

ANC027
WORK PACKAGE 5
15% CONCEPT SITE DEVELOPMENT

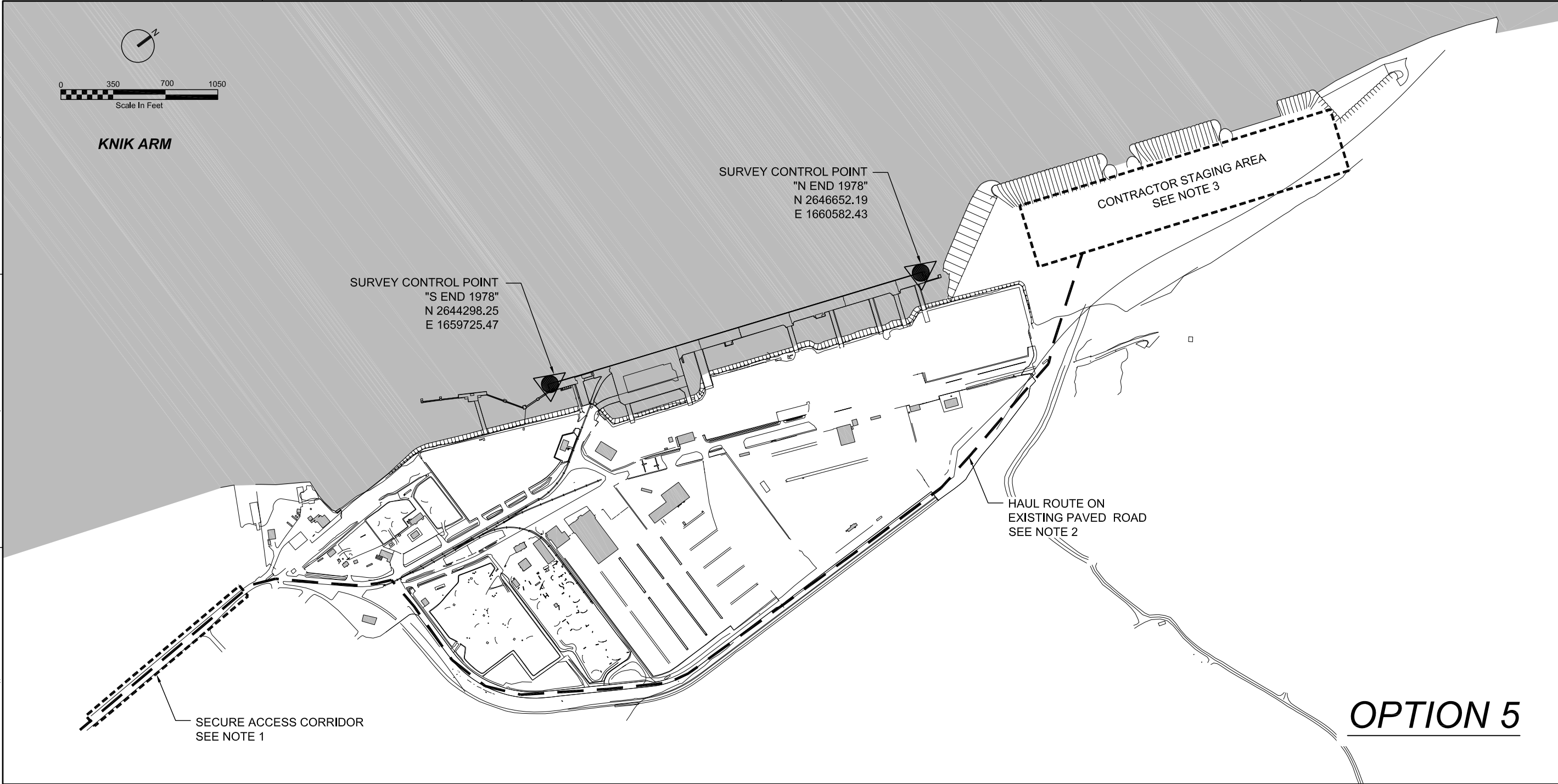
DEMOLITION OF EXISTING WHARFS, TRESTLES AND SHEET PILE WALLS,
CONSTRUCTION OF NEW WHARFS, TRESTLES, AND SHEET PILE WALLS,
MASS EXCAVATION, GRADING, PAVING, DRAINAGE, AND UTILITIES



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[illegible]

STANDARD ABBREVIATIONS				CIVIL LEGEND									
@	AT	MOTEMS	EARTHQUAKE	EXISTING		THIS CONTRACT		EXISTING		THIS CONTRACT			
AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	MFR	MARINE OIL TERMINAL ENGINEERING AND MAINTENANCE STANDARDS									ELECTRICAL MANHOLE	
AC	ASPHALT CONCRETE											UTILITY DUCT	
ACI	AMERICAN CONCRETE INSTITUTE	MG/KG	MILLIGRAMS/KILOGRAM									POST OR BOLLARD	
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MH	MANHOLE									GUY ANCHOR	
APPROX	APPROXIMATE	MPH	MILES PER HOUR									FIRE HYDRANT	
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	N/A	NOT APPLICABLE									UTILITY POLE	
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	NIC	NOT IN CONTRACT										
		NO.	NUMBER										
		NTS	NOT TO SCALE										
		N	NORTH										
		OC	ON CENTER										
		OD	OUTSIDE DIAMETER										
		OG	ORIGINAL GROUND										
		OLE	OPERATIONAL LEVEL										
		%	PERCENT										
		PCC	PORTLAND CEMENT CONCRETE										
		PCF	POUNDS PER CUBIC FOOT										
		PE	POLYETHYLENE										
		PERF	PERFORATED										
		PIANC	WORLD ASSOCIATION FOR WATERBORNE TRANSPORT INFRASTRUCTURE										
		PIEP	PORT OF ANCHORAGE INTERMODAL EXPANSION PROJECT										
		PLF	POUNDS PER LINEAR FOOT										
		POL	PETROLEUM OIL LINE										
		PP	POWER POLE										
		PSF	POUNDS PER SQUARE FOOT										
		PSI	POUNDS PER SQUARE INCH										
		PVC	POLYVINYL CHLORIDE										
		R	RADIUS										
		REQD	REQUIRED										
		RO-RO	ROLL-ON ROLL-OFF										
		RO/RO	ROLL-ON ROLL-OFF										
		ROW	RIGHT OF WAY										
		RT	RIGHT										
		SC	SURVEY CONTROL MONUMENT										
		SCHD	SCHEDULE										
		SD	STORM DRAIN										
		SDR	STANDARD DIMENSION RATIO										
		SI	SYSTEM INTERNATIONAL (METRIC UNITS)										
		SST	STAINLESS STEEL										
		SWPPP	STORM WATER POLLUTION PREVENTION PLAN										
		TOPO	TOPOGRAPHY										
		TYP	TYPICAL										
		UFC	UNIFIED FACILITIES CRITERIA										
		UPG	UNDERGROUND POWER										
		USACE	UNITED STATES ARMY CORPS OF ENGINEERS										
		USC	UNITED STATES CODE										
		V	VELOCITY										
		VERT	VERTICAL										
		W	WEST										
		W/	WITH										
		W/OUT	WITHOUT										
		S	SOUTH										
		STD	STANDARD										
		STL	STEEL										
				EXISTING		THIS CONTRACT		EXISTING		THIS CONTRACT			
												ELECTRICAL MANHOLE	
												UTILITY DUCT	
												POST OR BOLLARD	
												GUY ANCHOR	
												FIRE HYDRANT	
												UTILITY POLE	
						<							



