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APPENDIX E TYPICAL DRAWINGS

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TYPICAL DRAWING NUMBER	REV.	DRAWING CATEGORY	DRAWING DESCRIPTION
GTP		L	
E-1	2	GTP Supports	GTP Anchor Supports
E-2	2	GTP Supports	GTP Pipe Supports
E-3	2	GTP Supports	PBTL Anchor Supports
E-4	2	GTP Supports	PBTL Pipe Support
E-5	2	GTP Supports	VSM Embedment
E-6	2	GTP	Putuligayuk River Intake Access
E-7	2	GTP Roads	GTP Water Pipeline Road Crossing
E-8	2	GTP Roads	GTP Mine (Gravel) Haul Road – Cross Section
E-9	2	GTP Roads	GTP Emergency Access & River Access Roads – Cross Section
E-10	2	GTP Roads	GTP Module Haul Road Built on Existing Road – Cross Section
E-11	2	GTP Roads	GTP Module Haul Road (New) – Cross Section
E-12	3	GTP	Ice Road Construction for PBTL & GTP Transfer Lines
E-13	3	GTP	Ice Road Construction for Two GTP Pipelines
E-14	2	GTP	Ice Road Construction for a Single GTP Pipeline
E-15	0	GTP	Dockhead 4 Layout
E-16	0	GTP	Causeway Expansion
E-17	0	GTP	Barge Bridge Layout
E-18	0	GTP	GTP Mine Site Layout
E-19	0	GTP	GTP Reservoir Layout
MARINE TERMI	NAL		
E-20	3	Marine	Product Loading Facility General Arrangement
E-21	2	Marine Berth	Berth 1 & 2 Arrangements
E-22	3	Marine Trestle	Trestle Foundation Plan and Profile 1 of 2
E-23	3	Marine Trestle	Trestle Foundation Plan and Profile 2 of 2
E-24	3	Marine Trestle	Trestle Foundation Plan Type 1
E-25	3	Marine Trestle	Trestle Foundation Plan Type 2
E-26	3	Marine Trestle	Trestle Foundation Plan Type 3
E-27	3	Marine MOF	Material Offloading Facility General Arrangement
E-28	2	Marine Dredging	MOF Dredging Plan View
E-29	1	Marine Dredging	MOF Dredging Section View
E-30	1	Marine	Typical Derrick and Pipelay Barge
LNG PLANT			
E-31	1	LNG	LNG Tank
PIPELINES			· ·
E-32	2	TRENCH MODE	TRENCH DETAIL
E-33	1		NOT USED
E-34	1		NOT USED
E-35	3	RIGHT-OF-WAY MODES	ROW MODE #1 – ICE WORK PAD ROW NORTH SLOPE (WINTER)

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TYPICAL DRAWING NUMBER	REV.	DRAWING CATEGORY	DRAWING DESCRIPTION
E-36	3	RIGHT-OF-WAY MODES	ROW MODE #2 - WINTER FROST PACKED
E-37	3	RIGHT-OF-WAY MODES	ROW MODE #3 - MATTED SUMMER WETLANDS
E-38	3	RIGHT-OF-WAY MODES	ROW MODE #4 - GRANULAR WORK PAD OVER THAW SENSITIVE PERMAFROST (WINTER & SUMMER)
E-39	3	RIGHT-OF-WAY MODES	ROW MODE #5A - GRADED CROSS SLOPES (WINTER OR SUMMER)
E-40	3	RIGHT-OF-WAY MODES	ROW MODE #5B - MOUNTAIN GRADED CUT (SUMMER)
E-41	2	RIGHT-OF-WAY MODES	ROW MODE #6 - PTTL ABOVE GROUND PIPELINE ON VSMs
E-42	0	RIGHT-OF-WAY MODES	ADDITIONAL TEMPORARY WORKSPACE 1/3
E-43	0	RIGHT-OF-WAY MODES	ADDITIONAL TEMPORARY WORKSPACE 2/3
E-44	0	RIGHT-OF-WAY MODES	ADDITIONAL TEMPORARY WORKSPACE 3/3
E-45	2	BUOYANCY CONTROL	CONCRETE COATING, ONSHORE
E-46	2	BUOYANCY CONTROL	SADDLE BAGS
E-47	2	BUOYANCY CONTROL	BOLT-ON RIVER WEIGHTS
E-48	2	BUOYANCY CONTROL	SCREW ANCHORS
E-49	1	CORROSION CONTROL	COATINGS
E-50	1	CATHODIC PROTECTION	DEEP VERTICAL ANODE BED
E-51	2	CATHODIC PROTECTION	HORIZONTAL ANODE BED
E-52	1	ACCESS ROADS	PERMANENT ROAD SECTIONS
E-53	1	ACCESS ROADS	TEMPORARY ROAD SECTIONS
E-54	1	ACCESS ROADS	TEMPORARY SNOW/ICE ROAD SECTIONS
E-55	1	ACCESS ROADS	TEMPORARY SHOEFLY ROAD
E-56	2	ACCESS ROADS	RAMP OFF EXISTING ROAD
E-57	2	CONSTRUCTION TYPICALS	HORIZONTAL BORING/DRILLING ROADS
E-58	2	CONSTRUCTION TYPICALS	OPEN-CUT ROADS
E-59	1	EQUIPMENT CROSSINGS	TEMPORARY BRIDGE
E-60	2	CONSTRUCTION TYPICALS	EQUIPMENT CROSSING - FORD
E-61	2	CONSTRUCTION TYPICALS	EQUIPMENT CROSSING - MAT BRIDGE
E-62	2	CONSTRUCTION TYPICALS	EQUIPMENT CROSSING - MAT ROCK/CULVERT BRIDGE
E-63	2	CONSTRUCTION TYPICALS	EQUIPMENT CROSSING -TYPICAL ROCK/CULVERT BRIDGE
E-64	2	CONSTRUCTION TYPICALS	EQUIPMENT CROSSING - ICE BRIDGE
E-65	2	CONSTRUCTION TYPICALS	EQUIPMENT CROSSING – CLEAN SNOW FILL WITH ICE COVER
E-66	3	CONSTRUCTION TYPICALS	EQUIPMENT CROSSING – LOG FILL
E-67	2	120 BED PIONEER CAMPS (SKID MOUNTED)	4.3 ACRES
E-68	1	240 PERSON CAMP	8 ACRES
E-69	0	300 PERSON CAMP	7.4 ACRES
E-70	0	400 PERSON CAMP	8.7 ACRES
E-71	0	600 PERSON CAMP	14 ACRES
E-72	0	700 PERSON CAMP	14 ACRES

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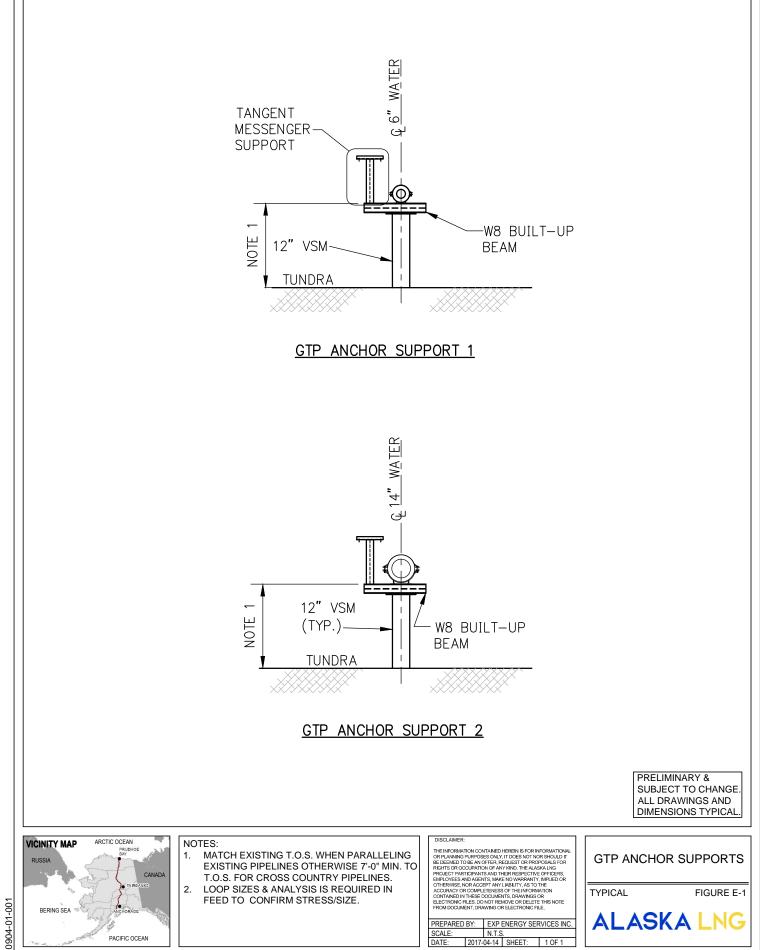
TYPICAL DRAWING NUMBER	REV.	DRAWING CATEGORY	DRAWING DESCRIPTION
E-73	1	120 MAN CAMP & CONTRACTOR YARD	OPTION 1
E-73A	0	120 MAN CAMP & CONTRACTOR YARD	OPTION 1 ELEVATION
E-74	1	240 MAN CAMP & CONTRACTOR YARD	OPTION 2
E-74A	0	240 MAN CAMP & CONTRACTOR YARD	OPTION 2 ELEVATION
E-75	1	360 MAN CAMP & CONTRACTOR YARD	OPTION 3
E-75A	0	360 MAN CAMP & CONTRACTOR YARD	OPTION 3 ELEVATION
E-76	1	480 MAN CAMP & CONTRACTOR YARD	OPTION 4
E-76A	0	480 MAN CAMP & CONTRACTOR YARD	OPTION 4 ELEVATION
E-77	1	600 MAN CAMP & CONTRACTOR YARD	OPTION 5
E-77A	0	600 MAN CAMP & CONTRACTOR YARD	OPTION 5 ELEVATION
E-78	1	660 MAN CAMP & CONTRACTOR YARD	OPTION 6
E-78A	0	660 MAN CAMP & CONTRACTOR YARD	OPTION 6 ELEVATION
E-79	1	600 MAN CAMP & CONTRACTOR YARD	OPTION 7
E-79A	0	600 MAN CAMP & CONTRACTOR YARD	OPTION 7 ELEVATION
E-80	1	960 MAN CAMP & CONTRACTOR YARD	OPTION 8
E-80A	0	960 MAN CAMP & CONTRACTOR YARD	OPTION 8 ELEVATION
E-81	1	960 MAN CAMP & CONTRACTOR YARD W/ FUEL DEPOT	OPTION 9
E-81A	0	960 MAN CAMP & CONTRACTOR YARD W/ FUEL DEPOT	OPTION 9 ELEVATION
E-82	1	1080 MAN CAMP & CONTRACTOR YARD	OPTION 10
E-82A	0	1080 MAN CAMP & CONTRACTOR YARD	OPTION 10 ELEVATION
E-83	1	1080 MAN CAMP & CONTRACTOR YARD	OPTION 11
E-83A	0	1080 MAN CAMP & CONTRACTOR YARD	OPTION 11 ELEVATION
E-84	1	400 MAN CAMP & CONTRACTOR YARD	OPTION 12
E-84A	0	400 MAN CAMP & CONTRACTOR YARD	OPTION 12 ELEVATION

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TYPICAL DRAWING NUMBER	REV.	DRAWING CATEGORY	DRAWING DESCRIPTION	
E-85	1	960 MAN CAMP & CONTRACTOR YARD	OPTION 13	
E-85A	0	960 MAN CAMP & CONTRACTOR YARD	OPTION 13 ELEVATION	
E-86	1	940 MAN CAMP & CONTRACTOR YARD	OPTION 14	
E-86A	0	940 MAN CAMP & CONTRACTOR YARD	OPTION 14 ELEVATION	
E-87	1	SMALL STANDALONE PIPE STORAGE YARD	6.4 ACRES	
E-87A	0	SMALL STANDALONE PIPE STORAGE YARD	6.4 ACRES ELEVATION	
E-88	2	MEDIUM STANDALONE PIPE STORAGE YARD	9.2 ACRES	
E-88A	0	MEDIUM STANDALONE PIPE STORAGE YARD	9.2 ACRES ELEVATION	
E-89	2	LARGE STANDALONE PIPE STORAGE YARD	11 ACRES	
E-89A	0	LARGE STANDALONE PIPE STORAGE YARD	11 ACRES ELEVATION	
E-90	2	VERY LARGE STANDALONE PIPE STORAGE YARD	15.6 ACRES	
E-90A	0	VERY LARGE STANDALONE PIPE STORAGE YARD	15.6 ACRES ELEVATION	
E-91	2	STANDALONE CONTRACTOR YARD	8 ACRES	
E-91A	0	STANDALONE CONTRACTOR YARD	8 ACRES ELEVATION	
E-92	1	CONSTRUCTION TYPICALS	WATER DISCHARGE SITE	
E-93	2	CONSTRUCTION TYPICALS	HYDROSTATIC TEST POINT	
E-94	2	CONCEPTUAL "ZEE" FAULT CROSSING DESIGN	STRIKE-SLIP FAULTS	
E-95	2	CONCEPTUAL "U" FAULT CROSSING DESIGN	STRIKE-SLIP FAULTS	
E-96	2	CONCEPTUAL "ZEE" FAULT CROSSING DESIGN	REVERSE OR THRUST FAULTS	
E-97	2	FOREIGN PIPELINE AND UTILITY CROSSINGS	FOREIGN PIPELINES	
E-98	2	RAILROAD CROSSINGS	RAILROAD CROSSINGS	
E-99	2	ROAD CROSSINGS	ROAD CROSSINGS	
E-100	1	PTTL – ROAD CROSSING	ROAD CROSSING	
E-101	2	FOREIGN PIPELINE AND UTILITY CROSSINGS	BURIED UTILITY	
E-102	2	PIPELINE FACILITIES	MAINLINE BLOCK VALVE PLOT PLAN	
E-102A	0	PIPELINE FACILITIES	MAINLINE BLOCK VALVE ELEVATION	
E-103	2	PIPELINE FACILITIES	TEE AND VALVE GAS DELIVERY POINT PLOT PLAN	
E-103A	0	PIPELINE FACILITIES	TEE AND VALVE GAS DELIVERY POINT ELEVATION	

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TYPICAL DRAWING NUMBER	REV.	DRAWING CATEGORY	DRAWING DESCRIPTION
E-104	1	PIPELINE FACILITIES	MLBV AT COMPRESSOR STATIONS
E-104A	0	PIPELINE FACILITIES	MLBV AT COMPRESSOR STATIONS ELEVATION
E-105	1	FRACTURE ARREST DEVICE	FRACTURE CONTROL METHOD
E-106	1	CONSTRUCTION TYPICALS	HELIPADS
E-107	1	TYPICAL HELIPORT	APPROACH/DEPARTURE MODES – CLEARING AREA
E-108	1	PTTL: SUPPORT TYPICALS	ANCHORS, OFFSETS AND GUIDED/SLIDING SUPPORTS
E-109	1	PTTL: SUPPORT TYPICALS	SUPPORT
E-110	1	PTTL: SUPPORT TYPICALS	SHARED HSM/VSM FOR PTTL AND PTU WEST GATHERING LINE
E-111	2	WATERBODY CROSSINGS	OPEN CUT
E-112	1	WATERBODY CROSSINGS	MAJOR/INTERMEDIATE - HDD
E-113	2	WATERBODY CROSSINGS	MAJOR/INTERMEDIATE – OPEN CUT
E-114	2	WATERBODY CROSSINGS	MINOR – OPEN CUT
E-115	2	WATERBODY CROSSINGS	ISOLATED OPEN-CUT – DAM AND PUMP
E-116	2	WATERBODY CROSSINGS	ISOLATED OPEN-CUT – DAM AND FLUME
E-117	1	WATERBODY CROSSINGS	ISOLATED OPEN-CUT – DAM AND DIVERT
E-118	1	WATERBODY CROSSINGS	HORIZONTAL DIRECTIONAL DRILL
E-119	0	TAPS ABOVE GROUND CROSSING	PLAN
E-119A	0	TAPS ABOVE GROUND CROSSING	ELEVATION
E-120	0	TAPS BELOW GROUND CROSSING AT ATIGUN PASS	PLAN
E-120A	0	TAPS BELOW GROUND CROSSING AT ATIGUN PASS	ELEVATION
E-121	0	NENANA RIVER CROSSING AT MOODY, ALTERNATIVE 6 UPSTREAM 3	SPAN STEEL BRIDGE
E-122	0	CROSS SECTION	MATERIAL SITE ABOVE WATER TABLE
E-123	0	CROSS SECTION	MATERIAL SITE BELOW WATER TABLE



