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PLANS OF PROPOSED IMPROVEMENT ON THE  
**INTERSTATE ROAD SYSTEM**  
**POLK COUNTY**  
**UNKNOWN PAVEMENT - GRADE AND NEW**  
 RECONSTRUCTION OF THE EXISTING INTERCHANGE  
 U.S. HIGHWAY 6 (HICKMAN ROAD) AND  
 INTERSTATE 35 / INTERSTATE 80 (I-35/80)  
SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.

For Project Location Map  
refer to Sheet A.2



REVISIONS

TOTAL
..
PROJECT IDENTIFICATION NUMBER
15-77-080-060
PROJECT NUMBER
IM-080-4(069)125--13-77
R.O.W. PROJECT NUMBER
IMN-080-3(279)124--0E-77

U.S. Hwy. 6	
DESIGN DATA RURAL	
20 - AADT	39,600 V.P.D.
20 - AADT	57,100 V.P.D.
20 - DHV	5,060 V.P.H.
TRUCKS	6 %
Total	
Design ESALs	-

I-35/80	
DESIGN DATA RURAL	
20 - AADT	108,600 V.P.D.
20 - AADT	163,400 V.P.D.
20 - DHV	15,610 V.P.H.
TRUCKS	13 %
Total	
Design ESALs	-

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Nathan E. Carhoff, P.E. \_\_\_\_\_ Date

License Number P19699

My License Renewal Date is December 31, 2023

Pages or sheets covered by this seal:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

T-78N

T-79N

City of Clive

City of Urbandale

STA. 371+52.00  
BEGIN PROJECT

STA. 484+25.00  
END PROJECT

Bridge FHWA No.  
41290

Bridge FHWA No.  
Exist: 41310  
New: 41311

Bridge FHWA No.  
Exist: 41310  
New: 41311

Bridge FHWA No.  
41290

80 35

235

Hickman Road

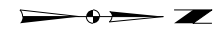
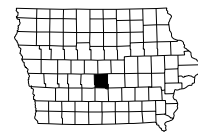
Douglas Avenue

Meredith Drive

University Avenue

R-25W

R-25W

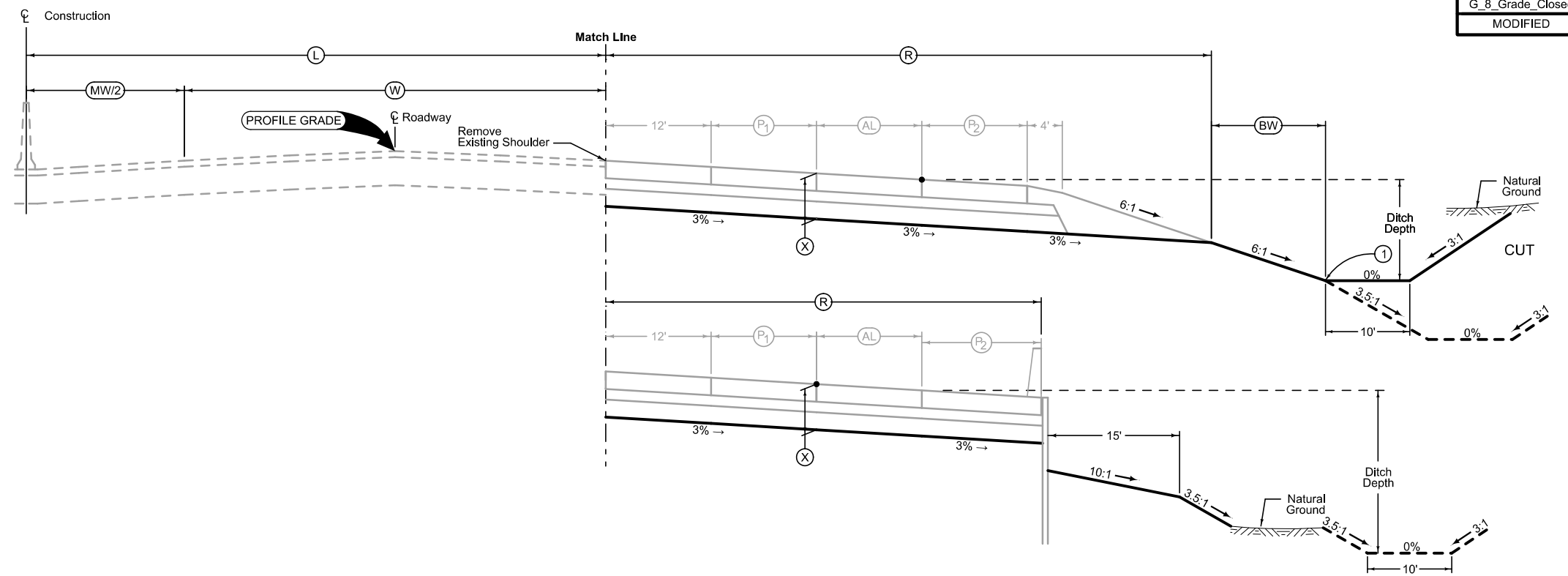


LOCATION MAP NOT TO SCALE



LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION	L Feet	R Feet	X Inches	BW Feet	MW Feet	
Interstate 35/80	NB	371+52.00	377+45.00	70-66	45	30	1	36
Interstate 35/80	NB	377+45.00	380+75.00	66	77-57	30	1	36
Interstate 35/80	NB	380+75.00	398+00.00	66	57	30	1	36
Interstate 35/80	NB	429+07.75	435+98.00	54	92-72	30	x	36
Interstate 35/80	NB	435+98.00	441+68.00	66	60-57	30	x	36
Interstate 35/80	NB	441+68.00	446+19.00	66	57	30	x	36
Interstate 35/80	NB	446+19.00	451+13.00	54	69	30	x	36
Interstate 35/80	NB	451+13.00	457+12.50	54	69-103	30	x	36
Interstate 35/80	NB	457+12.50	469+91.00	54	57	30	x	36

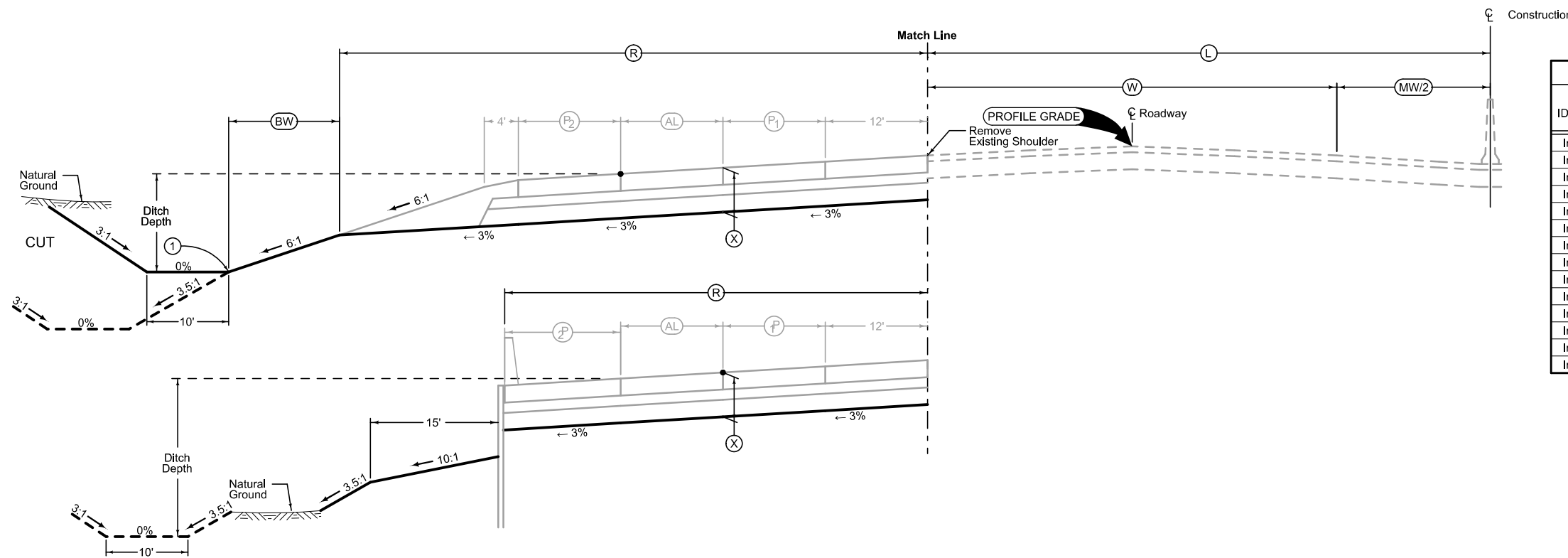
LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION	L Feet	R Feet	X Inches	BW Feet	MW Feet	
Interstate 35/80	NB	398+00.00	404+12.00	66	37.58	30	N/A	36



I-35/80 NORTHBOUND

MAINLINE GRADING  
ADD ADDITIONAL LANES  
Interstate 35/80

G\_8\_Grade\_Closed  
MODIFIED



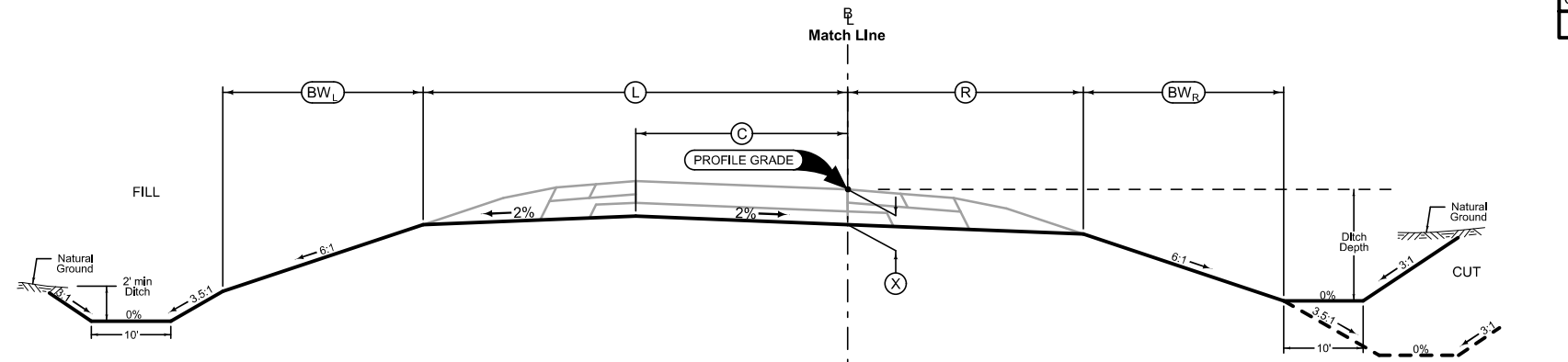
I-35/80 SOUTHBOUND

MAINLINE GRADING  
ADD ADDITIONAL LANES  
Interstate 35/80

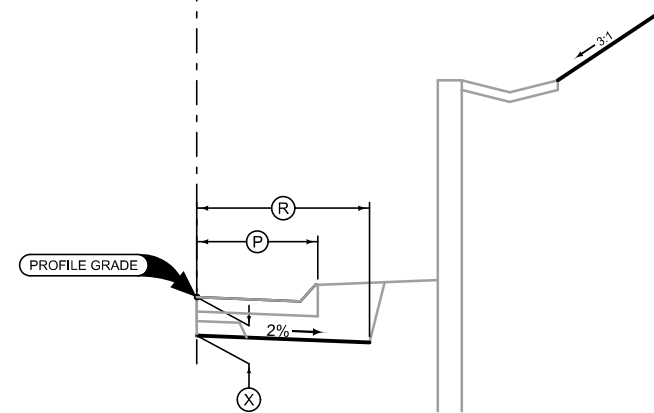
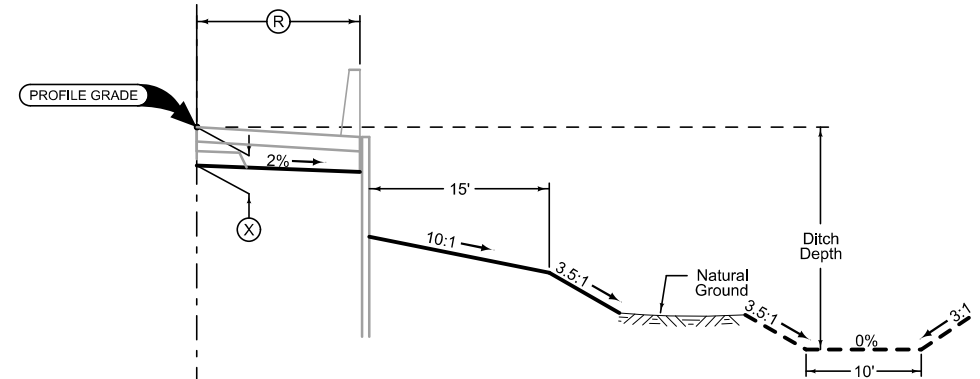
G\_8\_Grade\_Closed  
MODIFIED

LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION	L Feet	R Feet	X Inches	BW Feet	MW Feet	
Interstate 35/80	SB	371+52.00	383+91.00	54	57	30	x	36
Interstate 35/80	SB	383+91.00	389+01.00	54	103-69	30	x	36
Interstate 35/80	SB	389+01.00	396+13.00	54	69	30	x	36
Interstate 35/80	SB	396+13.00	401+10.00	66	57	30	x	36
Interstate 35/80	SB	401+10.00	404+10.50	66	57-63	30	x	36
Interstate 35/80	SB	429+07.75	430+13.00	54	57	30	x	36
Interstate 35/80	SB	430+13.00	435+25.00	54	103-69	30	x	36
Interstate 35/80	SB	435+25.00	437+28.50	54	69	30	x	36
Interstate 35/80	SB	437+28.50	451+78.50	66	57	30	x	36
Interstate 35/80	SB	451+78.50	455+97.50	54	69	30	x	36
Interstate 35/80	SB	455+97.50	459+27.00	54	69-89	30	x	36
Interstate 35/80	SB	459+27.00	462+27.00	54	51-63	30	x	36
Interstate 35/80	SB	462+27.00	471+27.00	54	63	30	x	36
Interstate 35/80	SB	471+27.00	476+02.00	54	63-91	30	x	36

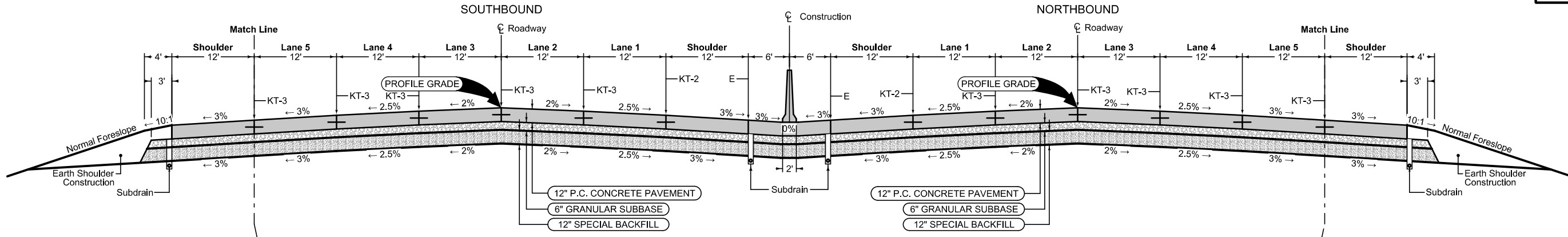
LOCATION			DIMENSIONS					
INTERCHANGE	RAMP	STATION TO STATION	L Feet	R Feet	C Feet	X Inches	BW <sub>L</sub> Feet	BW <sub>R</sub> Feet
University Avenue	A	1368+26.62 1382+75.00	42	20	24	22	14	12
University Avenue	D	2372+60.77 2377+16.00	34	21	16	22	14	11
Hickman Road	A	3422+17.00 3423+04.31	54	31.5	24	22	4	2.5
Hickman Road	A	3423+04.31 3424+84.31	47	25	24	22	10	8
Hickman Road	A	3424+84.31 3426+49.22	42	19	24	22	14	13
Hickman Road	A	3426+49.22 3429+53.98	41	10	24	22	15	22
Hickman Road	A	3429+53.98 3432+00.00	37	19	24	22	0	13
Hickman Road	B	4409+50.00 4414+25.97	42	14	24	22	0	0
Hickman Road	B	4414+25.97 4416+06.00	50	22	24	22	0	0
Hickman Road	B	4416+06.00 4417+63.22	54	26	24	22	4	0
Hickman Road	C	5408+41.80 5409+08.97	22	8	12	22	0	0
Hickman Road	C	5409+08.97 5409+68.73	24	13	12	22	0	0
Hickman Road	C	5409+68.73 5414+48.97	30	19	12	22	14	0
Hickman Road	C	5414+48.97 5416+00.00	38	30	12	22	6	14
Hickman Road	D	6423+15.00 6427+12.27	30	22	12	22	14	0
Hickman Road	D	6427+12.27 6432+19.65	30	12	12	22	0	0
Hickman Road	D	6432+19.65 6432+52.27	26	21	12	22	0	11
Hickman Road	D	6432+52.27 6433+90.47	23	20	12	22	0	12
Douglas Avenue	B	7457+25.00 7463+48.69	42	20	24	22	14	12
Douglas Avenue	C	8459.11.41 8466+89.46	34	20	16	22	14	12
Douglas Avenue	E	9475+99.00 9482+60.47	35	18	18	22	0	0
Douglas Avenue	F	10459+44.12 10467+49.00	35	18	18	22	0	0



Section view is in direction of traffic.  
Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or super-elevated curves.



**RAMP GRADING**



**Full Depth PCC**

Mainline Jointing:  
Transverse joints: CD at 17' spacing

Direction of Travel	BEGIN STATION	END STATION
SB	408+43.00	417+00.00
SB	423+63.95	433+00.00
NB	409+50.00	417+00.00
NB	423+65.33	433+89.85

**Full Depth PCC**

Mainline Jointing:  
Transverse joints: CD at 17' spacing

Auxiliary Lane Jointing:  
Transverse joints: Match Mainline

Shoulder Jointing:  
Longitudinal joint: BT-2, L-2 or KT-2  
Transverse joints: C at 17' spacing

Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
SB	433+00.00	434+00.00	52-45.33
NB	433+89.85	434+00.00	36.19-34.63

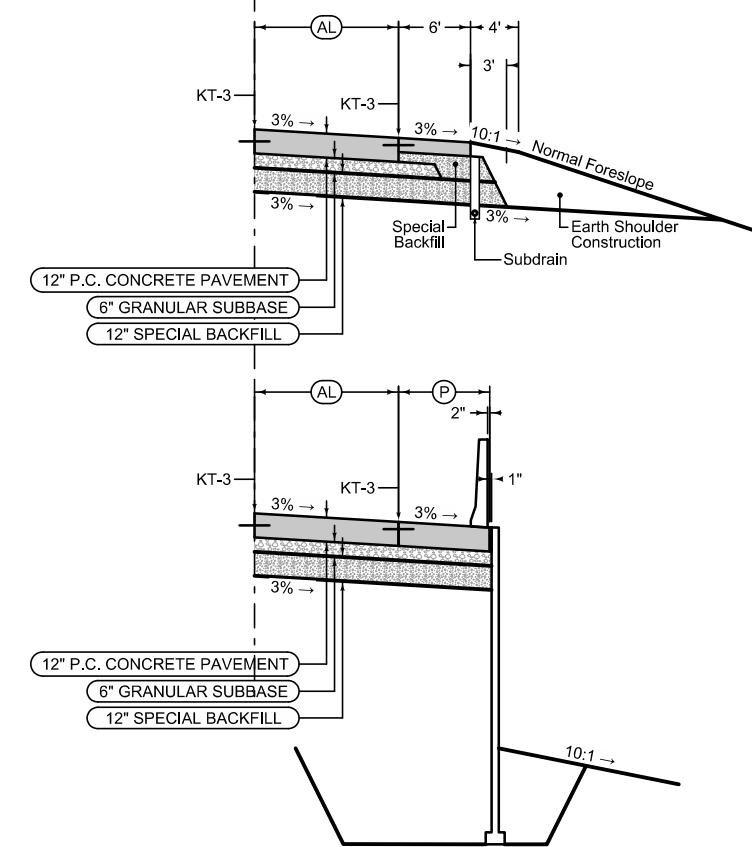
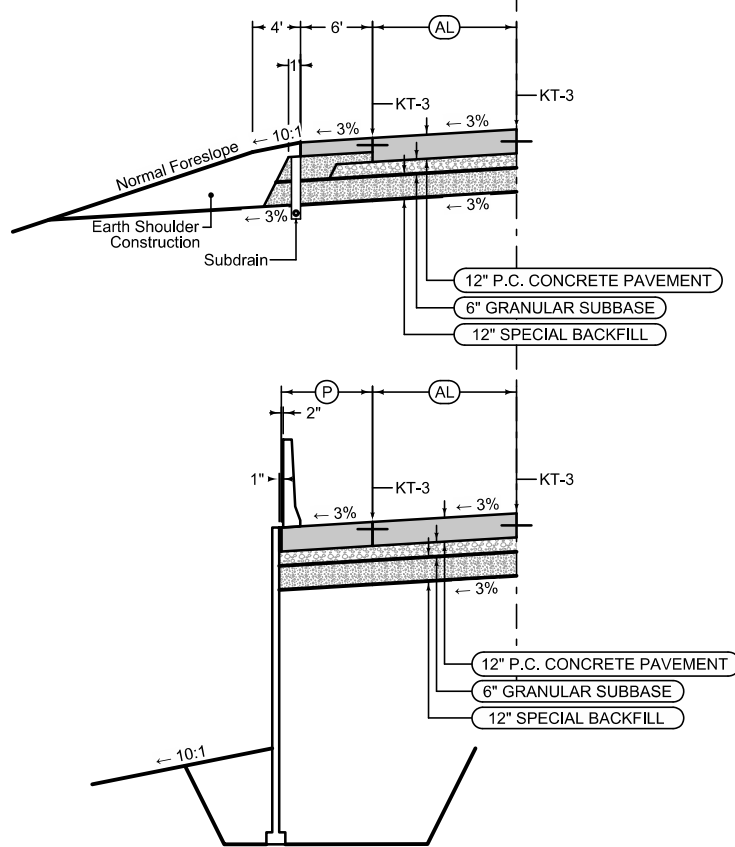
**Full Depth PCC**

Mainline Jointing:  
Transverse joints: CD at 17' spacing

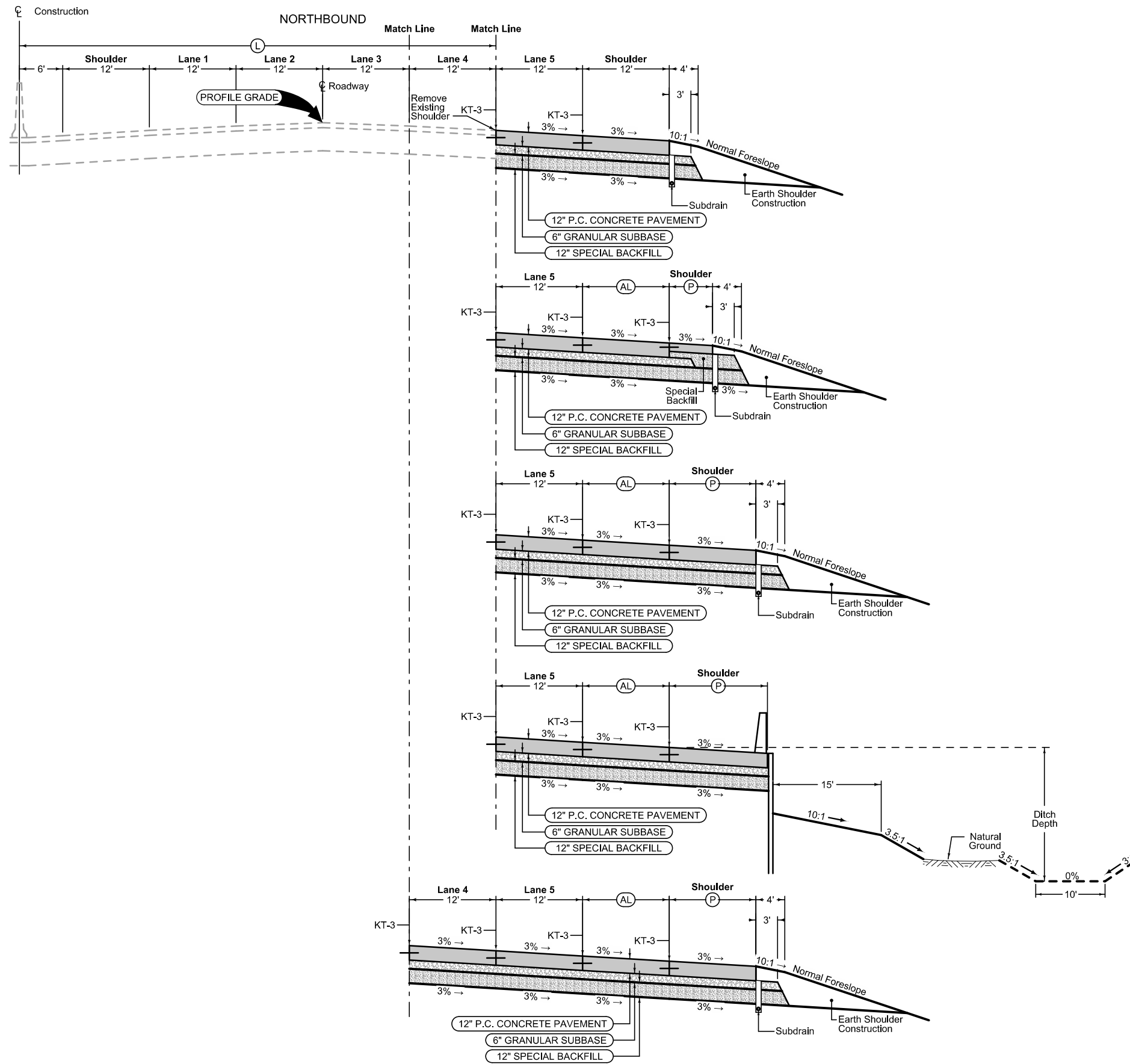
Auxiliary Lane Jointing:  
Transverse joints: Match Mainline

Shoulder Jointing:  
Longitudinal joint: BT-2, L-2 or KT-2  
Transverse joints: C at 17' spacing

Direction of Travel	BEGIN STATION	END STATION	(AL) Feet	(P) Feet
SB	408+21.57	408+43.00	34.11-37.44	7.58
SB	417+00.00	418+34.10	0	13.58
SB	420+70.81	423+63.95	0	13.58
NB	408+21.57	409+50.00	43.44-52.00	7.58-13.36
NB	417+00.00	418+34.10	0	13.58
NB	420+70.81	423+65.33	0	13.58



**MAINLINE PAVING  
FULL REMOVE AND REPLACE  
Interstate 35/80**



Mainline Jointing:  
Transverse joints: CD Match Existing (17' Max. spacing)

BEGIN STATION	END STATION
371+52.00	377+16.67

Mainline Jointing:  
Transverse joints: CD Match Existing (17' Max. spacing)

BEGIN STATION	END STATION	(AL) Feet	(P) Feet
377+16.67	378+72.25	36,19-17.98	6

Mainline Jointing:  
Transverse joints: CD Match Existing (17' Max. spacing)

BEGIN STATION	END STATION	(AL) Feet	(P) Feet
378+72.25	380+26.82	17.98-12.00	6-12
380+26.82	398+00.00	12.00	12
436+00.00	437+00.00	14.50-12.00	9.5-12
437+00.00	446+19.00	12.00	12
476+46.00	481+25.00	12.00	6
481+25.00	482+75.00	12.00-6	6
482+75.00	484+25.00	6-0	6-12

Mainline Jointing:  
Transverse joints: CD Match Existing (17' Max. spacing)

BEGIN STATION	END STATION	(AL) Feet	(P) Feet
398+00.00	404+12.00	12.00	12.58

Mainline Jointing:  
Transverse joints: CD Match Existing (17' Max. spacing)

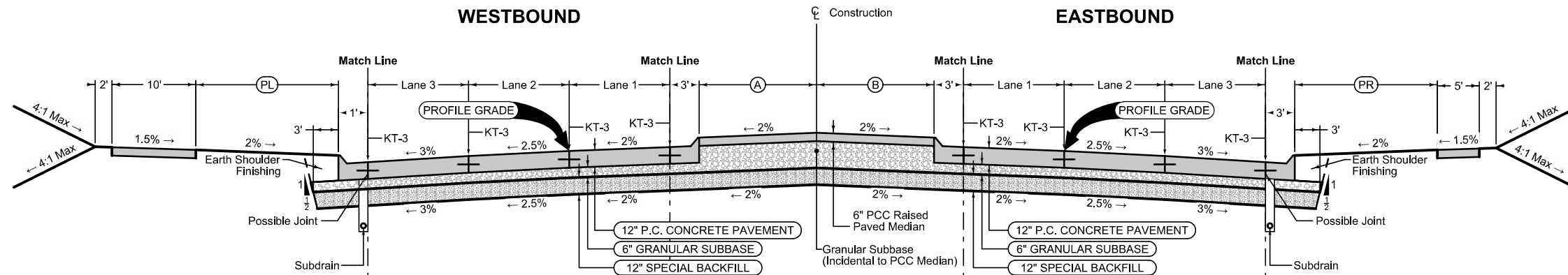
BEGIN STATION	END STATION	(AL) Feet	(P) Feet
434+00.00	436+00.00	34.63-14.50	6-9.5
446+19.00	451+25.00	12	12
451+25.00	452+14.80	12-18	12-6
452+14.80	454+25.00	18-52	6
457+25.00	467+50.00	0	12
467+50.00	472+25.00	39.83-12	6
472+25.00	476+46.00	12	6

**MAINLINE PAVING  
LANE WIDENING  
Interstate 35/80**



WESTBOUND

EASTBOUND



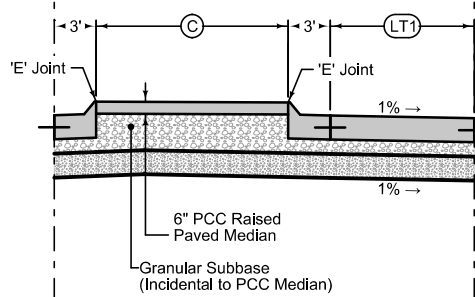
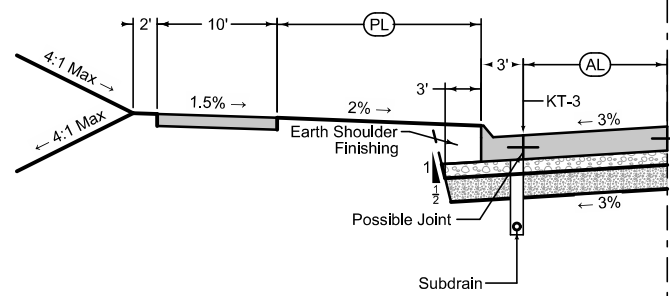
Mainline Jointing:  
Transverse joints: CD at 17' spacing  
Longitudinal joint: L-2

Mainline Jointing:  
Transverse joints: CD at 17' spacing  
Longitudinal joint: L-2

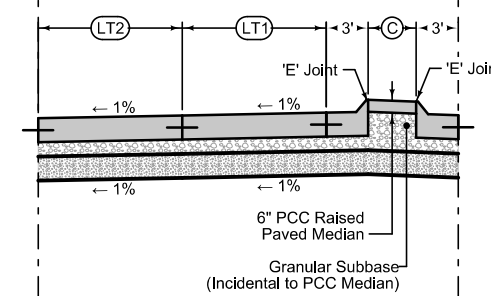
BEGIN STATION	END STATION	Aux Lane Feet	Lane 3 Feet	Lane 2 Feet	Lane 1 Feet
666+50.00	668+00.00	12	11	11	11
687+00.00	690+65.00	0	12	12	12

BEGIN STATION	END STATION	(A) Feet	(B) Feet
666+50.00	668+00.00	16	13
687+00.00	690+65.00	8	8

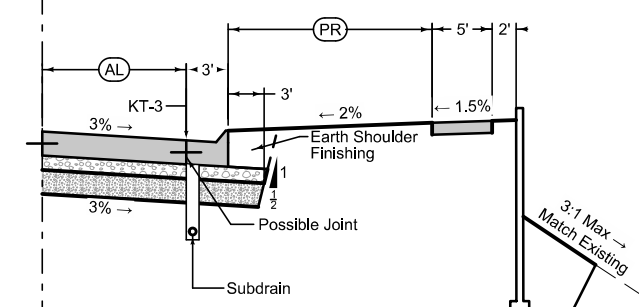
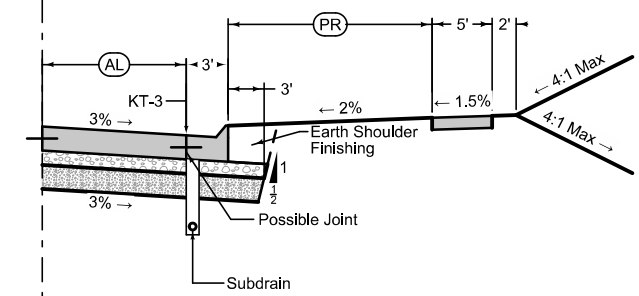
BEGIN STATION	END STATION	Lane 1 Feet	Lane 2 Feet	Lane 3 Feet	Aux Lane Feet
666+50.00	668+00.00	12	12	12	12
687+00.00	690+65.00	12	12	12	8-12



BEGIN STATION	END STATION	(C) Feet	(LT1) Feet	(LT2) Feet
687+00.00	688+62.83	16-4	0-12	0
688+62.83	690+65.00	4	12	0



BEGIN STATION	END STATION	(C) Feet	(LT1) Feet	(LT2) Feet
666+50.00	668+00.00	9-22	12-10	8-0
0	0	0	0	0

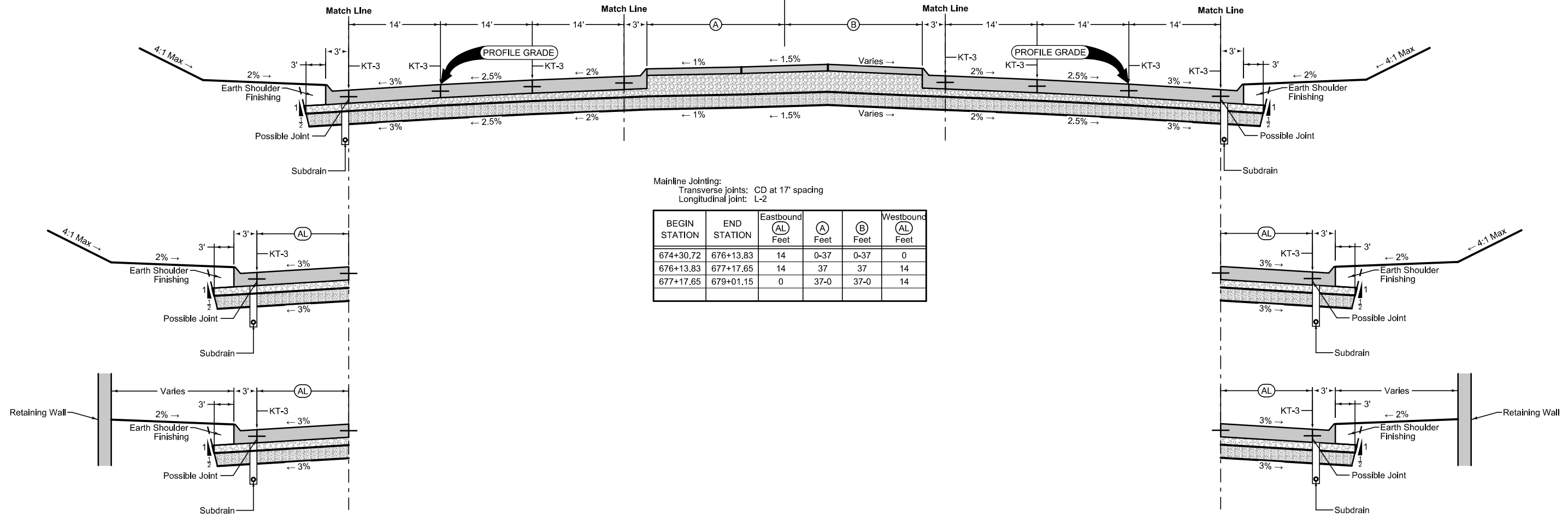


Hickman Road DDI  
Normal Lane Direction

EASTBOUND

WESTBOUND

Construction

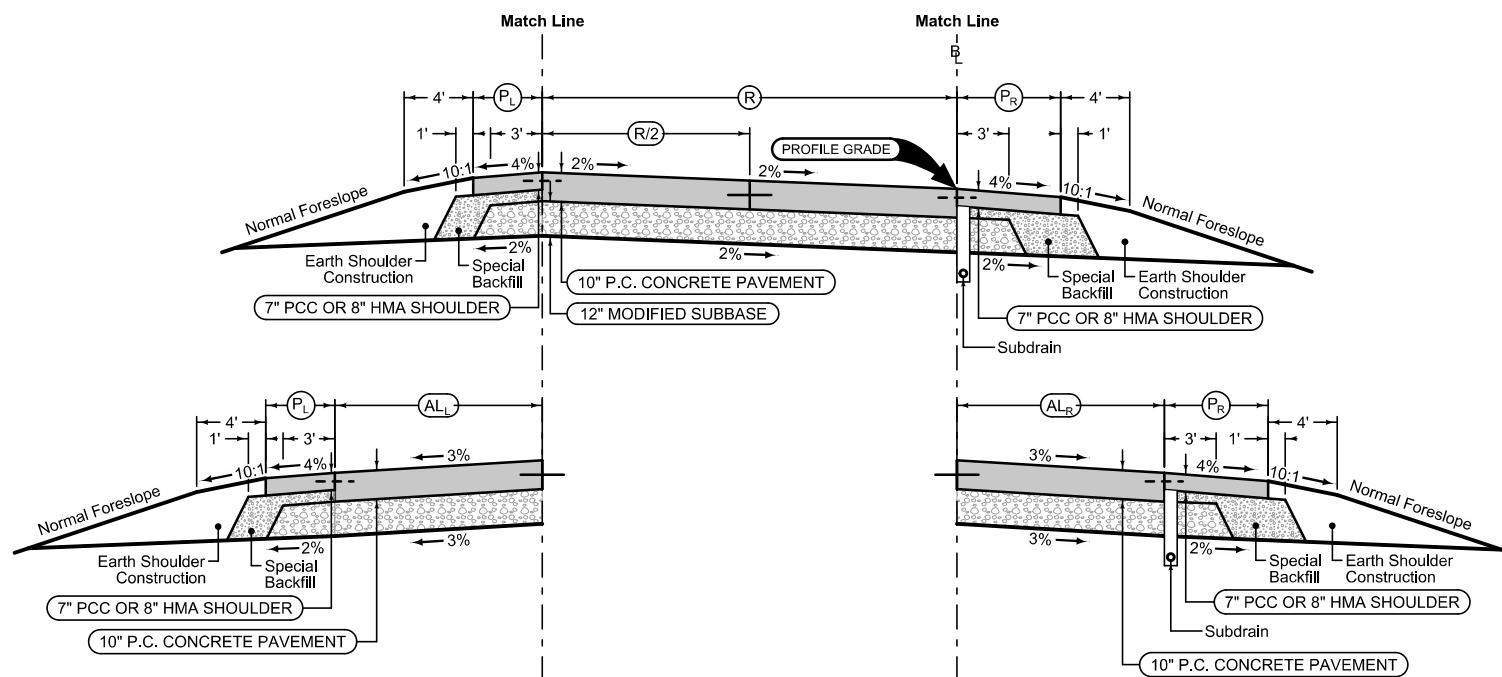


Mainline Jointing:  
Transverse joints: CD at 17' spacing  
Longitudinal joint: L-2

BEGIN STATION	END STATION	Eastbound AL Feet	A Feet	B Feet	Westbound AL Feet
674+30.72	676+13.83	14	0-37	0-37	0
676+13.83	677+17.65	14	37	37	14
677+17.65	679+01.15	0	37-0	37-0	14

Hickman Road DDI  
Opposite Lane Direction

LOCATION			DIMENSIONS				
INTERCHANGE	RAMP	STATION TO STATION	(R) Feet	(P <sub>L</sub> ) Feet	(P <sub>R</sub> ) Feet	(AL <sub>L</sub> ) Feet	(AL <sub>R</sub> ) Feet
University Avenue	A	1368+26.62   1369+75.00	24	0	6	0	0
University Avenue	A	1369+75.00   1382+75.00	24	4	6	0	0
University Avenue	D	2372+60.77   2377+16.00	16	4	8	0	0
Hickman Road	A	3422+17.00   3423+04.31	24	4	6	12	12
Hickman Road	A	3423+04.31   3424+84.31	24	4	6	12-0	12-0
Hickman Road	A	3424+84.31   3426+49.22	24	4	6	0	0
Hickman Road	A	3426+49.22   3429+53.98	24	4	7	0	0
Hickman Road	A	3429+53.98   3432+00.00	24	4	6	0	0
Hickman Road	B	4409+50.00   4414+25.97	24	4	13.58	0	0
Hickman Road	B	4414+25.97   4416+06.00	24	4	13.58	0-12	0-12
Hickman Road	B	4416+06.00   4417+63.22	24	4	13.58	12	12
Hickman Road	C	5408+41.80   5409+08.97	12	4	7.58	0	0
Hickman Road	C	5409+08.97   5409+68.73	12	4	7.58-13.58	0	0-1.33
Hickman Road	C	5409+68.73   5414+48.97	12	4	13.58	0	1.33-12
Hickman Road	C	5414+48.97   5416+00.00	12	4	6	0	12
Hickman Road	D	6423+15.00   6427+12.27	12	4	7	0	12
Hickman Road	D	6427+12.27   6432+19.65	12	4	7	0	12-0.73
Hickman Road	D	6432+19.65   6432+52.27	12	4	6	0	0.73-0
Hickman Road	D	6432+52.27   6433+90.47	12	4	6	0	0
Douglas Avenue	B	7457+25.00   7463+48.69	24	4	6	0	0
Douglas Avenue	C	8459.11.41   8466+89.46	16	4	6	0	0
Douglas Avenue	E	9475+99.00   9482+60.47	18	4	6	0	0
Douglas Avenue	F	10459+44.12   10467+49.00	18	4	6	0	0



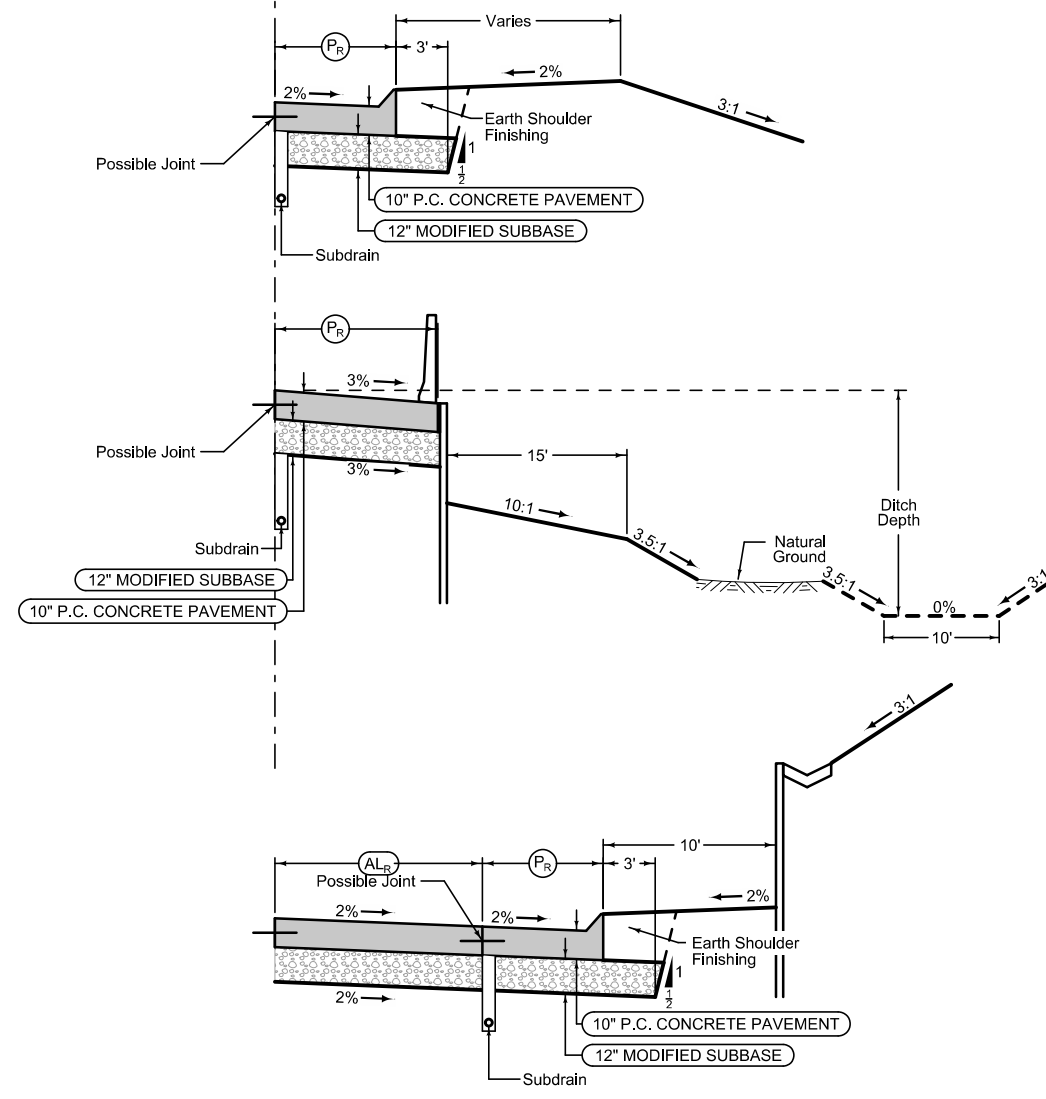
2RP  
MODIFIED

Section shown in the direction of traffic.  
Ramp Jointing (2RP):  
Transverse joints: CD at 17' spacing.  
Longitudinal joint: L-2  
PCC Auxiliary Lane Jointing (2\_AuxLane\_PCC):  
Longitudinal joint: L or KT  
Transverse joint: Match Mainline  
PCC Shoulder Jointing (1R\_P\_ALT):  
Longitudinal joint: BT-T or BT-5  
Transverse joints: C at 15' spacing  
HMA Shoulder Jointing (1R\_P\_ALT):  
Longitudinal joint: B

**Curbed Shoulder**

Shoulder jointing:  
Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':  
Transverse: C at 17' spacing  
Single pour: L-2  
Staged: KT-2

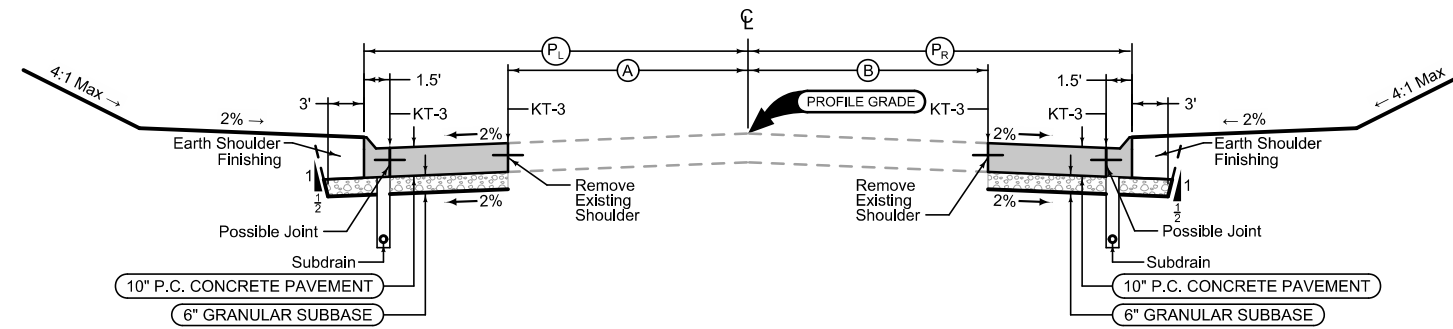
1R_Curb_04-21-20		
BEGIN STATION	END STATION	Curb Type See PV-102
3426+49.22	3429+53.98	6" Sloped
6423+15.00	6432+19.65	6" Sloped



**Interchange Ramps**

Mainline Jointing:  
Transverse joints: CD Match Existing (17' Max. spacing)

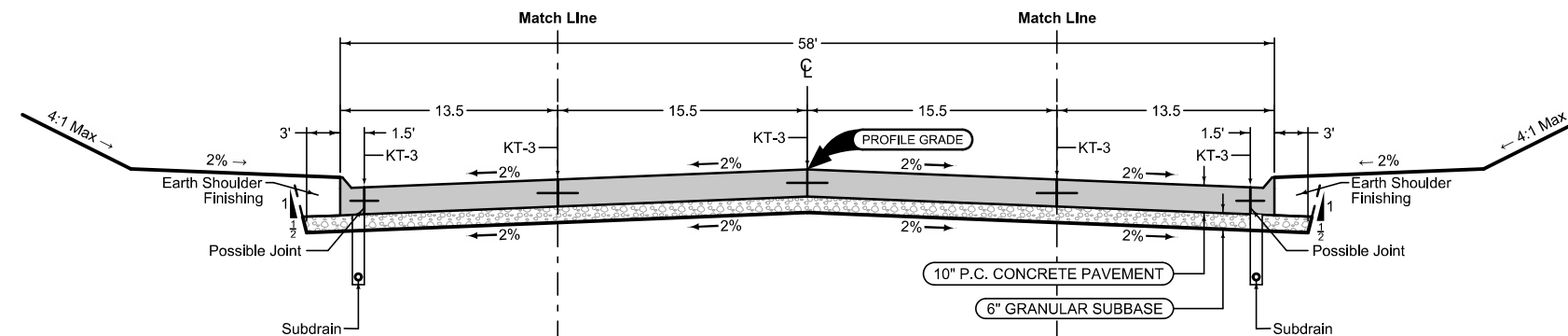
STATION TO STATION		(A) Feet	(P <sub>L</sub> ) Feet
1686+12.22	1687+76.00	16.46-16.87	3-27.71
1687+76.00	1688+03.24	3.50	27.71-29
1688+03.24	1688+29.70	3.50	29
1688+29.70	1690+20.00	0	29
1694+25.00	1695+73.00	19.27-13.88	30.78-15.38



Mainline Jointing:  
Transverse joints: CD Match Existing (17' Max. spacing)

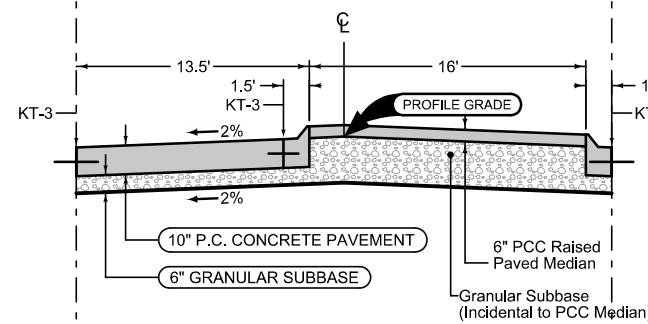
STATION TO STATION		(B) Feet	(P <sub>R</sub> ) Feet
1686+60.70	1688+03.24	17.10-21	19.52-29
1688+03.24	1690+20.00	21	29
1694+25.00	1695+72.58	11.27-14.82	25-16.32

**LANE WIDENING  
NW 111th Street**



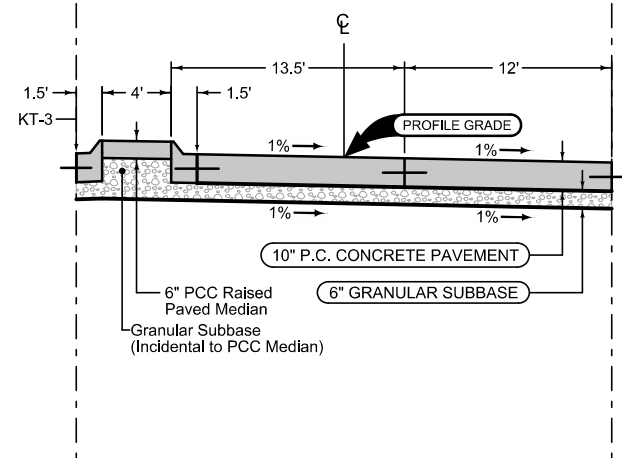
Mainline Jointing:  
Transverse joints: CD at 17' spacing  
Longitudinal joint: L-2

STATION TO STATION	
1690+60.00	1690+80.00
1691+90.00	1692+21.50
1694+02.50	1694+25.00



Mainline Jointing:  
Transverse joints: CD at 17' spacing  
Longitudinal joint: L-2

STATION TO STATION	
1692+21.50	1694+02.50



Mainline Jointing:  
Transverse joints: CD at 17' spacing  
Longitudinal joint: L-2

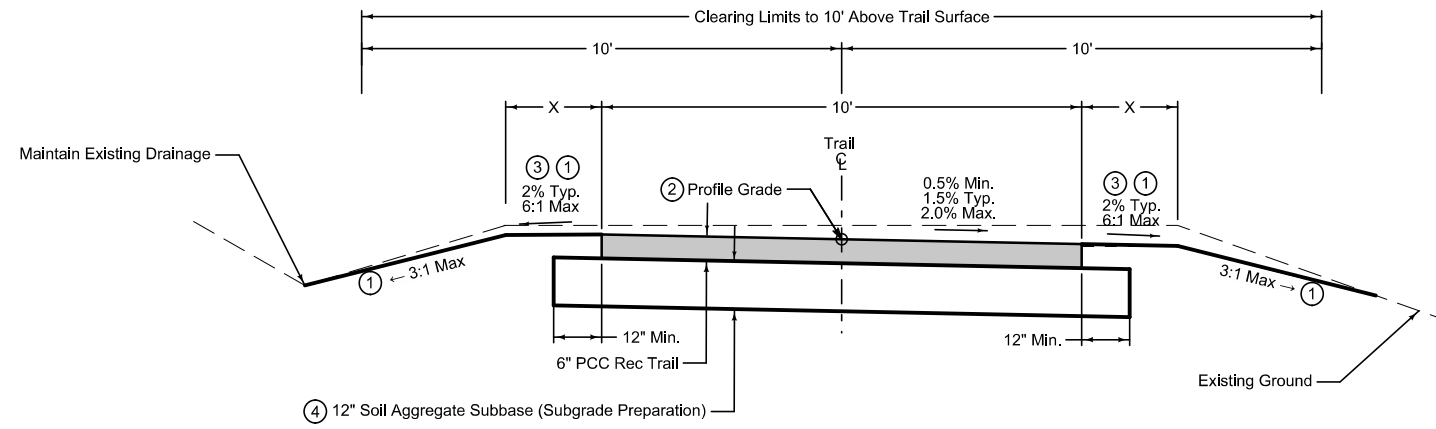
STATION TO STATION	
1690+20.00	1690+60.00

**NW 111th Street**



Note:  
See V Sheets for pedestrian bridge information.

- ① REFER TO CROSS SECTIONS FOR FORESLOPE AND BACKSLOPE GRADING.
- ② TRAIL ELEVATION TO BE GENERALLY AT OR SLIGHTLY ABOVE OR BELOW EXISTING GRADE AT TRAIL CENTERLINE. TRAIL ALIGNMENT AND PROFILE MAY BE ADJUSTED IN THE FIELD, AS APPROVED BY THE ENGINEER, TO BEST FIT THE EXISTING RAILROAD GRADE. ASSURE SMOOTH TRANSITIONS ON ALIGNMENTS AND PROFILES WITH NO SUDDEN GRADE BREAKS.
- ③ SHAPING AND FINISHING OF SHOULDERS TO MAINTAIN POSITIVE DRAINAGE AWAY FROM TRAIL IS REQUIRED THROUGHOUT THE PROJECT.
- ④ IF APPLICABLE, HARVEST EXCESS BALLAST STONE TO BE USED ALONG OTHER TRAIL AREAS AS SHOWN IN THE PLANS.

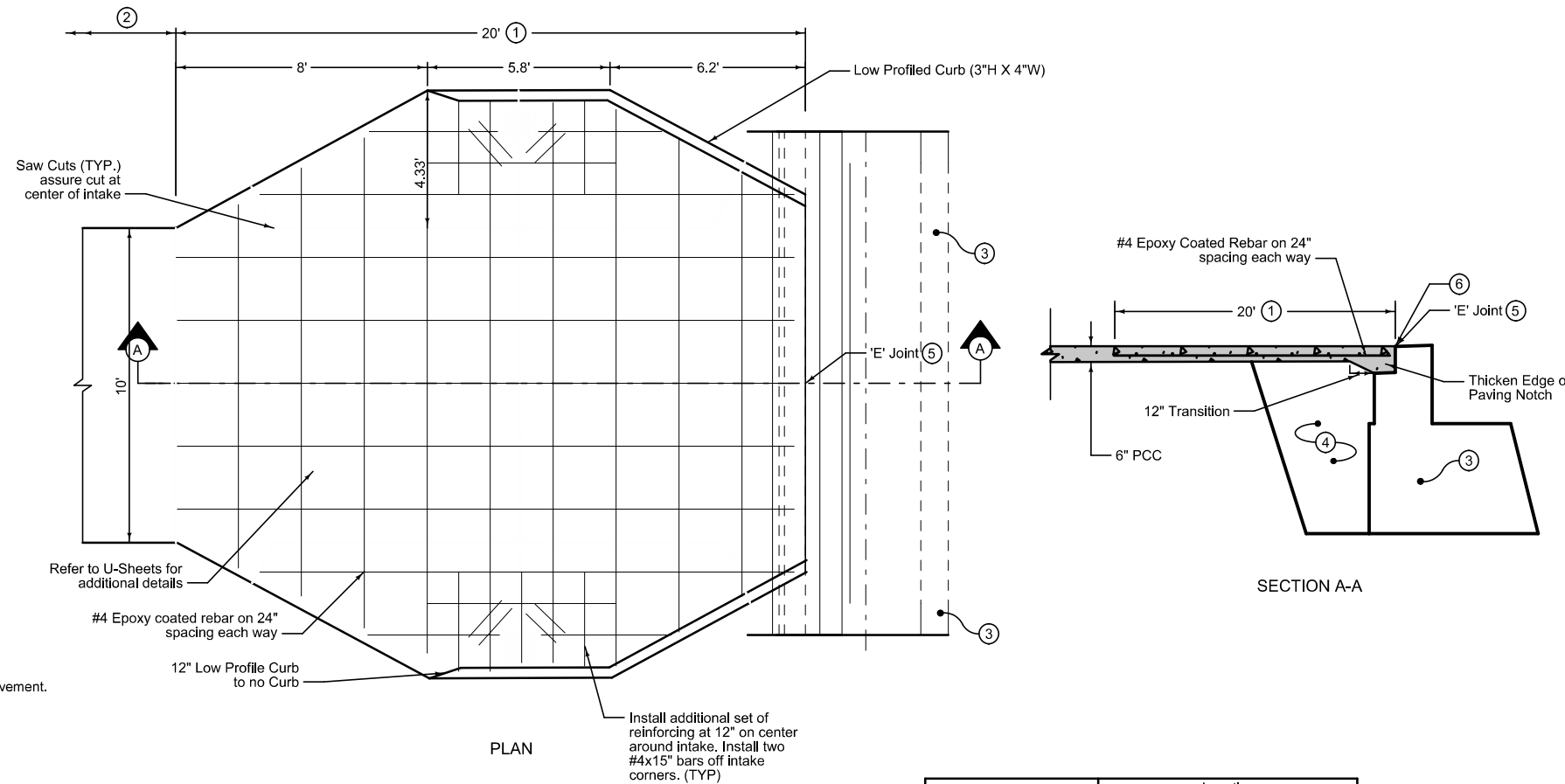


Note:  
Refer to cross sections and D-Sheets for trail cross-slope directions.

Location	
STATION TO STATION	
41+97.51	42+06.04
42+37.04	66+33.80
66+64.86	94+67.97

Joint: C Joint at 10' spacing

① HIGH TRESTLE TRAIL TYPICAL SECTION ON EXISTING RAILROAD GRADE  
NO SCALE



Keyed Notes:

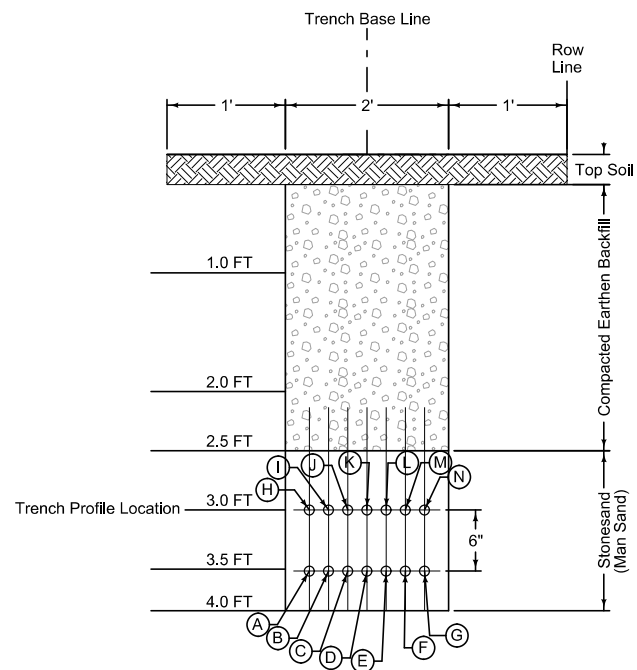
- ① Shared use path bridge approach pavement.
- ② Shared use path pavement.
- ③ Bridge abutment and framing elements, refer to V Sheets.
- ④ Refer to V Sheets for backfill details
- ⑤ 1' expansion joint, refer to PV-101
- ⑥ Match bridge approach slab elevation to the top of the bridge abutment backwall.

Description	Location	
	STATION TO STATION	
HTT	98+71.33	98+91.33
HTT	100+74.33	100+94.33

⑤ SHARED USE PATH REINFORCED BRIDGE APPROACH (BOTH APPROACHES SIMILAR)  
NO SCALE

GENERAL PROJECT NOTES

1. COMPLETE ALL CONSTRUCTION IN ACCORDANCE WITH THE IOWA DOT STANDARD SPECIFICATIONS, THESE PROJECT PLANS, AND CONTRACT DOCUMENTS.
2. NOTIFY CITY OF CLIVE, IOWA COMMUNICATIONS NETWORK AND ENGINEER AT LEAST TWO (2) BUSINESS DAYS PRIOR TO THE START OF CONSTRUCTION. CONTACTS WILL BE PROVIDED AT PRE-CONSTRUCTION MEETING.
3. NOTIFY IOWA ONE CALL AND UTILITY PROVIDERS PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES AND COORDINATE WITH UTILITY PROVIDERS AS NECESSARY DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR DETERMINING EXISTENCE, EXACT LOCATION, AND DEPTH OF ALL UTILITIES. PROTECT ALL ACTIVE UTILITY LINES AND STRUCTURES. ANY DAMAGES TO UTILITY ITEMS NOT SHOWN FOR REMOVAL OR MODIFICATION SHALL BE REPAIRED TO THE UTILITY OWNER'S SPECIFICATIONS AT THE CONTRACTOR'S EXPENSE.
4. PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETED.
5. ALL HOLES RESULTING FROM OPERATIONS OF THE CONTRACTOR, INCLUDING UTILITY LOCATING, SHALL BE FILLED AND COMPACTED TO FINISHED GRADE AS DIRECTED BY THE ENGINEER TO PREVENT FUTURE SETTLEMENT. THE VOIDS SHALL BE FILLED AS SOON AS PRACTICAL -PREFERABLY THE DAY CREATED AND NOT LATER THAN THE DAY AFTER CONSTRUCTION ACTIVITIES. ANY PORTION OF THE RIGHT-OF-WAY OR PROJECT LIMITS (INCLUDING BORROW AREAS AND OPERATION SITES) DISTURBED BY ANY SUCH OPERATIONS SHALL BE RESTORED TO AN ACCEPTABLE CONDITION. THIS OPERATION SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS IN PROJECT.
6. THE WORK LIMITS FOR THE PROJECT ARE WITHIN THE RIGHT OF WAY LINES AS SHOWN ON THE PLANS OR WITHIN CITY OWNED PROPERTY. CONFINE ALL CONSTRUCTION ACTIVITIES TO WITHIN THE CONSTRUCTION LIMITS.
7. DO NOT STORE EQUIPMENT AND/OR MATERIALS ON PAVEMENT OR WITHIN PUBLIC RIGHT OF WAY (UNLESS PRIOR APPROVAL IS RECEIVED), ON STREETS, OR TRAILS OPEN TO TRAFFIC. CONTRACTOR SHALL PROVIDE AREAS AS NEEDED FOR STORAGE OF EQUIPMENT AND/OR MATERIALS OFF SITE.
8. CONTRACTOR'S RESPONSIBLE TO PROVIDE OFF SITE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIAL (EXCAVATED MATERIAL OR BROKEN CONCRETE) WHICH IS NOT ALLOWED TO BE INCORPORATED INTO THE WORK INVOLVED ON THIS PROJECT AT NO ADDITIONAL COMPENSATION. CONTRACTOR RESPONSIBLE TO ENSURE THAT AREAS, INCLUDING HAUL ROADS, SELECTED FOR WASTE OR DISPOSAL NOT IMPACT CULTURALLY SENSITIVE SITES, GRAVES, WETLANDS OR "WATERS OF THE U.S." INCLUDING STREAMS OR STREAM BANKS BELOW THE "ORDINARY HIGH WATER MARK" WITHOUT APPROVED U.S. ARMY CORPS OF ENGINEERS SECTION 404 PERMIT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE PLACED WITHIN THE RIGHT-OF-WAY, UNLESS STATED IN THE PLANS. ONLY NECESSARY IF UNDERGROUND EXCAVATION IS NEEDED.
9. DO NOT RESTRICT DRAINAGE CHANNELS AND PROTECT ALL EXISTING DRAINAGE STRUCTURES UNLESS NOTED OTHERWISE. CONTRACTOR IS FULLY LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR ACTION OR INACTION IN PROVIDING FOR THE HANDLING OF STORM WATER FLOW DURING CONSTRUCTION. PROTECT STORM SEWER SYSTEM FROM SEDIMENT/BORING FLUID INFILTRATION.
10. DO NOT DISTURB GRASS AREAS AND TREES OUTSIDE THE CONSTRUCTION LIMITS. CONTRACTOR NOT PERMITTED TO PARK OR SERVICE VEHICLES AND EQUIPMENT OR USE THESE AREAS FOR STORAGE OF MATERIALS. STORAGE, PARKING, AND SERVICE AREAS(S) WILL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.
11. DIMENSIONS, BUILDING LOCATION, UTILITIES AND GRADING OF THIS SITE ARE BASED ON AVAILABLE INFORMATION AT THE TIME OF DESIGN. DEVIATIONS MAY BE NECESSARY IN THE FIELD. ANY SUCH CHANGES OR CONFLICTS BETWEEN THIS PLAN AND FIELD CONDITIONS ARE TO BE REPORTED TO THE ENGINEER PRIOR TO STARTING CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR LAYOUT VERIFICATION OF ALL SITE IMPROVEMENTS PRIOR TO CONSTRUCTION.
12. CONTRACTOR RESPONSIBLE FOR CLEANING DIRT AND DEBRIS FROM ROADWAY AND NEIGHBORING STREETS, DRIVEWAYS, AND SIDEWALKS CAUSED BY CONSTRUCTION ACTIVITIES DAILY OR BEFORE RAIN EVENT.
13. CONTRACTOR TO VERIFY THE LOCATION AND CONDITION OF EXISTING CONDUIT AND NOTIFY ENGINEER OF ANY VARIANCES FROM THE PROPOSED PLAN PRIOR TO INSTALLATION OF CABLE. IN INSTANCES WHERE CONTRACTOR IS UNABLE TO UTILIZE EXISTING CONDUIT, CONTRACTOR SHALL RECEIVE APPROVAL FROM ENGINEER PRIOR TO INSTALLATION OF ADDITIONAL CONDUIT.
14. ALL CONDUIT SHALL BE 2 INCH SCHEDULE 40 PVC OR HDPE.
15. LABEL ALL HANDHOLES PER THE IDENTIFICATION TABLE. DO NOT PROVIDE CABLE HOOKS WITHIN HANDHOLES.
16. INSTALL DUCT BANK AS SHOWN ON THE PLANS. BORING OF DUCT BANK IS REQUIRED UNDERNEATH THE INTERSTATE AND NW 111" ST. BORING UNDER THE ROADS CAN BE ACCOMPLISHED USING A SINGLE PULL OF ALL CONDUITS OR TWO SEPARATE PULLS OF HALF THE NUMBER OF CONDUITS EACH, SEPARATED BY FOUR (4) FEET. BORE ONE 2 INCH CONDUIT UNDERNEATH THE SOUTH APPROACH OF THE LIFETIME/LOVE'S INTERSECTION, EAST OF DUCT BANK 4, AND UNDER US HWY 6.
17. INSTALL A 96-COUNT SINGLE MODE FIBER IN PATHWAY A FOR THE CITY OF CLIVE, CITY OF URBANDALE, AND IOWA COMMUNICATIONS NETWORK (ICN) FROM THE US HWY 6 & LIFETIME INTERSECTION TO THE EAST OF US HWY 6 & NW 111" ST INTERSECTION, AS SHOWN IN THE PLANS. FIBER OPTIC CABLE SHALL BE ARMORED SINGLE MODE LOOSE TUBE G.652 OR EQUIVALENT. SPLICE FIBER AT BOTH ENDS OF THE PATH. SPLICING DETAILS WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING.
18. SPLICE THE 96-COUNT CABLE TO AN EXISTING CABLE AT THE US HWY 6 & NW 111" ST INTERSECTION IN THE EXISTING HANDHOLE. SPLICING DETAIL WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING.
19. COIL 100 FEET OF FIBER OPTIC CABLE IN EACH TYPE IV HANDHOLE, UNLESS OTHERWISE IDENTIFIED (200 FEET OF SLACK REQUIRED AT HANDHOLE BANK 2 AND 3). COIL 30 FEET OF CABLE IN ANY OTHER HANDHOLE ENCOUNTERED.
20. LABEL FIBER CABLE IN EACH HANDHOLE WITH A DURABLE TAG READING - CITY SM 96. EACH TAG SHALL SPECIFY THE DIRECTION THAT THE CABLE COMES FROM WHERE IT ENTERS EACH HANDHOLE.
21. INSTALL MID-SHEATH SPLICE KITS (CLOSURES, TRAYS) IN HANDHOLE A OF HANDHOLE BANKS 2 AND 3 AT THE MIDDLE OF THE REQUIRED SLACK (100 FEET OF CABLE ON EACH SIDE OF CLOSURE). NO SPLICING WILL BE REQUIRED, BUT PREPARE THE ORANGE TUBE FOR FUTURE SPLICING AT EACH LOCATION.
22. INSTALL ICN LOCATE PANEL NEAR EACH HANDHOLE BANK PER INSTRUCTIONS. ICN WILL PROVIDE PANEL AND INSTRUCTIONS.
23. SPLICING OF FIBER AT EACH END WILL REQUIRE OVERNIGHT WORK IN ACCORDANCE WITH ICN REQUIREMENTS (8:00 PM TO 5:00 AM). NOTIFY ICN AND CLIVE AT LEAST TWO (2) WEEKS PRIOR TO WORK.



**Joint Utility Trench Detail - Trenched Construction  
Hickman Road (U.S. 6)**

- Notes:
1. Ensure backfill material is free of cinders, concrete, or other rubble.
  2. Backfill material, shall, be compacted.
  3. Install tracer wire and pull rope in each conduit.

I-35/I-80 & HICKMAN ROAD JOINT UTILITY TRENCH								
ID #	OWNER	CONDUIT SIZE (IN)	CONDUIT COLOR	NUMBER OF CONDUIT (EA)	WIRING	CONDUIT START	CONDUIT END	Conduit Length (FT)
A	CITY OF CLIVE/ICN	2	GREEN	1	PR	HH BANK 1	HH BANK 4	3,009
B	CONSOLIDATED	2	GREEN W/ BLUE STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
C	CONSOLIDATED	2	GREEN W/ BLUE STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
D	LUMEN	2	GREEN W/ BLACK STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
E	LUMEN	2	GREEN W/ BLACK STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
F	MCI/VERIZON	2	GREEN W/ RED STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
G	MEDIACOM	2	GREEN W/ YELLOW STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
H	WINDSTREAM	2	GREEN W/ WHITE STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
I	METRONET	2	GREEN W/ GREY STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
J	METRONET	2	GREEN W/ GREY STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
K	FUTURE SPARE 1	2	ORANGE	1	PR	HH BANK 1	HH BANK 4	3,009
L	FUTURE SPARE 2	2	ORANGE W/ BLUE STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
M	FUTURE SPARE 3	2	ORANGE W/ BLACK STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
N	FUTURE SPARE 4	2	ORANGE W/ GREEN STRIPE	1	PR	HH BANK 1	HH BANK 4	3,009
O	FUTURE SPARE 5	2	ORANGE W/ RED STRIPE	1	PR	MH 1	MH 2	907
P	FUTURE SPARE 6	2	ORANGE W/ YELLOW STRIPE	1	PR	MH 1	MH 2	907
Q	FUTURE SPARE 7	2	ORANGE W/ WHITE STRIPE	1	PR	MH 1	MH 2	907
R	FUTURE SPARE 8	2	ORANGE W/ GREY STRIPE	1	PR	MH 1	MH 2	907

### SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- Water Hook Up
- Radio Tower
- Tower Anchor
- Guardrail (Beam or Cable)
- Guard Post (one or two)
- Guard Post (over two)
- Filler Pipe
- Gas Valve
- Water Valve
- Speed Limit Sign
- Mile Marker Post
- Sign
- Traffic Signal Control Box
- Rail Road Signal Control Box
- Telephone Switch Box
- Electric Box

### UTILITY LEGEND

- (CLV) CLIVE, CITY OF  
Contact Name : Jared Acheson  
Contact Phone: 5152236231  
Contact Email: JAcheson@cityofclive.com
- (CTLIA01) CENTURYLINK/LUMEN  
Contact Name : Steven Parker  
Contact Phone: 5152650968  
Contact Email: steven.parker4@lumen.com
- (DWR) DES MOINES METRO WASTEWATER  
Contact Name : Nick Carter  
Contact Phone: 5153238135  
Contact Email: nfcarter@dmgov.org
- (DWW) DES MOINES WATER WORKS  
Contact Name : Carla Schumacher  
Contact Phone: 5153236227  
Contact Email: cschumacher@dmww.com
- (ENV) CONSOLIDATED COMMUNICATIONS  
Contact Name : Phillip Williams  
Contact Phone: 5154181937  
Contact Email: Phillip.Williams@consolidated.com
- (ICN) IOWA COMMUNICATIONS NETWORK  
Contact Name : Shannon Marlow  
Contact Phone: 8005723940  
Contact Email: icnoutsideplantiowaonecall@iowa.gov
- (IDT) IOWA DOT  
Contact Name : Jason Dale  
Contact Phone: 5152391995  
Contact Email: jason.dale@iowadot.us
- (INS) AUREON NETWORK SERVICES  
Contact Name : Jeff Klocko  
Contact Phone: 5158300445  
Contact Email: jeff.klocko@aureon.com
- (M52E) MIDAMER-ELEC  
Contact Name : Jordan Hohensee  
Contact Phone: 5152424235  
Contact Email: jordan.hohensee@midamerican.com
- (M52G) MIDAMER-GAS  
Contact Name : Jordan Hohensee  
Contact Phone: 5152424235  
Contact Email: jordan.hohensee@mldamerican.com
- (MC1) VERIZON  
Contact Name : Grace Gilborn  
Contact Phone: 5154432865  
Contact Email: Grace.gilborn@verizon.com
- (T15) MEDIACOM COMMUNICATIONS CORP  
Contact Name : Jerry Broughton  
Contact Phone: 5152462252  
Contact Email: jbroughton@mediacomcc.com
- (UPN) UNITE PRIVATE NETWORKS, LLC  
Contact Name : Wyatt Bohle  
Contact Phone: 5153610491  
Contact Email: wyatt.bohle@upnfiber.com
- (URB) CITY OF URBANDALE  
Contact Name : Tyler Casey  
Contact Phone: 5152783950  
Contact Email: tcasey@urbandale.org
- (UWD) URBANDALE WATER UTILITY  
Contact Name : Gail Palmer  
Contact Phone: 5152783940  
Contact Email: gpalmer@urbandalewater.org
- (WNIA) WINDSTREAM COMMUNICATIONS  
Contact Name : Mark Hussman  
Contact Phone: 4028276355  
Contact Email: mark.hussman@windstream.com
- (ZAY) ZAYO GROUP LLC  
Contact Name : John Ferraresi  
Contact Phone: 3122160450  
Contact Email: john.ferraresi@zayo.com

### PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	
Lavender	(9)		Temporary Pavement Shading
Yellow	(4)		Proposed Pavement Shading
Orange	(6)		Proposed Granular Shading
Orange	(70)		Proposed Shoulder Granular Shading
Yellow	(68)		Proposed Shoulder Paved Full Depth Shading
Yellow	(132)		Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)		Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)		Grading Shading
Orange, Light	(134)		Proposed Granular Entrance Shading
Yellow	(220)		Proposed Paved Entrance Shading
Tan	(8)		Proposed Sidewalk Shading
Blue, Light	(230)		Proposed Sidewalk Landing Shading
Pink	(11)		Proposed Sidewalk Ramp Shading
Green, Light	(225)		Existing Pavement Shading
Red	(3)		Proposed Structure Shading
Red	(3)		Delineates Restricted Areas

### PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

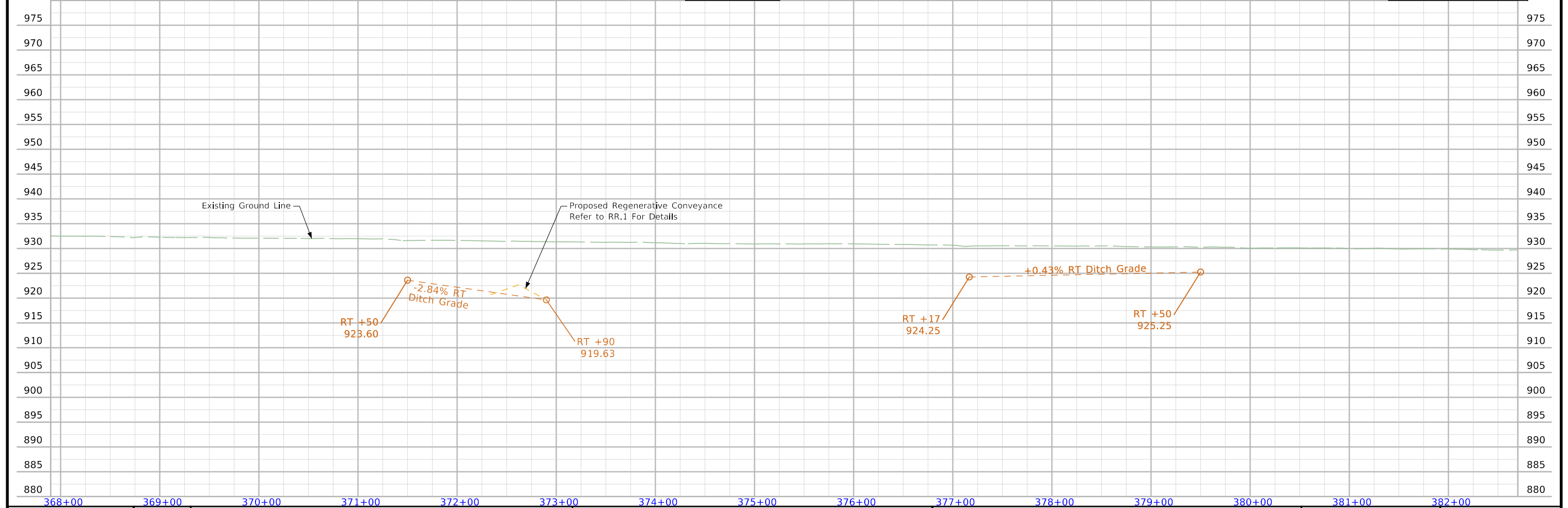
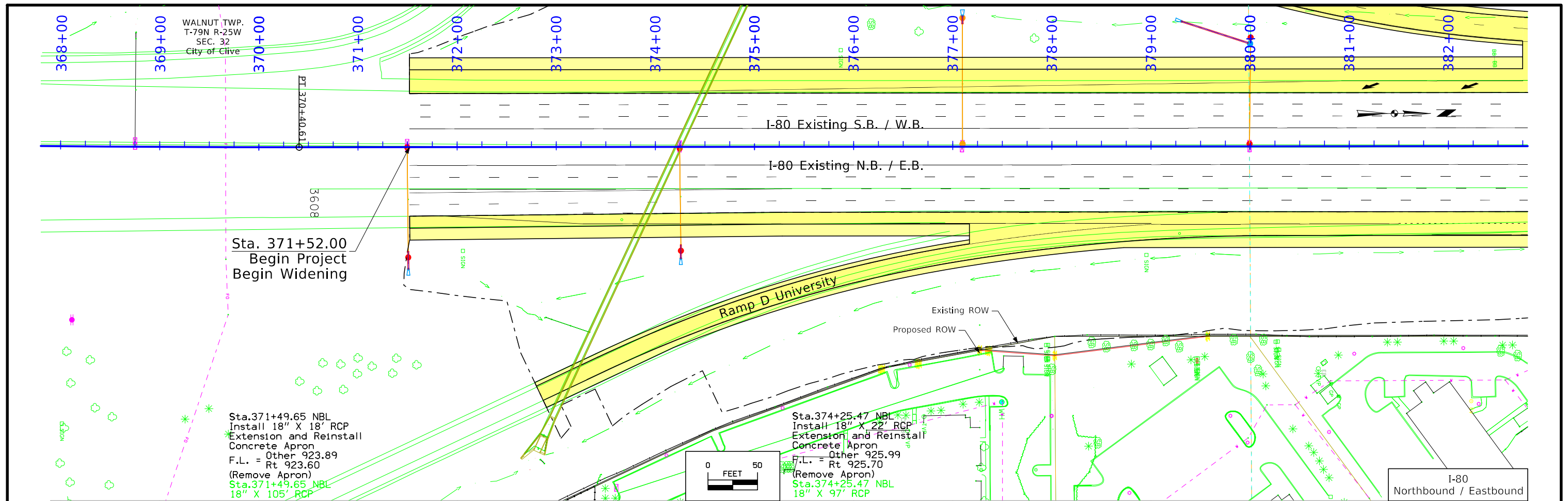
LINEWORK		Design Color No.	
Green	(10)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

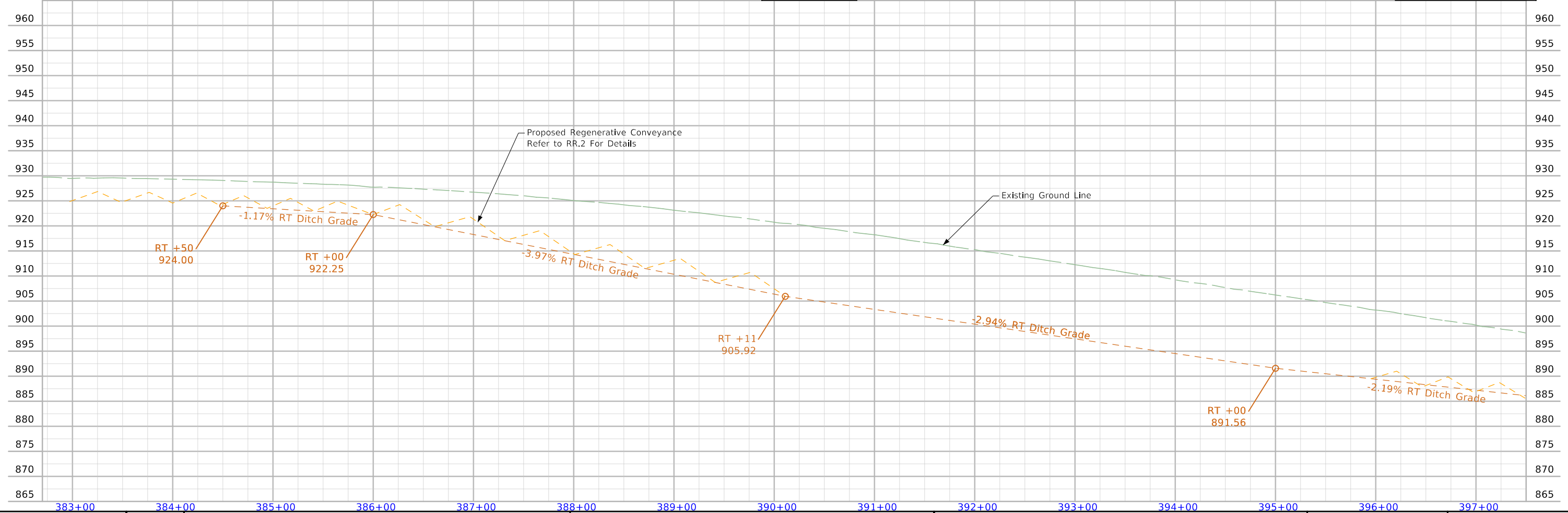
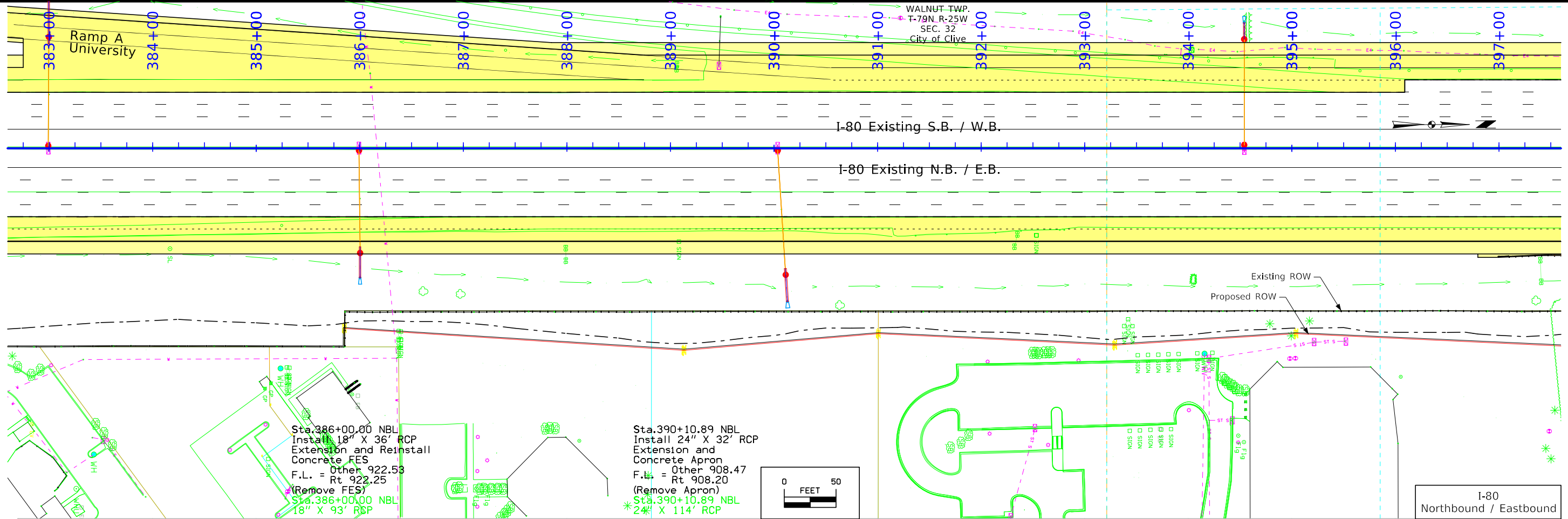
- #### RIGHT-OF-WAY LEGEND
- Proposed Right-of-Way
  - Existing Right of Way
  - Existing and Proposed Right-of-Way
  - Easement and Existing Right-of-Way
  - Easement (Temporary)
  - Easement
  - Access Control
  - Property Line

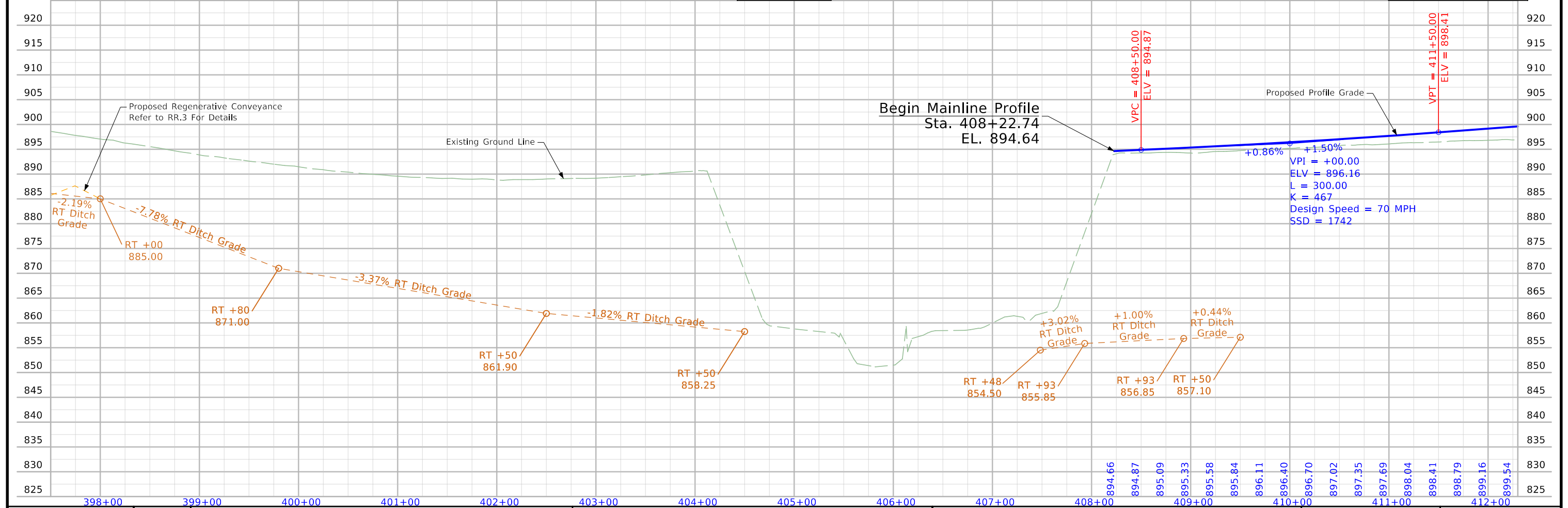
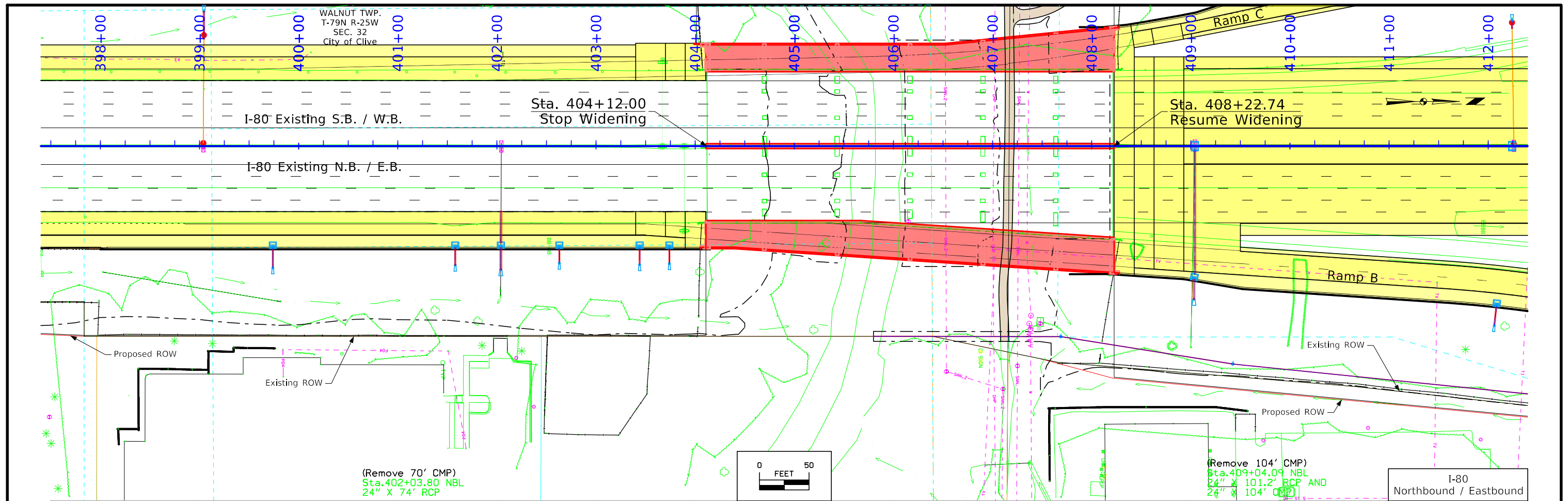
## PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, F, & K)

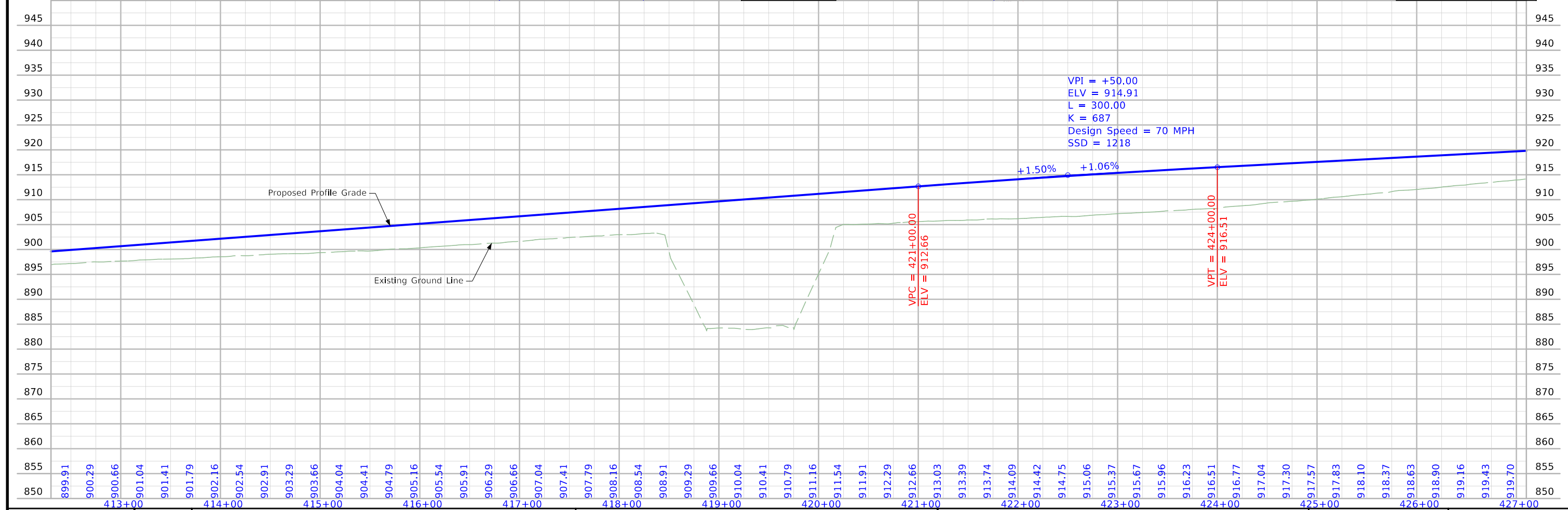
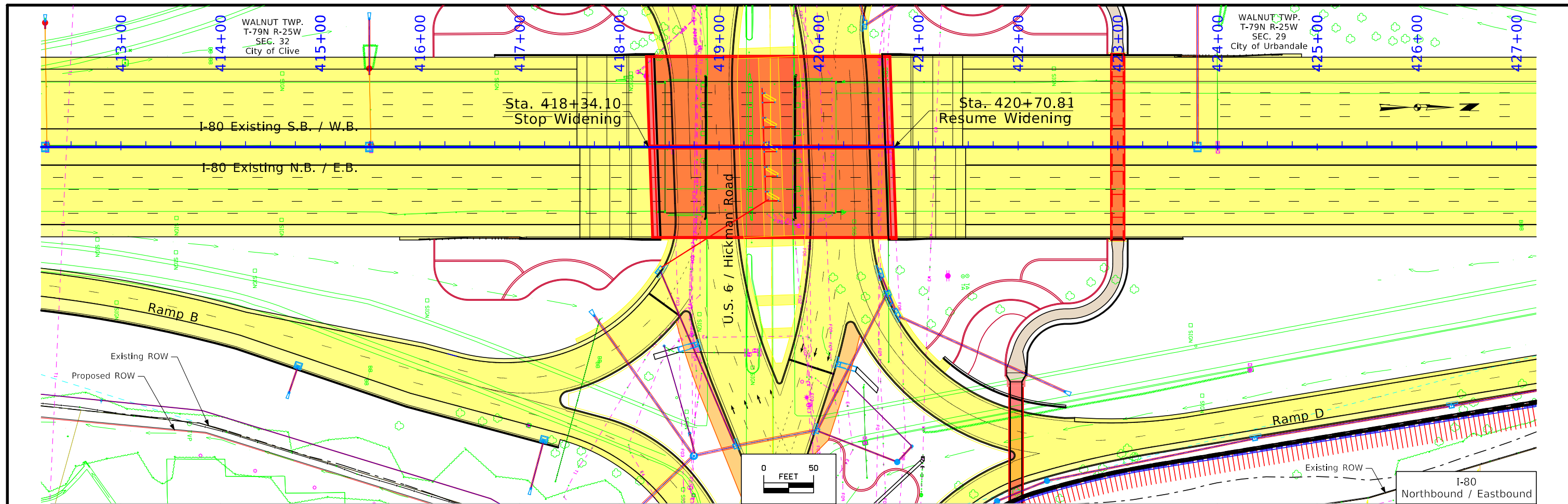




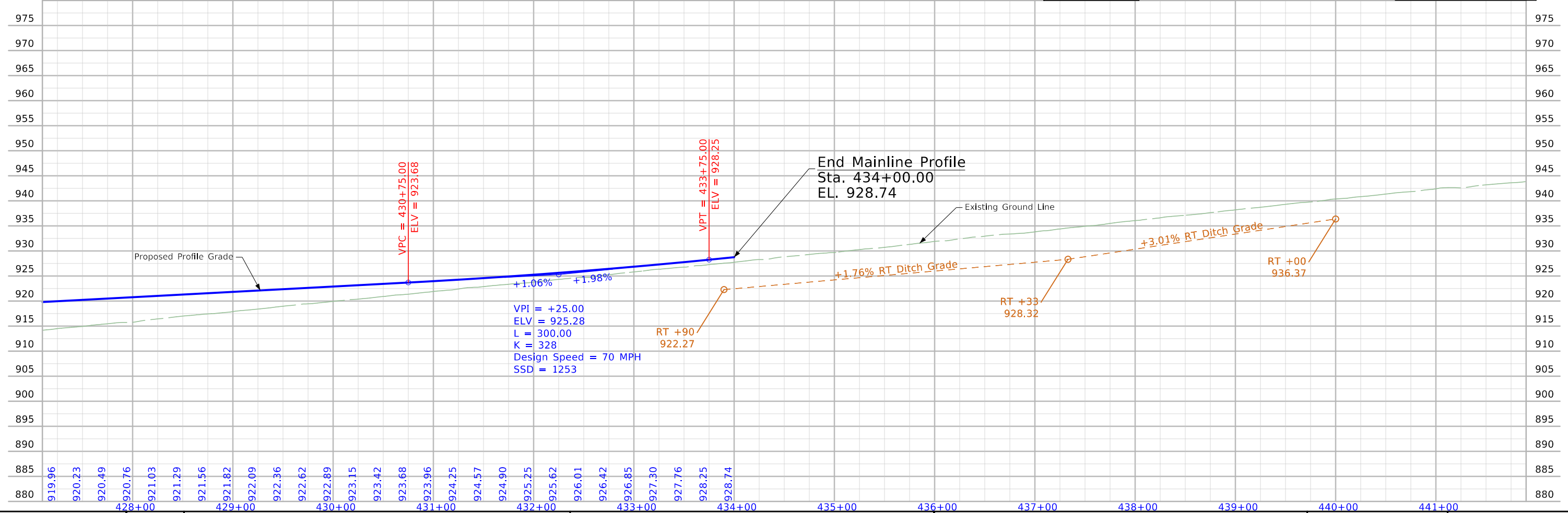
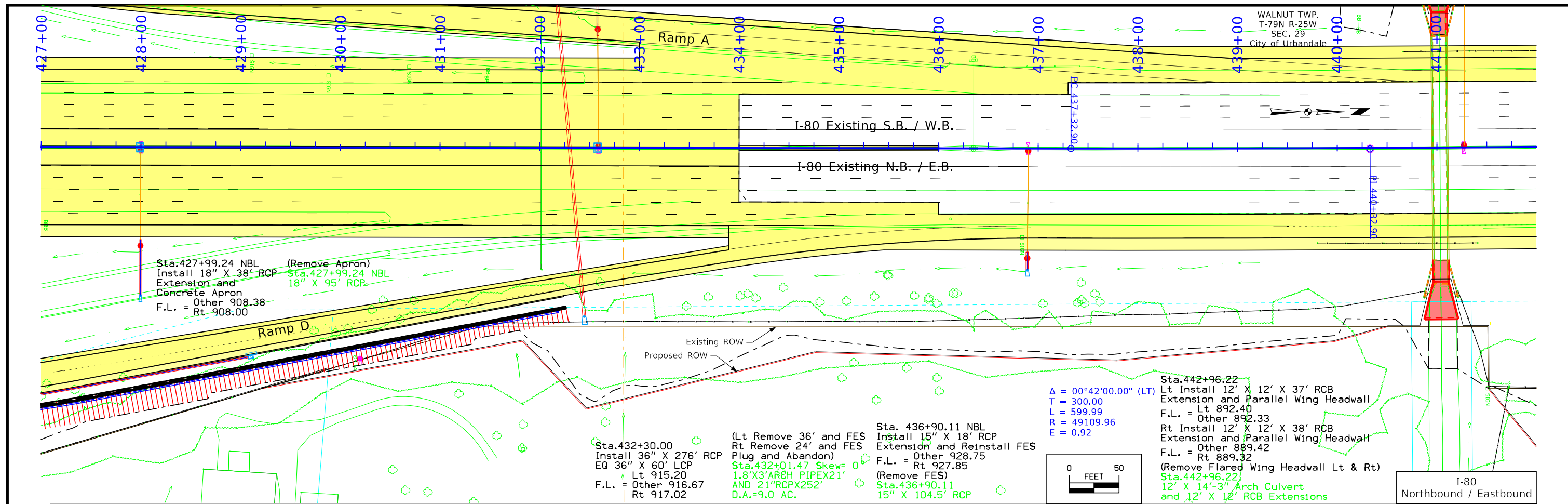




FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER D.4
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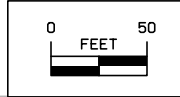
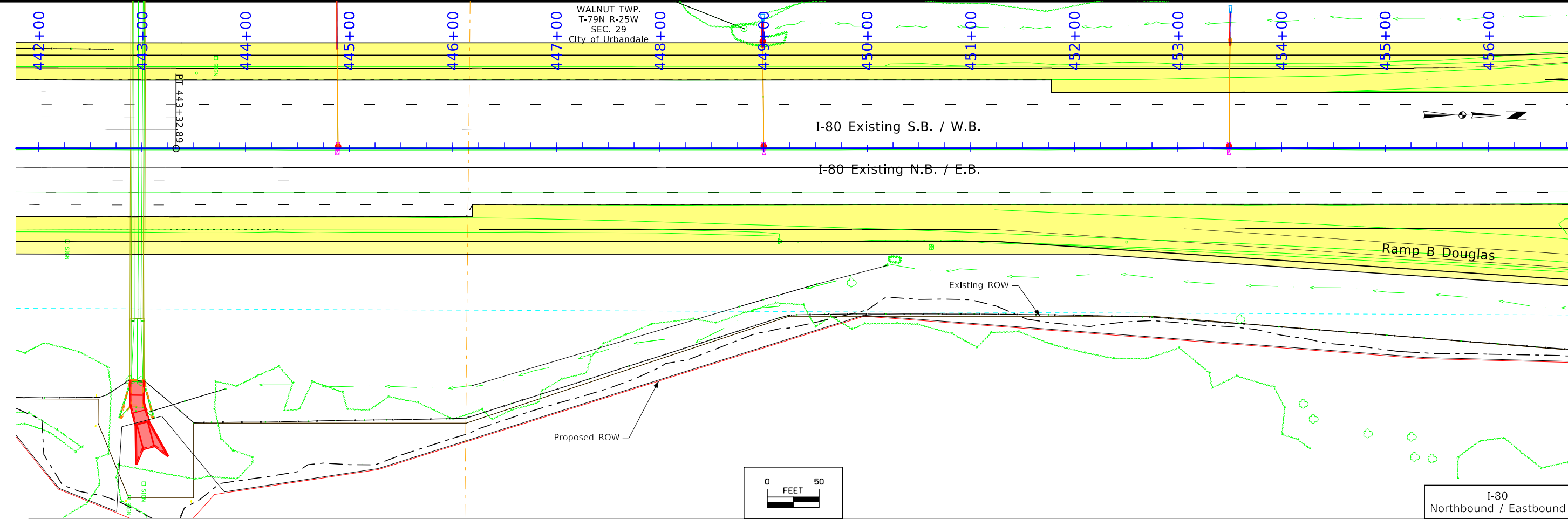


FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER	IM-080-4(069)125--13-77	SHEET NUMBER	D.5
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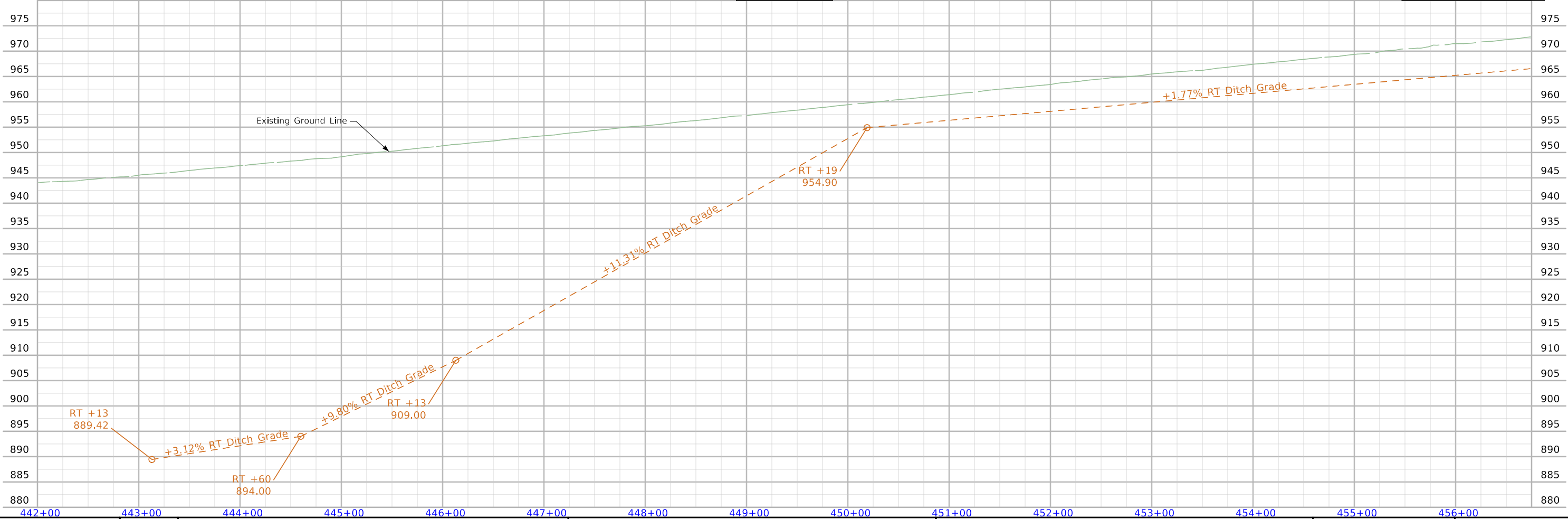




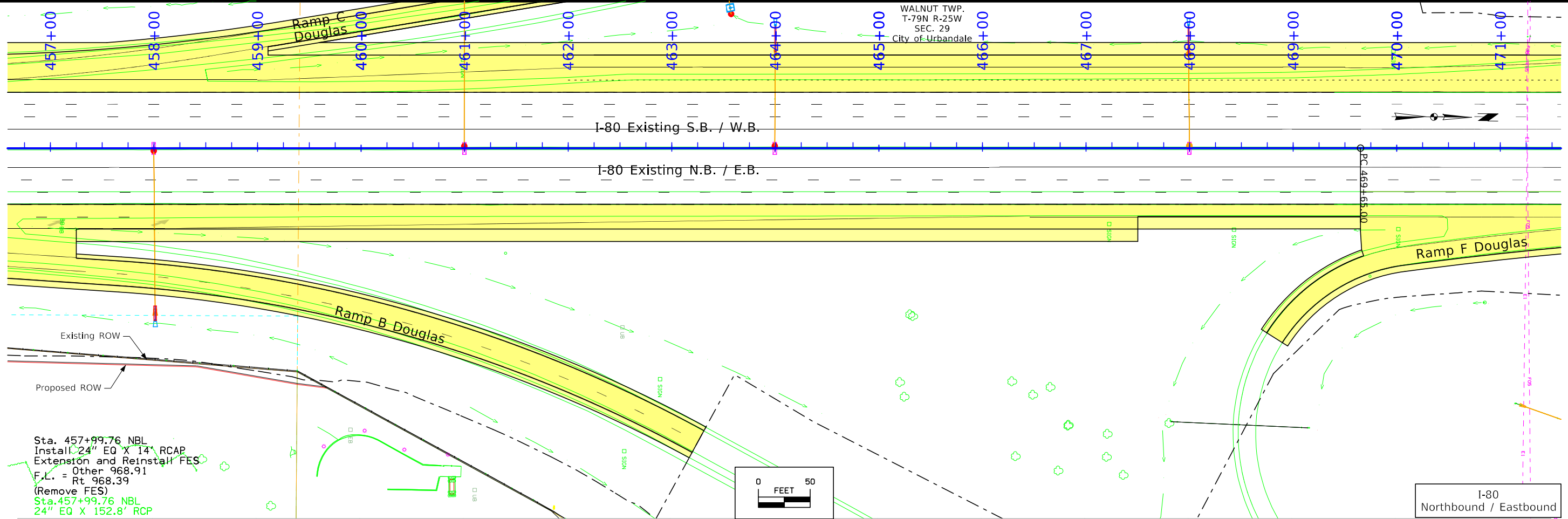
WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale



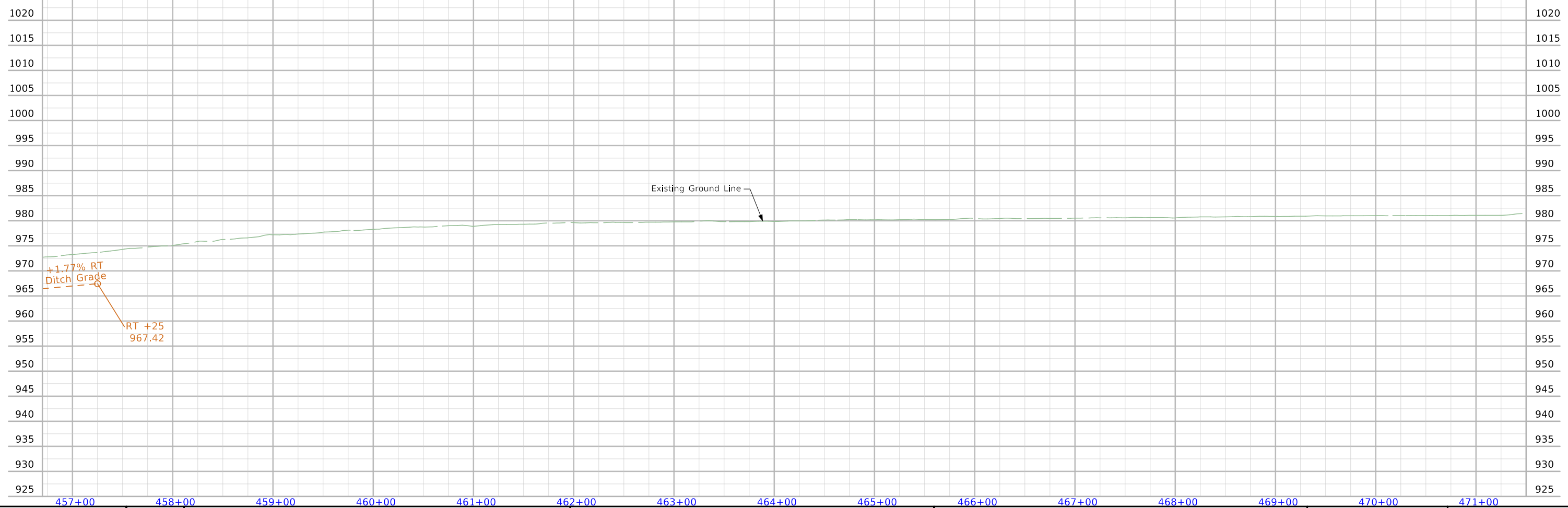
I-80  
Northbound / Eastbound



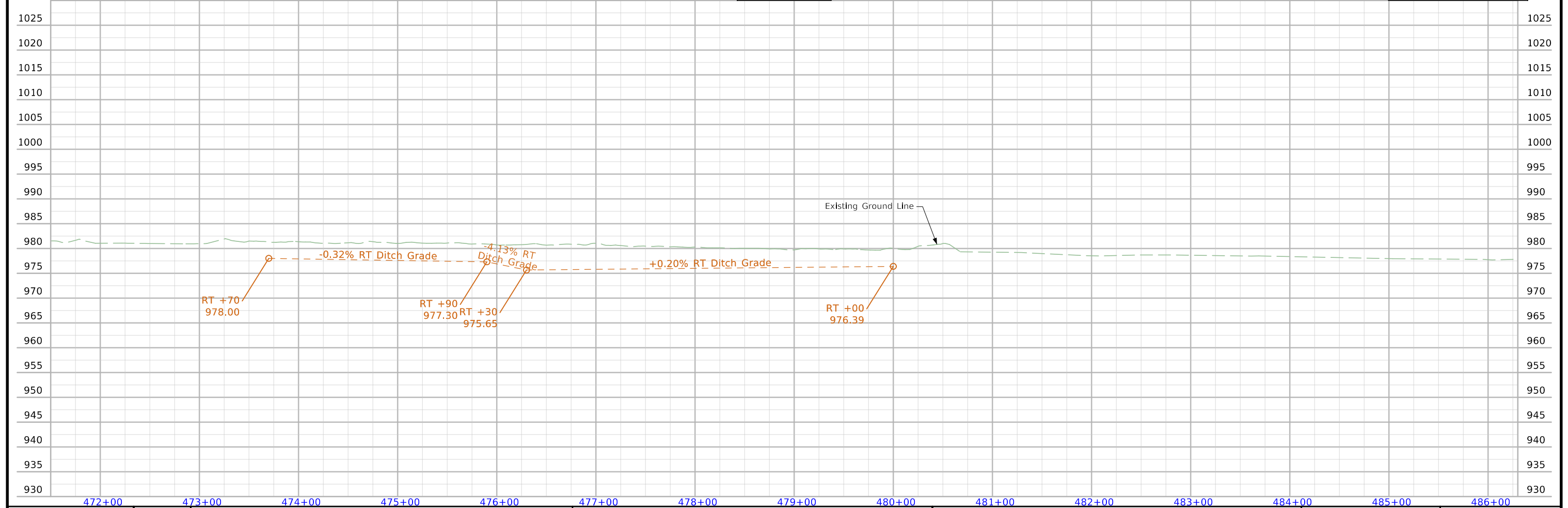
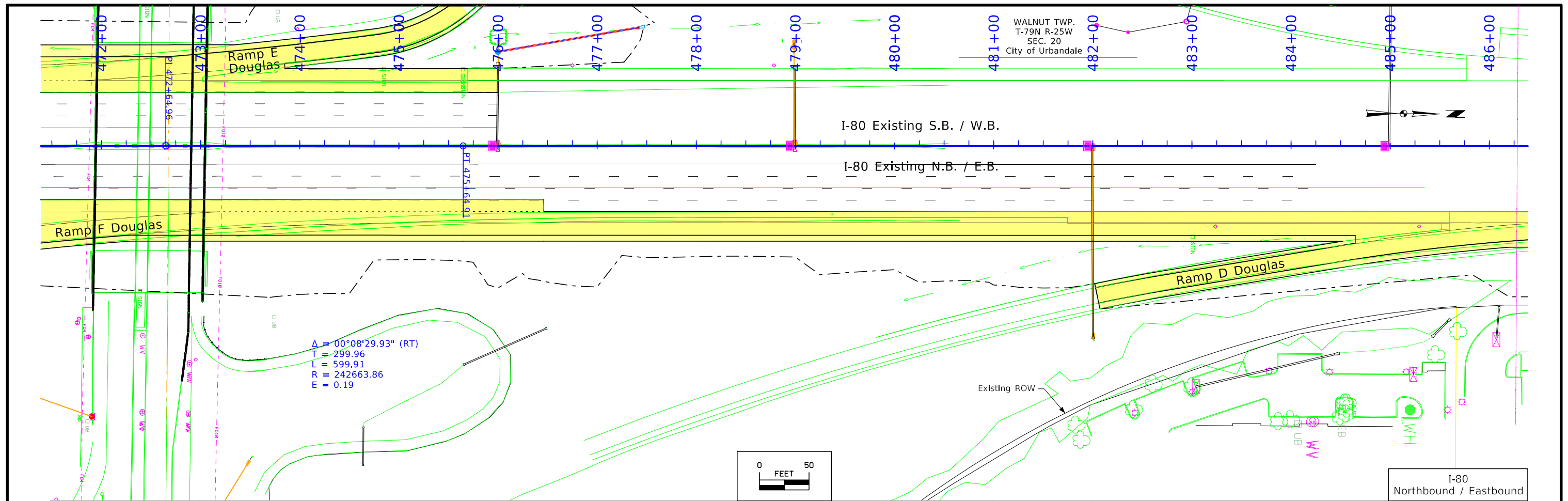
WALNUT TWP.  
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SEC. 29  
City of Urbandale



