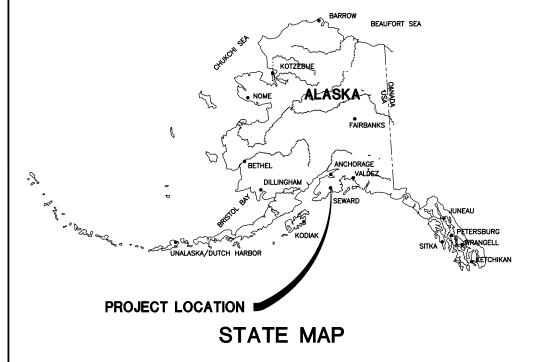
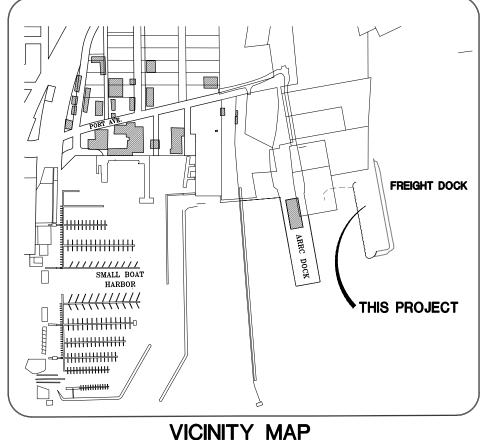
ALASKA RAILROAD CORPORATION SEWARD FREIGHT DOCK CROSSING PANELS

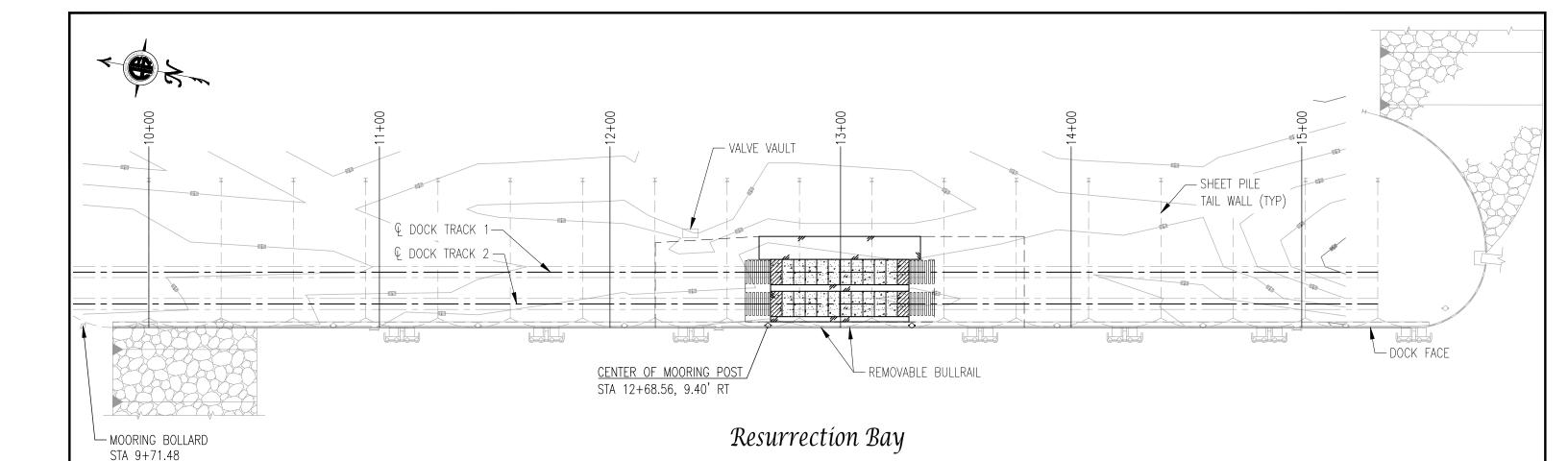
2017







	DRAWING INDEX				
DWG. NO.	TITLE				
1	COVER SHEET, VICINITY MAP AND DRAWING INDEX				
2	GENERAL LAYOUT				
3	PANEL LAYOUT AND GRADING LIMITS				
4	4 SECTION				
5	5 5'-0" X 11'-0" HD STANDARD STARTRACK SECTION MID-SECTION: PRODUCTION				
6	6 5'-0" X 11'-0" HD STANDARD STARTRACK SECTION MID-SECTION: STEEL				
7 5'-0" X 11'-0" STARTRACK II HD SUBMITTAL DRAWIN					
	<i></i>				



CONSTRUCTION NOTES:

