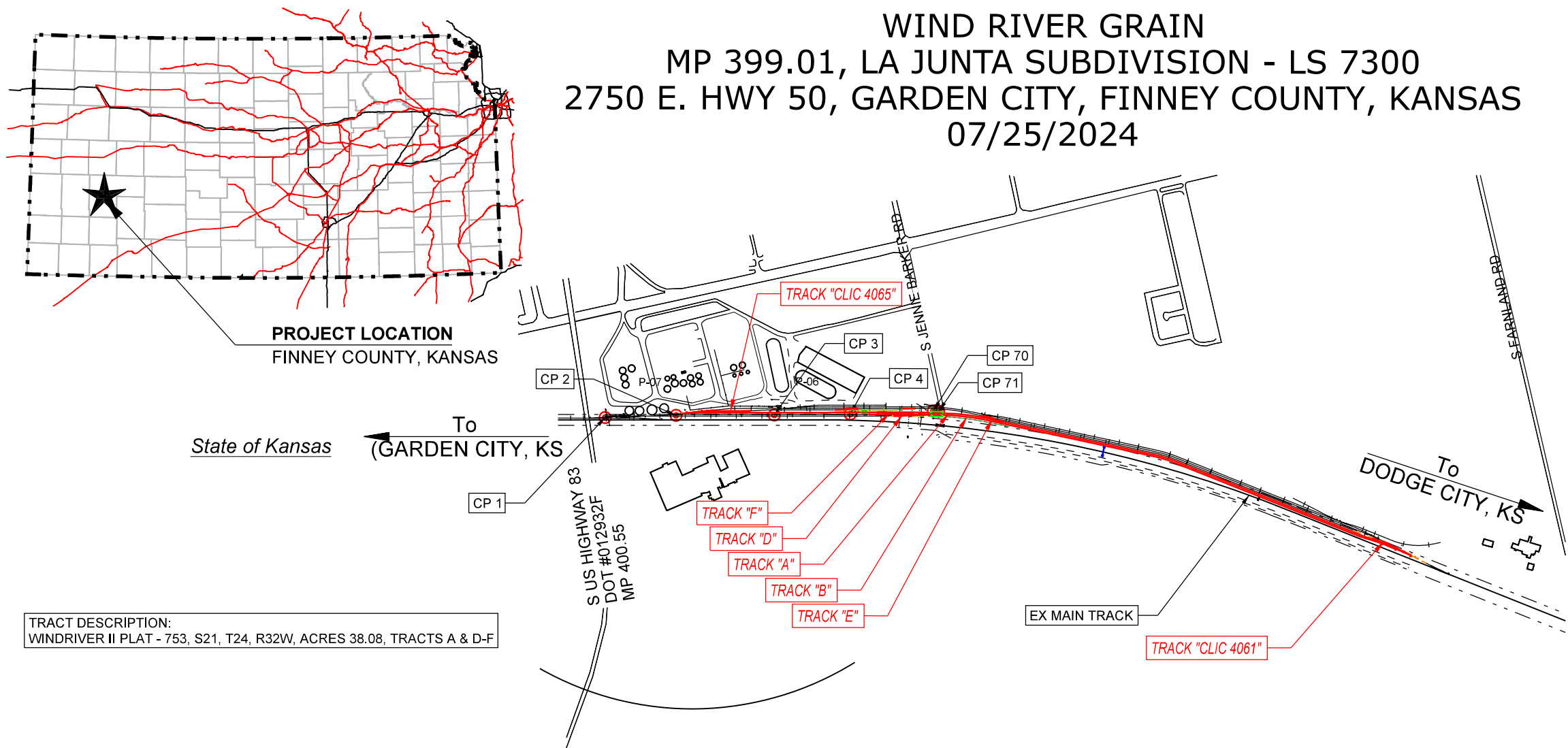


100% TRACK PLAN SET - ISSUED FOR CONSTRUCTION

WIND RIVER GRAIN
MP 399.01, LA JUNTA SUBDIVISION - LS 7300
2750 E. HWY 50, GARDEN CITY, FINNEY COUNTY, KANSAS
07/25/2024



TRACT DESCRIPTION:
WINDRIVER II PLAT - 753, S21, T24, R32W, ACRES 38.08, TRACTS A & D-F

- SCOPE OF WORK (TRACK):
WORK BY BNSF:
NONE
- WORK BY CONTRACTOR:
-CONSTRUCT 8,760 TF 115# TRACK W/ TIMBER TIES
-INSTALL (2) No. 11 LH HTTO 115# W/ TIMBER TIES
-INSTALL (1) No. 11 RH HTTO 115# W/ TIMBER TIES
-INSTALL (4) No. 9 RH HTTO 115# W/ TIMBER TIES
- RE-PROFILE 383 TF
-SHIFT 3,060 TF
-RE-PROFILE (1) DERAIL
-REMOVE TRACK 1,363 TF
-REMOVE (3) EARTHEN BERM
-RELOCATE (2) TURNOUTS (No. 10)
-RELOCATE (1) TURNOUTS (No. 11)
-RELOCATE (1) TURNOUTS (No. 9)
- CUT 7,140 CY
-FILL 830 CY
-SUBBALLAST 2,740 CY
-INSTALL 36" SSP CULVERT (75 LF)
-INSTALL RIP-RAP (40 SY)
-INSTALL HEAD WALLS (2)

CONTROL POINTS				
POINT #	NORTHING	EASTING	ELEV	DESCRIPTION
1	1790934.581	637885.461	2825.84	C1 SET X
2	1790789.380	638520.651	2824.33	C2 SET NAIL
3	1790562.172	639393.743	2823.42	C3 SET NAIL
4	1790393.324	640070.516	2822.62	C4 SET MAG
70	1790227.380	640815.408	2823.21	C70 X IN CONC
71	1790212.586	640863.814	2823.29	C71 MARKER X IN CONC

VARIANCE	REQUEST DATE	APPROVED DATE	CURRENT STATUS
0.5% Max Vertical Grade for Receiving/Departure Track (0.58%) (see sheet P-04, P-05, P-09) - Industry track	1-Dec-23	12-Jan-24	APPROVED

RECEIVED

City of Garden City, KS

Project Number: SPFC24-25
Received by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal

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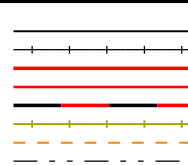
Project Number: SPFC24-25
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Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal

PREPARED FOR:



REV. #	BY	DATE	DESCRIPTION

LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY



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COVER SHEET

LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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SHEET #
G-01
SHEET 01 OF 45

WIND RIVER GRAIN - GARDEN CITY, FINNEY, KANSAS

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G-03	GENERAL NOTES	3	
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P-04	PLAN & PROFILE - TRACK "A" STA 19+50 TO STA 34+50	7	
P-05	PLAN & PROFILE - TRACK "A" STA 34+50 TO STA 49+50	8	
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City of Garden City, KS

Project Number: SPEC24-25

Approved by: SR

Date: 26Jul2024

No. of Pages: 59(PLANS)

2nd Submittal

COMPANY	NAME	INVOLMENT	CONTACT PHONE #
VIA RAIL ENGINEERING	RAMON RAMIREZ	PROJ. MANAGER	(817) 600-3420
VIA RAIL ENGINEERING	COLIN D. SCHAFFNIT	ENGINEER	(702) 449-5146

PREPARED FOR:

Ameritrack Rail
A DIVISION OF RAILSERVE, INC.

VIA RAIL
ENGINEERING
viarailengineering.com



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CHECKED BY: CDS	
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SHEET INDEX

LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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G-02
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GENERAL NOTES

1. IN GENERAL, THE PROPOSED RAILROAD INFRASTRUCTURE SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE ASSOCIATION (AREMA) "MANUAL FOR RAILWAY ENGINEERING" AND THE BNSF "GUIDELINES FOR INDUSTRY TRACK PROJECTS". CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, COUNTY AND CITY LAWS AND ORDINANCES AND REGULATIONS.
2. THE CONTRACTOR SHALL COMPLY WITH THE PLAN DESIGN DOCUMENTS AND DRAWING DETAILS FOR CONSTRUCTION. IN THE EVENT THAT DISCREPANCIES ARISE BETWEEN THE BNSF SPECIFICATIONS, THE AREMA MANUAL AND THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL CONTACT THE ENGINEER FOR DETERMINATION.
3. NO WORK WILL BE PERFORMED BY A CONTRACTOR ON RAILROAD RIGHT-OF-WAY WITHOUT APPROVAL OF THE OPERATING RAILROAD AND SHALL BE OBSERVED BY A DESIGNATED RAILROAD REPRESENTATIVE WHEN REQUIRED.
4. ANY WORK WITHIN 25 FT. OF THE MAINLINE TRACK SHALL BE MONITORED AND PROTECTED BY A FLAGMAN.
5. CONTRACTOR SHALL NOTIFY THE OPERATING RAILROAD 72 HOURS IN ADVANCE OF ANY WORK TO BE PERFORMED ON RAILROAD PROPERTY.
6. CONSTRUCTION PERMITS SHALL BE REQUIRED FOR ALL UTILITY CROSSINGS OR ENCROACHMENTS.
7. UTILITIES SHALL BE MARKED PRIOR TO START OF SITE GRADING AND UTILITY COMPANIES NOTIFIED OF PROJECT START-UP DATE.
8. IN THE EVENT THAT AN ELECTRIC SERVICE METER DROP IS REQUIRED, THE SERVICE DROP WILL BE PLACED AT THE RIGHT-OF-WAY LINE ADJACENT TO THE MAINLINE SWITCH.
9. RAILROAD PROTECTIVE INSURANCE IS REQUIRED FOR ANY WORK PERFORMED WITHIN THE RAILROAD RIGHT-OF-WAY.
10. NO FIELD CHANGES WILL BE PERMITTED WITHOUT DIRECT AUTHORIZATION FROM THE PROJECT ENGINEER OR HIS/HER REPRESENTATIVE.

UTILITY COMPANY CONTACTS

1. FOR CURRENT LIST OF PERTINENT UTILITY CONTACTS IN THE CONSTRUCTION AREA, CALL KANSAS 811.

TRACK CONSTRUCTION MATERIALS

1. NEW 7"x9"x8'6" HARDWOOD TREATED INDUSTRIAL GRADE CROSSTIES WITH SELECTIVE END PLATING. (21.5" TIE SPACING)
2. TRACK SPIKES SHALL BE NEW 5/8" x 6".
3. TIE PLATES SHALL BE NEW OR RELAY DOUBLE SHOULDER AND COMPATIBLE WITH THE RAIL SECTION.
4. RAIL ANCHORS SHALL BE NEW UNIT 5 DRIVE-ON TYPE.
5. UNLESS OTHERWISE SPECIFIED ON PLANS RAIL SECTIONS SHALL BE MINIMUM 115# NEW OR AREMA NO. 1 QUALITY RELAY, MINIMUM LENGTH OF 39' RAIL SECTIONS.
6. JOINT BARS SHALL BE NEW OR RELAY QUALITY MATCHING RAIL SECTION. BOLTS, LOCK WASHERS, AND NUTS SHALL BE NEW HARDWARE.
7. UNLESS OTHERWISE SPECIFIED ON PLANS ALL TURNOUT MATERIAL SHALL BE AREMA HEAVY INDUSTRIAL WITH NEW 16'-6" SAMSON SWITCH POINTS, NEW STOCK RAILS (CHAMFERED TO MATCH SAMSON POINTS), AND NEW SMSG FROG. BALANCE OF RAIL CAN BE NEW OR AREMA No.1 RELAY. TURNOUT TO INCLUDE ADJUSTABLE BRACES, AND MACHINED PLATING (NO HOOK PLATES).



TRACK CONSTRUCTION

1. PRIOR TO TRACK CONSTRUCTION, SUBBALLAST SHALL BE BROUGHT TO GRADE AND SHALL BE SHAPED AND COMPACTED AS SHOWN ON THE CONSTRUCTION DRAWINGS.
2. TRACKS SHALL BE LAID TO STANDARD GAGE 4' 8 - 1/2" MEASURED AT A POINT 5/8" BELOW THE CROWN RADIUS OF THE RAIL.
3. RAIL SECTIONS SHALL BE MINIMUM 115# NEW OR No. 1 QUALITY RELAY, MINIMUM 39' IN LENGTH AND LAID WITH STAGGERED JOINTS. PROPER ALLOWANCE FOR RAIL EXPANSION SHALL BE PROVIDED AT THE JOINTS BY USE OF APPROVED FIBER EXPANSION SOFTWOOD SHIMS. EXPANSION SHIMS SHALL BE REMOVED IMMEDIATELY AFTER INSTALLATION OF RAIL ANCHORS.
4. RAIL ANCHORS ARE TO BE NEW UNIT 5 DRIVE-ON TYPE AND APPLIED ON EVERY OTHER TIE, AND EVERY TIE WITHIN 200' OF A FIXED OBJECT. ANCHORS SHALL NOT BE INSTALLED IMMEDIATELY ADJACENT TO OR ACROSS FROM RAIL JOINTS. TURNOUTS TO BE FULLY ANCHORED.
5. CROSSTIES SHALL BE PLACED UNIFORMLY. TIES MUST BE LAID WITH HEART SIDE DOWN, SQUARE TO THE RAILS ON TANGENT TRACK AND RADIALLY ON CURVES. TIES SHALL BE FULLY TIE-PLATED, FIT EVENLY ON THE SURFACE, AND SNUG AGAINST THE BASE OF THE RAIL. SEE GRADE CROSSING DETAILS FOR TIE SPACING AND INSTALLATION THROUGH AT-GRADE CROSSING LOCATIONS.
6. TIE PLATES MAY BE NEW OR SECONDHAND, FREE OF INJURIOUS DEFECT AND FOREIGN MATERIAL, CONFORMING TO AREMA SPECIFICATIONS, AND SHALL FIT RAIL BEING USED. ALL PLATES WILL BE DOUBLE SHOULDERED.
7. TRACK SPIKES SHALL BE 6"x5/8" SQUARE. RAILS SHALL BE SPIKED TO EVERY TIE, USING NOT LESS THAN 2 SPIKES FOR EACH RAIL AT EACH TIE. DRIVE SPIKES THROUGH TIE PLATE HOLES INTO TIES, LOCATED DIAGONALLY OPPOSITE EACH OTHER BUT NOT LESS THAN 2" FROM EDGE OF TIE. START AND DRIVE SPIKES VERTICALLY AND SQUARE WITH RAIL. TAKE CARE TO AVOID SLANTING, BENDING, OR CAUSING SIDEWAYS MOVEMENT OF SPIKE. EACH RAIL WILL BE SPIKED WITH TWO SPIKES PER TIE PLATE ON TANGENT TRACK STAGGERED WITH INSIDE SPIKES TO THE EAST OR NORTH AND OUTSIDE SPIKES TO THE WEST OR SOUTH. ON CURVES A THIRD SPIKE IS REQUIRED ON THE GAGE SIDE OF THE RAIL. NO SPIKES SHALL BE DRIVEN AGAINST THE ENDS OF JOINT BARS.
8. TIMBER CROSSING PANEL FASTENERS SHALL BE TIMBER SCREW SPIKES AND MUST BE COUNTERSUNK FLUSH WITH TOP OF PANEL. PANEL MUST MATCH RAIL SIZE (NO SHIMMING). PANELS MUST BE NEW AND FACTORY MANUFACTURED TO ACCOMMODATE CROSSTIE FASTENERS. UNLESS OTHERWISE SPECIFIED IN PLANS, FIELD MODIFYING PANELS IS PROHIBITED.
9. JOINT BARS SHALL CONFORM TO THE RAIL SECTION, FULLY BOLTED WITH LOCK WASHERS AND NUT, AND BOLTS ALTERNATED IN DIRECTION. JOINT BAR BOLTS SHALL BE RE-TIGHTENED AFTER PLACEMENT OF RAIL ANCHORS.
10. BALLAST SHALL BE UNIFORMLY DISTRIBUTED AND THE TRACK RAISED, LINED, SURFACED AND TAMPED. THE FINISH SURFACE OF THE BALLAST DRESSED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS. SHOULDER BALLAST FOR WALKWAYS SHALL BE OF SMALLER GRANULAR SIZE AND DRESSED ACCORDINGLY.
11. ALL TRACKS SHALL BE CONSTRUCTED TO THE ALIGNMENT AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS.
12. IT SHOULD BE UNDERSTOOD THAT THE FINAL APPROVAL OF THE TRACK FOR SERVICE IS SUBJECT TO INSPECTION BY THE OPERATING RAILROAD REPRESENTATIVE.
13. PROJECT SITE CLEAN-UP IS REQUIRED UPON COMPLETION OF THE TRACK WORK. TRACK ZONE WILL BE MAINTAINED FREE OF ALL WASTE AND RUBBISH. TRACK PROJECT SHALL NOT BE CONSIDERED COMPLETE AND THE FINAL PAYMENT NOT MADE UNTIL THE PROJECT SITE HAS BEEN CLEANED.
14. SWITCH SLIDE PLATES AND SWITCH STAND SHALL BE ADJUSTED, LUBRICATED AND OPERATE SMOOTHLY. SWITCH STAND LOCATIONS ARE TO BE APPROVED BY THE LOCAL RAILROAD REPRESENTATIVE.
15. ANY AND ALL DISCREPANCIES DISCOVERED BY THE CONTRACTOR SHALL BE BROUGHT TO THE ATTENTION OF THE TRACK DESIGN ENGINEER PRIOR TO COMMENCEMENT OF ANY WORK.
16. CONTRACTOR TO VERIFY EXISTING RAIL ELEVATION, GEOMETRY, AND SLOPE AT CONNECTION TO EXISTING TRACK PRIOR TO START OF CONSTRUCTION. ANY QUESTIONS OR CONCERNS SHALL BE BROUGHT TO ENGINEERS ATTENTION IMMEDIATELY.
17. THE ALIGNMENT FOR THE PROPOSED TRACK SHALL NOT DEVIATE FROM UNIFORMITY MORE THAN 1/8 INCH AT THE MID-OFFSET IN ANY 62 FOOT LINE ON TANGENT TRACK OR MORE THAN 1/8 INCH MID-OFFSET IN ANY 62 FOOT CHORD ON CURVED TRACK.
18. THE PROPOSED TRACK SURFACE MAY NOT DEVIATE MORE THAN 1/8 INCH FROM THE DESIGN PROFILE OF ANY RAIL AT THE MID-ORDINATE OF A 62 FOOT CHORD.
19. CONTRACTOR SHALL REFER TO SPECIFICATIONS FOR ALL DETAILS PERTAINING TO TURNOUT GEOMETRY.
20. NO JOINTS IN THE RAIL SHALL OCCUR ON OR WITHIN 20' FROM THE EDGE OF ANY AT-GRADE CROSSING.
21. TRACKS IN LOADING/UNLOADING AREAS SHALL BE BONDED AND GROUNDED.
22. REQUIRED SUBMITTALS

1. WELDER QUALIFICATION FOR RAIL WELDING (FOR FLASH-BUTT OR THERMITE)

2. WELD TEST CERTIFICATES (NON-DESTRUCTIVE TESTING, 100% OF WELDS TO BE TESTED)

3. DOCUMENTATION OF RAIL, NEW OR AREMA No.1 RELAY

4. WASHED BALLAST ROCK DOCUMENTATION INCLUDING MATERIAL CHARACTERISTICS AND GRADATION

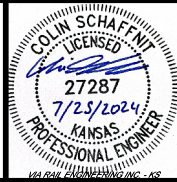
5. WASHED WALKWAY BALLAST ROCK DOCUMENTATION INCLUDING MATERIAL CHARACTERISTICS AND GRADATION

6. CROSSTIES AND SWITCH TIES

7. TURNOUT PACKAGE

8. CROSSING PANELS

PREPARED FOR:



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GENERAL NOTES

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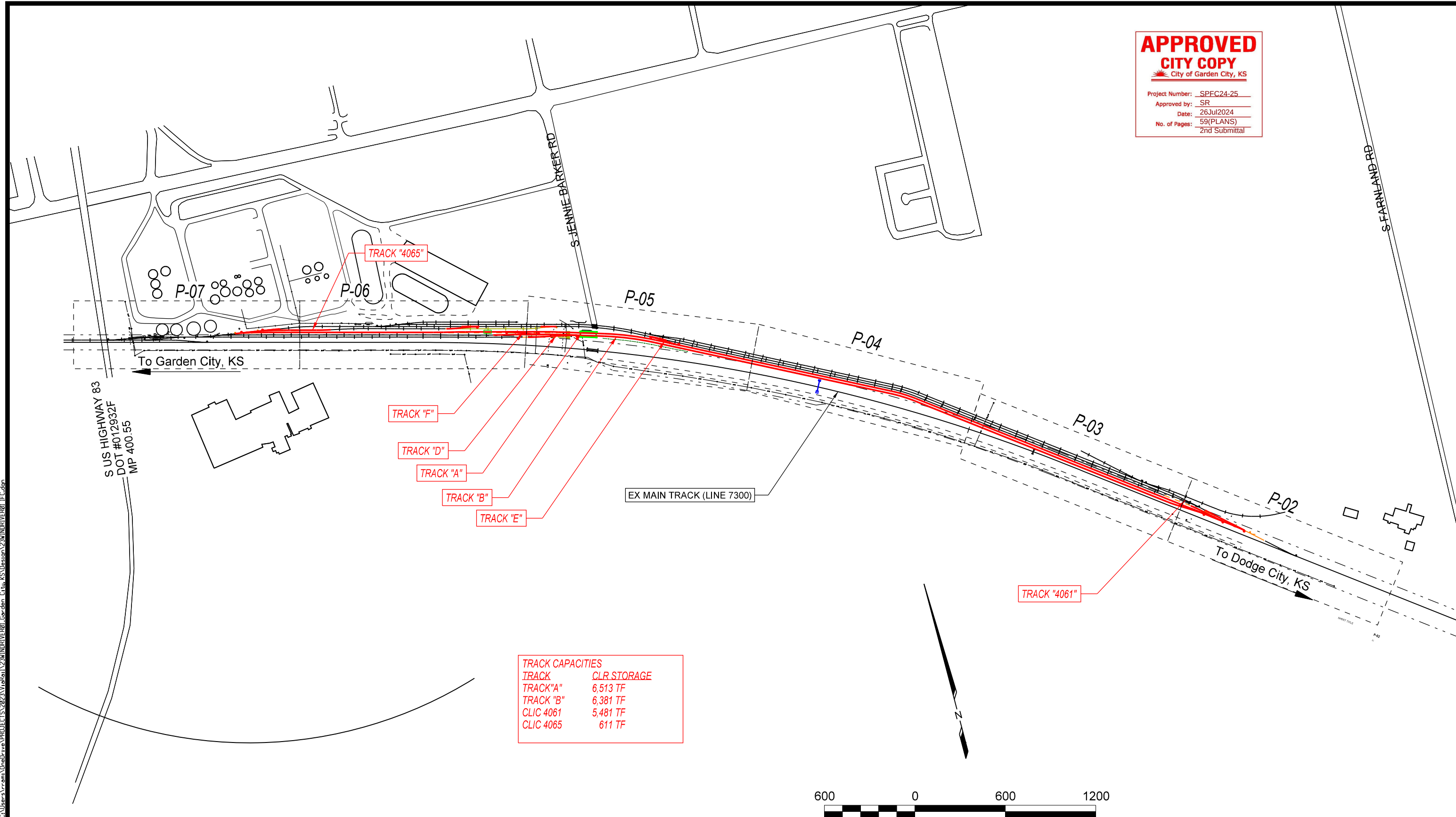
Project Number: SPEC24-25

Approved by: SR

Date: 26Jul2024

No. of Pages: 59(PLANS)

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TRACK CAPACITIES	
TRACK	CLR STORAGE
TRACK "A"	6,513 TF
TRACK "B"	6,381 TF
CLIC 4061	5,481 TF
CLIC 4065	611 TF

PREPARED FOR:
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



REV. #	BY	DATE	DESCRIPTION

LEGEND:

EXISTING MAINLINE TRACK

EXISTING INDUSTRY TRACK

PROPOSED RAILROAD TRACK

PROPOSED INDUSTRY TRACK

UPGRADE TRACK

REMOVE TRACK

SHIFT TRACK

MAPPED RIGHT OF WAY

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OVERALL TRACK LAYOUT

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GARDEN CITY, FINNEY COUNTY, KANSAS

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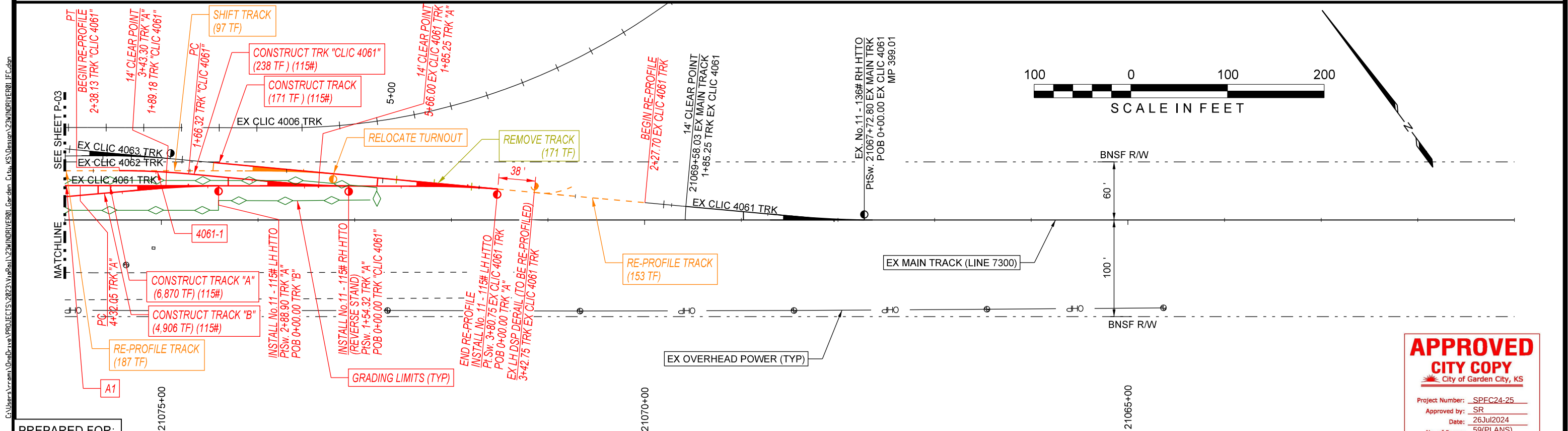
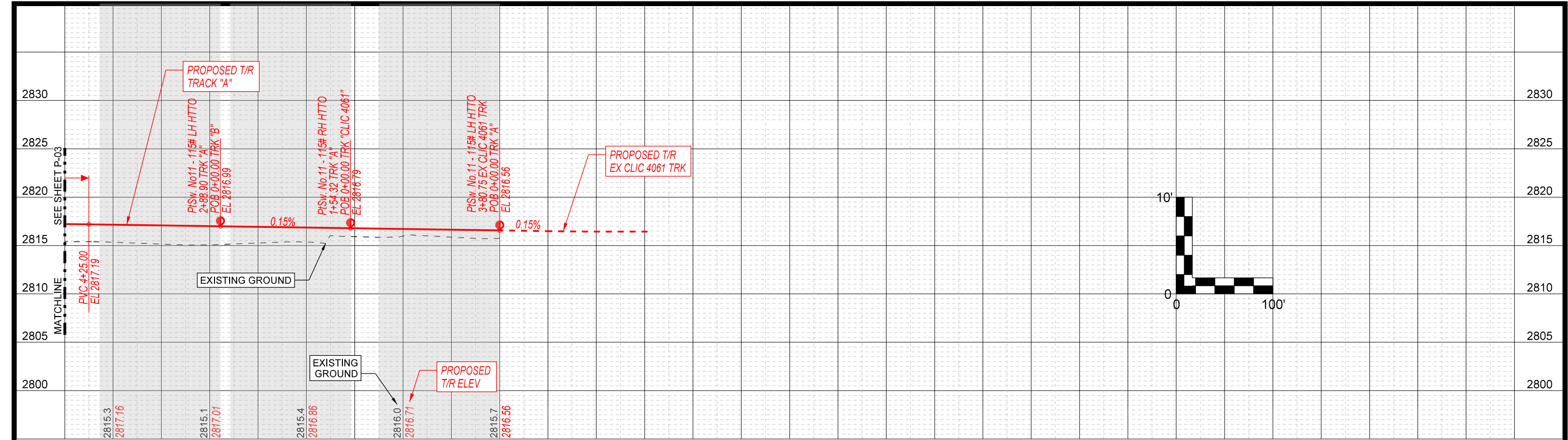
P-01

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04

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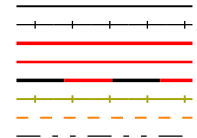


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REV. #	BY	DATE	DESCRIPTION

LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY



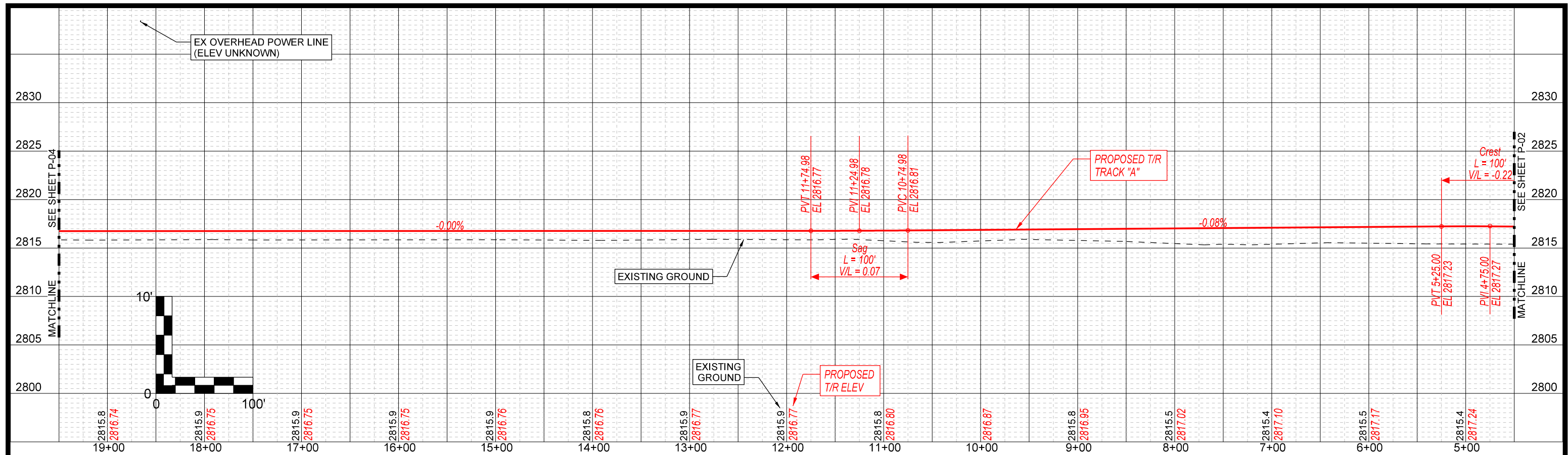
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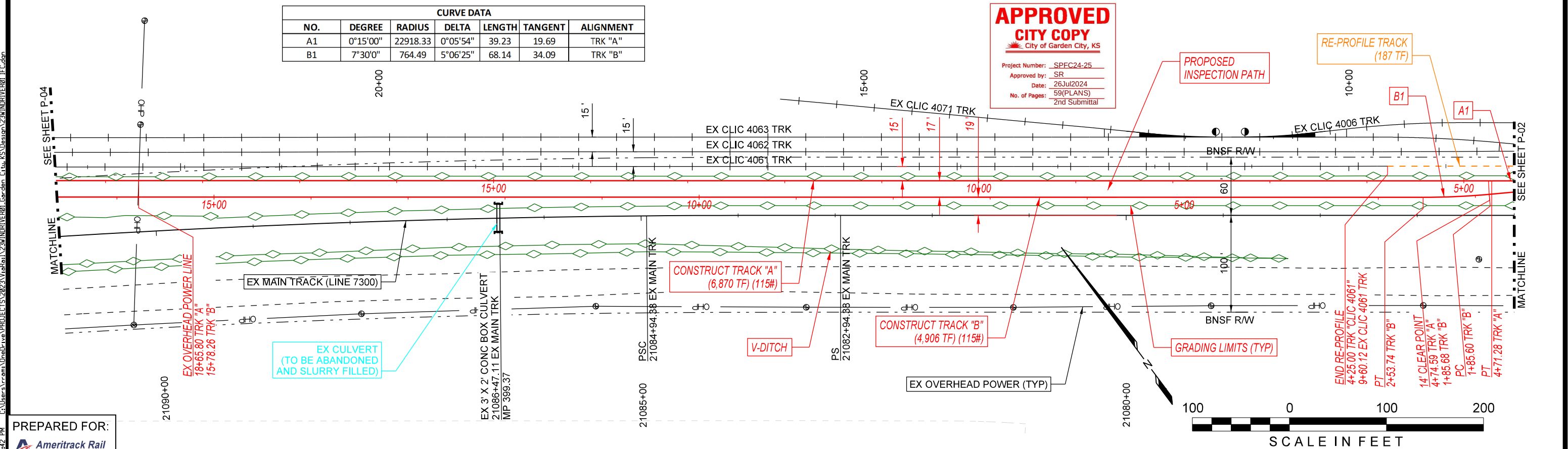
PLAN & PROFILE - TRACK "A"
STA 0+00 TO STA 4+50
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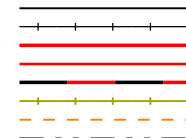
CURVE DATA						
NO.	DEGREE	RADIUS	DELTA	LENGTH	TANGENT	ALIGNMENT
A1	0°15'00"	22918.33	0°05'54"	39.23	19.69	TRK "A"
B1	7°30'0"	764.49	5°06'25"	68.14	34.09	TRK "B"



PREPARED FOR:

[illegible]

LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY



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SCALE:	AS NOTED

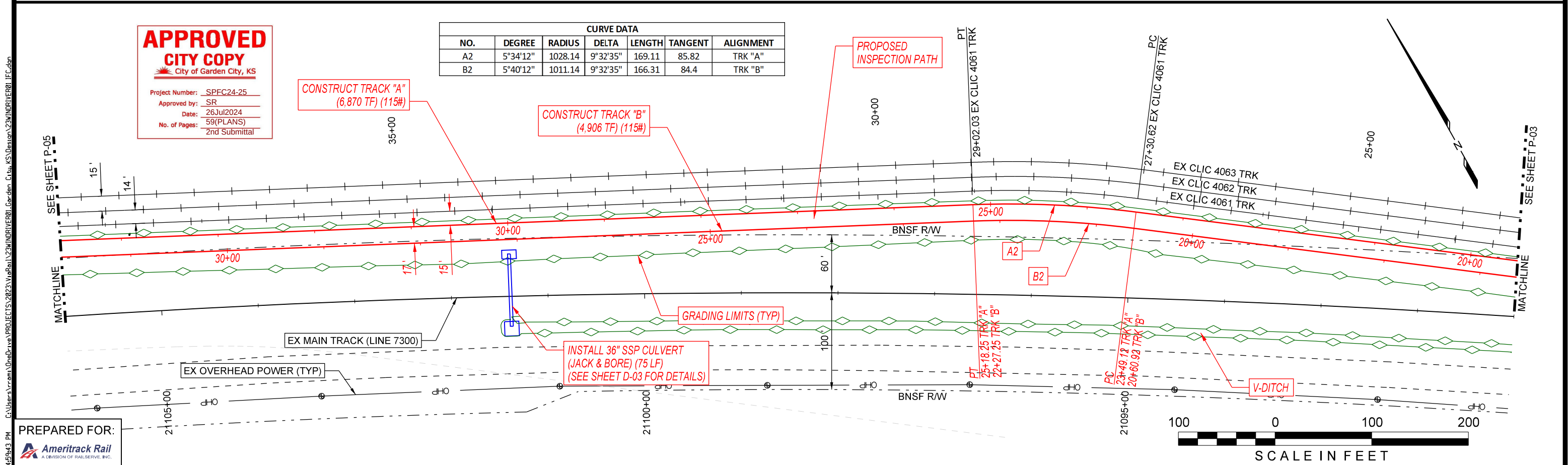
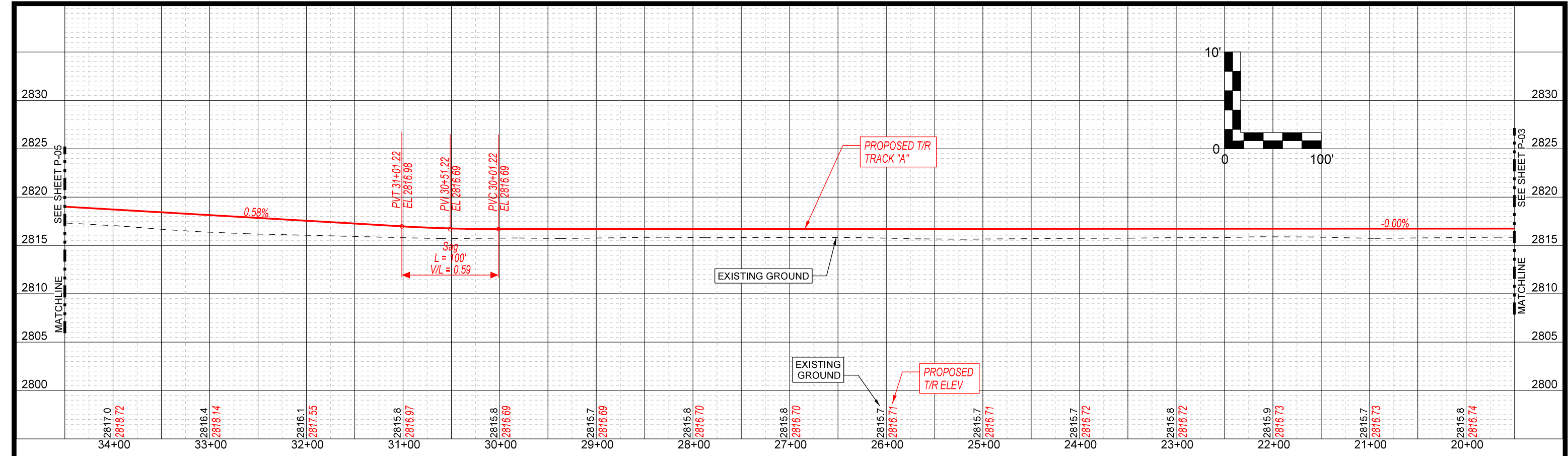


PLAN & PROFILE - TRACK "A"
STA 4+50 TO STA 19+50
LS - 7300, MP 399.01, LA JUNTA SUB.
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GARDEN CITY, FINNEY COUNTY, KANSAS

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P-03

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PREPARED FOR:
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



REV. #	BY	DATE	DESCRIPTION

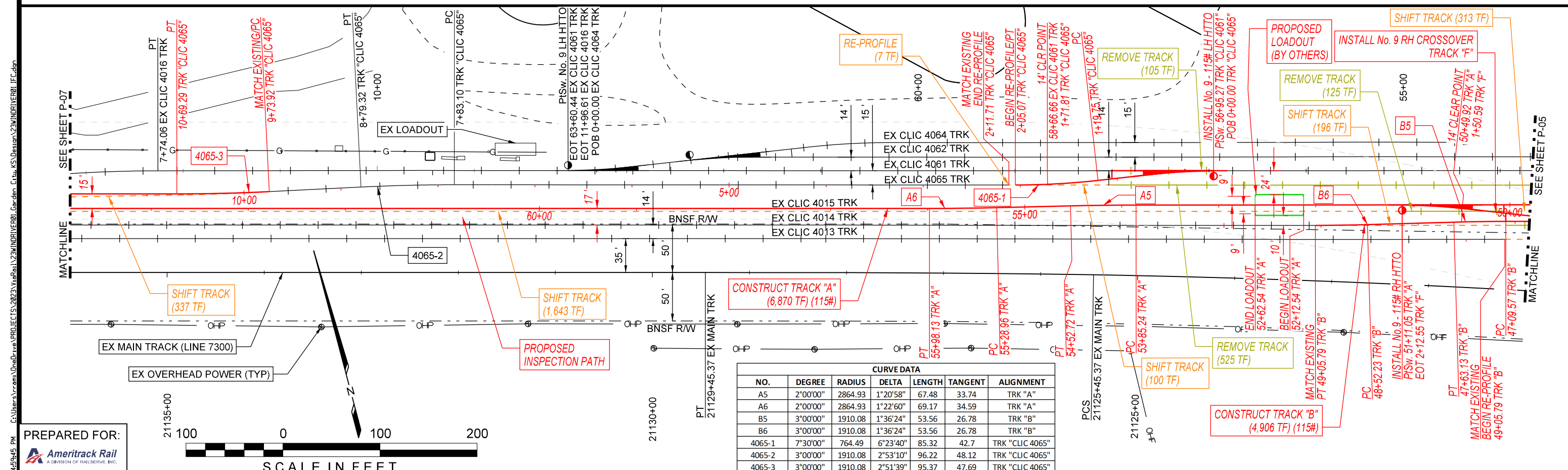
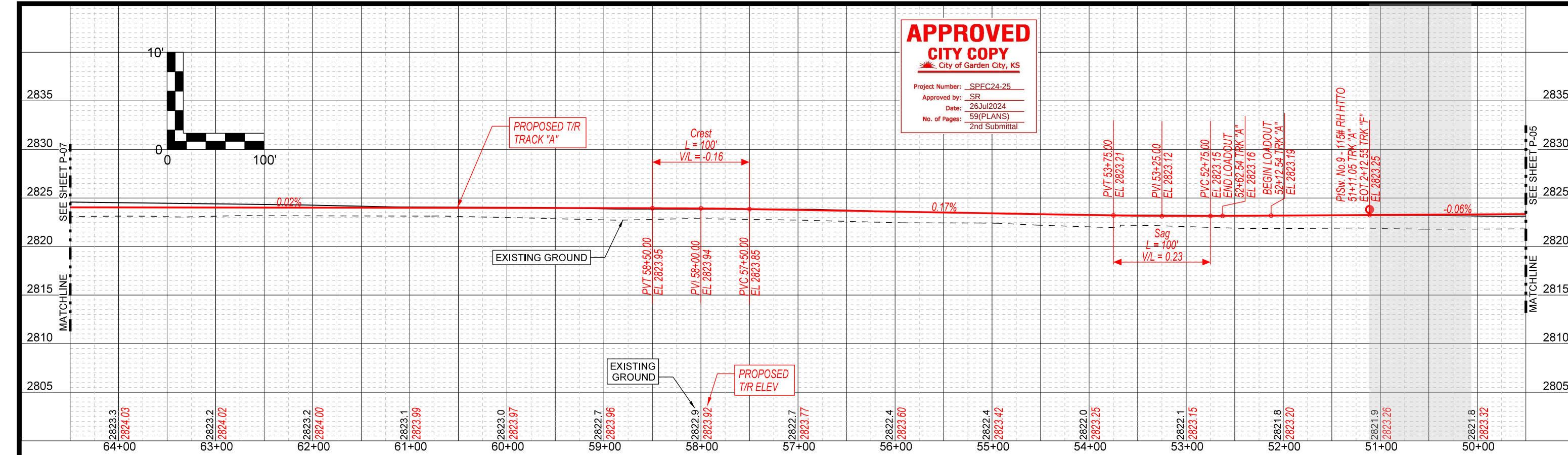
LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY

DRAWN BY: RR
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PLAN & PROFILE - TRACK "A"
STA 19+50 TO STA 34+50
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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CURVE DATA						
NO.	DEGREE	RADIUS	DELTA	LENGTH	TANGENT	ALIGNMENT
A5	2°00'00"	2864.93	1°20'58"	67.48	33.74	TRK "A"
A6	2°00'00"	2864.93	1°22'60"	69.17	34.59	TRK "A"
B5	3°00'00"	1910.08	1°36'24"	53.56	26.78	TRK "B"
B6	3°00'00"	1910.08	1°36'24"	53.56	26.78	TRK "B"
4065-1	7°30'00"	764.49	6°23'40"	85.32	42.7	TRK "CLIC 4065"
4065-2	3°00'00"	1910.08	2°53'10"	96.22	48.12	TRK "CLIC 4065"
4065-3	3°00'00"	1910.08	2°51'39"	95.37	47.69	TRK "CLIC 4065"

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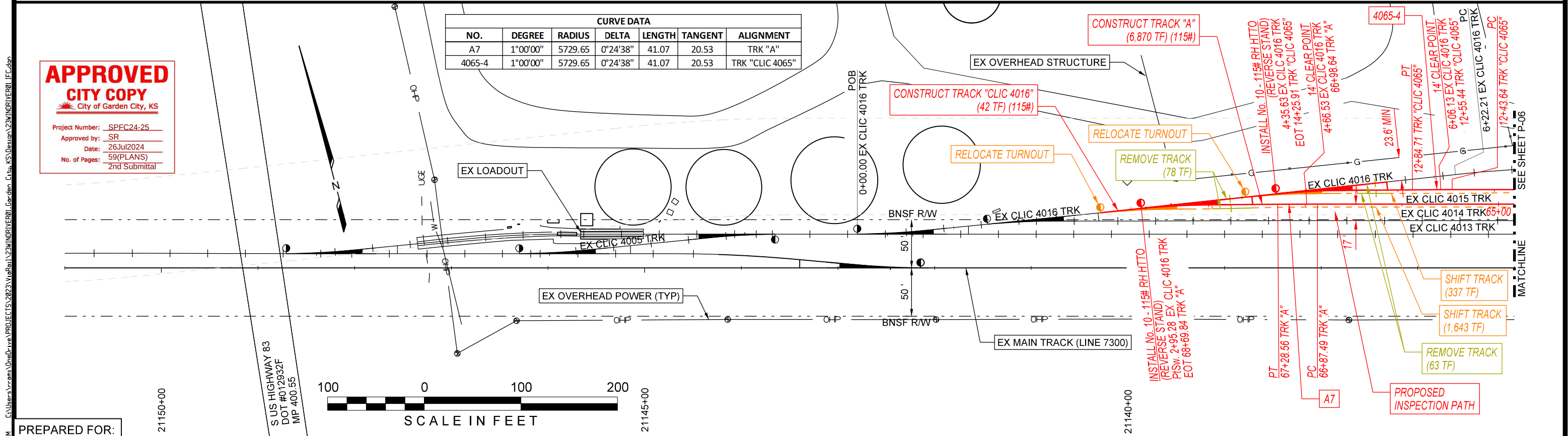
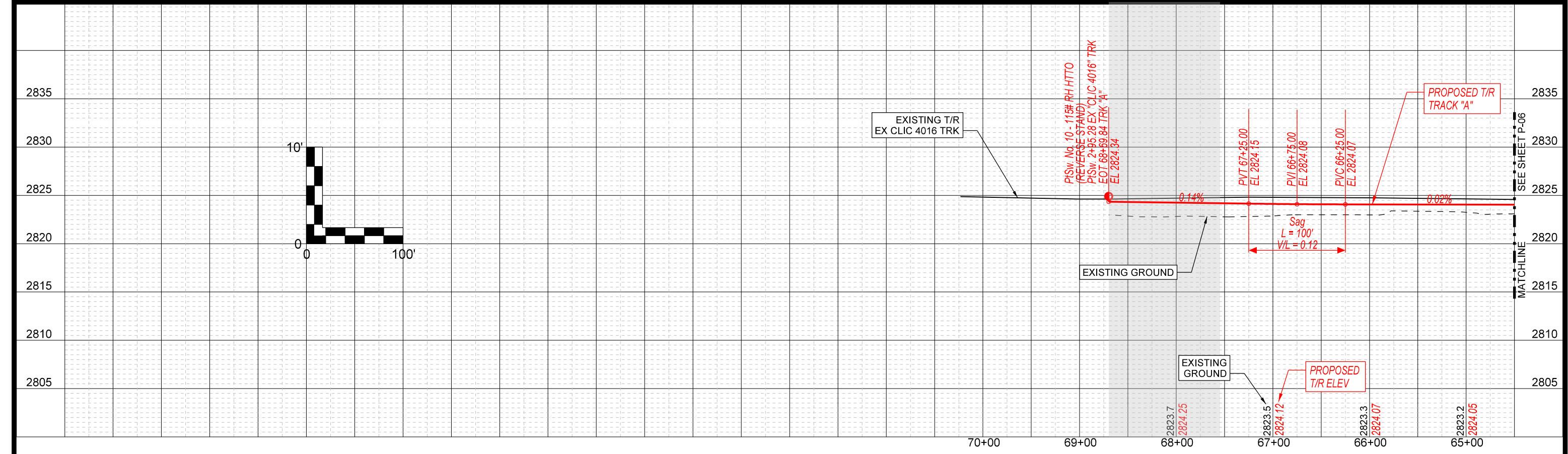
REV. #	BY	DATE	DESCRIPTION

LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY

DRAWN BY: RR
CHECKED BY: CDS
DATE: 07/25/2024
SCALE: AS NOTED

PLAN & PROFILE - TRACK "A"
STA 49+50 TO STA 64+50
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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SHEET # P-06
SHEET 09 OF 45



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City of Garden City, KS

Project Number: SPEC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal

PREPARED FOR:

Ameritrack Rail
A DIVISION OF RAILSERVE, INC.

