

STATTER HARBOR IMPROVEMENTS

CBJ CONTRACT NO. DH 14 - 014

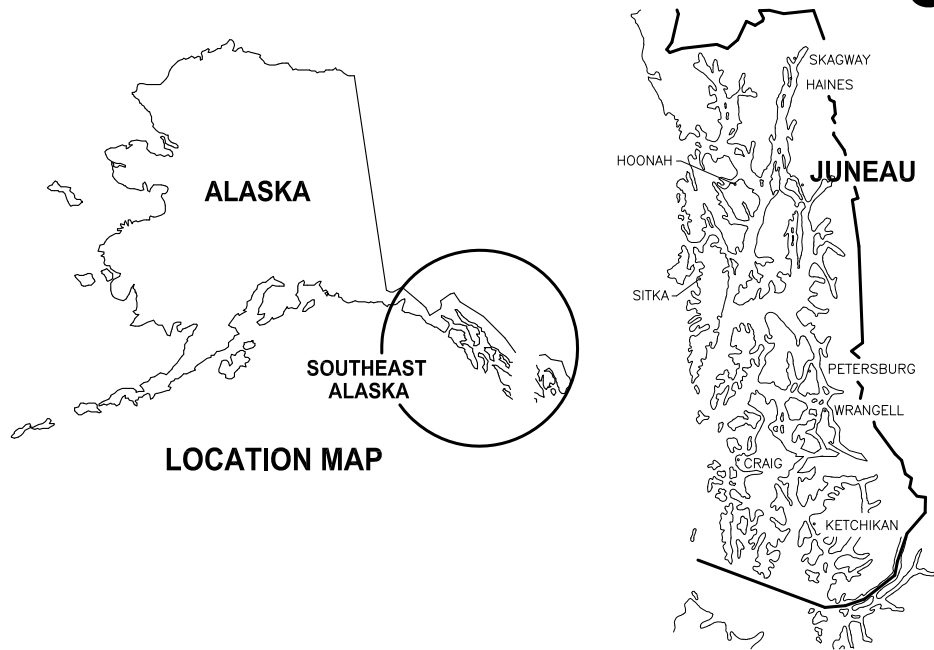
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PLANS



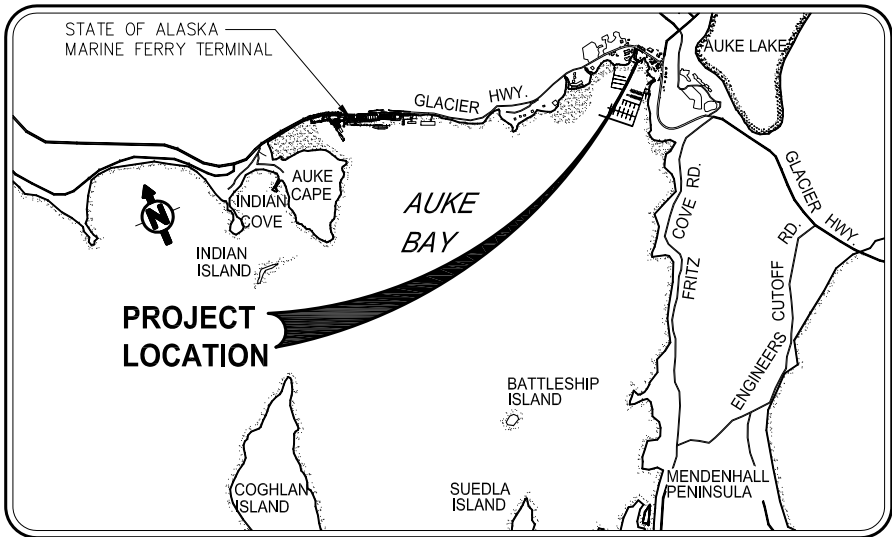
AUGUST 2014

CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014



LOCATION MAP

SOUTHEAST
ALASKA



SITE MAP

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PROJECT SCHEDULE

DESCRIPTION	SCHEDULE
1. SUBSTANTIAL COMPLETION	JUNE 1, 2016
2. FINAL COMPLETION OF ALL WORK UNDER THIS CONTRACT.	JUNE 30, 2016

NOTE:
ADDITIONAL SCHEDULE PROVISIONS APPLY TO SOFT GROUND MODIFICATIONS.

TIDAL DATA

ELEV. (FT)

HIGHEST OBSERVED WATER LEVEL	+24.58
MEAN HIGHER HIGH WATER (MHHW)	+16.30
MEAN HIGH WATER (MHW)	+15.34
MEAN SEA LEVEL (MSL)	+8.56
MEAN TIDE LEVEL (MTL)	+8.47
MEAN LOWER WATER (MLW)	+1.60
MEAN LOWER LOW WATER (MLLW)	0.0
LOWEST OBSERVED WATER LEVEL	-6.12

FROM: NOAA NOS/CO-OPS STATION ID: 9452210 JUNEAU, ALASKA



REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.



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SCALE:
AS SHOWN



CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
COVER SHEET, VICINITY MAPS AND
DRAWING INDEX

PND PROJECT NO.: 082015

1.01

SHEET
1 OF 82

GENERAL NOTES

1. EROSION AND POLLUTION CONTROL PLANS

THE CONTRACTOR SHALL DEVELOP AND SUBMIT FOR ENGINEER AND AGENCY REVIEW AND APPROVAL A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THIS PLAN SHALL INCLUDE AN EROSION AND SEDIMENT CONTROL PLAN BASED UPON THE CONTRACTOR'S SCHEDULING, EQUIPMENT AND WORK. TO THE GREATEST EXTENT POSSIBLE FOLLOW THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES (ADOT/PF) ALASKA STORM WATER POLLUTION PREVENTION PLAN GUIDE (ASWPPPG). THE PLAN SHALL CONSIDER FIRST PREVENTING EROSION, THEN MINIMIZING AND TRAPPING SEDIMENT PRIOR TO ITS ENTERING THE WATERWAYS. THE PLAN MUST ADDRESS THE SITE-SPECIFIC CONTROLS AND MANAGEMENT FOR THE CONSTRUCTION SITE AS WELL AS ALL MATERIAL SITES, WASTE DISPOSAL SITES AND AFFECTED AREAS. THE PLAN MUST INCORPORATE ALL THE REQUIREMENTS OF THE PROJECT PERMITS. BEST MANAGEMENT PRACTICES AS LISTED IN THE ASWPPPG SHALL BE USED.

THE CONTRACTOR SHALL PREPARE A HAZARDOUS MATERIAL CONTROL PLAN (HMCP) FOR THE HANDLING, STORAGE, CLEAN-UP AND DISPOSAL OF PETROLEUM AND OTHER HAZARDOUS SUBSTANCES. THE CONTRACTOR SHALL LIST AND GIVE LOCATIONS OF ALL HAZARDOUS MATERIALS, INCLUDING FIELD OFFICE MATERIALS, TO BE USED AND STORED ON-SITE AND THEIR ESTIMATED QUANTITIES. THE PLAN SHALL PROVIDE DETAILS FOR STORING THESE MATERIALS AS WELL AS DISPOSING WASTE PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS GENERATED BY THE PROJECT.

IDENTIFY THE LOCATIONS WHERE HAZARDOUS MATERIAL STORAGE, FUELING AND MAINTENANCE ACTIVITIES WILL TAKE PLACE. IF ON-SITE, DESCRIBE THE MAINTENANCE ACTIVITIES AND LIST ALL CONTROLS TO PREVENT THE ACCIDENTAL SPILLAGE OF OIL, PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS. DETAIL PROCEDURES FOR CONTAINMENT AND CLEANUP OF HAZARDOUS SUBSTANCES INCLUDING A LIST OF THE TYPES AND QUANTITIES OF EQUIPMENT AND MATERIALS AVAILABLE ON-SITE TO BE USED.

THE PLAN SHALL PROVIDE DETAILS FOR PREVENTION, CONTAINMENT, CLEAN-UP AND DISPOSAL OF SOIL AND WATER CONTAMINATED BY ACCIDENTAL SPILLS AND FOR UNEXPECTED CONTAMINATED SOIL AND WATER ENCOUNTERED DURING CONSTRUCTION.

2. MATCH EXISTING GRADES AT PROJECT LIMITS AND WHERE REQUIRED TO MATCH ELEVATIONS AT EXISTING ROADS.
3. ALL EXISTING ASPHALT CONCRETE MATERIALS TO BE REMOVED SHALL BE DELIVERED TO THE CBJ ASPHALT STOCKPILE AT LEMON CREEK GRAVEL PIT. ALL OTHER REMOVED MATERIALS THAT ARE NOT SUITABLE FOR REUSE ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND PROPERLY DISPOSED OF AT AN APPROVED SITE.
4. THE LOCATIONS OF EXISTING FEATURES AND UTILITIES SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADDITIONAL UTILITIES MAY BE PRESENT HOWEVER ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS IN THE FIELD AS NECESSARY, PRIOR TO BEGINNING WORK. THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL UTILITIES ENCOUNTERED IN THE FIELD SHALL BE RECORDED ON THE CONTRACTOR'S RECORD DRAWINGS. CONTACT LOCAL UTILITY COMPANIES PRIOR TO ANY/ ALL EXCAVATIONS AT THE FOLLOWING TELEPHONE NUMBERS:

DIAL BEFORE YOU DIG!
586-1333

UNDERGROUND POWER, TELEPHONE, T.V.,
COMMUNICATIONS, WATER AND SEWER LINES
ARE IN THE AREA. UTILITIES SHOWN HERE DO
NOT SUBSTITUTE FOR FIELD LOCATES.

5. CBJ ENGINEERING STANDARD DETAILS BOOK DATED APRIL, 2011 IS MADE A PART OF THIS CONTRACT, WITH CURRENT REVISIONS AS APPLICABLE.
6. PROPERTY DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ITS PRE-CONSTRUCTION CONDITION OR BETTER AT NO ADDITIONAL COST.
7. GRADING AND ALIGNMENT OF PIPE, STRUCTURES & FINAL SURFACING ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER TO FIT SITE CONDITIONS. GRADE ALL IMPROVEMENTS WITH POSITIVE DRAINAGE AWAY FROM STRUCTURES.
8. PROPERTY LINE LOCATIONS USED IN THESE PLANS ARE DERIVED FROM RECORD PLATS AND DO NOT REPRESENT A BOUNDARY SURVEY.

TABLE OF ESTIMATING FACTORS

PAY ITEM NO.	ITEM	FACTOR
2202.5	CLASS B SHOT ROCK BORROW	1.85 TON/CY
2202.6	SAND	1.70 TON/CY
2205.3	CLASS IV ARMOR ROCK	2.00 TON/CY
2801.1	ACP, TYPE II CLASS B	164.00 PCF

LEGEND

EXISTING	THIS PROJECT

TELEPHONE PEDESTAL
TELEVISION PEDESTAL
ELECTRICAL PEDESTAL
OVERHEAD ELECTRICAL
BURIED FUEL LINE
ELECTRICAL (UNDERGROUND)
WATER
SANITARY SEWER
RIGHT-OF-WAY
COMMUNICATION (CABLE/TEL)
STORM DRAIN
FORCE MAIN
ESTIMATION OF LAYER
PROPERTY LINE
GRADE BREAK
GEOTEXTILE FABRIC
GEOTEXTILE REINFORCEMENT
GUY WIRE ANCHOR
SURVEY CONTROL
UTILITY POLE
TELEPHONE VAULT
BOLLARD
CURB & GUTTER
ELECTRICAL TRANSFORMER
ELECTRICAL VAULT
ELECTRICAL HANDHOLE
FIRE HYDRANT
LAYOUT POINT
LIGHT POLE
TRAFFIC SIGNAL
SANITARY SEWER MANHOLE
STORM DRAIN MANHOLE
STORM DRAIN INLET
SIGN
BORE HOLE
TREE/VEGETATION
WATER VALVE
LAYOUT RADIUS
PARKING KIOSK
SWALE
GUARDRAIL

ABBREVIATIONS

A	AT	H	HUB & TACK	Q	QTY	QUANTITY
@	ASBESTOS CEMENT PIPE	H&T	HEAVY DUTY	R	RAD	RADIUS
AC	ASPHALT CONCRETE PAVEMENT	HD	HOT-DIPPED GALVANIZED	RE	RIM ELEVATION	
ACP	AMERICANS WITH DISABILITIES ACT	HDG	HIGH DENSITY POLYETHYLENE	REF	REFERENCE	
ADA	ADJUSTABLE	HDPE	HORIZONTAL	REINF	REINFORCEMENT	
ADJ	ASSOCIATED PILE AND FITTING CORP.	HORIZ	HOUSE	REQD	REQUIRED	
APF	APPROXIMATE	HSE	HEIGHT	RET	RETAINING	
APPROX.	ALASKA TIDELANDS SURVEY	HT	HIGHWAY	RO	ROUGH OPENING	
or APPX.	AIR RELEASE VALVE	HWY.		ROW	RIGHT OF WAY	
ATS		I		S		
AV		IAW	IN ACCORDANCE WITH	S	SOUTH	
B		ID	INSIDE DIAMETER	SCHED/SCH	SCHEDULE	
BCC	BEGINNING OF CURB CUT	IE	INVERT ELEVATION	SD	STORM DRAIN	
BFV	BUTTERFLY VALVE	IN	INCH	SDI	STORM DRAIN INLET STRUCTURE	
BLDG	BUILDING	IP	IRON PIPE	SDO	STORM DRAIN OUTLET STRUCTURE	
BOP	BEGINNING OF PROJECT	INCL	INCLUDE (D) (ING)	SDR	STANDARD DIMENSION RATIO	
BTM, BOT	BOTTOM	INSUL	INSULATE (D) (ION)	SF	SQUARE FOOT	
C		INV	INVERT	SHLDR	SHOULDER	
C&G	CURB & GUTTER	J		SI	STREET INTERSECTION	
CB	CATCH BASIN	JB	JUNCTION BOX	SPEC	SPECIFICATION (S)	
CBJ	CITY & BOROUGH OF JUNEAU	L		SQ	SQUARE	
CI	CAST IRON	LBS	POUNDS	SRB	SHOT ROCK BORROW	
CIP	CAST-IN-PLACE	LF	LINEAR FEET	SSC	SANITARY SEWER CONNECTION	
CJ	CONTROL JOINT	LL	LIVE LOAD	SS	STAINLESS STEEL, SANITARY SEWER	
CL	CENTER LINE	LOC	LOCATION	SDMH	STORM DRAIN MANHOLE	
CLR	CLEAR	LS	LUMP SUM	SSMH	SANITARY SEWER MANHOLE	
CMP	CORRUGATED METAL PIPE	M		STA	STATION	
CO	CLEANOUT	MAX	MAXIMUM	STD	STANDARD	
C.O.E.	CORPS OF ENGINEERS	M.E.	MATCH EXISTING	STL	STEEL	
COMM	COMMUNICATION	MECH	MECHANICAL	STRG	STRONG	
CONC.	CONCRETE	MFR	MANUFACTURE (R)	SW	SIDEWALK	
CP	COMPLETE PENETRATION	MH	MANHOLE	SWR	SEWER	
CPEP/CP	CORRUGATED POLYETHYLENE PIPE	MJ	MECHANICAL JOINT	SY	SQUARE YARD	
COR	CORNER	MI	MALLEABLE IRON	SYM	SYMMETRICAL	
CSC	COUNTERSINK	MIN	MINIMUM	T		
CTR	CENTER	MLLW	MEAN LOWER LOW WATER	t	THICK	
CY	CUBIC YARD	MSF	1000 SQUARE FEET	T&B	TOP AND BOTTOM	
D		MSE	MECHANICALLY STABILIZED EARTH	T&G	TONGUE AND GROOVE	
DCP	DISSIMILAR PIPE COUPLING	MTL	MATERIAL (S)	TBC	TOP BACK OF CURB	
D/DIA	DIAMETER	N		TBD	TO BE DETERMINED	
DBL	DOUBLE	N	NORTH	TBM	TEMPORARY BENCH MARK	
DEMO	DEMOLITION	NFS	NON FROST SUSCEPTIBLE	TD	TRENCH DRAIN	
DL	DEAD LOAD	NIC	NOT IN CONTRACT	TEL	TELEPHONE	
DIP	DUCTILE IRON PIPE	NO	NUMBER	TEMP	TEMPERATURE, TEMPORARY	
DIM	DIMENSION	NTS	NOT TO SCALE	TH	TEST HOLE	
DN	DOWN	O		THK	THICK	
DTL	DETAIL	OBD	OVERBURDEN	TRANS	TRANSVERSE	
E		OC	ON CENTER	TV	TELEVISION	
E	EAST	OD	OUTSIDE DIAMETER	TYP	TYPICAL	
EA.	EACH	OG	ORIGINAL GOUND	U		
EC	EDGE OF CONCRETE	OHE	OVERHEAD ELECTRICAL	UBC	UNIFORM BUILDING CODE	
ECC	END OF CURB CUT	OWS	OIL-WATER SEPARATOR	UE	UNDERGROUND ELECTRIC	
EG	EXISTING GRADE	OPP	OPPSITE	UMC	UNIFORM MECHANICAL CODE	
EJ	EXPANSION JOINT	P		UHMW	ULTRA HIGH MOLECULAR WEIGHT	
EL/ELEV	ELEVATION	P	PIPE	UON/UNO	UNLESS OTHERWISE NOTED	
ELEL	ELECTRICAL	PC	POINT OF CURVATURE, PIECE	UPC	UNIFORM PLUMBING CODE	
EOP	END OF PAVEMENT	PCC	PRECAST CONCRATE	V		
EQ	EQUAL	PE	POLYETHYLENE	VB	VALVE BOX	
EQUIP	EQUIPMENT	PED	PEDESTAL	VERT	VERTICAL	
EST	ESTIMATE	PER	PERIMETER	VG	VALLEY GUTTER	
EW	EACH WAY	PERF	PERFORATE (D)	W		
EXC	EXCAVATE	PI	POINT OF INTERSECTION	W	WEST	
EXIST	EXISTING	PLWD	PLYWOOD	W/	WITH	
F		PL	PROPERTY LINE, PLATE	WD	WOOD	
FC	FACE OF CURB	POC	POINT OF CURVE	WELDMT	WELDMENT	
FD	FLOOR DRAIN	PP	POLYPROPYLENE	WL	WATERLINE	
FF	FINISHED FLOOR	PRC	POINT OF REVERSE CURVATURE	WQU	WATER QUALITY UNIT	
FG	FINISHED GRADE	PROJ	PROJECT	WV	WATER VALVE	
FH	FIRE HYDRANT, FLAT HEAD	PRKG	PARKING	WW	WATER WATER	
FIN	FINISH (ED)	PRV	PRESSURE REDUCING VALVE	WWTP	WASTE WATER TREATMENT PLANT	
FM	FORCE MAIN SEWER	PT	POINT, PRESSURE TREATED, POINT OF TANGENCY	W/O	WITHOUT	
FND	FOUNDATION	PSI	POUND PER SQUARE INCH	X		
FOC	FACE OF CURB	PVC	POLY-VINYL CHLORIDE	XFMR	TRANSFORMER	
FT	FOOT	PVI	POINT OF VERTICAL CURVATURE, POINT OF VERTICAL INTERSECTION	<PT	ANGLE POINT	
FTG	FOOTING					
FL	FLOWLINE OR FLANGE					
G						
GAL	GALLON					
GALV	GALVANIZED					
GB	GRADE BREAK					
GPM	GALLONS PER MINUTE					
GRD	GROUND					
GV	GATE VALVE					

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

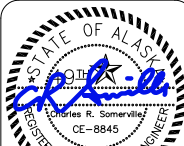
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APPROVED: CRS

SCALE:
NTS



DATE: 8/29/14

CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
GENERAL NOTES, LEGEND AND
ABBREVIATIONS

PND PROJECT NO.: 082015

1.02
SHEET
2 OF 82

GENERAL NOTES

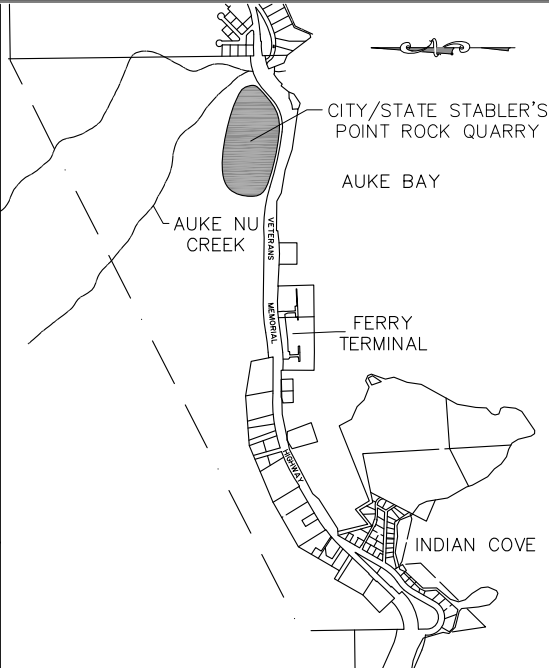
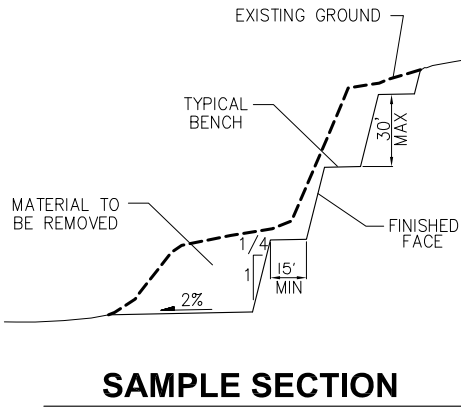
1. ALL INDIVIDUAL MINING PLANS SHALL BE APPROVED, IN WRITING, BY THE QUARRY MANAGER PRIOR TO CLEARING OR EXCAVATION.
2. ALL OVERBURDEN SHALL BE REMOVED TO A MINIMUM DISTANCE OF 15' FROM THE FINISHED WORKING FACE. THE CUT BANK OF THE OVERBURDEN SHALL BE SLOPED TO THE NATURAL ANGLE OF REPOSE, BUT SHALL BE NO STEEPER THAN 1 TO 1. OVERBURDEN SHALL BE DISPOSED OF OFF SITE OR PLACED IN THE ON-SITE OVERBURDEN STORAGE AREA WITH THE PERMISSION OF THE QUARRY MANAGER.
3. ALL DEAD TREES AND SNAGS WHICH ARE SUFFICIENTLY TALL TO REACH THE WORK AREA SHALL BE FELLED.
4. ALL VEGETATION CLEARING, MERCHANTABLE TIMBER AND GRUBBING DEBRIS, INCLUDING WOODY DEBRIS PREVIOUSLY CLEARED AND PILED ON SITE, SHALL BE DISPOSED OF OFF SITE, OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR MAY DISPOSE OF WOODY DEBRIS BY BURNING WITH THE PERMISSION OF THE QUARRY MANAGER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY REQUIRED BURN PERMITS.
5. AFTER EXCAVATION IS COMPLETE, THE AREA SHALL BE CLEANED UP AND LEFT AS SHOWN ON THE QUARRY USAGE PLAN. THE QUARRY SHALL BE LEFT IN A NEAT, ORDERLY AND WELL DRAINED CONDITION. ALL OVERHANGS AND LOOSE ROCK SHALL BE REMOVED. THE QUARRY FLOOR AND BENCHES SHALL NOT BE OVER EXCAVATED.
6. APPROXIMATE LIMITS OF DEVELOPMENT SPECIFIC TO THIS PROJECT WILL BE FIELD STAKED BY THE QUARRY MANAGER.
7. THE MATERIALS WITHIN THE QUARRY THAT ARE MADE AVAILABLE TO THE CONTRACTOR FOR THIS PROJECT MAY NOT MEET THE MATERIAL SPECIFICATIONS FOR THIS PROJECT WITHOUT PROCESSING EFFORTS BY THE CONTRACTOR. THESE EFFORTS MAY INCLUDE, BUT ARE NOT LIMITED TO, SCREENING AND SORTING AND PRIMARY CRUSHING.
8. MATERIAL STOCKPILED OFF-SITE MUST HAVE PRIOR APPROVAL OF THE PROJECT MANAGER.
9. ALL THE REQUIREMENTS AND CONDITIONS OF CONDITIONAL USE PERMIT NUMBER USE2011-0017 SHALL BE MET. IN PARTICULAR, NOTE THE CONDITIONS WITH REGARD TO THE EAGLE TREES, BLASTING, NOISE MANAGEMENT PLAN AND TRAFFIC CONTROL.
10. ALL REQUIREMENTS AND CONDITIONS OF THE QUARRY MULTI SECTOR GENERAL PERMIT (MSGP) FOR INDUSTRIAL ACTIVITIES AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE MET.
11. THE CONTRACTOR SHALL COORDINATE EXTRACTION ACTIVITY WITH OTHER QUARRY USERS TO ENSURE EACH HAS ACCESS TO THEIR DESIGNATED MINING AREAS.
12. COMPRESSION BRAKES SHALL BE USED ONLY AS NECESSARY FOR SAFETY AND SHALL MEET THE REQUIREMENTS OF THE NOISE MANAGEMENT PLAN.
13. ALL QUARRY OPERATIONS SHALL BE RESTRICTED TO THE FOLLOWING TIME PERIODS: MONDAY THROUGH FRIDAY FROM 8:00 AM – 4:30 PM. QUARRY IS CLOSED TO ALL OPERATIONS ON WEEKENDS AND STATE HOLIDAYS. WINTER OPERATIONS REQUIRE THE CONTRACTOR TO MAINTAIN THE ROAD AND GATE, CONTACT THE CBJ FOR FURTHER DETAILS AND REQUIREMENTS.
14. BLASTING IS RESTRICTED TO 10:00 AM – 12:00 PM AND 1:00 PM – 3:00 PM, MONDAY THROUGH FRIDAY. MAXIMUM SHOT SIZE IS TYPICALLY 6,000 CY.
15. QUARRY OPERATIONS SHALL BE SCHEDULED CONSISTENT WITH THE RECOMMENDATIONS OF THE U.S. FISH AND WILDLIFE SERVICE FOR THE PROTECTION OF NESTING EAGLES. SPECIFICALLY, NO BLASTING SHALL OCCUR WITHIN 330 FEET OF AN EAGLE NEST TREE BETWEEN MARCH 1 THROUGH MAY 31. BLASTING IS ALLOWED AFTER MAY 31 WITH A QUALIFIED EAGLE OBSERVER PRESENT TO MONITOR DISTURBANCE. IF NEST IS NOT OCCUPIED, A MONITOR IS NOT REQUIRED.
16. THE CONTRACTOR SHALL SUBMIT A \$10,000 CASH BOND FOR ROCK OR TOPSOIL PROCESSING WITHIN THE QUARRY PROJECT MINING AREA. CRUSHERS MAY OPERATE ON THE LOWER QUARRY LEVELS ONLY.
17. ALL CONTRACTORS SHALL BE IN GOOD STANDING WITH THE CITY.
18. ALL MATERIALS LEAVING THE QUARRY LIMITS SHALL BE CONTAINED WITHIN THE HAULING VEHICLE.
19. CONTRACTOR SHALL CLEAN THE ACCESS ROAD AND HAUL ROUTE ON A DAILY BASIS OR AS DIRECTED BY THE QUARRY MANAGER.
20. PRIOR TO LEAVING THE QUARRY ALL TRUCKS SHALL RECORD ITS LOAD WEIGHT ON A CBJ TRUCK TICKET, A COPY OF WHICH SHALL BE LEFT IN THE SCALE SHACK.
21. THE 2014 CY MANAGEMENT FEE FOR ROCK IS \$1.75/TON. ANNUAL INCREASE IS PEGGED TO ANCHORAGE CPI.
22. ALL MATERIAL FEES SHALL BE PAID PRIOR TO FINAL PROJECT PAYMENT.
23. TOPOGRAPHIC MAPPING DERIVED FROM LIDAR FLOWN IN APRIL 2013.

INDIVIDUAL MINING PLAN

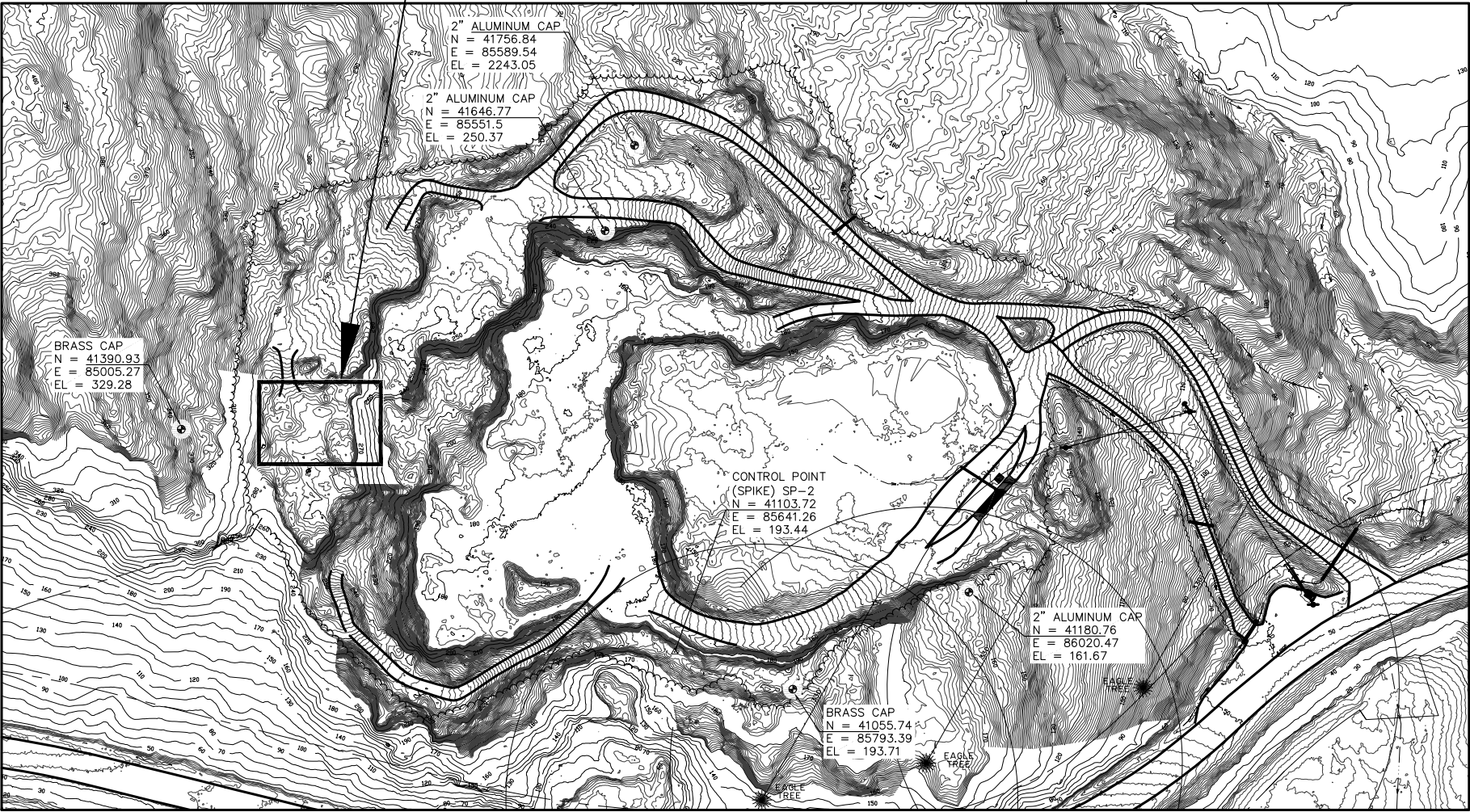
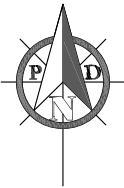
IF THE CONTRACTOR ELECTS TO USE THIS MATERIAL SOURCE FOR THIS PROJECT, ESTIMATES OF QUANTITIES AND AN INDIVIDUAL MINING PLAN MUST BE SUBMITTED WITHIN TWO WEEKS OF NOTICE TO PROCEED.

THE CONTRACTOR SHALL PROVIDE THE FOLLOWING INFORMATION TO THE OWNER PRIOR TO BEGINNING ANY OPERATIONS WITHIN THE QUARRY LIMITS. OPERATIONS SHALL NOT PROCEED UNTIL THE CONTRACTOR'S INDIVIDUAL MINING PLAN HAS BEEN APPROVED BY THE CITY. THE INDIVIDUAL MINING PLAN SHALL BE PREPARED BY A REGISTERED CIVIL ENGINEER LICENSED TO PRACTICE IN THE STATE OF ALASKA.

- A. INDIVIDUAL MINING PLAN – INCLUDE PLANNED TOTAL EXCAVATION QUANTITY, PLANNED SECTION, EXCAVATION LIMITS, CLEARING AND GRUBBING LIMITS.
- B. NOISE CONTROL PLAN AND EQUIPMENT SOUND CERTIFICATIONS.
- C. CLEARING/STRIPPING/OVERBURDEN DISPOSAL PLAN.
- D. RECLAMATION PLAN.
- E. A TRAFFIC CONTROL PLAN APPROVED BY ADOT/PF.
- F. SIGNED MSGP/SWPPP COMPLIANCE CERTIFICATION FORM.



GENERAL LOCATION OF MINING AREA FOR THIS PROJECT. ACTUAL MINING AREA WILL BE STAKED BY THE QUARRY MANAGER PRIOR TO MINING.
NOTE: TOPOGRAPHY SHOWN IS FROM 2013. MINING HAS SINCE OCCURRED EITHER SIDE OF INDICATED AREA.



STABLERS POINT ROCK QUARRY PLAN



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SCALE:
AS SHOWN



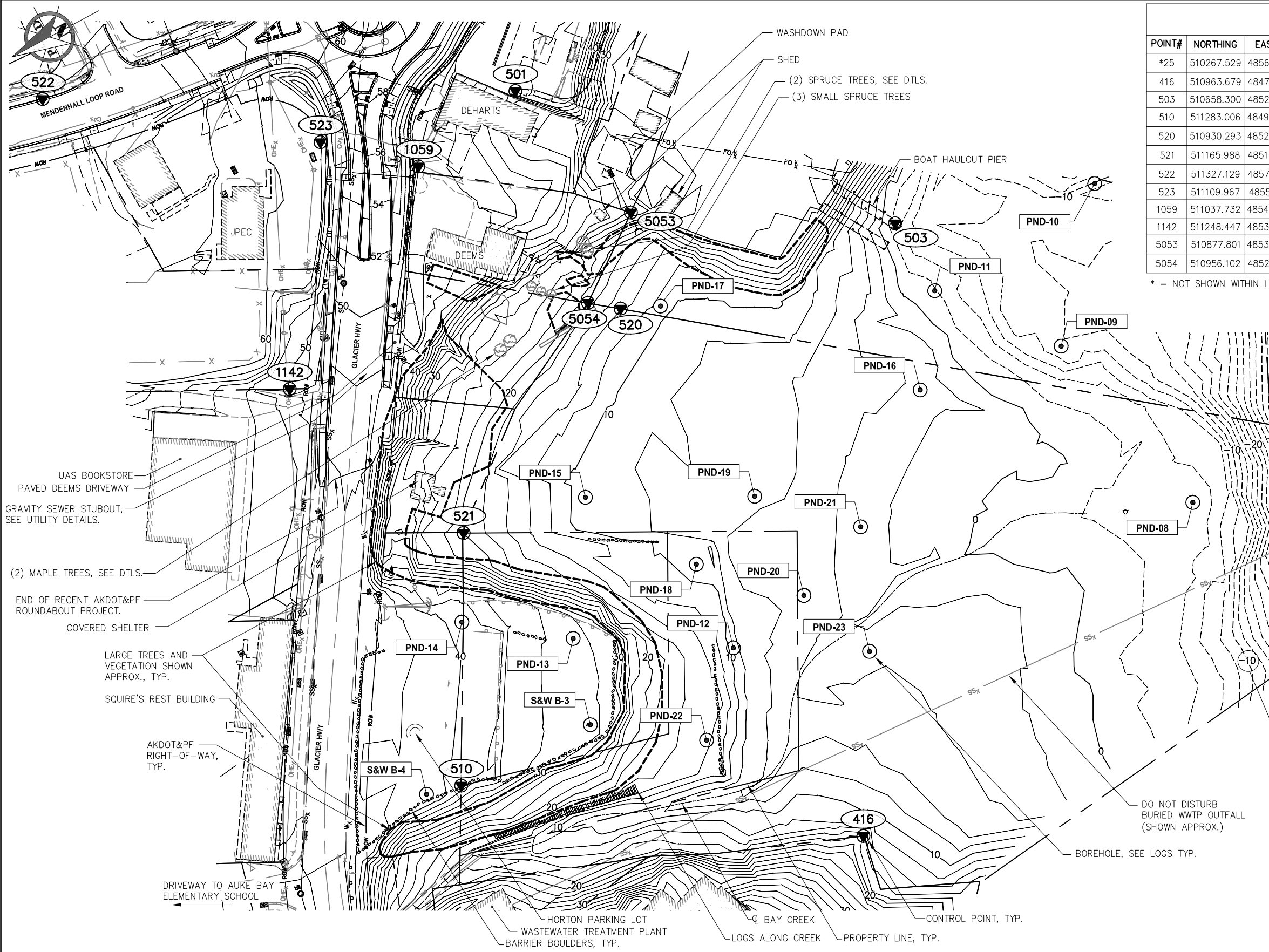
CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
PIT USAGE PLAN

PND PROJECT NO.: 082015

DATE: 8/29/14

1.03
SHEET
3 OF 82



SURVEY CONTROL TABLE					
POINT#	NORTHING	EASTING	ELEVATION	DESCRIPTION	
*25	510267.529	485606.890	68.760	FND AC[AK DOT]: FCF 5453-S 1998	
416	510963.679	484704.175	17.571	BC[3316-S]: ATS1362 C3 1988	
503	510658.300	485210.870	25.119	MAGNETIC NAIL	
510	511283.006	484930.049	0.000	AC[7570-S]: ASLS 2009-02 ATS 756 C5 ATS 121 C4 2010	
520	510930.293	485263.436	14.484	AC[3316-S]: ATS 16 RM ATS 1118 1986	
521	511165.988	485143.953	0.000	AC[7570-S]: ASLS 2009-02 C1 2010	
522	511327.129	485705.023	76.686	FD MAGNETIC NAIL	
523	511109.967	485541.616	58.512	FD FND AC[AK DOT]: 51 201	
1059	511037.732	485476.374	47.342	RBR/OPC[6277-S]	
1142	511248.447	485345.576	49.990	RBR	
5053	510877.801	485340.535	29.543	RBR/OPC[6277-S]	
5054	510956.102	485283.100	18.486	RBR AC[2664-S]: ATS 1118 WC C7 MC L4 C4 L3 C1 1986	

* = NOT SHOWN WITHIN LIMIT OF THIS SHEET.

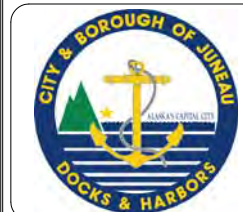
NOTES:

- PROJECT CONTROL IS BASED ON ALASKA DEPARTMENT OF TRANSPORTATION SURVEY CONTROL SHEET FOR GLACIER HIGHWAY & BACK LOOP ROAD INTERSECTION SAFETY IMPROVEMENTS - SURVEY CONTROL PROJECT 69003 SHEET A2, 2011, AND BY POINT FILE "AUKE BAY ROUNDABOUT SURVCON" AS PROVIDED BY MILLER CONSTRUCTION.
- THE HORIZONTAL CONTROL FOR THIS PROJECT IS BASED ON THE DOT/PF 2000 JUNEAU GRID. THE DOT/PF JUNEAU GRID IS A LOCAL GROUND SYSTEM BASED AT USC&GS FIRST ORDER CONTROL STATION "EDDIE". IT RELATES TO AKSPC ZONE 1 NAD83 THROUGH THE FOLLOWING PARAMETERS:
ZONE = NAD83 AKSPC ZONE 1
GRID SCALE = 0.999928875
CONVERGENCE = -0°45'27.26"
TRANSLATION ABOUT USC&GS POINT AS FOLLOWS:
AKSPC NORTHING = 2383469.17310 FT US
AKSPC EASTING = 2512570.06318 FT US
LOCAL NORTHING = 500000.0000 FT US
LOCAL EASTING = 500000.0000 FT US
- THE VERTICAL CONTROL FOR THIS PROJECT IS BASED ON DESTROYED CONTROL POINT 501 "ELSNORE". TBM-ELSNORE HAD AN OBSERVED ELEVATION OF 47.93 FEET ABOVE MEAN LOWER LOW WATER (MLLW).

THE PRIMARY VERTICAL CONTROL HAS BEEN DESTROYED SINCE THE ORIGINAL SURVEY. VERTICAL CONTROL UPDATED TO ALASKA DOT CONTROL POINT 51 (POINT 523) HOLDING AN ELEVATION OF 58.512 FEET, PROVIDED BY MILLER CONSTRUCTION.
- FIELD SURVEYS PERFORMED 2010, 2011, 2012 AND 2014 BY PND & OTHERS.
- PROPERTY LINES AND EASEMENTS ARE DERIVED FROM RECORD PLATS.
- BATHYMETRIC SURVEY PERFORMED BY PND 2010.
- ADDITIONAL GEOTECHNICAL DATA IS AVAILABLE IN THE STATTER HARBOR IMPROVEMENTS GEOTECHNICAL REPORT, DATED MAY 2014, PREPARED BY PND.

LEGEND:

- 520 = SURVEY CONTROL POINT
- PND-13 = BOREHOLE



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CHECKED: CRS
APPROVED: CRS

SCALE: SCALE IN FEET
0 50 100 FT.



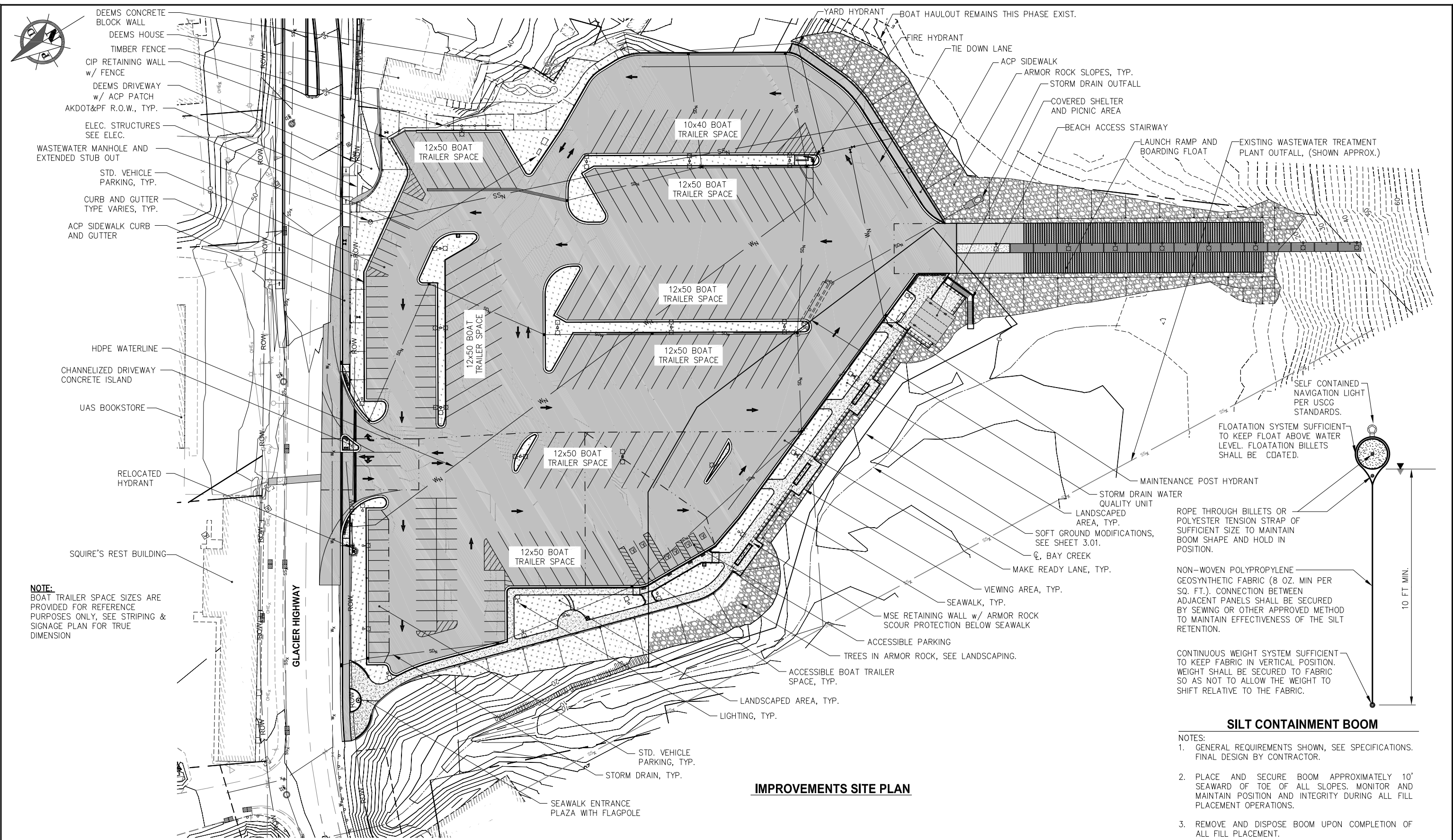
CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
EXISTING CONDITIONS,
SURVEY CONTROL AND BOREHOLE LOCATIONS

PND PROJECT NO.: 082015

8/29/14

1.04
SHEET
4 OF 82



SILT CONTAINMENT BOOM

- NOTES:
1. GENERAL REQUIREMENTS SHOWN, SEE SPECIFICATIONS. FINAL DESIGN BY CONTRACTOR.
 2. PLACE AND SECURE BOOM APPROXIMATELY 10' SEAWARD OF TOE OF ALL SLOPES. MONITOR AND MAINTAIN POSITION AND INTEGRITY DURING ALL FILL PLACEMENT OPERATIONS.
 3. REMOVE AND DISPOSE BOOM UPON COMPLETION OF ALL FILL PLACEMENT.



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SCALE:
SCALE IN FEET
0 40 80 FT

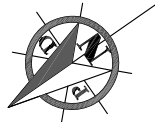


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
GENERAL IMPROVEMENTS OVERVIEW

PND PROJECT NO.: 082015

1.05
SHEET
5 OF 82

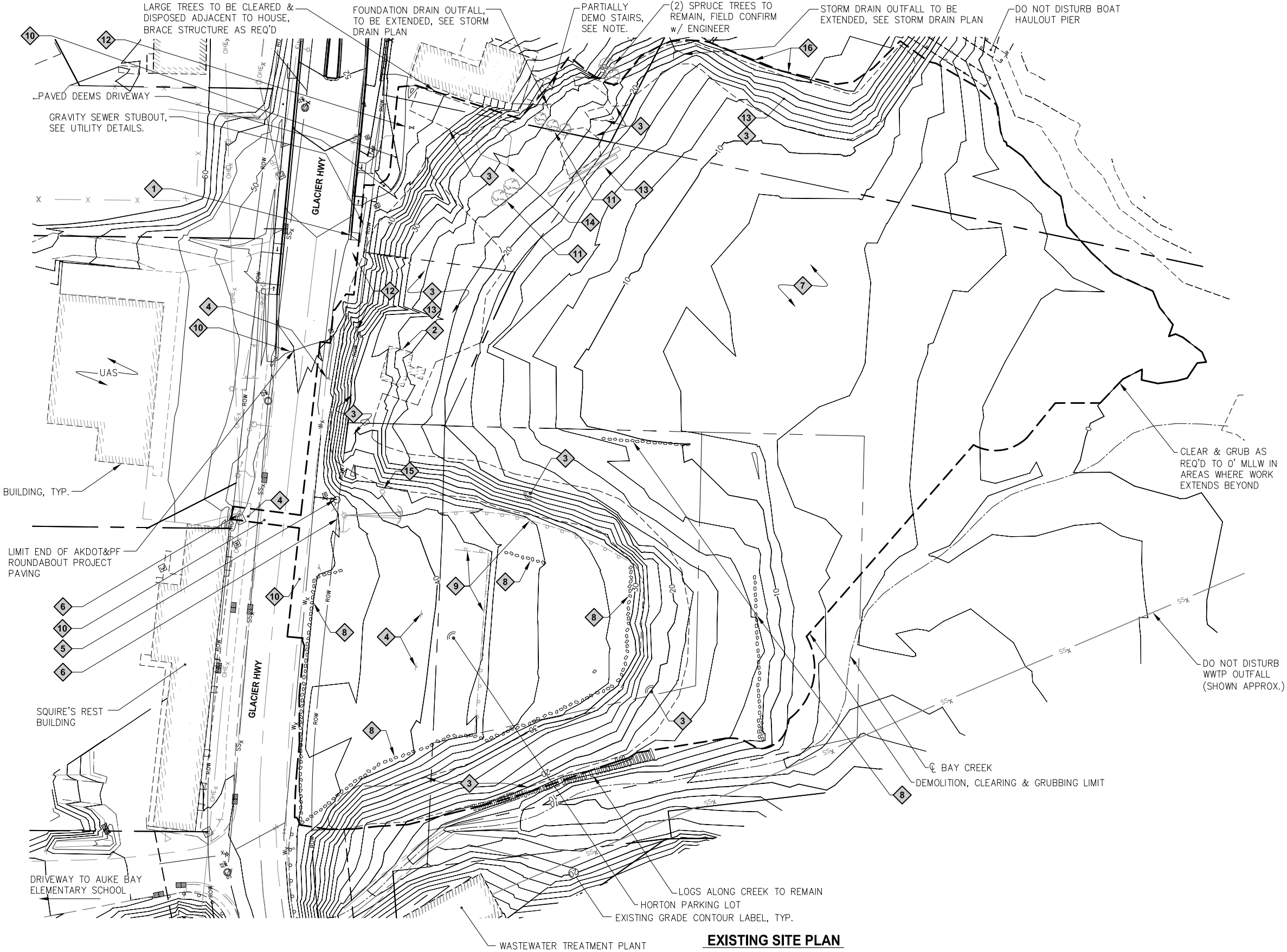


DEMOLITION & CLEARING SUMMARY TABLE

DEMOLITION	DESCRIPTION
1	DEMO CURB, GUTTER & ACP RAMP MAINTAIN 18" MIN. CUT BACK ON ACP SIDEWALK
2	DEMOLISH EXISTING BUILDING; CONC. FOUNDATION TO BE CRUSHED AND ABANDONED IN PLACE
3	CLEAR & DISPOSE LARGE TREES & VEGETATION, FIELD CONFIRM LIMITS w/ ENGINEER
4	DEMOLISH OR SALVAGE ALL SIGNAGE. (NOT ALL SHOWN)
5	SALVAGE HYDRANT, DEMO VALVE BOX, VALVE TO BE LEFT FULLY OPEN & BURIED. SEE UTILITIES.
6	UTILITY POLE & GUYS TO BE REMOVED, SEE ELEC
7	MUDFLATS, DEMOLISH ALL DEBRIS & LARGE ORGANICS TO 0' MLLW
8	BOULDERS SHALL BE SALVAGED AND UTILIZED ON PROJECT AS SURCHARGE PERIMETER ROCKS, SEE 3.01 DRAWINGS AND SECTION 02205-ARMOR ROCK PER ENGINEER DIRECTION
9	DEMOLISH AND DISPOSE ALL GUARDRAIL
10	DEMO ACP AS REQ'D. SEE SITE PLAN. MAINTAIN 18" MIN CUT BACKS ON ACP
11	SALVAGE & RELOCATE (2) MAPLE TREES & (3) SPRUCE TREES PER SPECIFICATIONS, SEE LANDSCAPING
12	VALVE BOX TO BE RAISED TO FINISH GRADE, SEE CIVIL
13	REMOVE & DISPOSE ALL DRIFTWOOD.
14	REMOVE & DISPOSE MISC. STEEL & CONCRETE DEBRIS.
15	DEMOLISH AND DISPOSE ABANDONED CUT-OFF POWER POLE.
16	DEMOLISH AND DISPOSE ABANDONED UTILITY PEDESTAL AND SURFACE MOUNTED CONDUITS & PIPING.

NOTES:

- VEGETATION AND MINOR STRUCTURES DEMOLITION REQ'D ON DEEMS PROPERTY. FIELD CONFIRM LIMITS w/ ENGINEER.
- DEMOLISH = REMOVE & DISPOSE AT CONTRACTOR PROVIDED DISPOSAL SITE.
- SALVAGE = REMOVE, SALVAGE & SUITABLY STORE AT NEARBY OWNER DESIGNATED LOCATION OR RELOCATE AS SHOWN ON PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRANSPORTING, LOADING, UNLOADING AND GENERAL HANDLING OF SALVAGED MATERIALS. STORAGE OF SALVAGED MATERIALS SHALL BE COORDINATED WITH THE OWNER AT ALL TIMES. SPECIFIC LOCATIONS FOR MATERIALS TO BE SALVAGED AND STORED SHALL BE DICTATED BY THE OWNER AND SHALL BE AT THE OWNER'S SOLE DISCRETION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE INCURRED DUE TO HIS ACTIVITIES. DAMAGED MATERIALS SHALL BE REPAIRED OR REPLACED AT NO COST TO THE OWNER.
- SEE LANDSCAPE AND ELECTRICAL PLANS FOR ADDITIONAL DEMOLITION, SALVAGE AND DISPOSAL REQUIREMENTS.
- NOT ALL EXISTING SIGNS ARE SHOWN ON THIS PLAN. INVENTORY ALL EXISTING SIGNS WITHIN PROJECT LIMITS, COORDINATE WITH OWNER FOR DEMO & SALVAGE REQUIREMENTS FOR ALL SIGNS.



EXISTING SITE PLAN



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SCALE: SCALE IN FEET
0 40 80 FT.



CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
DEMOLITION, CLEARING AND GRUBBING PLAN

PND PROJECT NO.: 082015

1.06
SHEET
6 OF 82

CLASSIFICATION

Identification and classification of the soil is accomplished in general accordance with the ASTM version of the Unified Soil Classification System (USCS) as presented in ASTM Standard D2487. The standard is a qualitative method of classifying soil into the following major divisions (1) coarse grained, (2) fine grained, and (3) highly organic soils. Classification is performed on the soils passing the 75 mm (3 inch) sieve and if possible the amount of oversize material (> 75 mm particles) is noted on the soil logs. This is not always possible for drilled test holes because the oversize particles are typically too large to be captured in the sampling equipment. Oversize materials greater than 300 mm (12 inches) are termed boulders, while materials between 75 mm and 300 mm are termed cobbles. Coarse grained soils are those having 50% or more of the non-oversize soil retained on the No. 200 sieve (0.075 mm); if a greater percentage of the coarse grains is retained on the No. 4 (4.76 mm) sieve the coarse grained soil is classified as gravel, otherwise it is classified as sand. Fine grained soils are those having more than 50% of the non-oversize material passing the No. 200 sieve; these may be classified as silt or clay depending their Atterberg liquid and plastic limits or observations of field consistency. Refer to the most recent version of ASTM D2487 for a complete discussion of the classification method.

Soil consistency as defined below and determined by normal field and laboratory methods applies only to non-frozen material. For these materials, the influence of such factors as soil structure, i.e. Fissure systems, shrinkage cracks, slickensides, etc., must be taken into consideration in making any correlation with the consistency values listed below. In permafrost zones, the consistency and strength of frozen soils may vary significantly and unexplainably with ice content, thermal regime and soil type.

Standard Penetration Test (Blows/ft) Relative to Density/Consistency					Undrained Shear Strength
N60	Density	Relative Density	N60	Consistency	psf
0-4	Very Loose	0-15%	< 2	Very Soft	< 250
4-10	Loose	15-35%	2 - 4	Soft	250 - 500
10-30	Medium	35-65%	4 - 8	Medium	500 - 1000
30-50	Dense	65-85%	8 - 15	Stiff	1000 - 2000
> 50	Very Dense	>85%	15 - 30	Very Stiff	2000 - 4000
			> 30	Hard	> 4000

Ref: Terzaghi, Peck, and Mesri Soil Mechanics in Engineering Practice, 3rd Edition, pg 60-63
ASTM D1586 Standard Test Method for Penetration Test and Split-Barrel Sampling of Soils
ASTM D2487 Standard Practice for Classification of Soils for Engineering Purposes (USCS)

A	Auger Sample	Pb	Pitcher Barrel	St	1.4" Split Spoon w/ 47# Hammer
Bs	Bulk (grab) Sample	Sl	2.5" Split Spoon w/ 140# Hammer	Sx	2.0" Split Spoon w/ 47# Hammer
Cs	Core Barrel w/ Single Tube	Sm	2.5" Split Spoon w/ 300# Hammer	Sz	1.4 Split Spoon w/ 340# Hammer
Cd	Core Barrel w/ Double Tube	Sh	2.5" Split Spoon w/ 340# Hammer	Ts	Shelby Tube
Ct	Core Barrel w/ Triple Tube	Sp	2.5" Split Spoon, Pushed	Tm	Modified 2.5 O.D. Shelby Tube
Hl	2.5" Split Spoon w/ Air Hammer	Ss	1.4" Split Spoon w/ 140# Hammer		
Hs	1.4" Split Spoon w/ Air Hammer				

Note: Split Spoon size refers to sampler inside diameter.

 ENGINEERS, INC.	Designed: PND Drawn: PND Checked: PND Project No.: 082015.01 Date: April 2014	STANDARD BOREHOLE LOG DETAILS	
		BOREHOLE LOGS	FIGURE B-1

Depth (Feet)	Water Table	GRAPHIC SYMBOL	SOIL DESCRIPTION	SAMPLES				GRAPH	COMMENTS	Elevation (Feet)			
			Soil Name, Color, Moisture Condition, Relative Density, Soil Structure, Mineralogy, Other Information	Number	Type	Location	Recovery (%) (RQD %)	Penetration Blows per 6/Inch (per Foot)* or {Rock Quality}	■ BLOW COUNT (BPF)* ■ 20 40 60 80		Casing Depth, Drilling Rate, Fluid Loss, Drill Pressure, Tests, Instrumentation Additional Information		
									● POCKET PEN. (TSF) ● 1 2 3 4				
									▲ VANE SHEAR (TSF) ▲ 2 4 6 8				
0			0' - 0.30' A.C. PAVEMENT								24.43		
1			POORLY-GRADED GRAVEL W/ SILT AND SAND (GP-GM) Gray, Moist, Dense, Subangular	1	Ss		30	20-20-25 (45)	■	Begin drilling 10/24/03 8:00 a.m. 2' to 3' - Hard, loud drilling (Cobbles/Boulder encountered)	22.43		
2			SLATY ARGILLITE grayish black, fine grained, thin bedded, medium hard, BX-U, steeply dipping	2	Ct		56 (50)	{Poor}					
		1	2	3	4	5	6	7	8	9	10	11	12

<u>1</u>	<u>Depth</u>	Depth (in feet) below the ground surface.
<u>2</u>	<u>Water Level</u>	Groundwater level recorded while drilling. Depths and times are recorded in comments column.
<u>3</u>	<u>Graphic Log</u>	Graphic depiction of materials encountered.
<u>4</u>	<u>Soil Description</u>	Description of materials encountered, including USCS soil descriptions.
<u>5</u>	<u>Sample Number</u>	Sample identification number.
<u>6</u>	<u>Sample Type</u>	Type of soil or rock sample collected at depth interval depicted; symbols explained on Fig. B-1.
<u>7</u>	<u>Sample Location</u>	Location soil sample taken.
<u>8</u>	<u>Sample Recovery/ RQD</u>	Soil: Percentage of sample recovered. Rock: Percentage of sample recovered and RQD value.
<u>9</u>	<u>Sample Blows or Rock Quality</u>	Soil: Number of blows to advance driven sampler each 6-inch interval using sampler type specified with a 30-inch drop. Blows per foot given in parentheses. Rock: Rock quality as defined from RQD value.
<u>10</u>	<u>Graphs</u>	Graphic log depicting blow counts per foot with a specified split spoon, Pocket Penetration and Vane Shear tests depicted where taken on fine grained soils.
<u>11</u>	<u>Comments</u>	Comments or observations on drilling/sampling by driller or PND field personnel.
<u>12</u>	<u>Elevation</u>	Elevation (in feet) with respect to Mean Lower Low Water (MLLW) or other datum where specified.

1. Field descriptions may have been modified to reflect laboratory test results.
2. Descriptions on these boring logs apply only at the specific locations at the time the borings were drilled. They are not warranted to be representative of subsurface conditions at other locations or times.
3. Split spoon blow counts shown are uncorrected raw data. Various hammer sizes and split spoon sizes were used and have not been corrected to a Standard Penetration Test (SPT). Blow counts may vary substantially between SPT and these methods.

 ENGINEERS, INC.	Designed: PND Drawn: PND Checked: PND Project No.: 082015.01 Date: April 2014	STANDARD BOREHOLE LOG DETAILS	
		BOREHOLE LOGS	FIGURE B-2

[illegible]

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DRAWN: <u>PJD</u>	APPROVED: <u>CRS</u>	



CITY & BOROUGH OF JUNEAU, ALASKA STATTER HARBOR IMPROVEMENTS CONTRACT NO. DH14-014	
SHEET TITLE: STANDARD BOREHOLE LOG DETAILS	2.01 SHEET 7 OF 82
PND PROJECT NO.: 082015	

Soil Legend

MAJOR DIVISIONS			SYMBOLS		TYPICAL DESCRIPTIONS	
			GRAPH	LETTER		
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	Well-graded gravels, gravel sand mixtures, little or no fines	
				GP	Poorly graded gravels, gravel-sand mixtures, little or no fines	
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE (4.75mm)	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	Silty gravels, gravel-sand-silt mixtures	
				GC	Clayey gravels, gravel-sand-clay mixtures	
	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	Well-graded sands, gravelly sands, little or no fines	
				SP	Poorly graded sands, gravelly sands, little or no fines	
	MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE (4.75mm)	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	Silty sands, sand-silt mixtures	
				SC	clayey sands, sand-clay mixtures	
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	
				OL	Organic silts and organic silty clays of low plasticity	
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	
				CH	Inorganic clays of high plasticity, fat clays	
				OH	Organic clays of medium to high plasticity, organic silts	
	HIGHLY ORGANIC SOILS				PT	Peat and other highly organic soils

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

Stratigraphic Contact

-
- Distinct contact between soil strata or geologic units

Gradual change between soil strata or geologic unitsApproximate location of soil strata change within a geologic soil unit

Laboratory / Field Tests List of Abbreviations

%F	Percent Fines	HA	Hydrometer Analysis	PP	Pocket Penetrometer
AL	Atterberg Limits	LMA	Limited Mechanical Analysis	SA	Sieve Analysis
CP	Laboratory Compaction test	MC	Moisture Content	TV	Torvane
CO	Consolidation test	MD	Moisture content and Dry density	TX	Triaxial Shear
DP	Depth "Peat" Probe	OC	Organic Content	UC	Unconfined Compression
DS	Direct Shear	PM	Permeability or Hydraulic Conductivity	VS	Vane Shear

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Drawn: PND
Checked: PND
Project No.: 082015.01
Date: April 2014

STANDARD BOREHOLE LOG DETAILS

BOREHOLE LOGS

FIGURE B-3

METRIC CONVERSIONS

Length	1 inch	= 25.4 mm	1 mm	= 0.0394 inch
	1 foot	= 0.3048 m	1 m	= 3.281 feet
	1 mile	= 1.6093 km	1 km	= 0.621 mile
Area	1 sq. inch	= 6.452 cm ²	1 cm ²	= 0.155 sq. inch
	1 sq. foot	= 0.0929 m ²	1 m ²	= 10.764 sq. foot
	1 acre	= 0.4047 hectare	1 hectare	= 2.47 acre
	1 sq. mile	= 2.59 km ²	1 km ²	= 0.386 sq. mile
Volume	1 cu. inch	= 16.387 cm ³	1 cm ³	= 0.061 cu. inch
	1 cu. foot	(cc)	1 m ³	= 35.31 cu. foot
	1 cu. yard	= 0.0283 m ³	1 m ³	= 1.308 cu. yard
	1 U.S. gallon	= 0.7646 m ³ = 3.785 liters	1 liter	= 0.264 U.S. gallon
Mass	1 lb.	= 0.4536 kg	1 kg	= 2.205 lb.
Force	1 lb.	= 4.448 N	1 N	= 0.225 lb.
	1 ton	=8.896 kN	1 kN	= 0.1124 U.S. ton
Density	1 lb./cu. ft.	= 16.019 kg/m ³ = 0.1571 kN/m ³	1 kg/m ³	= 0.0624 lb./cu. foot
			1 kN/m ³	= 6.365 lb./ cu. foot
Pressure/Stress	1 lb./sq. in.	= 0.0703 kg/cm ²	1 kg/cm ²	= 14.22 lb./sq. inch
			1 kPa	= 0.145 lb./sq. inch
	1 lb./sq. ft.	(= 6.895 kPa) = 4.882 kg/cm ²	1 kg/cm ²	= 0.2048 lb./sq. ft.
			1 kPa	= 20.886 lb./sq. foot
	1 U.S. ton/sq. ft. [Note: 1 kPa	(= 0.04788 kPa) = 95.76 kPa = 1 kN/m ²	1 kPa	= 0.01044 U.S. ton/sq. foot
Flow Velocity	1 gal./min.	= 6.309 x 10 ⁻⁵ m ³ /sec	1 m ³ /sec	= 15,850 gallons per minute
	1 ft./sec.	= 0.3048 m/sec	1 m/sec	= 3.28 ft./sec
Coefficient of Compressibility M _v	1 sq. ft./U.S. ton	= 0.0104 m ² /kN = 14.22 cm ² /kg		
Coefficient of consolidation C _v	1 sq. in./lb	= 0.0929 m ² /year	1 m ² /year	= 10.76 sq. ft. /year
	1 sq. ft./year	(= 0.002946 mm ² /sec)	1 mm ² /sec	= 339.4 sq. ft./year
Moment	1 lb.-ft.	= 0.1383 kq-m (= 1.3558 Nm)	1 kq-m	= 7.23 lb.-foot
			1 N-m	= 0.7376 lb.-foot
Speed	1 mile/hour	= 1.609 km/hour (=0.447 m/sec)	1 km/hour	= 0.622 mile/hour
			1 m/sec	= 2.237 mph
	1 foot/sec	= 0.3048 m/sec	1 m/sec	= 3.281 feet/sec

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STANDARD BOREHOLE LOG DETAILS

BOREHOLE LOGS

FIGURE B-4



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STANDARD BOREHOLE LOG
DETAILS

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ROCK DESCRIPTIVE INDEX

STANDARD SYMBOLS AND NOMENCLATURE

The Standard Graphic Symbols used in this report are consistent with those used by the U.S. Geological Survey. Other nomenclature and categorical descriptions follow those presented by the American Society of Civil Engineers, the International Society of Rock Mechanics and others.

DESCRIPTION OF RELATIVE WEATHERING

Modified from the Geological Society Engineering Group, Great Britain:

- BX-U

-

Fresh, no visible sign of weathering;
- BX-W

FW

Slightly weathered: weathering limited to the surface of major discontinuities;

SW

Slightly weathered: penetrative weathering developed on open discontinuity surfaces, but only slight weathering of rock material;

MW

Moderately weathered: weathering extends throughout the rock mass, but the rock material is not friable;

HW

Highly weathered: rock is wholly decomposed and in a friable condition, but the rock texture and structure are preserved;
- BX-R

-

Residual soil: a soil material with the original texture, structure and mineralogy of the rock completely destroyed.

DESCRIPTION OF HARDNESS

ASCE Field Measurements, unrelated to Moh's scale for minerals.
Material must be unfrozen for this determination.

- very hard

-

Can not be scratched with knife or sharp pick.
- hard

-

Can be scratched with knife or pick only with difficulty.
- moderately hard

-

Can be scratched readily with knife or pick.
- medium

-

Can be grooved or gouged by firm pressure on knife or pick point.
- soft

-

Can be gouged or grooved readily with knife or pick point.
- very soft

-

Can be carved with knife. Can be excavated readily with point of pick.

DESCRIPTION OF UNIT THICKNESS

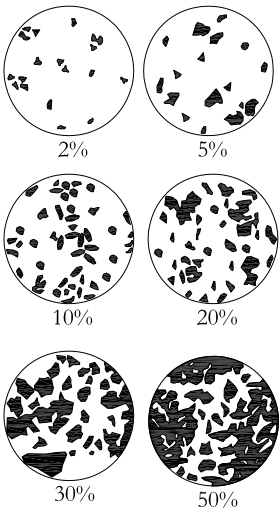
Modified from the Geological Society Engineering Group, Great Britain:

Measurement Parameters (equal to and less than)	Bedding Plane Spacing Massive	Discontinuity Spacing (joints, fractures, fissures)
>78.7 inches	>2000 mm	massive
78.7 inches	2000 mm	very thick
23.6 inches	600 mm	thick
7.9 inches	200 mm	medium
2.4 inches	60 mm	thin
0.8 inches	20 mm	very thin
0.2 inches	6 mm	thickly laminated
0.1 inches	2 mm	thinly laminated

Discontinuity filling material and surface roughness should also be noted whenever possible.

COMPARISON CHART FOR ESTIMATING COMPOSITION

Modified from R.D. Terry and others,
Journal of Sedimentary Petrology, 1955.



ROCK DESCRIPTIVE INDEX

BEDDING OF FRACTURE ATTITUDE

- Very Gentle

=

1° to 5°
- Gentle

=

5° to 20°
- Moderate

=

20° to 45°
- Steep

=

45° to 80°
- Very Steep

=

80° to 90°

Note:
The angle is measured perpendicular to the core axis.

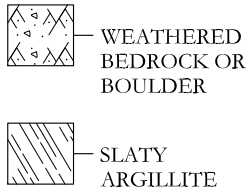
ROCK QUALITY DETERMINATION (RQD)

The figure is derived by adding the lengths of cored rock pieces which measure over 4 inches (10 cm) and dividing the sum by the total length of core recovered. Mechanical breaks are refitted to count as one piece, provided they form the requisite length of 4 inches.

* Performed on core not less than 2" diameter.

RQD (%)	DESCRIPTION OF ROCK QUALITY
0 - 25	VERY POOR
25 - 50	POOR
50 - 75	FAIR
75 - 90	GOOD
90 - 100	EXCELLENT

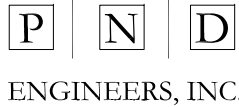
BEDROCK LITHOLOGIES



GEOLOGIC TIME SCALE:

Era	Period		Epoch	Duration in millions of years	Time B.P. *
CENOZOIC	Quaternary	Neogene	Pleistocene	1.8	1.8
			Pliocene	3.7	5.3
	Tertiary	Paleogene	Miocene	18.4	23.7
			Oligocene	12.9	36.6
			Eocene	21.2	57.8
			Paleocene	8.6	66.4
			MESOZOIC	Cretaceous	
Jurassic		64		208	
Triassic		37		245	
PALEOZOIC	Carboniferous	Permian		41	286
		Pennsylvanian	34	320	
		Mississippian	40	360	
	Devonian		48	409	
	Silurian		30	438	
	Ordovician		67	505	
	Cambrian		65	570	
	PRECAMBRIAN				

* ESTIMATED TIME BEFORE THE PRESENT
(B.P.) MILLIONS OF YEARS

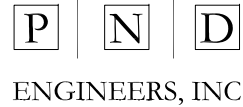


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STANDARD BOREHOLE LOG DETAILS

BOREHOLE LOGS

FIGURE B-5



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STANDARD BOREHOLE LOG DETAILS

BOREHOLE LOGS

FIGURE B-6



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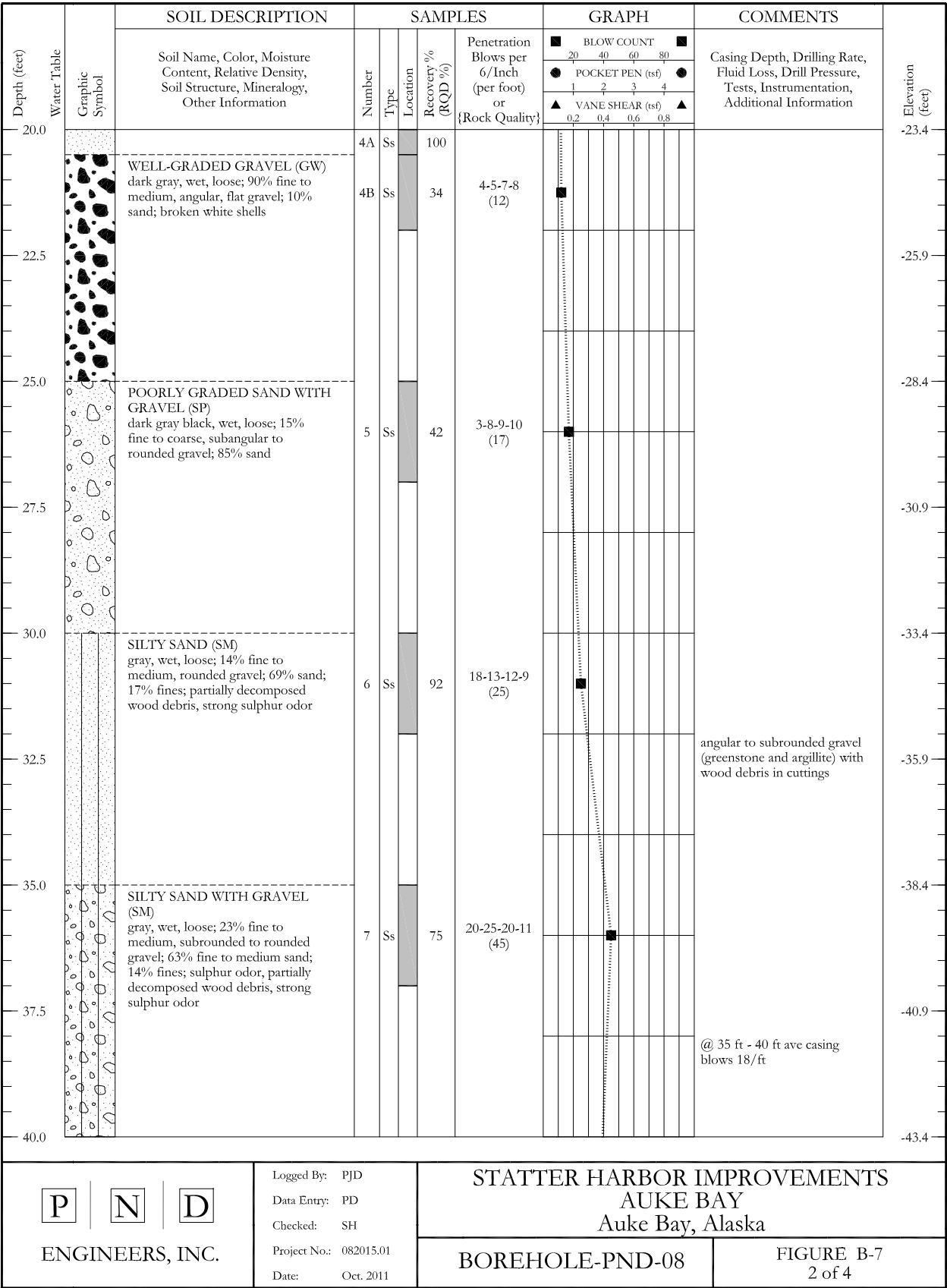
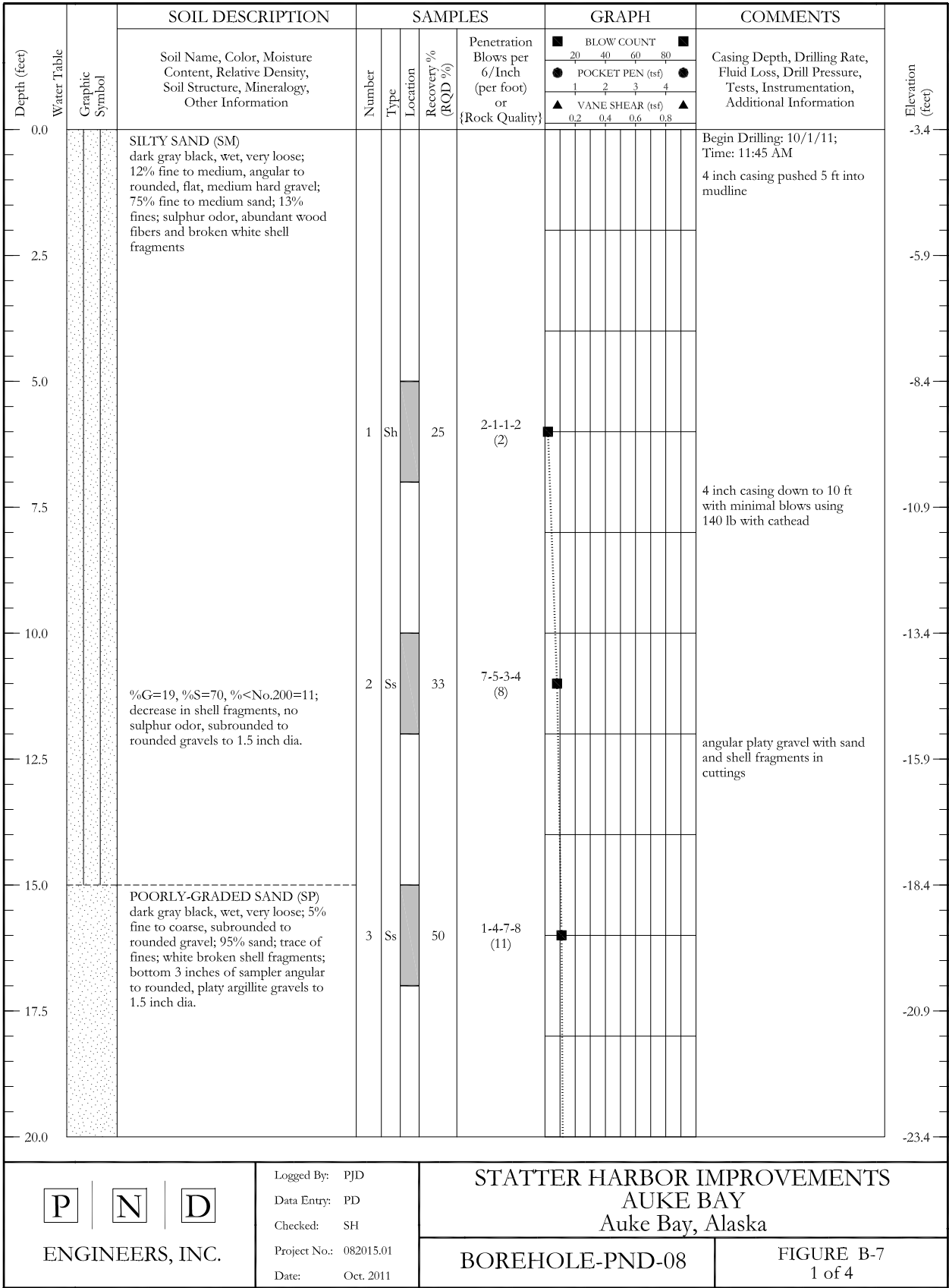
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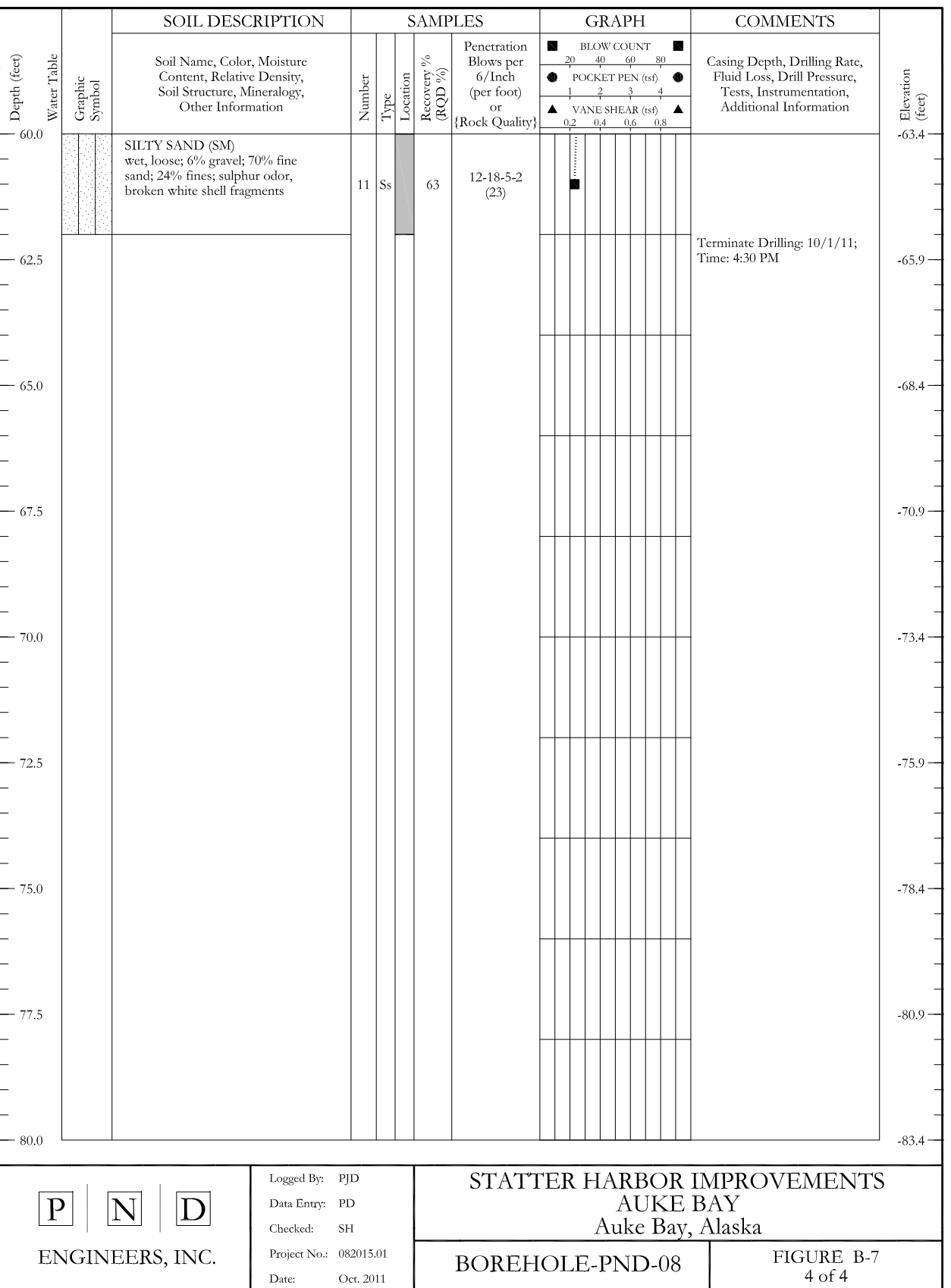
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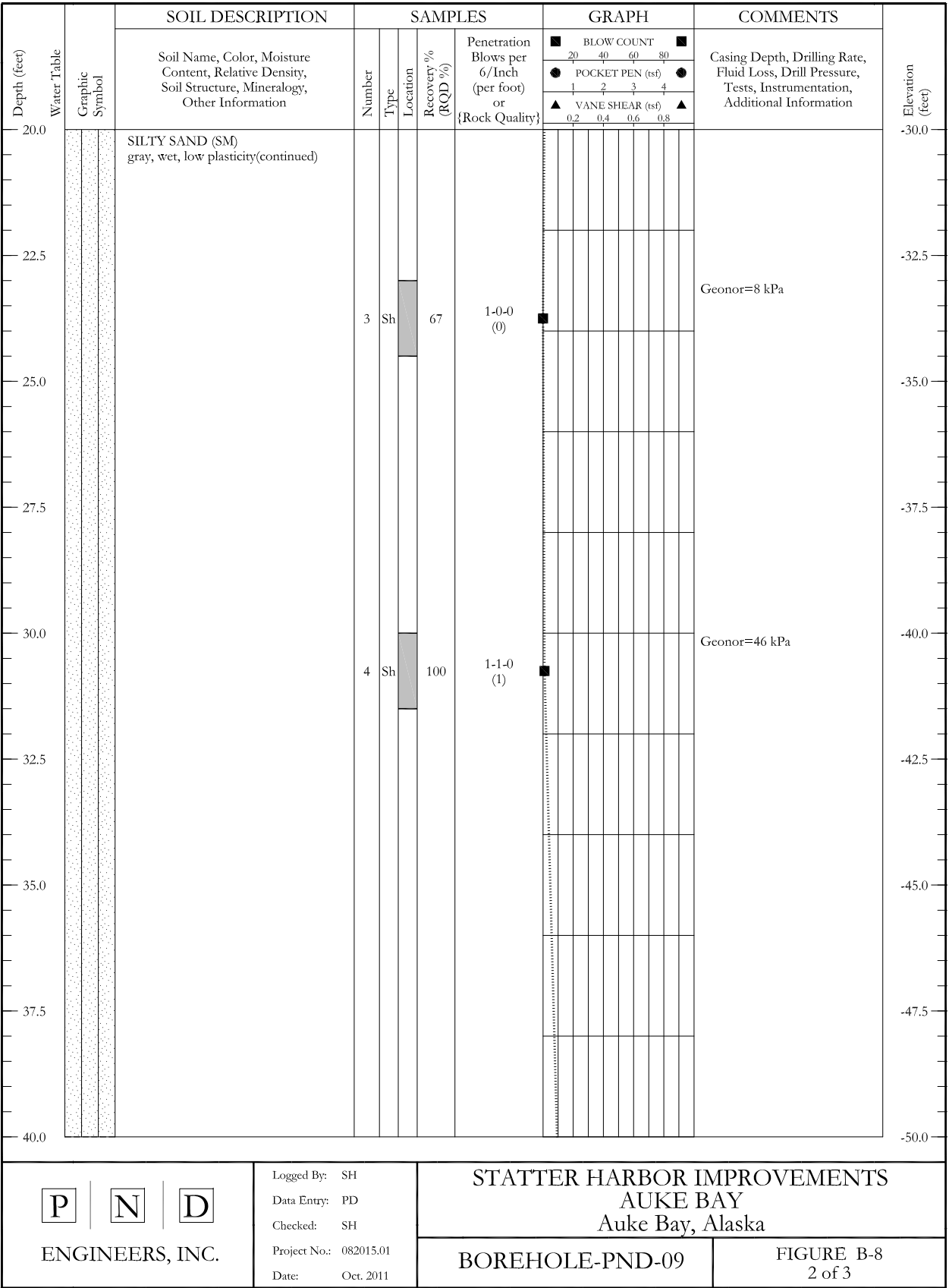
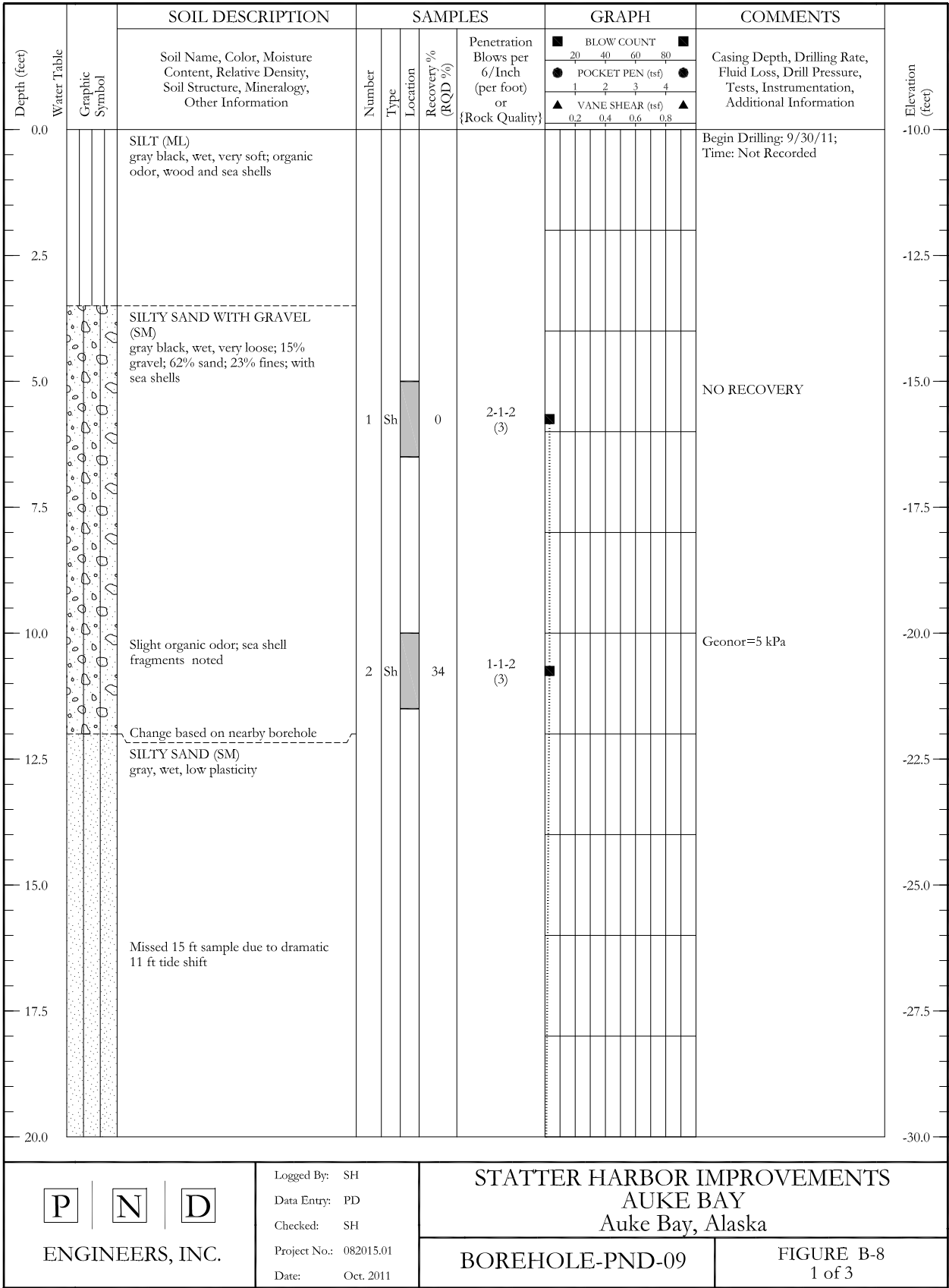


