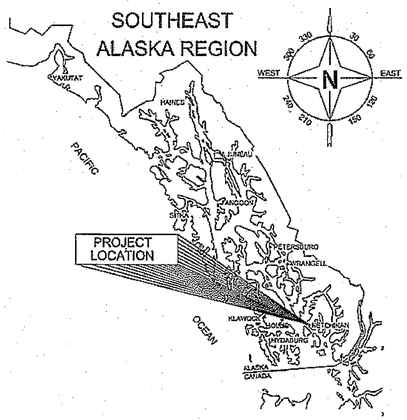
State of Alaska

Department of Transportation and Public Facilities

Design and Engineering Services Division-Southeast Region

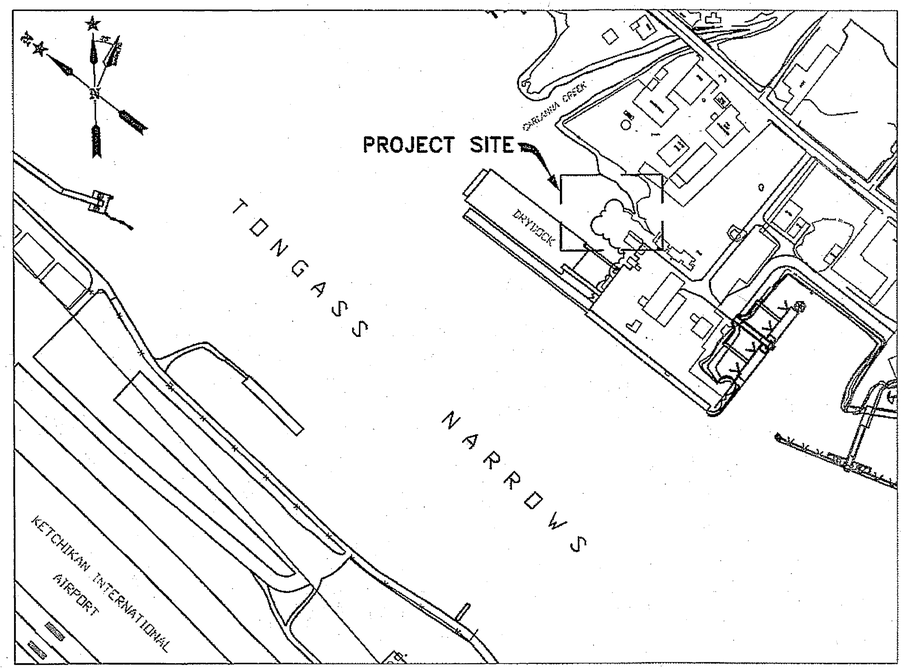
KETCHIKAN, ALASKA
KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT No. TI-0003(126)~68715



THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT

C-03.10,
D-01.02, D-20.03, D-22.01
E-13.00,
M-13.01



VICINITY MAP
NOT TO SCALE

AS-BUILT PLANS

Initials: KET Date: 3/10/09
Contractor: Dawson Construction
Date Started: August 2007
Date Completed: April 2008
Project Engineer*: (printed) Karen R. Tony
Project Engineer* (signature) Karen R Tony

*I certify that revisions to these plans made during construction are noted in RED and therefore the plans are an accurate record of construction.

INDEX

SHEET NO.	DESCRIPTION
G1	TITLE SHEET
G2	ABBREVIATIONS AND SYMBOLS
G3	PROJECT LIMITS
G4	SURVEY CONTROL
C0	ESTIMATE OF QUANTITIES & BASIS OF EST.
C1	SITE LAYOUT & DEMOLITION PLAN
C2	EROSION & SEDIMENT CONTROL PLAN
C3	NOT USED
C4	NOT USED
C5	NOT USED
C6	SLAB CROSS SECTIONS
C7	SEWER RELOCATION PLAN & PROFILE
C8	SEWER AND WATER SERVICE
C9	CIVIL DETAILS
C10	CIVIL DETAILS
S0	GENERAL NOTES
S1-S9	NOT USED
S10	SITE PLAN
S11	RELIEVING SLAB DETAILS
S12	UTILIDOR PLAN & SECTION
S13	CONCRETE SLAB SECTIONS
S14	RAIL BEAM & MISC DETAILS
S15	UTILIDOR PIT PLAN & DETAILS
S16	MISC SECTIONS & DETAILS
S17	MISC SECTIONS & DETAILS
S18	SHEET PILE DETAILS
S19	TROLLEY BEAM PLAN & DETAILS
S20	CIVIL DETAILS & SECTIONS
E1	ELECTRICAL PLAN
E2	ELECTRICAL ONE LINE & DETAILS
RF1	SITE PLAN
RF2	CIVIL DETAILS

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

STATE OF ALASKA — CRAIG FREAS — CE 3873 — REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC.

APPROVED: Jack D. Beedle 5/8/07
REGIONAL PRE-CONSTRUCTION ENGINEER — DATE
JACK D. BEEDLE, P.E.

APPROVED: Malcolm Menzies 5.8.07
DIRECTOR, SOUTHEAST REGION — DATE
MALCOLM A. MENZIES, P.E., U.S.

CERTIFIED TRUE & CORRECT AS-BUILT OF ACTUAL FIELD CONDITION:

CONSTRUCTION PROJECT MANAGER — DATE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	68715	2007	G1	28

CIVIL & PILING AS-BUILT
SEE ALSO R+M CITY SEWER AS-BUILT

ABBREVIATIONS

&	AND
@	AT
AMP	AMPLITUDE
APPROX	APPROXIMATE
BLDG	BUILDING
BLK	BLOCK
BM,BMS	BEAM
BOC	BOTTOM OF CONCRETE
BOT	BOTTOM
BTWN	BETWEEN
CB	CATCH BASIN
CI	CAST IRON
CIP	CAST IN PLACE
CW–NIC	CIVIL WORK NOT IN CONTRACT
℄,C	CENTERLINE
CLR,CL	CLEAR
CJ	CONSTRUCTION JOINT
CMP	CORRAGATED METAL PIPE
CONC	CONCRETE
COORD	COORDINATE
CTR	CENTER
CTRSK	COUNTERSINK(SUNK)
DIA,ø,DI	DIAMETER
DN	DOWN
DWG	DRAWING
E	EASTING
E–W	EAST–WEST
EA	EACH
EL/ELEV	ELEVATION
ELEC	ELECTRICAL
EQ	EQUAL
ES	EACH SIDE
EW	EACH WAY
EXIST	EXISTING
FH	FIRE HYDRANT
FIN	FINISH
FB	FLOOR BASIN
FLG,FL	FLANGE
FS	FAR SIDE
FT,'	FEET
GA	GAGE, GAUGE
GALV	GALVANIZE(D)
GR	GRADE(ING)
HR	HANDRAIL
HDPE	HIGH DENSITY POLYETHELENE
HP	HP STEEL SHAPE
HSS	HOLLOW STEEL SECTION
IN	INCH
INV	INVERT
JT	JOINT
KSI	KIPPS PER SQUARE INCH
LF	LINEAR FOOT
LOC	LOCATION
MH	MANHOLE
MAX	MAXIMUM
MIN	MINIMUM
MLLW	MEAN LOW LOW WATER
N	NORTHING
NIC	NOT IN CONTRACT
NO	NUMBER
NS	NEAR SIDE
NS/FS	NEAR SIDE/FAR SIDE
NTS	NOT TO SCALE
OC	ON CENTER
OG	ORIGINAL GROUND
OPNG	OPENING
OPP	OPPOSITE
PC	PRE–CAST
PE	POLYETHYLENE
ℙ,PL	PLATE (STEEL OR WOOD)
PLCS	PLACES
POL	PETROLEUM OIL LUBRICANT
PSI	POUNDS PER SQUARE INCH
PT	POST TENSION
PVC	POLYVINYL CHLORIDE
R/RAD	RADIUS
REF	REFERENCE
REQD	REQUIRED
REINF	REINFORCED
RF	REFERENCE POINT
SCH	SCHEDULE
SD	STORM DRAIN
SEC	SECTION
SHN	SHOWN
SIM	SIMILAR
SOG	SLAB ON GRADE
SP	SPACE(S)
SQ	SQUARE
STD	STANDARD
STL	STEEL
STRG	STRONG
SUPP'T	SUPPORT
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
TELE	TELEPHONE
THD	THREADED
THK	THICK
TOC	TOP OF CONCRETE
TOG	TOP OF GROUND
TOS	TOP OF STEEL
TOT	TOTAL
TYP	TYPICAL
UHMW	ULTRA HIGH MOLECULAR WEIGHT
UNGALV	UNGALVANIZED
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL
W/	WITH
WP	WORK POINT

EXISTING UTILITIES–CONTACT INFORMATION

SEWER AND STORM DRAIN SYSTEMS:
CITY OF KETCHIKAN, HARVEY HANSEN, (907) 228–4720

WATER SYSTEM:
CITY OF KETCHIKAN, JOHN KLEINEGGER, (907)228–5499

FUEL LINES AND ELECTRICAL LINES:
KETCHIKAN PUBLIC UTILITIES, JAY HANSEN, (907) 228–5447

SYMBOLS

- E — ELECTRICAL (EXISTING)
- T — TELEPHONE (EXISTING)
- S — SANITARY SEWER (EXISTING)
- SD — STORM DRAIN (EXISTING)
- W — WATER LINE (EXISTING)
- B — BILGE LINE (EXISTING)
- A — AIR LINE (EXISTING)
- E — ELECTRICAL (PROPOSED)
- S — SANITARY SEWER (PROPOSED)
- SD — STORM DRAIN (PROPOSED)
- W — WATER LINE (PROPOSED)
- PROPERTY LINE
- X — FENCE
- BURIED FUEL LINE
- EASEMENT
- EDGE OF ASPHALT
- CONTOUR LINE
- LIMITS OF DEMOLITION
- CONCRETE
- LIMITS OF ASPHALT RECONSTRUCTION

- B-3 — BORING LOG
- B-II — BORING LOG
- B-5 — BORING LOG
- SIGN
- UTILITY POLE
- LIGHT POLE
- UTILITY VAULTS
- E — UTILITY VAULTS
- S — UTILITY VAULTS
- SD — UTILITY VAULTS

- 18.0' — ELEVATION
- 18.0' — SPOT ELEVATION
- TOP CONCRETE PIPES
  TOP PVC CONDUIT ELEVATION
  TOP SEWER ELEVATION
- VALVE
- P# — SHEET PILE CORNER
- INLET PROTECTION
- SC — SC — SILT CURTAIN (IN WATER)
- SF — SF — SILT FENCE

TIDAL INFORMATION	
HIGHEST OBSERVED WATER LEVEL	21.3'
HIGH TIDE LEVEL (HTL)	19.4'
MEAN HIGHER HIGH WATER (MHHW)	15.4'
MEAN HIGH WATER (MHW)	14.4'
MEAN TIDE LINE (MTL)	8.1'
MEAN LOWER LOW WATER (MLLW)	0.0'
LOWEST OBSERVED WATER LEVEL	–5.2'

AS-BUILT PLANS

INITIALS KRT DATE 3/10/09

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: PC
DESIGNED BY: CF
DRAWN BY: WEH

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

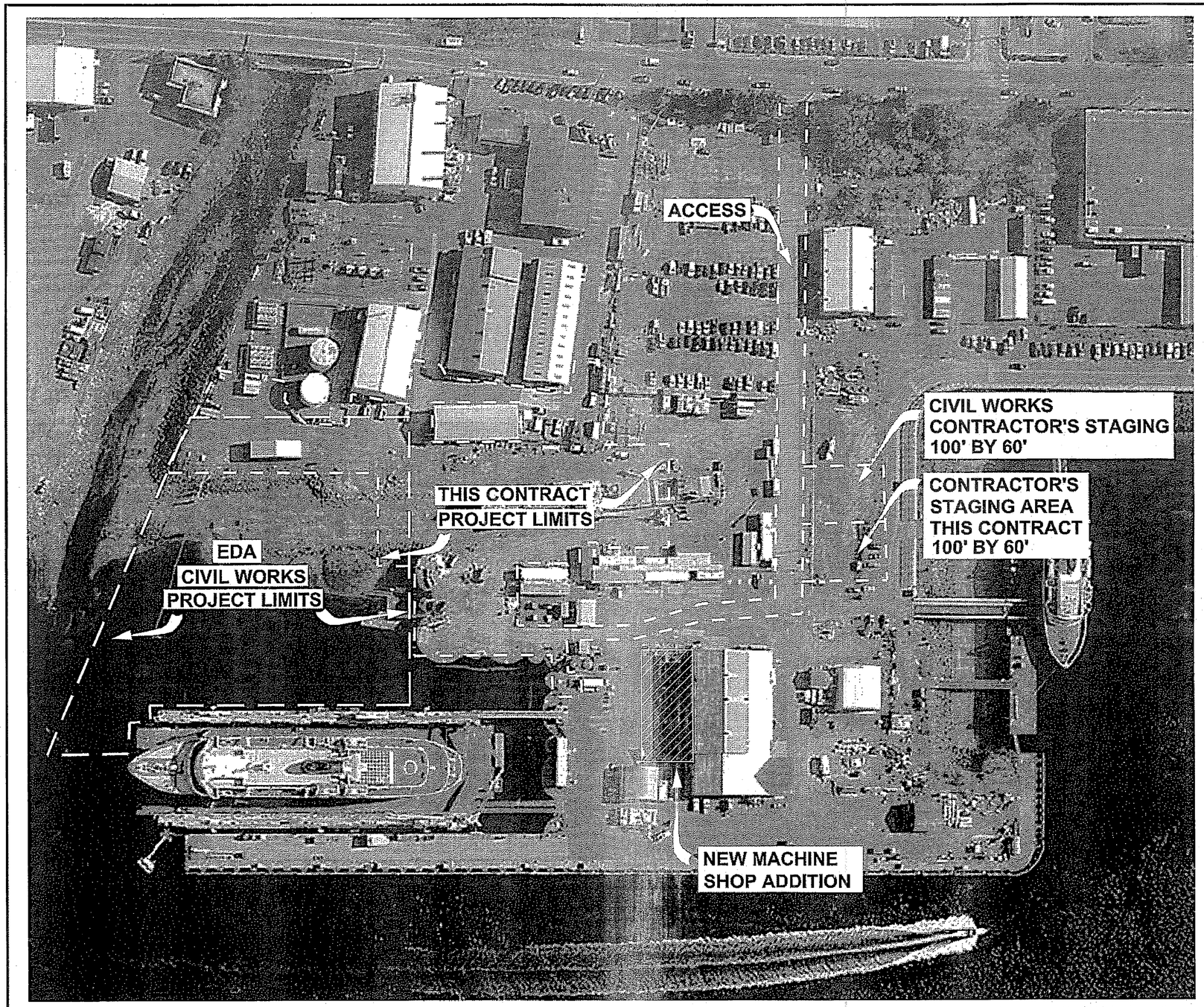
PROJECT #68715

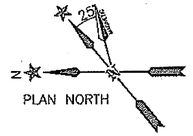
ABBREVIATIONS & SYMBOLS

PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158_G2.DWG
TAB: 2 5-8-07 SONJAJ

REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	G2	28





KETCHIKAN SHIPYARD IS EMBARKING ON A MULTI–YEAR EXPANSION PROJECT. THE FIRST SERIES OF CONSTRUCTION CONTRACTS ARE AS FOLLOWS:

* EDA CIVIL WORKS: CONSTRUCTION OF SHEET PILE BULKHEADS, DREDGING, CONSTRUCTION OF AN IN–WATER GROUNDING GRID, AND DEMOLITION AND RECONSTRUCTION OF A FUEL BARGE BERTH. (N.I.C.)

* UPLANDS SLAB: CONSTRUCTION OF A 250–FT BY 90–FOOT CONCRETE SLAB, ADJACENT SHEET PILE BULKHEAD, AND UTILITY RELOCATIONS. (THIS PROJECT)

THESE PROJECTS WILL BE CONSTRUCTED WITHIN THE EXISTING SHIPYARD WHERE VESSEL REPAIRS AND FABRICATION WILL BE ON–GOING. ACCESS INTO THE SITE WILL BE SHARED BY ALL THESE ACTIVITIES. THE EXACT SCHEDULE FOR THE VARIOUS PROJECTS IS UNCERTAIN AT THIS TIME. THE UPLANDS SLAB PROJECT ADJOINS THE EDA CIVIL WORKS PROJECT NEAR THE SOUTH BULKHEAD. CLOSE COORDINATION BETWEEN THE EDA AND UPLANDS SLAB CONTRACTORS IS REQUIRED.

IF ADDITIONAL STAGING AREAS ARE REQUIRED THE CONTRACTOR MUST PROVIDE THEM OFF–SITE.

AS-BUILT PLANS

INITIALS KRT DATE 3/10/09

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: PC	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION
STATE OF ALASKA — C. CRAIG FREAS — CE 3873 — REGISTERED PROFESSIONAL ENGINEER	KETCHIKAN SHIPYARD BERTH ONE RELIEVING SLAB PROJECT #68715
DESIGNED BY: CF	**PROJECT LIMITS**
DRAWN BY: WEH	
PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_G3.DWG	
TAB: 3 5–8–07 SONIAJ	

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			68715	2007	G3	28

PROJECT CONTROL

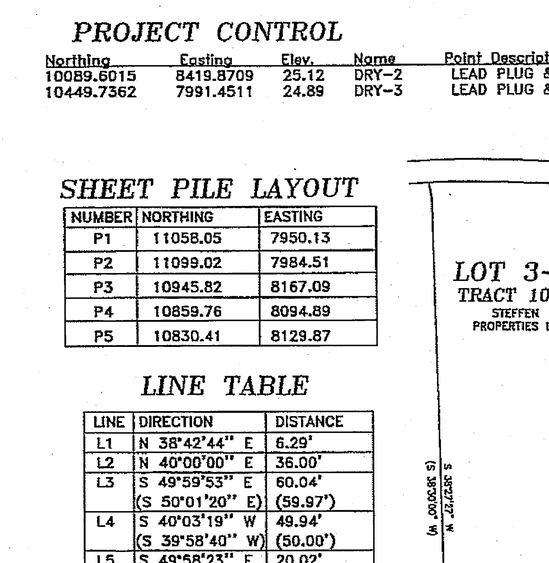
Northing	Easting	Elev.	Name	Point Description
10089.6015	8419.8709	25.12	DRY-2	LEAD PLUG & TACK
10449.7362	7991.4511	24.89	DRY-3	LEAD PLUG & TACK

SHEET PILE LAYOUT

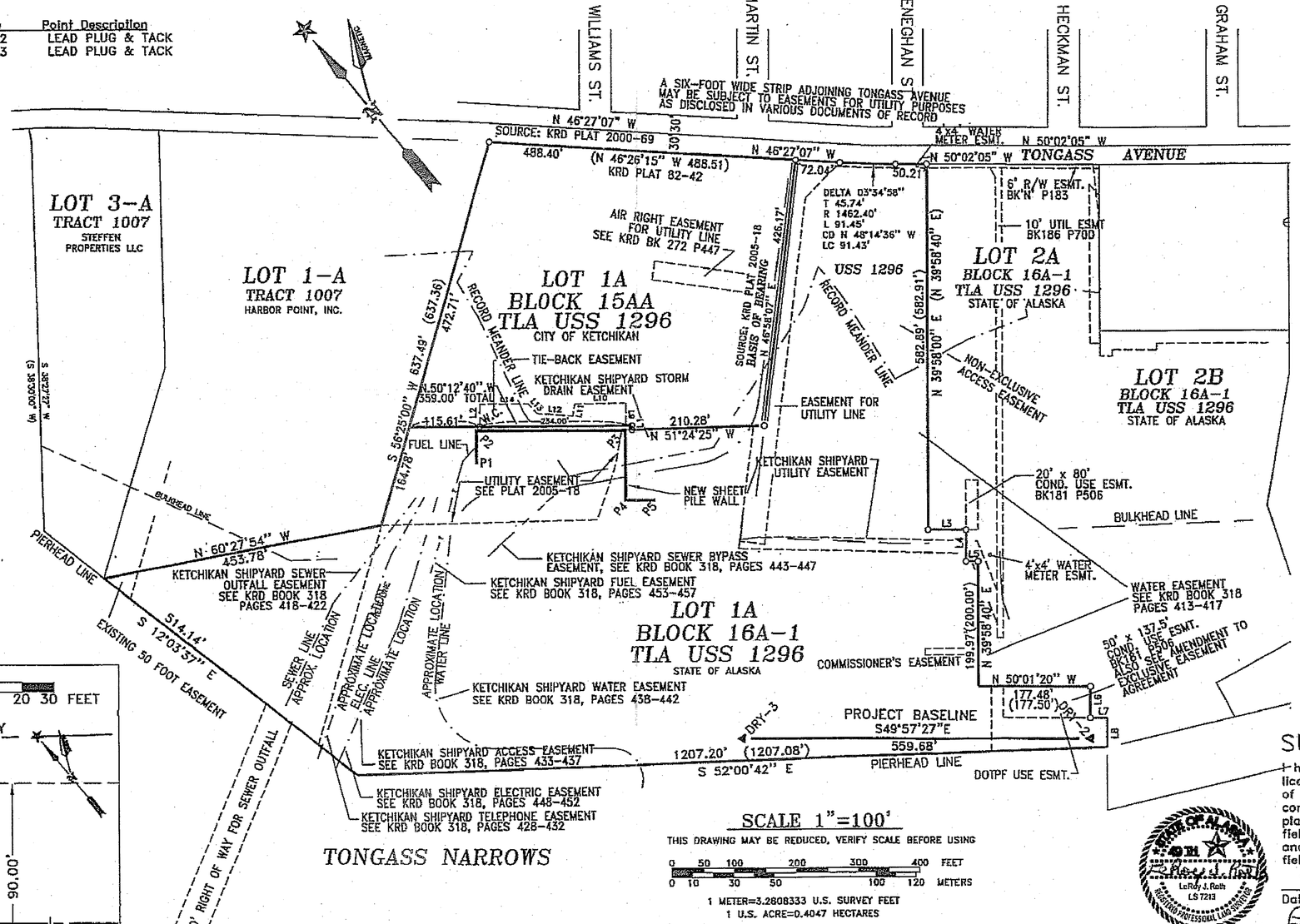
NUMBER	NORTHING	EASTING
P1	11058.05	7950.13
P2	11099.02	7984.51
P3	10945.82	8167.09
P4	10859.76	8094.89
P5	10830.41	8129.87

LINE TABLE

LINE	DIRECTION	DISTANCE
L1	N 38°42'44" E	6.29'
L2	N 40°00'00" E	36.00'
L3	S 49°59'53" E (S 50°01'20" E)	60.04' (59.97')
L4	S 40°03'19" W (S 39°58'40" W)	49.94' (50.00')
L5	S 49°58'23" E (S 50°01'20" E)	20.02' (20.00')
L6	S 39°58'40" W	50.00'
L7	S 50°01'20" E	26.63'
L8	S 39°58'40" W	47.47' (47.40')
L9	N 40°00'00" E	36.00'
L10	N 50°12'40" W	81.00'
L11	S 50°40'00" W	20.00'
L12	N 46°10'00" W	57.50'
L13	N 01°20'00" W	20.69'
L14	N 50°12'40" W	78.26'



RELIEVING SLAB BASELINE



TONGASS NARROWS

SCALE 1"=100'

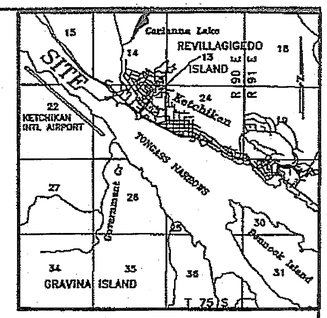
THIS DRAWING MAY BE REDUCED, VERIFY SCALE BEFORE USING

0 50 100 200 300 400 FEET

0 10 30 50 100 120 METERS

1 METER=3.2808333 U.S. SURVEY FEET

1 U.S. ACRE=0.4047 HECTARES



VICINITY MAP

SCALE: 1 INCH = 1 MILE

SYMBOLS

- △ LEAD PLUG AND TACK SET IN CONCRETE
- ○ FOUND 2" ALUMINUM CAP
- ( ) INDICATES RECORD DATA
- KRD KETCHIKAN RECORDING DISTRICT

SURVEYOR'S CERTIFICATE

I hereby certify that I am a registered surveyor, licensed in the State of Alaska, and that in April, of 2005, a survey of the herein described lands was conducted under my direct supervision and that this plat is a true and correct representation of the field notes of said survey, and that the dimensions and other details are correct according to said field notes.

5/8/07
Date

LeRoy J. Roth
Signature

STATE OF ALASKA 49TH LeRoy J. Roth LS 7213 REGISTERED PROFESSIONAL LAND SURVEYOR

VERTICAL CONTROL

Elevation datum is based on Mean Lower Low Water (MLLW) = 0.00' (feet). The highest observed water level is 21.30'. Mean Higher High Water (MHHW) is 14.45'. Mean High Water (MHW) is 14.54'.

The elevation bench mark for this project is a rounded bass cap found in the sidewalk at the U.S. Post Office. The elevation of this mark is 25.78' above MLLW.

HORIZONTAL CONTROL

The Basis of Bearing for this project is the Plat reference for the Lot 1A, BLOCK 16A-1 of the Ketchikan Shipyard Plat No. 2005-18.

The basis of horizontal control for this project are lead plug and tacks in the concrete pier labeled as "Dry-2" and "Dry -3".

AS-BUILT PLANS

INITIALS KET DATE 3/10/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: S. MENZIES

STATE OF ALASKA 49th TREVOR SANDE CE 9778 REGISTERED PROFESSIONAL ENGINEER 5/8/07

DESIGNED BY: T. SANDE

DRAWN BY: T. SANDE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

SURVEY CONTROL

PATH: SERVER\PROJECTS\032314 TNH\DWG\SURVEY CONTROL.DWG

TAB: LAYOUT1

REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	SHEETS
HRPM-003(121)	2007	G4	28

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	UNIT	TOTAL
202 (1)	REMOVAL OF STRUCTURE AND OBSTRUCTIONS	LUMP SUM	ALL REQUIRED
202 (2)	REMOVAL OF PAVEMENT	SQUARE YARD	~~1,300~~ 1,486.0
202 (4)	REMOVAL OF CULVERT PIPE	LINEAR FOOT	~~275~~ 83.0
202 (6)	REMOVAL OF MANHOLE	EACH	2
203 (3)	UNCLASSIFIED EXCAVATION	CUBIC YARD	~~3,101~~ 3797
203 (28)	CONTAMINATED SOIL EXCAVATION AND DISPOSAL	CONTINGENT SUM	ALL REQUIRED
301 (1)	AGGREGATE BASE COURSE, GRADING D-1	TON	~~5,483~~ 7680
401 (4)	ASPHALT CONCRETE, TYPE 2; CLASS B	SQUARE YARD	~~660~~ 824
501 (2)	CLASS A-A CONCRETE	LUMP SUM	ALL REQUIRED
501 (4)	CLASS A CONCRETE	CUBIC YARD	~~50~~ 69.25
501 (7A)	PRECAST CONCRETE MEMBER (RAIL BEAM)	EACH	64
501 (7B)	PRECAST CONCRETE MEMBER (UTILIDOR)	LUMP SUM	ALL REQUIRED
501 (7C)	PRECAST CONCRETE MEMBER (UTILIDOR PIT)	EACH	~~2~~ 4
501 (8)	CONCRETE PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
504 (3)	STRUCTURAL STEEL (RAIL)	LUMP SUM	ALL REQUIRED
505 (9)	STRUCTURAL STEEL SHEET PILE PZ 27	SQUARE FOOT	~~6,565~~ 6525
505 (12)	FURNISH PILES HP 10X57	LINEAR FOOT	~~3,780~~ 6561
505 (13)	FURNISH PIPE PILE 16X0.5	LINEAR FOOT	~~280~~ 198
505 (14)	DRIVE PILE HP 10X57	EACH	~~48~~ CO#5
505 (15)	DRIVE PILE PIPE PILE 16X0.5	EACH	2
505 (16)	SPECIAL PILE EXCAVATION	CONTINGENT SUM	ALL REQUIRED CO#1
603 (22-12)	12 INCH HDPE PIPE	LINEAR FOOT	~~281~~ 188
603 (22-18)	18 INCH HDPE PIPE	LINEAR FOOT	~~240~~ 239
603 (22-30)	30 INCH HDPE PIPE	LINEAR FOOT	~~150~~ 137
604 (1-48)	STORM SEWER MANHOLE, 48" DIAMETER	EACH	4
604 (8)	UTILITY VAULT ~~10'x14'~~ see CO#4	EACH	~~1~~ CO#4
604 (9)	UTILITY VAULT	EACH	4
604 (10A)	6" HDPE SLAB DRAIN PIPE	LINEAR FOOT	~~144~~ 137
604 (10B)	12" HDPE SLAB DRAIN PIPE	LINEAR FOOT	~~108~~ 105
604 (14)	STORM WATER INTERCEPTOR	LUMP SUM	1
626 (1A)	SANITARY SEWER CONDUIT, 4 INCH HDPE	LINEAR FOOT	~~695~~ 651
626 (1B)	SANITARY SEWER CONDUIT 20 INCH SDR17 HDPE	LINEAR FOOT	~~227~~ 274
626 (1C)	SANITARY SEWER CONDUIT 24 INCH SDR17 HDPE	LINEAR FOOT	~~317~~ CO#1
626 (2)	SEWER SERVICE CONNECTION	EACH	1
626 (3)	VALVES AND FITTINGS (OUTFALL VAULT)	LUMP SUM	ALL REQUIRED
626 (4)	SANITARY SEWER PRESSURE SERVICE CONNECTION	EACH	2
627 (3)	INSTALL VALVE BOX	EACH	1
627 (8)	WATER SERVICE CONNECTION	EACH	1
627 (11)	WATER SERVICE, 8 INCH HDPE PIPE	LINEAR FOOT	~~380~~ 609.5
627 (12)	WATER SERVICE PIER CONNECTION	EACH	2
633 (1)	SILT FENCE	LINEAR FOOT	~~800~~ 740.5
638 (2)	IMPERMEABLE LINER	LUMP SUM	ALL REQUIRED
640 (1)	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED

ESTIMATE OF QUANTITIES (CONT.)

