DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
ENVIRONMENTAL COORDINATOR
11511 MAIN ST., P.O. BOX 90012
BELLEVUE, WA 98009-9012

DETERMINATION OF NON-SIGNIFICANCE

PROPONENT: Katherine Lee, PBS Engineering and Environmental

LOCATION OF PROPOSAL: Meydenbauer Creek, e. side of 110th Ave SE, n. side of 100th Ave SE

NAME & DESCRIPTION OF PROPOSAL: Meydenbauer Creek Sewer Line Replacement

The City of Bellevue Utilities Department is proposing replacement of 500 feet of deteriorating sewer pipe that runs along the east side of 101st Ave SE near Meydenbauer Bay. The sewer line has settled and cracked over the years and could lead to water quality degradation in Lake Washington. Ongoing stream bank erosion in Meydenbauer Creek, along 101st Ave SE is threatening to expose the existing sewer line, and undermine other utilities, the city sidewalk and street. As part of the sewer line replacement, the stream bank will be stabilized to prevent further damage to infrastructure and utilities. The existing sewer line will be abandoned in-place and a sheet pile wall will be installed between the existing stream bank and the new sewer line. The project will disrupt approximately 120 feet of stream bank, which will be restored using an "Envirolok" geo-grid sandbag system planted with native species.

FILE NUMBER: 07-123155-LO

The Environmental Coordinator of the City of Bellevue has determined that this proposal does not have a probable significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(C). This decision was made after the Bellevue Environmental Coordinator reviewed the completed environmental checklist and information filed with the Land Use Division of the Department of Planning & Community Development. This information is available to the public on request.

☐ There is no comment period for this DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's office by 5:00 p.m. on _____, 2006.

☒ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's Office by **5 p.m. on September 13, 2007**.

☐ This DNS is issued under WAC 197-11-340(2) and is subject to a 14-day comment period from the date below. Comments must be submitted by 5 p.m. on _____. This DNS is also subject to appeal. A written appeal must be filed in the City Clerk's Office by 5 p.m. on _____.

This DNS may be withdrawn at any time if the proposal is modified so that it is likely to have significant adverse environmental impacts; if there is significant new information indicating, or on, a proposals probable significant adverse environmental impacts (unless a non-exempt license has been issued if the proposal is a private project): or if the DNS was procured by misrepresentation or lack of material disclosure.

_____ for
Environmental Coordinator

August 30, 2007
Date

OTHERS TO RECEIVE THIS DOCUMENT:
State Department of Fish and Wildlife
State Department of Ecology
Army Corps of Engineers
Attorney General
Muckleshoot Indian Tribe
King County Wastewater Treatment Division

City of Bellevue
Department of Planning and Community Development
Development Services Staff Report

Proposal Name:	Meydenbauer Creek Sewer Line Replacement & Bank Stabilization Project
Proposal Address:	East side of 101st Ave SE, north of 100th Ave SE
Proposal Description:	This is an application for a Critical Areas Land Use Permit. The applicant is proposing replacement of an existing sewer line and the stabilization of the associated stream bank of Meydenbauer Creek. The project calls for the in-place abandonment of the existing sewer line and installation of 500 feet of new sewer line behind a proposed 120 feet of new sheet-pile wall. The disrupted stream bank will be restored using an "Envirolok" geo-grid stream bank system planted with native species.
File Number:	07-123155-LO
Applicant:	**Abe Santos**, Project Manager, City of Bellevue Utilities Department
Decisions Included:	Critical Areas Land Use Permit (Process II - LUC 20.30P)
Planner:	Kevin LeClair, Senior Land Use Planner
State Environmental Policy Act Threshold Determination:	**Determination of Non-Significance** Carol V. Helland, Environmental Coordinator Department of Planning and Community Development
Director's Decision:	**Approval with Conditions** Matthew A. Terry, Director Department of Planning and Community Development

Application Date:	06/20/07
Notice of Application Publication Date:	07/12/07
Decision Publication Date:	08/30/07
Project Appeal Deadline:	09/13/07

For information on how to appeal a proposal, visit Development Services at City Hall or call (425) 452-6800. Comments on State Environmental Policy Act (SEPA) Determinations can be made with or without appealing the proposal within the noted comment period for a SEPA Determination. Appeal of the Decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision.

I. Background

A. Project Description

The City of Bellevue Utilities Department is proposing replacement of 500 feet of deteriorating sewer pipe that runs along the east side of 101st Ave SE near Meydenbauer Bay. The sewer line has settled and cracked over the years and could lead to water quality degradation in Lake Washington. Ongoing stream bank erosion in Meydenbauer Creek, along 101st Ave SE is threatening to expose the existing sewer line, and undermine other utilities, the city sidewalk and street. As part of the sewer line replacement, the stream bank will be stabilized to prevent further damage to infrastructure and utilities. The replacement of the sewer line and the stream bank stabilization respectively meet the definitions of "expanded utility facilities" and "stabilization measures" and are allowed uses within a critical area under LUC 20.25H.055.

The existing sewer line will be abandoned in-place and a sheet pile wall will be installed between the existing stream bank and the new sewer line. The project will disrupt approximately 120 feet of stream bank, which will be restored using an "Envirolok" geo-grid sandbag system planted with native species. The "Envirolok" system is comprised of geo-textile bags filled with stream gravels below the water line and planting medium above the water line. The bags are then locked together with spikes, woven straps and tiebacks. The native plants' roots and stems then provide a "bio-engineering" soil erosion solution when they become established. In addition, the vegetation, will overhang the stream and provide shade for the water, as well as wildlife habitat.

B. Site Description

The project is located along the east side of 101st Ave SE just north of the intersection with 100th Ave SE. The project is located within City of Bellevue Right-of-Way. The adjacent parcel to the east is King County parcel number 0666000475. Meydenbauer Creek flows along the east edge of the south 120 feet of the project area. At this point Meydenbauer Creek flows through several culverts for several hundred feet before entering Lake Washington.

C. Need For Improvement

When the Chittenden Locks were completed in 1916, the water level of Lake Washington was lowered by nearly 9 feet. This exposed former lake bed areas, including some of the area around Meydenbauer Bay. As Bellevue developed many of these areas were built upon and necessary utility infrastructure installed.

The existing sewer line was installed on wood piles driven into a bearing layer below the old sedimentary lake bed. Over time, these wooden supports have deteriorated and the sewer line has settled and cracked.

As Bellevue has grown and developed, the Meydenbauer Creek watershed has become increasingly urbanized. The creek itself has been piped, diverted and channelized. East of the project area, the creek flows around an earthen berm and then takes a near 90 degree turn. It take another near 90 degree turn as it enters the project site. The creek then runs parallel to the deteriorating sewer line before entering a culvert under 101st Ave SE. Stream bank erosion is threatening to expose the sewer line and potentially contaminate Lake Washington. A 2003 Bellevue stream inventory ranked Meydenbauer Creek low because channel dimensions and flow modifications, the high percentage of impervious surface in the watershed, and the low ratio of open channels to culverts. A 1995 water quality sample by Bellevue Utilities showed high levels of oils, grease and petroleum hydrocarbons and low oxygen levels.

II. Site Description and Context

A. Critical Areas:

Meydenbauer Creek- This project is located adjacent to Meydenbauer Creek. Meydenbauer Creek is designated as a Type "F", fish-bearing stream. Activities within a Type "F" fish-bearing stream are restricted by the City of Bellevue Land Use Code Critical Areas Overlay District requirements. New or expanded utilities facilities and bank stabilization projects are identified in the Land Use Code as allowed activities under section LUC 20.25H.055. As an allowed activity, this proposal must meet the performance standards outlined in LUC 20.25H.055.C.2, LUC 20.25H.080.A and LUC 20.25H.080.B. These requirements are discussed in detail below.

Associated Wetland- A Category II wetland was identified along the eastern and northern boundary of the project area. Activities within a Category II wetland are restricted by the City of Bellevue Land Use Code Critical Areas Overlay District requirements. Utility repair and maintenance and bank stabilization projects are identified in the Land Use Code as allowed activities under section LUC 20.25H.055. As an allowed activity, this proposal must meet the performance standards outlined in LUC 20.25H.055.C.2, LUC and LUC 20.25H.100. These requirements are discussed in detail below.

Special Flood Hazard Area- The project area contains a portion of the 100-year floodplain. Lands subject to the 100-year floodplain are restricted by the City of Bellevue Land Use Code Critical Areas Overlay District requirements. Utility repair and maintenance and bank stabilization projects are identified in the Land Use Code as allowed activities under section LUC 20.25H.055. As an allowed activity, this proposal must meet the performance standards outlined in LUC

20.25H.055.C.2, and LUC 20.25H.180.C. These requirements are discussed in detail below.

Habitat Associated with Species of Local Importance- Several species of local importance are in the vicinity of the project area. As such, the project area is restricted by the City of Bellevue Land Use Code Critical Areas Overlay District requirements. Land uses consistent with the underlying land use district are allowed within habitats associated with species of local importance provided the activity complies with performance standards outlined in LUC 20.25H.160.

III. State Environmental Policy Act (SEPA)

The submitted Environmental Checklist and Critical Areas Report adequately disclose expected environmental impacts associated with the project. City code requirements, including the Clear and Grade Code, Utility Code, Land Use Code, Noise Ordinance, Building Code and other construction codes are expected to mitigate potential adverse environmental impacts. A Determination of Non-Significance – Optional Process (DNS) is the appropriate threshold determination under the State Environmental Policy Act (SEPA) requirements identified in WAC 197-11-600.

A. Earth and Water

The proposed project will abandon in place an existing, deteriorating sewer line, install a sheet pile wall at the back edge of the existing sidewalk, install and connect a new sewer line behind the sheet pile wall separating it from the stream, and restore the nearly vertical stream bank using an "Envirolok" interlocking, geo-grid, sandbag system planted with native species. The "Envirolok" system, comprised of geotextile bags filled with stream gravels below the water line and planting medium above the water line, are then locked together with spikes, woven straps and tiebacks. The plantings then establish a substantial root system that provide bank stability, while also providing above ground structure for water quality control, slowing storm flows and providing wildlife habitat. During the project, approximately 37 cubic yards of the existing stream bank will be excavated to facilitate installation of the new, "Envirolok" stream bank. Additionally, a 120 foot section of the stream will be dewatered to prevent sediment or pollutants from being discharged into Lake Washington. The restored stream bank will be planted with native species. Two significant trees will be removed as part of this project. These activities are mitigated through the performance standards set forth in the Land Use Code. Erosion and sedimentation control is mitigated by best management practices required by Bellevue Clearing and Grading Code (BCC 23.76). See Conditions of Approval in Section X of this report.

B. Animals

The project area is within the most urbanized portions of Bellevue, the Meydenbauer Creek Watershed Basin. However, several species of local importance can be found in the vicinity of the project area. These include: Bald Eagle, Peregrine Falcon, Osprey, Puget Sound Chinook Salmon, Bull Trout, and Coho Salmon. Because of poor water quality and insufficient stream bed gravels, it is unlikely anadromous fish use this portion of the creek. Rather, they are present in Lake Washington, about 500 feet downstream of the project area. The presence of birds and mammals within the riparian areas is probable. To minimize impact to the riparian area, and preserve as much significant vegetation as possible, no significant trees will be removed. The stream bank will be planted with a variety of native species. The work will be timed and staged per appropriate species best management practices to avoid impacts. All temporary impacts will be restored and maintained. The proposed project should improve upon the current condition and provide improved habitat. See Conditions of Approval in Section X of this report.

B. Plants

Vegetation along the west bank of Meydenbauer Creek within the project area consists primarily of Himalayan blackberry (*Rubus discolor*). Some small red alder (*Alnus rubra*) saplings (less than 4" diameter) were recently removed and there are a few swordferns (*Polystichum munitum*). The area between the top of bank and the sidewalk is maintained as lawn. Two 12" diameter Pacific willows (*Salix spp.*) are present at the north part of the project area at the bend in the stream. Across the stream from the project area, there is a riparian zone with an overstory of red alder, willow (*Salix spp.*) and black cottonwood (*Populus balsamifera*). The understory consists of Himalayan blackberry, creeping blackberry (*Rubus ursinus*), and swordfern. The wetland east of the project area is dominated by reed canary grass (*Phallaris arrundinaceae*) with some common rush (*Juncus spp.*) and a few Pacific willows. Many of the willows died when a former beaver dam flooded the riparian area. These standing dead trees are still present and will remain.

No permanent impact to the riparian corridor is proposed or expected except the removal of two (2) pacific willows on the west side of the stream bank. These trees will be replaced by at least six (6) native conifers and six (6) native deciduous vine maples dispersed across the project area. All areas of temporary disturbance will be restored and monitored pursuant to an approved restoration and monitoring plan. See Conditions of Approval in Section X of this report.

D. Noise

The project site is approximately 1000 feet south of the southwest corner of the Downtown subarea within the Southwest Bellevue subarea. The underlying zoning classification is multi-family and single-family within 100 feet. These residents are most sensitive to disturbance from noise during evening, late night and weekend hours when they are likely to be at home. Construction noise will

be limited by the City's Noise Ordinance (BCC 9.18) which regulates construction hours and noise levels. See Conditions of Approval in Section X of this report.

The presence of local species of importance requires that work be timed to avoid significant impact to these species by using WDFW best management practices. See Conditions of Approval in Section X of this report.

IV. Consistency with Land Use Code Requirements:

A. Zoning District Dimensional Requirements:

This is a proposal for replacement of a deteriorating sewer line and stabilization and restoration of a stream bank of Meydenbauer Creek by the City of Bellevue Utilities Department. Utility repair and maintenance and bank stabilization and restoration projects are not subject to the use and dimensional provisions of the Land Use Code. No structures or new uses are proposed as part of this project.

B. Critical Areas Requirements:

The City of Bellevue Land Use Code lists allowed uses in Critical Areas (LUC 20.25H.055.B). New and expanded utility facilities and bank stabilization and restoration projects are considered allowed activities within stream critical areas, wetlands critical areas, areas of special flood hazards and habitat associated with species of local importance provided the performance standards outlined in LUC 20.25H.055.C.2, LUC 20.25H.055.C.3.m, LUC 20.25H.080.A, LUC 20.25H.080.B, LUC 20.25H.100, LUC 20.25H.160 and LUC 20.25H.180.C can be met.

