Snohomish County
Conservation and Natural Resources
Surface Water Management

3000 Rockefeller Ave., M/S 303
Everett, WA 98201-4046
(425) 388-3464
www.snoco.org

Dave Somers
County Executive

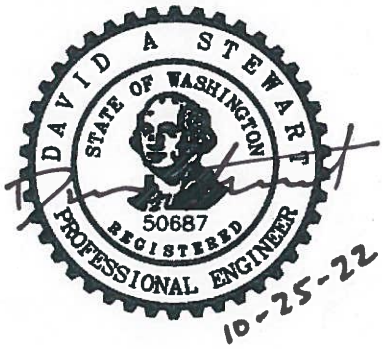
October 25, 2022

Re: Smith Island As-Built Survey

Dear Mr. Kopp:

The Smith Island Estuary Restoration Project included construction of a setback dike in the first phase of construction, and breaching the existing dike in the second phase of construction. Attached are the as-built drawings that were prepared following construction of the setback dike. An as-built survey of the setback dike was completed in 2017 at the end of dike construction.

A Letter of Map Revision application to FEMA is being prepared for the Smith Island Estuary Restoration project. I certify that the survey data represents the as-built elevations of the setback dike as indicated on the attached as-built drawings.



Sincerely,

Dave Stewart, P.E.
Engineer IV, Snohomish County Surface Water Management

PW00101056
1
-2011
FROM GIS

SMITH ISLAND ESTUARY RESTORATION

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

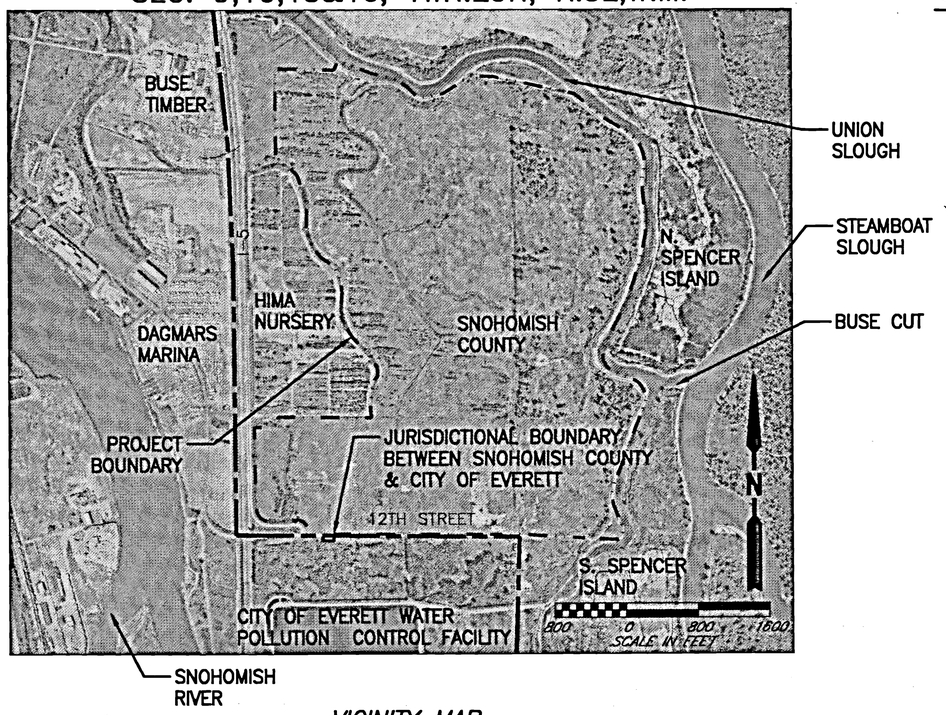
RR49206
PHASE 1
MAY 2015

FINAL CONFORMED PLANS
CONTAINS CHANGES FROM
ADDENDUMS 1 THROUGH 5

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SEC. 9,10,15&16; TWN.29N; R.5E,W.M.



VICINITY MAP

Snohomish County Officials

DIRECTOR OF PUBLIC WORKS
STEVEN E. THOMSEN, P.E.

COUNTY ENGINEER
OWEN B. CARTER, P.E.

EXECUTIVE
JOHN LOVICK

COUNCIL MEMBERS
KEN KLEIN – DIST. 1
BRIAN SULLIVAN – DIST. 2
STEPHANIE WRIGHT – DIST. 3
TERRY RYAN – DIST. 4
DAVE SOMERS – DIST. 5

Last Saved By: otok May 06, 2015 - 5:29pm

XREF LIST
Lscale: 1
Resolved
TTLBLK
GSLSEAL

GENERAL NOTES

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE 2014 EDITION OF THE WASHINGTON STATE DEPARTMENT OF TRANSPORTATION/AMERICAN PUBLIC WORKS ASSOCIATION (WSDOT/APWA) STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION AND CURRENT AMENDMENTS (AS AMENDED BY THE SNOHOMISH COUNTY GENERAL PROVISIONS AND THE PROJECT SPECIAL PROVISIONS) AND THE 2012 SNOHOMISH COUNTY ENGINEERING DESIGN AND DEVELOPMENT STANDARDS (EDDS).
2. ALL DRAINAGE AND GRADING WORK SHALL COMPLY WITH TITLE 30 OF THE SNOHOMISH COUNTY CODE (SCC)
3. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS, OR AS SHOWN ON THE PLANS.
4. ALL LOCATIONS OF EXISTING UTILITIES SHOWN HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND AVOID OTHER UTILITIES NOT SHOWN ON THE PLANS. EXISTING UTILITIES SHALL BE PROTECTED, SUPPORTED, OR MAINTAINED DURING CONSTRUCTION.
5. CONTACT THE UNDERGROUND UTILITIES LOCATION SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
6. ALL WORK SHALL BE IN ACCORDANCE WITH PERMIT REQUIREMENTS FOR EROSION CONTROL AND DEWATERING. REFER TO SPECIFICATIONS FOR PERMIT REQUIREMENTS.

RECOMMENDED CONSTRUCTION SEQUENCE

1. SURVEY AND FLAG LIMITS OF CLEARING AND EXCAVATION PRIOR TO START OF CONSTRUCTION. LOCATE LIMITS BY APPROXIMATE DIMENSIONS AND LOCATIONS SHOWN ON THE SITE PLANS.
2. SURVEY AND STAKE PROPOSED IMPROVEMENTS.
3. PROVIDE TRAFFIC CONTROL DEVICES, SIGNS, FLAGGERS, ETC. AS REQUIRED FOR TRAFFIC CONTROL PRIOR TO CONSTRUCTION.
4. INSTALL TESC MEASURES AT LOCATIONS SHOWN ON THE SITE PLANS.
5. FOR IN-WATER WORK, INSTALL FISH EXCLUSION SCREENS AND COORDINATE WITH COUNTY STAFF. COUNTY STAFF WILL REMOVE FISH FROM THE ISOLATED WORK AREA.
6. CONSTRUCT IMPROVEMENTS AS SHOWN ON PLANS AND SPECIFICATIONS.
7. REMOVE TESC MEASURES AND FISH SCREENS AFTER DISTURBED AREAS HAVE BEEN STABILIZED.

UTILITY COORDINATION NOTES

REFER TO GENERAL NOTES FOR ADDITIONAL UTILITY INFORMATION.

1. UTILITY PROVIDERS THAT MAY BE AFFECTED BY THE PROPOSED IMPROVEMENTS SHALL BE NOTIFIED IN ADVANCE OF CONSTRUCTION.
2. A LIST OF THE UTILITY PROVIDERS IS PROVIDED BELOW.

GAS

PUGET SOUND ENERGY
DAVID MATULICH
P.O. BOX 97034 BOT-01G
BELLEVUE, WA 98009-9734
(425) 424-6442 (EXT 81-6442)
CELL NO. (425) 214-3020

POWER

SNOHOMISH COUNTY PUD #1
CRAIG SIMPSON
P.O. BOX 1107
1802 75th STREET SW
EVERETT, WA 98206-1107
(425)783-8279

TELECOMMUNICATIONS

COMCAST
CASEY BROWN
1525 75TH ST SW #200
EVERETT, WA 98203
(425) 754-0064

FRONTIER
TIM RENNICK
1800 41ST AVE WA 010406
EVERETT, WA 98206
(425) 263-4025

ABBREVIATIONS

APPROX – APPROXIMATELY
BTM. – BOTTOM
C – CURVE
CB – CATCH BASIN
CONC – CONCRETE
CPEP – CORRUGATED POLYETHYLENE PIPE
CULV – CULVERT
DBH – DIAMETER AT BREAST HEIGHT
DF – DITCH FILL
DIAM – DIAMETER
DIP – DUCTILE IRON PIPE
E – EAST
EA – EACH
EL – ELEVATION
ELEV – ELEVATION
EOP – EDGE OF PAVEMENT
EX – EXISTING
FM – FORCE MAIN
FT – FEET
HDPE – HIGH DENSITY POLYETHYLENE PIPE
IE – INVERT ELEVATION
JBOX – JUNCTION BOX
L – LINE SEGMENT
LF – LINEAL FEET
LT – LEFT
LUM – LUMINAIRE
MAX – MAXIMUM
MH – MANHOLE
MIC – MONUMENT IN CASE
MIN – MINIMUM
N – NORTH
NAV88 – NORTH AMERICAN VERTICAL DATUM OF 1988
NE – NORTHEAST
NTS – NOT TO SCALE
NW – NORTHWEST
OC – ON CENTER
OD – OUTSIDE DIAMETER
OHW – ORDINARY HIGH WATER
OHWM – ORDINARY HIGH WATER MARK
PC – POINT OF CURVATURE
PI – POINT OF INTERSECTION
PP – PLAN AND PROFILE
PP – POWER POLE
PT – POINT OF TANGENCY
R – RADIUS
R/W – RIGHT OF WAY
RT – RIGHT
SD – STORM DRAIN
SE – SOUTHEAST
SL – SLOPE
STA – STATION
STD – STANDARD
STR – STRUCTURE
SW – SOUTHWEST
SWPPP – STORMWATER POLLUTION PREVENTION PLAN
TESC – TEMPORARY EROSION AND SEDIMENT CONTROL
TYP – TYPICAL
W – WEST
WM – WILLIAMETTE MERIDIAN
Q – FLOW

LEGEND

LINETYPE	DESCRIPTION
	EDGE OF PAVEMENT (EXISTING)
	BUILDING LINE (EXISTING)
	CURB/CONCRETE EXISTING
	DITCH CENTERLINE (EXISTING)
	DITCH/SWALE CENTERLINE (PROPOSED)
	FENCE (EXISTING)
	FENCE (PROPOSED)
	GRAVEL (EXISTING)
C C C C C	CLEARING LIMITS
CG CG CG	CLEARING AND GRUBBING LIMITS
SF SF SF	SILT FENCE
SC SC SC	SILT CURTAIN
HVF HVF HVF	HIGH VISIBILITY FENCE
	CONTOUR (MINOR-EXISTING)
	CONTOUR (MAJOR-EXISTING)
	CONTOUR (MINOR-PROPOSED)
	CONTOUR (MAJOR-PROPOSED)
	PROPERTY LINE
	RIGHT-OF-WAY (EXISTING)
	SECTION LINES
	QUARTER SECTION LINES
	PROJECT LIMITS
	JURISDICTIONAL BOUNDARY
OHW OHW OHW	ORDINARY HIGH WATER LINE
SD	STORM DRAINAGE (STR TO STR)
	CULVERT (PROPOSED)
FO FO	FIBER OPTIC
G G G	GAS LINE
P P P	OVERHEAD POWER LINE
P P P P	BURIED POWER LINE

SYMBOL EXIST.	PROPOSED	DESCRIPTION
		EMBANKMENT
	N/A	UTILITY POLE
	N/A	YARD LIGHT
	N/A	POTHOLE
	N/A	MONUMENT IN CASE
	N/A	TRAVERSE POINT
	N/A	SECTION CORNER
		STORM DRAIN CB TYPE 2
		STORM DRAIN MANHOLE (SIZED) CB TYPE 1
N/A		TEMPORARY GRAVEL BAG BERM
N/A		ASPHALT CONCRETE PAVEMENT
N/A		CONCRETE
N/A		GRAVEL FILTER
N/A		QUARRY SPALLS
N/A		RIPRAP
N/A		SAND FILTER
N/A		SUBGRADE/EARTH
N/A		TOP SOIL

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: davest Apr 24, 2015 – 5:50pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRE — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

LEGEND/GENERAL NOTES

REFERENCE SHEET NO. LA01
SHEET 2 OF 49 SHEETS

Plotted: May 06, 2015 – 4:45pm otak K:\project\31800\31852A\Dwg\Phase1\02_LA01.dwg Layout Name: LA01

XREF LIST
Ltscale: 1
Resolved
TTLBLK
GSLSEAL

SUMMARY OF QUANTITIES
SMITH ISLAND ESTUARY RESTORATION PROJECT, PHASE 1

REGION 10 — STATE WA

ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	STD ITEM NO.	STD Spec Section 1-07.2(1) GROUP 1 SNOH. COUNTY
			PREPARATION		
1	1	L.S.	MOBILIZATION	0001	1
2	38	ACRE	CLEARING AND GRUBBING	0025	38
3	20000	EST.	ARCHAEOLOGICAL AND HISTORICAL SALVAGE	0038	20000
4	1	L.S.	REMOVAL OF STRUCTURE AND OBSTRUCTION	0050	1
5	43	ACRE	CLEARING	-----	43
6	50000	EST.	REMOVAL OF MAN-MADE DEBRIS	-----	50000
7	9	EACH	DECOMMISSION OBSERVATION WELL	-----	9
			GRADING		
8	77300	C.Y.	ROADWAY EXCAVATION INCL. HAUL	0310	77300
9	271600	TON	SETBACK DIKE MATERIAL INCL. HAUL	-----	271600
10	85200	C.Y.	POND EXCAVATION INCL. HAUL	-----	85200
11	21100	TON	SAND FILTER INCL. HAUL	-----	21100
12	75000	EST.	SELECT GRADING	-----	75000
13	1	L.S.	SETTLEMENT PLATE INSTALLATION AND SURVEY	-----	1
14	11600	L.F.	TEMPORARY OBSERVATION TRENCH	-----	11600
			DRAINAGE		
15	26000	TON	QUARRY SPALLS	2919	26000
16	34	L.F.	SOLID WALL PVC CULV. PIPE 24 IN. DIAM.	2935	34
17	152	L.F.	CORRUGATED POLYETHYLENE CULV. PIPE 24 IN. DIAM.	3011	152
18	1973	L.F.	CORRUGATED POLYETHYLENE CULV. PIPE 35 IN. DIAM.	3012	1973
19	159	L.F.	HIGH DENSITY POLYETHYLENE (HDPE) PIPE 4 IN. DIAM., SDR 13.5	-----	159
20	322	L.F.	HIGH DENSITY POLYETHYLENE (HDPE) PIPE 10 IN. DIAM., SDR 17	-----	322
21	489	L.F.	HIGH DENSITY POLYETHYLENE (HDPE) PIPE 36 IN. DIAM., SDR 21	-----	489

GREGORY S. LABB — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

Reviewed and Approved for Construction
Owen B. Carter, P.E.
Snohomish County Engineer
5/12/15
Date Approved

SMITH ISLAND ESTUARY RESTORATION PROJECT, PHASE 1
BOB ALDRICH 5/11/2015
RR1349206

SUMMARY OF QUANTITIES
SMITH ISLAND ESTUARY RESTORATION PROJECT, PHASE 1

REGION 10 — STATE WA

ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	STD ITEM NO.	STD Spec Section 1-07.2(1) GROUP 1 SNOH. COUNTY
22	1	L.S.	STORMWATER PUMP STATION AND CONTROL BUILDING	-----	1
23	2	EACH	IN-LINE DRAINAGE CHECK VALVE, 30" DIAM.	-----	2
24	2	EACH	DRAINAGE CHECK VALVE 10" DIAM.	-----	2
25	1	EACH	DRAINAGE CHECK VALVE 4" DIAM.	-----	1
26	2	EACH	DRAINAGE FLAP GATE 36" DIAM.	-----	2
27	2	EACH	DRAINAGE FLAP GATE 24" DIAM.	-----	2
28	10	EACH	DEBRIS BARRIER	-----	10
29	1	EACH	FLARED END SECTION 36 IN. DIAM. WITH TRASH RACK	-----	1
30	44900	TON	RIPRAP	-----	44900
			STORM SEWER		
31	1	EACH	CATCH BASIN TYPE 2 48 IN. DIAM.	3105	1
			STRUCTURE		
32	1100	C.Y.	STRUCTURE EXCAVATION CLASS A INCL. HAUL	4006	1100
33	1	L.S.	TEMPORARY SHORING FOR PUMP STATION	-----	1
34	1	L.S.	TEMPORARY SHORING FOR PIPE OUTFALL	-----	1
			SURFACING		
35	56000	TON	GRAVEL FILTER	-----	56000
			HOT MIX ASPHALT		
36	12	TON	COMMERCIAL HMA	5875	12
			EROSION CONTROL AND ROADSIDE PLANTING		
37	400	S.Y.	STABILIZED CONSTRUCTION ENTRANCE	8667	400
38	1	EACH	TIRE WASH	8669	1

GREGORY S. LABB — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

Reviewed and Approved for Construction
Owen B. Carter, P.E.
Snohomish County Engineer
5/12/15
Date Approved

SMITH ISLAND ESTUARY RESTORATION PROJECT, PHASE 1
BOB ALDRICH 5/11/2015
RR1349206

SUMMARY OF QUANTITIES
SMITH ISLAND ESTUARY RESTORATION PROJECT, PHASE 1

REGION 10 — STATE WA

ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	STD ITEM NO.	STD Spec Section 1-07.2(1) GROUP 1 SNOH. COUNTY
39	200	HR	STREET CLEANING	8470	200
40	100000	EST.	EROSION/WATER POLLUTION CONTROL	8490	100000
41	66	ACRE	TEMPORARY SEEDING	8491	66
42	10	ACRE	SEEDING AND MULCHING	8422	10
43	5	EACH	PSIPE SHORE PINE 8' TALL	8552	5
44	74	EACH	PSIPE SNOWBERRY	8552	74
45	65	EACH	PSIPE TALL OREGON GRAPE	8552	65
46	60	S.Y.	LIVE BRUSH MATTRESS	8557	60
47	3200	L.F.	HIGH VISIBILITY FENCE	8630	3200
48	13600	L.F.	HIGH VISIBILITY SILT FENCE	8635	13600
49	1	L.S.	ENVIRONMENTAL COMPLIANCE LEAD	8404	1
50	30	L.F.	TEMPORARY FISH SCREENS	-----	30
51	90	L.F.	TEMPORARY GRAVEL BAG BERM	-----	90
52	238	C.Y.	COMPOST	-----	238
53	20	C.Y.	BARK OR WOOD CHIP MULCH	-----	20
			TRAFFIC		
54	204	L.F.	PAINT LINE	6805	204
55	1	EACH	PAINTED ACCESS PARKING SPACE SYMBOL	6862	1
56	1	L.S.	PERMANENT SIGNING	6890	1
57	4000	L.F.	CONDUIT PIPE 4 IN. DIAM.	6949	4000
58	1	L.S.	PROJECT TEMPORARY TRAFFIC CONTROL	6971	1
59	1600	HR	FLAGGERS	6980	1600
60	1	L.S.	ELECTRICAL SERVICE AND DISTRIBUTION SYSTEM	-----	1
			OTHER ITEMS		
61	8	EACH	WHEEL STOP	7095	8

GREGORY S. LABB — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

Reviewed and Approved for Construction
Owen B. Carter, P.E.
Snohomish County Engineer
5/12/15
Date Approved

SMITH ISLAND ESTUARY RESTORATION PROJECT, PHASE 1
BOB ALDRICH 5/11/2015
RR1349206

SUMMARY OF QUANTITIES
SMITH ISLAND ESTUARY RESTORATION PROJECT, PHASE 1

REGION 10 — STATE WA

ITEM NO.	PLAN QUANTITY	UNIT	DESCRIPTION	STD ITEM NO.	STD Spec Section 1-07.2(1) GROUP 1 SNOH. COUNTY
62	1	L.S.	[illegible]E B PROGRESS SCHEDULE	7033	1
63	19900	S.F.	SHORING OR EXTRA EXCAVATION CLASS B	7038	19900
64	1400	L.F.	CHAIN LINK FENCE TYPE 3	7083	1400
65	1715	L.F.	WIRE FENCE TYPE 2	7111	1715
66	4	EACH	MANHOLE 60 IN. DIAM. TYPE I	7364	4
67	11	L.F.	MANHOLE ADDITIONAL HEIGHT 60 IN. DIAM. TYPE I	7372	11
68	55000	CALC	FUEL COST ADJUSTMENT	7730	55000
69	1	L.S.	SPCC PLAN	7736	1
70	1	L.S.	FIELD OFFICE BUILDING	7500	1
71	16300	S.Y.	CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION	7552	16300
72	27900	S.Y.	CONSTRUCTION GEOTEXTILE FOR PERMANENT EROSION CONTROL	7554	27900
73	3	EACH	NO TRESPASSING SIGN	7569	3
74	1	L.S.	HEALTH AND SAFETY PLAN	7570	1
75	55000	EST.	FA-SITE CLEANUP OF BIO. AND PHYSICAL HAZARD	7571	55000
76	1	L.S.	PIPELINE PROTECTION	-----	1
77	84100	S.Y.	CONSTRUCTION GEOTEXTILE FOR REINFORCEMENT	-----	84100
78	1	L.S.	CONTRACTOR SURVEYING	-----	1
79	3	EACH	MANHOLE 60 IN. DIAM. TYPE I, EXTENDED BASE	-----	3
80	4	EACH	UTY SIDE X SIDE TRANSPORT	-----	4
81	1	L.S.	TEMPORARY ACCESS ROUTES	-----	1
82	1	L.S.	TEMPORARY DEWATERING	-----	1
83	15900	C.Y.	TOPSOIL TYPE C	-----	15900
84	7000	C.Y.	TOPSOIL TYPE D	-----	7000
85	1	EACH	ACCESS CONTROL GATE	-----	1
86	193	L.F.	SPLIT RAIL FENCE	-----	193
87	28	EACH	BOLLARD TYPE 2	-----	28

GREGORY S. LABB — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

Reviewed and Approved for Construction
Owen B. Carter, P.E.
Snohomish County Engineer
5/12/15
Date Approved

SMITH ISLAND ESTUARY RESTORATION PROJECT, PHASE 1
BOB ALDRICH 5/11/2015
RR1349206

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk May 07, 2015 – 2:40pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak — HanmiGlobal Partner

GREGORY S. LABB — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/12/15
DATE APPROVED:

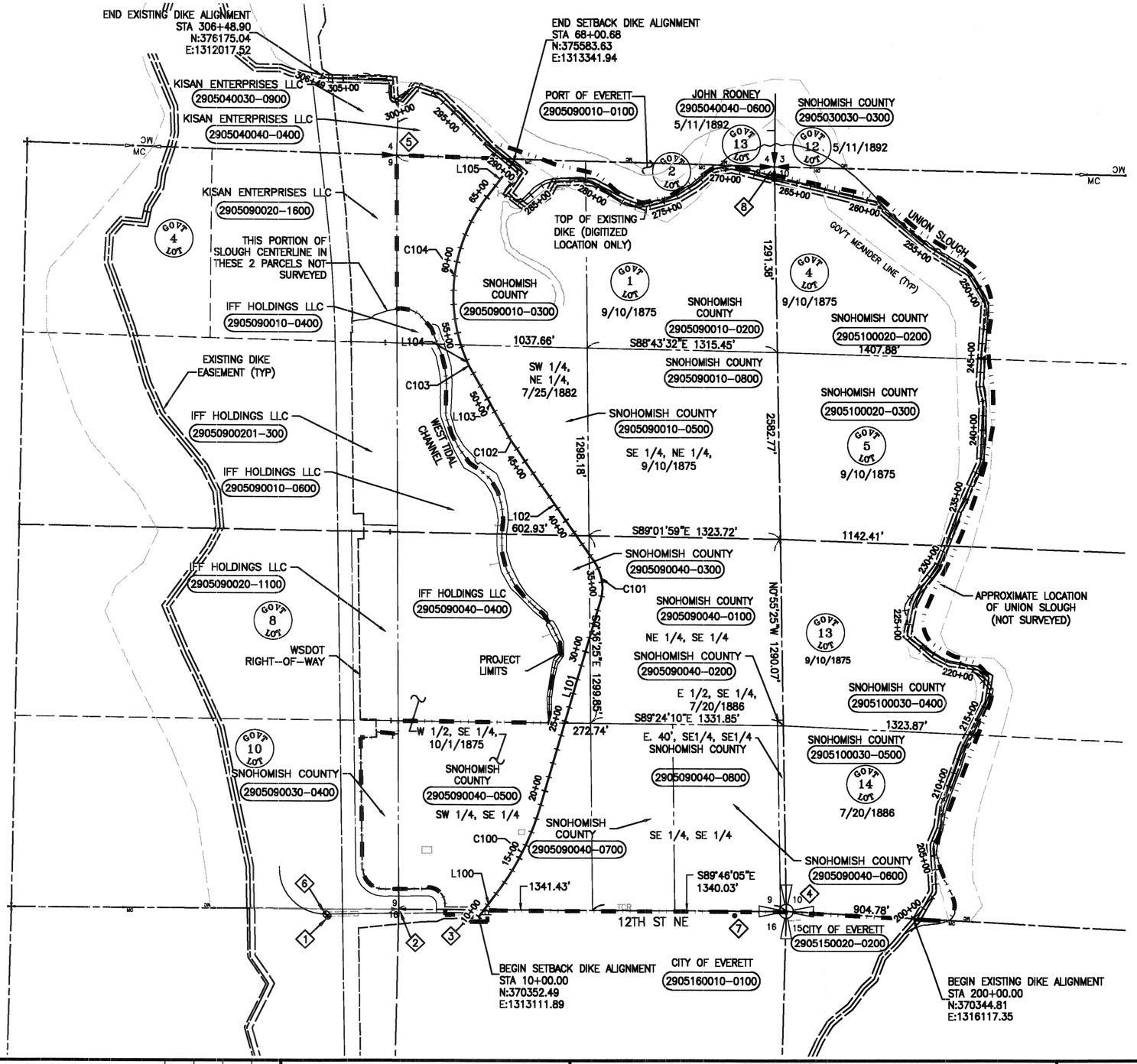
SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION
SUMMARY OF QUANTITIES

REFERENCE SHEET NO. SQ
SHEET 3 OF 49 SHEETS

Plotted: May 07, 2015 – 2:40pm ahmedk K:\project\31800\31852A\Dwg\Phase1\03_SQ01.dwg Layout Name: SQ

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



HORIZONTAL AND VERTICAL CONTROL				
⊗	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	370355.70	1312067.59	35.36	SNOHOMISH COUNTY CP #1 BD GW31005–74
2	370404.48	1312558.20	20.42	SNOHOMISH COUNTY CP #2 IP 2905J11
3	370371.67	1313068.49	5.76	SNOHOMISH COUNTY CP #3 MAG WSHR321/1661
4	370393.64	1315238.24	3.59	SNOHOMISH COUNTY CP #6 STONE 341/1661
5	375631.32	1312536.12	4.08	SNOHOMISH COUNTY CP #7 IP 481/1661
6	370368.61	1312055.42	33.88	SNOHOMISH COUNTY CP #8 MIC 371/1661
7	370363.29	1314882.20	4.23	SNOHOMISH COUNTY CP #9 SPK 741/1644
8	375558.66	1315149.56	8.63	SNOHOMISH COUNTY CP #10 IP 221/1739

NOTE

SEE SHEET CP02 FOR DIKE ALIGNMENT DATA TABLES.

SOURCE OF INFORMATION

1. SURVEY CONTROL POINTS SHOWN ON PLAN PROVIDED BY SNOHOMISH COUNTY.
2. PROPERTY DATA, SECTIONS, AND EASEMENT PROVIDED BY SNOHOMISH COUNTY.

DATUM
NAVD 88

HORIZONTAL DATUM:
WASHINGTON STATE COORDINATE SYSTEM, NORTH ZONE,
NAD 83/91 ADJUSTMENT

VERTICAL DATUM: NAVD 88
DATUM CONVERSION FOR PROJECT:
NAVD 88 (–) NGVD 29 = 1.109m OR 3.64feet

N

400 0 400 800
SCALE IN FEET

CALL BEFORE YOU DIG
1–800–424–5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk May 05, 2015 – 1:15pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12–0171–1

otak
HanmiGlobal Partner

WILLIAM C. LAWRENCE — STATE OF WASHINGTON — 20097 — REGISTERED PROFESSIONAL LAND SURVEYOR — 5/7/2015

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

PROJECT SURVEY CONTROL PLAN

REFERENCE SHEET NO. CP01
SHEET 4 OF 49 SHEETS

XREF LIST
Ltscale: 1
Resolved
TTLBLK
GSLSEAL
3784–TOPO
3784–BASE
3784–PRJL
3784–FROMGIS

Plotted: May 05, 2015 – 4:46pm otak K:\project\31800\31852A\Dwg\Phase1\04_CP01.dwg Layout Name: CP01

XREF LIST
Ltscale: 1
Resolved
TTLBLK
GSLSEAL
3784—TOPO
3784—BASE
3784—PRJL
3784—FROMGIS

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.

SETBACK DIKE ALIGNMENT

NUMBER	STATION	LENGTH	RADIUS	BEARING	DELTA
L100	10+00.00	201.66'		N36°46'34"E	
C100	12+01.66	680.59'	1900.00'	N26°30'51"E	20°31'25"
L101	18+82.25	1485.82'		N16°15'09"E	
C101	33+68.06	282.88'	320.00'	N9°04'20"W	50°38'58"
L102	36+50.94	971.77'		N34°23'49"W	
C102	46+22.72	95.57'	1180.00'	N32°04'37"W	4°38'25"
L103	47+18.28	524.03'		N29°45'24"W	
C103	52+42.31	36.54'	340.00'	N26°40'40"W	6°09'29"
L104	52+78.85	9.82'		N23°35'56"W	
C104	52+88.68	1220.49'	1150.00'	N6°48'18"E	60°48'28"
L105	65+09.17	292.02'		N37°12'32"E	

EXISTING DIKE ALIGNMENT

NUMBER	STATION	LENGTH	RADIUS	BEARING	DELTA
C1	200+00.00	88.94'	301.73'	N44°22'52"E	16°53'16"
L1	200+88.94	53.15'		N35°56'14"E	
C2	201+42.08	59.57'	335.81'	N41°01'10"E	10°09'52"
C3	202+01.66	69.38'	83.61'	N22°19'51"E	47°32'31"
L2	202+71.03	109.68'		N1°59'03"W	
C4	203+80.71	85.26'	766.18'	N5°10'20"W	6°22'34"
C5	204+65.98	30.92'	256.78'	N11°48'37"W	6°53'59"
C6	204+96.90	109.38'	163.79'	N3°52'14"E	38°15'41"
C7	206+06.27	36.74'	408.70'	N25°34'37"E	5°09'04"
C8	206+43.02	77.97'	202.21'	N17°06'20"E	22°05'38"
L3	207+20.99	65.48'		N5°03'31"E	
C9	207+86.47	36.32'	159.41'	N0°28'06"W	13°03'14"
C10	208+22.79	59.94'	116.52'	N7°44'33"E	29°28'33"
C11	208+82.74	38.29'	140.65'	N30°16'43"E	15°35'48"
C12	209+21.02	33.61'	54.97'	N20°33'50"E	35°01'33"
L4	209+54.63	282.32'		N19°41'32"E	
L5	212+36.95	179.53'		N26°27'31"E	
L6	214+16.48	196.35'		N26°21'26"E	
L7	216+12.83	58.38'		N20°23'26"E	
C13	216+71.21	26.03'	447.18'	N18°43'23"E	3°20'06"

EXISTING DIKE ALIGNMENT

NUMBER	STATION	LENGTH	RADIUS	BEARING	DELTA
C14	216+97.23	34.98'	49.16'	N3°19'41"W	40°46'01"
L8	217+32.21	147.60'		N40°56'43"W	
C15	218+79.82	95.59'	169.85'	N57°04'03"W	32°14'41"
C16	219+75.41	73.72'	404.59'	N78°24'36"W	10°26'24"
C17	220+49.13	57.18'	181.71'	N74°36'54"W	18°01'46"
L9	221+06.30	251.59'		N58°31'40"W	
C18	223+57.89	66.48'	117.49'	N42°19'09"W	32°25'02"
C19	224+24.37	32.24'	48.89'	N7°13'18"W	37°46'40"
C20	224+56.61	123.25'	199.55'	N6°01'35"W	35°23'14"
C21	225+79.85	65.72'	74.85'	N1°25'54"E	50°18'13"
C22	226+45.57	75.32'	403.13'	N31°56'10"E	10°42'18"
L10	227+20.89	89.84'		N48°04'23"E	
C23	228+10.73	118.06'	406.84'	N39°45'35"E	16°37'36"
L11	229+28.79	74.06'		N31°24'23"E	
L12	230+02.85	63.59'		N21°42'41"E	
L13	230+66.44	93.72'		N27°33'41"E	
C24	231+60.17	26.99'	102.15'	N19°59'32"E	15°08'17"
C25	231+87.16	83.35'	258.41'	N21°39'48"E	18°28'48"
C26	232+70.50	74.18'	164.17'	N17°57'31"E	25°53'22"
C27	233+44.68	64.71'	160.83'	N16°32'29"E	23°03'18"

EXISTING DIKE ALIGNMENT

NUMBER	STATION	LENGTH	RADIUS	BEARING	DELTA
C28	234+09.40	62.61'	380.42'	N32°47'00"E	9°25'45"
C29	234+72.00	41.90'	68.02'	N19°50'58"E	35°17'50"
L14	235+13.91	85.88'		N18°34'53"E	
L15	235+99.79	61.19'		N20°42'39"E	
L16	236+60.98	73.47'		N26°16'20"E	
C30	237+34.45	149.66'	342.57'	N13°45'26"E	25°01'48"
L17	238+84.11	276.68'		N1°14'31"E	
C31	241+60.79	74.34'	168.21'	N11°25'10"W	25°19'23"
C32	242+35.13	108.17'	173.11'	N6°10'45"W	35°48'12"
L18	243+43.30	178.40'		N2°02'49"E	
C33	245+21.70	174.07'	1167.08'	N6°19'12"E	8°32'45"
C34	246+95.77	112.46'	1311.44'	N8°08'10"E	4°54'48"
C35	248+08.23	101.16'	211.33'	N8°01'59"W	27°25'30"
C36	249+09.39	256.55'	685.85'	N32°27'42"W	21°25'55"
L19	251+65.94	183.56'		N59°02'34"W	
C37	253+49.50	193.58'	1496.78'	N55°20'15"W	7°24'37"
L20	255+43.08	344.96'		N50°00'54"W	
C38	258+88.04	32.00'	158.06'	N44°12'55"W	11°35'59"
C39	259+20.04	60.77'	62.56'	N66°14'41"W	55°39'32"
L21	259+80.82	195.26'		N76°14'44"W	

EXISTING DIKE ALIGNMENT

NUMBER	STATION	LENGTH	RADIUS	BEARING	DELTA
L22	261+76.08	282.59'		N75°52'36"W	
L23	264+58.67	493.41'		N78°14'59"W	
C40	269+52.08	123.52'	354.90'	N88°13'12"W	19°56'27"
C41	270+75.60	47.96'	68.38'	S61°43'03"W	40°11'04"
L24	271+23.55	82.90'		S50°23'36"W	
C42	272+06.45	418.27'	909.42'	S63°34'11"W	26°21'09"
C43	276+24.73	173.78'	232.22'	N81°48'57"W	42°52'36"
C44	277+98.51	154.33'	1039.24'	N56°07'23"W	8°30'31"
C45	279+52.84	124.12'	402.68'	N60°41'56"W	17°39'38"
C46	280+76.96	49.36'	131.28'	N80°18'03"W	21°32'36"
L25	281+26.32	159.81'		S88°24'14"W	
C47	282+86.13	126.92'	220.93'	S71°56'47"W	32°54'54"
L26	284+13.05	122.94'		S48°45'48"W	
C48	285+36.00	80.40'	69.01'	S72°22'14"W	66°45'10"
L27	286+16.40	82.32'		N57°52'02"W	
C49	286+98.72	46.39'	28.32'	N8°36'48"W	93°51'27"
L28	287+45.11	106.51'		N39°23'56"E	
C50	288+51.62	80.78'	47.08'	N0°30'43"W	98°18'17"
L29	289+32.40	290.09'		N51°47'18"W	
L30	292+22.49	437.43'		N46°07'00"W	

EXISTING DIKE ALIGNMENT

NUMBER	STATION	LENGTH	RADIUS	BEARING	DELTA
C51	296+59.92	87.52'	208.11'	N58°11'33"W	24°05'44"
L31	297+47.44	52.08'		N72°52'59"W	
C52	297+99.53	62.63'	61.08'	S77°44'42"W	58°44'38"
L32	298+62.15	55.64'		S38°59'18"W	
C53	299+17.79	83.44'	157.94'	S54°07'24"W	30°16'13"
C54	300+01.23	52.73'	29.93'	N60°16'26"W	100°56'07"
L33	300+53.97	49.77'		N10°18'39"W	
L34	301+03.74	53.48'		N2°43'44"E	
C55	301+57.22	46.69'	35.57'	N34°52'39"W	75°12'47"
L35	302+03.91	50.50'		N89°03'51"W	
L36	302+54.41	50.92'		N90°00'00"W	
L37	303+05.33	46.94'		N77°28'43"W	
L38	303+52.27	110.17'		S88°00'55"W	
L39	304+62.45	101.25'		S88°11'58"W	
L40	305+63.69	45.90'		N86°49'15"W	
L41	306+09.59	39.31'		N68°01'26"W	

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk Apr 27, 2015 – 2:16pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25756 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

PROJECT SURVEY CONTROL PLAN

REFERENCE SHEET NO. CP02
SHEET 5 OF 49 SHEETS

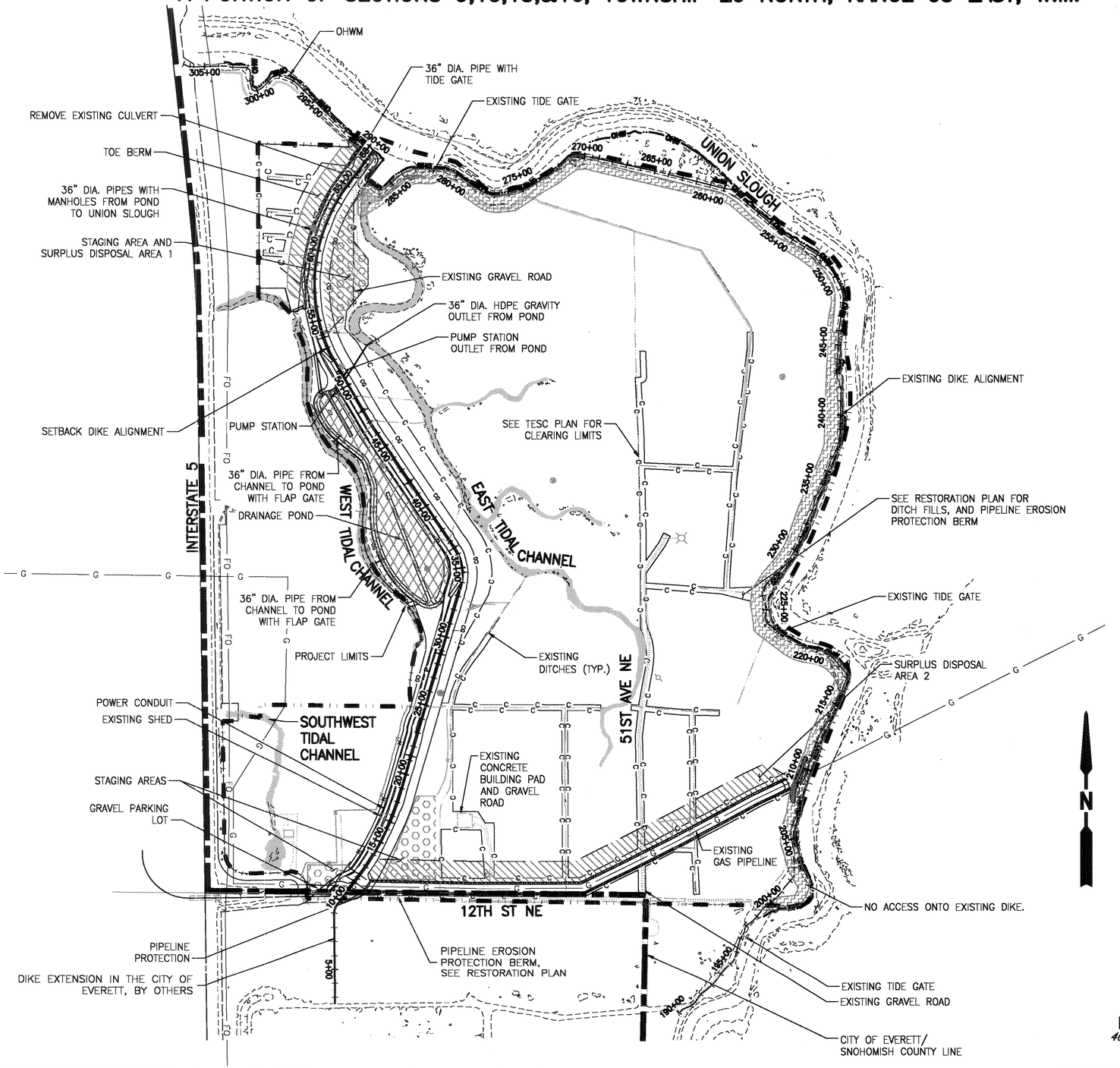
Plotted: May. 06, 2015 – 4:47pm otak K:\project\31800\31852A\dwg\Phase1\05_CP02.dwg Layout Name: CP02

XREF LIST
Ltscale: 1

Resolved
3784—BASE
TTLBLK
GSLSEAL
3784—TOPO
3784—PRJL
3784—DTCH
3784—PDRN
3784—PCHN
3784—FROMGIS

Unresolved
3784—GRDG

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



REFERENCE NOTES:

1. SEE SHEET SP02 FOR EXCAVATION SITE PLAN.
2. SEE SHEETS EC01—EC05 FOR TEMPORARY EROSION AND SEDIMENT CONTROL AND CLEARING LIMITS.
3. SEE SHEETS PD01—PD02 FOR PIPELINE PROTECTION.
4. SEE SHEET XS01 AND XS02 FOR TYPICAL DIKE SECTIONS.
5. SEE SHEETS PP01—PP06 FOR DIKE PLAN AND PROFILE.
6. SEE SHEETS GD01—GD02 FOR SETBACK DIKE GRADING DETAILS.
7. SEE SHEETS SF01—SF11 FOR DRAINAGE POND, PUMP STATION AND DRAINAGE PIPES.
8. SEE SHEETS RP01—RP03 FOR RESTORATION PLAN.
9. SEE SHEETS GP01—GP02 FOR PARKING AREA.
10. SEE SHEET TC01 FOR TRAFFIC CONTROL.

LEGEND

- CLEARING LIMITS
- CLEARING AND GRUBBING LIMITS
- DRAINAGE POND
- SURPLUS EXCAVATED MATERIAL DISPOSAL AREA
- RECOMMENDED CONSTRUCTION STAGING AREA
- NO ACCESS ONTO EXISTING DIKE
- OBSERVATION WELLS

CALL BEFORE YOU DIG
1—800—424—5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk May 05, 2015 — 12:09pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12—0171—1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

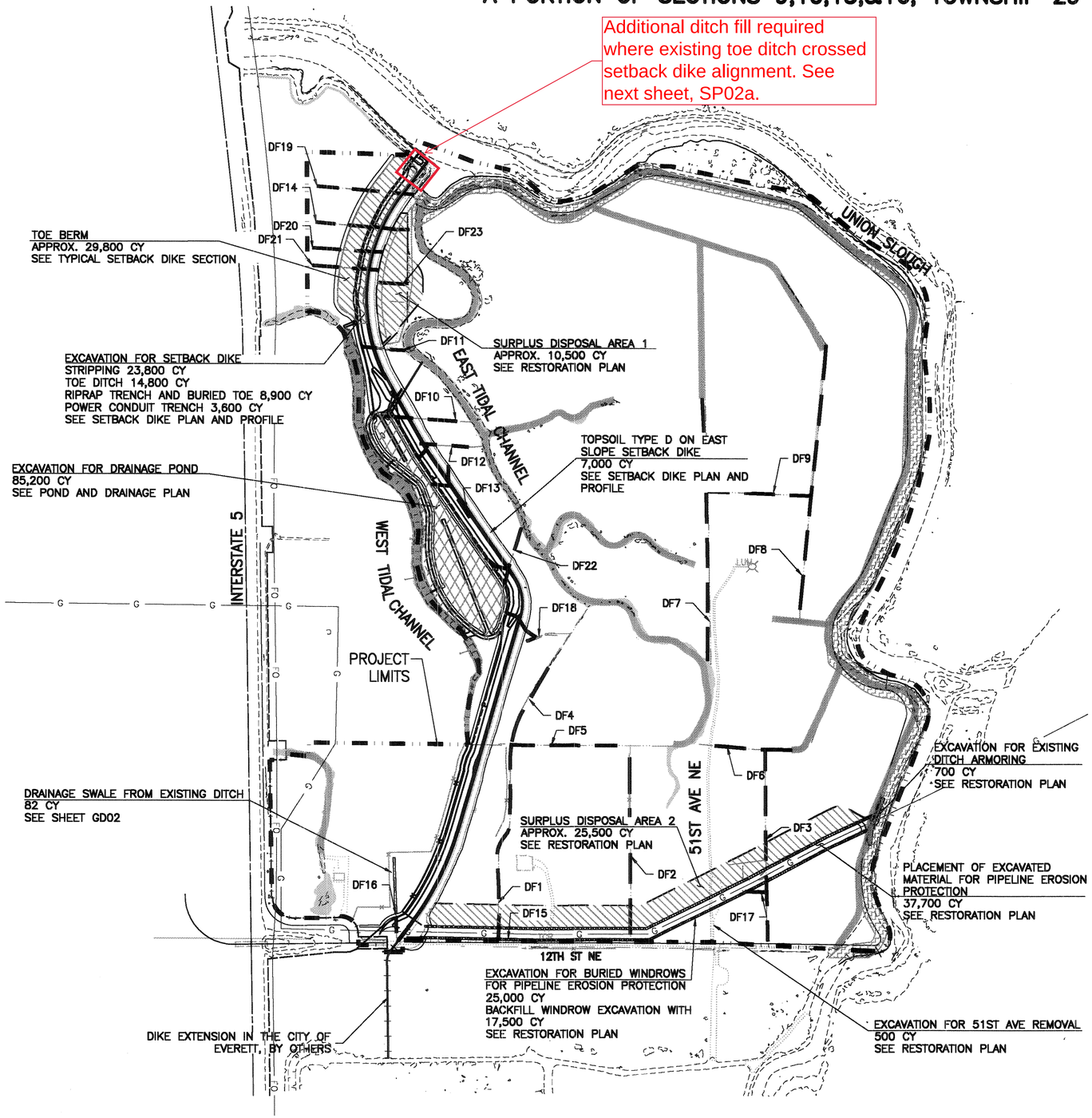
OVERALL SITE PLAN

REFERENCE SHEET NO. SP01
SHEET 6 OF 49 SHEETS

Plotted: May 06, 2015 — 4:48pm otak K:\project\31800\31852A\Dwg\Phase1\06_SP01.dwg Layout Name: SP01

XREF LIST
Lt.scale: 1
Resolved
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3784—PCHN
TTLBLK
GSLSEAL
3784—PDRN
3784—PRJL
3784—FROMGIS
Unresolved
3784—DTCH
3784—TOPO

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



LEGEND

- PROJECT LIMITS
- DITCH FILL
- DRAINAGE POND
- EXCESS MATERIAL DISPOSAL AREA
- NO ACCESS ONTO EXISTING DIKE

DF – DITCH FILL

REFERENCE NOTES:

1. SEE SHEET SP01 FOR OVERALL SITE PLAN.
2. SEE SHEETS EC01–EC05 FOR TEMPORARY EROSION AND SEDIMENT CONTROL AND CLEARING LIMITS.
3. SEE SHEETS PD01–PD02 FOR PIPELINE PROTECTION.
4. SEE SHEET XS01 AND XS02 FOR TYPICAL DIKE SECTIONS.
5. SEE SHEETS PP01–PP06 FOR DIKE PLAN AND PROFILE.
6. SEE SHEETS GD01–GD02 FOR SETBACK DIKE GRADING DETAILS.
7. SEE SHEETS SF01–SF11 FOR DRAINAGE POND, PUMP STATION AND DRAINAGE PIPES.
8. SEE SHEETS RP01–RP03 FOR RESTORATION PLAN.
9. SEE SHEETS GP01–GP02 FOR PARKING AREA.
10. SEE SHEET TC01 FOR TRAFFIC CONTROL.

EXCAVATION QUANTITIES

EXCAVATION AREAS	QUANTITIES (CY)
POND EXCAVATION INCL. HAUL	85,200
ROADWAY EXCAVATION INCL. HAUL	
STRIPPING BELOW SETBACK DIKE	23,800
SETBACK DIKE TOE DITCH	14,800
SETBACK DIKE RIPRAP TRENCH AND BURIED TOE	8,900
POWER CONDUIT TRENCH	3,600
EXCAVATION FOR BURIED WINDROWS FOR PIPELINE EROSION PROTECTION	25,000
EXISTING DITCH EXCAVATION FOR ARMORING	700
EXCAVATION FOR 51ST AVE REMOVAL	500
TOTAL (ROUNDED)	162,500
REQUIRED NON–STRUCTURAL EMBANKMENTS	
DITCH FILLS	
DF 1	2,131
DF 2	2,354
DF 3	1,648
DF 4	1,845
DF 5	1,784
DF 6	158
DF 7	4,126
DF 8	3,134
DF 9	1,845
DF 10*	151
DF 11*	–
DF 12*	149
DF 13*	–
DF 14*	201
DF 15	990
DF 16*	–
DF 17	98
DF 18	159
DF 19*	117
DF 20*	162
DF 21*	115
DF 22*	516
DF 23*	204
TOE BERM	29,800
BACKFILL WINDROW EXCAVATION	17,500
PIPELINE EROSION PROTECTION	37,700
TOPSOIL TYPE D	7,000
DRAINAGE SWALE FROM EXISTING DITCH	82
TOTAL (ROUNDED)	114,000
SURPLUS EXCAVATED MATERIAL DISPOSAL AREAS	
SURPLUS DISPOSAL AREA 1 – NORTH BENCH	10,500
SURPLUS DISPOSAL AREA 2 – BENCH NEAR PIPELINE	38,000
TOTAL	48,500

* A PORTION OF THIS DITCH SHALL BE FILLED WITH SETBACK DIKE MATERIAL UNDER THE SETBACK DIKE FOOTPRINT AND LANDWARD ACCESS ROAD. THE QUANTITY SHOWN IS FOR EXCAVATED MATERIAL PORTION ONLY AND DOES NOT INCLUDE SETBACK DIKE MATERIAL.

N

400 0 400 800
SCALE IN FEET

CALL BEFORE YOU DIG
1–800–424–5555

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 05, 2015 – 1:03pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12–0171–1

otak
HanmiGlobal Partner

GREGORY S. LAIRE — 25758 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

EXCAVATION SITE PLAN

REFERENCE SHEET NO. SP02
SHEET 7 OF 49 SHEETS

Plotted: May 06, 2015 – 4:49pm otak K:\project\31800\31852A\dwg\Phase1\07_SP02.dwg Layout Name: SP02

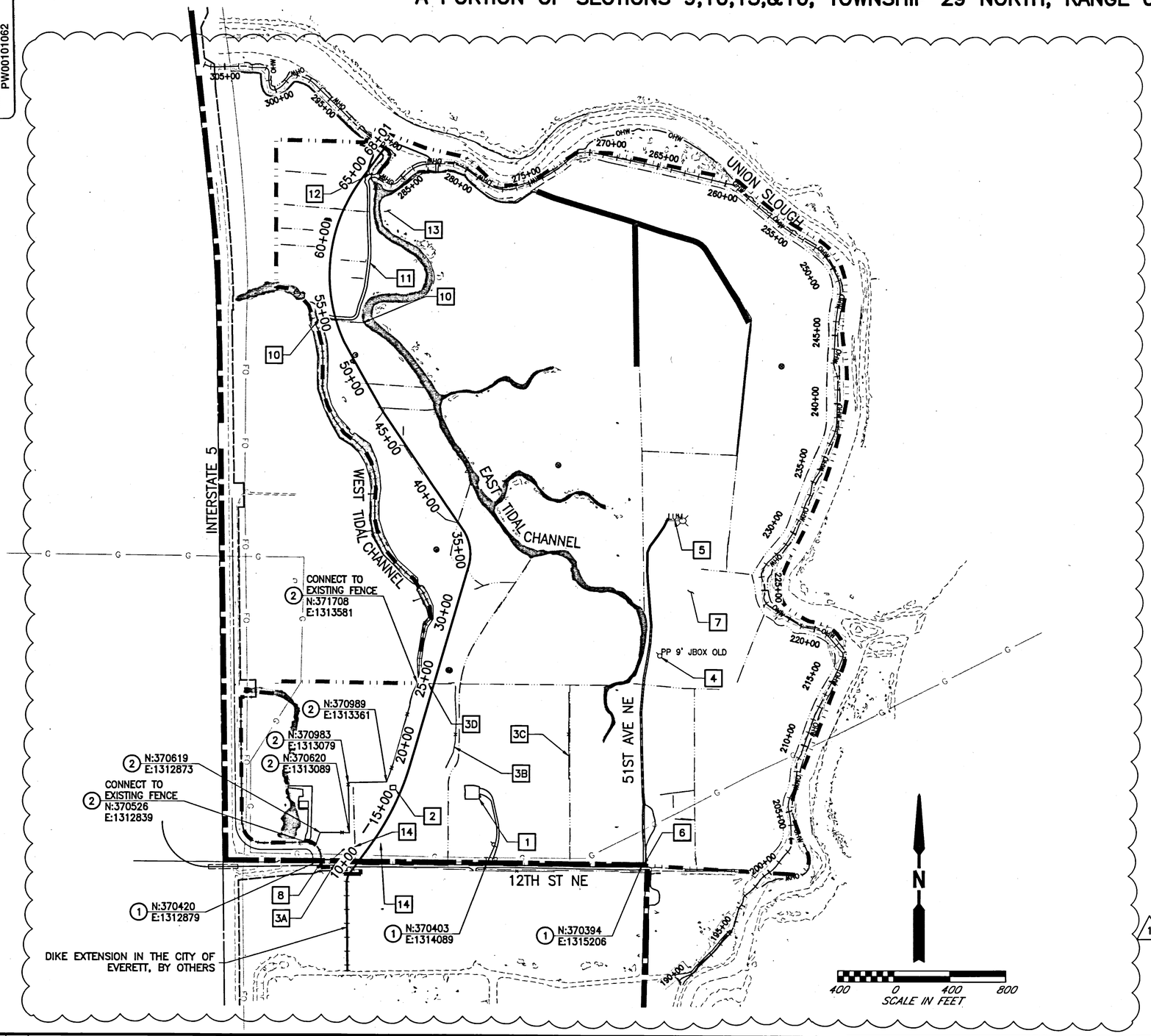


SP02a

XREF LIST
Ltscale: 1
Resolved
3784-BASE
TTLBLK
GSLSEAL
3784-TOPO
3784-PRJL
3784-DTCH
3784-PDRN
3784-PCHN
3784-FROMGIS
Unresolved
3784-GRDG

PW00101062

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



SITE PREPARATION GENERAL NOTES

1. PROTECT EXISTING GAS PIPELINE DURING CONSTRUCTION.
2. SEE SHEETS EC01–EC05 FOR TESC MEASURES TO BE IN PLACE PRIOR TO DEMOLITION.

DEMOLITION TABLE

NOTE	NORTHING/EASTING
1 REMOVE CONCRETE FOUNDATION	N: 370867.29 E: 1314032.82
2 REMOVE SHED AND FOUNDATION MATERIALS	N: 370963.05 E: 1313388.36
3A REMOVE FENCING	N: 371241.70 E: 1313849.80
3B REMOVE FENCING	N: 370396.88 E: 1312976.81
3C REMOVE FENCING	N: 370964.38 E: 1314809.51
3D REMOVE FENCING	N: 371699.31 E: 1313666.79
4 REMOVE POWER POLE AND JUNCTION BOX	N: 371902.86 E: 1315333.26
5 REMOVE POWER POLE AND LUMINAIRE	N: 372887.27 E: 1315400.64
6 REMOVE EXISTING ACCESS GATES	N: 370392.96 E: 1315217.67
7 REMOVE PILE OF CONCRETE RUBBLE	N: 372368.98 E: 1315549.08
8 REMOVE AND CAP EXISTING 2" WATERLINE	N:370403.33 E:1312881.26 (APPROX.)
9 NOT USED	N/A
10 REMOVE EXISTING PIPES	N: 374309.34 E: 1313186.56
11 REMOVE EXISTING GRAVEL ACCESS ROAD	N: 374783.04 E: 1313233.76
12 REMOVE EXISTING CULVERT	N: 375393.28 E: 1313238.36
13 REMOVE CAR BODY	N: 375144.13 E: 1313367.99 (APPROX.)
14 REMOVE PIPES AND MAN-MADE DEBRIS ENCOUNTERED BY EXCAVATING OBSERVATION TRENCHES ON BOTH SIDES OF SETBACK DIKE ALIGNMENT PER SHEET XS01 AND GD02	N/A

NOTES

1. INSTALL "NO TRESPASSING SIGN".
2. CONSTRUCT WIRE FENCE TYPE 2, PER WSDOT STD. PLAN L-10.10-02.

LEGEND

W OBSERVATION WELLS

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY
6/5/15	1	ADDENDUM NO. 2	DAS

Last Saved By: ahmedk Jun 08, 2015 – 9:40am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK | FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 6-10-15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
6/10/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

SITE PREPARATION PLAN

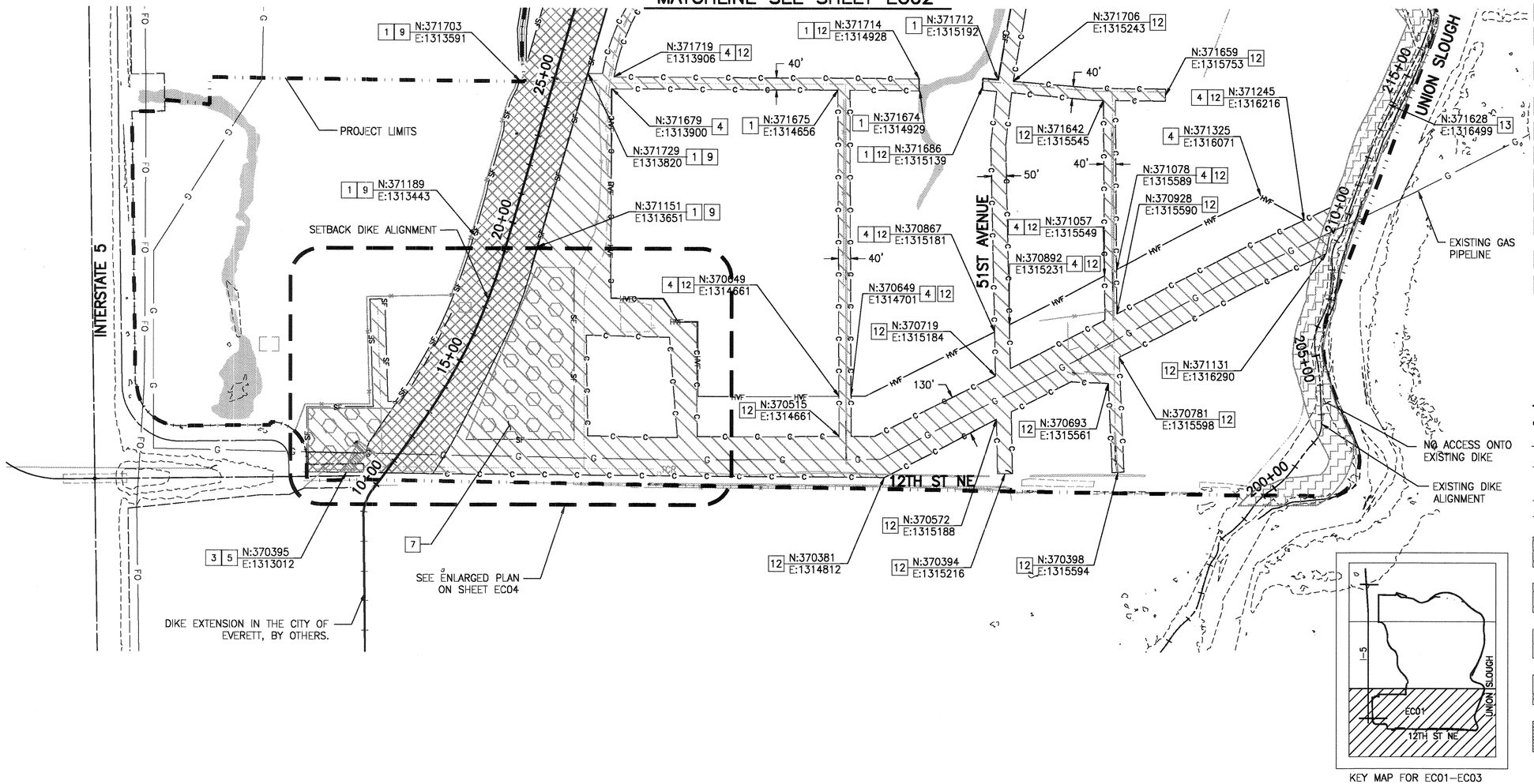
REFERENCE SHEET NO. SP03

SHEET 8 OF 49 SHEETS

Plotted: Jun 08, 2015 - 9:43am ahmedk K:\project\31800\31852A\Dwg\Phase1\08_SP03.dwg Layout Name: SP03

XREF LIST
Lscale: 1
Resolved
3784—TOPO
3784—BASE
TTLBLK
GSLSEAL
3784—PRJL
3784—FROMGIS
3784—ERSN
Unresolved
3784—PCHN
3784—DTCH
3784—PDRN

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



KEY MAP FOR EC01–EC03

TESC NOTES

1. INSTALL HIGH VISIBILITY SILT FENCE PER WSDOT STD PLAN I–30.17–00.
2. NOT USED.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE PER WSDOT STD PLAN I–80.10–01.
4. INSTALL HIGH VISIBILITY FENCE PER WSDOT STD PLAN I–10.10–01.
5. INSTALL WHEEL WASH.
6. NOT USED.
7. RECOMMENDED CONSTRUCTION STAGING AREA.
8. NOT USED.
9. CLEARING AND GRUBBING LIMITS.
10. INSTALL TEMPORARY GRAVEL BAG BERM PER DETAIL ON SHEET EC05.
11. NOT USED.
12. CLEARING LIMITS.