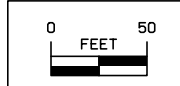
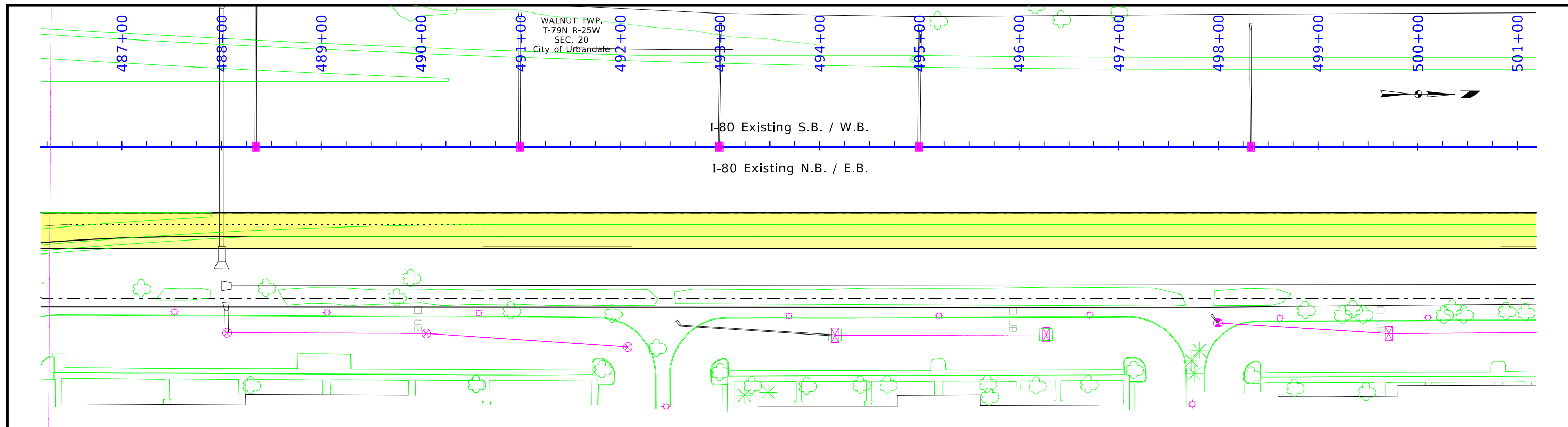
Sta. 457+99.76 NBL  
Install 24" EQ X 14" RCAP  
Extension and Reinstall FES  
F.L. = Other 968.91  
Rt 968.39  
(Remove FES)  
Sta. 457+99.76 NBL  
24" EQ X 152.8' RCP



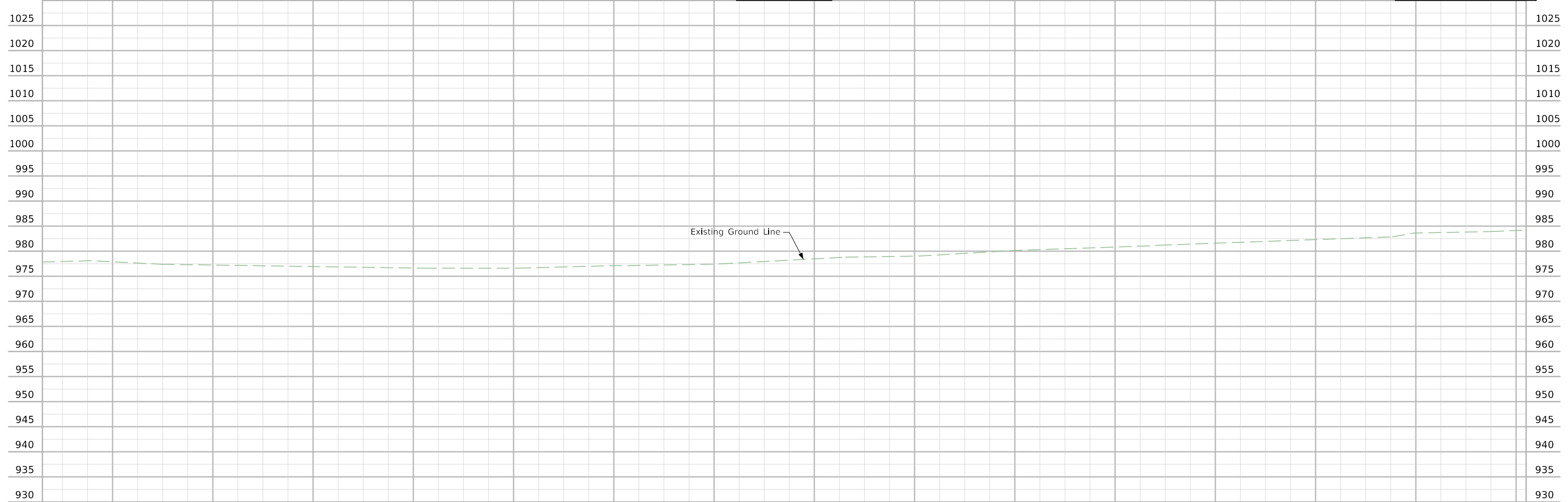
FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-080-4(069)125--13-77	SHEET NUMBER	D.8
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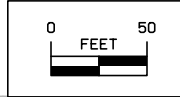
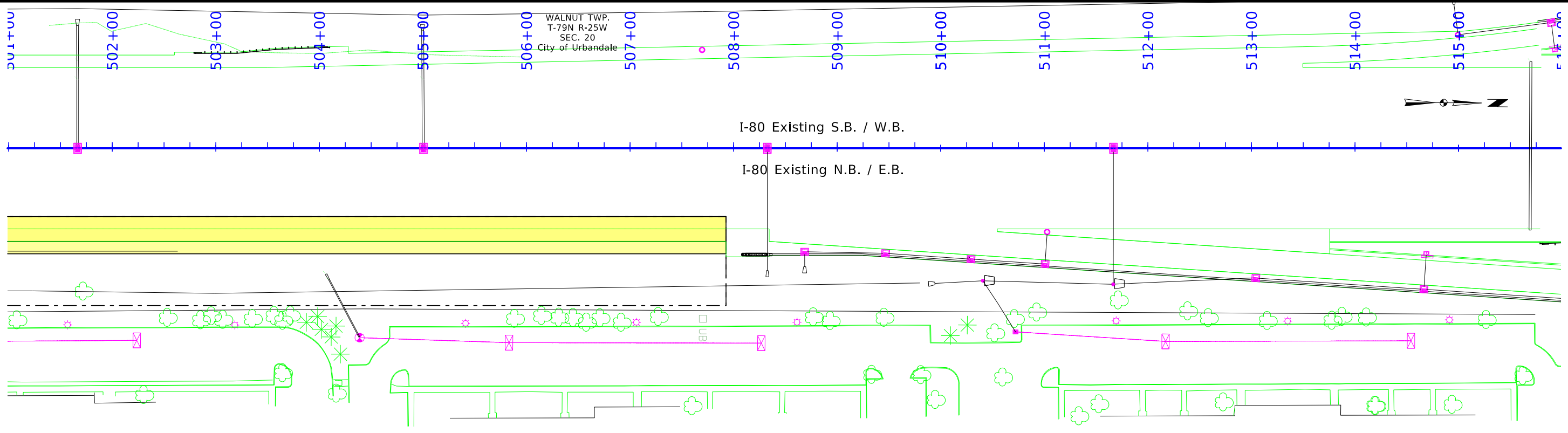


FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER	IM-080-4(069)125--13-77	SHEET NUMBER	D.9
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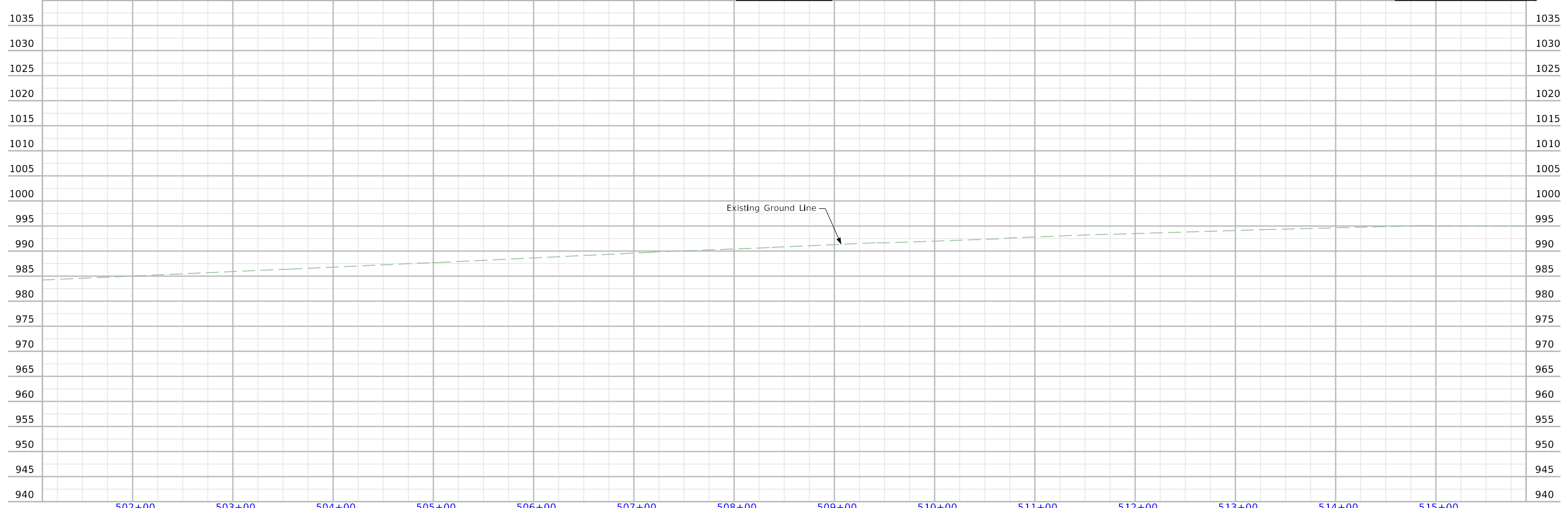


I-80  
Northbound / Eastbound





I-80  
Northbound / Eastbound



FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER D.11
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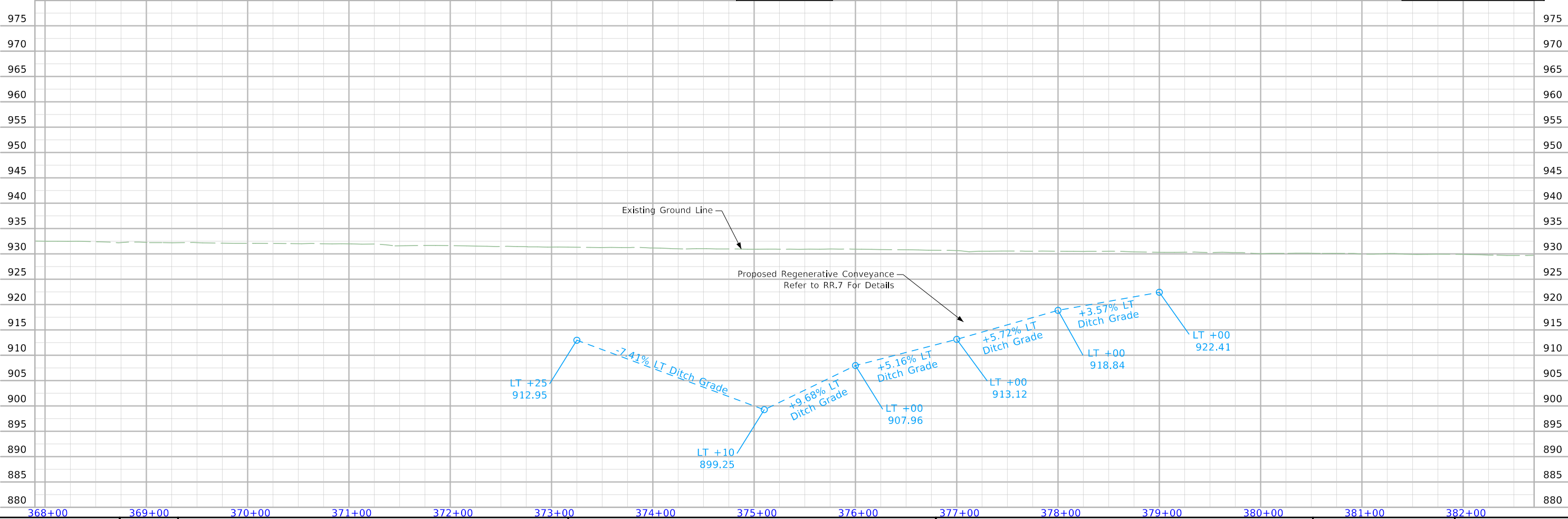
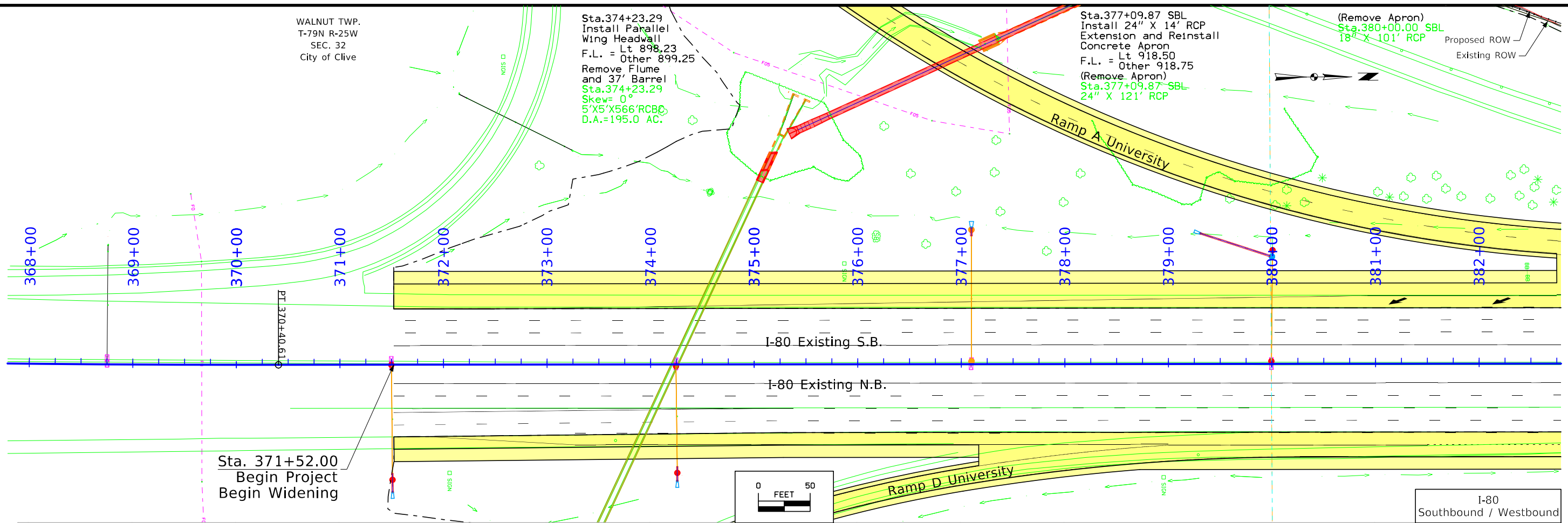
WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

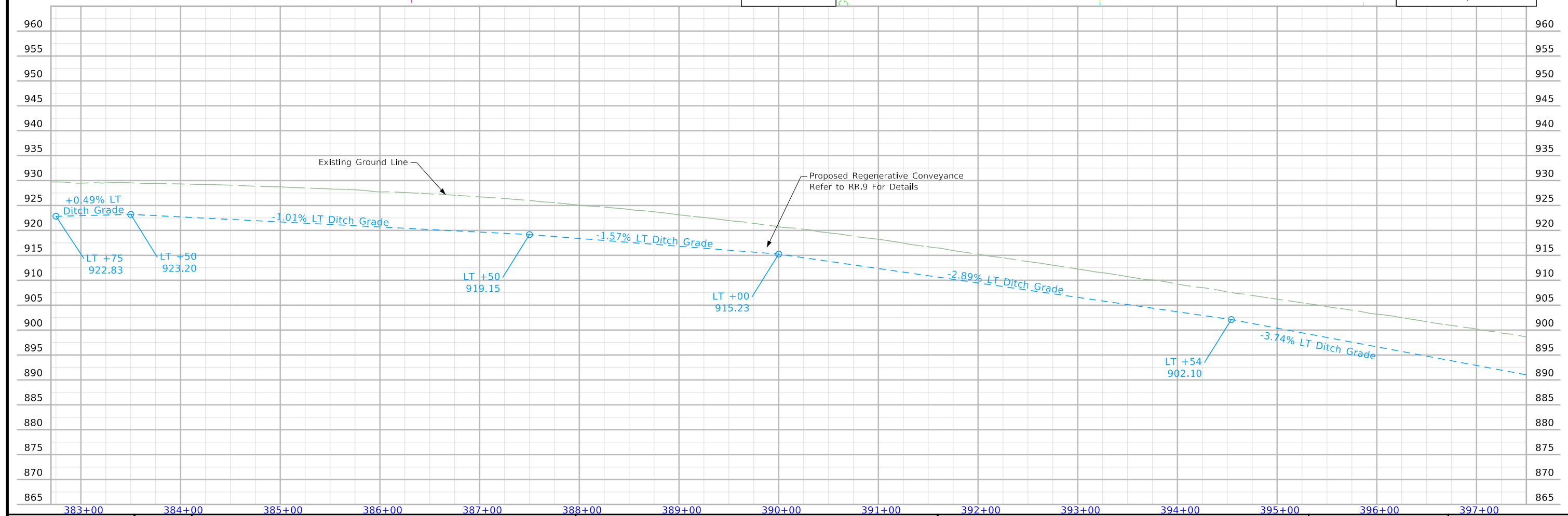
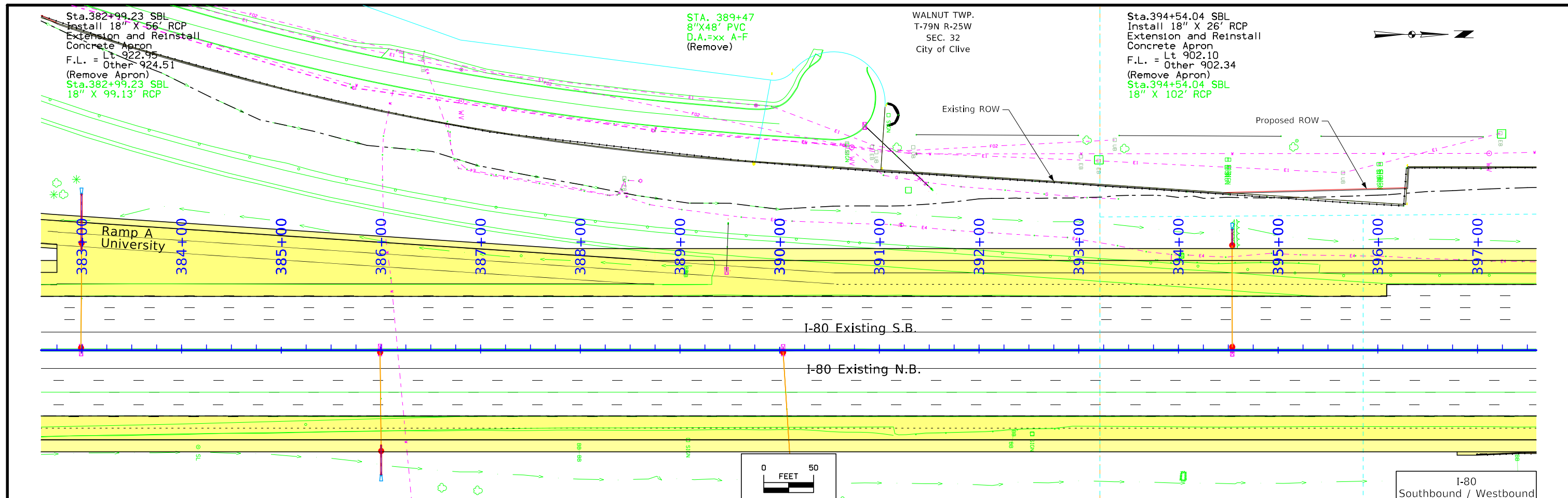
Sta.374+23.29  
Install Parallel  
Wing Headwall  
F.L. = Lt 898.23  
Other 899.25  
Remove Flume  
and 37' Barrel  
Sta.374+23.29  
Skew= 0°  
5'X5'X566'R/CBC  
D.A.=195.0 AC.

Sta.377+09.87 SBL  
Install 24" X 14' RCP  
Extension and Reinstall  
Concrete Apron  
F.L. = Lt 918.50  
(Remove Apron)  
Sta.377+09.87-SBL  
24" X 121' RCP

(Remove Apron)  
Sta.380+00.00 SBL  
18" X 101' RCP

Proposed ROW  
Existing ROW

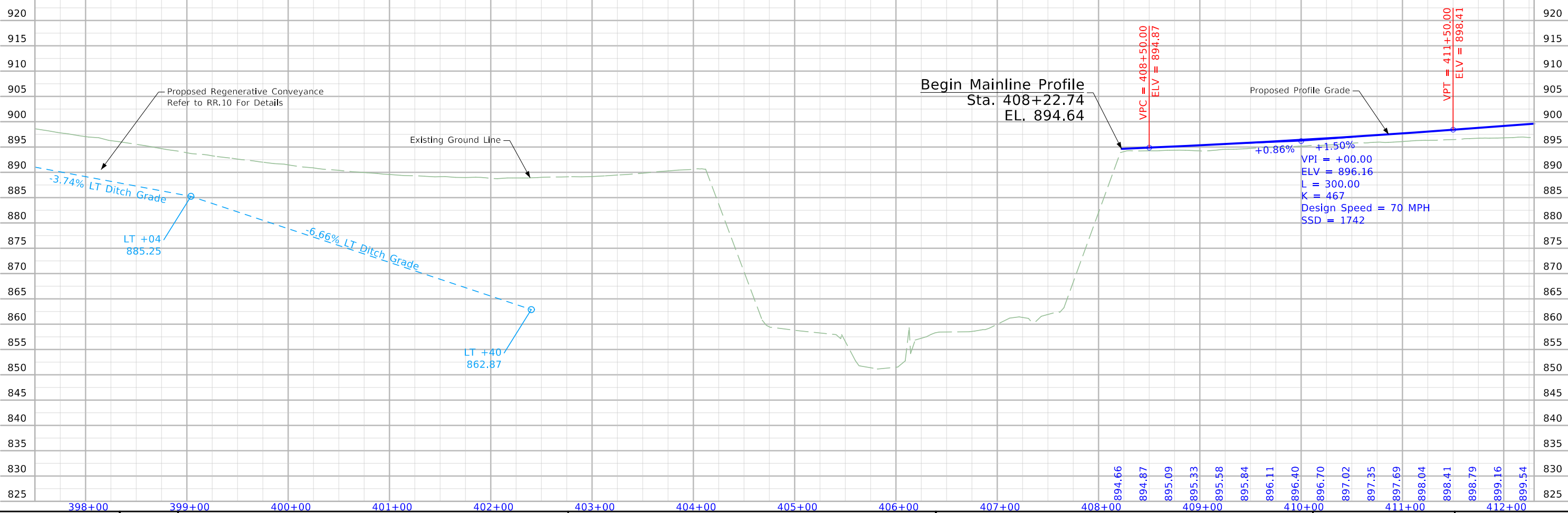
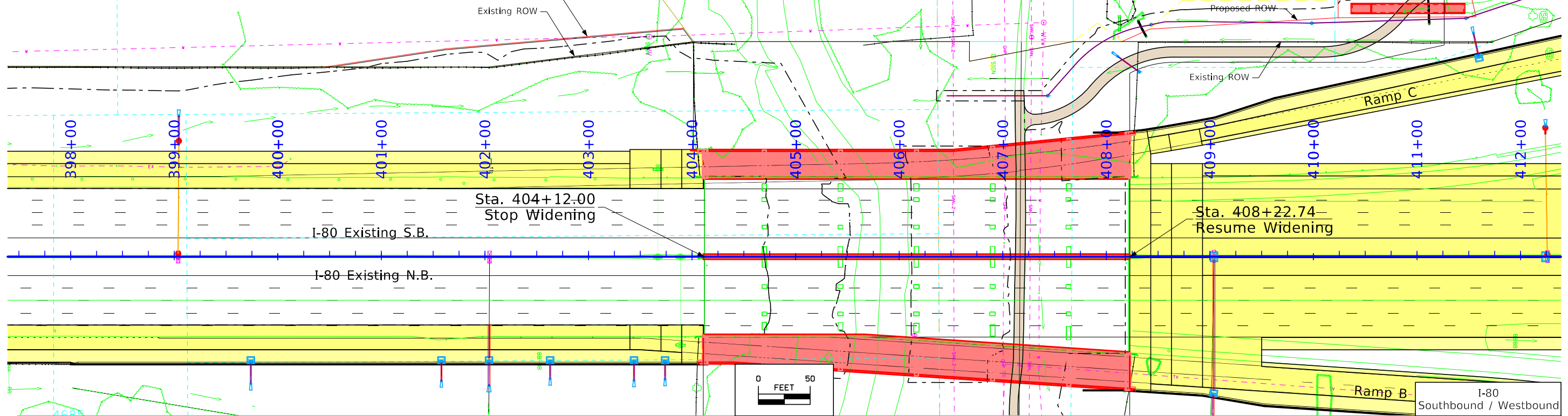


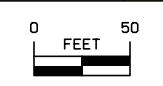
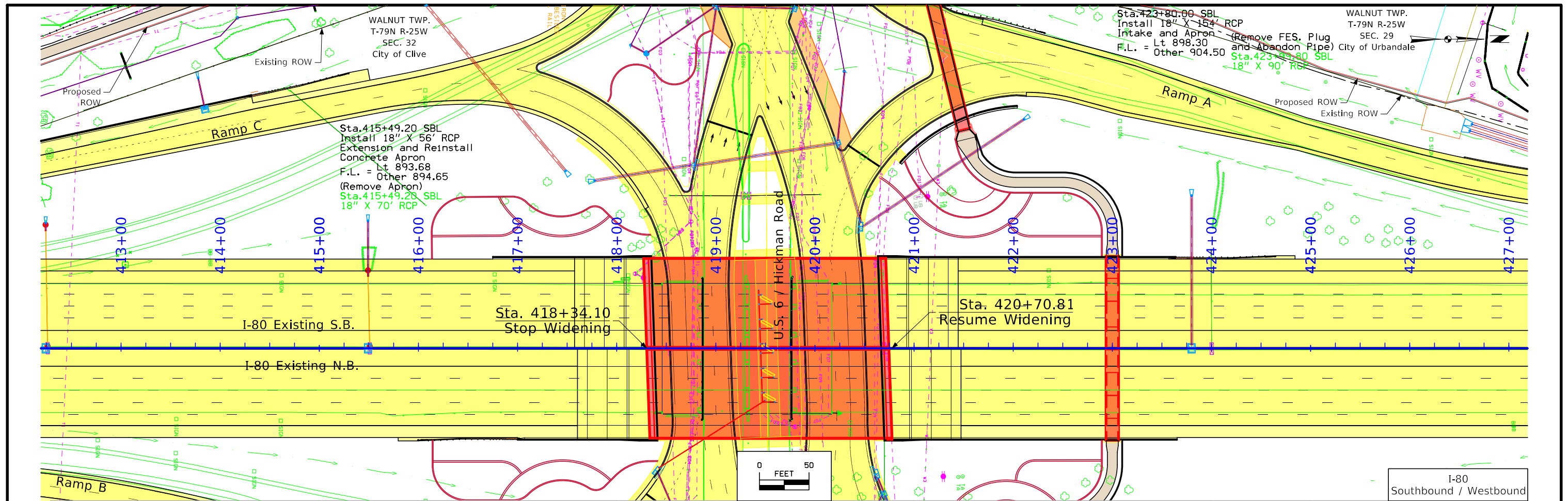


Sta.399+04.47 SBL  
 Install 18" X 28' RCP  
 Extension and Reinstall  
 Concrete FES  
 F.L. = Lt 885.25  
 (Remove FES)  
 Sta.399+04.47 SBL  
 18" X 109' RCP

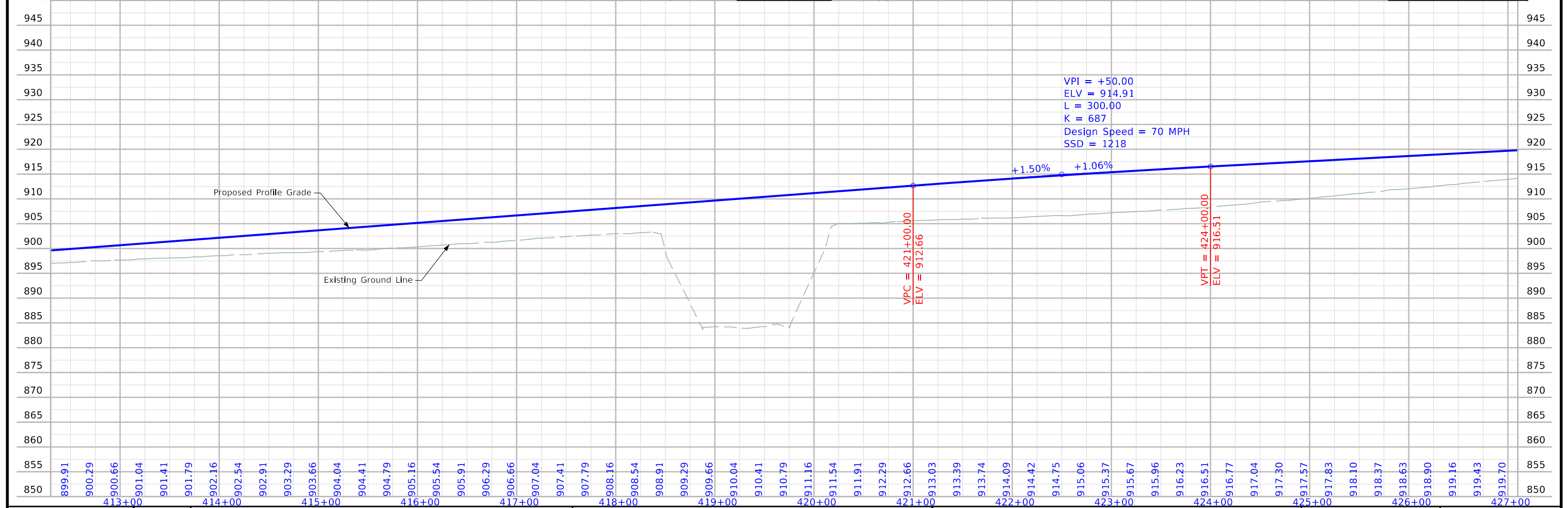
WALNUT TWP.  
 T-79N R-25W  
 SEC. 32  
 City of Clive

Sta.412+24.10 SBL  
 Install 18" X 14' RCP  
 Extension and Reinstall  
 Concrete FES  
 F.L. = Other 887.66  
 (Remove FES)  
 Sta.412+24.10 SBL  
 18" X 116' RCP



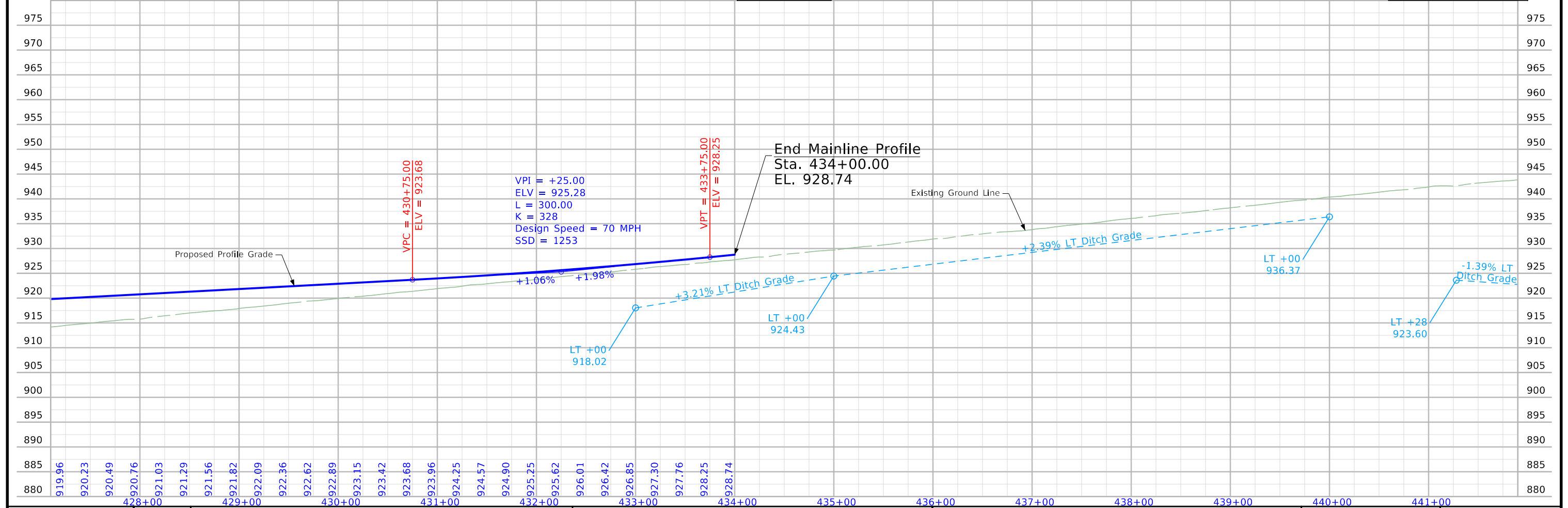
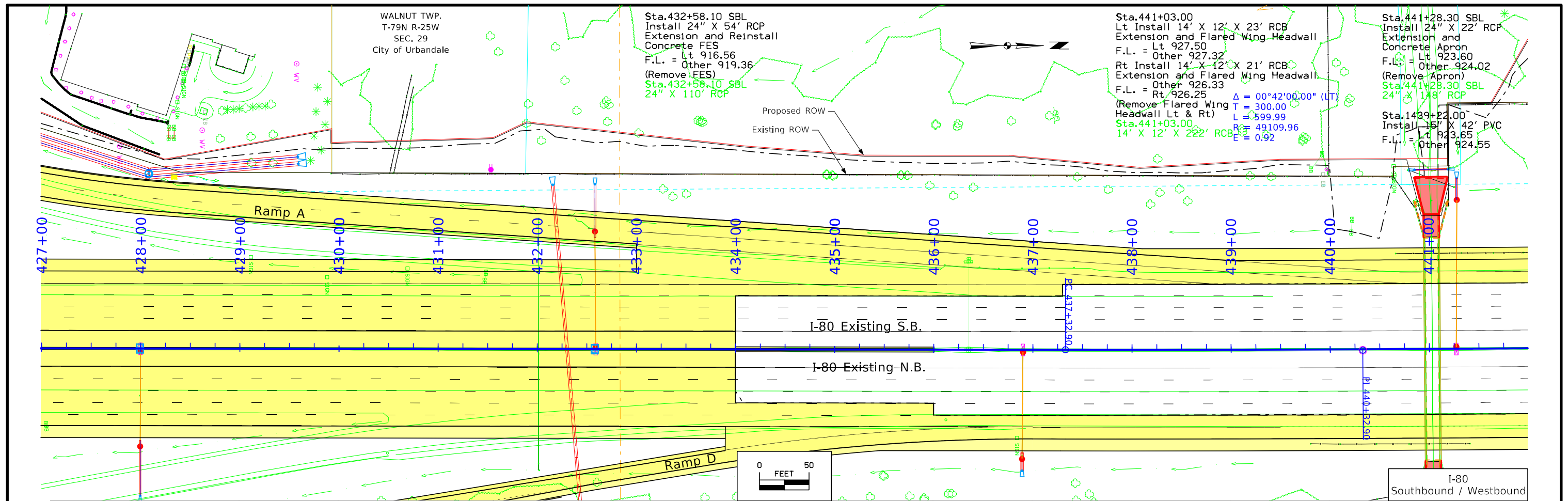


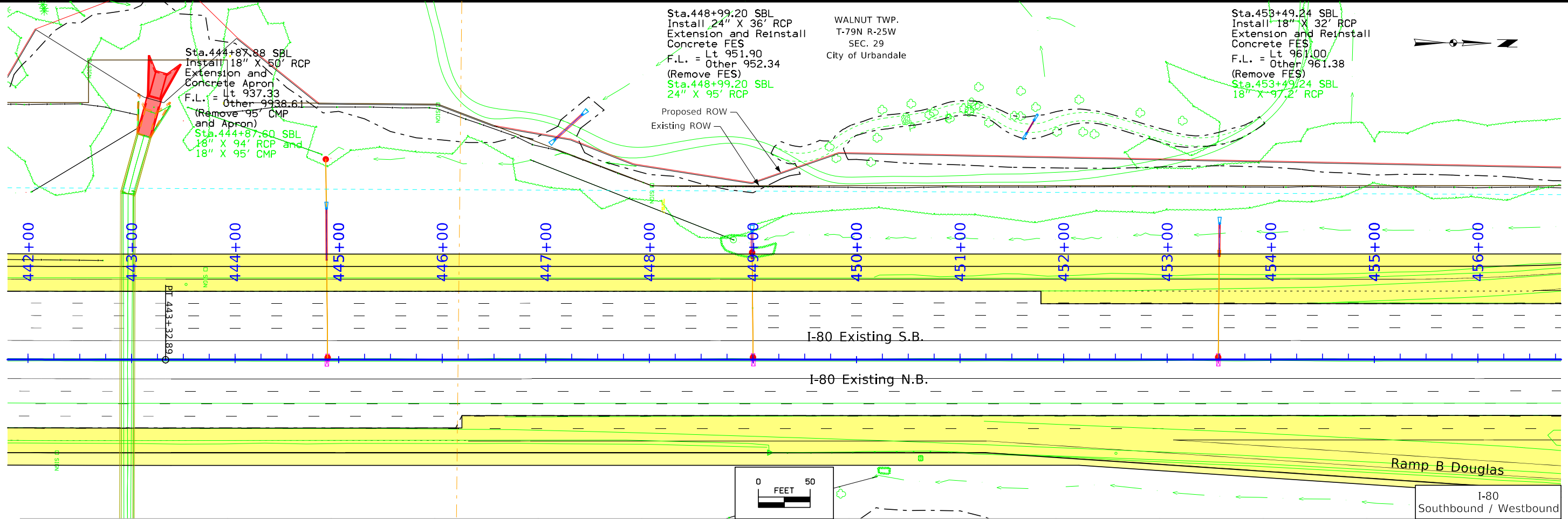
I-80  
Southbound / Westbound



FILE NO.	ENGLISH	DESIGN TEAM	Polk COUNTY	PROJECT NUMBER	SHEET NUMBER
		Snyder & Associates, Inc.		IM-080-4(069)125--13-77	D.15







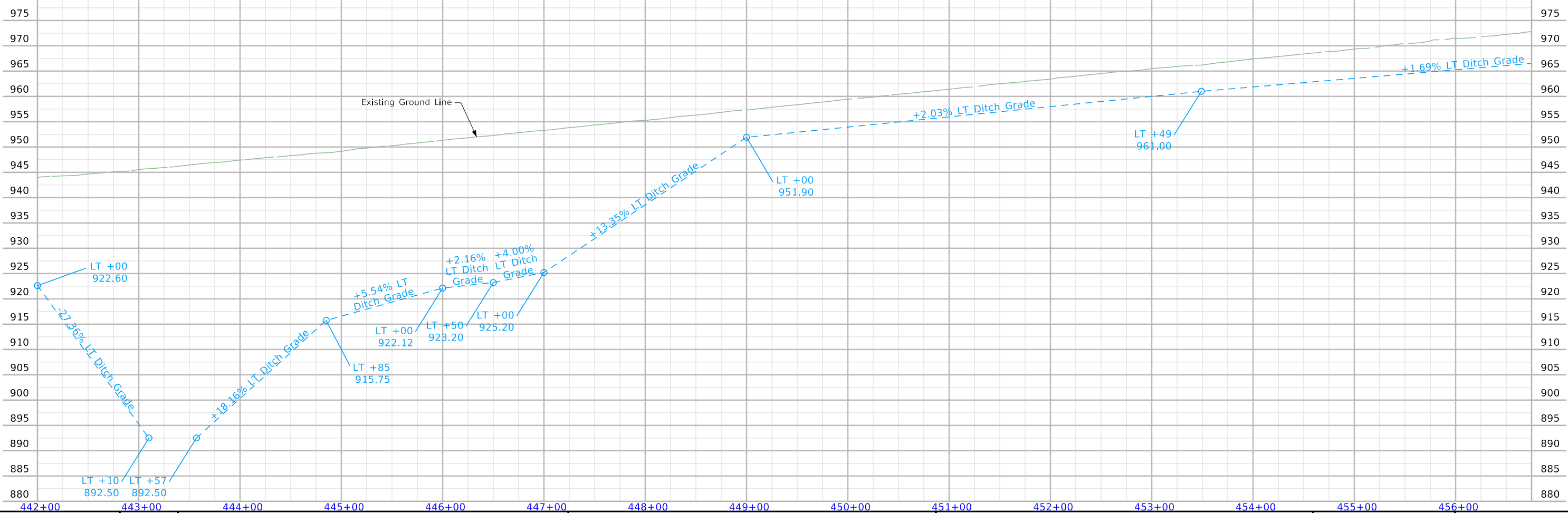
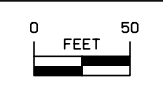
Sta.448+99.20 SBL  
 Install 24" X 36' RCP  
 Extension and Reinstall  
 Concrete FES  
 F.L. = Lt 951.90  
 Other 952.34  
 (Remove FES)  
 Sta.448+99.20 SBL  
 24" X 95' RCP

WALNUT TWP.  
 T-79N R-25W  
 SEC. 29  
 City of Urbandale

Sta.453+49.24 SBL  
 Install 18" X 32' RCP  
 Extension and Reinstall  
 Concrete FES  
 F.L. = Lt 961.00  
 Other 961.38  
 (Remove FES)  
 Sta.453+49.24 SBL  
 18" X 97.2' RCP

Sta.444+87.88 SBL  
 Install 18" X 50' RCP  
 Extension and  
 Concrete Apron  
 Lt 937.33  
 F.L. = Other 9938.61  
 (Remove 95' CMP  
 and Apron)  
 Sta.444+87.60 SBL  
 18" X 94' RCP and  
 18" X 95' CMP

Proposed ROW  
 Existing ROW



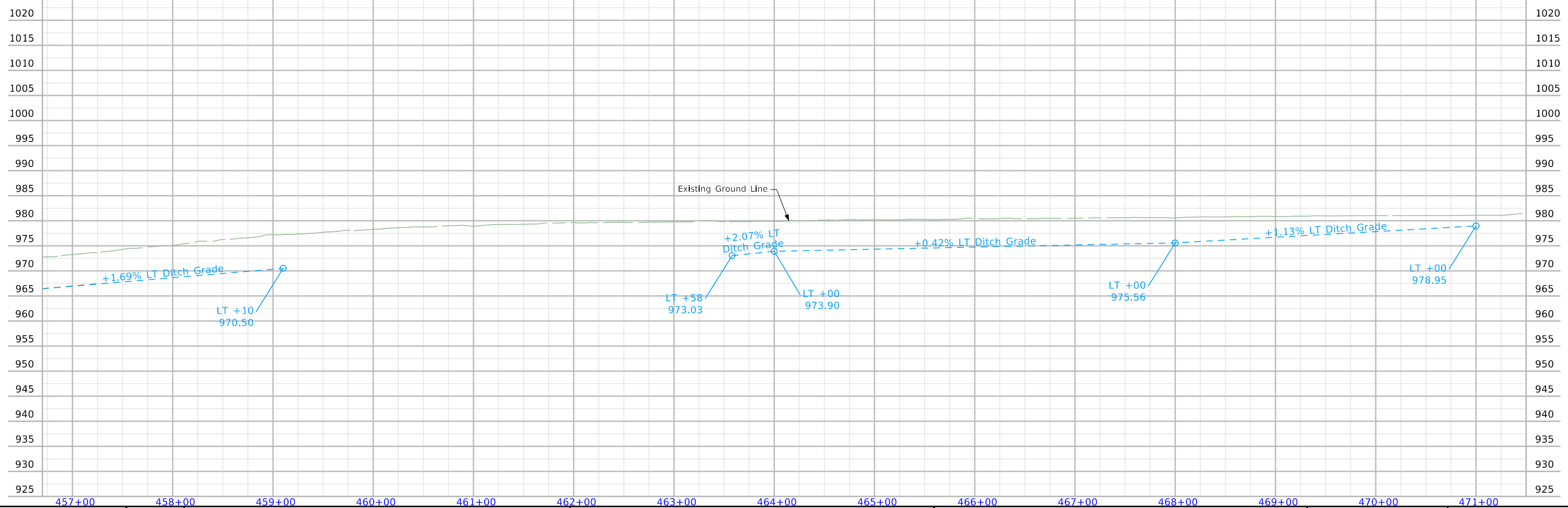
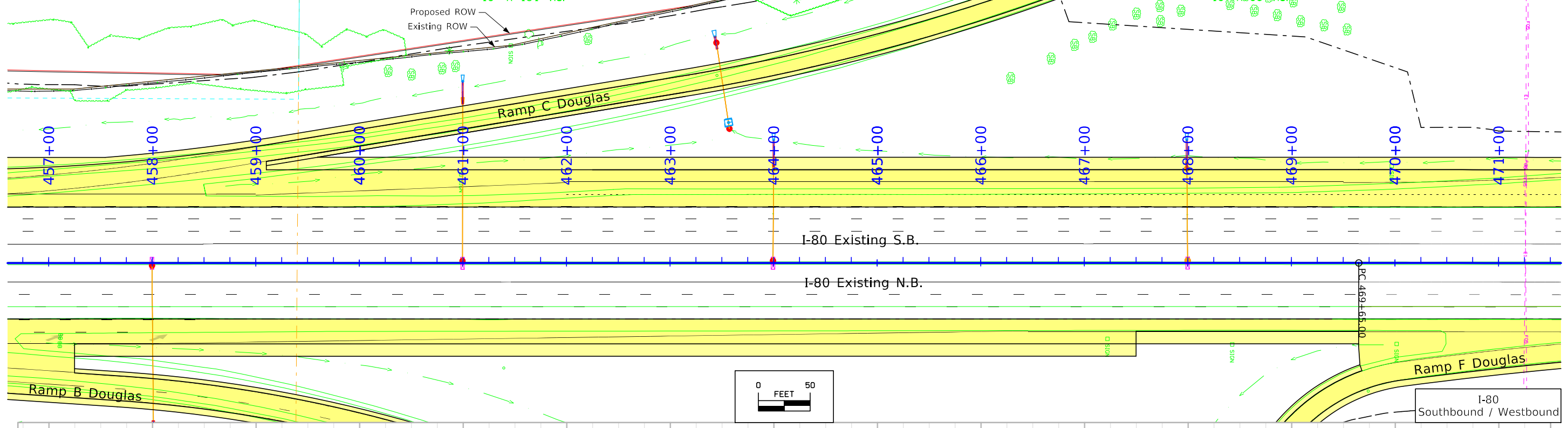
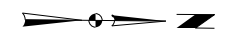
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER D.17
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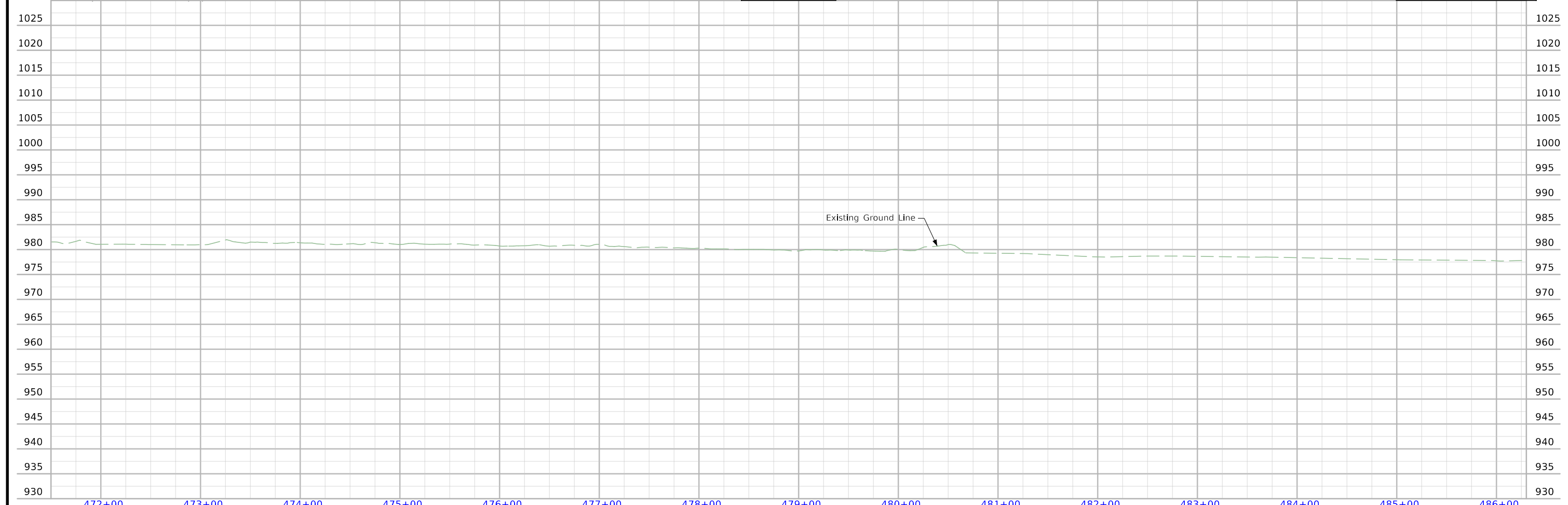
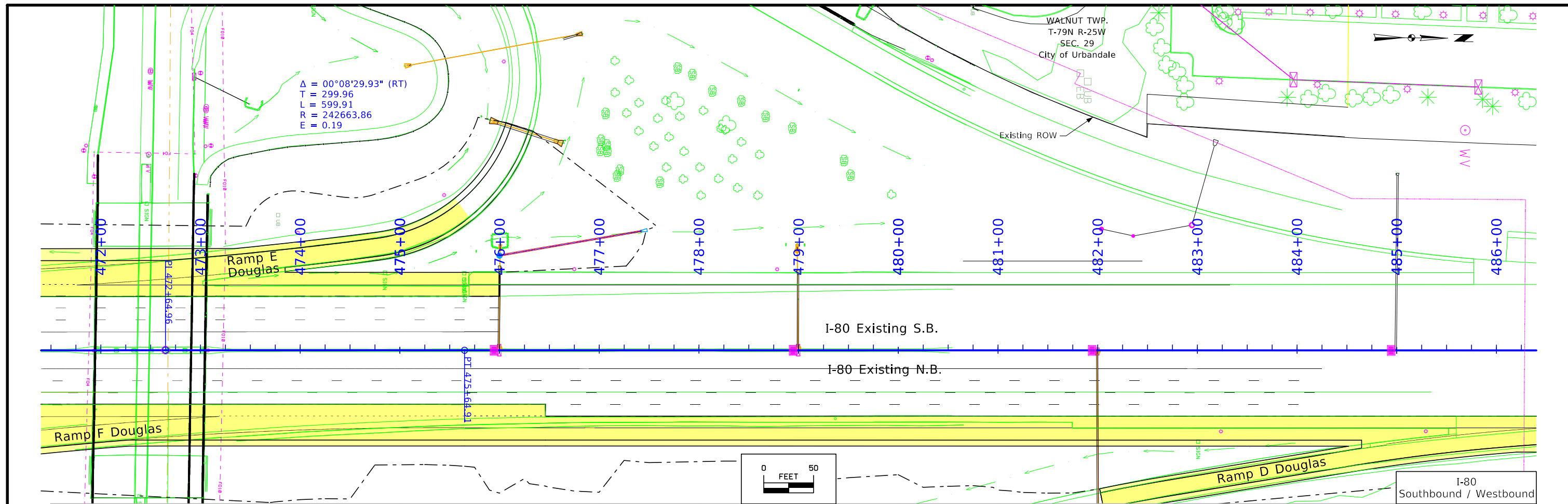
WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

Sta.461+00.00 SBL  
Install 18" X 22' RCP  
Extension and Reinstall  
Concrete FES  
F.L. = Lt 971.22  
Other 972.04  
(Remove FES)  
Sta.461+00.00 SBL  
18" X 151' RCP

Sta.464+00.00 SBL  
Install 18" X 26' RCP  
Extension and  
Concrete Apron  
F.L. = Lt 973.90  
Other 974.95  
(Remove FES)  
Sta.464+00.00 SBL  
18" X 90' RCP

Sta.468+00.00 SBL  
Install 18" X 28' RCP  
Extension and  
Concrete Apron  
F.L. = Lt 975.56  
Other 976.13  
(Remove FES)  
Sta.468+00.00 SBL  
18" X 88' RCP

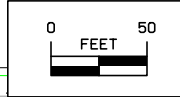
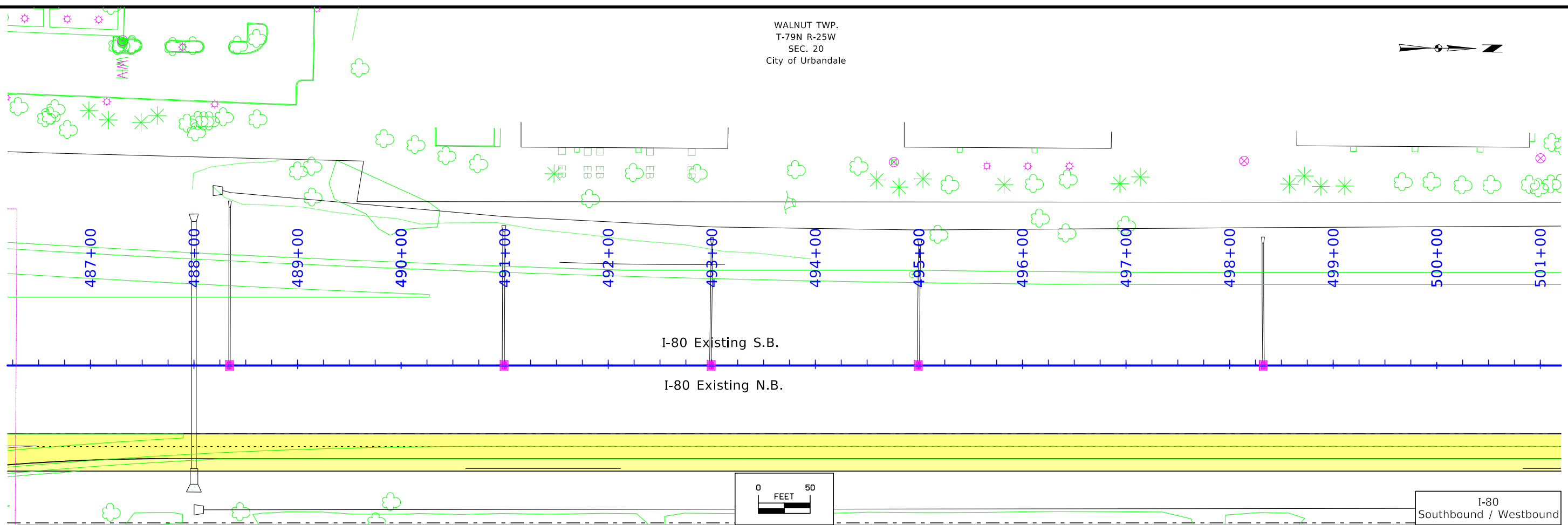




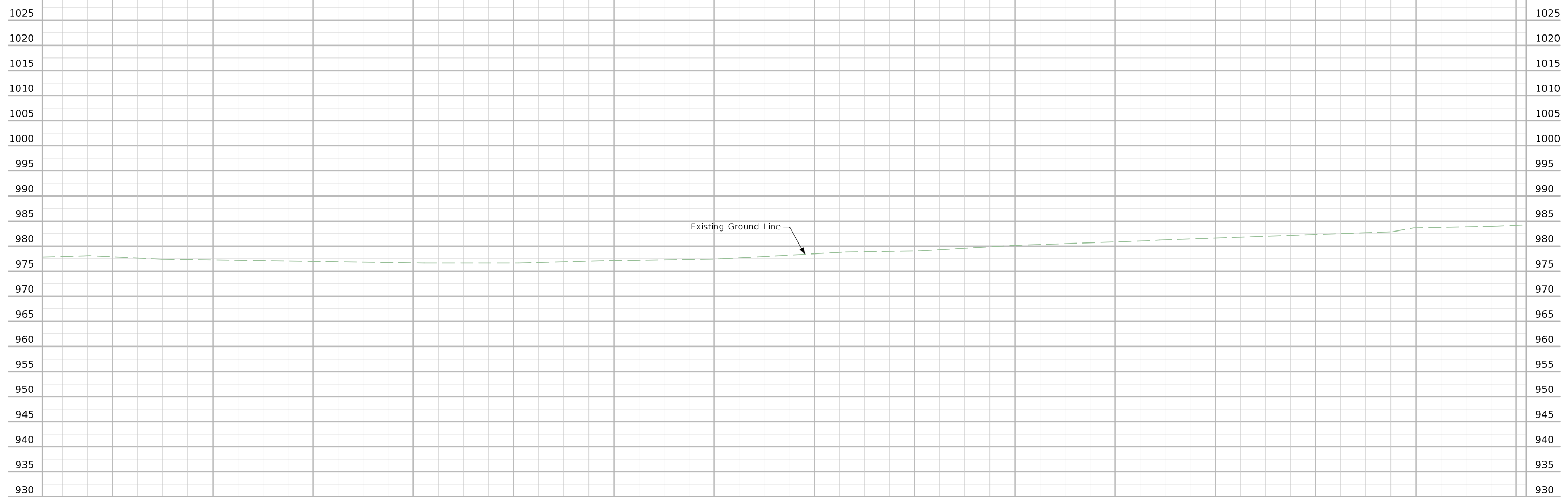
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER D.19
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WALNUT TWP.  
T-79N R-25W  
SEC. 20  
City of Urbandale

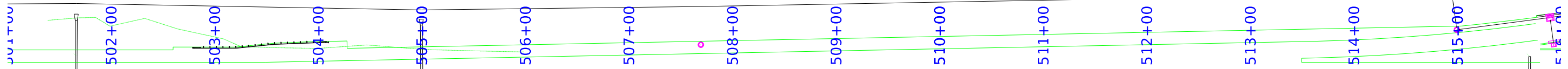


I-80  
Southbound / Westbound



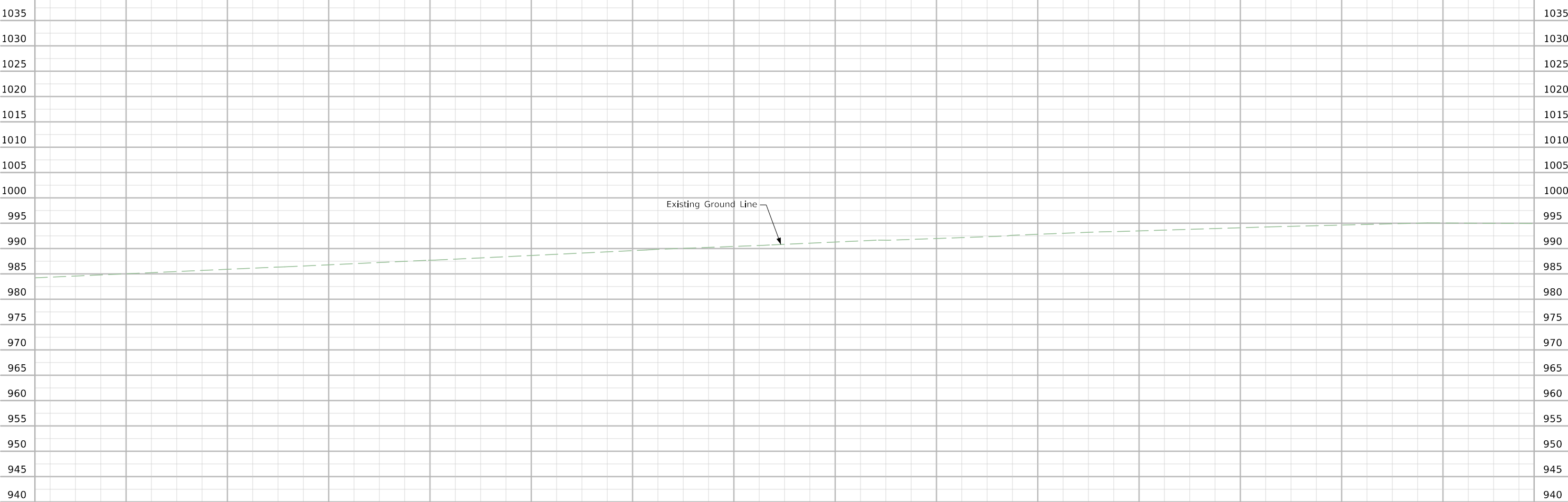
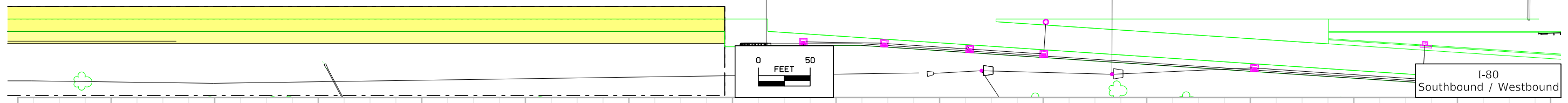
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER D.20
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WALNUT TWP.  
T-79N R-25W  
SEC. 20  
City of Urbandale



I-80 Existing S.B. / W.B.

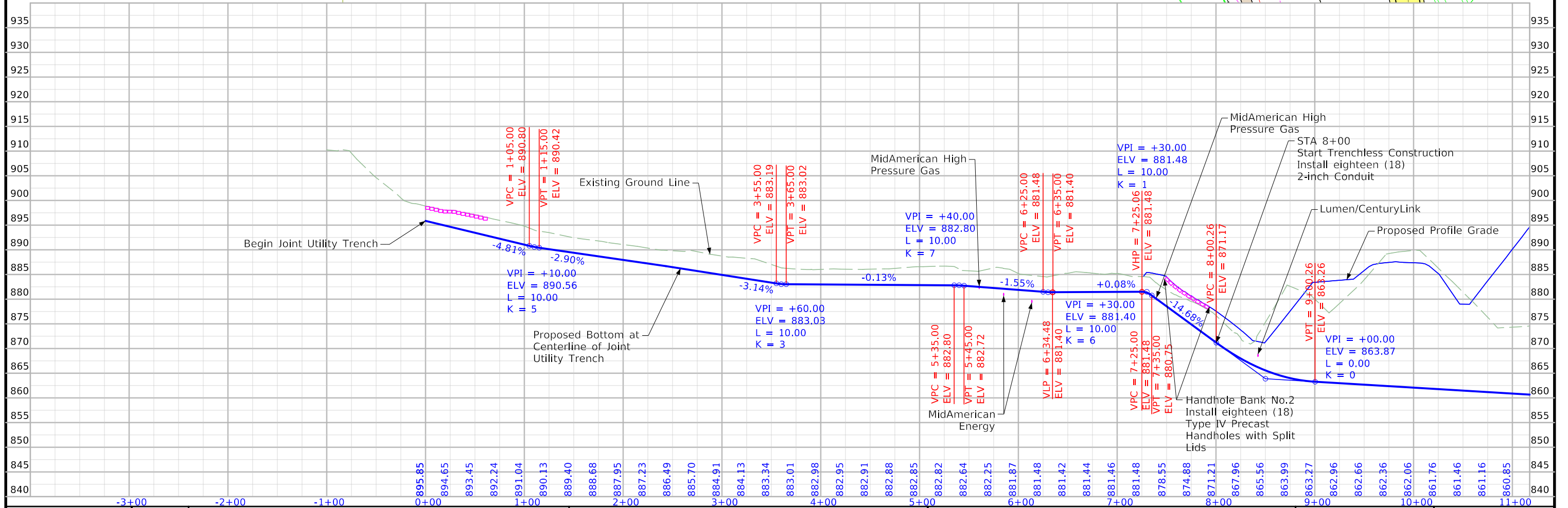
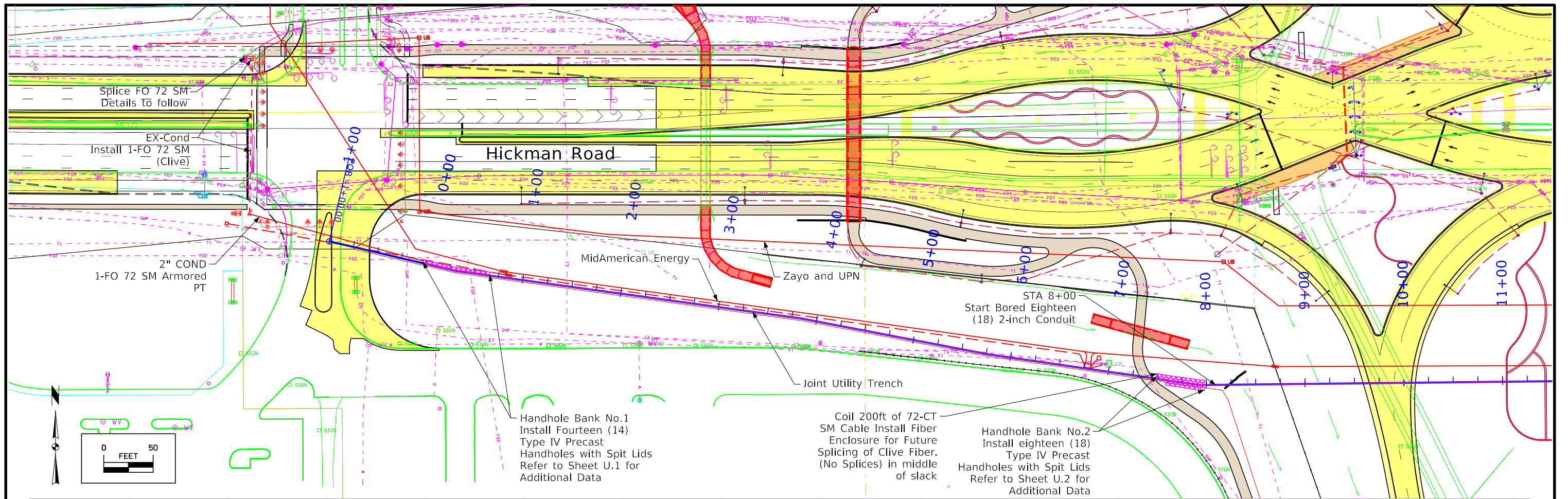
I-80 Existing N.B. / E.B.

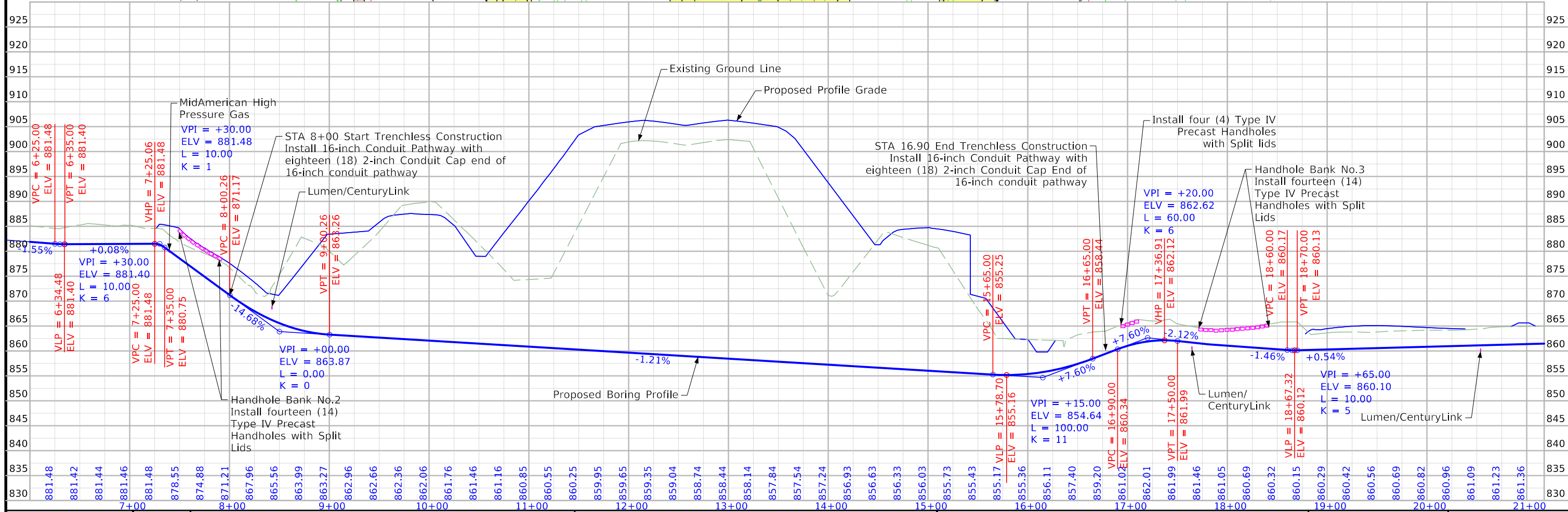
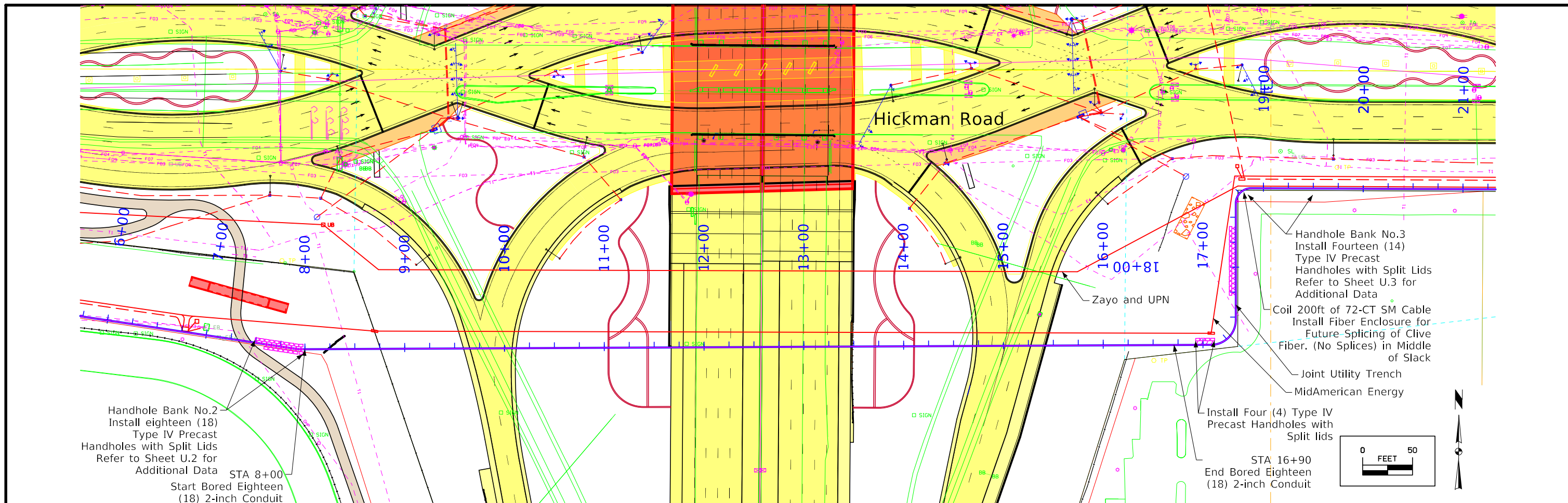


Existing Ground Line

I-80  
Southbound / Westbound

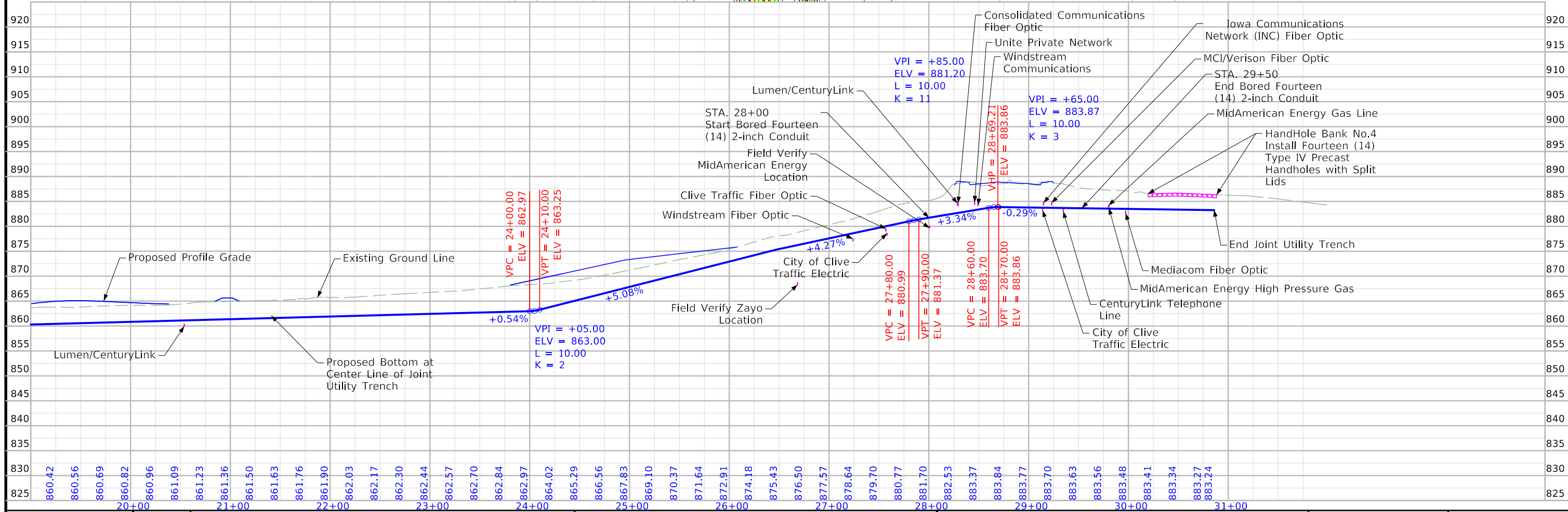
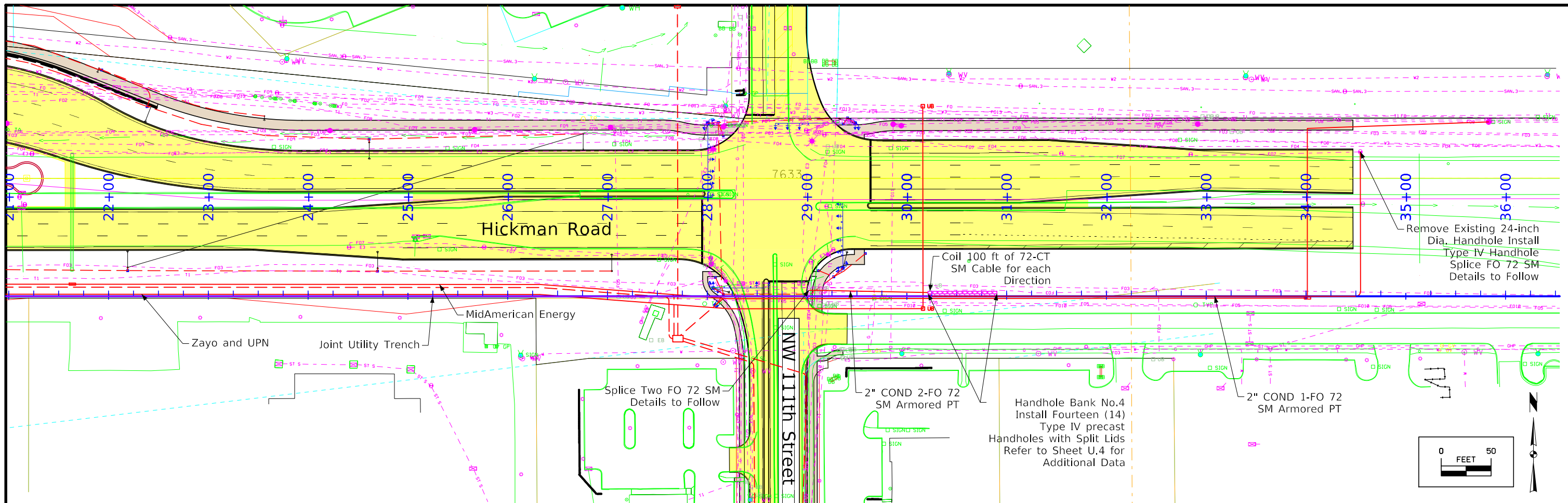
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER D.21
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FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER	IMN-080-4(105)125--0E-77	SHEET NUMBER	D.23
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WEBSTER TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

$\Delta = 01^{\circ}57'59.59"$  (LT)  
T = 196.52  
L = 393.00  
R = 11450.11  
E = 1.69

$\Delta = 02^{\circ}11'04.29"$  (RT)  
T = 218.31  
L = 436.56  
R = 11450.11  
E = 2.08

Existing ROW

Existing ROW

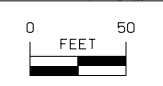
Proposed ROW

Sta. 656+09.63  
Begin Widening

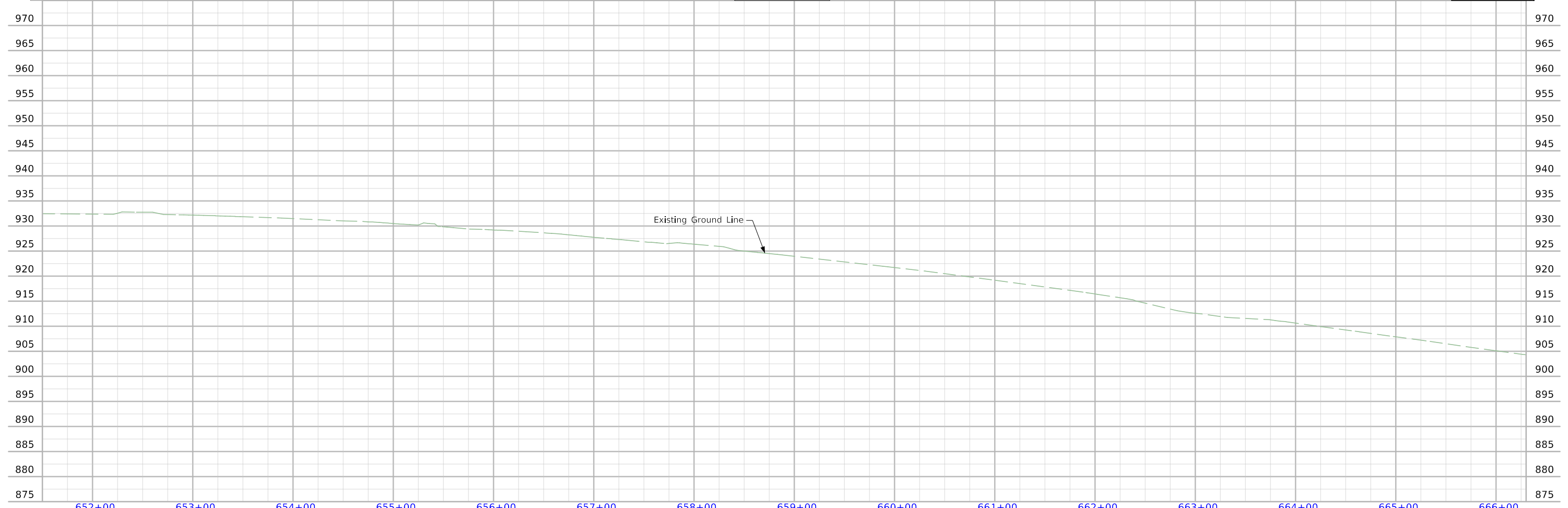
U.S. 6 / Hickman Road

Sta. 667+00.59  
Install 8' x 6' RCB  
Extensions and Wing Headwalls  
Lt F.L. = Other 888.35  
Rt F.L. = Other 879.89  
(Remove Flared Wing Headwalls  
Drop Inlet, and Part Barrel)

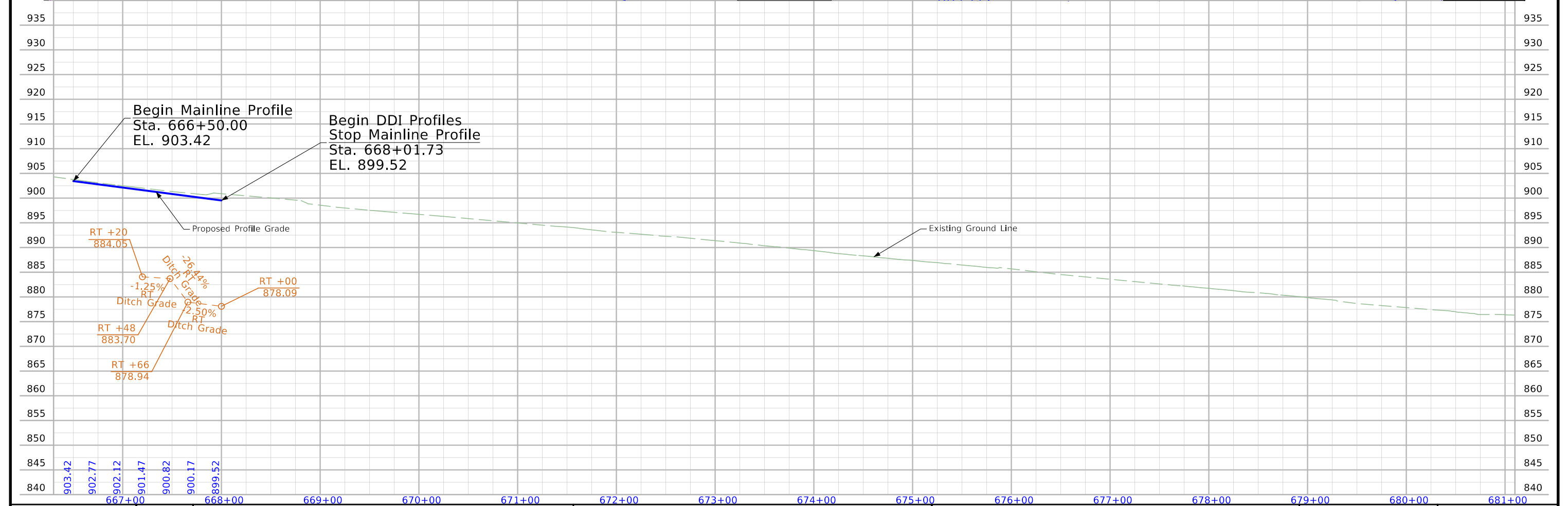
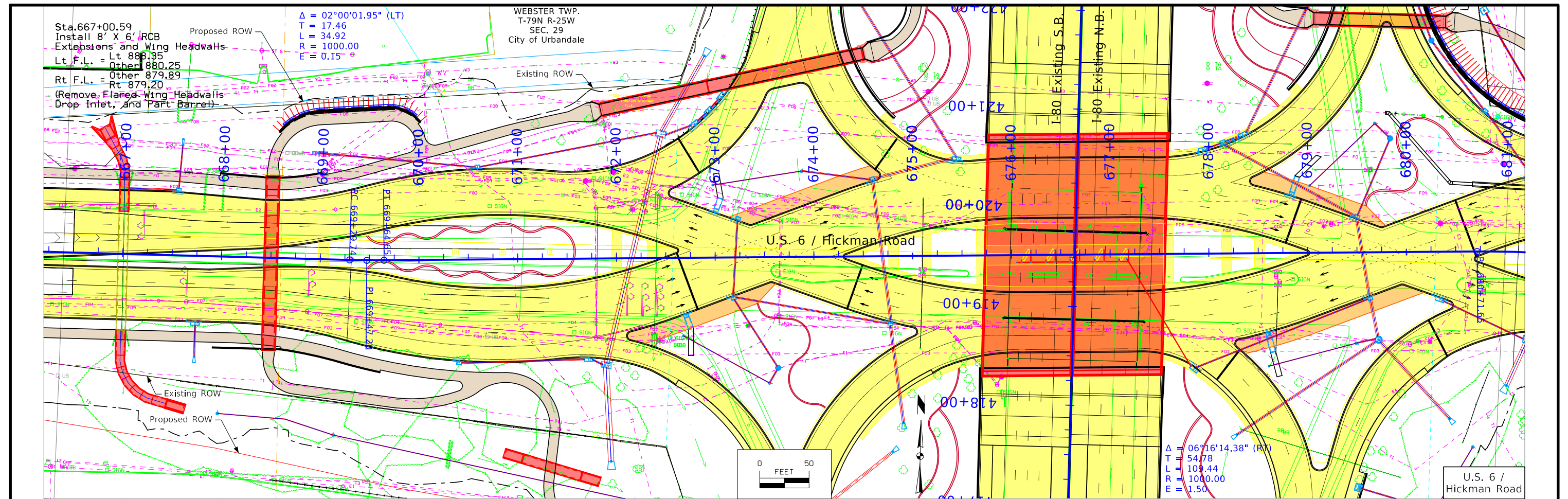
U.S. 6 /  
Hickman Road



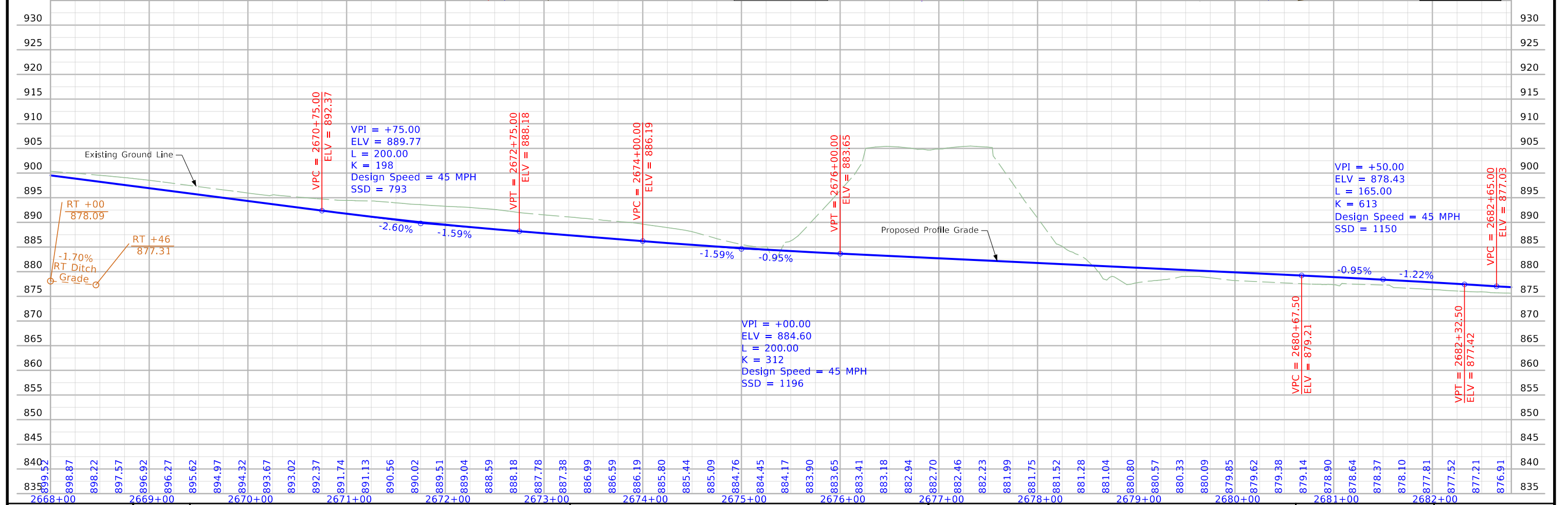
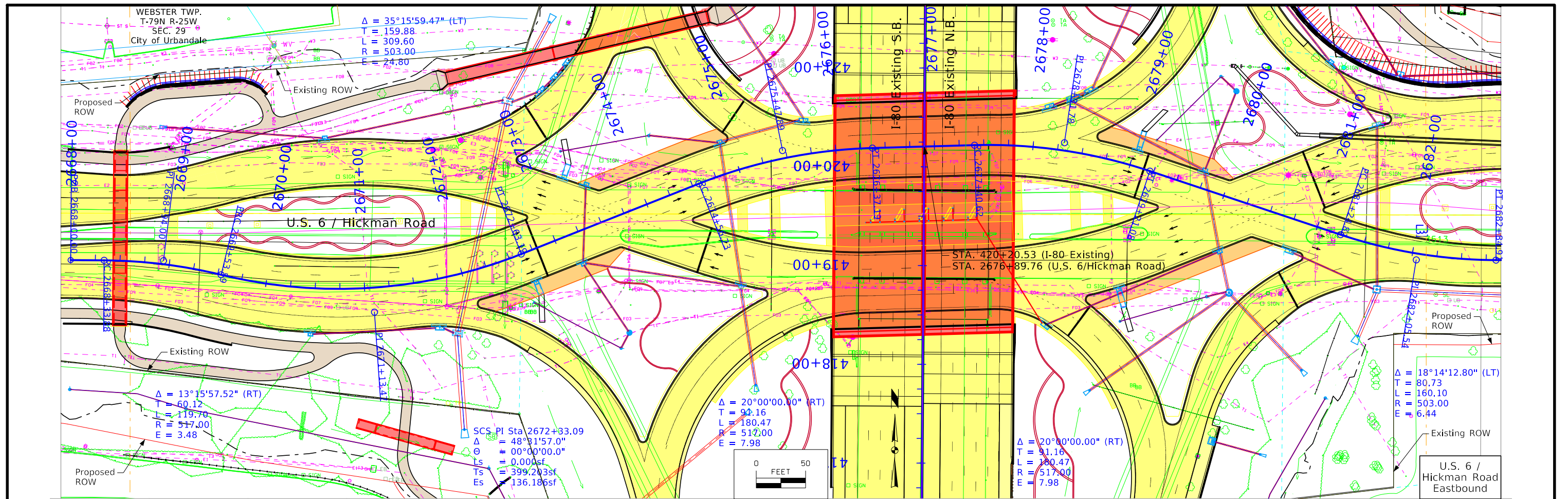
Existing Ground Line



FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER E.1
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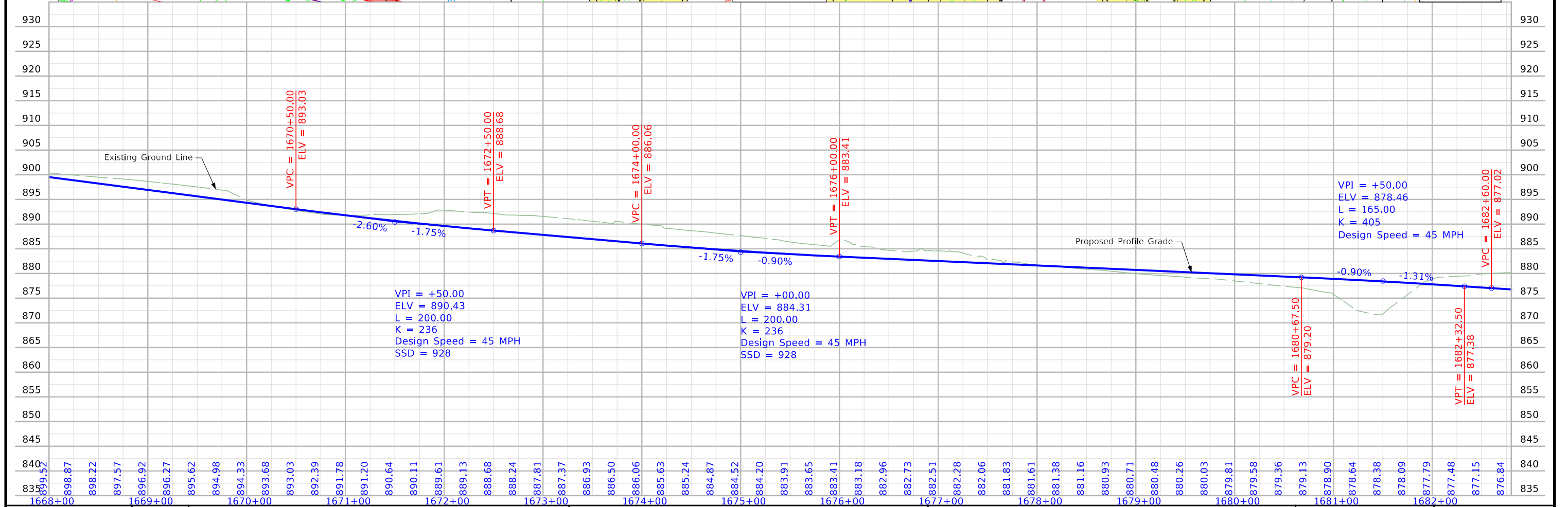
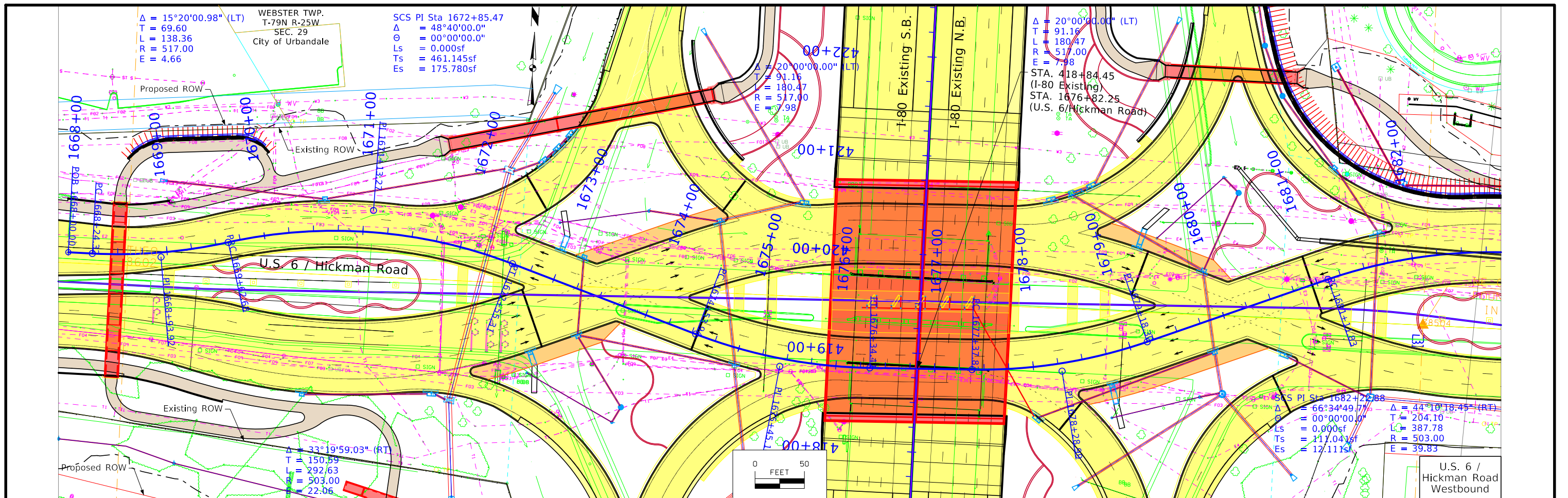


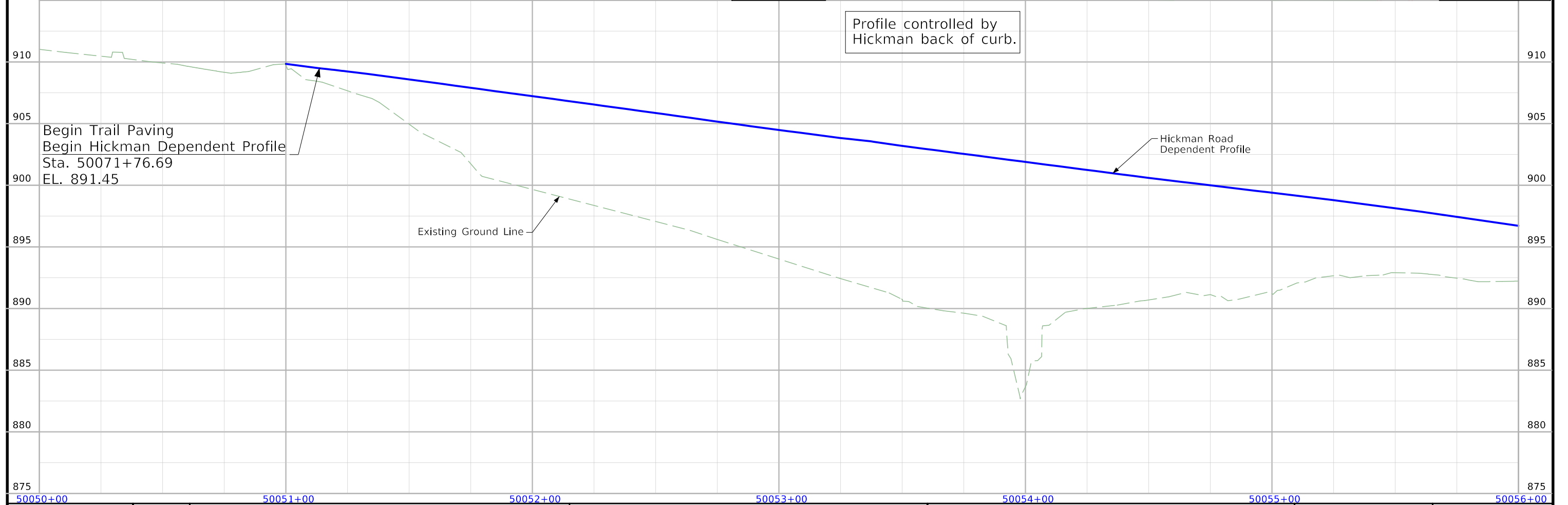
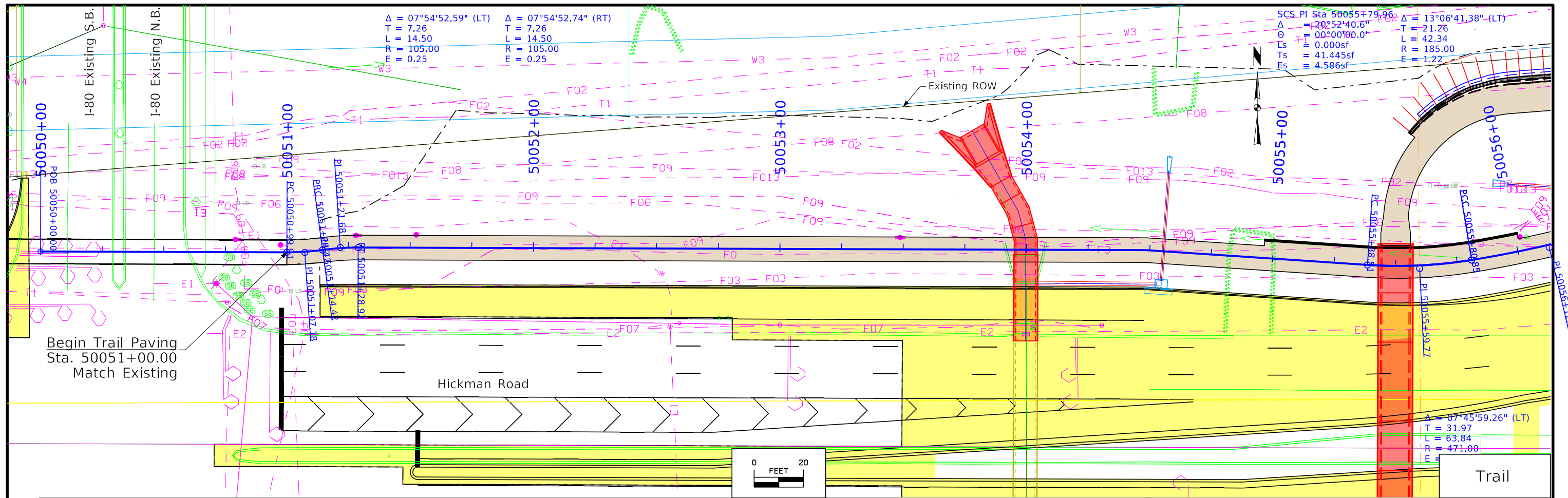


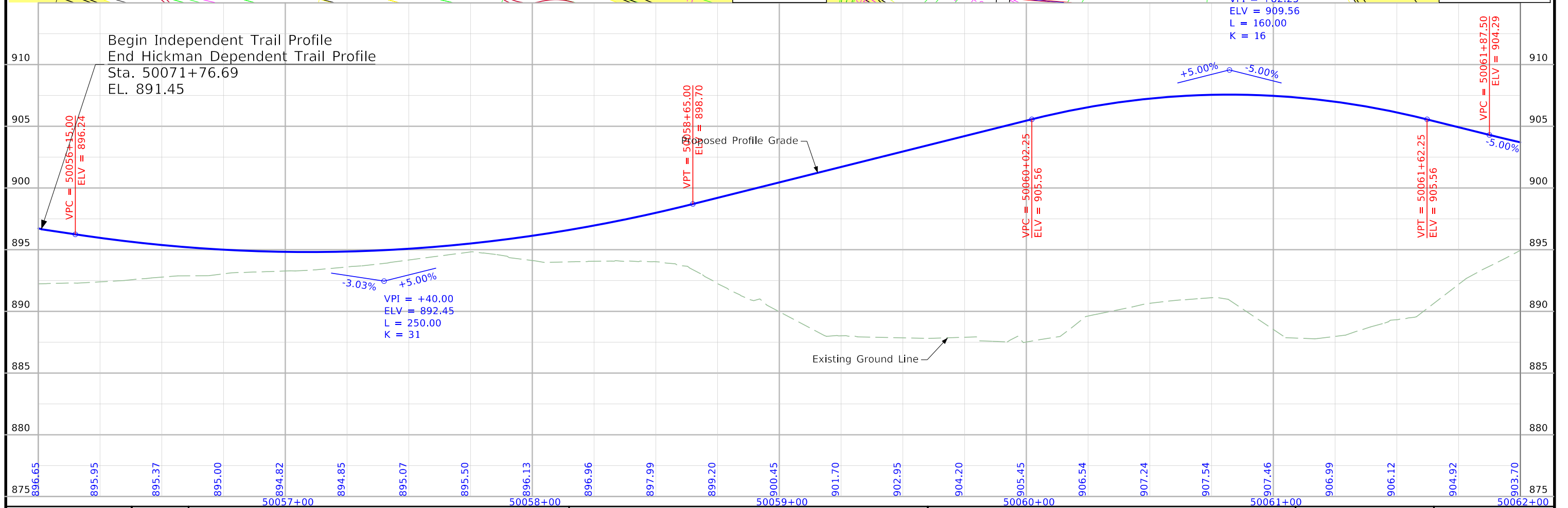
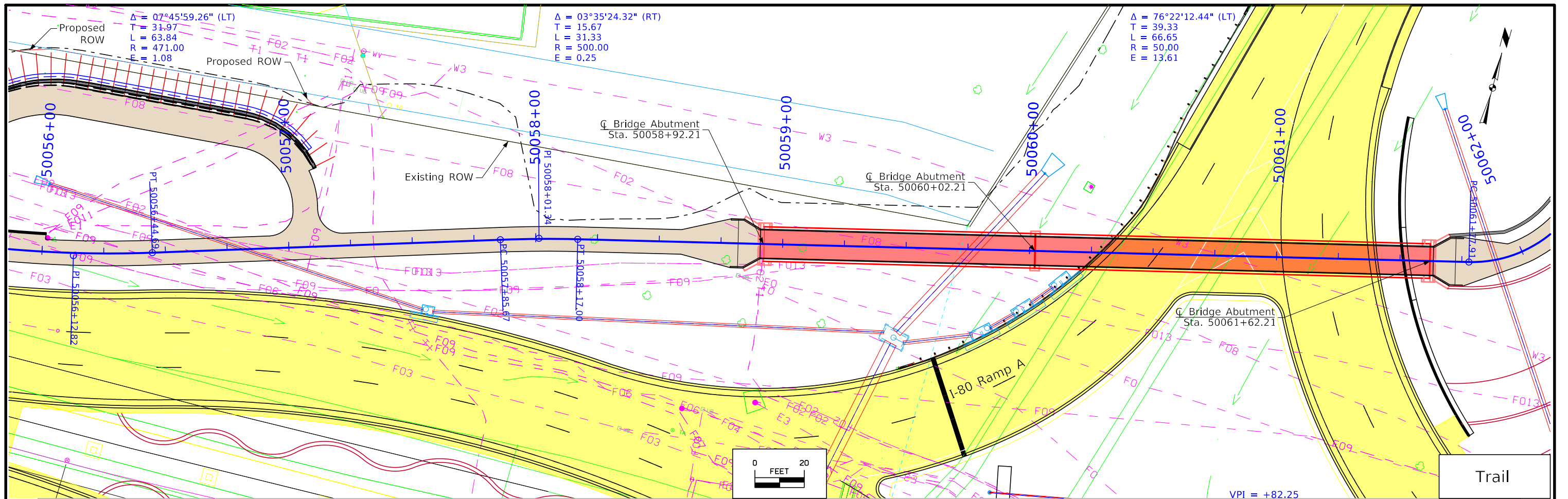


FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER E.3
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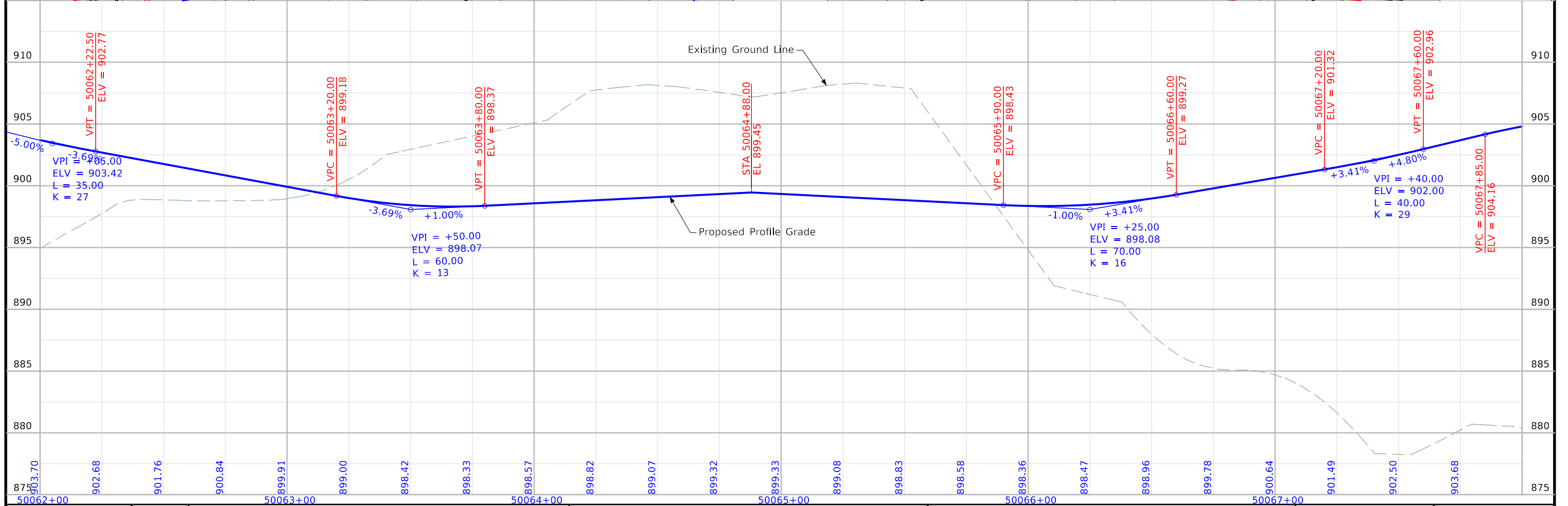
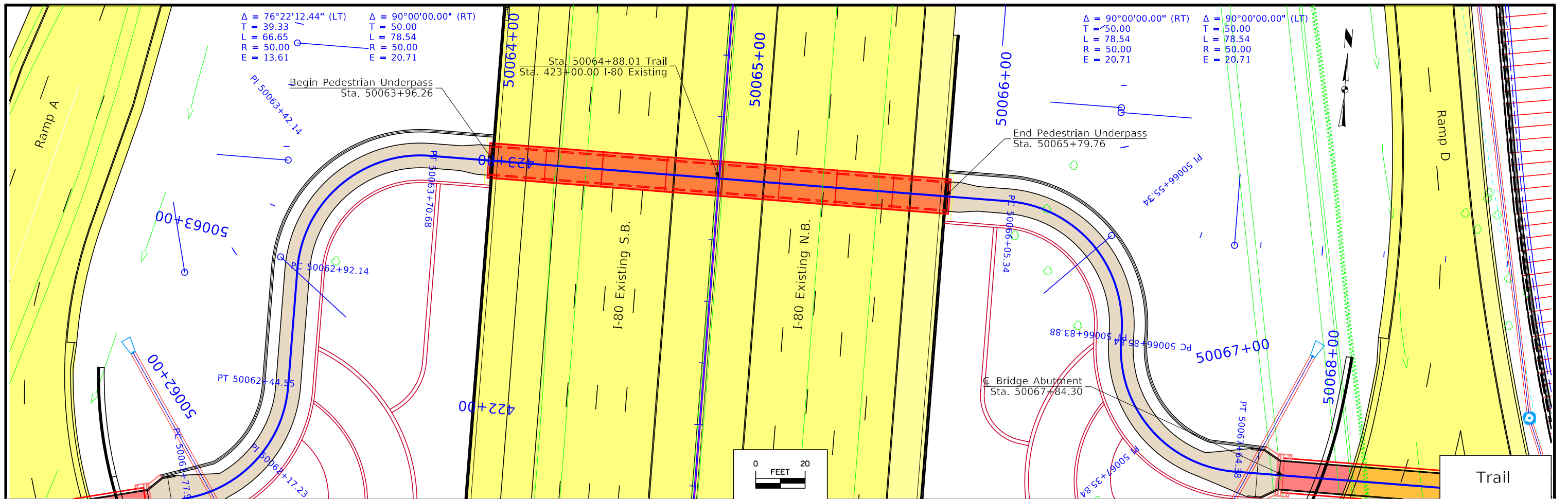


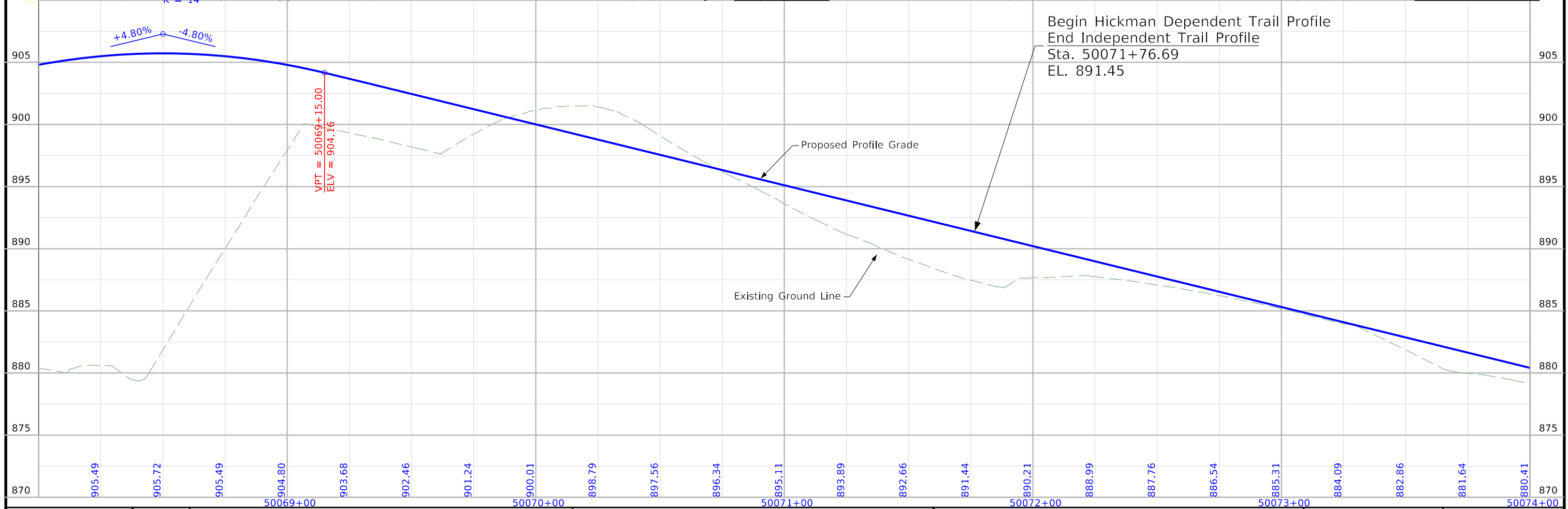
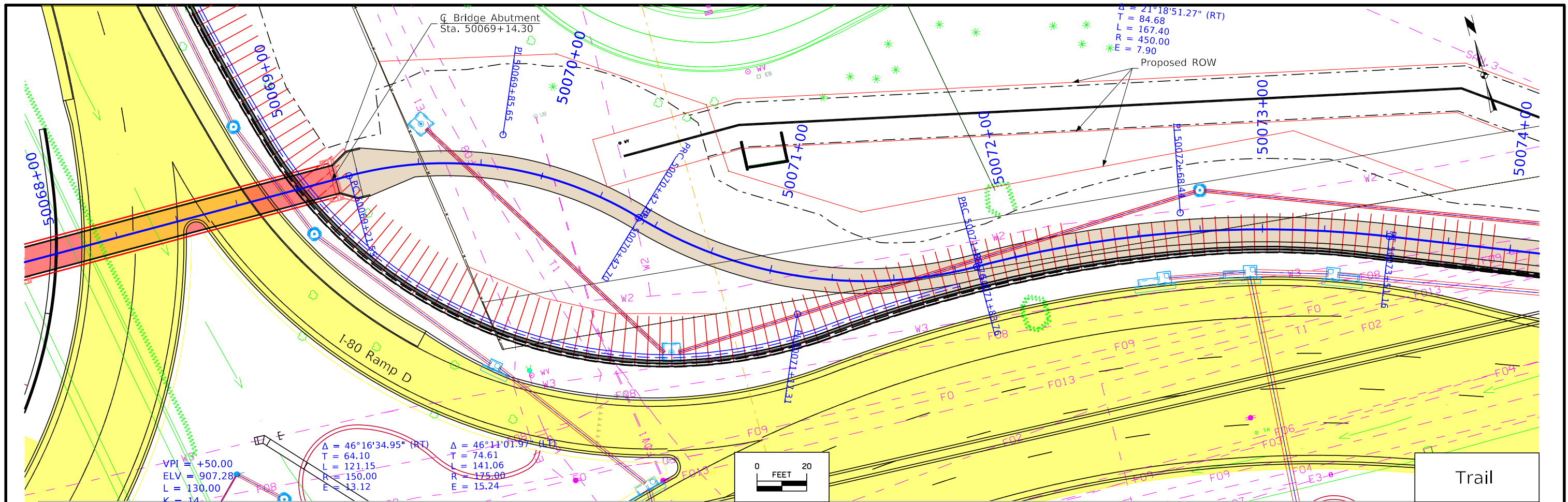