BM TOP = 100.00

- 1. UNLESS MODIFIED OR OTHERWISE SPECIFIED HEREIN, SUBBASE AND PAVING WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION. PANEL AND TRACK WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN RAILWAY ENGINEERING AND MAINTENANCE—OF—WAY ASSOCIATION MANUAL FOR RAILWAY ENGINEERING.
- 2. AFTER EXCAVATION, MECHANICALLY COMPACT THE DISTURBED SURFACE OF THE SUBGRADE.
- 3. NO WATER SHALL BE ALLOWED TO STAND ON THE SUBGRADE ONCE THE EXCAVATION IS OPENED UP. COVER AS NECESSARY AND ENSURE THAT SURFACE DRAINAGE IS AWAY FROM THE PROJECT.
- 4. CLOSE CLEARANCE IS ANTICIPATED AT TWO LOCATIONS BETWEEN THE NEW CROSSING PANELS AND THE EXISTING DOCK SHEET PILE TAIL WALLS. THE CONTRACTOR SHALL BE PREPARED TO TORCH REMOVE SMALL SECTIONS OF SHEET PILING AS DIRECTED BY THE OWNER.
- 5. D1 SUBBASE MATERIAL SHALL BE COMPACTED TO 98%, OR GREATER, OF THE MAXIMUM DENSITY USING THE APPROXIMATE OPTIMUM MOISTURE CONTENT FOR COMPACTION AS DETERMINED BY ASTM 212. PRIOR ESTABLISHMENT OF MAXIMUM DENSITY AND OPTIMUM MOISTURE CONTENT WILL BE ACCEPTED. THE CONTRACTOR MAY SUBMIT A COMPACTION PLAN THAT ENSURES THE MINIMUM SPECIFIED COMPACTION LEVEL FOR OWNER APPROVAL IN LIEU OF IN-PLACE DENSITY TESTING.
- 6. FLOWABLE FILL SHALL BE ADEQUATELY CURED TO PREVENT DAMAGE BEFORE PROCEEDING WITH FURTHER WORK. THE CONTRACTOR SHALL PROTECT THE FILL AS NECESSARY FROM CONSTRUCTION EQUIPMENT AND WORK ACTIVITIES.
- 7. APPLY AN ASPHALT TACK COAT TO THE TOP OF THE FLOWABLE FILL AND SIDES OF THE PRECAST TRACK PANELS NO MORE THAN FOUR (4) HOURS PRIOR TO PLACEMENT OF THE ASPHALT CONCRETE. ASPHALT SHALL BE PLACED IN A MAXIMUM OF THREE (3) INCH LIFTS WITH MECHANICAL COMPACTION, UTILIZING APPROPRIATE COMPACTION EQUIPMENT, OF EACH LIFT UNTIL THERE IS NO FURTHER EVIDENCE OF CONSOLIDATION.

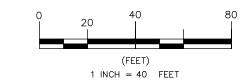
DOCK PLAN SCALE: 1" = 40'

GENERAL NOTES:

- SCHEDULE THE BEGINNING OF ON-SITE WORK AND DAILY WORK COORDINATION WITH ARRC SEWARD PORT AND REAL ESTATE MANAGER. OTHER WORK ACTIVITIES ON THE SEWARD FREIGHT DOCK WILL BE ON-GOING AND THE CONTRACTOR SHALL COORDINATE DAILY OPERATIONS, WORK LIMITS, MATERIAL AND EQUIPMENT STORAGE REQUIREMENTS WITH THE PORT MANAGER.
- 2. BARRICADE OFF WORK LIMITS AS NECESSARY TO PROTECT PROJECT CONSTRUCTION AND GUARD AGAINST 3RD PARTY PERSONNEL AND EQUIPMENT HARM.
- THE CONTRACTOR SHALL PROVIDE THEIR OWN UTILITIES AND SUPPORT FACILITIES NECESSARY TO COMPLETE THE WORK OR PROVIDE FOR THE CONTRACTOR'S EMPLOYEES UNLESS OTHERWISE AGREED UPON BY ARRC.
- 4. THE SEWARD FREIGHT DOCK IS AN ACTIVELY WORKING FACILITY. THE WORK TO INSTALL THE TRACK PANELS WILL NECESSARILY IMPACT DOCK OPERATIONS. THE CONTRACTOR SHALL UNDERTAKE THE WORK, ONCE BEGUN, IN A CONCERTED MANNER TO COMPLETE THE PROJECT, AND MINIMIZE THE DURATION OF DISRUPTION TO NORMAL DOCK OPERATIONS. SUBSTANTIAL COMPLETION SHALL BE WITHIN 10 DAYS OF BEGINNING WORK. FINAL COMPLETION SHALL BE WITHIN 15 DAYS OF BEGINNING WORK. WEATHER DELAYS FOR SENSATIVE ASPECTS OF THE WORK WILL BE ALLOWED.