V. Consistency with LUC Critical Areas Overlay District Performance Standards:

A. Consistency with LUC 20.25H.055.C.2: New and Expanded Uses or Development.

a. New or expanded facilities and systems are allowed within the critical area or critical area buffer only where no technically feasible alternative with less impact on the critical area or critical area buffer exists;

Based on information provide in the Critical Areas Report, two significant options were explored in arriving at the proposed solution. The first was to replace the existing sewer line in its current location. This option would have required complete excavation of both stream banks along with the stream bed. This option would also require replacement of the deteriorating piles upon which the sewer line is resting. Ultimately, the newly installed line would still be extremely close to the stream, making future maintenance nearly impossible without disturbing the creek.

The second option was to place the sewer line further from the stream, under the current roadway. The roadway profile has been settling unevenly over time on the historic lake bed. The asphalt in some areas is nearly 4' thick and increased settling and pressure from vehicular traffic would be detrimental to the stability of the future sewer line. Additionally, future maintenance of the sewer line would necessitate excavation through the roadway.

The applicant has demonstrated that no technically feasible alternative exists based on the location of the existing infrastructure elements and the required function and ongoing maintenance of the new facilities. Also, no alternative configuration exists outside of the critical areas and critical area buffer and no permanent disturbance will occur. All temporary disturbance will be restored.

b. If the applicant demonstrates that no technically feasible alternative with less impact on the critical area or critical area buffer exists, then the applicant shall comply with the following:

i. Location and design shall result in the least impacts on the critical area or critical area buffer;

The proposed project is designed to result in the least impact on critical areas and critical area buffer by limiting work to the west side of Meydenbauer Creek.

ii. Disturbance of the critical area and critical area buffer, including disturbance of vegetation and soils, shall be minimized;

Disturbance in the critical area and critical area buffer is minimized through the utilization of best management practices required by City of Bellevue codes.

iii. Disturbance shall not occur in habitat used for salmonid rearing or spawning or by any species of local importance unless no other technically feasible location exists;

No feasible alternative exists that would result in less temporary impact.

In addition, based on statements made by WDFW staff and confirmed by City of Bellevue staff, Meydenbauer Creek is not suitable rearing or spawning habitat for salmonids.

iv. Any crossing over of a wetland or stream shall be designed to minimize critical area and critical area buffer coverage and critical area and critical area buffer disturbance, for example by use of bridge, boring, or open cut and perpendicular crossings, and shall be the minimum width necessary to accommodate the intended function or objective; provided, that the Director may require that the facility be designed to accommodate additional facilities

where the likelihood of additional facilities exists, and one consolidated corridor would result in fewer impacts to the critical area or critical area buffer than multiple intrusions into the critical area or critical area buffer;

N/A – No permanent crossing of the stream or wetland is necessary.

v. All work shall be consistent with applicable City of Bellevue codes and standards;

All work will comply with City of Bellevue codes and standards, including the Clear and Grade Code, Utility Code, Land Use Code, Noise Ordinance, Transportation Code, Building Code and other applicable codes.

vi. The facility or system shall not have a significant adverse impact on overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;

The new facility will have a positive impact on flood storage capacity and will result in no rise of the base flood elevation. This information was verified based on HEC-RAS modeling results provide by PBS Engineering and Environmental (in file).

vii. Associated parking and other support functions, including, for example, mechanical equipment and maintenance sheds, must be located outside critical area or critical area buffer except where no feasible alternative exists; and

N/A – No parking or other support functions are necessary for this project.

viii. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

There are no areas of permanent disturbance associated with this project and all temporary disturbance will be restored per an approved restoration and monitoring plan.

Finding: The proposed project is consistent with the performance standards set forth in LUC 20.25H.055.C.2.

B. Consistency with LUC 20.25H.055.C.3.m: Stabilization Measures.

i. **When allowed.** The proposed stabilization measures is allowed because it protects essential public facilities, including: the roadway, sidewalk and other utilities, from potential undercutting through erosion processes. This project is in connection with uses and development allowed pursuant to LUC 20.25H.055.B. There are no technically feasible avoidance measures considering the location of the existing infrastructure and the stream.

ii. **Type of Stabilization Measure Used.** Following the installation of the sheet pile wall outside of the critical area and critical area buffer, the stream bank will be stabilized using an "Envirolok" geo-grid bank stabilization technique, which will be planted with native species. The "Envirolok" product by Agrecol qualifies as a "soft stabilization measure," As defined by LUC 20.25H.C.3.m.iii.(B), soft stabilization includes: biotechnical measures, bank enhancement, anchor trees, gravel placement, stepped back rockeries, vegetative plantings and similar measures that use natural materials engineered to provide stabilization while mimicking or preserving the functions and values of the critical area. The "Envirolok" system, with its interlocked geotextile bags filled with stream bed gravels and planting soil, and planted with native species is a biotechnical measure that uses vegetative plantings to mimic functions of the existing critical area buffer.

Finding: The proposed project is consistent with the performance standards set forth in LUC 20.25H.055.C.3.m.

C. Consistency with LUC 20.25H.080.A: Streams - Performance Standards – General.

There will be no lights or new lighting associated with this project. Following the installation and establishment of desirable native vegetation along the stream bank it is likely that less light will reach the stream.

No permanent additional noise will be generated by the project. Temporary noise impacts will be mitigated by the Noise Code (BCC 9.18).

No new impervious surfaces or toxic runoff will be created by the project. There will be no treated water generated by the project.

The project design includes the installation and establishment of native vegetation within and to the edge of the stream critical area and critical area buffer. Any use of pesticides, insecticides, and fertilizers associated with the restoration of the stream critical area and critical area buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices."

Finding: The proposed project is consistent with the performance standards set forth in LUC 20.25H.080.A.

D. Consistency with LUC 20.25H.080.B: Streams – Performance Standards – Modification of Stream Channel.

1. **When Allowed.** The installation of the new sewer line and sheet pile wall at the edge of the stream critical area buffer and the associated

stabilization of the stream bank is considered as a new or expanded utility facility. Therefore, a modification of the stream channel is allowed pursuant to LUC 20.25H.080.B.1.a. The modification of the stream channel in this project is limited to the temporary de-watering of the stream during the project's construction phase and the installation of two (2) or more rock deflectors in the stream bed to direct hydraulic forces away from the reestablished stream bank.

2. **Critical Areas Report Required.** A Critical Areas Report was prepared and submitted for this project pursuant to applicable sections of LUC 20.25H.230 through LUC 20.25H.270, as required because of the modification of the stream channel referenced above. The Critical Areas Report meets the submittal requirements outlined in LUC 20.25H.250.

A. Specific Proposal Required. The Critical Areas Report for the Meydenbauer Sewer Line Replacement and Bank Stabilization project was submitted as part of the application for the specific project proposal.

B. Minimum Report Requirements.

1. Identification and classification of all critical areas and critical area buffers on the site. The submitted Critical Areas Report identifies critical areas and critical area buffers including a stream, riparian wetlands, and a special flood hazard zone. (PBS Engineering and Environmental, May 2007)

2. Critical areas and buffers on adjacent properties. Figure 4 in the Critical Areas Report shows the identified critical areas and critical area buffers within the project area and on the adjacent properties.

3. Identification of codes and standards. Table 3 in the Critical Areas Report identifies the applicable code sections pertinent to the specific project proposal.

3. Habitat Assessment. The habitat assessment in the Critical Areas Report is consistent with LUC 20.25H.165. It provides a detailed description of the vegetation on the site. It identifies all of the probable species of local importance with a habitat association on the site. It discusses federal, state and local species management recommendations, including WDFW habitat management recommendations. It discuss the direct and indirect potential impacts to habitat presented by the project, including water quality impacts. It discusses measure used to avoid, minimize and mitigate potential impacts and restore degraded habitats. A discussion of ongoing management practices that will protect the restored habitat following the development was included as an addendum to the critical areas report.

4. Assessment of cumulative impacts. The Critical Areas Report addresses cumulative impacts through a discussion of the current conditions at the site and probable outcomes if no action is taken. It

then discusses what the desired condition will be following the proposed project.

5. Analysis of protection provided by the codes and standards, compared with the proposed project. On page 13 of the Critical Areas Report there is a comparison of the critical areas and critical area buffer protections that would be provided under a strict application of the code and the protections provided under the current proposal.

6. Discussion of Performance Standards. Table 3 of the Critical Areas Report outlines all of the applicable performance standards that apply to the allowable uses covered under this project proposal.

7. Discussion of Mitigation Measures. Section 6 of the Critical Areas Report outlines the proposed mitigation measures.

Finding: The proposed project is consistent with the performance standards set forth in LUC 20.25H.080.B.

E. Consistency with LUC 20.25H.100: Wetlands – Performance Standards

There will be no lights or new lighting associated with this project. Following the installation and establishment of desirable native vegetation along the restored stream bank it is likely that less light will reach the wetland area.

No permanent additional noise will be generated by the project. Temporary noise impacts will be mitigated by the Noise Code (BCC 9.18).

No new impervious surfaces or toxic runoff will be created by the project. There will be no treated water generated by the project.

The project design includes the installation and establishment of native vegetation within and to the edge of the wetland critical area and critical area buffer. Any use of pesticides, insecticides, and fertilizers associated with the restoration of the wetland critical area and critical area buffer shall be in accordance with the City of Bellevue's "Environmental Best Management Practices."

Finding: The proposed project is consistent with the performance standards set forth in LUC 20.25H.100.

F. Consistency with LUC 20.25H.160:
If habitat associated with species of local importance will be impacted by a proposal, the proposal shall implement the wildlife management plan developed by the Department of Fish and Wildlife for such species. Where the habitat does not include any other critical area or critical area buffer, compliance with the wildlife management plan shall

constitute compliance.

The project area is within habitat associated with species of local importance. A bald eagle management plan will be submitted and approved concurrently with subsequent permits for the project.

Finding: The proposed project is consistent with the performance standards set forth in LUC 20.25H.160.

G. Consistency with LUC 20.25H.180.C: Area of Special Flood Hazard – General Performance Standards.

1. **Intrusion Over the Area of Special Flood Hazard Allowed.** No permanent intrusion over the area of special flood hazard will occur as part of this project.

2. **Elevation Certificate Following Construction.** N/A – No structure will be constructed as any part of this project necessitating compliance with this performance standard.

3. **Construction Materials and Methods.**
   a. **Site Design.** All structures, utilities and other improvements of this project will be located at the edge or outside of the area of special flood hazard.
   b. **Methods that Minimize Flood Damage.** The improvements will use materials specially designed to withstand floods damage.
   c. **Utility Protection.** The newly installed utility infrastructure will be physically separated from the area of special flood hazard by a sheet pile wall to prevent inundation or damage from potential floods.
   d. **Anchoring.** The sheet pile wall will be driven to resist movement by flood damage. The "Envirolok" stream bank is an interlocking, sandbag geo-grid that will be anchored to itself and the backing soils to prevent flood damage. The 'rock barbs' will be constructed of a rock material large enough and in such a manner to resist movement.

4. **No Rise in the Base Flood Elevation.** There will be no rise in the Base Flood Elevation as a result of this project as verified by HEC-RAS modeling results (in file) for the Meydenbauer Creek Bank Stabilization Project provided by PBS Engineering and Environmental.

5. **Modification of Stream Channel.**

   a. This project will modify the stream channel through stabilization of the eroding west bank, planting of the new bank with native

species, and installation of rock deflection barbs in the stream bed. These measures equate to an improvement in habitat quality and function, and therefore a modification is allowed under this subsection.

b. The project will not block any side channels.

c. The City of Bellevue Utilities Department will notify adjacent communities, the state departments of Ecology and Fish and Wildlife, and the Federal Insurance Administration about the proposed modification at least 30 days prior to permit issuance.

d. The applicant will maintain the modified stream channel to ensure flood carrying capacity is not diminished. Maintenance will be for a period of five years, and be in accordance with an approved maintenance program.

6. **Compensatory Storage.** N/A – There will be no loss in flood storage capacity, therefore mitigated compensatory storage is not required to be created.

Finding: The proposed project is consistent with the performance standards set forth in LUC 20.25H.180.C.

VI. Summary of Technical Reviews

A. Clearing and Grading:

The Clearing and Grading Division of the Planning and Community Development Department has reviewed the proposal for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed restoration project.

VII. Public Notice and Comment

Application Date:	June 21, 2007
Public Notice:	July 12, 2007
Minimum Comment Period:	July 26, 2007

The Notice of Application for this project was published in the **Seattle Times on July 12, 2007**.

Comments have been received on this proposal. One party, the Muckleshoot Indian Tribe, asked about the determination of no viable spawning habitat in the stream and if large woody debris could be included in the design. The applicant, Bellevue Utilities through PBS Engineering and Environmental, responded to their comments. King County Wastewater Management Division requested a set of construction/engineering plans. No additional comments were received from King County.

VIII. Decision Criteria

The proposal, as conditioned below, meets the applicable regulations and decision criteria for a Critical Areas Report pursuant to LUC 20.25H.255 and Critical Areas Land Use Permit pursuant to LUC Section 20.30P.

A. Critical Areas Report – Decision Criteria (LUC 25.25H.255)

1. Modifications and performance standards. Per the discussion in Subsection V.D above, the Critical Areas Report submitted with the proposal demonstrates that the proposed performance standards will be at least as protective of the functions and values as an application of the regulations and standards of the Land Use Code.

2. Adequate resources to ensure completion of mitigation and monitoring. The project is owned and managed by the City of Bellevue Utilities Department. They have adequate resources to satisfactorily complete the project and comply with the mitigation and monitoring required.

3. Modifications and performance standards are not detrimental. The proposed modification to the stream channel should result in an improvement in functions and values associated with the affected critical areas and critical area buffers. See discussion in Section V. above.

4. Development is compatible. The activities proposed by this project are compatible with the other uses and development in the same land use district. The two activities occurring under this proposal, new or expanded utility systems and stabilization measures, are both considered allowable uses per LUC 20.25H.055.

Finding: The proposal meets the applicable decision criteria outlined in LUC 20.25H.255.

B. Critical Areas Land Use Permit – Decision Criteria (LUC 20.23P)

1. The proposal obtains all other permits required by the Land Use Code;

Finding: The applicant must obtain a Clearing and Grading, Building, and Right-of-Way Use permit before beginning any excavation, construction, or installation. **See Conditions of Approval in Section X of this report.**

2. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer;

Finding: The proposed Meydenbauer Creek Sewer Line Replacement & Bank Stabilization project is designed to be the least impacting to the surrounding landscape, critical areas and critical area buffers as possible.