LEGEND

- PROJECT LIMITS
- C — C — CLEARING LIMITS
- CG — CLEARING AND GRUBBING LIMITS
- HVF — HIGH VISIBILITY FENCE
- SF — HIGH VISIBILITY SILT FENCE
- CLEARING AND GRUBBING
- CLEARING
- NO ACCESS ONTO EXISTING DIKE
- RECOMMENDED CONSTRUCTION STAGING AREA
- STABILIZED CONSTRUCTION ENTRANCE

TEMPORARY EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. THE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY GRADING OR EXTENSIVE LAND CLEARING IN ACCORDANCE WITH THE PLANS AND AS DIRECTED BY THE ENGINEER. THESE FACILITIES MUST BE SATISFACTORILY MAINTAINED UNTIL CONSTRUCTION AND LANDSCAPING ARE COMPLETED, AND SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION. SEDIMENT LADEN WATERS SHALL NOT ENTER THE NATURAL DRAINAGE SYSTEMS.
2. ALL TEMPORARY EROSION AND SEDIMENT CONTROL WORK SHALL BE CONSISTENT WITH PROJECT PERMITS AND THE SWPPP.
3. ALL CLEARING, GRUBBING, AND GRADING SHALL BE CONTAINED WITHIN THE LIMITS ESTABLISHED BY THE ENGINEER. ALL VEGETATION OUTSIDE DESIGNATED LIMITS SHALL REMAIN UNDISTURBED.

N

200 0 200 400
SCALE IN FEET

CALL BEFORE YOU DIG 1–800–424–5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk May 05, 2015 – 2:55pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12–0171–1

otak
HanmiGlobal Partner

GREGORY S. LAKEBRINK — STATE OF WASHINGTON — 25759 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

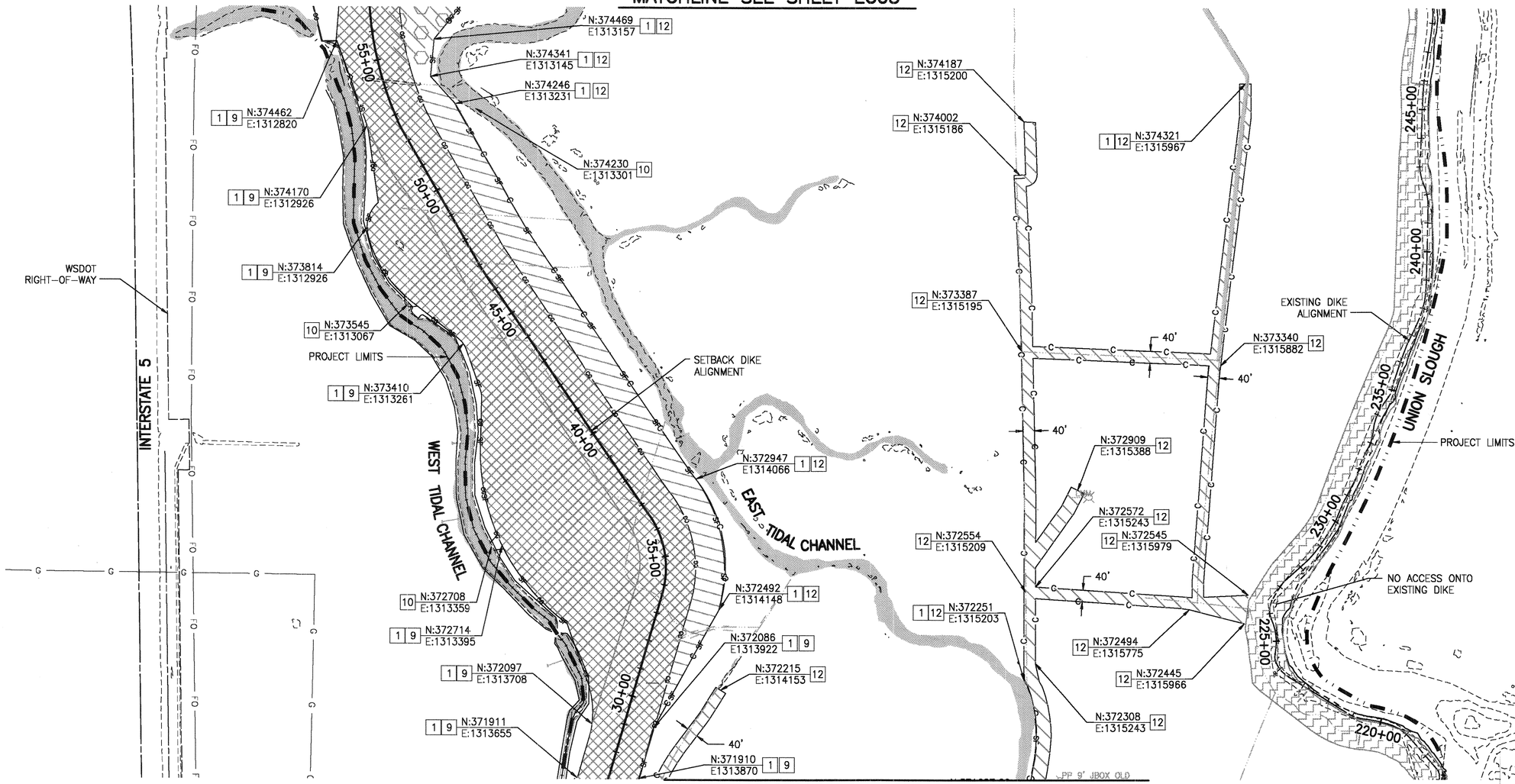
TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

REFERENCE SHEET NO. EC01
SHEET 9 OF 49 SHEETS

Plotted: May 06, 2015 – 4:31pm otak K:\project\31600\31852A\dwg\Phase1\09_EC01.dwg Layout Name: EC01

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3784—BASE
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GSLSEAL
3784—PRJL
Unresolved
3784—PCHN
3784—DTCH
3784—PDRN

MATCHLINE SEE SHEET EC03



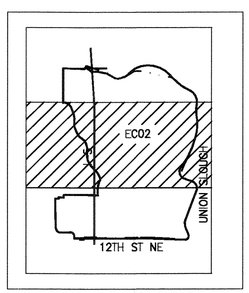
MATCHLINE SEE SHEET EC01

TESC NOTES

1. INSTALL HIGH VISIBILITY SILT FENCE PER WSDOT STD PLAN I—30.17—00.
2. NOT USED.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE PER WSDOT STD PLAN I—80.10—01.
4. INSTALL HIGH VISIBILITY FENCE PER WSDOT STD PLAN I—10.10—01.
5. INSTALL WHEEL WASH.
6. NOT USED.
7. RECOMMENDED CONSTRUCTION STAGING AREA.
8. NOT USED.
9. CLEARING AND GRUBBING LIMITS.
10. INSTALL TEMPORARY GRAVEL BAG BERM PER DETAIL ON SHEET EC05.
11. NOT USED.
12. CLEARING LIMITS.

LEGEND

- PROJECT LIMITS
- C — C — CLEARING LIMITS
- CG — CG — CLEARING AND GRUBBING LIMITS
- HV — HV — HIGH VISIBILITY FENCE
- SF — SF — HIGH VISIBILITY SILT FENCE
- CLEARING AND GRUBBING
- CLEARING
- NO ACCESS ONTO EXISTING DIKE
- RECOMMENDED CONSTRUCTION STAGING AREA
- STABILIZED CONSTRUCTION ENTRANCE



KEY MAP FOR EC01—EC03

N

200 0 200 400
SCALE IN FEET

CALL BEFORE YOU DIG
1—800—424—5555

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 04, 2015 — 9:04am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12—0171—1

otak
HanmiGlobal Partner

GREGORY S. LYLED — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

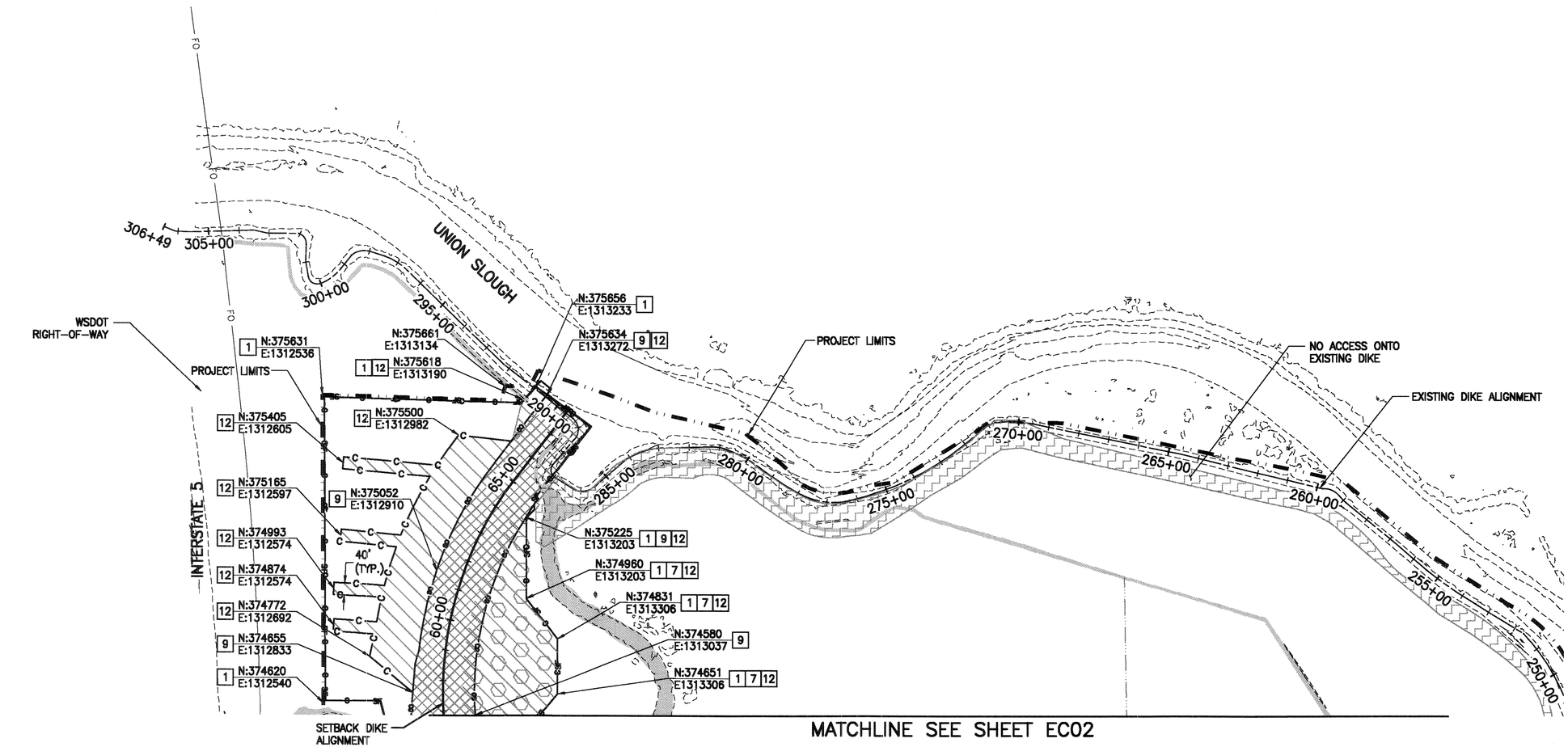
SMITH ISLAND ESTUARY RESTORATION

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

REFERENCE SHEET NO. EC02
SHEET 10 OF 49 SHEETS

Plotted: May 06, 2015 — 4:52pm otak K:\project\31800\31852A\Dwg\Phase1\10_EC02.dwg Layout Name: EC02

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GSLSEAL
3784-FROMGIS
3784-NOTES34
3784-CHNL

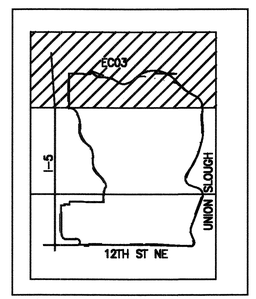


TESC NOTES

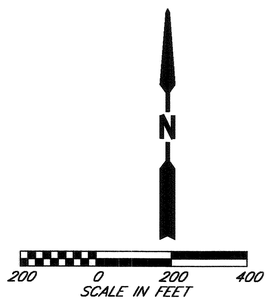
1. INSTALL HIGH VISIBILITY SILT FENCE PER WSDOT STD PLAN I-30.17-00.
2. NOT USED.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE PER WSDOT STD PLAN I-80.10-01.
4. INSTALL HIGH VISIBILITY FENCE PER WSDOT STD PLAN I-10.10-01.
5. INSTALL WHEEL WASH.
6. NOT USED.
7. RECOMMENDED CONSTRUCTION STAGING AREA.
8. NOT USED.
9. CLEARING AND GRUBBING LIMITS.
10. INSTALL TEMPORARY GRAVEL BAG BERM PER DETAIL ON SHEET EC05.
11. NOT USED.
12. CLEARING LIMITS.

LEGEND

- PROJECT LIMITS
- C — C — CLEARING LIMITS
- CG — CLEARING AND GRUBBING LIMITS
- HV — HIGH VISIBILITY FENCE
- SF — HIGH VISIBILITY SILT FENCE
- CLEARING AND GRUBBING
- CLEARING
- NO ACCESS ONTO EXISTING DIKE
- RECOMMENDED CONSTRUCTION STAGING AREA
- STABILIZED CONSTRUCTION ENTRANCE



KEY MAP FOR EC01-EC03



CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 06, 2015 - 1:17pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25756 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

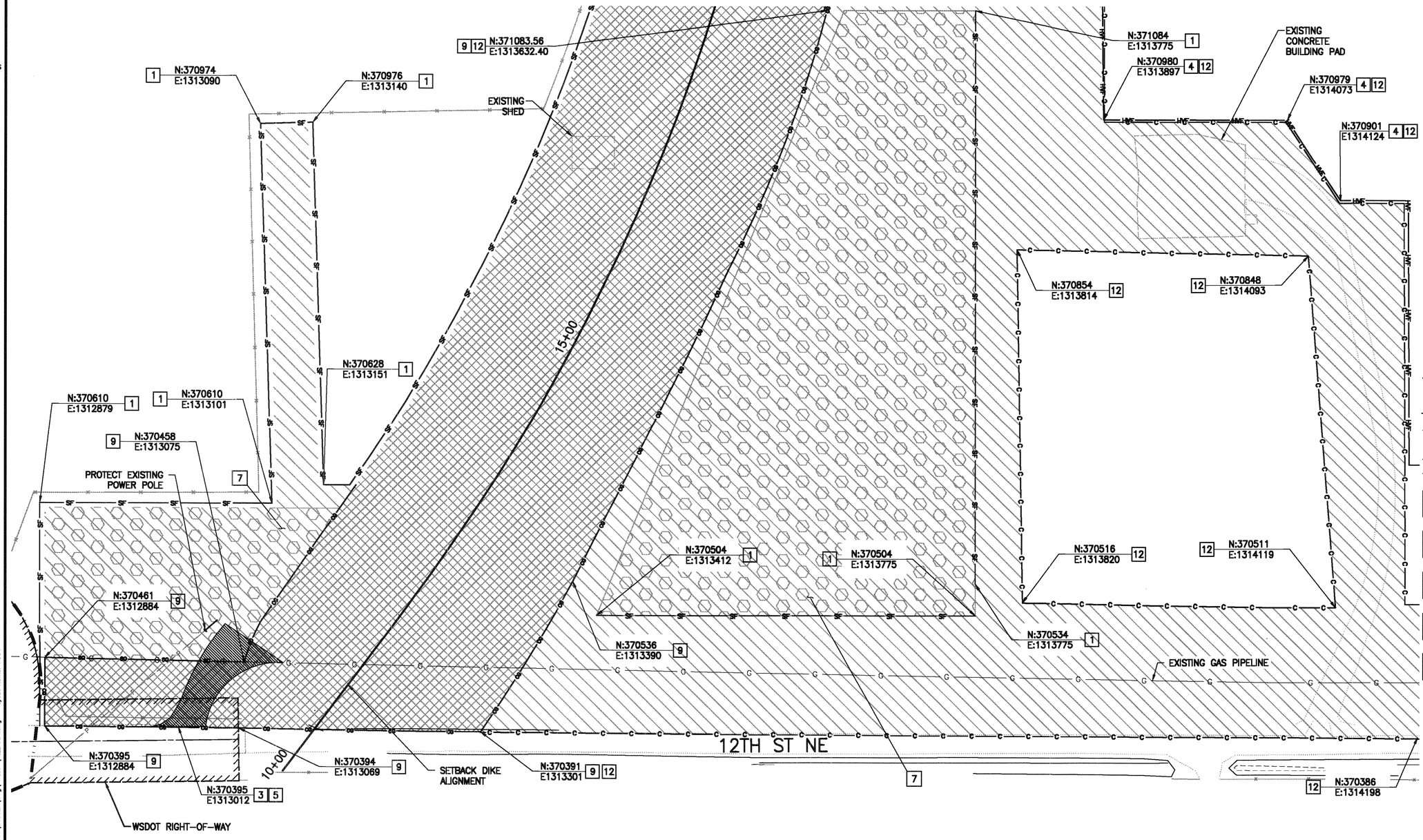
SMITH ISLAND ESTUARY RESTORATION

TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

REFERENCE SHEET NO. EC03
SHEET 11 OF 49 SHEETS

Plotted: May 06, 2015 - 4:53pm otak K:\project\31800\31852A\Dwg\Phase1\11_EC03.dwg Layout Name: EC03

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TTLBLK
GSLSEAL
3784--DTCH
3784--PDRN
3784--PRJL
3784--FROMGIS
Unresolved
3784--PCHN
3784--TOPO



ENLARGED PLAN -- CONSTRUCTION ENTRANCE AND STAGING AREA

TESC NOTES

1. INSTALL HIGH VISIBILITY SILT FENCE PER WSDOT STD PLAN I-30.17-00.
2. NOT USED.
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE PER WSDOT STD PLAN I-80.10-01.
4. INSTALL HIGH VISIBILITY FENCE PER WSDOT STD PLAN I-10.10-01.
5. INSTALL WHEEL WASH.
6. NOT USED.
7. RECOMMENDED CONSTRUCTION STAGING AREA.
8. NOT USED.
9. CLEARING AND GRUBBING LIMITS.
10. INSTALL TEMPORARY GRAVEL BAG BERM PER DETAIL ON SHEET EC05.
11. NOT USED.
12. CLEARING LIMITS.

LEGEND

- PROJECT LIMITS
- C C CLEARING LIMITS
- CG CLEARING AND GRUBBING LIMITS
- HV HIGH VISIBILITY FENCE
- SF HIGH VISIBILITY SILT FENCE
- CLEARING AND GRUBBING
- CLEARING
- NO ACCESS ONTO EXISTING DIKE
- RECOMMENDED CONSTRUCTION STAGING AREA
- STABILIZED CONSTRUCTION ENTRANCE

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 07, 2015 - 9:01am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12-0171-1

otak HanmiGlobal Partner

GREGORY S. LAIRD STATE OF WASHINGTON 25756 REGISTERED PROFESSIONAL ENGINEER 5-7-15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

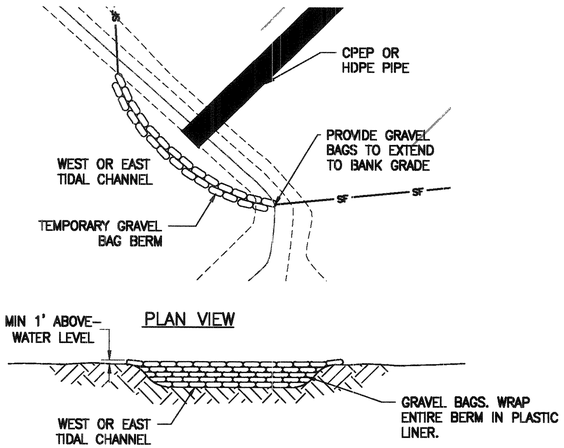
TEMPORARY EROSION AND SEDIMENT CONTROL PLAN

REFERENCE SHEET NO. EC04

SHEET 12 OF 49 SHEETS

Plotted: May 07, 2015 - 9:02am shannongr K:\project\131800\131852A\Dwg\Phase1\12_EC04.dwg Layout Name: EC04

XREF LIST
Lisccle: 1
Resolved
TTLBLK
GSLSEAL



NOTES

1. GRAVEL BAGS SHALL BE FILLED WITH STREAMBED SEDIMENT PER WSDOT SPEC. 9-03.11(1).
2. INITIAL ROW OF GRAVEL BAGS SHALL BE KEYED INTO THE GROUND SUCH THAT THEY MAKE TIGHT CONTACT WITH THE GROUND FOR THE LENGTH OF THE BERM.

ELEVATION VIEW

TEMPORARY GRAVEL BAG BERM

NTS

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk Apr 07, 2015 - 11:26am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY:	DRAWN BY:
GSL, DAS	AK
FIELD BOOK(S):	UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD
STATE OF WASHINGTON
25756
REGISTERED
PROFESSIONAL ENGINEER
5.7.15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND
ESTUARY RESTORATION

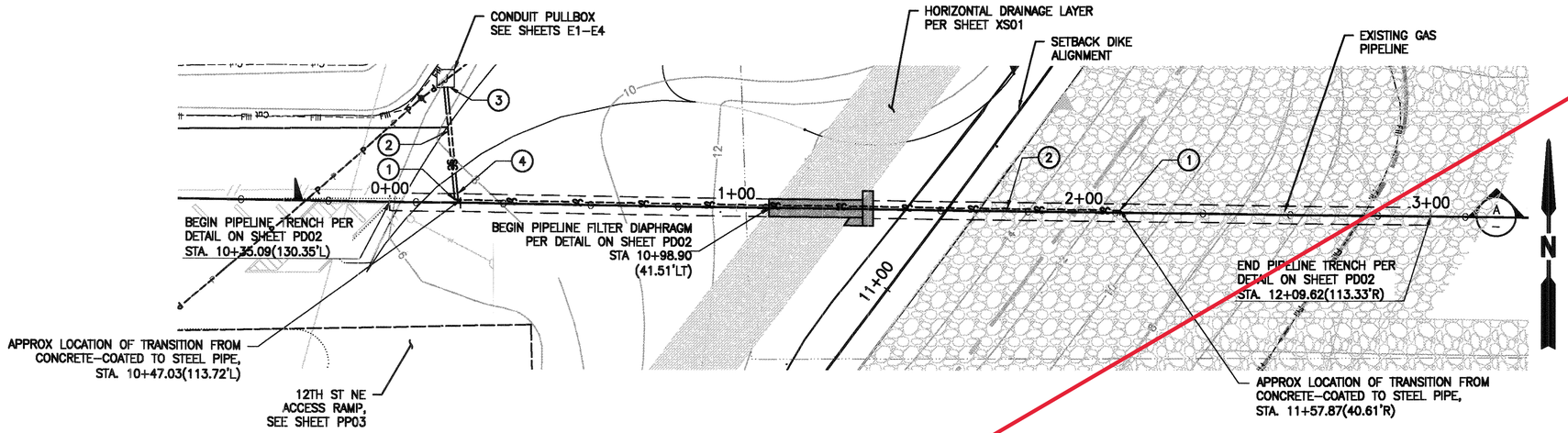
TEMPORARY EROSION AND
SEDIMENT CONTROL DETAILS

REFERENCE SHEET NO. EC05

SHEET 13 OF 49 SHEETS

Plotted: May 06, 2015 - 4:45pm otak K:\project\31800\31852A\Dwg\Phase1\13_EC05.dwg Layout Name: EC05

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



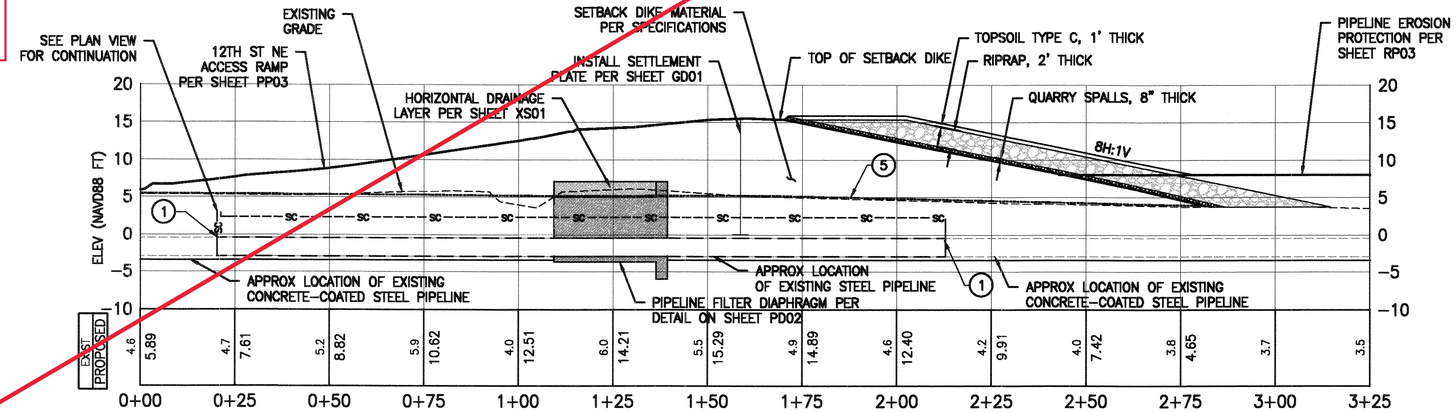
NOTES

1. APPROX. LOCATION OF STRAIN GAUGES INSTALLED BY OTHERS.
2. PROVIDE 1 INCH PVC CONDUIT FOR STRAIN GAUGE WIRES.
3. CONSTRUCT 1 INCH PVC CONDUIT TO CONDUIT PULLBOX.
4. CONSTRUCT CONDUIT TRENCH FOR STRAIN GAUGE WIRES PER SHEET PD02.
5. INSTALL CONSTRUCTION GEOSYNTHETIC FOR REINFORCEMENT BENEATH SETBACK DIKE MATERIAL PER SHEET XS01.

LEGEND

——sc—— PVC CONDUIT FOR STRAIN GAUGE WIRES

See revised sheet PD01 (next sheet) showing revisions to verified pipeline joint and strain gauge locations, and strain gauge conduit size.



SETBACK DIKE AT PIPELINE CROSSING SECTION (A)

H 20 0 20 40 SCALE IN FEET

V 10 0 10 20 SCALE IN FEET

CALL BEFORE YOU DIG 1–800–424–5555

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 06, 2015 – 11:06am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12–0171–1

otak HanmiGlobal Partner

GREGORY S. LATER — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5/15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

PIPELINE PROTECTION PLAN

REFERENCE SHEET NO. PD01

SHEET 14 OF 49 SHEETS

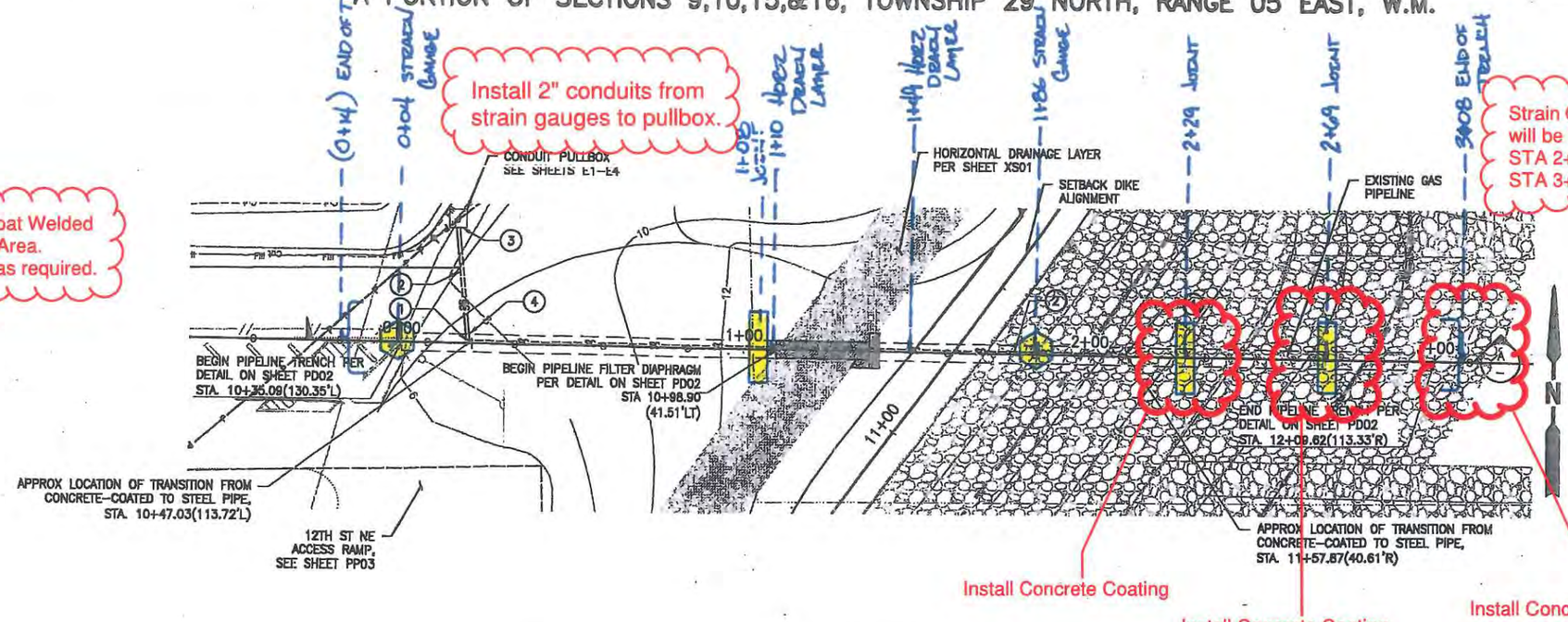
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A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.

Excavate and Coat Welded Joint in Parking Area. Repair Geogrid as required.

Install 2" conduits from strain gauges to pullbox.

Strain Gauges will be installed by others at STA 2+69 and STA 3+08

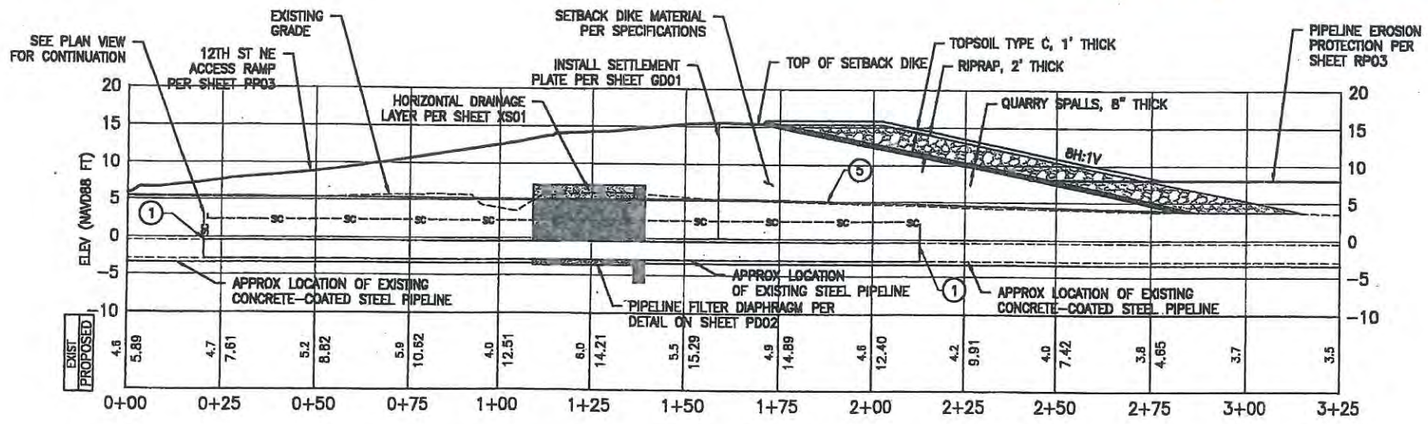


NOTES

1. APPROX. LOCATION OF STRAIN GAUGES INSTALLED BY OTHERS.
2. PROVIDE 1 INCH PVC CONDUIT FOR STRAIN GAUGE WIRES.
3. CONSTRUCT 1 INCH PVC CONDUIT TO CONDUIT PULLBOX.
4. CONSTRUCT CONDUIT TRENCH FOR STRAIN GAUGE WIRES PER SHEET PD02.
5. INSTALL CONSTRUCTION GEOSYNTHETIC FOR REINFORCEMENT BENEATH SETBACK DIKE MATERIAL PER SHEET XS01.

LEGEND

-----sc----- PVC CONDUIT FOR STRAIN GAUGE WIRES



SETBACK DIKE AT PIPELINE CROSSING SECTION (A)

AS BUILT JOINT LOCATIONS 5/31/16 Rev. 6/22/16

H 20 0 20 40 SCALE IN FEET

V 10 0 10 20 SCALE IN FEET

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 06, 2015 - 11:06am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12-0171-1

otak MunichGlobal Partner

GREGORY S. LAYER STATE OF WASHINGTON 38756 REGISTERED PROFESSIONAL ENGINEER 5/15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

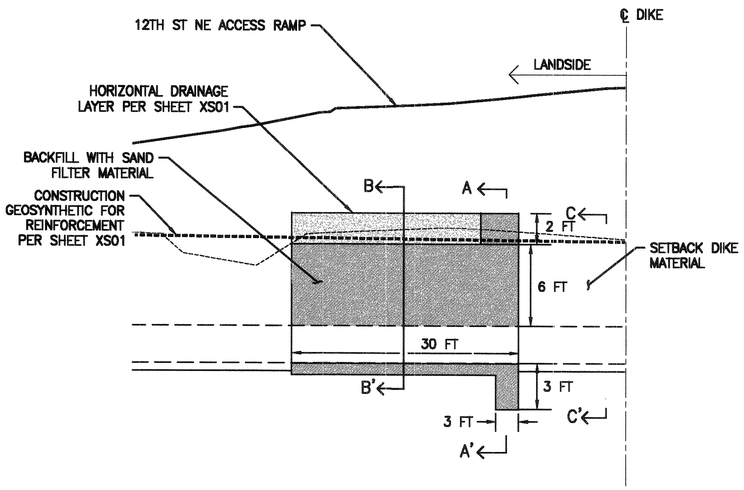
SMITH ISLAND ESTUARY RESTORATION

PIPELINE PROTECTION PLAN

REFERENCE SHEET NO. PD01

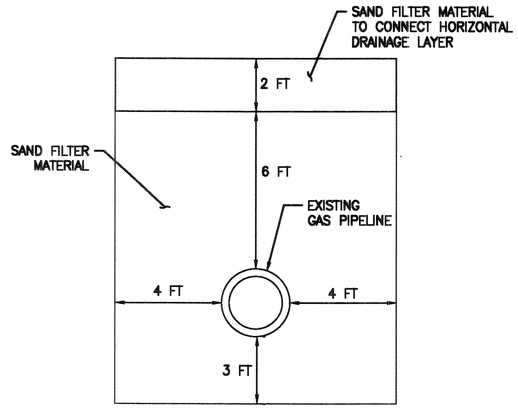
SHEET 14 OF 49 SHEETS

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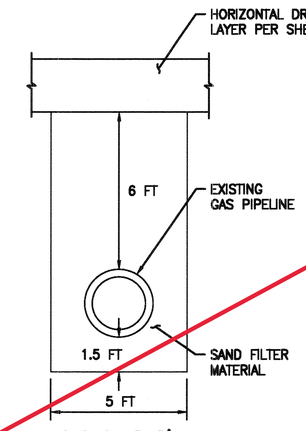


NOTES:
O.D. = OUTSIDE DIAMETER OF EXISTING GAS PIPELINE

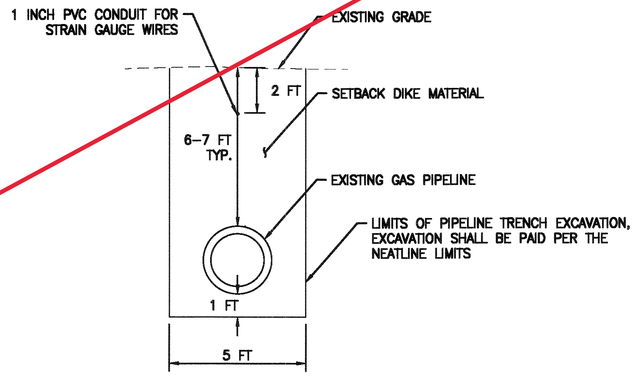
PIPELINE FILTER DIAPHRAGM
NTS



SECTION A–A'
NTS

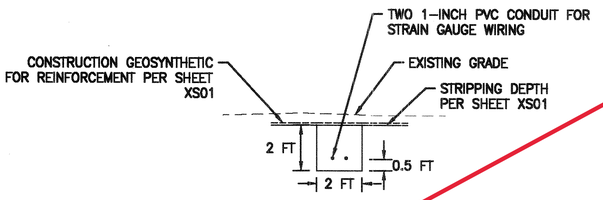


SECTION B–B'
NTS



SECTION C–C'
NTS

PIPELINE TRENCH
NTS



CONDUIT TRENCH FOR STRAIN GAUGE WIRES
NTS

See revised sheet PD02 (next sheet) showing revised conduit sizes.

CALL BEFORE YOU DIG
1–800–424–5555

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 06, 2015 – 11:06am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12–0171–1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 23758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

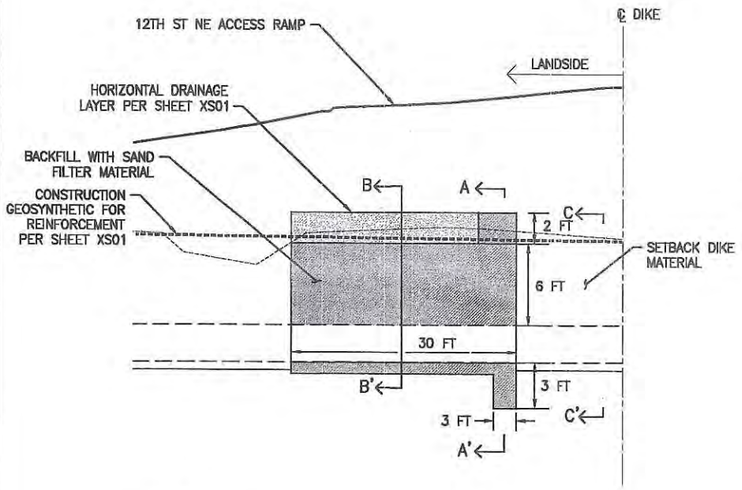
SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION
PIPELINE PROTECTION DETAILS

REFERENCE SHEET NO. PD02
SHEET 15 OF 49 SHEETS

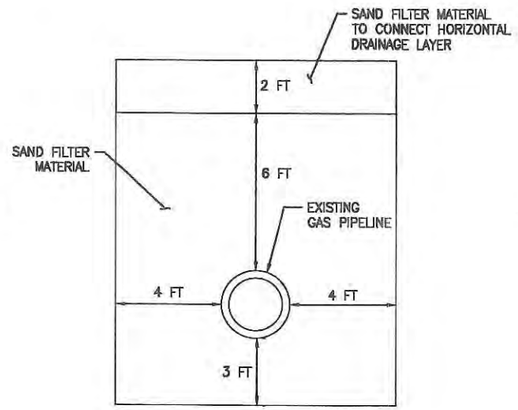
Plotted: May 06, 2015 – 5:13pm otak K:\project\31800\31852A\dwg\Phase1\15_PD02.dwg Layout Name: PD02

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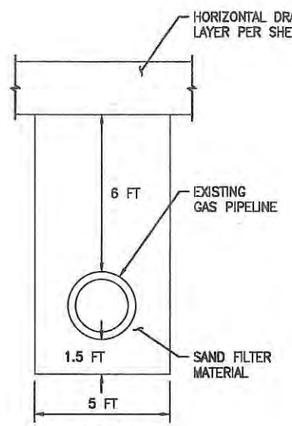


NOTES:
O.D. = OUTSIDE DIAMETER OF EXISTING GAS PIPELINE

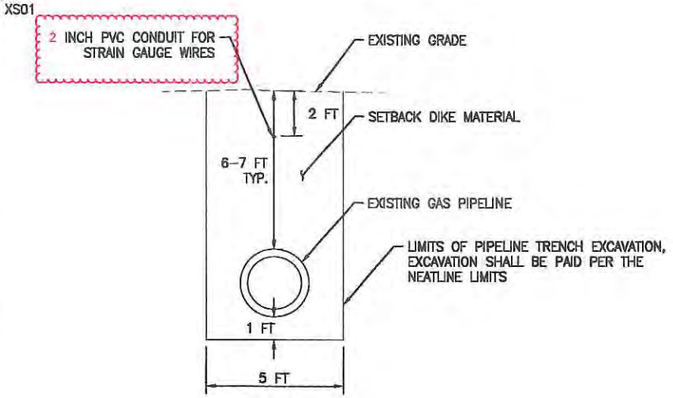
PIPELINE FILTER DIAPHRAGM
NTS



SECTION A–A'
NTS

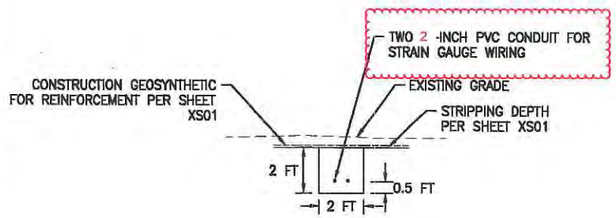


SECTION B–B'
NTS



SECTION C–C'
NTS

PIPELINE TRENCH
NTS



CONDUIT TRENCH FOR STRAIN GAUGE WIRES
NTS

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Last Saved By: shannongr May 06, 2015 – 11:06am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12–0171–1

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GREGORY S. LAIRD — STATE OF WASHINGTON — 22375 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

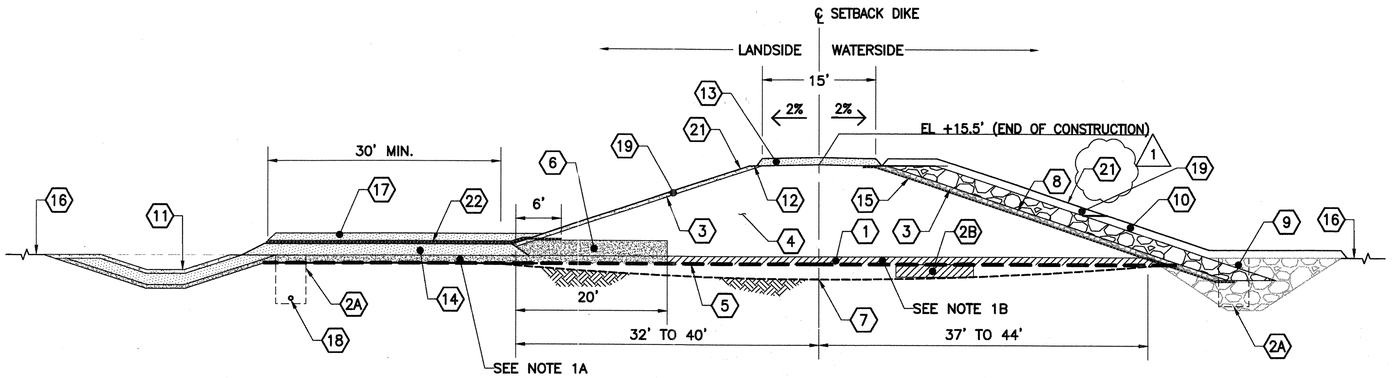
REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION
PIPELINE PROTECTION DETAILS

REFERENCE SHEET NO. PD02
SHEET 15 OF 49 SHEETS

Plotted: May 06, 2015 – 5:13pm otak K:\project\31800\31852A\Dwg\Phase1\15_PD02.dwg Layout Name: PD02

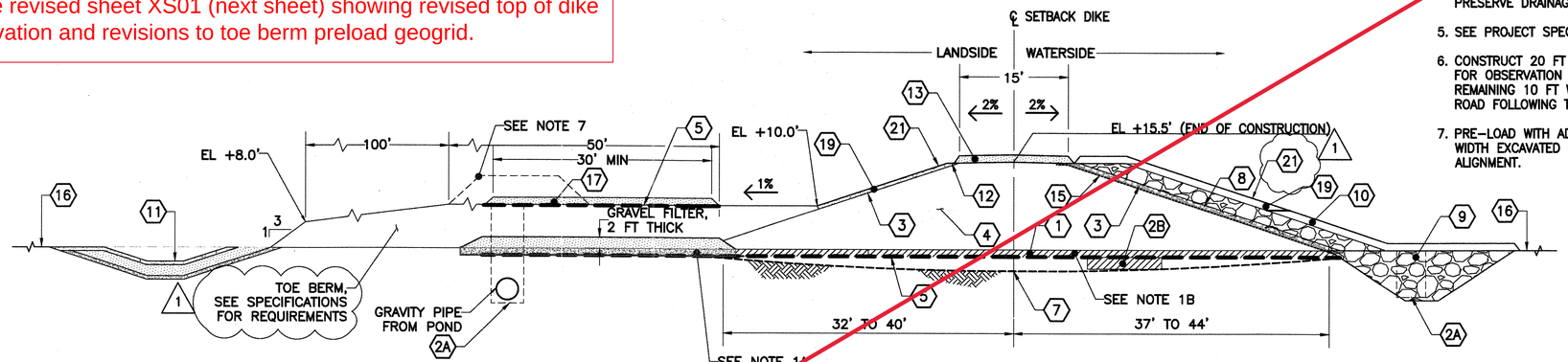


TYPICAL SETBACK DIKE SECTION – STA 10+00 TO STA 57+00

NTS

1 PP01

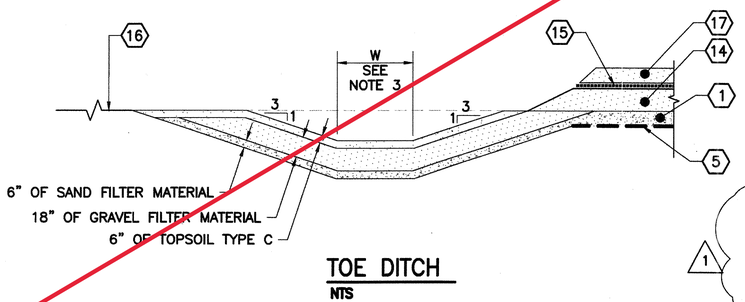
See revised sheet XS01 (next sheet) showing revised top of dike elevation and revisions to toe berm preload geogrid.



TYPICAL SETBACK DIKE WITH TOE BERM SECTION – STA 57+00 TO STA 68+00

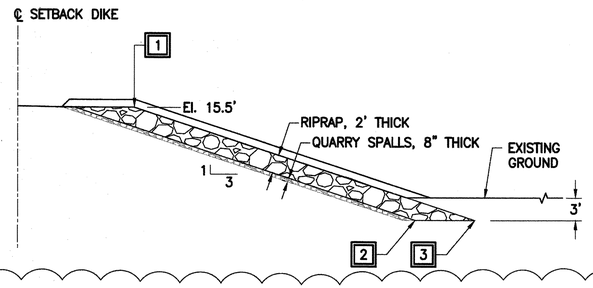
NTS

2 PP02

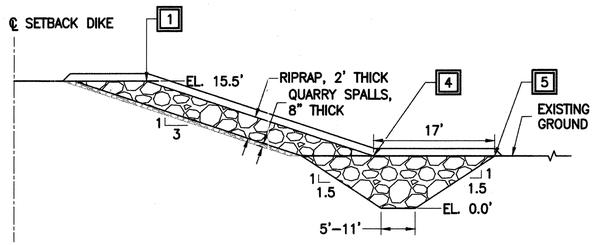


TOE DITCH

NTS



RIPRAP BURIED TOE – STA 10+00 TO STA 49+50



RIPRAP TRENCH – STA 49+50 TO STA 65+50

NOTE: SEE SHEET XS02 FOR RIPRAP EROSION PROTECTION AT EXISTING DIKE – STA 65+50 TO STA 68+00

RIPRAP EROSION PROTECTION

NTS

RIPRAP NOTES:

1. TOP FRONT EDGE
2. BURIED TOE BOTTOM BACK EDGE
3. BURIED TOE BOTTOM FRONT EDGE
4. RIPRAP TRENCH SLOPE BREAK
5. RIPRAP TRENCH FRONT EDGE

NOTES

1. BACKFILL EXCAVATED STRIPPING DEPTH WITH:
   - A. SAND FILTER MATERIAL BENEATH LANDSIDE ACCESS ROAD AND THE HORIZONTAL DRAINAGE LAYER.
   - B. SETBACK DIKE MATERIAL BENEATH THE SETBACK DIKE FOOTPRINT, EXCEPT AS NOTED ABOVE.
2. RIPRAP EROSION PROTECTION SHALL BE:
   - A. RIPRAP BURIED TOE BETWEEN STATIONS 10+00 AND 49+50.
   - B. RIPRAP TRENCH BETWEEN STATIONS 49+50 AND 68+00.
3. DITCH WIDTH (W) IS BOTTOM WIDTH OF DITCH. DITCH BOTTOM FINISHED GRADE SHALL BE AT ELEV +2.0 FEET. DITCH WIDTH SHALL BE AS FOLLOWS:
   - A. 5 FT BOTTOM WIDTH BETWEEN STATIONS 10+65 AND 32+00.
   - B. 9 FT BOTTOM WIDTH BETWEEN STATIONS 50+00 AND 68+00.
4. FOR STA 10+00 TO STA 57+00, THE LANDSIDE ACCESS ROAD CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION, AND CONSTRUCTION GEOSYNTHETIC FOR REINFORCEMENT SHALL BE IN PLACE BEFORE THE ROADWAY IS USED FOR SITE ACCESS OR CONSTRUCTION PURPOSES TO PRESERVE DRAINAGE LAYER.
5. SEE PROJECT SPECIFICATIONS FOR MATERIALS.
6. CONSTRUCT 20 FT WIDTH LANDSIDE ACCESS ROAD FOR OBSERVATION TRENCH EXCAVATION, AND REMAINING 10 FT WIDTH OF LANDSIDE ACCESS ROAD FOLLOWING TRENCH BACKFILL.
7. PRE-LOAD WITH ADDITIONAL 3 FT DEPTH, 24 FT WIDTH EXCAVATED MATERIAL OVER GRAVITY PIPE ALIGNMENT.

CONSTRUCTION NOTES:

1. EXCAVATE STRIPPING DEPTH BELOW SETBACK DIKE AND LANDSIDE ACCESS ROAD (10 INCH DEPTH) (SEE NOTE 1).
2A. CONSTRUCT TEMPORARY OBSERVATION TRENCH PER DETAIL ON SHEET GD02.
2B. SUBSURFACE REPAIR AT LOCATIONS IDENTIFIED BY ENGINEER.
3. SEE SHEET XS02 FOR GRADING TABLE AND SIDE SLOPES.
4. DIKE CORE, SETBACK DIKE MATERIAL.
5. INSTALL CONSTRUCTION GEOSYNTHETIC FOR REINFORCEMENT.
6. INSTALL HORIZONTAL DRAINAGE LAYER SAND FILTER MATERIAL (THICKNESS = 2 FT. PLUS 10 INCH STRIPPING DEPTH).
7. DIKE CORE SETBACK DIKE MATERIAL EXPECTED TO CONSOLIDATE NATIVE SOILS BY A DEPTH OF UP TO 3 FT AT DIKE CENTERLINE.
8. INSTALL QUARRY SPALLS (8" THICK).
9. CONSTRUCT RIPRAP EROSION PROTECTION PER DETAIL, THIS SHEET.
10. TOPSOIL TYPE D (EXCAVATED MATERIAL) BELOW ELEV 9 FT ON WATERSIDE (1 FT MIN. COMPACTED AND FINISHED DEPTH).
11. CONSTRUCT TOE DITCH PER DETAIL, THIS SHEET.
12. DIKE FILL FINAL GRADE.
13. CONSTRUCT TOP OF DIKE ROAD SURFACING WITH GRAVEL FILTER (0.5 FT MIN COMPACTED AND FINISHED DEPTH).
14. CONSTRUCT GRAVEL FILTER LAYER (1.0 FT MIN. COMPACTED AND FINISHED DEPTH). (SEE NOTE 6).
15. INSTALL CONSTRUCTION GEOTEXTILE FOR PERMANENT EROSION CONTROL.
16. EXISTING GRADE.
17. CONSTRUCT LANDSIDE ACCESS ROAD WITH GRAVEL FILTER (1.0 FT MIN. COMPACTED AND FINISHED DEPTH). (SEE NOTE 6).
18. CONSTRUCT POWER CONDUIT TRENCH PER SHEET GD02.
19. TOPSOIL TYPE C (1 FT MIN COMPACTED AND FINISHED DEPTH).
20. NOT USED.
21. SEEDING AND MULCHING, SEED WITH LOWLAND SEED MIX.
22. CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION.

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DATE	NO.	REVISION	BY
6/5/15	1	ADDENDUM NO. 2	DAS

Last Saved By: ahmedk Jun 04, 2015 – 3:32pm

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10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12-0171-1

otak Hanmi Global Partner

GREGORY S. LAIRD STATE OF WASHINGTON 25758 REGISTERED PROFESSIONAL ENGINEER 6/10/15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
6/10/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

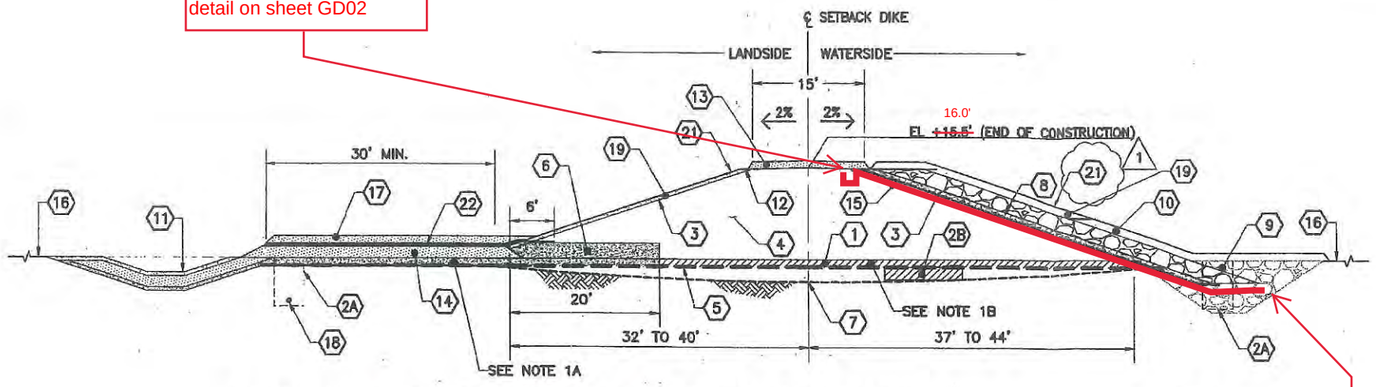
TYPICAL SETBACK DIKE SECTIONS

REFERENCE SHEET NO. XS01

SHEET 16 OF 49 SHEETS

Plotted: Jun 04, 2015 – 3:47pm otak \\Kirkne01\proj\project\31800\31852A\Dwg\Phase1\16_XS01.DWG Layout Name: XS01

CN 15 - Fabric keyed in per detail on sheet GD02

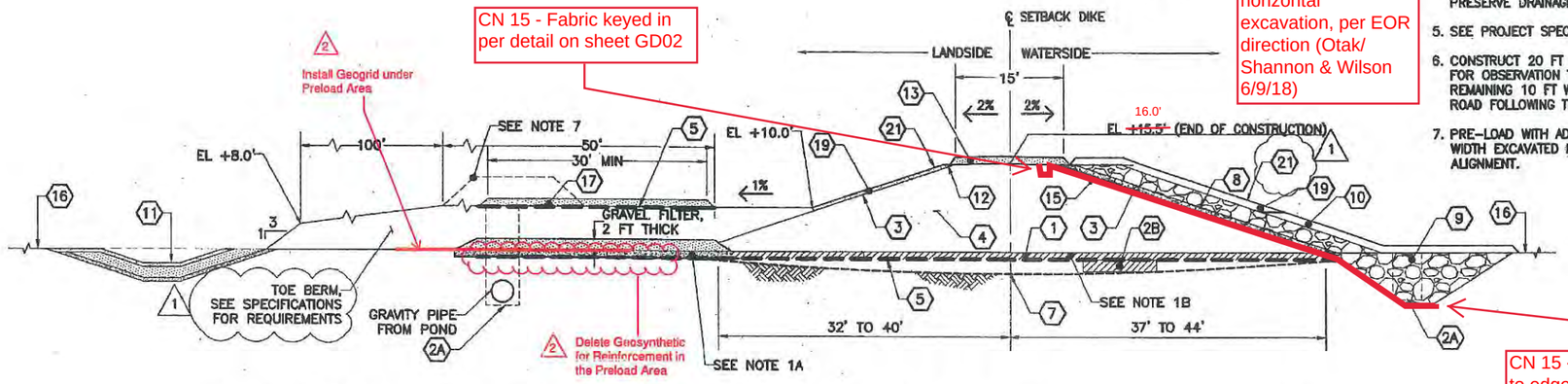


TYPICAL SETBACK DIKE SECTION – STA 10+00 TO STA 57+00
NTS

1 PP01

CN 15 - Fabric extended to edge of horizontal excavation, per EOR direction (Otak/ Shannon & Wilson 6/9/18)

CN 15 - Fabric keyed in per detail on sheet GD02



TYPICAL SETBACK DIKE WITH TOE BERM SECTION – STA 57+00 TO STA 68+00
NTS

2 PP02

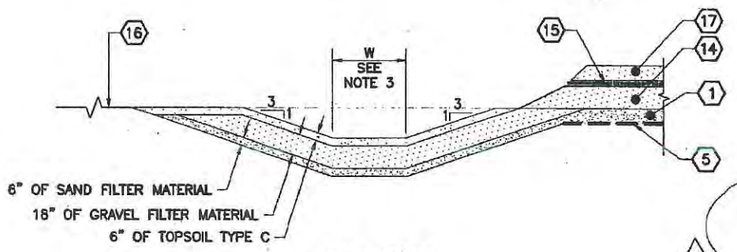
CN 15 - Fabric extended to edge of horizontal excavation, per EOR direction (Otak/Shannon & Wilson 6/9/18)

NOTES

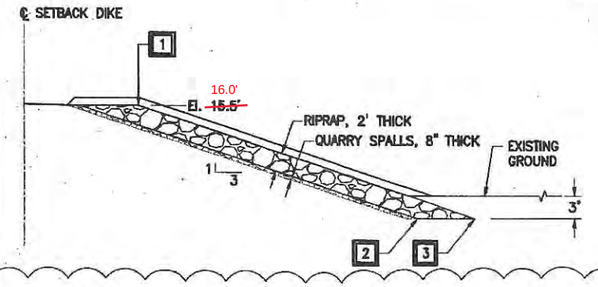
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4. FOR STA 10+00 TO STA 57+00, THE LANDSIDE ACCESS ROAD, CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION, AND CONSTRUCTION GEOSYNTHETIC FOR REINFORCEMENT SHALL BE IN PLACE BEFORE THE ROADWAY IS USED FOR SITE ACCESS OR CONSTRUCTION PURPOSES TO PRESERVE DRAINAGE LAYER.
5. SEE PROJECT SPECIFICATIONS FOR MATERIALS.
6. CONSTRUCT 20 FT WIDTH LANDSIDE ACCESS ROAD FOR OBSERVATION TRENCH EXCAVATION, AND REMAINING 10 FT WIDTH OF LANDSIDE ACCESS ROAD FOLLOWING TRENCH BACKFILL.
7. PRE-LOAD WITH ADDITIONAL 3 FT DEPTH, 24 FT WIDTH EXCAVATED MATERIAL OVER GRAVITY PIPE ALIGNMENT.

