

**Golder Associates Inc.**

18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052-3333  
Telephone (425) 883-0777  
Fax (425) 882-5498



**Norseland Site  
Port Orchard, Washington**

**As-Built Report**

**RECEIVED**

June 29, 2001

JUL 6 2001

PORT OF BREMERTON

prepared by

Golder Associates Inc.  
18300 N.E. Union Hill Rd. Ste. 200  
Redmond, Washington, 98052

This report consists of this cover sheet, compliance opinion (next sheet), and 11 record drawings, which also include the technical specifications for the project. This report is submitted to the following organizations:

1. Port of Bremerton  
8850 S.W. State Highway 3  
Port Orchard, Washington 98367
2. Washington State Department of Ecology  
3190 160<sup>th</sup> Ave. S.E.  
Bellevue, Washington 98008

Submitted in accordance with the requirements of WAC 173-340-400 7(b)(ii).

3. Kitsap County  
614 Division St.  
Port Orchard, Washington 98366

Submitted in accordance with Kitsap County requirements as contained in their letters SDAP 99-2015, dated May 26, 2000 and December 4, 2000.

# Norseland Site

## Compliance Opinion

June 29, 2001

Based on our review of the as-built drawings, testing results, and field inspections, we believe that the cleanup action at the Norseland Site in Port Orchard, Washington, has been constructed in substantial conformance with the Engineering Design Report (June 23, 2000), design drawings, technical specifications, and Cleanup Action Plan (May 17, 2000).

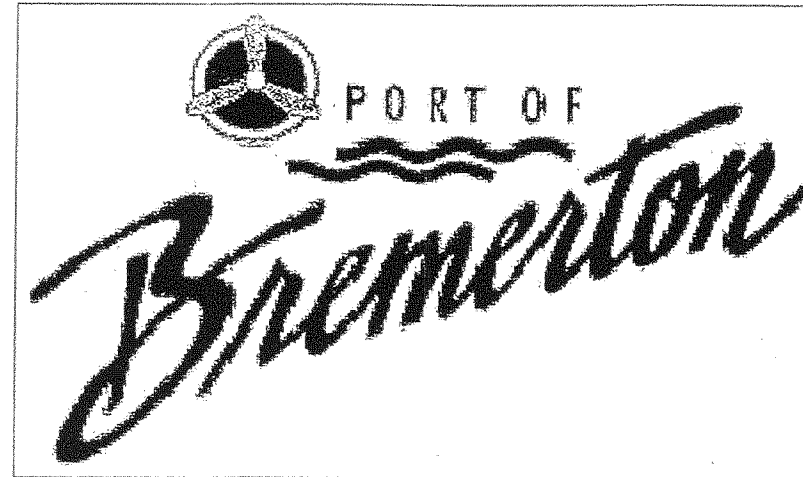
*Frank S. Shuri*

Frank S. Shuri, P.G., P.E.  
Project Engineer



*Douglas J. Morell*

Douglas J. Morell, Ph.D.  
Project Manager

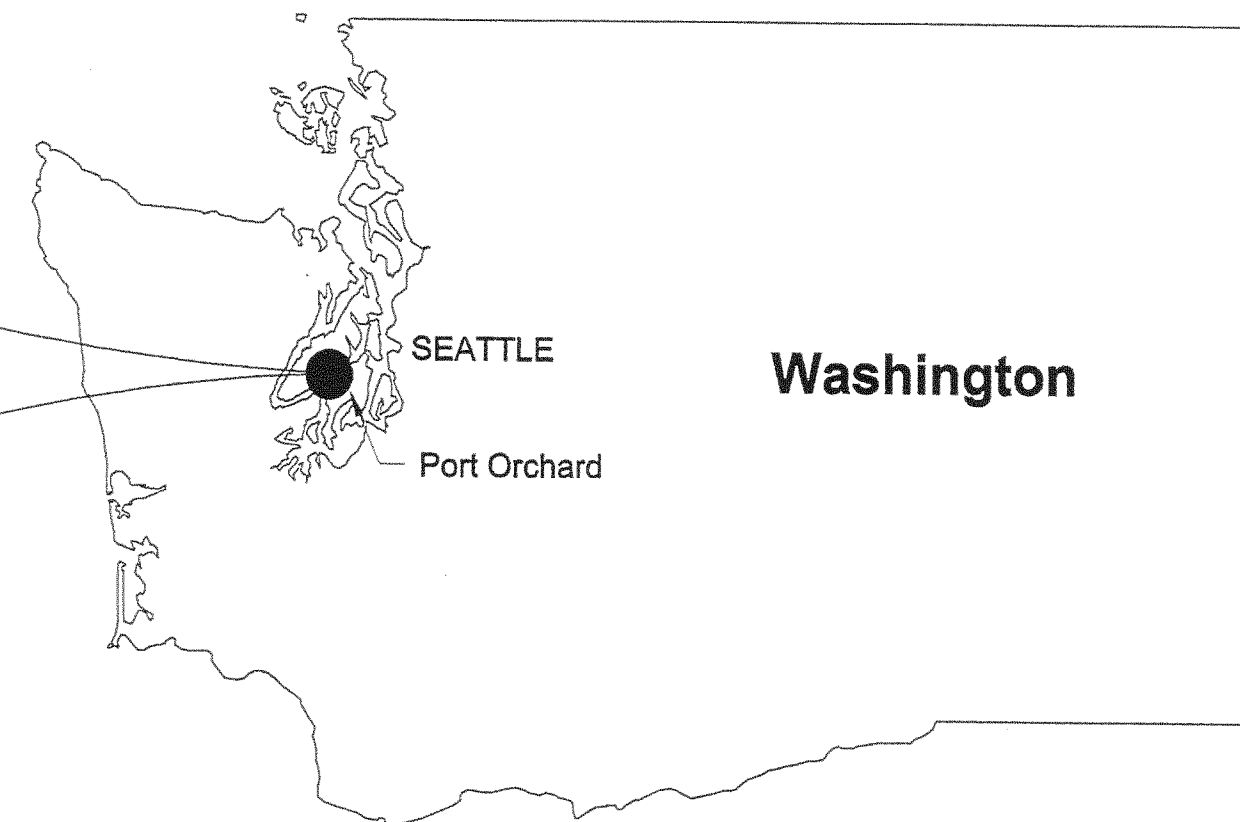
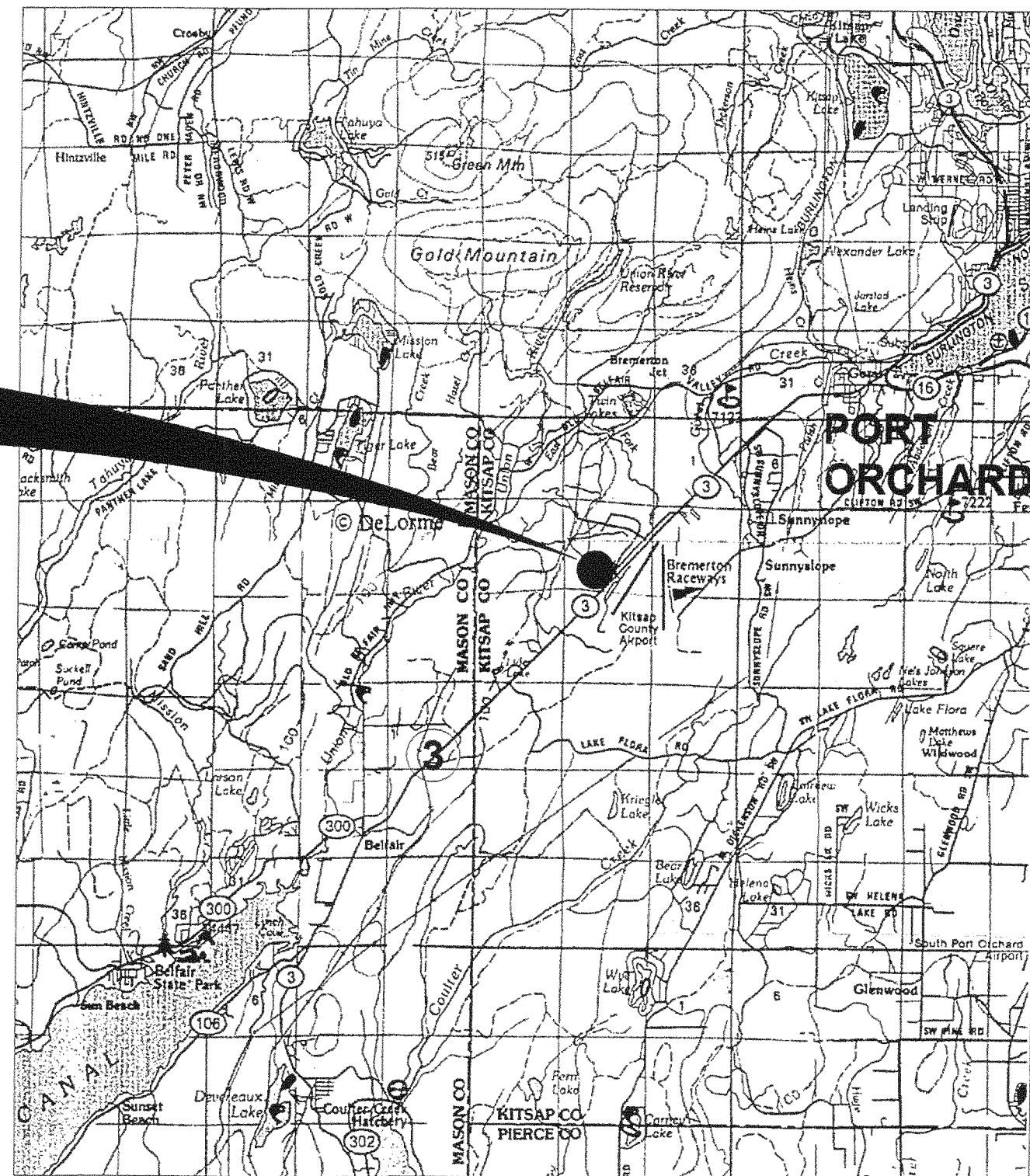


# PORT OF BREMERTON NORSELAND SITE

AS-BUILT DRAWINGS  
JUNE 15, 2001

## NORSELAND SITE 8651 State Highway 3 Port Orchard, WA

Those certain portions of the South half of Section 11, together with the Northwest quarter of Section 14, all in Township 23 North, Range 1 West, W. M., lying Northwestly of, adjacent to the right of way of, and measured at right angles to the center line of Primary State Highway No. 21 for a distance Northwestly of 1070 feet, and extending, along the Northwestly side of said State Highway from Highway Engineer's Station 221+00 to Highway Engineer's Station 240+00 containing 32.00 acres more or less. Highway Engineer's station and right of way mentioned in above description are identical with these shown on Sheet 7, Plan of Primary State Highway No. 21, Lost Lake to Gorst, bearing date of approval by State Highway Commission of July 9, 1957, and showing revision under date of November 21, 1961.



FILE NAME	SHEET NO.	SHEET TITLE
84003R1	1	COVER SHEET
84013R0	2	GENERAL NOTES*
84004R0	3	EXISTING TOPOGRAPHY*
84005R0	4	DEMOLITION*
84006R3	5	GRADING PLAN
84007R1	6	CROSS-SECTIONS
84011R2	7	SURFACE WATER FACILITIES PLAN
84009R2	8	SURFACE WATER FACILITIES DETAILS
84010R1	9	RAMP PROFILES
84008R0	10	EROSION AND SEDIMENT CONTROL PLAN*
84012R1	11	DETAILS

\* DRAWING UNAFFECTED BY CONSTRUCTION. AS-BUILT NOT APPLICABLE.

PROPERTY OWNER:  
Port of Bremerton

CONTACT:  
Richard Brandenburg  
Port of Bremerton  
8850 SW State Highway 3  
Port Orchard, WA 98367  
360.674.2381

PROJECT ENGINEER:  
Frank Shuri  
Golder Associates Inc.  
18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052  
425.883.0777

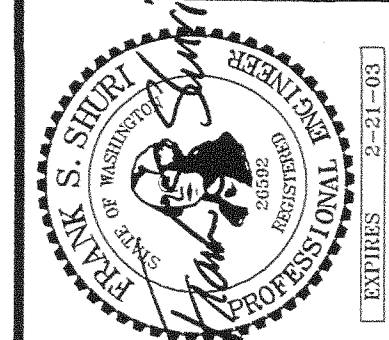
PORT OF BREMERTON - NORSELAND SITE

COVER SHEET

**Golder Associates**  
18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052-3333  
(425) 883-0777

Drawing No.	Description		Rev.	Date	Appd.	Chkd.	Drawn
	ISSUED FOR CONSTRUCTION	AS-BUILT					
1			0	5/31/00	FSS	CRS	JSS
11			1	6/15/01	DJM	CRS	FSS

RECORD DRAWING





Remap\K\Projects\19030331280\4060940130.dwg(E-23.0 1621\K-E-

GENERAL NOTES

1. All workmanship and materials shall conform to the MOST CURRENT Standard Specifications for Road, Bridge and Municipal Construction prepared by WSDOT and APWA as adopted by the Kitsap County Department of Public Works (KCDPW).
2. Any revisions to the accepted construction plans shall be reviewed and approved by the KCDPW prior to implementation in the field.
3. The contractor shall maintain a set of the accepted construction drawings on-site at all times while construction is in progress.
4. It shall be the responsibility of the contractor to obtain all necessary permits from the KCDPW prior to commencing any work within County right-of-way.
5. The contractor shall be responsible for providing adequate traffic control at all times during construction alongside or within all public roadways. Traffic flow on existing public roadways shall be maintained at all times, unless permission is obtained from the KCDPW for road closure and/or detours.
6. The locations of existing utilities on this plan is approximate only. The contractor shall contract the "Underground Locate" center at Ph: 1-800-424-5555, and non-subscribing individual utility companies 48 hours in advance of the commencement of any construction activity. The contractor shall provide for protection of existing from damage caused by the contractor's operations.
7. Rockeries or other retaining Facilities exceeding 4 ft. in height require a separate permit from the Kitsap County Building Department.
8. A "Forestry Practices" permit may be required prior to clearing of the site. Contact the Kitsap County Department of Community Development for further information.
9. Contractor shall be responsible for setting a minimum of two permanent bench mark control points on site using NGVD 29 and NAD reference.

