System Lagoon 3; the South Terminal Expansion Project; the Part 150 noise study; and the aircraft hydrant fueling system; and replacement of a water tower in the Gilliam Creek basin on a previously developed site. No wetland impacts from this work would occur in the Gilliam Creek basin. The project would not add new impervious surfaces to the Gilliam Creek watershed.

The Port also proposes to construct a temporary interchange at SR 509, in the vicinity of 170th Street, to facilitate truck and construction vehicle access to the construction site. This work according to the Port, would not have any direct impacts on wetlands or waters of the United States. The Corps reverified wetland boundaries in the vicinity of the Interchange site at Wetland 44, but has not reviewed final project plans for the interchange as of the date of this public notice.

Information on these and other projects is available from the Corps, the applicant, the FAA, and at selected public libraries at the addresses listed elsewhere in this public notice. The public is invited to submit comments on the potential cumulative impacts of these other projects, together with the proposed work described in this notice.

Changes in Impact to Waters of the United States: Changes in wetlands affected by the project and associated mitigation since the 1999 public notice include:

- A total of 15.61 acres of additional palustrine emergent wetlands have now been delineated and verified at the offsite mitigation site in Auburn. Approximately 1.60 acres of these wetlands extend off the site into the temporary and permanent construction easements, and approximately 19.50 acres are located within the boundary of the 67-acre Auburn mitigation site. The previous verified wetlands delineation at the offsite mitigation area in Auburn identified about 6 acres of wetland at the Auburn mitigation site.

- A 100-foot buffer has been added around the entire Auburn mitigation site, portions of which are wetlands.

- Approximately 3.20 additional acres of riparian and non-riparian wetlands, on recently acquired property near Miller Creek, will be enhanced as part of the Miller Creek in-basin mitigation actions.

- A 100-foot buffer along a portion of the West Branch of Des Moines Creek with enhanced wetland plantings has been added.

- Temporary construction impacts to wetlands have been reduced by 0.12 of an acre.

- Impacts to Wetlands 48 and B15 in Borrow Area 1 have been eliminated.

PURPOSE - The project purpose is to meet the public need for an efficient regional air transportation facility to meet anticipated future demand. The purpose is also described in the original and first revised public notice and remains the existing purpose of record for this application. Additional discussion about analysis of alternatives is found below in the additional information section. The applicant proposes to accomplish this by implementing specific measures at Sea-Tac which are summarized as follows:

- **Third Runway.** *Improve the poor weather airfield operating capability to accommodate aircraft activity with reduced delay in aircraft takeoffs and landings.* As aircraft operations at Sea-Tac have increased over

the years, aircraft delay, particularly during poor weather conditions, has worsened. Recent forecasts predict continued increases in aircraft operations and continued worsening of aircraft delay during poor weather conditions. A third runway would allow Sea-Tac to operate two runways for landing during times of poor weather.

- ***Runway Safety Areas (RSAs)****. Provide RSAs that meet current Federal Aviation Administration (FAA) standards.* An RSA is the surface surrounding a runway suitable for reducing the risk of injury/damage in the event that an airplane undershoots, overshoots, or veers off the runway. The RSAs on the two existing runways at Sea-Tac do not meet current FAA standards.

- **South Aviation Support Area (SASA)**. *Develop an additional South Aviation Support Area* (SASA) *to accommodate aircraft maintenance facilities and air cargo facilities.* Expansion of main air terminal Concourse A and development of the new North Terminal would displace existing maintenance and air cargo facilities. These terminal facilities are required to accommodate projected passenger demand.

ADDITIONAL INFORMATION – In 1992, the Puget Sound Regional Council and the Port issued the Flight Plan Project Final State EIS, pursuant to the Washington State Environmental Policy Act. In 1992 the FAA and the Port also issued the South Aviation Support Area Final Federal Environmental Impact Statement pursuant to the National Environmental Policy Act.

An EIS for this project was prepared under the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA) by the FAA (the NEPA lead agency) and the Port (the SEPA lead agency). The Corps participated as a cooperating agency under NEPA. The document, entitled *"Final Environmental Impact Statement (FEIS) for the Proposed Master Plan Update Development Actions at Seattle-Tacoma International Airport"* was issued in February 1996. A supplement to the EIS, entitled *"Final Supplemental Environmental Impact Statement for the Proposed Master Plan Update Development Actions at Seattle-Tacoma International Airport"* was issued in May 1997. The Master Plan Update is a comprehensive analysis of long-term needs for Sea-Tac airport and the regional transportation network in general. A full range of alternatives was addressed in the EIS, including alternative modes of transportation, construction of a new airport or modifications to an existing airport, improvements in systems management, development alternatives at Sea-Tac, and no action. After review of the alternative courses of action to address poor weather aircraft operating delay, the FAA, the Puget Sound Regional Council, and the Port concluded that the only practicable course of action to achieve the project purpose was to construct a third parallel air carrier runway and other air transportation facilities at Sea-Tac. Following review of alternative courses of action to bring the runways into compliance with FAA standards, the FAA and the Port of Seattle have concluded that it is necessary to construct extensions of the RSAs. The FAA and the Port of Seattle have also concluded that it is necessary to construct the SASA.
As a cooperating agency under NEPA, the Corps concluded that a number of upgrades and improvements at Sea-Tac proposed as part of the Master Plan update including, but not limited to, proposed terminal improvements, extension of runway 34R, parking and access improvements, and relocation, redevelopment and expansion of support facilities; would not involve the filling of wetlands or other waters of the United States and, therefore, would require no Department of the Army permit under Section 404 of the Clean Water Act.

Individual permits issued by this office are normally valid for 3 years from the date of issuance. The work proposed by the Port of Seattle in this Public Notice is expected to take considerably longer than 3 years. Pursuant to the requirements of 33 CFR 325.6(c), the District Engineer hereby establishes the duration of a permit for this work, if one were to be issued, to be 7 years from the date of issuance.

MITIGATION - To compensate for unavoidable project impacts to streams and wetlands, the applicant has proposed onsite and offsite mitigation described in the *Natural Resource Mitigation Plan, Seattle Tacoma-International Airport Master Plan Update Improvements (December 2000)*. In response to public review, agency comment, and new information collected since circulation of the first revised public notice dated

30 September 1999, the applicant has made the following changes to the mitigation plan.

- Mitigation at the Vacca Farm Site has increased from about 11 to 17.15 acres. This mitigation area includes new Miller Creek in-stream habitat enhancements, enhanced prior converted cropland (6.60 acres), enhanced emergent scrub-shrub and forested wetlands (3.64 acres), enhanced shoreline and aquatic habitat in Lora Lake (3.06 acres). The mitigation also includes enhanced stream, shoreline, and wetland buffers associated with Miller Creek (4.85 acres).

  The principal features of mitigation at Vacca farm remain: Relocation and enhancement of a 980-linear-foot reach of Miller Creek around the footprint of the proposed improvements; enhancement of fisheries habitat in relocated sections of Miller Creek; and excavation of new floodplain/wetland enhancement at Vacca Farm to compensate for floodplain areas filled.

- Mitigation in the Miller Creek buffer downstream of Vacca Farm has increased from 24 to 39.4 acres. This increase results from establishing 100-foot buffers from the outer edge of the riparian wetlands (versus the ordinary high watermark of the creek), and by including a buffer averaging approach to increase buffer size where the embankment and easements occur within 100 feet of Miller Creek or riparian wetlands.

The mitigation work downstream of Vacca Farm still includes the following major features:

a. Removal of existing development (including removal of septic tanks, underground storage tanks, ornamental vegetation, invasive species, and water uses);

b. Establishment of buffers vegetated with native woody vegetation along about 6,500 linear feet (about 40 acres) of Miller Creek. These buffers include enhancement of about 7.40 acres of wetlands in the Miller Creek buffer;

c. Restoration of in-stream habitat at four locations in the Miller Creek channel;

d. Installation of large woody debris along approximately 6,500 linear feet of the Miller Creek channel.

Onsite and in-basin mitigation for filling of 14.37 acres of wetlands in the Miller Creek watershed, described above, will occur on approximately 57 acres of property around Miller Creek that would be placed in native growth protection easements or an equivalent restrictive covenant. Additional in-basin mitigation would result from the establishment of a $150,000 Trust Fund to promote enhancement of aquatic habitat in Miller Creek.

- Mitigation on the Tyee Valley Golf Course has increased from 4.5 to 10.46 acres. This results from the addition of increased buffers on the Tyee Valley golf course enhancement project, which would convert a managed golf course to scrub-shrub wetland habitat, bringing the total to 6.07 acres, and by adding buffers to a portion of the West Branch of Des Moines Creek (4.39 acres), and enhancing them with native shrubs.

The major details of mitigation for filling of 3.88 acres of wetlands in the Des Moines Creek watershed remain as from the first revised public notice and will occur on over 10 acres of property that would be placed in native growth protection easements or an equivalent restrictive covenant. Additional in-basin mitigation would result from the establishment of a $150,000 Trust Fund to promote enhancement of aquatic habitat in Des Moines Creek.

- Out-of-basin mitigation in Auburn has increased from 51 acres to over 65 acres. This increase results from an increase in the buffer width from 50 to 100 feet. The project now includes 15.9 acres of buffer, 19.5 acres of wetlands enhancement, and 29.98 acres of wetlands creation or restoration.

The major features of the out-of-basin mitigation, on a site within the city of Auburn, adjacent to the Green River remain as in the 1999 public notice. This mitigation is located more than 10,000 feet from active runways at STIA, and consistent with provisions of the FAA Advisory Circular 150/5200-33, which limits wildlife habitat mitigation near airports, would provide habitat mitigation. The mitigation plan consists of the following elements:

a. In-kind replacement of wetlands at a mitigation ratio of 2.1:1 (about 17.20 acres).

b. In-kind replacement of scrub-shrub wetlands at a ratio of 2:1 (about 6.00 acres).

c. In-kind replacement of emergent wetlands at a ratio of 0.9:1 (about 6.80 acres, which includes 0.60 of an acre of open water).

d. Enhance approximately 19.50 acres of existing wetlands with native tree and shrub species.

Protect the replacement wetlands with 100-foot-wide forested buffers and other upland forest areas. About 11.9 acres of buffer would protect the mitigation wetlands. About 4 acres of upland forest would provide habitat for upland wildlife in the interior portion of the site.

Consolidate impacts to many small, isolated, lower functioning wetlands into a larger, ecologically diverse wetlands ecosystem. The wetlands would provide increased habitat function in comparison to that provided by the impacted wetlands.

The Auburn wetland mitigation site consists of upland and palustrine emergent wetlands. About 10.40 acres of palustrine emergent wetlands dominated by pasture grasses would be regraded and replanted with native

wetland species. Approximately 9.10 acres of emergent wetlands (areas dominated by pasture grass) would be temporarily impacted by installation of plantings and temporary irrigation. About 1.60 acres of offsite emergent wetlands would be temporarily disturbed during construction of the temporary construction road. About 19.50 acres of existing emergent wetlands dominated by pasture grasses would be enhanced and restored to native forested wetlands habitat. Finally, about 2.20 acres of seasonally saturated emergent wetlands (dominated by reed canarygrass, pasture grasses, and/or row crops) could be altered by construction of channels connecting the mitigation site to the 100-year floodplain of the Green River. About 0.12 of an acre of wetlands (dominated by emergent pasture grasses) would be permanently impacted by construction access to the Auburn mitigation project. The total wetlands area affected at the Auburn mitigation site, including construction access, would be about 23 acres.

ENDANGERED SPECIES - The Endangered Species Act of 1973 (ESA), as amended, requires assessment of potential impacts to listed and proposed species. Puget Sound chinook salmon (*Oncorhynchus tshawytscha*) and the Coastal/Puget Sound bull trout (*Salvelinus confluentus)* have been listed as threatened in the State of Washington. These two species occur downstream of the proposed project area in the Miller and Des Moines Creek estuaries and do occur in the Green River (located approximately 200 feet east of the proposed offsite wetlands mitigation area in Auburn, Washington). Critical habitat has been designated for chinook salmon. The Miller and Des Moines Creek estuaries are in designated critical habitat areas for the species. The bald eagle (*Haliaeetus leucoephalus*), listed as threatened in Washington, occurs in the project area. Overwintering bald eagles may use the Green River as a forage area; however, construction of the mitigation project will occur during the summer months when eagles are unlikely to be present. Upon completion, the mitigation site may provide additional roosting and forage habitat for eagles.

In 1995, during preparation of the EIS, a biological assessment (*Appendix K – STIA Airport Master Update Final EIS Biological Assessment, April 1995*) and addendum (*Addendum to Biological Assessment STIA Airport Master Plan Update Final EIS, December 1995*) were completed for the proposed work. At that time, the bald eagle (*Haliaeetus leucoephalus*), and peregrine falcon (*Falco peregrinus),* were listed as threatened in Washington. Based on the biological assessment and addendum, the FAA, the lead Federal agency, determined the proposed action was not likely to adversely affect bald eagles or peregrine falcons. The U.S. Fish and Wildlife Service concurred with this determination on 6 December 1995. After that time, the peregrine falcon was formally delisted under ESA.

In early 2000, following the listing of Puget Sound chinook, and Coastal/Puget Sound bull trout, the FAA, as the lead Federal agency for ESA consultation, reinitiated consultation for all currently listed fish and wildlife species. A biological assessment has been prepared addressing potential impacts to chinook salmon, bull trout, marbled murrelet (*Brachyramphus marmoratus*), and bald eagle. The FAA has initiated formal consultation under Section 7 of the ESA with the National Marine Fisheries Service (NMFS), and the U. S. Fish and Wildlife Service (USFWS). The Services are currently preparing biological opinions. The Corps will not proceed to a permit decision until ESA consultation has been completed.

CULTURAL RESOURCES - The District Engineer has reviewed the latest published version of the National Register of Historic Places, lists of properties determined eligible and other sources of information. The following is current knowledge of the presence or absence of historic properties and the effects of the undertaking upon these properties:

An historic properties investigation has been conducted within the permit area. One site, the Sunnydale School, is potentially eligible for the National Register and, while not within the permit area proposed herein, would be indirectly affected by the operation of the third runway. The applicant is preparing a Memorandum

of Agreement for the sound insulation of the school in accordance with Section 106 of the National Historic Preservation Act. That process includes review and coordination by the Washington State Office of Archaeology and Historic Preservation, and the Advisory Council on Historic Preservation, as appropriate.

A cultural resource survey has been conducted for the permit area. No archeological or cultural resources were identified. The applicant proposes monitoring of portions of the project area by a qualified archaeologist during construction. If necessary, coordination with the State Historic Preservation Officer (SHPO) would occur per the requirements of Section 106 of the National Historic Preservation Act prior to a Corps permit decision.

The District Engineer invites responses to this public notice from Federal, State, and local agencies, historical and archeological societies, Indian tribes, and other parties likely to have knowledge of or concerns with historic properties in the area.

PUBLIC HEARING – Two joint public hearings will be held by the Corps for the Department of the Army permit application and the Washington State Ecology's Washington State Water Quality Certification for the proposed project.

Dates and Times: 26 January 2001 5:30 p.m. – 10 p.m.;
27 January 2001 9 a.m. – 5 p.m.

Location: Washington State Criminal Justice Training Center
19010 - 1st Avenue South
Burien, Washington 98148

The purpose of the hearings is to obtain public views and opinions on the proposed project that are relevant for consideration in making a permit decision for this proposed project.

HEARING FORMAT – The forum will be two formal hearings with verbatim recording. Oral and/or written comments can be presented. The hearings will be conducted in accordance with procedures set forth in 33 CFR, Part 327 (see Federal Register, Vol. 51, Number 219, dated November 13, 1986, page 41249 et. Seq.), and requirements of the State of Washington at 173-225 WAC. A brief description of the proposal, including changes from the prior project reviewed in the public hearing of 3 November 1999, will be presented. Following this, interested parties may present specific information on the proposal, potential impacts, alternatives, or other related concerns.

During the afternoon session of 26 January 2001, 4 p.m. to – 5 p.m., and from 9 a.m. to 10 a.m. at the beginning of the 27 January 2001 session, Corps and Ecology staffs will conduct question and answer sessions to discuss procedural issues and concerns that the public may have about the permit process. Discussion will be limited to procedural issues only. Comments or questions of a technical nature on the applicant’s proposal must be given as formal comment during the testimony portions of the hearings.

Testimony should be restricted to changes in the applicant’s proposal from that presented in the public hearing of 3 November 1999, or to update previously submitted comments. All written and oral statements given during the previous hearings and accompanying comment periods remain a part of the record and will be given full consideration in making a permit decision.

All interested parties are invited to be present or to be represented at these public hearing. Oral statements will be heard, but for accuracy of the record, important testimony should be submitted in writing. Oral statements should be brief, and summarize any extensive written material so that there will be time for all interested persons to be heard.

COMMENT AND REVIEW PERIOD - The Corps and the Ecology will accept written comments on the proposed work for 20 days following the public hearing, until 16 February 2001. Comments for the Corps should be submitted to:

U.S. Army Corps of Engineers
Regulatory Branch
Post Office Box 3755
Seattle, Washington 98124-2255
ATTN: Jonathan Freedman, Project Manager

Comments for Ecology should be submitted to:

Washington State Department of Ecology
Shorelands and Environmental Assistance Program
3190 - 160th Avenue Southeast
Bellevue, Washington 98008-5452
ATTN: Ann Kenny, Environmental Specialist

PROJECT BIBLIOGRAPHY - The following is a non-inclusive list of documents, issued since the November 1999 public hearing, relating to this permit application. Additional information on this project is available in the project files located at the Corps Seattle District office.

I. Port of Seattle Projects—404 Permit Documents

1. *Wetland Functional Assessment and Impact Analysis*, Parametrix (December 2000)

2. *Natural Resource Management Plan*, Parametrix (December 2000)

3. *Wetland Delineation Report*, Parametrix (December 2000)

4. *Comprehensive Stormwater Management Plan*, Parametrix (December 2000)

5. *Wildlife Hazard Management Plan* (August 2000)

6. *Seattle – Tacoma Master Plan Update Low Streamflow Analysis,* Earth Tech Inc., (December 2000).

II. Port of Seattle Projects—Other Documents

1. *Industrial Wastewater System Lagoon #3 Upgrades and Expansions* SEPA Determination of Non-Significance (December 22, 1999) and Environmental Checklist.

2. *Part 150 Noise Compatibility Plan* SEPA Determination of Non-Significance (October 20, 2000) and Environmental Checklist (October 16, 2000).

3. *Water System Improvements Project Seattle-Tacoma International Airport* SEPA Determination of Non-Significance (July 5, 2000) *Addendum to Water System Improvements* (June 27, 2000) and Environmental

Checklist (March 8, 2000).

4. *North Electrical Service Upgrade Seattle-Tacoma International Airport* Final SEPA Determination of Non-Significance (August 7, 2000), SEPA Determination of Non-Significance (June 2, 2000) and Environmental Checklist (June 2, 2000).

III. Projects in the Airport Vicinity Initiated by Other Agencies

1. Central Puget Sound Regional Transit Authority: *Central Link Light Rail Transit Project* Final Environmental Impact Statement, Volume 1 and *Executive Summary Report* (November 1999).

2. Washington State Department of Transportation: *Selected SR 509/South Access Road EIS Discipline Reports:*

Geology and Soils	February 2000
Vegetation, Wildlife and Fisheries	March 2000
Wetlands	April 2000
Section 4(f)	August 2000
Water Quality	August 2000

3. City of Sea Tac: *SeaTac City Center Plan* Final Supplemental Programmatic Environmental Impact Statement (November 12, 1999).

4. Des Moines Creek Basin Committee: *Des Moines Creek Regional Capital Improvement Project Preliminary Design Report Alternative Analysis* (November 1, 1999).

5. Des Moines Creek Basin Committee: *Des Moines Creek Regional Capital Improvement Project Preliminary Design Report Alternative Analysis Addendum* (November 1, 1999).

6. Washington State Department of Ecology: *Sea-Tac Runway Fill Hydrologic Studies Report*. Northwest Regional Office, Bellevue Washington, (June 19, 2000).

The above documents will be available for public review at the following locations during the public comment period:

- The Port of Seattle Neighborhood Field Office at 19639 28th Avenue South, SeaTac WA 98188 Building E, Room SC4-1011A;

- Burien Public Library, 14700 6th Avenue Southwest, Burien WA 98166.

- Des Moines Public Library at 21620 11th South, Des Moines WA 98198.

- U.S. Army Corps of Engineers, Seattle District Law Library, Room 2131A 4735 E. Marginal Way South, Seattle WA 98124-2255.

<u>EVALUATION</u> - The decision whether to issue a permit will be based on an evaluation of the probable impact, including cumulative impacts of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits which reasonably may be expected to accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and

wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people.

The Corps is soliciting comments from the public; Federal, State, and local agencies and officials; Indian tribes; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, condition, or deny a permit for the work. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used to determine if supplemental documentation under the National Environmental Policy Act (NEPA) may be required, as appropriate. Comments may also used to determine the overall public interest of the activity.

The evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act. This evaluation will include an alternatives analysis.

ADJACENT PROPERTY OWNERS - A list of adjacent property owners is available for review at the Seattle District offices and from the Port of Seattle at the address listed on the first page of this notice.

The State of Washington is reviewing this work for consistency with the approved Washington Coastal Zone Management Program.

The State of Washington is reviewing this work pursuant to the State Hydraulic Project Code.

The State of Washington water quality certification for the proposed work is necessary under the provisions of Section 401 of the Clean Water Act.

The State of Washington is reviewing this work for compliance with the State water quality standards. The Ecology will extend jurisdiction over 7.88 acres of lands as waters of the State considered as prior converted cropland by the Corps (non-jurisdictional under Federal law) on the Vacca Farm property. Accordingly, impacts being considered under water quality standards include an additional .92 of an acre of waters of the State to be filled at the Vacca Farm site, and an additional 6.92 acres of waters of the State temporarily impacted during construction of mitigation.

The FAA issued a Record of Decision on the SASA on 13 September 1994, and issued a Record of Decision for the Master Plan Update Development Actions on 3 July 1997.

The Port has concluded that the portion of this action at STIA is outside the jurisdictional authority of the Shoreline Management Act of 1971.