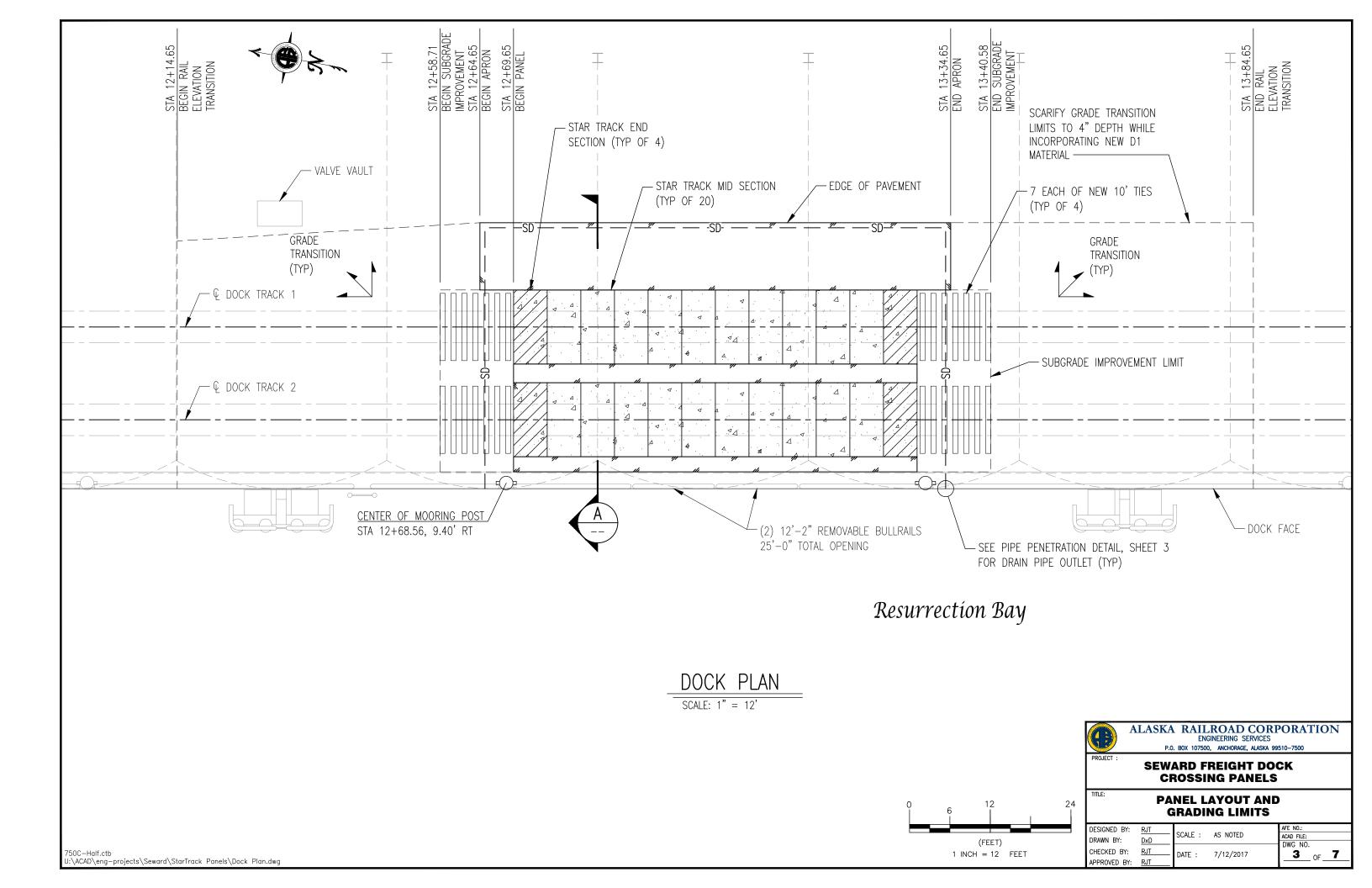
DRAWING NOTES:

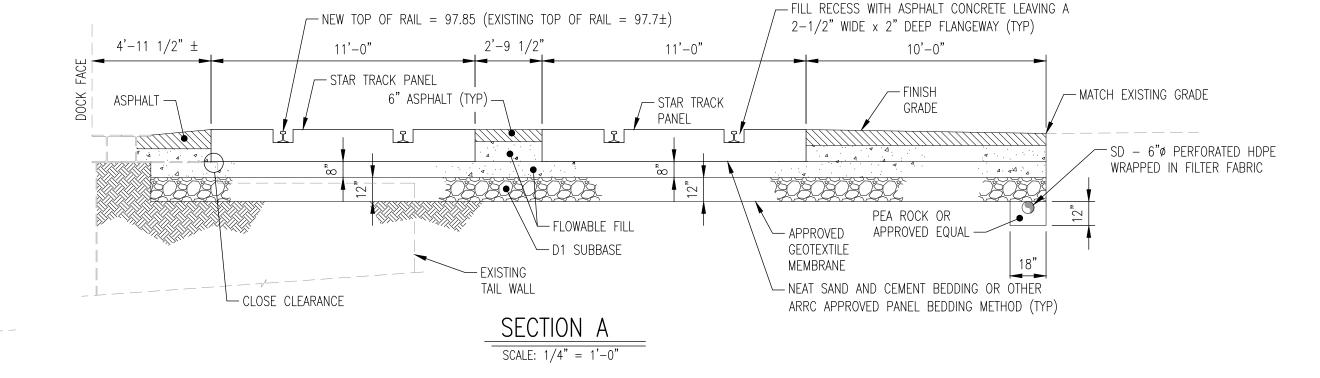
- 1. PROJECT STATIONING IS ALONG CENTERLINE OF DOCK TRACK 2.
- 2. MOORING POST ADJACENT TO THE REMOVABLE BULL RAIL = STA 12+68.36, 9.40' RIGHT.

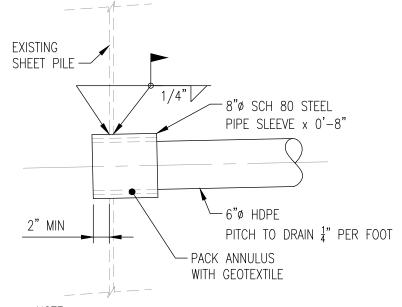




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NOTE: CAREFULLY CUT HOLE IN DOCK SHEET PILE USING A TEMPLATE.