GENERAL NOTES

1. THE PORT OF ANCHORAGE IS A RESTRICTED FACILITY AND SECURITY CLEARANCE IS REQUIRED FOR PROJECT ACCESS. PORT ACCESS MAY BE LIMITED OR RESTRICTED AT ANY TIME. COORDINATE AND COMPLY WITH CONTRACTOR ACCESS AND SECURITY PROTOCOLS THROUGHOUT CONSTRUCTION.
2. MUNICIPAL AND STATE LOAD RESTRICTIONS APPLY. ALL LOADS ARE TO BE SECURED TO PREVENT DEBRIS FROM SCATTERING ON ROADWAYS. MANAGE FUGITIVE DUST FROM EARTH MOVING OPERATIONS ACCORDING TO THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP).
3. THE CONTRACTOR STAGING AREA IS LOCATED WITHIN THE PROJECT LIMITS AS SHOWN. DO NOT STAGE EQUIPMENT OR MATERIALS OUTSIDE OF THE DESIGNATED STAGING AREA WITHOUT OBTAINING PERMISSION SO AS NOT TO INTERRUPT EXISTING OPERATIONS.
4. DISPOSAL OF CONCRETE, ASPHALT AND OTHER CONSTRUCTION DEBRIS IS THE RESPONSIBILITY OF THE CONTRACTOR. THERE IS NO ONSITE DISPOSAL AVAILABLE. DISPOSE OF NON-HAZARDOUS DEBRIS AT THE LOCAL LANDFILL OR OTHER APPROVED DISPOSAL SITE.

SURVEY CONTROL

1. THE SURVEY CONTROL FOR THIS PROJECT IS BASED ON THE *95% PS&E PORT OF ANCHORAGE NORTH EXTENSION PAVEMENT AND UTILITIES DESIGN - PROJECT CONTROL* DEVELOPED BY DOWL HKM IN JUNE OF 2009.
2. THE TOPOGRAPHY AND BASE MAPPING SHOWN HAVE BEEN DEVELOPED UTILIZING MULTIPLE CONSTRUCTION, DESIGN AND AS-BUILT SURVEYS. THE ACTUAL TOPOGRAPHY AND LOCATION OF UTILITIES AND FEATURES WILL VARY FROM THOSE SHOWN IN THE PLANS.
3. PRESERVE FROM INJURY OR DEFACEMENT SURVEY CONTROL MONUMENTATION ENCOUNTERED DURING CONSTRUCTION.
4. THE COORDINATE SYSTEM IS ALASKA STATE PLANE ZONE 4, NAD83 DATUM. ALL COORDINATES AND ELEVATIONS ARE EXPRESSED IN U.S. SURVEY FEET.
5. "N END 1978" AND "S END 1978" ARE USACE BRASS CAP MONUMENTS. THE BASIS OF BEARINGS IS THE LINE BETWEEN "N END 1978" AND "S END 1978" HAVING A BEARING OF S20°00'15"W. THE COORDINATE VALUE FOR "S END 1978" **SHOULD NOT BE USED** FOR ANY PURPOSE OTHER THAN LOCATING THE MONUMENT.
6. PROJECT ELEVATIONS ARE BASED ON MEAN LOWER LOW WATER (MLLW). ELEVATION DATA IS FROM THE NOAA/NOS TIDAL BENCH MARK SHEET 9455920 FOR ANCHORAGE, KNIK ARM, COOK INLET, ALASKA DATED 21 APRIL 2003.
7. THE BASIS OF ELEVATIONS IS NOAA/NOS TIDAL BENCH MARK "TIDAL 16 1966", A USACE BRASS CAP MONUMENT HAVING A VALUE OF 40.53 FEET AND TIDAL BENCHMARK "B 75 1964", A USACE BRASS CAP MONUMENT HAVING A VALUE OF 36.82 FEET.

CH2MHILL®

PORT OF ANCHORAGE
CIVIL
HAUL ROUTES, TRAFFIC CONTROL,
AND SURVEY CONTROL

US ARMY CORPS OF ENGINEERS
PORT OF ANCHORAGE
INTERMODAL EXPANSION PROJECT STUDY
ANCHORAGE, ALASKA

NO. DATE DSGN J. TAYLOR
REVISION CHK M. HAAPALA
BY APVD J. TAYLOR
APVD D. PLAYER

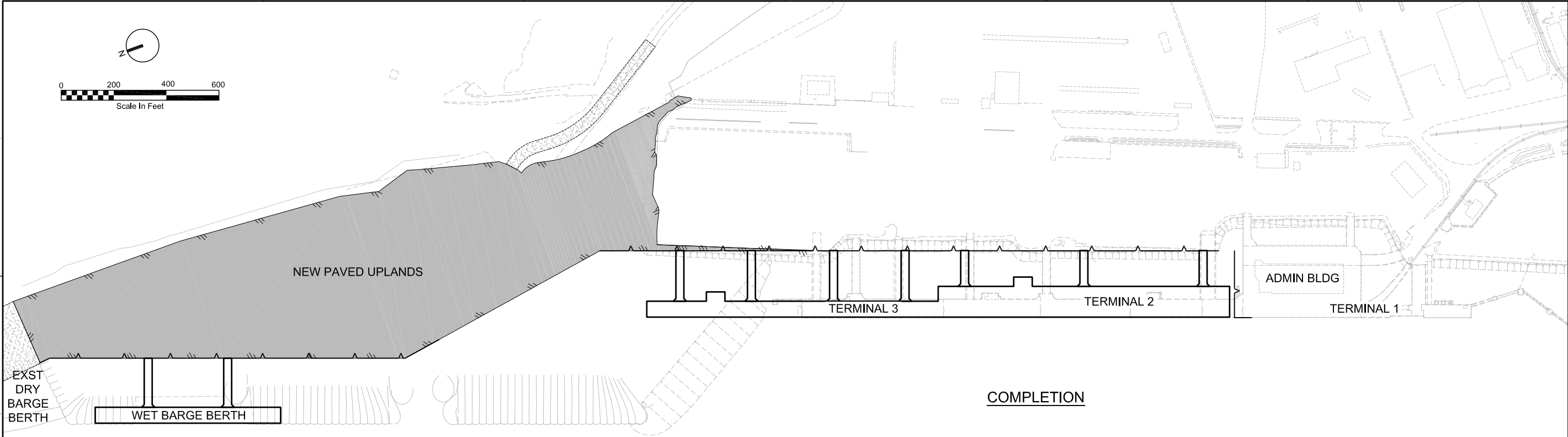
VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING. 1"=100'

DATE FEBRUARY 2013
PROJ 462130
DWG C-01
SHEET 3 of 20

PRELIMINARY DESIGN

CONCEPT STUDY
NOT FOR CONSTRUCTION

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PHASE I

CONSTRUCTION PHASING AND SEQUENCE OF EVENTS

PHASE I

REMOVE EXISTING OPEN CELL SHEET PILE WALL, EMBANKMENT, STORM DRAIN PIPING AND ARMOR STONE PER DEMOLITION PLANS. PRESERVE THE EXISTING DRY BARGE BERTH. CONSTRUCT NEW SHEET PILE BULKHEAD WALL NEAR WET BARGE BERTH (WBB), WBB CONCRETE WHARF AND TRESTLES. INSTALL NEW UTILITIES AND PAVE NORTH BACKLANDS.