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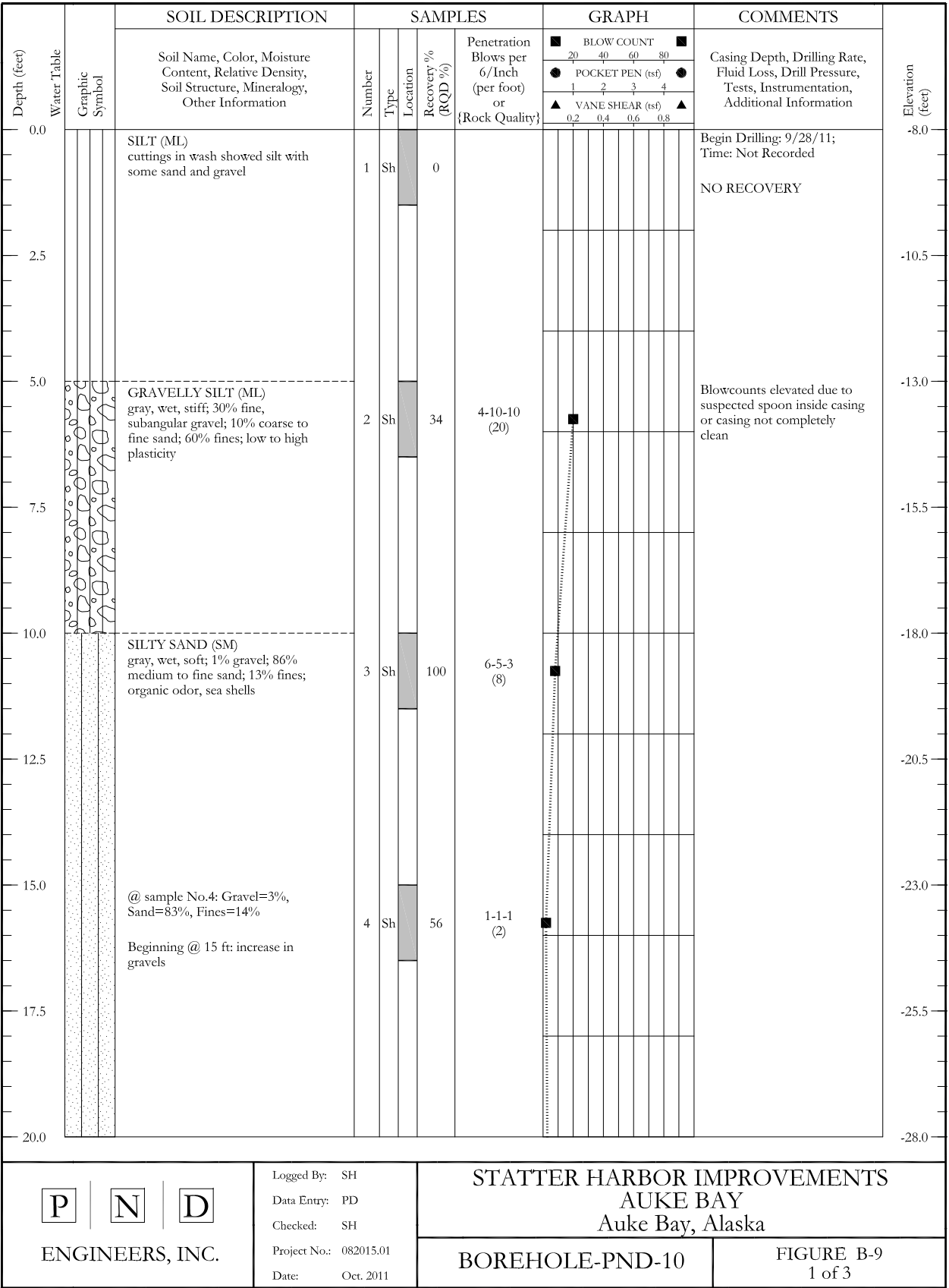
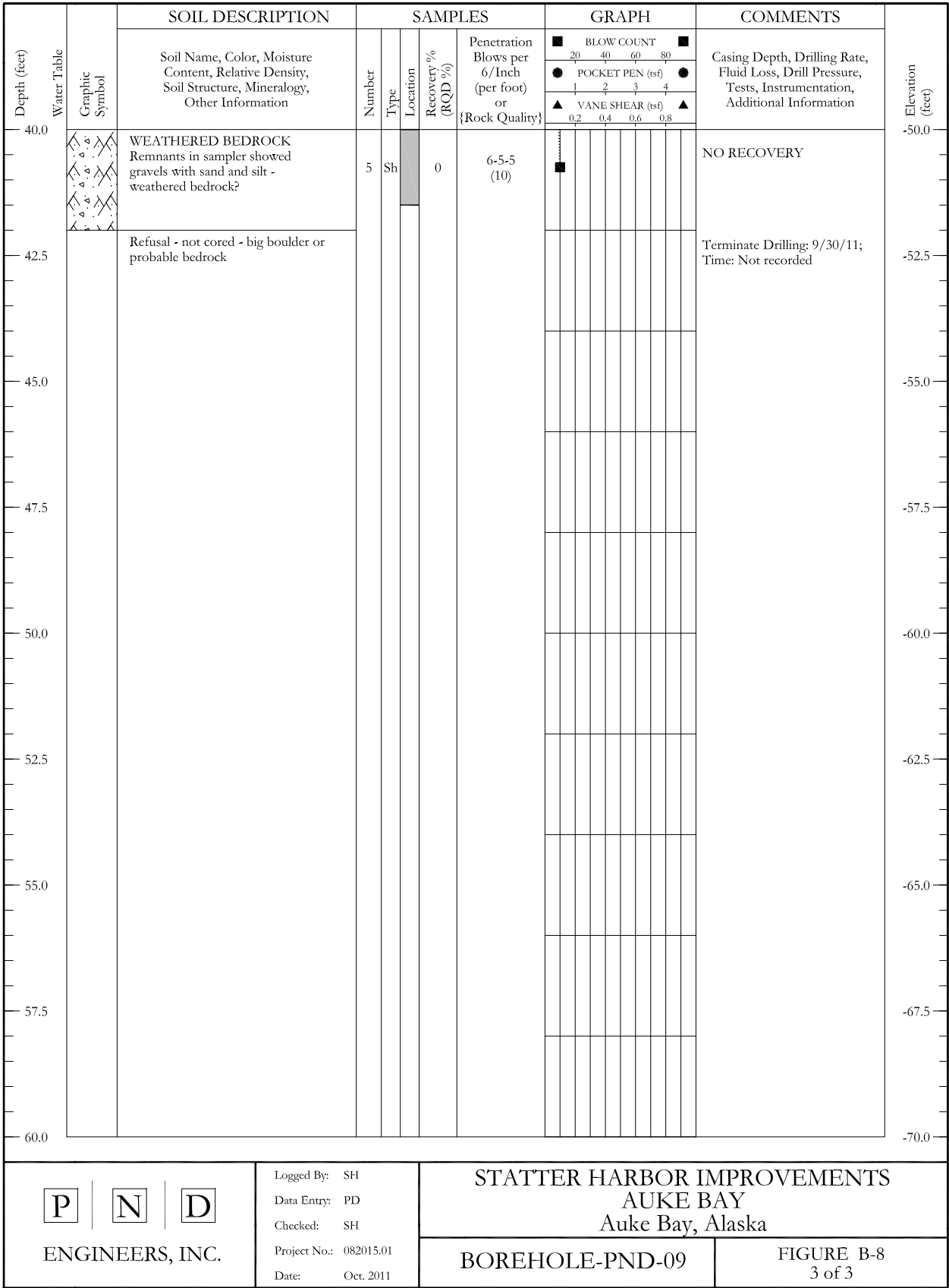


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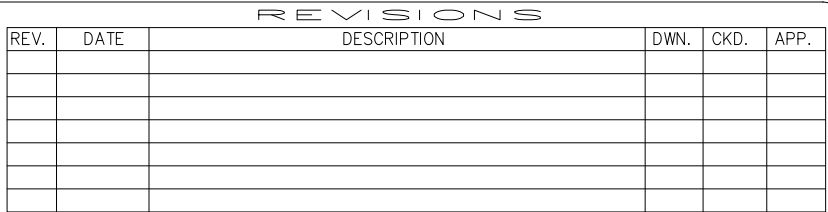
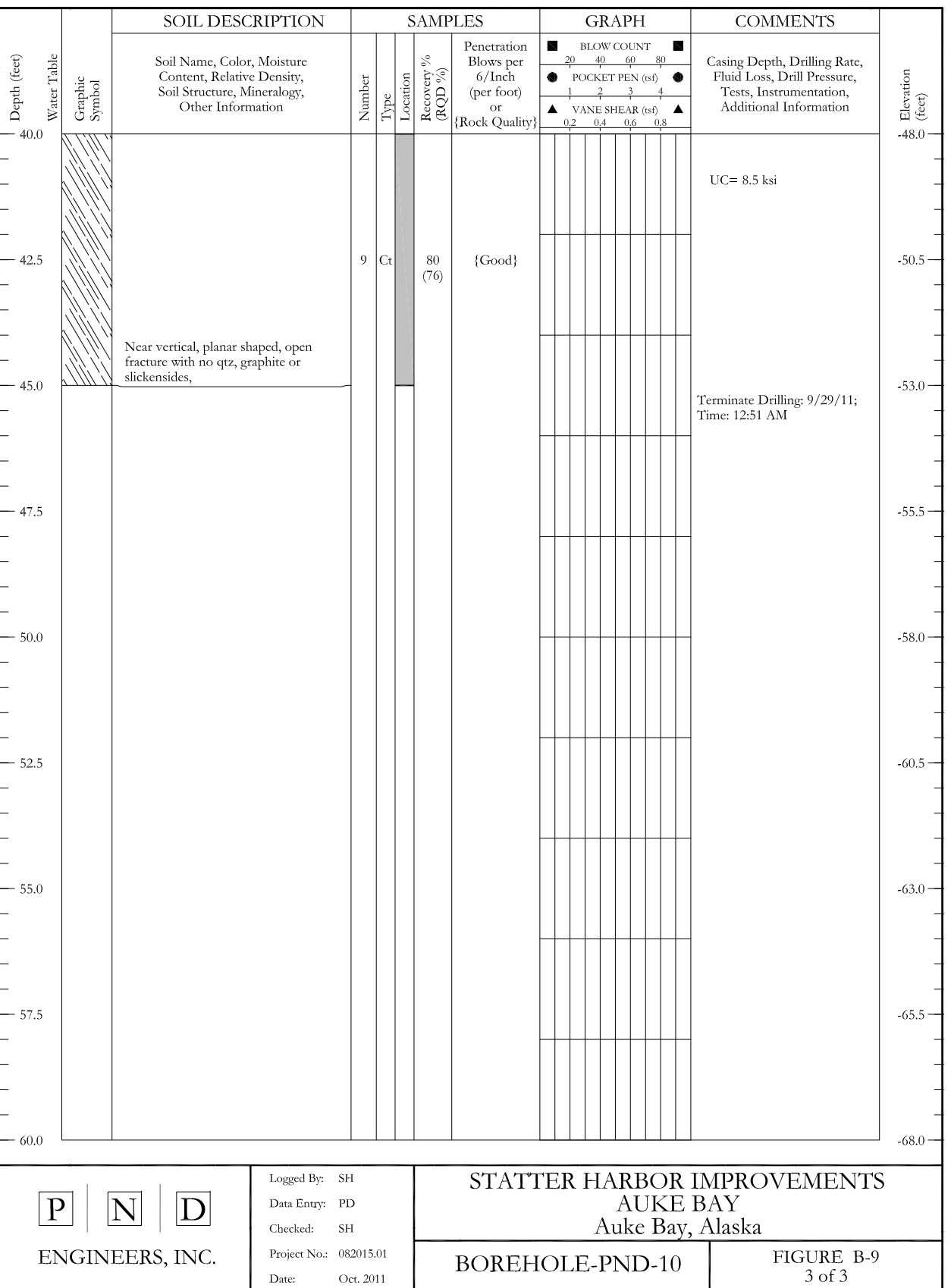
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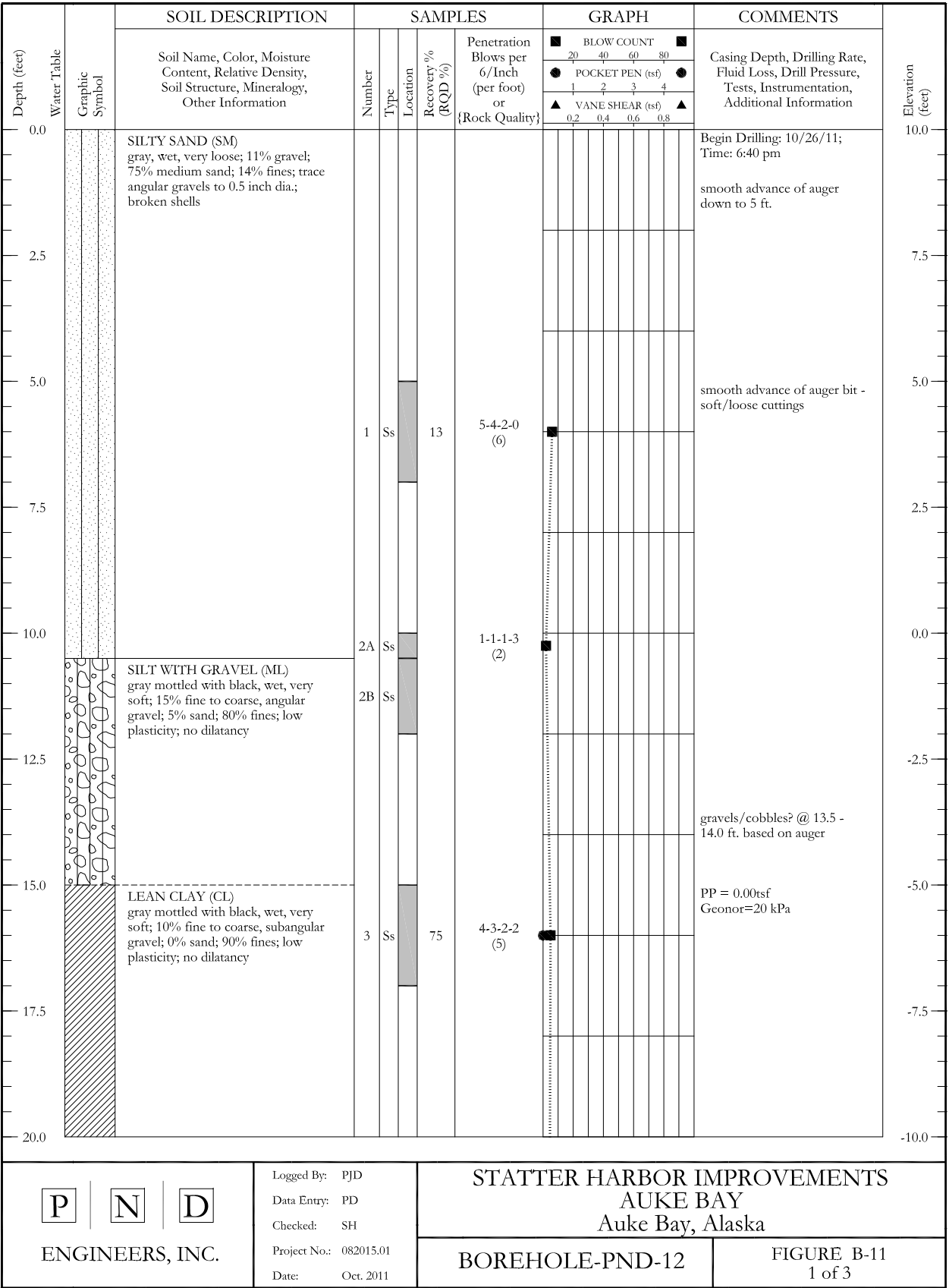
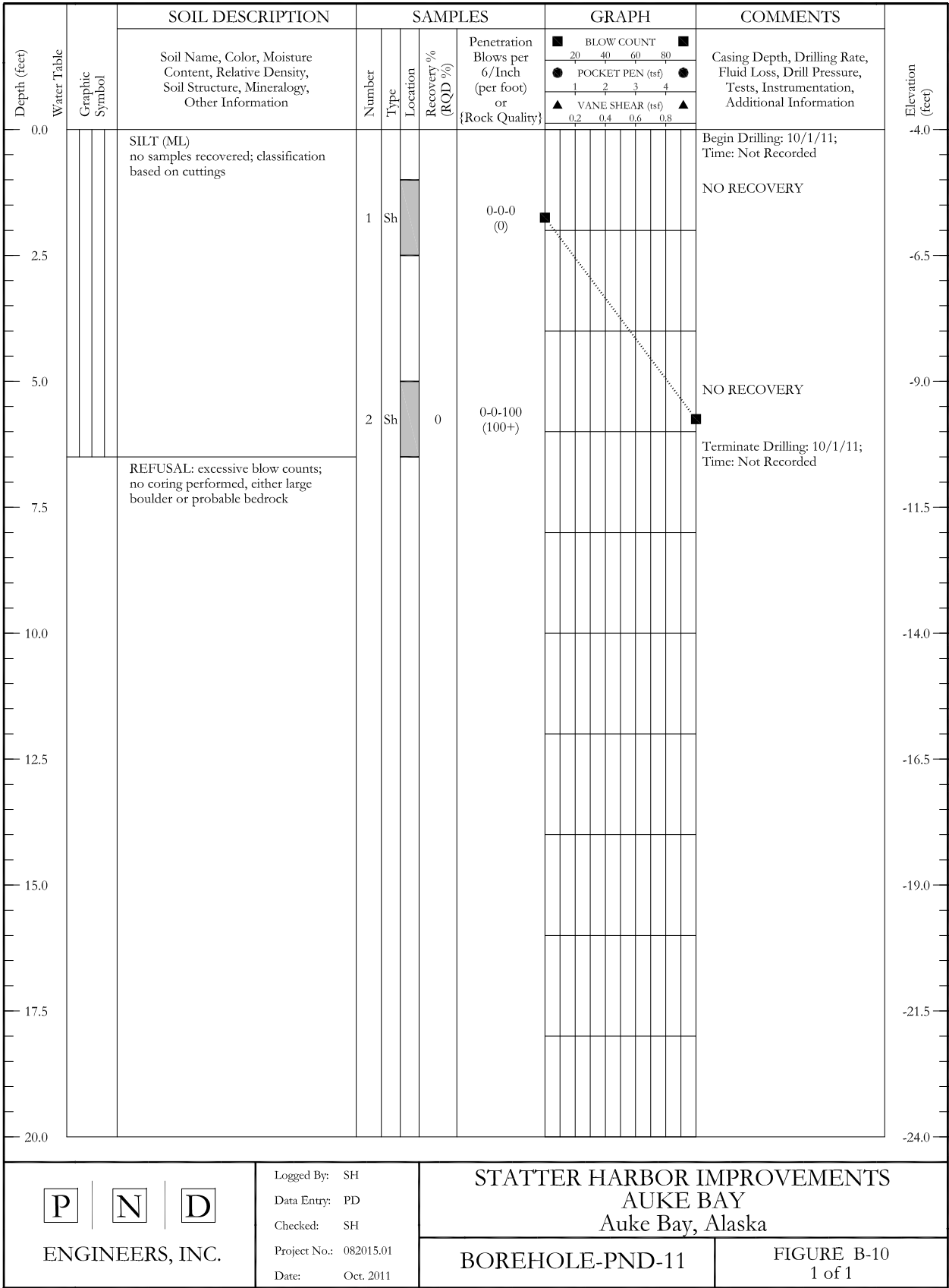
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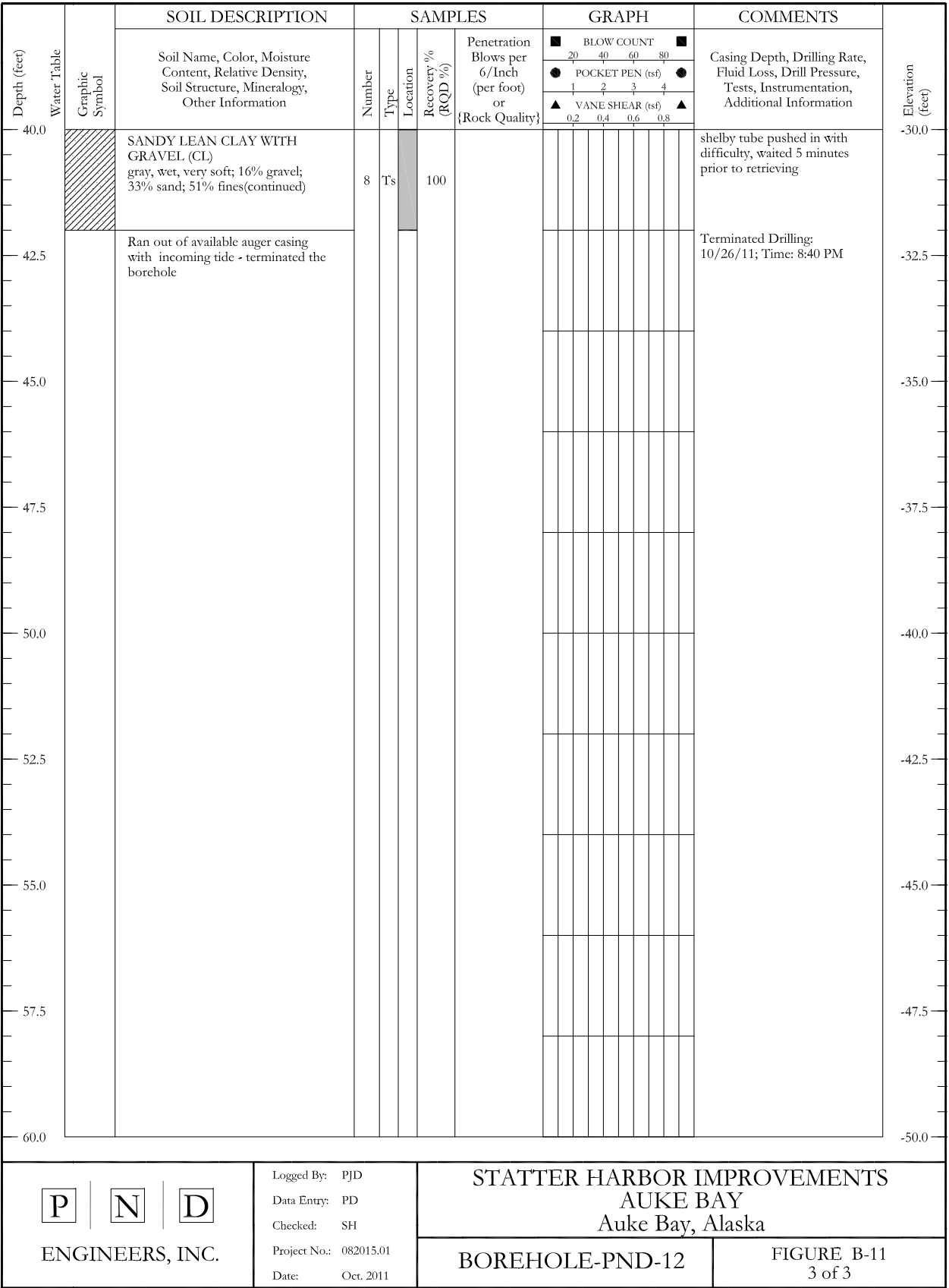
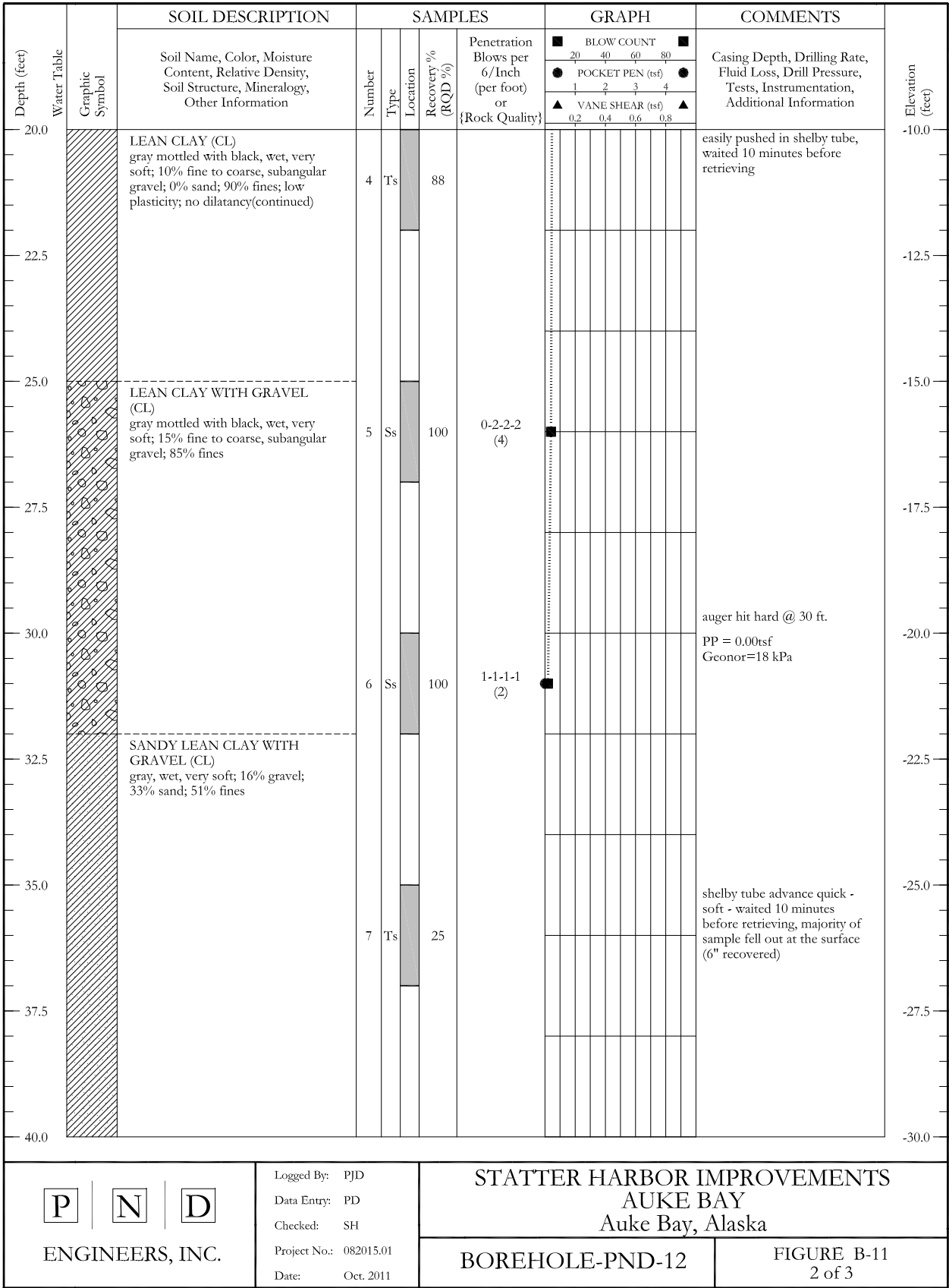
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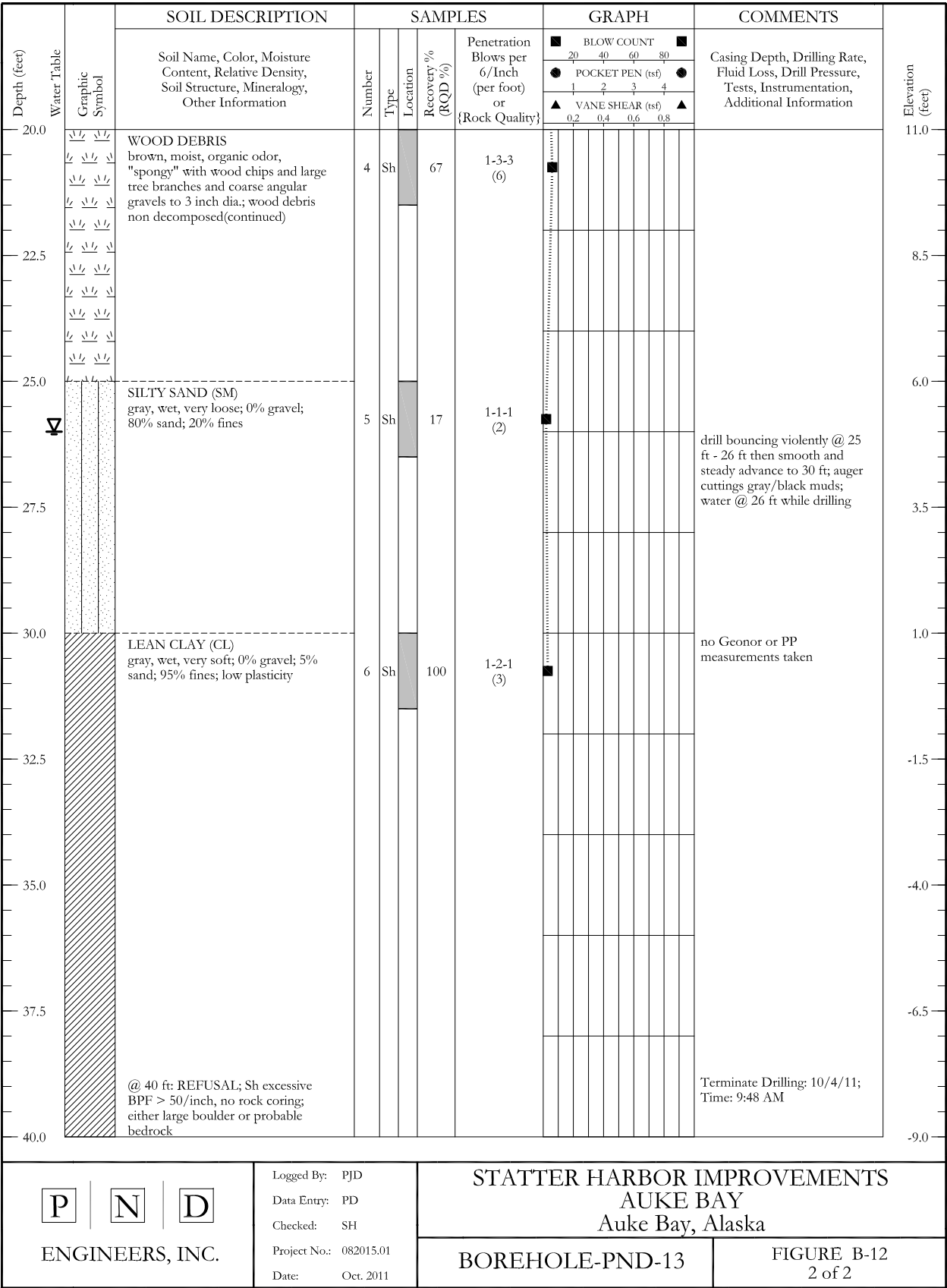
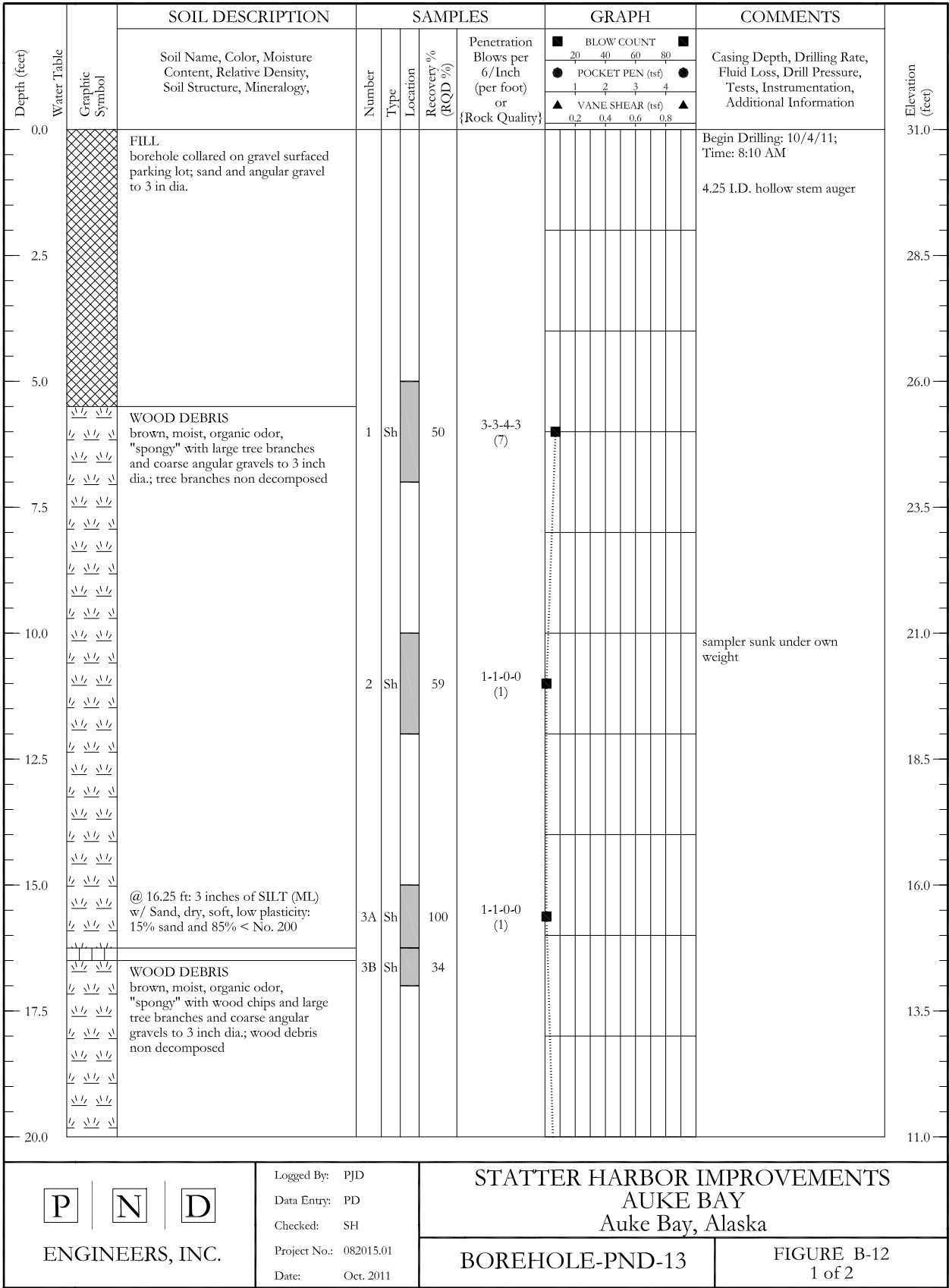


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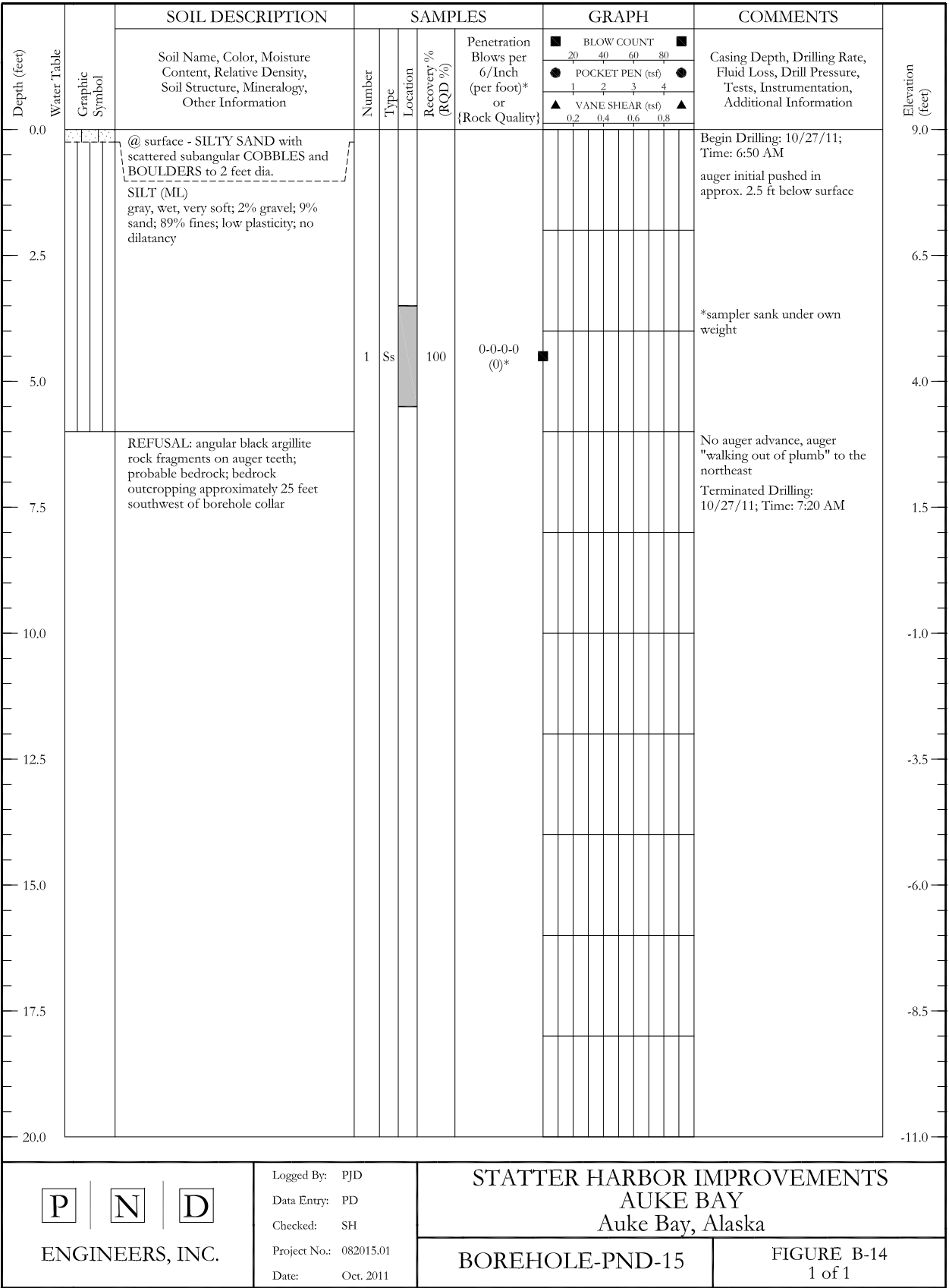
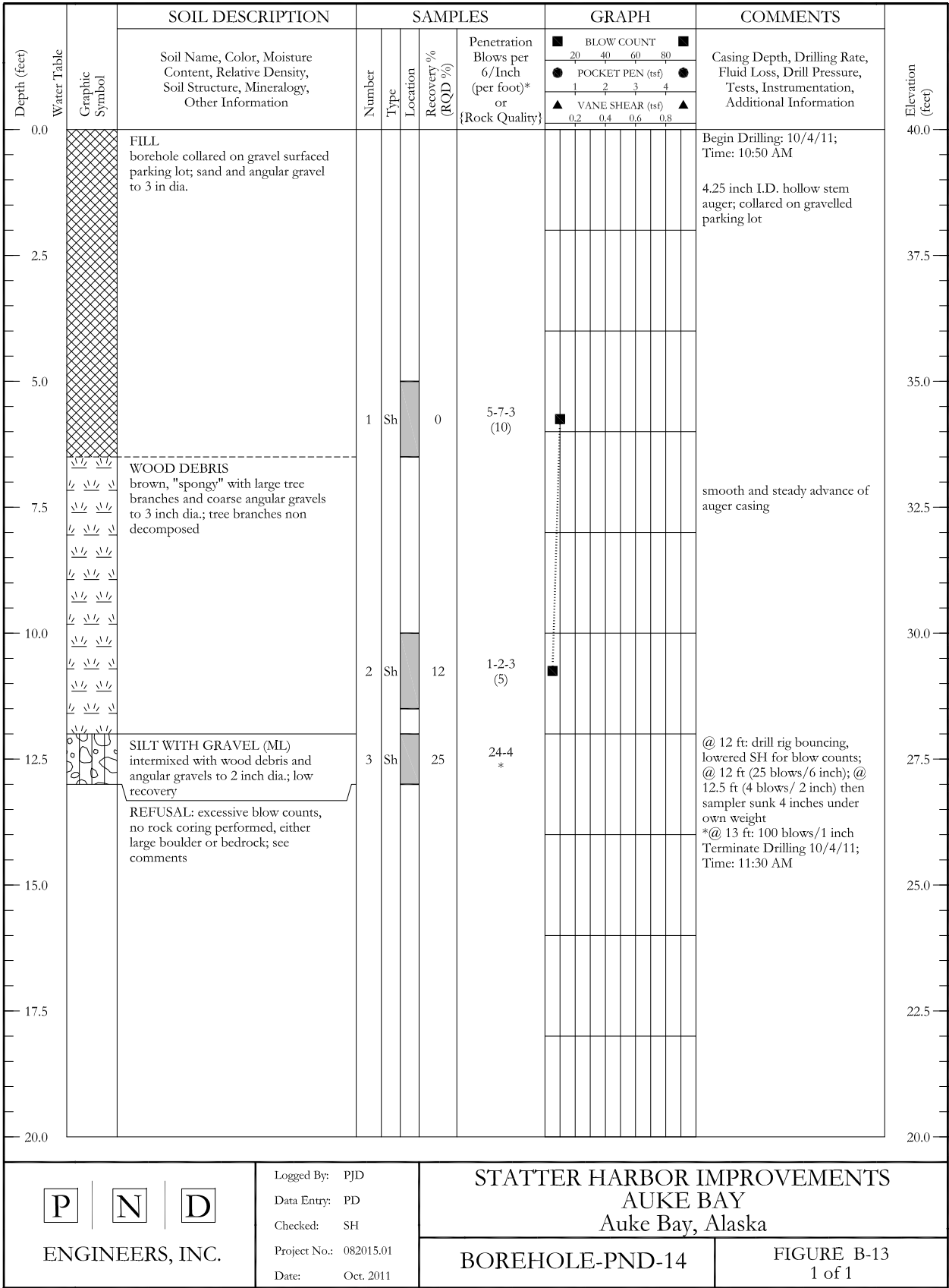
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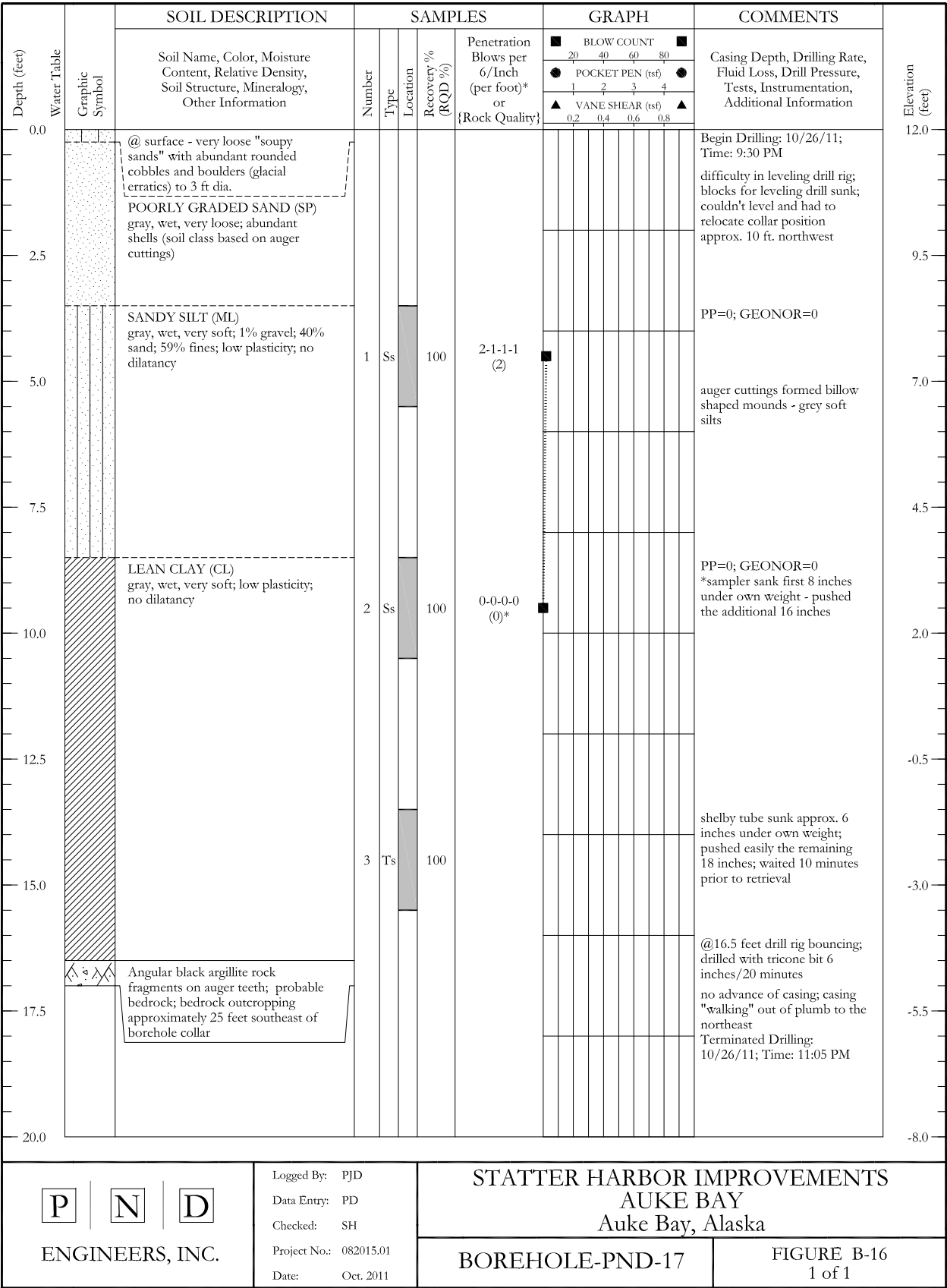
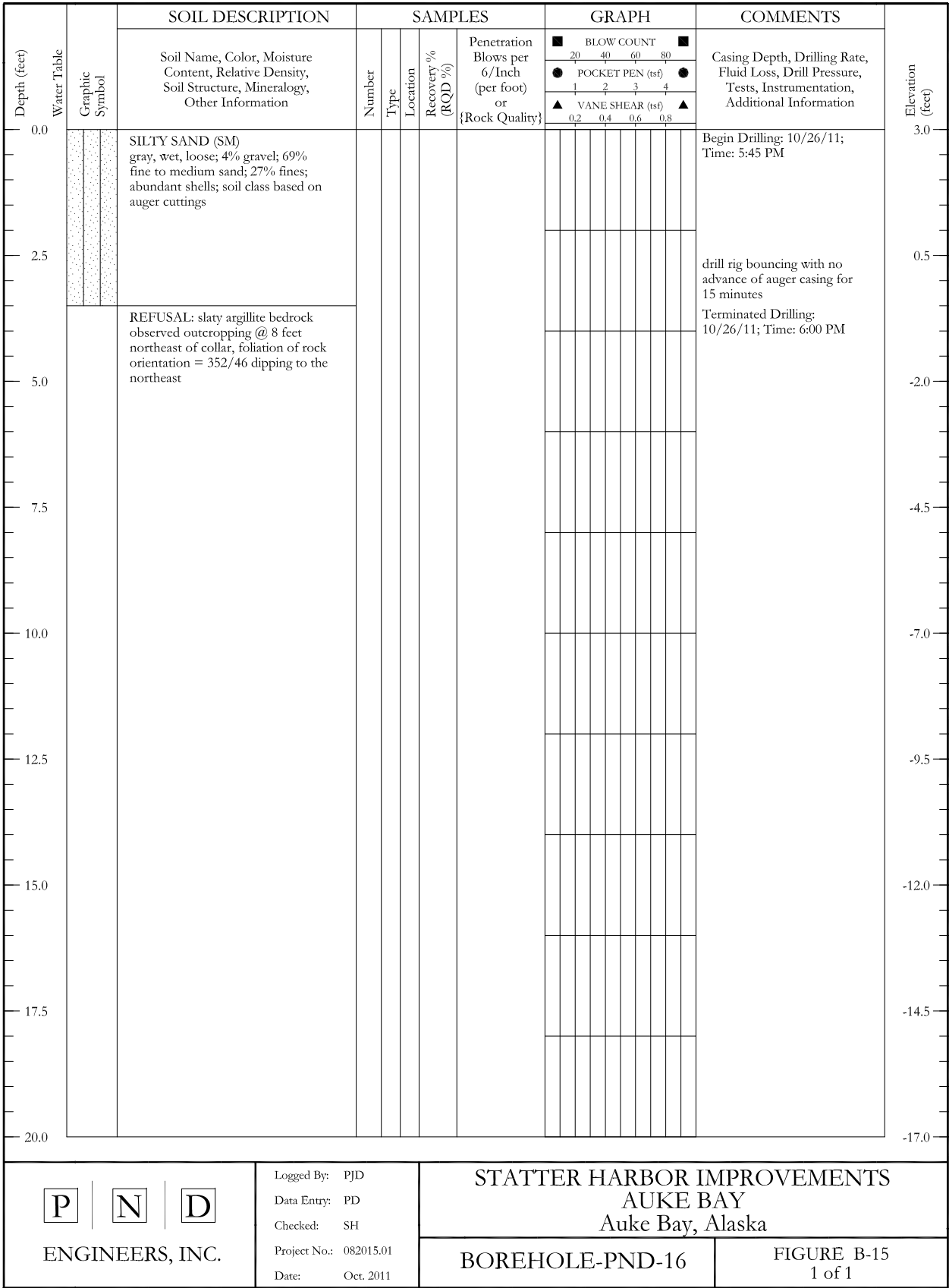
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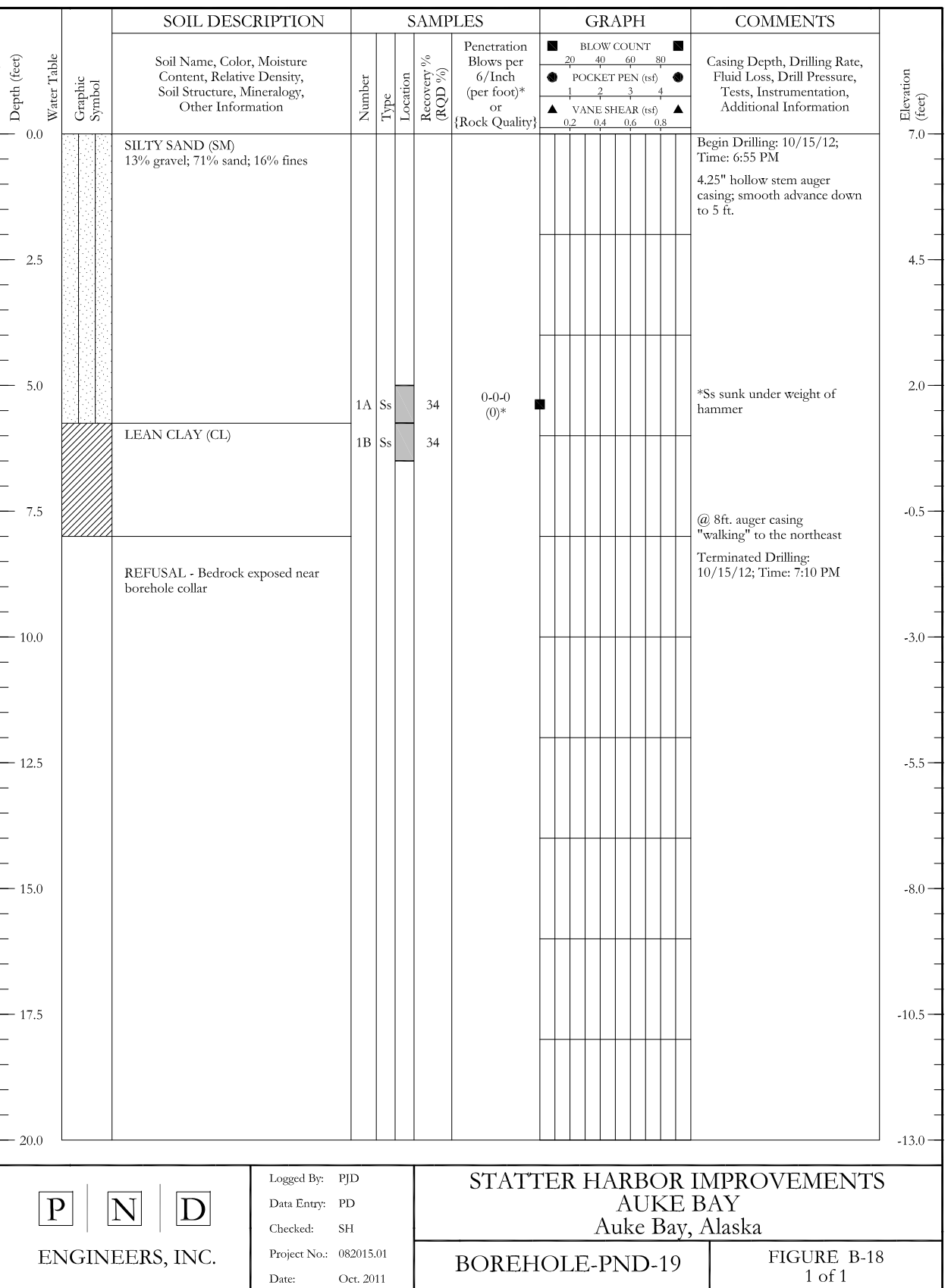


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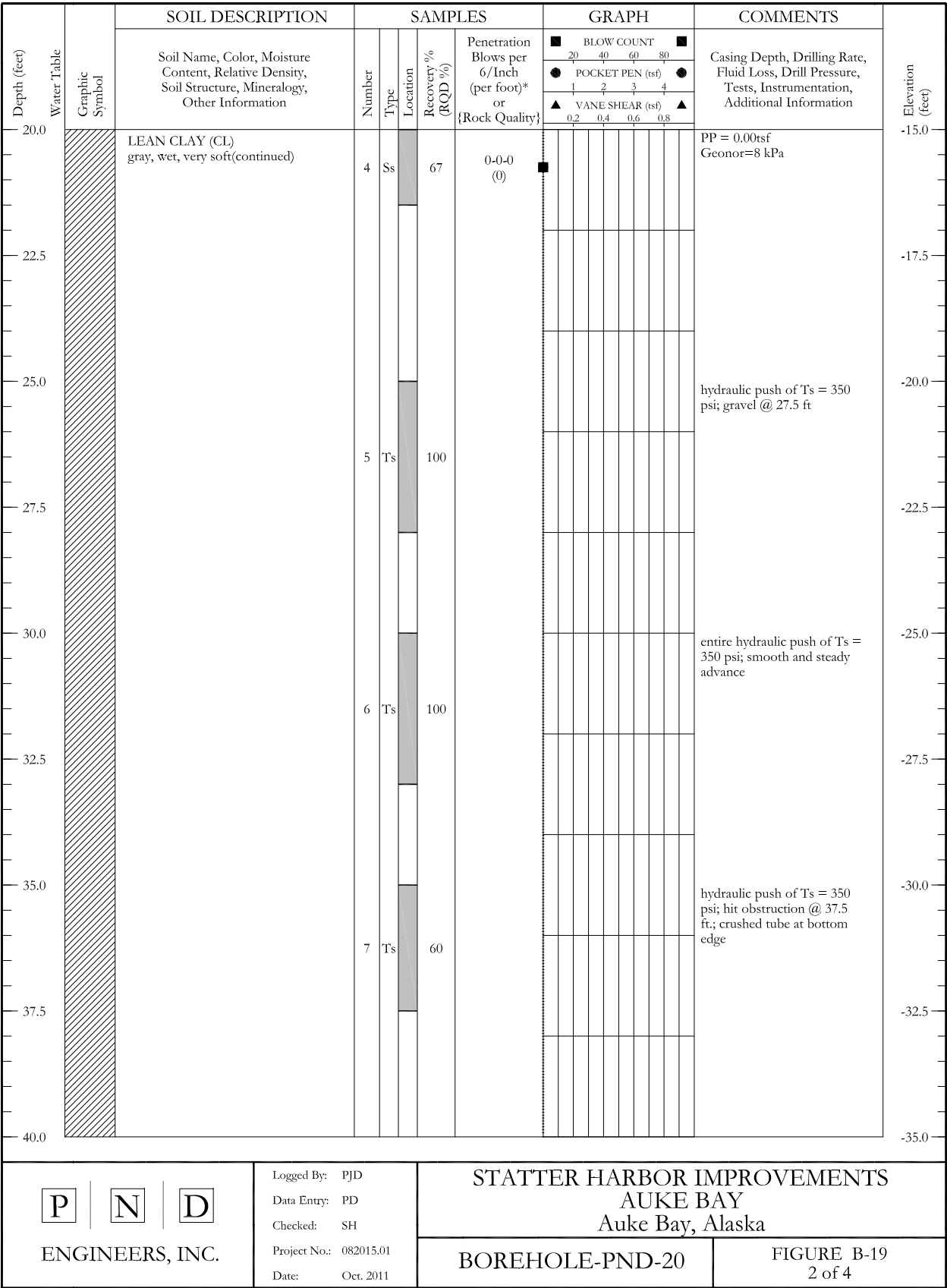
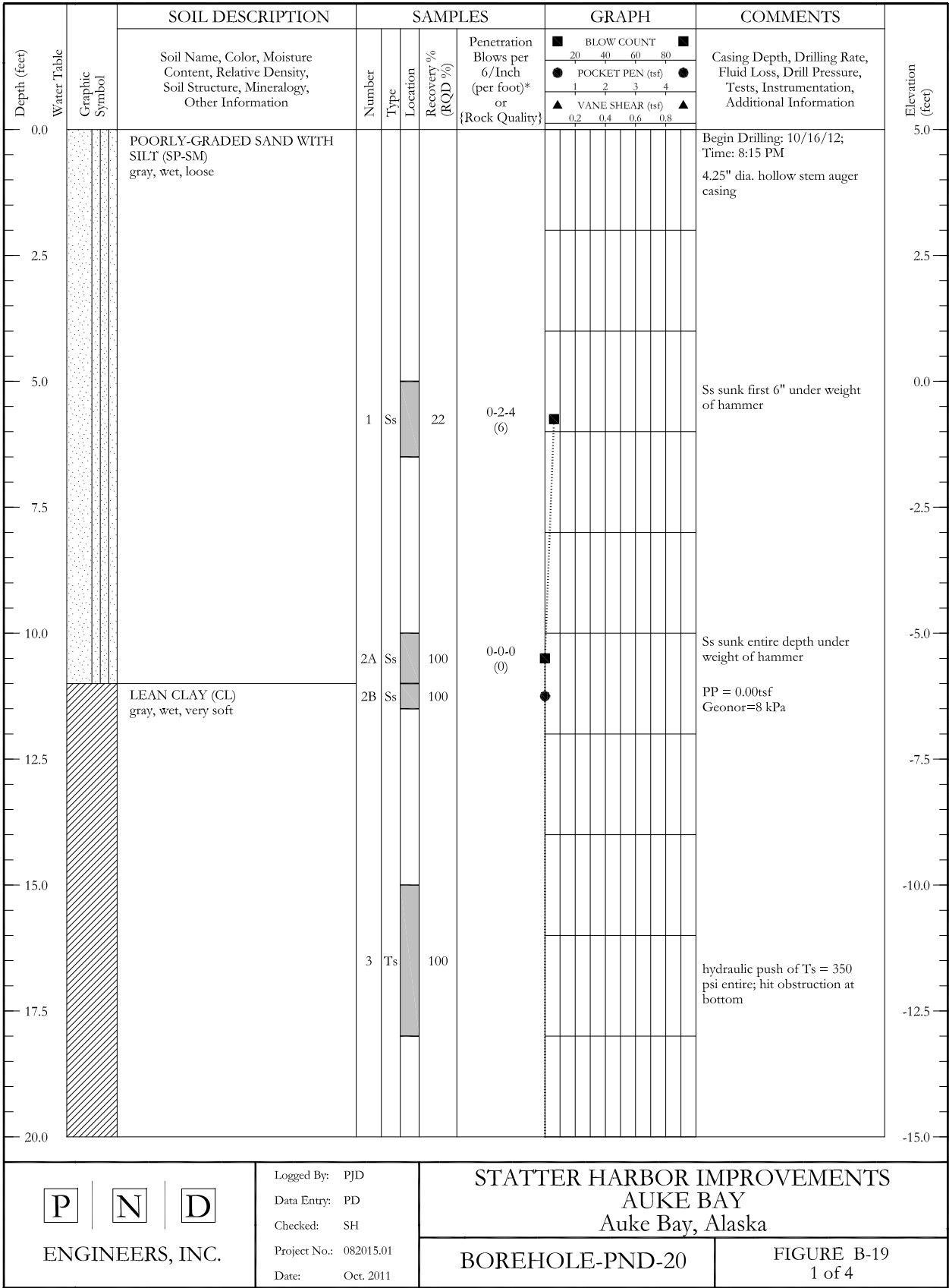
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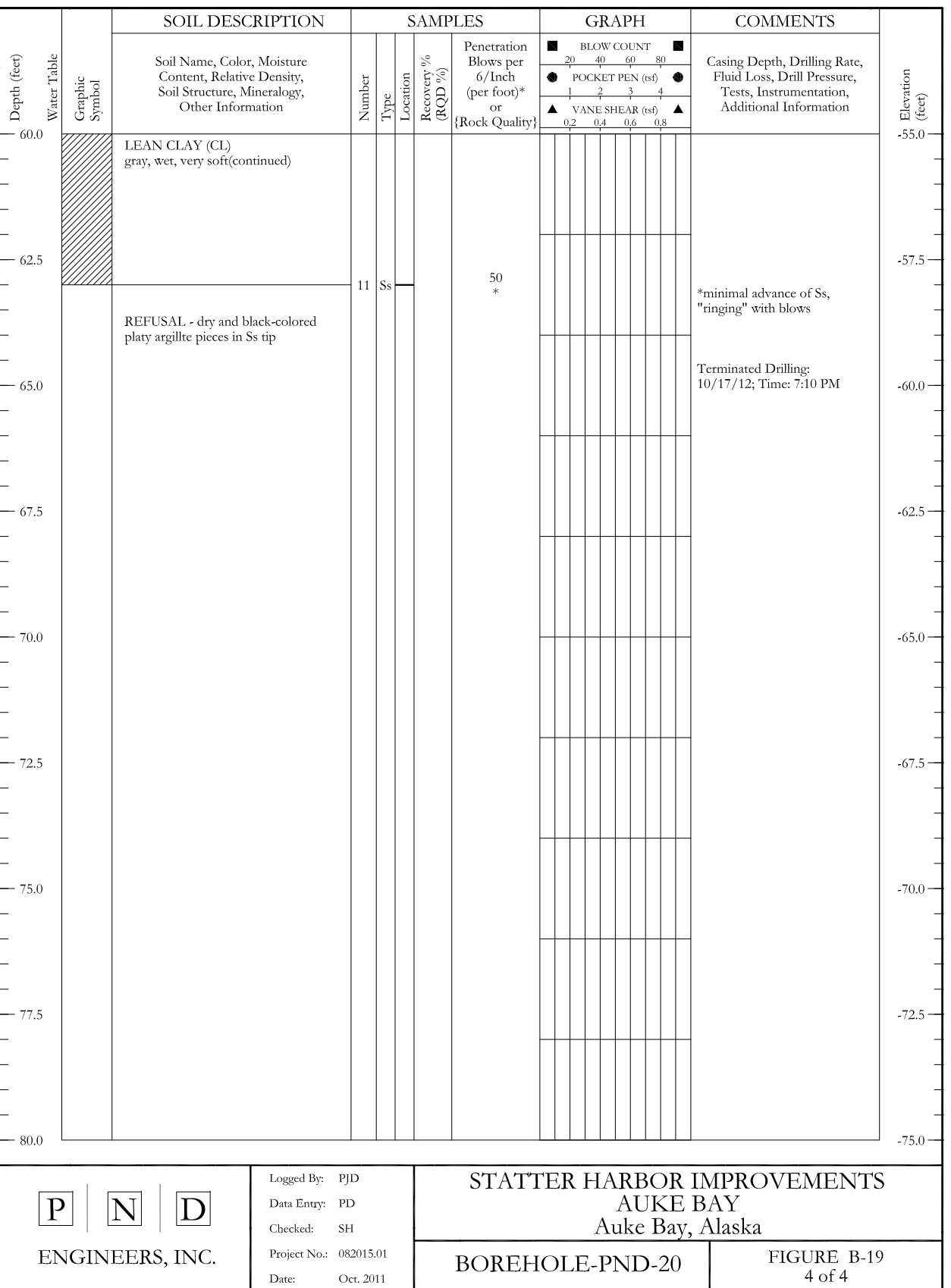


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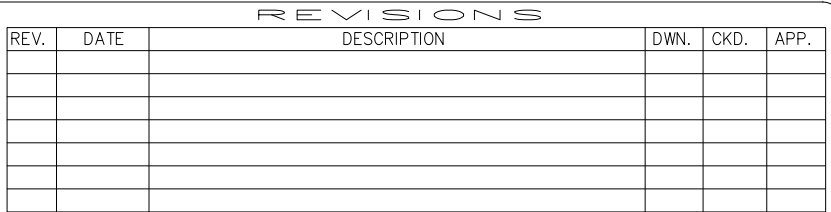
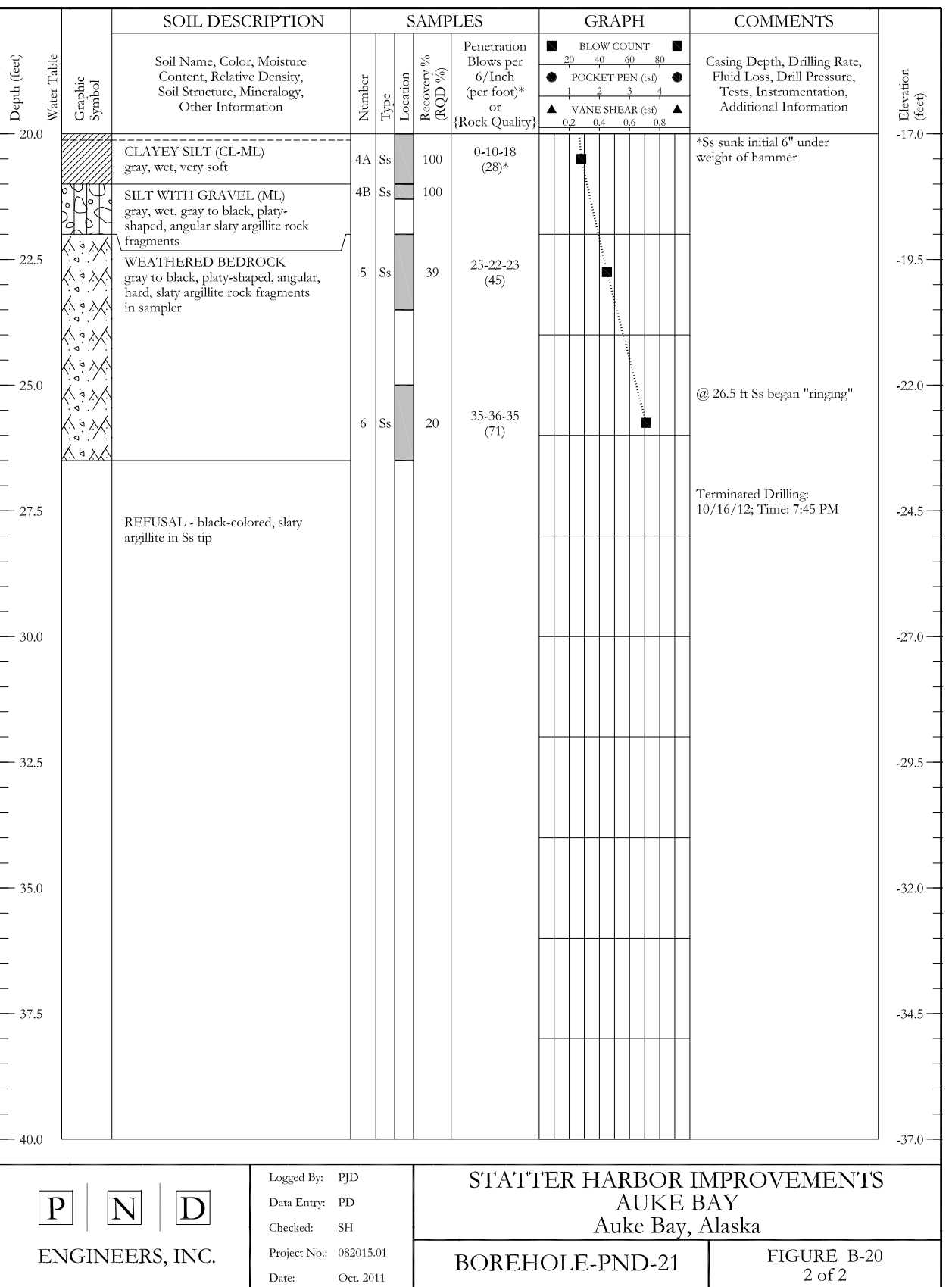


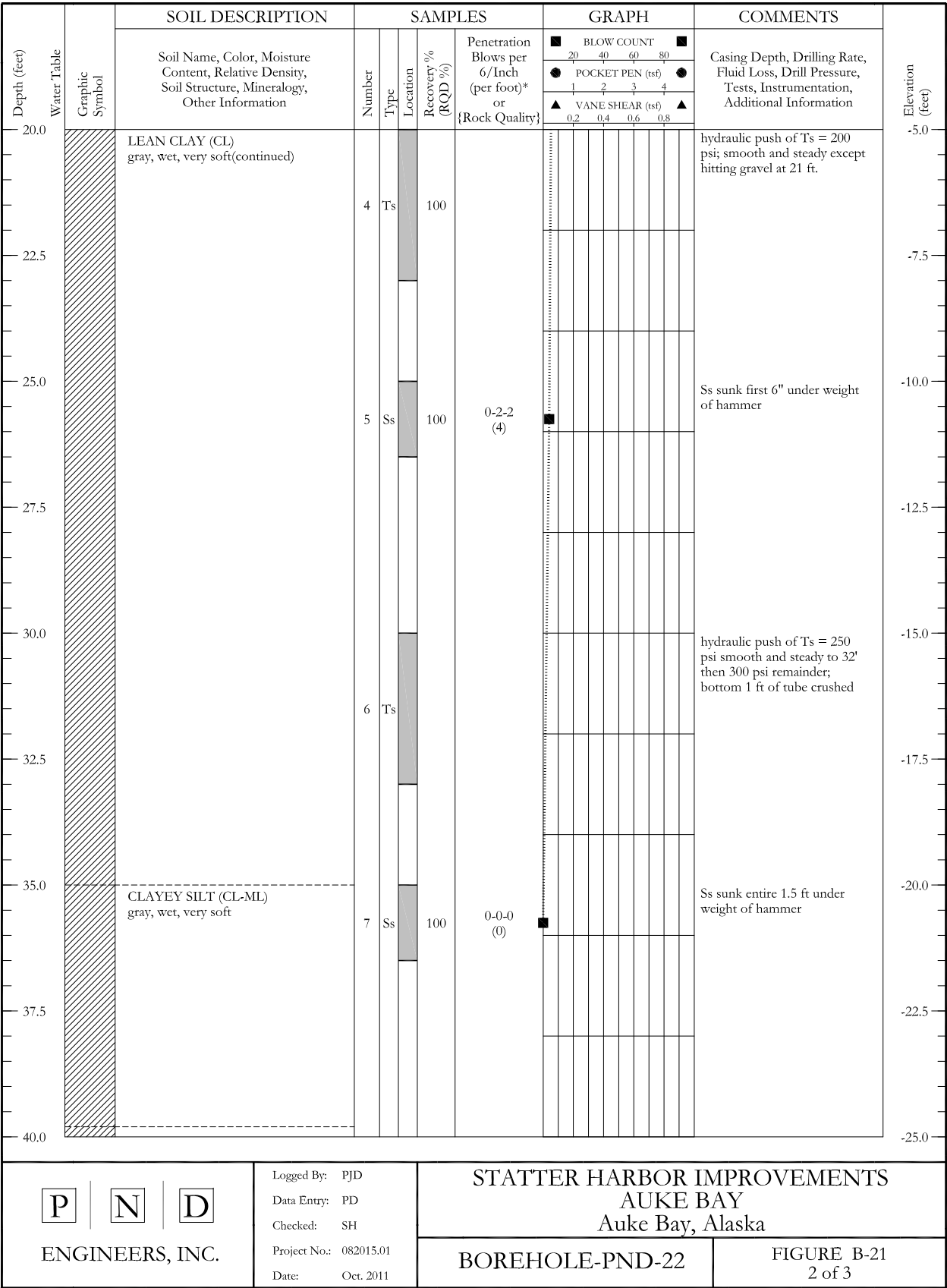
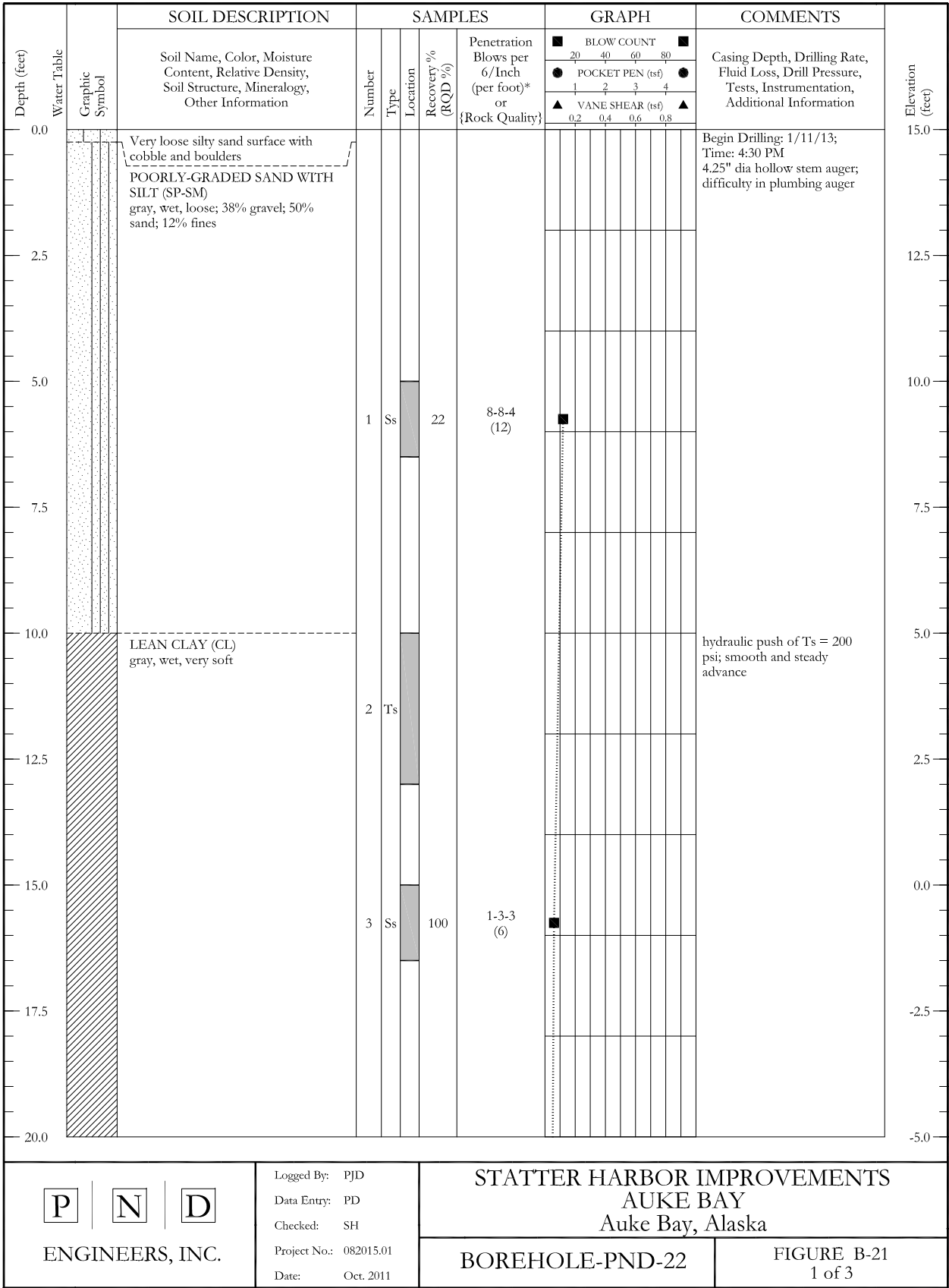
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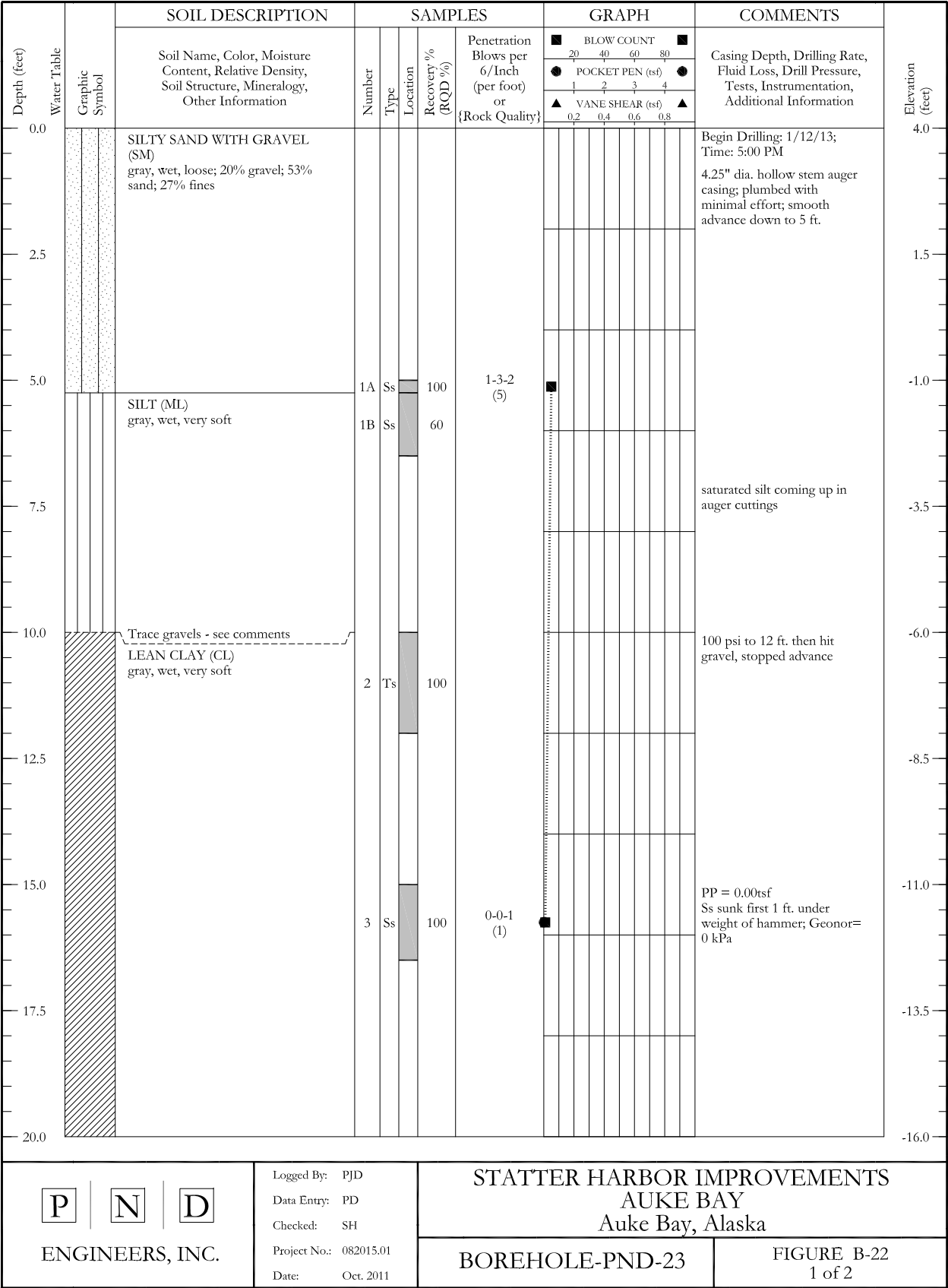
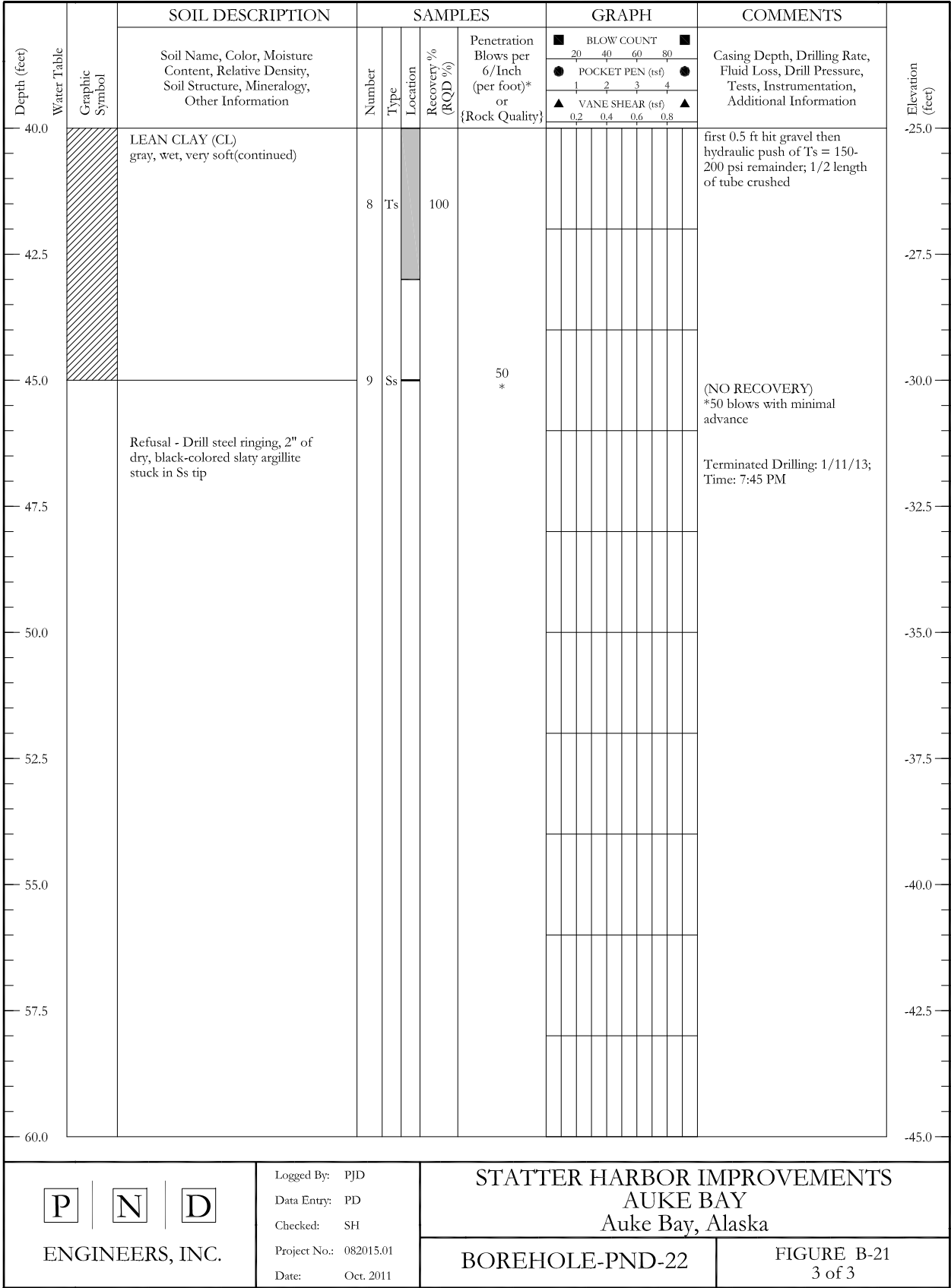


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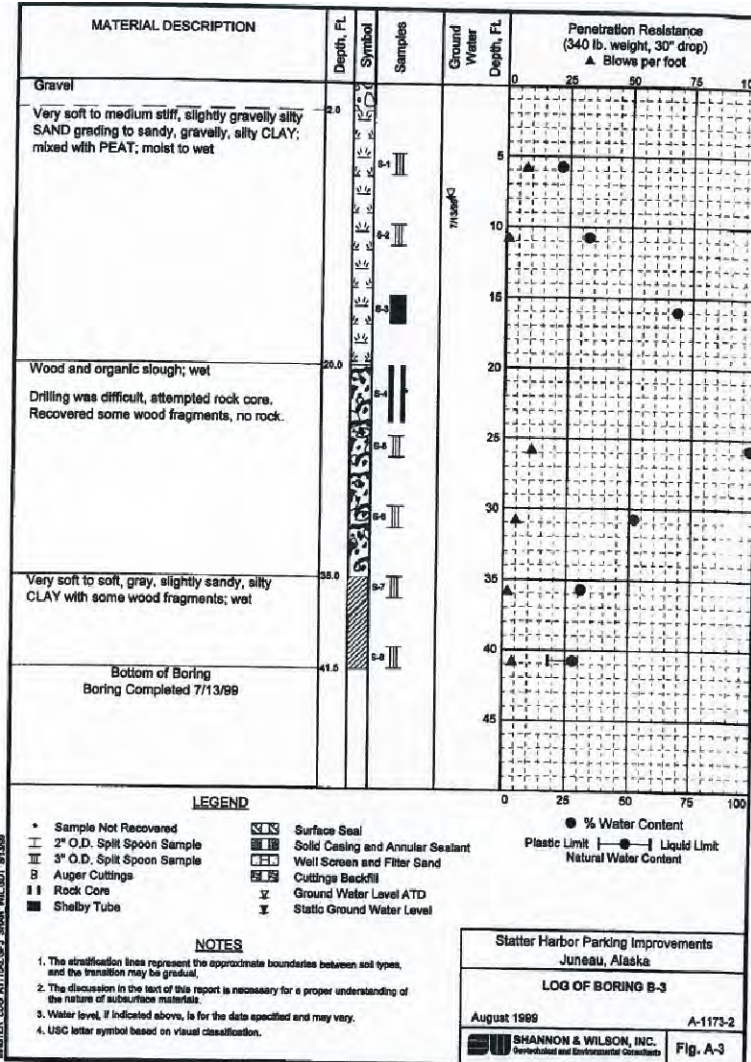
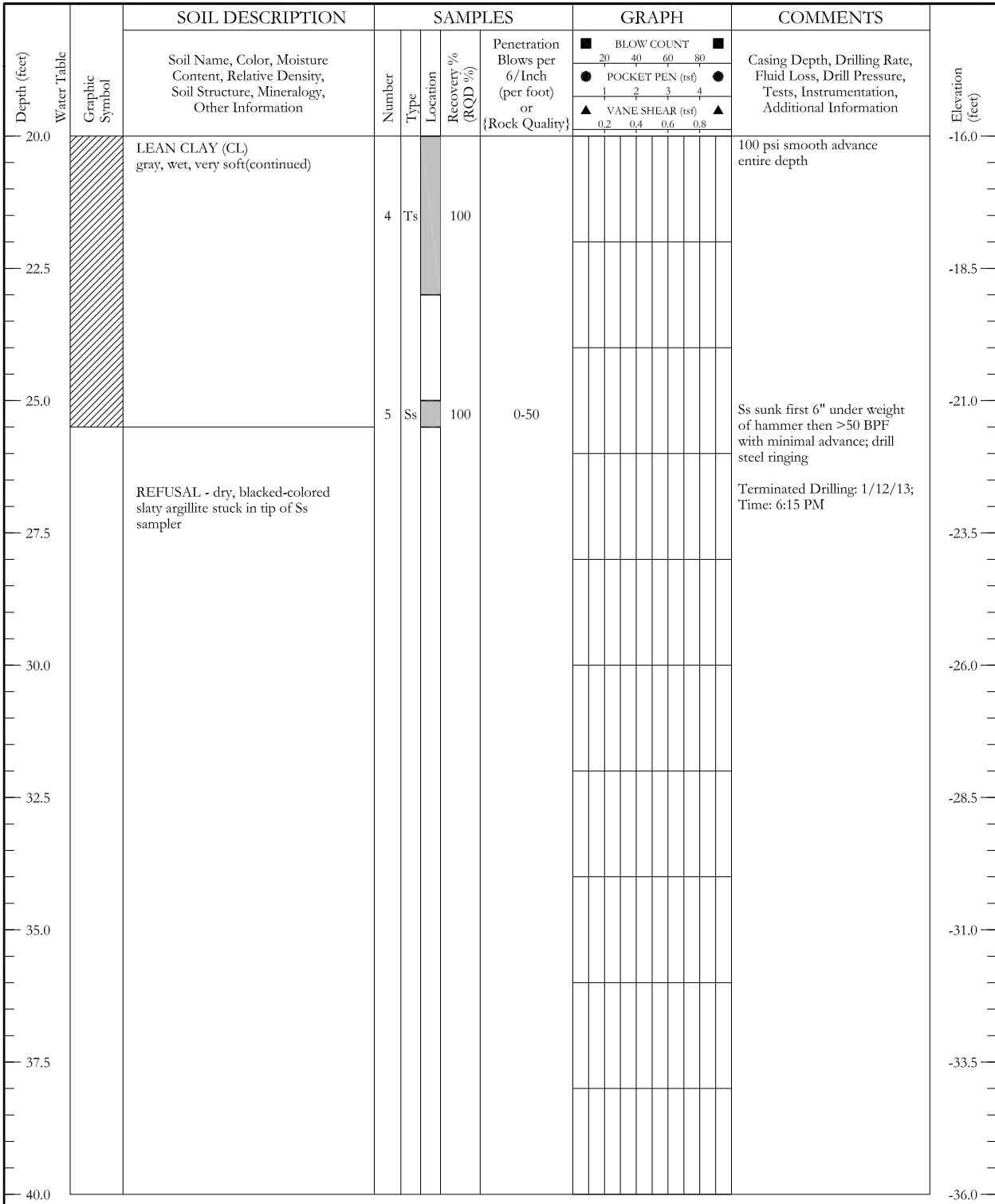
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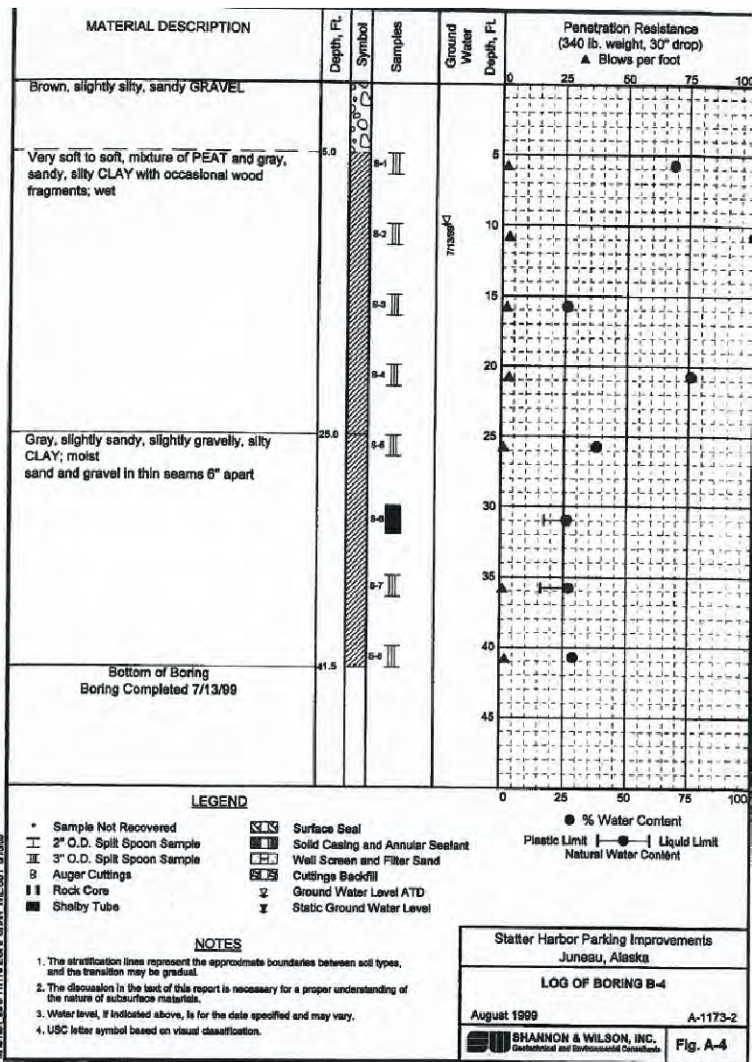
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BOREHOLE SW B-3



BOREHOLE SW B-4

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BOREHOLE-PND-23

FIGURE B-22
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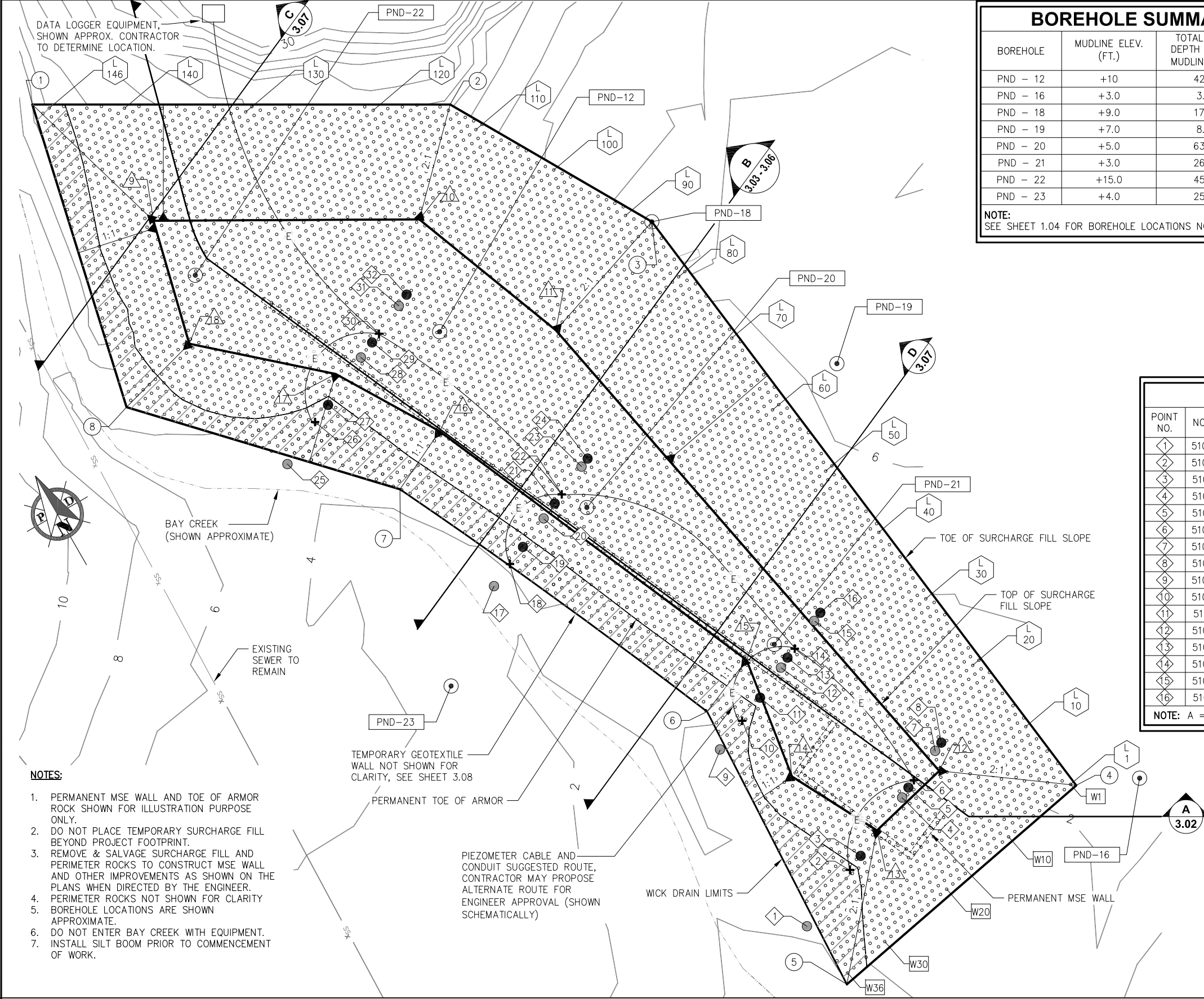
SHEET TITLE:

BOREHOLE LOGS

PND PROJECT NO.: 082015

2.20

SHEET
26 OF 82



- NOTES:**
1. PERMANENT MSE WALL AND TOE OF ARMOR ROCK SHOWN FOR ILLUSTRATION PURPOSE ONLY.
 2. DO NOT PLACE TEMPORARY SURCHARGE FILL BEYOND PROJECT FOOTPRINT.
 3. REMOVE & SALVAGE SURCHARGE FILL AND PERIMETER ROCKS TO CONSTRUCT MSE WALL AND OTHER IMPROVEMENTS AS SHOWN ON THE PLANS WHEN DIRECTED BY THE ENGINEER.
 4. PERIMETER ROCKS NOT SHOWN FOR CLARITY
 5. BOREHOLE LOCATIONS ARE SHOWN APPROXIMATE.
 6. DO NOT ENTER BAY CREEK WITH EQUIPMENT.
 7. INSTALL SILT BOOM PRIOR TO COMMENCEMENT OF WORK.