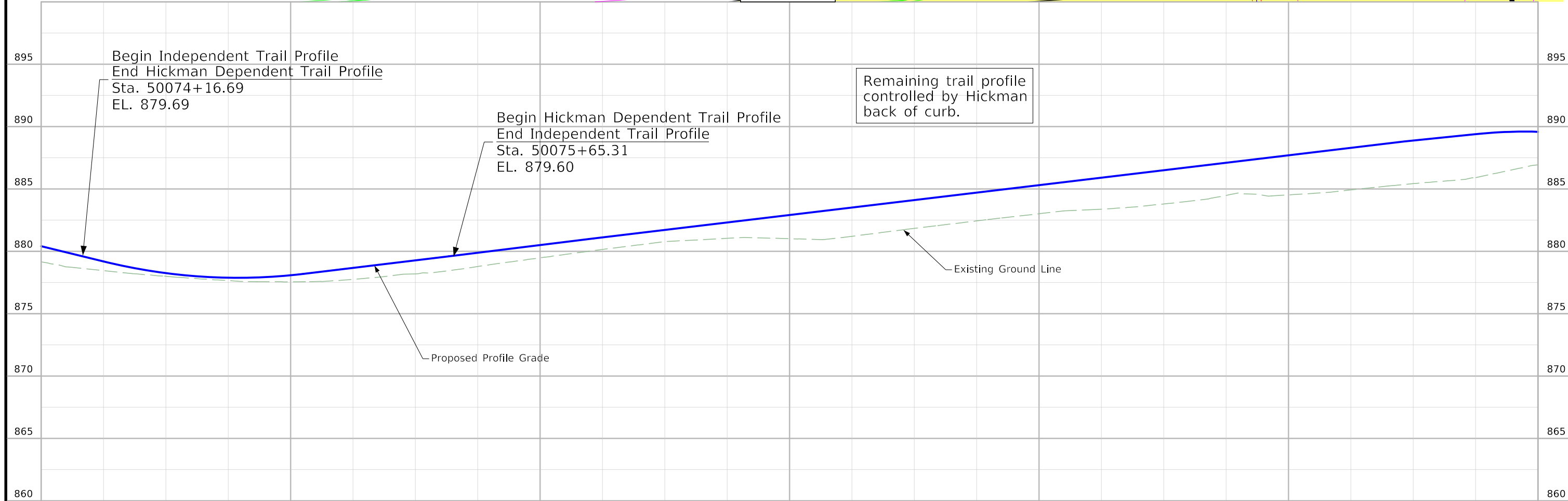
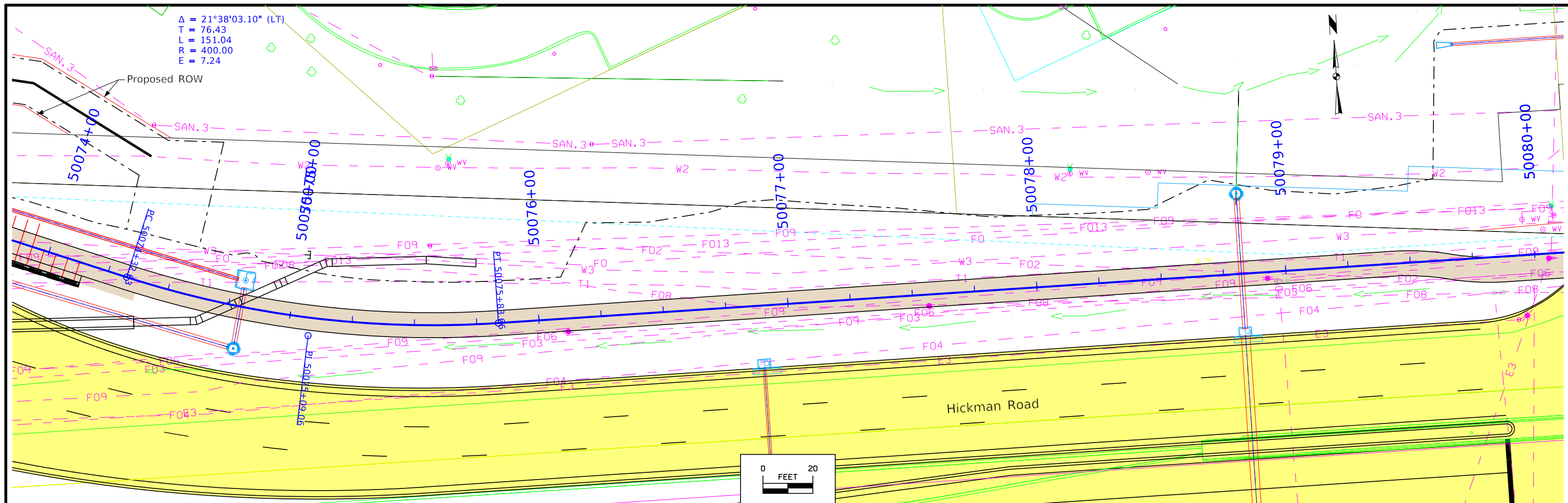


FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER E.6
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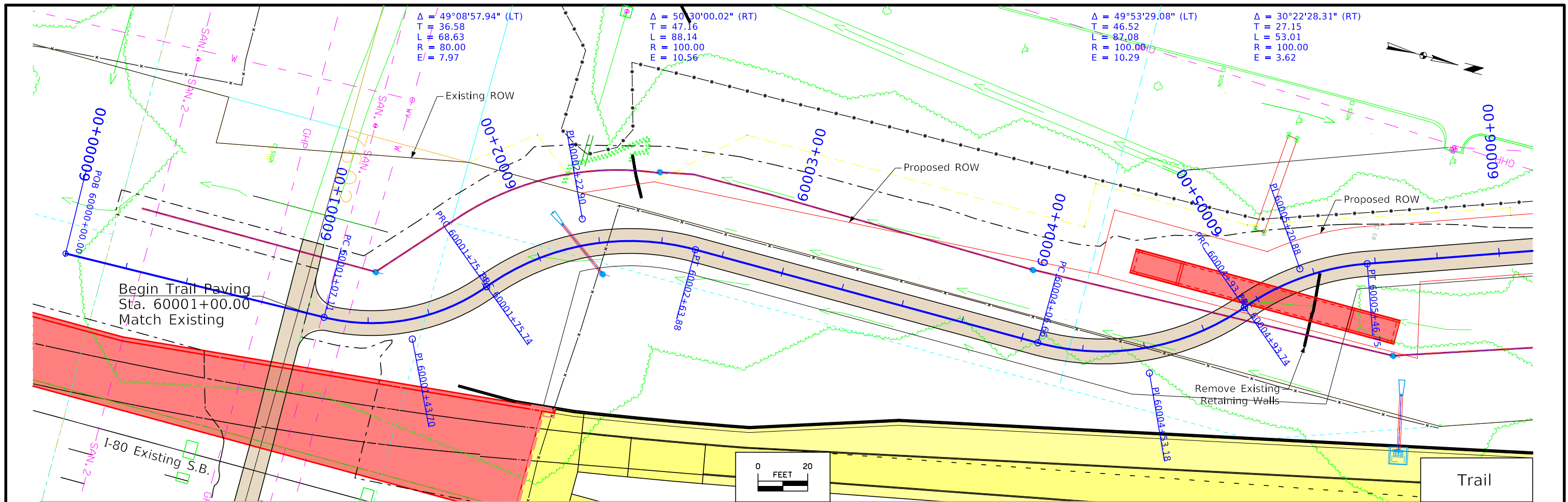










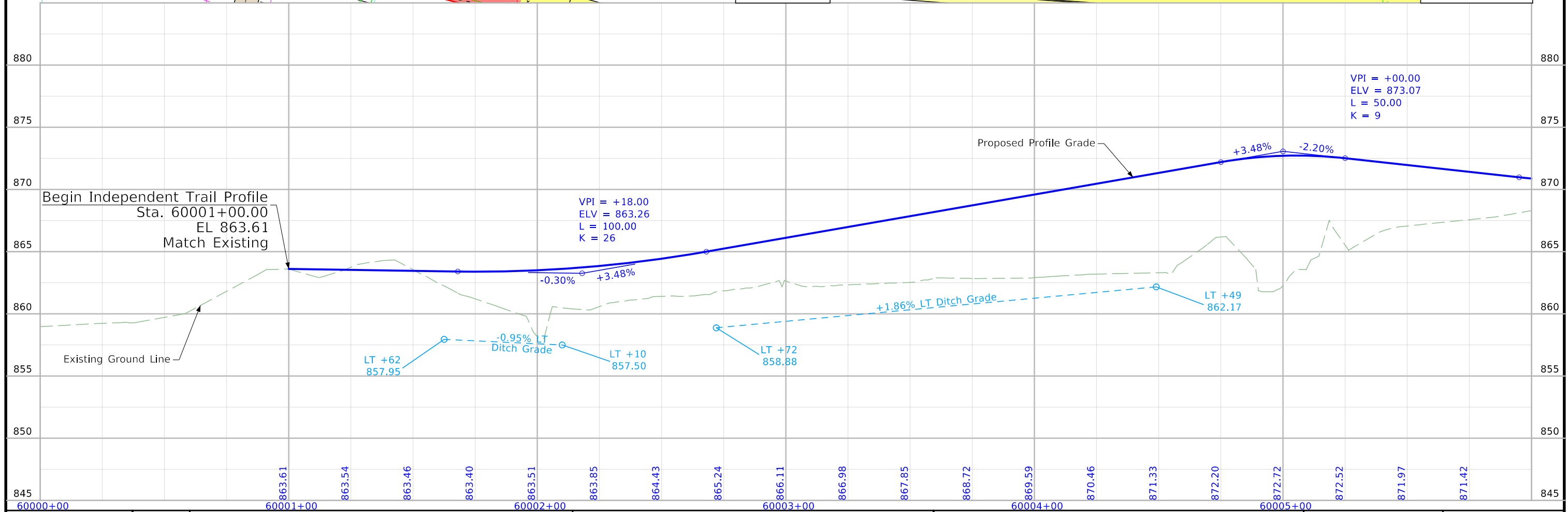
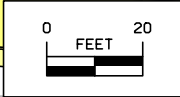


$\Delta = 49^\circ 08' 57.94''$  (LT)  
 T = 36.58  
 L = 68.63  
 R = 80.00  
 E = 7.97

$\Delta = 50^\circ 30' 00.02''$  (RT)  
 T = 47.16  
 L = 88.14  
 R = 100.00  
 E = 10.56

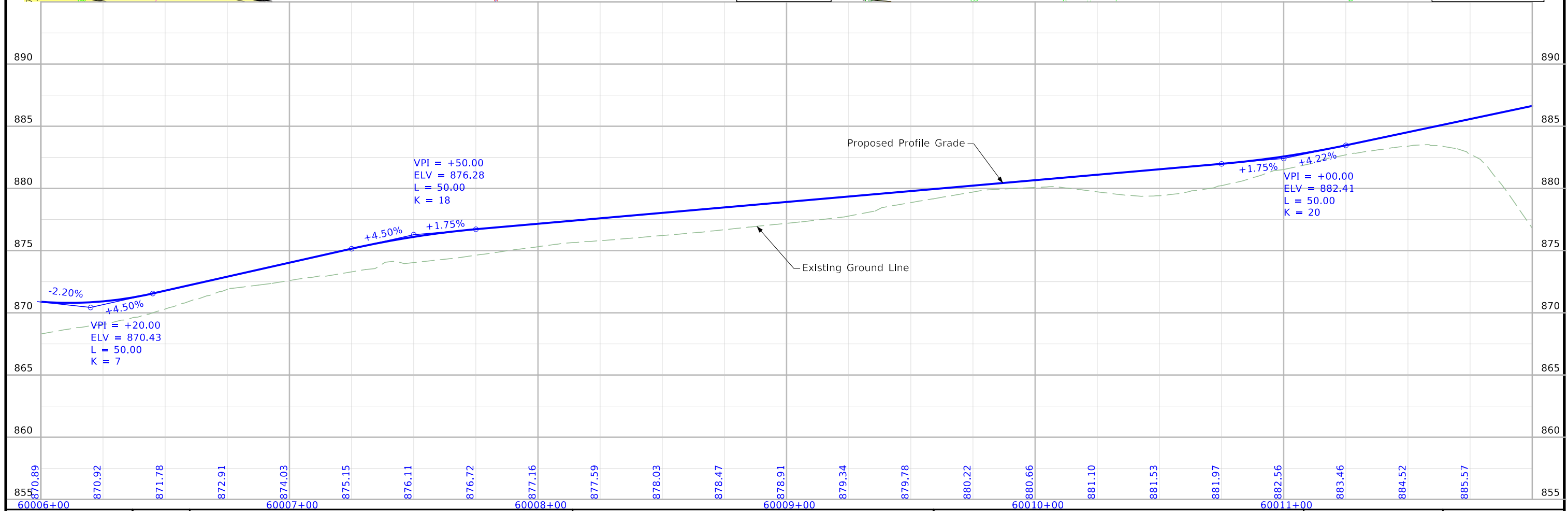
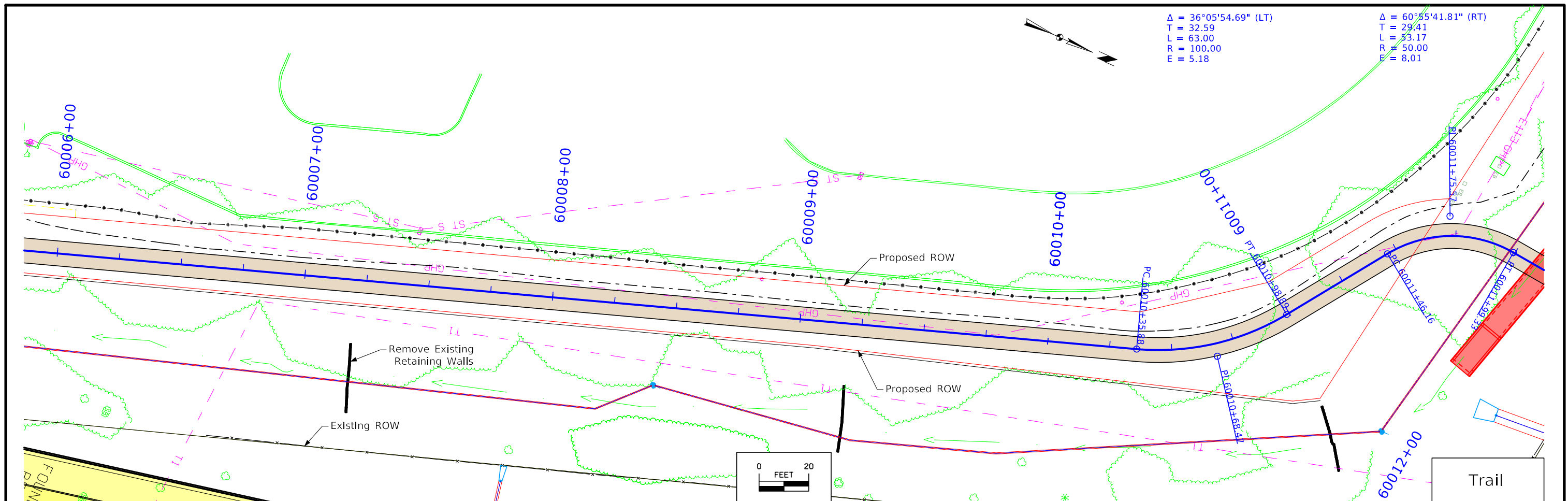
$\Delta = 49^\circ 53' 29.08''$  (LT)  
 T = 46.52  
 L = 87.08  
 R = 100.00  
 E = 10.29

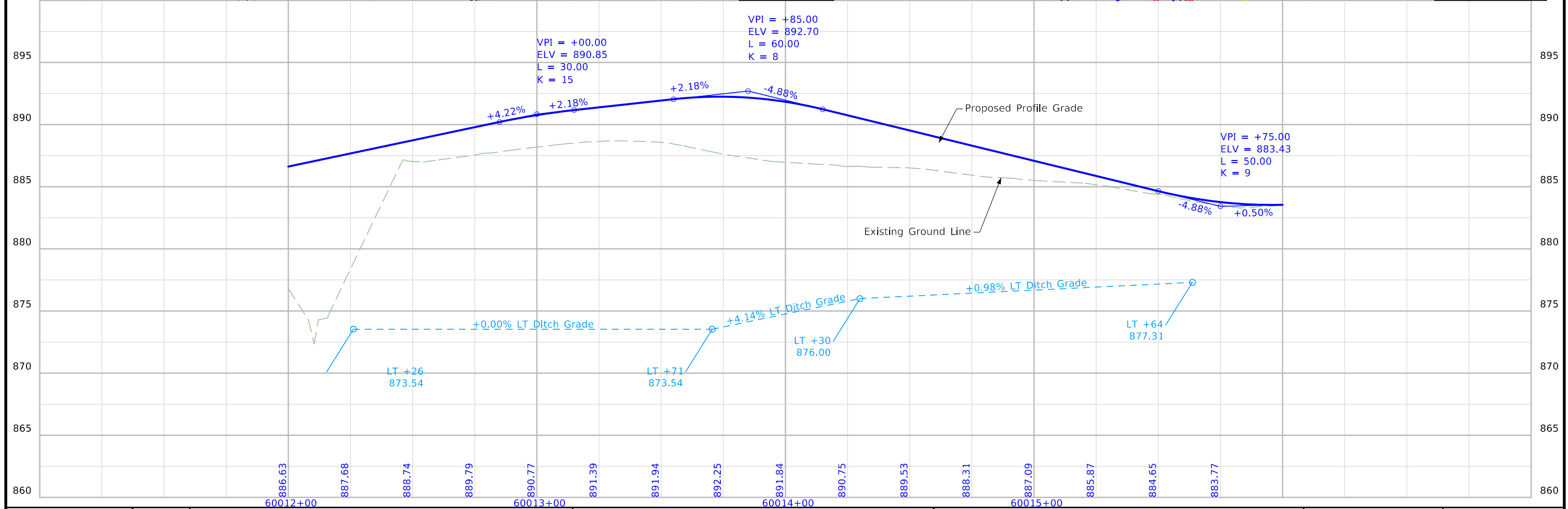
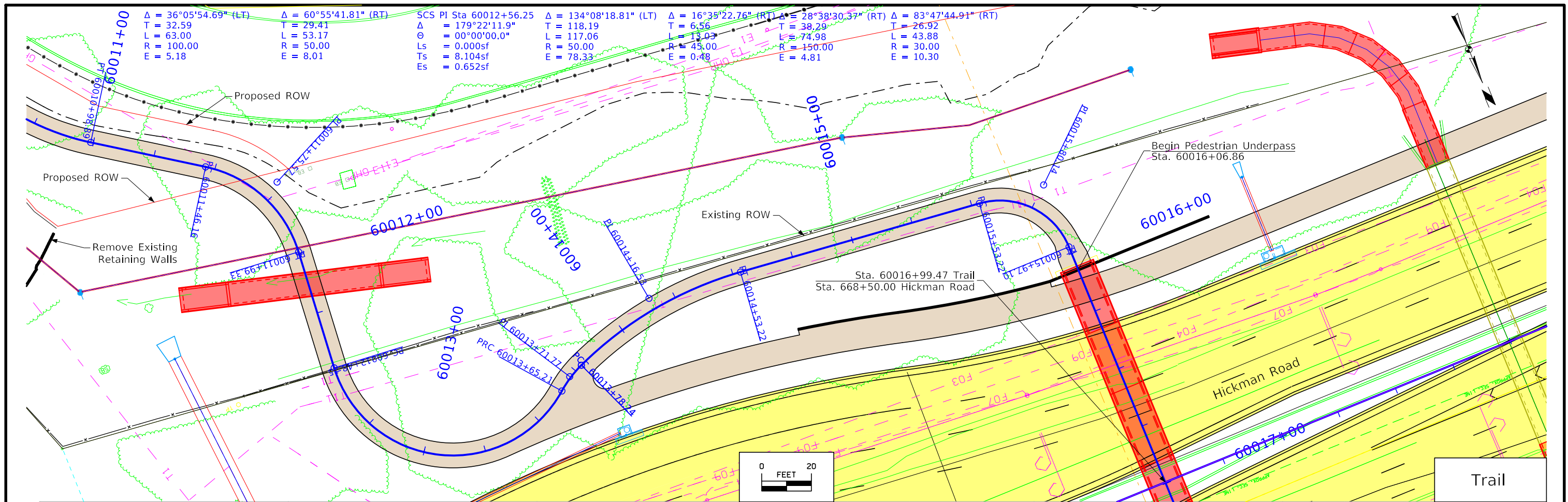
$\Delta = 30^\circ 22' 28.31''$  (RT)  
 T = 27.15  
 L = 53.01  
 R = 100.00  
 E = 3.62

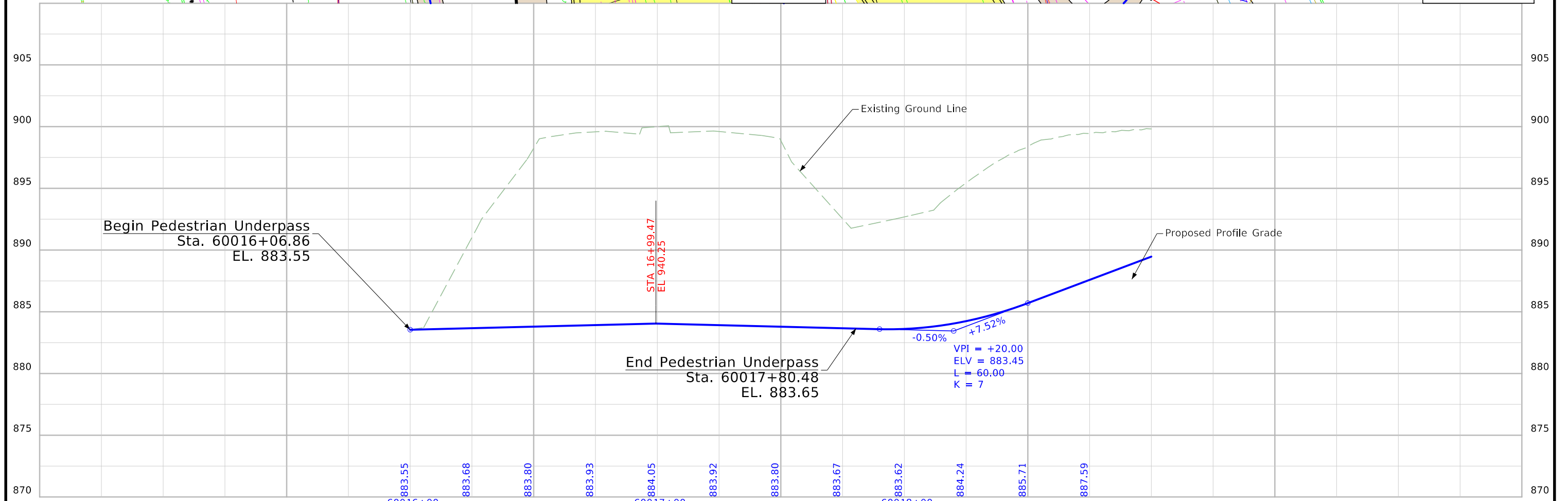
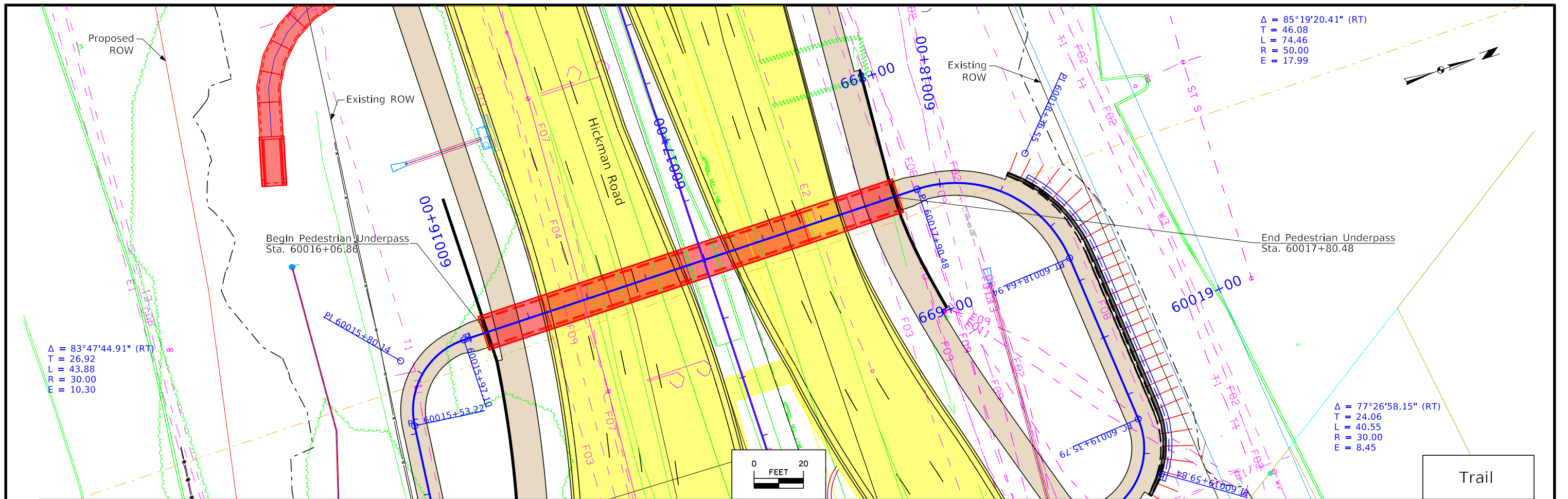


FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER	IM-080-4(069)125--13-77	SHEET NUMBER	E.10
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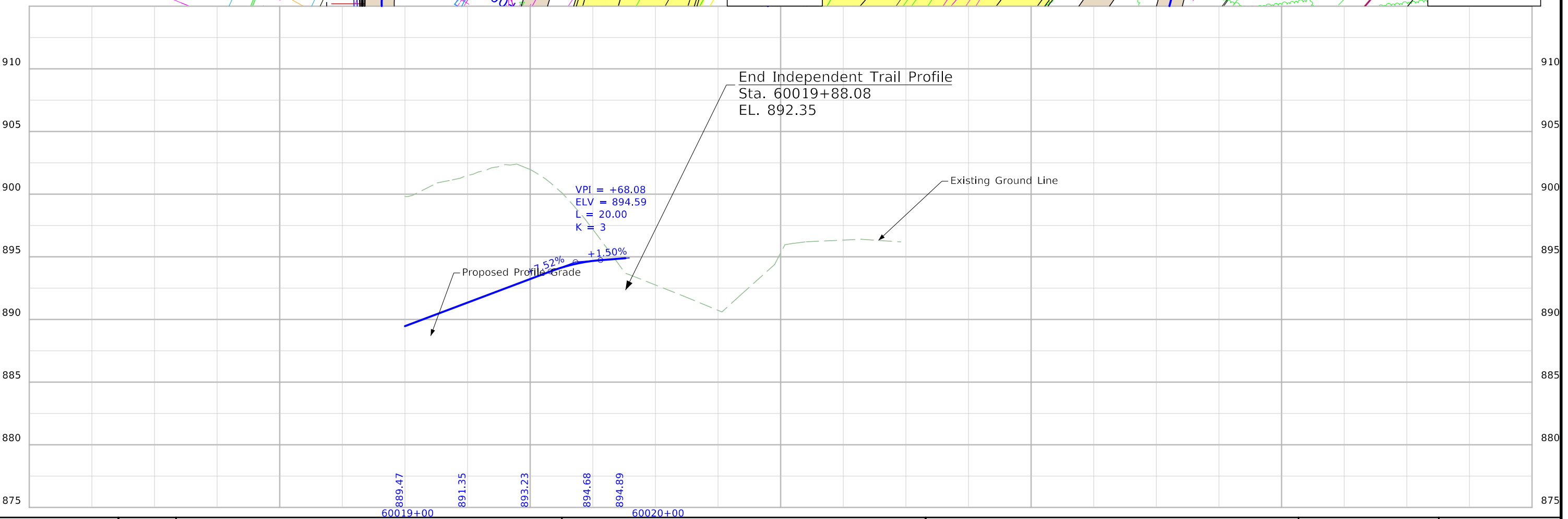


$\Delta = 85^{\circ}19'20.41"$  (RT)  $\Delta = 77^{\circ}26'58.15"$   
 T = 46.08 T = 24.06  
 L = 74.46 L = 40.55  
 R = 50.00 R = 30.00  
 E = 17.99 E = 8.45

$\Delta = 16^{\circ}35'22.76"$  (RT)  $\Delta = 28^{\circ}38'30.37"$  (RT) Proposed ROW  
 T = 6.56 T = 38.29  
 L = 13.03 L = 74.98  
 R = 45.00 R = 150.00  
 E = 0.48 E = 4.81

$\Delta = 134^{\circ}08'18.81"$  (LT)  $\Delta = 60^{\circ}55'41.81"$  (RT)  
 T = 118.19 T = 29.41  
 L = 117.06 L = 53.17  
 R = 50.00 R = 50.00  
 E = 78.33 E = 8.01

SCS PI Sta 60012+56.25  
 $\Delta = 179^{\circ}22'11.9"$   
 $\theta = 00^{\circ}00'00.0"$   
 Ls = 0.000sf  
 Ts = 8.104sf  
 Es = 0.652sf



WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

Sta.374+23.29  
Install Parallel  
Wing Headwall  
F.L. = Lt 898.23  
Other 899.25  
Remove Flume  
and 37' Barrel  
Sta.374+23.29  
Skew= 0°  
5'X5'X566'R/CBC  
D.A.=195.0 AC.

Existing ROW  
Proposed ROW

Sta.377+09.87 SBL  
Install 24" X 14' RCP  
Extension and Reinstall  
Concrete Apron  
F.L. = Lt 918.50  
Other 918.75  
(Remove Apron)  
Sta.377+09.87 SBL  
24" X 121' RCP

(Remove Apron)  
Sta.380+00.00 SBL  
18" X 101' RCP

Ramp A University

368+00 369+00 370+00 371+00 372+00 373+00 374+00 375+00 376+00 377+00 378+00 379+00 380+00 381+00 382+00

I-80 Existing S.B. / W.B.

I-80 Existing N.B. / E.B.

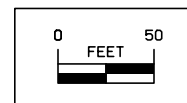
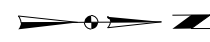
3608

Ramp D University

Existing ROW  
Proposed ROW

Sta.371+49.65 NBL  
Install 18" X 18' RCP  
Extension and Reinstall  
Concrete Apron  
F.L. = Other 923.89  
Rt 923.60  
(Remove Apron)

Sta.374+25.47 NBL  
Install 18" X 22' RCP  
Extension and Reinstall  
Concrete Apron  
F.L. = Other 925.99  
Rt 925.70  
(Remove Apron)



Removal Plan  
Interstate 80

WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

Sta.382+99.23 SBL  
Install 18" X 56' RCP  
Extension and Reinstall  
Concrete Apron  
F.L. = Lt 922.95  
Other 924.51  
(Remove Apron)  
Sta.382+99.23 SBL  
18" X 99.13' RCP

STA. 389+47  
8"X48' PVC  
D.A.=xx A-F  
(Remove)

Sta.394+54.04 SBL  
Install 18" X 26' RCP  
Extension and Reinstall  
Concrete Apron  
F.L. = Lt 902.10  
Other 902.34  
(Remove Apron)  
Sta.394+54.04 SBL  
18" X 102' RCP

Ramp A University

I-80 Existing S.B. / W.B.

I-80 Existing N.B. / E.B.

383+00 384+00 385+00 386+00 387+00 388+00 389+00 390+00 391+00 392+00 393+00 394+00 395+00 396+00 397+00

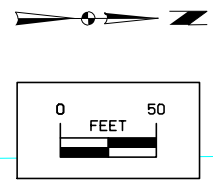
Existing ROW

Proposed ROW

Existing ROW  
Proposed ROW

Sta.386+00.00 NBL  
Install 18" X 36' RCP  
Extension and Reinstall  
Concrete FES  
F.L. = Other 922.53  
Rt 922.25  
(Remove FES)  
Sta.386+00.00 NBL  
18" X 93' RCP

Sta.390+10.89 NBL  
Install 24" X 32' RCP  
Extension and  
Concrete Apron  
F.L. = Other 908.47  
Rt 908.20  
(Remove Apron)  
Sta.390+10.89 NBL  
24" X 114' RCP



Removal Plan  
Interstate 80

WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

Sta.399+04.47 SBL  
Install 18" X 28' RCP  
Extension and Reinstall  
Concrete FES  
F.L. = Lt 885.25  
Other 885.53  
(Remove FES)  
Sta.399+04.47 SBL  
18" X 109' RCP

Sta.412+24.10 SBL  
Install 18" X 14' RCP  
Extension and Reinstall  
Concrete FES  
F.L. = Lt 887.66  
Other 887.93  
(Remove FES)  
Sta.412+24.10 SBL  
18" X 116' RCP

(Remove 70' CMP)  
Sta.402+03.80 NBL  
24" X 74' RCP

(Remove 104' CMP)  
Sta.409+04.09 NBL  
24" X 101.2' RCP AND  
24" X 104' CMP

Proposed ROW  
Existing ROW

Proposed ROW  
Existing ROW

Existing ROW

Proposed ROW

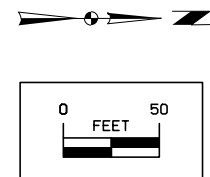
398+00 399+00 400+00 401+00 402+00 403+00 404+00 405+00 406+00 407+00 408+00 409+00 410+00 411+00 412+00

I-80 Existing S.B. / W.B.

I-80 Existing N.B. / E.B.

Ramp C

Ramp B

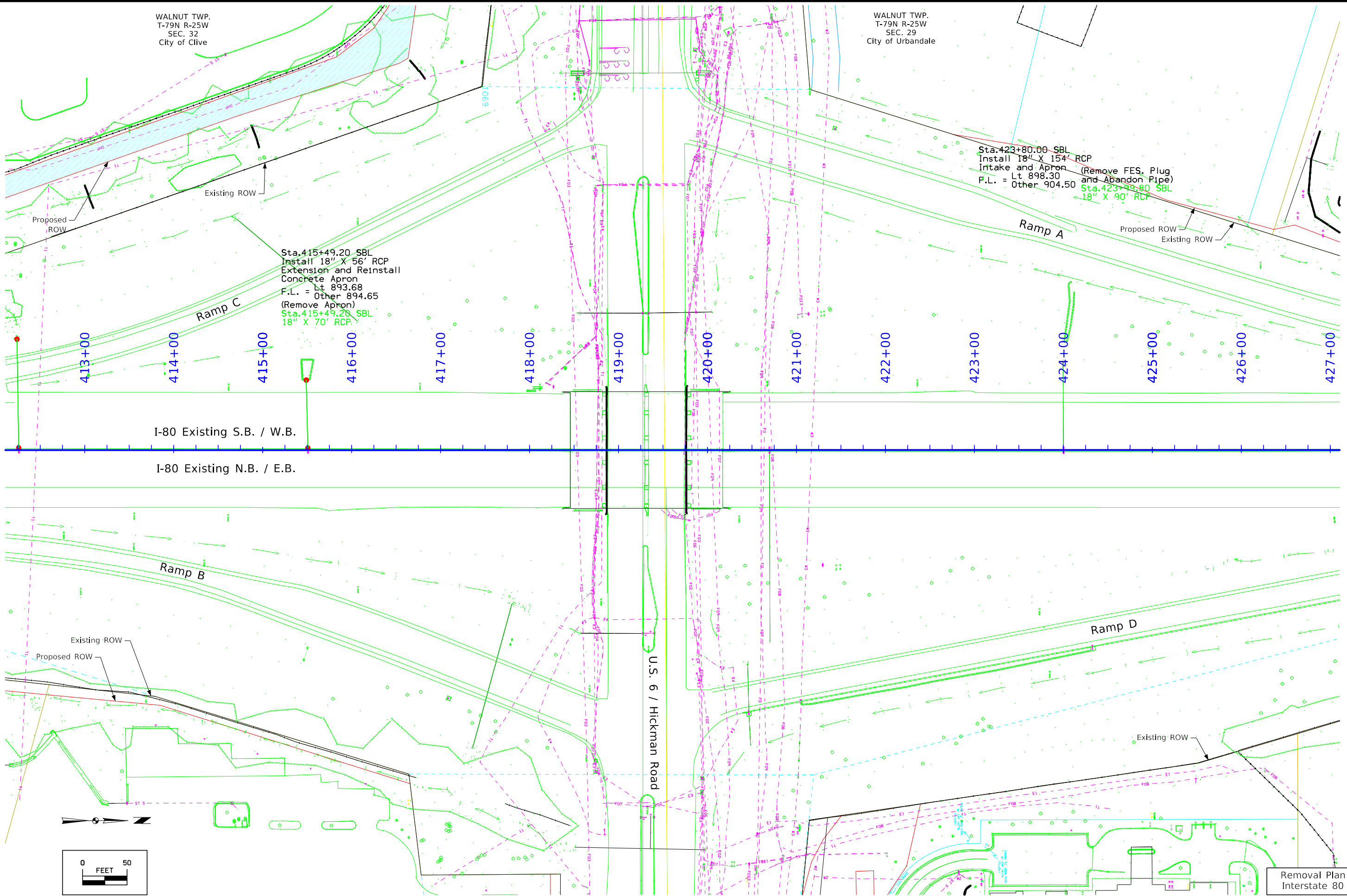


Removal Plan  
Interstate 80



WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale



Removal Plan  
Interstate 80

WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

Sta.432+58.10 SBL  
Install 24" X 54' RCP  
Extension and Reinstall  
Concrete FES  
F.L. = Lt 916.56  
Other 919.36  
(Remove FES)  
Sta.432+58.10 SBL  
24" X 110' RCP

Sta.441+03.00  
Lt Install 14' X 12' X 23' RCB  
Extension and Flared Wing Headwall  
F.L. = Lt 927.50  
Other 927.32  
Rt Install 14' X 12' X 21' RCB  
Extension and Flared Wing Headwall  
F.L. = Other 926.33  
Rt 926.25  
(Remove Flared Wing  
Headwall Lt & Rt)  
Sta.441+03.00  
14' X 12' X 222' RCB

Sta.441+28.30 SBL  
Install 24" X 22' RCP  
Extension and  
Concrete Apron  
F.L. = Lt 923.60  
Other 924.02  
(Remove Apron)  
Sta.441+28.30 SBL  
24" X 148' RCP  
Sta.1439+22.00  
Install 15" X 42' PVC  
F.L. = Lt 923.65  
Other 924.55

Proposed ROW  
Existing ROW

427+00 428+00 429+00 430+00 Ramp A 431+00 432+00 433+00 434+00 435+00 436+00 437+00 438+00 439+00 440+00 441+00

I-80 Existing S.B. / W.B.

I-80 Existing N.B. / E.B.

Ramp D

Sta.427+99.24 NBL  
Install 18" X 38' RCP  
Extension and  
Concrete Apron  
F.L. = Rt 908.38  
Other 908.00  
(Remove Apron)  
Sta.427+99.24 NBL  
18" X 95' RCP

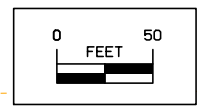
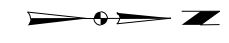
Existing ROW  
Proposed ROW

Sta.432+30.00  
Install 36" X 276' RCP  
EQ 36" X 60' LCP  
Lt 915.20  
F.L. = Other 916.67  
Rt 917.02

(Lt Remove 36' and FES  
Rt Remove 24' and FES  
Plug and Abandon)  
Sta.432+01.47 Skew= 0°  
1.8'X3'ARCH PIPEX21'  
AND 21'RCPX252'  
D.A.=9.0 AC.

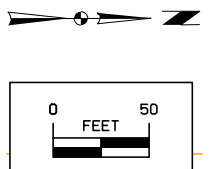
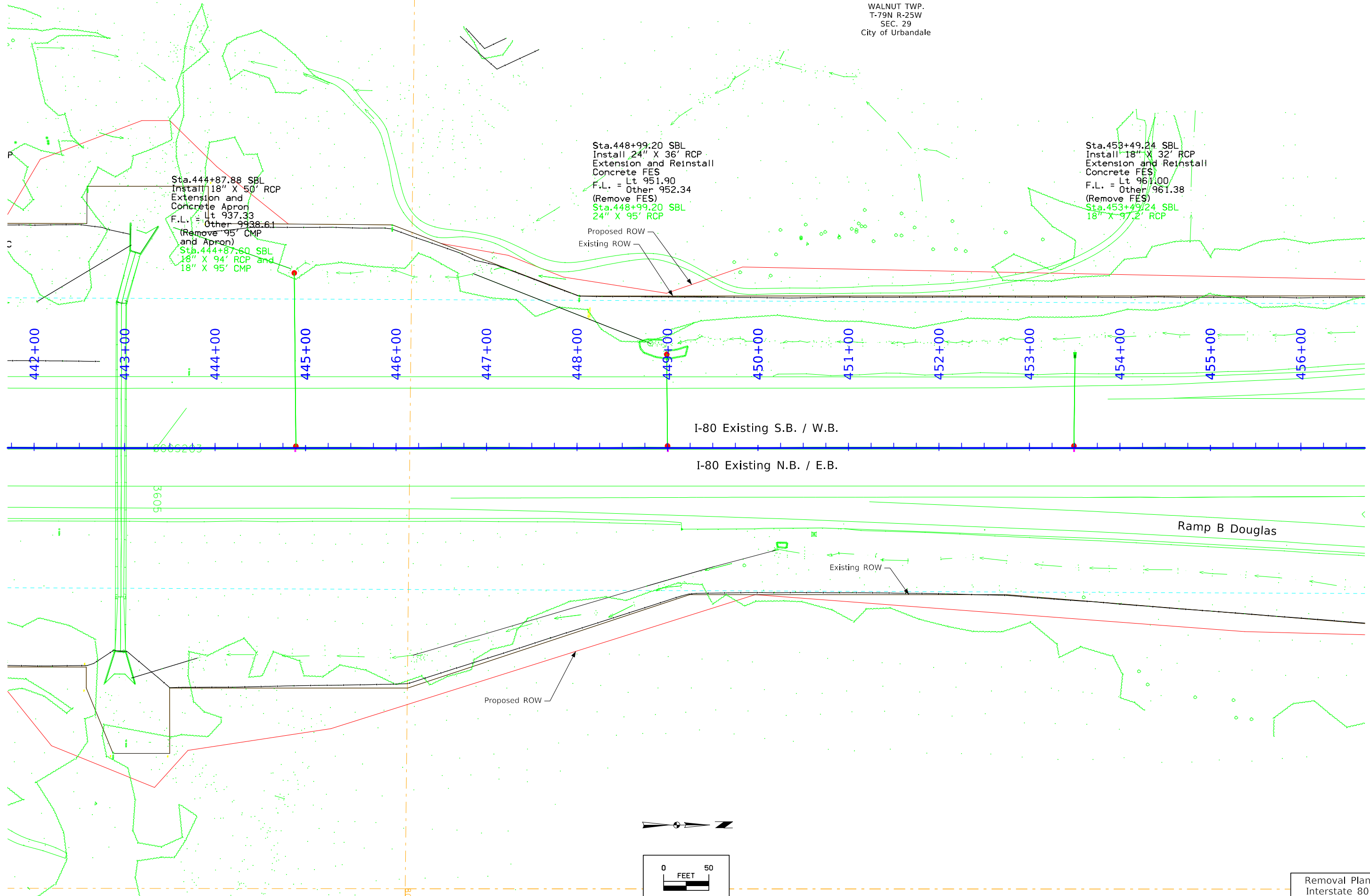
Sta. 436+90.11 NBL  
Install 15" X 18' RCP  
Extension and Reinstall FES  
F.L. = Rt 927.85  
Other 928.75  
(Remove FES)  
Sta.436+90.11  
15" X 104.5' RCP

Sta.442+96.22  
Lt Install 12' X 12' X 37' RCB  
Extension and Parallel Wing Headwall  
F.L. = Lt 892.40  
Other 892.33  
Rt Install 12' X 12' X 38' RCB  
Extension and Parallel Wing Headwall  
F.L. = Other 889.42  
Rt 889.32  
(Remove Flared Wing Headwall Lt & Rt)  
Sta.442+96.22  
12' X 14'-3" Arch Culvert  
and 12' X 12' RCB Extensions



Removal Plan  
Interstate 80

WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale



Removal Plan  
Interstate 80

WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

Sta.461+00.00 SBL  
Install 18" X 22' RCP  
Extension and Reinstall  
Concrete FES  
F.L. = Lt 971.22  
Other 972.04  
(Remove FES)  
Sta.461+00.00 SBL  
18" X 151' RCP

Sta.464+00.00 SBL  
Install 18" X 26' RCP  
Extension and  
Concrete Apron  
F.L. = Lt 973.90  
Other 974.95  
(Remove FES)  
Sta.464+00.00 SBL  
18" X 90' RCP

Sta.468+00.00 SBL  
Install 18" X 28' RCP  
Extension and  
Concrete Apron  
F.L. = Lt 975.56  
Other 976.13  
(Remove FES)  
Sta.468+00.00 SBL  
18" X 88' RCP

Proposed ROW  
Existing ROW

Ramp C Douglas

457+00

458+00

459+00

460+00

461+00

462+00

463+00

464+00

465+00

466+00

467+00

468+00

469+00

470+00

471+00

I-80 Existing S.B. / W.B.

I-80 Existing N.B. / E.B.

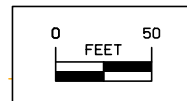
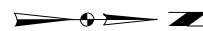
Ramp F Douglas

Ramp B Douglas

Existing ROW

Proposed ROW

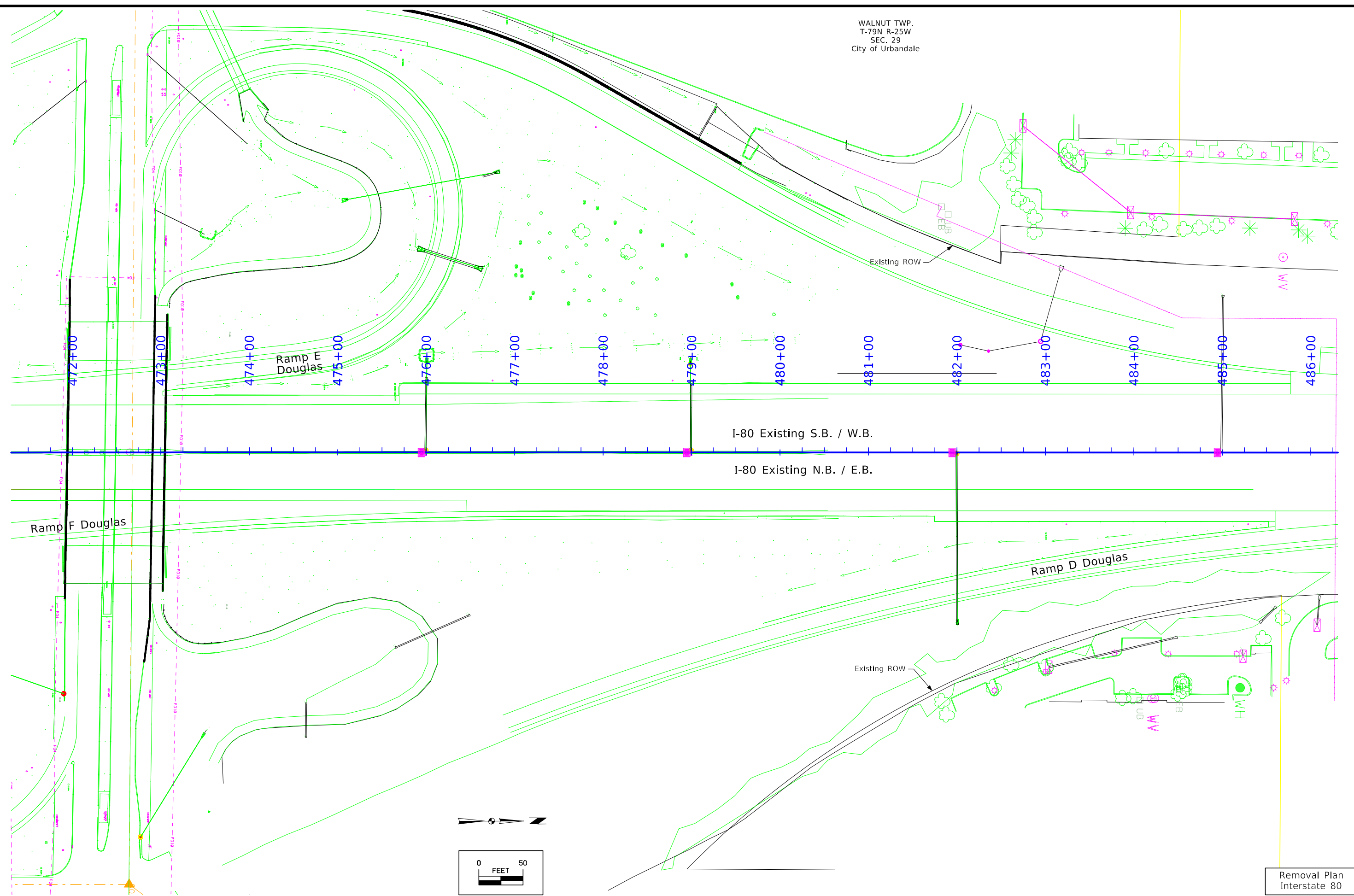
Sta. 457+99.76 NBL  
Install 24" EQ X 14' RCAP  
Extension and Reinstall FES  
F.L. = Rt 968.91  
Other 968.39  
(Remove FES)  
Sta.457+99.76 NBL  
24" EQ X 152.8' RCP



Removal Plan  
Interstate 80



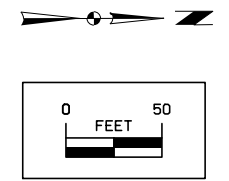
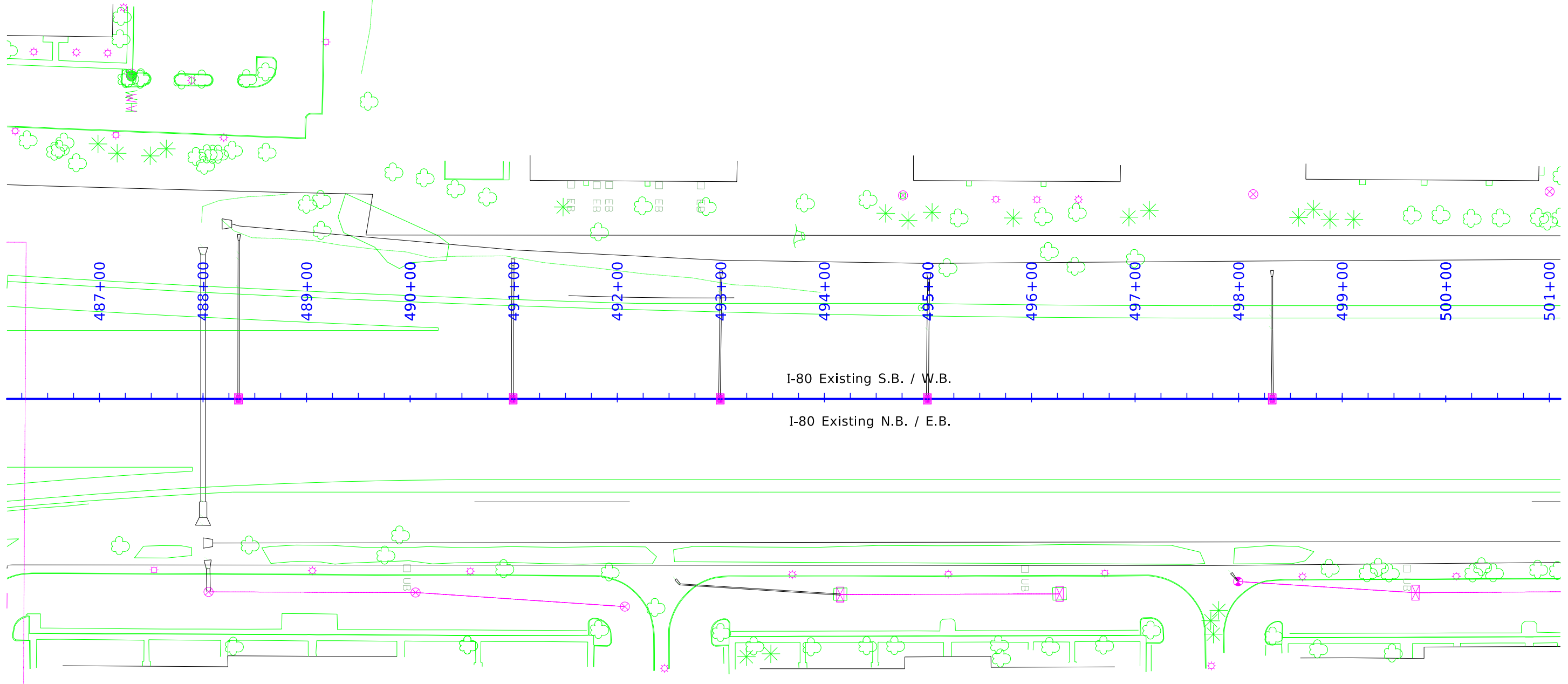
WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale



Removal Plan  
Interstate 80

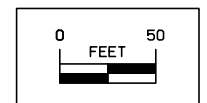
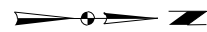
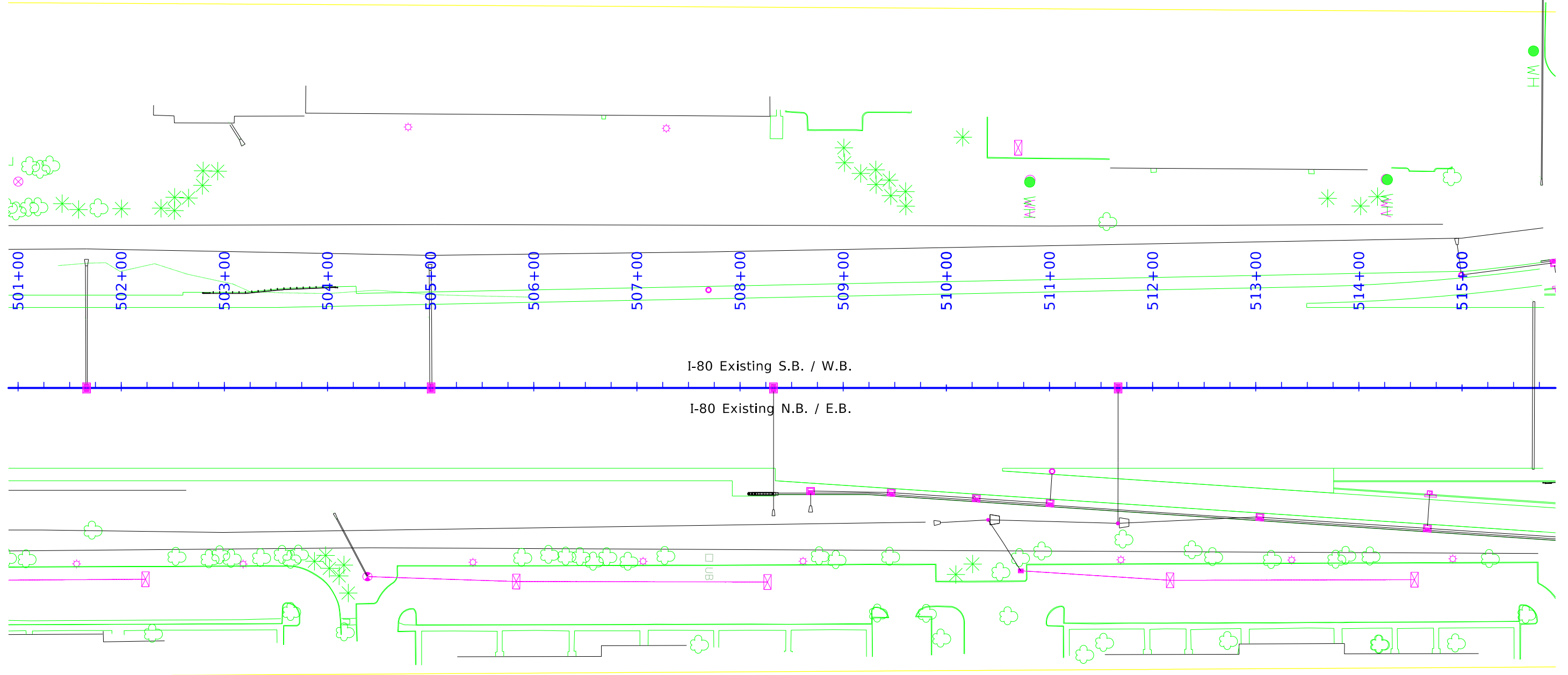


WALNUT TWP.  
T-79N R-25W  
SEC. 20  
City of Urbandale

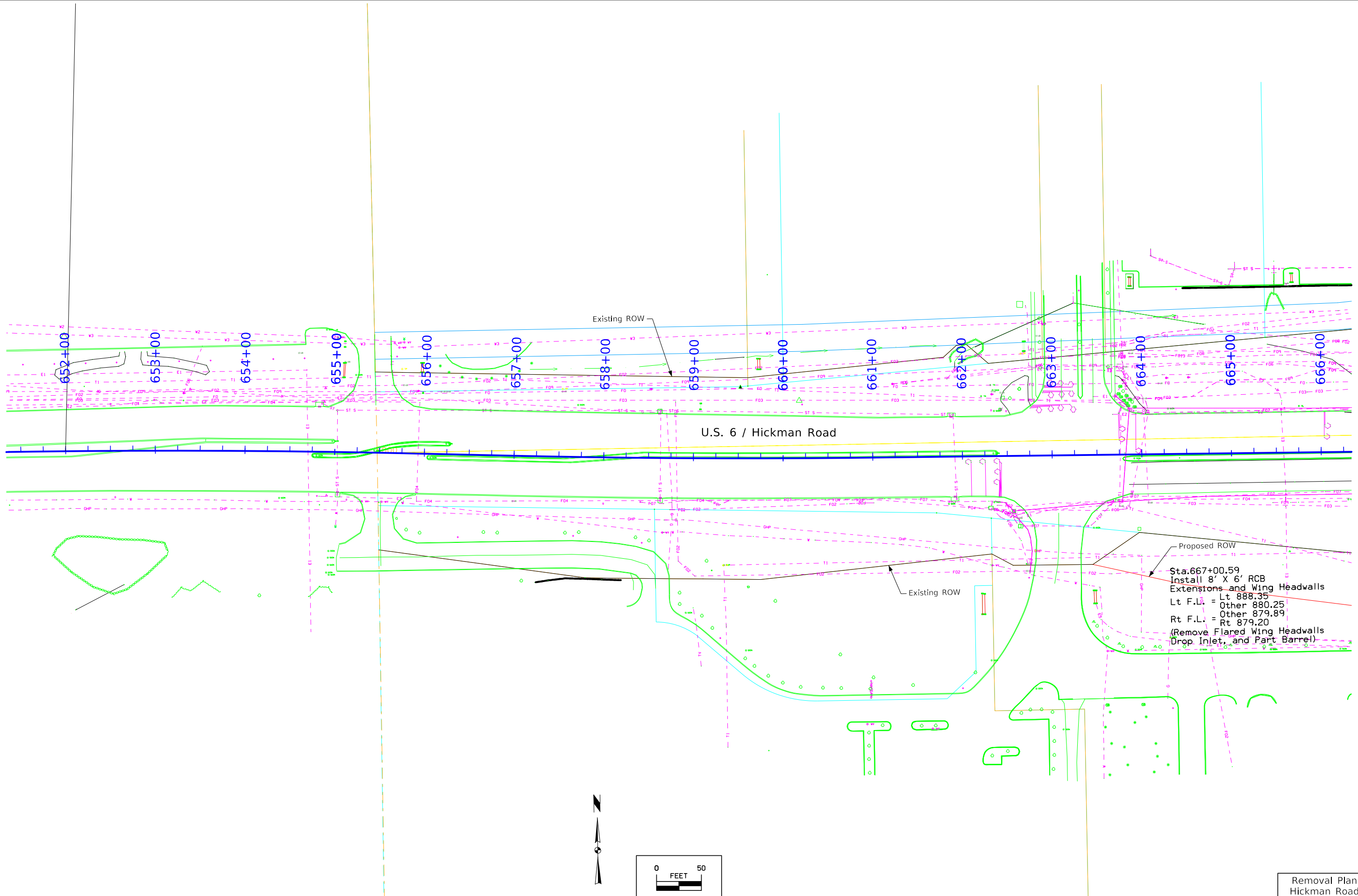


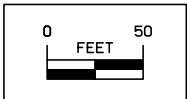
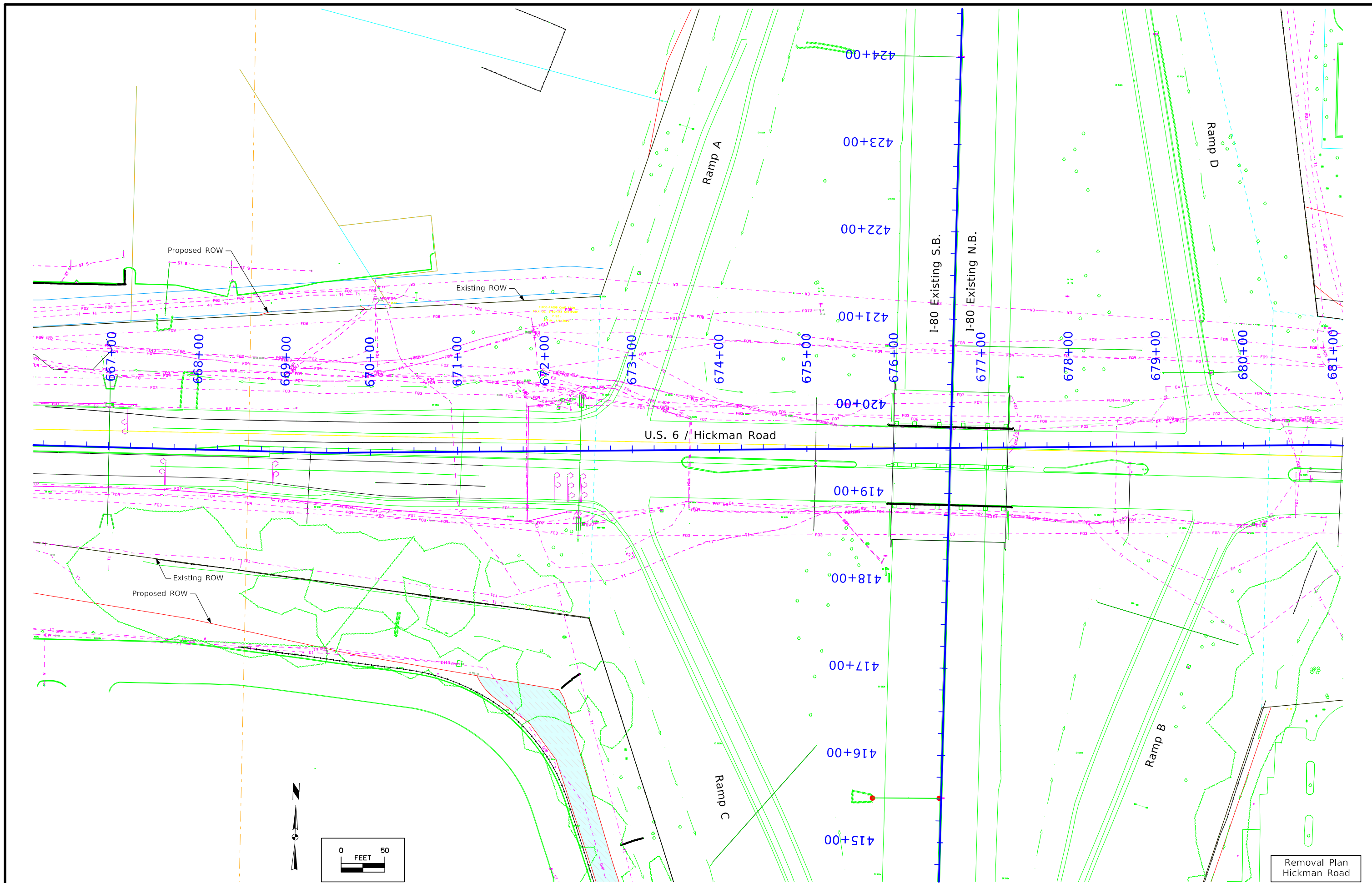
Removal Plan  
Interstate 80

WALNUT TWP.  
T-79N R-25W  
SEC. 20  
City of Urbandale

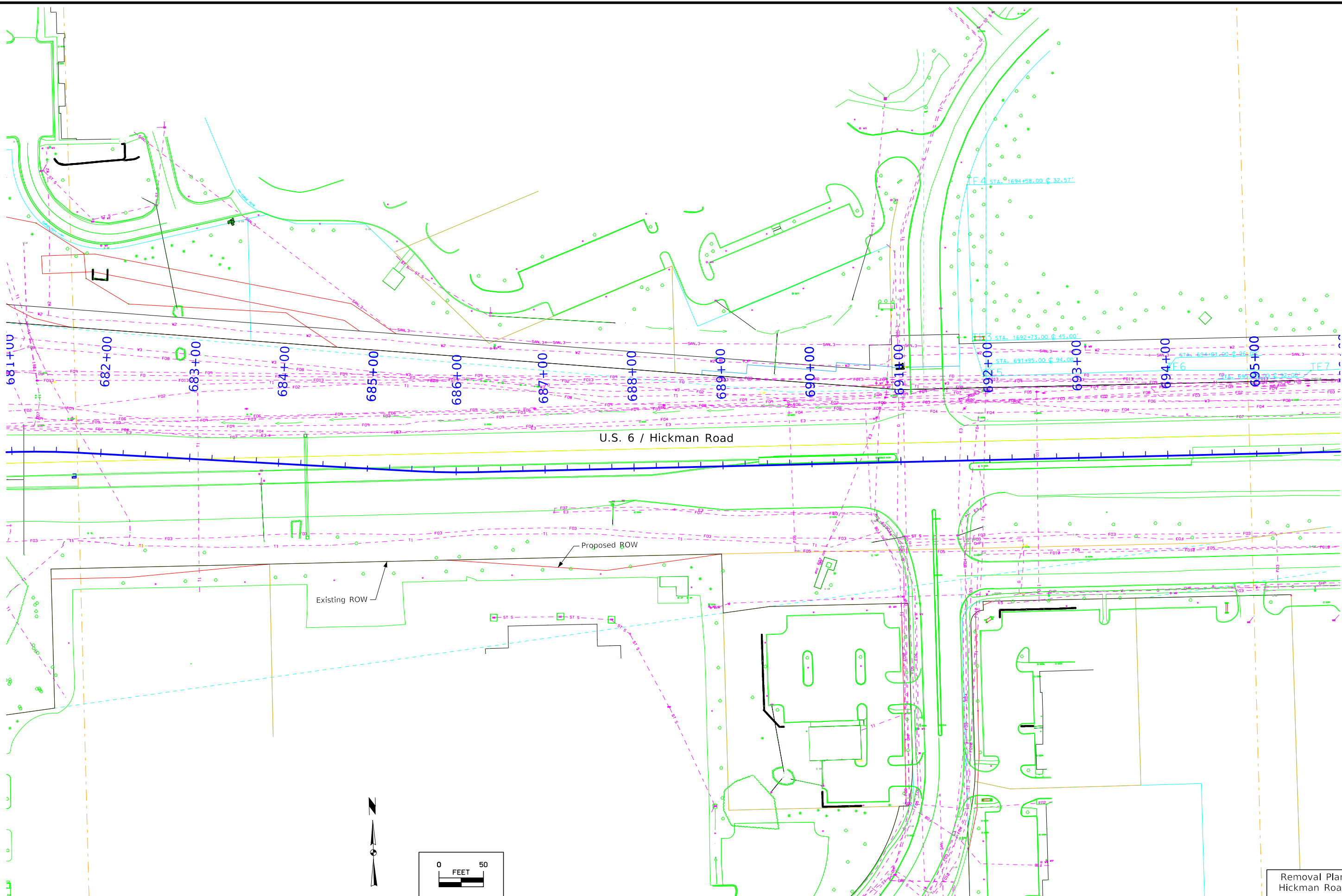


Removal Plan  
Interstate 80





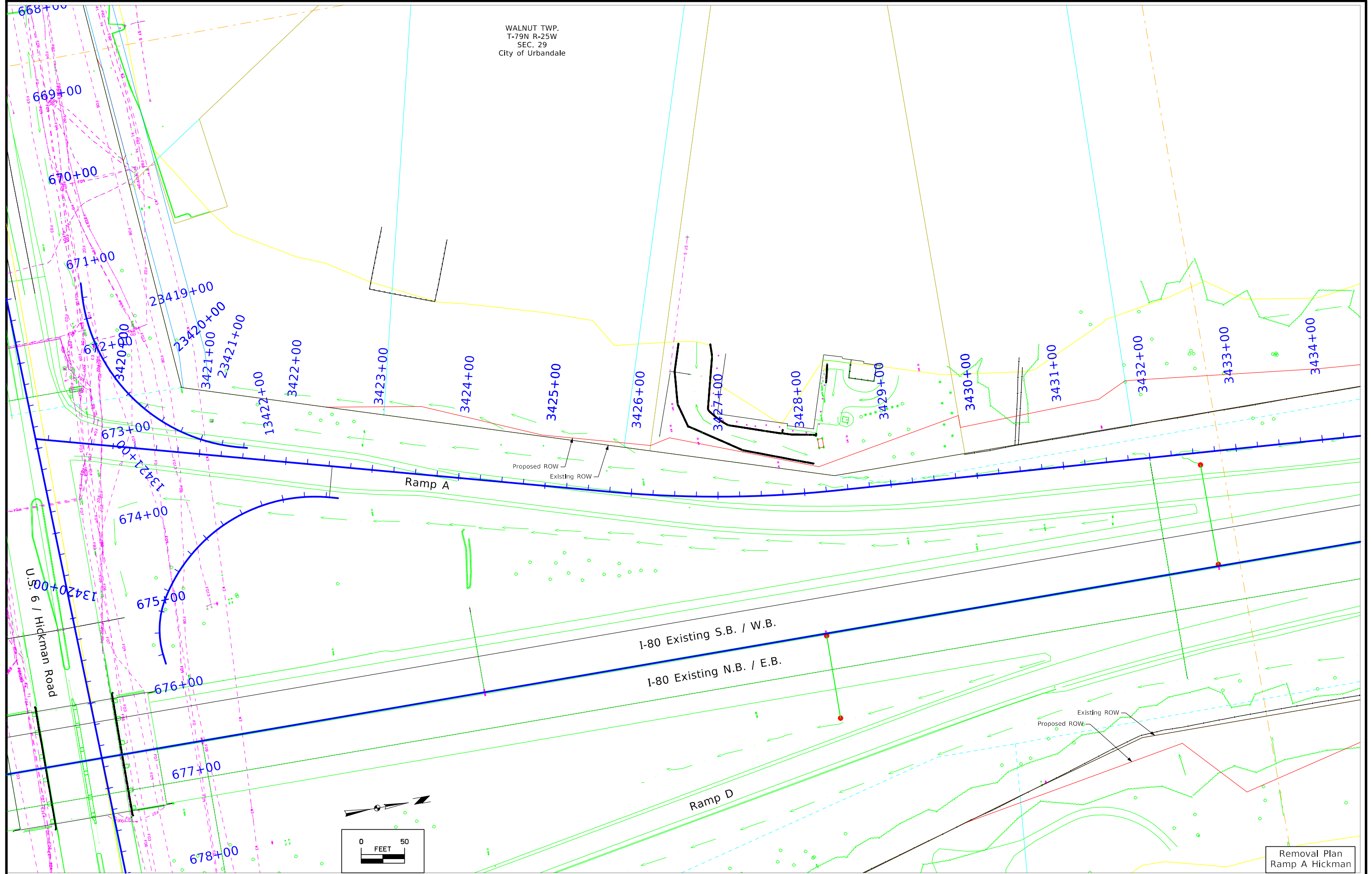
Removal Plan  
Hickman Road

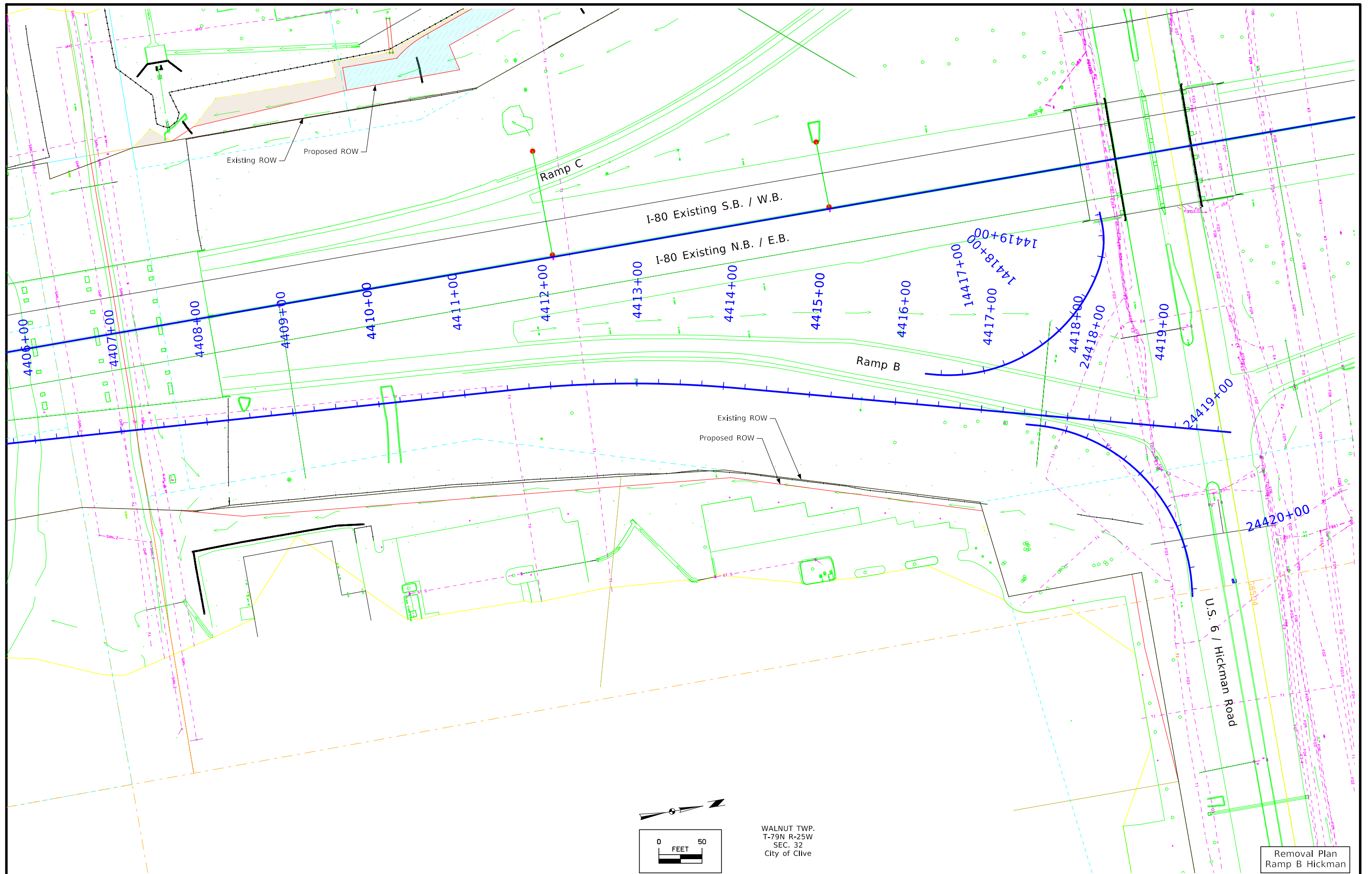


Removal Plan  
Hickman Road

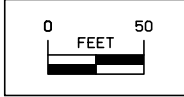


WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

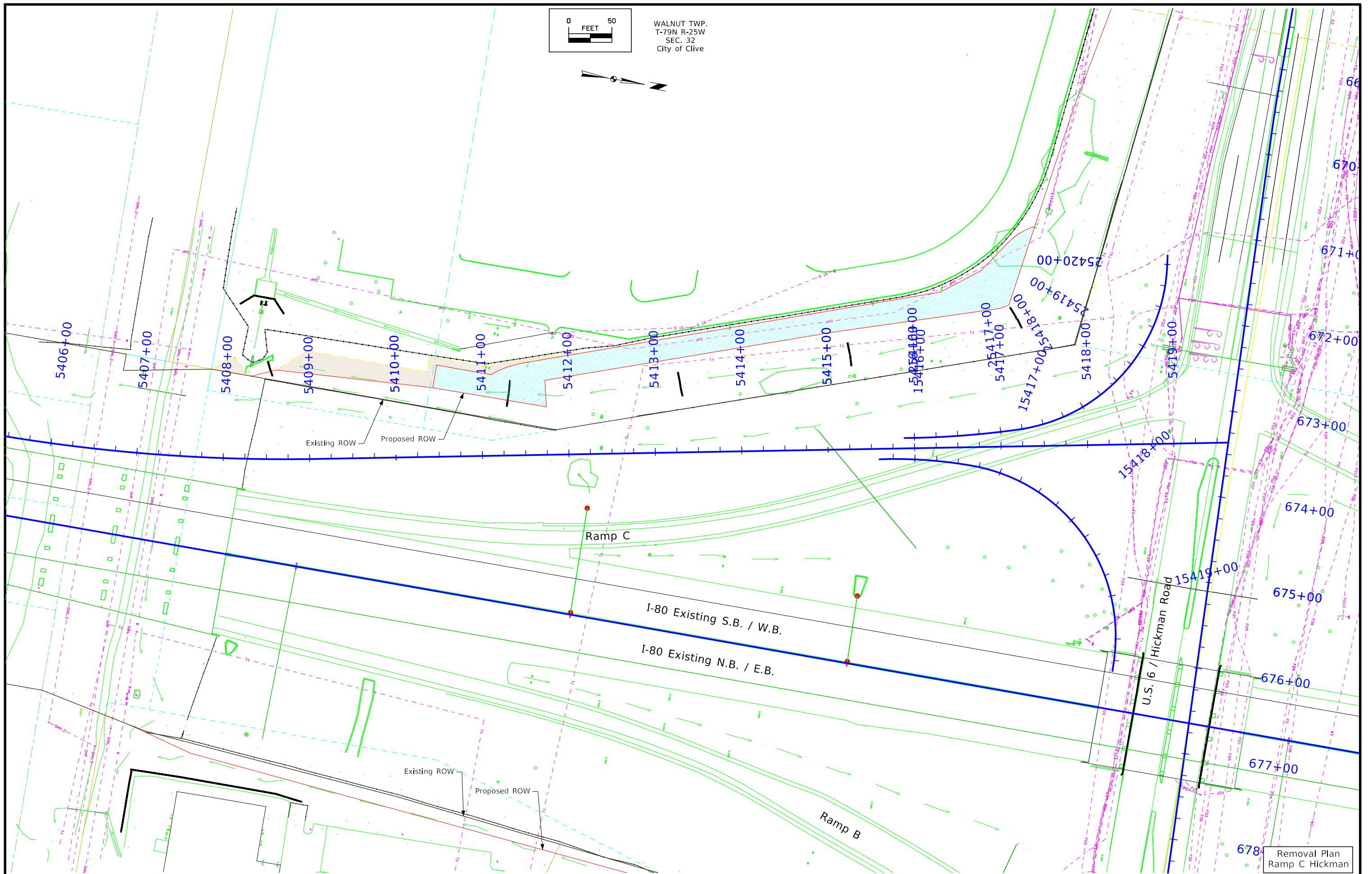




Removal Plan  
Ramp B Hickman

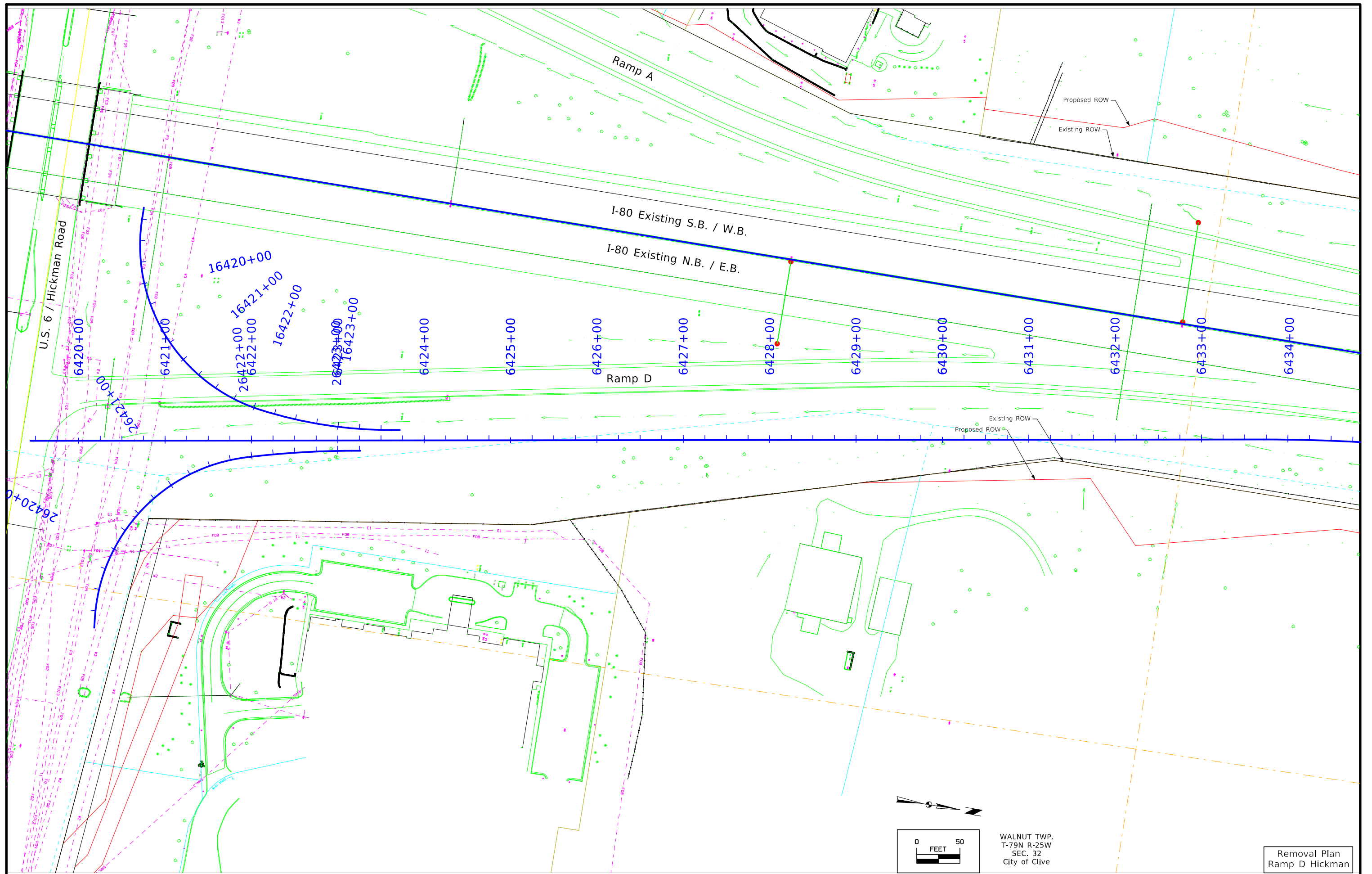


WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive



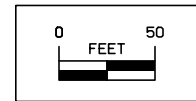
Removal Plan  
Ramp C Hickman



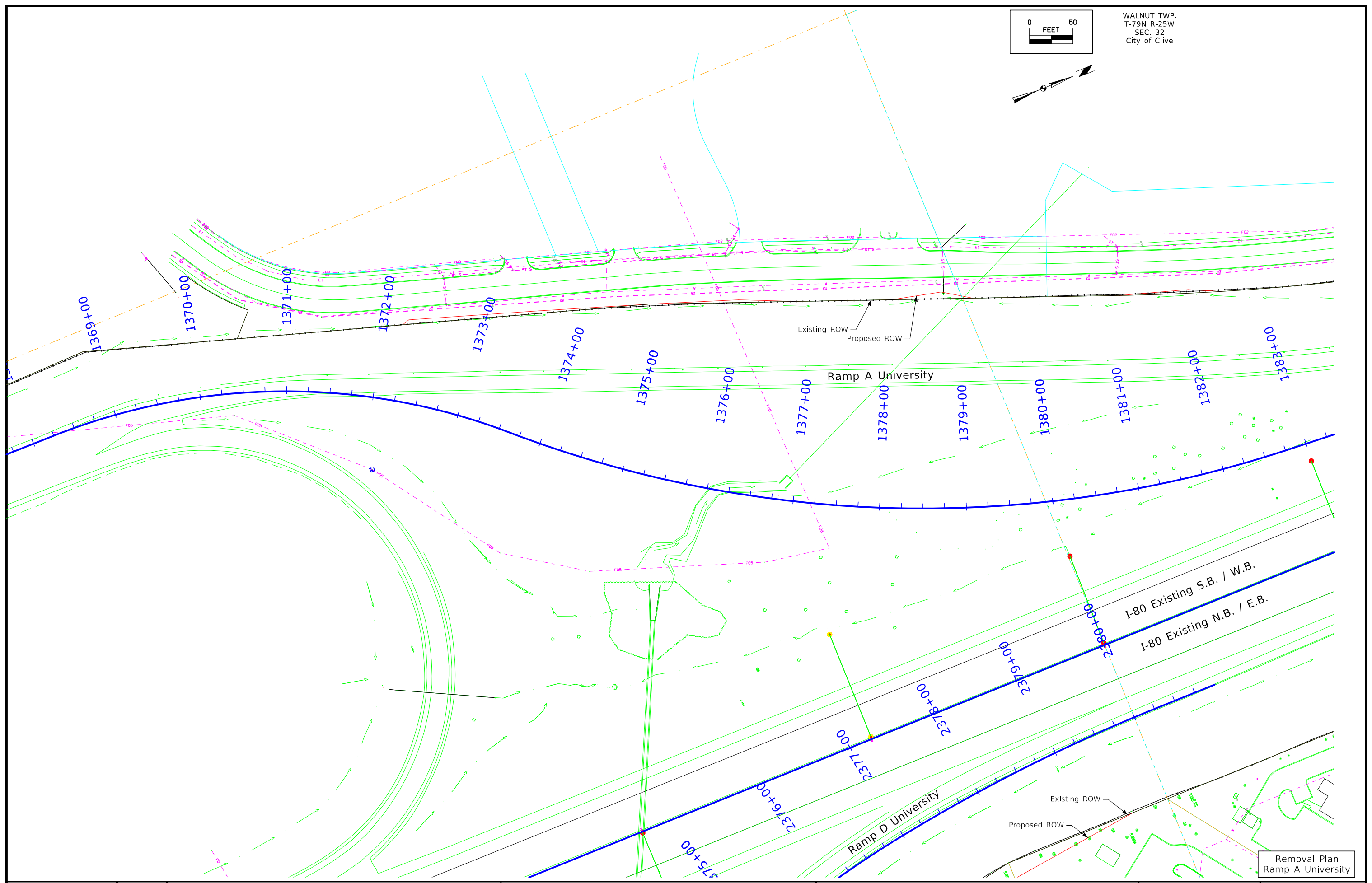
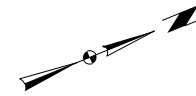


Removal Plan  
Ramp D Hickman

WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive



WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

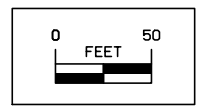
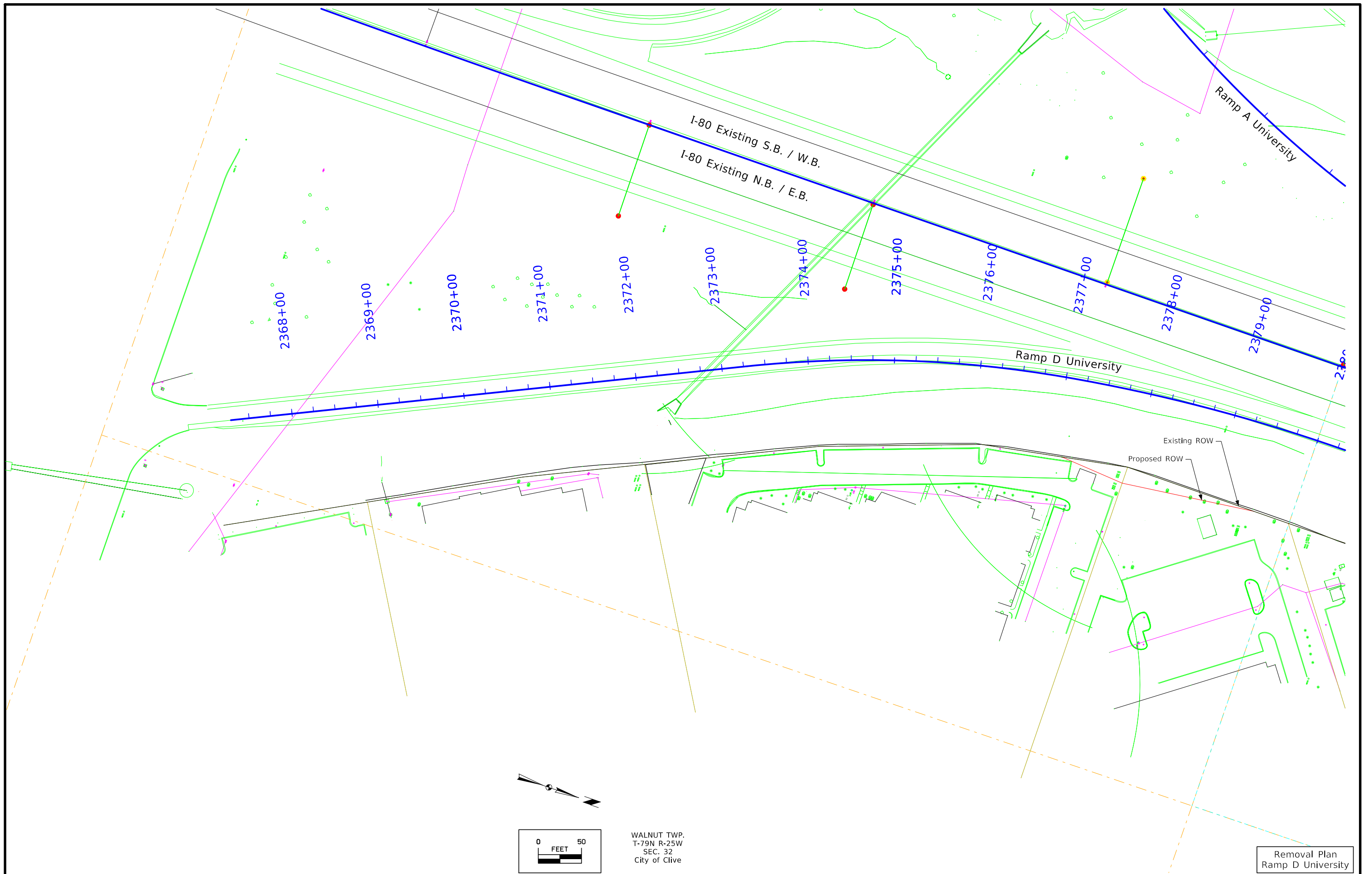


Removal Plan  
Ramp A University

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)124--13-77	SHEET NUMBER F.18
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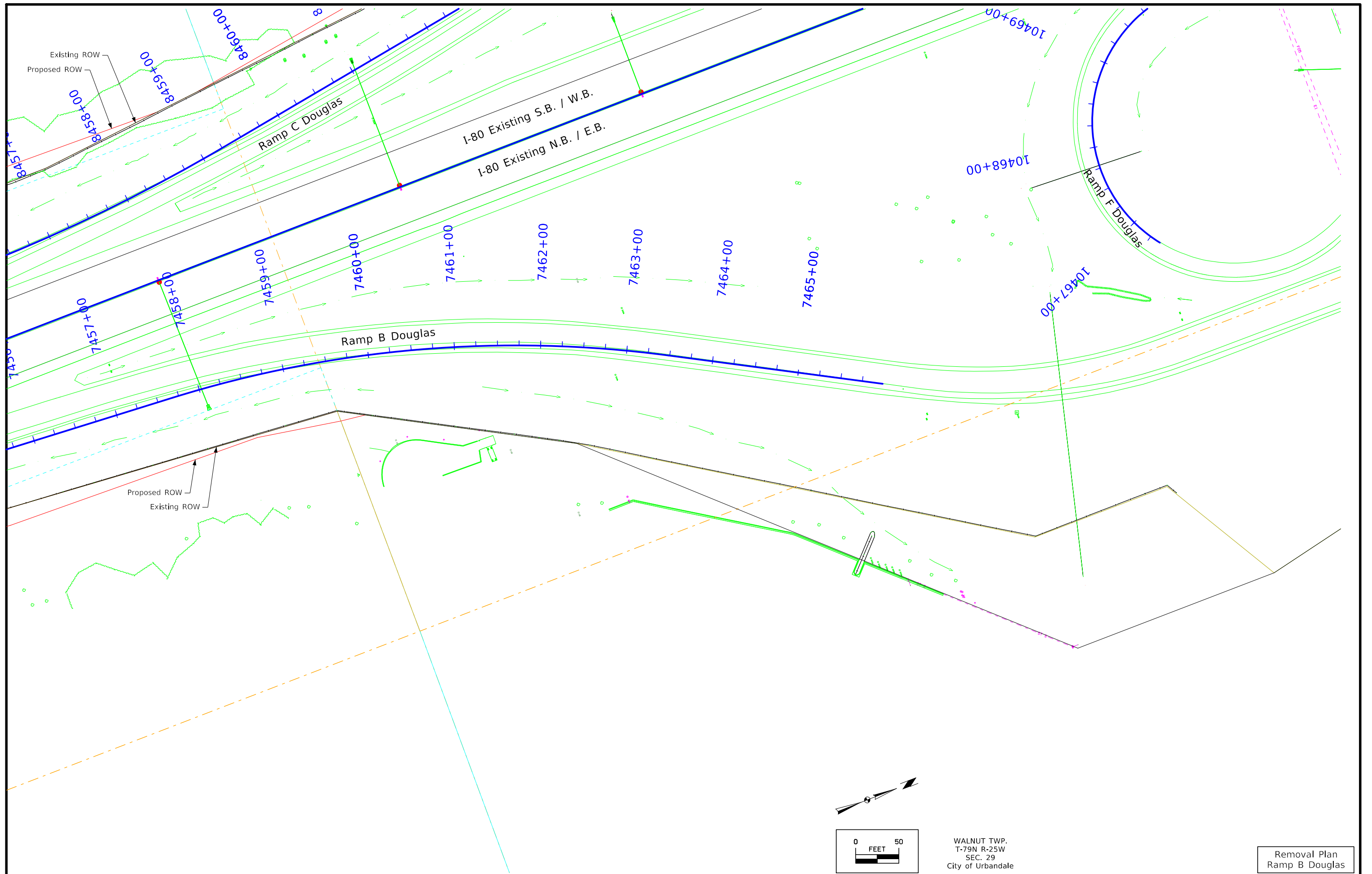


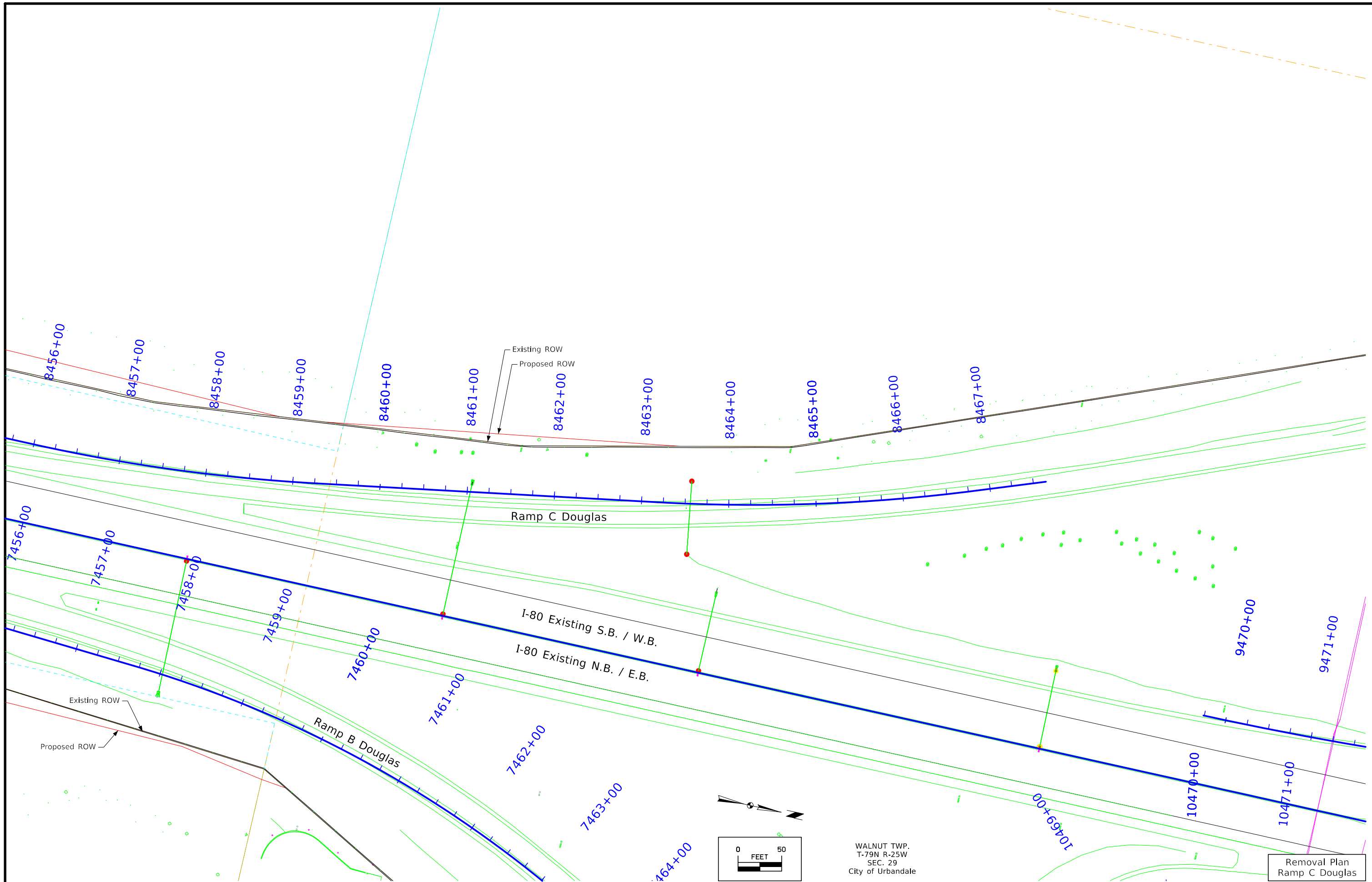


WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

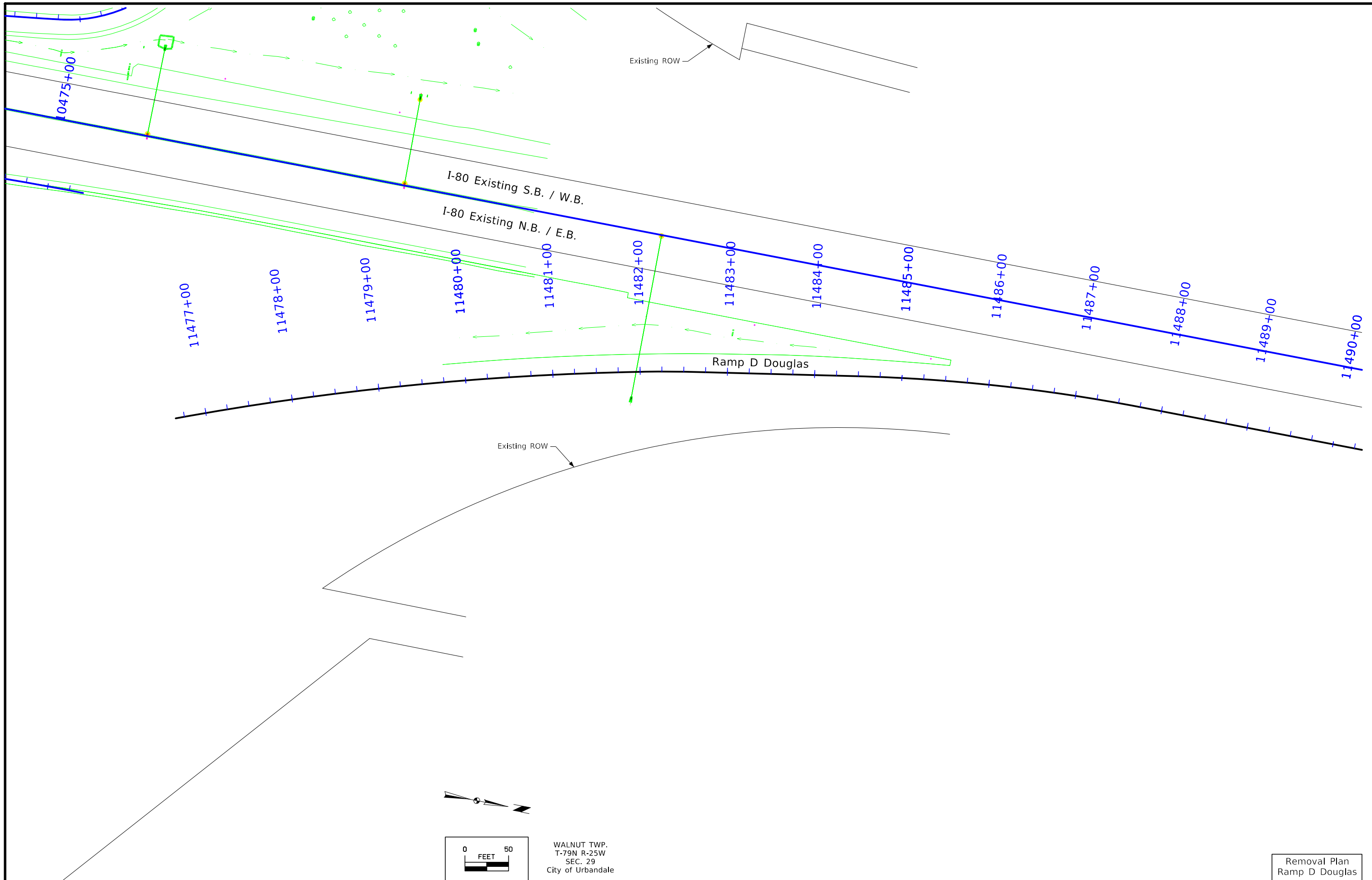
Removal Plan  
Ramp D University

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)124--13-77	SHEET NUMBER F.19
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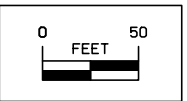


Removal Plan  
Ramp C Douglas

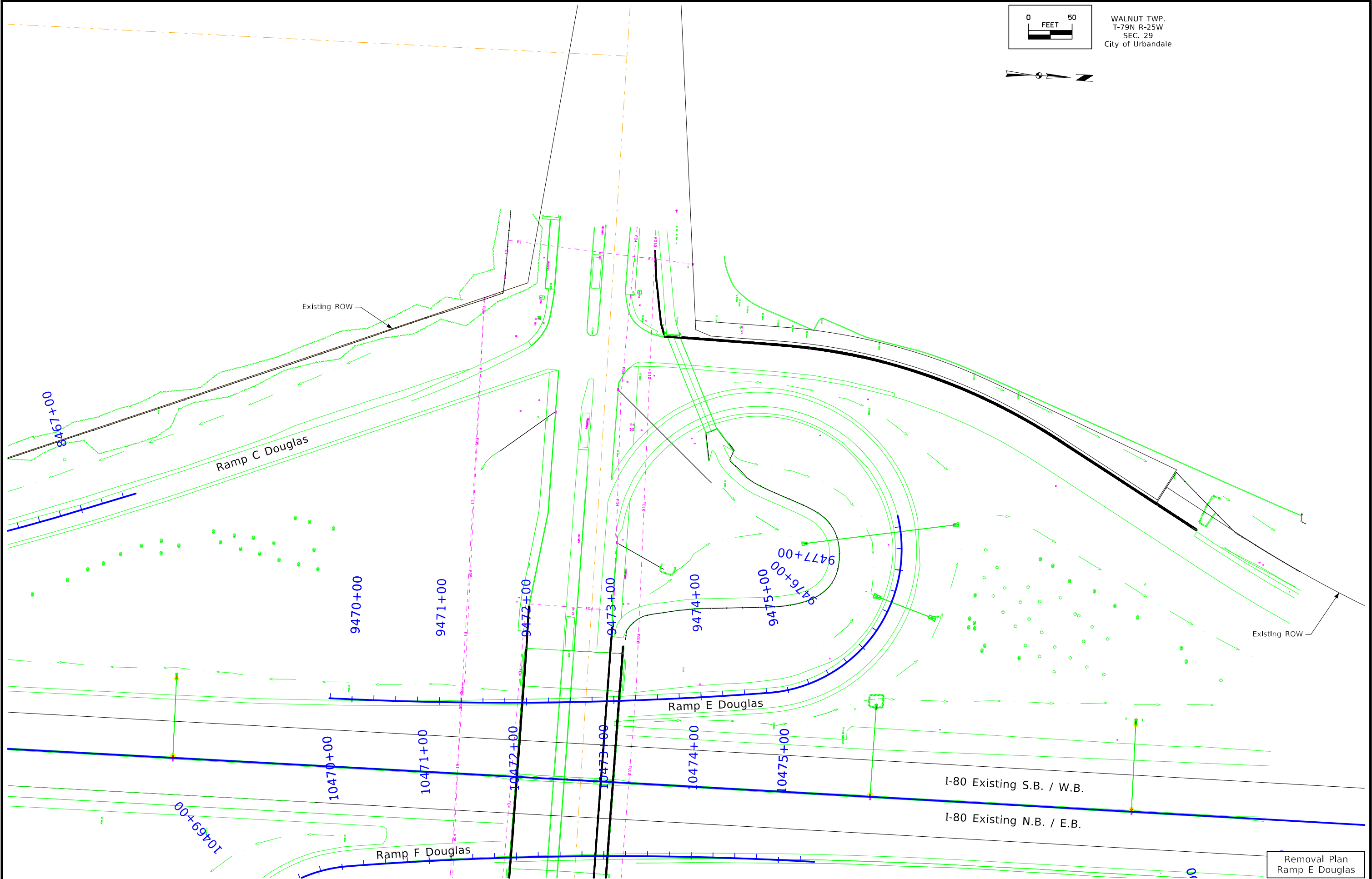
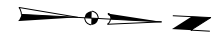


Removal Plan  
Ramp D Douglas

WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale



WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

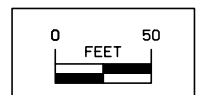
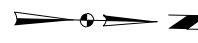
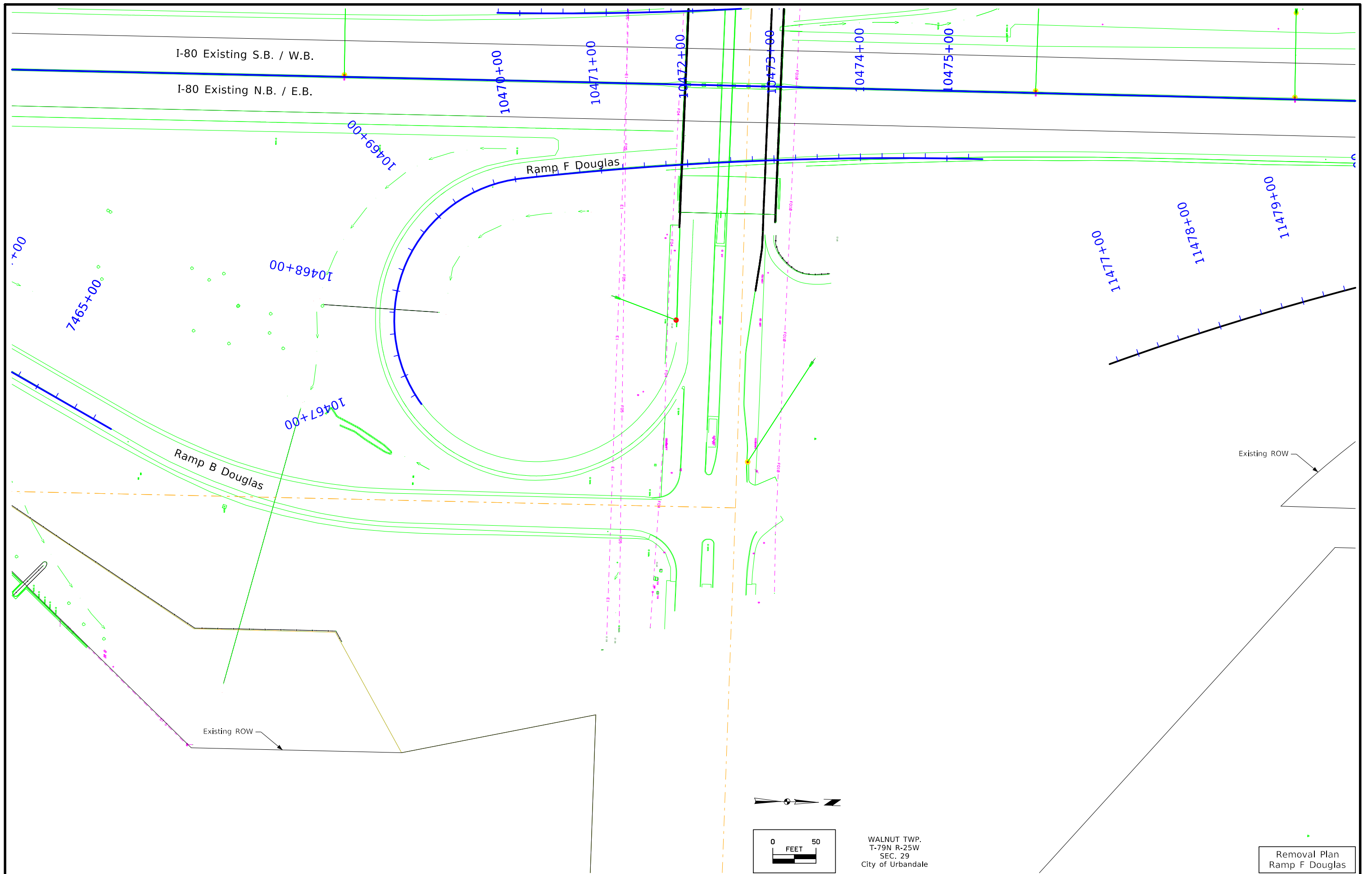


Removal Plan  
Ramp E Douglas

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)124--13-77	SHEET NUMBER F.23
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WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

Removal Plan  
Ramp F Douglas

## Survey Information

POLK COUNTY  
 IM-080-4(69)125--13-77  
 I-35/80 & US HWY 6/HICKMAN ROAD INTERCHANGE  
 PIN 13770804069  
 SAP#04129

### General Information

Measurement units for this survey are US survey feet. This survey is Preliminary Engineering Survey for the proposed Hickman Interchange project. This project is a Partial DTM survey. Traditional survey was performed within the project limits, with the exception of interstate pavement. For efficiency and safety, UAS was utilized to collect photo generated point cloud data on the interstate. The point cloud data was used to generate 3D line in the SUR file.

### Vertical Control

Vertical datum for this survey is relative to NAVD88 Geoid 12b. Vertical datum originated from Hickman Road and 128th intersection, NHSX-006-4(189)--77, SAP 07011. Vertical positions originated from City of Urbandale published city benchmark report. BM #55 was used as the primary vertical control and is an IHC brass marker located at NE corner of northbound I-35 bridge over U.S. Highway 6. This survey observed three City of Urbandale Benchmark Monuments with published NAVD88 elevations:

City of Urbandale Benchmark #55 has a published Elev. of 929.83  
 Survey Elev. = 929.83

City of Urbandale Benchmark #45 has a published Elev. of 908.05  
 IR-35-2(204)73--12-77 published Elev. of 907.82  
 Survey Elev. = 908.05

BM #38B Project STP-6-49119)--2C-77 published Elev. of 889.17 (271.021m)  
 Survey Elev.= 889.46

City of Urbandale Benchmark #57 has a published Elev. of 899.61  
 Survey Elev. = 899.61

IDOT performed a 2018 survey of the SB University exit ramp, Project IMN-080-3(235)124--OE-77, SAP 0412.8. A difference of 0.07' was found. Vertical difference between this current survey and the SB University exit ramp project are shown below.

Control Point	Published Elevation	Surveyed Elevation
FENO1	915.08	915.02
FENO2	895.27	895.21
G032	937.70	937.63

### Horizontal Control

The project coordinate system is the Iowa Regional Coordinate System, Zone 8. Horizontal datum is NAD83 (2011) for Epoch 2010.00. The projection parameters for Zone 8 of the IaRCS is defined below:

Traverse Mercator Projection North American Datum of 1983  
 Origin Lat: 40°15'00"N  
 Origin Central Meridian: 093°43'00"W  
 Central Meridian Scale: 1.000033  
 False Northing: 7,000,000  
 False Easting: 18,500,000

Coordinates were determined by averaging a minimum of three IaRTN observations with appropriate time spans between. The horizontal standard deviation of these observations was less than 0.05' at 95% confidence level.

### Alignment Information

The horizontal alignments for I-35 was a retrace of as-built pacing plans for project IR-35-2(204)73--12-77. Stationing was held at POT Station 419+51.50 and ran ahead and back without equation.

P.C. 363+05.61 (plan) = P.C. 363+00.68 (this survey)

P.T. 370+45.61 (plan) = P.C. 370+40.61 (this survey)

Plan Equation  
 P.O.T. 388+16.72 (plan back) = P.O.T. 388+17.60 (plan ahead) = P.C. 388+21.85 (this survey)  
 P.O.T. 419+51.50 (plan) = P.O.T 419+51.50 (this survey)

P.C. 437+32.9 (plan) = P.C. 437+32.9 (this survey)

P.T. 443+32.9 (plan) = P.T. 443+32.89 (this survey)

P.C. 469+65.5 (plan) = P.C. 469+65.5 (this survey)

P.T. 475+65.5 (plan) = P.T. 475+64.91 (this survey)

P.C. 522+83.36 (plan) = P.C. 522+84.09 (this survey)

The horizontal alignments for U.S. Highway 6 and 128th Street was provided by Iowa DOT District 1 Office. Description of alignment as received described below.

The horizontal alignment for U.S. 6 (Hickman Road) is a retrace of as-built paving plan for project STP-6-4(119)--2C-77. Plan stationing is in metric and was converted to U.S. survey foot for this survey. Stationing was held at P.I. 186+92.513m (converted to station 613+27.02 in U.S. survey foot) and ran ahead without equation.

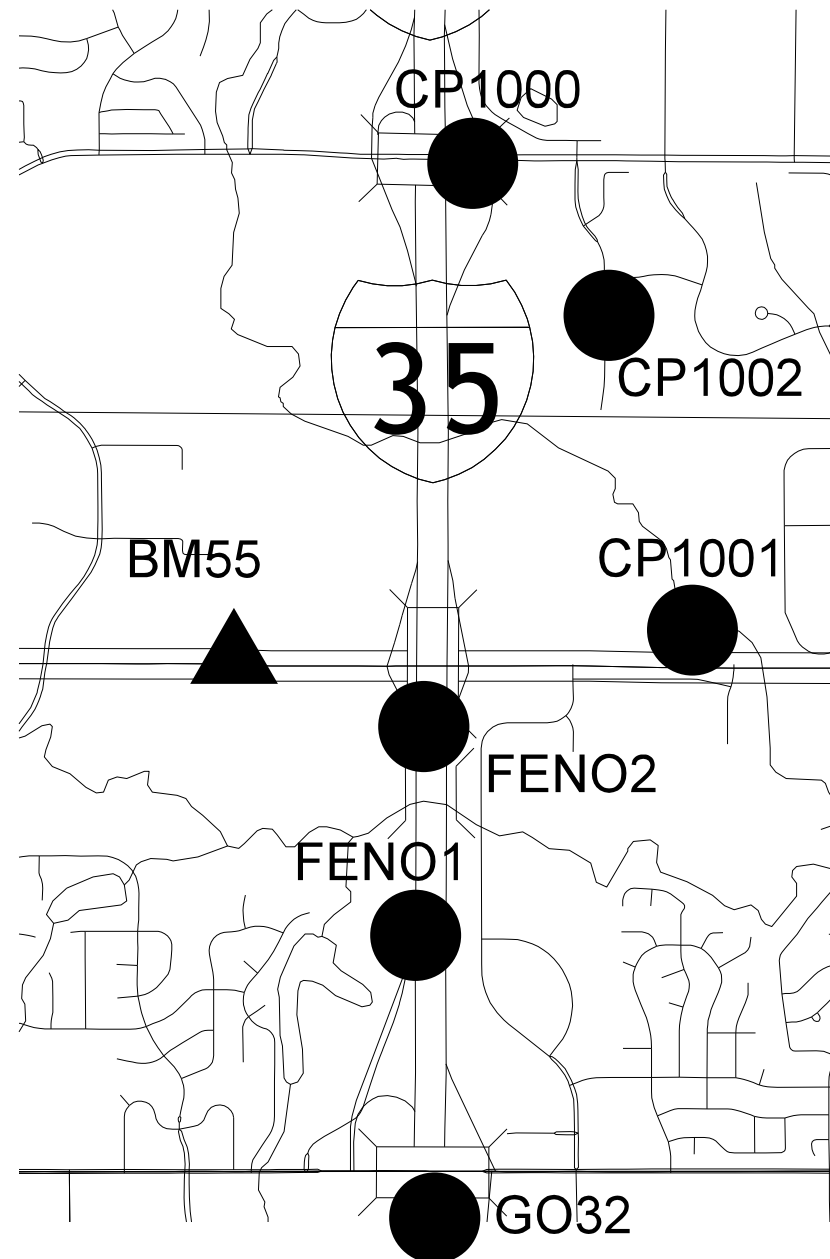
P.I. 186+92.513m (613+27.02 U.S. survey foot) = P.I. 186+92.513m (613+27.02 U.S. survey foot) (this survey)  
 Found "P-K" nail in conc. crossover

P.C. 198+53.721m (651+36.75 U.S. survey foot) = P.C. 198+53.757 (651+36.87 U.S. survey foot) (this survey)  
 Found 5/8" re-rod (flush)

Utilizing the provided alignment and the same as-built paving plans for project STP-6-4(119)--2C-77, Snyder & Associates extended alignment east from 651+36.75 to 673+00.

### CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points  
Primary control is for use with RTK base stations and for RTN validation.  
Future surveys will use primary project control to establish temporary  
control as needed for construction or other surveying applications.



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

1a. Regional Coordinate System Zone 8

Coordinate listing from next sheet will be used with 1aRTN for monument  
recovery. No other reference ties are given.

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

Ia. Regional Coordinate System Zone 8

Point Name	Northing	Easting	Elevation	Feature Definition
CP1000	7502552.37	18483969.64	999.20	FENO-SET MONUMENT +/- 25' SOUTH OF DOUGLAS AVE, +/-25' OFF RAMP.
CP1001	7497688.97	18486259.21	876.70	FENO-SET MONUMENT NORTH SIDE NW 11TH ST, 8' NORTH OF BACK OF CURB, 40' SW OF LIGHT POLE.
CP1002	7500968.72	18485389.65	935.99	FENO-SET MONUMENT EAST SIDE OF 11TH ST, +/- 7' EAST OF 1ST HYDRANT SOUTH OF JOHNSTON SUPPLY.
FEN01	7494509.38	18483375.02	915.02	FENO-FOUND MONUMENT WEST SIDE OF I-35 AT START OF UNIVERSITY OFF RAMP.
FEN02	7496684.19	18483459.91	895.21	FENO-FOUND MOUNUMENT WEST SIDE I-35 AND EAST OF SB ON RAMP OF HICKMAN ROAD.
G032	7491564.87	18483573.86	937.63	FENO-FOUND MONUMENT +/- 5' EAST OF EAST SHOULDER NB I-35, 500' SOUTH OF UNIVERSITY AVE.
BM55	7497393.85	18481482.57	929.83	URBANDALE BM55//FOUND BRASS PLUG IN CONCRETE/NORTH SIDE OF HICKMAN ROAD

**SUPERELEVATION DATA**

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius FT	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
			%	FT	FT														
University Ave																			
Ramp A	A-1	724	6.0	200	67	PV-303	1368+26.62		1368+91.97	1369+51.97							1368+85.30		Normal cross slope at A-A is 2.23%
Ramp A	A-2	1340	6.0	240	80	PV-303		1373+62.42		1371+62.42						1372+29.09	1372+29.09		
Ramp D	D-1	1340	6.0	186	62	PV-303	1383+23.00		1382+75.00	1382+03.00						1382+83.00	1375+22.42		Normal cross slope at A-A is 3.0%
Ramp D	D-2	2000	5.4	168	62	PV-303	2372+60.77		2373+28.97	2373+84.77						2376+89.79	2373+22.77		
Hickman Road																			
Ramp A	A-1	1340	6.0	240	80	PV-303	3424+86.86		3425+74.86	3426+46.86						3425+66.86	3425+66.86		
Ramp B	B-1	1340	6.0	240	80	PV-303	4410+66.36		4411+54.36	4412+26.36						4411+46.36	4411+46.36		
Ramp C	C-1	2000	5.4	160	53	PV-303	4415+03.97		4414+15.97	4413+43.97						4414+23.97	4414+23.97		Refer to Detail 533-2
Ramp D	D-1	2000	5.4	160	53	PV-303	5409+67.97		5409+08.97	5408+60.97						5409+02.45	5409+02.45		Refer to Detail 533-2
Douglas Ave																			
Ramp B	B-1	1340	6.0	240	80	PV-303	7457+20.31		7457+68.31	7458+40.31						7457+60.31	7457+60.31		Normal cross slope at A-A is 3.0%
Ramp C	C-1	2000	5.4	168	62	PV-303			8460+14.92	8459+08.92						8459+52.48			Refer to Detail 533-2
Ramp C	C-2	2000	5.4	168	62	PV-303	8462+62.51		8463+18.11	8463+68.51						8463+24.95	8463+24.95		
Ramp E	E-3	144	6.0	128	43	PV-303	9476+40.73		9476+45.00	9476+83.40						9476+40.73	8466+86.19		Normal cross slope at A-A is 4.0%
Ramp E	E-4	164	6.0	128	43	PV-303	9481+00.58		9480+53.98	9480+15.58						9480+58.25	9480+58.25		
Ramp F	F-1	164	6.0	128	43	PV-303	9481+75.47		9482+22.07	9482+60.47						9482+17.80	9482+17.80		
Ramp F	F-2	144	6.0	128	43	PV-303	10460+29.12		10459+82.52	10459+44.12						10459+86.79	10459+86.79		
							10462+38.89		10462+85.49	10463+23.89						10462+81.22	10462+81.22		
							10467+09.27		10467+05.00	10466+66.60						10467+09.27			Normal cross slope at A-A is 4.0%



CRACKER BARREL  
OLD COUNTRY STORE INC.

SW 1/4 SE 1/4  
SEC. 32-79N-25W

WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

SAI HOTELS LLC

SUNRISE TOWA  
HOTELS LLC

AMC REAL ESTATE HOLDINGS LLC

NW 1/4 SE 1/4  
SEC. 32-79N-25W

NE 1/4 SE 1/4  
SEC. 32-79N-25W

CITY OF  
CLIVE

Sta 1368+26.62 (Ramp A)  
Begin Ramp A Construction

CITY OF  
CLIVE

NW 18th ST

Ramp E

Ramp A

SE 1/4 SE 1/4  
SEC. 32-79N-25W

1375

1380

370

375

380

INTERSTATE 35/80 SB

INTERSTATE 35/80 NB

2380

Right of Way Design Information  
THIS SHEET INCLUDED  
FOR INFORMATION ONLY

ROW Team: Hughes / Larson  
ROW #: IMN-080-3(279)124-0E-77  
Plan Date: 3-2-2023

Color Legend:  
Property Lines  
Temporary Easement  
Permanent Acquisition

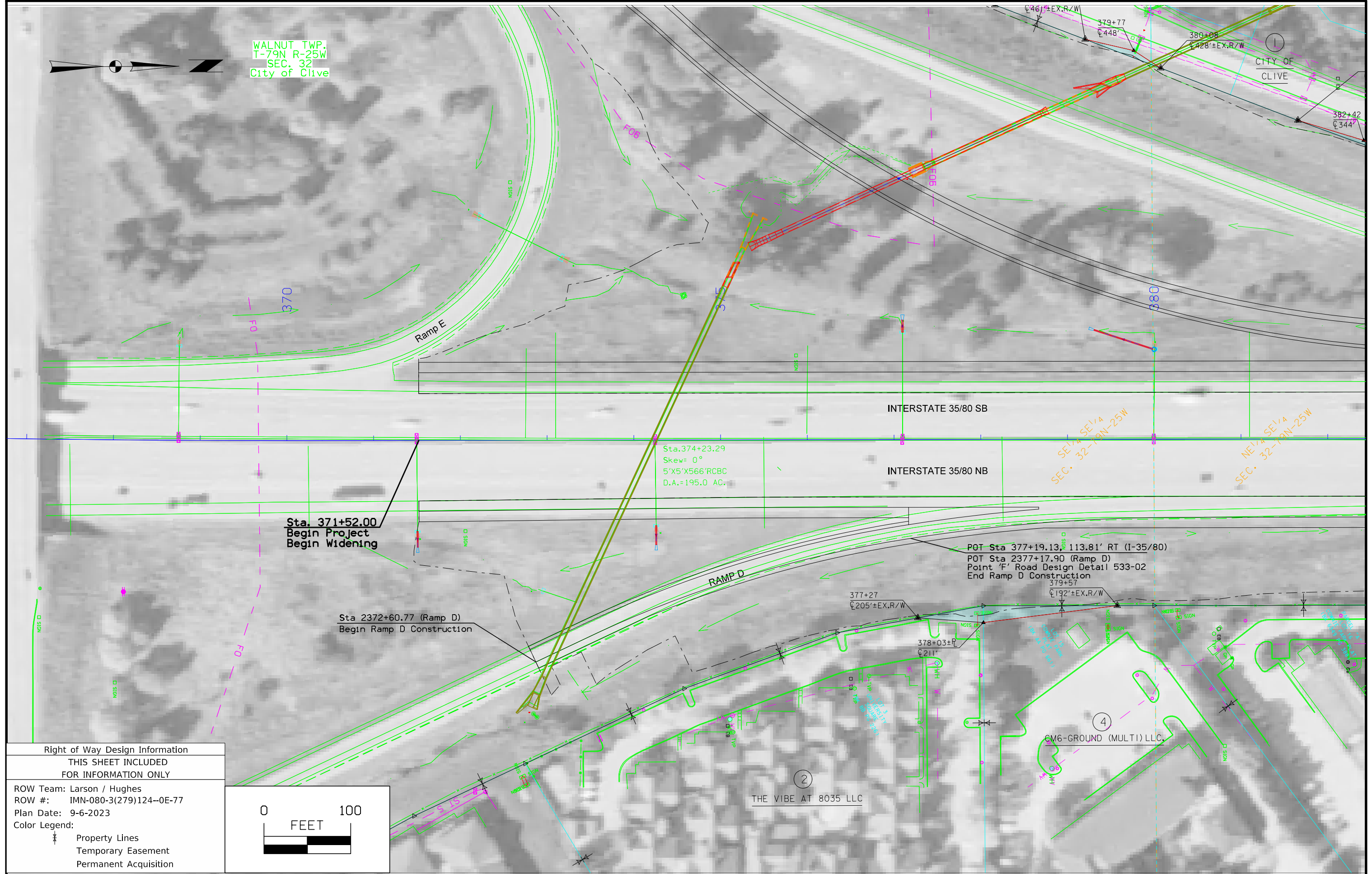






WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

CITY OF  
CLIVE



Sta. 374+23.29  
Skew= 0°  
5'x5'x566' RCBC  
D.A.=195.0 AC.

Sta. 371+52.00  
Begin Project  
Begin Widening

Sta. 2372+60.77 (Ramp D)  
Begin Ramp D Construction

POT Sta 377+19.13, 113.81' RT (I-35/80)  
POT Sta 2377+17.90 (Ramp D)  
Point 'F' Road Design Detail 533-02  
End Ramp D Construction

SEC. 32-T-RAIN-25W  
SE 1/4 SE 1/4

SEC. 32-T-RAIN-25W  
NE 1/4 SE 1/4

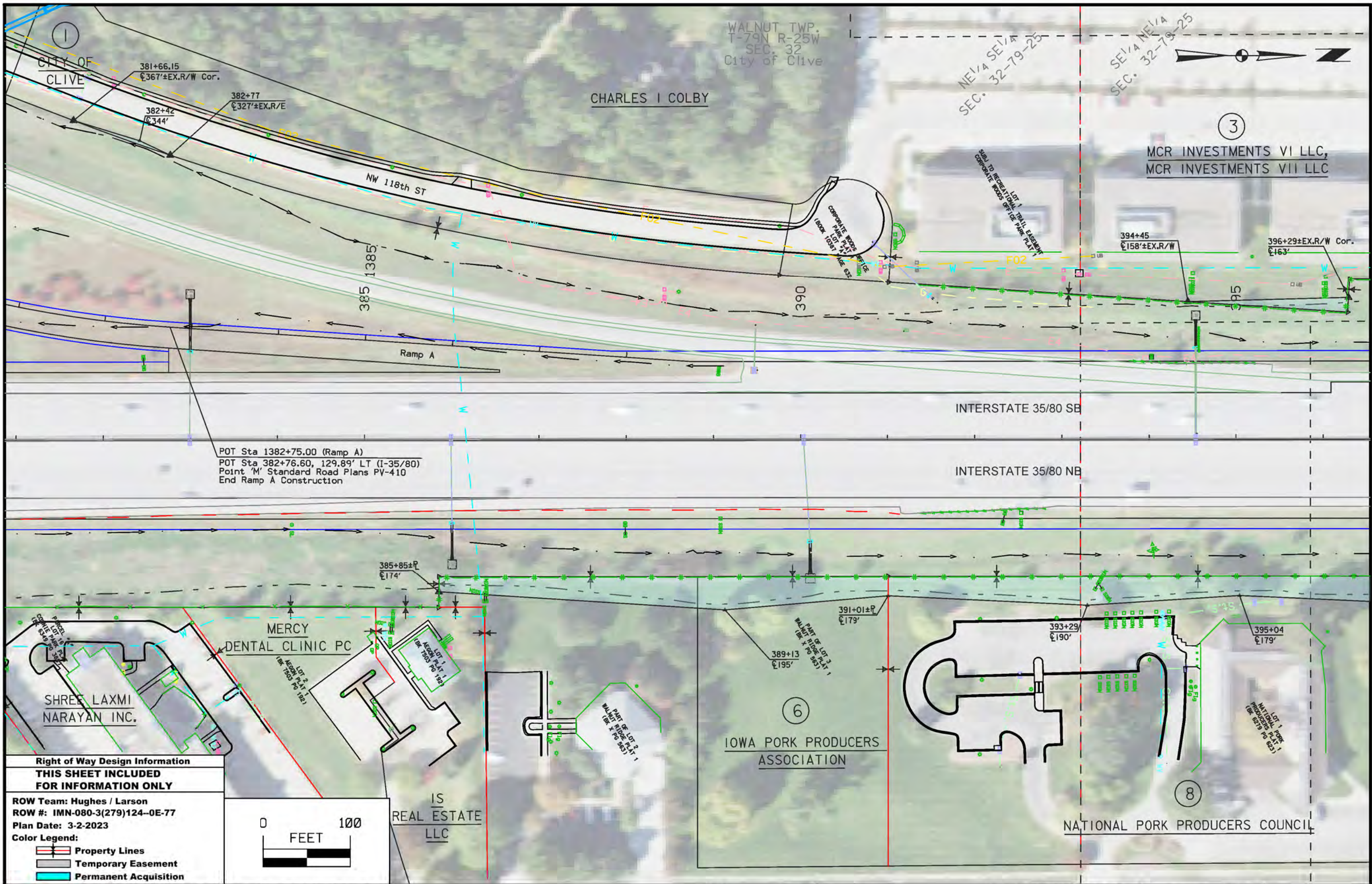
Right of Way Design Information  
THIS SHEET INCLUDED  
FOR INFORMATION ONLY

ROW Team: Larson / Hughes  
ROW #: IMN-080-3(279)124--0E-77  
Plan Date: 9-6-2023

Color Legend:  
Property Lines  
Temporary Easement  
Permanent Acquisition







POT Sta 1382+75.00 (Ramp A)  
 POT Sta 382+76.60, 129.89' LT (I-35/80)  
 Point 'M' Standard Road Plans PY-410  
 End Ramp A Construction

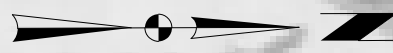
**Right of Way Design Information**  
**THIS SHEET INCLUDED**  
**FOR INFORMATION ONLY**

ROW Team: Hughes / Larson  
 ROW #: IMN-080-3(279)124-0E-77  
 Plan Date: 3-2-2023

- Color Legend:**
- Property Lines
  - Temporary Easement
  - Permanent Acquisition







SE 1/4 NE 1/4  
SEC. 32-79N-25W

③  
MCR INVESTMENTS VI LLC  
MCR INVESTMENTS VII LLC

①  
CITY OF CLIVE

⑤  
LOVES TRAVEL STOPS &  
COUNTRY STORES INC.

TRAIL RIGHT OF WAY  
ACQUIRED BY OTHERS

Trail  
Construction  
Limits

TRAIL RIGHT OF WAY  
ACQUIRED BY OTHERS

396+29±EX.R/W Cor.  
C 163'

400+46  
C 184±EX.R/W

401+62  
C 201'

403+92±P  
C 221'

407+92±  
C 226±

408+73±  
C 248±

410+14±  
C 266±

410+14±  
C 248±

411+22±  
C 278±

410+24±  
C 258±

410+77±  
C 266±

Sta.399+04.47 SBL  
Install 18" X 28" RCP  
Extension and Reinstall  
Concrete FES  
Lt 885.25  
F.L. = Other 885.53  
(Remove FES)  
Sta.399+04.47 SBL  
18" X 109" RCP

INTERSTATE 35/80 SB

Sta. 404+12.00  
Stop Widening

POT Sta 408+40.48, 115.04' LT (I-35/80)  
POT Sta 5408+41.80 (Ramp B)  
Point 'F' Road Design Detail 533-02  
Begin Ramp C Construction

INTERSTATE 35/80 NB

Wall 'A'  
615'-3" x Variable Height  
MSE Retaining Wall

Sta. 408+21.57  
Begin Paving

395+04  
79'

397+83.66  
C 192±EX.R/W Cor.

407+48  
C 214±EX.R/W

407+15±P  
C 276'

408+21  
C 234'

⑧  
NATIONAL PORK PRODUCERS COUNCIL

①  
CITY OF CLIVE

①  
CITY OF CLIVE

⑩  
DEALER PROPERTIES 114 LLC

Right of Way Design Information  
THIS SHEET INCLUDED  
FOR INFORMATION ONLY

ROW Team: Larson / Hughes  
ROW #: IMN-080-3(279)124--0E-77  
Plan Date: 5-22-2023

Color Legend:  
Property Lines  
Temporary Easement  
Permanent Acquisition





NW 1/4 NE 1/4  
SEC. 32-79N-25W

NE 1/4 NE 1/4  
SEC. 32-79N-25W

WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

CRM PROPERTIES I LLC,  
CRM PROPERTIES II LLC,  
GB RE INVESTMENT HBI LLC,  
GB RE INVESTMENT HB2 LLC,  
GB RE INVESTMENT LI LLC,  
GB RE INVESTMENT LLC

TEMPORARY EASEMENT  
TO SHAPE

PERMANENT EASEMENT FOR  
UNDERGROUND RETAINING WALL ANCHORS

TEMPORARY EASEMENT  
TO SHAPE

(17)  
S & S  
HERITAGE PARK LLC

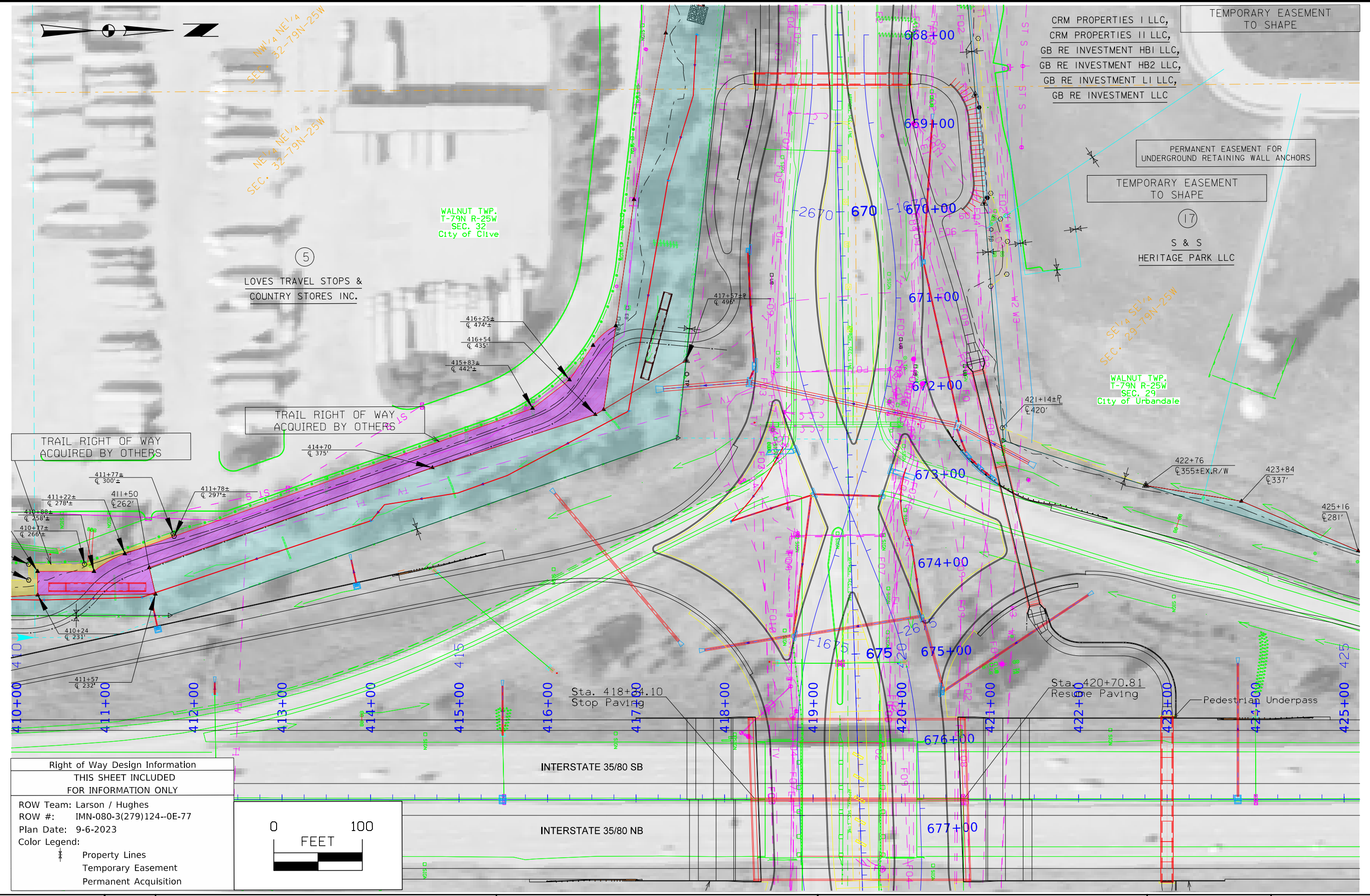
SE 1/4 SE 1/4  
SEC. 29-79N-25W

WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

(5)  
LOVES TRAVEL STOPS &  
COUNTRY STORES INC.

TRAIL RIGHT OF WAY  
ACQUIRED BY OTHERS

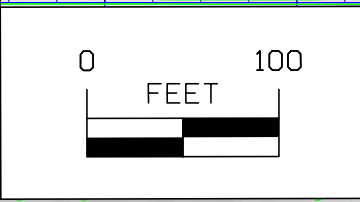
TRAIL RIGHT OF WAY  
ACQUIRED BY OTHERS



Right of Way Design Information  
THIS SHEET INCLUDED  
FOR INFORMATION ONLY

ROW Team: Larson / Hughes  
ROW #: IMN-080-3(279)124--0E-77  
Plan Date: 9-6-2023

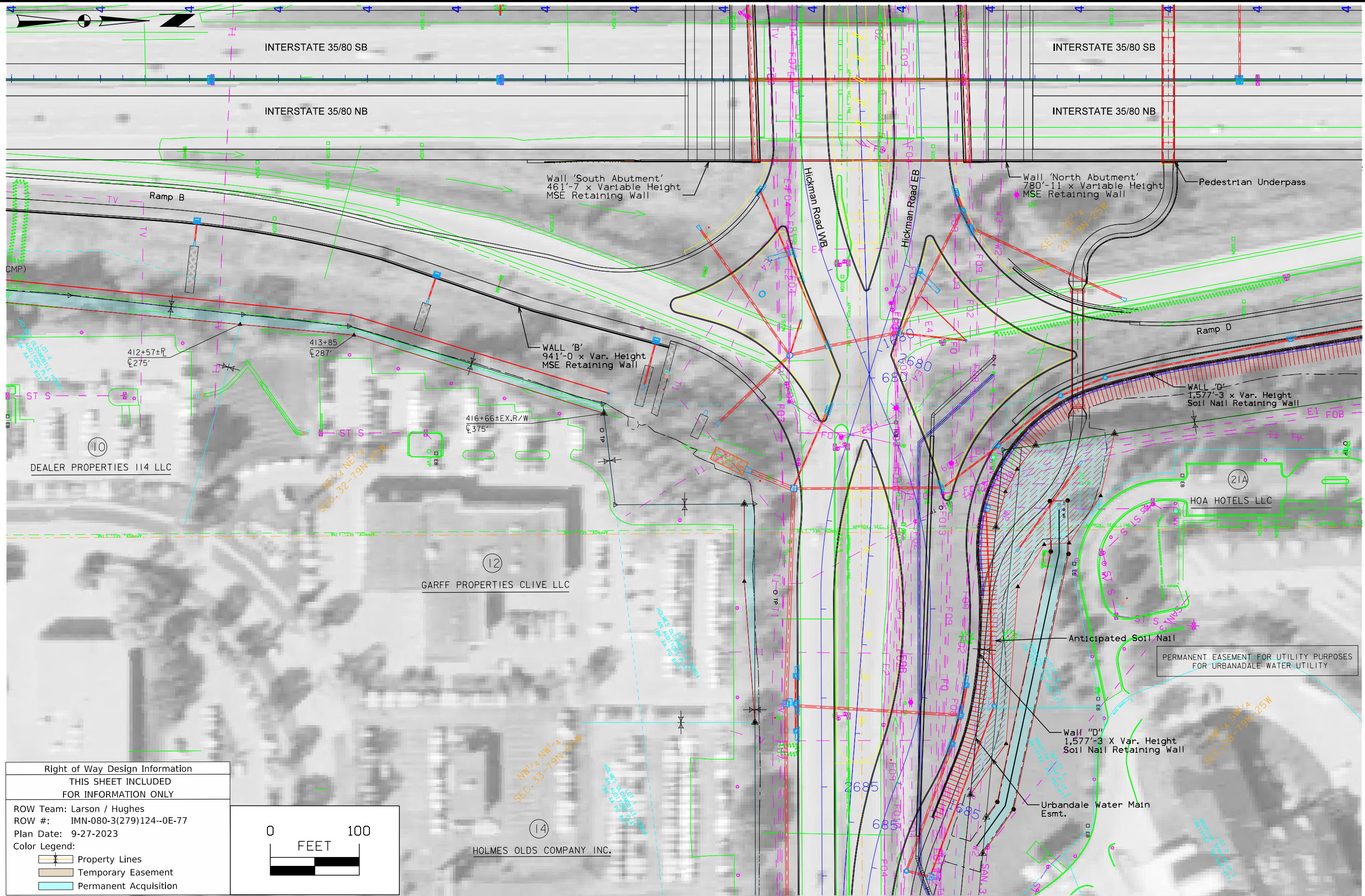
Color Legend:  
 - Property Lines  
 - Temporary Easement  
 - Permanent Acquisition



INTERSTATE 35/80 SB

INTERSTATE 35/80 NB



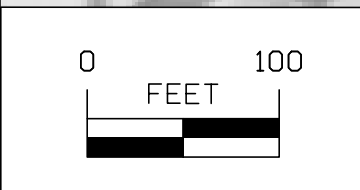


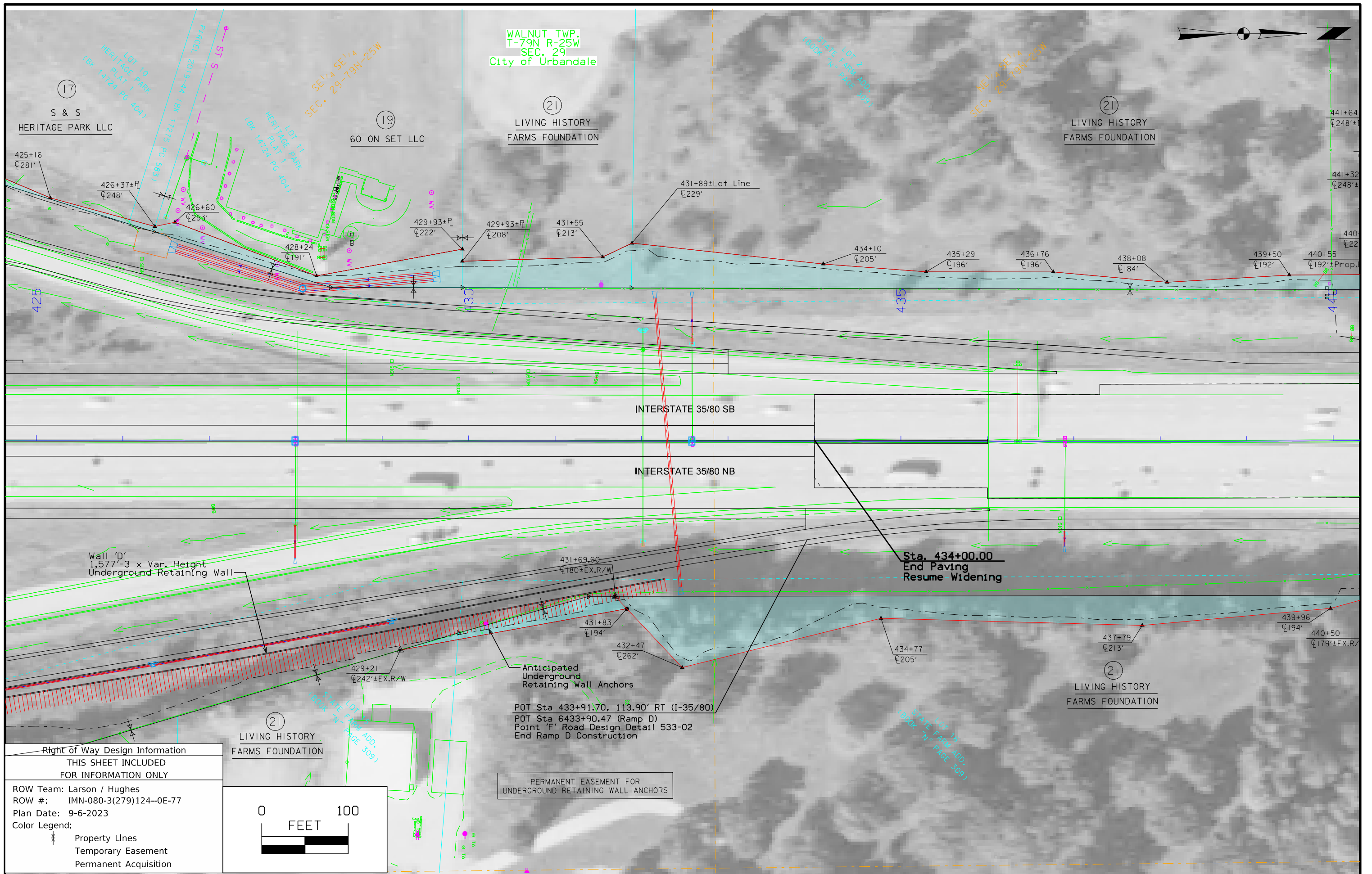
**Right of Way Design Information**  
 THIS SHEET INCLUDED  
 FOR INFORMATION ONLY

ROW Team: Larson / Hughes  
 ROW #: IMN-080-3(279)124--0E-77  
 Plan Date: 9-27-2023

**Color Legend:**

- Property Lines
- Temporary Easement
- Permanent Acquisition

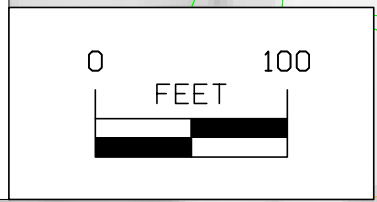




**Right of Way Design Information**  
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 FOR INFORMATION ONLY

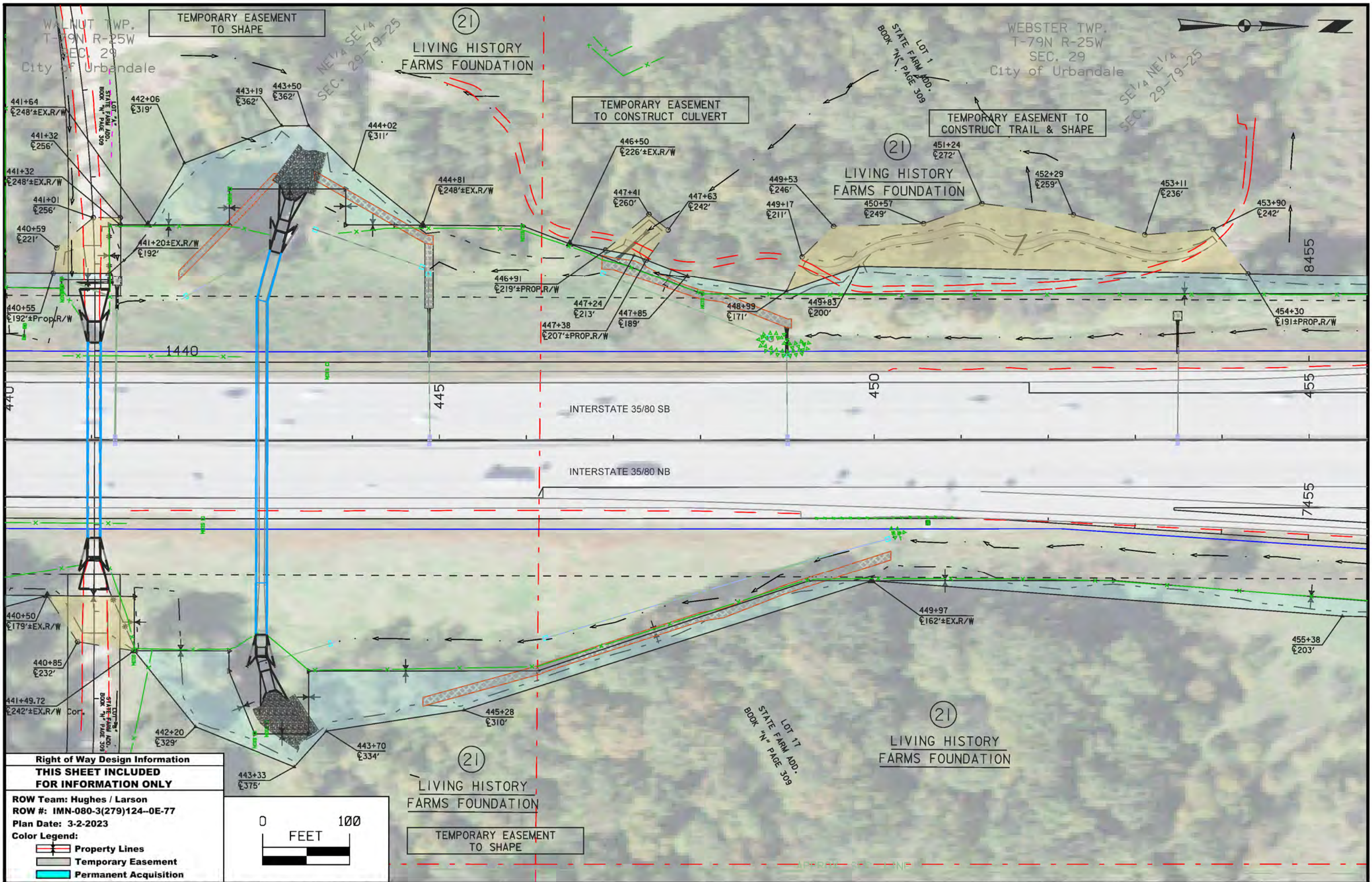
ROW Team: Larson / Hughes  
 ROW #: IMN-080-3(279)124--0E-77  
 Plan Date: 9-6-2023  
 Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition



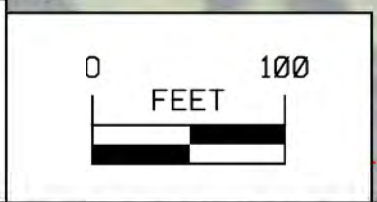
PERMANENT EASEMENT FOR  
 UNDERGROUND RETAINING WALL ANCHORS





**Right of Way Design Information**  
**THIS SHEET INCLUDED FOR INFORMATION ONLY**

**ROW Team:** Hughes / Larson  
**ROW #:** IMN-080-3(279)124-0E-77  
**Plan Date:** 3-2-2023  
**Color Legend:**  
 - Property Lines  
 - Temporary Easement  
 - Permanent Acquisition







21

LIVING HISTORY  
FARMS FOUNDATION

POT Sta 8459+08.92 (Ramp C)  
POT Sta 459+07.69, 113.81' LT (I-35/80)  
Point 'F' Road Design Detail 533-02  
Begin Ramp C Construction

SE 1/4 NE 1/4  
SEC. 29-79-25

STATE LOT 1  
BDDK N PAGE 309

NE 1/4 NE 1/4  
SEC. 29-79-25

21

LIVING HISTORY  
FARMS FOUNDATION

WEBSTER TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

POT Sta 8466+89.46 (Ramp C)  
End Ramp C Construction

463+22  
±249±EX.R/W

458+67  
±182±EX.R/W

459+21  
±188±EX.R/W

8460

8465

9465

9470

Ramp C

460

INTERSTATE 35/80 SB

465

INTERSTATE 35/80 NB

7460

Ramp B

POT Sta 467+52.10, 117.58' RT (I-35/80)  
POT Sta 1477+51.1' (Ramp F)  
Point 'F' Standard Road Plans PV-414  
End Ramp F Construction

455+38  
±203'

458+41  
±211'

459+38±P  
±228'

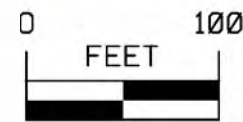
21

LIVING HISTORY  
FARMS FOUNDATION

Right of Way Design Information  
THIS SHEET INCLUDED  
FOR INFORMATION ONLY

ROW Team: Hughes / Larson  
ROW #: IMN-080-3(279)124-0E-77  
Plan Date: 3-2-2023

Color Legend:  
Property Lines  
Temporary Easement  
Permanent Acquisition



459+67  
±232±EX.R/W

WALNUT RIDGE LOT 8 BUSINESS  
BDDK 12826 PAGE 730

22

RGBA LC

Sta 7463+48.69 (Ramp B)  
End Ramp B Construction

Ramp F

Remove Pipe

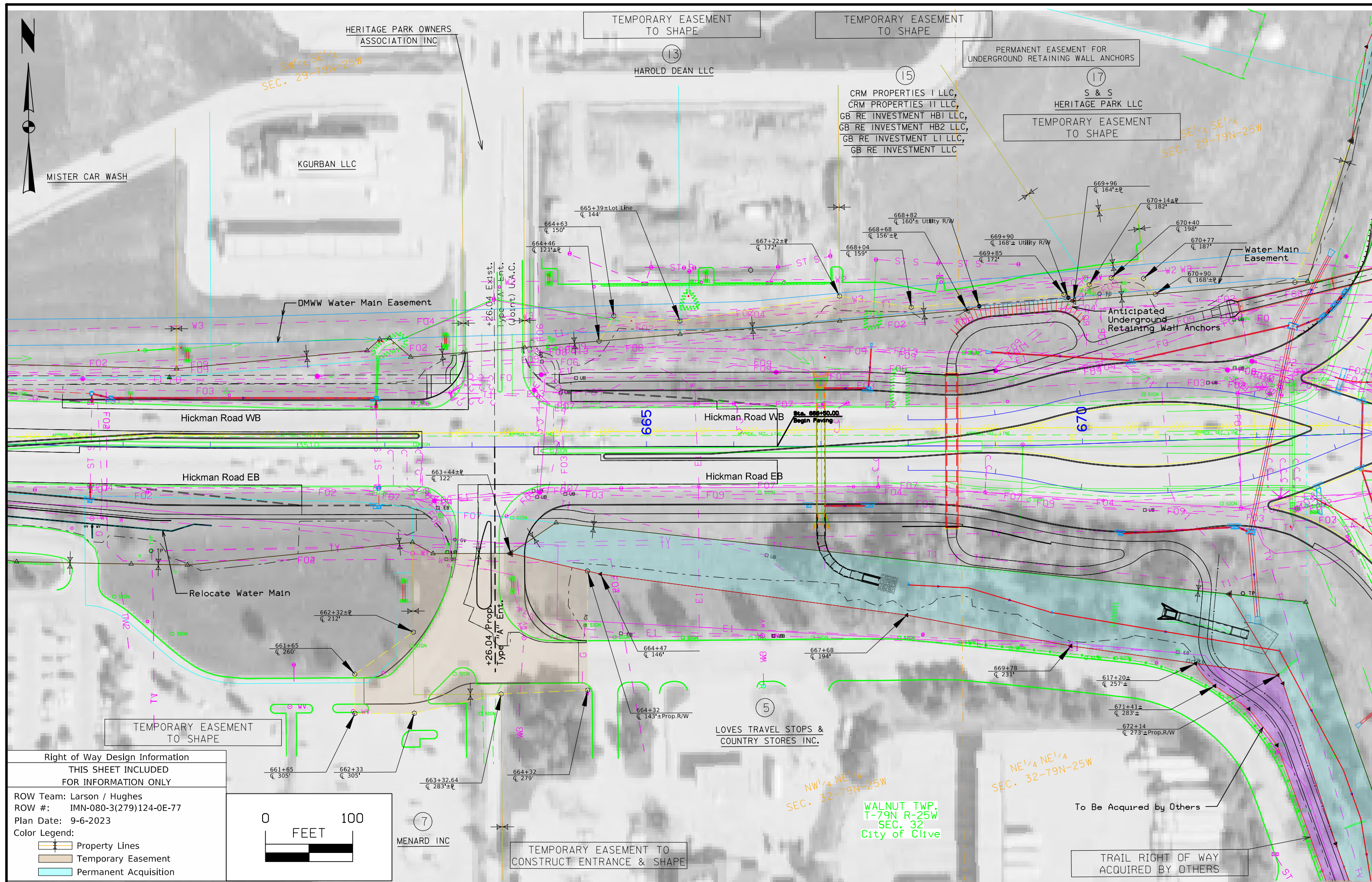
10465

7465

10470

10460

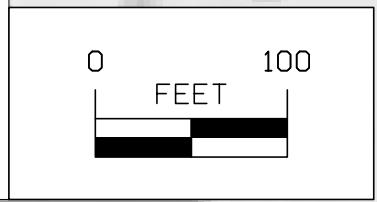




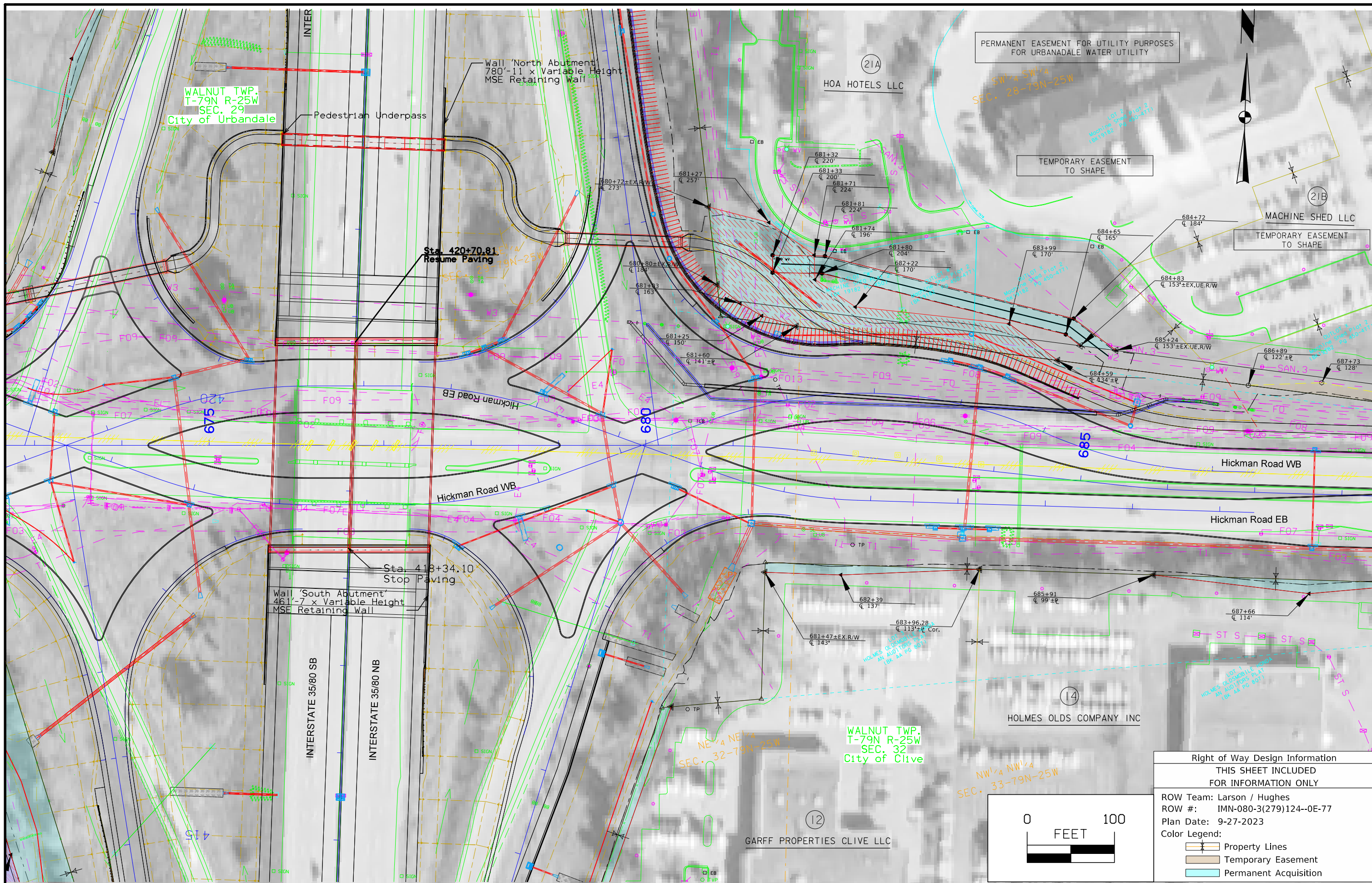
Right of Way Design Information  
THIS SHEET INCLUDED  
FOR INFORMATION ONLY

ROW Team: Larson / Hughes  
ROW #: IMN-080-3(279)124-0E-77  
Plan Date: 9-6-2023

Color Legend:  
 [Yellow Line] Property Lines  
 [Orange Shaded Area] Temporary Easement  
 [Cyan Shaded Area] Permanent Acquisition







PERMANENT EASEMENT FOR UTILITY PURPOSES  
FOR URBANADALE WATER UTILITY

TEMPORARY EASEMENT  
TO SHAPE

TEMPORARY EASEMENT  
TO SHAPE

WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

21A  
HOA HOTELS LLC

21B  
MACHINE SHED LLC

Sta. 420+70.81  
Resume Paving

Sta. 418+34.10  
Stop Paving

Wall 'South Abutment'  
461'-7" x Variable Height  
MSE Retaining Wall

Wall 'North Abutment'  
780'-11" x Variable Height  
MSE Retaining Wall

WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

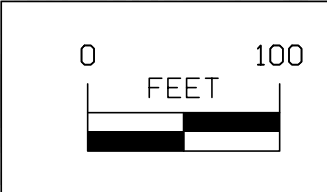
14  
HOLMES OLDS COMPANY INC

12  
GARFF PROPERTIES CLIVE LLC

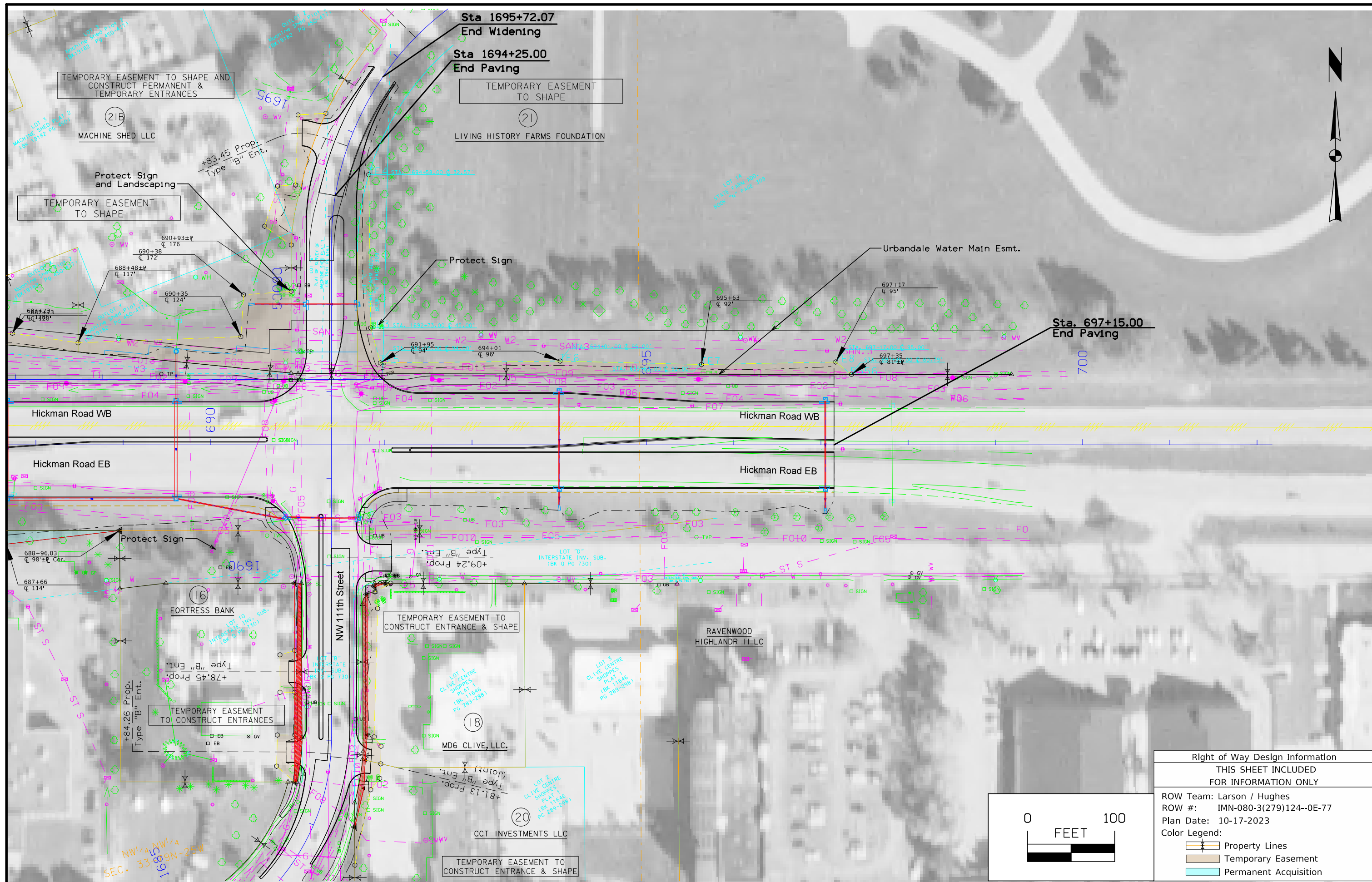
Right of Way Design Information  
THIS SHEET INCLUDED  
FOR INFORMATION ONLY

ROW Team: Larson / Hughes  
ROW #: IMN-080-3(279)124--0E-77  
Plan Date: 9-27-2023

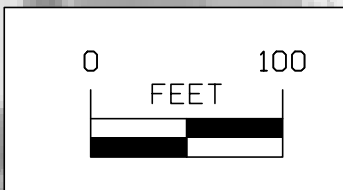
Color Legend:  
 Property Lines  
 Temporary Easement  
 Permanent Acquisition



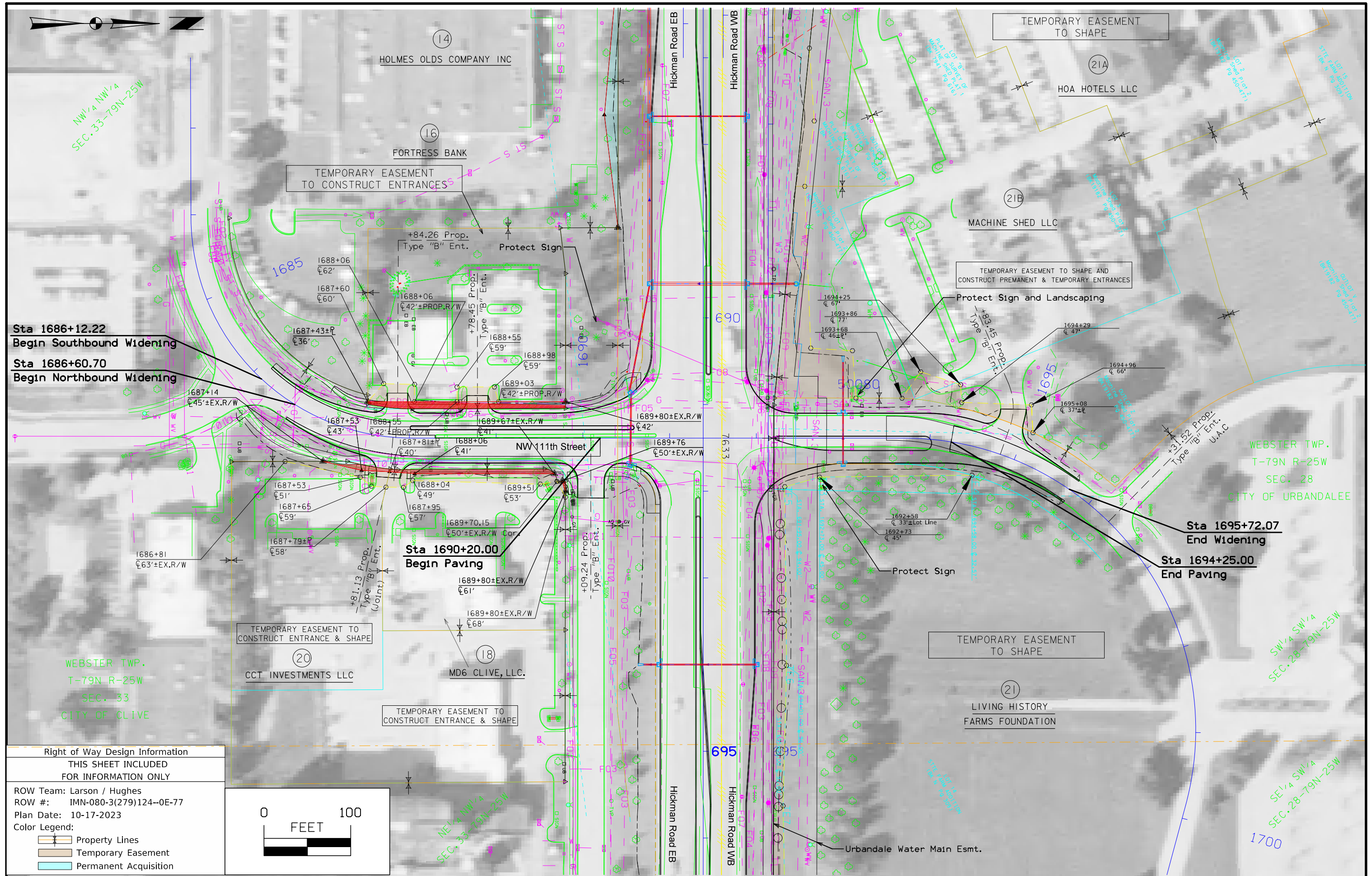




Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team:	Larson / Hughes
ROW #:	IMN-080-3(279)124--0E-77
Plan Date:	10-17-2023
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition

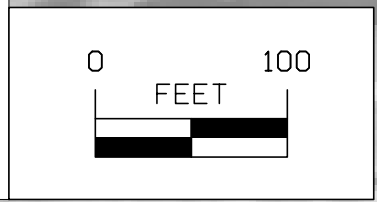






Right of Way Design Information  
 THIS SHEET INCLUDED  
 FOR INFORMATION ONLY










ROW Team: Larson / Hughes  
 ROW #: IMN-080-3(279)124--0E-77  
 Plan Date: 10-17-2023  
 Color Legend:  
 [Yellow Line] Property Lines  
 [Orange Area] Temporary Easement  
 [Red Area] Permanent Acquisition



**CROSS SECTION VIEW COLOR LEGEND  
OF TRAFFIC CONTROL AND STAGING SHEETS**

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Med	(237)	Future Proposed Pavement Shading

**CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND  
OF TRAFFIC CONTROL AND STAGING SHEETS**





















	Pavement Removal		Proposed Granular Shoulder
	Proposed Granular Subbase		Temporary Shoulder
	Proposed Special Backfill		Existing Shoulder Strengthening
	Temporary Barrier Rail		Permanent Barrier Rail
			Channelizing Device

**PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS**

LINWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White
Violet	(15)	Temporary barrier rail, Unpinned
Flush Orange	(228)	Temporary barrier rail, Pinned

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Proposed Granular Surface Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Pink, Dark	(13)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure

**PLAN VIEW PATTERN AND SYMBOL LEGEND  
OF TRAFFIC CONTROL AND STAGING SHEETS**

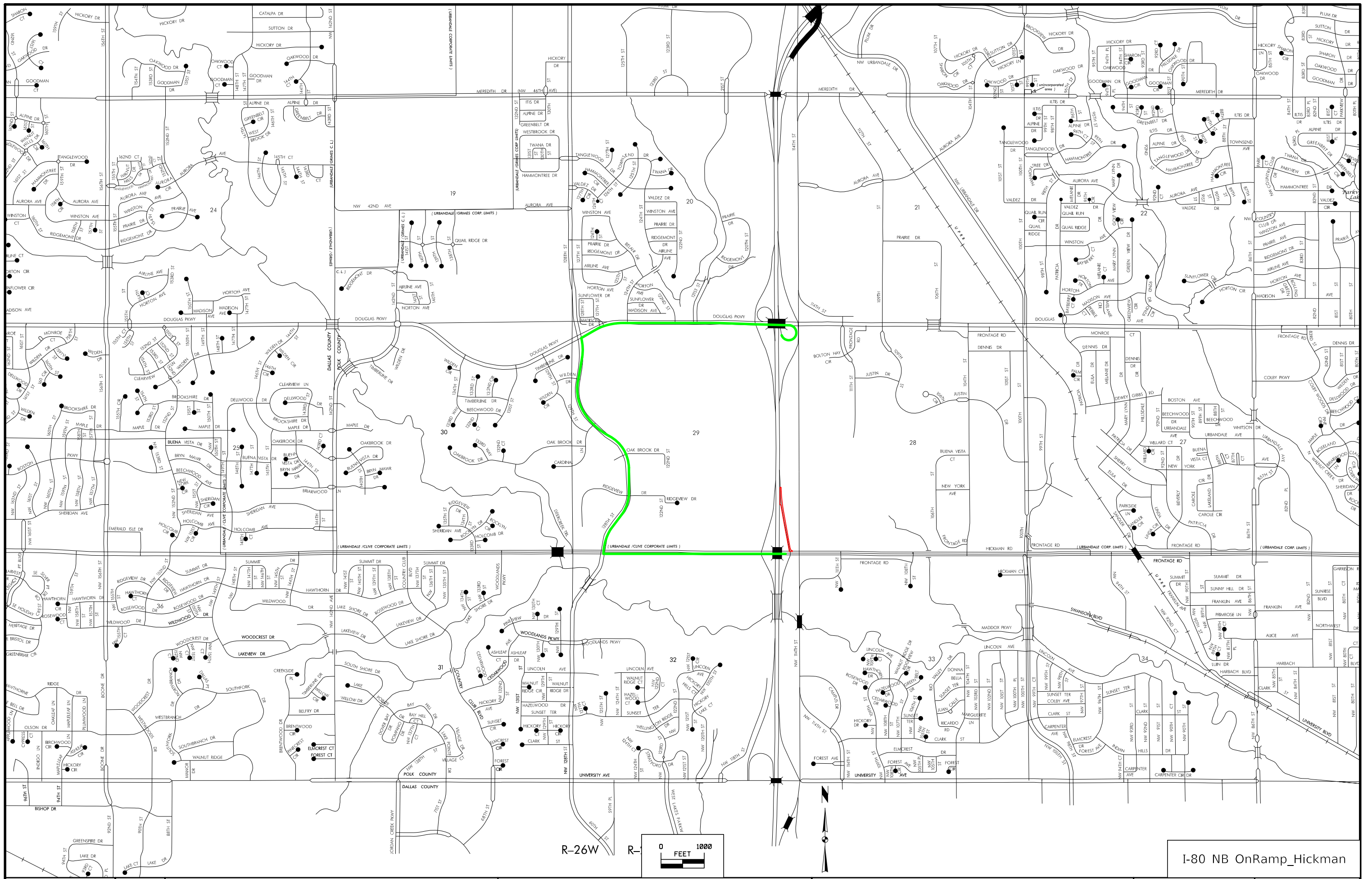
	Channelizing Device		Crash Cushion (Temp or Perm)
	Drum		Traffic Signal
	Temporary Lane Separator		Flagger
	Tubular Marker		Temporary Floodlighting
	Channelizer Marker		Traffic Sign
	Concrete Barrier Marker		Type III Barricade
	Delineator		Type A Warning Light
	Temporary Barrier Rail		Direction of Traffic
	Pavement Removal		Safety Closure
	Sand Barrel Layout		Lane Identification

NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

**TRAFFIC CONTROL  
AND  
STAGING  
LEGEND AND SYMBOL  
INFORMATION SHEET**

(COVERS SHEET SERIES J)





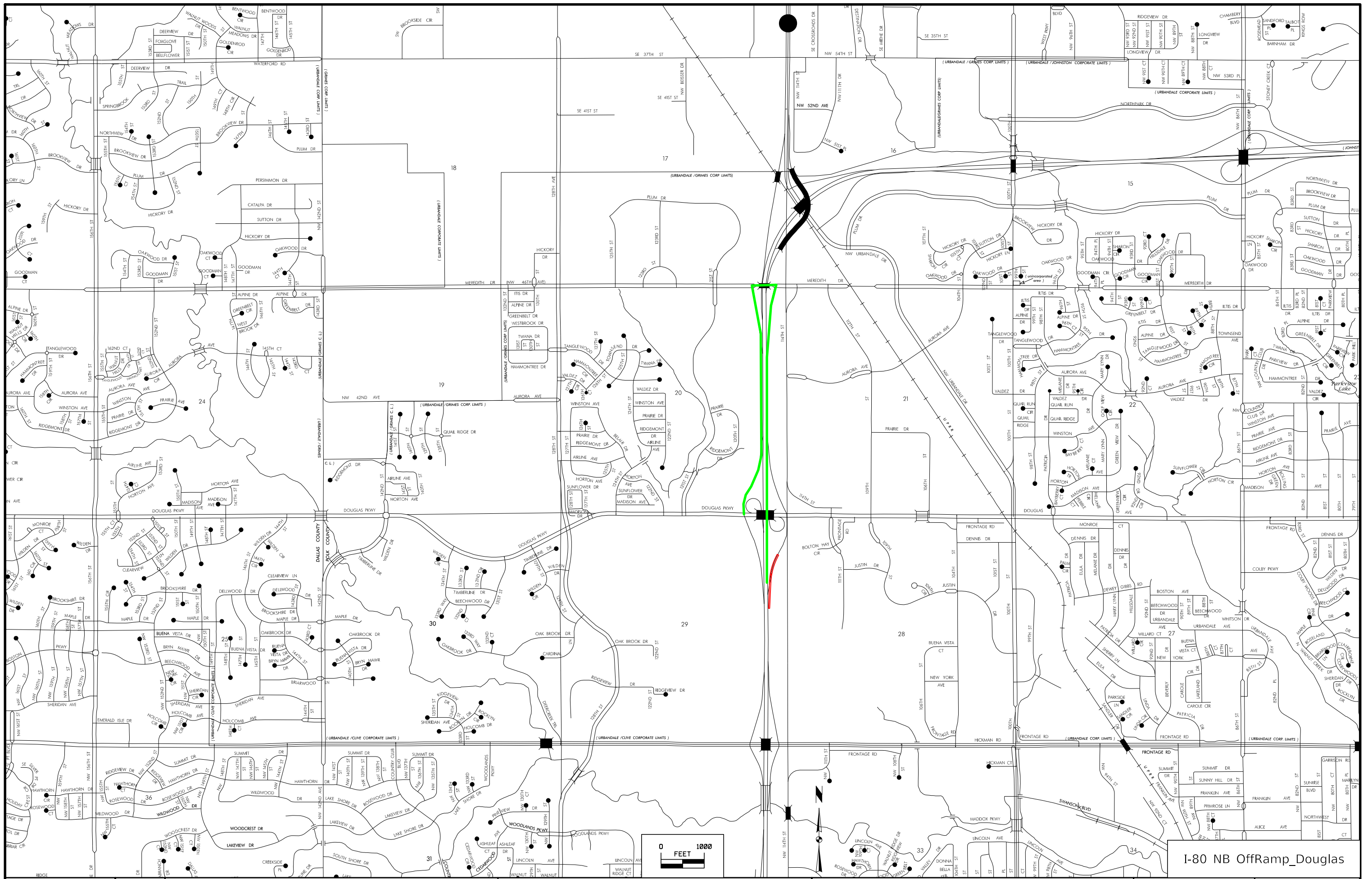
R-26W



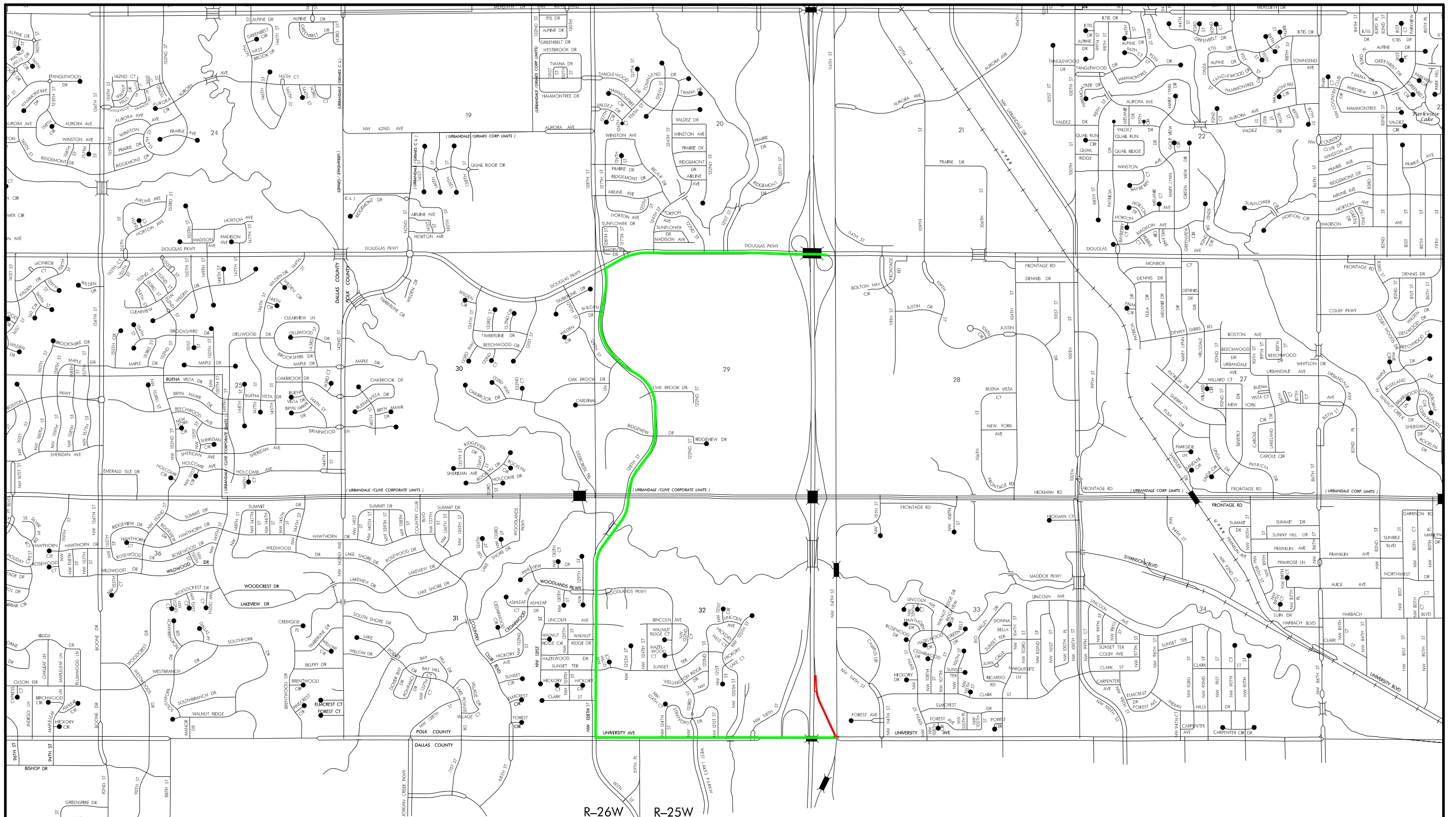
I-80 NB OnRamp\_Hickman

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.2
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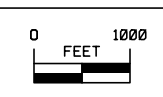




I-80 NB OffRamp\_Douglas

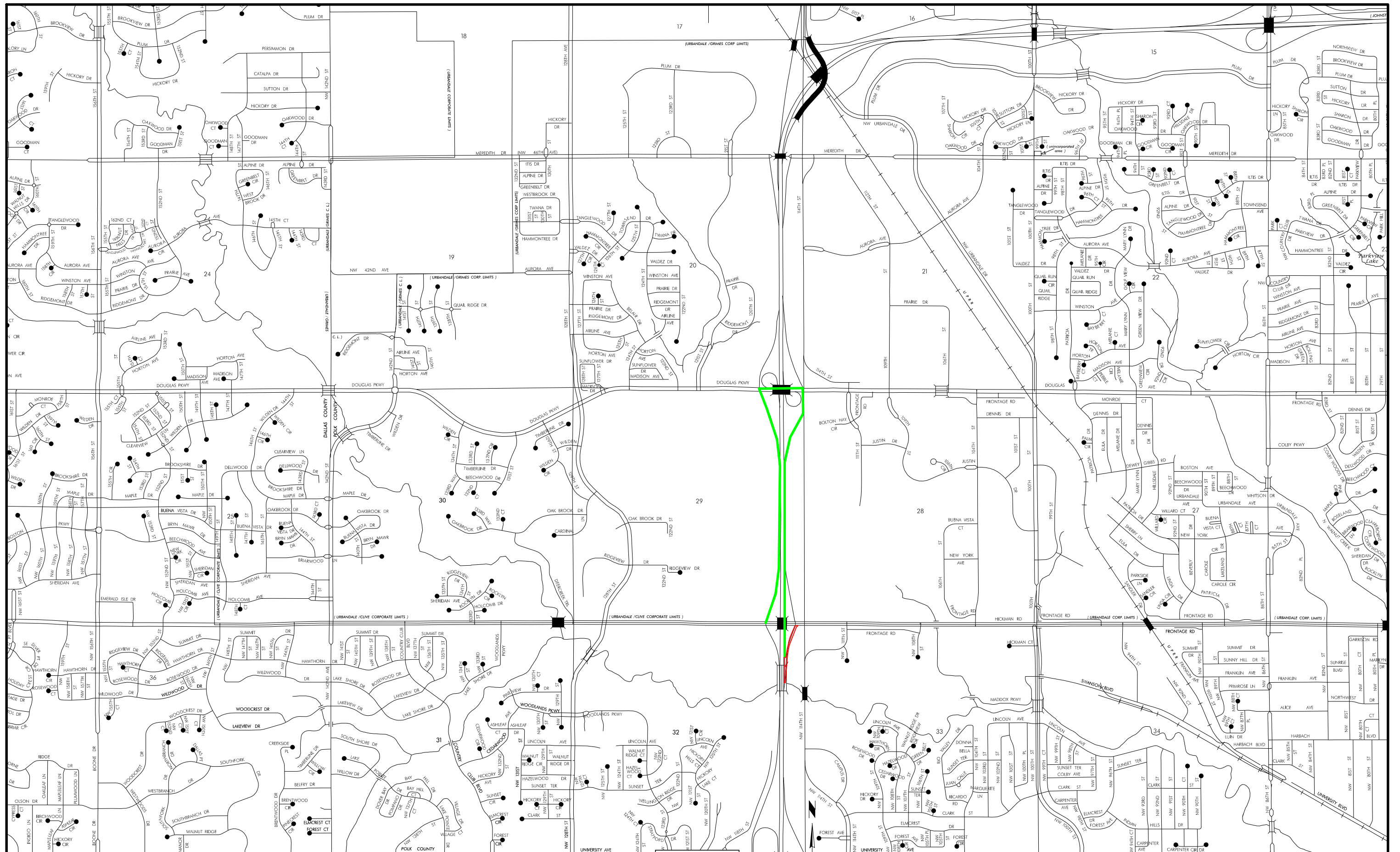


R-26W R-25W



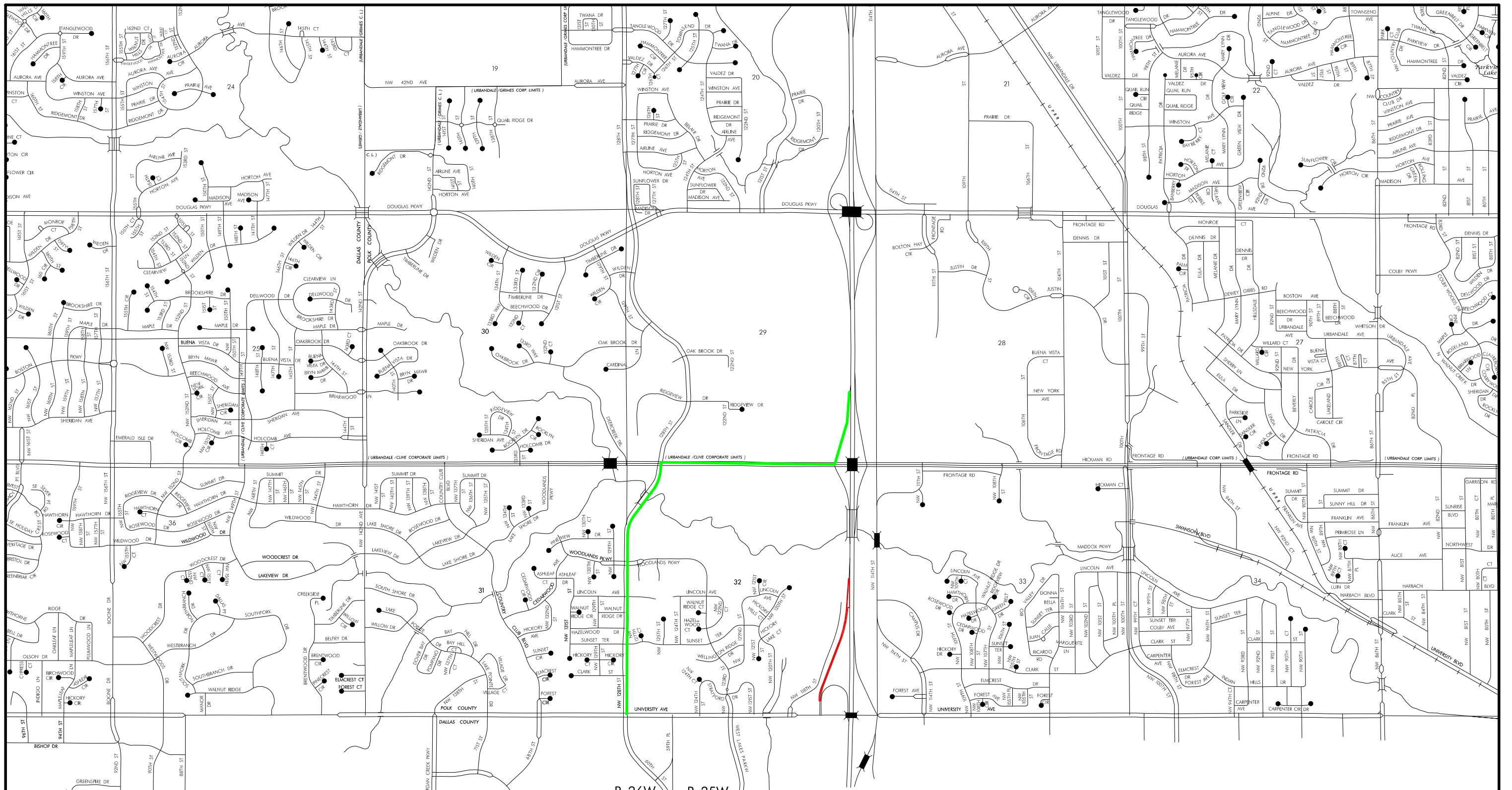
I-80 NB OnRamp\_University



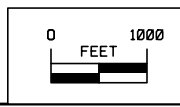


I-80 NB OffRamp\_Hickman



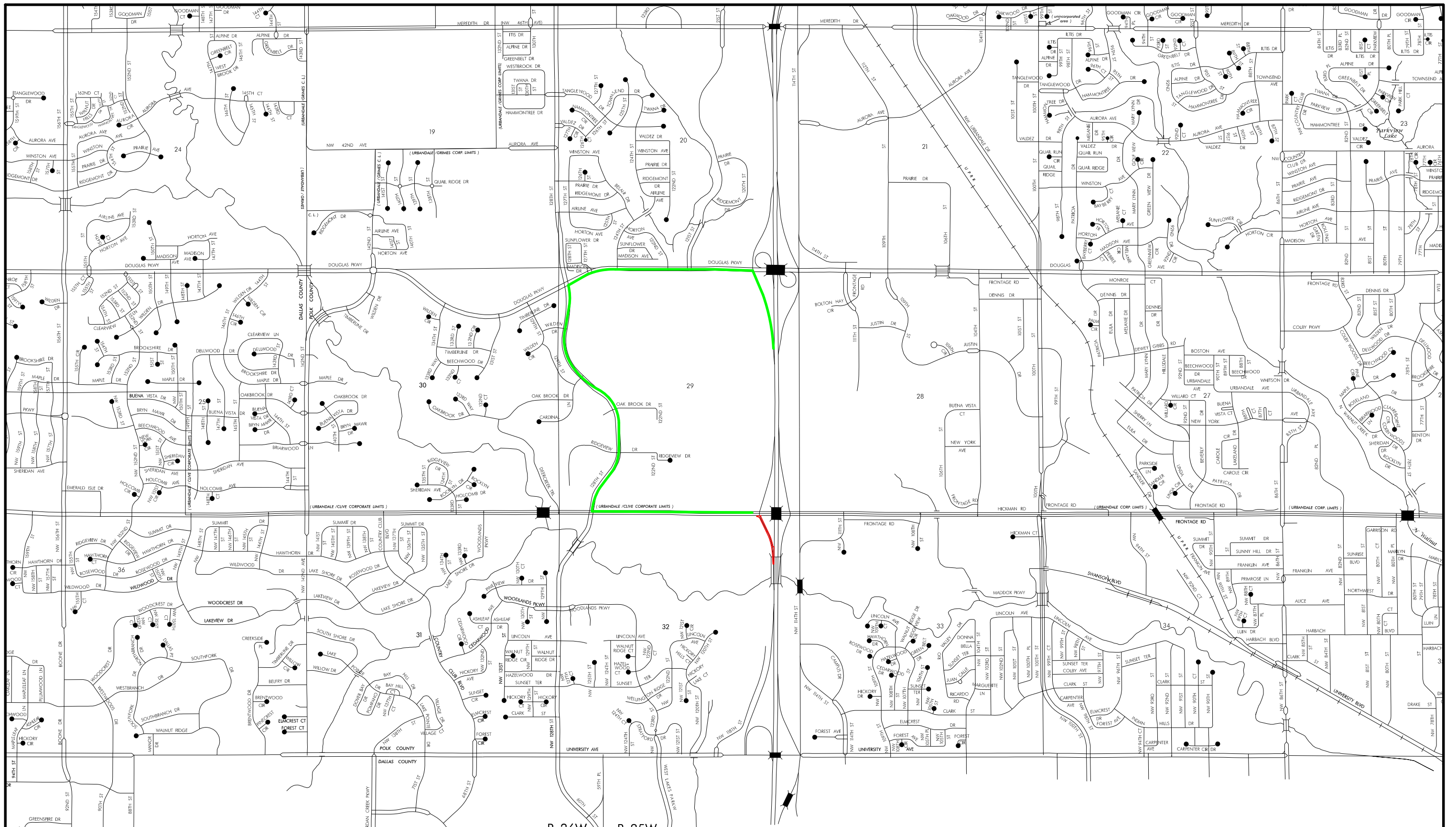


R-26W R-25W

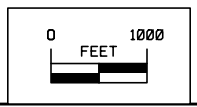


I-80 SB OffRamp\_University

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.6
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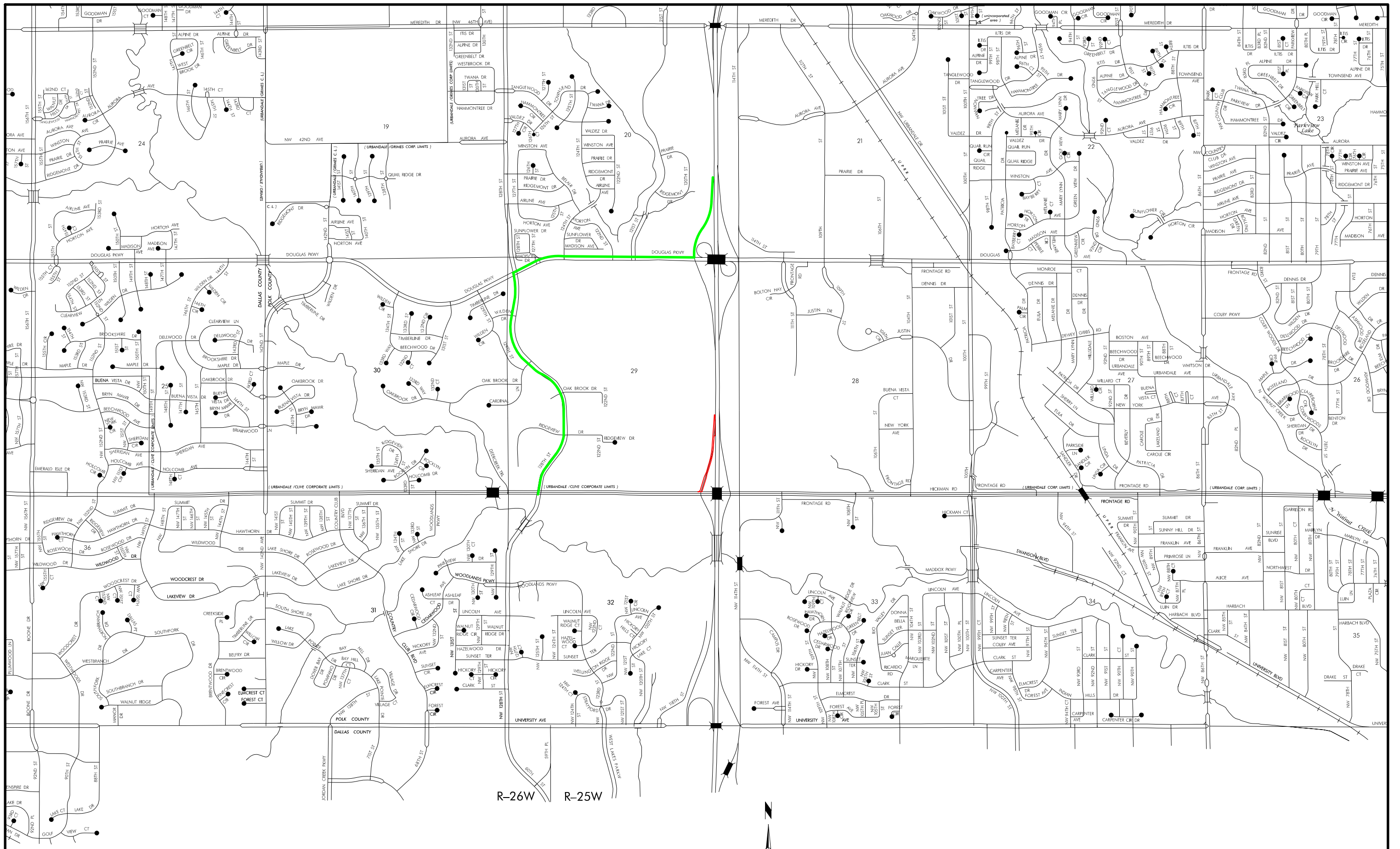


R-26W R-25W



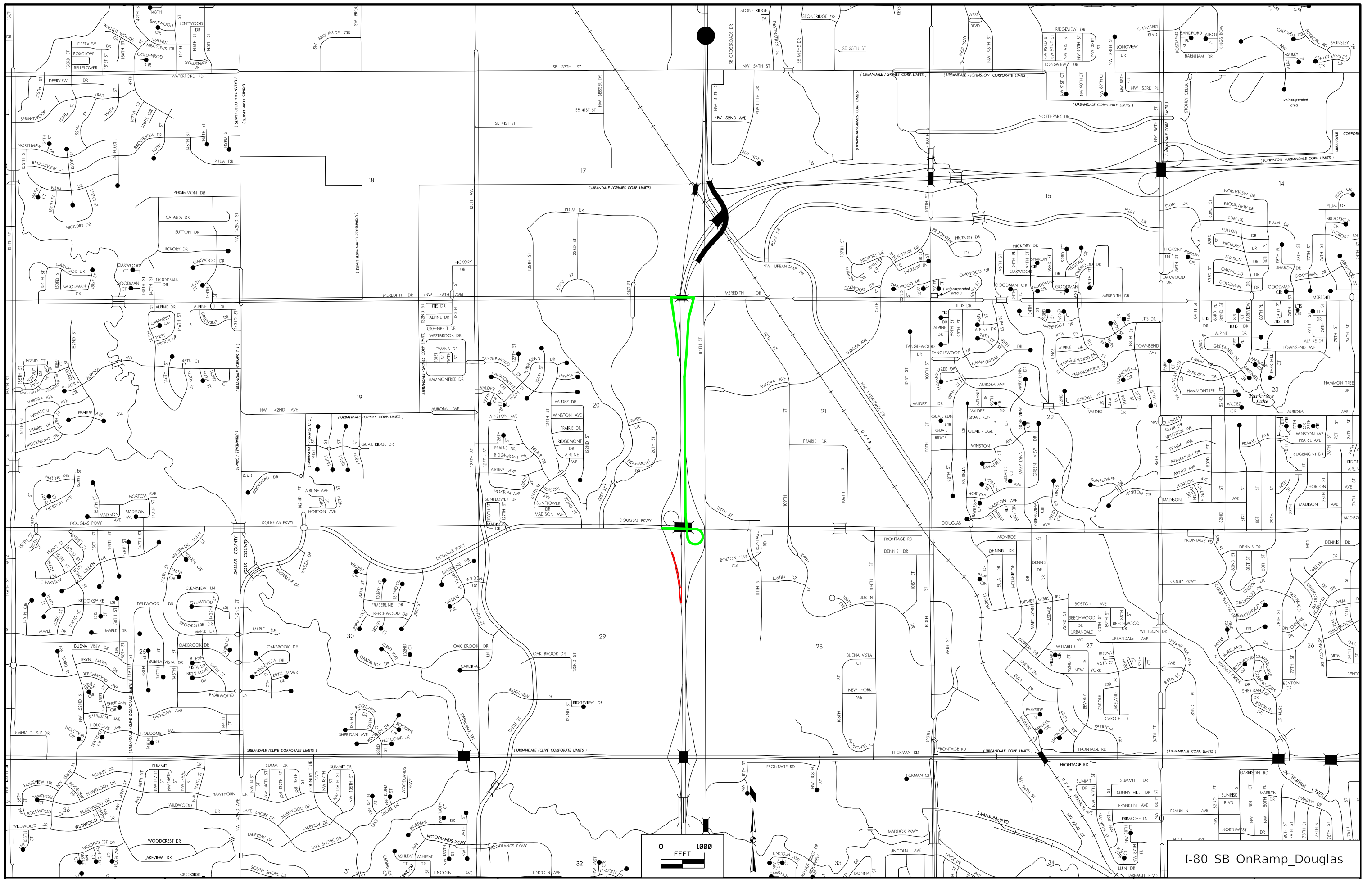
I-80 SB OnRamp\_Hickman



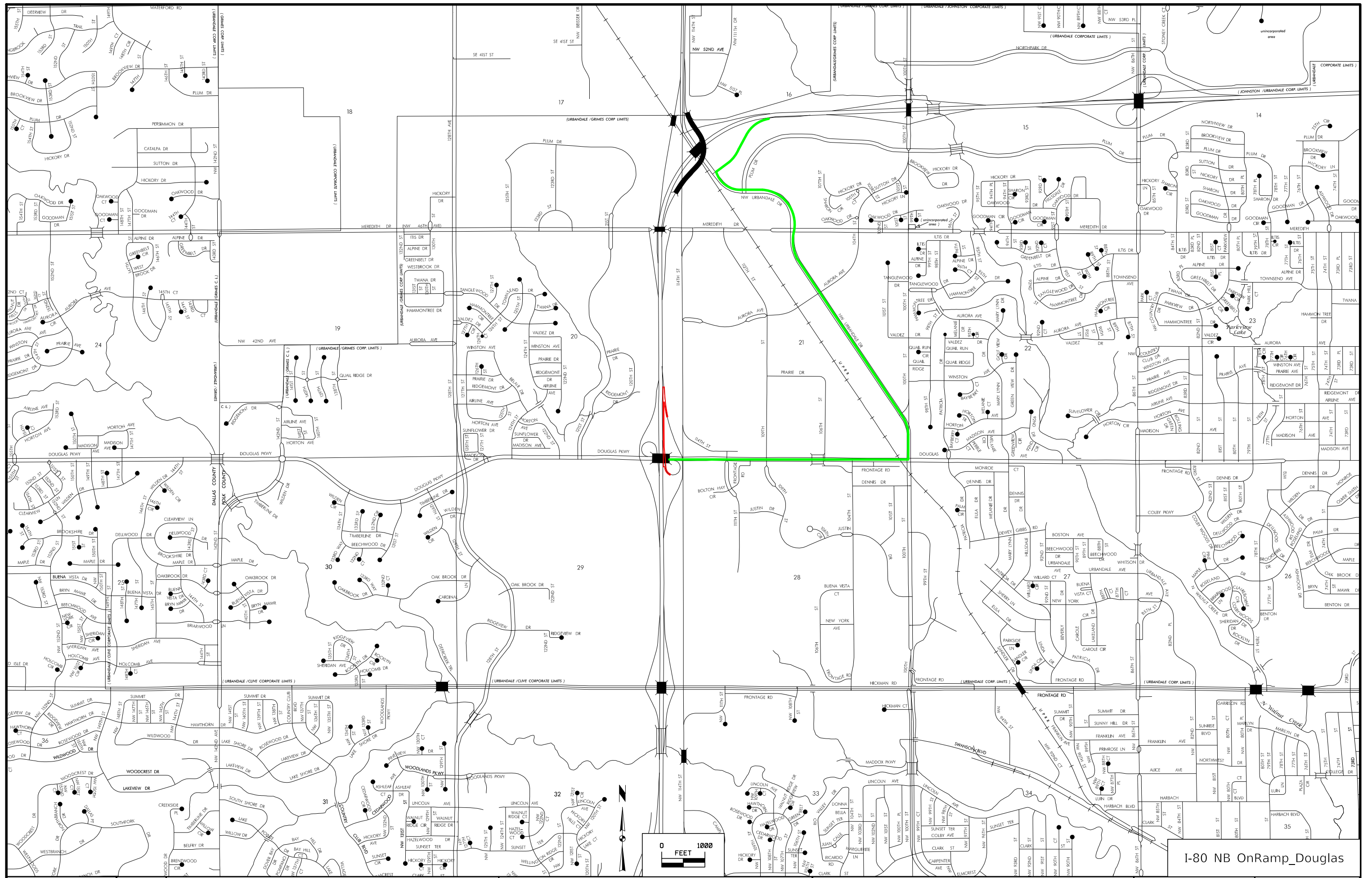


I-80 SB OffRamp\_Hickman



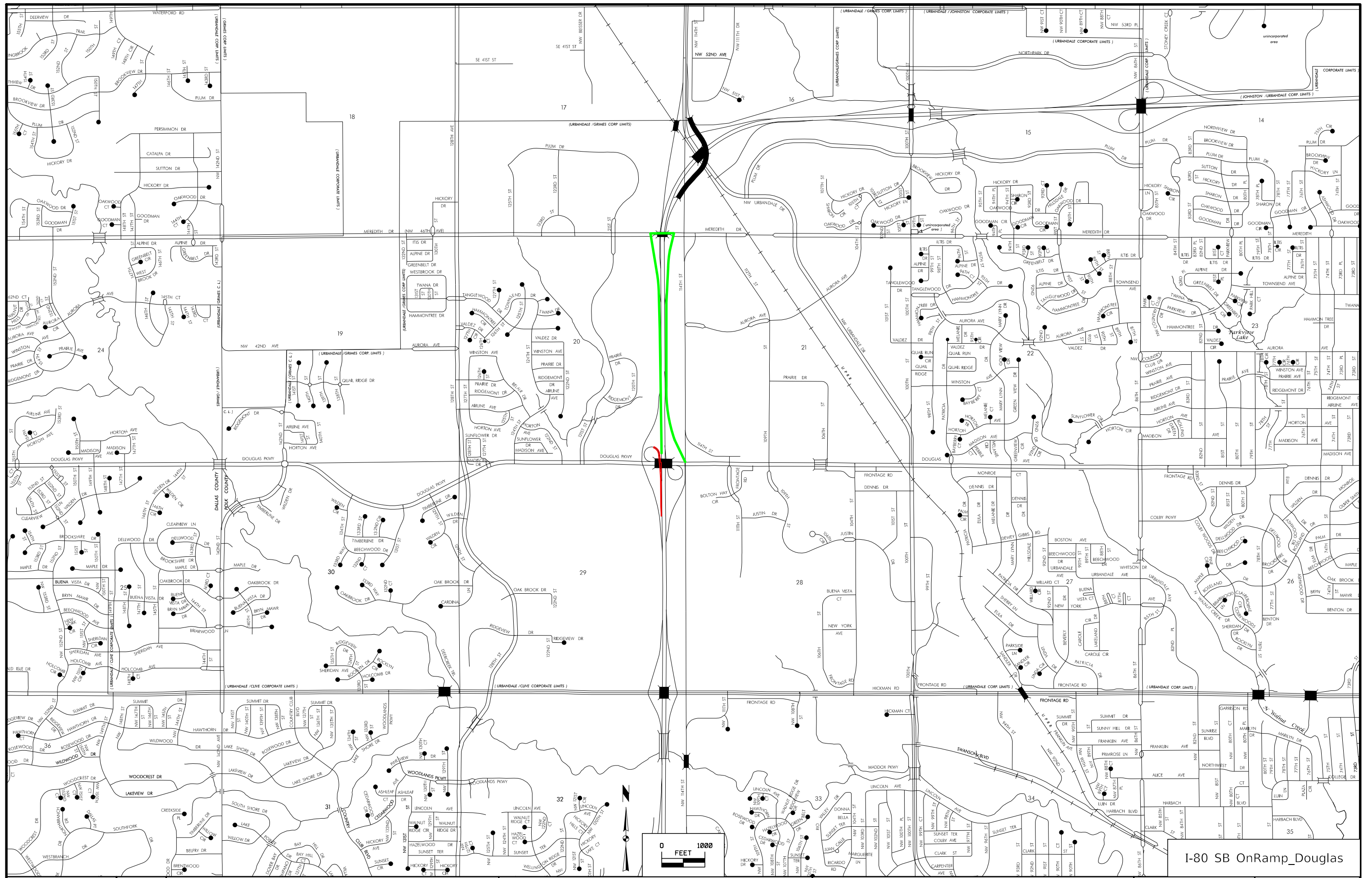


I-80 SB OnRamp\_Douglas



I-80 NB OnRamp\_Douglas

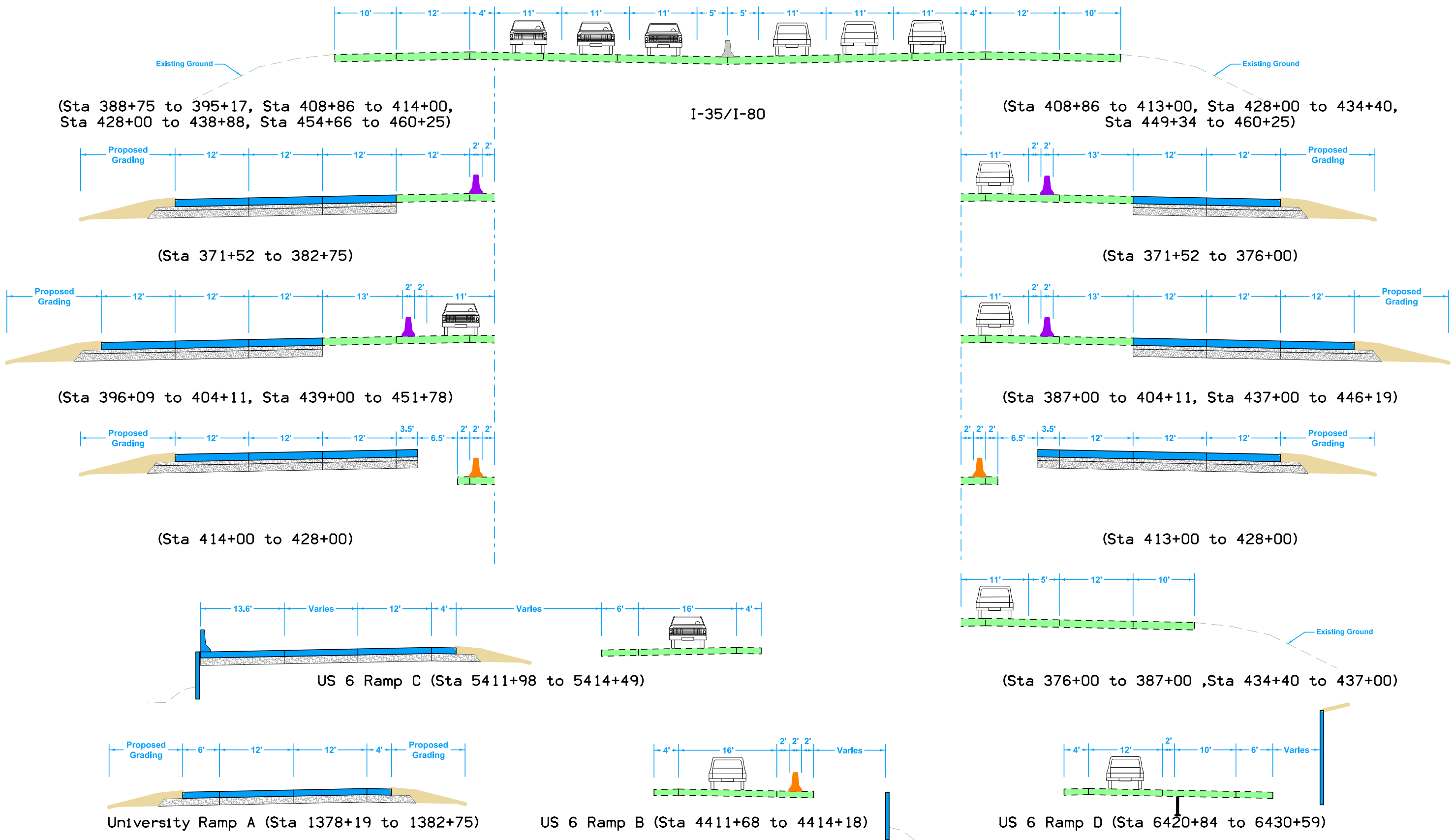




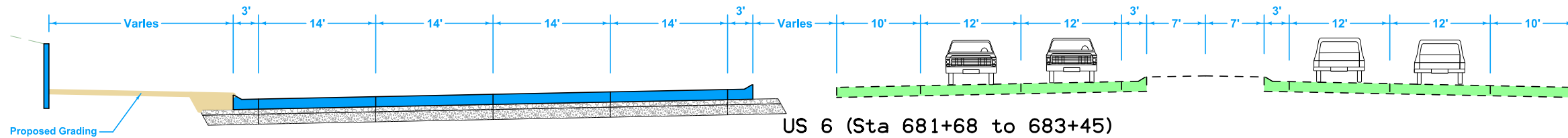
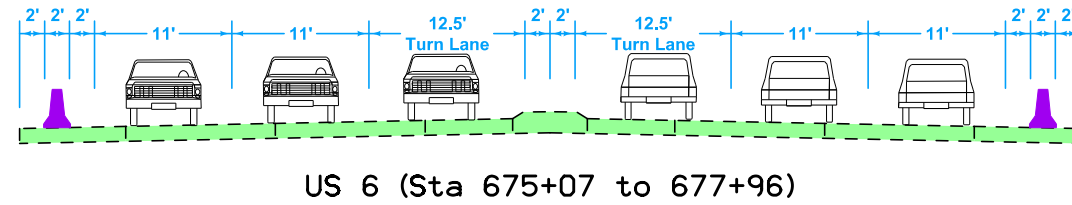
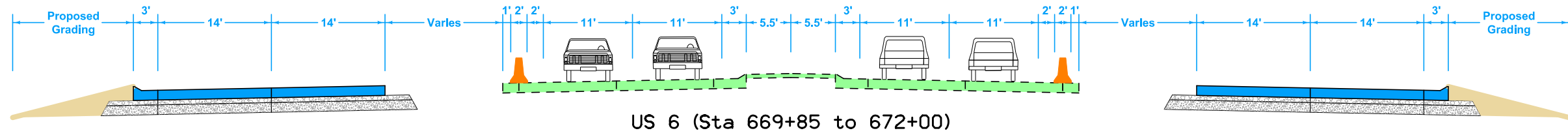
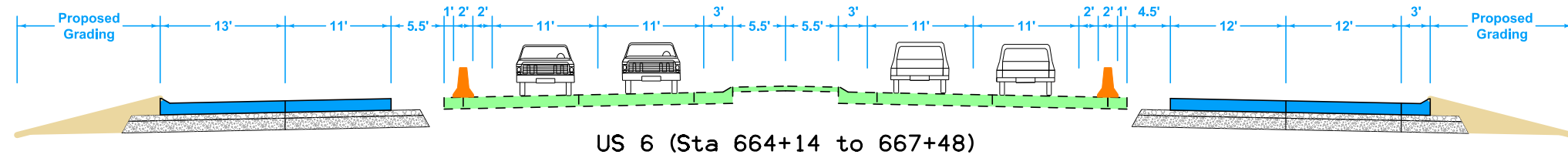
I-80 SB OnRamp\_Douglas



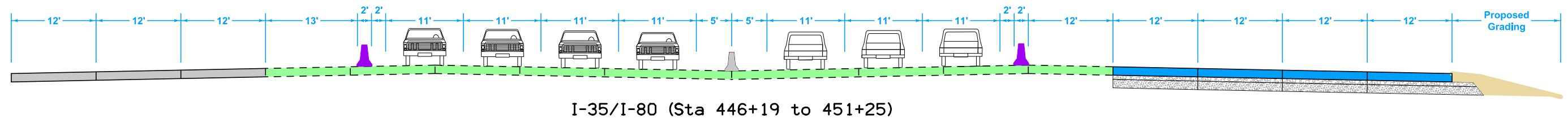
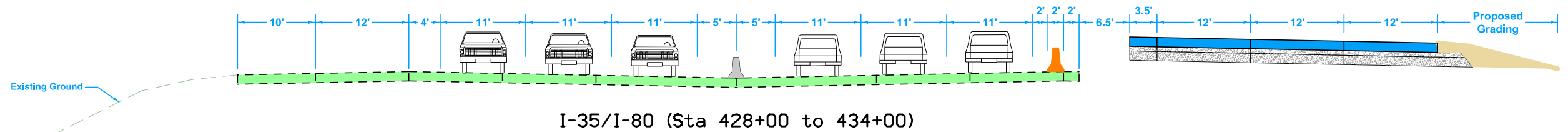
# Stage 1A



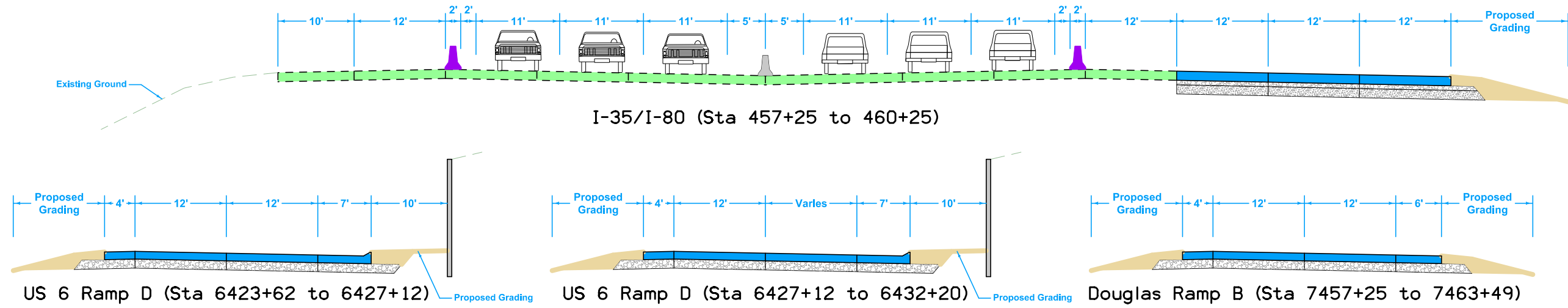
# Stage 1A



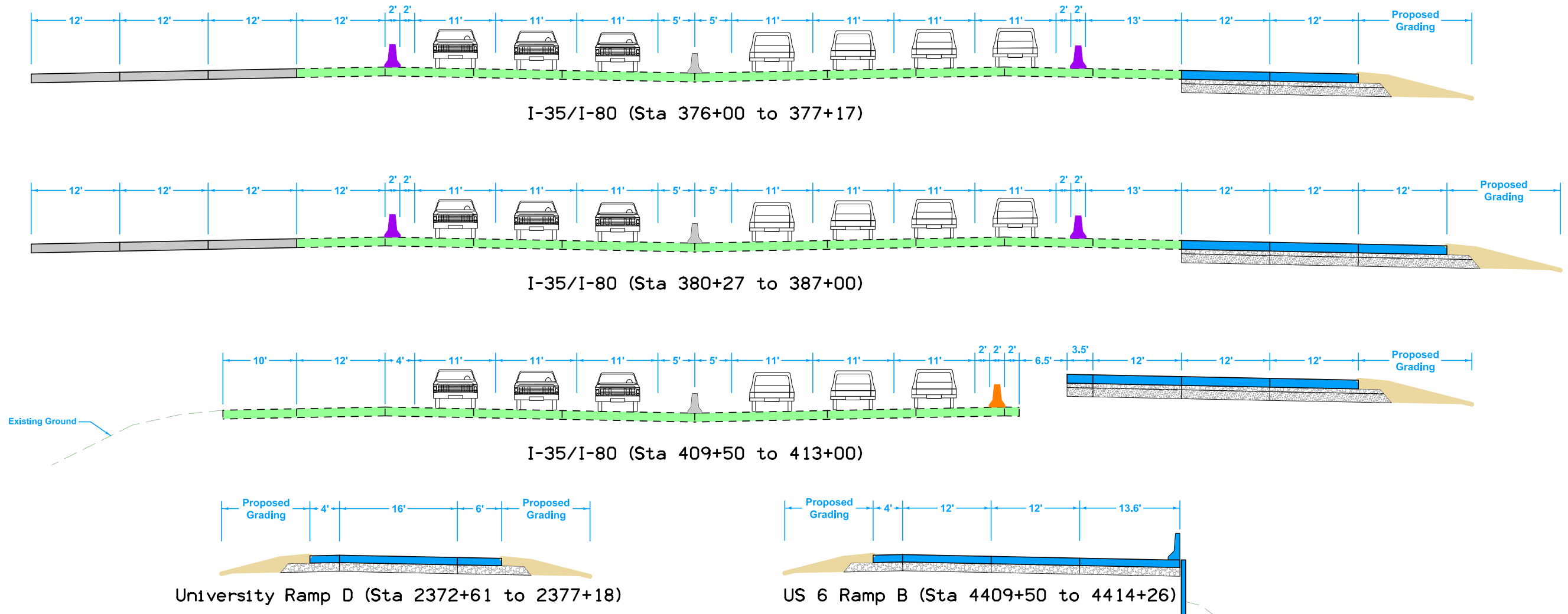
# Stage 1B



## Stage 1B

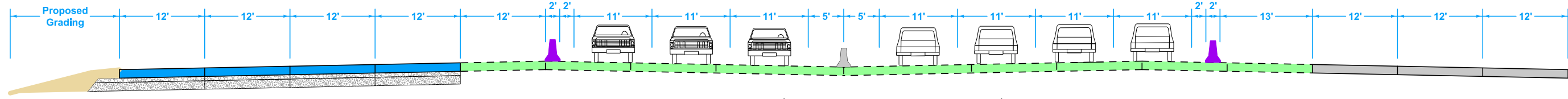


## Stage 1C

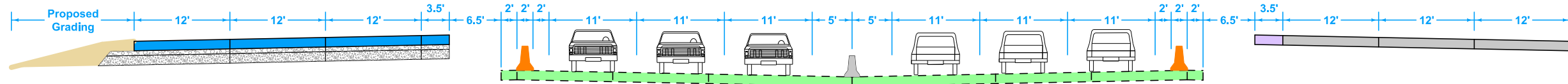




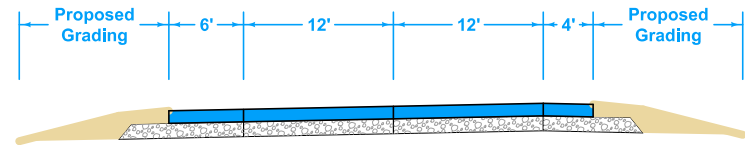
## Stage 1D



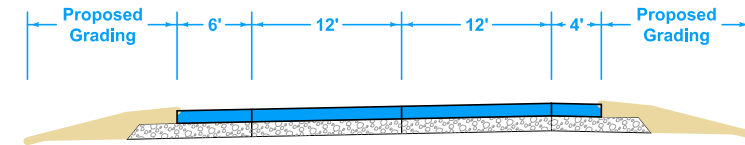
I-35/I-80 (Sta 388+75 to 396+09)



I-35/I-80 (Sta 408+93 to 414+00)

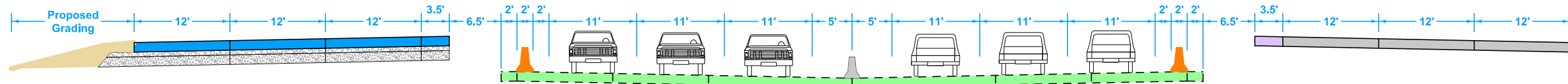


University Ramp A (Sta 1368+27 to 1378+19)

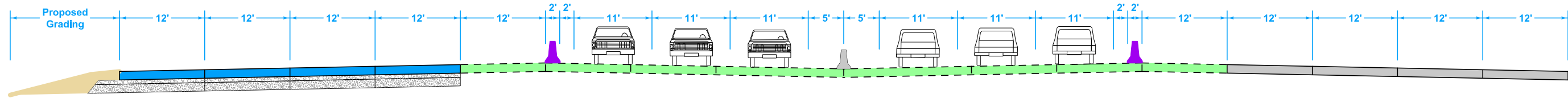


Douglas Ramp C (Sta 5414+49 to 5415+69)

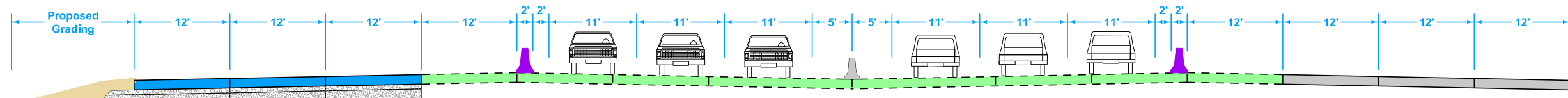
## Stage 1E



I-35/I-80 (Sta 428+00 to 433+00)



I-35/I-80 (Sta 451+78 to 456+00)



I-35/I-80 (Sta 459+10 to 460+25)

# Stage 1E



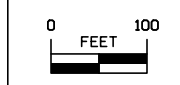
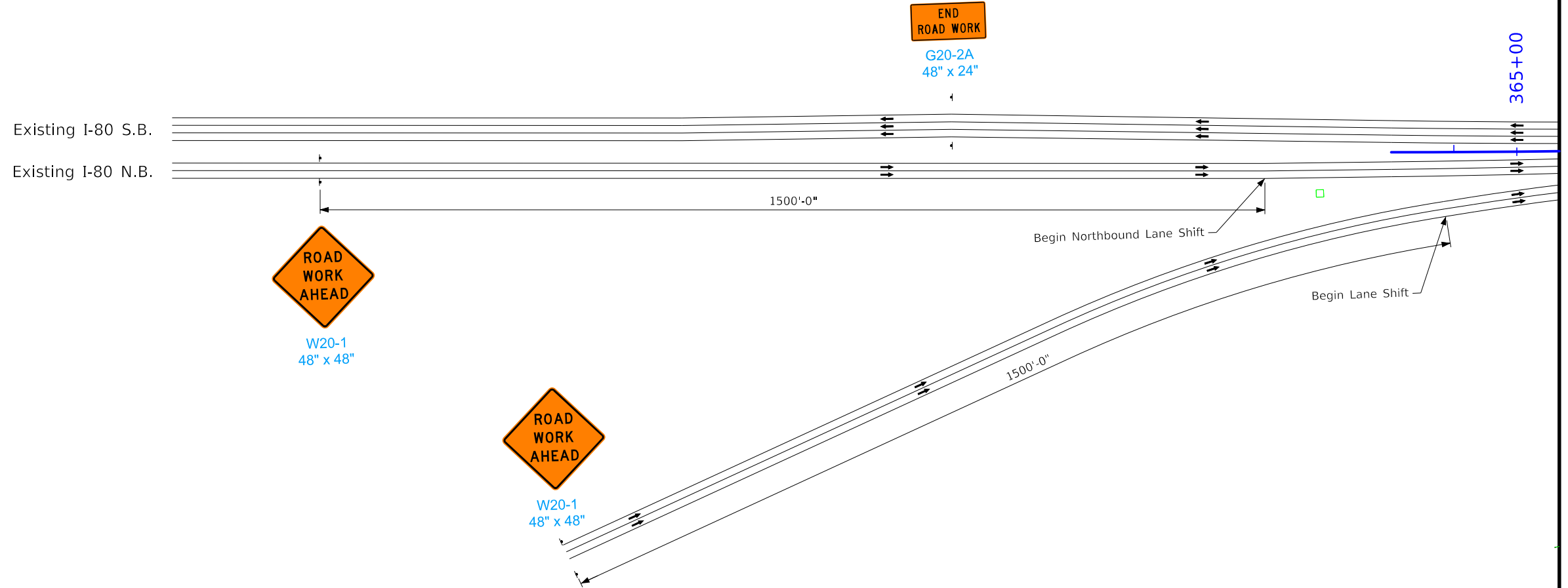
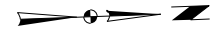
US 6 Ramp A (Sta 3424+84 to 3426+49,  
Sta 3429+54 to 3433+00)



US 6 Ramp A (Sta 3426+49 to 3429+54)

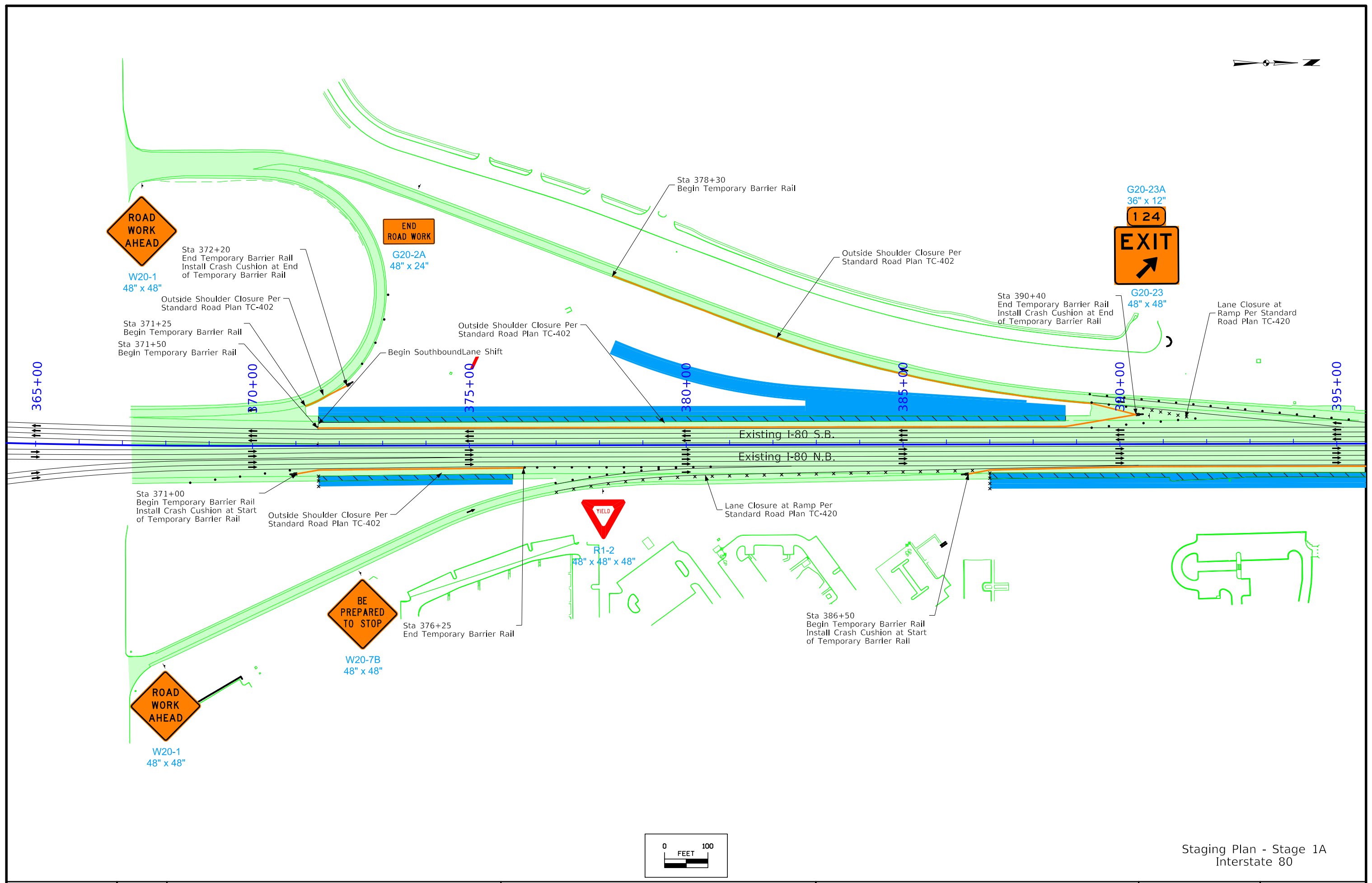


Douglas Ramp C (Sta XXX+XX to XXX+XX)