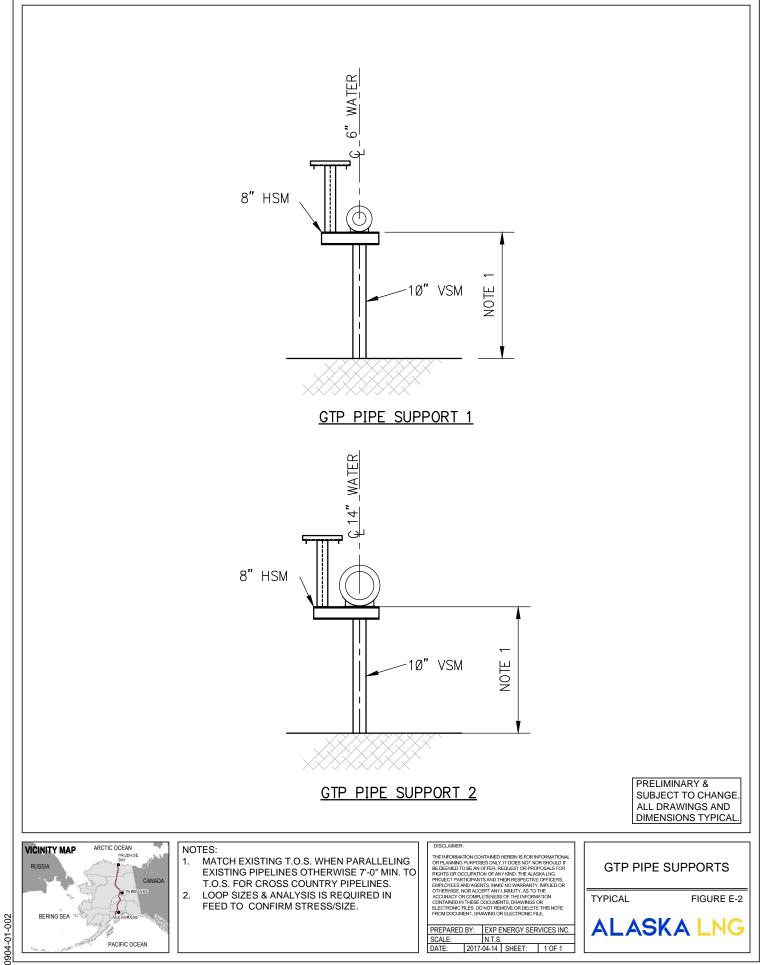
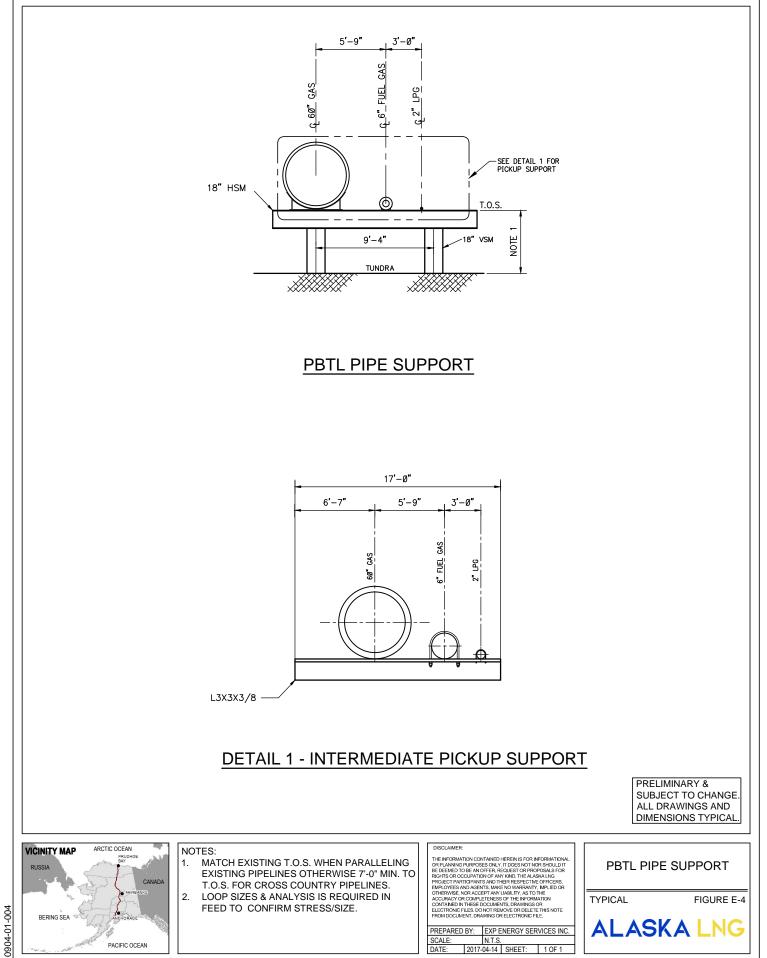
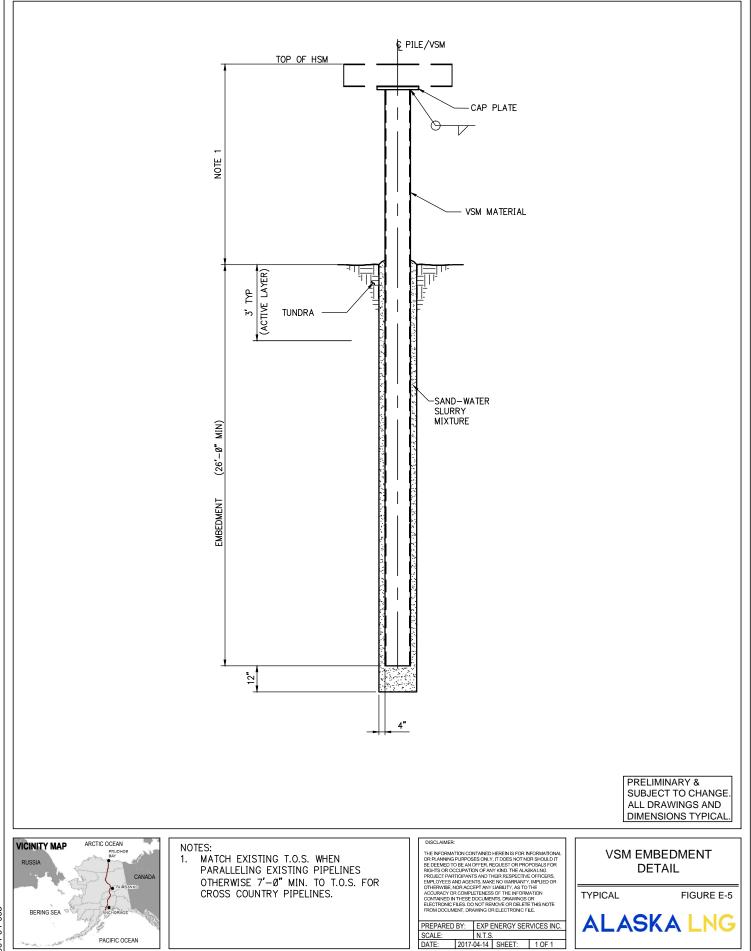
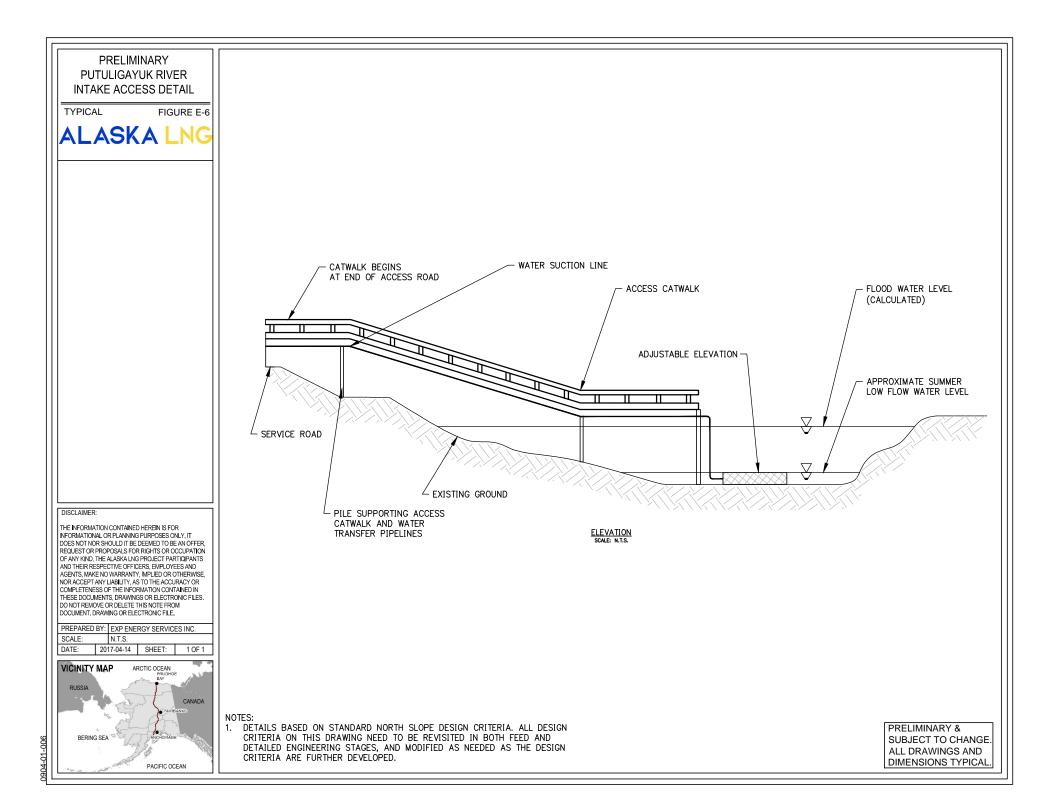


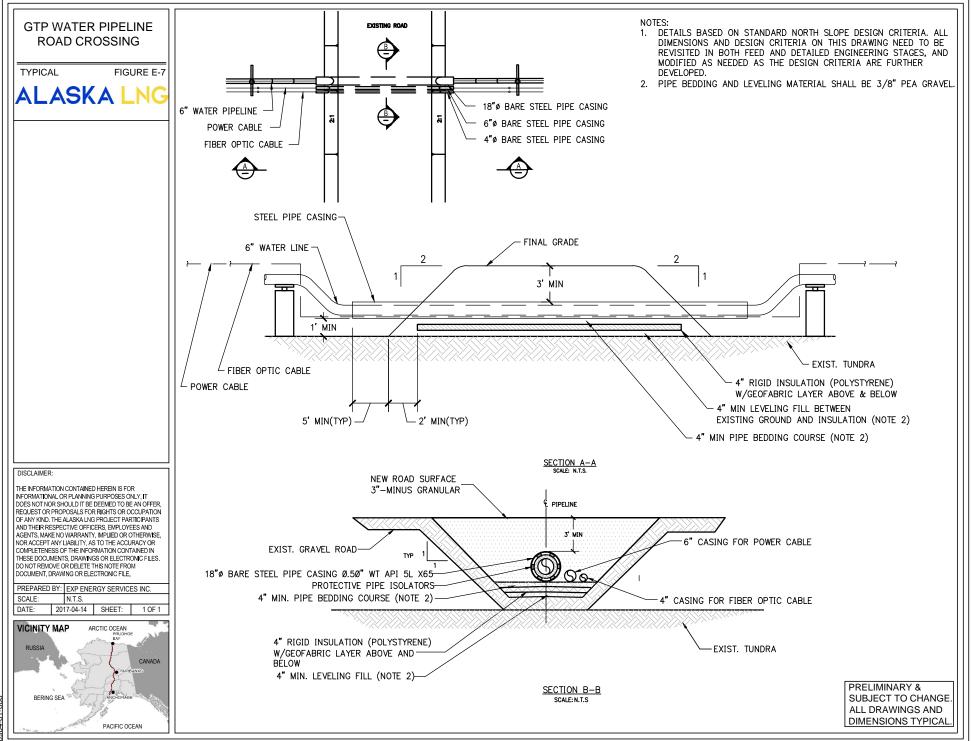
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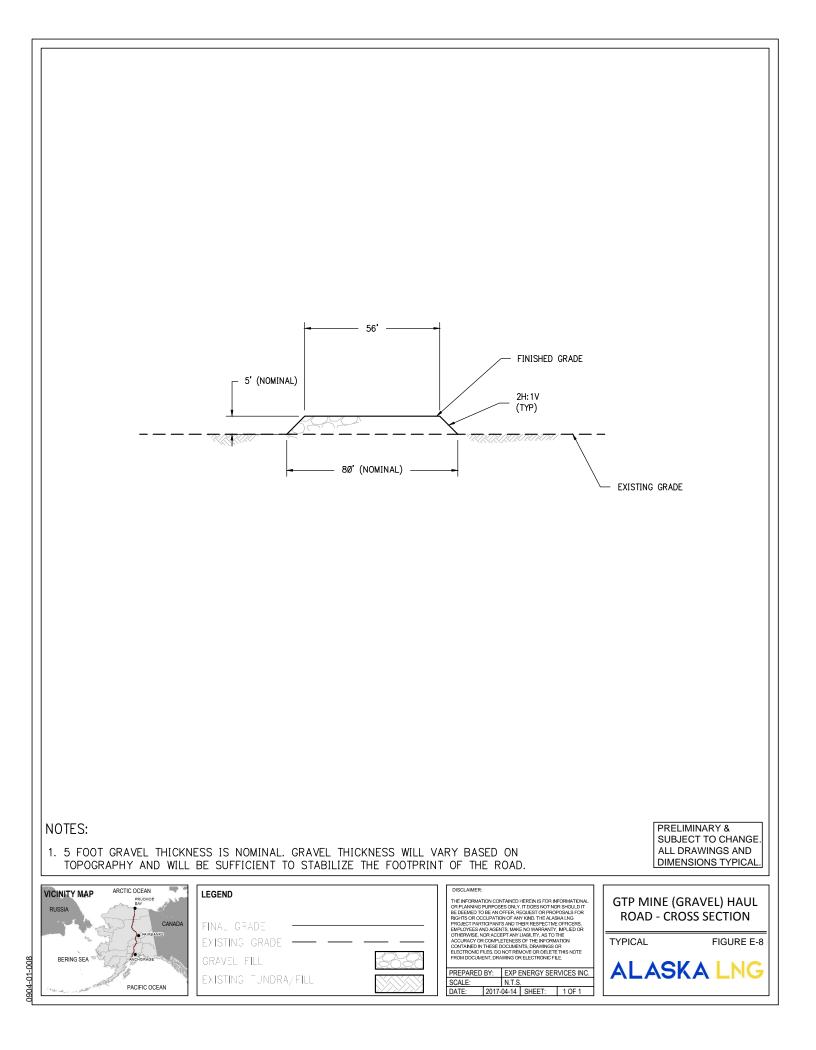