DRAINAGE NOTES

1. The contractor shall ensure that the drainage is installed and operational prior to commencement of paving work.
2. All steel pipe and parts shall be galvanized. All submerged steel pipes and parts shall be galvanized and have asphalt treatment #1 or better.
3. Drainage stubouts on individual lots shall be located with a five foot high 2" x 4" stake marked "STORM". The stubout shall extend above surface level and be secured to the stake.

MINIMUM EROSION AND SEDIMENTATION CONTROL REQUIREMENTS

1. Stabilization and sediment trapping. All exposed and unworked soils, including soil stockpiles shall be stabilized by suitable application of BMPs which protect soil from the erosive forces of raindrop impact and flowing water. Applicable practices include, but are no limited to vegetative establishment, mulching, plastic covering, and the early application of gravel base on areas to be paved. From October 1 to April 30, no soils shall remain unstabilized for more than 2 days. From May 1 to September 30, no soils shall remain unstabilized for more than 7 days.
- At all times of the year, the Contractor shall have sufficient materials, equipment, and labor on-site to stabilize and prevent erosion from all denuded areas within 12-hours as site and weather conditions dictate.
- From October 1 to April 30, the Project Engineer shall visit the development site a minimum of once per week for the purpose of inspecting the erosion and sedimentation control facilities, reviewing the progress of construction, and verifying the effectiveness of the erosion control measures being undertaken. The Project Engineer shall immediately inform the Director of any problems or potential problems observed during said site visits, as well as of any recommended changes in the erosion control measures to be undertaken. When requested by the Director, the Project Engineer shall provide the Director with written records of said weekly site visits, including dates of visits and noted site observations.
- In the event that ground on a project site is left bare after September 30, the County may issue a Stop Work Order for the entire project until satisfactory controls are provided. In addition, the Owner will be subject to the penalties provided in Section 10 and Section 11 of the Kitsap County Stormwater Ordinance.
- In the event that ground on a project site is left bare after September 30, and the County is unsuccessful in contacting the Owner or his/her designated emergency contact person, the County may enter the project site and install temporary ground cover measures and bill the Owner for all expenses incurred by the County. These costs will be in addition to any monetary penalties levied against the Owner.
2. Delineation of clearing and easement limits. Clearing limits, setbacks, buffers, and sensitive or critical areas such as steep slopes, wetlands and riparian corridors shall be clearly marked in the field and inspected by Kitsap County Department of Community Development prior to commencement of land clearing activities.
  3. Protection of adjacent properties. Adjacent properties shall be protected from sediment deposition by appropriate use of vegetative buffer strips, sediment barriers of filters, dikes or mulching, or by a combination of these measures and other appropriate BMPs.
  4. Timing and stabilization of sediment trapping measures. Sediment ponds and traps, perimeter dikes, sediment barriers and other BMPs intended to trap sediment on-site shall be constructed as a first step in grading. These BMPs shall be functional before land disturbing activities take place. Earthen structures such as dam, dikes, and diversions shall be stabilized according to the timing indicated in item (1) above.
  5. Slope Stabilization. Cut and fill slopes shall be constructed in a manner that will minimize erosion. Roughened soil surfaces are preferred to smooth surfaces. Interceptors should be constructed at the top of long, steep slopes, which have significant areas above that contribute runoff. Concentrated runoff should not be allowed to flow down the face of a cut or fill slope unless contained within an adequate channel or pipe slope drain. Wherever a slope face crosses a water seepage place, adequate drainage or other protection should be provided. In addition, slopes should be stabilized in accordance with item (1) above.
  6. Controlling off-site erosion. Properties and waterways downstream from development sites shall be protected from erosion due to increases in the volume, velocity, and peak flow rate of stormwater runoff from the development site by the implementation of appropriate BMPs to minimize adverse downstream impacts.

7. Stabilization of temporary conveyance channels and outlets. All temporary on-site conveyance channels shall be desgned, constructed and stabilized to prevent erosion from the expected flow velocity from a 2-year frequency, 24-hour duration storm for the post-development condition. Stabilization adequate to prevent erosen of outlets, adjacent streambanks, slopes and downstream reaches shall be provided at the outlets of all conveyance systems.
  8. Storm drain inlet protection. All storm drain inlets made operable during construction shall be protected so that stormwater runoff shall not enter the conveyance system without first being filtered or otherwise treated to remove sediment. After proper written application, the requirement for inlet protection may be waived by the Director on a site-specific basis when the conveyance system downstream of the inlet discharges to an appropriate sediment containment BMP and the conveyance system can be adequately cleaned following site stabilization.
  9. Underground utility construction. The construction of underground utility lines shall be limited, where feasible, to no more than 500 feet of open trench at any one time. Where consistent with safety and space considerations, excavated material shall be placed on the uphill side of the trench. Dewatering devices shall discharge to an appropriate sediment trap or pond, preceded by adequate energy dissipation, prior to runoff leaving the site.
  10. Constructed access routes. Wherever construction vehicle access rotes intersect paved roads, provisions must be made to minimize the transport of sediment (mud) onto the paved road by the use of appropriate BMPs such as a Stabilized construction Entrance. If sediment is transported onto a road surface, the roads shall be cleaned thoroughly, as a minimum, at the end of each day. Sediment shall be removed from roads by shoveling or sweeping and be transported to a controlled sediment disposal area. Street washing shall be allowed only after sediment is removed in this manner.
  11. Removal of temporary BMPs. All temporary erosion and sediment control BMPs shall be removed within 30 days after final site stabilization is achieved or after the temporary BMPs are no longer needed. Trapped sediment shall be removed or stabilized on-site. Disturbed soil areas resulting from removal of temporary BMPs shall be permanently stabilized. The removal of temporary erosion and sediment control BMPs may not be required for those projects, such as single family plats, that will be followed by additional construction under a different permit. In these circumstances, the need for removing or retaining the measures will be evaluated on a site-specific basis.
  12. Dewatering construction sites. Dewater devices shall discharge into an appropriate sediment trap or pond, designed to accept such a discharge, preceded by adequate energy dissipation, prior to runoff leaving the site.
  13. Control of pollutants other than sediment on construction sites. All pollutants other than sediment that occur on-site during construction shall be handled and legally disposed of in a manner that does not cause contamination of storm or surface waters. Pollutants of concern include, but are not limited too, fuels, lubricants, solvents, concrete by-products and construction materials.
  14. Maintenance. All temporary and permanent erosion and sediment control BMPs shall be maintained and repaired as needed to assure continued performance of their intended function. All maintenance and repair shall be conducted in accordance with the Manual. The Applicant shall be responsible for assuring that any such facilities damaged during floods, storms, or other adverse weather conditions are immediately returned to normal operating condition.
  15. Financial liability. A performance covenant or performance surety, shall be required for all projects to ensure compliance with the approved erosion and sediment control plan, as outlined in Section 4.0 of the Kitsap County Stormwater Ordinance.
- CONTROL STRUCTURE NOTES
1. Except as shown or noted, units shall be constructed in accordance with the requirements for Catch Basin Type 2, 60" minimum diameter, unless otherwise noted.
  2. For details showing Grade Ring, Ladder, Steps, Handholds, and Top Slabs, see Standard Plan "Miscellaneous Catch Basin Details."
  3. Pipe supports and restrictor/separator shall be of the same material, and be anchored at 3 ft max spacing by 5/8" dia stainless steel expansion bolts or embedded 2" in wall.
  4. The restrictor/separator shall be fabricated from 0.05" aluminum or 0.054" aluminized steel or pipes in accordance with AASHTO M 36, M 196, M 197, and M 274.
  5. Outlet shall be connected to culvert or sewer pipe with a standard coupling band for corrugated metal pipe, or grouted into the bell of the concrete pipe.
  6. Frame and ladder or steps are to be offset so that:
    - \* Cleanout gate is visible from top.
    - \* Clint-down space is clear of the riser and gate.
    - \* Frame is clear of curb (if any exists).
  7. Restrictor plate with orifice as specified in the contract plans. Specified opening is to be cut round and smooth.
  8. Cleanout/Shear gate:
    - \* Aluminum alloy per ASTM B-26-26-32e or east iron ASTM A4D Class 308 as required.
    - \* Lift Handle either solid or tubing with adjustable hook as required.
    - \* Neoprene rubber gasket required between riser mounting flange and gate flange.
    - \* Mating surfaces of lid and body to be machined for proper fit.
    - \* Flange mounting belts shall be 3/8" dia stainless steel.
  9. Alternative cleanout/shear gates to the design shown are acceptable, provided that they meet the material specifications above and have a six bolt, 10 3/8" belt circle for bolting to the flange connection.
  10. Gate shall not open beyond the clear opening as shown, by limited hinge movement, stop tabs, or some other devices.

GRADING NOTES

1. The contractor shall notify the engineer in the event or discovery of poor soils, groundwater or discrepancies in the existing conditions as noted on the plans.
2. Maximum slope steepness shall be 2:1 Horizontal:Vertical for cut and fill slopes.
3. Unless otherwise specified, all embankments in the Plan Set shall be constructed in accordance with Section 2-03.3(14)B of the WSDOT Standard Specifications. Embankment compactions shall conform to Section 2-03.3(14)C, Method B of said Standard Specifications.
4. Embankments designed to impound water shall be compacted to 95% maximum density per section 2-03.3(14)C, Method C of WSDOT Standard Specifications.
5. All areas receiving fill material shall be prepared by removing vegetation, non-complying fill, vegetative soil and other unsuitable material, by scarifying the surface to provide a bond with the new fill, and where slopes are steeper than 3 horizontal to 1 vertical and the height is greater than 5 ft., by benching into sound competent material as determined by a soils engineer.

GENERAL EROSION AND SEDIMENTATION CONTROL NOTES

- The following erosion and sedimentation control notes apply to all construction site activities at all times, unless otherwise specified on these plans:
1. Approval of this erosion and sedimentation control plan does not constitute an acceptance of the permanent road or drainage design.
  2. The owner and his/her contractor shall be responsible at all times for preventing silt-laden runoff from discharging from the project site. Failure by the owner and/or contractor can result in a fine. The designated temporary contact person noted on this plan must be available for contact by telephone on a 24 hour basis throughout construction and until the project has been completed and accepted by the county.
  3. The implementation of these ESC plans and the construction, maintenance, replacement and upgrading of these facilities is the responsibility of the owner and/or contractor from the beginning of construction until all construction is completed and accepted by the county and the site is stabilized.
  4. Prior to beginning any work on the project site, a preconstruction conference must be held, and shall be attended by the general contractor, the project engineer, representatives from affected utilities, and a representative of Kitsap County.
  5. The erosion and sedimentation control facilities shown on this plan are to be considered adequate basic requirements for the anticipated site conditions. During construction, deviations from this plan may be necessary in order to maintain water quality. Minor departures from this plan are permitted subject to the approval of the county inspector. However, except for emergency situations, all other deviations from this plan must be designed by the project engineer and approved by Kitsap County prior to installation.
  6. All erosion and sedimentation control measures shall be inspected by the owner and/or contractor on a frequent basis and immediately after each rainfall, and maintained as necessary to insure their continued functioning. All sediment must be removed from silt fences, straw bales, sediment ponds, etc. prior to the sediment reaching 1/2 its maximum potential depth.
  7. At no time shall concrete, concrete by-products, vehicle fluids, paint, chemicals, or other polluting matter be permitted to discharge to the temporary or permanent drainage system, or to discharge from the project site.
  8. Permanent detention/retention ponds, pipes, tanks or vaults may only be used for sediment containment when specifically indicated on these plans.

SURFACE WATER FACILITIES NOTES

1. Place two fixed bollards and two removable bollards at the top of the pond access road, per Kitsap County Stormwater Management Manual, as shown on plan view.
2. Riprap shall be 6" median diameter, with a minimum stone size of 2" and a maximum stone size of 8". Riprap shall consist of broken stone free of rock fines, soil or other extraneous material. Stone shall be free of segregation, seams, cracks, and other defects tending to degrade its resistance to weather. Stone shall meet the following requirements:

Degradation Factor:	15 minimum
Los Angeles Wear, 500 rev.	50% maximum
Specific Gravity	2.55 maximum

CONSTRUCTION SEQUENCE

1. Attend preconstruction meeting with the Port of Bremerton, the Engineer, and a representative of Kitsap County.
2. Construct stabilized construction entrance(s).
3. Construct filter fence barriers.
4. Construct pond access road and sediment pond.
5. Construct runoff interception and diversion ditches.
6. Clear and grade the minimum site area required for construction of the various phases of work.
7. Provide temporary hydroseeding or other source control stabilization measures on all disturbed soils.
8. Maintain all erosion and sedimentation control facilities to provide the required protection of downstream water quality.
9. Provide permanent surface water control features and provide permanent site stabilization.
10. Erosion and sedimentation control facilities shall not be removed until construction is complete, the site is stabilized, and the work has been approved by Kitsap County. Once approved by Kitsap County, the Contractor shall be responsible for removing temporary erosion and sedimentation control facilities and converting the pond outlet works from temporary to permanent.