PIPE PENETRATION DETAIL

SCALE: 1'' = 1' - 0''

MATERIAL NOTES:

- 1. ALL MATERIALS TO CONSTRUCT AND INSTALL THE CROSSING PANELS AS SPECIFIED WITHIN THESE DRAWINGS SHALL BE FURNISHED BY THE CONTRACTOR UNLESS NOTED AS MATERIAL FURNISHED BY THE OWNER.
- 2. FLOWABLE FILL SHALL BE A CONTROLLED LOW STRENGTH MATERIAL PER ACI 229 R-99 WITH A MINIMUM STRENGTH OF 500 PSI. THE CONTRACTOR SHALL SAMPLE THE MATERIAL DURING PLACEMENT AND PROVIDE DOCUMENTATION TO THE OWNER OF COMPLIANCE WITH THE MINIMUM STRENGTH REQUIREMENT. THE FINISHED SURFACE OF THE FLOWABLE FILL SHALL NOT DEVIATE MORE THAN 3/16 INCH FROM AQ 16 FOOT STRAIGHT EDGE. ANY DEVIATIONS GREATER THAN 3/16 INCH SHALL BE CORRECTED.
- 3. ASPHALT CONCRETE SHALL MEET THE REQUIREMENTS OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES (ADOT&PF) STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, CLASS A, TYPE 2 UNLESS OTHERWISE APPROVED BY THE OWNER.
- 4. SUBBASE MATERIAL SHALL BE IN ACCORDANCE WITH ADOT&PF AGGREGATE GRADATION FOR BASE COURSE D-1. THE CONTRACTOR SHALL SUBMIT DOCUMENTATION OF COMPLIANCE WITH AGGREGATE QUALITY PROPERTIES AND GRADATION.

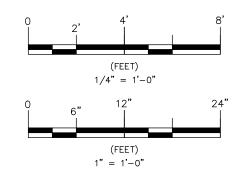
MATERIALS FURNISHED BY OWNER:

STARTRACK END SECTIONS 4 EACH STARTRACK MID SECTIONS 20 EACH 10 FT. CROSS TIFS 28 EACH STARTRACK E CLIPS 193 EACH 193 EACH STARTRACK NYLON INSULATORS STARTRACK UHMW ABRASION STRIPS 48 EACH CONSEAL SEALANT ROLL 18 EACH STARTRACK CAULK, 10 OZ TUBE 24 EACH STARTRACK UNIT RAIL ANCHORS 8 EACH STARTRACK PANDROL PULLER 1 EACH FOAM BACKER ROD. 260 LE 1 FACH

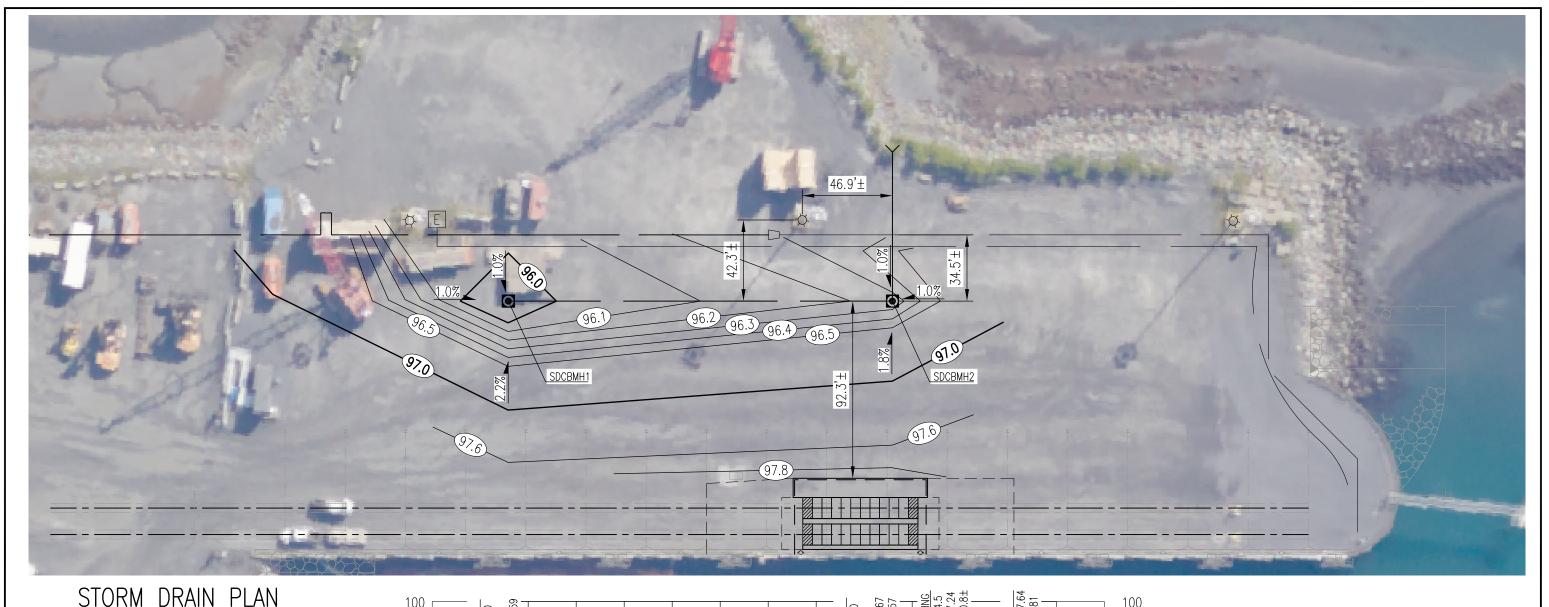
RAIL - THE INTENT IS TO REUSE THE RAIL CURRENTLY IN PLACE ON THE FREIGHT DOCK.