CONSTRUCTION NOTES:

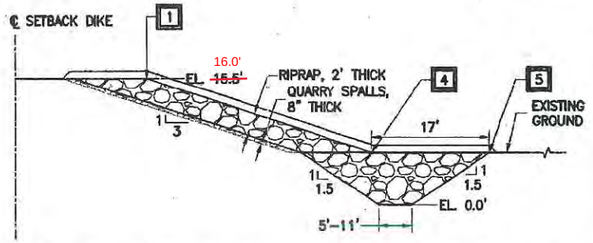
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15. INSTALL CONSTRUCTION GEOTEXTILE FOR PERMANENT EROSION CONTROL.
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17. CONSTRUCT LANDSIDE ACCESS ROAD WITH GRAVEL FILTER (1.0 FT MIN. COMPACTED AND FINISHED DEPTH). (SEE NOTE 6).
18. CONSTRUCT POWER CONDUIT TRENCH PER SHEET GD02.
19. TOPSOIL TYPE C (1 FT MIN COMPACTED AND FINISHED DEPTH).
20. NOT USED.
21. SEEDING AND MULCHING, SEED WITH LOWLAND SEED MIX.
22. CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION.



TOE DITCH
NTS



RIPRAP BURIED TOE – STA 10+00 TO STA 49+50



RIPRAP TRENCH – STA 49+50 TO STA 65+50

NOTE: SEE SHEET XS02 FOR RIPRAP EROSION PROTECTION AT EXISTING DIKE – STA 65+50 TO STA 68+00

RIPRAP EROSION PROTECTION
NTS

RIPRAP NOTES:

1. TOP FRONT EDGE
2. BURIED TOE BOTTOM BACK EDGE
3. BURIED TOE BOTTOM FRONT EDGE
4. RIPRAP TRENCH SLOPE BREAK
5. RIPRAP TRENCH FRONT EDGE

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6/5/15	1	ADDENDUM NO. 2	DAS

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DESIGNED BY: GSL, DAS | DRAWN BY: AK | FIELD BOOK(S): | UPI# 12-0171-1

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REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
6/10/15
DATE APPROVED:

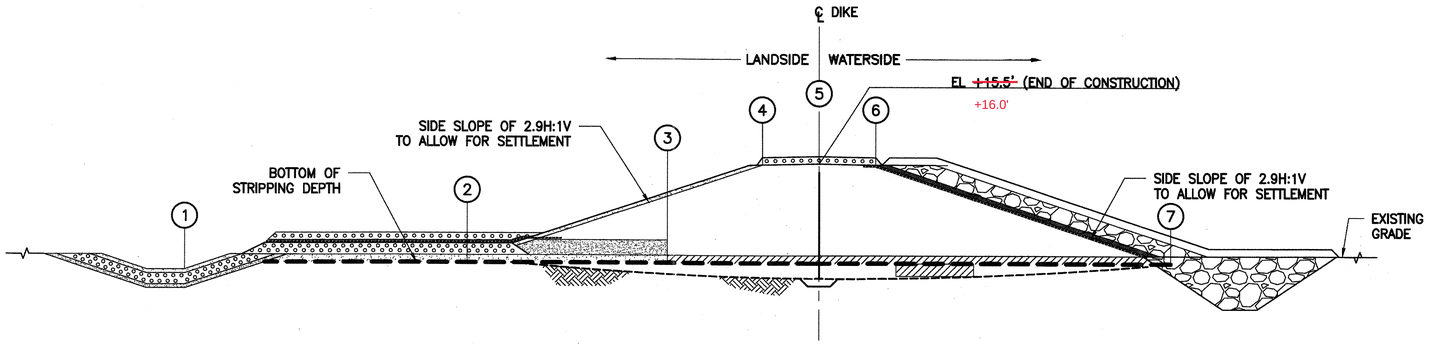
SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

TYPICAL SETBACK DIKE SECTIONS

REFERENCE SHEET NO. XS01
SHEET 16 OF 49 SHEETS

Plotted: Jun 04, 2015 – 3:47pm otak \\Kirkso1\proj\project\J1600\J1692A\dwg\Phase1\16_XS01.DWG Layout Name: XS01



SETBACK DIKE SECTION GRADING POINTS
N.T.S.

GENERAL NOTES

SETBACK DIKE CORE SHALL HAVE SIDE SLOPES OF 2.9H:1V TO ALLOW FOR SETTLEMENT TO 3H:1V SIDE SLOPES. SETBACK DIKE SECTION GRADING POINTS ARE PROVIDED TO CONTROL DIKE TOES TO MEET SLOPE REQUIREMENTS, AND CONTROL HORIZONTAL DRAINAGE LAYER AND TOE DITCH LOCATIONS.

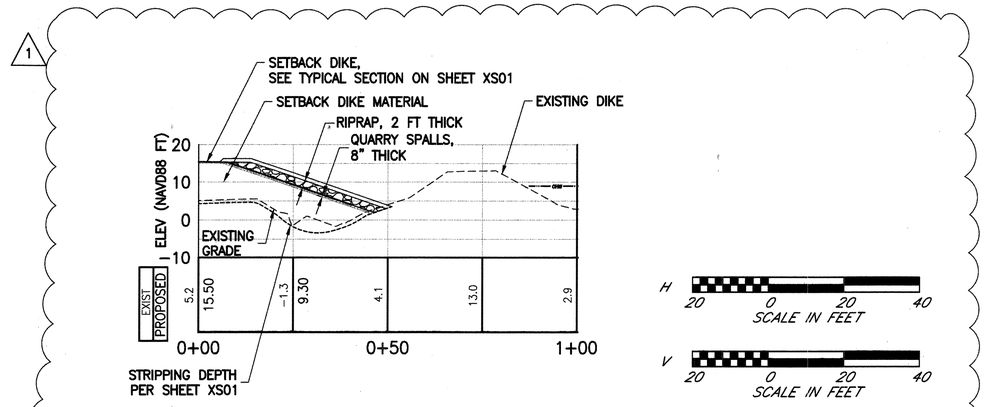
SETBACK DIKE SECTION GRADING NOTES

DIKE SECTION GRADING POINTS ARE AS FOLLOWS:

1. FINISHED GRADE AT BOTTOM EDGE OF TOE DITCH.
2. REFERENCE POINT AT BOTTOM OF STRIPPING DEPTH FOR DETERMINING DIKE CORE SIDE SLOPE TO POINT (4).
3. INTERIOR EDGE OF HORIZONTAL DRAINAGE LAYER.
4. LANDSIDE TOP EDGE OF DIKE CORE MATERIAL (END OF CONSTRUCTION).
5. TOP OF SETBACK DIKE CORE MATERIAL AT CENTERLINE. (END OF CONSTRUCTION).
6. WATER SIDE TOP EDGE OF DIKE CORE MATERIAL (END OF CONSTRUCTION).
7. REFERENCE POINT AT BOTTOM OF STRIPPING DEPTH FOR DETERMINING DIKE CORE SIDE SLOPE TO POINT (6).

SETBACK DIKE SECTION GRADING TABLE

STATION	POINT (1)	POINT (2)	POINT (3)	POINT (4)		POINT (5)	POINT (6)		POINT (7)
	OFFSET	OFFSET	OFFSET	OFFSET	ELEV	ELEV	OFFSET	ELEV	OFFSET
12+00	94.14'L	90.54'L	62.34'L	7.50'L	15.35	15.50	7.50'R	15.35	99.83'R
14+00	83.04'L	44.11'L	15.91'L	7.50'L	15.35	15.50	7.50'R	15.35	45.34'R
16+00	83.07'L	38.86'L	10.66'L	7.50'L	15.35	15.50	7.50'R	15.35	38.91'R
18+00	83.07'L	42.80'L	14.60'L	7.50'L	15.35	15.50	7.50'R	15.35	45.81'R
20+00	83.03'L	45.42'L	17.22'L	7.50'L	15.35	15.50	7.50'R	15.35	44.93'R
22+00	83.08'L	43.07'L	14.87'L	7.50'L	15.35	15.50	7.50'R	15.35	44.79'R
24+00	84.48'L	43.54'L	15.34'L	12.00'L	15.35	15.50	7.50'R	15.35	35.81'R
26+00	80.01'L	40.95'L	12.75'L	7.50'L	15.35	15.50	7.50'R	15.35	42.39'R
28+00	81.06'L	41.08'L	12.88'L	7.50'L	15.35	15.50	7.50'R	15.35	39.73'R
30+00	82.11'L	42.57'L	14.37'L	7.50'L	15.35	15.50	7.50'R	15.35	41.22'R
32+00	88.15'L	42.03'L	13.83'L	7.50'L	15.35	15.50	7.50'R	15.35	45.10'R
34+00	N/A	63.47'L	35.27'L	25.04'L	15.35	15.50	7.50'R	15.35	42.14'R
36+00	N/A	45.41'L	17.21'L	7.50'L	15.35	15.50	7.50'R	15.35	43.44'R
38+00	N/A	46.12'L	17.92'L	7.50'L	15.35	15.50	7.50'R	15.35	45.45'R
40+00	N/A	43.25'L	15.05'L	7.50'L	15.35	15.50	7.50'R	15.35	42.90'R
42+00	N/A	44.37'L	16.17'L	7.50'L	15.35	15.50	7.50'R	15.35	44.11R
44+00	N/A	46.37'L	18.17'L	7.50'L	15.35	15.50	7.50'R	15.35	43.87'R
46+00	N/A	42.19'L	13.99'L	7.50'L	15.35	15.50	7.50'R	15.35	42.93'R
48+00	N/A	43.19'L	14.99'L	7.50'L	15.35	15.50	7.50'R	15.35	43.91'R
50+00	N/A	41.99'L	13.79'L	7.50'L	15.35	15.50	7.50'R	15.35	44.87'R
52+00	134.98'L	58.58'L	30.38'L	27.50'L	15.35	15.50	7.50'R	15.35	41.08'R
54+00	83.64'L	43.24'L	15.04'L	7.50'L	15.35	15.50	7.50'R	15.35	42.73R
56+00	83.75'L	43.32'L	15.12'L	7.50'L	15.35	15.50	7.50'R	15.35	43.28'R
58+00	194.82'L	50.64'L	N/A	15.04'L	15.35	15.50	7.50'R	15.35	41.77'R
60+00	196.33'L	43.52'L	N/A	7.50'L	15.35	15.50	7.50'R	15.35	40.18'R
62+00	196.44'L	43.93'L	N/A	7.50'L	15.35	15.50	7.50'R	15.35	43.93'R
64+00	196.60'L	43.89'L	N/A	7.50'L	15.35	15.50	7.50'R	15.35	43.42'R
66+00	198.43'L	41.66'L	N/A	7.50'L	15.35	15.50	7.50'R	15.35	43.17'R
					15.85	16.00		15.85	



NOTE: SEE SHEET XS01 FOR RIPRAP EROSION PROTECTION FOR STA 10+00 TO STA 65+50

RIPRAP EROSION PROTECTION AT EXISTING DIKE – STA 65+50 TO STA 68+00

CALL BEFORE YOU DIG
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DATE	NO.	REVISION	BY
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Last Saved By: ahmedk Jun 04, 2015 – 9:13am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
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DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LASTER — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 6-10-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
DATE APPROVED: 6/10/15

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

SETBACK DIKE SECTION GRADING TABLE

REFERENCE SHEET NO. XS02
SHEET 17 OF 49 SHEETS

Plotted: Jun 04, 2015 – 3:50pm otak \\Kirad01\proj\project\31800\31852A\Dwg\Phase1\17_XS02.dwg Layout Name: XS02

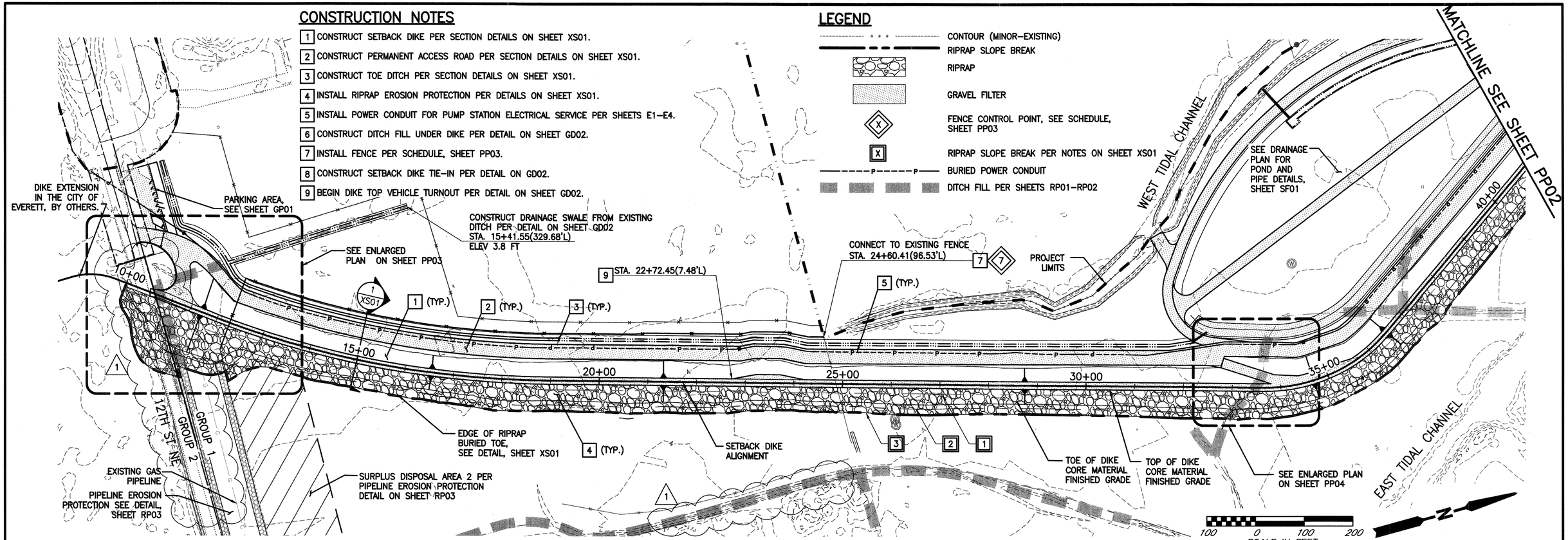
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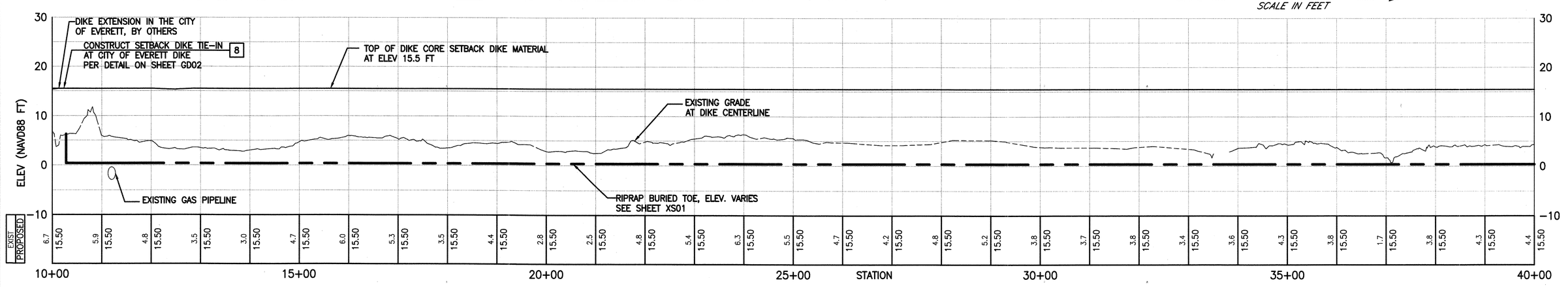
CONSTRUCTION NOTES

1. CONSTRUCT SETBACK DIKE PER SECTION DETAILS ON SHEET XS01.
2. CONSTRUCT PERMANENT ACCESS ROAD PER SECTION DETAILS ON SHEET XS01.
3. CONSTRUCT TOE DITCH PER SECTION DETAILS ON SHEET XS01.
4. INSTALL RIPRAP EROSION PROTECTION PER DETAILS ON SHEET XS01.
5. INSTALL POWER CONDUIT FOR PUMP STATION ELECTRICAL SERVICE PER SHEETS E1–E4.
6. CONSTRUCT DITCH FILL UNDER DIKE PER DETAIL ON SHEET GD02.
7. INSTALL FENCE PER SCHEDULE, SHEET PP03.
8. CONSTRUCT SETBACK DIKE TIE–IN PER DETAIL ON GD02.
9. BEGIN DIKE TOP VEHICLE TURNOUT PER DETAIL ON SHEET GD02.

LEGEND

- CONTOUR (MINOR–EXISTING)
- RIPRAP SLOPE BREAK
- RIPRAP
- GRAVEL FILTER
- FENCE CONTROL POINT, SEE SCHEDULE, SHEET PP03
- RIPRAP SLOPE BREAK PER NOTES ON SHEET XS01
- BURIED POWER CONDUIT
- DITCH FILL PER SHEETS RP01–RP02





SETBACK DIKE – STA 10+00 TO STA 40+00

CALL BEFORE YOU DIG
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DATE	NO.	REVISION	BY
6/5/15	1	ADDENDUM NO. 2	DAS

Last Saved By: ahmedk Jun 04, 2015 – 5:04pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12–0171–1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — 25788 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 6-10-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
DATE APPROVED: 6/10/15

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

SETBACK DIKE PLAN AND PROFILE

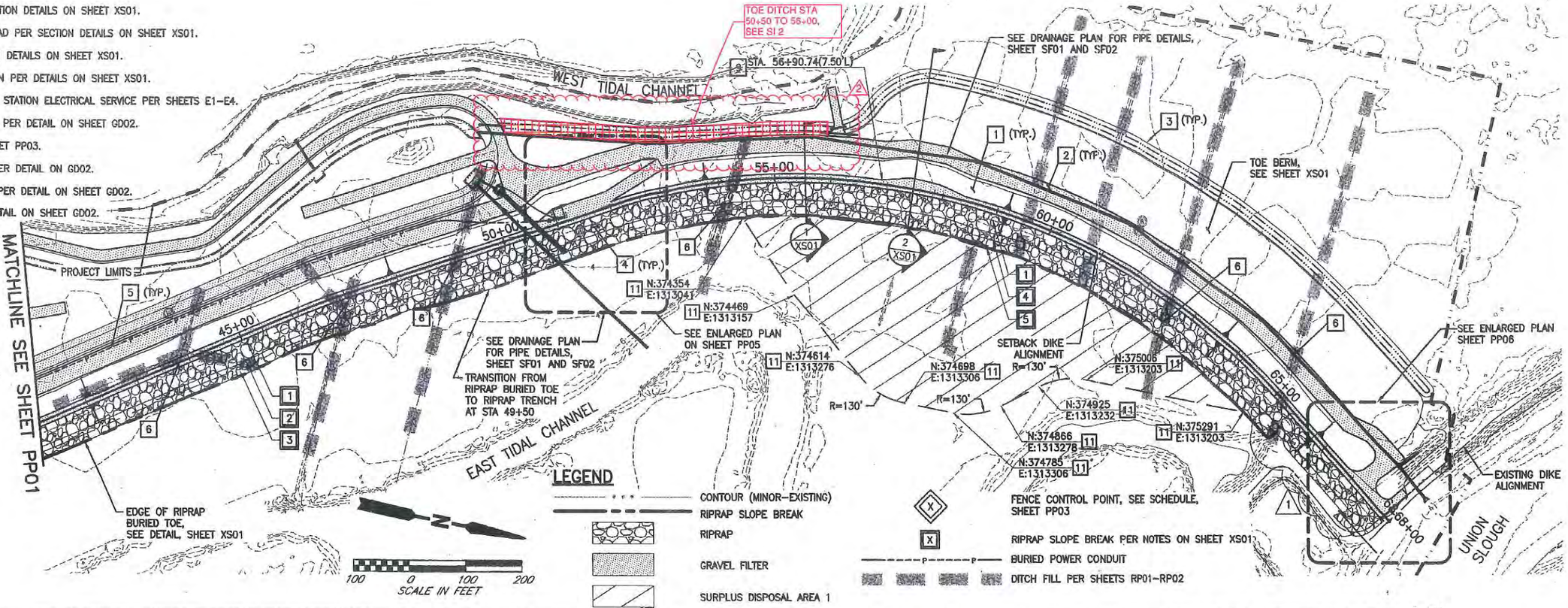
REFERENCE SHEET NO. PP01
SHEET 18 OF 49 SHEETS

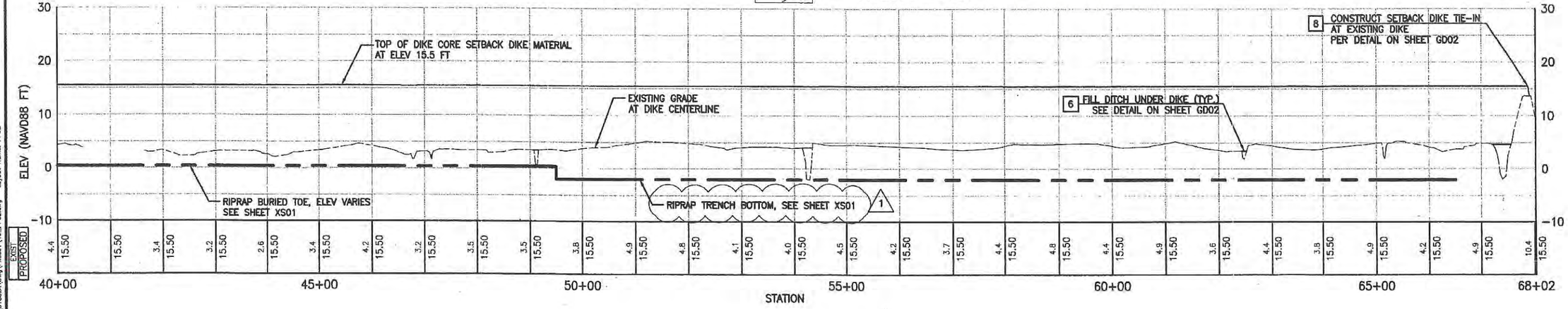
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3784-PROF
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CONSTRUCTION NOTES

1. CONSTRUCT SETBACK DIKE PER SECTION DETAILS ON SHEET XS01.
2. CONSTRUCT PERMANENT ACCESS ROAD PER SECTION DETAILS ON SHEET XS01.
3. CONSTRUCT TOE DITCH PER SECTION DETAILS ON SHEET XS01.
4. INSTALL RIPRAP EROSION PROTECTION PER DETAILS ON SHEET XS01.
5. INSTALL POWER CONDUIT FOR PUMP STATION ELECTRICAL SERVICE PER SHEETS E1-E4.
6. CONSTRUCT DITCH FILL UNDER DIKE PER DETAIL ON SHEET GD02.
7. INSTALL FENCE PER SCHEDULE, SHEET PP03.
8. CONSTRUCT SETBACK DIKE TIE-IN PER DETAIL ON GD02.
9. BEGIN DIKE TOP VEHICLE TURNOUT PER DETAIL ON SHEET GD02.
11. SURPLUS DISPOSAL AREA 1 PER DETAIL ON SHEET GD02.





SETBACK DIKE – STA 40+00 TO STA 68+00

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY
9/13/16	2	SI 2, TOE DITCH 50+50 TO 56+00	DAS
6/5/15	1	ADDENDUM NO. 2	DAS

Last Saved By: ohmedk Jun 09, 2015 - 4:48pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12-0171-1

otak
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GREGORY S. LAIRD 25758 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON 6-10-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
DATE APPROVED: 6/10/15

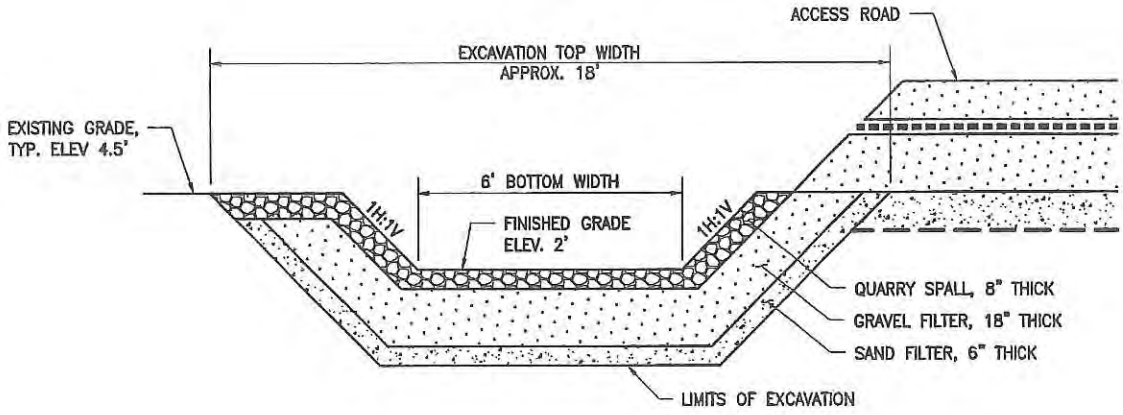
SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

SETBACK DIKE PLAN AND PROFILE

REFERENCE SHEET NO. PP02
SHEET 19 OF 49 SHEETS

Plotted: Jun 09, 2015 - 4:49pm ohmedk K:\project\31800\31852A\Dwg\Phase1\19_PP02.dwg Layout Name: PP02



TOE DITCH STA 50+50 TO 56+00
NTS

DAVID ALAN STEWART
STATE OF WASHINGTON
50687
REGISTERED
PROFESSIONAL ENGINEER
9-13-16

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11241 Willows Road NE
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Redmond, Washington 98052
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SMITH ISLAND ESTUARY RESTORATION

Drawing No. XS01
TOE DITCH
Title STA 50+50 TO 56+00
Date 9/13/16
By DAS
Project No. RR49206
Scale NTS

SI 2
1 of 1

Plotted: Sep 13, 2016 - 7:45pm davest K:\project\32400\32432B\CADD\ACAD\Dwg\Exhibits\SI2_TOEDITCH.dwg Layout Name: XS01

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3784-PDRN
3784-PDKE
3784-FROMGIS

CONSTRUCT PIPELINE PROTECTION PER SHEETS PD01-PD02.
STA. 10+17.36(124.41'L) EL=5.52' PC
CONSTRUCT ACCESS CONTROL GATE PER SHEET GP01
WSDOT RIGHT-OF-WAY
PARKING AREA, SEE SHEET GP01
PARKING AREA DRAINAGE SWALE, SEE DETAIL ON SHEET GP01
BEGIN TOE DITCH STA. 10+65.77(150.62'L) 3
PROTECT UTILITY POLE, INSTALLED BY OTHERS STA. 10+64.28(140.64'L)
CONDUIT PULLBOX PER ELECTRICAL PLAN SEE SHEET E2
STA. 11+68.08(105.23'L) 6
STA. 11+10.39(77.06'L) EL=11.71' PC
STA. 11+21.77(91.61'L) EL=9.23' PT
CONSTRUCT DRAINAGE SWALE FROM EXISTING DITCH PER DETAIL ON SHEET GD02 END STA 11+81.02 ELEV 3.0 FT
← TO INTERSTATE 5
12TH ST NE
BEGIN 12TH ST. RAMP ALIGNMENT N: 370395.61 E:1313023.14 EL=5.83
STA. 9+94.71(87.09'L) EL=5.66' PT
STA. 9+92.88(79.62'L) EL=5.78' PC
STA. 10+89.63(52.32'L) EL=12.18' PC
STA. 11+93.31(90.31'L) EL=5.27' PT
DIKE EXTENSION IN THE CITY OF EVERETT, BY OTHERS.
APPROXIMATE CITY OF EVERETT DIKE EXTENTS
STA. 12+37.16(74.52'L) EL=3.93' PC
2 (TYP)
STA. 10+60.39(19.38'L) 6
STA. 11+23.92(42.15'L) EL=14.00' PT
STA. 12+07.74(51.38'L) EL=5.73' PC
STA. 12+42.61(43.64'L) EL=4.34' PT
STA. 11+71.62(7.50'L) EL=15.35' PC
STA. 11+28.68(0.00') EL=15.50'
STA. 10+37.06(7.27'L) EL=15.35'
START RIPRAP BURIED TOE STA 10+00
STA. 10+65.24(10.53'L) EL=15.32' PT
8 EXISTING DIKE FILL
END 12TH ST. RAMP ALIGNMENT STA. 11+06.76(0.00') EL=15.50'
CITY OF EVERETT RIGHT-OF-WAY
SETBACK DIKE ALIGNMENT
APPROX 3H:1V
1 (TYP.)
STA. 11+19.73(68.06'R) EL=8.00'
STA. 11+36.32(100.94'R) EL=4.00'
6 STA. 11+49.00(100.26'R)
STA. 11+87.75(67.90'R) EL=8.00'
STA. 12+78.66(41.39'R) EL=4.00'
TOP FRONT EDGE OF RIPRAP 1
EXISTING GAS PIPELINE
7 1 STA. 12+21.80(92.42'R) EL=4.00'
BACK EDGE OF RIPRAP BURIED TOE 2
FRONT EDGE OF RIPRAP BURIED TOE 3
END RIPRAP BURIED TOE, CONSTRUCT RIPRAP PROTECTION PER PIPELINE PROTECTION PLAN, SHEET PD01, STA. 11+72.97(141.71'R)
PIPELINE EROSION PROTECTION, SEE DETAIL, SHEET RP05
END RIPRAP PROTECTION PER PIPELINE PROTECTION PLAN BEGIN RIPRAP BURIED TOE, STA. 12+64.21(113.86'R)
GROUP 1
GROUP 2
VARIES
R=225'
R=5'
R=70'
R=10'
R=100'
R=30'
R=50'
C100
C101
L102
10+00
11+00
12+00
13+00
3H:1V
2%

GENERAL NOTES

1. ELEVATIONS AND PROPOSED CONTOURS WITHIN FILL LIMITS INDICATE SETBACK DIKE MATERIAL GRADE.

CONSTRUCTION NOTES

1. CONSTRUCT SETBACK DIKE PER SECTION DETAILS ON SHEET XS01.
2. CONSTRUCT PERMANENT ACCESS ROAD PER SECTION DETAILS ON SHEET XS01.
3. CONSTRUCT TOE DITCH PER SECTION DETAILS ON SHEET XS01.
4. INSTALL RIPRAP EROSION PROTECTION PER DETAILS ON SHEET XS01.
5. INSTALL POWER CONDUIT FOR PUMP STATION ELECTRICAL SERVICE PER SHEETS E1-E4.
6. CONSTRUCT DITCH FILL UNDER DIKE PER DETAIL ON SHEET GD02.
7. INSTALL FENCE PER SCHEDULE, SHEET PP03.
8. CONSTRUCT SETBACK DIKE TIE-IN PER DETAIL ON GD02.
9. BEGIN DIKE TOP VEHICLE TURNOUT PER DETAIL ON SHEET GD02.

12TH ST. RAMP ALIGNMENT

NUMBER	LENGTH	RADIUS	BEARING	DELTA
C100	144.88'	85.00'	N54°27'22"E	97°39'30"
C101	18.78'	45.00'	S64°45'21"E	23°55'03"
L102	39.76'		S52°47'49"E	

FENCE SCHEDULE

X	STATION	OFFSET	TYPE
1	12+27.31	58.4'R	BEGIN 7 FT TYPE 3 CHAIN LINK FENCE
2	12+26.98	17.0'R	BEGIN DOUBLE 14 FT. CHAIN LINK GATE PER WSDOT STD PLAN L-30.10-02
3	12+26.99	17.0'L	BEGIN 7 FT TYPE 3 CHAIN LINK FENCE
4	12+26.96	40.0'L	BEGIN DOUBLE 20 FT. CHAIN LINK GATE PER WSDOT STD PLAN L-30.10-02
5	12+25.56	80.0'L	7 FT TYPE 3 CHAIN LINK FENCE
6	12+26.59	97.3'L	7 FT TYPE 3 CHAIN LINK FENCE
7	24+60.41	96.5'L	END 7 FT TYPE 3 CHAIN LINK FENCE

LEGEND

- CONTOUR (MINOR-EXISTING)
- CONTOUR (MAJOR-PROPOSED)
- RIPRAP SLOPE BREAK
- RIPRAP
- GRAVEL FILTER
- FENCE CONTROL POINT, SEE SCHEDULE, THIS SHEET
- RIPRAP SLOPE BREAK PER SCHEDULE ON SHEET XS01
- BURIED POWER CONDUIT
- DITCH FILL PER SHEETS RP01-RP02
- PVC CONDUIT FOR STRAIN GAUGE WIRES PER SHEET PD01

ENLARGED PLAN - SETBACK DIKE STA 10+00 TO STA 13+90

20 0 20 40
SCALE IN FEET

N

CALL BEFORE YOU DIG 1-800-424-5555

NO.	DATE	REVISION	BY
1	6/5/15	ADDENDUM NO. 2	DAS

Last Saved By: ahmedk Jun 04, 2015 - 4:58pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HammlGlobal Partner

GREGORY S. LAIRD, STATE OF WASHINGTON, 25754, REGISTERED PROFESSIONAL ENGINEER

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
DATE APPROVED: 6/25/15

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

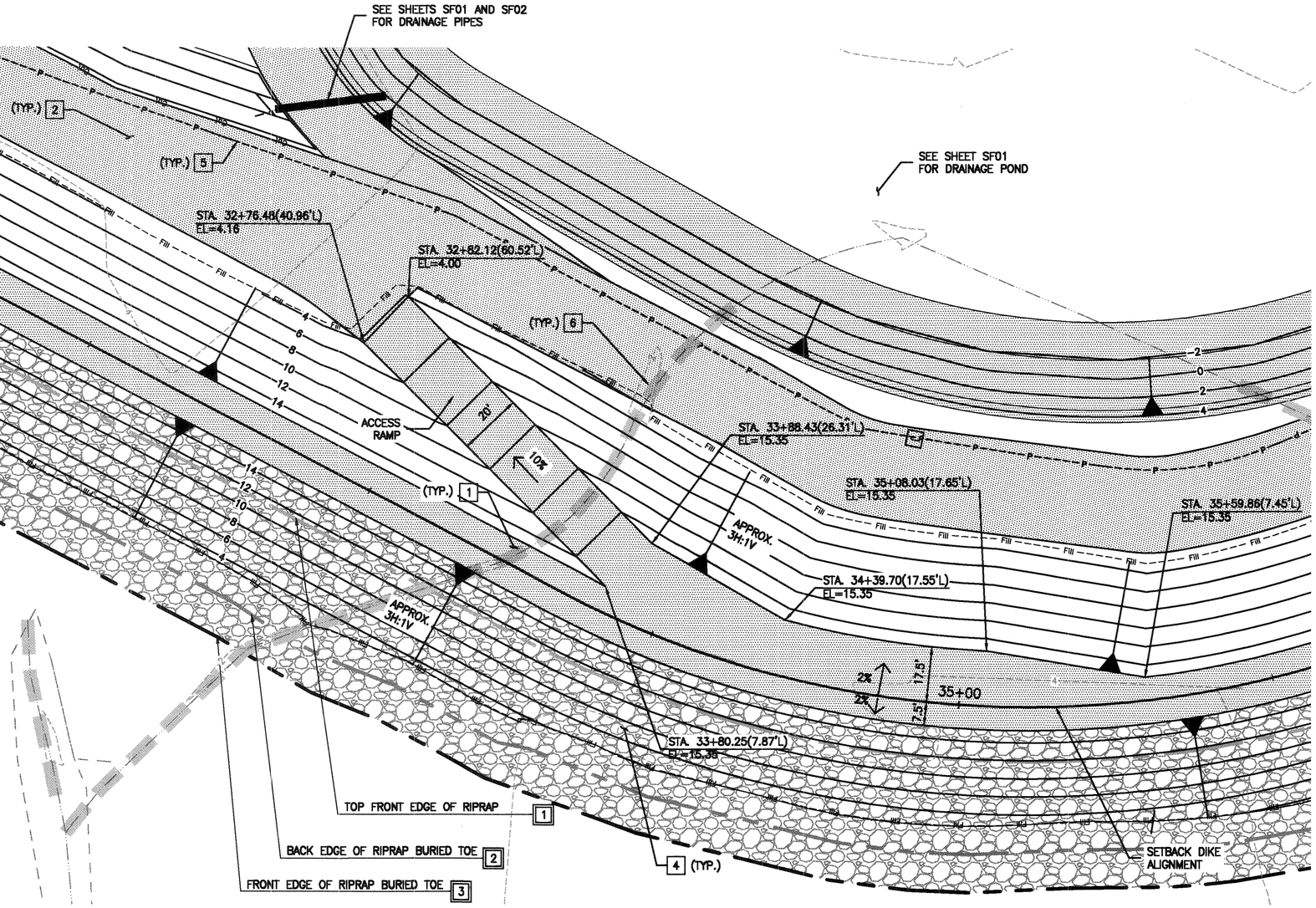
SMITH ISLAND ESTUARY RESTORATION

SETBACK DIKE SOUTH ACCESS ENLARGED PLAN

REFERENCE SHEET NO. PP03
SHEET 20 OF 49 SHEETS

Plotted: Jun 04, 2015 - 5:26pm ahmedk K:\project\31800\31852A\Dwg\Phase1\20_PP03.dwg Layout Name: PP03

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3784-PDRN
3784-PDKE
3784-FROMGIS



ENLARGED PLAN – SETBACK DIKE STA 32+00 TO STA 36+00

GENERAL NOTES

1. ELEVATIONS AND PROPOSED CONTOURS WITHIN FILL LIMITS INDICATE SETBACK DIKE MATERIAL GRADE.

CONSTRUCTION NOTES

1. CONSTRUCT SETBACK DIKE PER SECTION DETAILS ON SHEET XS01.
2. CONSTRUCT PERMANENT ACCESS ROAD PER SECTION DETAILS ON SHEET XS01.
3. CONSTRUCT TOE DITCH PER SECTION DETAILS ON SHEET XS01.
4. INSTALL RIPRAP EROSION PROTECTION PER DETAILS ON SHEET XS01.
5. INSTALL POWER CONDUIT FOR PUMP STATION ELECTRICAL SERVICE PER SHEETS E1–E4.
6. CONSTRUCT DITCH FILL UNDER DIKE PER DETAIL ON SHEET GD02.
7. INSTALL FENCE PER SCHEDULE, SHEET PP03.
8. CONSTRUCT SETBACK DIKE TIE–IN PER DETAIL ON GD02.
9. BEGIN DIKE TOP VEHICLE TURNOUT PER DETAIL ON SHEET GD02.

LEGEND

- CONTOUR (MINOR–EXISTING)
- CONTOUR (MAJOR–PROPOSED)
- RIPRAP SLOPE BREAK
- RIPRAP
- GRAVEL FILTER
- [x] RIPRAP SLOPE BREAK LINE PER NOTES ON SHEET XS01
- BURIED POWER CONDUIT
- DITCH FILL PER SHEETS RP01–RP02

N

20 0 20 40
SCALE IN FEET

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DATE	NO.	REVISION	BY

Last Saved By: kaelam May 06, 2015 – 12:59pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12–0171–1

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Hanmi Global Partner

GREGORY S. LARSEN — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5.7.15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

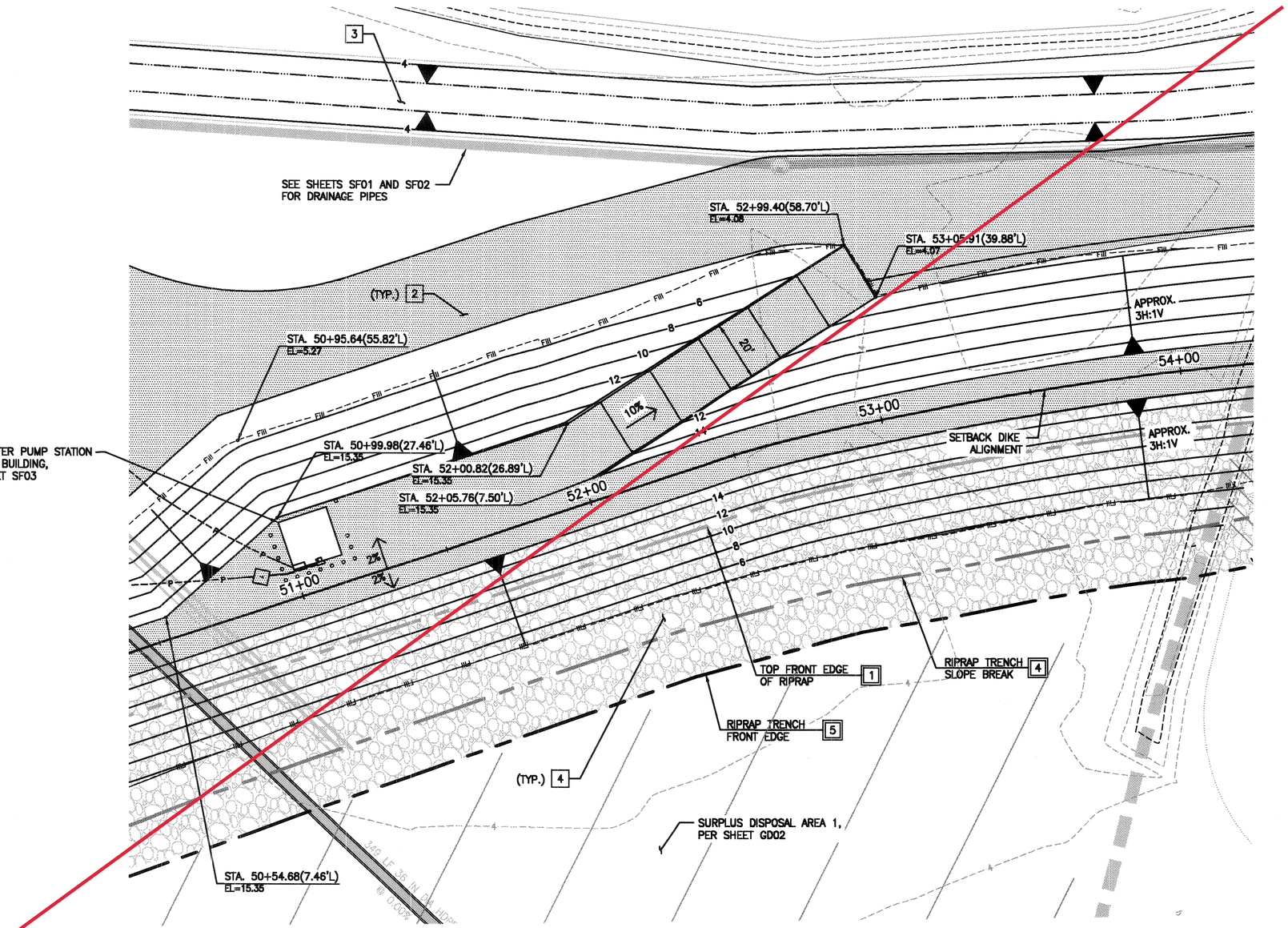
SMITH ISLAND ESTUARY RESTORATION

SETBACK DIKE ENLARGED PLAN AT STA 34+00

REFERENCE SHEET NO. PP04
SHEET 21 OF 49 SHEETS

Plotted: May 06, 2015 – 5:26pm otak K:\project\31600\31852A\Dwg\Phase1\21_PP04.dwg Layout Name: PP04

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3784—PDKE
3784—FROMGIS



ENLARGE PLAN – SETBACK DIKE STA 51+00 TO STA 54+00

GENERAL NOTES

1. ELEVATIONS AND PROPOSED CONTOURS WITHIN FILL LIMITS INDICATE SETBACK DIKE MATERIAL GRADE.

CONSTRUCTION NOTES

1. CONSTRUCT SETBACK DIKE PER SECTION DETAILS ON SHEET XS01.
2. CONSTRUCT PERMANENT ACCESS ROAD PER SECTION DETAILS ON SHEET XS01.
3. CONSTRUCT TOE DITCH PER SECTION DETAILS ON SHEET XS01.
4. INSTALL RIPRAP EROSION PROTECTION PER DETAILS ON SHEET XS01.
5. INSTALL POWER CONDUIT FOR PUMP STATION ELECTRICAL SERVICE PER SHEETS E1–E4.
6. CONSTRUCT DITCH FILL UNDER DIKE PER DETAIL ON SHEET GD02.
7. INSTALL FENCE PER SCHEDULE, SHEET PP03.
8. CONSTRUCT SETBACK DIKE TIE–IN PER DETAIL ON GD02.
9. BEGIN DIKE TOP VEHICLE TURNOUT PER DETAIL ON SHEET GD02.

LEGEND

- CONTOUR (MINOR–EXISTING)
- CONTOUR (MAJOR–PROPOSED)
- RIPRAP SLOPE BREAK
- RIPRAP
- GRAVEL FILTER
- RIPRAP SLOPE BREAK LINE PER NOTES ON SHEET XS01
- BURIED POWER CONDUIT
- DITCH FILL PER SHEETS RP01–RP02

See revised sheet PP05 (next sheet) showing revised control building location.

N

20 0 20 40
SCALE IN FEET

CALL BEFORE YOU DIG
1–800–424–5555

DATE	NO.	REVISION	BY

Last Saved By: kaelam Apr 27, 2015 – 11:38am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12–0171–1

otak
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GREGORY S. LATSO — STATE OF WASHINGTON — 25756 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

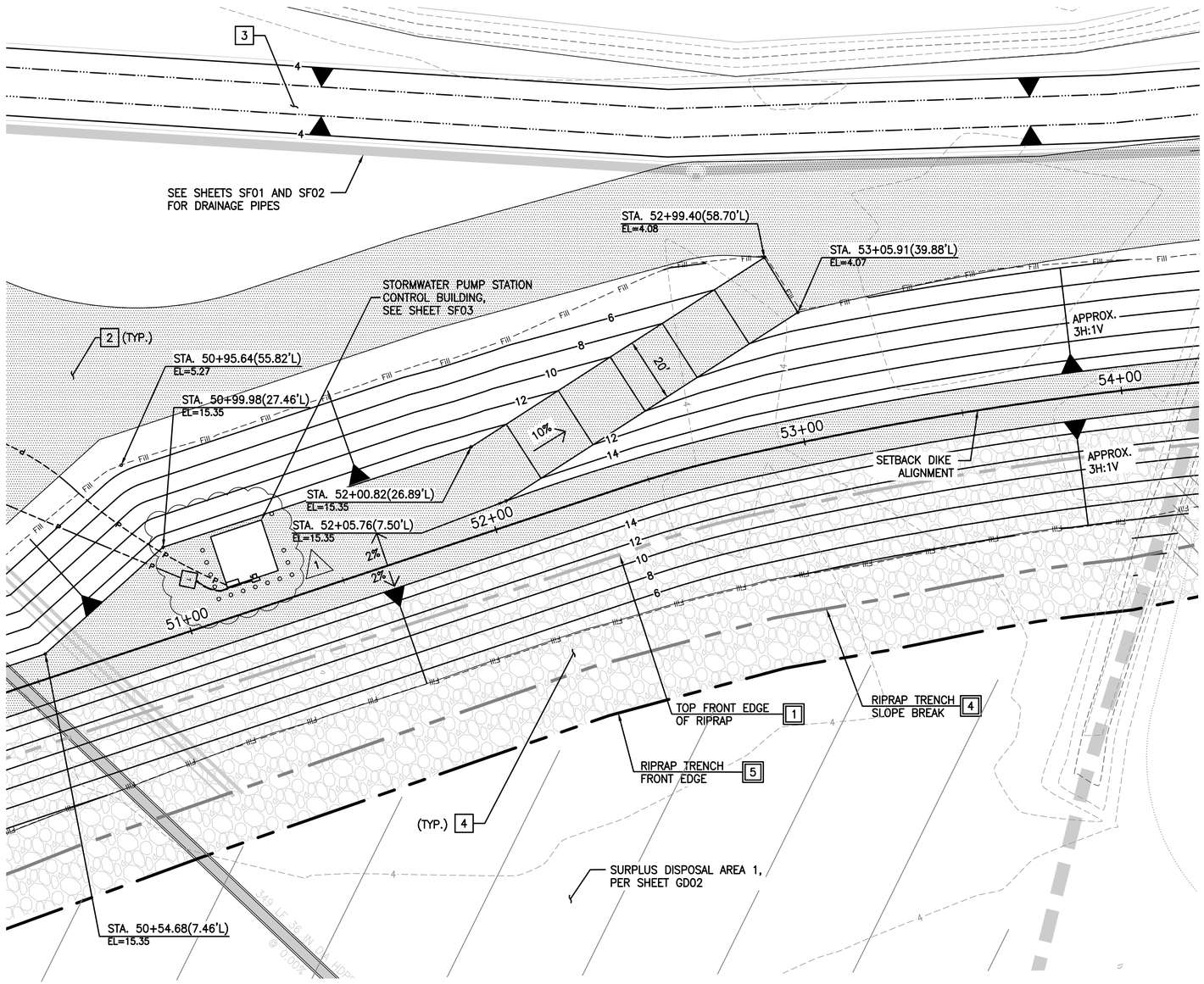
SMITH ISLAND ESTUARY RESTORATION

SETBACK DIKE ENLARGED PLAN AT STA 52+00

REFERENCE SHEET NO. PP05
SHEET 22 OF 49 SHEETS

Plotted: May 06, 2015 – 5:28pm otak K:\project\31900\31852A\Dwg\Phase1\22_PP05.dwg Layout Name: PP05

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3784-FROMGIS



ENLARGE PLAN – SETBACK DIKE STA 51+00 TO STA 54+00

GENERAL NOTES

1. ELEVATIONS AND PROPOSED CONTOURS WITHIN FILL LIMITS INDICATE SETBACK DIKE MATERIAL GRADE.

CONSTRUCTION NOTES

1. CONSTRUCT SETBACK DIKE PER SECTION DETAILS ON SHEET XS01.
2. CONSTRUCT PERMANENT ACCESS ROAD PER SECTION DETAILS ON SHEET XS01.
3. CONSTRUCT TOE DITCH PER SECTION DETAILS ON SHEET XS01.
4. INSTALL RIPRAP EROSION PROTECTION PER DETAILS ON SHEET XS01.
5. INSTALL POWER CONDUIT FOR PUMP STATION ELECTRICAL SERVICE PER SHEETS E1–E4.
6. CONSTRUCT DITCH FILL UNDER DIKE PER DETAIL ON SHEET GD02.
7. INSTALL FENCE PER SCHEDULE, SHEET PP03.
8. CONSTRUCT SETBACK DIKE TIE–IN PER DETAIL ON GD02.
9. BEGIN DIKE TOP VEHICLE TURNOUT PER DETAIL ON SHEET GD02.

LEGEND

- CONTOUR (MINOR–EXISTING)
- CONTOUR (MAJOR–PROPOSED)
- RIPRAP SLOPE BREAK
- RIPRAP
- GRAVEL FILTER
- [x] RIPRAP SLOPE BREAK LINE PER NOTES ON SHEET XS01
- BURIED POWER CONDUIT
- DITCH FILL PER SHEETS RP01–RP02

N

20 0 20 40
SCALE IN FEET

CALL BEFORE YOU DIG
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NO.	DATE	REVISION	BY
1	6/8/17	S.I. 03 – CONTROL BUILDING LOCATION	CRC DAS

Last Saved By: chrisc Jun 09, 2017 – 2:18pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12–0171–1

otak
HanmiGlobal Partner

REFER TO ORIGINAL DRAWINGS FOR SIGNATURES AND SEALS

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER

DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

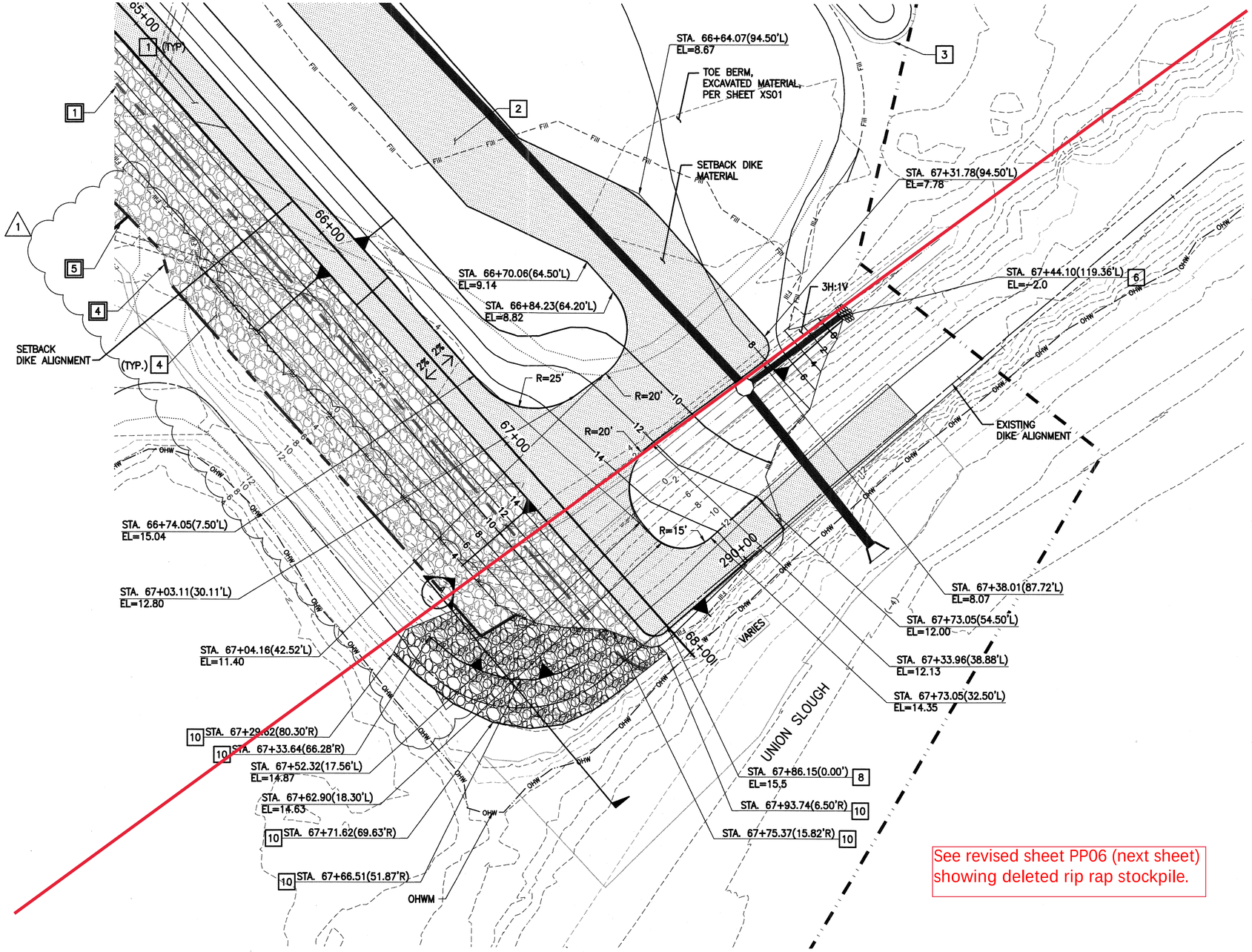
SETBACK DIKE ENLARGED PLAN AT STA 52+00

REFERENCE SHEET NO. PP05

SHEET 22 OF 49 SHEETS

Plotted: Jun 09, 2017 – 3:01pm chrisc K:\project\31800\31852A\Dwg\Phase1\22_PP05.dwg Layout Name: PP05

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3784-PDKE
3784-FROMGIS



ENLARGED PLAN – SETBACK DIKE STA 64+00 TO STA 66+60

See revised sheet PP06 (next sheet) showing deleted rip rap stockpile.

GENERAL NOTES

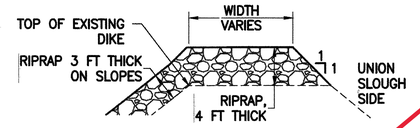
1. ELEVATIONS AND PROPOSED CONTOURS WITHIN FILL LIMITS INDICATE SETBACK DIKE MATERIAL GRADE.

CONSTRUCTION NOTES

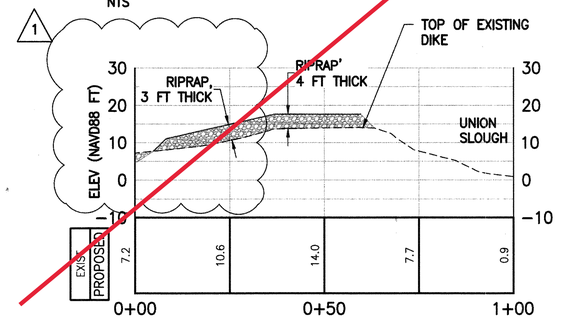
1. CONSTRUCT SETBACK DIKE PER SECTION DETAILS ON SHEET XS01.
2. CONSTRUCT PERMANENT ACCESS ROAD PER SECTION DETAILS ON SHEET XS01.
3. CONSTRUCT TOE DITCH PER SECTION DETAILS ON SHEET XS01.
4. INSTALL RIPRAP EROSION PROTECTION PER DETAILS ON SHEET XS01.
5. INSTALL POWER CONDUIT FOR PUMP STATION ELECTRICAL SERVICE PER SHEETS E1–E4.
6. CONSTRUCT DITCH FILL UNDER DIKE PER DETAIL ON SHEET GD02.
7. INSTALL FENCE PER SCHEDULE, SHEET PP03.
8. CONSTRUCT SETBACK DIKE TIE–IN PER DETAIL ON GD02.
9. BEGIN DIKE TOP VEHICLE TURNOUT PER DETAIL ON SHEET GD02.
10. CONSTRUCT RIPRAP STOCKPILE FOR LAUNCHABLE TOE PER DETAIL, THIS SHEET.