The proposal incorporates soft stabilization measures, avoidance measures designed to eliminate permanent intrusions into previously establish critical area and critical area buffer boundaries, and minimizes impacts through thoughtful staging and timing of activities. The proposal does requires the removal of two (2) significant willow trees, which will be replaced a minimum of six (6) native conifer trees and six (6) native deciduous trees. All replacement trees and shrubs as identified in the approved project replanting plans will be maintained to assure successful establishment. **See Conditions of Approval in Section X of this report.**

3. The proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable, and ;

Finding: As discussed in Section V of this report, the proposal meets the performance standards identified for new and expanded utility facilities and bank stabilization projects. The applicable performance standards are outlined in LUC 20.25H.055.C.2, LUC 20.25H.055.C.3.m, LUC 20.25H.080.A, LUC 20.25H.080.B, LUC 20.25H.100, LUC 20.25H.160 and LUC 20.25H.180.C.

4. The proposal will be served by adequate public facilities including street, fire protection, and utilities; and ;

Finding: This is a proposal to replace a deteriorating sewer line currently threatened by erosion and stabilization of an associated stream bank. As an essential public facility, owned and maintained by the City of Bellevue Utilities Department it will be adequately serviced.

5. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC Section 20.25H.210; and

Finding: This project involves the replacement of a deteriorating sewer line and the stabilization of an eroding stream bank. No permanent disturbance will occur within a critical area or critical area buffer, therefore no mitigation is required. There will be temporary disturbance within a critical area and critical area buffer, therefore restoration will be required. The project plans specify a stream bank stabilization and restoration planting plan. New plantings will be monitored for a five (5) years as specified in LUC 20.25H.220.D. **See Conditions of Approval in Section X of this report regarding the required restoration and monitoring plan.**

6. The proposal complies with other applicable requirements of this code.

Finding: As discussed in Section IV & V of this report, the proposal

complies with all other applicable requirements of the Land Use Code.

IX. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, SEPA, City Code and Standard compliance reviews, the Director of Planning and Community Development does hereby **approve with conditions** the proposal for replacement of the sewer line along 101st Ave SE by abandoning the existing sewer line, installing a sheet pile wall, installing a new sewer line, and stabilizing the west stream bank of Meydenbauer Creek where it coincides with the project area.

Note- Expiration of Approval: In accordance with LUC 20.30P.150 a Critical Areas Land Use Permit automatically expires and is void if the applicant fails to file for a Clearing and Grading Permit or other necessary development permits within one year of the effective date of the approval.

X. Conditions of Approval

The applicant shall comply with all applicable Bellevue City Codes and Ordinances including but not limited to:

Applicable Ordinances	Contact Person
Clearing and Grading Code- BCC 23.76	Tom McFarlane, 425-452-5207
Land Use Code- BCC 20.25H	Kevin LeClair, 425-452-2928
Noise Control- BCC 9.18	Kevin LeClair, 425-452-2928
Transportation Code- BCC 14.30	Right-of-Way Use, 425-452-2888

The following conditions are imposed under the Bellevue City Code or SEPA authority referenced:

1. **Clearing and Grading Permit:** Before beginning any stabilization activity, the applicant must apply for and obtain a Clearing and Grading Permit.

   Authority: Bellevue City Code Section 23.76.025
   Reviewer: Tom McFarlane, Clearing and Grading Supervisor

2. **Site Restoration:** A final restoration and replanting plan for all areas of temporary disturbance that meets the requirements of LUC 20.25H.220.H shall be submitted and approved prior to the issuance of any clearing and grading permits for stabilization activity on this site.

   Authority: Land Use Code Section 20.25H.220
   Reviewer: Kevin LeClair, Senior Environmental Planner

3. **Monitoring Required:** The applicant must submit as part of the required Clearing and Grading Permit application a monitoring plan that identifies performance standards for all restoration areas for a period of five years following installation.

   Authority: Land Use Code Section 20.25H.220.H
   Reviewer: Kevin LeClair, Senior Land Use Planner

4. **Noise Control:** The proposal will be subject to normal construction hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Upon written request to PCD, work hours may be extended to 10 pm if the criteria for extension of work hours as stated in BCC 9.18 can be met.

   Authority: Noise Code BCC 9.18
   Reviewer: Kevin LeClair, Senior Land Use Planner

5. **Wildlife Management Plans Required:** The applicant must submit as part of the required Clearing and Grading Permit application a Bald Eagle Management Plan and a schedule of work that complies with WDFW management recommendations for habitat associated with species of local importance.

   Authority: Land Use Code 20.25H.160
   Reviewer: Kevin LeClair, Senior Land Use Planner

6. **Right-of-Way Use Permit:** The applicant must obtain a right-of-way use permit from Bellevue Transportation including a traffic control plan.

   Authority: Transportation Right-of-Way Use Code 14.30
   Reviewer: Jon Regalia, Right-of-Way Use Permit Supervisor

XI. Attachments:

1. Site context map- In File
2. Adopted Environmental Checklist and DNS Threshold Determination- In File
3. Site Plan- In File

City of Bellevue Submittal Requirements | 27a

ENVIRONMENTAL CHECKLIST

Reviewed by: KevinLeClair 7-3-07 4/18/02

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Our TTY number is 425-452-4636.

BACKGROUND INFORMATION

Property Owner: City of Bellevue

Proponent:

Contact Person: Abe Santos

(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: 450 110th Ave. NE
P.O. Box 90012
Bellevue, WA 98009

Phone: 425-452-6456

Proposal Title: Meydenbauer Creek Sewer Replacement & Bank Stabilization Project

Proposal Location: East side of 101st Ave. SE just north of the intersection with 100th Ave. SE in Bellevue, King County, WA 98004

(Street address and nearest cross street or intersection) Provide a legal description if available.

Please attach an 8 ½" x 11" vicinity map that accurately locates the proposal site.

Give an accurate, brief description of the proposal's scope and nature

1. General description: Replace deteriorating sewer line, install sheet pile retaining wall, stabilize and reconstruct stream bank

2. Acreage of site: .1475 acres

3. Number of dwelling units/buildings to be demolished: N/A

4. Number of dwelling units/buildings to be constructed: N/A

5. Square footage of buildings to be demolished: N/A

6. Square footage of buildings to be constructed N/A

7. Quantity of earth movement (in cubic yards): 1,153 CY

8. Proposed land use: Road and utilities right-of-way

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A. ENVIRONMENTAL ELEMENTS

1. EARTH

a. General description of the site: Flat Rolling Hilly Steep slopes Mountains
☒ Other Streambank and adjacent sidewalk

b. What is the steepest slope on the site (approximate percent slope)? Streambank is nearly vertical in places

c. What general types of soil are found on the site (for example, clay, sand, gravel, peat, and muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. Seattle Muck, urban fill, alluvial deposits

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. Streambank has eroded, roadway has settled nearly 4 feet

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill. Excavation for installation of sheet pile wall and new sewer line (1,072 cubic yards). Excavation for installation of vegetated bag wall (80 CY). Fill over new sewer line (1,065 cubic yards).

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe. Project is designed to prevent further erosion of streambank

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

h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any: The project will implement best management practices during construction to prevent incidental fallback into the stream. Following installation of the sheetpile wall and sewer, the streambank will be reconstructed using interlocking geotextile bags and planted to native shrubs and grasses. Mitigated by: 20.25H, 23.76

2. AIR

a. What types of emissions to the air would result from the proposal (i.e. dust, automobile odors, and industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known. Construction activities could result in some exhaust emissions from the operation of heavy equipment and some dust emissions.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. No

b. Proposed measures to reduce or control emissions or other impacts to the air, if any: If dust is an issue there will be a water truck on hand.

Reviewed: KL 6/30/07

c. Water Runoff (Including storm water)

(1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe. Stormwater runoff from the project site will either collect in the de-watered section of stream or in the sewer trench where it will be pumped out and disposed of as described above.

(2) Could waste materials enter ground or surface waters? If so, generally describe. Measures will be taken to prevent discharge of any waste materials to surface waters.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any: Temporary diversion of the stream during construction will prevent water quality degradation of stream flows from construction activities. Turbid or otherwise contaminated water from trenching or runoff will be routed to a Baker Tank and discharged either to the sanitary sewer or pumped into a truck for proper disposal off site. No construction runoff will be allowed to enter the stream. Mitigated by: 23.76

4. PLANTS

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

deciduous tree: alder, maple, aspen, other

evergreen tree: fir, cedar, pine, other

shrubs Himalayan blackberry

grass

pasture

crop or grain

wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other

water plants: water lily, eelgrass, milfoil, other

other types of vegetation

b. What kind and amount of vegetation will be removed or altered? All vegetation along the west streambank in the project area will be removed. Current vegetation consists primarily of Himalayan blackberry and lawn grasses. A few swordferns and alders are present.

c. List threatened or endangered species known to be on or near the site. None known

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any: The top of the streambank area will be replanted following

Reviewed:
KL 6/30/07

(1) Describe special emergency services that might be required. N/A

(2) Proposed measures to reduce or control environmental health hazards, if any. Replacement of the broken sewer line helps to control a potential environmental health hazard

Mitigation: 14.30.210

b. Noise

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

(2) What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example, traffic, construction, operation, other)? Indicate what hours noise would come from the site. During construction, heavy equipment will be operating during normal working hours. Installation of the sheet pile wall will have the greatest noise impact and is expected to last for two weeks. A vibratory hammer will be specified if soil conditions warrant. Installation of the trench shoring system may also have temporary noise impacts for approximately 4 weeks, but will be no louder than the sheetpile installation, depending on the shoring system selected by the contractor. No noise impacts will occur following construction.

(3) Proposed measures to reduce or control noise impacts, if any: Any activity that is expected to generate excessive noise will be conducted during normal City of Bellevue work hours and within specified wildlife work windows

Mitigation: 20.25H, WDFW

8. LAND AND SHORELINE USE

a. What is the current use of the site and adjacent properties? The project is located within a City of Bellevue road right-of-way and stream easement. There is also a utility easement in this area. Adjacent properties are mostly multi-family residential development.

b. Has the site been used for agriculture? If so, describe. Probably not, since it would have been below lake level prior to the construction of the locks on Lake Washington.

c. Describe any structures on the site. The site has an existing road and sidewalk. The existing sewer line is now under the stream

d. Will any structures be demolished? If so, what? The sidewalk will be demolished and then rebuilt at the end of the project. The old sewer line will be abandoned in place

e. What is the current zoning classification of the site? The site is zoned R-20, R-30

f. What is the current comprehensive plan designation of the site? Multi-family high density

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

Reviewed: KL 6/30/07

b. Would the proposed project displace any existing recreational uses? If so, describe. No Sidewalk will be closed temporarily, Sidewalk on other side of street will remain open.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any: Sidewalk improvements and plantings should improve recreational value

Mitigation: 14.30.200

13. HISTORIC AND CULTURAL PRESERVATION

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe. None known

b. Generally describe any landmarks or evidence of historic, archeological, scientific, or cultural importance known to be on or next to the site. None known

c. Proposed measures to reduce or control impacts, if any: N/A

14. TRANSPORTATION

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any. 101st Ave. SE is adjacent to the site and will be the primary point of access.

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

c. How many parking spaces would be completed project have? How many would the project eliminate? N/A

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not Including driveways? If so, generally describe (indicate whether public or private). No

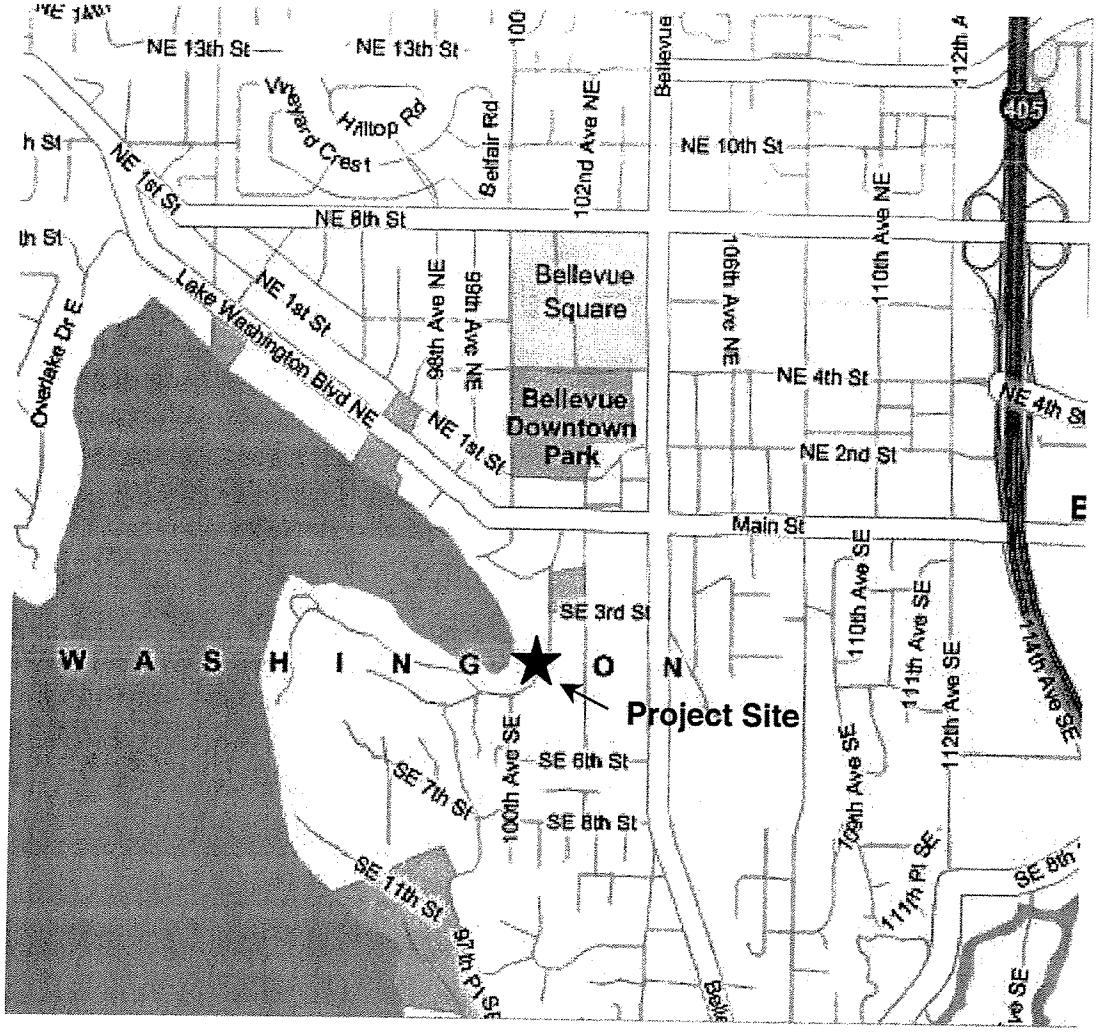
e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe. No

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur. None

g. Proposed measures to reduce or control transportation impacts, if any: The project has prepared a traffic control plan. Sidewalk traffic will be directed to the opposite side of the street, one 12' lane will remain open at all times and access to private driveways will be maintained.