ITEM NO.	ITEM	UNIT	TOTAL
640 (4)	WORKER MEALS AND LODGING, OR PER DIEM	LUMP SUM	ALL REQUIRED
641 (1)	EROSION AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQUIRED
641 (2)	TEMPORARY EROSION AND POLLUTION CONTROL	CONTINGENT SUM	ALL REQUIRED
641 (4)	TEMPORARY EROSION AND POLLUTION CONTROL AMENDMENTS	CONTINGENT SUM	ALL REQUIRED
641 (9)	INLET PROTECTION	EACH	27
641 (10)	SILT CURTAIN	LINEAR FOOT	~~330~~ 200
642 (1)	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED
642 (3A)	THREE PERSON SURVEY PARTY	CONTINGENT SUM	ALL REQUIRED
643 (2)	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED
643 (8)	PLASTIC SAFETY FENCE	LINEAR FOOT	~~1000~~ 590
643 (12)	PORTABLE CONCRETE BARRIER	EACH	10
644 (1)	FIELD OFFICE	LUMP SUM	ALL REQUIRED
644 (6)	VEHICLES	LUMP SUM	ALL REQUIRED
644 (10)	SECURITY	CONTINGENT SUM	ALL REQUIRED
646 (1)	CPM SCHEDULING	LUMP SUM	ALL REQUIRED
662 (1)	ELECTRICAL	LUMP SUM	ALL REQUIRED
680 (1A)	(ADDITIVE ALTERNATE I) TRANSFER CRADLES	LUMP SUM	ALL REQUIRED

DRAINAGE STRUCTURE SUMMARY

SHEET NO.	MH NO.	DRAINAGE STRUCTURE TYPE	CASTING TYPE
C7	1	STORM SEWER MANHOLE, 48" DIAMETER	FRAME & GRATE
C7	2	STORM SEWER MANHOLE, 48" DIAMETER	FRAME & COVER
S10	3	STORM SEWER MANHOLE, 48" DIAMETER	FRAME & COVER
S10	4	STORM SEWER MANHOLE, 48" DIAMETER	FRAME & COVER

NOTES:
1. SEE C7 AND S10 FOR LOCATION, INVERT ELEVATIONS AND RIM ELEVATIONS OF MANHOLES.
2. MH#2 HAS AN OIL/WATER SEPARATOR PLATE, SEE DETAIL ON C9.

BASIS OF ESTIMATE

ITEM NO.	ITEM	QUANTITY
301 (1)	AGGREGATE BASE COURSE, GRADING D-1	1.96 TONS/CUBIC YARD
401 (4)	ASPHALT CONCRETE, TYPE 2; CLASS B	120 LB./SQ. YARD/IN. DEPTH

New Items By Change Order

	CO#	New Items:	
505(16a)	1	Special Pile Excavation and Backfill	LS
680(1b)	2	Transfer Cradles	LS
108(1)	3	Extended OH Costs	LS
604(8a)	4	Additional Vault Costs	LS
505(14a)	5	Drive Pile HP 10x57	LS
504(3b)	6	Continuity Strips	LS
502(2)	7	Grout Costs	LS
604(14a)	8	Tideflex for Stormwater Int	LS
626(1z)	9	24 Inch Sewer Conflicts	LS
504(3a)	10	Structural Steel Rail Alignment	LS

AS-BUILT PLANS

INITIALS KRT DATE 3/10/09

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC

CHECKED BY: PC
DESIGNED BY: CF
DRAWN BY: WEH
PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_C0
TAB: 5 5-8-07 MATHEWS

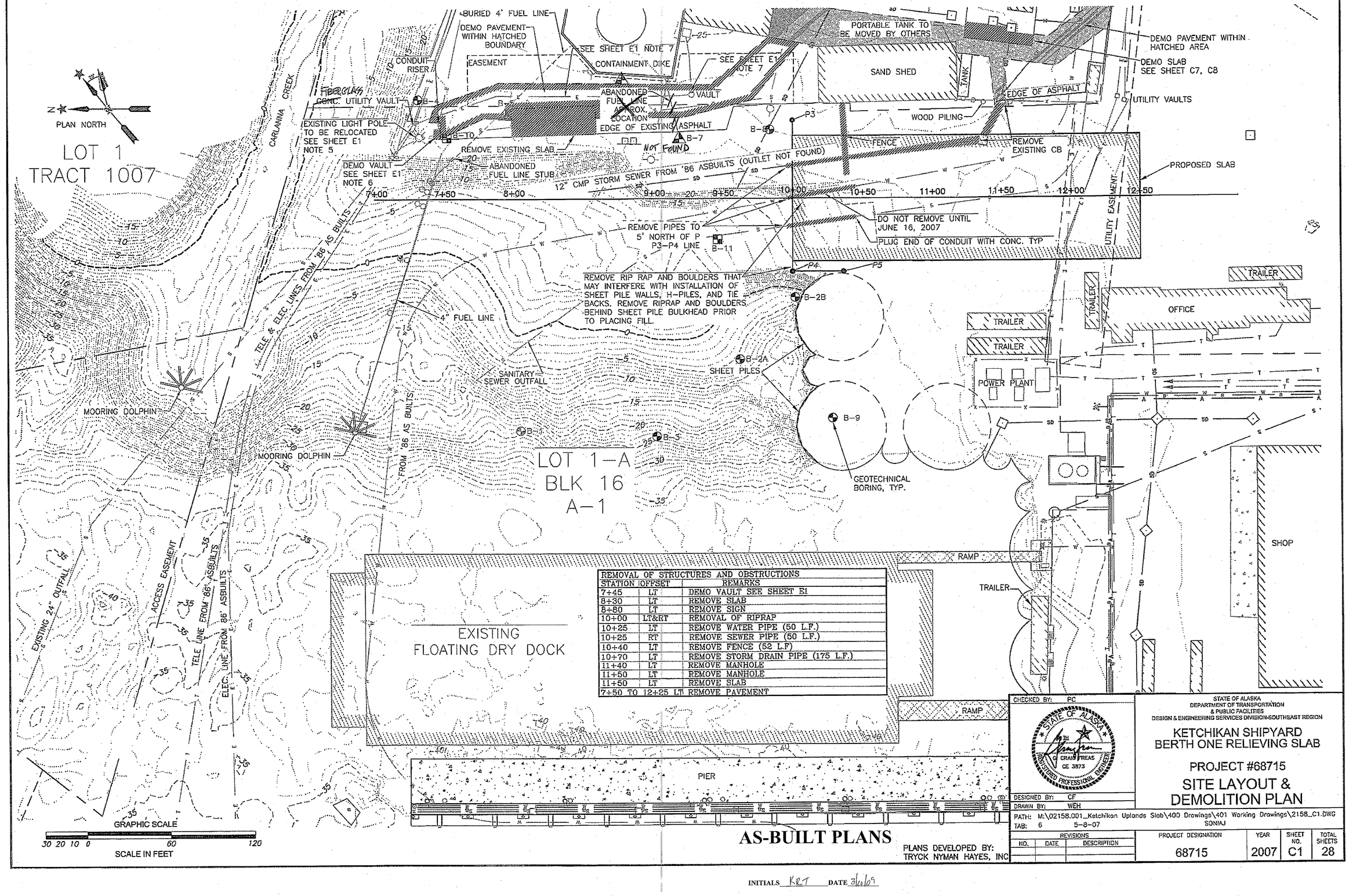
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

ESTIMATE OF QUANTITIES
& BASIS OF ESTIMATE

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			68715	2007	C0	28



REMOVAL OF STRUCTURES AND OBSTRUCTIONS		
STATION	OFFSET	REMARKS
7+45	LT	DEMO VAULT SEE SHEET E1
8+30	LT	REMOVE SLAB
8+80	LT	REMOVE SIGN
10+00	LT&RT	REMOVAL OF RIPRAP
10+25	LT	REMOVE WATER PIPE (50 L.F.)
10+25	RT	REMOVE SEWER PIPE (50 L.F.)
10+40	LT	REMOVE FENCE (52 L.F)
10+70	LT	REMOVE STORM DRAIN PIPE (175 L.F.)
11+40	LT	REMOVE MANHOLE
11+50	LT	REMOVE MANHOLE
11+50	LT	REMOVE SLAB
7+50 TO 12+25	LT	REMOVE PAVEMENT

AS-BUILT PLANS

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC

INITIALS KRT DATE 3/6/09

CHECKED BY: PC
DESIGNED BY: CF
DRAWN BY: WEH
PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158_C1.DWG
TAB: 6 5-8-07 SONIAJ

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

SITE LAYOUT & DEMOLITION PLAN

REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	C1	28

CITY OF KETCHIKAN
LOT 1, BLK 15AA-1

PLAN NORTH

LOT 1
TRACT 1007

CARLANNA CREEK

SEE SHEET E1 NOTE 7

NEW 24" HDPE SEWER OUTFALL

PROVIDE INLET PROTECTION AT SD MH HOLES WITHIN AREAS WHERE AC HAS BEEN REMOVED

EASEMENT

CONTAINMENT DIKE

SAND SHED

PORTABLE TANK TO BE MOVED BY OTHERS

TANK

EDGE OF ASPHALT

UTILITY VAULTS

ABANDONED FUEL LINE APPROX. LOCATION

EDGE OF EXISTING ASPHALT

ELEC. VAULT

ABANDONED 4" BURIED FUEL LINE

CONC. UTILITY VAULT

NOT FOUND

NEW 18" HDPE STORM DRAIN

REMOVE EXISTING CB

12" CMP STORM SEWER FROM '86 ASBUILTS (OUTLET NOT FOUND)

(PIPE NOT FOUND)

NEW SLAB

ABANDONED FUEL LINE STUB

PROVIDE SILT CURTAIN DURING SEWER INSTALLATION

NEW 4" HDPE VAULT DRAIN

SEE NOTE 2

DO NOT REMOVE UNTIL JUNE 16, 2007

UTILITY EASEMENT

CONTAMINATED SOIL HOLDING CELL #1

not used

PROVIDE SILT CURTAIN UNTIL SHEET PILE BULKHEAD IS COMPLETE (ALL SHEETS DRIVEN TO FINAL GRADE)

4" FUEL LINE

TELE & ELEC LINES FROM '86 AS BUILTS

CONTAMINATED SOIL HOLDING CELL #2

not used

TRAILER

OFFICE

NEW 12" HDPE SLAB DRAIN

POWER PLANT

SHEET PILES

MOORING DOLPHIN

MOORING DOLPHIN

APPROX LOCATION 10" WATER LINE FROM '86 AS BUILTS

SANITARY SEWER OUTFALL

LOT 1-A
BLK 16
A-1

STORM WATER INTERCEPTOR

GEOTECHNICAL BORING, TYP.

SHOP

RAMP

TRAILER

EXISTING FLOATING DRY DOCK

RAMP

PIER

AS-BUILT PLANS

INITIALS KRT DATE 3/10/09

LEGEND:

- ☆ INLET PROTECTION
- —SC——SC— SILT CURTAIN (IN WATER)
- —SF——SF— SILT FENCE

NOTES:

1. SEE THE SPECIFICATION APPENDICES FOR THE EROSION SEDIMENT CONTROL PLAN NARRATIVE, INLET PROTECTION DETAILS, AND THE CONTAMINATED SOIL HOLDING CELL DETAILS.
2. THE CONTRACTOR SHALL PROVIDE A SILT FENCE BETWEEN ANY EXCAVATION OR FILL AND NATURAL OR MANMADE DRAINAGE COURSES TO PREVENT DIRECT RUNOFF OF PRECIPITATION INTO CARLANNA CREEK OR TONGASS NARROWS. NOTE THAT TIDES AS HIGH AS 21.3 FEET MEAN LOWER LOW WATER (MLLW) MAY OCCUR AT THIS SITE. ACCORDINGLY, SILT FENCES WILL HAVE TO BE ADVANCED AS EXCAVATION PROCEEDS TOWARDS THE WATERFRONT. THE SILT CURTAINS ALONE SHOULD NOT BE CONSIDERED ADEQUATE TO PREVENT SILTING OF EITHER CARLANNA CREEK OR TONGASS NARROWS. ONCE ALL OF THE SOUTH BULKHEAD SHEET PILES HAVE BEEN DRIVEN (P3 TO P5), THE SHEETS MAY SUBSTITUTE AS A SILT FENCE AT THAT LOCATION.

GRAPHIC SCALE

30 20 10 0 60 120

SCALE IN FEET

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC

CHECKED BY: PC

STATE OF ALASKA
CRAIG FREAS
CE 3873
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: CF
DRAWN BY: WEH

PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158_C1.DWG
TAB: 7 5-8-07 SONIAJ

REVISIONS		
NO.	DATE	DESCRIPTION

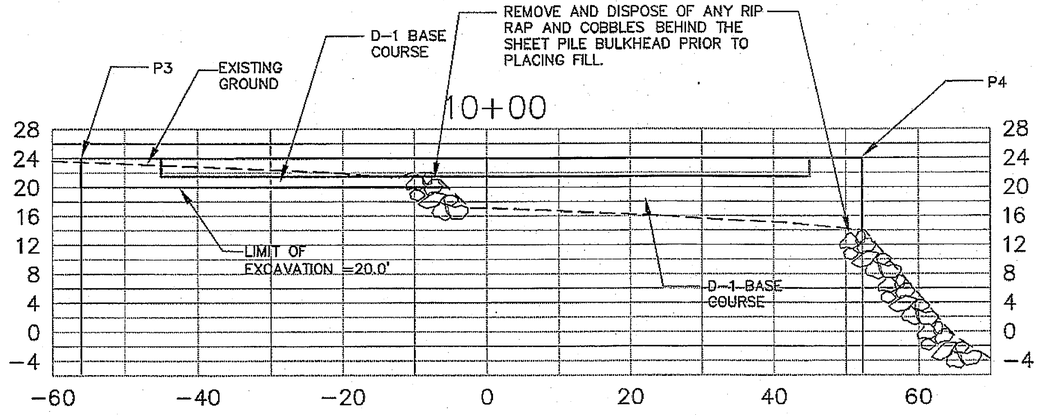
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

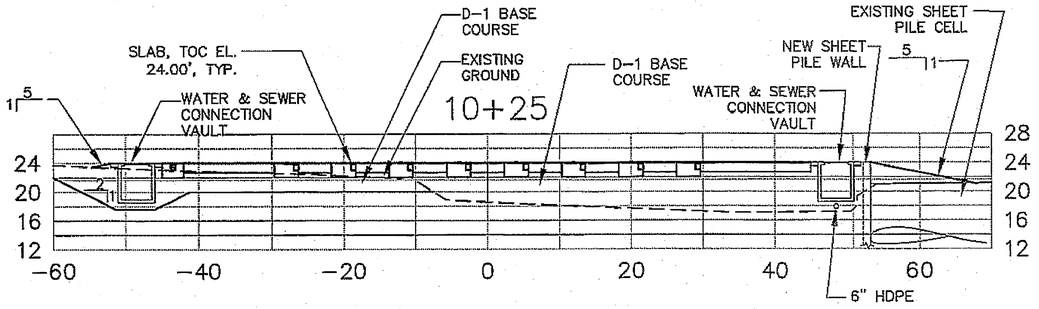
KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

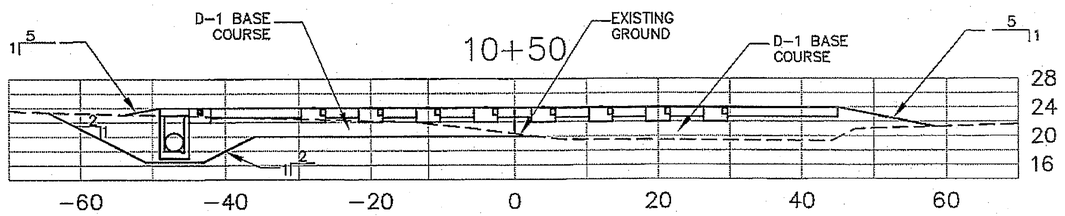
PROJECT #68715

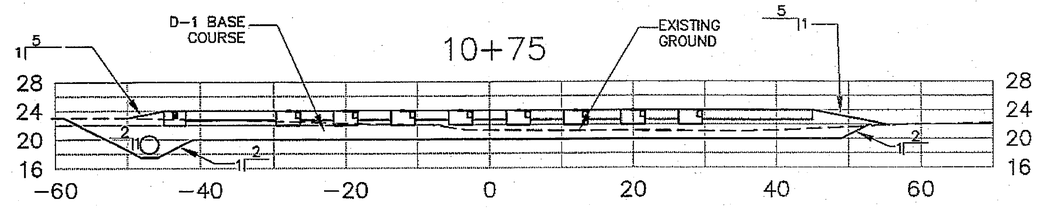
EROSION & SEDIMENT CONTROL PLAN

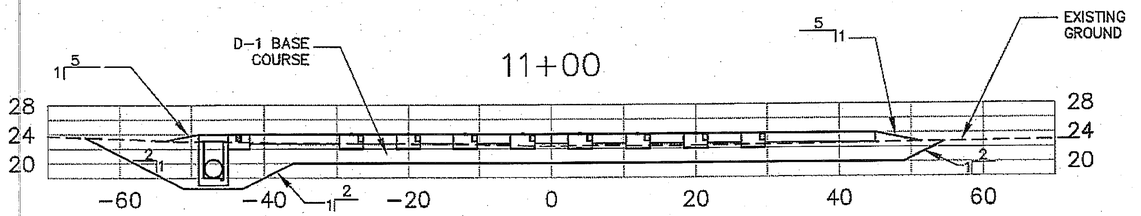
PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	C2	28

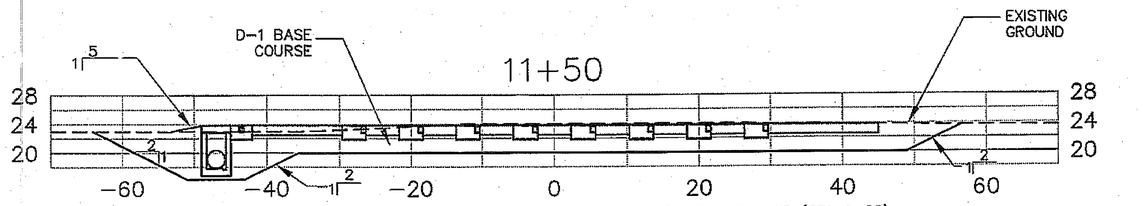


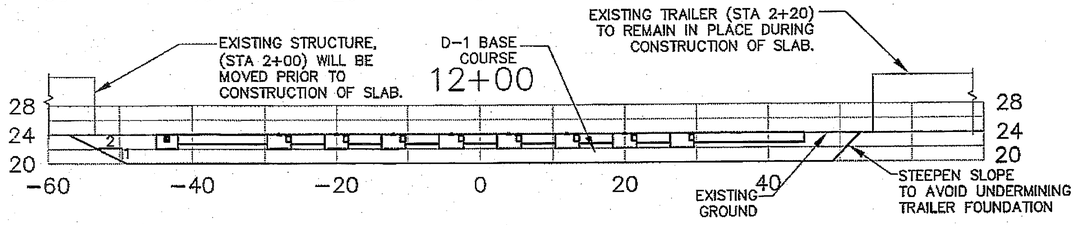


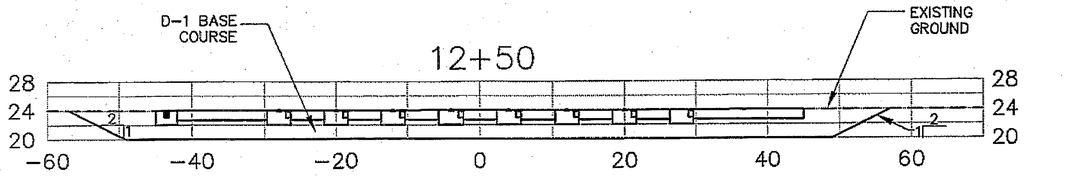




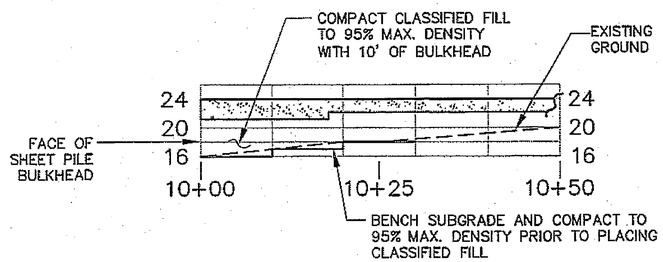


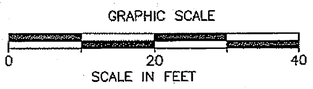






PARTIAL SECTION 20 FT RIGHT





AS-BUILT PLANS

INITIALS KMT DATE 3/10/09

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC.

CHECKED BY: PC
DESIGNED BY: CF
DRAWN BY: PC
PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_C6.DWG
TAB: 8 5-8-07

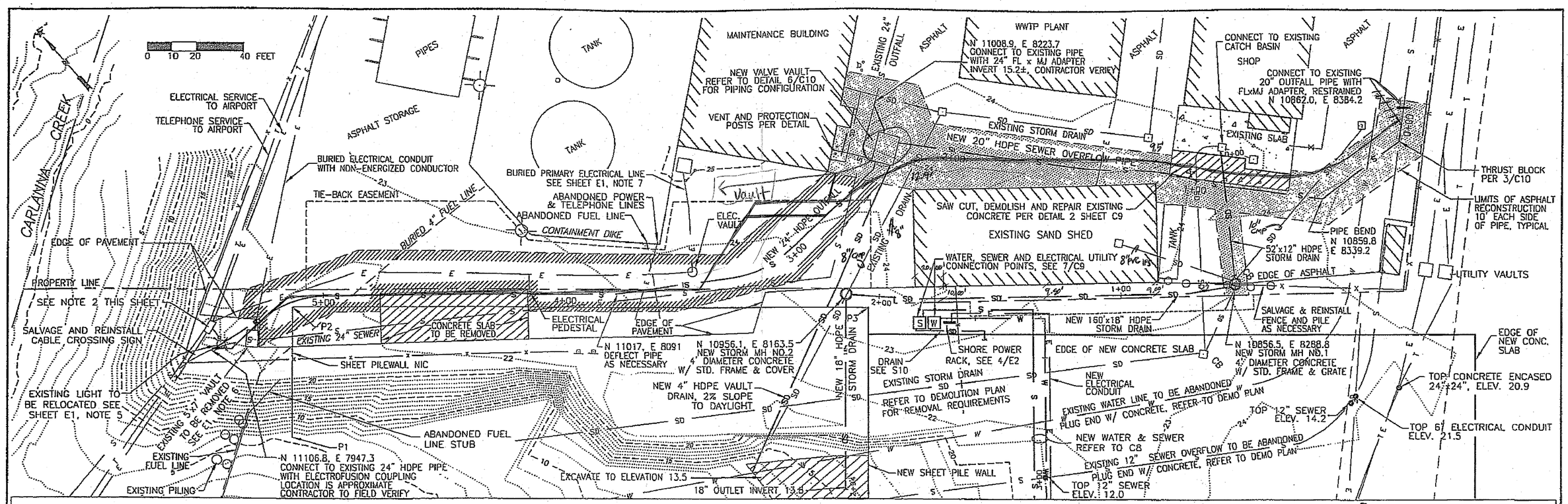
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

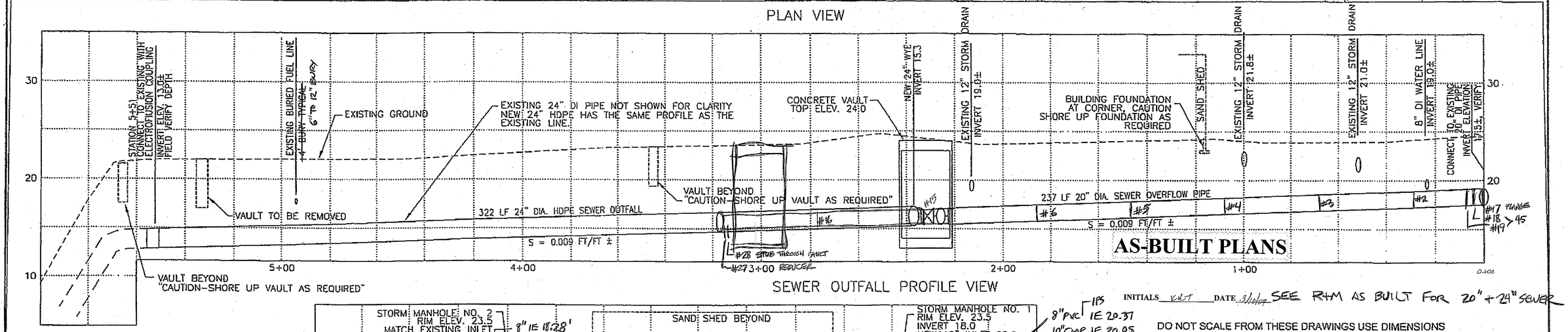
KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

SLAB CROSS SECTIONS

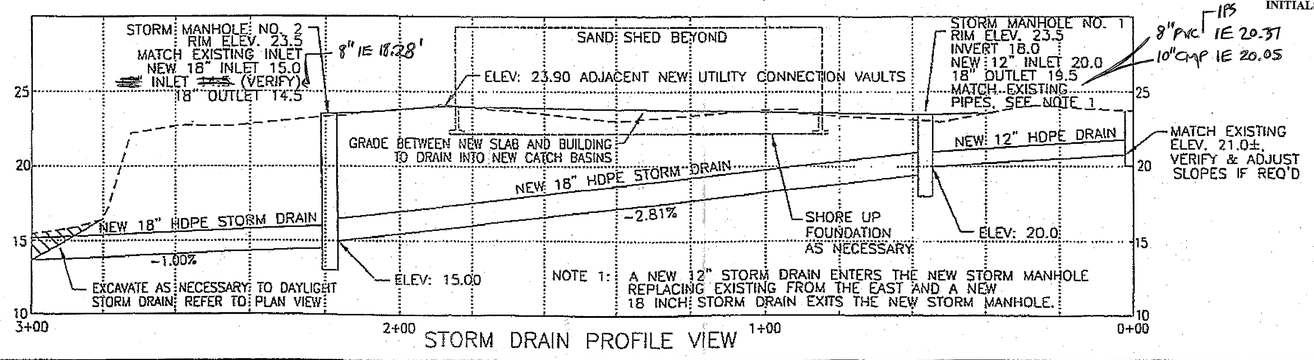
REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			68715	2007	C6	28





NOTES:

1) THE STORED MATERIALS AND THE TANK LOCATED ON THE CITY OF KETCHIKAN PROPERTY SHALL BE REMOVED BY OTHERS.
2) ALL PIPELINES THAT ARE SCHEDULE TO BE ABANDONED AND NOT REMOVED SHALL HAVE THE ENDS PLUGGED WITH 12" LENGTH OF CONCRETE
3) CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO SHORE AND PROTECT THE EXISTING ELECTRICAL AND TELEPHONE CONDUCTORS AND UTILITY VAULT. CONTACT KPU PRIOR TO DIGGING.
4) MANHOLE NO. 2 SHALL RECEIVE A STEEL INSERT FOR OIL/WATER SEPARATION. REFER TO DETAIL 3/C9.