LEGEND

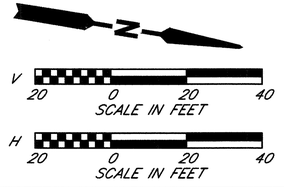
- CONTOUR (MINOR–EXISTING)
- CONTOUR (MAJOR–PROPOSED)
- RIPRAP
- GRAVEL FILTER
- [X] RIPRAP SLOPE BREAK PER NOTES ON SHEET XS01



RIPRAP STOCKPILE FOR LAUNCHABLE TOE
NTS



RIPRAP ON EXISTING DIKE SECTION A



CALL BEFORE YOU DIG
1–800–424–5555

NO.	DATE	REVISION	BY
1	6/5/15	ADDENDUM NO. 2	DAS

Last Saved By: ahmedk Jun 09, 2015 – 4:21pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12–0171–1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 6-10-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
DATE APPROVED: 6/10/15

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

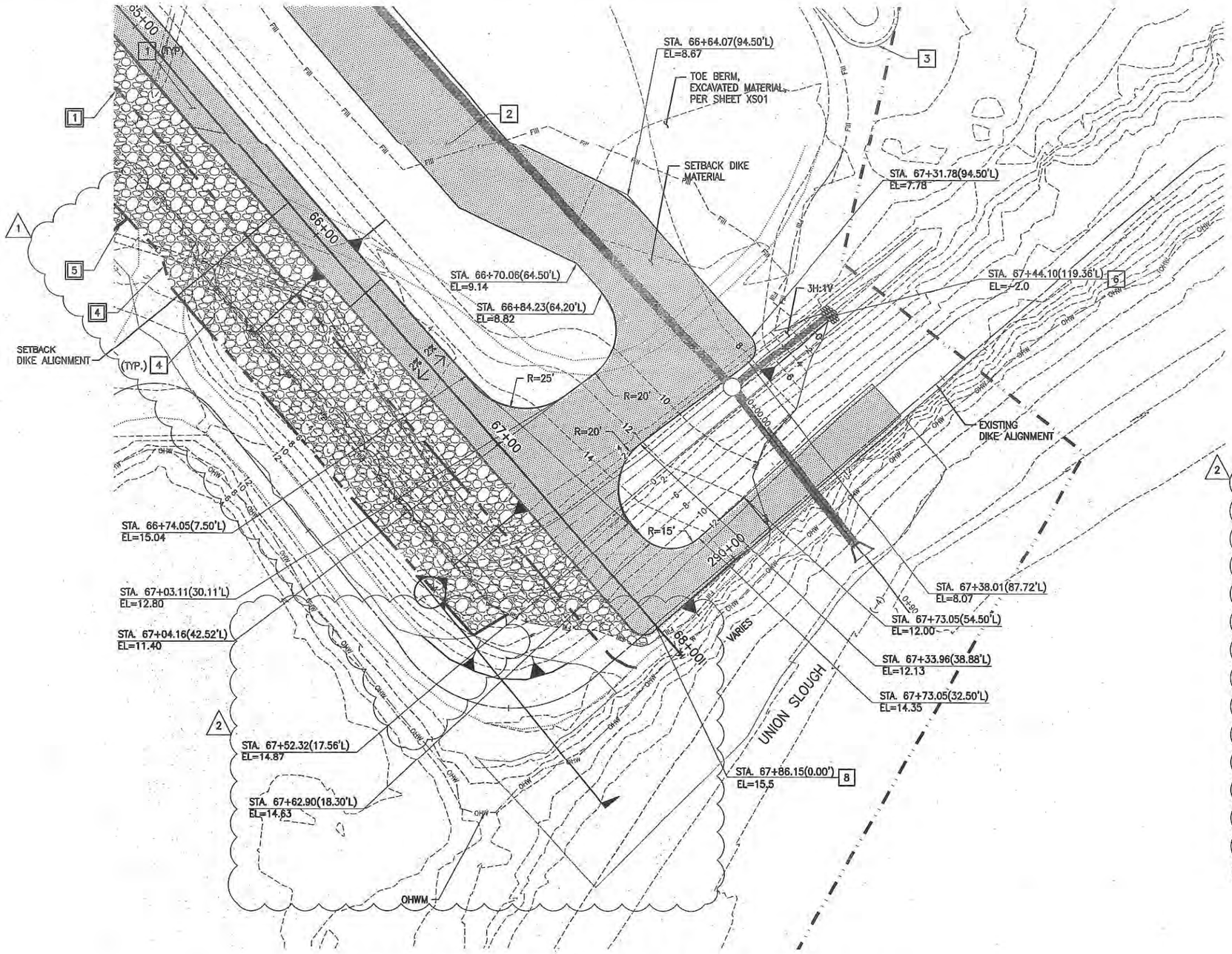
SMITH ISLAND ESTUARY RESTORATION

SETBACK DIKE NORTH ACCESS ENLARGED PLAN

REFERENCE SHEET NO. PP06
SHEET 23 OF 49 SHEETS

Plotted: Jun 09, 2015 – 4:26pm ahmedk K:\project\31800\31852A\Dwg\Phase1\23_PP06.dwg Layout Name: PP06

XREF LIST
Lscale: 1
Resolved
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3784-BASE
3784-PCHN
TTLBLK
GSLSEAL
3784-GRDG
3784-PROF
3784-DRNG
3784-PDRN
3784-PDKE
3784-FROMGIS



ENLARGED PLAN – SETBACK DIKE STA 64+00 TO STA 66+60

GENERAL NOTES

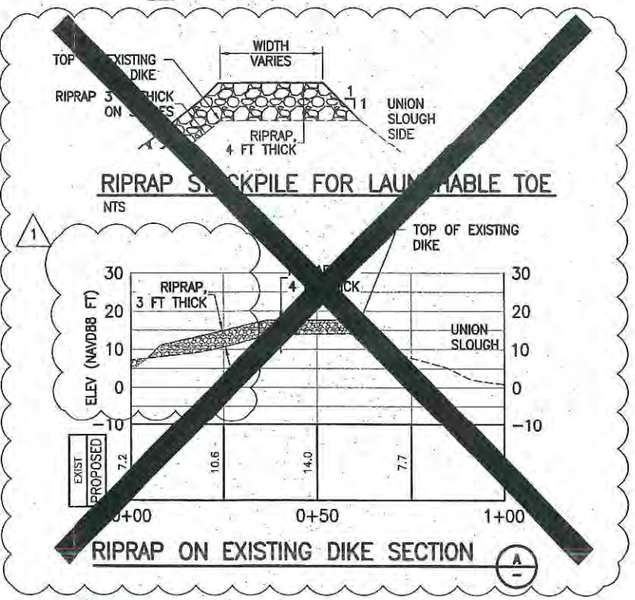
1. ELEVATIONS AND PROPOSED CONTOURS WITHIN FILL LIMITS INDICATE SETBACK DIKE MATERIAL GRADE.

CONSTRUCTION NOTES

1. CONSTRUCT SETBACK DIKE PER SECTION DETAILS ON SHEET XS01.
2. CONSTRUCT PERMANENT ACCESS ROAD PER SECTION DETAILS ON SHEET XS01.
3. CONSTRUCT TOE DITCH PER SECTION DETAILS ON SHEET XS01.
4. INSTALL RIPRAP EROSION PROTECTION PER DETAILS ON SHEET XS01.
5. INSTALL POWER CONDUIT FOR PUMP STATION ELECTRICAL SERVICE PER SHEETS E1–E4.
6. CONSTRUCT DITCH FILL UNDER DIKE PER DETAIL ON SHEET GD02.
7. INSTALL FENCE PER SCHEDULE, SHEET PP03.
8. CONSTRUCT SETBACK DIKE TIE–IN PER DETAIL ON GD02.
9. BEGIN DIKE TOP VEHICLE TURNOUT PER DETAIL ON SHEET GD02.

LEGEND

- CONTOUR (MINOR–EXISTING)
- CONTOUR (MAJOR–PROPOSED)
- RIPRAP
- GRAVEL FILTER
- [X] RIPRAP SLOPE BREAK PER NOTES ON SHEET XS01



RIPRAP STOCKPILE FOR LAUNCHABLE TOE
NTS

RIPRAP ON EXISTING DIKE SECTION (A)

V 20 0 20 40 SCALE IN FEET
H 20 0 20 40 SCALE IN FEET

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY
9/28/16	2	REMOVED RIPRAP STOCKPILE FOR LAUNCHABLE TOE	DAS
6/5/15	1	ADDENDUM NO. 2	DAS

Last Saved By: ahmedk Sep 29, 2016 – 11:41am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12–0171–1

otak — HanmiGlobal Partner

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER

DATE APPROVED:

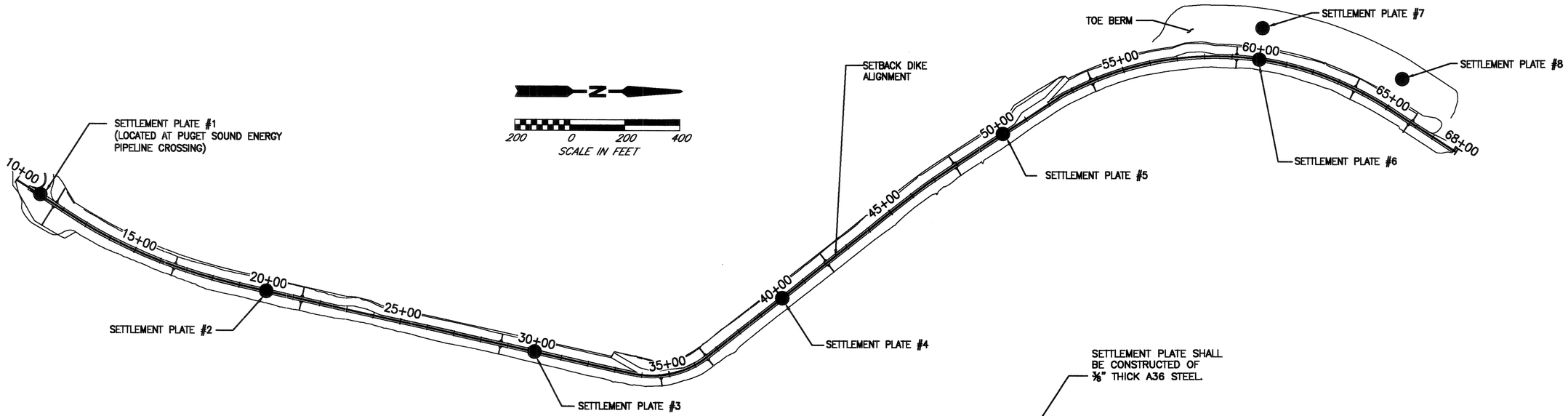
SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

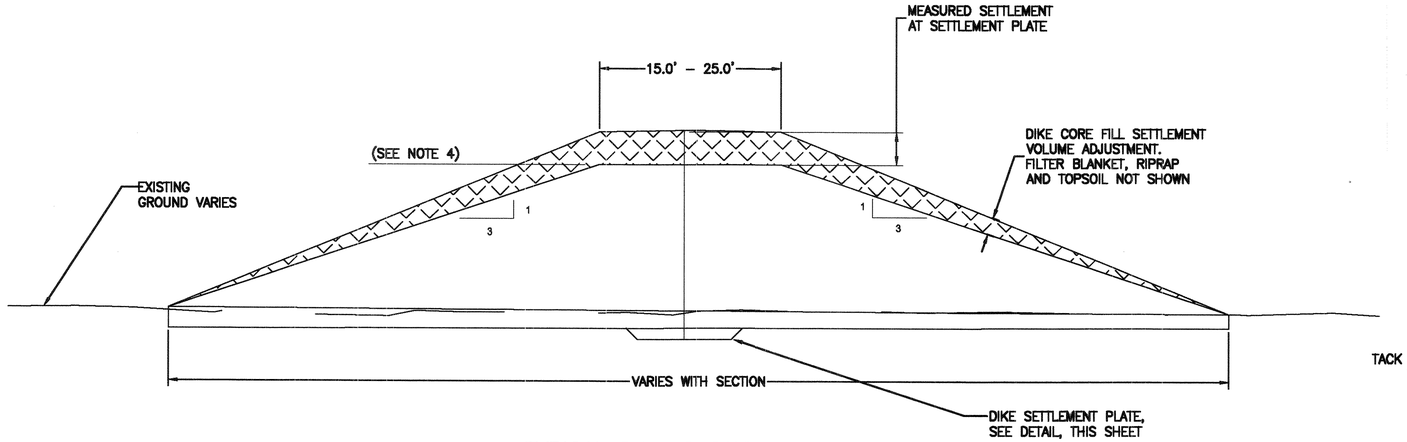
SMITH ISLAND ESTUARY RESTORATION

SETBACK DIKE NORTH ACCESS ENLARGED PLAN

REFERENCE SHEET NO. PP06
SHEET 23 OF 49 SHEETS

Plotted: Sep 29, 2016 – 11:42am ahmedk K:\project\31800\31852A\dwg\Phase1\23_PP06.dwg Layout Name: PP06

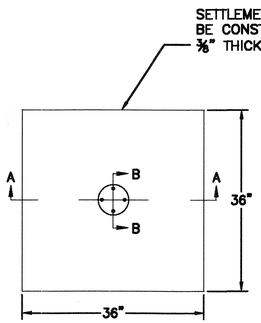




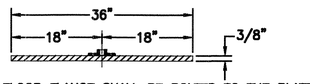
TYPICAL DIKE SECTION
NTS

DIKE SETTLEMENT NOTES:

1. DIKE SETTLEMENT PLATES SHALL BE INSTALLED AT STATIONS 11+29 (PSE PIPELINE CROSSING), 20+00, 30+00, 40+00, 50+00, AND 60+00 WITHIN THE SETBACK DIKE, 60+00 WITHIN THE TOE BERM, AND 65+00 WITHIN THE TOE BERM. THE SETTLEMENT PLATES WILL BE USED TO MEASURE AND ESTIMATE SETTLEMENT AND MODIFIED QUANTITIES OF PLACED AND COMPACTED SOILS DURING CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTION AND REPLACEMENT OF SETTLEMENT PLATES.
3. CAP 2" PIPE FLUSH WITH FINISHED GRADE.
4. FINAL CREST ELEVATION AT END OF CONSTRUCTION TO BE EL. 15.5 FEET.

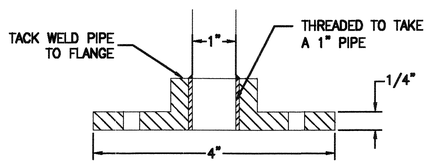


PLAN VIEW



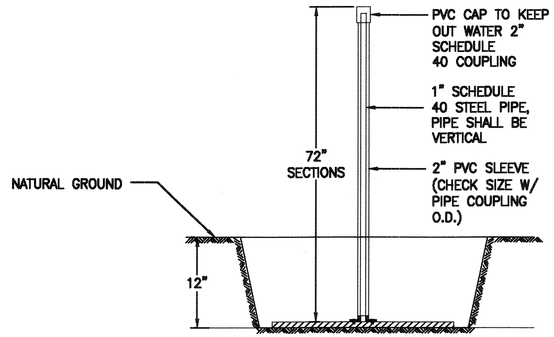
FLOOR FLANGE SHALL BE BOLTED TO THE PLATE WITH A MINIMUM OF FOUR THROUGH BOLTS PER THE MANUFACTURER'S SPECIFICATIONS

SECTION A–A

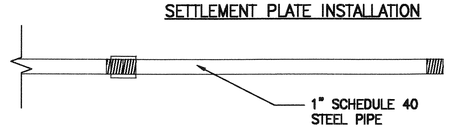


STANDARD BLACK 1" FLOOR FLANGE

SECTION B–B



SETTLEMENT PLATE INSTALLATION



IN SEATING THE PLATE, THE TRENCH SHALL BE BACKFILLED WITH SETBACK DIKE MATERIAL AND COMPACTED PER SPECIFICATIONS.

RISER PIPE & COUPLING

DIKE SETTLEMENT PLATE
NTS

CALL BEFORE YOU DIG
1–800–424–5555

DATE	NO.	REVISION	BY

Last Saved By: kaelam Apr 24, 2015 – 3:54pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12–0171–1

otak
HanmiGlobal Partner

GREGORY S. LAMB — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS

PROJECT NO. RR49206

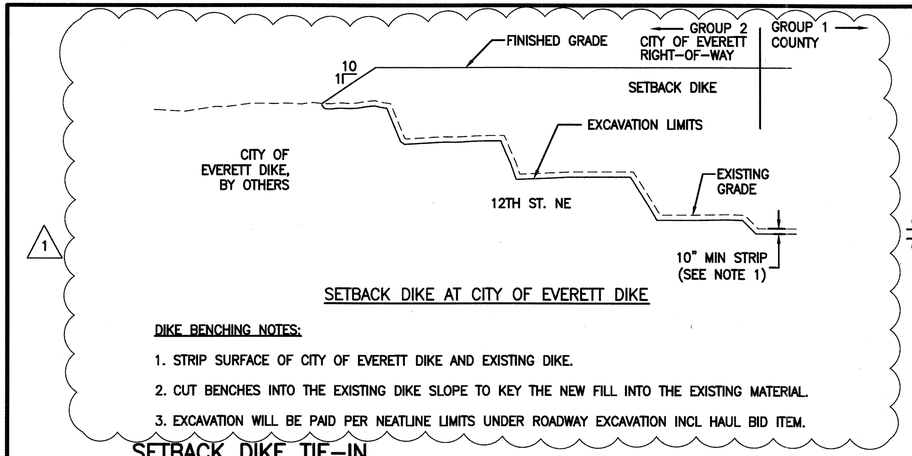
SMITH ISLAND ESTUARY RESTORATION

SETBACK DIKE GRADING DETAILS

REFERENCE SHEET NO. GD01

SHEET 24 OF 49 SHEETS

Plotted: May 06, 2015 – 5:42pm otak K:\project\31800\31852A\Dwg\Phase1\24_GD01.dwg Layout Name: GD01

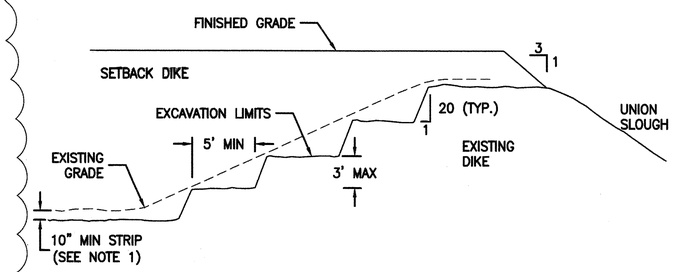


SETBACK DIKE AT CITY OF EVERETT DIKE

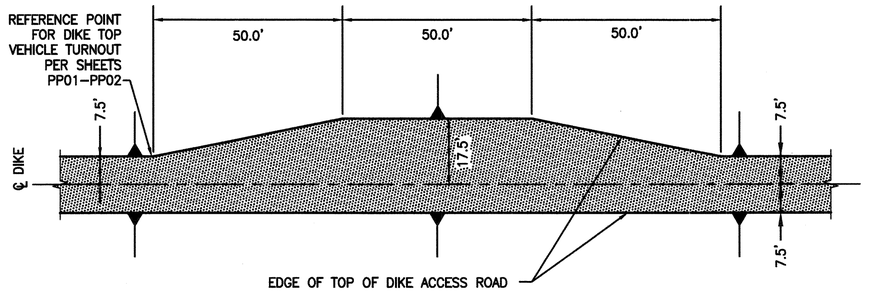
DIKE BENCHING NOTES:

1. STRIP SURFACE OF CITY OF EVERETT DIKE AND EXISTING DIKE.
2. CUT BENCHES INTO THE EXISTING DIKE SLOPE TO KEY THE NEW FILL INTO THE EXISTING MATERIAL.
3. EXCAVATION WILL BE PAID PER NEATLINE LIMITS UNDER ROADWAY EXCAVATION INCL HAUL BID ITEM.

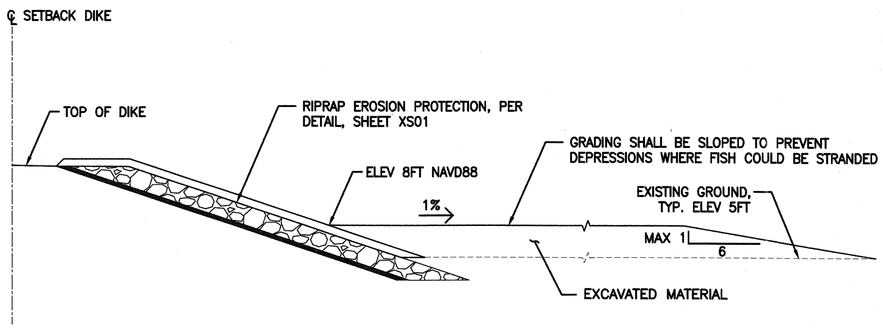
SETBACK DIKE TIE-IN
NTS



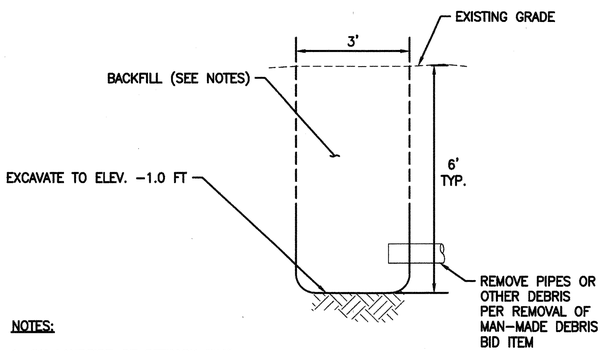
SETBACK DIKE AT EXISTING DIKE



DIKE TOP VEHICLE TURNOUT
NTS



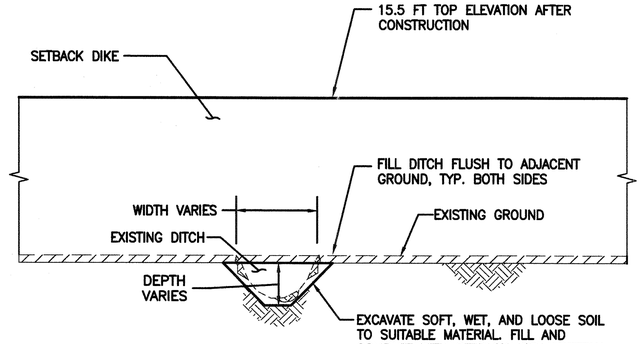
SURPLUS DISPOSAL AREA 1
NTS



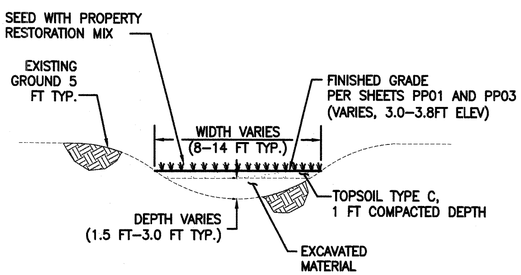
NOTES:

1. ON LANDSIDE OF SETBACK DIKE:
   CONSTRUCT POWER CONDUIT TRENCH FROM STA 10+00 TO STA 49+00. BACKFILL WITH EXCAVATED MATERIAL FROM STA 49+00 TO STA 68+00.
2. ON WATERSIDE OF SETBACK DIKE:
   BACKFILL WITH SETBACK DIKE MATERIAL TO ELEV. +2.0 FT FROM STA 10+00 TO 49+50. BACKFILL WITH EXCAVATED MATERIAL ONLY FROM STA 49+50 TO 68+00

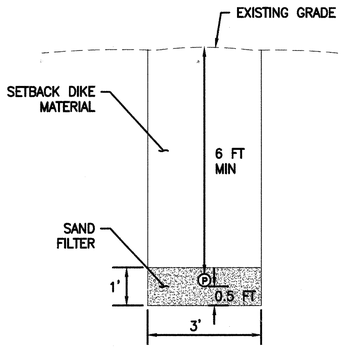
TEMPORARY OBSERVATION TRENCH
NTS



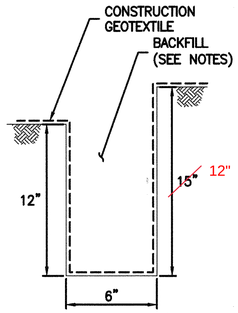
DITCH FILL UNDER DIKE
NTS



DRAINAGE SWALE FROM EXISTING DITCH
NTS



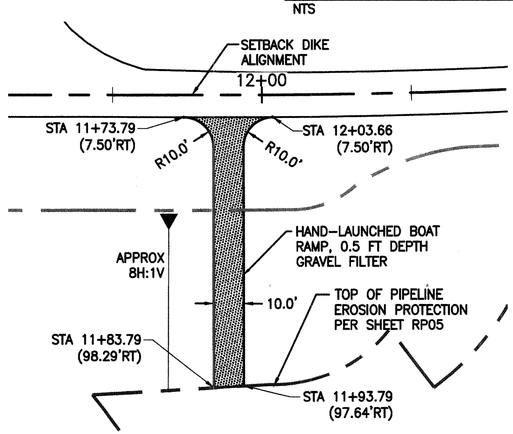
POWER CONDUIT TRENCH
NTS



NOTES:

1. KEY TRENCH SHALL BE CONSTRUCTED AT LEAST 3 FEET FROM TOP OF SLOPE AND 3 FEET FROM TOE OF SLOPE.
2. BACKFILL KEY TRENCH AT TOP OF SLOPE WITH SETBACK DIKE MATERIAL. BACKFILL KEY TRENCH AT TOE OF SLOPE WITH EXCAVATED MATERIAL.

GEOTEXTILE KEY-IN
NTS



HAND-LAUNCHED BOAT RAMP
NTS

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY
6/5/15		ADDENDUM NO. 2	DAS

Last Saved By: otak Jun 09, 2015 - 4:16pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LATTRD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — G.S.L.

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER

6/10/15
DATE APPROVED:

SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

SETBACK DIKE GRADING DETAILS

REFERENCE SHEET NO. GD02

SHEET 25 OF 49 SHEETS

Plotted: Jun 09, 2015 - 4:17pm otak \\Kirce01\proj\project\31800\31852A\Dwg\Phase1\25_GD02.dwg Layout Name: GD02

XREF LIST
Ltscale: 1
Resolved
TTLBLK
GSLSEAL
3784--GRDG
3784--TOPO
3784--BASE
3784--PC-IN
3784--PROF
3784--PDRN

GENERAL NOTES:

1. SEE SHEET SF05 AND SF06 FOR PIPE PROFILES. PIPE PROFILES ARE SHOWN ALONG CENTERLINE OF PIPE.
2. MANHOLES SHALL BE CONSTRUCTED PER WSDOT STD. PLAN B-15.20-00. COORDINATES SHOWN ARE TO CENTER OF STRUCTURE. SEE DETAIL ON SHEET SF09 FOR KNOCKOUT SPACING.
3. PIPE LENGTHS SHOWN ARE FROM START OF PIPE TO CENTER OF STRUCTURE, OR END OF PIPE WHERE NO STRUCTURE IS LOCATED.

LEGEND

- (DX) DRAINAGE GATE, SEE SCHEDULE ON SHEET SF09
- SDXX PIPE PROFILE PER SHEET SF05--SF06
- CONTOUR (MINOR--EXISTING)
- RIPRAP
- GRAVEL FILTER MATERIAL
- DITCH FILLS PER SHEET RP01--RP02

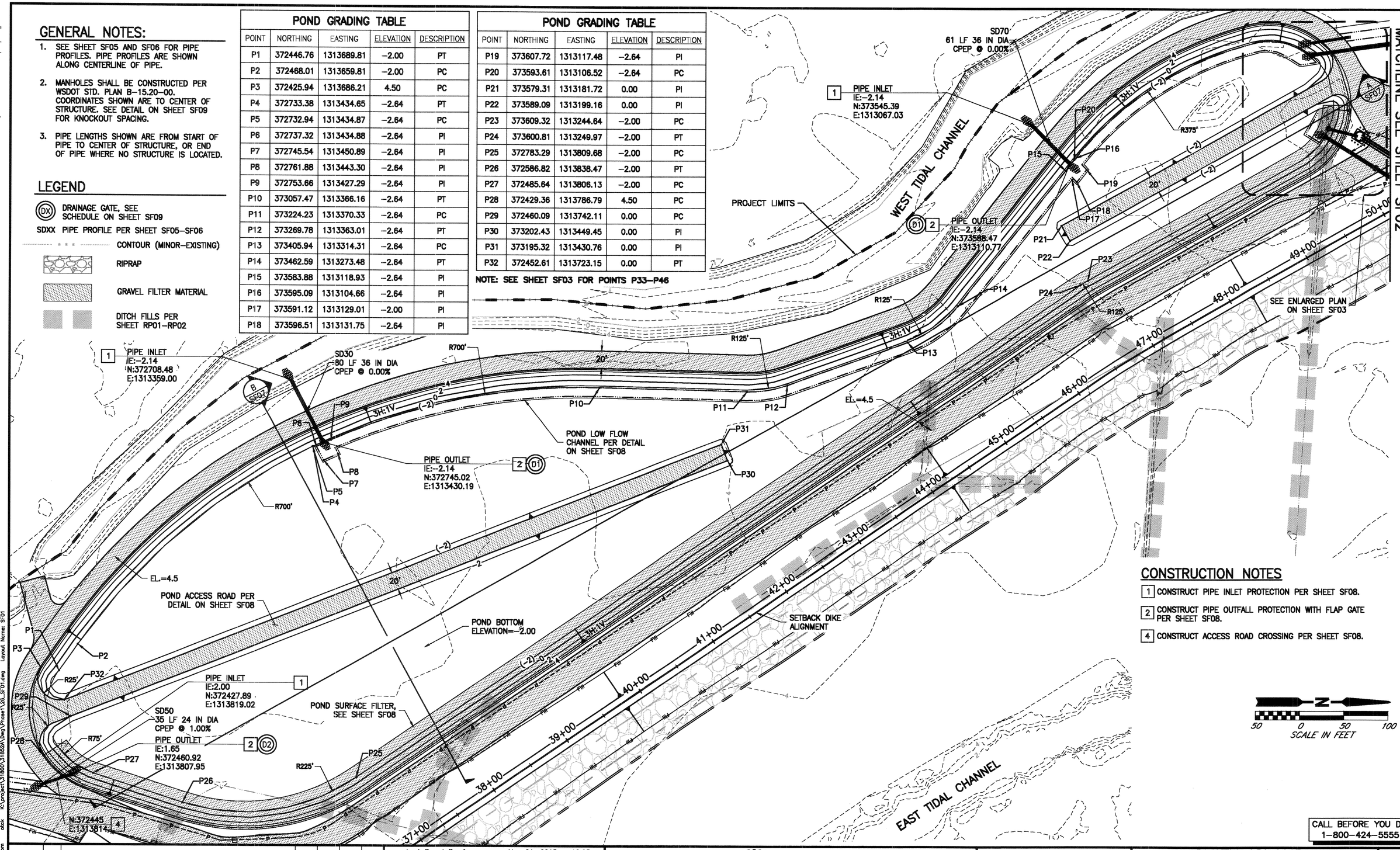
POND GRADING TABLE

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P1	372446.76	1313689.81	--2.00	PT
P2	372468.01	1313659.81	--2.00	PC
P3	372425.94	1313686.21	4.50	PC
P4	372733.38	1313434.65	--2.64	PT
P5	372732.94	1313434.87	--2.64	PC
P6	372737.32	1313434.88	--2.64	PI
P7	372745.54	1313450.89	--2.64	PI
P8	372761.88	1313443.30	--2.64	PI
P9	372753.66	1313427.29	--2.64	PI
P10	373057.47	1313366.16	--2.64	PT
P11	373224.23	1313370.33	--2.64	PC
P12	373269.78	1313363.01	--2.64	PT
P13	373405.94	1313314.31	--2.64	PC
P14	373462.59	1313273.48	--2.64	PT
P15	373583.88	1313118.93	--2.64	PI
P16	373595.09	1313104.66	--2.64	PI
P17	373591.12	1313129.01	--2.00	PI
P18	373596.51	1313131.75	--2.64	PI

POND GRADING TABLE

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P19	373607.72	1313117.48	--2.64	PI
P20	373593.61	1313106.52	--2.64	PC
P21	373579.31	1313181.72	0.00	PI
P22	373589.09	1313199.16	0.00	PI
P23	373609.32	1313244.64	--2.00	PC
P24	373600.81	1313249.97	--2.00	PT
P25	372783.29	1313809.68	--2.00	PC
P26	372586.82	1313838.47	--2.00	PT
P27	372485.64	1313806.13	--2.00	PC
P28	372429.36	1313786.79	4.50	PC
P29	372460.09	1313742.11	0.00	PC
P30	373202.43	1313449.45	0.00	PI
P31	373195.32	1313430.76	0.00	PI
P32	372452.61	1313723.15	0.00	PT

NOTE: SEE SHEET SF03 FOR POINTS P33--P46



CONSTRUCTION NOTES

1. CONSTRUCT PIPE INLET PROTECTION PER SHEET SF08.
2. CONSTRUCT PIPE OUTFALL PROTECTION WITH FLAP GATE PER SHEET SF08.
4. CONSTRUCT ACCESS ROAD CROSSING PER SHEET SF08.

SCALE IN FEET: 50 0 50 100

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: francescaw May 01, 2015 -- 12:03pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12--0171--1

otak
HanmiGlobal Partner

GREGORY S. LAIRD STATE OF WASHINGTON 25755 REGISTERED PROFESSIONAL ENGINEER 5-7-15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

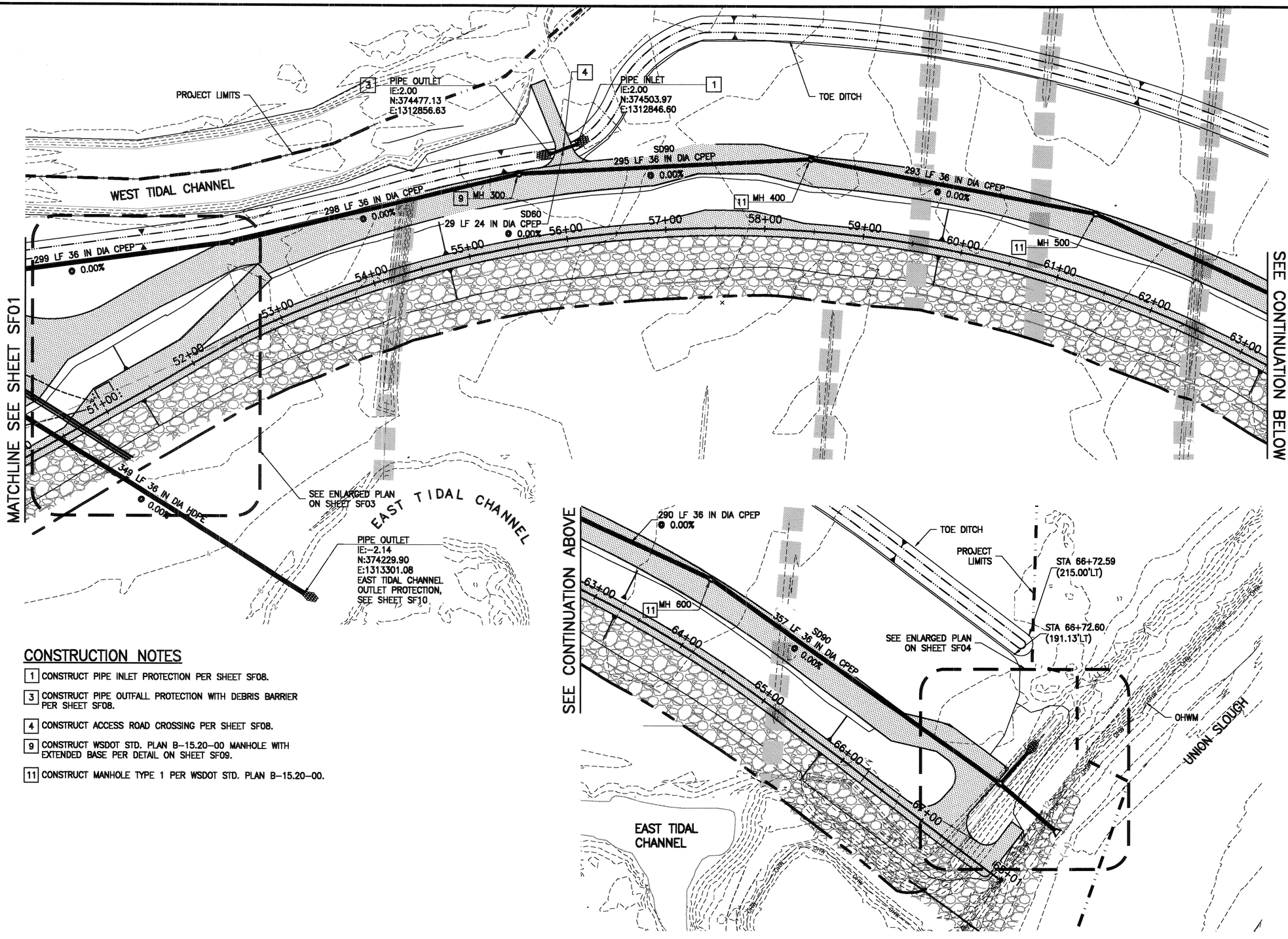
SMITH ISLAND ESTUARY RESTORATION

POND AND DRAINAGE PLAN

REFERENCE SHEET NO. SF01
SHEET 26 OF 49 SHEETS

Plotted: May 06, 2015 -- 5:47pm
otak K:\project\31800\31802A\Dwg\Phase1\26_SF01.dwg Layout Name: SF01

XREF LIST
Ltscale: 1
Resolved
TTLBLK
GSLSEAL
3784--GRDG
3784--TOPO
3784--BASE
3784--PCHN
3784--PROF
3784--PDRN



GENERAL NOTES:

1. SEE SHEET SF05 AND SF06 FOR PIPE PROFILES. PIPE PROFILES ARE SHOWN ALONG CENTERLINE OF PIPE.
2. MANHOLES SHALL BE CONSTRUCTED PER WSDOT STD. PLAN B-15.20-00. COORDINATES SHOWN ARE TO CENTER OF STRUCTURE. SEE DETAILS ON SHEET SF09 FOR MANHOLE EXTENDED BASE AND STRUCTURE ANGLE LAYOUT.
3. PIPE LENGTHS SHOWN ARE FROM START OF PIPE TO CENTER OF STRUCTURE, OR END OF PIPE WHERE NO STRUCTURE IS LOCATED.

LEGEND

- (DX) DRAINAGE GATE, SEE SCHEDULE ON SHEET SF09
- SDXX PIPE PROFILE PER SHEET SF05-SF06
- CONTOUR (MINOR-EXISTING)
- RIPRAP
- GRAVEL FILTER MATERIAL
- DITCH FILLS PER SHEET RP01-RP02

CONSTRUCTION NOTES

1. CONSTRUCT PIPE INLET PROTECTION PER SHEET SF08.
3. CONSTRUCT PIPE OUTFALL PROTECTION WITH DEBRIS BARRIER PER SHEET SF08.
4. CONSTRUCT ACCESS ROAD CROSSING PER SHEET SF08.
9. CONSTRUCT WSDOT STD. PLAN B-15.20-00 MANHOLE WITH EXTENDED BASE PER DETAIL ON SHEET SF09.
11. CONSTRUCT MANHOLE TYPE 1 PER WSDOT STD. PLAN B-15.20-00.

STORM STRUCTURE TABLE

STRUCTURE NAME:	NORTHING/ EASTING
MH300, TYPE 1-60" SOLID COVER	N:374445.73 E:1312876.67
MH400, TYPE 1-60" SOLID COVER	N:374740.41 E:1312861.09
MH500, TYPE 1-60" SOLID COVER	N:375028.02 E:1312916.41
MH600, TYPE 1-60" SOLID COVER	N:375291.47 E:1313036.66

50 0 50 100
SCALE IN FEET

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: kaelam May 06, 2015 - 1:05pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD 35758 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

POND AND DRAINAGE PLAN

REFERENCE SHEET NO. SF02
SHEET 27 OF 49 SHEETS

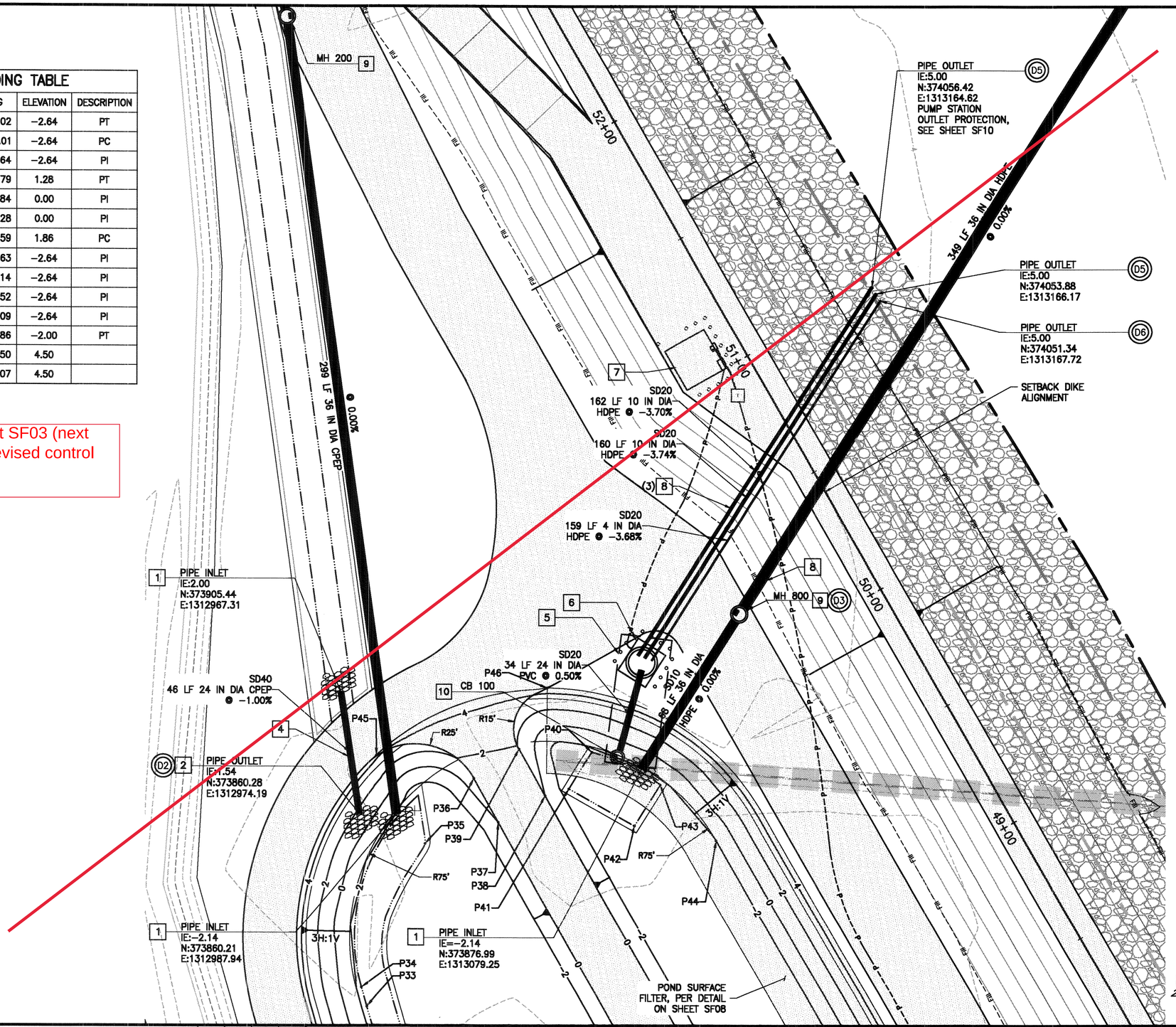
Plotted: May 06, 2015 - 5:50pm otak K:\project\31800\31852A\dwg\Phase1\27_SF02.dwg Layout Name: SF02

XREF LIST
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Resolved
TTLBLK
GSLSEAL
3784--GRDG
3784--TOPO
3784--BASE
3784--PCHN
3784--PROF
3784--PDRN

POND GRADING TABLE

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P33	373787.80	1312977.02	-2.64	PT
P34	373795.04	1312975.01	-2.64	PC
P35	373849.17	1312998.64	-2.64	PI
P36	373873.23	1313016.79	1.28	PT
P37	373857.09	1313025.84	0.00	PI
P38	373866.88	1313043.28	0.00	PI
P39	373884.16	1313033.59	1.86	PC
P40	373883.05	1313060.63	-2.64	PI
P41	373869.54	1313052.14	-2.64	PI
P42	373855.73	1313076.52	-2.64	PI
P43	373870.97	1313086.09	-2.64	PI
P44	373850.31	1313106.86	-2.00	PT
P45	373881.78	1312980.50	4.50	
P46	373907.06	1313044.07	4.50	

See revised sheet SF03 (next sheet) showing revised control building location.



GENERAL NOTES:

1. SEE SHEET SF05 AND SF06 FOR PIPE PROFILES AND STORM STRUCTURE INFORMATION. PIPE PROFILES ARE SHOWN ALONG CENTERLINE OF PIPE.
2. MANHOLES SHALL BE CONSTRUCTED PER PER WSDOT STD DETAIL B-15.20-00. COORDINATES SHOWN ARE TO CENTER OF STRUCTURE. SEE DETAILS ON SHEET SF09 FOR MANHOLE EXTENDED BASE AND STRUCTURE ANGLE LAYOUT.
3. PIPE LENGTHS SHOWN ARE FROM START OF PIPE TO CENTER OF STRUCTURE, OR END OF PIPE WHEN NO STRUCTURE IS LOCATED.

CONSTRUCTION NOTES

1. CONSTRUCT PIPE INLET PROTECTION PER SHEET SF08.
2. CONSTRUCT PIPE OUTFALL PROTECTION WITH FLAP GATE PER SHEET SF08.
4. CONSTRUCT ACCESS ROAD CROSSING PER SHEET SF08.
5. CONSTRUCT TEMPORARY SHORING FOR PUMP STATION.
6. CONSTRUCT STORMWATER PUMP STATION WET WELL. CONSTRUCT PUMP STATION FOUNDATION PER DETAIL ON SHEET SF08.
7. CONSTRUCT STORMWATER PUMP STATION CONTROL BUILDING. TOP OF SLAB ELEVATION AT 17 FT NAVD88.
8. CONSTRUCT PIPE FILTER DIAPHRAGM PER SHEET SF08.
9. CONSTRUCT WSDOT STD. PLAN B-15.20-00 MANHOLE WITH EXTENDED BASE PER DETAIL ON SHEET SF09.
10. CONSTRUCT WSDOT STD PLAN B-10.20-00 CB TYPE 2 WITH OVERFLOW PER SNOHOMISH COUNTY STD PLAN 5-245 AND EXTENDED BASE PER DETAIL ON SHEET SF09

LEGEND

- (DX) DRAINAGE GATE, SEE SCHEDULE ON SHEET SF09
- SDXX PIPE PROFILE PER SHEET SF05-SF06
- CONTOUR (MINOR-EXISTING)
- CONTOUR (MAJOR-PROPOSED)
- RIPRAP
- GRAVEL FILTER MATERIAL
- DITCH FILL PER SHEET RP01-RP02

STORM STRUCTURE TABLE

STRUCTURE NAME:	NORTHING/ EASTING
CB100, TYPE 2-48" OVERFLOW STRUCTURE	N:373881.24 E:13130070.14
MH200, TYPE 1-60" SOLID COVER	N:374156.64 E:1312946.93
MH800 TYPE 1-60" SOLID COVER	N:373934.55 E:1313115.42
PUMP STATION	N:373916.49 E:1313079.21

N

20 0 20 40
SCALE IN FEET

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: kaelam May 06, 2015 - 1:12pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LATED — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5716

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

POND OUTLET ENLARGED PLAN

REFERENCE SHEET NO. SF03
SHEET 28 OF 49 SHEETS

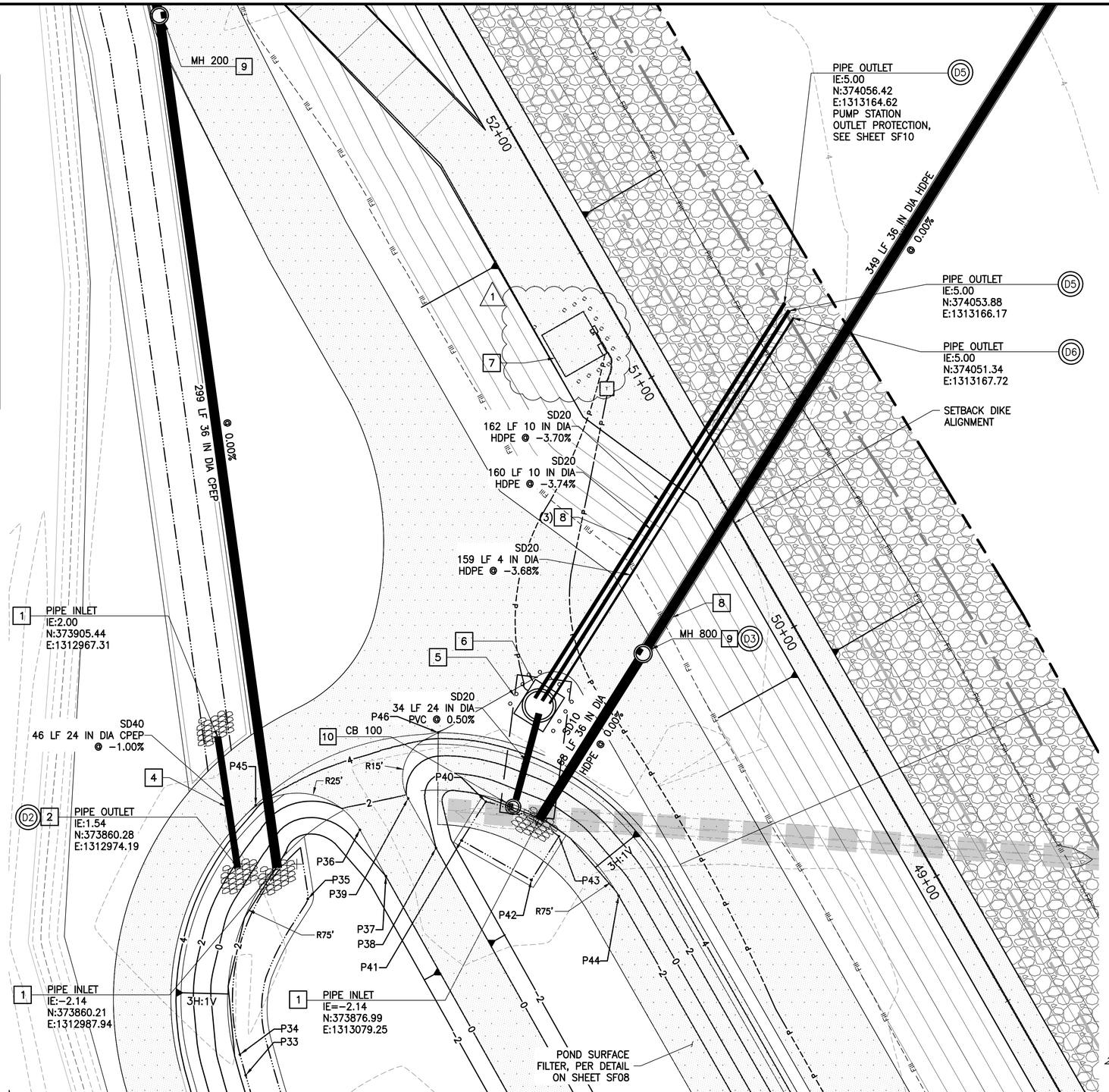
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Resolved
TTLBLK
GSLSEAL
3784-GRDG
3784-TOPO
3784-BASE
3784-PCHN
3784-PROF
3784-PDRN

POND GRADING TABLE

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P33	373787.80	1312977.02	−2.64	PT
P34	373795.04	1312975.01	−2.64	PC
P35	373849.17	1312998.64	−2.64	PI
P36	373873.23	1313016.79	1.28	PT
P37	373857.09	1313025.84	0.00	PI
P38	373866.88	1313043.28	0.00	PI
P39	373884.16	1313033.59	1.86	PC
P40	373883.05	1313060.63	−2.64	PI
P41	373869.54	1313052.14	−2.64	PI
P42	373855.73	1313076.52	−2.64	PI
P43	373870.97	1313086.09	−2.64	PI
P44	373850.31	1313106.86	−2.00	PT
P45	373881.78	1312980.50	4.50	
P46	373907.06	1313044.07	4.50	

Excavation through setback dike for installation of pipes SD-10 and SD-20 was performed as detailed on sheets SF03a and SF03b.



GENERAL NOTES:

1. SEE SHEET SF05 AND SF06 FOR PIPE PROFILES AND STORM STRUCTURE INFORMATION. PIPE PROFILES ARE SHOWN ALONG CENTERLINE OF PIPE.
2. MANHOLES SHALL BE CONSTRUCTED PER PER WSDOT STD DETAIL B−15.20−00. COORDINATES SHOWN ARE TO CENTER OF STRUCTURE. SEE DETAILS ON SHEET SF09 FOR MANHOLE EXTENDED BASE AND STRUCTURE ANGLE LAYOUT.
3. PIPE LENGTHS SHOWN ARE FROM START OF PIPE TO CENTER OF STRUCTURE, OR END OF PIPE WHEN NO STRUCTURE IS LOCATED.

CONSTRUCTION NOTES

1. CONSTRUCT PIPE INLET PROTECTION PER SHEET SF08.
2. CONSTRUCT PIPE OUTFALL PROTECTION WITH FLAP GATE PER SHEET SF08.
4. CONSTRUCT ACCESS ROAD CROSSING PER SHEET SF08.
5. CONSTRUCT TEMPORARY SHORING FOR PUMP STATION.
6. CONSTRUCT STORMWATER PUMP STATION WET WELL. CONSTRUCT PUMP STATION FOUNDATION PER DETAIL ON SHEET SF08.
7. CONSTRUCT STORMWATER PUMP STATION CONTROL BUILDING. TOP OF SLAB ELEVATION AT 17 FT NAVD88.
8. CONSTRUCT PIPE FILTER DIAPHRAGM PER SHEET SF08.
9. CONSTRUCT WSDOT STD. PLAN B−15.20−00 MANHOLE WITH EXTENDED BASE PER DETAIL ON SHEET SF09.
10. CONSTRUCT WSDOT STD PLAN B−10.20−00 CB TYPE 2 WITH OVERFLOW PER SNOHOMISH COUNTY STD PLAN 5−245 AND EXTENDED BASE PER DETAIL ON SHEET SF09

LEGEND

- (DX) DRAINAGE GATE, SEE SCHEDULE ON SHEET SF09
- SDXX PIPE PROFILE PER SHEET SF05−SF06
- CONTOUR (MINOR−EXISTING)
- CONTOUR (MAJOR−PROPOSED)
- RIPRAP
- GRAVEL FILTER MATERIAL
- DITCH FILL PER SHEET RP01−RP02

STORM STRUCTURE TABLE

STRUCTURE NAME:	NORTHING/ EASTING
CB100, TYPE 2−48" OVERFLOW STRUCTURE	N:373881.24 E:1313070.14
MH200, TYPE 1−60" SOLID COVER	N:374156.64 E:1312946.93
MH800 TYPE 1−60" SOLID COVER	N:373934.55 E:1313115.42
PUMP STATION	N:373916.49 E:1313079.21

N

20 0 20 40
SCALE IN FEET

CALL BEFORE YOU DIG
1−800−424−5555

DATE	NO.	REVISION	BY
6/8/17	1	S.I. 03 − CONTROL BUILDING LOCATION	CRC DAS

Last Saved By: chrisc Jun 09, 2017 − 2:19pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12−0171−1

otak
HanmiGlobal Partner

REFER TO ORIGINAL DRAWINGS FOR SIGNATURES AND SEALS

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER

DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

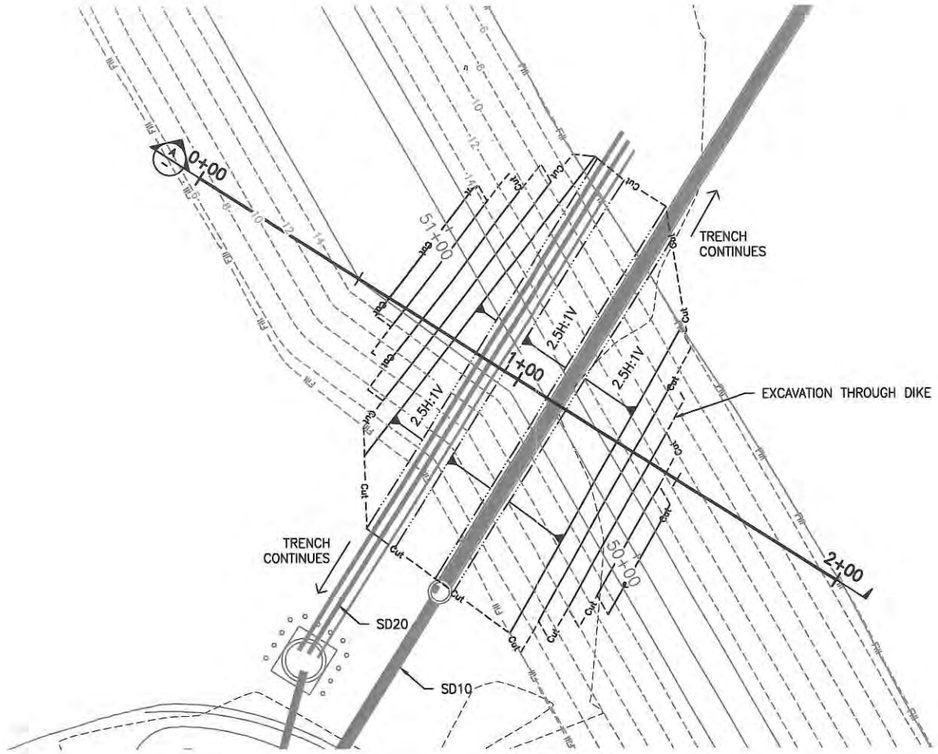
POND OUTLET ENLARGED PLAN

REFERENCE SHEET NO. SF03

SHEET 28 OF 49 SHEETS

Plotted: Jun 09, 2017 − 3:14pm chrisc K:\project\31800\31852A\Dwg\Phase1\28_SF03.dwg Layout Name: SF03

Exhibit B



PLAN VIEW

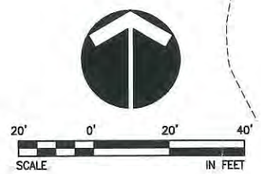


Estimated Excavation Quantities

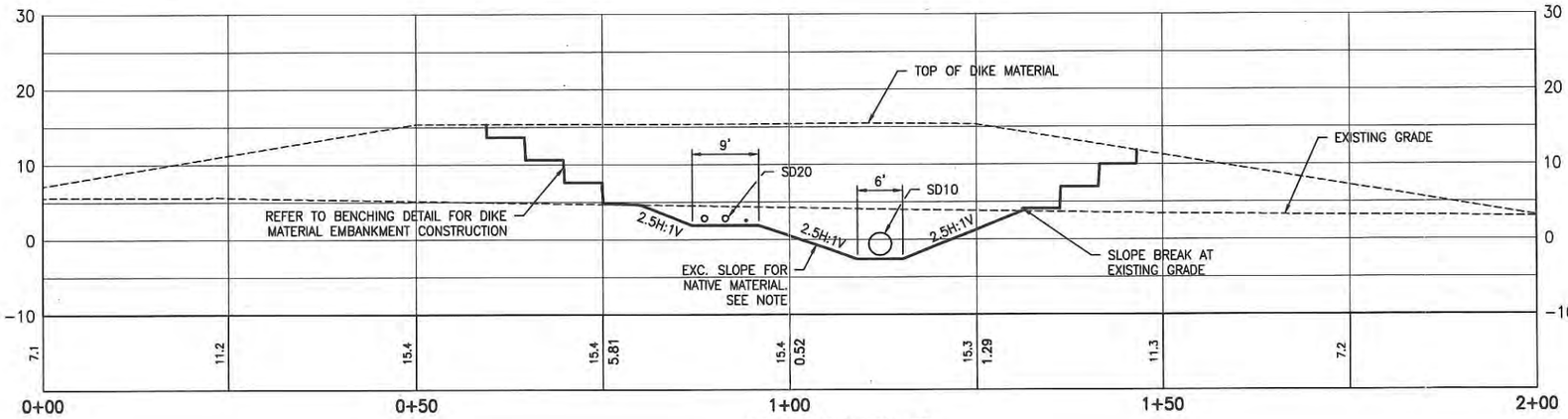
Dike Material Excavation:	1,580 CY
Native Material Excavation:	830 CY
Total Excavation	2,410 CY

Estimated Backfill Quantities:

Reused Dike Material	1,500 CY
New Dike Material	910 CY
Total	2,410 CY
Or	3,900 tons



NOTE:
1. EXCAVATION SLOPE OF 2.5H:1V SHOWN FOR NATIVE MATERIAL. REFER TO REQUIREMENTS FOR STEEPER SLOPES.
2. DEWATERING SHALL BE COMPLETED AS NECESSARY FOR EXCAVATION IN WET SOILS BELOW NATIVE GRADE.