BOREHOLE SUMMARY TABLE

BOREHOLE	MUDLINE ELEV. (FT.)	TOTAL HOLE DEPTH BELOW MUDLINE (FT.)	BEDROCK/REFUSAL ELEV. (FT. MLLW)
PND - 12	+10	42.0	NOT ENCOUNTERED
PND - 16	+3.0	3.5	-0.5
PND - 18	+9.0	17.0	-8.0
PND - 19	+7.0	8.0	-1.0
PND - 20	+5.0	63.0	-58.0
PND - 21	+3.0	26.5	-23.5
PND - 22	+15.0	45.0	-30.0
PND - 23	+4.0	25.5	-21.5

NOTE:
SEE SHEET 1.04 FOR BOREHOLE LOCATIONS NOT SHOWN

LAYOUT TABLE

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
①	511138.84	484838.58	12.0	TOE OF SLOPE, M.E.
②	511058.14	484970.42	18.0	TOE OF SLOPE, M.E.
③	510982.19	485011.41	10.0	TOE OF SLOPE, M.E.
④	510722.39	485036.48	2.5	TOE OF SLOPE, M.E.
⑤	510703.93	484925.68	0.0	TOE OF SLOPE, M.E.
⑥	510817.09	484934.20	2.0	TOE OF SLOPE, M.E.
⑦	510946.46	484880.28	5.0	TOE OF SLOPE, M.E.
⑧	511025.15	484809.87	7.0	TOE OF SLOPE, M.E.
⑨	511078.78	484854.35	40.5	TOP OF SURCHARGE
⑩	511027.84	484938.52	39.5	TOP OF SURCHARGE
⑪	510966.52	484960.16	37.0	TOP OF SURCHARGE
⑫	510753.46	484996.03	28.0	TOP OF SURCHARGE
⑬	510746.67	484964.89	29.0	TOP OF SURCHARGE
⑭	510780.06	484948.50	30.0	TOP OF SURCHARGE
⑮	510825.61	484956.65	32.0	TOP OF SURCHARGE
⑯	510957.10	484904.00	37.8	TOP OF SURCHARGE
⑰	510995.22	484882.28	39.0	TOP OF SURCHARGE
⑱	511033.05	484841.91	40.0	TOP OF SURCHARGE

INSTRUMENTATION

POINT NO.	NORTHING	EASTING	DESCRIPTION	POINT NO.	NORTHING	EASTING	DESCRIPTION
①	510729.94	484924.29	INCLINOMETER	①⑦	510897.72	484891.23	INCLINOMETER
②	510739.42	484948.75	PIEZOMETER	①⑧	510901.60	484900.56	PIEZOMETER
③	510741.79	484954.84	SETTLEMENT PLATE, A	①⑨	510904.49	484907.92	SETTLEMENT PLATE, A
④	510752.18	484979.16	INCLINOMETER	②⑦	510909.49	484919.97	INCLINOMETER
⑤	510754.12	484983.08	SETTLEMENT PLATE, B	②⑧	510912.06	484926.36	SETTLEMENT PLATE, B
⑥	510755.37	484986.27	PIEZOMETER	②⑨	510913.56	484930.35	PIEZOMETER
⑦	510760.52	484998.62	INCLINOMETER	③⑦	510918.51	484941.94	INCLINOMETER
⑧	510761.93	485002.13	SETTLEMENT PLATE, A	③⑧	510919.87	484945.41	SETTLEMENT PLATE, A
⑨	510802.53	484930.99	INCLINOMETER	③⑨	510976.11	484849.61	INCLINOMETER
⑩	510807.30	484943.53	PIEZOMETER	④⑦	510984.05	484866.49	PIEZOMETER
⑪	510811.12	484953.64	SETTLEMENT PLATE, A	④⑧	510986.93	484873.87	SETTLEMENT PLATE, A
⑫	510816.58	484966.03	INCLINOMETER	④⑨	510995.58	484893.42	INCLINOMETER
⑬	510818.46	484970.01	SETTLEMENT PLATE, B	⑤⑦	510998.14	484899.81	SETTLEMENT PLATE, B
⑭	510819.87	484974.04	PIEZOMETER	⑤⑧	510999.56	484903.70	PIEZOMETER
⑮	510819.87	484974.04	INCLINOMETER	⑥⑦	511004.50	484915.33	INCLINOMETER
⑯	510824.91	484985.53	SETTLEMENT PLATE, A	⑥⑧	511006.56	484919.94	SETTLEMENT PLATE, A

NOTE: A = TYPE A, B = TYPE B

LEGEND

- PND-08
- PND, INC. - 2011, 2012 AND 2013 (BOREHOLES DRILLED AS PART OF THIS INVESTIGATION)
- 3' O.C. TRIANGULAR/STAGGERED PATTERN AREA FOR WICK DRAIN INSTALLATION (TOTAL 5,508)
- WICK DRAINS BEYOND TOE OF PERMANENT ARMOR ROCK, 3' O.C. TRIANGULAR/STAGGERED PATTERN
- SETTLEMENT PLATE
- INCLINOMETER
- PIEZOMETER
- WICK DRAIN LIMIT/ TOE OF SURCHARGE FILL
- TOP OF SURCHARGE FILL
- WICK DRAIN NUMBER SYSTEM**
- L 100 LINE NUMBER
- W1 WICK DRAIN NUMBER



REVISIONS				
REV.	DATE	DESCRIPTION	DWN.	CKD.

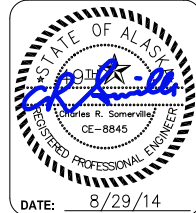
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ENGINEERS, INC.

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Juneau, Alaska 99801
Phone: 907-586-2093
Fax: 907-586-2099
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DESIGN: PLR
DRAWN: KLL

CHECKED: CRS
APPROVED: CRS

SCALE: 1" = 40 FT.
0 20 40



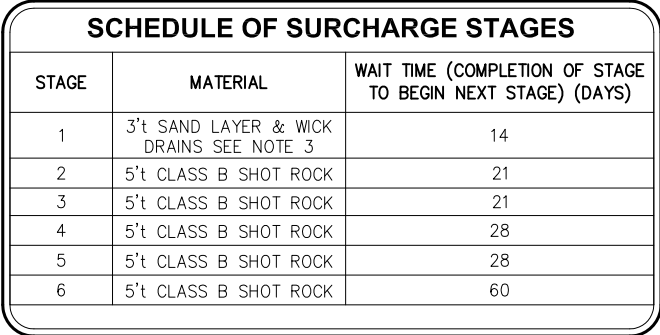
CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
SOFT GROUND MODIFICATIONS AND WICK DRAIN LIMITS

PND PROJECT NO.: 082015

DATE: 8/29/14

3.01
SHEET
27 OF 82



NOTE:

1. EXCAVATION AT PERMANENT MSE RETAINING WALL NOT SHOWN FOR CLARITY
2. HORIZONTAL SCALE EQUALS VERTICAL SCALE
3. SOIL AND BEDROCK CONDITIONS SHOWN ARE INFERRED FROM BOREHOLES AND ARE SUBJECT TO VARIATION THROUGHOUT THE PROJECT AREA.

SURCHARGE NOTES:

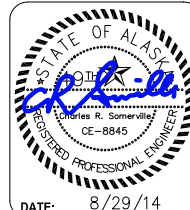
1. WAIT TIMES ARE ESTIMATED AND SHALL BE ADHERED TO UNLESS OTHERWISE ALLOWED BY THE ENGINEER. VERIFICATION W/ SETTLEMENT AND PORE WATER PRESSURE MONITORING IS REQUIRED.
2. SUBSEQUENT STAGES MAY BE PLACED SOONER IF APPROVED BY ENGINEER.
3. WAIT TIME FOR SURCHARGE STAGE 1 BEGINS WHEN THE 3' SAND LAYER AND ALL WICK DRAINS HAVE BEEN INSTALLED.
4. INCLINOMETER CASING, PIEZOMETERS AND SETTLEMENT PLATES SHALL BE INSTALLED PRIOR TO PLACEMENT OF STAGE 2.
5. A 1'-0" THICK LAYER OF SAND MATERIAL, PLYWOOD OR MATS SHALL BE UTILIZED BETWEEN THE WICK DRAINS (TO PROTECT THE WICK DRAINS) AND THE DRILLING EQUIPMENT WHILE ACCESSING THE INSTRUMENTATION LOCATIONS FOR INSTALLATION. (INCIDENTAL)

[illegible]

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SCALE: SCALE IN FEET

0 20 40 FT.



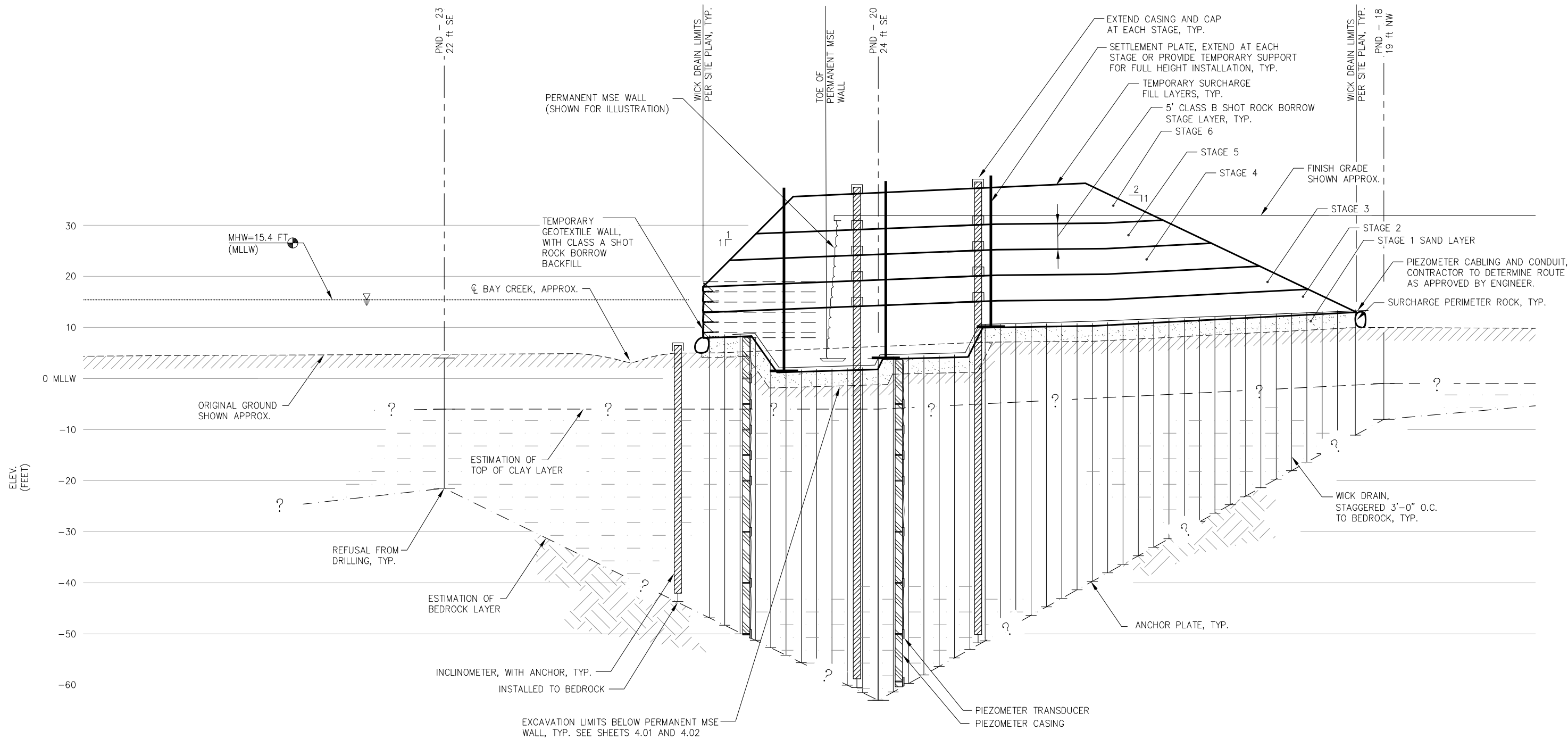
CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

**SHEET TITLE: SOFT GROUND MODIFICATIONS
SURCHARGE STAGES
AND WICK DRAIN SECTION**

PND PROJECT NO.: 082015

.02

SHEET
OF 82



B 3.01 SURCHARGE AND WICK DRAIN TYPICAL SECTION

NOTE:
SOIL AND BEDROCK CONDITIONS SHOWN ARE INFERRED FROM BOREHOLES AND ARE SUBJECT TO VARIATION THROUGHOUT THE PROJECT AREA.

NOTE:
HORIZONTAL SCALE EQUALS VERTICAL SCALE



REVISIONS					
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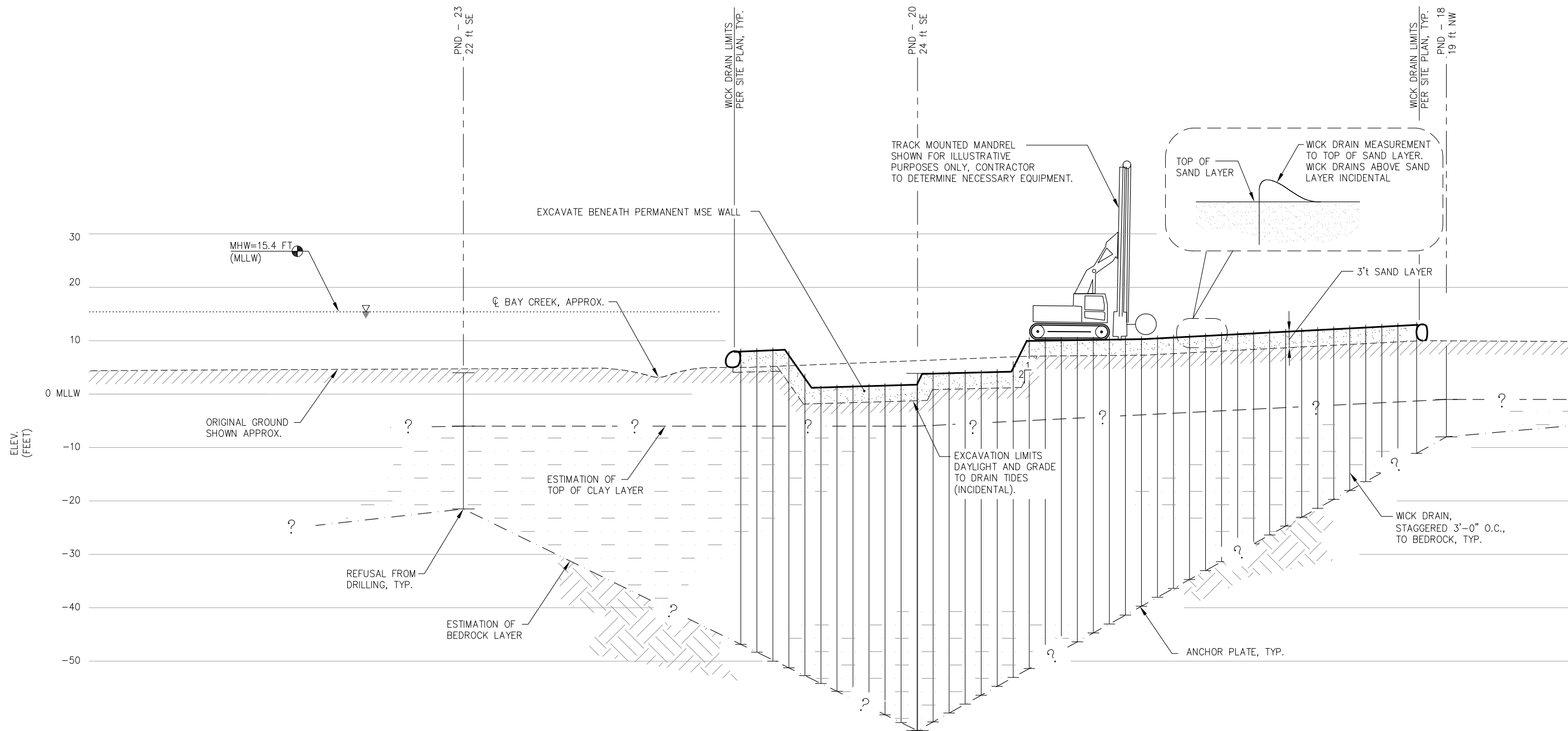


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE: **SOFT GROUND MODIFICATIONS SURCHARGE, WICK DRAIN AND INSTRUMENTATION TYPICAL SECTION**

PND PROJECT NO.: 082015

3.03
SHEET
29 OF 82



B
3.01 **SURCHARGE AND WICK DRAIN - STAGE 1**
TYPICAL SECTION

NOTE:
SOIL AND BEDROCK CONDITIONS SHOWN ARE INFERRED FROM BOREHOLES AND ARE SUBJECT TO VARIATION
THROUGHOUT THE PROJECT AREA.

NOTE:
1. HORIZONTAL SCALE EQUALS VERTICAL SCALE
2. INSTRUMENTATION TO BE INSTALLED AFTER WICK DRAINS.



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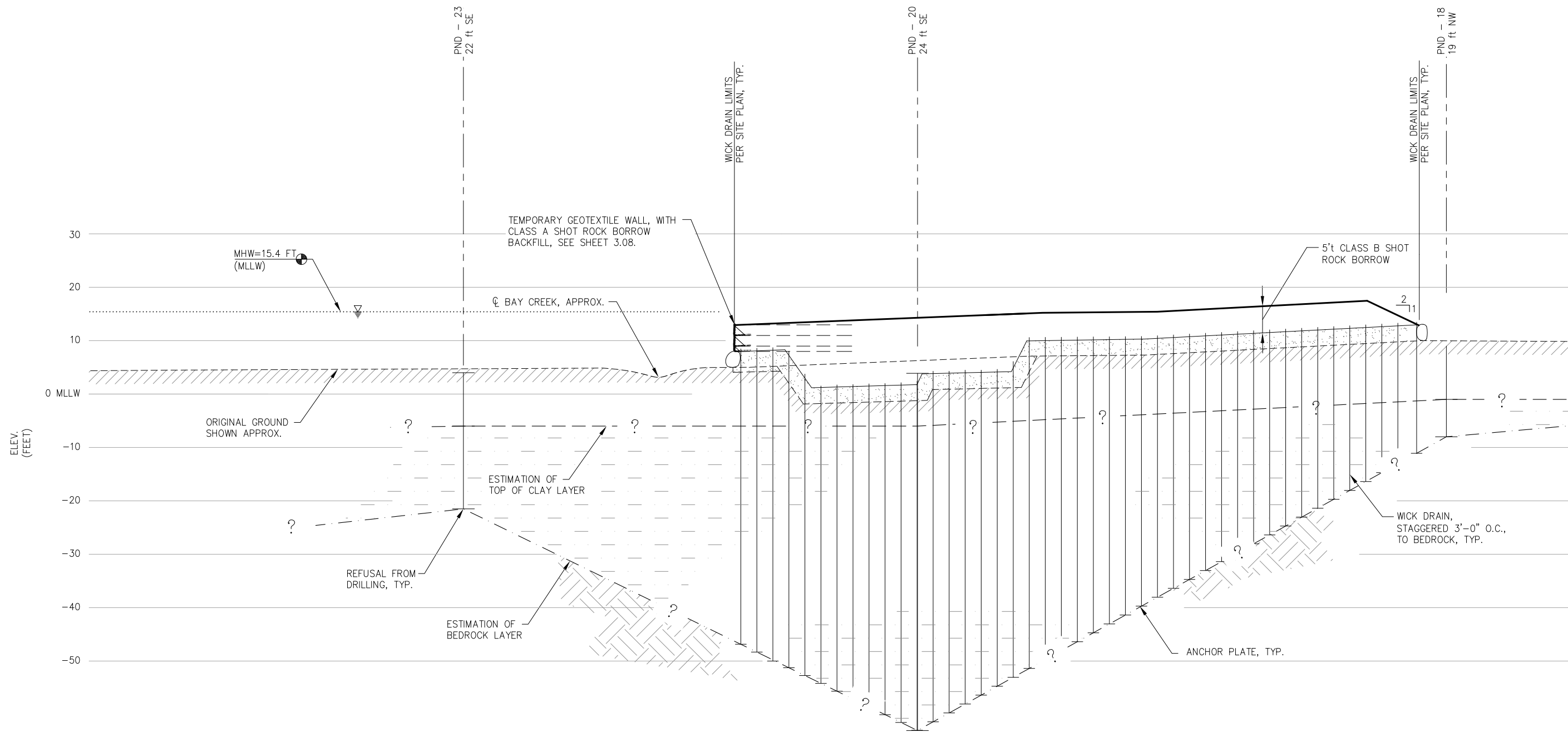


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CONTRACT NO. DH14-014

SHEET TITLE: **SOFT GROUND MODIFICATIONS**
SURCHARGE STAGE 1
AND WICK DRAIN SECTION

PND PROJECT NO.: 082015

3.04
SHEET
30 OF 82



B
3.01 **SURCHARGE AND WICK DRAIN - STAGE 2**
TYPICAL SECTION

NOTE:
SOIL AND BEDROCK CONDITIONS SHOWN ARE INFERRED FROM BOREHOLES AND ARE SUBJECT TO VARIATION
THROUGHOUT THE PROJECT AREA.

NOTE:
1. HORIZONTAL SCALE EQUALS VERTICAL SCALE
2. INSTRUMENTATION NOT SHOWN



REVISIONS					
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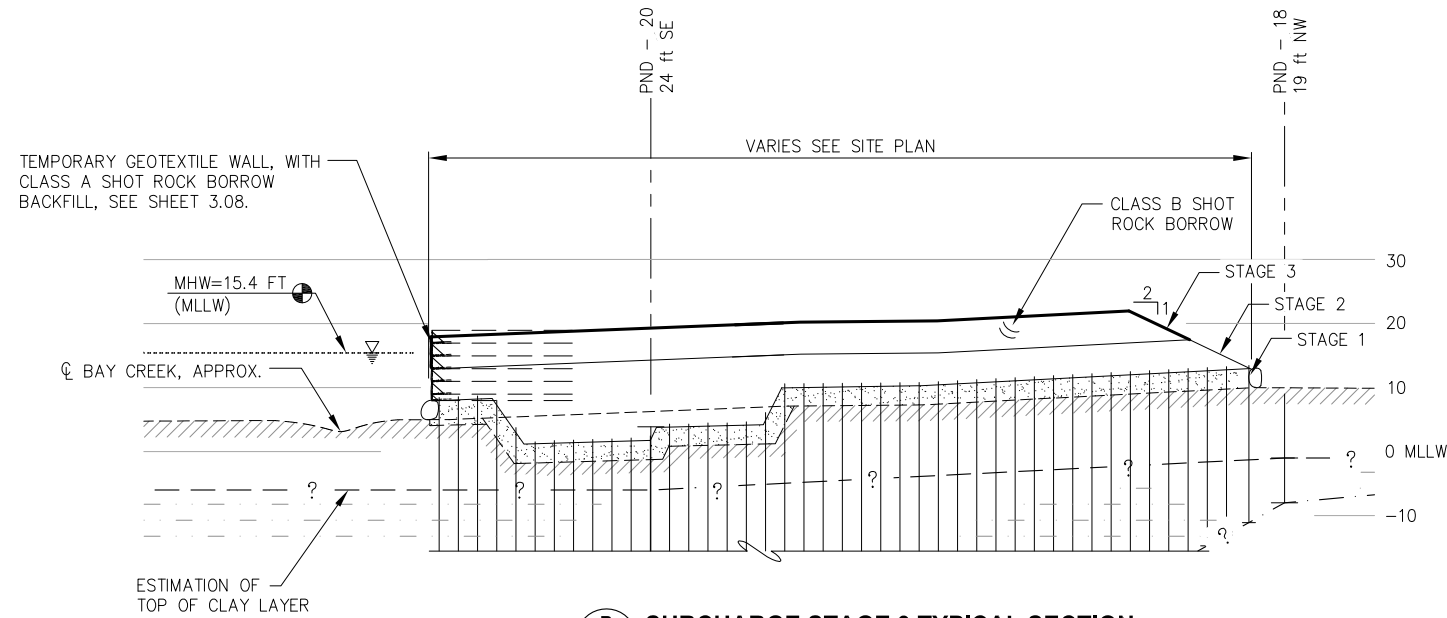


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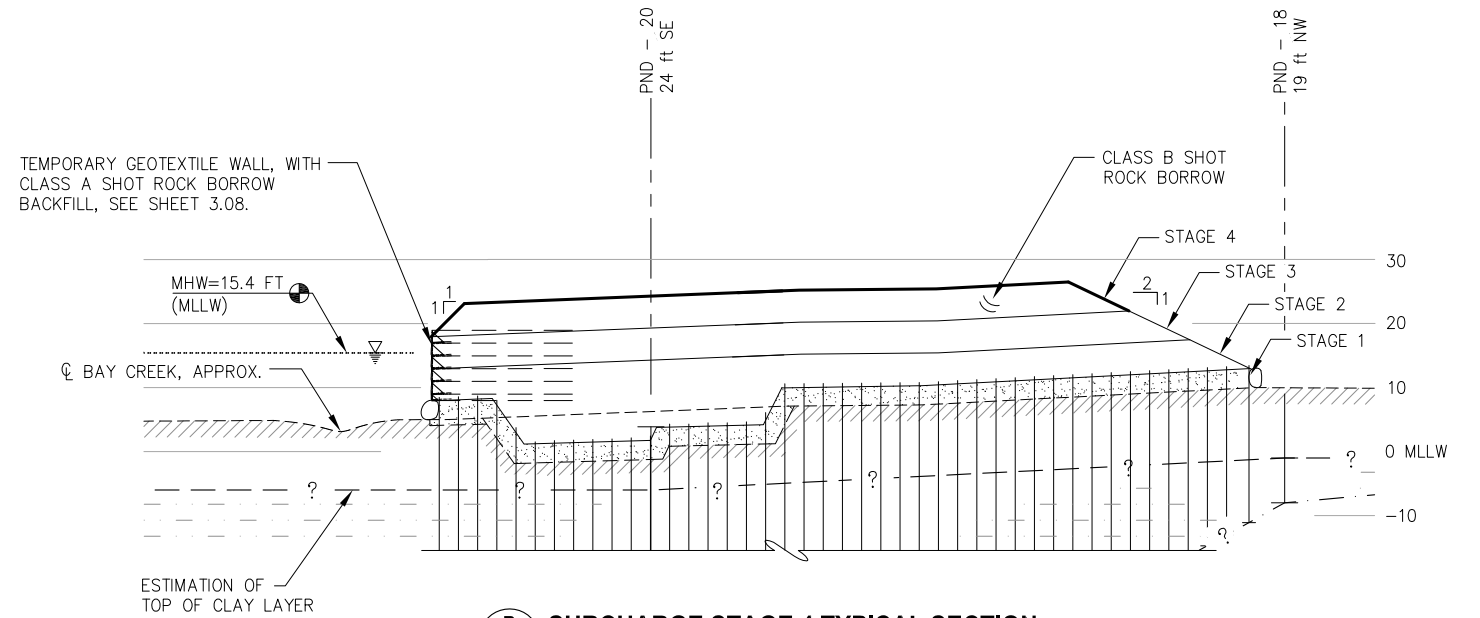
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SURCHARGE STAGE 2
AND WICK DRAIN SECTION**

PND PROJECT NO.: 082015

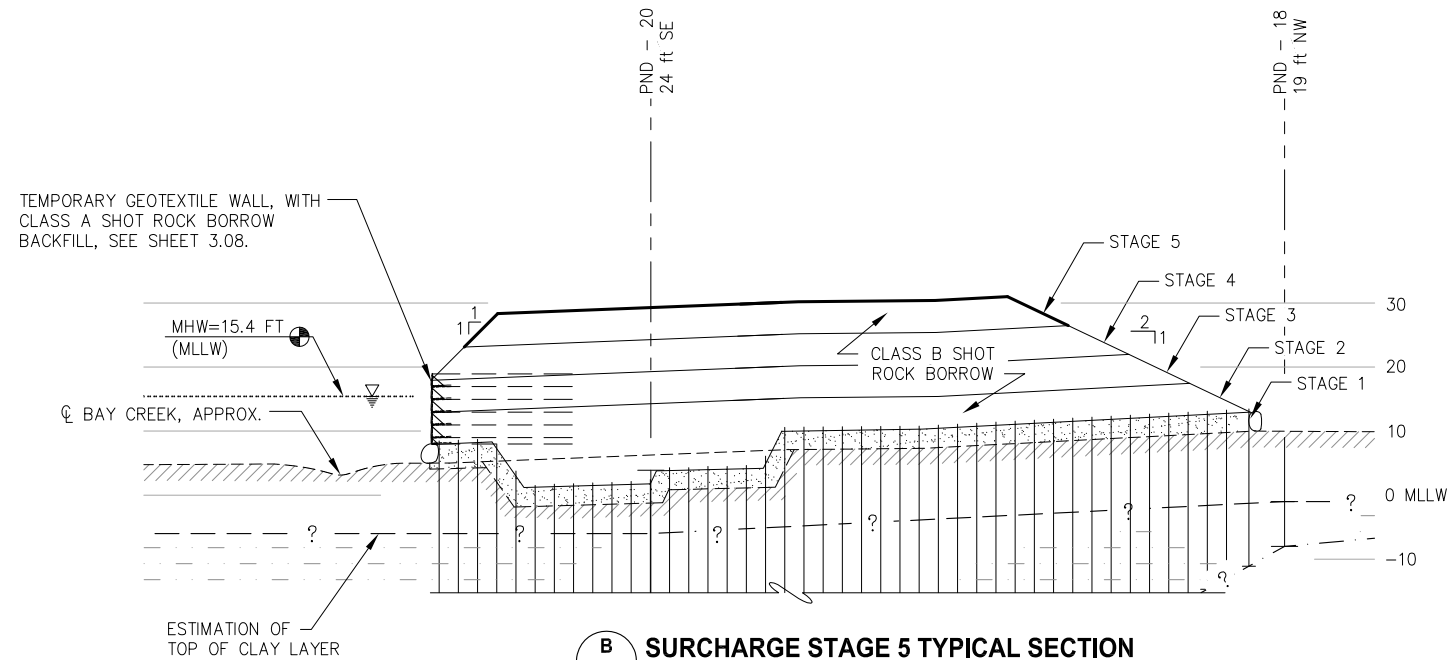
3.05
SHEET
31 OF 82



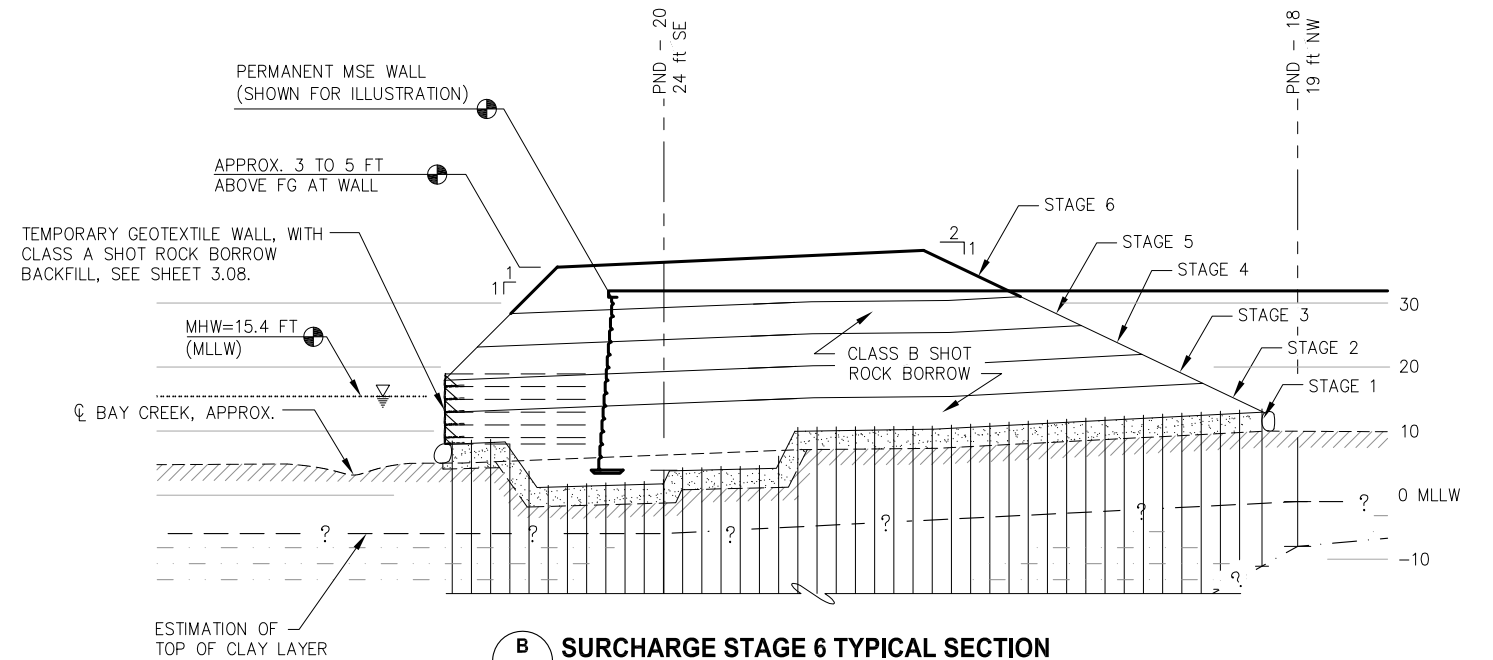
B
3.01 SURCHARGE STAGE 3 TYPICAL SECTION



B
3.01 SURCHARGE STAGE 4 TYPICAL SECTION



B
3.01 SURCHARGE STAGE 5 TYPICAL SECTION



B
3.01 SURCHARGE STAGE 6 TYPICAL SECTION

NOTE:

SOIL AND BEDROCK CONDITIONS SHOWN ARE INFERRED FROM BOREHOLES AND ARE SUBJECT TO VARIATION THROUGHOUT THE PROJECT AREA.

NOTE:

1. PERMANENT MSE WALL SHOWN FOR ILLUSTRATION PURPOSE ONLY & SHALL NOT BE CONSTRUCTED UNTIL SURCHARGE WAIT PERIOD IS COMPLETE PER ENGINEER DIRECTION.
2. DETAILS SHOWN REFERENCE SEQUENTIAL PHASES OF A SIMILAR SECTION.
3. INSTRUMENTATION NOT SHOWN FOR FOR CLARITY.



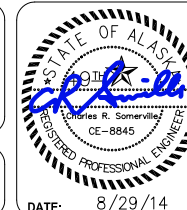
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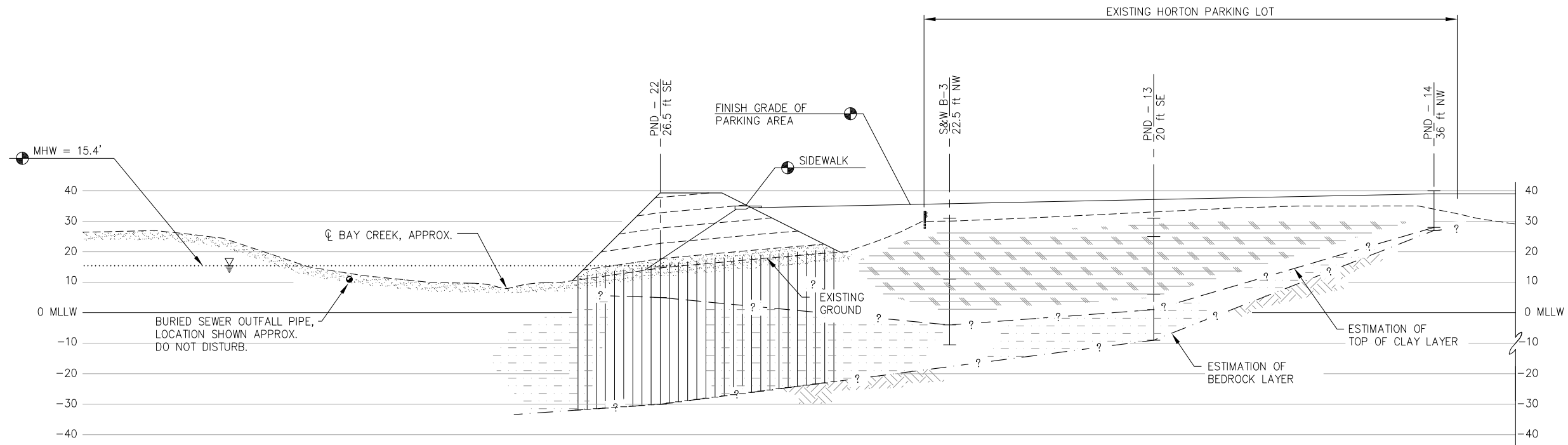


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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

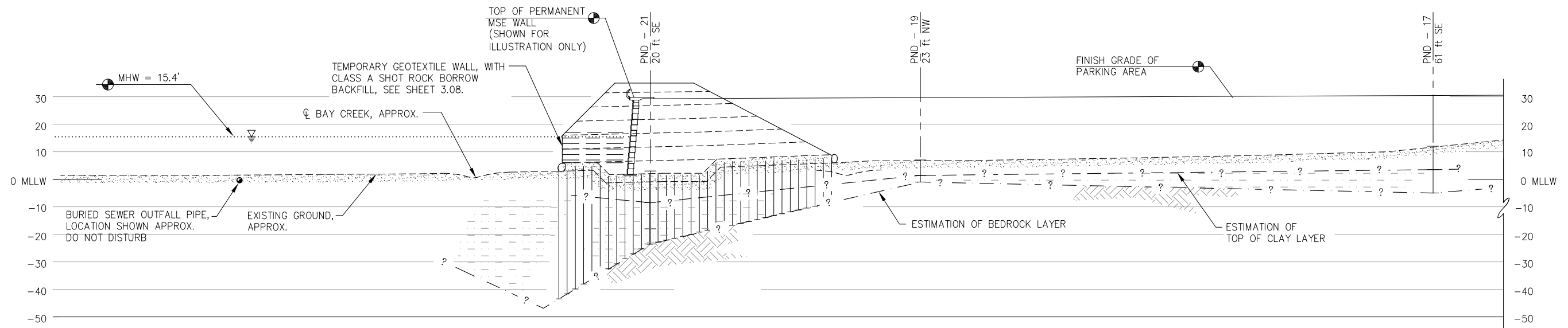
SHEET TITLE: **SOFT GROUND MODIFICATIONS SURCHARGE STAGES 3-6**

PND PROJECT NO.: 082015

3.06
SHEET
32 OF 82



C
3.01
PARKING AREA SECTION



D
3.01
**TEMPORARY RETAINING WALL, MSE WALL
AND PARKING AREA SECTION**

NOTES:

1. SEE BOREHOLE LOGS FOR DETAILED SOIL AND ROCK DESCRIPTIONS.
2. SOIL AND BEDROCK CONDITIONS ARE SUBJECT TO VARIATION THROUGHOUT THE INVESTIGATION AREA AND ARE INFERRED FROM BOREHOLES.



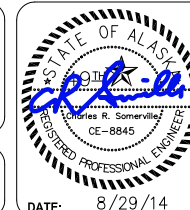
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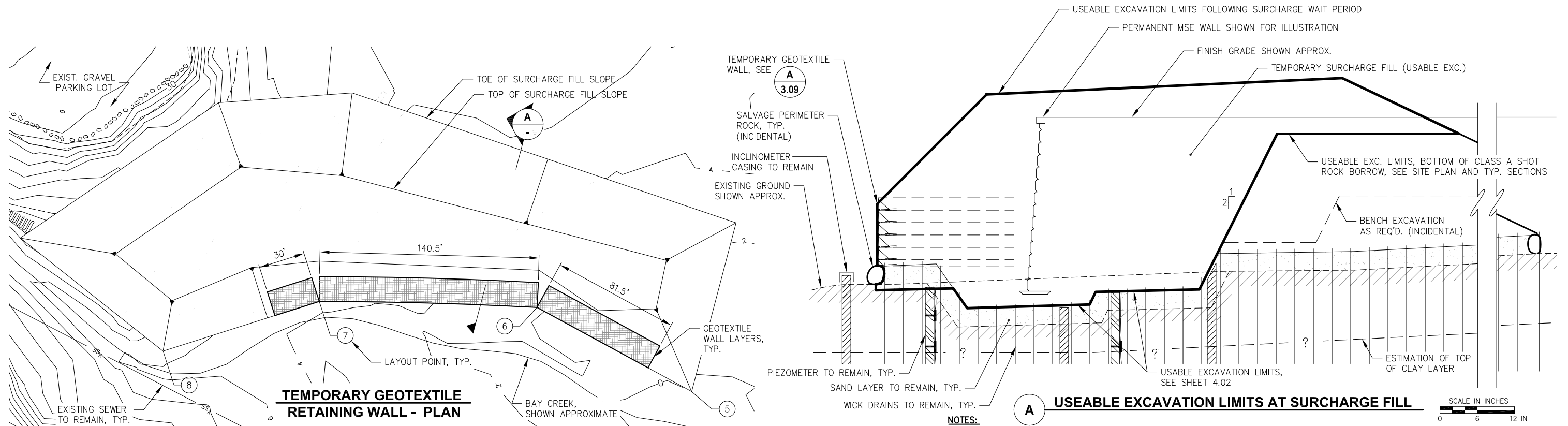
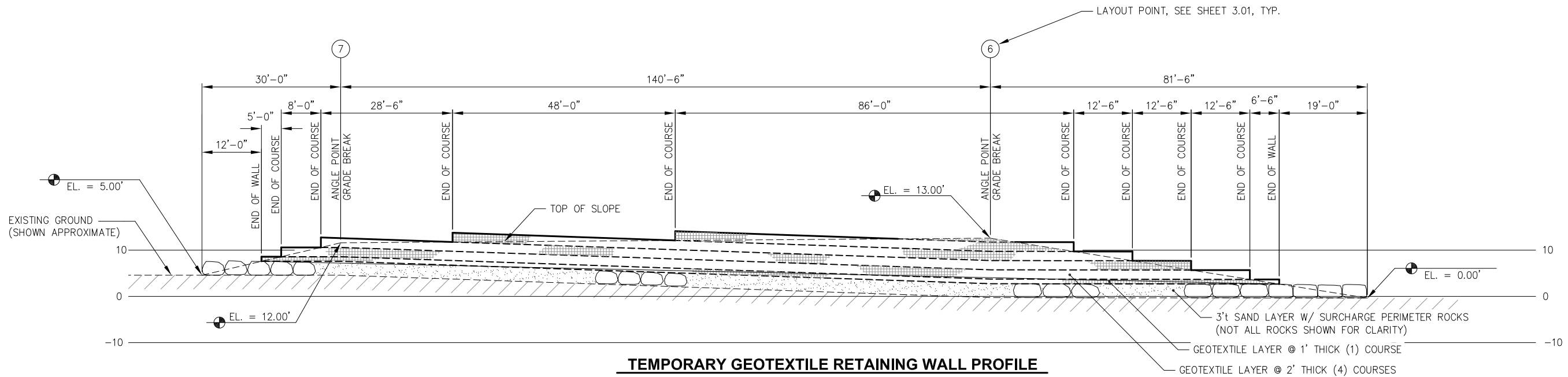
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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE: **SOFT GROUND MODIFICATIONS
TYPICAL SECTIONS**

PND PROJECT NO.: 082015

3.07
SHEET
33 OF 82



- USEABLE EXCAVATION LIMITS AT SURCHARGE FILL**
- NOTES:**
1. USEABLE EXCAVATION LIMITS FOR ARMOR ROCK SLOPES AND OTHER IMPROVEMENTS NOT SHOWN. CONTRACTOR SHALL EXCAVATE TO THE MINIMUM DEPTH REQUIRED TO CONSTRUCT PERMANENT IMPROVEMENTS (APPROX. 20,000 CUBIC YARDS OF USEABLE EXCAVATION ANTICIPATED). OVER EXCAVATION AND BENCH EXCAVATION FOR EQUIPMENT, ACCESS AND SLOPE STABILITY SHALL NOT BE MEASURED FOR PAYMENT AND SHALL BE CONSIDERED INCIDENTAL.
 2. THE CONTRACTOR SHALL SURVEY THE SURCHARGE FILL BEFORE AND AFTER EXCAVATION.
 3. REMOVAL AND DISPOSAL OF SETTLEMENT PLATES, INCLINOMETER CASING, PIEZOMETER CONDUIT AND TEMPORARY WALL REINFORCEMENT WITHIN THE USEABLE EXCAVATION LIMITS IS CONSIDERED INCIDENTAL & SHALL NOT BE MEASURED FOR PAYMENT.
 4. BACKFILL INCLINOMETER CASING WITH SAND TO USEABLE EXCAVATION LIMITS (INCIDENTAL).



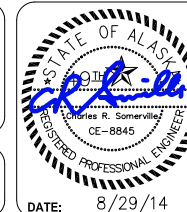
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REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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SCALE:
AS SHOWN



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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE: **SOFT GROUND MODIFICATIONS**
TEMPORARY GEOTEXTILE
RETAINING WALL

PND PROJECT NO.: 082015

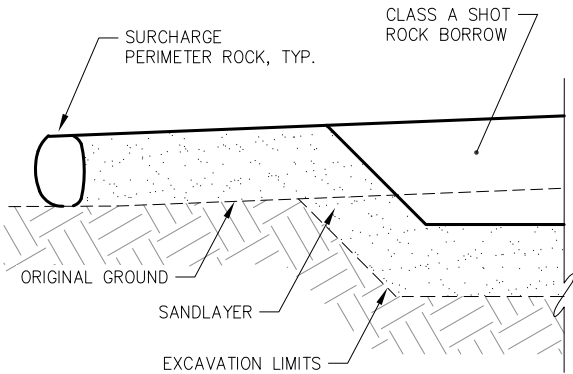
3.08
SHEET
34 OF 82

SAMPLE CONSTRUCTION PLAN

THE SAMPLE PLAN ILLUSTRATED BELOW IS FOR INFORMATION ONLY AND DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR SUBMITTING A CONSTRUCTION PLAN FOR ENGINEER REVIEW.

STEP 1:

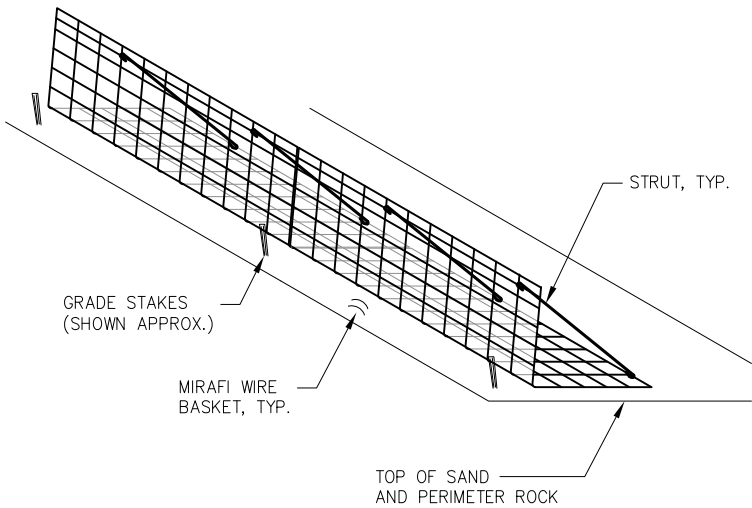
- EXCAVATE FOR PERMANENT MSE WALL PER TYPICAL SECTION, PLACE 3' THICK LAYER OF SAND, COMPLETE STAGE 1 SURCHARGE FILL INCLUDING WICK DRAINS, INSTRUMENTATION AND CLASS A SHOT ROCK BORROW TO A LENGTH ADEQUATE FOR GEOTEXTILE REINFORCEMENT EMBEDMENT.
- SET GRADING STAKES PER MANUFACTURES RECOMMENDATIONS BETWEEN PERIMETER ROCKS.



NOTE: WICK DRAINS NOT SHOWN FOR CLARITY.

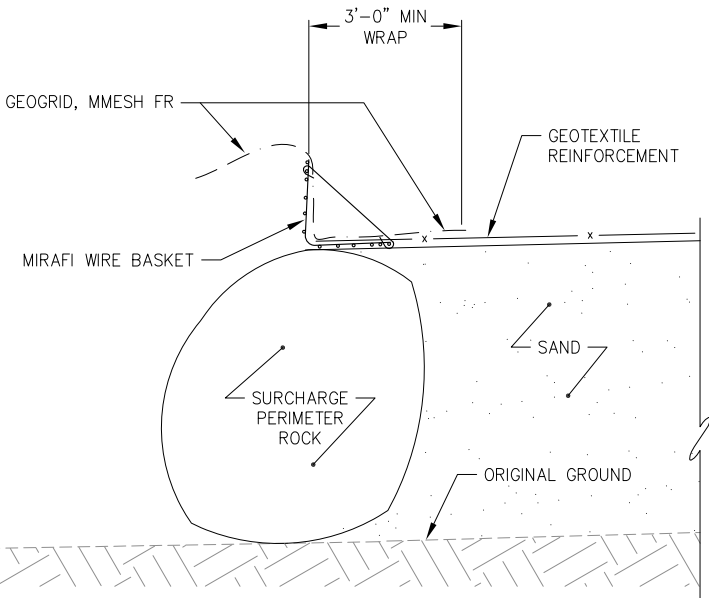
STEP 2:

- FOR THE FIRST COURSE OF THE WALL, ALIGN BASKETS WITHOUT SPACES AND HOG RING TOGETHER
- INSTALL STRUTS AT 24" SPACINGS, TYP.



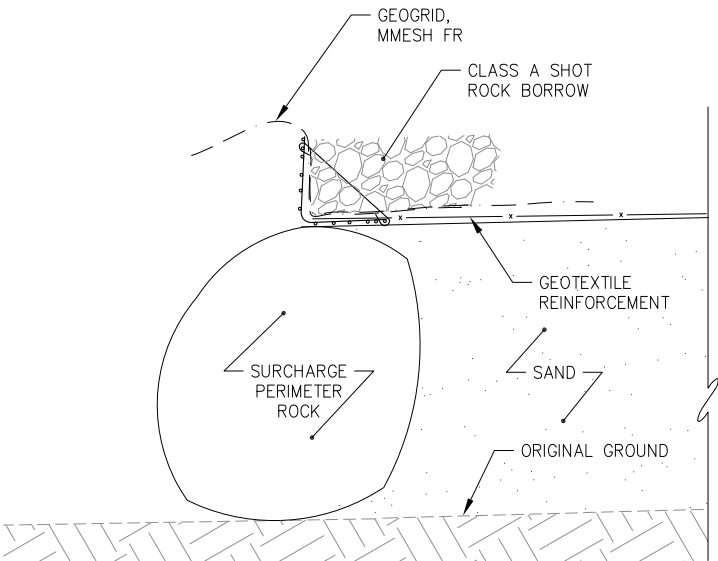
STEP 3:

- PLACE GEOTEXTILE REINFORCEMENT AT ELEVATIONS SHOWN ON WALL PROFILE DRAWING. CUT AND TRIM GEOTEXTILE TO ACCOMMODATE INSTRUMENTATION AS REQ'D.
- DRAPE MMESH GEOGRID OVER BASKET ALLOWING FOR THE REQUIRED WRAP EMBEDMENT



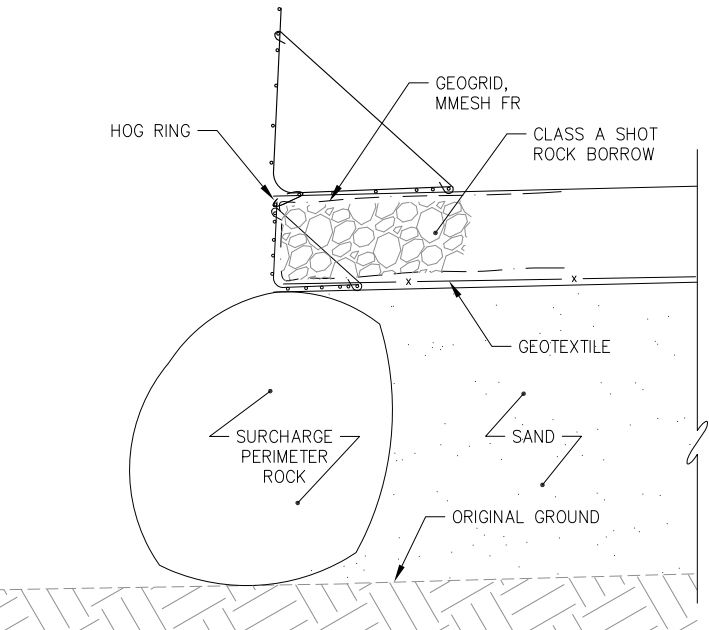
STEP 4:

- BACKFILL CAREFULLY TO ABOUT 1"-2" ABOVE THE TOP HORIZONTAL BASKET WIRE OR AS REQUIRED BY THE ENGINEER
- COMPACT TO REQUIRED DENSITY.



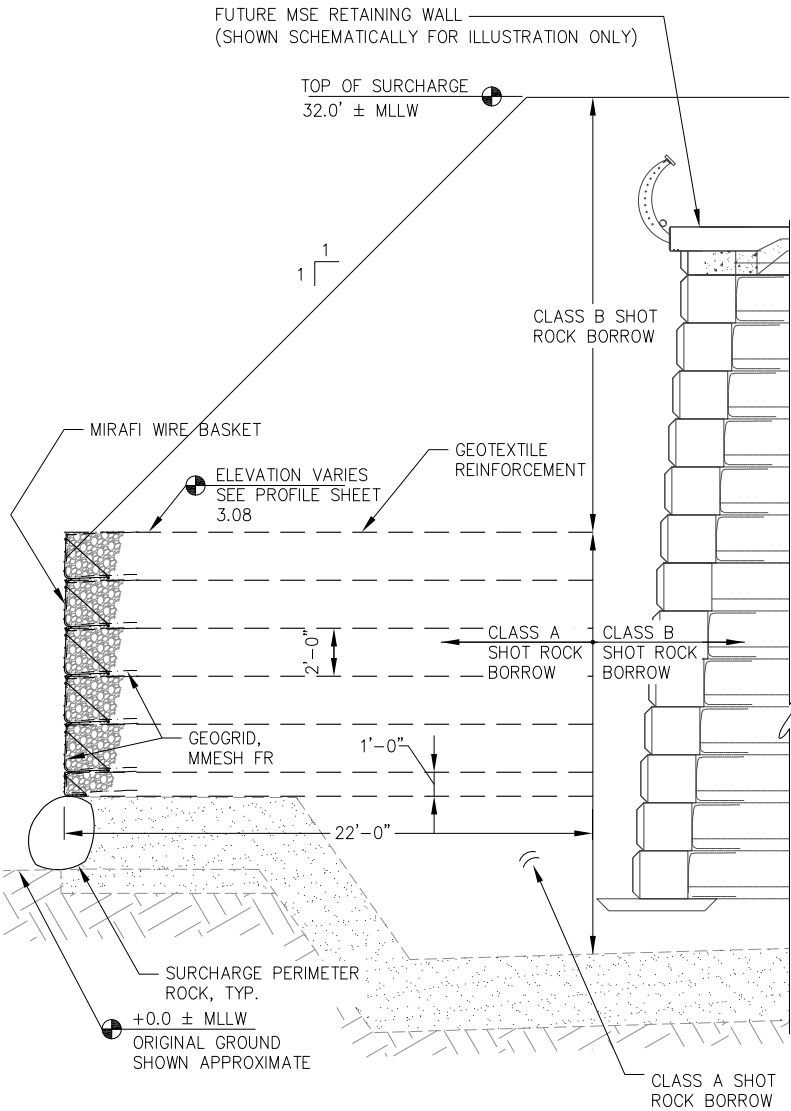
STEP 5:

- PULL MMESH BACK OVER COMPACTED FILL.
- SLIDE THE NEXT BASKET BACK AGAINST THE PRONGS OF THE LOWER MAT AND HOG RING USING RUNNING BOND (STAGGERED)
- INSTALL HOG RINGS AND STRUTS TO SECOND LIFT.



STEP 6:

- REPEAT STEPS 2 THRU 5 UNTIL DESIRED HEIGHT OF WALL IS REACHED.
- COMPLETE STAGE 1 SURCHARGE FILL FOR ENTIRE WALL LENGTH PRIOR TO STEP 2.
- ACCOMMODATE REQUIRED STAGES AND DURATIONS FOR THE ENTIRE HEIGHT OF WALL CONSTRUCTION. (SURCHARGE FILL STAGES NOT SHOWN FOR CLARITY)



A 3.08 TEMPORARY GEOTEXTILE WALL
NOTE: WICK DRAINS AND INSTRUMENTATION NOT SHOWN FOR CLARITY.

GENERAL NOTES:

- GEOTEXTILE REINFORCEMENT SHALL BE MIRAFI PET 200 OR APPROVED EQUAL. THE GEOTEXTILE ROLLS SHALL BE TAGGED SHOWING THE NUMBER OF SQUARE YARDS CONTAINED IN THE ROLL. FIELD SEAMS IN GEOTEXTILE WILL NOT BE ALLOWED. GEOTEXTILE MUST BE PROVIDED IN MINIMUM LENGTHS AS SHOWN ON THE PLANS. DURING SHIPMENT, STORAGE, AND PLACEMENT, THE GEOTEXTILE SHALL BE PROTECTED FROM DIRECT SUNLIGHT, MOISTURE, ULTRAVIOLET RAYS, TEMPERATURES GREATER THAN 100°F, MUD, DIRT, DUST AND DEBRIS.
- CARE SHALL BE TAKEN TO ASSURE THAT CUTS OR TEARS DO NOT OCCUR IN THE GEOTEXTILE REINFORCEMENT DURING PLACEMENT OR DURING BACKFILL. IF TEARS OR CUTS OCCUR AT ANY TIME DURING CONSTRUCTION OF THE WALL, THE SECTION OF DAMAGED GEOTEXTILE REINFORCEMENT SHALL BE REMOVED AND REPLACED AT NO ADDITIONAL COST.
- EACH LAYER OF WALL CONSTRUCTION SHALL BE COMPLETED ENTIRELY BEFORE BEGINNING THE NEXT LAYER. THE GEOTEXTILE REINFORCEMENT SHALL BE STRETCHED OUT IN THE DIRECTION PERPENDICULAR TO THE WALL FACE TO ENSURE THAT NO SLACK OCCURS IN THE GEOTEXTILE REINFORCEMENT PRIOR TO BACKFILLING. COMPACTION WITHIN FOUR FEET OF WALL FACE SHALL BE ACHIEVED USING A LIGHT MECHANICAL TAMPER APPROVED BY THE ENGINEER AND SHALL BE DONE IN A MANNER AS NOT TO CAUSE DAMAGE OR DISTORTION TO THE WALL FACING ELEMENTS OR GEOTEXTILE REINFORCING LAYERS.
- GEOTEXTILE REINFORCEMENT SHALL BE PLACED SMOOTH WITH NO BUNCHING DUE TO MISALIGNMENT. GEOTEXTILE REINFORCEMENT SHALL BE PLACED AND HELD TAUT WHILE THE SPECIFIED COVER MATERIAL IS PLACED OVER GEOTEXTILE REINFORCEMENT.
- THE CONTRACTOR SHALL SUBMIT A WALL CONSTRUCTION PLAN FOR APPROVAL BY THE ENGINEER. THE CONTRACTOR SHALL MONITOR WALL POSITION AT VARIOUS WALL HEIGHTS DURING FILL PLACEMENT PER THE SPECIFICATIONS.



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SCALE: AS SHOWN

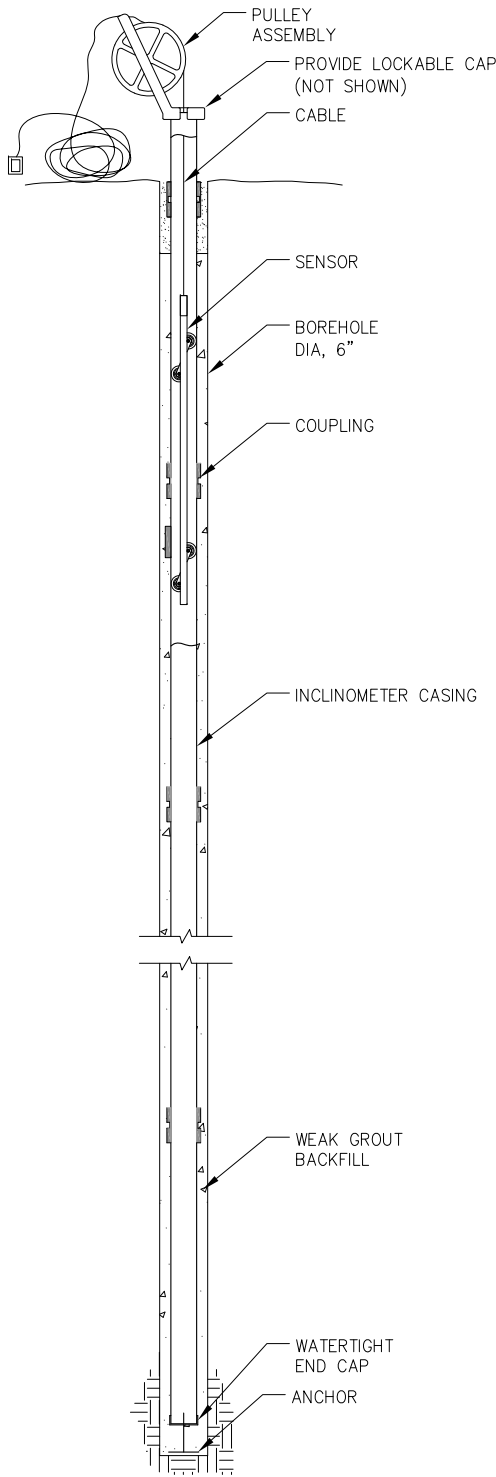


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE: **SOFT GROUND MODIFICATIONS**
TEMPORARY GEOTEXTILE
RETAINING WALL

PND PROJECT NO.: 082015

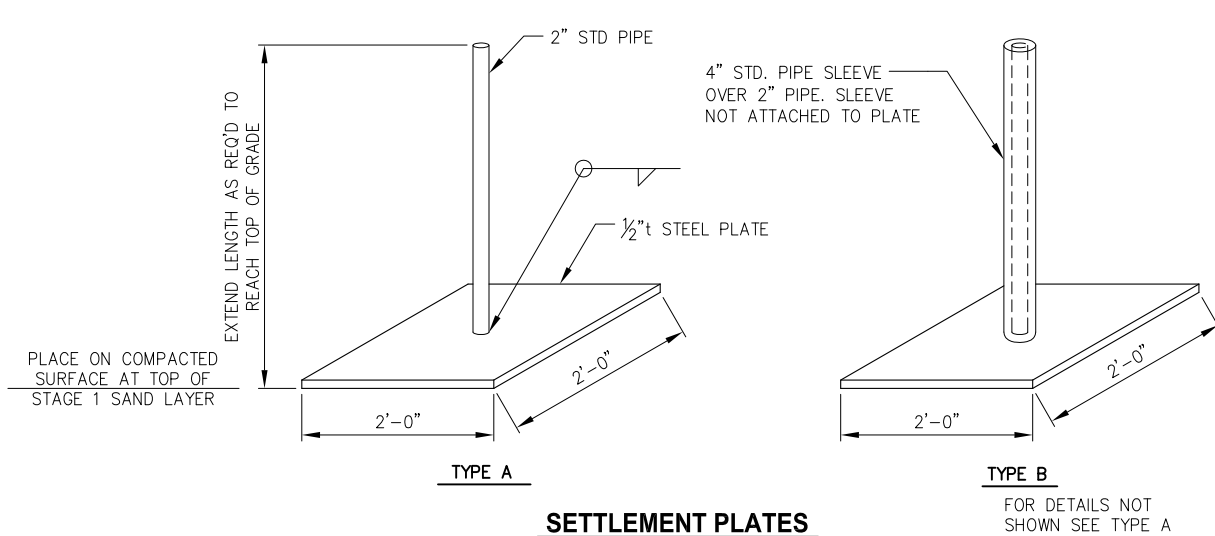
3.09
SHEET
35 OF 82



INCLINOMETER NOTES:

1. INCLINOMETER CASING SHALL BE EXTENDED TO ENSURE THAT THE CASING PROJECT ABOVE THE VARIOUS FILL LEVELS.
2. INCLINOMETER CASING SHALL BE SEALED SUCH THAT GROUT AND DEBRIS CANNOT INFILTRATE.

INCLINOMETER



SETTLEMENT PLATES

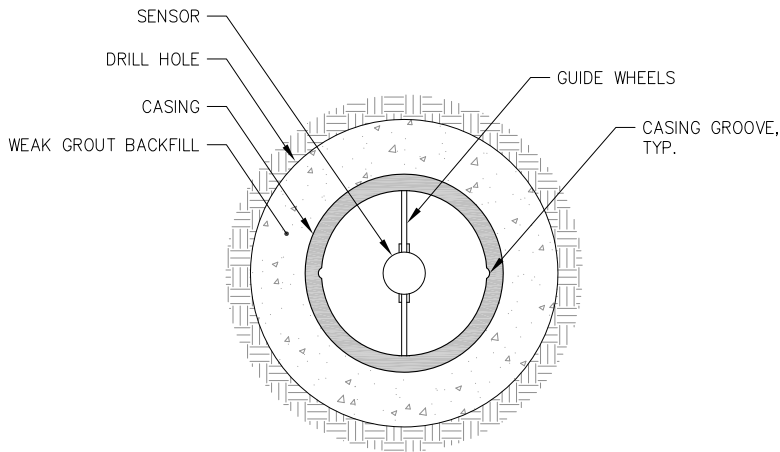
SETTLEMENT MONITORING:

MONITORING POINTS SHALL BE ESTABLISHED AND BASELINE MEASUREMENTS TAKEN BY CONTRACTOR IMMEDIATELY AFTER COMPACTION IS COMPLETE. AFTER BASELINE HAS BEEN ESTABLISHED, THE FOLLOWING MONITORING SCHEDULE SHALL BE FOLLOWED:

1. EVERY DAY DURING SURCHARGE PERIOD
2. OR AS DIRECTED BY THE ENGINEER

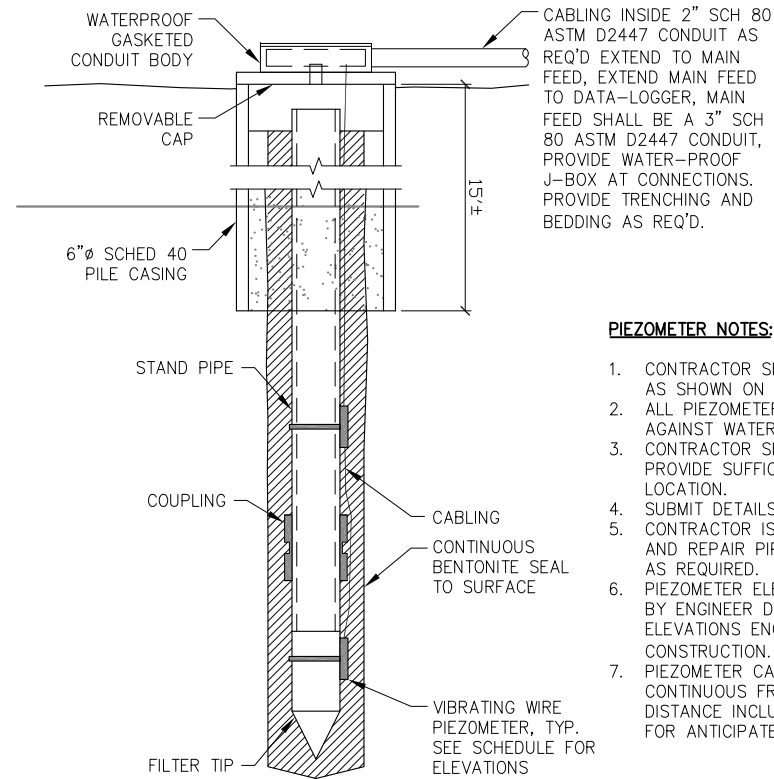
ALL HORIZONTAL AND VERTICAL MONITORING POINT MEASUREMENTS AND SETTLING PLATE MEASUREMENTS SHALL BE MADE USING SURVEY EQUIPMENT WITH 1/100th FOOT ACCURACY. A STATIC VERTICAL AND HORIZONTAL BENCHMARK SHALL BE USED FOR SOIL MEASUREMENTS. BENCHMARK SHALL BE AT LEAST 100 FEET AWAY FROM FILL AREA.

THE CONTRACTOR SHALL PROVIDE ALL MEASUREMENT READINGS TO THE ENGINEER FOR ANALYSIS WITHIN TWO DAYS OF MEASUREMENT. THE READINGS SHALL BE PROVIDED IN A MICROSOFT EXCEL SPREADSHEET WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO, POINT DESCRIPTION LABEL, STATION AND OFFSET FROM PROJECT BASELINE, DAY AND TIME OF READING. BASELINE MEASUREMENT SHALL BE INCLUDED IN SPREADSHEET FOR EACH SUBSEQUENT READING.



INCLINOMETER SECTION

NTS



PIEZOMETER NOTES:

1. CONTRACTOR SHALL PROVIDE PIEZOMETERS AS SHOWN ON THE PLANS.
2. ALL PIEZOMETERS SHALL BE SEALED AGAINST WATER INTRUSION FROM ABOVE.
3. CONTRACTOR SHALL FIELD LOCATE AND PROVIDE SUFFICIENT CONDUIT TO FINAL LOCATION.
4. SUBMIT DETAILS FOR APPROVAL.
5. CONTRACTOR IS RESPONSIBLE TO PROTECT AND REPAIR PIPE, CONDUIT AND CABLING AS REQUIRED.
6. PIEZOMETER ELEVATIONS MAY BE ADJUSTED BY ENGINEER DUE TO ACTUAL BEDROCK ELEVATIONS ENCOUNTERED DURING CONSTRUCTION. (INCIDENTAL)
7. PIEZOMETER CABLES SHALL BE CONTINUOUS FROM DEPTH AND HORIZONTAL DISTANCE INCLUDING 4 FEET OF SLACK FOR ANTICIPATED SETTLEMENT

VIBRATING WIRE PIEZOMETER

NTS

PIEZOMETER SCHEDULE

PT NO.	OG ELEV. (APPROX)	≈ FT. TO CLAY LAYER	≈ FT. TO BEDROCK	VIBRATING WIRE PIEZOMETER ELEVATIONS								
				1	2	3	4	5	6	7	8	9
2	0	10	25	0	-5	-10	-15	-20	-25			
6	2	10	15	2	-3	-8	-13					
10	2	10	27	2	-3	-8	-13	-18	-23			
14	2.5	10	27	2.5	-2.5	-7.5	-12.5	-22.5	-24.5			
18	4.5	12	63	4.5	-0.5	-5.5	-10.5	-15.5	-25.5	-35.5	-45.5	-55.5
22	5.5	12	63	5.5	0.5	-4.5	-9.5	-14.5	-24.5	-34.5	-44.5	-54.5
26	6	10	42	6	1	4	-9	-14	-24	-34		
30	11	10	42	11	6	1	-4	-9	-19	-29		



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CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE: **SOFT GROUND MODIFICATIONS INSTRUMENTATION DETAILS**

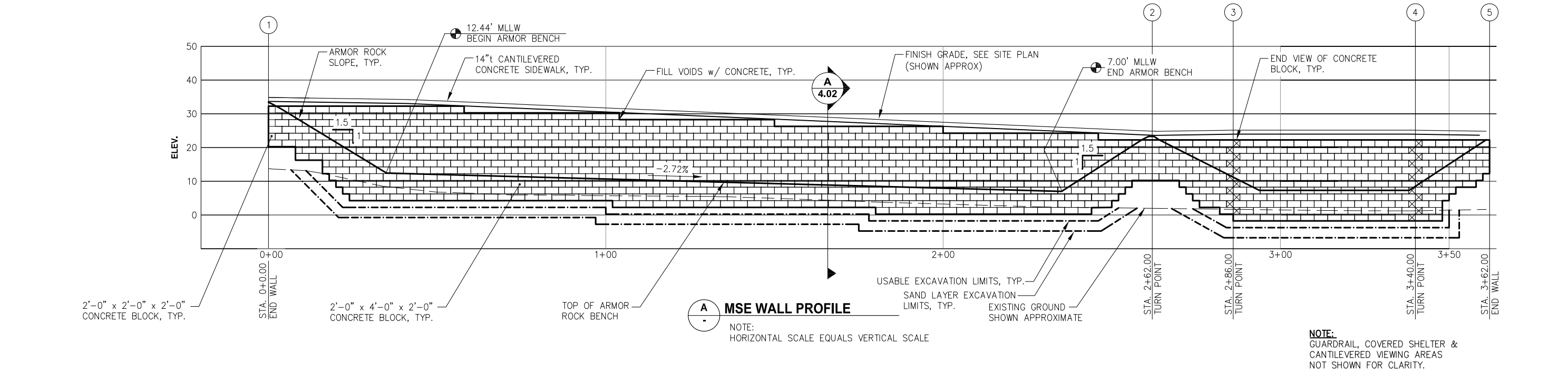
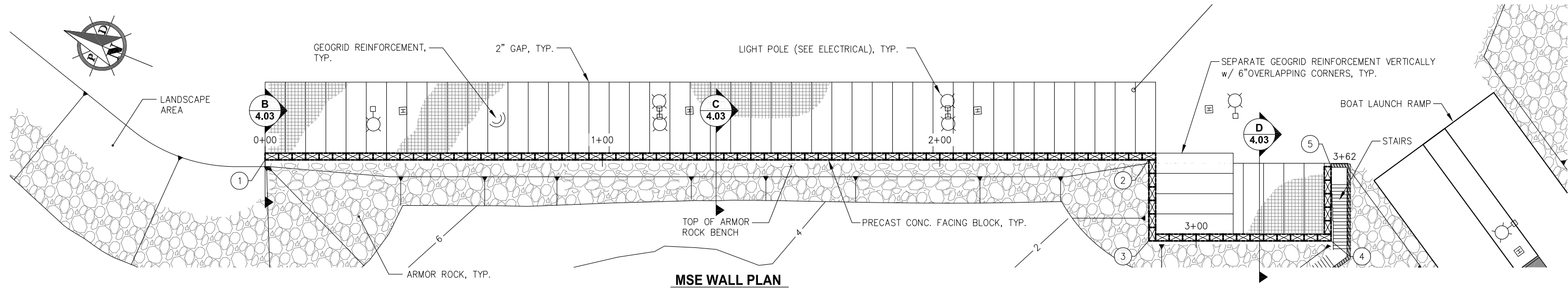
PND PROJECT NO.: 082015

3.10
SHEET
36 OF 82

MSE WALL COURSE STATION AND ELEVATION LAYOUT											
STATION	ELEV.	DESCRIPTION	STATION	ELEV.	DESCRIPTION	STATION	ELEV.	DESCRIPTION	STATION	ELEV.	DESCRIPTION
0+00	20.25	BOTTOM OF WALL, BEGIN 6 COURSES	1+02	2.25	BOTTOM OF WALL, BEGIN 14 COURSES	2+52	4.25	BOTTOM OF WALL, END 9 COURSES	2+82	0.25	BOTTOM OF WALL, BEGIN 11 COURSES
0+08	16.25	BOTTOM OF WALL, BEGIN 8 COURSES	1+04	28.25	TOP OF WALL, BEGIN 13 COURSES	2+54	6.25	BOTTOM OF WALL, END 8 COURSES	2+86	-1.75	BOTTOM OF WALL, BEGIN 12 COURSES
0+16	12.25	BOTTOM OF WALL, BEGIN 10 COURSES	1+50	26.25	TOP OF WALL, BEGIN 12 COURSES	2+56	8.25	BOTTOM OF WALL, END 7 COURSES	3+48	-1.75	BOTTOM OF WALL, END 12 COURSES
0+18	10.25	BOTTOM OF WALL, BEGIN 11 COURSES	1+80	0.25	BOTTOM OF WALL, BEGIN 13 COURSES	2+56	10.25	BOTTOM OF WALL, BEGIN 6 COURSES	3+50	4.25	BOTTOM OF WALL, END 9 COURSES
0+20	8.25	BOTTOM OF WALL, BEGIN 12 COURSES	2+00	24.25	TOP OF WALL, BEGIN 12 COURSES	2+70	8.25	BOTTOM OF WALL, BEGIN 7 COURSES	3+52	6.25	BOTTOM OF WALL, END 8 COURSES
0+22	6.25	BOTTOM OF WALL, BEGIN 13 COURSES	2+44	0.25	BOTTOM OF WALL, END 12 COURSES	2+72	6.25	BOTTOM OF WALL, BEGIN 8 COURSES	3+58	8.25	BOTTOM OF WALL, END 7 COURSES
0+24	4.25	BOTTOM OF WALL, BEGIN 14 COURSES	2+46	24.25	TOP OF WALL, BEGIN 10 COURSES	2+74	4.25	BOTTOM OF WALL, BEGIN 9 COURSES	3+60	10.25	BOTTOM OF WALL, END 6 COURSES
0+58	30.25	TOP OF WALL, BEGIN 13 COURSES	2+50	2.25	BOTTOM OF WALL, END 10 COURSES	2+76	2.25	BOTTOM OF WALL, BEGIN 10 COURSES	3+62	12.25	BOTTOM OF WALL, END 5 COURSES

MSE WALL LAYOUT POINTS				
POINT	NORTHING	EASTING	ELEV.	DESCRIPTION
1	511032.467	484872.776	32.25	FACE OF BLOCK, END WALL, TOP OF WALL
2	510789.937	484971.891	22.25	FACE OF BLOCK, CORNER, TOP OF WALL
3	510780.857	484949.675	22.25	FACE OF BLOCK, CORNER, TOP OF WALL
4	510730.8710	484970.103	22.25	FACE OF BLOCK, CORNER, TOP OF WALL
5	510739.193	484990.468	22.25	FACE OF BLOCK, END WALL, TOP OF WALL

NOTE: CONTRACTOR TO DETERMINE BASE OF WALL LAYOUT TO ACHIEVE WALL BATTER AND TOP OF WALL LAYOUT POINTS SPECIFIED.



NOTE: GUARDRAIL, COVERED SHELTER & CANTILEVERED VIEWING AREAS NOT SHOWN FOR CLARITY.



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SCALE: 1" = 30 FT.
0 15 30 FT.



CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
MSE WALL PLAN AND PROFILE

PND PROJECT NO.: 082015

4.01
SHEET
37 OF 82



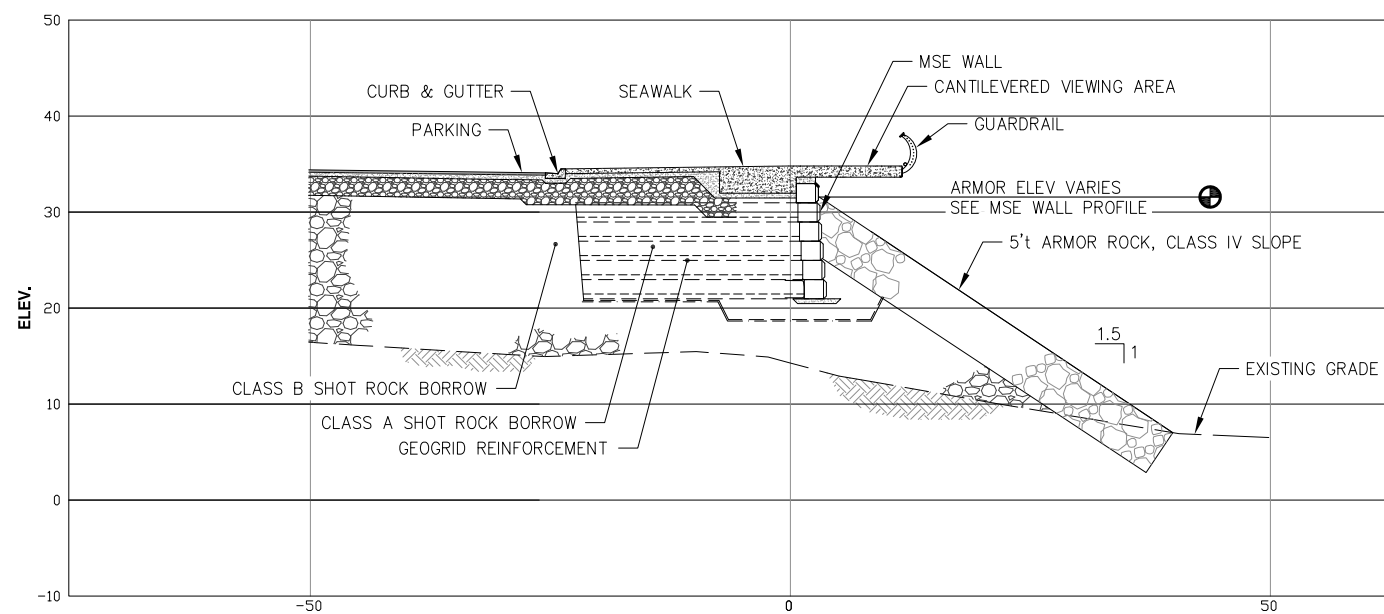
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ENGINEERS, INC.