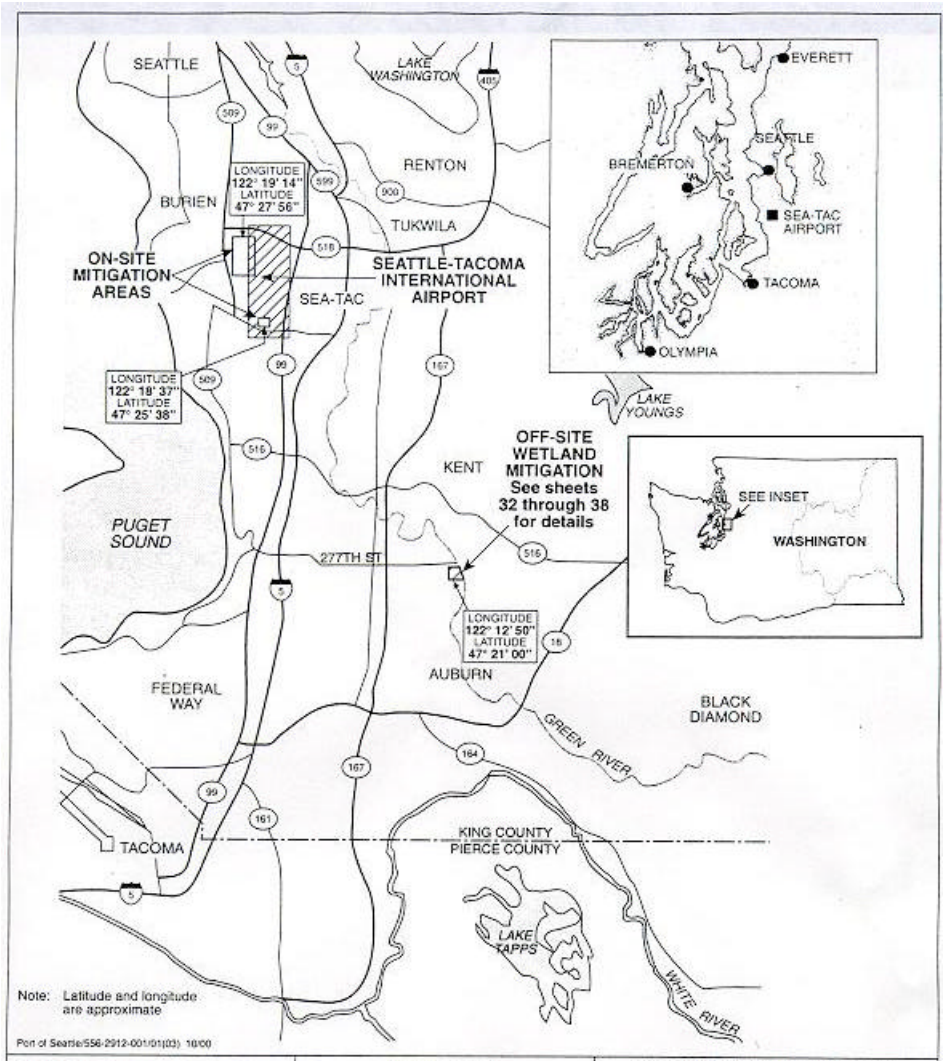
1996-4-02325

COMMENT AND REVIEW PERIOD - Comments on these factors will be accepted and made part of the record and will be considered in determining whether it would be in the best public interest to grant a permit. Comments should reach this office, Attn: Regulatory Branch, not later than the expiration date of this public notice to ensure consideration and refer to the following name and file number:

Seattle, Port of
1996-4-02325

Encl
Drawings (38)

1996-4-02325



PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND

96-4-02325

VICINITY MAP

N

0 15,000' 30,000'

SCALE 1" = 15,000'

IMPACT/MITIGATION SITES FOR PROPOSED MASTER PLAN UPDATE IMPROVEMENTS AT SEATTLE TACOMA INTERNATIONAL AIRPORT

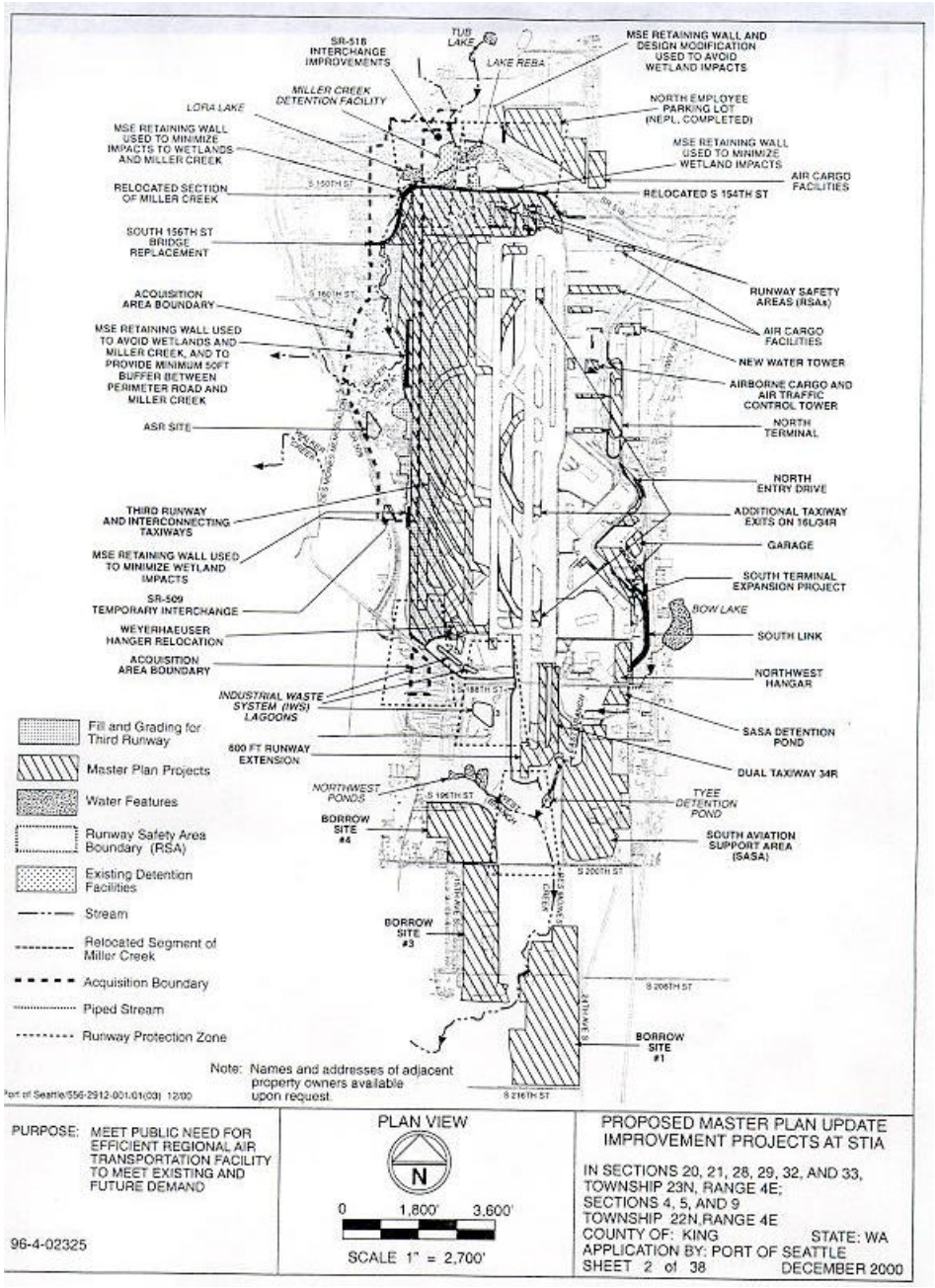
IN: SECTIONS 20, 21, 28, 29, 32, AND 33, TOWNSHIP 23N, RANGE 4E; SECTIONS 4, 5, AND 9 TOWNSHIP 22N, RANGE 4E; AND SECTION 31 TOWNSHIP 22N, RANGE 5E

COUNTY OF: KING STATE: WA

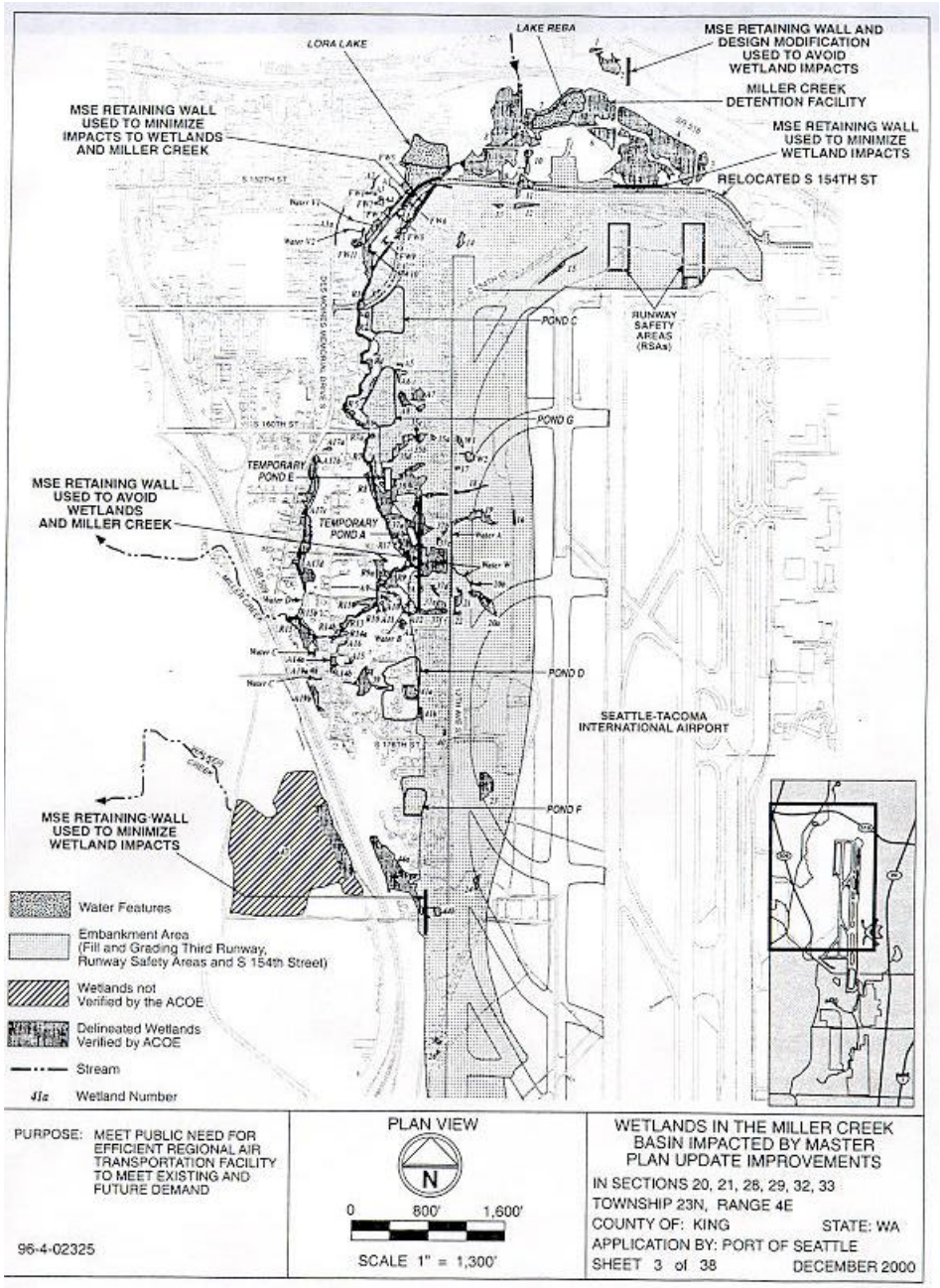
APPLICATION BY: PORT OF SEATTLE

SHEET 1 of 38 DECEMBER 2000

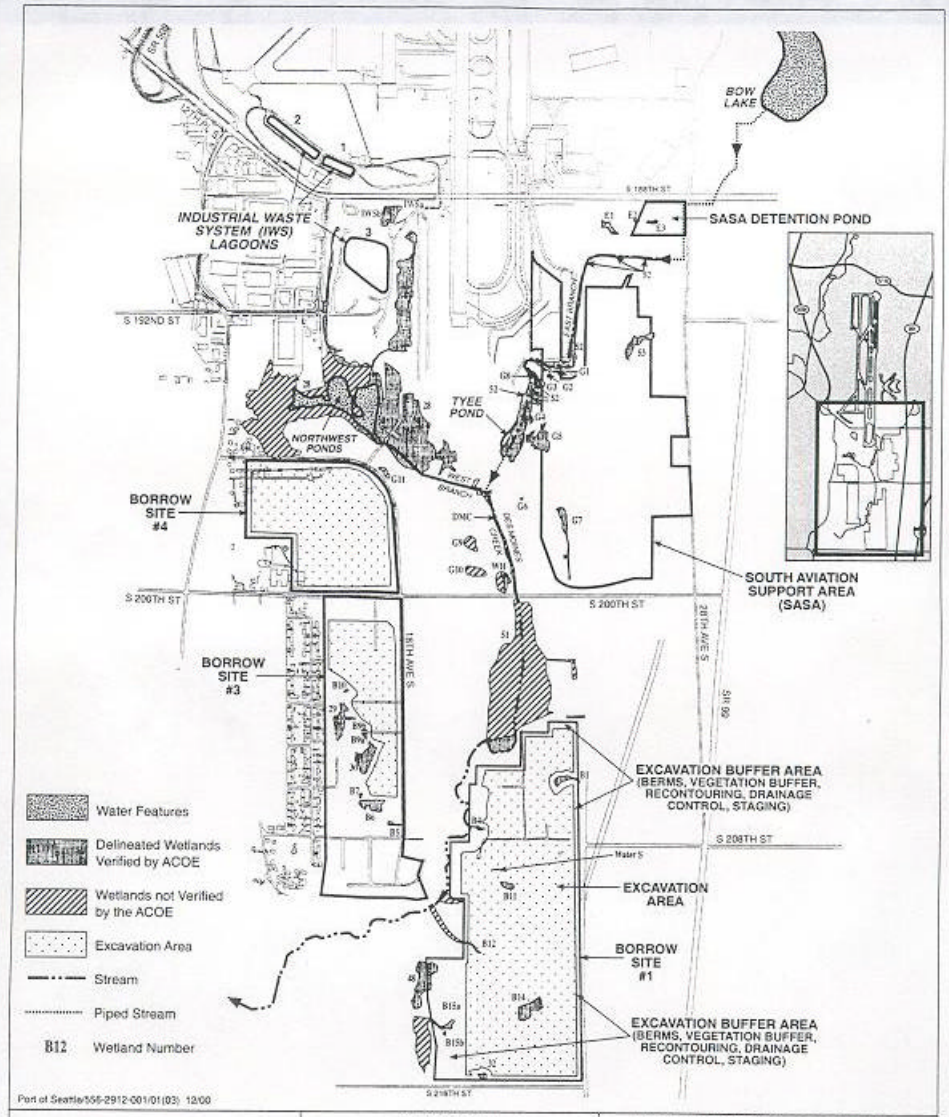
1996-4-02325


SR-518 INTERCHANGE IMPROVEMENTS
TUB LAKE
LAKE REBA
MSE RETAINING WALL AND DESIGN MODIFICATION USED TO AVOID WETLAND IMPACTS
MILLER CREEK DETENTION FACILITY
LORA LAKE
NORTH EMPLOYEE PARKING LOT (NEPL, COMPLETED)
MSE RETAINING WALL USED TO MINIMIZE IMPACTS TO WETLANDS AND MILLER CREEK
MSE RETAINING WALL USED TO MINIMIZE WETLAND IMPACTS
AIR CARGO FACILITIES
RELOCATED SECTION OF MILLER CREEK
RELOCATED S 154TH ST
SOUTH 156TH ST BRIDGE REPLACEMENT
RUNWAY SAFETY AREAS (RSAs)
ACQUISITION AREA BOUNDARY
AIR CARGO FACILITIES
MSE RETAINING WALL USED TO AVOID WETLANDS AND MILLER CREEK, AND TO PROVIDE MINIMUM 50FT BUFFER BETWEEN PERIMETER ROAD AND MILLER CREEK
NEW WATER TOWER
AIRBORNE CARGO AND AIR TRAFFIC CONTROL TOWER
ASR SITE
NORTH TERMINAL
NORTH ENTRY DRIVE
THIRD RUNWAY AND INTERCONNECTING TAXIWAYS
ADDITIONAL TAXIWAY EXITS ON 16L/34R
GARAGE
MSE RETAINING WALL USED TO MINIMIZE WETLAND IMPACTS
SOUTH TERMINAL EXPANSION PROJECT
SR-509 TEMPORARY INTERCHANGE
BOW LAKE
WEYERHAEUSER HANGER RELOCATION
SOUTH LINK
ACQUISITION AREA BOUNDARY
NORTHWEST HANGAR
INDUSTRIAL WASTE SYSTEM (IWS) LAGOONS
SASA DETENTION POND
600 FT RUNWAY EXTENSION
DUAL TAXIWAY 34R
NORTHWEST PONDS
TYEE DETENTION POND
BORROW SITE #4
SOUTH AVIATION SUPPORT AREA (SASA)
BORROW SITE #3
BORROW SITE #1
Fill and Grading for Third Runway
Master Plan Projects
Water Features
Runway Safety Area Boundary (RSA)
Existing Detention Facilities
Stream
Relocated Segment of Miller Creek
Acquisition Boundary
Piped Stream
Runway Protection Zone
Note: Names and addresses of adjacent property owners available upon request.
Port of Seattle/556-2912-001.01(03) 12/00
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
96-4-02325
PLAN VIEW
N
0 1,800' 3,600'
SCALE 1" = 2,700'
PROPOSED MASTER PLAN UPDATE IMPROVEMENT PROJECTS AT STIA
IN SECTIONS 20, 21, 28, 29, 32, AND 33, TOWNSHIP 23N, RANGE 4E; SECTIONS 4, 5, AND 9 TOWNSHIP 22N,RANGE 4E
COUNTY OF: KING STATE: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 2 of 38 DECEMBER 2000

1996-4-02325


LORA LAKE
LAKE REBA
MSE RETAINING WALL AND DESIGN MODIFICATION USED TO AVOID WETLAND IMPACTS
MILLER CREEK DETENTION FACILITY
MSE RETAINING WALL USED TO MINIMIZE IMPACTS TO WETLANDS AND MILLER CREEK
MSE RETAINING WALL USED TO MINIMIZE WETLAND IMPACTS
RELOCATED S 154TH ST
POND C
RUNWAY SAFETY AREAS (RSAs)
POND G
TEMPORARY POND E
TEMPORARY POND A
MSE RETAINING WALL USED TO AVOID WETLANDS AND MILLER CREEK
POND D
SEATTLE-TACOMA INTERNATIONAL AIRPORT
POND F
MSE RETAINING WALL USED TO MINIMIZE WETLAND IMPACTS
Water Features
Embankment Area (Fill and Grading Third Runway, Runway Safety Areas and S 154th Street)
Wetlands not Verified by the ACOE
Delineated Wetlands Verified by ACOE
Stream
Wetland Number
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
96-4-02325
PLAN VIEW
N
0 800' 1,600'
SCALE 1" = 1,300'
WETLANDS IN THE MILLER CREEK BASIN IMPACTED BY MASTER PLAN UPDATE IMPROVEMENTS
IN SECTIONS 20, 21, 28, 29, 32, 33
TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING STATE: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 3 of 38 DECEMBER 2000

1996-4-02325



PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND

96-4-02325

PLAN VIEW

N

0 800' 1,600'

SCALE 1" = 1,300'

WETLANDS IN THE DES MOINES CREEK BASIN IMPACTED BY MASTER PLAN UPDATE IMPROVEMENTS

IN SECTIONS 4, 5, AND 9 TOWNSHIP 22N, RANGE 4E

COUNTY OF: KING STATE: WA

APPLICATION BY: PORT OF SEATTLE

SHEET 4 of 38 DECEMBER 2000

In the approximately 2,600-acre area that will be owned by the Port of Seattle after property acquisition is complete, there are approximately 117 delineated wetlands associated with Master Plan Update improvements totaling approximately 115 acres. Full implementation of the proposed Master Plan Update improvements will permanently impact approximately 18.37 acres of wetlands, including 8.17 acres of forested wetlands, 2.98 acres of scrub-shrub wetlands, and 7.22 acres of emergent wetlands. A complete description of wetlands in the impact area is included in the *Wetland Delineation Report* and *Natural Resource Mitigation Plan*.