INITIALS KWT DATE 3/16/07 SEE RIM AS BUILT FOR 20" + 24" SEWER

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: S. MENZIES
DESIGNED BY: T. SANDE
DRAWN BY: T. SANDE
PATH: SERVER\PROJECTS\032314 TNH\DWG\C7_C8.DWG
TAB: C7

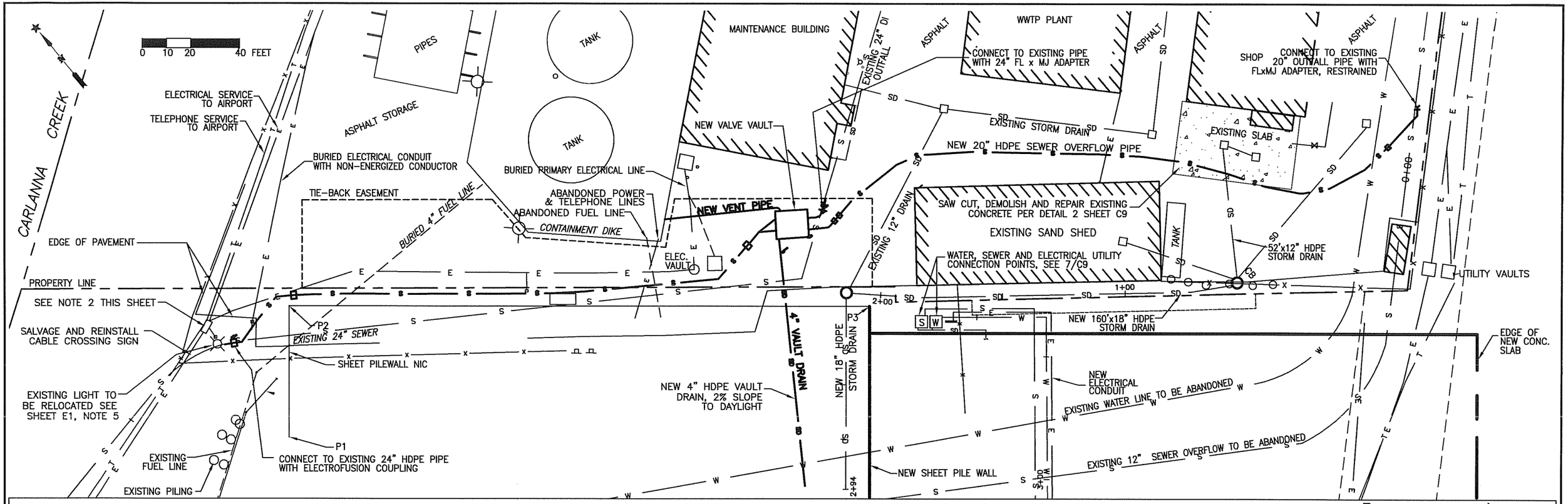
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEASTY REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

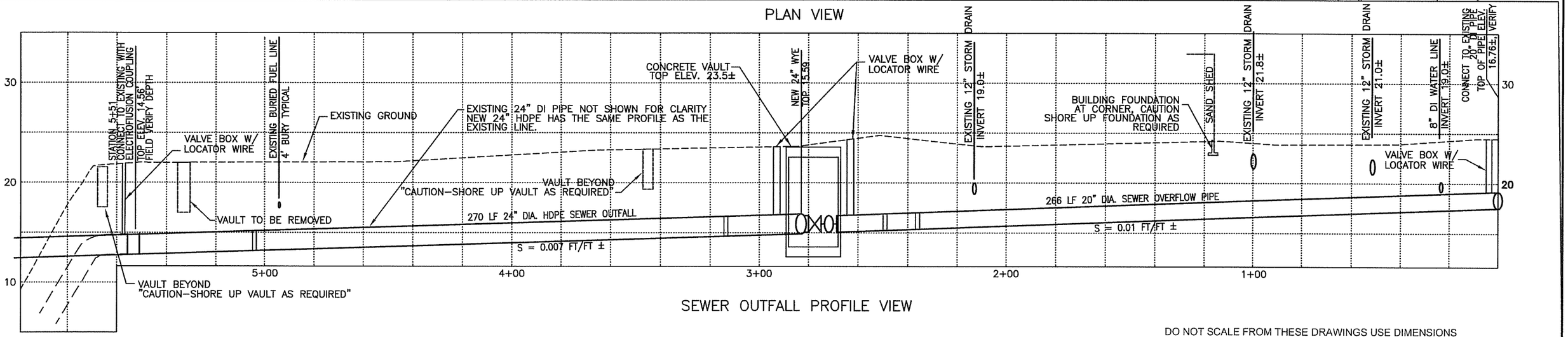
PROJECT #68715

SEWER RELOCATION PLAN AND PROFILE

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	SHEETS
			HRPM-003(121)	2007	C7	28



PLAN VIEW



SEWER OUTFALL PROFILE VIEW

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

RECORD DRAWINGS

RECORD DRAWING INFORMATION PROVIDED BY THE CITY OF KETCHIKAN AND DAWSON CONSTRUCTION

CHECKED BY: S. MENZIES

STATE OF ALASKA 49th TREVOR SANDE CE 9778 REGISTERED ENGINEER

DESIGNED BY: T. SANDE

DRAWN BY: T. SANDE

PATH: SERVER\PROJECTS\032314 TNH\DWG\C7_C8.DWG

TAB: C7

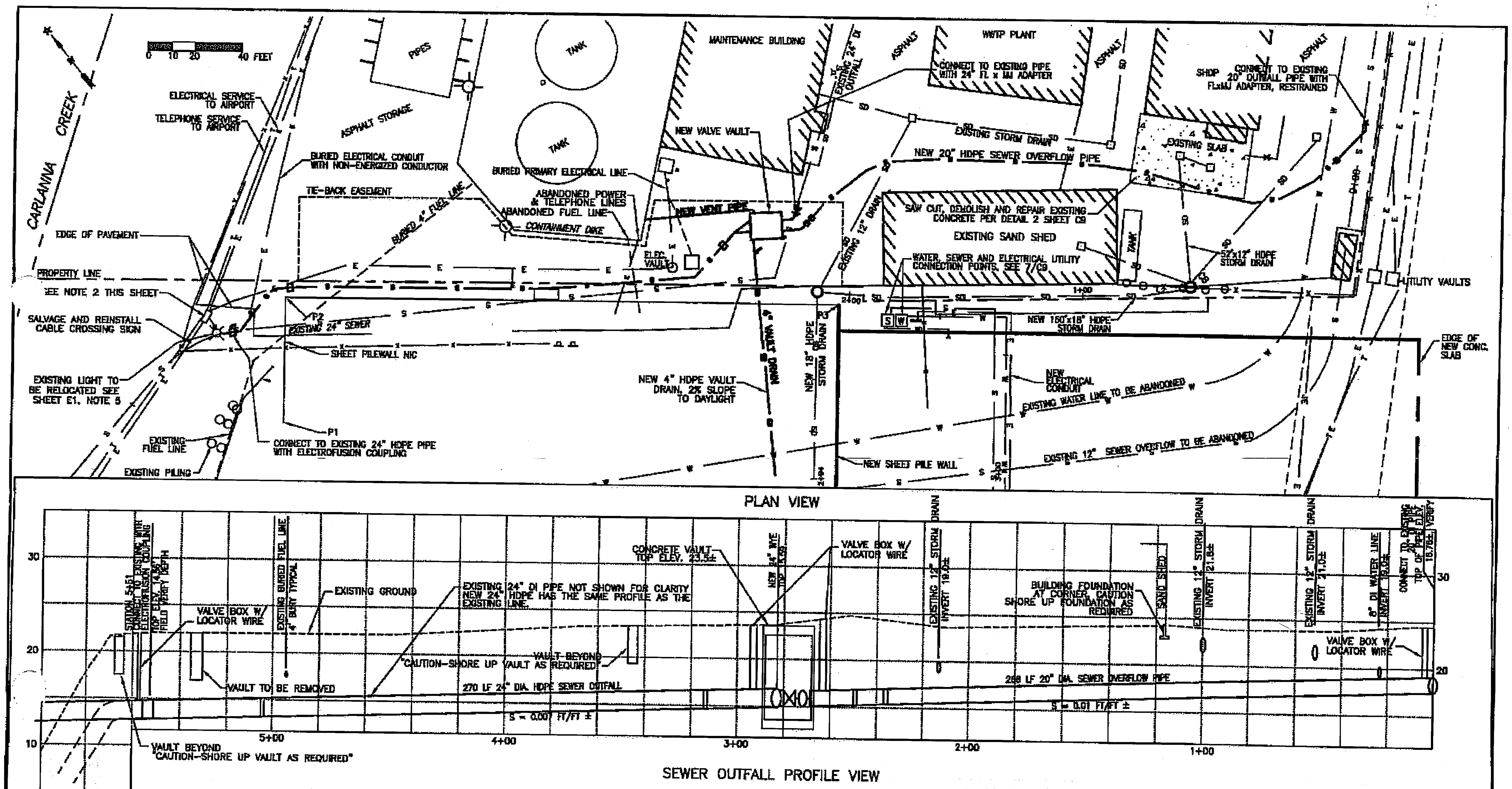
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

SEWER RELOCATION PLAN AND PROFILE

REVISIONS			PROJECT DESIGNATION	YEAR	SHEET NO	SHEETS
NO	DATE	DESCRIPTION				
1	9/7/07	REVISED VAULT	HRPM-003(121)	2007	C7	28



AS-BUILT PLANS

INITIALS KCT DATE 3/9/07

RECORD DRAWINGS

RECORD DRAWING INFORMATION PROVIDED BY THE CITY OF KETCHIKAN AND DAWSON CONSTRUCTION

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: S. MENZIES

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION SOUTHEAST REGION

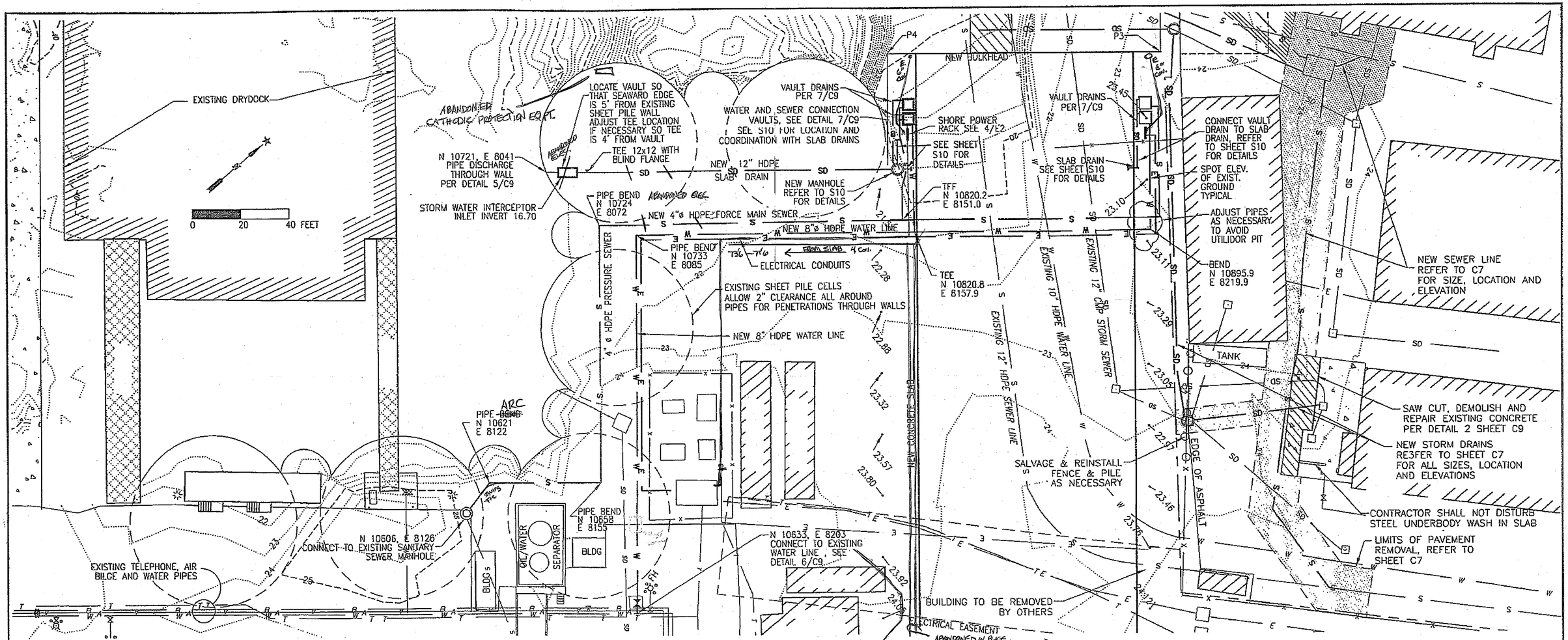
KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

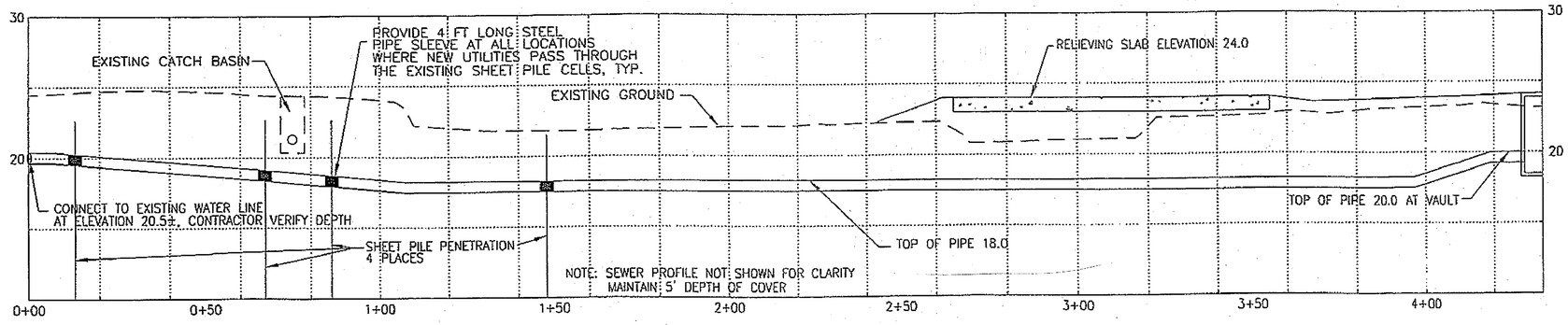
SEWER RELOCATION PLAN AND PROFILE

DESIGNED BY: T. SANDE
DRAWN BY: T. SANDE

REVISIONS NO	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO	SHEETS
1	8/27/07	REVISED VAULT	HRPM-003(121)	2007	C7	28



PLAN VIEW



PROFILE VIEW OF WATER SERVICE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

AS-BUILT PLANS by Contractor

INITIALS KRT DATE 9/10/09

CHECKED BY: S. MENZIES

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

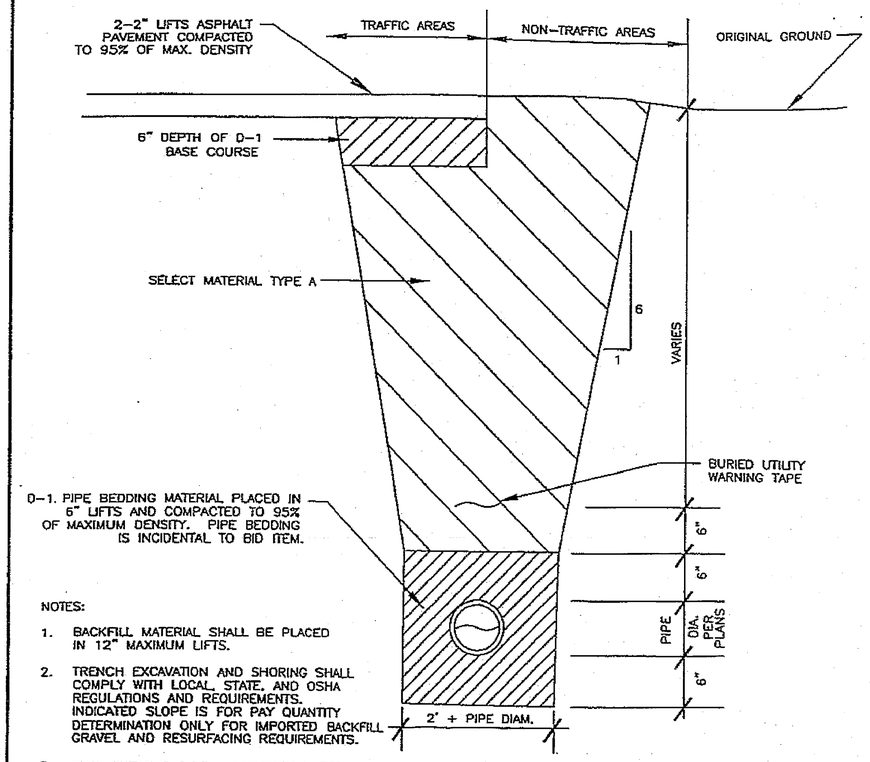
SEWER & WATER SERVICE PLAN AND PROFILE

STATE OF ALASKA 49th TREVOR SANDE CE 9778 REGISTERED PROFESSIONAL ENGINEER 9/9/09

DESIGNED BY: T. SANDE
DRAWN BY: T. SANDE
PATH: SERVER\PROJECTS\032314 TNH\DWG\C7_C8.DWG
TAB: C8

REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	SHEETS
HRPM-003(121)	2007	C8	28

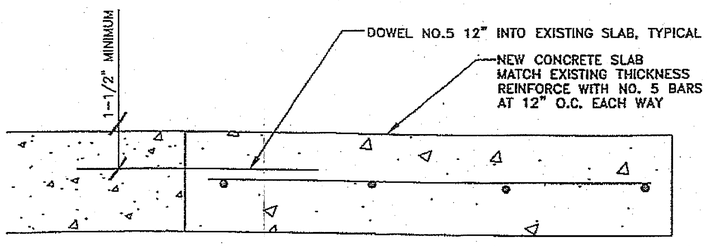


D-1. PIPE BEDDING MATERIAL PLACED IN 6" LIFTS AND COMPACTED TO 95% OF MAXIMUM DENSITY. PIPE BEDDING IS INCIDENTAL TO BID ITEM.

NOTES:

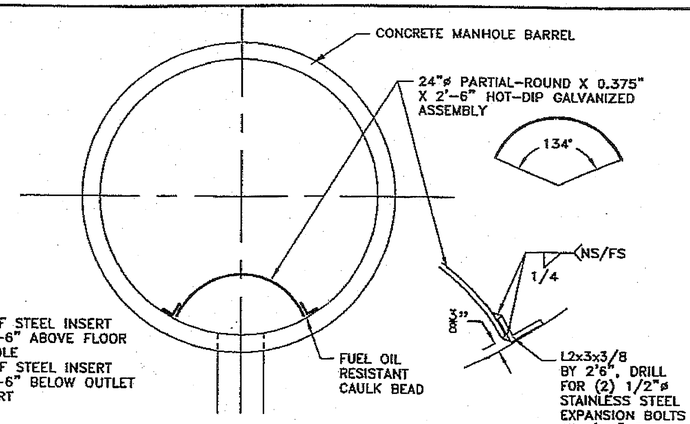
1. BACKFILL MATERIAL SHALL BE PLACED IN 12" MAXIMUM LIFTS.
2. TRENCH EXCAVATION AND SHORING SHALL COMPLY WITH LOCAL, STATE, AND OSHA REGULATIONS AND REQUIREMENTS. INDICATED SLOPE IS FOR PAY QUANTITY DETERMINATION ONLY FOR IMPORTED BACKFILL GRAVEL AND RESURFACING REQUIREMENTS.
3. IF UNSUITABLE PIPE FOUNDATION MATERIAL IS ENCOUNTERED DURING EXCAVATION, ENGINEER MAY DIRECT THE CONTRACTOR TO OVER-EXCAVATE AND BACKFILL WITH SUITABLE MATERIAL.
4. THE DITCH LINE, IF ONE EXISTS, SHALL BE RESHAPED IN SUCH A MANNER TO ALLOW POSITIVE DRAINAGE TO MATCH PRE-CONSTRUCTION CONDITIONS.
5. TRENCHING SEAWARD OF ELEVATION 19.4 WILL ENCOUNTER CONTAMINATED MATERIALS. REFER TO SECTION 203-2.01 FOR HANDLING AND DISPOSAL REQUIREMENTS

1 / C9 TYPICAL UPLAND TRENCH SECTION
NOT TO SCALE



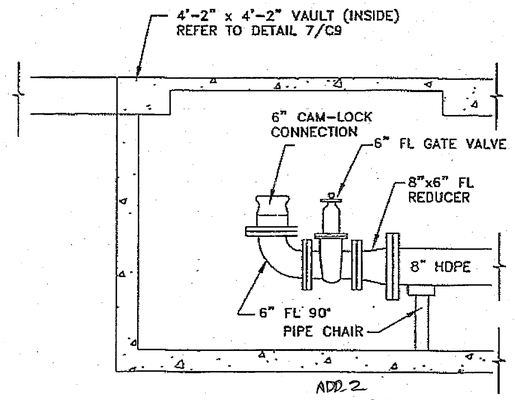
REFER TO PLAN VIEW SHEET C7 FOR DIMENSIONS

2 / C9 CONCRETE SLAB REPAIR
NOT TO SCALE

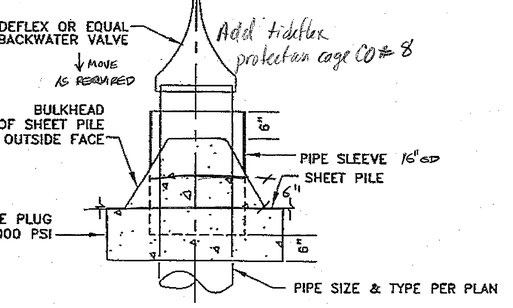


NOTES:
1. BOTTOM OF STEEL INSERT TO BE 1'-6" ABOVE FLOOR OF MANHOLE
2. BOTTOM OF STEEL INSERT TO BE 0'-6" BELOW OUTLET PIPE INVERT

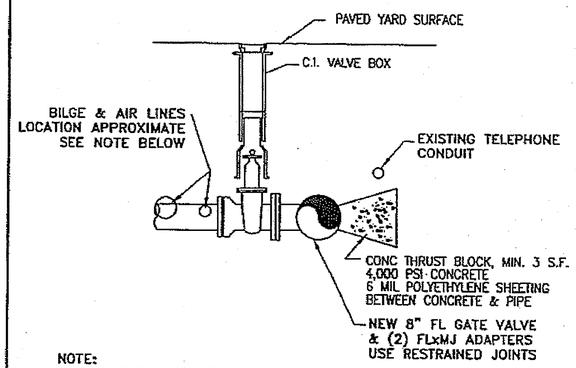
3 / C9 OIL/WATER SEPARATOR
NOT TO SCALE



4 / C9 WATER SERVICE CONNECTION
NOT TO SCALE

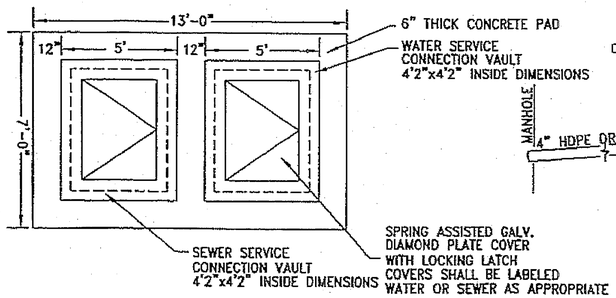


5 / C9 STORM DRAIN WALL PENETRATION
NOT TO SCALE

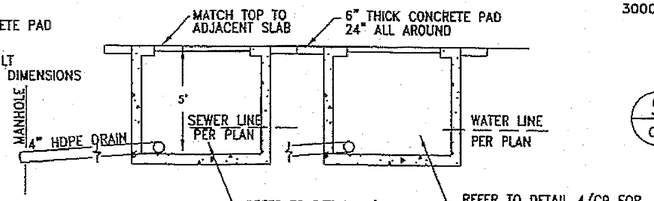


NOTE:
CONTRACTOR SHALL EXPOSE THE EXISTING BILGE AND AIR LINES PRIOR TO BEGINNING WORK TO DETERMINE LOCATION, PIPE TYPE, DEPTH AND LOCATION. BILGE AND AIR LINES SHALL BE REMOVED AND PLACED BELOW THE WATER LINE IF CONFLICTS EXIST.