SECTION VIEW A



DATE	NO.	REVISION	BY
2/19/16	1	Added estimated quantities to sheet.	CRG

Last Saved By: ahmedk Feb 18, 2016 – 8:15am

STATE	FED. AID PROJ. NO.	SURVEY NO.
10 WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

REVIEWED AND APPROVED BY:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND SETBACK DIKE EXCAVATION FOR SD10 AND SD20

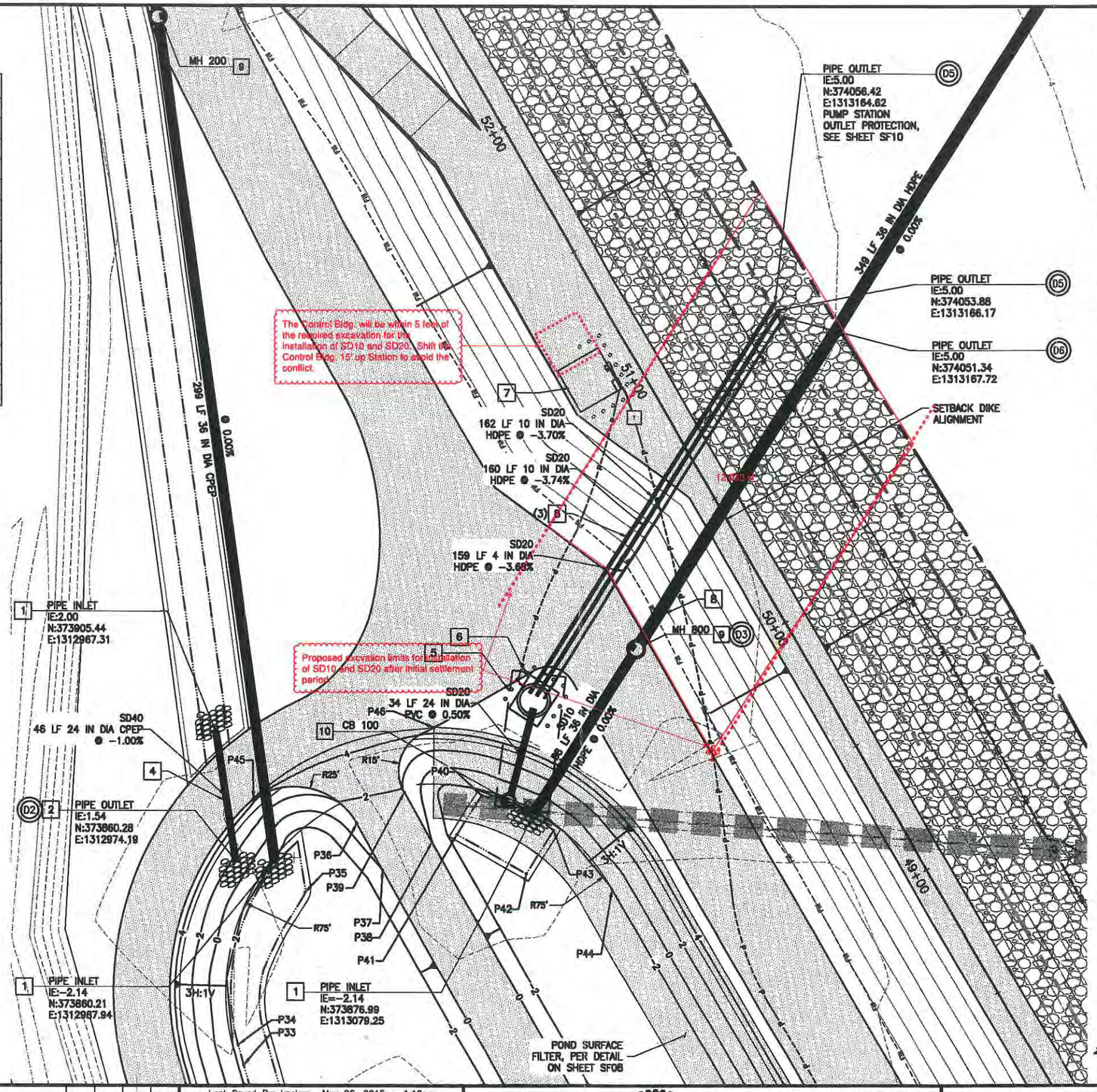
REFERENCE SHEET NO. SF03a

SHEET 1 OF 1 SHEETS

Plotted: Feb 18, 2016 – 8:17am ahmedk K:\project\32400\324328\CADD\ACAD\Dwg\Exhibits\SI1.dwg Layout Name: SI1

XREF LIST
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Resolved
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GSLSEAL
3784-GRDG
3784-TOPO
3784-BASE
3784-PCHN
3784-PROF
3784-PDRN

POND GRADING TABLE				
POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
P33	373787.80	1312977.02	-2.64	PT
P34	373795.04	1312975.01	-2.64	PC
P35	373849.17	1312998.64	-2.64	PI
P36	373873.23	1313016.79	1.28	PT
P37	373857.09	1313025.84	0.00	PI
P38	373866.88	1313043.28	0.00	PI
P39	373884.16	1313033.59	1.86	PC
P40	373883.05	1313060.63	-2.64	PI
P41	373869.54	1313052.14	-2.64	PI
P42	373855.73	1313076.52	-2.64	PI
P43	373870.97	1313086.09	-2.64	PI
P44	373850.31	1313106.86	-2.00	PT
P45	373881.78	1312980.50	4.50	
P46	373907.06	1313044.07	4.50	



GENERAL NOTES:

1. SEE SHEET SF05 AND SF06 FOR PIPE PROFILES AND STORM STRUCTURE INFORMATION. PIPE PROFILES ARE SHOWN ALONG CENTERLINE OF PIPE.
2. MANHOLES SHALL BE CONSTRUCTED PER PER WSDOT STD DETAIL B-15.20-00. COORDINATES SHOWN ARE TO CENTER OF STRUCTURE. SEE DETAILS ON SHEET SF09 FOR MANHOLE EXTENDED BASE AND STRUCTURE ANGLE LAYOUT.
3. PIPE LENGTHS SHOWN ARE FROM START OF PIPE TO CENTER OF STRUCTURE, OR END OF PIPE WHEN NO STRUCTURE IS LOCATED.

CONSTRUCTION NOTES

1. CONSTRUCT PIPE INLET PROTECTION PER SHEET SF08.
2. CONSTRUCT PIPE OUTFALL PROTECTION WITH FLAP GATE PER SHEET SF08.
4. CONSTRUCT ACCESS ROAD CROSSING PER SHEET SF08.
5. CONSTRUCT TEMPORARY SHORING FOR PUMP STATION.
6. CONSTRUCT STORMWATER PUMP STATION WET WELL. CONSTRUCT PUMP STATION FOUNDATION PER DETAIL ON SHEET SF08.
7. CONSTRUCT STORMWATER PUMP STATION CONTROL BUILDING. TOP OF SLAB ELEVATION AT 17 FT NAVD88.
8. CONSTRUCT PIPE FILTER DIAPHRAGM PER SHEET SF08.
9. CONSTRUCT WSDOT STD. PLAN B-15.20-00 MANHOLE WITH EXTENDED BASE PER DETAIL ON SHEET SF09.
10. CONSTRUCT WSDOT STD PLAN B-10.20-00 CB TYPE 2 WITH OVERFLOW PER SNOHOMISH COUNTY STD PLAN 5-245 AND EXTENDED BASE PER DETAIL ON SHEET SF09

LEGEND

- (DX) DRAINAGE GATE, SEE SCHEDULE ON SHEET SF09
- SDXX PIPE PROFILE PER SHEET SF05-SF06
- CONTOUR (MINOR-EXISTING)
- CONTOUR (MAJOR-PROPOSED)
- RIPRAP
- GRAVEL FILTER MATERIAL
- DITCH FILL PER SHEET RP01-RP02

STORM STRUCTURE TABLE	
STRUCTURE NAME:	NORTHING/ EASTING
CB100, TYPE 2-48" OVERFLOW STRUCTURE	N:373881.24 E:1313070.14
MH200, TYPE 1-60" SOLID COVER	N:374156.64 E:1312946.93
MH800 TYPE 1-60" SOLID COVER	N:373934.55 E:1313115.42
PUMP STATION	N:373916.49 E:1313079.21

CALL BEFORE YOU DIG 1-800-424-5555

Last Saved By: kaelam May 06, 2015 - 1:12pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12-0171-1

DATE	NO.	REVISION	BY

otak
Member Global Partner

GREGORY S. LAIRD 25758 REGISTERED PROFESSIONAL ENGINEER 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

POND OUTLET ENLARGED PLAN

REFERENCE SHEET NO. SF03b
SHEET 28 OF 49 SHEETS

Plotted: May 06, 2015 - 5:53pm otak K:\project\31800\31803A\Dwg\Phase1\2B_SF03.dwg Layout Name: SF03

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Ltscale: 1
Resolved
TTLBLK
GSLSEAL
3784-GRDG
3784-TOPO
3784-BASE
3784-PCHN
3784-PROF
3784-PDRN

EXISTING TOE DITCH

1 PIPE INLET
IE: -2.00
N:375611.14
E:1313212.15

PROJECT LIMITS

SNOHOMISH COUNTY PROPERTY BOUNDARY

N:375613.10
E:1313191.56

42 LF 24 IN DIA CPEP SD90 @ 0.33%

MH 750
SEE DETAIL, SHEET SF09
D4 11

357 LF 36 IN DIA CPEP SD90 @ 0.00%

72 LF 36 IN DIA HDPE SD90 @ 0.00%

5

PIPE OUTLET
IE: -2.14
N:375638.23
E:1313290.21
UNION SLOUGH
OUTLET PROTECTION, SEE SHEET SF10

UNION SLOUGH

CONSTRUCT PIPE FILTER DIAPHRAGM PER SHEET SF08

DIKE EASEMENT BOUNDARIES

68+00

67+00

See revised sheet SF04 (next sheet) showing revisions to SD90 Pipe FIlter Diaphragm.

GENERAL NOTES:

1. SEE SHEET SF05 AND SF06 FOR PIPE PROFILES. PIPE PROFILES ARE SHOWN ALONG CENTERLINE OF PIPE.
2. MANHOLES SHALL BE CONSTRUCTED PER WSDOT STD. PLAN B-15.20-00 COORDINATES SHOWN ARE TO CENTER OF STRUCTURE.
3. PIPE LENGTHS SHOWN ARE FROM START OF PIPE TO CENTER OF STRUCTURE, OR END OF PIPE WHEN NO STRUCTURE IS LOCATED.

CONSTRUCTION NOTES

1 CONSTRUCT PIPE INLET PROTECTION PER SHEET SF08.

5 CONSTRUCT TEMPORARY SHORING AND DEWATERING SYSTEM.

11 CONSTRUCT MANHOLE TYPE 1 PER WSDOT STD. PLAN B-15.20-00.

12 CONSTRUCT TEMPORARY SHORING FOR PIPE OUTFALL.

LEGEND

DX DRAINAGE GATE, SEE SCHEDULE ON SHEET SF06

SDXX PIPE PROFILE PER SHEETS SF05-SF06

CONTOUR (MINOR-EXISTING)

CONTOUR (MAJOR-PROPOSED)

RIPRAP

GRAVEL FILTER MATERIAL

STORM STRUCTURE TABLE	
STRUCTURE NAME:	NORTHING/ EASTING
MH700, TYPE 1-60"	N:375582.81 E:1313243.61

N

10 0 10 20
SCALE IN FEET

CALL BEFORE YOU DIG
1-800-424-5555

Plotted: May 06, 2015 - 6:03pm otak K:\project_31880_31852A\Dwg\Phase1\29_SF04.dwg Layout Name: SF04

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 06, 2015 - 2:20pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD
STATE OF WASHINGTON
21578
REGISTERED PROFESSIONAL ENGINEER
5.7.15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

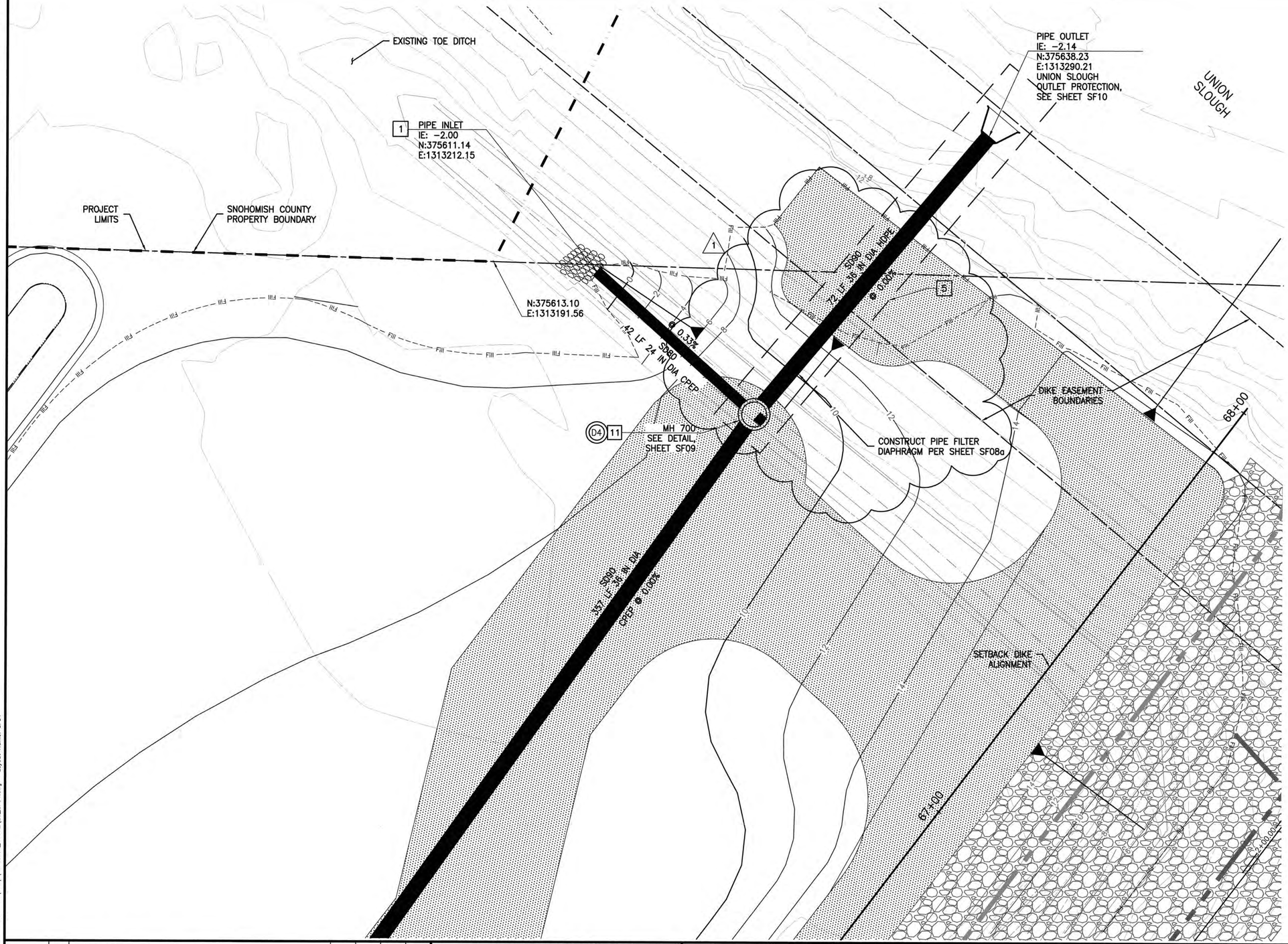
SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

UNION SLOUGH OUTFALL ENLARGED PLAN

REFERENCE SHEET NO. SF04
SHEET 29 OF 49 SHEETS

XREF LIST
Ltscale: 1
Resolved
TTLBLK
GSLSEAL
3784-GRDG
3784-TOPO
3784-BASE
3784-PCHN
3784-PROF
3784-PDRN



GENERAL NOTES:

1. SEE SHEET SF05 AND SF06 FOR PIPE PROFILES. PIPE PROFILES ARE SHOWN ALONG CENTERLINE OF PIPE.
2. MANHOLES SHALL BE CONSTRUCTED PER WSDOT STD. PLAN B-15.20-00 COORDINATES SHOWN ARE TO CENTER OF STRUCTURE.
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CONSTRUCTION NOTES

1 CONSTRUCT PIPE INLET PROTECTION PER SHEET SF08.

5 CONSTRUCT TEMPORARY SHORING AND DEWATERING SYSTEM.

11 CONSTRUCT MANHOLE TYPE 1 PER WSDOT STD. PLAN B-15.20-00.

12 CONSTRUCT TEMPORARY SHORING FOR PIPE OUTFALL.

LEGEND

DX DRAINAGE GATE, SEE SCHEDULE ON SHEET SF06

SDXX PIPE PROFILE PER SHEETS SF05-SF06

CONTOUR (MINOR-EXISTING)

CONTOUR (MAJOR-PROPOSED)

RIPRAP

GRAVEL FILTER MATERIAL

STORM STRUCTURE TABLE	
STRUCTURE NAME:	NORTHING/ EASTING
MH700, TYPE 1-60"	N:375582.81 E:1313243.61

1 THESE PLANS REFLECT DESIGN INFORMATION, INCLUDING PLAN REVISIONS MADE DURING CONSTRUCTION. OTAK HAS NOT SURVEYED TO VERIFY THE "AS-BUILT" CONDITION

10 0 10 20
SCALE IN FEET

N

CALL BEFORE YOU DIG
1-800-424-5555

NO.	DATE	REVISION	BY
1	1/22/18	SD90 FILTER DIAPHRAGM AND DIKE GRADING	DAS CRC

Last Saved By: otak Feb 06, 2018 - 2:33pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
Hanmi Global Partner

GREGORY S. LATTA — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER

REVIEWED AND APPROVED BY:

DOUGLAS W. McCORMICK, P.E.
SNOHOMISH COUNTY ENGINEER

DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

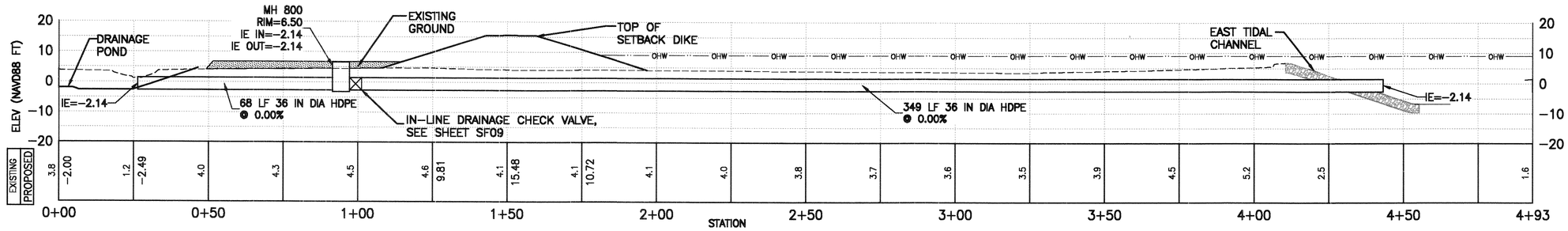
UNION SLOUGH OUTFALL ENLARGED PLAN

REFERENCE SHEET NO. SF04

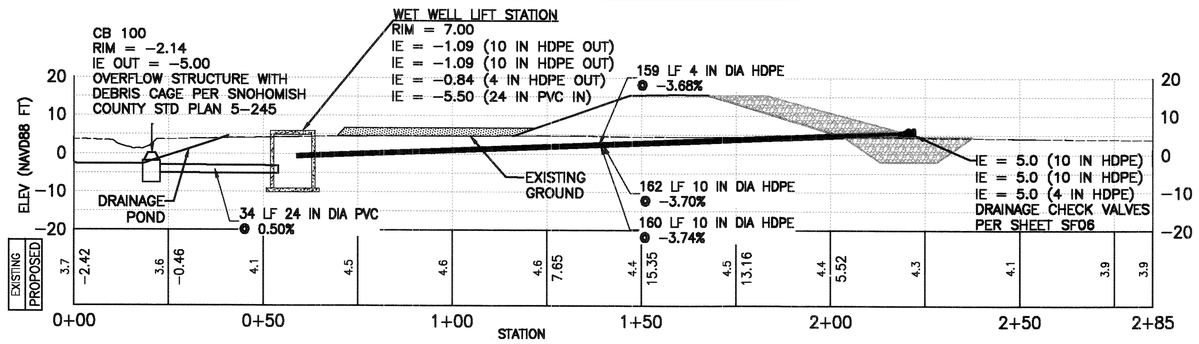
SHEET 29 OF 49 SHEETS

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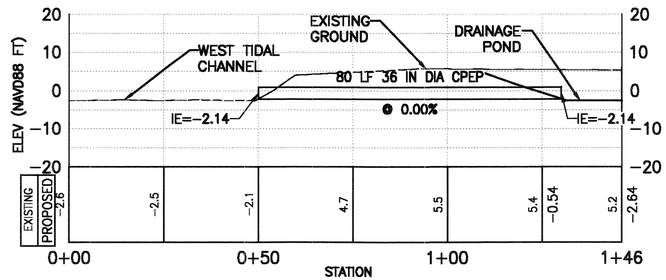
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GSLSEAL
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3784—TOPO
3784—BASE
3784—PCHN
3784—PROF
3784—PDRN



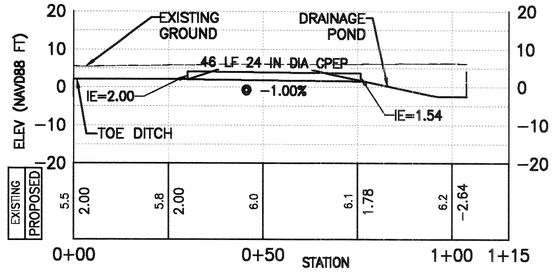
ALIGNMENT ALONG ℄ – SD10, PIPE FROM POND TO EAST TIDAL CHANNEL



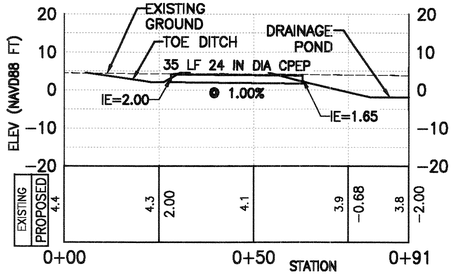
ALIGNMENT ALONG ℄ – SD20, PUMP STATION INTAKE TO RIPRAP TRENCH



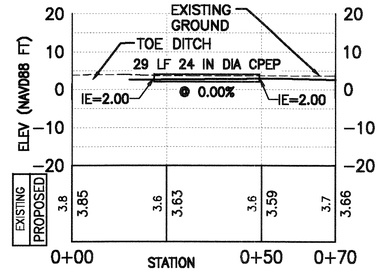
ALIGNMENT ALONG ℄ – SD30, PIPE FROM WEST TIDAL CHANNEL TO POND



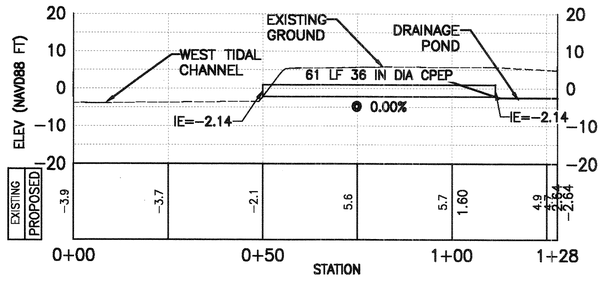
ALIGNMENT ALONG ℄ – SD40, PIPE FROM NORTH TOE DITCH TO POND



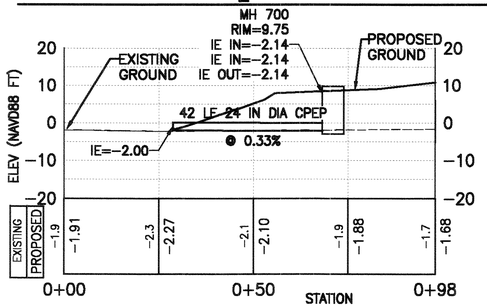
ALIGNMENT ALONG ℄ – SD50, PIPE FROM SOUTH TOE DITCH TO POND



ALIGNMENT ALONG ℄ – SD60, CULVERT AT DRIVEWAY



ALIGNMENT ALONG ℄ – SD70, PIPE FROM WEST TIDAL CHANNEL TO POND



ALIGNMENT ALONG ℄ – SD80, PIPE FROM EX TOE DITCH TO CATCH BASIN

H
20 0 20 40
SCALE IN FEET

V
20 0 20 40
SCALE IN FEET

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk May 05, 2015 – 1:35pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD
STATE OF WASHINGTON
25758
REGISTERED
PROFESSIONAL ENGINEER
5-7-15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS

PROJECT NO. RR49206

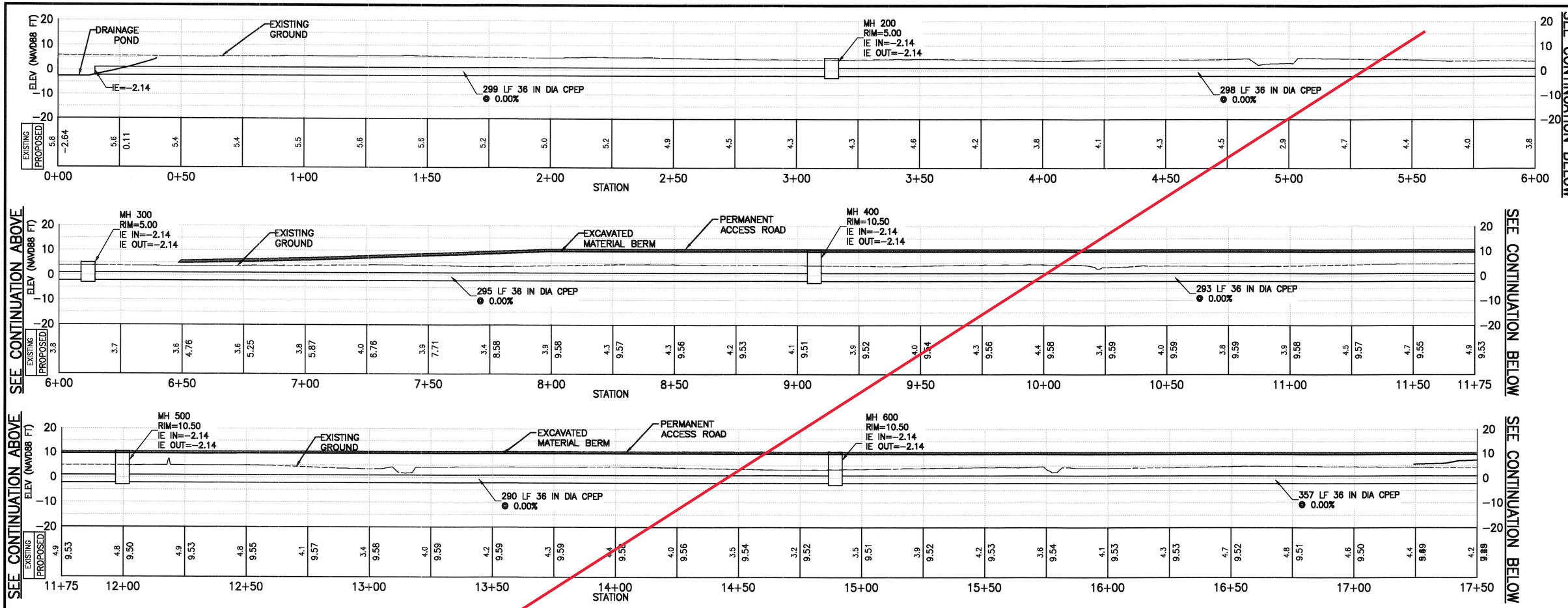
SMITH ISLAND ESTUARY RESTORATION

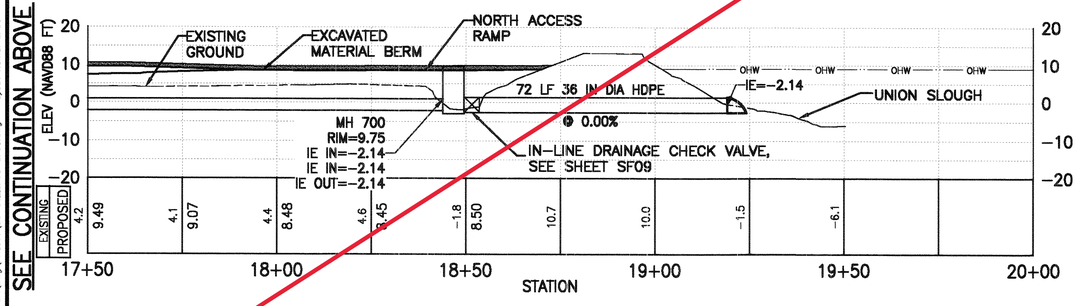
DRAINAGE PIPE PROFILES

REFERENCE SHEET NO. SF05
SHEET 30 OF 49 SHEETS

Plotted: May 06, 2015 – 6:08am otak K:\project\31800\31852A\dwg\Phase1\30-31_SF05-SF06.dwg Layout Name: SF05

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Resolved
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GSLSEAL
3784--GRDG
3784--TOPO
3784--BASE
3784--PCHN
3784--PROF
3784--PDRN





ALIGNMENT ALONG ℄ – SD90, PIPE FROM POND TO UNION SLOUGH

See revised sheet SF06 (next sheet) showing revisions to SD90 Pipe FIlter Diaphragm.

H
20 0 20 40
SCALE IN FEET

V
20 0 20 40
SCALE IN FEET

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk May 05, 2015 – 1:35pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY:	DRAWN BY:
GSL, DAS	AK
FIELD BOOK(S):	UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

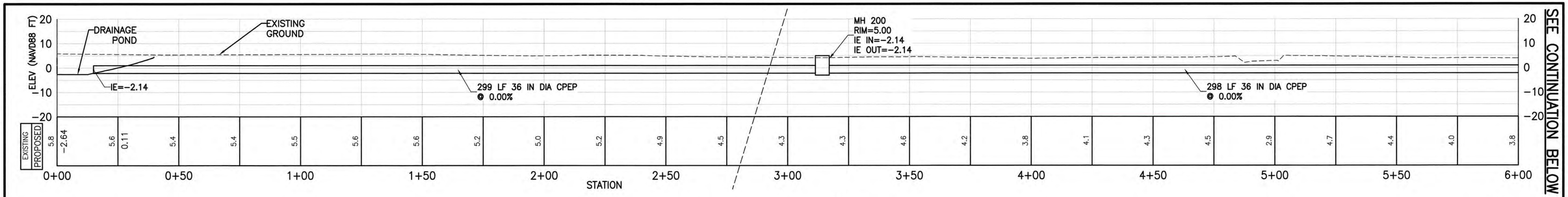
SMITH ISLAND ESTUARY RESTORATION

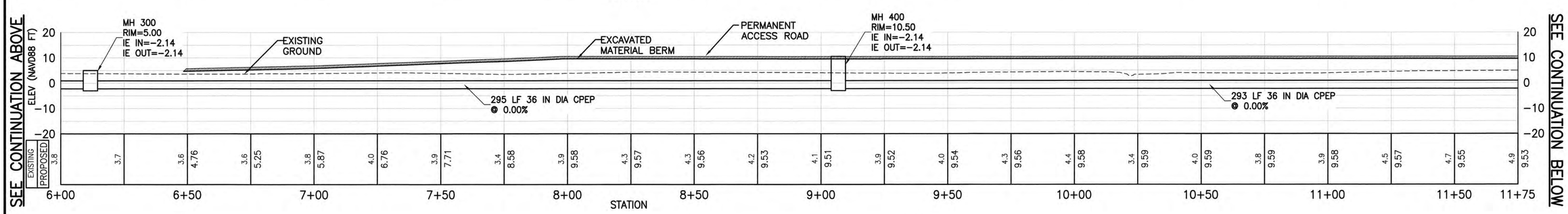
DRAINAGE PIPE PROFILES

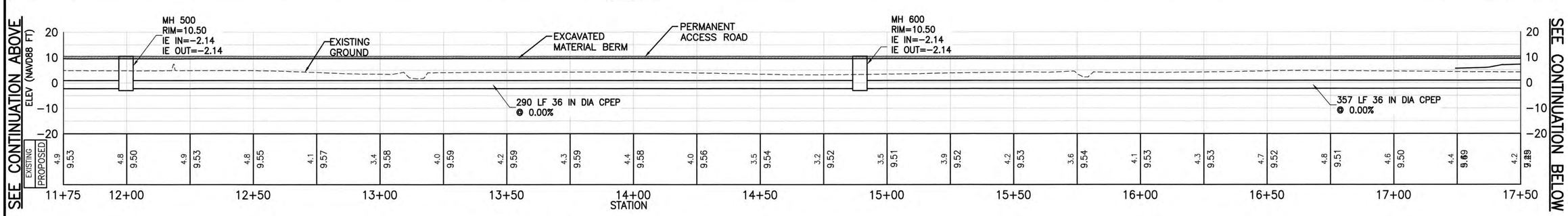
REFERENCE SHEET NO. SF06
SHEET 31 OF 49 SHEETS

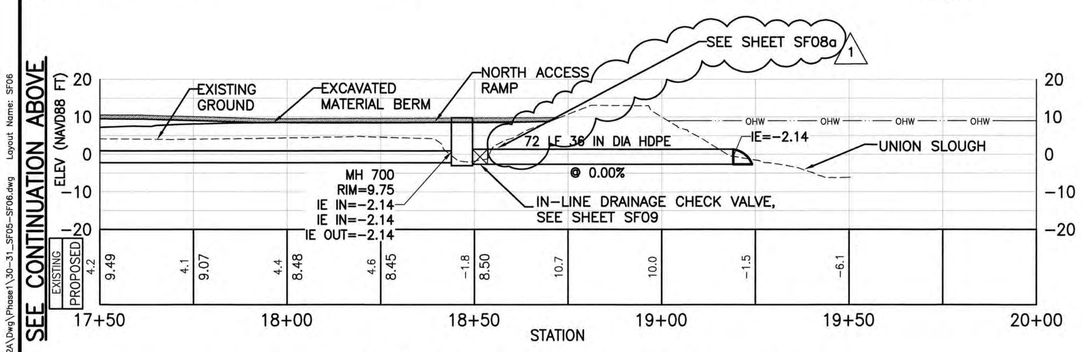
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Resolved
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3784-GRDG
3784-TOPO
3784-BASE
3784-PCHN
3784-PROF
3784-PDRN









ALIGNMENT ALONG ℄ – SD90, PIPE FROM POND TO UNION SLOUGH

H 20 0 20 40 SCALE IN FEET

V 20 0 20 40 SCALE IN FEET

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY
1/22/18	1	REFERENCE TO NEW SHEET SF08a	DAS CRC

Last Saved By: otak Feb 06, 2018 – 2:28pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD STATE OF WASHINGTON 18758 REGISTERED PROFESSIONAL ENGINEER 2-6-18

REVIEWED AND APPROVED BY:

DOUGLAS W. McCORMICK, P.E.
SNOHOMISH COUNTY ENGINEER

DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

DRAINAGE PIPE PROFILES

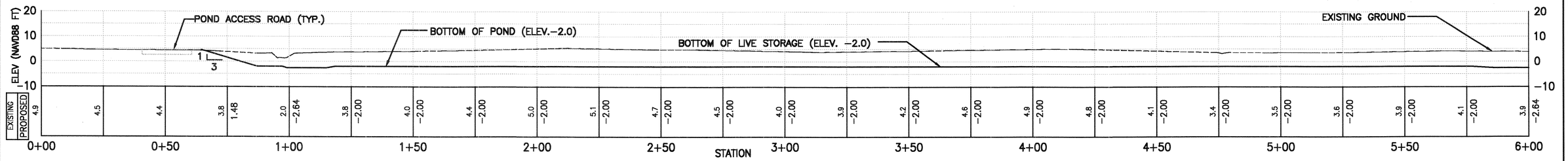
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SHEET 31 OF 49 SHEETS

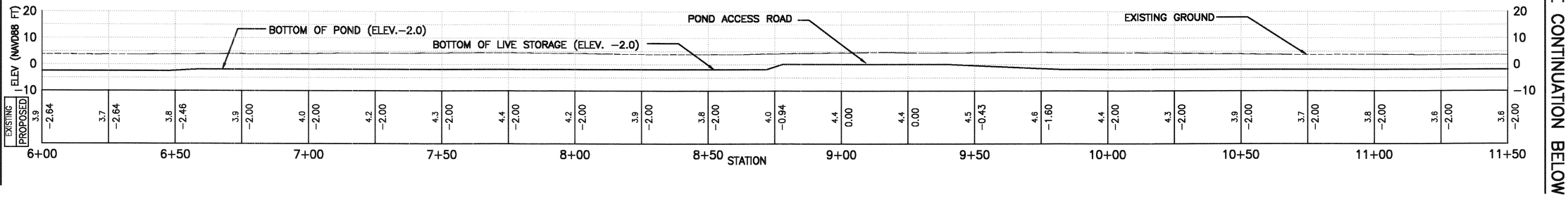
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XREF LIST
Ltscale: 1
Resolved
TTLBLK
GSLSEAL
3784--GRDG
3784--TOPO
3784--BASE
3784--PCHN
3784--PROF
3784--PDRN

SEE CONTINUATION BELOW

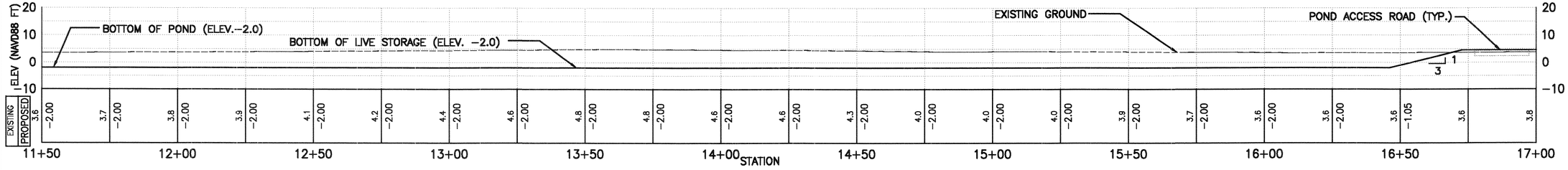


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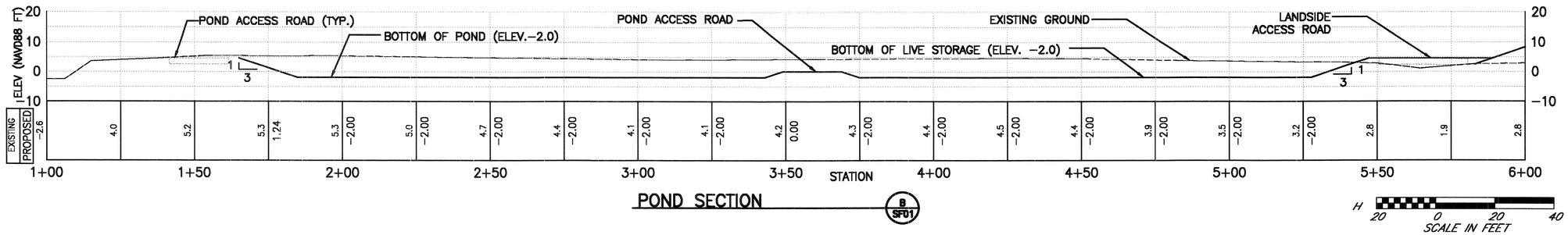


SEE CONTINUATION BELOW

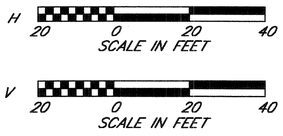
SEE CONTINUATION ABOVE



POND SECTION (A SF01)



POND SECTION (B SF01)



CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 06, 2015 - 1:01pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAYARD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5.7.15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

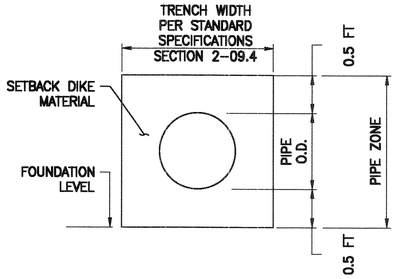
SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

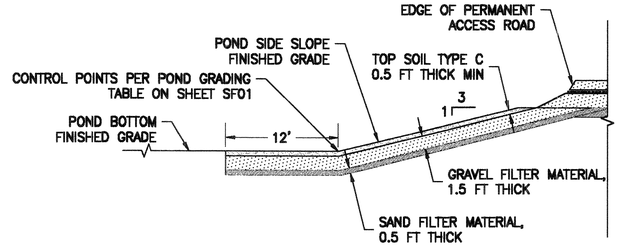
POND SECTIONS

REFERENCE SHEET NO. SF07
SHEET 32 OF 49 SHEETS

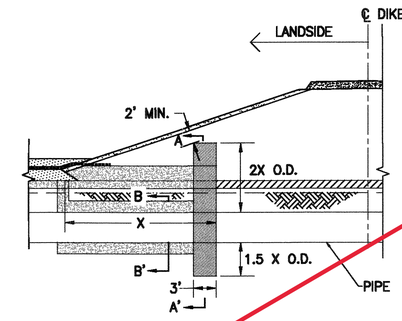
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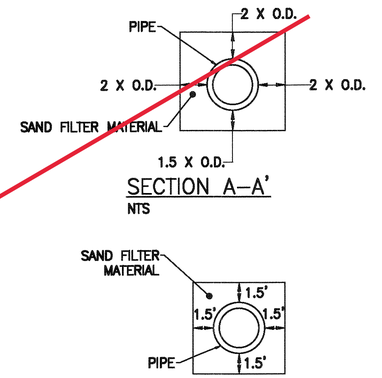


PIPE ZONE BEDDING
NTS



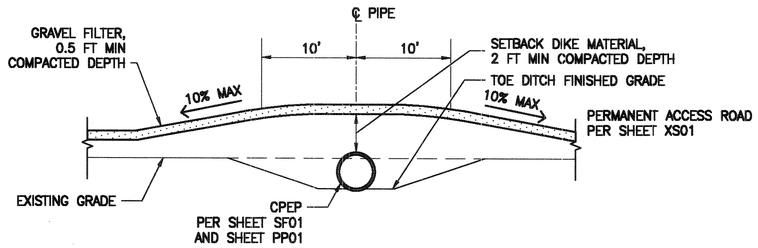
POND SURFACE FILTER
NTS



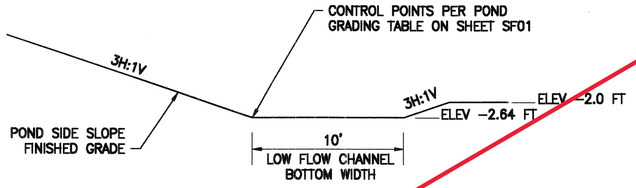


NOTES:
O.D. = OUTSIDE DIAMETER OF PIPE
X = LANDSIDE ONE-THIRD OF DIKE FOOTPRINT

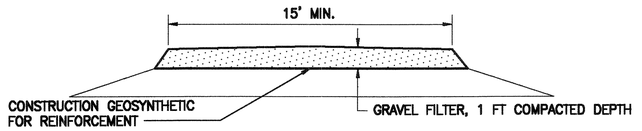
PIPE FILTER DIAPHRAGM
NTS



ACCESS ROAD CROSSING
NTS

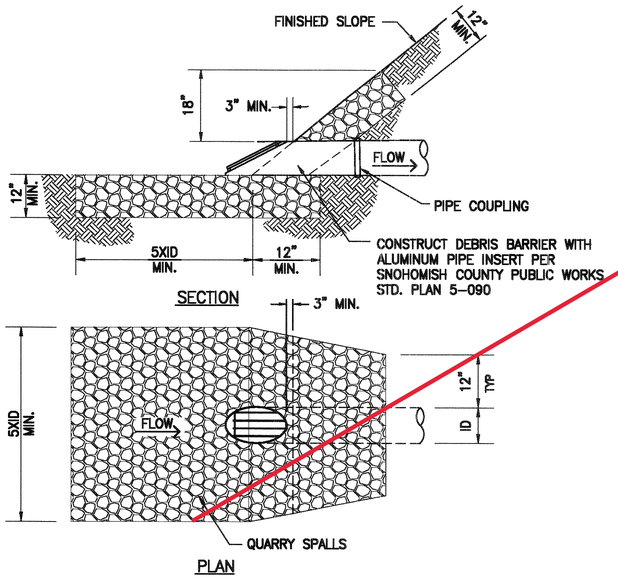


POND LOW FLOW CHANNEL
NTS



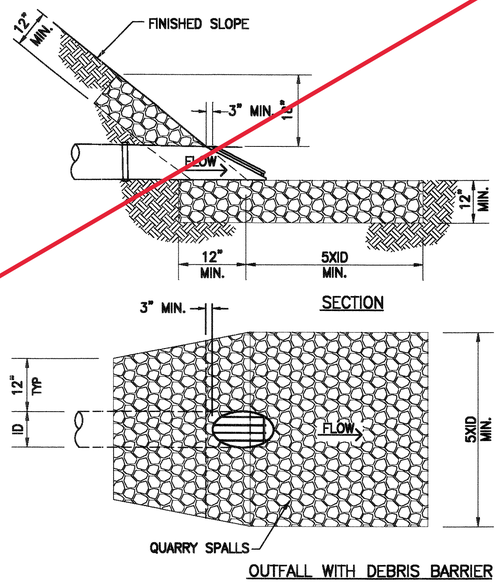
POND ACCESS ROAD
NTS

See revised sheet SF08 (next sheet) showing revisions to Pipe FIlter Diaphragm detail.



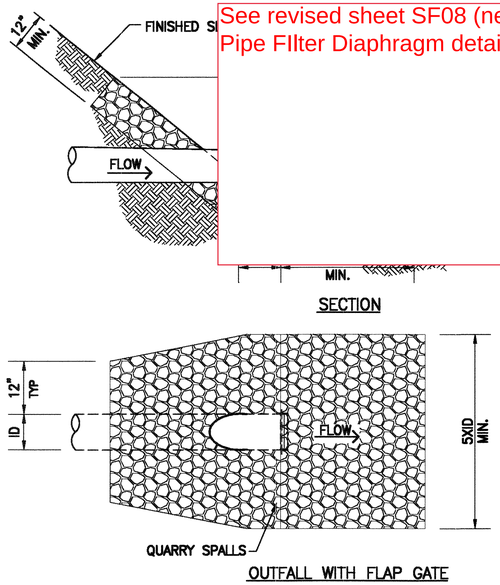
NOTE:
ID=INSIDE DIAMETER OF PIPE

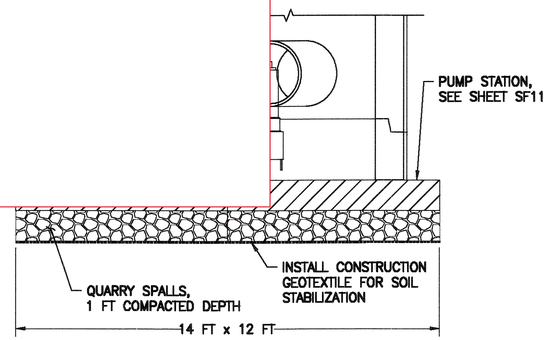
PIPE INLET PROTECTION
NTS



NOTE:
ID=INSIDE DIAMETER OF PIPE

PIPE OUTFALL PROTECTION
NTS





PUMP STATION FOUNDATION
NTS

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: davest May 01, 2015 - 2:39pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAILAND
STATE OF WASHINGTON
25758
REGISTERED
PROFESSIONAL ENGINEER
5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

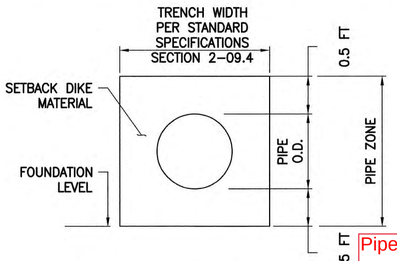
SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

DRAINAGE DETAILS

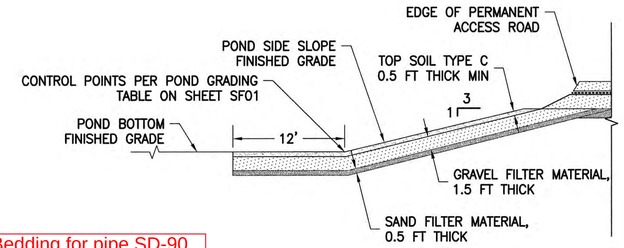
REFERENCE SHEET NO. SF08
SHEET 33 OF 49 SHEETS

Plotted: May 06, 2015 - 6:14pm otak K:\project\31800\31852A\Dwg\Phase1\33_SF08.dwg Layout Name: SF08

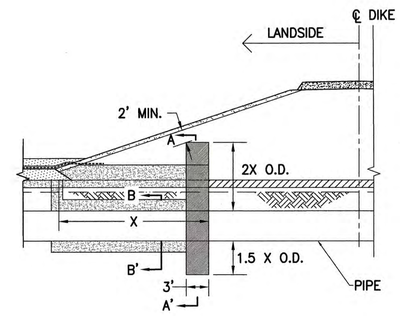


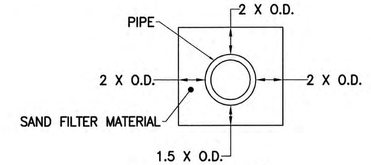
PIPE ZONE BEDDING
NTS

Pipe Zone Bedding for pipe SD-90 was changed to WSDOT specification pipe zone bedding, in accordance with Change Order #16. All other pipes were bedded using Setback Dike material as originally specified.

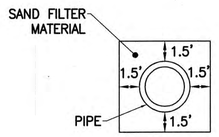


POND SURFACE FILTER
NTS





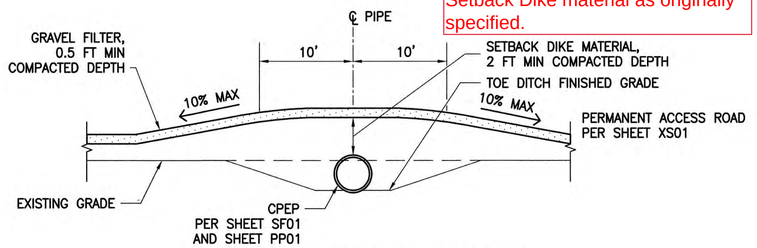
SECTION A–A'
NTS



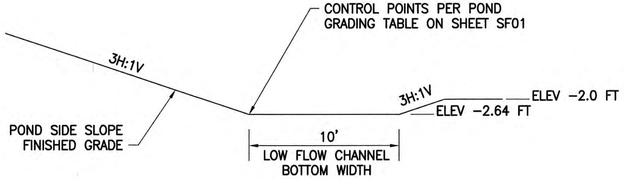
SECTION B–B'
NTS

NOTES:
O.D. = OUTSIDE DIAMETER OF PIPE
X = LANDSIDE ONE-THIRD OF DIKE FOOTPRINT

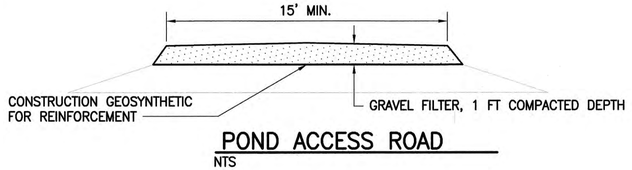
SD10 AND SD20 PIPE FILTER DIAPHRAGM
NTS



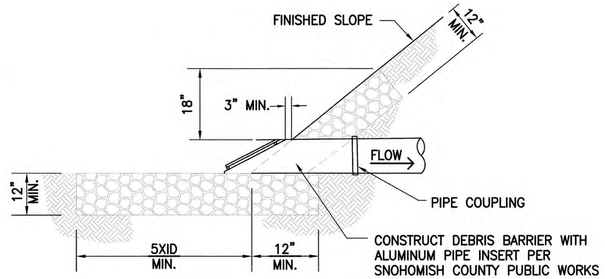
ACCESS ROAD CROSSING
NTS

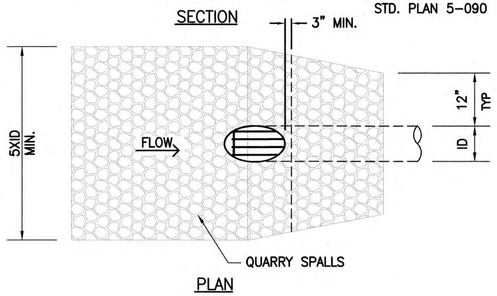


POND LOW FLOW CHANNEL
NTS



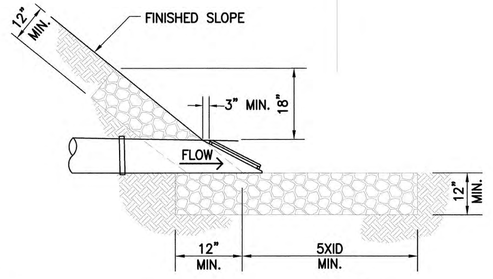
POND ACCESS ROAD
NTS

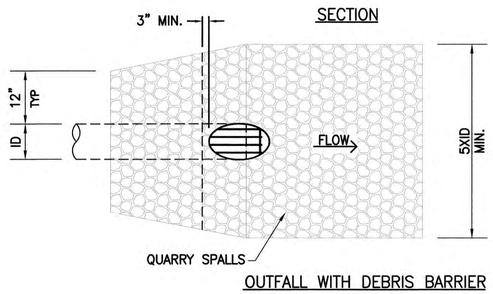




NOTE:
ID=INSIDE DIAMETER OF PIPE

PIPE INLET PROTECTION
NTS

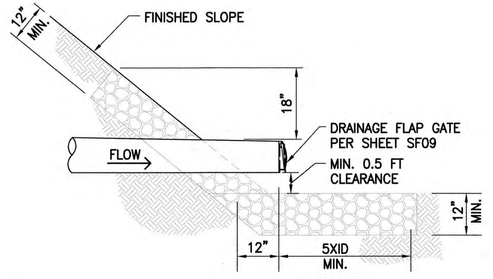


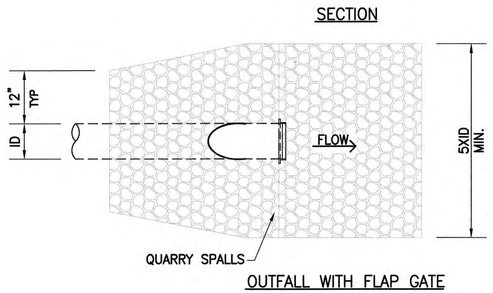


PIPE OUTFALL WITH DEBRIS BARRIER

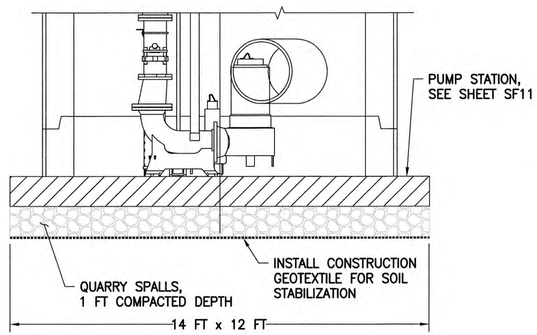
NOTE:
ID=INSIDE DIAMETER OF PIPE

PIPE OUTFALL PROTECTION
NTS





OUTFALL WITH FLAP GATE



PUMP STATION FOUNDATION
NTS

CALL BEFORE YOU DIG
1-800-424-5555

NO.	DATE	REVISION	BY
1	1/22/18	SD10 AND SD20 PIPE FILTER DIAPHRAGM	DAS CRC

Last Saved By: otak Feb 06, 2018 – 2:32pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — 25758 — STATE OF WASHINGTON — REGISTERED PROFESSIONAL ENGINEER — 2018

REVIEWED AND APPROVED BY:

DOUGLAS W. McCORMICK, P.E.
SNOHOMISH COUNTY ENGINEER

DATE APPROVED:

SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

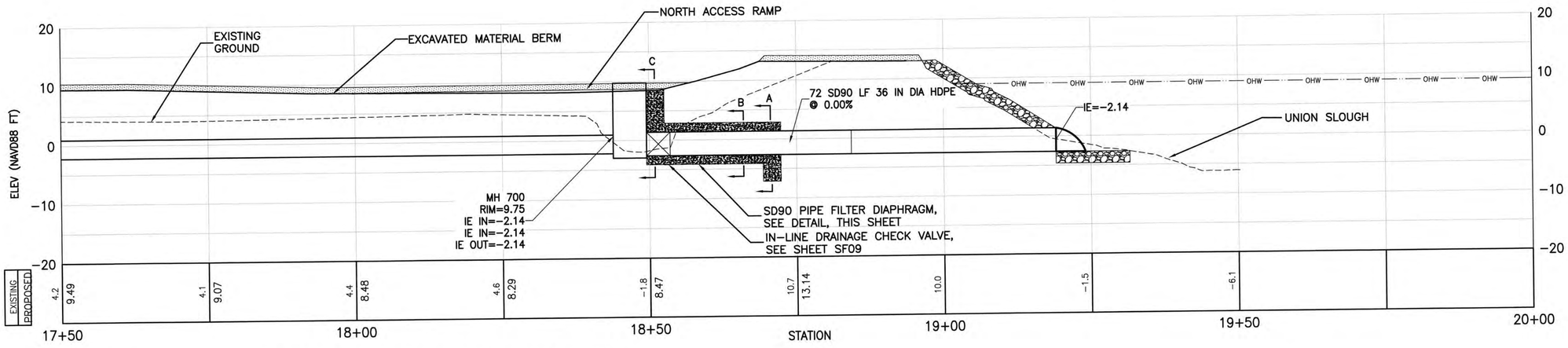
DRAINAGE DETAILS

REFERENCE SHEET NO. SF08

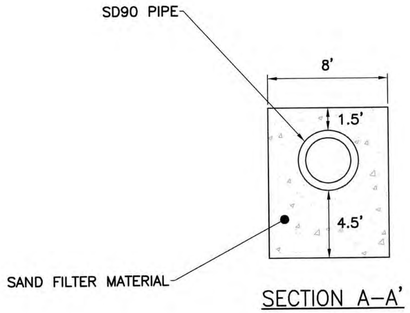
SHEET 33 OF 49 SHEETS

Plotted: Feb 06, 2018 – 3:26pm otak K:\project\31800\31852A\Dwg\Phase1\33_SF08.dwg Layout Name: SF08

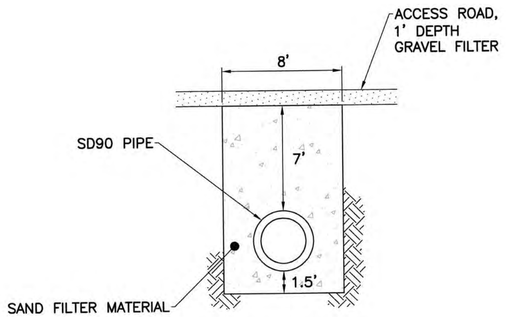
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3784-PDRN



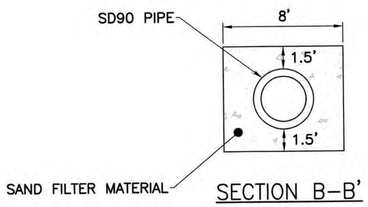
ALIGNMENT ALONG ℄ – SD90, PIPE FROM MH700 TO UNION SLOUGH



SECTION A–A'
NTS



SECTION C–C'
NTS



SECTION B–B'
NTS

SD90 PIPE FILTER DIAPHRAGM
NTS

H 10 0 10 20 SCALE IN FEET

V 10 0 10 20 SCALE IN FEET

CALL BEFORE YOU DIG 1-800-424-5555

NO.	DATE	REVISION	BY
1	1/22/18	ADDED SHEET SF08a	DAS CRC

Last Saved By: otak Feb 06, 2018 – 2:40pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD STATE OF WASHINGTON 25758 REGISTERED PROFESSIONAL ENGINEER 2-6-18

REVIEWED AND APPROVED BY:

DOUGLAS W. McCORMICK, P.E.
SNOHOMISH COUNTY ENGINEER

DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

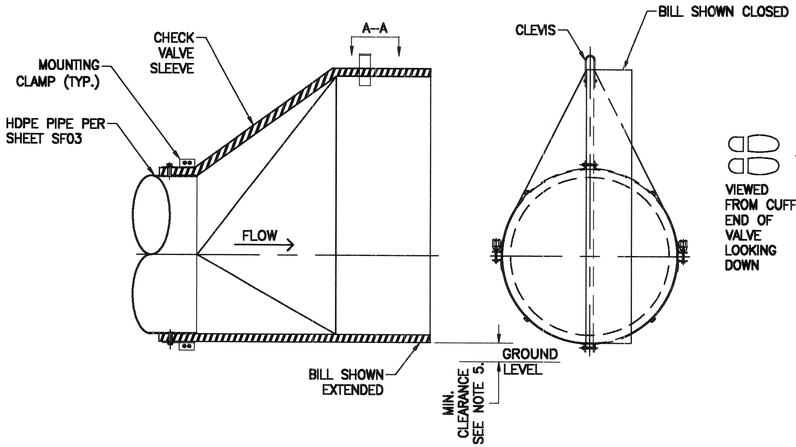
SMITH ISLAND ESTUARY RESTORATION

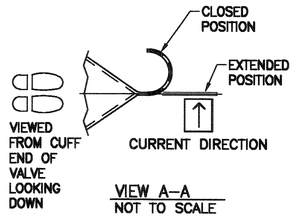
DRAINAGE DETAILS

REFERENCE SHEET NO. SF08A

SHEET OF 49 SHEETS

Plotted: Feb 06, 2018 – 3:31pm otak K:\project\31800\31852A\Dwg\Phase1\33a_SF08a.dwg Layout Name: SF08a





VIEW A–A
NOT TO SCALE

NOTES

1. INSTALL CHECK VALVE PER MANUFACTURER'S RECOMMENDATION.
2. MINIMUM BACK PRESSURE IS 0 FT, AND MAXIMUM BACK PRESSURE IS 17 FT FOR ALL PIPES. MAXIMUM LINE PRESSURE FOR 10–INCH PIPE (PRESSURIZED) IS 13.2 FT AND FOR 4–INCH PIPE (PRESSURIZED) IS 6.0 FT.
3. TIDE GATE TO BE MOUNTED WITH THE OUTLET IN THE VERTICAL POSITION.
4. CHECK VALVES SHALL FIT ON O.D. OF PIPES.
5. A MINIMUM BOTTOM CLEARANCE OF 0.5 FT SHALL BE PROVIDED.