Wetland Number	Vegetation Type [a]	Indirect Impact (acres)	Direct Impact (acres)	Total Impact (acres)[b]	Vegetation Types Impacted (acres)		
					Forested	Shrub	Emergent
	Runway Safety Area Extension						
5	Shrub	0.00	0.14	0.14	0.07	0.07	0.00
	Subtotal	**0.00**	**0.14**	**0.14**	**0.07**	**0.07**	**0.00**
	Third Runway Project Area						
9	Forested/Emergent	0.00	0.03	0.03	0.01	0.00	0.02
11	Forested/Emergent	0.16	0.34	0.50	0.40	0.00	0.10
12	Forested/Emergent	0.00	0.21	0.21	0.04	0.00	0.17
13	Emergent	0.00	0.05	0.05	0.00	0.00	0.05
14	Forested	0.00	0.19	0.19	0.19	0.00	0.00
West Airfield							
15	Emergent	0.00	0.28	0.28	0.00	0.00	0.28
16	Emergent	0.00	0.05	0.05	0.00	0.00	0.05
17	Emergent	0.00	0.02	0.02	0.00	0.00	0.02
18	Forested/Shrub/Emergent	0.55	2.29	2.84	1.28	0.75	0.81
19	Forested	0.00	0.56	0.56	0.56	0.00	0.00
20	Shrub/Emergent	0.00	0.57	0.57	0.00	0.51	0.06
21	Forested	0.00	0.22	0.22	0.22	0.00	0.00
22	Shrub/Emergent	0.00	0.06	0.06	0.00	0.01	0.05
23	Emergent	0.00	0.77	0.77	0.00	0.00	0.77
24	Emergent	0.00	0.14	0.14	0.00	0.00	0.14
25	Forested	0.00	0.06	0.06	0.06	0.00	0.00
26	Emergent	0.00	0.02	0.02	0.00	0.00	0.02
W1	Forested/Emergent	0.00	0.10	0.10	0.00	0.00	0.10
W2	Forested/Emergent	0.00	0.22	0.22	0.04	0.00	0.18
West Acquisition Area							
35a-d	Forested/Emergent	0.04	0.63	0.67	0.27	0.00	0.40
37a-f	Forested/Emergent	0.34	3.75	4.09	2.84	0.00	1.25
39	Forested	0.02	0.00	0.02	0.02	0.00	0.00
40	Forested	0.00	0.03	0.03	0.00	0.03	0.00
41a and b [c]	Emergent	0.00	0.44	0.44	0.00	0.00	0.44
44a and b	Forested	0.00	0.26	0.26	0.18	0.08	0.00
A5	Emergent	0.02	0.01	0.03	0.00	0.00	0.03

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND 96-4-02325	PERMANENT IMPACTS TO WETLANDS	IN: SECTIONS 20, 21, 28, 29, 32, AND 33, TOWNSHIP 23N, RANGE 4E; SECTIONS 4, 5, AND 9, TOWNSHIP 22N, RANGE 4E; SECTION 31, TOWNSHIP 22N, RANGE 5E COUNTY OF: KING STATE: WA APPLICATION BY: PORT OF SEATTLE SHEET 5 OF 38 DECEMBER 2000

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Wetland Number	Classification[a]	Indirect (acres)	Direct (acres)	Total Impact (acres)[b]	Vegetation Types Impacted (acres)		
					Forested	Shrub	Emergent
A6	Forested	0.09	0.07	0.16	0.16	0.00	0.00
A7	Forested	0.00	0.30	0.30	0.30	0.00	0.00
A8	Forested/Shrub	0.00	0.38	0.38	0.07	0.31	0.00
A12	Shrub	0.06	0.02	0.08	0.00	0.08	0.00
A 18	Shrub	0.01	0.00	0.01	0.00	0.01	0.00
Vacca Farm Site							
A1	Forested/Shrub/Emergent	0.00	0.59	0.59	0.09	0.09	0.41
FW 5	Farmed Wetland	0.00	0.08	0.08	0.00	0.00	0.08
FW 6	Farmed Wetland	0.00	0.07	0.07	0.00	0.00	0.07
Riparian Wetland							
R1	Emergent	0.00	0.13	0.13	0.00	0.00	0.13
	Subtotal	**1.29**	**12.94**	**14.23**	**6.73**	**1.87**	**5.63**
South Aviation Support Area (SASA)/Tyee Valley Golf Course							
52	Forested/Shrub/Emergent	0.54	0.00	0.54	0.54	0.00	0.00
53	Forested	0.00	0.60	0.60	0.60	0.00	0.00
E2	Forested	0.00	0.04	0.04	0.04	0.00	0.00
E3	Forested	0.00	0.06	0.06	0.06	0.00	0.00
G1	Shrub (Slope)	0.00	0.05	0.05	0.00	0.05	0.00
G2	Emergent	0.00	0.02	0.02	0.00	0.00	0.02
G3	Emergent	0.02	0.04	0.06	0.00	0.00	0.06
G4	Emergent	0.04	0.00	0.04	0.00	0.00	0.04
G5	Emergent	0.47	0.40	0.87	0.00	0.00	0.87
G7	Forested/Shrub	0.00	0.50	0.50	0.13	0.37	0.00
	Subtotal	**1.07**	**1.71**	**2.78**	**1.37**	**0.42**	**0.99**
Borrow Area and Haul Road							
28	Emergent	0.00	0.07	0.07	0.00	0.00	0.07
B11	Emergent	0.00	0.18	0.18	0.00	0.00	0.18
B12	Forested	0.04	0.03	0.07	0.00	0.07	0.00
B14	Shrub	0.00	0.78	0.78	0.00	0.55	0.23
	Subtotal	**0.04**	**1.06**	**1.10**	**0.00**	**0.62**	**0.48**
Mitigation[d]							
Auburn area 7	Emergent	0.00	0.02	0.02	0.00	0.00	0.02
Auburn area 9	Emergent	0.00	0.03	0.03	0.00	0.00	0.03
Auburn area 10	Emergent	0.00	0.07	0.07	0.00	0.00	0.07
	Subtotal	**0.00**	**0.12**	**0.12**	**0.00**	**0.00**	**0.12**
TOTAL		**2.40**	**15.97**	**18.37**	**8.17**	**2.98**	**7.22**

[a] All wetlands are palustrine, based on USFWS wetland classification system (Cowardin et al. 1979).
[b] Values are rounded to two significant figures and may be subject to minor change.
[c] Includes 0.18 acre of open water habitat.
[d] Impacts result from access roads (see Sheet 33 of 38).

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND 96-4-02325	PERMANENT IMPACTS TO WETLANDS (continuation of Sheet 5 of 38)	IN: SECTIONS 20, 21, 28, 29, 32, AND 33, TOWNSHIP 23N, RANGE 4E; SECTIONS 4, 5, AND 9, TOWNSHIP 22N, RANGE 4E; SECTION 31, TOWNSHIP 22N, RANGE 5E COUNTY OF: KING STATE: WA APPLICATION BY: PORT OF SEATTLE SHEET 6 OF 38 DECEMBER 2000

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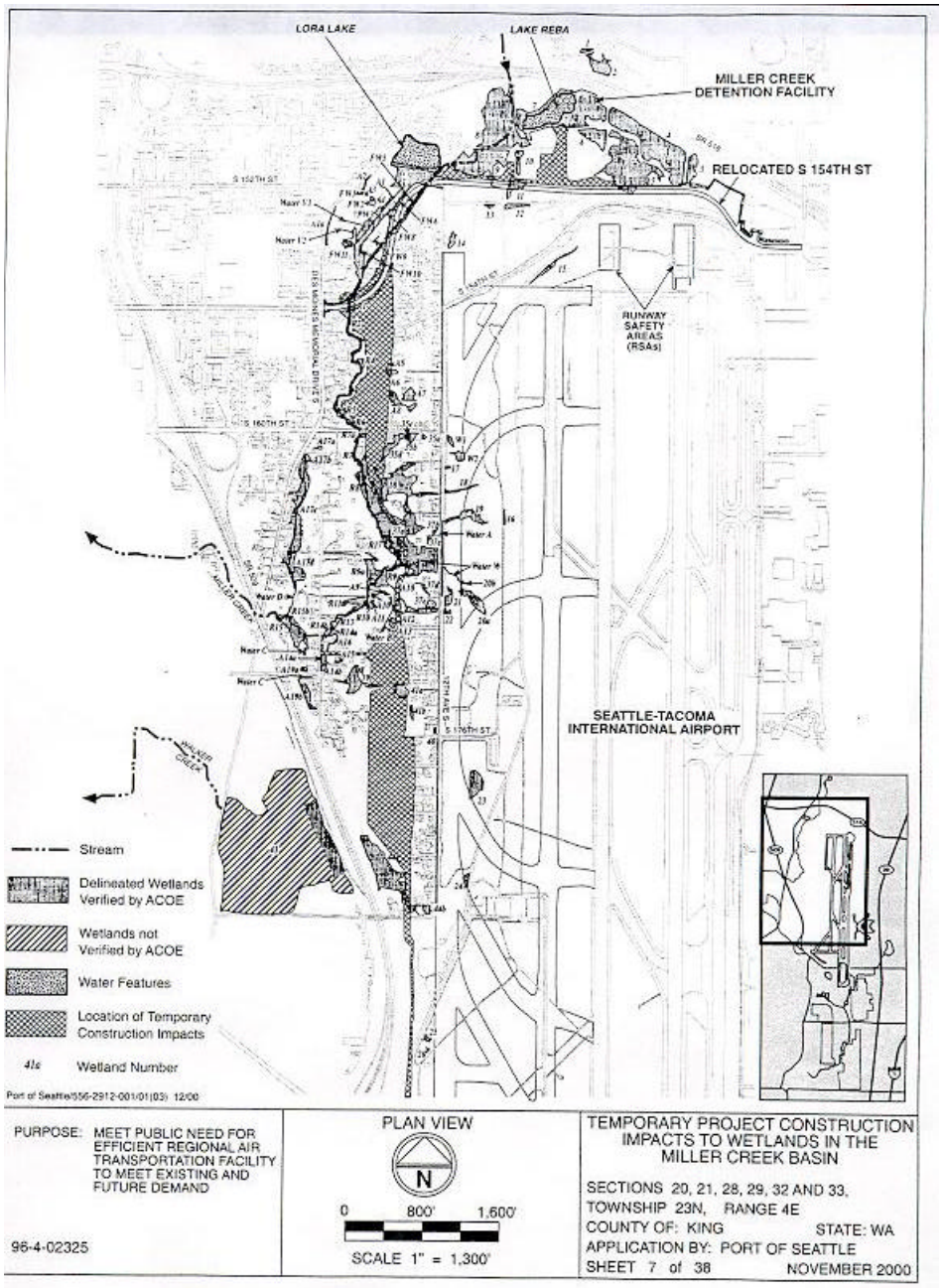
LORA LAKE
LAKE REBA
MILLER CREEK DETENTION FACILITY
RELOCATED S 154TH ST
RUNWAY SAFETY AREAS (RSAs)
SEATTLE-TACOMA INTERNATIONAL AIRPORT
Stream
Delineated Wetlands Verified by ACOE
Wetlands not Verified by ACOE
Water Features
Location of Temporary Construction Impacts
41a Wetland Number
Port of Seattle/556-2912-001/01(03) 12/00
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
96-4-02325
PLAN VIEW
N
0 800' 1,600'
SCALE 1" = 1,300'
TEMPORARY PROJECT CONSTRUCTION IMPACTS TO WETLANDS IN THE MILLER CREEK BASIN
SECTIONS 20, 21, 28, 29, 32 AND 33,
TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING STATE: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 7 of 38 NOVEMBER 2000

Wetland	Classification [a]	Total Temporary Impact Area (acres)	Vegetation Type Impacted (acres)		
			Forest	Shrub	Emergent
Runway Safety Area Extension					
4	Forested [b]	0.20	0.20	0.00	0.00
5	Forested /Shrub [b]	0.20	0.10	0.10	0.00
Third Runway					
9	Forested/Emergent	0.16	0.11	0.00	0.05
18	Forested/Shrub/Emergent	0.22	0.04	0.07	0.11
37	Forested/Shrub/Emergent	0.71	0.50	0.10	0.11
44a	Forested/Shrub	0.28	0.18	0.10	0.00
A1	Forested/Shrub/Emergent [b]	0.05	0.01	0.01	0.03
A12	Shrub	0.03	0.00	0.03	0.00
A13	Forested	0.01	0.01	0.00	0.00
R2	Emergent	0.02	0.00	0.00	0.02
South Aviation Support Area					
52	Forested/Shrub/Emergent [b]	0.17	0.00	0.05	0.12
TOTAL		**2.05**	**1.15**	**0.46**	**0.44**

[a] All wetlands are palustrine, based on USFWS wetland classification system (Cowardin et al. 1979).
[b] Temporary impacts will be limited to installation of sediment fencing and other standard BMPs such as temporary seeding, straw mulch, interception swales, etc.

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND 96-4-02325	TEMPORARY CONSTRUCTION IMPACTS TO WETLANDS FROM MASTER PLAN UPDATE IMPROVEMENTS, SEATTLE-TACOMA INTERNATIONAL AIRPORT	IN: SECTIONS 20, 21, 28, 29, 32, AND 33, TOWNSHIP 23N, RANGE 4E; SECTIONS 4, 5, AND 9, TOWNSHIP 22N, RANGE 4E COUNTY OF: KING STATE: WA APPLICATION BY: PORT OF SEATTLE SHEET 8 OF 38 DECEMBER 2000

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Wetland	Vegetation Types	Total Area (acres)	Vegetation Type Disturbed (acres) Forest	Shrub	Emergent
Temporary impacts to wetlands associated with implementing mitigation that includes excavation or installation of temporary roads					
FW 1, 2, 3, 8, 9, 10, and FW 11[a]	Farmed Wetlands	0.88	0.00	0.00	0.88
A1[a]	Forest/Shrub/Emergent	3.74	0.56	0.56	2.62
A2[a]	Shrub	0.05	0.00	0.05	0.00
A3[a]	Shrub	0.01	0.00	0.01	0.00
A4[a]	Shrub	0.03	0.00	0.03	0.00
Auburn Area 1[b]	Emergent	1.55	0.00	0.00	1.55
Auburn Area 2[c]	Emergent	0.06	0.00	0.00	0.06
Auburn Area 3[c]	Emergent	5.11	0.00	0.00	5.11
Auburn Area 4[c]	Emergent	0.99	0.00	0.00	0.99
Auburn Area 5[c]	Emergent	3.27	0.00	0.00	3.27
Auburn Area 6[c]	Emergent	0.35	0.00	0.00	0.35
Auburn Area 8[c]	Emergent	0.60	0.00	0.00	0.60
Auburn Area 11[c]	Emergent	0.01	0.00	0.00	0.01
Auburn[d]	Emergent	2.20	0.00	0.00	2.20
	Subtotal	**18.85**	**0.56**	**0.65**	**17.64**
Temporary impacts in wetlands associated with enhancement planting					
18[e]	Forest/Shrub/Emergent	1.27	1.27	0.00	0.00
28[f]	Forest/Shrub/Emergent	4.50	0.00	0.00	4.50
37a[e,i]	Forest/Emergent	1.96	1.50	0.00	0.46
A1[e,i]	Forest/Shrub/Emergent	0.34	0.34	0.00	0.00
A9[e,i]	Shrub	0.04	0.00	0.04	0.00
A10[e,i]	Shrub	0.01	0.00	0.01	0.00
A11[e,i]	Shrub	0.02	0.00	0.02	0.00
A13[e,i]	Forest	0.12	0.12	0.00	0.00
A16[e,i]	Shrub/Emergent	0.05	0.00	0.00	0.05
R1[g]	Emergent	0.04	0.00	0.00	0.04
R2[e,i]	Shrub/Emergent	0.12	0.00	0.06	0.06
R3[e,i]	Shrub	0.02	0.00	0.02	0.00
R4[e,i]	Emergent	0.11	0.00	0.00	0.11
R4b[e,i]	Forest/Emergent	0.11	0.03	0.00	0.08
R5[e,i]	Emergent	0.05	0.00	0.00	0.05
R5b[e,i]	Forest/Emergent	0.07	0.02	0.00	0.05
R6[e,i]	Forest/Emergent	0.21	0.05	0.00	0.16
R6b[e,i]	Emergent	0.09	0.00	0.00	0.09
R7[e,i]	Forest/Emergent	0.04	0.04	0.00	0.00
R7a[e,i]	Emergent	0.04	0.04	0.00	0.00
R8[e,i]	Shrub/Emergent	0.40	0.00	0.20	0.20

Continued on Sheet 10 of 38

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND 96-4-02325	TEMPORARY IMPACTS TO WELANDS DUE TO WETLAND MITIGATION ACTIVITIES	IN: SECTIONS 20, 21, 28, 29, 32, AND 33, TOWNSHIP 23N, RANGE 4E; SECTIONS 4, 5, AND 9, TOWNSHIP 22N, RANGE 4E; SECTION 31, TOWNSHIP 22N, RANGE 5E COUNTY OF: KING STATE: WA APPLICATION BY: PORT OF SEATTLE SHEET 9 OF 38 DECEMBER 2000

Continued from Sheet 9 of 38

Wetland	Vegetation Types	Total Area (acres)	Vegetation Type Disturbed (acres)		
			Forest	Shrub	Emergent
R9 [e,i]	Forest	0.38	0.38	0.00	0.00
R9a [e,i]	Forest/Shrub/Emergent	0.30	0.30	0.00	0.00
R10 [e,i]	Shrub	0.04	0.04	0.00	0.00
R11 [e,i]	Emergent	0.42	0.00	0.00	0.42
R12 [e,i]	Forest	0.03	0.03	0.00	0.00
R13 [e,i]	Emergent	0.12	0.00	0.00	0.12
R14a [e,i]	Shrub/Emergent	0.13	0.13	0.00	0.00
R14b [e,i]	Emergent	0.08	0.00	0.00	0.08
R15a [e,i]	Forest/Shrub/Emergent	0.79	0.25	0.40	0.14
R15b [e,i]	Forest/Emergent	0.25	0.06	0.00	0.19
R17 [e,i]	Forest	0.31	0.31	0.00	0.00
Waters B, V1, V2	Open Water	0.05	0.00	0.00	0.05
Auburn [b]	Emergent	9.13	0.00	0.00	9.13
	Subtotal	**21.64**	**4.91**	**0.75**	**15.98**
TOTAL		**40.49**	**5.47**	**1.40**	**33.62**

[a] Temporary impacts associated with restoration activities at the Vacca Farm site (Sheets 14 and 19).
[b] Temporary impacts result from constructing temporary roads to provide access to the mitigation site (Sheet 33).
[c] Excavation in wetlands at off-site mitigation site to increase habitat diversity/complexity, construction of temporary roads to access the interior portion of the site to conduct monitoring and maintenance activities, and approximately 3 acres of temporary staging area.
[d] Maximum of 2.20 acres of existing off-site ditches and farmed wetland will be converted to a wetland drainage channel that connects the mitigation site to the 100-year floodplain of the Green River (Sheet 33).
[e] Enhancements in these wetlands may include excavation for temporary irrigation systems (Sheet 3).
[f] Planting and removal of culverts in wetland located at the Tyee Valley Golf Course (Sheet 30).
[g] Existing drain tiles will be removed and natural wetland topography restored.
[h] Mowing, discing, and planting in existing meadow wetland.
[i] Wetlands in the Miller Creek riparian buffer to be enhanced.

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND 96-4-02325	TEMPORARY IMPACTS TO WELANDS DUE TO WETLAND MITIGATION ACTIVITIES (continuation of Sheet 9 of 38)	IN: SECTIONS 20, 21, 28, 29, 32, AND 33, TOWNSHIP 23N, RANGE 4E; SECTIONS 4, 5, AND 9, TOWNSHIP 22N, RANGE 4E; SECTION 31, TOWNSHIP 22N, RANGE 5E COUNTY OF: KING STATE: WA APPLICATION BY: PORT OF SEATTLE SHEET 10 OF 38 DECEMBER 2000

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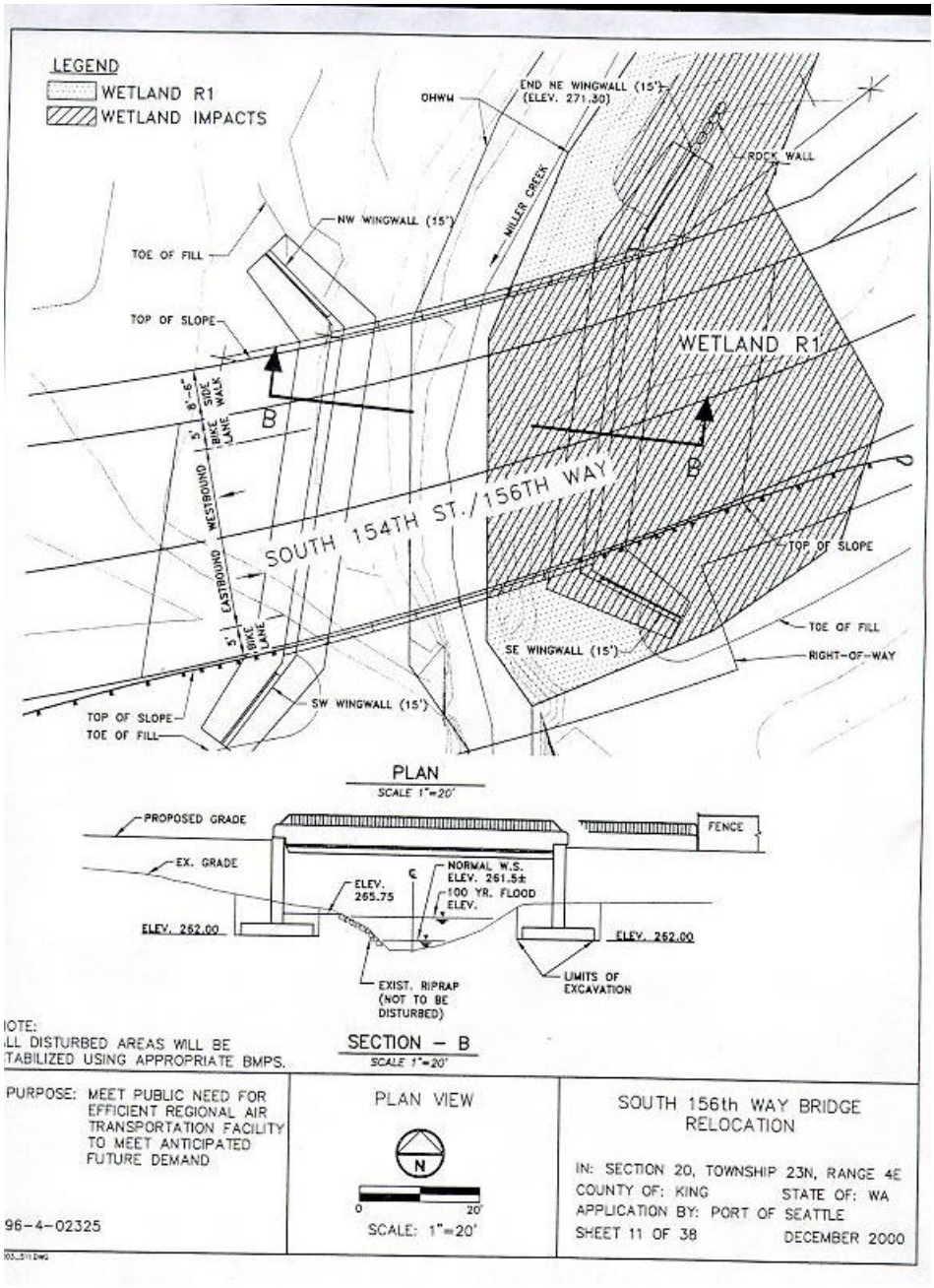
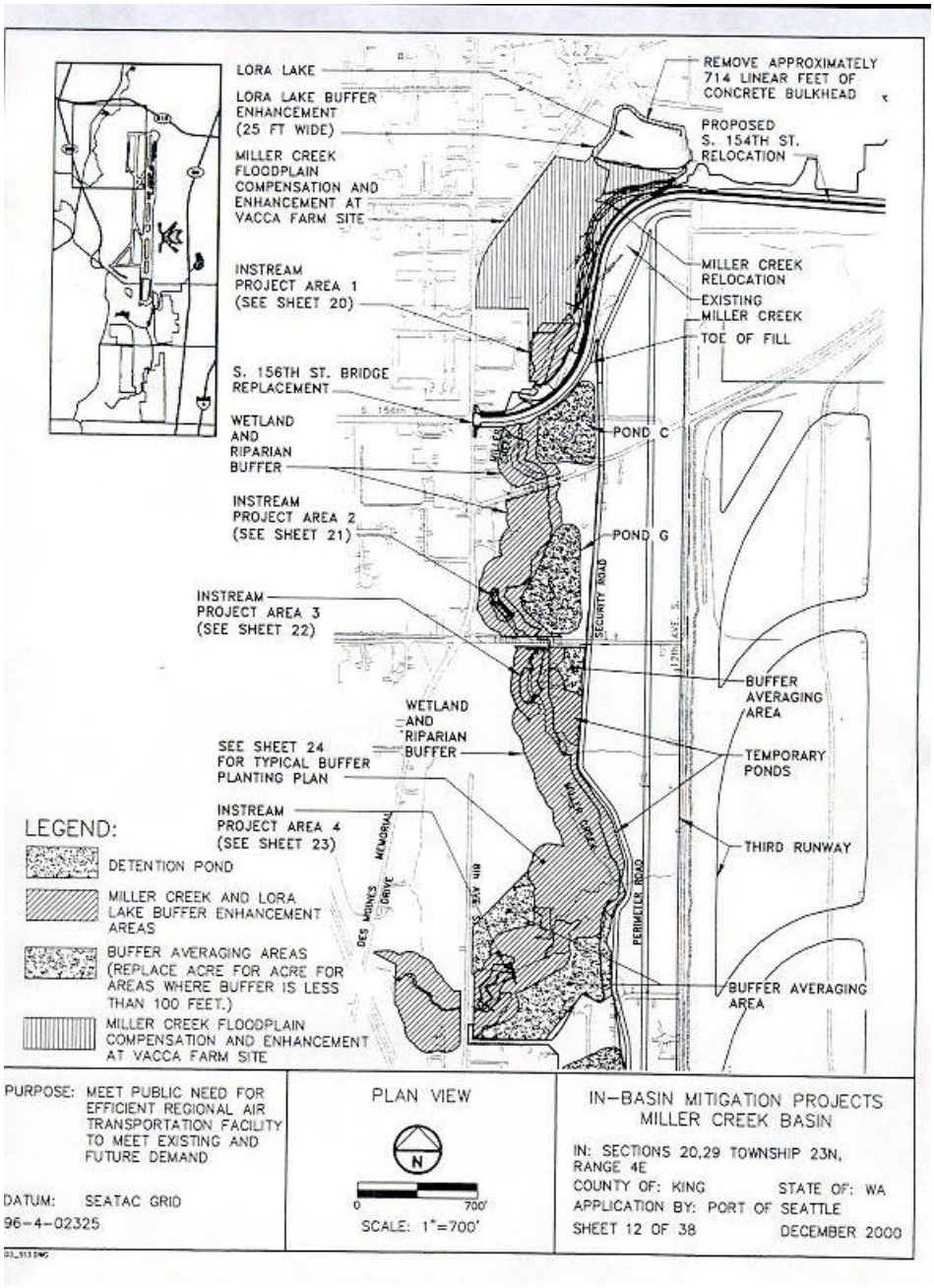