PORT OF BREMERTON - NORSELAND SITE  
GENERAL NOTES



Drawing No.	2	11	Description	Rev.	Date	Appd.	Chkd.	Drawn	ISS	CRS	FSS	5/51/00	0	ISSUED FOR CONSTRUCTION

PORT OF BREMERTON - NORSELAND SITE

18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052-3333  
(425) 883-0777

RECORD DRAWING

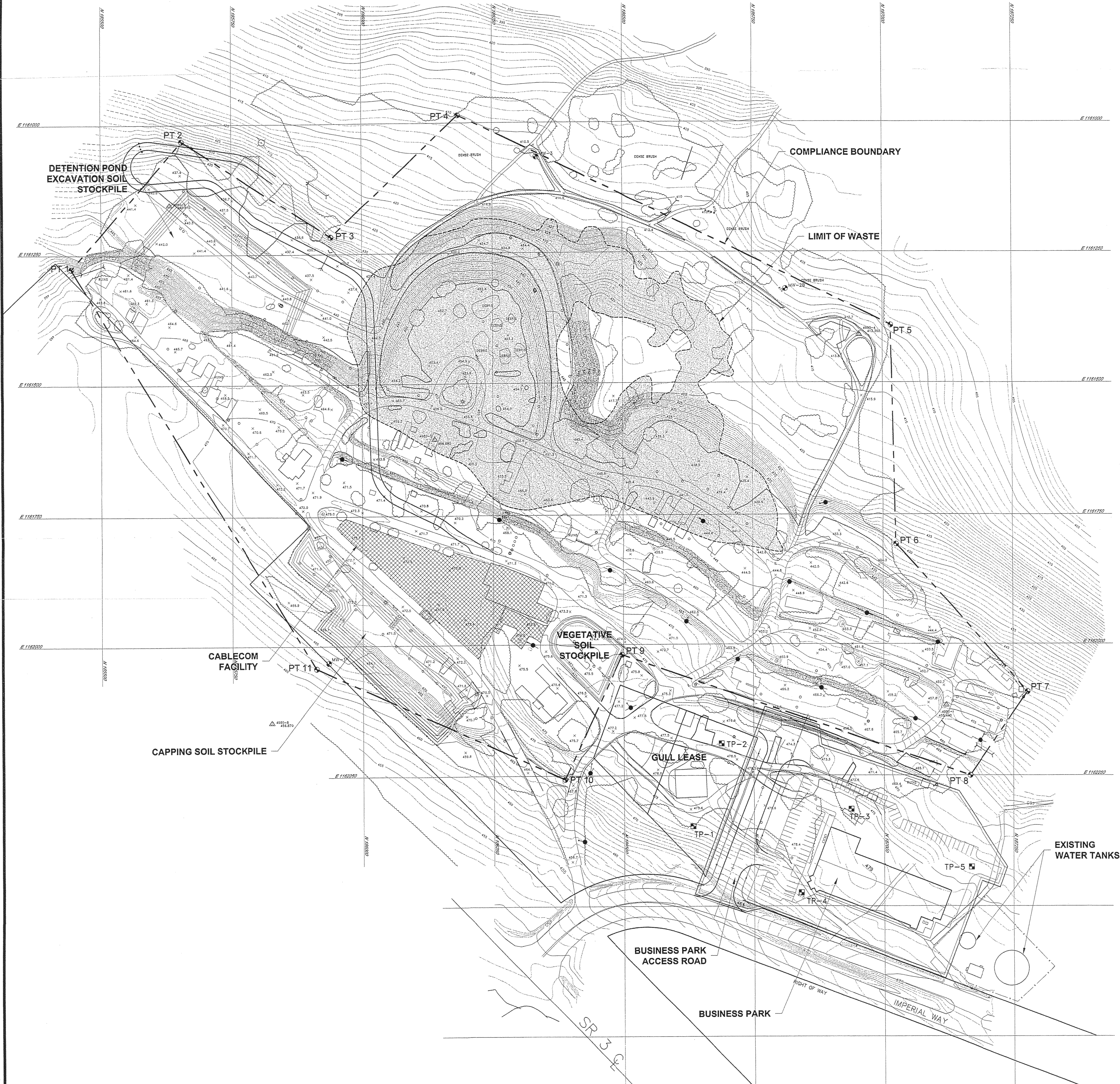
2-21-08

PROFESSIONAL ENGINEER

18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052-3333  
(425) 883-0777



\\remork\K:\Projects\1993\3331280\060\040\040.dwg;E-24-0 9-21c\XBASE\



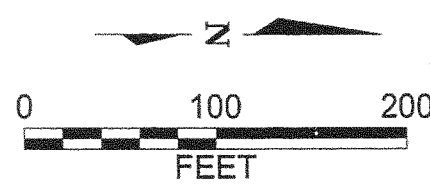
LEGEND:

- △ 4352-1  
435.442 PHOTO CONTROL POINTS
- 455.5 SPOT ELEVATION
- 440 EXISTING CONTOUR - 5 FT
- EXISTING CONTOUR - 1 FT
- EDGE OF TREES / BRUSH
- WASTE
- SLOPES STEEPER THAN 2H:1V
- MW-1 EXISTING MONITORING WELL
- POWER POLE
- LIGHT
- POST
- TP-3 TESTPIT

NOTES:

1) COMPLIANCE AREA = 31.6 ACRES.

COMPLIANCE AREA BOUNDARY COORDINATES		
POINT	NORTHING	EASTING
PT 1	185442.81	1161276.44
PT 2	185654.59	1161031.88
PT 3	185940.45	1161216.57
PT 4	186184.30	1160984.91
PT 5	187016.30	1161389.77
PT 6	187025.08	1161807.58
PT 7	187277.08	1162090.91
PT 8	187165.71	1162250.00
PT 9	186497.20	1162019.62
PT 10	186386.20	1162256.77
PT 11	185911.14	1162042.64



CONTOUR INTERVAL: 1 FOOT  
ELEVATION REFERENCE: NGVD 29  
HORIZONTAL GRID REFERENCE: NAD 83

MAPPING BY: WALKER AND ASSOCIATES  
SURVEY CONTROL BY: N.L. OLSON & ASSOCIATES

This mapping was compiled using photogrammetric methods and meets National Map Accuracy Standards for a scale of 1"=50' from photography dated: 20FEB99.

The presence of dashed contours indicate that the ground is obscured by buildings, vegetation or shadows and does not meet National Map Accuracy Standards. Additional field surveys may be required.

PORT OF BREMERTON - NORSELAND SITE



Description

ISSUED FOR CONSTRUCTION

Rev.

0

Date

5/31/00

Appd.

FSS

Drawn

JSS

CRS

EXTENDS

2-21-00

Drawing No.

3

11

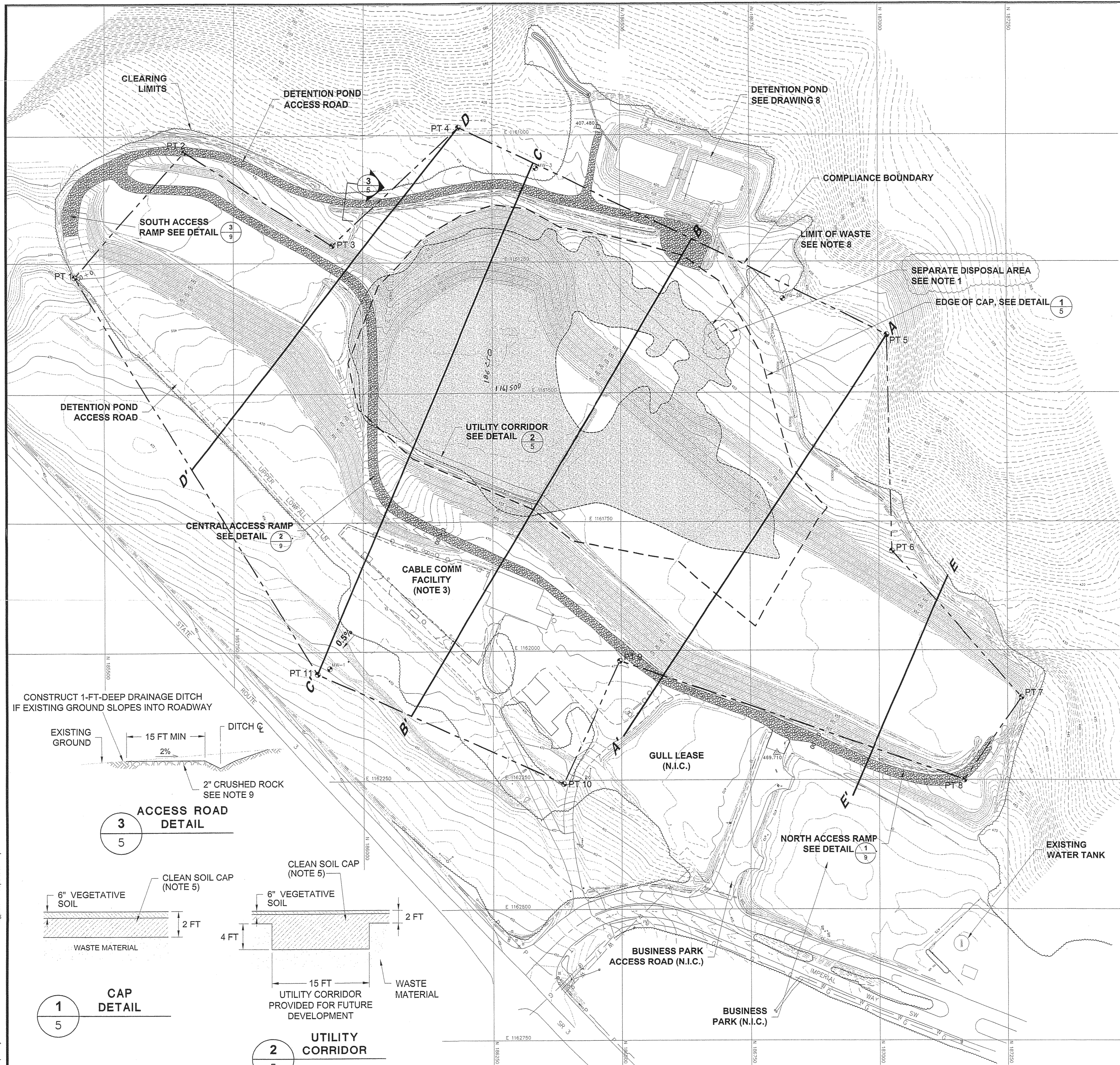
RECORD DRAWING







amadeo\jk\Projects\1993\31280\6050 - As Built\604063.dwg(6-26-17 7:50)C:\Users\abj\...



**LEGEND:**

- SURVEY BENCHMARK / ELEVATION
- FINAL CONTOUR - 5 FT
- FINAL CONTOUR - 1 FT
- EDGE OF TREES / BRUSH / CLEARING LIMITS (NOTE 3)
- WASTE
- A—A' CROSS-SECTION LOCATION

- NOTES:**
- LIMITS OF CAP AND FINAL CONTOURS ARE AS-BUILT. SEPARATE DISPOSAL AREA IS FOR SOIL WITH RADIATION LEVELS HIGHER THAN BACKGROUND.
  - ESTIMATED CONSTRUCTION MATERIALS QUANTITIES:  
CUT/FILL BALANCE- SOIL: 65,500 CY  
EXCAVATION - WASTE: 20,500 CY  
SOIL COVER: 25,600 CY  
RIP RAP: 100 TONS  
VEGETATIVE SOIL: 15,700 CY
  - CLEARLY MARK CLEARING LIMITS PRIOR TO START OF WORK. PROTECT INDICATED FACILITIES AND ALL BUILDING FENCES, UTILITIES, DRAINAGE DITCHES, AND OTHER FACILITIES OUTSIDE OF LIMITS OF CLEARING.
  - ROADWAYS SHALL PROVIDE ADEQUATE SUPPORT FOR CONSTRUCTION EQUIPMENT DURING ALL TYPES OF WEATHER. SURFACE WITH CRUSHED ROCK IF NECESSARY.
  - GENERAL FILL AND SOIL CAP  

A. OBTAIN FILL AND SOIL CAP MATERIALS FROM EXISTING STOCKPILES OR ALTERNATIVE SOURCES APPROVED BY THE ENGINEER. PROCESS SOILS AS REQUIRED TO MEET THE REQUIREMENTS OF THIS SECTION.

B. FILL AND SOIL CAP MATERIALS SHALL CONSIST OF CLEAN, GRANULAR SOILS FREE OF ROOTS, ICE, FROZEN MATERIAL, RUBBISH, OR ANY OTHER DELETERIOUS MATERIAL. MAXIMUM PARTICLE SIZE SHALL BE 12 INCHES. K > 10-6 CM/SEC.

C. PREPARE SUBGRADE IN ACCORDANCE WITH SPECIFICATIONS RELATED TO DEMOLITION. COMPACT SUBGRADE TO ACHIEVE A FIRM, UNYIELDING SURFACE. MOISTURE CONDITION AS REQUIRED TO ACHIEVE COMPACTION.

D. PLACE SOILS IN LOOSE LIFTS NOT EXCEEDING 12 INCHES IN THICKNESS. COMPACT TO AT LEAST 92% OF MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D1557). MOISTURE CONDITION AS NECESSARY TO ACHIEVE COMPACTION.

E. DO NOT PLACE SOILS DURING FREEZING WEATHER UNLESS APPROVED IN WRITING BY THE ENGINEER.
  - VEGETATIVE SOIL  

A. OBTAIN VEGETATIVE SOIL FROM EXISTING STOCKPILES OR ALTERNATIVE SOURCES APPROVED BY THE ENGINEER. PROCESS SOILS AS REQUIRED TO MEET THE REQUIREMENTS OF THIS SECTION.

B. VEGETATIVE SOIL SHALL CONSIST OF CLEAN, ORGANIC SOIL FREE OF ICE, FROZEN MATERIAL, RUBBISH, OR ANY OTHER DELETERIOUS MATERIAL.