SCALE: SCALE IN FEET



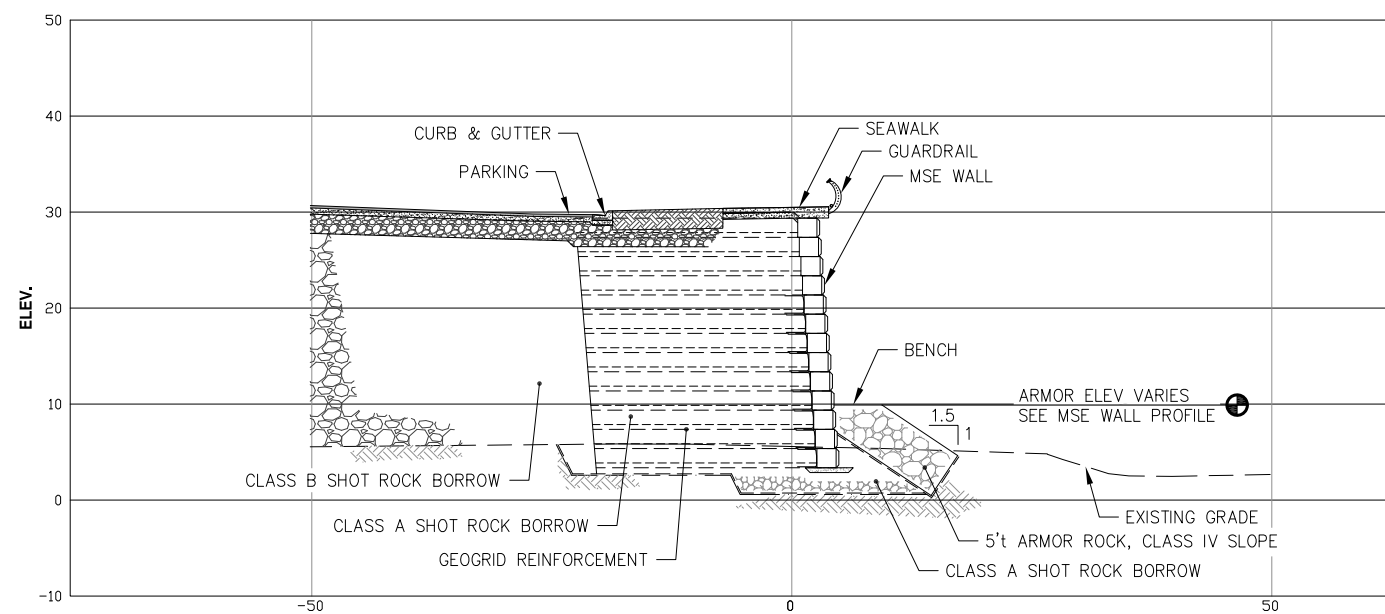
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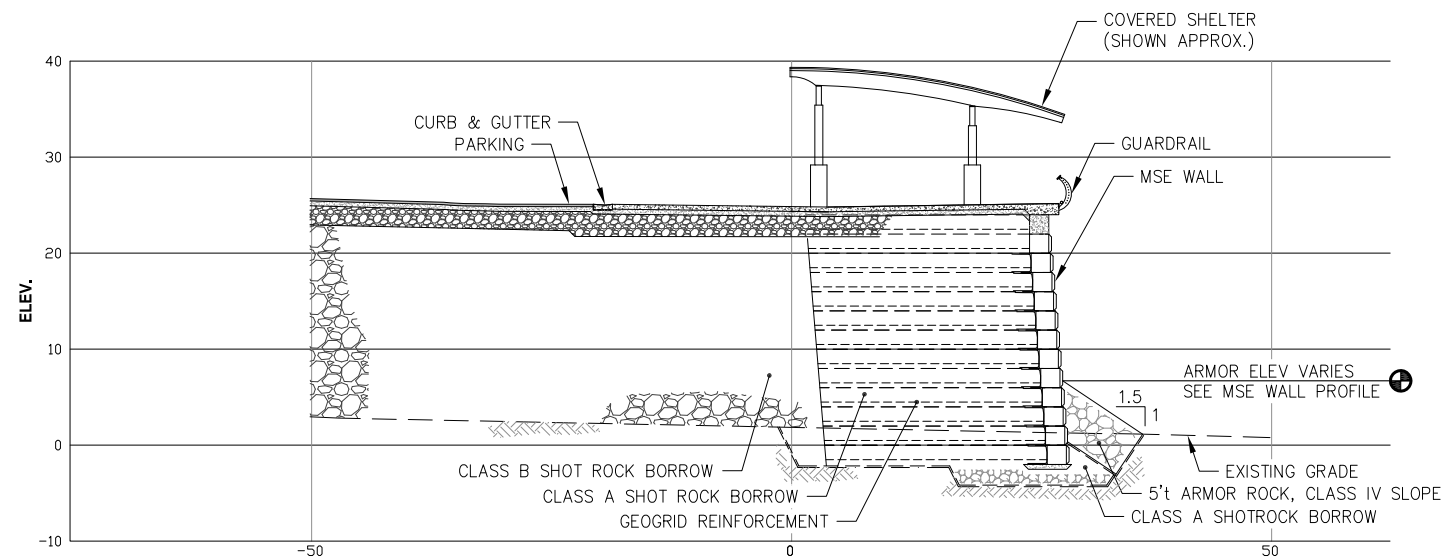


B
4.01 **WALL SECTION**

NOTE:
SEE TYPICAL MSE WALL SECTION & SEAWALK
SECTIONS FOR DETAILS NOT SHOWN.



C
4.01 **WALL SECTION**



D
4.01 **WALL SECTION**



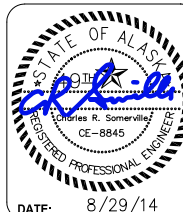
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STATTER HARBOR IMPROVEMENTS
 CONTRACT NO. DH14-014

SHEET TITLE:

MSE WALL SECTION

4.03
 SHEET
 39 OF 82

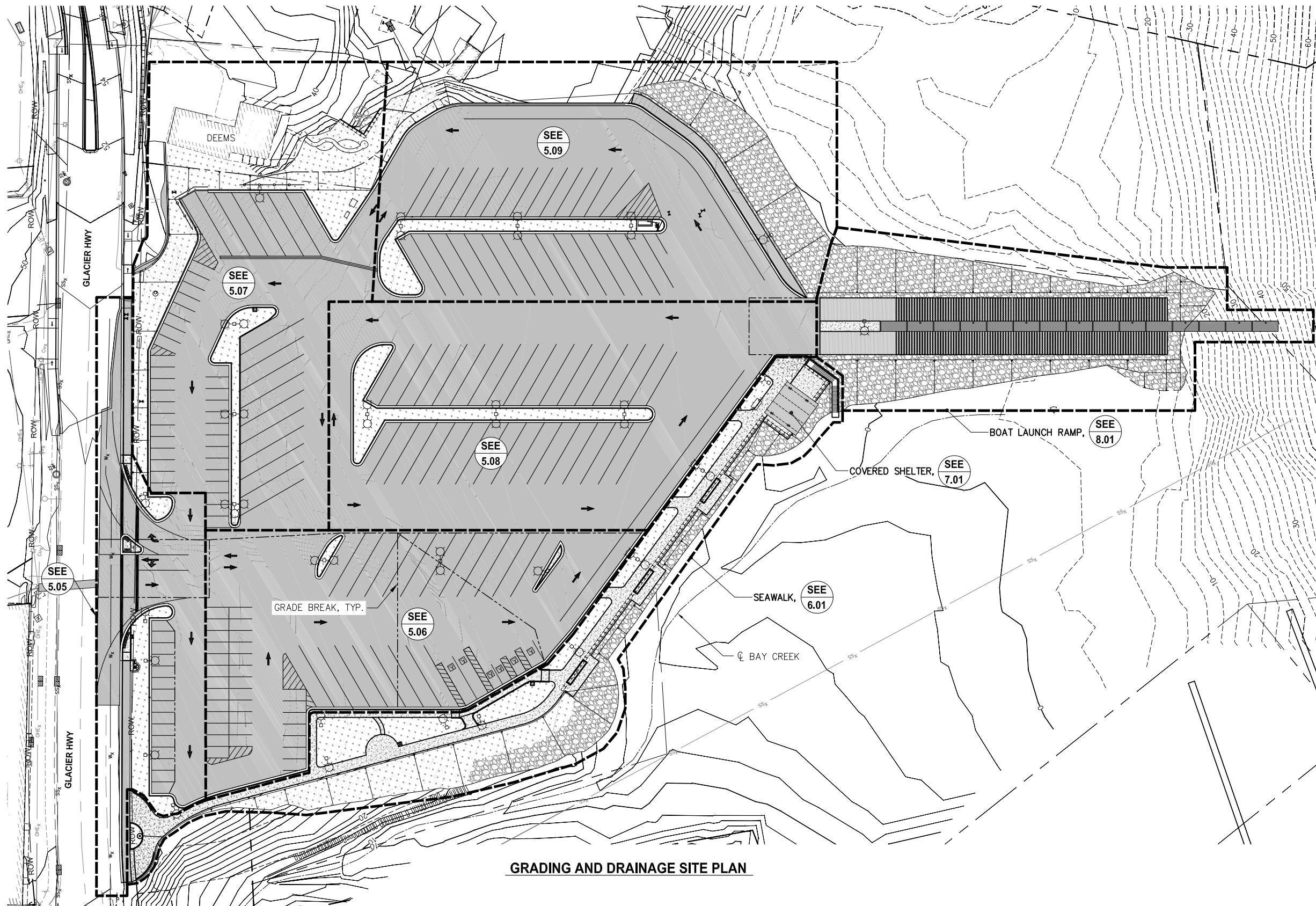
PND PROJECT NO.: 082015



- GENERAL CIVIL NOTES:**
1. SEE CBJ STD. DETAILS FOR DETAILS NOT SHOWN.
 2. EXISTING UTILITIES TO REMAIN UNO.
 3. EXISTING UTILITIES SHOWN APPROX, CONTRACTOR SHALL OBTAIN LOCATES PRIOR TO WORK.
 4. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO DOT&PF ROW & OBTAIN APPROVAL PRIOR TO WORK.

DIAL BEFORE YOU DIG!
586-1333

UNDERGROUND POWER, TELEPHONE, T.V.,
COMMUNICATIONS, WATER AND WASTEWATER
LINES ARE IN THE AREA. UTILITIES SHOWN HERE
DO NOT SUBSTITUTE FOR FIELD LOCATES.



GRADING AND DRAINAGE SITE PLAN



REVISIONS				
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SCALE:
SCALE IN FEET
0 40 80 FT

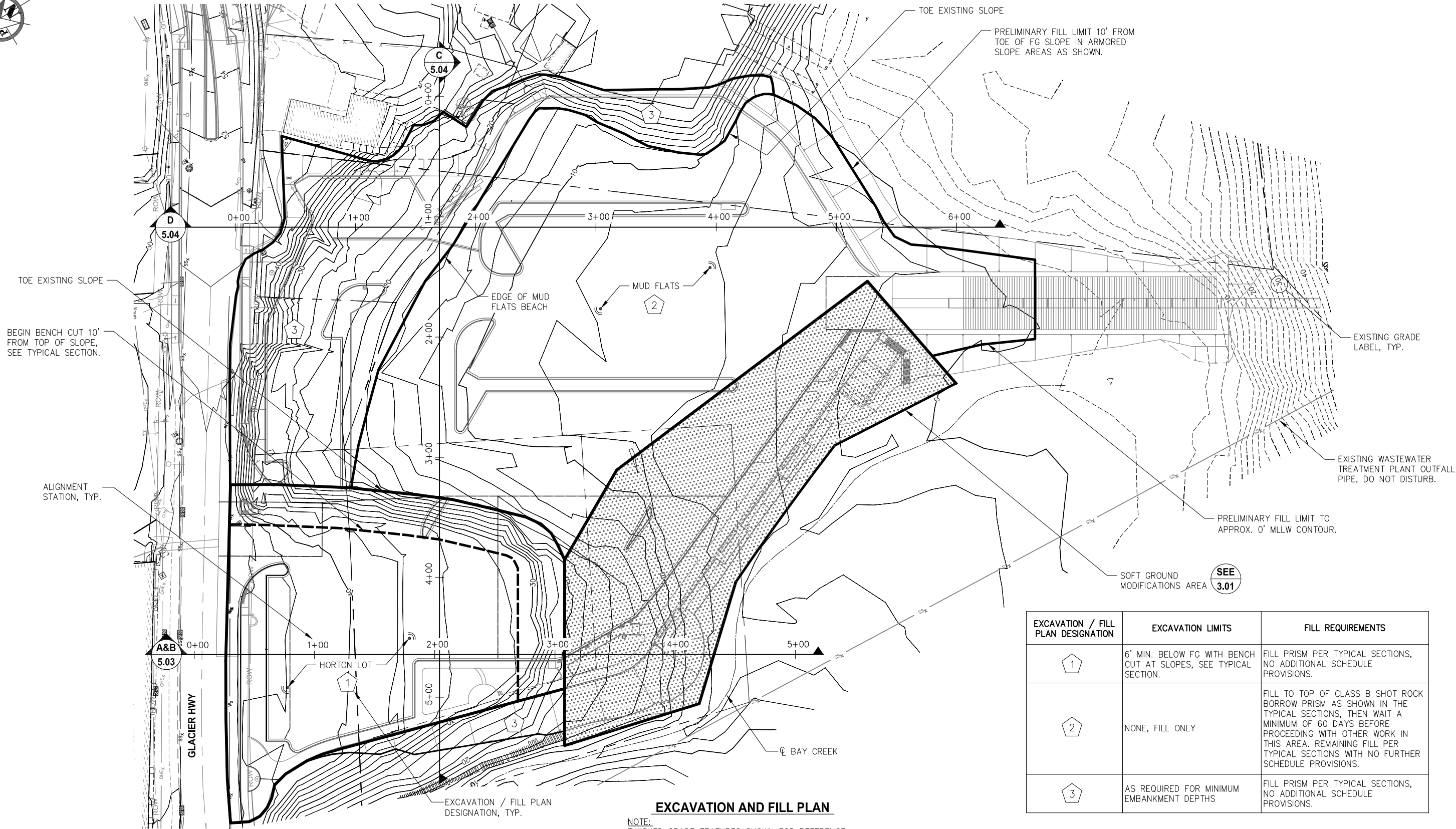


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
**OVERALL GRADING AND DRAINAGE
SITE PLAN**

PND PROJECT NO.: 082015

5.01
SHEET
40 OF 82



EXCAVATION / FILL PLAN DESIGNATION	EXCAVATION LIMITS	FILL REQUIREMENTS
1	6' MIN. BELOW FG WITH BENCH CUT AT SLOPES, SEE TYPICAL SECTION.	FILL PRISM PER TYPICAL SECTIONS, NO ADDITIONAL SCHEDULE PROVISIONS.
2	NONE, FILL ONLY	FILL TO TOP OF CLASS B SHOT ROCK BORROW PRISM AS SHOWN IN THE TYPICAL SECTIONS, THEN WAIT A MINIMUM OF 60 DAYS BEFORE PROCEEDING WITH OTHER WORK IN THIS AREA. REMAINING FILL PER TYPICAL SECTIONS WITH NO FURTHER SCHEDULE PROVISIONS.
3	AS REQUIRED FOR MINIMUM EMBANKMENT DEPTHS	FILL PRISM PER TYPICAL SECTIONS, NO ADDITIONAL SCHEDULE PROVISIONS.



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SCALE: 1" = 40'
0 40 80 FT



CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
EXCAVATION AND FILL PLAN

PND PROJECT NO.: 082015

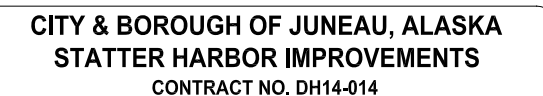
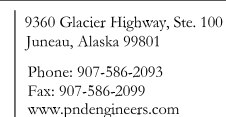
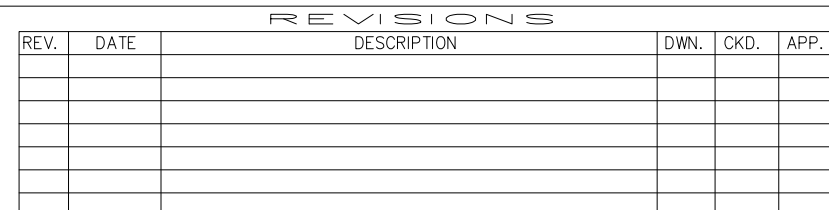
5.02
SHEET
41 OF 82



1. SEE INDIVIDUAL DTLS FOR BEDDING AND FILL REQUIREMENTS FOR SIDEWALK, CURB & GUTTER AND WALLS.
2. "ROADWAY BASE COURSE" SHALL BE 10"t. 2"(-) MATERIAL CAPPED w/ 2"t. BASE COURSE GRADING D-1, SEE SPECIFICATIONS FOR GRADATION.
3. EXCAVATION LIMIT IN LANDSCAPED AREAS SHALL BE ONLY AS REQUIRED TO ACHIEVE MIN DEPTHS OF PLANTING SOIL.

(E) CLASS B SHOT ROCK BORROW OR USABLE EXCAVATION, THICKNESS AS REQUIRED.
 (F) PLANTING SOIL, THICKNESS VARIES, SEE LANDSCAPING
 (G) 5't. MIN. CLASS IV ARMOR ROCK
 (H) GEOTEXTILE FABRIC, TYPE VARIES, SEE SPECS.

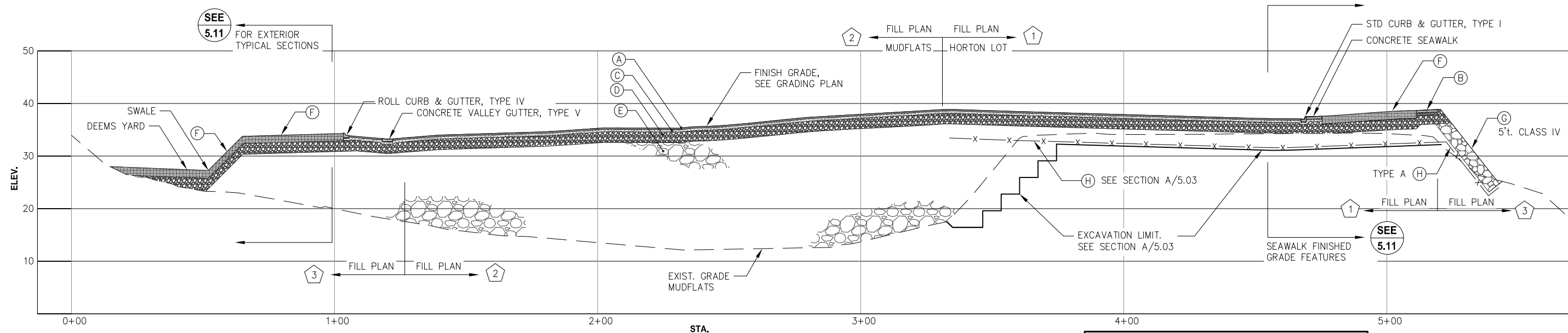
B
5.02 **TYPICAL SECTION**
(PROFILE SHOWN WITH 2x VERTICAL EXAGGERATION.)



TYPICAL SECTIONS

5.03

SHEET
OF 82



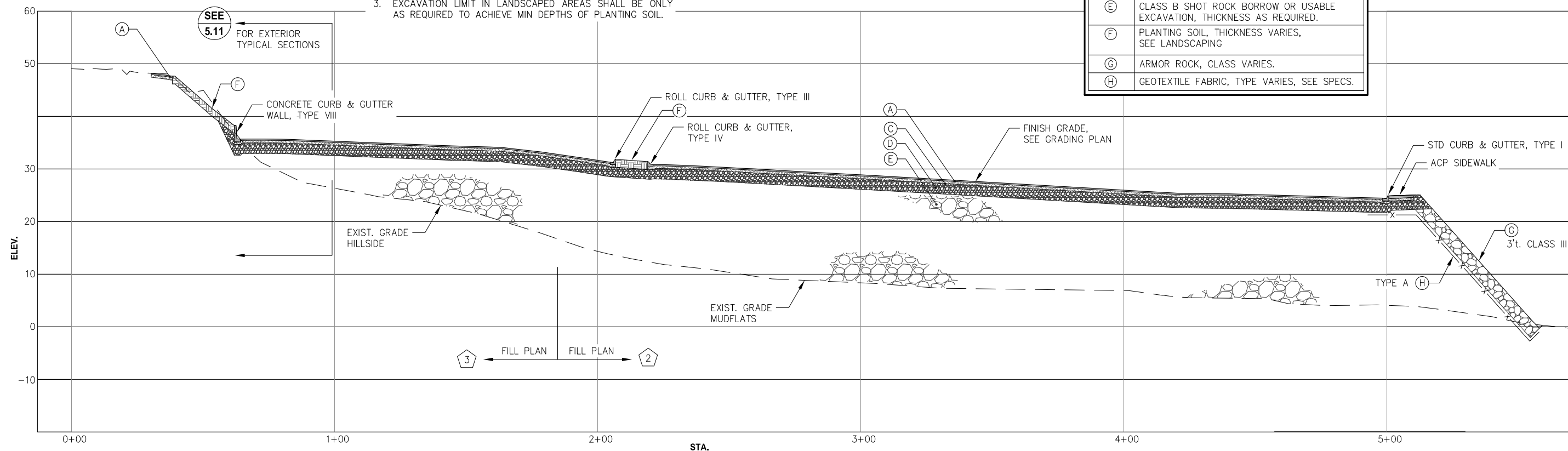
C TYPICAL SECTION

NOTE:
PROFILE SHOWN WITH 2x VERTICAL EXAGGERATION.

GENERAL SECTION NOTES:

- SEE INDIVIDUAL DTLS FOR BEDDING AND FILL REQUIREMENTS FOR SIDEWALK, CURB & GUTTER AND WALLS.
- "ROADWAY BASE COURSE" SHALL BE 10"t. 2"(-) MATERIAL CAPPED w/ 2"t. BASE COURSE GRADING D-1, SEE SPECIFICATIONS FOR GRADATION.
- EXCAVATION LIMIT IN LANDSCAPED AREAS SHALL BE ONLY AS REQUIRED TO ACHIEVE MIN DEPTHS OF PLANTING SOIL.

MATERIAL DESIGNATIONS	
SYMBOL	MATERIAL DESCRIPTION
(A)	3"t. AC PAVEMENT (2 EA 1½" LAYERS)
(B)	CONC. SEAWALK, SEE DETAILS
(C)	12"t. MIN. ROADWAY BASE COURSE
(D)	18"t. MIN. CLASS A SHOT ROCK BORROW
(E)	CLASS B SHOT ROCK BORROW OR USABLE EXCAVATION, THICKNESS AS REQUIRED.
(F)	PLANTING SOIL, THICKNESS VARIES, SEE LANDSCAPING
(G)	ARMOR ROCK, CLASS VARIES.
(H)	GEOTEXTILE FABRIC, TYPE VARIES, SEE SPECS.



D TYPICAL SECTION

NOTE:
PROFILE SHOWN WITH 2x VERTICAL EXAGGERATION.



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0 20 40 FT.

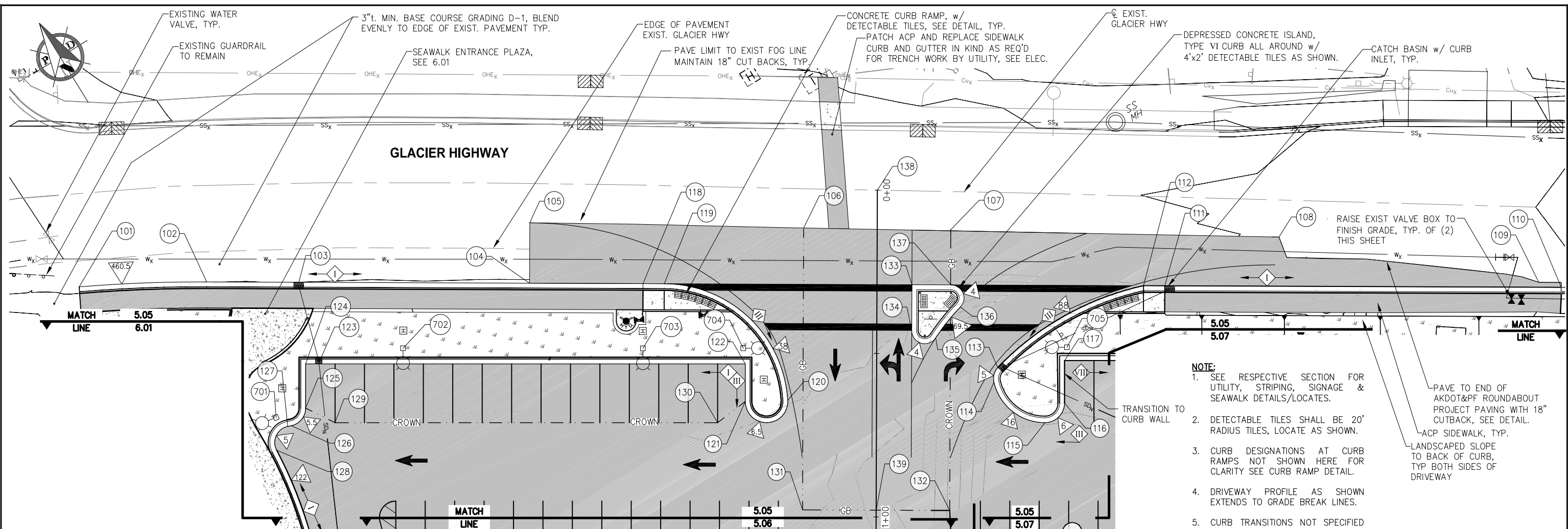


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

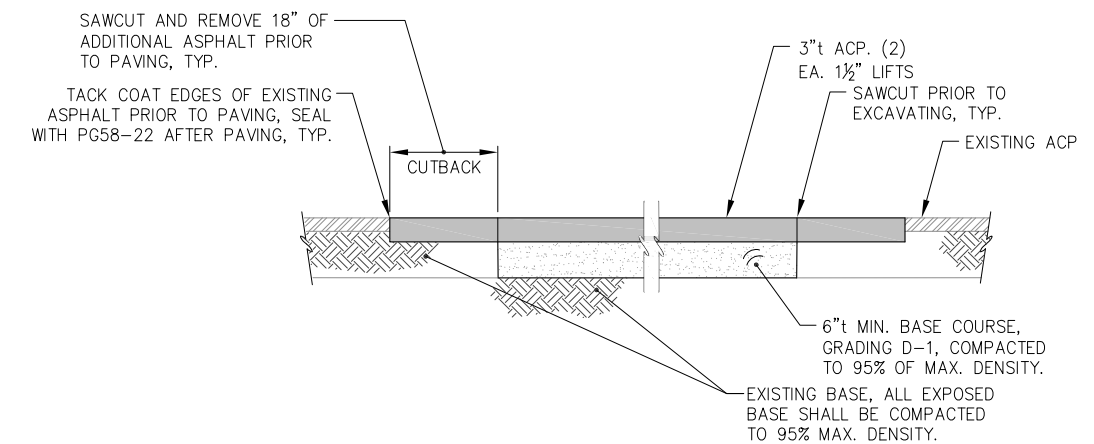
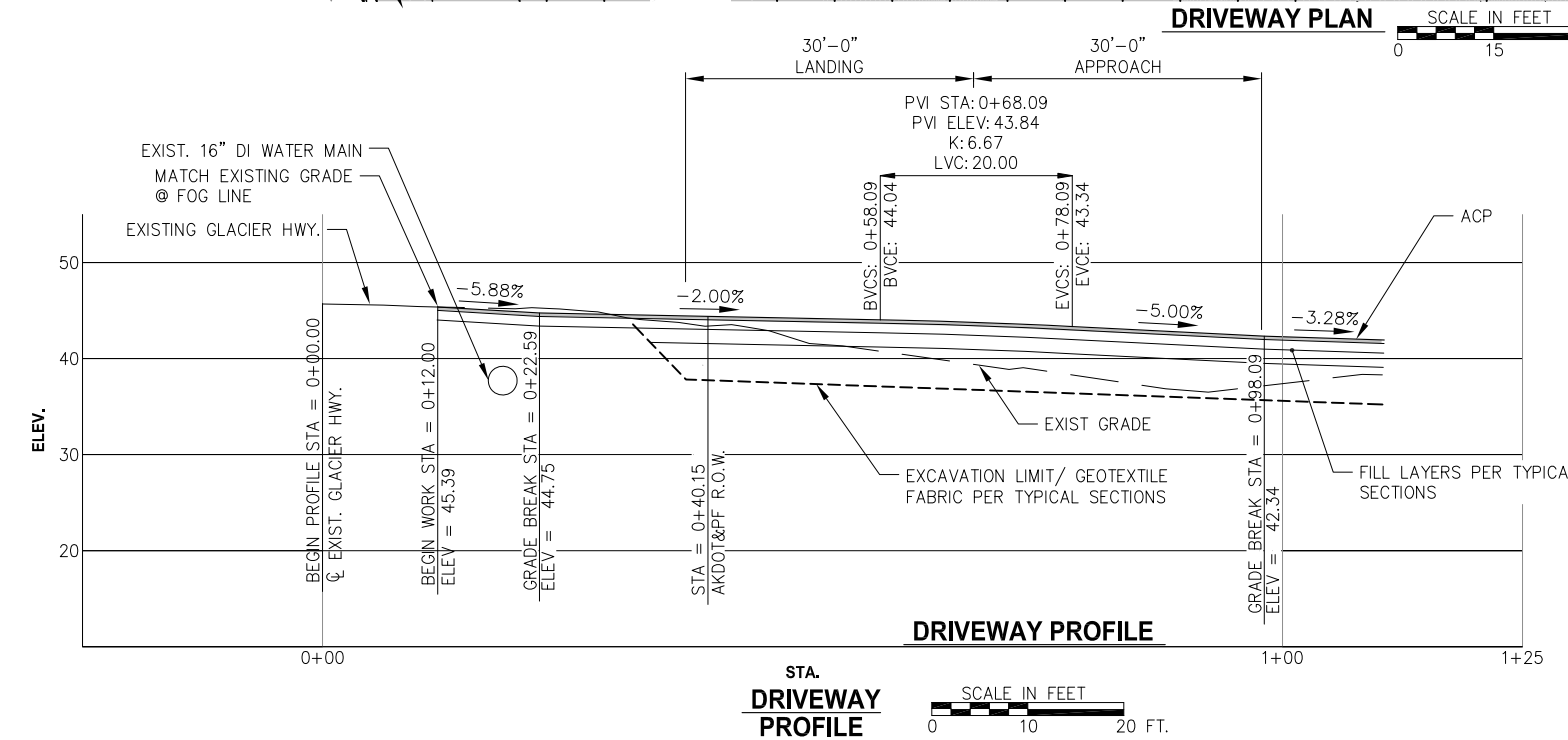
SHEET TITLE:
TYPICAL SECTIONS

PND PROJECT NO.: 082015

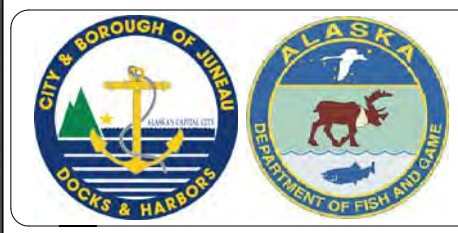
5.04
SHEET
43 OF 82



- NOTE:**
1. SEE RESPECTIVE SECTION FOR UTILITY, STRIPING, SIGNAGE & SEAWALK DETAILS/LOCATES.
 2. DETECTABLE TILES SHALL BE 20' RADIUS TILES, LOCATE AS SHOWN.
 3. CURB DESIGNATIONS AT CURB RAMPS NOT SHOWN HERE FOR CLARITY SEE CURB RAMP DETAIL.
 4. DRIVEWAY PROFILE AS SHOWN EXTENDS TO GRADE BREAK LINES.
 5. CURB TRANSITIONS NOT SPECIFIED BY POINT SHALL BE IN APPROX LOCATION SHOWN.
- PAVE TO END OF AKDOT&PF ROUNDABOUT PROJECT PAVING WITH 18" CUTBACK, SEE DETAIL.
- ACP SIDEWALK, TYP.
- LANDSCAPED SLOPE TO BACK OF CURB, TYP BOTH SIDES OF DRIVEWAY



AC PAVEMENT IN R.O.W. SECTION



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SCALE:
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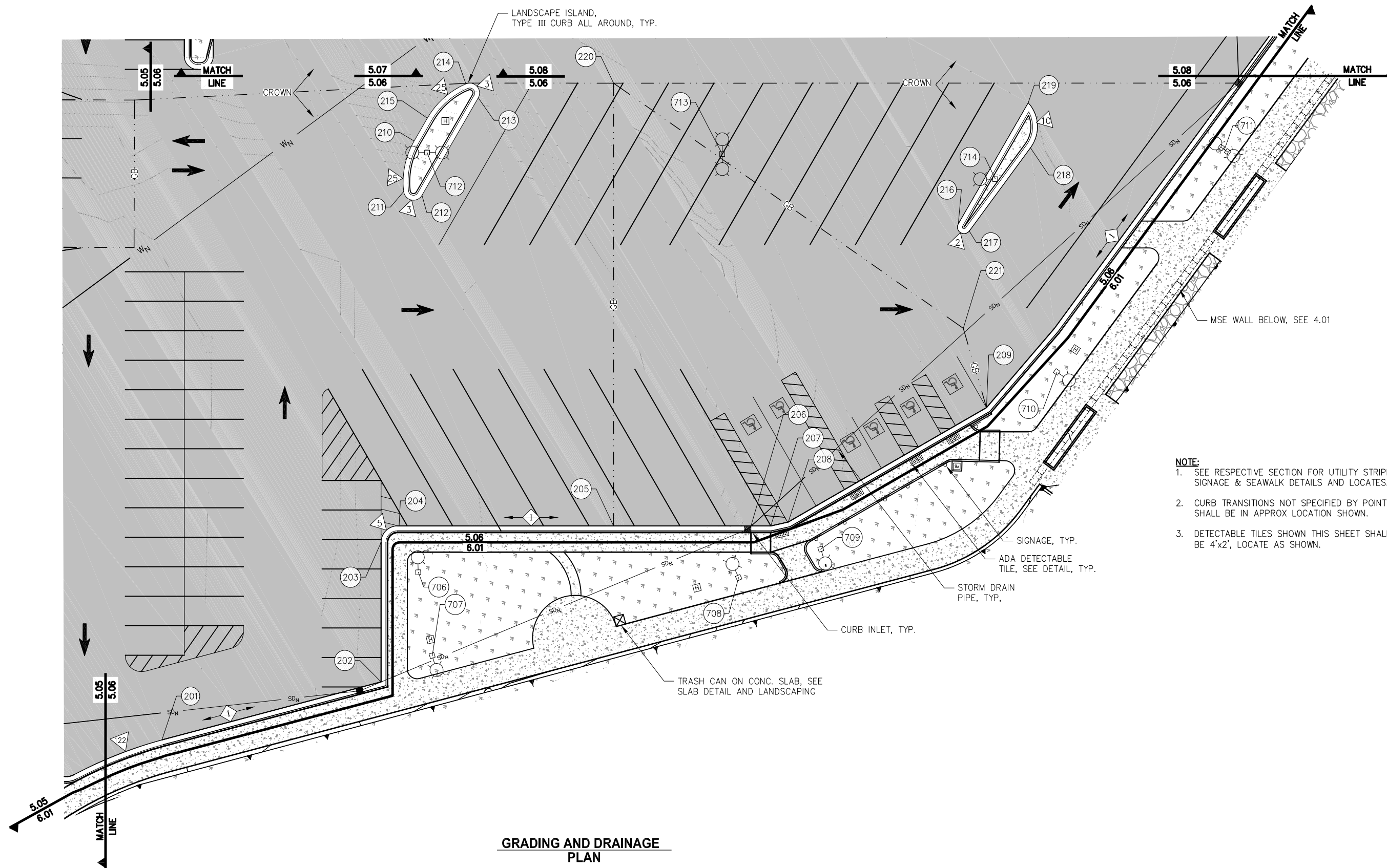


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
DRIVEWAY PLAN AND PROFILE

PND PROJECT NO.: 082015

5.05
SHEET
44 OF 82



- NOTE:**
1. SEE RESPECTIVE SECTION FOR UTILITY STRIPING, SIGNAGE & SEAWALK DETAILS AND LOCATES.
 2. CURB TRANSITIONS NOT SPECIFIED BY POINT SHALL BE IN APPROX LOCATION SHOWN.
 3. DETECTABLE TILES SHOWN THIS SHEET SHALL BE 4'x2', LOCATE AS SHOWN.

**GRADING AND DRAINAGE
PLAN**



REVISIONS					
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SCALE:
SCALE IN FEET
0 15 30 FT

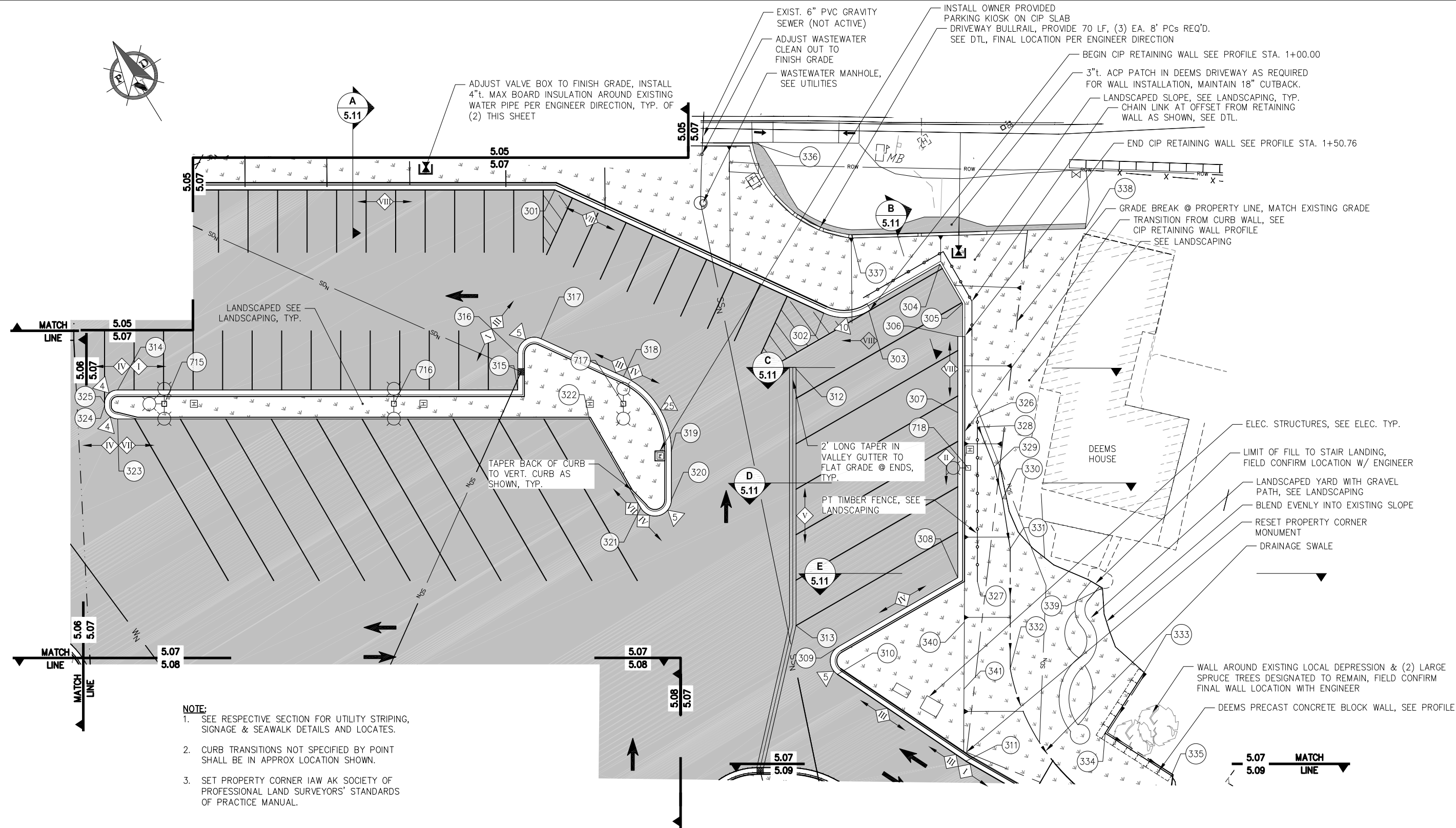


**CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014**

SHEET TITLE:
GRADING AND DRAINAGE PLAN

PND PROJECT NO.: 082015

5.06
SHEET
45 OF 82



- NOTE:
1. SEE RESPECTIVE SECTION FOR UTILITY STRIPING, SIGNAGE & SEAWALK DETAILS AND LOCATES.
 2. CURB TRANSITIONS NOT SPECIFIED BY POINT SHALL BE IN APPROX LOCATION SHOWN.
 3. SET PROPERTY CORNER IAW AK SOCIETY OF PROFESSIONAL LAND SURVEYORS' STANDARDS OF PRACTICE MANUAL.

GRADING AND DRAINAGE
PLAN



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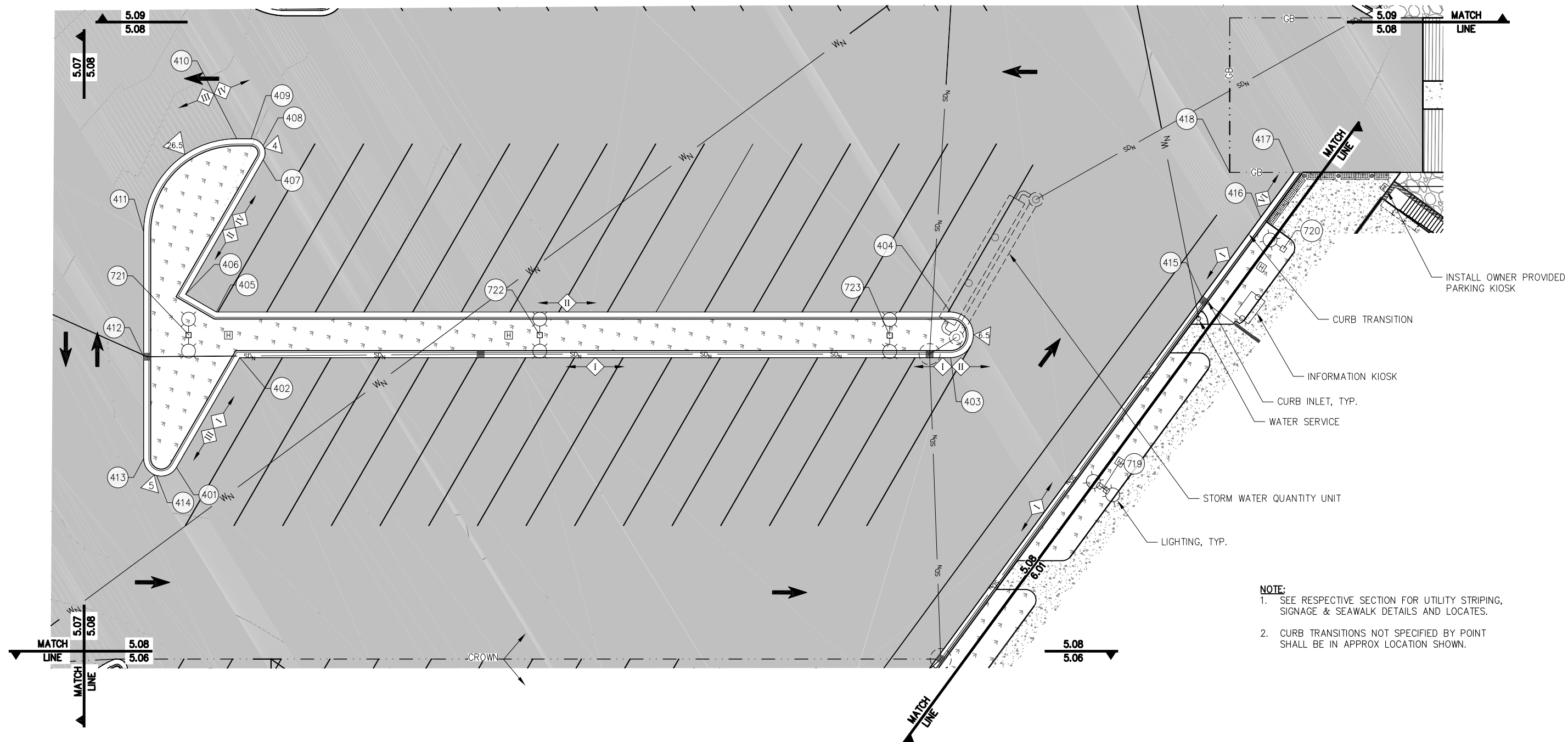


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CONTRACT NO. DH14-014

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- NOTE:**
1. SEE RESPECTIVE SECTION FOR UTILITY STRIPING, SIGNAGE & SEAWALK DETAILS AND LOCATES.
 2. CURB TRANSITIONS NOT SPECIFIED BY POINT SHALL BE IN APPROX LOCATION SHOWN.

**GRADING AND DRAINAGE
PLAN**



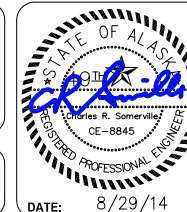
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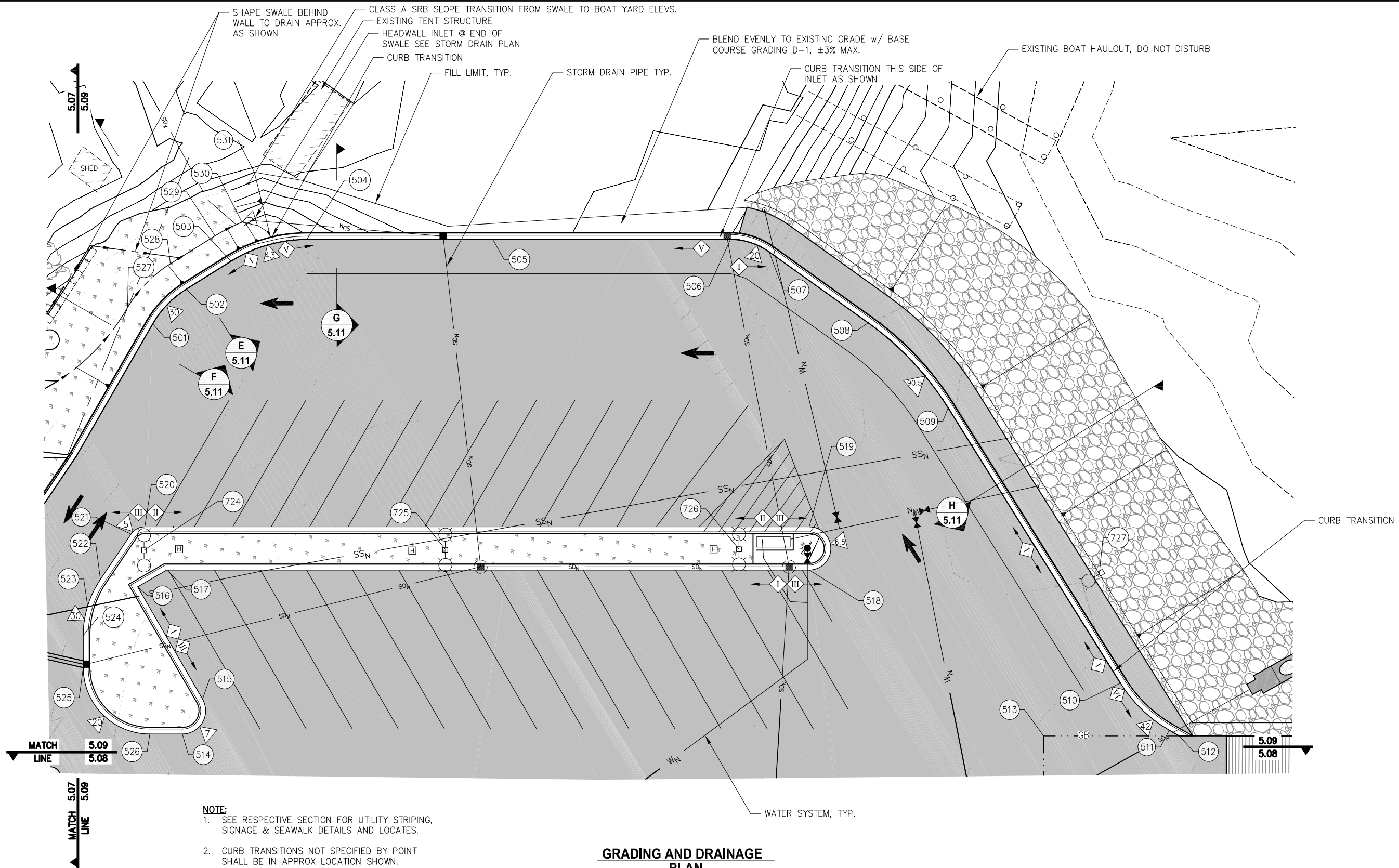


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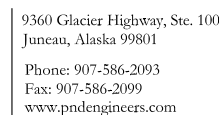
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NOTE:

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GRADING AND DRAINAGE PLAN

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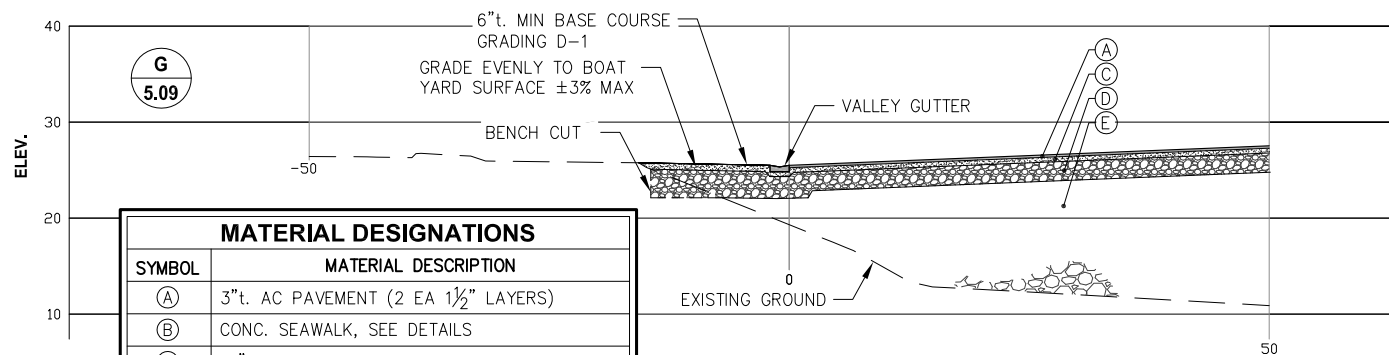
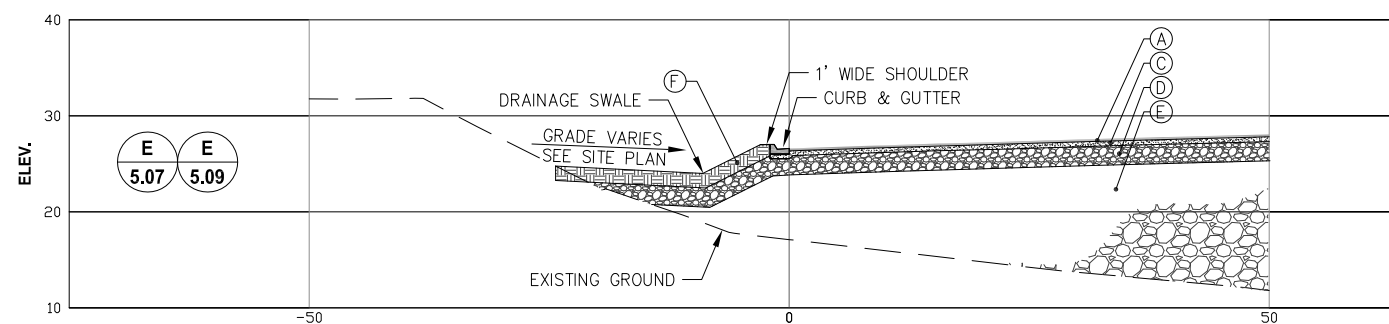
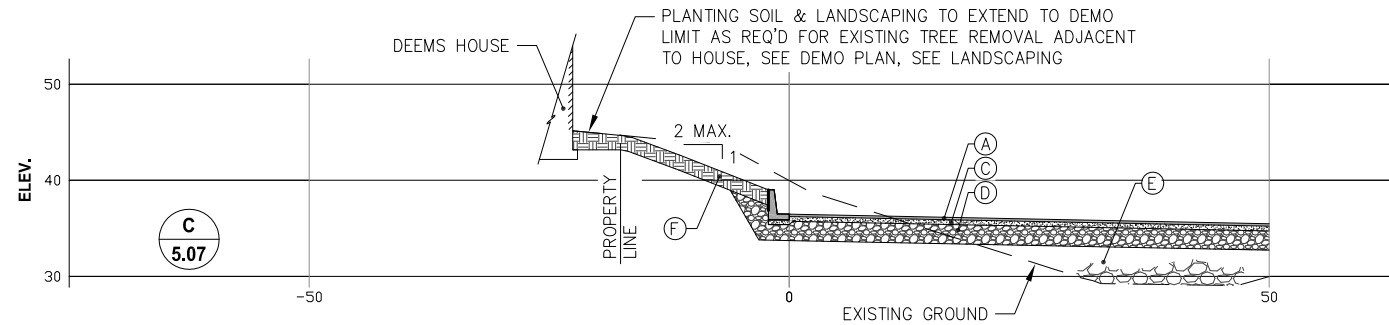
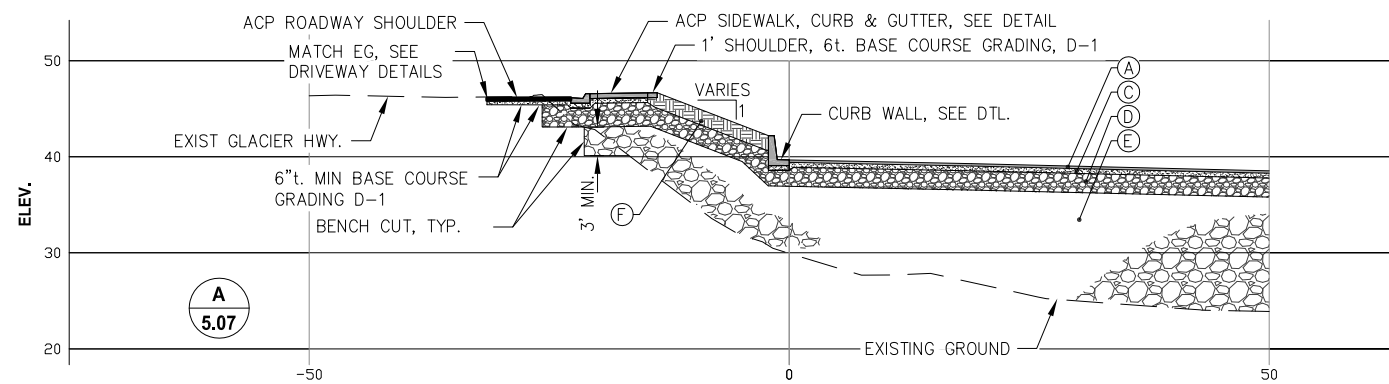
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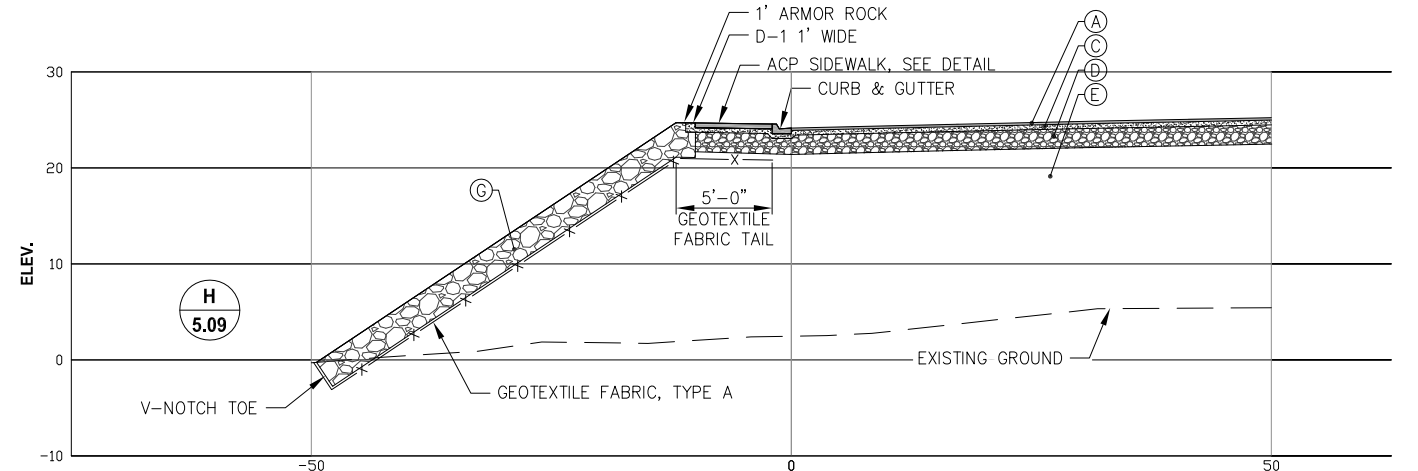
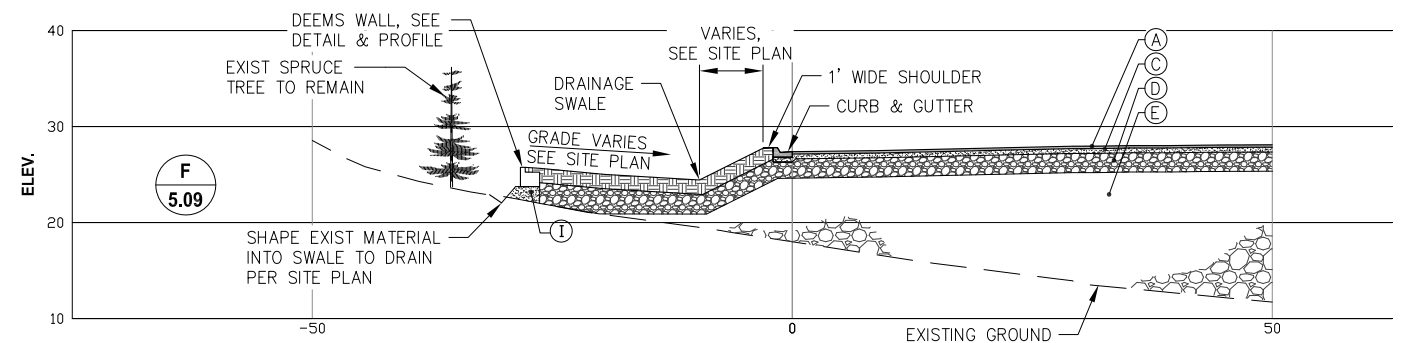
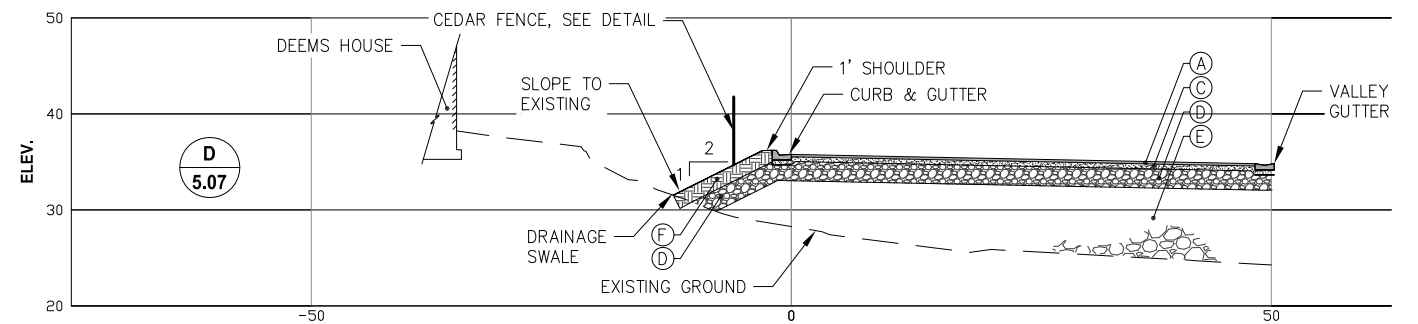
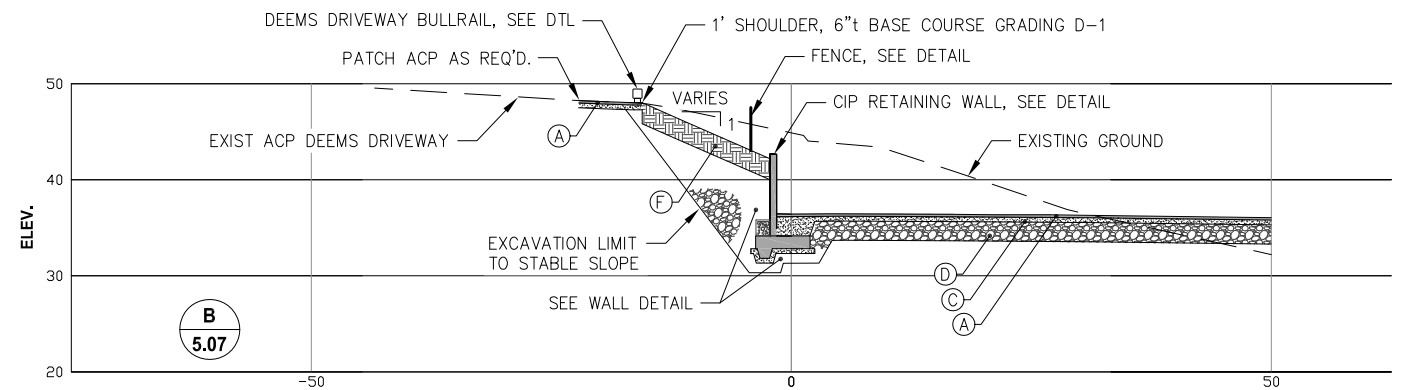
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48 OF 82



MATERIAL DESIGNATIONS	
SYMBOL	MATERIAL DESCRIPTION
(A)	3"t. AC PAVEMENT (2 EA 1½" LAYERS)
(B)	CONC. SEAWALK, SEE DETAILS
(C)	12"t. MIN. ROADWAY BASE COURSE
(D)	18"t. MIN. CLASS A SHOT ROCK BORROW
(E)	CLASS B SHOT ROCK BORROW OR USABLE EXCAVATION, THICKNESS AS REQUIRED.
(F)	PLANTING SOIL, THICKNESS VARIES, SEE LANDSCAPING
(G)	3't. CLASS III ARMOR ROCK
(H)	GEOTEXTILE FABRIC, TYPE VARIES, SEE SPECS.
(I)	CRUSHED AGGREGATE DRAIN ROCK

GENERAL SECTION NOTES:

- SEE INDIVIDUAL DTLs FOR BEDDING AND FILL REQUIREMENTS FOR SIDEWALK, CURB & GUTTER AND WALLS.
- "ROADWAY BASE COURSE" SHALL BE 10"t. 2"(-) MATERIAL CAPPED w/ 2"t. BASE COURSE GRADING D-1, SEE SPECIFICATIONS FOR GRADATION.
- EXCAVATION LIMIT IN LANDSCAPED AREAS SHALL BE ONLY AS REQUIRED TO ACHIEVE MIN DEPTHS OF PLANTING SOIL.



EXTERIOR TYPICAL SECTIONS



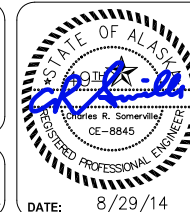
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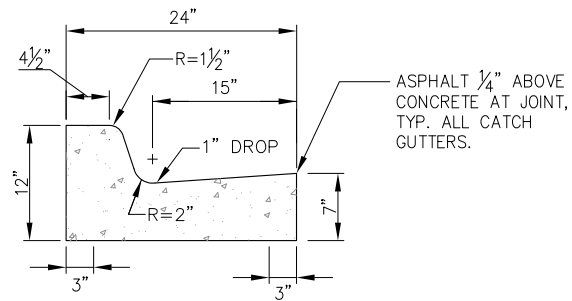
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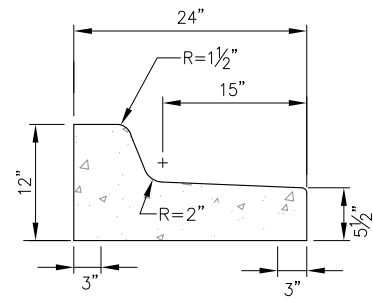
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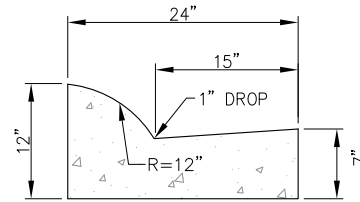
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50 OF 82



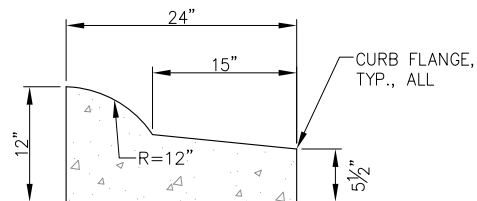
**TYPE I CURB AND GUTTER
STANDARD CATCH**



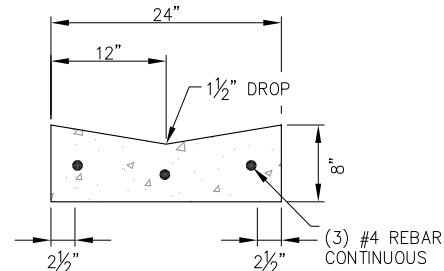
**TYPE II CURB AND GUTTER
STANDARD SPILL**



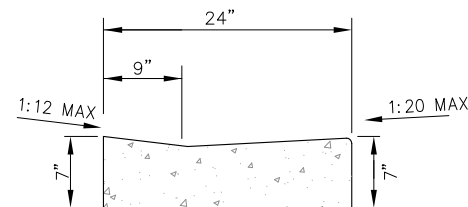
**TYPE III CURB AND GUTTER
ROLL CATCH**



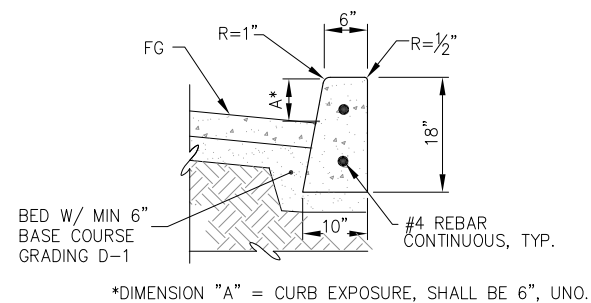
**TYPE IV CURB AND GUTTER
ROLL SPILL**



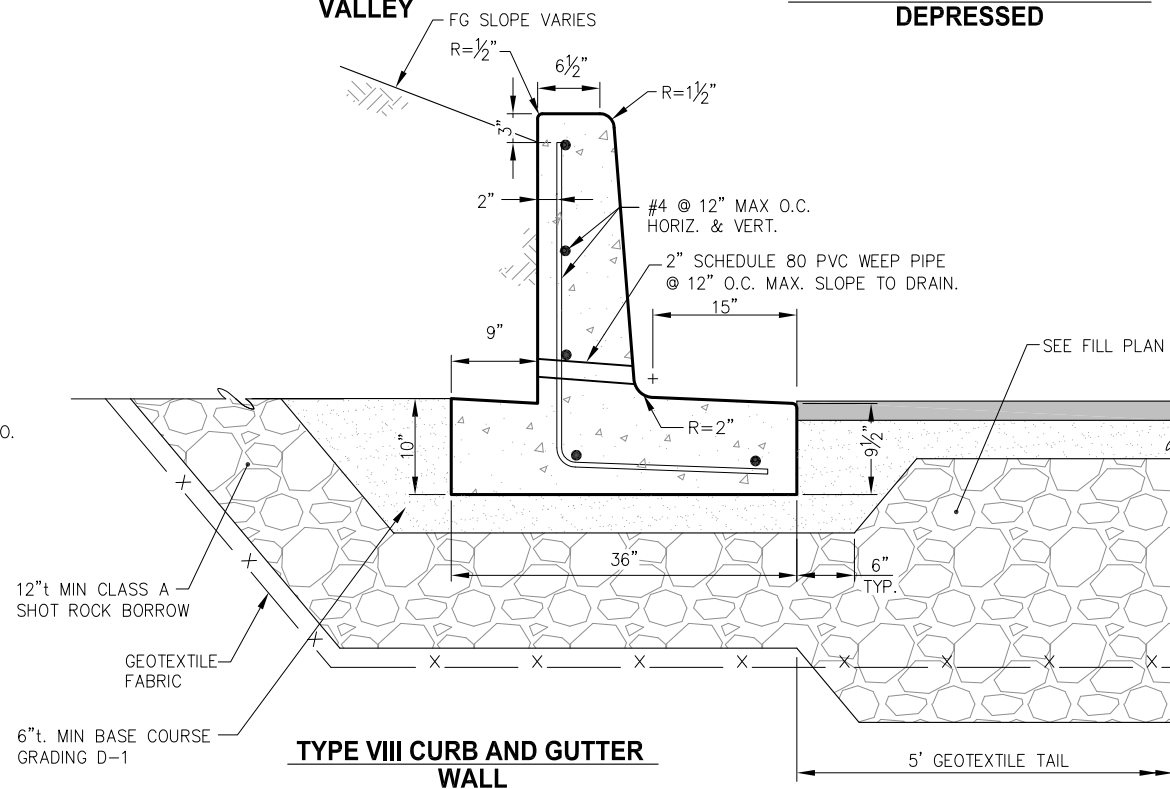
**TYPE V GUTTER
VALLEY**



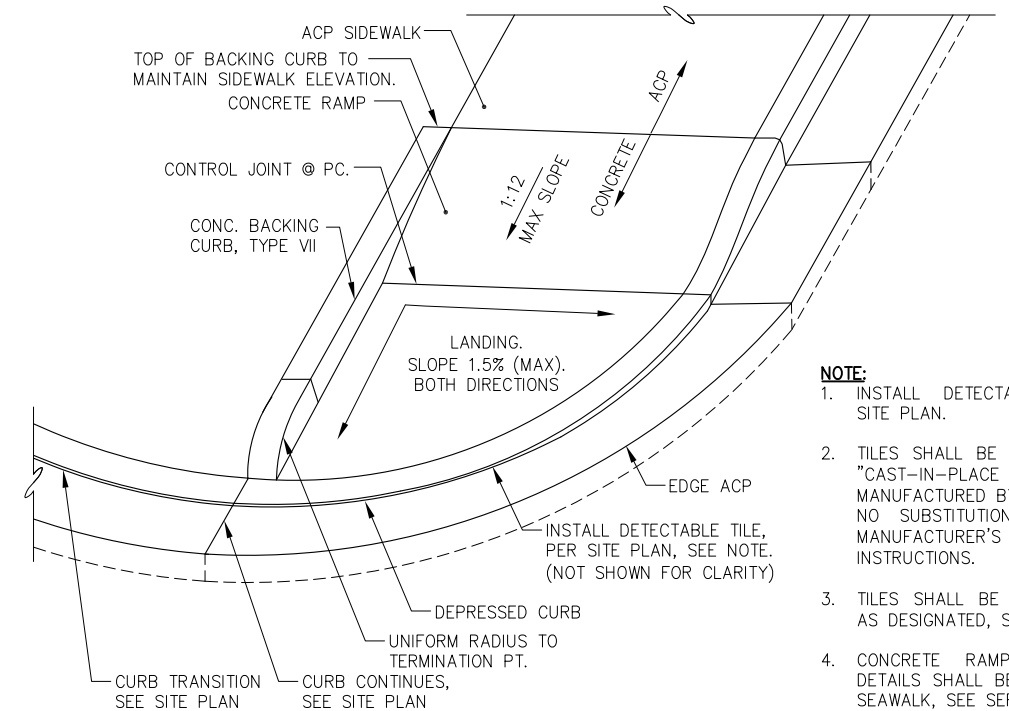
**TYPE VI CURB AND GUTTER
DEPRESSED**



**TYPE VII CURB
VERTICAL**

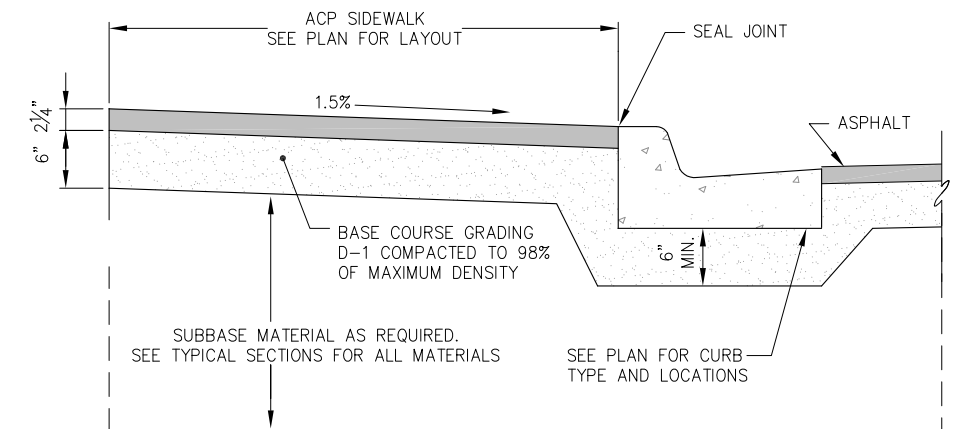


**TYPE VIII CURB AND GUTTER
WALL**



**DRIVEWAY CURB CUT
DETAIL**

- NOTE:**
1. INSTALL DETECTABLE TILES PER SITE PLAN.
 2. TILES SHALL BE BLACK IN COLOR, "CAST-IN-PLACE REPLACEABLE" AS MANUFACTURED BY ADA SOLUTIONS, NO SUBSTITUTIONS. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 3. TILES SHALL BE 2'x4' OR RADIUS AS DESIGNATED, SEE SITE PLAN.
 4. CONCRETE RAMP AND LANDING DETAILS SHALL BE SIMILAR TO THE SEAWALK, SEE SERIES 6.



- NOTE:**
1. ACP SIDEWALK IN AKDOT&PF RIGHT OF WAY AND ADJACENT TO TIE DOWN LANE ONLY, SEE SEAWALK DRAWINGS FOR ALL OTHER SIDEWALK.

ACP SIDEWALK

GENERAL CURB & GUTTER NOTES:

1. THE VERTICAL MATCH POINT FOR ALL CURB AND GUTTER TRANSITIONS SHALL BE THE FLOWLINE.
2. CURB AND GUTTER TRANSITIONS SHALL BE GRADUAL OVER A MIN DISTANCE OF 6 LF PER ENGINEER DIRECTION.
3. ALL STEEL MUST HAVE A MINIMUM OF 2" OF CONCRETE COVER.
4. ALL JOINTS AND SEAMS SHALL BE TOOLED AND EDGED, SEE SERIES 6 FOR CONTROL JOINT DTL.
5. STEEL TROWELING FINISH REQUIRED PRIOR TO BROOM FINISHING OF ALL SURFACES.
6. CONCRETE INTERNATIONAL CORPORATION ASHFORD FORMULA OR APPROVED EQUAL SHALL BE APPLIED AS A CURING COMPOUND. APPLICATION SHALL EXPLICITLY CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS.
7. BED ALL TYPES OF CURB AND GUTTER W/ 6"t. MIN LAYER OF BASE COURSE GRADING D-1, ALL AROUND.
8. SUBBASE MATERIALS SHALL BE PER APPLICABLE FILL SECTION, EXCEPT AS NOTED.
9. CURBS SHALL HAVE POLY-FIBER REINFORCEMENT UNO, SEE SPECIFICATIONS.



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SHEET TITLE:

CIVIL DETAILS

PND PROJECT NO.: 082015

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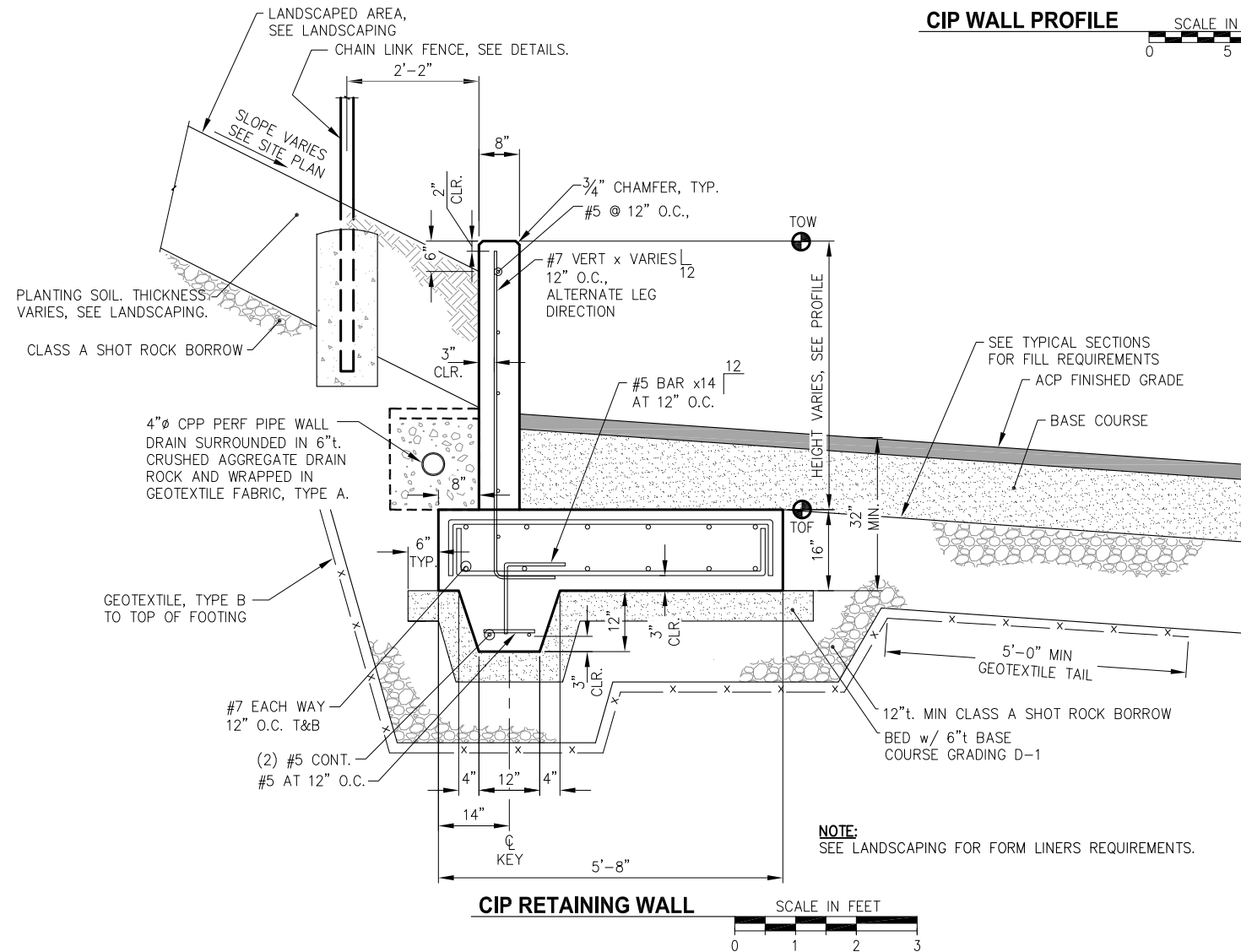
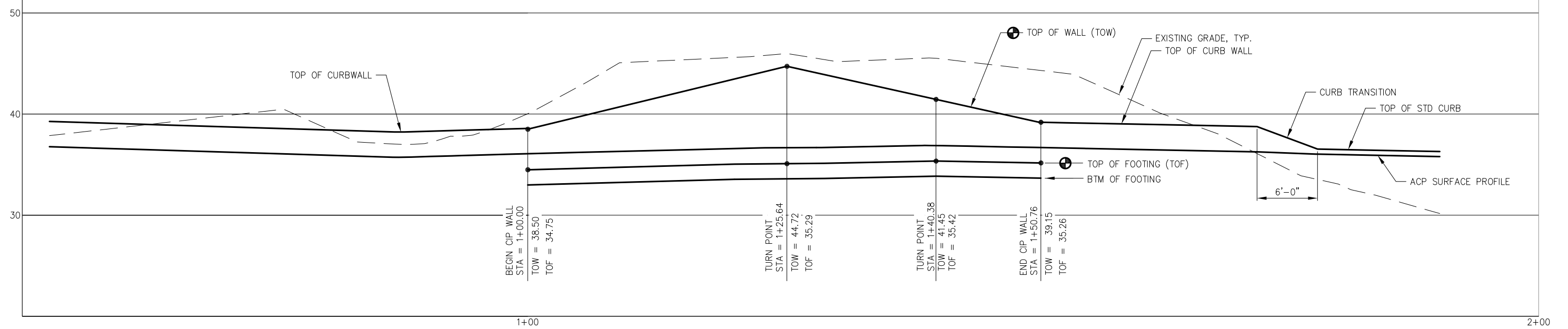
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NOTE:

1. PROFILE CUT @ FACE OF WALL
2. ELEV. SHOWN REFERENCE TOP OF WALL



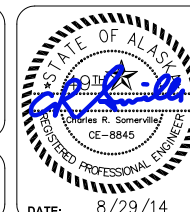


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SHEET TITLE: **CIVIL DETAILS**

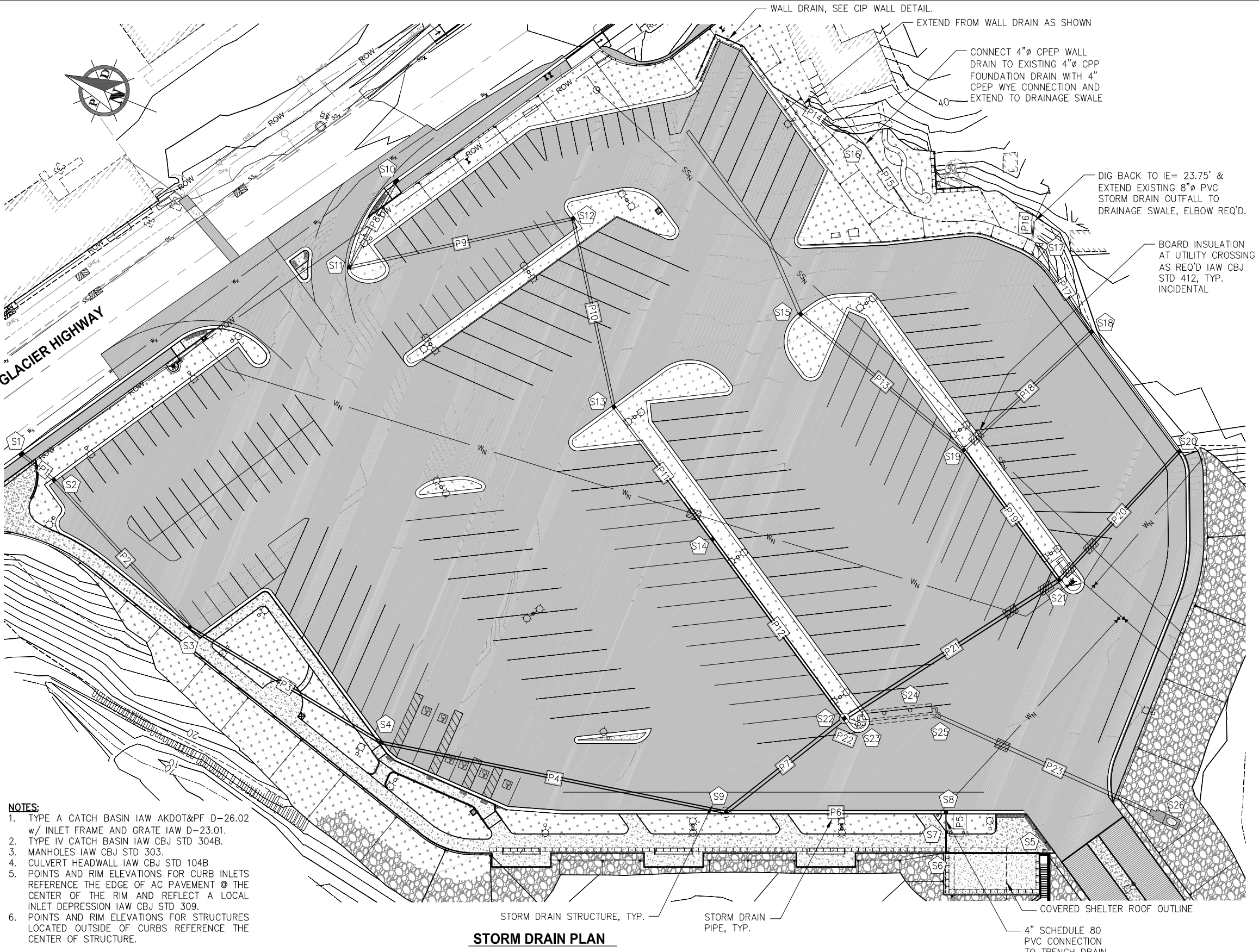
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STORM DRAIN STRUCTURES				
STRUCTURE DESIGNATION	NORTHING	EASTING	RIM ELEVATION	TYPE
S1	511368.53	484983.00	43.67	TYPE A CB, SEE NOTE.
S2	511344.13	484975.11	42.35	TYPE IV CB, SCI
S3	511240.38	484927.74	39.23	TYPE IV CB, SCI
S4	511113.46	484907.94	35.19	TYPE IV CB, SCI
S5	510739.57	484991.39	24.13*	TRENCH DRAIN, SEE DTL
S6	510789.25	484971.09	23.85*	TRENCH DRAIN, SEE DTL
S7	510793.92	484982.51	23.80*	TRENCH DRAIN, SEE DTL
S8	510798.57	484993.75	24.04	TYPE IV CB, SCI
S9	510915.60	484945.92	29.35	TYPE II MH, SCI
S10	511228.60	485209.64	45.25	TYPE A CB, SEE NOTE.
S11	511235.02	485152.98	44.06	TYPE IV CB, SCI
S12	511126.21	485226.81	37.13	TYPE IV CB, SCI
S13	511063.82	485136.86	35.02	TYPE IV CB, RCI
S14	510982.15	485086.56	32.39	TYPE IV CB, SCI
S15	510985.18	485225.95	30.45	TYPE IV CB, RCI
S16	510986.54	485330.13	26.56*	4" CPEP WYE CONNECTION
S17	510874.59	485315.24	23.58*	CULVERT HEADWALL
S18	510825.76	485279.23	24.74	TYPE IV CB, VGI
S19	510868.02	485188.59	28.00	TYPE I MH, SCI
S20	510752.11	485234.15	23.11	TYPE IV CB, SCI
S21	510788.96	485140.20	25.36	TYPE I MH, SCI
S22	510873.14	485019.83	27.46	TYPE II MH, SCI
S23	510863.63	485020.75	27.52	TYPE I MH w/ SOLID COVER
S24	510847.14	485037.88	-	WQU, SEE DTL
S25	510823.80	485042.40	26.24	TYPE I MH w/ SOLID COVER
S26	510673.14	485036.81	15.00	STORM DRAIN OUTFALL

CB = CATCH BASIN
MH = MANHOLE
SCI = STANDARD CURB INLET IAW CBJ STD 308
RCI = ROLL CURB INLET, EAST JORDAN IRON WORKS 7711 OR APPROVED EQUAL
VGI = VALLEY GUTTER INLET, EAST JORDAN IRON WORKS V-4410 OR APPROVED EQUAL
* = INVERT ELEVATION

STORM DRAIN PIPING						
PIPE DESIGNATION	NOMINAL Ø	LENGTH	FROM	IE	TO	IE
P1	18" CPEP	24	S1	40.60	S2	39.30
P2	18" CPEP	115	S2	39.20	S3	36.23
P3	18" CPEP	128	S3	36.13	S4	31.92
P4	18" CPEP	202	S4	31.82	S9	24.86
P5	4" PVC	12	S7	23.80	S8	21.50
P6	18" CPEP	126	S8	21.00	S9	20.37
P7	24" CPEP	87	S9	20.27	S22	19.83
P8	18" CPEP	57	S10	42.21	S11	41.01
P9	18" CPEP	132	S11	40.91	S12	34.10
P10	18" CPEP	111	S12	34.00	S13	31.87
P11	18" CPEP	95	S13	31.77	S14	29.34
P12	18" CPEP	128	S14	29.24	S22	23.00
P13	18" CPEP	122	S15	27.40	S19	23.55
P14	4" CPEP	137	WALL	35.0±	S16	26.56
P15	4" CPEP	48	S16	26.56	AIR	25.0±
P16	8" PVC	11	PVC	23.75	AIR	23.60
P17	18" CPEP	59	S17	23.58	S18	21.69
P18	18" CPEP	100	S18	21.59	S19	21.00
P19	18" CPEP	93	S19	20.90	S21	19.90
P20	18" CPEP	100	S20	20.05	S21	18.45
P21	24" CPEP	128	S21	18.20	S22	17.30
P22	24" CPEP	9	S22	17.20	S23	17.10
P23	24" CPEP	135	S25	16.00	S26	14.50



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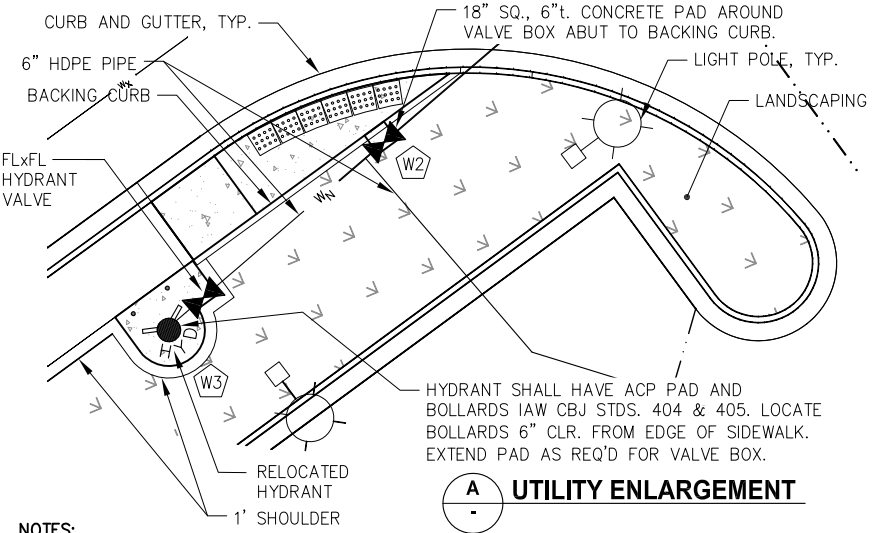
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STORM DRAIN PLAN

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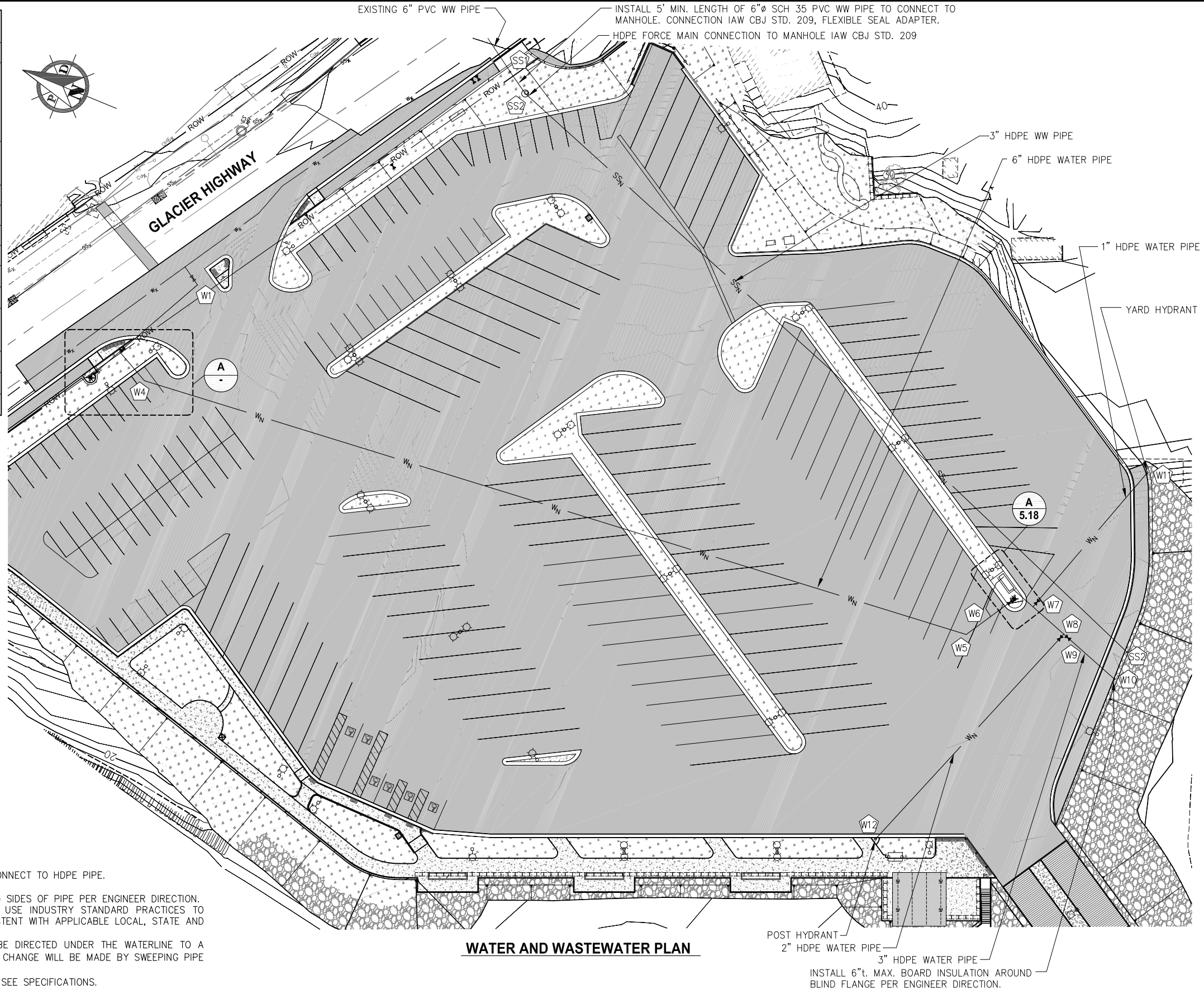
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WATER SYSTEM FEATURES				
DESIGNATION	NORTHING	EASTING	FG ELEVATION	DESCRIPTION
W1	511270.21	485132.80	44.55	CONNECT TO EXIST 6" GATE VALVE w/ HDPE MJ ADAPTER w/ MEGALUG JOINT RESTRAINT SUITABLE FOR HDPE CONNECTION AND HDPE 90° ELBOW. VALVE TO BE BURIED IN FULLY OPEN POSITION, WRAP WITH (2) LAYERS OF GEOTEXTILE FABRIC PRIOR TO BURYING
W2	511295.45	485083.49	44.57	6" FLxFL GATE VALVE CONNECTED TO DOWNSTREAM HDPE TEE WITH FLANGE ADAPTER
W3	511306.13	485062.22	44.54	HYDRANT WITH STORZ CONNECTOR
W4	511277.42	485071.96	43.39	30 DEGREE HDPE ELBOW
W5	510798.28	485114.43	25.59	45 DEGREE HDPE ELBOW
W6	510789.37	485128.99	25.41	6x3 HDPE REDUCING TEE
W7	510769.52	485142.90	25.16	3x1 REDUCING TEE WITH CURB STOP, SEE DTL.
W8	510747.72	485135.24	24.69	3x2 REDUCING TEE WITH CURB STOP, SEE DTL.
W9	510744.89	485134.24	24.63	3" GATE VALVE AND BOX. INSTALL CONCRETE COLLAR AROUND VALVE BOX IAW CBJ STD. 126.
W10	510711.90	485122.67	24.73	316 SS BLIND FLANGE, CAP AND FLAG
W11	510738.73	485236.49	23.84	YARD HYDRANT, SEE DTL.
W12	510801.95	484989.34	24.74	POST HYDRANT, SEE DTL.