Mitigation: H.30.200

Reviewed: KL 6/30/07

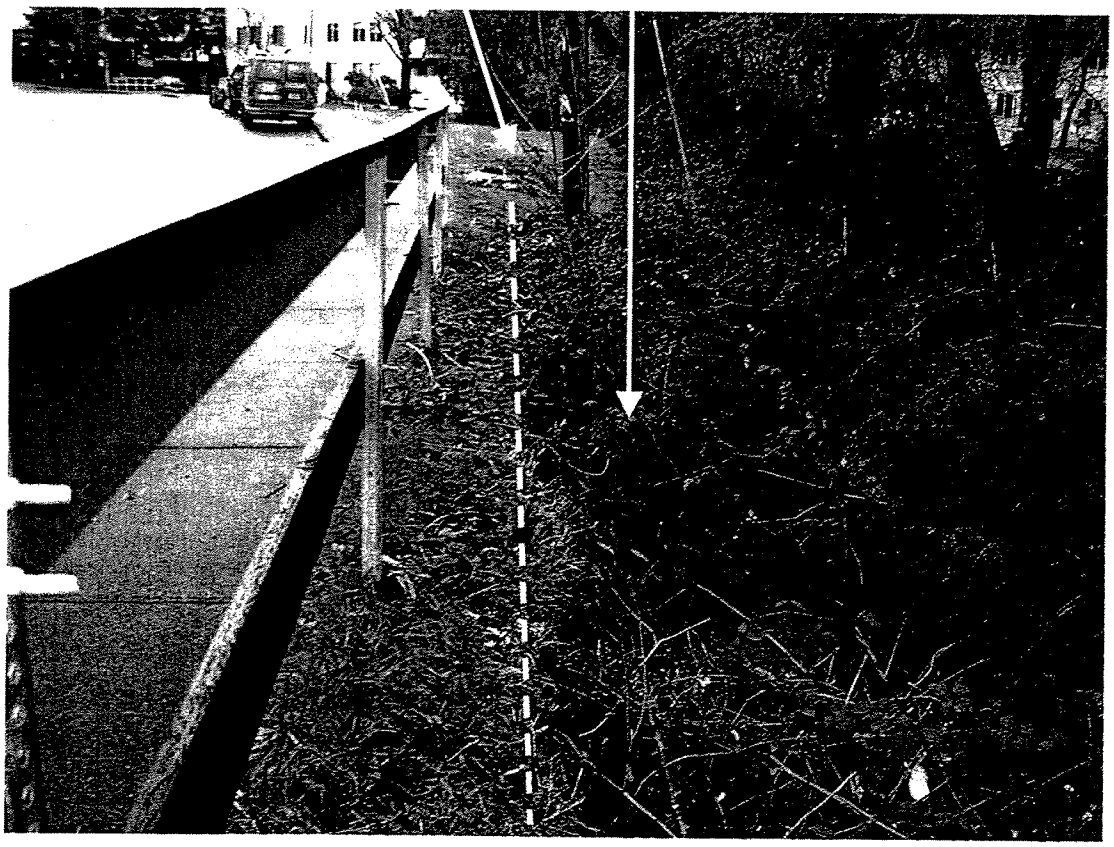


PBS	Project # 407044.000 Date: April 2007	**SITE VICINITY MAP** Meydenbauer Creek Sewer Replacement Bellevue, Washington	**FIGURE 1**

Reviewed:
KL 6/30/07

PBS	Project # 407044.000 Date: April 2007	**FLOODPLAIN MAP** Meydenbauer Creek Sewer Replacement Bellevue, Washington	**FIGURE 2**

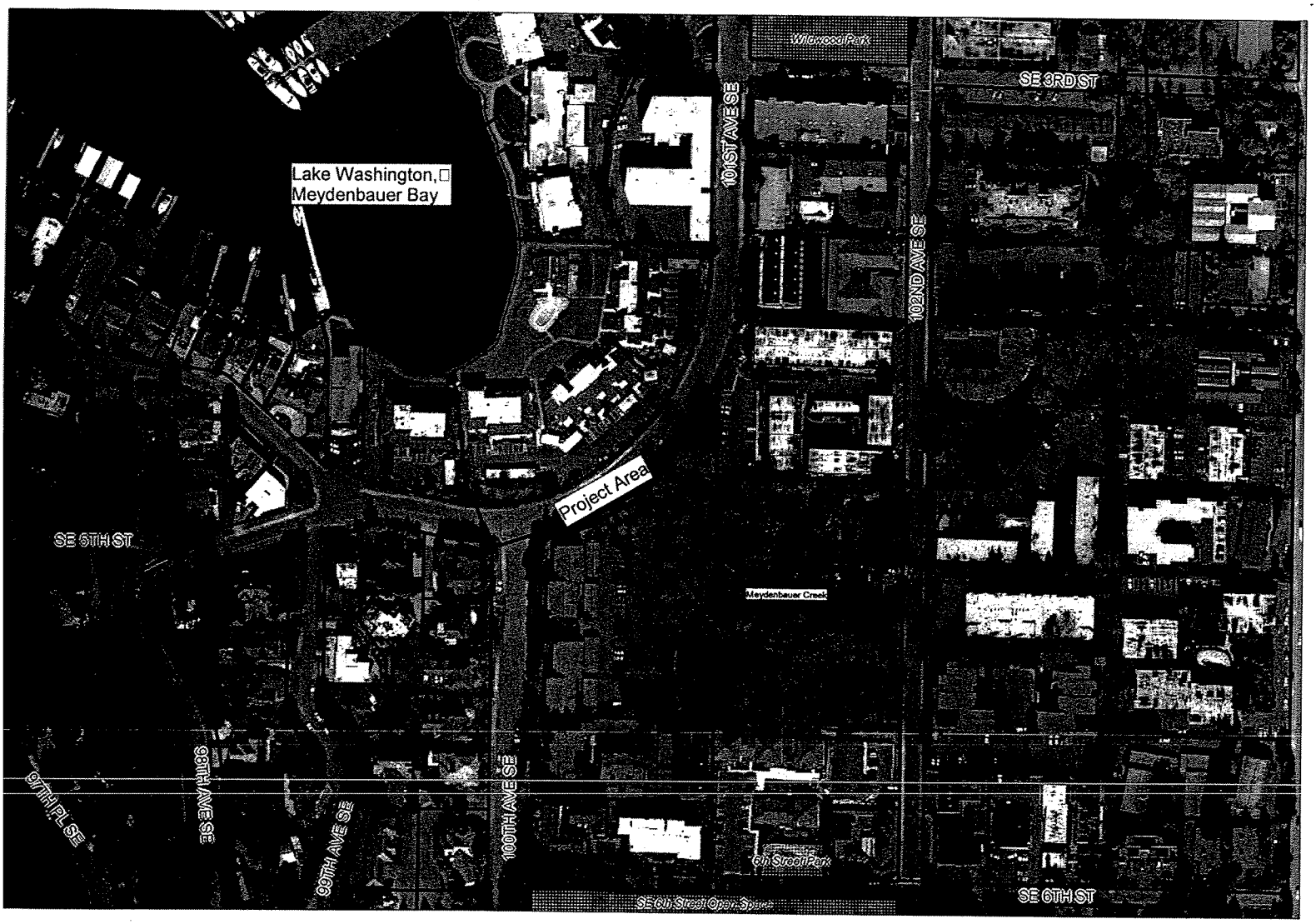
Reviewed:
KL 6/30/07



PBS	Project # 407044.000 Date: April 2007	**PROJECT AREA PHOTOGRAPH** Meydenbauer Creek Sewer Replacement Bellevue, Washington	**FIGURE 3**

Reviewed:
KL 6/30/07

Meydenbauer Creek Sewer Line Replacement & Streambank Stabilization Project (Vicinity Map)



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CITY OF BELLEVUE
UTILITIES DEPARTMENT

MEYDENBAUER CREEK SEWER REPLACEMENT AND BANK STABILIZATION PROJECT

CITY MANAGER
STEVE SARKOZY

MAYOR
GRANT DEGGINGER

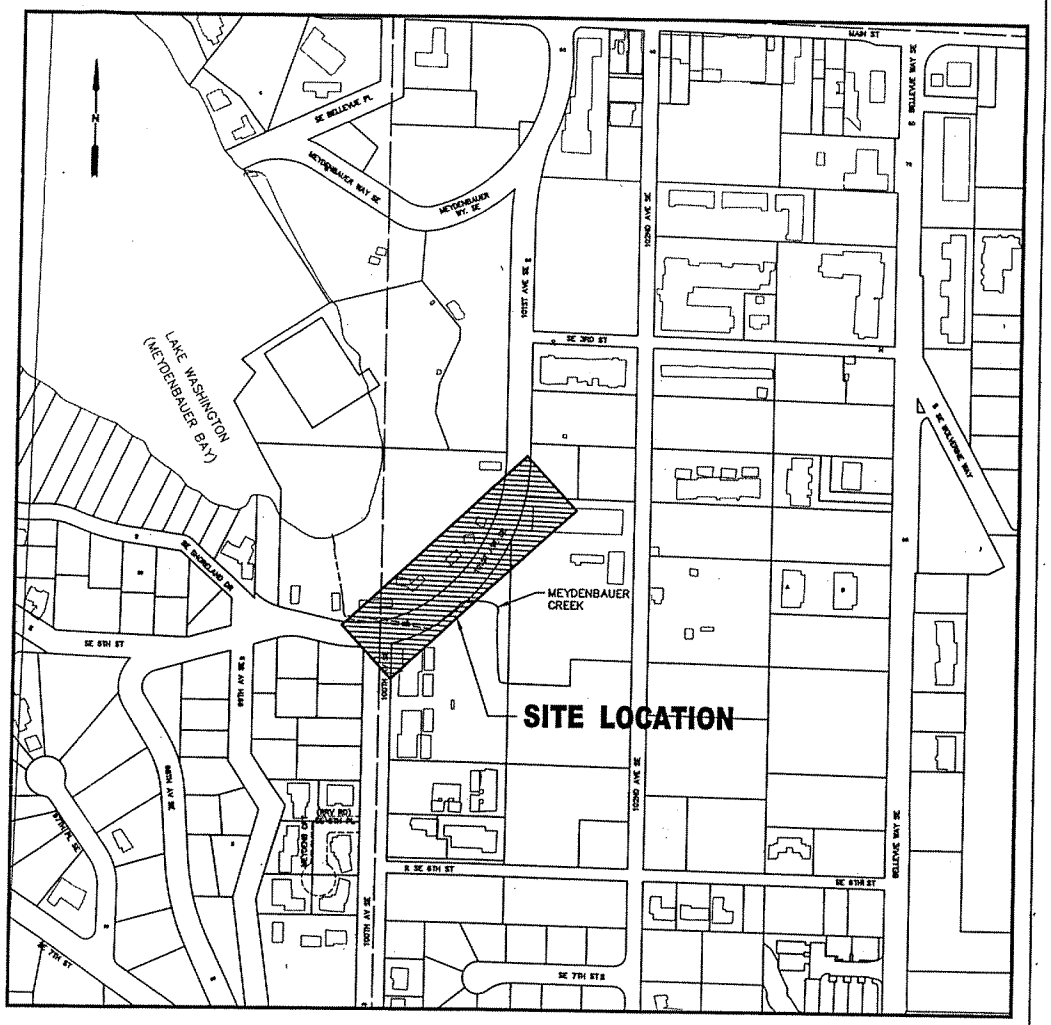
DIRECTOR OF UTILITIES
DENNIS VIDMAR

CITY COUNCIL

JOHN CHELMINIAK
CONRAD LEE
CLAUDIA BALDUCCI
PHIL NOBLE
DON DAVIDSON
CONNIE MARSHALL

SCHEDULE OF DRAWINGS

SHEET NO.	DRAWING TITLE
1	VICINITY MAP & INDEX OF SHEETS
2	EXISTING SITE PLAN
3	TRAFFIC CONTROL PLAN
4	TRAFFIC CONTROL DETAILS
5	SEWER REPLACEMENT PLAN – SHEET 1
6	SEWER REPLACEMENT PLAN – SHEET 2
7	STREAM BANK RECONSTRUCTION PLAN
8	TYPICAL SECTIONS
9	EROSION CONTROL PLAN
10	EROSION CONTROL DETAILS
11	PLANTING PLAN & DETAILS
12	RETAINING WALL PLAN AND PROFILE (FOR REFERENCE ONLY)



VICINITY MAP

SCALE: 1"=300'