C. PLACE VEGETATIVE SOIL IN A SINGLE LIFT TO A MINIMUM THICKNESS OF 3" OVER ALL DISTURBED AREAS, EXCEPT IN AREA OF CLEAN FILL CAP WHICH REQUIRES 6 INCHES. COMPACT BY TRACKWALKING UP AND DOWN THE SLOPE.
  - DUST CONTROL: THE CONTRACTOR SHALL CONTROL DUST AT ALL TIMES DURING CONSTRUCTION SO THAT NO VISIBLE DUST IS PRESENT. WATER SHALL BE USED FOR DUST CONTROL. DUST SUPPRESSANTS OR OTHER PRODUCTS SHALL NOT BE USED WITHOUT WRITTEN APPROVAL BY THE OWNER.
  - WASTE REMOVAL AREA OUTSIDE CAPPING AREA SHALL BE MONITORED DURING REMOVAL TO VERIFY ALL WASTE IS REMOVED AND THAT ONLY CLEAN MATERIAL IS LEFT IN PLACE.
  - PROVIDE 15 FT. WIDE ACCESS ROAD TO POND. REMOVE ALL UNSUITABLE MATERIAL. PROVIDE A MINIMUM 6-INCH SUBGRADE COMPACTED TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY MODIFIED PROCTOR (ASTM D1557), OR CLEAR TO ACCEPTABLE IN SITU MATERIAL AS DETERMINED BY THE PORT OF BREMERTON AND THE COUNTY REPRESENTATIVE. PROVIDE 2" CRUSHED ROCK SURFACE.
  - CLEARING AREA = APPROX. 27 ACRES.

MAPPING BY: WALKER AND ASSOCIATES  
SURVEY CONTROL BY: N.L. OLSON & ASSOCIATES

This mapping was compiled using photogrammetric methods and meets National Standards for Spatial Data Accuracy (NSSDA) for a scale of 1"=50' from photography dated: 07FEB01.

The presence of dashed contours indicate that the ground is obscured by buildings, vegetation or shadows and does not meet National Standards for Spatial Data Accuracy. Additional field surveys may be required.

0 100 200  
FEET

CONTOUR INTERVAL: 1 FOOT  
ELEVATION REFERENCE: NGVD 29  
HORIZONTAL GRID REFERENCE: NAD 83

PORT OF BREMERTON - NORSELAND SITE

**GRADING PLAN**

18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052-3333  
(425) 883-0777

Rev.	Description	Date	Appd.	Chkd.	Drawn
0	ISSUED FOR CONSTRUCTION	5/3/00	FSS	CRS	JSS
1	ADD CONSTRUCTION STAKING POINTS	7/20/00	DJM	CRS	FSS
2	MODIFY GRADE AT NORTH END OF NORTH BENCH	9/14/00	DJM	CRS	FSS
3	AS-BUILT	6/15/01	DJM	CRS	FSS

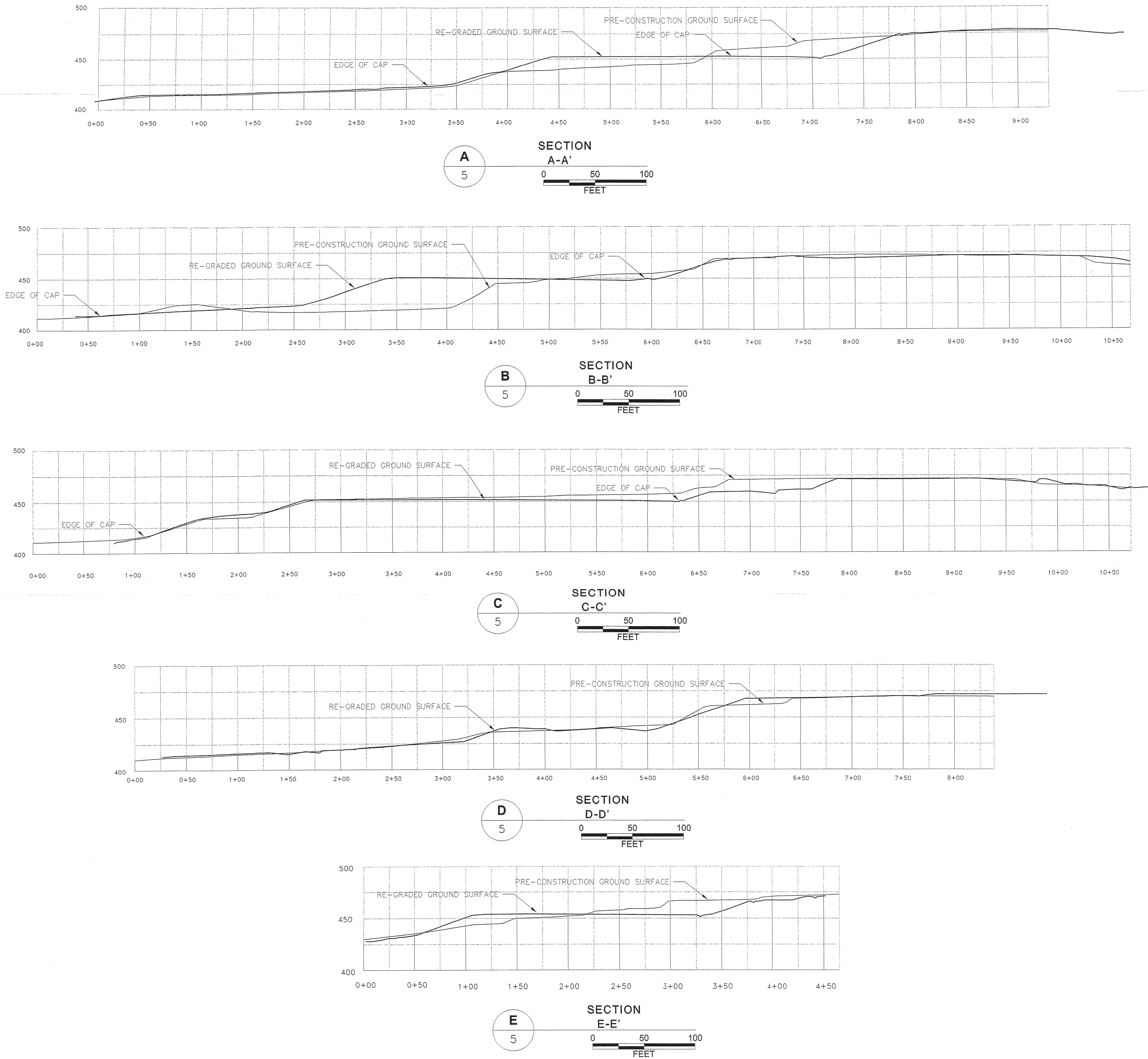
Drawing No.

**5**

11



I:\hwy\Projects\1993\933129\6660 - As Bldg\944071.dwg(6-26-17 23)rc-jl-



RECORD DRAWING

PORT OF BREMERTON - NORSELAND SITE

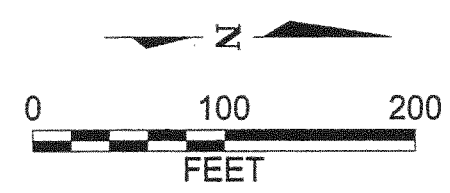
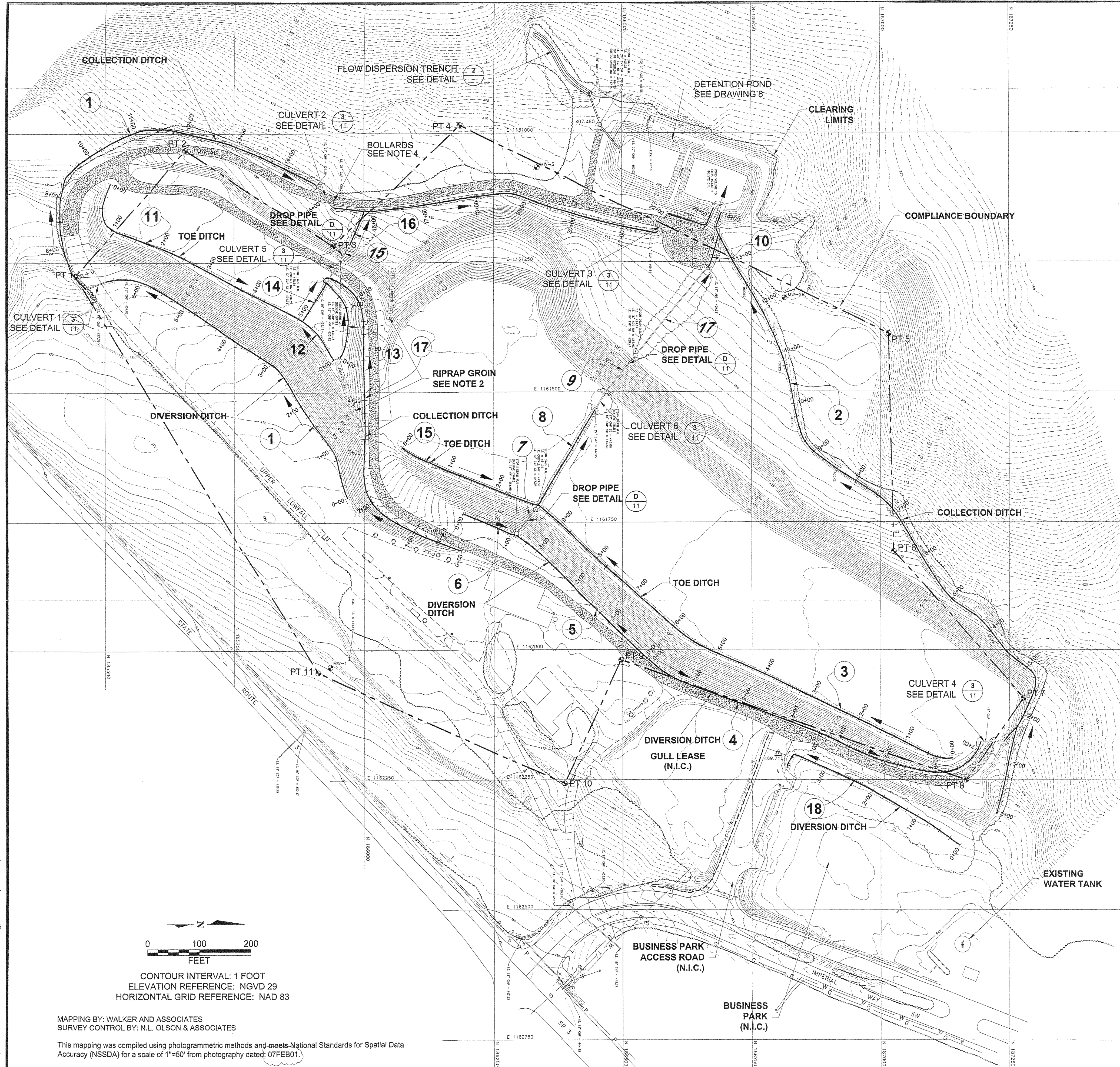
CROSS-SECTIONS



Drawing No.	Description				
	Rev.	Date	Appd.	Chkd.	Drawn
6	0	5/31/00	FSS	CRS	JSS
	1	6/15/01	DJM	FSS	AGM
11					



fs:\proj\19030331\2806060 - As Built\840112.dwg(5-20-1 12:11:05pm-sjlf)-

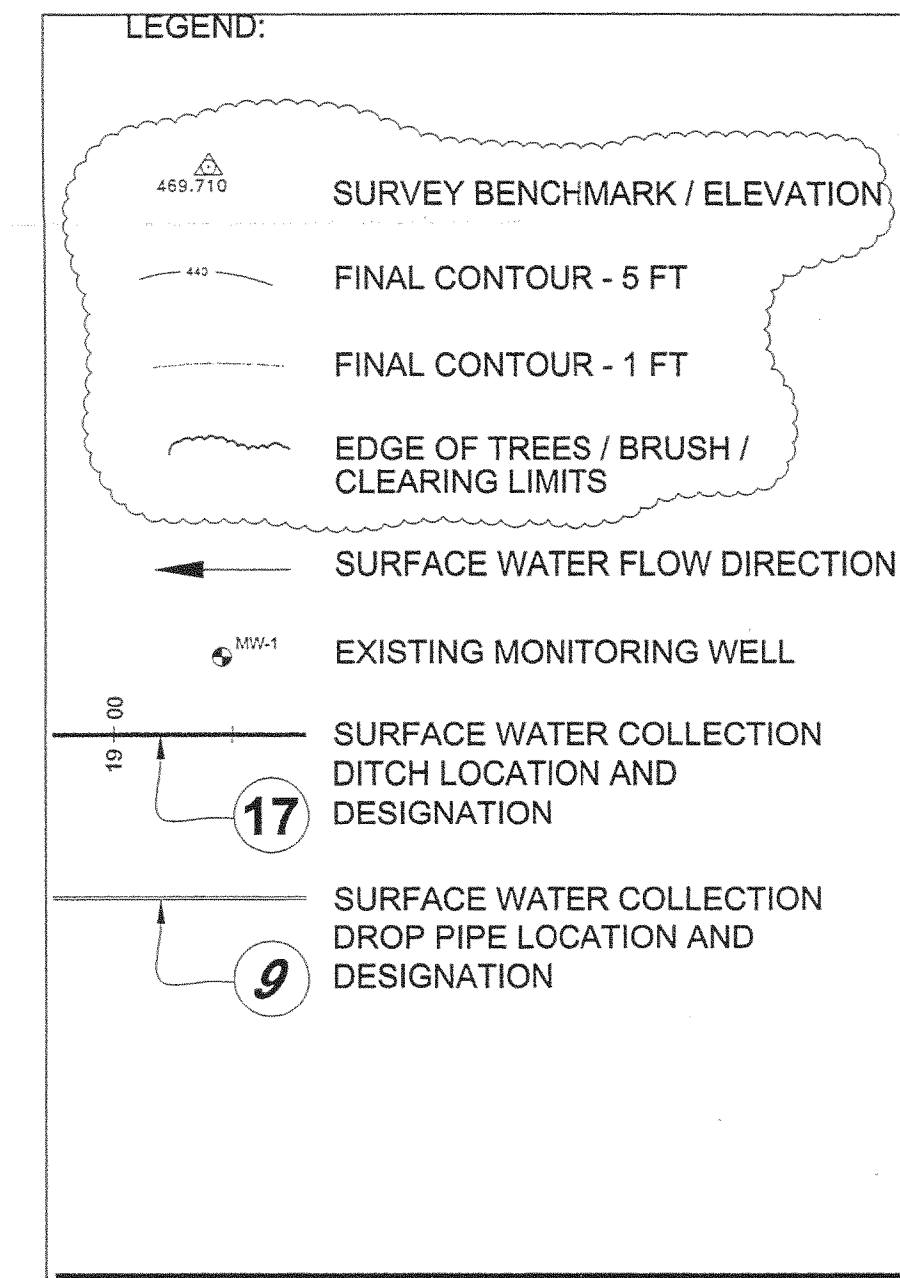


CONTOUR INTERVAL: 1 FOOT  
ELEVATION REFERENCE: NGVD 29  
HORIZONTAL GRID REFERENCE: NAD 83

MAPPING BY: WALKER AND ASSOCIATES  
SURVEY CONTROL BY: N.L. OLSON & ASSOCIATES

This mapping was compiled using photogrammetric methods and meets National Standards for Spatial Data Accuracy (NSSDA) for a scale of 1"=50' from photography dated: 07FEB01.