VIA RAIL
ENGINEERING
viarailengineering.com

COIN SCHAFFNER
LICENSED
27287
7/25/2024
KANSAS
PROFESSIONAL ENGINEER

REV. #	BY	DATE	DESCRIPTION

LEGEND:

- EXISTING MAINLINE TRACK
- EXISTING INDUSTRY TRACK
- PROPOSED RAILROAD TRACK
- PROPOSED INDUSTRY TRACK
- UPGRADE TRACK
- REMOVE TRACK
- SHIFT TRACK
- MAPPED RIGHT OF WAY

DRAWN BY: RR
CHECKED BY: CDS
DATE: 07/25/2024
SCALE: AS NOTED

BNSF
RAILWAY

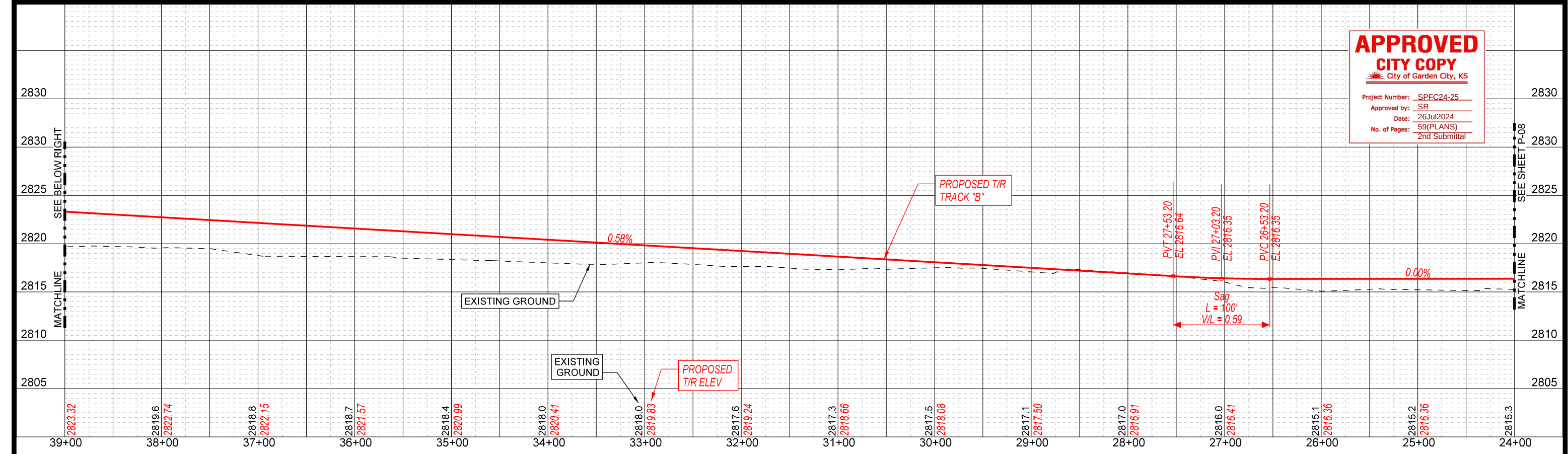
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STA 64+50 TO STA 68+70
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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SHEET #
P-07
SHEET 10 OF 45

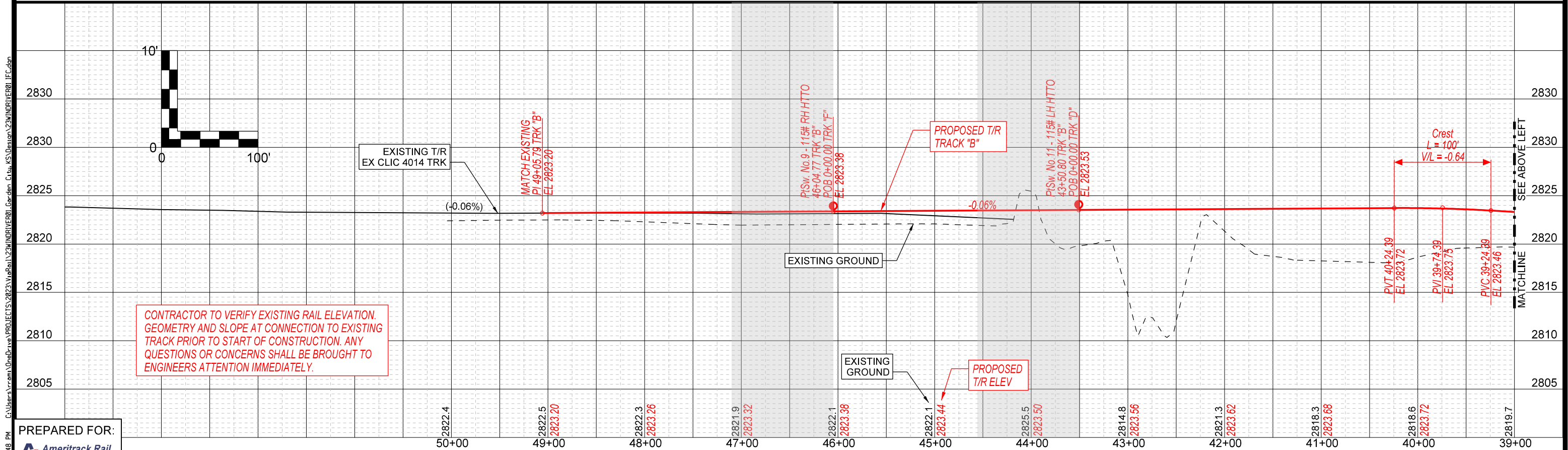


rrami

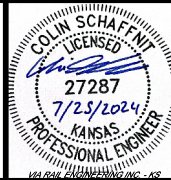


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Project Number: SPEC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal



PREPARED FOR:
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



REV. #	BY	DATE	DESCRIPTION

DRAWN BY: RR
CHECKED BY: CDS
DATE: 07/25/2024
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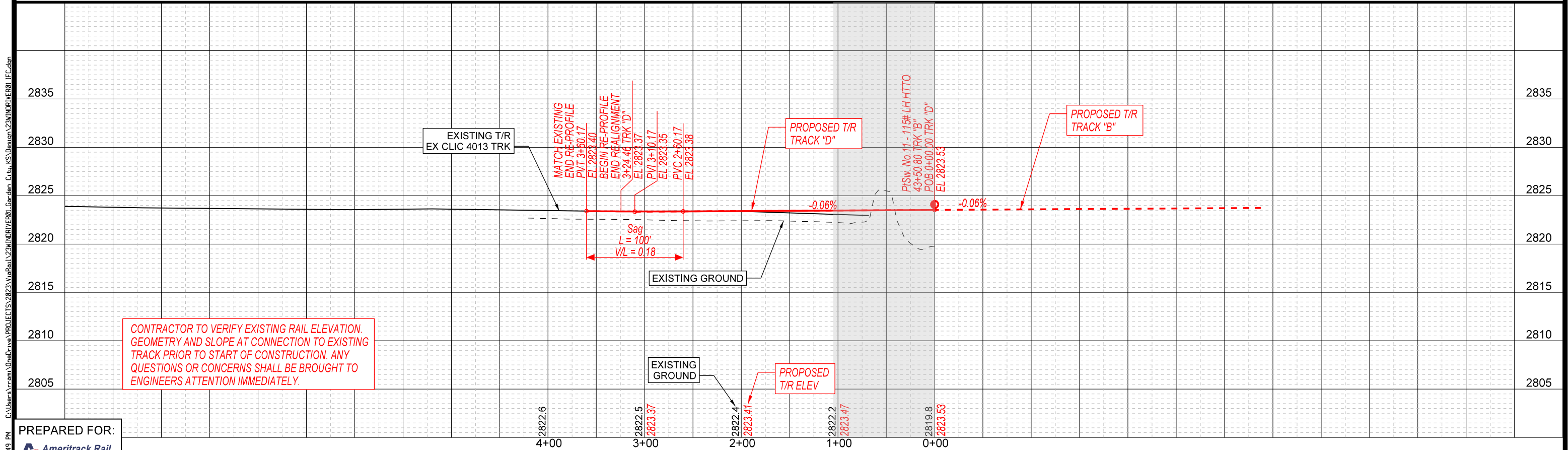
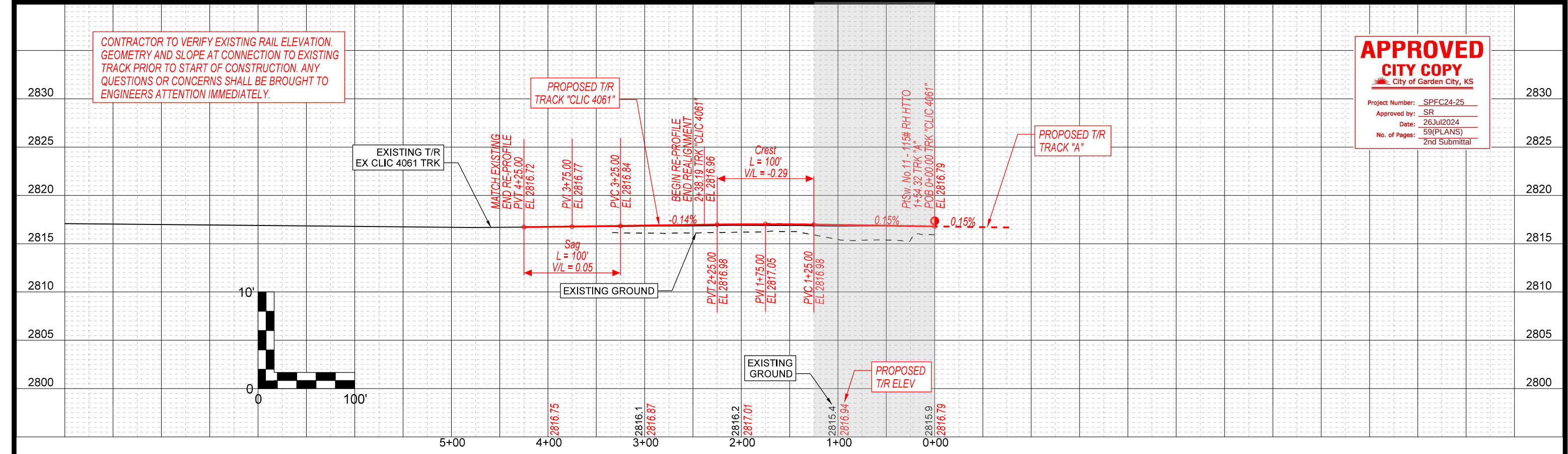


PROFILE TRACK "B"
STA 24+00 TO EOT
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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P-09

SHEET
12
OF
45



PREPARED FOR:

Ameritrack Rail
A DIVISION OF RAILSERVE, INC.

VIA RAIL
ENGINEERING
viarailengineering.com

COIN SCHAFFNER
LICENSED PROFESSIONAL ENGINEER
27287
7/25/2024
KANSAS

REV. #	BY	DATE	DESCRIPTION

DRAWN BY: RR
CHECKED BY: CDS
DATE: 07/25/2024
SCALE: AS NOTED

BNSF
RAILWAY

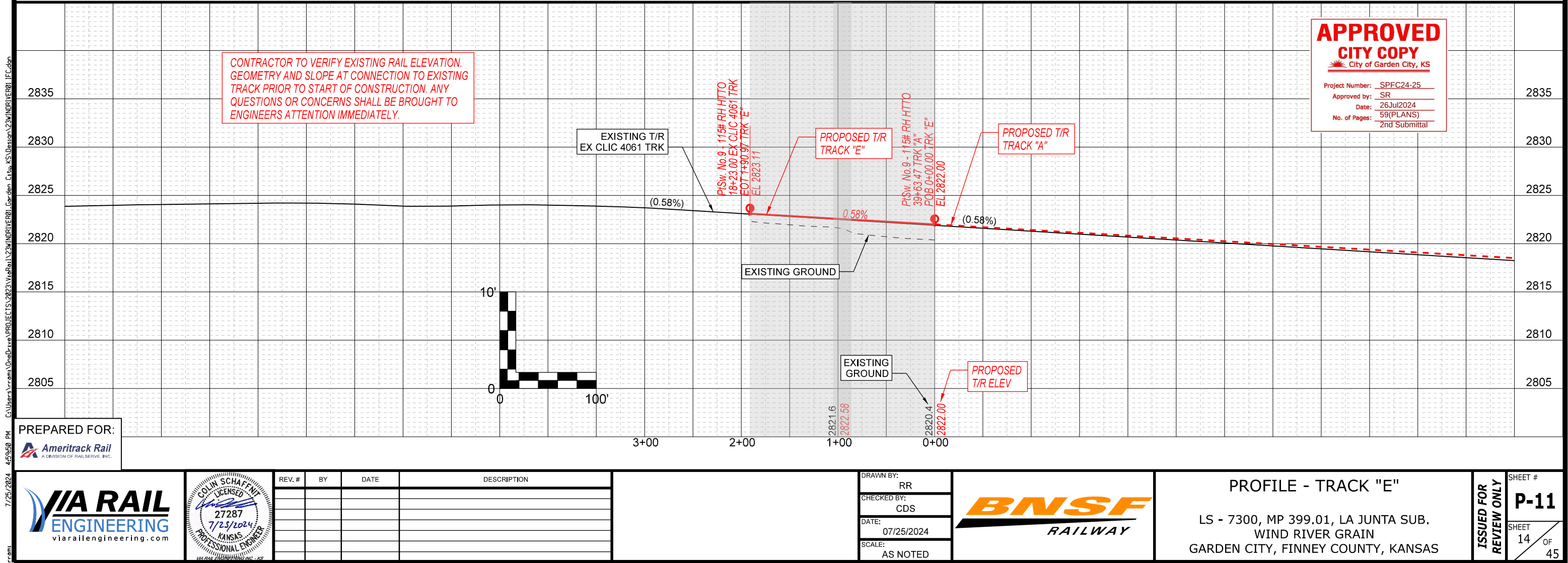
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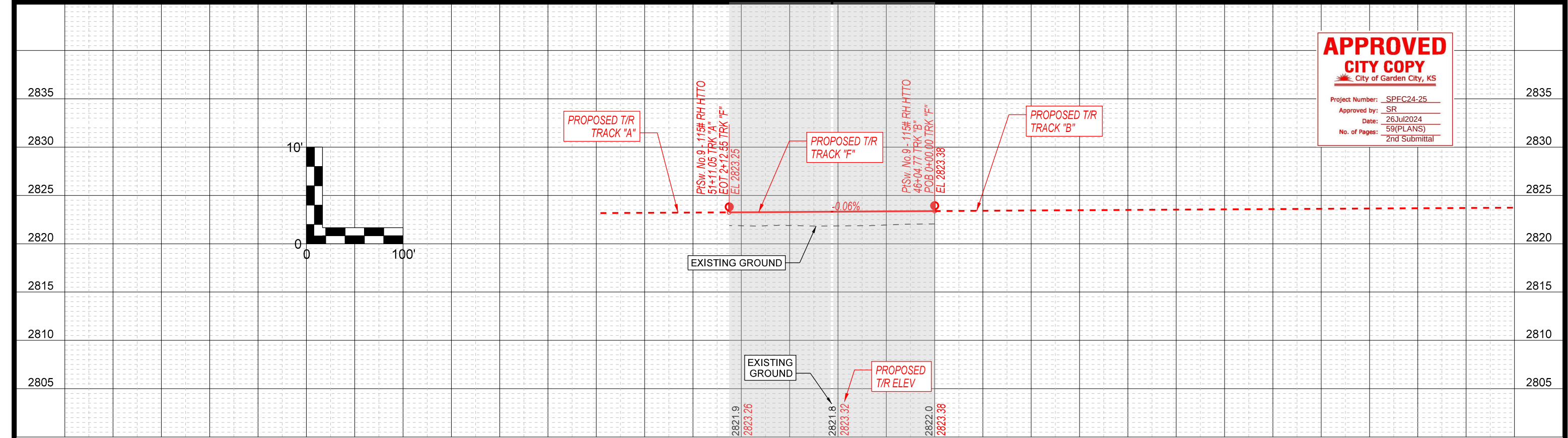
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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SHEET #
P-10
SHEET 13 OF 45

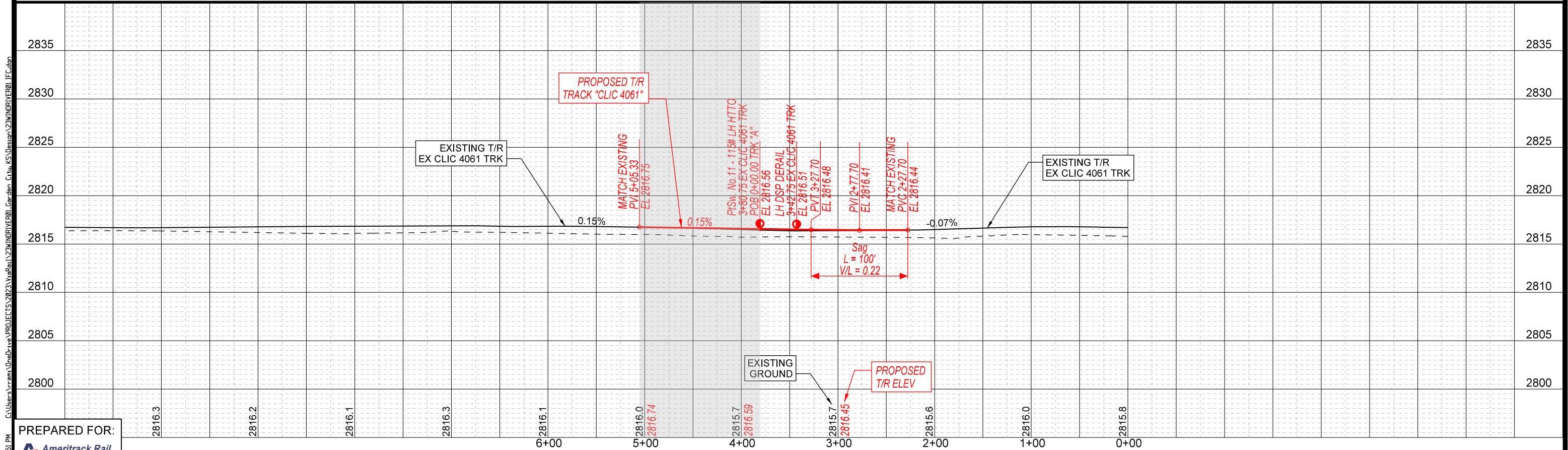
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City of Garden City, KS

Project Number: SPFC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal



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A DIVISION OF RAILSERVE, INC.



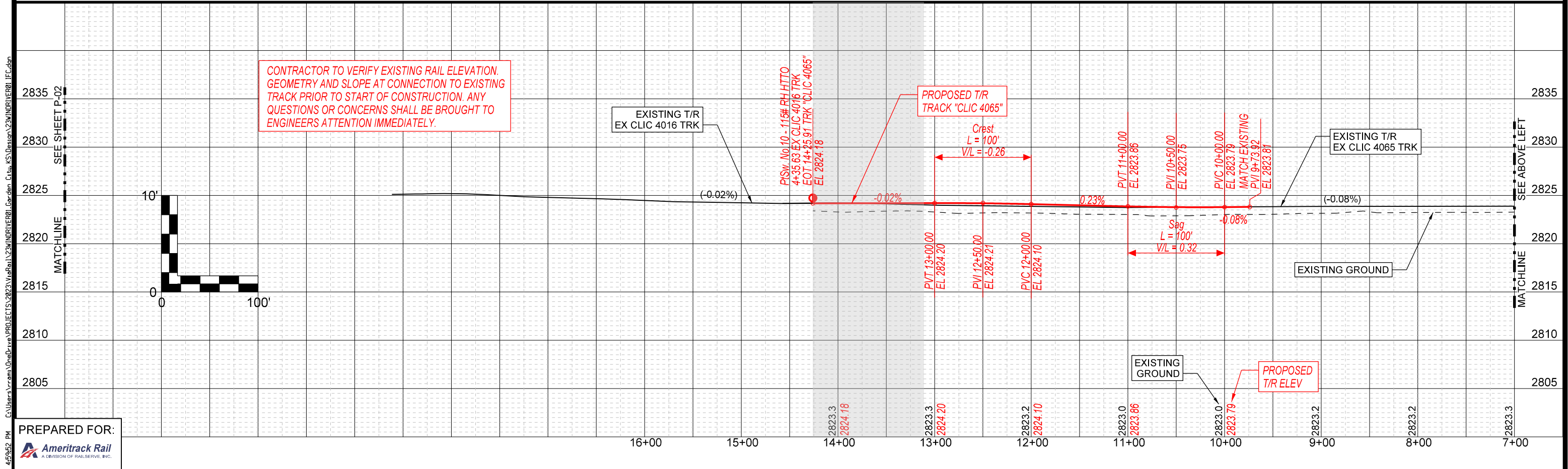
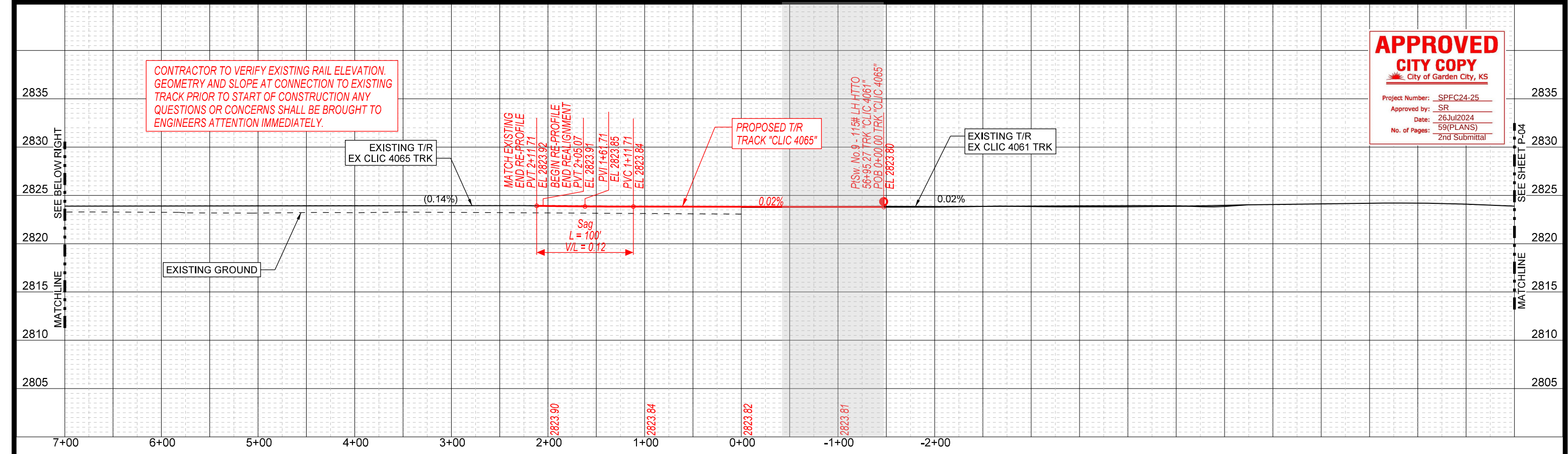
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DATE:	07/25/2024
SCALE:	AS NOTED



PROFILES
TRACK "F" & TRACK "CLIC 4061"
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	P-12
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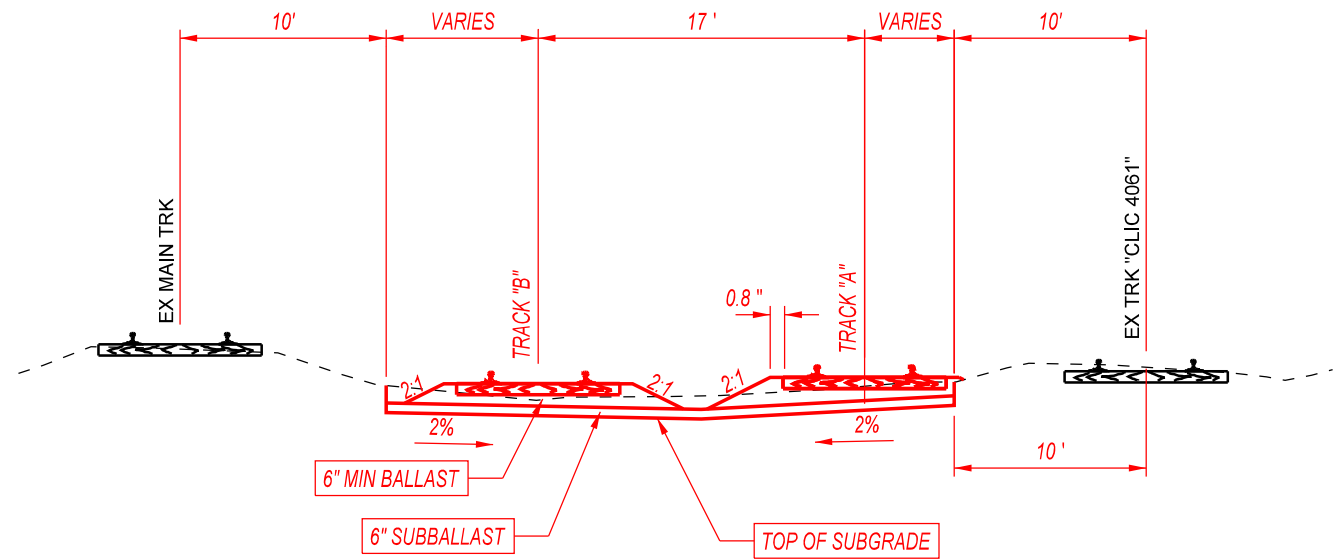


 via rail engineering.com		REV. #	BY	DATE	DESCRIPTION

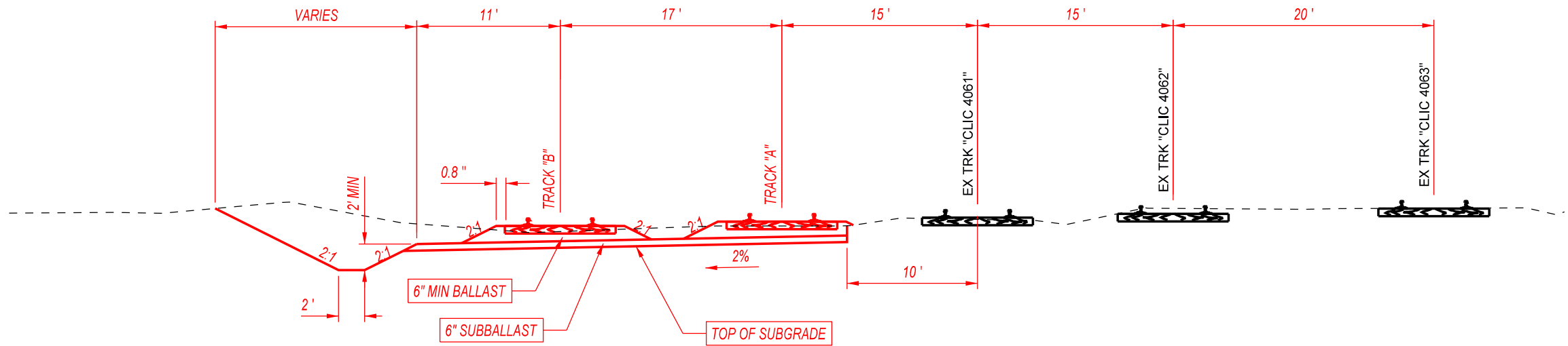
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SCALE: AS NOTED	

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TYPICAL SECTION - STA 2+00 TO 17+50 (TRACK "A")



TYPICAL SECTION - STA 17+50 TO STA 43+50 (TRACK "A")

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Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



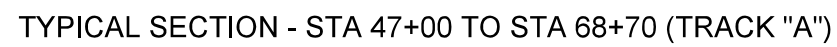
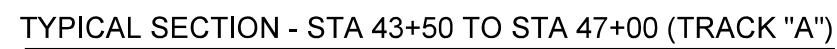
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DATE:	07/25/2024
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TYPICAL SECTIONS
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WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

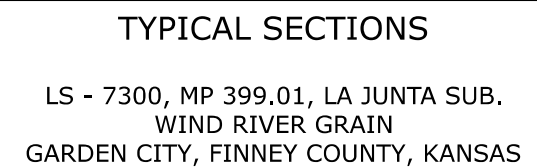
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	SHEET
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Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



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T-02

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18 OF
45

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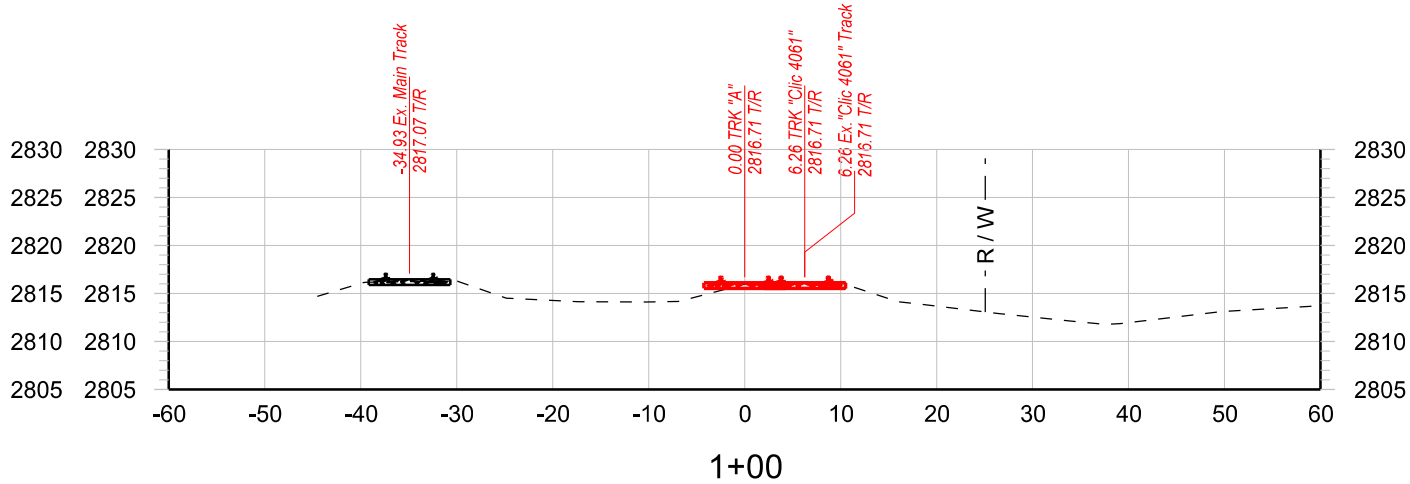
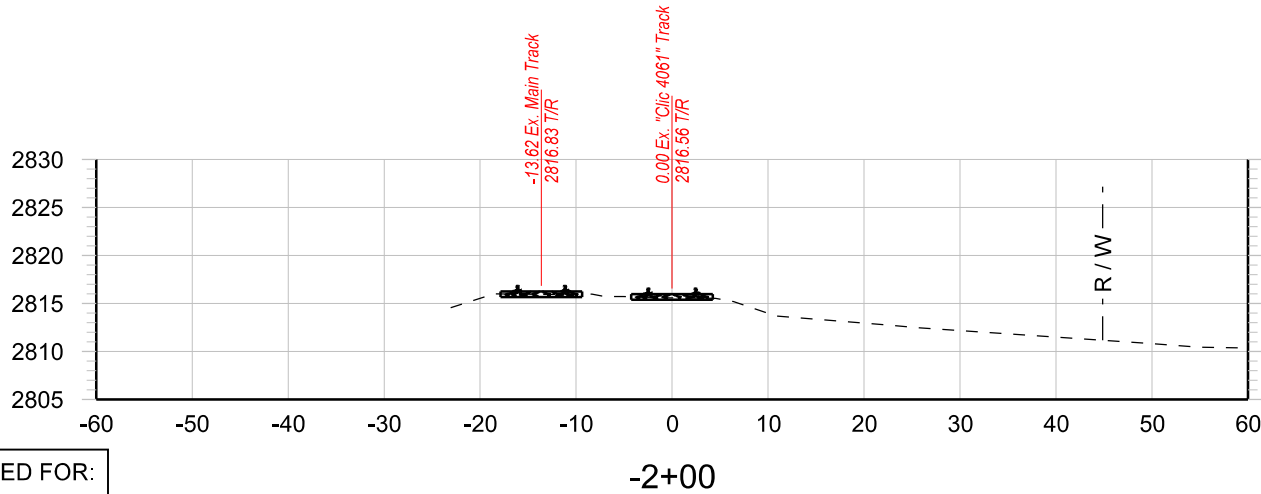
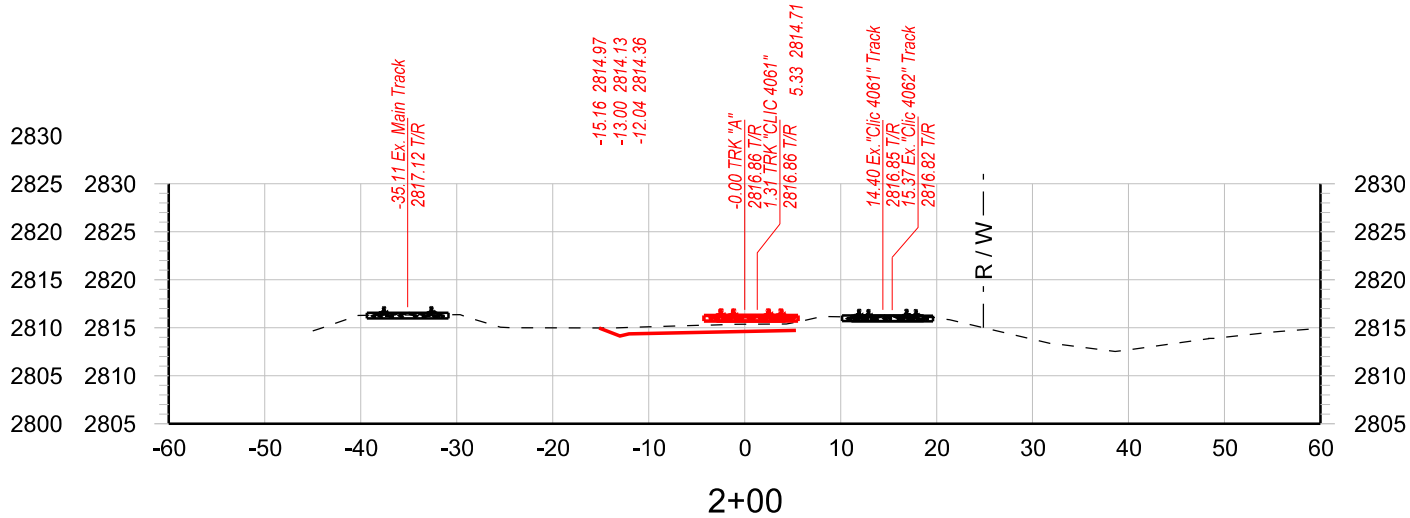
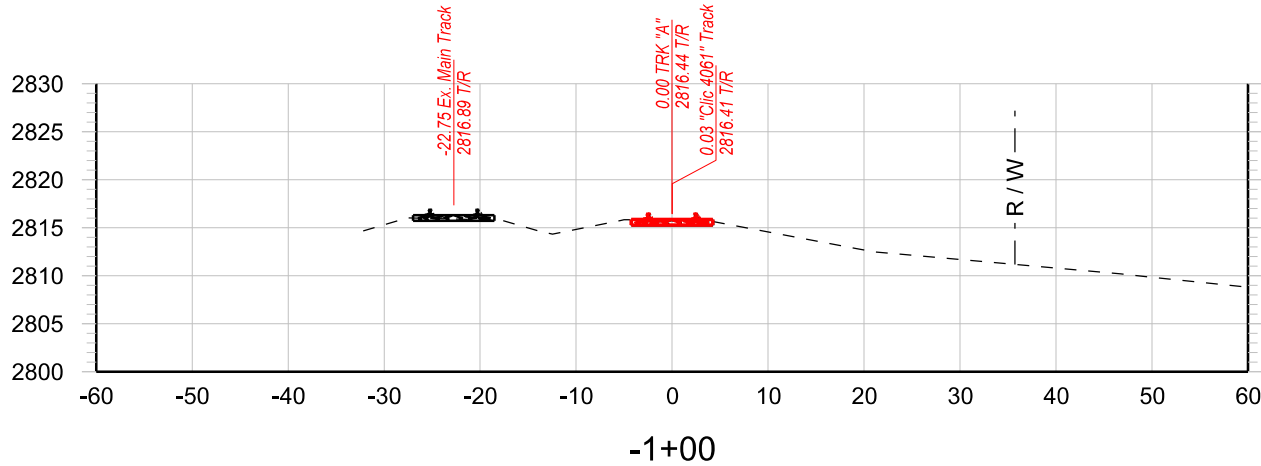
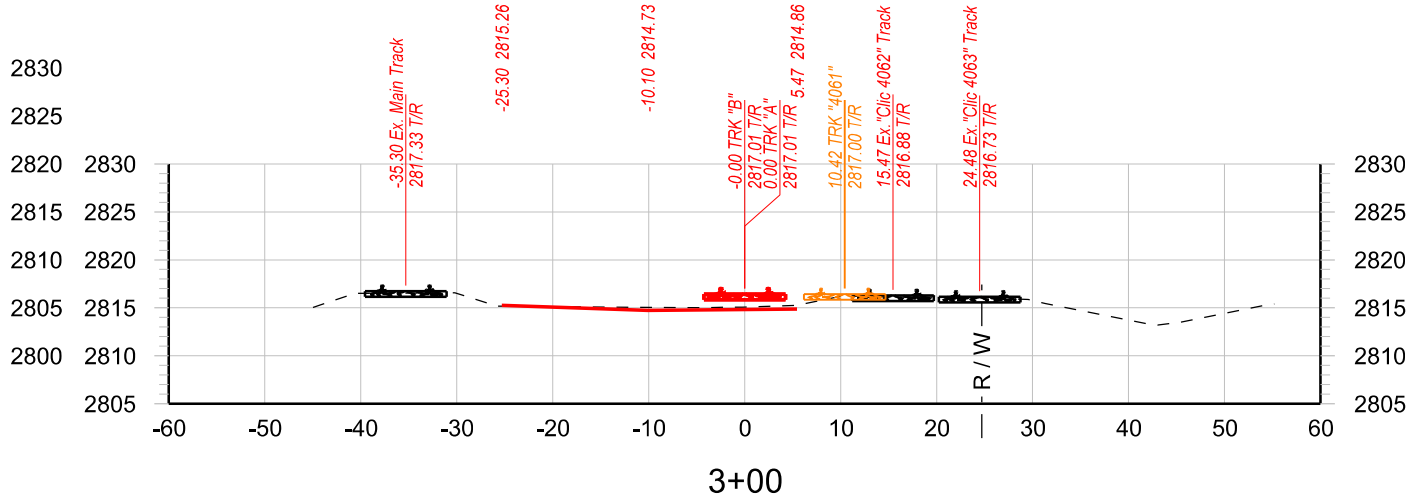
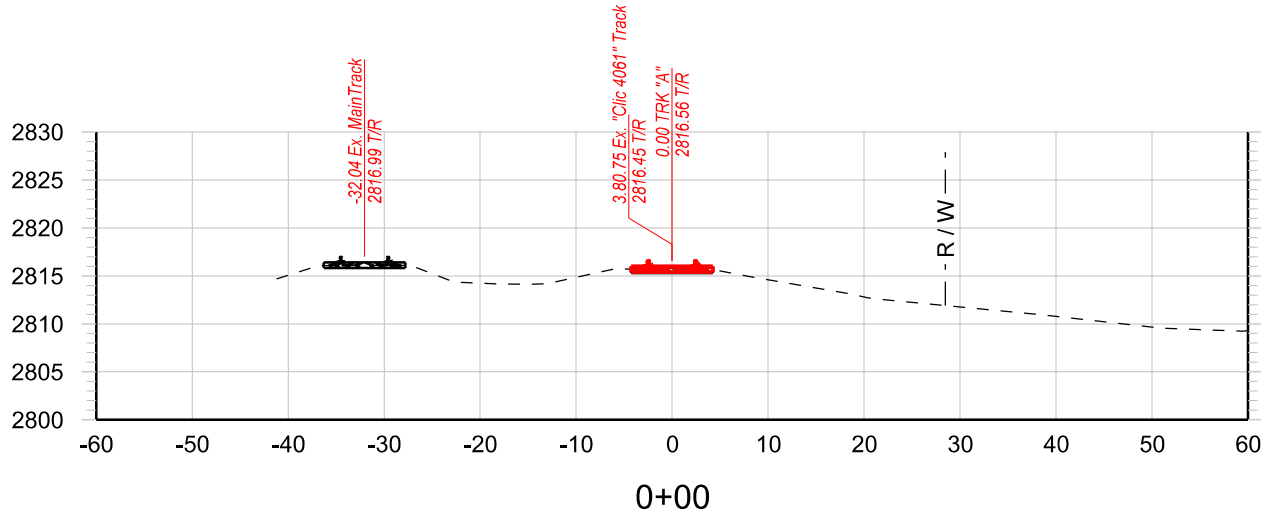
Project Number: SPEC24-25

Approved by: SR

Date: 26Jul2024

No. of Pages: 59(PLANS)

2nd Submittal



PREPARED FOR:



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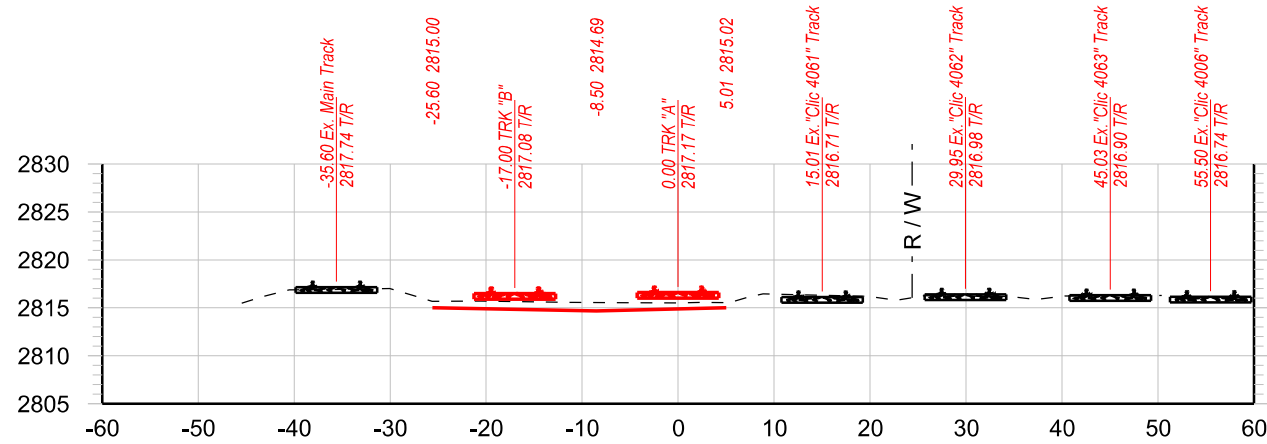
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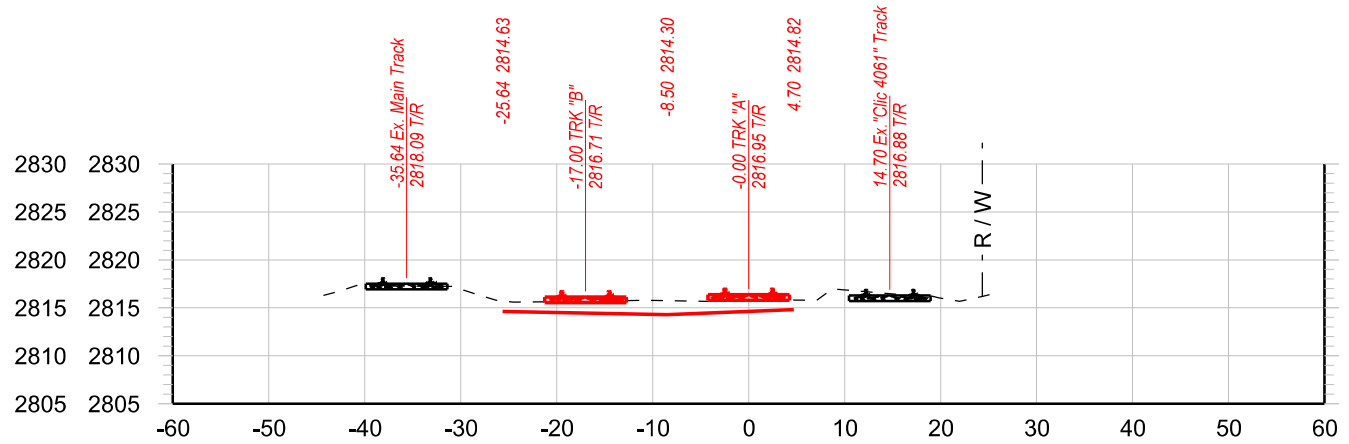
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LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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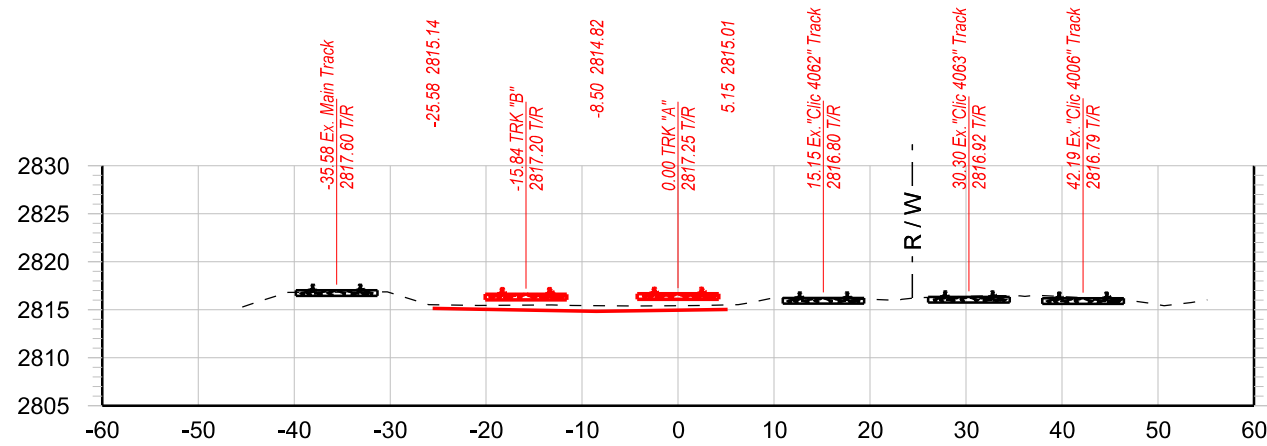
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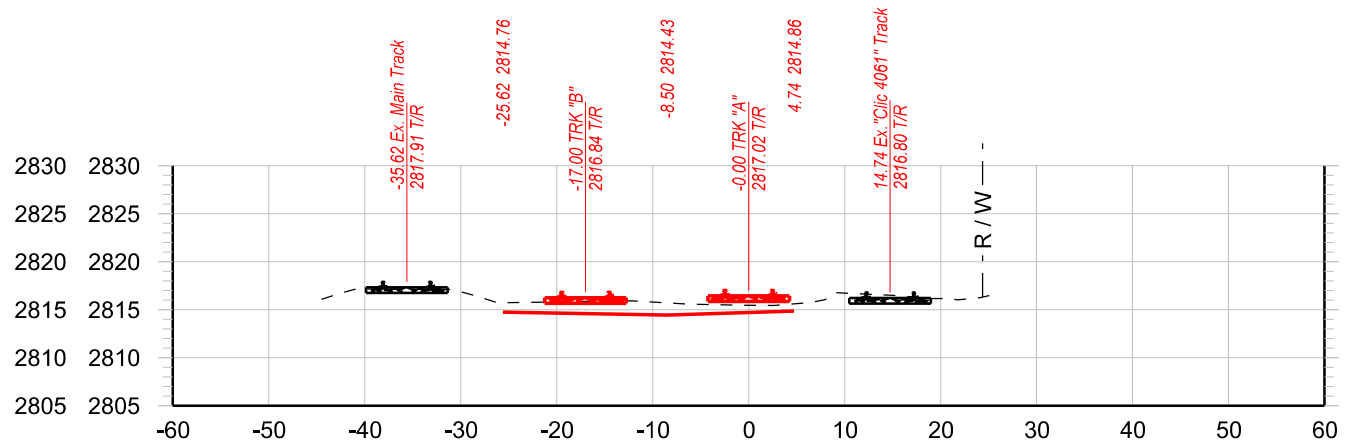
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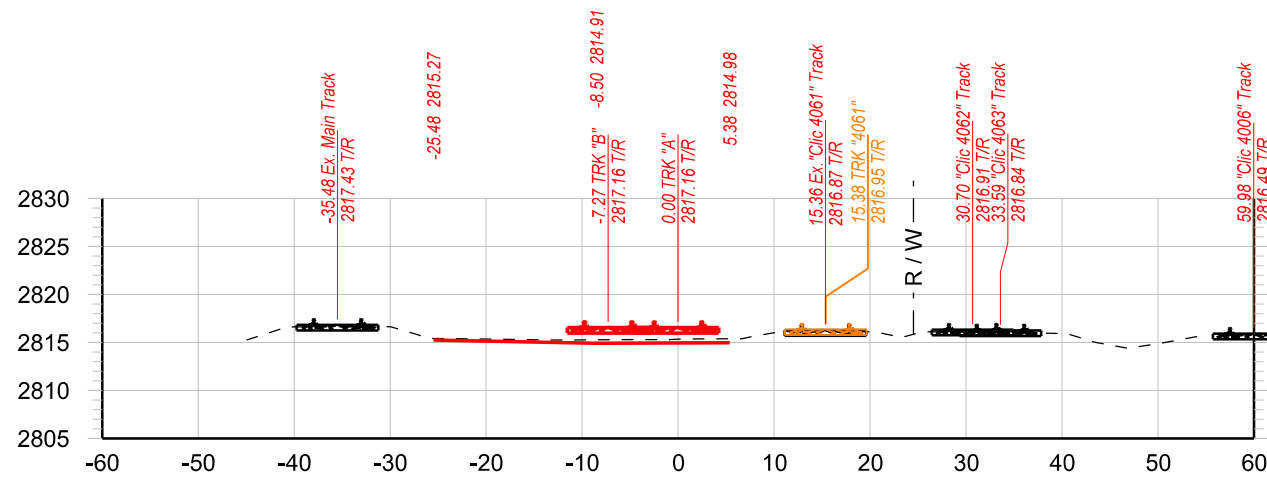
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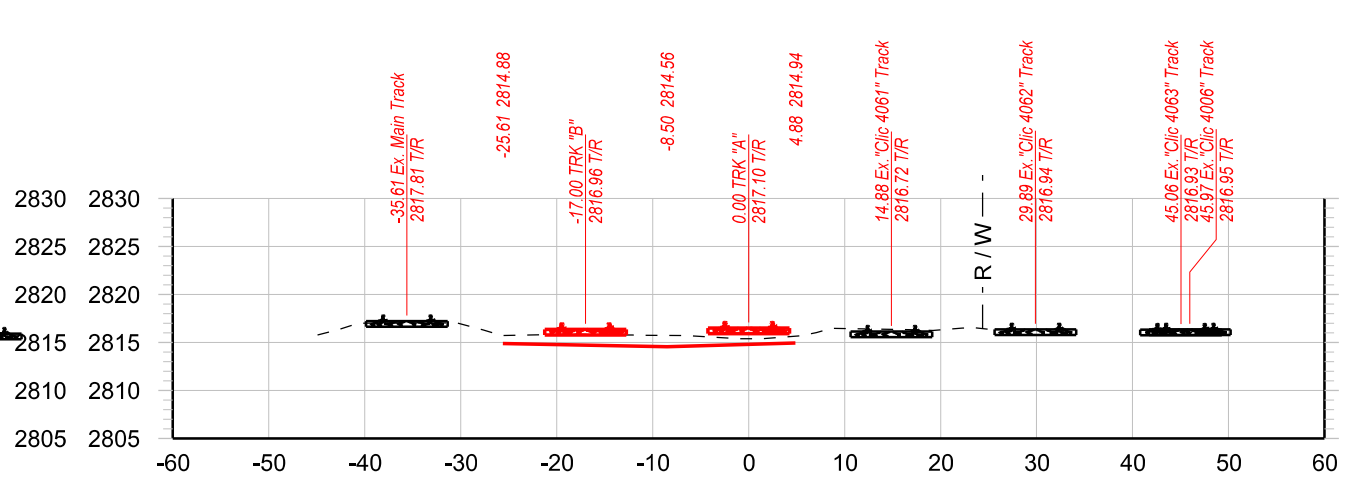
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8+00



4+00



7+00

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Project Number: SPFC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal

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SCALE:	AS NOTED



EARTHWORK SECTIONS
STA 4+00 TO STA 9+00
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	X-02
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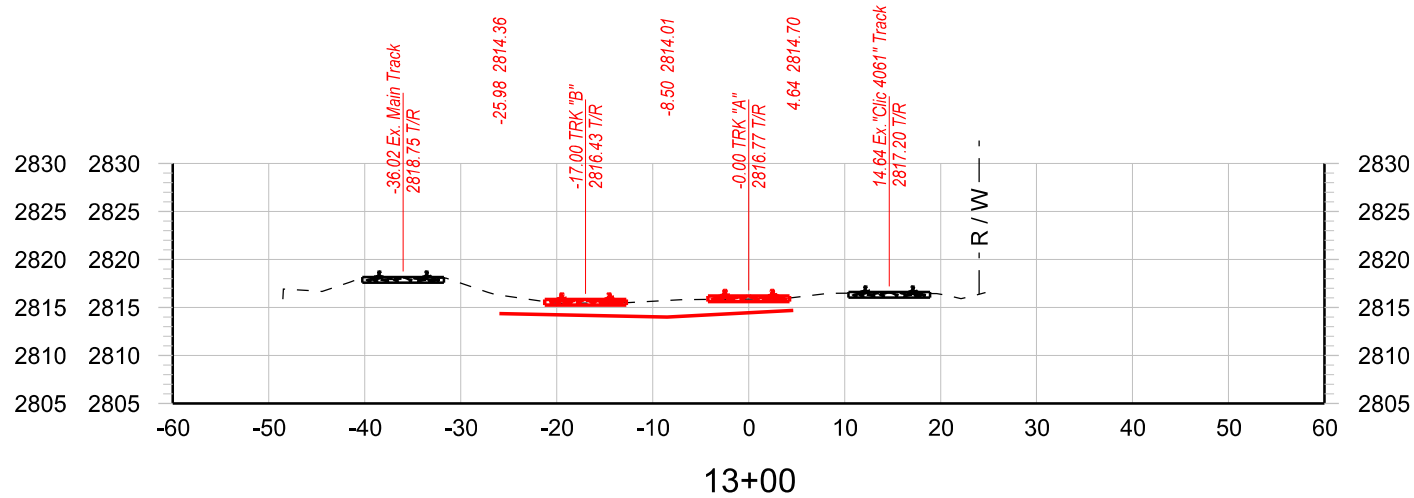
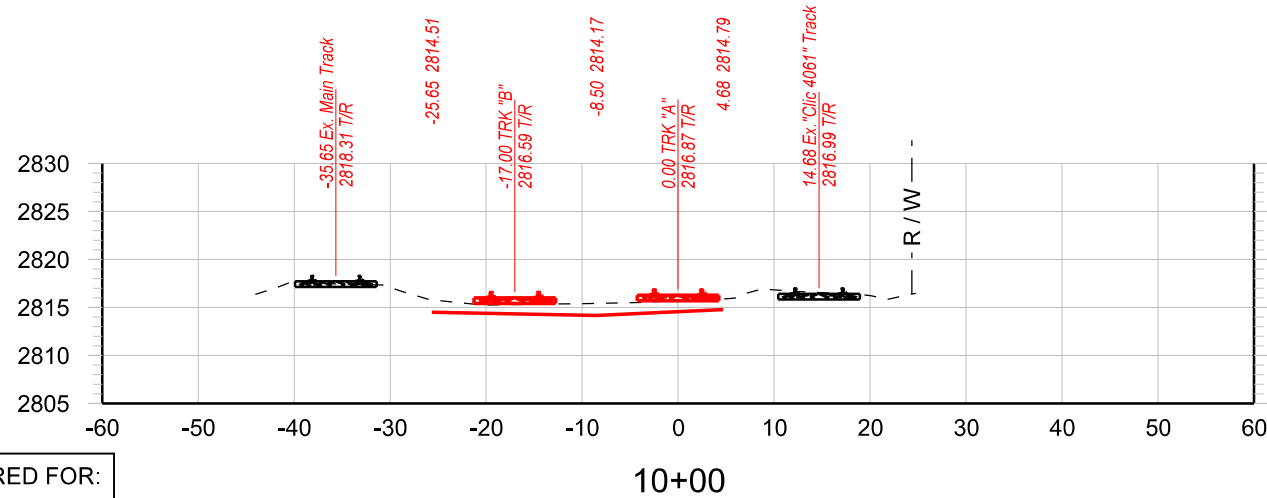
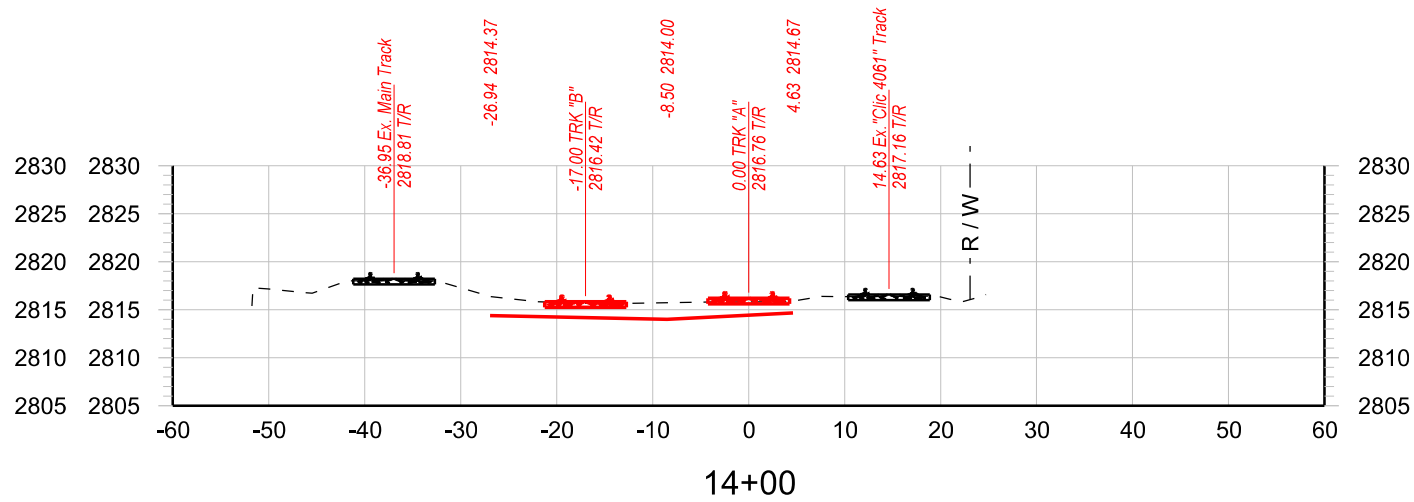
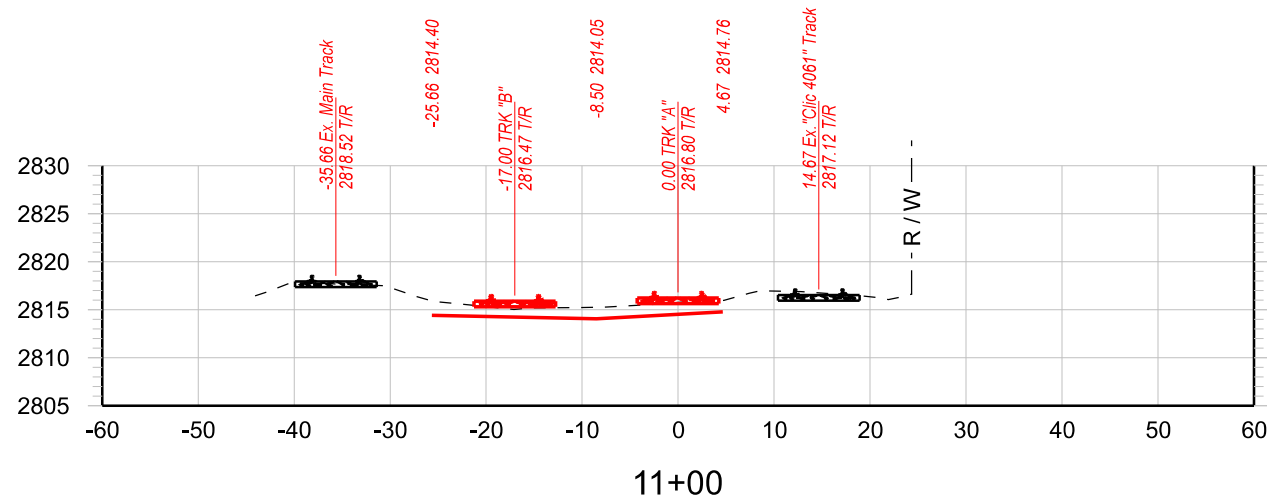
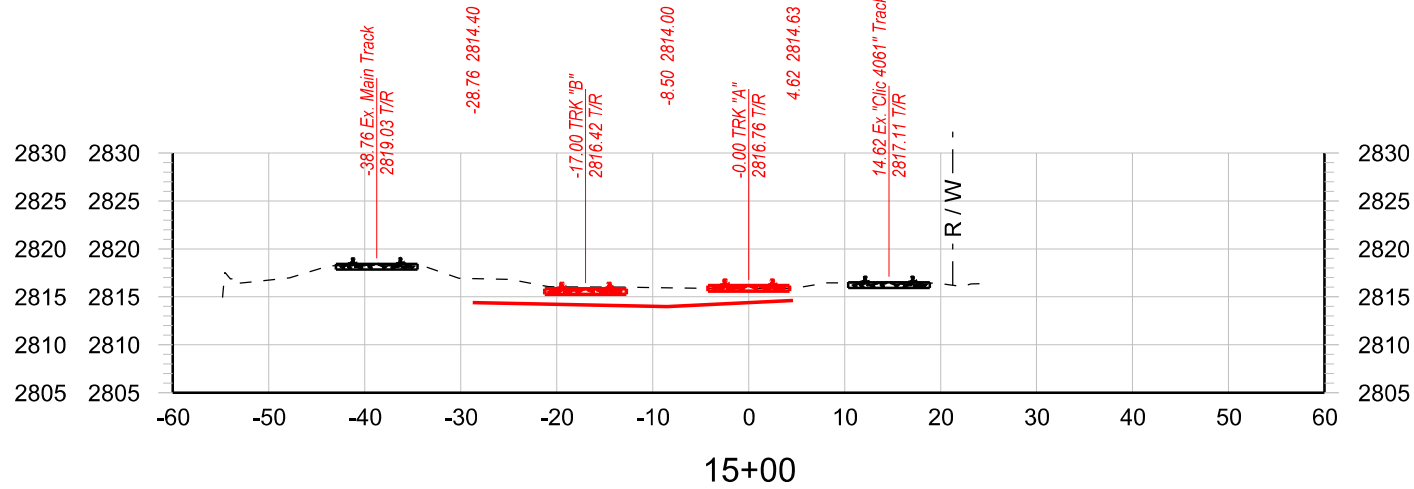
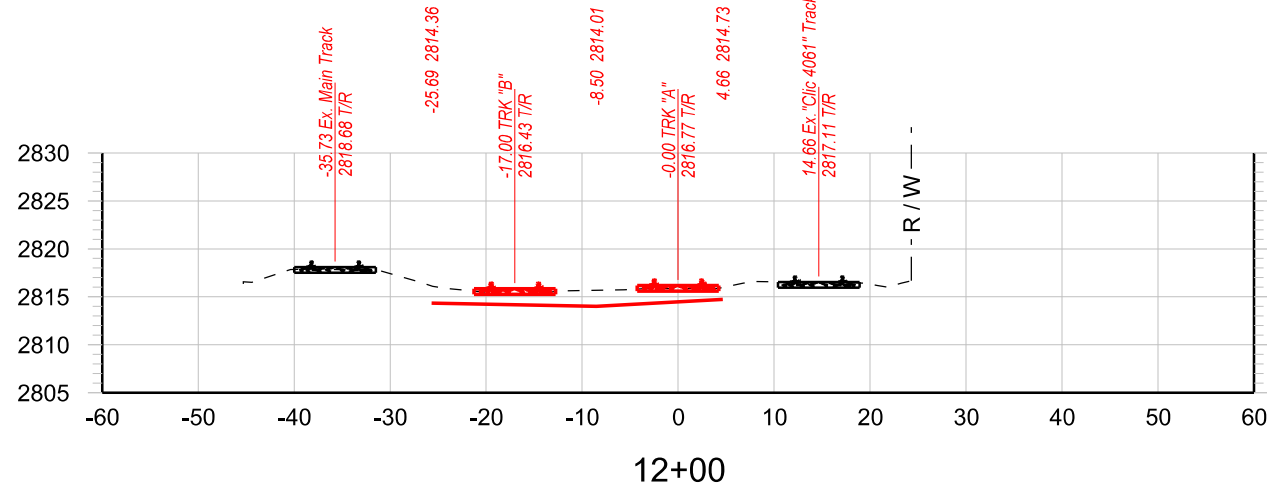
Project Number: SPFC24-25

Approved by: SR

Date: 26Jul2024

No. of Pages: 59(PLANS)

2nd Submittal



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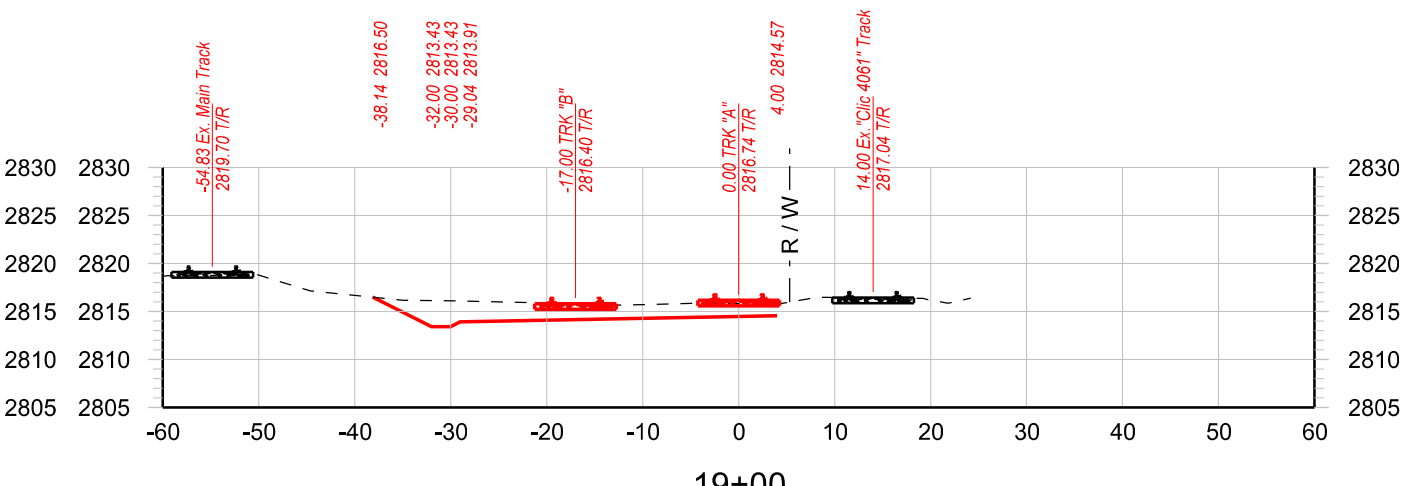
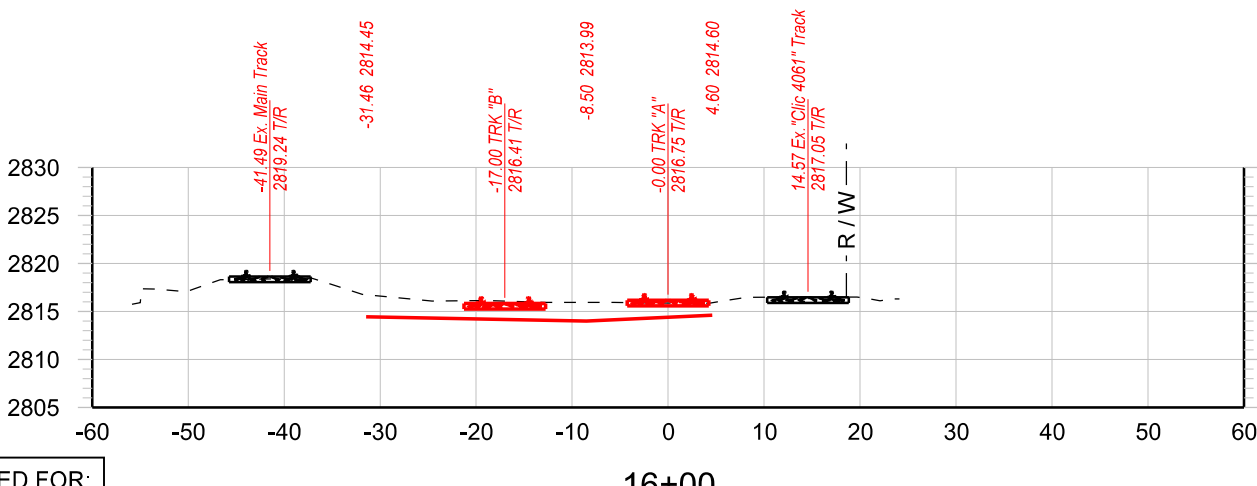
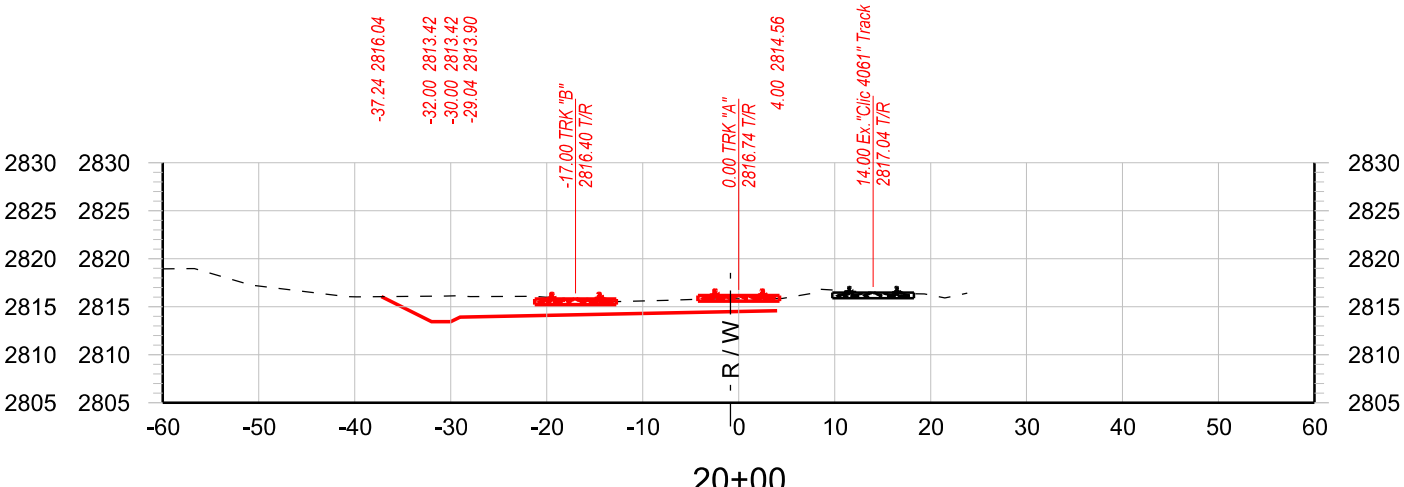
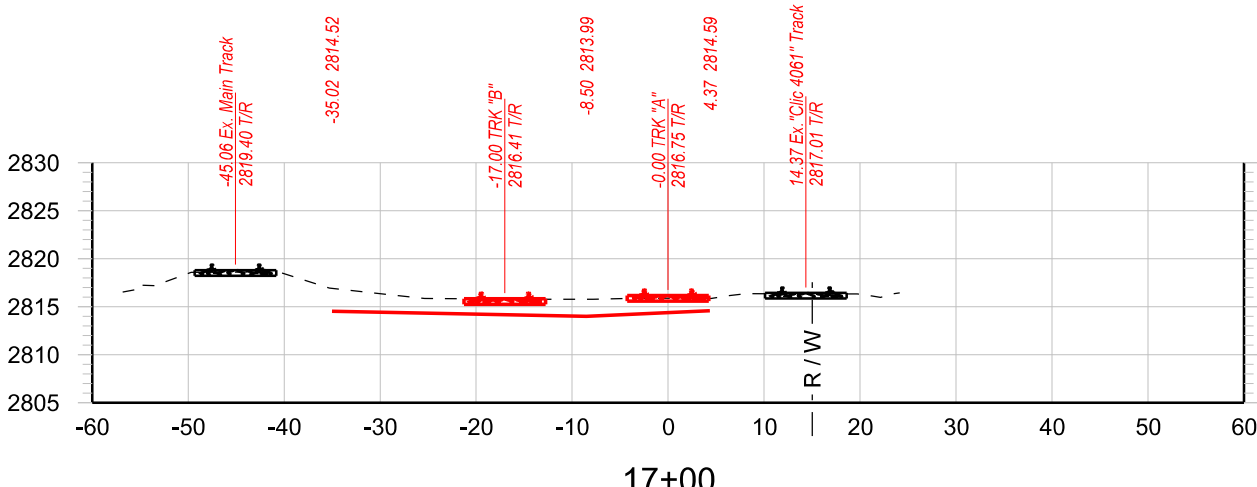
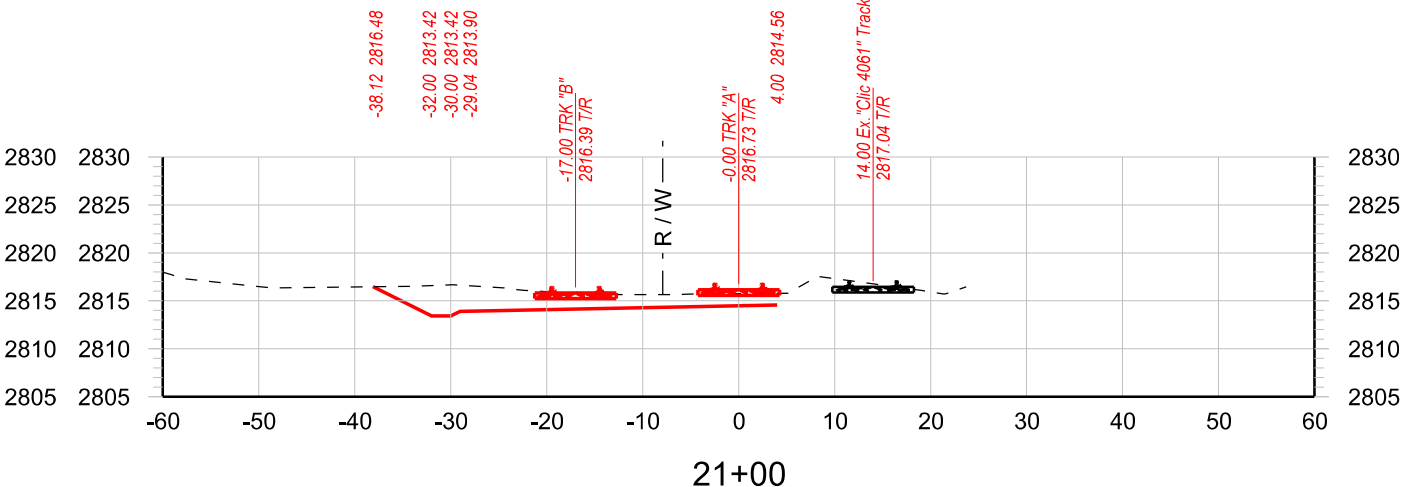
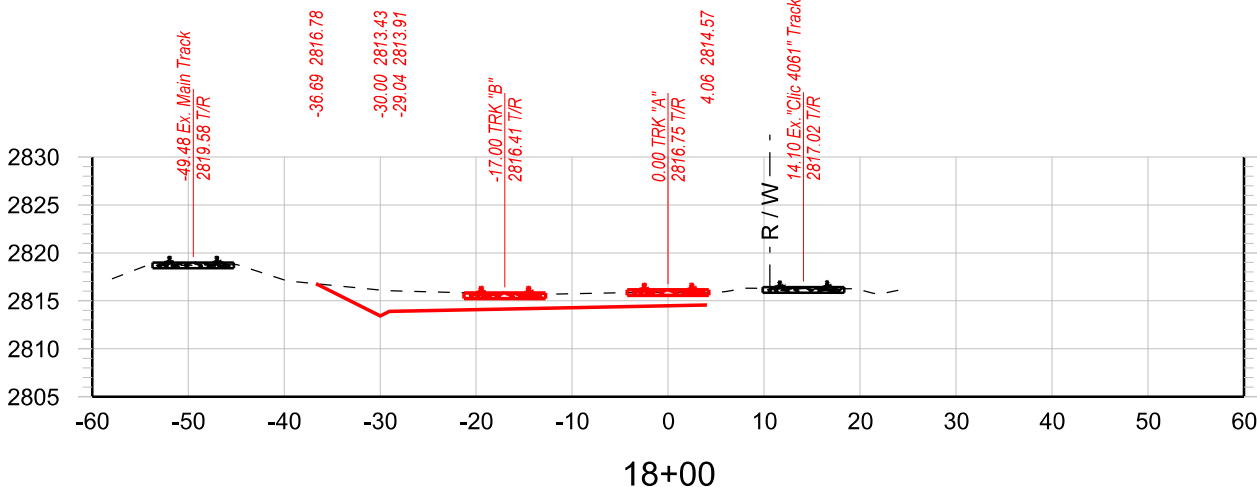
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DATE:	07/25/2024
SCALE:	AS NOTED



EARTHWORK SECTIONS
STA 10+00 TO STA 15+00
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	21 OF 45



PREPARED FOR:
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



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DATE:	07/25/2024
SCALE:	AS NOTED



EARTHWORK SECTIONS
STA 16+00 TO STA 21+00
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	X-04
	SHEET 22 OF 45

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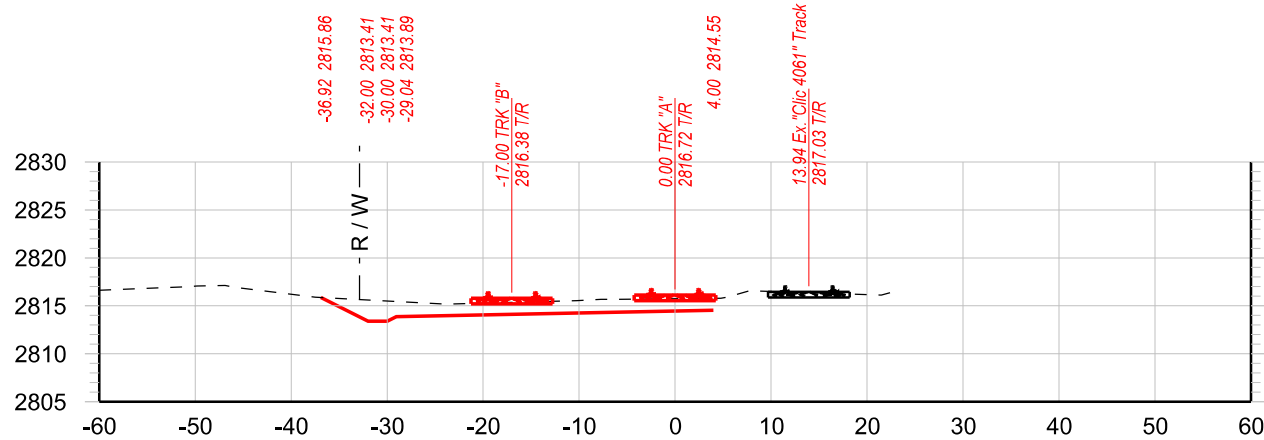
Project Number: SPEC24-25

Approved by: SR

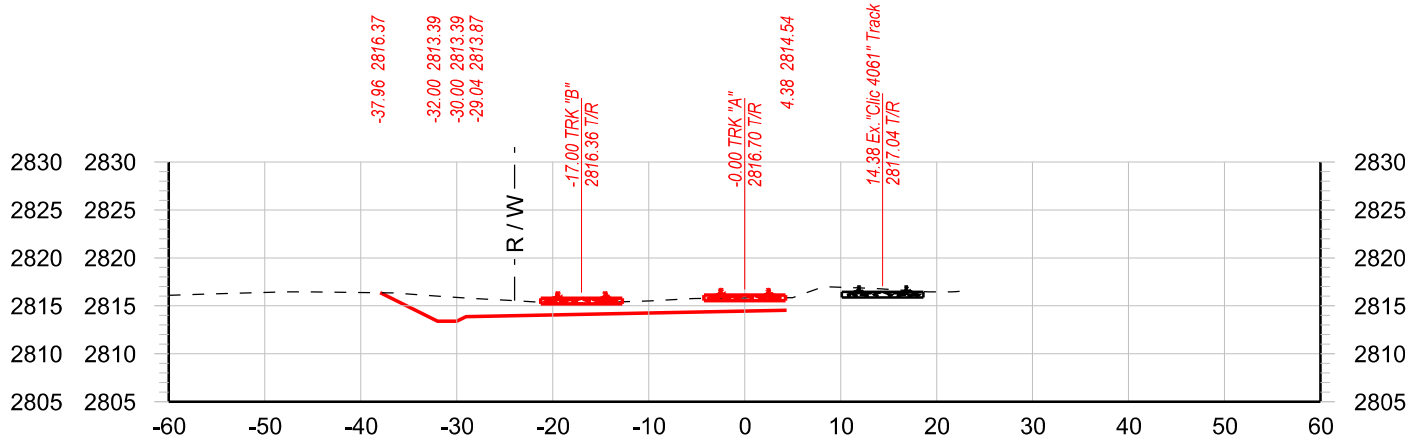
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No. of Pages: 59(PLANS)

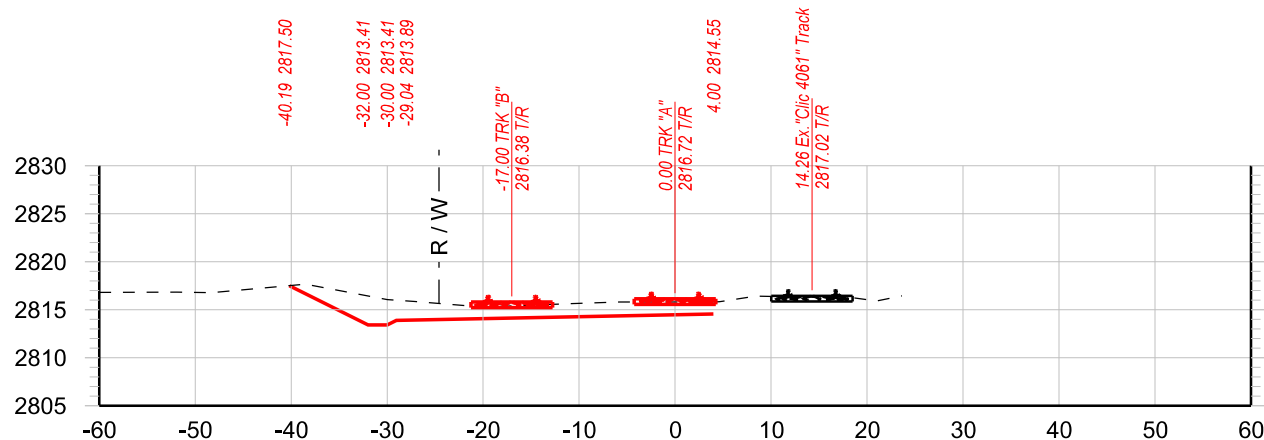
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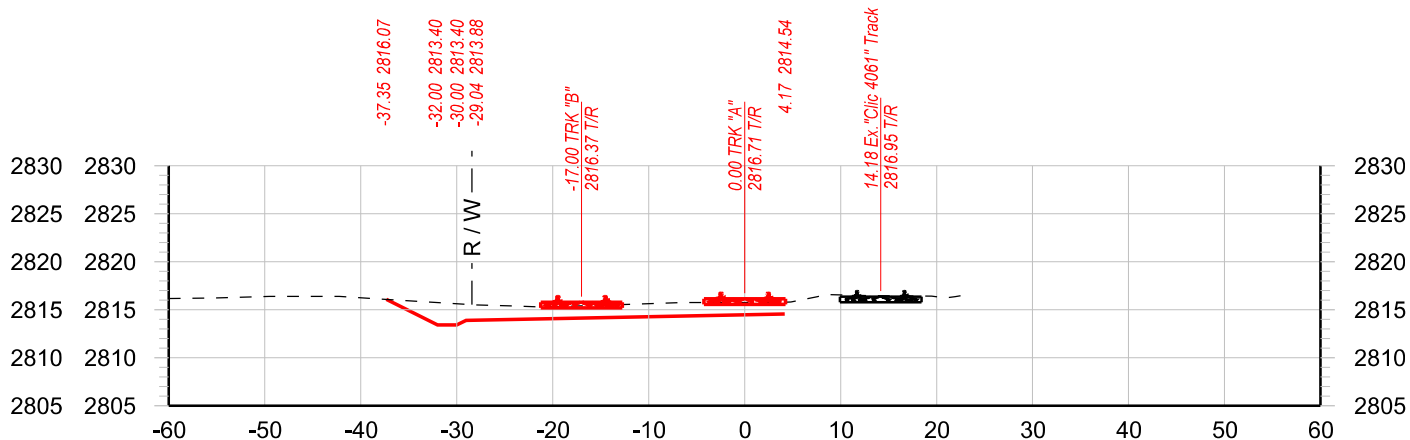
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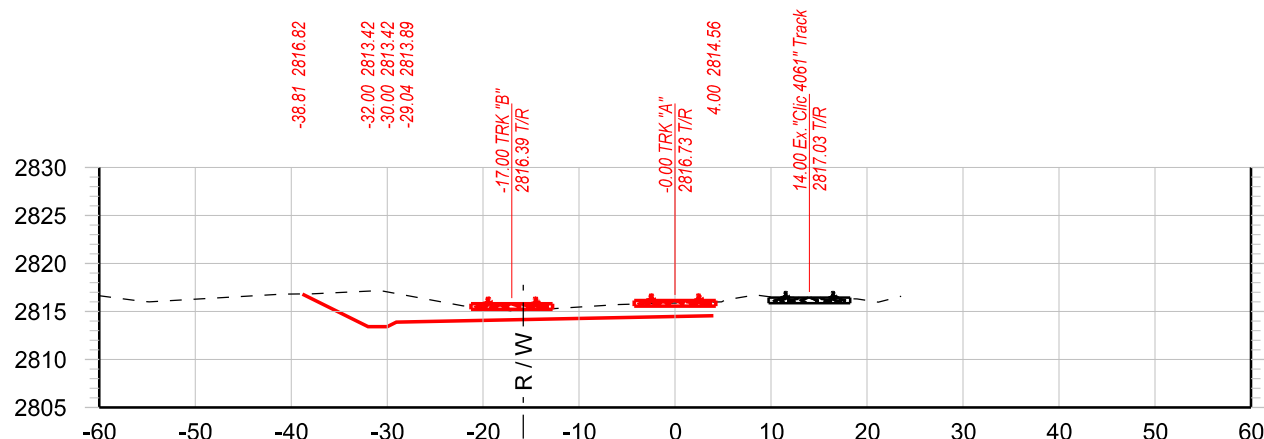
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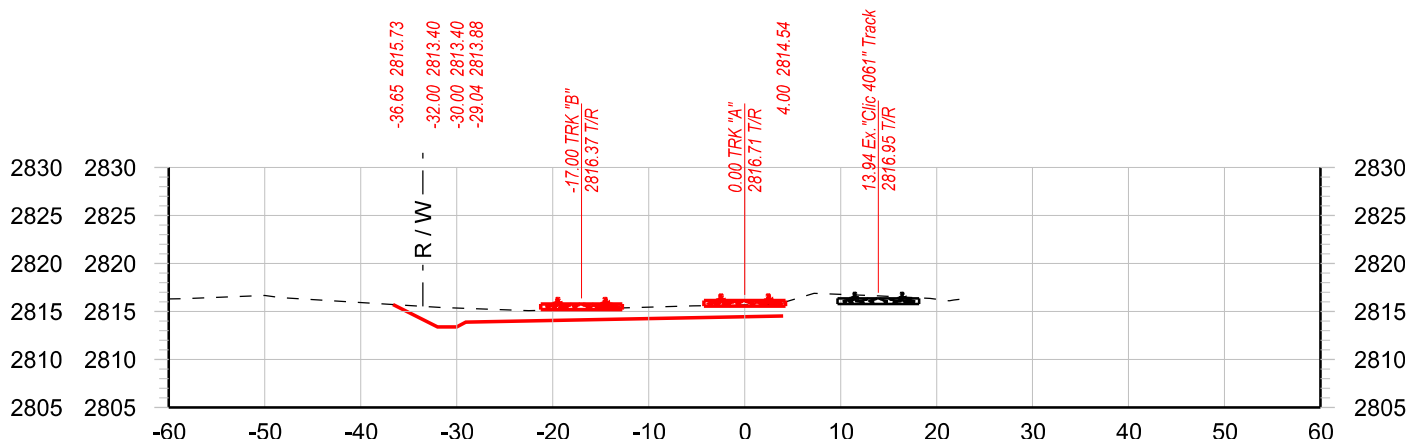
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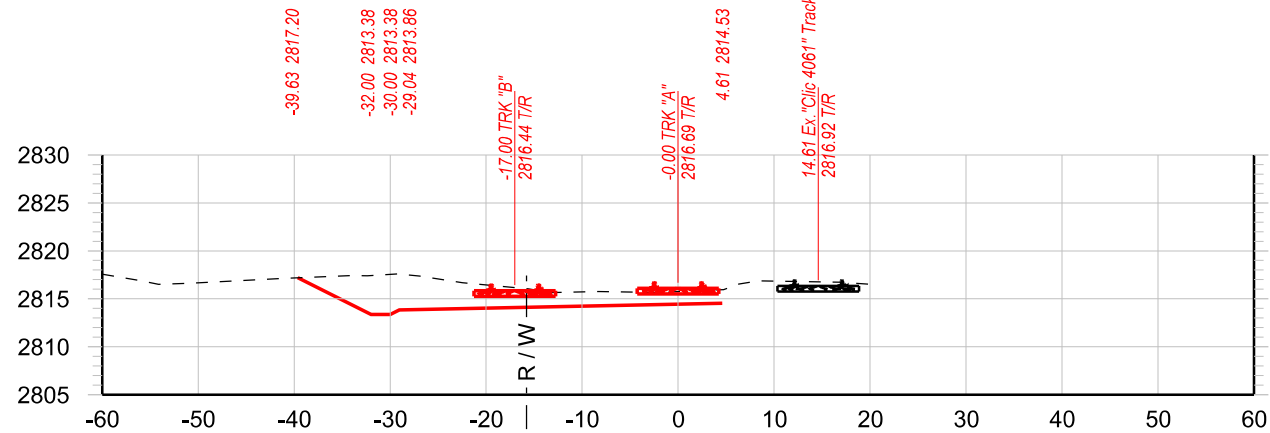
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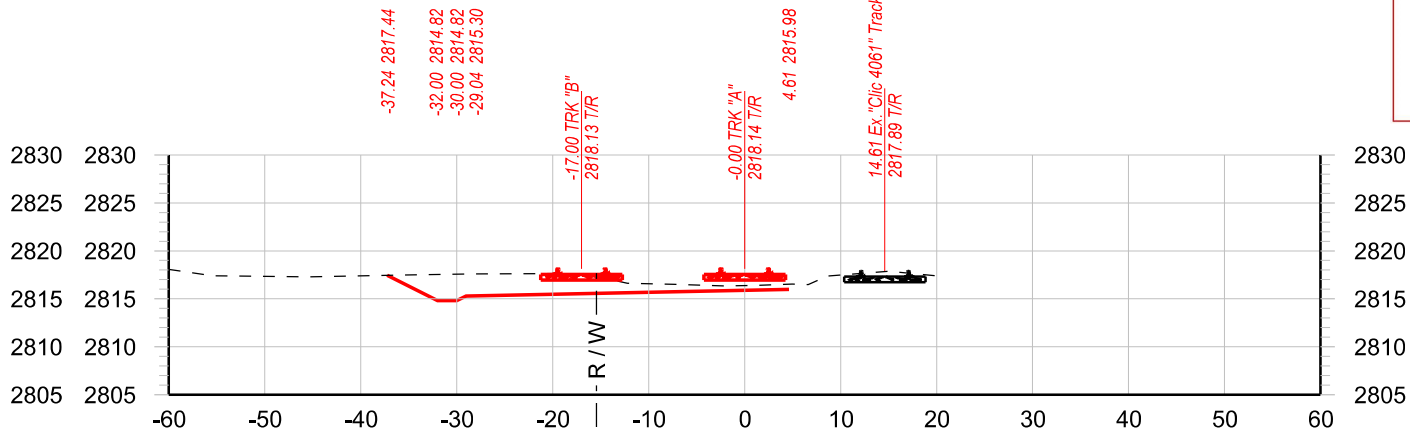


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WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

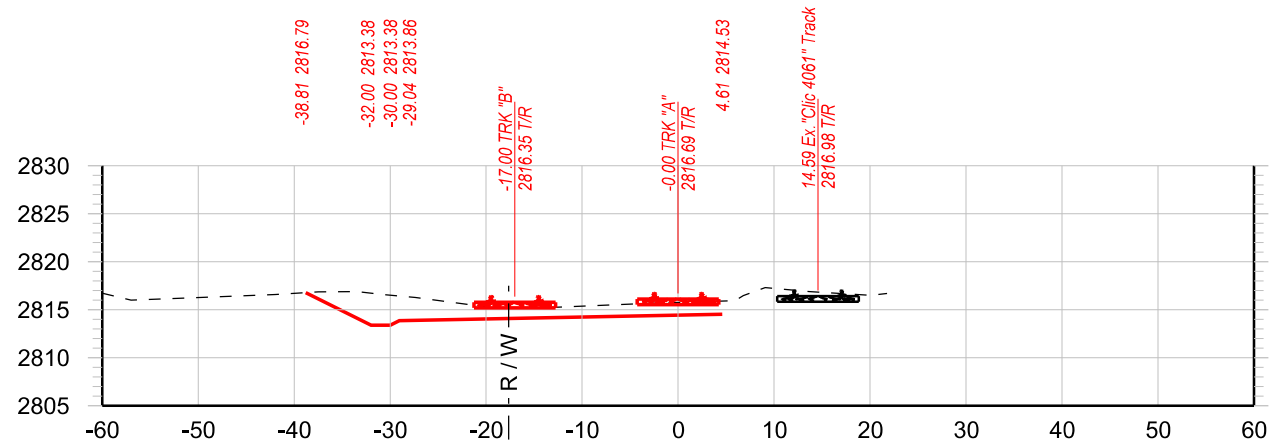
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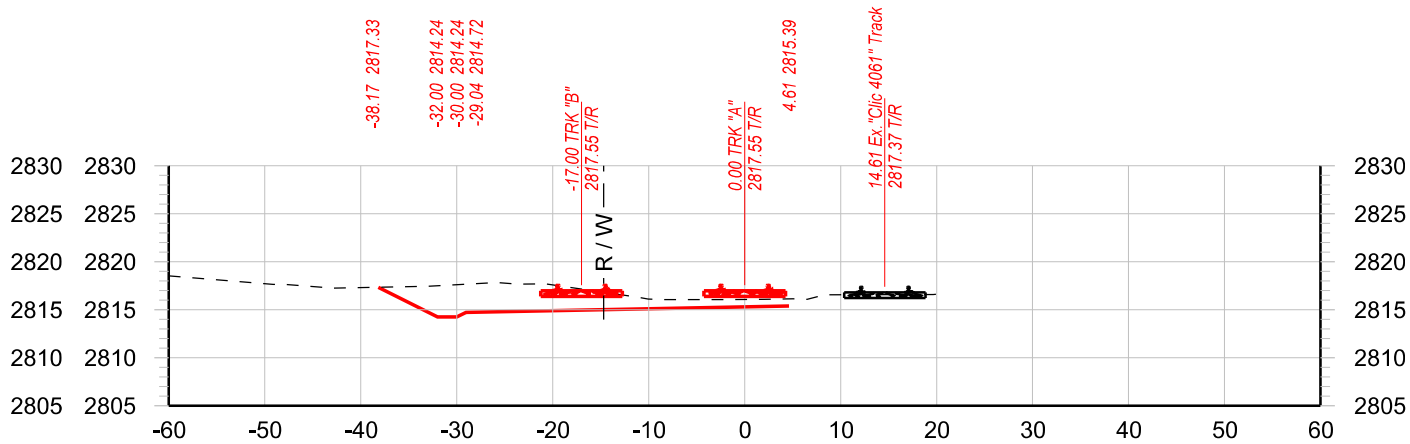
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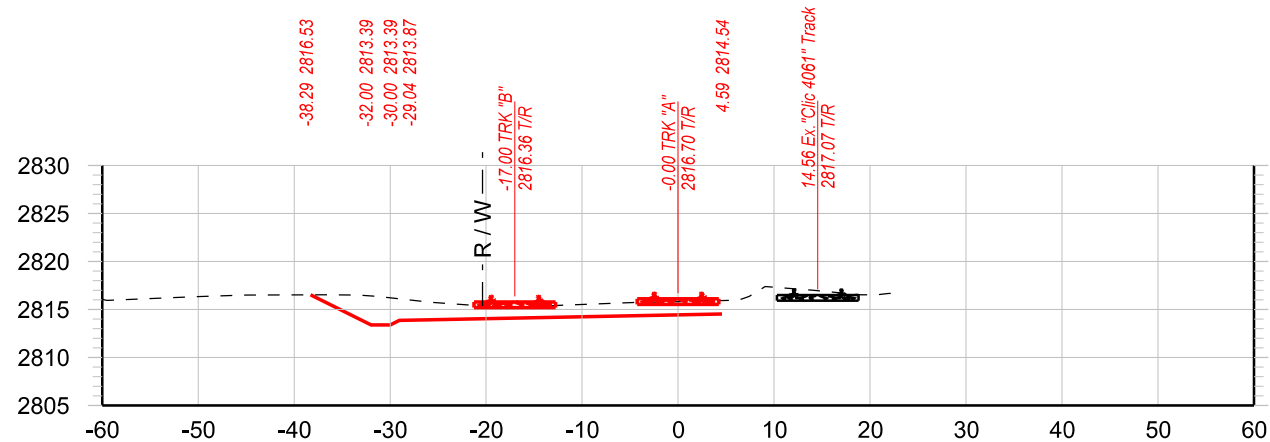
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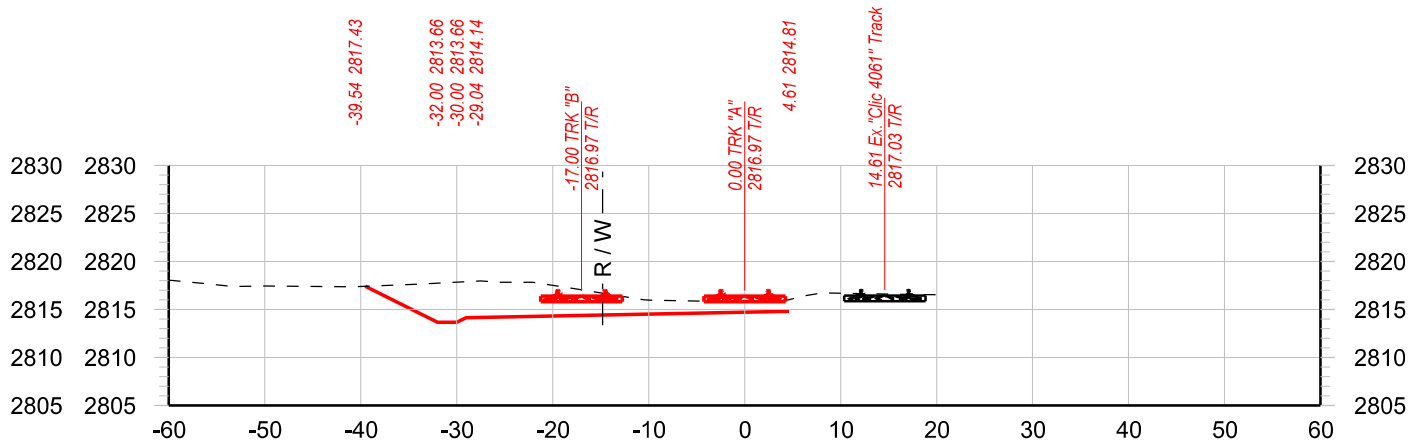
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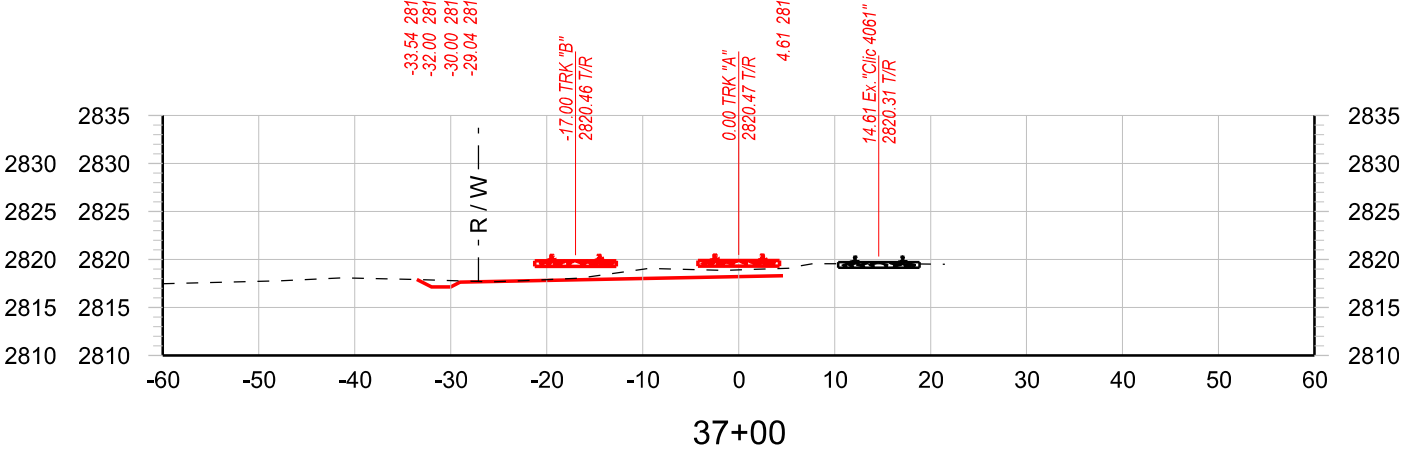
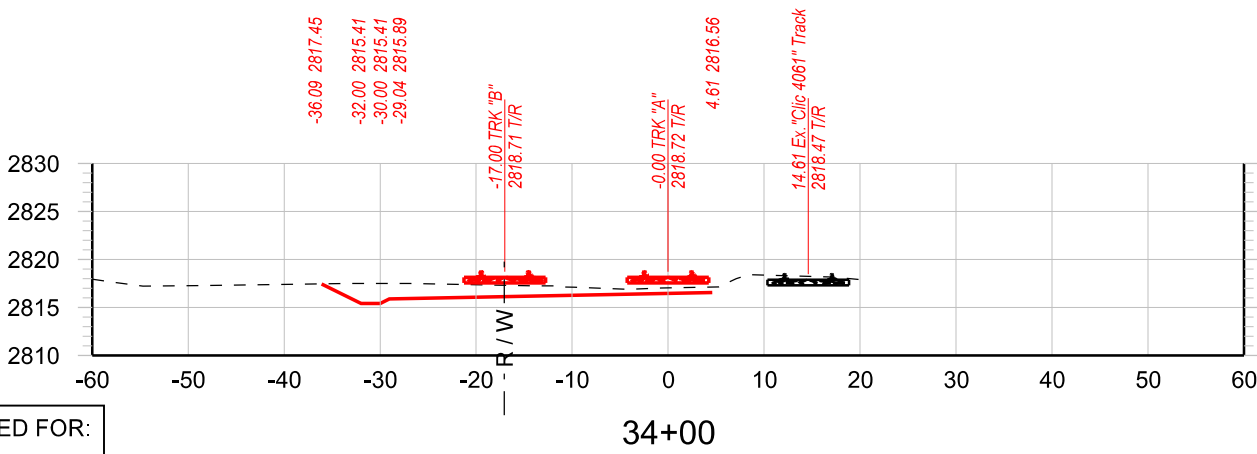
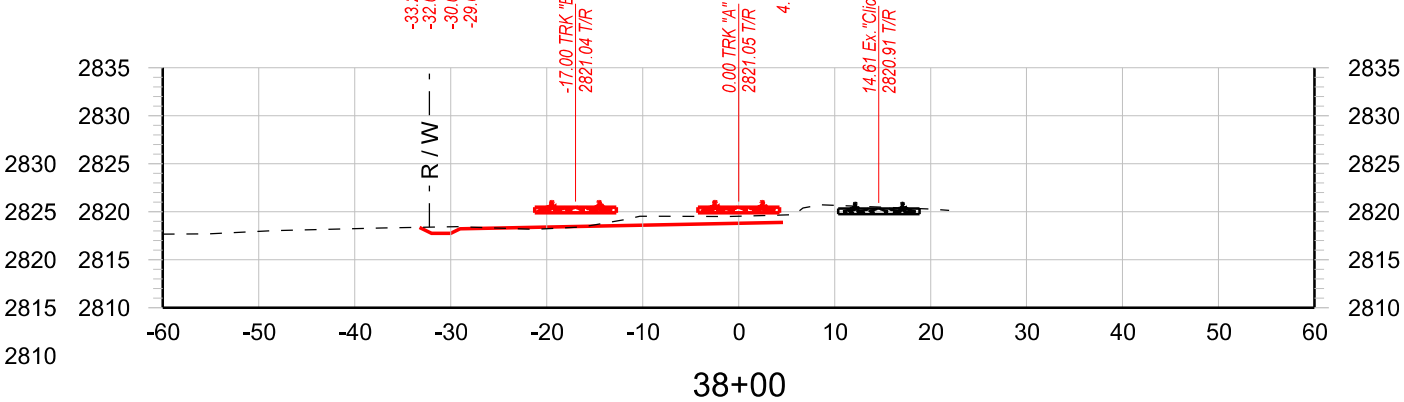
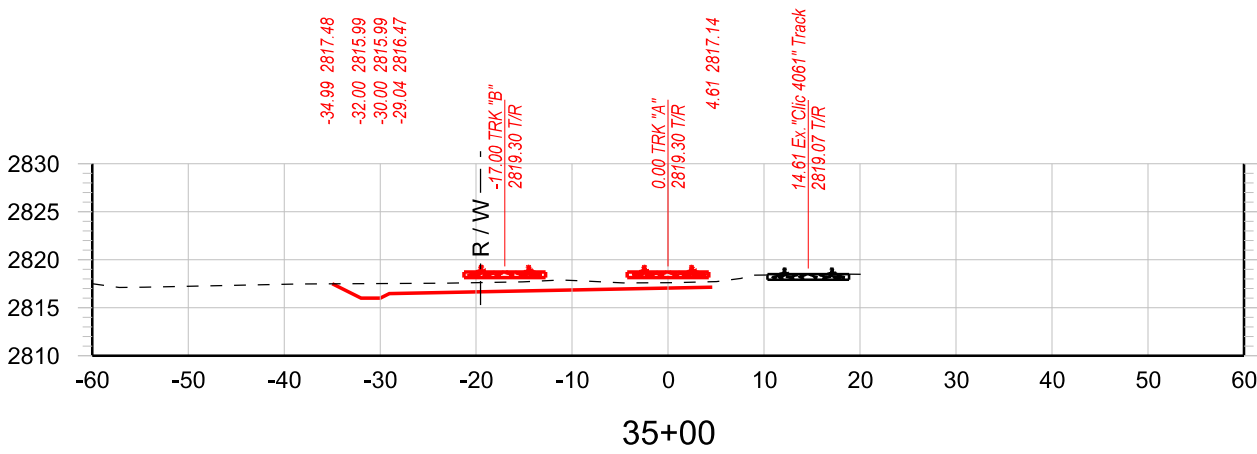
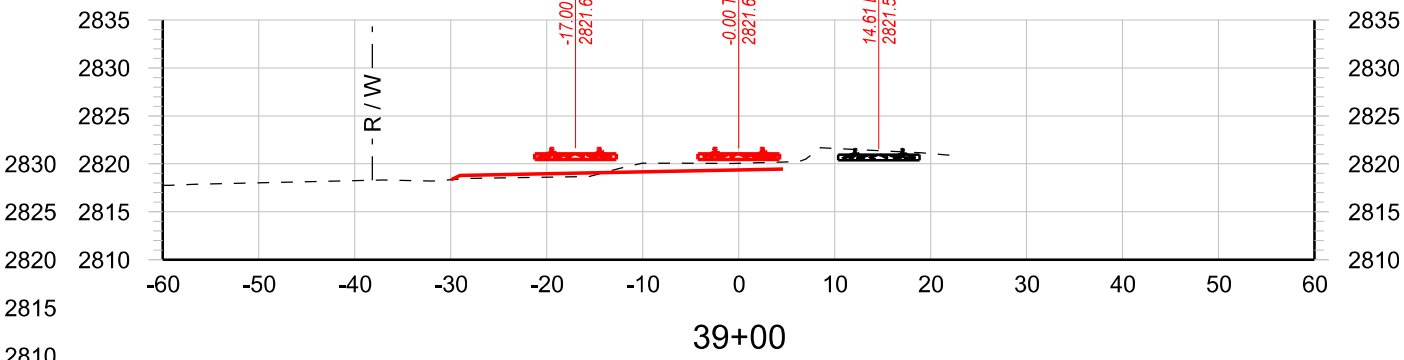
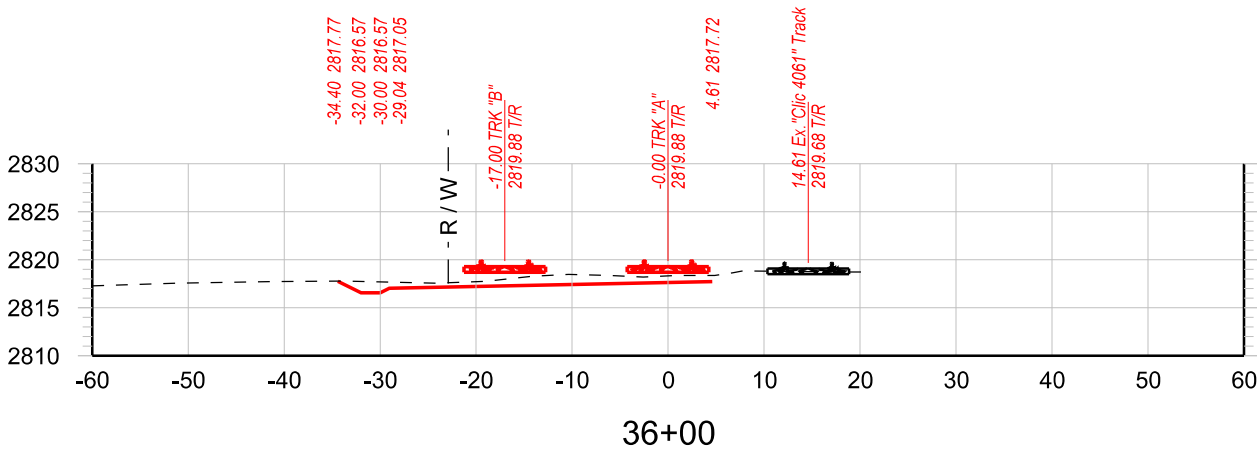
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DATE:	07/25/2024
SCALE:	AS NOTED