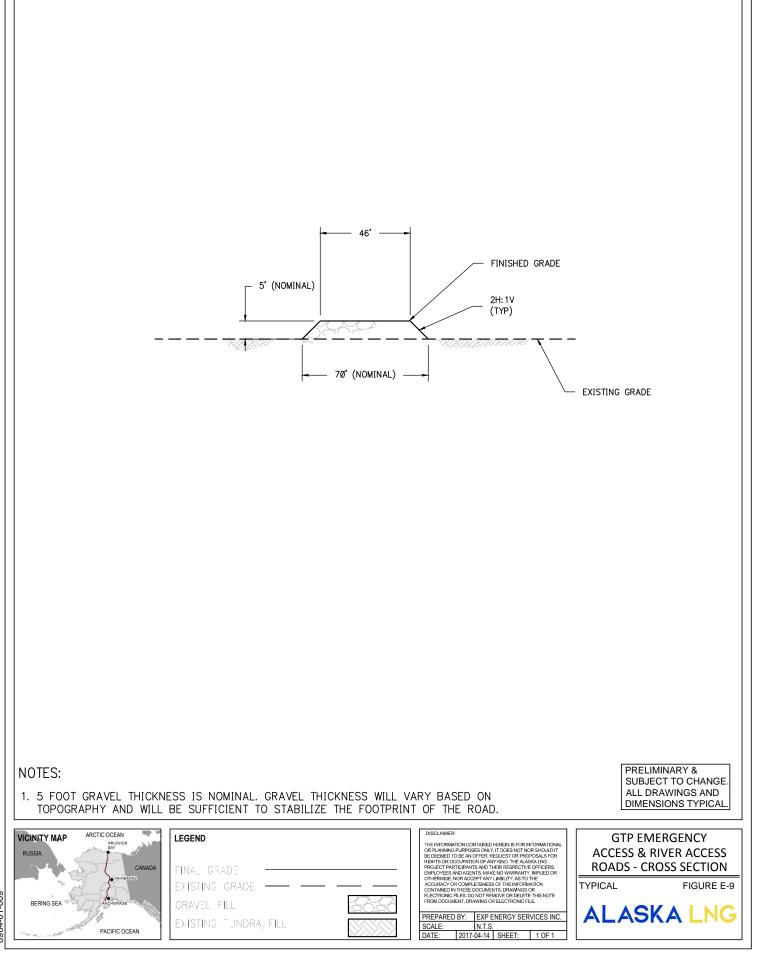
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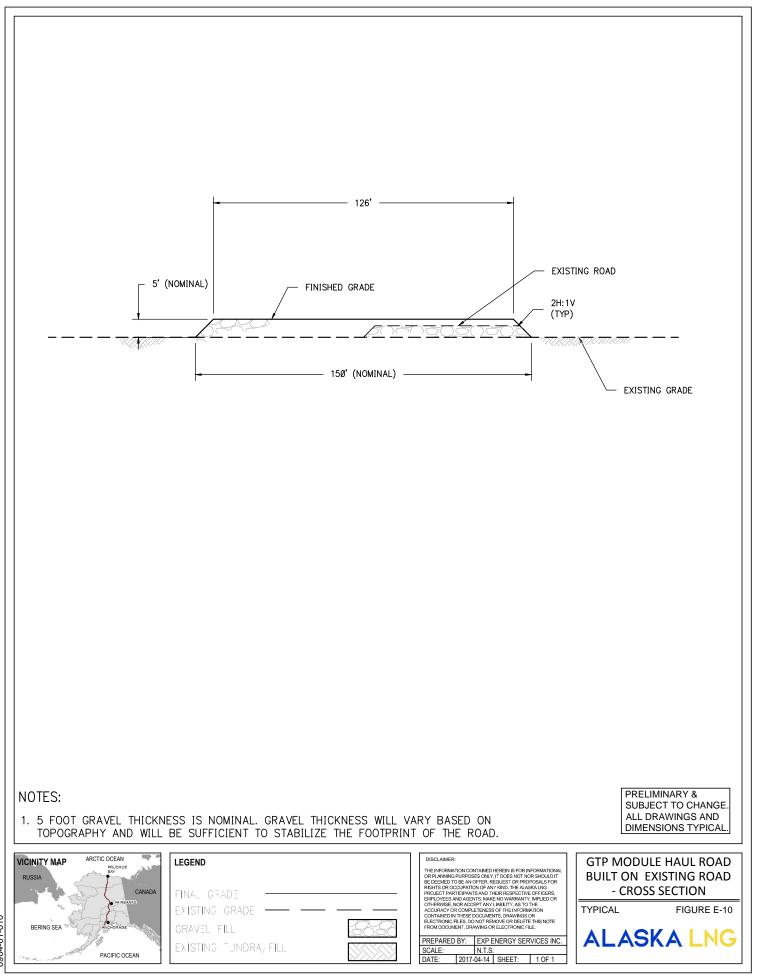


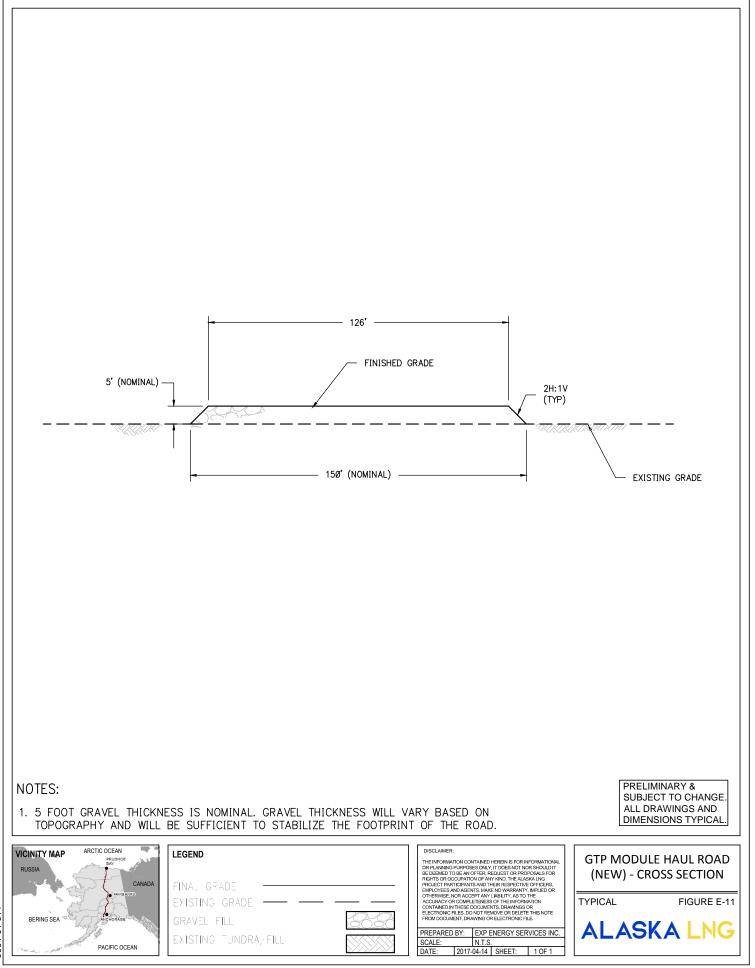


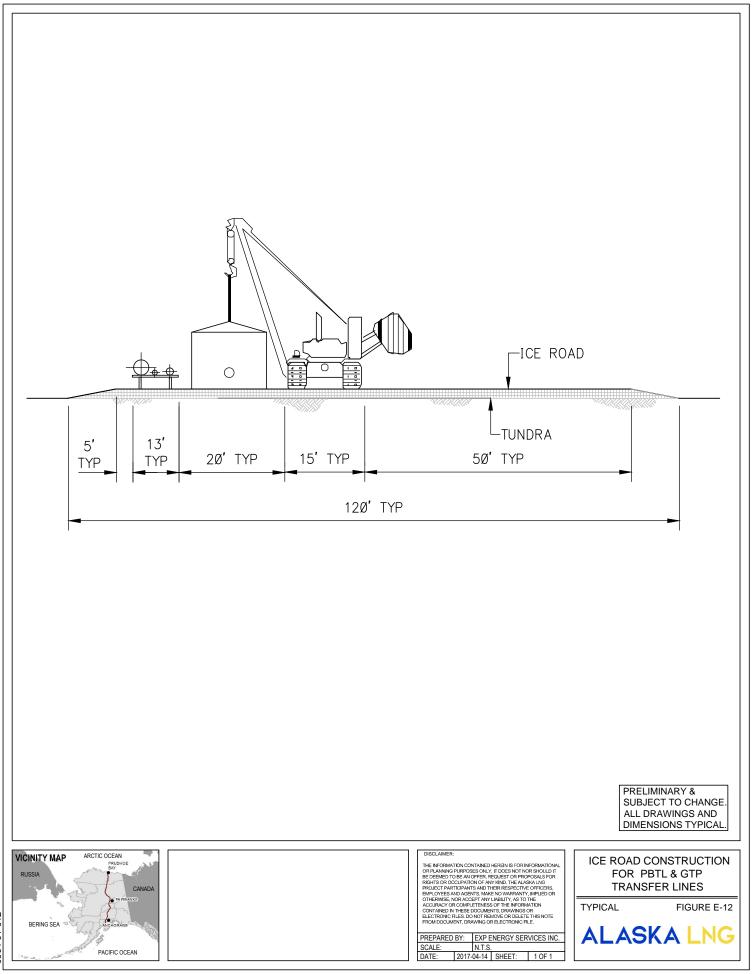
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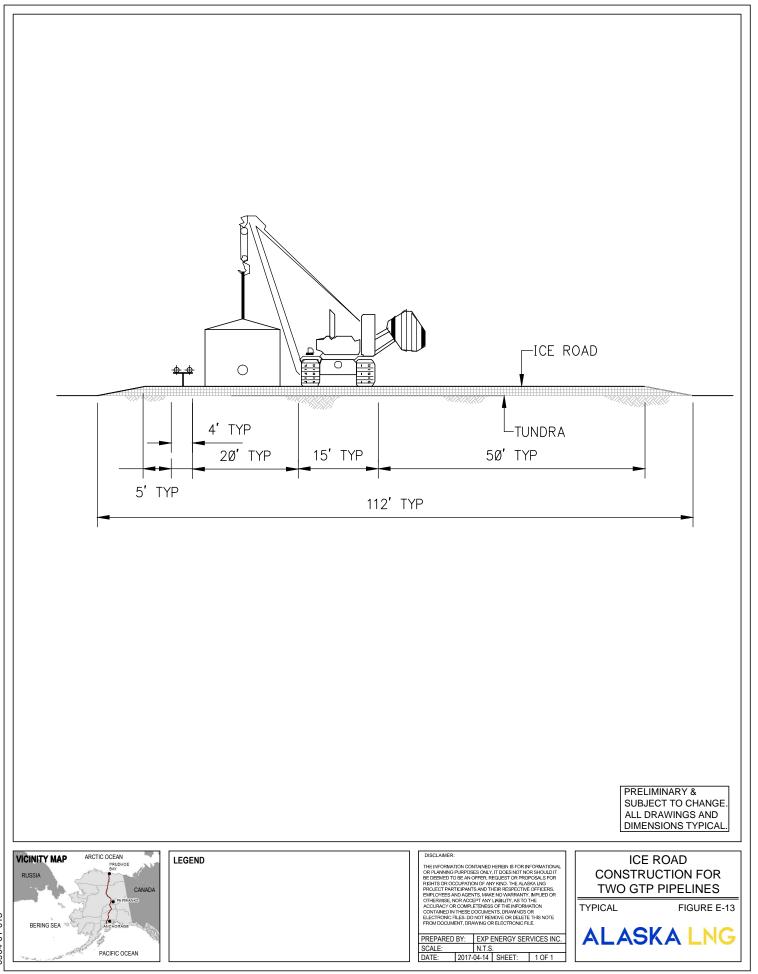