6 / C9 BURIED WATER SERVICE
NOT TO SCALE



PLAN VIEW



ELEVATION VIEW

NOTE: 1) REFER TO SHEETS C7, C8 AND S10 FOR DRAIN LOCATIONS
2) CONNECT BOTH VAULTS INTO SINGLE PIPE PENETRATION OF SLAB DRAIN MANHOLE
3) EXCAVATE A MINIMUM OF 12" BELOW PLANNED BOTTOM OF VAULT & BACKFILL WITH D-1 COMPACTED 95% OF MAXIMUM DENSITY

7 / C9 SERVICE CONNECTION DETAIL
NOT TO SCALE

AS-BUILT PLANS

INITIALS KRT DATE 3/10/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: S. MENZIES
DESIGNED BY: T. SANDE
DRAWN BY: T. SANDE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

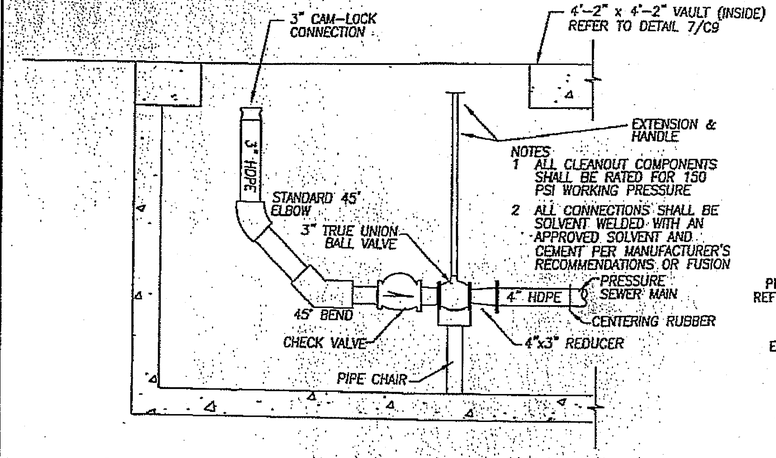
KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

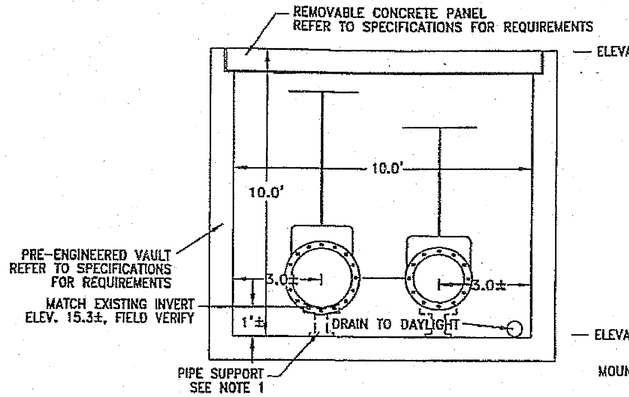
CIVIL DETAILS

PATH: SERVER\PROJECTS\032314 TN\HDWG\C9_C10.DWG
TAB: C9

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	SHEETS
			HRPM-003(121)	2007	C9	28

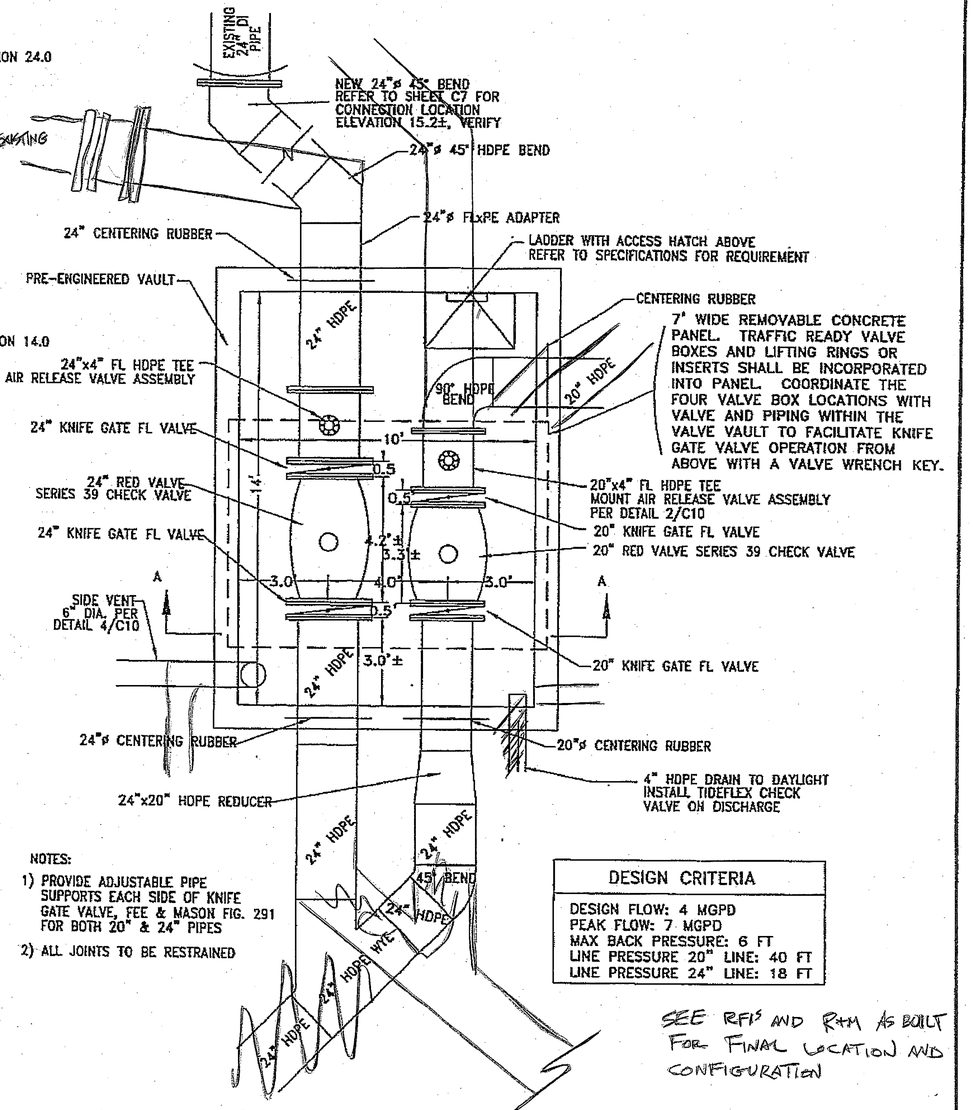


1 / C10 PRESSURE SEWER SERVICE CONNECTION
NOT TO SCALE



NOTE: EXCAVATE A MINIMUM OF 12" BELOW PLANNED BOTTOM OF VAULT & BACKFILL WITH D -1 COMPACTED 95% OF MAXIMUM DENSITY

SECTION A-A

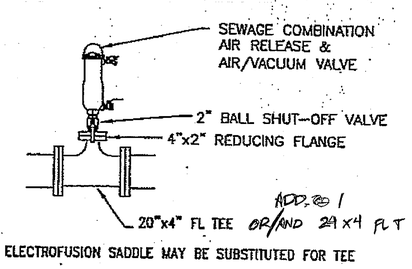


NOTES:
1) PROVIDE ADJUSTABLE PIPE SUPPORTS EACH SIDE OF KNIFE GATE VALVE, FEE & MASON FIG. 291 FOR BOTH 20" & 24" PIPES
2) ALL JOINTS TO BE RESTRAINED

DESIGN CRITERIA
DESIGN FLOW: 4 MGPD
PEAK FLOW: 7 MGPD
MAX BACK PRESSURE: 6 FT
LINE PRESSURE 20" LINE: 40 FT
LINE PRESSURE 24" LINE: 18 FT

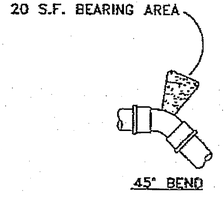
SEE RFI'S AND R+M AS BUILT FOR FINAL LOCATION AND CONFIGURATION

6 / C10 BYPASS / OUTFALL VAULT
NOT TO SCALE



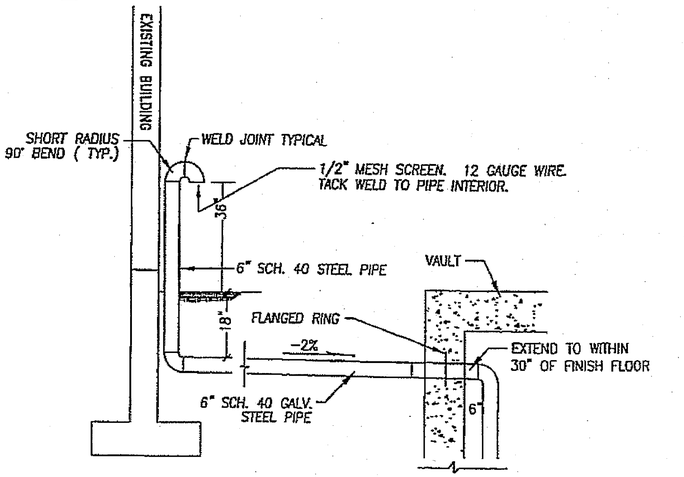
2" ELECTROFUSION SADDLE MAY BE SUBSTITUTED FOR TEE

2 / C10 SEWAGE AIR RELEASE ASSEMBLY
NOT TO SCALE



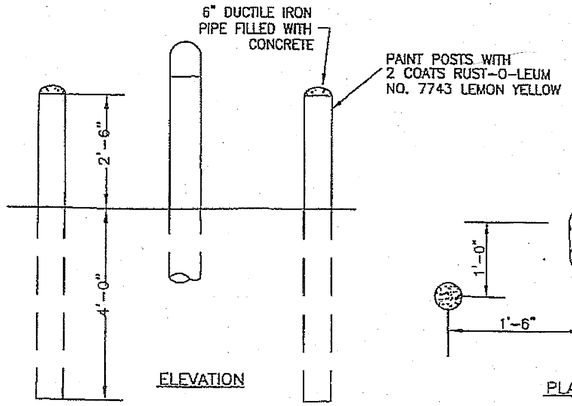
NOTES:
1. CONCRETE BLOCKING SHALL BE CAST IN PLACE & HAVE A MIN. OF 1/4 SQ. FT. BEARING AGAINST THE FITTINGS.
2. BLOCK SHALL BE CLEAR OF ALL JOINTS TO PERMIT DISMANTLING JOINTS.
3. 6 MIL POLYETHYLENE MUST BE INSTALLED BETWEEN CONC. THRUST BLOCK & PIPE.
4. CONCRETE SHALL BE 4,000 PSI

3 / C10 20" SEWER BYPASS THRUST BLOCK
NOT TO SCALE



NOTES: 1) HOT DIP GALVANIZE VENT ASSEMBLY AFTER FABRICATION
2) VENT SHALL HAVE TWO PROTECTION POST PER DETAIL 5 THIS SHEET
3) REFER TO SHEET C7 FOR VENT LOCATION

4 / C10 VAULT VENT DETAIL
NOT TO SCALE



5 / C10 VENT PROTECTION POST DETAIL
NOT TO SCALE

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

AS-BUILT PLANS
by Dawson Inc

INITIALS KRT DATE 3/10/09
ADOT/PF

CHECKED BY: S. MENZIES
DESIGNED BY: T. SANDE
DRAWN BY: T. SANDE
PATH: SERVER\PROJECTS\032314 TM\HDWG\C9_C10.DWG
TAB: C10

STATE OF ALASKA
49th
TREVOR SANDE CE 9778
5/8/07

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

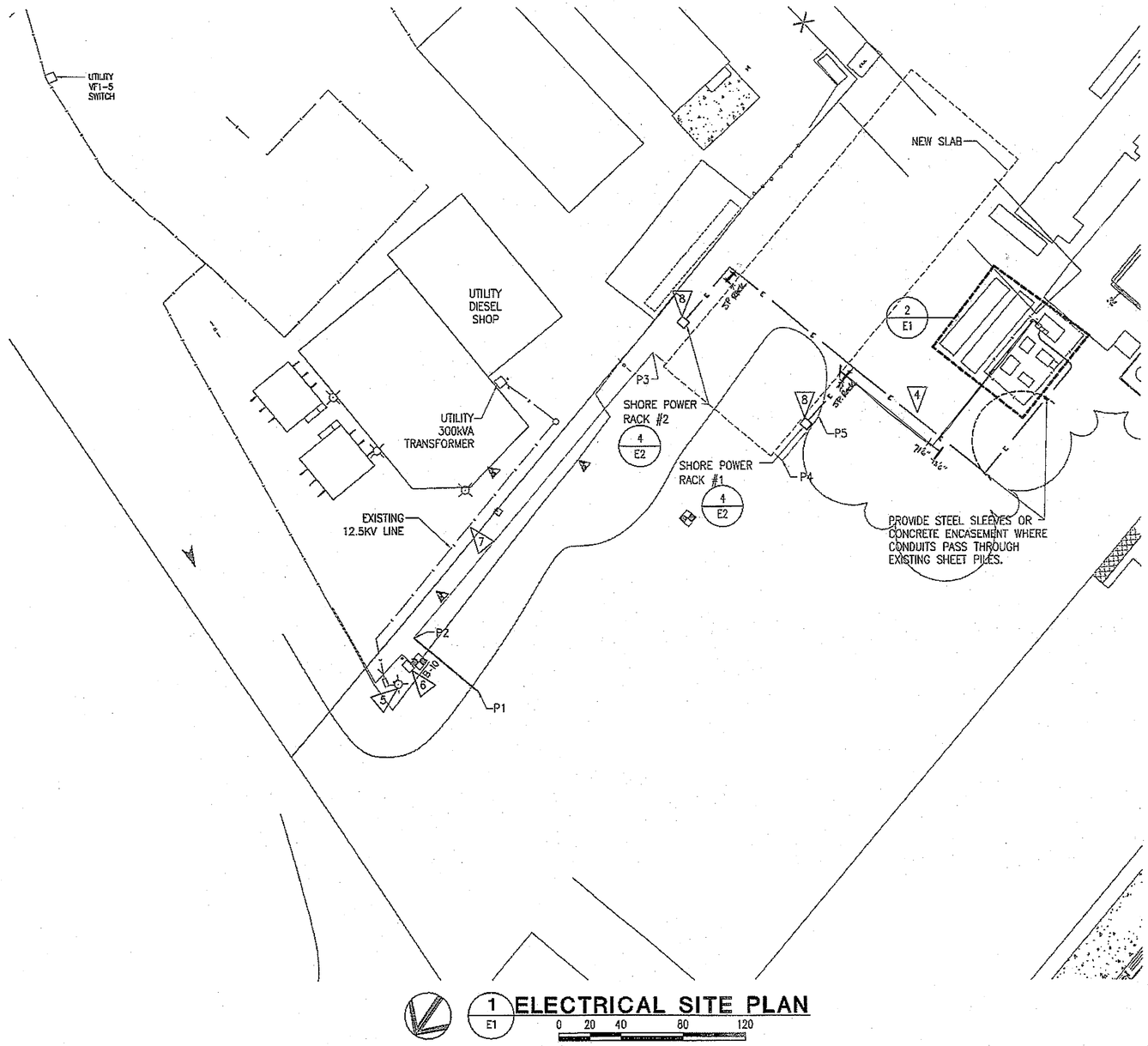
KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

CIVIL DETAILS

REVISIONS		
NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	SHEETS
HRPM-003(121)	2007	C10	28



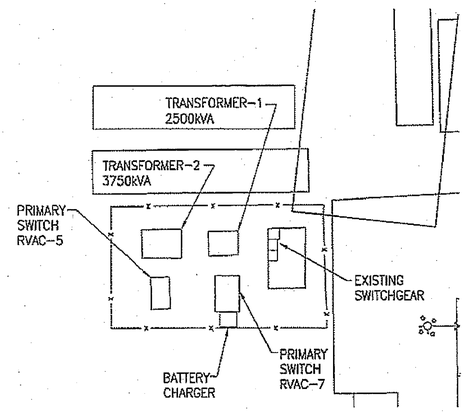
1 E1 **ELECTRICAL SITE PLAN**

0 20 40 80 120

NOTES:

1. PROVIDE 1-1200A, 480V, 3ø, 4-W CIRCUIT FROM THE MAIN SWITCHGEAR, TO THE SHORE POWER RACK ATTACHMENT POINTS. REFER TO 2/E1.
2. INSTALL 2-400A RECEPTACLES AND DISCONNECTS AT LOCATION-1 (LOC#1), EXTEND CIRCUIT TO LOCATION-2 AND INSTALL A SECOND SET OF TWO 400A RECEPTACLES, REFER TO 4/E2.
3. INSTALL NEW BREAKER FOR THE CIRCUIT IN THE EXISTING SWITCHGEAR, REFER TO ONE-LINE DIAGRAM 1/E2.

4. UNDERGROUND FEEDER RUNS FROM EXISTING SWITCHGEAR TO SHORE POWER POINTS. (4) 3" CONDUITS FROM THE EXISTING SWITCHGEAR BUILDING RACK #1, (4) 3" CONDUITS FROM RACK #1 TO RACK #2. REFER TO 4/E2 AND 5/E2 FOR FURTHER DETAILS. THE CONDUIT SHALL BE SITUATED ALONG SIDE THE WATER AND SEWER LINES, TO THE SOUTH AND THE EAST OF THESE LINES. WHERE THE CONDUIT IS REQUIRED TO CROSS THE WATER AND SEWER LINES, IT SHALL CROSS ABOVE THESE LINES. REFER TO C8 FOR FURTHER DETAILS ON WATER AND SEWER LINE ROUTING.
5. REMOVE AND RELOCATE EXISTING LIGHT MOUNTED ON WOODEN POLE FOR INSTALLATION OF SEWER LINE. RINSTALL EXISTING POLE AND FIXTURE AS CLOSE TO ORIGINAL LOCATION AS POSSIBLE. RECONNECT TO THE EXISTING CIRCUIT.
6. EXISTING VAULT HAS AN UNENERGIZED DISTRIBUTION CABLE. COORDINATE WITH KETCHIKAN PUBLIC UTILITIES TO REMOVE THIS CABLE. DEMO THE EXISTING VAULT.
7. EXISTING 12.5KV LINE WITHIN AREA OF TIE-BACKS. COORDINATE WITH THE UTILITY FOR LINE LOCATE AND EXERCISE CAUTION EXCAVATING AROUND THIS LINE.
8. REFER TO SHEET S10 FOR SPECIFIC LOCATION OF THE SHORE POWER ATTACHMENT RACKS.



2 E1 **ENLARGED SITE PLAN**

0 10 20 40 60

AS-BUILT PLANS

INITIALS KLT DATE 3/10/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: DJI

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

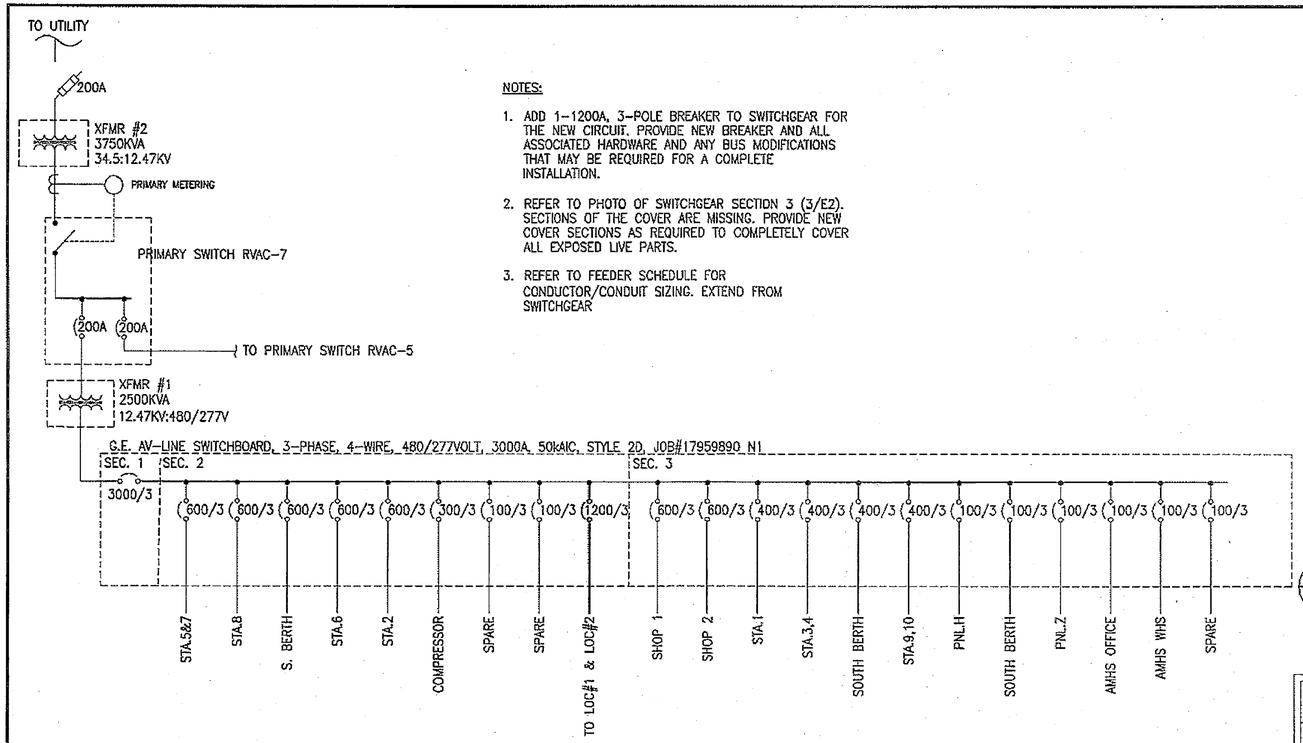
PROJECT #68715

ELECTRICAL PLAN

DESIGNED BY: TJP
DRAWN BY: TAH

PATH: P:\03139 SHIPLIFT FOR KETCHIKAN SHIPYARD\DRAWINGS\02156.001 DWGS\03139E1.DWG
TAB: E1 5-8-07 MORROW, ANDREA

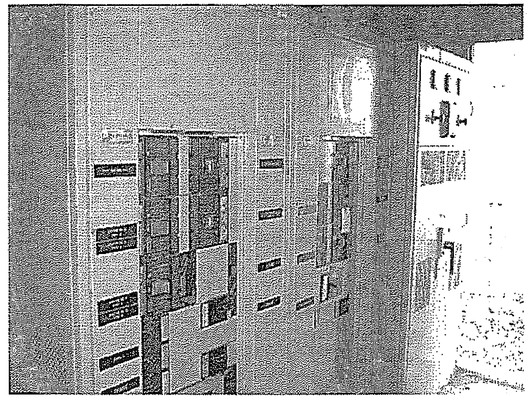
REVISIONS			PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
NO.	DATE	DESCRIPTION				
1	10/20/06	REVISION #1	68715	2007	E1	28



1 PARTIAL ONE-LINE DIAGRAM
E2 NTS

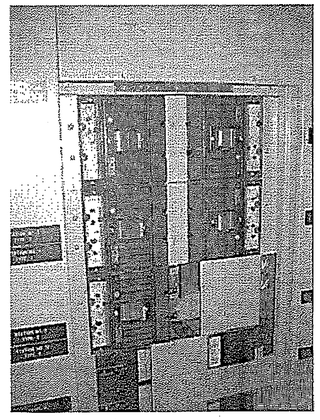
NOTES:

1. ADD 1-1200A, 3-POLE BREAKER TO SWITCHGEAR FOR THE NEW CIRCUIT. PROVIDE NEW BREAKER AND ALL ASSOCIATED HARDWARE AND ANY BUS MODIFICATIONS THAT MAY BE REQUIRED FOR A COMPLETE INSTALLATION.
2. REFER TO PHOTO OF SWITCHGEAR SECTION 3 (3/E2). SECTIONS OF THE COVER ARE MISSING. PROVIDE NEW COVER SECTIONS AS REQUIRED TO COMPLETELY COVER ALL EXPOSED LIVE PARTS.
3. REFER TO FEEDER SCHEDULE FOR CONDUCTOR/CONDUIT SIZING. EXTEND FROM SWITCHGEAR



NOTE:
1. SECTION #3 IS CLOSEST

2 PHOTO OF EXISTING SWITCHGEAR
E2 NTS

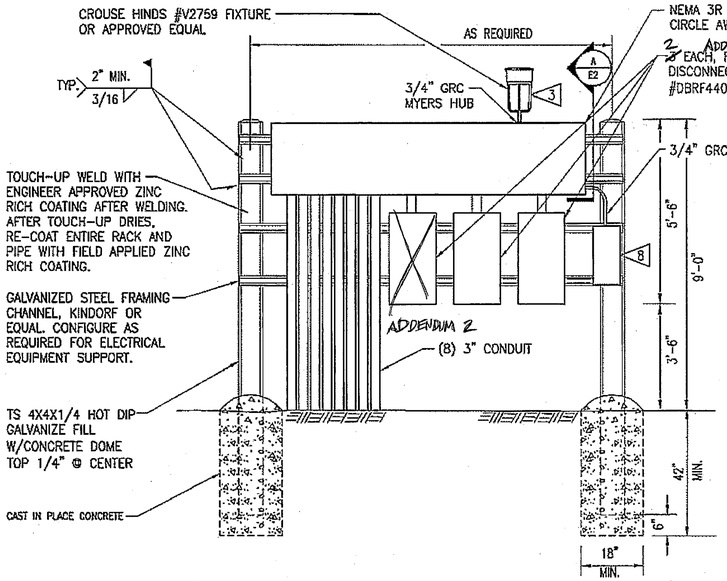


NOTE:
1. PROVIDE NEW COVER FOR THIS SECTION TO COVER EXPOSED LIVE PARTS.

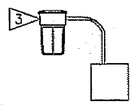
3 PHOTO OF SECTION 3
E2 NTS

FEEDER SCHEDULE

CONDUCTORS	EQUIPMENT GROUNDING CONDUCTOR	CONDUIT	REMARKS
(4)3-350 kcmil Cu. XHHW	1- 3/0 Cu.	(4) 3" GRC	FEEDER FROM NEW 1200A CIRCUIT BREAKER TO SHORE POWER RACKS LOC#1 & LOC#2 CONSISTS OF FOUR PARALLEL RUNS
3-500 kcmil Cu. XHHW	1- 3/0 Cu.	3 1/2" GRC	TAPS FROM MAIN FEEDER TO EACH DISCONNECT



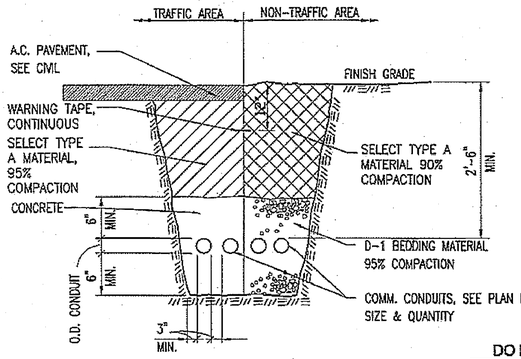
4 SHORE POWER RACK DETAIL
E2 NTS



A SECTION
E2 NTS

NOTES:

1. REFER TO FEEDER SCHEDULE FOR FEEDER CIRCUIT SIZING.
2. SHORE POWER RACK #1 HAS 8 CONDUITS, 4 FROM SWITCHGEAR, 4 TO SHORE POWER RACK #2 FROM SHORE POWER RACK #1. THE RACK AT LOCATION TWO IS SIMILAR.
3. FIXTURE MOUNTED 1'-0" IN FRONT OF EQUIPMENT, BRACE AS NECESSARY.
4. INSTALL GROUNDING BUSHINGS AT ALL CONDUITS AND NIPPLES AND BOND TO ENCLOSURE WITH #1AWG Cu.
5. USE DUCT SEAL TO PLUG THE CONDUIT ENTRIES BETWEEN THE BUSSED GUTTER AND THE NIPPLES TO THE DISCONNECTS.
6. ALSO PROVIDE THE FOLLOWING FOR EACH SHORE POWER ATTACHMENT POINT:
7. 2- 70' SECTIONS, AMERICAN INSULATED WIRE CORP. TYPE W, PORTABLE POWER CABLE 4-CONDUCTOR, 500kcmil, 2- MALE PLUG, RUSSELL STOLL #DS4404MFP000
8. 2- FEMALE PLUG, RUSSELL STOLL #DF404FP000
9. USE IRREVERSIBLE CRIMP TYPE CONNECTORS FOR ALL CONNECTION TO BUS.
10. PROVIDE SQUARE D FAL14015, 1-POLE, 15AMP BREAKER IN FA100DS ENCLOSURE (NEMA 4X) FOR SWITCHING THE LIGHT FIXTURE. TAP FEEDERS FOR POWERING CIRCUIT.



5 TYPICAL TRENCH DETAIL
E2 NTS

NOTES:

1. TRENCH WALL SLOPES WILL VARY WITH SOIL STRENGTH AND CHARACTERISTICS, SLOPE OR SHORE TO CONFORM TO SAFETY STANDARDS.
2. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN ODORS OR SHEENS ARE DISCOVERED THAT MIGHT INDICATE CONTAMINATION IN ANY EXCAVATED SOILS MOVED THROUGH DREDGING, EXCAVATION, TRENCHING OR GRADING.