WASTEWATER SYSTEM FEATURES				
DESIGNATION	NORTHING	EASTING	FG ELEVATION	DESCRIPTION
SS1	511149.47	485306.61	46.79	CONNECT TO EXISTING 6" PVC GRAVITY SEWER IE=APPROX 43.75, FIELD VERIFY
SS2	511141.04	485301.23	43.81	TYPE 1 SS MANHOLE IAW CBJ STDS. 203 & 205
SS3	510711.23	485139.31	24.60	316 SS BLIND FLANGE, CAP & FLAG



- NOTES:**
- 3" AND 6" VALVES SHALL BE IAW CBJ STD. 407 EXCEPT CONNECTIONS SHALL BE FLANGED TO CONNECT TO HDPE PIPE.
 - HYDRANTS SHALL BE IAW CBJ STD. 403 EXCEPT CONNECTION SHALL BE FLANGED.
 - WHERE BURY DEPTHS ARE LESS THAN 5'-0" 6" t. BOARD INSULATION SHALL BE INSTALLED ON (3) SIDES OF PIPE PER ENGINEER DIRECTION.
 - NOT ALL FITTINGS AND VARIOUS PLUMBING APPURTENANCES ARE SHOWN. CONTRACTOR SHALL USE INDUSTRY STANDARD PRACTICES TO ACHIEVE ALL CONNECTIONS NOT DETAILED IN ACCORDANCE WITH THE SPECIFICATIONS AND CONSISTENT WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS PER ENGINEER DIRECTION (INCIDENTAL).
 - AT LOCATIONS WHERE WATER AND WASTEWATER LINES INTERSECT THE WASTEWATER LINE WILL BE DIRECTED UNDER THE WATERLINE TO A MINIMUM OF 18" CLR. FOR 10' IN EACH DIRECTION FROM THE POINT OF INTERSECTION. ELEVATION CHANGE WILL BE MADE BY SWEEPING PIPE (INCIDENTAL) WITHIN MFR'S MINIMUM BENDING RADIUS REQUIREMENTS.
 - 3" WASTEWATER PIPE SHALL BE HYDROSTATIC PRESSURE TESTED TO FORCE MAIN REQUIREMENTS, SEE SPECIFICATIONS.



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SHEET TITLE:

WATER AND WASTEWATER PLAN

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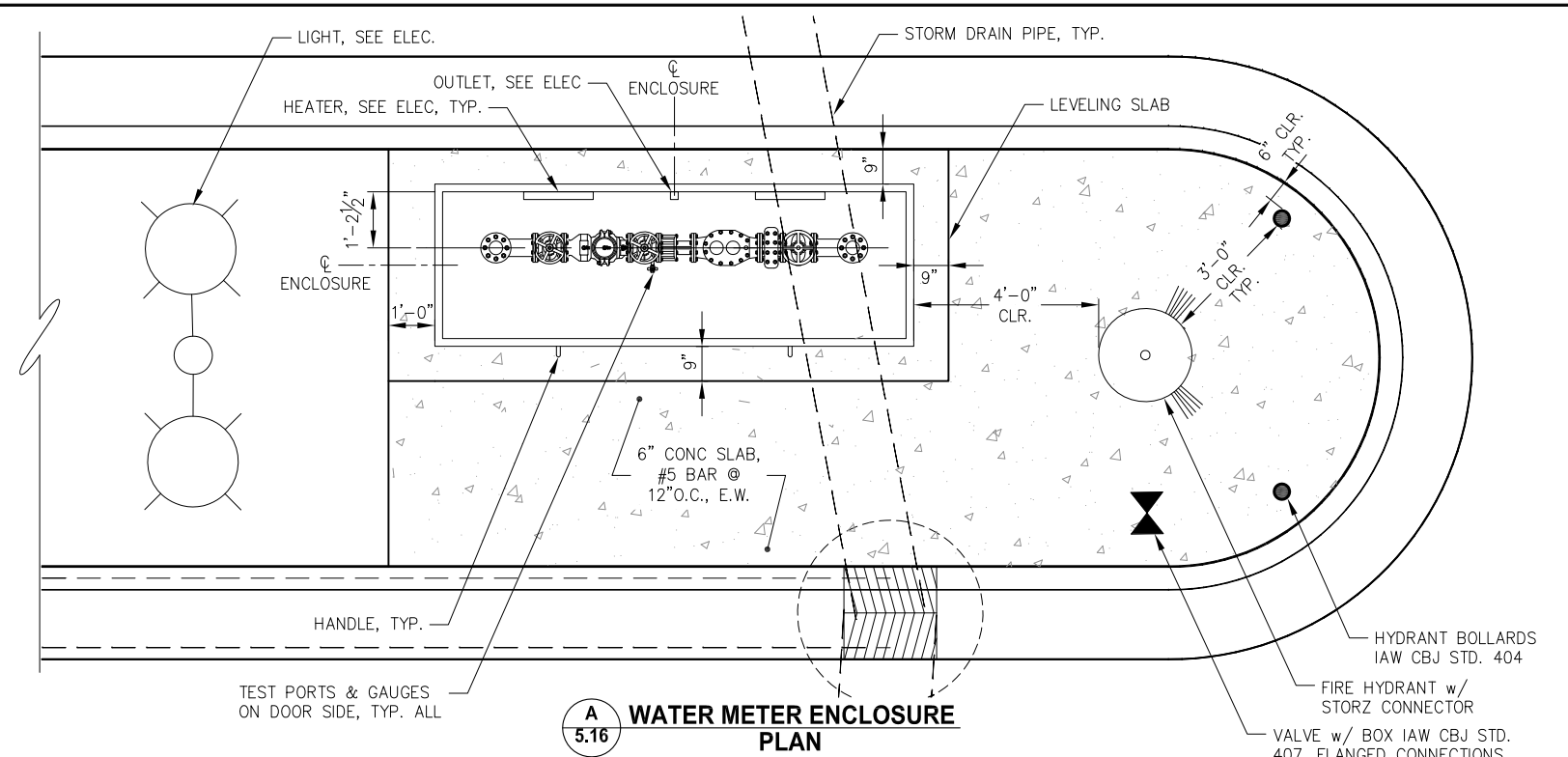
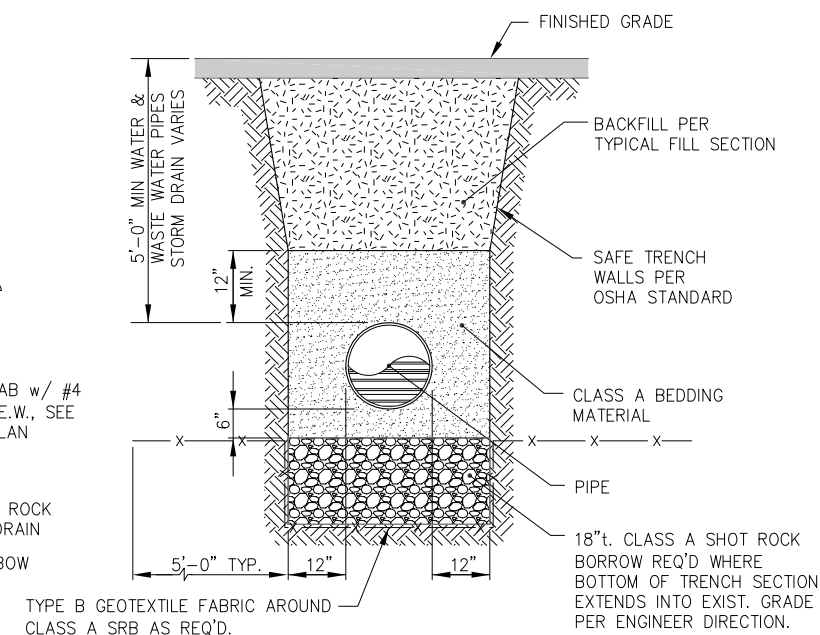
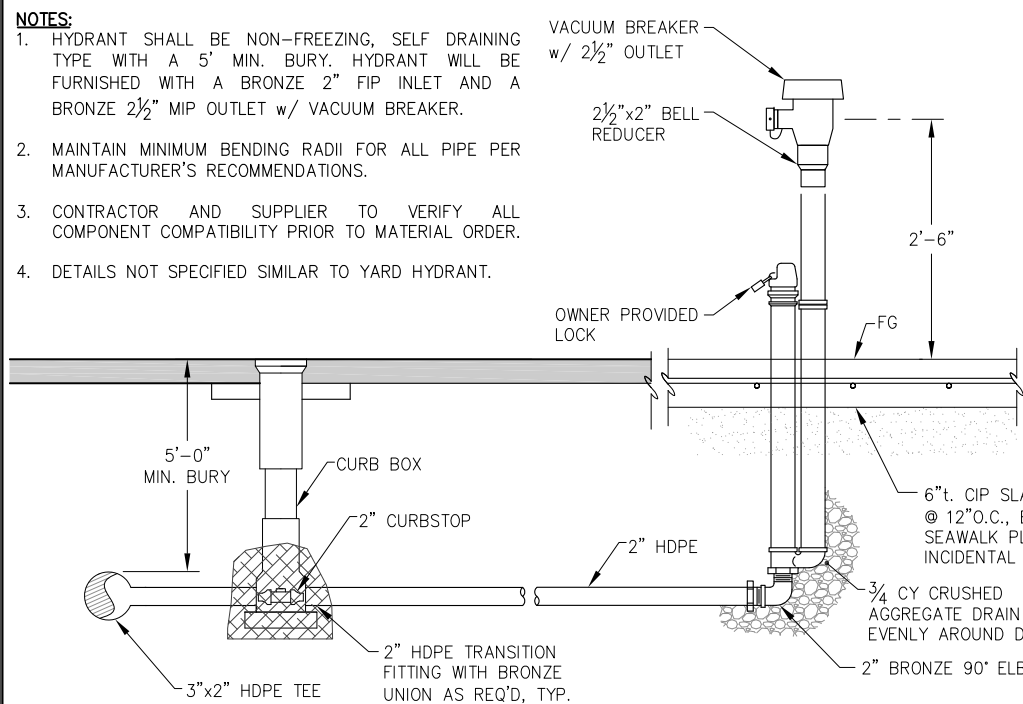
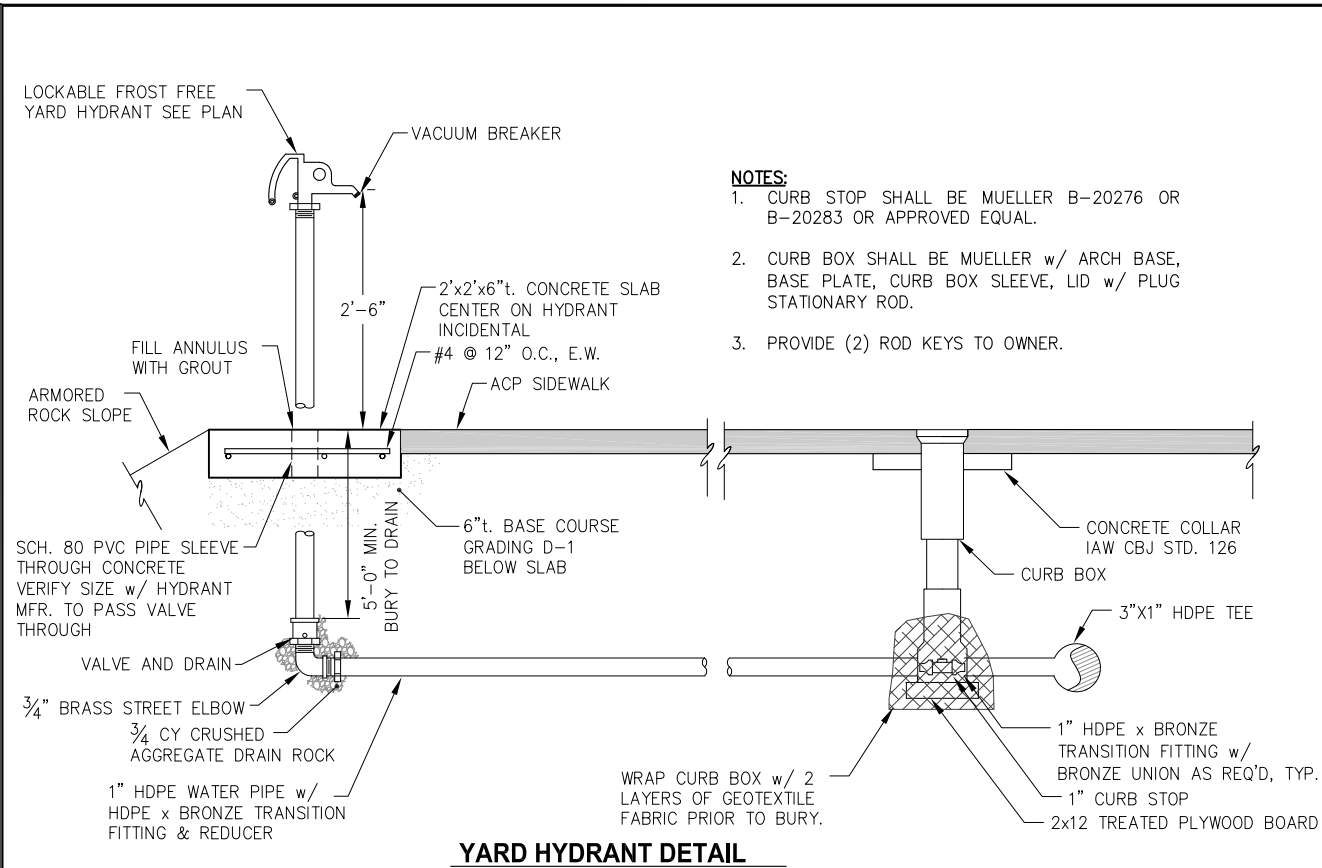
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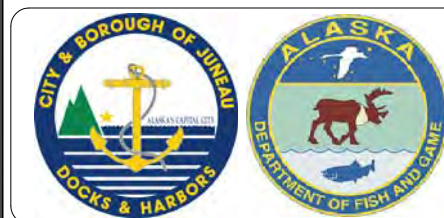
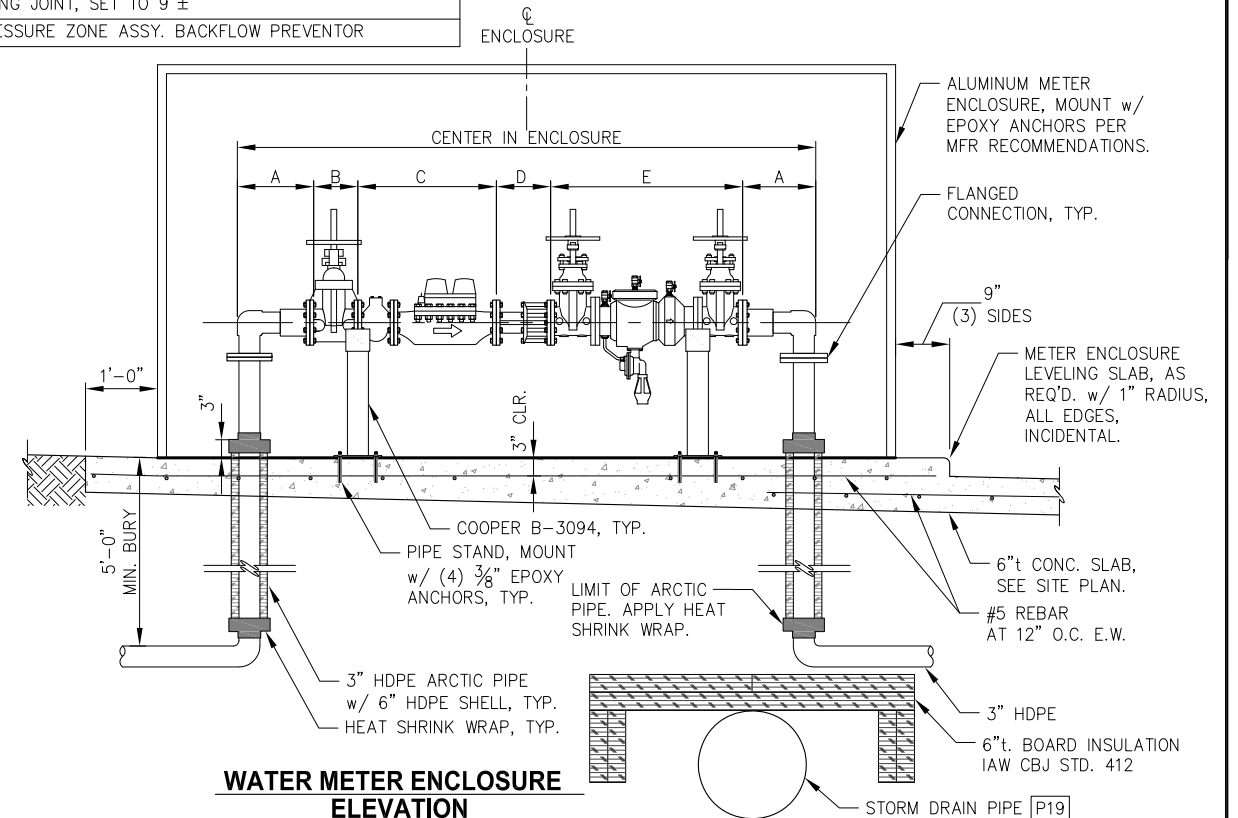


- ### TRENCH DRAIN DETAIL





DESIGNATION	WATER METER ENCLOSURE COMPONENT DESCRIPTION
A	3" HDPE 90° ELBOW w/ FLANGE ADAPTERS & HDG BACKUP RING
B	3" NRS GATE VALVE
C	3" METER w/ STRAINER & E-CODER
D	3" DISMANTLING JOINT, SET TO 9"±
E	REDUCED PRESSURE ZONE ASSY. BACKFLOW PREVENTOR



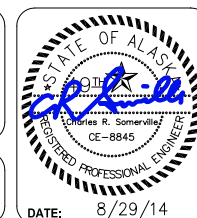
REVISIONS				
REV.	DATE	DESCRIPTION	DWN.	CKD.

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DESIGN: TCB CHECKED: CRS SCALE: 1"=10'-0"

DRAWN: PJD APPROVED: CRS



CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE: UTILITIES DETAILS

PND PROJECT NO.: 082015

5.18
SHEET 57 OF 82

STRIPE POINT LAYOUT			
POINT NO.	DESCRIPTION	NORTHING	EASTING
1	END PARKING STRIPE	511280.59	484963.99
2	END PARKING STRIPE	511219.51	485063.78
3	END PARKING STRIPE	511152.11	485252.91
4	END TIE DOWN LANE	510866.05	485291.90
5	BEGIN TIE DOWN LANE	510732.31	485063.15
6	END MAKE READY LANE	510782.29	485011.74
7	BEGIN MAKE READY LANE	511006.13	484920.27
8	END ACCESSIBLE STRIPE	511032.05	484918.70
9	PC NO PARKING STRIPE	511200.75	485010.38
10	END DELINEATION STRIPE	511217.26	485240.38
11	PCC DELINEATION STRIPE	511239.17	485173.52
12	PCC DELINEATION STRIPE	511232.10	485143.65
13	BEGIN DELINEATION STRIPE	511218.79	485125.03
14	BEGIN DELINEATION STRIPE	511242.62	485086.45
15	PCC DELINEATION STRIPE	511272.28	485097.08
16	PCC DELINEATION STRIPE	511287.96	485097.10
17	END DELINEATION STRIPE	511347.79	485052.79
18	END PARKING STRIPE	510905.77	485271.66
19	PI NO PARKING STRIPE	511216.93	484987.54

STRIPE SCHEDULE		
PARKING STALL SIZE	STRIPE LENGTH	SPACING
12x50	55'-2"	12' O.C.
10x40	44'-0"	10' O.C.
9x19	19'-0"	9' O.C.
9x18	18'-0"	9' O.C.

NOTES:

1. STRIPING SHALL CONFORM TO TABLE, U.N.O.

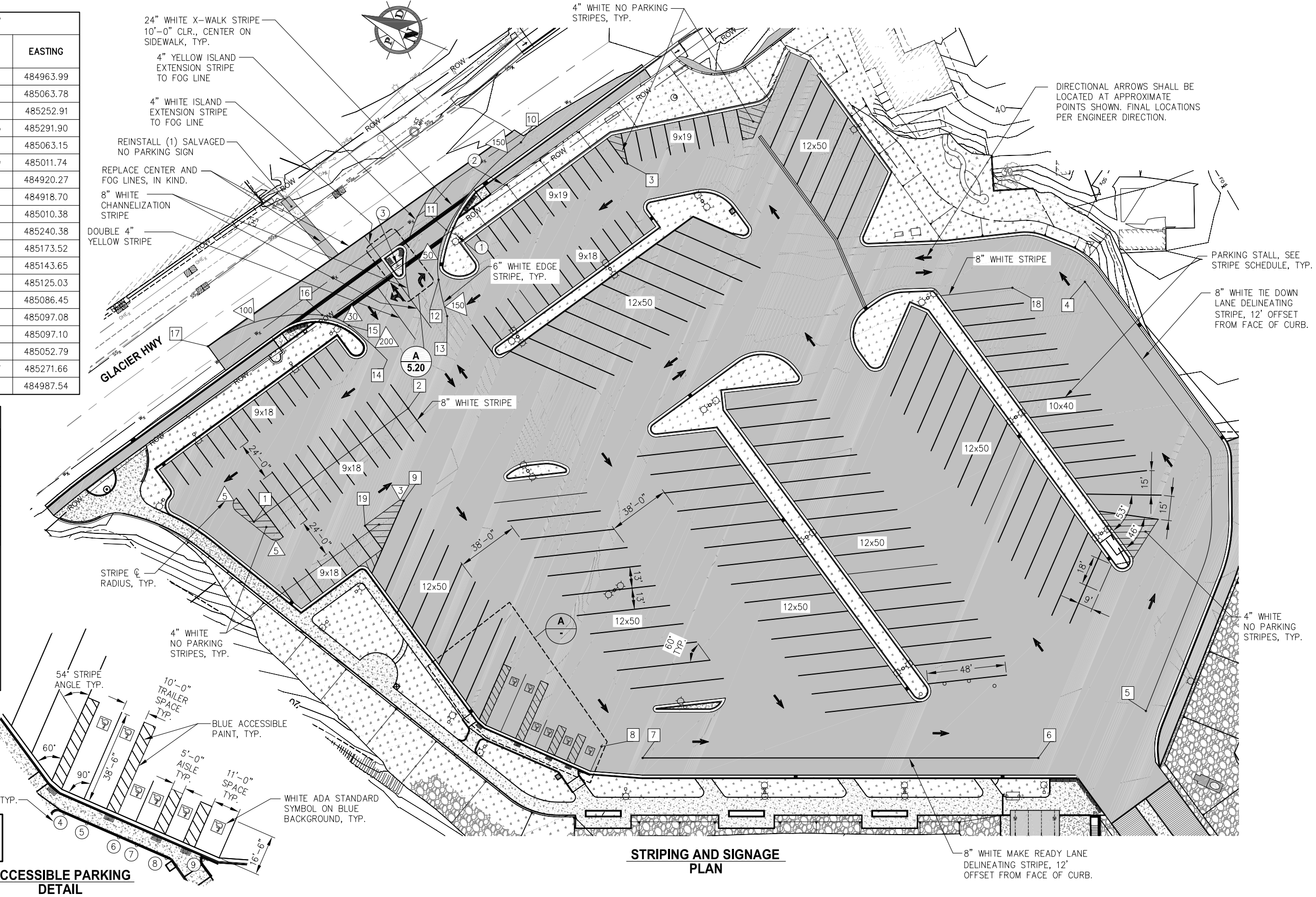
2. ANGLED PARKING STRIPES SHALL BE 60° TO CURB FACE, U.N.O.

3. DIMENSIONS SHOWN ADJACENT TO CURB SHALL BE MEASURED FROM FACE OF CURB.

4. STRIPE LENGTH MEASURED FROM EDGE OF PAVEMENT.

5. STRIPES IN NO PARKING ZONES SHALL BE ANGLED 54° FROM ADJACENT STRIPE PER ENGINEER DIRECTION.

6. CURB WALL ADJACENT PARKING STRIPES SHALL BE 19'-0".



ACCESSIBLE PARKING DETAIL



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CHECKED: CRS
APPROVED: CRS

SCALE:
SCALE IN FEET
0 30 60 FT



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CONTRACT NO. DH14-014

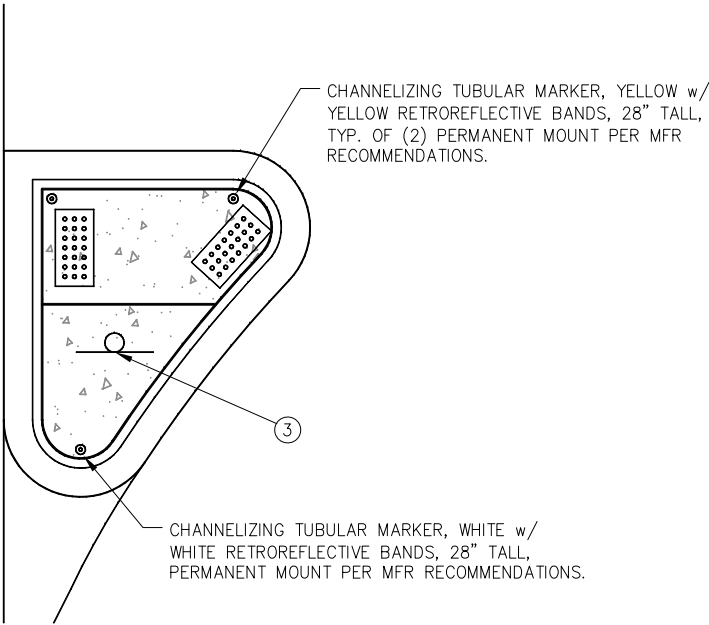
SHEET TITLE:
STRIPING AND SIGNAGE PLAN

PND PROJECT NO.: 082015

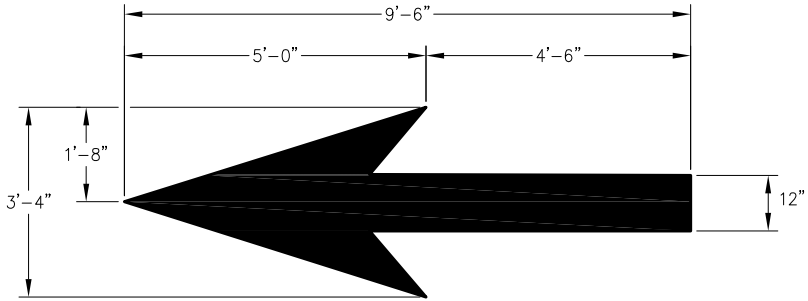
5.19
SHEET
58 OF 82

SIGN SCHEDULE						
SIGN NO.	MUTCD CODE NO.	DESCRIPTION	SIGN SIZE (INCH)	POST SIZE (INCH)	NORTHING	EASTING
①	R1-1	STOP SIGN	30 x 30	2.0" SQUARE PERFORATED TUBE	511233.15	485173.59
②	S5-2	END SCHOOL ZONE	30 x 30	2.0" SQUARE PERFORATED TUBE	511216.73	485212.62
③	R1-1	STOP SIGN	30 x 30	2.0" SQUARE PERFORATED TUBE	511258.50	485142.22
④	W12-1	DOUBLE ARROW	30 x 30			
④	R7-8	RESERVED PARKING	12 x 18	2.0" SQUARE PERFORATED TUBE	ACCESSIBLE PARKING SEE NOTE 3	
⑤	R7-8	RESERVED PARKING	12 x 18	2.0" SQUARE PERFORATED TUBE	ACCESSIBLE PARKING SEE NOTE 3	
⑥	R7-8	RESERVED PARKING	12 x 18	2.0" SQUARE PERFORATED TUBE	ACCESSIBLE PARKING SEE NOTE 3	
⑦	R7-8	RESERVED PARKING	12 x 18	2.0" SQUARE PERFORATED TUBE	ACCESSIBLE PARKING SEE NOTE 3	
⑧	R7-8	RESERVED PARKING	12 x 18	2.0" SQUARE PERFORATED TUBE	ACCESSIBLE PARKING SEE NOTE 3	
⑨	R7-8	RESERVED PARKING	12 x 18	2.0" SQUARE PERFORATED TUBE	ACCESSIBLE PARKING SEE NOTE 3	
	R7-8p	VAN ACCESSIBLE	18 x 9			

- NOTES:**
- MUTCD CODE NO. FROM U.S. DOT FEDERAL HIGHWAY ADMINISTRATION "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", 2009
 - SIGNS AND SIGN POSTS SHALL BE PROVIDED & INSTALLED IAW CBJ STANDARD 127A.
 - SEE ACCESSIBLE PARKING DTL. SHT. 5.19
 - CHANNELIZING TUBULAR MARKERS SHALL BE PROVIDED IN ACCORDANCE w/ MUTCD 3h.01 AND 6f.65



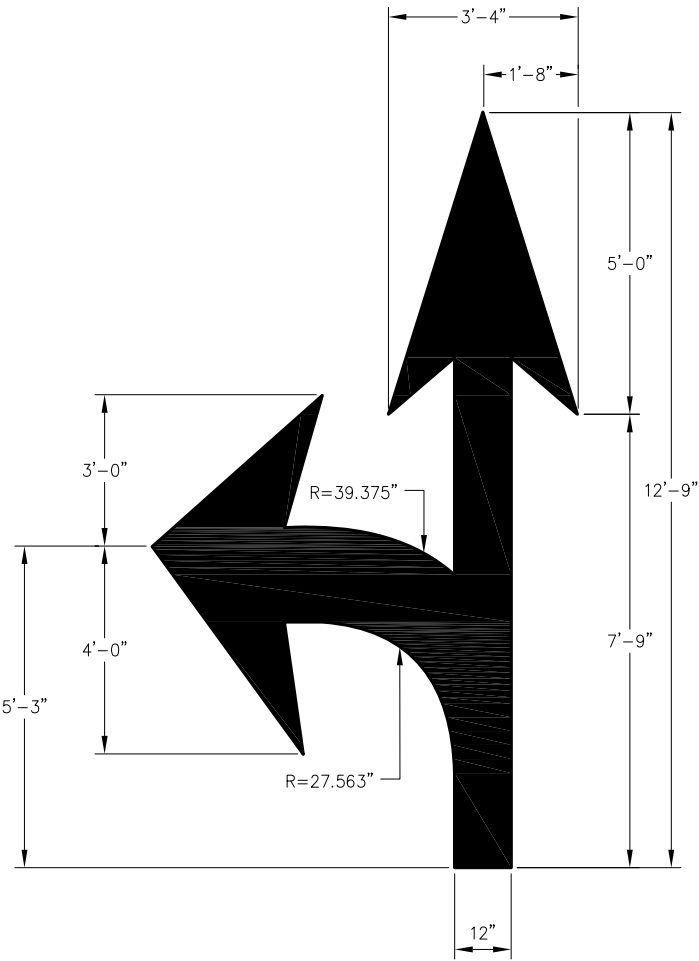
A
- REFUGE ISLAND
DETAIL



THROUGH LANE-USE ARROW

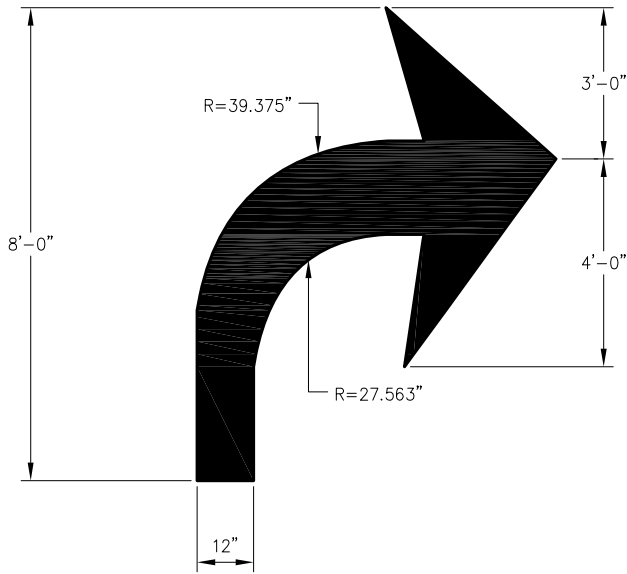
(QUANTITY: 23)

NOTE:
ARROWS TO BE LOCATED AT APPROXIMATE LOCATION SHOWN ON SIGNING AND STRIPING PLAN. EXACT LOCATION TO BE DETERMINED IN FIELD AS INSTRUCTED BY ENGINEER.



TURN AND THROUGH LANE-USE ARROW

(QUANTITY: 1)



TURN LANE-USE ARROW

(QUANTITY: 1)



REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P

N

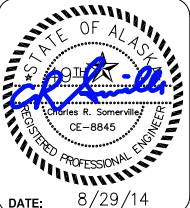
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SCALE:

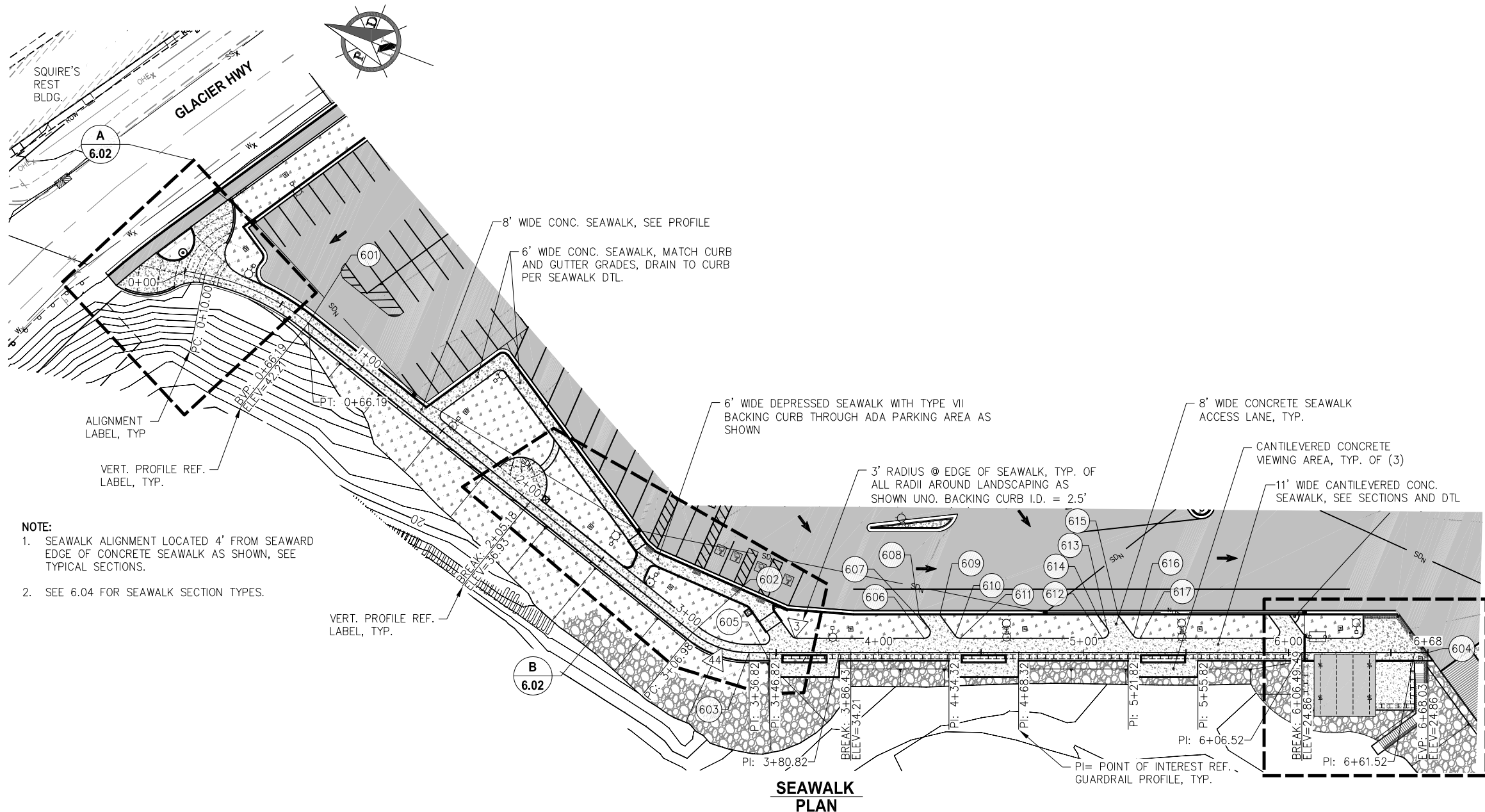


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
STRIPING AND SIGNAGE DETAILS

PND PROJECT NO.: 082015

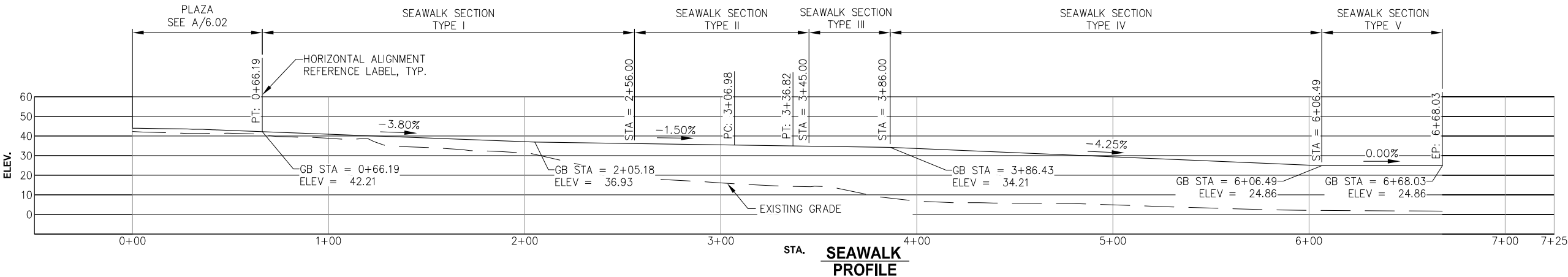
5.20
SHEET
59 OF 82



LAYOUT TABLE				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
601	511301.60	484939.77	42.21	SWA, PT
602	511070.89	484870.84	35.40	SWA, PC
603	511041.65	484872.27	34.95	SWA, PT
604	510735.05	484997.56	24.85	SWA, END
605	511030.88	484872.35	34.86	EC, COR, BEGIN GUARDRAIL
606	510965.24	484911.06	32.58	EC, PC
607	510964.80	484916.39	32.41	EC, PT
608	510971.92	484920.75	32.51	EC, TBC
609	510962.52	484924.59	32.08	EC, TBC
610	510951.64	484917.93	31.92	EC, PC
611	510948.94	484917.71	31.83	EC, PT
612	510884.74	484943.95	28.88	EC, PC
613	510884.31	484949.29	28.71	EC, PT
614	510891.43	484953.64	28.82	EC, TBC
615	510882.02	484957.49	28.39	EC, TBC
616	510871.15	484950.83	28.22	EC, PC
617	510867.68	484950.76	28.11	EC, PT

- NOTE:
- SEAWALK ALIGNMENT LOCATED 4' FROM SEAWARD EDGE OF CONCRETE SEAWALK AS SHOWN, SEE TYPICAL SECTIONS.
 - SEE 6.04 FOR SEAWALK SECTION TYPES.

- POINT TABLE ABBREVIATIONS:
- BOL BOLLARD
 - COR CORNER
 - EC EDGE OF CONCRETE
 - EP EDGE OF PAVEMENT
 - FC CURB FLANGE
 - GB GRADE BREAK
 - ME MATCH EXISTING
 - PC POINT OF CURVATURE
 - PCC POINT OF COMPOUND CURVATURE
 - POC POINT ON CURVE
 - PRC POINT OF REVERSE CURVATURE
 - PT POINT OF TANGENCY
 - SWA SEAWALK ALIGNMENT



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SCALE:
SCALE IN FEET
0 30 60 FT

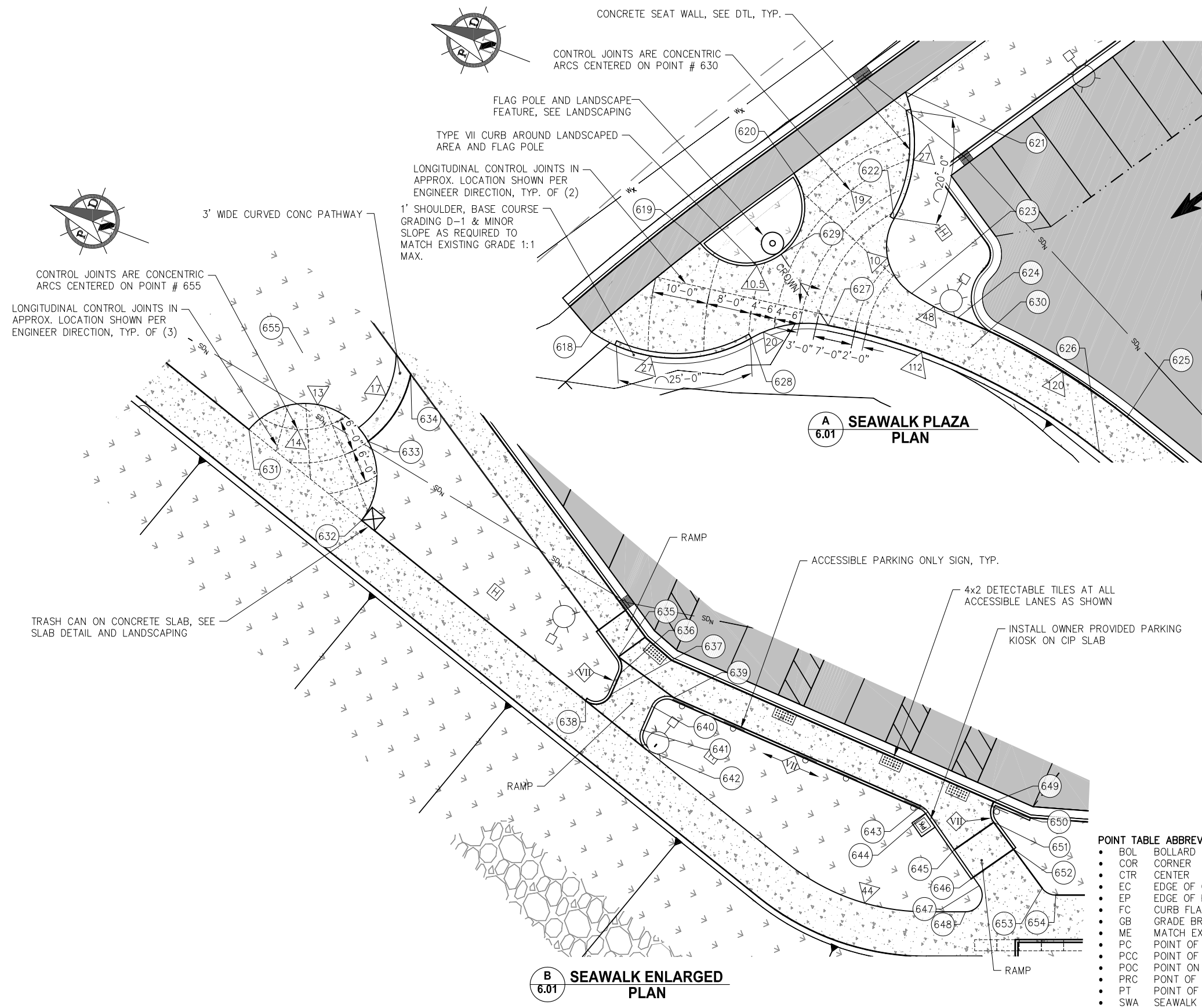


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
SEAWALK PLAN AND PROFILE

PND PROJECT NO.: 082015

6.01
SHEET
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LAYOUT TABLE				
POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
618	511395.34	484921.34	44.67	EC
619	511383.33	484943.52	44.58	EC, COR
620	511372.46	484961.49	44.44	EC, COR
621	511359.43	484982.59	44.28	EC
622	511352.70	484960.71	43.80	EC, PRC, SEATWALL
623	511344.70	484949.51	43.61	EC, PCC
624	511335.34	484948.62	43.45	EC, PRC
625	511300.45	484943.60	42.13	EC, PT
626	511302.74	484935.94	42.27	EC, PT
627	511356.41	484938.53	43.80	EC, PCC
628	511368.35	484931.17	43.80	EC, PRC, SEATWALL
629	511369.07	484947.16	44.11	SW, POC
630	511331.16	484944.55	43.36	CTR CONCENTRIC JOINTS
631	511188.56	484910.17	37.71	EC, COR
632	511163.66	484902.73	36.81	EC, COR
633	511167.93	484916.30	36.93	EC, COR
634	511165.41	484930.36	36.84	EC, COR
635	511111.66	484897.46	35.29	EC, PC
636	511110.23	484894.82	35.37	EC, PT
637	511110.33	484890.75	35.69	EC, PC
638	511114.19	484887.95	36.03	EC, PT
639	511099.70	484894.43	35.17	EC, PC
640	511102.77	484891.51	35.40	EC, PT
641	511102.89	484886.89	35.74	EC, PC
642	511100.75	484883.93	35.82	EC, PT
643	511051.23	484893.18	34.28	EC, PC
644	511049.68	484892.70	34.28	EC, PT
645	511042.70	484888.19	34.21	EC, BEGIN RAMP
646	511037.66	484884.93	34.78	EC, END OF RAMP
647	511036.11	484883.92	34.75	EC, PC
648	511036.62	484878.64	34.78	EC, PT
649	511039.42	484898.88	34.11	EC, TBC, COR
650	511039.44	484898.08	34.11	EC, PC
651	511038.00	484895.44	34.10	EC, PT, BEGIN RAMP
652	511032.89	484892.31	34.50	EC, END RAMP
653	511025.46	484887.76	34.51	EC, PC
654	511022.76	484887.55	34.50	EC, PT
655	511184.87	484926.58	37.51	CTR CONCENTRIC JOINTS



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SCALE:
SCALE IN FEET
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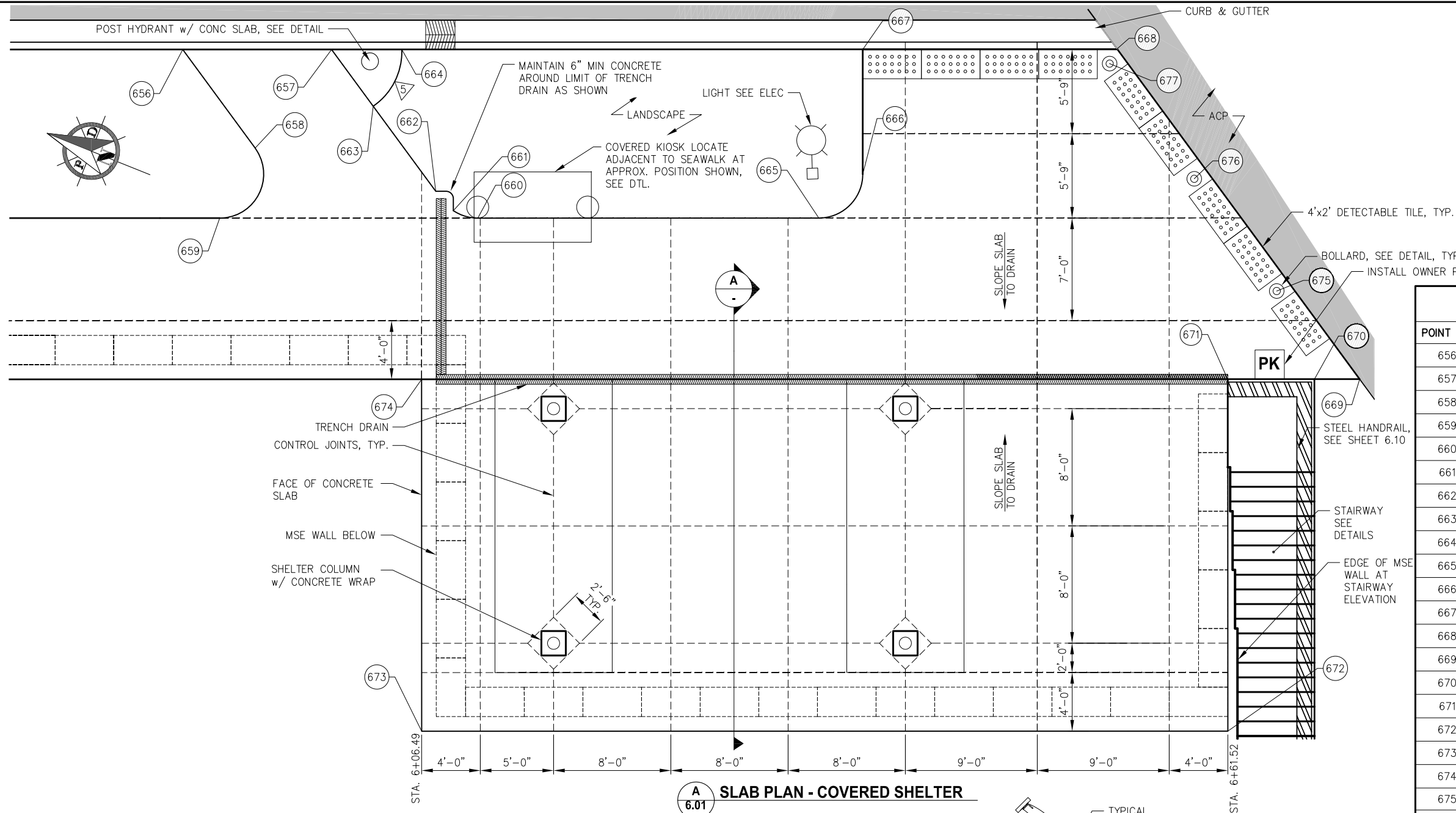


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CONTRACT NO. DH14-014

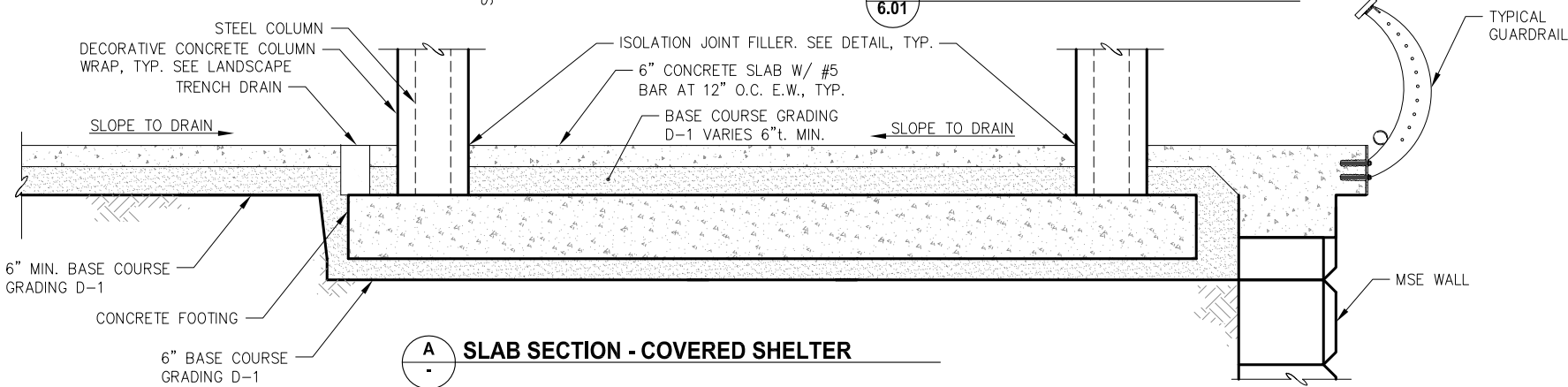
SHEET TITLE:
SEAWALK ENLARGED PLANS

PND PROJECT NO.: 082015

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SHEET
61 OF 82



SLAB PLAN - COVERED SHELTER

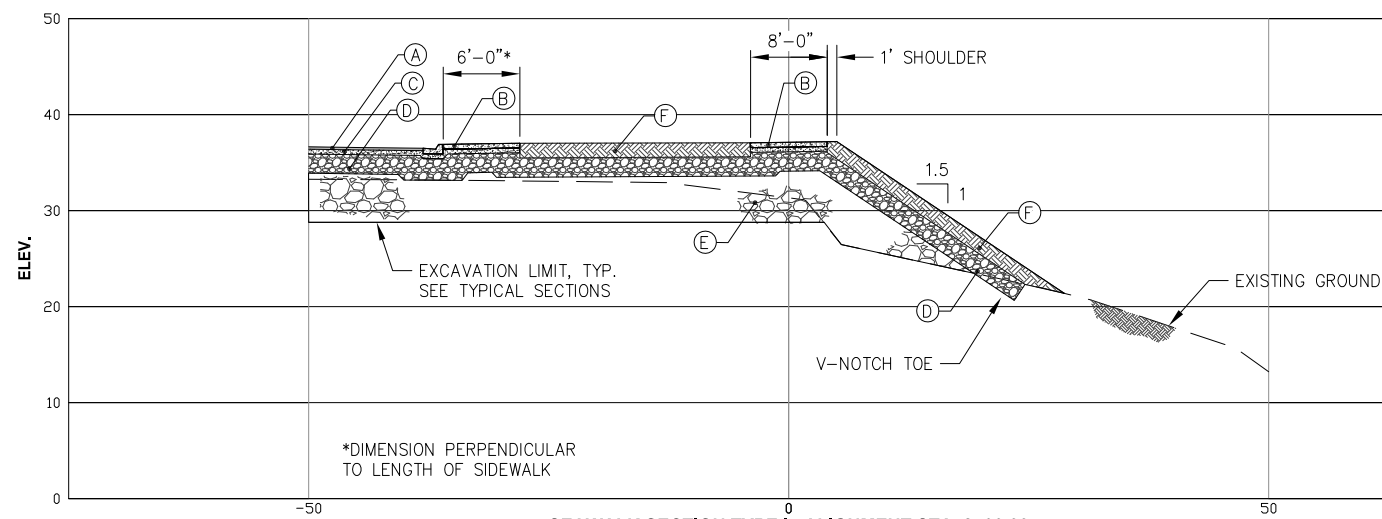


SLAB SECTION - COVERED SHELTER

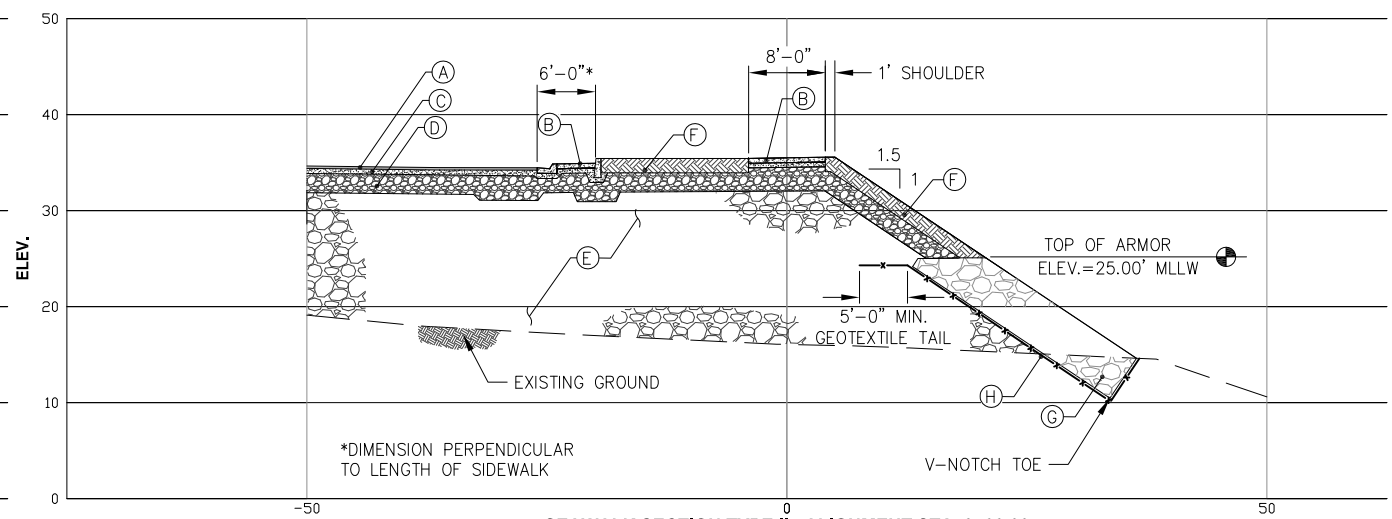
LAYOUT TABLE

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
656	510814.08	484985.25	25.27	EC, TBC
657	510804.67	484989.09	24.84	COR, TBC
658	510806.96	484980.90	25.16	EC, PC
659	510807.39	484975.56	25.33	EC, PT
660	510791.10	484982.22	24.85	EC, PC
661	510792.83	484982.06	24.85	EC, POC, COR
662	510794.44	484982.83	24.85	EC, COR
663	510800.58	484986.59	24.72	EC, COR
664	510800.24	484990.91	24.63	TBC, COR
665	510769.56	484991.02	24.96	EC, PC
666	510767.92	484994.93	24.99	EC, PT
667	510771.13	485002.80	25.08	COR, TBC
668	510755.11	485009.35	25.05	EC, END CURB
669	510731.24	484994.80	24.80	EC, EP
670	510734.10	484993.63	24.80	COR, LANDING
671	510739.57	484991.39	24.80	COR, LANDING
672	510730.49	484969.18	25.16	EC, COR
673	510781.41	484948.37	25.16	EC, COR
674	510790.48	484970.59	24.80	EC, COR
675	510738.76	484998.23	24.87	BOL
676	510746.86	485003.19	24.96	BOL
677	510755.18	485008.28	25.06	BOL

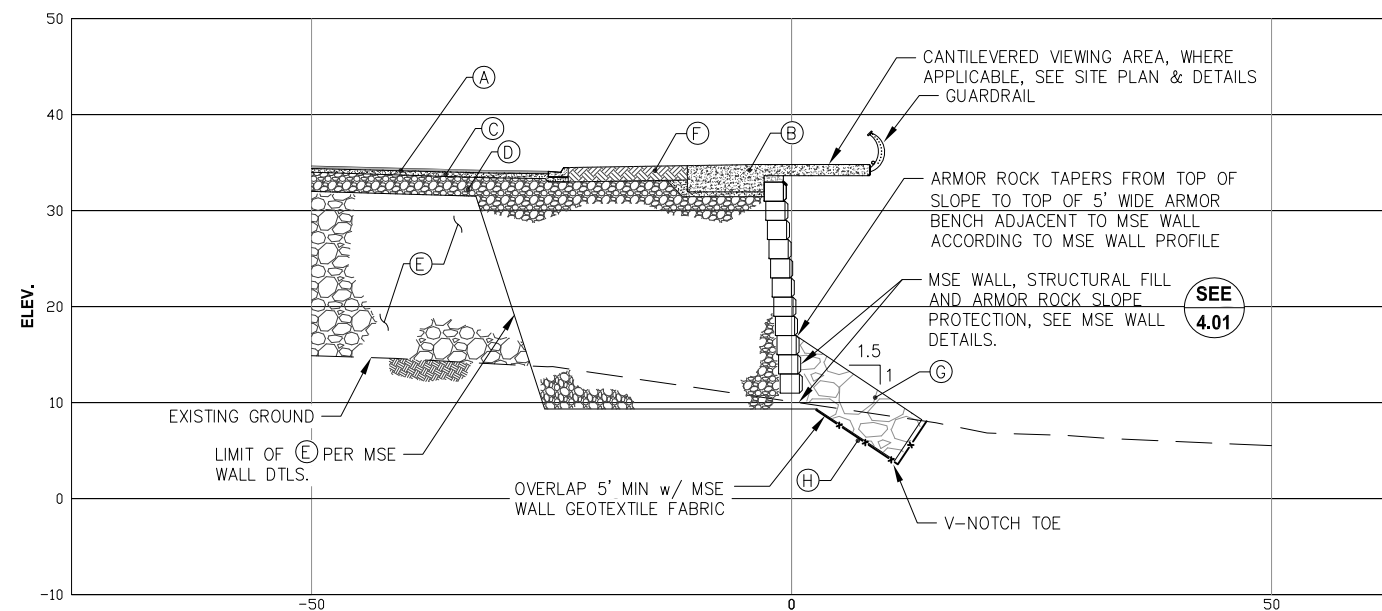
- POINT TABLE ABBREVIATIONS:**
- COR CORNER
 - EC EDGE OF CONCRETE
 - EP EDGE OF PAVEMENT
 - FC CURB FLANGE
 - GB GRADE BREAK
 - ME MATCH EXISTING
 - PC POINT OF CURVATURE
 - PCC POINT OF COMPOUND CURVATURE
 - PRC POINT OF REVERSE CURVATURE
 - PT POINT OF TANGENCY
 - SWA SEAWALK ALIGNMENT



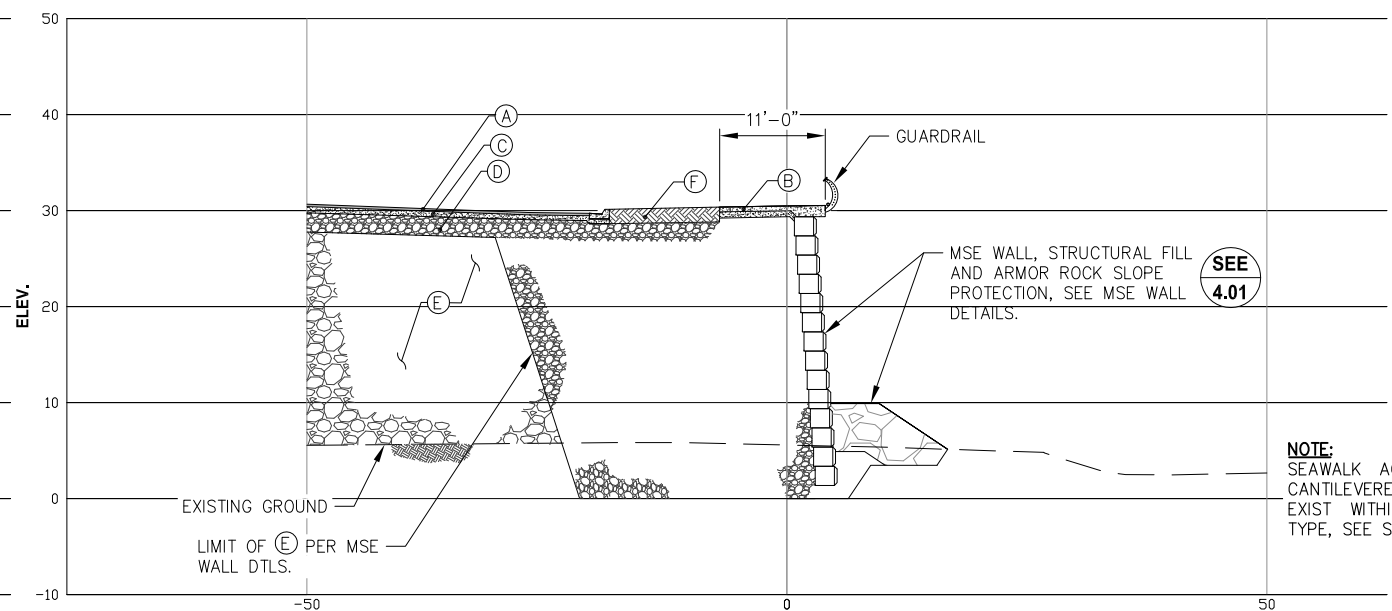
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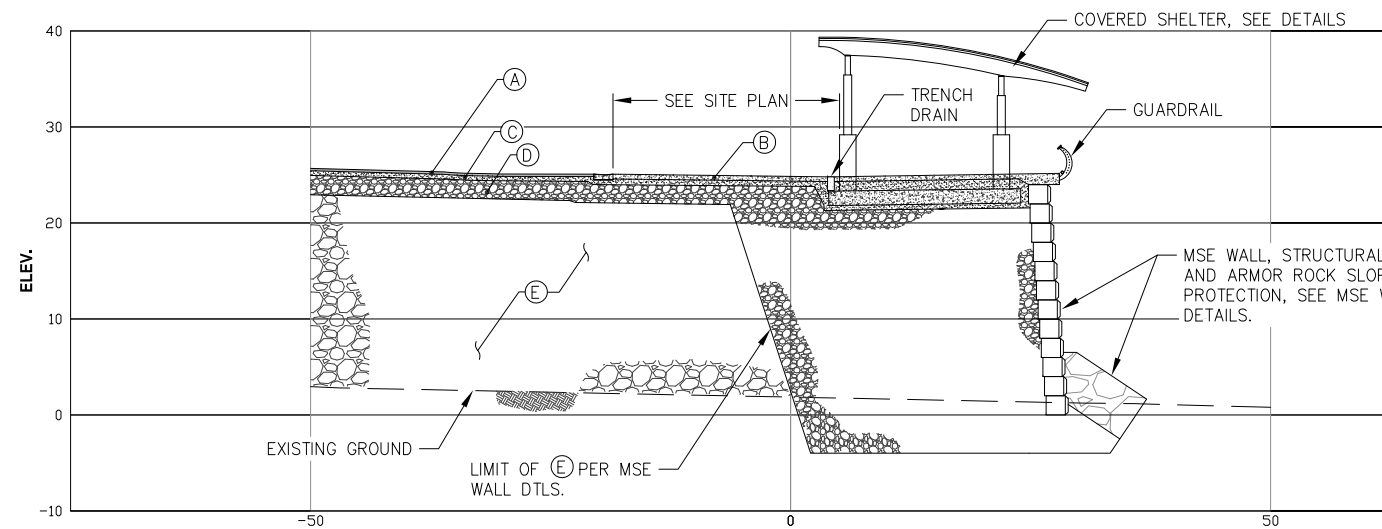
SEAWALK SECTION TYPE II - ALIGNMENT STA. 3+00.00



SEAWALK SECTION TYPE III - ALIGNMENT STA. 3+75.00



SEAWALK SECTION TYPE IV - ALIGNMENT STA. 4+75.00



SEAWALK SECTION TYPE V - ALIGNMENT STA. 6+40.00

GENERAL SECTION NOTES:

- SEE INDIVIDUAL DTLS FOR BEDDING AND FILL REQUIREMENTS FOR SIDEWALK, CURB & GUTTER AND WALLS.
- "ROADWAY BASE COURSE" SHALL BE 10"t. 2"(-) MATERIAL CAPPED w/ 2"t. BASE COURSE GRADING D-1, SEE SPECIFICATIONS FOR GRADATION.
- EXCAVATION LIMIT IN LANDSCAPED AREAS SHALL BE ONLY AS REQUIRED TO ACHIEVE MIN DEPTHS OF PLANTING SOIL.

MATERIAL DESIGNATIONS

SYMBOL	MATERIAL DESCRIPTION
(A)	3"t. AC PAVEMENT (2 LAYERS @ 1½")
(B)	CONC. SEAWALK, SEE DETAILS
(C)	12"t. MIN. ROADWAY BASE COURSE
(D)	18"t. MIN. CLASS A SHOT ROCK BORROW
(E)	CLASS B SHOT ROCK BORROW OR USABLE EXCAVATION, THICKNESS AS REQUIRED.
(F)	PLANTING SOIL, THICKNESS VARIES, SEE LANDSCAPING
(G)	5"t. MIN. CLASS IV ARMOR ROCK
(H)	GEOTEXTILE FABRIC, TYPE VARIES, SEE SPECS.

SEAWALK SECTIONS



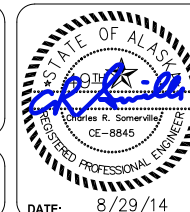
REVISIONS				
REV.	DATE	DESCRIPTION	DWN.	CKD.



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DRAWN: TCB APPROVED: CRS

SCALE: SCALE IN FEET
0 10 20 FT.



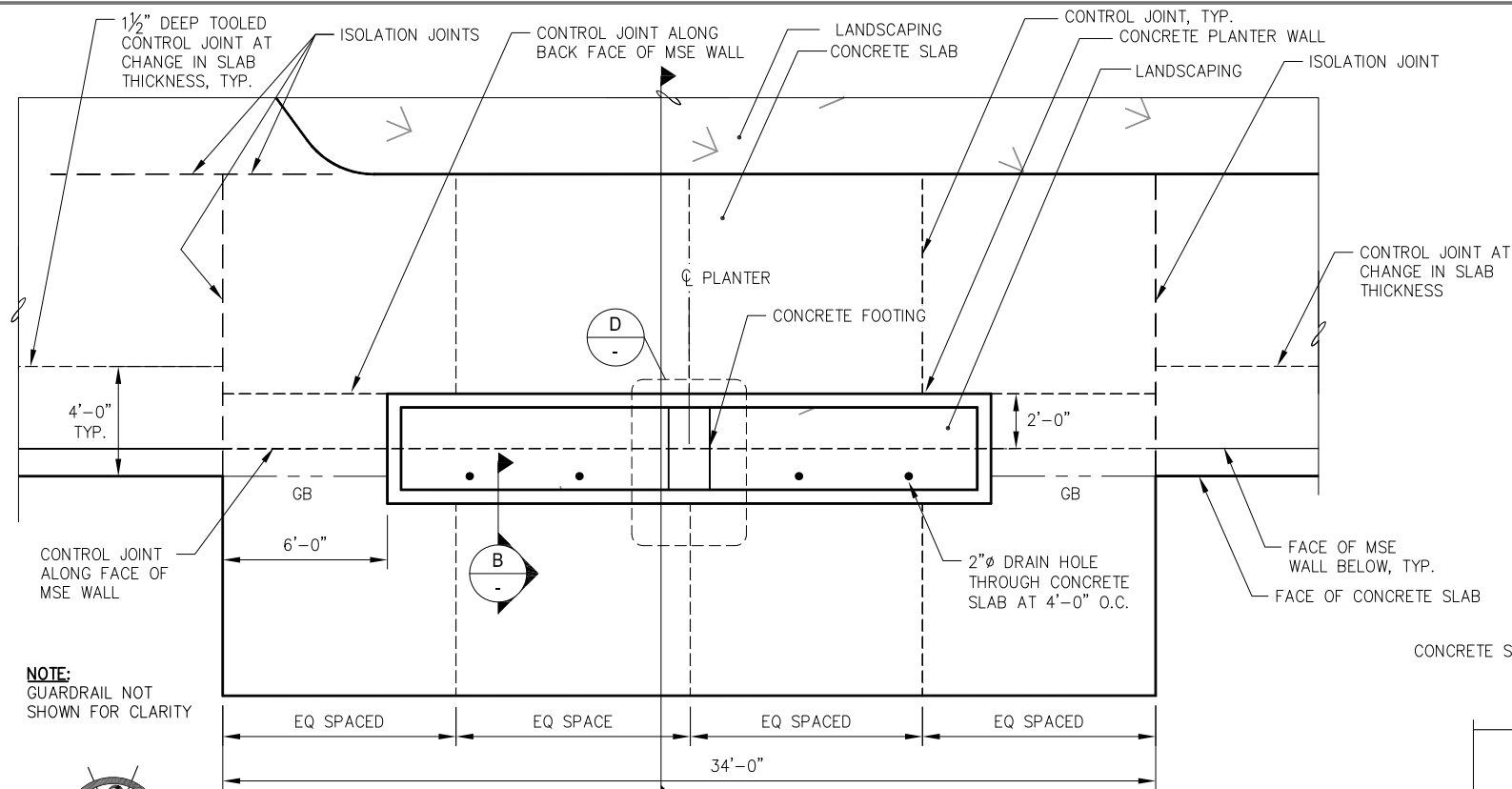
CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

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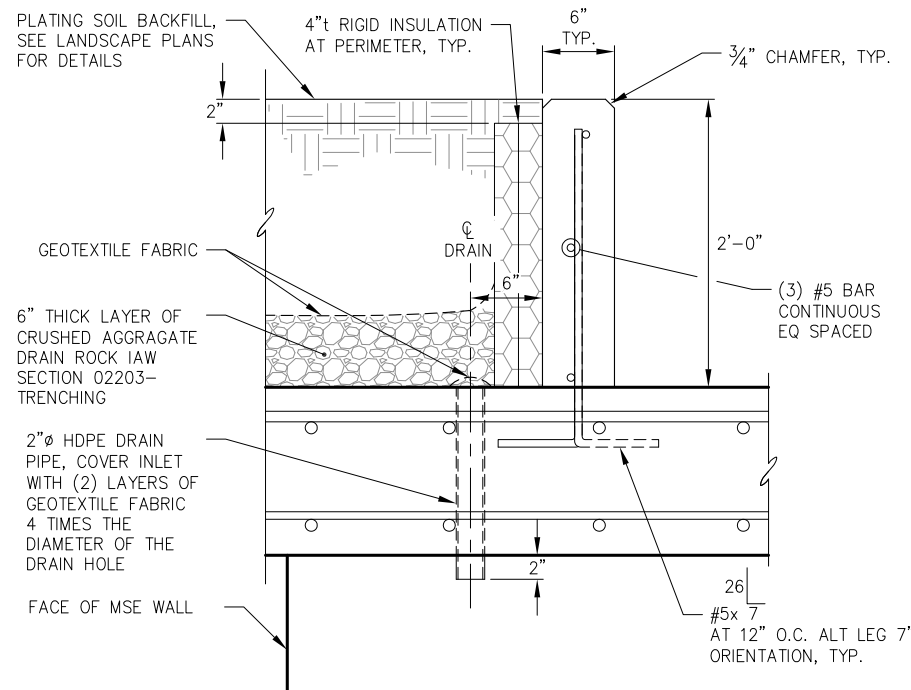
SEAWALK SECTIONS

PND PROJECT NO.: 082015

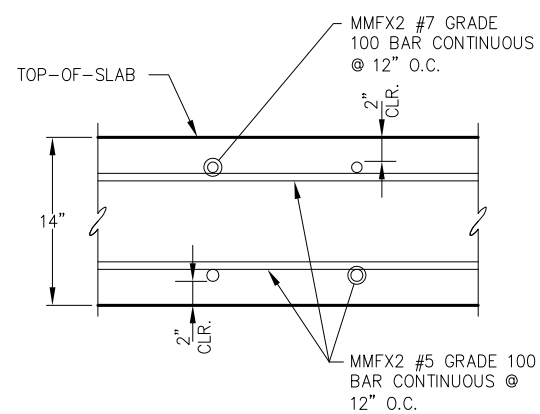
6.04
SHEET
63 OF 82



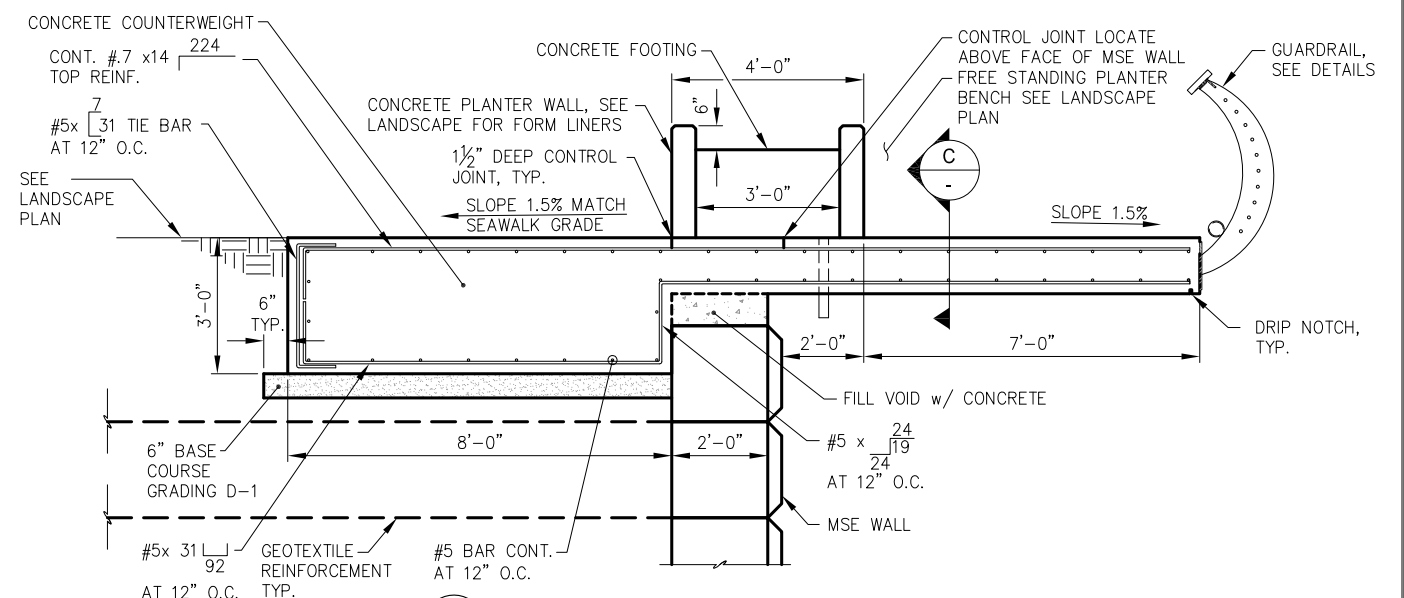
CANTILEVERED CONCRETE VIEWING AREA PLAN



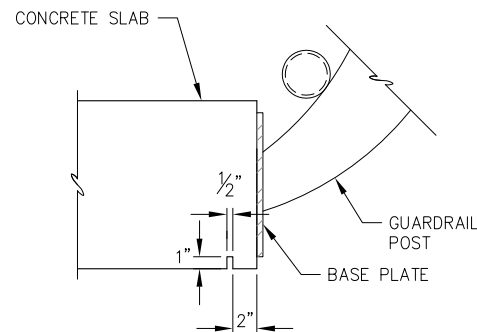
B PLANTER TYPICAL DETAIL



C TYPICAL CANTILEVER SLAB SECTION



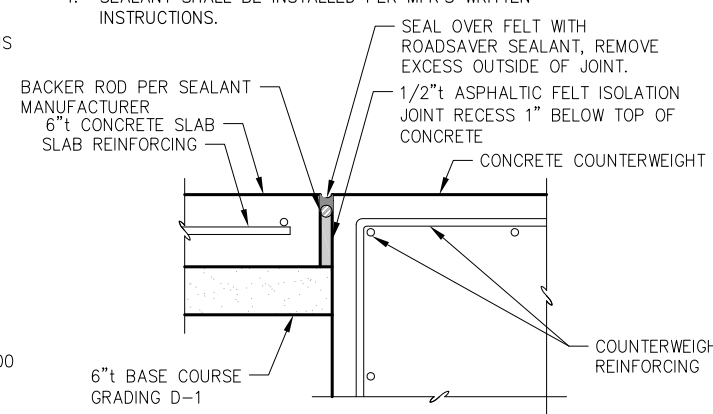
A CANTILEVERED CONCRETE VIEWING AREA TYPICAL SECTION



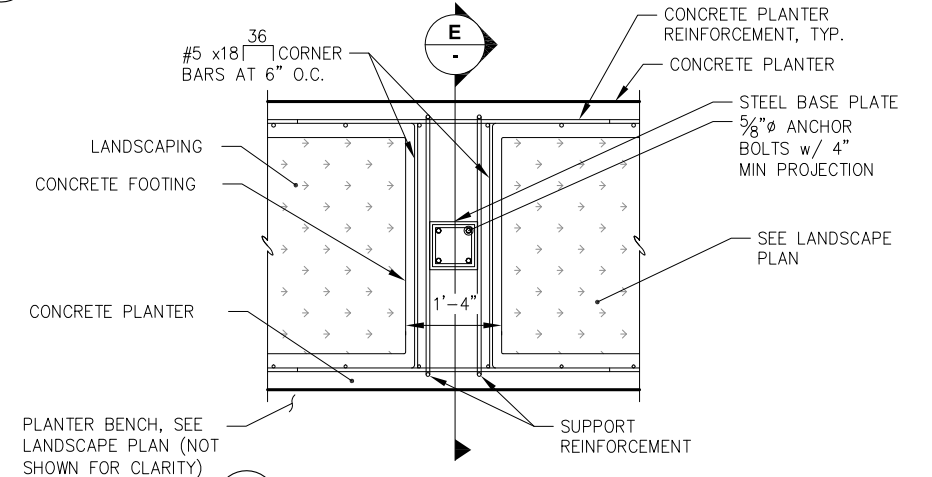
DRIP NOTCH DETAIL

NOTE: DRIP NOTCH SHALL RUN THE ENTIRE LENGTH OF CANTILEVERED CONCRETE VIEWING AREA AND SEAWALK.

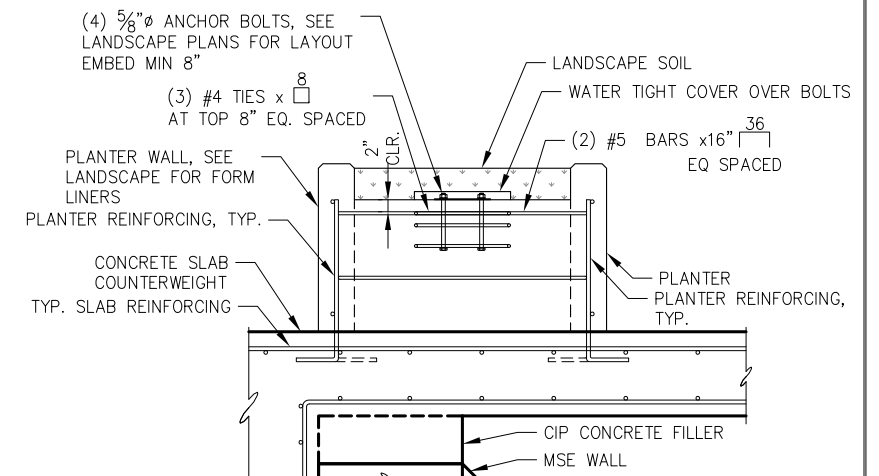
- NOTES:**
1. ALL ISOLATION JOINTS SHALL BE CONSTRUCTED AS SHOWN.
 2. SEALANT SHALL BE PER SPECIFICATIONS.
 3. SEALANT BEAD SHALL BE 1/4" ± 25%.
 4. SEALANT SHALL BE INSTALLED PER MFR'S WRITTEN INSTRUCTIONS.



TYPICAL ISOLATION JOINT DETAIL



D CONCRETE FOOTING PLAN



E PLANTER SECTION AT CONCRETE FOOTING



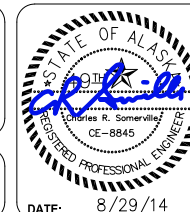
REVISIONS					
REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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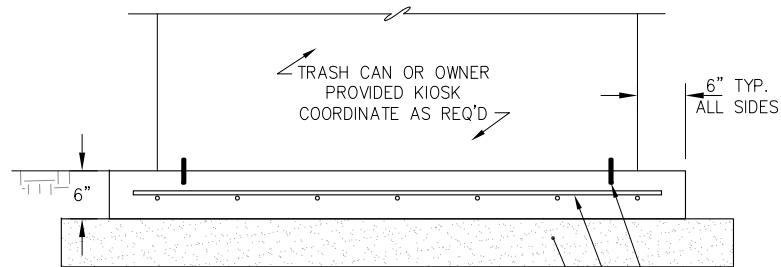


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
CANTILEVERED CONCRETE VIEWING AREA
PLAN, SECTIONS AND DETAILS

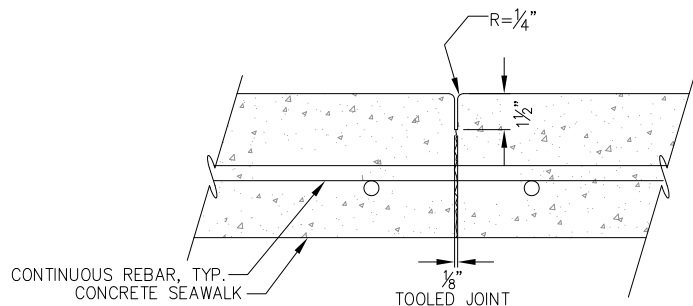
PND PROJECT NO.: 082015

6.05
SHEET
64 OF 82



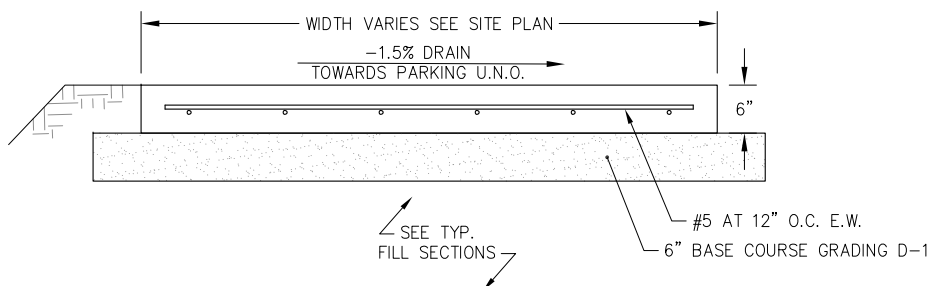
- NOTE:**
1. FINAL LOCATION PER ENGINEER DIRECTION.
 2. SLAB TYPICAL OF (3) APPLIES ONLY TO KIOSKS/TRASH CANS LOCATION OUTSIDE OF PAVED AREAS.
 3. SLABS SHALL BE INCIDENTAL TO SEAWALK PAY ITEMS.