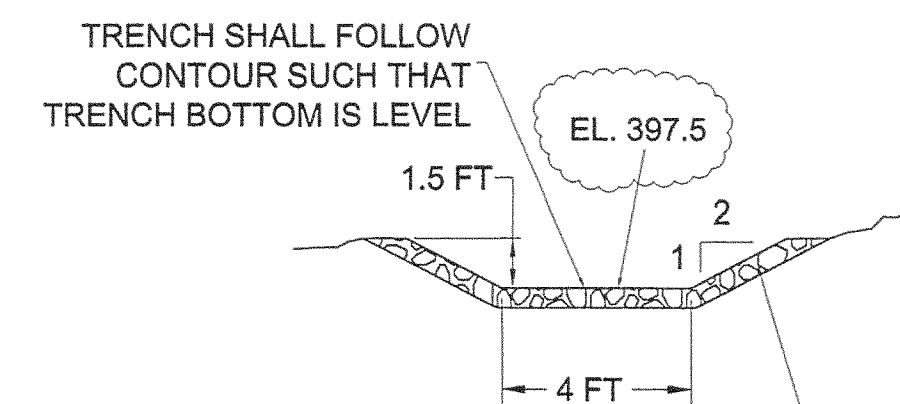
The presence of dashed contours indicate that the ground is obscured by buildings, vegetation or shadows and does not meet National Standards for Spatial Data Accuracy. Additional field surveys may be required.



#### NOTES:

- SEE DRAWING 11 FOR DITCH SIZING SCHEDULE, INCLUDING DITCH LINING REQUIREMENTS.
- RIPRAP GROINS AS SHOWN ON DRAWING. RIPRAP SHALL BE 6" MEDIAN DIAMETER, WITH A MINIMUM STONE SIZE OF 2" AND A MAXIMUM STONE SIZE OF 8".
- RIPRAP SHALL CONSIST OF BROKEN STONE FREE OF ROCK FINES, SOIL, OR OTHER EXTRANEOUS MATERIAL. STONE SHALL BE FREE OF SEGREGATION, SEAMS, CRACKS, AND OTHER DEFECTS TENDING TO DEGRADE ITS RESISTANCE TO WEATHER. STONE SHALL MEET THE FOLLOWING REQUIREMENTS:  

DEGRADATION FACTOR:	15 MINIMUM
LOS ANGELES WEAR, 500 REV.	50% MAXIMUM
SPECIFIC GRAVITY	2.55 MINIMUM
- ACCESS TO POND ACCESS ROAD SHALL BE LIMITED BY BOLLARDS, PER KITSAP COUNTY STORMWATER MANAGEMENT MANUAL.



8" RIPRAP LINING ALONG FIRST 50 FT OF TRENCH - SEE NOTES 2, 3

#### 1 FLOW DISPERSION TRENCH SECTION

NOT TO SCALE

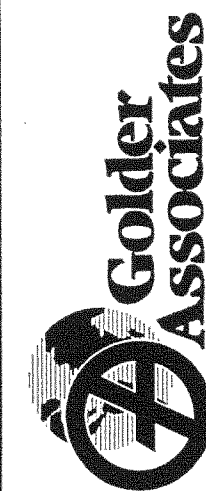
FLOW RELEASE DEPRESSION. PROVIDE 6" DEEP, 4 FT WIDE DEPRESSION SPACED 15 FT O.C.

LIMIT OF CLEARING

#### 2 FLOW DISPERSION TRENCH DETAIL

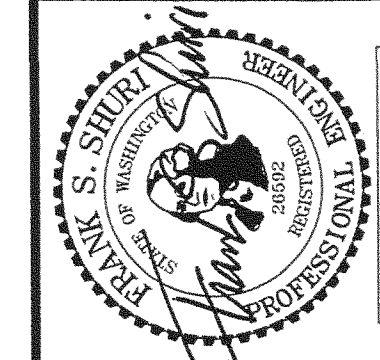
NOT TO SCALE

## PORT OF BREMERTON - NORSELAND SITE SURFACE WATER FACILITIES PLAN



18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052-3333  
(425) 883-0777

Description		Rev.	Date	Appd.	Chkd.	Drawn
ISSUED FOR CONSTRUCTION		0	5/31/00	FSS	CRS	JSS
ADD CONSTRUCTION STAKING POINTS		1	7/20/00	DJM	CRS	FSS
AS-BUILT		2	6/15/01	DJM	CRS	FSS