AS-BUILT PLANS
by Dawson
INITIALS KRT DATE 3/10/09

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: DJI
DESIGNED BY: TJP
DRAWN BY: TAH

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

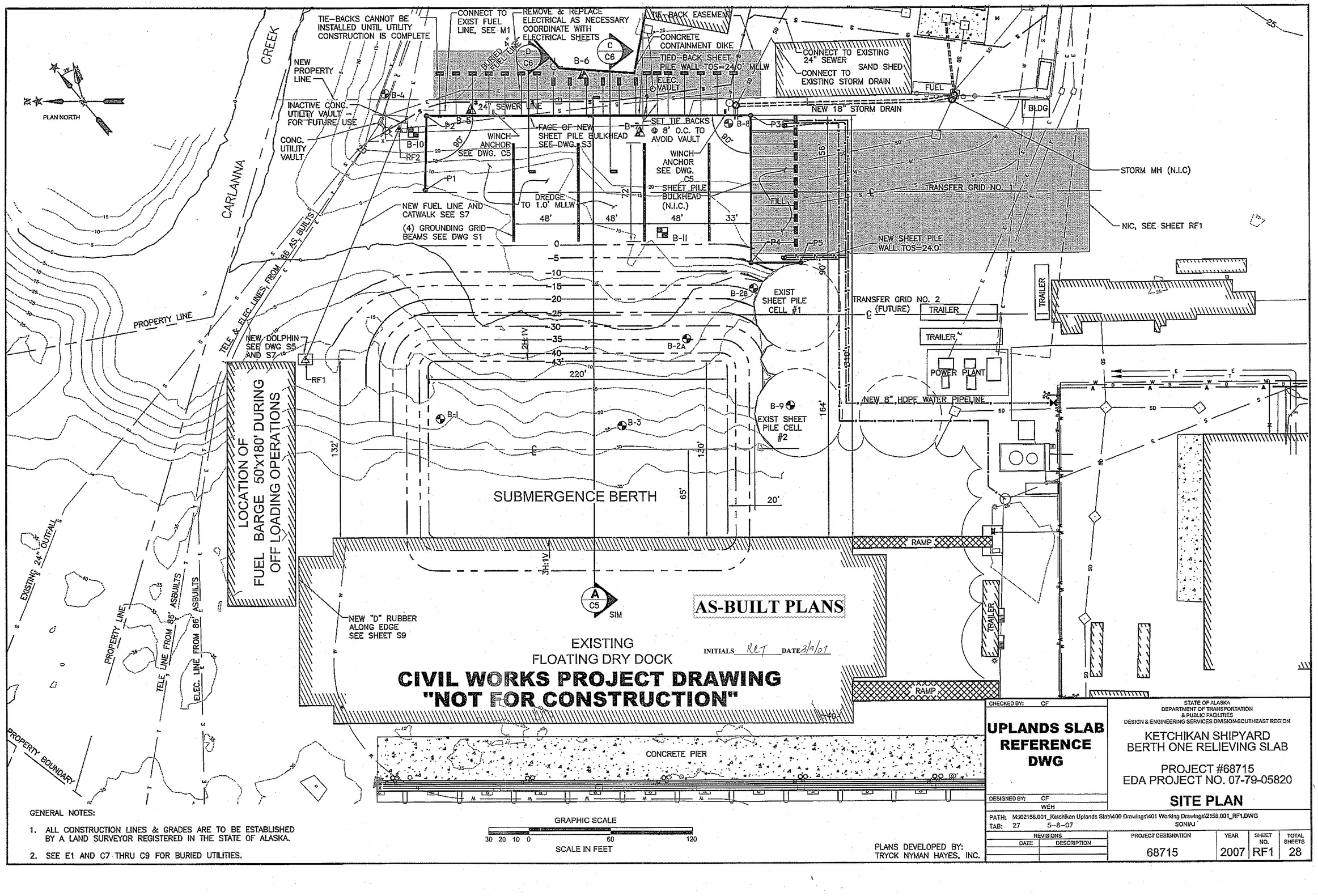
PROJECT #68715

ELECTRICAL ONE-LINE AND DETAILS

PATH: P:\03139 SHIPLIFT FOR KETCHIKAN SHIPYARD\DRAWINGS\02158.001 DWGS\03139E2.DWG
TAB: E2 5-8-07 MORROW, ANDREA

REVISIONS NO.	DATE	DESCRIPTION
1	10/20/06	REVISION #1

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	E2	28



GENERAL NOTES:

1. ALL CONSTRUCTION LINES & GRADES ARE TO BE ESTABLISHED BY A LAND SURVEYOR REGISTERED IN THE STATE OF ALASKA.
2. SEE E1 AND C7 THRU C9 FOR BURIED UTILITIES.

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC.

CHECKED BY: CF

UPLANDS SLAB REFERENCE DWG

DESIGNED BY: CF
WEH

PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_RF1.DWG
TAB: 27 5-8-07 SONIAJ

REVISIONS	
DATE	DESCRIPTION

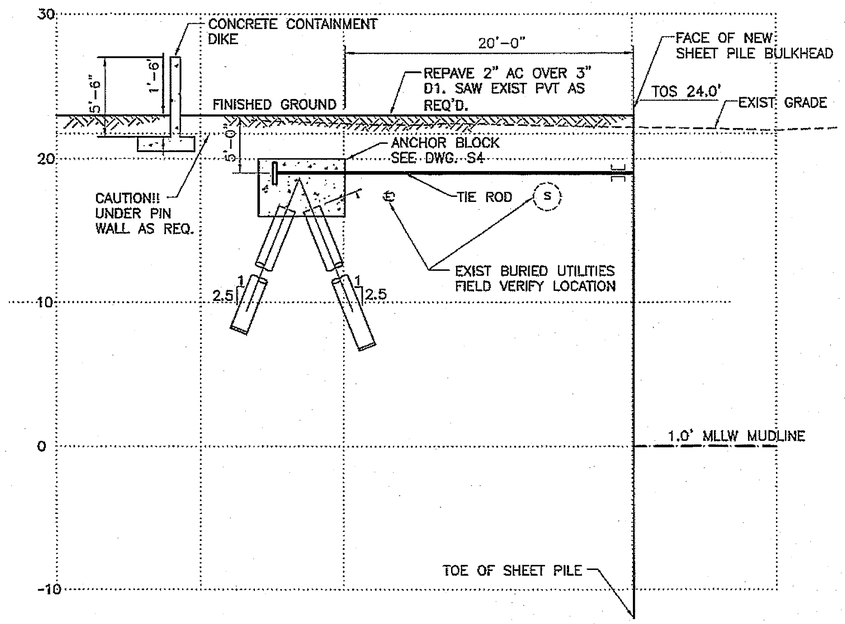
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

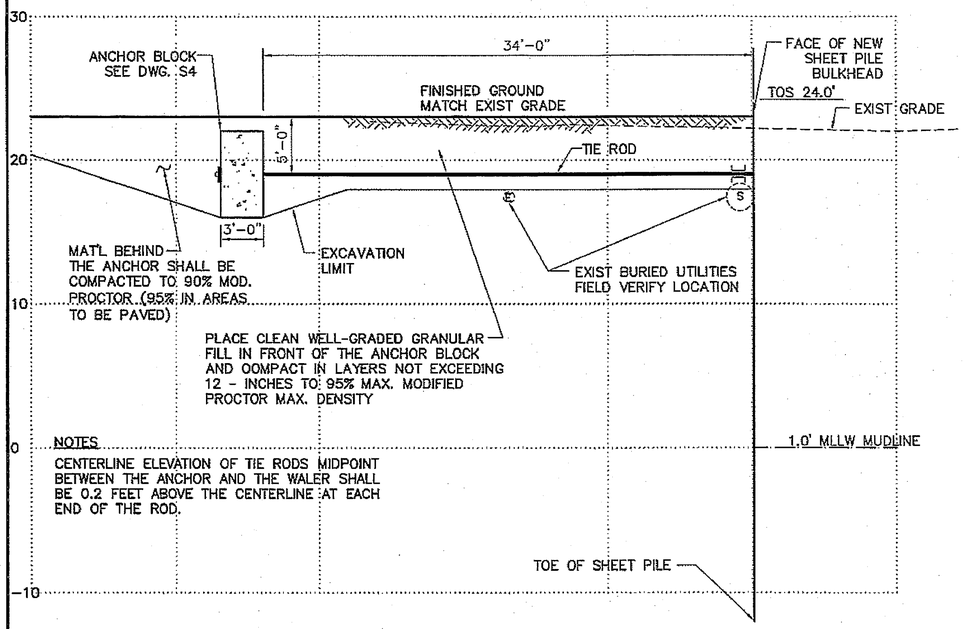
PROJECT #68715
EDA PROJECT NO. 07-79-05820

SITE PLAN

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	RF1	28



C / C4 PILE-TYPE ANCHOR PROFILE
SCALE: 1" = 5'



D / C4 ANCHOR BLOCK PROFILE
SCALE: 1" = 5'

CIVIL WORKS PROJECT DRAWING
"NOT FOR CONSTRUCTION"

GRAPHIC SCALE
5 0 5 10
(IN FEET)
SCALE: 1" = 5'

AS-BUILT PLANS

INITIALS KRT DATE 3/9/09

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC.

DO NOT SCALE FROM THESE DRAWINGS USE DIMENSIONS

CHECKED BY: CF
DESIGNED BY: CF
DRAWN BY: WEH

UPLANDS SLAB REFERENCE DWG

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715
EDA PROJECT NO. 07-79-05820

CIVIL DETAILS

PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_RF2.DWG
TAB: 28 5-8-07 SONIAJ

REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	RF2	28

GENERAL NOTES

1. DESIGN CRITERIA
THE SLAB DESIGN IS BASED ON THE FOLLOWING LOAD ASSUMPTIONS:
–MANITOWOC 4100W S2 CRANE WITH 150' BOOM.
–THE CRANE MAY WALK UNLOADED PARALLEL TO THE RAIL BEAMS WITHOUT TIMBER MATS. THE CRAWLERS ARE TO BE POSITIONED DIRECTLY ON THE CAST–IN–PLACE SLAB AND NOT ON THE RAIL BEAMS.
–THE CRANE MAY WALK PERPENDICULAR TO THE RAIL BEAMS BUT ONLY WITH TIMBER MATS AT LEAST 12" THICK.
–WHEN PICKING LOADS THE CRANE MUST BE ON TIMBER MATS AT LEAST 12" THICK. THE CRANE MAY PICK LOADS UP TO 42,500 POUNDS.

2. PARTIAL SEQUENCE OF STRUCTURAL CONSTRUCTION
KETCHIKAN SHIPYARD IS EMBARKING ON A MULTI–YEAR EXPANSION PROJECT. THE FIRST SERIES OF CONSTRUCTION CONTRACTS ARE AS FOLLOWS

A. EDA CIVIL WORKS: CONSTRUCTION OF SHEET PILE BULKHEADS, DREDGING, CONSTRUCTION OF AN IN–WATER GROUNDING GRID, AND DEMOLITION AND RECONSTRUCTION OF A FUEL BARGE BERTH.

B. THIS PROJECT WHICH INVOLVES CONSTRUCTION OF A 250–FT BY 90–FOOT CONCRETE SLAB AND UTILITY RELOCATIONS.

THESE PROJECTS WILL BE CONSTRUCTED WITHIN THE EXISTING SHIPYARD WHERE VESSEL REPAIRS AND FABRICATION WILL BE ON–GOING. ACCESS INTO THE SITE WILL BE SHARED BY ALL THESE ACTIVITIES. THE EXACT SCHEDULE FOR THE VARIOUS PROJECTS IS UNCERTAIN AT THIS TIME. THE UPLANDS SLAB PROJECT OVERLAPS THE EDA CIVIL WORKS PROJECT NEAR THE SOUTH BULKHEAD. CLOSE COORDINATION BETWEEN THE EDA AND UPLANDS SLAB CONTRACTORS IS REQUIRED.
–PILES FOR THE PILE–SUPPORTED SLAB (SOG) MUST BE DRIVEN IN ADVANCE OF PLACING ANY CONCRETE OR PRECAST CONCRETE.
–IF BOTH SECTIONS OF THE SOG (NON–PILE SUPPORTED SLAB) ARE CONSTRUCTED AT THE SAME TIME, THE PT SPLICE LOCATED 57' SOUTH OF THE PILE–SUPPORTED SLAB IS TO BE ELIMINATED AND THE ENTIRE LENGTH OF THE RAIL BEAMS POST–TENSIONED IN ONE OPERATION.
–FOR THE SOG, THE RAIL BEAMS ARE TO BE SET AND POST–TENSIONED PRIOR TO CASTING ADJACENT CIP SECTIONS.
–CIP SPLICES BETWEEN THE PRECAST RAIL BEAMS MUST REACH A CONCRETE STRENGTH OF f'c = 3000 PSI BEFORE COMMENCING POST–TENSIONING.
–THE CONTRACTOR SHALL SUBMIT THE RAIL BEAM STRESSING SEQUENCE FOR REVIEW 30–DAYS PRIOR TO STRESSING.
–THE JOINT BETWEEN THE PRECAST RAIL BEAMS AND THE PILE–SUPPORTED SLAB MAY NOT BE CAST UNTIL 21 DAYS FOLLOWING POST–TENSIONING.
–SLABS ADJACENT TO THE RAIL BEAMS MAY NOT BE CAST UNTIL 7 DAYS FOLLOWING POST–TENSIONING.
–PT DUCTS MUST BE GROUTED WITHIN 7 DAYS OF POST–TENSIONING.

3. CAST–IN–PLACE CONCRETE
ALL CAST–IN–PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH F'C = 5,000 PSI. ALL CONCRETE SHALL BE AIR–ENTRAINED AND CONTAIN DCI CORROSION INHIBITOR.
–ALL ITEMS EMBEDDED IN CONCRETE SHALL BE HOT DIP GALVANIZED. (EXCEPT REBAR & PILING ARE TO BE BARE)

4. PRECAST CONCRETE
–ALL CONCRETE SHALL BE AIR ENTRAINED AND CONTAIN DCI CORROSION INHIBITOR.
–PRECAST POST–TENSIONED CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH F'C = 7,000 PSI. USE 0.60–INCH DIAMETER, SEVEN–WIRE LOW RELAXATION STRAND CONFORMING TO ASTM A–421 AND ASTM A–416, GRADE 270.
–THE STRESSING METHOD FOR THE RAIL BEAMS SHALL MAINTAIN A UNIFORM STRESS IN THE CONCRETE SECTION. THE STRESSING METHOD SHALL BE DESIGNED TO ACHIEVE A COMPRESSIVE FORCE OF 575 KIPS IN THE CONCRETE RAIL BEAM AFTER ALL LOSSES. INCLUDE LOSSES DUE TO FRICTION ON THE BOTTOM OF THE CONCRETE RAIL BEAM IN THE LOSS CALCULATIONS. STRESS FROM BOTH ENDS.
–OTHER PRECAST CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH F'C = 5,000 PSI. THE WATER–CEMENT RATIO W/C SHALL NOT EXCEED 0.40.
–THE SUPPLIER SHALL PROVIDE DETAILED BUNKING REQUIREMENTS FOR TRANSPORTATION AND ONSITE STORAGE. HANDLING AND BUNKING DIAGRAMS ARE TO BE INCLUDED ON THE SHOP DRAWINGS.

Concrete for Rails were cast in place

–UTILIDORS, PITS AND RAIL BEAMS ARE SHOWN AS PRECAST CONCRETE ELEMENTS. IN LIEU OF PRECASTING, THE CONTRACTOR MAY CAST THESE ITEMS IN PLACE. CONCRETE STRENGTHS AND REINFORCING REQUIREMENTS WILL BE THE SAME FOR CAST–IN–PLACE (CIP) CONCRETE AS FOR THE PRECAST CONCRETE. THE PRECAST CONCRETE SUPPLIER MAY HAVE TO ADD ADDITIONAL REINFORCEMENT AND INSERTS FOR HANDLING AND SHALL DEMONSTRATE THAT THE PROPOSED METHODS OF HANDLING WILL NOT OVERSTRESS THE ELEMENTS.
–REMOVABLE LIDS FOR PITS AND UTILIDORS SHALL BE MATCH CAST ON SITE.

5. STRUCTURAL STEEL
–STEEL PLATE AND SHAPES SHALL BE ASTM A–36 UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER. ALL BOLTS SHALL BE ASTM A–307 UNLESS OTHERWISE NOTED. BOLTS SHALL BE INSTALLED "SNUG TIGHT". HOLES MAY NOT BE BURNED; THEY MUST BE PUNCHED OR DRILLED.

6. WELDING
–ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1. USE ELECTRODES WITH 70 KSI TENSILE STRENGTH U.O.N.

7. STEEL PILING
–HP PILES SHALL BE ASTM A572 GRADE 50. ALL PILING SHALL BE FITTED WITH CAST–STEEL CUTTING SHOES. SPLICE PILES WITH COMPLETE JOINT PENETRATION WELDS IN ACCORDANCE WITH AWS D1.1.
–ALL PILES SHALL BE DRIVEN TO A MINIMUM DRIVING RESISTANCE AND MINIMUM PENETRATION FOR BOTH IMPACT AND VIBRATORY HAMMERS. WHERE A VIBRATORY HAMMER IS USED THE PILE MUST BE PROOFED WITH AN IMPACT HAMMER.
–A CONTINUOUS DRIVING RECORD IN BLOWS PER FOOT OR INCHES PER MINUTE SHALL BE TAKEN FOR THE ENTIRE LENGTH OF ALL PILES. THE WAVE EQUATION WILL BE USED TO DETERMINE THE MINIMUM DRIVING RESISTANCE.
–IF THE MINIMUM PENETRATION IS NOT OBTAINED THE PILE SHALL BE DRIVEN TO 2 TIMES THE RECOMMENDED MINIMUM DRIVING RESISTANCE. IF THE REQUIRED MINIMUM DEPTH IS STILL NOT OBTAINED IT IS LIKELY THAT AN OBSTRUCTION HAS BEEN ENCOUNTERED AND THE PILE SHALL BE PULLED AND RE–DRIVEN, OR PRE–DRILLED AND THEN DRIVEN.
–HARD DRIVING IS ANTICIPATED IN THE TILLS AND PRE–DRILLING MAY BE REQUIRED. SCATTERED BOULDERS AND COBBLES MAY ALSO BE ENCOUNTERED. PRE–DRILL ONLY WITH WRITTEN AUTHORIZATION FROM OWNERS REPRESENTATIVE.
–THE CONTRACTOR IS TO EXPOSE THE ADJACENT TIE–RODS PRIOR TO DRIVING EVERY PILE. THE TIP OF THE PILE MUST BE PLACED BELOW THE TIE–ROD ELEVATION AT THE START OF DRIVING.

8. STEEL TIE RODS
TIE RODS SHALL ALL–THREAD–BAR WITH A MINIMUM YIELD STRENGTH OF 150 KSI CONFORMING TO ASTM A–722–95. THE BARS SHALL BE COATED WITH FUSION BONDED EPOXY CONFORMING TO ASTM A–775. USE SPRAY EPOXY COATING IN THE FIELD TO REPAIR NICKS OR SCRATCHED SURFACES. AT A MINIMUM, ALL TENSION COMPONENTS OF THE SYSTEM MUST DEVELOP 100% OF THE BARS PUBLISHED ULTIMATE STRENGTH. THE BARS MAY NOT BE WELDED. FIELD CUTTING MUST BE DONE WITH AN ABRASIVE WHEEL OR BAND SAW; THEY MAY NOT BE TORCH CUT. BEARING PLATES, NUTS, AND WASHERS SHALL BE FURNISHED BY THE BAR SUPPLIER AND BE SIZED FOR THE CAPACITY OF THE BAR AND THE INTENDED APPLICATION. ALL OF THE HARDWARE SHALL BE FUSION BONDED EPOXY COATED LIKE THE TIE RODS. WHERE BARS ARE ANGLED, BEVELED WASHERS OR DISHED PLATES WITH ROUNDED NUTS SHALL BE PROVIDED. BARS MAY NOT BE SPLICED. PLATE WASHERS SHALL CONFORM TO ASTM F–436, TYP 1 HEAVY DUTY HEX NUTS FOR GRADE 150 ALL–THREAD–BAR SHALL CONFORM TO ASTM A–29, GRADE C–1045.

PILE CRITERIA

LOCATION	PILE SIZE	WORKING LOAD (KIPS)	ESTIMATED LENGTH (FEET)	MINIMUM PENETRATION (FEET)
RELIEVING SLAB	HP10	~~190~~ C	~~77~~ 126–144	39 (SEE PILE LOGS FOR ACTUAL LENGTH ALL PILING TO REFUSAL TO REACH REQUIRED CAPACITY)
TROLLEY BEAM	16	~~30~~ C	~~80~~ 90	30 (BELOW FUTURE DREDGE LINE)

C=COMPRESSION

REQUIRED ULTIMATE CAPACITY = 2X WORKING LOAD. ESTIMATED LENGTH IS THE LENGTH FROM CUT–OFF TO TIP, THAT IS EXPECTED TO ACHIEVE THE REQUIRED ULTIMATE CAPACITY. MINIMUM PENETRATION IS THE LENGTH FROM BOTTOM OF RELIEVING SLAB CONCRETE TO TIP, REQUIRED FOR UPLIFT OR LATERAL LOADS.

9. HEAVY TIMBER
TIMBER PRESSURE TREATED NO. 1 OR BETTER DOUG–FIR. PRESSURE TREATMENT SHALL BE PERFORMED AFTER ALL CUTTING, DRILLING, DAPPING, AND COUNTERSINKING IS COMPLETED. PRESSURE TREATING SHALL CONFORM TO THE AMERICAN WOOD–PRESERVERS ASSOCIATION STANDARD C18. TREATMENT SHALL CONSIST OF CREOSOTE AT A MINIMUM RETENTION OF 26 POUNDS PER CUBIC FOOT. ALL BOLTS, RODS, WASHERS, NUTS AND OTHER HARDWARE SHALL BE HOT DIP GALVANIZED.

10. ~~CORRUGATED METAL PIPE~~ NOPE ADD. 2
–~~THE 30" DIAMETER CORRUGATED METAL PIPE BETWEEN THE PITS SHALL BE GALVANIZED STEEL WITH 2 2/3" X ½" CORRUGATIONS AND A MINIMUM THICKNESS OF 0.064".~~
–THE CONTRACTOR SHALL KEEP CONSTRUCTION DEBRIS OUT OF THE UNDER SLAB DRAINS.

11. STEEL RAILS
–STEEL FOR RAILS: (SEE SPECS) THE RAILS ARE TO BE INSTALLED STRAIGHT, PARALLEL AND LEVEL AND MATCH THE POSITION OF THE RAILS ON THE DRAWINGS, ~~GROUNDED SHIP LIFT.~~ THE RAILS MAY NOT VARY MORE THAN 3/32" (0.016') FROM CENTERLINE OR MORE THAN 1/16" (0.016') FROM GRADE. THE HORIZONTAL AND VERTICAL GAP BETWEEN RAILS AND A TEN FOOT STRAIGHT–EDGE SHALL NOT EXCEED 3/32" (.0078'). ADJOINING SECTIONS OF RAIL MAY NOT VERY MORE THAN 1/32" (0.0313") VERTICALLY. THE CONTRACTOR SHALL USE STEEL SHIMS TO SUPPORT THE RAILS TO THESE TOLERANCES OR BETTER BEFORE GROUTING. GROUT THE RAILS WITH SIKAGROUT 212, OR APPROVED EQUAL, MIXED TO A FLOWABLE CONSISTENCY IN ACCORDANCE WITH THE MANUFACTURERS PRINTED INSTRUCTIONS. THE GROUT SHALL BE EXTENDED WITH 3/8" PEA GRAVEL CONFORMING TO ASTM C33 SIZE NUMBER 8 PER TABLE 2 AND INACCORDANCE WITH SIKA'S APPROVED MIXING PROCEDURES. APPLY A CURING COMPOUND CONFORMING TO ASTM C–309 ON EXPOSED SURFACES. SEE ALSO 2/S14 AND 5/S14. NOTE: RAILS ARE NOT DESIGNED FOR UPLIFT.

SHIP LIFT RAILS ARE NOT SPACED W/ SAME TOLERANCE

AS-BUILT PLANS

INITIALS KLT DATE 3/10/09

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC

CHECKED BY: DE
DESIGNED BY: CF
DRAWN BY: WEH

STATE OF ALASKA
CRAIG FREAS
CE 3873
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

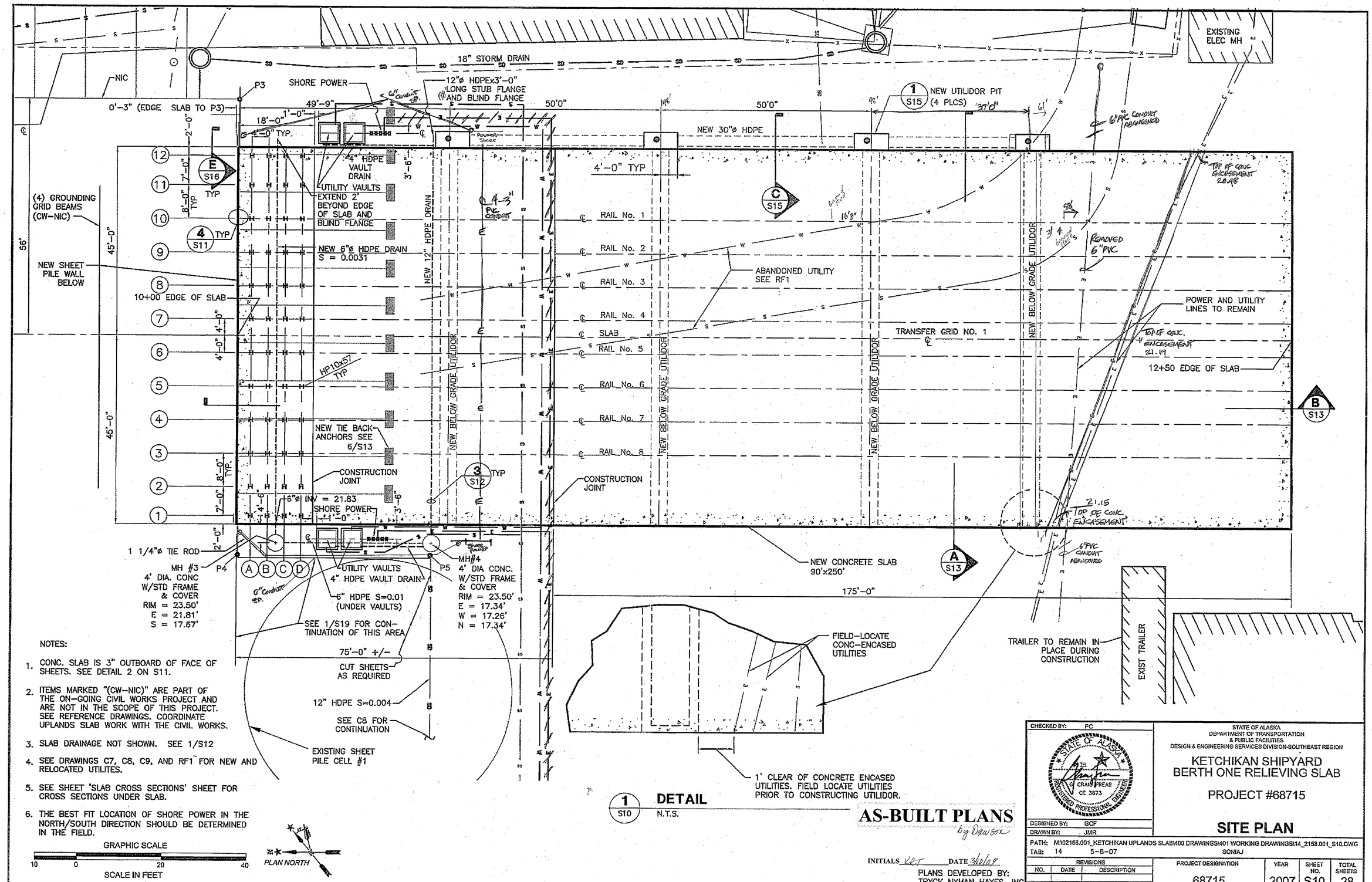
PROJECT #68715

GENERAL NOTES

PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_S0
TAB: 13 5-8-07 SONIAJ

REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	S0	28



NOTES:

1. CONC. SLAB IS 3" OUTBOARD OF FACE OF SHEETS. SEE DETAIL 2 ON S11.
2. ITEMS MARKED "(CW-NIC)" ARE PART OF THE ON-GOING CIVIL WORKS PROJECT AND ARE NOT IN THE SCOPE OF THIS PROJECT. SEE REFERENCE DRAWINGS. COORDINATE UPLANDS SLAB WORK WITH THE CIVIL WORKS.
3. SLAB DRAINAGE NOT SHOWN. SEE 1/S12
4. SEE DRAWINGS C7, C8, C9, AND RF1 FOR NEW AND RELOCATED UTILITES.
5. SEE SHEET 'SLAB CROSS SECTIONS' SHEET FOR CROSS SECTIONS UNDER SLAB.
6. THE BEST FIT LOCATION OF SHORE POWER IN THE NORTH/SOUTH DIRECTION SHOULD BE DETERMINED IN THE FIELD.