EARTHWORK SECTIONS
STA 28+00 TO STA 33+00
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	X-06
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	24 OF 45



PREPARED FOR:
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



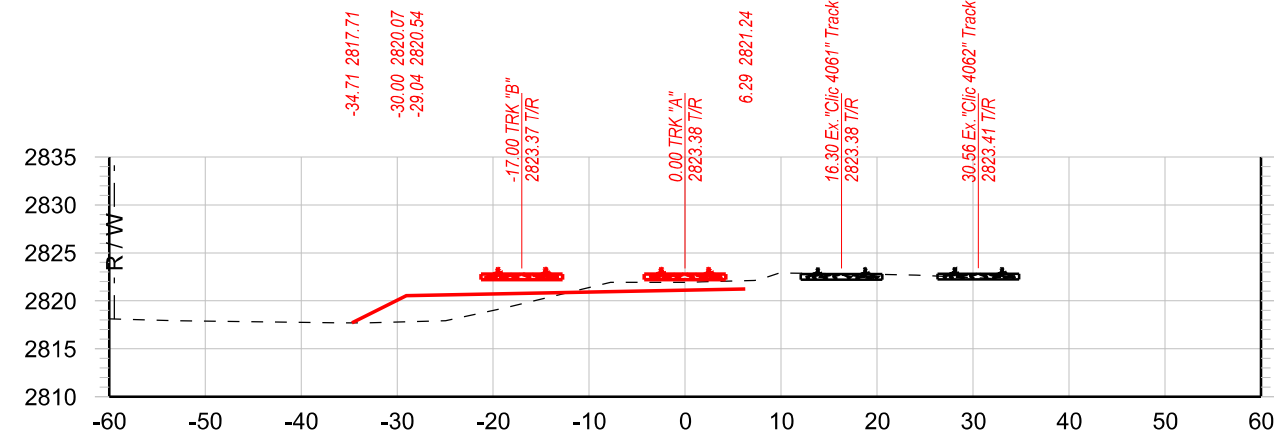
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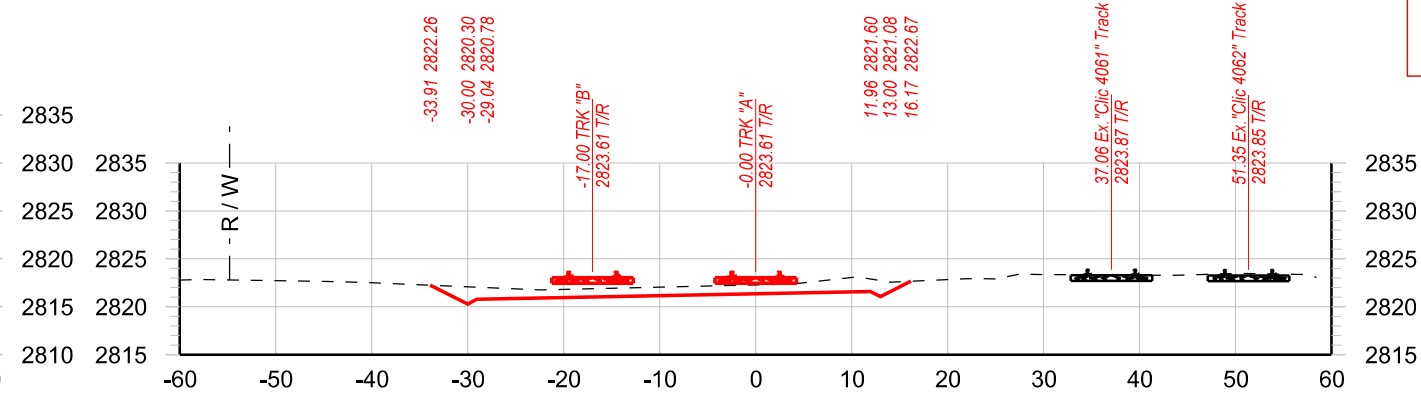


EARTHWORK SECTIONS
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LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

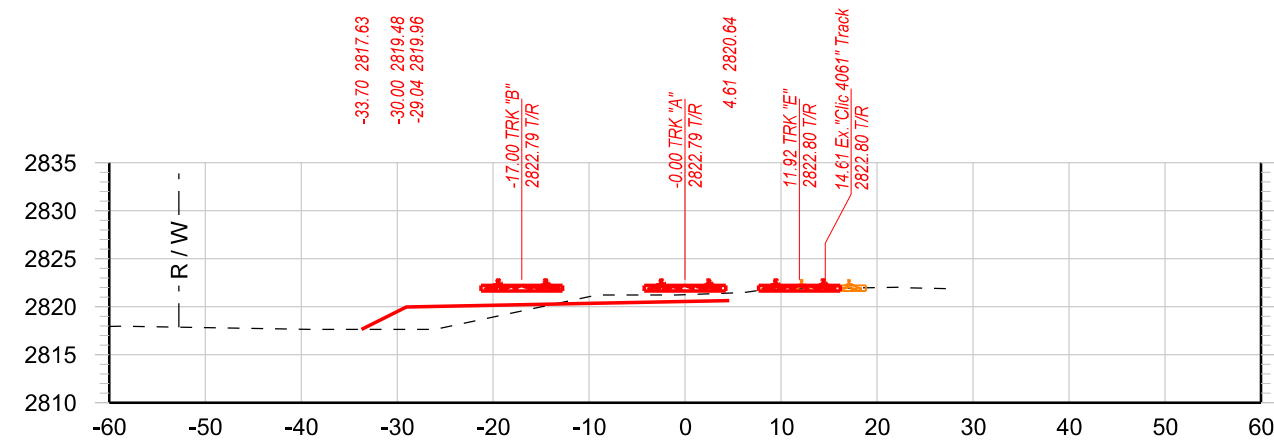
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ISSUED FOR REVIEW ONLY	SHEET
	25 OF 45



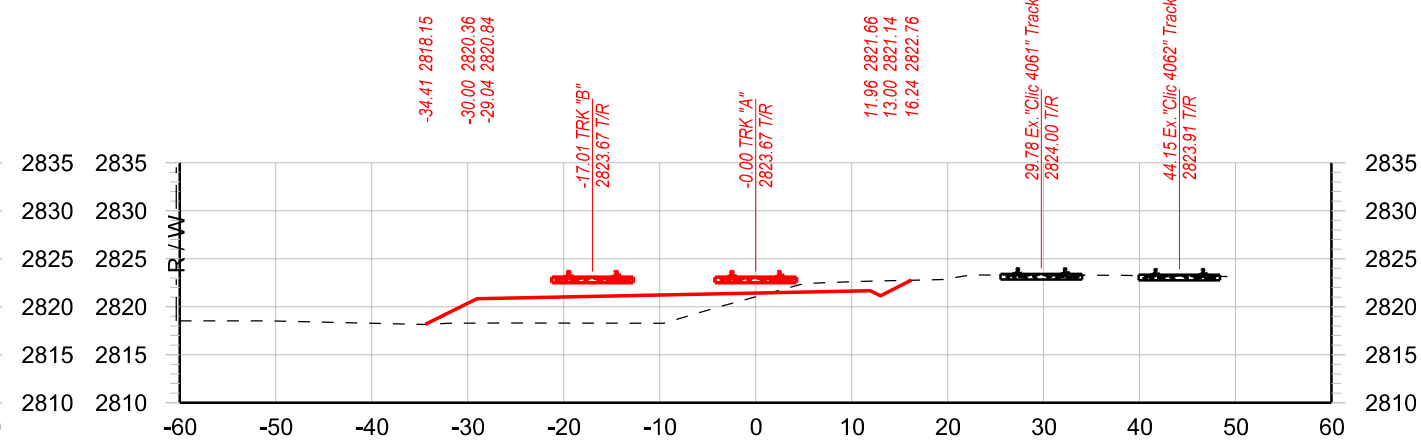
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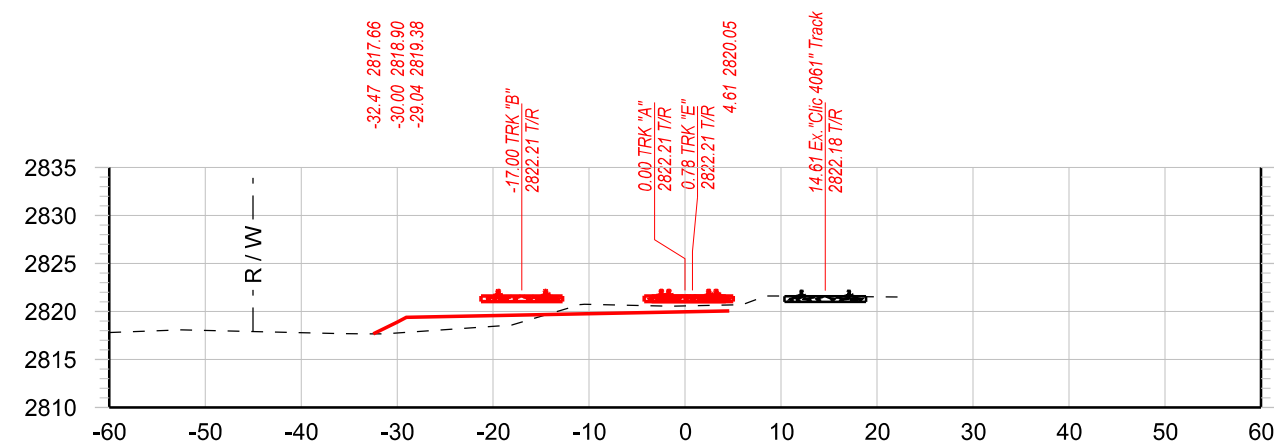
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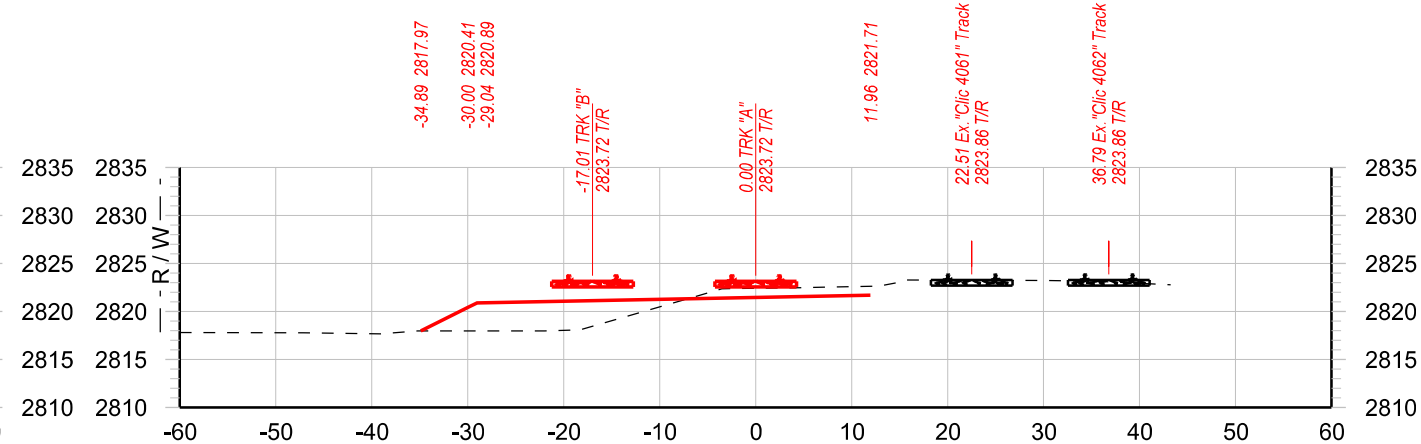
41+00



44+00



40+00



43+00

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 AMERITRACK RAIL
A DIVISION OF RAILSERVE, INC.



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SCALE:	AS NOTED



EARTHWORK SECTIONS
STA 40+00 TO STA 45+00
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	X-08
	SHEET
	26 OF 45

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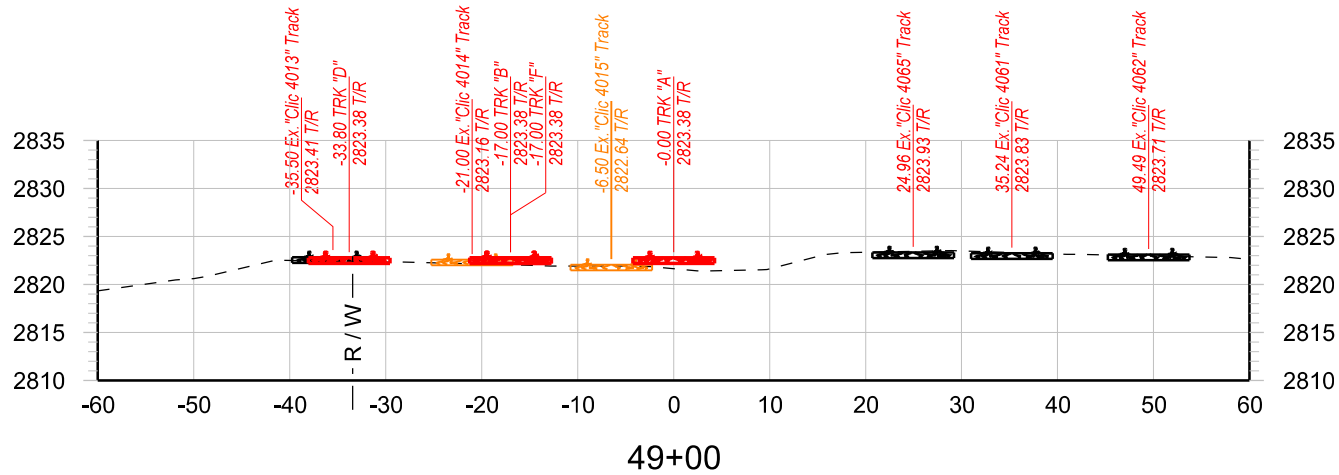
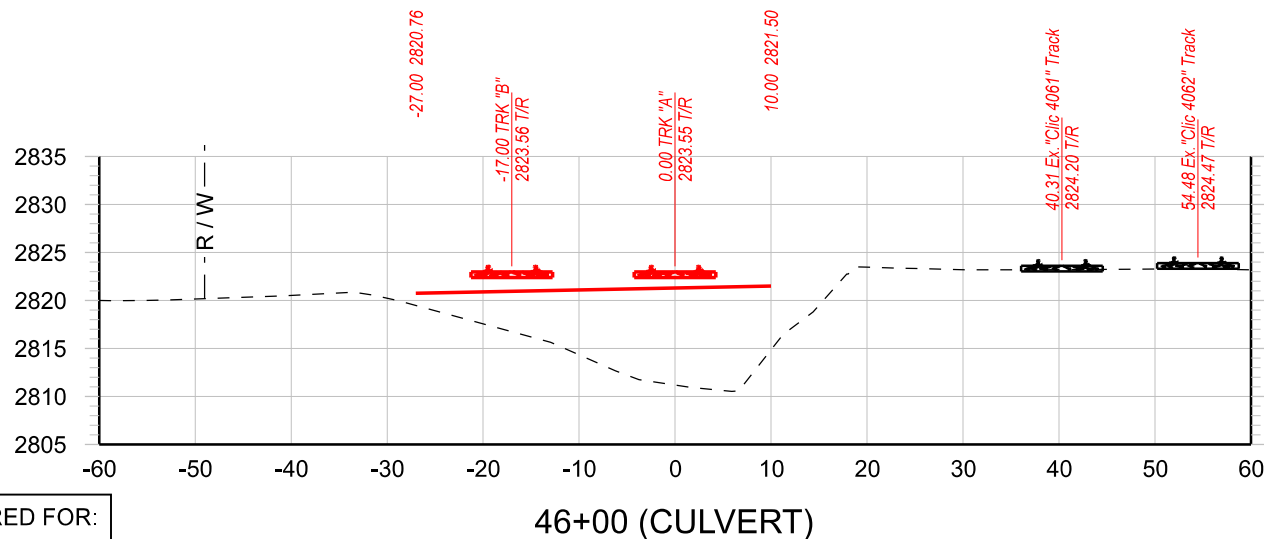
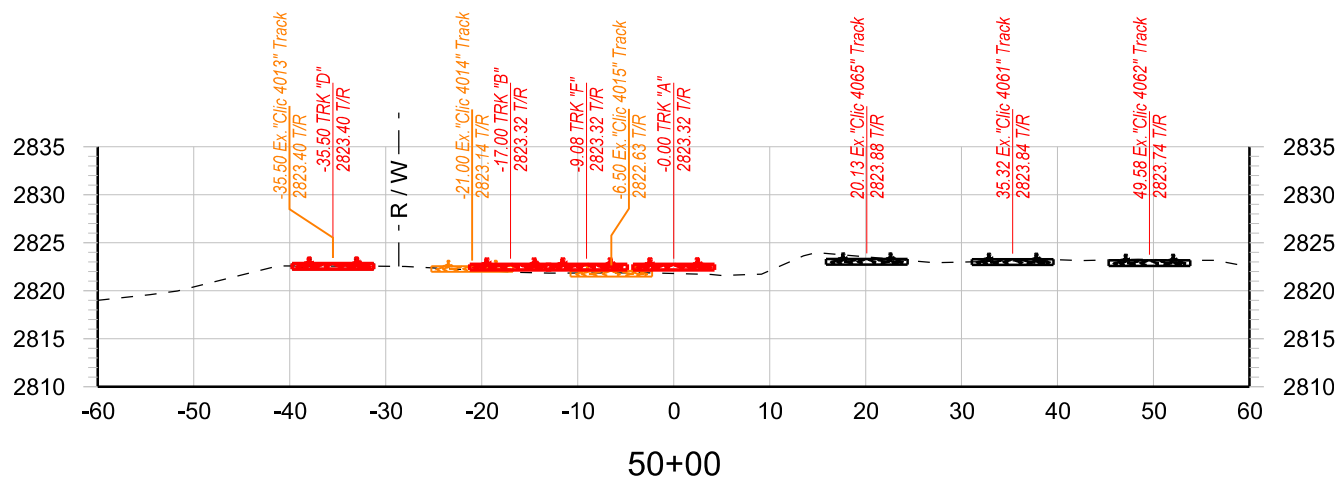
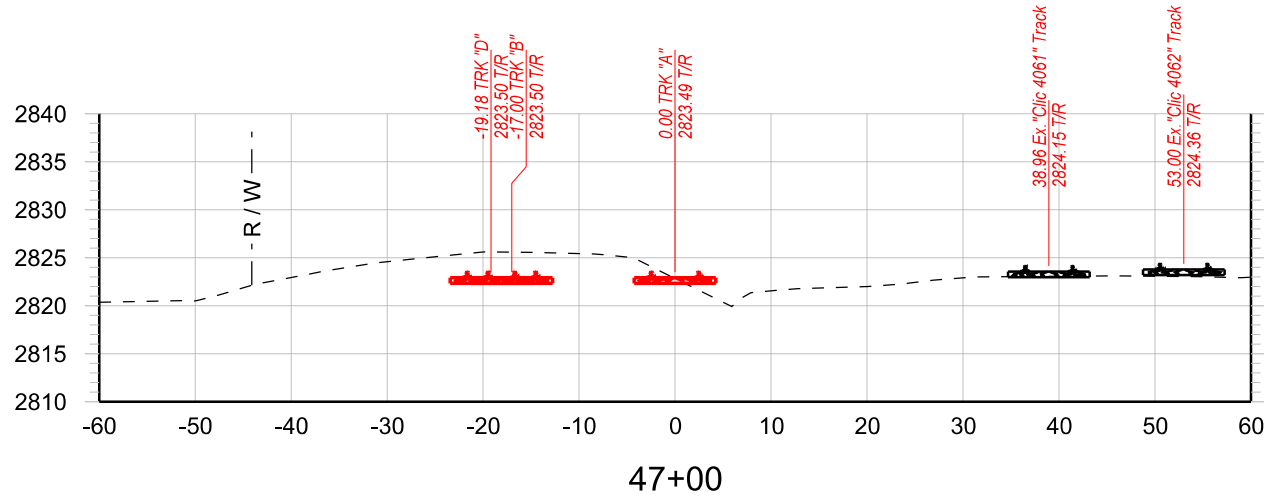
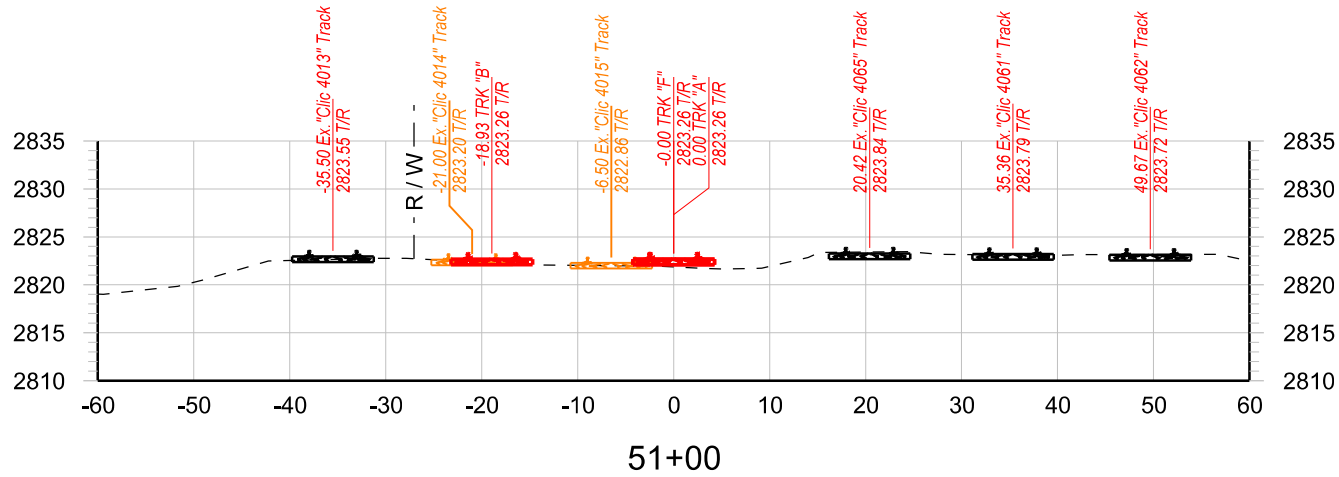
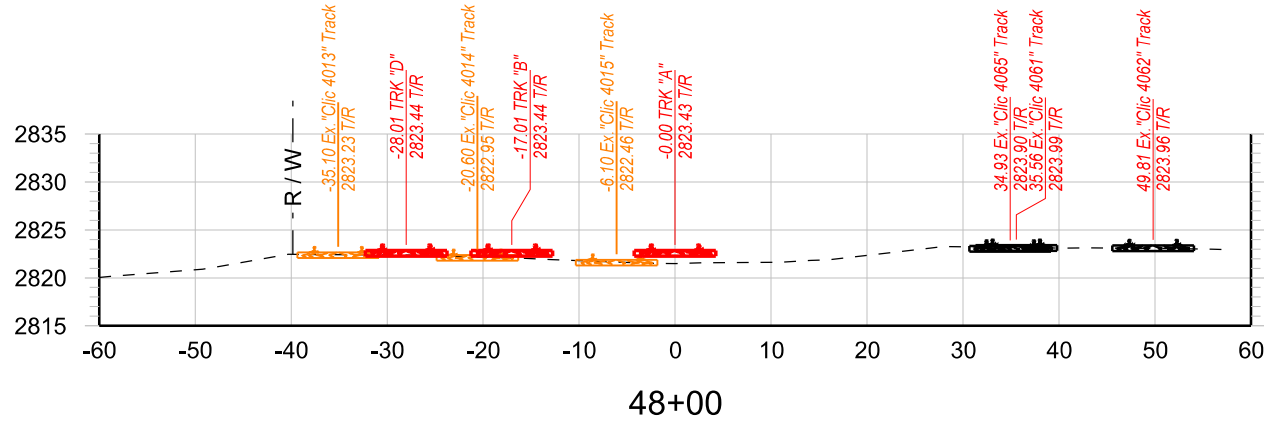
Project Number: SPFC24-25

Approved by: SR

Date: 26Jul2024

No. of Pages: 59 (PLANS)

2nd Submittal



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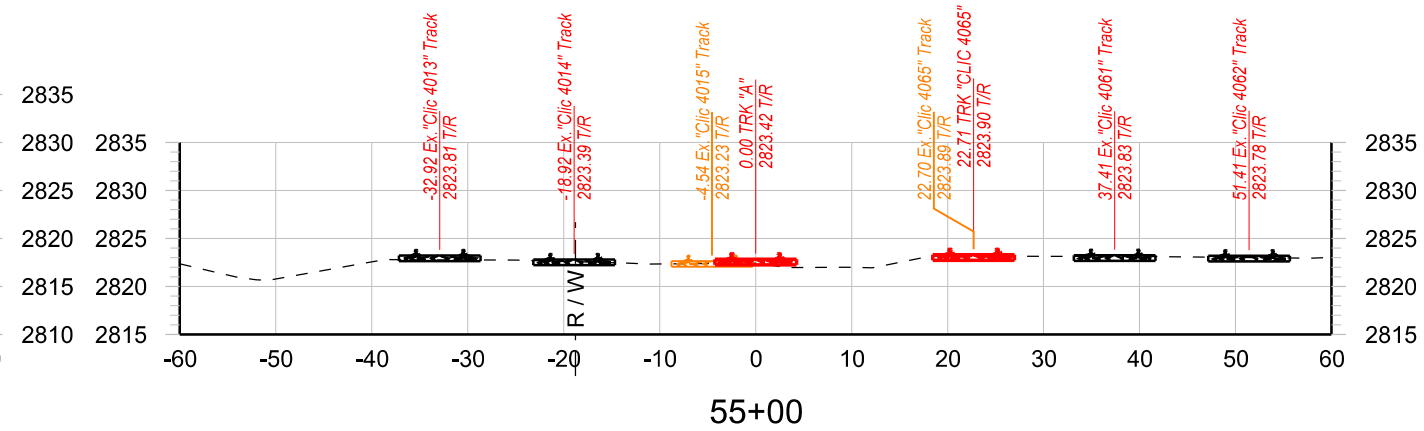
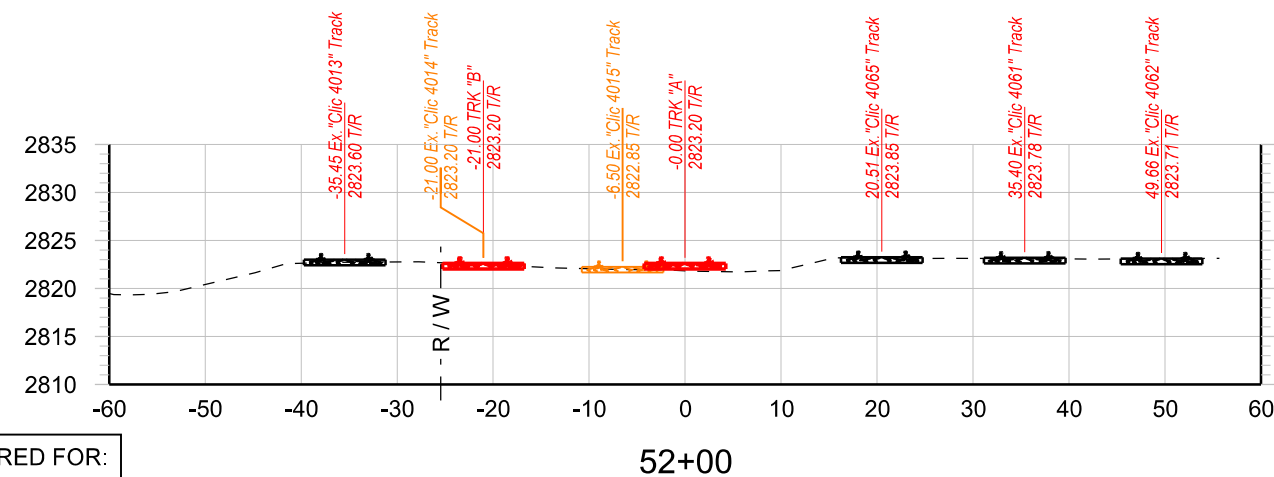
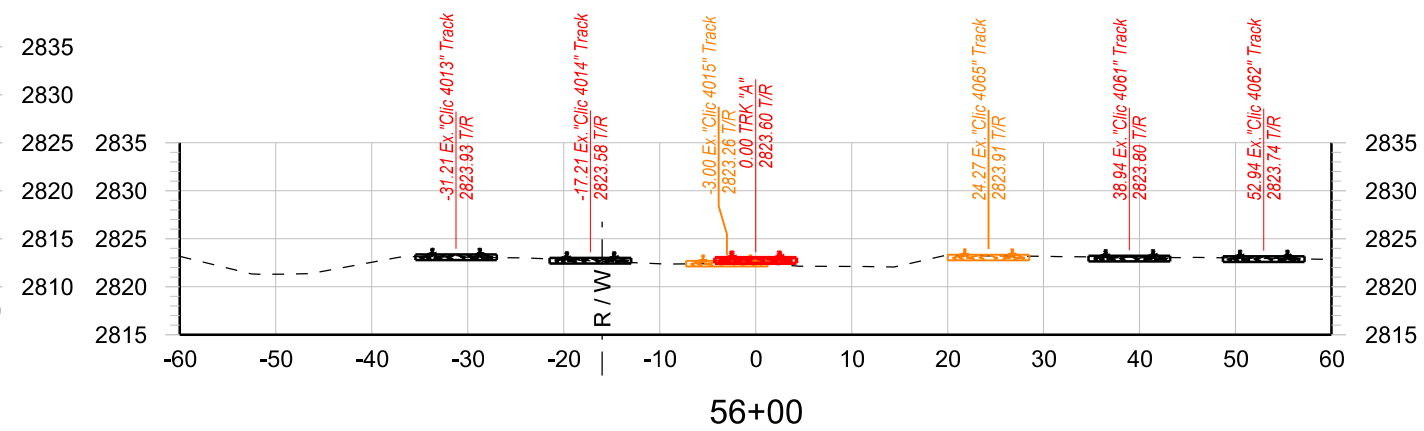
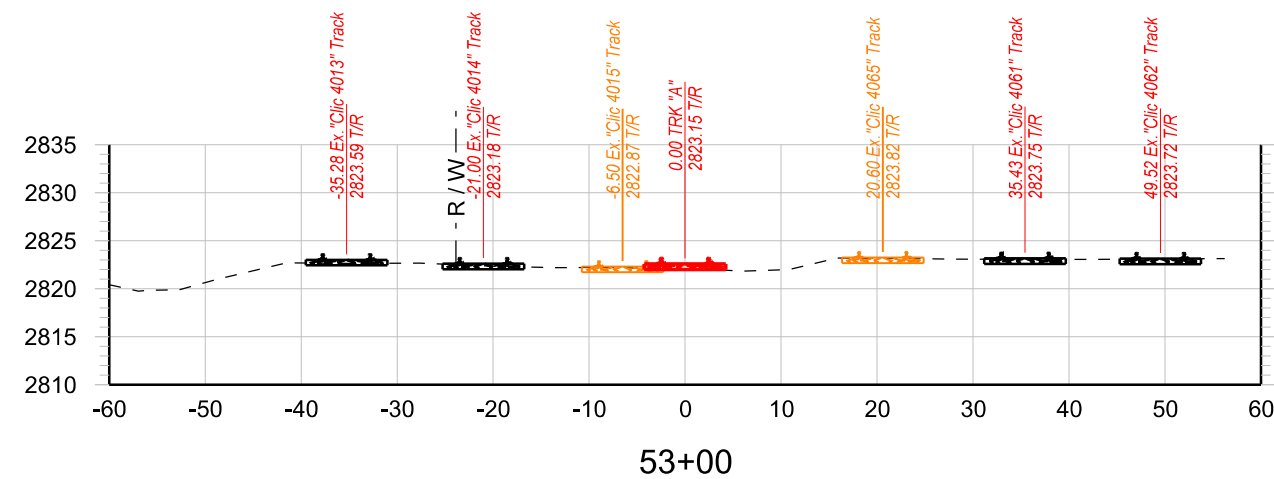
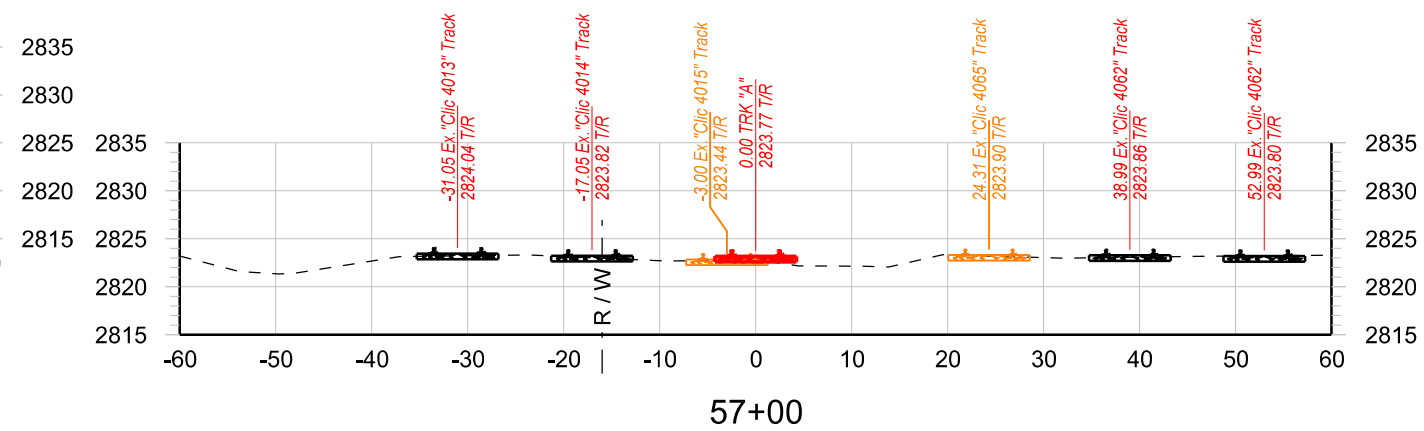
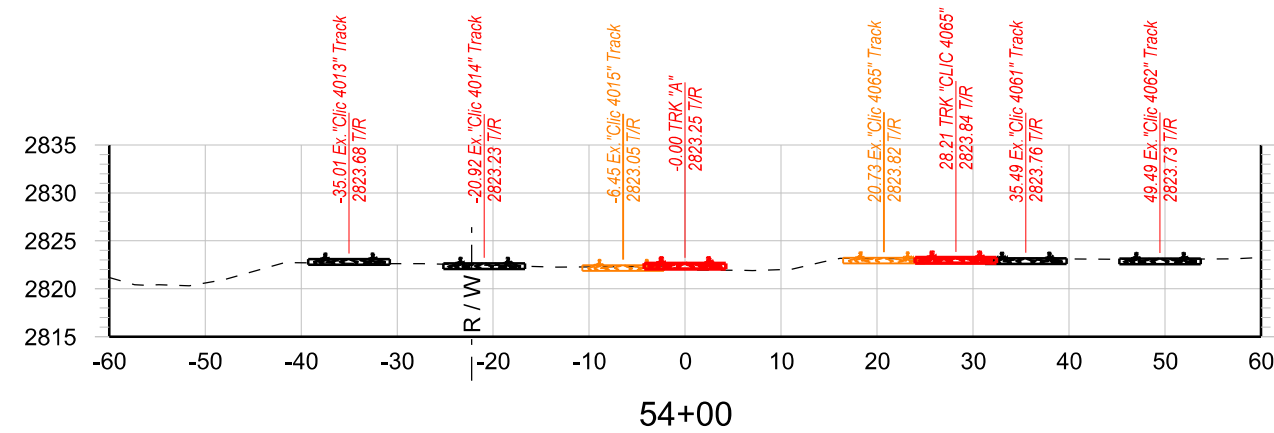
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DATE:	07/25/2024
SCALE:	AS NOTED



EARTHWORK SECTIONS
STA 46+00 TO STA 51+00
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	X-09
	SHEET
	27 OF 45



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A DIVISION OF RAILSERVE, INC.



REV. #	BY	DATE	DESCRIPTION

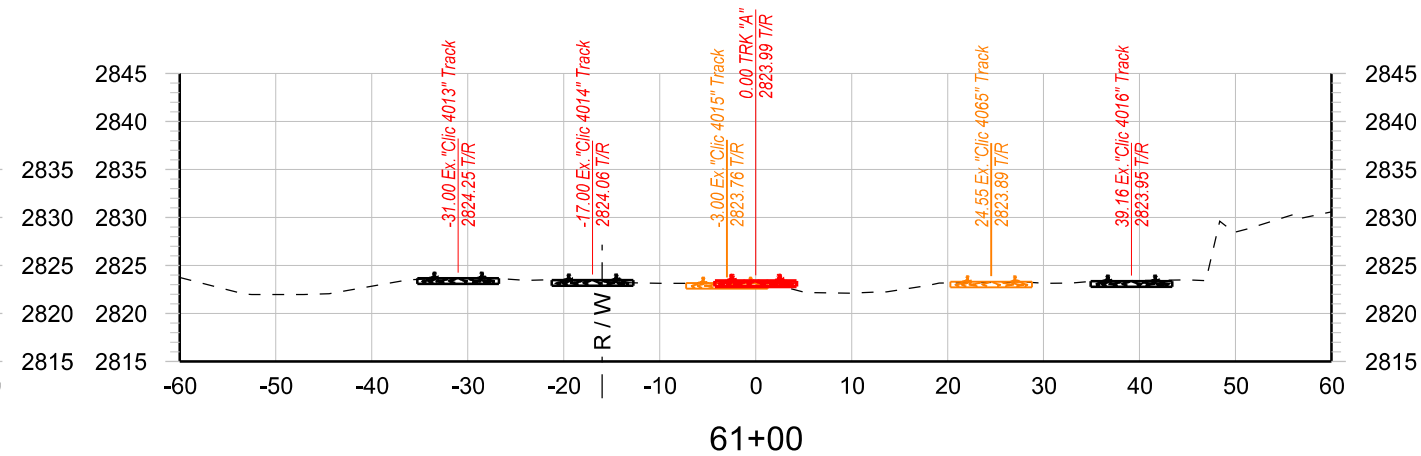
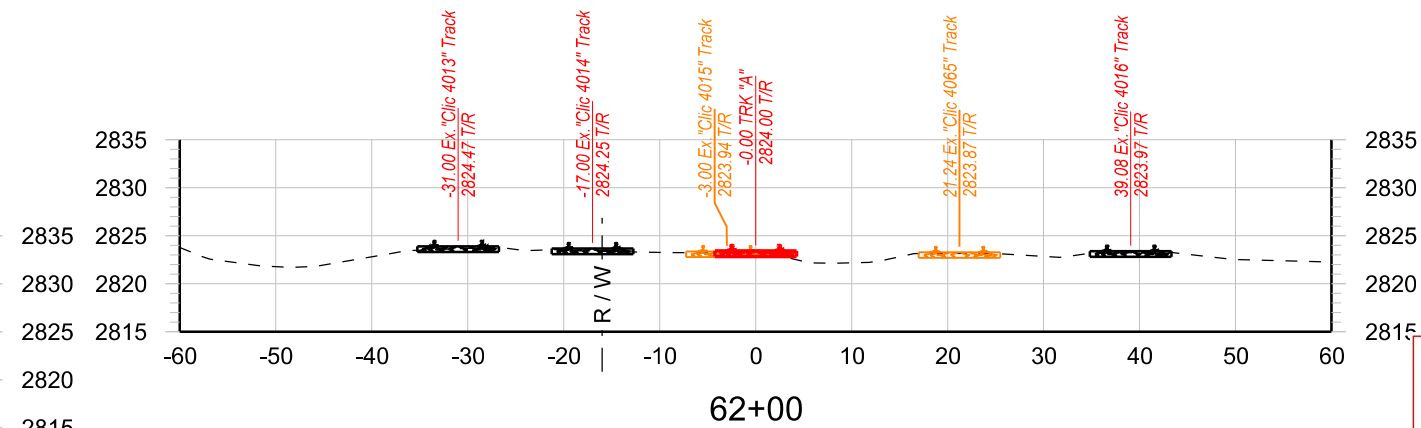
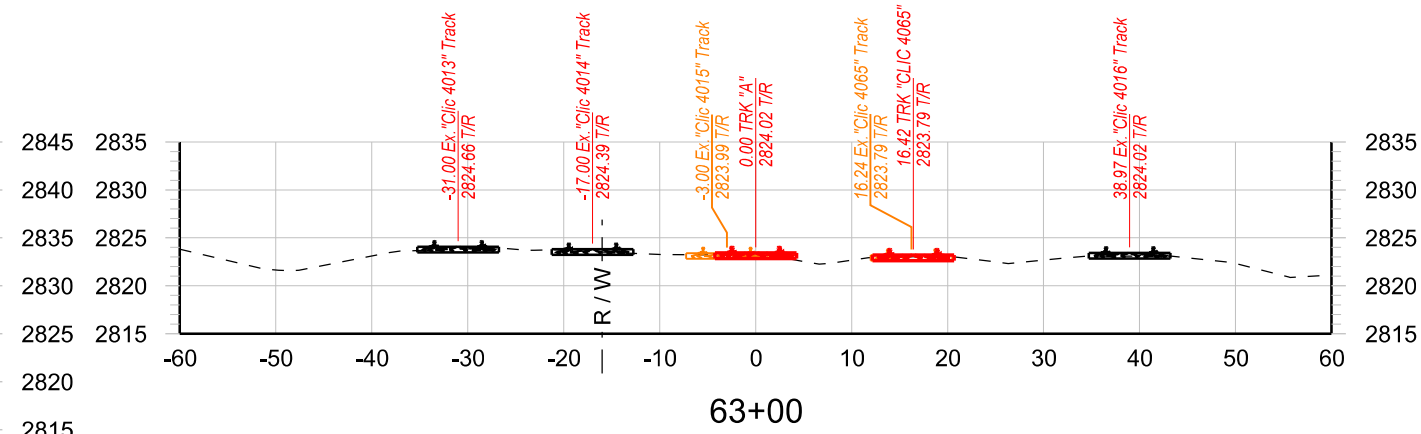
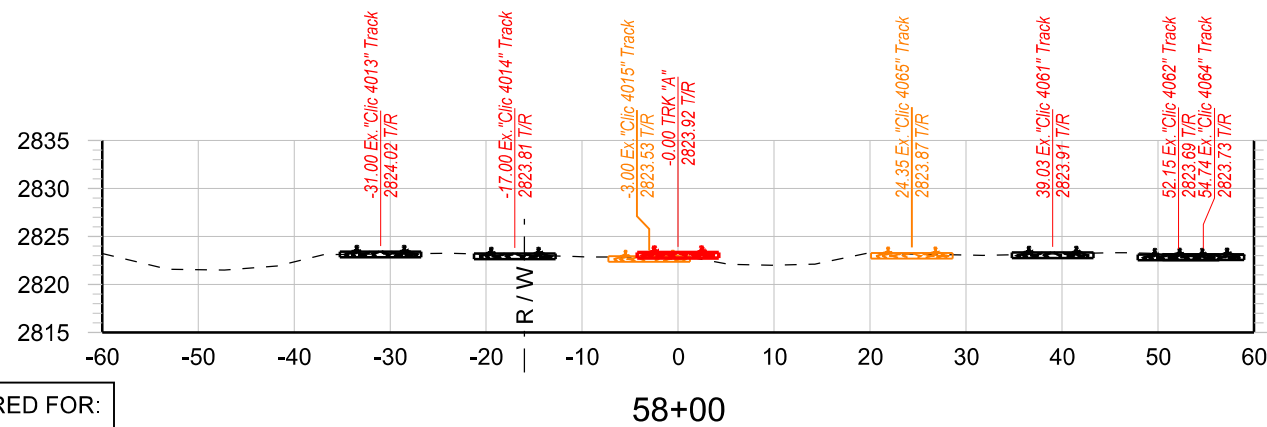
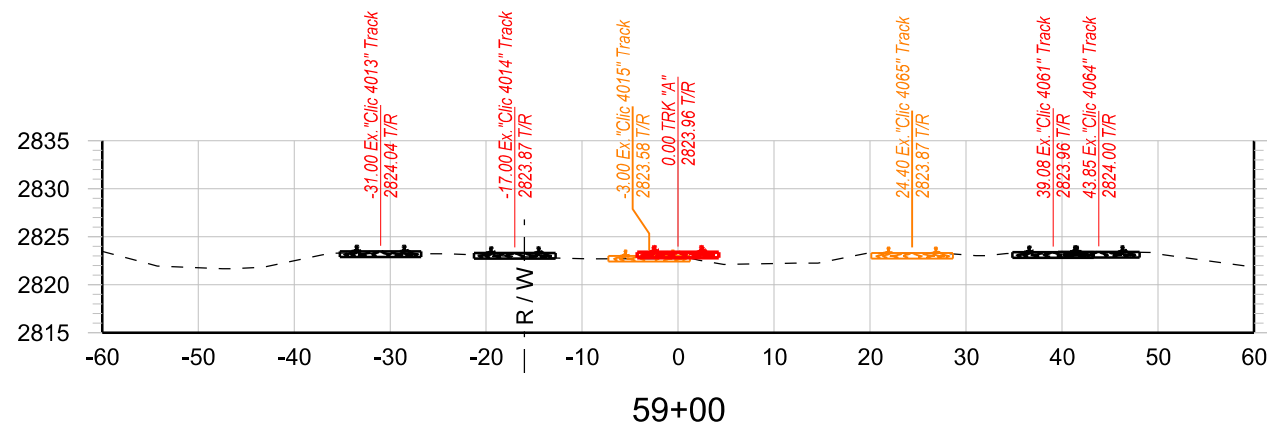
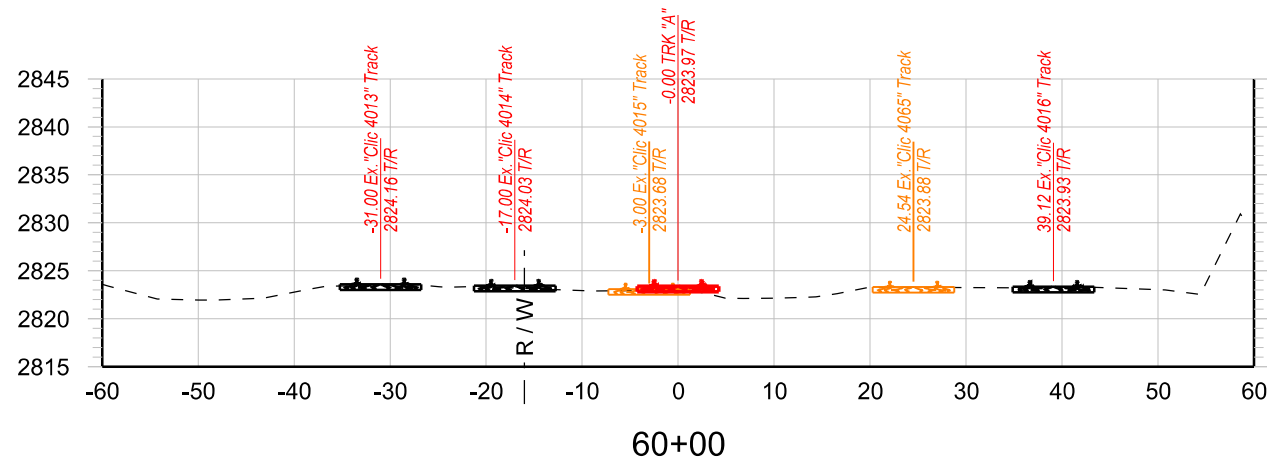
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CHECKED BY:	CDS
DATE:	07/25/2024
SCALE:	AS NOTED



EARTHWORK SECTIONS
STA 52+00 TO STA 57+00
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	X-10
	SHEET
	28 OF 45

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Project Number: SPFC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59 (PLANS)
2nd Submittal

PREPARED FOR:



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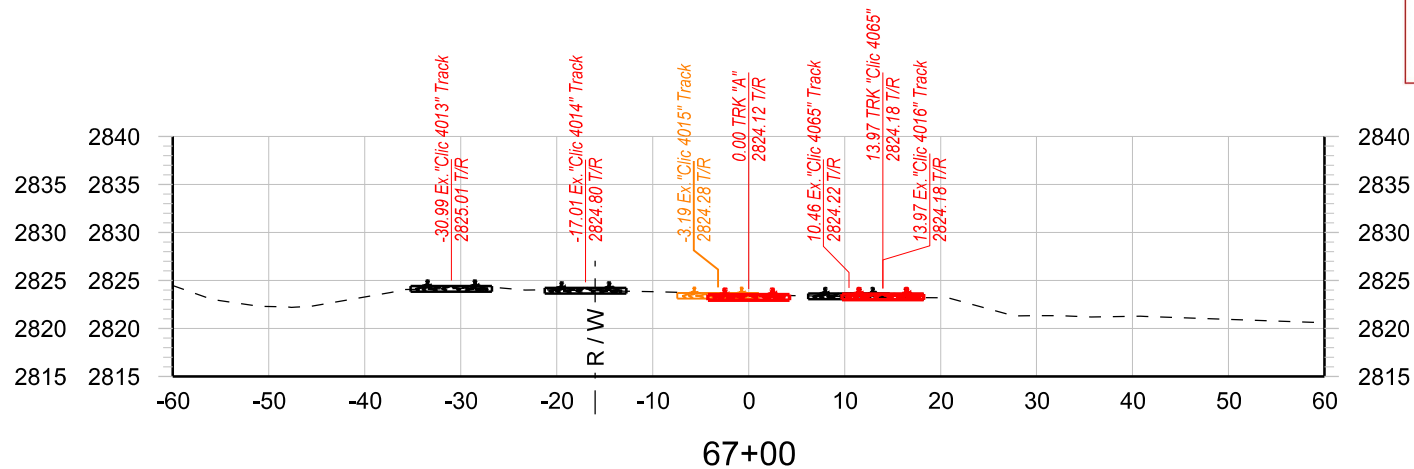
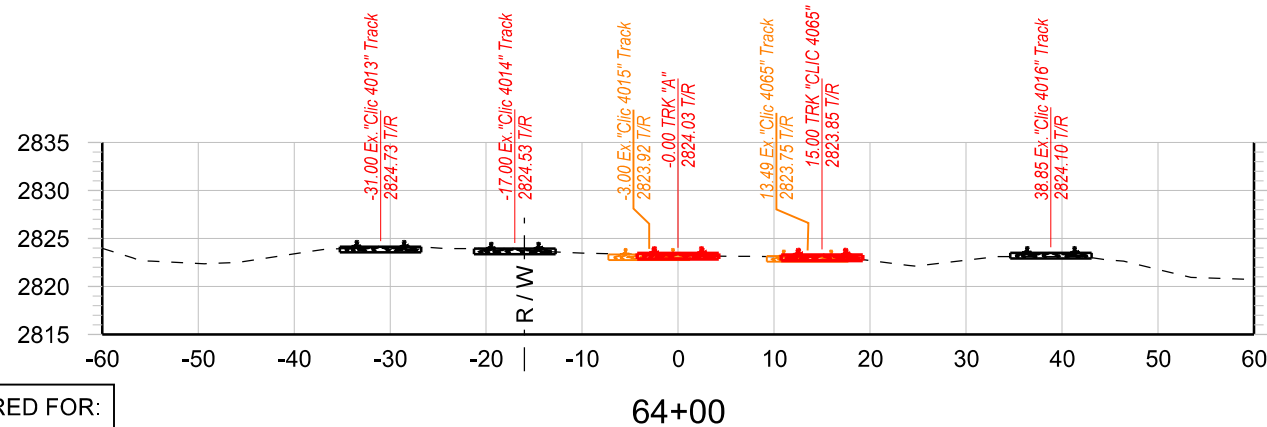
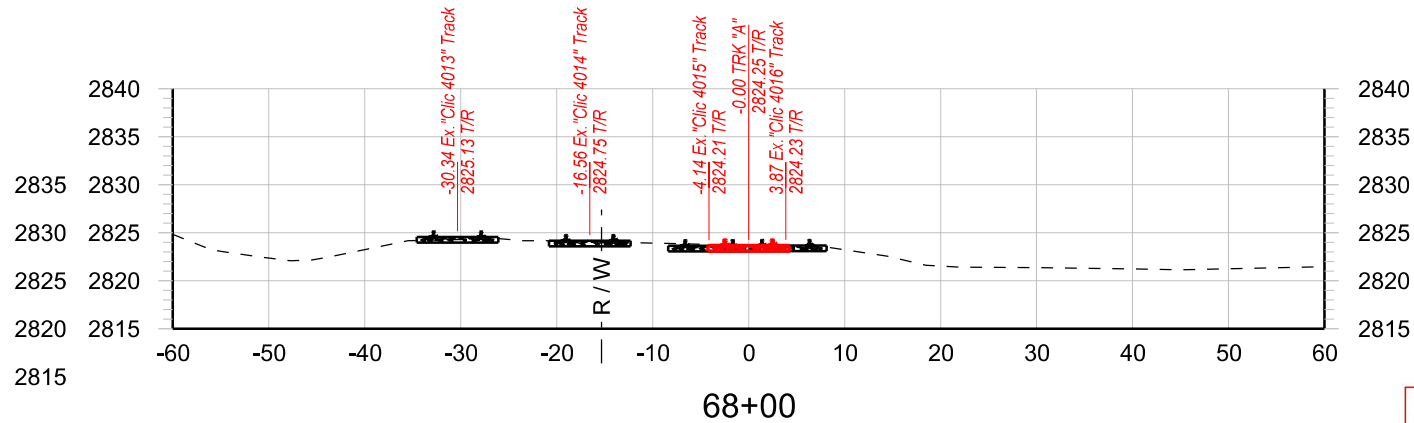
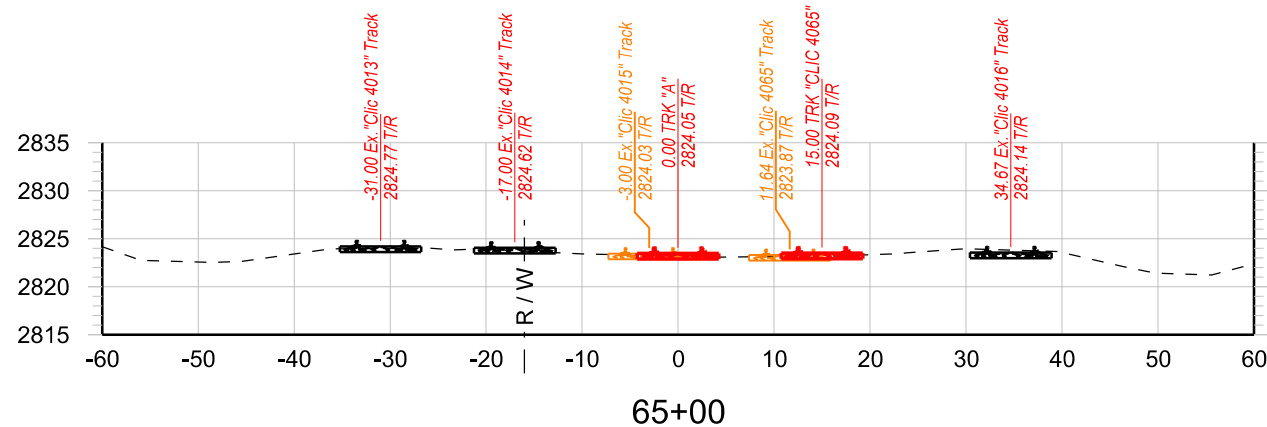
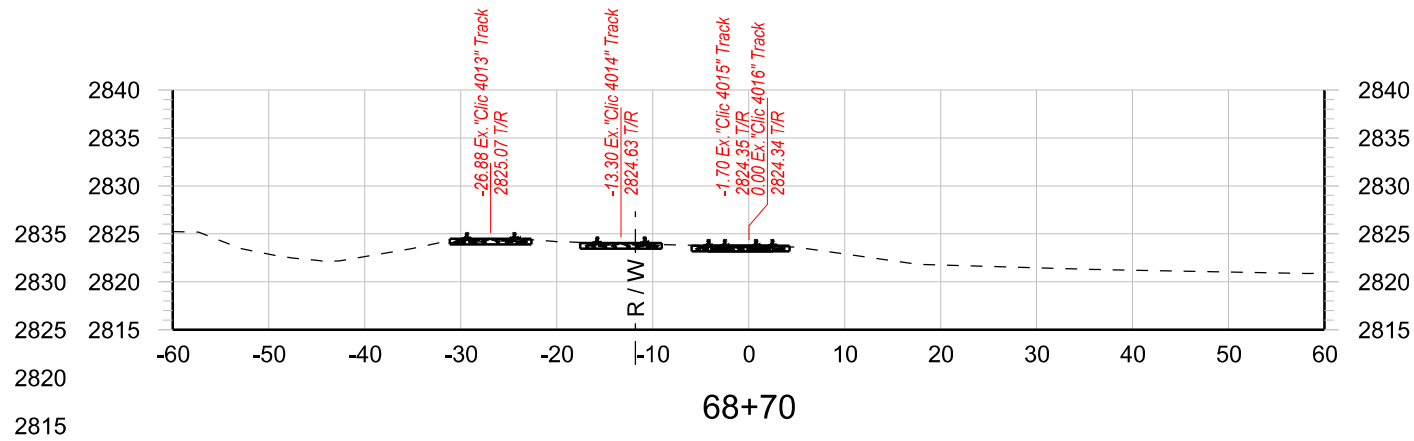
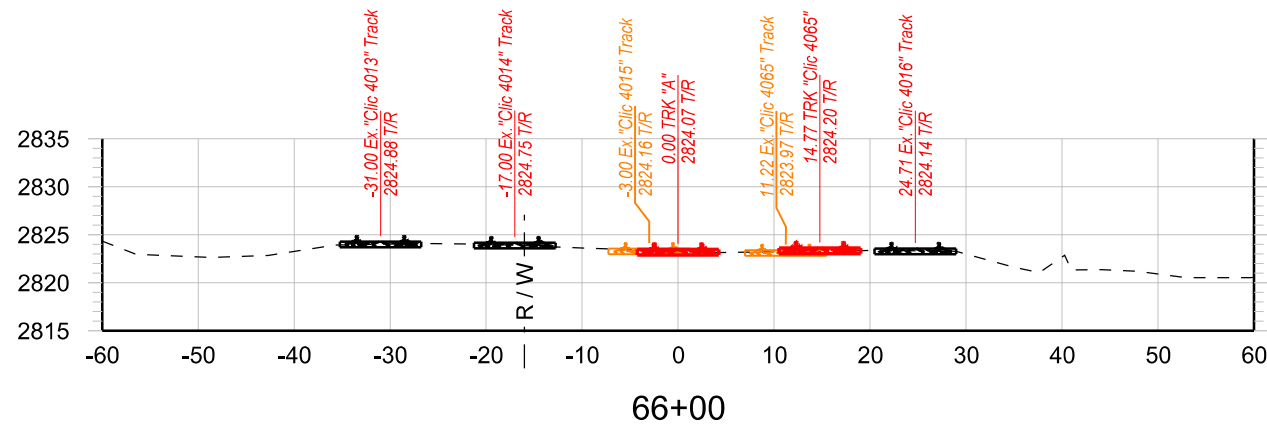
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DATE:	07/25/2024
SCALE:	AS NOTED