LEGEND
WETLAND R1
WETLAND IMPACTS
OHWM
END NE WINGWALL (15')
(ELEV. 271.30)
ROCK WALL
MILLER CREEK
NW WINGWALL (15')
TOE OF FILL
TOP OF SLOPE
WETLAND R1
B
B
8'-6" SIDE WALK
5' BIKE LANE
EXISTING WIDENING
SOUTH 154TH ST./156TH WAY
TOP OF SLOPE
TOE OF FILL
SE WINGWALL (15')
RIGHT-OF-WAY
5' BIKE LANE
SW WINGWALL (15')
TOP OF SLOPE
TOE OF FILL
PLAN
SCALE 1"=20'
PROPOSED GRADE
FENCE
EX. GRADE
NORMAL W.S.
ELEV. 261.5±
100 YR. FLOOD
ELEV.
ELEV.
265.75
ELEV. 262.00
ELEV. 262.00
EXIST. RIPRAP
(NOT TO BE
DISTURBED)
LIMITS OF
EXCAVATION
SECTION – B
SCALE 1"=20'
NOTE:
ALL DISTURBED AREAS WILL BE
STABILIZED USING APPROPRIATE BMPS.
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET ANTICIPATED FUTURE DEMAND
96-4-02325
PLAN VIEW
N
0
20'
SCALE: 1"=20'
SOUTH 156th WAY BRIDGE
RELOCATION
IN: SECTION 20, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING
STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 11 OF 38
DECEMBER 2000

1996-4-02325


LORA LAKE
LORA LAKE BUFFER ENHANCEMENT (25 FT WIDE)
MILLER CREEK FLOODPLAIN COMPENSATION AND ENHANCEMENT AT VACCA FARM SITE
INSTREAM PROJECT AREA 1 (SEE SHEET 20)
S. 156TH ST. BRIDGE REPLACEMENT
WETLAND AND RIPARIAN BUFFER
INSTREAM PROJECT AREA 2 (SEE SHEET 21)
INSTREAM PROJECT AREA 3 (SEE SHEET 22)
WETLAND AND RIPARIAN BUFFER
SEE SHEET 24 FOR TYPICAL BUFFER PLANTING PLAN
INSTREAM PROJECT AREA 4 (SEE SHEET 23)
REMOVE APPROXIMATELY 714 LINEAR FEET OF CONCRETE BULKHEAD
PROPOSED S. 154TH ST. RELOCATION
MILLER CREEK RELOCATION
EXISTING MILLER CREEK
TOE OF FILL
POND C
POND G
BUFFER AVERAGING AREA
TEMPORARY PONDS
THIRD RUNWAY
BUFFER AVERAGING AREA
SECURITY ROAD
PERIMETER ROAD
DES MOINES MEMORIAL DRIVE
MILLER CREEK
LEGEND:
DETENTION POND
MILLER CREEK AND LORA LAKE BUFFER ENHANCEMENT AREAS
BUFFER AVERAGING AREAS (REPLACE ACRE FOR ACRE FOR AREAS WHERE BUFFER IS LESS THAN 100 FEET.)
MILLER CREEK FLOODPLAIN COMPENSATION AND ENHANCEMENT AT VACCA FARM SITE
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
DATUM: SEATAC GRID
96-4-02325
PLAN VIEW
N
0 700'
SCALE: 1"=700'
IN-BASIN MITIGATION PROJECTS
MILLER CREEK BASIN
IN: SECTIONS 20,29 TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING
STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 12 OF 38
DECEMBER 2000

Summary of Wetland Mitigation Areas

Mitigation	Mitigation Area (acres)
In-Basin	
Wetland Restoration	
Vacca Farm (prior converted wetland and other upland)	6.60
Wetland Enhancement	
Vacca Farm (Farmed Wetland, Other Wetlands, Lora Lake and Water Quality)	5.70
Wetlands in Miller Creek Wetland and Riparian Buffer	7.40
Tyee Valley Golf Course Wetland 28	4.50
Wetland in Des Moines Creek Buffer	1.01
Subtotal	**25.21**
Buffer Enhancement	
Miller Creek Buffer, South of Vacca Farm (not including enhanced wetlands)	32.00
Vacca Farm (Des Moines Memorial Drive and new Miller Creek channel)	4.58
Lora Lake	0.27
Tyee Valley Golf Course Mitigation Area Buffer [1]	1.57
Des Moines Creek Upland Buffer[2]	3.38
Subtotal	**41.80**
Other Actions	
Miller Creek Channel Replacement	- -
Miller Creek Instream Enhancement Projects	- -
Miller Creek Drainage Channel Replacement	- -
Trust Fund of $300,000 for Miller and Des Moines Creek Basins	- -
Total In-Basin Mitigation	**67.01[3]**
Out-of-Basin	
Wetland Restoration	29.98
Wetland Enhancement	19.50
Buffer Enhancement	15.90
Total Out-of-Basin Mitigation	**65.38**
TOTAL MITIGATION	**134.39**

[1] This includes buffer around the 4.5 acres of wetland enhancement.
[2] This enhancement is located along the west branch of Des Moines Creek, south of the Tyee Valley Golf Course Mitigation Area.
[3] Mitigation area in the Des Moines and Miller Creek watersheds is 10.46 acres and 56.55 acres respectively; in-basin mitigation area divided by wetland impact (18.37 acres) provides 3:1 aerial replacement ratio.

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND 96-4-02325	SUMMARY OF WETLAND MITIGATION	IN: SECTIONS 20, 21, 28, 29, 32, AND 33, TOWNSHIP 23N, RANGE 4E; SECTIONS 4, 5, TOWNSHIP 22N, RANGE 4E; SECTION 31, TOWNSHIP 22N, RANGE 5E COUNTY OF: KING STATE: WA APPLICATION BY: PORT OF SEATTLE SHEET 13 OF 38 DECEMBER 2000

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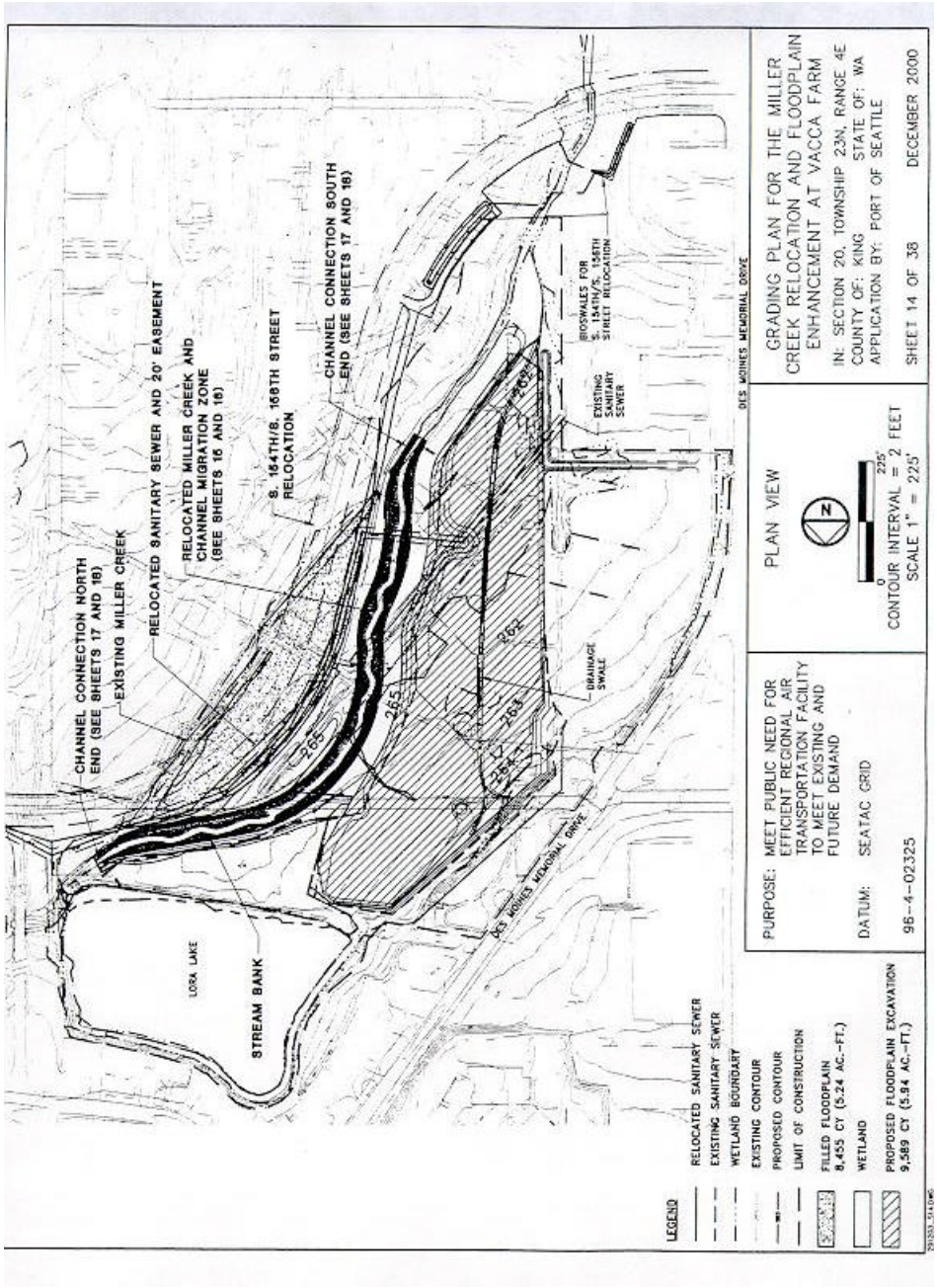
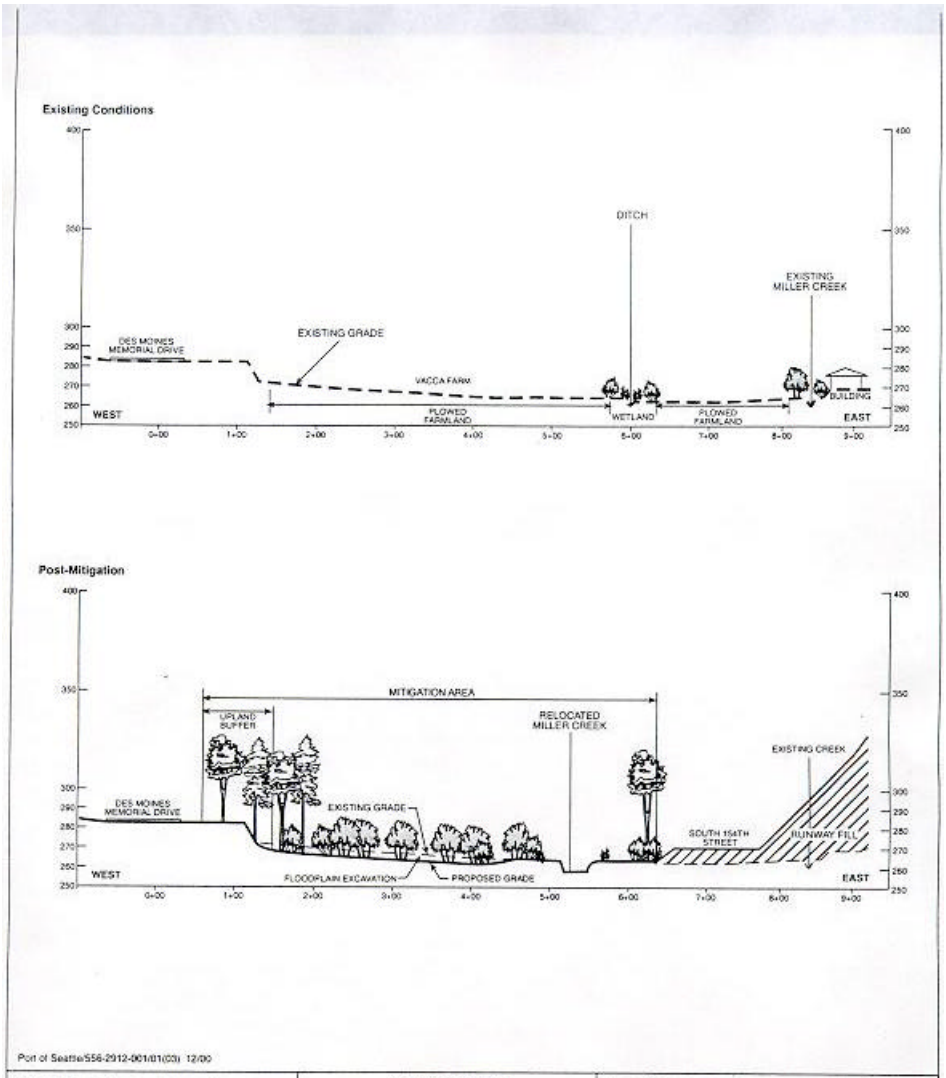
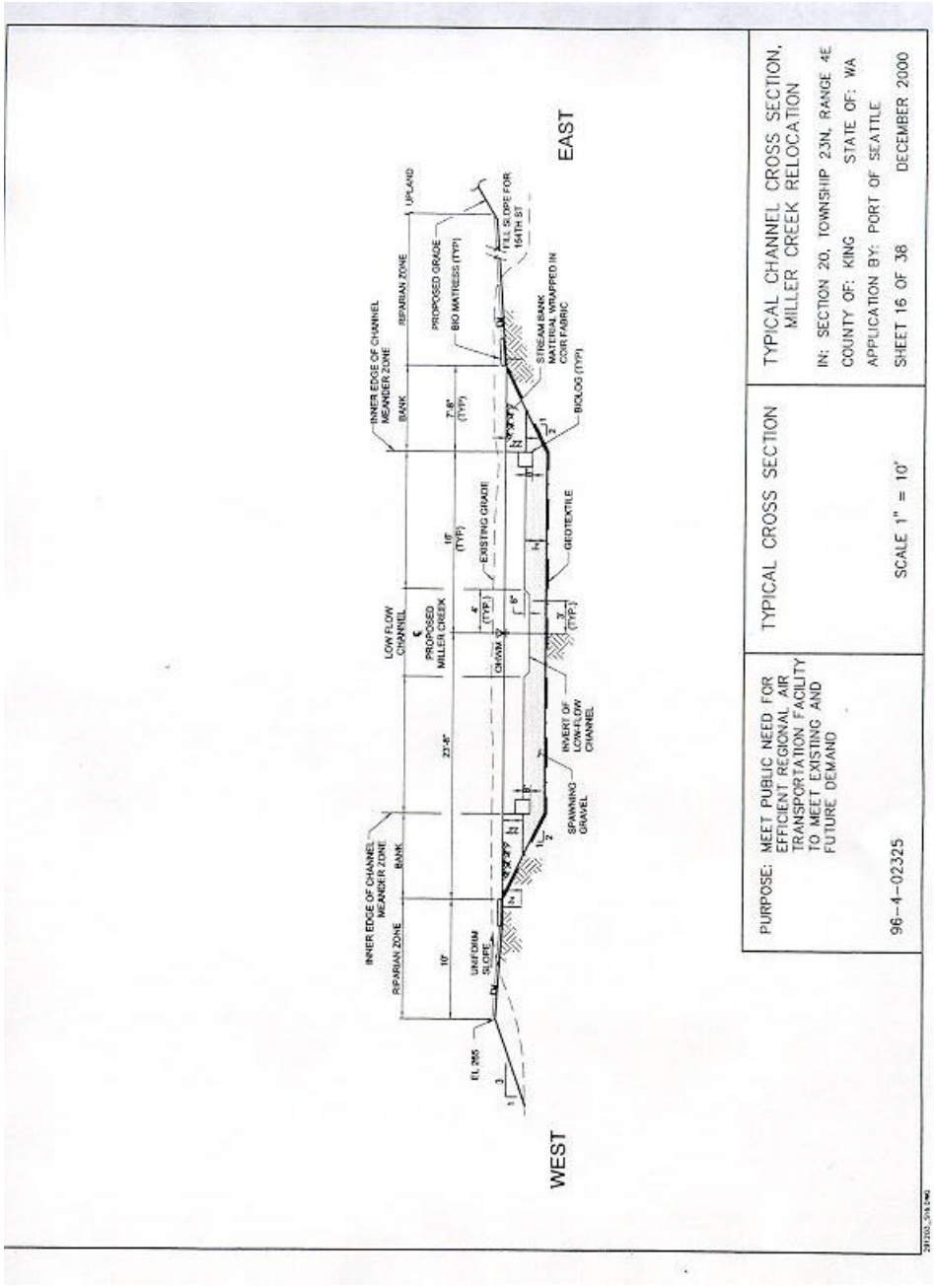
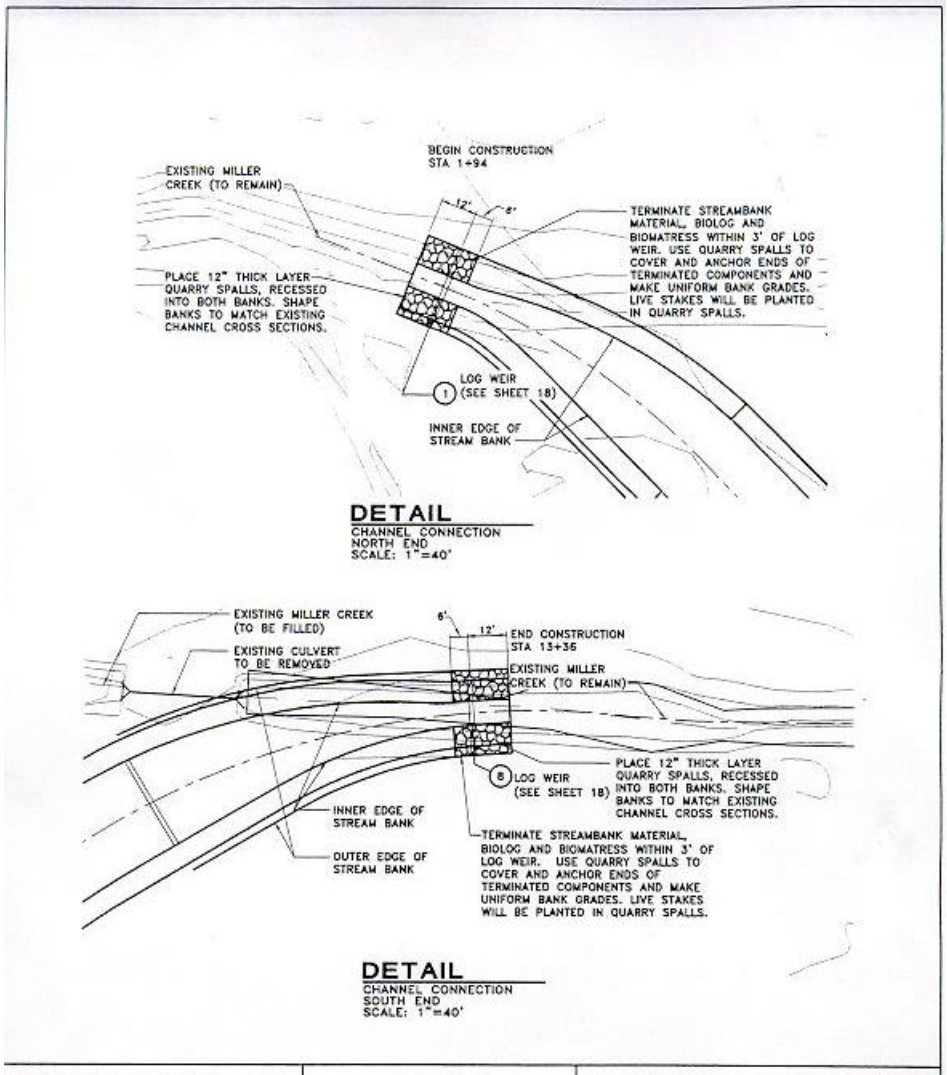
1996-4-02325