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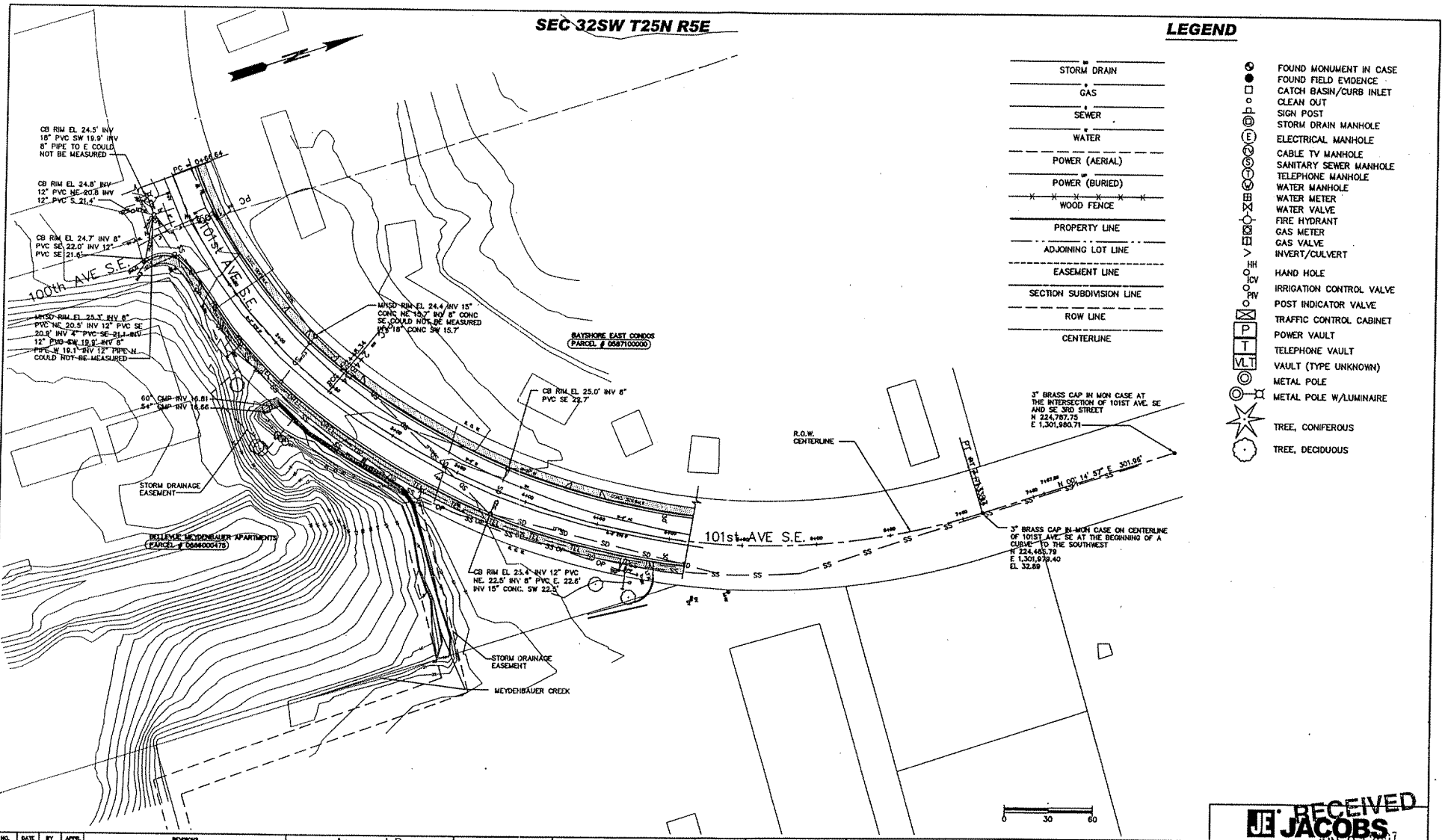

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EXISTING SITE PLAN

SHT 2 OF 12

DETAIL NOTES: SEC 32SW T25N R5E

1. SIGN SEQUENCE IS THE SAME FOR BOTH DIRECTIONS OF TRAVEL ON THE ROADWAY.

2. AT LEAST ONE TRAVEL LANE AT LEAST 12 FEET WIDE ON 100TH AVE SE AND 101ST AVE SE SHALL BE OPEN TO TRAFFIC AT ALL TIMES.

3 MAINTAIN ACCESS TO ALL PRIVATE DRIVEWAYS. MINIMUM WIDTH OF ACCESS SHALL BE 12 FEET OR EXISTING DRIVEWAY WIDTH, WHICHEVER IS LESS. COORDINATE ALL WORK AFFECTING DRIVEWAY ACCESS WITH ENGINEER. PROVIDE NOTICE TO ENGINEER AT LEAST 24 HOURS IN ADVANCE OF ALL WORK AFFECTING DRIVEWAY ACCESS.

4. THE "LANE CLOSURE DETAIL WITHOUT FLAGGERS" APPLIES ONLY TO AREAS WHERE FLAGGERS ARE NOT REQUIRED. IF CONSTRUCTION ACTIVITIES AFFECT THE TRAVELED WAY WITHIN 155' OF 100TH AVE. SE, FLAGGERS ARE REQUIRED, AND THE "LANE CLOSURE DETAIL WITH FLAGGERS" APPLIES.

5. WHEN FLAGGERS ARE REQUIRED, ALL SIGNS THAT DO NOT AGREE WITH THE "TRAFFIC CONTROL DETAIL WITH FLAGGERS," SHALL BE COVERED OR REMOVED.

6. EXTEND TAPER OF TRAFFIC CONTROL DEVICES ACROSS SHOULDER.

7. DURING NON-WORKING HOURS, THE CONTRACTOR SHALL KEEP EXISTING TRAFFIC LANES CLEAR FOR TRAFFIC. COVER ALL TRENCHES IN ROADWAY WITH STEEL PLATES, REMOVE TEMPORARY TRAFFIC CONTROL DEVICES FROM ROADWAY AND COVER OR REMOVE ALL SIGNS EXCEPT G20-2A, W20-1, W21-1701 & W20-1 MOD.

8. W21-1701 SIGNS SHALL BE USED WHEN STEEL PLATES ARE IN ROADWAY. WHEN USED, SIGNS SHALL BE 200 FEET IN ADVANCE OF STEEL PLATES. COVER OR REMOVE SIGNS AT ALL OTHER TIMES.

9. W20-1 MOD SIGNS SHALL BE USED WHEN STEEL PLATES ARE IN ROADWAY. WHEN USED, SIGNS SHALL BE 400 FEET IN ADVANCE OF STEEL PLATES. COVER OR REMOVE SIGNS AT ALL OTHER TIMES.

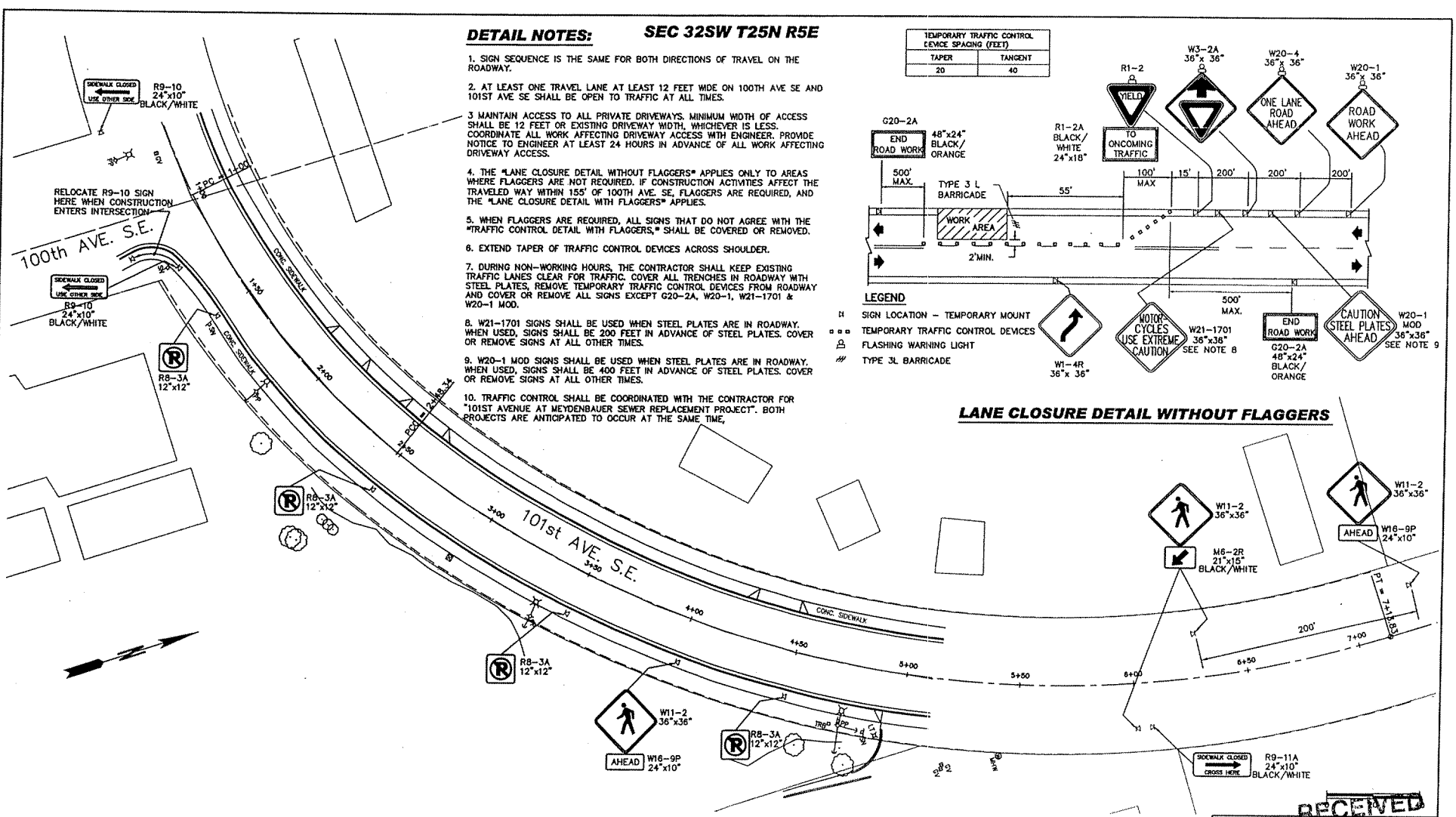
10. TRAFFIC CONTROL SHALL BE COORDINATED WITH THE CONTRACTOR FOR "101ST AVENUE AT MEYDENBAUER SEWER REPLACEMENT PROJECT". BOTH PROJECTS ARE ANTICIPATED TO OCCUR AT THE SAME TIME,

TEMPORARY TRAFFIC CONTROL DEVICE SPACING (FEET)	
TAPER	TANGENT
20	40

LEGEND

- SIGN LOCATION – TEMPORARY MOUNT
- TEMPORARY TRAFFIC CONTROL DEVICES
- FLASHING WARNING LIGHT
- TYPE 3L BARRICADE

LANE CLOSURE DETAIL WITHOUT FLAGGERS



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PROJECT MANAGER DATE

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BLP 8/2007 DRAWN BY DATE

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City of Bellevue

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MEYDENBAUER CREEK SEWER REPLACEMENT AND BANK STA LIZATION PROJECT

TRAFFIC CONTROL PLAN

SHT 3 OF 12

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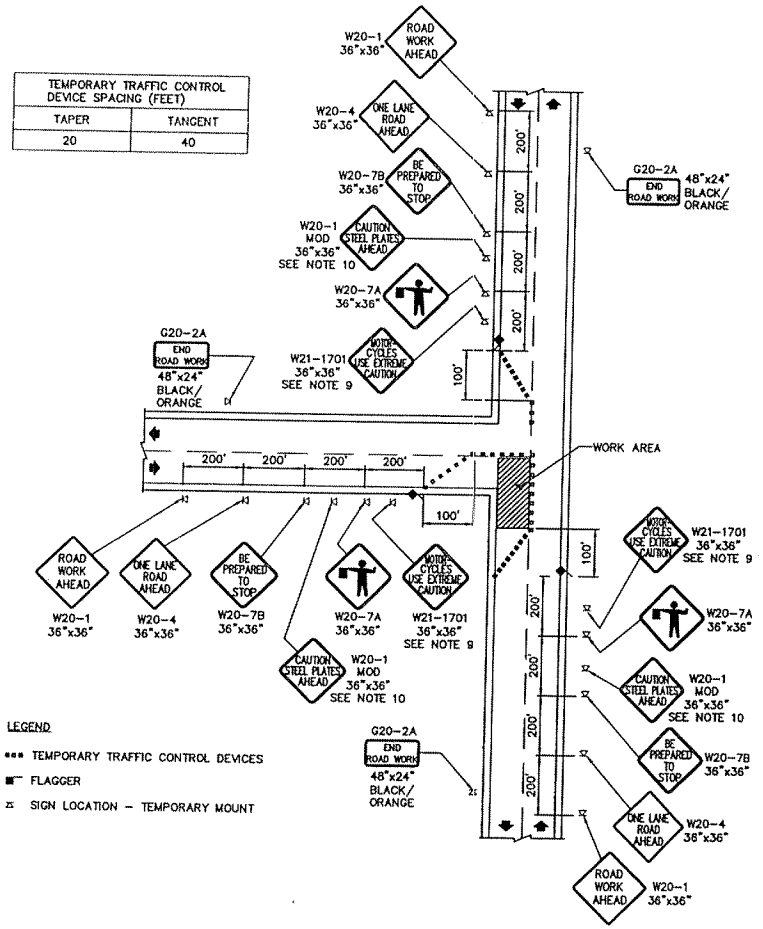
TEMPORARY TRAFFIC CONTROL DEVICE SPACING (FEET)	
TAPER	TANGENT
20	40



LANE CLOSURE DETAIL WITH FLAGGERS

NOTES:

1. THE "LANE CLOSURE DETAIL WITH FLAGGERS" APPLIES ONLY WHEN FLAGGERS ARE REQUIRED. IF CONSTRUCTION ACTIVITIES AFFECT THE TRAVELED WAY WITHIN 155' OF 100TH AVE. SE, FLAGGERS ARE REQUIRED.
2. AT LEAST ONE TRAVEL LANE AT LEAST 12 FEET WIDE ON 100TH AVE SE AND 101ST AVE SE SHALL BE OPEN TO TRAFFIC AT ALL TIMES.
3. WHEN FLAGGERS ARE NOT REQUIRED, ALL SIGNS THAT DO NOT AGREE WITH THE "LANE CLOSURE DETAIL WITHOUT FLAGGERS," SHALL BE COVERED OR REMOVED.
4. EXTEND TAPER OF TRAFFIC CONTROL DEVICES ACROSS SHOULDER.
5. FLOODLIGHTS SHALL BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT.
6. RADIO COMMUNICATION IS RECOMMENDED BETWEEN FLAGGERS. IT IS REQUIRED IF FLAGGERS DO NOT HAVE CLEAR VISION OF EACH OTHER.
7. ADJUST TRAFFIC CONTOL SIGNING AND DEVICES FOR WORK IN OTHER INTERSECTION QUADRANTS.
8. DURING NON-WORKING HOURS, THE CONTRACTOR SHALL KEEP EXISTING TRAFFIC LANES CLEAR FOR TRAFFIC. COVER ALL TRENCHES IN ROADWAY WITH STEEL PLATES, REMOVE TEMPORARY TRAFFIC CONTROL DEVICES FROM ROADWAY AND COVER OR REMOVE ALL SIGNS EXCEPT G20-2A, W20-1,W20-1 MOD & W21-1701.
9. W21-1701 SIGNS SHALL BE USED WHEN STEEL PLATES ARE IN ROADWAY. WHEN USED, SIGNS SHALL BE 200 FEET IN ADVANCE OF STEEL PLATES. COVER OR REMOVE SIGNS AT ALL OTHER TIMES.
10. W20-1 MOD SIGNS SHALL BE USED WHEN STEEL PLATES ARE IN ROADWAY. WHEN USED, SIGNS SHALL BE 400 FEET IN ADVANCE OF STEEL PLATES. COVER OR REMOVE SIGNS AT ALL OTHER TIMES.