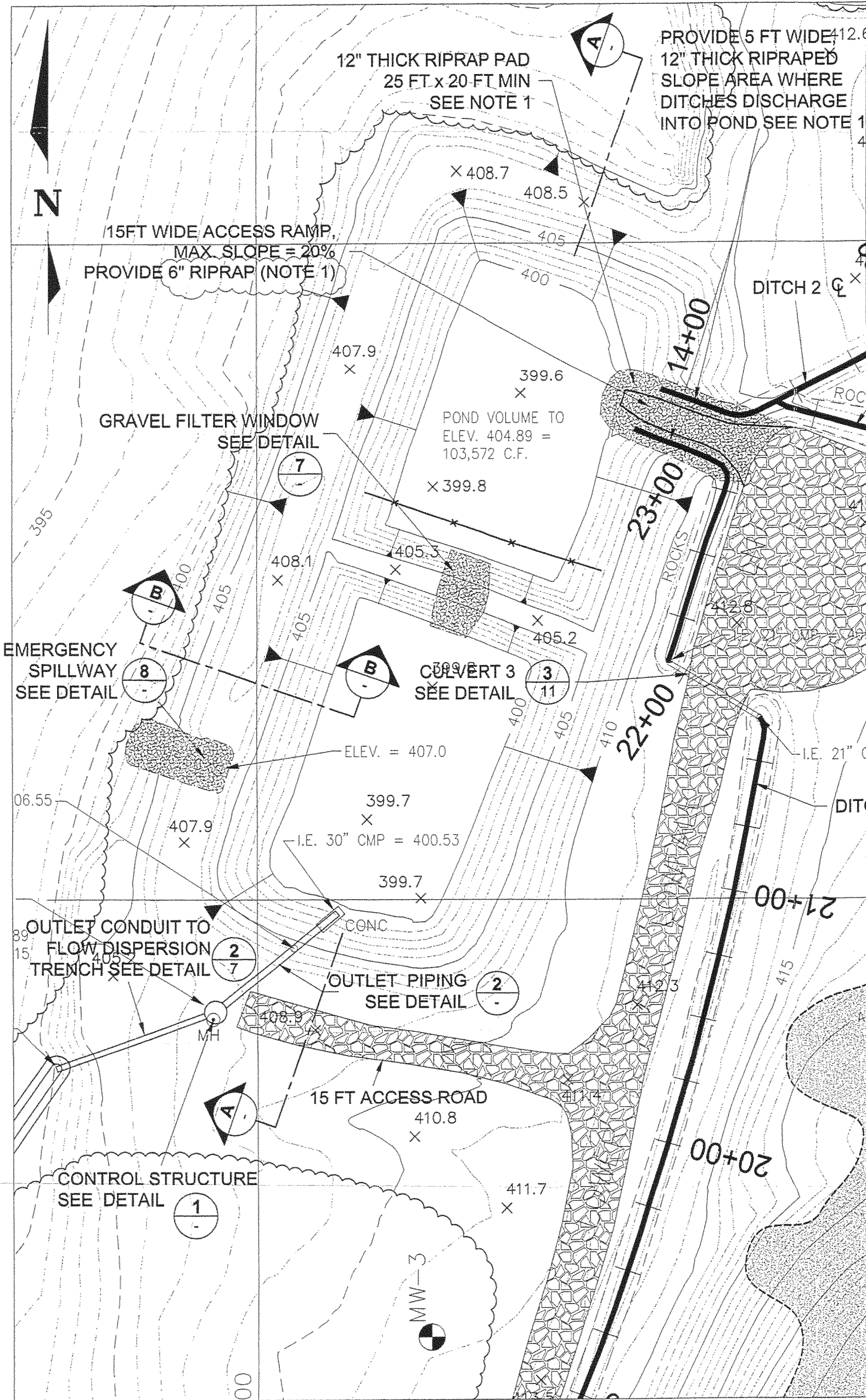


7

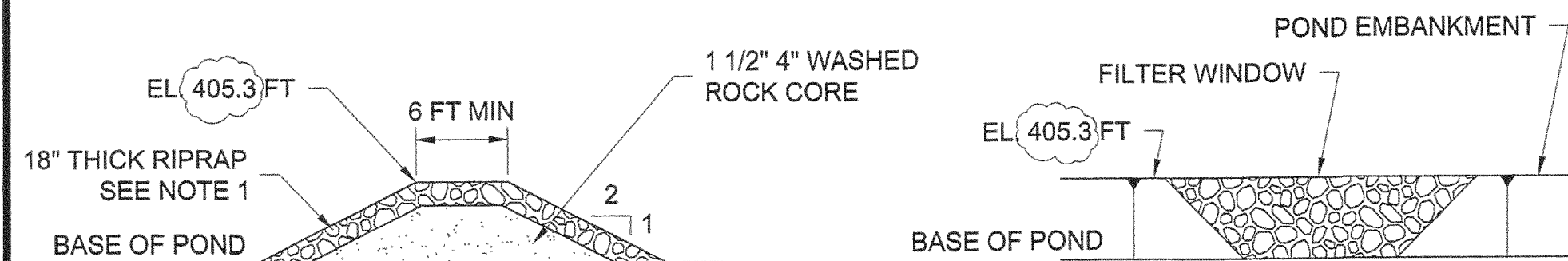
11

RECORD DRAWING





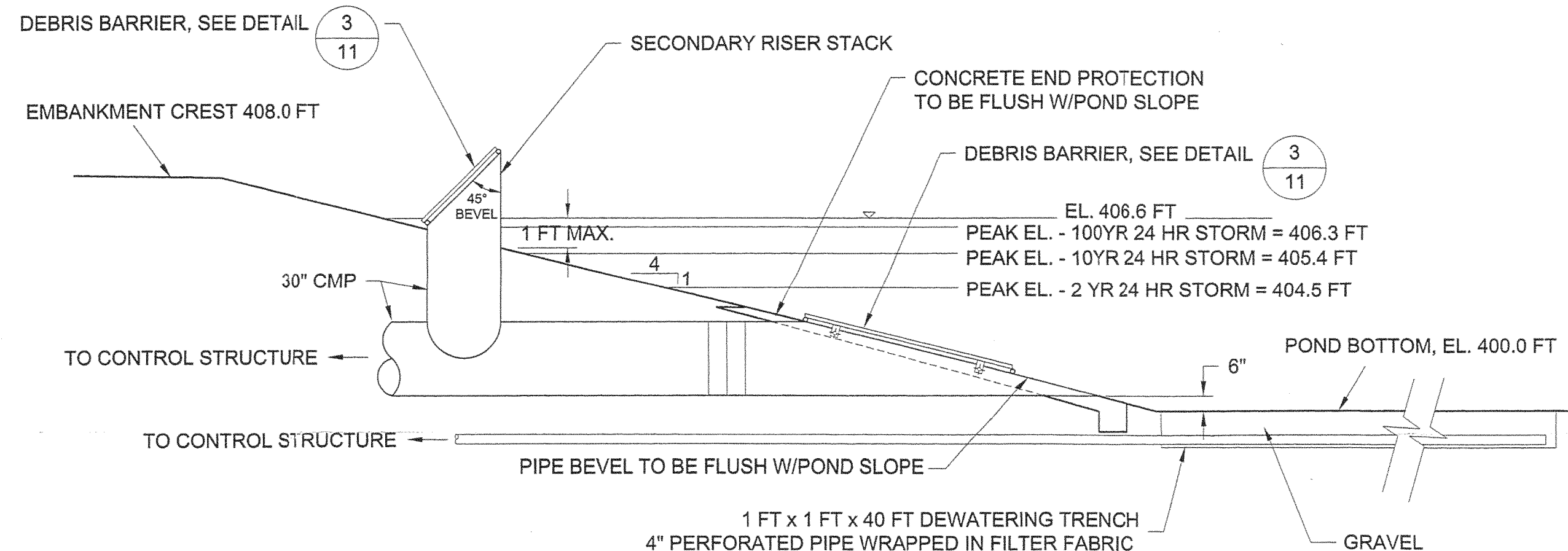
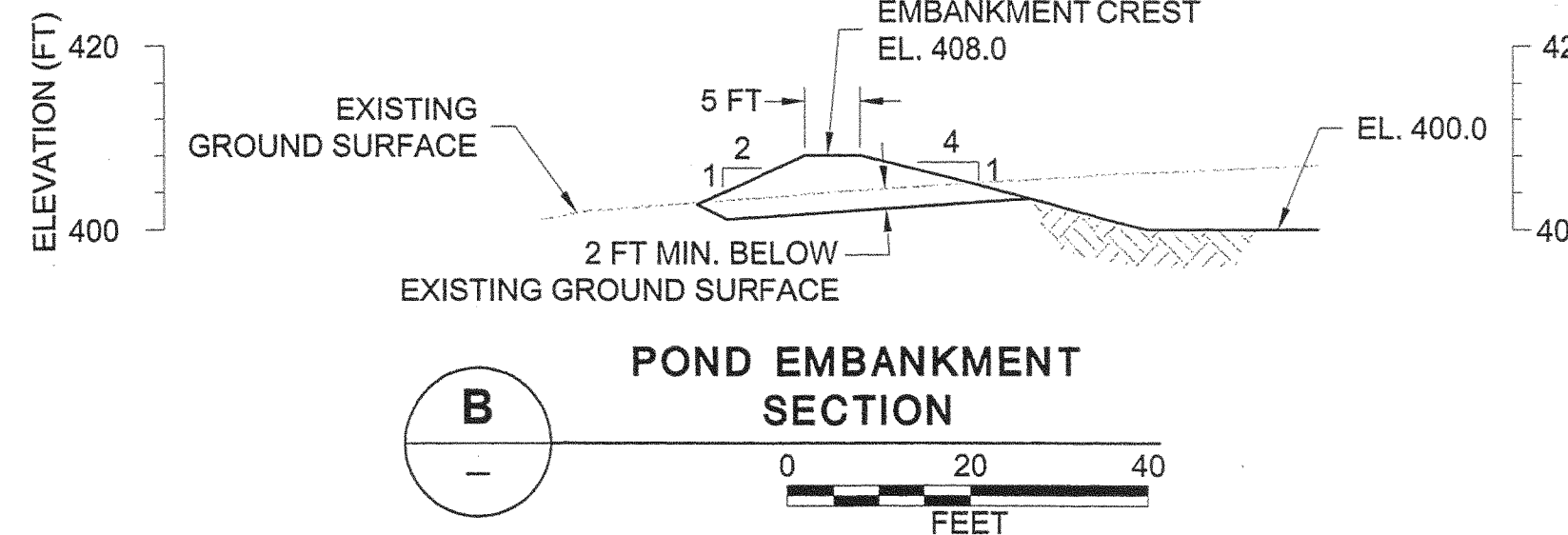
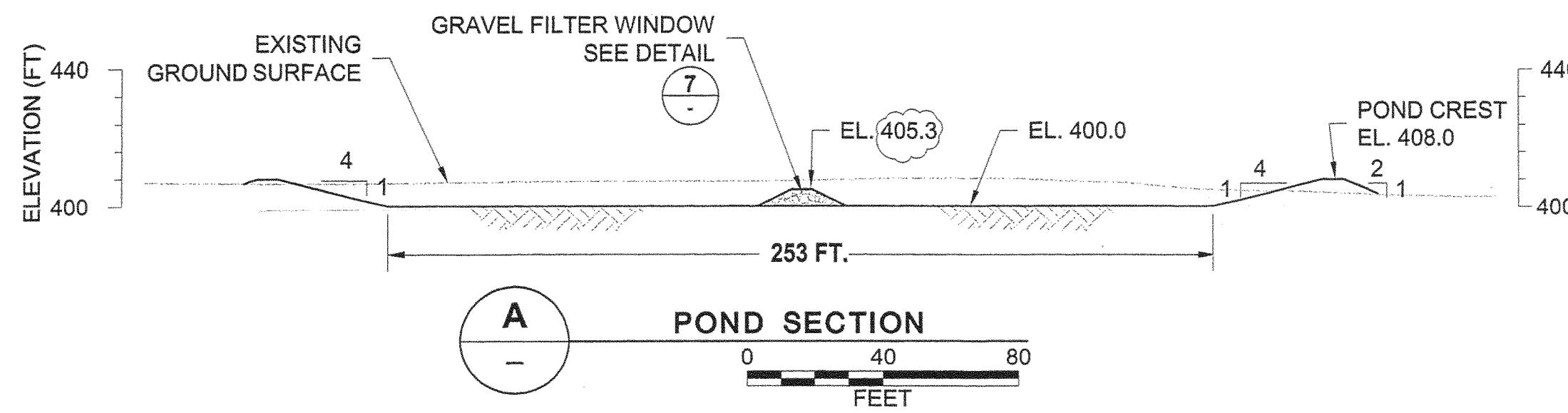
SURFACE WATER FACILITY  
PLAN VIEW



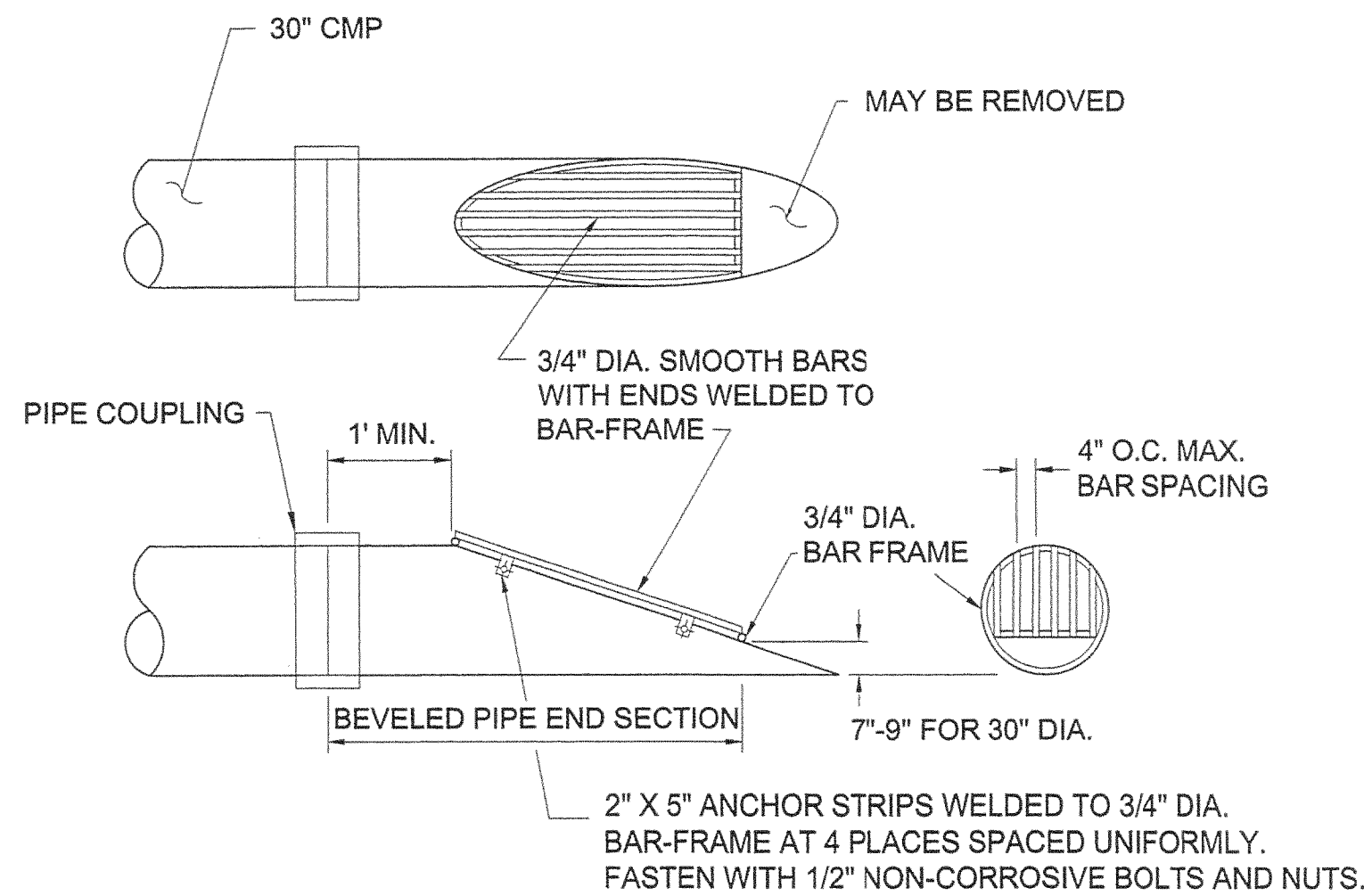
7  
GRAVEL FILTER  
WINDOW SECTIONS  
NOT TO SCALE

NOTES

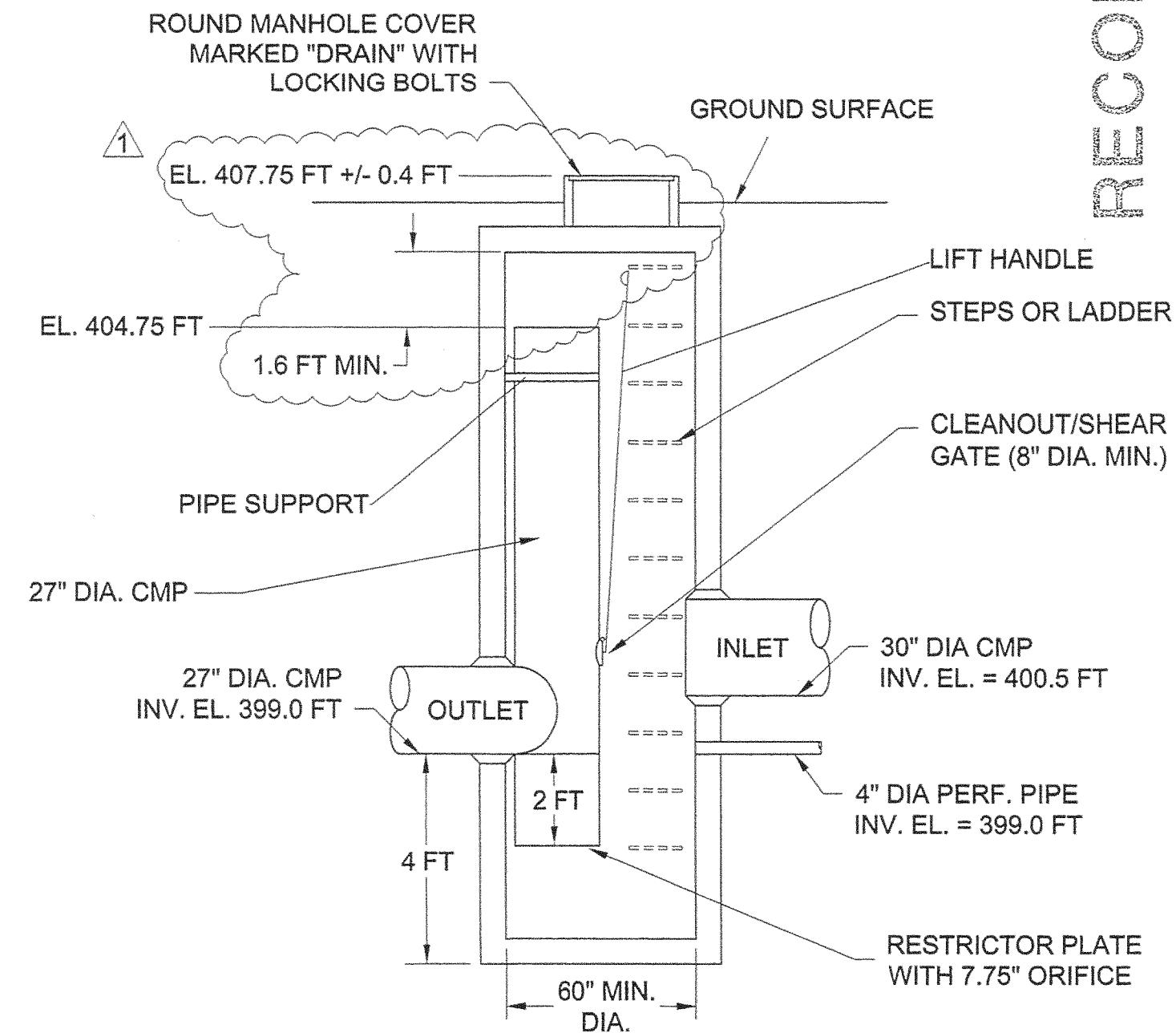
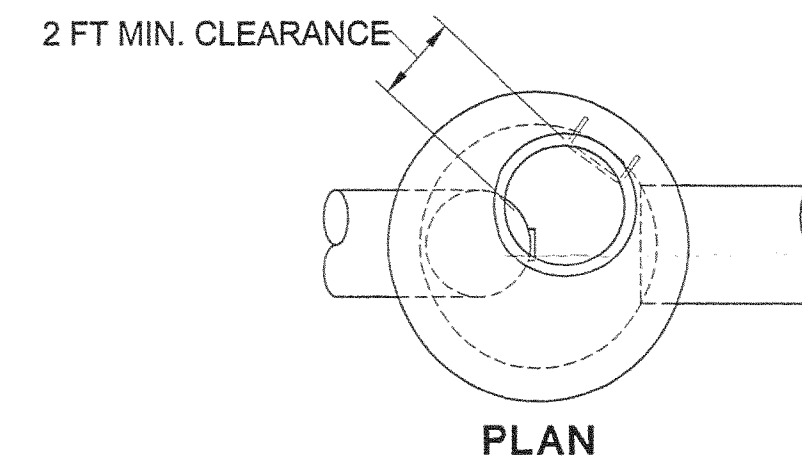
1. Riprap shall be 6" median diameter, with a minimum stone size of 2" and a maximum stone size of 8". Riprap shall consist of broken stone free of rock fines, soil or other extraneous material. Stone shall be free of segregation, seams, cracks, and other defects tending to degrade its resistance to weather. Stone shall meet the requirements of note 3 on Drawing 7.