PHASE II

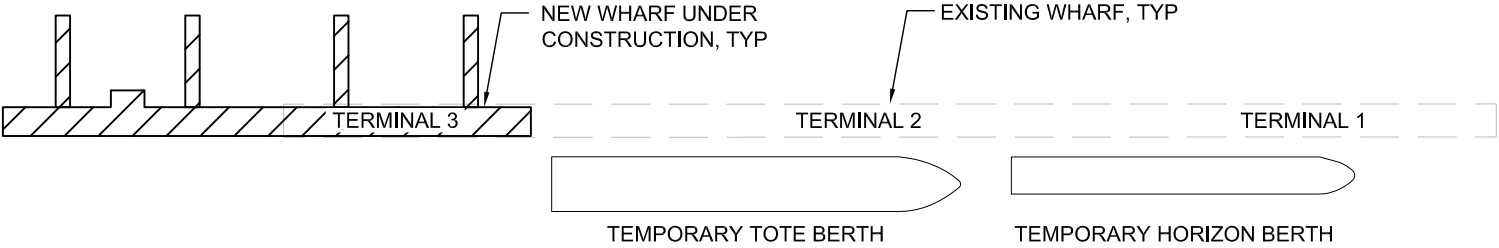
PRIOR TO CONSTRUCTION, TEMPORARILY RELOCATE TOTE OPERATIONS TO EXISTING TERMINAL 2 AND HORIZON OPERATIONS TO TERMINAL 1. DEMOLISH EXISTING WHARF AT TERMINAL 3 AND ASSOCIATED PILES AND UTILITIES PER DEMOLITION PLANS. CONSTRUCT NEW PILE SUPPORTED WHARF AND TRESTLES AND UTILITIES. UPON COMPLETION OF PHASE II CONSTRUCTION, RELOCATE TOTE OPERATIONS TO THE NEWLY CONSTRUCTED BERTH. MAINTAIN TEMPORARY HORIZON OPERATIONS AT TERMINAL 1.

PHASE III

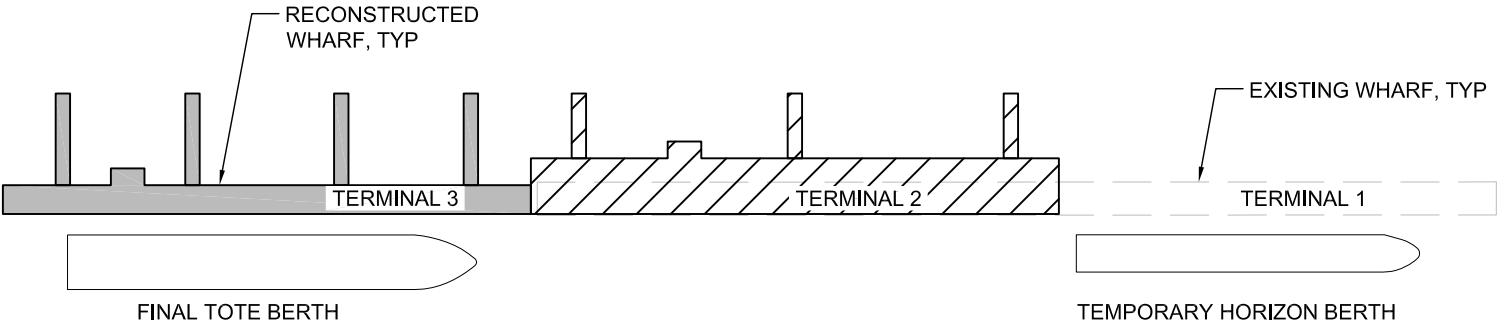
DEMOLISH EXISTING WHARF AT TERMINAL 2 AND ASSOCIATED PILES AND UTILITIES PER DEMOLITION PLANS. CONSTRUCT NEW PILE SUPPORTED WHARF AND TRESTLES, CRANE RAIL, AND UTILITIES. UPON COMPLETION OF PHASE III CONSTRUCTION, RELOCATE HORIZON OPERATIONS TO THE NEWLY CONSTRUCTED BERTH.

GENERAL NOTES

- 1. NEW UTILITIES FOR ALL OPTIONS ARE OMITTED FROM THIS PHASING PLAN FOR CLARITY. REFER TO THE CIVIL PARTIAL SITE PLANS FOR UTILITY DETAILS.



PHASE II



PHASE III

COMPLETION

OPTION 5

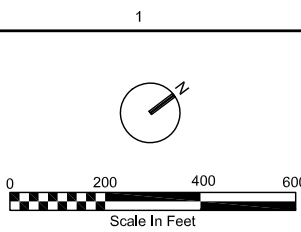
CH2MHILL®

PORT OF ANCHORAGE
CIVIL
CONSTRUCTION STAGING
AND PHASING PLAN

US ARMY CORPS OF ENGINEERS PORT OF ANCHORAGE INTERMODAL EXPANSION PROJECT STUDY ANCHORAGE, ALASKA									
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PRELIMINARY DESIGN									
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"									
DATE FEBRUARY 2013									
PROJ 462130									
DWG C-03									
SHEET 5 of 20									