CHANNEL CONNECTION NORTH END (SEE SHEETS 17 AND 18)
EXISTING MILLER CREEK
RELOCATED SANITARY SEWER AND 20' EASEMENT
RELOCATED MILLER CREEK AND CHANNEL MIGRATION ZONE (SEE SHEETS 16 AND 18)
S. 154TH/S. 156TH STREET RELOCATION
CHANNEL CONNECTION SOUTH END (SEE SHEETS 17 AND 18)
BIOSWALES FOR S. 154TH/S. 156TH STREET RELOCATION
EXISTING SANITARY SEWER
DES MOINES MEMORIAL DRIVE
DRAINAGE SWALE
LORA LAKE
STREAM BANK
265
264
263
262
LEGEND
RELOCATED SANITARY SEWER
EXISTING SANITARY SEWER
WETLAND BOUNDARY
EXISTING CONTOUR
PROPOSED CONTOUR
LIMIT OF CONSTRUCTION
FILLED FLOODPLAIN 8,455 CY (5.24 AC.-FT.)
WETLAND
PROPOSED FLOODPLAIN EXCAVATION 9,589 CY (5.94 AC.-FT.)
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
DATUM: SEATAC GRID
96-4-02325
PLAN VIEW
N
0 225'
CONTOUR INTERVAL = 2 FEET
SCALE 1" = 225'
GRADING PLAN FOR THE MILLER CREEK RELOCATION AND FLOODPLAIN ENHANCEMENT AT VACCA FARM
IN: SECTION 20, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 14 OF 38
DECEMBER 2000

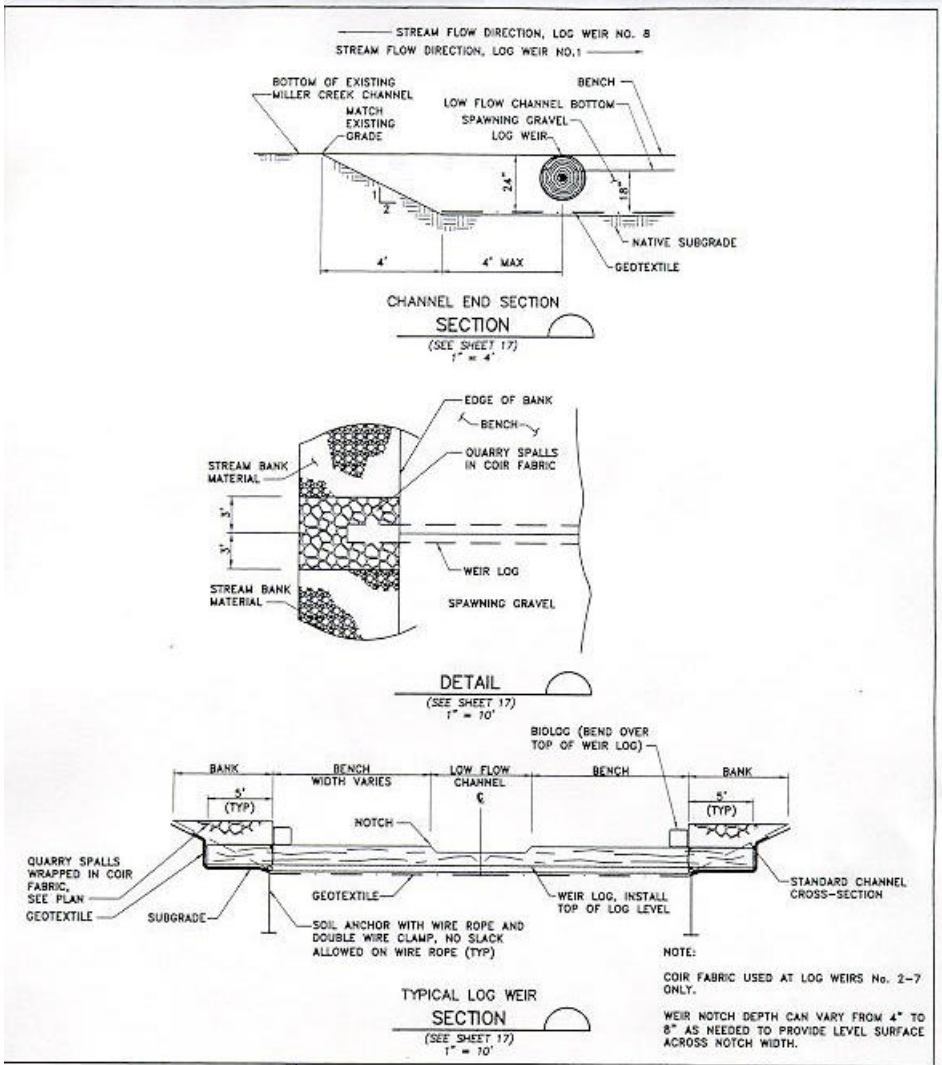


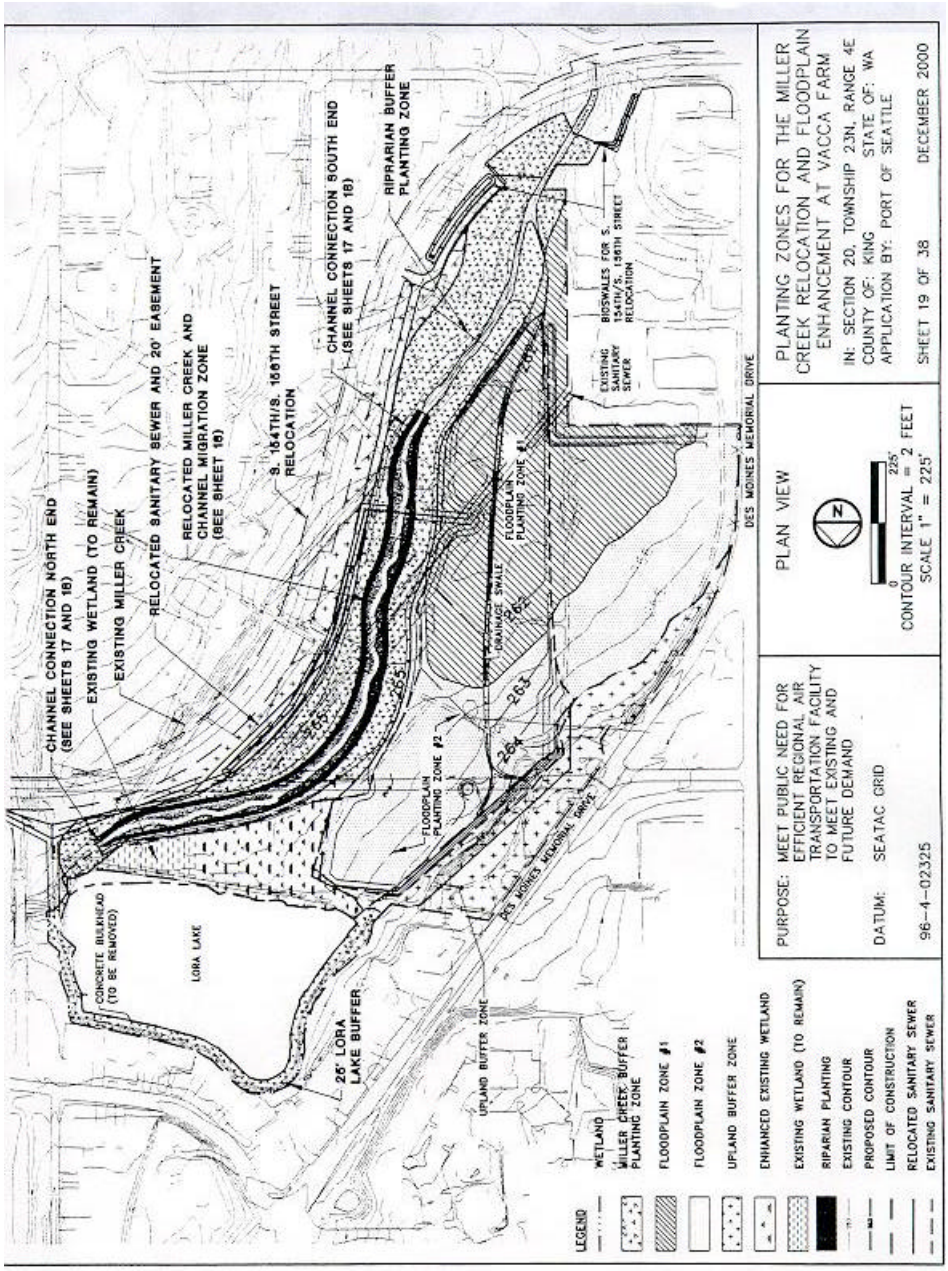
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND DATUM: VERTICAL: KING COUNTY HORIZONTAL: SEA-TAC GRID 96-4-02325	SECTION VIEW VERTICAL SCALE 1" = 60' HORIZONTAL SCALE 1" = 150'	TYPICAL CROSS SECTION PROPOSED GRADING FOR MILLER CREEK RELOCATION AND FLOODPLAIN ENHANCEMENT AT VACCA FARM IN: SECTION 20, TOWNSHIP 23N, RANGE 4E COUNTY OF: KING STATE: WA APPLICATION BY: PORT OF SEATTLE SHEET 15 of 38 DECEMBER 2000

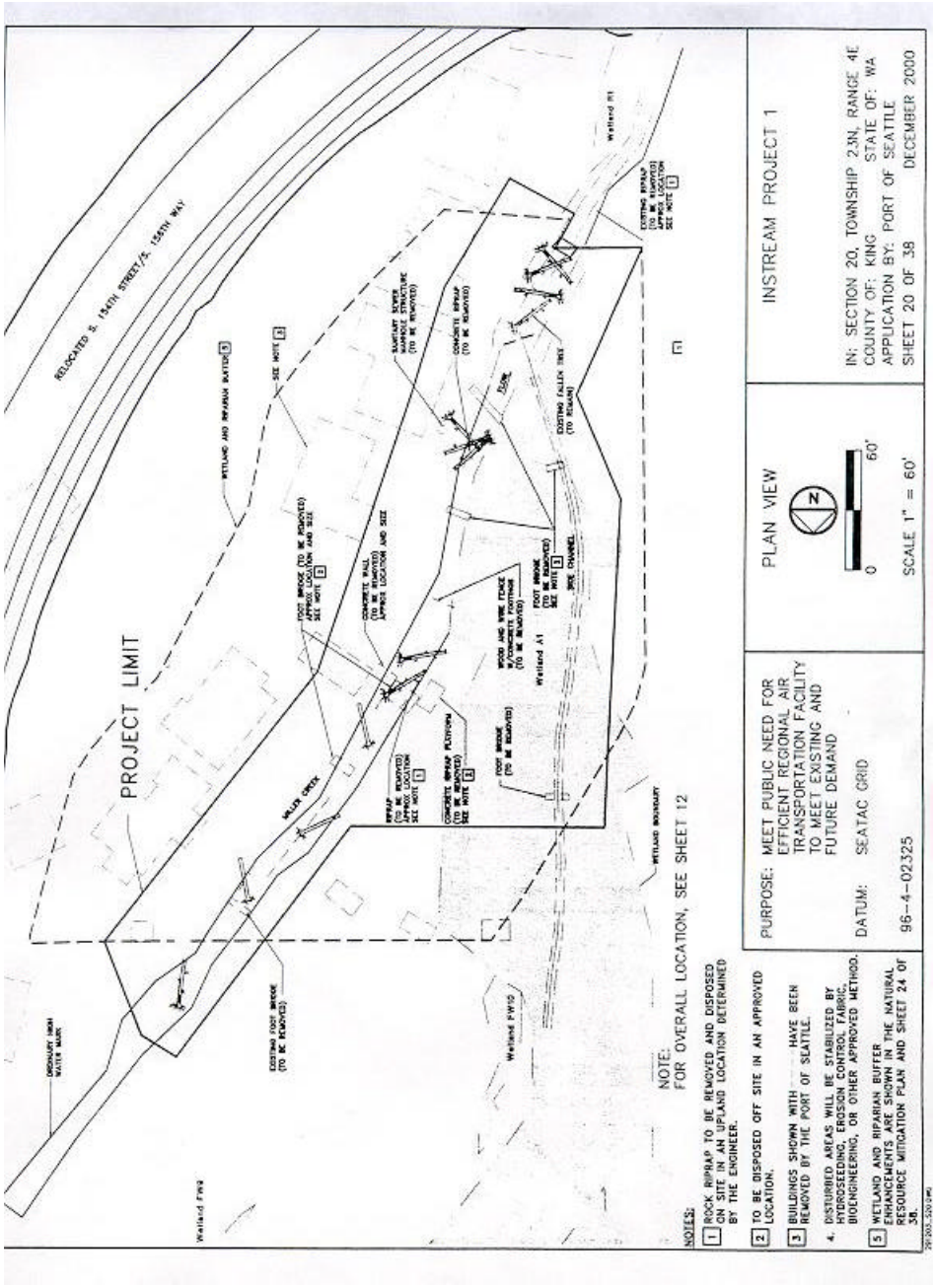

WEST
EAST
INNER EDGE OF CHANNEL MEANDER ZONE
RIPARIAN ZONE
BANK
UPLAND
LOW FLOW CHANNEL
PROPOSED MILLER CREEK
PROPOSED GRADE
BIO MATTRESS (TYP)
FILL SLOPE FOR 154TH ST
STREAM BANK MATERIAL WRAPPED IN COIR FABRIC
BIOLOG (TYP)
EXISTING GRADE
GEOTEXTILE
INVERT OF LOW-FLOW CHANNEL
SPAWNING GRAVEL
UNIFORM SLOPE
EL 265
23'-8"
10'
7'-8" (TYP)
10' (TYP)
4' (TYP)
3' (TYP)
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
96-4-02325
TYPICAL CROSS SECTION
SCALE 1" = 10'
TYPICAL CHANNEL CROSS SECTION, MILLER CREEK RELOCATION
IN: SECTION 20, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING
STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 16 OF 38
DECEMBER 2000

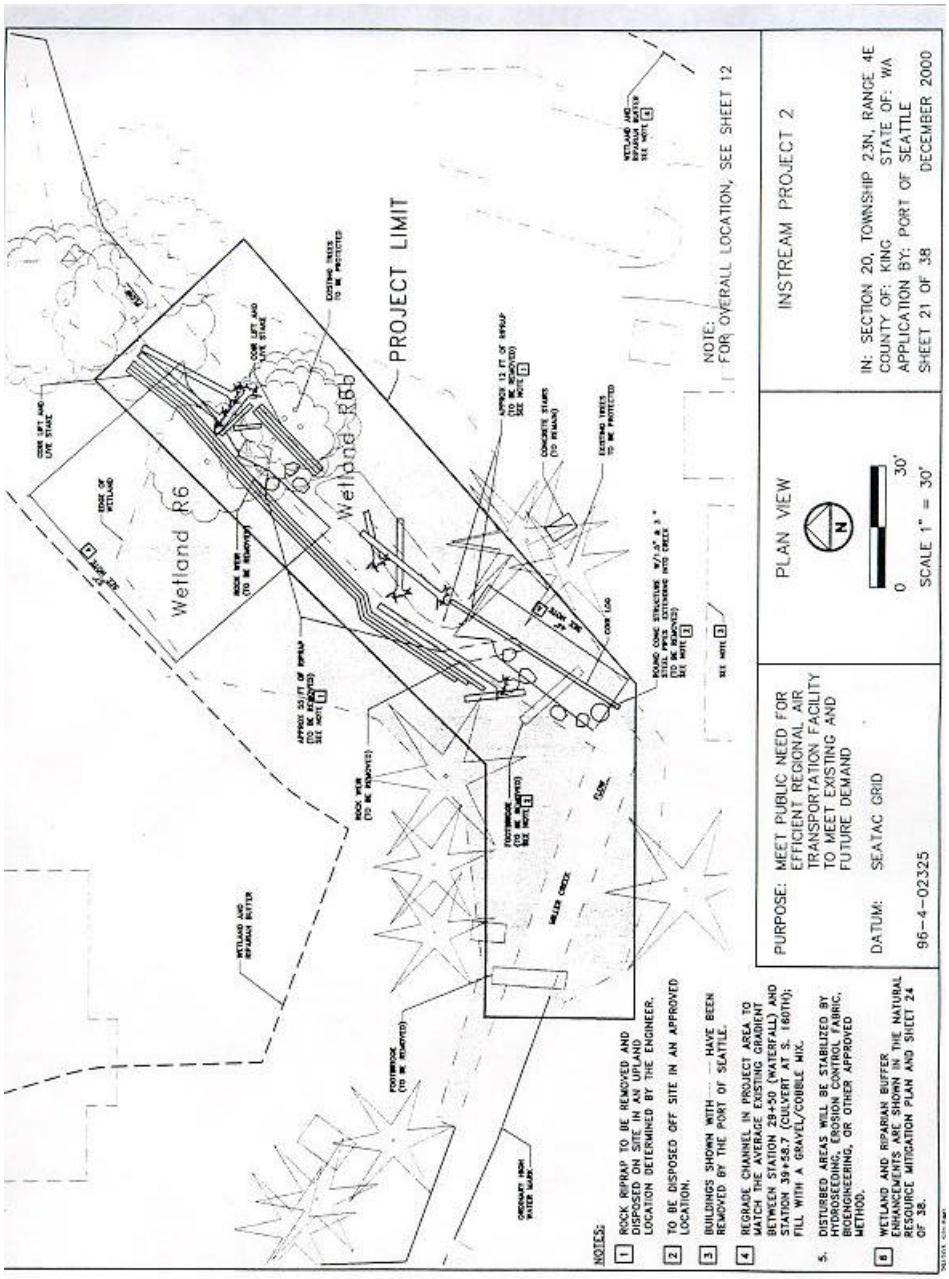


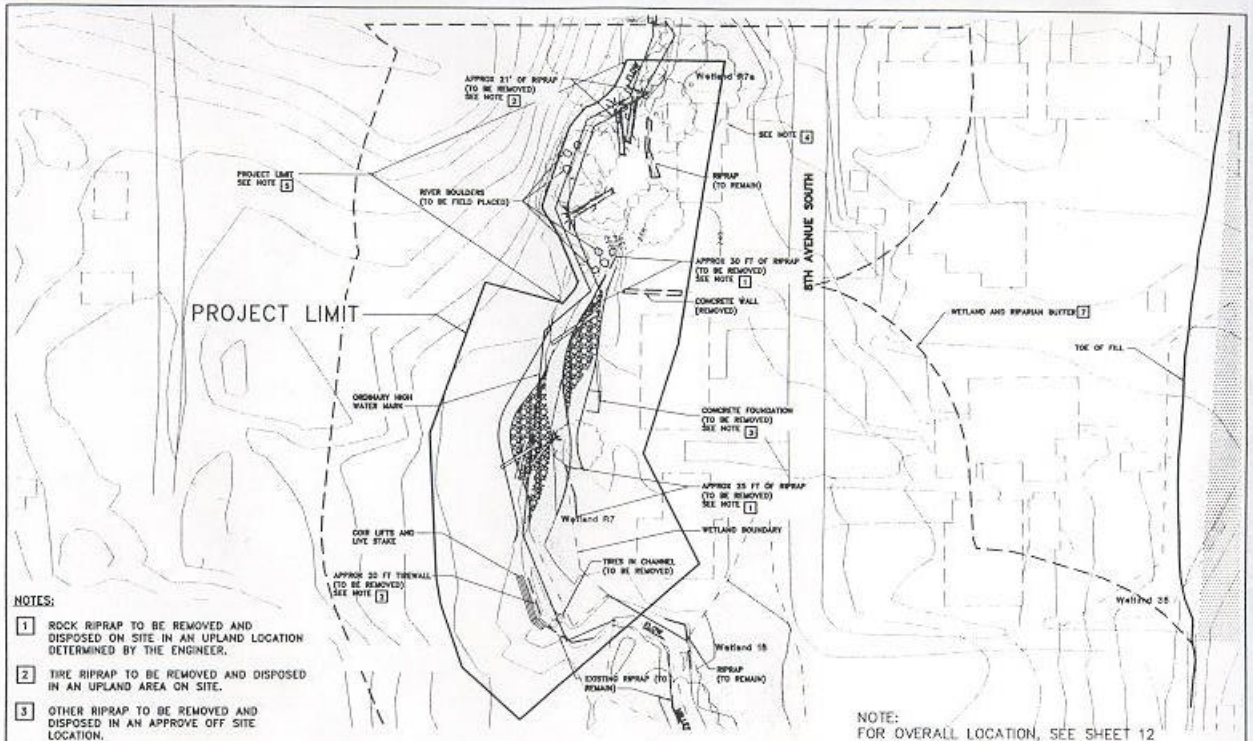
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND	PLAN VIEW	RELOCATED MILLER CREEK CHANNEL CONNECTIONS TO EXISTING CREEK
DATUM: SEATAC GRID		IN: SECTION 20, TOWNSHIP 23N, RANGE 4E COUNTY OF: KING STATE OF: WA APPLICATION BY: PORT OF SEATTLE
96-4-02325	SCALE: AS SHOWN	SHEET 17 OF 38 DECEMBER 2000