1 S10 **DETAIL** N.T.S.

AS-BUILT PLANS by Dawson

INITIALS KRT DATE 3/6/07

PLANS DEVELOPED BY: TRYCK NYMAN HAYES, INC

CHECKED BY: PC

STATE OF ALASKA
CRAIG FREAS CE 3873
REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: GCF
DRAWN BY: JMR

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

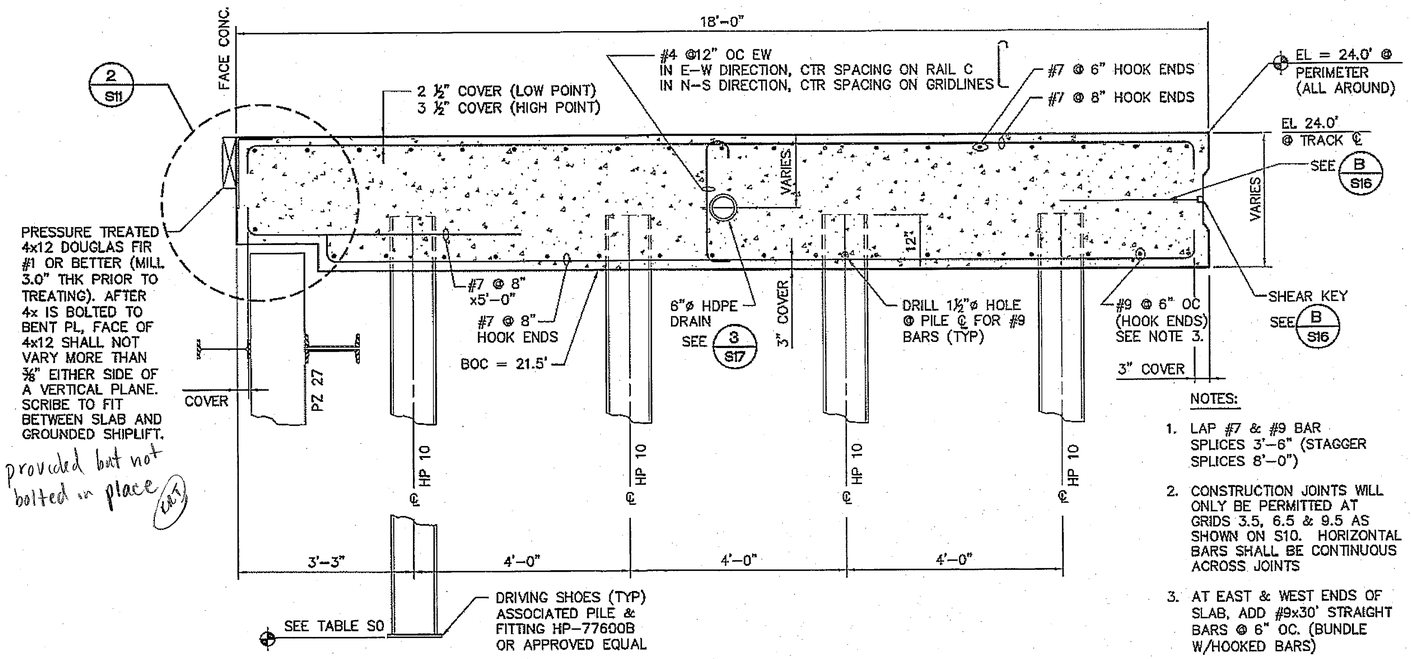
KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

SITE PLAN

PATH: M:\02158.001_KETCHIKAN UPLANDS SLAB\100 DRAWINGS\401 WORKING DRAWINGS\14_2158.001_S10.DWG
TAB: 14 5-8-07 SONIAJ

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			68715	2007	S10	28

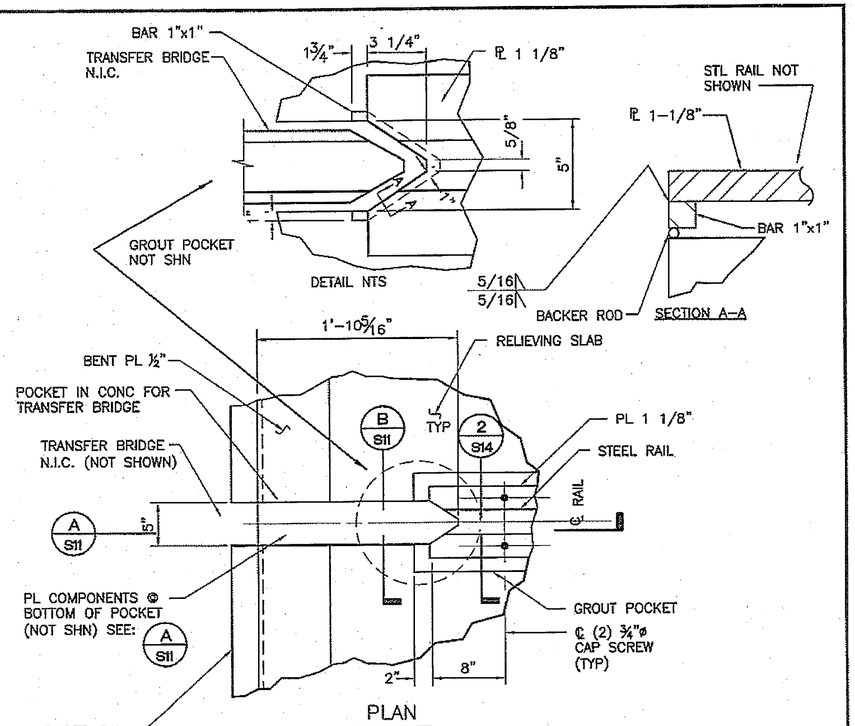


NOTES:

1. LAP #7 & #9 BAR SPLICES 3'-6" (STAGGER SPLICES 8'-0")
2. CONSTRUCTION JOINTS WILL ONLY BE PERMITTED AT GRIDS 3.5, 6.5 & 9.5 AS SHOWN ON S10. HORIZONTAL BARS SHALL BE CONTINUOUS ACROSS JOINTS
3. AT EAST & WEST ENDS OF SLAB, ADD #9x30' STRAIGHT BARS @ 6" OC. (BUNDLE W/HOOKED BARS)

1 S11 RELIEVING SLAB (f'c = 5000 PSI)

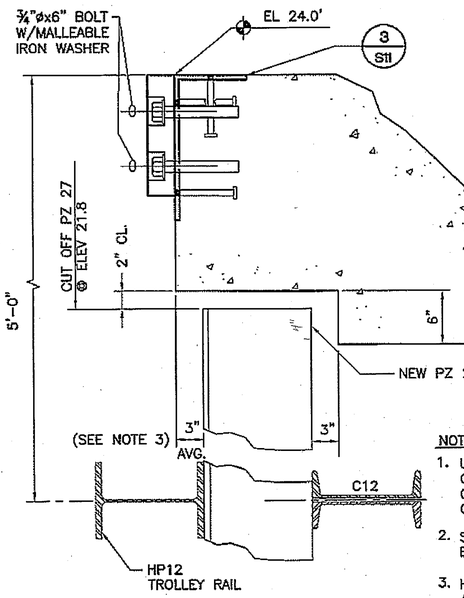
SCALE: 3/4" = 1'-0"



PLAN

4 S11 PLAN @ POCKET FOR TRANSFER BRIDGE

SCALE: 1 1/2" = 1'-0"

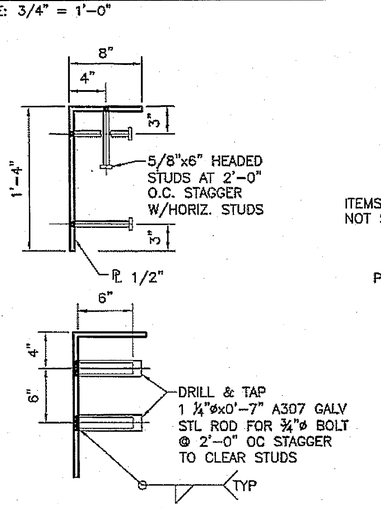


NOTES:

1. USE 16' MIN LENGTHS OF DOUG FIR. TREAT ALL CUTS, DRILLS & COUNTER SINKS.
2. SLAB DOES NOT BEAR ON SHEETS
3. HORIZ LOCATION OF AS-BUILT SHEET PILE WALL WILL VARY. LOCATE SLAB EDGE AS SHN.

2 S11 SLAB CORNER

SCALE: 1 1/2" = 1'-0"



3 S11 SLAB EDGE REINFORCEMENT

SCALE: 1 1/2" = 1'-0"

GRAPHIC SCALE

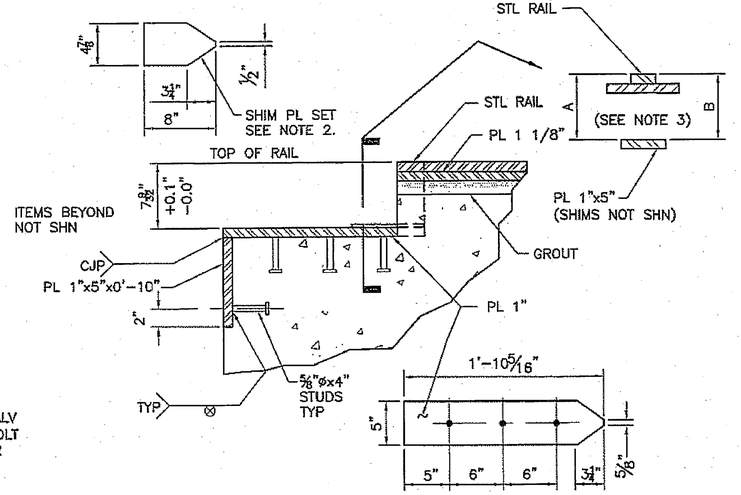
0" 3" 6" 9" 1' 2' 3' 4' 5' 6'

3/4"=1'-0"

GRAPHIC SCALE

0" 3" 6" 9" 1' 2' 3'

1 1/2"=1'-0"

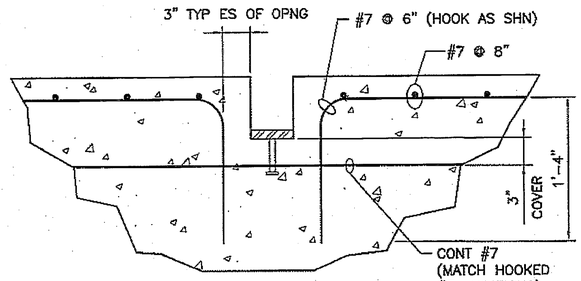


NOTES:

1. HOT DIP GALV PL 1" ASSEMBLY AFTER FABRICATION
2. PROVIDE 8 SETS OF SHIMS. EACH SET TO INCLUDE ONE SHIM OF EACH OF THE FOLLOWING THICKNESSES: 1/16", ⅛", ¼", ½" & ⅛". HOT DIP GALV. TOTAL # OF SHIMS = 40.
3. CROSS SLOPE OF STL RAIL & PL 1"x5" SHALL MATCH: ABSOLUTE VALUE OF DIFFERENCE BTWN A & B SHALL NOT EXCEED 1/16".

A S11 SECTION THRU POCKET FOR TRANSFER BRIDGE

SCALE: 1 1/2" = 1'-0"



B S11 SECTION

SCALE: 1 1/2" = 1'-0"

AS-BUILT PLANS

INITIALS KAT DATE 3/10/09

PLANS DEVELOPED BY: TRYCK NYMAN HAYES, INC

CHECKED BY: DE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

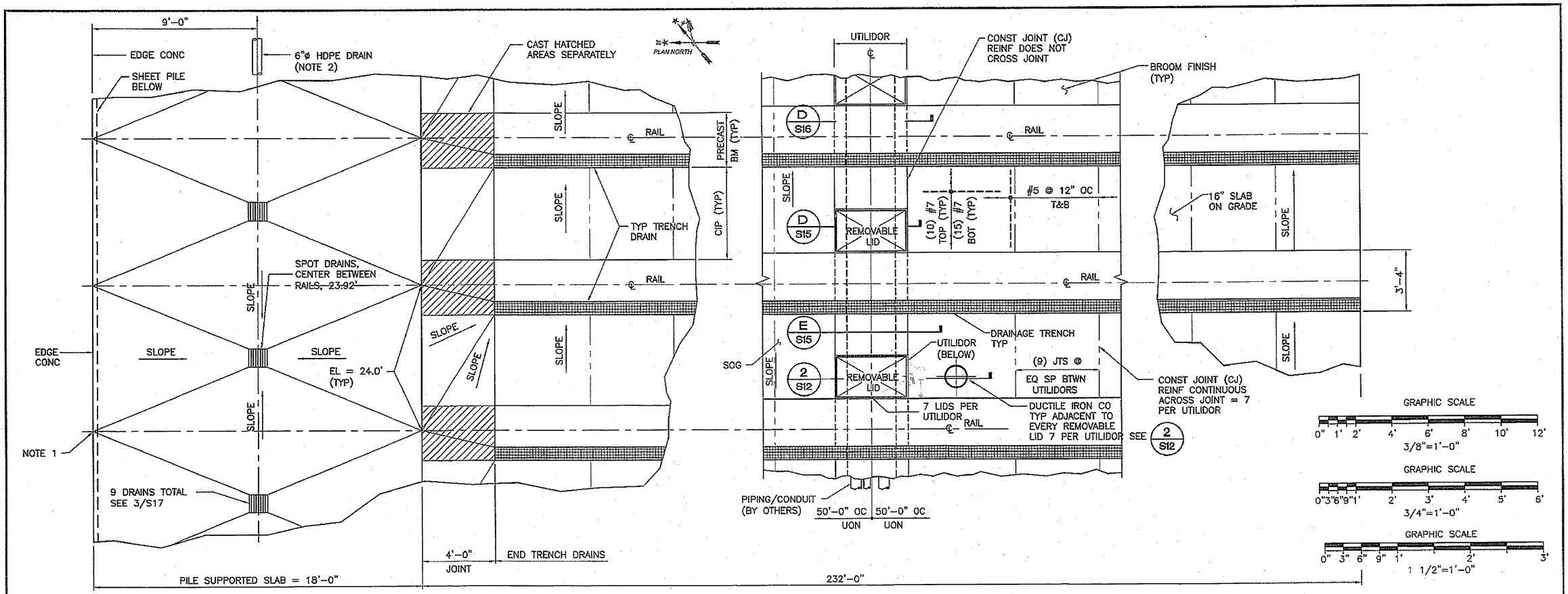
DESIGNED BY: CF

DRAWN BY: WEH

RELIEVING SLAB DETAILS

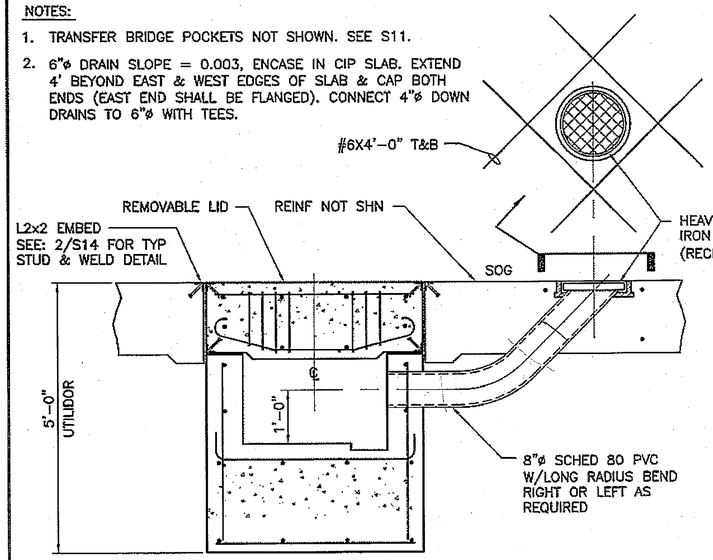
PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_S11.DWG
TAB: 15 5-8-07 SONIAJ

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			68715	2007	S11	28



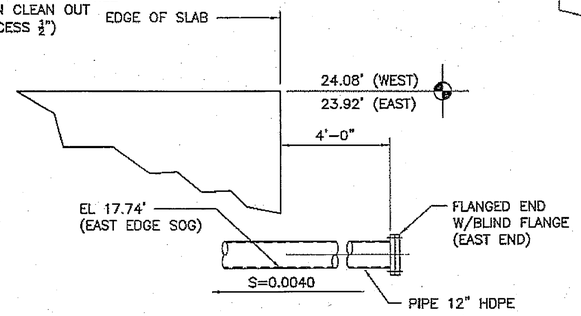
NOTES:

1. TRANSFER BRIDGE POCKETS NOT SHOWN. SEE S11.
2. 6"ø DRAIN SLOPE = 0.003, ENCASE IN CIP SLAB. EXTEND 4' BEYOND EAST & WEST EDGES OF SLAB & CAP BOTH ENDS (EAST END SHALL BE FLANGED). CONNECT 4"ø DOWN DRAINS TO 6"ø WITH TEES.



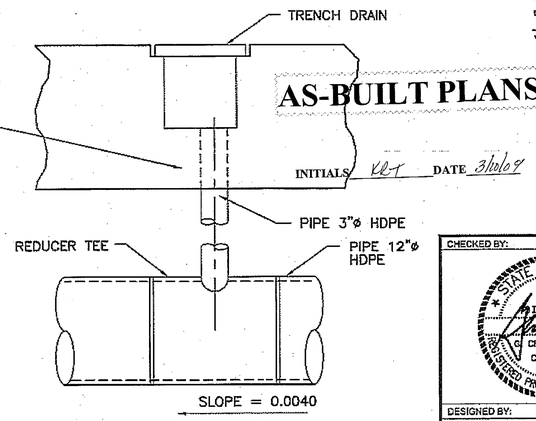
2 S12 UTILITY SERVICE ACCESS
SCALE: 3/4" = 1'-0"
(28 REQ'D)

1 S12 PARTIAL PLAN
SCALE: 3/8" = 1'-0"

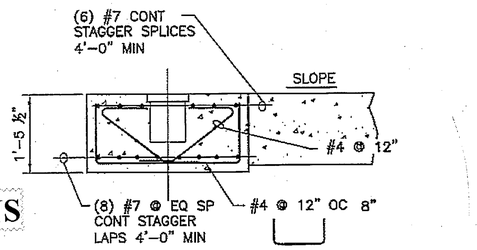


3 S12 12" HDPE DRAIN TERMINATION
SCALE: 3/4" = 1'-0"

B S13
B S14
1 S17



5 S12 TYP DRAIN DETAIL
SCALE: 1 1/2" = 1'-0"



4 S12 DETAIL
SCALE: 3/4" = 1'-0"

AS-BUILT PLANS
INITIALS KBT DATE 3/16/07

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC

CHECKED BY: DE
DESIGNED BY: CF
DRAWN BY: WEH
PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_S12.DWG
TAB: 16 5-8-07 SONIAJ

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

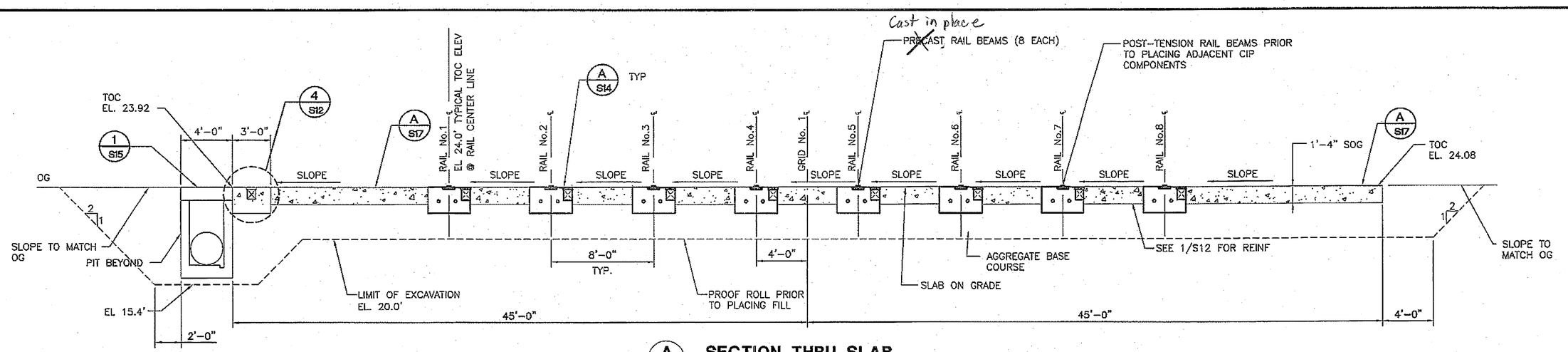
KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

UTILIDOR PLAN & SECTION

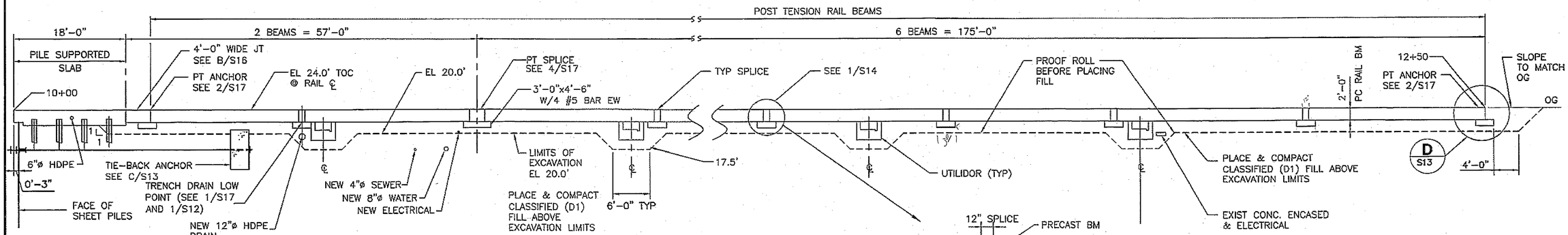
REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	S12	28



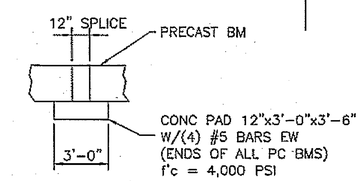
A S13 SECTION THRU SLAB

SCALE: 1/4" = 1'-0"



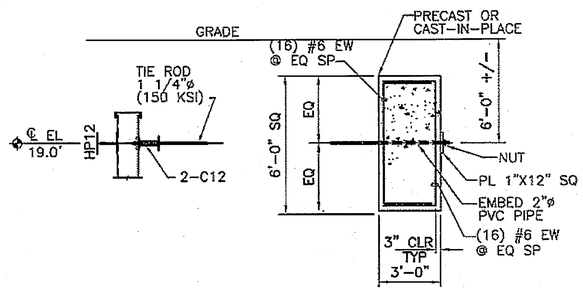
B S13 SECTION THRU SLAB @ RAIL BEAM

SCALE: 1/8" = 1'-0"



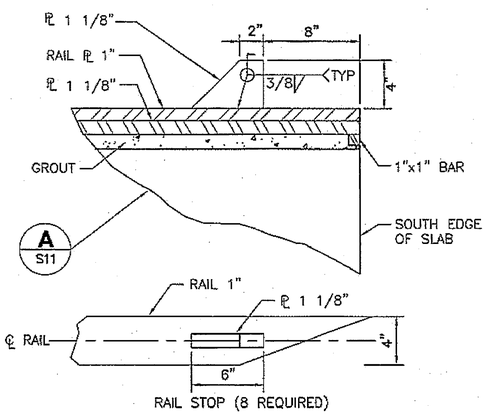
NOTES:

1. CENTERLINE ELEVATON OF TIE RODS MIDPOINT BETWEEN THE ANCHOR AND THE WALER SHALL BE 0.2 FEET ABOVE THE CENTERLINE AT EACH END OF THE ROD.
2. PLACE CLEAN WELL-GRADED GRANULAR FILL IN FRONT OF THE ANCHOR BLOCK AND COMPACT IN LAYERS NOT EXCEEDING 12-INCHES TO 95% MAX. MODIFIED PROCTOR MAX. DENSITY. MATERIAL BEHIND THE ANCHOR SHALL BE COMPACTED TO 98% MOD. PROCTOR (95% IN AREAS TO BE PAVED).
3. SEE SHEET C1 FOR EXISTING GRADE ELEVATIONS.
4. SEE SHEET RF1 & RF2 FOR EXCAVATION, FILL & FINAL GRADE ELEVATONS BY CIVIL WORKS CONTRACTOR ON WATER SIDE ONLY.



C S13 ANCHOR BLOCK

SCALE: 3/8" = 1'-0" (f'c = 4,000 PSI)



D S13 RAIL STOP DETAIL

SCALE: 1/8" = 1"

GRAPHIC SCALE
8' 0 4' 8' 16'
1/8"=1'-0"

GRAPHIC SCALE
1' 0 2' 4' 6' 8' 12' 16'
1/4"=1'-0"

GRAPHIC SCALE
0" 1' 2' 4' 6' 8' 10' 12'
3/8"=1'-0"

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC

AS-BUILT PLANS

INITIALS KRT DATE 3/26/07

CHECKED BY: DE
DESIGNED BY: CF
DRAWN BY: WEH
PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_S13.DWG
TAB: 17 5-8-07 SONIAJ

STATE OF ALASKA
REGISTERED PROFESSIONAL ENGINEER
CRAIG FREAS
CE 3573

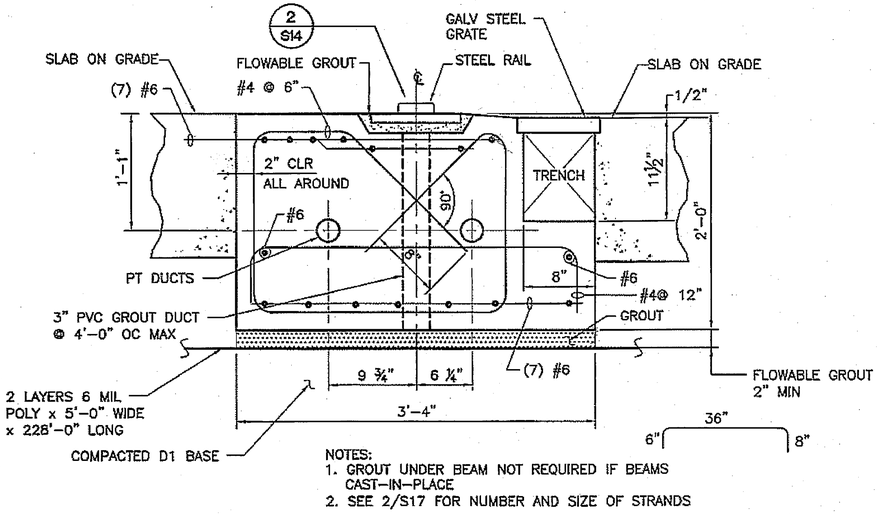
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

CONCRETE SLAB SECTION

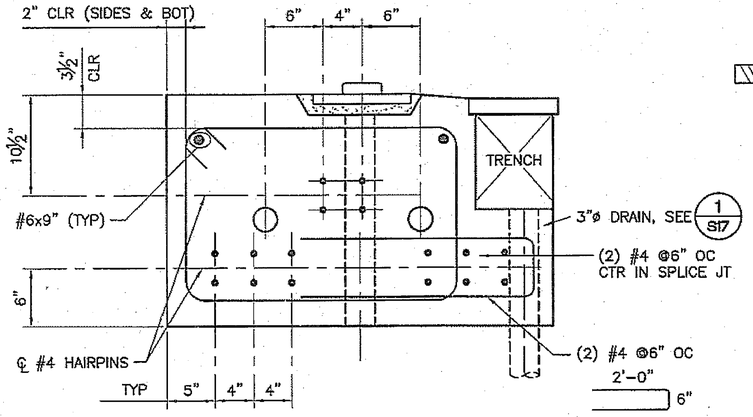
REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			68715	2007	S13	28



NOTES:
1. GROUT UNDER BEAM NOT REQUIRED IF BEAMS CAST-IN-PLACE
2. SEE 2/S17 FOR NUMBER AND SIZE OF STRANDS

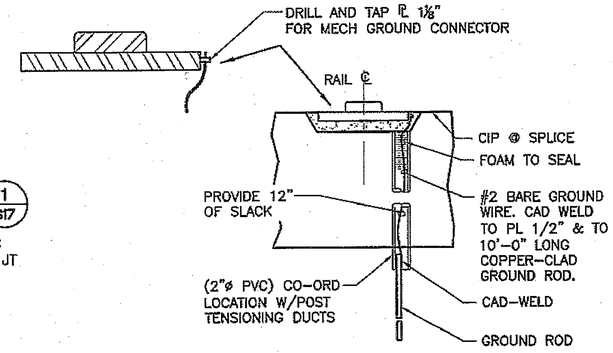
A S14 SECTION @ RAIL BEAM

SCALE: 1 1/2" = 1'-0" f'c = 7000 PSI



B S14 SECTION @ RAIL BEAM SPLICE

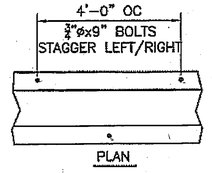
SCALE: 1 1/2" = 1'-0"



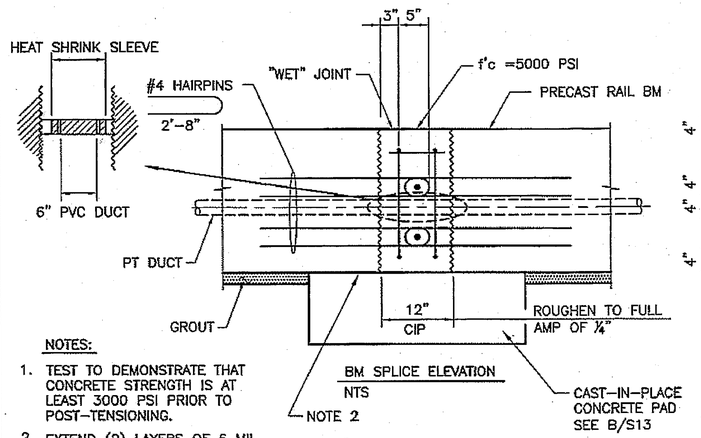
NOTE: (2) GROUNDS FOR EA RAIL (16 TOTAL) LOCATE @ ⅓ POINTS OF 175' SECTION OF SLAB

3 S14 GROUNDING DETAIL

SCALE: 1 1/2" = 1'-0"

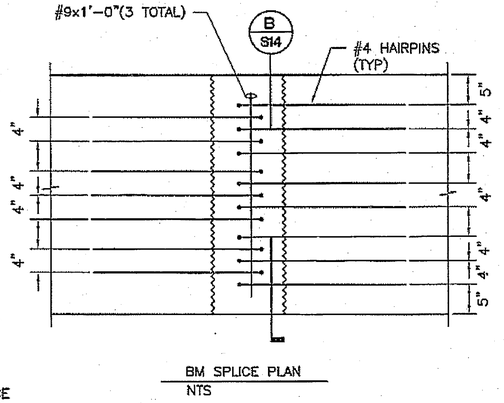


NOTE:
PROVIDE BOLTS WITHIN 12" OF THE ENDS OF ALL SECTIONS OF RAIL UON.