EARTHWORK SECTIONS
STA 58+00 TO STA 63+00
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	SHEET 29 OF 45

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Project Number: SPFC24-25
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Date: 26Jul2024
No. of Pages: 59(PLANS)
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DATE:	07/25/2024
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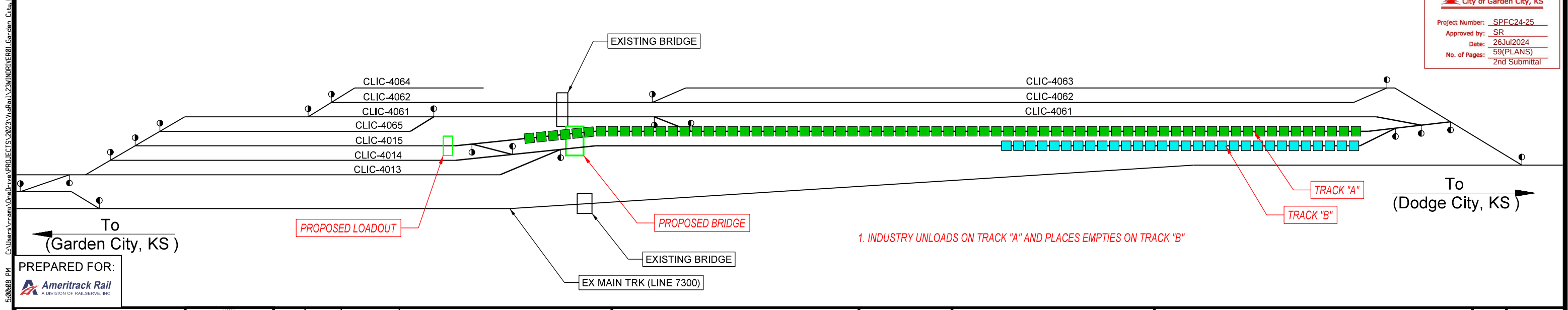
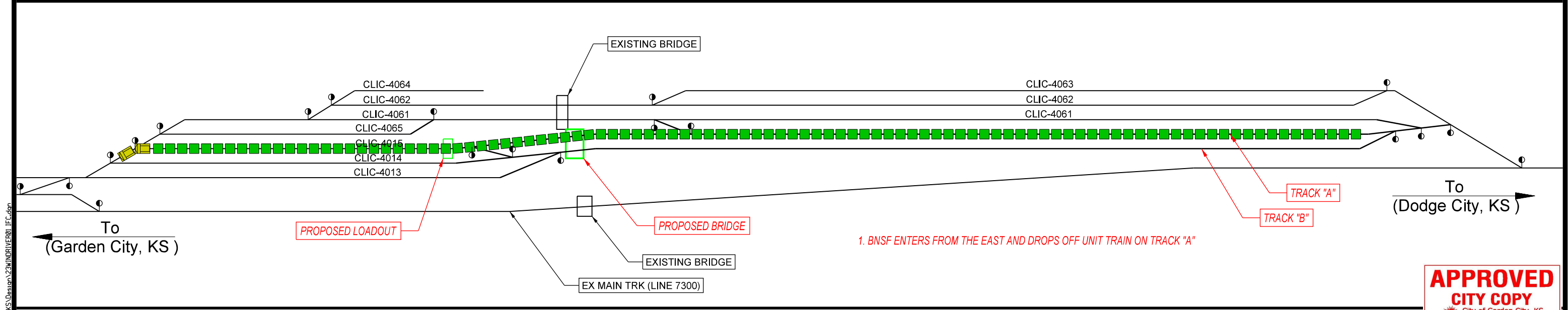
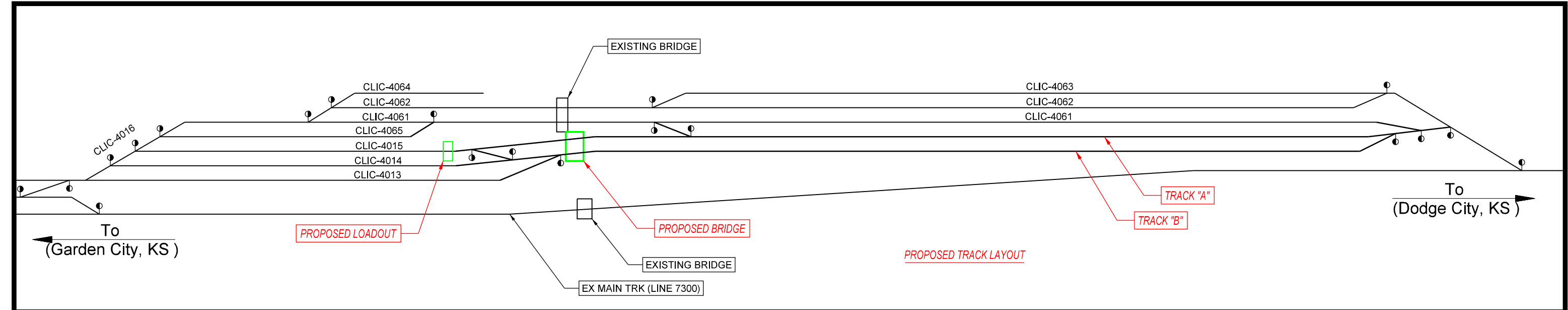


EARTHWORK SECTIONS
STA 64+00 TO STA 68+70
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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X-12

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OF
45



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Project Number: SPFC24-25
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Date: 26Jul2024
No. of Pages: 59 (PLANS)
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PREPARED FOR:

Ameritrack Rail
A DIVISION OF RAILSERVE, INC.

VIA RAIL
ENGINEERING
viarailengineering.com

COIN SCHAFFNER
LICENSED PROFESSIONAL ENGINEER
27287
7/25/2024
KANSAS

REV. #	BY	DATE	DESCRIPTION

LEGEND:

SWITCH

BNSF LOCOMOTIVE

EMPTY CARS

LOADED CARS

DRAWN BY: RR

CHECKED BY: CDS

DATE: 07/25/2024

SCALE: AS NOTED

BNSF
RAILWAY

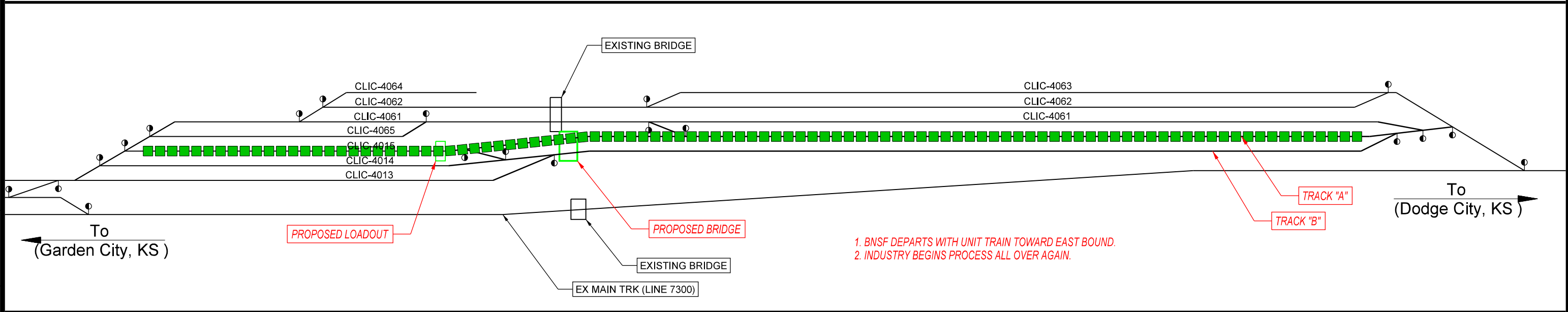
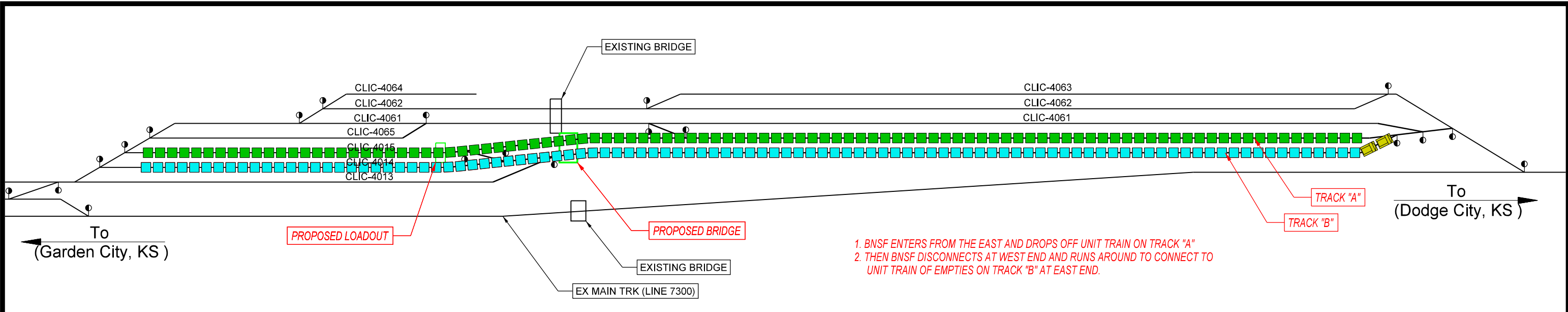
OPERATING PLAN
SHEET 1 OF 2
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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SHEET #
OP-01

SHEET
31
OF
45

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PREPARED FOR:
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



REV. #	BY	DATE	DESCRIPTION

SWITCH	●
BNSF LOCOMOTIVE	■
EMPTY CARS	■
LOADED CARS	■

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CHECKED BY:	CDS
DATE:	07/25/2024
SCALE:	AS NOTED



OPERATING PLAN
SHEET 2 OF 2
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	SHEET 32 OF 45

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City of Garden City, KS
Project Number: SPFC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal

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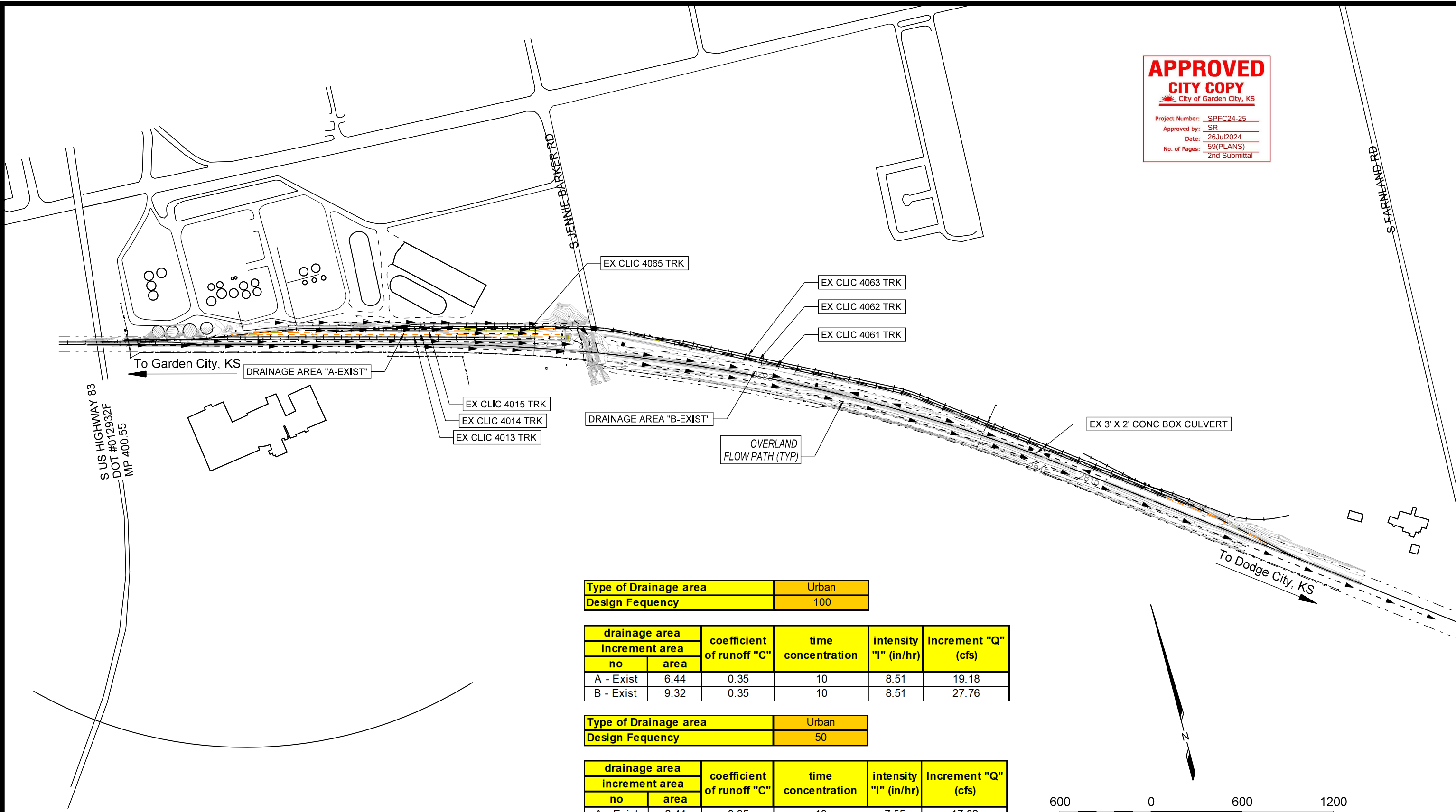
Project Number: SPEC24-25

Approved by: SR

Date: 26Jul2024

No. of Pages: 59(PLANS)

2nd Submittal



Type of Drainage area	Urban
Design Frequency	100

drainage area increment area		coefficient of runoff "C"	time concentration	intensity "I" (in/hr)	Increment "Q" (cfs)
no	area				
A - Exist	6.44	0.35	10	8.51	19.18
B - Exist	9.32	0.35	10	8.51	27.76

Type of Drainage area	Urban
Design Frequency	50

drainage area increment area		coefficient of runoff "C"	time concentration	intensity "I" (in/hr)	Increment "Q" (cfs)
no	area				
A - Exist	6.44	0.35	10	7.55	17.02
B - Exist	9.32	0.35	10	7.55	24.63



PREPARED FOR:

Ameritrack Rail

A DIVISION OF RAILSERVE, INC.

VIA RAIL
ENGINEERING
viarailengineering.com

COIN SCHAFFNER

27287

7/25/2024

KANSAS

PROFESSIONAL ENGINEER

REV. #	BY	DATE	DESCRIPTION

LEGEND:

EXISTING MAINLINE TRACK

EXISTING INDUSTRY TRACK

PROPOSED RAILROAD TRACK

PROPOSED INDUSTRY TRACK

UPGRADE TRACK

REMOVE TRACK

SHIFT TRACK

MAPPED RIGHT OF WAY

DRAWN BY: RR

CHECKED BY: CDS

DATE: 07/25/2024

SCALE: AS NOTED

BNSF

RAILWAY

EXISTING DRAINAGE MAP

LS - 7300, MP 399.01, LA JUNTA SUB.

WIND RIVER GRAIN

GARDEN CITY, FINNEY COUNTY, KANSAS

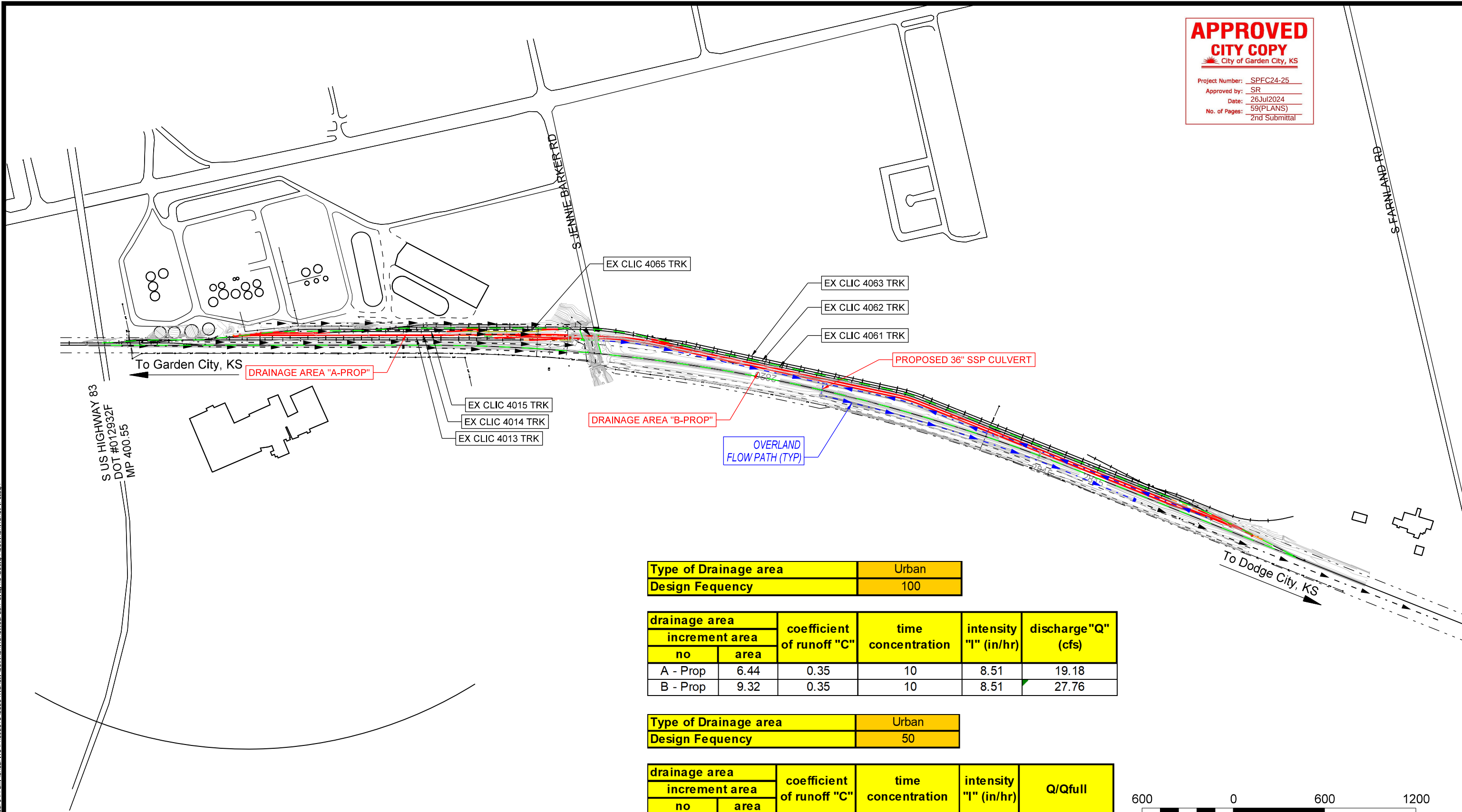
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SHEET # D-01

SHEET 33 OF 45

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City of Garden City, KS

Project Number: SPFC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal



Type of Drainage area	Urban
Design Frequency	100

drainage area		coefficient of runoff "C"	time concentration	intensity "I" (in/hr)	discharge "Q" (cfs)
no	area				
A - Prop	6.44	0.35	10	8.51	19.18
B - Prop	9.32	0.35	10	8.51	27.76

Type of Drainage area	Urban
Design Frequency	50

drainage area		coefficient of runoff "C"	time concentration	intensity "I" (in/hr)	Q/Qfull
no	area				
A - Prop	6.44	0.35	10	7.55	17.02
B - Prop	9.32	0.35	10	7.55	24.63



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ENGINEERING
viarailengineering.com

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27287
7/25/2024
KANSAS
PROFESSIONAL ENGINEER

REV. #	BY	DATE	DESCRIPTION

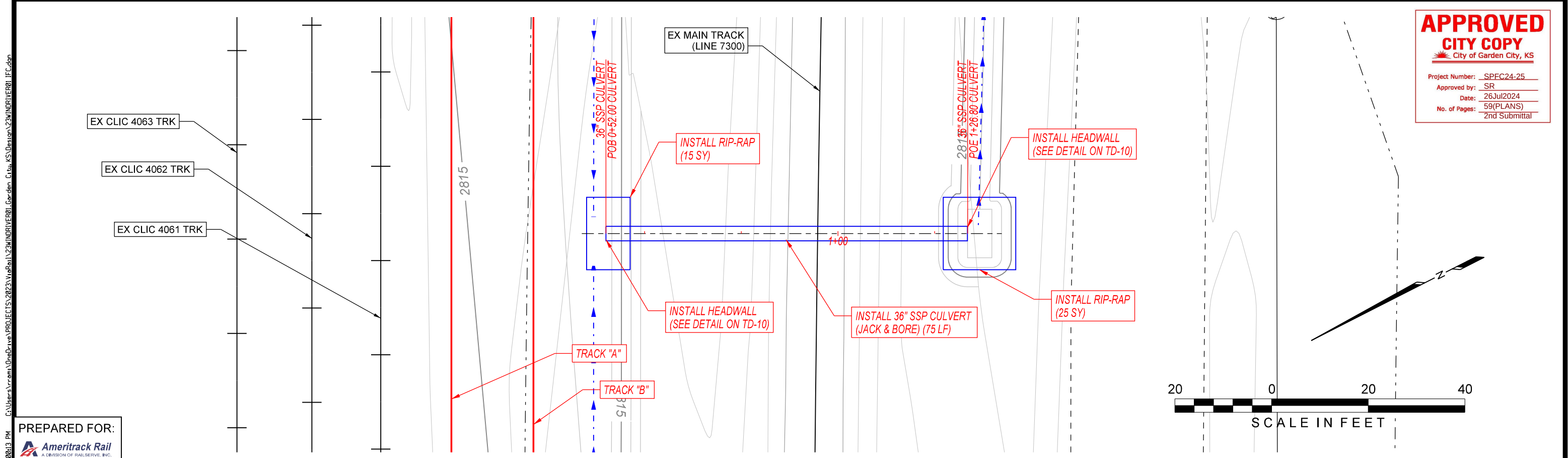
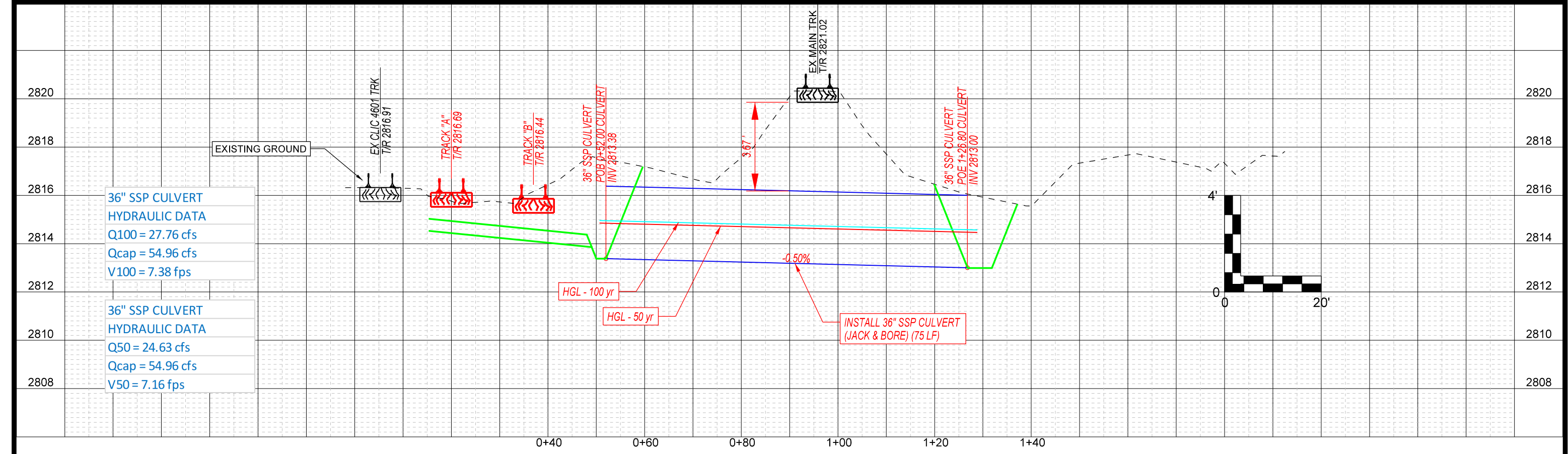
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EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY

DRAWN BY: RR
CHECKED BY: CDS
DATE: 07/25/2024
SCALE: AS NOTED

BNSF
RAILWAY

PROPOSED DRAINAGE MAP
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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SHEET # D-02
SHEET 34 OF 45



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Ameritrack Rail
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ENGINEERING
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LICENSED PROFESSIONAL ENGINEER
27287
7/25/2024
KANSAS

REV. #	BY	DATE	DESCRIPTION

LEGEND:

- EXISTING MAINLINE TRACK
- EXISTING INDUSTRY TRACK
- PROPOSED RAILROAD TRACK
- PROPOSED INDUSTRY TRACK
- UPGRADE TRACK
- REMOVE TRACK
- SHIFT TRACK
- MAPPED RIGHT OF WAY

DRAWN BY: RR

CHECKED BY: CDS

DATE: 07/25/2024

SCALE: AS NOTED

BNSF
RAILWAY

36" SSP CULVERT

LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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SHEET 35 OF 45

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City of Garden City, KS

Project Number: SPFC24-25
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Date: 26Jul2024
No. of Pages: 59(PLANS)
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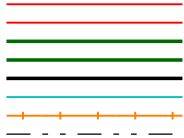
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A DIVISION OF RAILSERVE, INC.



REV. #	BY	DATE	DESCRIPTION

LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY

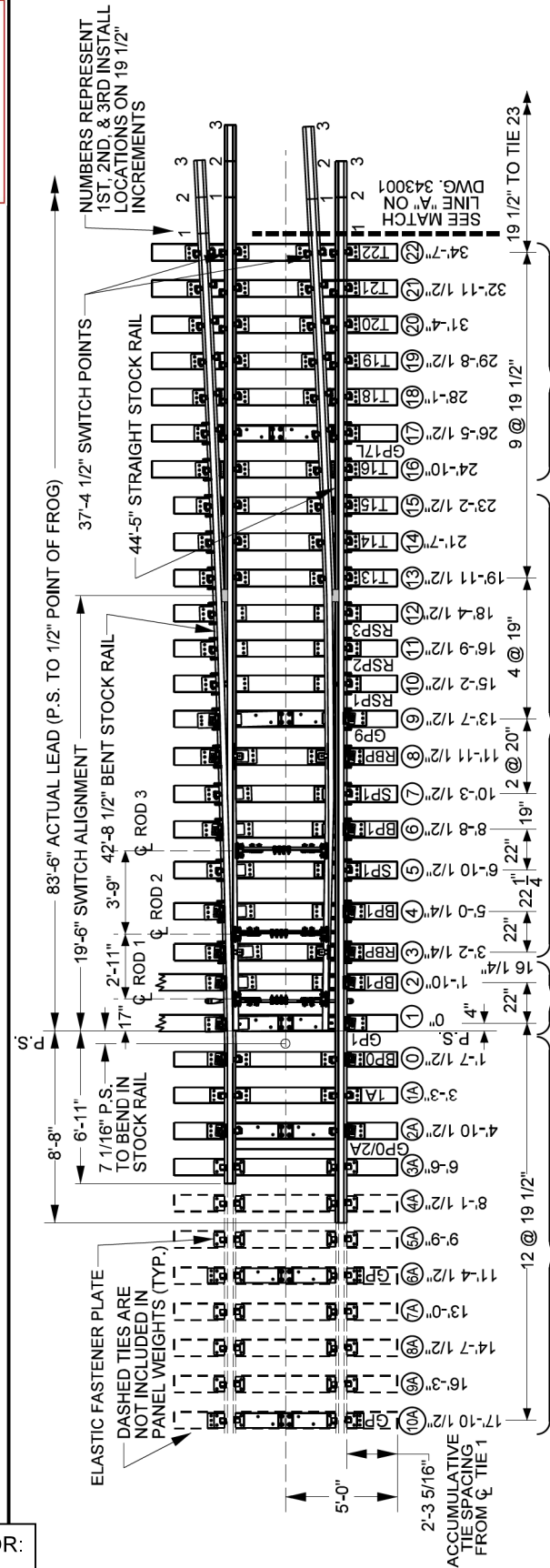


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DATE: 07/25/2024
SCALE: AS NOTED



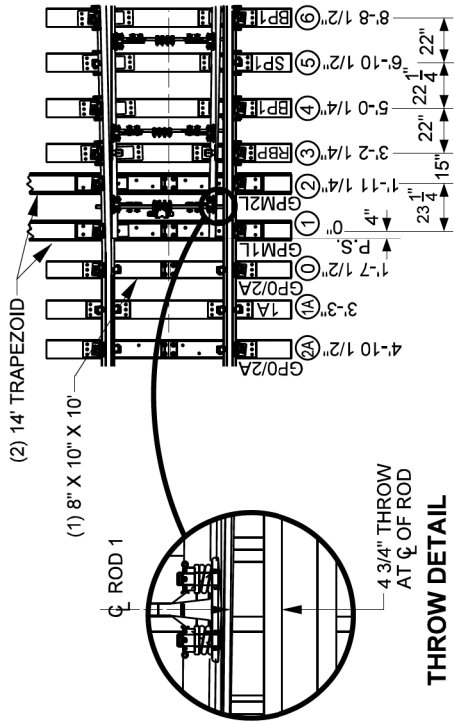
TYPICAL DETAIL
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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SHEET 36 OF 45
TD-01



NOTES:
1. SEE DWGS 343001 THRU 343005 FOR THE BALANCE OF LAYOUT PLANS.
2. ALL TIES 7" X 9" BODY UNLESS OTHERWISE SHOWN.
3. SEE DWG 343100 FOR TURNOUT GEOMETRY.
4. SEE DWG 343200 FOR TURNOUT BILL OF MATERIAL.
5. FULLY BOX ANCHOR STOCK RAILS, TIES 3-15 FOR SHIPPING OF PANELS ONLY.
6. APPLY 5" SAFE BOND WIRES ONE CRIB AHEAD OF HEEL OF SWITCH ON STOCK AND SWITCH POINT RAILS.
7. ALL SWITCH POINT AND STOCK RAIL DIMENSIONS ARE TO FIRST INSTALL, SEE PLAN 241500 FOR FULL LENGTH.

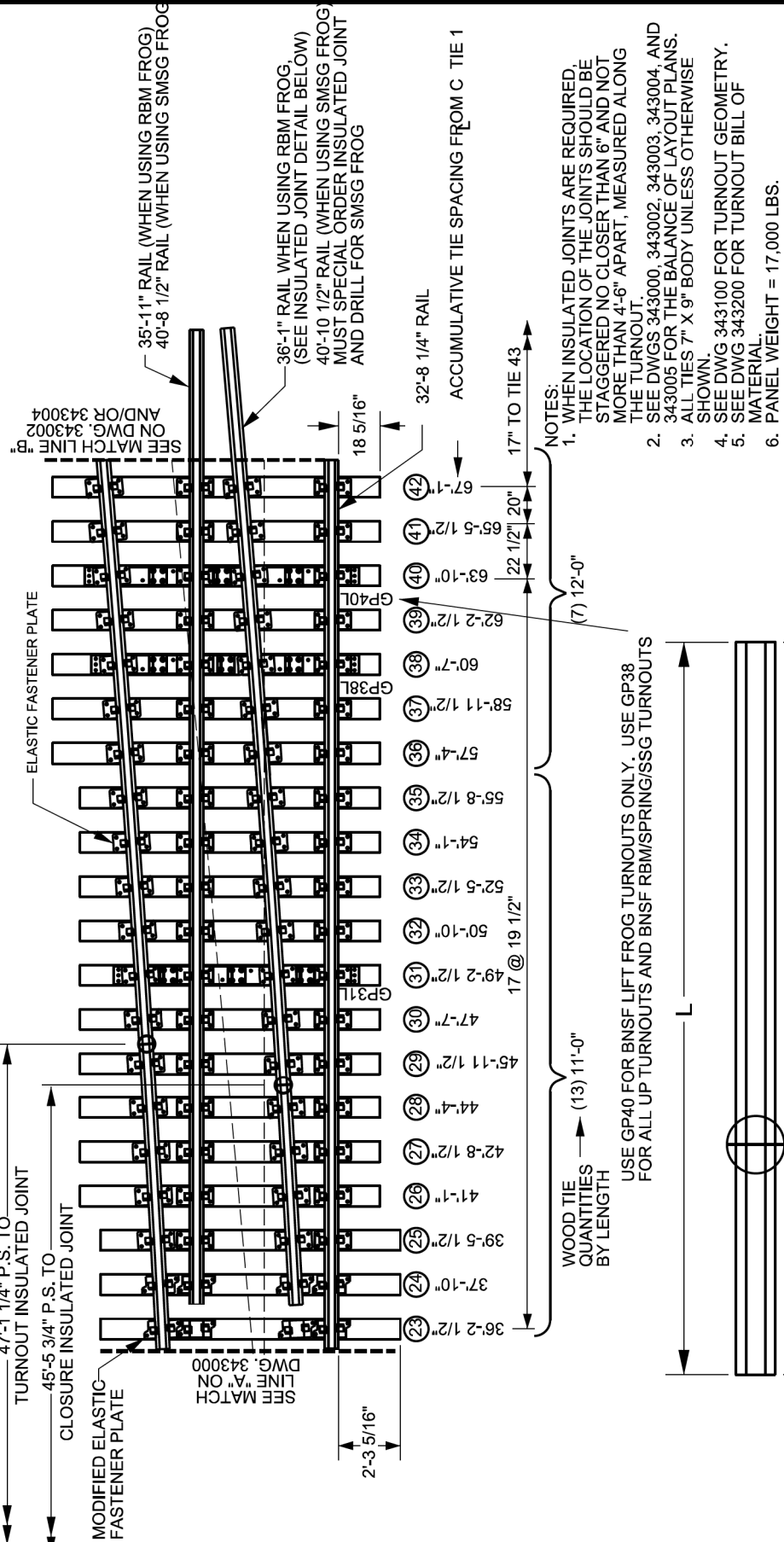
MANUAL OPERATED
PANEL WEIGHT: 20,000 LBS.



POWER OPERATED
PANEL WEIGHT: 20,000 LBS.

	UPRR	BNSF RH	BNSF LH
136LB. POWER	N/A	004734653	004734810
136LB. MANUAL	N/A	004734828	004734836
136LB. MAN. SPR. SW.	N/A	004734869	004734877
141LB. POWER	N/A	005253505	005253497
141LB. MANUAL	N/A	005253521	005253513
141LB. MAN. SPR. SW.	N/A	005253547	005253539

COMMON STANDARDS
NO. 11 TURNOUT 136/141 LB. PANEL NO. 1
FILE OWNER: BNSF
DATE: NOV. 22, 2016
REV. NO.: 7
DWG NO: 343000



NOTES:
1. WHEN INSULATED JOINTS ARE REQUIRED, THE LOCATION OF THE JOINTS SHOULD BE STAGGERED NO CLOSER THAN 6" AND NOT MORE THAN 4'-6" APART, MEASURED ALONG THE TURNOUT.
2. SEE DWGS 343000, 343002, 343003, 343004, AND 343005 FOR THE BALANCE OF LAYOUT PLANS.
3. ALL TIES 7" X 9" BODY UNLESS OTHERWISE SHOWN.
4. SEE DWG 343100 FOR TURNOUT GEOMETRY.
5. SEE DWG 343200 FOR TURNOUT BILL OF MATERIAL.
6. PANEL WEIGHT = 17,000 LBS.



COMMON STANDARDS

NO. 11 TURNOUT 136/141 LB. PANEL NO. 2

BNSF STOCK CODE	
136LB.	141LB.
LH TURNOUT INSULATED JOINT RAIL	005253760
LH CLOSURE INSULATED JOINT RAIL	005253778
RH TURNOUT INSULATED JOINT RAIL	005253786
RH CLOSURE INSULATED JOINT RAIL	005253794

	A	B	L
TURNOUT INSULATED JOINT RAIL	11'-4"	21'-5"	32'-9"
CLOSURE INSULATED JOINT RAIL	8'-2"	27'-11"	36'-1"

22-8

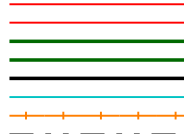
7/25/2024 5:00:20 PM C:\Users\jram\OneDrive\PROJECTS\2023\WindRiver\23WINRIVER01_Garden_City_KS\Design\23WINRIVER01_IFC.dgn

PREPARED FOR:
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



REV. #	BY	DATE	DESCRIPTION

LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY

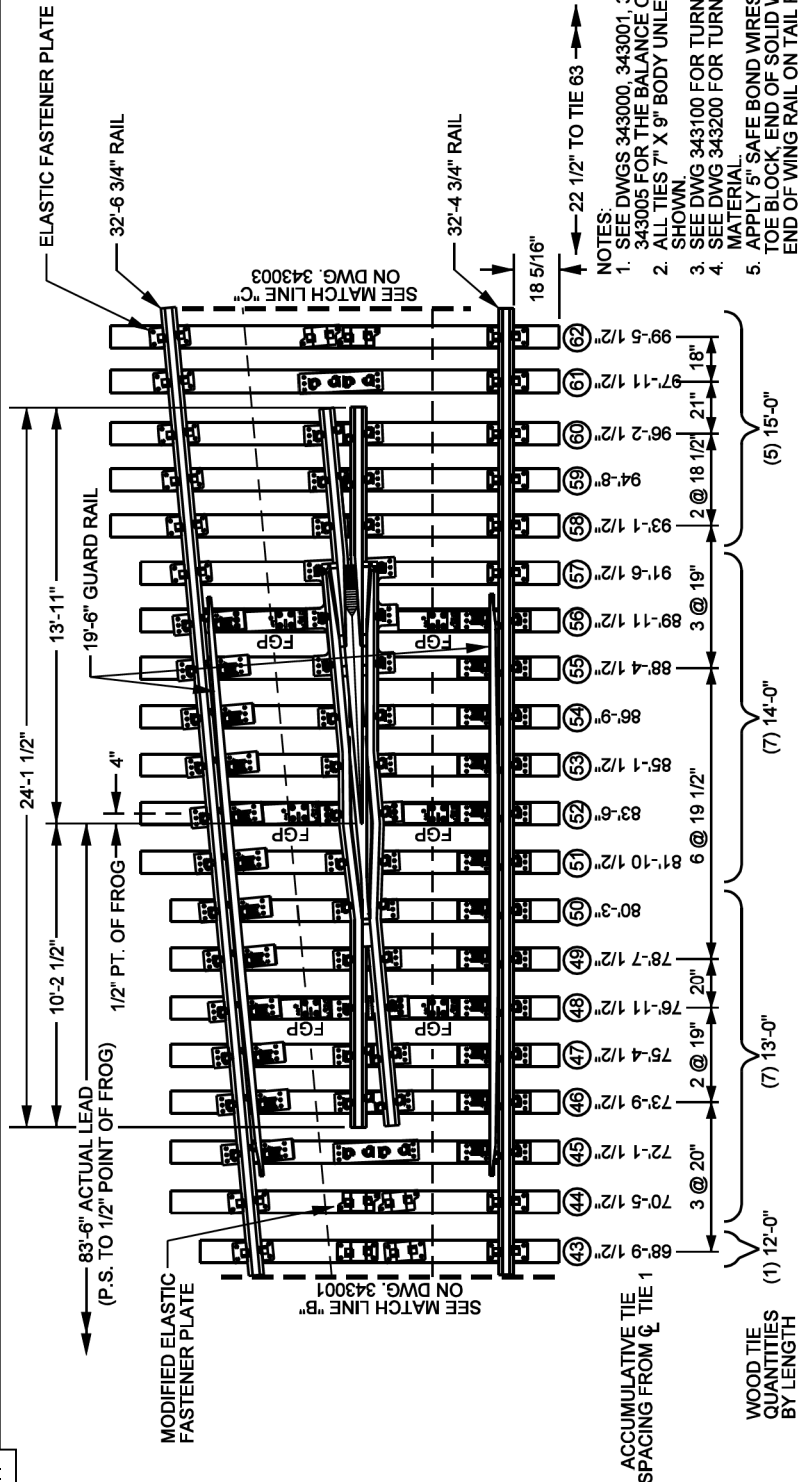


DRAWN BY: RR
CHECKED BY: CDS
DATE: 07/25/2024
SCALE: AS NOTED



TYPICAL DETAIL
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

ISSUED FOR REVIEW ONLY
SHEET 37 OF 45
SHEET # TD-02



- NOTES:
- SEE DWGS 343000, 343001, 343003, 343004, AND 343005 FOR THE BALANCE OF LAYOUT PLANS.
 - ALL TIES 7" X 9" BODY UNLESS OTHERWISE SHOWN.
 - SEE DWG 343100 FOR TURNOUT GEOMETRY.
 - SEE DWG 343200 FOR TURNOUT BILL OF MATERIAL.
 - APPLY 5" SAFE BOND WIRES ONE CRIB AHEAD OF TOE BLOCK, END OF SOLID WING RAIL, BEHIND END OF WING RAIL ON TAIL RAIL AND ONE CRIB BEHIND HEEL BLOCK OF FROG.
 - PANEL WEIGHT = 22,000 LBS.
 - SEE DWGS 343004 AND 343005 FOR SMSG AND LIFT FROG PANELS.



COMMON STANDARDS

**NO. 11 TURNOUT 136/141 LB.
PANEL NO. 3 WITH
OPTIONAL RBM FROG**

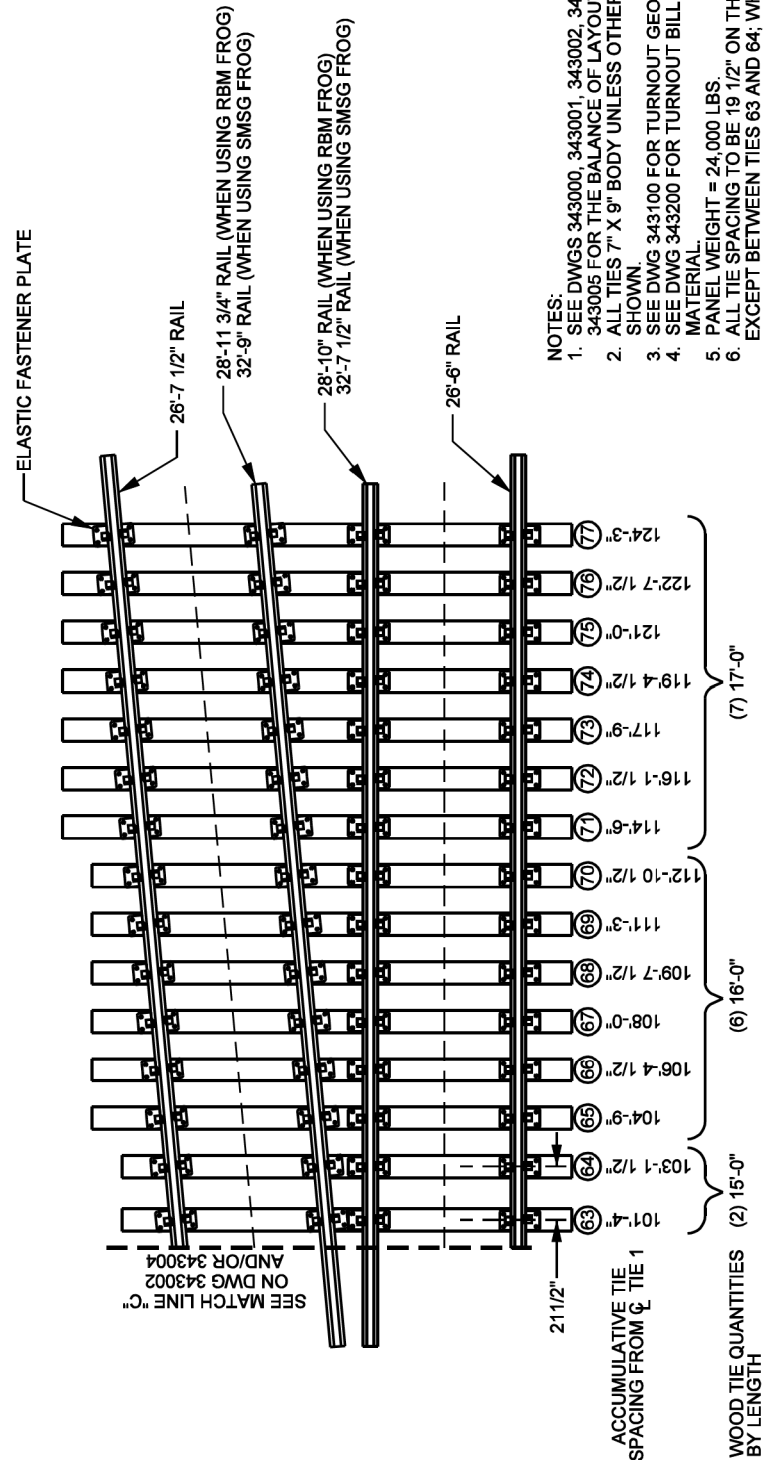
FILE OWNER: BNSF
REV. NO.: 5
DATE: AUG. 26, 2009
DWG NO: 343002

UPRR	BNSF RH	BNSF LH
136LB. RBM	004710299	004710307
136LB. SPR	004710315	004710323
136LB. SOLID	004710331	004710349
141LB. RBM	005252739	005252721
141LB. SPR	005252754	005252747
141LB. SOLID	N/A	N/A

22-9

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CITY COPY**
City of Garden City, KS

Project Number: SPFC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal



- NOTES:
- SEE DWGS 343000, 343001, 343002, 343004, AND 343005 FOR THE BALANCE OF LAYOUT PLANS.
 - ALL TIES 7" X 9" BODY UNLESS OTHERWISE SHOWN.
 - SEE DWG 343100 FOR TURNOUT GEOMETRY.
 - SEE DWG 343200 FOR TURNOUT BILL OF MATERIAL.
 - PANEL WEIGHT = 24,000 LBS.
 - ALL TIE SPACING TO BE 19 1/2" ON THIS DWG, EXCEPT BETWEEN TIES 63 AND 64; WHICH ARE SHOWN AT 21 1/2".