**PARKING KIOSK/ TRASH CAN SLAB
DETAIL**

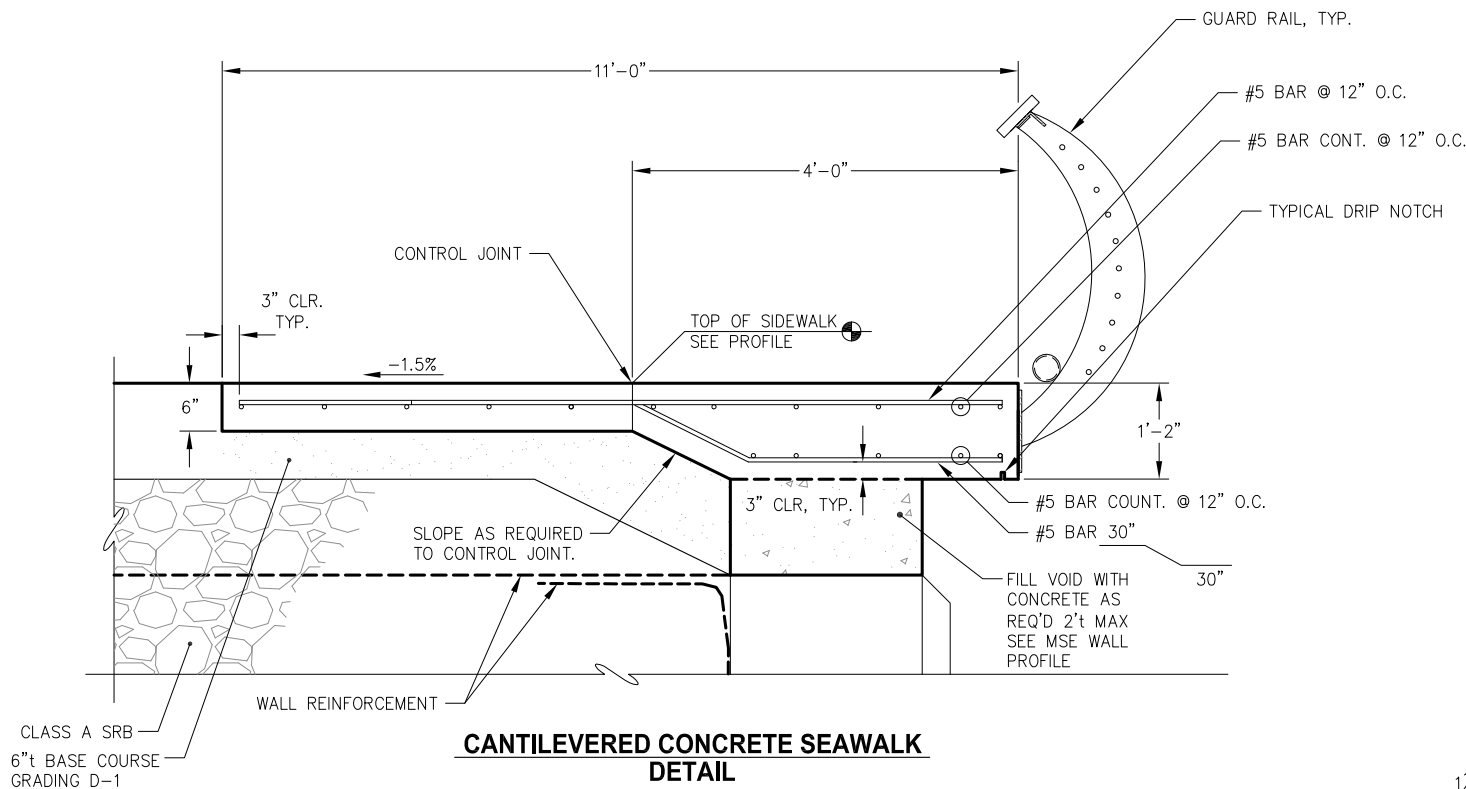


- NOTES:**
1. ALL JOINTS SHALL BE TOOLED AS SHOWN.

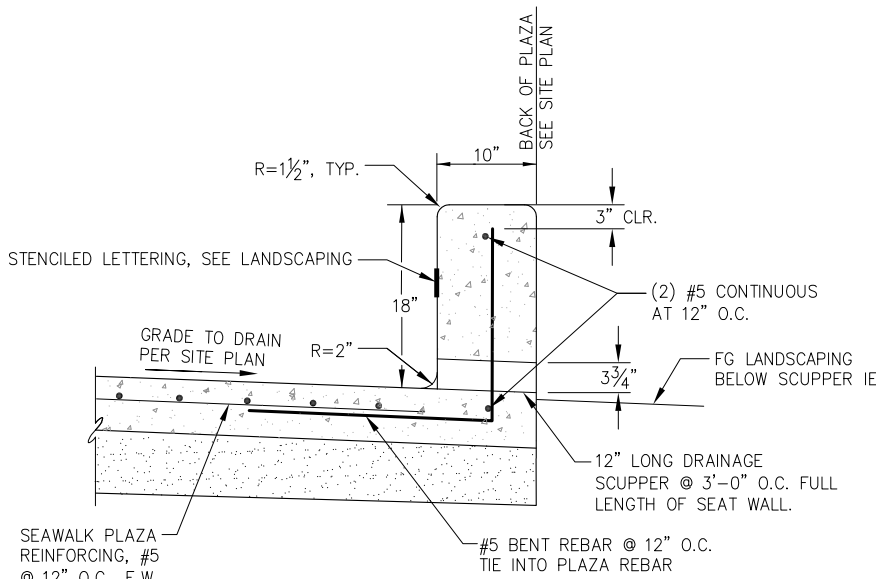
**CONTROL JOINT
DETAIL**



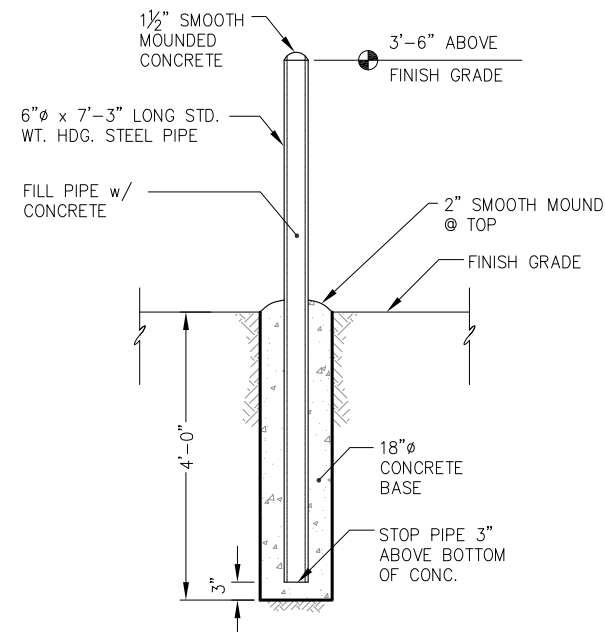
**CONCRETE SEAWALK
TYPICAL SECTION**



**CANTILEVERED CONCRETE SEAWALK
DETAIL**



**SEAWALK PLAZA CONCRETE SEAT WALL
DETAIL**



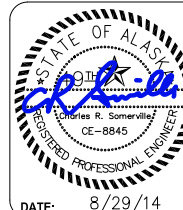
- NOTE:**
1. TYP. OF (3) LOCATE PER SITE PLAN

**PIPE BOLLARD
DETAIL**

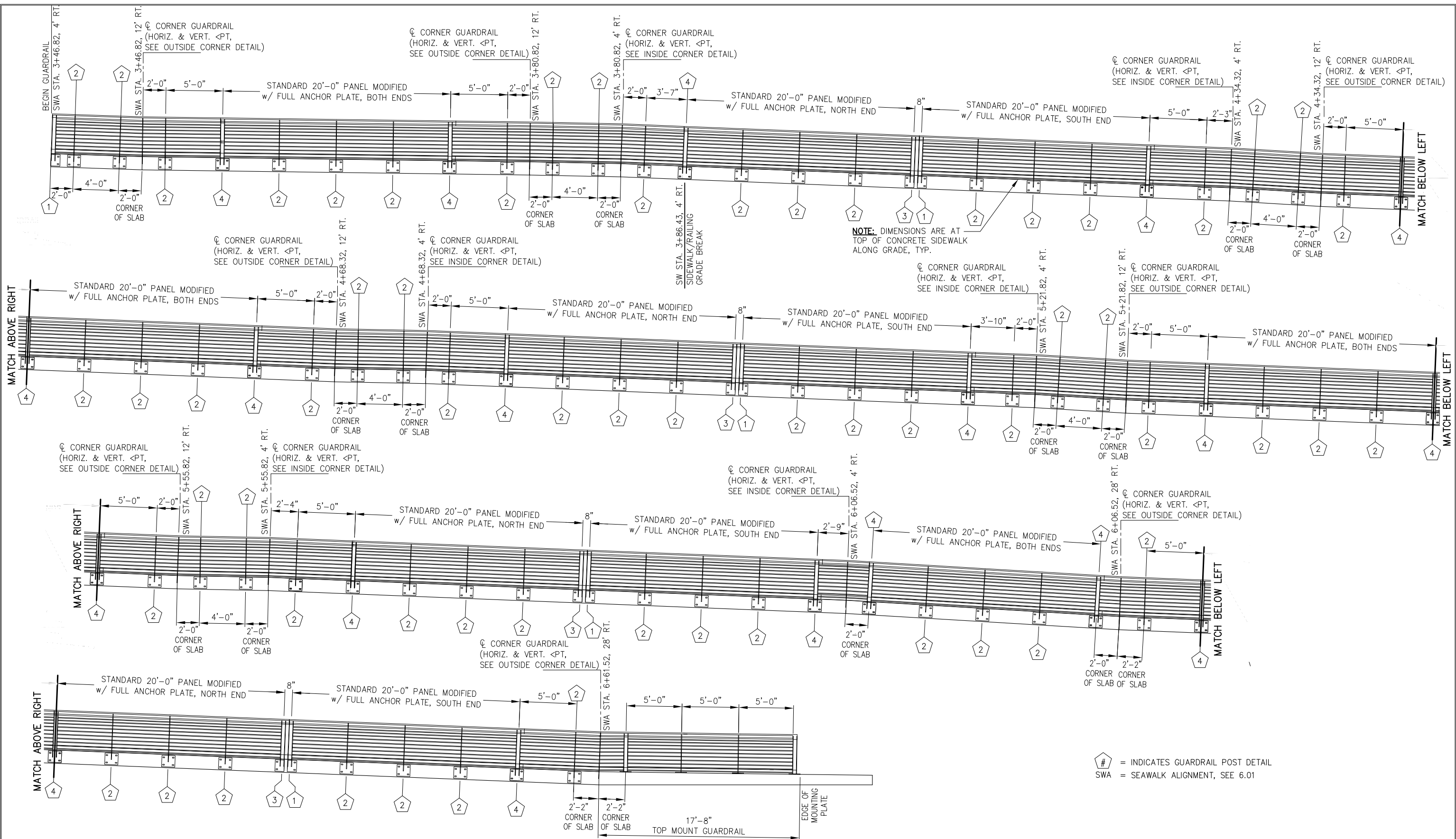


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CITY & BOROUGH OF JUNEAU, ALASKA STATTER HARBOR IMPROVEMENTS CONTRACT NO. DH14-014	
SHEET TITLE: SEAWALK DETAILS	6.06 SHEET 65 OF 82
PND PROJECT NO.: 082015	



= INDICATES GUARDRAIL POST DETAIL
 SWA = SEAWALK ALIGNMENT, SEE 6.01



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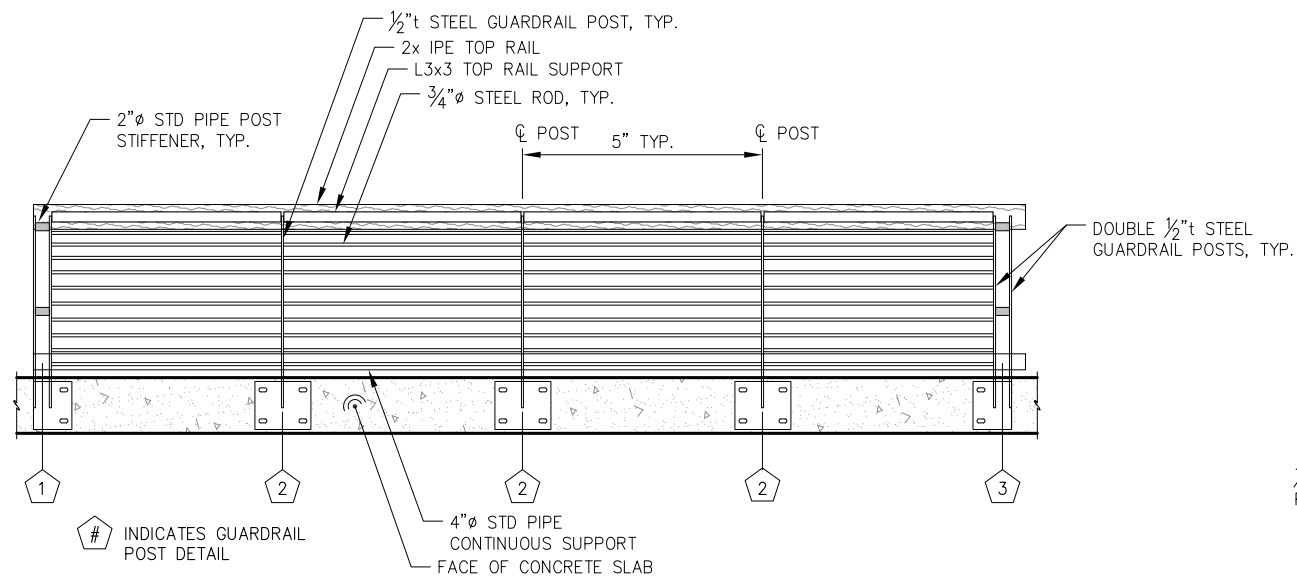


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
 CONTRACT NO. DH14-014

SHEET TITLE:
SEAWALK GUARDRAIL PROFILE

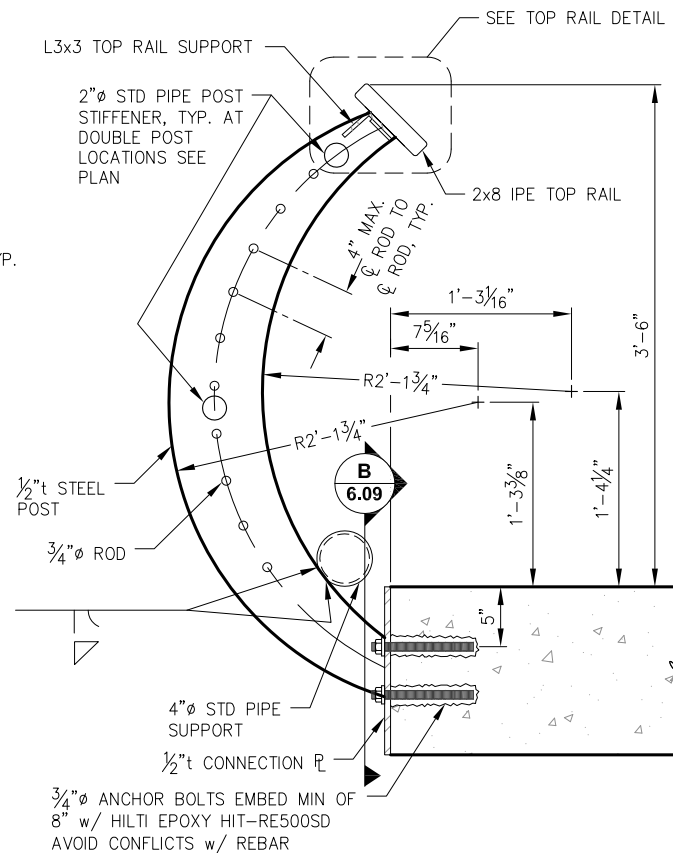
PND PROJECT NO.: 082015

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 SHEET
 66 OF 82

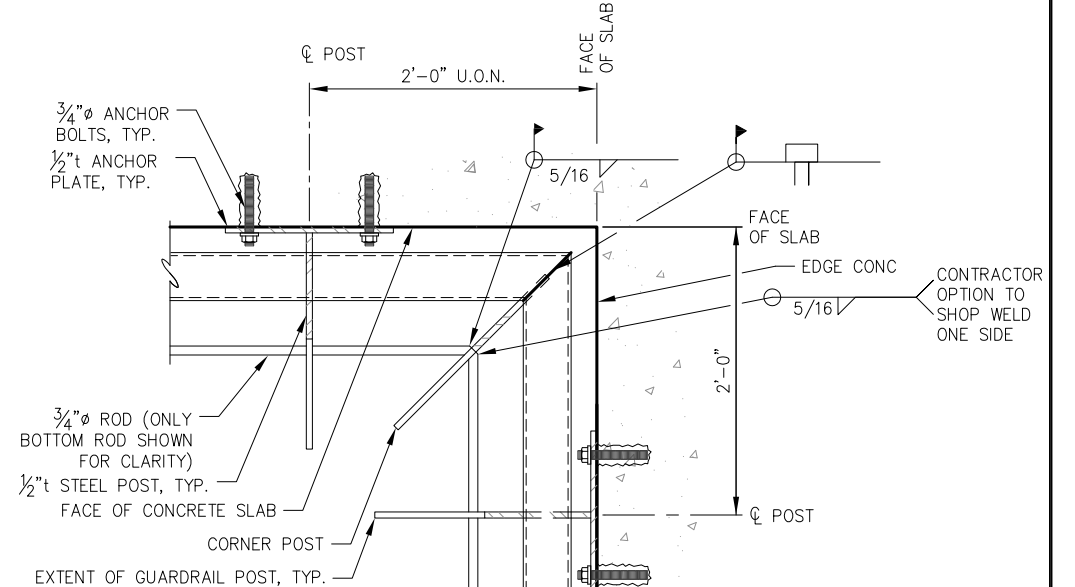


STANDARD 20' PANEL ELEVATION

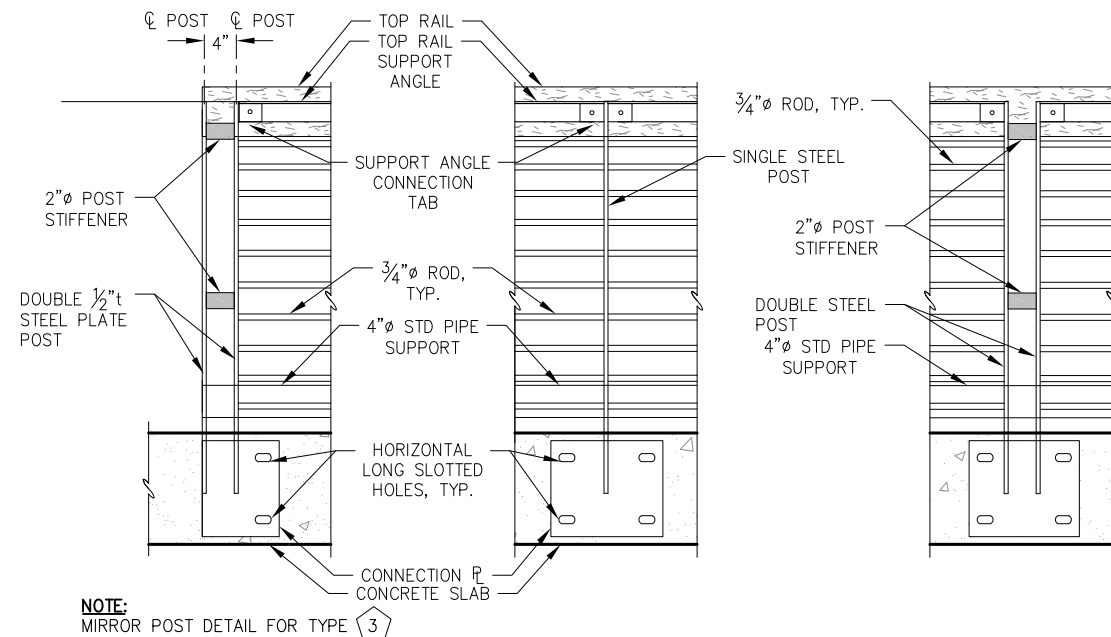
NOTE:
POST CALLOUTS VARY - SEE PROFILE



TYPICAL GUARDRAIL SECTION



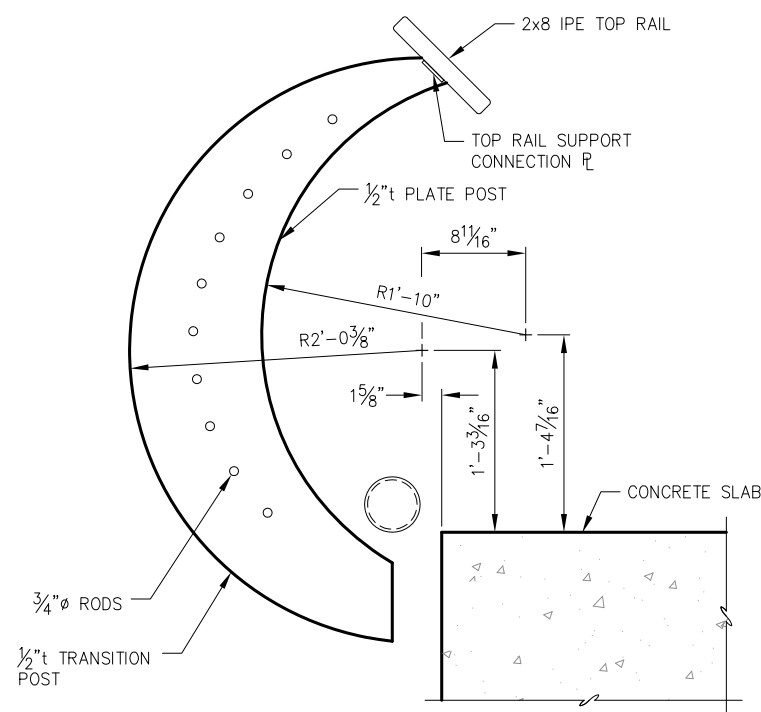
TYPICAL INSIDE CORNER DETAIL



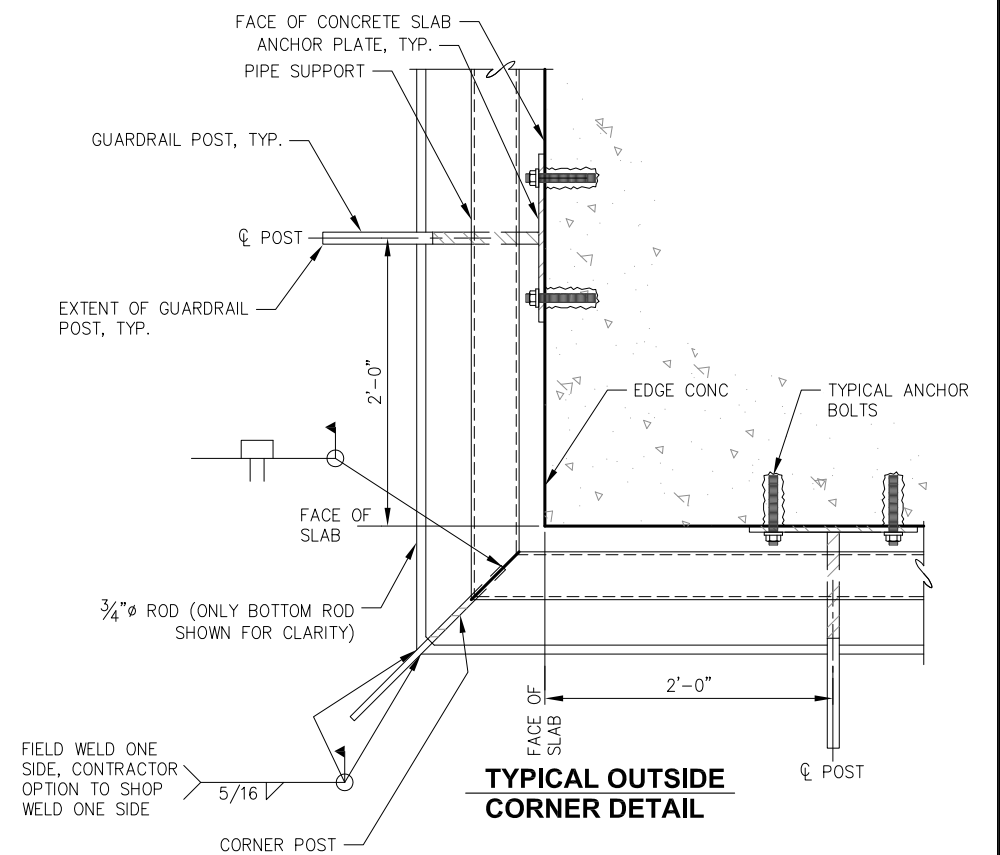
GUARDRAIL POST 1

GUARDRAIL POST 2

GUARDRAIL POST 4



GUARDRAIL CORNER POST SECTION



TYPICAL OUTSIDE CORNER DETAIL



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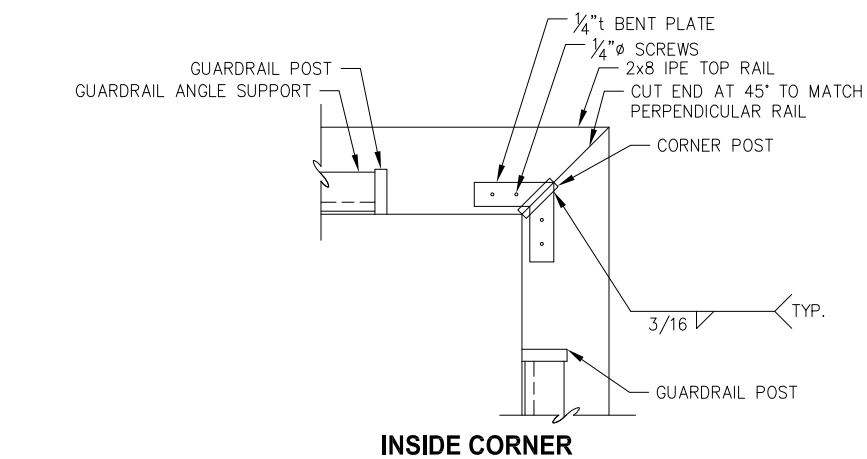


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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
SEAWALK GUARDRAIL DETAILS

PND PROJECT NO.: 082015

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SHEET
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RECESS BOLT HEAD AS SHOWN

#10x1½" HOT-DIPPED GALVANIZED WOOD SCREW @ 6" O.C. IN 2" OFFSET PATTERN DRILL PILOT HOLES AS REQUIRED

5/8" Ø A307 BOLT w/ CUT WASHER

L 3x3 TOP RAIL SUPPORT

½" t PLATE POST (BEYOND)

45°

CL BOLT/ POST/ TAB

2x8 IPE TOP RAIL. RADIUS ALL EDGES ½" AS SHOWN.

2x2x¼" POST TAB RL

3/16" WELB TAB TO POST, TYP.

TOP RAIL DETAIL

SEE TOP RAIL DETAIL

L3x3 TOP RAIL SUPPORT

2"Ø STD PIPE POST STIFFENER, TYP.

2x8 IPE TOP RAIL

4" MAX. Ø ROD TO Ø ROD, TYP.

R2'-1 $\frac{3}{4}$ "

R2'-1 $\frac{3}{4}$ "

1/2" t STEEL POST

4"Ø STD PIPE SUPPORT

42"

1'-3 $\frac{3}{8}$ "

1'-4 $\frac{1}{4}$ "

A

1/2" t CONNECTION PL

3/4"Ø ANCHOR BOLTS, EMBED 8" MIN w/ HIT-RE500SD EPOXY. AVOID CONFLICT w/ REBAR

2'-1 $\frac{3}{4}$ "

2'-9 $\frac{7}{16}$ "

MSE WALL BELOW

CL BASE PL
 CL SINGLE POST
 5/16"
 SINGLE CURVED GUARDRAIL POST AT CENTER OF CL
 LOCATION OF DOUBLE POST ON BASE PL
 1/2" t STEEL BASE PL
 7/8" ϕ HOLES, TYP.
 FACE OF CONCRETE SLAB BELOW
 2" 4" 2"
 2 5/8" 6" 4 1/2"

2'-0"
 CL POST
 FACE OF CONCRETE SLAB
 ANCHOR PLATE, TYP.
 PIPE SUPPORT
 $\frac{3}{4}" \phi$ ROD (ONLY BOTTOM ROD SHOWN FOR CLARITY)
 EXTENT OF GUARDRAIL POST, TYP.
 FACE MOUNT GUARDRAIL POST, TYP.
 CONTRACTOR OPTION TO FIELD WELD ON SHOP WELD
 $\frac{5}{16}$
 $\frac{1}{2}" t$ CORNER POST
 $\frac{5}{16}$
 FACE OF SLAB
 FACE OF CONCRETE SLAB
 2'-0"
 CL POST
 PIPE SUPPORT
 TOP MOUNT GUARDRAIL POST
**OUTSIDE CORNER
DETAIL AT TOP MOUNT POST**

CL BASE PL

CL POST

2"

5"

TOP OF CONCRETE SLAB

SINGLE CURVED GUARDRAIL POST

5/16" TYP.

1/2" t STEEL BASE PL

7/8" Ø LONG SLOT HOLES

LOCATION OF DOUBLE POST ON BASE PL

5"

4"

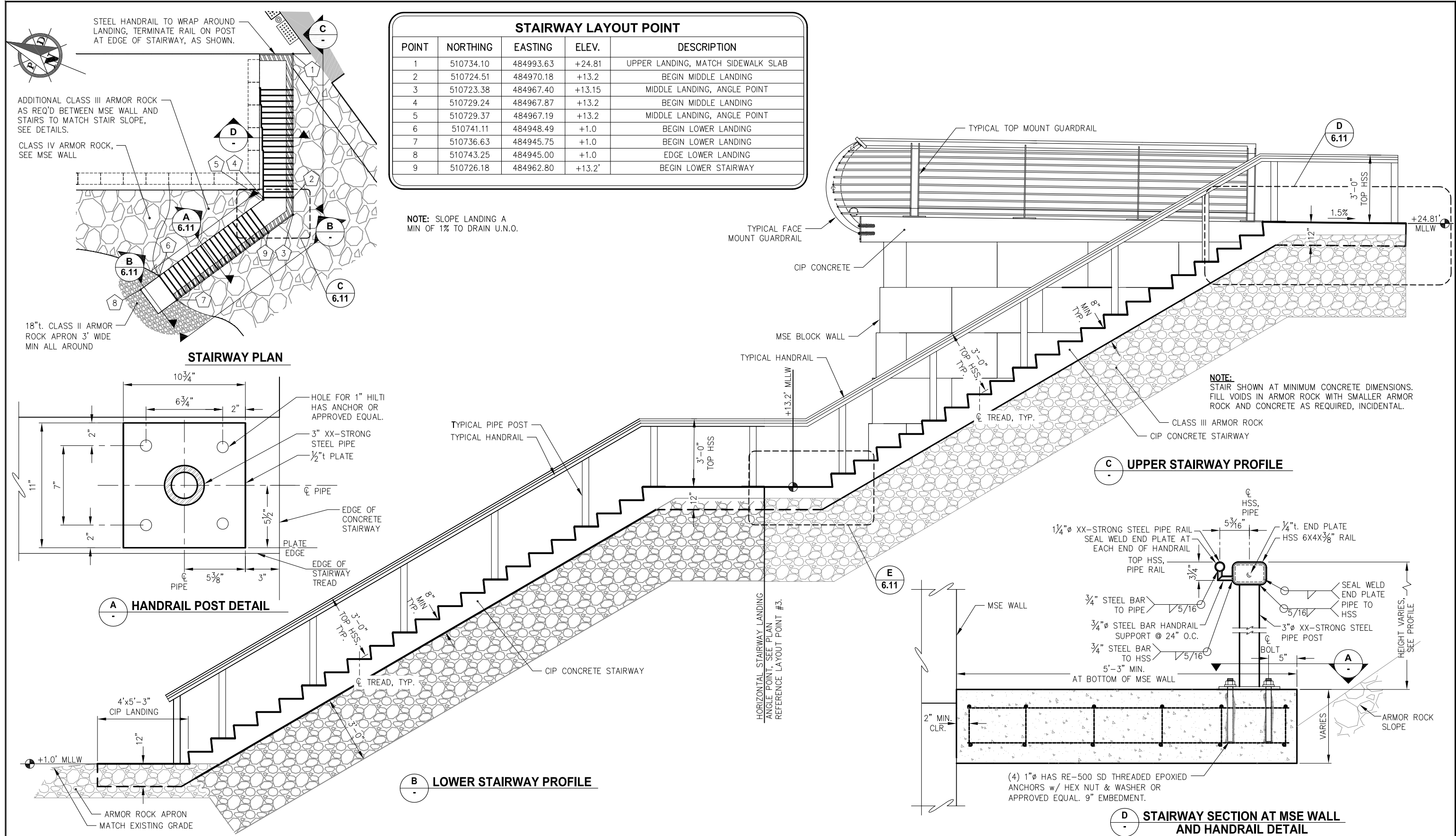
5"

2"

2"



6.09
SHEET
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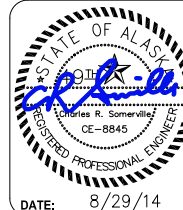
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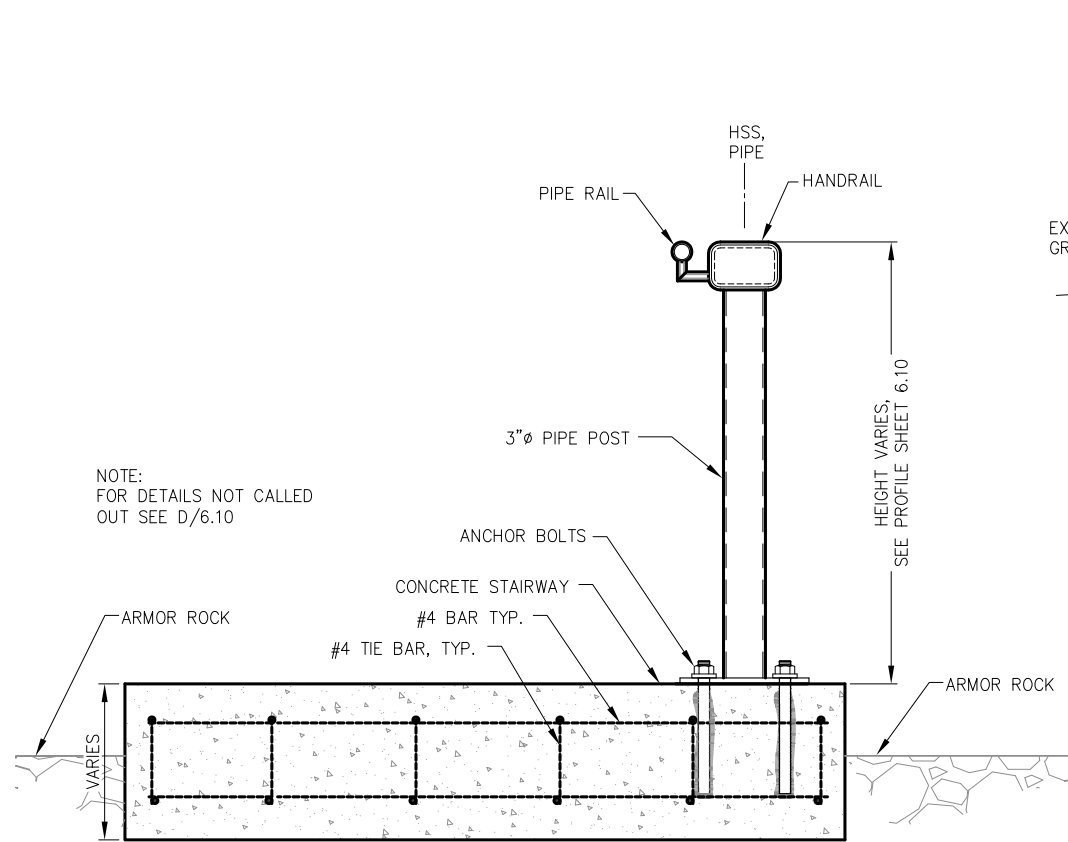


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
STAIRWAY PLAN, PROFILE AND DETAILS

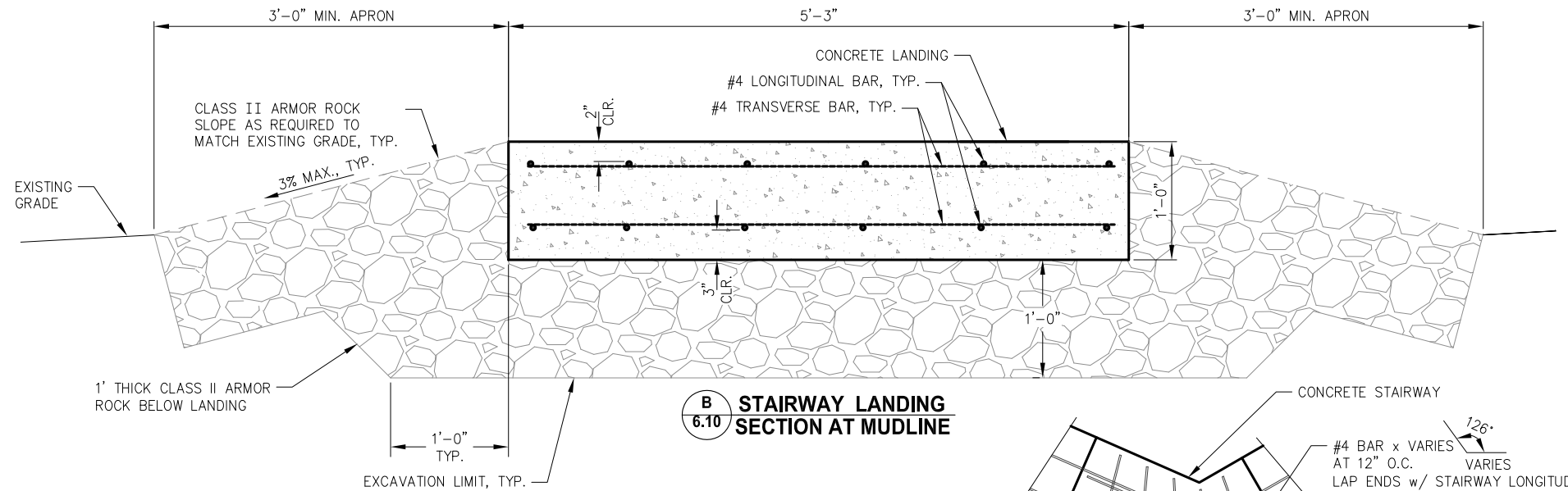
PND PROJECT NO.: 082015

6.10
SHEET
69 OF 82

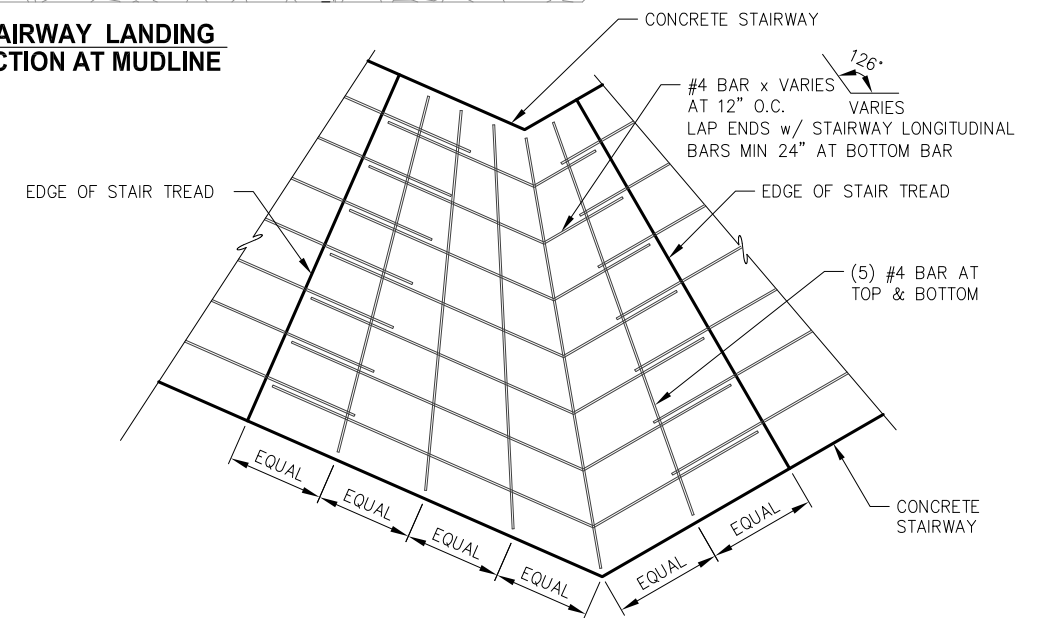


A
6.10 **STAIRWAY SECTION
ALONG ARMOR ROCK SLOPE**

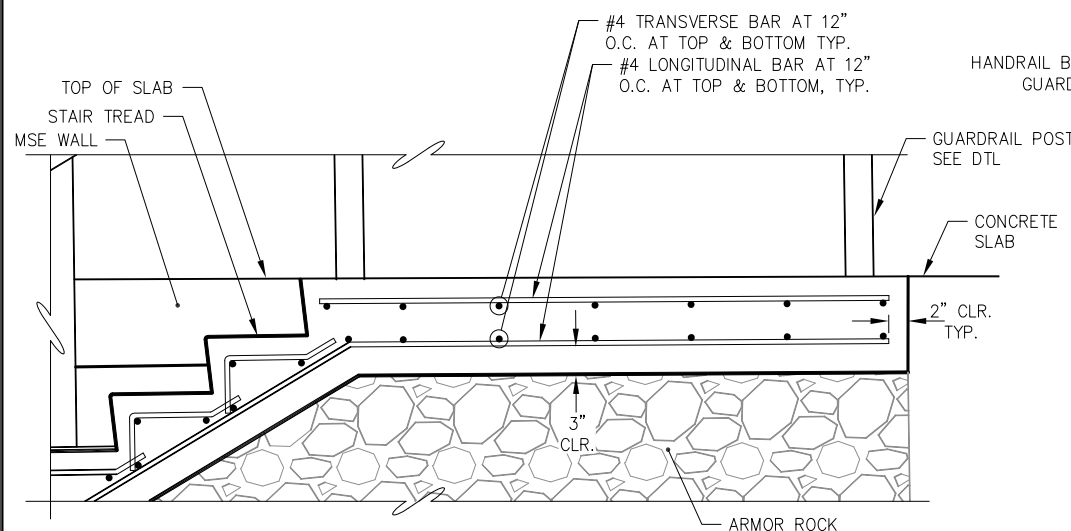
NOTE:
STAIR SHOWN AT MINIMUM CONCRETE DIMENSIONS.
FILL VOIDS IN ARMOR ROCK WITH SMALLER ARMOR
ROCK AND CONCRETE AS REQUIRED, INCIDENTAL.



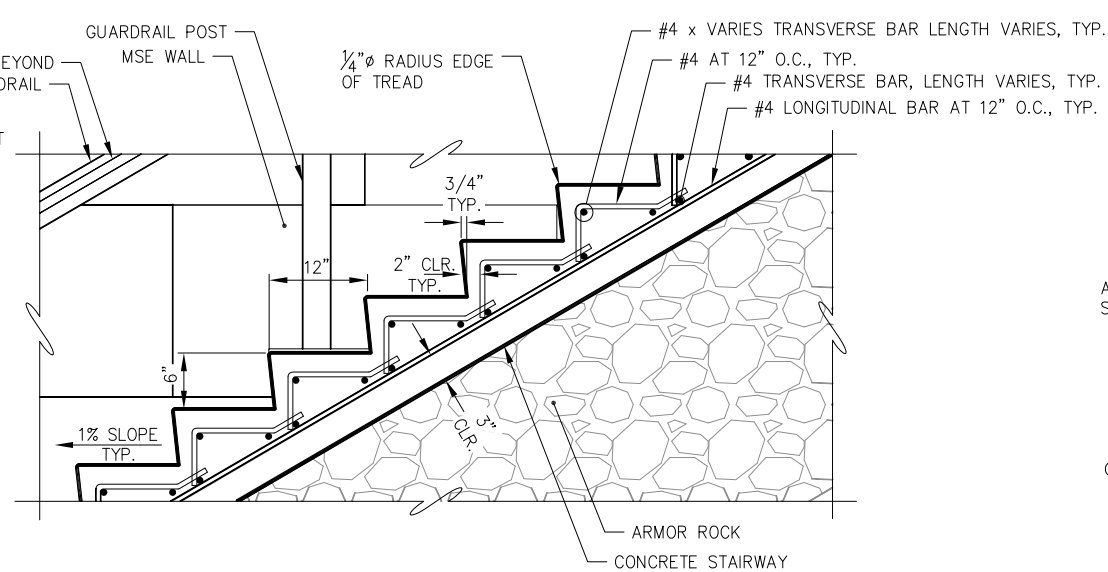
B
6.10 **STAIRWAY LANDING
SECTION AT MUDLINE**



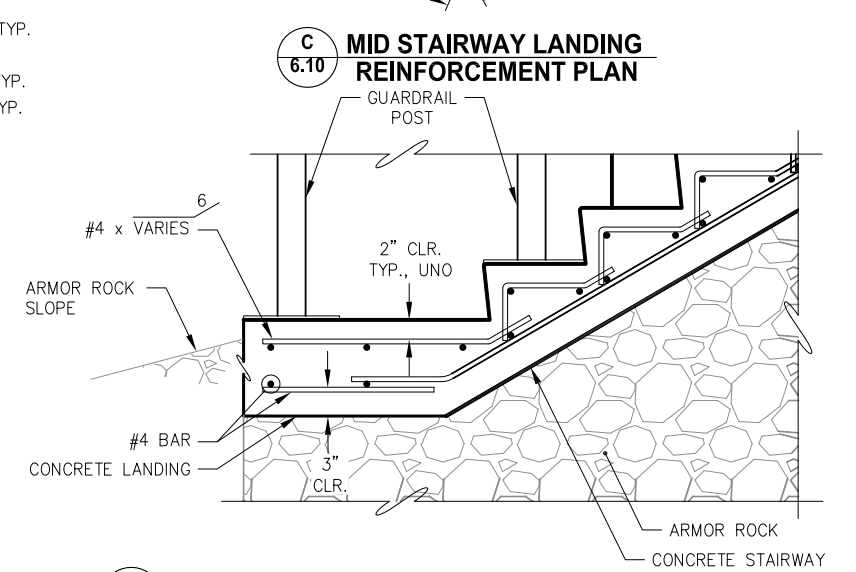
C
6.10 **MID STAIRWAY LANDING
REINFORCEMENT PLAN**



D
6.10 **STAIRWAY REINFORCEMENT
DETAIL AT TOP LANDING**



E
6.10 **TYPICAL STAIRWAY
REINFORCEMENT DETAIL**



F
6.10 **TYPICAL STAIRWAY LOWER LANDING
REINFORCEMENT DETAIL**



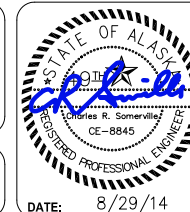
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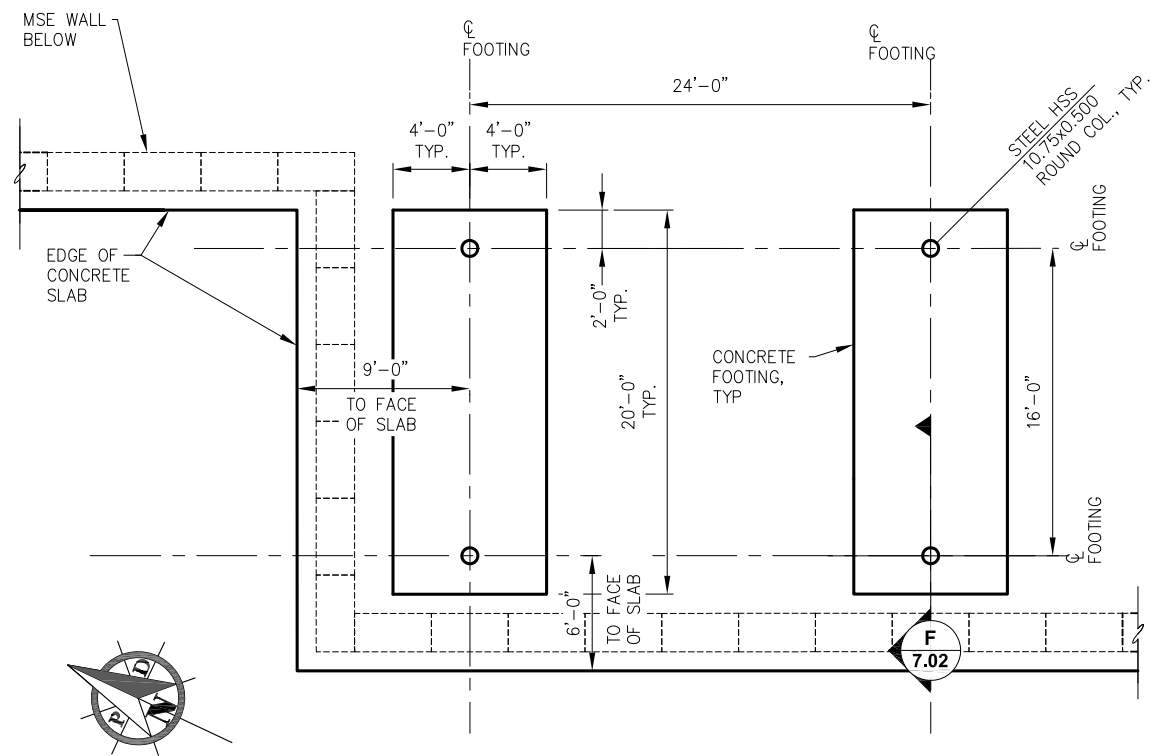
CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:

STAIRWAY DETAILS

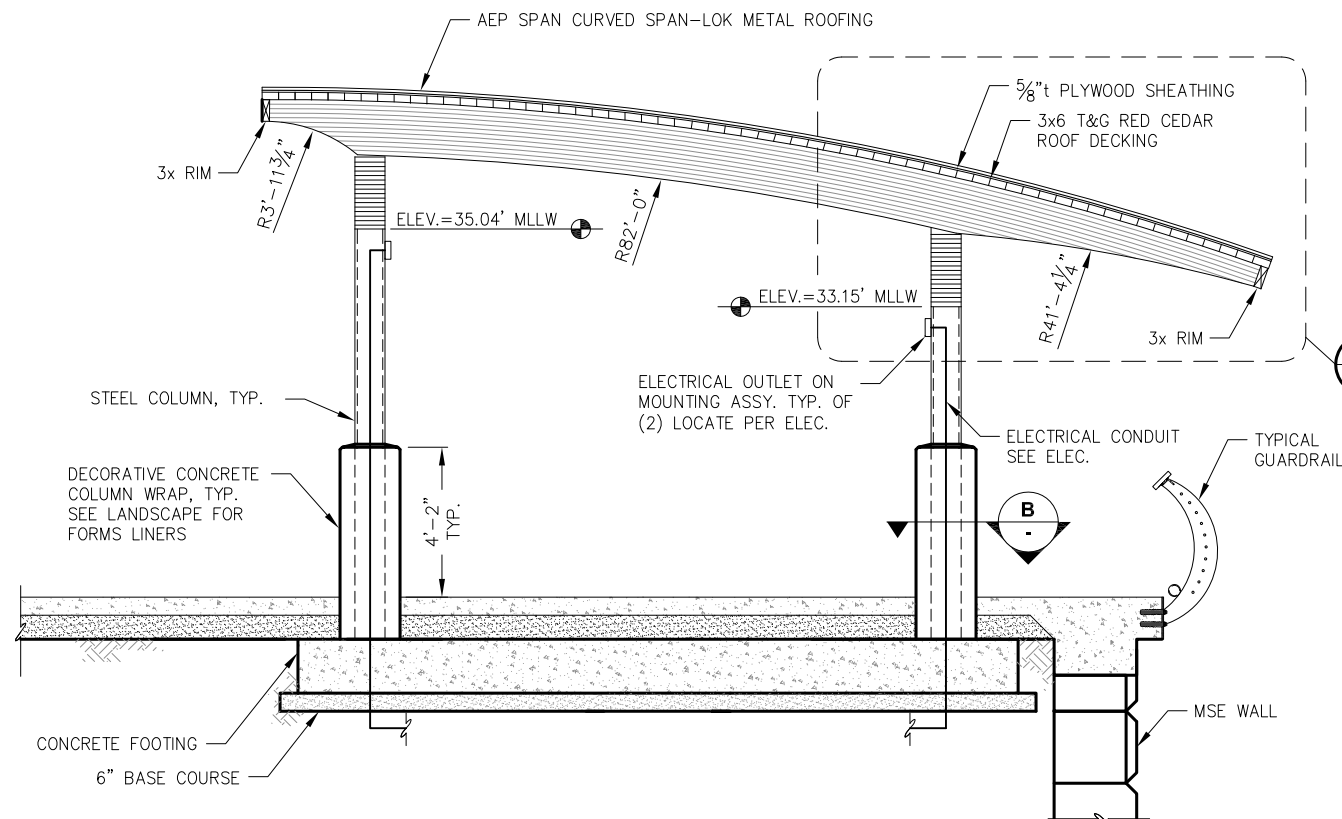
PND PROJECT NO.: 082015

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SHEET
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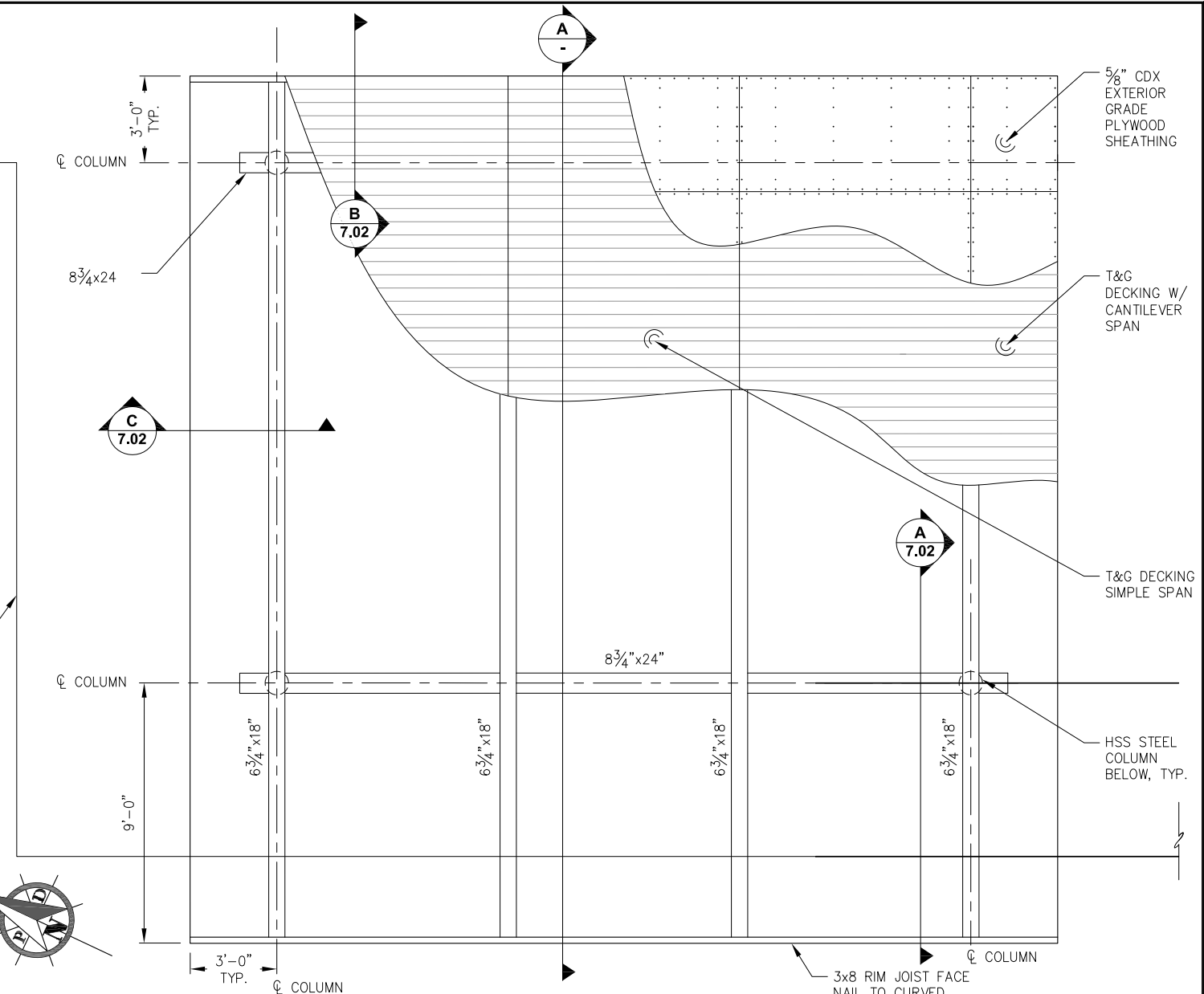
FOUNDATION PLAN - COVERED SHELTER

NOTE: TRENCH DRAIN NOT SHOWN FOR CLARITY

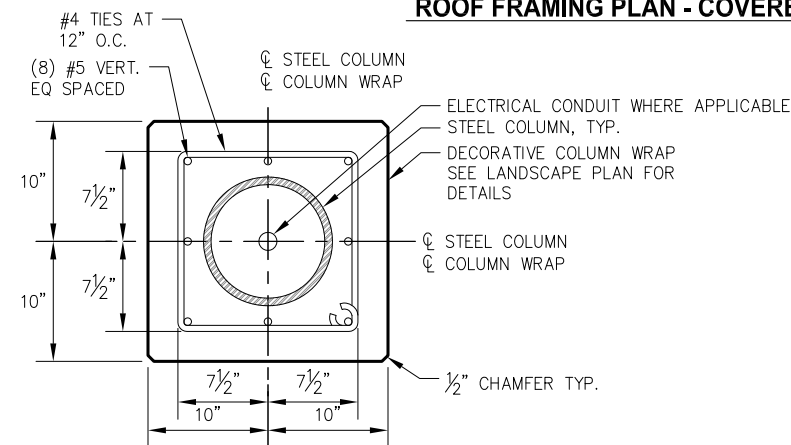


SHELTER ELEVATION - COVERED SHELTER

NOTE: TRENCH DRAIN AND MSE WALL REINFORCEMENT NOT SHOWN FOR CLARITY



ROOF FRAMING PLAN - COVERED SHELTER



DECORATIVE COLUMN WRAP SECTION

NOTES:

1. EDGE NAIL ALL ROOF SHEATHING @ 6" O.C., FIELD NAIL @ 12" O.C. w/ 10d HOT-DIP GALVANIZED COMMON NAILS.
2. NAIL ALL TONGUE AND GROOVE ROOF DECKING PER THE MANUFACTURERS RECOMMENDATIONS.
3. ALL FRAMING NAILS TO BE 16d HOT-DIP GALVANIZED COMMON NAILS.
4. ALL FLASHING SHALL BE SIMILAR MATERIAL AND GAGE AS METAL ROOFING.



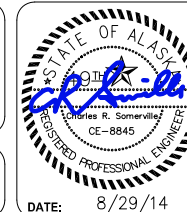
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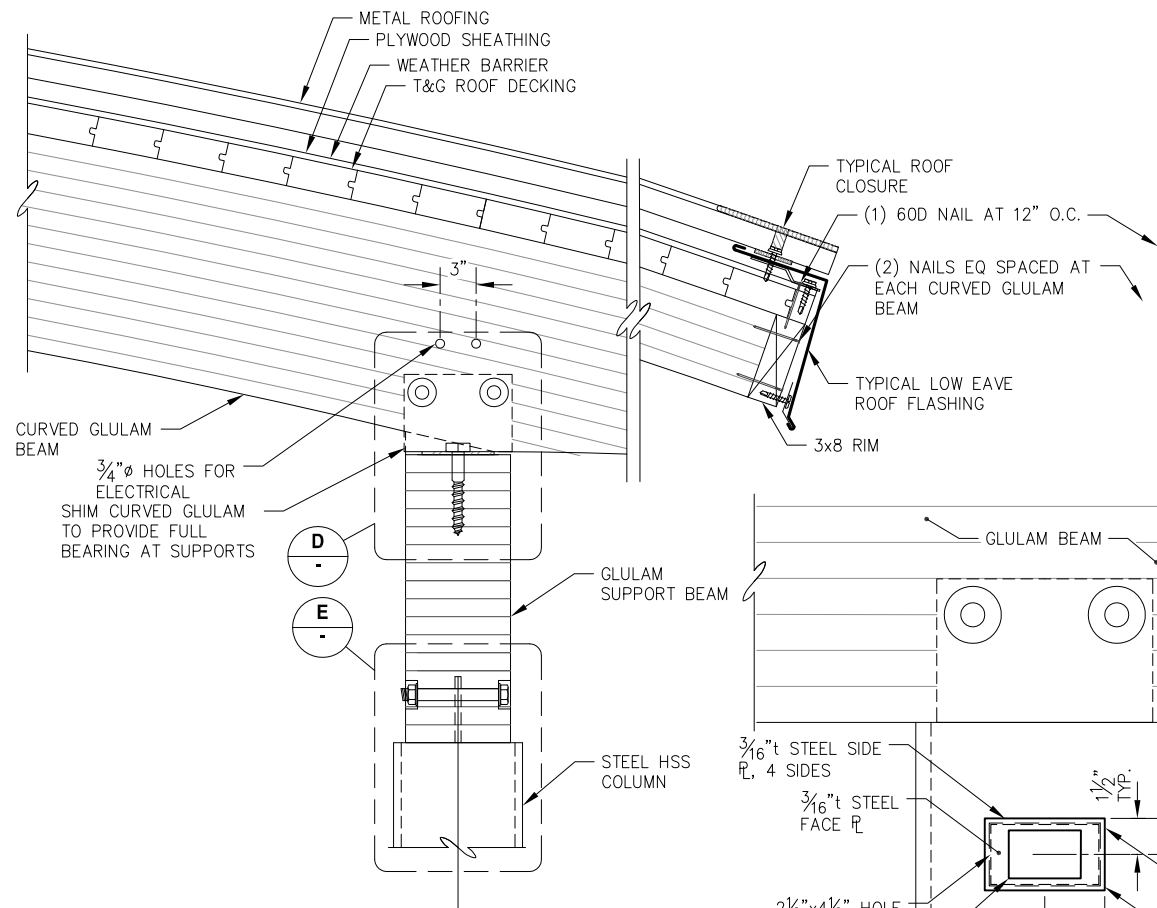


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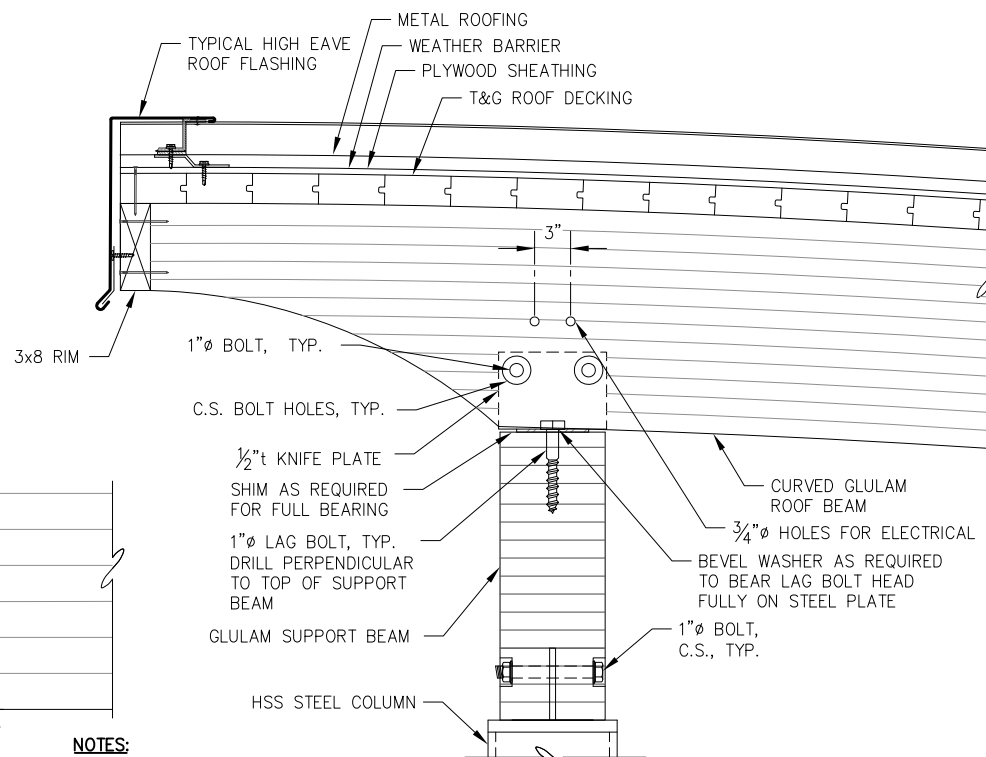
SHEET TITLE:
**COVERED SHELTER PLANS
AND ELEVATION**

PND PROJECT NO.: 082015

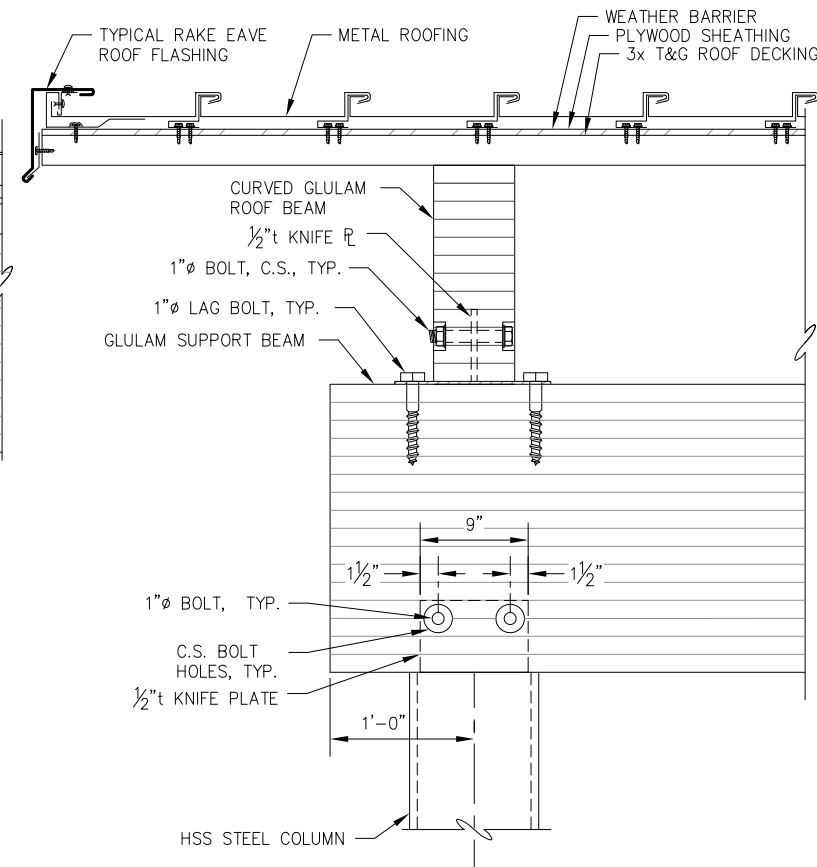
7.01
SHEET
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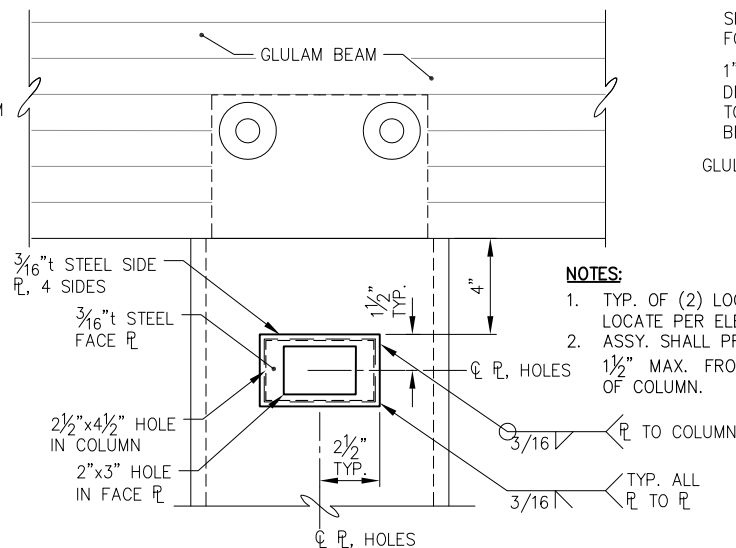
A
7.01
**TYPICAL LOW EAVE SECTION
COVERED SHELTER**



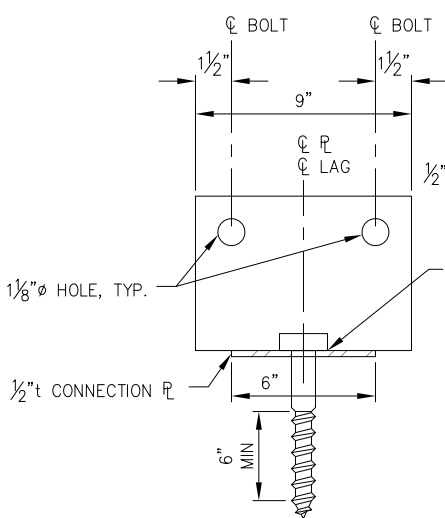
B
7.01
**TYPICAL HIGH EAVE SECTION
COVERED SHELTER**



C
7.01
**TYPICAL RAKE EAVE SECTION
COVERED SHELTER**

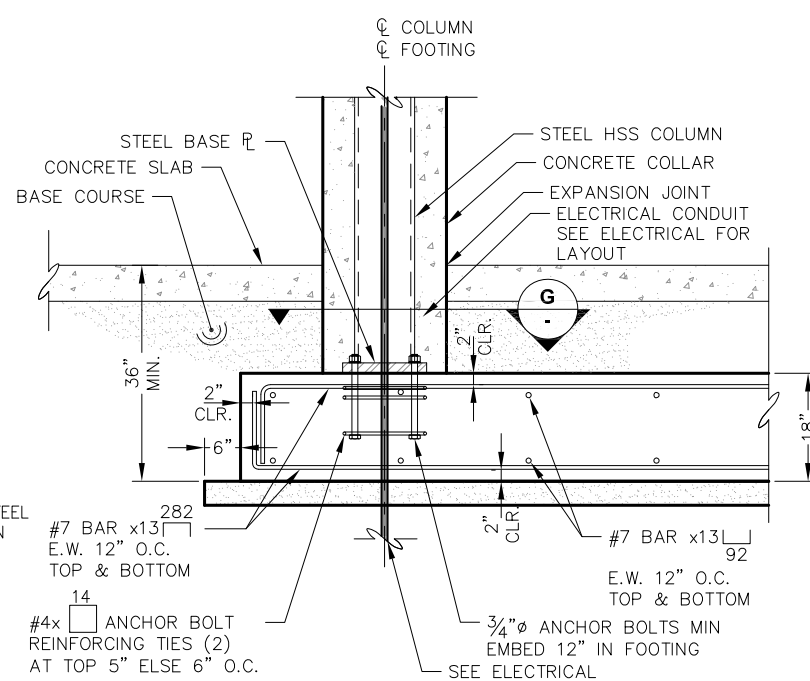
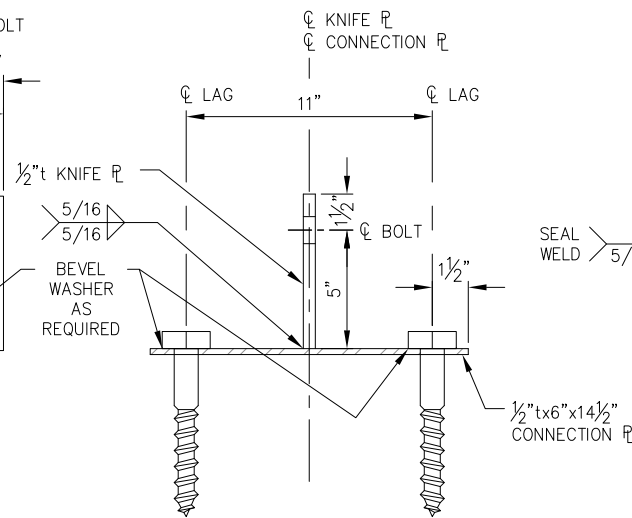


D
-
**CURVED GLULAM
CONNECTION PLATE DETAIL**



E
-
**GLULAM SUPPORT BEAM
CONNECTION DETAIL**

ELECTRIC OUTLET MOUNTING ASSY.



G
-
**TYPICAL COLUMN BASE PLATE
COVERED SHELTER**

ELEVATION

SECTION

F
7.01
**TYPICAL FOOTING DETAIL
COVERED SHELTER**



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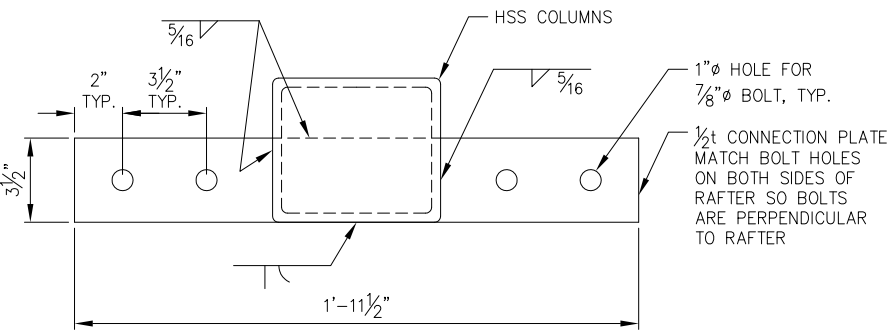
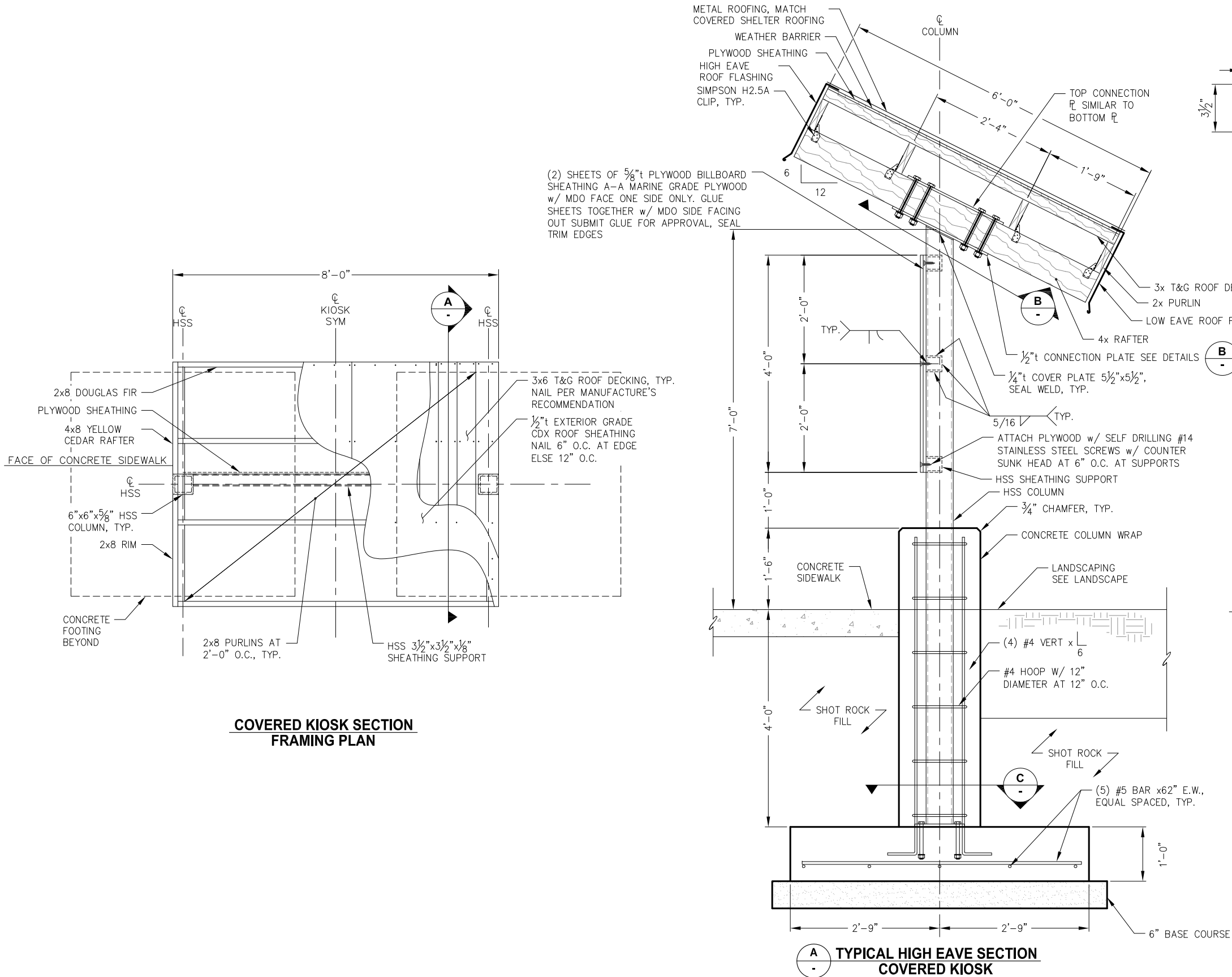


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CONTRACT NO. DH14-014

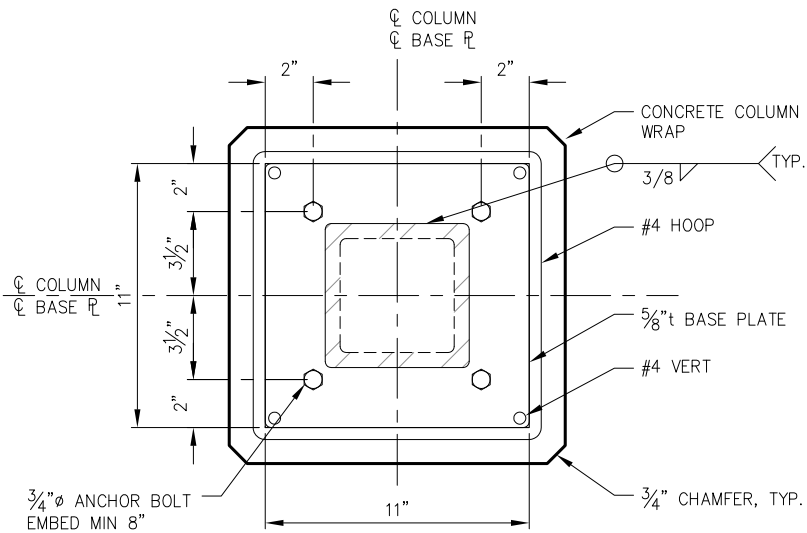
SHEET TITLE:
**COVERED SHELTER
DETAILS**

PND PROJECT NO.: 082015

7.02
SHEET
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B TYPICAL TIMBER FRAME CONNECTION PLATE



C TYPICAL COLUMN BASE PLATE DETAIL



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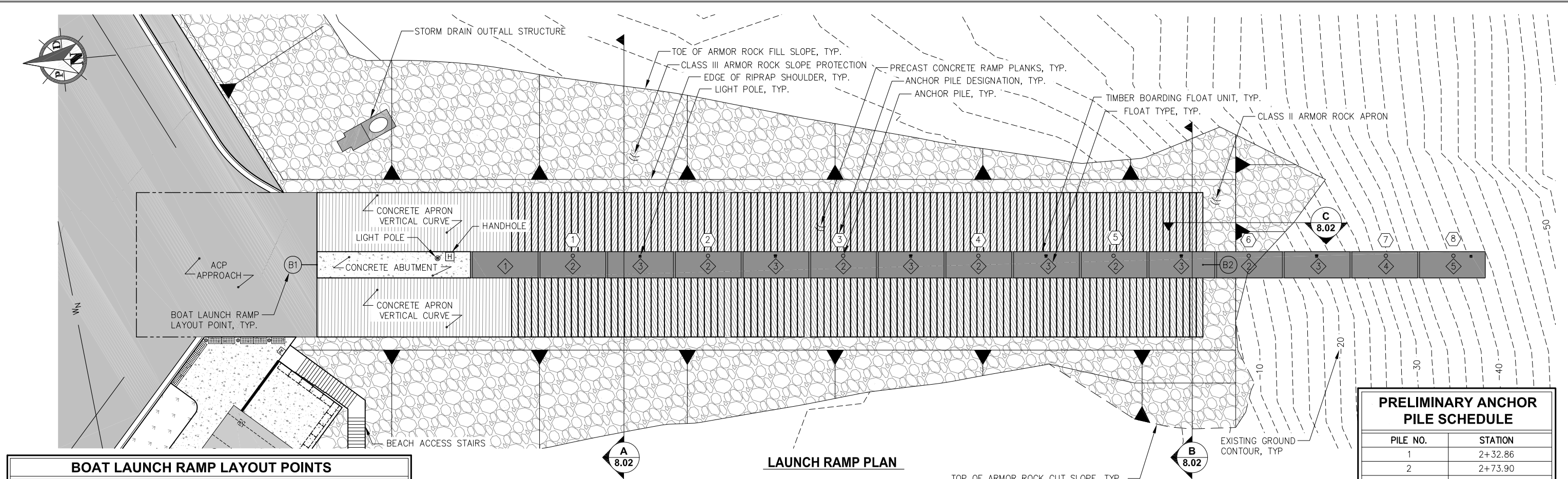


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SHEET TITLE:
COVERED KIOSK PLANS AND DETAILS

PND PROJECT NO.: 082015

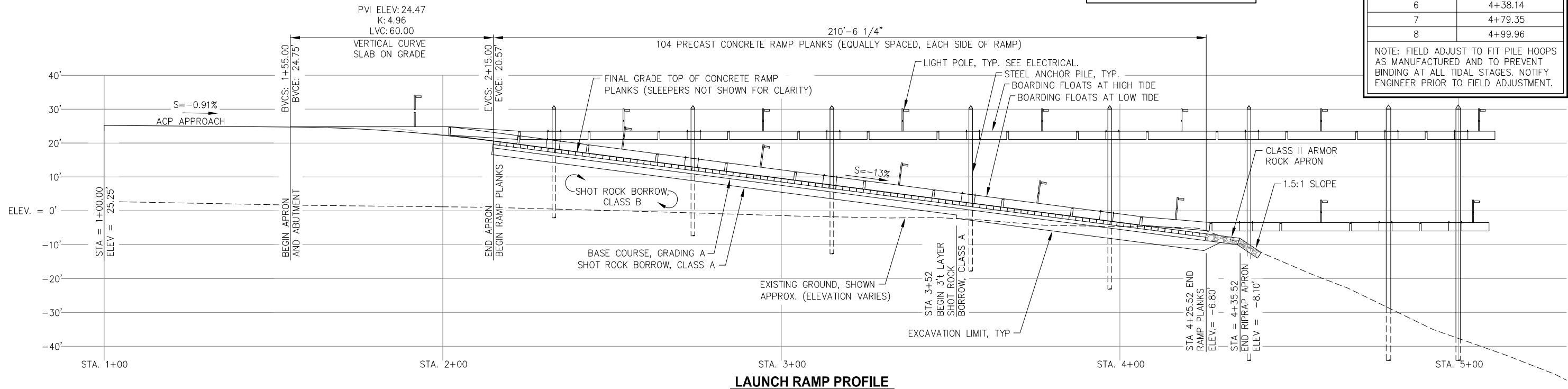
7.03
SHEET
73 OF 82



BOAT LAUNCH RAMP LAYOUT POINTS				
WORK PT.	NORTHING	EASTING	ELEV.	DESCRIPTION
B1	510714.35	485010.25	24.75'	STA 1+55 @ BEGIN C.I.P. ABUTMENT
B2	510484.24	484869.40	-6.80'	STA 4+25.52 @ END RAMP PLANK

PRELIMINARY ANCHOR PILE SCHEDULE	
PILE NO.	STATION
1	2+32.86
2	2+73.90
3	3+14.94
4	3+55.97
5	3+97.01
6	4+38.14
7	4+79.35
8	4+99.96

NOTE: FIELD ADJUST TO FIT PILE HOOPS AS MANUFACTURED AND TO PREVENT BINDING AT ALL TIDAL STAGES. NOTIFY ENGINEER PRIOR TO FIELD ADJUSTMENT.



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DESIGN: TCB
DRAWN: PJD

CHECKED: CRS
APPROVED: CRS

SCALE: SCALE IN FEET
0 15 30 FT.

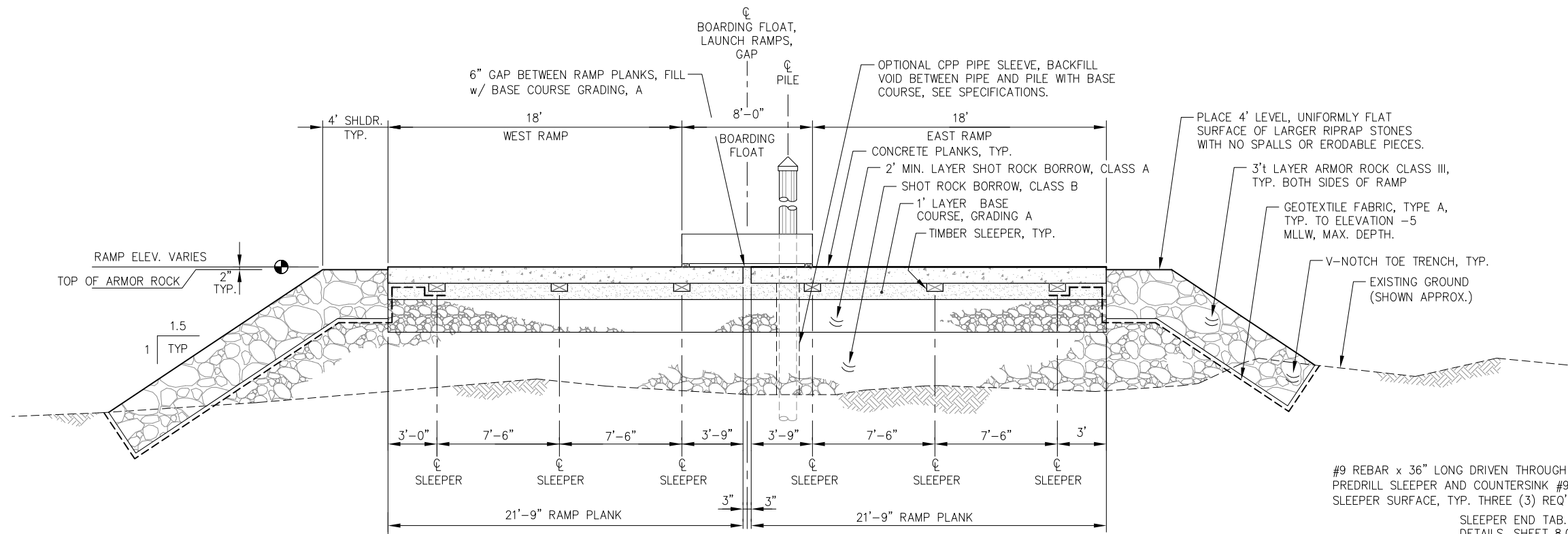


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

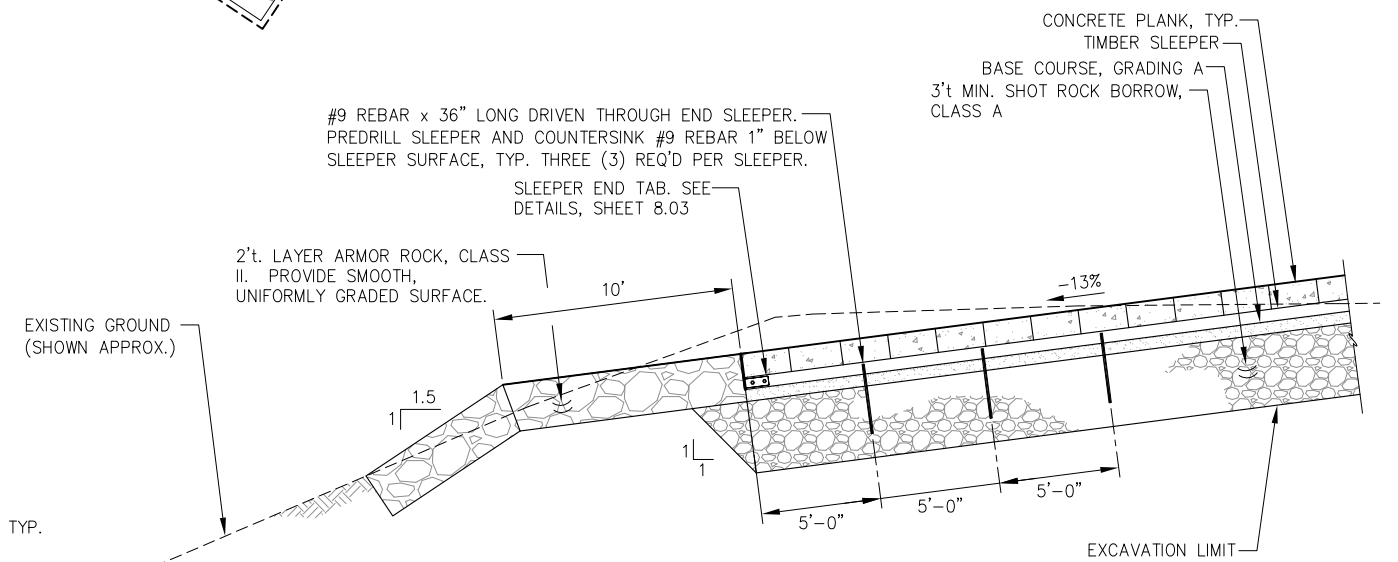
SHEET TITLE: **BOAT LAUNCH RAMP PLAN AND PROFILE**

PND PROJECT NO.: 082015

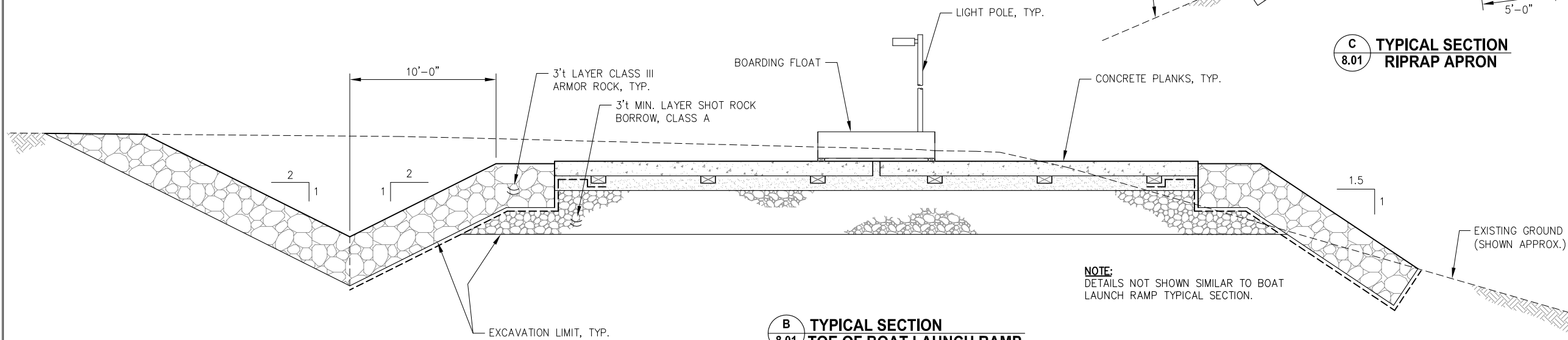
8.01
SHEET
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A
8.01 **TYPICAL SECTION**
BOAT LAUNCH RAMP



C
8.01 **TYPICAL SECTION**
RIPRAP APRON



B
8.01 **TYPICAL SECTION**
TOE OF BOAT LAUNCH RAMP

NOTE:
DETAILS NOT SHOWN SIMILAR TO BOAT
LAUNCH RAMP TYPICAL SECTION.