DRAINAGE GATE SCHEDULE

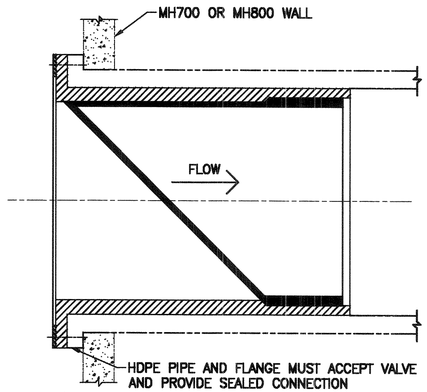
SEE SHEET SF01–SF04 FOR DRAINAGE GATE LOCATION
INSTALL DRAINAGE GATES PER MANUFACTURER'S RECOMMENDATIONS.
ALL MOUNTING BOLTS SHALL BE STAINLESS STEEL.

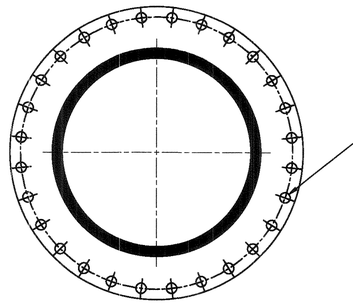
ID	TYPE	LOCATION	INSTALLATION	CONNECTING PIPE	QUANTITY	MANUFACTURER*	MODEL SPECS	NORMAL POSITION
D1	36" DIAM. DRAINAGE FLAP GATE	POND	SPIGOTBACK WITH HDPE ADAPTER	36" I.D. CPEP	2	WATERMAN	AF-41 ALUMINUM FLAP GATE	CLOSED
D2	24" DIAM. DRAINAGE FLAP GATE	POND	SPIGOTBACK WITH HDPE ADAPTER	24" I.D. CPEP	2	WATERMAN	AF-41 ALUMINUM FLAP GATE	CLOSED
D3	30" DIAM. IN-LINE DRAINAGE CHECK VALVE	EAST TIDAL CHANNEL	UPSTREAM FLANGED	36" O.D. HDPE	1	TIDEFLEX	IN-LINE CHECKMATE VALVE	CLOSED
D4	30" DIAM. IN-LINE DRAINAGE CHECK VALVE	UNION SLOUGH	UPSTREAM FLANGED	36" O.D. HDPE	1	TIDEFLEX	IN-LINE CHECKMATE VALVE	CLOSED
D5	10" DIAM. DRAINAGE CHECK VALVE	EAST TIDAL CHANNEL	CUFF WTH MOUNTING CLAMPS	10" O.D. HDPE	2	TIDEFLEX	ECCENTRIC TF-1 CHECK VALVE	CLOSED
D6	4" DIAM. DRAINAGE CHECK VALVE	EAST TIDAL CHANNEL	CUFF WTH MOUNTING CLAMPS	4" O.D. HDPE	1	TIDEFLEX	ECCENTRIC TF-1 CHECK VALVE	CLOSED

* OR APPROVED EQUAL

DRAINAGE CHECK VALVE

NTS



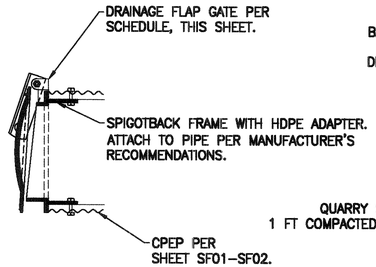


NOTES

1. PIPE INSIDE DIAMETER IS 32.4 INCHES.
2. MAXIMUM BACK PRESSURE IS 17 FEET.

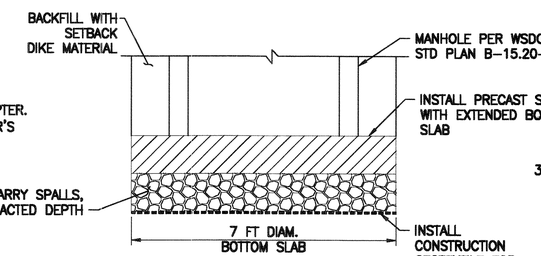
IN–LINE DRAINAGE CHECK VALVE

NTS



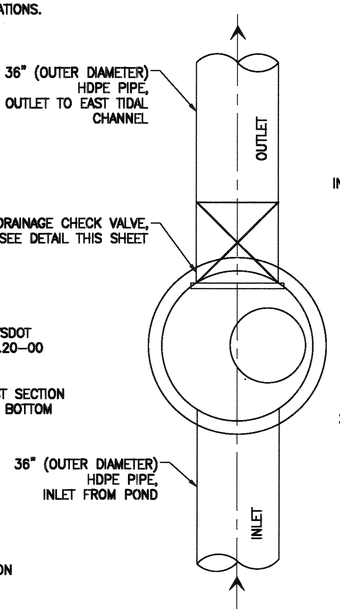
DRAINAGE FLAP GATE CONNECTION

NTS



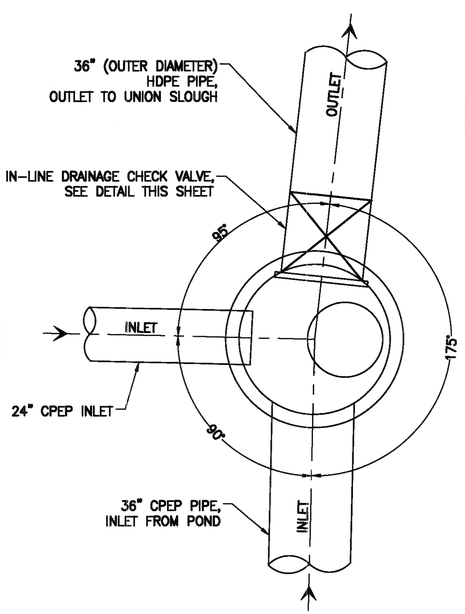
MANHOLE EXTENDED BASE

NTS



MH800 LAYOUT

NTS

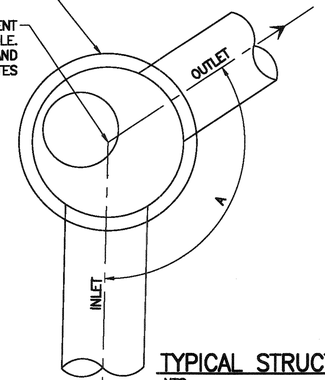


MH700 LAYOUT

NTS

MANHOLE TYPE 1 PER WSDOT STD PLAN B–15.20–00

CENTER OF ALIGNMENT AND MANHOLE. SEE SHEETS SF01 AND SF02 FOR COORDINATES

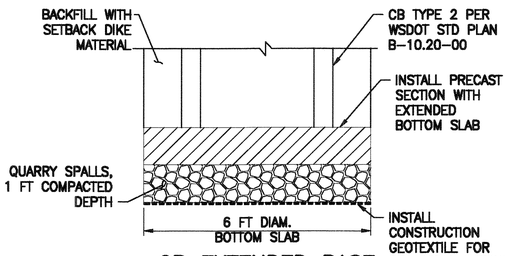


STRUCTURE NAME	ANGLE, A (°)
CB100	
MH200	174
MH300	169
MH400	166
MH500	166
MH600	169
MH700 *	175
MH800	180

* FOR MH700, SEE DETAIL, THIS SHEET

TYPICAL STRUCTURE ANGLE LAYOUT

NTS



CB EXTENDED BASE

NTS

CALL BEFORE YOU DIG 1–800–424–5555

DATE	NO.	REVISION	BY

Last Saved By: francescaw May 01, 2015 – 11:32am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12–0171–1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25756 — REGISTERED PROFESSIONAL ENGINEER — 5715

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

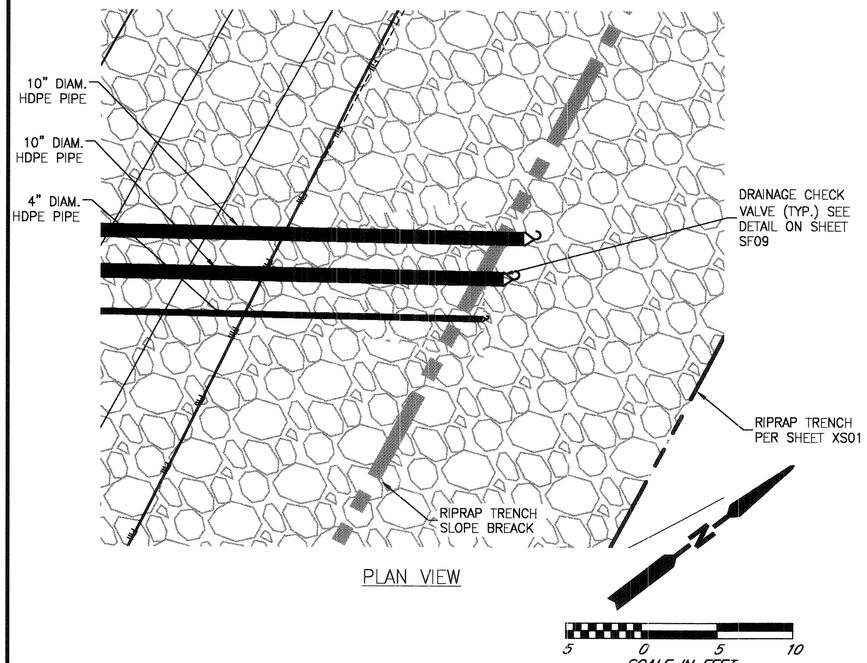
DRAINAGE DETAILS

REFERENCE SHEET NO. SF09

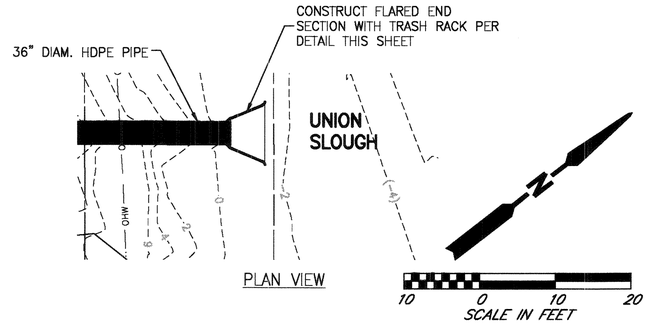
SHEET 34 OF 49 SHEETS

Plotted: May 06, 2015 – 6:14pm otak K:\project\31800\31892A\Dwg\Phase1\34_SF09.dwg Layout Name: SF09

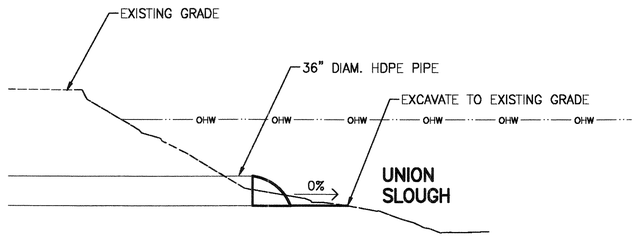
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Resolved
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3784-TOPO
3784-BASE
3784-PCHN
3784-PROF
3784-PDRN



PLAN VIEW

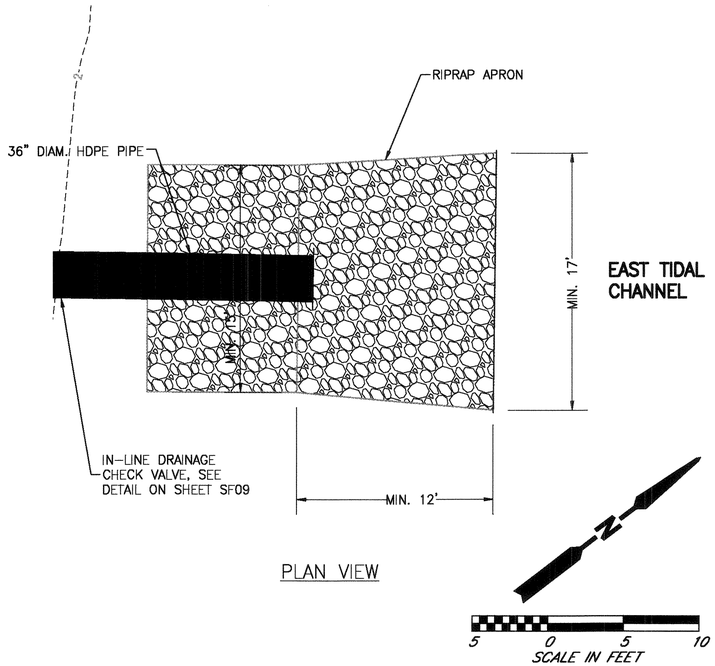


PLAN VIEW

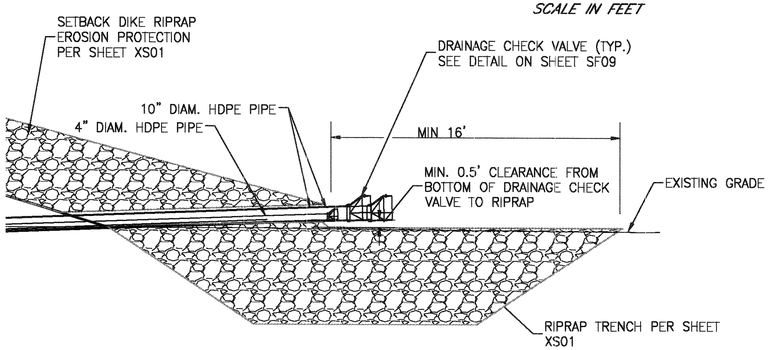


SECTION VIEW

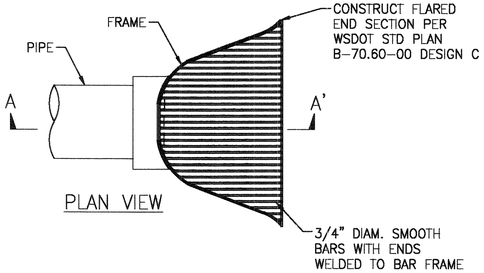
UNION SLOUGH OUTLET PROTECTION



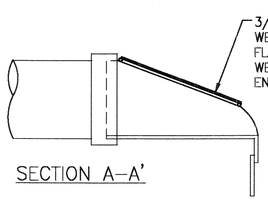
PLAN VIEW



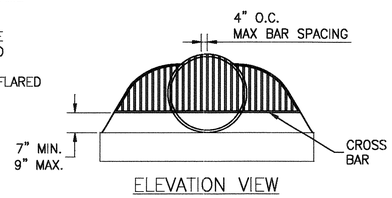
SECTION VIEW



PLAN VIEW

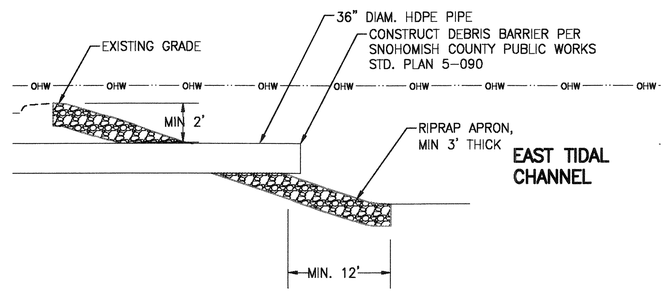


SECTION A-A'



ELEVATION VIEW

PUMP STATION OUTLET PROTECTION



SECTION VIEW

EAST TIDAL CHANNEL OUTLET PROTECTION

FLARED END SECTION WITH TRASH RACK

NTS

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 06, 2015 - 12:34pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5/7/15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

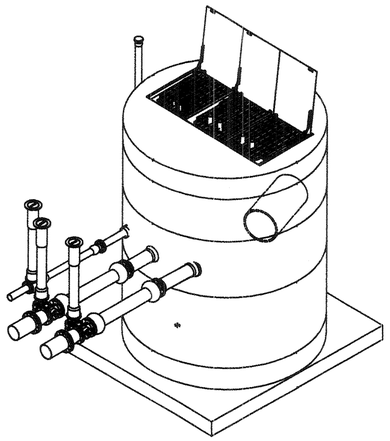
SMITH ISLAND ESTUARY RESTORATION

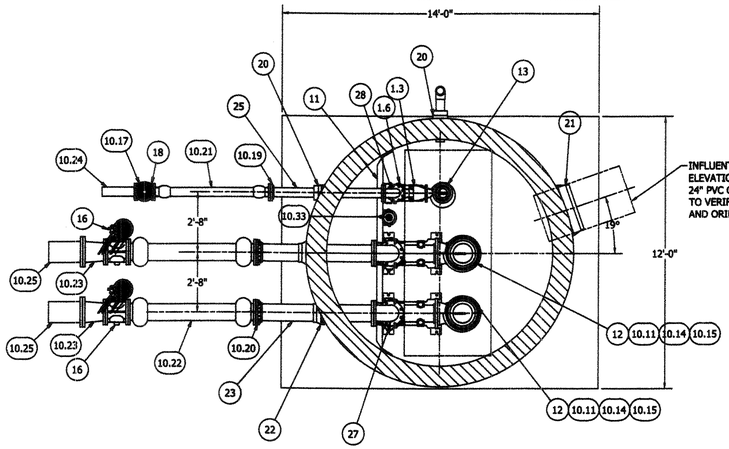
DRAINAGE DETAILS

REFERENCE SHEET NO. SF10
SHEET 35 OF 49 SHEETS

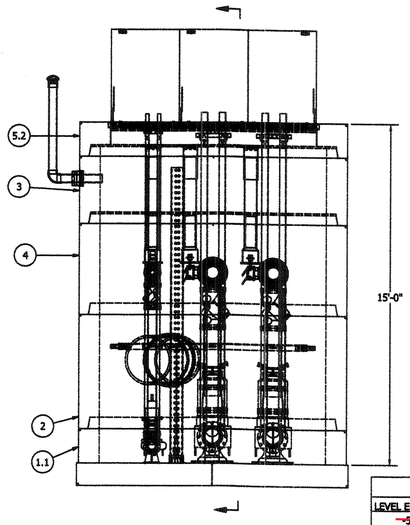
Plotted: May 06, 2015 - 6:18pm otak K:\project\31800\31852A\Dwg\Phase1\35_SF10.dwg Layout Name: SF10

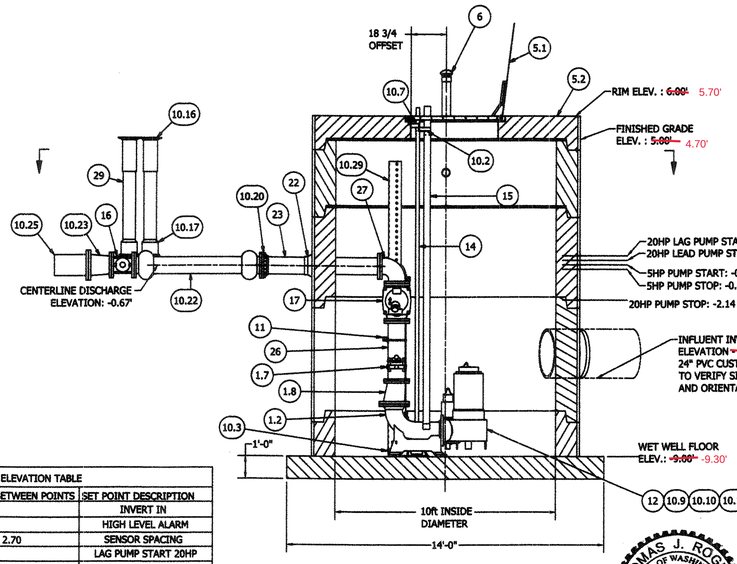
XREF LIST
Ltscale: 1
Resolved
TTLBLK
GSLSEAL





NOTE: WET WELL TOP SLAB IS PEDESTRIAN RATED





SENSOR AND ELEVATION TABLE		
LEVEL ELEVATION	DISTANCE BETWEEN POINTS	SET POINT DESCRIPTION
~~-5.50~~ -5.80'		INVERT IN
2.50		HIGH LEVEL ALARM
	2.70	SENSOR SPACING
-0.20		LAG PUMP START 20HP
	0.20	SENSOR SPACING
-0.40		LEAD PUMP START 20HP
	0.20	SENSOR SPACING
-0.60		JOCKEY PUMP START 5HP
	0.20	SENSOR SPACING
-0.80		JOCKEY PUMP STOP 5HP
-2.14		LEAD/LAG PUMP STOP 20HP
	~~6.86~~ 7.16	DISTANCE TO FLOOR
~~-9.00~~ -9.30'		FLOOR ELEVATION

NOTE: ALL DIMENSIONS AND ELEVATIONS SHOWN ARE NOMINAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE ON-SITE CONTRACTOR OR ROMTEC UTILITIES CUSTOMER (NOT ROMTEC UTILITIES) TO VERIFY THE ACCURACY OF ANY CRITICAL DIMENSIONS OR ELEVATIONS PRIOR TO SETTING OR INSTALLING ANY EQUIPMENT.

? 2015 ROMTEC INC. ALL RIGHTS RESERVED. THESE PLANS AND DRAWINGS MAY NOT BE REPRODUCED, ADAPTED, OR FURTHER DISTRIBUTED, AND NO COMPONENTS MAY BE CONSTRUCTED FROM THESE PLANS, WITHOUT WRITTEN PERMISSION OF ROMTEC, INC.

Parts List			
ITEM	QTY	STOCK NUMBER	DESCRIPTION
1	1	10-XXXX	BASE ASSEMBLY
1.1	1	10-5168	BASE - WW - 10ft - RU FLAT BASE - 12ft X 14ft
1.2	2	31-4463	QUICK DISCHARGE ELBOW - 10in - LL250U - EBARA
1.3	1	31-5422	QUICK DISCHARGE CONNECTOR - LL100
1.4	1	31-5481	DISCHARGE ELBOW - EBARA - 4 X 4
1.5	3	31-6040	ANCHOR KIT - DISCHARGE ELBOW
1.6	1	42-5659	COUPLING - STAR - RFCA - 4in FBEC - WITH SS HARDWARE
1.7	2	42-5661	RFCA - 8in
1.8	2	44-4XXXX	REDUCER - DI - ECCENTRIC - 10 X 8
1.9	2	47-5252	GASKET - FLANGE - 10in X 1/8in
2	1	12-4615	BARREL - 10ft DIA X 5ft H
3	1	12-5903	BARREL - 10ft DIA X 3ft H
4	1	12-5904	BARREL - 10ft DIA X 4ft H
5	1	14-XXXX	TOP SLAB ASSEMBLY
5.1	1	13-5338	HATCH - WW - 10ft PED - TRIPLEX - 54791 - 46 X 109
5.2	1	14-5404	TOP SLAB - WW - 10ft PED - TRIPLEX
6	1	18-5157	4 in PVC VENT
7	1	18-6009	DISCHARGE PIPE SUPPORT - WALL BRACKET SET
8	2	18-FAST	DISCHARGE CLAMP BOLT - 1-2 X 1 SS BOLT, WASHER, FIBER LOCK NUT
9	1	18-FAST	DISCHARGE PIPE SUPPORT - BOLT KIT
10	1	18-XXXX	SHIPPING CRATE
10.1	4	12-ROM	BARREL GASKET
10.2	2	18-4057	UGBB - 3in - EBARA
10.3	1	18-4874	STILLING WELL SUPPORT BRACKET - STAINLESS
10.4	1	18-5488	UGBB - 1.5in - EBARA
10.5	4	18-6020	LIFTING CLUTCH - 8 TON
10.6	3	18-6031	BOLT & NUT KIT - UPPER GUIDE BAR BRACKET - 3-8in
10.7	2	18-XXXX	SPACER - 4in - UPPER GUIDE BAR BRACKET
10.8	1	25-6552	VALVE KEY - EXT GATE WRENCH
10.9	1	32-4673	PUMP LIFTING EYE
10.10	3	32-5492	LINK - 1/2in OBLONG CORROSION RESISTANT
10.11	3	32-5942	BOW SHACKLE - 3-8in - SS W-SCREW PIN
10.12	6	32-5999	CHAIN - SS 5-16in 316SS
10.13	1	32-6065	CORD GRIP - 1.000in - 1.240 DIA SS
10.14	2	32-6118	CORD GRIP - 1.50in - 1.74in DIA SS
10.15	3	32-6354	LIFTING SLING - .125in SS CABLE - 3 @ 17ft
10.16	3	41-5139	VALVE BOX - TOP - #910 X 18in TALL
10.17	3	41-5142	VALVE BOX - BASE - #931 5X18
10.18	3	41-5143	VALVE BOX - LID - #910
10.19	1	42-5723	STAR FLANGE ADAPTER - 4in - SERIES 200
10.20	2	42-5724	STAR FLANGE ADAPTER - 8in - SERIES 200
10.21	1	42-5725	DOUBLE-BALL EXAPANSION JOINT S5000 - 4in - +8 - -8 EXPANSION
10.22	2	42-5726	DOUBLE-BALL EXAPANSION JOINT S5000 - 8in - +8 - -8 EXPANSION
10.23	2	44-4925	REDUCER - DI -CONCENTRIC - 10 X 8
10.24	1	45-XXXX	ADAPTER SPOOL - FLG X HDPE - 4in
10.25	2	45-XXXX	ADAPTER SPOOL - FLG X HDPE - 10in
10.26	12	47-5222	GASKET - FLANGE - 8in X 1/8in
10.27	2	47-5252	GASKET - FLANGE - 10in X 1/8in
10.28	6	47-6546	GASKET - FLANGE - 4in X 1/8in
10.29	1	48-XXXX	6in PVC PIPE - PERFORATED X 13ft
10.30	150	51-5949	TAPECOAT - 6in X .65mils X LFT
10.31	174	51-6081	SEALANT - 1in X 1in X 14.5ft CS-202
10.32	1	51-ROM	NEVER SIEZE - TUBE
10.33	1	60-4896	PRESSURE TRANSDUCER - 4-20 ma - 0-10 PSI - CL1 DIV1 - 50ft CABLE
10.34	1	62-5981	BRACKET - PRESS TRANS LVL
11	1	18-XXXX	DISCHARGE PIPE BRACKET
12	2	30-5500	PUMP - EBARA - 250DLCFU615 20HP - 50ft CABLE
13	1	30-5500	PUMPS - EBARA - 100DLMFU63.7 - 5HP - 33ft CABLE
14	29	40-4125	PIPE - 304SS - 1.5in SCH40 (2 @ 14.5ft)
15	56	40-5262	PIPE - 304SS - 3in SCH40 - 4 @ 14ft
16	2	41-5233	VALVE - PLUG - 8in - GEAR OP
17	2	41-6157	VALVE - SWING CHECK - 8in
18	1	41-6563	VALVE - PLUG - 4in - WITH OP NUT
19	1	41-6565	VALVE - SWING CHECK - 4in
20	2	43-5186	KOR-N-SEAL - 8in CORE -1.70 THRU 4.80 PIPE
21	1	43-5579	KOR-N-SEAL - 28in CORE X 24in
22	2	43-6135	KOR-N-SEAL - 12in CORE - 8in PIPE
23	2	45-5067	SPOOL - FLG X PE - 8in X 60in - DI
24	1	45-5070	SPOOL - FLG X PE - 4in X 72in - DI
25	1	45-5216	SPOOL - FLG X PE - 4in X 60in - DI
26	2	45-5240	SPOOL - FLG X PE - 8in X 36in - DI
27	2	46-5281	ELBOW - DI - 8in - 90 DEG - FLG X FLG
28	1	46-6520	ELBOW - DI - 4in - 90 DEG - FLG X FLG
29	3	48-4537	PIPE - PVC - 6in x 48in

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROV
7	ADDED ADAPTERS FOR HDPE FORCE MAINS	3-26-15	AD
6	NEW LOCATION	3-12-15	AD

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY
DSN - RNA
DRN - RNA
CHK -
DATE - 3/7/14

COMPONENT DRAWING

ROMTEC UTILITIES
18240 NORTH BANK ROAD
ROSEBURG, OREGON 97470
(541) 496-9678
FAX (541) 496-0804

SMITH ISLAND DRAINAGE
8" & 4" - 10' DIA WET WELL

SHEET 1 OF 1

JOB NUMBER RMTC 0000

THOMAS J. ROGERS
STATE OF WASHINGTON
41728
REGISTERED PROFESSIONAL ENGINEER
EXPIRES 9/6/15

10' DIAMETER WET WELL
8" & 4"DISCHARGE PIPING
EBARA PUMPS

ALL MATERIALS SHOWN ON THIS SHEET WILL BE SUPPLIED BY ROMTEC UTILITIES AND DELIVERED TO THE SITE AFTER THE HOLE HAS BEEN EXCAVATED AND SHORED. THE CONTRACTOR SHALL SUPPLY A CRANE OF SUFFICIENT SIZE TO LOWER ALL THE CONCRETE PIECES INTO THE HOLE SAFELY. THE THE CONTRACTOR SHALL INSTALL THE WET WELL (AND VALVE VAULT AND METERING VAULT IF APPLICABLE). ROMTEC UTILITIES WILL PROVIDE A REPRESENTATIVE FOR TECHNICAL ASSISTANCE ON THE DAY OF INSTALLATION TO ANSWER ANY QUESTIONS THAT MAY ARISE. THE CONTRACTOR IS RESPONSIBLE FOR ALL PLUMBING AND ELECTRICAL CONNECTIONS AND INSTALLATION. ITEMS NOTED AS "BY OTHERS" WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. ROMTEC UTILITIES WILL NOT INSTALL ANY OF THE COMPONENTS SHOWN ON THIS PAGE.

Snohomish County Planning and Development Services
APPROVED FOR CONSTRUCTION
By:_____
Randolph R. Sleight, P.E., P.L.S.
R/W Permit No._____

PFN: 15-102186LDA

CALL BEFORE YOU DIG 1-800-424-5555
IF THIS DRAWING IS LESS THAN 22" X 34" IT HAS BEEN REDUCED. SCALE ACCORDINGLY.

DATE	NO.	REVISION	BY

Last Saved By: ahmedk Apr 10, 2015 - 2:57pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD
STATE OF WASHINGTON
25756
REGISTERED PROFESSIONAL ENGINEER
5/15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

PUMP STATION COMPONENTS

REFERENCE SHEET NO. SF11
SHEET 36 OF 49 SHEETS

Plotted: May 05, 2015 - 4:04pm otak K:\project\31800\31852A\Dwg\Phase1\36_SF11.dwg Layout Name: SF11

XREF LIST
Ltscale: 1
Resolved
3784—TOPO
3784—BASE
3784—PCHN
TTLBLK
GSLSEAL
3784—DTCH
3784—PRJL
3784—FROMGIS
3784—PIPELINE_PROTECTION

MATCHLINE SEE SHEET RP02

INTERSTATE 5

WEST TIDAL CHANNEL

EAST TIDAL CHANNEL

SOUTHWEST TIDAL CHANNEL

UNION SLOUGH

51ST AVE NE

12TH ST NE

PROJECT LIMITS

SETBACK DIKE SEE SHEET PP01 AND PP02

SURPLUS DISPOSAL AREA 2, PER DETAIL ON SHEET RP03

CONSTRUCT HAND-LAUNCHED BOAT RAMP PER DETAIL ON SHEET GD02

CONSTRUCT EXISTING DITCH ARMORING PER DETAIL ON SHEET RP03

DITCH TO REMAIN (TYP.)

END 51ST AVE REMOVAL, SEE TYPICAL SECTION, SHEET RP05 N:372903 E:1315379

BEGIN 51ST AVE REMOVAL, SEE TYPICAL SECTION, SHEET RP03 N:370394 E:1315207

N:372942 E:1313721
N:372946 E:1313898
N:372744 E:1313844
N:372582 E:1313851
N:372486 E:1313969
N:372401 E:1314047
N:372383 E:1313993
N:372206 E:1314137
N:372253 E:1315191
N:372599 E:1315805
N:371698 E:1313893
N:371695 E:1314593
N:371697 E:1315241
N:371618 E:1314676
N:371671 E:1315574
N:371669 E:1315753
N:371308 E:1316071
N:371170 E:1316234
N:370896 E:1313514
N:370646 E:1313387
N:370550 E:1313128
N:370453 E:1313309
N:370412 E:1313301
N:370405 E:1313807
N:370440 E:1314681
N:370441 E:1314798
N:370728 E:1315442
N:370396 E:1315593

DF1 DF2 DF3 DF4 DF5 DF6 DF7 DF8 DF15 DF16 DF17 DF18 DF22

35+00 30+00 25+00 20+00 15+00 10+00 5+00 230+00 225+00 220+00 215+00 210+00 205+00 200+00

CONSTRUCTION NOTES

1. BEGIN DITCH FILL PER DETAIL ON SHEET RP03.
2. ~~CONSTRUCT LIVE BRUSH MATTRESS PER DETAIL ON SHEET RP03.~~
3. BEGIN DITCH FILL UNDER DIKE PER DETAIL ON SHEET GD02.
4. NOT USED.
5. CONSTRUCT PIPELINE EROSION PROTECTION PER DETAIL ON SHEET RP03.
6. NOT USED.
7. END DITCH FILL UNDER DIKE.

The brush mattresses were not installed, as they were deemed not necessary by the Engineer of Record, due to breach happening 2 years after ditch fills.
In select locations, logs were buried at ends of ditch fills, in accordance with Phase 2 Change Order 2. See Sheet RP03a for buried log locations.

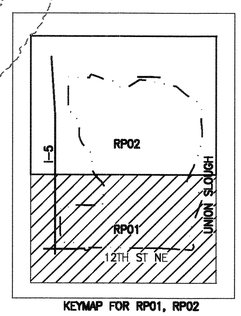
LEGEND

- PROJECT LIMITS
- DITCH FILL
- EXISTING CHANNEL OR DITCH TO REMAIN
- SURPLUS DISPOSAL AREA
- CONTOUR (MINOR—EXISTING)

DF – DITCH FILL

N

200 0 200 400
SCALE IN FEET



KEYMAP FOR RP01, RP02

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk May 07, 2015 – 10:19am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12-0171-1

otak HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

RESTORATION PLAN

REFERENCE SHEET NO. RP01
SHEET 37 OF 49 SHEETS

Plotted: May 07, 2015 – 10:22am ahmedk K:\project\31800\31852A\Dwg\Phase1\37_RP01.dwg Layout Name: RP01

The brush mattresses were not installed, as they were deemed not necessary by the Engineer of Record, due to breach happening 2 years after ditch fills.
In select locations, logs were buried at ends of ditch fills, in accordance with Phase 2 Change Order 2. See Sheet RP03a for buried log locations.

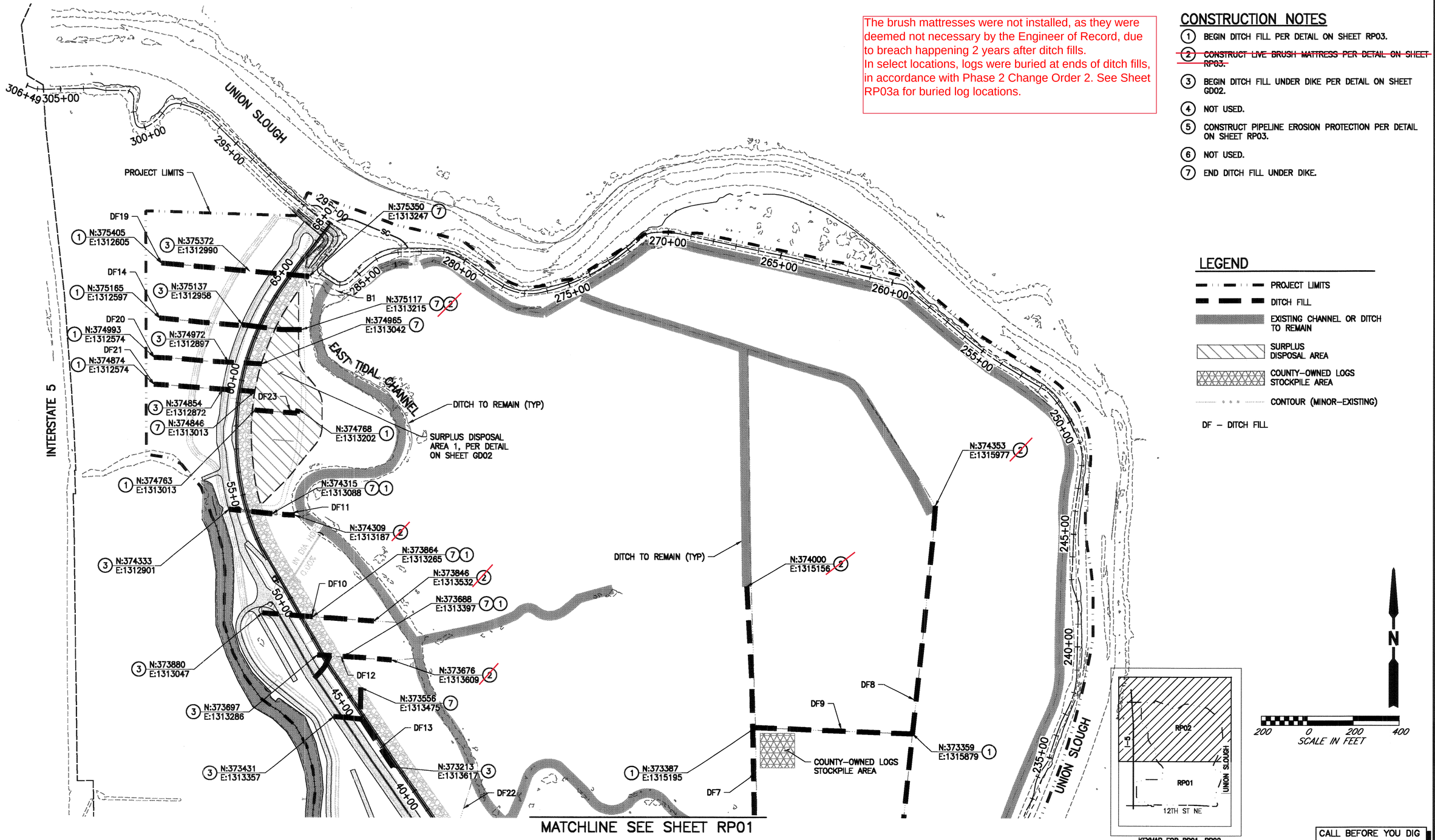
CONSTRUCTION NOTES

1. BEGIN DITCH FILL PER DETAIL ON SHEET RP03.
2. ~~CONSTRUCT LIVE BRUSH MATTRESS PER DETAIL ON SHEET RP03.~~
3. BEGIN DITCH FILL UNDER DIKE PER DETAIL ON SHEET GD02.
4. NOT USED.
5. CONSTRUCT PIPELINE EROSION PROTECTION PER DETAIL ON SHEET RP03.
6. NOT USED.
7. END DITCH FILL UNDER DIKE.

LEGEND

- PROJECT LIMITS
- DITCH FILL
- EXISTING CHANNEL OR DITCH TO REMAIN
- SURPLUS DISPOSAL AREA
- COUNTY-OWNED LOGS STOCKPILE AREA
- CONTOUR (MINOR-EXISTING)

DF – DITCH FILL



KEYMAP FOR RP01, RP02

N

200 0 200 400
SCALE IN FEET

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: shannongr May 06, 2015 – 4:11pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — 25758 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 5-7-15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

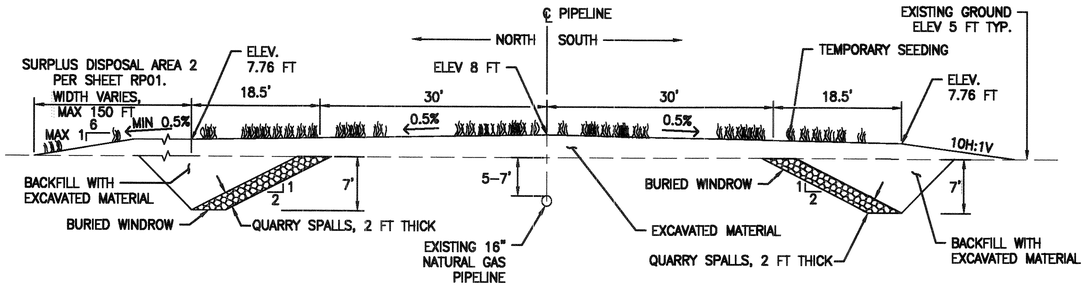
RESTORATION PLAN

REFERENCE SHEET NO. RP02

SHEET 38 OF 49 SHEETS

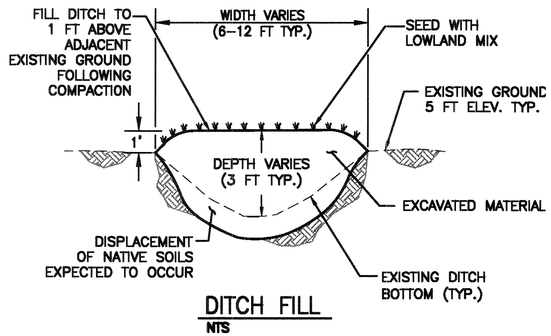
Plotted: May 07, 2015 – 9:57am ahmedk K:\project\31800\31852A\Dwg\Phase1\38_RP02.dwg Layout Name: RP02

XREF LIST
Lscale: 1
Resolved
TTLBLK
GSLSEAL

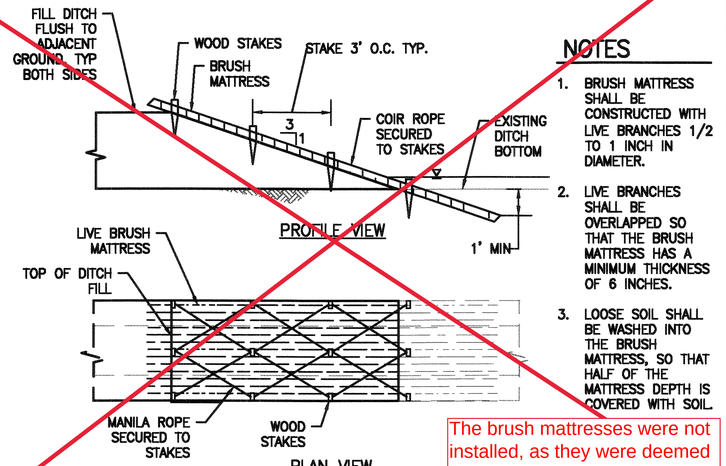


NOTE:
GRADING SHALL BE SLOPED TO PREVENT DEPRESSIONS WHERE FISH COULD BE STRANDED.

PIPELINE EROSION PROTECTION
NTS



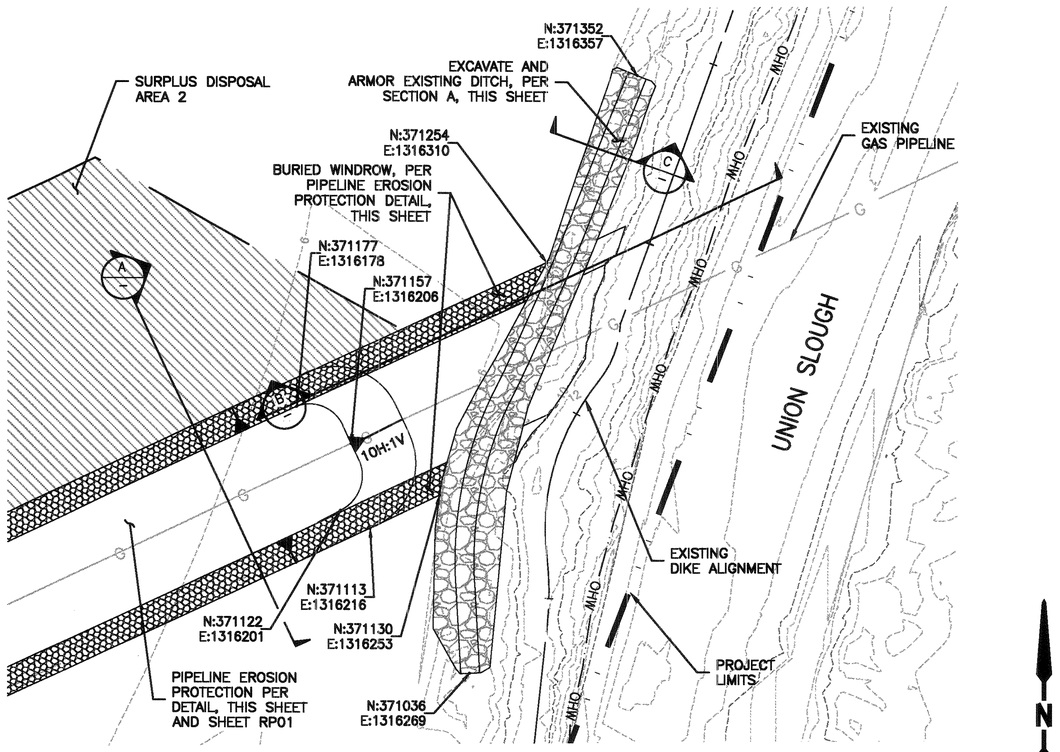
DITCH FILL
NTS



LIVE BRUSH MATTRESS
NTS

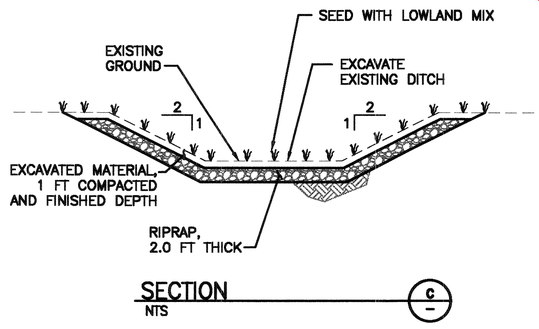
NOTES
1. BRUSH MATTRESS SHALL BE CONSTRUCTED WITH LIVE BRANCHES 1/2 TO 1 INCH IN DIAMETER.
2. LIVE BRANCHES SHALL BE OVERLAPPED SO THAT THE BRUSH MATTRESS HAS A MINIMUM THICKNESS OF 6 INCHES.
3. LOOSE SOIL SHALL BE WASHED INTO THE BRUSH MATTRESS, SO THAT HALF OF THE MATTRESS DEPTH IS COVERED WITH SOIL.

The brush mattresses were not installed, as they were deemed not necessary by the Engineer of Record, due to breach happening 2 years after ditch fills.
In select locations, logs were buried at ends of ditch fills, in accordance with Phase 2 Change Order 2. See Sheet RP03a for buried log locations.

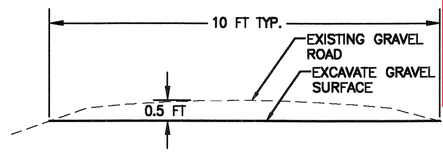


PLAN VIEW

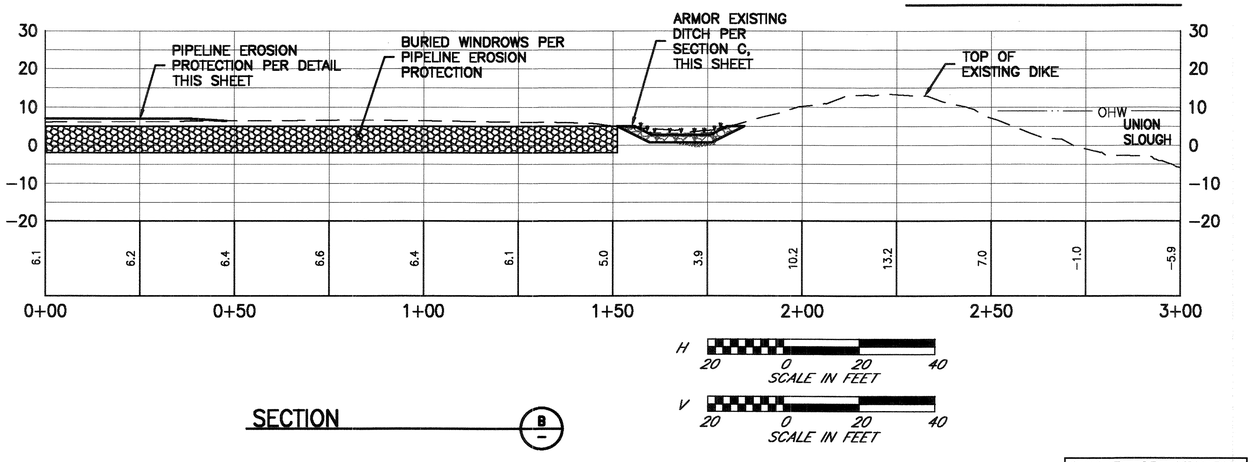
EXISTING DITCH ARMORING



SECTION C
NTS



51ST AVE REMOVAL TYPICAL SECTION
NTS



SECTION B
NTS

CALL BEFORE YOU DIG
1–800–424–5555

DATE	NO.	REVISION	BY

Last Saved By: davest May 05, 2015 – 11:24am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY:	DRAWN BY:
GSL, DAS	AK
FIELD BOOK(S):	UPI# 12–0171–1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — 25758 — REGISTERED PROFESSIONAL ENGINEER — STATE OF WASHINGTON — 5-7-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS
PROJECT NO. RR49206

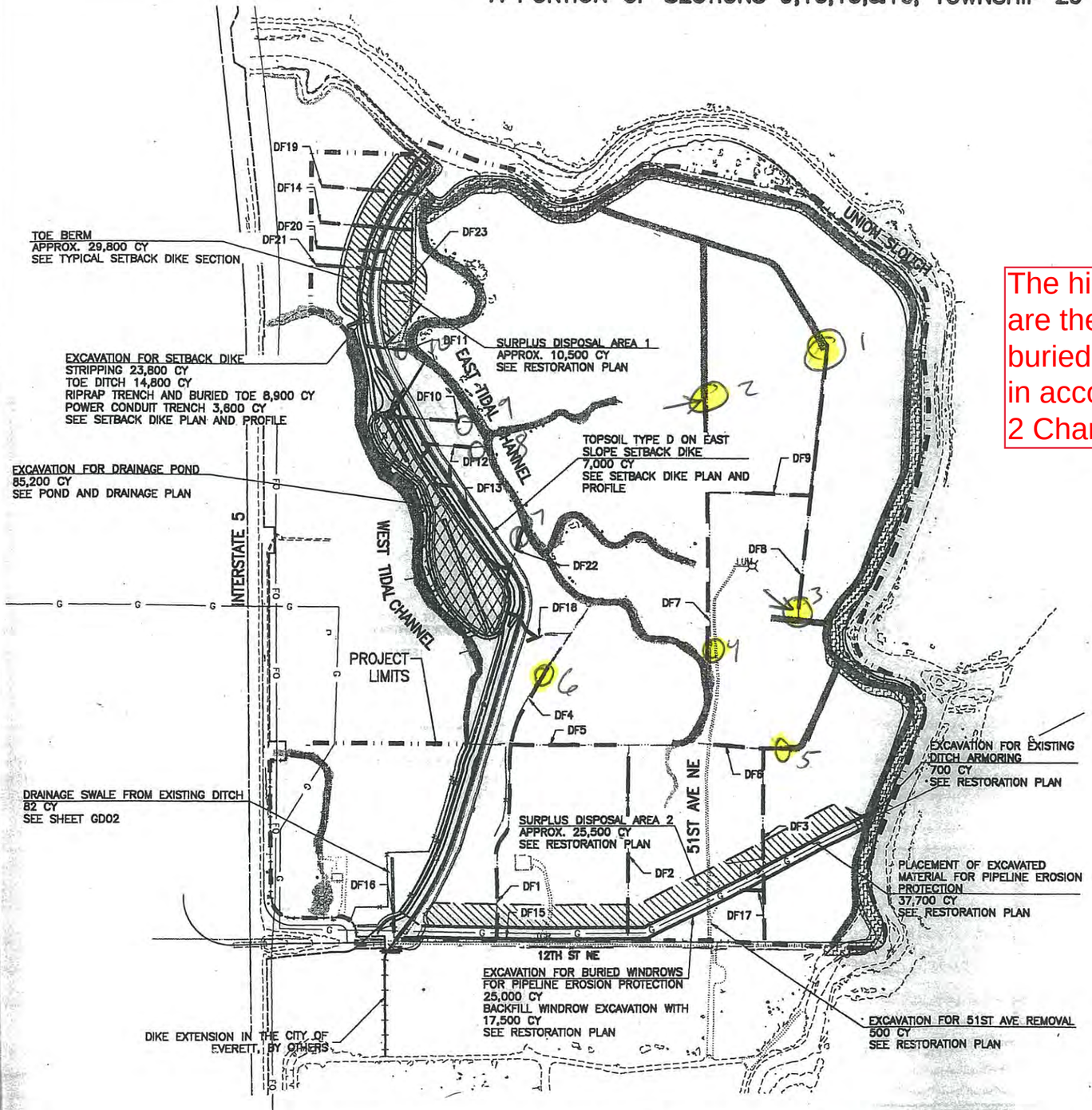
SMITH ISLAND ESTUARY RESTORATION

RESTORATION DETAILS

REFERENCE SHEET NO. RP03
SHEET 39 OF 49 SHEETS

Plotted: May 07, 2015 – 9:29am shonnongr K:\project\31800\31852A\Dwg\Phase1\39_RP03.dwg Layout Name: RP03

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



LEGEND

- PROJECT LIMITS
- DITCH FILL
- DRAINAGE POND
- EXCESS MATERIAL DISPOSAL AREA
- NO ACCESS ONTO EXISTING DIKE

DF – DITCH FILL

The highlighted areas 1 - 6 are the locations where buried logs were installed in accordance with Phase 2 Change Order 2.

REFERENCE NOTES:

1. SEE SHEET SP01 FOR OVERALL SITE PLAN.
2. SEE SHEETS EC01–EC05 FOR TEMPORARY EROSION AND SEDIMENT CONTROL AND CLEARING LIMITS.
3. SEE SHEETS PD01–PD02 FOR PIPELINE PROTECTION.
4. SEE SHEET XS01 AND XS02 FOR TYPICAL DIKE SECTIONS.
5. SEE SHEETS PP01–PP06 FOR DIKE PLAN AND PROFILE.
6. SEE SHEETS GD01–GD02 FOR SETBACK DIKE GRADING DETAILS.
7. SEE SHEETS SF01–SF11 FOR DRAINAGE POND, PUMP STATION AND DRAINAGE PIPES.
8. SEE SHEETS RP01–RP03 FOR RESTORATION PLAN.
9. SEE SHEETS GP01–GP02 FOR PARKING AREA.
10. SEE SHEET TC01 FOR TRAFFIC CONTROL.

EXCAVATION QUANTITIES

EXCAVATION AREAS	QUANTITIES (CY)
POND EXCAVATION INCL. HAUL	85,200
ROADWAY EXCAVATION INCL. HAUL	
STRIPPING BELOW SETBACK DIKE	23,800
SETBACK DIKE TOE DITCH	14,800
SETBACK DIKE RIPRAP TRENCH AND BURIED TOE	8,900
POWER CONDUIT TRENCH	3,600
EXCAVATION FOR BURIED WINDROWS FOR PIPELINE EROSION PROTECTION	25,000
EXISTING DITCH EXCAVATION FOR ARMORING	700
EXCAVATION FOR 51ST AVE REMOVAL	500
TOTAL (ROUNDED)	162,500
REQUIRED NON–STRUCTURAL EMBANKMENTS	
DITCH FILLS	
DF 1	2,131
DF 2	2,354
DF 3	1,648
DF 4	1,845
DF 5	1,784
DF 6	158
DF 7	4,126
DF 8	3,134
DF 9	1,845
DF 10*	151
DF 11*	–
DF 12*	149
DF 13*	–
DF 14*	201
DF 15	990
DF 16*	–
DF 17	98
DF 18	159
DF 19*	117
DF 20*	162
DF 21*	115
DF 22*	516
DF 23*	204
TOE BERM	29,800
BACKFILL WINDROW EXCAVATION	17,500
PIPELINE EROSION PROTECTION	37,700
TOPSOIL TYPE D	7,000
DRAINAGE SWALE FROM EXISTING DITCH	82
TOTAL (ROUNDED)	114,000
SURPLUS EXCAVATED MATERIAL DISPOSAL AREAS	
SURPLUS DISPOSAL AREA 1 – NORTH BENCH	10,500
SURPLUS DISPOSAL AREA 2 – BENCH NEAR PIPELINE	38,000
TOTAL	48,500

* A PORTION OF THIS DITCH SHALL BE FILLED WITH SETBACK DIKE MATERIAL UNDER THE SETBACK DIKE FOOTPRINT AND LANDWARD ACCESS ROAD. THE QUANTITY SHOWN IS FOR EXCAVATED MATERIAL PORTION ONLY AND DOES NOT INCLUDE SETBACK DIKE MATERIAL.