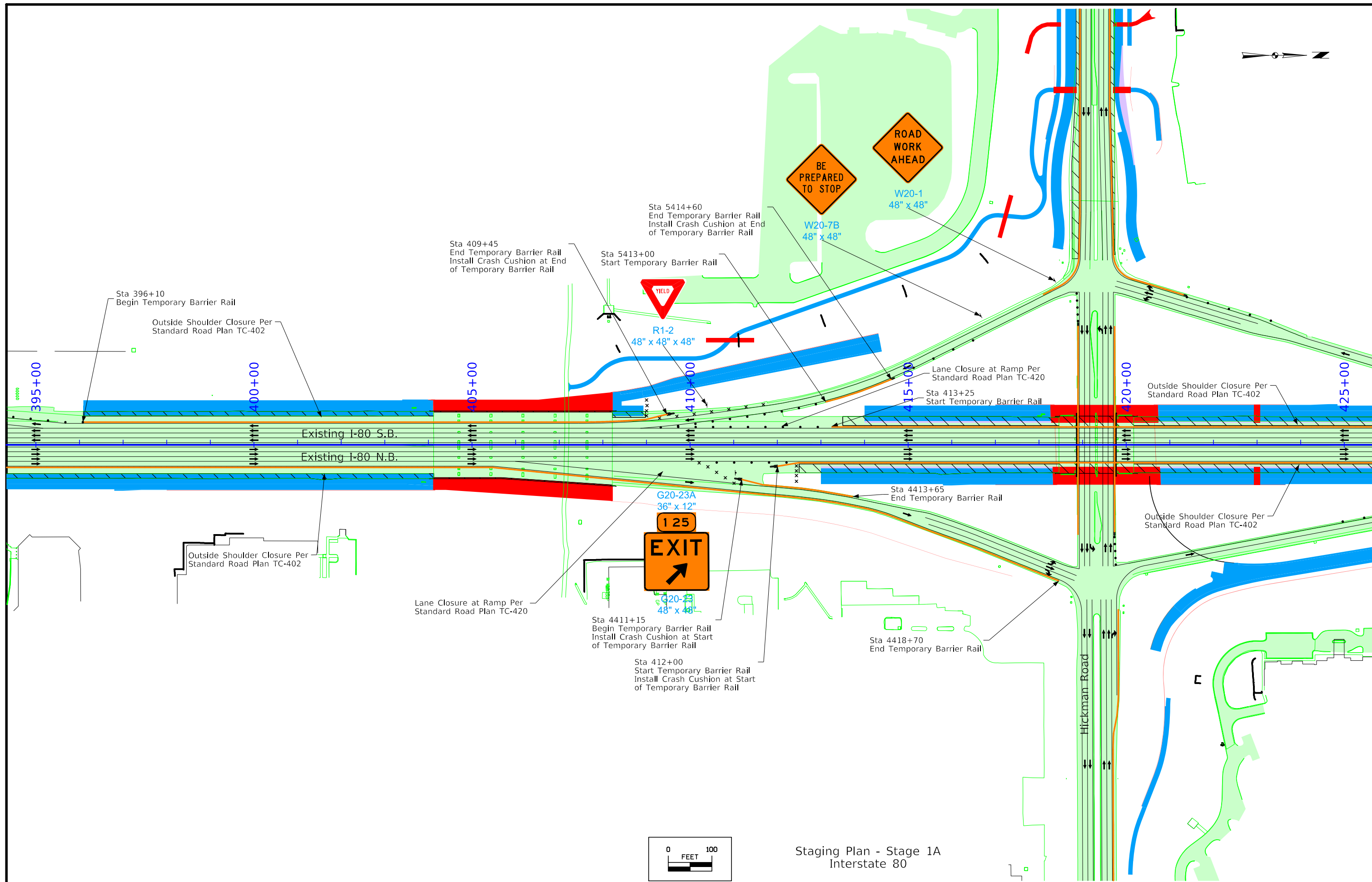


Staging Plan - Stage 1A  
Interstate 80

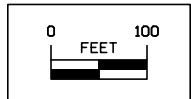


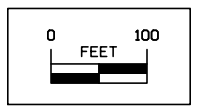
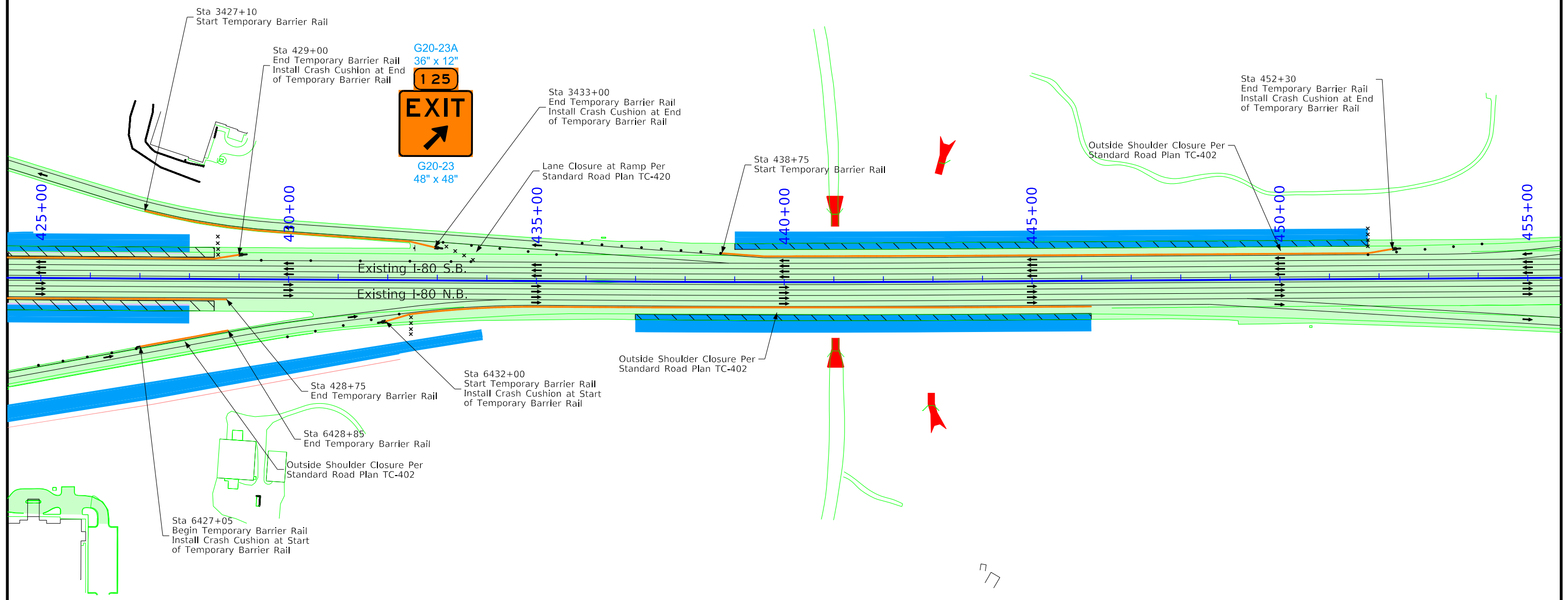


Staging Plan - Stage 1A  
Interstate 80



Staging Plan - Stage 1A  
Interstate 80

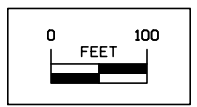
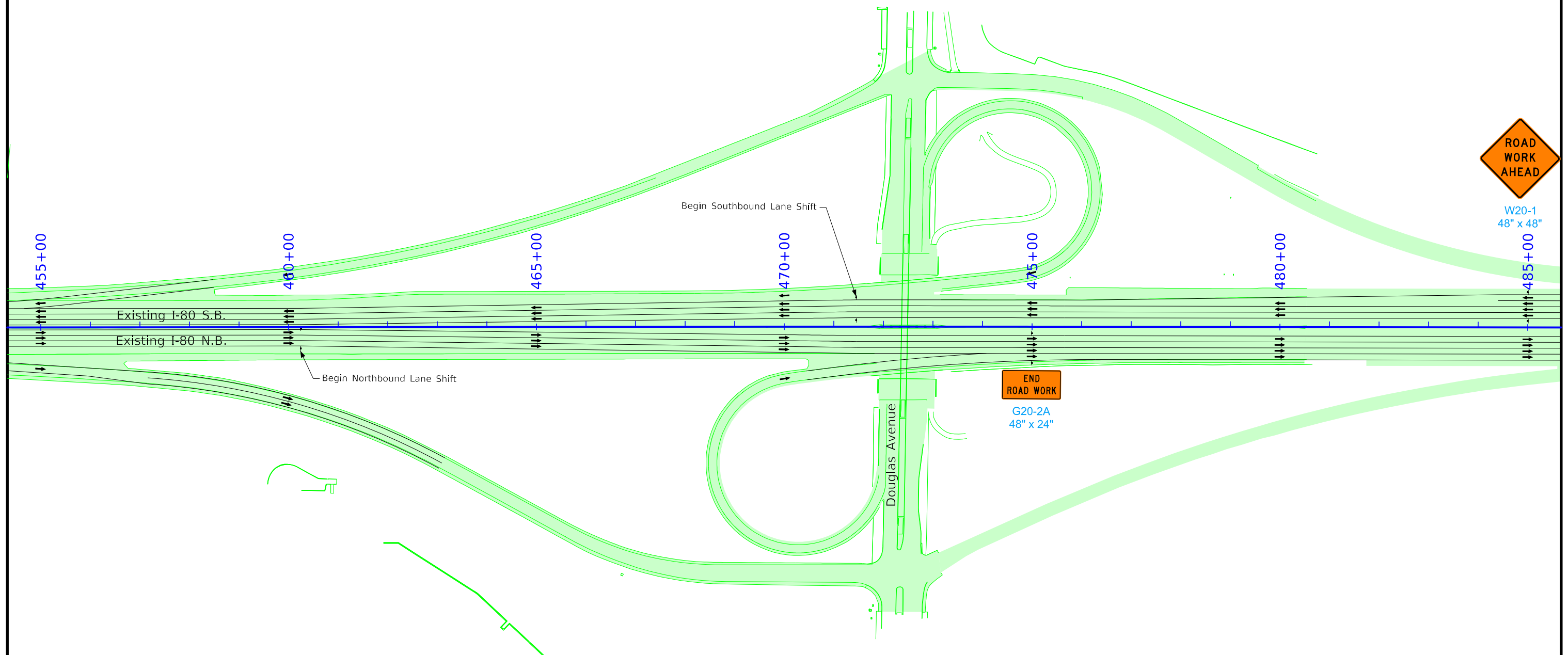




Staging Plan - Stage 1A  
Interstate 80

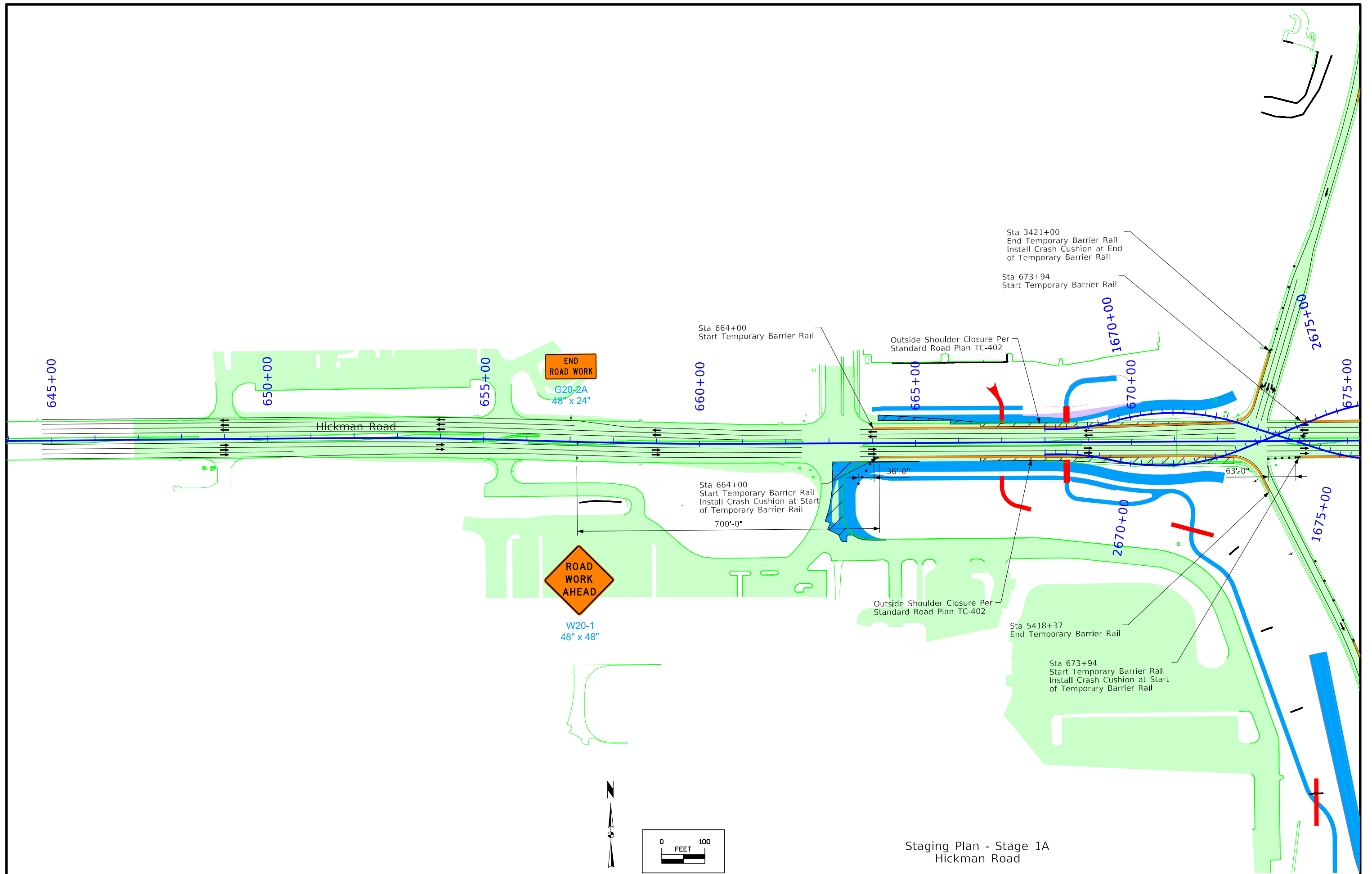
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.20
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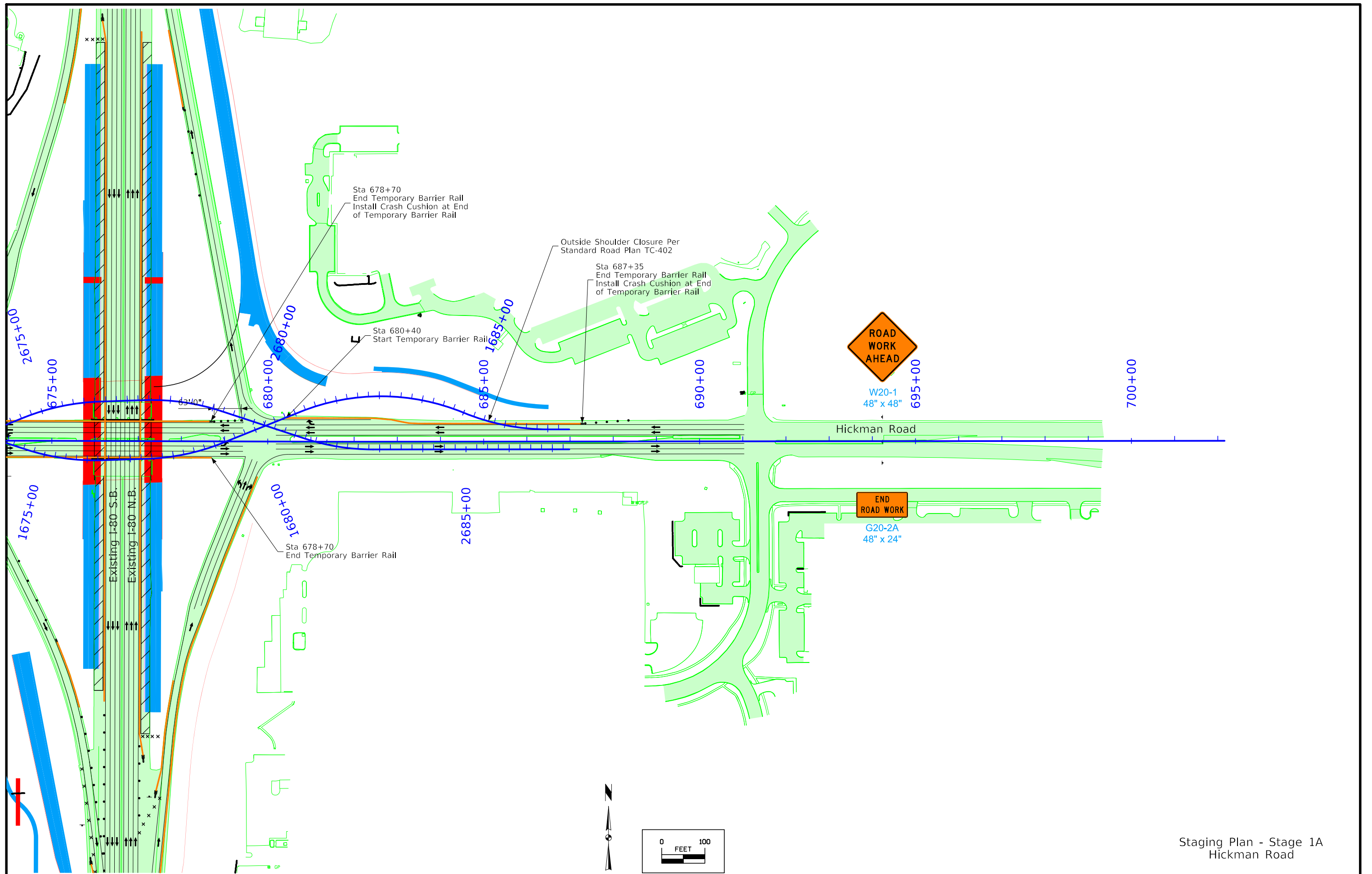


Staging Plan - Stage 1A  
Interstate 80

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.21
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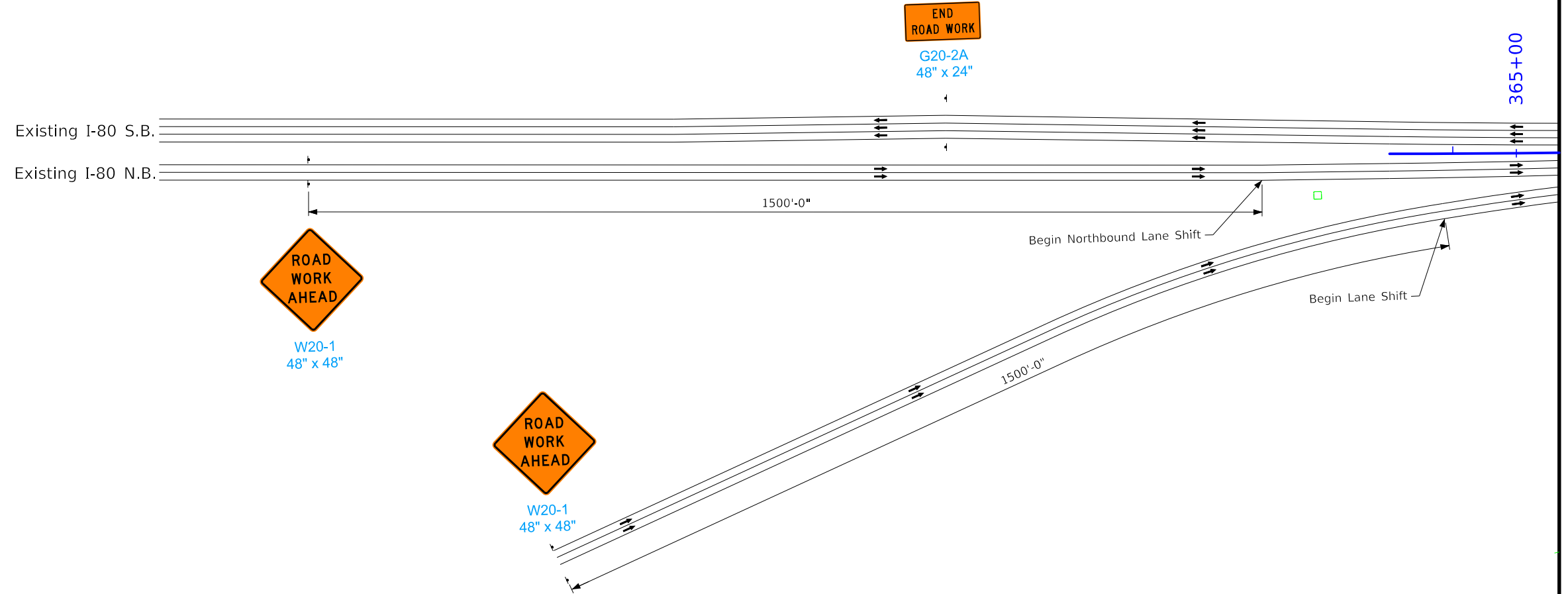
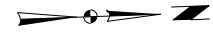


Staging Plan - Stage 1A  
Hickman Road

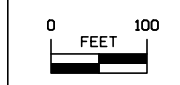
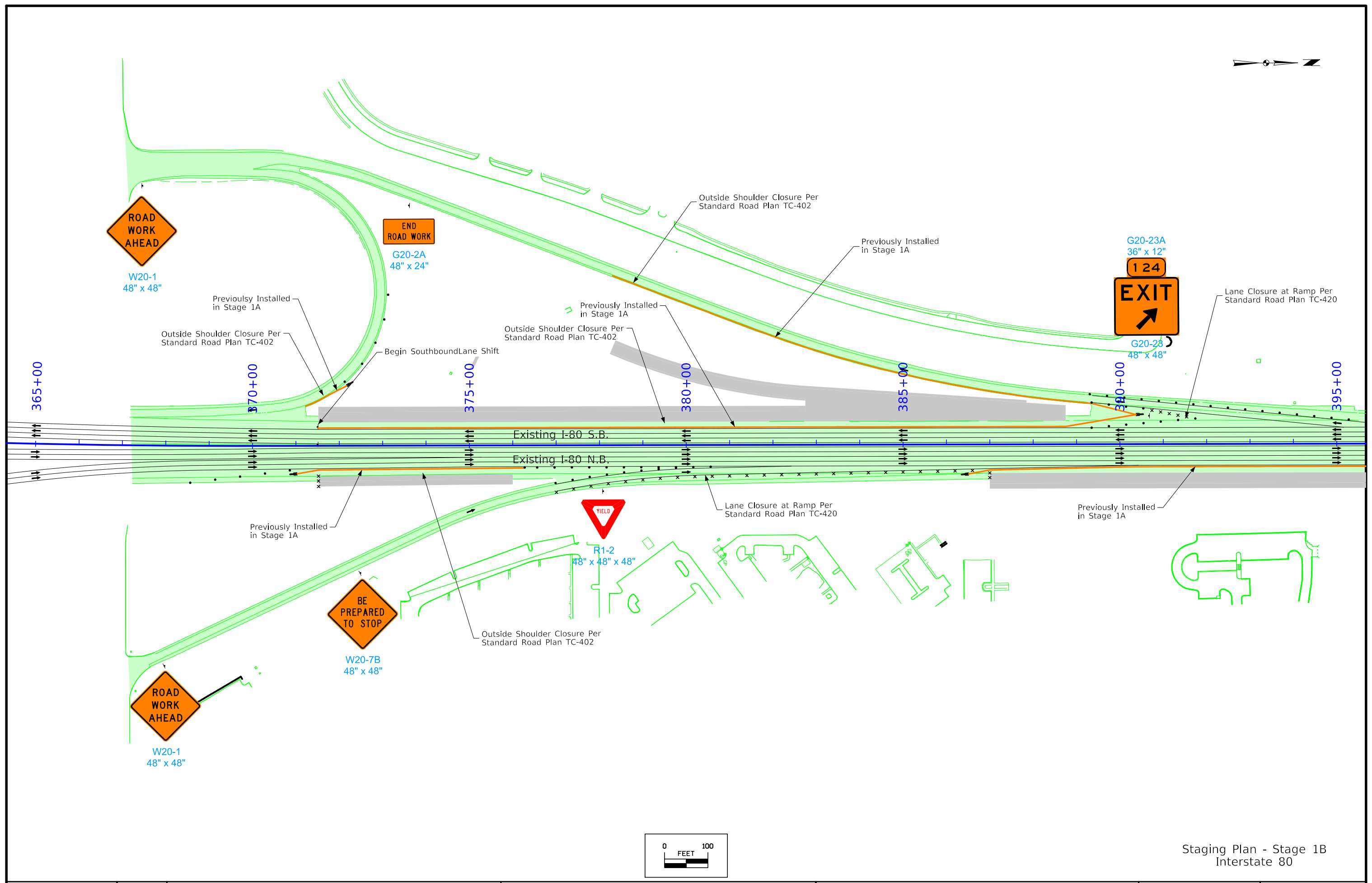


Staging Plan - Stage 1A  
Hickman Road

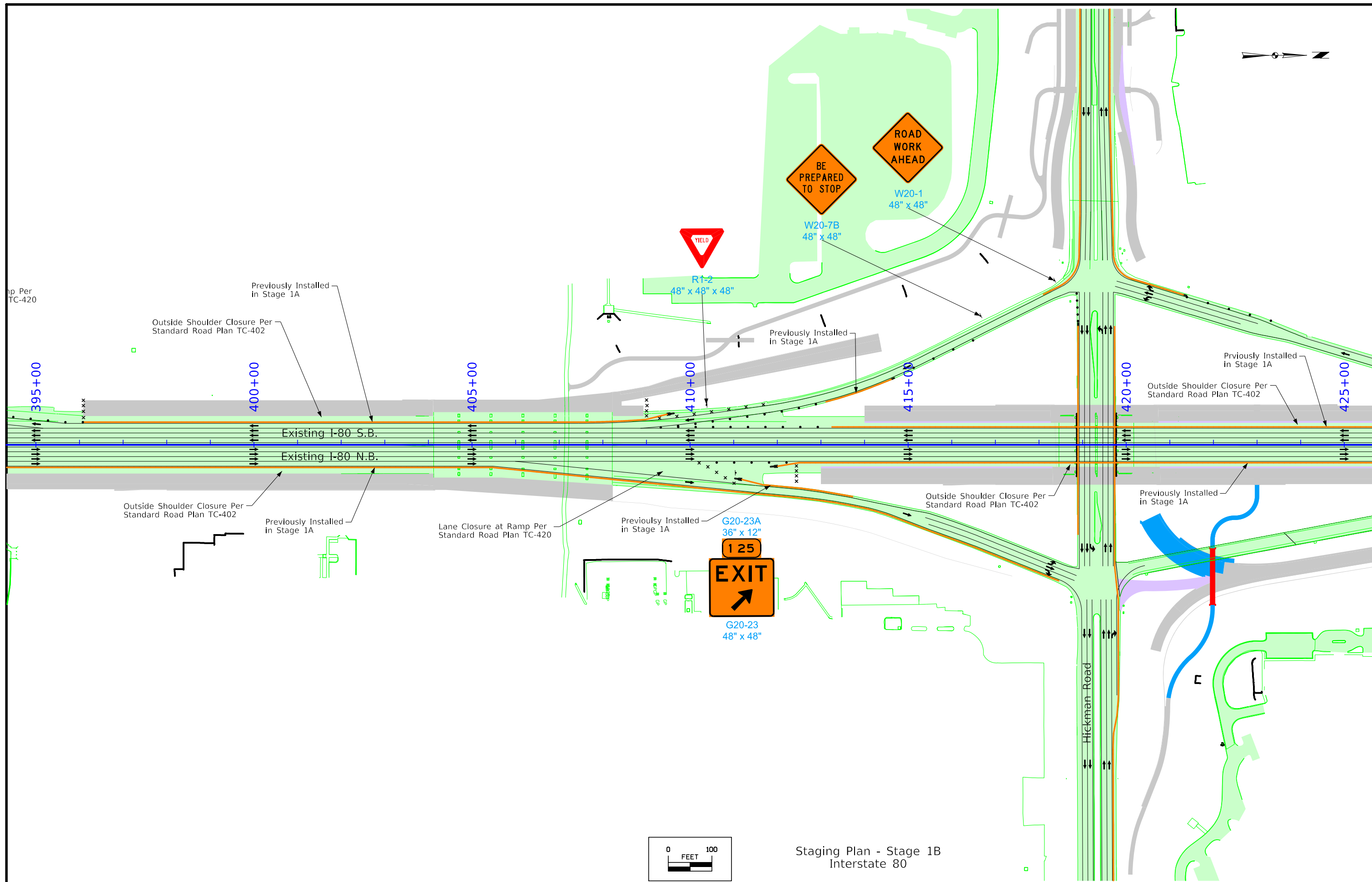




Staging Plan - Stage 1B  
Interstate 80

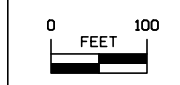
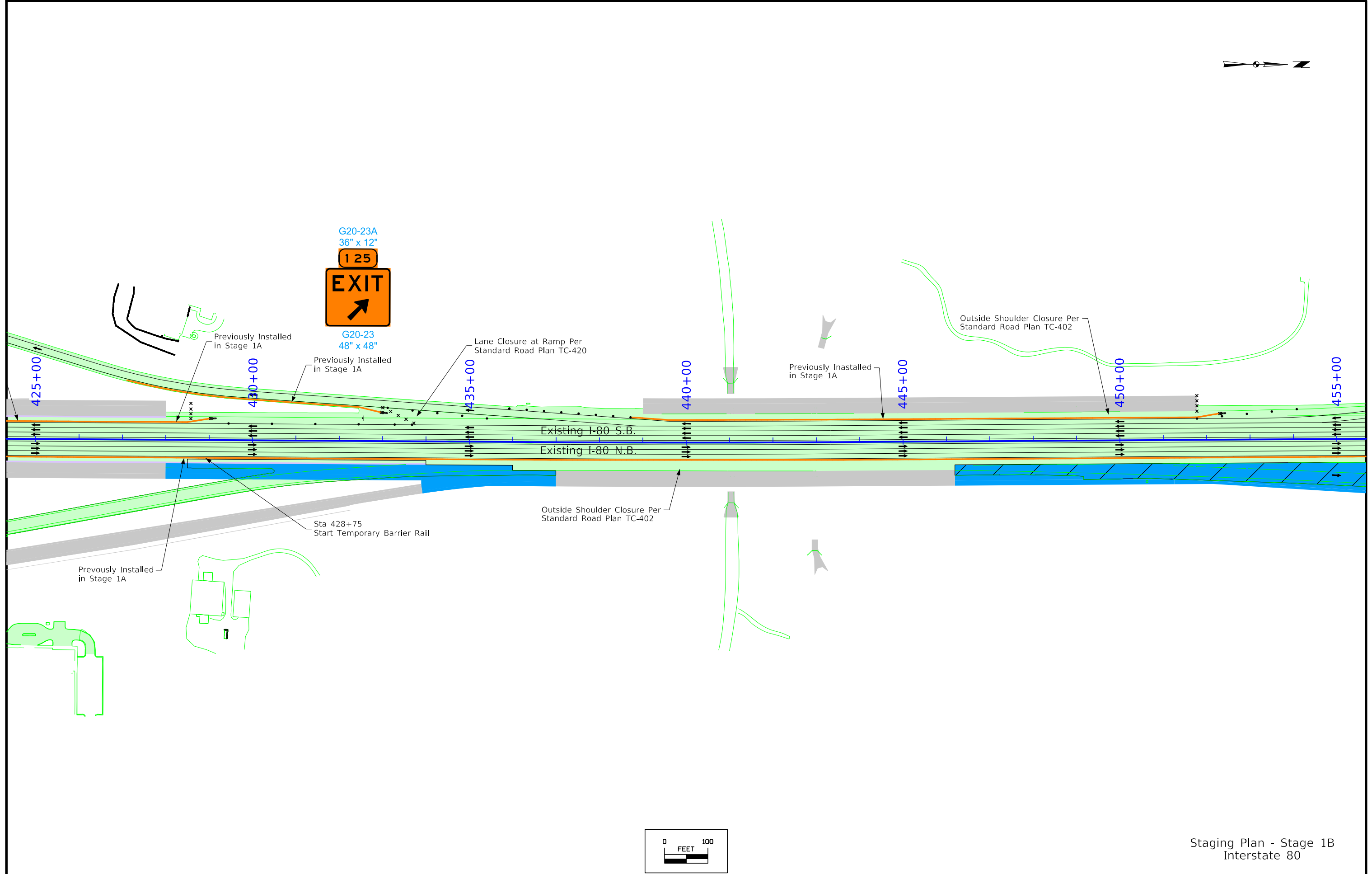


Staging Plan - Stage 1B  
Interstate 80



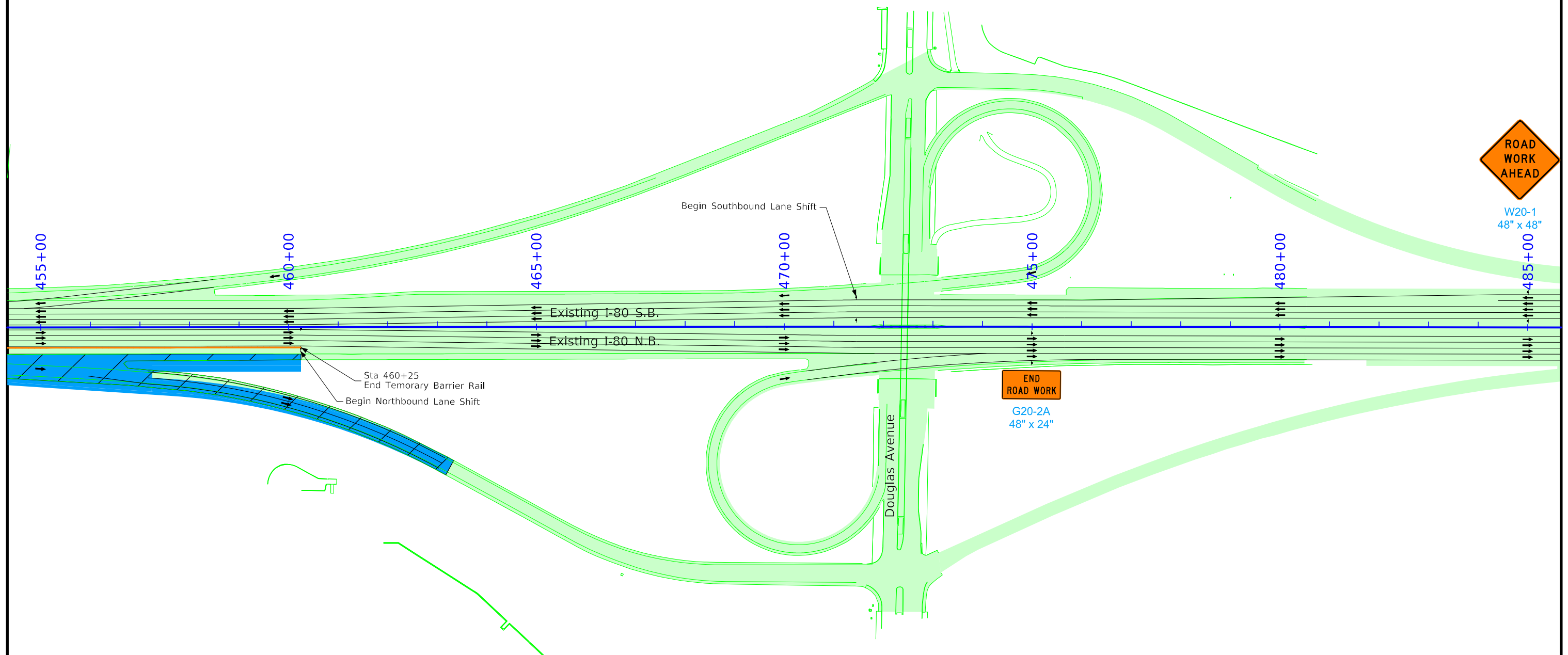
Staging Plan - Stage 1B  
Interstate 80





Staging Plan - Stage 1B  
Interstate 80

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.27
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W20-1  
48" x 48"

Begin Southbound Lane Shift

455+00

460+00

465+00

470+00

475+00

480+00

485+00

Existing I-80 S.B.

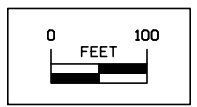
Existing I-80 N.B.

Sta 460+25  
End Temorary Barrier Rail  
Begin Northbound Lane Shift

END  
ROAD WORK

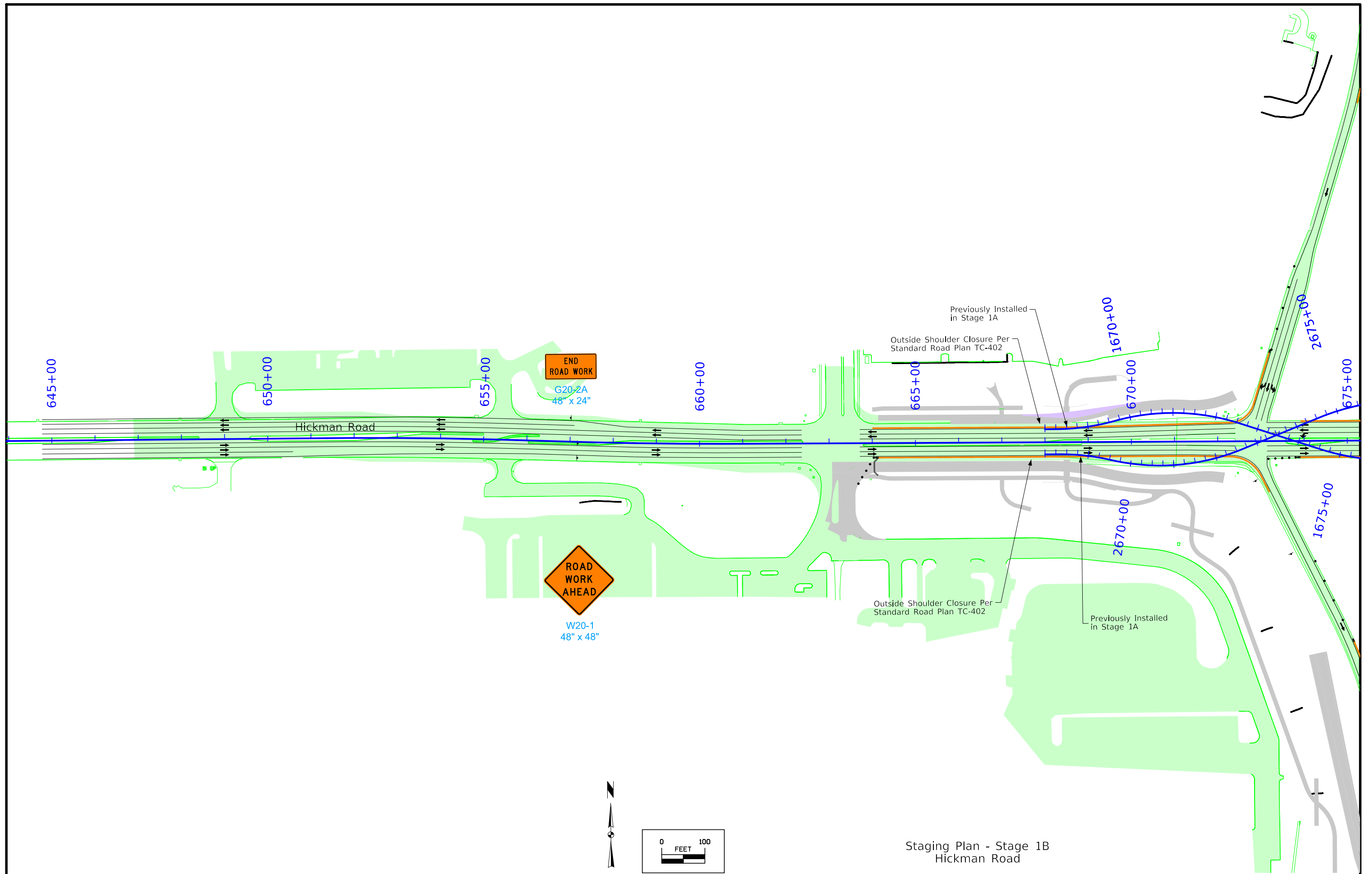
G20-2A  
48" x 24"

Douglas Avenue

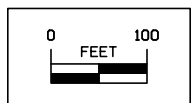


Staging Plan - Stage 1B  
Interstate 80

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.28
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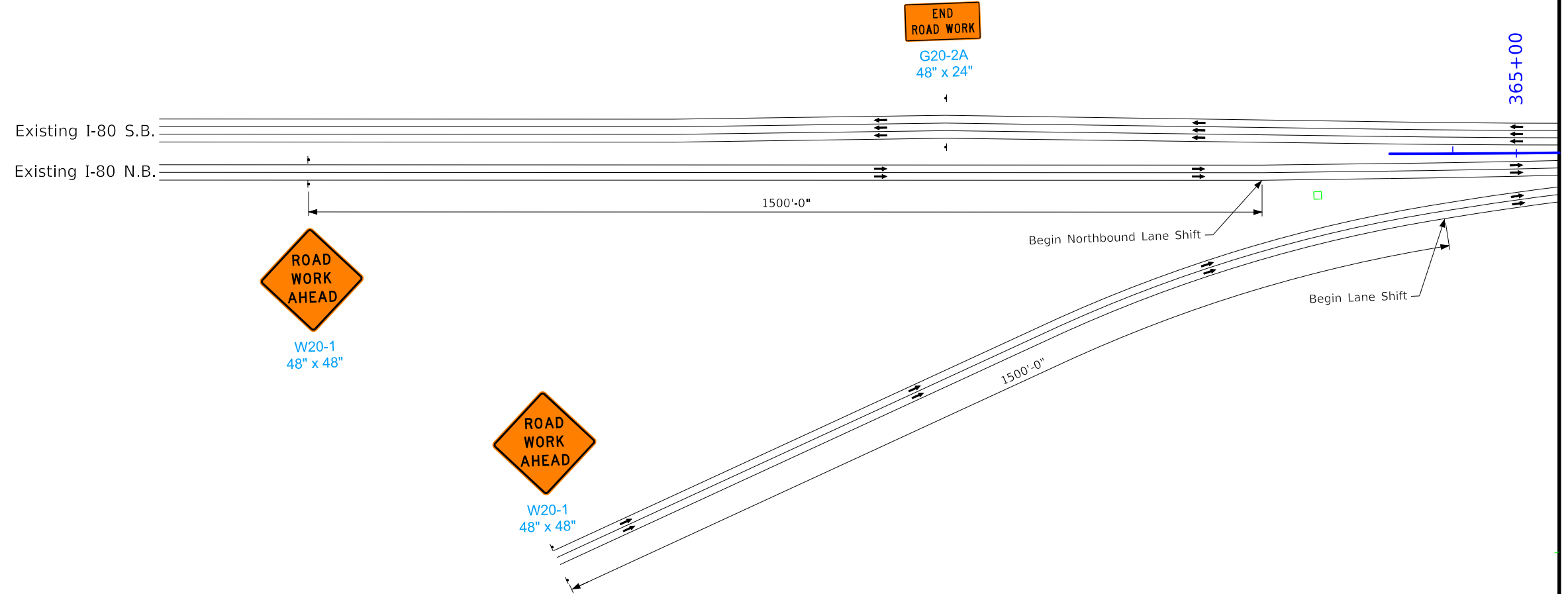
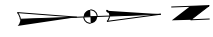


Staging Plan - Stage 1B  
Hickman Road

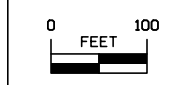
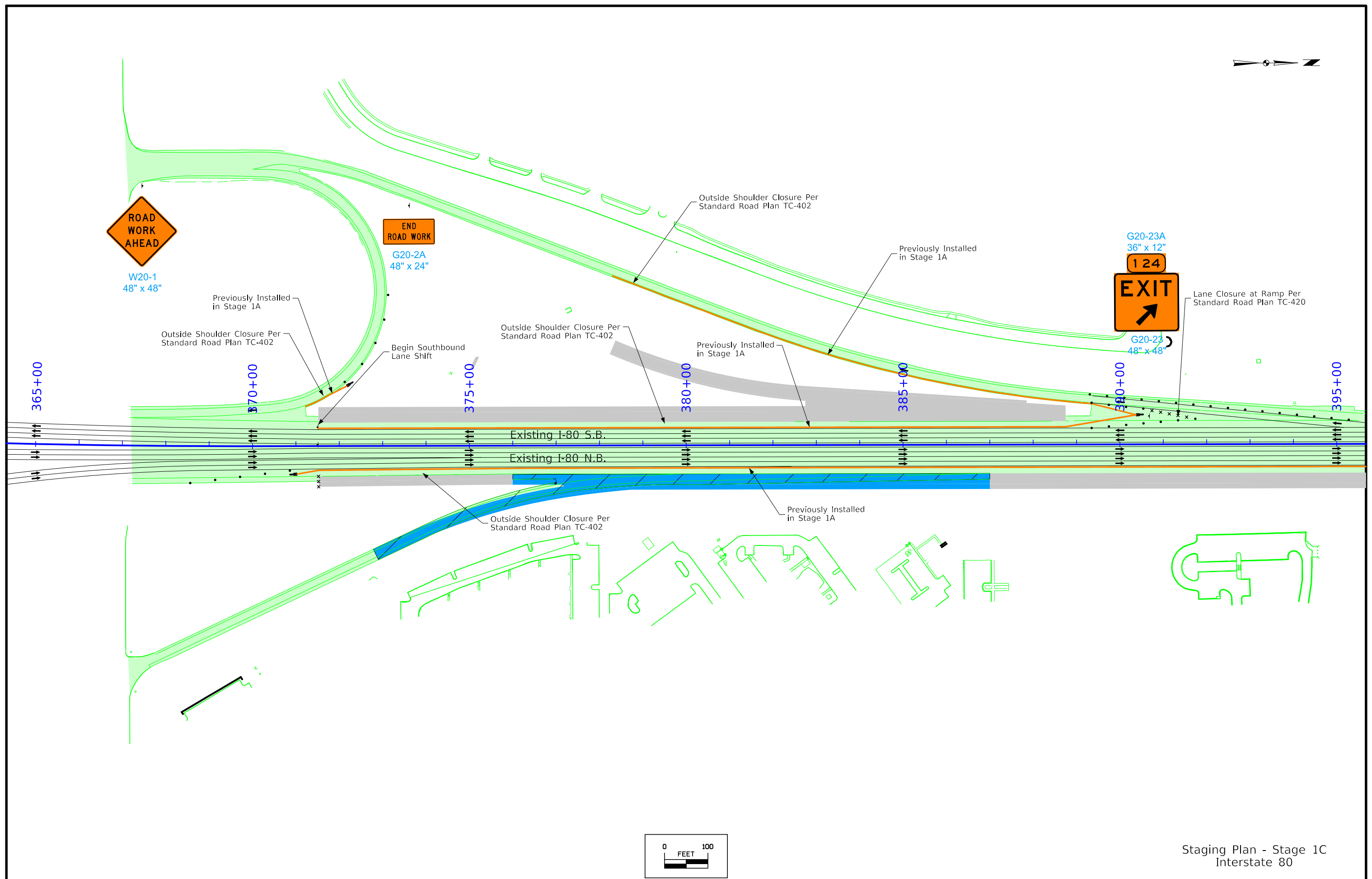








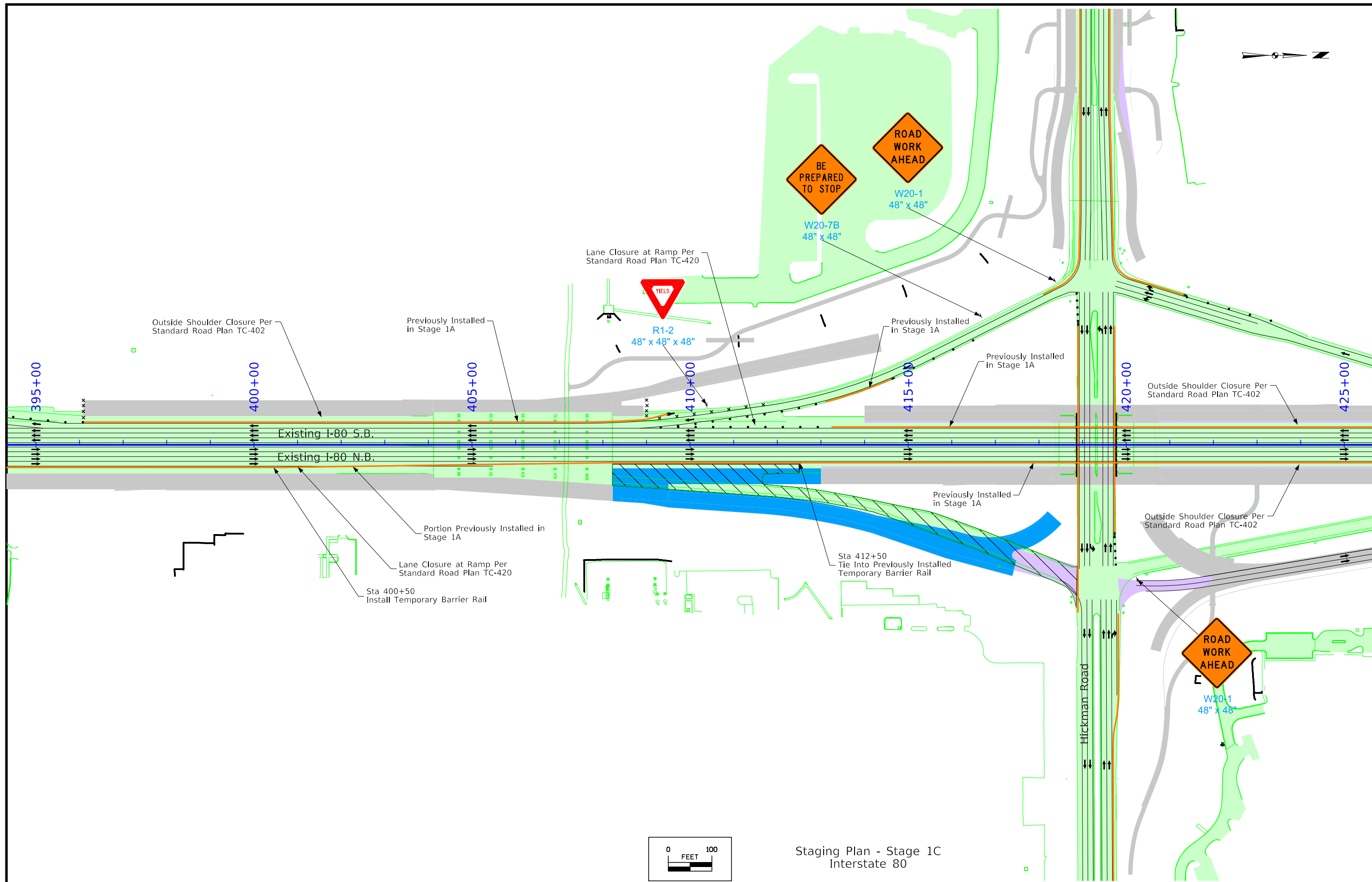
Staging Plan - Stage 1C  
Interstate 80



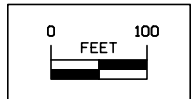
Staging Plan - Stage 1C  
Interstate 80

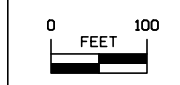
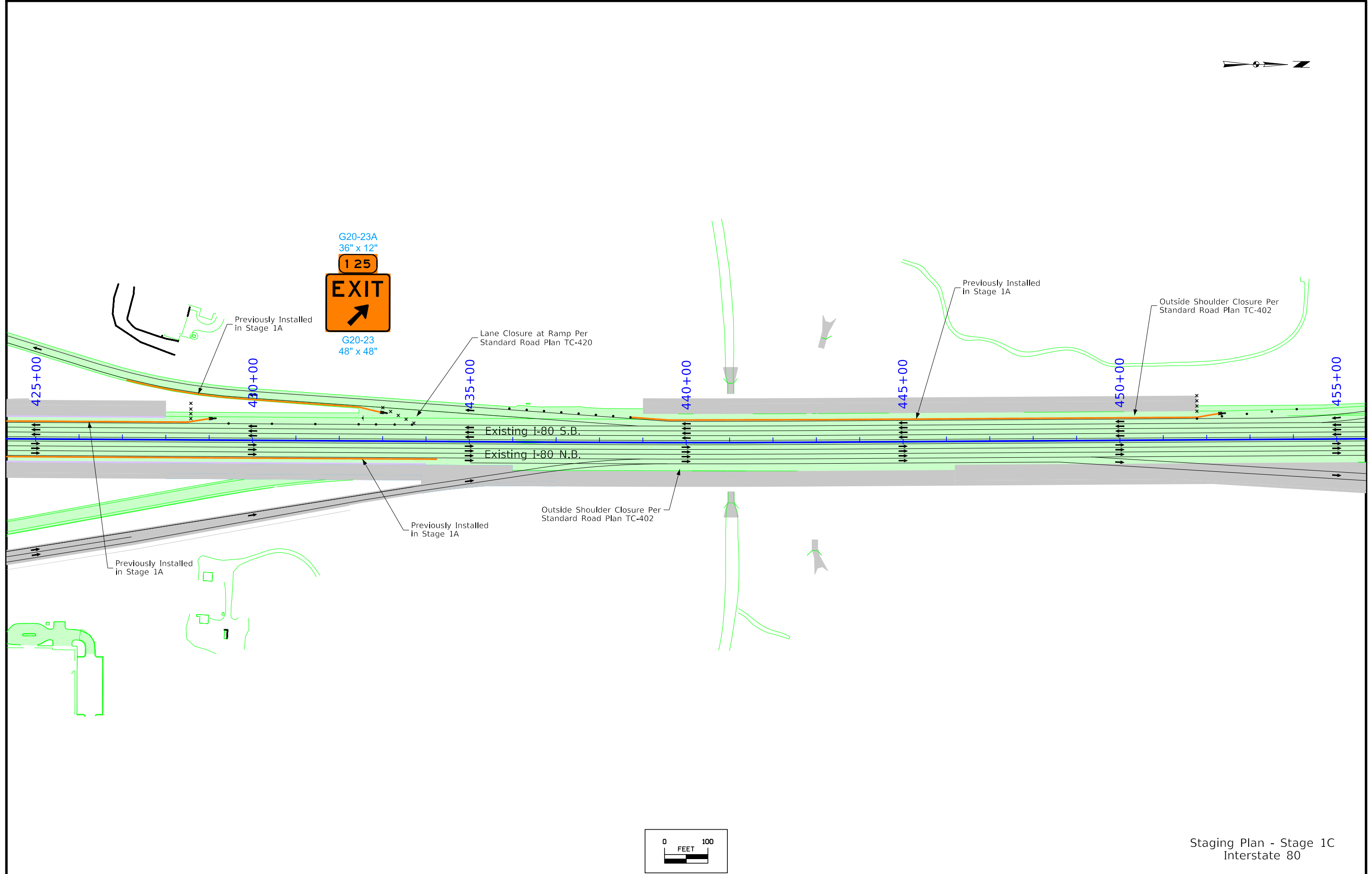
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.32
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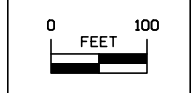
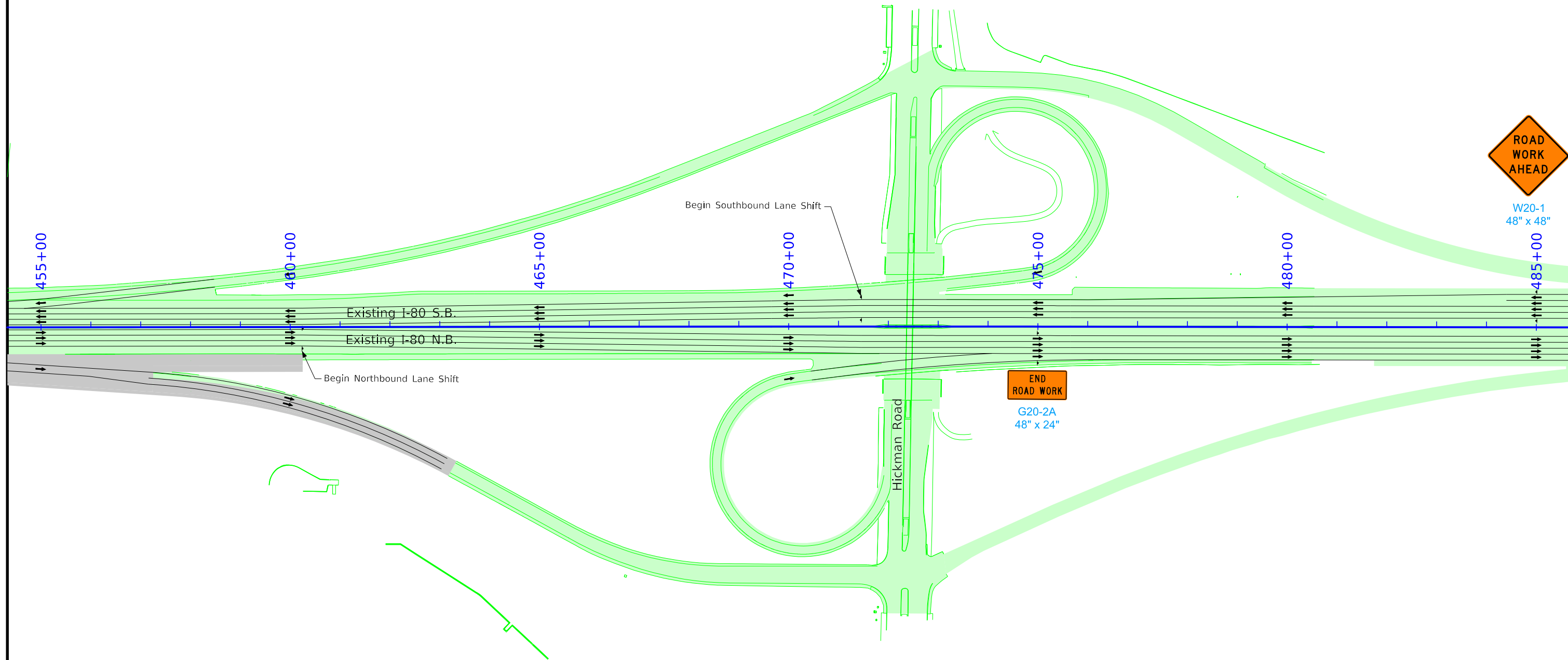
Staging Plan - Stage 1C  
Interstate 80





Staging Plan - Stage 1C  
Interstate 80

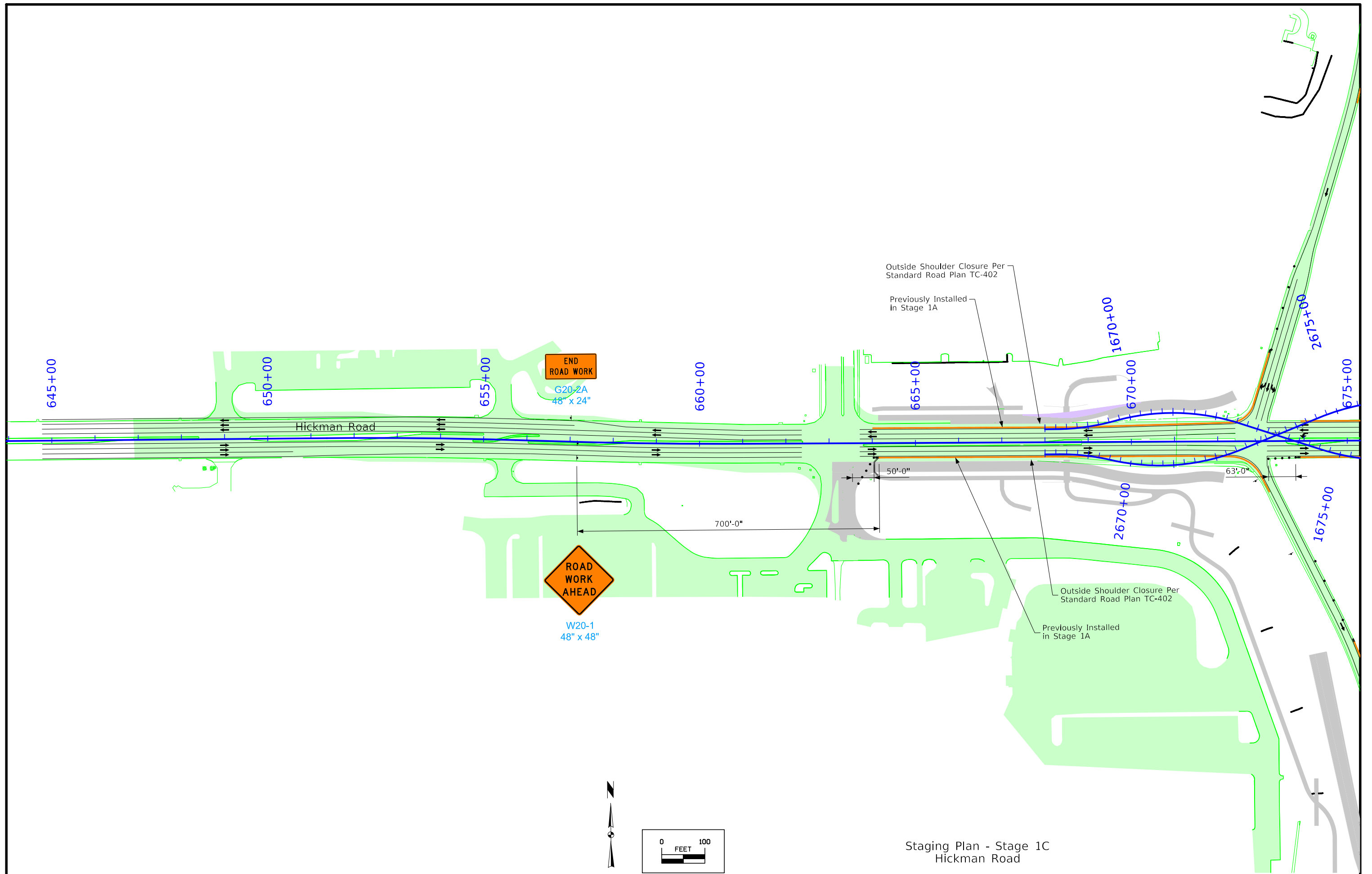
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.34
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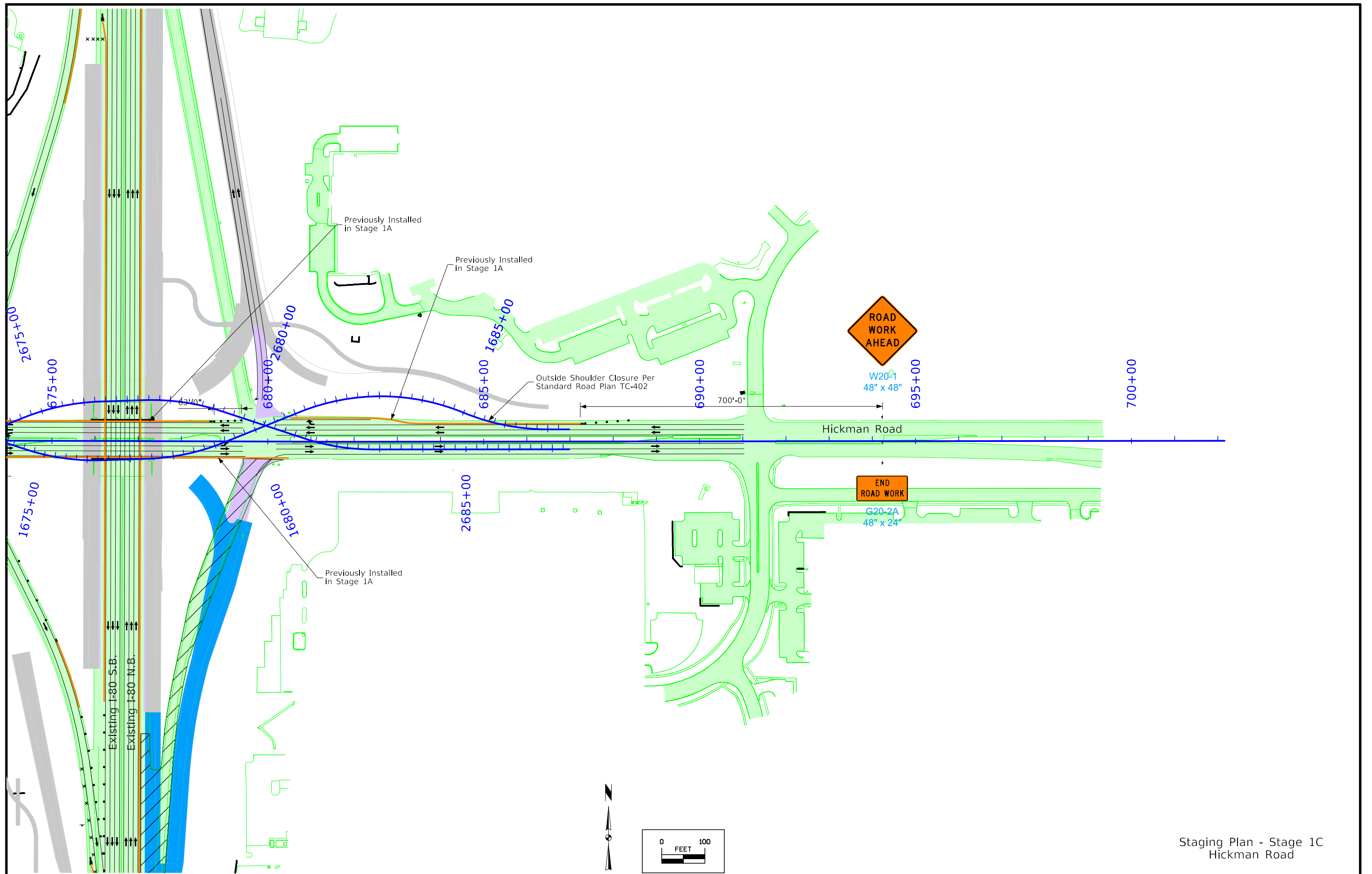


Staging Plan - Stage 1C  
Interstate 80

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.35
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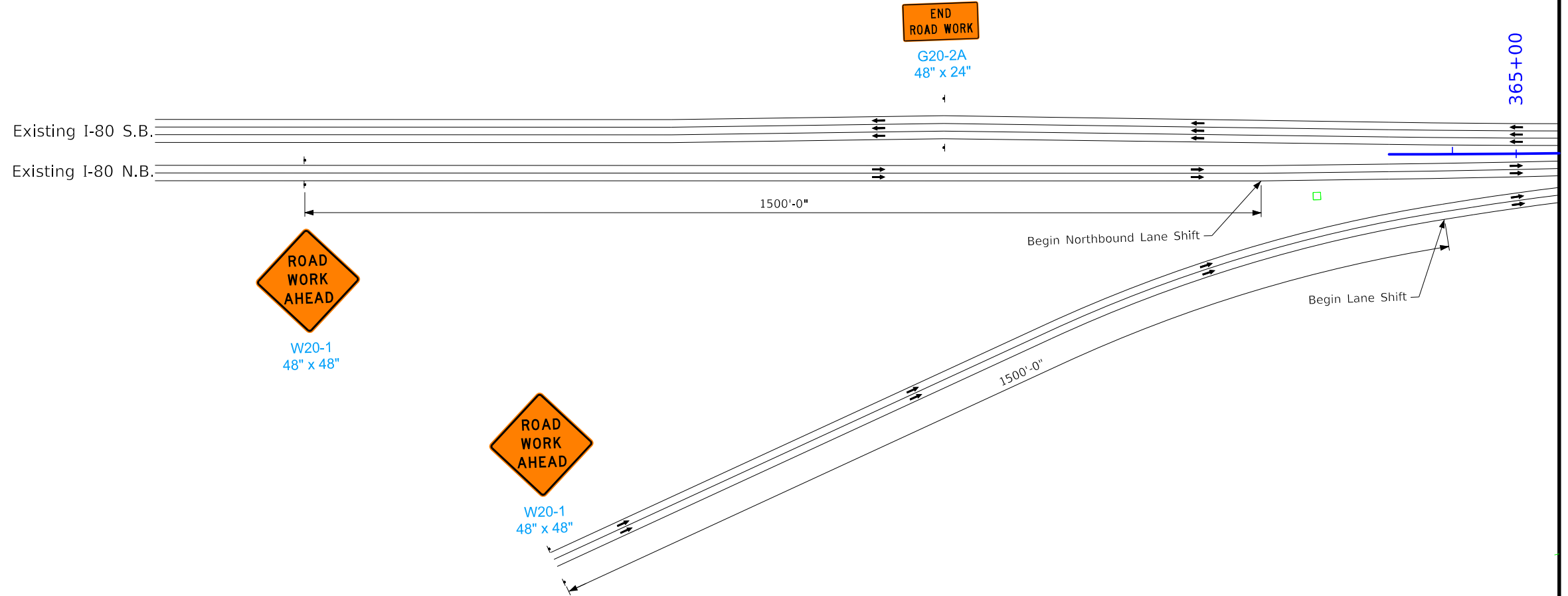
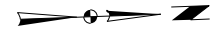




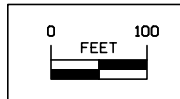


Staging Plan - Stage 1C  
Hickman Road

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.37
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Staging Plan - Stage 1D  
Interstate 80







W20-1  
48" x 48"

Previously Installed  
in Stage 1A

Outside Shoulder Closure Per  
Standard Road Plan TC-402

Begin Southbound Lane Shift

Outside Shoulder Closure Per  
Standard Road Plan TC-402

Portion Previously Installed  
in Stage 1A

Sta 388+75  
Install Temporary  
Barrier Rail

Lane Closure at Ramp Per  
Standard Road Plan TC-420

365+00

370+00

375+00

380+00

385+00

390+00

395+00

Existing I-80 S.B.

Existing I-80 N.B.



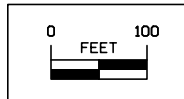
R1-2  
48" x 48" x 48"



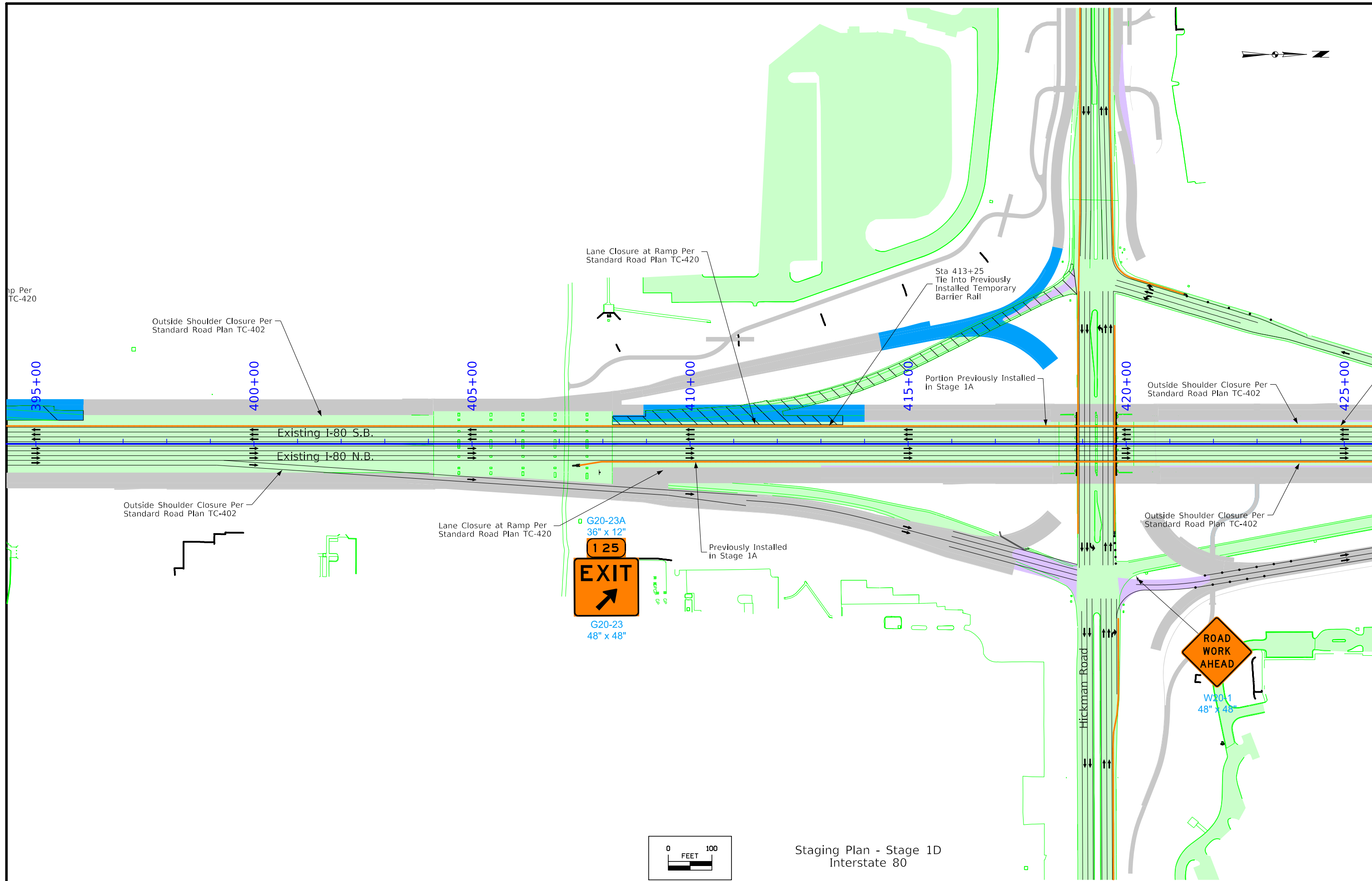
W20-7B  
48" x 48"



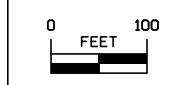
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48" x 48"

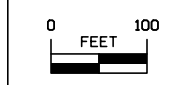
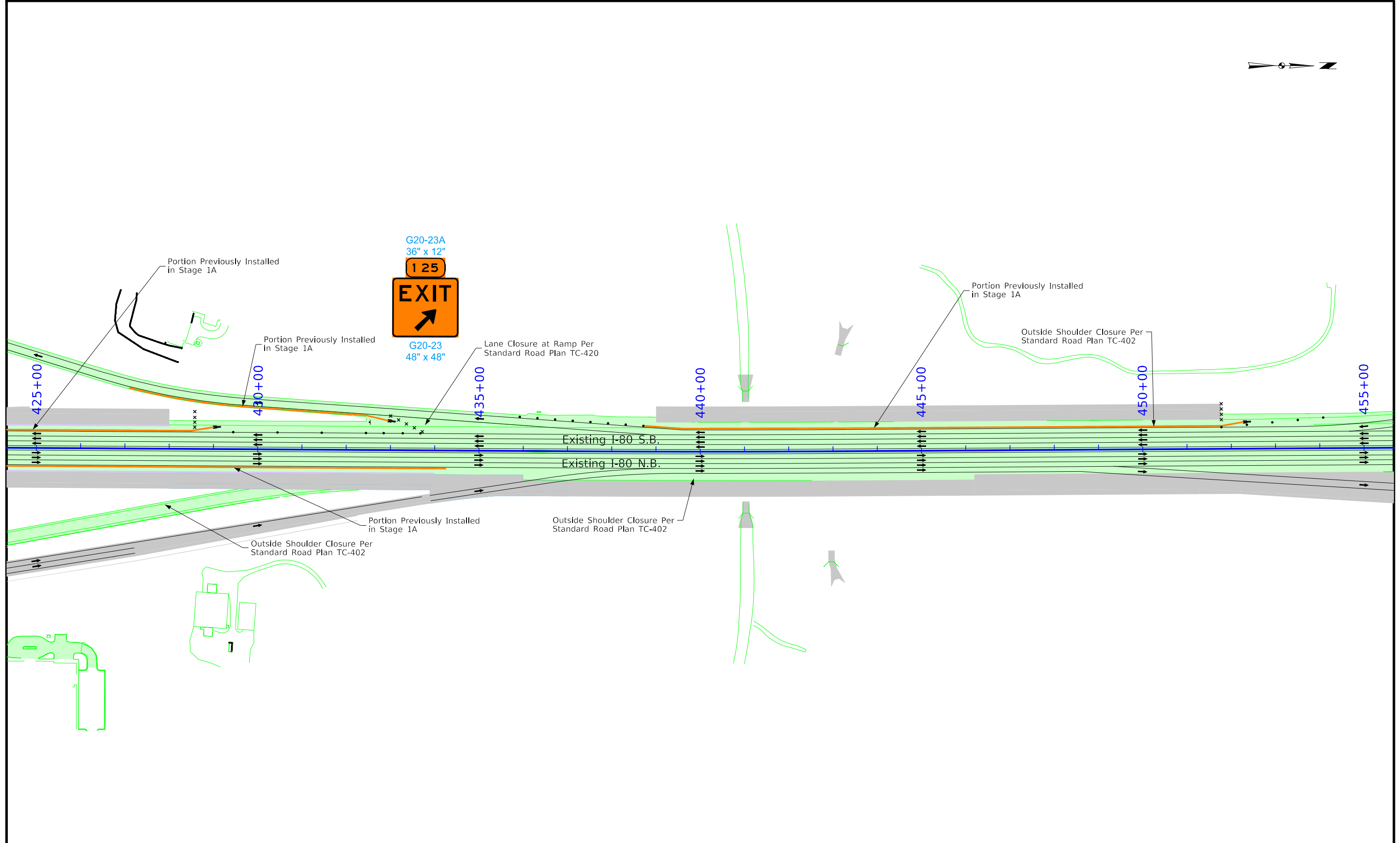


Staging Plan - Stage 1D  
Interstate 80



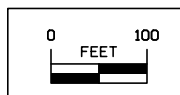
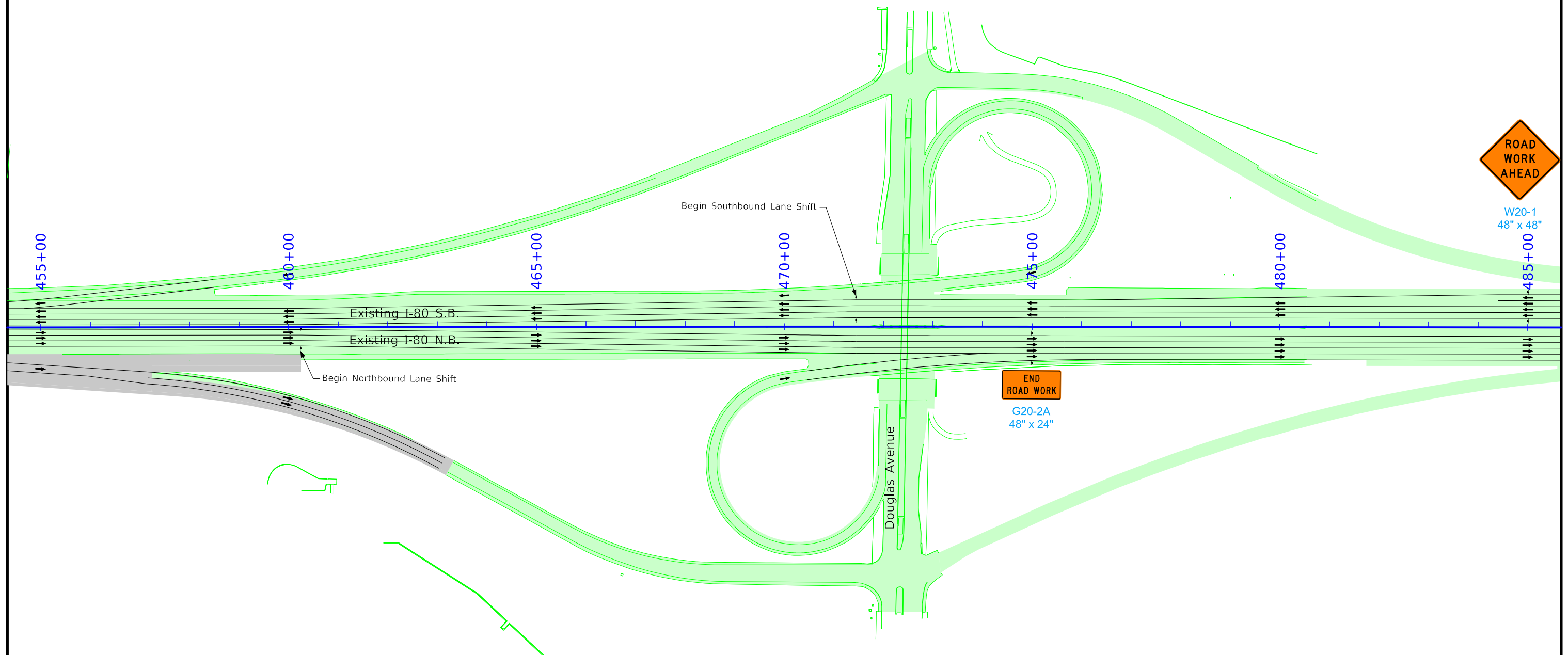
Staging Plan - Stage 1D  
Interstate 80





Staging Plan - Stage 1D  
Interstate 80

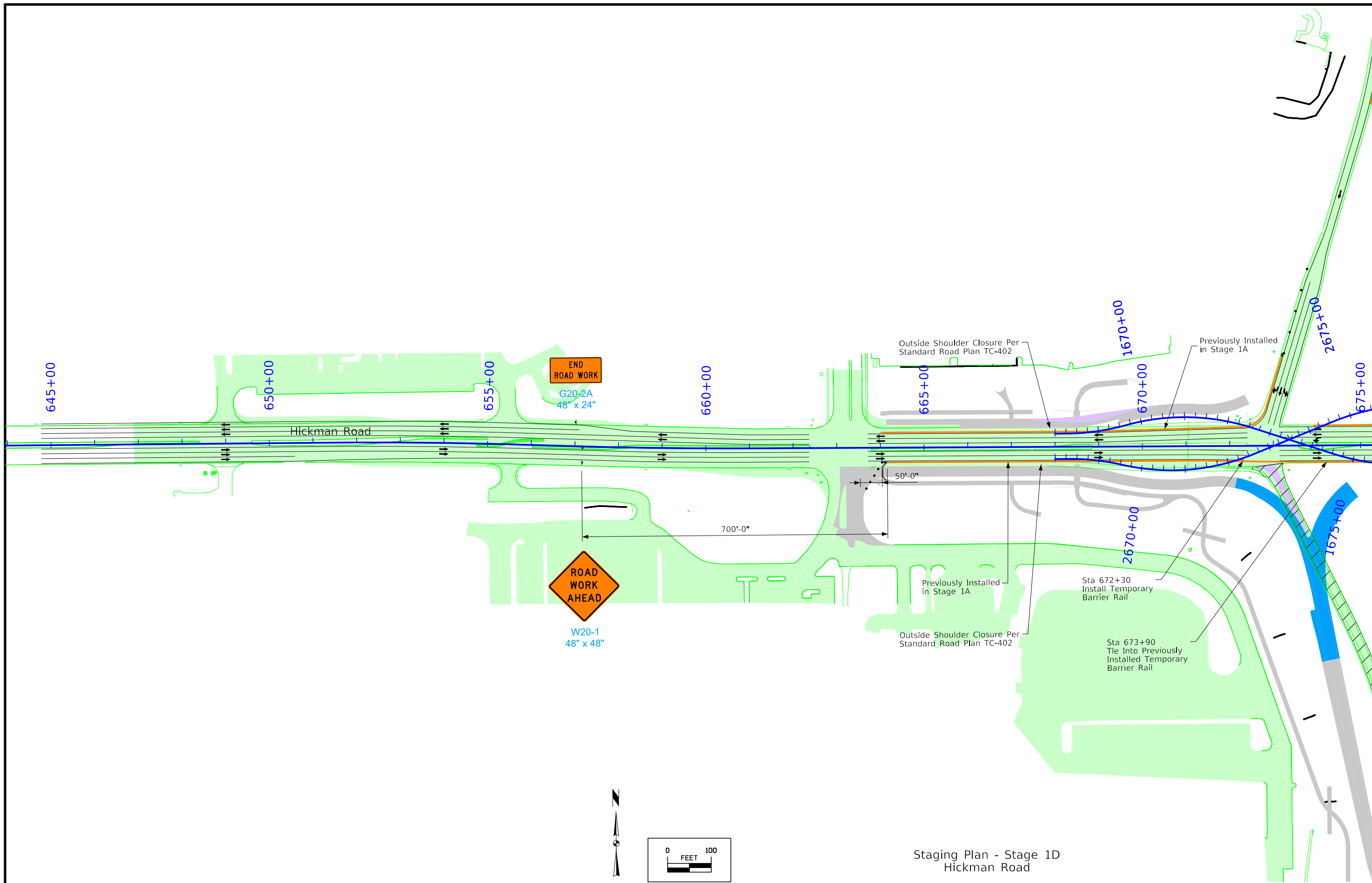
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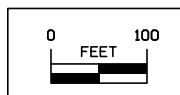
Staging Plan - Stage 1D  
Interstate 80

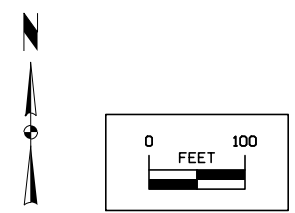
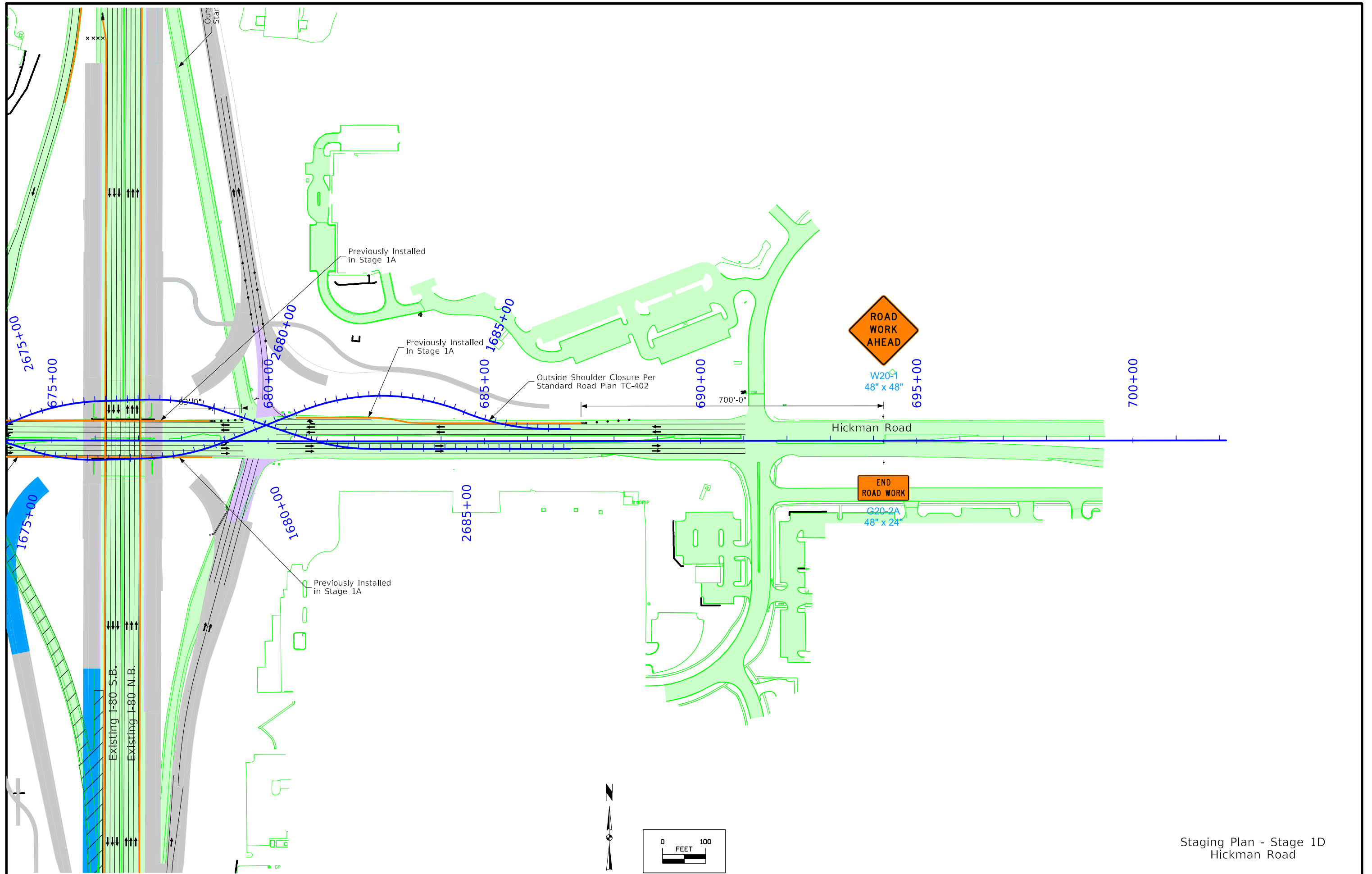
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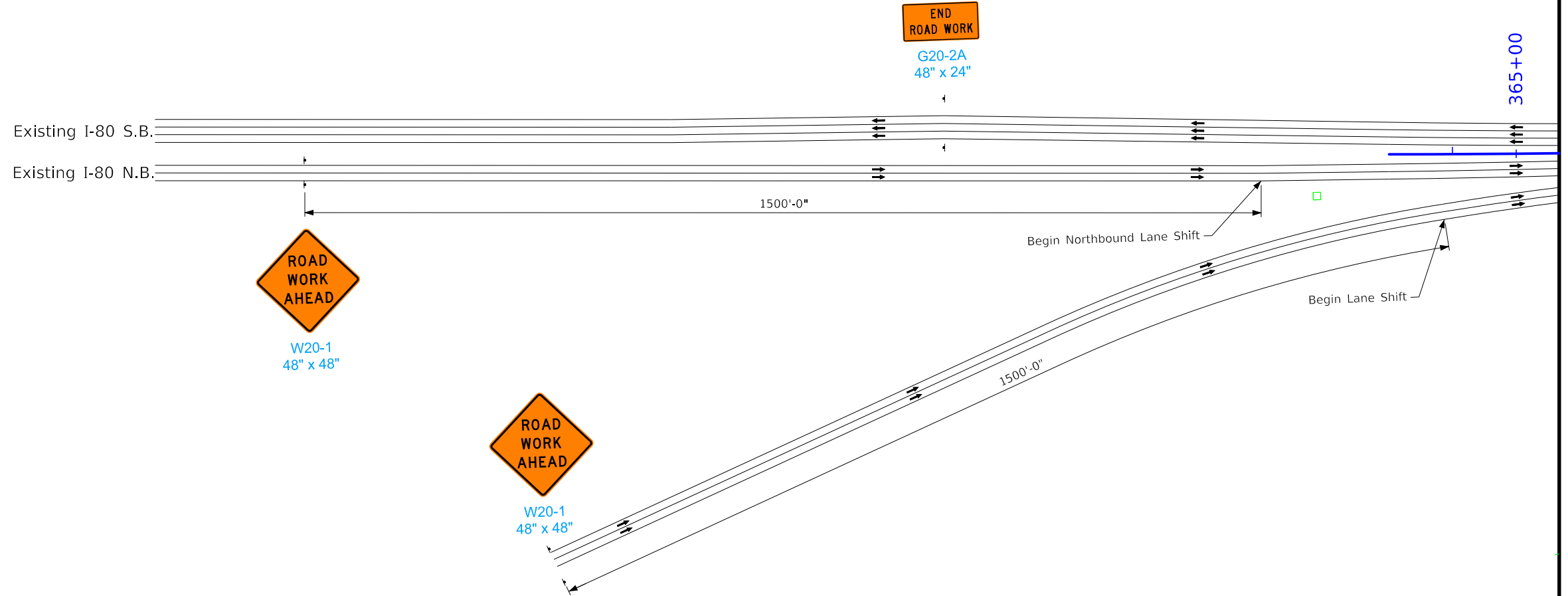
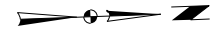
Staging Plan - Stage 1D  
Hickman Road



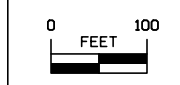
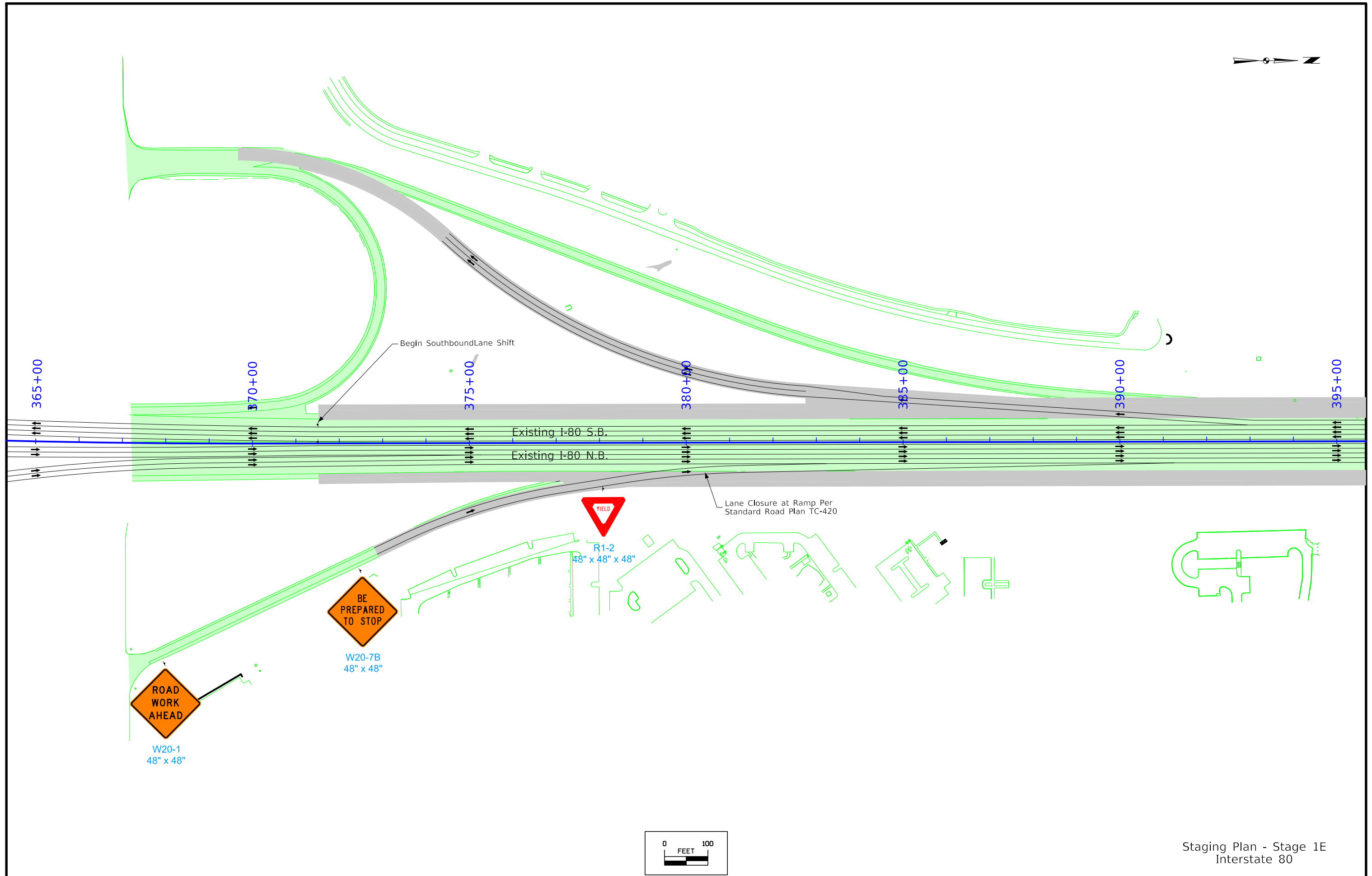


Staging Plan - Stage 1D  
Hickman Road

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.44
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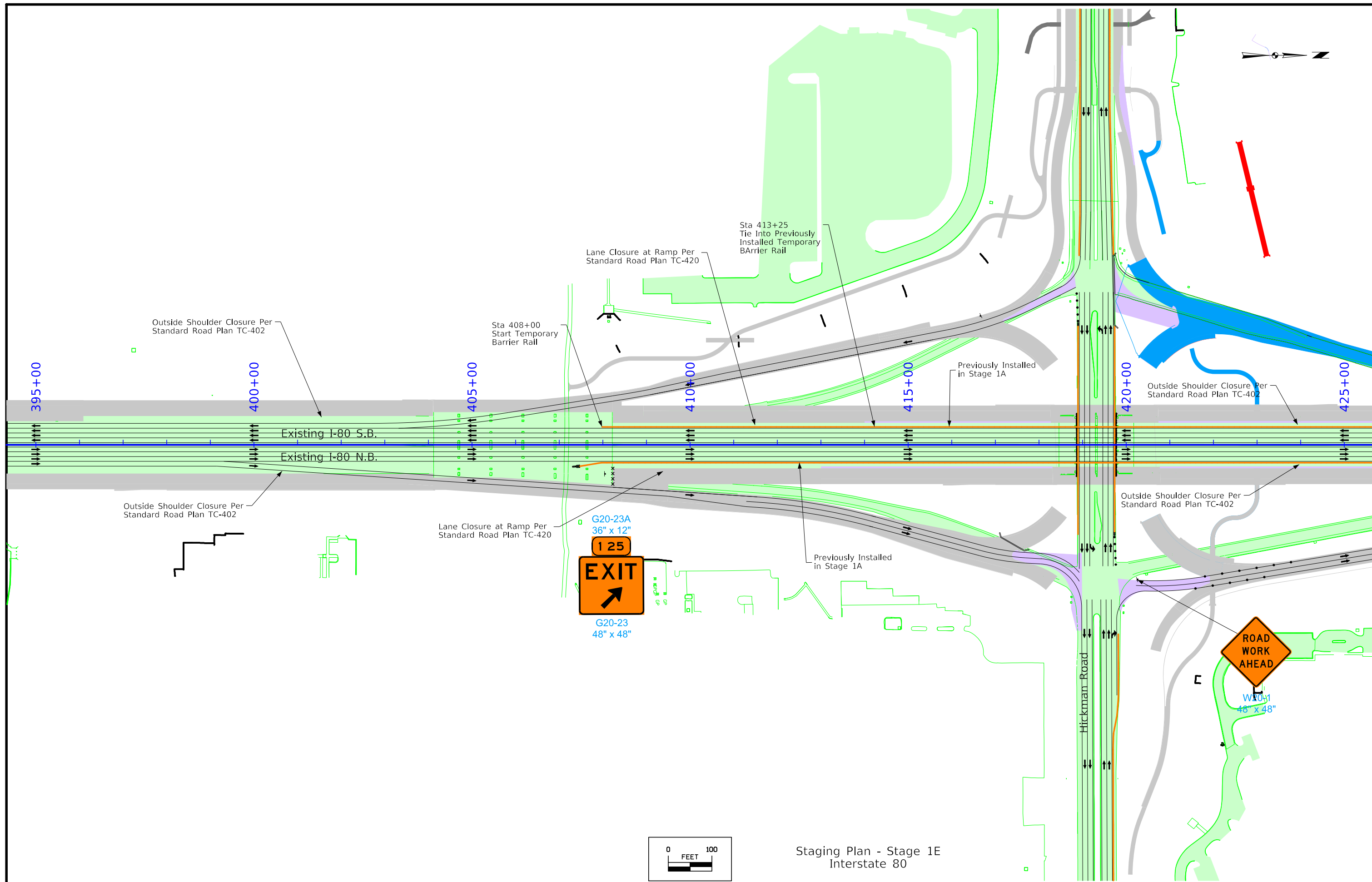
Staging Plan - Stage 1E  
Interstate 80



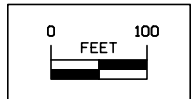
Staging Plan - Stage 1E  
Interstate 80

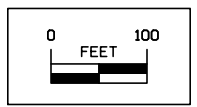
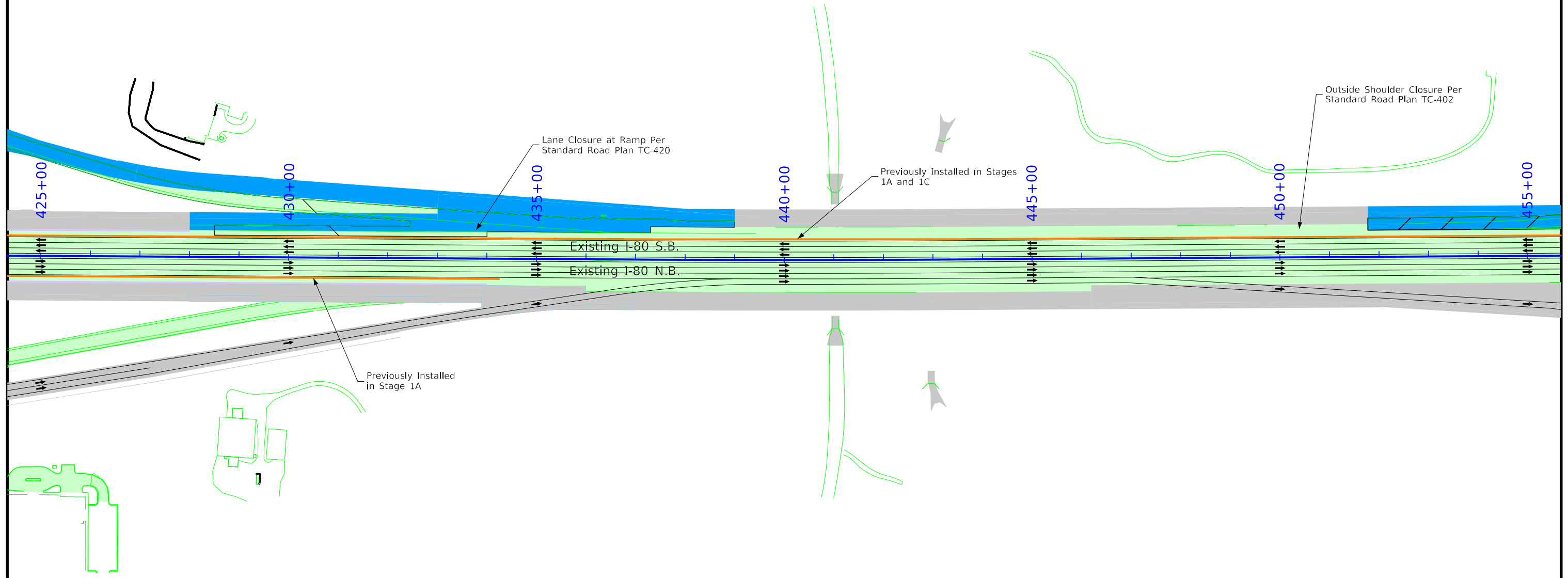
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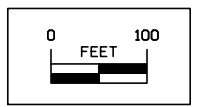
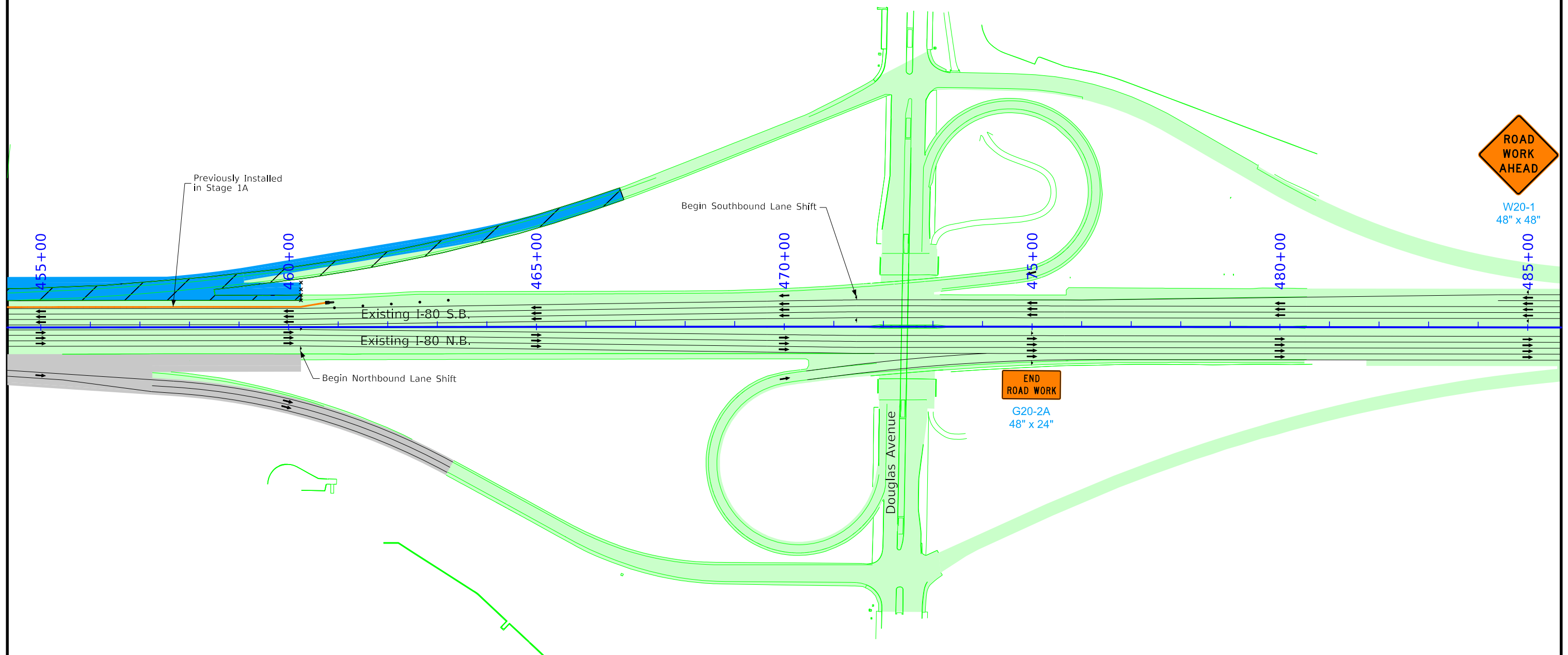


Staging Plan - Stage 1E  
Interstate 80



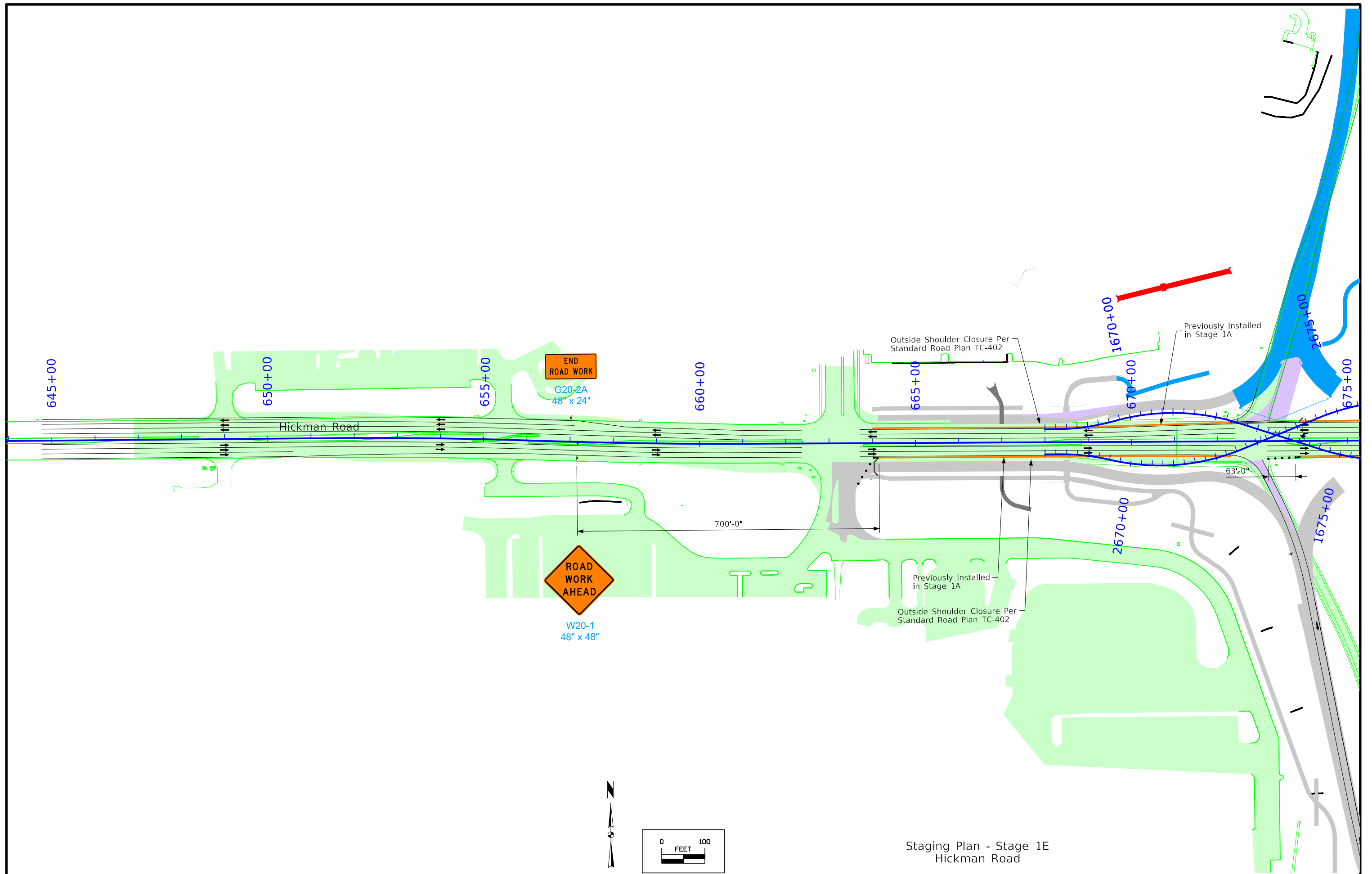


Staging Plan - Stage 1E  
Interstate 80



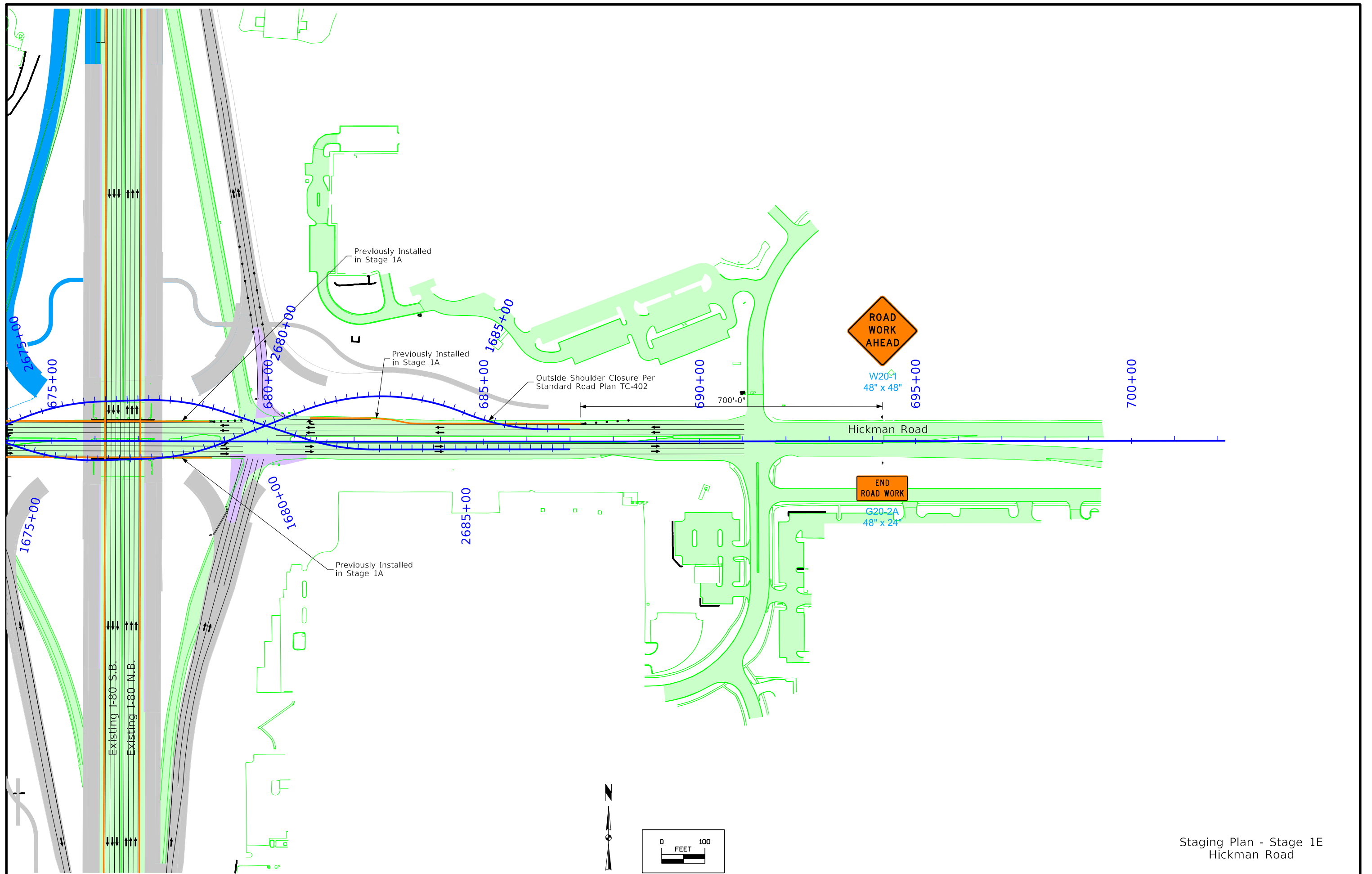
Staging Plan - Stage 1E  
Interstate 80

FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER J.49
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Staging Plan - Stage 1E  
Hickman Road





Staging Plan - Stage 1E  
Hickman Road

### SURVEY SYMBOLS

	Interstate Highway Symbol		Septic Tank
	U.S. Highway Symbol		Cistern
	Iowa Highway Symbol		L.P. Gas Tank (No Footing)
	County Road Highway Symbol		Underground Storage Tank
	Evergreen Tree		Latrine
	Deciduous Tree		Satellite TV Dish
	Fruit Tree		Water Hook Up
	Shrub (Bushes)		Radio Tower
	Timber		Tower Anchor
	Hedge		Guardrail (Beam or Cable)
	Stump		Guard Post (one or two)
	Swamp		Guard Post (over two)
	Rock Outcrop		Filler Pipe
	Broken Concrete		Gas Valve
	Revetment (Rip Rap)		Water Valve
	Cemetery		Speed Limit Sign
	Grave		Mile Marker Post
	Cave		Sign
	Sink Hole		Traffic Signal Control Box
	Board Fence		Rail Road Signal Control Box
	Chain Link or Security Fence		Telephone Switch Box
	Wire Fence		Electric Box
	Terrace		
	Earth Dam or Dike (Existing)		
	Tile Outlet		
	Edge of Water		
	Existing Drainage		
	Right of Way Rail or Lot Corner		
	Concrete Monument		
	Well		
	Windmill		
	Beehive Intake		
	Existing Intake		
	Existing Utility Access (Manhole)		
	Fire Hydrant		
	Water Hydrant (Rural)		