AT THE REQUEST OF THE CONTRACTOR AND CONCURRENCE OF THE OWNER'S ENGINEER, THE OWNER WILL FURNISH NEW TIE PLATES, TRACK FASTENERS, RAIL ANCHORS AND STANDARD 8.5 FT. HARDWOOD CROSS TIES FOR USE ON THIS PROJECT.

OWNER FURNISHED MATERIALS WILL BE MADE AVAILABLE TO THE CONTRACTOR IN SEWARD.



A A		ENG	ROAD CO SINEERING SERVIC I, ANCHORAGE, ALAS	
PROJECT :			REIGHT I	
TITLE:		SE	CTION	
DESIGNED BY: DRAWN BY:	RJT DxD	SCALE :	AS NOTED	AFE NO.: ACAD FILE:
CHECKED BY: APPROVED BY:	RJT RJT	DATE :	7/12/2017	DWG NO. 4 OF 7



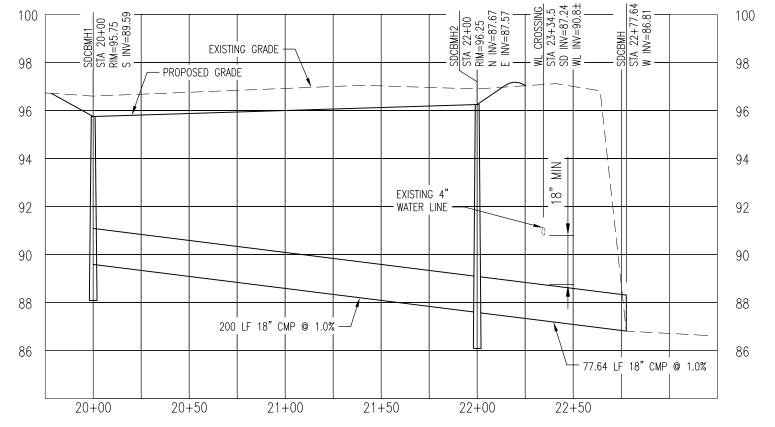


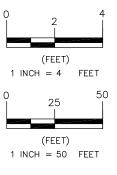
NOTE: CMP IS 10 GAGE CORRUGATED
ALUMINIZED STEEL PIPE.

STORM DRAIN PROFILE

SCALE: H: 1" = 50' V: 1" = 4'

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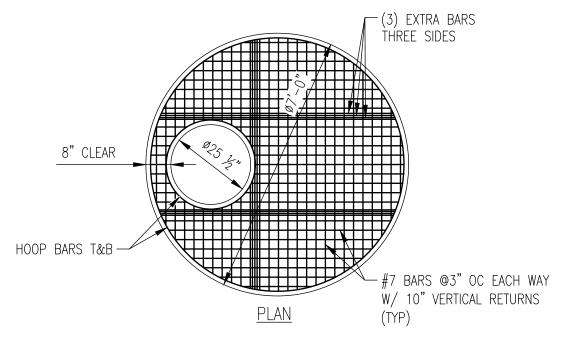


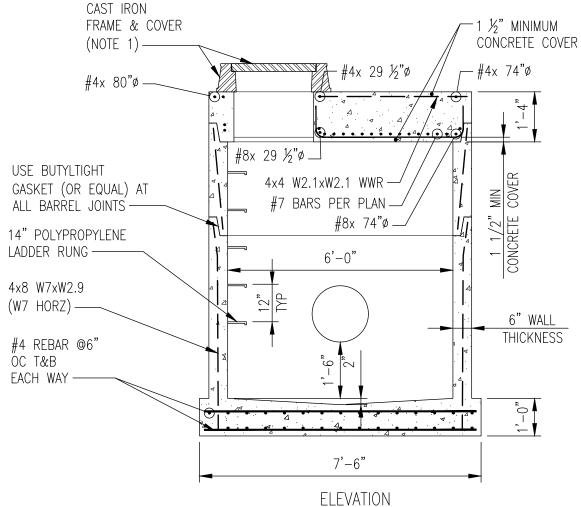
ALASKA RAILROAD CORPORATION ENGINEERING SERVICES P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500

SEWARD FREIGHT DOCK CROSSING PANELS

STORM DRAIN PLAN & PROFILE

DESIGNED BY:	RJT			AFE NO.:
DRAWN BY:	DxD	SCALE :	AS NOTED	ACAD FILE:
	<u>DND</u>			DWG NO.
CHECKED BY:	<u>RJT</u>	DATE :	7/12/2017	4 5
APPROVED BY:	RJT	D	.,,	_ _ 0F





NOTE:

1. CAST IRON MANHOLE LID:

D&L SUPPLY

P-3492 FRAME

P-2575 SLOTTED LID

(OR APPROVED EQUAL)

2. REFERENCE FIERRO ENGINEERING (2130 SHORE DRIVE, ANCHORAGE, AK 99515), D&S CONCRETE (FOR ARRC, 2 SHEETS), HEAVY DUTY FORKLIFT-RATED MANHOLE LID, TYPE II (6 FT Ø) MANHOLE LID, DATED 8/31/2017 AND STORM MANHOLE (72" DIA.)