COMMON STANDARDS

**NO. 11 TURNOUT 136/141 LB.
PANEL NO. 4**

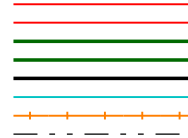
FILE OWNER: BNSF
REV. NO.: 3
DATE: AUG. 26, 2009
DWG NO: 343003

A-27

21-10

[illegible]

LEGEND:
 EXISTING MAINLINE TRACK
 EXISTING INDUSTRY TRACK
 PROPOSED RAILROAD TRACK
 PROPOSED INDUSTRY TRACK
 UPGRADE TRACK
 REMOVE TRACK
 SHIFT TRACK
 MAPPED RIGHT OF WAY



DRAWN BY:	RR
CHECKED BY:	CDS
DATE:	07/25/2024
SCALE:	AS NOTED



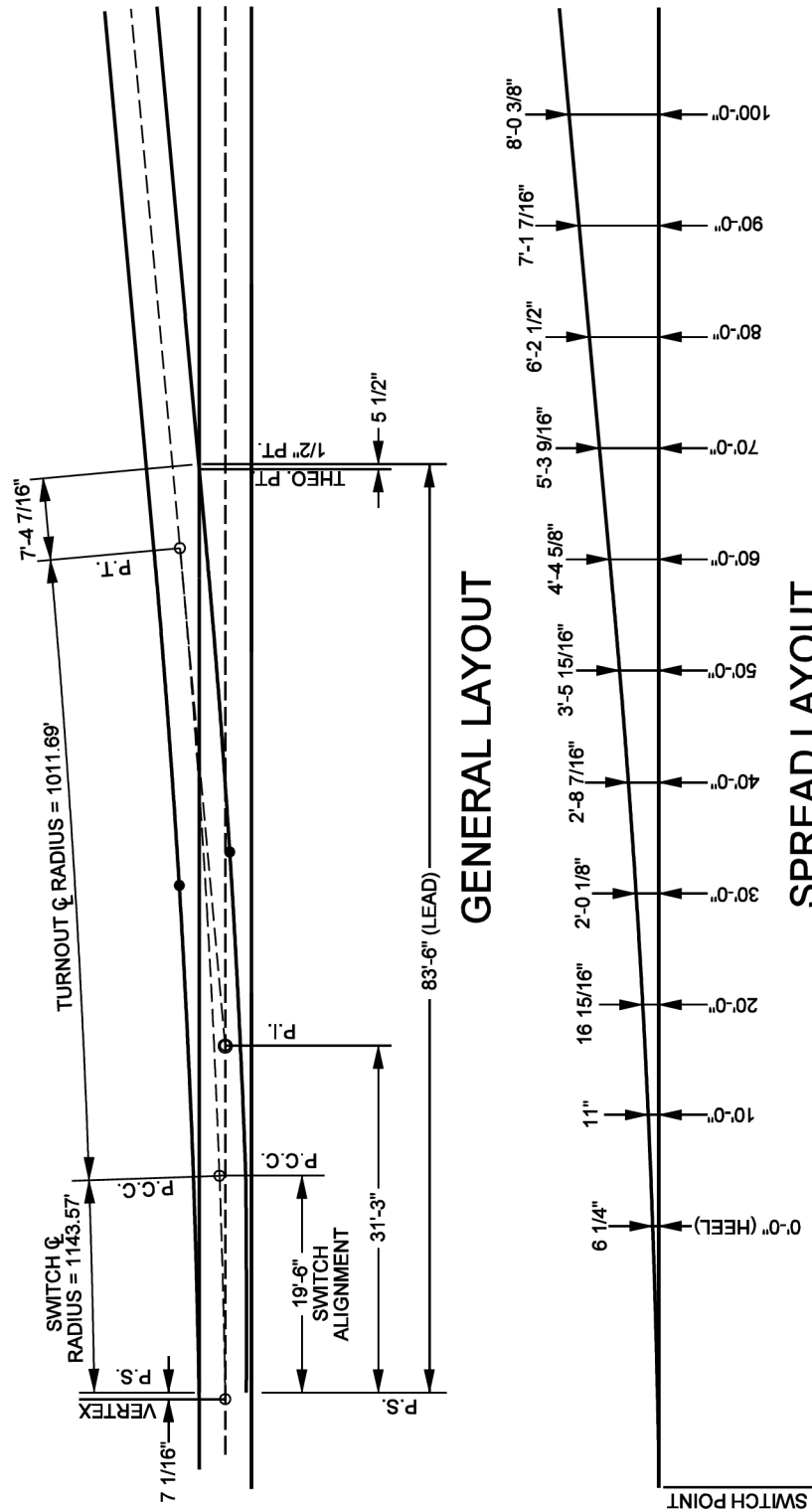
TYPICAL DETAIL

LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

**ISSUED FOR
REVIEW ONLY**

SHEET #
TD-03

SHEET
38 OF
45



GENERAL LAYOUT

SPREAD LAYOUT

SWITCH DATA	
SWITCH LENGTH	19'-6"
HEEL SPREAD	6 1/4"
HEEL ANGLE	1°-59'-16"
SWITCH ANGLE	1°-00'-40"
THROW AT ROD #1	4 3/4"
RADIUS (CENTER LINE)	1143.57'
T =	9.69'
CENTRAL ANGLE - CLOSURE CURVE	0°58'16"
DEGREE OF CURVE	5°00'06"
THICKNESS AT POINT	1/8"
RADIUS (CLOSURE CURVE)	1145.92'
VERTEX DISTANCE	7 1/16"

FROG DATA	
ANGLE	5°-12'-18"
LENGTH	VARIABLE

TURNOUT DATA

RADIUS OF CENTER LINE	1011.69'
T =	28.35'
CENTRAL ANGLE - CLOSURE CURVE	3°13'02"
DEGREE OF CURVE	5°40'44"

NOTES:



**NO. 11 TURNOUT 19'-6" CURVED
SWITCH TURNOUT GEOMETRY**

FILE OWNER: BNSF	DATE: JAN. 9, 2003
REV. NO.: 0	DWG NO: 343100

22-11

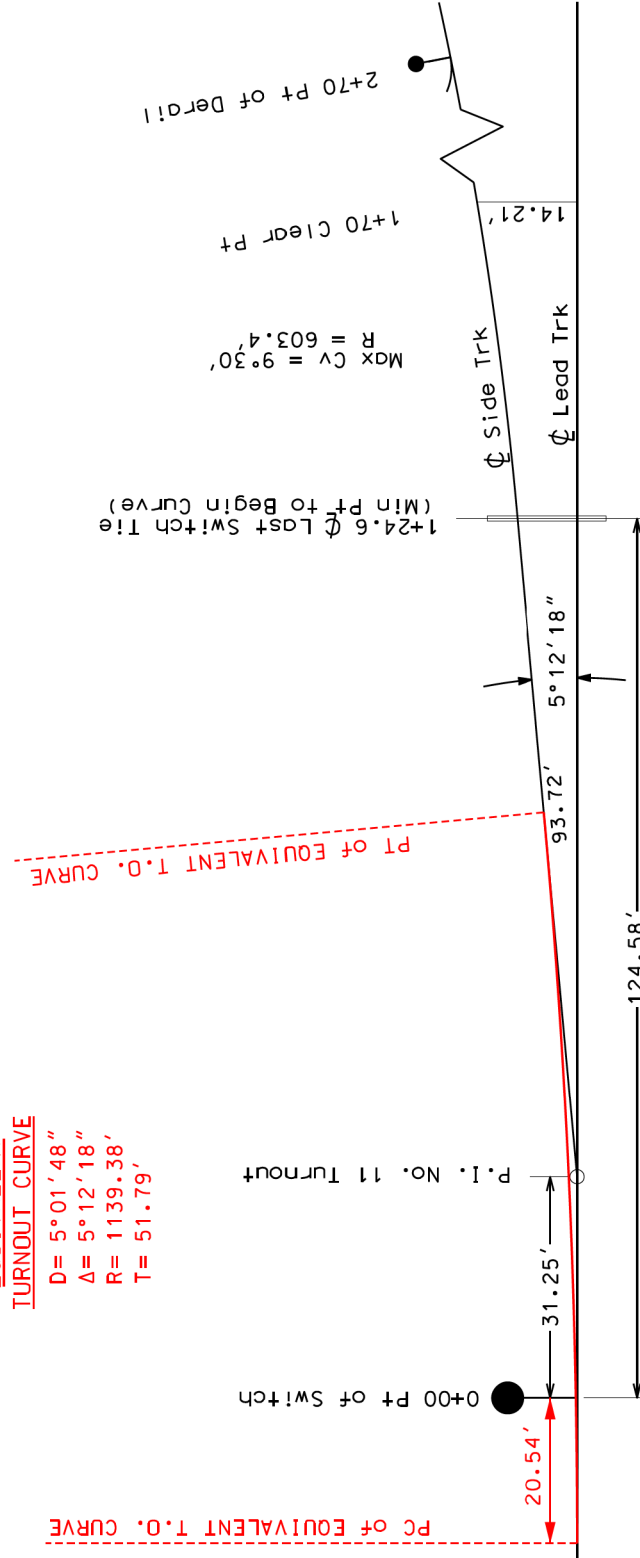
APPROVED

City of Garden City, KS

Project Number: SPFC24-25
 Approved by: SR
 Date: 26Jul2024
 No. of Pages: 59(PLANS)
2nd Submittal



D = 5° 01' 48"
Δ = 5° 12' 18"
R = 1139.38'
T = 51.79'

[illegible]

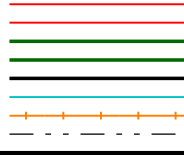
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PREPARED FOR:
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



REV. #	BY	DATE	DESCRIPTION

LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY



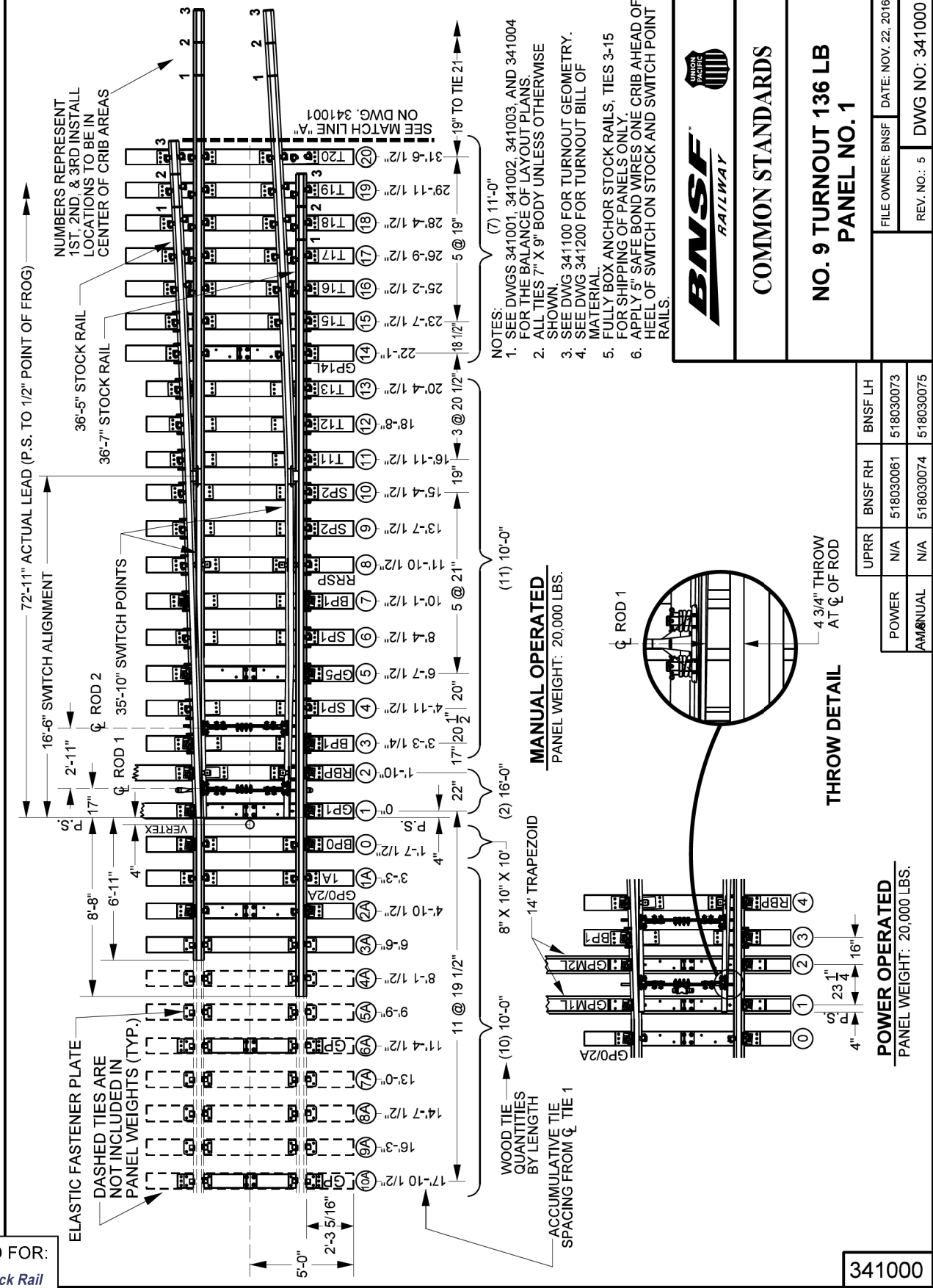
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CHECKED BY: CDS
DATE: 07/25/2024
SCALE: AS NOTED



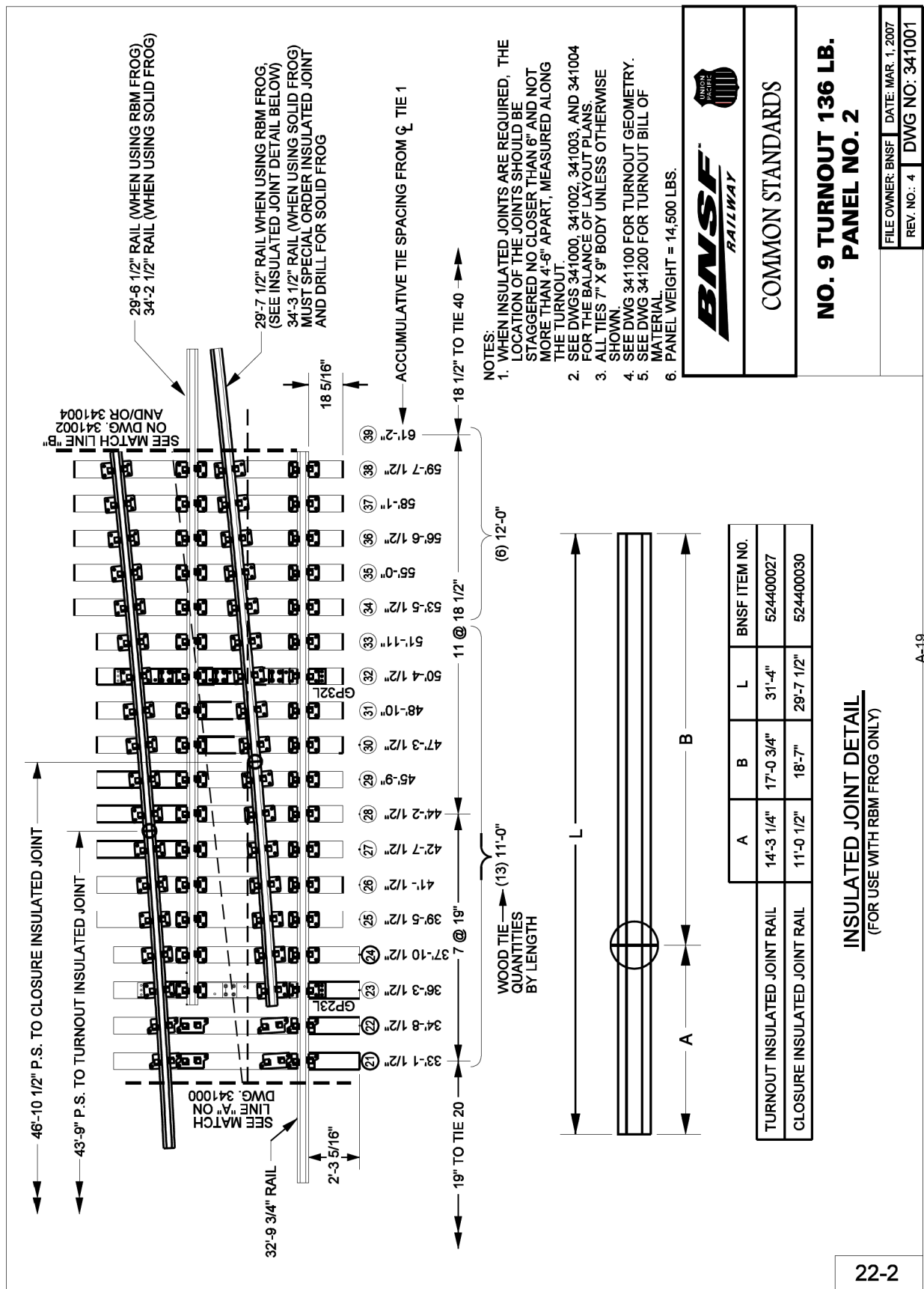
TYPICAL DETAIL
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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TD-04
39 OF 45



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City of Garden City, KS
Project Number: SPEC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal



22-2



LEGEND:
 EXISTING MAINLINE TRACK
 EXISTING INDUSTRY TRACK
 PROPOSED RAILROAD TRACK
 PROPOSED INDUSTRY TRACK
 UPGRADE TRACK
 REMOVE TRACK
 SHIFT TRACK
 MAPPED RIGHT OF WAY

22-3

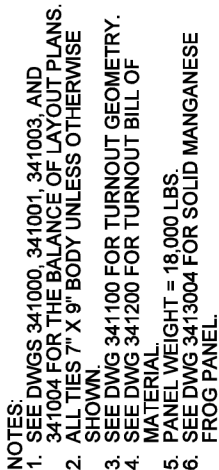
A-20



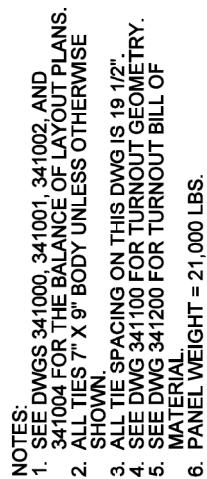
BNSF
RAILWAY

COMMON STANDARDS

**NO. 9 TURNOUT 136 LB.
PANEL NO. 3 WITH
OPTIONAL RBM FROG**



Ameritrack Rail
A DIVISION OF RAILSERVE, INC.



COMMON STANDARDS

**NO. 9 TURNOUT 136 LB.
PANEL NO. 4**

A-21

TYPICAL DETAIL

LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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TD-05

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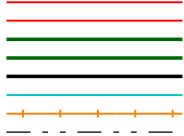
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PREPARED FOR:
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.

REV. #	BY	DATE	DESCRIPTION

LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY

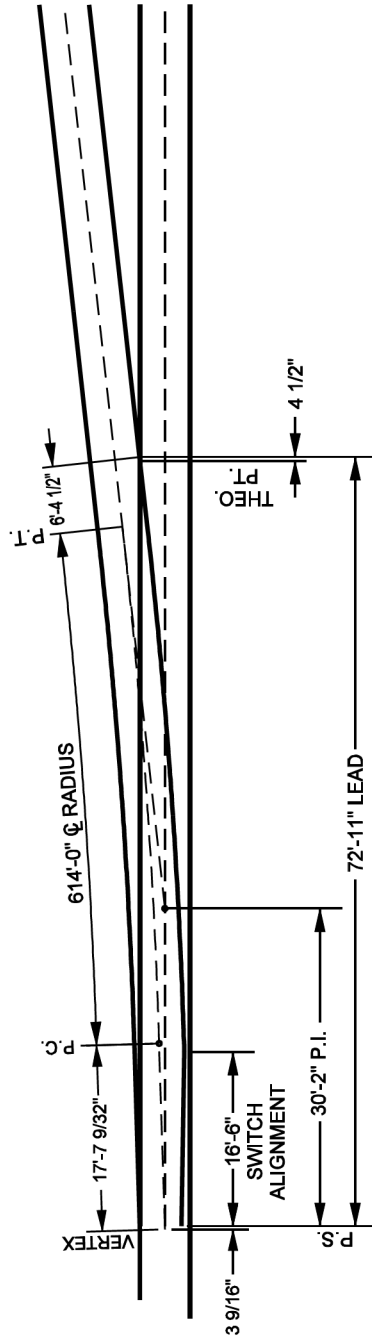


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DATE: 07/25/2024
SCALE: AS NOTED

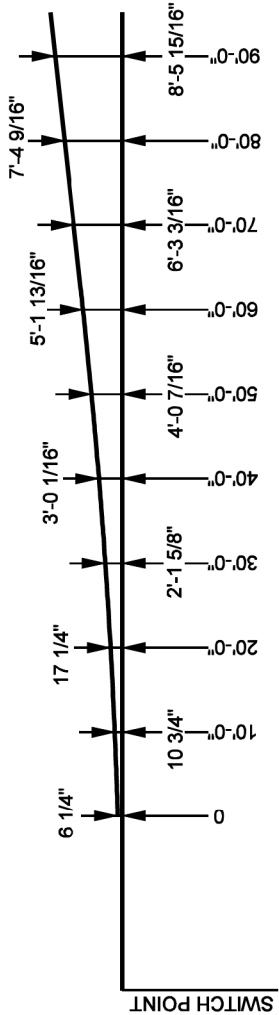


TYPICAL DETAIL
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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SHEET 41 OF 45
SHEET # TD-06



GENERAL LAYOUT



SPREAD LAYOUT

SWITCH DATA	
SWITCH LENGTH	16'-6"
HEEL SPREAD	6 1/4"
HEEL ANGLE	1°-48'-22"
SWITCH ANGLE	1°-48'-22"
THROW AT ROD #1	4 3/4"
THICKNESS AT POINT	0"
RADIUS (CLOSURE CURVE)	616.3542'
VERTEX DISTANCE	7 1/16"

FROG DATA	
ANGLE	6°-21'-35"
LENGTH	VARIES

TURNOUT DATA	
RADIUS OF CENTER LINE	614'
T =	24.59'
CENTRAL ANGLE - CLOSURE CURVE	4°-35'-13"
DEGREE OF CURVE	9°20'31"

TURNOUT POINT



COMMON STANDARDS

NO. 9 TURNOUT 16-6" STRAIGHT SWITCH TURNOUT GEOMETRY

FILE OWNER: BNSF
REV. NO.: 0
DATE: JAN. 8, 2003
DWG NO: 341100

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City of Garden City, KS
Project Number: SPFC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal

EQUIVALENT TURNOUT CURVE

D = 7°31'02"
Δ = 6°21'35"
R = 762.75'
T = 42.37'

PC of EQUIVALENT T.O. CURVE

0+00 Pt of Switch

P. I. No. 9 Turnout

PT of EQUIVALENT T.O. CURVE

1+07.4 Pt to Last Switch Tie
(Min Pt to Begin Curve)

Max Cv = 9°30'
R = 603.4'

1+47 Clear Pt

2+47 Pt of Derail

Side Trk

Lead Trk



NUMBER 9 TURNOUT
TRACK ALIGNMENT GEOMETRY

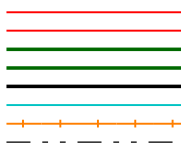
FILE: TURNOUTS.DGN
SHEET 1 OF 1
DATE: 05/06/2011



PREPARED FOR:
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.

REV. #	BY	DATE	DESCRIPTION

LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY

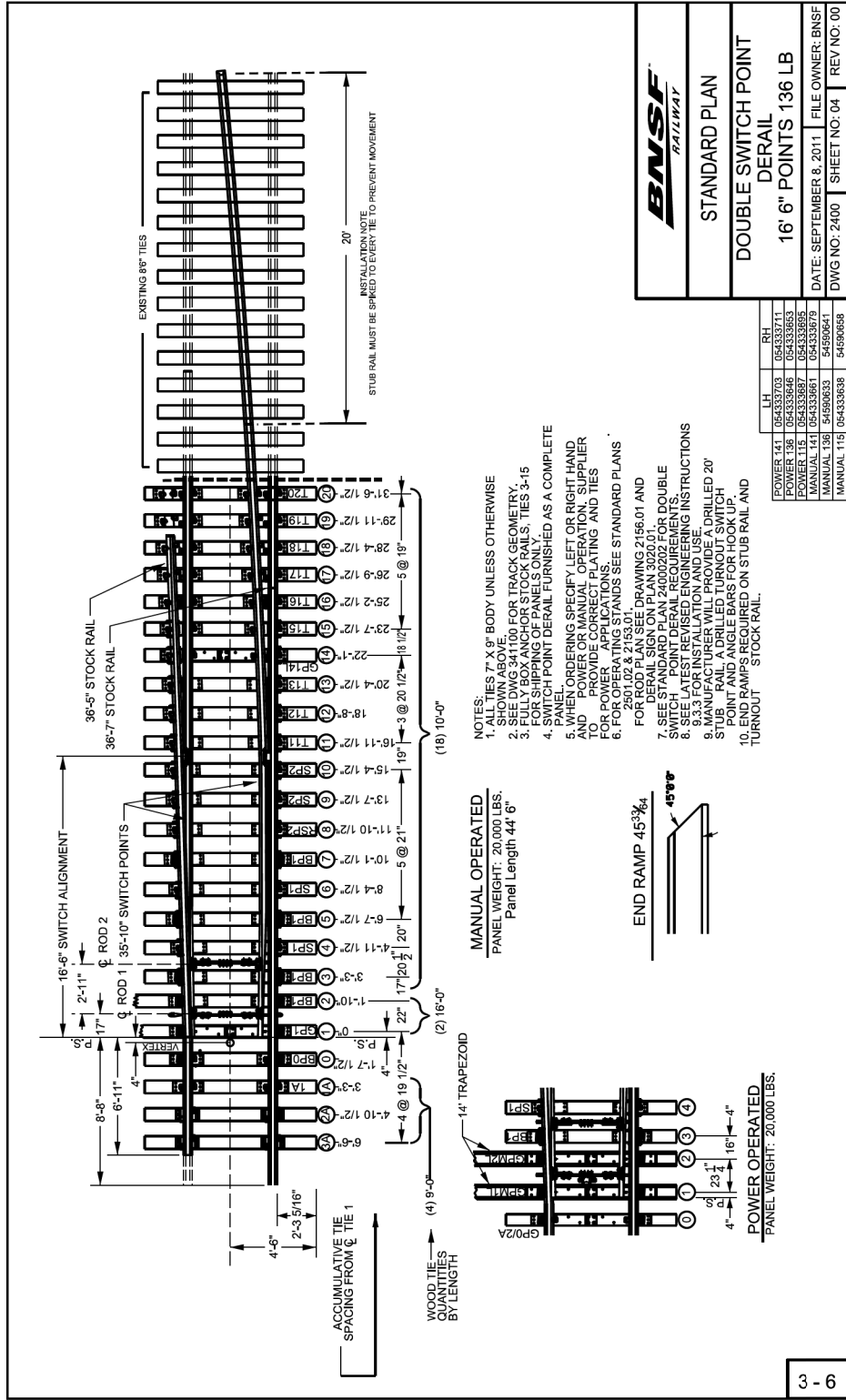


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DATE: 07/25/2024
SCALE: AS NOTED

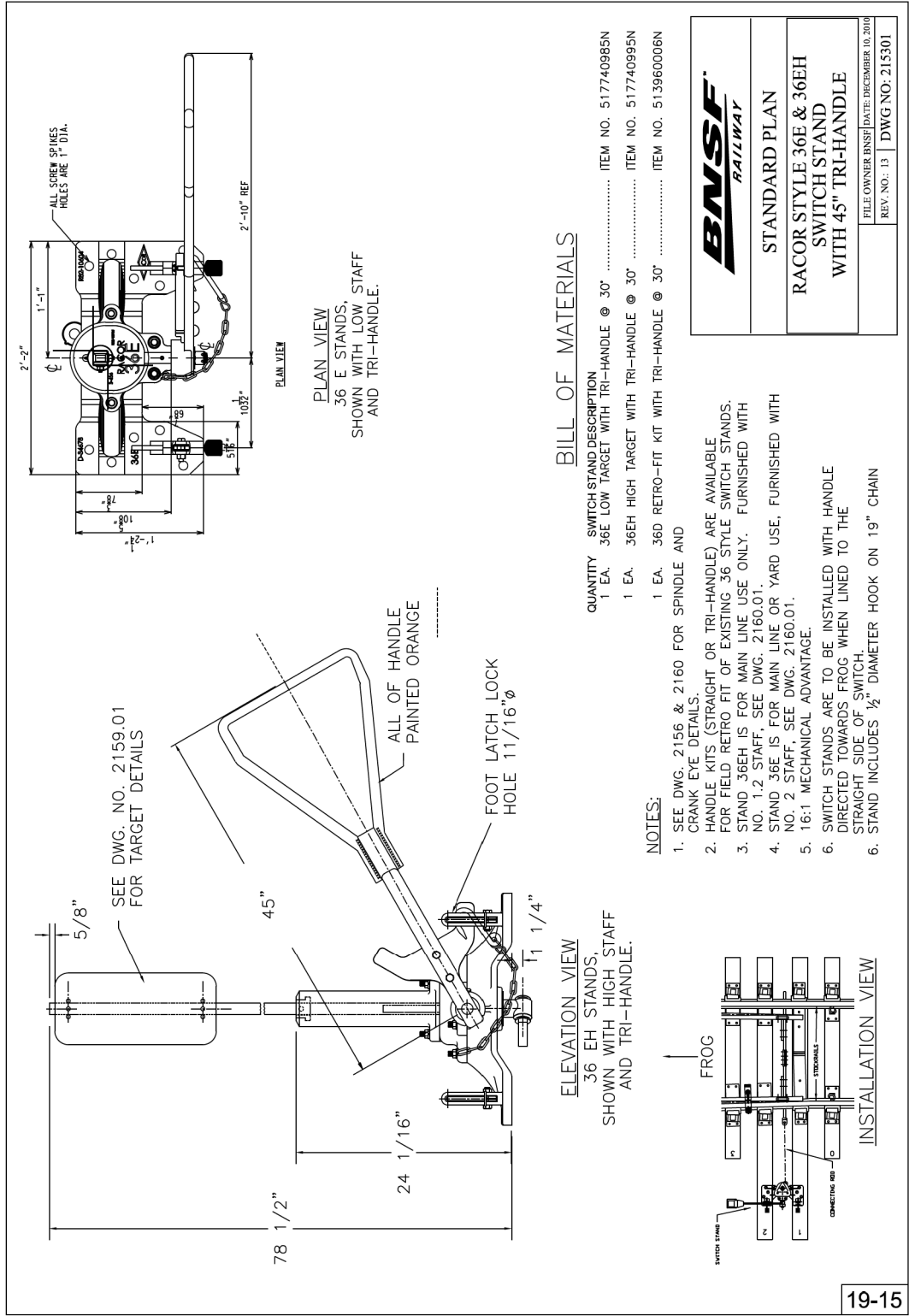


TYPICAL DETAIL
LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

ISSUED FOR REVIEW ONLY
SHEET 42 OF 45
SHEET # TD-07



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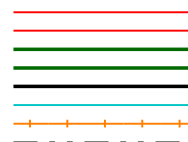


A-37

[illegible]

LEGEND:

- EXISTING MAINLINE TRACK
- EXISTING INDUSTRY TRACK
- PROPOSED RAILROAD TRACK
- PROPOSED INDUSTRY TRACK
- UPGRADE TRACK
- REMOVE TRACK
- SHIFT TRACK
- MAPPED RIGHT OF WAY



DRAWN BY:	RR
CHECKED BY:	CDS
DATE:	07/25/2024
SCALE:	AS NOTED



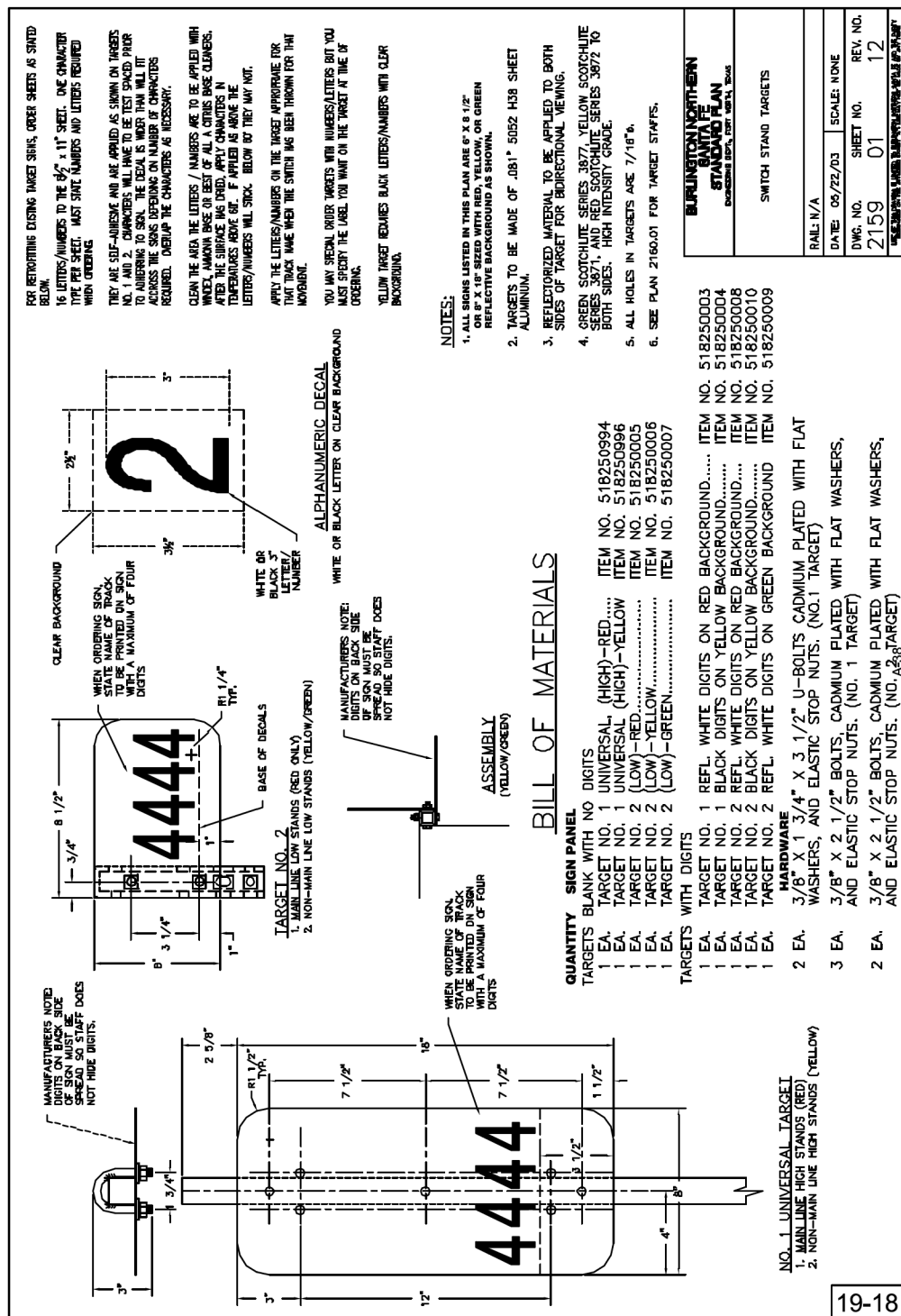
TYPICAL DETAIL

LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

**ISSUED FOR
REVIEW ONLY**

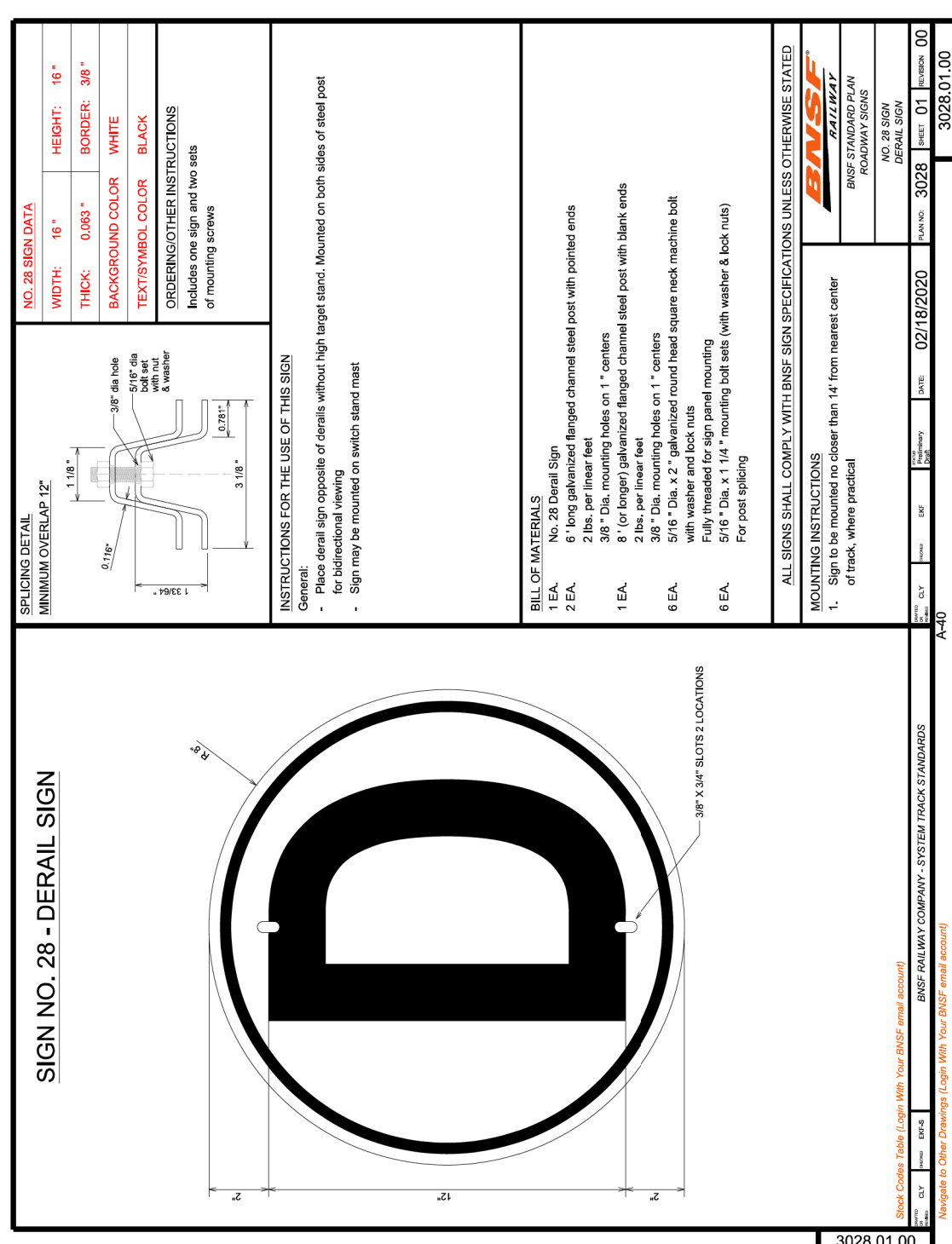
SHEET #
TD-08

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45



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 City of Garden City, KS

Project Number: SPFC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal



Stock Codes Table (Login With Your BNSF email account)

Navigable to Other Drawings (Login With Your BNSF email account)



LEGEND:

EXISTING MAINLINE TRACK	
EXISTING INDUSTRY TRACK	
PROPOSED RAILROAD TRACK	
PROPOSED INDUSTRY TRACK	
UPGRADE TRACK	
REMOVE TRACK	
SHIFT TRACK	
MAPPED RIGHT OF WAY	



ISSUED FOR
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SHEET #
TD-09

SHEET
44 OF
45

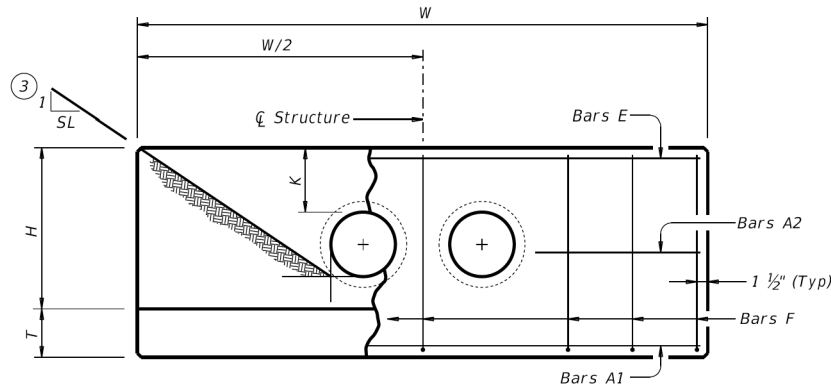
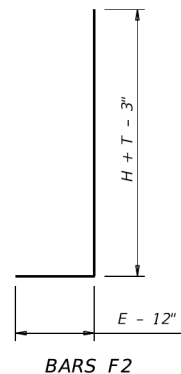
Ameritrack Rail
A DIVISION OF RAILSERVE, INC.

[illegible]

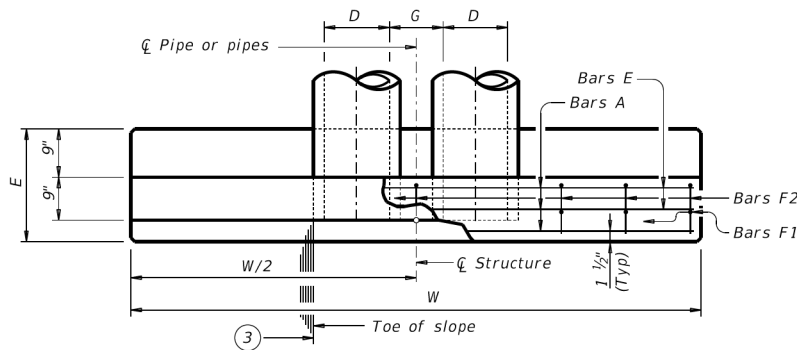
C:\Users\rram\OneDrive\PROJECTS\2023\Viaduct\23WINDRIVER\01_Garden_City_KS\Design\23WINDRIVER01_IFC.dgn 7/25/2024 5:01:05 PM

TABLE OF VARIABLE DIMENSIONS AND QUANTITIES FOR ONE HEADWALL^⑤

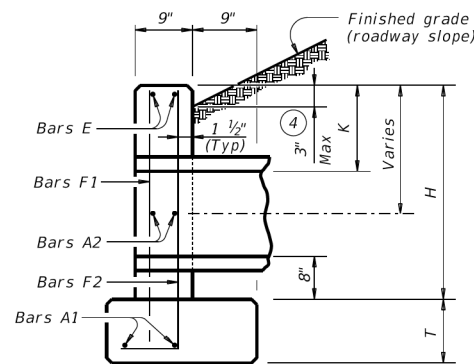
Slope	Dia of Pipe (D)	Values for One Pipe			Values To Be Added for Each Add'l Pipe		
		W	Reinf (Lbs) ①	Conc (CY) ②	W	Reinf (Lbs) ①	Conc (CY) ②
2:1	12"	9' - 0"	122	1.1	1' - 9"	15	0.2
	15"	10' - 3"	136	1.3	2' - 2"	16	0.2
	18"	11' - 6"	163	1.5	2' - 8"	19	0.3
	21"	12' - 9"	200	1.8	3' - 1"	31	0.4
	24"	14' - 0"	217	2.1	3' - 7"	34	0.4
	27"	15' - 3"	254	2.4	3' - 11"	37	0.5
	30"	16' - 6"	272	2.7	4' - 4"	40	0.6
	33"	17' - 9"	314	3.1	4' - 8"	43	0.6
	36"	19' - 0"	371	3.9	5' - 1"	46	0.8
	42"	21' - 6"	442	4.9	5' - 10"	52	1.0
	48"	25' - 0"	569	6.4	6' - 7"	59	1.3
	54"	27' - 6"	701	7.5	7' - 6"	82	1.6
	60"	30' - 0"	794	8.8	8' - 3"	90	1.8
	66"	32' - 6"	894	10.2	8' - 9"	96	2.0
	72"	35' - 0"	1,055	11.7	9' - 4"	103	2.3
3:1	12"	13' - 0"	175	1.6	1' - 9"	14	0.2
	15"	14' - 9"	193	1.9	2' - 2"	17	0.2
	18"	16' - 6"	228	2.2	2' - 8"	19	0.3
	21"	18' - 3"	299	2.6	3' - 1"	31	0.4
	24"	20' - 0"	323	3.0	3' - 7"	33	0.4
	27"	21' - 9"	371	3.5	3' - 11"	37	0.5
	30"	23' - 6"	415	4.0	4' - 4"	40	0.5
	33"	25' - 3"	469	4.6	4' - 8"	43	0.6
	36"	27' - 0"	556	5.7	5' - 1"	46	0.8
	42"	30' - 6"	675	7.1	5' - 10"	52	1.0
	48"	35' - 6"	837	9.2	6' - 7"	59	1.3
	54"	39' - 0"	1,015	11.0	7' - 6"	84	1.6
	60"	42' - 6"	1,171	12.9	8' - 3"	91	1.8
	66"	46' - 0"	1,298	14.9	8' - 9"	98	2.0
	72"	49' - 6"	1,561	17.1	9' - 4"	103	2.3
4:1	12"	17' - 0"	229	2.0	1' - 9"	15	0.2
	15"	19' - 3"	266	2.4	2' - 2"	17	0.2
	18"	21' - 6"	308	2.9	2' - 8"	19	0.3
	21"	23' - 9"	382	3.5	3' - 1"	31	0.3
	24"	26' - 0"	430	3.9	3' - 7"	34	0.4
	27"	28' - 3"	486	4.7	3' - 11"	37	0.5
	30"	30' - 6"	539	5.2	4' - 4"	40	0.6
	33"	32' - 9"	603	6.0	4' - 8"	42	0.6
	36"	35' - 0"	738	7.5	5' - 1"	47	0.8
	42"	39' - 6"	881	9.3	5' - 10"	52	1.0
	48"	46' - 0"	1,102	12.1	6' - 7"	61	1.3
	54"	50' - 6"	1,364	14.4	7' - 6"	84	1.6
	60"	55' - 0"	1,547	16.9	8' - 3"	91	1.8
	66"	59' - 6"	1,741	19.5	8' - 9"	98	2.0
	72"	64' - 0"	2,077	22.4	9' - 4"	102	2.3
6:1	12"	25' - 0"	336	3.0	1' - 9"	14	0.2
	15"	28' - 3"	384	3.6	2' - 2"	17	0.2
	18"	31' - 6"	452	4.2	2' - 8"	19	0.3
	21"	34' - 9"	581	5.1	3' - 1"	31	0.4
	24"	38' - 0"	644	5.8	3' - 7"	34	0.4
	27"	41' - 3"	737	6.9	3' - 11"	37	0.5
	30"	44' - 6"	807	7.7	4' - 4"	39	0.6
	33"	47' - 9"	912	8.9	4' - 8"	44	0.6
	36"	51' - 0"	1,108	11.0	5' - 1"	48	0.8
	42"	57' - 6"	1,318	13.7	5' - 10"	54	1.0
	48"	67' - 0"	1,682	17.9	6' - 7"	59	1.3
	54"	73' - 6"	2,072	21.3	7' - 6"	83	1.6
	60"	80' - 0"	2,351	24.9	8' - 3"	89	1.8
	66"	86' - 6"	2,643	28.9	8' - 9"	96	2.0
	72"	93' - 0"	3,121	33.1	9' - 4"	101	2.3



ELEVATION



PLAN OF NON-SKEWED PIPES



SECTION AT CENTER OF PIPE

- ① Total quantities include one 3'-1" lap for bars over 60' in length.
- ② Quantities shown are for concrete pipe and will increase slightly for metal pipe installations.
- ③ Indicated slope is perpendicular to centerline pipe or pipes.
- ④ For vehicle safety, construct curbs no more than 3" above finished grade. Reduce curb heights, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- ⑤ Dimensions shown are usual and maximum.
- ⑥ Quantities shown are for one structure end only (one headwall).

TABLE OF CONSTANT DIMENSIONS

Dia of Pipe (D)	G	K ⑤	H	T	E
12"	0' - 9"	1' - 0"	2' - 8"	0' - 9"	1' - 9"
15"	0' - 11"	1' - 0"	2' - 11"	0' - 9"	1' - 9"
18"	1' - 2"	1' - 0"	3' - 2"	0' - 9"	1' - 9"
21"	1' - 4"	1' - 0"	3' - 5"	0' - 9"	2' - 0"
24"	1' - 7"	1' - 0"	3' - 8"	0' - 9"	2' - 0"
27"	1' - 8"	1' - 0"	3' - 11"	0' - 9"	2' - 3"
30"	1' - 10"	1' - 0"	4' - 2"	0' - 9"	2' - 3"
33"	1' - 11"	1' - 0"	4' - 5"	0' - 9"	2' - 6"
36"	2' - 1"	1' - 0"	4' - 8"	1' - 0"	2' - 6"
42"	2' - 4"	1' - 0"	5' - 2"	1' - 0"	2' - 9"
48"	2' - 7"	1' - 3"	5' - 11"	1' - 0"	3' - 0"
54"	3' - 0"	1' - 3"	6' - 5"	1' - 0"	3' - 3"
60"	3' - 3"	1' - 3"	6' - 11"	1' - 0"	3' - 6"
66"	3' - 3"	1' - 3"	7' - 5"	1' - 0"	3' - 9"
72"	3' - 4"	1' - 3"	7' - 11"	1' - 0"	4' - 0"

TABLE OF REINFORCING STEEL^⑥

Bar	Size	Spa	No.
A1	#5	~	2
A2	#5	1' - 6"	~
E	#5	~	2
F	#5	1' - 0"	~

MATERIAL NOTES:
Provide Grade 60 reinforcing steel.
Provide Class C concrete (f'c = 3,600 psi).

GENERAL NOTES:
Designed according to AASHTO LRFD Bridge Design Specifications.
Do not mount bridge rails of any type directly to these culvert headwalls.
This standard may not be used for wall heights, H, exceeding the values shown.

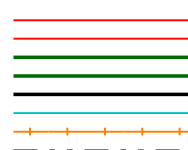
Cover dimensions are clear dimensions, unless noted otherwise.
Reinforcing dimensions are out-to-out of bars.

PREPARED FOR:



REV. #	BY	DATE	DESCRIPTION

LEGEND:
EXISTING MAINLINE TRACK
EXISTING INDUSTRY TRACK
PROPOSED RAILROAD TRACK
PROPOSED INDUSTRY TRACK
UPGRADE TRACK
REMOVE TRACK
SHIFT TRACK
MAPPED RIGHT OF WAY



DRAWN BY: RR
CHECKED BY: CDS
DATE: 07/25/2024
SCALE: AS NOTED



TYPICAL DETAIL

LS - 7300, MP 399.01, LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

ISSUED FOR REVIEW ONLY

SHEET #
TD-10
SHEET
OF
45

GENERAL NOTES:

CONCRETE:

- 1. CONCRETE MATERIAL, PLACING AND CURING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED IN THE CURRENT BNSF SPECIFICATIONS.
- 2. ALL CONCRETE COMPRESSIVE STRENGTHS SHOWN ON PLAN SHEET S-02 ARE MINIMUM AT 28 DAYS.
- 3. ESTIMATED WEIGHT OF PRECAST COMPONENTS PROVIDED THROUGHOUT ARE BASED ON NOMINAL DIMENSIONS AND A CONCRETE UNIT WEIGHT OF 156 POUNDS PER CUBIC FOOT. WEIGHTS SHOWN INCLUDE ESTIMATED WEIGHTS OF EMBED PLATES.

REINFORCING STEEL:

- 1. REINFORCING STEEL MATERIAL FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT BNSF STANDARD CONSTRUCTION SPECIFICATIONS. BARS CROSSING CURB JOINT SHALL CONFORM TO A.S.T.M. A1035 AND MEET GRADE 100 REQUIREMENTS. ALL REINFORCING BARS REQUIRED TO MEET A.S.T.M. A1035 ARE NOTED UNDER PLAN SHEET S-09 REBAR BENDING DIAGRAM. REINFORCING SCHEDULES ARE AVAILABLE ON COMPONENT PLAN SHEETS.
- 2. TACK WELDING OF REINFORCING IS PROHIBITED.

PRESTRESSING STRANDS:

- 1. STRAND SHALL BE TESTED IN ACCORDANCE WITH P.C.I. RECOMMENDATION (MOUSTAFA METHOD) AND CERTIFIED BY THE FABRICATOR AS HAVING ADEQUATE BOND CHARACTERISTICS TO SATISFY THE PREDICTION EQUATIONS FOR TRANSFER AND DEVELOPMENT LENGTH GIVEN IN THE A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING.
- 2. AN ALTERNATE STRAND PATTERN WHICH HAS THE SAME ECCENTRICITY AS THE PATTERN SHOWN AND IS BETTER SUITED TO THE MANUFACTURER'S FACILITIES WILL BE CONSIDERED. MANUFACTURER MUST SUBMIT PLANS AND COMPUTATIONS FOR RAILROAD APPROVAL PRIOR TO CASTING.
- 3. PRESTRESSING STRAND MATERIAL, FABRICATION, INSTALLATION AND STRESSING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT BNSF STANDARD CONSTRUCTION SPECIFICATIONS.

CONCRETE CURB:

- 1. CURB SHALL BE CAST ON PRESTRESSED BEAM ONLY AFTER STRANDS ARE DETENSIONED. BOND NEW CONCRETE TO PRESTRESSED BEAM USING APPROVED CONCRETE BONDING AGENT ACCORDING TO MANUFACTURER'S INSTRUCTIONS.
- 2. PREFORMED ½" X 6" ASPHALT EXPANSION BOARD SHALL BE PLACED TO DIVIDE CURB INTO EQUAL SEGMENTS. SEE PLAN SHEET S-10 FOR NUMBER OF SEGMENTS. SEAL TOP AND SIDES OF CURB AT ASPHALT EXPANSION BOARD WITH APPROVED JOINT SEALANT. A 3" DIAMETER DRAIN OPENING SHALL BE FORMED AT THE CENTER OF EACH CURB JOINT AT THE BASE.
- 3. IF LENGTH OF CURB CANNOT BE EQUALLY SPACED, ADJUST CURB LENGTH SO THAT JOINT BETWEEN CURBS IS AT LEAST 12" FROM HANDRAIL POST HOLES. LENGTH OF STRAIGHT REINFORCING STEEL IN CURB SHALL THEN BE RECALCULATED TO ACCOMMODATE A 2½" CLEAR AT ENDS OF CURBS.
- 4. FOR BEAMS LOCATED OVER ROADWAYS, THE DRAIN OPENING SHALL BE COVERED WITH WIRE SCREEN TO PREVENT BALLAST FROM FALLING OFF BEAMS. SCREEN SHALL BE INDUSTRIAL WIRE SCREEN MEETING THE REQUIREMENTS SPECIFIED IN A.S.T.M. E437-85, HEAVY GRADE, ¾" OPENING, PLANE WEAVE, GALVANIZED SHEET.

CEMENTITIOUS GROUT:

- 1. UNLESS OTHERWISE SPECIFIED, GROUT SHALL BE NON-SHRINK GROUT CONFORMING TO A.S.T.M. C1107, WITH A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI.
- 2. GROUT SHALL BE MIXED PER MANUFACTURER INSTRUCTIONS TO ACHIEVE A PLASTIC CONSISTENCY. LIQUID OR FLOWABLE, MIX SHALL NOT BE USED UNLESS IT IS PLACED IN A FORM AND PROPERLY CONSOLIDATED.
- 3. WHEN GROUT IS USED AS A LEVELING PAD, WEDGES MAY BE PLACED AT THE CORNERS OF THE GROUT AREA TO MAINTAIN PROPER ELEVATION OF THE SUPPORTED MEMBER. WHEN USING THIS PROCEDURE, THE WEDGES ARE PLACED AND ELEVATIONS CHECKED PRIOR TO MIXING AND PLACING GROUT. GROUT SHALL BE PLACED SO THAT WHEN THE MEMBER IS SET IN PLACE, GROUT IS DISPLACED ENSURING CONSISTENT CONTACT BETWEEN THE GROUT AND THE SURFACE OF THE ADJOINING MEMBERS. REMOVE THE WEDGES AFTER INITIAL SET OF GROUT AND PATCH HOLES WITH GROUT.
- 4. WHEN USING GROUT TO ANCHOR BARS IN CONCRETE, GROUT SHALL BE MIXED TO A FLOWABLE CONSISTENCY PER MANUFACTURER'S INSTRUCTIONS. WHEN NOT CALLED OUT ON PLANS OR IN MANUFACTURER'S INSTRUCTIONS, DRILLED HOLES SHALL BE A MINIMUM OF ¼" GREATER IN DIAMETER THAN THE ANCHORED BAR.
- 5. ALL SURFACES SHALL BE DRY, CLEAN, AND FREE OF DUST, DIRT, OR OTHER DEBRIS AT PLACEMENT.
- 6. ALL PRODUCTS MUST BE REVIEWED & APPROVED BY BNSF BEFORE ARRIVAL AT ANY BNSF PROPERTY.