BM SPLICE ELEVATION
NTS

NOTES:
1. TEST TO DEMONSTRATE THAT CONCRETE STRENGTH IS AT LEAST 3000 PSI PRIOR TO POST-TENSIONING.
2. EXTEND (2) LAYERS OF 6 MIL POLY OVER TOP OF CONC PAD

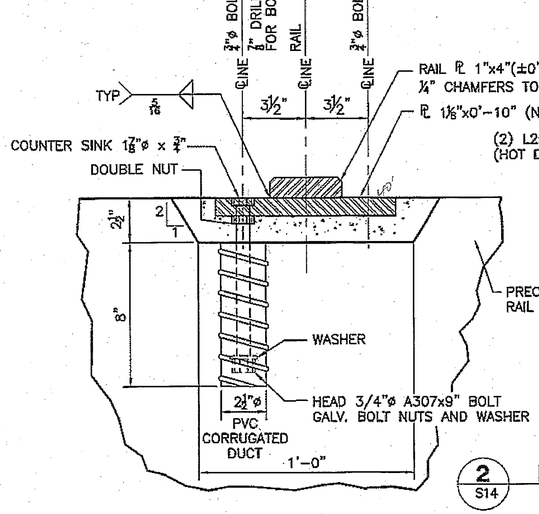


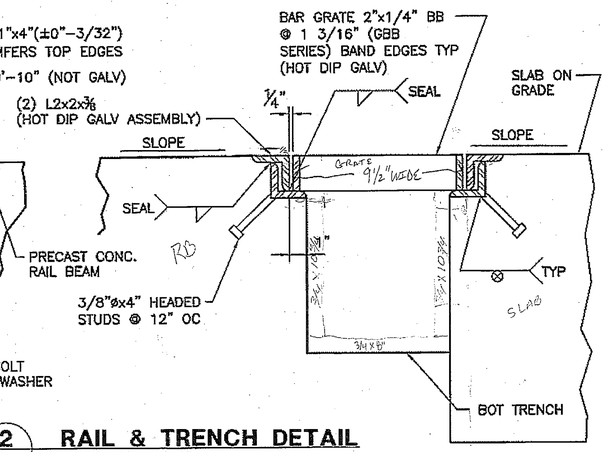
BM SPLICE PLAN
NTS

1 S14 RAIL SPLICE PLAN & ELEVATION

SCALE: 1 " = 1'-0"

NOTES:
1. INSTALL NUTS FINGER TIGHT PRIOR TO GROUTING.
2. BOLT TO PROJECT ⅜" ABOVE NUT AT FINGER TIGHT.
3. MANUALLY TIGHTEN TO SNUG TIGHT AFTER GROUT CURES.
4. DO NOT USE IMPACT WRENCH TO TIGHTEN.
5. FLOOD DUCT WITH GROUT WHEN KEYWAY IS GROUTED.
6. PROVIDE BOLTS WITHIN 12" OF THE ENDS OF ALL PLATES UON.



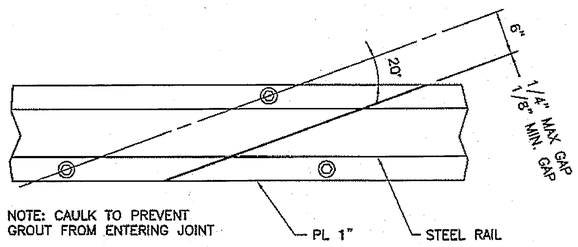


2 S14 RAIL & TRENCH DETAIL

SCALE: 3" = 1'-0"

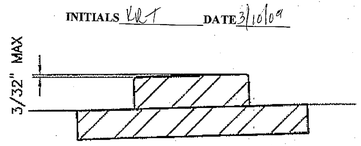
AS-BUILT PLANS

INITIALS KRT DATE 3/10/09



4 S14 TYP RAIL JOINT

NTS



5 S14 RAIL CROSS-SLOPE TOLERANCE

NTS

GRAPHIC SCALE
3" 0 3" 6" 9" 1' 2' 3' 4' 5'
1"=1'-0"

GRAPHIC SCALE
0" 3" 6" 9" 1' 2' 3'
1 1/2"=1'-0"

GRAPHIC SCALE
0 3" 6" 9" 1' 1.5'
3"=1'-0"

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC.

CHECKED BY: DE
DESIGNED BY: CF
DRAWN BY: WEH

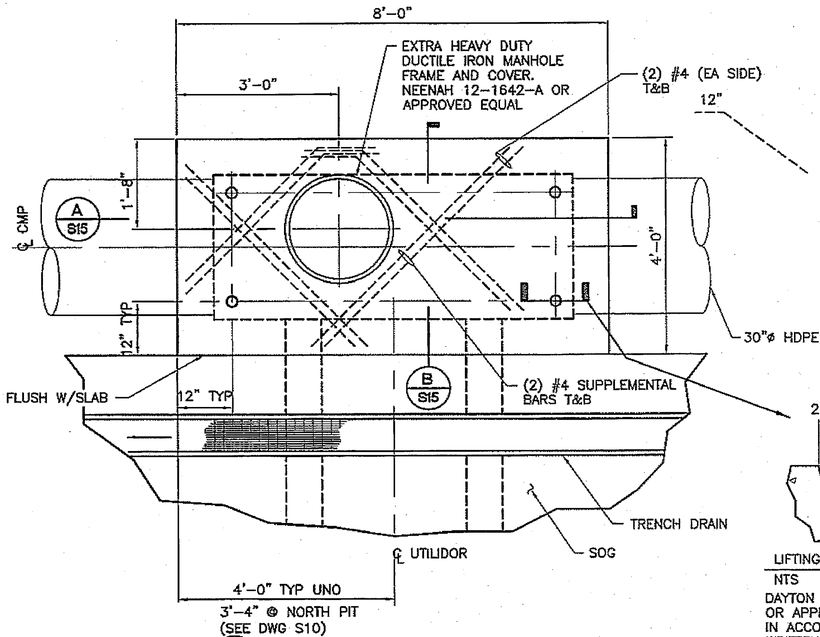
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB
PROJECT #68715

RAIL BEAMS & MISC DETAILS

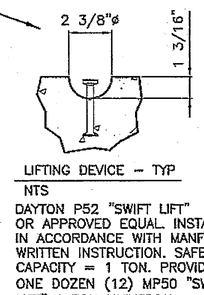
PATH: M:\02158.001_KETCHIKAN UPLANDS SLAB\400 DRAWINGS\401 WORKING DRAWINGS\18_2158_001_S14.DWG
TAB: 18 5-8-07 SONIAJ

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			68715	2007	S14	28



1 S15 PIT LID PLAN

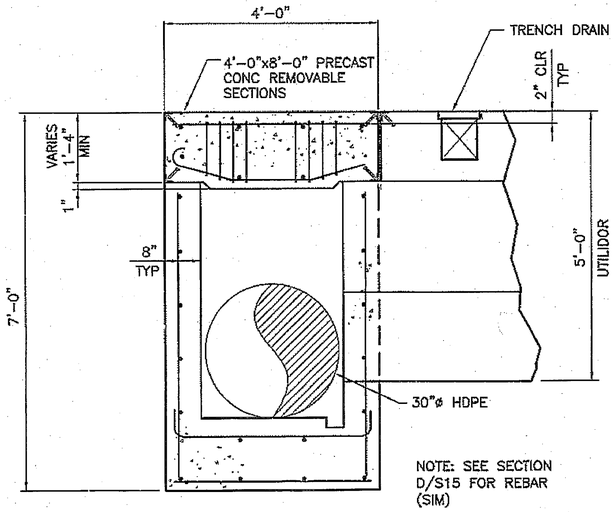
SCALE: 3/4" = 1'-0"



LIFTING DEVICE - TYP

NTS

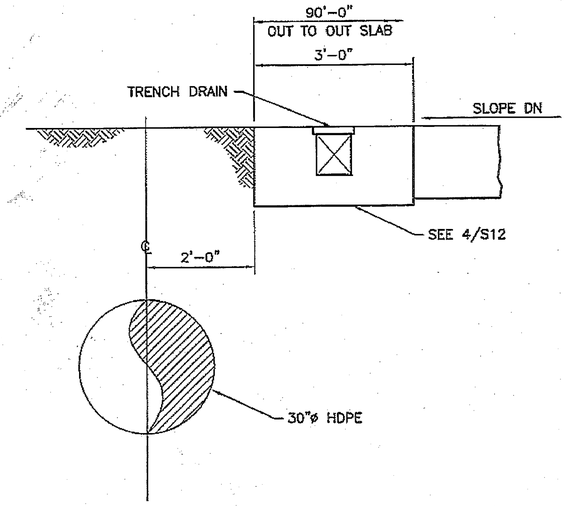
DAYTON P52 "SWIFT LIFT" OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANF WRITTEN INSTRUCTION. SAFE CAPACITY = 1 TON. PROVIDE ONE DOZEN (12) MP50 "SWIFT LIFT" 1 TON UNIVERSAL LIFTING EYES.



NOTE: SEE SECTION D/S15 FOR REBAR (SIM)

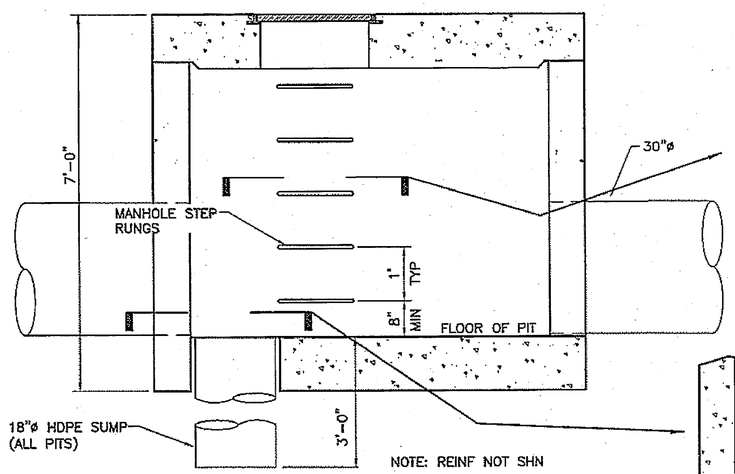
B S15 SECTION

SCALE 3/4" = 1'-0"



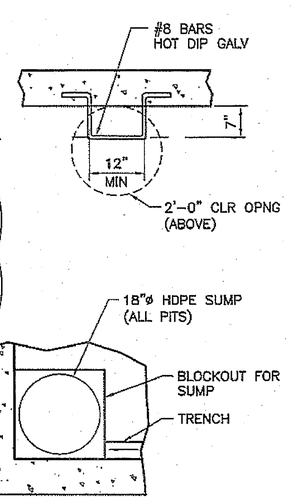
C S15 SECTION

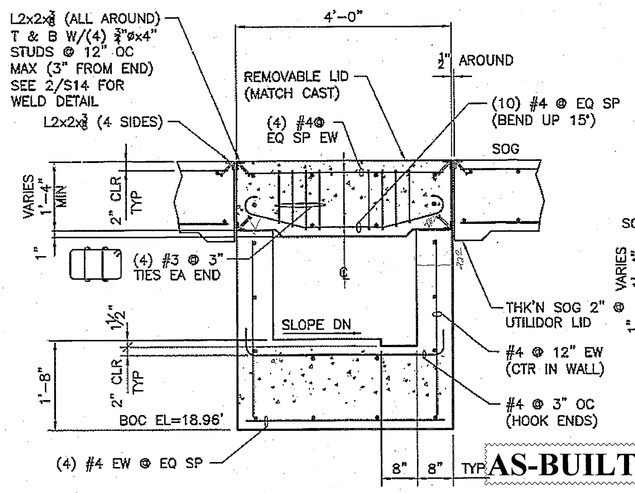
SCALE 3/4" = 1'-0"



A S15 SECTION

SCALE 3/4" = 1'-0"

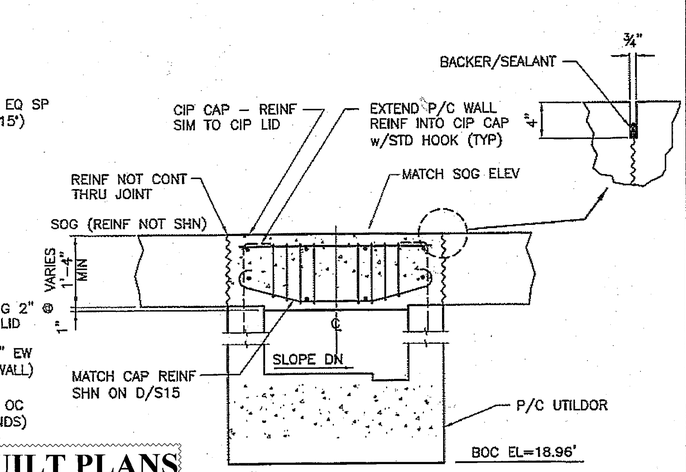




NOTE: 1. SEE 1/S15 (SIM) FOR LIFTING DEVICES
2. SEE 2/S16 FOR UTILDOR JT DETAIL

D S15 SECTION THRU 5'-0" UTILIDOR

SCALE 3/4" = 1'-0"



E S15 SECTION @ CIP CAP

SCALE 3/4" = 1'-0"

GRAPHIC SCALE

0"3"6"9"1' 2' 3' 4' 5' 6'

3/4"=1'-0"

AS-BUILT PLANS

INITIALS KRT DATE 3/6/07

PLANS DEVELOPED BY: TRYCK NYMAN HAYES, INC

CHECKED BY: DE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

UTILIDOR PIT PLAN & DETAILS

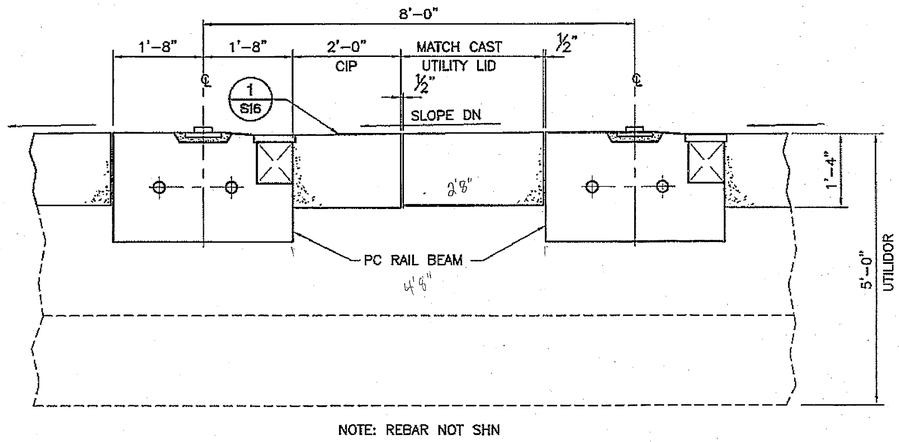
STATE OF ALASKA · CRAIG FREAS · CE 3873 · REGISTERED PROFESSIONAL ENGINEER

DESIGNED BY: CF
DRAWN BY: WEH

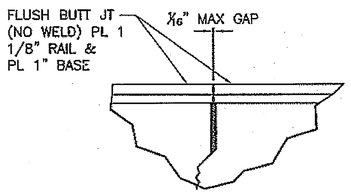
PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_S15.DWG
TAB: 19 5-8-07 SONIAJ

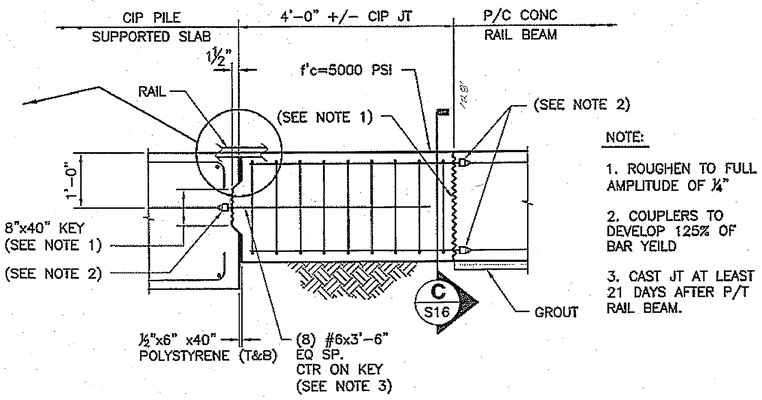
REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	S15	28



NOTE: REBAR NOT SHN



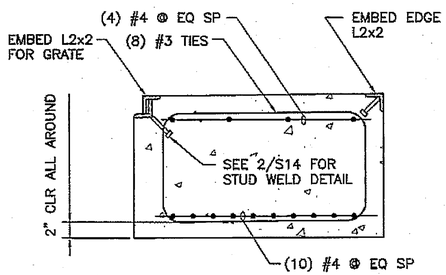


NOTE:

1. ROUGHEN TO FULL AMPLITUDE OF ¼"
2. COUPLERS TO DEVELOP 125% OF BAR YEILD
3. CAST JT AT LEAST 21 DAYS AFTER P/T RAIL BEAM.

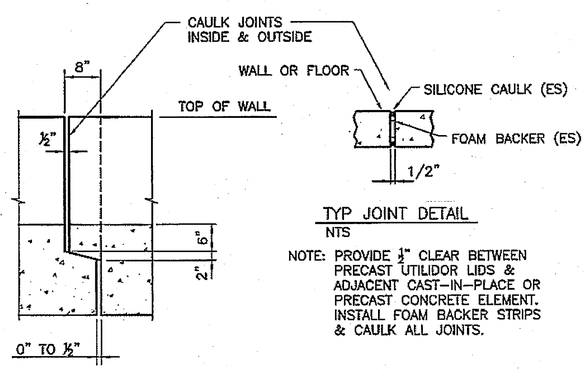
A S16 SECTION THRU RAIL BEAMS

SCALE: 3/4" = 1'-0"



1 S16 CIP DETAIL

SCALE: 1 1/2" = 1'-0"



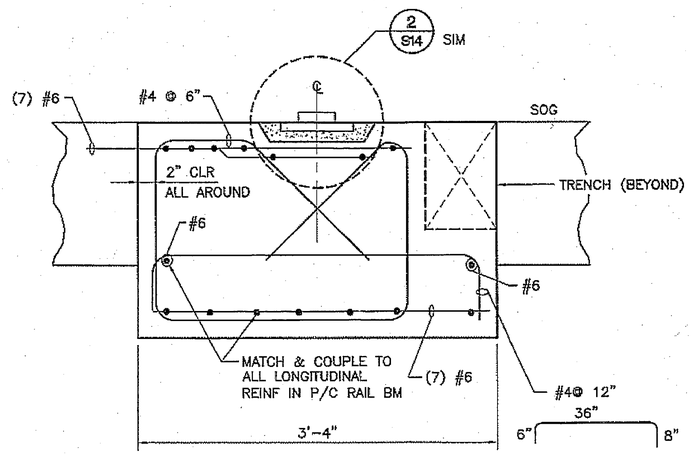
TYP JOINT DETAIL

NTS

NOTE: PROVIDE ½" CLEAR BETWEEN PRECAST UTILIDOR LIDS & ADJACENT CAST-IN-PLACE OR PRECAST CONCRETE ELEMENT. INSTALL FOAM BACKER STRIPS & CAULK ALL JOINTS.

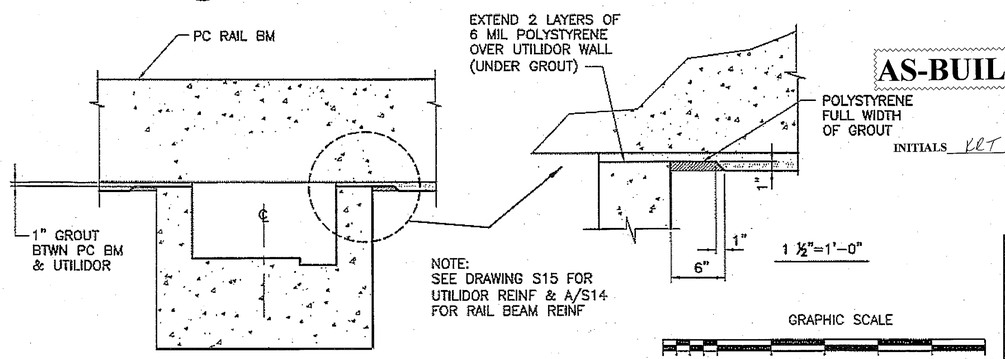
2 S16 UTILIDOR JOINT DETAIL (IF PRECAST)

SCALE 3/4" = 1'-0"



C S16 SECTION

SCALE: 1 1/2" = 1'-0"



NOTE:
SEE DRAWING S15 FOR UTILIDOR REINF & A/S14 FOR RAIL BEAM REINF

D S16 SECTION

SCALE3/4" = 1'-0"

GRAPHIC SCALE

0" 3" 6" 9" 1' 2' 3' 4' 5' 6'

3/4"=1'-0"

GRAPHIC SCALE

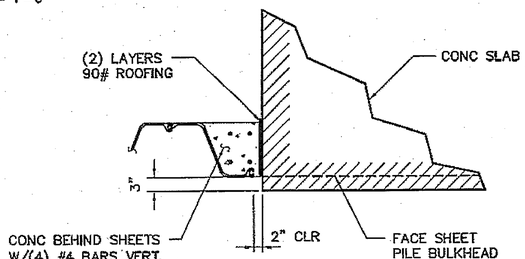
0" 3" 6" 9" 1' 2' 3'

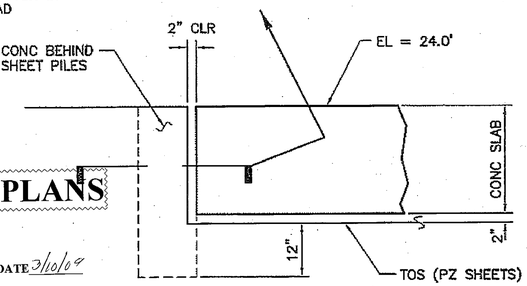
1 1/2"=1'-0"

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC.

B S16 LONG SECTION THRU RAIL BEAMS

SCALE: 3/4" = 1'-0"





E S16 TYPICAL CLOSURE SECTION

SCALE: 3/4" = 1'-0"

AS-BUILT PLANS

INITIALS KLT DATE 3/10/09

CHECKED BY: DE

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

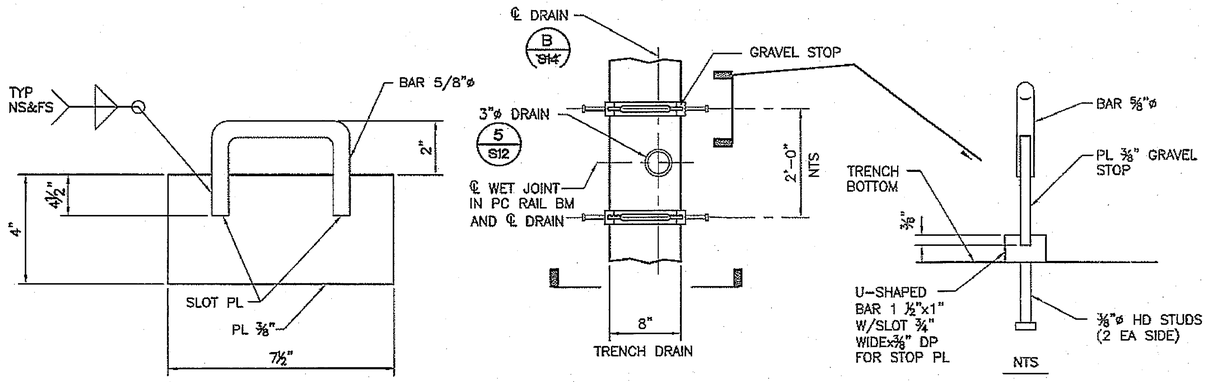
PROJECT #68715

DESIGNED BY: CF
DRAWN BY: WEH

MISC SECTIONS & DETAILS

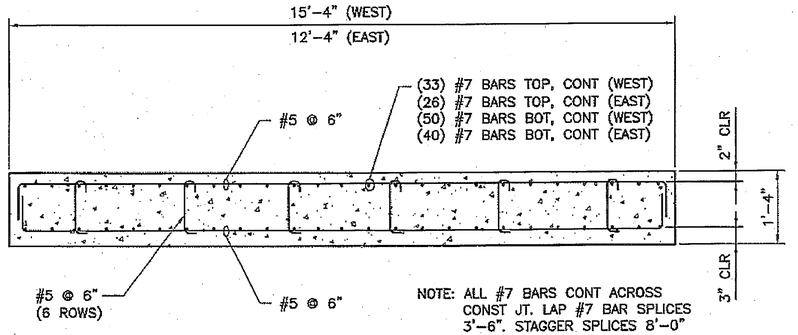
PATH: M:\02158.001_Ketchikan Uplands Slab\400 Drawings\401 Working Drawings\2158.001_S16.DWG
TAB: 20 5-8-07 SONIAJ

REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			68715	2007	S16	28



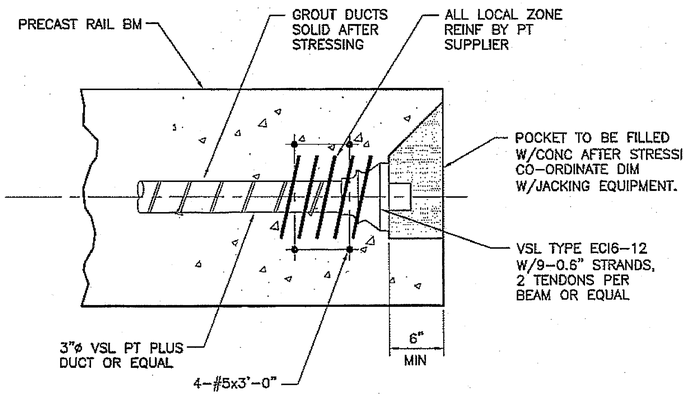
1 S17 GRAVEL STOP DETAIL

SCALE: 1 1/2" = 1'-0"



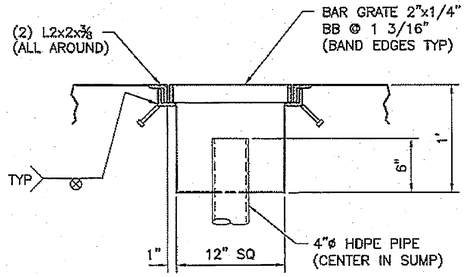
A S17 SOG SECTION (EAST & WEST)

SCALE: 3/4" = 1'-0" (f'c = 5,000 PSI)



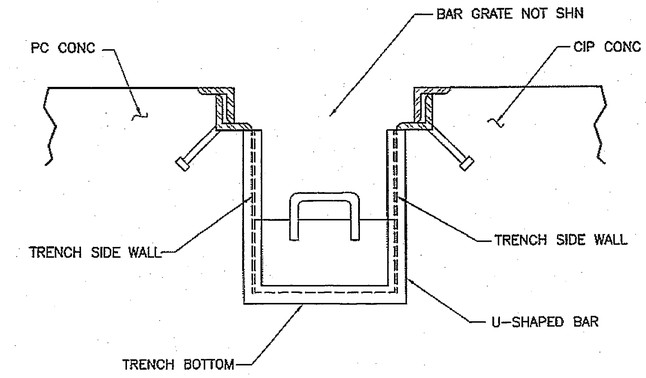
2 S17 PT ANCHOR DETAIL

SCALE: 1 1/2" = 1'-0"



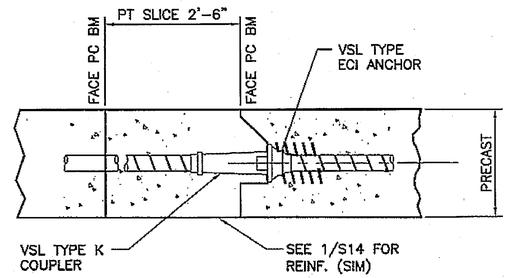
3 S17 SPOT DRAIN DETAIL (9 LOCATIONS)

SCALE: 1 1/2" = 1'-0"



B S17 GRAVEL STOP SECTION (9 LOCATIONS)

SCALE: 3" = 1'-0"

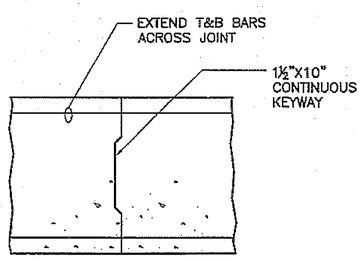


OPTIONAL-NOT REQUIRED

4 S17 PT ANCHOR DETAIL

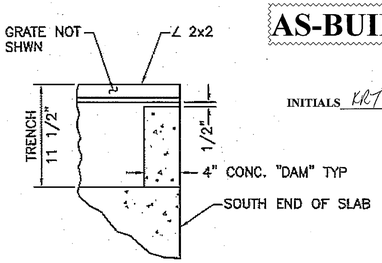
SEE ADD. Bl. 1

SCALE: 3/4" = 1'-0"



5 S17 CONSTRUCTION JOINT FOR PILE SUPPLIED SLAB

SCALE: 3/4" = 1'-0"



6 S17 TRENCH DETAIL

SCALE: 1 1/2" = 1'-0"

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC.