ALASKA RAILROAD CORPORATION ENGINEERING SERVICES P.O. BOX 107500, ANCHORAGE, ALASKA 99510-7500

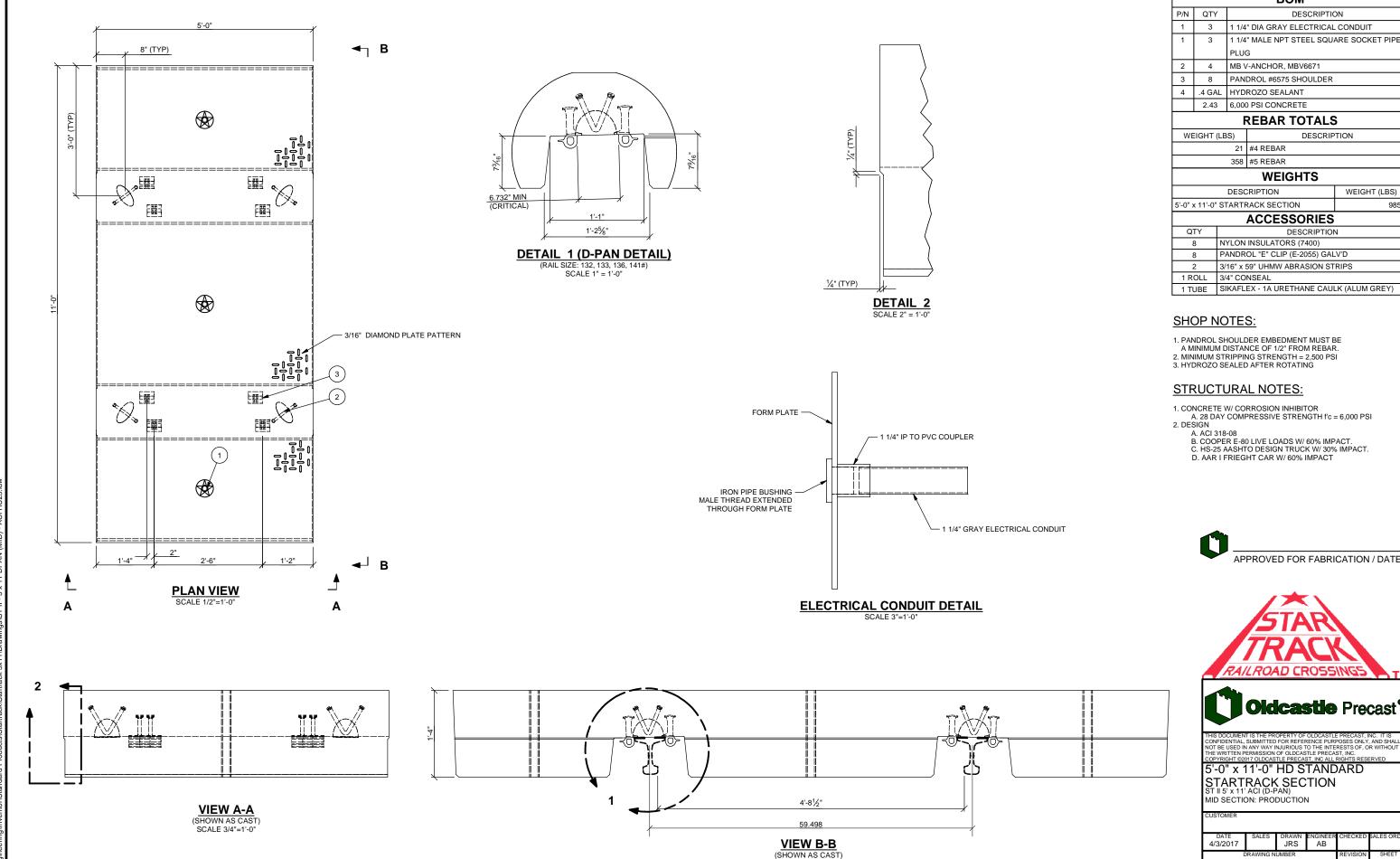
SEWARD FREIGHT DOCK CROSSING PANELS

STORM DRAIN MANHOLE DETAIL

DESIGNED BY: SCALE : AS NOTED DRAWN BY: CHECKED BY: RJT DATE: 7/12/2017 5 _{OF} 5

MANHOLE DETAIL SCALE: 3/8" = 1'-0"

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SCALE 3/4"=1'-0"

BOM DESCRIPTION 3 1 1/4" DIA GRAY ELECTRICAL CONDUIT 1 1/4" MALE NPT STEEL SQUARE SOCKET PIPE **REBAR TOTALS** DESCRIPTION WEIGHT (LBS) DESCRIPTION PANDROL "E" CLIP (E-2055) GALV'D 3/16" x 59" UHMW ABRASION STRIPS