EPOXY:

- 1. EPOXY RESINS USED FOR ANCHORING DOWEL BARS OR ANCHOR BOLTS SHALL CONFORM TO A.S.T.M. C881, TYPE IV. ANCHORAGE DEVICES SHALL BE DEFORMED REINFORCING BARS, WEDGED ANCHOR BOLTS, OR THREADED RODS. SMOOTH BARS SHALL NOT BE USED WITH EPOXY ANCHORAGE.
- 2. EPOXY RESINS USED FOR BONDING HARDENED CONCRETE TO HARDENED CONCRETE SHALL CONFORM TO A.S.T.M. C881, TYPE IV. APPROPRIATE MEASURES SHALL BE TAKEN TO ENSURE FIRM CONTACT BETWEEN THE EPOXY AND BONDED SURFACES.
- 3. EPOXY RESINS USED FOR BONDING FRESH CONCRETE TO HARDENED CONCRETE SHALL CONFORM TO A.S.T.M. C881, TYPE V.
- 4. MIXING AND PLACEMENT OF EPOXY RESIN MATERIALS SHALL BE PERFORMED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ALL SURFACES SHALL BE DRY, CLEAN AND FREE OF DUST, DIRT, OR OTHER DEBRIS AT TIME OF PLACEMENT.
- 5. ALL PRODUCTS MUST BE REVIEWED & APPROVED BY BNSF BEFORE ARRIVAL AT ANY BNSF PROPERTY.

STRUCTURAL & MISCELLANEOUS STEEL:

- 1. IN ACCORDANCE WITH CURRENT A.W.S. BRIDGE WELDING CODE D1.5 AND AREMA MANUAL CHAPTER 15 FOR RAILWAY ENGINEERING. ALL WELD METAL MUST BE EQUIVALENT TO THE BASE METAL IN STRENGTH, CORROSION RESISTANCE, AND WEATHERED APPEARANCE.
- 2. FABRICATION AND ARC WELDING OF STRUCTURAL STEEL AND HANDRAIL PANELS SHALL BE IN ACCORDANCE WITH CHAPTER 15, PART 3 OF THE CURRENT A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING; MIG WELDING SHALL BE USED ON HANDRAIL PANELS.
- 3. SHEAR CONNECTOR STUDS SHALL BE AUTOMATICALLY END WELDED WITH COMPLETE FUSION IN ACCORDANCE WITH SECTION 7 OF THE CURRENT A.W.S. STRUCTURAL WELDING CODE D1.1.
- 4. ALL STRUCTURAL STEEL DENOTED IN THE PLANS AS "IMPACT TESTING REQUIRED" (ITR) SHALL CONFORM TO A.S.T.M. A709, GRADE 50WT2 AND SHALL MEET IMPACT REQUIREMENTS FOR HIGH STRENGTH STRUCTURAL STEEL PER CHAPTER 15 OF THE AREMA MANUAL. DECK PLATES, DIAPHRAGMS AND OTHER SECONDARY MEMBERS SHALL BE EXEMPT FROM IMPACT TEST REQUIREMENTS.
- 5. FABRICATION AND WORKMANSHIP SHALL CONFORM TO THE AREMA MANUAL CHAPTER 15 FOR RAILWAY ENGINEERING.
- 6. GALVANIZED ELEMENTS SHALL BE FREE OF FINS, ABRASIONS, ROUGH OR SHARP EDGES AND OTHER SURFACES DEFECTS.
- 7. ALL RE-ENTRANT CUTS TO BE FILLETED A MINIMUM 1" RADIUS, UNLESS OTHERWISE SHOWN.
- 8. ALL CORNER CLIPS TO BE 1" X 1", UNLESS OTHERWISE SHOWN.
- 9. ALL BOLTS SHALL BE TIGHTENED BY THE TURN-OF-NUT METHOD TO OBTAIN PROPER BOLT TENSION.
- 10. ADJACENT WALKWAY PANELS SHALL NOT LAND ON THE SAME SUPPORT EXCEPT AT THE END OF SPANS.
- 11. HANDRAIL PANELS ON WALKWAYS SHALL BE ERECTED PLUMB AND IN LINE.
- 12. UNLESS OTHERWISE NOTED WITHIN PLANS, ALL MATERIALS USED SHALL CONFORM TO TABLE BELOW:

ALL STRUCTURAL STEEL	A.S.T.M. A709, GRADE 50W
ALL MISCELLANEOUS STEEL (STEEL CHANNELS, BARS, PLATES, ANGLES)	A.S.T.M. A36
FASTENERS	7⁄8" DIAMETER HEAVY HEX BOLTS A.S.T.M. F3125, GRADE A325, TYPE 3 (COMPONENTS OF CORRESPONDING GRADE)
WASHERS	7⁄8" (NOMINAL) A.S.T.M. F436-3
FASTENER HOLES	15⁄16" DIAMETER
ANCHOR BOLTS (FOR BEARINGS)	A.S.T.M. F1554, GRADE 105
BALLAST PAN PLATES	NON-WEATHERING STEEL A.S.T.M. A709, GRADE 50
STANDARD BLACK PIPES	A.S.T.M. A53 (UNCOATED)
SHEAR CONNECTOR STUDS	A.S.T.M. A108, GRADE 1020
GALVANIZED COMPONENTS (SPECIFIED WITHIN PLANS)	A.S.T.M. A123
D-RINGS	3" INNER DIAMETER (WEAR RESISTANT STEEL) WITH WELD ON BRACKET MINIMUM LOAD 1,000 LBS.

WATERPROOFING:

- 1. WATERPROOFING SYSTEM SHALL BE IN ACCORDANCE WITH SECTION 04800, WATERPROOFING, OF THE BNSF STANDARD CONSTRUCTION SPECIFICATIONS. ALL RELEVANT REQUIREMENTS OUTLINED UNDER A.R.E.M.A. CHAPTER 8, PART 29 SHALL BE FOLLOWED.
- 2. WHERE INDICATED AND CALLED FOR BY PROJECT DOCUMENTS, ONE LAYER OF INTEGRATED BALLAST MAT (IBM) SYSTEM MANUFACTURED BY BRIDGE PRESERVATION OR AN APPROVED EQUAL WILL BE PLACED ON THE DECK SURFACE (TOTAL THICKNESS OF APPROXIMATELY ¼") WHERE SPRAYED APPLIED WATERPROOFING WAS UTILIZED. THE IBM SYSTEM SHALL PASS THE NORTH AMERICAN BALLAST IMPACT TEST AND MODIFIED A.S.T.M. D1883 SPECIFIED IN A.R.E.M.A. CHAPTER 8, PART 29.10.3.3.(o) RESISTANCE TO PENETRATION, DYNAMIC LOADING. THE THICKNESS SUBMITTED SHALL BE SAME THICKNESS USED TO PASS THESE SPECIFIED TESTS.
- 3. PRIMED SHALL BE APPLIED TO BALLAST PAN AND CURB FACE, 1'-4" MIN. ON EACH SIDE.
- 4. FABRICATOR SHALL SUBMIT DETAILED APPLICATION PROCEDURES, MATERIAL SPECIFICATIONS AND SHOP DRAWINGS FOR THE WATERPROOFING SYSTEM. WATERPROOFING SYSTEM MUST BE APPROVED PRIOR TO INSTALLATION.

BALLAST MATS ON BRIDGES:

- 1. IMPACT ATTENUATION DEVICES WILL ONLY BE REQUIRED IF SPECIFICALLY SPECIFIED WITHIN PROJECT DOCUMENTS. APPROVED IMPACT ATTENUATION DEVICES AND ASSOCIATED PRACTICES ARE OUTLINED UNDER THE LATEST VERSION OF BNSF STANDARD PLANS BNSF-1002.01 & BNSF-1002.02.

PAINTING:

- 1. WHEN SPECIFIED, EXPOSED PORTIONS OF PILING BETWEEN BOTTOM OF CAP AND ONE FOOT BELOW GROUND LINE, CHANNEL BRACING, ANGLE HANDRAIL AND ABRASIONS OR CUTS ON PAINTED STEEL SHALL BE PAINTED PER SECTION 04620, PROTECTIVE COATINGS FOR STEEL SURFACES, OF THE BNSF STANDARD CONSTRUCTION SPECIFICATIONS. PAINT APPLICATION SHALL BE TO A MINIMUM DRY FILM THICKNESS OF 8 MILS. ALL AREAS TO BE PAINTED SHALL BE CLEANED IN ACCORDANCE WITH THE STEEL STRUCTURES PAINTING COUNCIL SURFACE PREPARATION SPECIFICATION SSPC-SP6. PAINT SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- 2. ALL PRODUCTS MUST BE REVIEWED & APPROVED BY BNSF BEFORE ARRIVAL AT ANY BNSF PROPERTY.

PILES:

- 1. STEEL PILE MATERIAL SHALL CONFORM TO A.S.T.M. A572 GRADE 50.
- 2. PILES SHALL BE DRIVEN IN ACCORDANCE WITH THE BNSF STANDARD CONSTRUCTION SPECIFICATIONS. STEEL BEARING PILES SHALL BE DRIVEN TO REFUSAL IF POSSIBLE OR TO A MINIMUM ULTIMATE RESISTANCE OF 250 TONS AS DETERMINED BY THE MODIFIED ENGINEERING NEWS-RECORD FORMULA AS PER THE BNSF ENGINEERING INSTRUCTIONS SECTION 17. IF PENETRATION OF 25 FEET BELOW NATURAL OR FINISHED GROUND LINE, WHICHEVER IS LOWER, CANNOT BE ACHIEVED, CONTACT SYSTEM STRUCTURES OFFICE.
- 3. HAMMERS MUST BE APPROVED BY SYSTEM STRUCTURES OFFICE PRIOR TO USE. PILE DRIVING CRITERIA SHALL BE SUPPLIED BY SYSTEM STRUCTURES OFFICE.
- 4. ESTIMATED PILE LENGTHS ARE NOT TO BE USED AS BEARING OR DESIGN CRITERIA. ACTUAL PILE DEPTHS REQUIRED TO MEET DESIGN ARE DEPENDENT ON SITE SOIL CONDITIONS ACCORDING TO THE BORING LOG AND PILE DRIVING EQUIPMENT.
- 5. AFTER PILES ARE DRIVEN, THEY SHALL BE PULLED, IF NECESSARY, AND HELD IN THE PROPER LOCATION AND CUT OFF AT THE PROPER ELEVATION. THEY SHALL CONTINUE BEING HELD UNTIL THE PRECAST CAPS HAVE BEEN SET AND WELDED TO STEEL BEARING PILES.
- 6. PILE SPlicing SHOULD BE AT LEAST 15'-0" BELOW GROUNDLINE WHERE POSSIBLE. SEE PLAN SHEET S-14 FOR PILE SPLICE DETAILS.

MANUFACTURER'S NOTES:

- 1. PRODUCTION PROCEDURES AND DIMENSIONAL TOLERANCES FOR THE MANUFACTURE OF PRECAST, PRESTRESSED BEAMS SHALL BE IN ACCORDANCE WITH THE A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING, THE PRESTRESSED CONCRETE INSTITUTE'S CURRENT MANUAL MNL-116 FOR QUALITY CONTROL, AND CURRENT BNSF SPECIFICATIONS.
- 2. SURFACES SHALL BE FORMED IN A MANNER WHICH WILL PRODUCE A SMOOTH AND UNIFORM APPEARANCE WITHOUT RUBBING OR PLASTERING, UNLESS OTHERWISE NOTES, EXPOSED EDGES OF 90-DEGREES OR LESS ARE TO BE CHAMFERED ¾" X ¾". UNFORMED SURFACES SHALL HAVE A SMOOTH FINISH FREE OF ALL FLOAT AND TROWEL MARKS.
- 3. THE FABRICATOR SHALL STENCIL INFORMATION ACCORDING TO CURRENT BNSF SPECIFICATIONS AT LOCATIONS SHOWN IN THESE STANDARD PLANS.
- 4. THE AREA AROUND LIFTING LOOPS SHALL NOT BE RECESSED. LIFTING LOOPS TO BE REMOVED IN FIELD FLUSH WITH CONCRETE SURFACE.
- 5. INSPECTION, LOADING, AND SECURING FOR SHIPMENT: SHALL BE IN ACCORDANCE WITH CURRENT BNSF SPECIFICATIONS.
- 6. IF LIFTED WITH SLINGS INSTEAD OF LIFTING LOOPS, SLINGS MUST NOT BE PLACED MORE THAN 3'-0" FOR ENDS OF BEAMS.
- 7. FABRICATOR IS RESPONSIBLE FOR DEVELOPING LIFTING LOOP ANCHORAGE DETAIL TO PROVIDE SAFETY FACTOR OF 4 ON WORKING LOAD. DETAIL SHALL BE PROOF-TESTED WITH TEST RESULTS KEPT ON FILE BY FABRICATOR AND AVAILABLE FOR INSPECTION BY THE RAILROAD.
- 8. COIL LOOP INSERTS ARE TO BE DOUBLE FLARED B17, 1¼" X 12", AND HAVE A SAFE WORKING LOAD OF 13,500 LBS. WITH A 4 TO 1 SAFETY FACTOR. THE INSERTS ARE TO BE COMPLETELY RECESSED WITH 1¼" DIA. X 13" SPIRAL BOLTS ATTACHED TO CAP FOR SHIPMENT.
- 9. COIL LOOP INSERTS ARE TO BE SINGLE FLARED B18, 1" X 12", AS MANUFACTURED BY DAYTON SUPERIOR AND HAVE A SAFE WORKING LOAD OF 4,750 LB. WITH A 4:1 SAFETY FACTOR. THE INSERTS ARE TO BE COMPLETELY RECESSED WITH SPIRAL BOLTS FURNISHED IN THE INSERT.
- 10. BENT CAPS AND ABUTMENT CAPS SHALL BE PROVIDED WITH SUFFICIENT ELECTRICAL GROUND CONNECTION BETWEEN EMBED PLATES, TO AID IN FIELD WELD PRECEDURES.

ABBREVIATIONS:

∟	ANGLE	MIN.	MINIMUM
℄	CENTERLINE	MAX.	MAXIMUM
B.S.	BOTH SIDES	N/A	NOT APPLICABLE
BOT.	BOTTOM	NO.	NUMBER
CONC.	CONCRETE	O.D.	OUTSIDE DIAMETER
C.S.	CUBIC YARD	PL	PLATE
DIA.	DIAMETER	PLF	POUNDS PER LINEAR FOOT
E.F.	EACH FACE	PSI	POUNDS PER SQUARE INCH
EST.	ESTIMATED	S	SPAN LENGTH
FT.	FOOT	SPA.	SPACE
H	BENT HEIGHT	STD.	STANDARD
I.D.	INSIDE DIAMETER	STR.	STRAIGHT
IN.	INCHES	SYM.	SYMMETRIC
ITR	IMPACT TESTING REQUIRED	TL	TRIBUTARY LENGTH
KSI	KIPS PER SQUARE INCH	(TYP.)	TYPICAL
L	BEAM LENGTH (L = S - 2")	VERT.	VERTICAL
LBS.	POUNDS	WT.	WEIGHT

SHEET INDEX:

S-01	GENERAL NOTES	S-08	PRESTRESSED BOX BEAM #1
S-02	GENERAL LAYOUT	S-09	PRESTRESSED BOX BEAM #2
S-03	TYPICAL SECTIONS	S-10	CURB DETAILS
S-04	ELEVATION VIEW DETAILS	S-11	HAND RAILING LAYOUT
S-05	ABUTMENT DETAILS	S-12	RAILING & CURB PLATE DETAILS
S-06	WING WALL DETAILS	S-13	PLATE & BRACKET DETAILS
S-07	BENT DETAILS	S-14	LIFTING, PILE & REBAR DETAILS

APPROVED

CITY COPY

City of Garden City, KS

Project Number: SPEC24-25

Approved by: SR

Date: 26Jul2024

No. of Pages: 59(PLANS)

2nd Submittal

FILE C:\CDD PROJECT FILES\2024\6-24\03 BNSF Rail Bridge for West River Grain, Garden City, Kansas\01 - CADD - Bridge.dwg
PLOT DATE: 6/26/2024 9:11:32 AM BY: jms



viarailengineering.com



REV. #	BY	DATE	DESCRIPTION
REV. 0	CDS (W)	06/05/2024	100% PLAN - ISSUED FOR CONSTRUCTION



DRAWN BY:
CDS (W)

CHECKED BY:
ACK

DATE:
6/5/2024

SCALE:
AS NOTED



GENERAL NOTES

105': 3 SPAN 30" TDBX

MP 399.01 LA JUNTA SUB.

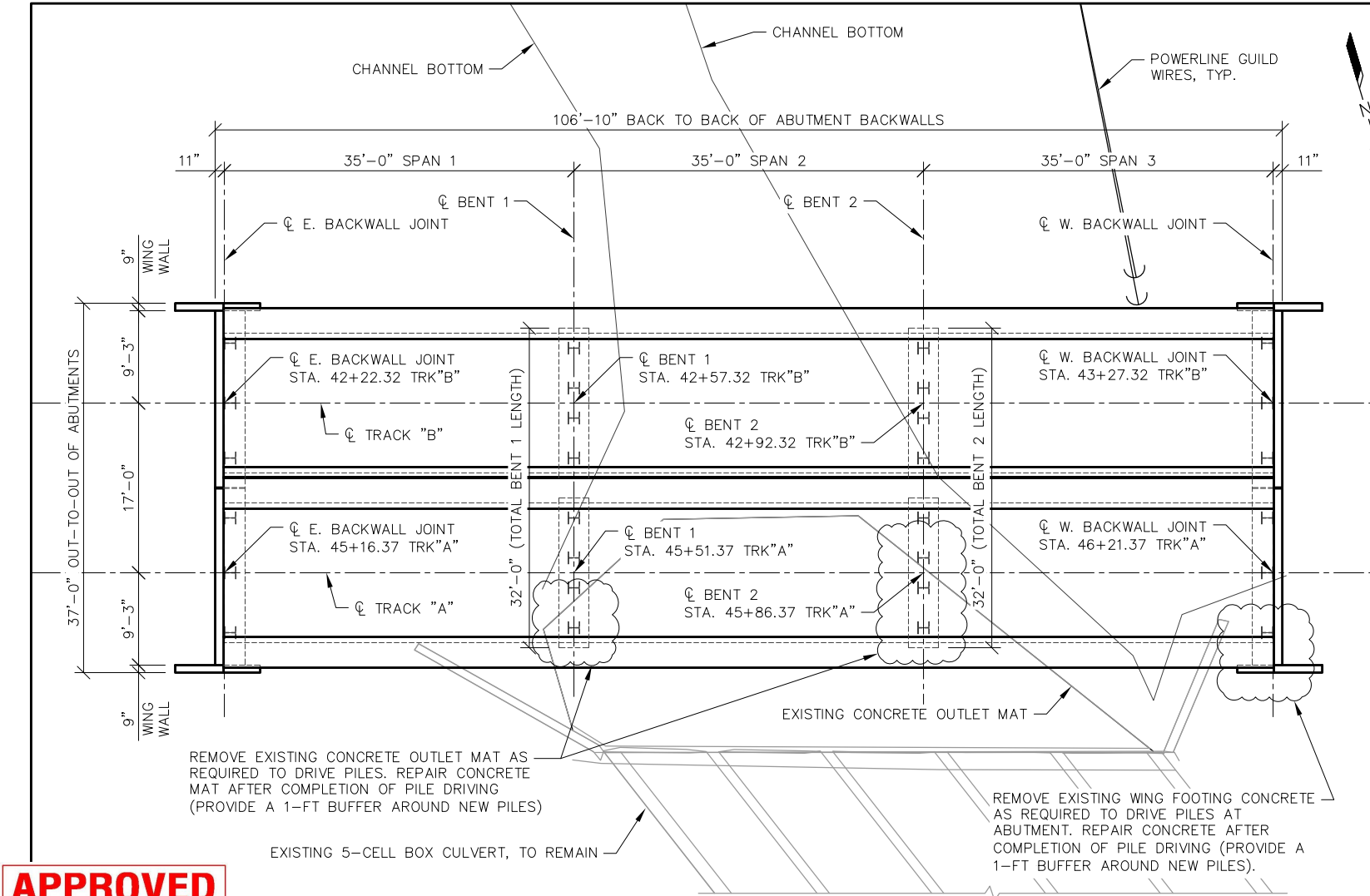
WIND RIVER GRAIN

GARDEN CITY, FINNEY COUNTY, KANSAS

ISSUED FOR CONSTRUCTION

SHEET #
S-01

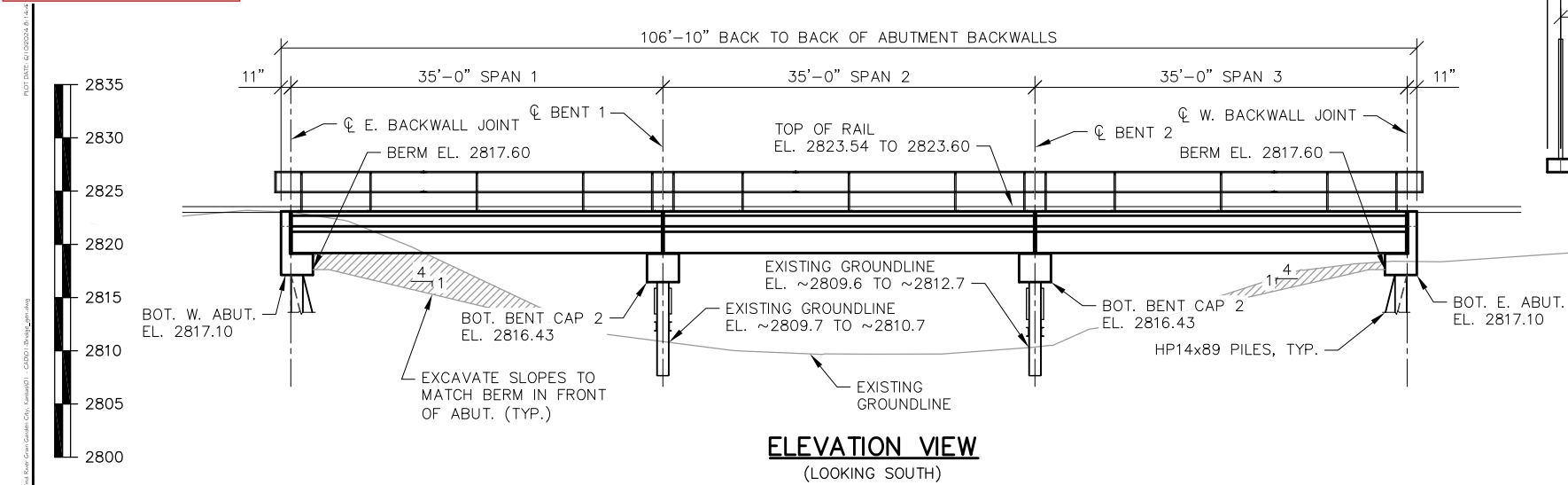
SHEET
36 OF
49



PLAN VIEW
(THREE SPAN BRIDGE)

APPROVED
CITY COPY
City of Garden City, KS

Project Number: SPEC24-25
Approved by: SR
Date: 26Jul2024
No. of Pages: 59(PLANS)
2nd Submittal



ELEVATION VIEW
(LOOKING SOUTH)

DESIGN SPECIFICATION

BNSF STANDARD PLAN: DATED ISSUED FEBRUARY 16, 2024

LOADING

- LIVE LOAD: COOPER E80. LIVE LOAD IS INCREASED 25% PER RAIL TO ACCOUNT FOR CENTRIFUGAL FORCE OR ECCENTRICITY OF TRACK PLACEMENT. TRACK ECCENTRICITY IS NOT TO EXCEED 6".
- IMPACT: DIESEL IMPACT PER CHAPTER 8 OF THE A.R.E.M.A. MANUAL FOR RAILWAY ENGINEERING.

DESIGN STRESSES

CONCRETE: PRECAST BOX BEAM $f'_c = 7,000$ PSI
PRECAST CURBS $f'_c = 4,000$ PSI
ALL OTHER CONCRETE $f'_c = 4,500$ PSI

REINFORCEMENT $f_y = 60,000$ PSI

PRESTRESSING STRANDS $f_u = 270,000$ PSI

CEMENTITIOUS GROUT $f'_c = 5,000$ PSI

ALL MISCELLANEOUS STEEL (A.S.T.M. A36) $f_y = 36,000$ PSI

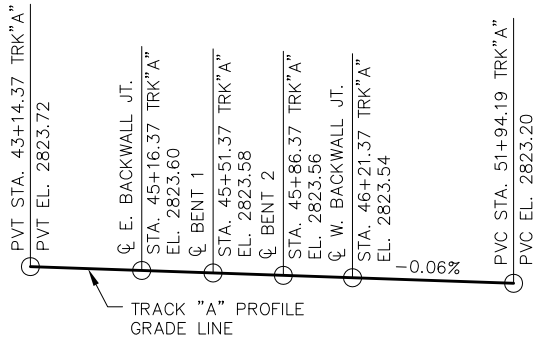
STEEL PILES (A.S.T.M. A572, GR. 50) $f_y = 50,000$ PSI

SEISMIC DATA

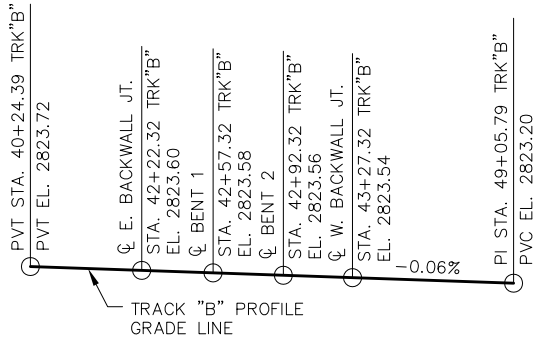
SEISMIC SITE CLASS DEFINITION = D
PEAK GROUND ACCELERATION (PGA) = 0.036
GROUND MOTION AT PERIOD 0.2s (S_s) = 0.077
GROUND MOTION AT PERIOD 1.0s (S_1) = 0.039

FOUNDATION DATA

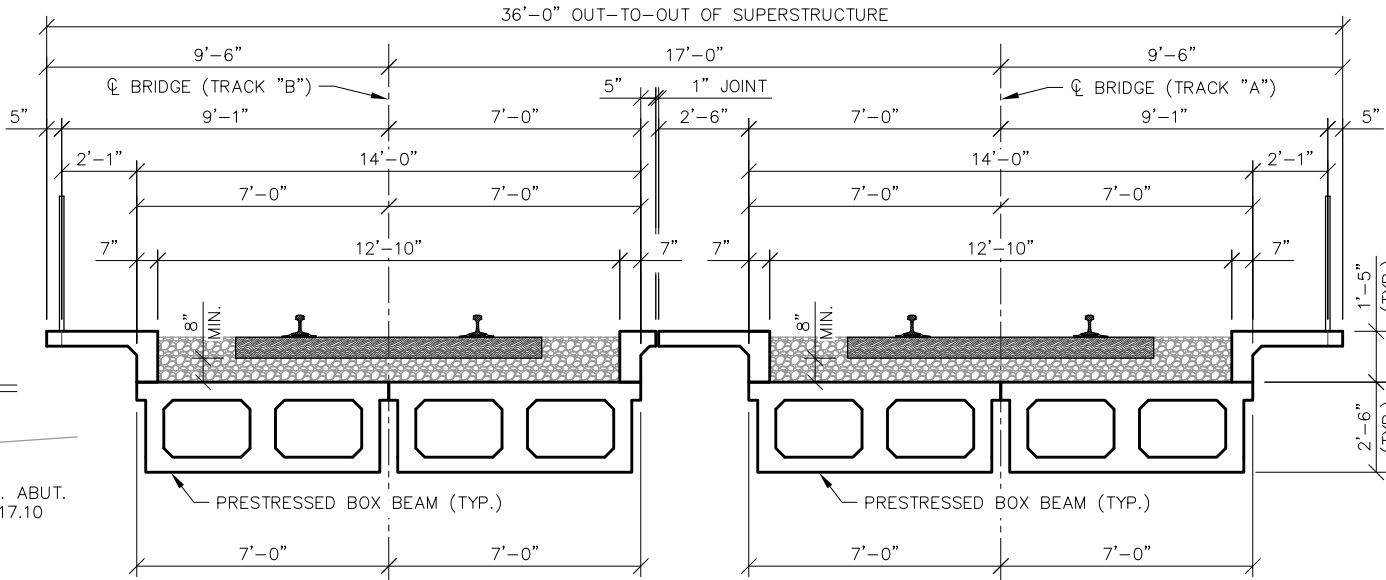
ABUTMENTS AND BENTS TO BE SUPPORTED ON HP14x89 PILING DRIVEN TO REFUSAL IF POSSIBLE OR TO A MINIMUM ULTIMATE RESISTANCE OF 250 TONS AS DETERMINED BY THE MODIFIED ENGINEERING NEWS-RECORD FORMULA AS PER THE BNSF ENGINEERING INSTRUCTIONS SECTION 17. ESTIMATED 90-FT PILE LENGTHS HOWEVER FINAL PILE LENGTHS ARE TO BE DETERMINED FOLLOWING THE COMPLETION OF A TEST PILE TO VERIFY LENGTH.



TRACK "A" PROFILE GRADE LINE

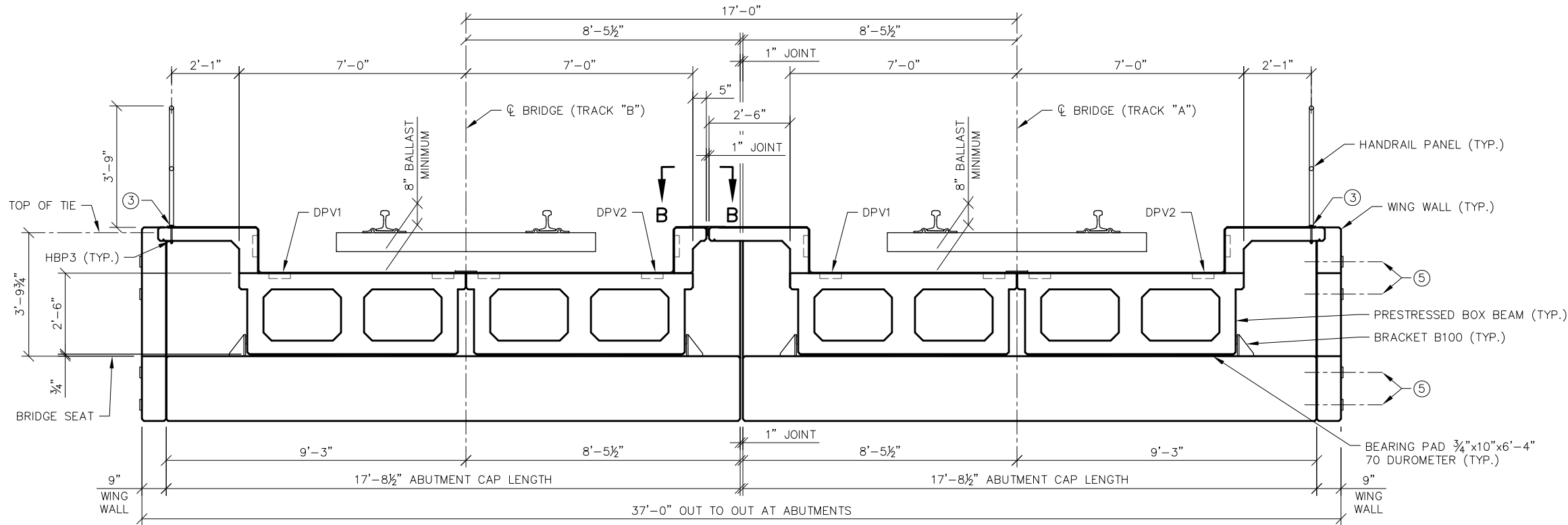


TRACK "B" PROFILE GRADE LINE

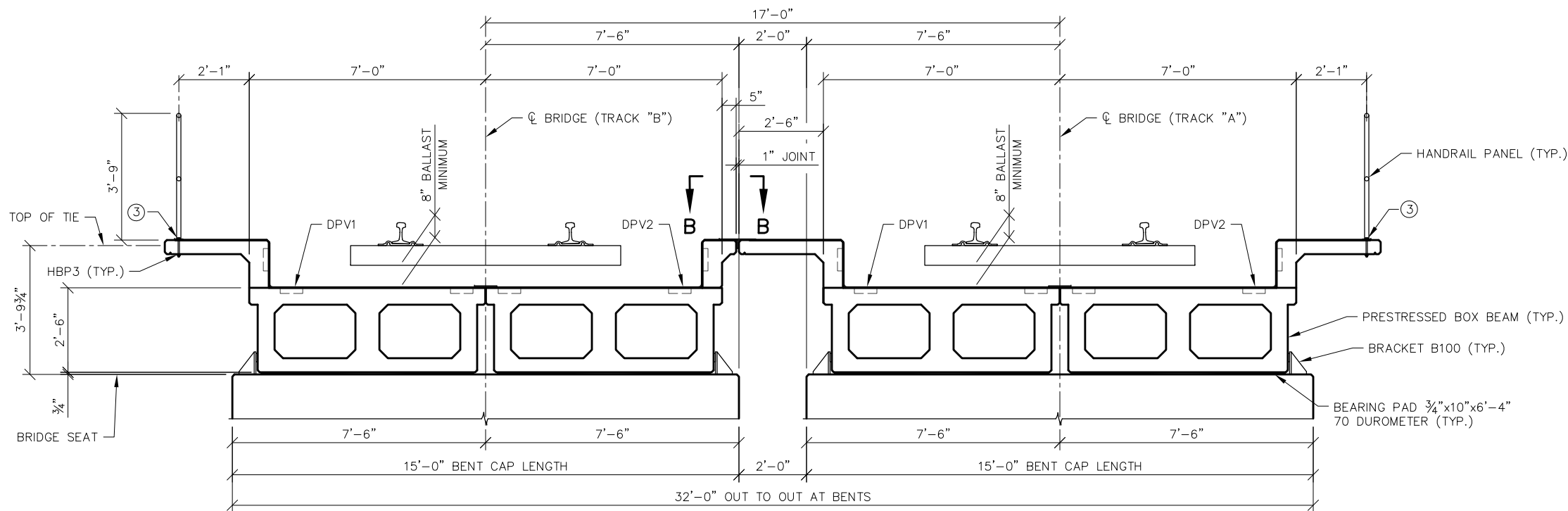


TYPICAL SECTION IN SPAN
(LOOKING WEST)

		REV. #	BY	DATE	DESCRIPTION
		REV. 0	CDS (W)	06/05/2024	100% PLAN - ISSUED FOR CONSTRUCTION
		DRAWN BY:		CDS (W)	
		CHECKED BY:		ACK	
		DATE:		6/10/2024	
		SCALE:		AS NOTED	
GENERAL LAYOUT 105': 3 SPAN 30" TDBX MP 399.01 LA JUNTA SUB. WIND RIVER GRAIN GARDEN CITY, FINNEY COUNTY, KANSAS					
ISSUED FOR CONSTRUCTION		SHEET #		S-02	
		SHEET		37 OF 49	



TYPICAL SECTION AT ABUTMENT
(LOOKING WEST)



TYPICAL SECTION AT BENTS
(LOOKING WEST)

NOTES

SEE PLAN SHEET S-13 FOR DPV1 & DPV2 PLATES AND BRACKET B100 DETAILS.

SEE PLAN SHEET S-04 FOR BEARING PAD DETAILS.

SEE PLAN SHEET S-11 FOR HANDRAIL LAYOUT AND DETAILS.

SEE PLAN SHEET S-08 & S-09 FOR PRESTRESSED BOX GIRDER DETAILS.

SEE PLAN SHEET S-05 & S-06 FOR ABUTMENT CAP & WING WALL DETAILS.

SEE PLAN SHEET S-07 FOR BENT CAP DETAILS.

SEE PLAN SHEET S-12 FOR SECTION B-B OF CURB PLATE DETAILS.

③ FASTEN HANDRAIL PANEL TO CONCRETE WALK WITH:
2~ $\frac{3}{4}$ " DIA. x 7" BOLTS.
4~WASHERS ($\frac{13}{16}$ " I.D. x $\frac{17}{16}$ O.D.)
2~LOCK NUTS, SELF LOCKING NYLON INSERT
1~ HANDRAIL BASE PLATE HBP3

⑤ FASTEN WING WALL TO ABUTMENT CAP WITH:
4~ $\frac{1}{4}$ " DIA. x 13" SPIRAL BOLT
4~WASHERS W100



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SCALE:	AS NOTED

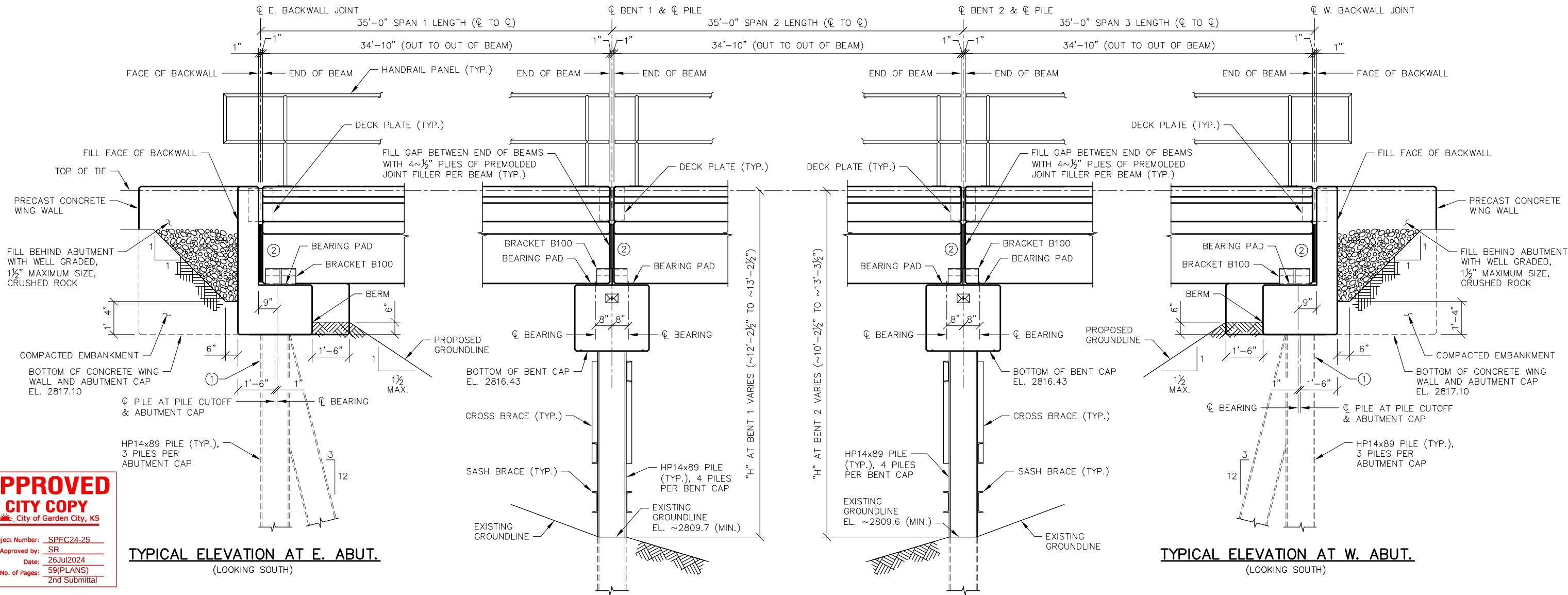


TYPICAL SECTIONS
105': 3 SPAN 30" TDBX
MP 399.01 LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

ISSUED FOR CONSTRUCTION	SHEET #
	S-03
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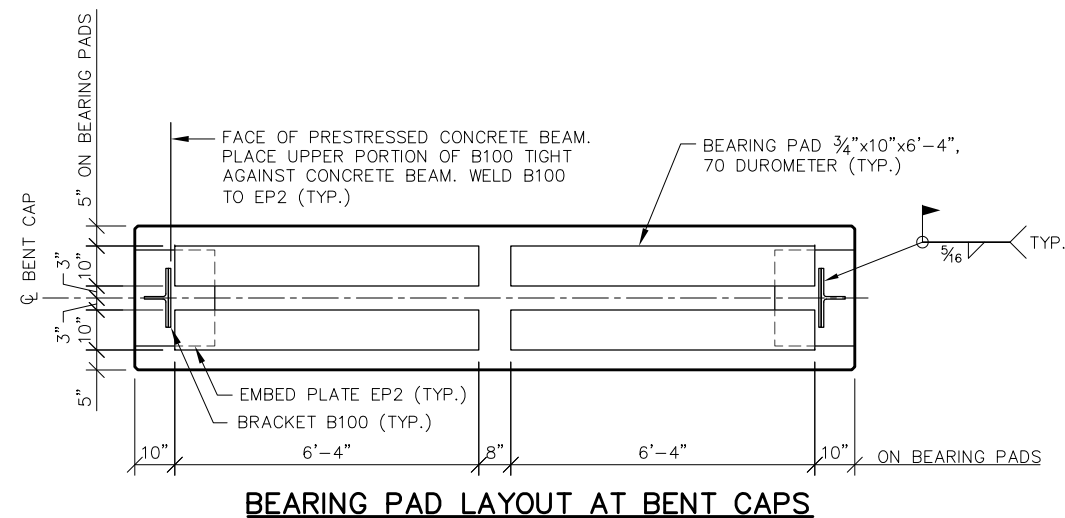
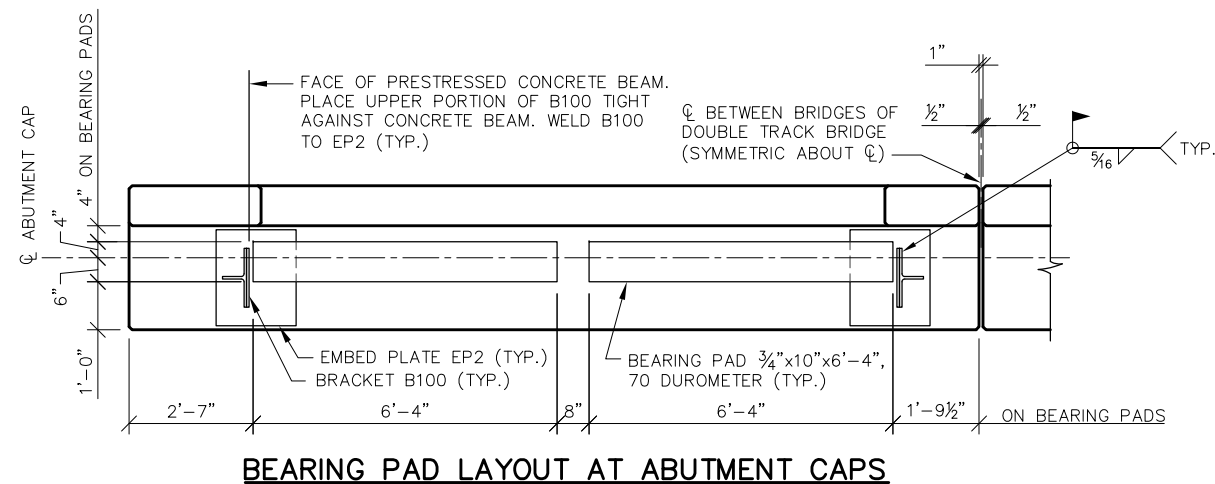
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Date: 26Jul2024
No. of Pages: 59(PLANS)
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NOTES

- SEE PLAN SHEET S-13 FOR DPV1 & DPV2 PLATES AND BRACKET B100 DETAILS.
- SEE PLAN SHEET S-11 FOR HANDRAIL LAYOUT AND DETAILS.
- SEE PLAN SHEET S-08 & S-09 FOR PRESTRESSED BOX GIRDER DETAILS.
- SEE PLAN SHEET S-05 & S-06 FOR ABUTMENT CAP & WING WALL DETAILS.
- SEE PLAN SHEET S-07 FOR BENT CAP DETAILS.
- ① BEFORE BACKFILLING ABUTMENTS, APPLY A PROTECTIVE COATING TO PILE PLATES AND TOP ONE FOOT OF PILES.
- ② ASPHALT IMPREGNATED JOINT FILLER SHALL BE SIZED 2" LESS THAN THE HEIGHT OF ATTRIBUTING BEAM SPAN AND 2" LESS THAN THE WIDTH OF ATTRIBUTING BEAM SPAN.



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REV. 0	CDS (W)	06/05/2024	100% PLAN - ISSUED FOR CONSTRUCTION



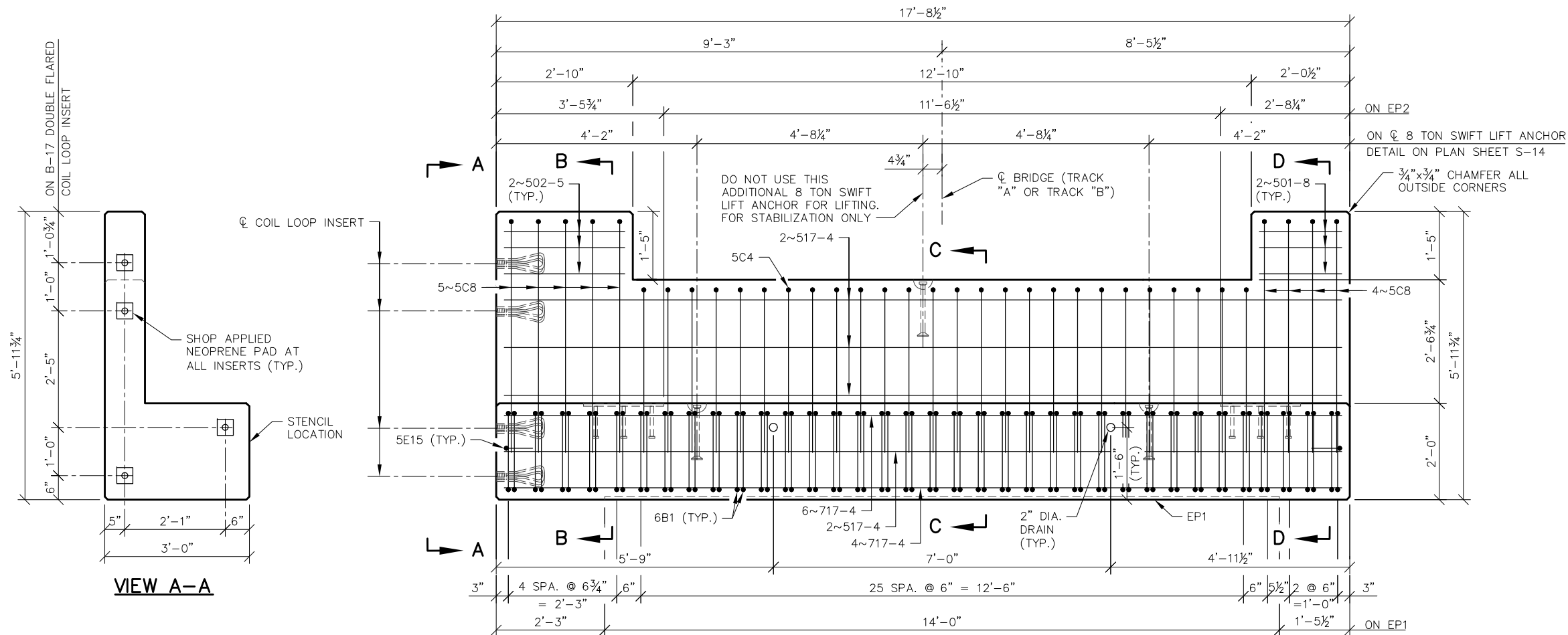
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DATE:	6/5/2024
SCALE:	AS NOTED



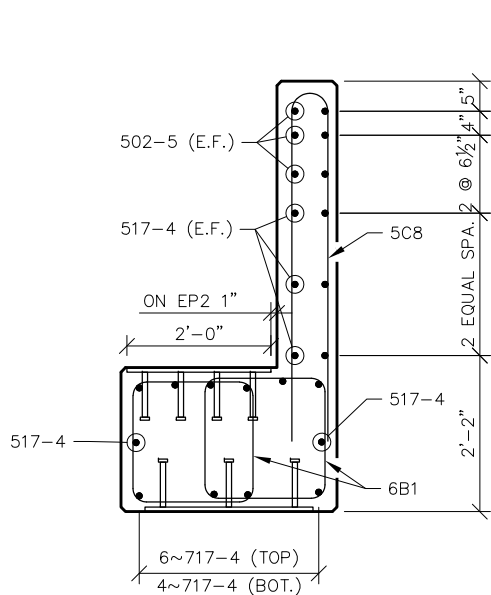
ELEVATION VIEW DETAILS
105': 3 SPAN 30" TDBX
MP 399.01 LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

ISSUED FOR CONSTRUCTION	SHEET #
	S-04
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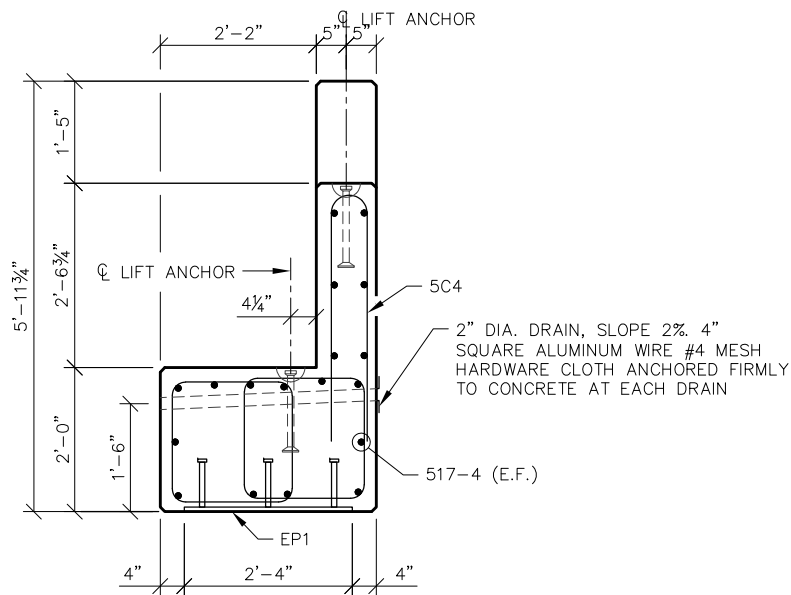
FILE: C:\000 PROJECT FILES\2024\6-03\1 BNSF Rail Bridge for Wind River Grain, Garden City, Kansas\01 - CAD\02 Bridge\main.dwg
PLOT DATE: 05/05/2024 9:21:44 AM
PLOT BY: jms



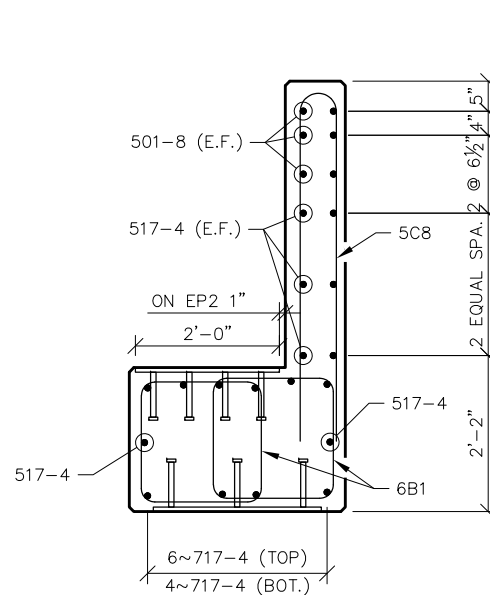
ABUTMENT CAP
(LEFT WALKWAY SHOWN, RIGHT OPPOSITE HAND)



SECTION B-B



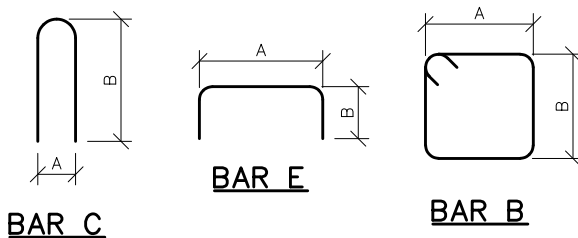
SECTION C-C



SECTION D-D

BILL OF MATERIAL		
QTY.	UNIT	DESCRIPTION
1	E.A.	EP1 (SEE DETAIL ON PLAN SHEET S-13)
2	E.A.	EP2 (SEE DETAIL ON PLAN SHEET S-13)
3	E.A.	8 TON SWIFT LIFT ANCHOR
4	E.A.	COIL LOOP INSERT w/BOLT, B17

REINFORCING LIST					
MARK	SIZE	TYPE	A	B	LENGTH
5C4	#5	C	6"	3'-5"	7'-2"
5C8	#5	C	6"	4'-10"	10'-0"
5E15	#5	E	2'-6 1/2"	9"	4'-1"
6B1	#6	B	1'-8"	1'-8"	8'-0"
501-8	#5	STR.	-	-	1'-8"
502-5	#5	STR.	-	-	2'-5"
517-4	#5	STR.	-	-	17'-4"
717-4	#7	STR.	-	-	17'-4"



NOTES

ESTIMATED LIFT WEIGHT = 24,710 LBS (EACH)

BILL OF MATERIALS SHOWN IS FOR A SINGLE (1) ABUTMENT CAP. THERE IS A TOTAL OF FOUR (4) ABUTMENT CAPS REQUIRED FOR BRIDGE PROJECT.