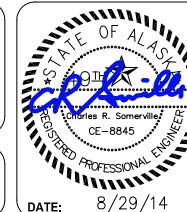
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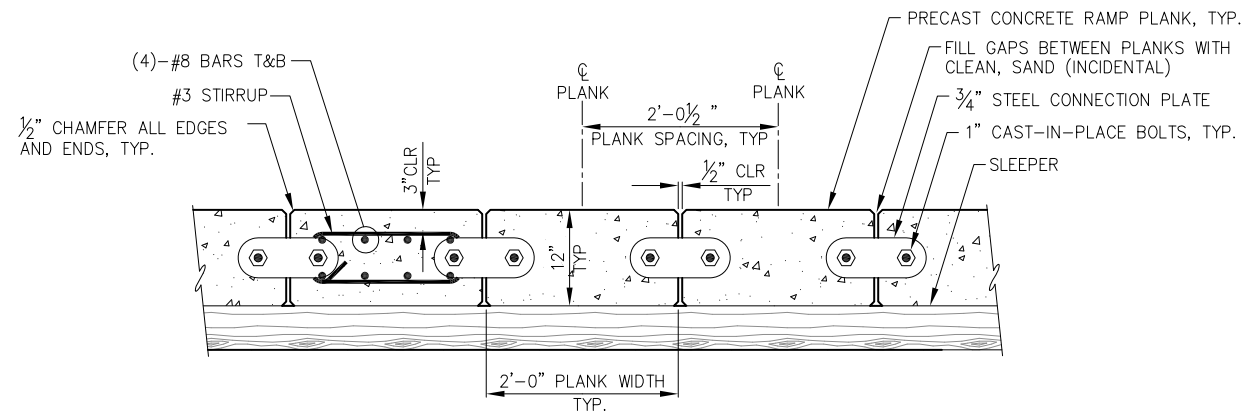


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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
BOAT LAUNCH RAMP
TYPICAL SECTIONS

PND PROJECT NO.: 082015

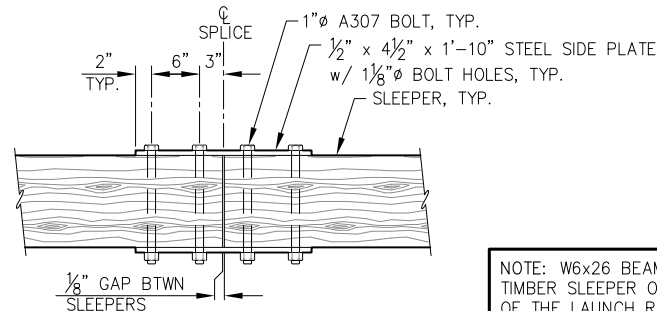
8.02
SHEET
75 OF 82



TYPICAL RAMP PLANK SECTION

NOTE: V-GROOVE SURFACE NOT SHOWN THIS SECTION FOR CLARITY

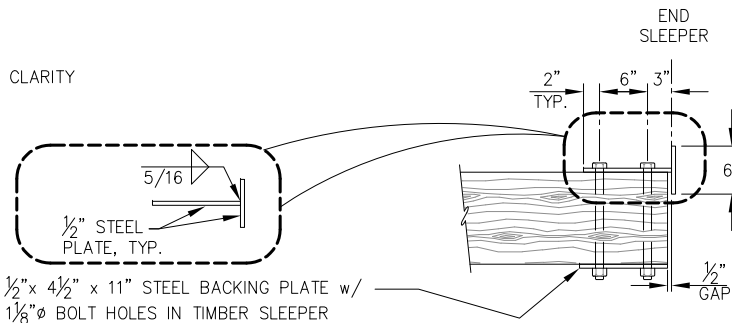
RAMP PLANK SCHEDULE	
TYPE	QUANTITY
TYPE 1	193 TOTAL
TYPE 2	15 TOTAL



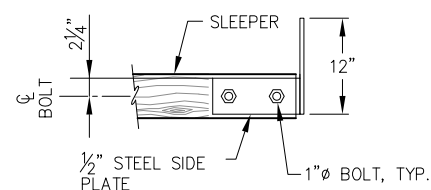
SLEEPER SPlice DETAIL - PLAN

NOTE: SLEEPER SPICES SHALL BE STAGGERED.

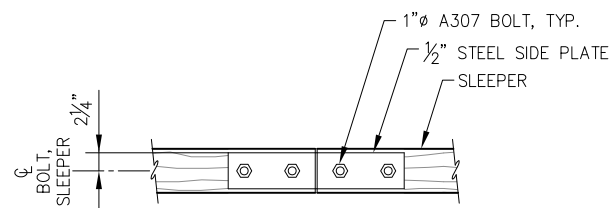
NOTE: W6x26 BEAM MAY BE USED IN LIEU OF TIMBER SLEEPER ON THE SUBMERGED PORTION OF THE LAUNCH RAMP. ATTACH END TAB AND SPlice PLATES TO BEAM WEB SIMILAR AS SHOWN.



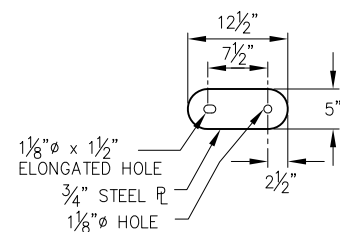
SLEEPER END TAB DETAIL - PLAN



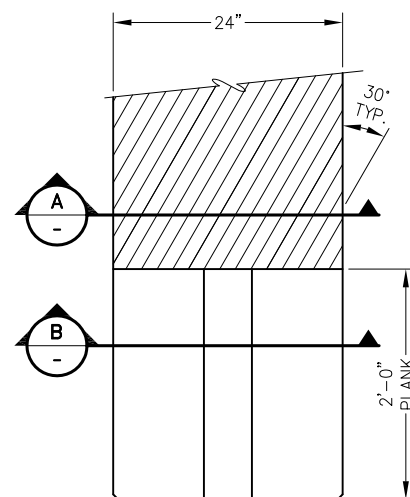
SLEEPER END TAB DETAIL - PROFILE



SLEEPER SPlice DETAIL - PROFILE

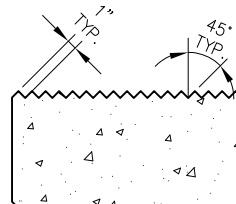


CONNECTION PLATE DETAIL

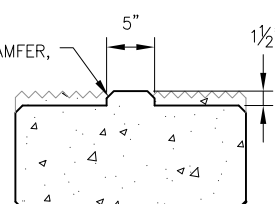


PLAN

NOTE: CONSTRUCT PLANKS AS REQ'D TO ACHIEVE RAMP LANES WITH OPPOSING V-GROOVES AS SHOWN IN PLAN VIEW.

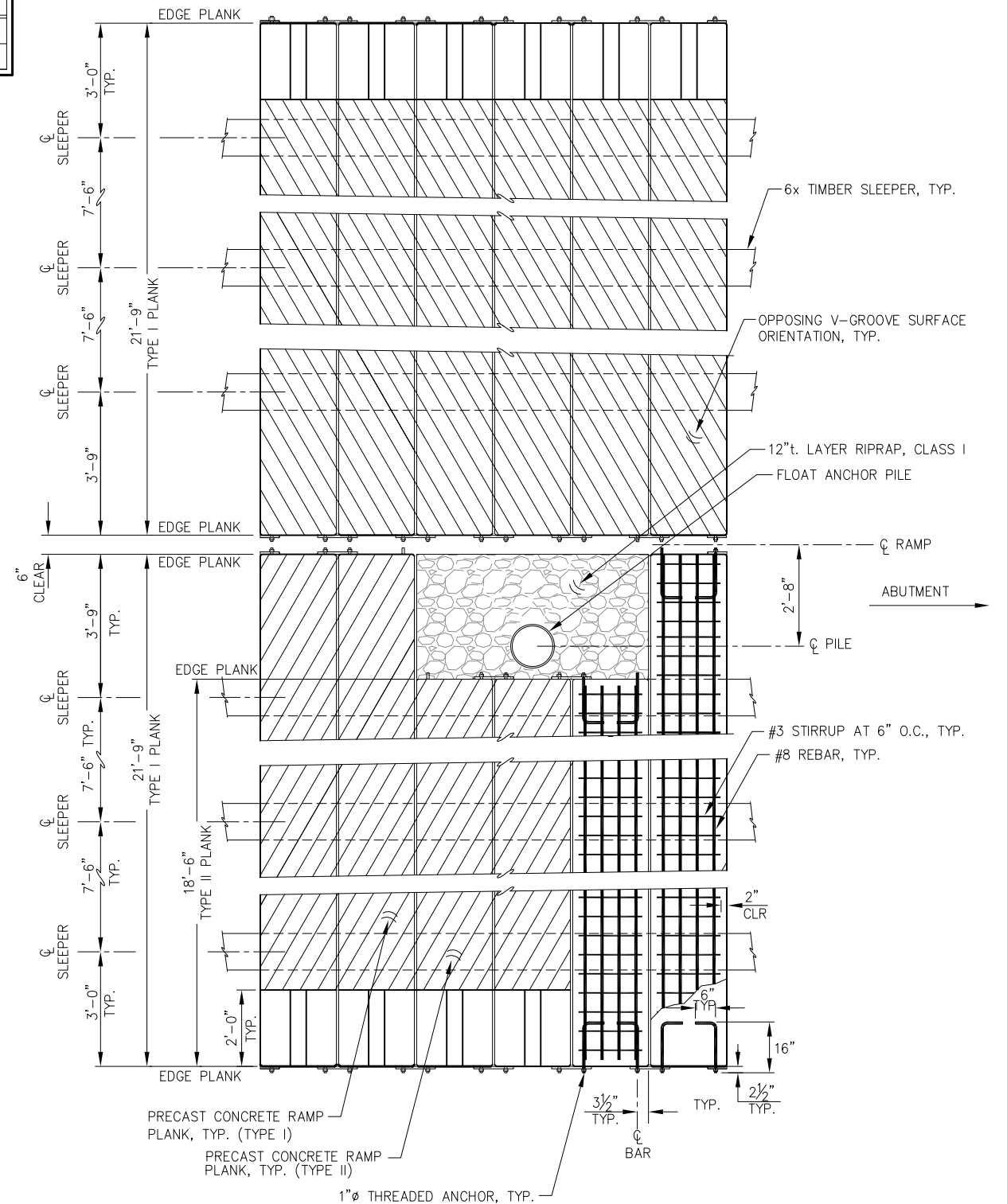


A TYPICAL SECTION



B TYPICAL SECTION

PLANK SURFACE FINISH DETAIL



CONCRETE RAMP PLANKS - PLAN



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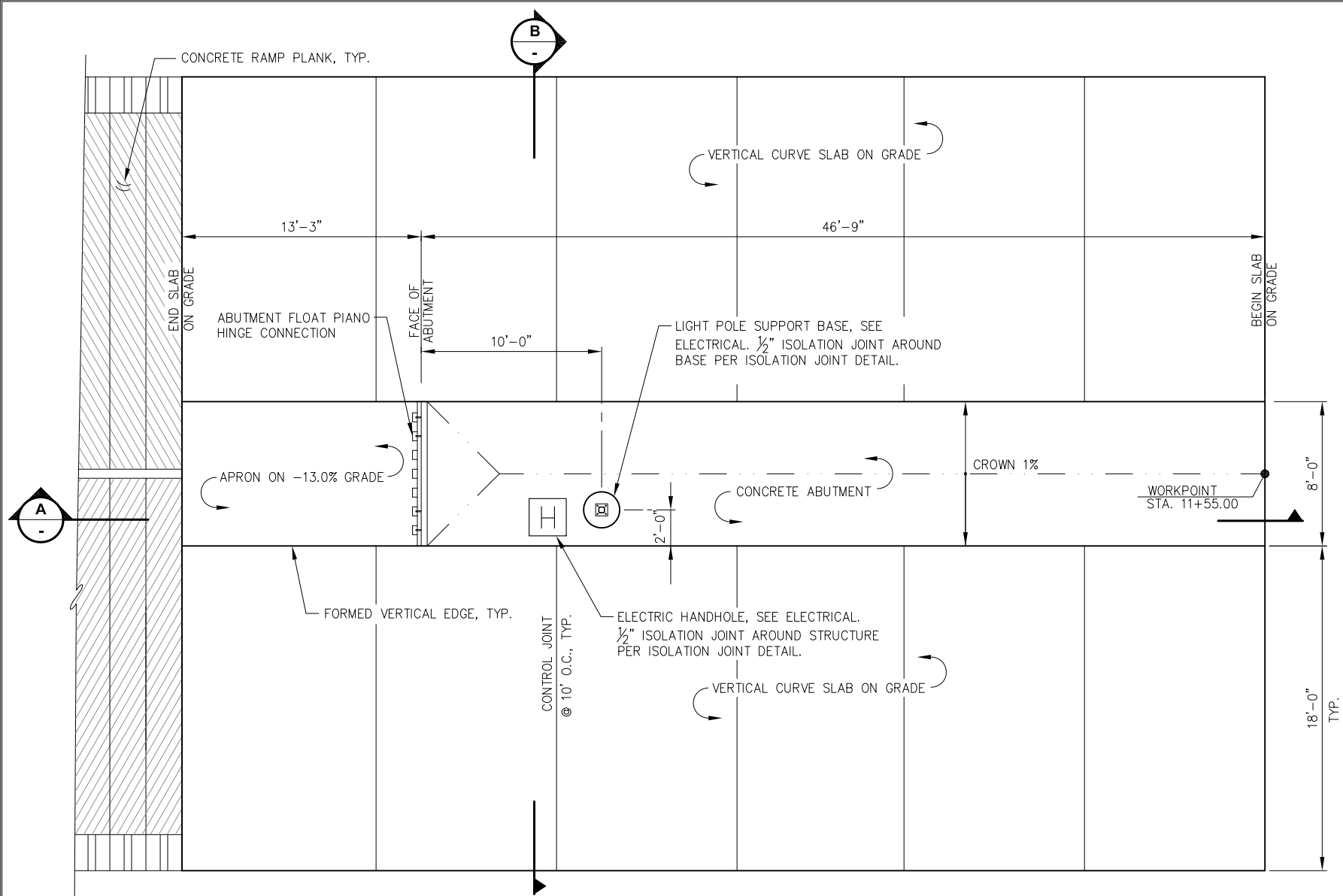


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SHEET TITLE:
BOAT LAUNCH RAMP PLANK AND SLEEPER DETAILS

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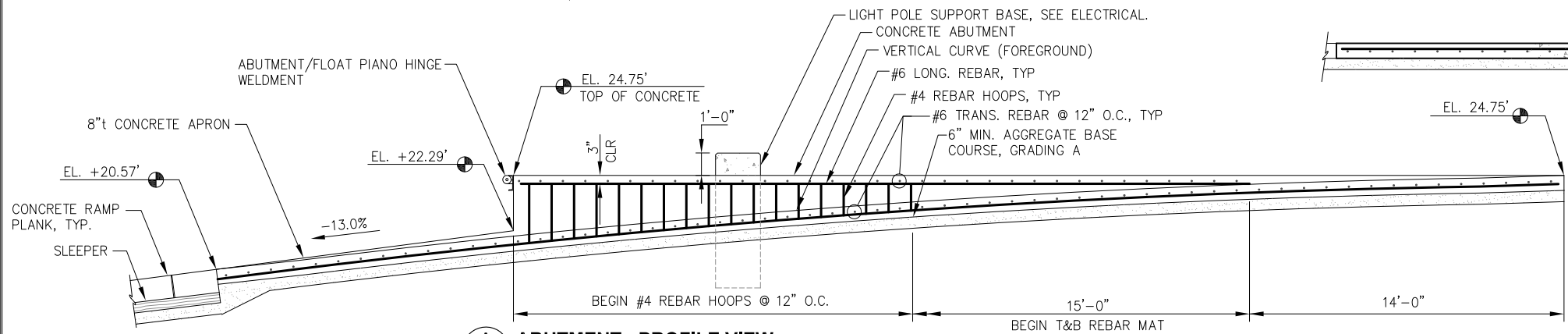
8.03
SHEET
76 OF 82



APRON AND ABUTMENT PLAN

NOTE: NOT ALL ELECTRICAL DETAILS SHOWN THIS SHEET. SEE ELECTRICAL.

- NOTES:
1. RIPRAP AND FLOAT NOT SHOWN FOR CLARITY
 2. CONTROL JOINTS 1/4" x 1 1/2" TOOLED JOINT w/ 1/4" RADIUS. FILL SLOT w/FIELD-MOLDED FILLER ASPHALT SEALANT.



ABUTMENT - PROFILE VIEW

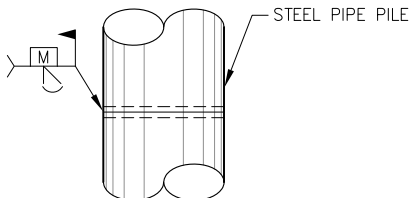
WHITE, SINGLE PIECE, FIBERGLASS CAP. ATTACH PER MANUFACTURER'S RECOMMENDATIONS FOR 100 MPH WIND CONDITIONS. PRIOR TO INSTALLATION, REPAIR DAMAGE TO TOP OF PILE CAUSED BY DRIVING. SEE SPECIFICATIONS FOR REPAIR REQUIREMENTS.

STEEL PIPE PILE. SEE SPECIFICATIONS FOR PILE DRIVING REQUIREMENTS.

EXISTING GROUND

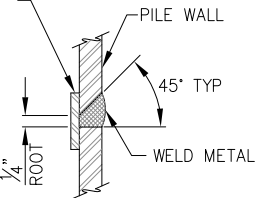
APF INSIDE FLANGED, OPEN CUTTING SHOE, OR APPROVED EQUAL. INSTALL PER MANUF. RECOMMENDATIONS.

PILE INSTALLATION DETAIL



ELEVATION

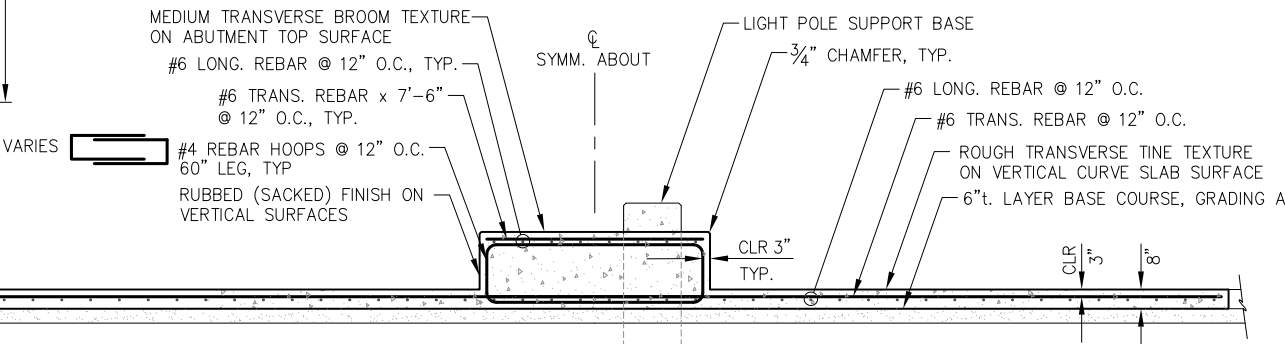
3/16" PLATE BACKING RING CURVED FOR TIGHT FIT TO BASE METAL.



TYPICAL SECTION

TYPICAL PILE SPLICE WELD

(TYPICAL FOR ALL PIPE PILE SPLICES)



APRON AND ABUTMENT TYPICAL SECTION

NOTE: MAINTAIN 3" CONCRETE COVER OVER REINFORCEMENT, TOP, BTM, AND ALL SIDES.



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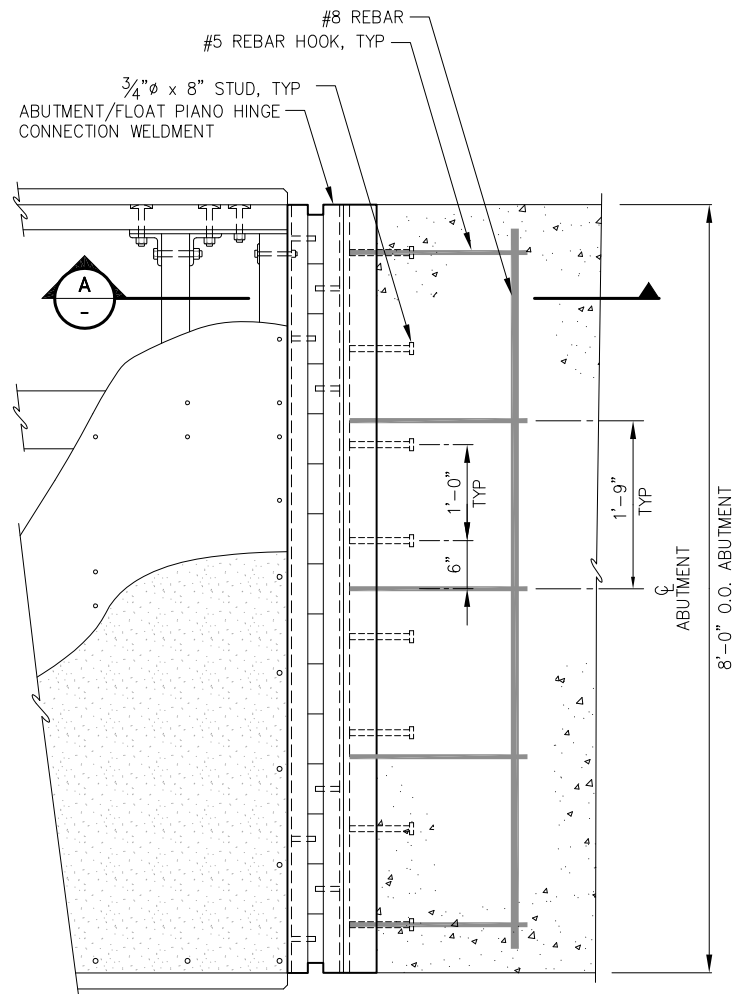


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CONTRACT NO. DH14-014

SHEET TITLE:
**BOAT LAUNCH RAMP APRON,
ABUTMENT AND PILE DETAILS**

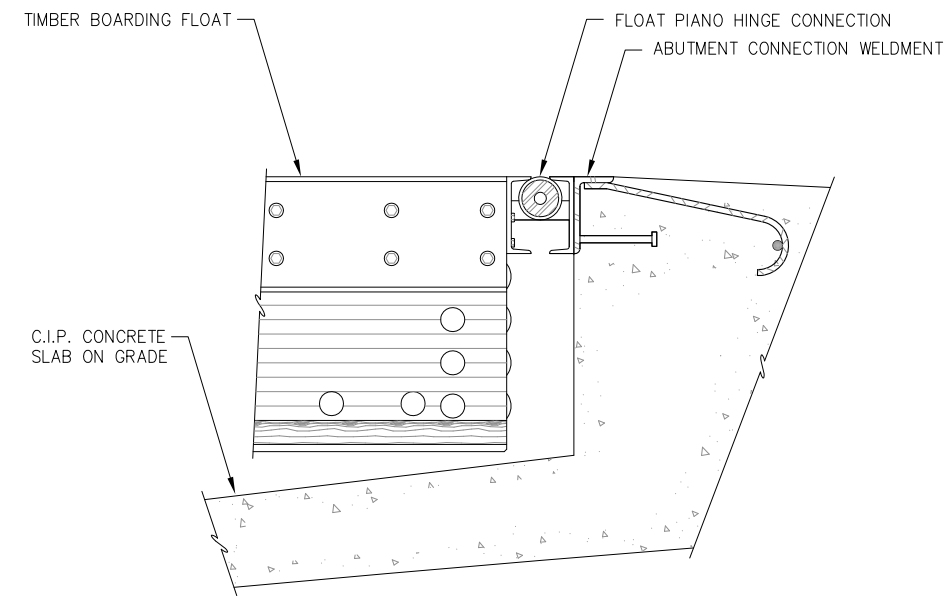
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8.04
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77 OF 82



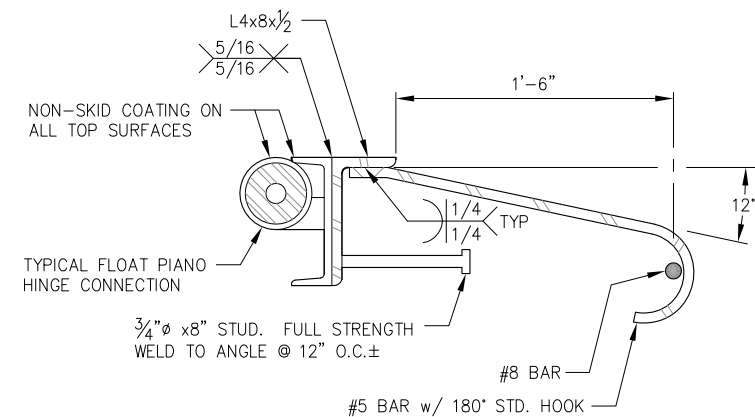
ABUTMENT/FLOAT CONNECTION - PLAN

NOTE: 1. ALL STEEL WALKING SURFACES TO BE COATED WITH NON-SKID SURFACE (I.E. ALL TOP SURFACES OF ABUTMENT HINGE CONNECTION WELDMENTS).



A PROFILE VIEW ABUTMENT/FLOAT CONNECTION

NOTE: NOT ALL ELECTRICAL DETAILS SHOWN THIS SHEET. SEE ELECTRICAL.



ABUTMENT CONNECTION WELDMENT DETAIL



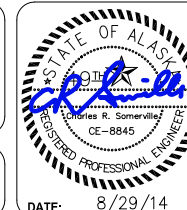
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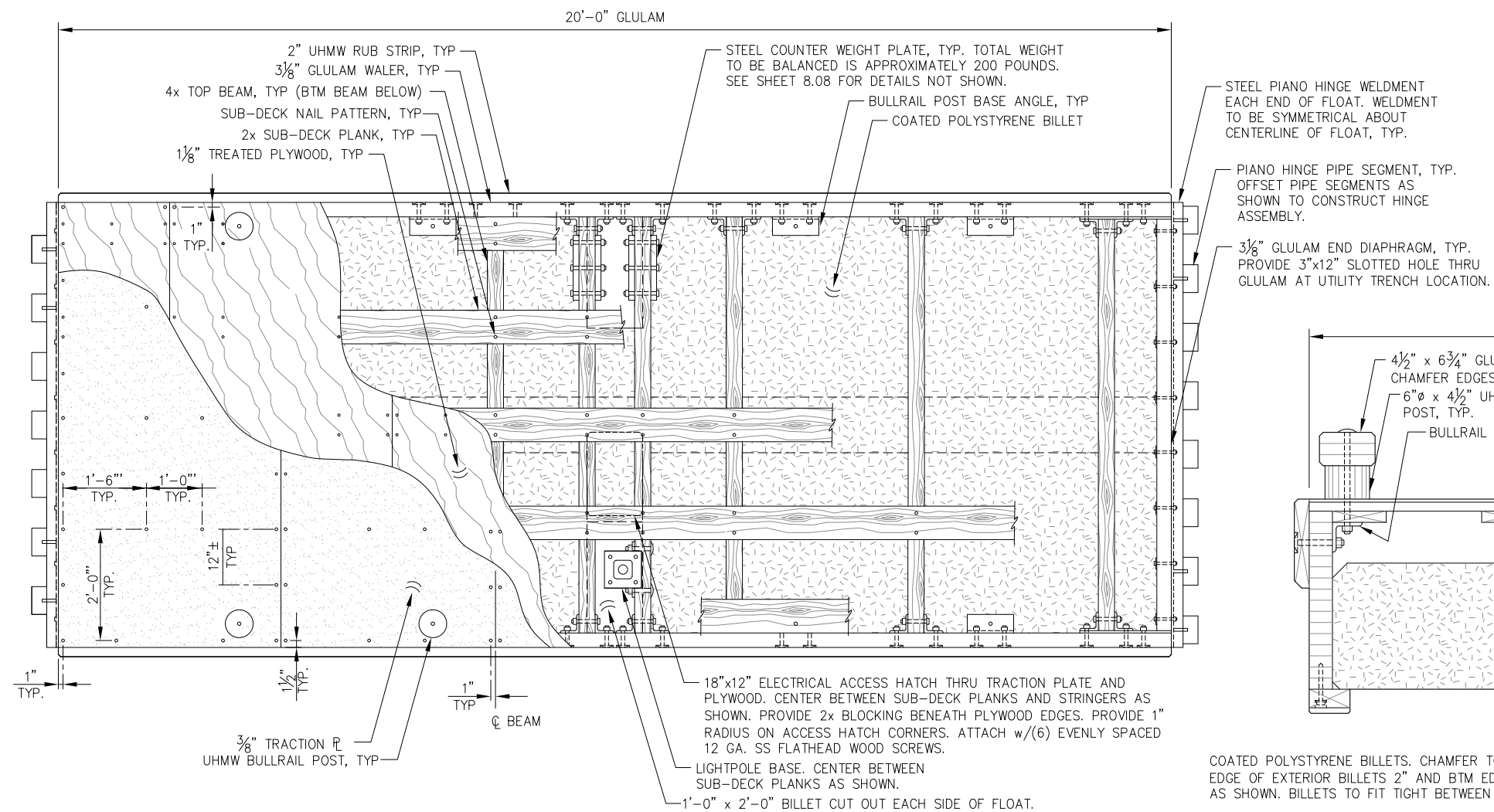


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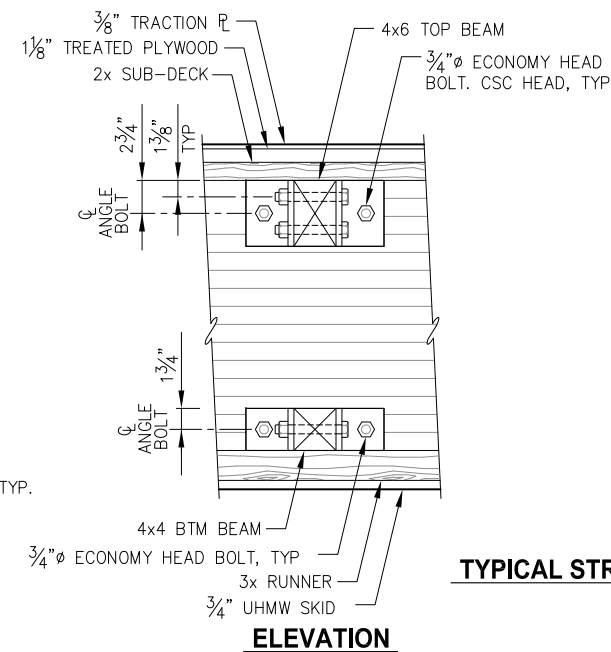
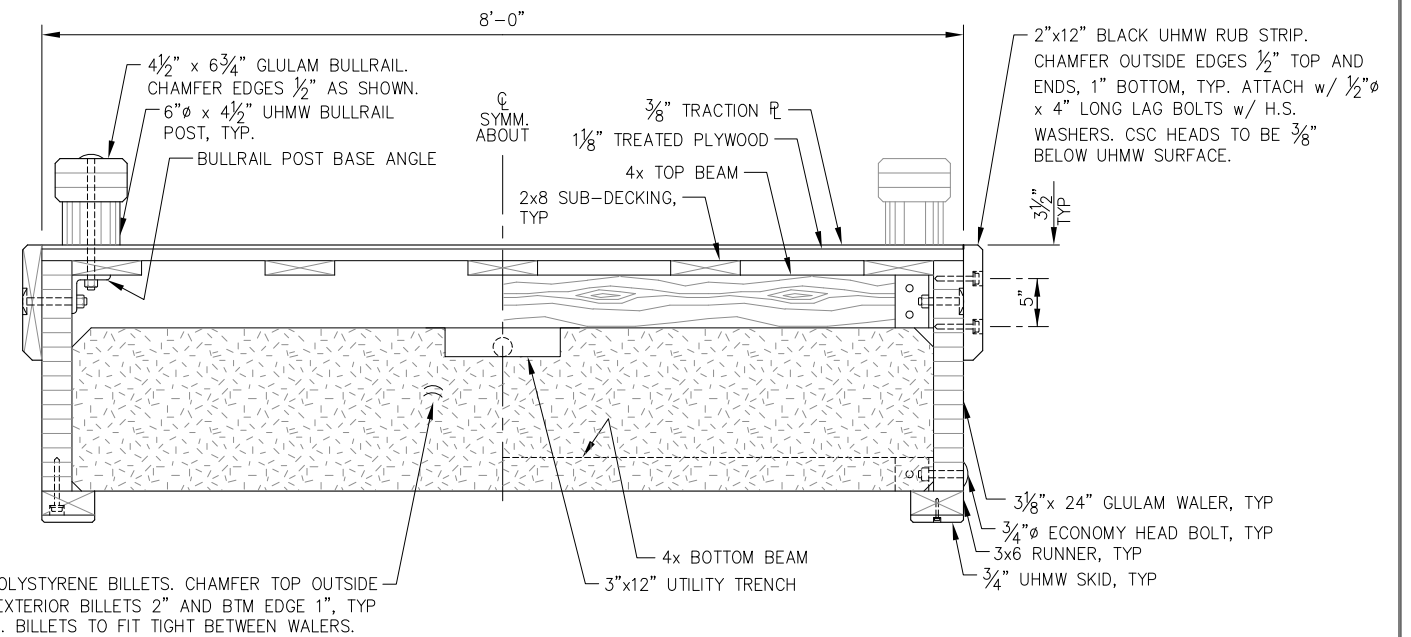
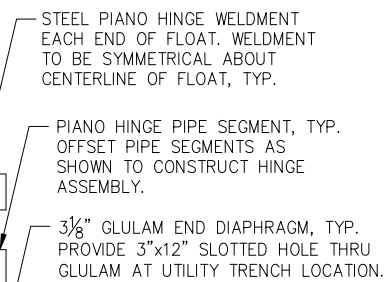
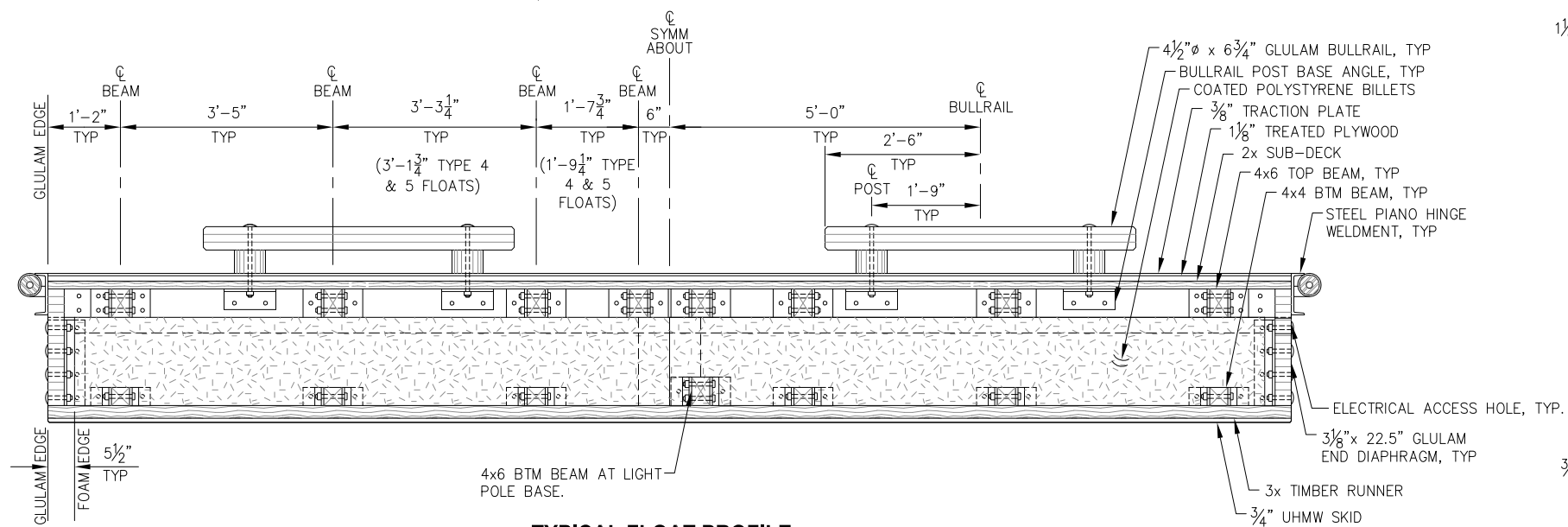
SHEET TITLE:
**BOAT LAUNCH RAMP APRON AND
ABUTMENT DETAILS**

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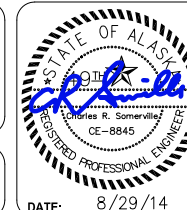
8.05
SHEET
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FLOAT FRAMING PLAN (TYPE 3)
NOTE: TYPE 1 FLOAT SIMILAR TO TYPE 3 FLOAT WITHOUT LIGHT POLE BASE, BILLET CUT OUT, STEEL COUNTER WEIGHTS OR BTM 4x6 BEAM.

[illegible]

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BOAT LAUNCH RAMP BOARDING FLOAT DETAILS

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8.06

SHEET
9 OF 82

BULLRAIL BASE ANGLE - PLAN

BULLRAIL BASE ANGLE - PROFILE

FLOAT FRAMING PLAN (TYPE 2)

NOTES:

1. DETAILS NOT SHOWN SIMILAR TO TYPE 1 FLOAT.
2. TYPE 4 FLOAT SIMILAR TO TYPE 2 FLOAT w/16"Ø PILE HOOP.
3. TYPE 5 FLOAT SIMILAR TO TYPE 4 FLOAT, IN LIEU OF HINGE ON OUTBOARD END INSTALL UHMW RUB STRIP AND TIMBER BULLRAIL FULL WIDTH ACROSS END OF FLOAT AND LIGHT POLE BASE, ELECTRICAL ACCESS HATCH, BILLET CUT OUT, BTM 4x6 BEAM AND STEEL COUNTERWEIGHTS.

END DIAPHRAGM/FLOAT CONNECTION PROFILE

HINGE CONNECTION PLAN

HINGE CONNECTION ROD

NOTES:
FABRICATOR TO DRY-FIT HINGE ASSEMBLIES PRIOR TO APPLICATION OF COATINGS TO ENSURE HINGE MOVES FREELY AND DOES NOT BIND.
** DIMENSION ASSUMED TO BE MINIMUM OF 3/8". FABRICATOR SHALL VERIFY DIMENSION REQ'D FOR TOP OF PIPE SEGMENT TO BE FLUSH WITH TOP OF ANGLE, AND WELDED AS SHOWN. ALSO, PIPE SEGMENT SHALL HAVE MINIMUM CLEARANCE BETWEEN IT AND THE ANGLE OF 3/8" SUCH THAT WHEN ASSEMBLED, HINGE PIPE SEGMENTS DO NOT RUB AGAINST EDGE OF ANGLE TOP LEG. (I.E. AVOID NON-SKID COATING BEING WORE OFF AFTER INSTALLATION.)

TYPICAL PIANO HINGE RUBBER BUSHING

**SEE SPECIFICATIONS FOR DIAMETER REQUIREMENTS

HINGE CONNECTION SECTION

NOTE: ALL STEEL WALKING SURFACES ON THE FLOATS SHALL BE COATED WITH A NON-SKID SURFACE (I.E. TOP PORTION OF ALL PIANO HINGE WELDMENTS).

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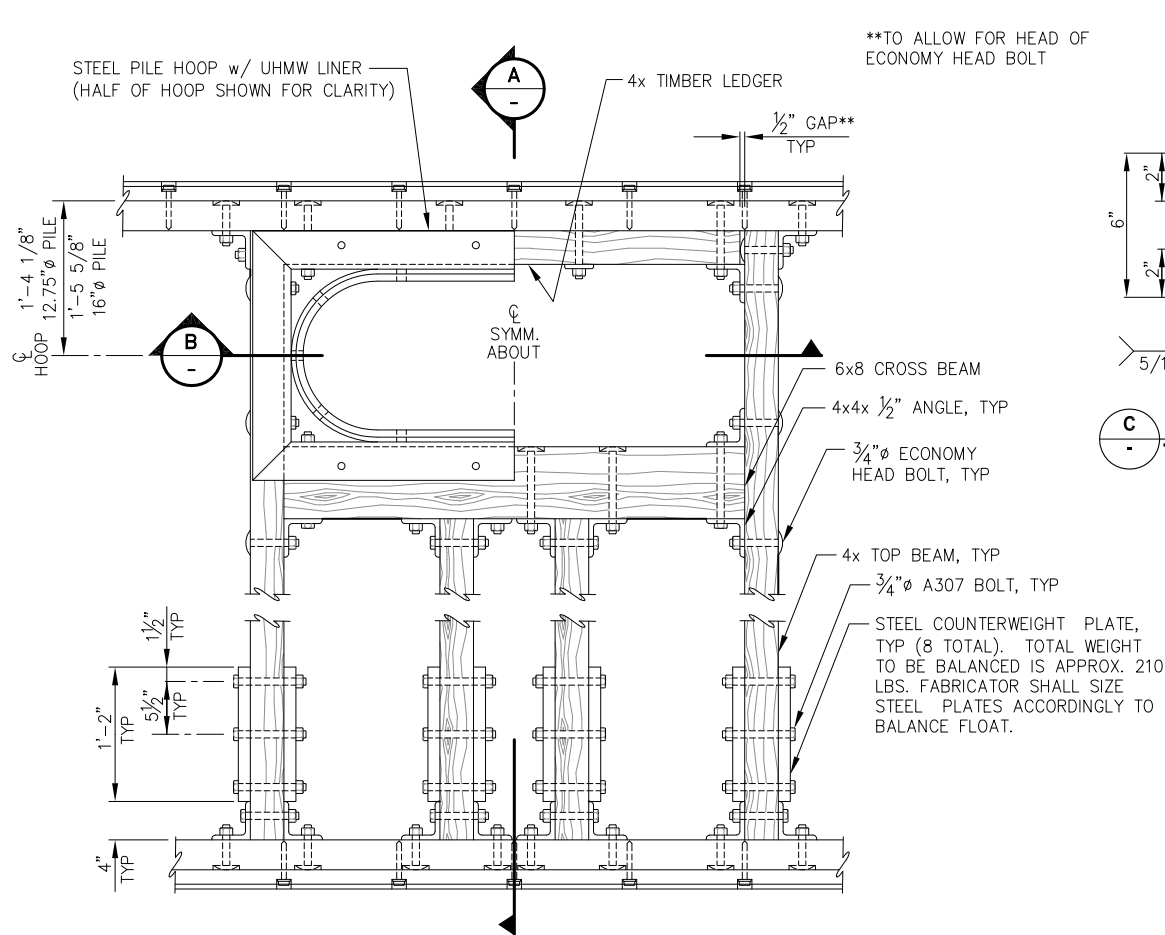
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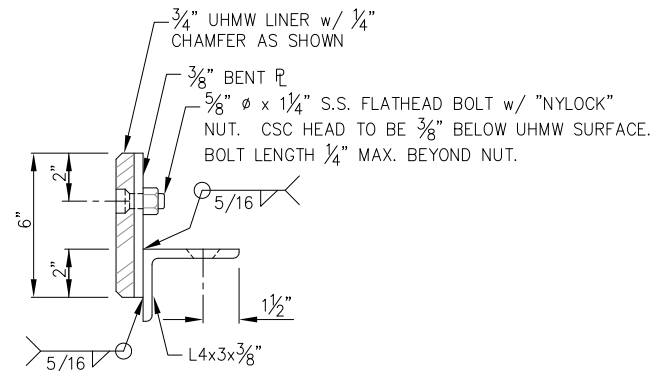
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SHEET
0 OF 82

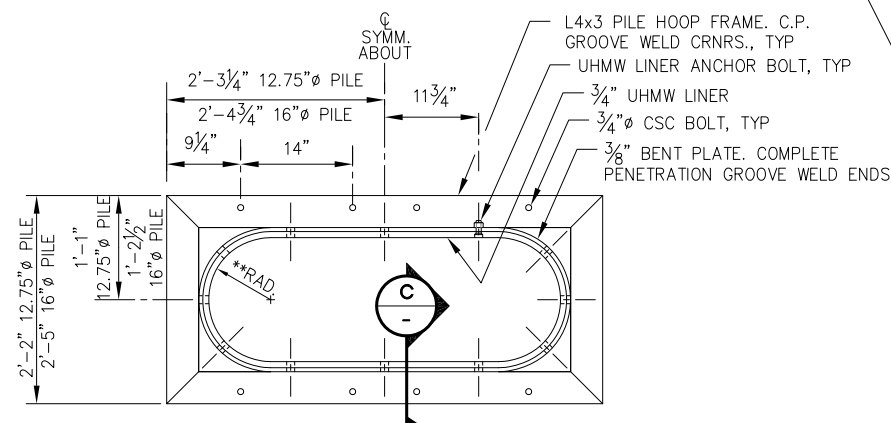


PILE HOOP FRAMING PLAN

NOTE: FOAM BILLETS NOT SHOWN THIS VIEW FOR CLARITY.

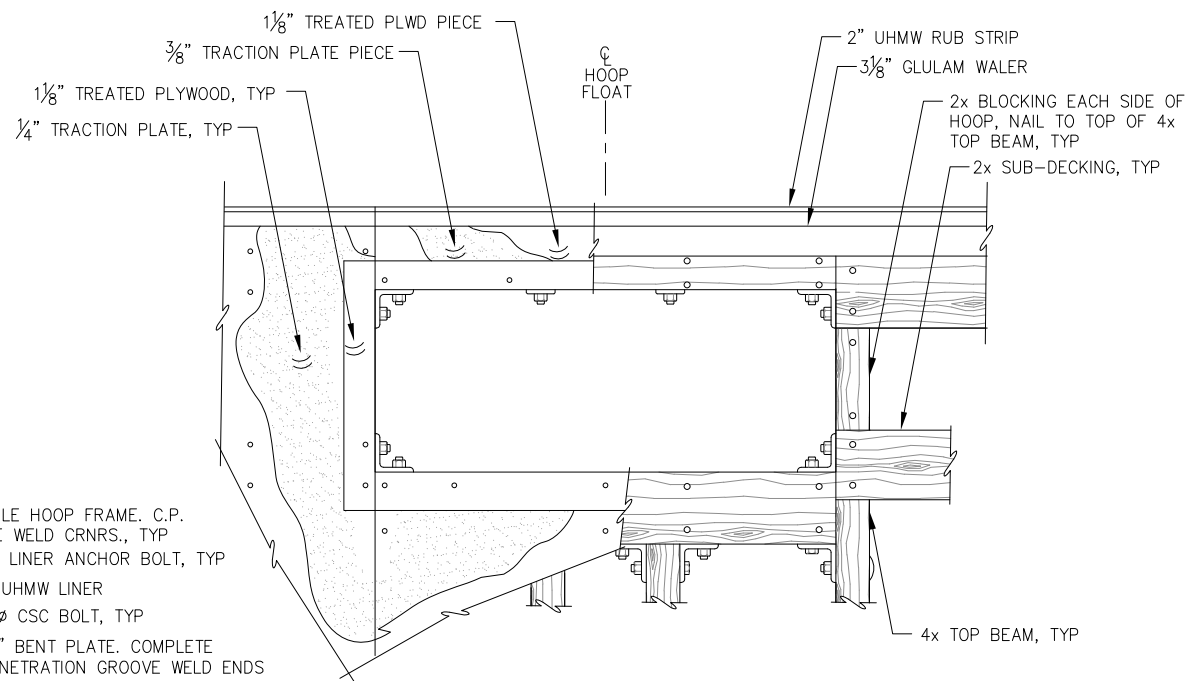


C PILE HOOP TYPICAL SECTION



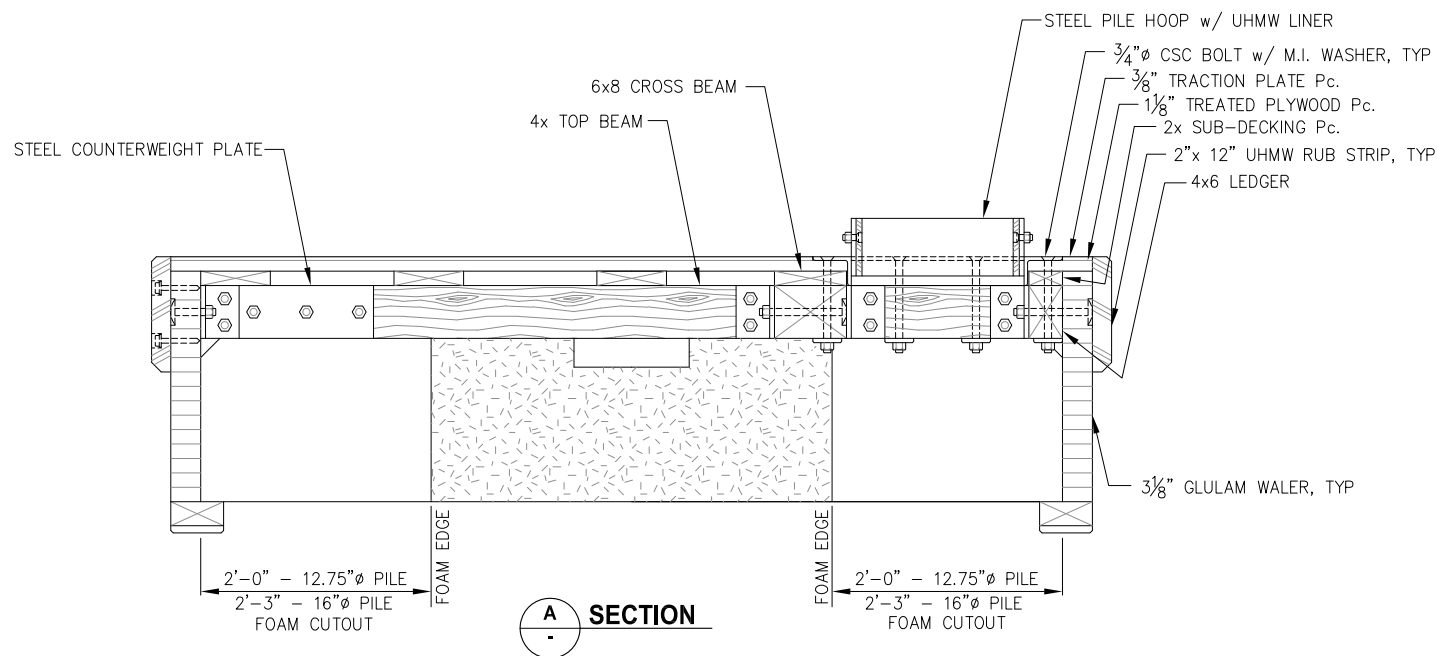
PILE HOOP PLAN

**RAD. = 7.875" FOR 12.75" Ø PILE
9.375" FOR 16" Ø PILE

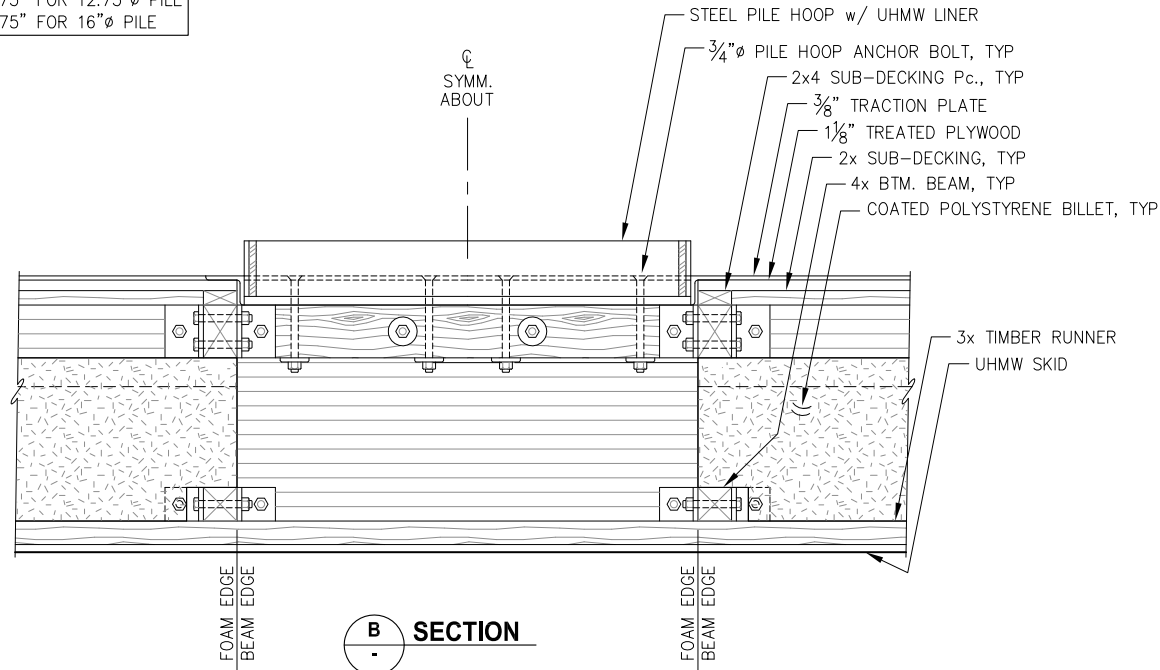


PILE HOOP DECKING PLAN

NOTES: PILE HOOP NOT SHOWN FOR CLARITY. CHAMFER TOP INSIDE EDGE OF TRACTION PLATE/DECK AS REQ'D FOR PILE HOOP FRAME FIT-UP.



A SECTION



B SECTION

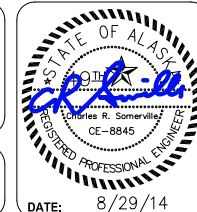


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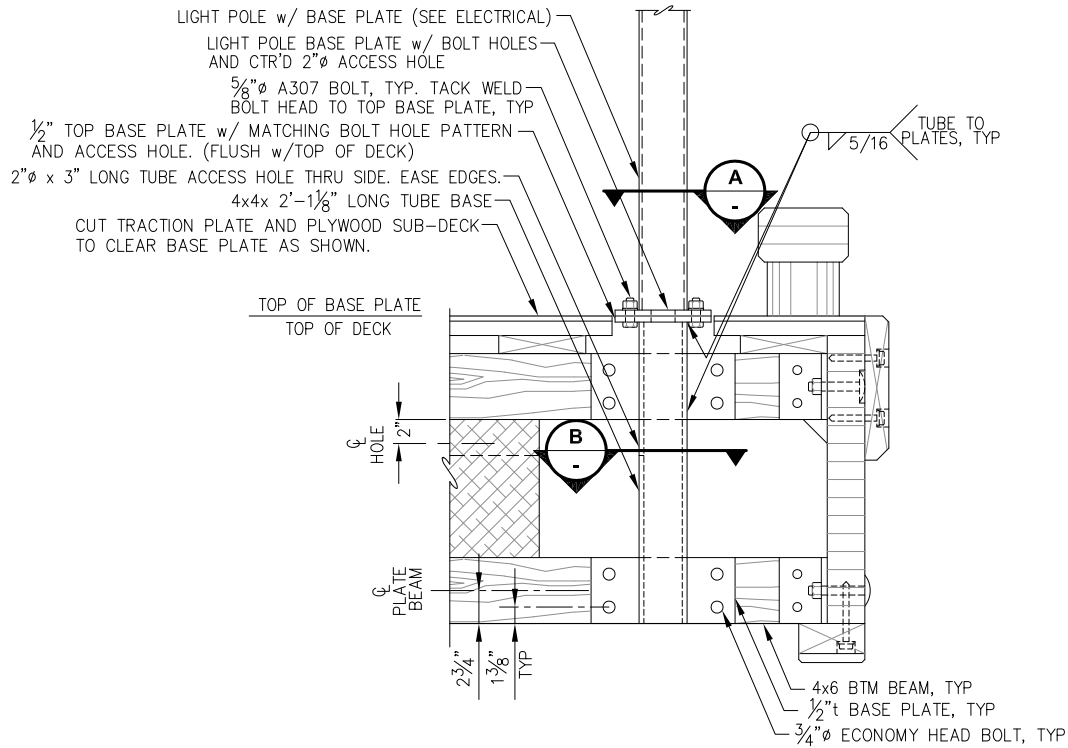


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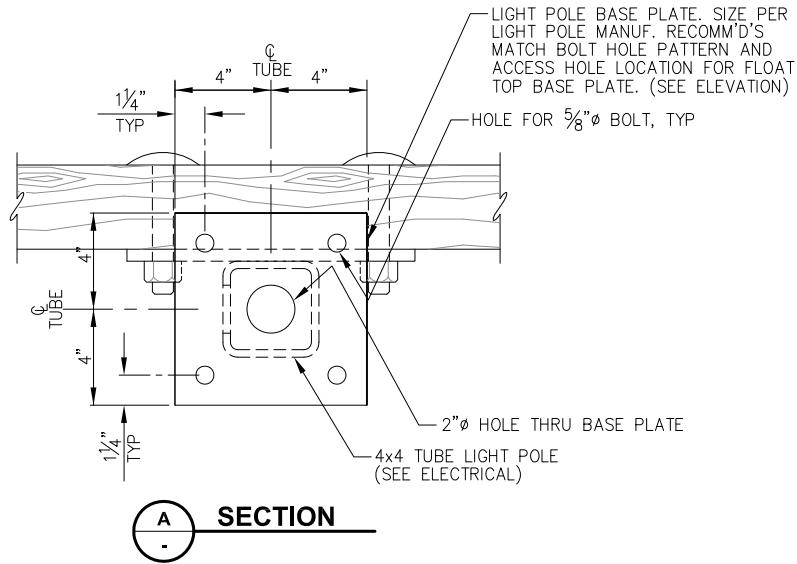
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8.08
SHEET
81 OF 82

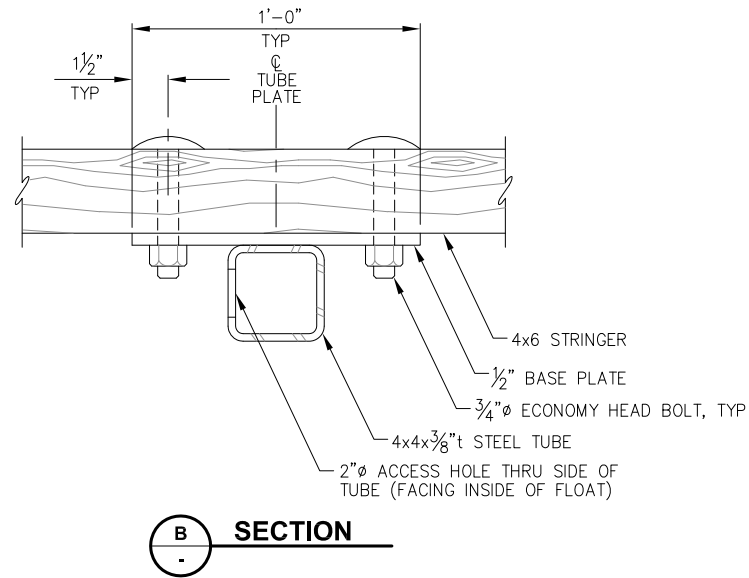


LIGHT POLE BASE - ELEVATION

NOTE: SEE FLOAT PLANS FOR LOCATION.



SECTION A



SECTION B

NOTE: PROVIDE (1) LIGHT POLE BASE w/ELECTRICAL ACCESS HOLE ON OPPOSITE SIDE OF 4x TUBE FOR TYPE 5 FLOAT UNIT.



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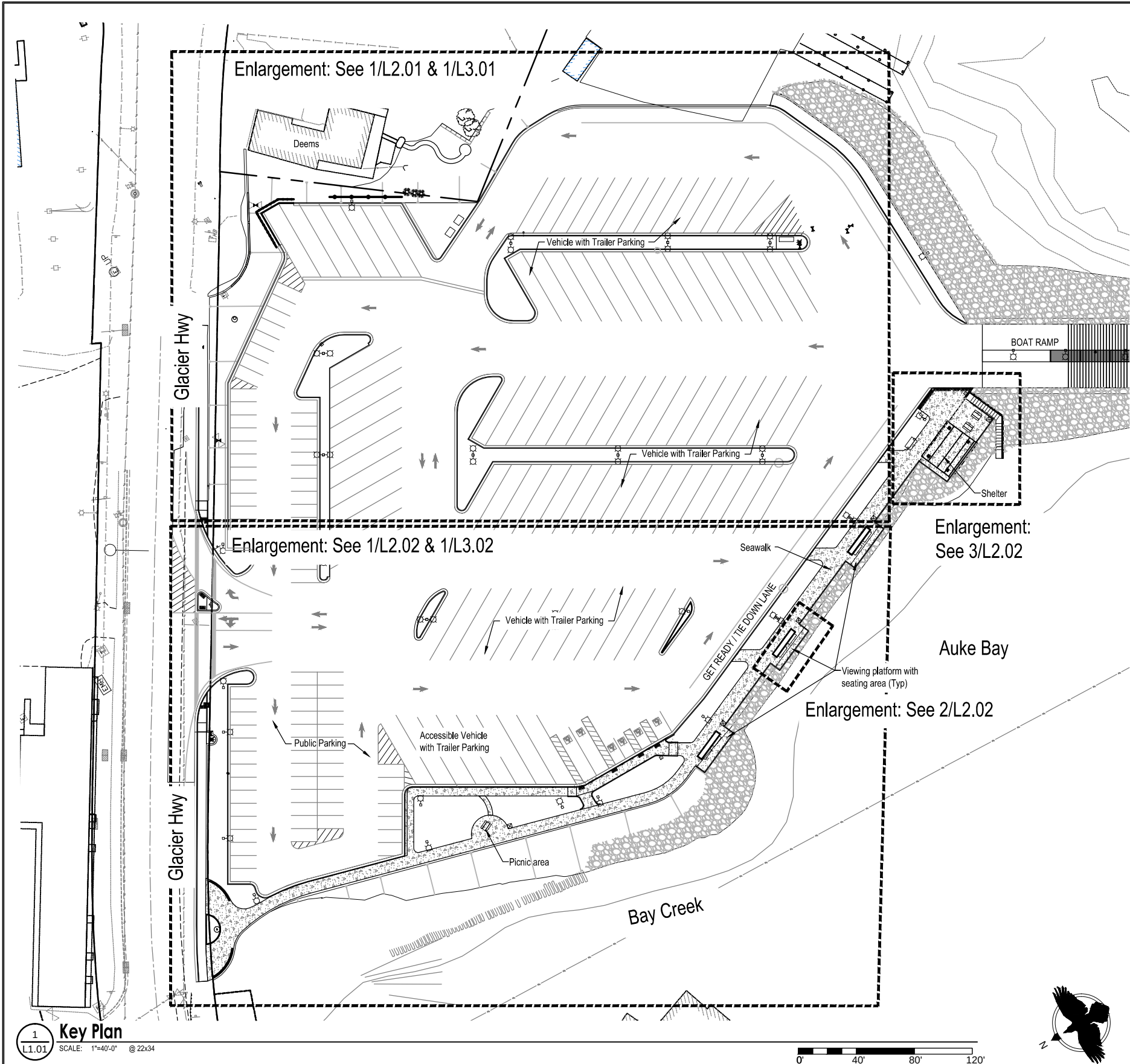
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**BOAT LAUNCH RAMP
BOARDING FLOAT DETAILS**

DATE: 8/29/14

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8.09
SHEET
82 OF 82



Planting Schedule

Evergreen Trees- See Detail: 1 L4.01 Evergreen Tree

Qty.	Symbol	Label	Latin Name	Common Name	Size	Furnished	Notes
17		PS	Picea sitchensis	Sitka Spruce	12' Ht.	CG	
4		TH	Tsuga heterophylla	Western Hemlock	12' Ht.	CG	
40		TO	Thuja occidentalis 'smaragd'	Emerald Green Arborvitae	8' Ht.	CG	

Deciduous Trees- See Detail: 2 L4.01 Deciduous Tree

Qty.	Symbol	Label	Latin Name	Common Name	Size	Furnished	Notes
44		AP	Acer platanoides 'Schwedler'	'Schwedler' Norway Maple	2" CAL	CG	Street Tree
2		LD	Larix decidua	European Larch	2" CAL	CG	
31		TC	Tilia cordata	Littleleaf Linden	2.5" CAL	CG	Street Tree
2		T-M	Transplant Maple				Provided by owner

Shrubs - See Detail: 3 L4.01 Shrub Planting

Qty.	Symbol	Label	Latin Name	Common Name	Size	Furnished	Notes
39		AS	Alnus sinuata	Sitka Alder	#5	CG	5' OC
356		AM	Aronia melanocarpa var. elata	Black Chokeberry	#2	CG	24" OC
248		CS	Cornus sericea	Red Twig Dogwood	#5	CG	36" OC
10		HV	Hamamelis vernalis	Vernal Witch Hazel	#5	CG	7' OC
15		MF	Menziesia ferruginea	False Azalea	#2	CG	3.5' OC
23		RB	Ribes bracteosum	Stink Currant	#2	CG	3.5' OC
453		RR	Rosa rugosa alba	White Sitka Rose	#2	CG	3.5' OC
47		RS	Rubus spectabilis	Salmonberry	#1	CG	3.5' OC
17		SL	Salix lucida ssp. Lasioandra	Pacific Willow	#5	CG	7' OC
301		SB	Spiraea bumalda	Anthony Waterer Spirea	#2	CG	30" OC
929		SJ	Spiraea japonica 'Shirobana'	Shirobana Spirea	#3	CG	18" OC
29		VO	Vaccinium ovalifolium	Oval-leafed Blueberry	#2	CG	5' OC
93		VT-C	Viburnum trilobum 'Compactum'	Compact American Cranberrybush	#2	CG	24" OC

Perennials- See Detail: 4 L4.01 Perennial Planting 5 L4.01 Plug Planting

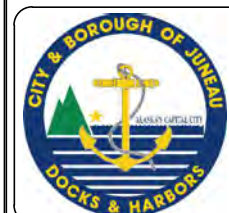
Symbol	Qty.	Label	Latin Name	Common Name	Size	Furnished	Notes
	712	AA-F	Astilbe x arendsii 'Bridal Veil'	Bridal Veil Astilbe	#1	CG	18" OC Triangular spacing
	57	IS	Iris setosa	Wild-Flag Iris	#1	CG	12" OC Triangular spacing
	1200	CM	Carex macrocephala	Largeheaded Sedge	Plug	CG	10" OC Triangular spacing
	1200	IS-B	Iris setosa	Wild-Flag Iris	Bulb	CG	10" OC Triangular spacing
	1200	LM	Leymus mollis	Beach Wildrye	Plug	CG	10" OC Triangular spacing

Miscellaneous

	Rock Mulch
	Seed Type A
	Landscape Edging

General Notes:

- All plants shall be nursery grown to ANSI Z60.1 or native transplants to ANSI Z60.1.
- All disturbed areas not indicated on plans to receive 4" depth planting soil and seed.
- SPECIFICATION SECTIONS 02240, 02870, 02900, 02910, 02920, 02930, AND 02970 ARE A COMPONENT OF THE LANDSCAPE CONSTRUCTION DOCUMENTS. ALL LANDSCAPE WORK SHALL BE BASED ON THESE DRAWINGS IN COMBINATION WITH THE ABOVE REFERENCED SPECIFICATION SECTIONS. IF YOU DO NOT HAVE THESE SPECIFICATIONS, REQUEST THEM. SUBMITTAL OF BID SHALL BE RECOGNITION THAT SPECIFICATIONS HAVE BEEN RECEIVED.



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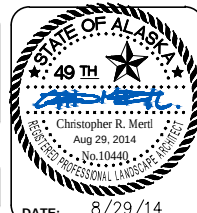
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SHEET TITLE: **KEY PLAN**

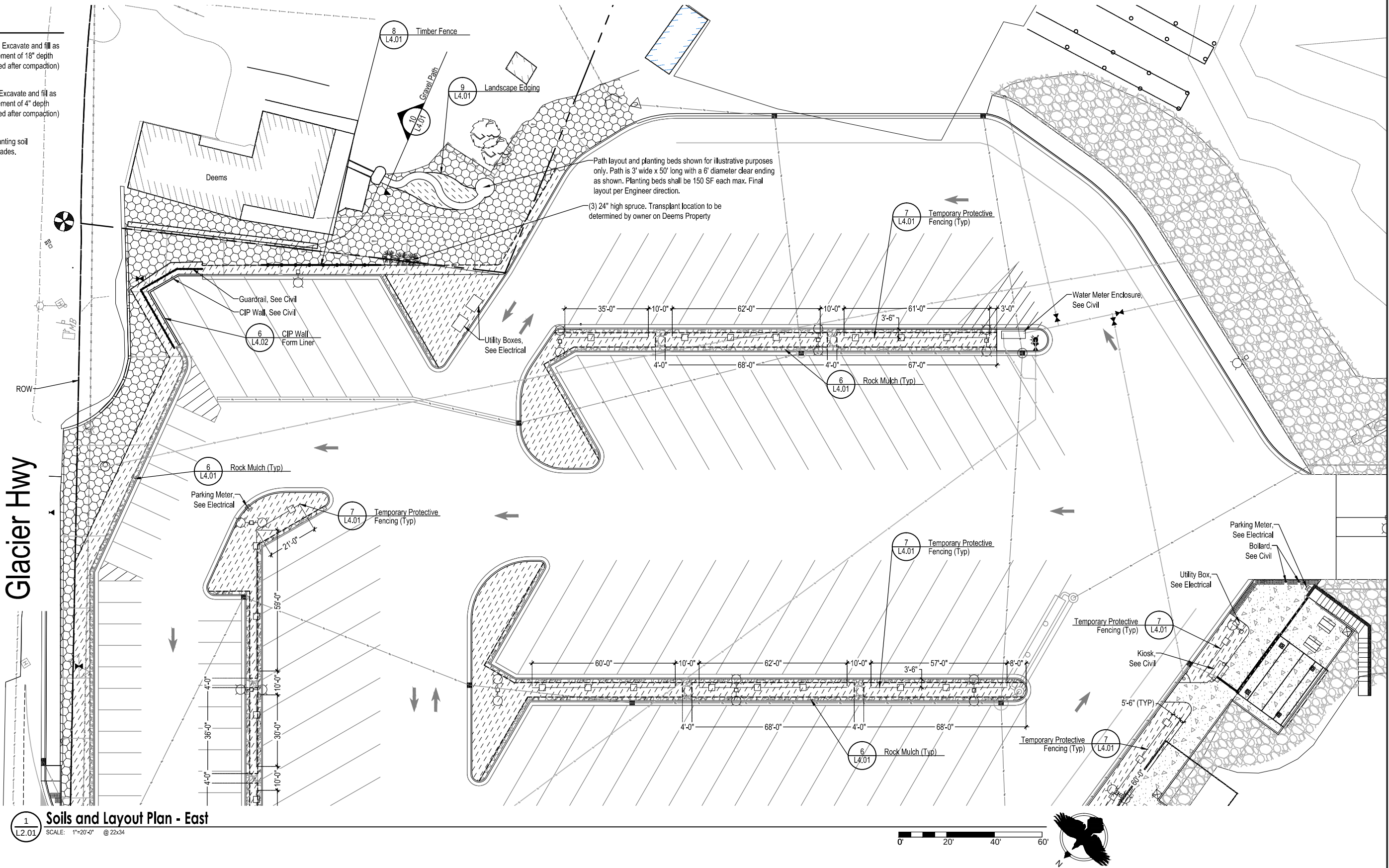
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L1.01
SHEET OF 7

Soils Legend

- 18" Depth Planting Soil - Excavate and fill as necessary to allow placement of 18" depth planting soil (as measured after compaction) and meet finish grade.
- 4" Depth Planting Soil - Excavate and fill as necessary to allow placement of 4" depth planting soil (as measured after compaction) and meet finish grade.

Note:
Excavate to the depth required to accept planting soil and where indicated, mulch, to meet final grades.



1 Soils and Layout Plan - East
L2.01 SCALE: 1"=20'-0" @ 22x34



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SCALE:
SCALE IN FEET
0 20 40 FT.

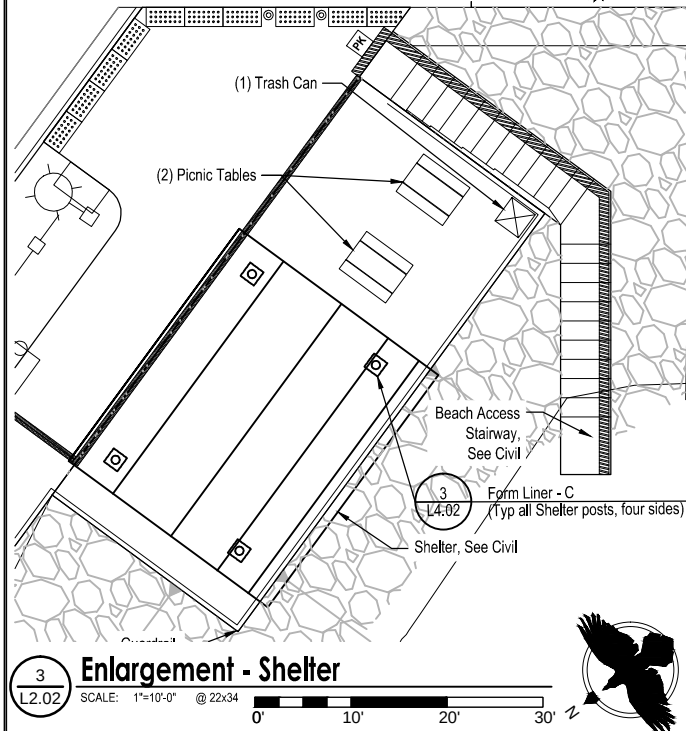
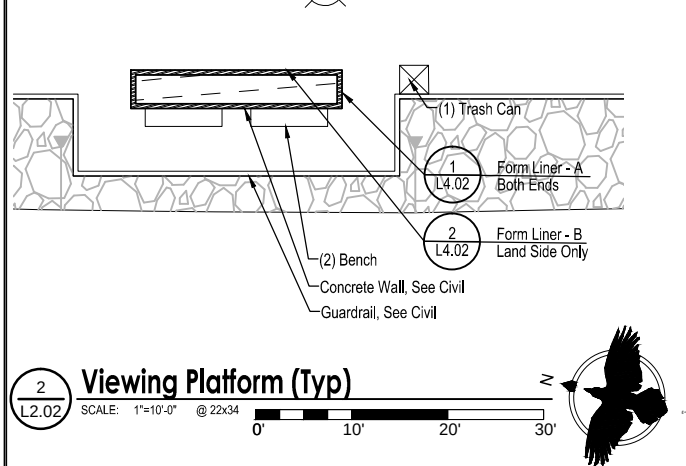


CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
SOILS AND LAYOUT PLAN

PND PROJECT NO.: 082015

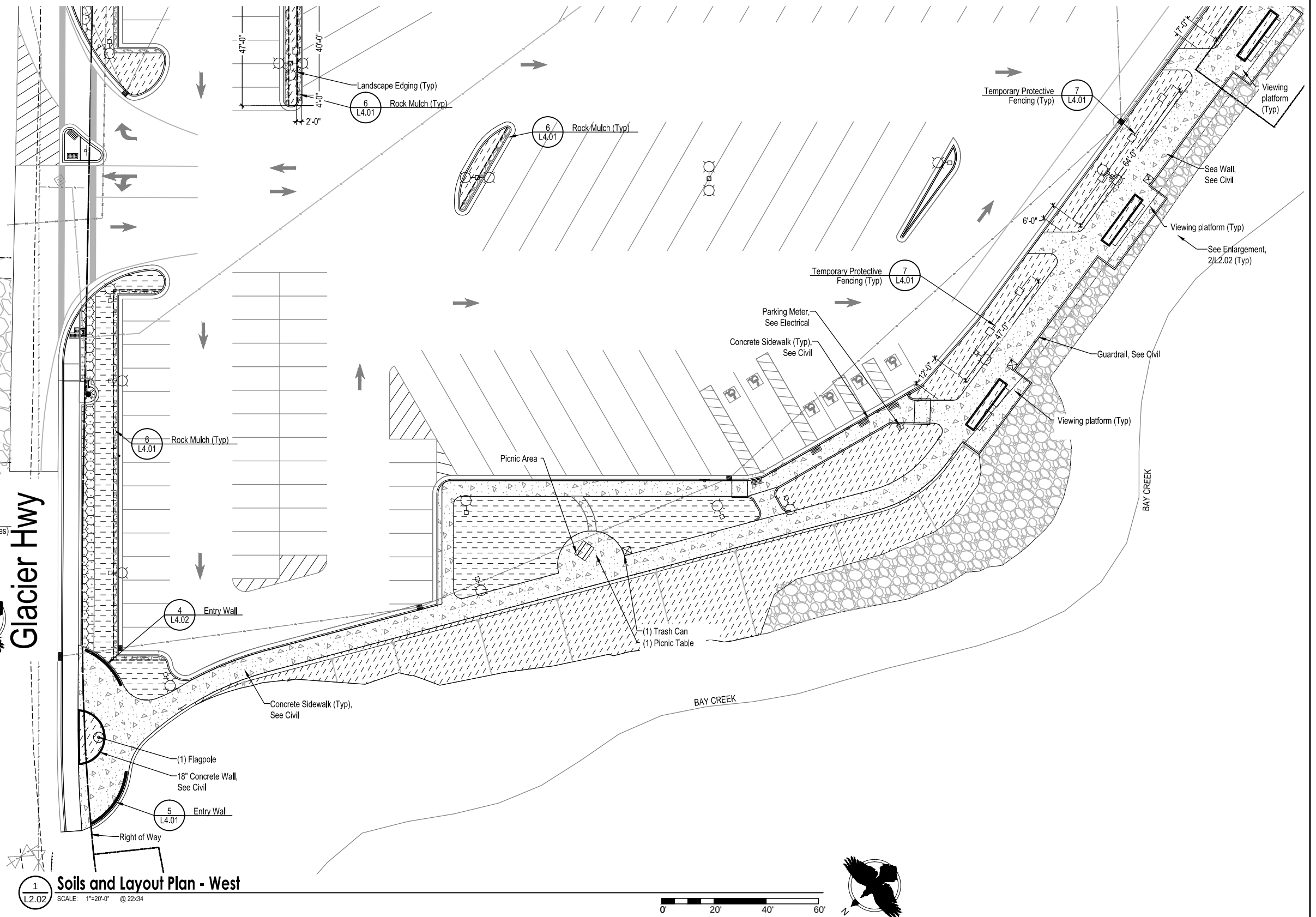
L2.01
SHEET OF 7



Soils Legend

- 18" Depth Planting Soil - Excavate and fill as necessary to allow placement of 18" depth planting soil (as measured after compaction) and meet finish grade.
- 4" Depth Planting Soil - Excavate and fill as necessary to allow placement of 4" depth planting soil (as measured after compaction) and meet finish grade.

Note:
Excavate to the depth required to accept planting soil and where indicated, mulch, to meet final grades.



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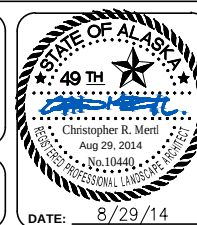
9360 Glacier Highway, Ste. 100
Juneau, Alaska 99801

Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: CM
DRAWN: NF

CHECKED: KD
APPROVED: CM

SCALE:
SCALE IN FEET
0 20 40 FT.

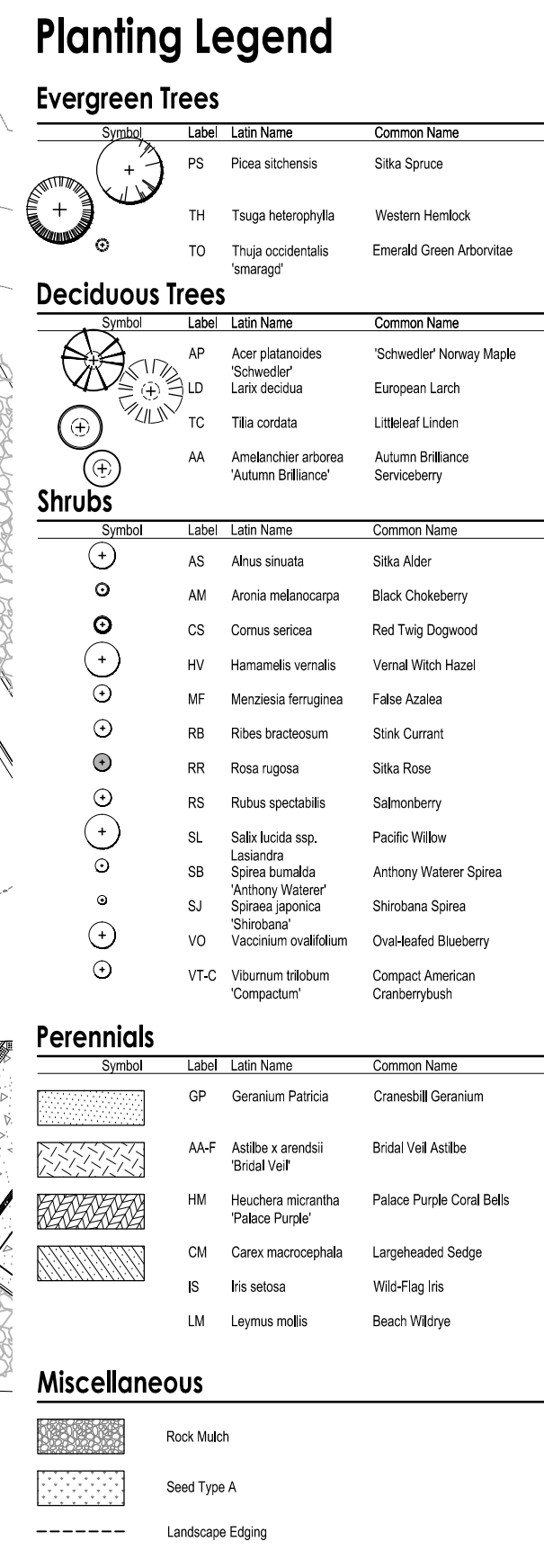


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CONTRACT NO. DH14-014

SHEET TITLE:
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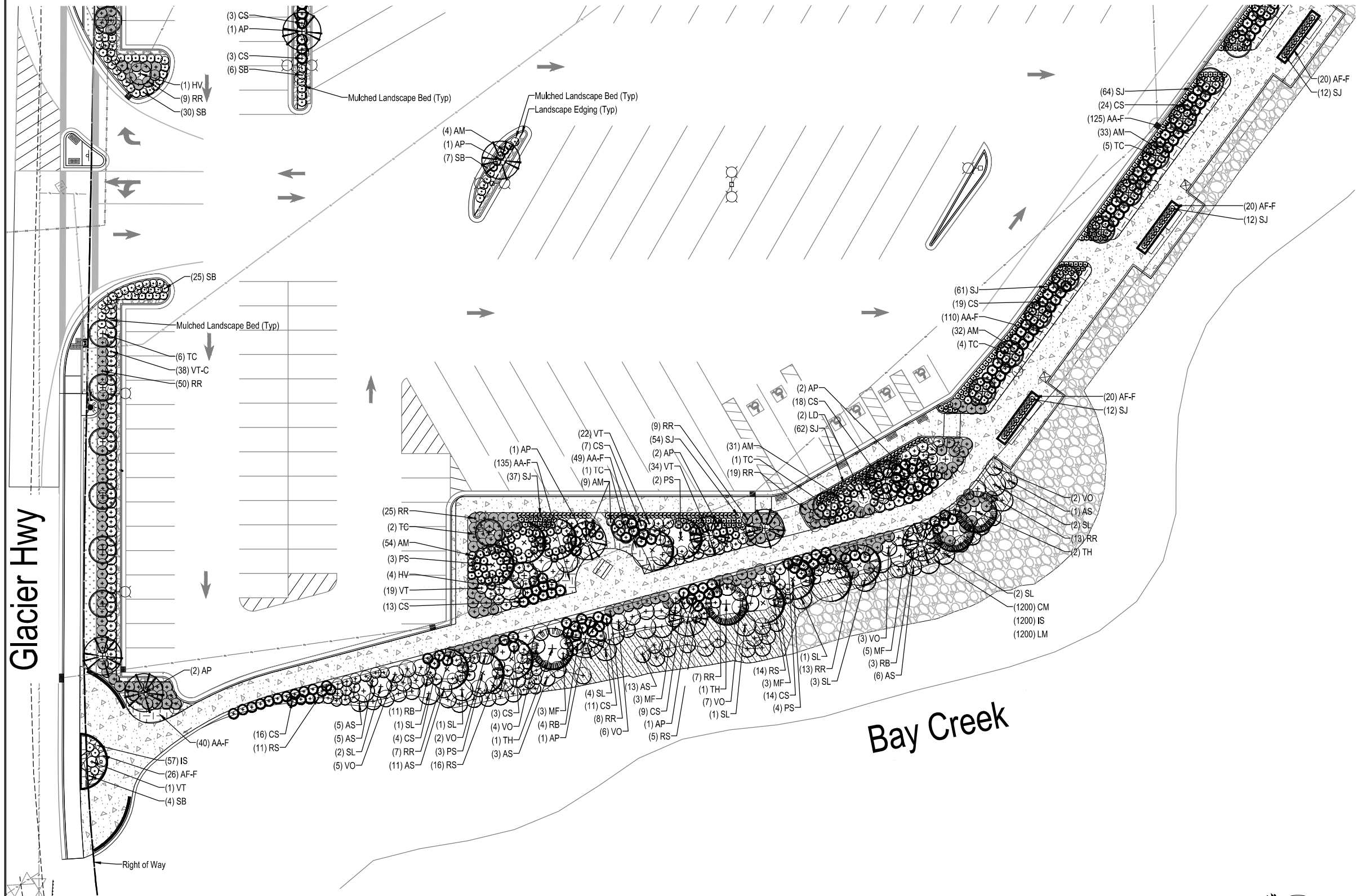
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L2.02
3 SHEET OF 7



CITY & BOROUGH OF JUNEAU, ALASKA STATTER HARBOR IMPROVEMENTS CONTRACT NO. DH14-014		
SHEET TITLE:	PLANTING PLAN	L3.01
RND PROJECT NO.: 082015	SHEET 4 OF 7	

Glacier Hwy



Planting Legend

Evergreen Trees

Symbol	Label	Latin Name	Common Name
	PS	<i>Picea sitchensis</i>	Sitka Spruce
	TH	<i>Tsuga heterophylla</i>	Western Hemlock
	TO	<i>Thuja occidentalis 'smaragd'</i>	Emerald Green Arborvitae

Deciduous Trees

Symbol	Label	Latin Name	Common Name
	AP	<i>Acer platanoides</i>	'Schwedler' Norway Maple
	LD	<i>Larix decidua</i>	European Larch
	TC	<i>Tilia cordata</i>	Littleleaf Linden
	AA	<i>Amelanchier arborea 'Autumn Brilliance'</i>	Autumn Brilliance Serviceberry

Shrubs

Symbol	Label	Latin Name	Common Name
	AS	<i>Alnus sinuata</i>	Sitka Alder
	AM	<i>Aronia melanocarpa</i>	Black Chokeberry
	CS	<i>Cornus sericea</i>	Red Twig Dogwood
	HV	<i>Hamamelis vernalis</i>	Vernal Witch Hazel
	MF	<i>Menziesia ferruginea</i>	False Azalea
	RB	<i>Ribes bracteosum</i>	Stink Currant
	RR	<i>Rosa rugosa</i>	Sitka Rose
	RS	<i>Rubus spectabilis</i>	Salmonberry
	SL	<i>Salix lucida ssp. Lasianдра</i>	Pacific Willow
	SB	<i>Spiraea bumalda</i>	Anthony Waterer Spirea
	SJ	<i>Spiraea japonica 'Shirobana'</i>	Shirobana Spirea
	VO	<i>Vaccinium ovalifolium</i>	Oval-leaved Blueberry
	VT-C	<i>Viburnum trilobum 'Compactum'</i>	Compact American Cranberrybush

Perennials

Symbol	Label	Latin Name	Common Name
	GP	<i>Geranium Patricia</i>	Cranesbill Geranium
	AA-F	<i>Astilbe x arendsii 'Bridal Veil'</i>	Bridal Veil Astilbe
	HM	<i>Heuchera micrantha 'Palace Purple'</i>	Palace Purple Coral Bells
	CM	<i>Carex macrocephala</i>	Largeheaded Sedge
	IS	<i>Iris setosa</i>	Wild-Flag Iris
	LM	<i>Leymus mollis</i>	Beach Wildrye

Miscellaneous

	Rock Mulch
	Seed Type A
	Landscape Edging

1
L3.02
Planting Plan - West
SCALE: 1"=20'-0" @ 22x34

0' 20' 40' 60'



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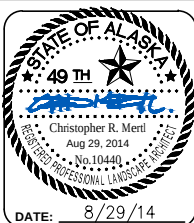
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REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

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CHECKED: KD
APPROVED: CM

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SCALE IN FEET
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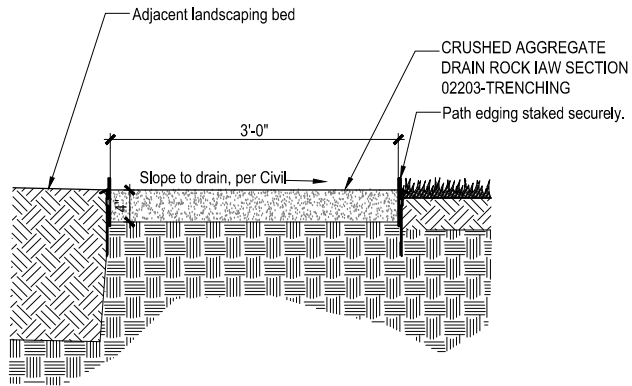


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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
PLANTING PLAN

PND PROJECT NO.: 082015

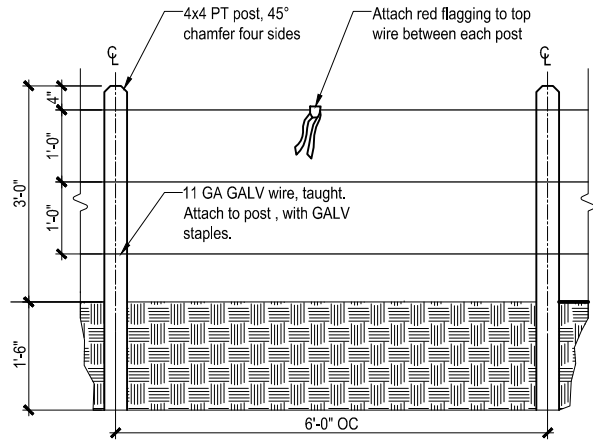
L3.02
SHEET
OF 7



10 Gravel Path

L4.01 SCALE: 1"=1'-0"

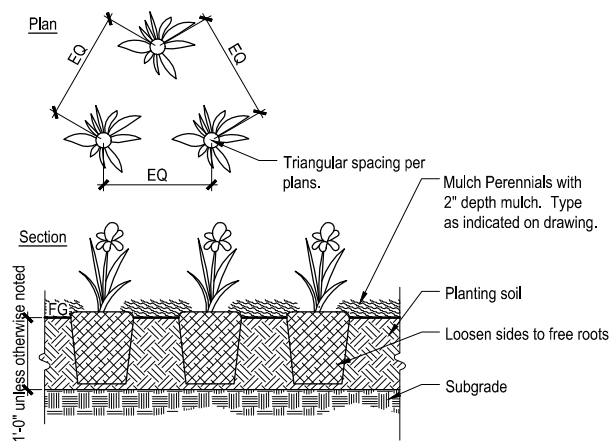
dt-pvmt-aggr.dwg



7 Temporary Protective Fencing

L4.01 SCALE: 3/4"=1'-0"

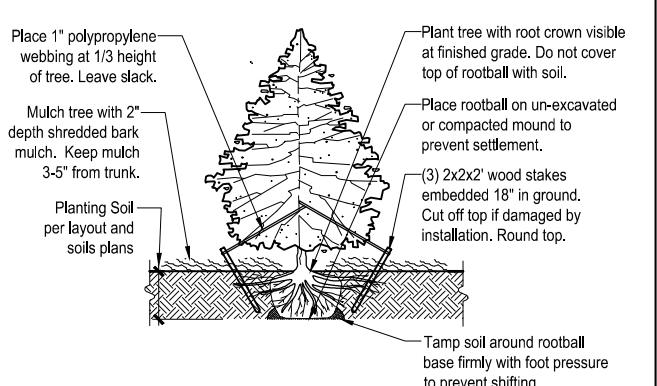
dt-rest-fenc.dwg



4 Perennial Planting

L4.01 SCALE: 3/4"=1'-0"

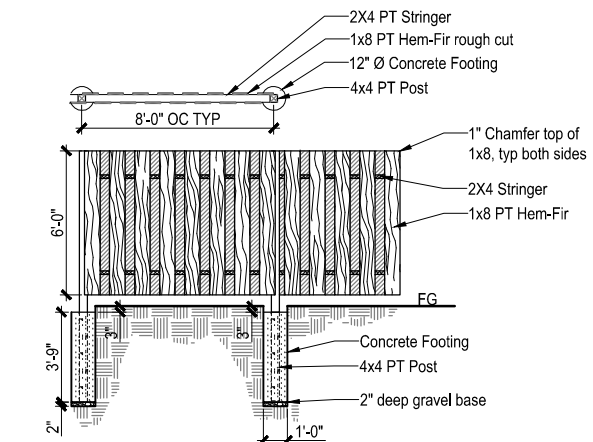
dt-plnt-pere.dwg



1 Evergreen Tree Planting - Staked

L4.01 SCALE: NTS

dt-tree-egvrn-stak-se.dwg

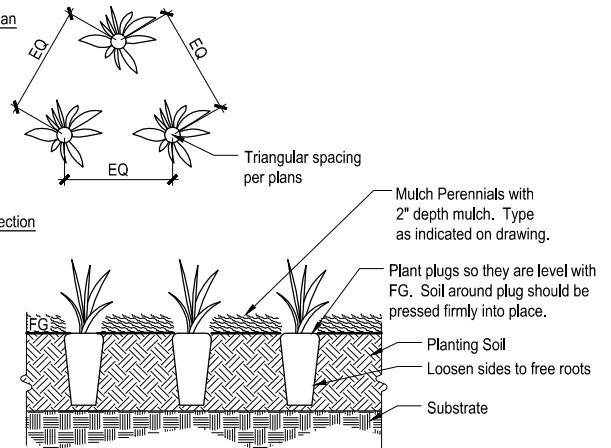


Note:
Length of fence is 50'-0". Fence detail shows general requirements only. Fence shall match existing timber fence on Deems' property.