STREAM FLOW DIRECTION, LOG WEIR NO. 8
STREAM FLOW DIRECTION, LOG WEIR NO.1
BOTTOM OF EXISTING MILLER CREEK CHANNEL
MATCH EXISTING GRADE
BENCH
LOW FLOW CHANNEL BOTTOM
SPAWNING GRAVEL
LOG WEIR
24"
18"
1
2
NATIVE SUBGRADE
GEOTEXTILE
4'
4' MAX
CHANNEL END SECTION
SECTION
(SEE SHEET 17)
1" = 4'
EDGE OF BANK
BENCH
QUARRY SPALLS IN COIR FABRIC
STREAM BANK MATERIAL
3'
3'
WEIR LOG
STREAM BANK MATERIAL
SPAWNING GRAVEL
DETAIL
(SEE SHEET 17)
1" = 10'
BIOLOG (BEND OVER TOP OF WEIR LOG)
BANK
BENCH WIDTH VARIES
LOW FLOW CHANNEL ℄
BENCH
BANK
5' (TYP)
5' (TYP)
NOTCH
QUARRY SPALLS WRAPPED IN COIR FABRIC, SEE PLAN
GEOTEXTILE
SUBGRADE
GEOTEXTILE
SOIL ANCHOR WITH WIRE ROPE AND DOUBLE WIRE CLAMP, NO SLACK ALLOWED ON WIRE ROPE (TYP)
WEIR LOG, INSTALL TOP OF LOG LEVEL
STANDARD CHANNEL CROSS-SECTION
NOTE:
COIR FABRIC USED AT LOG WEIRS No. 2-7 ONLY.
WEIR NOTCH DEPTH CAN VARY FROM 4" TO 8" AS NEEDED TO PROVIDE LEVEL SURFACE ACROSS NOTCH WIDTH.
TYPICAL LOG WEIR
SECTION
(SEE SHEET 17)
1" = 10'
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
96-4-02325
CROSS SECTIONS AND DETAIL
SCALE AS SHOWN
DETAIL, RELOCATED MILLER CREEK LOG WEIRS
IN: SECTION 20, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING
STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 18 OF 38
DECEMBER 2000


CHANNEL CONNECTION NORTH END (SEE SHEETS 17 AND 18)
EXISTING WETLAND (TO REMAIN)
EXISTING MILLER CREEK
RELOCATED SANITARY SEWER AND 20' EASEMENT
RELOCATED MILLER CREEK AND CHANNEL MIGRATION ZONE (SEE SHEET 18)
S. 154TH/S. 156TH STREET RELOCATION
CHANNEL CONNECTION SOUTH END (SEE SHEETS 17 AND 18)
RIPRARIAN BUFFER PLANTING ZONE
BIOSWALES FOR S. 154TH/S. 156TH STREET RELOCATION
EXISTING SANITARY SEWER
CONCRETE BULKHEAD (TO BE REMOVED)
LORA LAKE
26' LORA LAKE BUFFER
UPLAND BUFFER ZONE
FLOODPLAIN PLANTING ZONE #2
FLOODPLAIN PLANTING ZONE #1
DRAINAGE SWALE
DES MOINES MEMORIAL DRIVE
265
264
263
262
LEGEND
WETLAND
MILLER CREEK BUFFER PLANTING ZONE
FLOODPLAIN ZONE #1
FLOODPLAIN ZONE #2
UPLAND BUFFER ZONE
ENHANCED EXISTING WETLAND
EXISTING WETLAND (TO REMAIN)
RIPARIAN PLANTING
EXISTING CONTOUR
PROPOSED CONTOUR
LIMIT OF CONSTRUCTION
RELOCATED SANITARY SEWER
EXISTING SANITARY SEWER
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
DATUM: SEATAC GRID
96-4-02325
PLAN VIEW
N
0
225'
CONTOUR INTERVAL = 2 FEET
SCALE 1" = 225'
PLANTING ZONES FOR THE MILLER CREEK RELOCATION AND FLOODPLAIN ENHANCEMENT AT VACCA FARM
IN: SECTION 20, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 19 OF 38
DECEMBER 2000


PROJECT LIMIT
RELOCATED S. 154TH STREET/S. 158TH WAY
MILLER CREEK
WETLAND BOUNDARY
Wetland FW9
Wetland FW10
Wetland A1
Wetland R1
NOTE:
FOR OVERALL LOCATION, SEE SHEET 12
NOTES:
1 ROCK RIPRAP TO BE REMOVED AND DISPOSED ON SITE IN AN UPLAND LOCATION DETERMINED BY THE ENGINEER.
2 TO BE DISPOSED OFF SITE IN AN APPROVED LOCATION.
3 BUILDINGS SHOWN WITH ---- HAVE BEEN REMOVED BY THE PORT OF SEATTLE.
4. DISTURBED AREAS WILL BE STABILIZED BY HYDROSEEDING, EROSION CONTROL FABRIC, BIOENGINEERING, OR OTHER APPROVED METHOD.
5 WETLAND AND RIPARIAN BUFFER ENHANCEMENTS ARE SHOWN IN THE NATURAL RESOURCE MITIGATION PLAN AND SHEET 24 OF 38.
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
DATUM: SEATAC GRID
96-4-02325
PLAN VIEW
0
60'
SCALE 1" = 60'
INSTREAM PROJECT 1
IN: SECTION 20, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 20 OF 38 DECEMBER 2000


PROJECT LIMIT
Wetland R6
Wetland R6b
NOTE:
FOR OVERALL LOCATION, SEE SHEET 12
INSTREAM PROJECT 2
IN: SECTION 20, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 21 OF 38 DECEMBER 2000
PLAN VIEW
0 30'
SCALE 1" = 30'
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
DATUM: SEATAC GRID
96-4-02325
NOTES:
1 ROCK RIPRAP TO BE REMOVED AND DISPOSED ON SITE IN AN UPLAND LOCATION DETERMINED BY THE ENGINEER.
2 TO BE DISPOSED OFF SITE IN AN APPROVED LOCATION.
3 BUILDINGS SHOWN WITH ---- HAVE BEEN REMOVED BY THE PORT OF SEATTLE.
4 REGRADE CHANNEL IN PROJECT AREA TO MATCH THE AVERAGE EXISTING GRADIENT BETWEEN STATION 29+50 (WATERFALL) AND STATION 39+58.7 (CULVERT AT S. 160TH); FILL WITH A GRAVEL/COBBLE MIX.
5. DISTURBED AREAS WILL BE STABILIZED BY HYDROSEEDING, EROSION CONTROL FABRIC, BIOENGINEERING, OR OTHER APPROVED METHOD.
6 WETLAND AND RIPARIAN BUFFER ENHANCEMENTS ARE SHOWN IN THE NATURAL RESOURCE MITIGATION PLAN AND SHEET 24 OF 38.



NOTE:
FOR OVERALL LOCATION, SEE SHEET 12

NOTES:

1. ROCK RIPRAP TO BE REMOVED AND DISPOSED ON SITE IN AN UPLAND LOCATION DETERMINED BY THE ENGINEER.
2. TIRE RIPRAP TO BE REMOVED AND DISPOSED IN AN UPLAND AREA ON SITE.
3. OTHER RIPRAP TO BE REMOVED AND DISPOSED IN AN APPROVE OFF SITE LOCATION.
4. BUILDINGS SHOWN WITH ——— HAVE BEEN REMOVED BY THE PORT OF SEATTLE.
5. PROJECT BOUNDARY IN THIS AREA IS TOP OF BANK.
6. DISTURBED AREAS WILL BE STABILIZED BY HYDROSEEDING, EROSION CONTROL FABRIC, BIOENGINEERING, OR OTHER APPROVED METHOD.
7. WETLAND AND RIPARIAN BUFFER ENHANCEMENTS ARE SHOWN IN THE NATURAL RESOURCE MITIGATION PLAN AND SHEET 24 OF 38.

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND

DATUM: SEATAC GRID

96-4-02325

PLAN VIEW

N

0 60'

SCALE: 1" = 60'

INSTREAM PROJECT 3

IN: SECTION 29, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 22 OF 38 DECEMBER 2000

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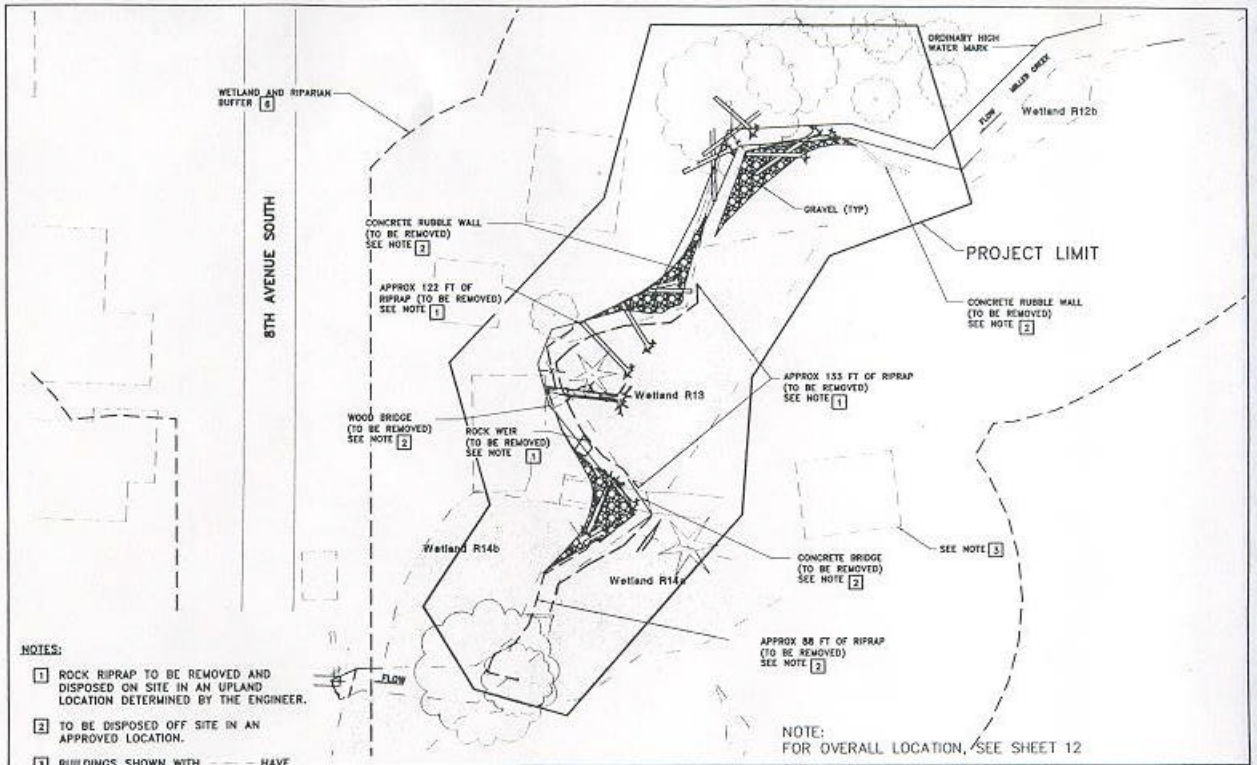
1996-4-02325



NOTES:

1. ROCK RIPRAP TO BE REMOVED AND DISPOSED ON SITE IN AN UPLAND LOCATION DETERMINED BY THE ENGINEER.
2. TO BE DISPOSED OFF SITE IN AN APPROVED LOCATION.
3. BUILDINGS SHOWN WITH — — HAVE BEEN REMOVED BY THE PORT OF SEATTLE.
4. PROTECT EXISTING TREES.
5. DISTURBED AREAS WILL BE STABILIZED BY HYDROSEEDING, EROSION CONTROL FABRIC, BIOENGINEERING, OR OTHER APPROVED METHOD.
6. WETLAND AND RIPARIAN BUFFER ENHANCEMENTS ARE SHOWN IN THE NATURAL RESOURCE MITIGATION PLAN AND SHEET 24 OF 38.

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND

DATUM: SEATAC GRID

96-4-02325

PLAN VIEW

N

0 50'

SCALE 1" = 50'

INSTREAM PROJECT 4

IN: SECTION 29, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 23 OF 38 DECEMBER 2000

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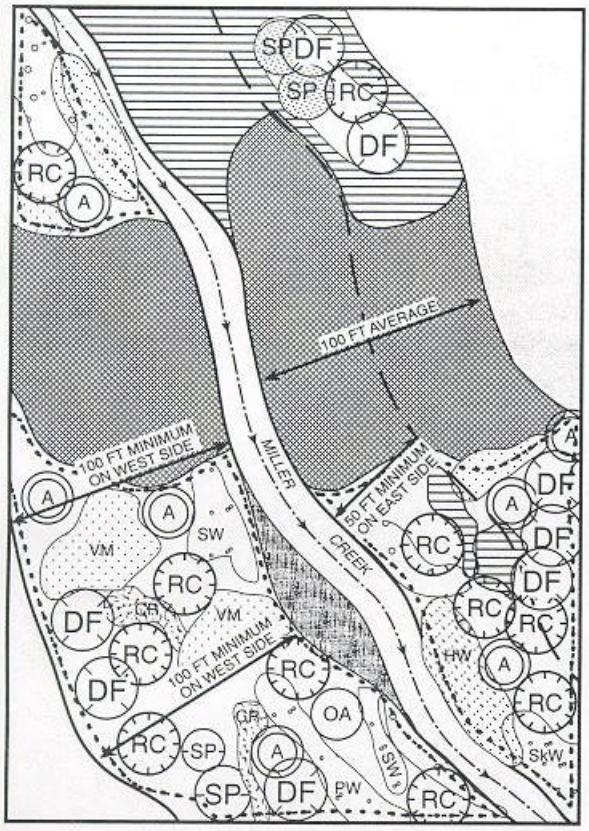
1996-4-02325

1996-4-02325



Wetland

Existing vegetation to remain

Existing non-native invasive plant species to be removed and replaced with native riparian trees and shrubs

Areas for partial non-native plant removal. Native coniferous trees will be planted to provide shading

Riparian Floodplain Zone

TREES

- RC Western Redcedar
- A Red Alder
- OA Oregon Ash

SHRUBS

- SkW Sitka Willow
- PW Pacific Willow
- HW Hooker's Willow
- Hydroseed Mix/Natural Colonization

Upland Zone

TREES

- RC Western Redcedar
- SP Sitka Spruce
- DF Douglas Fir
- A Red Alder
- C Cascara

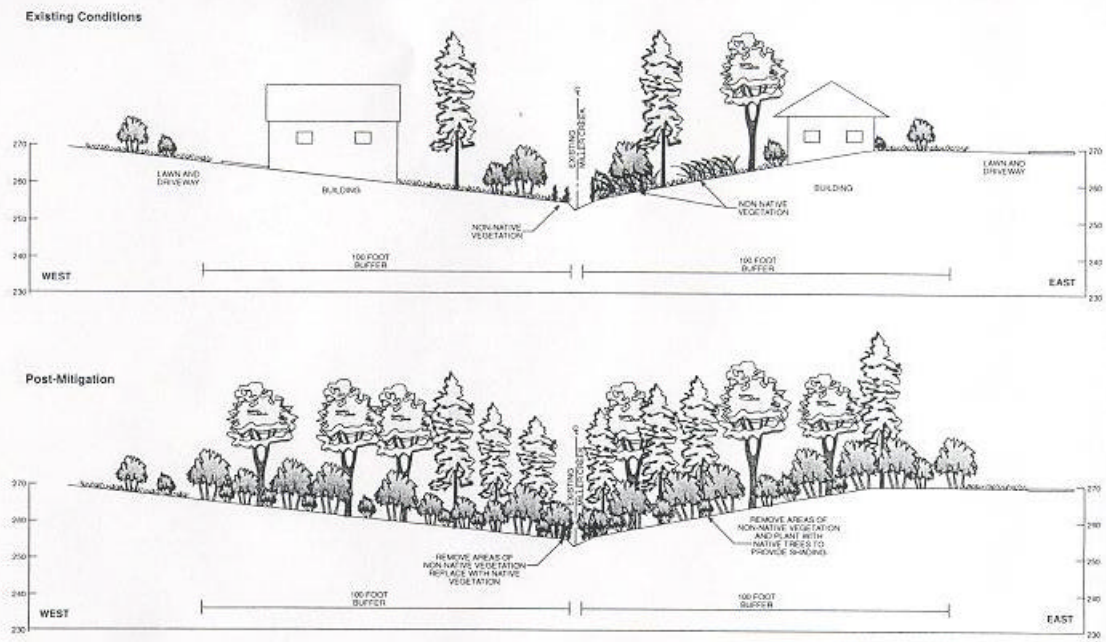
SHRUBS

- VM Vine Maple
- CR Clustered Rose

Port of Seattle/556-2912-001/01(03) 12/00

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND 96-4-02325	PLAN VIEW SCALE 1" = 50'	TYPICAL PLANTING PLAN FOR THE MILLER CREEK UPLAND AND RIPARIAN BUFFER IN: SECTIONS 20 AND 29, TOWNSHIP 23N, RANGE 4E COUNTY OF: KING STATE: WA APPLICATION BY: PORT OF SEATTLE SHEET 24 of 38 DECEMBER 2000

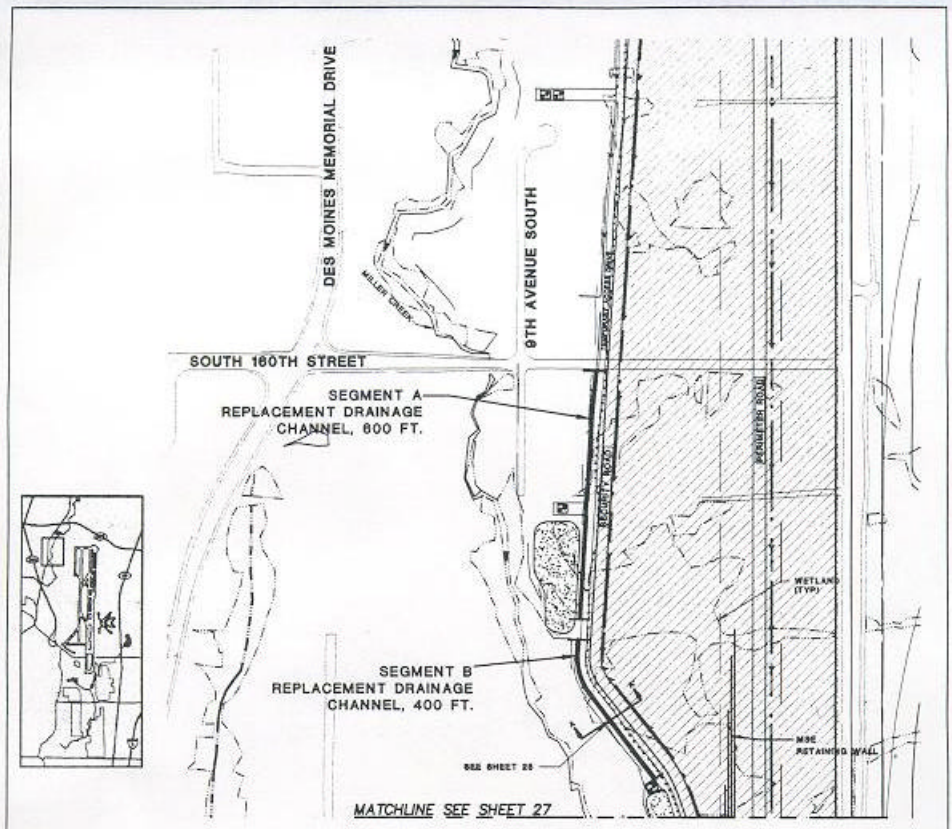
1996-4-02325



Port of Seattle/556-2912-001/01(03) 12/00

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND DATUM: VERTICAL: KING COUNTY HORIZONTAL: SEA-TAC GRID 96-4-02325	SECTION VIEW NOT TO SCALE	MILLER CREEK TYPICAL BUFFER ENHANCEMENT IN: SECTION 20, TOWNSHIP 23N, RANGE 4E COUNTY OF: KING STATE: WA APPLICATION BY: PORT OF SEATTLE SHEET 25 of 38 DECEMBER 2000

1996-4-02325

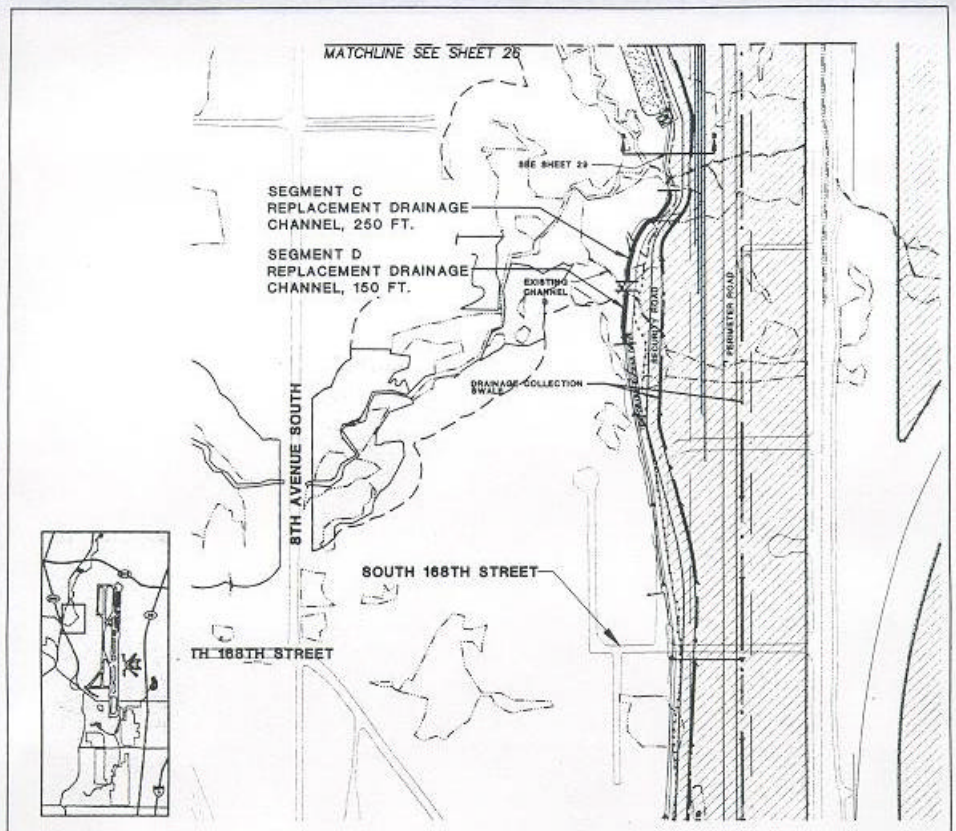


LEGEND

- Replacement Drainage Channel
- Temporary Drainage Channel
- Toe of Embankment
- Drainage Collection Swale
- Embankment
- Wetland