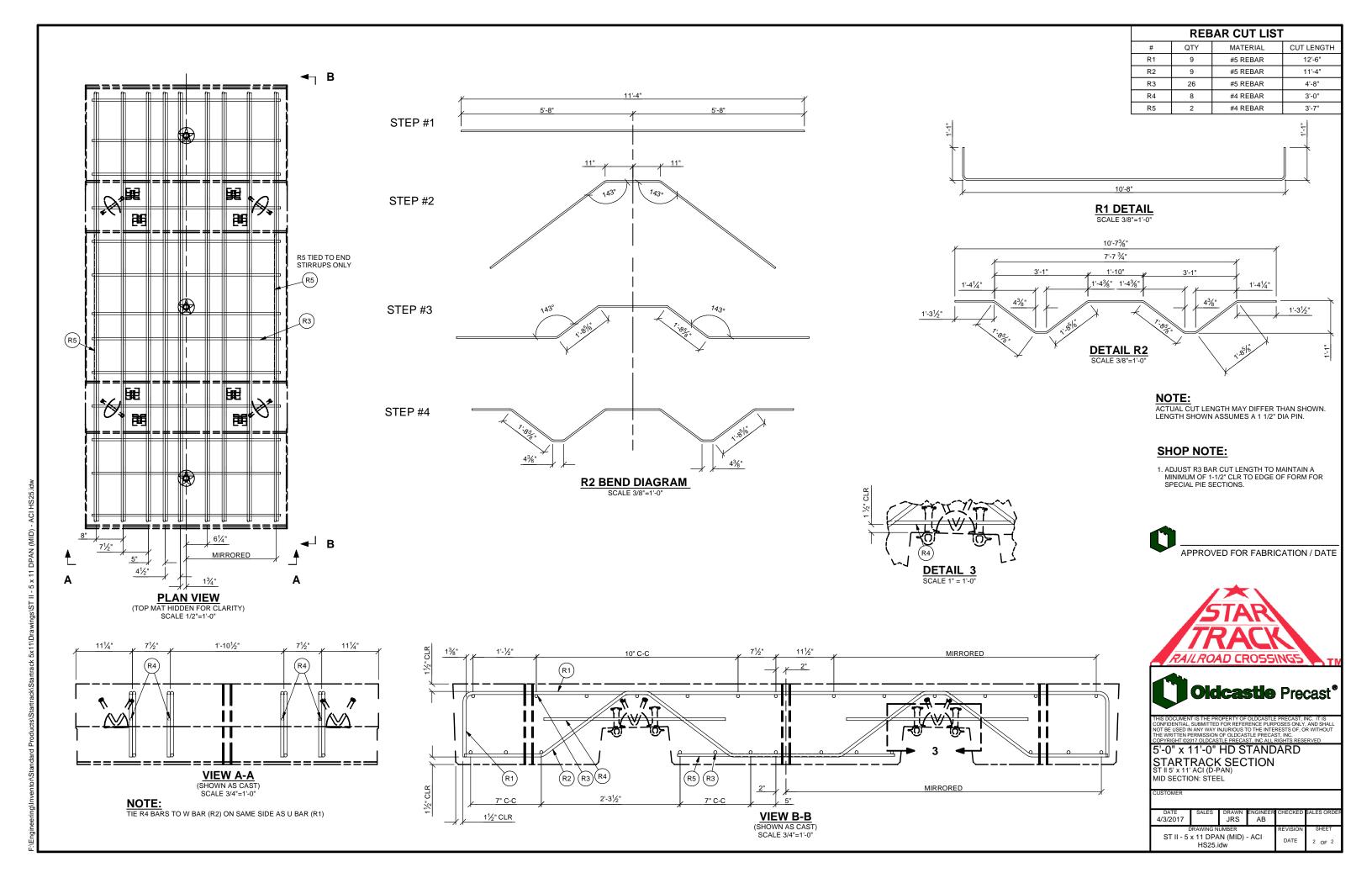
APPROVED FOR FABRICATION / DATE

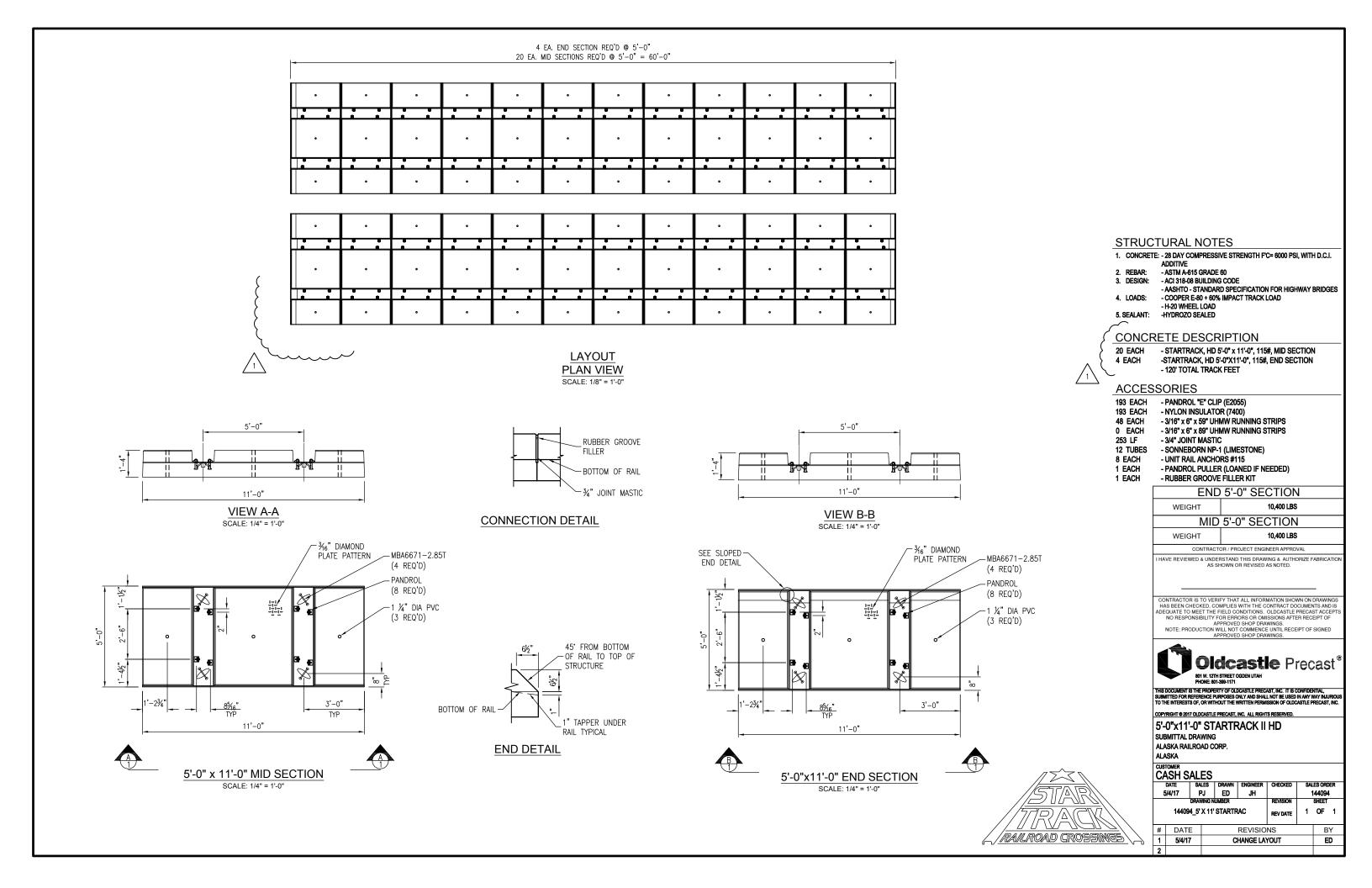




5'-0" x 11'-0" HD STANDARD

DATE	SALES	DRAWN	ENGINEER	CHECKED	SALES ORDER
4/3/2017		JRS	AB		
	RAWING N	REVISION	SHEET		
ST II - 5 x 11 DPAN (MID) - ACI HS25.idw				DATE	1 OF 2







StarTrack Suggested Installation Procedure

Preliminary Subsurface Investigation (Optional)

Prior to removal of ties and ballast, soil samples shall be taken by a recognized soil testing laboratory and through laboratory analysis, sufficient data is collected to evaluate the depth of excavation and thickness of base required.

Subgrade Preparation

Rails, ties, asphalt, ballast, and sub ballast will be removed from an area comprising the length of the crossing plus 15' on each end and 10' wide (13' wide for HD) to a minimum depth of 12" below precast modules, or as determined above. If any areas of pumping or other indications of instability are encountered, they shall be undercut as required and backfilled with compacted base course material.

The resulting subgrade shall be scarified and compacted to 95% of its peak dry density. Drainage tile shall then be installed in a trench area, surrounded by open graded stone or filter fabric.

The entire excavated area and sides shall be lined with an approved fabric equal in performance characteristics to "TYPAR" style 3401.

The base course material shall be applied in 4" lifts compacted to 98% of peak dry intensity. The leveling course (1-1/2" maximum thickness) shall be carefully screeded to the grade shown. Screeded surface to be within +/- 1/4" of grade. Fill and compact entire excavation. See StarTrack's "StarTrack Base Options" for other acceptable subgrade procedures.

Module Placement