CONCEPT STUDY
NOT FOR CONSTRUCTION

NO.		DATE		DR		CHK		APVD	
DSGN		J. TAYLOR		M. HAAPALA		J. TAYLOR		D. PLAYER	



MAINTAIN EXISTING
DRY BARGE BERTH,
SEE NOTE 5

EXCAVATE AND REMOVE
EMBANKMENT,
SEE NOTE 4

DEMOLISH OPEN CELL -
SHEET PILE BULKHEAD,
SEE NOTE 3

REMOVE AND SALVAGE EXISTING
ARMOR ROCK, SEE NOTE 2

DEMOLISH EXISTING WHARF
AND TRESTLES ON PILES,
SEE NOTE 1

DEMOLISH 2000 LF OF
EXISTING CRANE RAIL

ADMIN BLDG

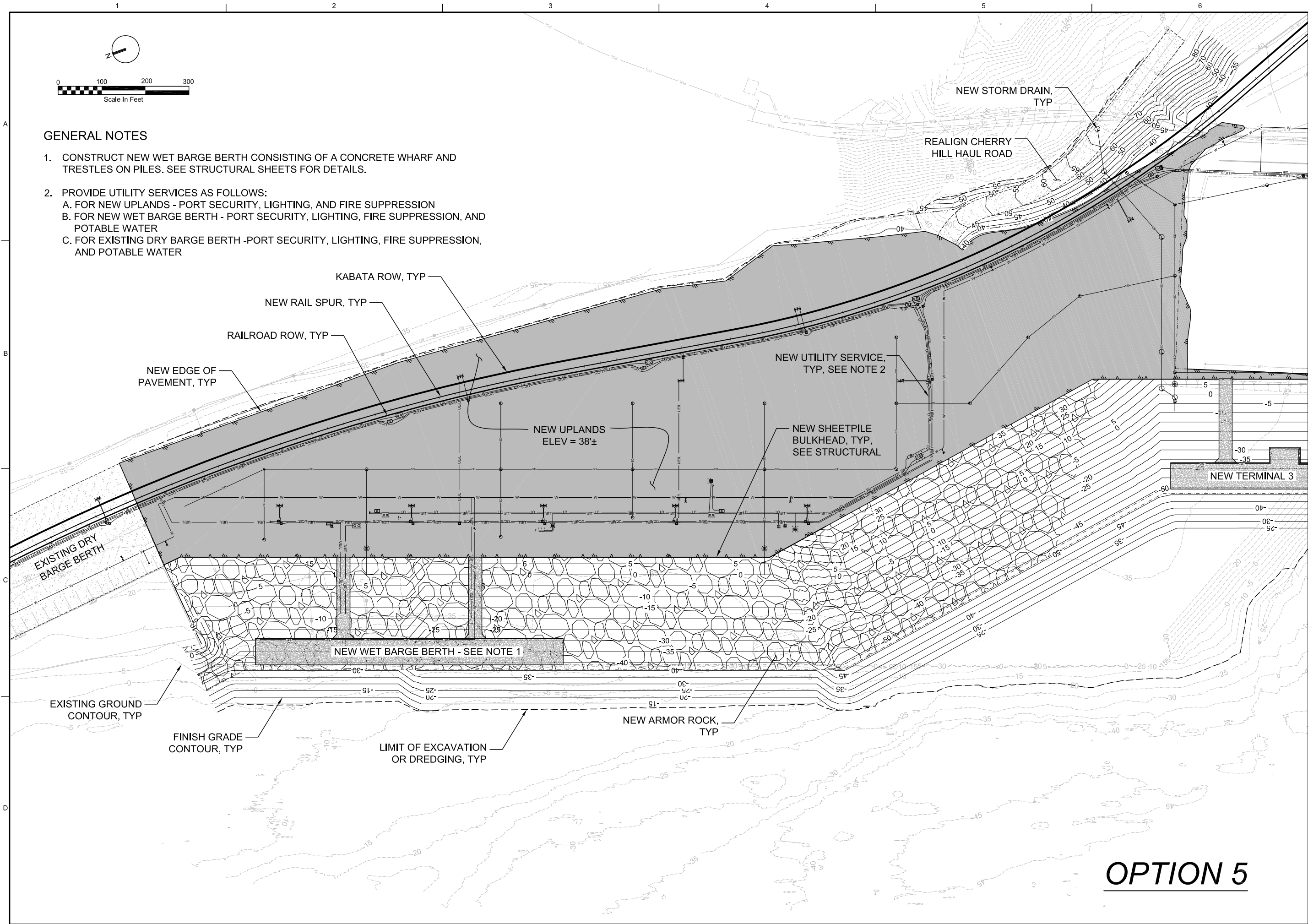
NEW UPLANDS
SEE NOTE 4

OPTION 5

GENERAL NOTES

1. DEMOLISH 175,600 SF OF CONCRETE WHARF AND TRESTLES. THE EXISTING WHARF AND TRESTLES ARE SUPPORTED BY APPROX 1500 PILES. PILE DIAMETER VARIES. THE TYPICAL PILE DIAMETER IS 2 FEET, WITH APPROX MAXIMUM DIAMETER OF 4 FEET. REMOVE APPROX 4000 LF OF ELECTRICAL SERVICE LINES ALONG THE EXISTING WHARF AND TRESTLES. REMOVE UTILITY SERVICE LINES ALONG THE EXISTING WHARF AND TRESTLES. MAINTAIN EXISTING TERMINALS AND ASSOCIATED UTILITY SERVICES AS NEEDED TO MAINTAIN OPERATIONS PER THE PHASING PLAN.
2. SALVAGE ROCK FOR REUSE AS SLOPE PROTECTION. DEPTH OF ROCK TO BE SALVAGED IS ASSUMED TO BE 4 FEET. QUANTITIES FOR ROCK TO BE SALVAGED ARE SHOWN ON THE PARTIAL SITE PLAN(S).
3. REMOVE THE OPEN CELL SHEET PILE STRUCTURE, INCLUDING SECTIONS OF TRADITIONAL DRIVEN PILE WALL AND ALL ASSOCIATED TAIL WALLS. THE FACE OF THE SHEET PILE STRUCTURE AS SHOWN IS APPROX 2800 LF WHICH DOES NOT INCLUDE THE LENGTH OF THE TAIL WALLS. REFER TO DESIGN DRAWINGS AND PROJECT AS-BUILT RECORD DRAWINGS FOR INFORMATION ON EMBEDMENT DEPTHS AND OVERALL LENGTHS OF SHEETS TO BE REMOVED. SALVAGE STEEL SHEET PILES FOR REUSE IN CELLULAR SHEET PILE BULKHEAD AND RETAINING WALL.
4. EXCAVATE AND REMOVE THE EMBANKMENT BEHIND THE EXISTING OPEN CELL SHEET PILE WALL TO THE FACE OF THE NEW SHEET PILE BULKHEAD WALL OR NEW SLOPE. THE NEW UPLANDS ARE SHOWN FOR REFERENCE, THE ACTUAL EXCAVATION LIMITS AND QUANTITIES ARE SHOWN ON THE SITE PLAN(S).
5. PRESERVE AND PROTECT THE EXISTING DRY BARGE BERTH.

[illegible]



GENERAL NOTES

1. CONSTRUCT NEW WET BARGE BERTH CONSISTING OF A CONCRETE WHARF AND TRESTLES ON PILES. SEE STRUCTURAL SHEETS FOR DETAILS.
2. PROVIDE UTILITY SERVICES AS FOLLOWS:
 - A. FOR NEW UPLANDS - PORT SECURITY, LIGHTING, AND FIRE SUPPRESSION
 - B. FOR NEW WET BARGE BERTH - PORT SECURITY, LIGHTING, FIRE SUPPRESSION, AND POTABLE WATER
 - C. FOR EXISTING DRY BARGE BERTH -PORT SECURITY, LIGHTING, FIRE SUPPRESSION, AND POTABLE WATER

CONCEPT STUDY
NOT FOR CONSTRUCTION

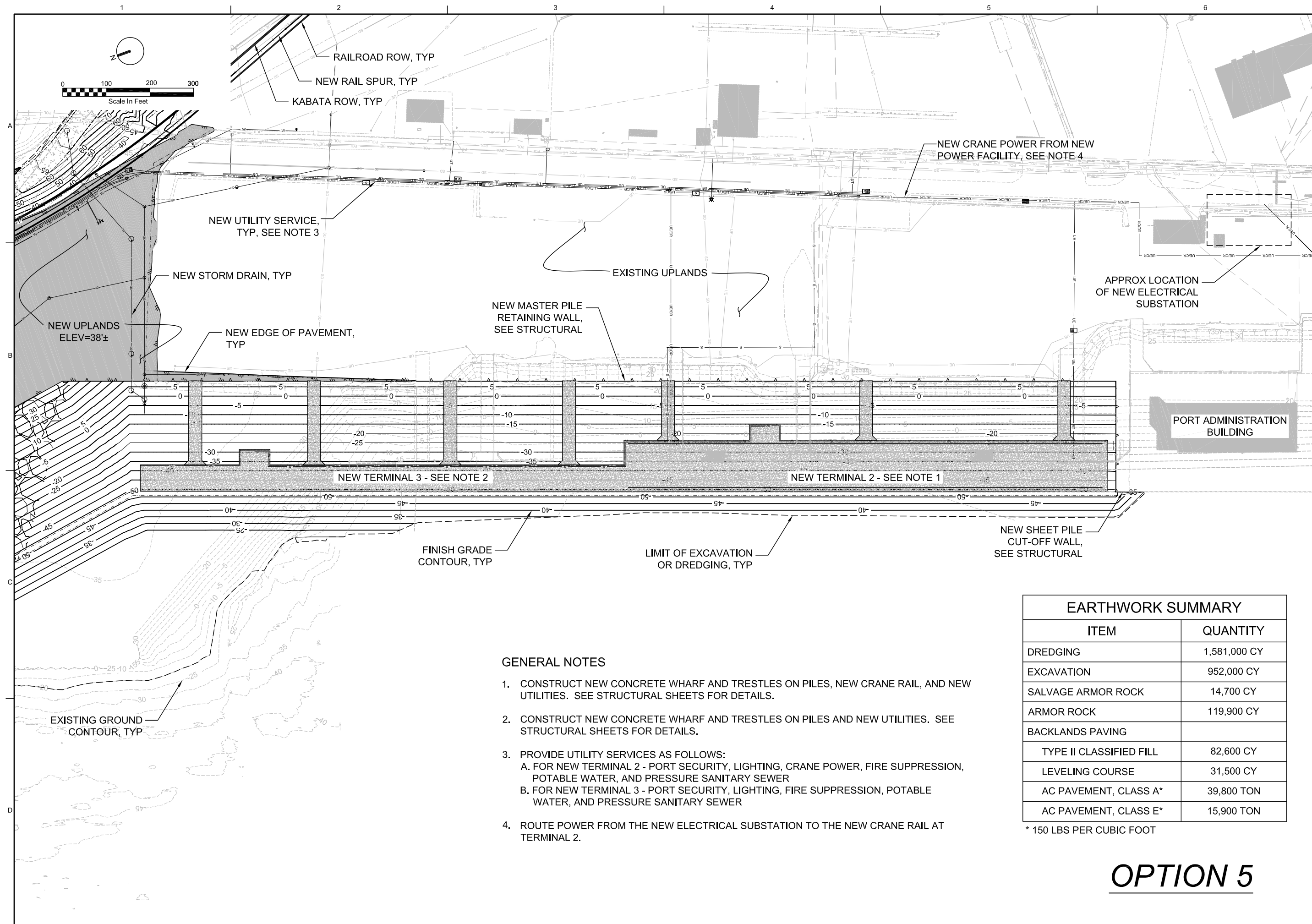
NO.	DATE	DR	CHK	REVISION	APVD	BY	APVD
1		J. TAYLOR	M. HAAPALA				D. PLAYER

US ARMY CORPS OF ENGINEERS
PORT OF ANCHORAGE
INTERMODAL EXPANSION PROJECT STUDY
ANCHORAGE, ALASKA

PORT OF ANCHORAGE
CIVIL
PARTIAL SITE PLAN A

VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
DATE	FEBRUARY 2013
PROJ	462130
DWG	C-05
SHEET	7 of 20