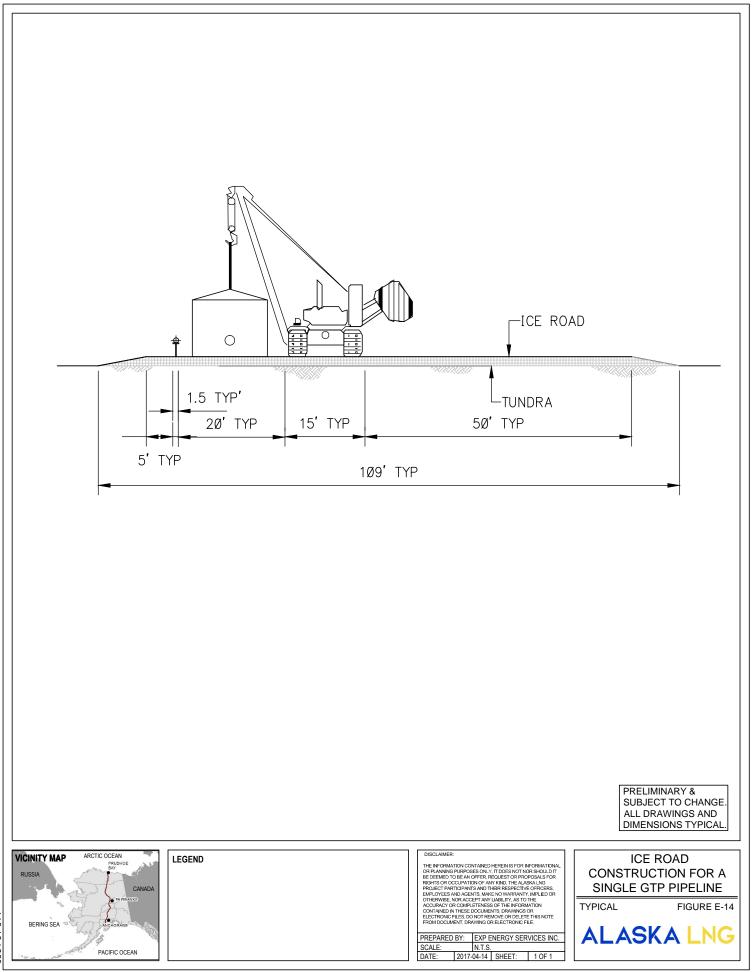


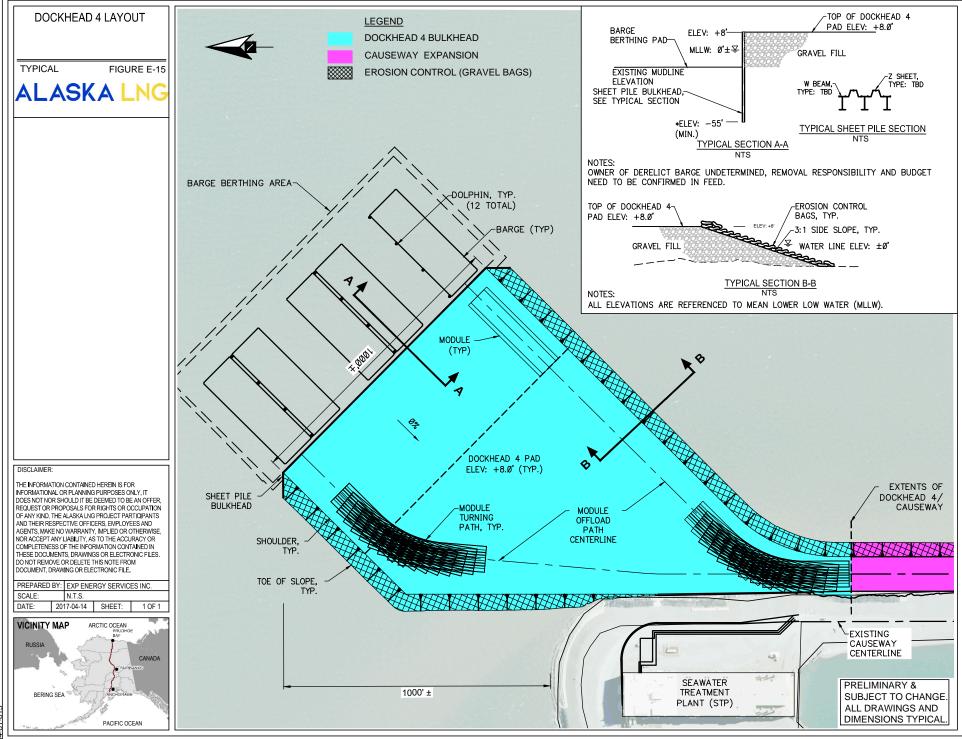


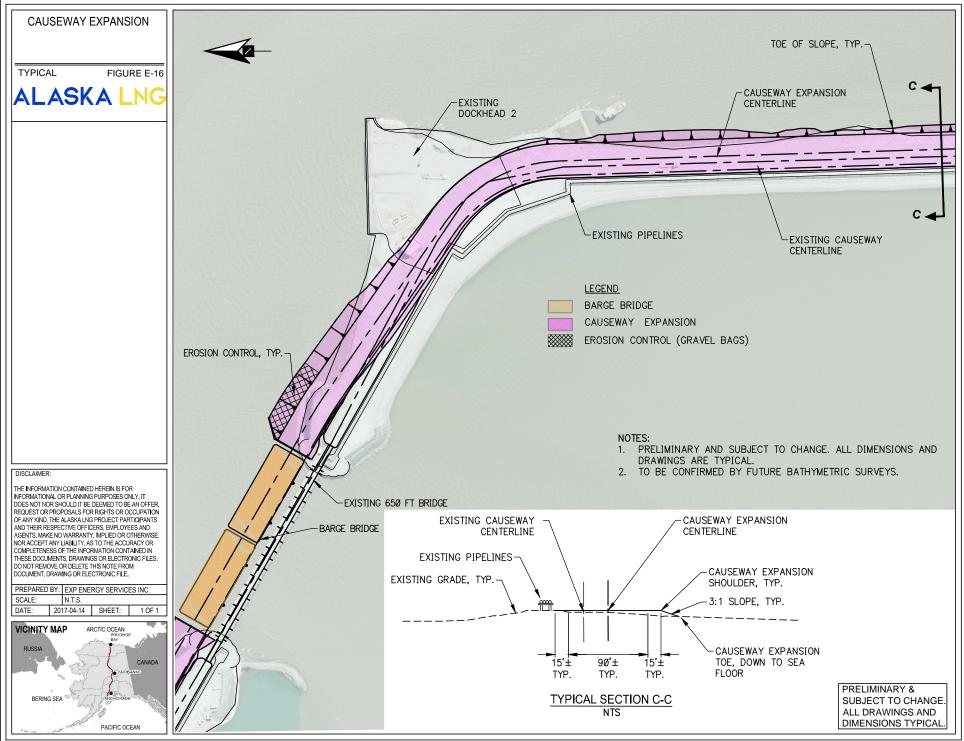


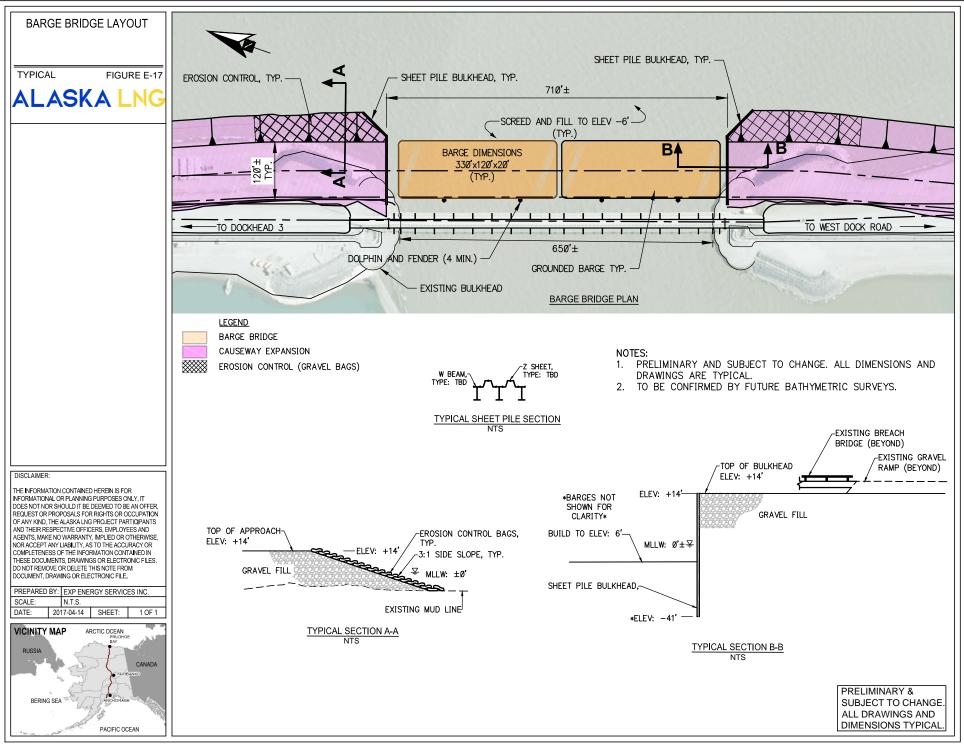


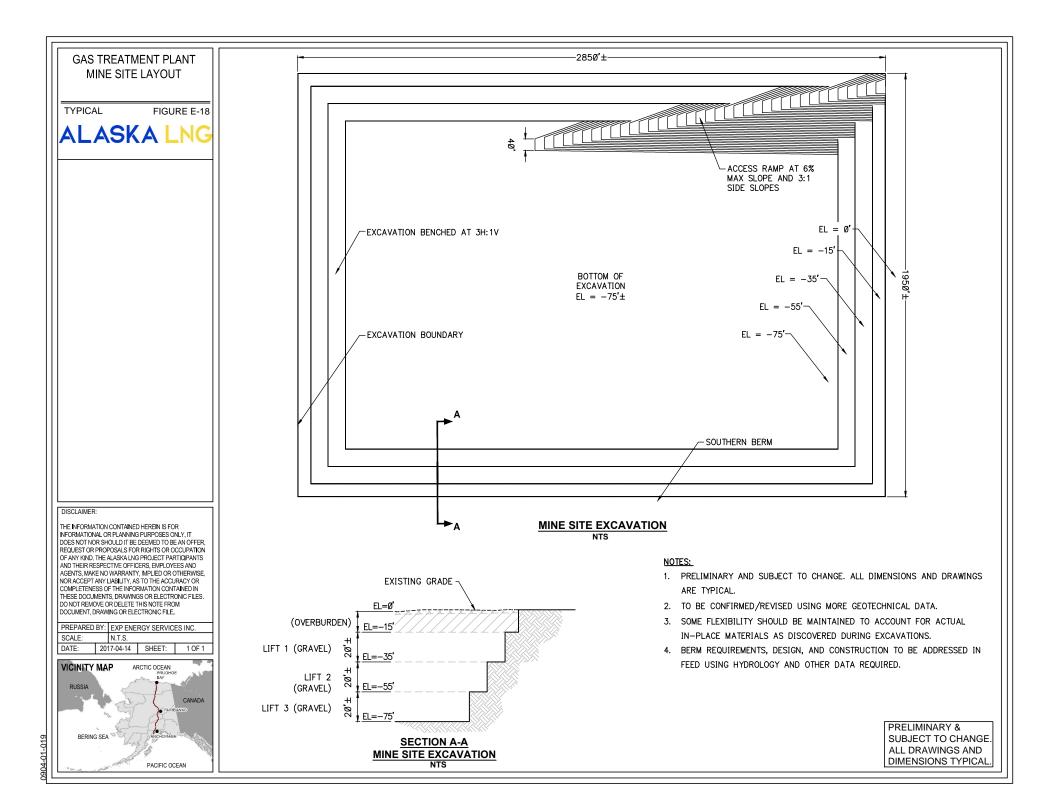


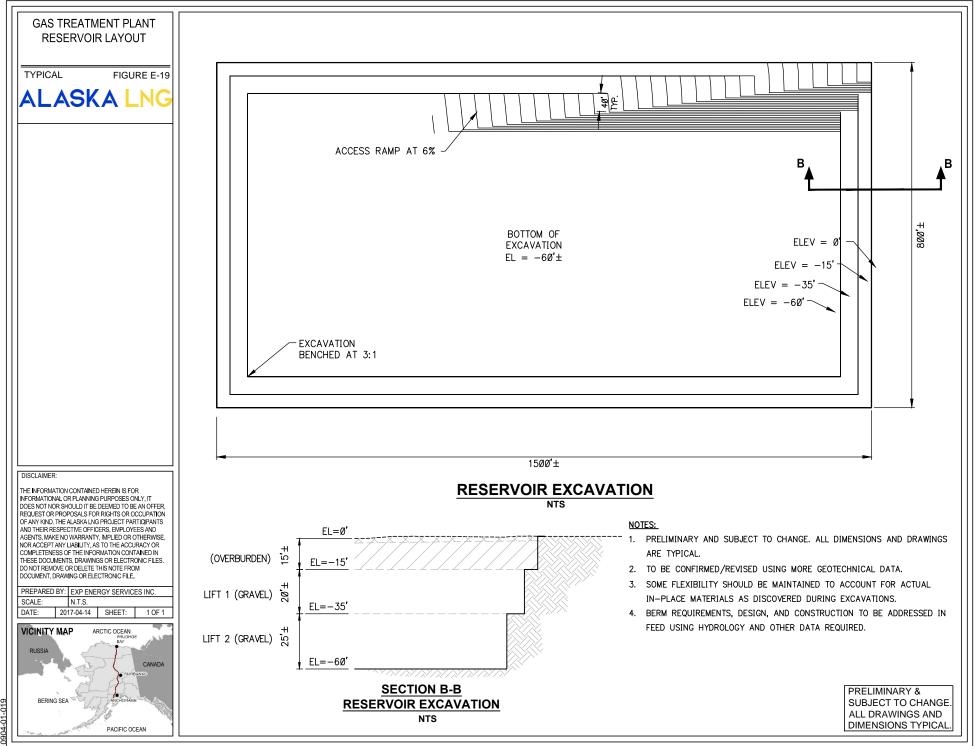


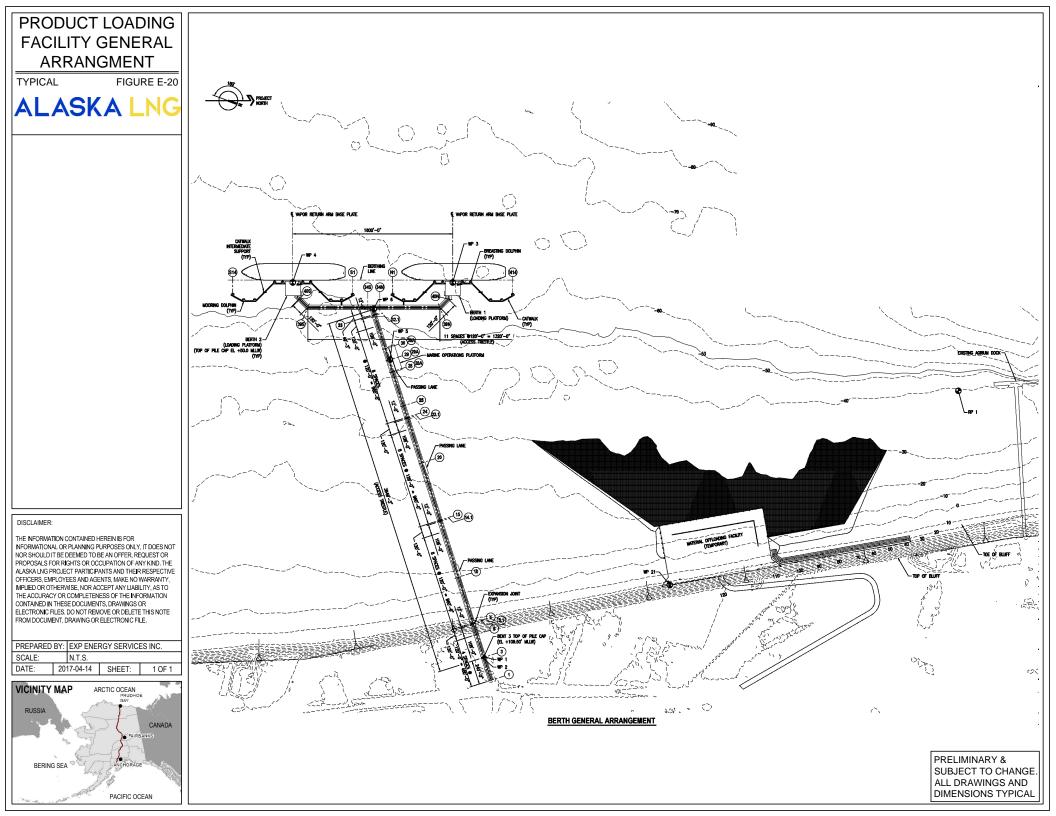


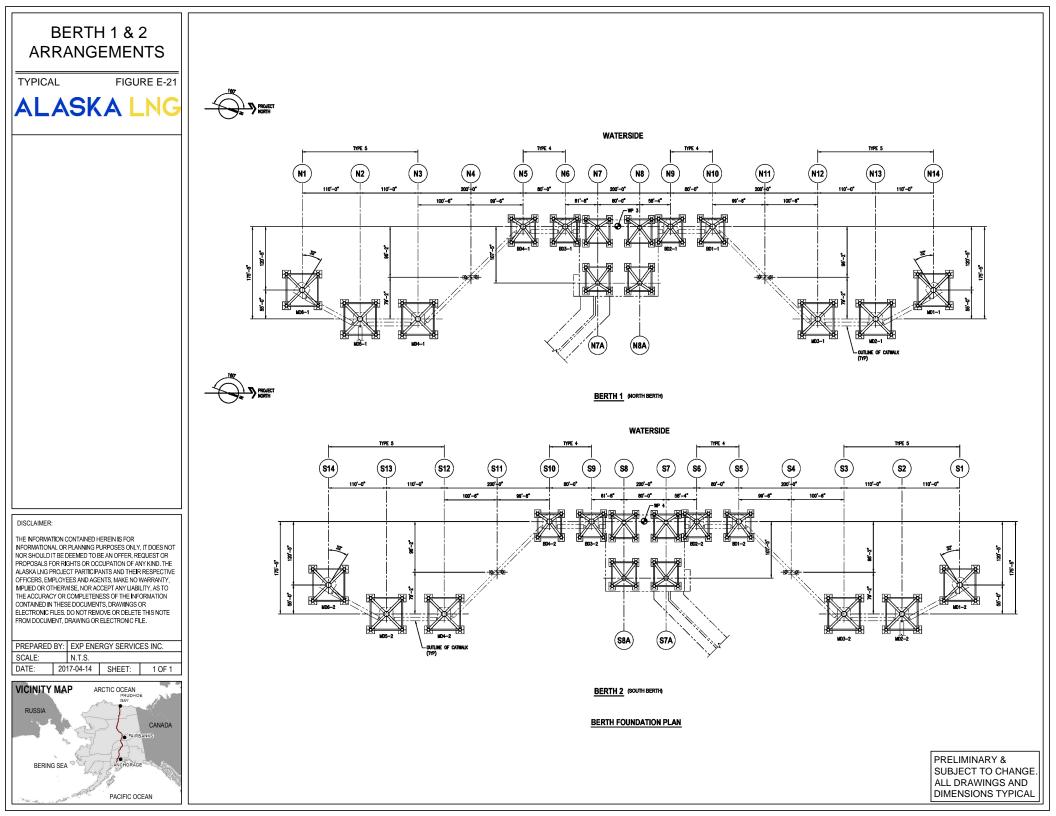


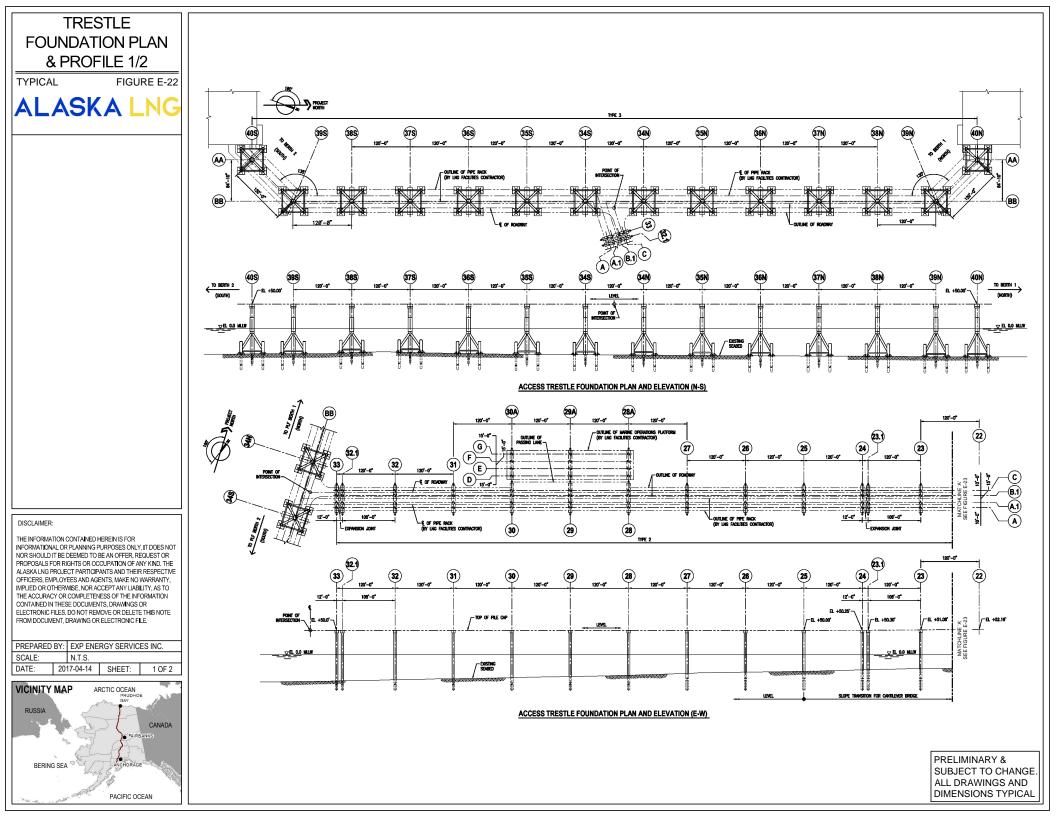