8 Timber Fence

L4.01 SCALE: 1/4"=1'-0"

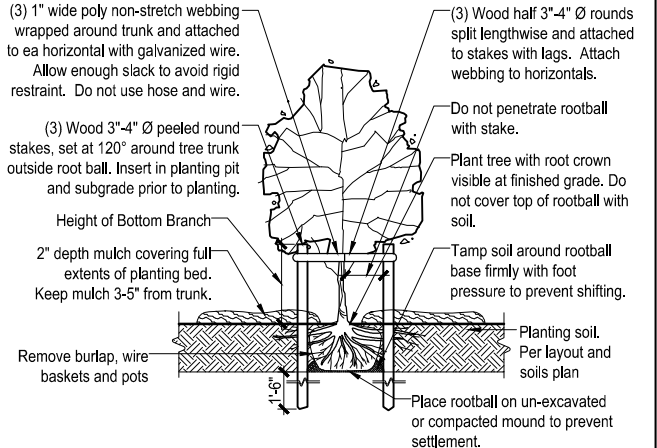
dt-fenc.dwg



5 Plug Planting

L4.01 SCALE: 3/4"=1'-0"

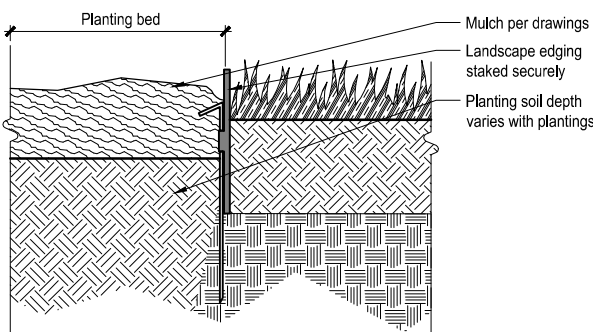
dt-plnt-plug.dwg



2 Deciduous Tree Planting - Staked

L4.01 SCALE: 1/2"=1'-0"

dt-tree-decd-stak-se.dwg

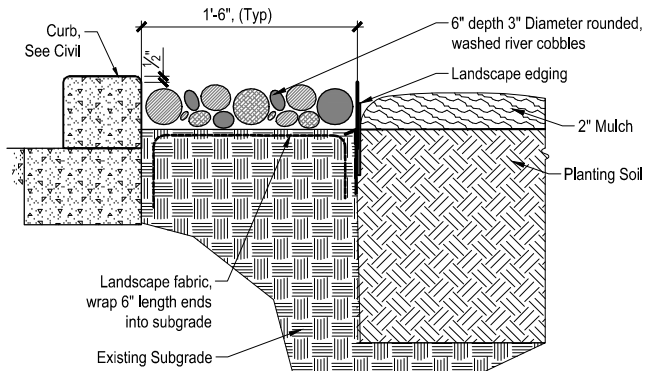


Notes: 1) Install edging per manufacturer's specifications

9 Landscape Edging

L4.01 SCALE: NTS

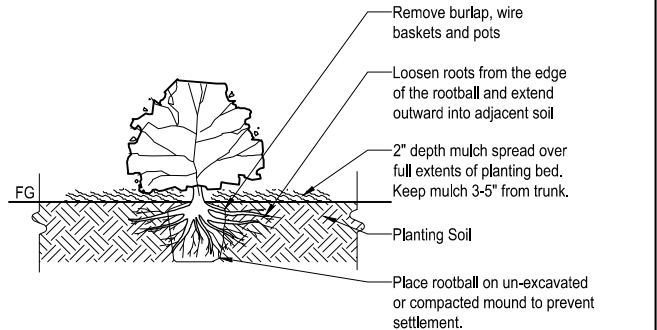
dt-edge-land.dwg



6 Rock Mulch

L4.01 SCALE: 1 1/2"=1'-0"

dt-edge-drip.dwg



3 Shrub Planting

L4.01 SCALE: 3/4"=1'-0"

dt-plnt-shrb-se.dwg



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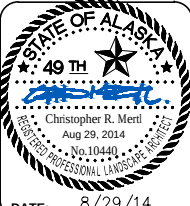
ENGINEERS, INC.

9360 Glacier Highway, Ste. 100
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SCALE:

DATE: 8/29/14



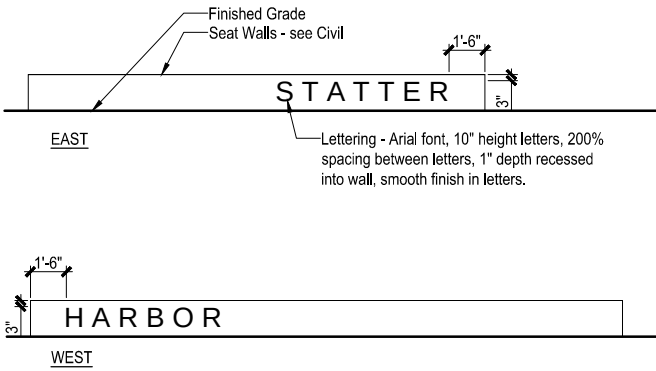
CITY & BOROUGH OF JUNEAU, ALASKA
STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
LANDSCAPE DETAILS

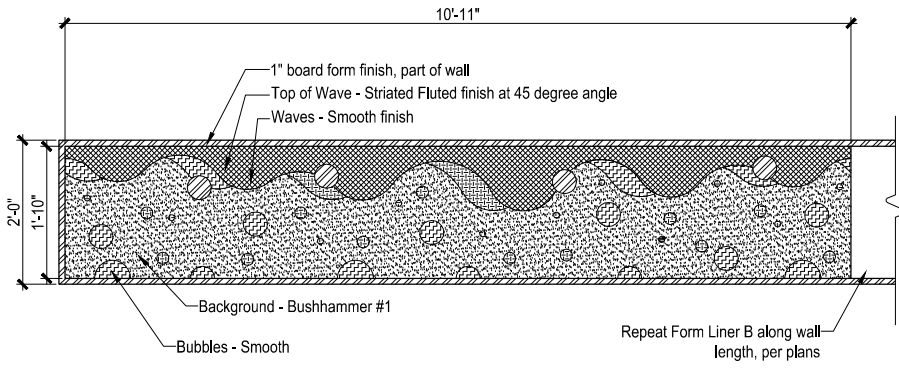
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L4.01

SHEET OF 7



4
L4.02
Entry Wall
SCALE: 1/4"=1'-0"
dl-wall-entry-elev.dwg



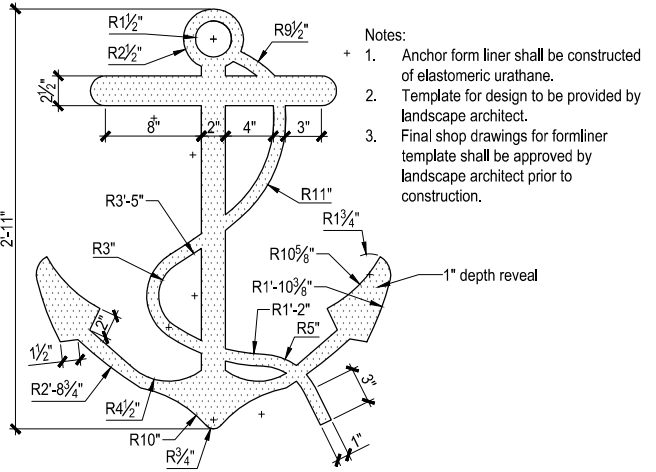
2
L4.02
Form Liner - B
SCALE: 3/4"=1'-0"
dl-wall-form-b.dwg

Notes:

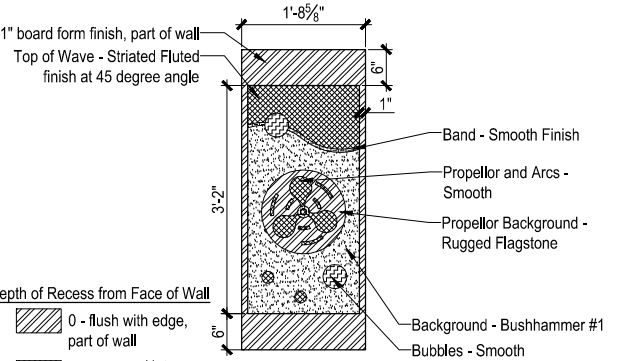
1. Textures are labeled here, per Scott Systems, Inc. or approved equal.
2. Depth of Recess from face of wall illustrated with hatches.
3. Template for design to be provided by landscape architect.
4. Final shop drawings for formliner template shall be approved by landscape architect prior to construction.

Depth of Recess from Face of Wall

0 - flush with edge, part of wall
-1/4"
-1/2"
-3/4"
-1"



5
L4.02
Form Liner - D
SCALE: 1 1/2"=1'-0"
dl-wall-form-d.dwg

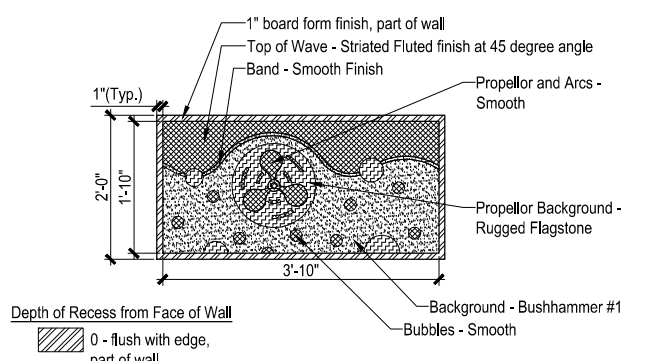


Notes:

1. Textures are labeled here, per Scott Systems, Inc. or approved equal.
2. Depth of Recess from face of wall illustrated with hatches.
3. Template for design to be provided by landscape architect.
4. Final shop drawings for formliner template shall be approved by landscape architect prior to construction.
5. Form Liner for Post shall be used on all four sides of square post base.

Depth of Recess from Face of Wall

0 - flush with edge, part of wall
-1/4"
-1/2"
-3/4"
-1"

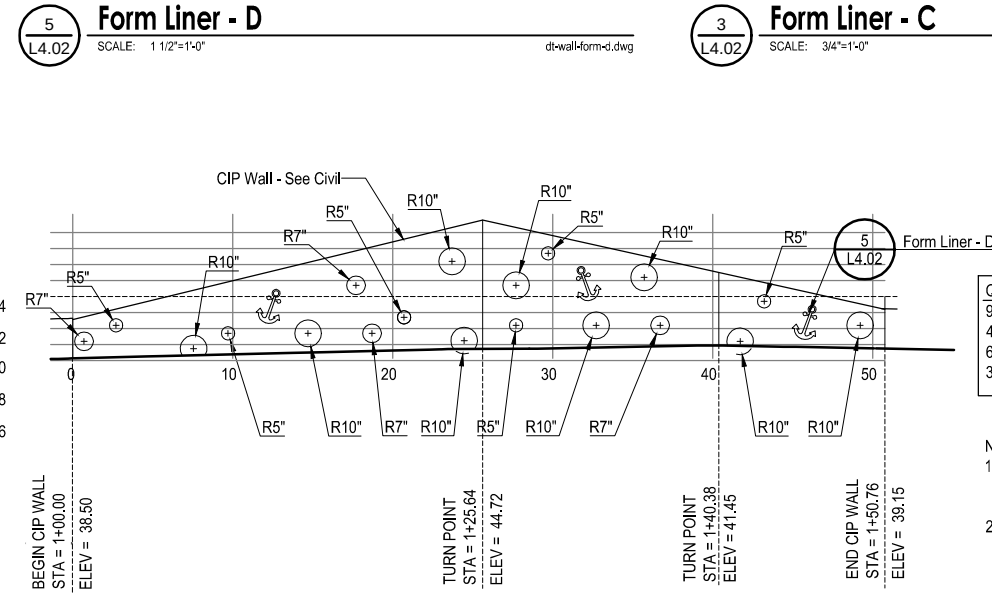


Notes:

1. Textures are labeled here, per Scott Systems, Inc. or approved equal.
2. Depth of Recess from face of wall illustrated with hatches.
3. Template for design to be provided by landscape architect.
4. Final shop drawings for formliner template shall be approved by landscape architect prior to construction.

Depth of Recess from Face of Wall

0 - flush with edge, part of wall
-1/4"
-1/2"
-3/4"
-1"



6
L4.02
CIP Wall - Form Liner
SCALE: 3/16"=1'-0"
dl-wall-cip-form.dwg

Qty	Pattern
9	10" Ø circles
4	7" Ø circles
6	5" Ø circles
3	Anchors (Form Liner - D)

Note:

1. 1" depth reveal, circular and anchor patterns to be set into face of wall.
2. Circular forms shall be made of wood and anchor forms shall be made of elastomeric urathane.

Note:

Details 1/L4.02, 2/L4.02, 3/L4.02, and 7/L4.02 shall be Elastomeric Urethane form liners [per Scott System or approved equal. (303)373-2500]. Templates to be provided by landscape architect, contractor to submit shop drawings for final approval.



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9360 Glacier Highway, Ste. 100
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Fax: 907-586-2099
www.pndengineers.com

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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
LANDSCAPE DETAILS

PND PROJECT NO.: 082015

L4.02
SHEET OF 7

LEGEND

ABBREVIATIONS:
AFG ABOVE FINISHED GRADE
GFI GROUND FAULT INTERRUPTED
UON UNLESS OTHERWISE NOTED
WP WEATHERPROOF
XFMR TRANSFORMER
OHE OVERHEAD ELECTRIC
UGE UNDERGROUND ELECTRIC
GRS GALVANIZED RIGID STEEL
E EXISTING TO REMAIN
N NEW
R RELOCATE EXISTING
X REMOVE EXISTING

DATA:
K PARKING KIOSK
C SECURITY CAMERA
LIGHTING:
EXTERIOR POLE MOUNTED LUMINAIRE
EXTERIOR IN-GRADE LUMINAIRE
POWER:
DUPLEX RECEPTACLE, 18" AFG UON.
H HANDHOLE
T TRANSFORMER
P POLE MOUNT TRANSFORMER
G GROUND ROD
C CIRCUIT BREAKER
S SWITCH OR DISCONNECT
I CONTACT

NOTE: ALL DEVICE HEIGHTS TO CENTER, UON.



NOTE: THE EXISTING ELECTRICAL SYSTEMS ARE ILLUSTRATED WITH THE REQUIRED DEMOLITION OR REPLACEMENT IDENTIFIED.

1 SITE PLAN - EXISTING



HAIGHT
& ASSOCIATES
CONSULTING
ELECTRICAL
ENGINEERS
526 Main Street, Juneau, AK 99801
(907) 586-9788

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Fax: 907-586-2099
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DRAWN: KHD APPROVED: BCH

SCALE: SCALE IN FEET
0 40 80 FT.



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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
SITE PLAN - EXISTING

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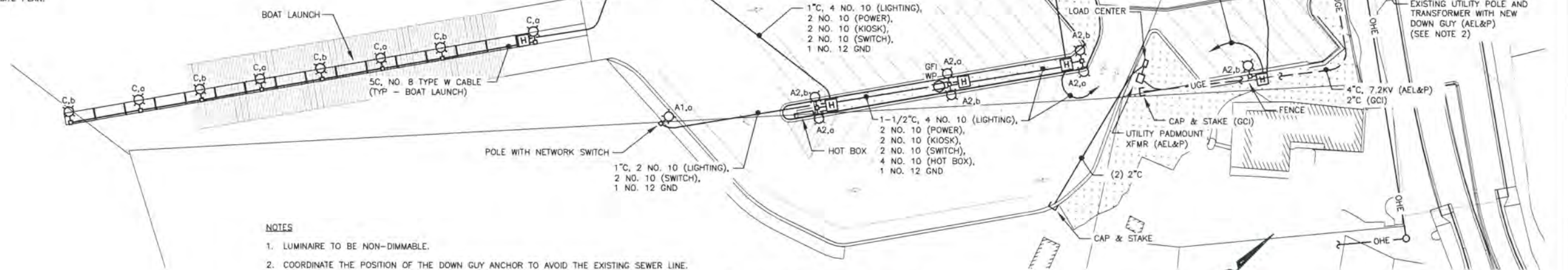
E1.00
SHEET
1 OF 9

LUMINAIRE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	LAMPS	REMARKS
A1	POLE MOUNT LED SITE LIGHT, DIE-CAST LOW-COPPER ALUMINUM HOUSING, CLEAR GLASS LENS, TYPE III DISTRIBUTION, INTEGRAL ELECTRONIC DRIVER, BLACK FINISH, FIXTURE MOUNT OCCUPANCY SENSOR, 20% HIGH/LOW DIMMING	KIM LIGHTING WP9-S-3-E35-60L-3K-120 -BL-SCH	65W LED 3000K, CRI 80	MOUNT AT 20'-0" AFG, UON.
A2	POLE MOUNT LED SITE LIGHT, DIE-CAST LOW-COPPER ALUMINUM HOUSING, CLEAR GLASS LENS, TYPE IV DISTRIBUTION, INTEGRAL ELECTRONIC DRIVER, BLACK FINISH, FIXTURE MOUNT OCCUPANCY SENSOR, 20% HIGH/LOW DIMMING	KIM LIGHTING WP9-S-4-E35-60L-3K-120 -BL-SCH	65W LED 3000K, CRI 80	-MOUNT AT 20'-0" AFG, UON.
B1	POLE MOUNT ARCHITECTURAL LED, ALUMINUM HOUSING, TYPE II DISTRIBUTION, INTEGRAL 0-10V DIMMABLE DRIVER, BLACK FINISH, POLE MOUNT OCCUPANCY SENSOR	BEACON CAP-21-24NB-27-3K-T2 -UNV-3RNV-BBT	27W LED 3000K, CRI 80	-MOUNT AT 11'-0" AFG, UON. -PROVIDE 0-10V DIMMING DRIVER.
B2	POLE MOUNT ARCHITECTURAL LED, ALUMINUM HOUSING, TYPE IV DISTRIBUTION, INTEGRAL 0-10V DIMMABLE DRIVER, BLACK FINISH, POLE MOUNT OCCUPANCY SENSOR	BEACON CAP-21-24NB-55-3K-T4 -UNV-3RNV-BBT	55W LED 3000K, CRI 80	MOUNT AT 11'-0" AFG, UON. -PROVIDE 0-10V DIMMING DRIVER.
C	POLE MOUNTED LED AREA LIGHT, IP66 OR BETTER, MARINE GRADE, ALUMINUM HOUSING, STANCHION STRAIGHT MOUNTING, TYPE I DISTRIBUTION, INTEGRAL ELECTRONIC DRIVER	CROUSE-HINDS PVM-3L-W-P-R1/UNV1	41W LED 80 CRI, 3000K	-MOUNT AT 15' AFG, UON. -PROVIDE BIRD SPIKES.
D	4' SURFACE MOUNT LED LIGHT, ALUMINUM HOUSING, BLACK FINISH, CORROSION RESISTANT FINISH, 100 DEGREE OPTIC DISTRIBUTION, REMOTE ELECTRONIC DRIVER	INSIGHT LIGHTING MXI-6-35K-100-U-CES-48" -REM-TBL-CRF	24W LED 3500K	
	REMOTE POWER SUPPLY, 96 WATT, WET LOCATION RATED	INSIGHT LIGHTING RPS/96/PWR/WET		
F1	7" FLUSH MOUNT LED LIGHT, FIBERGLASS HOUSING, BRONZE LENS RING, SILICONE GASKET, REBAR CAGE ANCHOR, SPOT DISTRIBUTION, INTEGRAL ELECTRONIC DRIVER, WITH SLIP RESISTANT LENS	KIM LIGHTING LTV83FF-SP-12L-3K-UV -RCAB3-SR	14W LED 3000K, CRI 80	
F2	7" FLUSH MOUNT LED LIGHT, FIBERGLASS HOUSING, BRONZE LENS RING, SILICONE GASKET, SPOT DISTRIBUTION, INTEGRAL ELECTRONIC DRIVER, WITH SLIP RESISTANT LENS	KIM LIGHTING LTV83FF-SP-12L-3K-UV-SR	14W LED 3000K, CRI 80	
POLE A	18" TALL 4"x4" SQUARE STEEL POLE, HOT DIP GALVANIZED, BLACK FINISH FOR TYPE A1 & A2 LUMINAIRES	KW INDUSTRIES SSP-18-4.0-11-G-KZ21 -XXX		DRILLING OPTIONS: DM10 FOR SINGLE LUMINAIRE, DM2090 FOR TWO LUMINAIRES AT 90 DEGREES, DM2180 FOR TWO LUMINAIRES AT 180 DEGREES
POLE B	10' TALL 4" DIAMETER ROUND STEEL POLE, HOT DIP GALVANIZED, OPEN TOP, BLACK FINISH, BASE COVER MOUNTING ARM, LOW-COPPER ALUMINUM ALLOY, BLACK FINISH FOR TYPE B1 & B2 LUMINAIRES	KW INDUSTRIES RSP-10-4.0-7-G-KZ21 -OP-BC BEACON AA-39-S-4-X-P-BBT		MOUNTING ARRANGEMENT: B FOR SINGLE LUMINAIRE, C FOR TWO LUMINAIRES AT 180 DEGREES
POLE C	15' TALL 4"x4" SQUARE STEEL POLE, HOT DIP GALVANIZED, BLACK FINISH FOR TYPE C LUMINAIRE	KW INDUSTRIES SSP-15-4.0-11-G-KZ21 -DM10		TENON PIPE ON TOP AS REQUIRED BY LUMINAIRE.
	POLE MOUNT OCCUPANCY SENSOR, LOW PROFILE MOUNT, 20% HIGH/LOW DIMMING, BLACK FINISH	SENSORSWITCH SBOR-10-D-BK-2V		-TO BE UTILIZED WITH LUMINAIRE TYPES B1 AND B2, UON. -TO BE MOUNTED 9'-0" AFG, UON.

NOTES

- ALL LUMINAIRE MOUNTING HEIGHTS ARE TO THE BOTTOM OF THE LUMINAIRE, UNLESS OTHERWISE NOTED AND OR APPLICABLE.
- PROVIDE FOR RECEPTACLES IN POLES WHERE NOTED ON SITE PLAN.



1 SITE PLAN - LIGHTING



HAIGHT & ASSOCIATES
CONSULTING ELECTRICAL ENGINEERS
526 Main Street, Juneau, AK 99801
(907) 586-9788

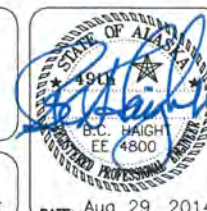
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DESIGN: BCH/KHD CHECKED: BCH
DRAWN: KHD APPROVED: BCH

SCALE: SCALE IN FEET
0 40 80 FT.



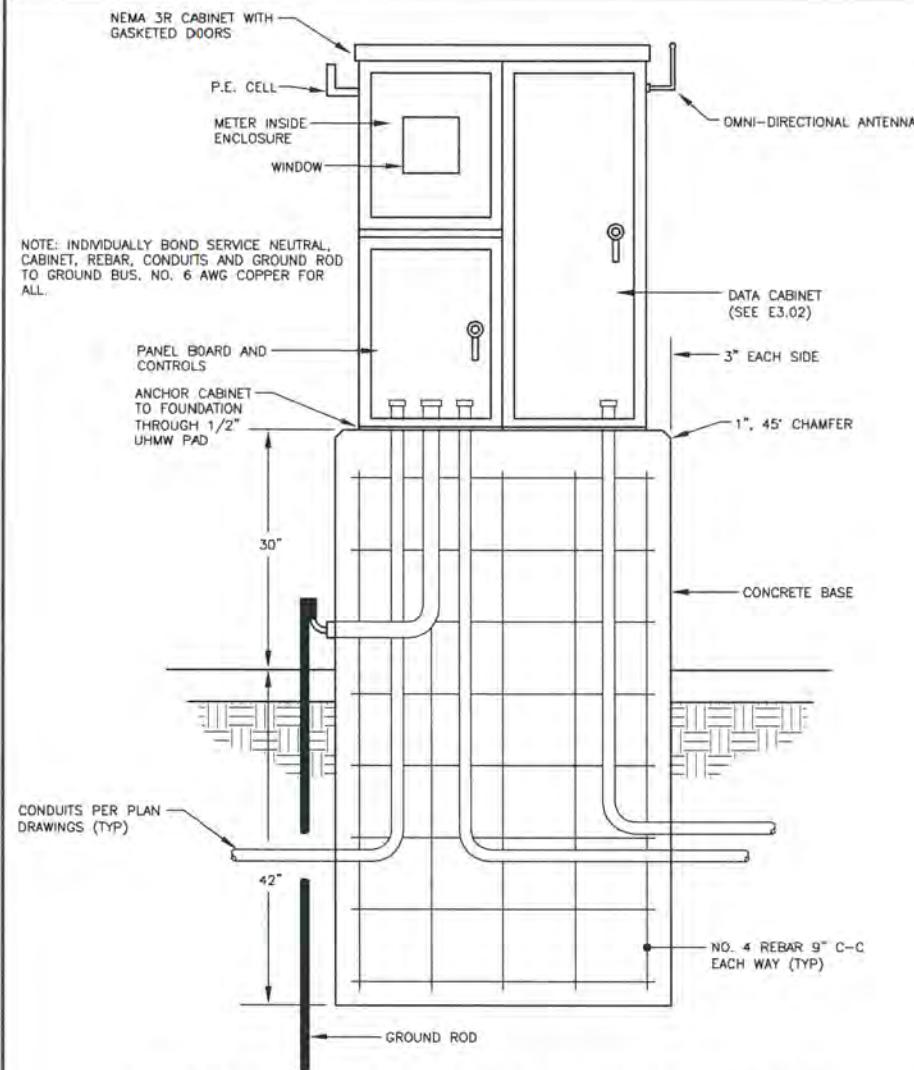
DATE: Aug 29, 2014

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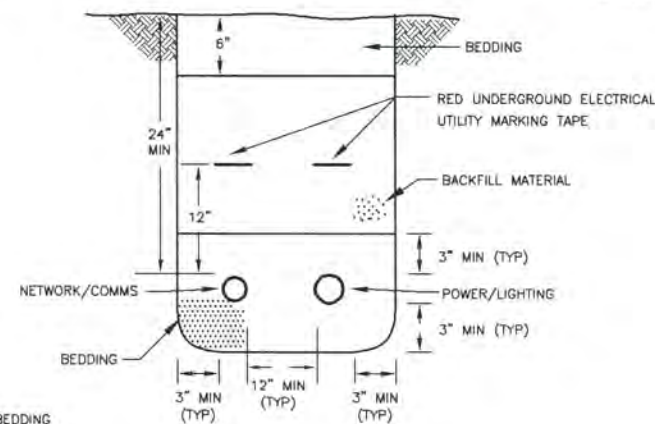
SHEET TITLE:
SITE PLAN - LIGHTING

PND PROJECT NO.: 082015

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SHEET
2 OF 9

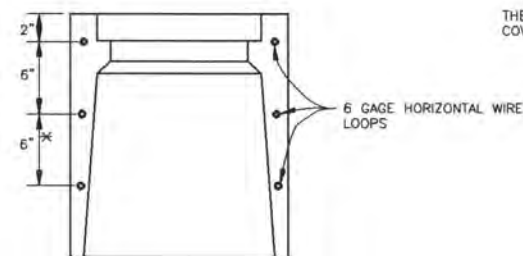


1 DETAIL - LOAD CENTER CABINET AND FOUNDATION NO SCALE



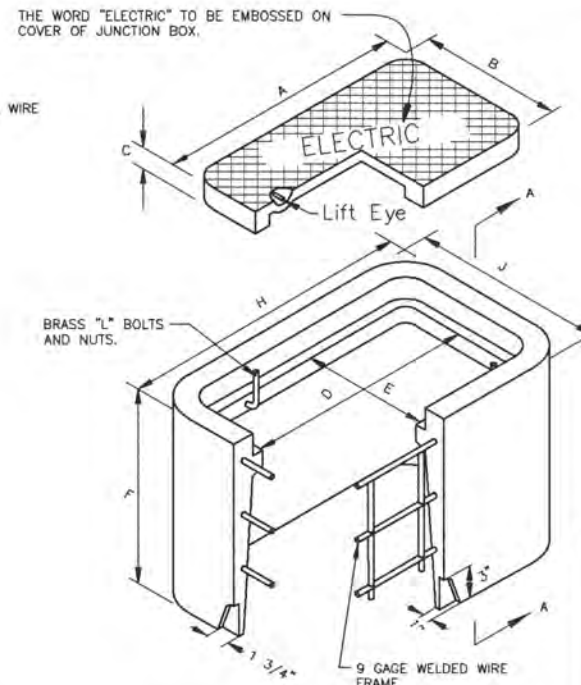
NOTE:
1. PROVIDE AND COMPACT BEDDING & BACKFILL PER SPECIFICATIONS.

3 DETAIL - TRENCH NO SCALE



ALTERNATE REINFORCING
* TYPE I-A ONLY

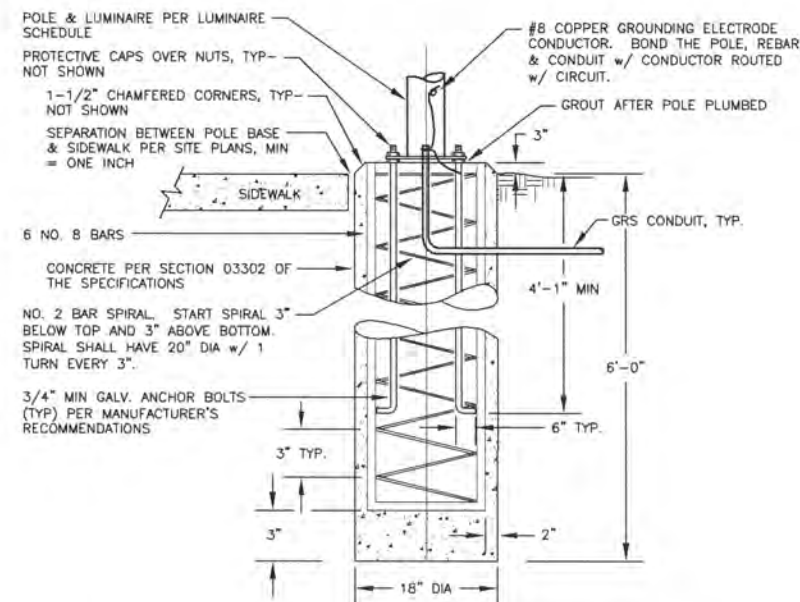
- GENERAL NOTES:
- COVERS FOR TYPE I-A JUNCTION BOXES SHALL BE EITHER ALUMINUM OR CAST IRON.
 - JUNCTION BOXES LOCATED IN A SIDE- WALK SHALL BE INSTALLED WITH A 1/2" PREFORMED BITUMINOUS JOINT MATERIAL AROUND ITS PERIMETER.
 - ALL CONDUITS SHALL BE BONDED TO FORM A CONTINUOUS ELECTRICAL SECURE SYSTEM WITH THE GROUND AT THE LOAD CENTER JUNCTION BOX.
 - ALL JUNCTION BOX COVERS SHALL BE BONDED TO GROUND WITH COPPER BRAID OF #8 AWG CROSS SECTION. THE LENGTH SHALL BE 3 FEET.
 - ALL CONDUITS SHALL BE GROUTED IN KNOCKOUT SECTIONS.
 - JUNCTION BOXES SHALL BE SET FLUSH WITH THE SURROUNDING SURFACE EXCEPT IN AN UNPAVED SHOULDER, WHEN THEY SHALL BE LOCATED 2" BELOW GRADE.



TYPE I-A JUNCTION BOX

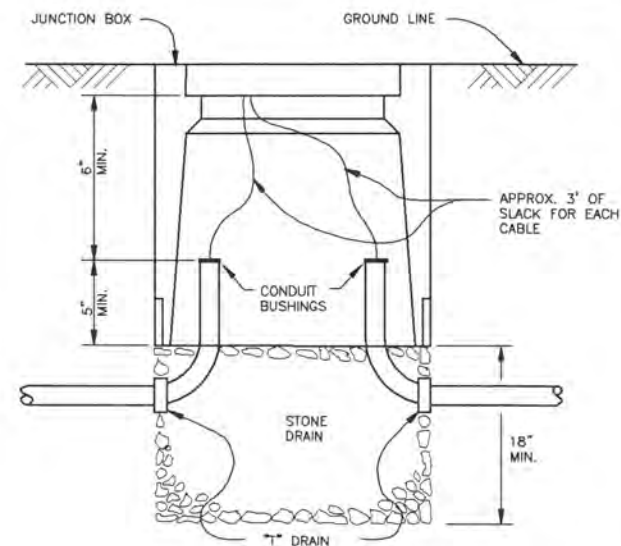
DIMENSIONS (IN.)	
TYPE I-A	
A	22 3/4
B	13 1/4
C	2
D	21 1/4
E	11 3/4
F	18
G	2
H	27 1/4
J	17 3/4
K	14 1/2

2 DETAIL - HANDHOLE NO SCALE

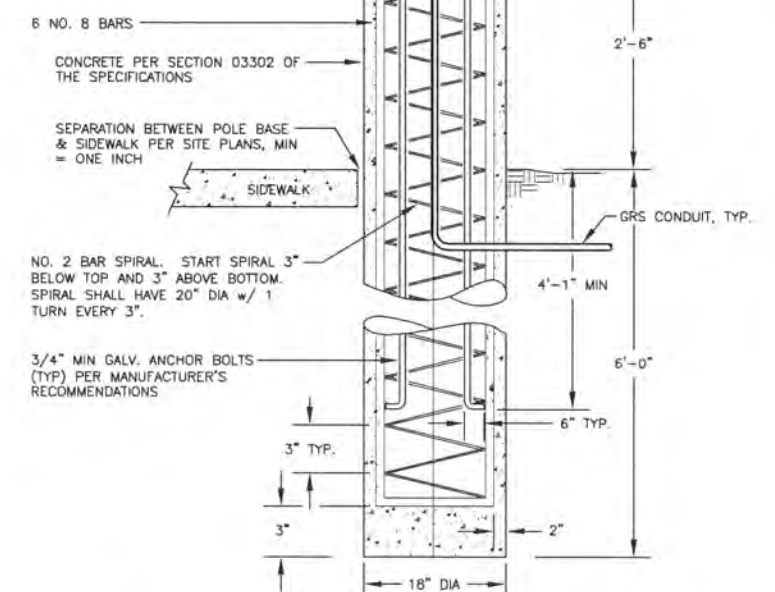


- NOTES:
- BACKFILL w/ N.F.S. SAND & GRAVEL COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
 - ANCHOR BOLTS TO MEET ATSM-A36 w/ MINIMUM YIELD STRESS OF 36.0 KSI.
 - POLE B BASE FOUNDATION TO BE UTILIZED FOR LUMINAIRES B1 & B2.

4 DETAIL - POLE B BASE FOUNDATION NO SCALE



- POLE & LUMINAIRE PER LUMINAIRE SCHEDULE, PROTECTIVE CAPS OVER NUTS, TYP- NOT SHOWN, 1-1/2" CHAMFERED CORNERS, TYP- NOT SHOWN, #8 COPPER GROUNDING ELECTRODE CONDUCTOR, BOND THE POLE, REBAR, & CONDUIT w/ CONDUCTOR ROUTED w/ CIRCUIT, GROUT AFTER POLE PLUMBED.



- NOTES:
- BACKFILL w/ N.F.S. SAND & GRAVEL COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
 - ANCHOR BOLTS TO MEET ATSM-A36 w/ MINIMUM YIELD STRESS OF 36.0 KSI.
 - POLE A BASE FOUNDATION TO BE UTILIZED FOR LUMINAIRES A1 & A2.

5 DETAIL - POLE A BASE FOUNDATION NO SCALE



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DESIGN: BCH/KHD CHECKED: BCH
DRAWN: KHD APPROVED: BCH

SCALE: NO SCALE



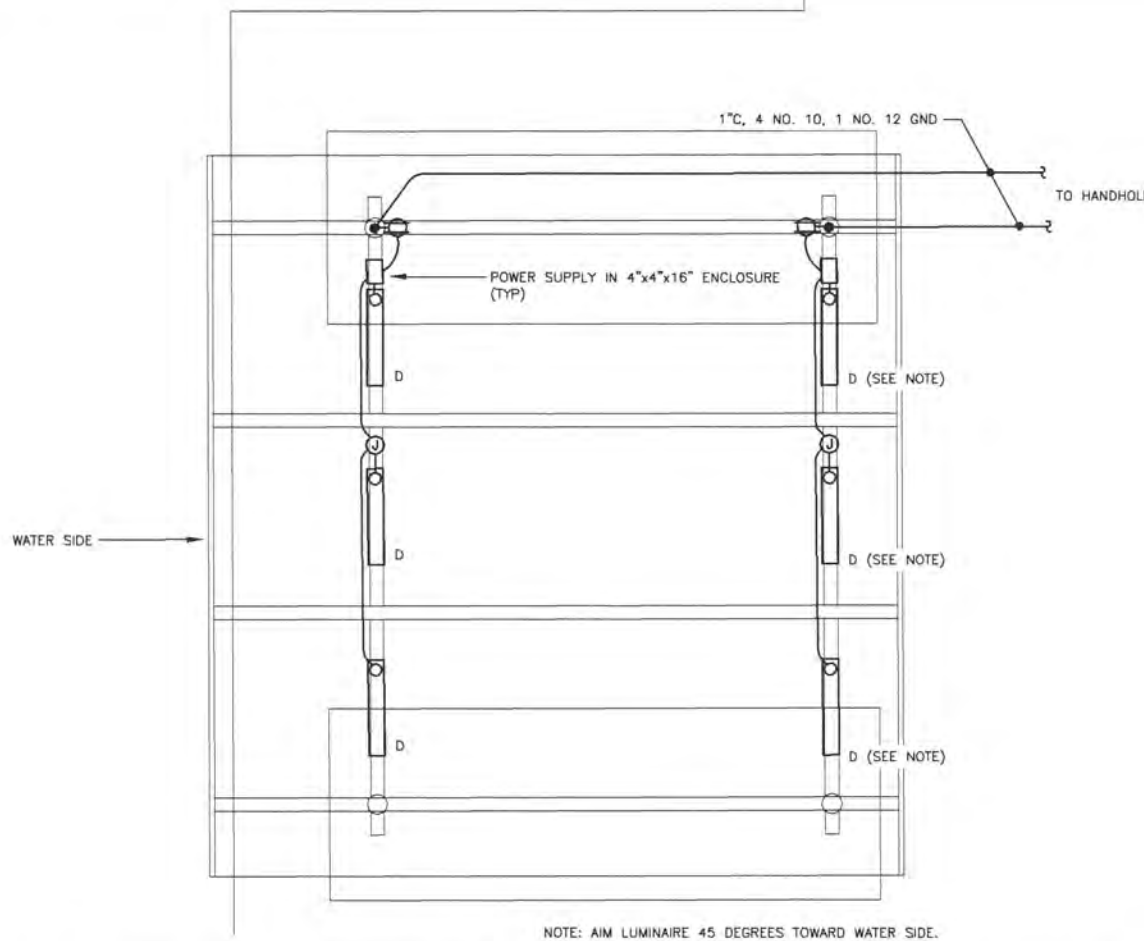
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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
ELECTRICAL DETAILS

PND PROJECT NO.: 082015

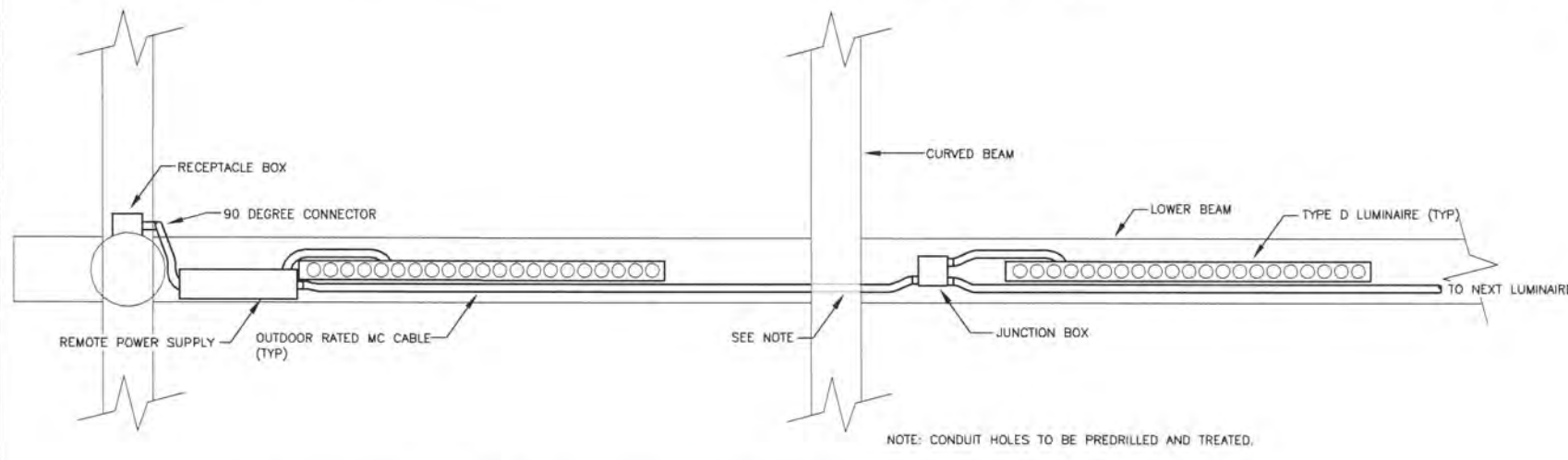
E2.02
SHEET 3 OF 9

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Plotted 2/20/2014 5:29 PM by Kyle Drogeaux

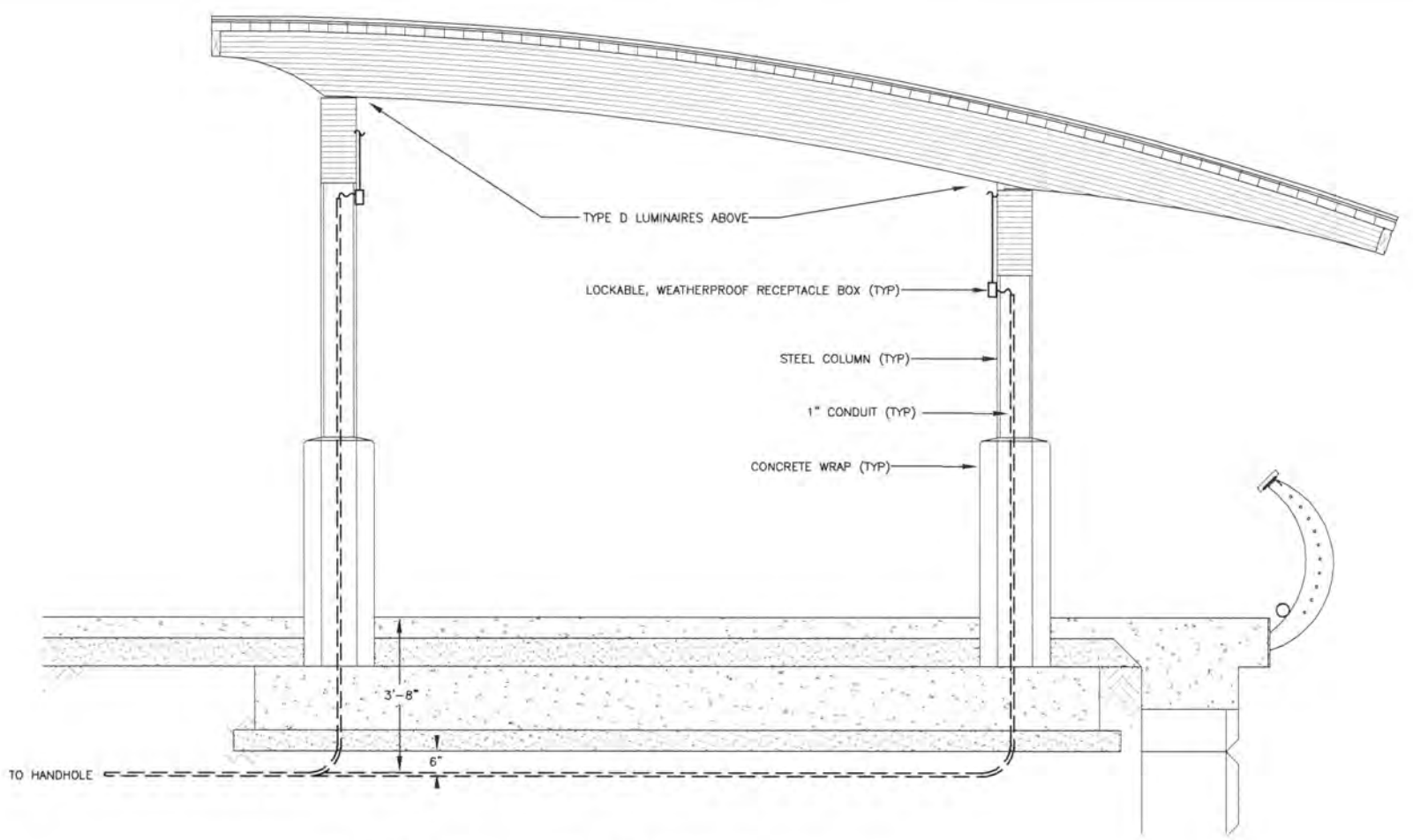


NOTE: AIM LUMINAIRE 45 DEGREES TOWARD WATER SIDE.

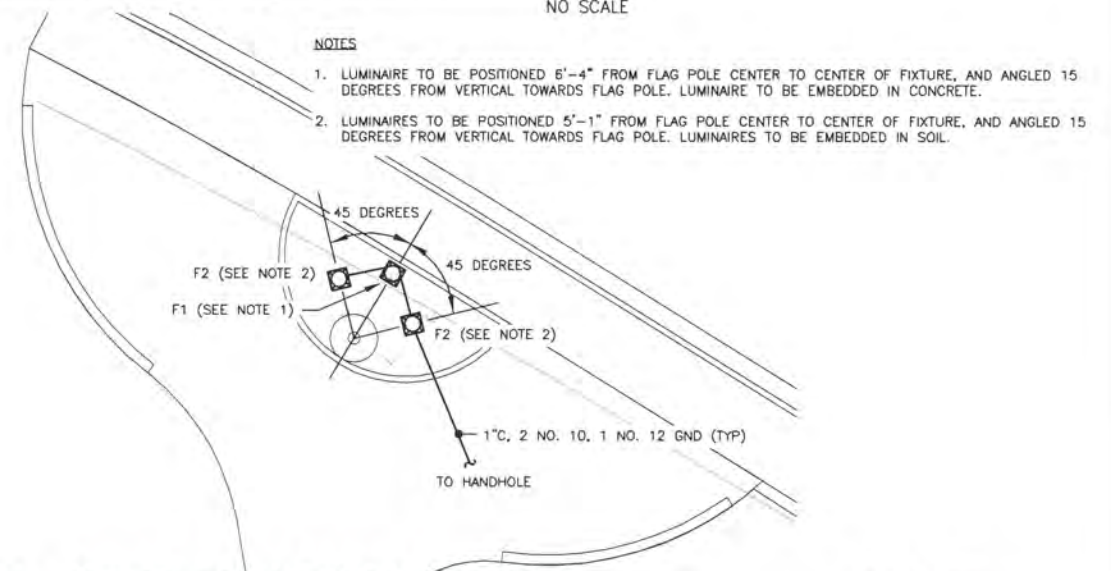
1 SITE PLAN - SHELTER
SCALE IN FEET
0 2 4 8 FT.



3 DETAIL - SHELTER LUMINAIRE INSTALLATION
NO SCALE



2 DETAIL - SHELTER RECEPTACLES
NO SCALE



4 DETAIL - FLAG POLE LIGHTING
SCALE IN FEET
0 4 8 16 FT.



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DESIGN: BCH/KHD
DRAWN: KHD

CHECKED: BCH
APPROVED: BCH

SCALE:
NO SCALE

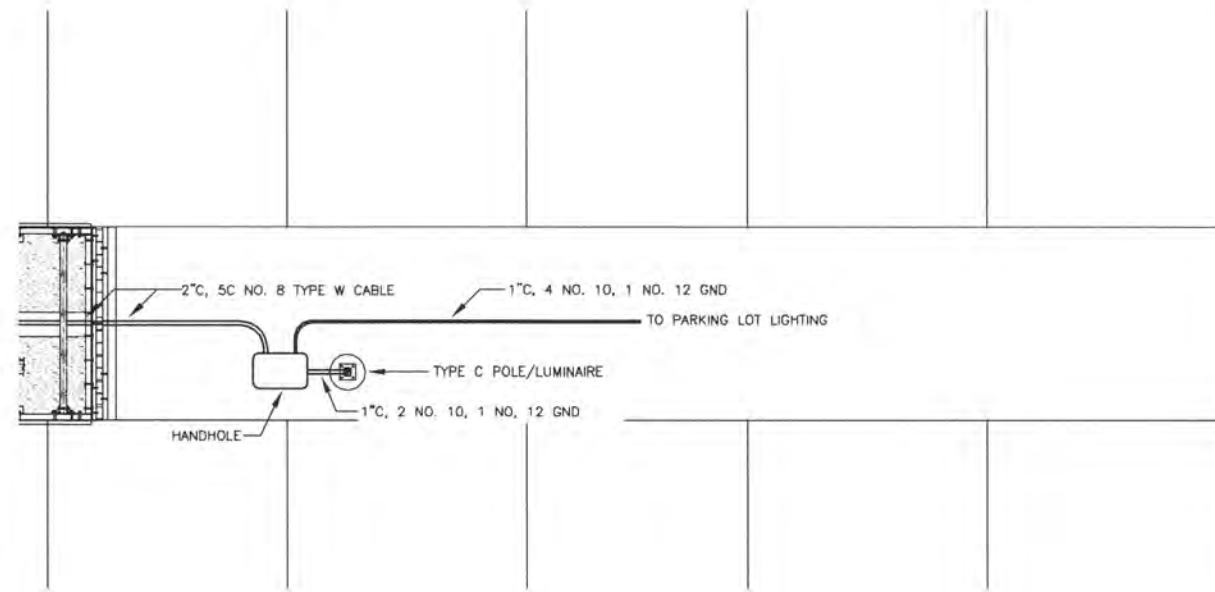


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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
SHELTER & FLAGPOLE DETAILS

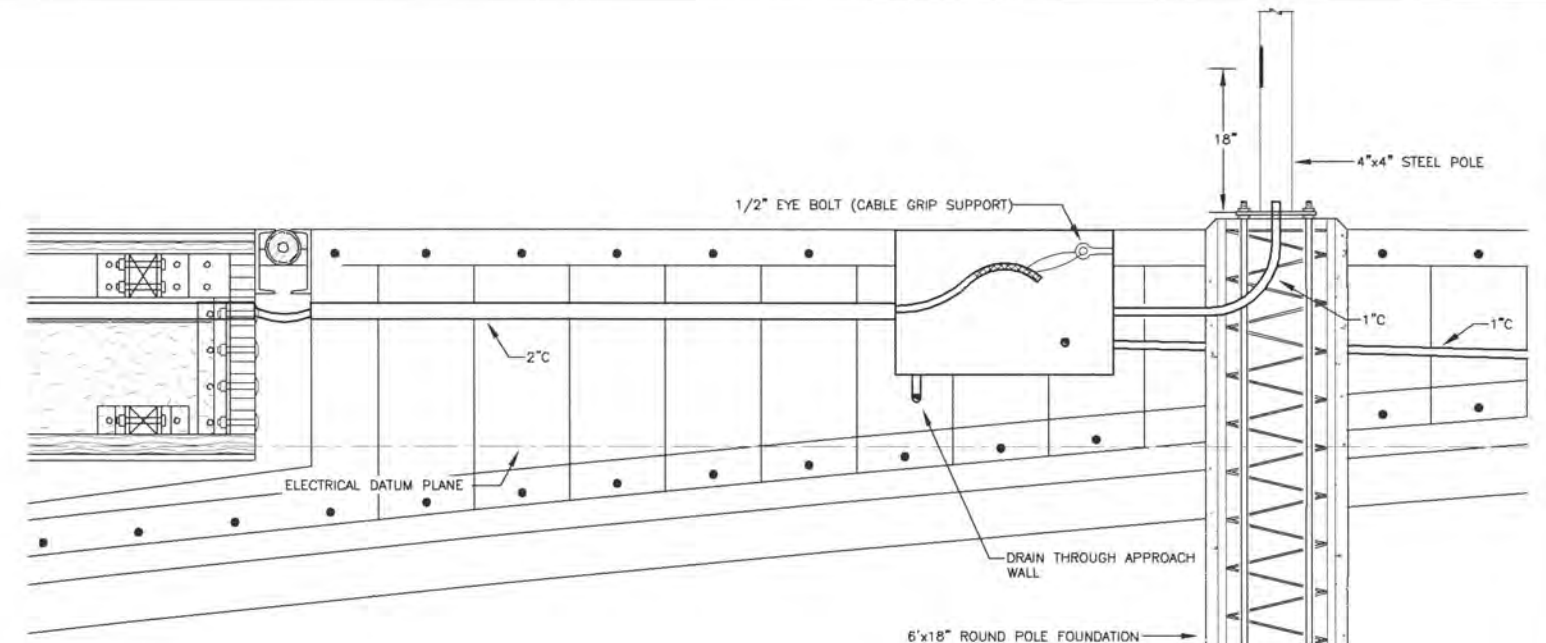
PND PROJECT NO.: 082015

E2.03
SHEET
4 OF 9



1 SITE PLAN - ABUTMENT LUMINAIRE

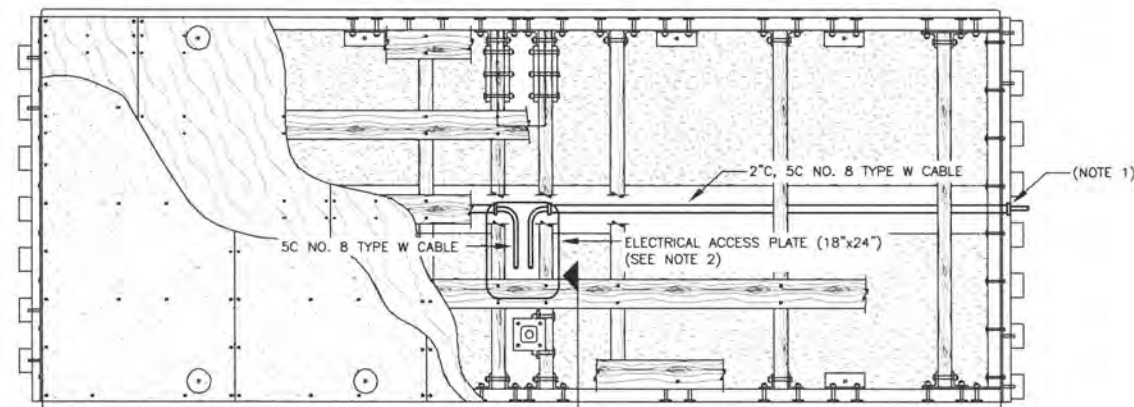
SCALE IN FEET
0 4 8 FT.



- NOTES
1. CABLES AND CONDUCTORS TO BE SPLICED INSIDE HANDHOLE.
 2. ANTI-CHAFFING SLEEVES TO BE WRAPPED AROUND ELECTRICAL CABLES AT CHAFFING-PRONE AREAS.

2 DETAIL - ABUTMENT LUMINAIRE

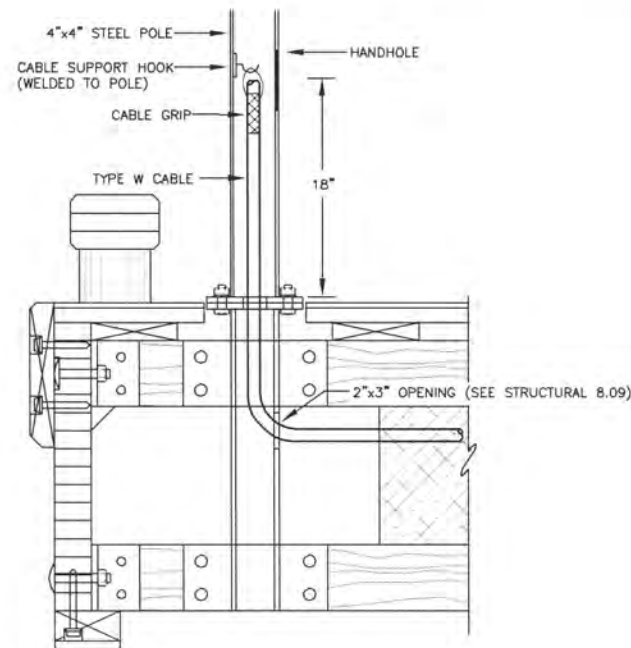
SCALE IN INCHES
0 12 24



- NOTES
1. ANTI-CHAFFING SLEEVES TO BE WRAPPED AROUND ELECTRICAL CABLES AT CHAFFING-PRONE AREAS.
 2. ELECTRICAL ACCESS PLATE POSITIONED IN FRONT OF LUMINAIRE POLE BASE.

3 DETAIL - FLOAT LIGHTING

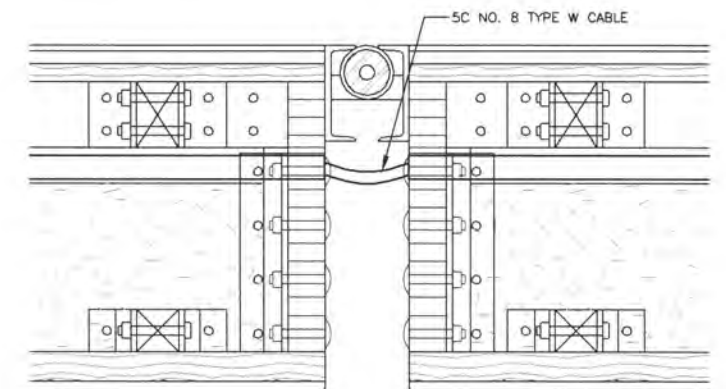
SCALE IN FEET
0 2 4



- NOTES
1. CABLES TO BE SPLICED INSIDE LUMINAIRE POLE AT LEAST 12" ABOVE DECK.
 2. ANTI-CHAFFING SLEEVES TO BE WRAPPED AROUND ELECTRICAL CABLES AT CHAFFING-PRONE AREAS.

4 DETAIL - FLOAT LUMINAIRE POLE

SCALE IN INCHES
0 6 12 IN



NOTE: ANTI-CHAFFING SLEEVES TO BE WRAPPED AROUND ELECTRICAL CABLES AT CHAFFING-PRONE AREAS.

5 DETAIL - FLOAT POWER TRANSITION

NO SCALE



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DRAWN: KHD APPROVED: BCH

SCALE:
NO SCALE



DATE: Aug 29, 2014

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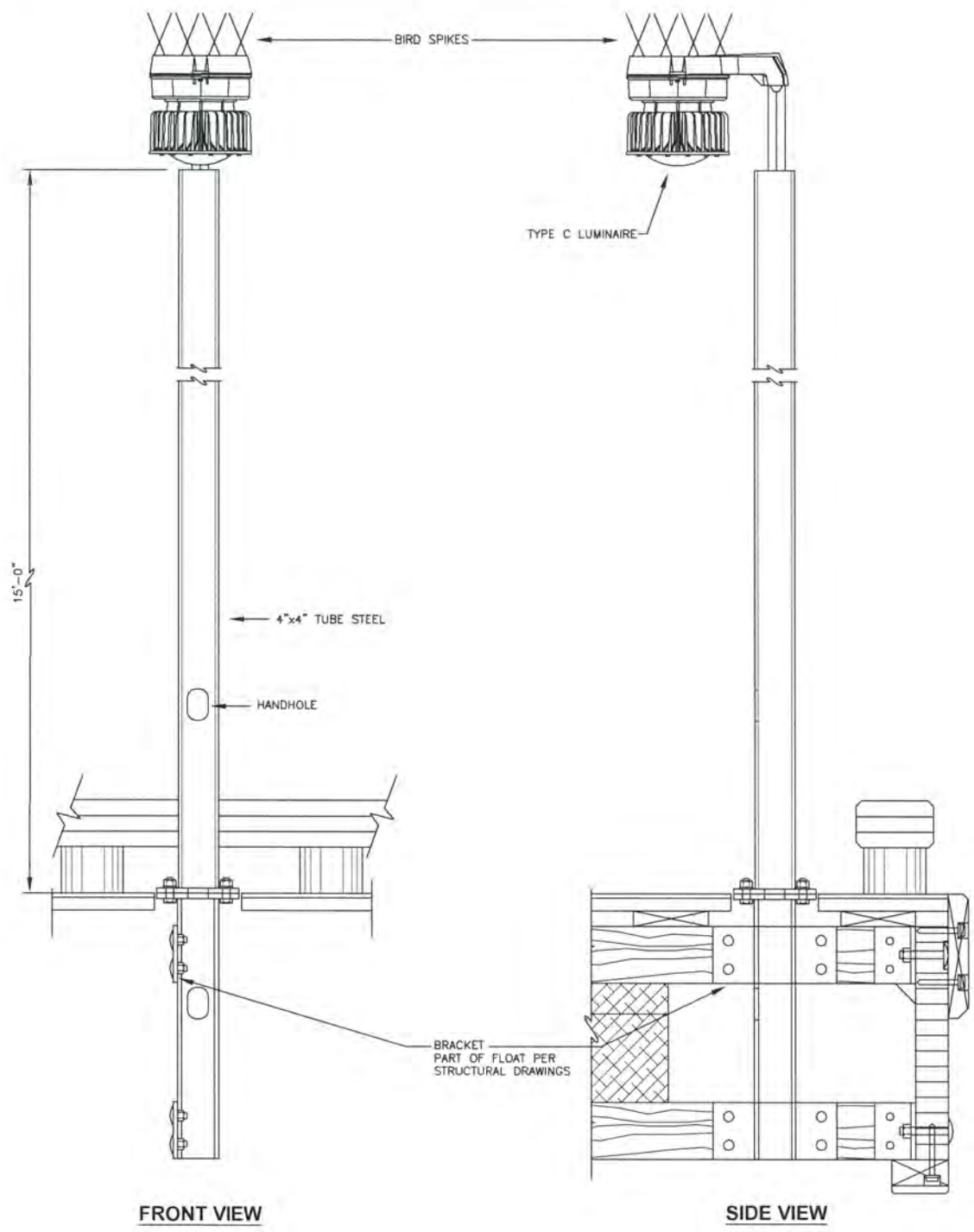
SHEET TITLE:
BOAT LAUNCH DETAILS

PND PROJECT NO.: 082015

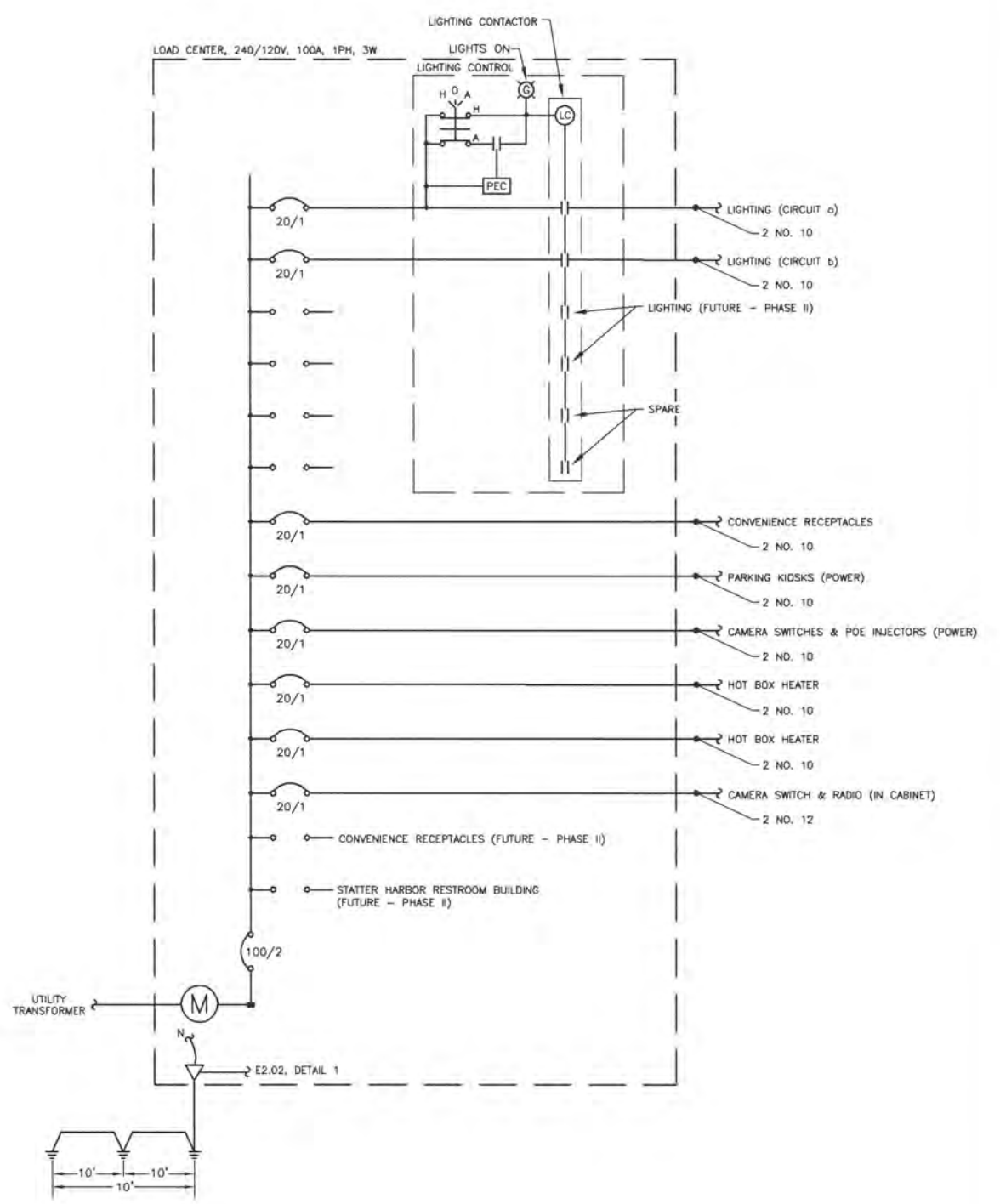
E2.04
SHEET
5 OF 9

F:\projects\137 PNAD\102 Statter Harbor Boat Launch\Drawings\Working\E2.05.dwg

Plotted 6/12/2014 11:35 AM by Kyle Drapeaux



1 DETAIL - POLE C
NO SCALE



2 SINGLE LINE DIAGRAM
NO SCALE



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DESIGN: BCH/KHD
CHECKED: BCH
DRAWN: KHD
APPROVED: BCH

SCALE:
NO SCALE



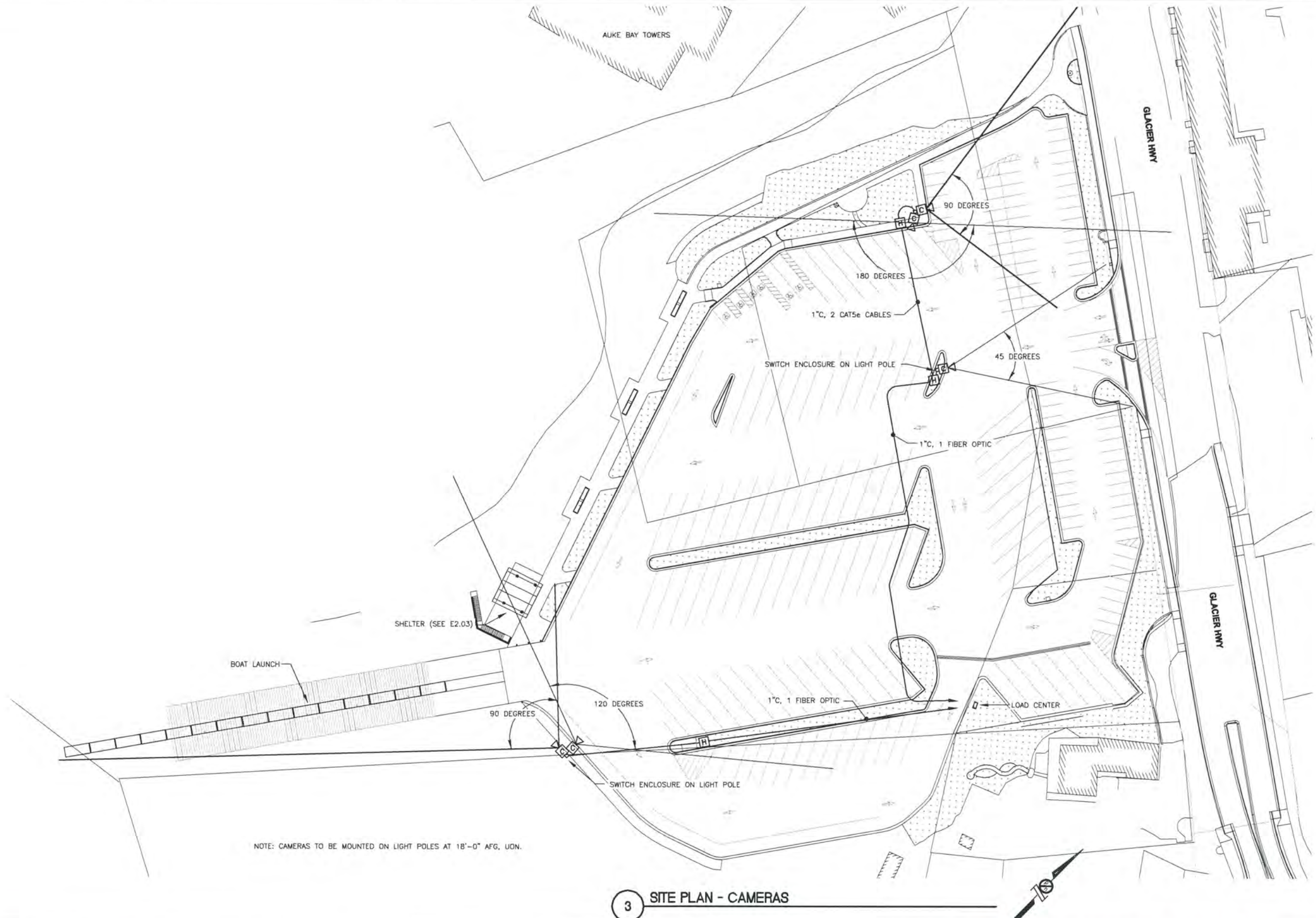
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CONTRACT NO. DH14-014

SHEET TITLE:
SINGLE LINE DIAGRAM & DETAILS
PND PROJECT NO.: 082015

E2.05
SHEET
6 OF 9

F:\Projects\137 PND\102 Statter Harbor Boat Launch Drawings Working\137.dwg

Plotted 6/26/2014 10:51 AM by Kyle Dropeaux



3 SITE PLAN - CAMERAS



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DESIGN: BCH/KHD CHECKED: BCH
DRAWN: KHD APPROVED: BCH

SCALE: SCALE IN FEET
0 40 80 FT.



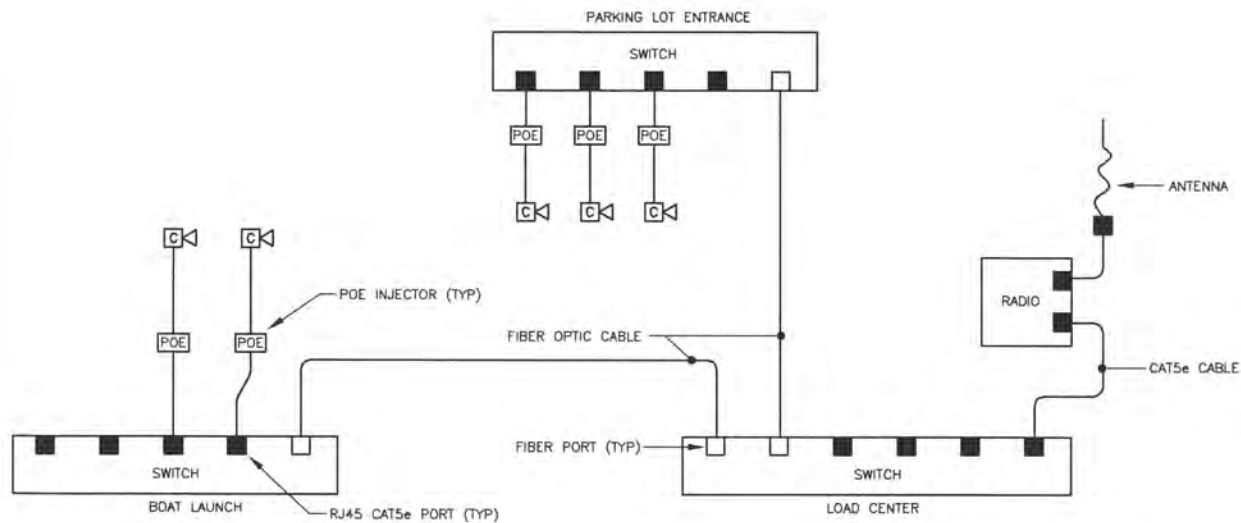
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SHEET TITLE:
SITE PLAN - CAMERAS

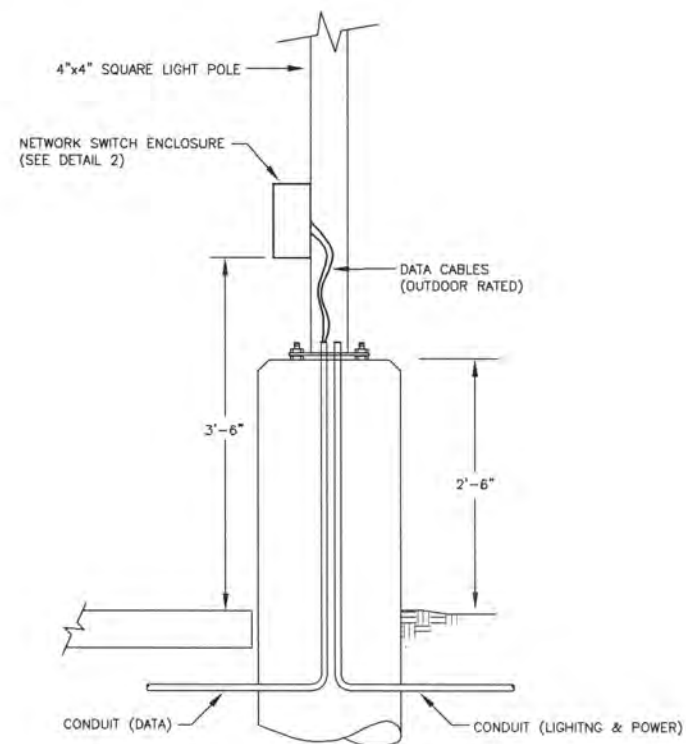
PND PROJECT NO.: 082015

E3.01
SHEET
7 OF 9

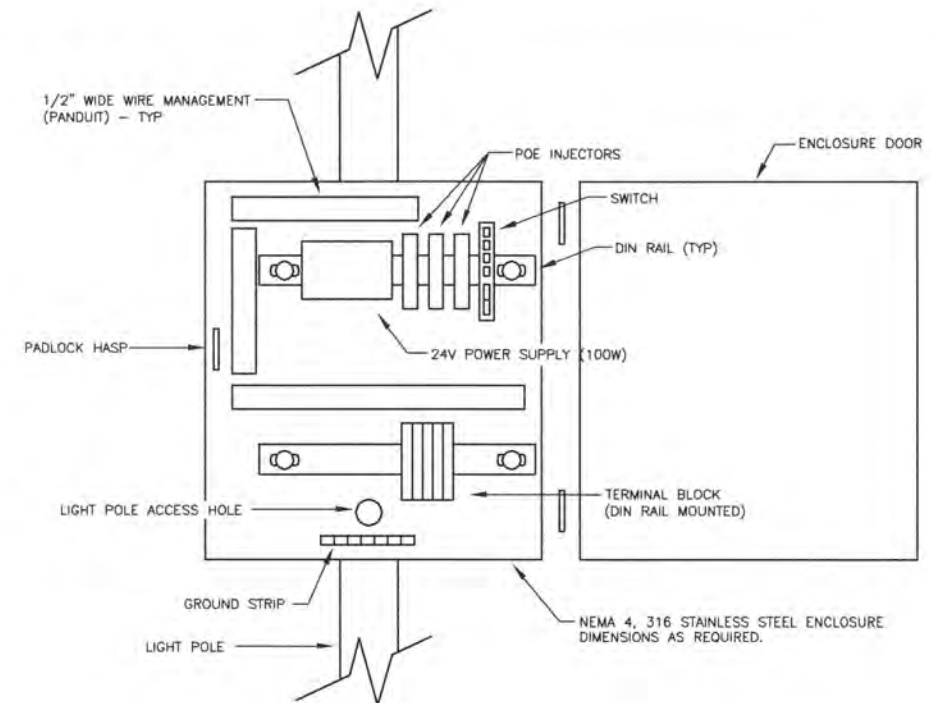
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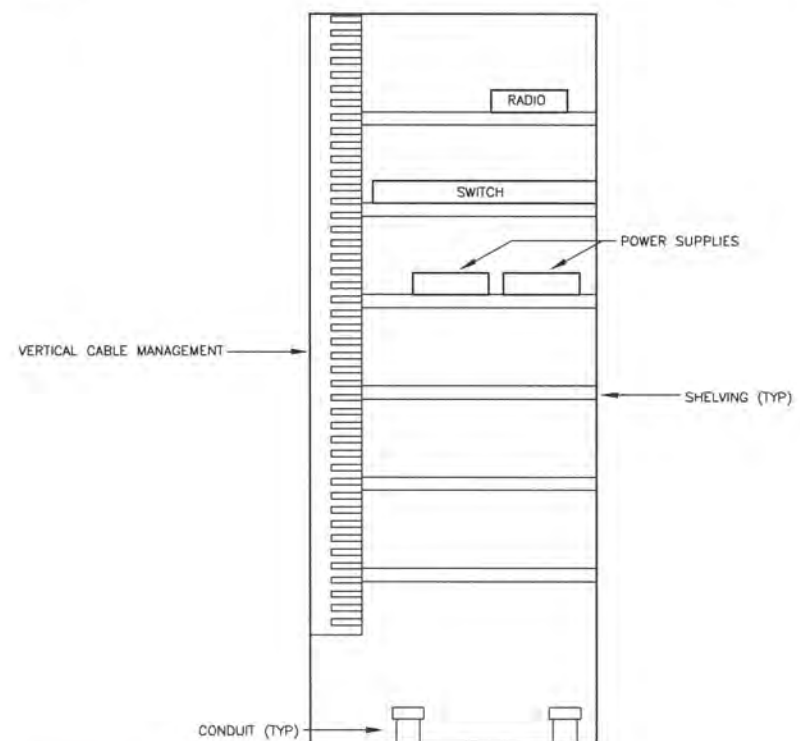
1 DETAIL - CAMERA COMMUNICATIONS
NO SCALE



3 DETAIL - SWITCH ENCLOSURE
NO SCALE



2 DETAIL - CAMERA EQUIPMENT ENCLOSURE
NO SCALE



4 DETAIL - DATA CABINET
NO SCALE



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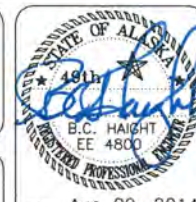
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DESIGN: BCH/KHD CHECKED: BCH
DRAWN: KHD APPROVED: BCH

SCALE: SCALE IN FEET
0 40 80 FT.



DATE: Aug 29, 2014

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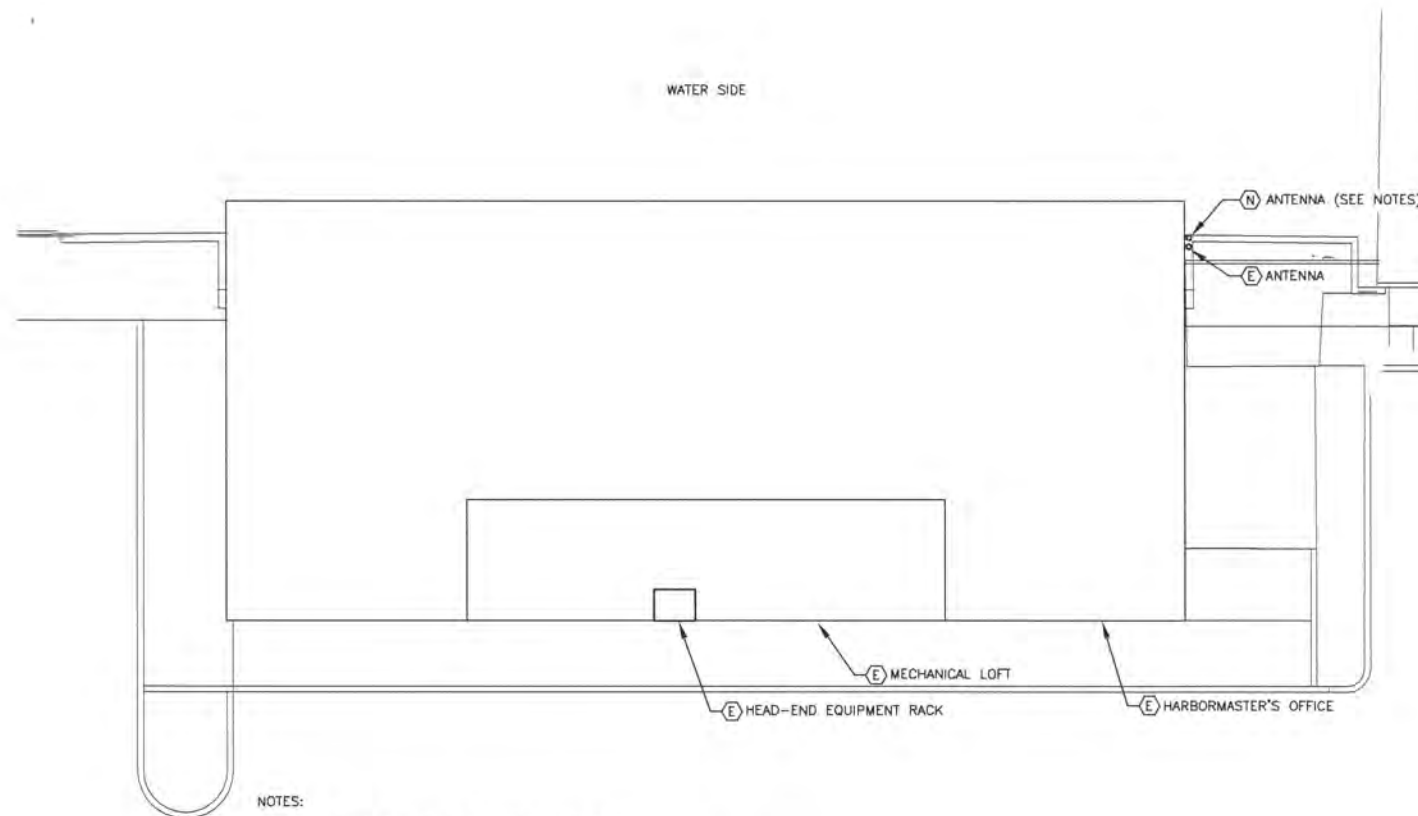
SHEET TITLE:
CAMERA EQUIPMENT DETAILS

PND PROJECT NO.: 082015

E3.02
SHEET
8 OF 9

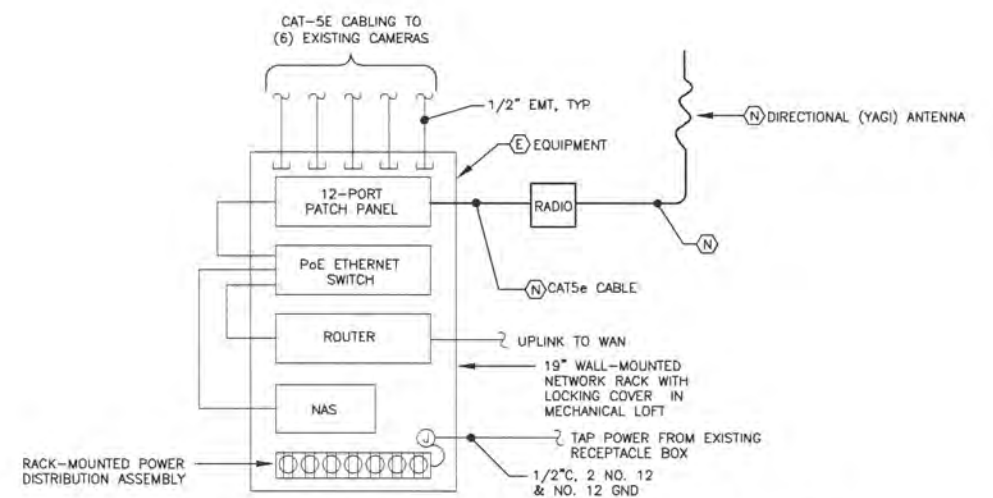
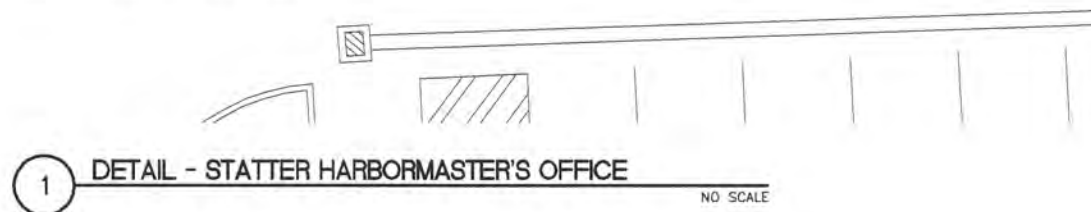
F:\Projects\137 PM\102 Statter Harbor Ball Launch\Design\Working\137.03.dwg

Plotted 6/30/2014 12:45 PM by Kyle Droppaux



NOTES:

1. MOUNT TO NEW BRACKET ATTACHED TO GABLE.
2. MAINTAIN CLEARANCE FROM EXISTING ANTENNAS TO AVOID SIGNAL INTERFERENCE.
3. AIM TOWARD THE NEW LOAD CENTER.
4. ROUTE CABLE TO ANTENNA WITH EXISTING CABLES.



1 DETAIL - STATTER HARBORMASTER'S OFFICE
NO SCALE

2 NETWORK DIAGRAM - EXISTING HARBORMASTER'S OFFICE
NO SCALE



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DESIGN: BCH/KHD CHECKED: BCH
DRAWN: KHD APPROVED: BCH

SCALE: SCALE IN FEET
0 40 80 FT.



DATE: Aug 29, 2014

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STATTER HARBOR IMPROVEMENTS
CONTRACT NO. DH14-014

SHEET TITLE:
HARBORMASTER'S OFFICE DETAILS

PHD PROJECT NO.: 082015

E3.03
SHEET
9 OF 9