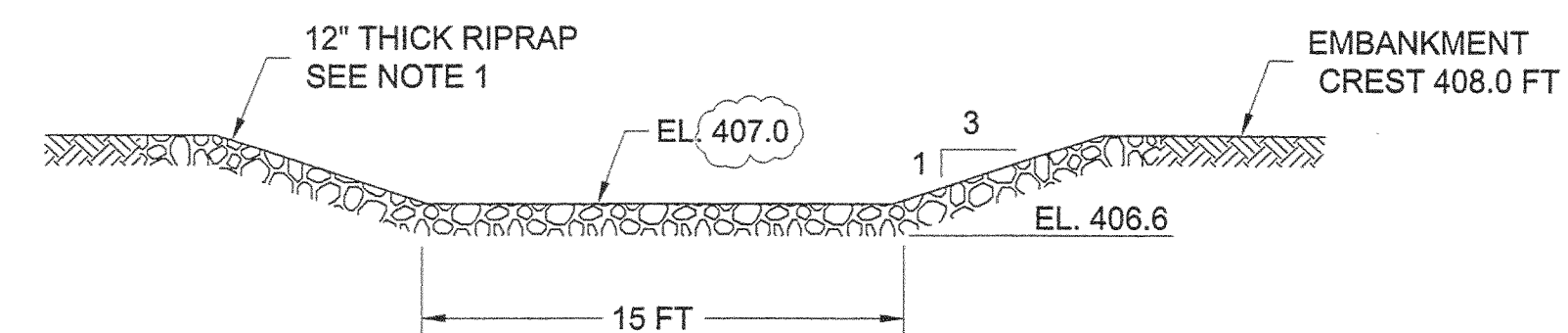
2  
OUTLET PIPING  
NOT TO SCALE



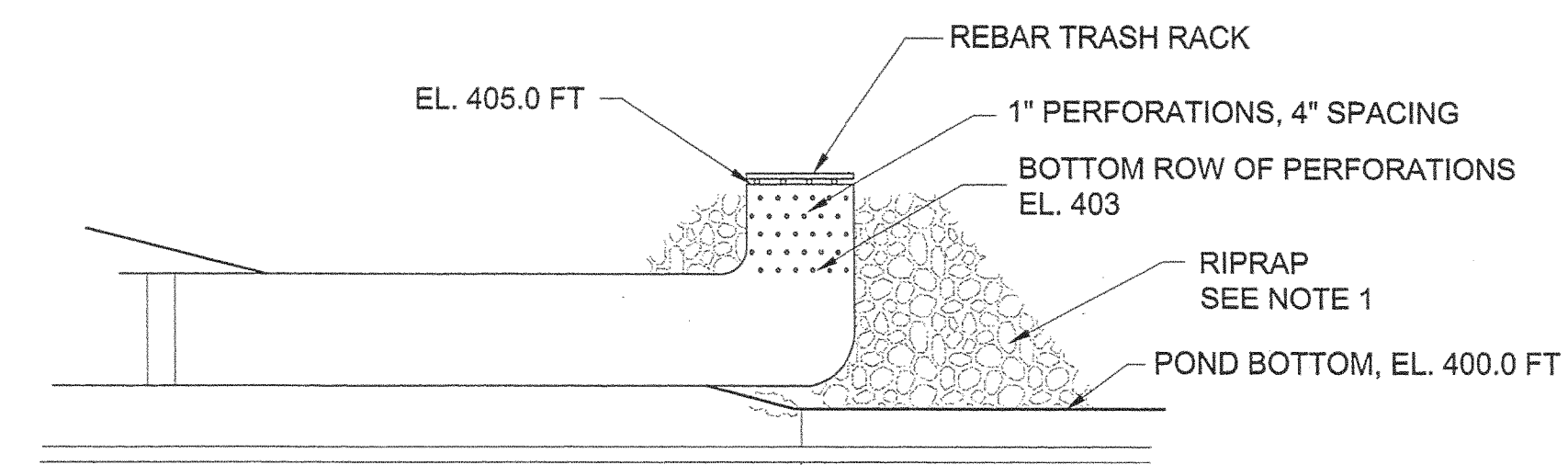
3  
DEBRIS BARRIER DETAIL  
NOT TO SCALE



1  
SECTION  
CONTROL STRUCTURE  
DETAIL  
NOT TO SCALE



8  
EMERGENCY SPILLWAY  
DETAIL  
NOT TO SCALE



9  
TEMPORARY OUTLET  
DURING CONSTRUCTION  
NOT TO SCALE

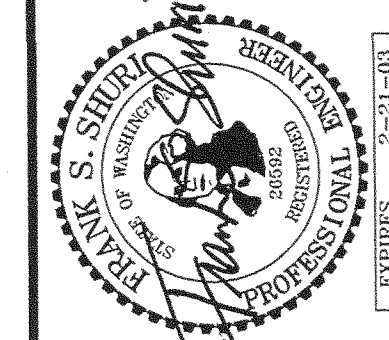
RECORD DRAWING

PORT OF BREMERTON - NORSELAND SITE  
**SURFACE WATER  
FACILITIES DETAILS**



18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052-3333  
(425) 883-0777

Description		Rev.	Date	Appd.	Chkd.	Drawn
ISSUED FOR CONSTRUCTION		0	5/31/00	FSS	CRS	JSS
SPECIFY CONTROL STRUCTURE RIM ELEVATION		1	7/24/00	FSS	CRS	CRS
AS-BUILT		2	6/15/01	DJM	CRS	FSS



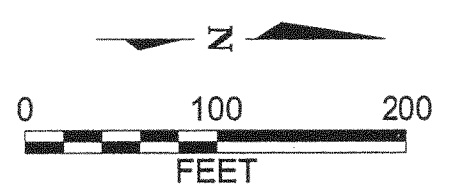
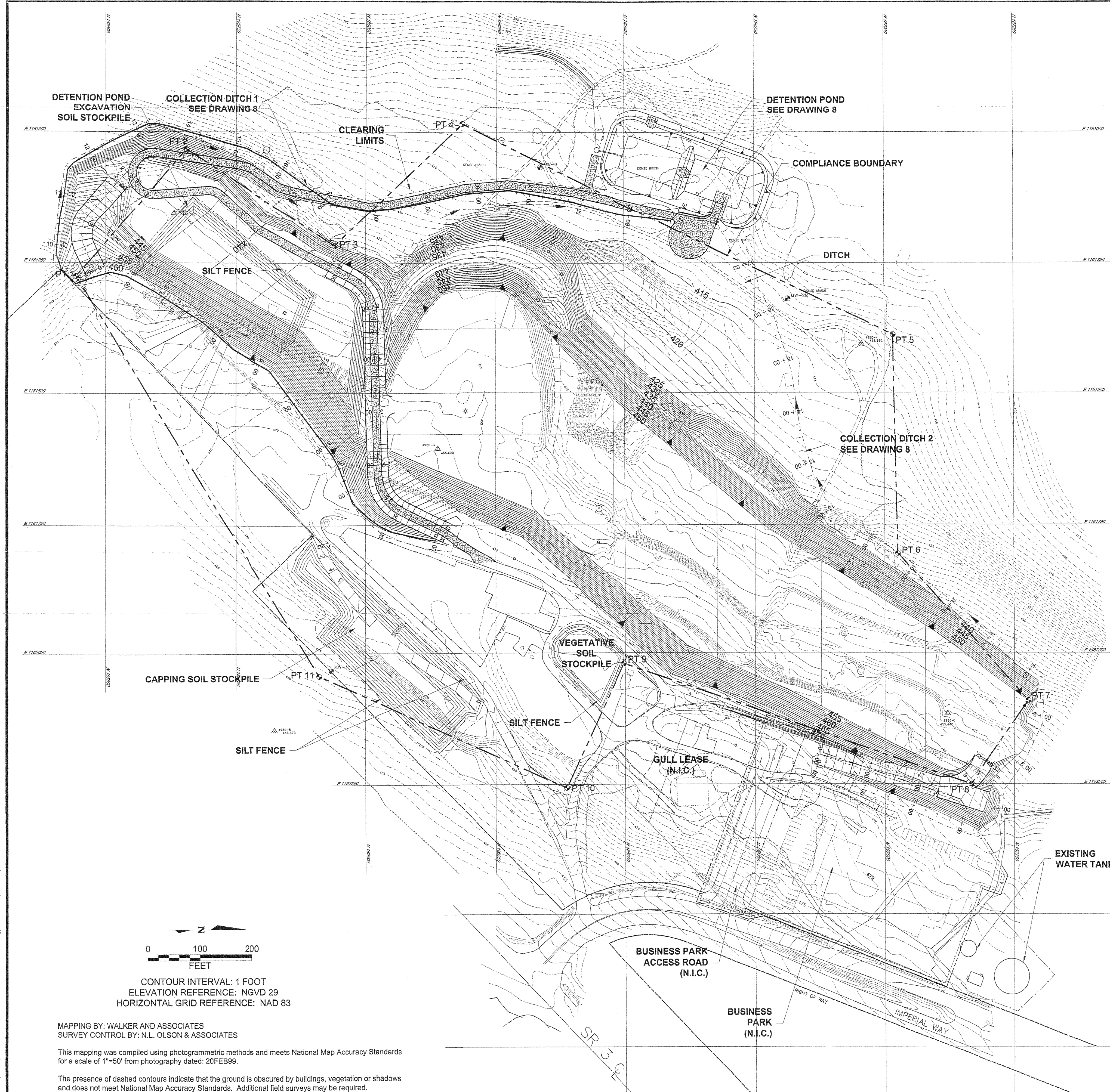
Drawing No. **8**  
**11**







\\fsn\proj\p01\p01\195\93\31280\6060 - As Built\840060.dwg(6-27-1 12:27)-X&A\$E\$E\$-



CONTOUR INTERVAL: 1 FOOT  
ELEVATION REFERENCE: NGVD 29  
HORIZONTAL GRID REFERENCE: NAD 83

MAPPING BY: WALKER AND ASSOCIATES  
SURVEY CONTROL BY: N.L. OLSON & ASSOCIATES

This mapping was compiled using photogrammetric methods and meets National Map Accuracy Standards for a scale of 1"=50' from photography dated: 20FEB99.

The presence of dashed contours indicate that the ground is obscured by buildings, vegetation or shadows and does not meet National Map Accuracy Standards. Additional field surveys may be required.

LEGEND:

- △ 450-1 451.440 PHOTO CONTROL POINTS
- EXISTING CONTOUR - 5 FT
- EXISTING CONTOUR - 1 FT
- 440 PROPOSED CONTOUR - 5 FT
- PROPOSED CONTOUR - 1 FT
- EDGE OF TREES / BRUSH
- - - CLEARING LIMITS
- SURFACE WATER FLOW DIRECTION
- ⊙ 100-1 EXISTING MONITORING WELL
- - - SILT FENCE