### UTILITY LEGEND

	(M52G) MIDAMER-GAS
	Contact Name : Craig Ranfeld
	Contact Phone: 5152526632
	Contact Email: MECDSMDesignLocates@midamerican.com
	(ADB) ADB COMPANIES
	Contact Name : ANGIE BACH
	Contact Phone: 6365849702
	Contact Email: abach@adb-us.com
	(CLV) CLIVE, CITY OF
	Contact Name : Jared Acheson
	Contact Phone: 5152236231
	Contact Email: rowpermits@cityofclive.com
	(CTLIA01) CENTURYLINK
	Contact Name : Tom Sturmer
	Contact Phone: 3034539927
	Contact Email: Thomas.sturmer@centurylink.com
	(DWR) DES MOINES METRO WASTEWATER
	Contact Name : Nick Carter
	Contact Phone: 5153238135
	Contact Email: nfcarter@dmgov.org
	(DWW) DES MOINES WATER WORKS
	Contact Name : Chris Mlynarik or Jana Hodges
	Contact Phone: 5152838729
	Contact Email: onecallmaps@dmww.com
	(ENV) CONSOLIDATED COMMUNICATIONS
	Contact Name : Justin Grev
	Contact Phone: 5073863606
	Contact Email: Justin.grev@consolidated.com
	(ICN) IOWA COMMUNICATIONS NETWORK
	Contact Name : Shannon Marlow
	Contact Phone: 8005723940
	Contact Email: icnoutsideplantiowaonecall@iowa.gov
	(IDT) IOWA DOT
	Contact Name : Jason Dale
	Contact Phone: 5152391995
	Contact Email: DOT-IOC-Traffic@iowadot.us
	(INS) AUREON NETWORK SERVICES
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	Contact Phone: 5158300445
	Contact Email: jeff.klocko@areon.com
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	Contact Email: MECDSMDesignLocates@midamerican.com
	(MC1) VERIZON
	Contact Name : John Bachelder
	Contact Phone: 9727297000
	Contact Email: john.bachelder@verizon.com
	(T15) MEDIACOM COMMUNICATIONS CORP
	Contact Name : Paul May
	Contact Phone: 5152462252
	Contact Email: pmay@mediacomcc.com
	(UPN) UNITE PRIVATE NETWORKS, LLC
	Contact Name : Joe Kilzer
	Contact Phone: 8164253556
	Contact Email: upngls@upnfiber.com
	(URB) CITY OF URBANDALE
	Contact Name : Tyler Casey
	Contact Phone: 5152783950
	Contact Email: tcasey@urbandale.org
	(UWD) URBANDALE WATER UTILITY
	Contact Name : Dale Acheson
	Contact Phone: 5152783940
	Contact Email: dacheson@urbandalewater.org
	(W16) IOWA DOT
	Contact Name : Scott Smyth
	Contact Phone: 5152505290
	Contact Email: scott.smyth@iowadot.us
	(WDM) WEST DES MOINES WATER WORKS
	Contact Name : William Mabuca
	Contact Phone: 5152223510
	Contact Email: design_locates@wdmww.com
	(WDT) WEST DES MOINES TRAFFIC
	Contact Name : Jim Dickinson
	Contact Phone: 5152223482
	Contact Email: Jim.Dickinson@wdm.iowa.gov
	(WNIA) WINDSTREAM COMMUNICATIONS
	Contact Name : LOCATE DESK
	Contact Phone: 8002891901
	Contact Email: LOCATE.DESK@WINDSTREAM.COM
	(ZAY) ZAYO GROUP LLC
	Contact Name : George Huss
	Contact Phone: 4434032023
	Contact Email: venus.minucciani@zayo.com

### PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
SHADING		Design Color No.
Lavender	(9)	Temporary Pavement Shading
Yellow	(4)	Proposed Pavement Shading
Orange	(6)	Proposed Granular Shading
Orange	(70)	Proposed Shoulder Granular Shading
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading
Yellow	(132)	Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Orange, Light	(134)	Proposed Granular Entrance Shading
Yellow	(220)	Proposed Paved Entrance Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Green, Light	(225)	Existing Pavement Shading
Red	(3)	Proposed Structure Shading
Red	(3)	Delineates Restricted Areas

### PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.
Green	(10)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Black	(0)	Proposed Ditch Grades, Median
Rust	(14)	Proposed Ditch Grades, Right

Reference Point	
	Survey Line
	Section Corner
	Ground Line Intercept
	Saw Cut
	Guardrail
	Trench Drain
	High Tension Cable Guardrail
	Sheet Pile
	Pavement Removal
	Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND	
	Proposed Right-of-Way
	Existing Right of Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Easement (Temporary)
	Easement
	Access Control
	Property Line

## PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

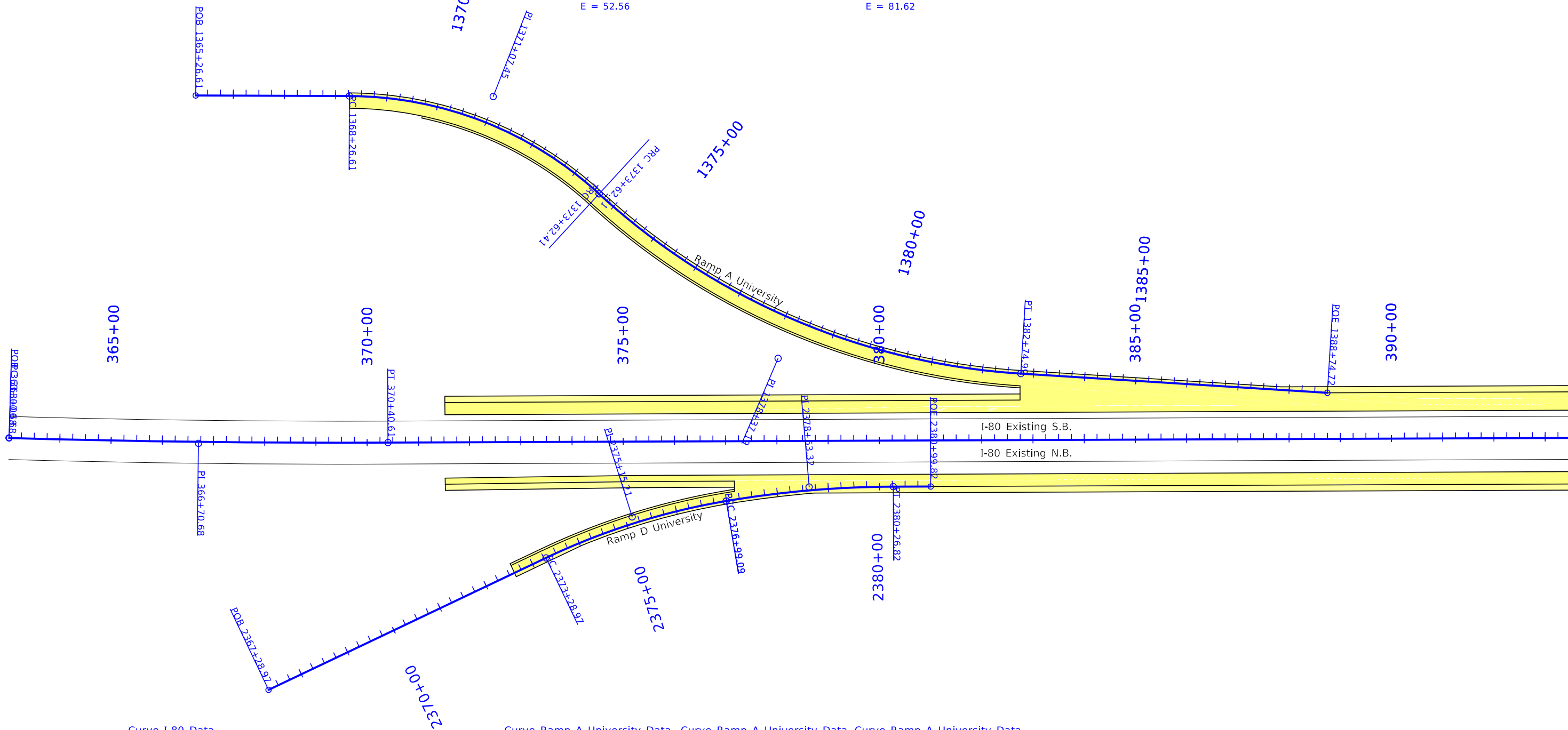
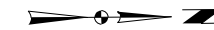
(COVERS SHEET SERIES D, E, F, & K)

WEBSTER TWP.  
T-79N R-25W  
SEC. 6  
City of West  
Des Moines

WEBSTER TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

Curve Ramp A University Data  
 $\Delta = 42^\circ 24' 08.56''$  (RT)  
 T = 280.84  
 L = 535.80  
 R = 724.00  
 E = 52.56

Curve Ramp A University Data  
 $\Delta = 39^\circ 01' 11.45''$  (LT)  
 T = 474.78  
 L = 912.57  
 R = 1340.00  
 E = 81.62

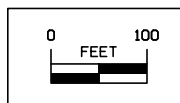


Curve I-80 Data  
 $\Delta = 01^\circ 51' 00.00''$  (LT)  
 T = 370.00  
 L = 739.93  
 R = 22916.27  
 E = 2.99

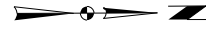
Curve Ramp A University Data  
 $\Delta = 15^\circ 49' 31.66''$  (RT)  
 T = 186.24  
 L = 370.12  
 R = 1340.00  
 E = 12.88

Curve Ramp A University Data  
 SCS PI Sta 2376+49.42  
 $\Delta = 25^\circ 12' 51.2''$   
 $\Theta = 00^\circ 00' 00.0''$   
 Ls = 0.000sf  
 Ts = 320.454sf  
 Es = 37.785sf

Curve Ramp A University Data  
 $\Delta = 09^\circ 23' 19.58''$  (RT)  
 T = 164.23  
 L = 327.73  
 R = 2000.00  
 E = 6.73



Geometric Plan  
 Proposed Interchange of  
 Interstate 80 with  
 Hickman Road  
 Polk County



Curve Ramp C Data  
 $\Delta = 11^{\circ}00'00.00''$  (LT)  
 T = 192.58  
 L = 383.97  
 R = 2000.00  
 E = 9.25

Curve Ramp C\_1 Data  
 $\Delta = 11^{\circ}28'42.03''$  (RT)  
 T = 50.25  
 L = 100.17  
 R = 500.00  
 E = 2.52

Curve Ramp C\_1 Data  
 SCS PI Sta 15418+67.11  
 $\Delta = 99^{\circ}47'15.7''$   
 $\Theta = 00^{\circ}00'00.0''$   
 Ls = 0.000sf  
 Ts = 298.1902sf  
 Es = 82.1661sf

Curve Ramp C\_1 Data  
 $\Delta = 88^{\circ}18'33.65''$  (RT)  
 T = 194.18  
 L = 308.26  
 R = 200.00  
 E = 78.76

WEBSTER TWP.  
 T-79N R-25W  
 SEC. 32  
 City of Clive

Curve Ramp C\_2 Data  
 $\Delta = 07^{\circ}01'17.99''$  (LT)  
 T = 61.35  
 L = 122.55  
 R = 1000.00  
 E = 1.88

Curve Ramp C\_2 Data  
 $\Delta = 80^{\circ}04'58.41''$  (LT)  
 T = 168.07  
 L = 279.54  
 R = 200.00  
 E = 61.24

Curve Ramp C\_2 Data  
 SCS PI Sta 25418+86.02  
 $\Delta = 87^{\circ}06'16.4''$   
 $\Theta = 00^{\circ}00'00.0''$   
 Ls = 0.000sf  
 Ts = 287.632sf  
 Es = 40.544sf

Curve Ramp B Data  
 $\Delta = 11^{\circ}11'09.33''$  (RT)  
 T = 131.22  
 L = 261.61  
 R = 1340.00  
 E = 6.41

Curve Ramp B\_1 Data  
 $\Delta = 75^{\circ}03'59.70''$  (LT)  
 T = 142.13  
 L = 242.38  
 R = 185.00  
 E = 48.29

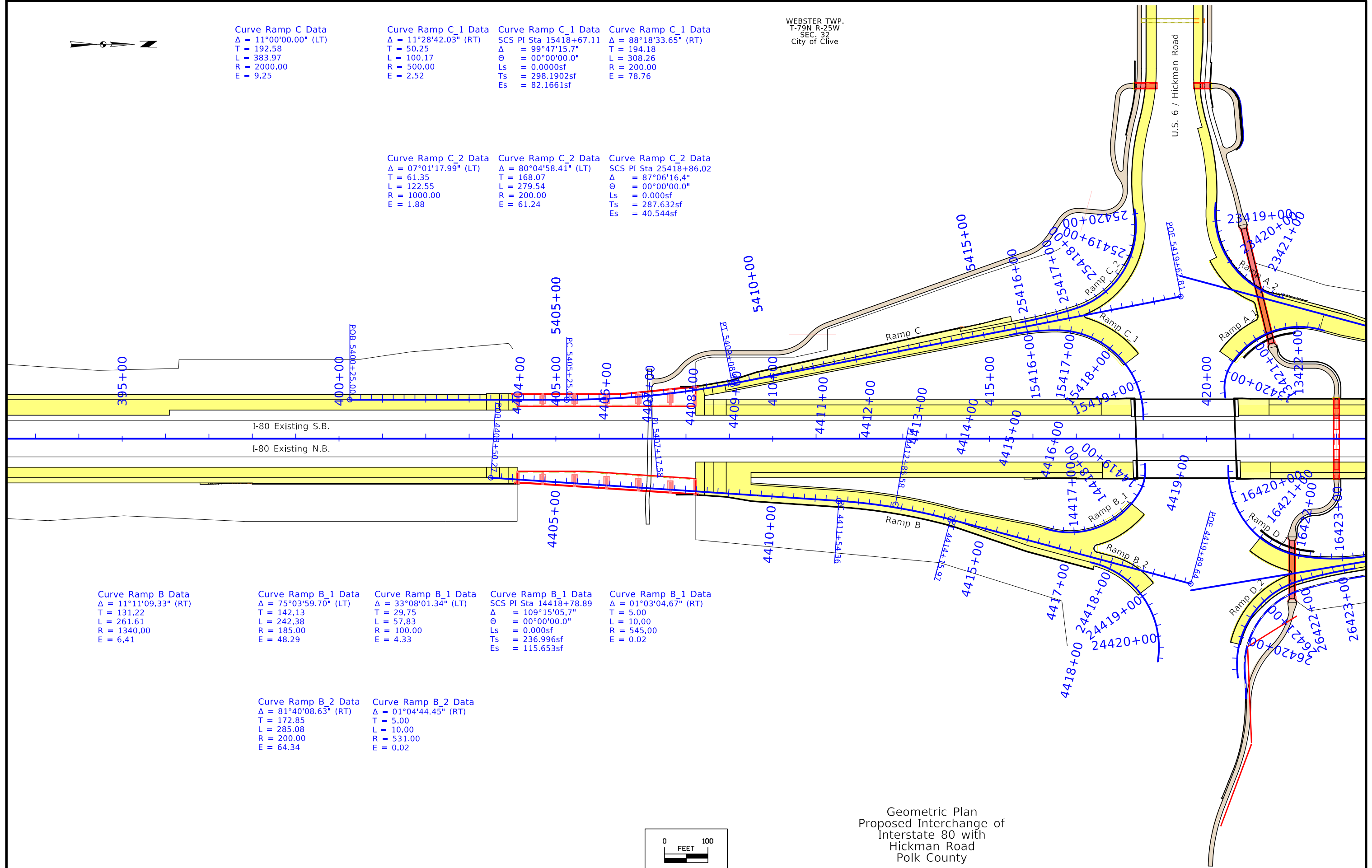
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 T = 29.75  
 L = 57.83  
 R = 100.00  
 E = 4.33

Curve Ramp B\_1 Data  
 SCS PI Sta 14418+78.89  
 $\Delta = 109^{\circ}15'05.7''$   
 $\Theta = 00^{\circ}00'00.0''$   
 Ls = 0.000sf  
 Ts = 236.996sf  
 Es = 115.653sf

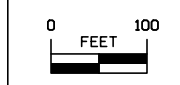
Curve Ramp B\_1 Data  
 $\Delta = 01^{\circ}03'04.67''$  (RT)  
 T = 5.00  
 L = 10.00  
 R = 545.00  
 E = 0.02

Curve Ramp B\_2 Data  
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 T = 172.85  
 L = 285.08  
 R = 200.00  
 E = 64.34

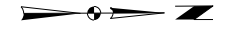
Curve Ramp B\_2 Data  
 $\Delta = 01^{\circ}04'44.45''$  (RT)  
 T = 5.00  
 L = 10.00  
 R = 531.00  
 E = 0.02



Geometric Plan  
 Proposed Interchange of  
 Interstate 80 with  
 Hickman Road  
 Polk County







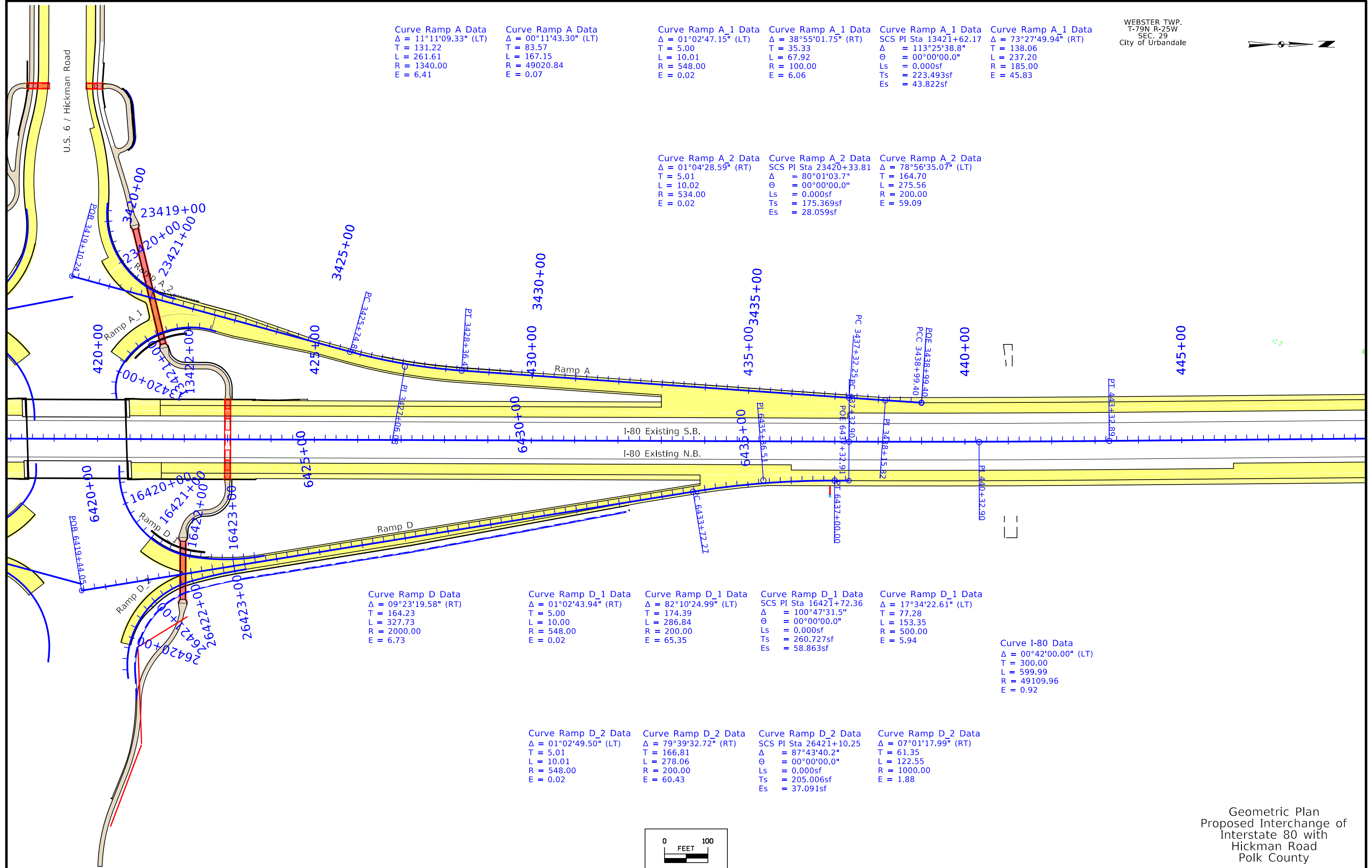
Curve Ramp A Data $\Delta = 11^{\circ}11'09.33''$ (LT) T = 131.22 L = 261.61 R = 1340.00 E = 6.41	Curve Ramp A Data $\Delta = 00^{\circ}11'43.30''$ (LT) T = 83.57 L = 167.15 R = 49020.84 E = 0.07	Curve Ramp A_1 Data $\Delta = 01^{\circ}02'47.15''$ (LT) T = 5.00 L = 10.01 R = 548.00 E = 0.02	Curve Ramp A_1 Data $\Delta = 38^{\circ}55'01.75''$ (RT) T = 35.33 L = 67.92 R = 100.00 E = 6.06	Curve Ramp A_1 Data SCS PI Sta 13421+62.17 $\Delta = 113^{\circ}25'38.8''$ $\Theta = 00^{\circ}00'00.0''$ Ls = 0.000sf Ts = 223.493sf Es = 43.822sf	Curve Ramp A_1 Data $\Delta = 73^{\circ}27'49.94''$ (RT) T = 138.06 L = 237.20 R = 185.00 E = 45.83
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Curve Ramp A_2 Data $\Delta = 01^{\circ}04'28.59''$ (RT) T = 5.01 L = 10.02 R = 534.00 E = 0.02	Curve Ramp A_2 Data SCS PI Sta 23420+33.81 $\Delta = 80^{\circ}01'03.7''$ $\Theta = 00^{\circ}00'00.0''$ Ls = 0.000sf Ts = 175.369sf Es = 28.059sf	Curve Ramp A_2 Data $\Delta = 78^{\circ}56'35.07''$ (LT) T = 164.70 L = 275.56 R = 200.00 E = 59.09
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Curve Ramp D Data $\Delta = 09^{\circ}23'19.58''$ (RT) T = 164.23 L = 327.73 R = 2000.00 E = 6.73	Curve Ramp D_1 Data $\Delta = 01^{\circ}02'43.94''$ (RT) T = 5.00 L = 10.00 R = 548.00 E = 0.02	Curve Ramp D_1 Data $\Delta = 82^{\circ}10'24.99''$ (LT) T = 174.39 L = 286.84 R = 200.00 E = 65.35	Curve Ramp D_1 Data SCS PI Sta 16421+72.36 $\Delta = 100^{\circ}47'31.5''$ $\Theta = 00^{\circ}00'00.0''$ Ls = 0.000sf Ts = 260.727sf Es = 58.863sf	Curve Ramp D_1 Data $\Delta = 17^{\circ}34'22.61''$ (LT) T = 77.28 L = 153.35 R = 500.00 E = 5.94
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Curve Ramp D_2 Data $\Delta = 01^{\circ}02'49.50''$ (LT) T = 5.01 L = 10.01 R = 548.00 E = 0.02	Curve Ramp D_2 Data $\Delta = 79^{\circ}39'32.72''$ (RT) T = 166.81 L = 278.06 R = 200.00 E = 60.43	Curve Ramp D_2 Data SCS PI Sta 26421+10.25 $\Delta = 87^{\circ}43'40.2''$ $\Theta = 00^{\circ}00'00.0''$ Ls = 0.000sf Ts = 205.006sf Es = 37.091sf	Curve Ramp D_2 Data $\Delta = 07^{\circ}01'17.99''$ (RT) T = 61.35 L = 122.55 R = 1000.00 E = 1.88
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Curve I-80 Data  
 $\Delta = 00^{\circ}42'00.00''$  (LT)  
T = 300.00  
L = 599.99  
R = 49109.96  
E = 0.92



Geometric Plan  
Proposed Interchange of  
Interstate 80 with  
Hickman Road  
Polk County

WEBSTER TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

WEBSTER TWP.  
T-79N R-25W  
SEC. 20  
City of Urbandale

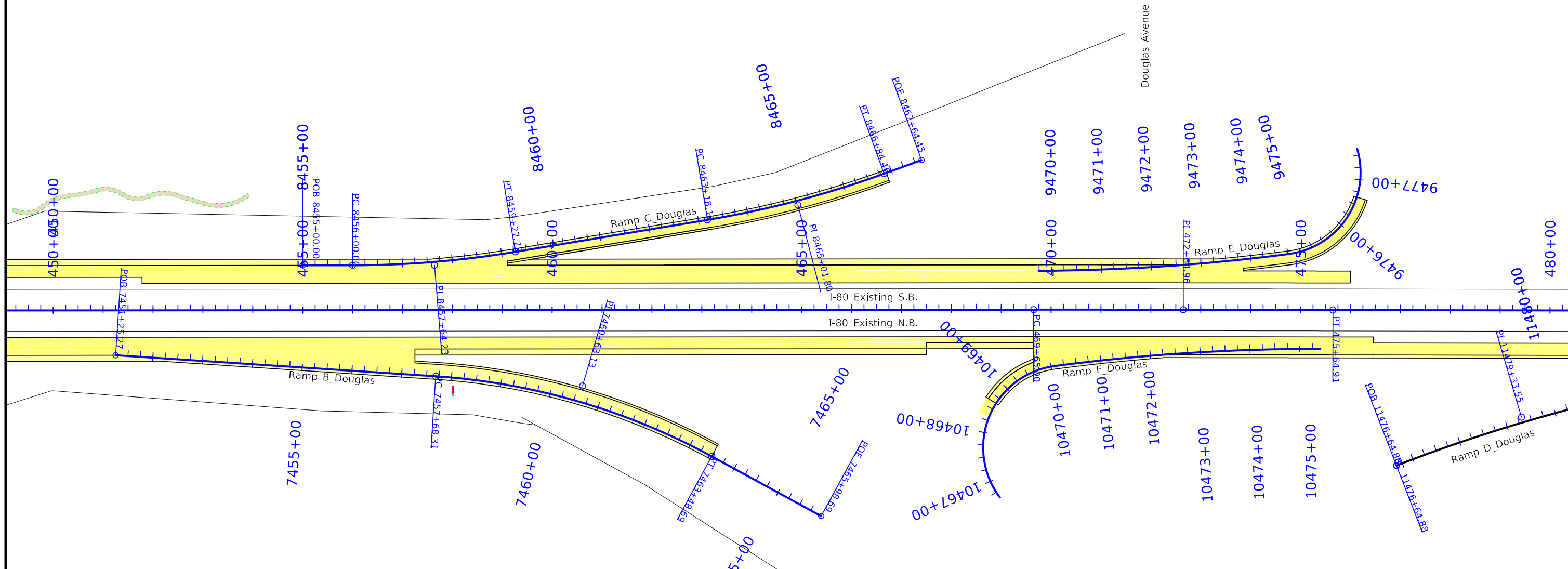


Curve Ramp C Data  
 $\Delta = 09^{\circ}23'19.62''$  (LT)  
 T = 164.23  
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 R = 2000.00  
 E = 6.73

Curve Ramp C Data  
 $\Delta = 10^{\circ}29'42.73''$  (LT)  
 T = 183.69  
 L = 366.35  
 R = 2000.00  
 E = 8.42

Curve Ramp E Data  
 $\Delta = 07^{\circ}05'23.71''$  (LT)  
 T = 247.80  
 L = 494.97  
 R = 4000.00  
 E = 7.67

Curve Ramp E Data  
 $\Delta = 99^{\circ}16'39.92''$  (LT)  
 T = 194.14  
 L = 285.90  
 R = 165.00  
 E = 89.79



Curve Ramp B Data  
 $\Delta = 24^{\circ}48'57.31''$  (RT)  
 T = 294.81  
 L = 580.38  
 R = 1340.00  
 E = 32.05

Curve Ramp F Data  
 SCS PI Sta 10470+39.04  
 $\Delta = 127^{\circ}24'48.2''$   
 $\Theta = 00^{\circ}00'00.0''$   
 $L_s = 0.000sf$   
 $T_s = 376.926sf$   
 $E_s = 246.459sf$

Curve Ramp F Data  
 $\Delta = 119^{\circ}45'47.38''$  (RT)  
 T = 284.43  
 L = 344.89  
 R = 165.00  
 E = 163.82

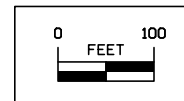
Curve Ramp F Data  
 $\Delta = 07^{\circ}39'00.78''$  (RT)  
 T = 267.44  
 L = 534.09  
 R = 4000.00  
 E = 8.93

Curve Ramp D Data  
 $\Delta = 09^{\circ}18'32.69''$  (RT)  
 T = 268.67  
 L = 536.16  
 R = 3300.00  
 E = 10.92

Curve I-80 Data  
 $\Delta = 00^{\circ}08'29.93''$  (RT)  
 T = 299.96  
 L = 599.91  
 R = 242663.86  
 E = 0.19

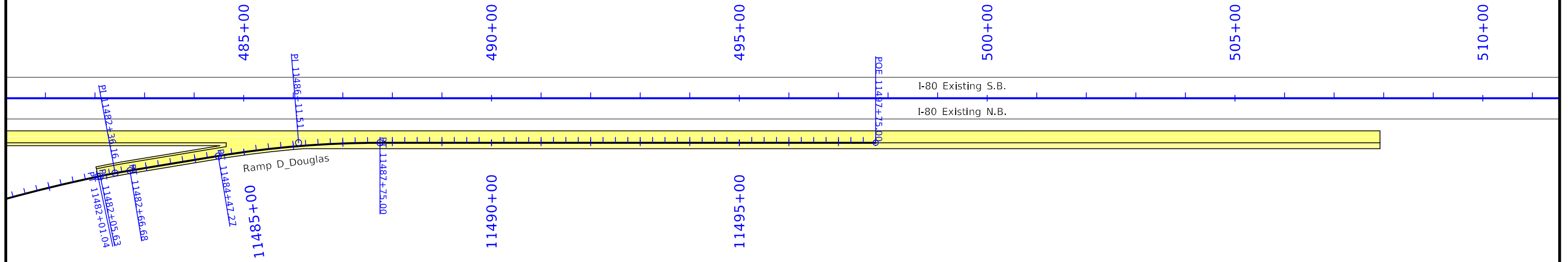
WEBSTER TWP.  
T-79N R-25W  
SEC. 21  
City of Urbandale

WEBSTER TWP.  
T-79N R-25W  
SEC. 28  
City of Urbandale



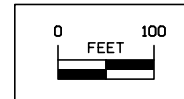
Geometric Plan  
Proposed Interchange of  
Interstate 80 with  
Hickman Road  
Polk County

WEBSTER TWP.  
T-79N R-25W  
SEC. 20  
City of Urbandale

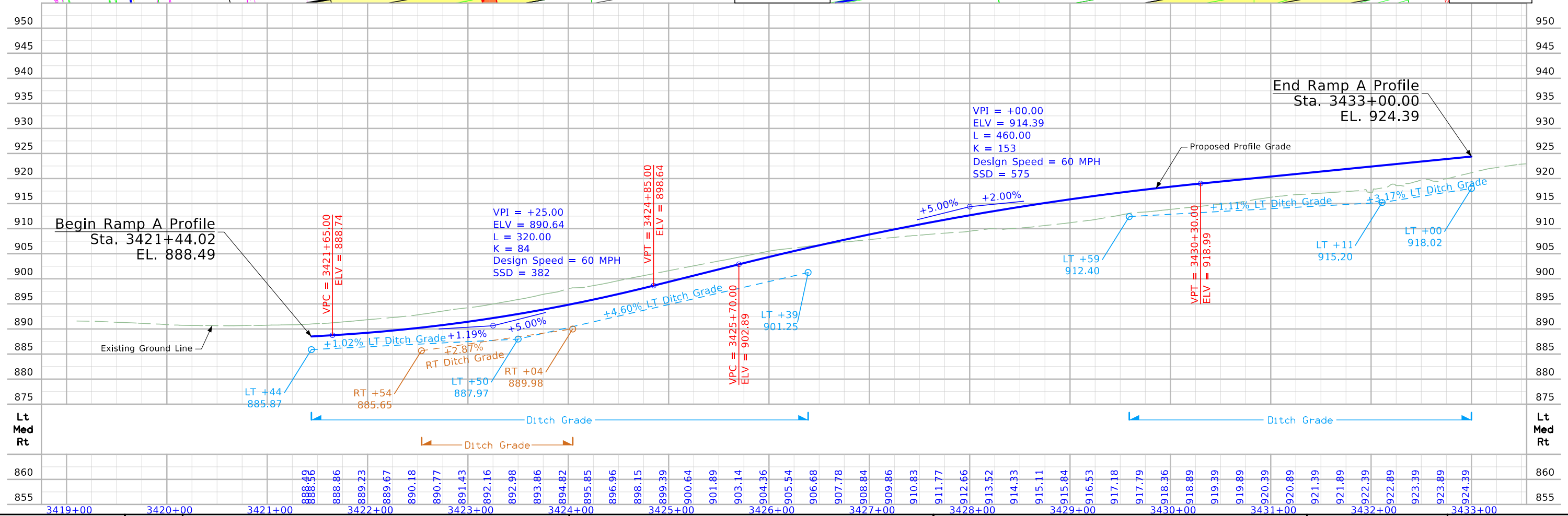
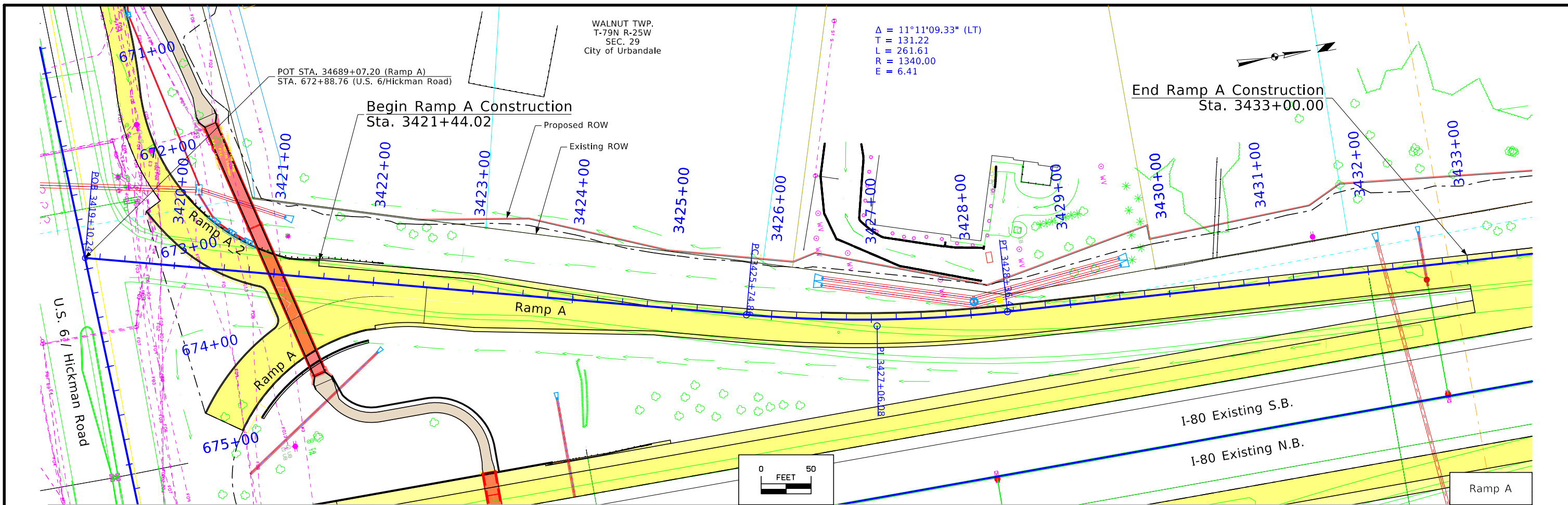


Curve Ramp D Data	Curve Ramp D Data	Curve Ramp D Data
$\Delta = 09^\circ 18' 32.69''$ (RT)	$\Delta = 02^\circ 19' 55.29''$ (RT)	$\Delta = 09^\circ 23' 19.58''$ (RT)
T = 268.67	T = 30.53	T = 164.23
L = 536.16	L = 61.05	L = 327.73
R = 3300.00	R = 1500.00	R = 2000.00
E = 10.92	E = 0.31	E = 6.73

WEBSTER TWP.  
T-79N R-25W  
SEC. 21  
City of Urbandale

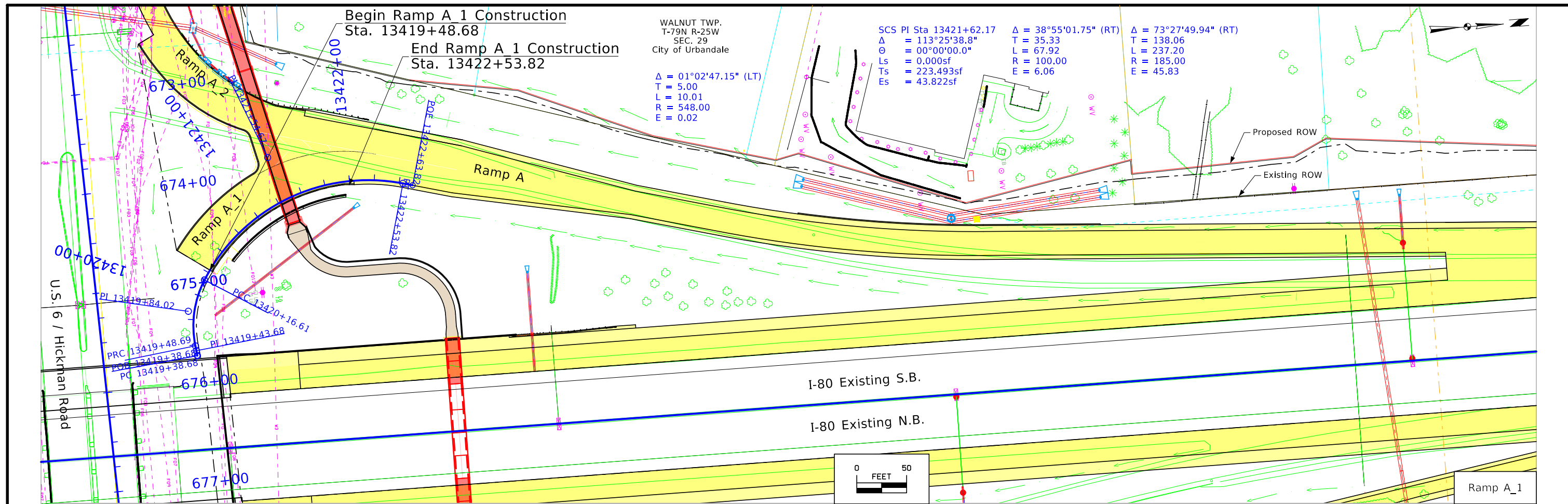


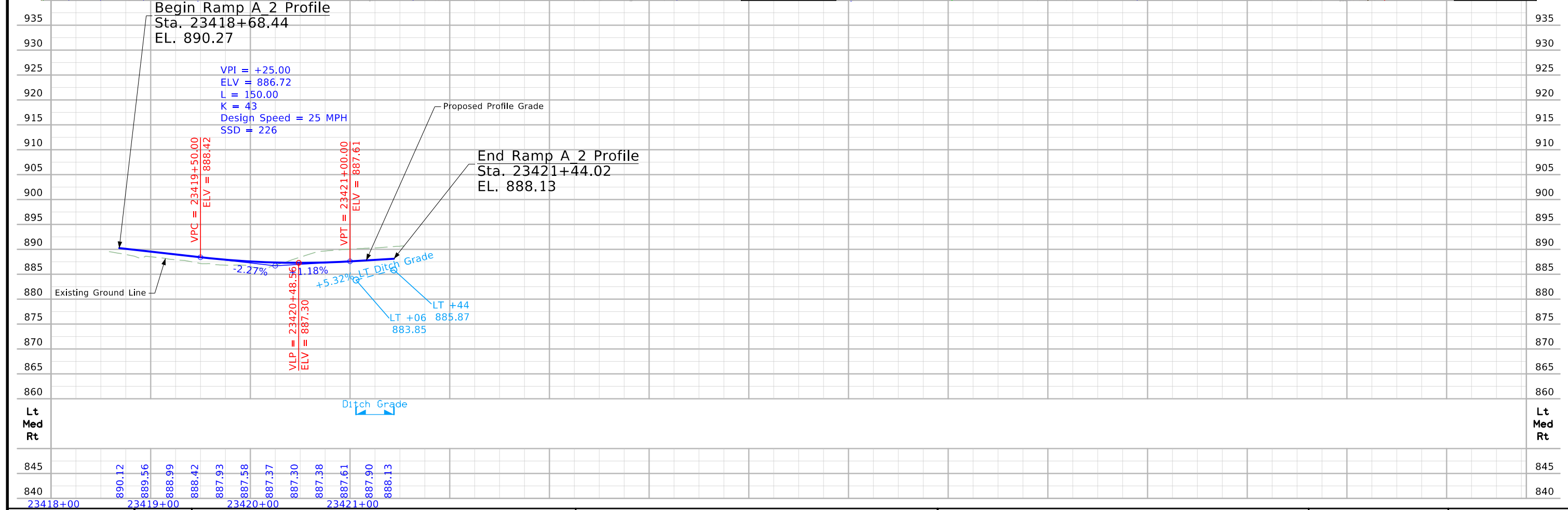
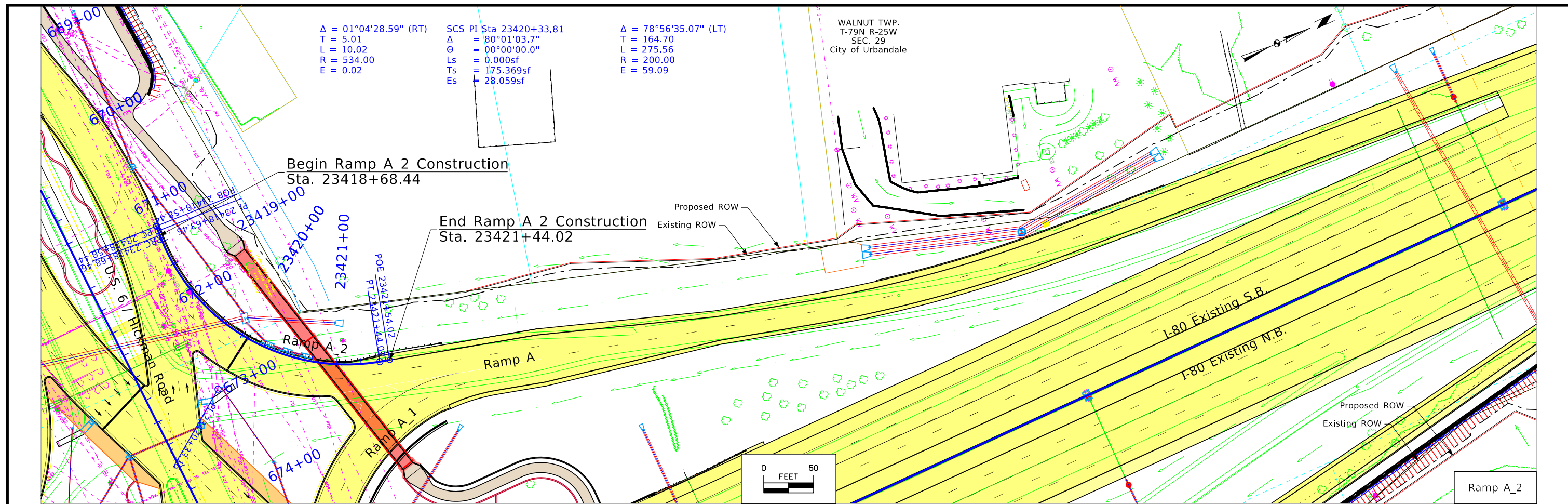
Geometric Plan  
Proposed Interchange of  
Interstate 80 with  
Hickman Road  
Polk County

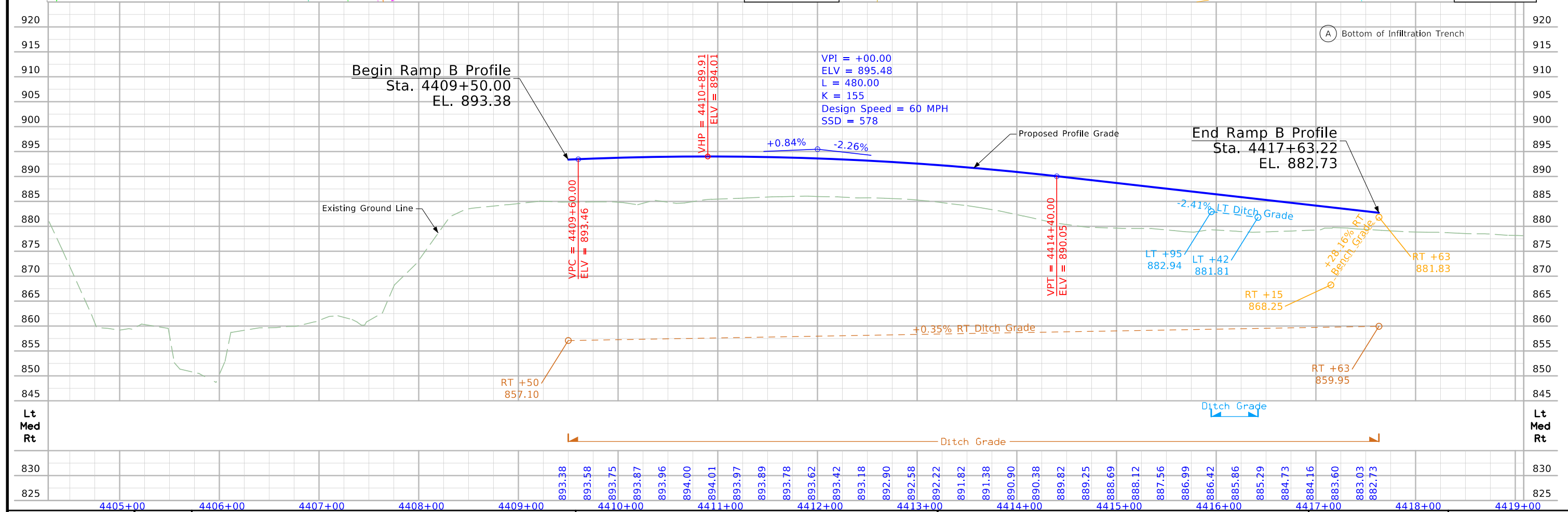
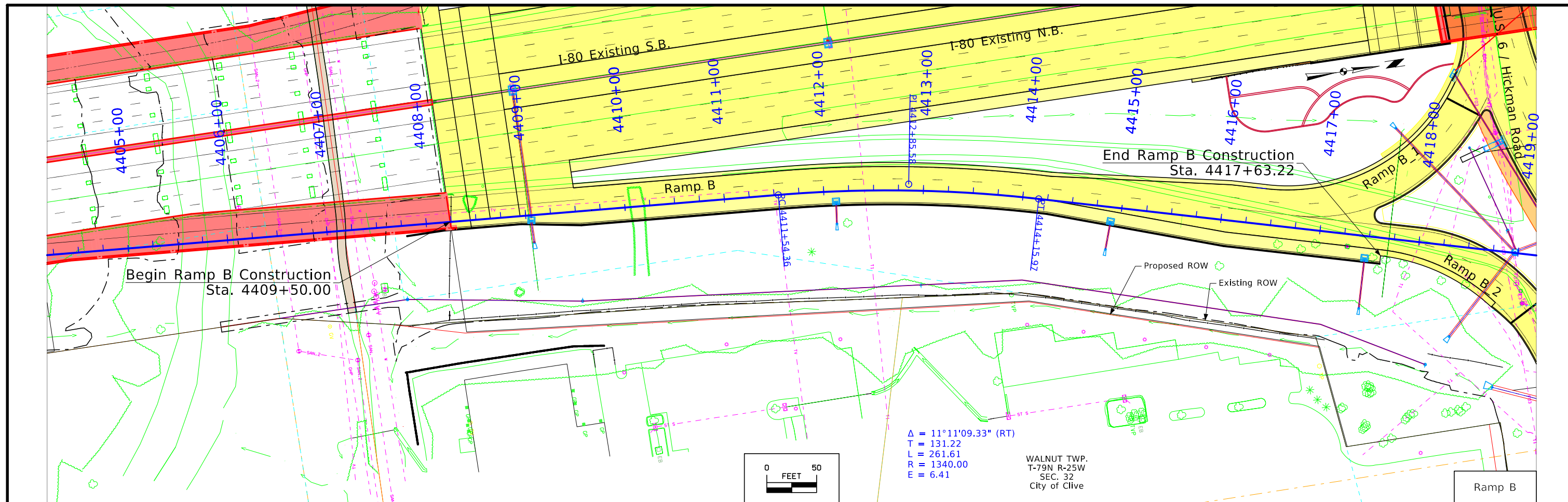


FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER K.7
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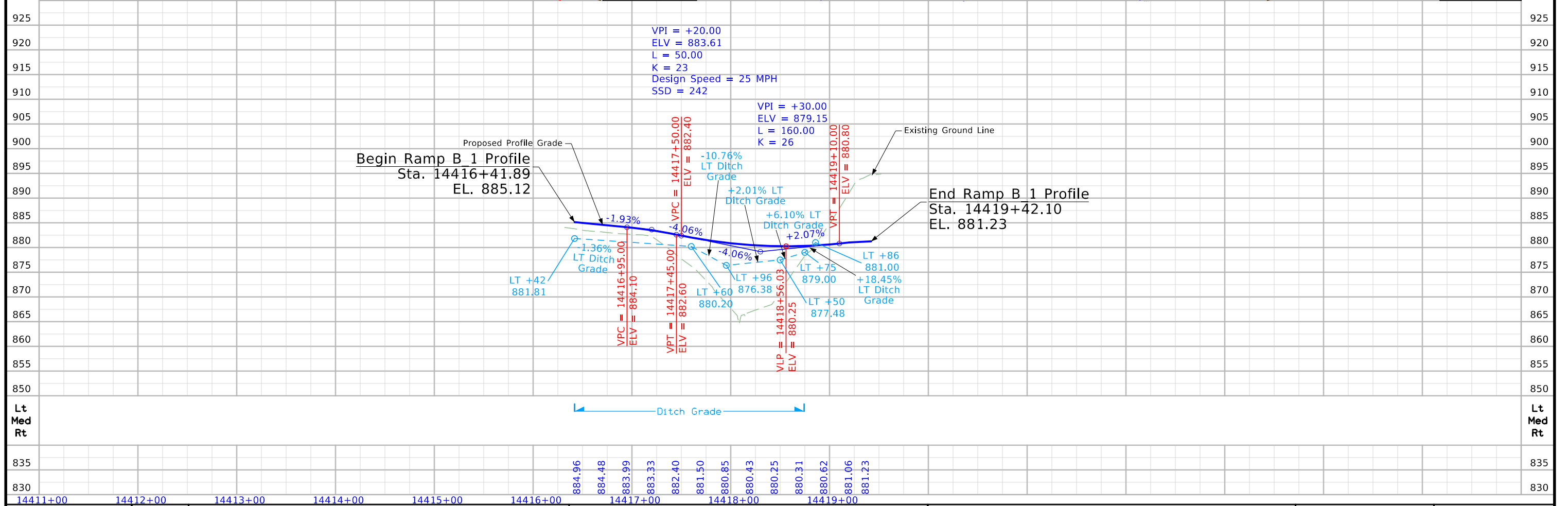
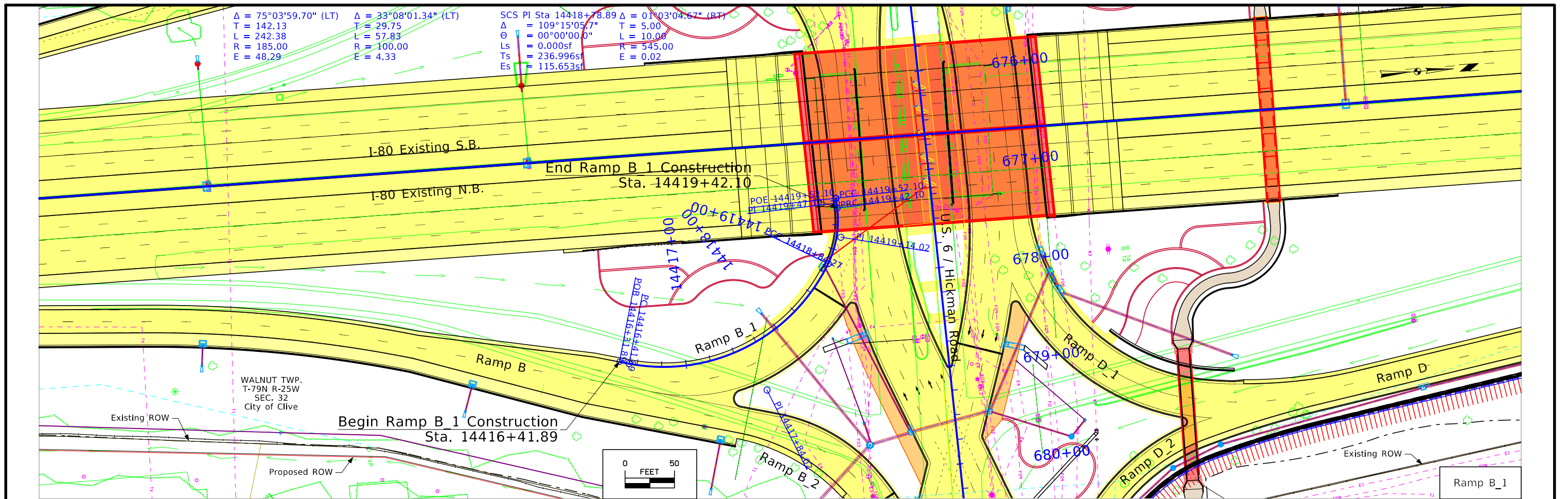






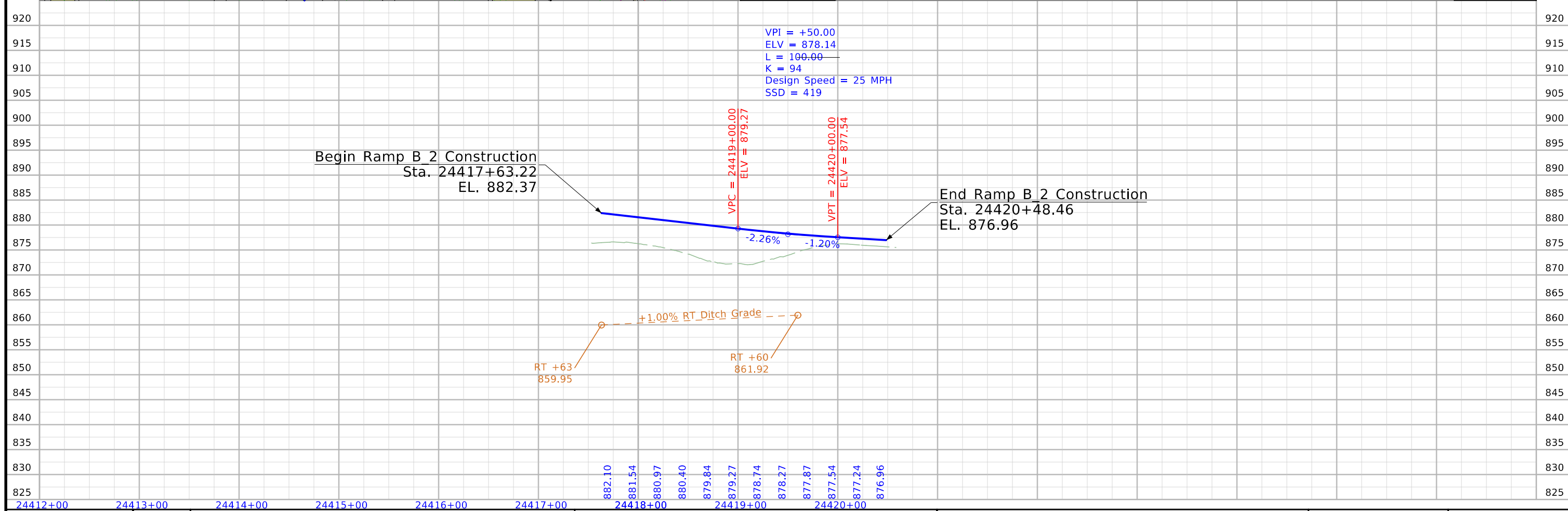
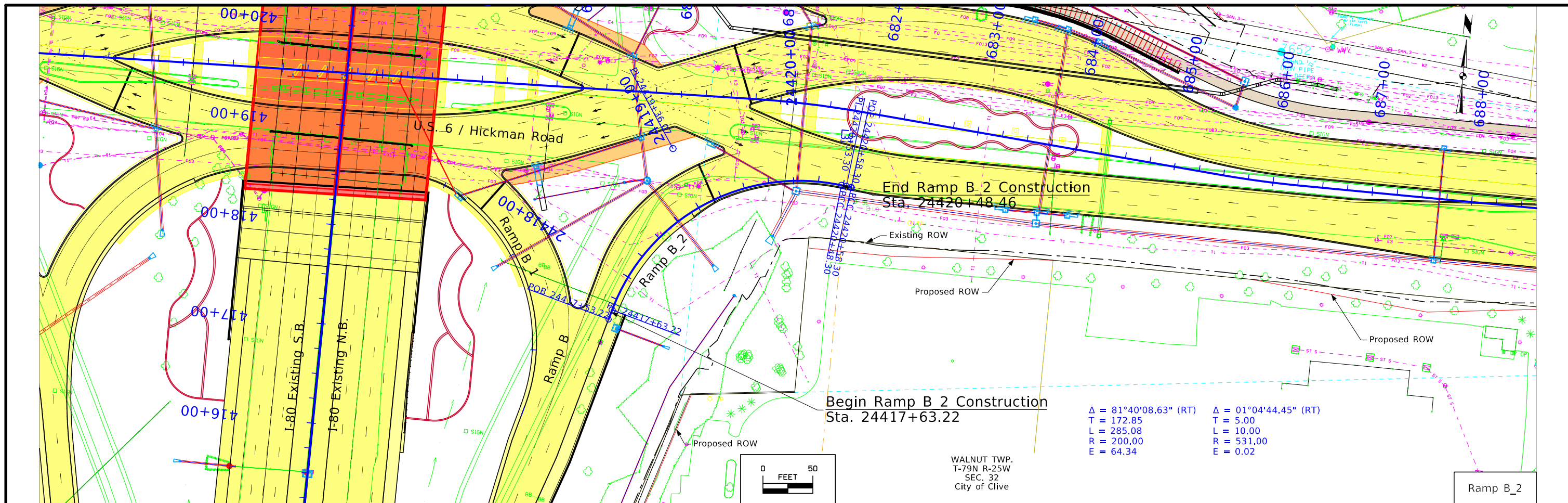
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER K.10
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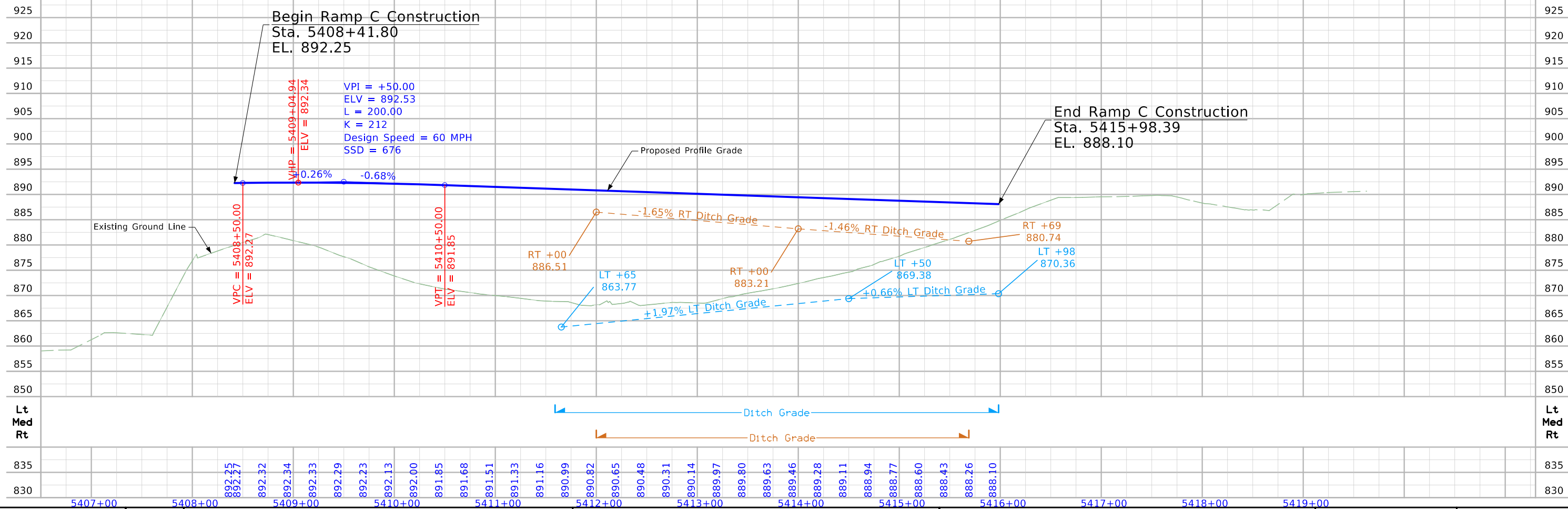
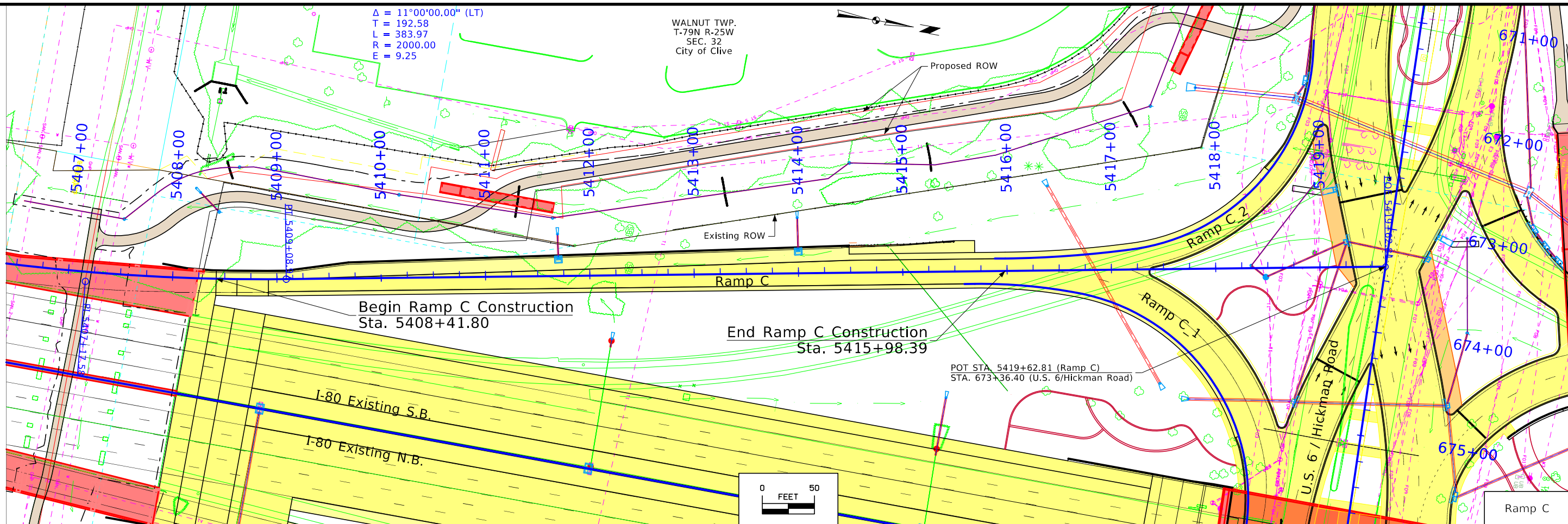




FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER K.11
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FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-080-4(069)125--13-77	SHEET NUMBER	K.13
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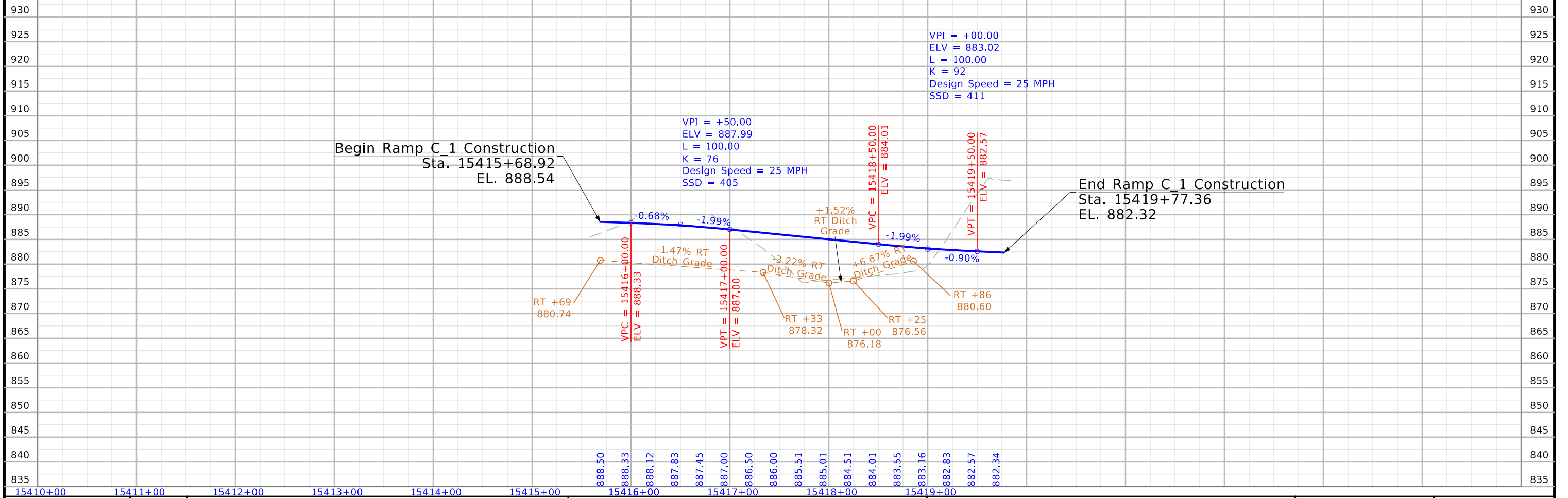
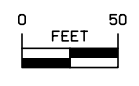
$\Delta = 11^\circ 28' 42.03''$  (RT) SCS PI Sta 15418+67.11  $\Delta = 88^\circ 18' 33.65''$  (RT)  
 T = 50.25  $\Delta = 99^\circ 47' 15.7''$  T = 194.18  
 L = 100.17  $\Theta = 00^\circ 00' 00.0''$  L = 308.26  
 R = 500.00 Ls = 0.000sf R = 200.00  
 E = 2.52 Es = 298.190sf E = 78.76

Proposed ROW  
Existing ROW

Begin Ramp C\_1 Construction  
Sta. 15415+68.92

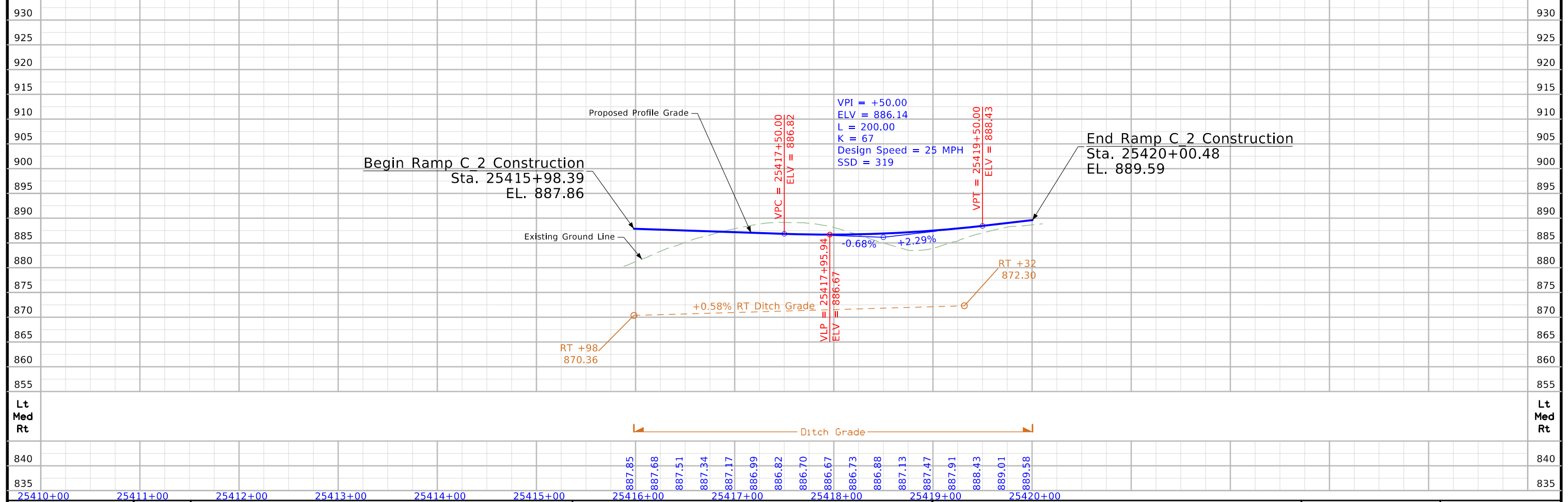
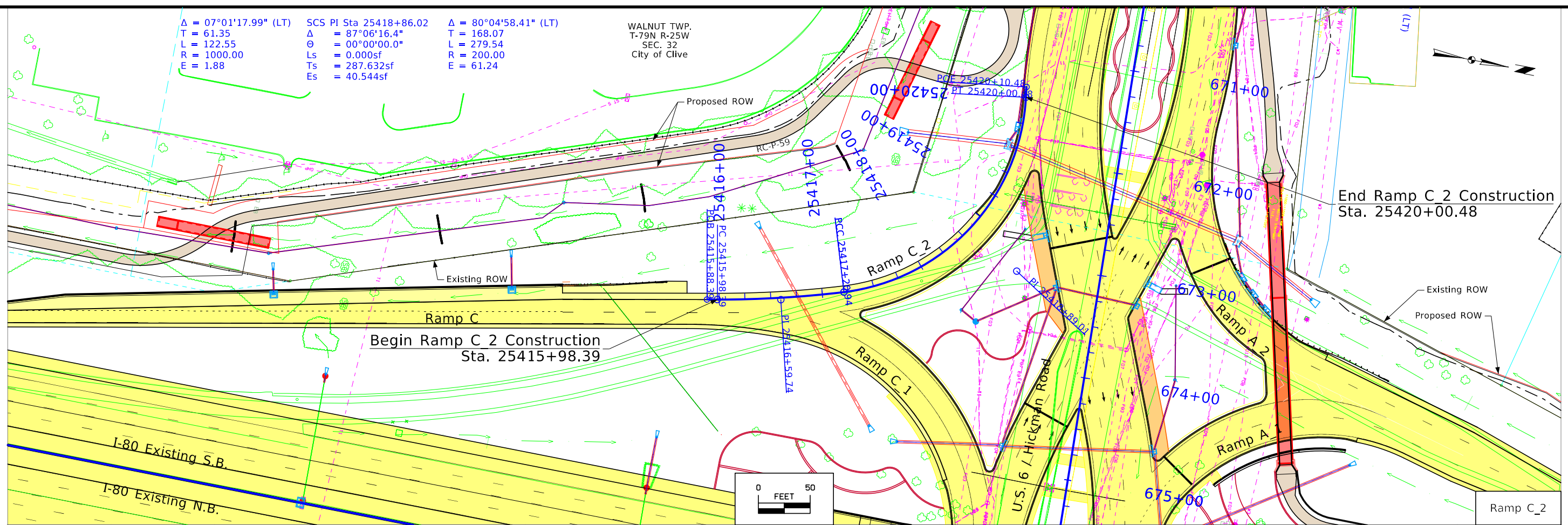
End Ramp C\_1 Construction  
Sta. 15419+77.36

WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

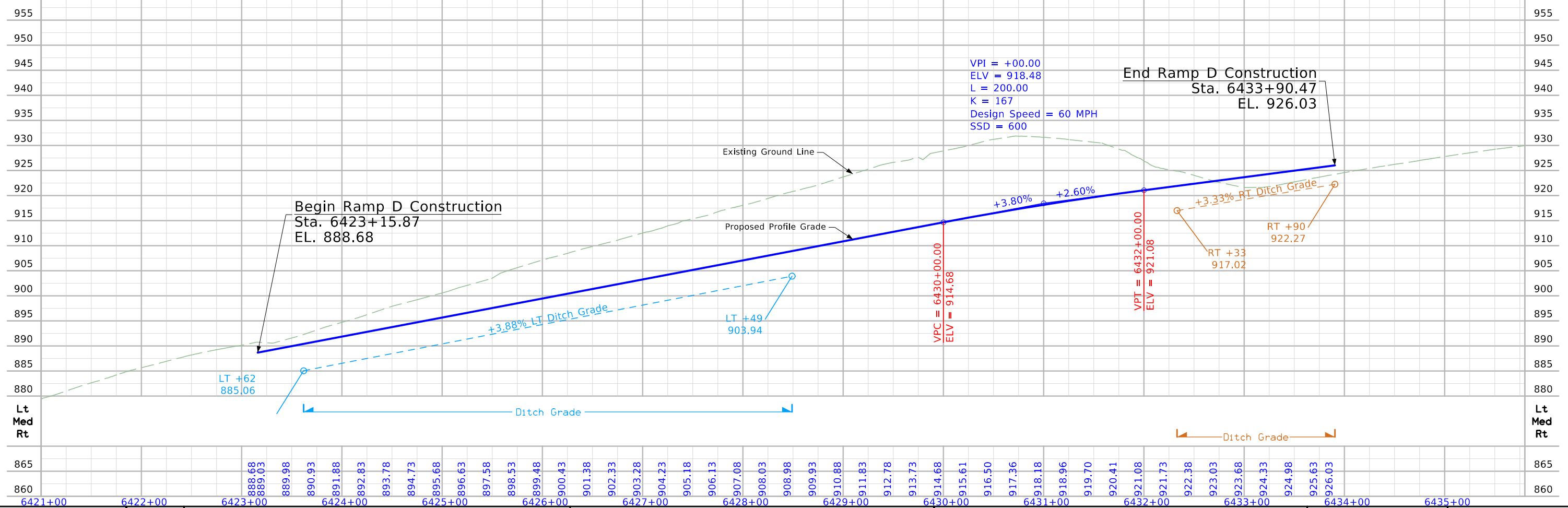
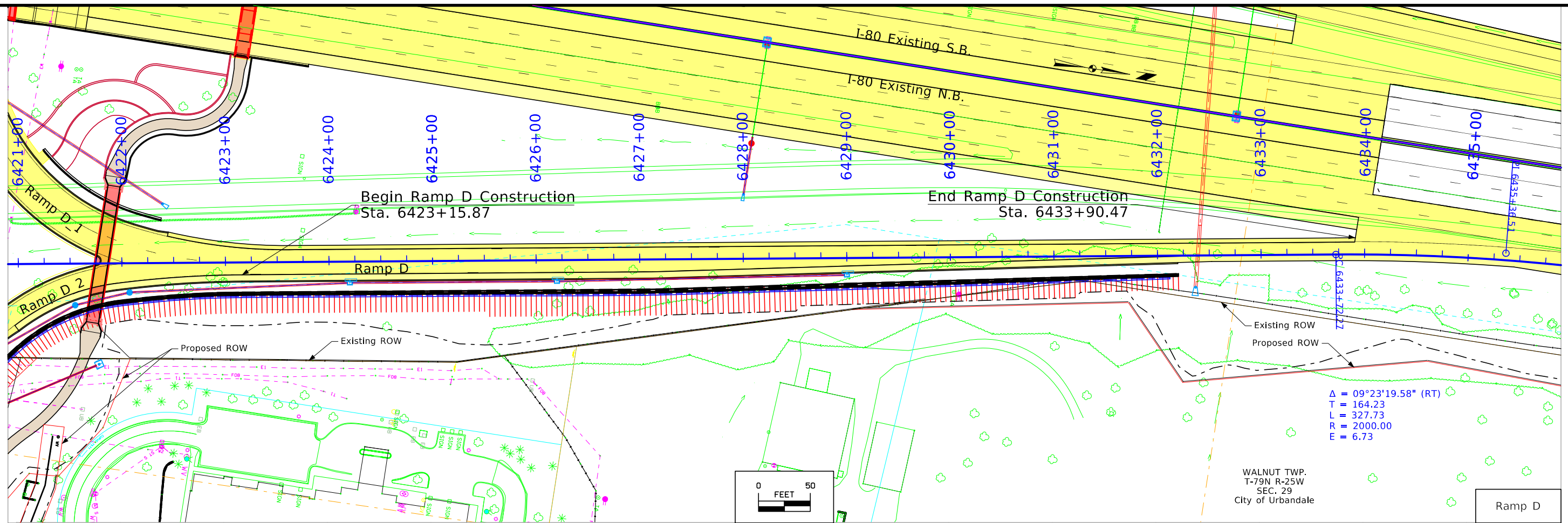


$\Delta = 07^{\circ}01'17.99"$  (LT)    SCS PI Sta. 25418+86.02     $\Delta = 80^{\circ}04'58.41"$  (LT)  
 T = 61.35     $\Delta = 87^{\circ}06'16.4"$     T = 168.07  
 L = 122.55     $\Theta = 00^{\circ}00'00.0"$     L = 279.54  
 R = 1000.00    Ts = 287.632sf    R = 200.00  
 E = 1.88    Es = 40.544sf    E = 61.24

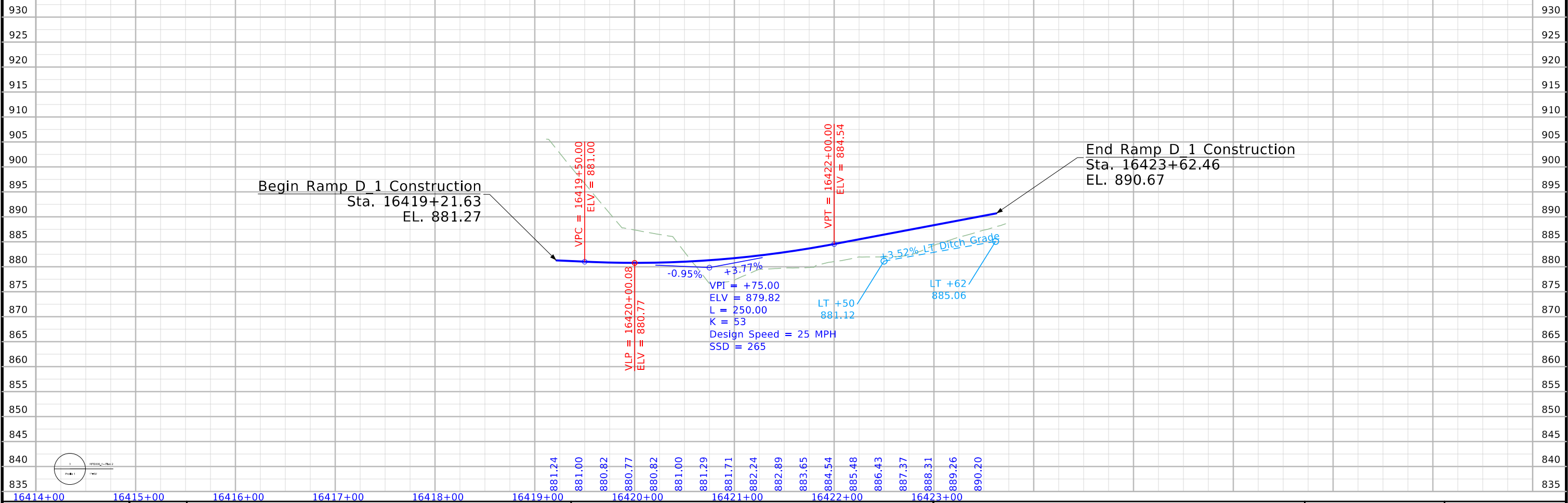
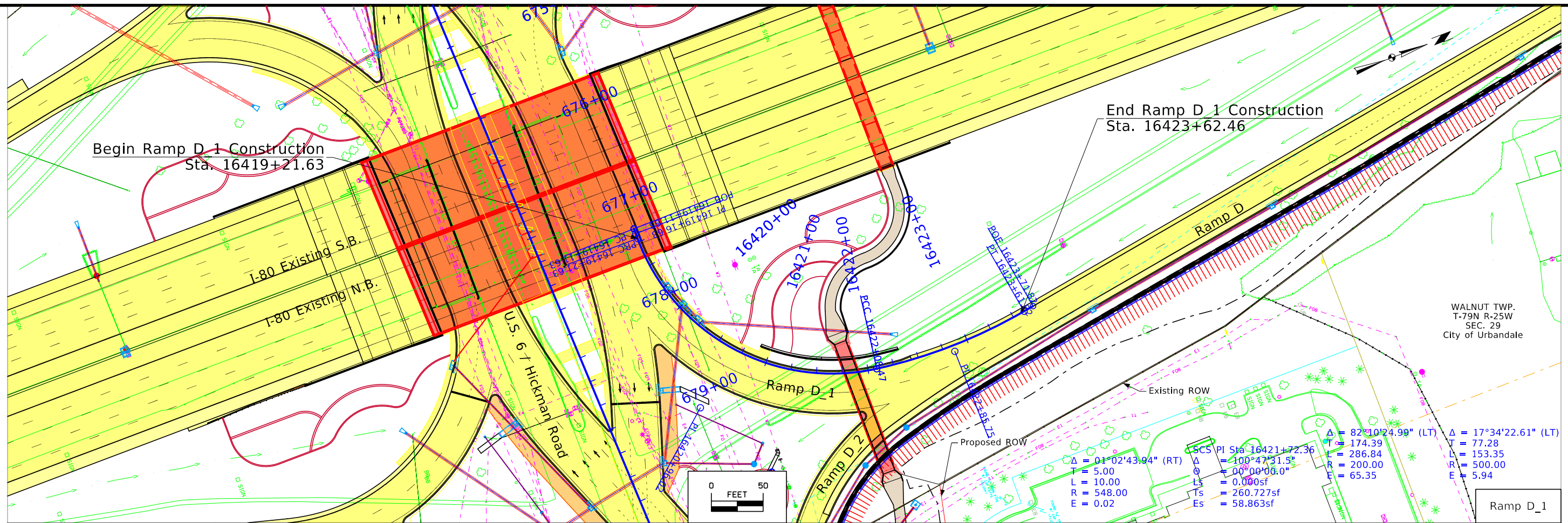
WALNUT TWP.  
 T-79N R-25W  
 SEC. 32  
 City of Clive



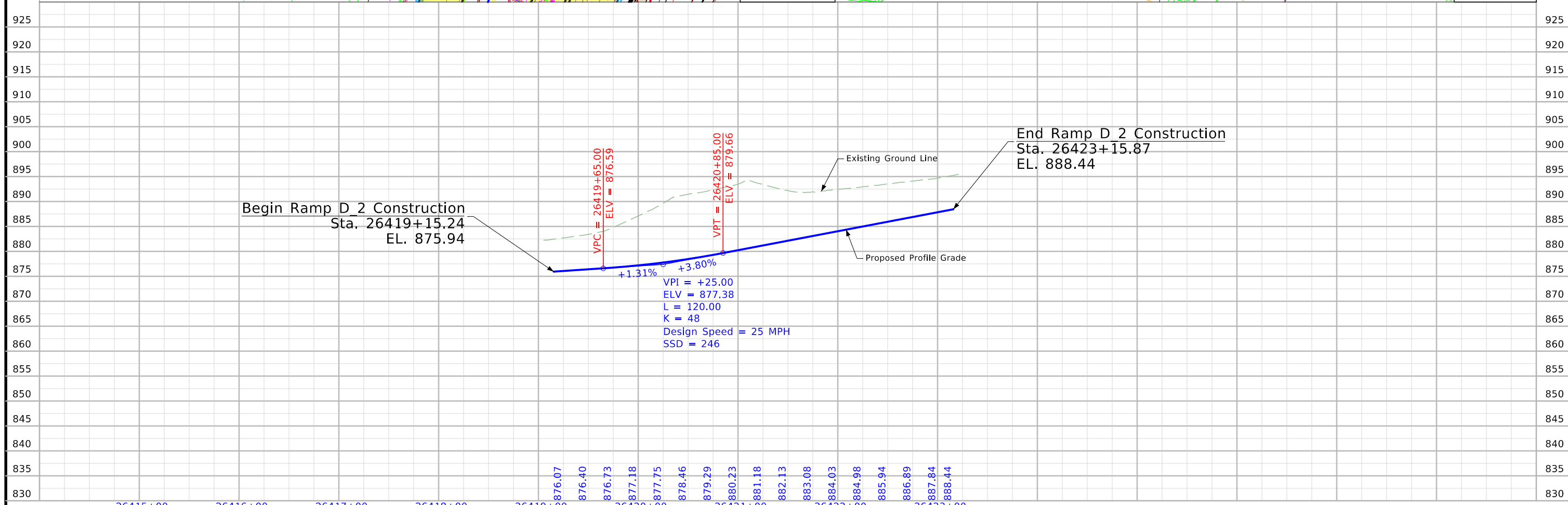
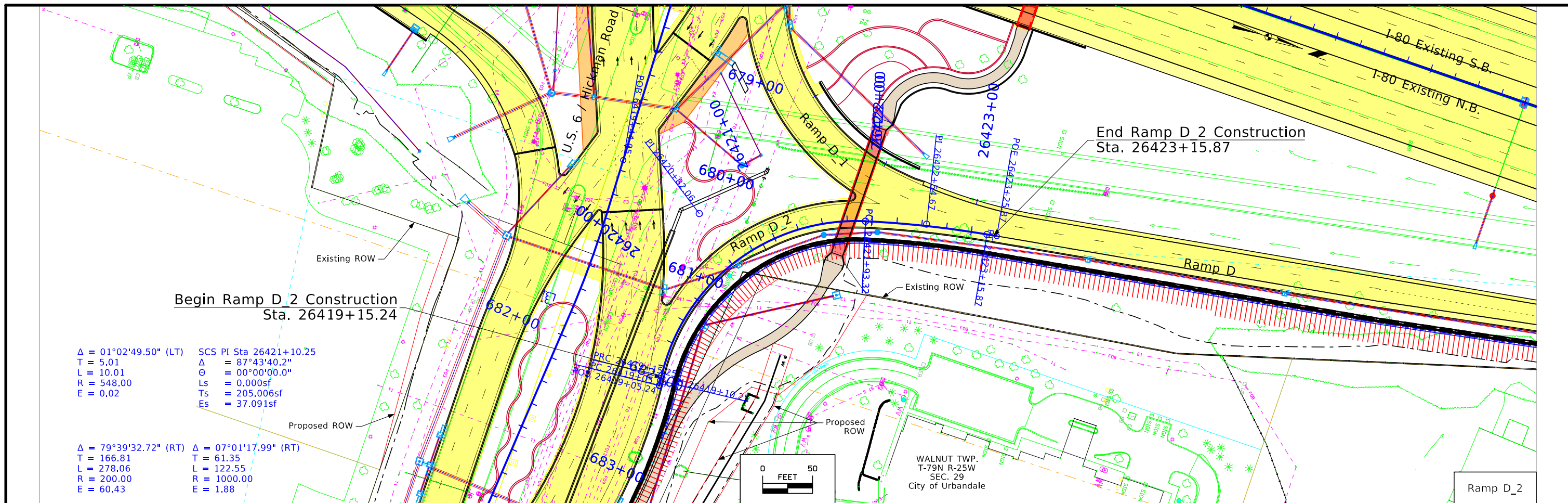




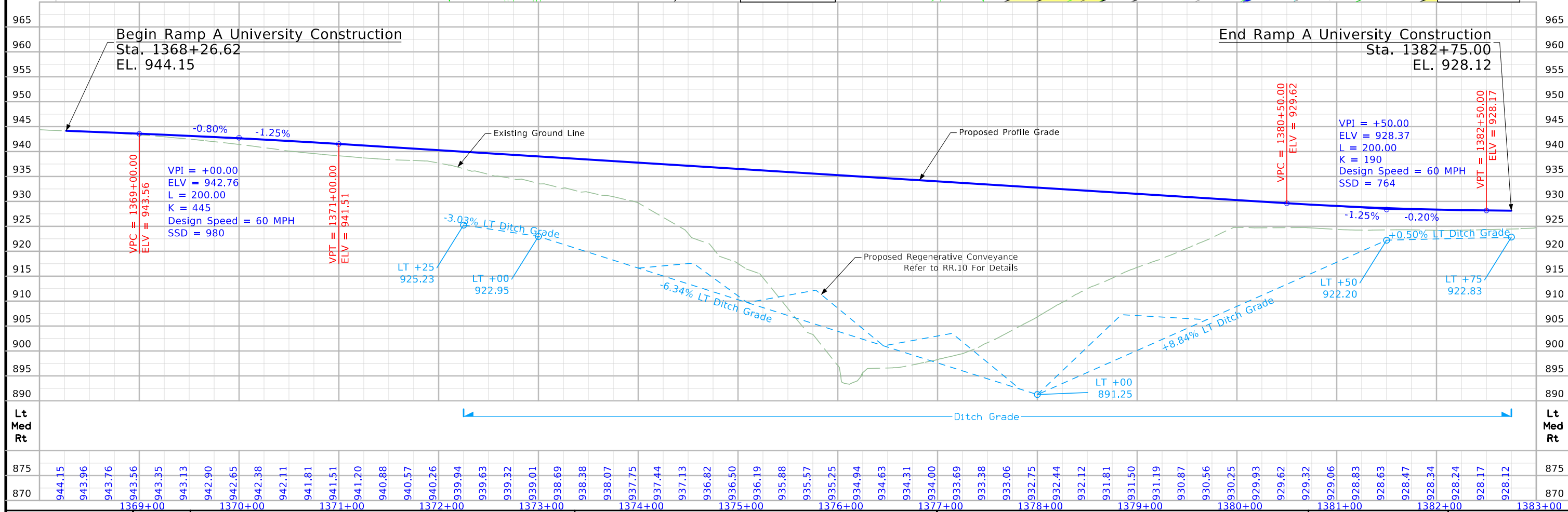
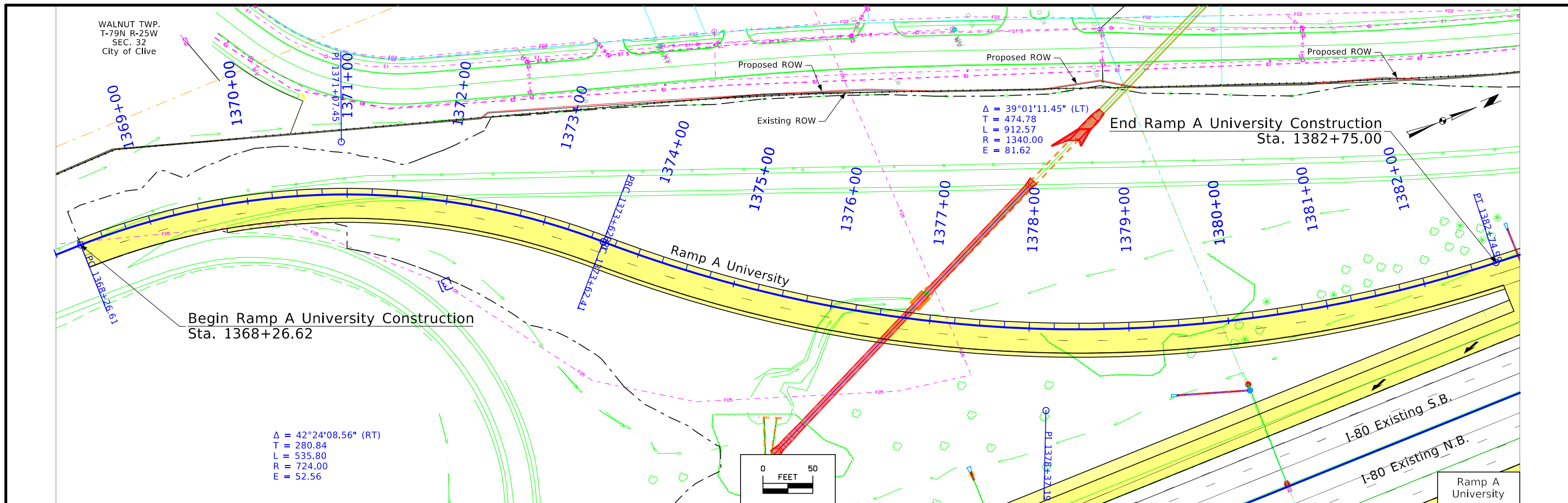
FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-080-4(069)125--13-77	SHEET NUMBER	K.16
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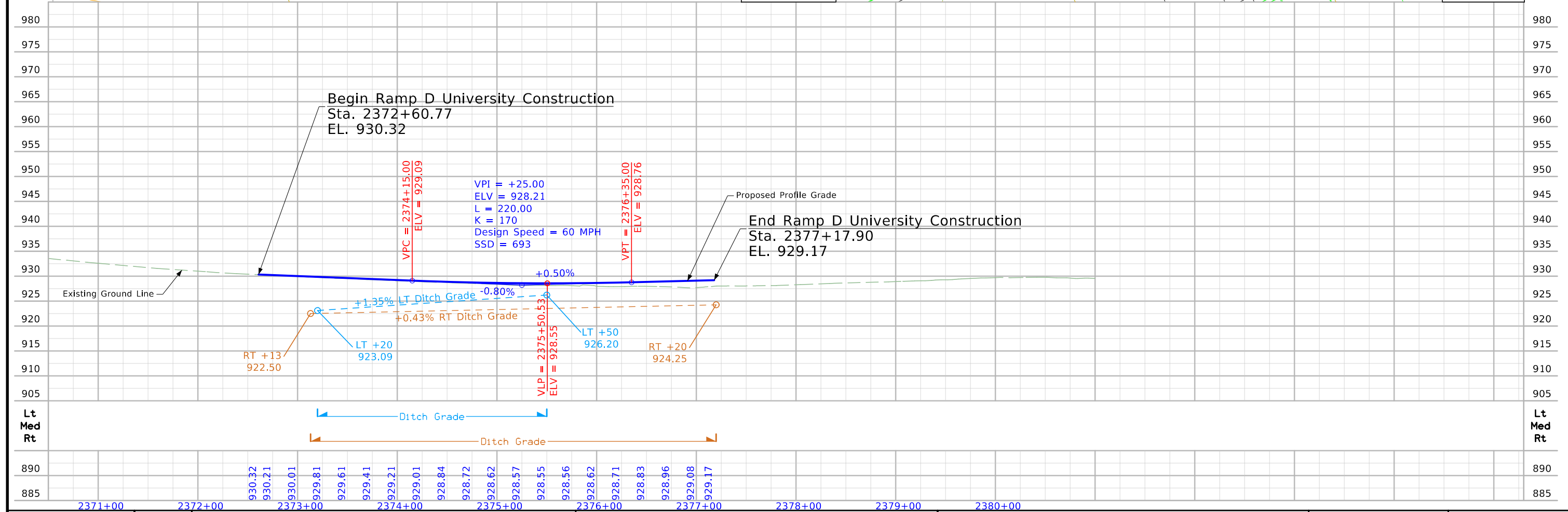
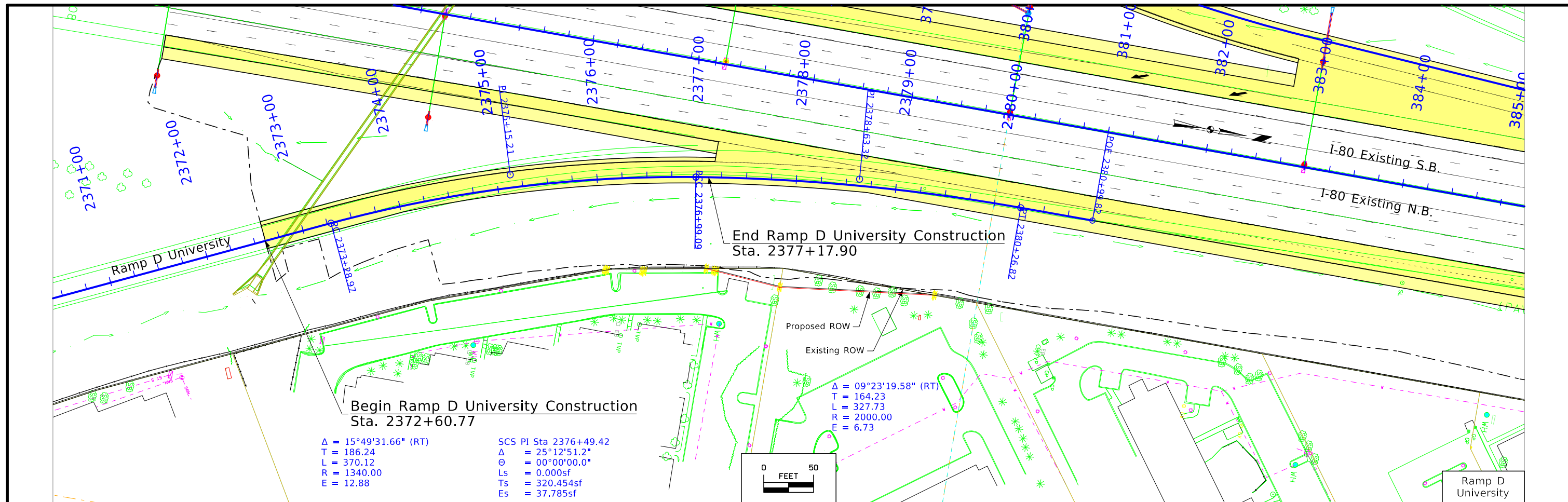




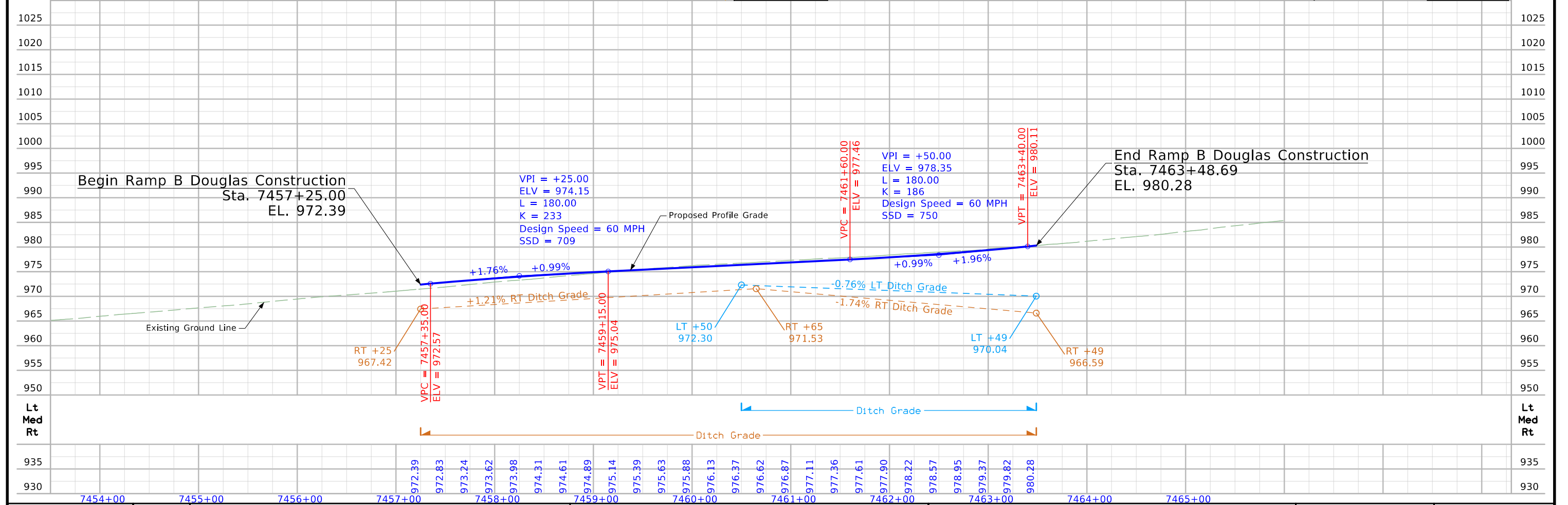
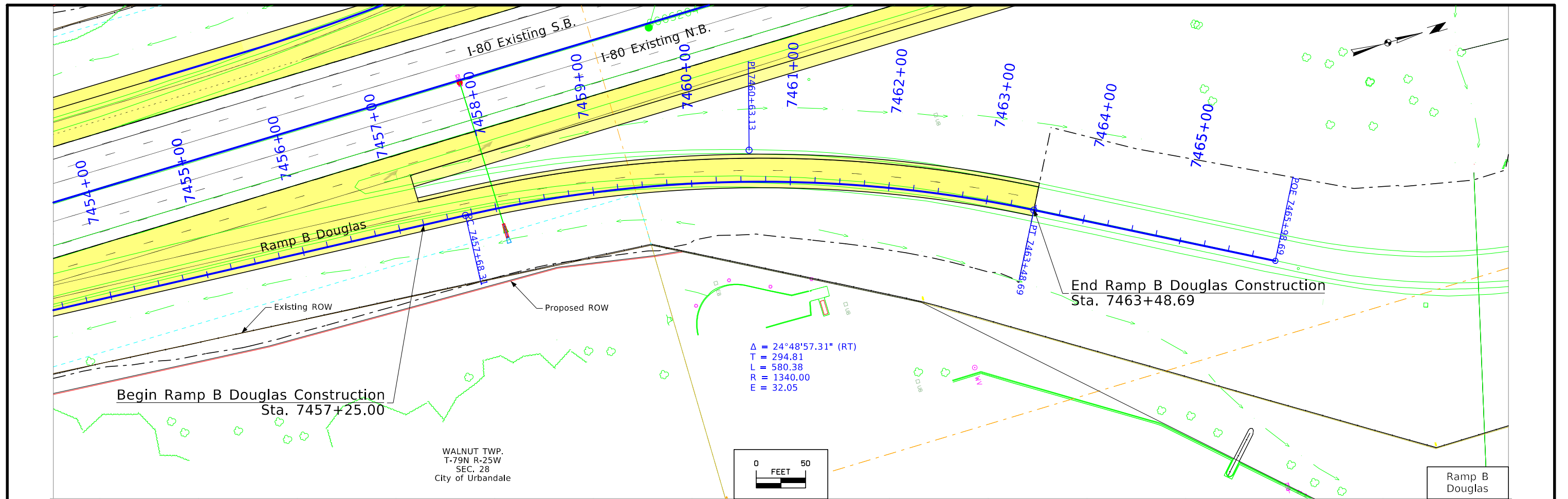
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER K.18
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FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER K.20
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FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-080-4(069)125--13-77	SHEET NUMBER	K.21
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 L = 327.73  
 R = 2000.00  
 E = 6.73

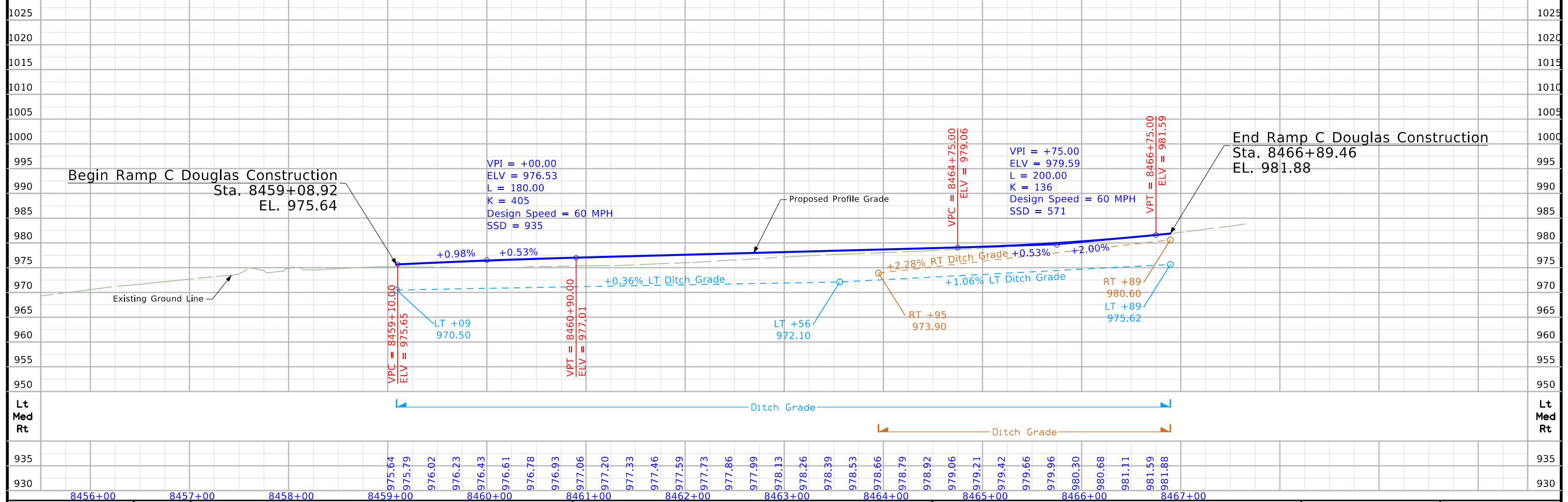
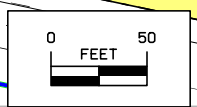
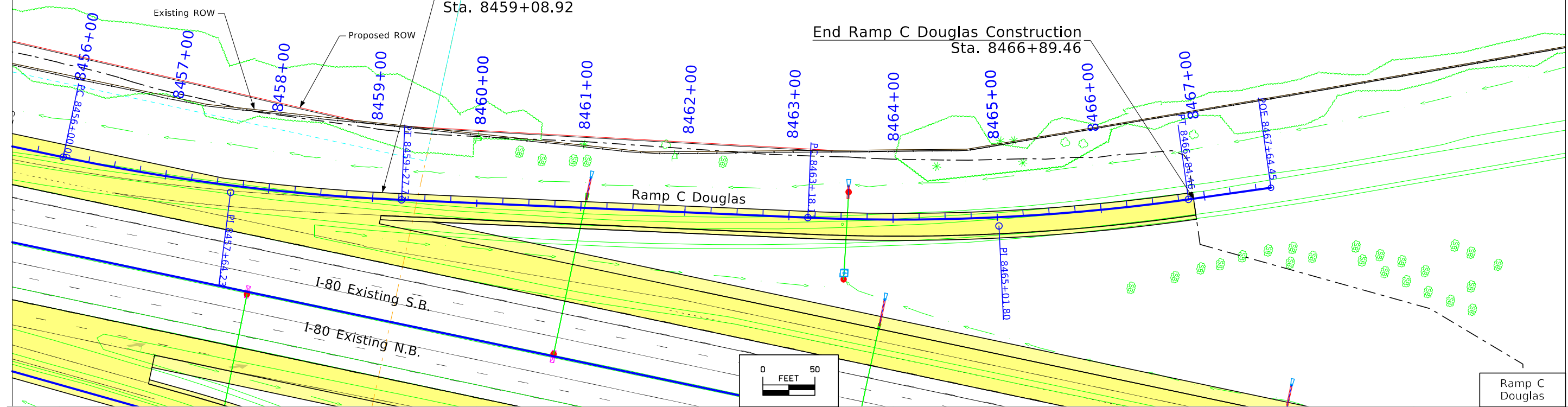
WALNUT TWP.  
 T-79N R-25W  
 SEC. 29  
 City of Urbandale

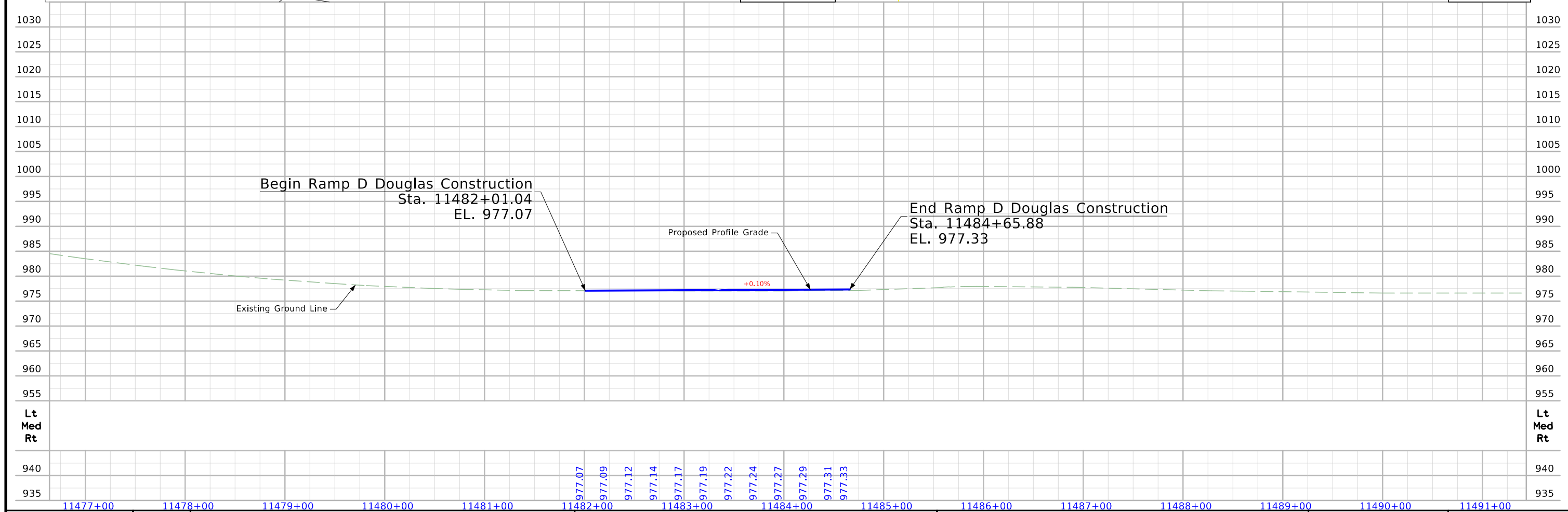
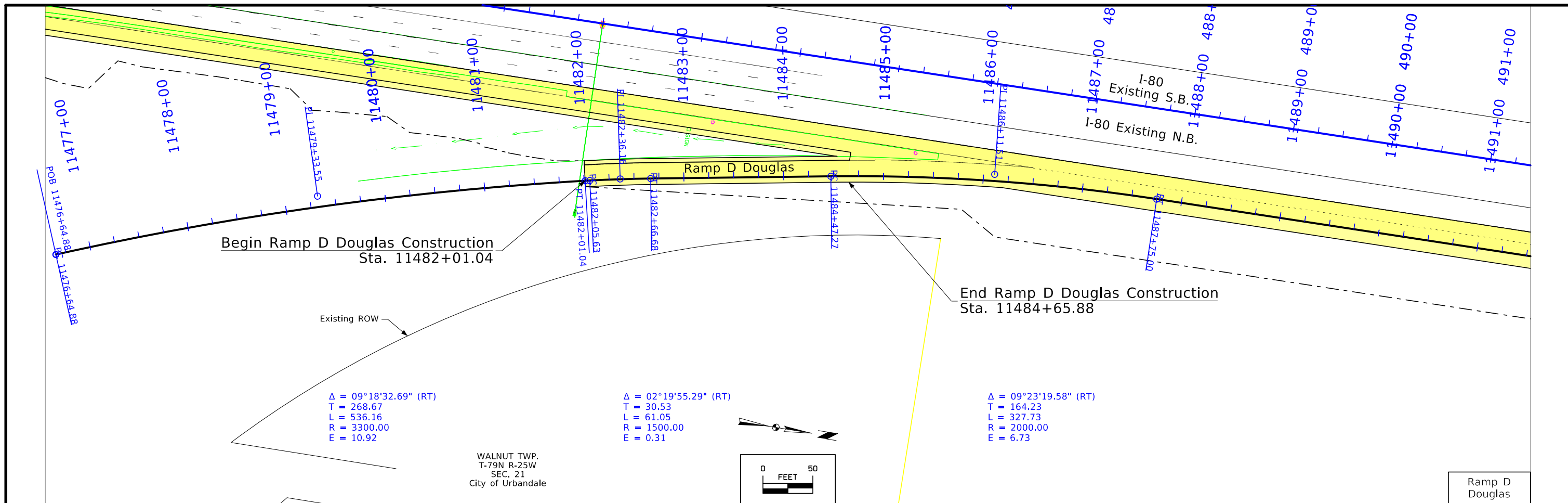
Δ = 10°29'42.73" (LT)  
 T = 183.69  
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 R = 2000.00  
 E = 8.42



Begin Ramp C Douglas Construction  
 Sta. 8459+08.92

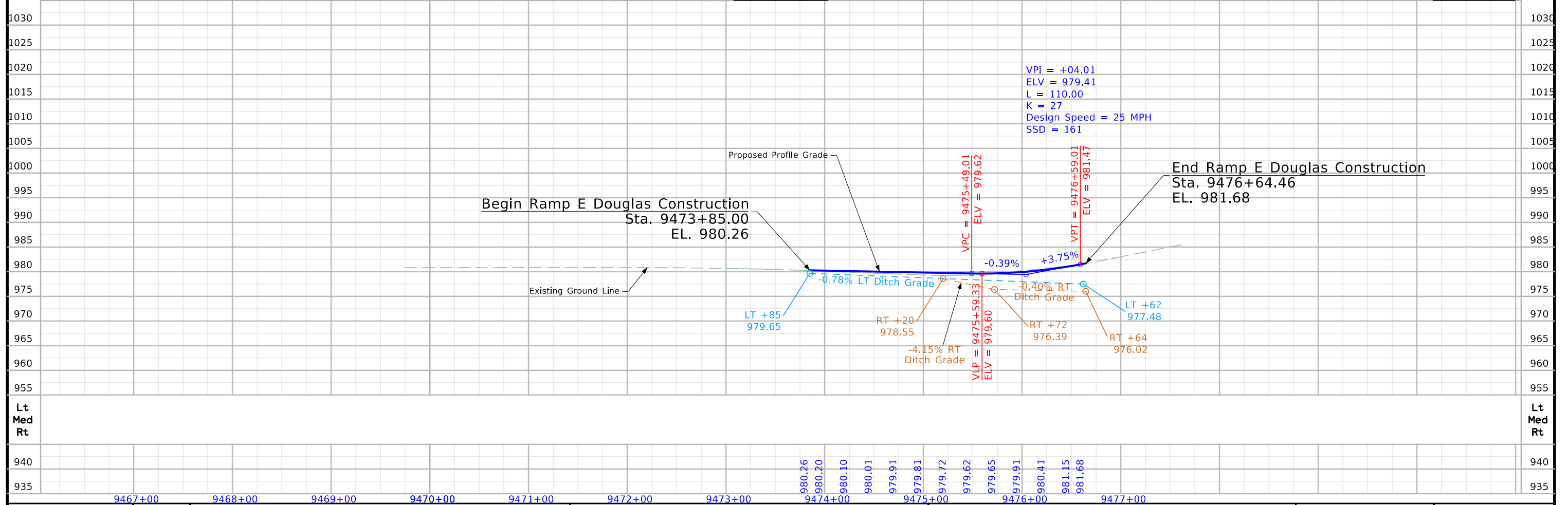
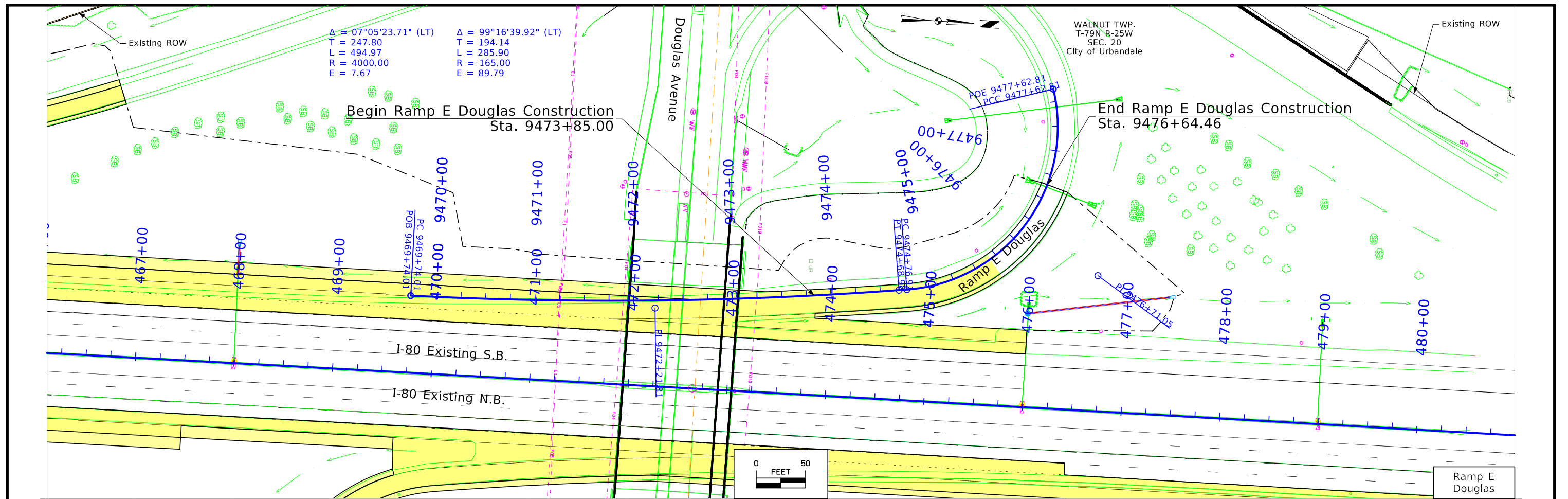
End Ramp C Douglas Construction  
 Sta. 8466+89.46