N

400 0 400 800
SCALE IN FEET

CALL BEFORE YOU DIG
1–800–424–5555

DATE	NO	REVISION	BY

Last Saved By: shannongr May 05, 2015 – 1:03pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12–0171–1

otak
Hammi Global Partner

GREGORY S. LAIR — 5-7-15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

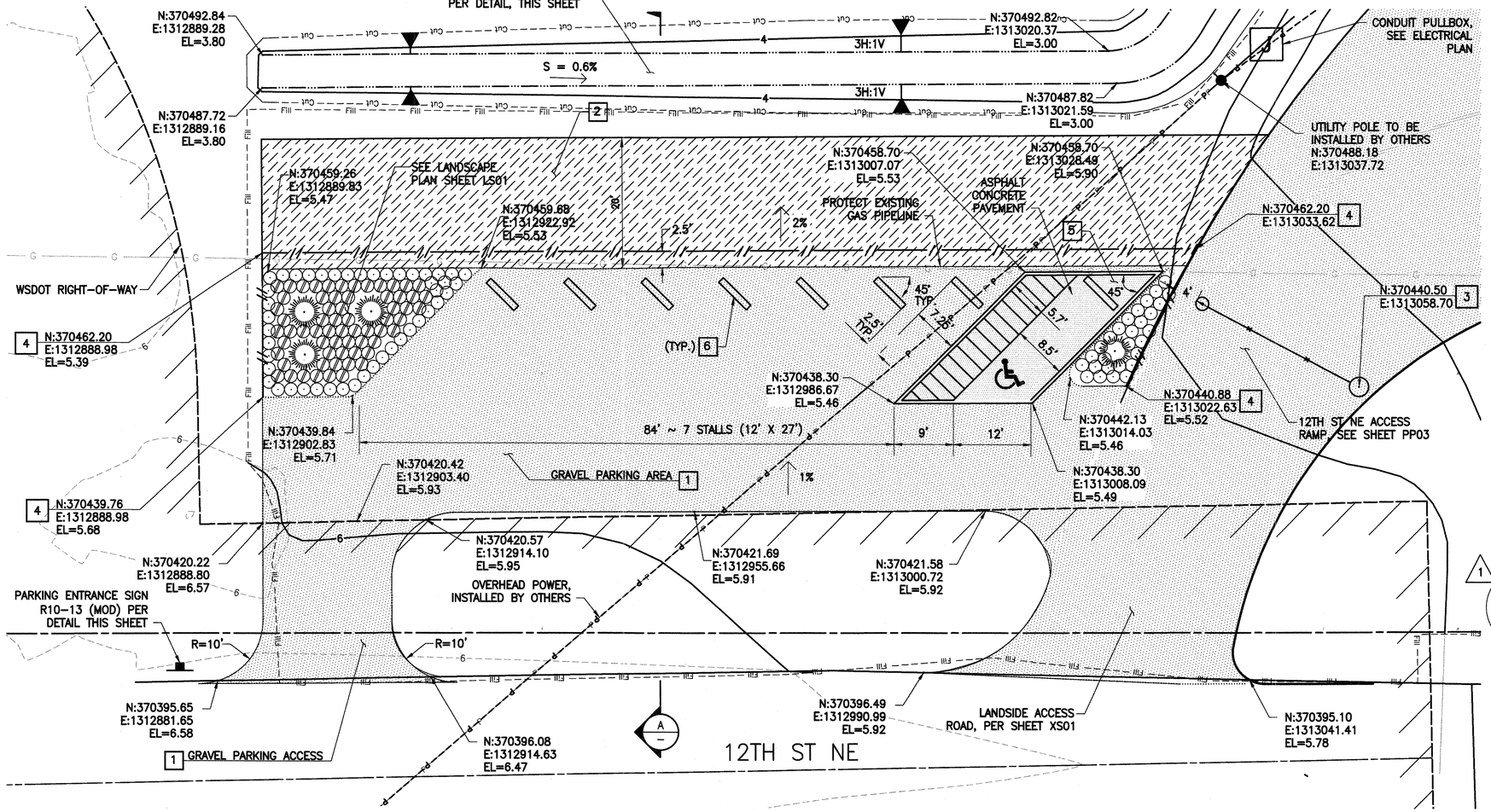
SMITH ISLAND ESTUARY RESTORATION

EXCAVATION SITE PLAN

REFERENCE SHEET NO. RP03a

SHEET 7 OF 49 SHEETS

XREF LIST
Ltscale: 1
Resolved
3784—BASE
TTLBLK
GSLSEAL
3784—DTCH
3784—PDRN
3784—PRJL
3784—FROMGIS
Unresolved
3784—PCHN
3784—TOPO



GENERAL NOTES

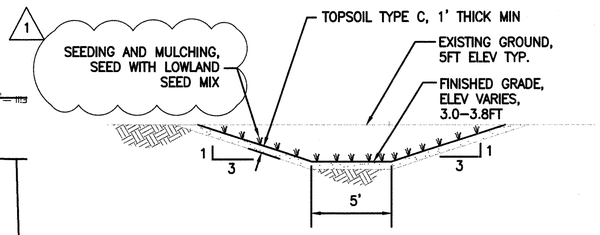
1. ELEVATIONS AND CONTOURS INDICATE FINISHED GRADE. EXCAVATION WILL BE REQUIRED BELOW FINISHED GRADE TO ACCOMMODATE GRAVEL FILTER, AND TOPSOIL.

CONSTRUCTION NOTES

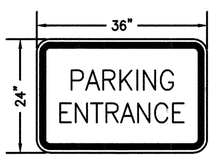
1. CONSTRUCT GRAVEL PARKING, 12" COMPACTED DEPTH OF GRAVEL FILTER OVER CONSTRUCTION GEOTEXTILE FOR SOIL STABILIZATION AND CONSTRUCTION GEOSYNTHETIC FOR REINFORCEMENT.
2. CONSTRUCT VEGETATED FILTER STRIP PER SHEET GP02.
3. CONSTRUCT ACCESS CONTROL GATE PER SHEET GP02.
4. CONSTRUCT SPLIT RAIL FENCE PER SHEET GP02.
5. STRIPE PARKING PER WSDOT STD. PLAN M-17.10-02. CONSTRUCT ASPHALT PARKING, PAVEMENT SHALL CONSIST OF 3" HMA CL. ½" PG 64-22 OVER 6" GRAVEL FILTER.
6. INSTALL PRECAST WHEEL STOP PER DETAIL ON SHEET GP02.

LEGEND

- CONTOUR (MINOR-EXISTING)
- CONTOUR (MAJOR-PROPOSED)
- SPLIT RAIL FENCE
- ASPHALT CONCRETE PAVEMENT
- GRAVEL FILTER
- COMPOST-AMENDED, VEGETATED FILTER STRIP

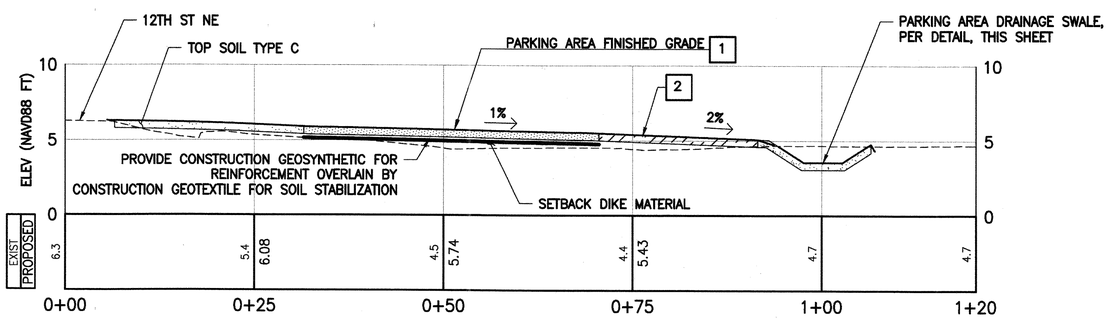


PARKING AREA DRAINAGE SWALE
NTS

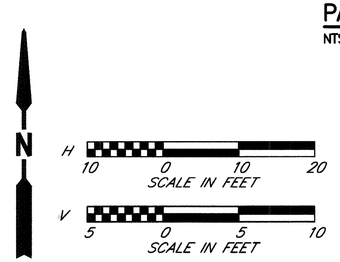


PARKING ENTRANCE SIGN R10-13 (MOD)
NTS

The features on this plan sheet will be constructed as part of the Phase 2 contract.



PARKING AREA SECTION (A)



CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY
6/5/15	1	ADDENDUM NO. 2	DAS

Last Saved By: ahmedk Jun 04, 2015 - 11:23am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25768 — REGISTERED PROFESSIONAL ENGINEER — 6-10-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
DATE APPROVED: 6/10/15

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

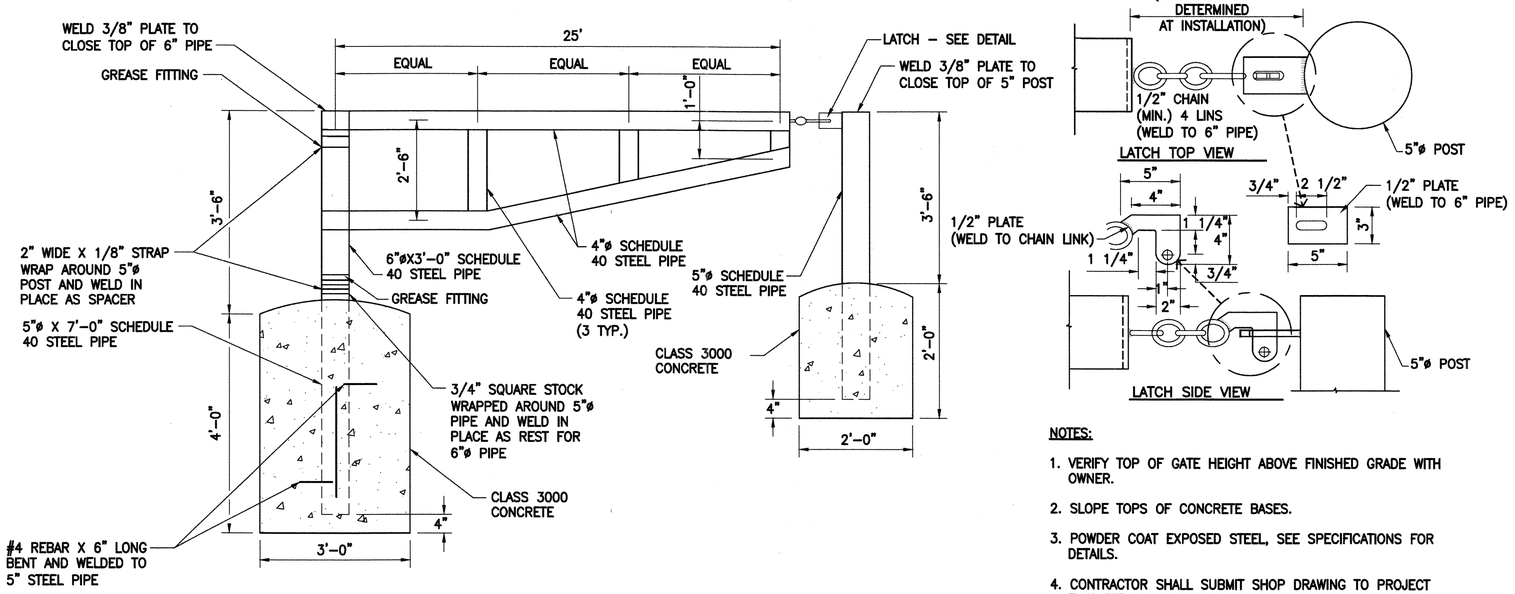
SMITH ISLAND ESTUARY RESTORATION

PARKING AREA PLAN

REFERENCE SHEET NO. GP01
SHEET 40 OF 49 SHEETS

Plotted: Jun 04, 2015 - 4:23pm otak \\kirsrd01\proj\project\31800\31852A\Dwg\Phase1\10_GP01.dwg Layout Name: GP01

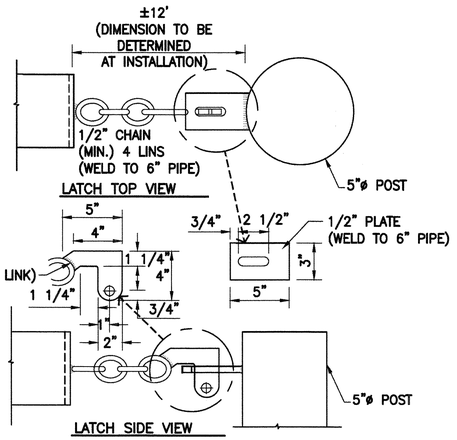
A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



ACCESS CONTROL GATE

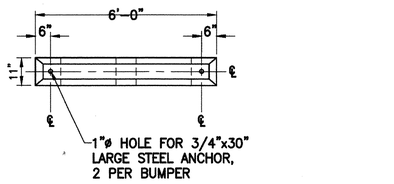
NTS

Access Control Gate was changed to a two panel gate instead of a single panel gate. Overall span dimensions were not changed. See GP02a and GP02b.

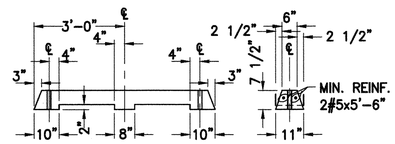


NOTES:

1. VERIFY TOP OF GATE HEIGHT ABOVE FINISHED GRADE WITH OWNER.
2. SLOPE TOPS OF CONCRETE BASES.
3. POWDER COAT EXPOSED STEEL, SEE SPECIFICATIONS FOR DETAILS.
4. CONTRACTOR SHALL SUBMIT SHOP DRAWING TO PROJECT ENGINEER FOR APPROVAL.



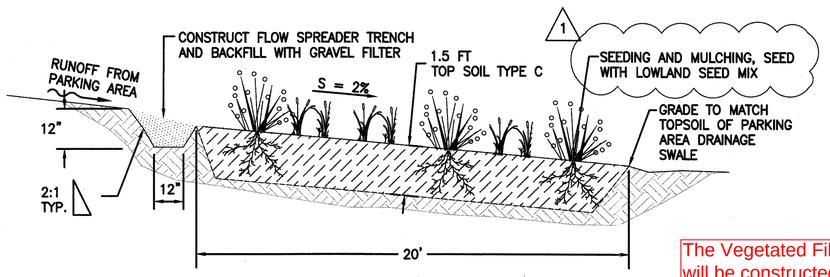
PLAN



ELEVATION SECTION

WHEEL STOP

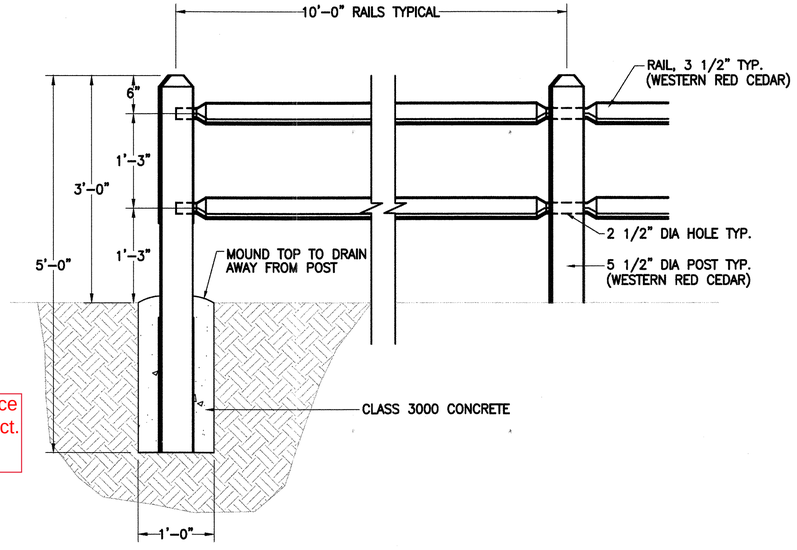
NTS



VEGETATED FILTER STRIP

NTS

The Vegetated Filter Strip and the Split Rail Fence will be constructed as part of the Phase 2 contract.



SPLIT RAIL FENCE

NTS

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY
6/5/15	1	ADDENDUM NO. 2	DAS

Last Saved By: ahmedk Jun 04, 2015 - 11:16am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12-0171-1

otak HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 21578 — REGISTERED PROFESSIONAL ENGINEER — 6-10-15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
6/10/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

PARKING AREA DETAILS

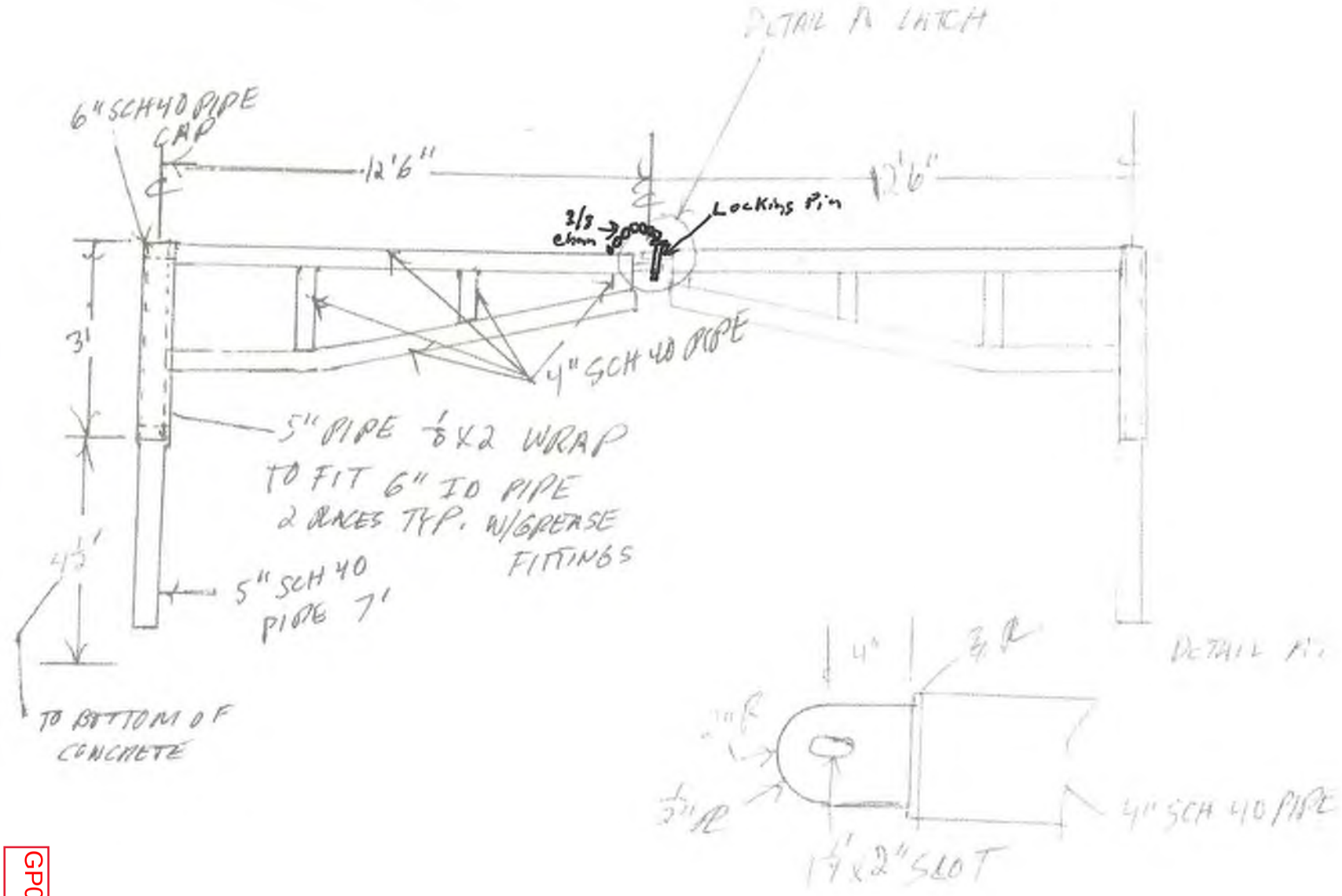
REFERENCE SHEET NO. GP02

SHEET 41 OF 49 SHEETS

Plotted: Jun 04, 2015 - 4:23pm otak \\Kirkoa01\pro\project\318000\318524\Dwg\Phase1\41_GP02.dwg Layout Name: GP02

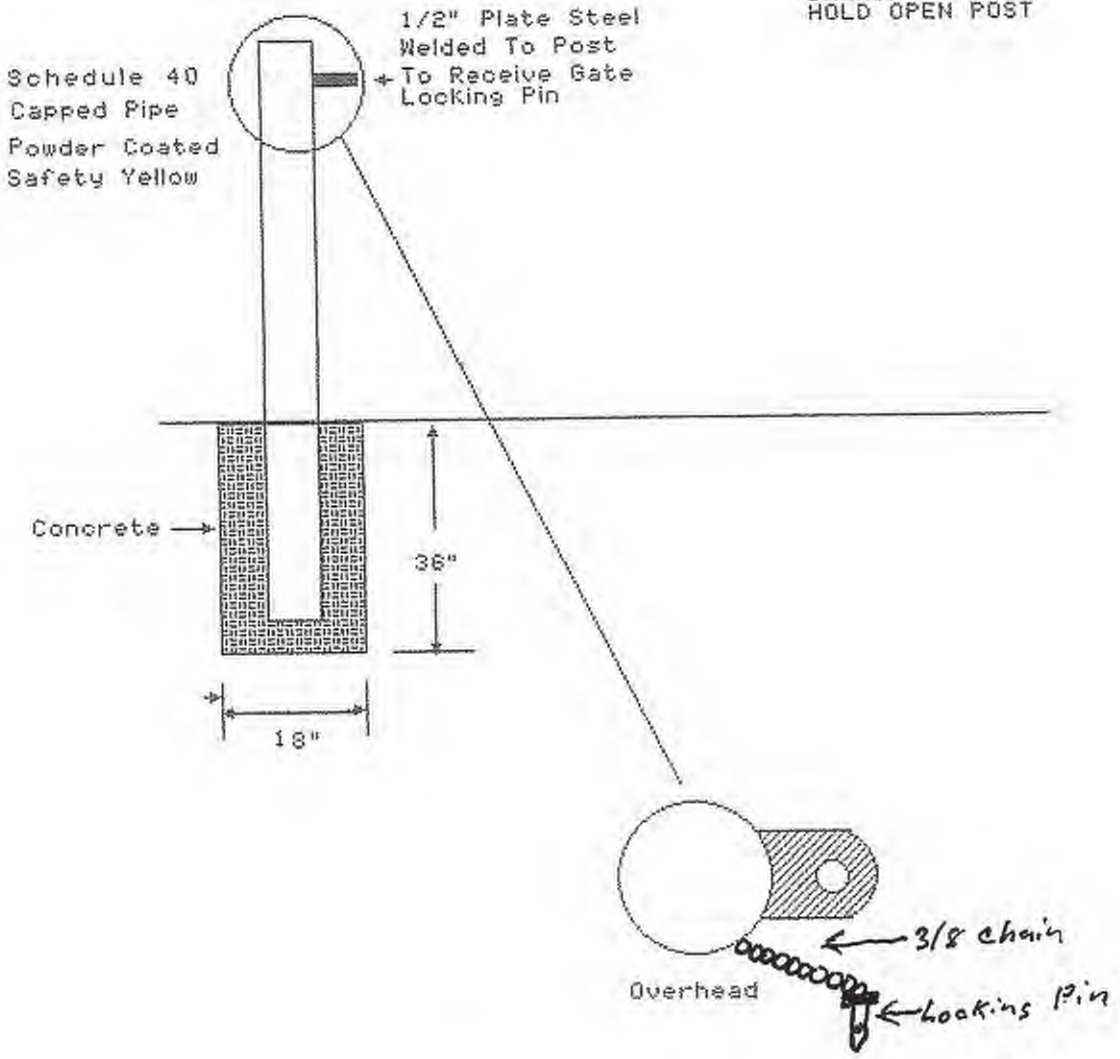
SMITH ISLAND DOUBLE GATE

ALL DETAILS TYP. EACH SIDE



GP02a

BARRIER GATE
HOLD OPEN POST



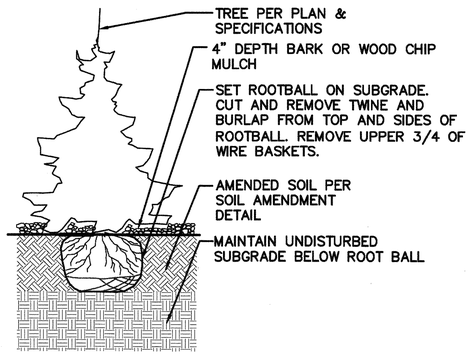
C & P FENCING
1516 Chinook Avenue
ENUMCLAW, WA 98022.3721
360-802-1059

Scarsella Bros
Smith Island

DRAWN BY: 02/02/18	SCALE:	PAGE:
REVISED: pp 02/02/18	FILE: Hold P	1 of 1

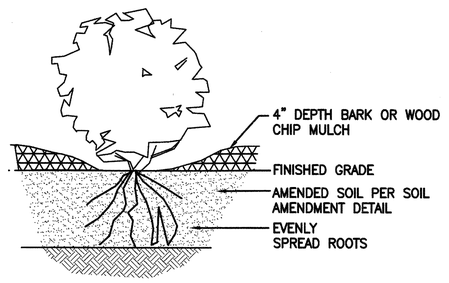
GP02b

NOTE: ACCEPTABLE TREE PLANTING SHALL HAVE ROOT FLARE FLUSH TO 2" ABOVE SURROUNDING GRADE.



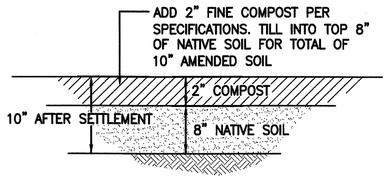
CONIFEROUS TREE PLANTING DETAIL

NOT TO SCALE



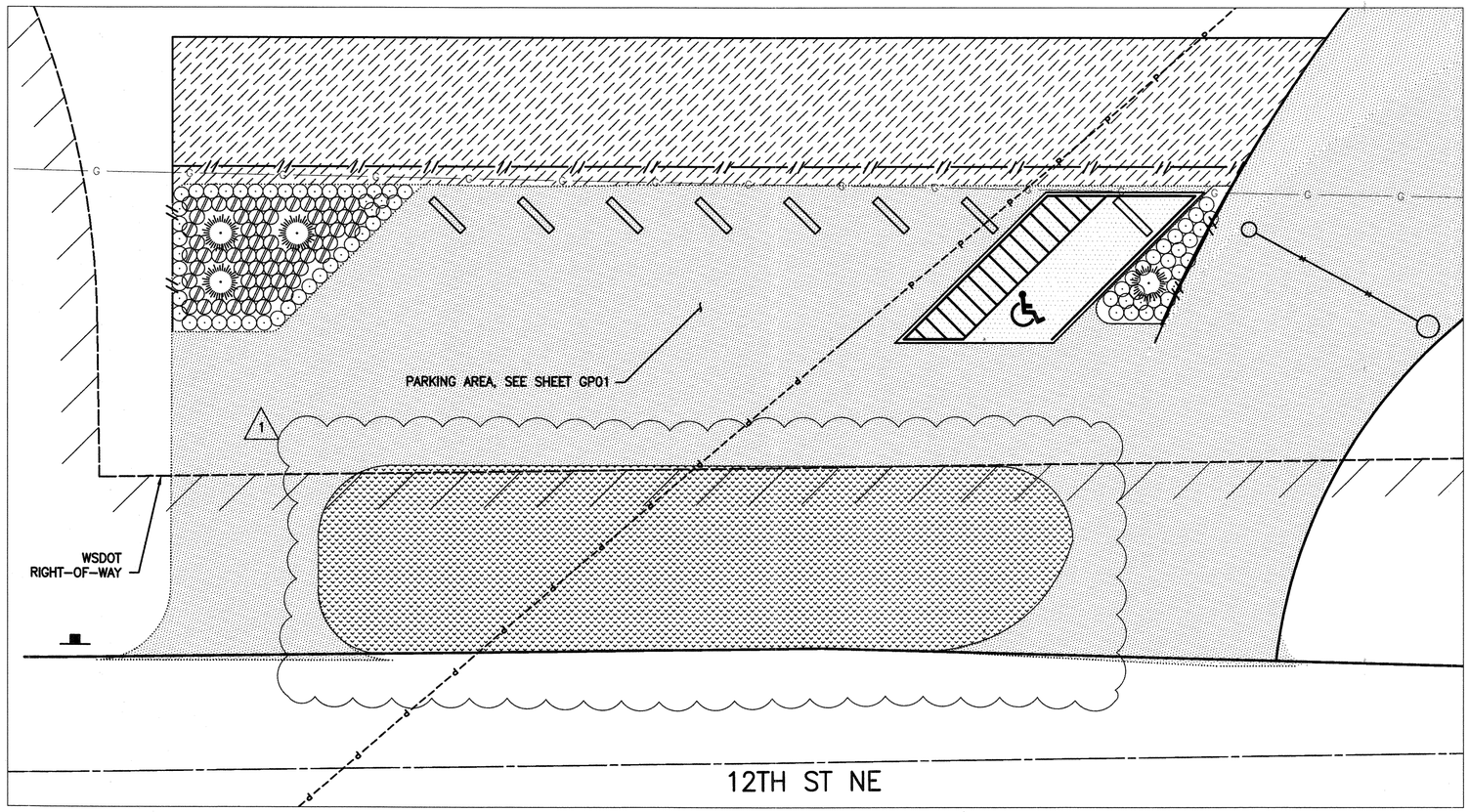
NATIVE SHRUBS PLANTING DETAIL

NOT TO SCALE



SOIL AMENDMENT DETAIL

NOT TO SCALE



PARKING AREA LANDSCAPING PLAN

10 0 10 20
SCALE IN FEET

The features on this plan sheet will be constructed as part of the Phase 2 contract.

PLANT LEGEND

SCIENTIFIC NAME	COMMON NAME	SIZE	ESTIMATED QUANTITY
PINUS CONTORTA VAR. CONTORTA	SHORE PINE	8' TALL +	4
SYMPHORICARPOS ALBUS	SNOW BERRY	1 GALLON	74
MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	1 GALLON	65
SEEDING AND MULCHING, SEED WITH LOWLAND SEED MIX			2750 SF
COMPOST-AMENDED, VEGETATED FILTER STRIP			

CALL BEFORE YOU DIG
1-800-424-5555

NO.	DATE	REVISION	BY
1	6/5/15	ADDENDUM NO. 2	DAS

Last Saved By: otak Jun 09, 2015 - 6:02pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 6-10-15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
6/10/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

PARKING AREA LANDSCAPING PLAN

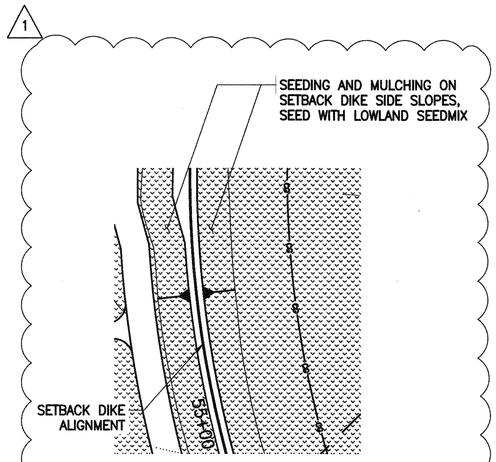
REFERENCE SHEET NO. LS01

SHEET 42 OF 49 SHEETS

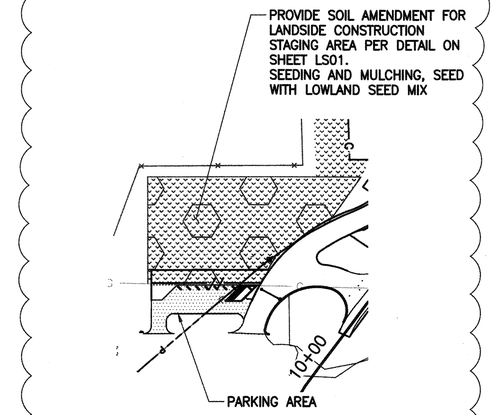
Plotted: Jun 09, 2015 - 6:04pm otak K:\project\31800\31852A\Dwg\Phase1\V2_LS01.dwg Layout Name: LS01

XREF LIST
Ltscale: 1
Resolved
3784-BASE
TTLBLK
GSLSEAL
3784-TOPO
3784-PRJL
3784-DTCH
3784-PDRN
3784-PCHN
3784-FROMGIS
Unresolved
3784-GRDG

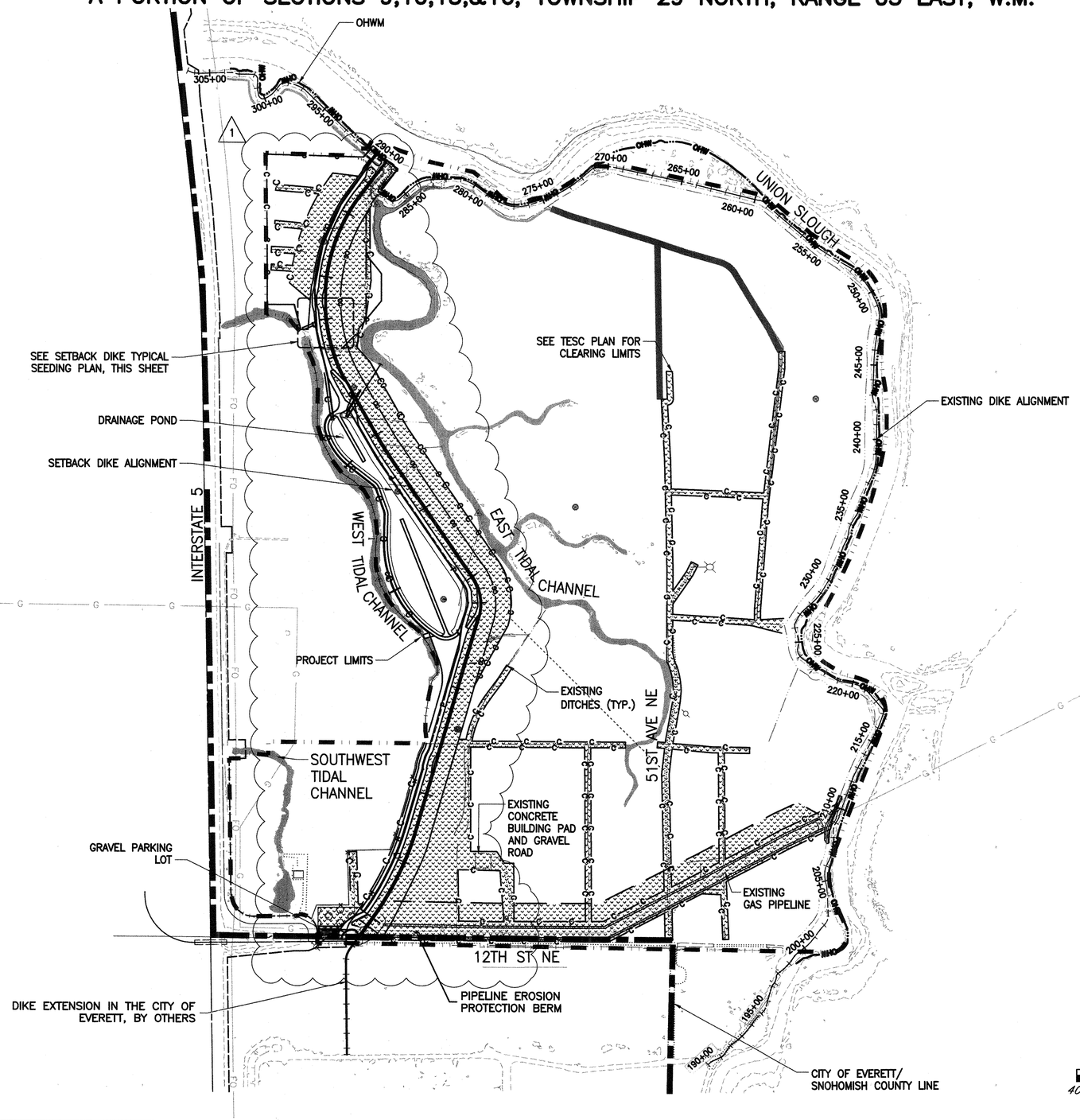
A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



SETBACK DIKE TYPICAL SEEDING PLAN



SOIL AMENDMENT PLAN



REFERENCE NOTES:

1. SEE SHEET SP02 FOR EXCAVATION SITE PLAN.
2. SEE SHEETS EC01–EC05 FOR TEMPORARY EROSION AND SEDIMENT CONTROL AND CLEARING LIMITS.
3. SEE SHEETS PD01–PD02 FOR PIPELINE PROTECTION.
4. SEE SHEET XS01 AND XS02 FOR TYPICAL DIKE SECTIONS.
5. SEE SHEETS PP01–PP06 FOR DIKE PLAN AND PROFILE.
6. SEE SHEETS GD01–GD02 FOR SETBACK DIKE GRADING DETAILS.
7. SEE SHEETS SF01–SF11 FOR DRAINAGE POND, PUMP STATION AND DRAINAGE PIPES.
8. SEE SHEETS RP01–RP03 FOR RESTORATION PLAN.
9. SEE SHEETS GP01–GP02 FOR PARKING AREA.
10. SEE SHEET TC01 FOR TRAFFIC CONTROL.

LEGEND

SEEDING AND MULCHING, SEED WITH LOWLAND MIX

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY
6/5/15	1	ADDENDUM NO. 2	DAS

Last Saved By: ahmedk Jun 09, 2015 – 5:07pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK
FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

GREGORY S. LAIRD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 6-10-15

REVIEWED AND APPROVED BY:
OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
6/10/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

SEEDING PLAN

REFERENCE SHEET NO. LS02
SHEET 43 OF 49 SHEETS

Plotted: Jun 09, 2015 – 5:08pm ahmedk K:\project\31800\31852A\Dwg\Phase1\43_LS02.dwg Layout Name: LS02

ELECTRICAL SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

Abbreviations

(E)	EXISTING
(N)	NEW
(X)	DEMOLISH
UG	UNDERGROUND

Connections / Equipment

	NON-FUSED DISCONNECT SWITCH
T	TRANSFORMER

General

—X—X—	DEMOLISH
———	EXISTING WORK
———	NEW WORK
X / X	DETAIL NUMBER AND SHEET LOCATION
1	KEYED NOTE

Raceways

_ _ _ _ _ _ _ _ _ _	CONDUIT ROUTED BELOW FLOOR / GRADE

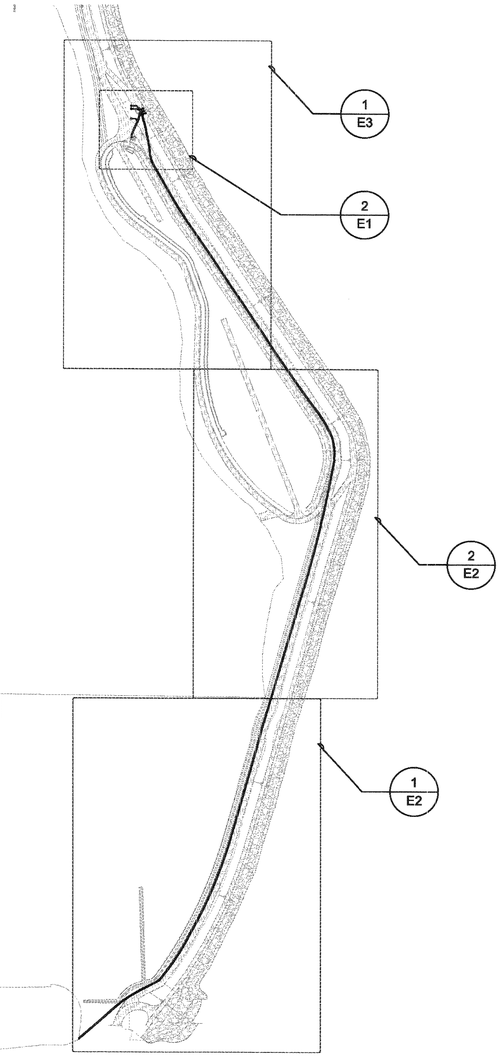
See revised sheet E1 (next sheet) showing revised conduit routing.

GENERAL SHEET NOTES

A. 4" SCHEDULE 40 PVC CONDUIT FOR PRIMARY.

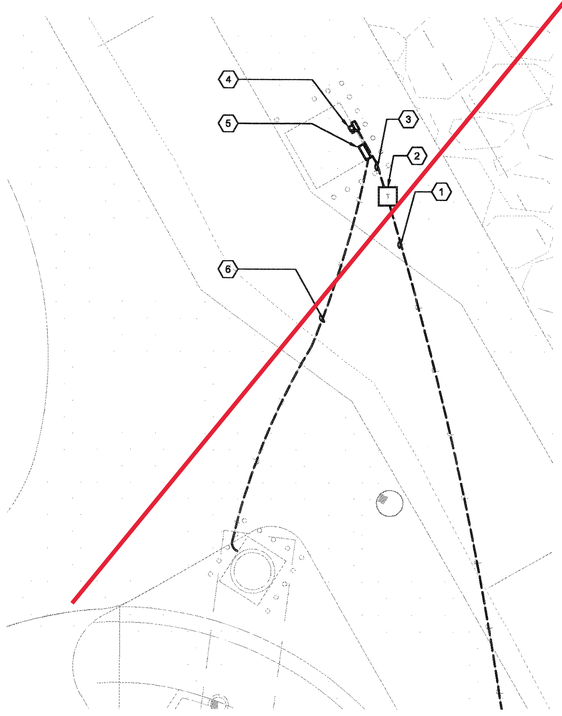
SHEET KEYNOTES

1. UG PRIMARY: 4" C.O. W/ PULL STRING FOR SNOHOMISH COUNTY PUD TO INSTALL PRIMARY CABLE.
2. 480Y/277V, 3P, 4W, PAD MOUNT TRANSFORMER/VAULT BY SNOHOMISH COUNTY PUD. PROVIDE 4'-8" X 4'-8" X 4'-0" VAULT WITH TRANSFORMER LID. UTILITY VAULT NO. 504-BL.
3. (1) 2" C, WITH 4# 3/0-CU XLP:USE-2 U.G. SERVICE CONDUCTORS.
4. ELECTRICAL SERVICE DISCONNECT SWITCH 200A, FUSE AT 100A. PROVIDE ELECTRICAL SERVICE GROUNDING ELECTRODE SYSTEM. PROVIDE (1) 2"C. WITH 4#2-CU, 1#8-CU, GR. TO PUMP STATION CONTROL CABINET.
5. PUMP STATION CONTROL CABINET.
6. SERVICE TO PUMP STATION WET VAULT



1 ELECTRICAL KEY PLAN

NO SCALE



2 ELECTRICAL PUMP STATION PLAN

0 20' 40'

SCALE: 1"=20'-0"

INCOMING ELECTRICAL SERVICE DIVISION OF RESPONSIBILITY

	ELEC. CONTR.	UTILITY CO.
PRIMARY CONDUIT	X	
PRIMARY CONDUCTORS		X
TRANSFORMER		X
TRANSFORMER VAULT	X	
PRIMARY GROUNDING	X	
BOLLARDS	X	

	ELEC. CONTR.	UTILITY CO.
TRANSFORMER CONNECTIONS		X
SECONDARY CONDUIT	X	
SECONDARY CONDUCTORS	X	
METER BASE	X	
METER		X
METER GROUNDING	X	

NOTES:

1. CONTACT AND COORDINATE ALL REQUIREMENTS AND RESPONSIBILITIES WITH SERVING UTILITY COMPANIES PRIOR TO SUBMITTING BID.
2. ALL SERVICE INSTALLATION WORK SHALL BE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE SERVING UTILITIES.

POWER UTILITY CONTACT:

CRAIG SIMPSON
SNOHOMISH COUNTY PUD
PO BOX 1107
EVERETT, WA 98206-1107
PHONE: (425) 783-8279

INTERFACE ENGINEERING, INC. HAS CONTACTED THE UTILITIES BUT HAS NOT RECEIVED IN WRITING THE FINAL REQUIREMENTS FROM THE SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT. THESE DRAWINGS INDICATE OUR BEST ESTIMATION OF THEIR REQUIREMENTS. PRIOR TO ANY CONSTRUCTION CONTACT THE UTILITY AND OBTAIN IN WRITING THEIR REQUIREMENTS.

SHEET INDEX

E1	KEY PLAN, SYMBOL LIST, AND NOTES - ELECTRICAL
E2	ENLARGED SITE PLANS - ELECTRICAL
E3	ENLARGED SITE PLANS - ELECTRICAL
E4	ELECTRIC SERVICE DETAILS

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: michaela May 07, 2015 – 11:45am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: DRAWN BY:

FIELD BOOK(S): UPI#

PROJECT 2014-0405
CONTACT Nicholas Rich
INTERFACE ENGINEERING
801 Second Avenue
Suite 200
Seattle, WA 98104-1581
TEL 206.382.0200
FAX 206.382.0202
www.interfaceengineering.com

NICHOLAS P. RICH — STATE OF WASHINGTON — 27894 — REGISTERED PROFESSIONAL ENGINEER — 5/1/15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION
ELECTRICAL PLAN

REFERENCE SHEET NO. E1

SHEET 11 OF 49 SHEETS

Plotted: May 07, 2015 – 1:23pm michaela G:\2014\2014-0405\CAD\Electrical\E1.dwg Layout Name: E1

FILE: E1.DWG – E1 | EDIT: 5/7/2015 11:45 AM BY MICHAELA | PLOT: 5/7/2015 1:23 PM BY MICHAEL ADAMS

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.

ELECTRICAL SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

Abbreviations

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(X)	DEMOLISH
UG	UNDERGROUND

Connections / Equipment

NON-FUSED DISCONNECT SWITCH

T — TRANSFORMER

General

DEMOLISH

EXISTING WORK

NEW WORK

X / X — DETAIL NUMBER AND SHEET LOCATION

1 — KEYED NOTE

Raceways

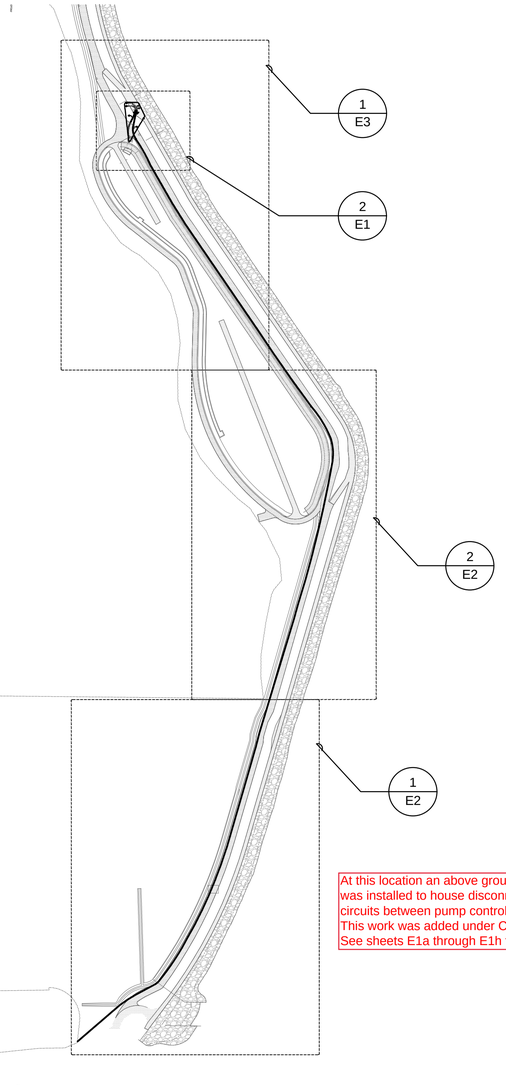
CONDUIT ROUTED BELOW FLOOR / GRADE

GENERAL SHEET NOTES

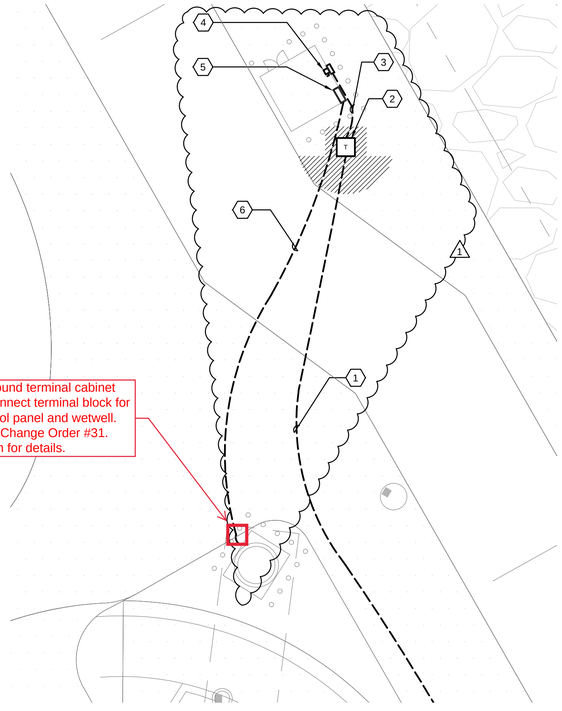
A. 4" SCHEDULE 40 PVC CONDUIT FOR PRIMARY.

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1. UG PRIMARY: 4" C.O. W/ PULL STRING FOR SNOHOMISH COUNTY PUD TO INSTALL PRIMARY CABLE.
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4. ELECTRICAL SERVICE DISCONNECT SWITCH 200A, FUSE AT 100A. PROVIDE ELECTRICAL SERVICE GROUNDING ELECTRODE SYSTEM. PROVIDE (1) 2"C. WITH 4#2-CU, 1#8-CU, GR. TO PUMP STATION CONTROL CABINET.
5. PUMP STATION CONTROL CABINET.
6. SERVICE TO PUMP STATION WET VAULT.



E2 — 1 ELECTRICAL KEY PLAN
NO SCALE



At this location an above ground terminal cabinet was installed to house disconnect terminal block for circuits between pump control panel and wetwell. This work was added under Change Order #31. See sheets E1a through E1h for details.

NORTH — 2 ELECTRICAL PUMP STATION PLAN
0 20' 40'
SCALE: 1"=20'-0"

INCOMING ELECTRICAL SERVICE DIVISION OF RESPONSIBILITY

	ELEC. CONTR.	UTILITY CO.
PRIMARY CONDUIT	X	
PRIMARY CONDUCTORS		X
TRANSFORMER		X
TRANSFORMER VAULT	X	
PRIMARY GROUNDING	X	
BOLLARDS	X	

	ELEC. CONTR.	UTILITY CO.
TRANSFORMER CONNECTIONS		X
SECONDARY CONDUIT	X	
SECONDARY CONDUCTORS	X	
METER BASE	X	
METER		X
METER GROUNDING	X	

NOTES:
1. CONTACT AND COORDINATE ALL REQUIREMENTS AND RESPONSIBILITIES WITH SERVING UTILITY COMPANIES PRIOR TO SUBMITTING BID.
2. ALL SERVICE INSTALLATION WORK SHALL BE IN STRICT COMPLIANCE WITH THE REQUIREMENTS OF THE SERVING UTILITIES.

POWER UTILITY CONTACT:

CRAIG SIMPSON
SNOHOMISH COUNTY PUD
PO BOX 1107
EVERETT, WA 98206-1107
PHONE: (425) 783-8279

INTERFACE ENGINEERING, INC. HAS CONTACTED THE UTILITIES BUT HAS NOT RECEIVED IN WRITING THE FINAL REQUIREMENTS FROM THE SNOHOMISH COUNTY PUBLIC UTILITY DISTRICT. THESE DRAWINGS INDICATE OUR BEST ESTIMATION OF THEIR REQUIREMENTS. PRIOR TO ANY CONSTRUCTION CONTACT THE UTILITY AND OBTAIN IN WRITING THEIR REQUIREMENTS.

SHEET INDEX

E1	KEY PLAN, SYMBOL LIST, AND NOTES - ELECTRICAL
E2	ENLARGED SITE PLANS - ELECTRICAL
E3	ENLARGED SITE PLANS - ELECTRICAL
E4	ELECTRIC SERVICE DETAILS

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY
6/8/17	1	S.I. 03 – CONTROL BUILDING LOCATION	JDD

Last Saved By: joeyd Jun 09, 2017 – 10:47am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: | DRAWN BY:
FIELD BOOK(S): | UPI#

PROJECT 2014-0405.01
CONTACT Jim Sattem/Joey Dysert
INTERFACE ENGINEERING
100 SW Main Street
Suite 1600
Portland, OR 97204
TEL 503.382.2266
FAX 503.382.2262
www.interfaceengineering.com

JAMES R. SATTEM — STATE OF WASHINGTON — 46689 — REGISTERED PROFESSIONAL ENGINEER — 6/9/17

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER

DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION
ELECTRICAL PLAN

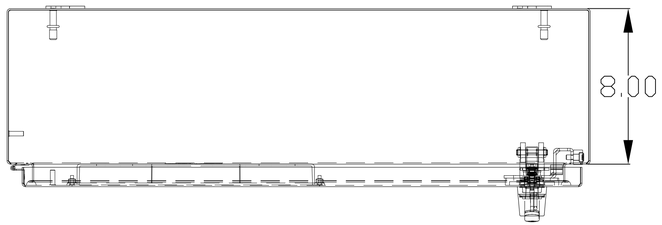
REFERENCE SHEET NO. E1

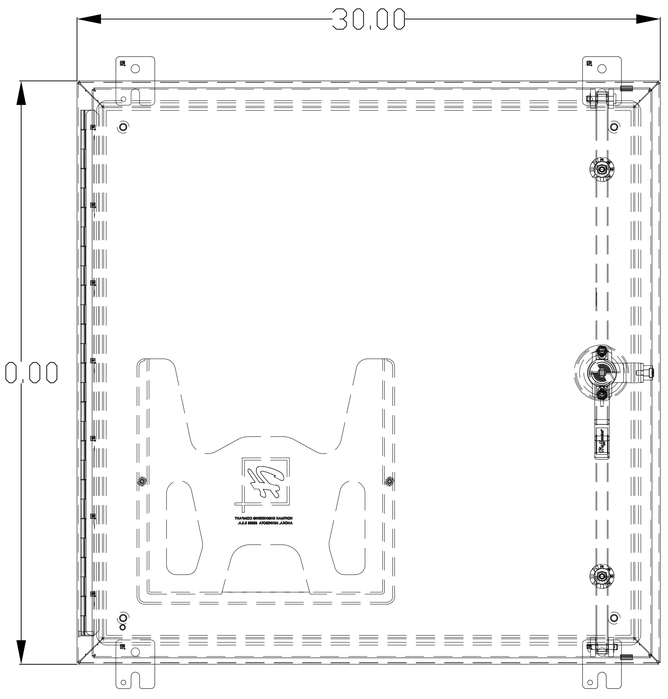
SHEET 44 OF 49 SHEETS

Plotted: Jun 09, 2017 – 10:47am joeyd P:\2014\2014-0405.01\CAD\Electrical\0405.01-E1.dwg Layout Name: E1

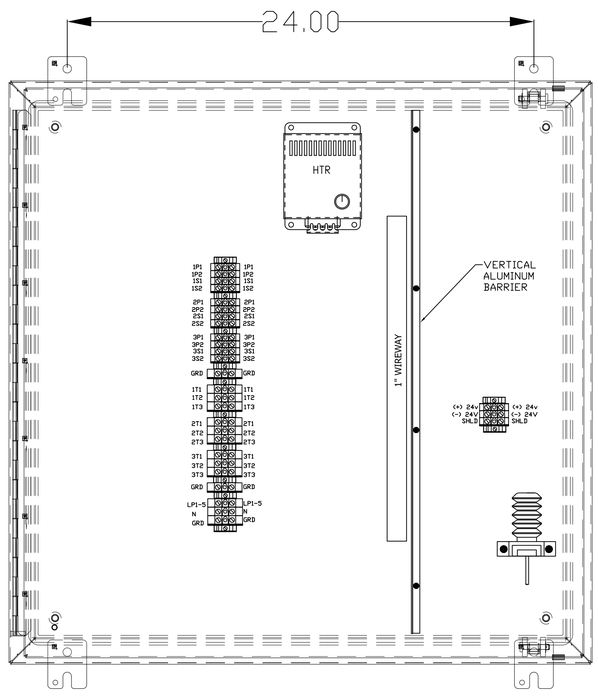
HOFFMAN NEMA 4X STAINLESS STEEL ENCLOSURE
A30H308SSLP3PT

PARTS LIST			
ITEM	QTY	STOCK NUMBER	DESCRIPTION
1	1	A30H3008SSLP3PT	NEMA 4X STAINLESS STEEL JUNCTION BOX 30X30X8
2	1	A30P30	BACK PLATE
3	12		TERMINAL END STOP
4	10		TERMINAL END SECTION
5	27		TERMINALS
6	1		ALUMINUM BARRIER
7	1	DAH1001A	PANEL HEATER
8	1	SLT-AB1	ANEROID BELLOWS
9	1		ALUMINUM BARRIER
9	16"		1" X 1" SLOTTED WIREWAY



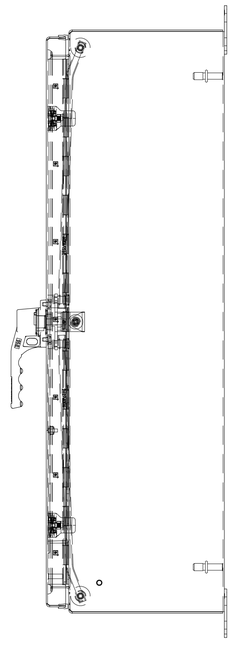


OUTER-DOOR VIEW



NOTE: MAINTAIN SEPARATION OF INTRINSICALLY SAFE FIELD WIRES FROM ALL OTHER WIRING.