AS-BUILT PLANS

INITIALS KRT DATE 3/10/09

GRAPHIC SCALE
0" 3" 6" 9" 1' 2' 3' 4' 5' 6'
3/4"=1'-0"

GRAPHIC SCALE
0" 3" 6" 9" 1' 2' 3'
1 1/2"=1'-0"

GRAPHIC SCALE
0 3" 6" 9" 1' 1.5'
3"=1'-0"

CHECKED BY: DE
DESIGNED BY: CF
DRAWN BY: WEH
PATH: M:\02158.001_Ketchikan Upland Slab\400 Drawings\401 Working Drawings\2158.001_S17.DWG
TAB: 21 5-8-07 SONIAJ

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

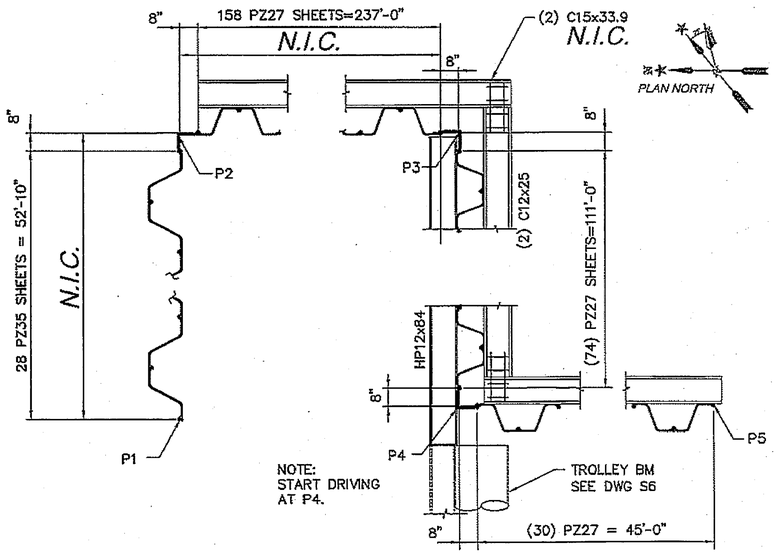
PROJECT #68715

MISC SECTIONS & DETAILS

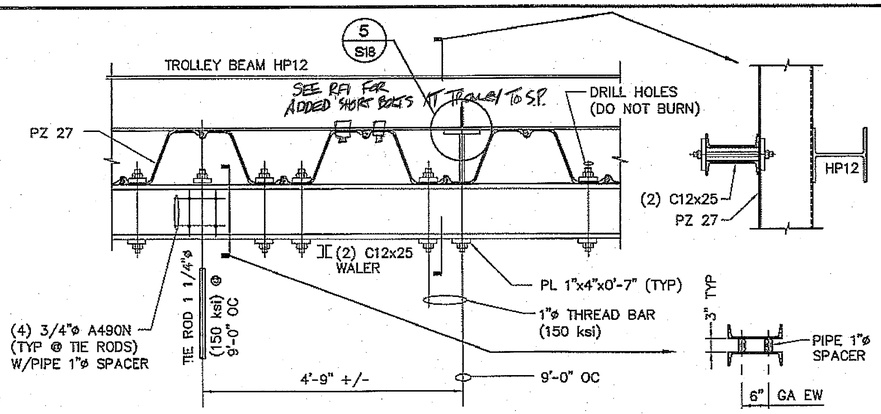
REVISIONS NO.	DATE	DESCRIPTION	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			68715	2007	S17	28

GENERAL NOTES

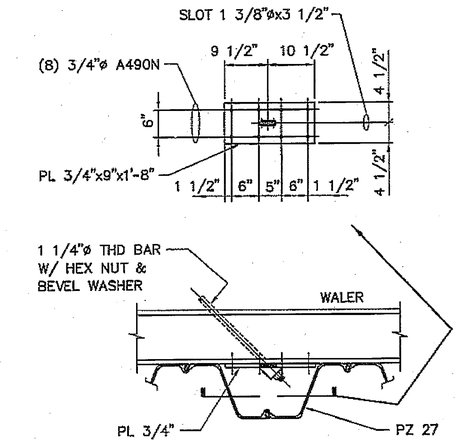
STRUCTURAL STEEL:
STEEL PLATE AND SHAPES EXCEPT ANGLES AND CHANNELS SHALL BE ASTM A572 GR. 50 UNLESS OTHERWISE NOTED OR APPROVED BY THE OWNER. ALL ANGLES AND CHANNELS SHALL BE A36. ALL BOLTS SHALL BE ASTM A-490 UNLESS OTHERWISE NOTED. BOLTS SHALL BE INSTALLED "SNUG TIGHT". HOLES MAY NOT BE BURNED; THEY MUST BE PUNCHED OR DRILLED.



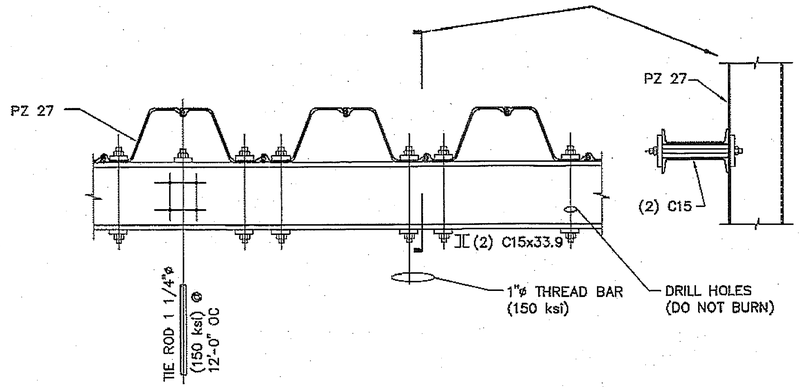
1 S18 **SHEET PILE LAYOUT**
SCALE: 3/8" = 1'-0"



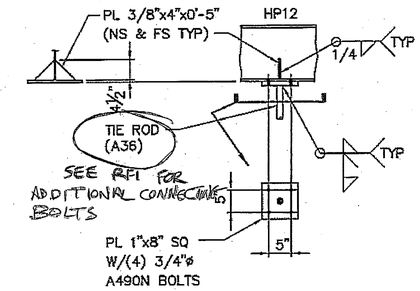
3 S18 **SHEET PILE PLAN-SOUTH BULKHEAD**
SCALE: 3/4" = 1'-0"



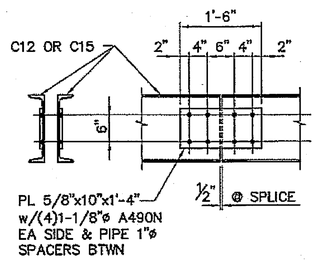
8 S18 **DETAIL**
SCALE: 3/4" = 1'-0"



4 S18 **SHEET PILE PLAN-EAST BULKHEAD (N.I.C.)**
SCALE: 3/4" = 1'-0"

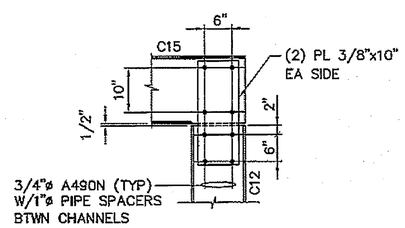


5 S18 **DETAIL**
SCALE: 3/4" = 1'-0"



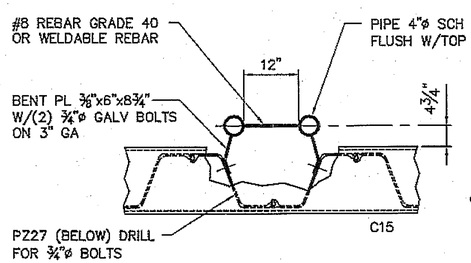
NOTE: POSITION SPLICE 3 FEET FROM THE TIE RODS

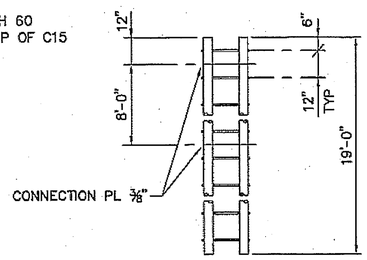
6 S18 **TYP SPLICE DETAIL**
SCALE: 3/4" = 1'-0"



NOTE: INSIDE / OUTSIDE CORNERS SIM.

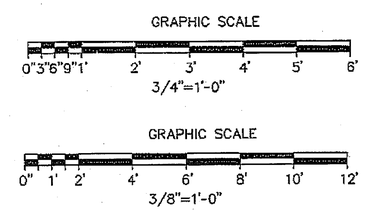
7 S18 **WHALER CORNER SPLICE (N.I.C.)**
SCALE: 3/4" = 1'-0"





LADDER ELEVATION
NTS

9 S18 **LADDER DETAIL - 3 REQ'D (N.I.C.)**
SCALE: 3/4" = 1'-0"



AS-BUILT PLANS
by Dawson
INITIALS RRT DATE 3/10/09

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC.

CHECKED BY: DE
DESIGNED BY: DE
DRAWN BY: WEH

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

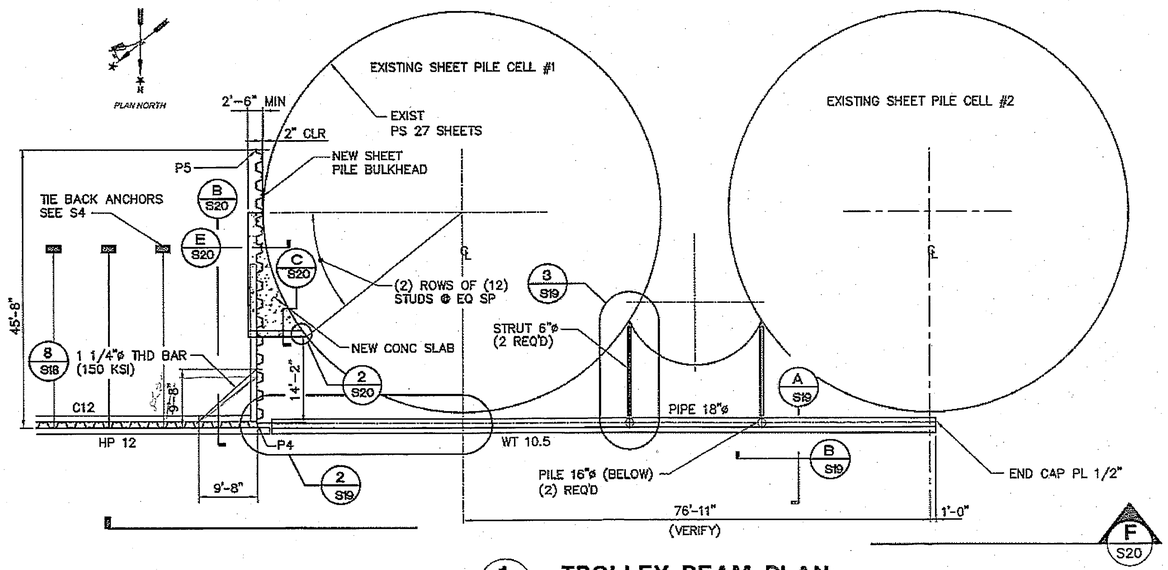
PROJECT #68715

SHEET PILE DETAILS

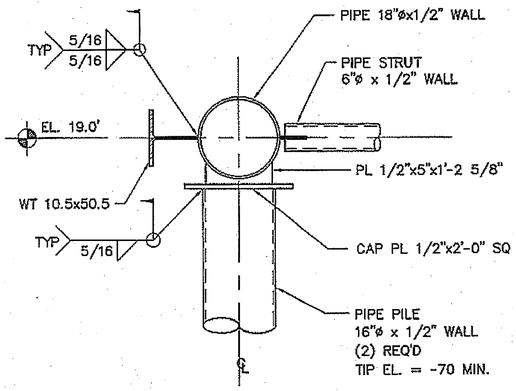
PATH: M:\02158.001_KETCHIKAN UPLANDS SLAB\400 DRAWINGS\401 WORKING DRAWINGS\22_2158.001_S18.DWG
TAB: 22 5-8-07 SONIAJ

REVISIONS NO.	DATE	DESCRIPTION

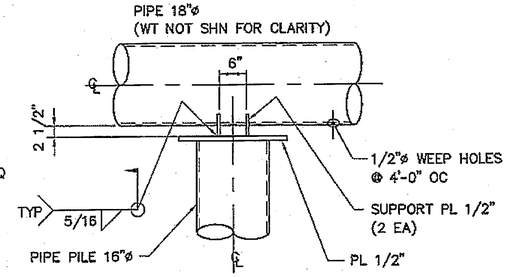
PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	S18	28



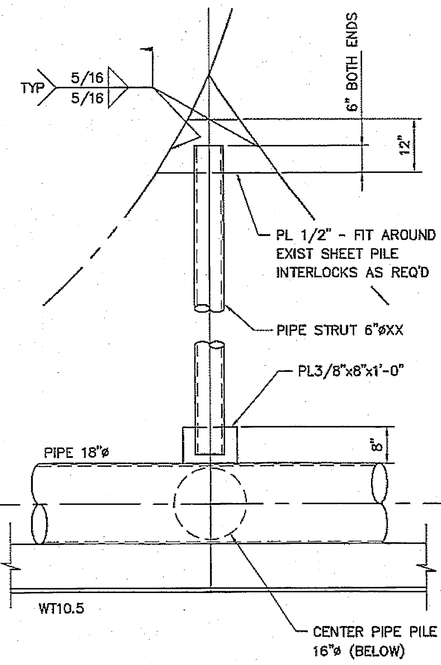
1 S19 TROLLEY BEAM PLAN
SCALE: 3/32" = 1'-0"



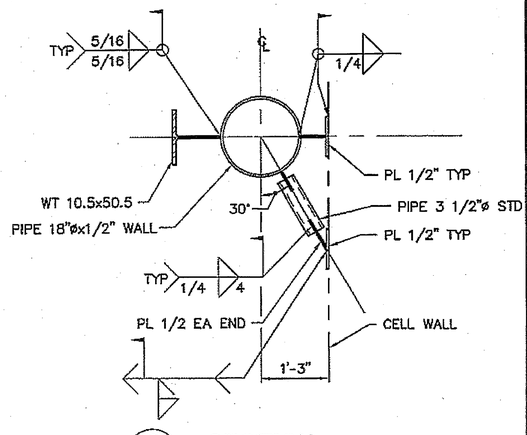
A S19 SECTION
SCALE: 3/4" = 1'-0"



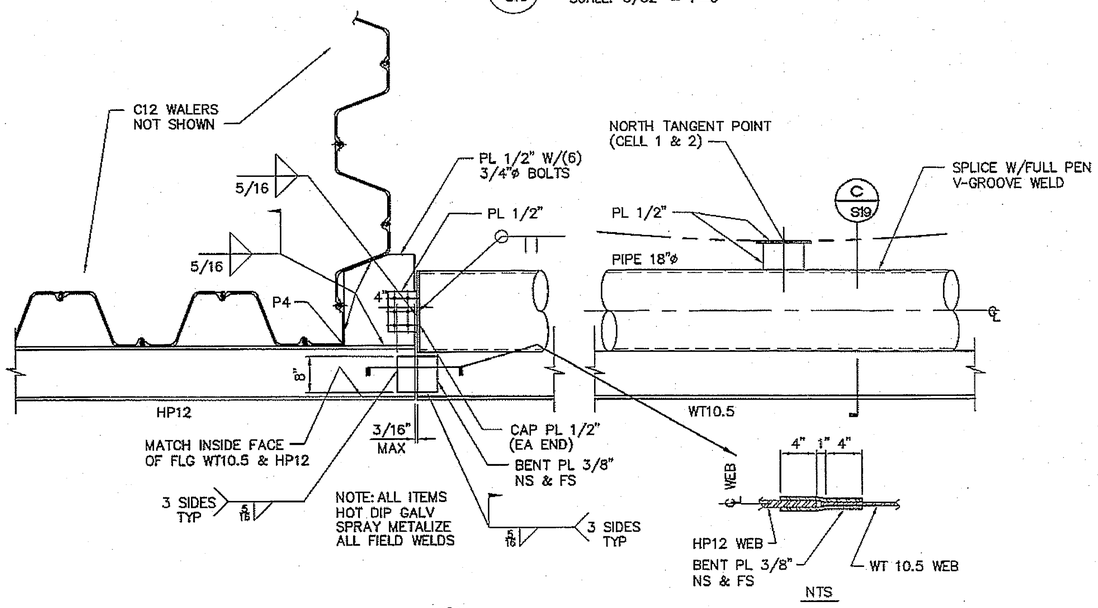
B S19 SECTION
SCALE: 3/4" = 1'-0"



3 S19 DETAIL
SCALE: 3/4" = 1'-0"



C S19 SECTION
SCALE: 3/4" = 1'-0"



2 S19 DETAIL
SCALE: 3/4" = 1'-0"

GRAPHIC SCALE
0"3"6"9"1' 2' 3' 4' 5' 6'
3/4"=1'-0"

GRAPHIC SCALE
0"2'4'6'8' 16' 24' 32' 40' 48'
3/32"=1'-0"

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC.

NOTE:
ALL ITEMS HOT DIP GALVANIZED EXCEPT PORTION OF OUTER FLANGE OF TROLLY BEAM.

AS-BUILT PLANS

INITIALS KNT DATE 3/10/09

CHECKED BY: DE
DESIGNED BY: CF
DRAWN BY: WEH

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
& PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

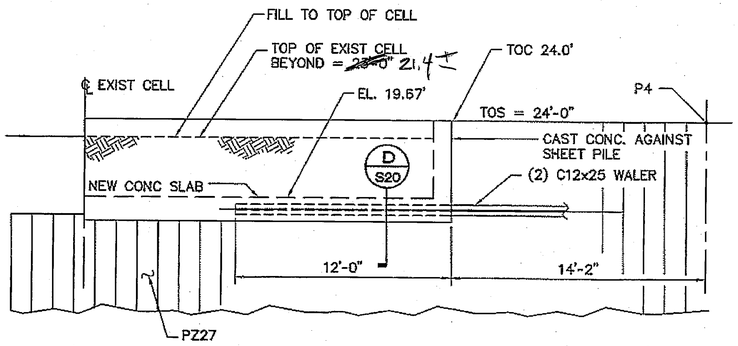
TROLLEY BEAM PLAN & DETAILS

PATH: M:\02158.001_KETCHIKAN UPLANDS SLAB\400 DRAWINGS\401 WORKING DRAWINGS\23_2158.001_S19.DWG
TAB: 23 5-8-07 WALTH

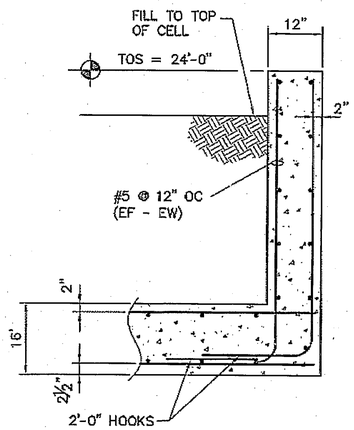
REVISIONS		
NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	S19	28

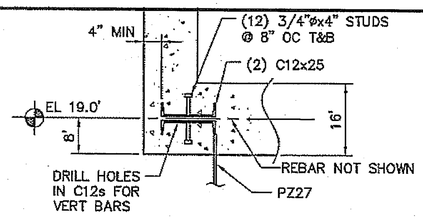
NOTE: COMPLETE AND CURE CONCRETE PRIOR TO PLACING FILL AGAINST SHEET PILE BULKHEAD



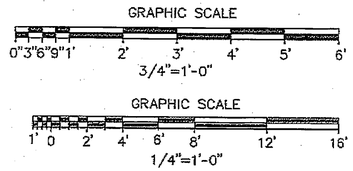
B S20 SECTION
SCALE: 1/4" = 1'-0"

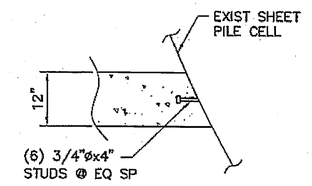


C S20 SECTION
SCALE: 3/4" = 1'-0" (f'c = 4,000 PSI)

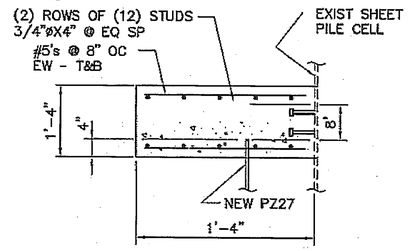


D S20 SECTION
SCALE: 3/4" = 1'-0"





2 S20 SECTION
SCALE: 3/4" = 1'-0"

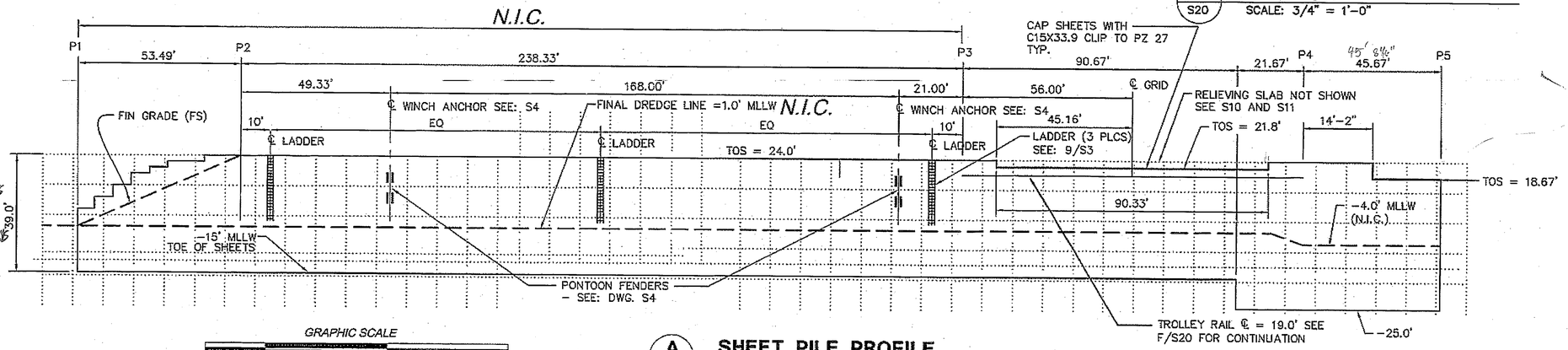


E S20 SECTION
SCALE: 3/4" = 1'-0"

N.I.C.

TIE ROD LOCATIONS
SOUTH BULKHEAD
3.7
12.7
21.7
30.7
39.7
48.7
57.7
66.7
75.7
85.2**
93.7
102.7*

SEE SHEET PILE SHOPS AND WALER SHOPS AND RFI'S FOR ACTUAL LOCATIONS



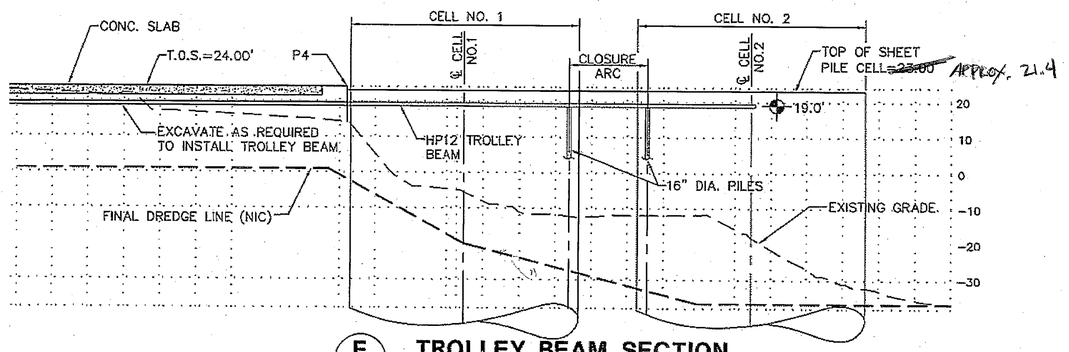
GRAPHIC SCALE
20 0 40 80
SCALE IN FEET

A S20 SHEET PILE PROFILE
SCALE: 1 = 20

CAP SHEETS WITH C15X33.9 CLIP TO PZ 27 TYP.

NOTE: REMOVE EXISTING RIPRAP AS REQUIRED TO DRIVE SHEETS

NOTE:
DISTANCES ARE IN FEET FROM P3.
* – ANGLED RODS
** – SPECIAL LOCATION TO AVOID FUTURE PILING.



F S20 TROLLEY BEAM SECTION
SCALE: 1 = 20

AS-BUILT PLANS
by Dawson Inc

INITIALS KRT DATE 3/6/09

PLANS DEVELOPED BY:
TRYCK NYMAN HAYES, INC.

CHECKED BY: DE
DESIGNED BY: CF
DRAWN BY: WEH

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DESIGN & ENGINEERING SERVICES DIVISION-SOUTHEAST REGION

KETCHIKAN SHIPYARD
BERTH ONE RELIEVING SLAB

PROJECT #68715

CIVIL DETAILS & SECTIONS

PATH: M:\02158.001_KETCHIKAN UPLANDS SLAB\400 DRAWINGS\401 WORKING DRAWINGS\24_2158.001_S20.DWG
TAB: 24 5-8-07 SONIAJ

REVISIONS NO.	DATE	DESCRIPTION

PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
68715	2007	S20	28