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND DATUM: SEATAC GRID 96-4-02325	PLAN VIEW N 0 300' SCALE: 1" = 300'	LOCATION OF PROPOSED REPLACEMENT DRAINAGE CHANNEL AND SWALES ALONG THE WEST SIDE OF THE THIRD RUNWAY EMBANKMENT, NORTH HALF IN: SECTION 29, TOWNSHIP 23N, RANGE 4E COUNTY OF: KING STATE OF: WA APPLICATION BY: PORT OF SEATTLE SHEET 26 OF 38 DECEMBER 2000

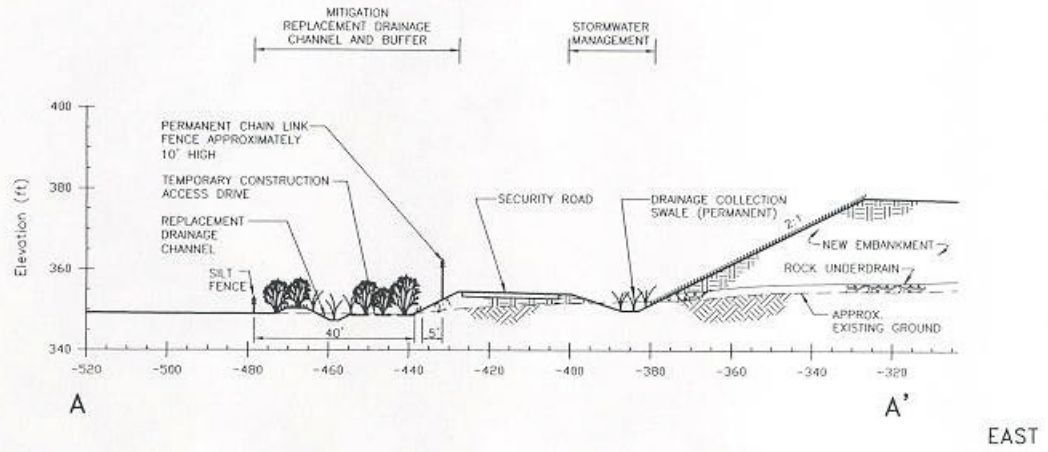
1996-4-02325



LEGEND

- Replacement Drainage Channel
- Temporary Drainage Channel
- Toe of Embankment
- Drainage Collection Swale
- Embankment
- Wetland

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND DATUM: SEATAC GRID 96-4-02325	PLAN VIEW N 0 300' SCALE: 1" = 300'	LOCATION OF PROPOSED REPLACEMENT DRAINAGE CHANNEL AND SWALES ALONG THE WEST SIDE OF THE THIRD RUNWAY EMBANKMENT, SOUTH HALF IN: SECTION 29, TOWNSHIP 23N, RANGE 4E COUNTY OF: KING STATE OF: WA APPLICATION BY: PORT OF SEATTLE SHEET 27 OF 38 DECEMBER 2000

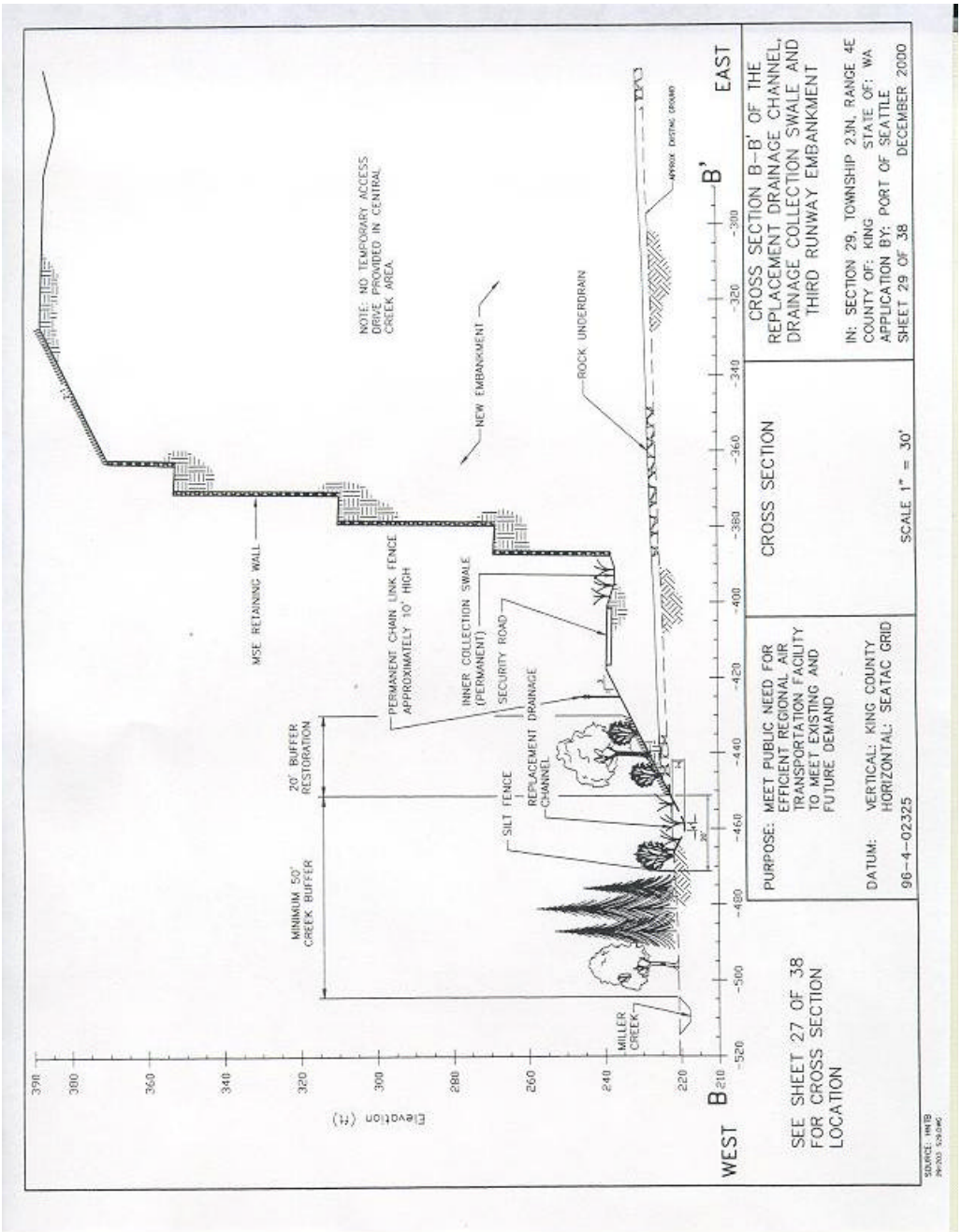


SEE SHEET 26 OF 38 FOR CROSS SECTION LOCATION

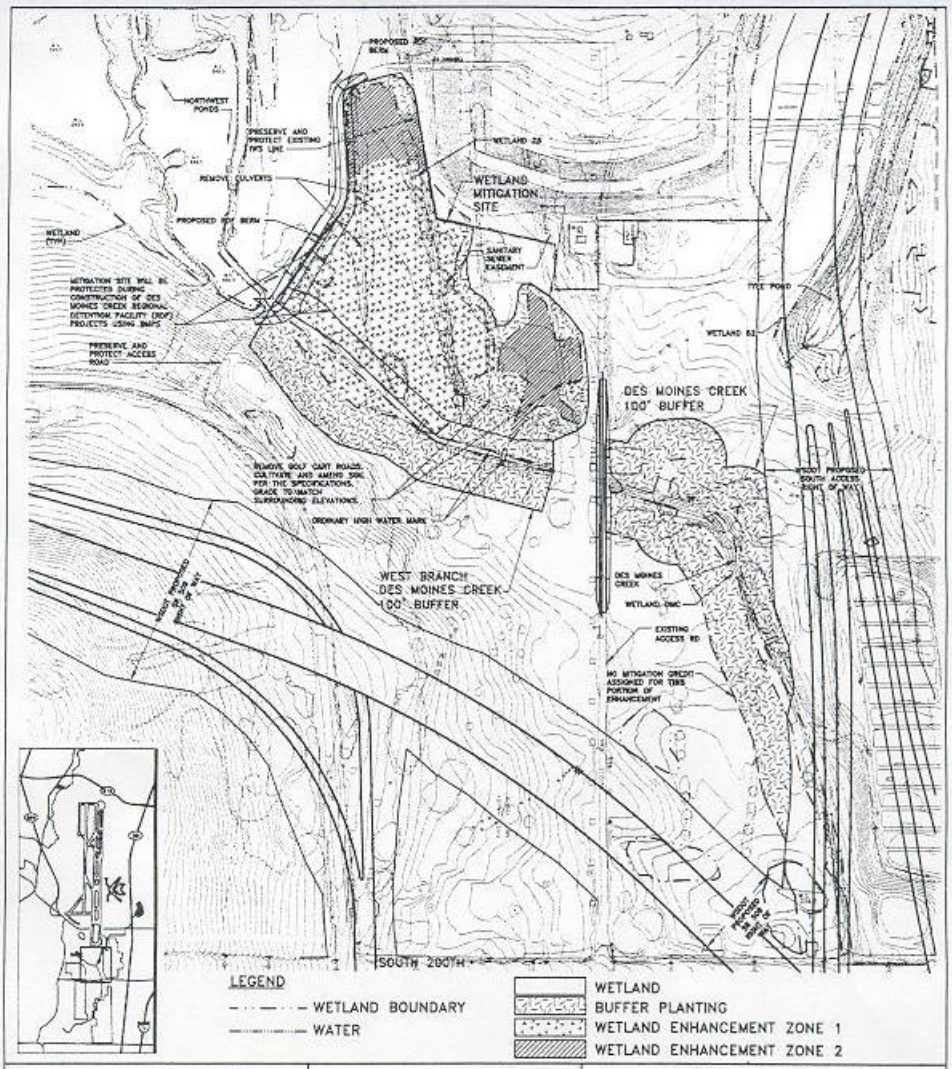
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND DATUM: VERTICAL: KING COUNTY HORIZONTAL: SEATAC GRID 96-4-02325	CROSS SECTION SCALE 1" = 30'	CROSS SECTION A-A' OF THE REPLACEMENT DRAINAGE CHANNEL, DRAINAGE COLLECTION SWALE AND THIRD RUNWAY EMBANKMENT IN: SECTION 29, TOWNSHIP 23N, RANGE 4E COUNTY OF: KING STATE OF: WA APPLICATION BY: PORT OF SEATTLE SHEET 28 OF 38 DECEMBER 2000

1996-4-02325

1996-4-02325


NOTE: NO TEMPORARY ACCESS DRIVE PROVIDED IN CENTRAL CREEK AREA
NEW EMBANKMENT
ROCK UNDERDRAIN
APPROX. EXISTING GROUND
MSE RETAINING WALL
PERMANENT CHAIN LINK FENCE APPROXIMATELY 10' HIGH
INNER COLLECTION SWALE (PERMANENT)
SECURITY ROAD
20' BUFFER RESTORATION
MINIMUM 50' CREEK BUFFER
SILT FENCE
REPLACEMENT DRAINAGE CHANNEL
MILLER CREEK
Elevation (ft)
WEST
B
B'
EAST
SEE SHEET 27 OF 38 FOR CROSS SECTION LOCATION
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
DATUM: VERTICAL: KING COUNTY HORIZONTAL: SEATAC GRID
96-4-02325
CROSS SECTION
SCALE 1" = 30'
CROSS SECTION B-B' OF THE REPLACEMENT DRAINAGE CHANNEL, DRAINAGE COLLECTION SWALE AND THIRD RUNWAY EMBANKMENT
IN: SECTION 29, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 29 OF 38 DECEMBER 2000

1996-4-02325



PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND

DATUM: NGVD 29/AUBURN

96-4-02325

PLAN VIEW

N

0 300'

SCALE: 1" = 300'

LOCATION OF WETLAND ENHANCEMENT ON THE TYEE VALLEY GOLF COURSE, DES MOINES CREEK BASIN

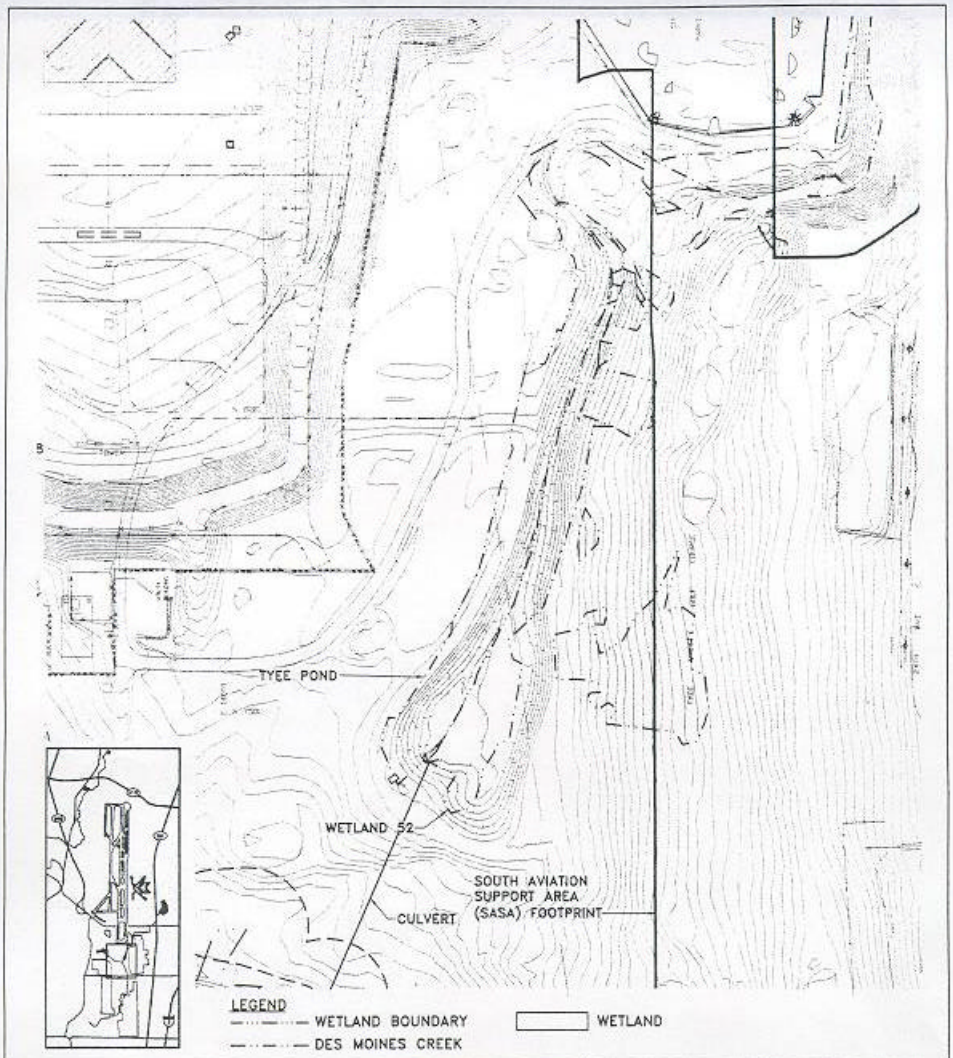
IN: SECTION 4,5 TOWNSHIP 22N, RANGE 5E

COUNTY OF: KING STATE OF: WA

APPLICATION BY: PORT OF SEATTLE

SHEET 30 OF 38 DECEMBER 2000

1996-4-02325



PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND

DATUM: NGVD 29/AUBURN

96-4-02325

PLAN VIEW

N

0 200'

SCALE: 1" = 200'

SASA FACILITY FOOTPRINT NEAR EAST BRANCH OF DES MOINES CREEK

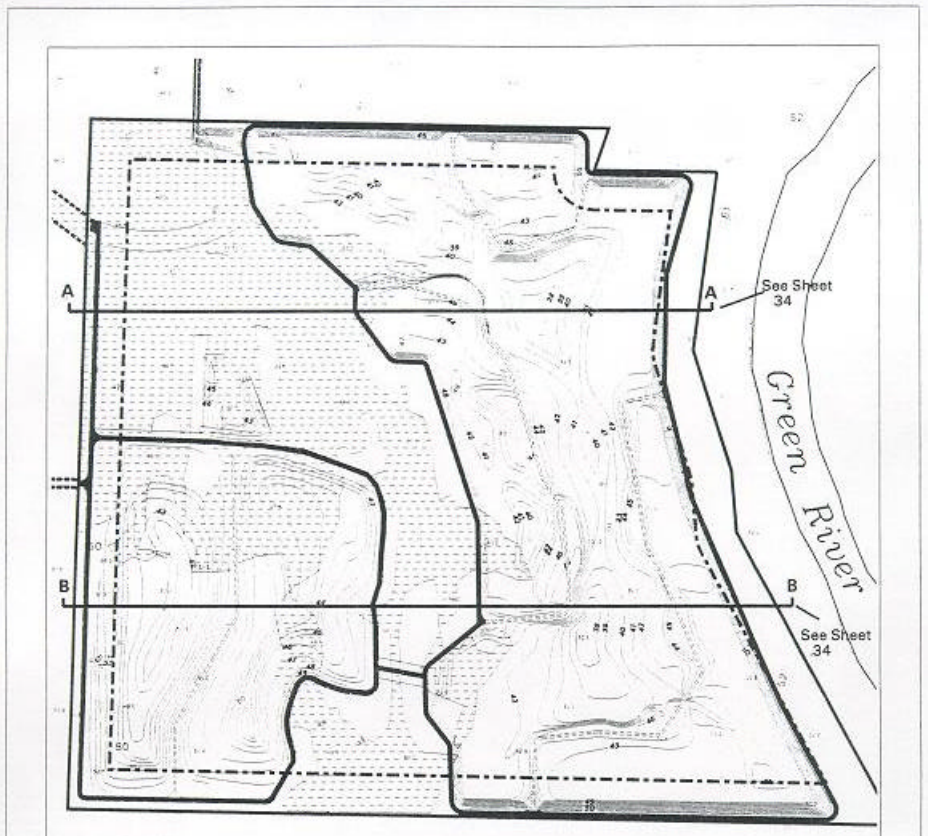
IN: SECTION 4,5 TOWNSHIP 22N, RANGE 5E

COUNTY OF: KING STATE OF: WA

APPLICATION BY: PORT OF SEATTLE

SHEET 31 OF 38 DECEMBER 2000

1996-4-02325



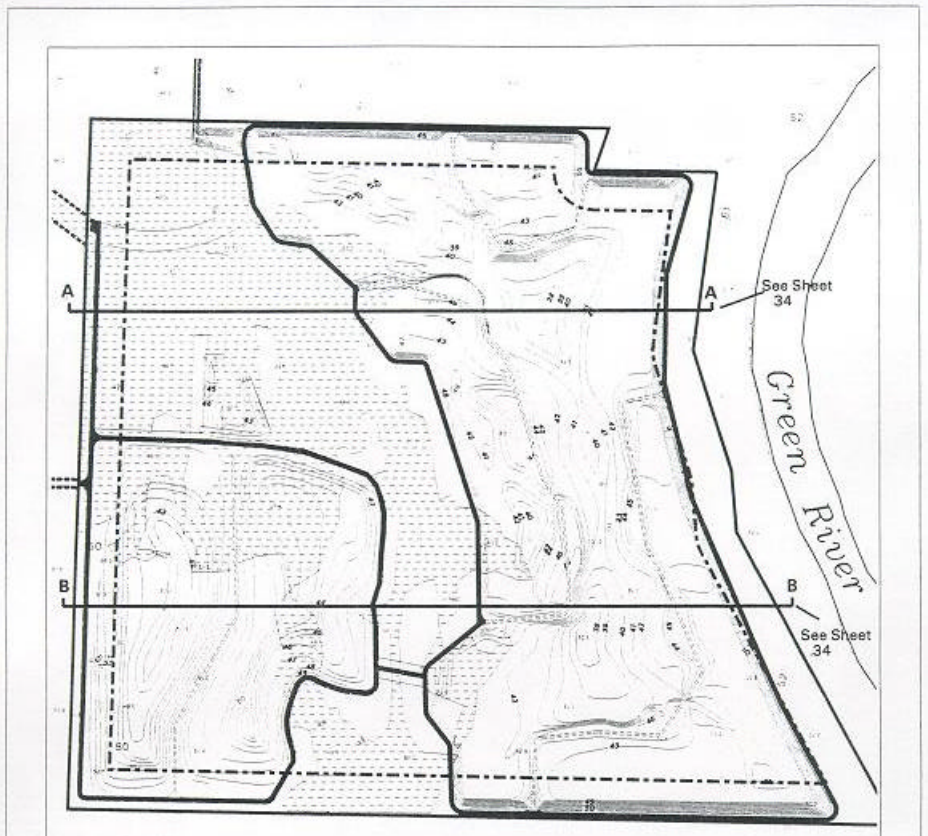
LEGEND:

- Jurisdictional Wetlands
- Temporary Roads
- Proposed Grade
- Property Boundary
- 100 Foot Buffer
- Easement
- Existing Contours

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET ANTICIPATED FUTURE DEMAND DATUM: NGVD 29/AUBURN 96-4-02325	PLAN VIEW N 0 300' SCALE: 1" = 300'	OFF-SITE WETLAND MITIGATION AND GRADING PLAN IN: SECTION 31, TOWNSHIP 22N, RANGE 5E COUNTY OF: KING STATE OF: WA APPLICATION BY: PORT OF SEATTLE SHEET 32 OF 38 DECEMBER 2000