BACK PLATE VIEW



SIDE VIEW

Sheet E1a

REVISION HISTORY			
REV	DATE	DESCRIPTION	BY
0			

PROJECT #: EO418D01
DSN: DSN
DRN: DRN
CKD: CKD
DATE: 5/25/18

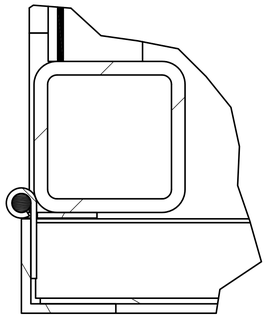
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ROMTEC UTILITIES
18240 NORTH BANK ROAD
ROSEBURG, OREGON 97470
PHONE: (541) 496-9678
WWW.ROMTECUTILITIES.COM

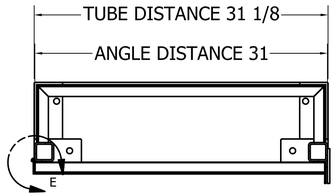
SNITH ISLAND DRAINAGE
EVERETT, WA

ABOVE GRADE JUNCTION BOX

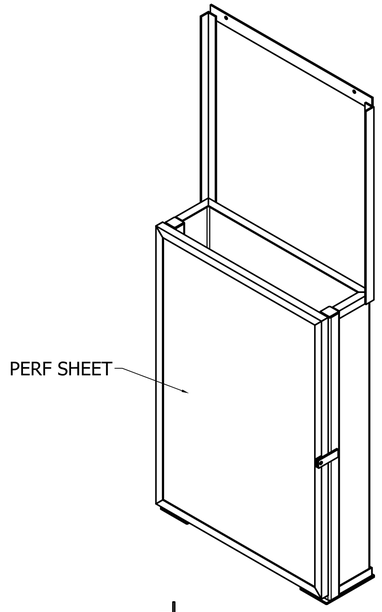
ELECTRICAL SHEET
1 OF 1

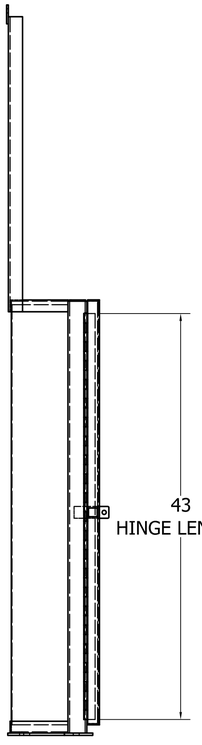


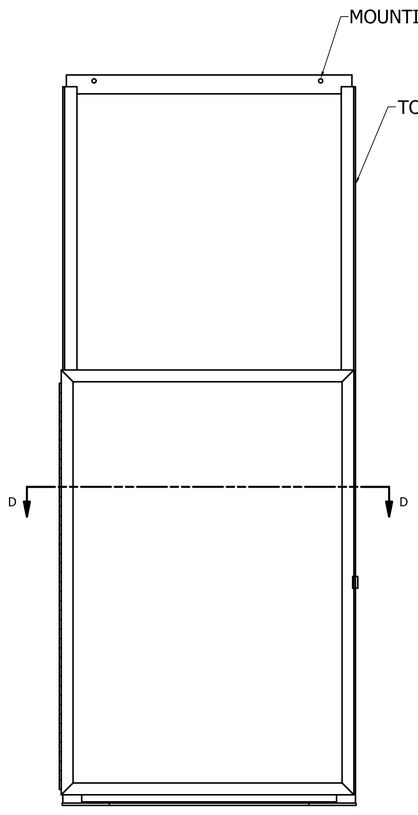
DETAIL E
SCALE 1 : 1

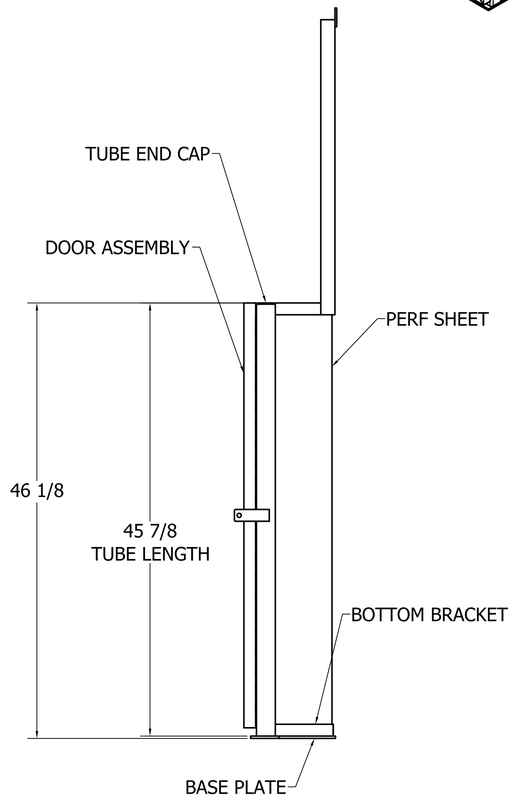


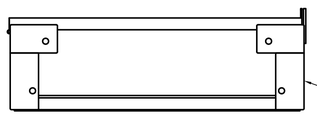
SECTION D-D
SCALE 1/8











PARTS LIST			
ITEM	ITEM QTY	PART NUMBER	DESCRIPTION
1	2	8ft DISCONNECT PANEL - ANGLE - TOP FRAME - SIDE - VERTICAL	ANGLE - 1-1/2 X 1-1/2 X 3/16 X 31-1/4
2	1	8ft STD DISCONNECT PANEL - ANGLE - BOTTOM FRAME - BACK	ANGLE - 1-1/4 X 1-1/4 X 1/8 X 30 5/8
3	1	8ft DISCONNECT PANEL - ANGLE - TOP FRAME	ANGLE - 1-1/4 X 1-1/4 X 1/8 X 30 5/8
4	2	8ft DISCONNECT PANEL - DOOR ANGLE - LONG	ANGLE - 1-1/4 X 1-1/4 X 1/8 X 45
5	1	8ft STD DISCONNECT PANEL - ANGLE - TOP FRAME - SIDE - SHORT LH - STRAIGHT	ANGLE - 1-1/4 X 1-1/4 X 1/8 X 6 1/8
6	1	8ft STD DISCONNECT PANEL - ANGLE - TOP FRAME - SIDE - SHORT RH - STRAIGHT	ANGLE - 1-1/4 X 1-1/4 X 1/8 X 6-1/8
7	2	8ft STD DISCONNECT PANEL - DOOR ANGLE - SHORT x 31	ANGLE - 1.25 X 1.25 X 1/8 X 31
8	1	8ft STD DISCONNECT PANEL - ANGLE - BOTTOM FRAME - SIDE - SHORT RH - STRAIGHT	ANGLE - 1.25 X 1.25 X 1/8 X 6 1/8
9	1	8ft STD DISCONNECT PANEL - ANGLE - BOTTOM FRAME - SIDE - SHORT LH - STRAIGHT	ANGLE - 1.25 X 1.25 X 1/8 X 6 1/8
10	1	8ft STD DISCONNECT PANEL - LOWER COVER SHEET - FLUSH	COVER SCREEN - PERF PLATE 44 1/4 x 42 3/8
11	1	8ft STD DISCONNECT PANEL - FRAME LOCK TAB - STRAIGHT	FB - 1/4 X 1-1/4 X 3
12	2	8ft STD DISCONNECT PANEL - TUBE CAP	FB - 1/8 X 1 3/4 X 1 3/4 - TUBE CAPS
13	1	8ft DISCONNECT PANEL - DOOR LOCK TAB	FB - 1/8 X 1 X 1
14	1	8ft DISCONNECT PANEL - TOP FRAME FLATBAR	FB - 3/16 X 2 X 30 1/4
15	2	50-FB0300S4	FLAT BAR - 304SS - .25 x 3in x 6in
16	1	50-FB0125S4 - FLAT BAR - 304SS - 1.25in x .25in x 25.125in	FLAT BAR - 304SS - .25in x 1.25in x 25-1/8in
17	2	50-FB0300S4	FLAT BAR - 304SS - .25in x 3in x 5in
18	1	8ft STD DISCONNECT PANEL - DOOR PANEL x 31	PERF PLATE - 30 1/2 X 44 1/2
19	1	8ft STD DISCONNECT PANEL - DOOR SUPPORT TUBE x 31	TS - 1 X 1 X .065 X 30 11/16
20	2	8ft STD DISCONNECT PANEL - FRAME TUBE - SIDE X 45.75	TS - 2 X 2 X .180 X 45.75"
21	1	8ft STD DISCONNECT PANEL - HINGE PIN - 43in	MCMASTER CARR 1582A298
22	1	8ft STD DISCONNECT PANEL - DOOR HINGE PLATE - 43in - B	DOOR HINGE PLATE
23	1	8ft STD DISCONNECT PANEL - DOOR HINGE PLATE - 43in - A	DOOR HINGE PLATE

ALL 304 STAINLESS STEEL OR BETTER

NOTE: ALL DIMENSIONS AND ELEVATIONS SHOWN ARE NOMINAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE ON-SITE CONTRACTOR OR ROMTEC UTILITIES CUSTOMER (NOT ROMTEC UTILITIES) TO VERIFY THE ACCURACY OF ANY CRITICAL DIMENSIONS OR ELEVATIONS PRIOR TO SETTING OR INSTALLING ANY EQUIPMENT.

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Sheet E1b

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPR
1			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

DSN -AD
DRN -AD
CKD -AD
DATE-27-18

ROMTEC UTILITIES
18240 NORTH BANK ROAD
ROSEBURG, OREGON 97470
(541) 496-9678
FAX (541) 496-0804

DISCONNECT PANEL STAND
30" X 30" X 8" FLUSH MOUNT

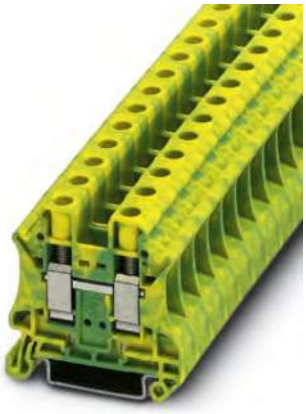
SHEET
1 OF 1

JOB NUMBER
RMTC

Extract from the online catalog

UT 10-PE

Order No.: 3044173



http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=3044173

Universal terminal block with screw connection, cross section: 0.5 - 10 mm², AWG: 20 - 6, width: 10.2 mm, color: Green-yellow

Commercial data	
EAN	4017918960452
Pack	50 Pcs.
Customs tariff	85369010
Weight/Piece	0.02956 KG
Catalog page information	Page 33 (CL-2007)

Product notes

WEEE/RoHS-compliant since: 01/01/2003

http://www.download.phoenixcontact.com
Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation. The General Terms and Conditions of Use apply to Internet downloads.

Technical data

General

Number of levels	1
Number of connections	2
Color	green-yellow

CONTINUOUS HINGE WITH 3-POINT LATCH, TYPE 4X



APPLICATION

These enclosures feature Hoffman's exclusive POWERGLIDE Handle with 3-point latching, ideal for indoor or outdoor applications that require corrosion protection, convenient access, and padlocking security.

SPECIFICATIONS

- 14 gauge Type 304 or 316L stainless steel bodies and doors
- Seams continuously welded and ground smooth
- Seamless foam-in-place gasket
- Rolled lip around three sides of door
- Internal 3-point latch and Type 316L stainless steel padlocking POWERGLIDE Handle
- Remove door by pulling stainless steel continuous hinge pin
- Data pocket is high-impact thermoplastic
- Collar studs provided for mounting optional panels
- Exterior hardware on Type 316L stainless steel enclosures matches enclosure material
- Bonding provision on door; grounding stud on body

FINISH

Door, sides, top and bottom have smooth #4 brushed finish. Handle is electropolished.

ACCESSORIES

Panels for Type 3R, 4, 4X, 12 and 13 Enclosures
Steel and Stainless Steel Window Kits
H2OMIT Vent Drains, Type 4X
H2OMIT Thermoelectric Dehumidifier

MODIFICATION AND CUSTOMIZATION

Hoffman excels at modifying and customizing products to your specifications. Contact your local Hoffman sales office or distributor for complete information.

BULLETIN: A4SW3

INDUSTRY STANDARDS

UL 508A Listed; Type 3R, 4, 4X, 12; File No. E61997
cUL Listed per CSA C22.2 No 94; Type 3R, 4, 4X, 12; File No. E61997

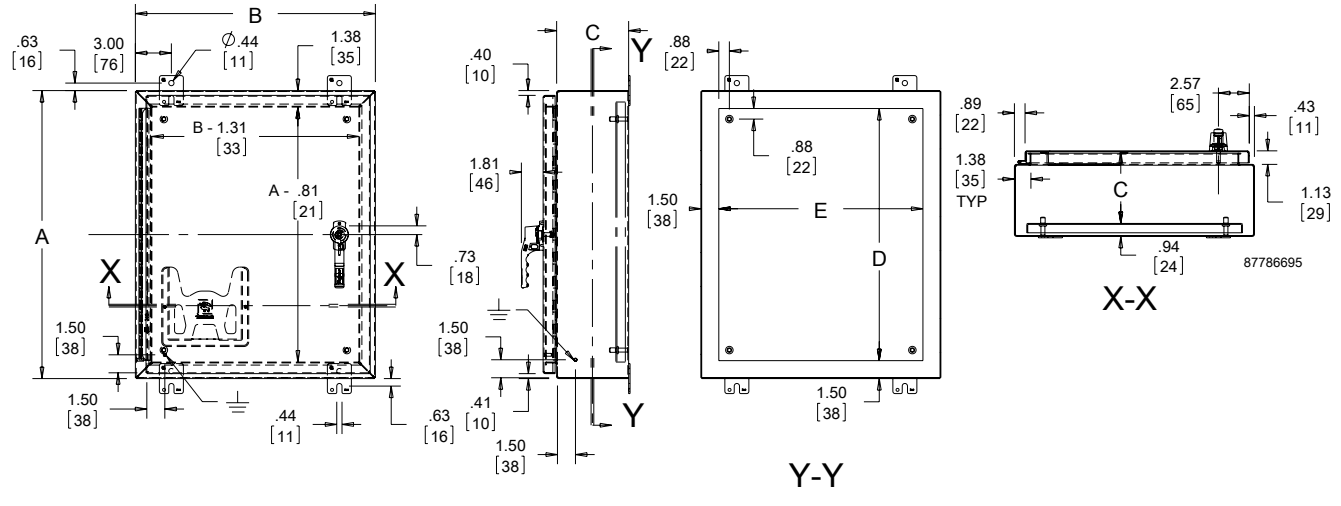
NEMA/EEMAC Type 3R, 4, 4X, 12, 13
IEC 60529, IP66
Meets NEMA Type 3RX requirements

Standard Product

Catalog Number	AxBxC in./mm	Stainless Steel Type	Steel Panel	Conductive Panel	Stainless Steel Panel	Panel Size D x E in./mm	Data Pocket
A24H2006SSLP3PT	24.00 x 20.00 x 6.00 610 x 508 x 152	304	A24P20	A24P20G	A24P20SS6	21.00 x 17.00 533 x 432	Small
A24H2006SS6LP3PT	24.00 x 20.00 x 6.00 610 x 508 x 152	316L	A24P20	A24P20G	A24P20SS6	21.00 x 17.00 533 x 432	Small
A24H2008SSLP3PT	24.00 x 20.00 x 8.00 610 x 508 x 203	304	A24P20	A24P20G	A24P20SS6	21.00 x 17.00 533 x 432	Small
A24H2008SS6LP3PT	24.00 x 20.00 x 8.00 610 x 508 x 203	316L	A24P20	A24P20G	A24P20SS6	21.00 x 17.00 533 x 432	Small
A24H2408SSLP3PT	24.00 x 24.00 x 8.00 610 x 610 x 203	304	A24P24	A24P24G	A24P24SS6	21.00 x 21.00 533 x 533	Small
A24H2408SS6LP3PT	24.00 x 24.00 x 8.00 610 x 610 x 203	316L	A24P24	A24P24G	A24P24SS6	21.00 x 21.00 533 x 533	Small
A30H2408SSLP3PT	30.00 x 24.00 x 8.00 762 x 610 x 203	304	A30P24	A30P24G	A30P24SS6	27.00 x 21.00 686 x 533	Large
A30H2408SS6LP3PT	30.00 x 24.00 x 8.00 762 x 610 x 203	316L	A30P24	A30P24G	A30P24SS6	27.00 x 21.00 686 x 533	Large
A30H3008SSLP3PT	30.00 x 30.00 x 8.00 762 x 762 x 203	304	A30P30	A30P30G	A30P30SS6	27.00 x 27.00 686 x 686	Large
A30H3008SS6LP3PT	30.00 x 30.00 x 8.00 762 x 762 x 203	316L	A30P30	A30P30G	A30P30SS6	27.00 x 27.00 686 x 686	Large
A36H2408SSLP3PT	36.00 x 24.00 x 8.00 914 x 610 x 203	304	A36P24	A36P24G	A36P24SS6	33.00 x 21.00 838 x 533	Large
A36H2408SS6LP3PT	36.00 x 24.00 x 8.00 914 x 610 x 203	316L	A36P24	A36P24G	A36P24SS6	33.00 x 21.00 838 x 533	Large
A36H3008SSLP3PT	36.00 x 30.00 x 8.00 914 x 762 x 203	304	A36P30	A36P30G	A36P30SS6	33.00 x 27.00 838 x 686	Large
A36H3008SS6LP3PT	36.00 x 30.00 x 8.00 914 x 762 x 203	316L	A36P30	A36P30G	A36P30SS6	33.00 x 27.00 838 x 686	Large
A48H3608SSLP3PT	48.00 x 36.00 x 8.00 1219 x 914 x 203	304	A48P36	A48P36G	A48P36SS6	45.00 x 33.00 1143 x 838	Large
A48H3608SS6LP3PT	48.00 x 36.00 x 8.00 1219 x 914 x 203	316L	A48P36	A48P36G	A48P36SS6	45.00 x 33.00 1143 x 838	Large
A24H2010SSLP3PT	24.00 x 20.00 x 10.00 610 x 508 x 254	304	A24P20	A24P20G	A24P20SS6	21.00 x 17.00 533 x 432	Small

Catalog Number	AxBxC in./mm	Stainless Steel Type	Steel Panel	Conductive Panel	Stainless Steel Panel	Panel Size D x E in./mm	Data Pocket
A24H2010SS6LP3PT	24.00 x 20.00 x 10.00 610 x 508 x 254	316L	A24P20	A24P20G	A24P20SS6	21.00 x 17.00 533 x 432	Small
A36H3010SSLP3PT	36.00 x 30.00 x 10.00 914 x 762 x 254	304	A36P30	A36P30G	A36P30SS6	33.00 x 27.00 838 x 686	Large
A36H3010SS6LP3PT	36.00 x 30.00 x 10.00 914 x 762 x 254	316L	A36P30	A36P30G	A36P30SS6	33.00 x 27.00 838 x 686	Large
A42H3010SSLP3PT	42.00 x 30.00 x 10.00 1067 x 762 x 254	304	A42P30	A42P30G	A42P30SS6	39.00 x 27.00 991 x 686	Large
A48H3610SSLP3PT	48.00 x 36.00 x 10.00 1219 x 914 x 254	304	A48P36	A48P36G	A48P36SS6	45.00 x 33.00 1143 x 838	Large
A48H3610SS6LP3PT	48.00 x 36.00 x 10.00 1219 x 914 x 254	316L	A48P36	A48P36G	A48P36SS6	45.00 x 33.00 1143 x 838	Large
A24H2412SSLP3PT	24.00 x 24.00 x 12.00 610 x 610 x 305	304	A24P24	A24P24G	A24P24SS6	21.00 x 21.00 533 x 533	Small
A24H2412SS6LP3PT	24.00 x 24.00 x 12.00 610 x 610 x 305	316L	A24P24	A24P24G	A24P24SS6	21.00 x 21.00 533 x 533	Small
A30H2412SSLP3PT	30.00 x 24.00 x 12.00 760 x 610 x 305	304	A30P24	A30P24G	A30P24SS6	27.00 x 21.00 686 x 533	Large
A30H2412SS6LP3PT	30.00 x 24.00 x 12.00 762 x 610 x 305	316L	A30P24	A30P24G	A30P24SS6	27.00 x 21.00 686 x 533	Large
A36H3012SSLP3PT	36.00 x 30.00 x 12.00 914 x 762 x 305	304	A36P30	A36P30G	A36P30SS6	33.00 X 27.00 838 x 686	Large
A36H3012SS6LP3PT	36.00 x 30.00 x 12.00 914 x 762 x 305	316L	A36P30	A36P30G	A36P30SS6	33.00 X 27.00 838 x 686	Large
A36H3612SSLP3PT	36.00 x 36.00 x 12.00 914 x 914 x 305	304	A36P36	A36P36G	A36P36SS6	33.00 x 33.00 838 x 838	Large
A36H3612SS6LP3PT	36.00 x 36.00 x 12.00 914 x 914 x 305	316L	A36P36	A36P36G	A36P36SS6	33.00 x 33.00 838 x 838	Large
A42H3612SSLP3PT	42.00 x 36.00 x 12.00 1067 x 914 x 305	304	A42P36	A42P36G	A42P36SS6	39.00 x 33.00 991 x 838	Large
A48H3612SSLP3PT	48.00 x 36.00 x 12.00 1219 x 914 x 305	304	A48P36	A48P36G	A48P36SS6	45.00 x 33.00 1143 x 838	Large
A48H3612SS6LP3PT	48.00 x 36.00 x 12.00 1219 x 914 x 305	316L	A48P36	A48P36G	A48P36SS6	45.00 x 33.00 1143 x 838	Large
A60H3612SSLP3PT	60.00 x 36.00 x 12.00 1524 x 914 x 305	304	A60P36	A60P36G	A60P36SS6	57.00 x 33.00 1448 x 838	Large
A60H3612SS6LP3PT	60.00 x 36.00 x 12.00 1524 x 914 x 305	316L	A60P36	A60P36G	A60P36SS6	57.00 x 33.00 1448 x 838	Large
A48H3616SSLP3PT	48.00 x 36.00 x 16.00 1219 x 914 x 406	304	A48P36	A48P36G	A48P36SS6	45.00 x 33.00 1143 x 838	Large
A48H3616SS6LP3PT	48.00 x 36.00 x 16.00 1219 x 914 x 406	316L	A48P36	A48P36G	A48P36SS6	45.00 x 33.00 1143 x 838	Large
A60H3616SSLP3PT	60.00 x 36.00 x 16.00 1524 x 914 x 406	304	A60P36	A60P36G	A60P36SS6	57.00 x 33.00 1448 x 838	Large
A60H3616SS6LP3PT	60.00 x 36.00 x 16.00 1524 x 914 x 406	316L	A60P36	A60P36G	A60P36SS6	57.00 x 33.00 1448 x 838	Large

Purchase panels separately. Optional stainless steel, composite and aluminum panels are available for most sizes.



Sheet E1e

ProSense® SLT Series Submersible Level Transmitter Accessories



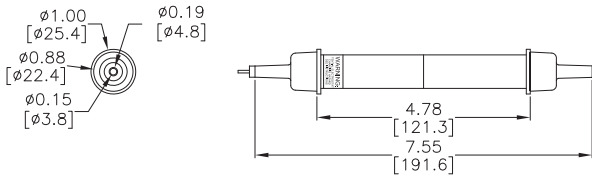
Submersible Level Transmitter Vent Filter (Desiccant)

Vent filters utilize indicating desiccant to prevent moisture from entering the vent tube and damaging transmitters with vented gage reference pressure. The desiccant will turn from blue to pink when exposed to moisture indicating the need for maintenance. This vent filter design prevents moisture from entering the vent tube for at least one year without maintenance.

Submersible Level Transmitter Vent Filter (Desiccant)						
Part No.	***Description***	***Housing Material***	***Tubing Size***	***Connector Material***	***Price***	***Weight (lbs)***
SLT-VF1	ProSense indicating desiccant vent filter, for ProSense submersible hydrostatic level transmitters	PUR (polyethylene) tube with PP (polypropylene) fittings	13in (330mm)	PEEK (Polyetheretherketone)	$22.00	0.5

Dimensions

inches [mm]





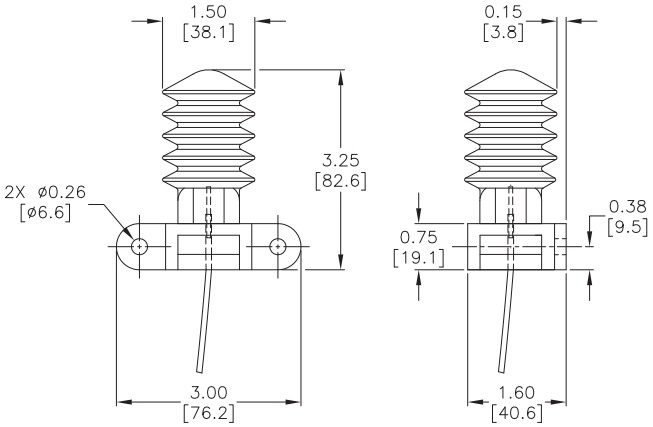
Submersible Level Transmitter Aneroid Bellows

The aneroid bellows is a maintenance-free alternative to desiccant filters for moisture protection on vented gage transmitters. Made of flexible neoprene material attached to a polycarbonate mounting bracket, the bellows fluctuates with changes in atmospheric pressure, maintaining a constant barometric reference. Note that the use of the bellows results in a closed reference pressure system subject to zero shift errors induced by changing temperatures of up to 0.003 psi/°C.

Submersible Level Transmitter Aneroid Bellows						
Part No.	***Description***	***Housing Material***	***Tubing Size***	***Connector Material***	***Price***	***Weight (lbs)***
SLT-AB1	ProSense aneroid bellows, for ProSense submersible hydrostatic level transmitters	Neoprene bellows attached to a PC (polycarbonate) bracket	12in (305mm)	PEEK (Polyetheretherketone)	$33.00	0.8

Dimensions

inches [mm]



Always install a vent filter (desiccant) or aneroid bellows immediately after transmitter installation. Failure to use one or the other could result in premature failure of the transmitter, which would not be covered by warranty.

Sheet E1f

See our website www.AutomationDirect.com for complete Engineering drawings.

ELECTRIC HEATERS (FOR 100-800 W HEATING APPLICATIONS)



Example:
Which electric heater would most-efficiently maintain a 60 F temperature in an uninsulated 24 x 24 x 10 enclosure that is exposed to a temperature not less than 30 F?

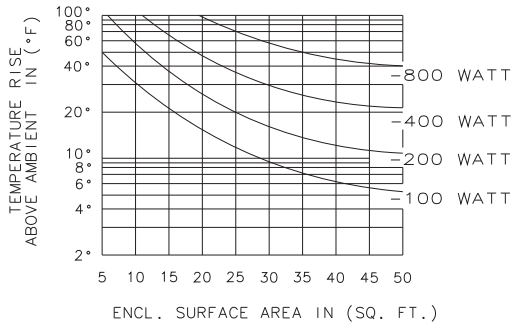
Step 1:
Calculate the total enclosure surface area.
- Area ($ft.^2$) = 2[(AxB)+(AxC)+BxC)] ÷ 144 where "A", "B" and "C" are the dimensions of the enclosure.

In our example,
- Area = 2[(24x24)+(24x10)+(24x10)] ÷ 144 = 14.7 $ft.^2$

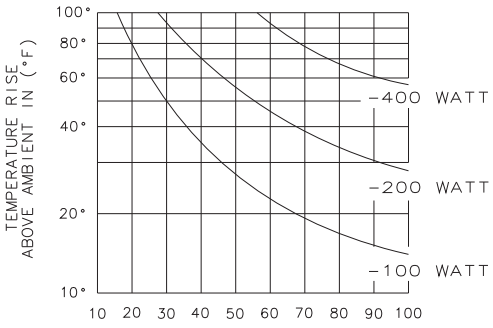
Step 2:
Using the graphs, draw a vertical line through the enclosure surface area and determine the temperature rise given by each heater. For enclosures exposed to windy conditions, heaters should be oversized by approximately 50 percent.

Step 3:
Select the electric heater that achieves the desired temperature rise. In our example, the desired temperature rise is 30 F (60 F - 30 F). The 200 W heater should be selected since its temperature rise (35 F) exceeds the requirement.

HEATER SELECTION GRAPH
(UNINSULATED ENCLOSURES)



HEATER SELECTION GRAPH
(INSULATED ENCLOSURES)



87793520

SEMICONDUCTOR CONTROL PANEL HEATERS



Catalog No.	Watts
DAH101	10
DAH301	30
DAH601	60

ELECTRIC HEATERS



Catalog No.	Watts
DAH1001A	100
DAH1002A	100
DAH2001A	200
DAH2002A	200
DAH4001B	400
DAH4002B	400
DAH8001B	800
DAH8002B	800

Sheet E1g

Feed-through terminal block - UT 6 - 3044131

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (http://phoenixcontact.com/download)



Feed-through terminal block, Connection method: Screw connection, Cross section: 0.2 mm² - 10 mm², AWG: 24 - 8, Width: 8.2 mm, Color: gray, Mounting type: NS 35/7,5, NS 35/15

Product Features

- The large wiring space enables the connection of solid and stranded conductors without ferrules, even above the nominal cross section
- Tested for railway applications
- As well as saving space, the compact design enables user-friendly wiring in a small amount of space
- Optimum screwdriver guidance through closed screw shafts
- The multi-conductor connection offers maximum flexibility and wiring density
- The cable entry funnel enables the use of conductors with ferrules and plastic collars within the nominal cross section

Key commercial data

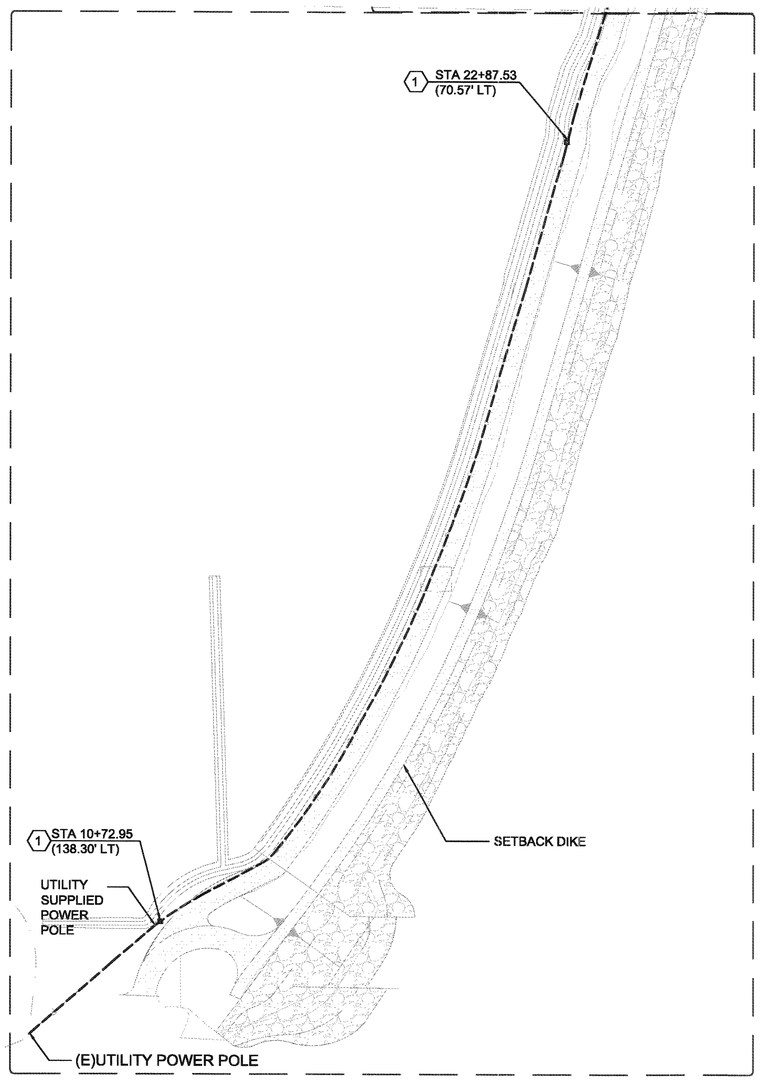
Packing unit	1 pc
Weight per Piece (excluding packing)	14.8 GRM
Custom tariff number	85369010
Country of origin	Germany

Technical data

General

Number of levels	1
Number of connections	2
Color	gray
Insulating material	PA
Inflammability class according to UL 94	V0
Area of application	Railway industry
	Mechanical engineering

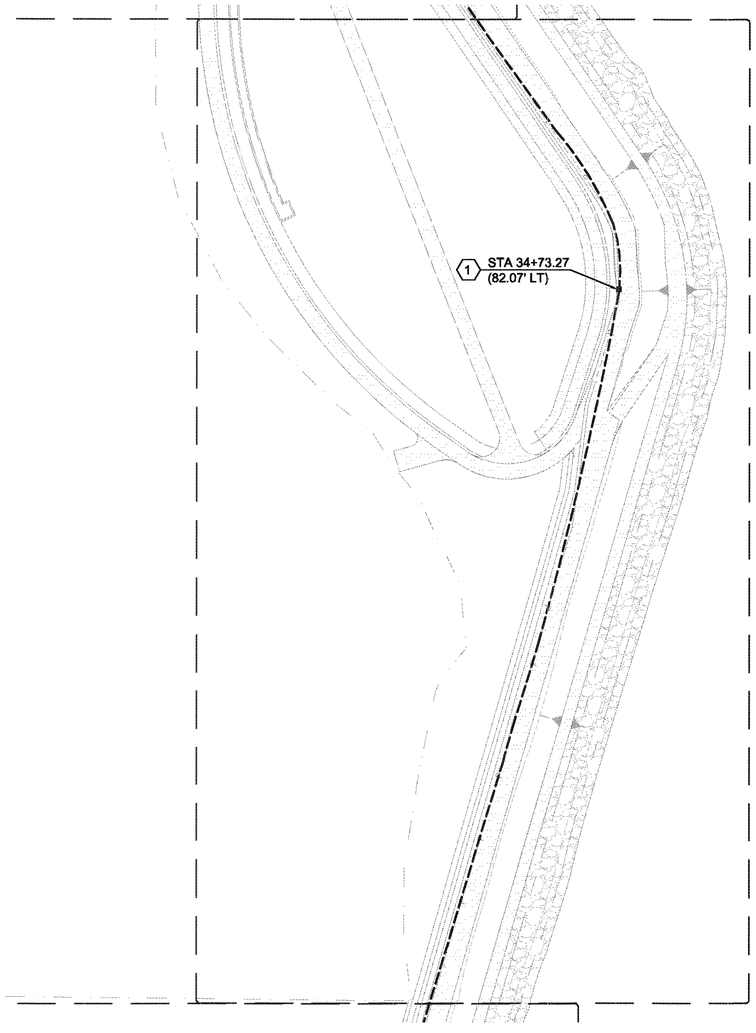
A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



1 ENLARGED SITE PLAN

0 100' 200'

SCALE: 1"=100'-0"



2 ENLARGED SITE PLAN

0 100' 200'

SCALE: 1"=100'-0"

GENERAL SHEET NOTES

A. 4" SCHEDULE 40 PVC CONDUIT FOR PRIMARY.

ELECTRICAL SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

Abbreviations

(E) EXISTING

General

1 KEYED NOTE

Raceways

CONDUIT ROUTED BELOW FLOOR / GRADE

SHEET KEYNOTES

1. PULLBOX FOR SNOHOMISH COUNTY PUD PRIMARY 200A CABLE/CONDUIT, INSTALLED EVERY 1200' PER PUD REQUIREMENTS.

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: michaela May 04, 2015 – 10:38am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: DRAWN BY:

FIELD BOOK(S): UPI#

PROJECT 2014-0405
CONTACT Nicholas Rich

INTERFACE ENGINEERING

801 Second Avenue
Suite 200
Seattle, WA 98104-1581
TEL 206.382.0200
FAX 206.382.0202
www.interfaceengineering.com

NICHOLAS P. RICE — 27694 — REGISTERED PROFESSIONAL ENGINEER — 5/1/15

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER

5/8/15
DATE APPROVED:

SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND
ESTUARY RESTORATION
ELECTRICAL PLAN

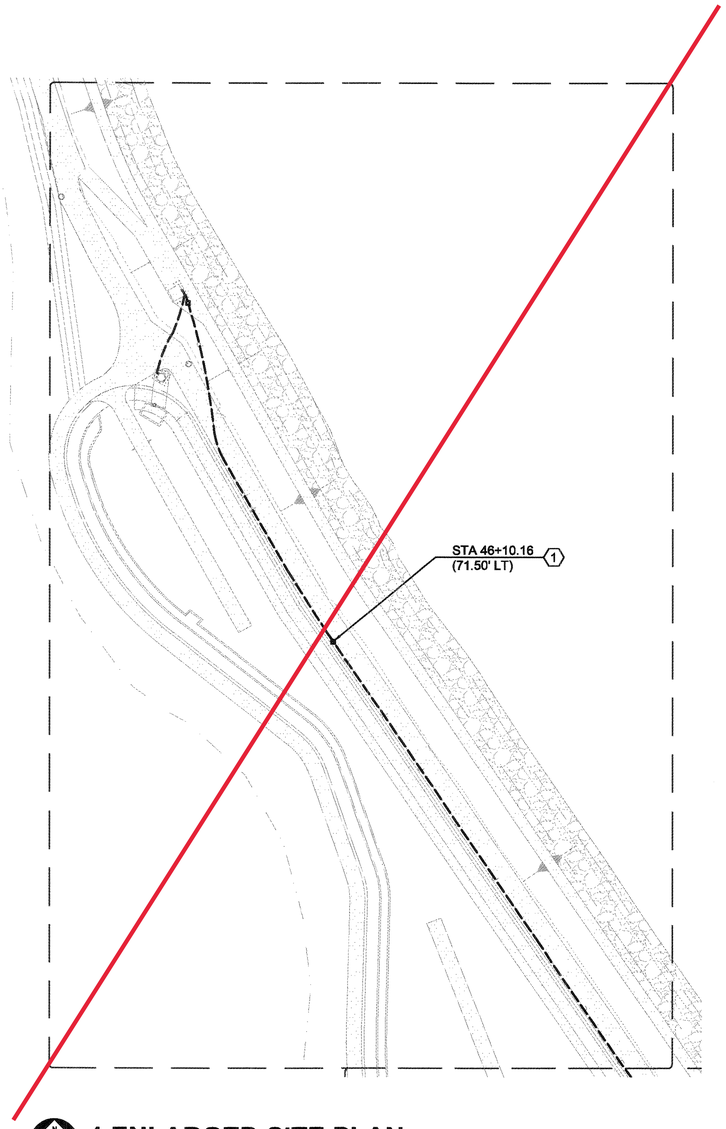
REFERENCE SHEET NO. E2

SHEET 15 OF 49 SHEETS

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FILE: E2.DWG – E2 | EDIT: 5/4/2015 10:38 AM BY MICHAELA | PLOT: 5/7/2015 1:23 PM BY MICHAEL ADAMS

See revised sheet E3 (next sheet) showing revised conduit routing.



1 ENLARGED SITE PLAN

0 100' 200'

SCALE: 1"=100'-0"

GENERAL SHEET NOTES

A. 4" SCHEDULE 40 PVC CONDUIT FOR PRIMARY.

ELECTRICAL SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

General

(1) KEYED NOTE

Raceways

— — — — CONDUIT ROUTED BELOW FLOOR / GRADE

SHEET KEYNOTES

1. PULLBOX FOR SNOHOMISH COUNTY PUD PRIMARY 200A CABLE/CONDUIT, INSTALLED EVERY 1200' PER PUD REQUIREMENTS.

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DATE	NO.	REVISION	BY

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10	WASH.		

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FIELD BOOK(S): UPI#

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5/1/15

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OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND
ESTUARY RESTORATION
ELECTRICAL PLAN

REFERENCE SHEET NO. E3

SHEET 16 OF 49 SHEETS

Plotted: May 07, 2015 – 1:23pm michaela Q:\2014\2014-0405\CAD\Electrical\E3.dwg Layout Name: E3

FILE: E3.DWG – E3 | EDIT: 5/4/2015 10:37 AM BY MICHAELA | PLOT: 5/7/2015 1:23 PM BY MICHAEL ADAMS

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.

GENERAL SHEET NOTES

A. 4" SCHEDULE 40 PVC CONDUIT FOR PRIMARY.

ELECTRICAL SYMBOL LIST

NOTE: This is a standard symbol list and not all items listed may be used.

General

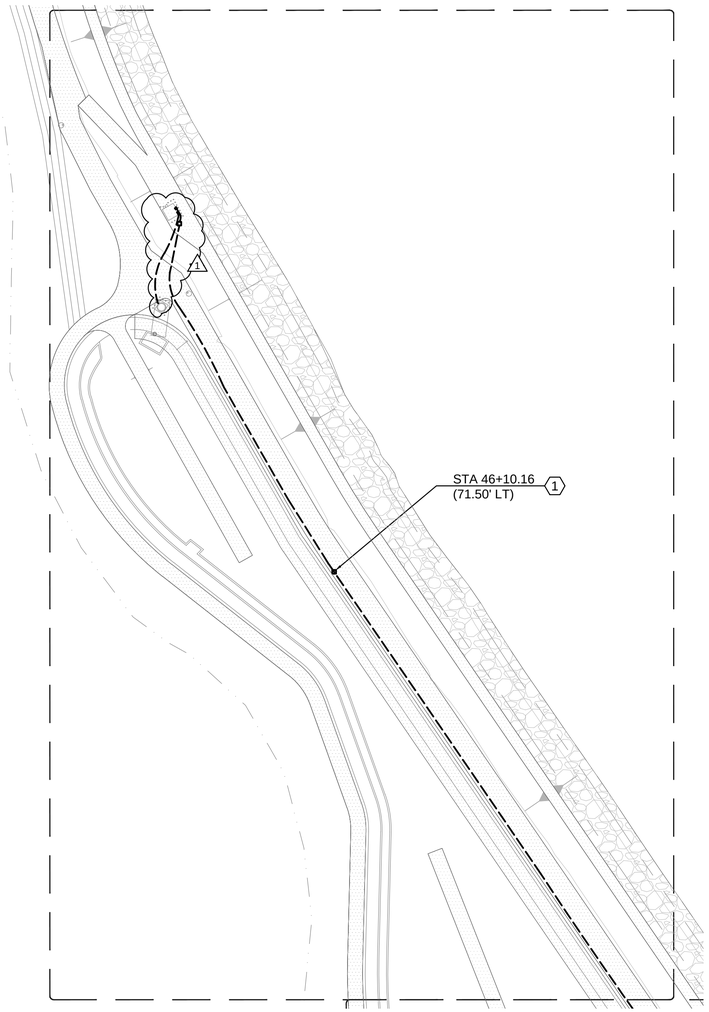
(1) KEYED NOTE

Raceways

CONDUIT ROUTED BELOW FLOOR / GRADE

SHEET KEYNOTES

1. PULLBOX FOR SNOHOMISH COUNTY PUD PRIMARY 200A CABLE/CONDUIT, INSTALLED EVERY 1200' PER PUD REQUIREMENTS.



NORTH

1 ENLARGED SITE PLAN

0 100' 200'

SCALE: 1"=100'-0"

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1-800-424-5555

NO.	REVISION	BY
1	S.I. 03 – CONTROL BUILDING LOCATION	JDD

DATE 6/8/17

Last Saved By: joeyd Jun 08, 2017 – 2:20pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: DRAWN BY:

FIELD BOOK(S): UPI#

PROJECT 2014-0405.01
CONTACT Jim Sattem/Joey Dysert
INTERFACE ENGINEERING
100 SW Main Street
Suite 1600
Portland, OR 97204
TEL 503.382.2266
FAX 503.382.2262
www.interfaceengineering.com

JAMES R. SATTEM STATE OF WASHINGTON 46689 REGISTERED PROFESSIONAL ENGINEER

6/9/17

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER

DATE APPROVED:

SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND
ESTUARY RESTORATION
ELECTRICAL PLAN

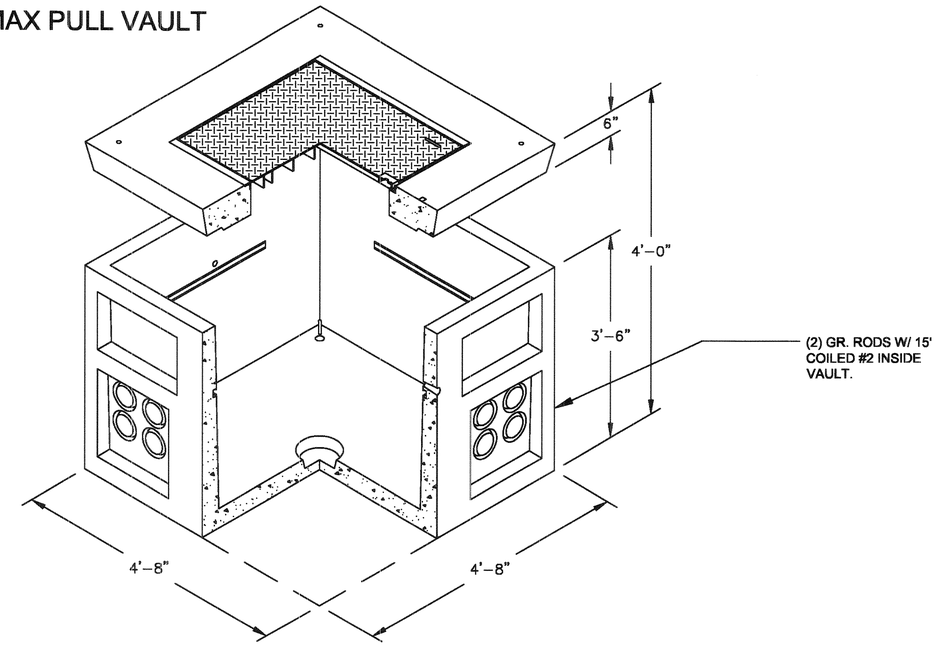
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SHEET 46 OF 49 SHEETS

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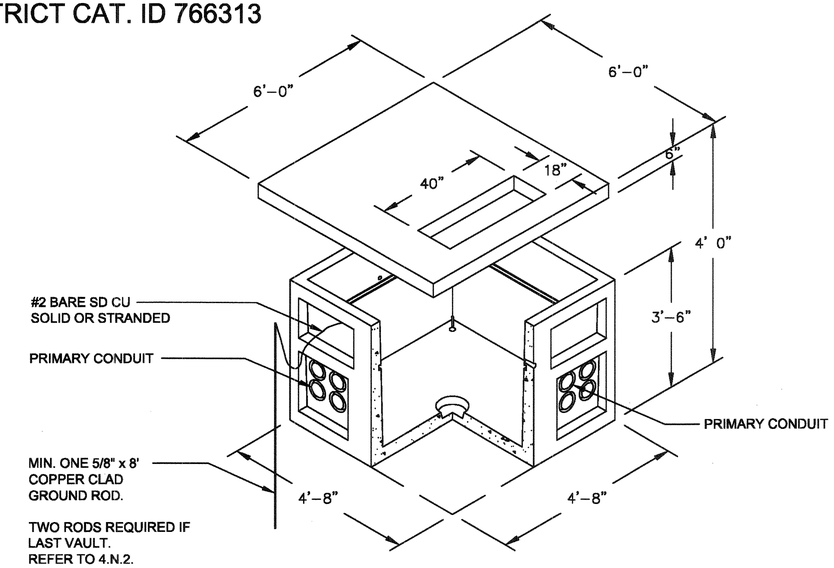
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3 PHASE 1200' MAX PULL VAULT

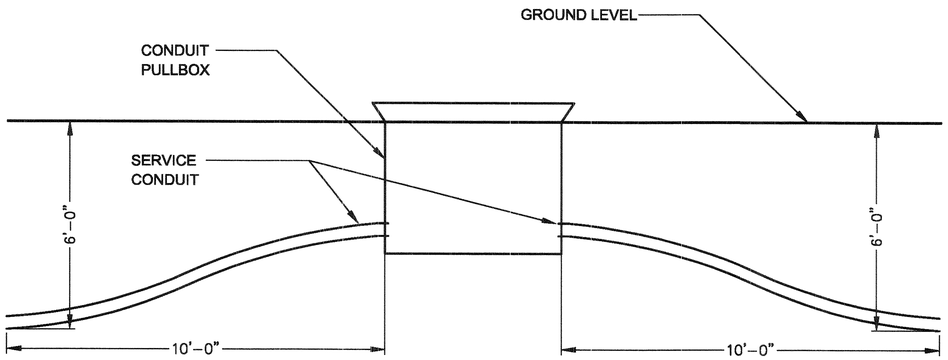


1 CONDUIT PULLBOX
NO SCALE

DISTRICT CAT. ID 766313



3 TRANSFORMER VAULT
NO SCALE



2 CONDUIT PULLBOX SERVICE ENTRY/EXIT
NO SCALE

CALL BEFORE YOU DIG 1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: michaela May 04, 2015 – 10:38am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: | DRAWN BY:

FIELD BOOK(S): | UPI#

PROJECT 2014-0405
CONTACT Nicholas Rich
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801 Second Avenue
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Seattle, WA 98104-1581
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REVIEWED AND APPROVED BY:

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5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

ELECTRIC SERVICE DETAILS

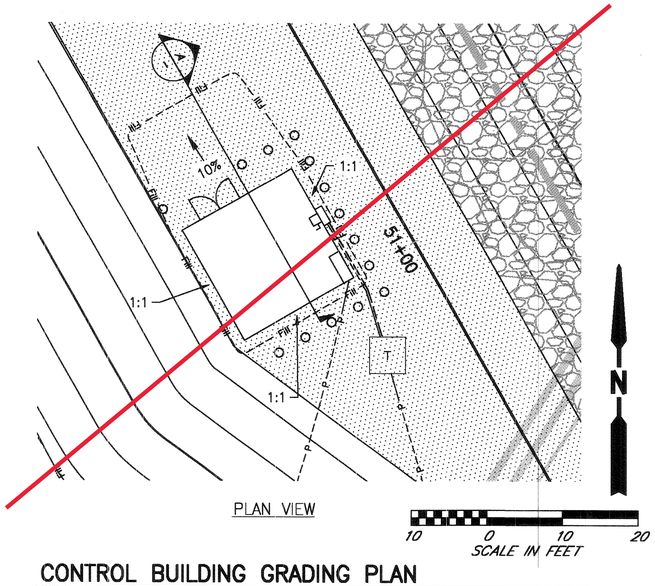
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SHEET 47 OF 49 SHEETS

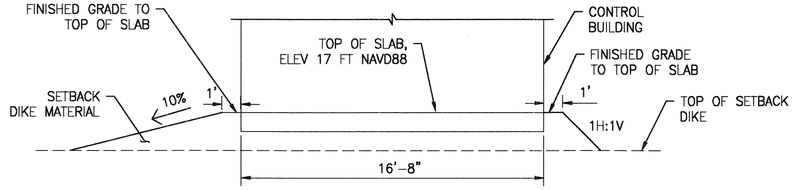
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FILE: E4.DWG – E4 | EDIT: 5/4/2015 10:38 AM BY MICHAELA | PLOT: 5/7/2015 1:23 PM BY MICHAEL ADAMS

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



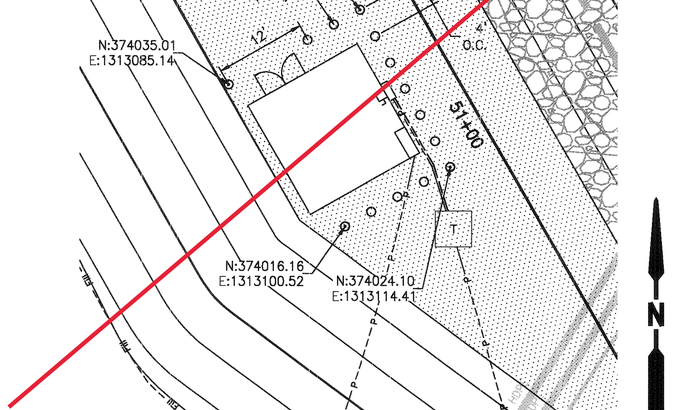
CONTROL BUILDING GRADING PLAN

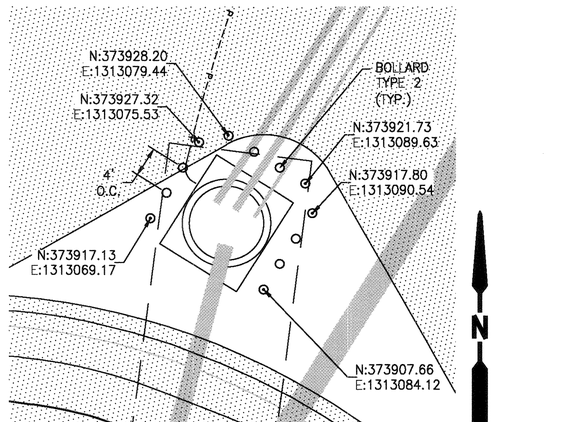


CONTROL BUILDING GRADING SECTION

NTS

See revised sheet BP02 (next sheet) showing revised control building and bollard locations.





NOTES

1. CONSTRUCT BOLLARD TYPE 2 PER WSDOT STD PLAN H-60.20-01.
2. CONSTRUCT BOLLARDS 4' O.C.

BOLLARD PLAN

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk May 01, 2015 - 9:24am

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS | DRAWN BY: AK

FIELD BOOK(S): | UPI# 12-0171-1

otak
HanmiGlobal Partner

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REVIEWED AND APPROVED BY:

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SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS

PROJECT NO. RR49206

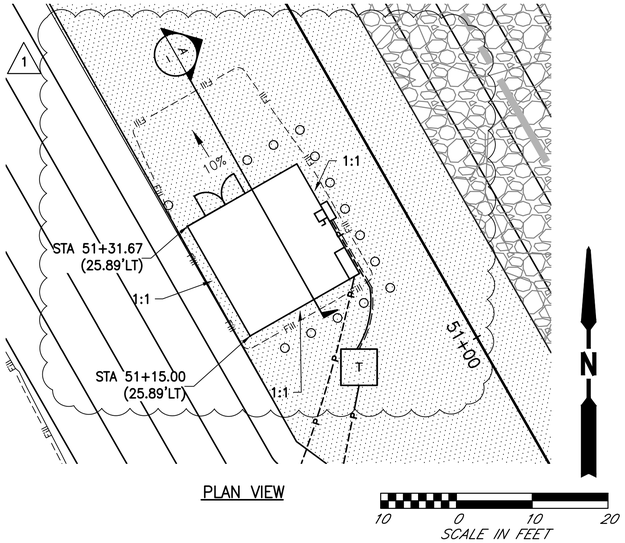
SMITH ISLAND ESTUARY RESTORATION

CONTROL BUILDING GRADING PLAN

REFERENCE SHEET NO. BP01

SHEET 48 OF 49 SHEETS

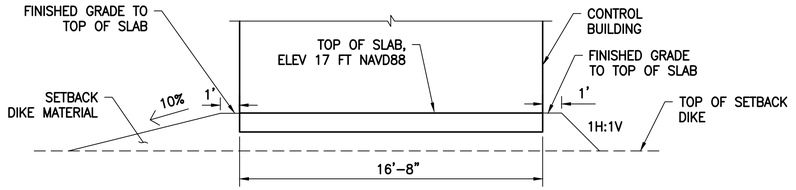
Plotted: May 06, 2015 - 6:33pm otak K:\project\31800\31852A\Dwg\Phase1\48_BP01.dwg Layout Name: BP01



PLAN VIEW

10 0 10 20
SCALE IN FEET

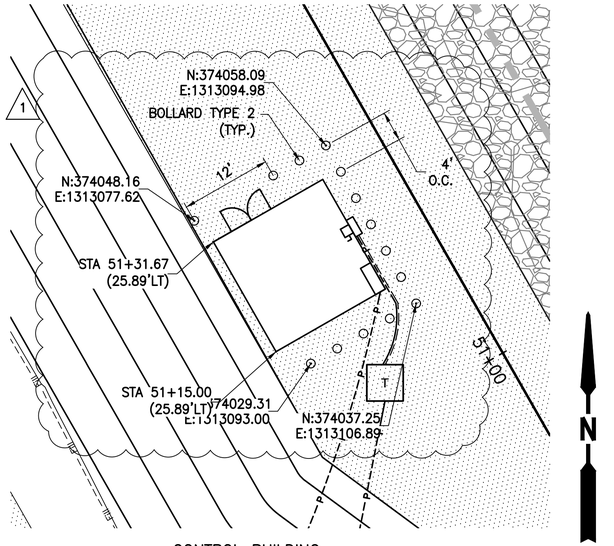
CONTROL BUILDING GRADING PLAN



CONTROL BUILDING GRADING SECTION

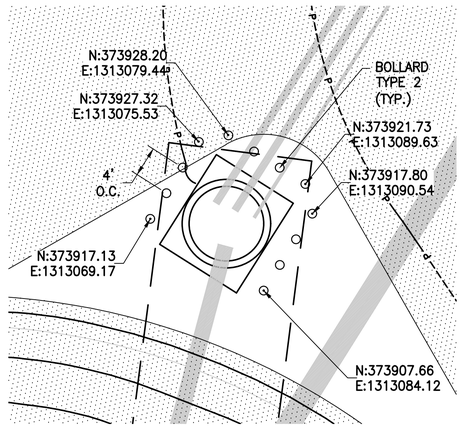
A

NTS



CONTROL BUILDING

10 0 10 20
SCALE IN FEET



PUMP STATION

10 0 10 20
SCALE IN FEET

NOTES

1. CONSTRUCT BOLLARD TYPE 2 PER WSDOT STD PLAN H-60.20-01.
2. CONSTRUCT BOLLARDS 4' O.C.

BOLLARD PLAN

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY
6/8/17	1	S.I. 03 - CONTROL BUILDING LOCATION	CRC DAS

Last Saved By: davest Jun 09, 2017 - 5:34pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

DESIGNED BY: GSL, DAS
DRAWN BY: AK
FIELD BOOK(S):
UPI# 12-0171-1

otak
HanmiGlobal Partner

REFER TO ORIGINAL DRAWINGS FOR SIGNATURES AND SEALS

REVIEWED AND APPROVED BY:

OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER

DATE APPROVED:

SNOHOMISH COUNTY
DEPARTMENT OF
PUBLIC WORKS

PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

CONTROL BUILDING GRADING PLAN

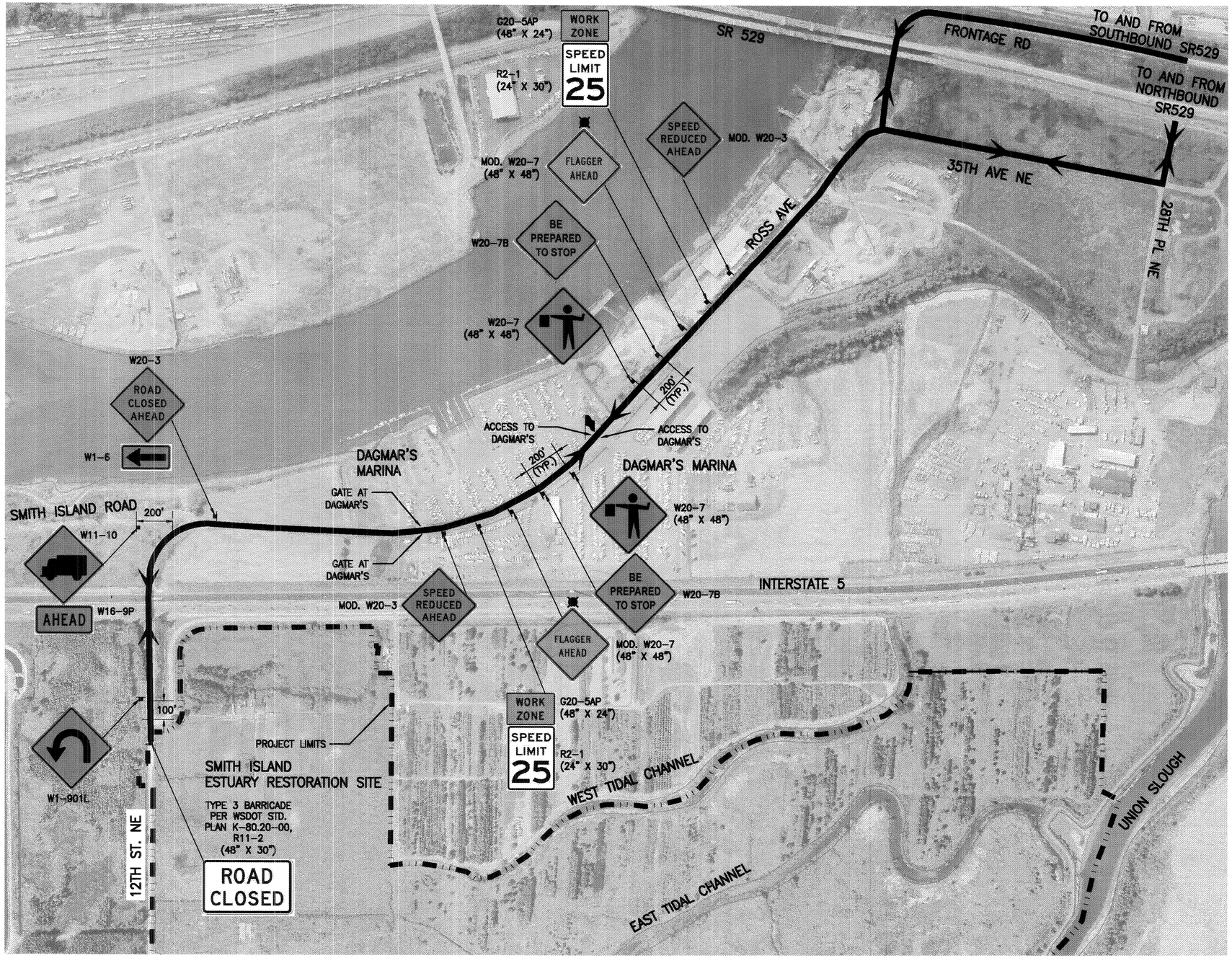
REFERENCE SHEET NO. BP01

SHEET 48 OF 49 SHEETS

Plotted: Jun 09, 2017 - 5:39pm davest K:\project\31800\31852A\Dwg\Phase1\48_BP01.dwg Layout Name: BP01

XREF LIST
Ltscale: 1
Resolved
3784-PRJL
3784-RIVER
TTLBLK
VICINITY_MAP
3784-BASE
Unresolved
GSLSEAL

A PORTION OF SECTIONS 9,10,15,&16, TOWNSHIP 29 NORTH, RANGE 05 EAST, W.M.



NOTES

1. LOCATION OF SIGNS SHOWN ARE APPROXIMATE AND SHALL BE FIELD LOCATED AND/OR AS DIRECTED BY THE ENGINEER. PLACEMENT OF SIGNS SHALL NOT INTERFERE WITH DRIVEWAYS, FIRE HYDRANTS AND EXISTING SIGNS.
2. SEE SPECIFICATIONS SECTION 1-10 FOR ADDITIONAL REQUIREMENTS.
3. PROVIDE FLASHING WARNING LIGHT PER SECTION 1-10.3(3)I OF WSDOT STD. SPECIFICATIONS.

LEGEND

- ACCESS AND HAUL ROUTE
- PROJECT LIMITS
- PROPOSED SIGN
- FLAGGING STATION
- FLASHING WARNING LIGHT (SEE NOTE 3)

N

300 0 300 600
SCALE IN FEET

CALL BEFORE YOU DIG
1-800-424-5555

DATE	NO.	REVISION	BY

Last Saved By: ahmedk May 07, 2015 - 2:25pm

REGION NO.	STATE	FED. AID PROJ. NO.	SURVEY NO.
10	WASH.		

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FIELD BOOK(S): | UPI# 12-0171-1

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GREGORY S. LAIRD — STATE OF WASHINGTON — 25758 — REGISTERED PROFESSIONAL ENGINEER — 5-7-15

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OWEN B. CARTER, P.E.
SNOHOMISH COUNTY ENGINEER
5/8/15
DATE APPROVED:

SNOHOMISH COUNTY DEPARTMENT OF PUBLIC WORKS
PROJECT NO. RR49206

SMITH ISLAND ESTUARY RESTORATION

ACCESS AND HAUL ROUTE TRAFFIC CONTROL PLAN

REFERENCE SHEET NO. TC01
SHEET 49 OF 49 SHEETS

Plotted: May 07, 2015 - 2:27pm otak \\Kirca01\pno\project\318001\318529A\Dwg\Phase1\49_TC01.dwg Layout Name: TC01