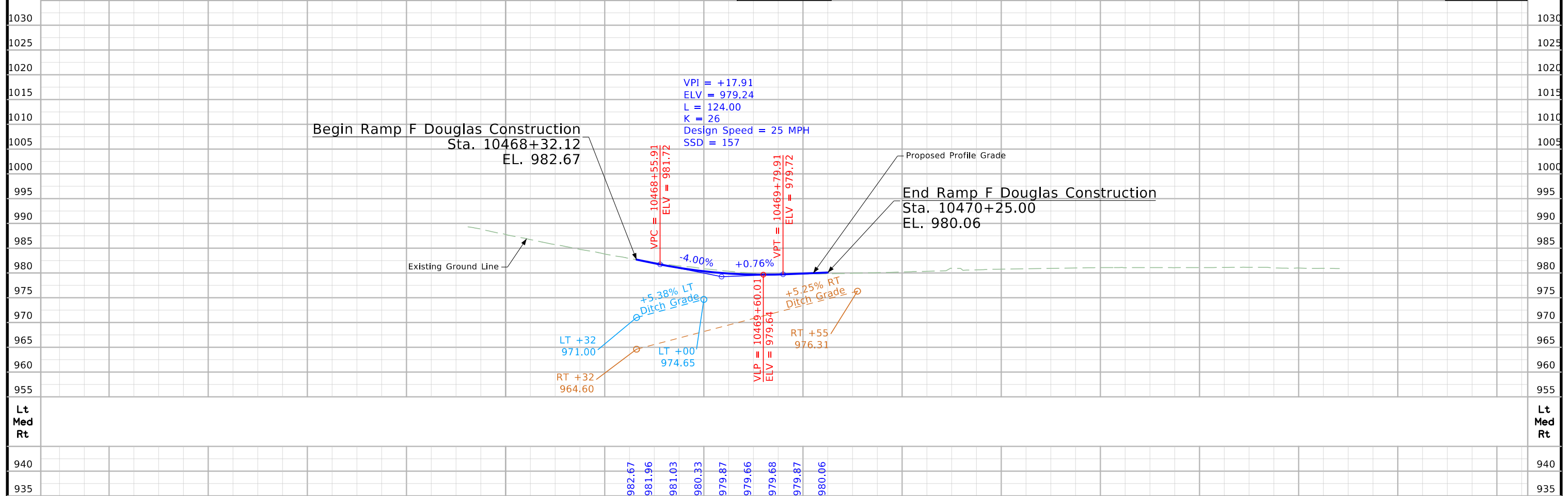
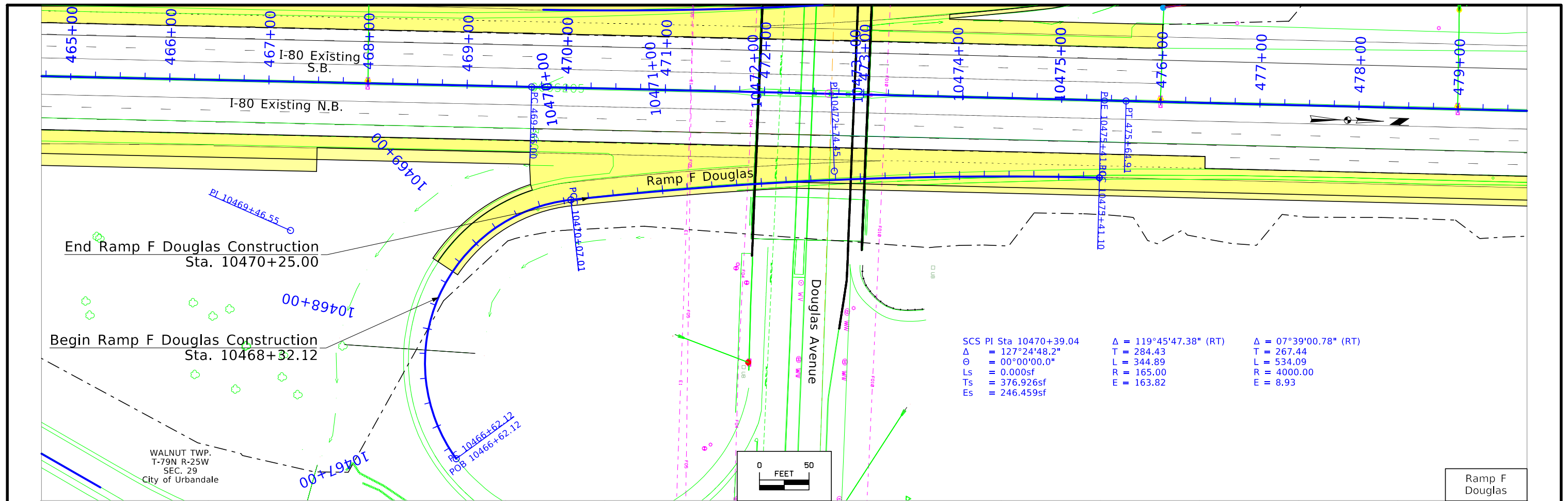


FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER K.23
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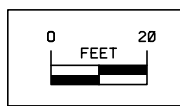
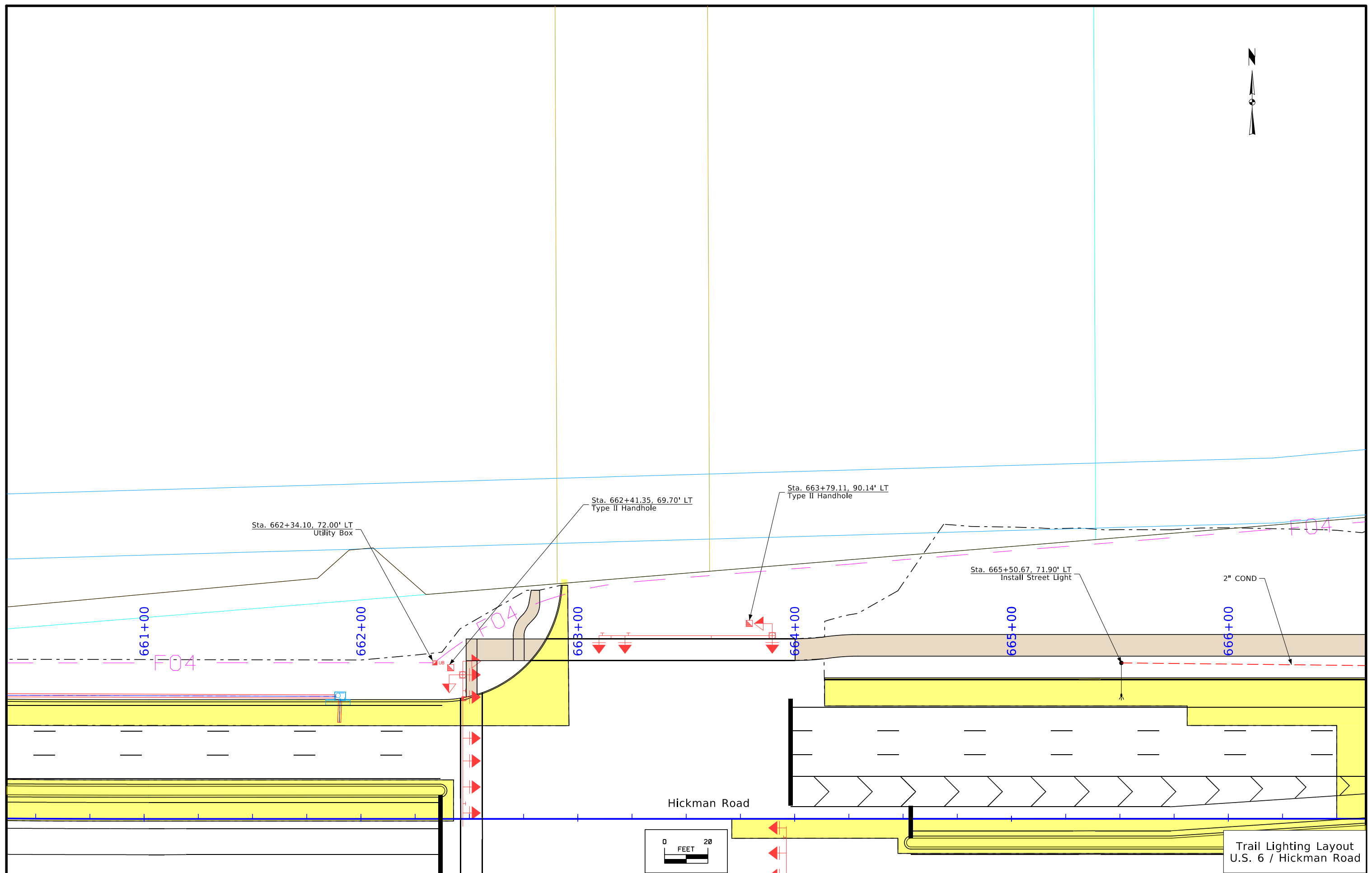




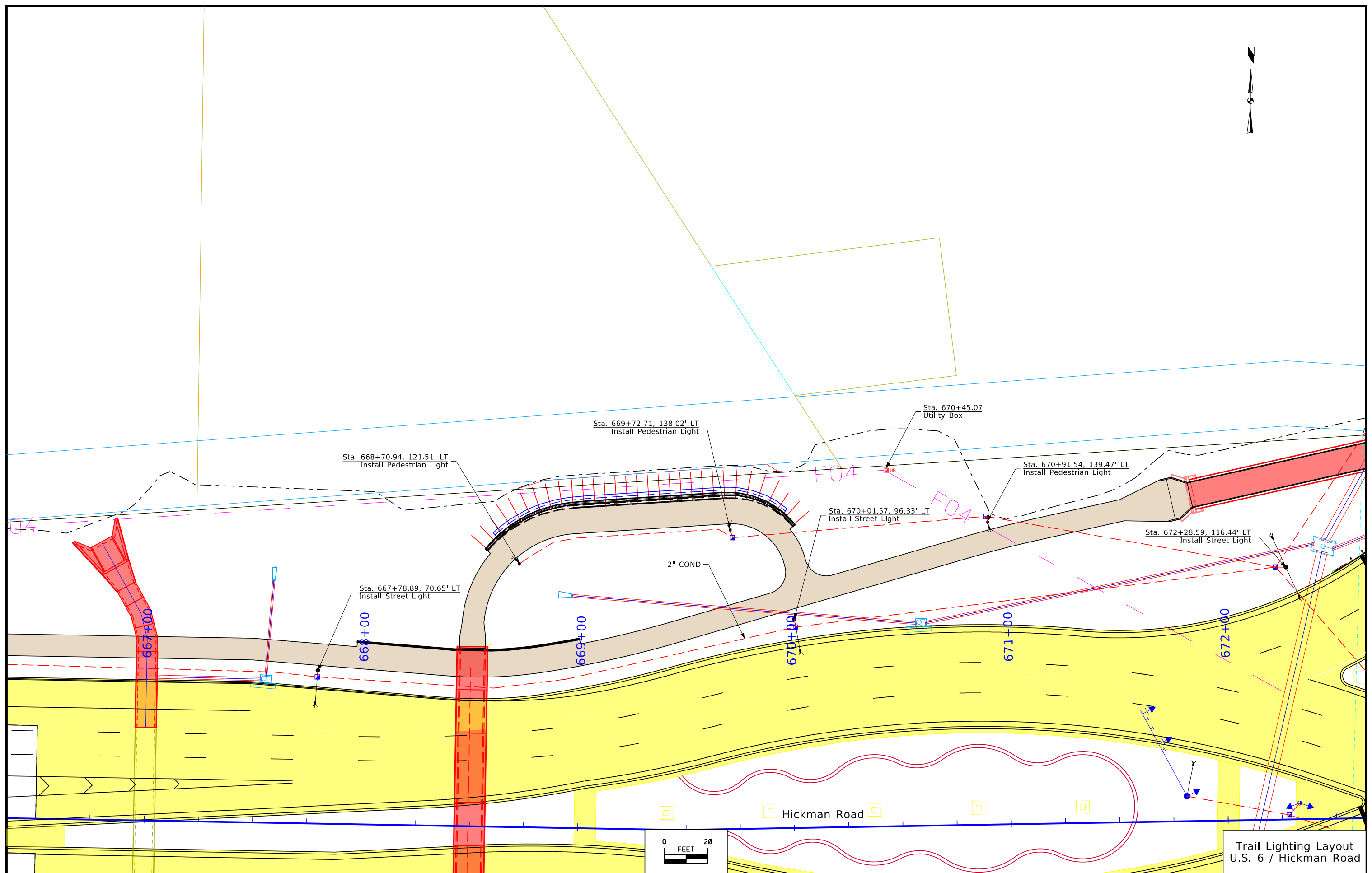
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER K.24
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FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER	IM-080-4(069)125--13-77	SHEET NUMBER	K.25
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Trail Lighting Layout  
U.S. 6 / Hickman Road



Sta. 669+72.71, 138.02' LT  
Install Pedestrian Light

Sta. 668+70.94, 121.51' LT  
Install Pedestrian Light

Sta. 667+78.89, 70.65' LT  
Install Street Light

Sta. 670+01.57, 96.33' LT  
Install Street Light

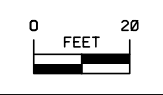
Sta. 670+45.07  
Utility Box

Sta. 670+91.54, 139.47' LT  
Install Pedestrian Light

Sta. 672+28.59, 116.44' LT  
Install Street Light

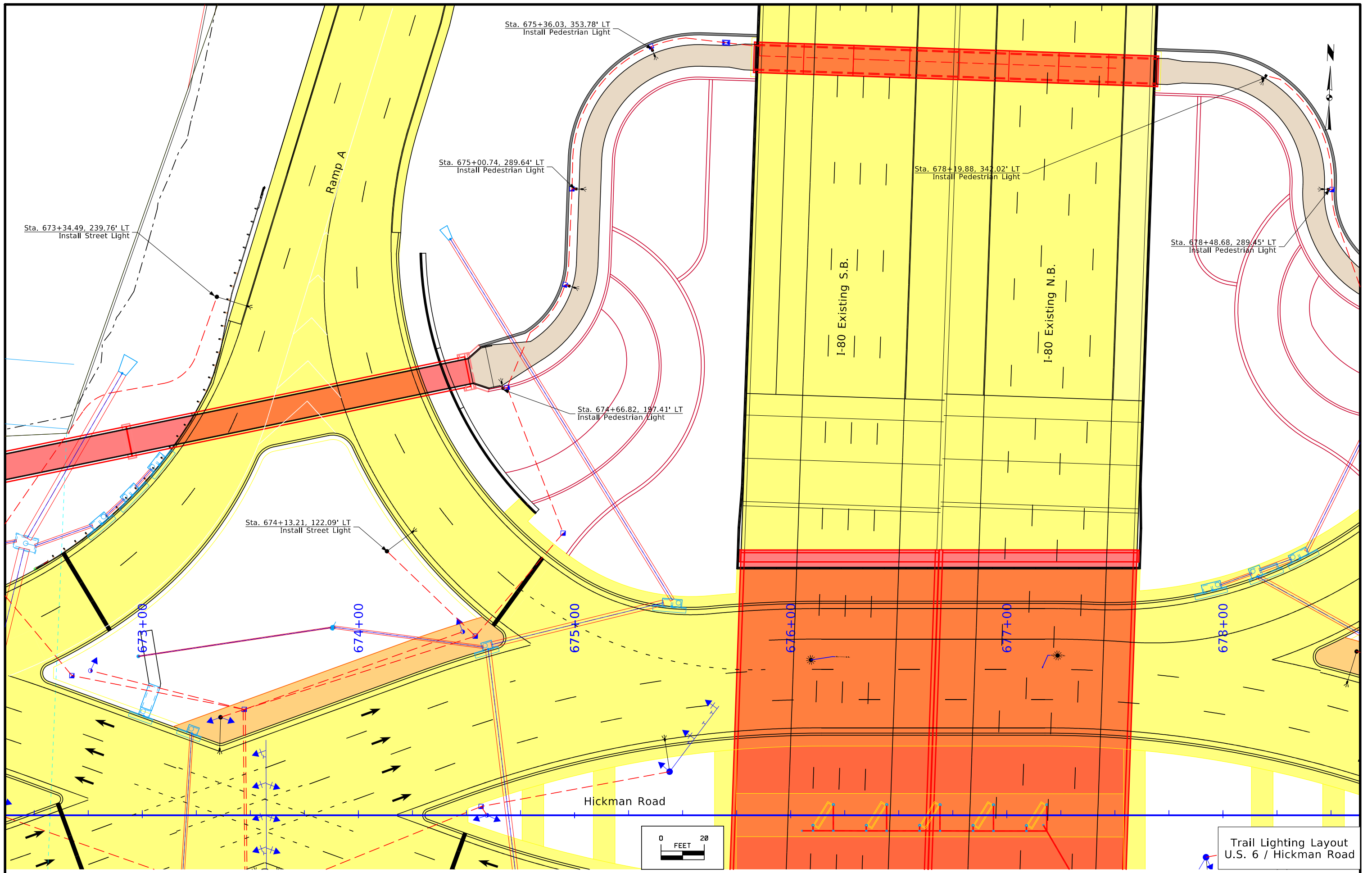
2" COND

Hickman Road

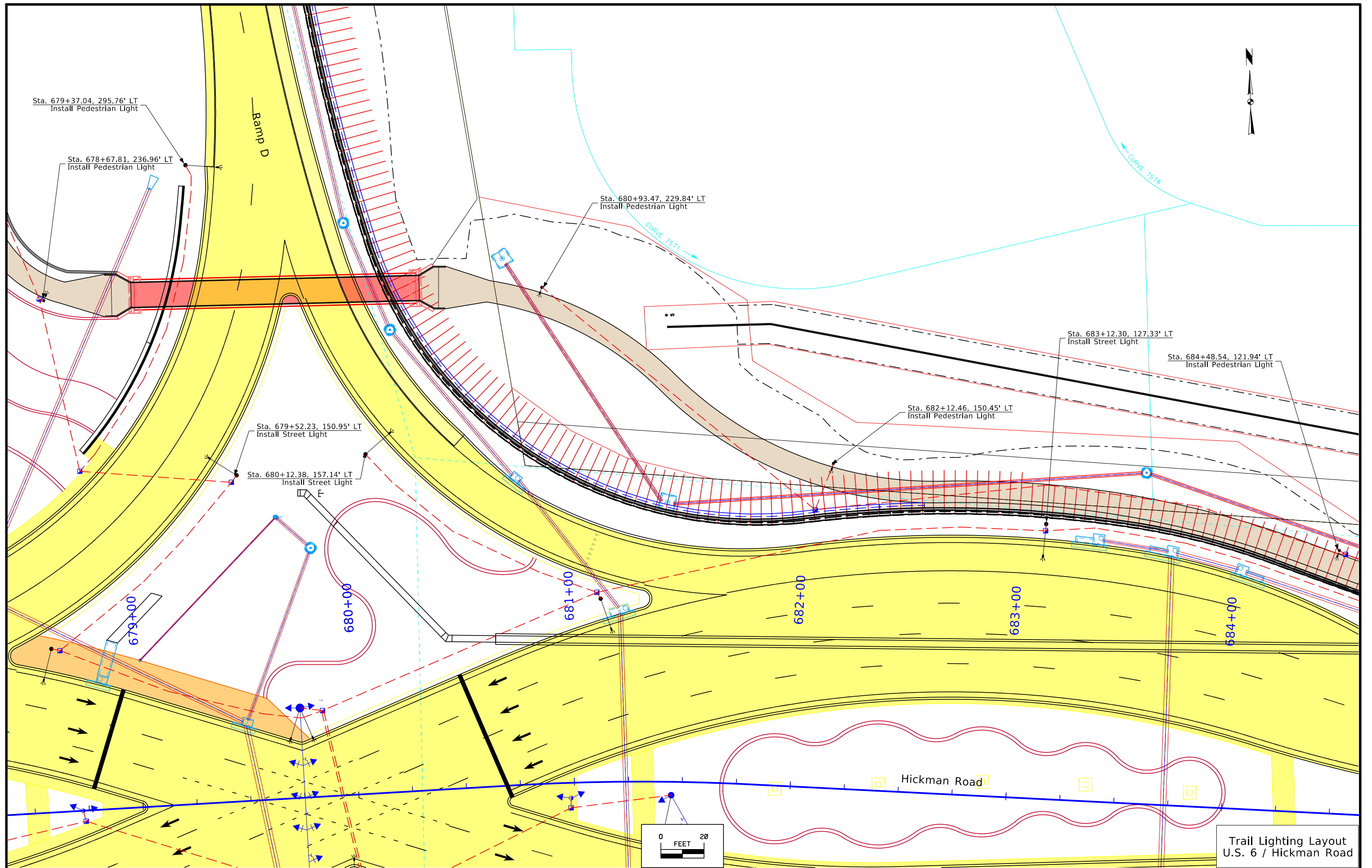


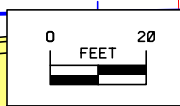
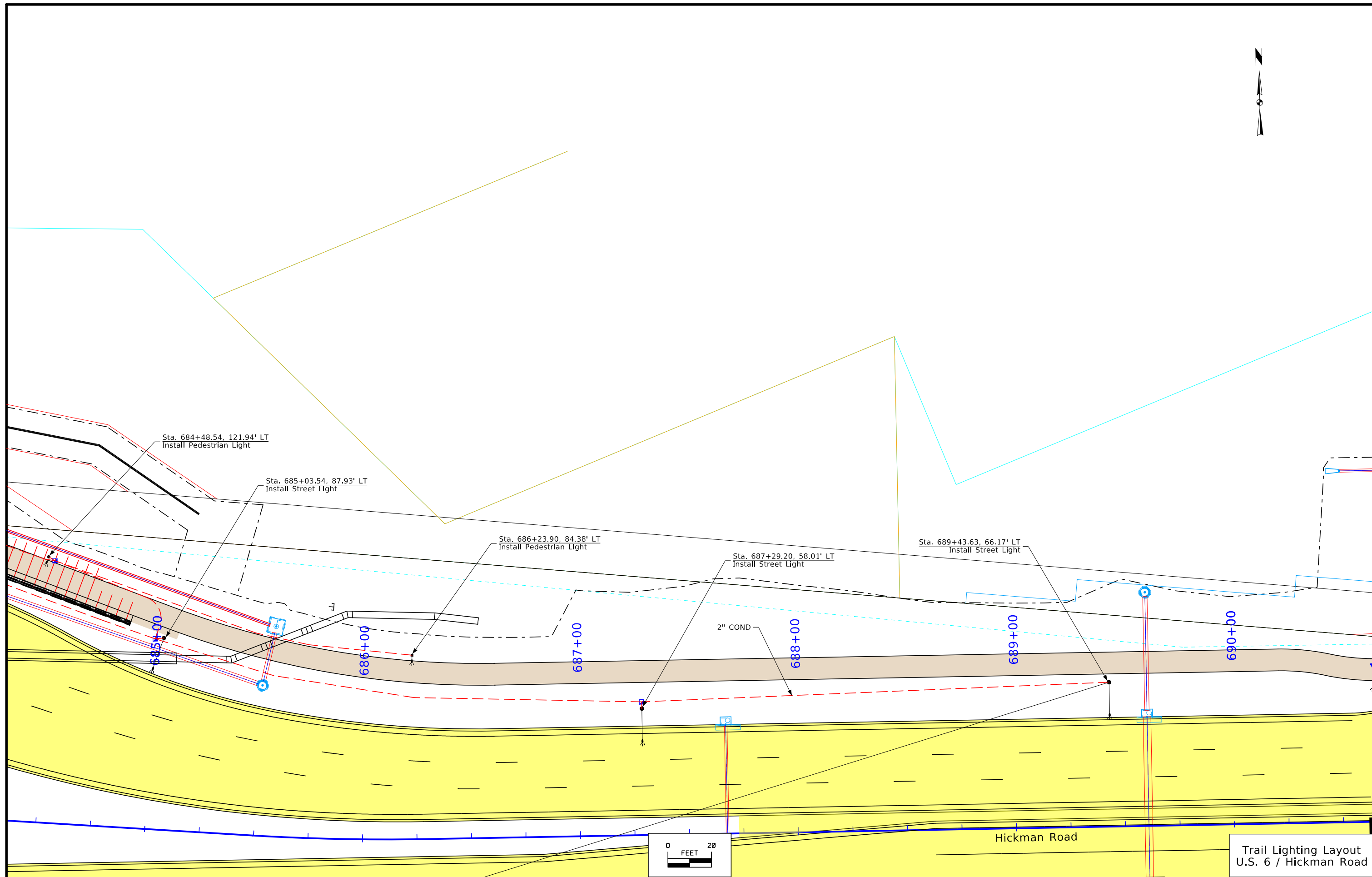
Trail Lighting Layout  
U.S. 6 / Hickman Road



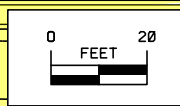
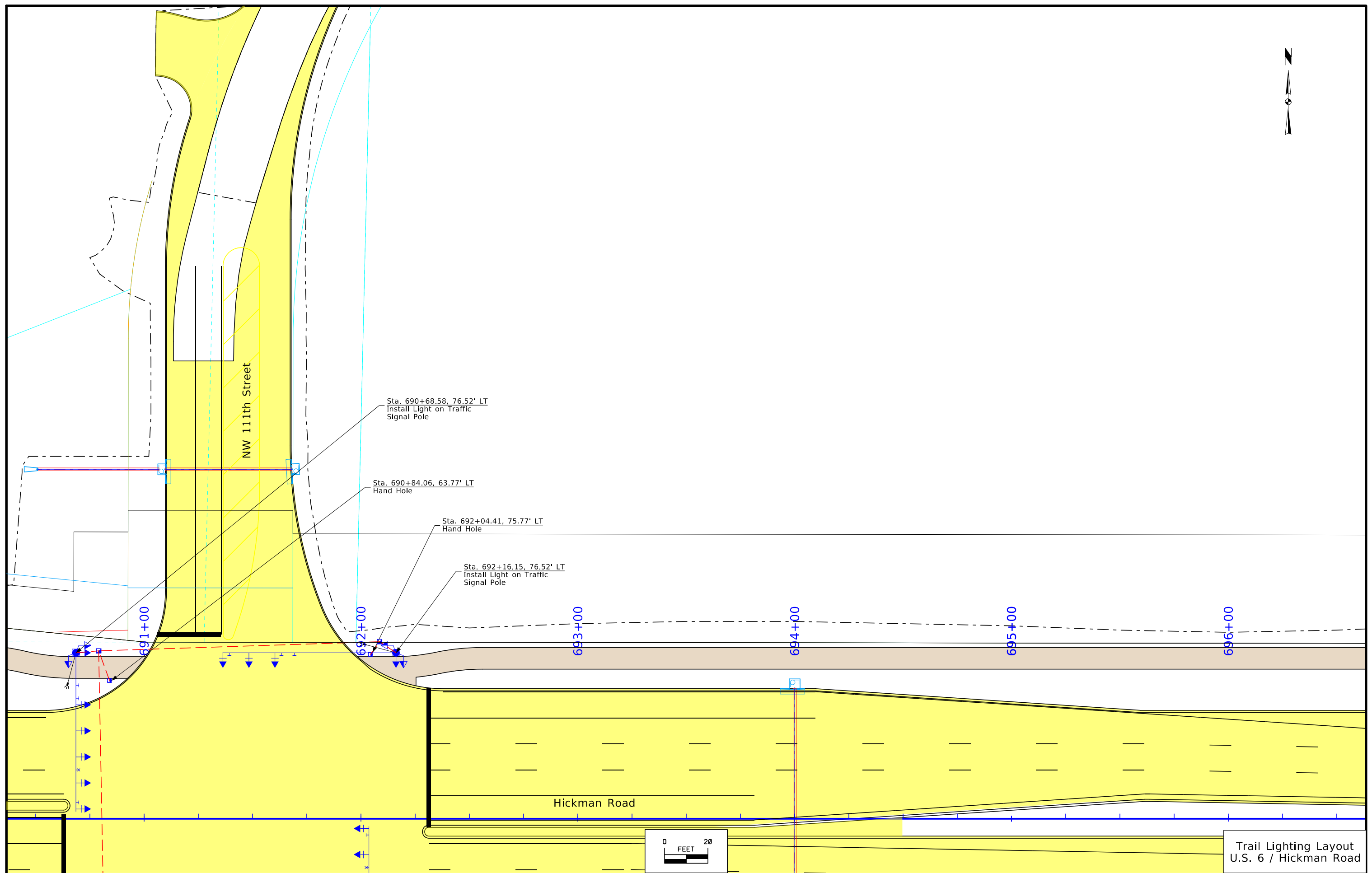


Trail Lighting Layout  
U.S. 6 / Hickman Road





Trail Lighting Layout  
U.S. 6 / Hickman Road



Trail Lighting Layout  
U.S. 6 / Hickman Road



### LINE STYLE LEGEND OF LANDSCAPE SHEETS

LINETYPE	Design Element
-----	Living Snow Fence Single Row
-----	Living Snow Fence Double Row
_____	Mechanical Edge

### CELL LEGEND OF LANDSCAPE SHEETS

CELL	Design Element	Plant Diameter
⊕	Clearing	
⊙	Proposed Shrub	6 FT
⊙	Proposed Understory Tree	12 FT
⊙	Proposed Conifer Tree	18 FT
⊙	Proposed Overstory Tree	30 FT

### PATTERN LEGEND OF LANDSCAPE SHEETS

	Brush Clearing		Spray Area
	Clearing & Grubbing		

### LINE STYLE LEGEND OF EROSION CONTROL SHEETS

LINETYPE	Design Element
	Silt Fence
	Perimeter and Slope Sediment Control Device (9")
	Perimeter and Slope Sediment Control Device (12")
	Perimeter and Slope Sediment Control Device (20")
	Open-Throat Curb Intake Sediment Filter
	Concentrated Flow
	Rock Check and Rock Check Dam
	Sheet Flow

### CELL LEGEND OF EROSION CONTROL SHEETS

CELL	Design Element
	Temporary Sediment Control basin
	Erosion Control for Circular Intake or Manhole Well
	Erosion Control for Rectangular Intake or Manhole Well
	Grate Intake Sediment Filter Bag
	Silt Basin
	Silt Fence Tail
	Stormwater Drainage Basin Discharge Point

### PLAN VIEW COLOR LEGEND OF EROSION CONTROL SHEETS

LINEWORK	Design Color No.	Design Element
Green	(2)	Existing Topographic Features and Labels
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)	Existing Utilities
Black	(0)	Permanent Erosion Control Features
Blaze Orange	(222)	Temporary Erosion Control Features

SHADING	Design Color No.	Design Element	Transparency
Citron	(234)	Mulching, All Types	50%
Light Brown	(238)	Special Ditch Control, Wood Excelsior Mat	0%
Grass Green	(233)	8FT Mow Strip	50%
Red	(3)	Delineates Restricted Areas	0%
Red	(3)	Basin_100YR_Ponding	
Magenta	(5)	Soil Quality Restoration	
Gray	(48)	Regenerative Conveyance	
Green	(2)	Grass Swale_Rock Infiltration	
Yellow	(4)	Bioretention Cell	

### PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

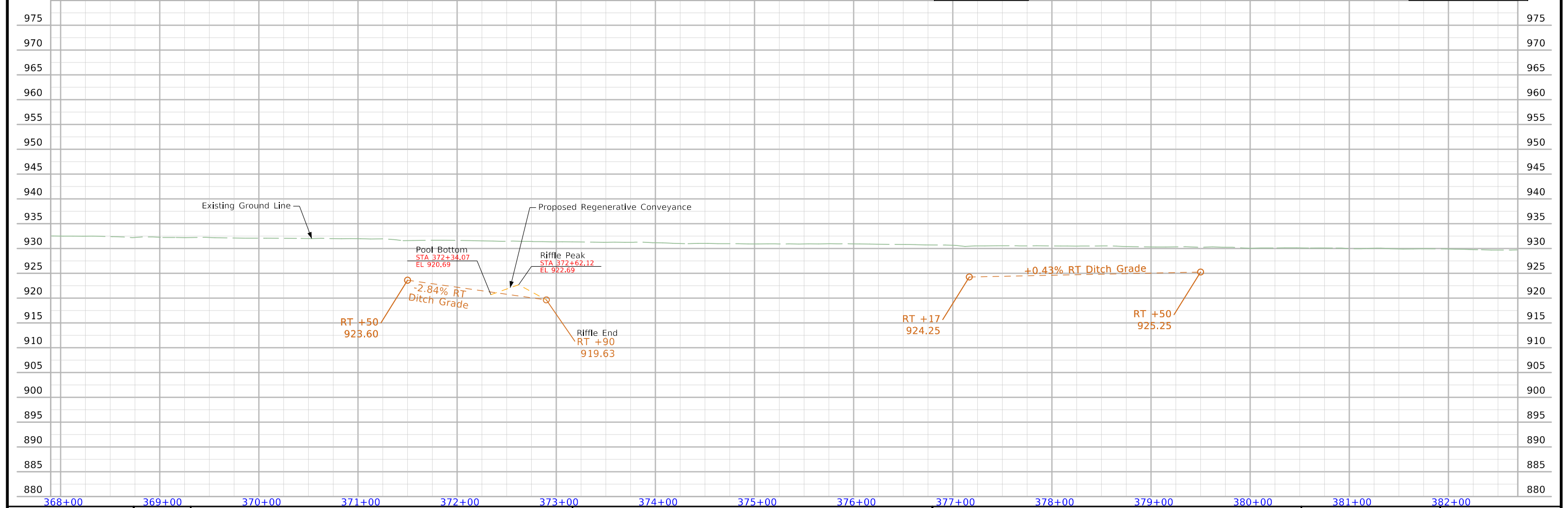
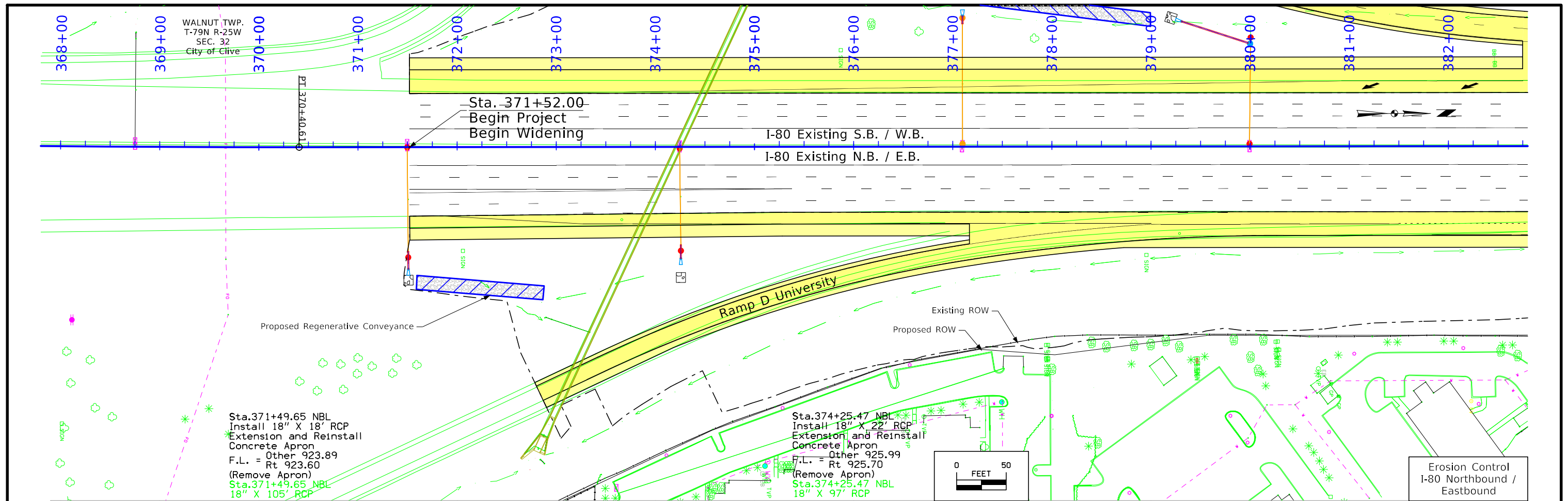
LINEWORK	Design Color No.	Design Element
Green	(10)	Existing Ground Line Profile
Blue	(1)	Proposed Profile and Annotation
Magenta	(5)	Existing Utilities
Blue, Light	(230)	Proposed Ditch Grades, Left
Rust	(14)	Proposed Ditch Grades, Right
Black	(0)	Infiltration Trench
Teal	(7)	Regenerative Conveyance, Left
Orange	(6)	Regenerative Conveyance, Right

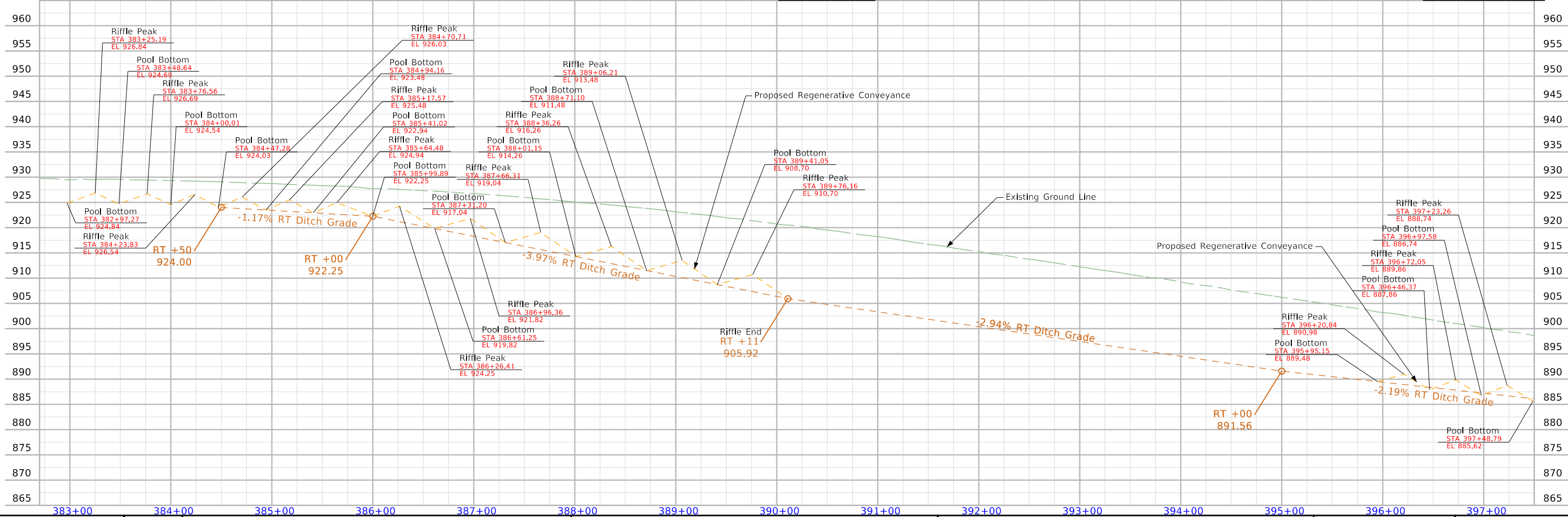
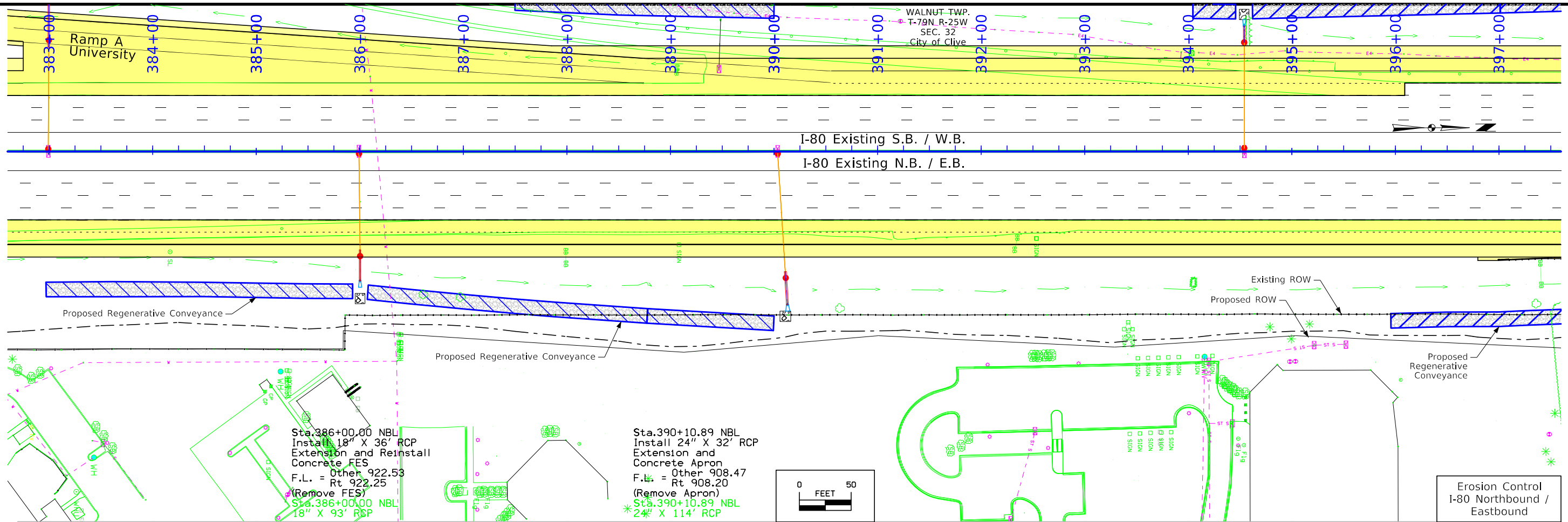
### PATTERN LEGEND OF EROSION CONTROL SHEETS

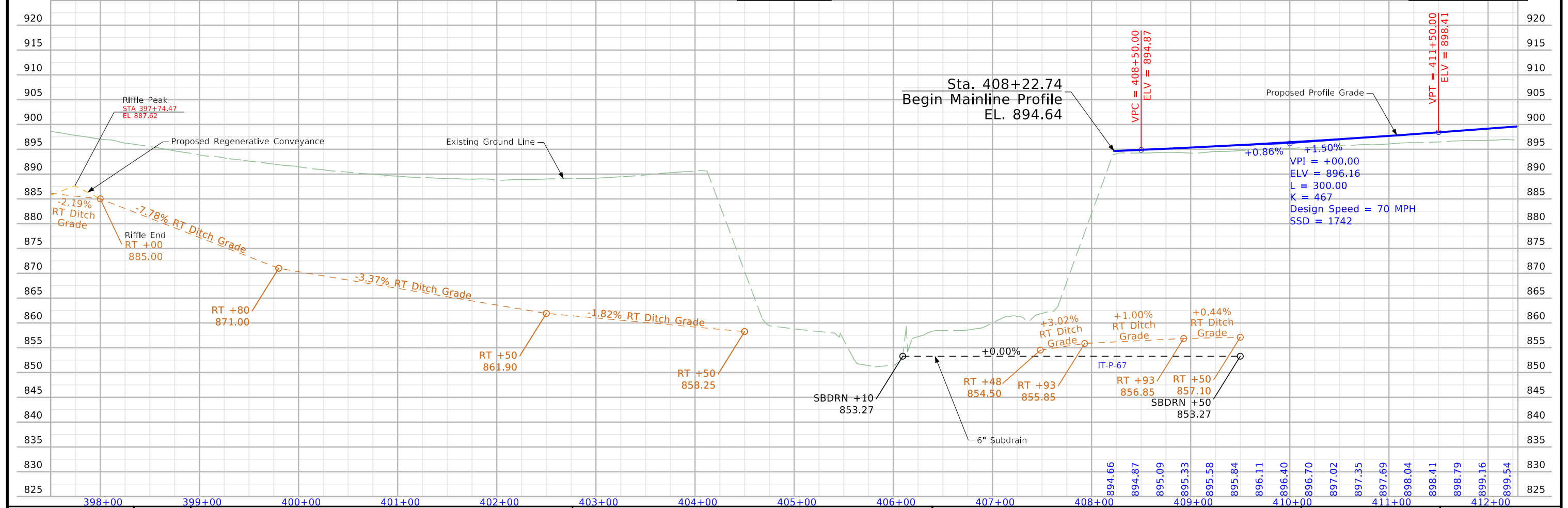
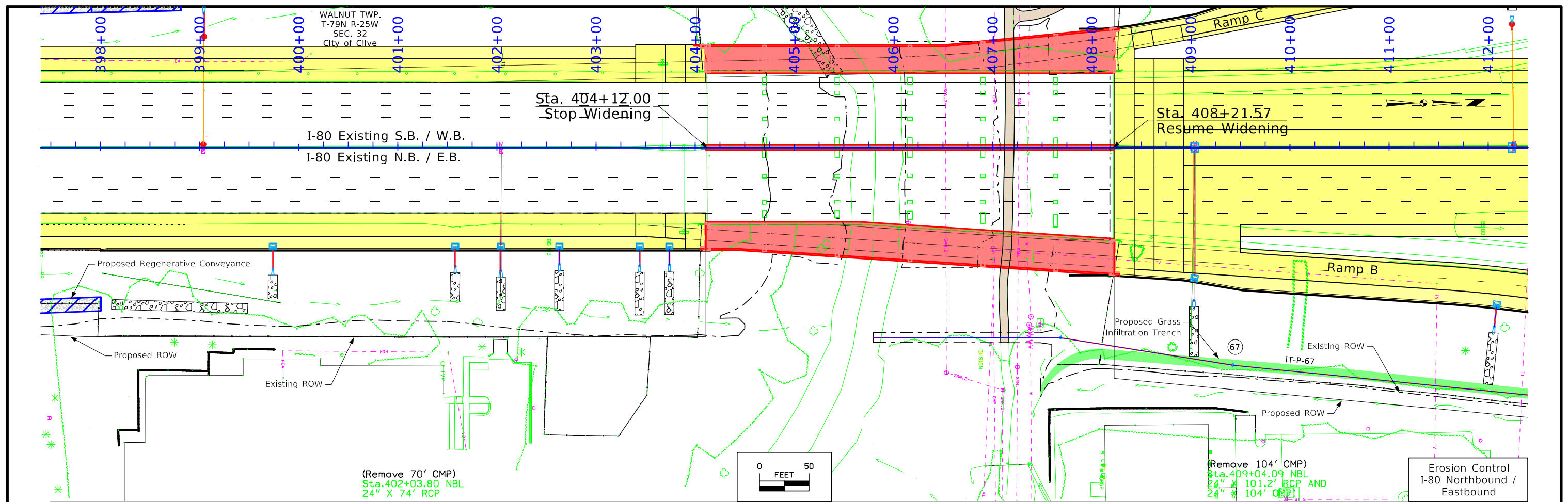
	Seeding and Fertilizing		Turf Reinforcement Mat Type 1
	Seeding and Fertilizing (Rural)		Turf Reinforcement Mat Type 2
	Seeding and Fertilizing (Urban)		Turf Reinforcement Mat Type 3
	Native Grass Seeding		Turf Reinforcement Mat Type 4
	Salt Tolerant Seeding		Slope Protection, Wood Excelsior Mat
	Wetland Grass Seeding		Transition Mat
	Wildflower Seeding		Rock Features, Permanent
	Sodding		Rock Features, Temporary

## EROSION CONTROL LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES R)









WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

I-80 Existing S.B. / W.B.

I-80 Existing N.B. / E.B.

Ramp F Douglas

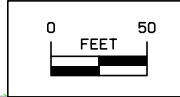
Ramp B Douglas

Basin

Install SW-513 outlet structure over existing pipe. Refer to Sheet RU.5 for details.

$\Delta = 00^{\circ}08'29.93"$  (RT)  
T = 299.96  
L = 599.91  
R = 242663.86  
E = 0.19

Erosion Control  
I-80 Northbound / Eastbound



Existing ROW  
Proposed ROW  
Sta. 457+99.76 NBL  
Install 24" EQ X 14' RCAP  
Extension and Reinstall FES  
F.L. = Other 968.91  
(Remove FES)  
Sta. 457+99.76 NBL  
24" EQ X 152.8' RCP



+1.77% RT  
Ditch Grade  
RT +25  
967.42

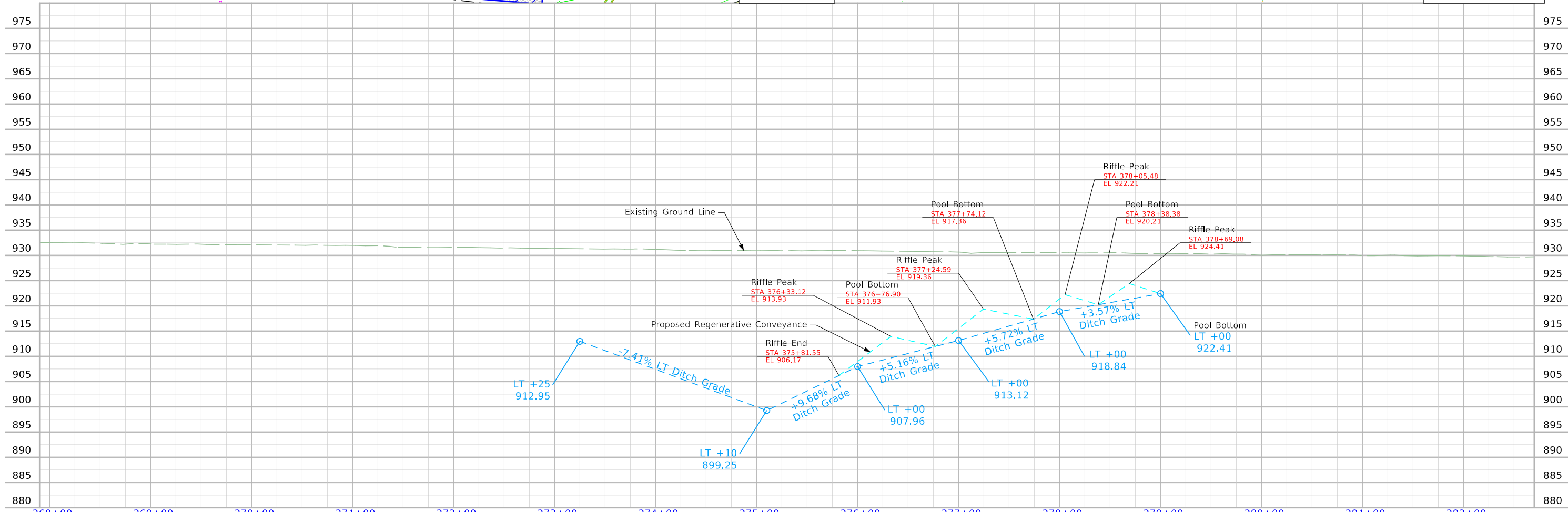
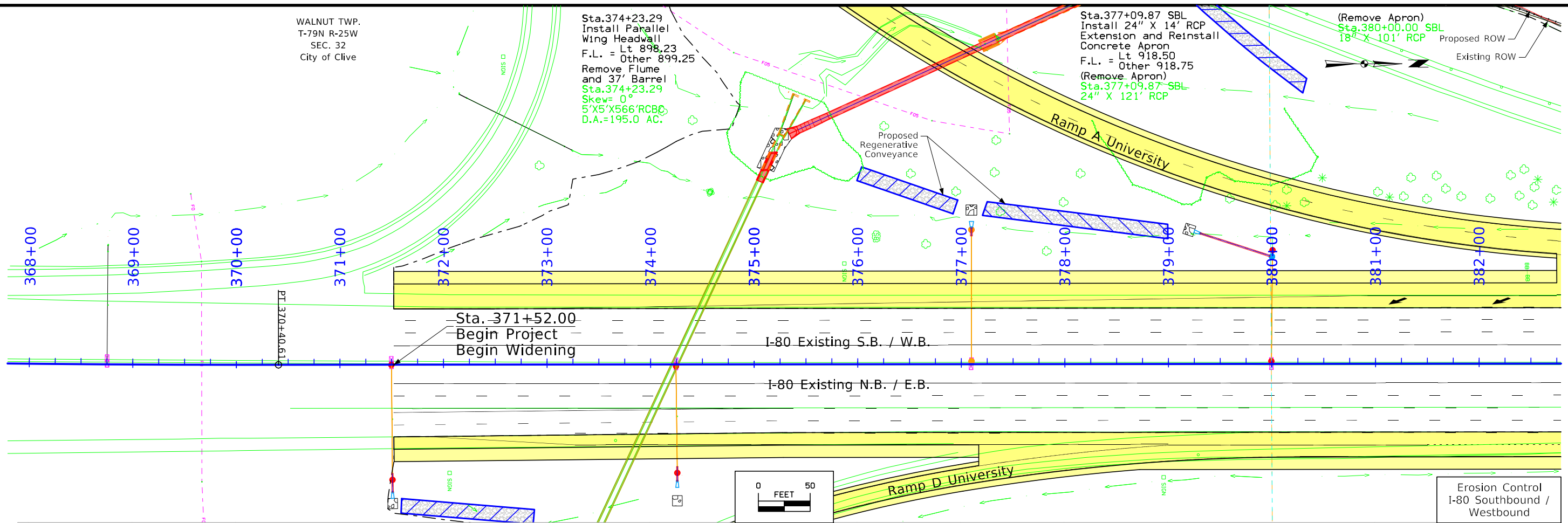
Existing Ground Line

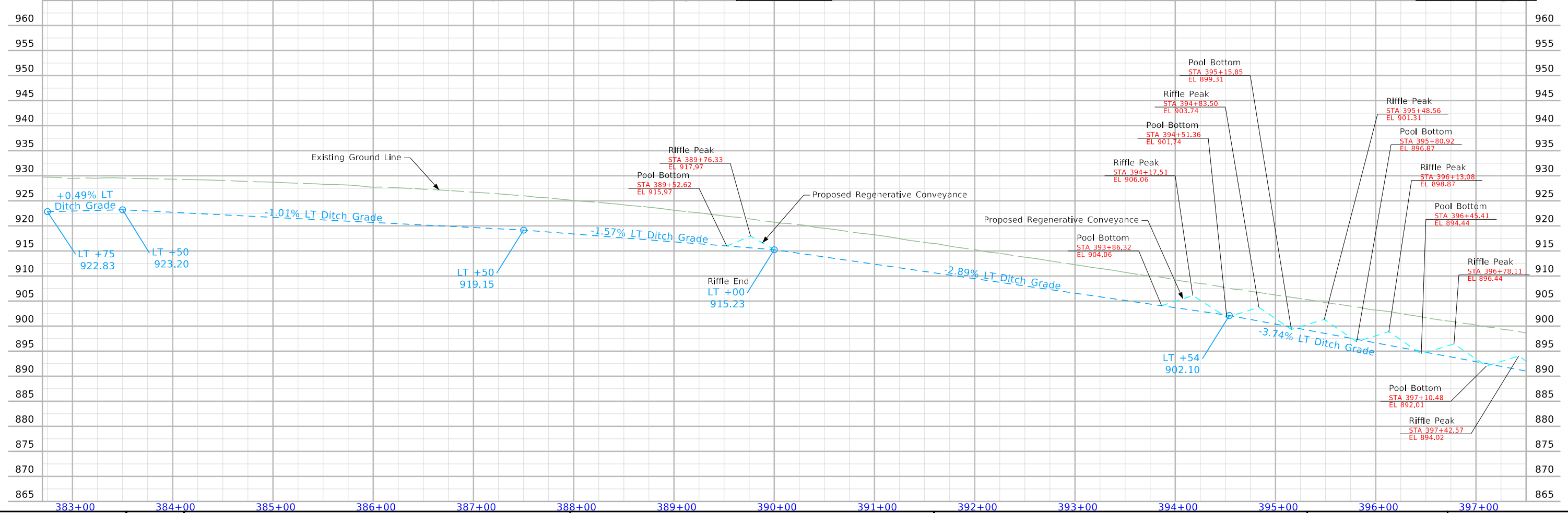
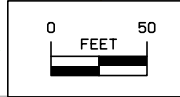
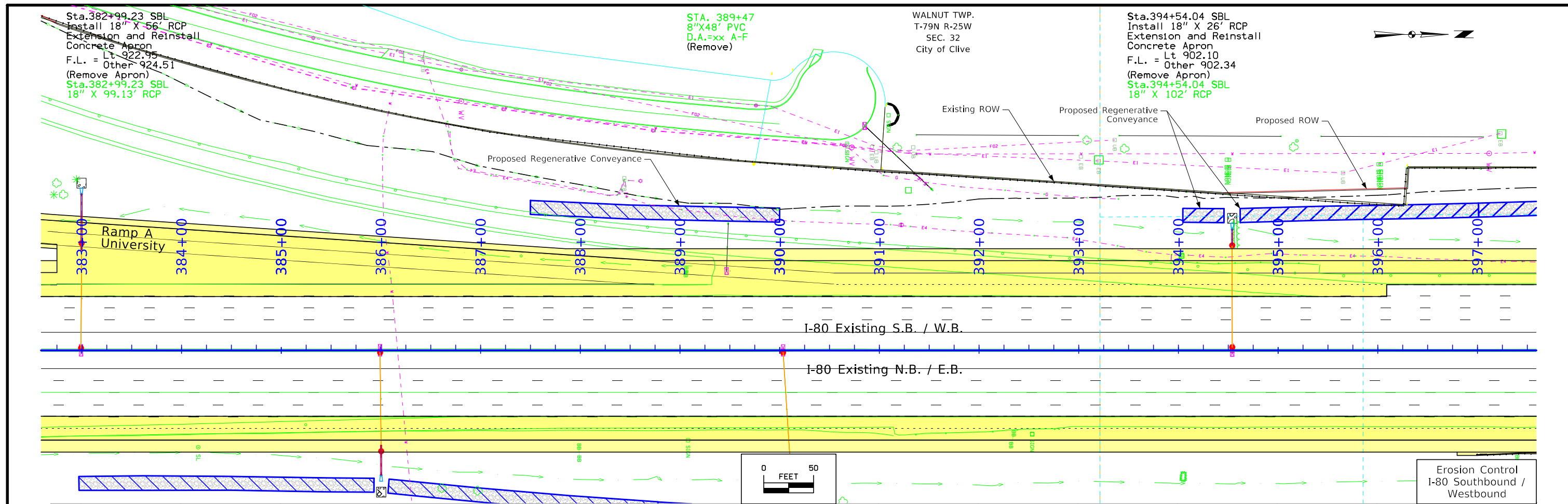
WALNUT TWP.  
T-79N R-25W  
SEC. 32  
City of Clive

Sta. 374+23.29  
Install Parallel  
Wing Headwall  
F.L. = Lt 898.23  
Other 899.25  
Remove Flume  
and 37' Barrel  
Sta. 374+23.29  
Skew= 0°  
5'X5'X566'R/CBC  
D.A.=195.0 AC.

Sta. 377+09.87 SBL  
Install 24" X 14' RCP  
Extension and Reinstall  
Concrete Apron  
F.L. = Lt 918.50  
Other 918.75  
(Remove Apron)  
Sta. 377+09.87 SBL  
24" X 121' RCP

(Remove Apron)  
Sta. 380+00.00 SBL  
18" X 101' RCP

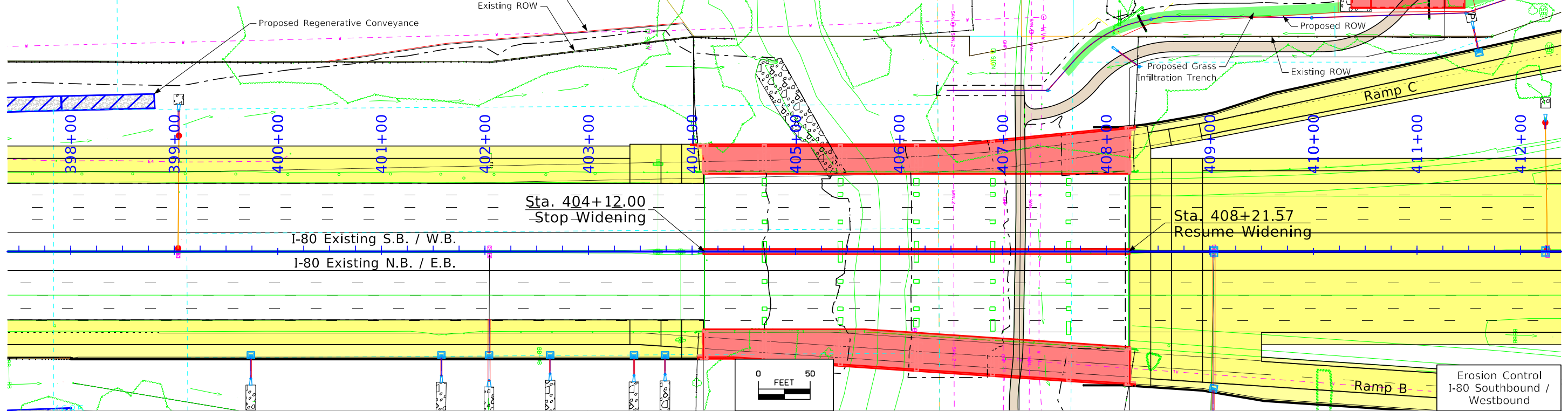




Sta.399+04.47 SBL  
 Install 18" X 28' RCP  
 Extension and Reinstall  
 Concrete FES  
 F.L. = Lt 885.25  
 (Remove FES)  
 Sta.399+04.47 SBL  
 18" X 109' RCP

WALNUT TWP.  
 T-79N R-25W  
 SEC. 32  
 City of Clive

Sta.412+24.10 SBL  
 Install 18" X 14' RCP  
 Extension and Reinstall  
 Concrete FES  
 F.L. = Lt 887.66  
 Other 887.93  
 (Remove FES)  
 Sta.412+24.10 SBL  
 18" X 116' RCP



FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER RR.8
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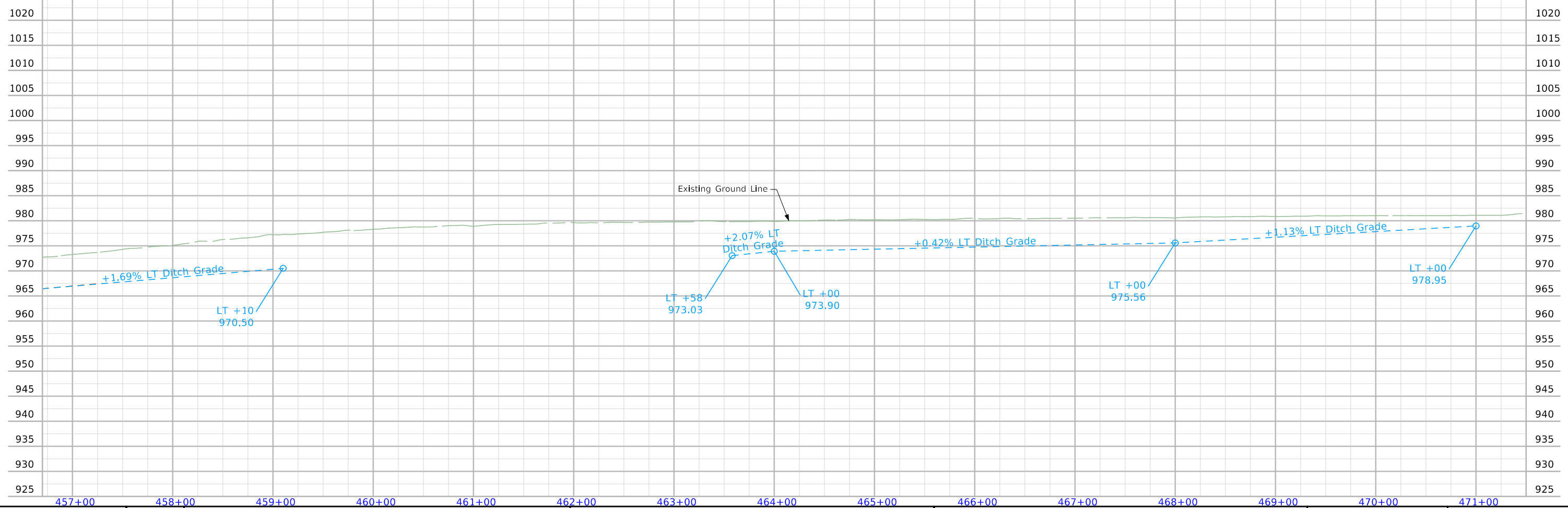
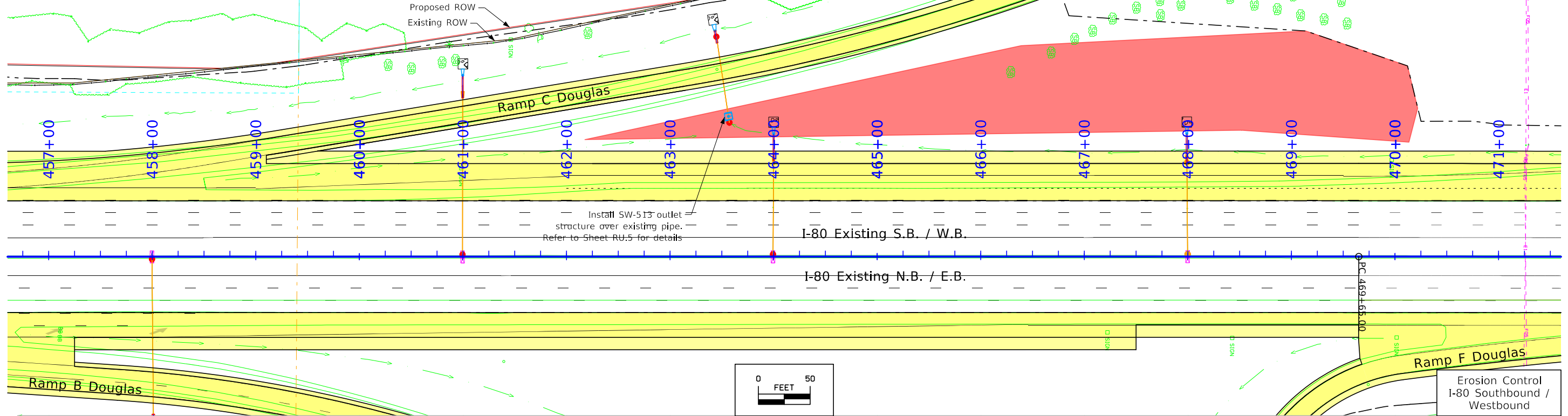
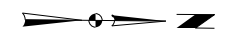


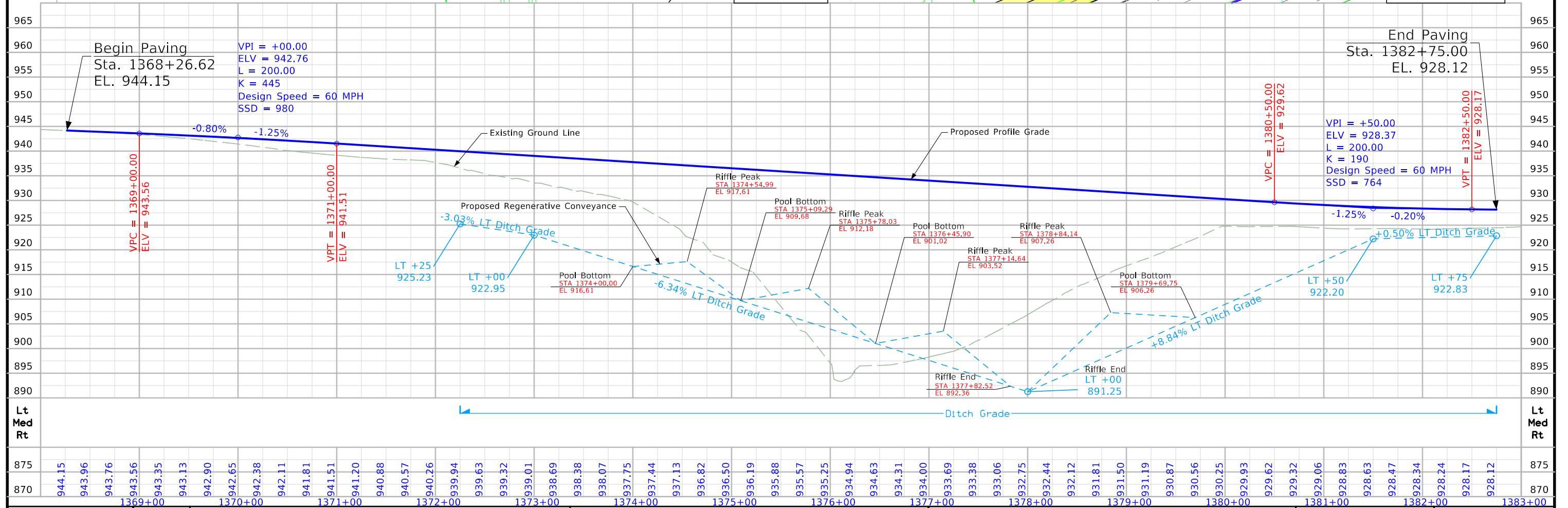
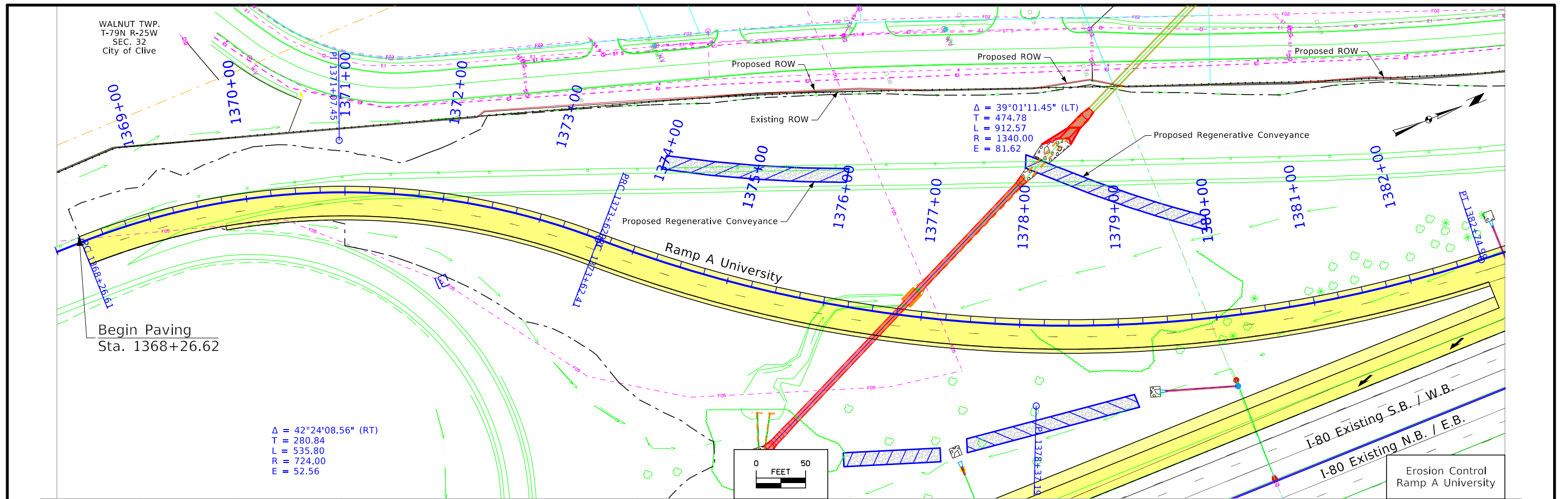
WALNUT TWP.  
T-79N R-25W  
SEC. 29  
City of Urbandale

Sta.461+00.00 SBL  
Install 18" X 22' RCP  
Extension and Reinstall  
Concrete FES  
F.L. = Lt 971.22  
Other 972.04  
(Remove FES)  
Sta.461+00.00 SBL  
18" X 151' RCP

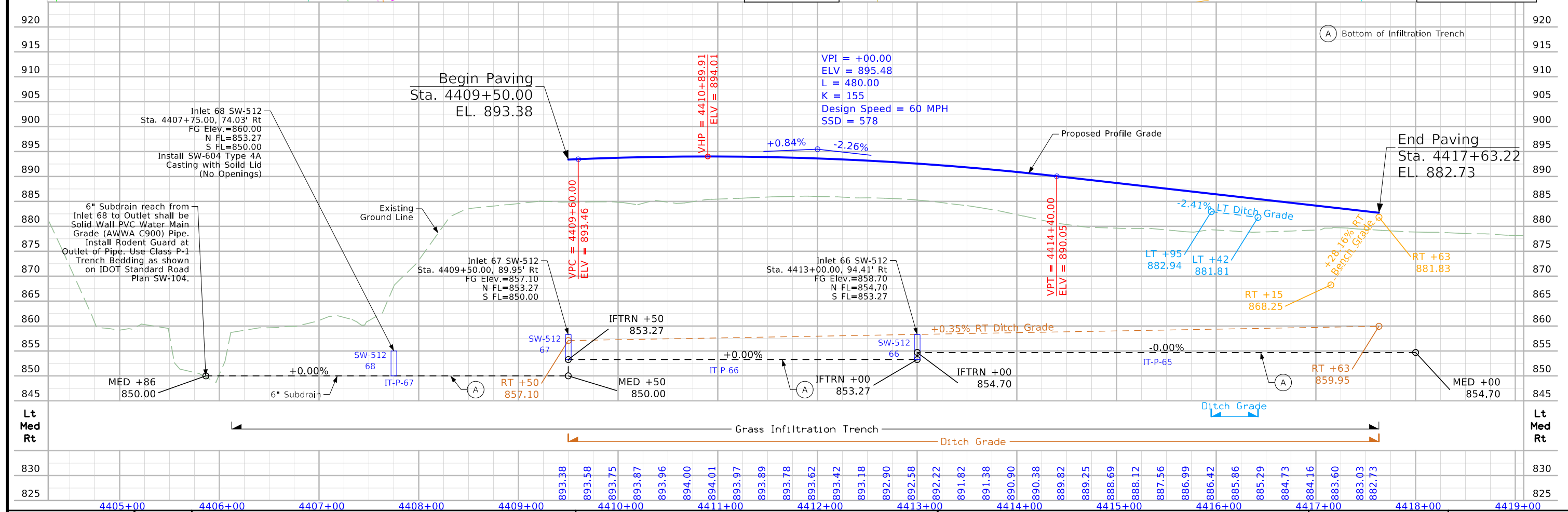
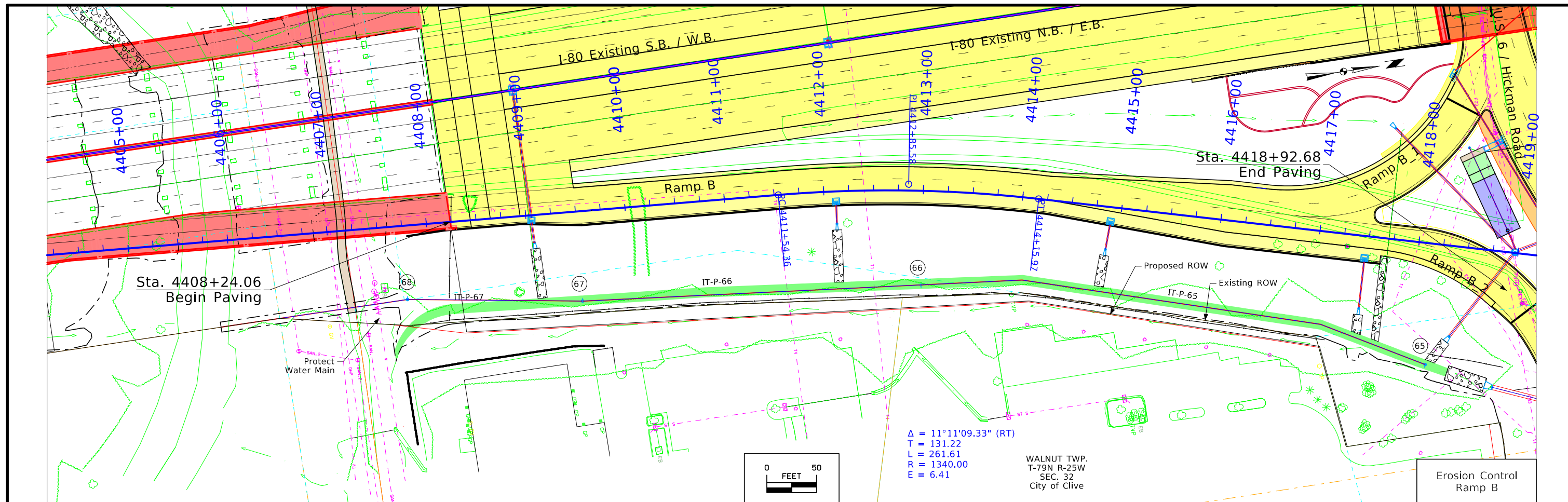
Sta.464+00.00 SBL  
Install 18" X 26' RCP  
Extension and  
Concrete Apron  
F.L. = Lt 973.90  
Other 974.95  
(Remove FES)  
Sta.464+00.00 SBL  
18" X 90' RCP

Sta.468+00.00 SBL  
Install 18" X 28' RCP  
Extension and  
Concrete Apron  
F.L. = Lt 975.56  
Other 976.13  
(Remove FES)  
Sta.468+00.00 SBL  
18" X 88' RCP



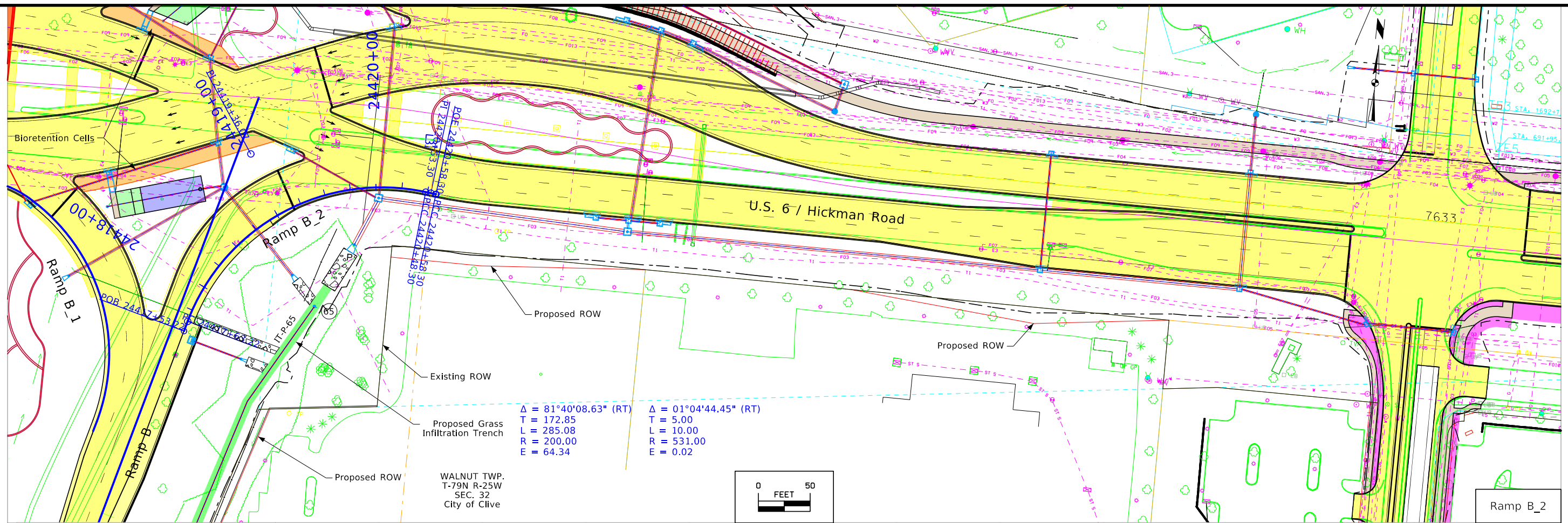


FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER	IM-080-4(069)125--13-77	SHEET NUMBER	RR.10
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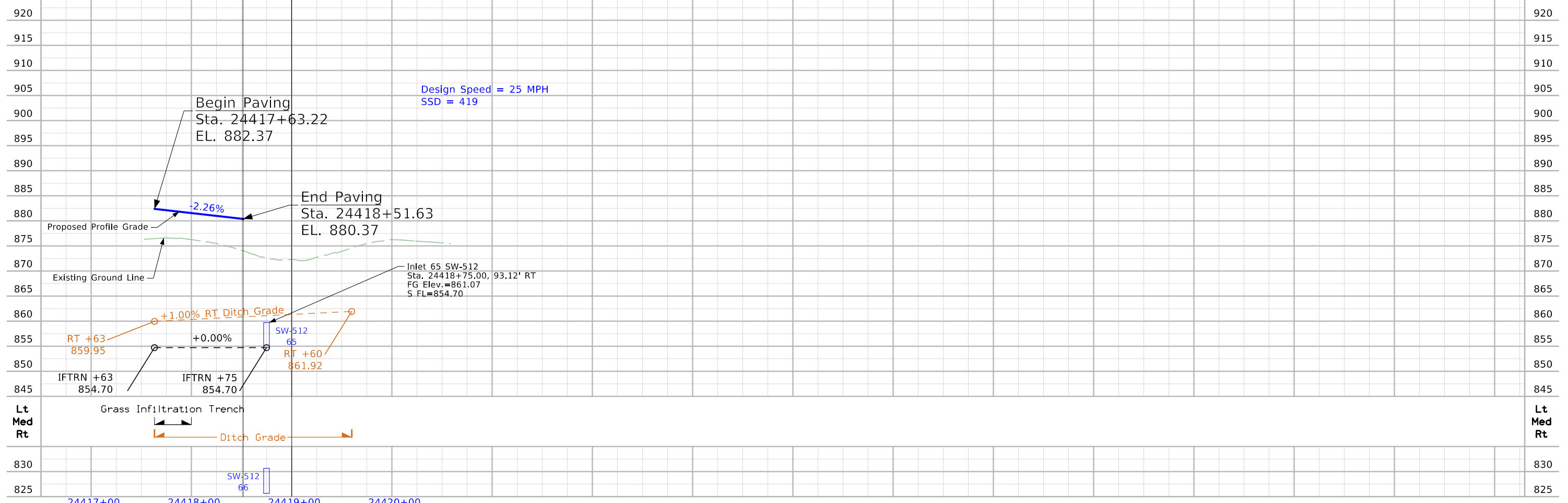
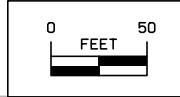
FILE NO.	ENGLISH	DESIGN TEAM	Snyder & Associates, Inc.	POLK COUNTY	PROJECT NUMBER	IM-080-4(069)125--13-77	SHEET NUMBER	RR.11
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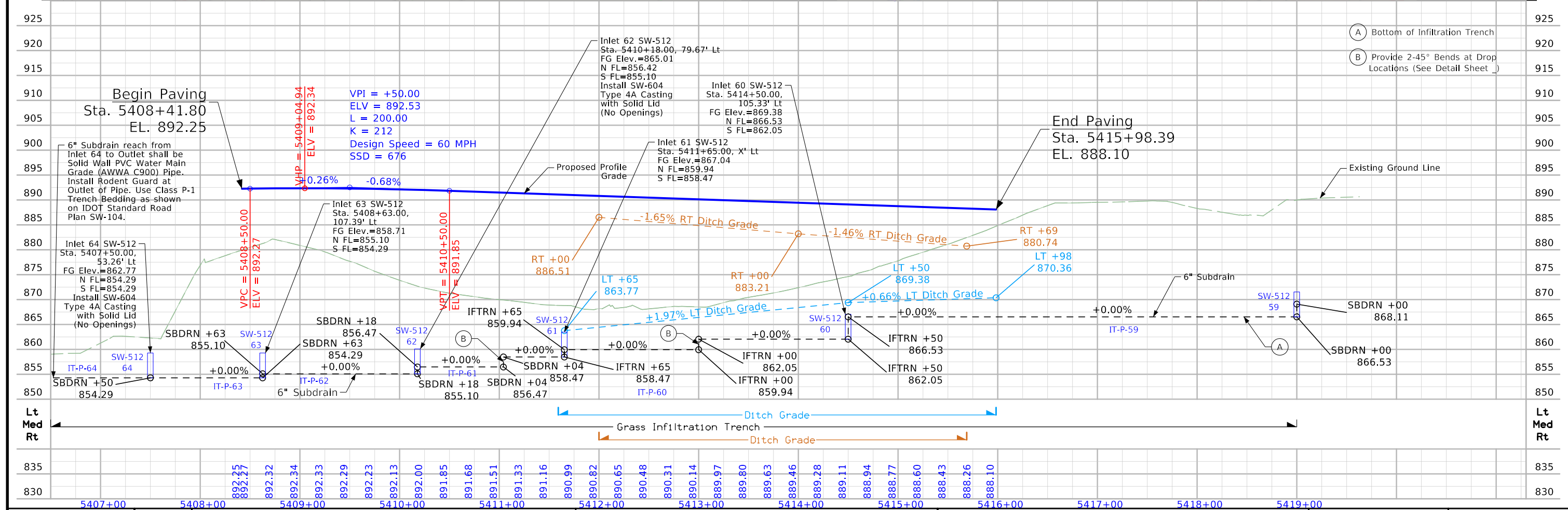
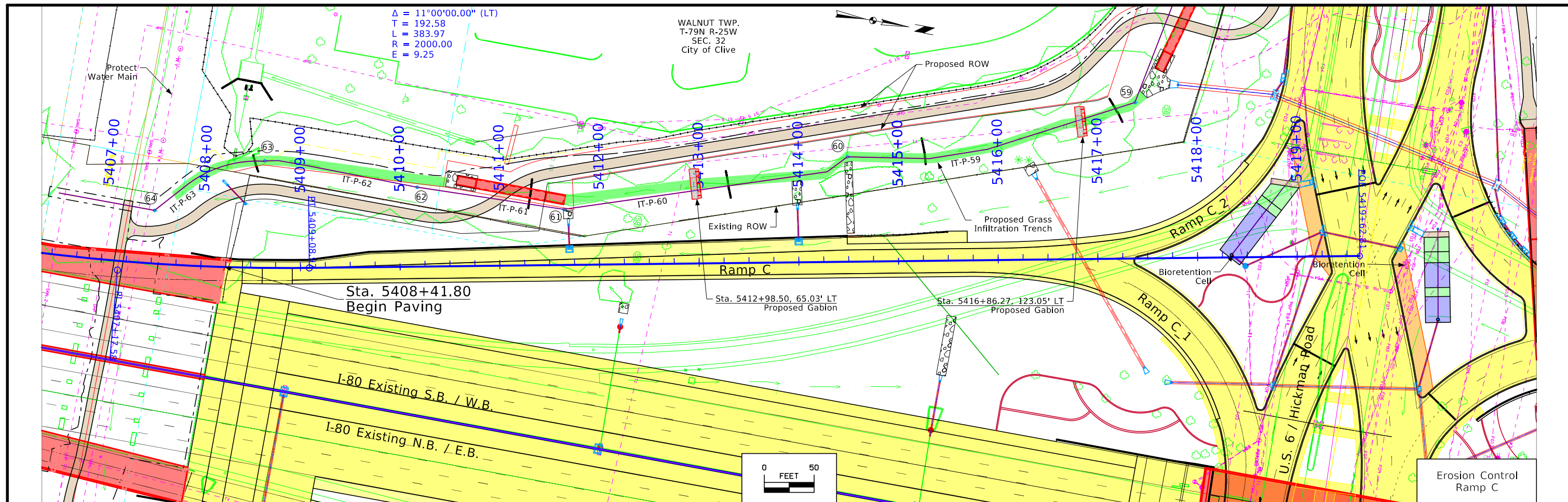


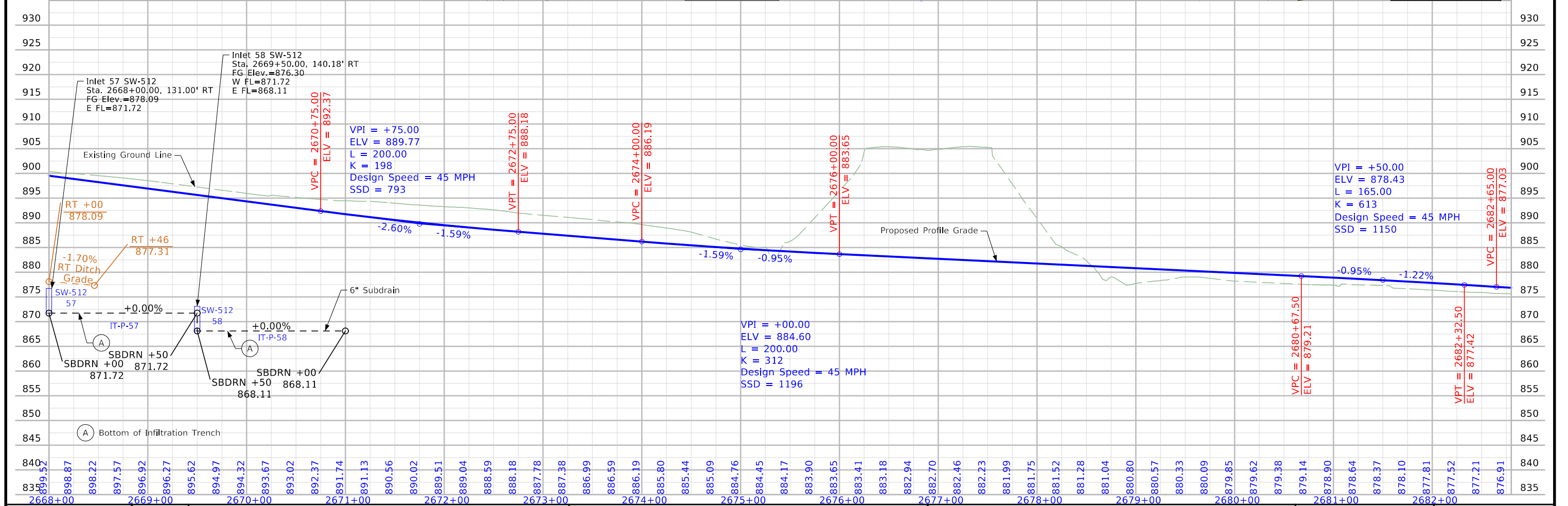
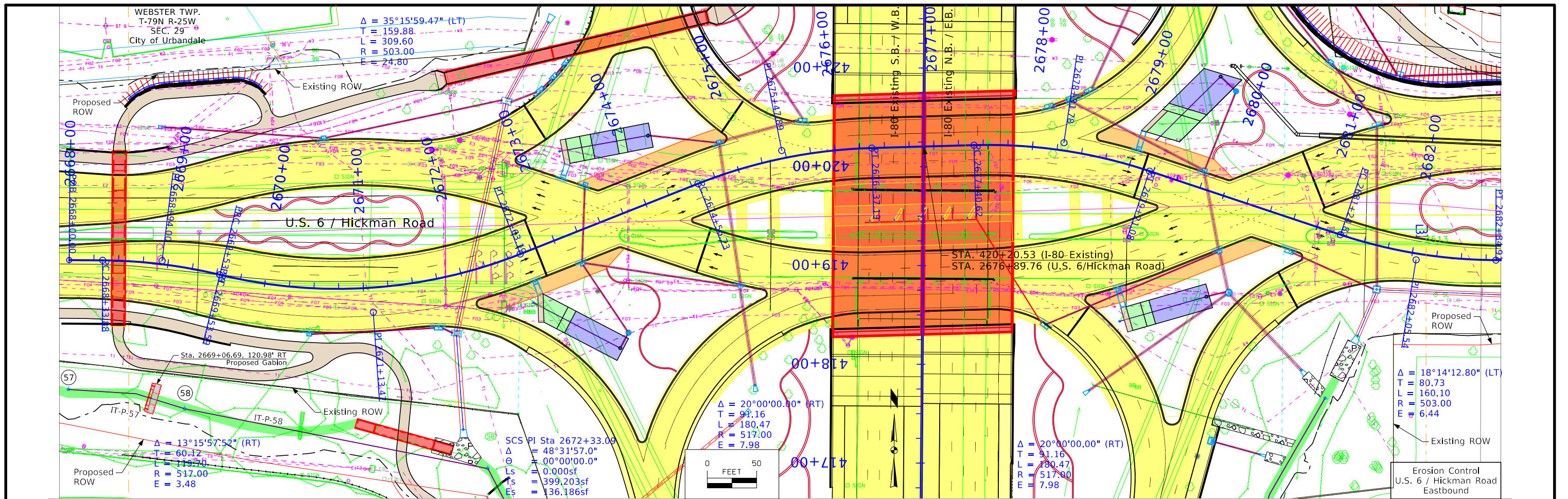
$\Delta = 81^\circ 40' 08.63''$  (RT)     $\Delta = 01^\circ 04' 44.45''$  (RT)  
 T = 172.85                      T = 5.00  
 L = 285.08                      L = 10.00  
 R = 200.00                      R = 531.00  
 E = 64.34                        E = 0.02

WALNUT TWP.  
 T-79N R-25W  
 SEC. 32  
 City of Clive

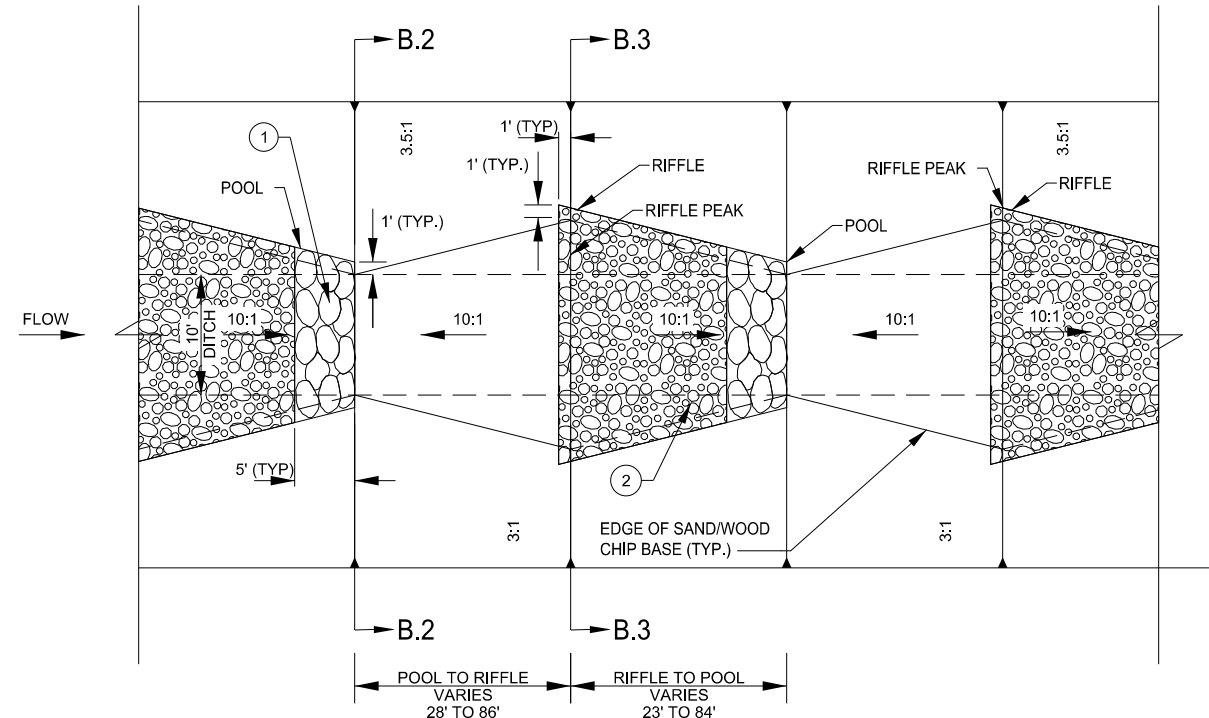






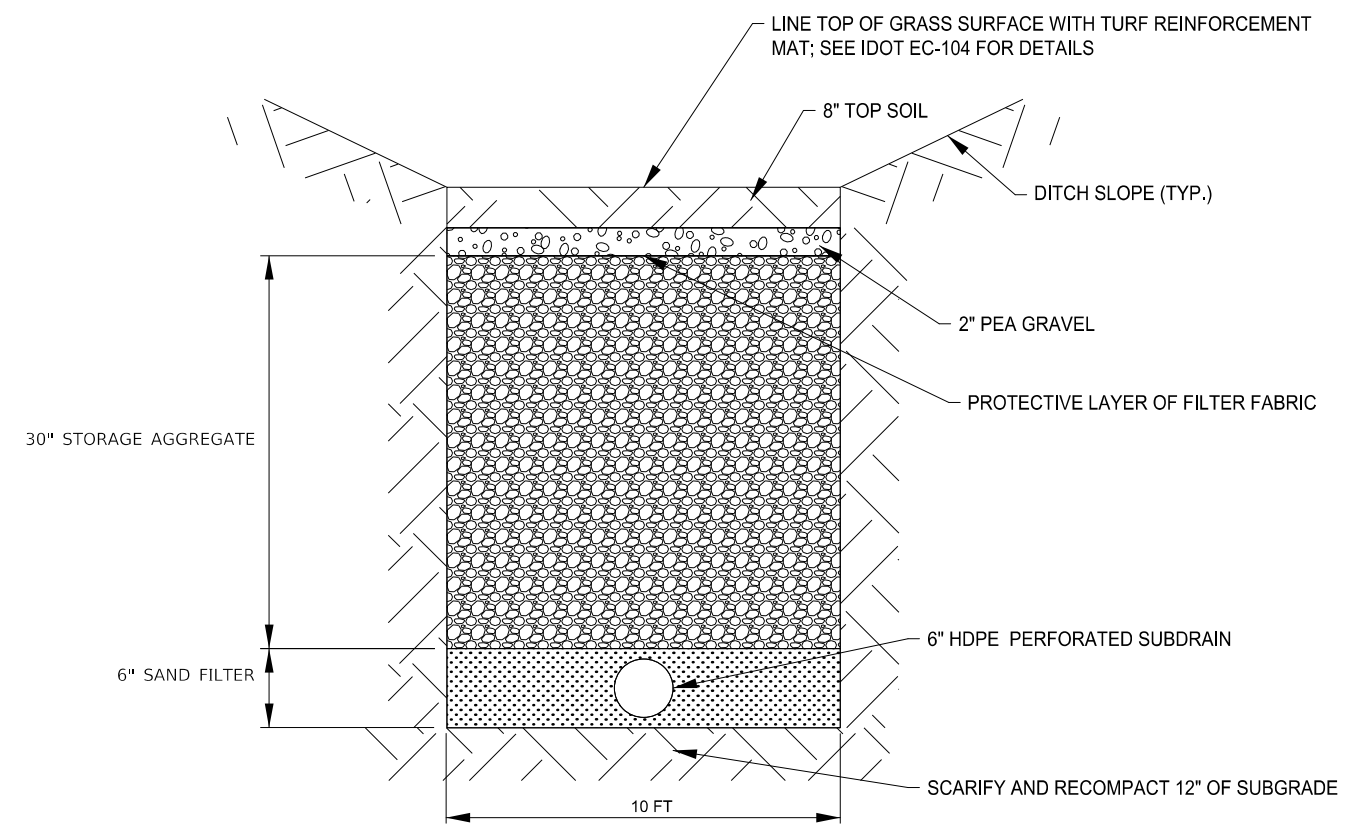






- ① CLASS E REVETMENT UNDERLAIN WITH ENGINEERING FABRIC; MINIMUM 2" THICK
- ② EROSION STONE; MINIMUM 9" THICK

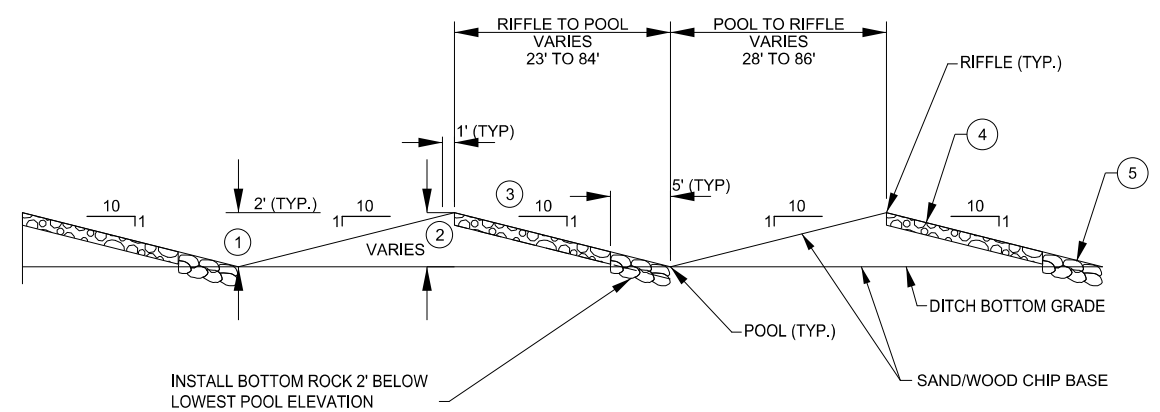
① REGENERATIVE CONVEYANCE PLAN (TYP.)  
RU.1 NO SCALE



NOTES

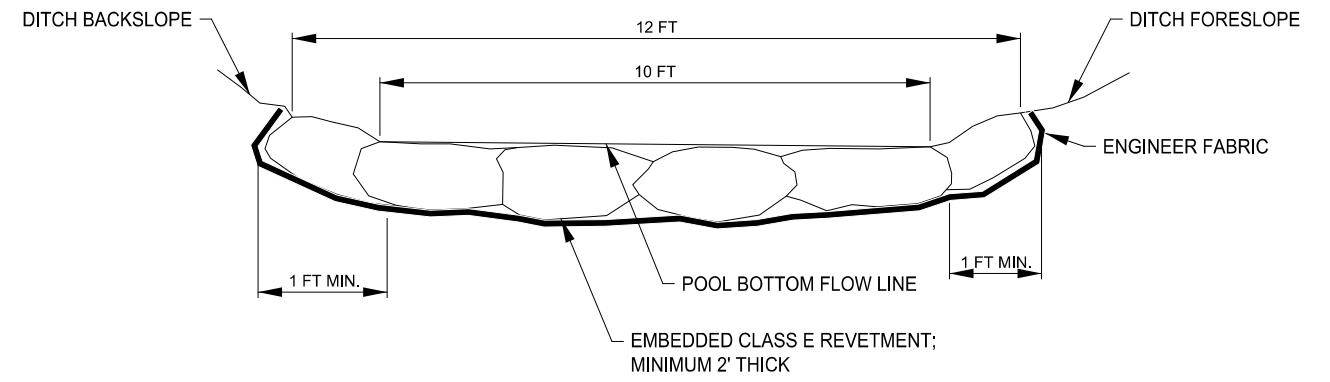
- 1. PEA GRAVEL SHALL COMPLY WITH IDOT SPECIFICATIONS SECTION 4109.02, GRADATION NO. 20 OR 21.
- 2. STORAGE AGGREGATE SHALL COMPLY WITH IDOT SPECIFICATIONS SECTION 4122, GRADATION NO. 13.
- 3. SAND SHALL COMPLY WITH IDOT SPECIFICATIONS SECTION 4110, GRADATION NO. 1.