OPTION 5

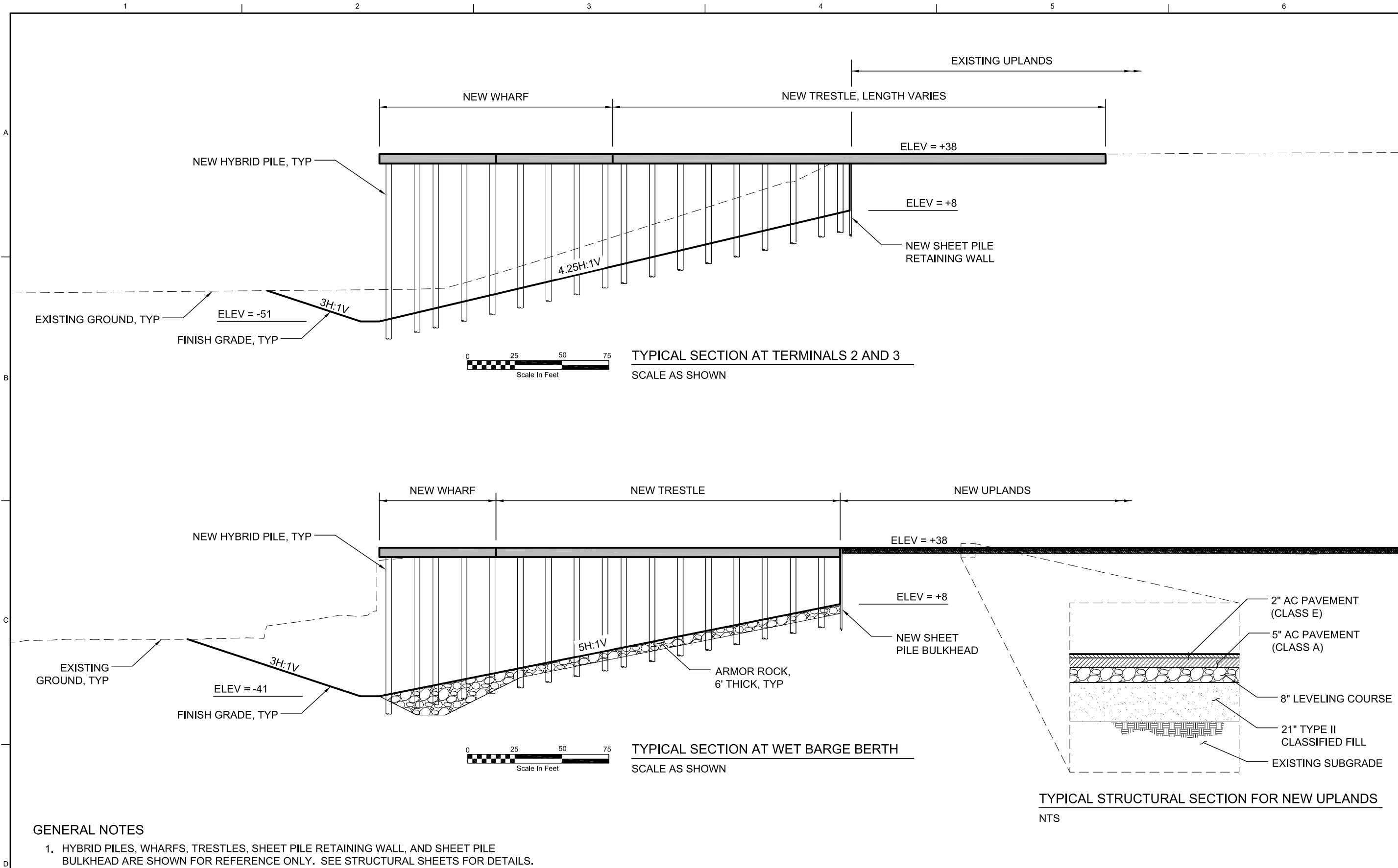


EARTHWORK SUMMARY	
ITEM	QUANTITY
DREDGING	1,581,000 CY
EXCAVATION	952,000 CY
SALVAGE ARMOR ROCK	14,700 CY
ARMOR ROCK	119,900 CY
BACKLANDS PAVING	
TYPE II CLASSIFIED FILL	82,600 CY
LEVELING COURSE	31,500 CY
AC PAVEMENT, CLASS A*	39,800 TON
AC PAVEMENT, CLASS E*	15,900 TON

* 150 LBS PER CUBIC FOOT

OPTION 5

[illegible]



GENERAL NOTES

- 1. HYBRID PILES, WHARFS, TRESTLES, SHEET PILE RETAINING WALL, AND SHEET PILE BULKHEAD ARE SHOWN FOR REFERENCE ONLY. SEE STRUCTURAL SHEETS FOR DETAILS.

OPTION 5

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PORT OF ANCHORAGE
CIVIL
TYPICAL SECTIONS

US ARMY CORPS OF ENGINEERS PORT OF ANCHORAGE INTERMODAL EXPANSION PROJECT STUDY ANCHORAGE, ALASKA				CONCEPT STUDY NOT FOR CONSTRUCTION			
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VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.

0 1"

DATE	FEBRUARY 2013
PROJ	462130
DWG	C-07
SHEET	9 of 20

PRELIMINARY DESIGN

A

B

- C

D

- Figure 1 consists of two diagrams. The left diagram, titled "Crane Wheel Spacing", shows a side view of a crane with two sets of wheels. The distance between the centers of the two wheel sets is 48'-6". Each wheel set has six wheels with the following spacings from left to right: 15'-0", 5'-0", 5'-0", 5'-0", 5'-0", and 5'-0". The right diagram, titled "Crane Loading Distribution", shows the crane's position relative to two rail lines: "Waterside Rail" and "Lakeside Rail". The crane's span is 48'-0". The distance from the left wheel set to the Waterside Rail is 45'-0", and the distance from the right wheel set to the Lakeside Rail is 40'-0".