Modules shall be placed on the resulting base as snug as possible to one another and to within +/- 1/4" in alignment, utilizing lifting hardware provided. Sika 1A and T-Strip sealant shall be applied as shown on the drawing details. Should any screeded surface irregularity become evident during placement of modules, the module shall be removed and the surface corrected.

Placing and Fastening of Rail

Rail shall then be placed along StarTrack modules on both sides and all rail splicing completed, making sure all polyethylene pads are in place.

After laying rail into blockout groove, start rail installation by centering rail between a set of shoulders, inserting nylon insulators, and then pull the clips into place over the insulators with the pandrol puller or other acceptable methods. Repeat this process throughout the crossing, then connect rail to track rail by normal methods. If necessary, adjust final alignment by moving modules with rail jacks or backhoe.

Placing of Rail Groove Filler

Install rubber rail groove filler according to StarTrack's rail Groove Filler Installation Instructions for StarTrack Rubber Inserts.

Final Completion

Surface the adjacent track construction with new 10' switch ties in the transition area. Install signal wiring in conduit if required. Apply T-Strips to joints as required.

Clean all debris from excavation and pave alongside, up to and flush with module. Apply asphalt at ends of crossing to provide a 5' transition from tie surface to module surface (optional). If asphalt is used for rail groove filler, run locomotive across to cut flangeway.

Remove all construction debris from site and leave completed crossing in a clean condition. Package and ship loaned lifting hardware to plant (freight prepaid.)