SEE PLAN SHEET S-13 FOR EMBEDMENT PLATES EP1 & EP2.

SEE PLAN SHEET S-06 FOR PILE SPACING AT ABUTMENT CAP.



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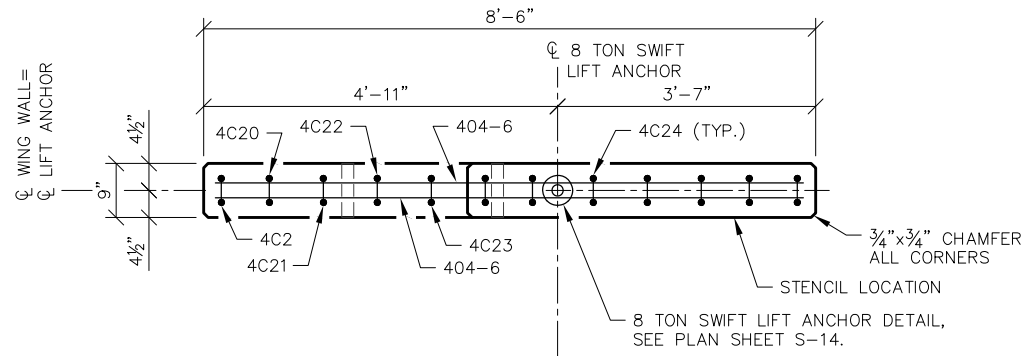


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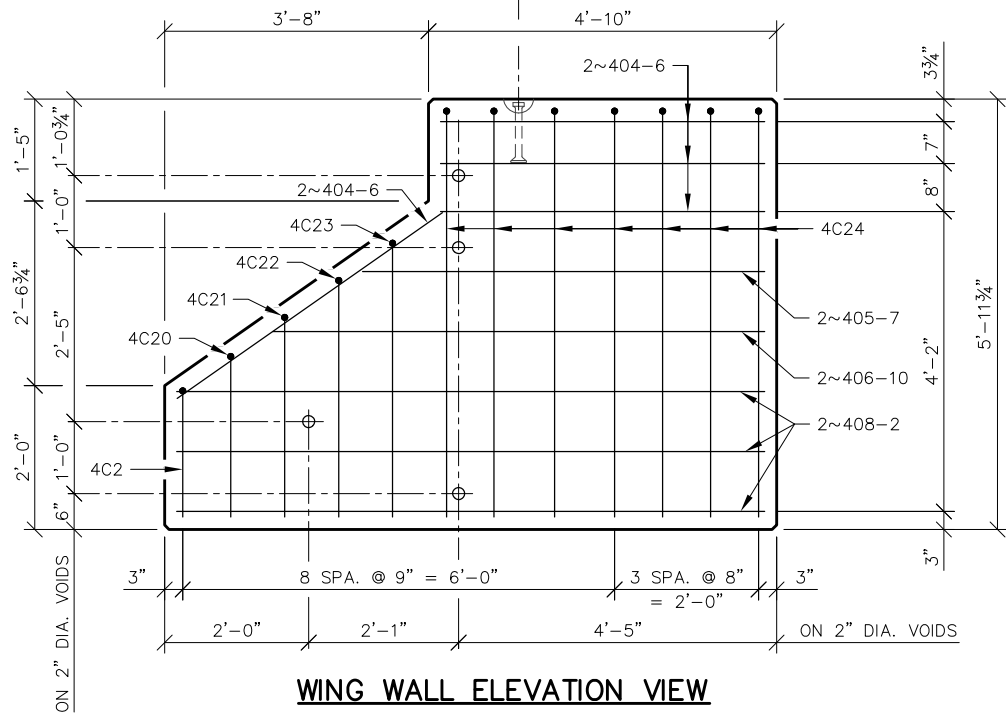


ABUTMENT DETAILS
105': 3 SPAN 30" TDBX
MP 399.01 LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

ISSUED FOR CONSTRUCTION	SHEET #
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40 OF 49	SHEET
	40



WING WALL PLAN VIEW



WING WALL ELEVATION VIEW

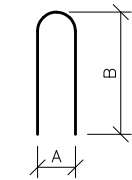
BILL OF MATERIAL		
QTY.	UNIT	DESCRIPTION
1	EA.	8 TON SWIFT LIFT ANCHOR

NOTES

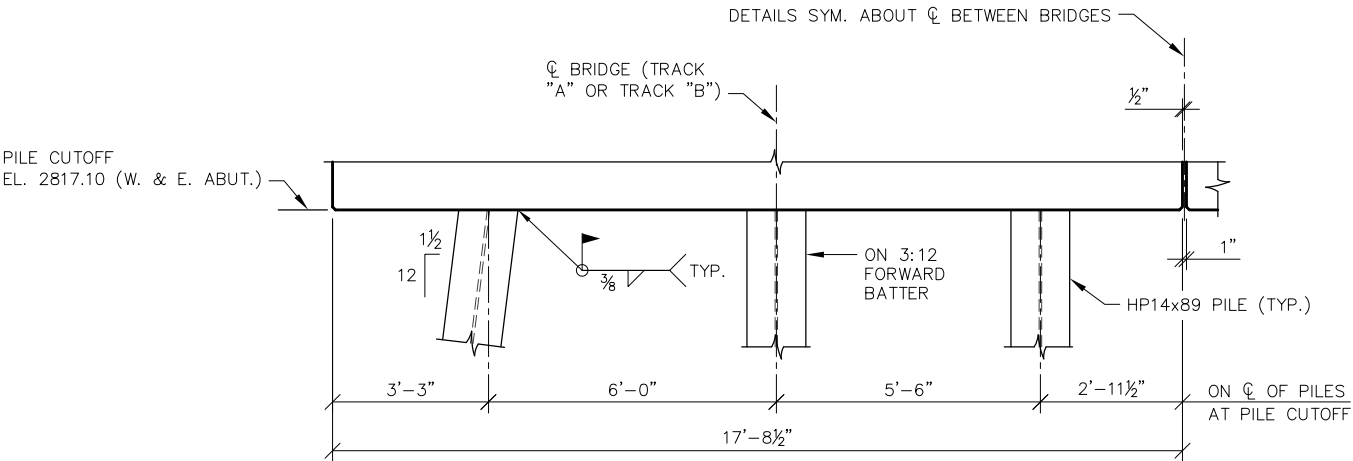
ESTIMATED LIFT WEIGHT = 4,790 LBS (EACH)

BILL OF MATERIALS SHOWN IS FOR A SINGLE (1) WING WALL. THERE IS A TOTAL OF FOUR (4) WING WALLS REQUIRED FOR BRIDGE PROJECT.

REINFORCING LIST					
MARK	SIZE	TYPE	A	B	LENGTH
4C2	#4	C	5"	1'-9"	3'-9"
4C20	#4	C	5"	2'-2 3/4"	4'-8"
4C21	#4	C	5"	2'-10"	5'-11"
4C22	#4	C	5"	3'-4 1/4"	7'-0"
4C23	#4	C	5"	3'-10 1/2"	8'-0"
4C24	#4	C	5"	5'-7 3/4"	11'-7"
404-6	#4	STR.	-	-	4'-6"
405-7	#4	STR.	-	-	5'-7"
406-10	#4	STR.	-	-	6'-10"
408-2	#4	STR.	-	-	8'-2"



BAR C



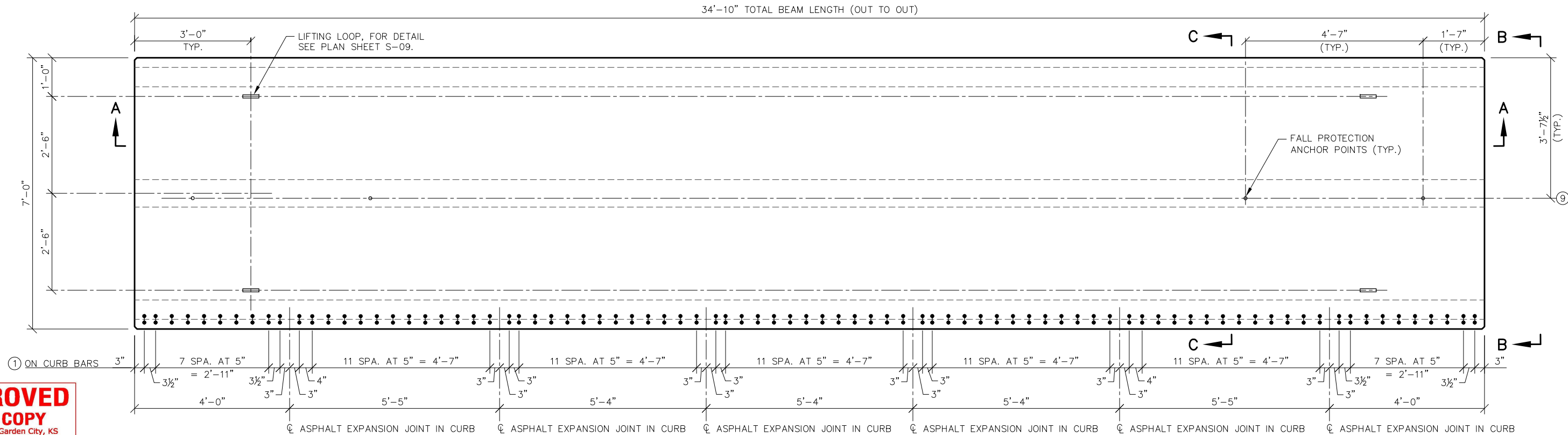
ABUTMENT CAP PILE LAYOUT

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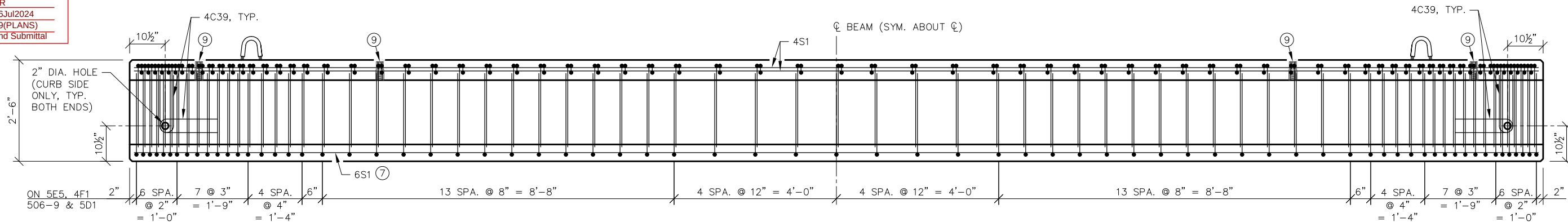
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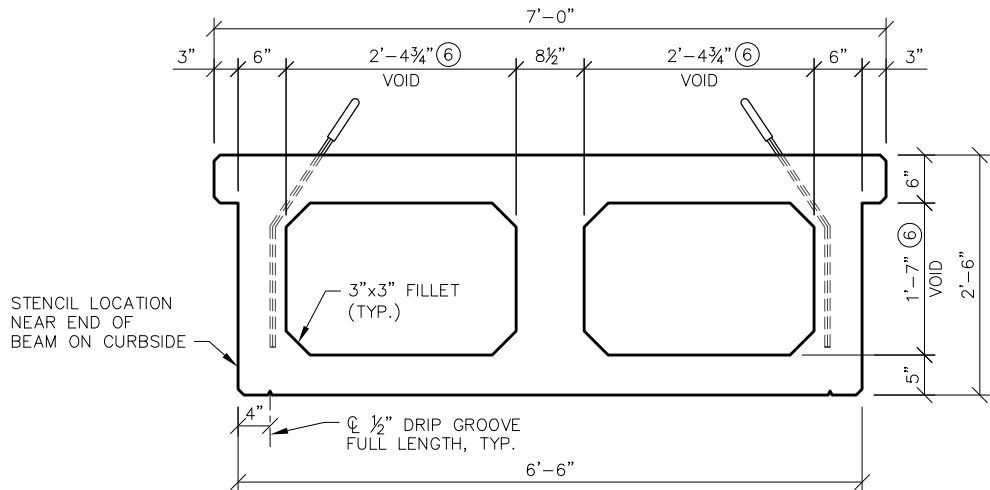


PLAN

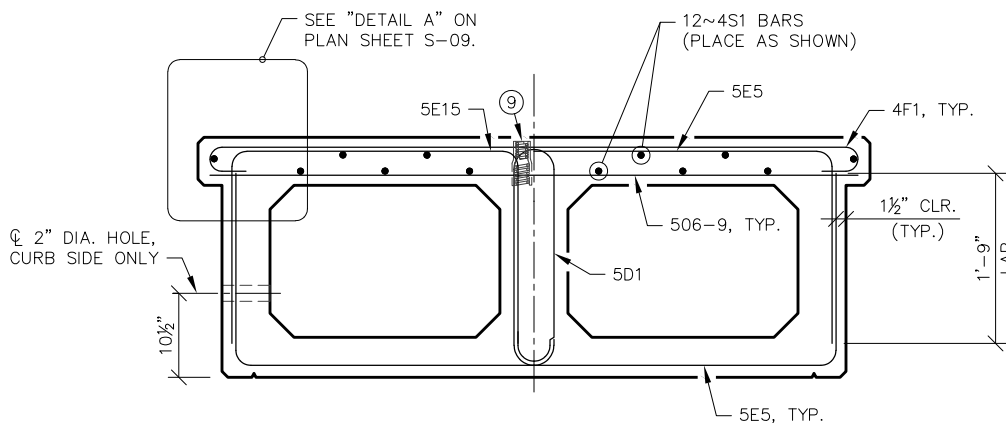


SECTION A-A

PRESTRESSING STRANDS AND CURB BARS NOT SHOWN



VIEW B-B



SECTION C-C

NOTES

SEE PLAN SHEET S-09 FOR REINFORCING LIST OF REBAR WITHIN PRESTRESSED BOX BEAM.

- ① ADJUST AS REQUIRED TO MISS OTHER REINFORCEMENT.
- ⑥ VOID DIMENSIONS SHOWN ARE MAXIMUM AND MUST NOT BE EXCEEDED AT ANY POINT INCLUDING SPLICES OF VOID FORM.
- ⑦ SEE PRESTRESSING STRAND PATTERN ON PLAN SHEET S-09 FOR LOCATION OF 6S1 BARS.
- ⑨ CAST-IN-PLACE F56 COIL INSERTS FOR 1" DIA. BOLTS TO BE FURNISHED WITH 1" X 8" COIL BOLTS. ADJUST POSITION OF 4F1 & 506-9 REBAR AS NEEDED TO ADDRESS INTERFERENCE ISSUES.



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REV. 0	CDS (W)	06/05/2024	100% PLAN - ISSUED FOR CONSTRUCTION

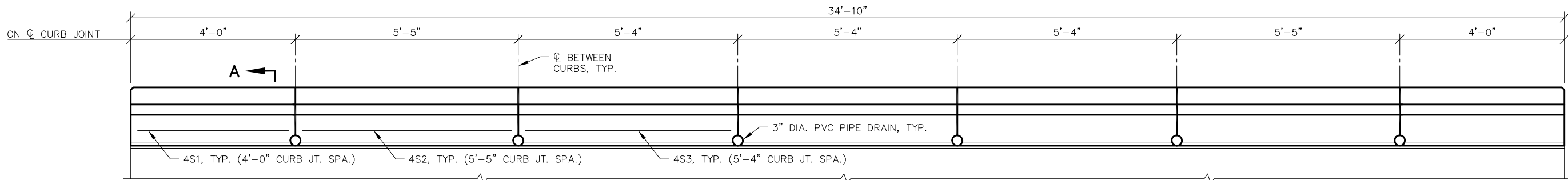


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DATE:	6/5/2024
SCALE:	AS NOTED

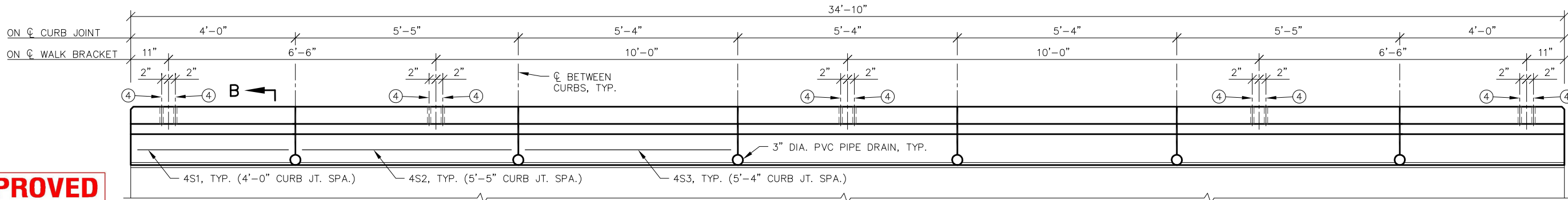


PRESTRESSED BOX BEAM #1
105': 3 SPAN 30" TDBX
MP 399.01 LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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	SHEET
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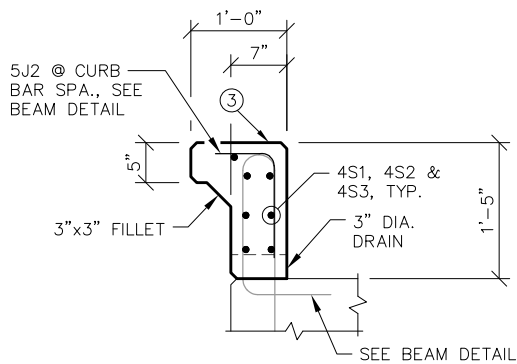
ELEVATION – EXTENDED CURB



ELEVATION – CURB AND WALK

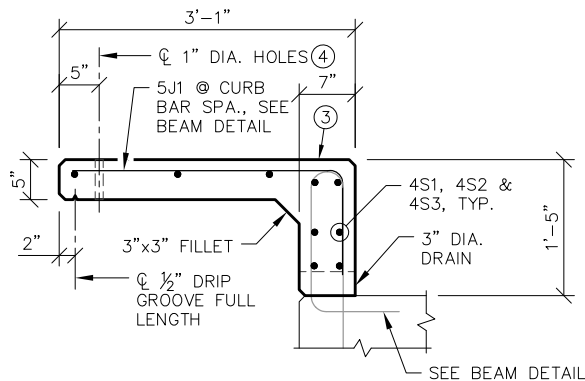
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SECTION A-A

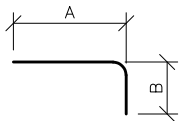
TYPICAL SECTION OF EXTENDED CURB
LIGHT BROOM FINISH ON WALKING SURFACE



SECTION B-B

TYPICAL SECTION OF CURB AND WALKWAY
LIGHT BROOM FINISH ON WALKING SURFACE

REINFORCING LIST					
MARK	SIZE	TYPE	A	B	LENGTH
4S1	#4	STR.	–	–	3'–8"
4S2	#4	STR.	–	–	5'–1"
4S3	#4	STR.	–	–	5'–0"
5J1	#5	J	2'–9"	1'–3"	4'–0"
5J2	#5	J	0'–8"	1'–3"	1'–11"



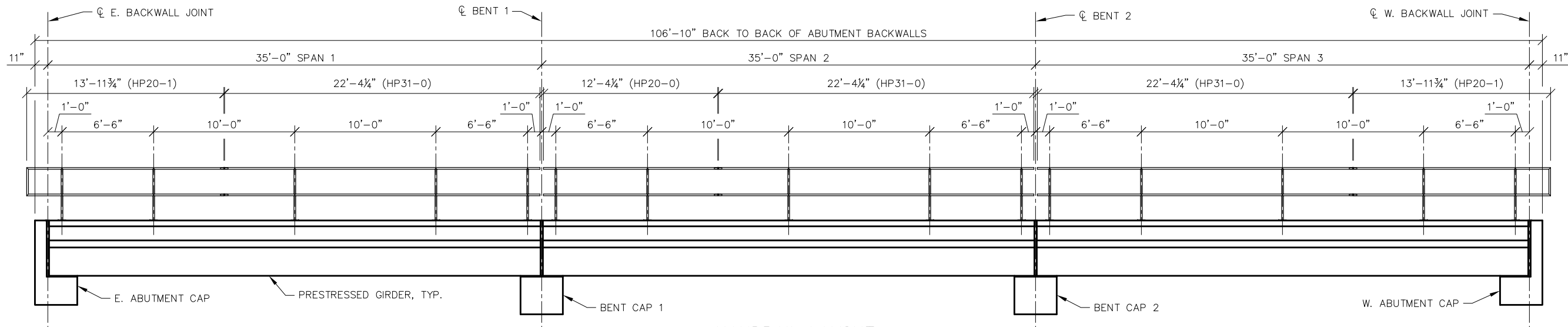
BAR J

EST. LIFTING WEIGHT

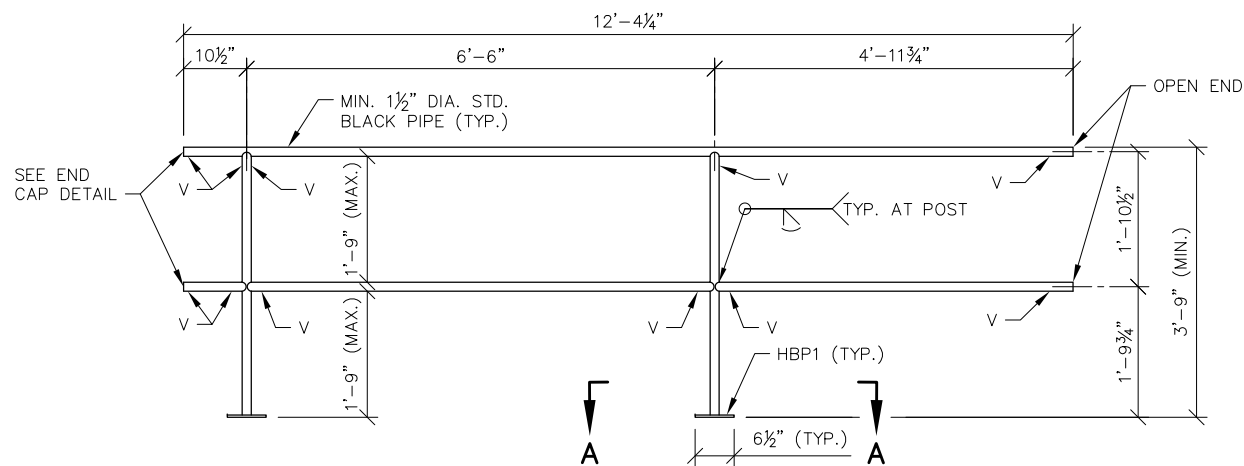
CURB TYPE	WEIGHT / (PLF)
17" CURB AND WALK	300
17" EXTENDED	170

NOTES

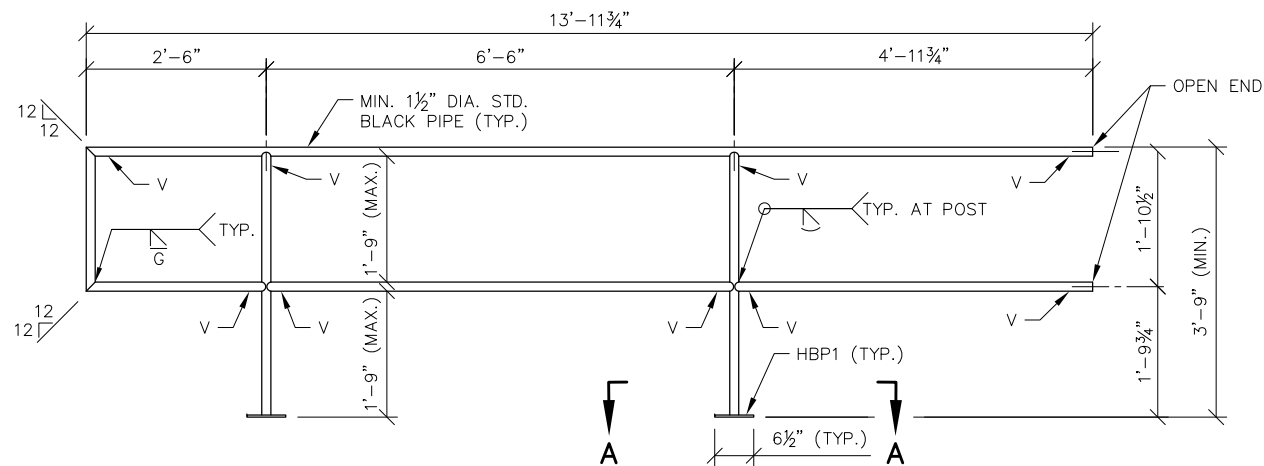
- CAST-IN-PLACE FERRULE INSERTS, FOR 7/8" DIA. BOLT MINIMUM SHEAR = 3,000 LBS. FACTOR SAFETY 3 TO 1 AND A MINIMUM TENSION = 3,660 LBS. 4 INSERTS PER LOCATION. FURNISH WITH 7/8" DIA. BOLTS AND WASHERS. ALL ITEMS SHALL BE GALVANIZED.
- 3"x6" I.D. PLATE IS TO BE EMBEDDED FLUSH IN TOP OF CURB AND CENTERED 6" FROM END OF CURB. PLATE SHALL CONTAIN THE FOLLOWING INFORMATION IN 1/2" LETTERING: ITEM NAME, LENGTH, DATE MANUFACTURED AND NAME OF MANUFACTURER.
- 1" DIA. HOLES FOR HANDRAIL POST (ONLY ON EXTERIOR WALKWAY, HANDRAIL POST ARE NOT LOCATED ON THE MIDDLE WALKWAY).



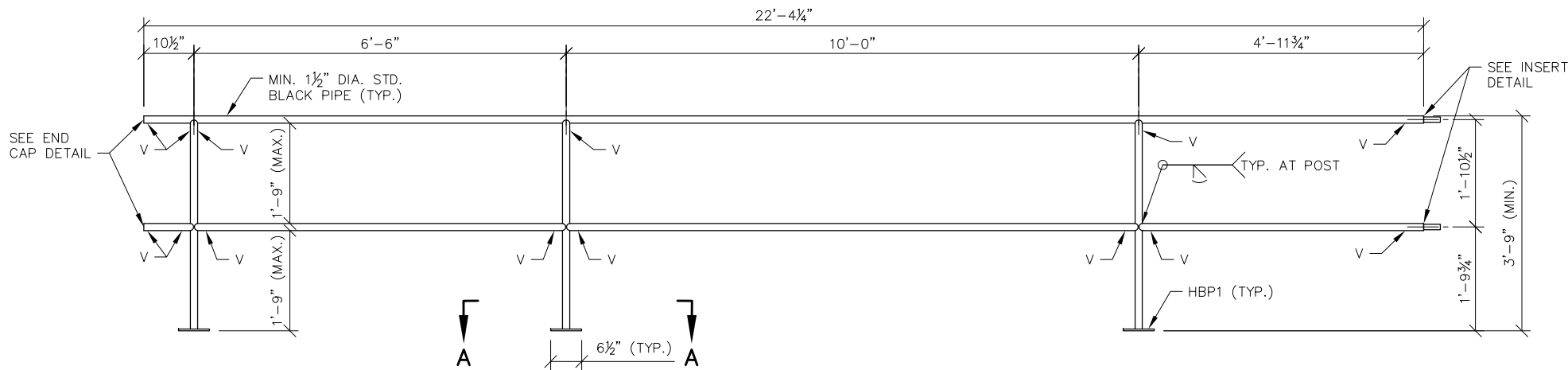
HANDRAIL LAYOUT
(LOOKING SOUTH)



HP20-0
GALVANIZE AFTER FABRICATION.



HP20-1
GALVANIZE AFTER FABRICATION.



H31-0
GALVANIZE AFTER FABRICATION.

NOTES

- V = 3/8" DIA. DRILLED VENT HOLE 1" FROM JOINT.
- FOR SECTION A-A AND HBP1 DETAILS, SEE PLAN SHEET S-12.
- FOR END CAP AND INSERT DETAILS, SEE PLAN SHEET S-12.

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DATE:	6/5/2024
SCALE:	AS NOTED

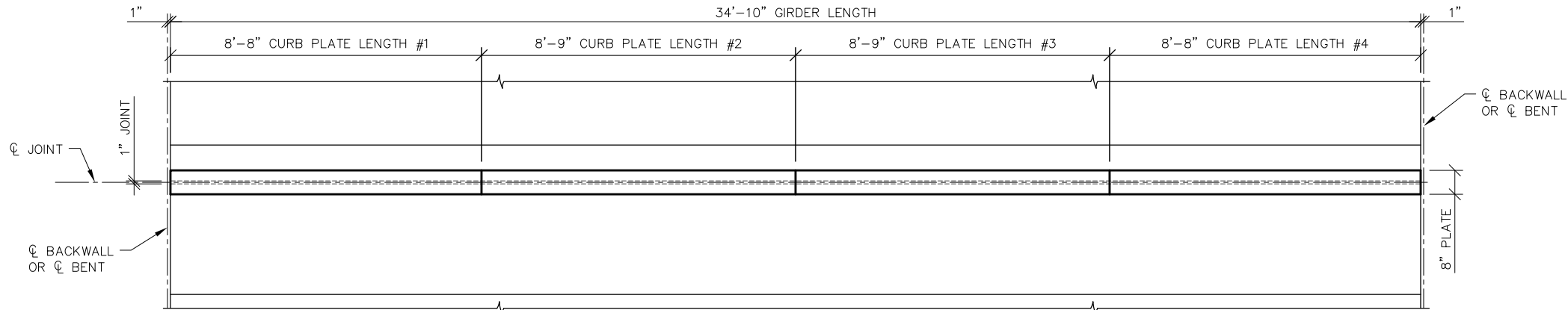


HAND RAILING LAYOUT
105': 3 SPAN 30" TDBX
MP 399.01 LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

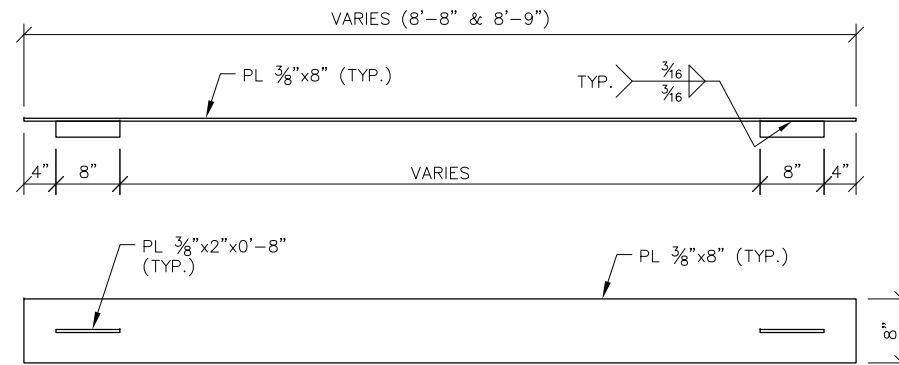
ISSUED FOR CONSTRUCTION	SHEET #
	S-11
	SHEET
	46 OF 49

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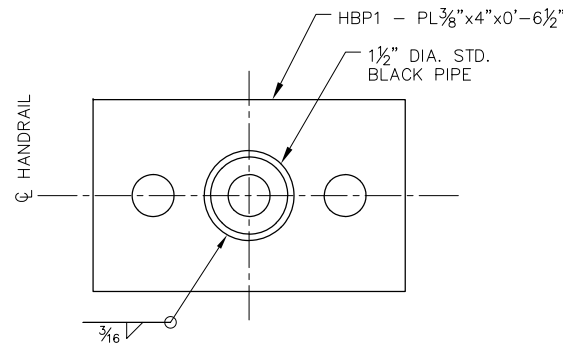
Project Number: SPEC24-25
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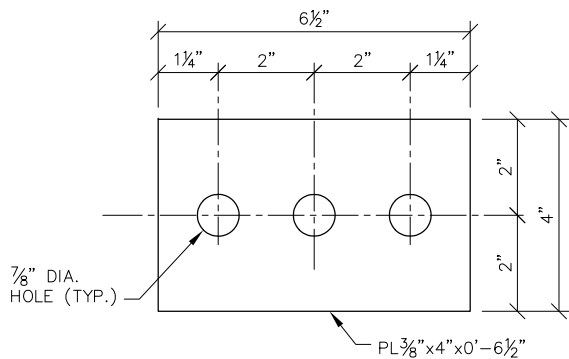
SECTION B-B
CURB PLATE LAYOUT, PER SPAN
SEE PLAN SHEET S-03 FOR SECTION LOCATION



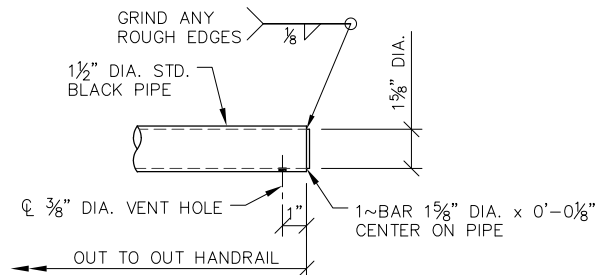
CURB PLATE
GALVANIZE AFTER FABRICATION



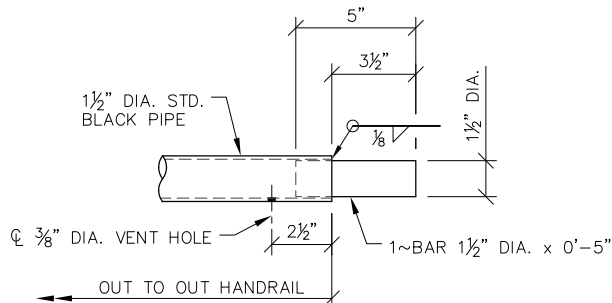
SECTION A-A
SEE PLAN SHEET S-11 FOR SECTION LOCATION



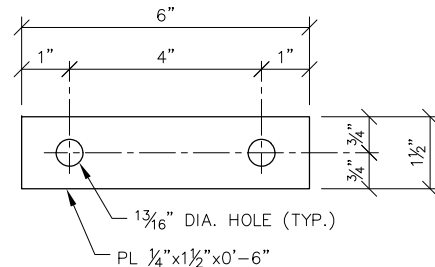
HANDRAIL BASE PLATE HBP1
WEIGHT = 2.5 LBS.



END CAP



INSERT



HANDRAIL BASE PLATE HBP3
GALVANIZE AFTER FABRICATION



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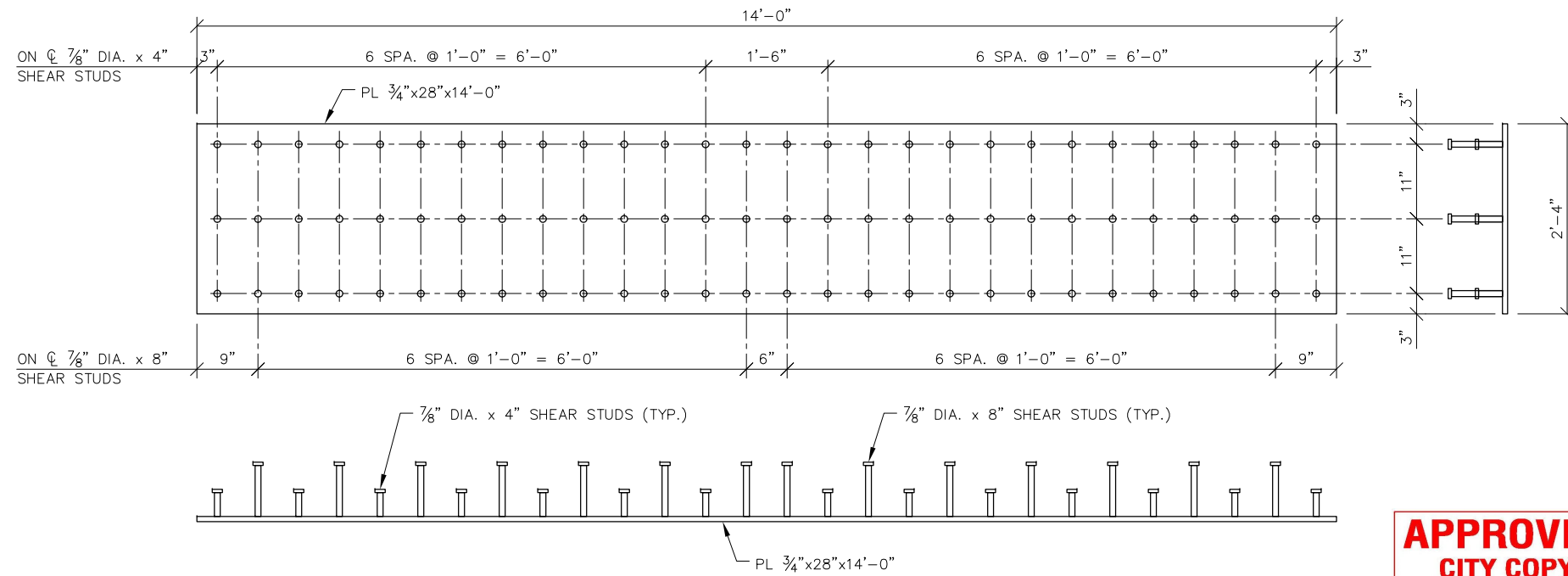


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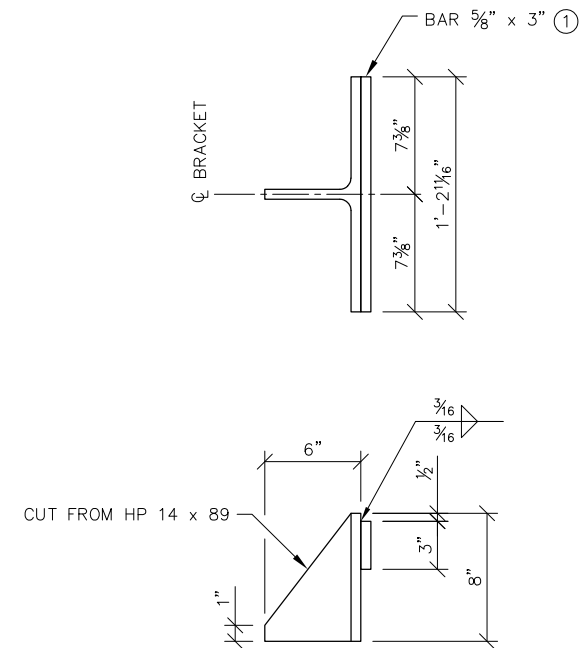


RAILING & CURB PLATE DETAILS
105': 3 SPAN 30" TDBX
MP 399.01 LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

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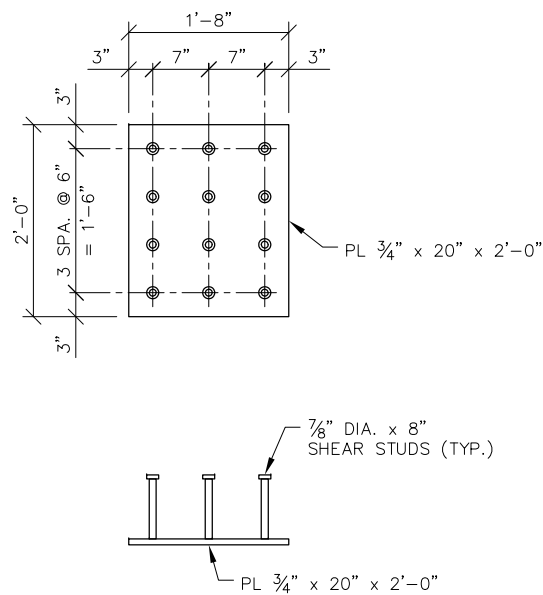


EMBED PLATE EP1
WEIGHT = 1097 LBS.

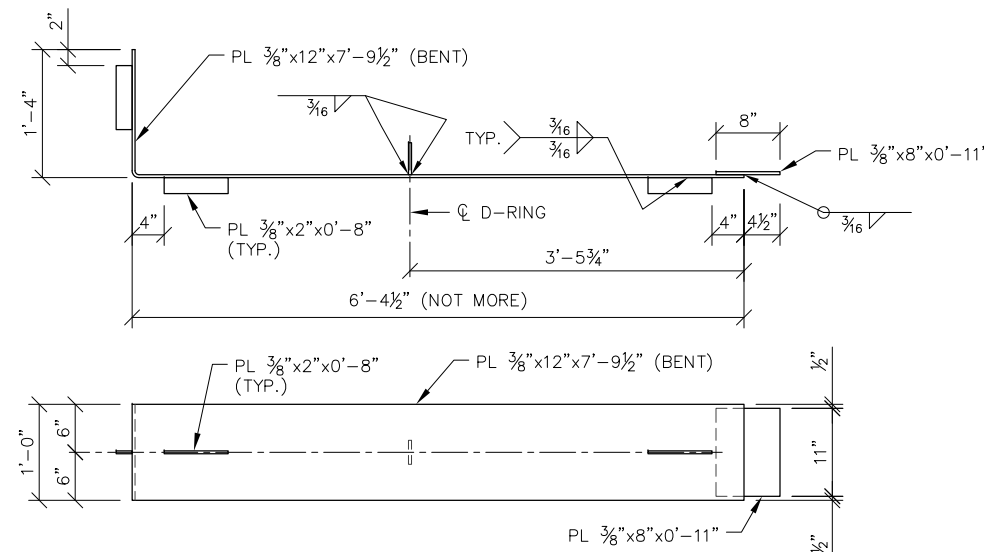


RETAINER BRACKET B100
WEIGHT = 35 LBS.

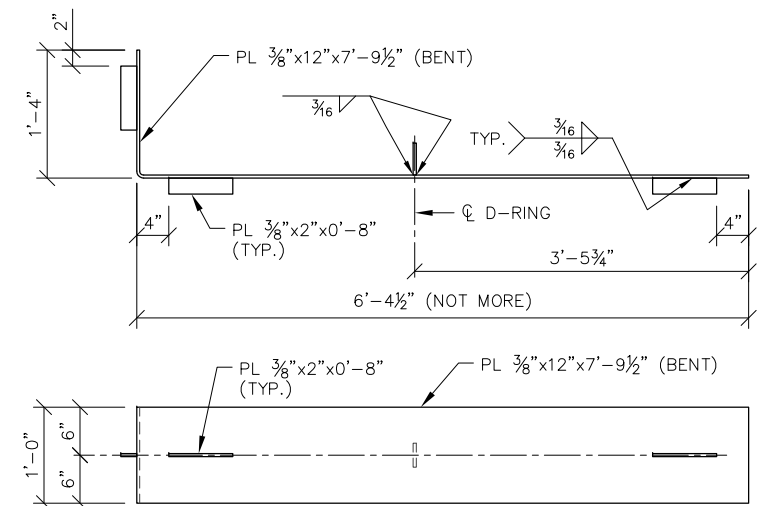
NOTE
① 5/8" x 3" BAR MAY BE CUT FROM FLANGE OR WEB OF H-PILE, IF AVAILABLE.



EMBED PLATE EP2
WEIGHT = 120 LBS.



DECK PLATE DPV1
GALVANIZE AFTER FABRICATION
WEIGHT = 134 LBS.



DECK PLATE DPV2
GALVANIZE AFTER FABRICATION
WEIGHT = 125 LBS.



REV. #	BY	DATE	DESCRIPTION
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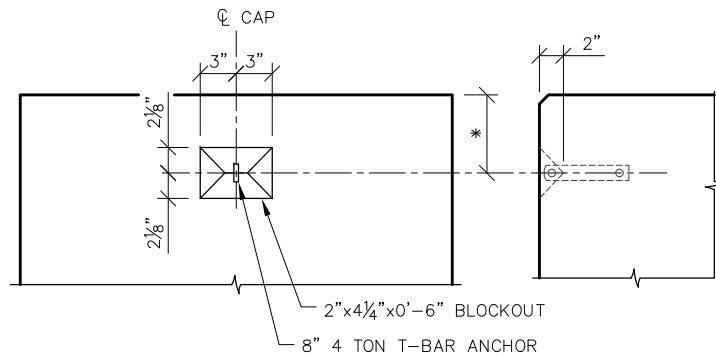


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SCALE:	AS NOTED



PLATE & BRACKET DETAILS
105': 3 SPAN 30" TDBX
MP 399.01 LA JUNTA SUB.
WIND RIVER GRAIN
GARDEN CITY, FINNEY COUNTY, KANSAS

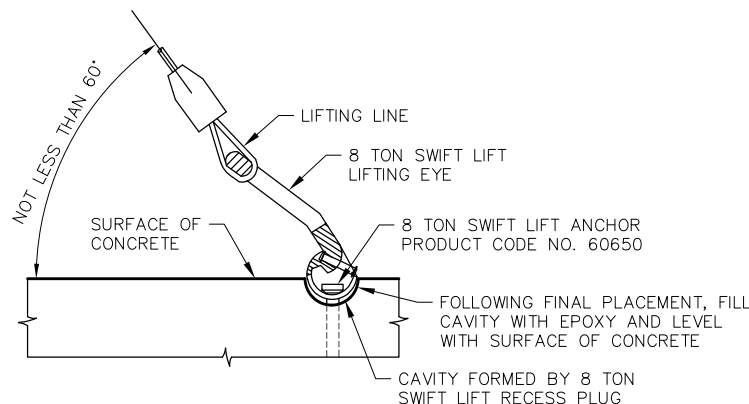
ISSUED FOR CONSTRUCTION	SHEET #
	S-13
	SHEET 48 OF 49



GUIDE LINE DETAIL

TYPICAL AT EACH END OF CAP.

* SEE PRECAST CONCRETE CAP PLAN SHEET S-07 FOR LOCATIONS.

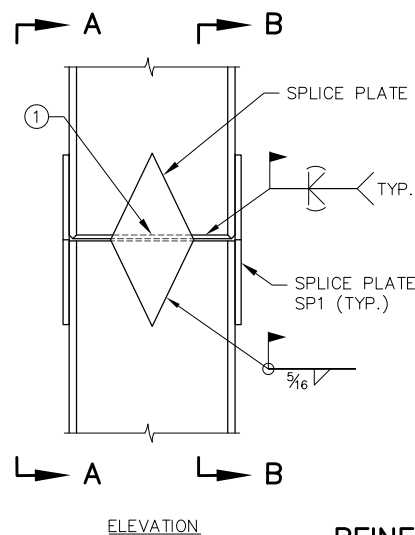
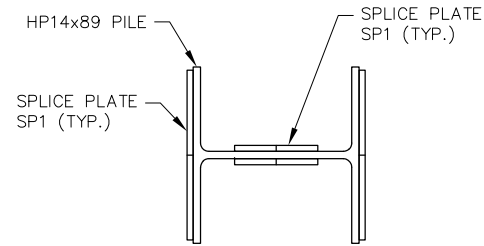


SWIFT LIFT DETAIL

8 TON SWIFT LIFT RECESS PLUGS, ANCHORS AND LIFT. EYES ARE AVAILABLE FROM DAYTON SUPERIOR. THE MATERIALS FOR THIS LIFTING SYSTEM ARE NOT INCLUDED IN THE BILL OF MATERIAL BUT ARE TO BE ORDERED AS REQUIRED.

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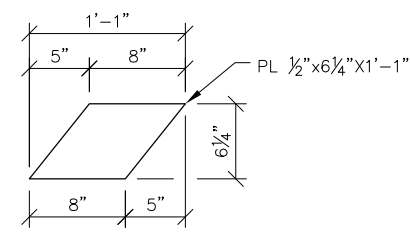
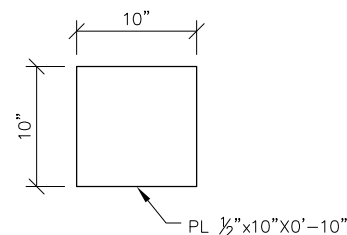


SPLICE PLATE SP1

2 REQ'D PER SPLICE

SPLICE PLATE SP2

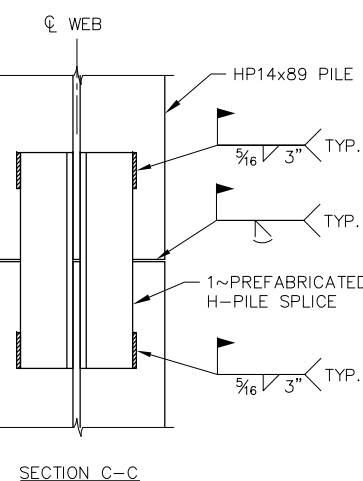
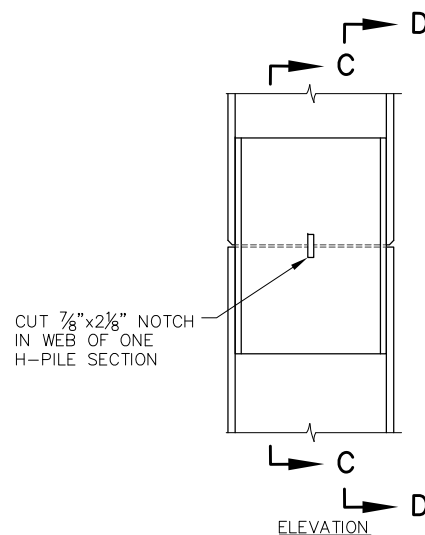
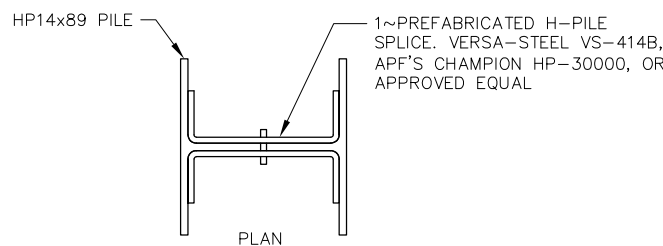
2 REQ'D PER SPLICE



REINFORCED PLATE PILE SPLICE

FOR USE WHEN SPLICE IS LESS THAN 15'-0" BELOW GROUNDLINE

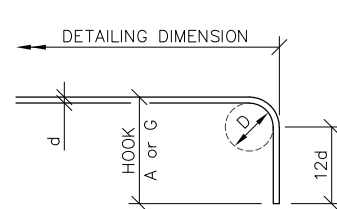
① BEFORE REINFORCING PLATES ARE INSTALLED, GRIND THE WELD CONTOURS WHICH WILL BE COVERED BY THE REINFORCING PLATES.



PREFABRICATED PILE SPLICE

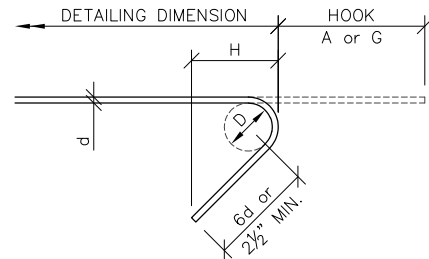
FOR USE WHEN SPLICE IS GREATER THAN 15'-0" BELOW GROUNDLINE

STIRRUP & TIE HOOK DIMENSIONS					
BAR SIZE	d (IN.)	D (IN.)	90° HOOK	135° HOOK	
			HOOK A OR G	HOOK A OR G	H
#3	3/8"	1 1/2"	4"	4"	2 1/2"
#4	1/2"	2"	4 1/2"	4 1/2"	3"
#5	5/8"	2 1/2"	6"	5 1/2"	3 3/4"
#6	3/4"	4 1/2"	1'-0"	8"	4 1/2"
#7	7/8"	5 1/4"	1'-2"	9"	5 1/4"
#8	1"	6"	1'-4"	10 1/2"	6"



90° STIRRUP HOOK

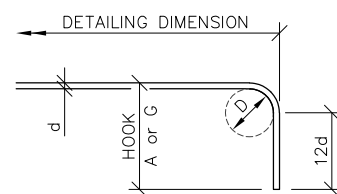
(TIES SIMILAR)



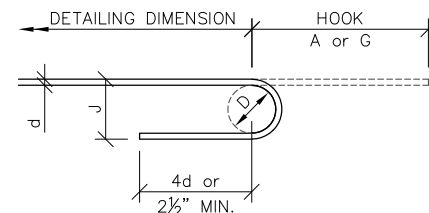
135° STIRRUP HOOK

(TIES SIMILAR)

STANDARD HOOK DIMENSIONS					
BAR SIZE	d (IN.)	D (IN.)	90° HOOK	180° HOOK	
			HOOK A OR G	HOOK A OR G	J
#3	3/8"	2 1/4"	6"	5"	3"
#4	1/2"	3"	8"	6"	4"
#5	5/8"	3 3/4"	10"	7"	5"
#6	3/4"	4 1/2"	1'-0"	8"	6"
#7	7/8"	5 1/4"	1'-2"	10"	7"
#8	1"	6"	1'-4"	11"	8"
#9	1 1/8"	9 1/2"	1'-7"	1'-3"	11 3/4"
#10	1 1/4"	10 3/4"	1'-10"	1'-5"	1'-1 1/4"
#11	1 3/8"	12"	2'-0"	1'-7"	1'-2 3/4"
#14	1 3/4"	18 1/4"	2'-7"	2'-2"	1'-9 3/4"
#18	2 1/4"	24"	3'-5"	2'-11"	2'-4 1/2"



90° HOOK



180° HOOK

NOTES:
1. REINFORCING STEEL IS TO BE IDENTIFIED PER THE FOLLOWING EXAMPLE:

BAR NAME	BAR SIZE	DETAIL
424-4	#4	24'-4"
520	#5	20'-0"
409-11	#4	9'-11"
4G1	#4	G IS SHAPE OF BAR. 1 IS THE FIRST BENT BAR OF THIS TYPE.

2. DIMENSIONS OF BENDING DETAILS ARE OUT TO OUT OF BAR.