1. WIND LOADS - PER MOTEMS SUBSECTIONS 3105F.2 & 3103F.5.2 AND WIND SPEED SPECIFIED IN WIND LOAD SECTION.
2. CURRENT LOADS - PER MOTEMS SUBSECTION 3103F.5.3.
3. WAVE LOADS - PER MOTEMS SUBSECTIONS 3103F.5.4 & 3104F.3.1.
4. PASSING VESSELS - PER MOTEMS SUBSECTION 3103F.5.5.
5. MOORING BOLLARD LOAD: 150 TON

SUMMARY OF DESIGN EARTHQUAKE PARAMETERS			
EARTHQUAKE	RETURN PERIOD (YEARS)	PEAK HORIZONTAL GROUND ACCELERATION - LANDWARD LOCATION (g)	PEAK HORIZONTAL GROUND ACCELERATION - SEAWARD LOCATION (g)
OLE	72	0.17	0.21
CLE	475	0.31	0.23
MCE	2,475	0.39	0.27

SEAWARD LOCATION					
OLE		CLE		MCE	
PERIOD (sec)	SA (g)	PERIOD (sec)	SA (g)	PERIOD (sec)	SA (g)
0.01	0.21	0.01	0.23	0.01	0.27
0.3	0.42	0.5	0.7	0.55	0.82
0.7	0.42	1.1	0.7	1.4	0.82
1	0.3	1.5	0.45	1.5	0.76
2	0.09	2	0.27	2	0.6
4	0.04	4	0.12	4	0.37
5	0.03	5	0.1	5	0.3
6	0.03	6	0.08	6	0.25
7	0.02	7	0.07	7	0.21
8	0.02	8	0.06	8	0.19

LANDWARD (BACKLANDS) LOCATION					
OLE		CLE		MCE	
PERIOD (sec)	SA (g)	PERIOD (sec)	SA (g)	PERIOD (sec)	SA (g)
0.01	0.17	0.01	0.31	0.01	0.39
0.1	0.3	0.15	0.54	0.25	0.88
0.65	0.3	0.9	0.54	1	0.88
1	0.18	1	0.45	-	-
2	0.06	2	0.15	2	0.32
4	0.03	4	0.08	4	0.15
5	0.02	5	0.06	5	0.12
6	0.02	6	0.05	6	0.1
7	0.02	7	0.05	7	0.09
8	0.015	8	0.04	8	0.08

2010 CBC TABLE 31F-3-12

LOAD TYPE	VACANT CONDITION		MOORING & BREASTING CONDITION	BERTHING CONDITION	EARTHQUAKE CONDITION	
DEAD LOAD (D)	1.2	0.9	1.2	1.2	$1.2+k^b$	$0.9-k^b$
LIVE LOAD (L)	1.6		1.6^c	1.0	1.0	
BUOYANCY (B)	1.2	0.9	1.2	1.2	1.2	0.9^a
WIND ON STRUCTURE (W)	1.6	1.6	1.6	1.6		
CURRENT ON STRUCTURE (C)	1.2	0.9	1.2	1.2	1.2	0.9
EARTH PRESSURE ON THE STRUCTURE (H)	1.6	1.6	1.6	1.6	1.6^c	1.6^c
MOORING/BREASTING LOAD (M)			1.6			
BERTHING LOAD (Be)				1.6		
EARTHQUAKE LOAD (E)					1.0	1.0

a. THE K FACTOR ($k = 0.5$ (PGA) AND BUOYANCY (B) SHALL BE APPLIED TO THE VERTICAL DEAD LOAD (D) ONLY, AND NOT TO THE INERTIAL MASS OF THE STRUCTURE.

b. THE LOAD FACTOR FOR LIVE LOAD (L) MAY BE REDUCED TO 1.3 FOR THE MAXIMUM OUTRIGGER FLOAT LOAD FROM A TRUCK CRANE.

c. AN EARTH PRESSURE ON THE STRUCTURE FACTOR (H) OF 1.0 MAY BE USED FOR PILE OR BULKHEAD STRUCTURE.

d. FOR LEVEL 1 AND 2 EARTHQUAKE CONDITION WITH STRAIN LEVELS DEFINED IN DIVISION 7 OF THE 2010 CBC CHAPTER 31F, THE CURRENT ON STRUCTURE (C) MAY NOT BE REQUIRED.

OPTION 5

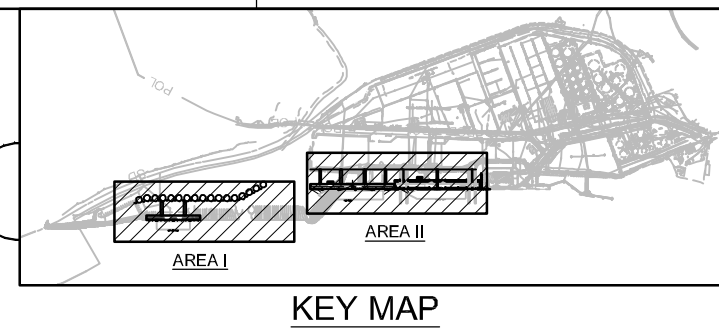
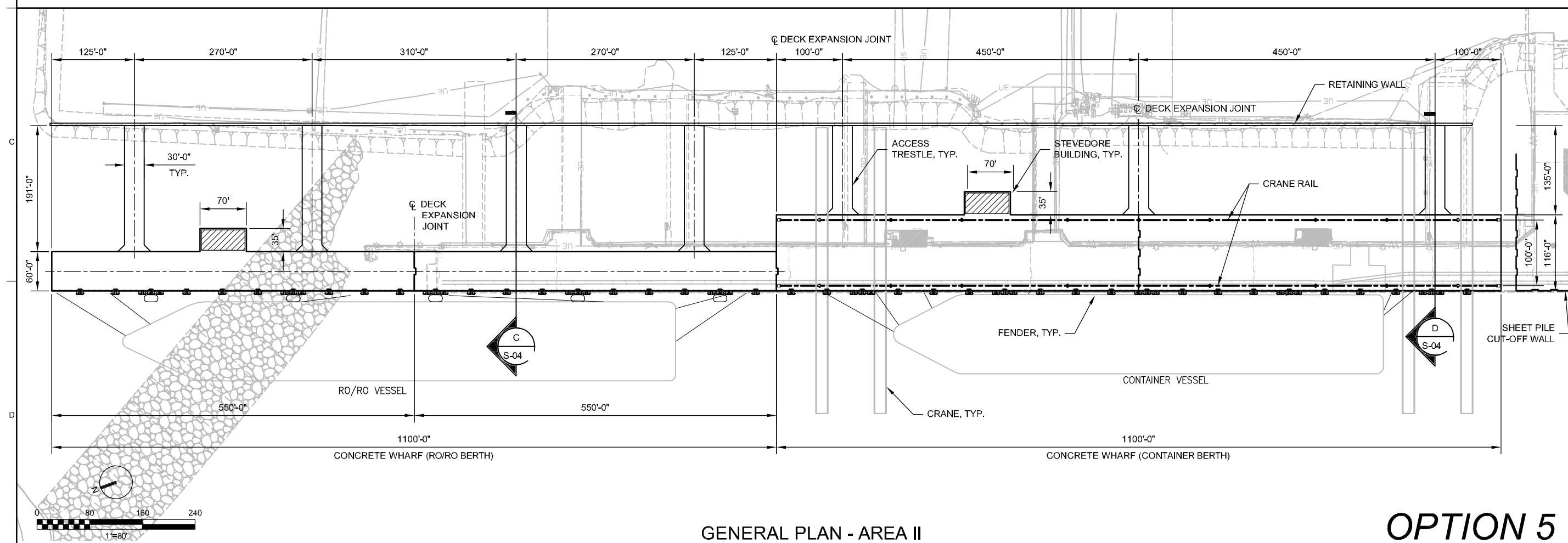
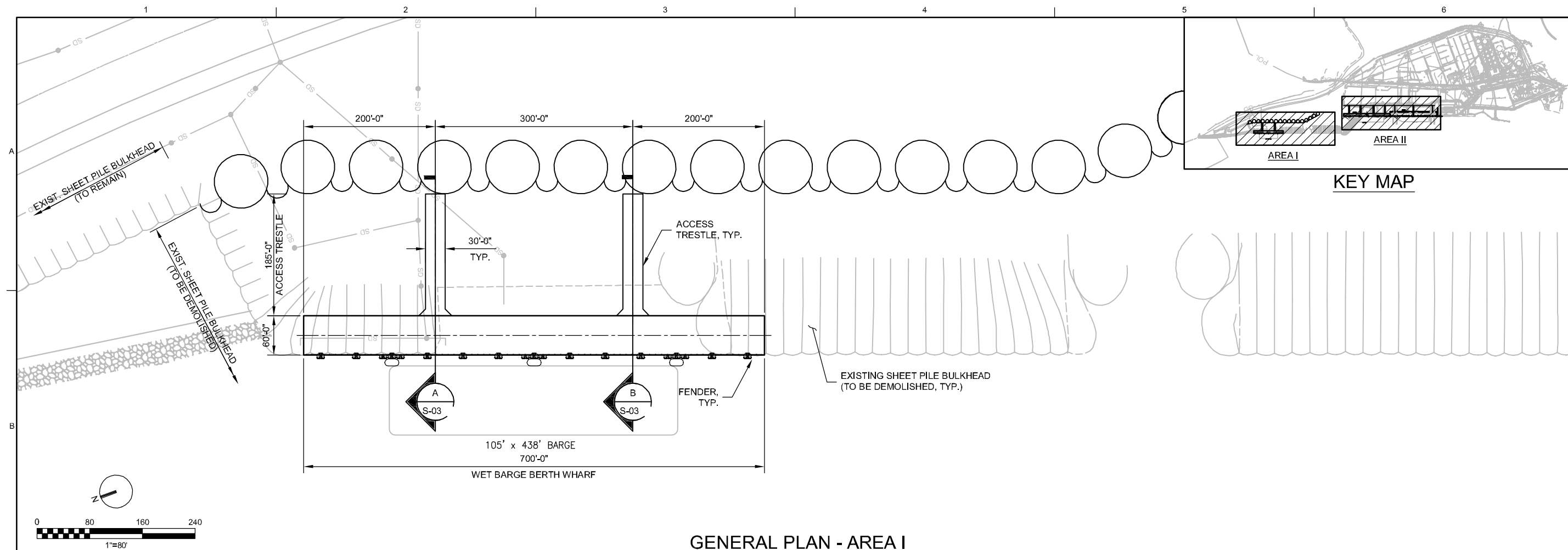
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US ARMY CORPS OF ENGINEERS
PORT OF ANCHORAGE
INTERMODAL EXPANSION PROJECT STUDY
ANCHORAGE, ALASKA