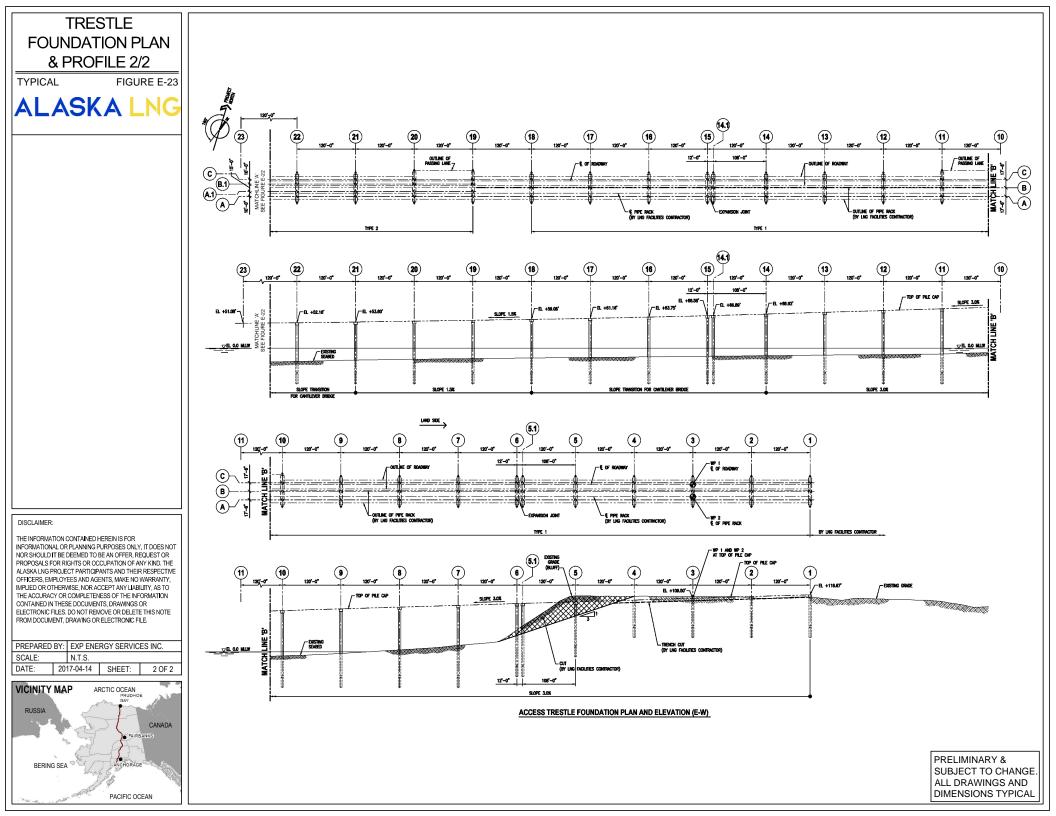


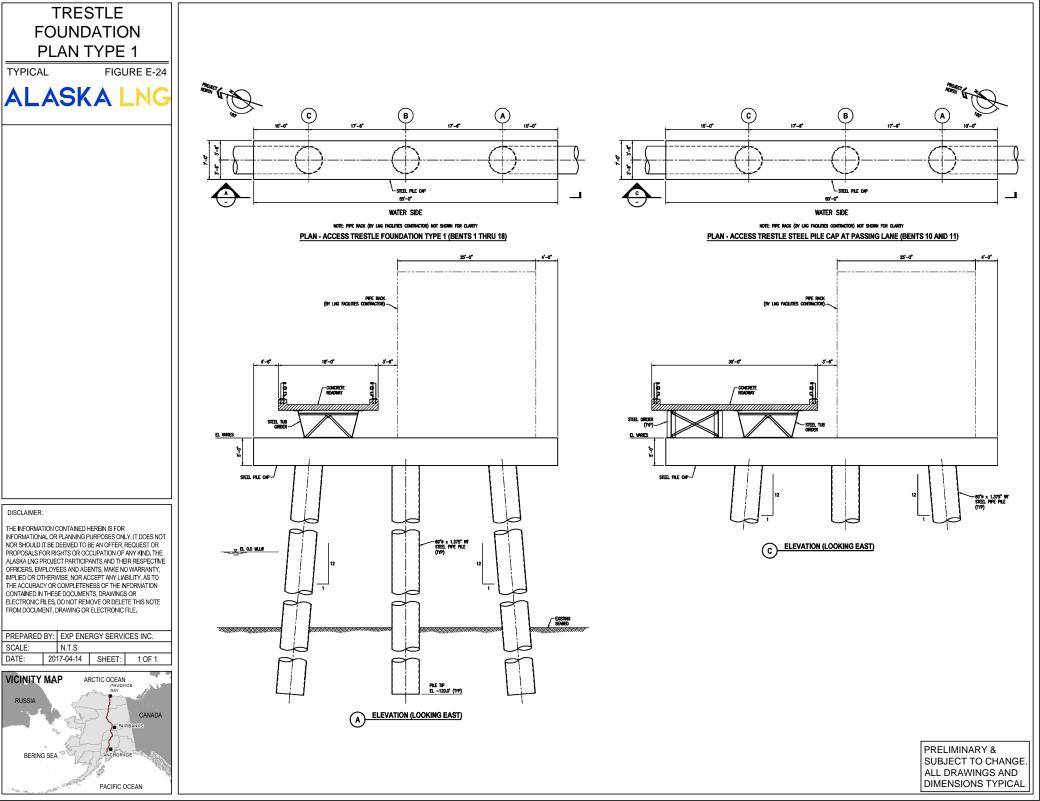




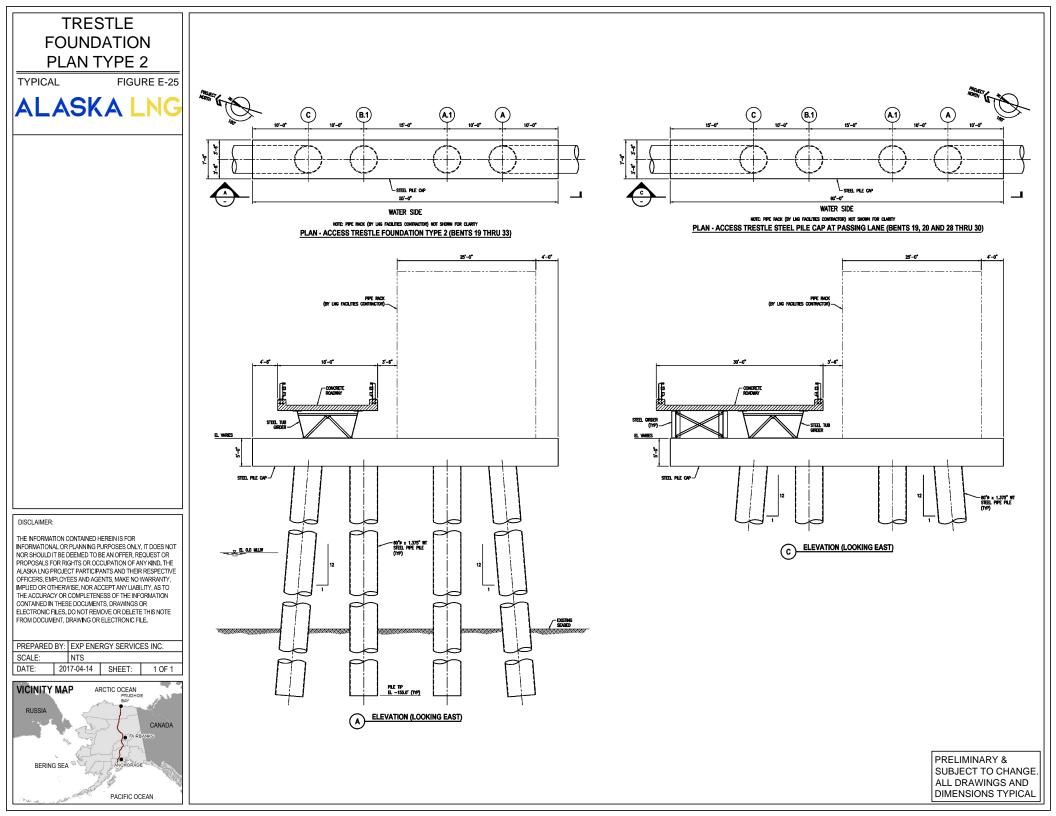


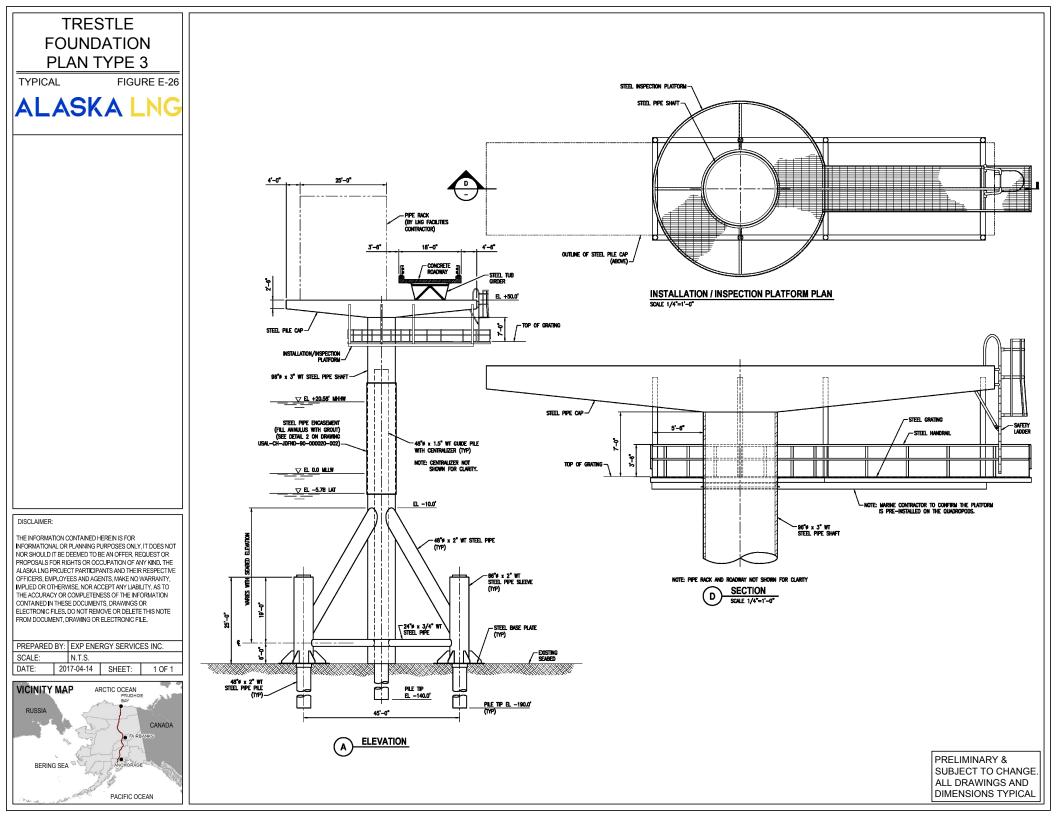


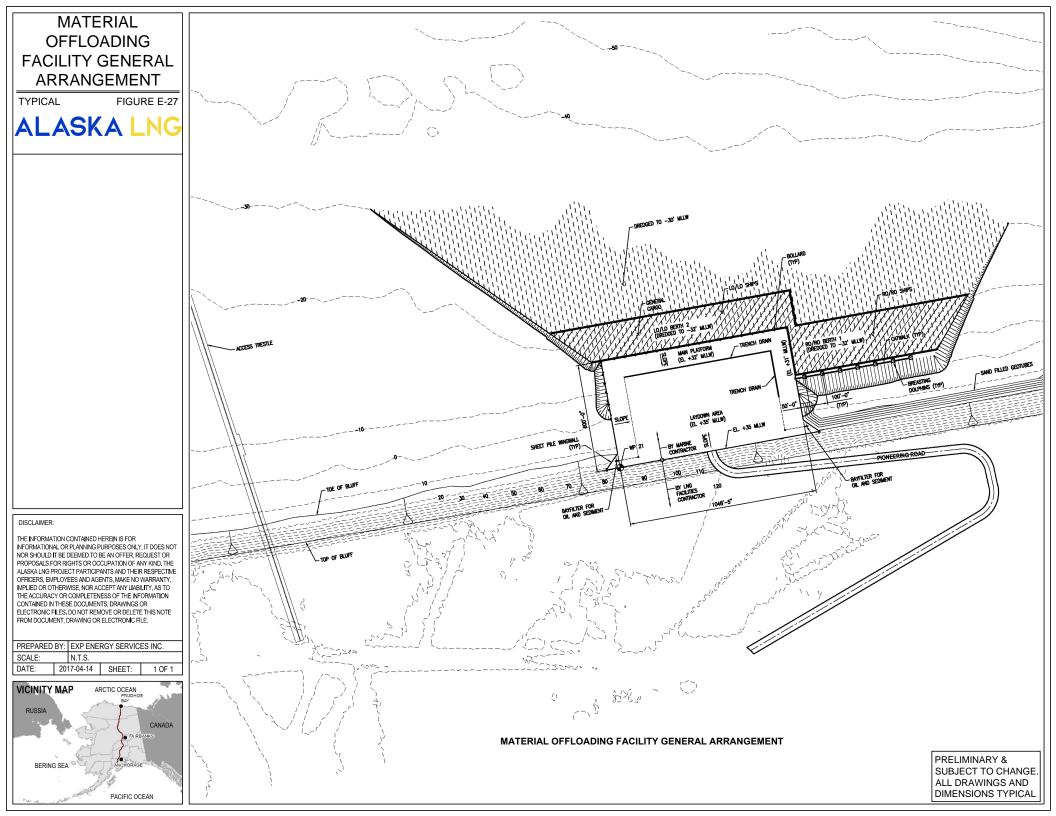


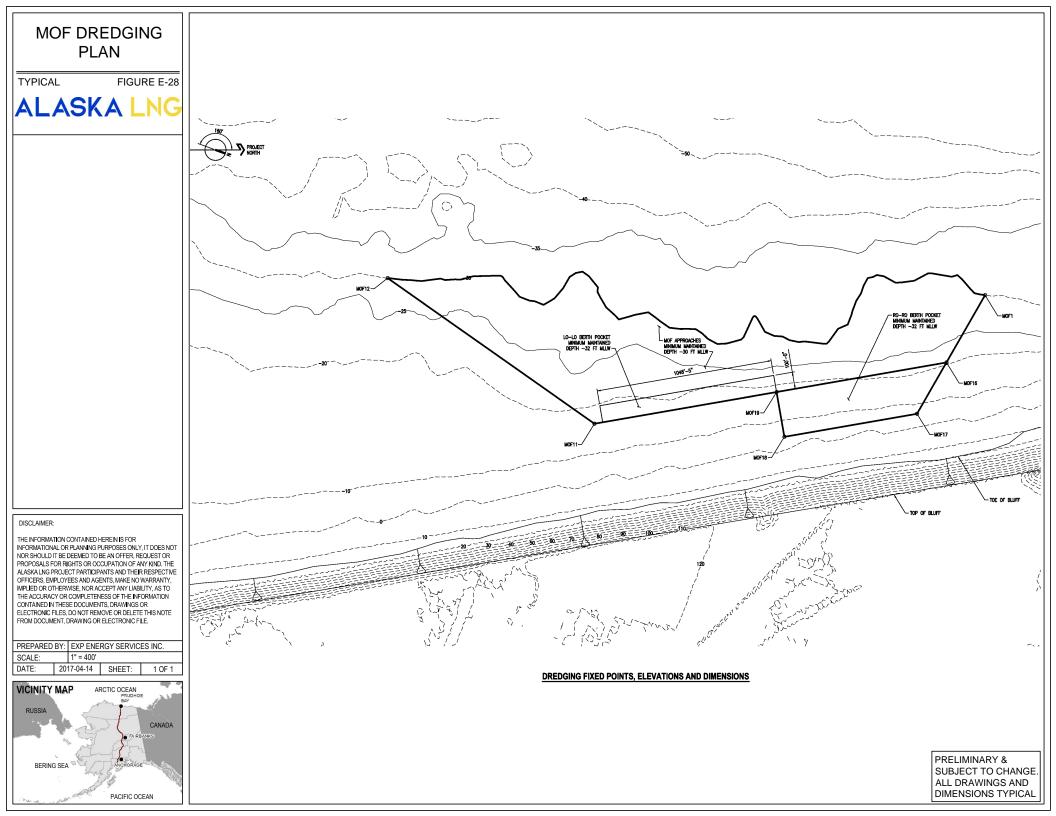


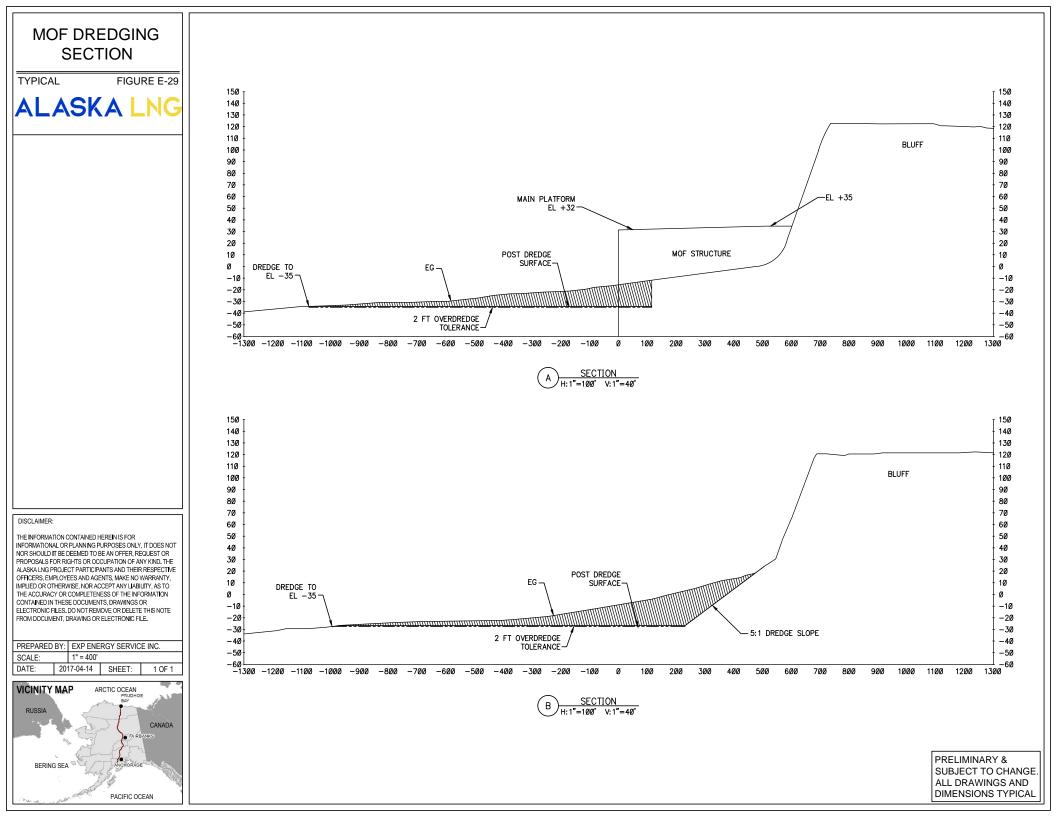


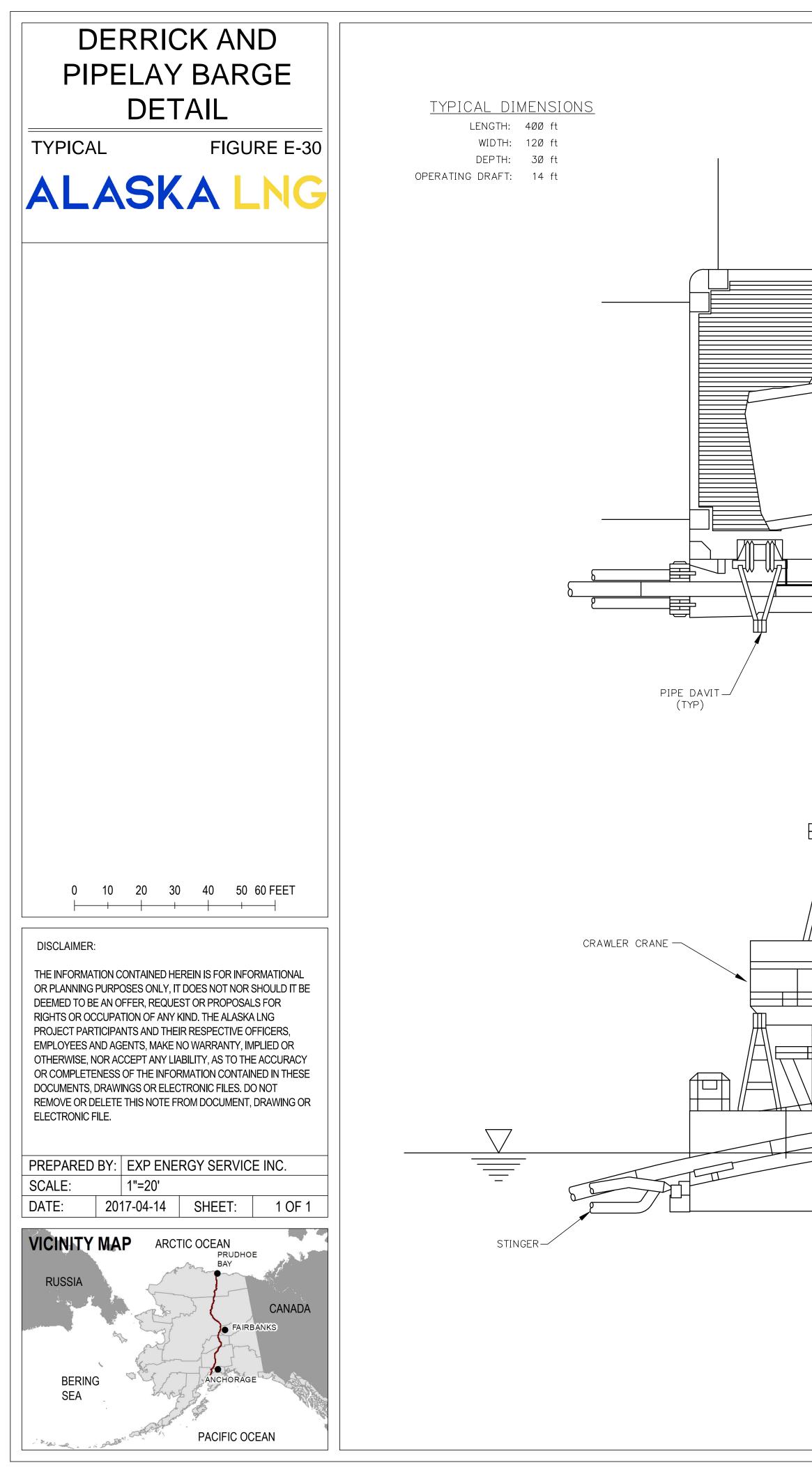


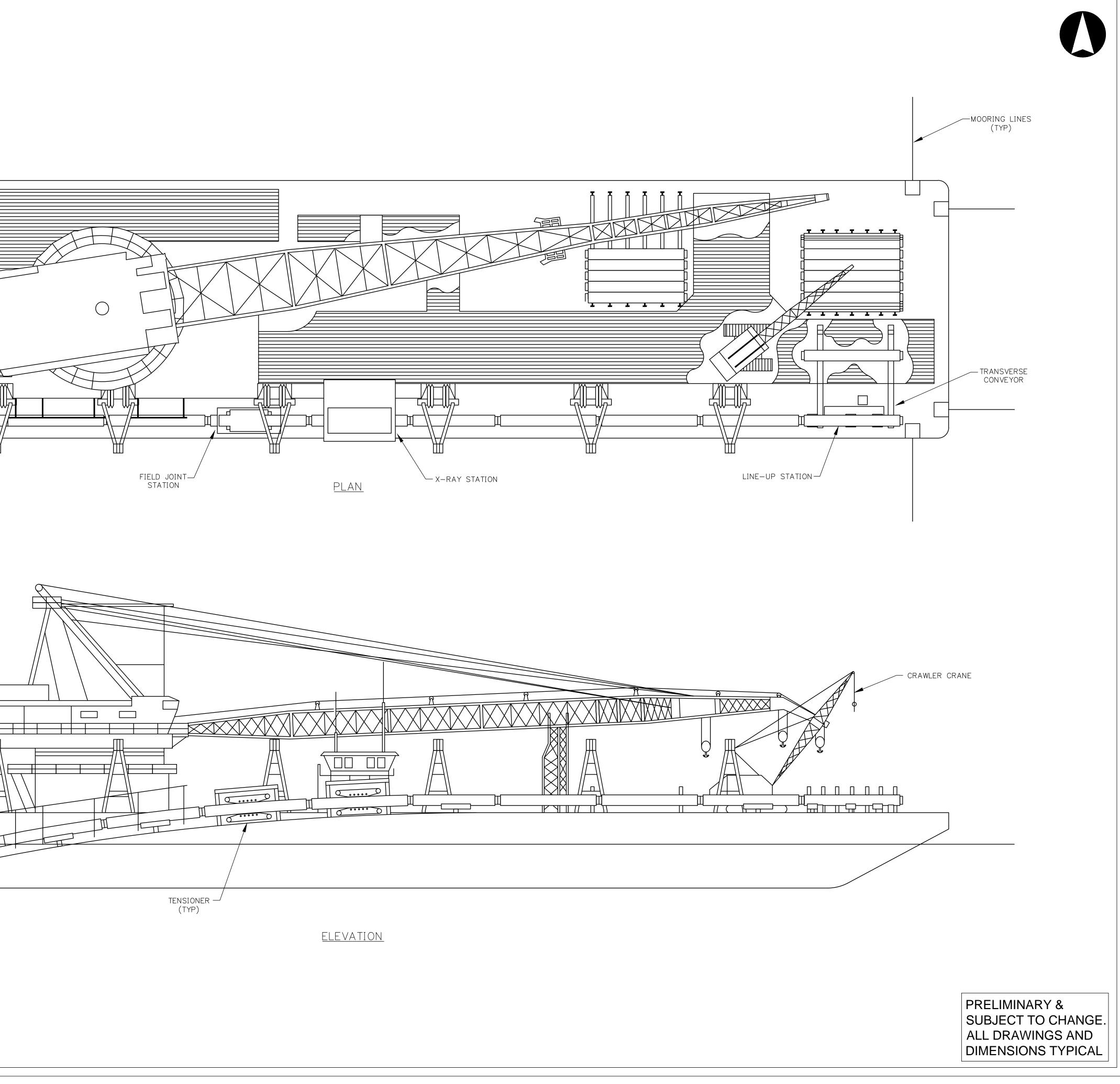