Prepared by Parametrix, Inc. File: seatac2/8x11auburn_grade_public.aml creating p8x11auburn_grade_public.gra Date: December 18, 2000

1996-4-02325



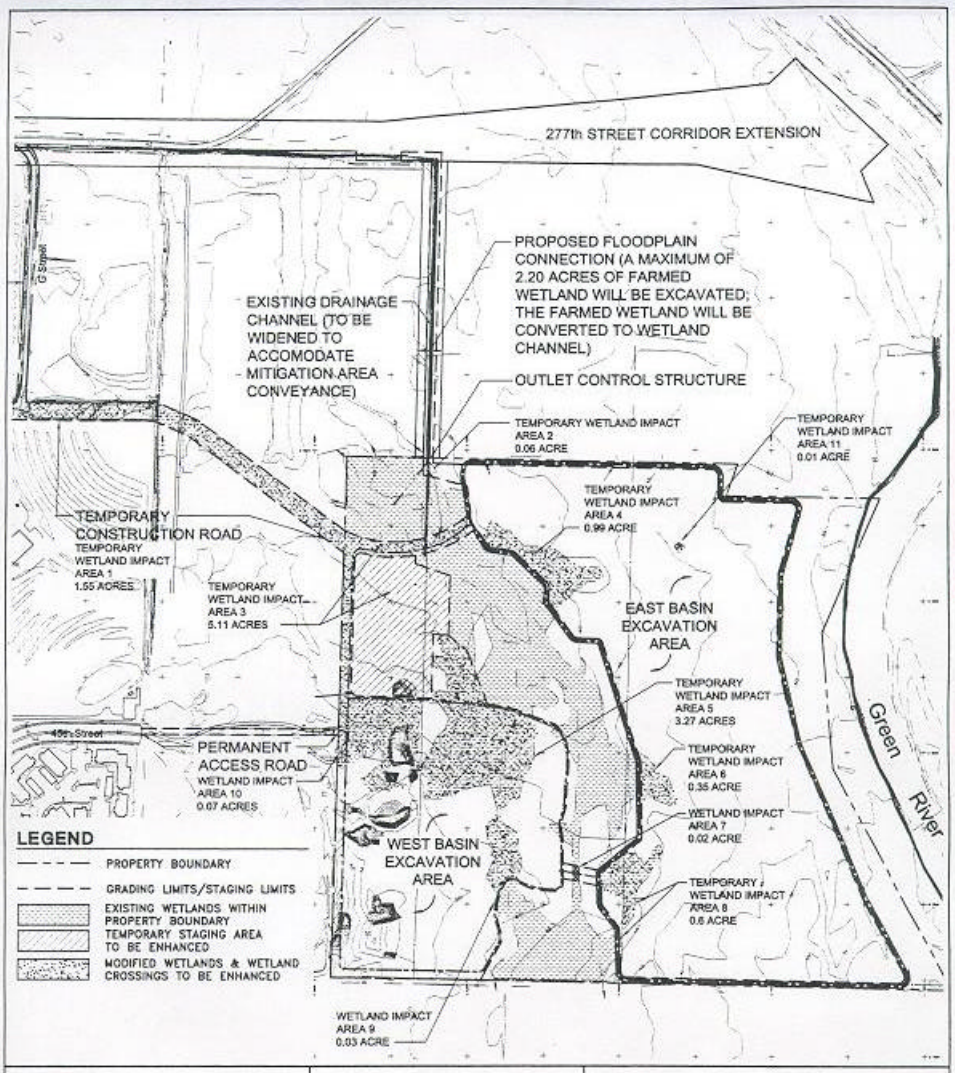
LEGEND:

- Jurisdictional Wetlands
- Temporary Roads
- Proposed Grade
- Property Boundary
- 100 Foot Buffer
- Easement
- Existing Contours

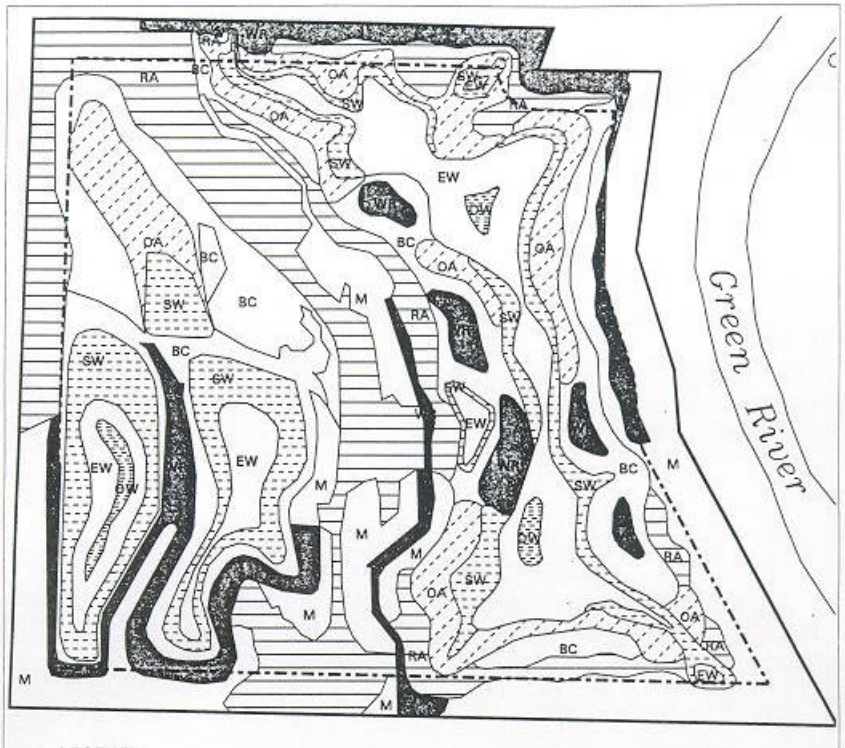
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET ANTICIPATED FUTURE DEMAND DATUM: NGVD 29/AUBURN 96-4-02325	PLAN VIEW N 0 300' SCALE: 1" = 300'	OFF-SITE WETLAND MITIGATION AND GRADING PLAN IN: SECTION 31, TOWNSHIP 22N, RANGE 5E COUNTY OF: KING STATE OF: WA APPLICATION BY: PORT OF SEATTLE SHEET 32 OF 38 DECEMBER 2000

Prepared by Parametrix, Inc. File: seatac2/8x11auburn_grade_public.aml creating p8x11auburn_grade_public.gra Date: December 18, 2000

1996-4-02325


277th STREET CORRIDOR EXTENSION
PROPOSED FLOODPLAIN CONNECTION (A MAXIMUM OF 2.20 ACRES OF FARMED WETLAND WILL BE EXCAVATED; THE FARMED WETLAND WILL BE CONVERTED TO WETLAND CHANNEL)
EXISTING DRAINAGE CHANNEL (TO BE WIDENED TO ACCOMODATE MITIGATION AREA CONVEYANCE)
OUTLET CONTROL STRUCTURE
TEMPORARY WETLAND IMPACT AREA 2 0.06 ACRE
TEMPORARY WETLAND IMPACT AREA 11 0.01 ACRE
TEMPORARY WETLAND IMPACT AREA 4 0.99 ACRE
TEMPORARY CONSTRUCTION ROAD
TEMPORARY WETLAND IMPACT AREA 1 1.55 ACRES
TEMPORARY WETLAND IMPACT AREA 3 5.11 ACRES
EAST BASIN EXCAVATION AREA
TEMPORARY WETLAND IMPACT AREA 5 3.27 ACRES
TEMPORARY WETLAND IMPACT AREA 6 0.35 ACRE
WETLAND IMPACT AREA 7 0.02 ACRE
TEMPORARY WETLAND IMPACT AREA 8 0.6 ACRE
PERMANENT ACCESS ROAD
WETLAND IMPACT AREA 10 0.07 ACRES
WEST BASIN EXCAVATION AREA
WETLAND IMPACT AREA 9 0.03 ACRE
Green River
LEGEND
PROPERTY BOUNDARY
GRADING LIMITS/STAGING LIMITS
EXISTING WETLANDS WITHIN PROPERTY BOUNDARY
TEMPORARY STAGING AREA TO BE ENHANCED
MODIFIED WETLANDS & WETLAND CROSSINGS TO BE ENHANCED
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
DATUM: NGVD 29/AUBURN
96-4-02325
PLAN VIEW
N
0 400'
SCALE: 1"=400'
LOCATION OF TEMPORARY/PERMANENT WETLAND IMPACTS, AUBURN MITIGATION SITE
IN: SECTION 31, TOWNSHIP 22N, RANGE 5E
COUNTY OF: KING STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 33 OF 38 DECEMBER 2000

1996-4-02325



LEGEND:

- Black Cottonwood (BC)
- Red Alder (RA)
- Oregon Ash (OA)
- Mixed Forest (M)
- Western Redcedar (WR)
- Shrub Wetland (SW)
- Emergent Wetland (EW)
- Open Water Non-vegetated (OW)
- Property Boundary
- 100 Foot Buffer

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET ANTICIPATED FUTURE DEMAND

DATUM: NGVD 29/AUBURN

96-4-02325

PLAN VIEW

N

0 300'

SCALE: 1" = 300'

PROPOSED PLANT ASSOCIATIONS FOR THE WETLAND MITIGATION SITE

IN: SECTION 31, TOWNSHIP 22N, RANGE 5E

COUNTY OF: KING STATE OF: WA

APPLICATION BY: PORT OF SEATTLE

SHEET 35 OF 38 DECEMBER 2000

Prepared by Parametrix, Inc. File: seatac2/fix11auburn_plants.aml creating pds11auburn_plants_public.pnt Date: December 15, 2000

1996-4-02325

BC

Black Cottonwood/Willow Plant Association

Trees	*Populus trichocarpa*	Black cottonwood
	Fraxinus latifolia	Oregon ash
	Malus fusca	Pacific crabapple
	Alnus rubra	Red alder
	Salix lasiandra	Pacific willow
	Picea sitchensis	Sitka spruce
Shrubs	*Salix sitchensis*	Sitka willow
	Salix hookeriana	Hooker's willow
	Lonicera involucrata	Twinberry
	Rosa nutkana	Nootka rose
	Physocarpus capitatus	Pacific ninebark

RA

Red Alder/Salmonberry Plant Association

Trees	*Alnus rubra*	Red alder
	Fraxinus latifolia	Oregon ash
	Malus fusca	Pacific crabapple
	Picea sitchensis	Sitka spruce
	Populus trichocarpa	Black cottonwood
	Salix lasiandra	Pacific willow
	Thuja plicata	Western redcedar
Shrubs	*Rubus spectabilis*	Salmonberry
	Cornus stolonifera	Red-osier dogwood
	Lonicera involucrata	Twinberry
	Rosa nutkana	Nootka rose
	Salix scouleriana	Scouler's willow

OA

Oregon Ash Plant Association

Trees	*Fraxinus latifolia*	Oregon ash
	Malus fusca	Pacific crabapple
	Populus trichocarpa	Black cottonwood
	Salix lasiandra	Pacific willow
	Picea sitchensis	Sitka spruce
Shrubs	*Lonicera involucrata*	Twinberry
	Salix sitchensis	Sitka willow
	Rubus spectabilis	Salmonberry
	Cornus stolonifera	Red-osier dogwood

SW

Willow/Red-osier Dogwood Shrub Association

Salix hookeriana	Hooker's willow
Salix lasiandra	Pacific willow
Salix sitchensis	Sitka willow
Cornus stolonifera	Red-osier dogwood
Lonicera involucrata	Twinberry

M

Mixed Forest Plant Association

Trees	*Abies grandis*	Grand fir
	Prunus emarginata	Bitter cherry
	Populus trichocarpa	Black cottonwood
	Alnus rubra	Red alder
	Pseudotsuga menziesii	Douglas fir
	Acer macrophyllum	Bigleaf maple
	Rhamnus purshiana	Cascara
	Thuja plicata	Western redcedar
	Crataegus douglasii	Black hawthorn
Shrubs	*Acer circinatum*	Vine maple
	Amelanchier alnifolia	Serviceberry
	Rosa gymnocarpa	Bald-hip rose
	Rubus parviflorus	Thimbleberry
	Corylus cornuta	California filbert
	Oemleria cerasiformis	Indian plum
	Symphoricarpos albus	Snowberry
	Berberis aquifolium	Tall Oregon grape
	Rosa nutkana	Nootka rose
	Sambucus racemosa	Red elderberry

WC

Western Redcedar Plant Association

Trees	*Thuja plicata*	Western redcedar
	Populus trichocarpa	Black cottonwood
	Alnus rubra	Red alder
	Abies grandis	Grand fir
	Pseudotsuga menziesii	Douglas fir
	Acer macrophyllum	Bigleaf maple
	Rhamnus purshiana	Cascara
Shrubs	*Acer circinatum*	Vine maple
	Physocarpus capitatus	Pacific ninebark
	Salix scouleriana	Scouler's willow
	Oemleria cerasiformis	Indian plum

EW

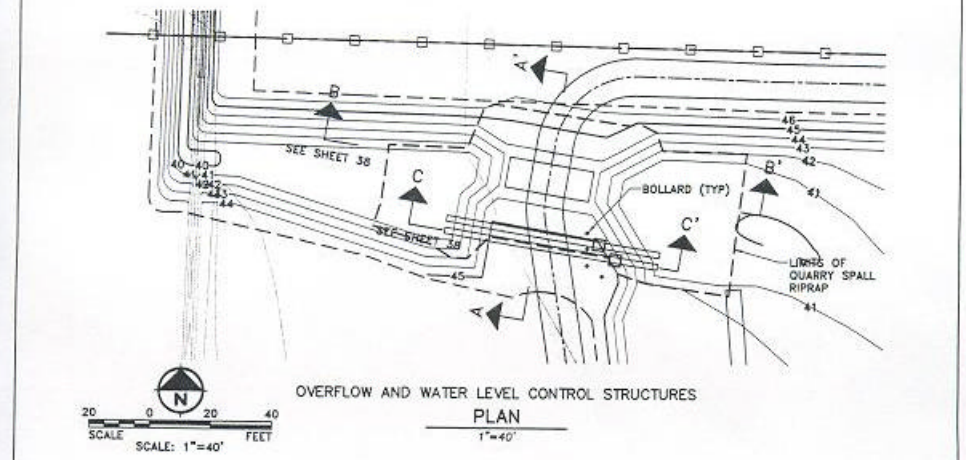
Beaked Sedge/Water Parsley Emergent Association

Carex rostrata	Beaked sedge
Oenanthe sarmentosa	Water-parsley
Eleocharis palustris	Spike-rush
Polygonum amphibium	Water smartweed
Scirpus acutis	Hardstem bulrush
Scirpus microcarpus	Small-fruited bulrush
Sparganium emersum	Narrow-leaf burreed

Port of Seattle/556-2812-001/01(03) 12/00

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND 96-4-02325	TABLE	PLANT SPECIES FOR OFF-SITE WETLAND MITIGATION IN: SECTION 31, TOWNSHIP 22N, RANGE 5E COUNTY OF: KING STATE: WA APPLICATION BY: PORT OF SEATTLE SHEET 36 of 38 DECEMBER 2000

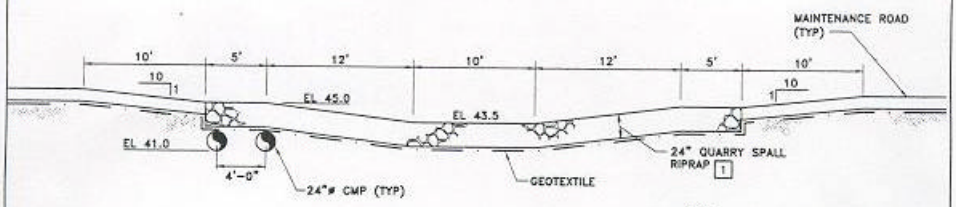
1996-4-02325



OVERFLOW AND WATER LEVEL CONTROL STRUCTURES

PLAN

1"=40'



NOTE:

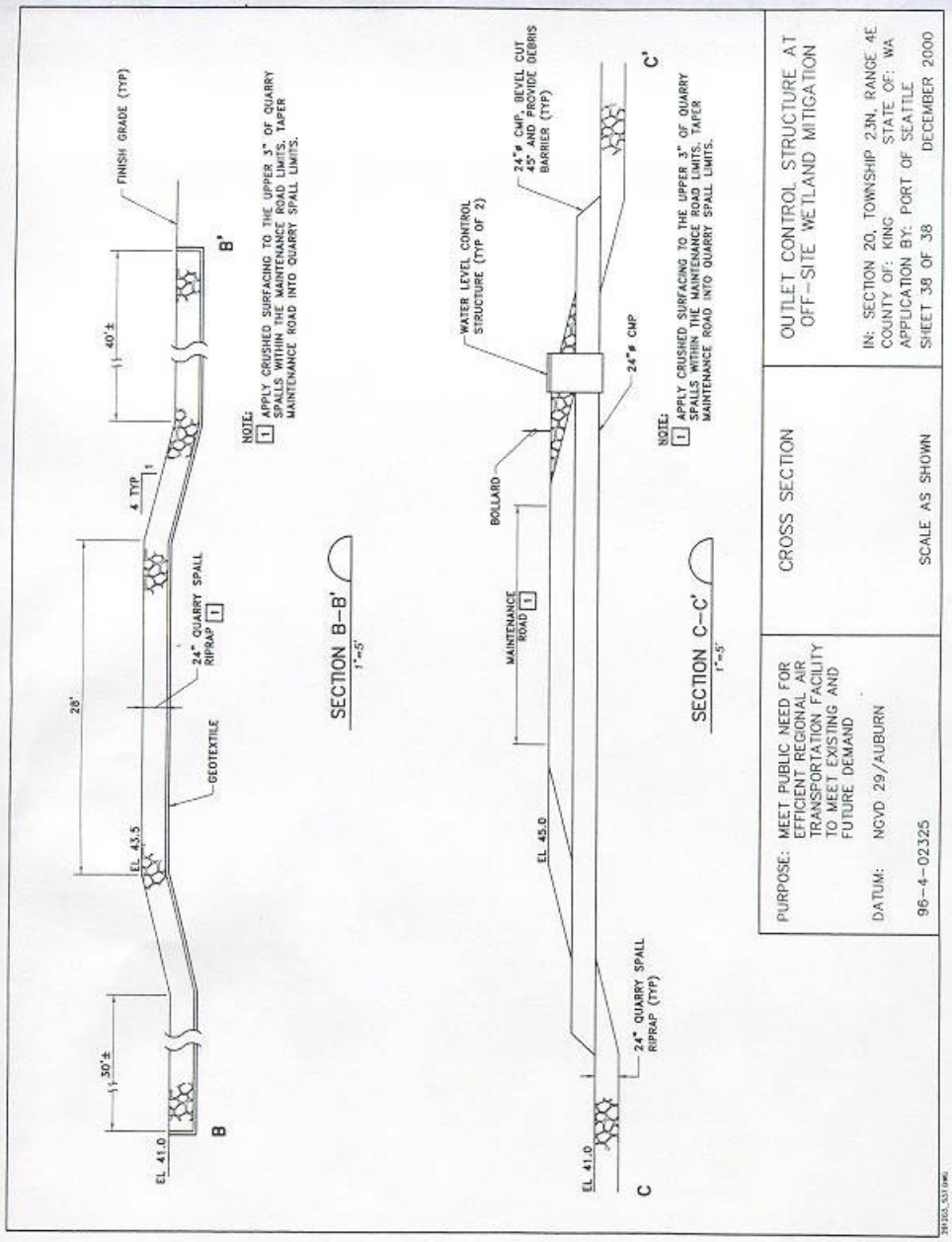
1. APPLY CRUSHED SURFACING TO THE UPPER 3" OF QUARRY SPALLS WITHIN THE MAINTENANCE ROAD LIMITS. TAPER MAINTENANCE ROAD INTO QUARRY SPALL LIMITS.
2. SEE SHEET 33 FOR LOCATION OF OUTLET CONTROL STRUCTURE.

SECTION A–A'

HORIZ: 1"=5'
VERT: 1"=5'

PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND DATUM: NGVD 29/AUBURN 96-4-02325	PLAN AND SECTION VIEWS SCALE AS SHOWN	OUTLET CONTROL STRUCTURE AT OFF-SITE WETLAND MITIGATION IN: SECTION 31, TOWNSHIP 22N, RANGE 5E COUNTY OF: KING STATE OF: WA APPLICATION BY: PORT OF SEATTLE SHEET 37 OF 38 DECEMEBER 2000

1996-4-02325


FINISH GRADE (TYP)
B'
40'±
NOTE:
1 APPLY CRUSHED SURFACING TO THE UPPER 3" OF QUARRY SPALLS WITHIN THE MAINTENANCE ROAD LIMITS. TAPER MAINTENANCE ROAD INTO QUARRY SPALL LIMITS.
4 TYP
1
28'
24" QUARRY SPALL RIPRAP 1
GEOTEXTILE
EL 43.5
30'±
EL 41.0
B
SECTION B-B'
1"=5'
WATER LEVEL CONTROL STRUCTURE (TYP OF 2)
24"ø CMP, DEVEL CUT 45° AND PROVIDE DEBRIS BARRIER (TYP)
C'
24"ø CMP
NOTE:
1 APPLY CRUSHED SURFACING TO THE UPPER 3" OF QUARRY SPALLS WITHIN THE MAINTENANCE ROAD LIMITS. TAPER MAINTENANCE ROAD INTO QUARRY SPALL LIMITS.
BOLLARD
MAINTENANCE ROAD 1
EL 45.0
24" QUARRY SPALL RIPRAP (TYP)
EL 41.0
C
SECTION C-C'
1"=5'
PURPOSE: MEET PUBLIC NEED FOR EFFICIENT REGIONAL AIR TRANSPORTATION FACILITY TO MEET EXISTING AND FUTURE DEMAND
DATUM: NGVD 29/AUBURN
96-4-02325
CROSS SECTION
SCALE AS SHOWN
OUTLET CONTROL STRUCTURE AT OFF-SITE WETLAND MITIGATION
IN: SECTION 20, TOWNSHIP 23N, RANGE 4E
COUNTY OF: KING STATE OF: WA
APPLICATION BY: PORT OF SEATTLE
SHEET 38 OF 38 DECEMBER 2000

1996-4-02325