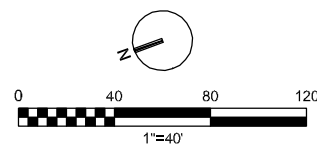
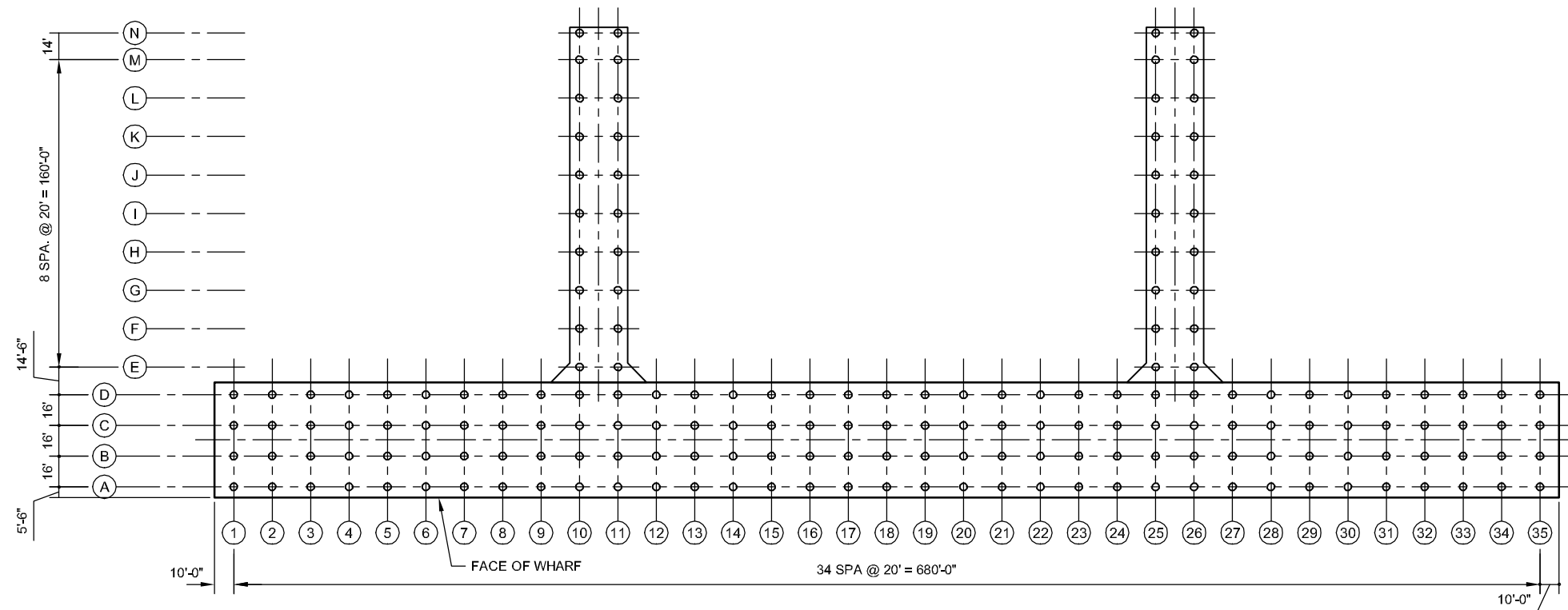
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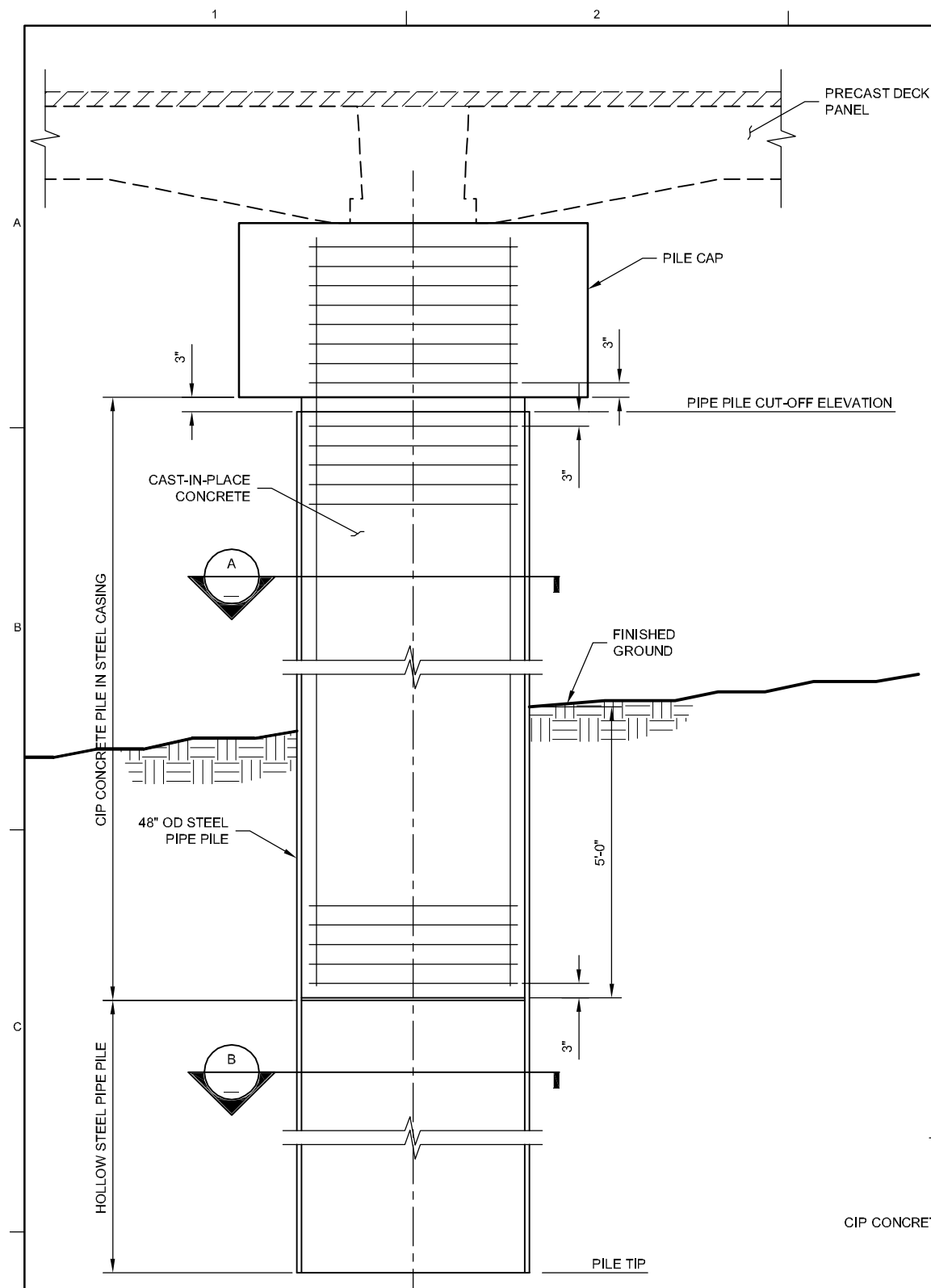