- NOTES:
1. THE CONTRACTOR SHALL SUBMIT MODIFICATIONS TO EROSION AND SEDIMENT CONTROL PLAN AS NECESSARY, AND SHALL NOTIFY THE PORT AND COUNTY INSPECTORS REGARDING ANY CHANGES TO THE PLAN.
  2. ALL REQUIRED SEDIMENTATION AND EROSION CONTROL FACILITIES, INCLUDING THE POND, PERIMETER COLLECTION DITCHES AND SILT FENCES, SHALL BE CONSTRUCTED AND IN OPERATION PRIOR TO ANY LAND CLEARING AND/OR OTHER CONSTRUCTION TO ENSURE THAT THE SEDIMENT LADEN WATER DOES NOT ENTER THE NATURAL DRAINAGE SYSTEM.
  3. ALL EROSION AND SEDIMENT FACILITIES SHALL BE MAINTAINED IN A SATISFACTORY CONDITION AS DETERMINED BY THE OWNER, UNTIL SUCH TIME AS CONSTRUCTION IS COMPLETED AND THE POTENTIAL FOR ON-SITE EROSION HAS PASSED.
  4. THE IMPLEMENTATION, MAINTENANCE, REPLACEMENT, AND ADDITIONS TO THE EROSION AND SEDIMENTATION CONTROL SYSTEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
  5. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS ACTIVITIES AND SHALL PROVIDE ADDITIONAL FACILITIES OVER AND ABOVE THE MINIMUM SHOWN HERE, AS A MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES, SENSITIVE AREAS, NATURAL WATER COURSES, AND/OR STORM DRAINAGE SYSTEMS.
  6. IN THE EVENT THAT EROSION OR SEDIMENTATION OCCURS OUTSIDE OF THE LIMITS OF CLEARING, WORK WITHIN THE CONSTRUCTION AREA THAT WILL FURTHER AGGRAVATE THE SITUATION SHALL CEASE AND THE CONTRACTOR SHALL IMMEDIATELY IMPLEMENT CONTROL MEASURES. IMPACTED AREAS OUTSIDE OF THE LIMITS OF CLEARING SHALL BE RESTORED AS SOON AS THE ADDITIONAL CONTROL MEASURES ARE IN PLACE.
  7. AT ALL TIMES OF THE YEAR, THE CONTRACTOR SHALL HAVE SUFFICIENT MATERIAL, EQUIPMENT, AND LABOR ON-SITE TO STABILIZE AND PREVENT EROSION FROM ALL DENUDED AREAS WITHIN 12 HOURS AS SITE AND WEATHER CONDITIONS DICTATE.
  8. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURE ARE NO LONGER NEEDED, AS DETERMINED BY THE OWNER. TRAPPED SEDIMENT SHALL BE REMOVED OR STABILIZED ON SITE.
  9. RESEEDING
    - A. SEED ALL DISTURBED AREAS AT THE EARLIEST PRACTICABLE TIME AFTER WORK HAS BEEN COMPLETED IN THAT AREA, INCLUDING FINAL PLACEMENT OF VEGETATIVE SOIL.
    - B. SEED ONLY WHEN WEATHER CONDITIONS ARE EXPECTED TO BE SUITABLE FOR GERMINATION. AREAS SEEDED BETWEEN MAY 15 AND AUGUST 30 SHALL BE IRRIGATED IF REQUIRED.
    - C. THE FOLLOWING SEED MIXTURE OR APPROVED EQUAL SHALL BE USED (PERCENTAGES ARE BY WEIGHT):
      - KENTUCKY BLUEGRASS (POA PRATENSIS) %15
      - TALL FESCUE (FESTUCA ARUNDINACEA) %40
      - PERENNIAL RYE (LOLIUM PERENNE) %30
      - CHEWINGS FESCUE (FESTUCA REBRA COMMUTATA) %15
    - D. BLUEGRASS SHALL HAVE A MINIMUM PURITY OF 85% AND A MINIMUM GERMINATION OF 80%. ALL OTHER SPECIES SHALL HAVE A MINIMUM PURITY OF 95% AND A MINIMUM GERMINATION OF 90%.
    - E. APPLY SEED MIXTURE AT A MINIMUM RATE OF 120 LBS PER ACRE.
    - F. MULCH, FERTILIZER, TACKIFIER, AND OTHER SOIL AMENDMENTS SHALL BE AS RECOMMENDED BY THE SEED SUPPLIER.
    - G. ON SLOPES, THE CONTRACTOR SHALL USE MATS, NETS, MULCH, OR OTHER BIODEGRADABLE MATERIALS AS REQUIRED TO HOLD SOIL AND SEED IN PLACE UNTIL AN ADEQUATE STAND OF VEGETATION HAS BEEN ESTABLISHED.
    - H. ONE YEAR AFTER THE INITIAL SEEDING, ANY AREAS THAT DO NOT HAVE A MINIMUM COVER OF 50% BASED UPON INSPECTION BY THE OWNER SHALL BE RESEEDED BY THE CONTRACTOR AT HIS EXPENSE.
  10. CONSTRUCTION ENTRANCE SHALL BE IMPLEMENTED WHERE CONSTRUCTION VEHICLES ACCESS THE SITE, WHERE PAVEMENT ENDS. MORE THAN ONE CONSTRUCTION ENTRANCE MAY BE REQUIRED. ENTRANCE WILL BE INSTALLED PRIOR TO START OF WORK. CONTRACTOR SHALL MAINTAIN ENTRANCE AS REQUIRED. SEE DETAIL 2/11.
  11. STOCKPILES PREPARED BY OTHERS. CONTRACTOR SHALL USE EXISTING STOCKPILES FOR MATERIAL SOURCES AS REQUIRED. CONTRACTOR SHALL MAINTAIN EXISTING EROSION AND SEDIMENT CONTROL MEASURES AROUND STOCKPILES. SILT FENCE DETAILS ARE PROVIDED ON DRAWING 11 IN THE EVENT THE SILT FENCES NEED TO BE REPAIRED OR REPLACED.

RECORD DRAWING

PORT OF BREMERTON - NORSELAND SITE  
**EROSION & SEDIMENT  
CONTROL PLAN**

**Golder  
Associates**  
18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052-3333  
(425) 863-0777

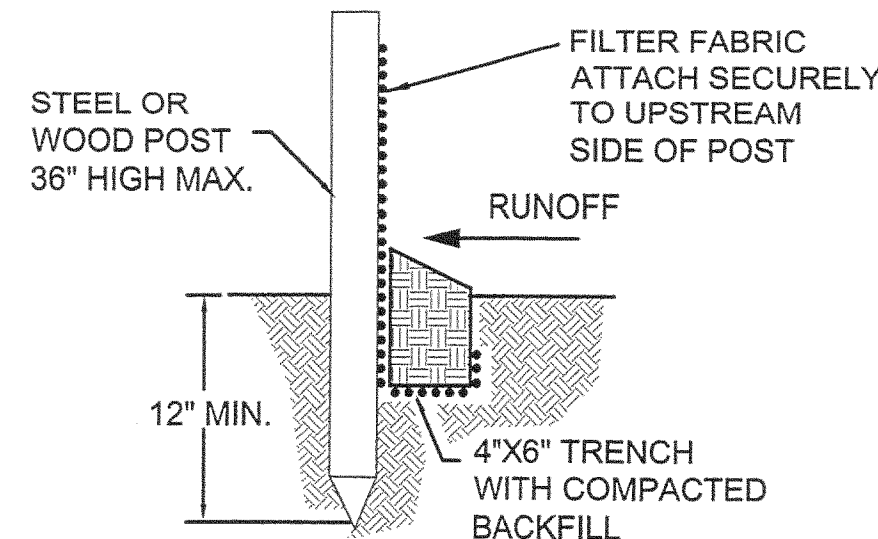
Rev.	Date	Appd.	Chkd.	Drawn	Description
0	5/3/00	FSS	CRS	JSS	ISSUED FOR CONSTRUCTION

FRANK S. SHIORI  
STATE OF WASHINGTON  
LICENSE NO. 12000  
EXPIRES 2-21-05

Drawing No. **10**

**11**





## NOTES

## 1. SILT FENCE

A. SILT FENCE SHALL CONSIST OF A GEOTEXTILE MATERIAL SPECIFICALLY MANUFACTURED FOR THE APPLICATION AND HAVING THE FOLLOWING PROPERTIES:

APPARENT OPENING SIZE (AOS, ASTM D4751): 30 TO 100 U.S. STANDARD SIEVE  
PERMITTIVITY (ASTM D4491): 0.02 SEC-1 MINIMUM  
GRAB TENSILE STRENGTH (ASTM D4632): 180 LBS MIN (EXTRA STRENGTH)  
GRAB TENSILE STRENGTH (ASTM D4632): 100 LBS MIN (STANDARD)  
GRAB TENSILE ELONGATION (ASTM D4632): 30% MAXIMUM  
ULTRAVIOLET RESISTANCE (ASTM D4355): 70% MINIMUM

B. THE NUMBER OF JOINTS IN THE SILT FENCE SHALL BE MINIMIZED. WHERE JOINTS ARE NECESSARY, ADJACENT SECTIONS OF SILT FENCE SHALL BE SPICED TOGETHER ONLY AT SUPPORT POSTS. SECTIONS SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AND BOTH ENDS SHALL BE FASTENED SECURELY TO THE POST.

C. SPACING BETWEEN SUPPORT POSTS SHALL NOT EXCEED 6 FEET IF STANDARD SILT FENCE IS USED. IF A SUPPORT WIRE FENCE OR EXTRA STRENGTH FABRIC IS USED, SPACING MAY BE INCREASED TO 10 FEET.

D. SILT FENCES SHALL BE INSPECTED AFTER EACH RUNOFF-PRODUCING RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE PERFORMED IMMEDIATELY.

E. SEDIMENT SHALL BE REMOVED WHEN IT ACCUMULATES TO 1/3 THE HEIGHT OF THE SILT FENCE. SEDIMENT SHALL BE DISPOSED IN AREAS OF THE SITE WHERE IT WILL NOT RE-ENTER THE DRAINAGE SYSTEM.

## 2. TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

A. CONSTRUCTION ENTRANCE WILL BE IN PLACE PRIOR TO SITE DEVELOPMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND REPAIRING ENTRANCE AS REQUIRED.

B. THE AGGREGATE SIZE FOR CONSTRUCTION OF THE PAD SHALL BE 4 TO 8 INCH STONE. PLACE THE GRAVEL TO THE DIMENSIONS SHOWN ON THE PLAN AND SMOOTH IT.

C. REINFORCE THE SUBGRADE WITH GEOTEXTILE IF REQUIRED.

D. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

E. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

F. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE THROUGH USE OF SAND BAGS, GRAVEL, STRAW BALES, OR OTHER APPROVED METHOD.

3. PROVIDE FRAMED GRATE. PROVIDE VERTICAL BARS IN FRAME @ 4" O.C. FRAME SHALL EXTEND A MINIMUM OF HALF OF THE CIRCUMFERENCE OF THE CATCH BASIN.

4. APPLY JUTE MATTING TO 3H:1V CONSTRUCTED SLOPES.

A. APPLY STRIPS OF NETTING PARALLEL TO DIRECTION OF FLOW. PROVIDE A MINIMUM OF 3" OVERLAP.

B. BRING NEETING TO A LEVEL AREA BEFORE TERMINATING INSTALLATION. TURN END UNDER 6" AND STABPLE AT 12" INTERVALS.

C. ANCHOR NETTING AT 3 FOOT O.C. SPACING. ANCHORS SHALL BE NO. 11 GAUGE WIRE STAPLES, A MINIMUM OF 6 INCHES LONG.

D. JUTE MAT SHALL BE HEAVY, UNIFORM CLOTH WOVEN OF SINGLE JUTE YARD, AND SHALL WEIGH AN AVERAGE OF 1.2 LBS PER LINEAR YARD.

E. MATTING SHALL BE INSTALLED SO THAT IT IS IN COMPLETE CONTACT WITH THE SOIL.

5. RIPRAP SHALL BE 6" MEDIAN DIAMETER, WITH A MINIMUM STONE SIZE OF 2" AND A MAXIMUM STONE SIZE OF 8". RIPRAP SHALL CONFORM TO SECTION 9-134 OF THE WSDOT/APWA STANDARD SPECIFICATIONS.

6. CULVERTS SHALL BE CORRUGATED GALVANIZED STEEL PIPE (WITH TREATMENT 1 THROUGH 6), OR OTHER PIPE MATERIAL APPROVED FOR CULVERT USE BY KITSAP COUNTY.

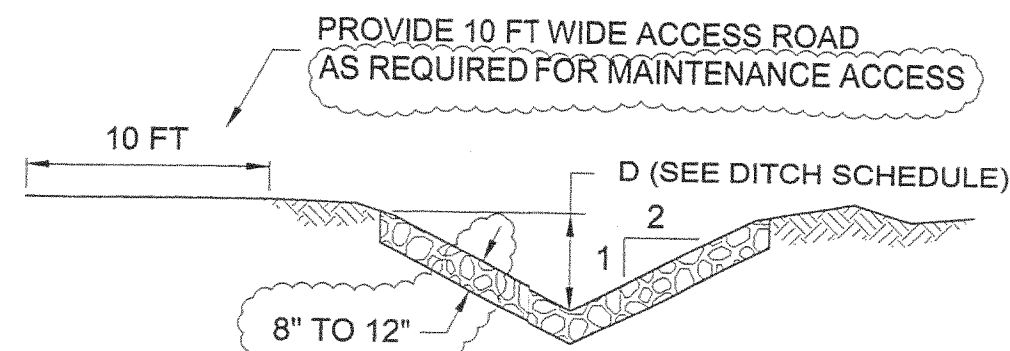


Diagram illustrating a ditch cross-section. A 10 FT wide access road is shown on the left. The ditch has a 1:2 slope (vertical to horizontal) and a depth labeled 'D (SEE DITCH SCHEDULE)'. The ditch is shown with a 1:2 slope ratio.

The diagram illustrates the construction details for a drop pipe. It shows a cross-section of a ditch where a pipe is being installed. Key components and labels include:

- 4 FT DEEP TYPE 1 CATCH BASIN WSDOT STANDARD BEEHIVE GRATE**: A rectangular structure at the top left.
- DEPTH EQUAL TO DEPTH OF DITCH**: A label pointing to the vertical depth of the catch basin.
- JUTE MAT STABILIZATION, SEE NOTE 4**: A layer along the slope of the ditch.
- DROP PIPE**: The main pipe running diagonally down the slope.
- 4FT**: A dimension indicating the width of the catch basin base.
- 1 FT. MIN. COVER**: A dimension indicating the minimum cover over the pipe before it enters the ditch.
- 48"Ø TYPE 2 CATCH BASIN WSDOT STANDARD SEE NOTE 3**: A larger circular structure at the bottom right.
- CONVEYANCE DITCH**: The final destination for the water flow.
- PIPE SIZE**: A label at the bottom left corner.

DROP PIPE	PIPE SIZE
PIPE 7	12" CMP
PIPE 9	18" CMP
PIPE 15	12" CMP
PIPE 17	18" CPEP

6" VEGETATIVE SOIL

18" DIA CPEP PIPE

CLEAN SOIL CAP

WASTE MATERIAL


6"

**PIPE 17 SECTION**

0 1 2  
FEET

DITCH	STATION	LINING TYPE	DEPTH "D FEET
1	0+00 TO 6+66	GRASS	1
1	6+66 TO END	RIPRAP	2
2	0+00 TO 8+00	RIPRAP	2
2	8+00 TO 13+53	GRASS	2
2	13+53 TO END	RIPRAP	2
3	ALL	GRASS	2
4	0+00 TO 4+17	GRASS	1
4	4+17 TO END	RIPRAP	1
5	ALL	GRASS	1
6	ALL	GRASS	1
7 (PIPE)			
8	ALL	GRASS	2
9 (PIPE)			
10	ALL	RIPRAP	2
11	ALL	GRASS	1
12	ALL	GRASS	1
13	ALL	GRASS	1
14	ALL	GRASS	1
15 (PIPE)			
16	ALL	RIPRAP	2
17 (PIPE)			
18	ALL	GRASS	1

PORT OF BREMERTON - NORSELAND SITE



**Golder  
Associates**

18300 NE Union Hill Road, Suite 200  
Redmond, WA 98052-3333  
(425) 883-0777

Drawn	Chkd.	Appd.	Date	Rev.	Description
-------	-------	-------	------	------	-------------

Drawing No.

11

11

# RECORD DRAWING