NO.	DATE	BY	APPR.	REVISIONS

Approved By

UTILITIES DESIGN MANAGER DATE

PROJECT MANAGER DATE

MTF DESIGNED BY 5/2007 DATE

BLP DRAWN BY 5/2007 DATE

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TRAFFIC CONTROL PLAN
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SHT 4 OF 12

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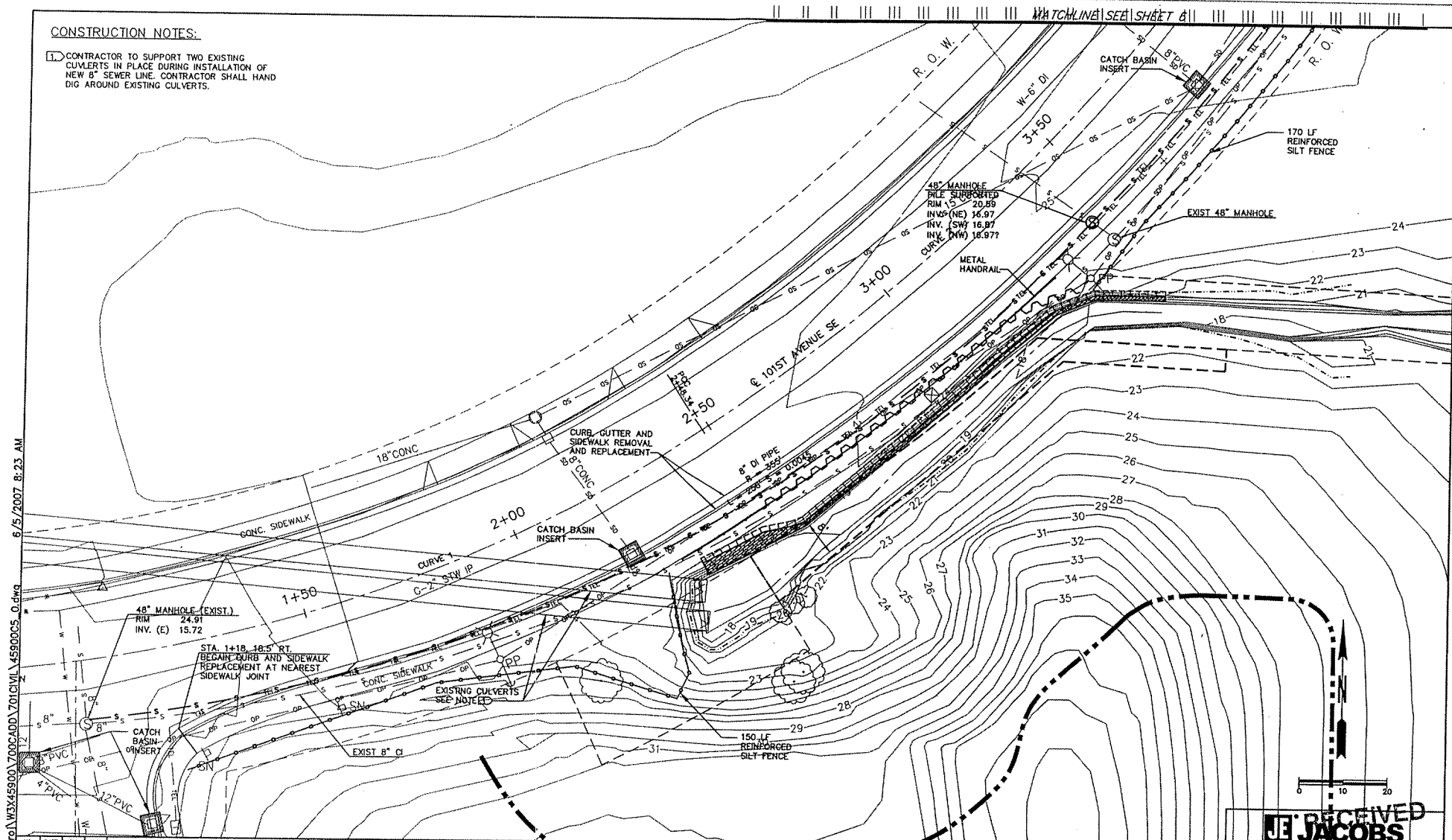
CONSTRUCTION NOTES:

1. CONTRACTOR TO SUPPORT TWO EXISTING CUVLERTS IN PLACE DURING INSTALLATION OF NEW 8" SEWER LINE. CONTRACTOR SHALL HAND DIG AROUND EXISTING CULVERTS.



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PROJECT MANAGER DATE

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MEYDENBAUER CREEK
SEWER REPLACEMENT AND
BANK STABILIZATION PROJECT

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SEWER REPLACEMENT PLAN

SHEET 1

SHT 5 OF 12

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CONSTRUCTION NOTES:

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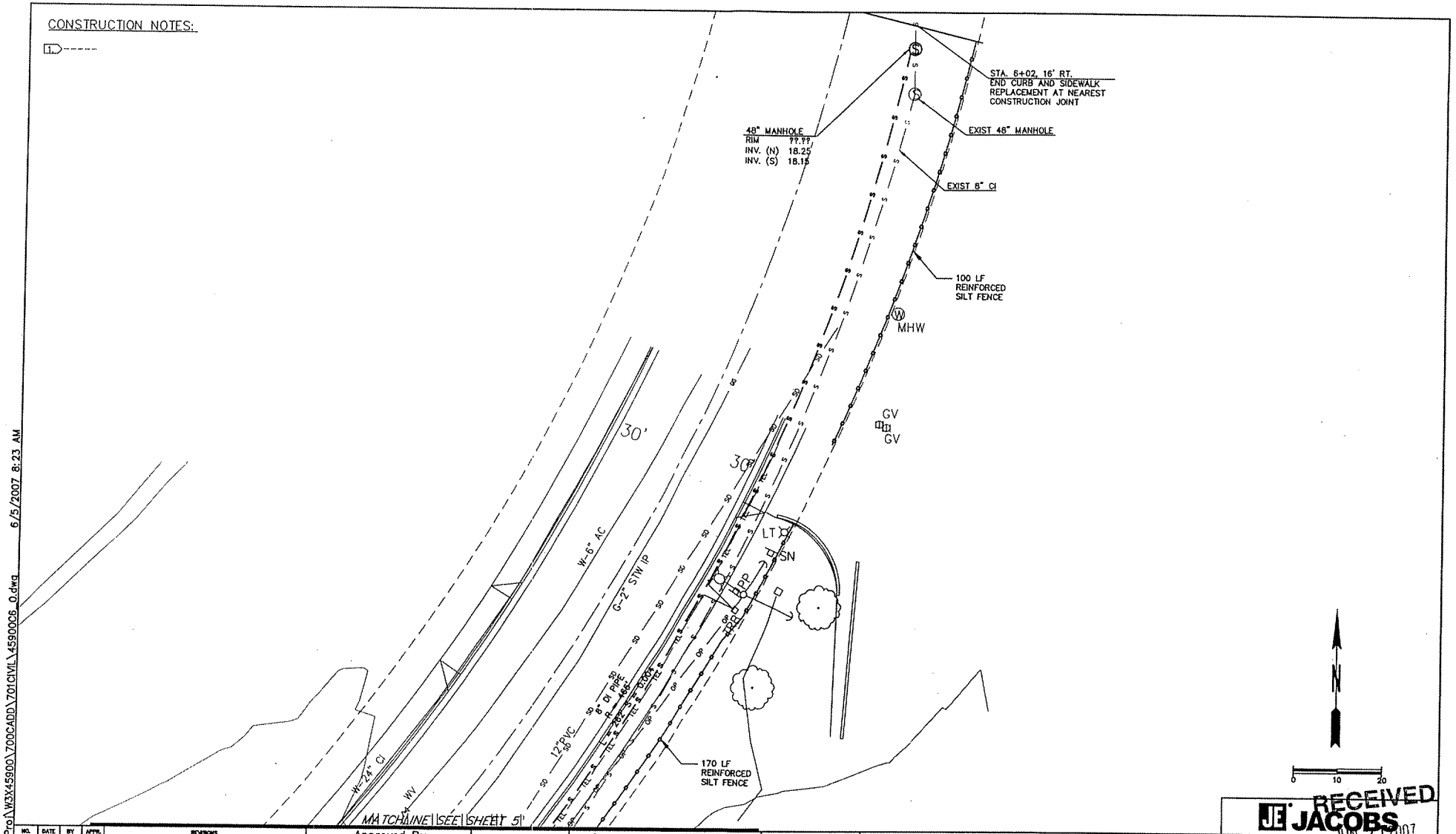

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UTILITIES DESIGN MANAGER DATE

PROJECT MANAGER DATE

DESIGNED BY	5/2007 DATE
DRAWN BY	5/2007 DATE
CHECKED BY	DATE

City of Bellevue
UTILITIES DEPARTMENT

PERMIT SET

MEYDENBAUER CREEK
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SEWER REPLACEMENT PLAN

SHEET 2

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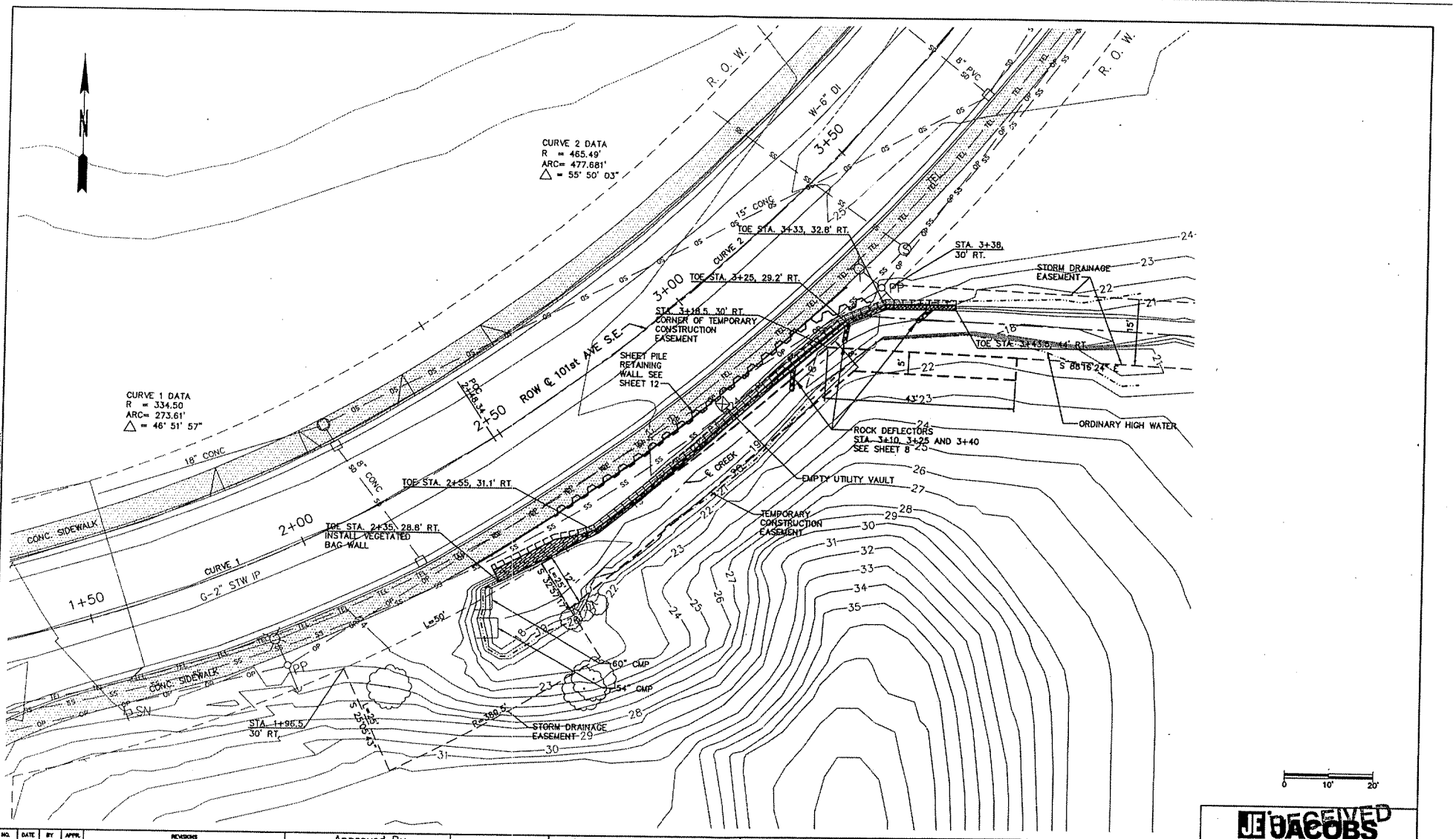