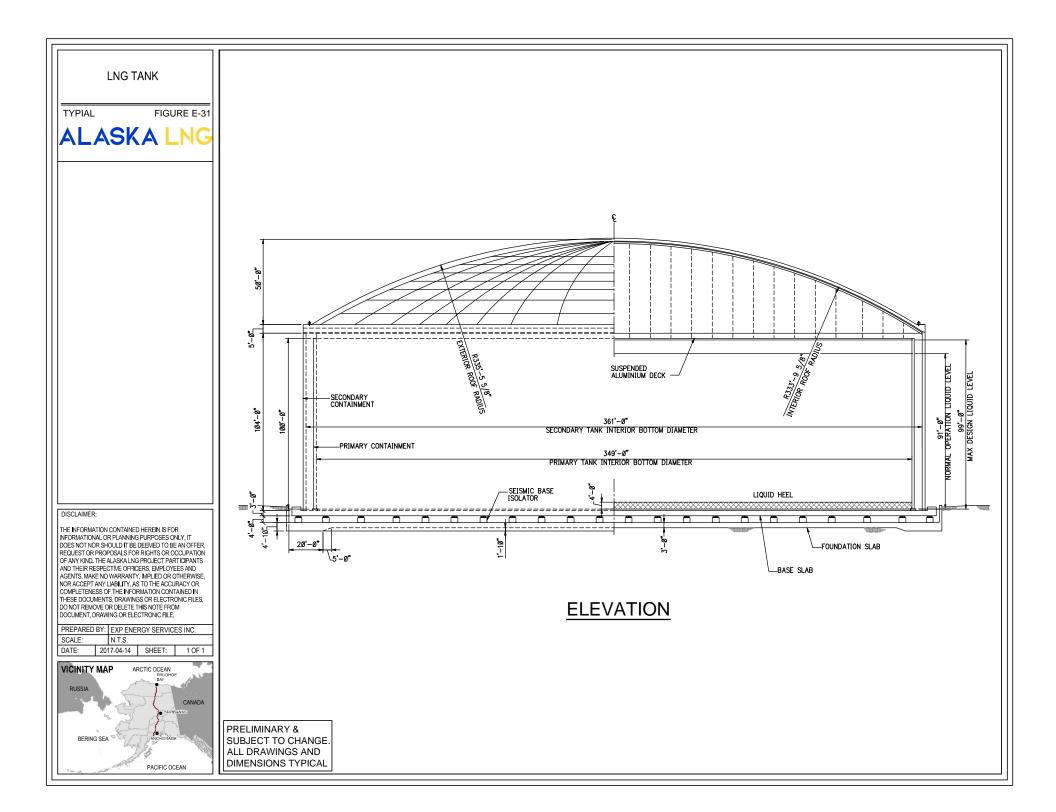


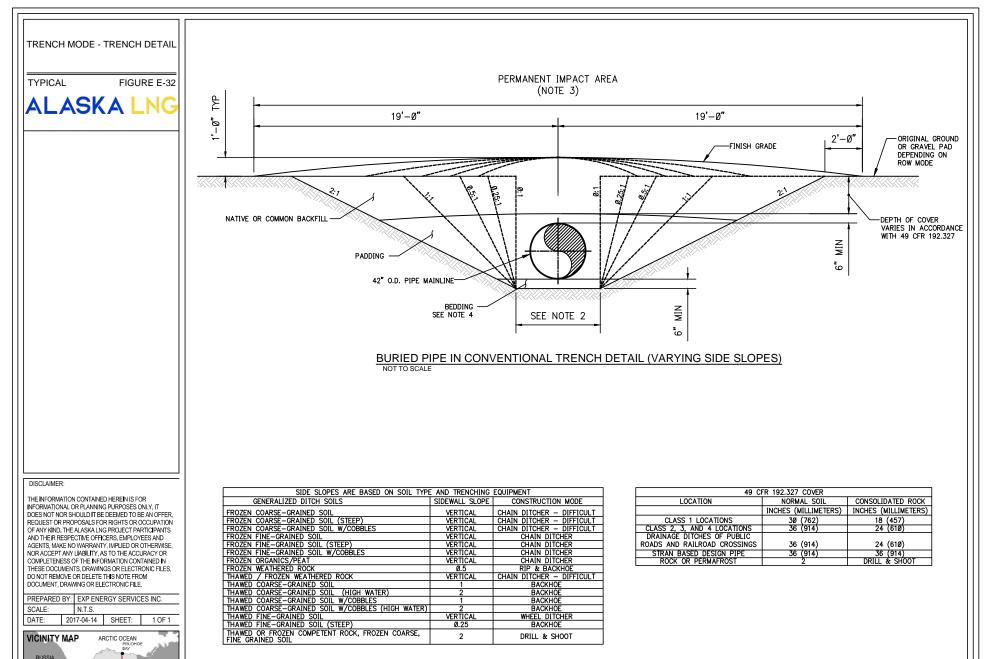












NOTES:

CANADA

PACIFIC OCEAN

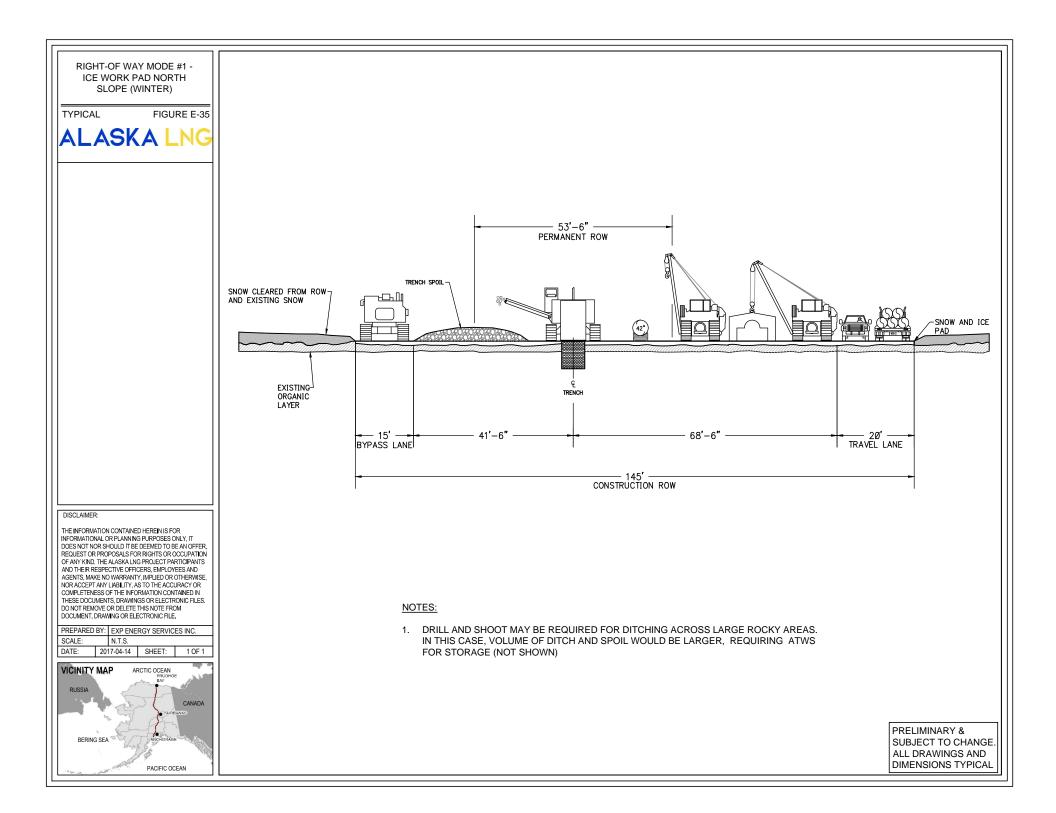
BERING SEA

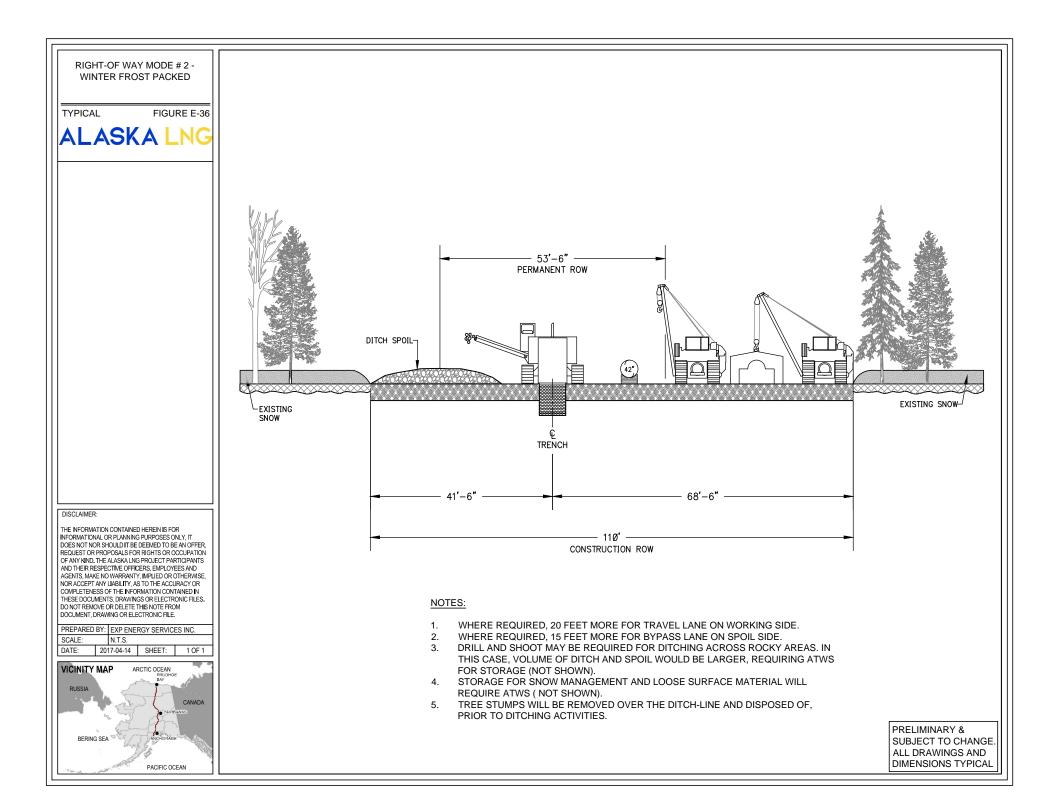
1. TYPICAL PIPE IN WETLANDS.

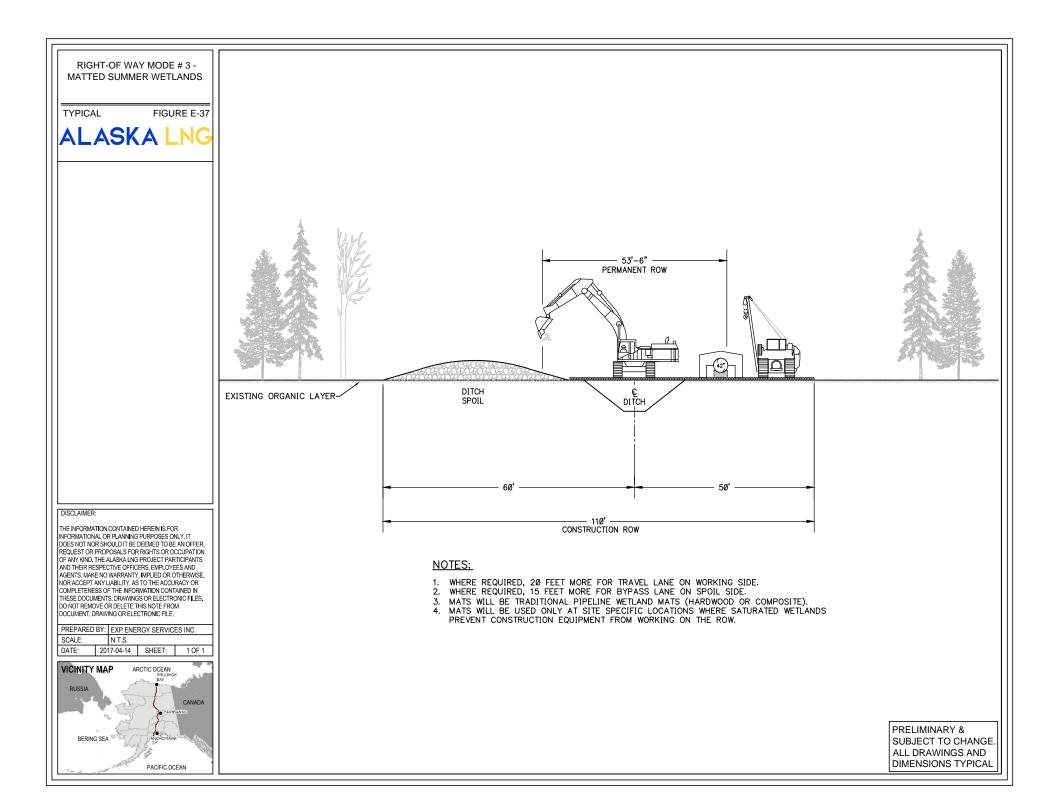
5' FOR TRENCHER, 6' FOR BACKHOE. 2.

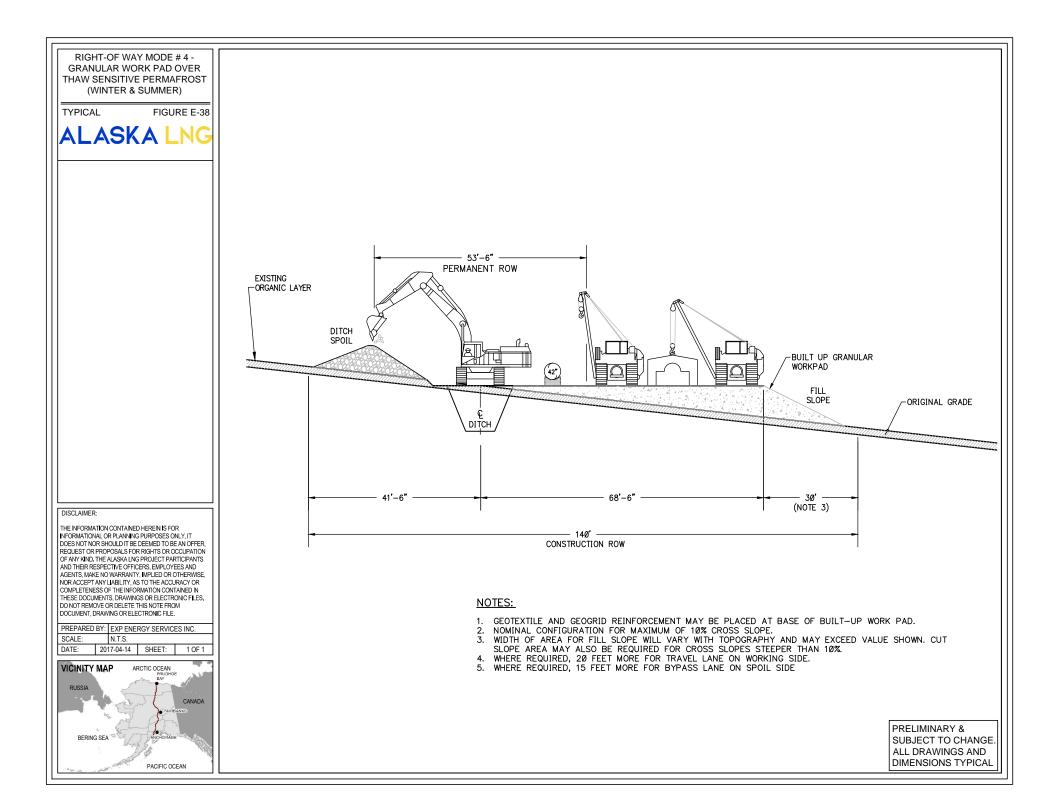
- JOY TO WONGER, O DO BOCHOL.
 IMPACT TO WOUS AND WETLANDS ARE CALCULATED ON THE ACTUAL TOE TO TOE WIDTH. THE TOE-TO-TOE DIMENSION VARIES FROM A MINIMUM OF 9 UP TO A MAXIMUM OF 38 FEET.
 BEDDING ONLY REQUIRED IF NATIVE TRENCH MATERIAL IS NOT SUITABLE, OTHERWISE PIPE CAN DOTED IN MATHE CONTENTION DOTED IN DOTED IN MATERIAL IS NOT SUITABLE, OTHERWISE PIPE CAN REST ON NATIVE SOIL TRENCH BOTTOM.