<div>CH2MHILL®</div> <div>PORT OF ANCHORAGE STRUCTURAL GENERAL PLAN</div>		US ARMY CORPS OF ENGINEERS PORT OF ANCHORAGE INTERMODAL EXPANSION PROJECT STUDY ANCHORAGE, ALASKA		NO.		DATE		REVISION		BY		APVD			
				DGSN		H. GUAN		DR		D. HENDERSON		CHK		APVD	
1" = 80'															
VERIFY SCALE															
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"															
DATE		2013/02/01													
PROJ		462130													
DWG		S-02													
SHEET		12 of 20													
CONCEPT STUDY NOT FOR CONSTRUCTION															



OPTION 5

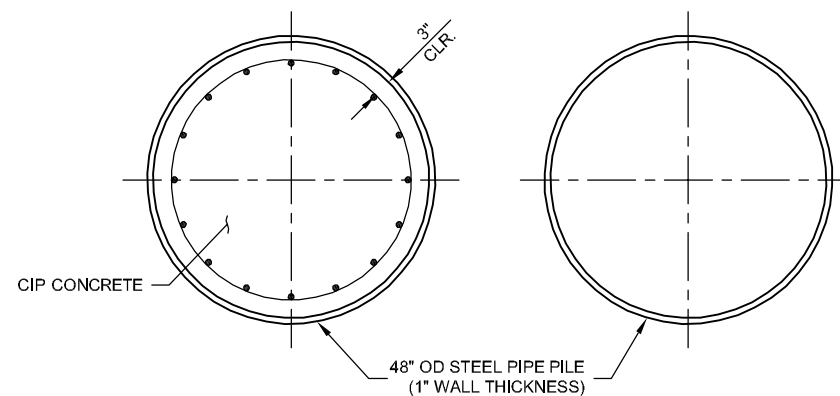
<div>CH2MHILL®</div>		PORT OF ANCHORAGE STRUCTURAL PILE LAYOUT (1 OF 2)		US ARMY CORPS OF ENGINEERS PORT OF ANCHORAGE INTERMODAL EXPANSION PROJECT STUDY ANCHORAGE, ALASKA		NO.		DATE		H. GUAN		D. HENDERSON		D. PLAYER	
						DSGN						CHK		APVD	



PILE ELEVATION

PILE DATA TABLE
AREA I

PILE	TOTAL NO. OF PILES	CUT-OFF ELEV. (FT)	TIP ELEV. (FT)	PILE LENGTH (FT)
A1-A18	18	33	-145	178
A19-A35	17	33	-145	178
B1-B18	18	33	-145	178
B19-B35	17	33	-145	178
C1-C18	18	33	-140	173
C19-C35	17	33	-140	173
D1-D18	18	33	-135	168
D19-D35	17	33	-135	168
E10-E11	2	33	-155	188
E25-E26	2	33	-165	198
F10-F11	2	33	-150	183
F25-F26	2	33	-160	193
G10-G11	2	33	-145	178
G25-G26	2	33	-155	188
H10-H11	2	33	-140	173
H25-H26	2	33	-150	183
I10-I11	2	33	-135	168
I25-I26	2	33	-145	178
J10-J11	2	33	-130	163
J25-J26	2	33	-140	173
K10-K11	2	33	-125	158
K25-K26	2	33	-140	173
L10-L11	2	33	-125	158
L25-L26	2	33	-140	173
M10-M11	2	33	-115	148
M25-M26	2	33	-125	158
N1-N2	2	33	-100	133
N3-N4	2	33	-110	143



A SECTION
3/4" = 1'-0"

B SECTION
3/4" = 1'-0"

PILE DATA TABLE
AREA II

PILE	TOTAL NO. OF PILES	CUT-OFF ELEV. (FT)	TIP ELEV. (FT)	PILE LENGTH (FT)
A1-A55	55	33	-170	203
A56-A110	109	33	-190	223
B1-B55	55	33	-165	198
B56-B110	55	33	-180	213
C1-C55	55	33	-165	198
C56-C110	55	33	-170	203
D1-D55	55	33	-160	193
D56-D110	55	33	-165	198
E6A-E49A	12	33	-170	203
E56-E110	55	33	-160	193
F6A-F49A	12	33	-160	193
F56-F110	55	33	-155	188
G6A-G49A	8	33	-155	188
G56-G110	109	33	-165	198
H6A-H49A	8	33	-150	183
H60-H106	10	33	-160	193
I6A-I49A	8	33	-145	178
I60-I106	10	33	-150	183
J6A-J49A	8	33	-140	173
J60-J106	6	33	-145	178
K6A-K49A	8	33	-135	168
K60-K106	6	33	-140	173
L6A-L49A	8	33	-130	163
L60-L106	6	33	-135	168
M6A-M49A	8	33	-125	158
M60-M106	6	33	-130	163
N6A-N49A	8	33	-95	128
N60-N106	6	33	-115	148

CONCEPT STUDY
NOT FOR CONSTRUCTION

[illegible]

US ARMY CORPS OF ENGINEERS
PORT OF ANCHORAGE
INTERMODAL EXPANSION PROJECT STUDY
ANCHORAGE, ALASKA

PORT OF ANCHORAGE
STRUCTURAL
PILE DETAILS

10

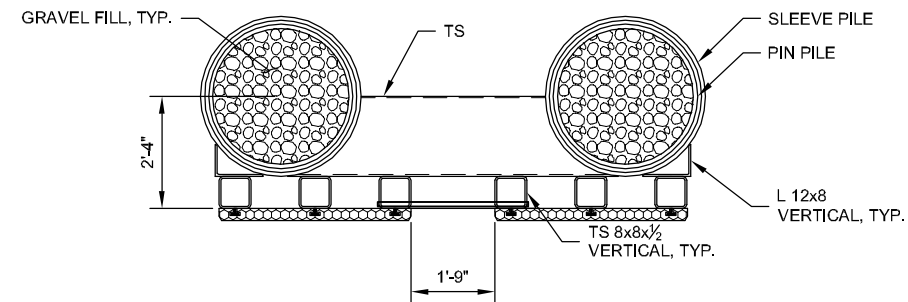
3/4" = 1'-0"	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING.	
0	1"
DATE	2013/02/01
PROJ	462130
DWG	S-07
SHEET	17 of 20

01	30	07	PRELIMINARY DESIGN
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	H. GUAN	D. HENDERSON	D. PLAYER
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OPTION 5



A SECTION
1/2" = 1'-0"

FENDER FRONT ELEVATION

[illegible]

91	90	89	PRELIMINARY DESIGN	
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OPTION 5