NO.	DATE	BY	APPR.	REVISIONS

Approved By

UTILITIES DESIGN MANAGER DATE

PROJECT MANAGER DATE

RFV DESIGNED BY 8/2007 DATE

RLP DRAWN BY 8/2007 DATE

CHECKED BY DATE

City of Bellevue

UTILITIES DEPARTMENT

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MEYDENBAUER CREEK SEWER REPLACEMENT AND BANK STABILIZATION PROJECT

JACOBS

STREAM BANK RECONSTRUCTION PLAN

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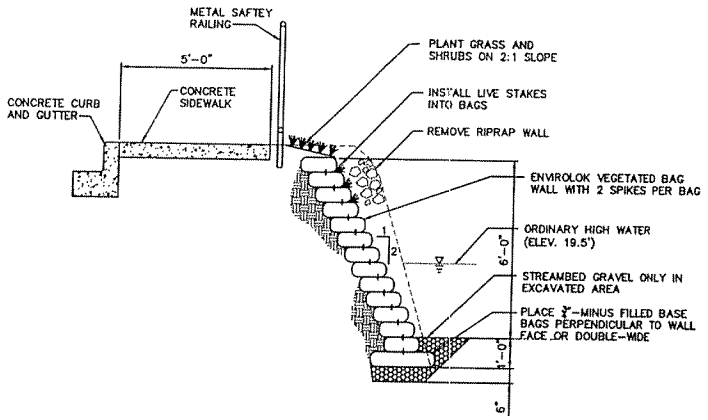
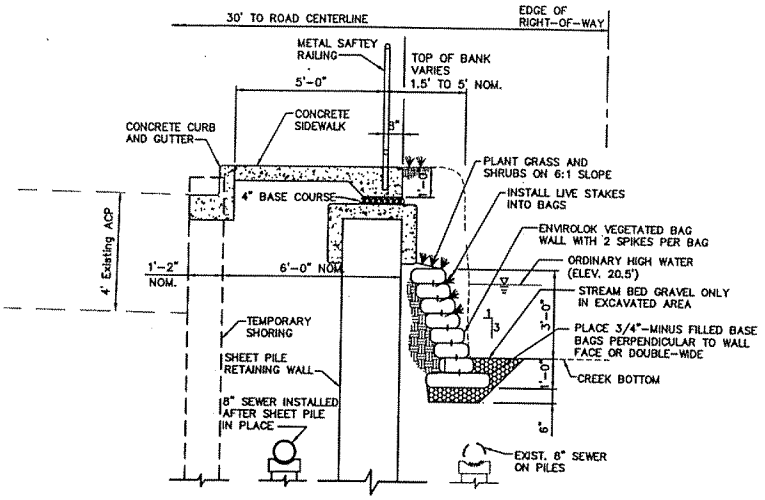


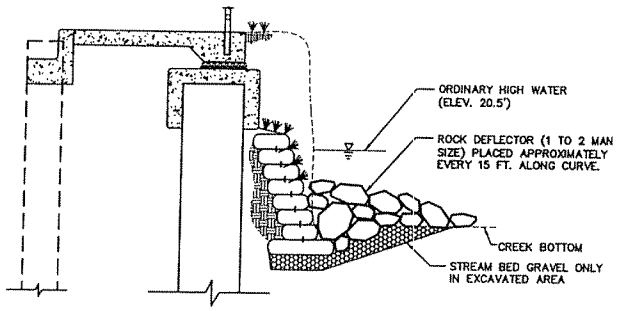
TYPICAL SECTION

STA. 2+35 TO 2+55
SCALE: N.T.S.



TYPICAL SECTION

STA. 2+55 TO 3+45
SCALE: N.T.S.



ROCK DEFLECTOR TYPICAL SECTION

STA. 3+10, 3+25 AND 3+40
SCALE: N.T.S.

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Approved By

UTILITIES DESIGN MANAGER DATE

PROJECT MANAGER DATE

DRN. 5/2007 CHECKED BY DATE

DES. 5/2007 DRAWN BY DATE

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TYPICAL SECTIONS

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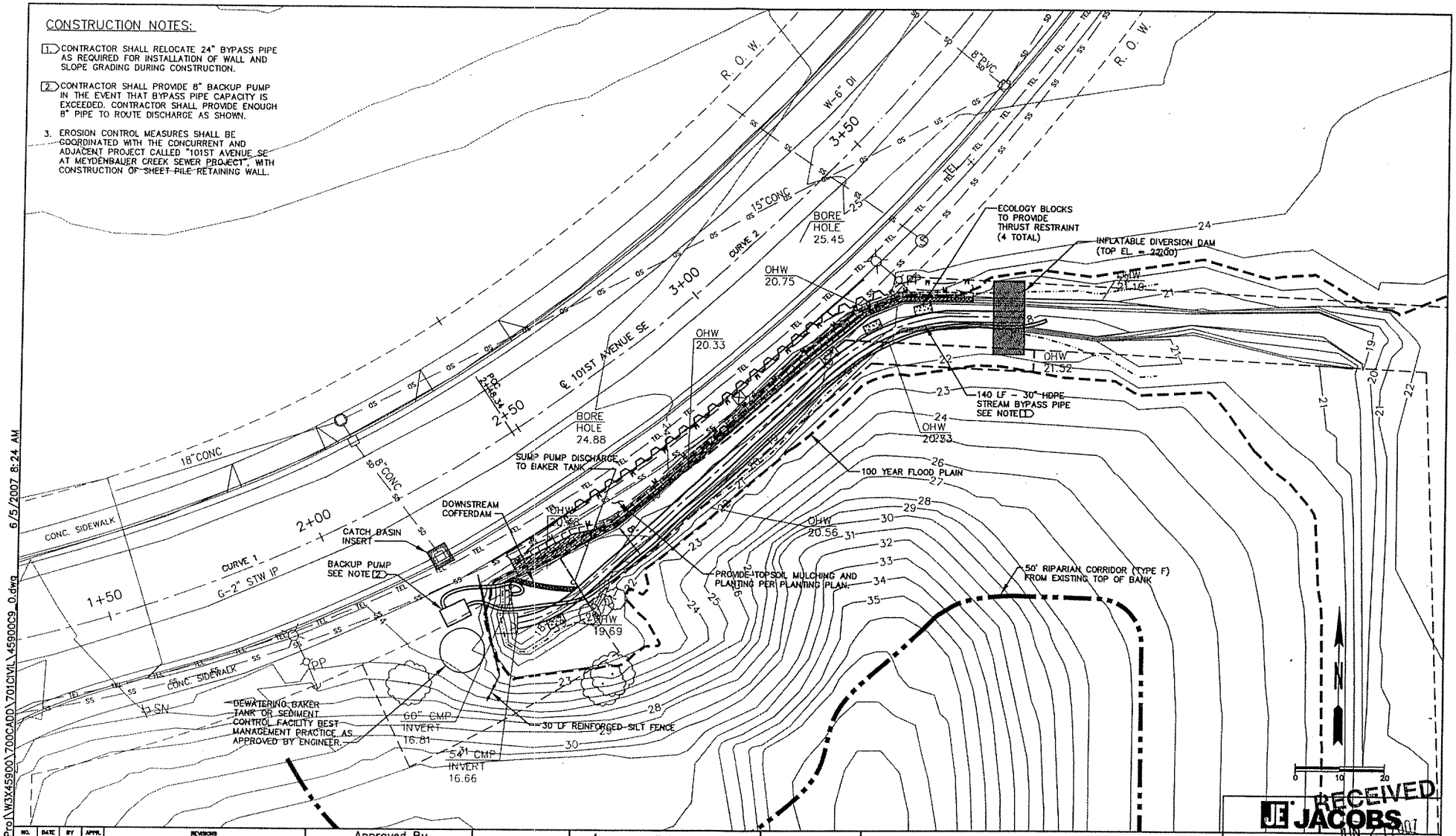
CONSTRUCTION NOTES:

1. CONTRACTOR SHALL RELOCATE 24" BYPASS PIPE AS REQUIRED FOR INSTALLATION OF WALL AND SLOPE GRADING DURING CONSTRUCTION.
2. CONTRACTOR SHALL PROVIDE 8" BACKUP PUMP IN THE EVENT THAT BYPASS PIPE CAPACITY IS EXCEEDED. CONTRACTOR SHALL PROVIDE ENOUGH 8" PIPE TO ROUTE DISCHARGE AS SHOWN.
3. EROSION CONTROL MEASURES SHALL BE COORDINATED WITH THE CONCURRENT AND ADJACENT PROJECT CALLED "101ST AVENUE SE AT MEYDENBAUER CREEK SEWER PROJECT", WITH CONSTRUCTION OF SHEET PILE RETAINING WALL.



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Approved By

UTILITIES DESIGN MANAGER DATE

PROJECT MANAGER DATE

RWM 8/2007 DESIGNED BY DATE

ENS 8/2007 DRAWN BY DATE

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City of Bellevue

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MEYDENBAUER CREEK SEWER REPLACEMENT AND BANK STABILIZATION PROJECT

JACOBS

EROSION CONTROL PLAN

SHT 9 OF 12

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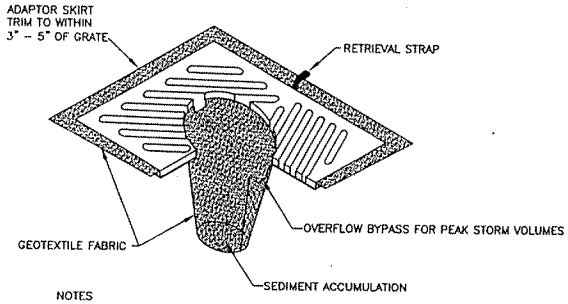
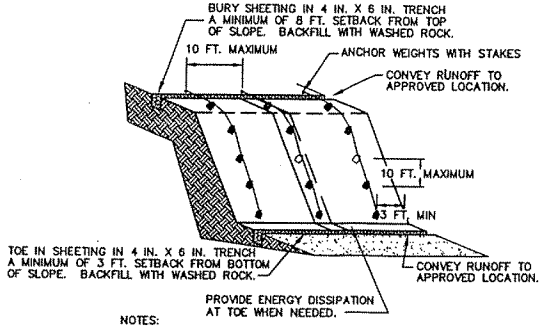


NOTES

1. INSERT SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
2. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES HALF FULL .
3. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INSERT, EMPTYING, AND RE–INSERTING IT INTO THE CATCH BASIN.

TYPICAL CATCH BASIN INSERT

DETAIL A
SCALE: NTS VAR

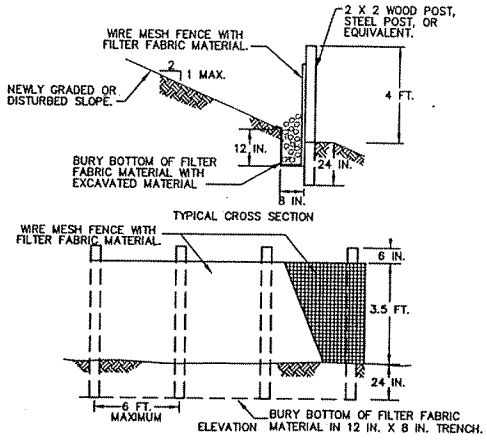


NOTES:

1. TIRES, SANDBAGS, OR EQUIVALENT MAY BE USED TO WEIGHT PLASTIC SHEETING.
2. SEAMS BETWEEN SHEETS MUST OVERLAP A MINIMUM OF 12 IN. AND BE WEIGHTED OR TAPED.
3. PLASTIC SHEETING SHALL HAVE A MINIMUM THICKNESS OF 6 MIL.
4. DUE TO RAPID RUNOFF CAUSED BY PLASTIC SHEETING, THIS METHOD SHALL NOT BE USED UPSLOPE OF AREAS THAT MIGHT BE ADVERSELY IMPACTED BY CONCENTRATED RUNOFF.
5. CONSTRUCT BERM OR SWALE AT TOP OF SLOPE AS DIRECTED BY THE CLEARING AND GRADING INSPECTOR.
6. CONSTRUCT DITCH AT BASE OF SLOPE AS REQUIRED BY CITY CLEARING AND GRADING INSPECTOR. DISCHARGE TO APPROVED LOCATION.

PLASTIC COVERING FOR SLOPE AND STOCKPILES

DETAIL B
SCALE: NTS VAR



NOTES:

1. FENCE SHALL NOT BE INSTALLED ON SLOPES STEEPER THAN 2 : 1.
2. JOINTS IN FILTER FABRIC SHALL BE OVERLAPPED 6 INCHES AT POST.
3. USE STAPLES, WIRE RINGS, OR EQUIVALENT TO ATTACH FABRIC TO WIRE FENCE.
4. REMOVE SEDIMENT WHEN IT REACHES 1/3 FENCE HEIGHT.
5. NO FILL WITHIN 4 FT. OF FENCE.

REINFORCED SILT FENCE

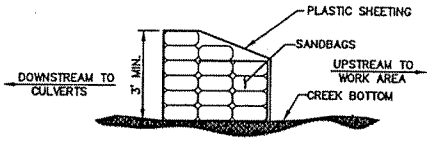
DETAIL C
SCALE: NTS VAR

CLEARING AND GRADING NOTES:

1. ALL CLEARING & GRADING CONSTRUCTION MUST BE IN ACCORDANCE WITH CITY OF BELLEVUE (COB) CLEARING & GRADING CODE, CLEARING & GRADING EROSION CONTROL STANDARD DETAILS, DEVELOPMENT STANDARDS, LAND USE CODE, UNIFORM BUILDING CODE, PERMIT CONDITIONS, AND ALL OTHER APPLICABLE CODES, ORDINANCES, AND STANDARDS. THE DESIGN ELEMENTS WITHIN THESE PLANS HAVE BEEN REVIEWED. VARIANCE FROM ADOPTED EROSION CONTROL STANDARDS IS NOT ALLOWED UNLESS SPECIFICALLY APPROVED BY THE CITY OF BELLEVUE DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT (PCD) PRIOR TO CONSTRUCTION.
2. IT SHALL BE THE RESPONSIBILITY OF KING COUNTY TO CORRECT ANY ERROR, OMISSION, OR VARIATION FROM THE ABOVE REQUIREMENTS FOUND IN THESE PLANS. ALL CORRECTIONS SHALL BE AT NO ADDITIONAL COST OR LIABILITY TO THE COB. ALL DETAILS FOR STRUCTURAL WALLS, ROCKERIES OVER FOUR FEET IN HEIGHT, GEOGRID REINFORCED ROCKERIES AND GEOGRID REINFORCED MODULAR BLOCK WALLS, SHALL BE STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF WASHINGTON.
3. A COPY OF THE APPROVED PLANS MUST BE ON–SITE DURING CONSTRUCTION. THE APPLICANT IS RESPONSIBLE FOR OBTAINING ANY OTHER REQUIRED OR RELATED PERMITS PRIOR TO BEGINNING CONSTRUCTION. ALL LOCATIONS OF EXISTING UTILITIES HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED ONLY APPROXIMATE AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS AND TO DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
4. THE AREA TO BE CLEARED AND GRADED SHALL BE FLAGGED BY THE CONTRACTOR AND APPROVED BY THE COB CLEARING AND GRADING INSPECTOR PRIOR TO BEGINNING ANY WORK ON THE SITE.
5. A SILT FENCE SHALL BE INSTALLED IN ACCORDANCE WITH DETAIL C AND SHALL BE LOCATED AS SHOWN ON THE APPROVED PLANS OR PER THE COB CLEARING AND GRADING INSPECTOR, ALONG SLOPE CONTOURS AND DOWN SLOPE FROM THE SITE.