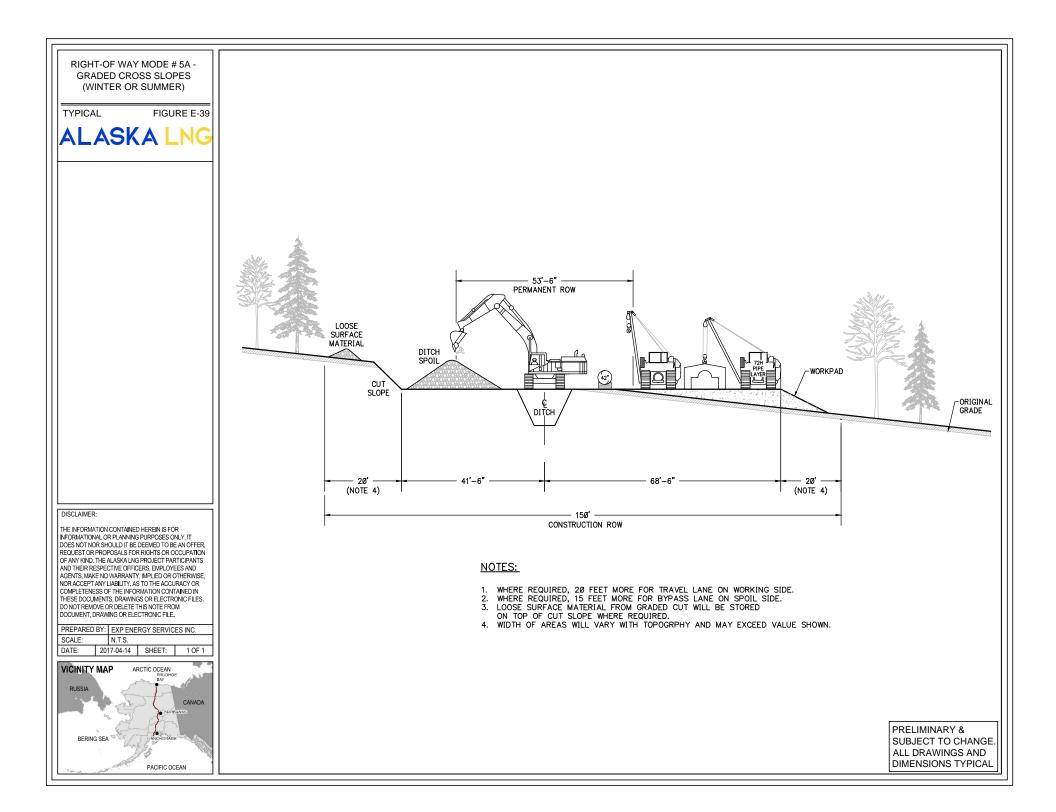
PRELIMINARY & SUBJECT TO CHANGE. ALL DRAWINGS AND DIMENSIONS TYPICAL

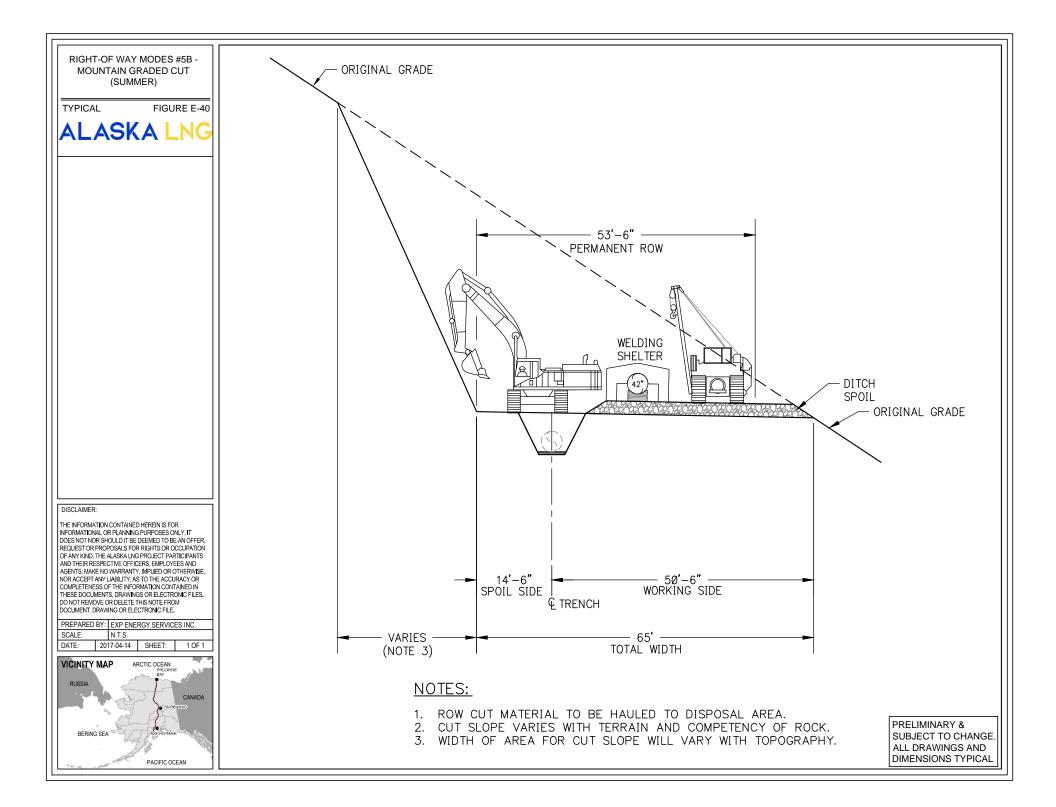


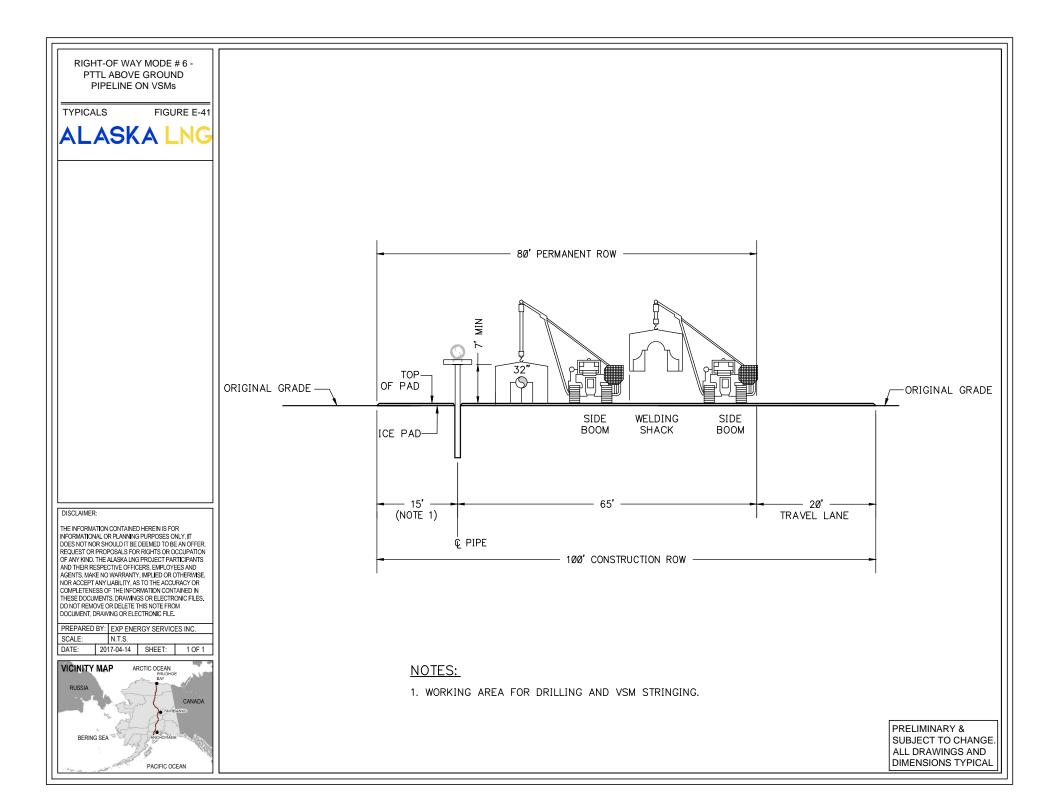


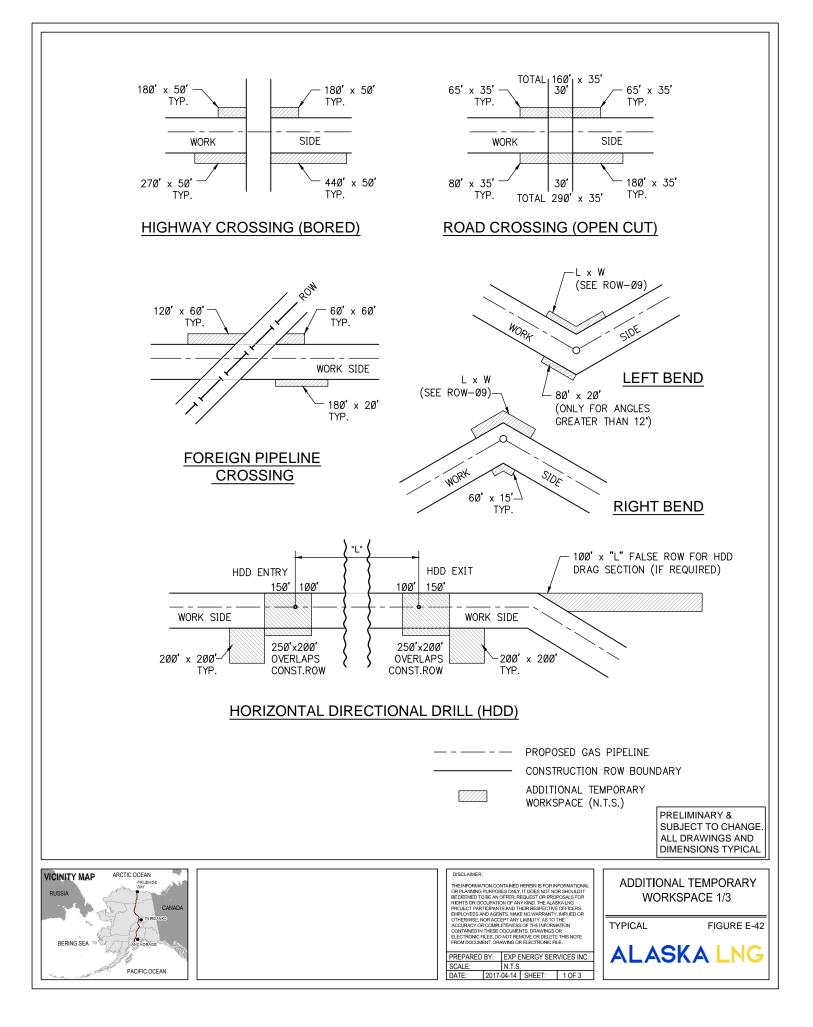


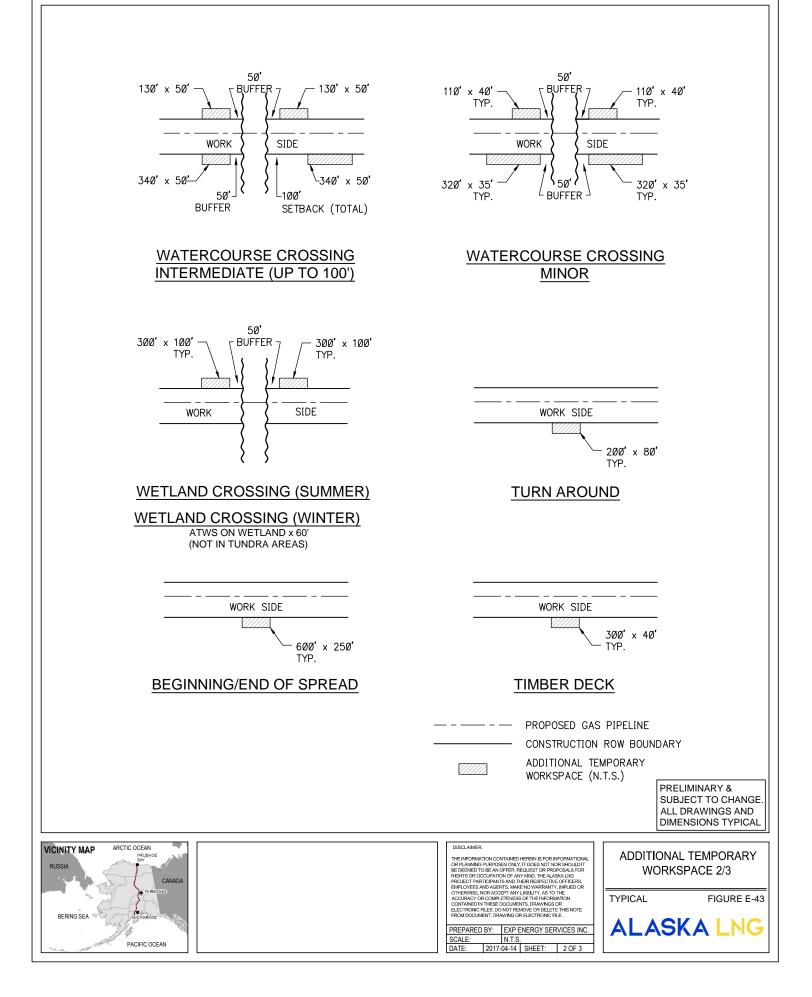












	(FT)	(FT)	LOCATION	
2 ° –12°	32Ø	35	SPOILSIDE (320' SPLIT 100' AND 220' AT PI)	
12 ° -90°	8Ø	2Ø	WORKSIDE (ONE SIDE OF PI)	
12 ° -20°	12Ø	35	SPOILSIDE	
20°-30°	14Ø	35	SPOILSIDE	
30°-40°	15Ø	35	SPOILSIDE	
40°-50°	17Ø	35	SPOILSIDE	
5ذ-6ذ	18Ø	35	SPOILSIDE	
60°-70°	19Ø	35	SPOILSIDE	
7Ø ° -8ذ	200	35	SPOILSIDE	
80°-90°	21Ø	35	SPOILSIDE	
RIGHT	LENGTH (FT)	WIDTH (FT)	LOCATION	
2 ° -90°	6Ø	15	WORKSIDE (WRAP AROUND PI)	
2 ° -12°	34Ø	35	SPOILSIDE	
12 ° -2ذ	24Ø	35	SPOILSIDE	
	25Ø	35	SPOILSIDE	
20°-30°				
20°-30° 30°-40°	26Ø	35	SPOILSIDE	
	26Ø 29Ø	35 35	SPOILSIDE SPOILSIDE	
30°-40°				
30°-40° 40°-50°	29Ø	35	SPOILSIDE	
30°-40° 40°-50° 50°-60°	29Ø 29Ø	35 35	SPOILSIDE SPOILSIDE	

HORIZONTAL BENDS

PRELIMINARY & SUBJECT TO CHANGE. ALL DRAWINGS AND DIMENSIONS TYPICAL

VICINITY MAP ARCTIC OCEAN PRUPHOE RUSSIA CANADA	DISCLAIMER: THE INCOMMITION CONTAINED HEREIN IS FOR INCOMMITIONAL OR RANAMAS PROPOSES ONLY IT DOES NOT NOT SOULD IT OR DESINGT TO BE AN OFFER RESULES TO PROPOSALS FOR RIGHTS OR OCCUPATION OF ANY WIRK THE ALASSA JUS PROJECT PARTICIPANTS AND THEIR RESPECTIVE OFFICERS. EMPLOYEES AND GERITS ANY ON OWARRATTY, MINEED OR	ADDITIONAL TEMPORARY WORKSPACE 3/3
BERING SEA	OTHERWISE, NOR ACCEPT ANY LUBILITY, AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION CONTAINED IN THESE DOCUMENTS, DRAWINGS OR ELECTRONIC FILES, DO NOT REMOVE OR DELETE THIS NOTE FROM POCUMENT, DRAWING OR ELECTRONIC FILE FROM POCUMENT, DRAWING OR ELECTRONIC FILE	TYPICAL FIGURE E-44
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