CLEARING AND GRADING NOTES: CONT'D

6. CLEARING SHALL BE LIMITED TO THE AREAS WITHIN THE APPROVED DISTURBANCE LIMITS AS SHOWN ON THE CLEARING AND GRADING PERMIT. EXPOSED SOILS SHALL BE COVERED AT THE END OF EACH WORKING DAY WHEN WORKING FROM OCTOBER 1ST THROUGH APRIL 30TH. FROM MAY 1ST THROUGH SEPTEMBER AT THE END OF EACH CONSTRUCTION WEEK AND ALSO AT THE THREAT OF RAIN.
7. ANY EXCAVATED MATERIAL REMOVED FROM THE CONSTRUCTION SITE AND DEPOSITED ON PROPERTY WITHIN THE CITY LIMITS SHALL BE DONE IN COMPLIANCE WITH A VALID CLEARING & GRADING PERMIT. LOCATIONS FOR THE MOBILIZATION AREA AND STOCKPILED MATERIAL SHALL BE APPROVED BY THE COB CLEARING AND GRADING INSPECTOR AT LEAST 24 HOURS IN ADVANCE OF ANY STOCKPILING.
8. THE CONTRACTOR MUST MAINTAIN A SWEEPER ON SITE DURING EARTHWORK AND IMMEDIATELY REMOVE SOIL THAT HAS BEEN TRACKED ONTO PAVED AREAS AS RESULT OF CONSTRUCTION.
9. TO REDUCE THE POTENTIAL FOR EROSION OF EXPOSED SOILS, OR WHEN RAINY SEASON CONSTRUCTION IS PERMITTED, THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) ARE REQUIRED.
   PRESERVE NATURAL VEGETATION FOR AS LONG AS POSSIBLE OR AS REQUIRED BY THE COB CLEARING AND GRADING INSPECTOR.
   PROTECT EXPOSED SOIL USING PLASTIC, EROSION CONTROL BLANKETS, STRAW OR MULCH (COB GUIDE TO MULCH MATERIALS, RATES, AND USE CHART), OR AS DIRECTED BY THE COB CLEARING AND GRADING INSPECTOR.
   INSTALL CATCH BASIN INSERTS AS REQUIRED BY THE COB CLEARING AND GRADING INSPECTOR OR PERMIT CONDITIONS OF APPROVAL.
   INSTALL A TEMPORARY SEDIMENT POND, A SERIES OF SEDIMENTATION TANKS, TEMPORARY FILTER VAULTS, OR OTHER SEDIMENT CONTROL FACILITIES. INSTALLATION OF EXPOSED AGGREGATE SURFACES REQUIRES A SEPARATE EFFLUENT COLLECTION POND SITE.



DOWNSTREAM COFFERDAM

DETAIL D
SCALE: NTS VAR

NO.	DATE	BY	APPR.	REVISIONS

Approved By

UTILITIES DESIGN MANAGER DATE
PROJECT MANAGER DATE

DESIGNED BY DATE 5/2007
DRAWN BY DATE 5/2007
CHECKED BY DATE

City of Bellevue
UTILITIES DEPARTMENT

PERMIT SET

MEYDENBAUER CREEK
SEWER REPLACEMENT AND
BANK STABILIZATION PROJECT

JE JACOBS

RECEIVED
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EROSION CONTROL DETAILS

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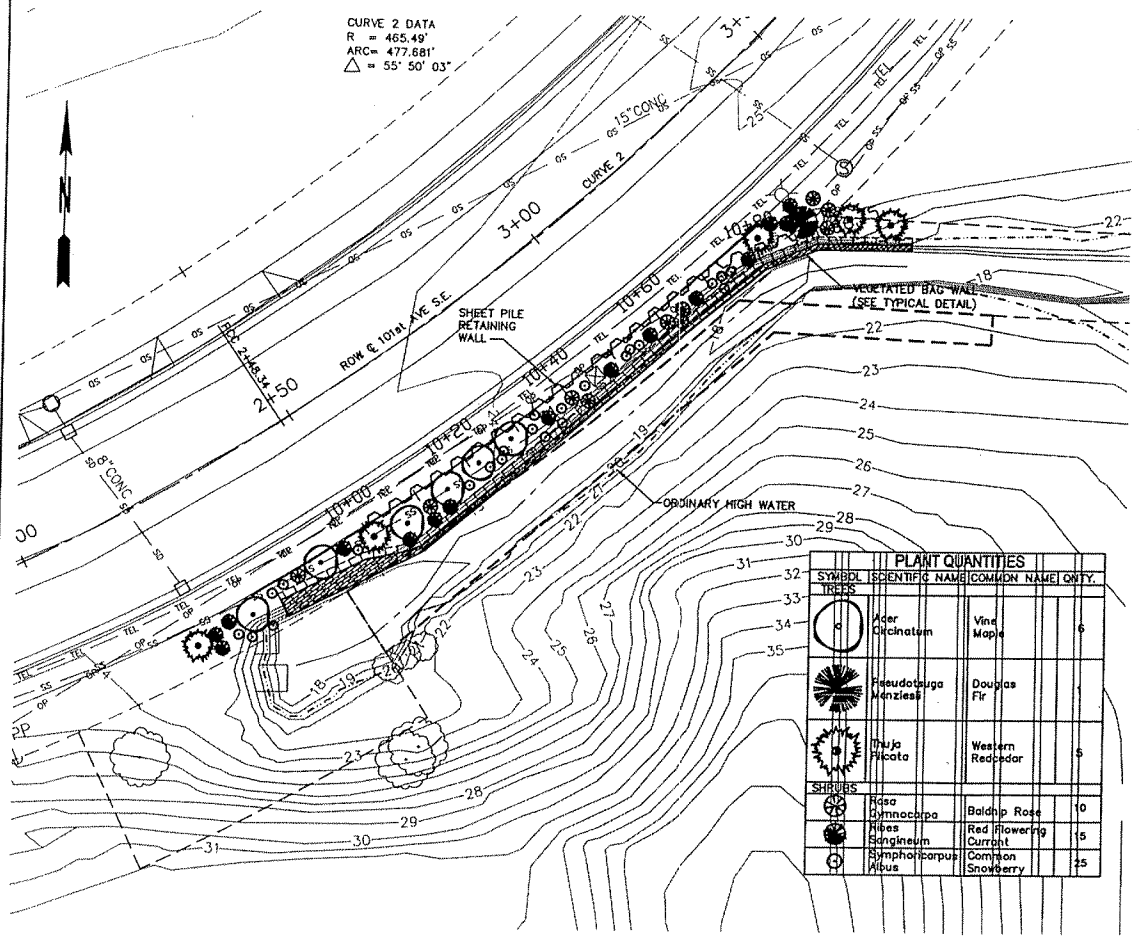
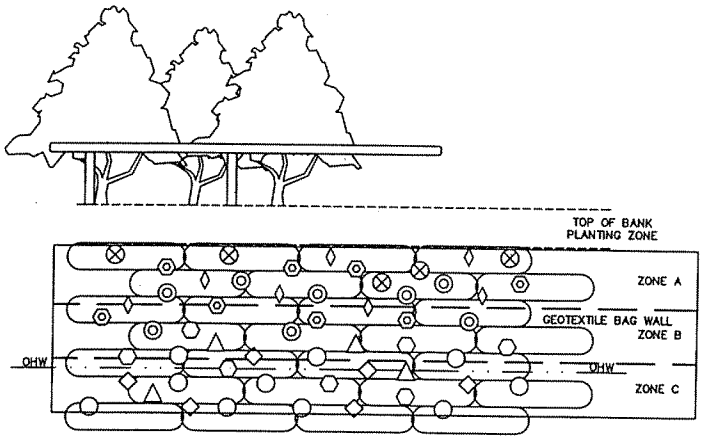


PLANT QUANTITIES					
SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	QNTY.	ZONE
○	Carex Obnupta/ Carex Deweyana	Slough Sedge/ Dewey's Sedge	5" POT	200/150	B–C
◇	Salix Sitchensis	Sitka Willow	3' LIVE STAKES	150	C
⬡	Cornus Sericea	Red–osier Dogwood	10" CONE	250	B–C
△	Deschampsia Caespitosa	Tufted Hairgrass	2" POT	100	B–C
◎	Petasites Frigidus/ Tolmiea Menziesii	Coltsfoot/Piggy –back Plant	BARE ROOT	100/75	A–B
⬡	Polystichum Munitum	Swordfern	4" POT	150	A–B
◇	Festuca Rubra	Native Red Fescue	4" POT	225	A–B
⊗	Symphoricarpus Alba	Snowberry	BARE ROOT	100	A



VEGETATED BAG WALL
TYPICAL ELEVATION

SCALE: N.T.S.

0 5' 10'
SCALE 1" = 10'

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PROJECT MANAGER DATE

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REP DRAWN BY 2/2007 DATE
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PLANTING PLAN AND DETAILS

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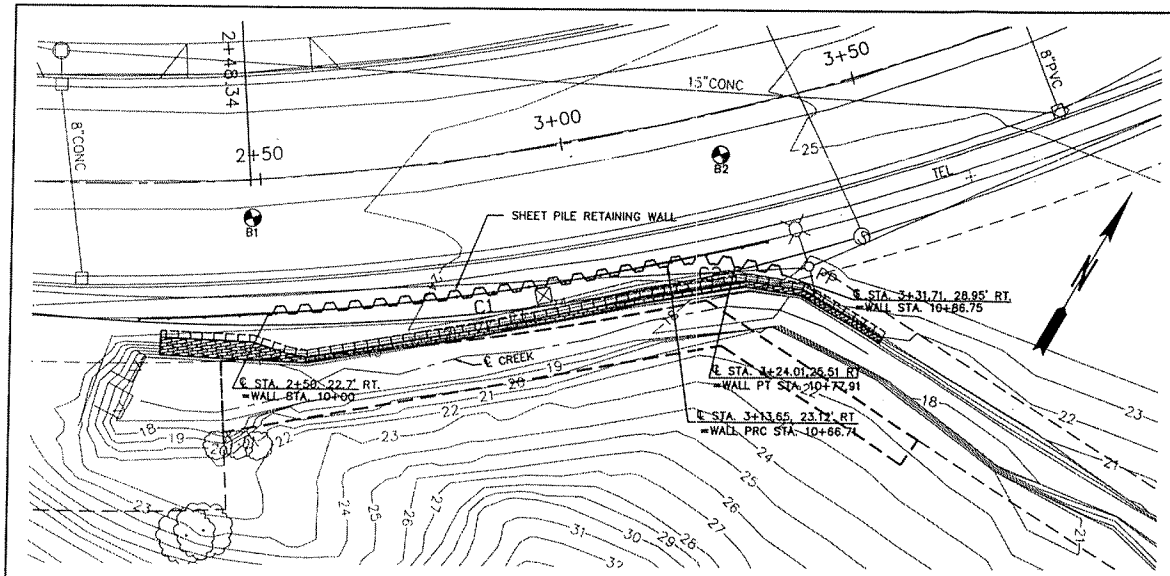
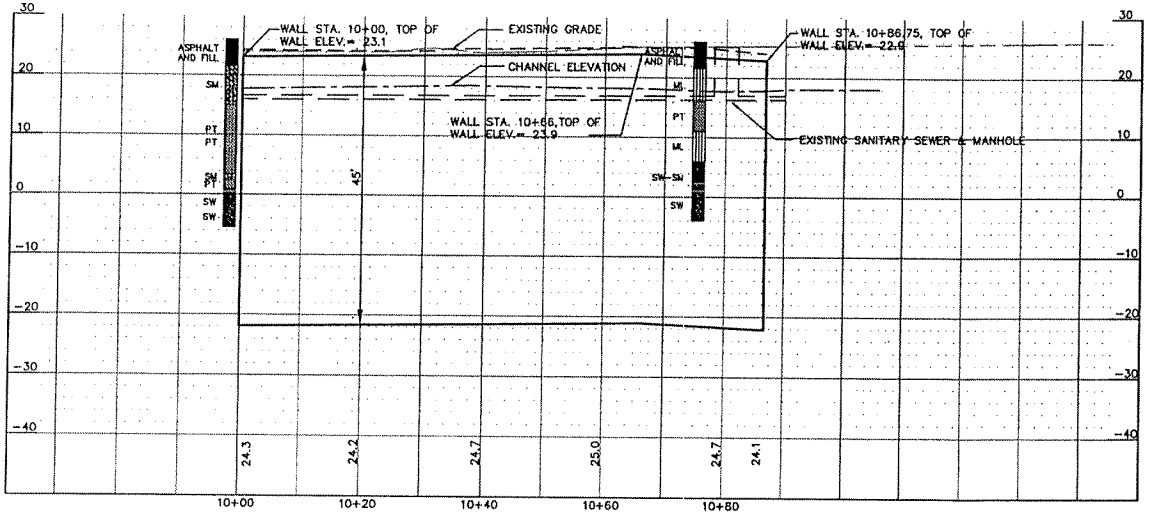
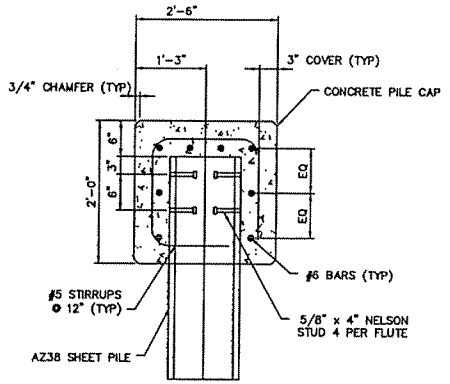




WALL CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	66.71	475.00	8°02'50"
C2	11.19	35.00	18°19'30"

NOTES:

SHEET PILE WALL SHALL BE AZ38 OR EQUIVALENT AND SHALL HAVE A MINIMUM SECTION MODULUS OF 70.3 INCHES CUBED / FOOT.



CONCRETE PILE CAP DETAIL

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SLP DRAWN BY 5/2007 DATE

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MEYDENBAUER CREEK
SEWER REPLACEMENT AND
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JACOBS

RETAINING WALL
PLAN AND PROFILE

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