③ GRASS SWALE / INFILTRATION TRENCH TYPICAL SECTION  
RU.1 NO SCALE

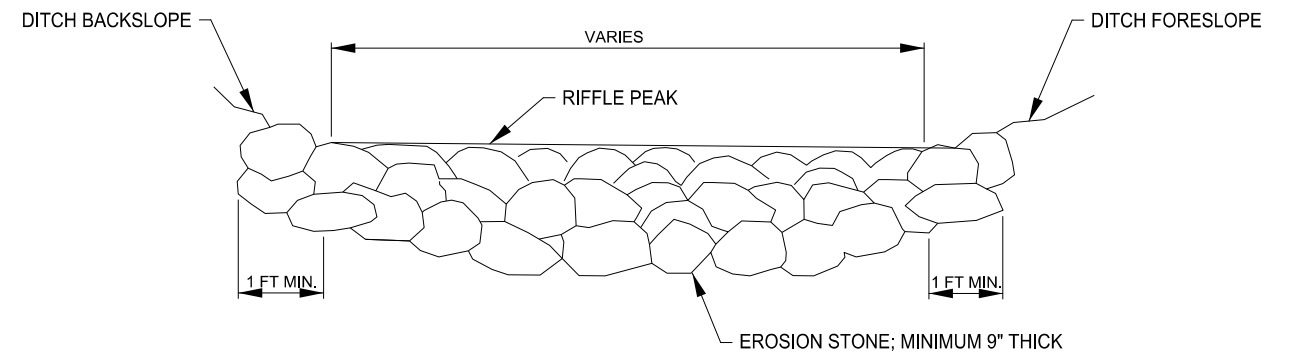


- ① POOL DEPTH: MINIMUM 1' MAXIMUM 2.5'
- ② SAND/WOOD CHIP BASE HEIGHT: MINIMUM 2' MAXIMUM 8'
- ③ SLOPE RELATIVE TO DITCH GRADE
- ④ EROSION STONE MINIMUM 9" THICK
- ⑤ CLASS E REVETMENT UNDERLAIN WITH ENGINEERING FABRIC; MINIMUM 2" THICK

② REGENERATIVE CONVEYANCE PROFILE (TYP.)  
RU.1 NO SCALE

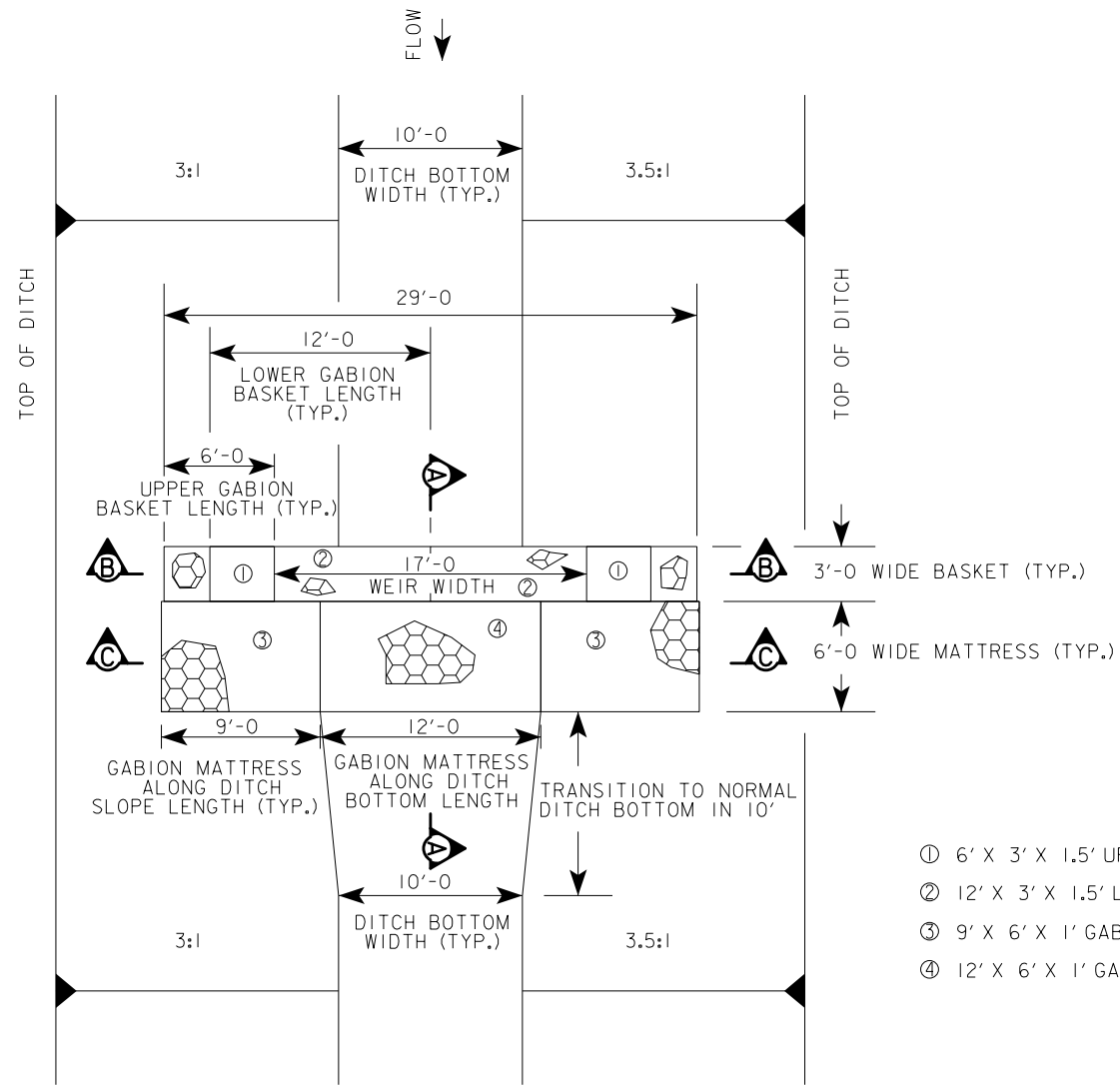


1 SECTION THROUGH CLASS E REVETMENT AT POOL  
RU.2 NO SCALE



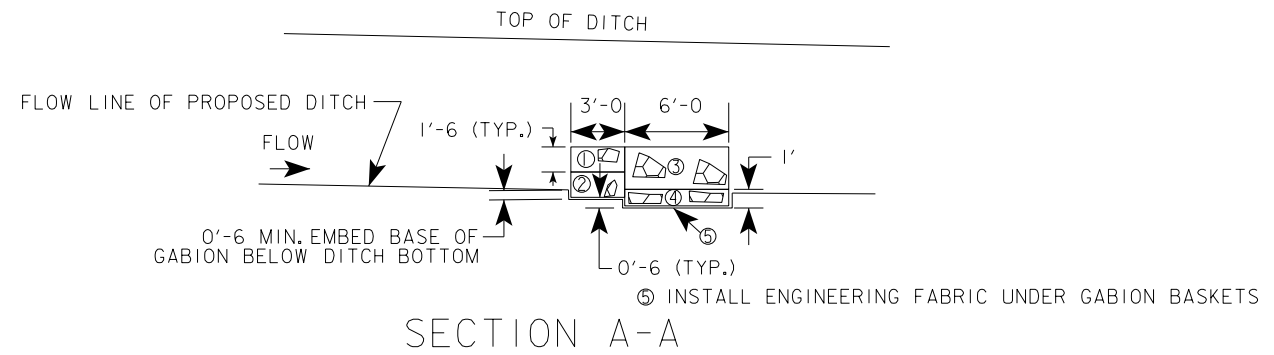
2 SECTION THROUGH EROSION STONE  
RU.2 NO SCALE



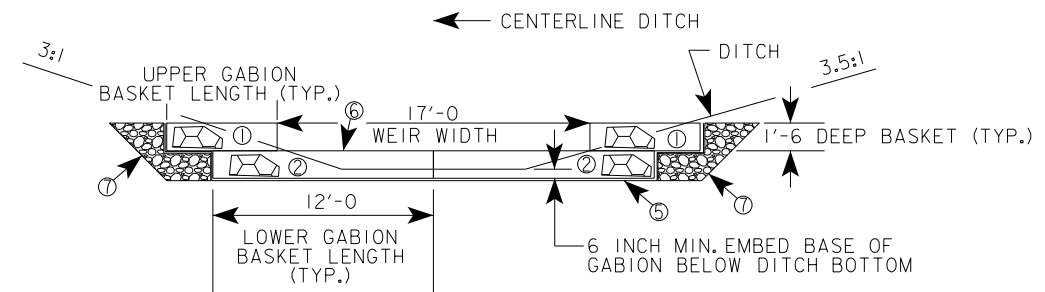


GABION PLAN VIEW

- ① 6' X 3' X 1.5' UPPER GABION BASKET
- ② 12' X 3' X 1.5' LOWER GABION BASKET
- ③ 9' X 6' X 1' GABION MATTRESS
- ④ 12' X 6' X 1' GABION MATTRESS

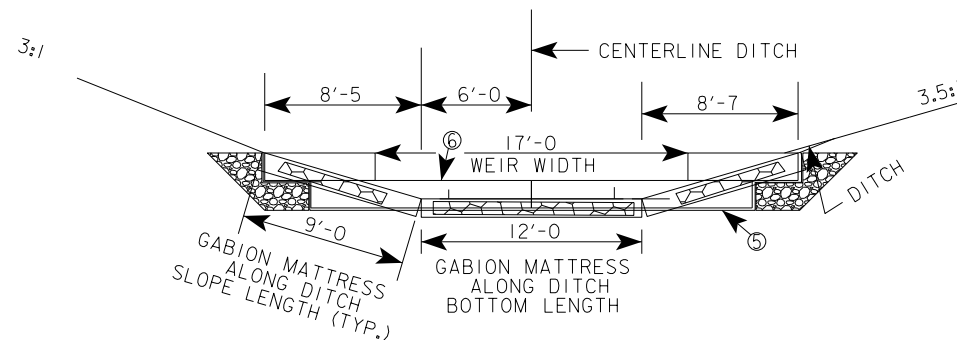


SECTION A-A



SECTION B-B

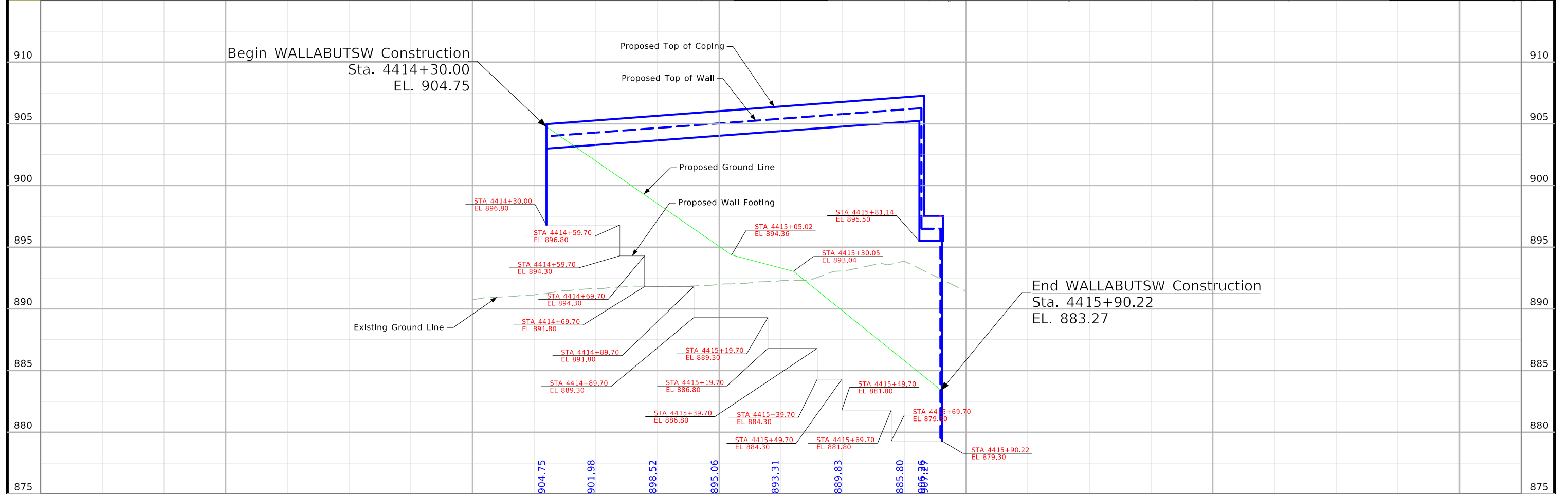
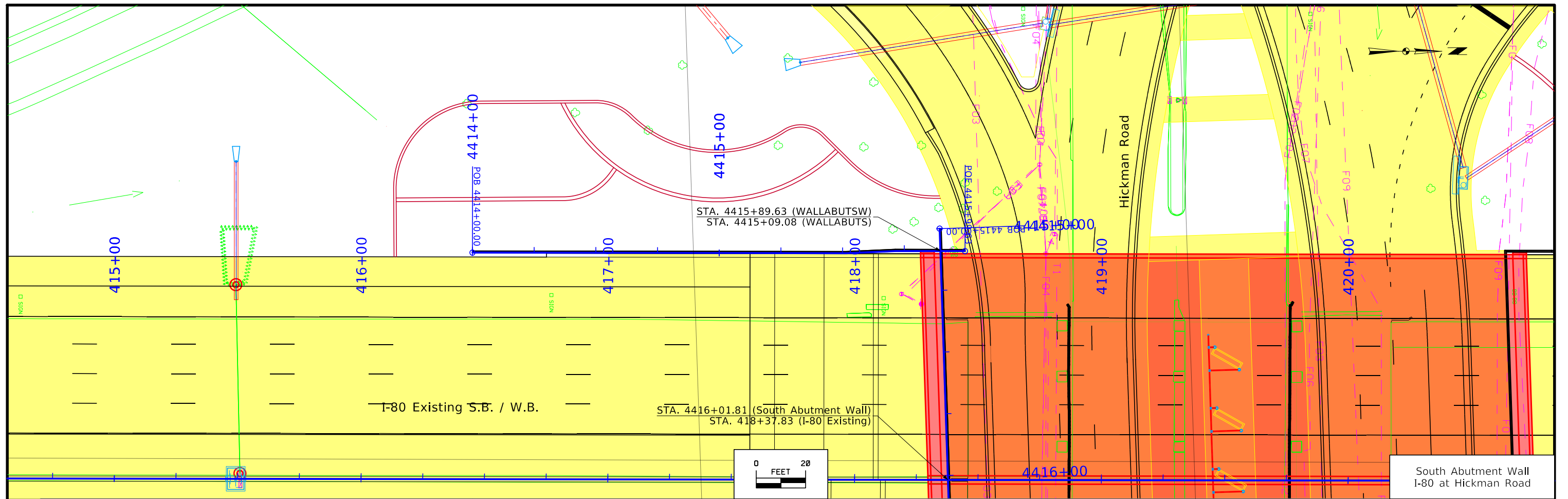
- ⑤ INSTALL ENGINEERING FABRIC UNDER GABION BASKETS
- ⑥ WEIR FLOW LINE
- ⑦ FILL VOID BETWEEN BASKETS AND EXCAVATED TRENCH WITH AGGREGATE CONFORMING TO IDOT SECTION 4115, GRADATION NO. 3 UNDERLAIN WITH ENGINEERING FABRIC

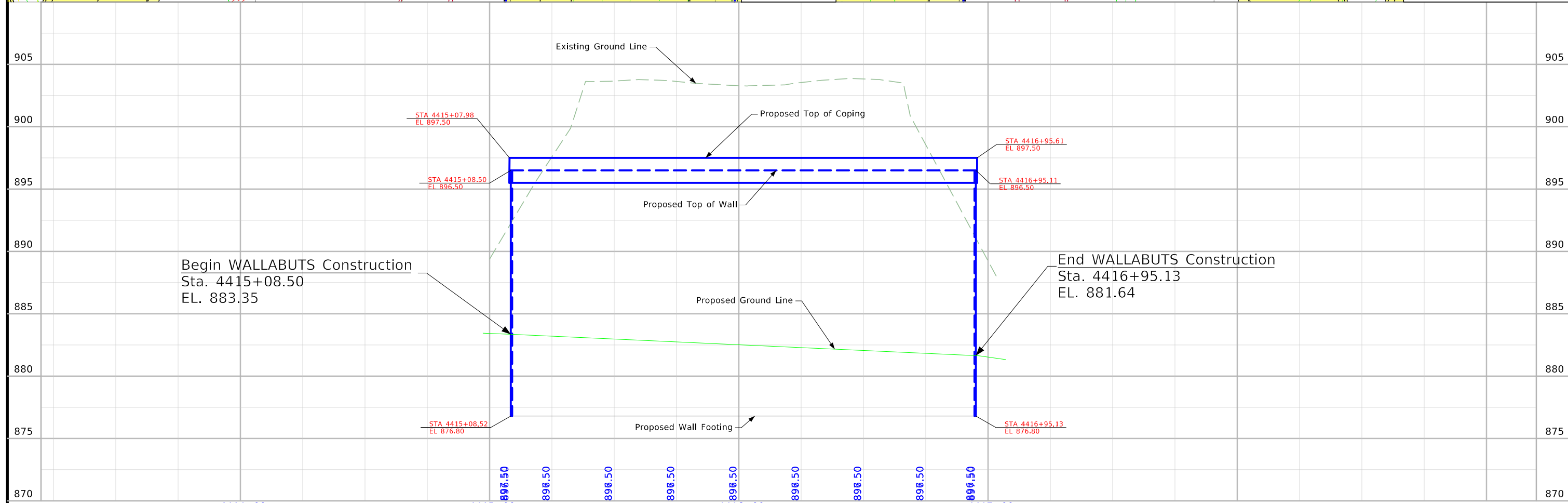
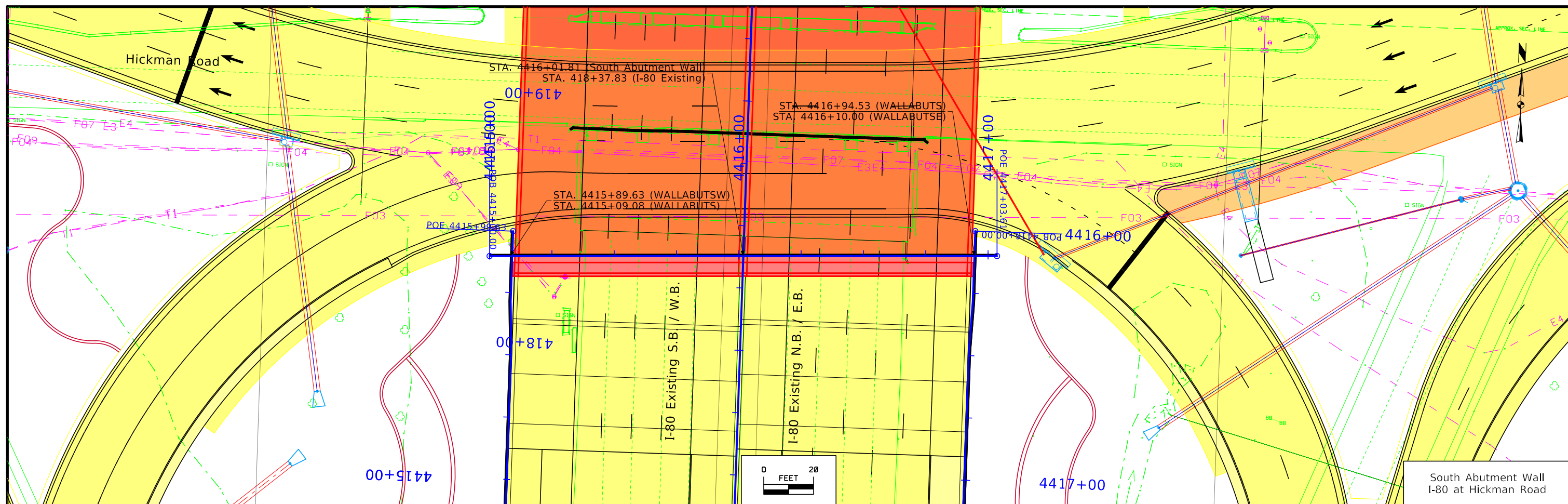


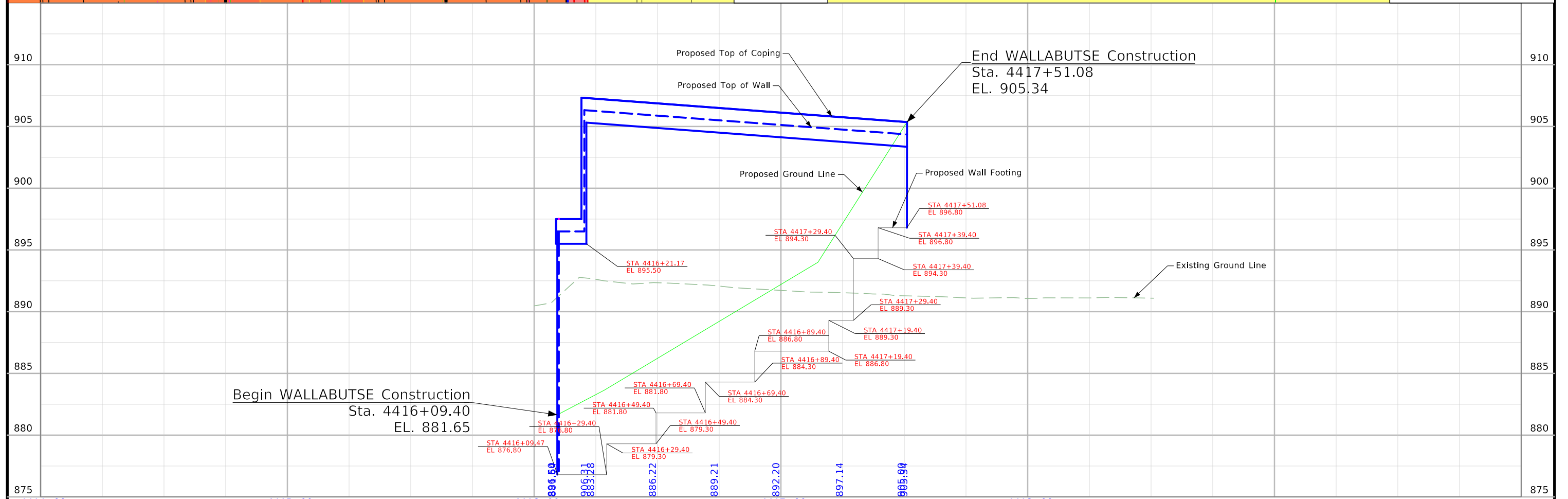
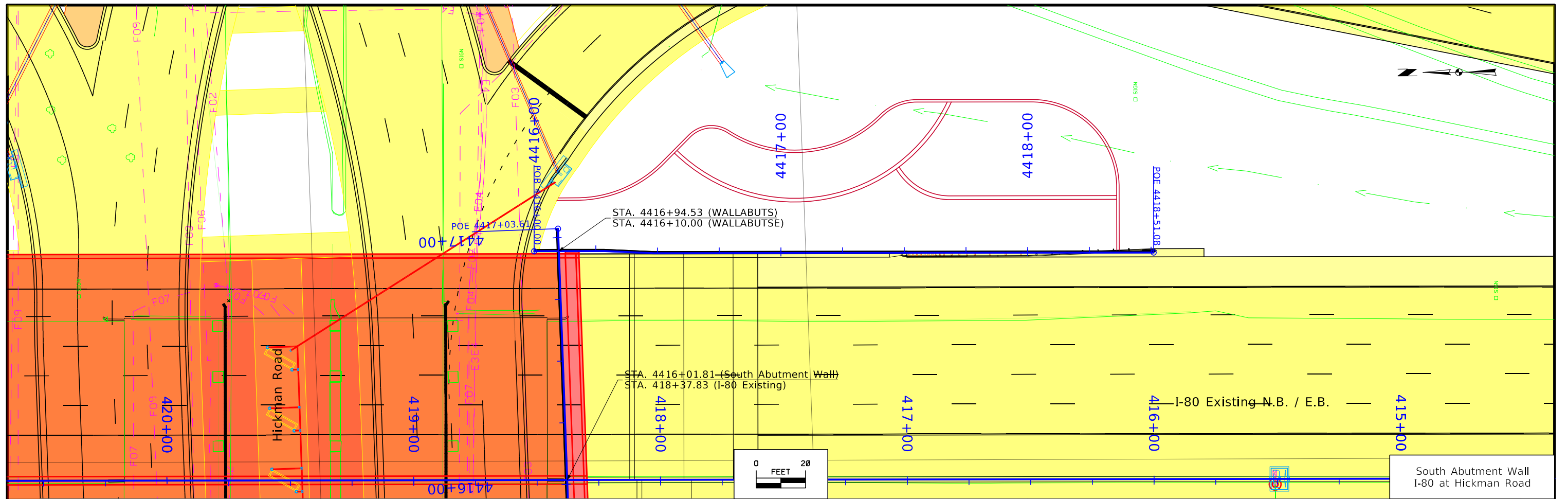
SECTION C-C

- ⑤ INSTALL ENGINEERING FABRIC UNDER GABION BASKETS
- ⑥ WEIR FLOW LINE

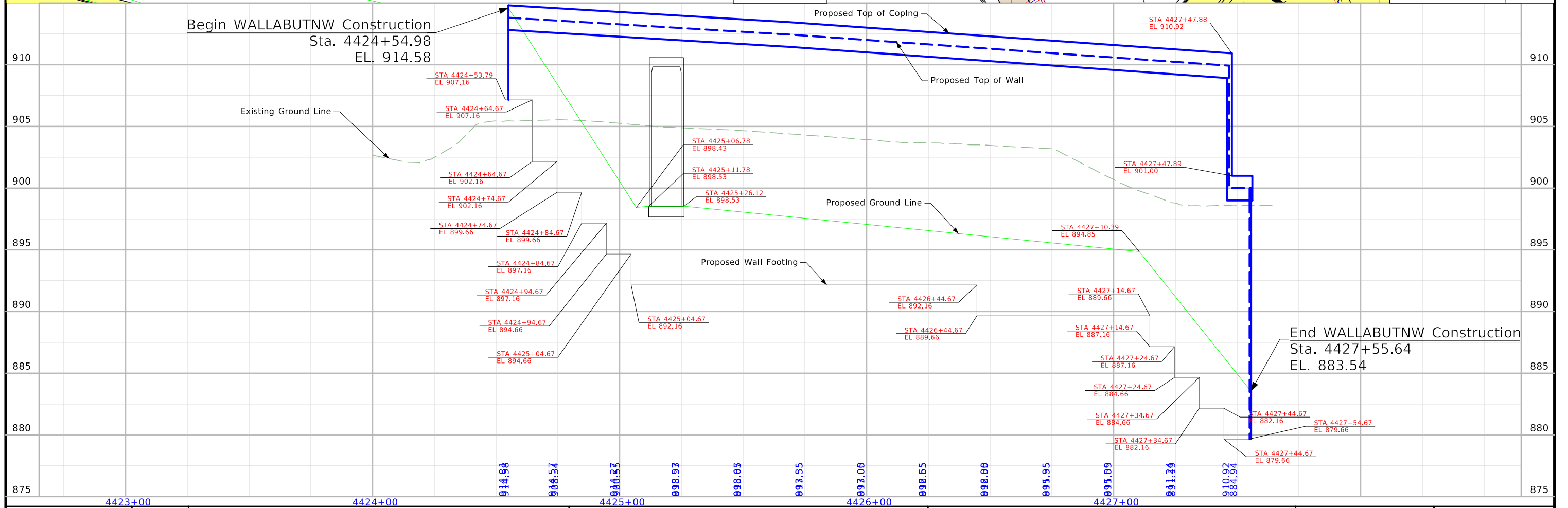
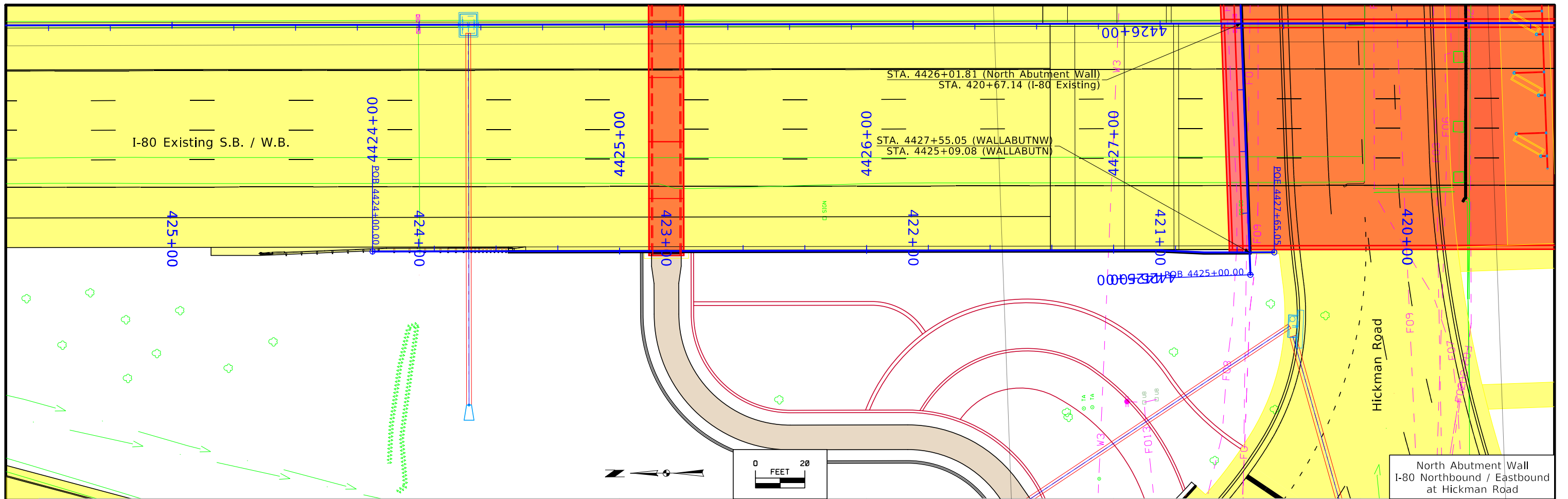
1 GABION - PLAN AND TYPICAL SECTIONS  
RU.8 NO SCALE



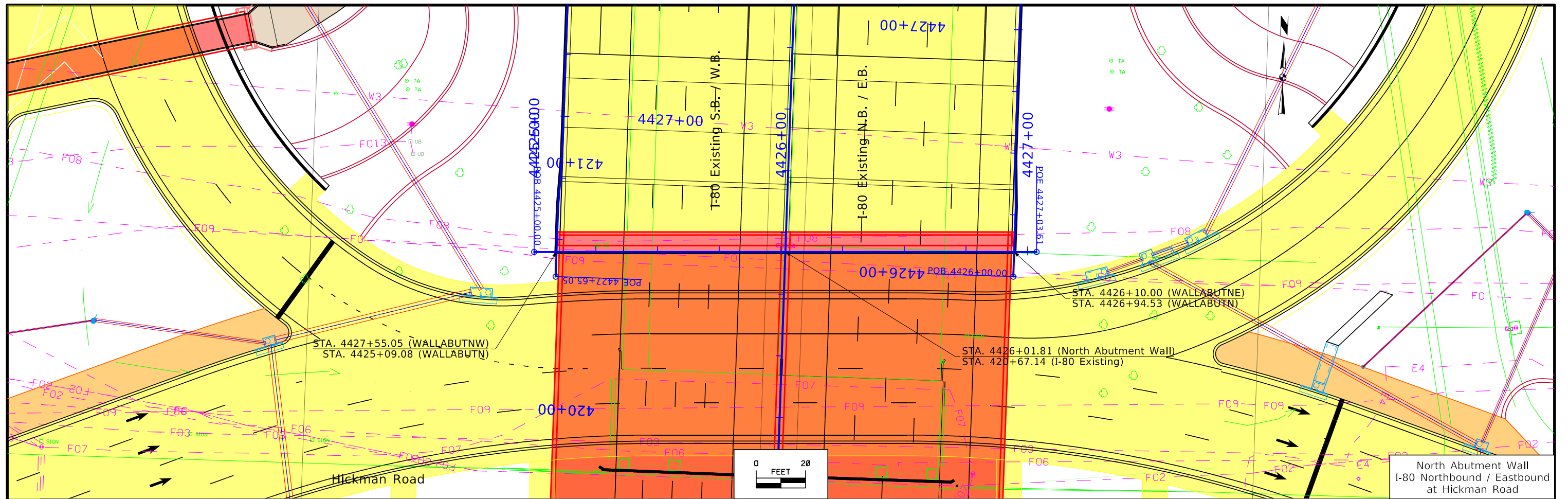




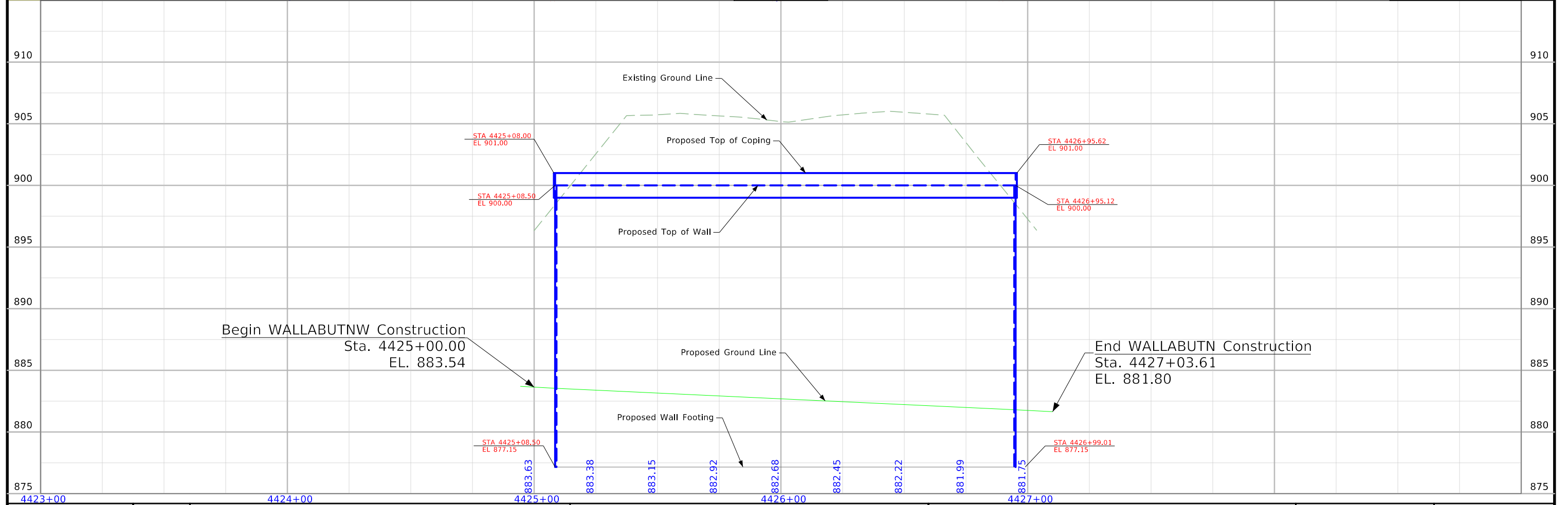


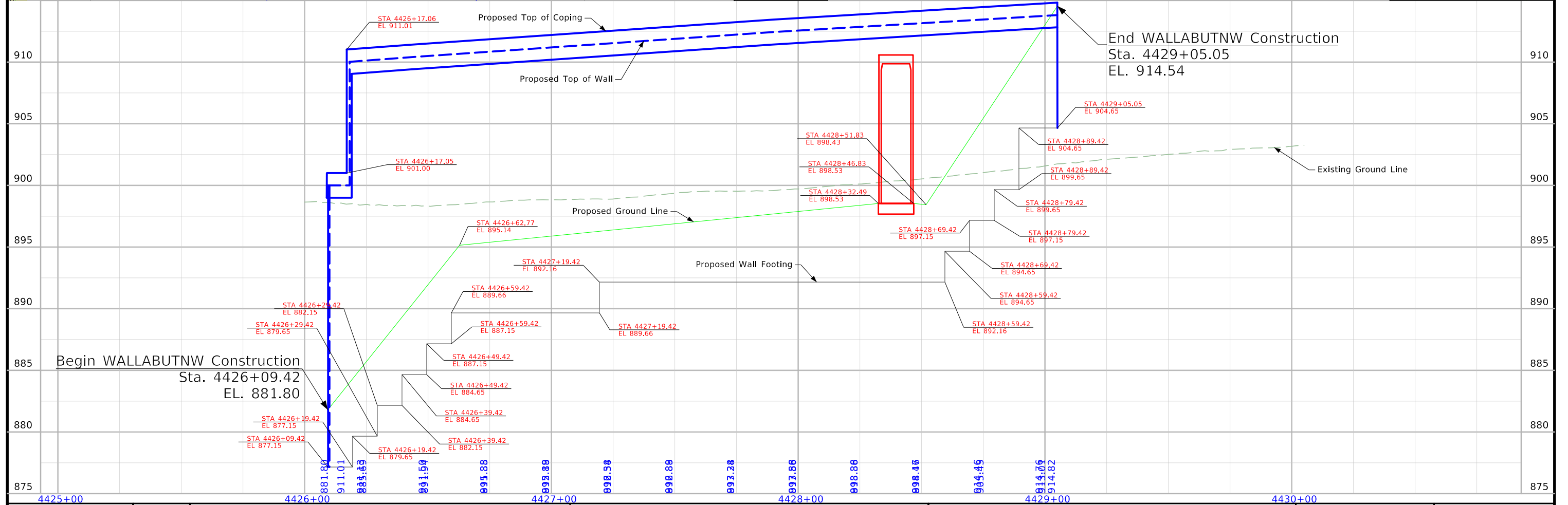
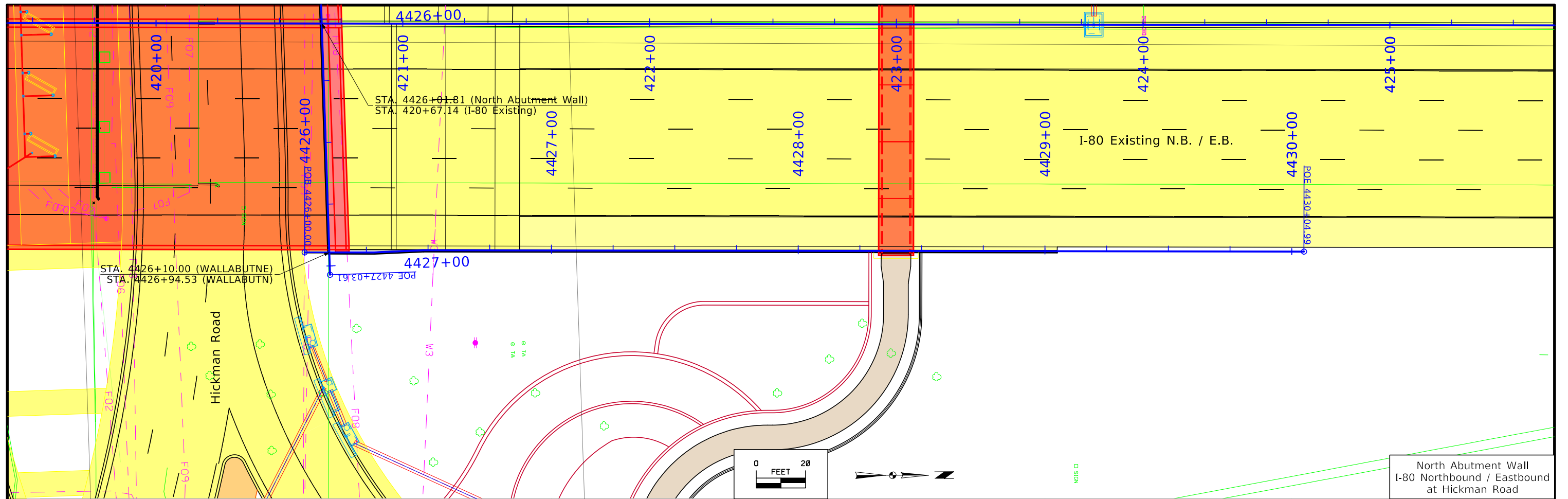


FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER U.4
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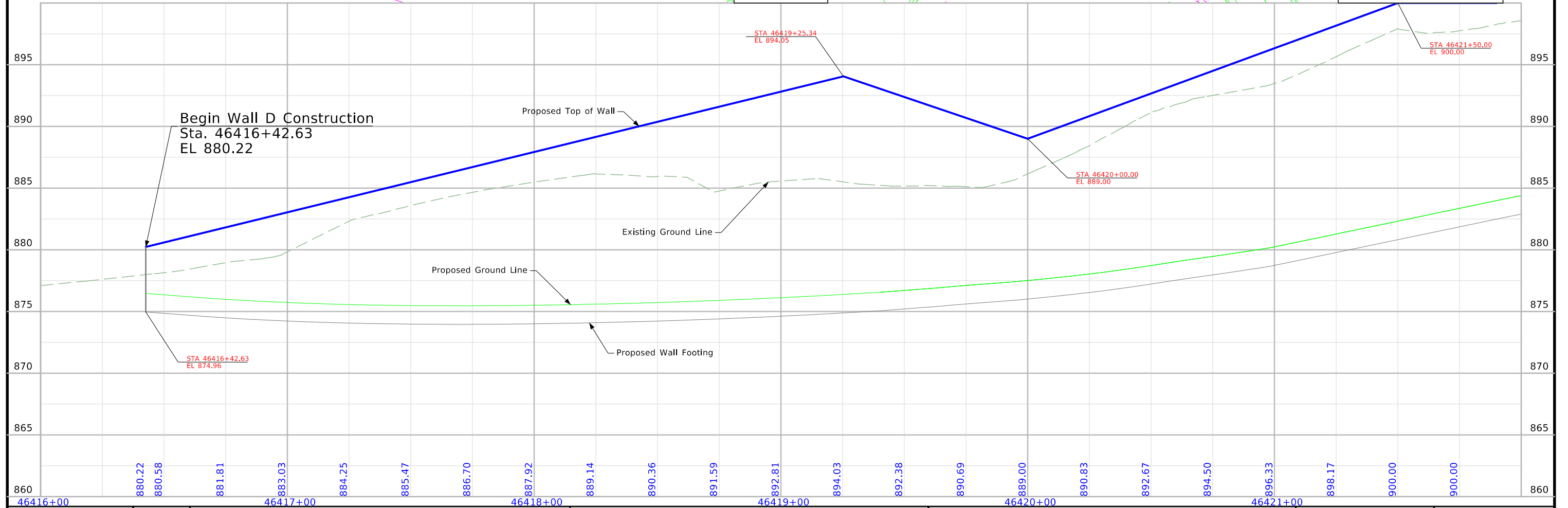
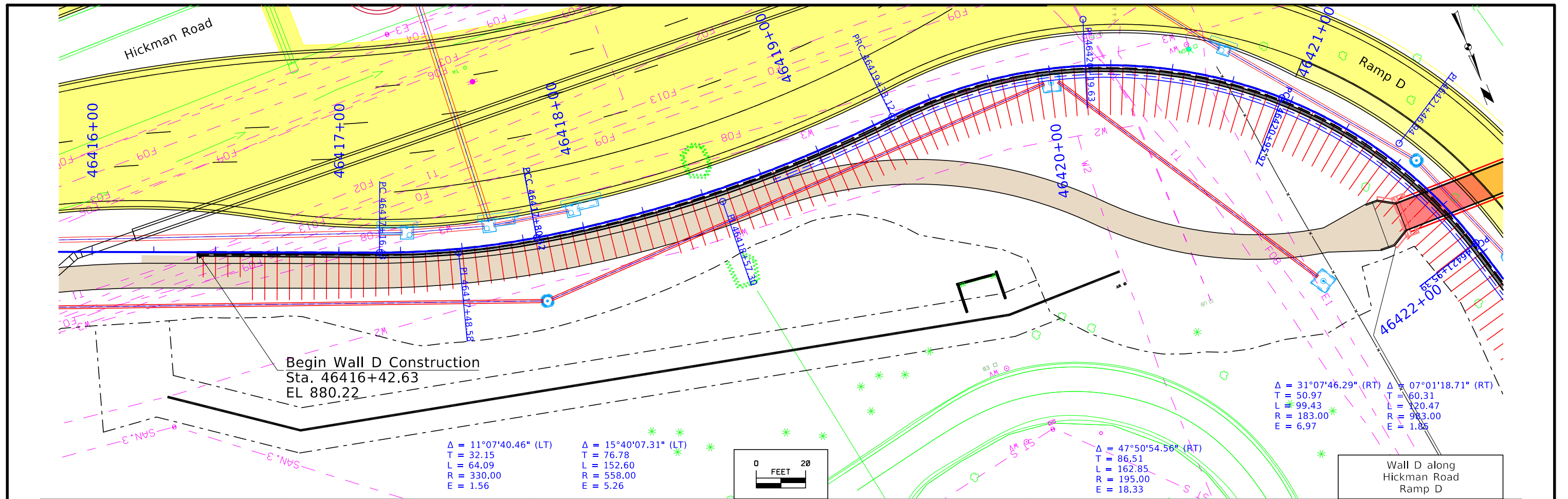


North Abutment Wall  
I-80 Northbound / Eastbound  
at Hickman Road

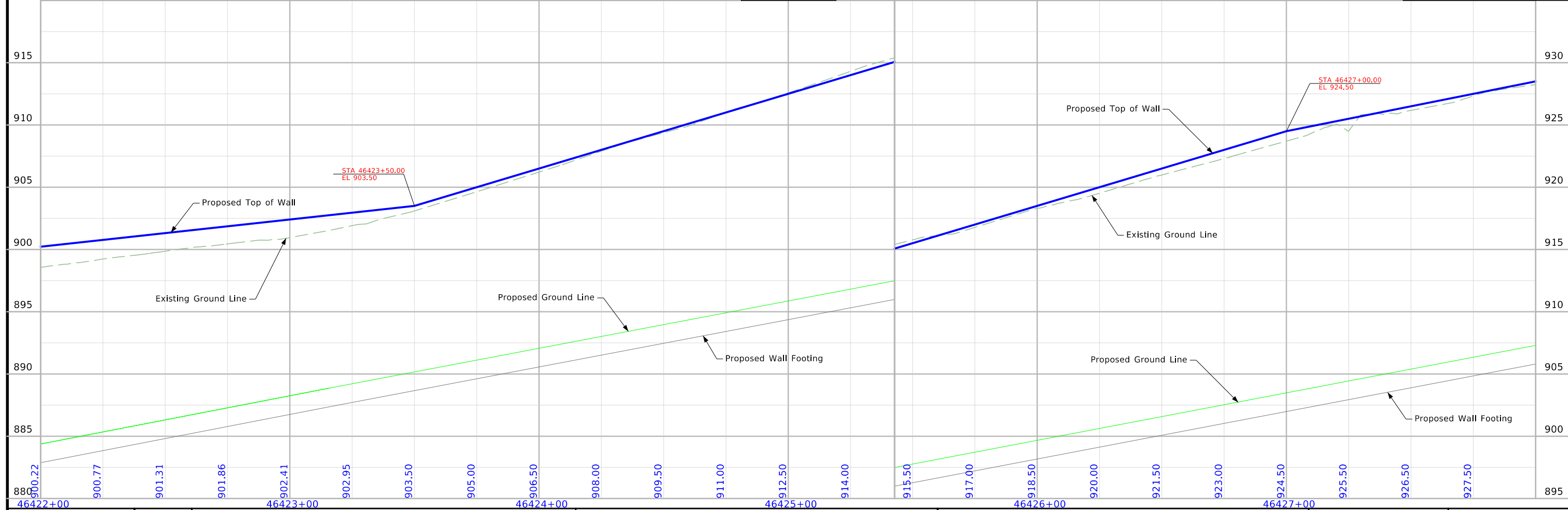
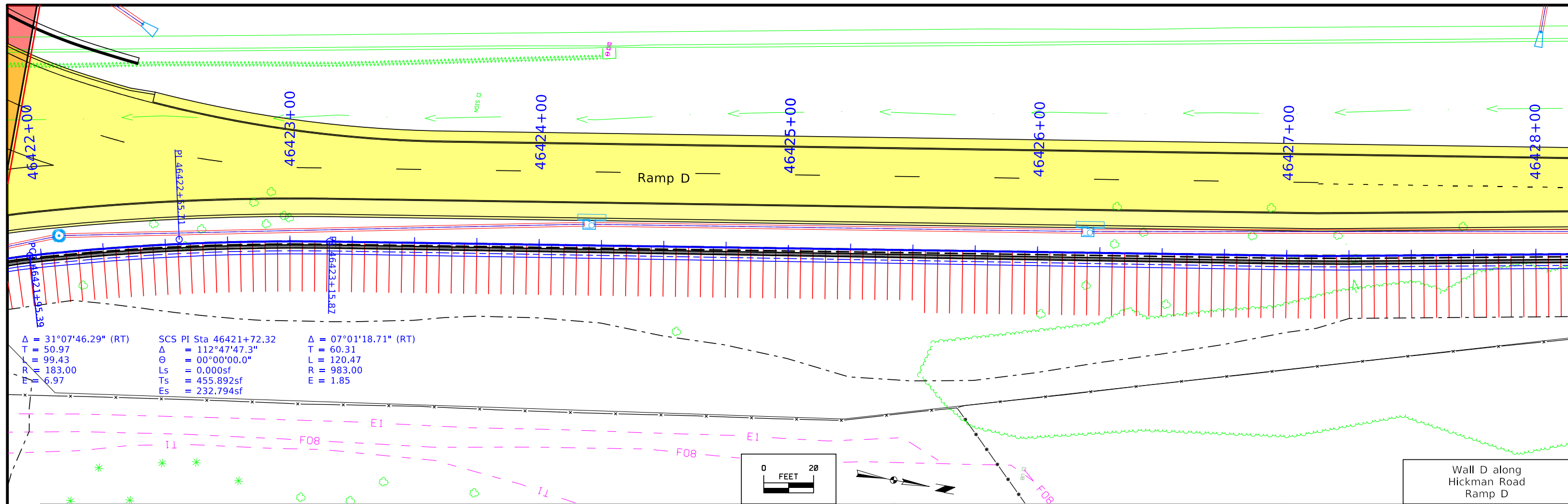


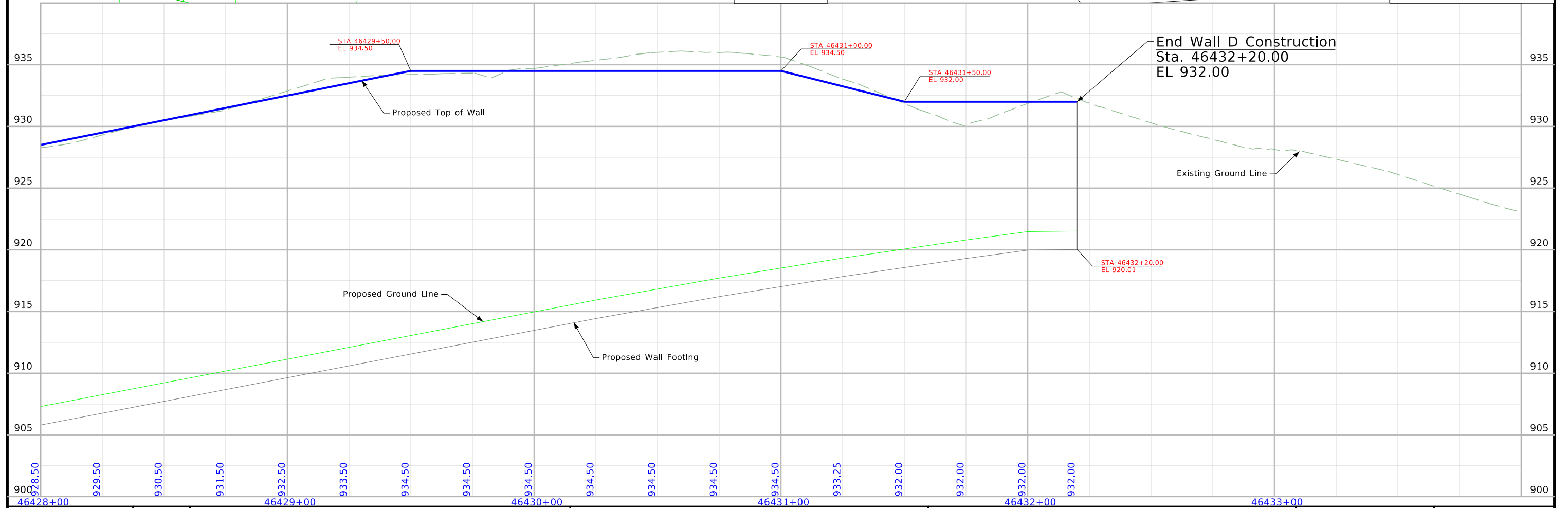
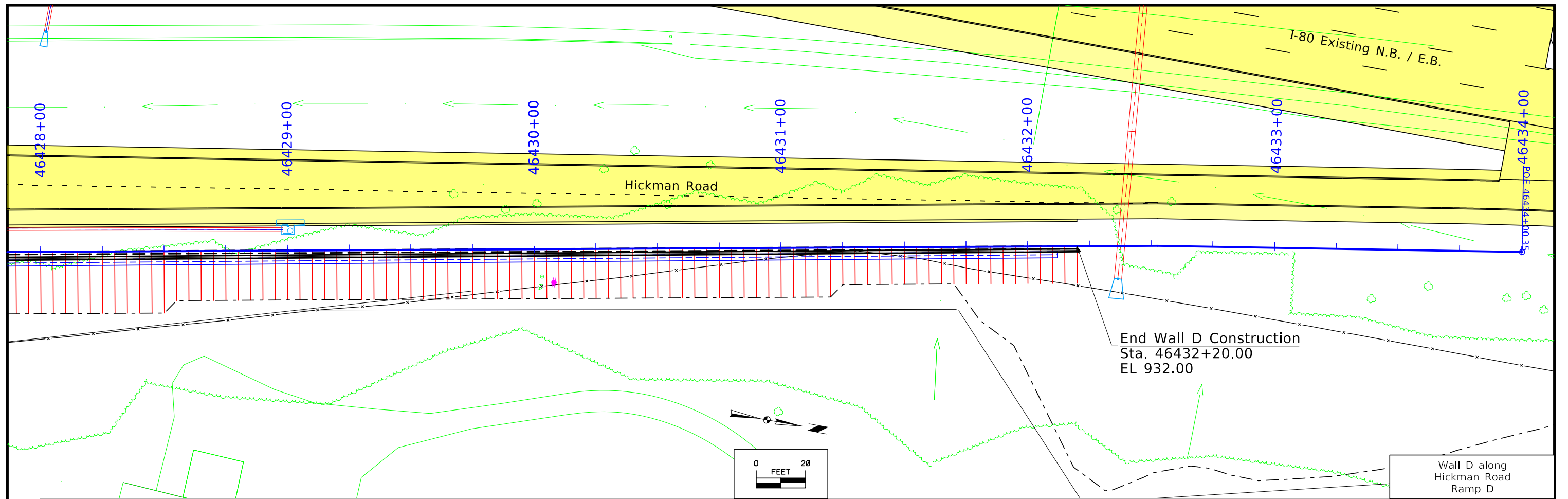


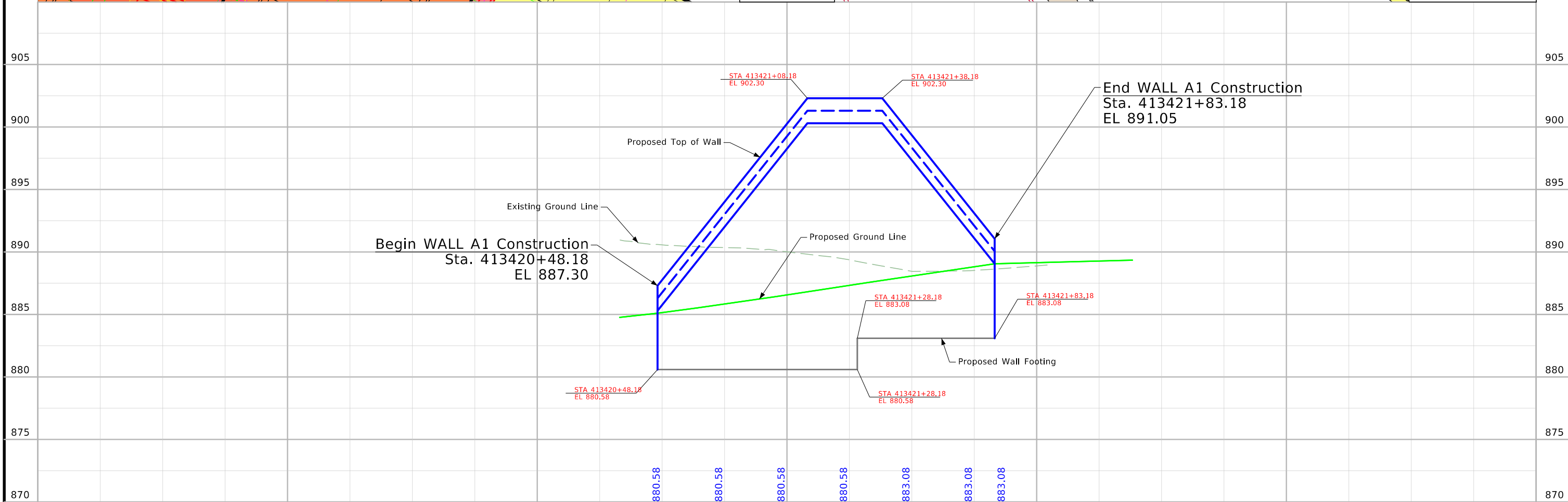
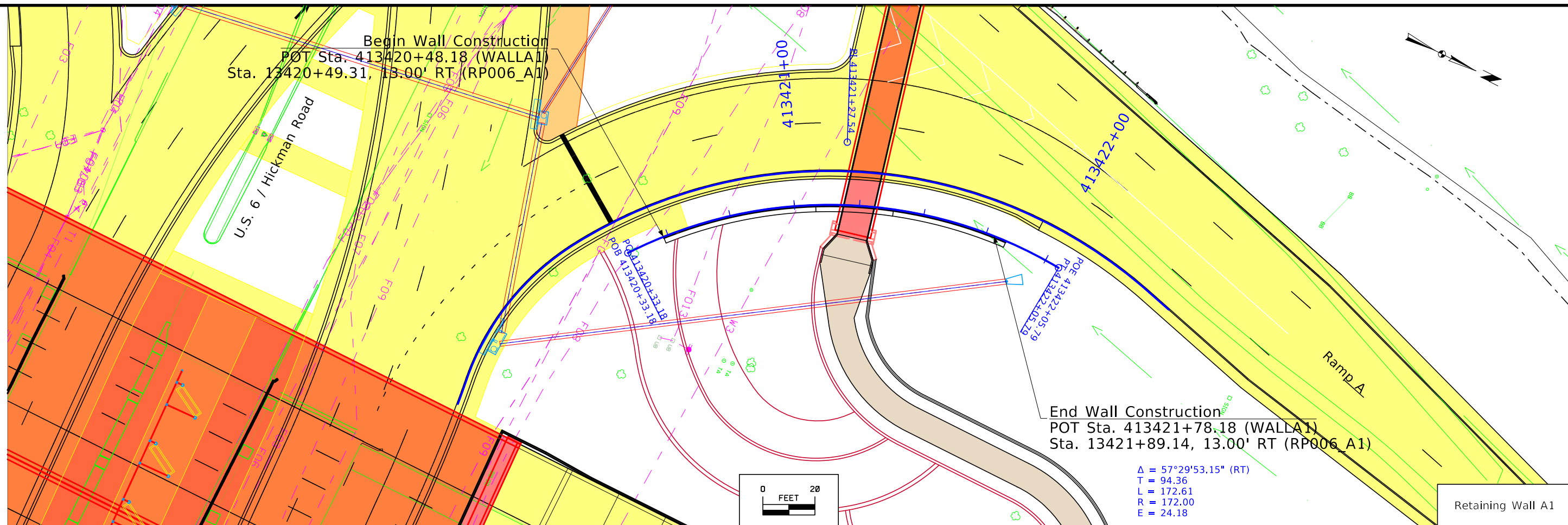
FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER U.6
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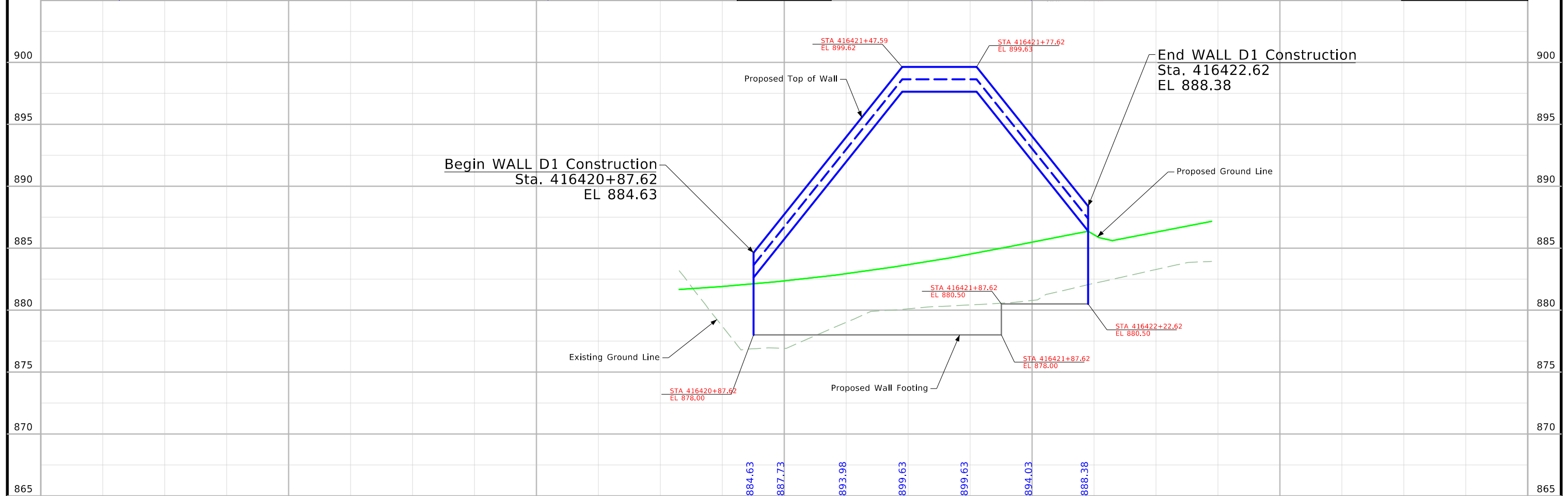
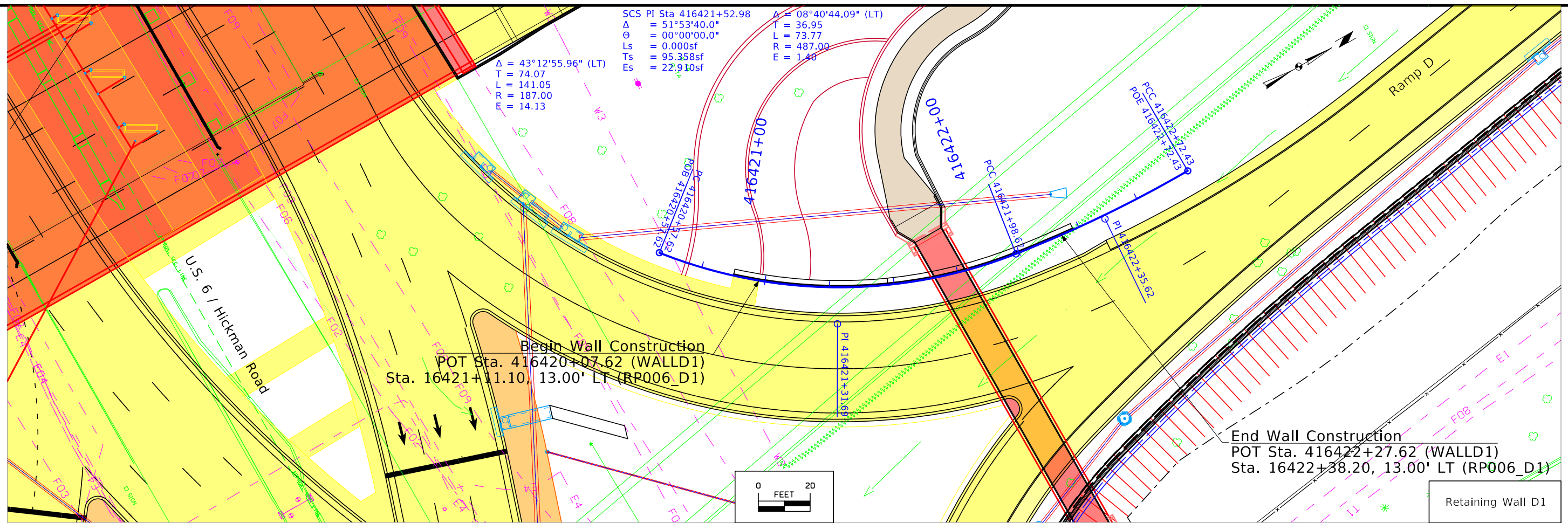




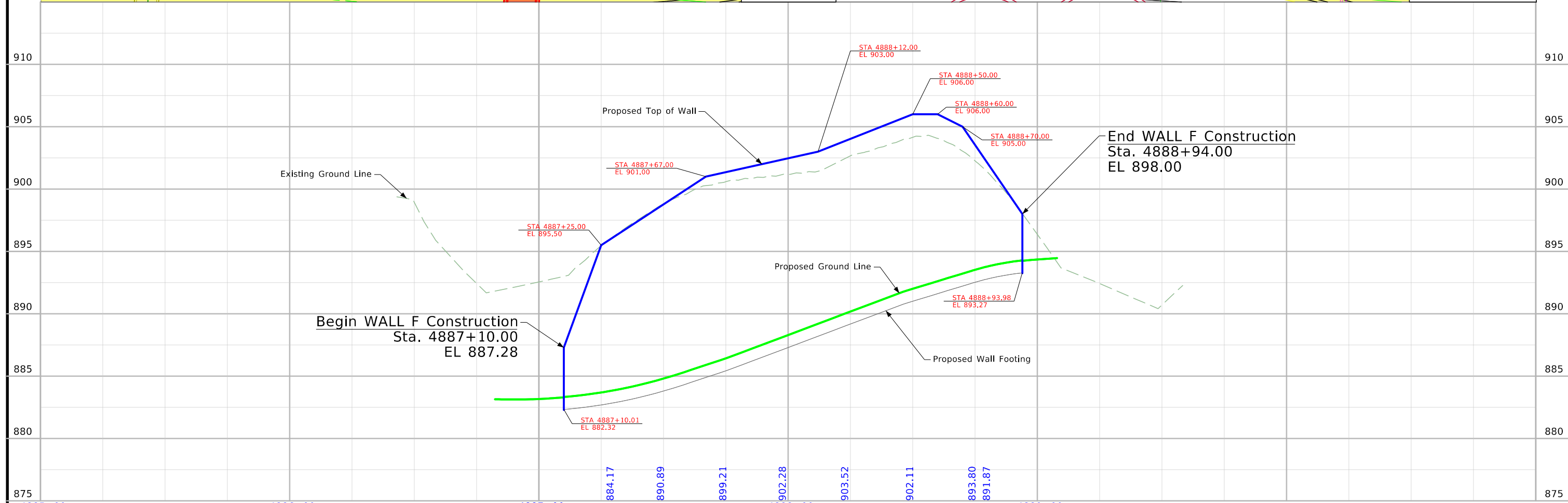
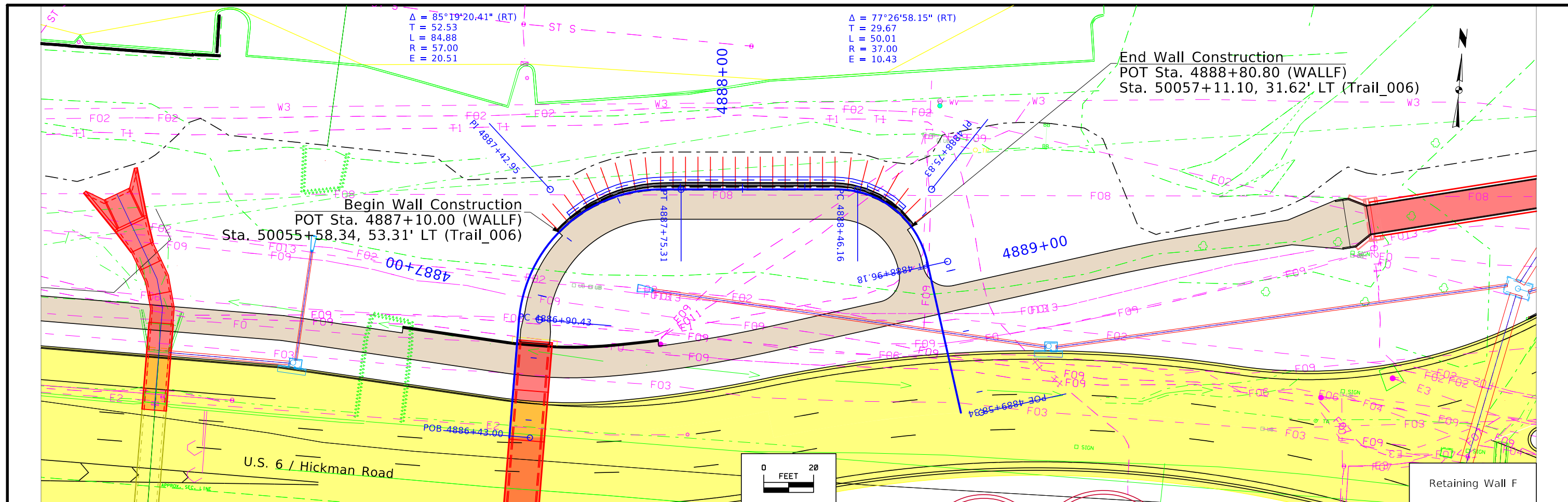


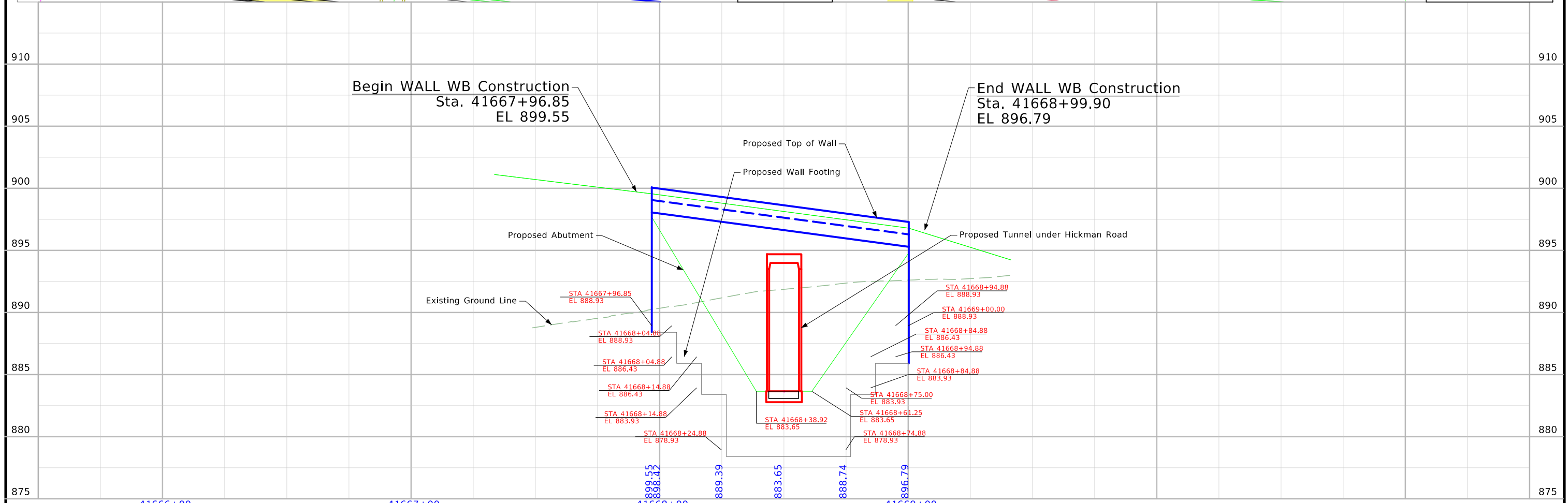
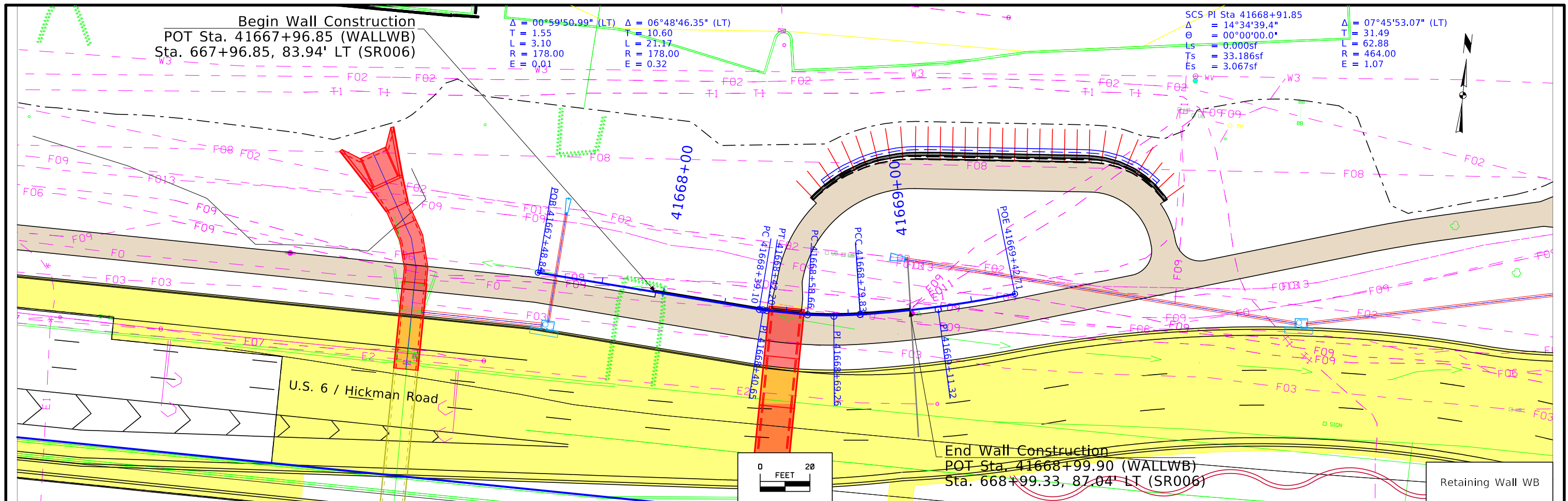




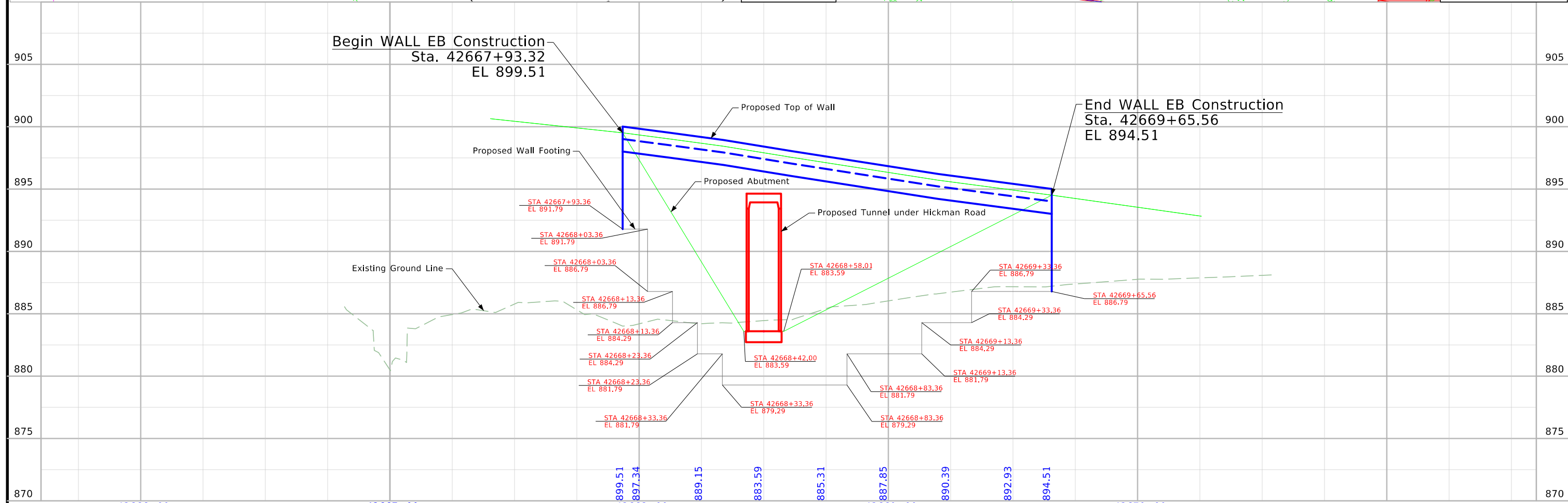
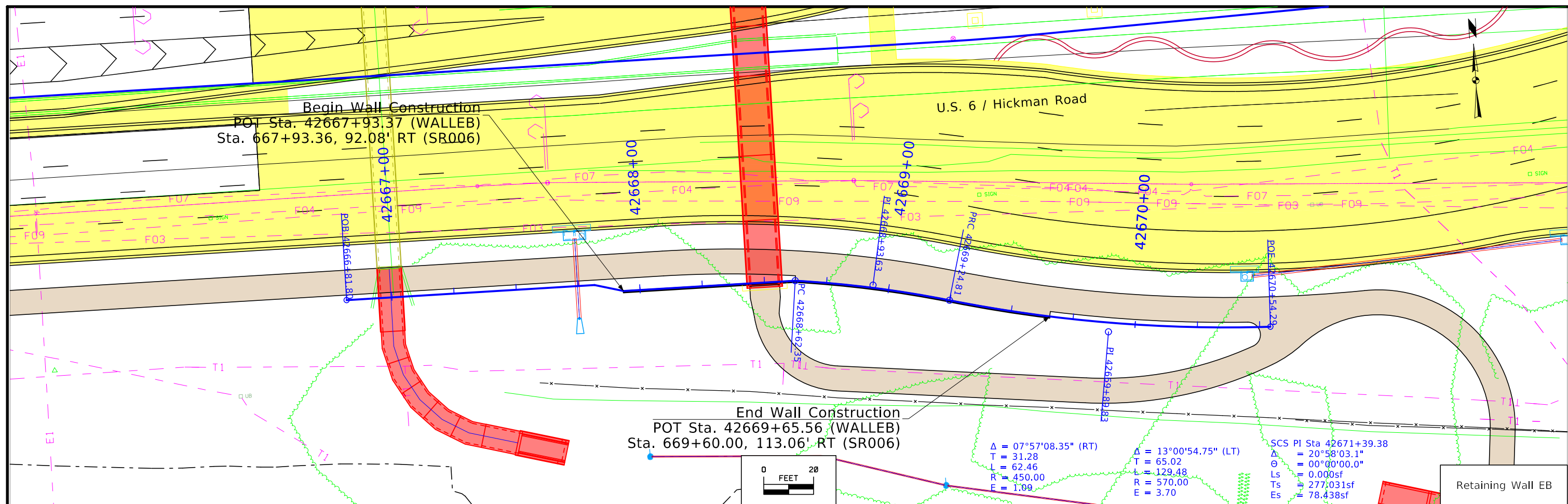


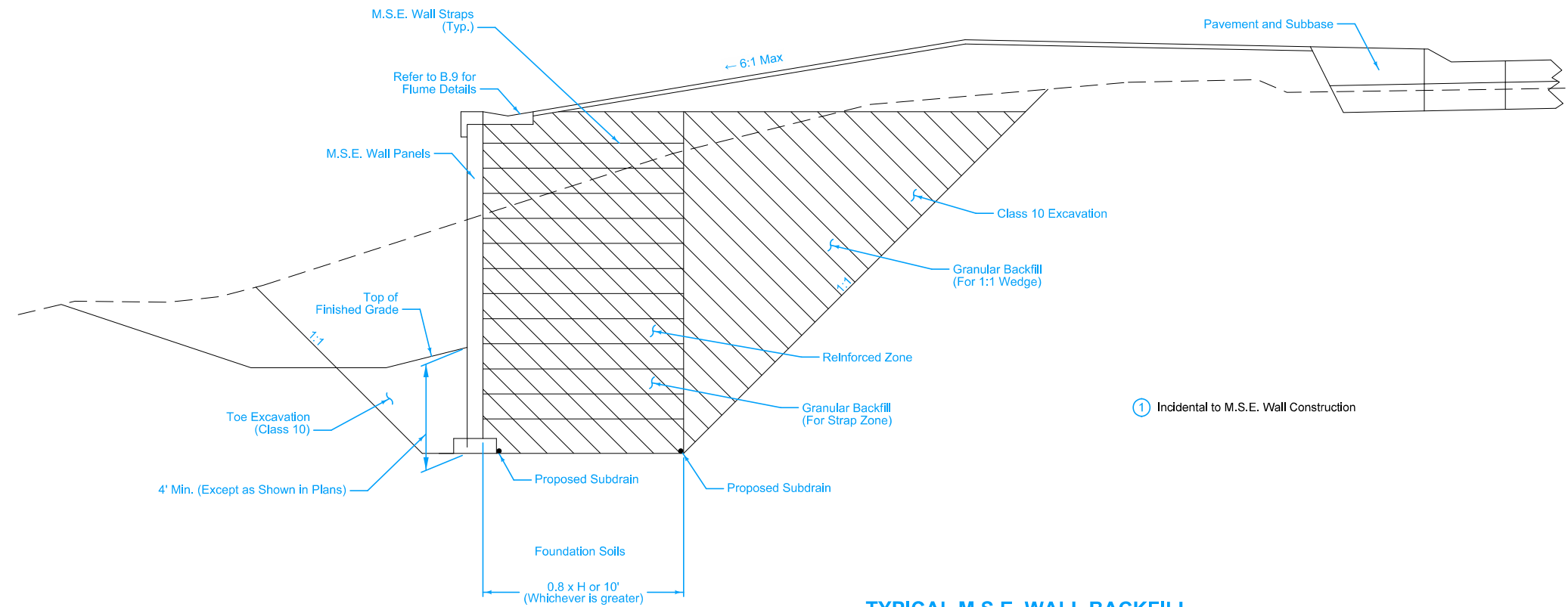




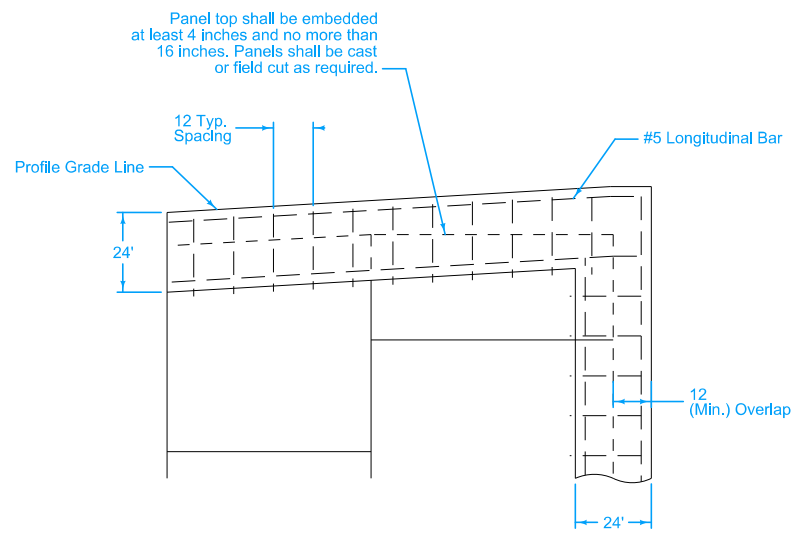
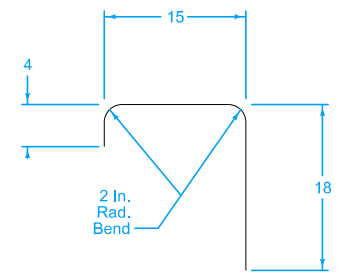


FILE NO.	ENGLISH	DESIGN TEAM Snyder & Associates, Inc.	Polk COUNTY	PROJECT NUMBER IM-080-4(069)125--13-77	SHEET NUMBER U.13
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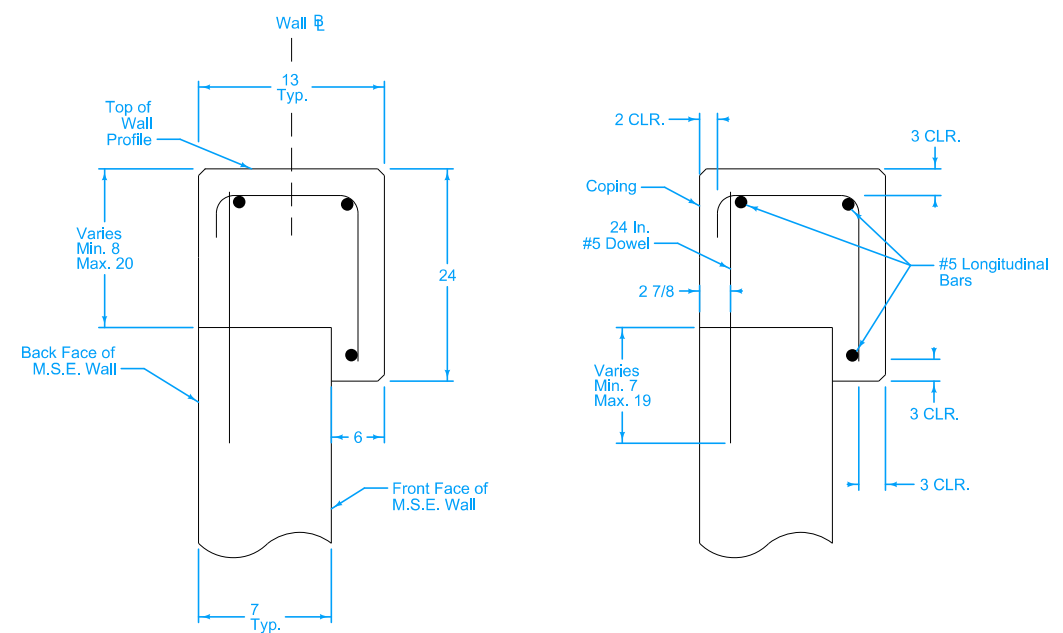




**TYPICAL M.S.E. WALL BACKFILL**



**Coping Elevation**

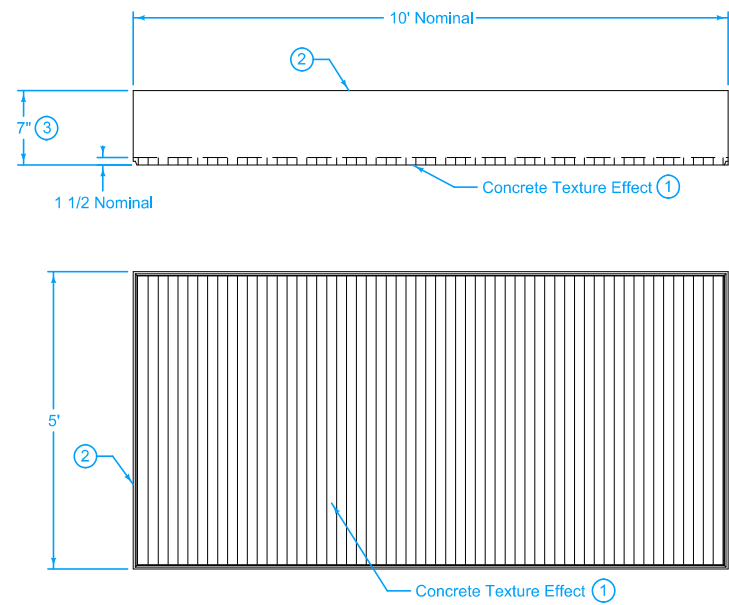


Typical M.S.E. Coping Section

**Coping Details**

(Joints for the coping shall be designed to accommodate settlement in the M.S.E. wall. this will be incidental to the design of the M.S.E. wall.)

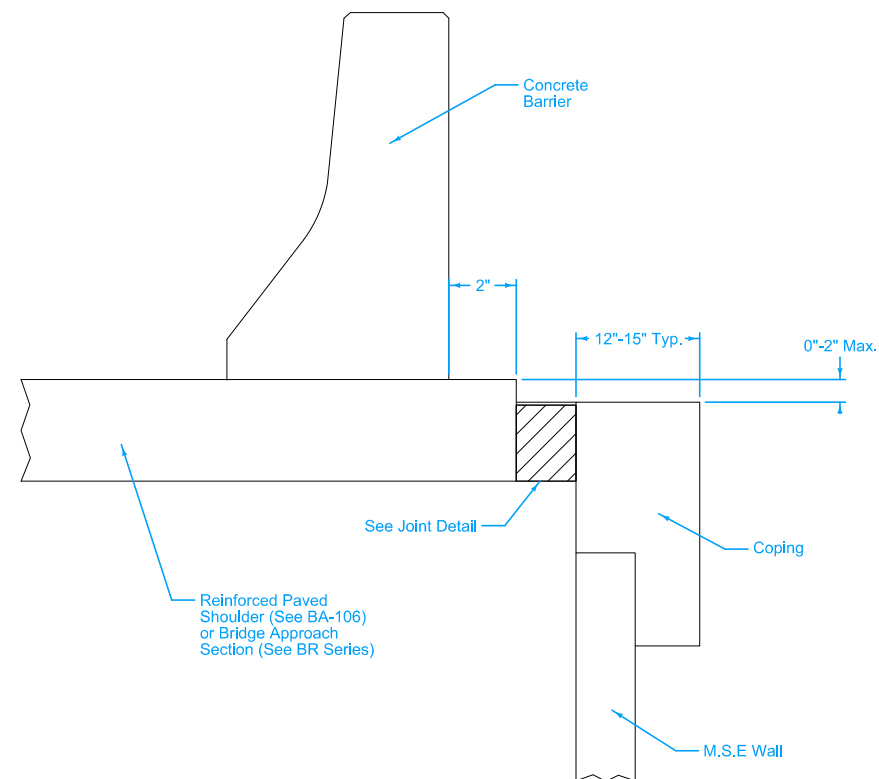




10'-0" x 5'-0" (Nominal) Typical M.S.E. Panel

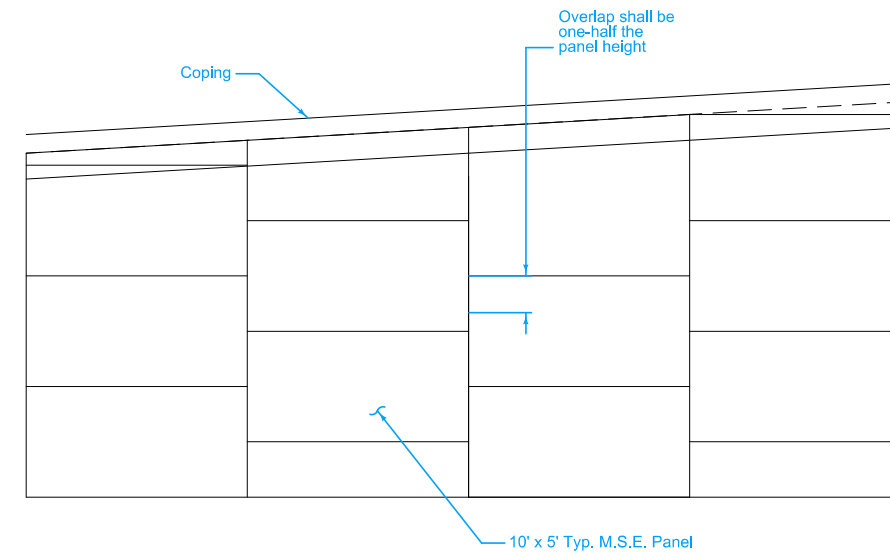
- ① Vertical, Fractured-Face Ribs on Approximately 2 Inch Centers. Nominal Texture Depth Shall Be 1 1/2 Inches
- ② 1/2" Chamfer (Max.) at outside corners (Typ.)
- ③ Dimensions May Vary Per Manufacturer Design. Typical Dimension Shown.

**M.S.E Wall Details**



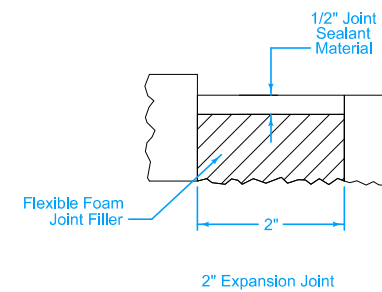
**Concrete Barrier With M.S.E Wall**

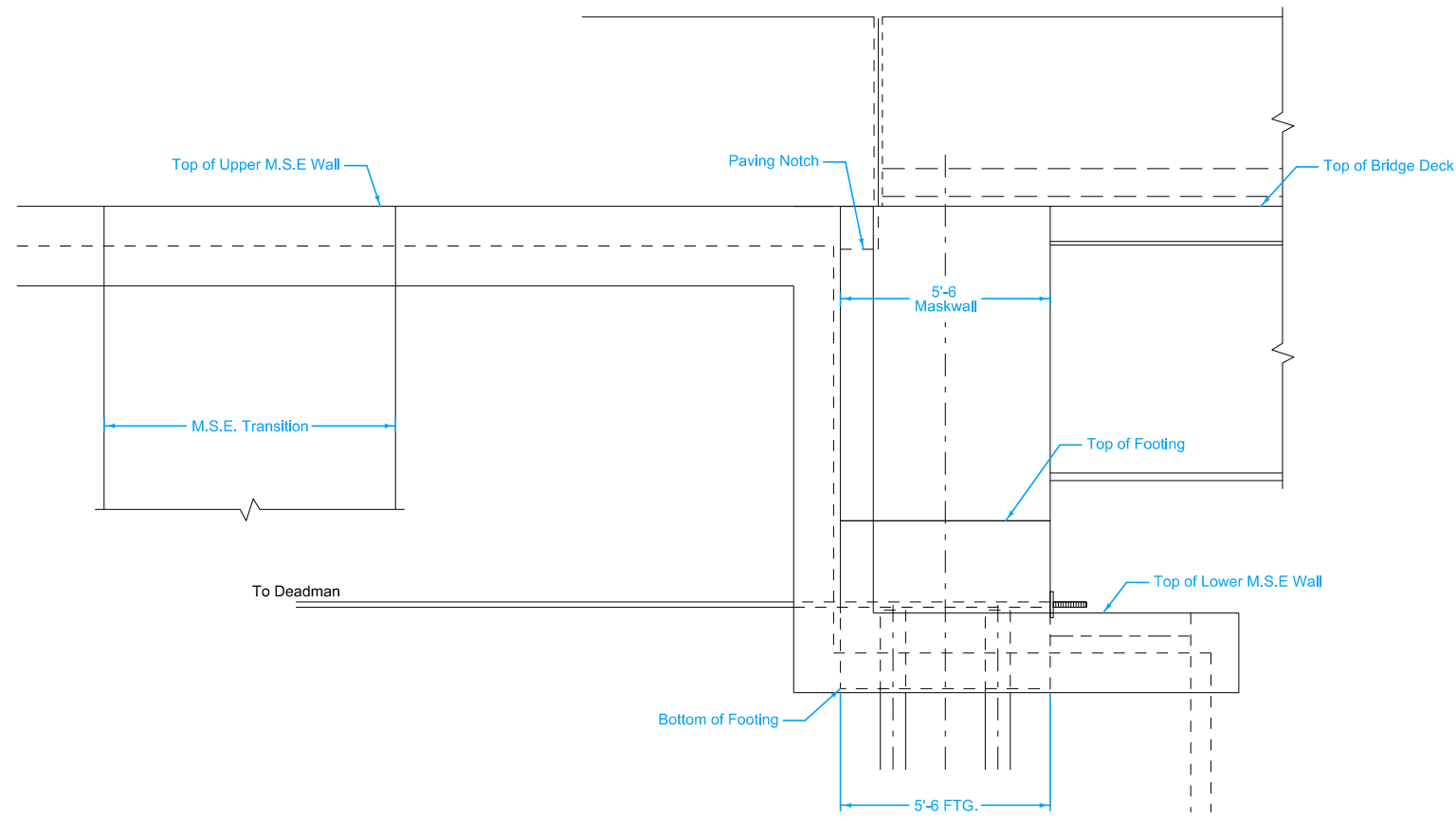
Refer to tabulation 108-20



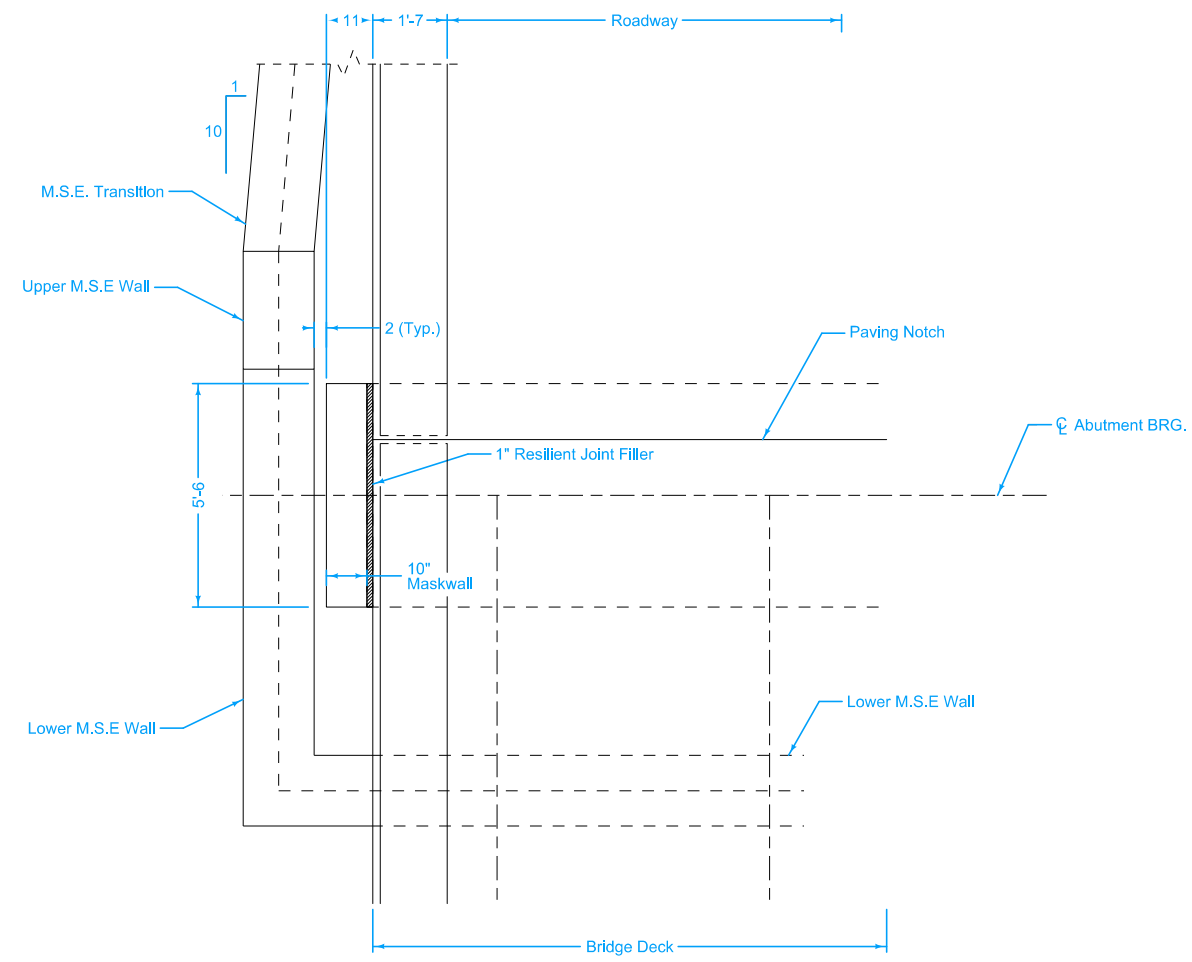
**Panel Lapping Details**

(M.S.E. wall pattern not shown for clarity)

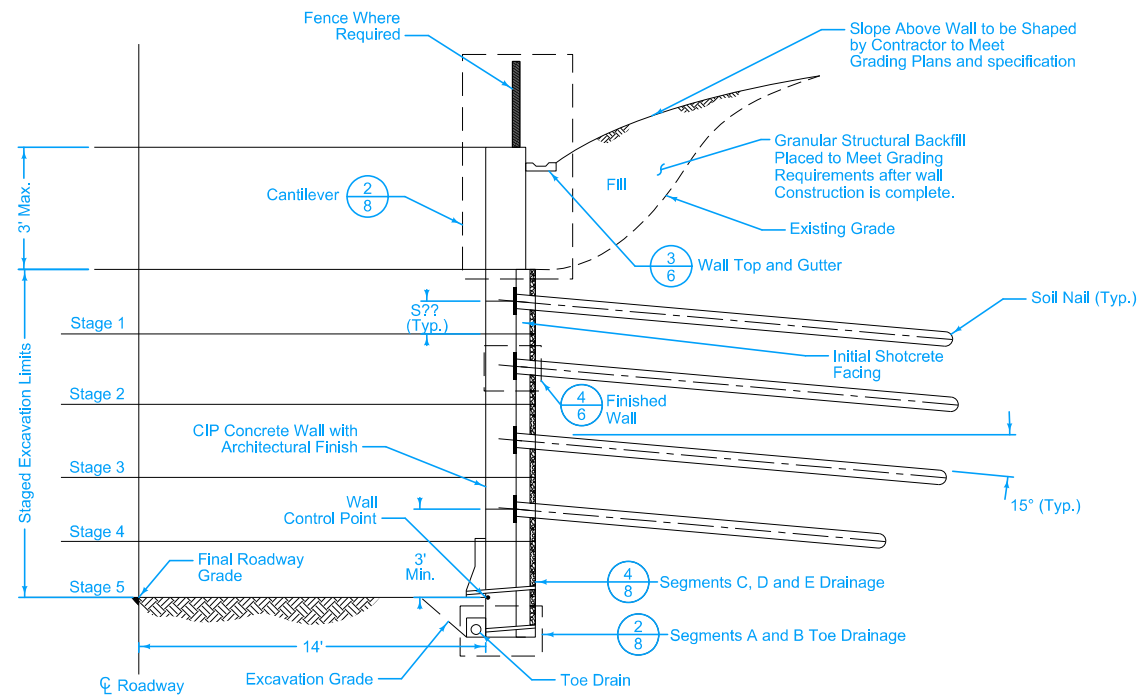




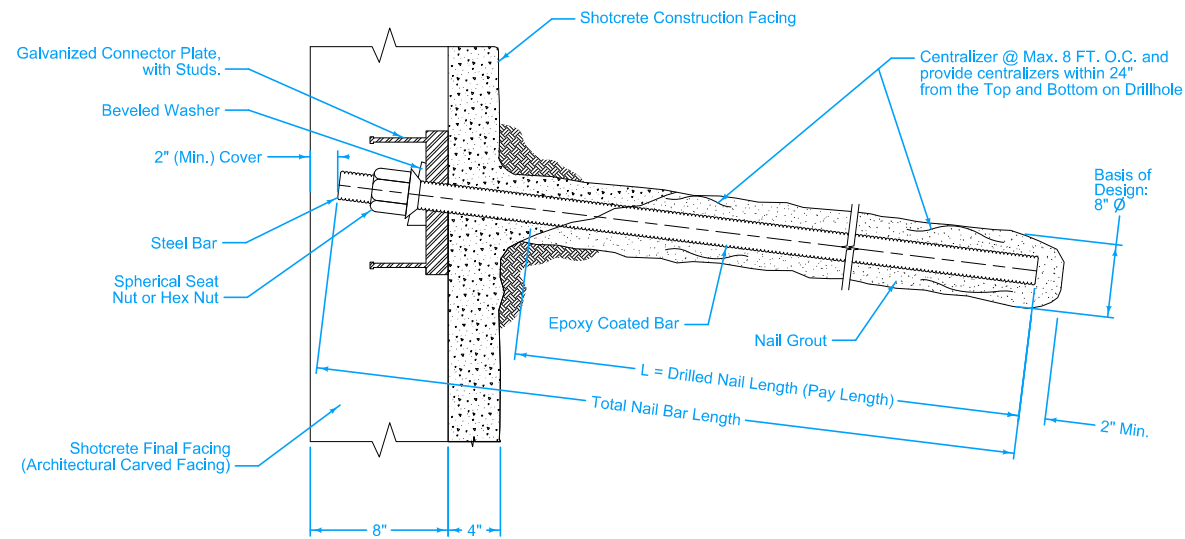
Section A-A



Part Abutment Plan View

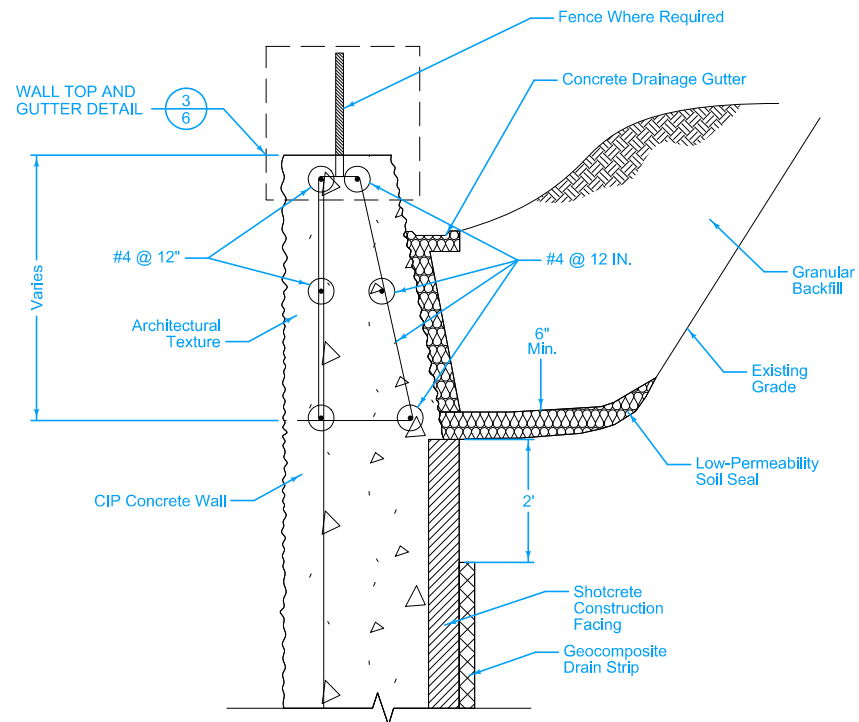


**Typical Section**

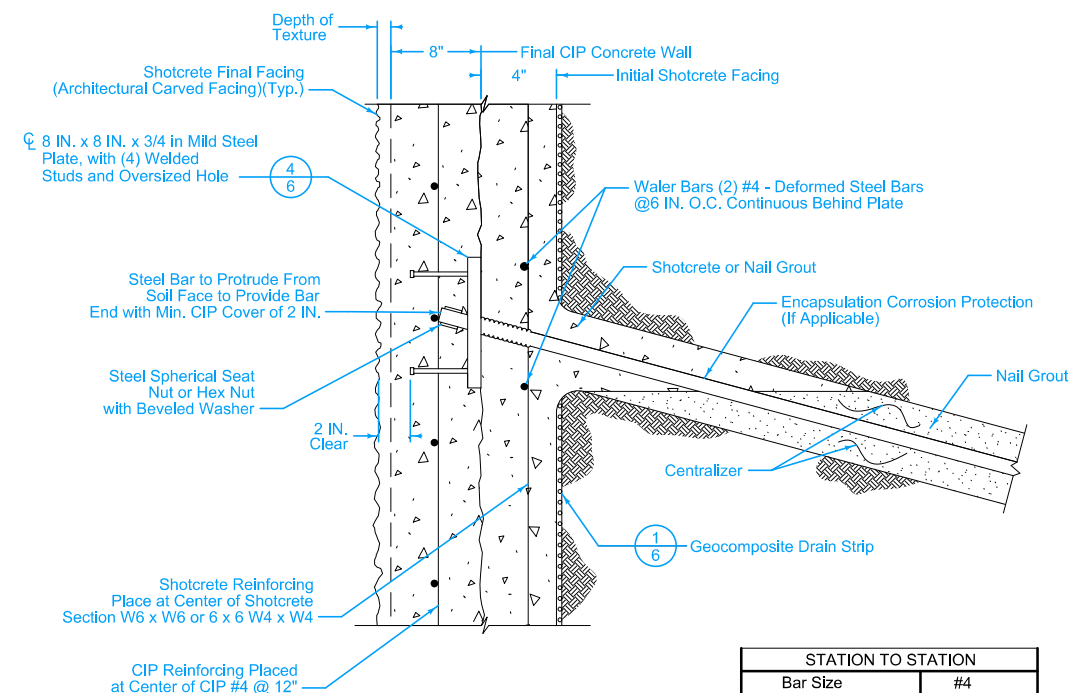


**Note:**  
All nail reinforcing #8 rebar or 1" Ø grade 75 KSI

**Soil Nail Detail**

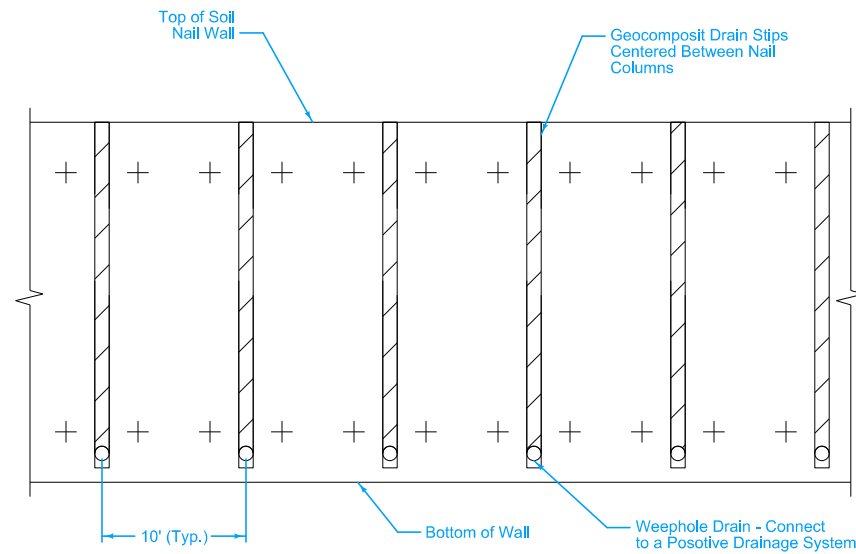


**Cantilever Detail**

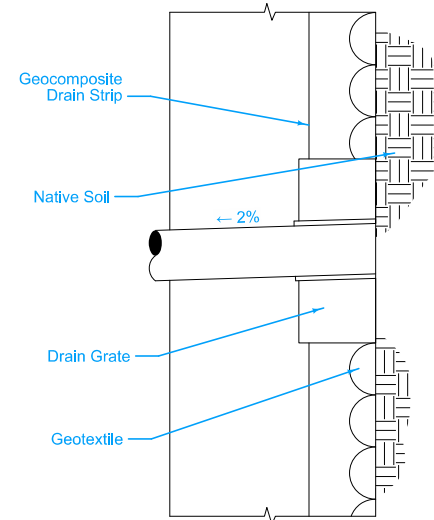


STATION TO STATION	
Bar Size	#4
Splice Length	22"

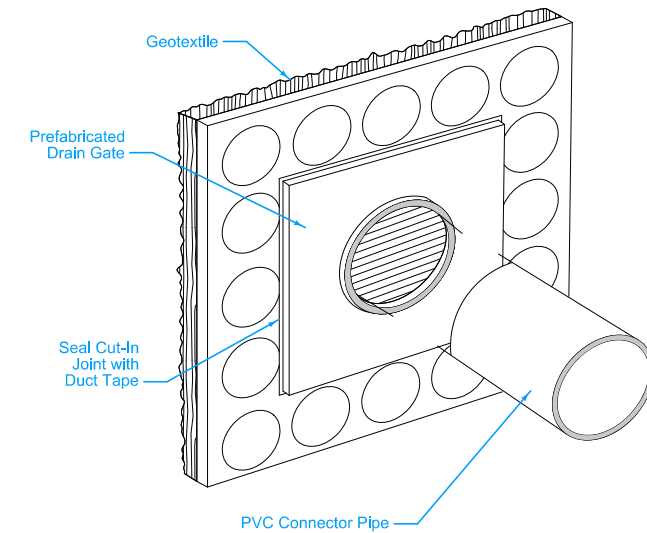
**Finished Wall Section**



Typical Weep Detail



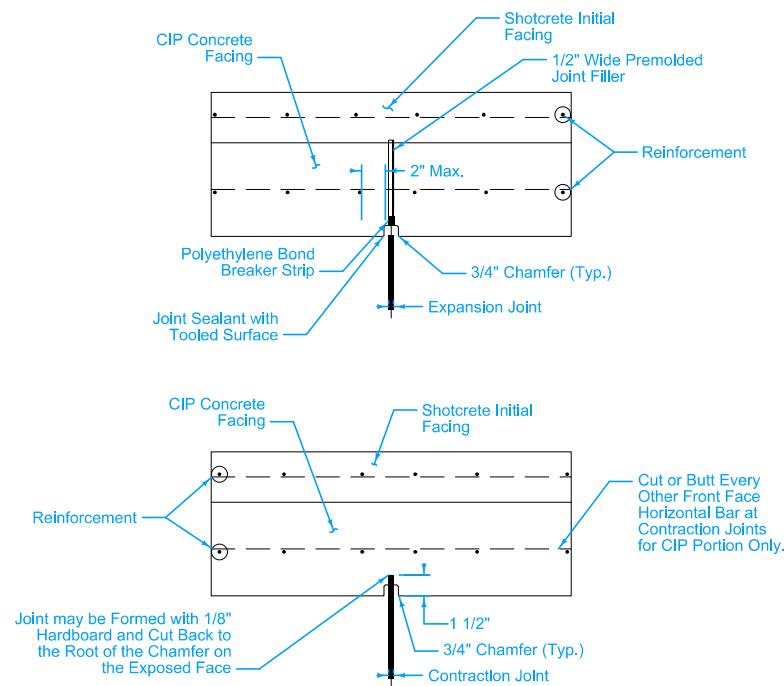
Sectional View



Isometric View

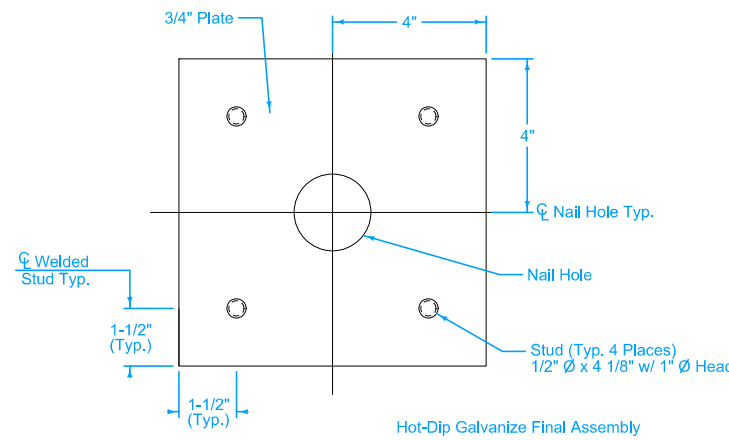
Note: Drain gate installation shall not disrupt geotextile.

Weep Drain Details

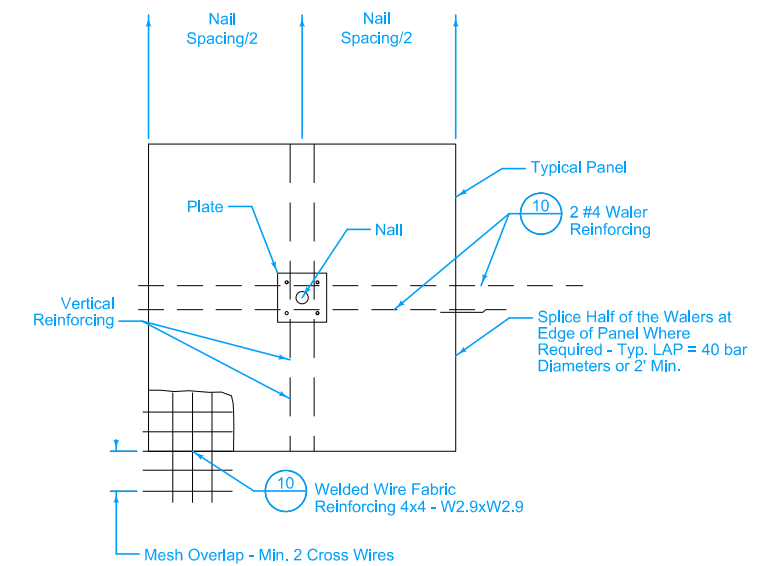


Expansion and Contraction Joint Detail

Notes:  
Expansion joints in CIP wall shall be located at a maximum spacing of 100' center to center, and shall be centered between nails. Except if the joint is within 2' of a step at the top of wall. In which case the joint shall be located at that step. Contraction joints in CIP wall shall be located at maximum spacing of 60' center to center. Expansion and contraction joints not required through shotcrete construction facing.

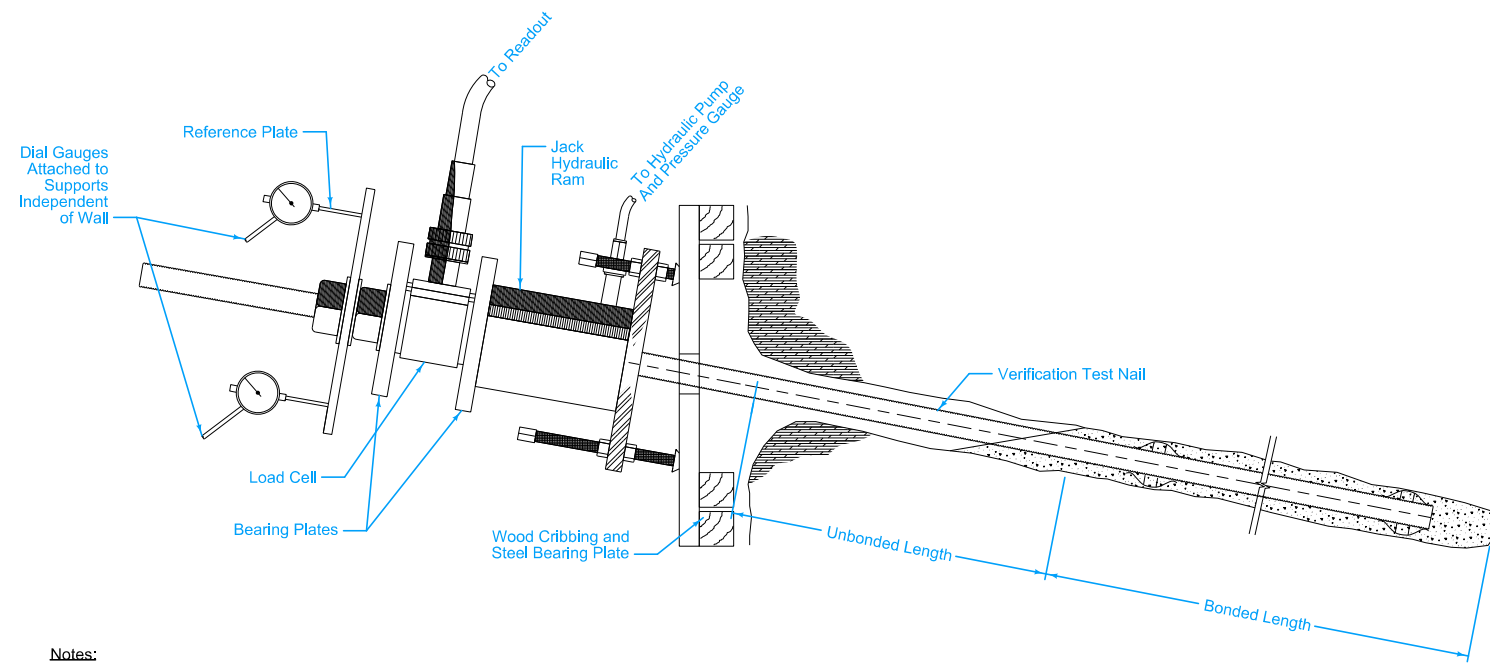


Connector Plate with Stud Detail



Typical Shotcrete Panel Sheet

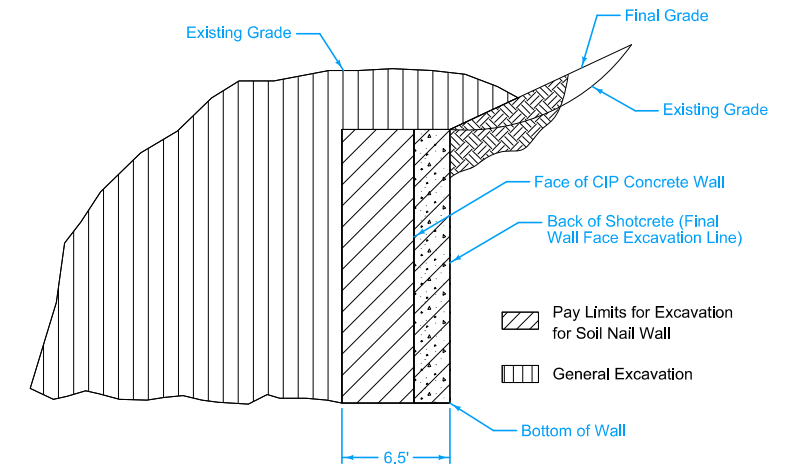




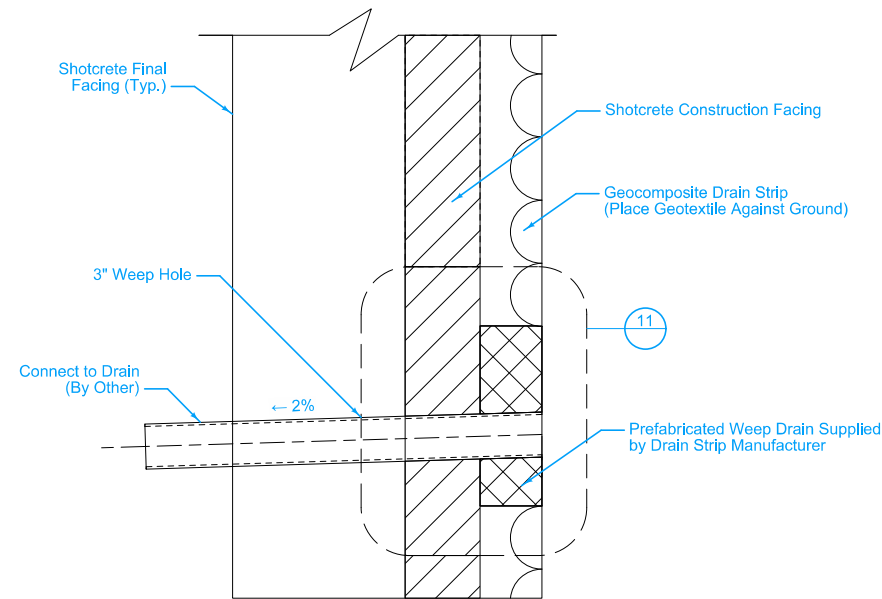
**Notes:**

1. Bare bars may be used for sacrificial test nails.
2. Proof test detail is same exact load cell is not required.

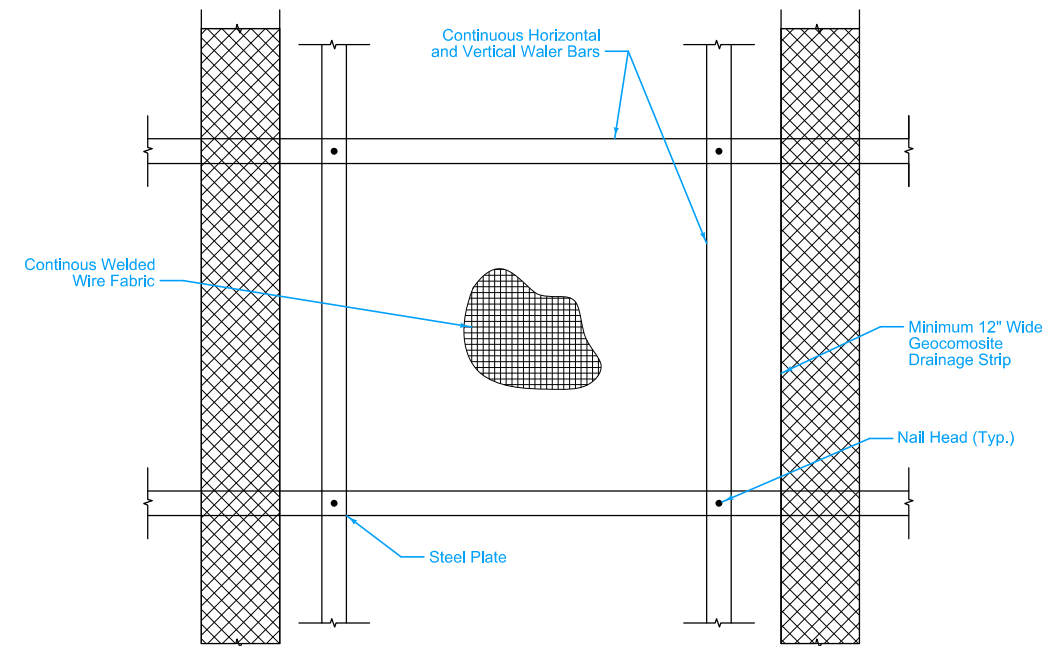
**Verification Test Soil Nail Detail**



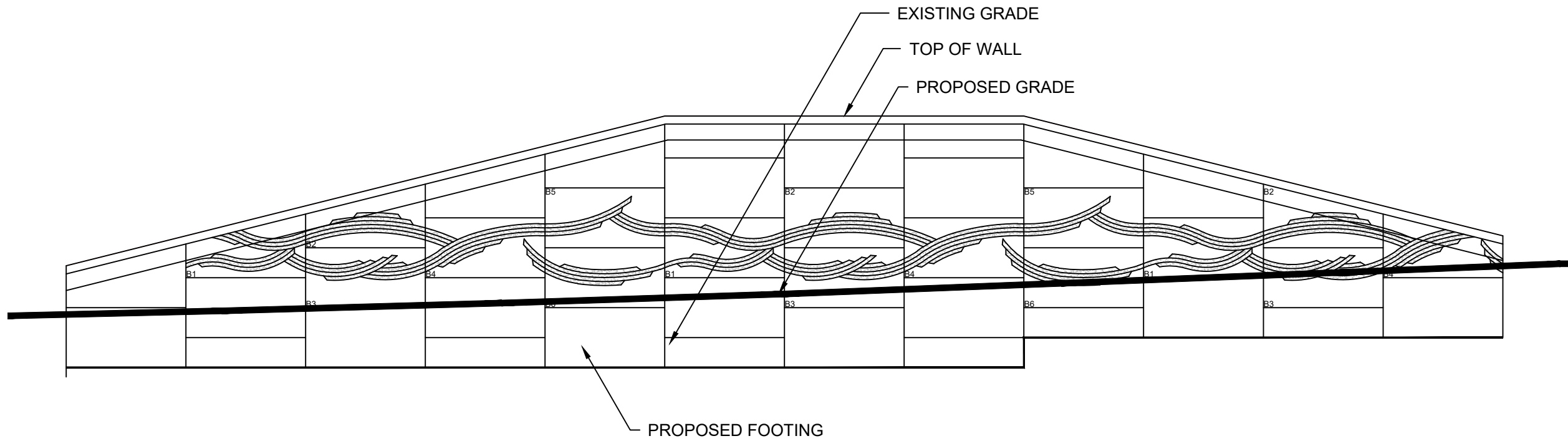
**Excavation Pay Limits**



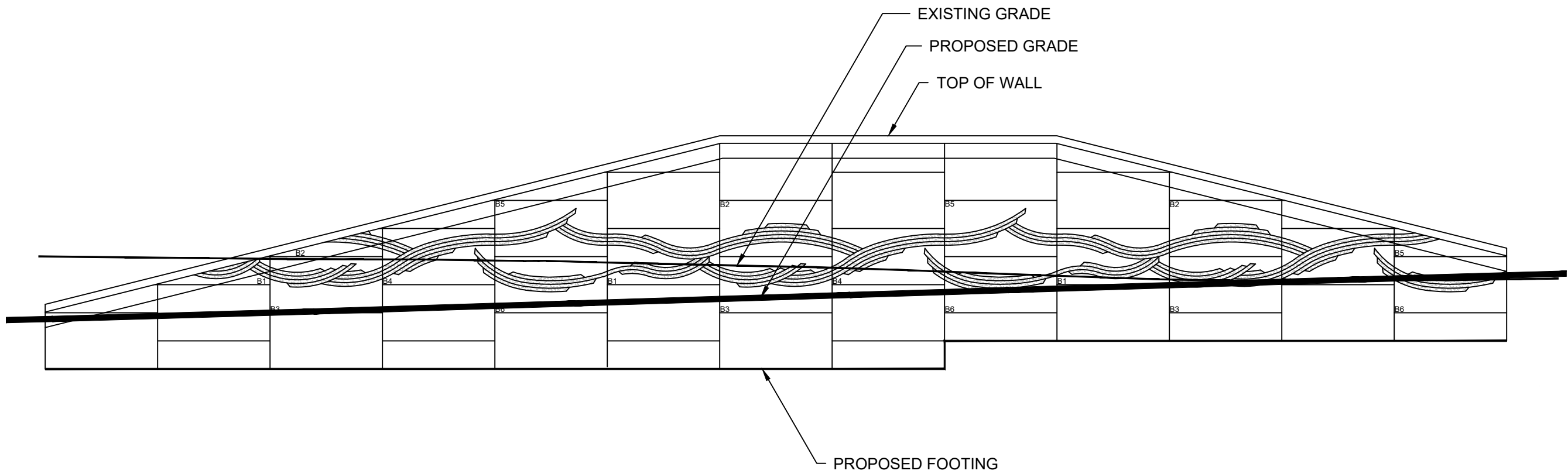
**Typical Weep Drain**



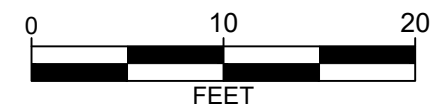
**Soil Nail Elevation**



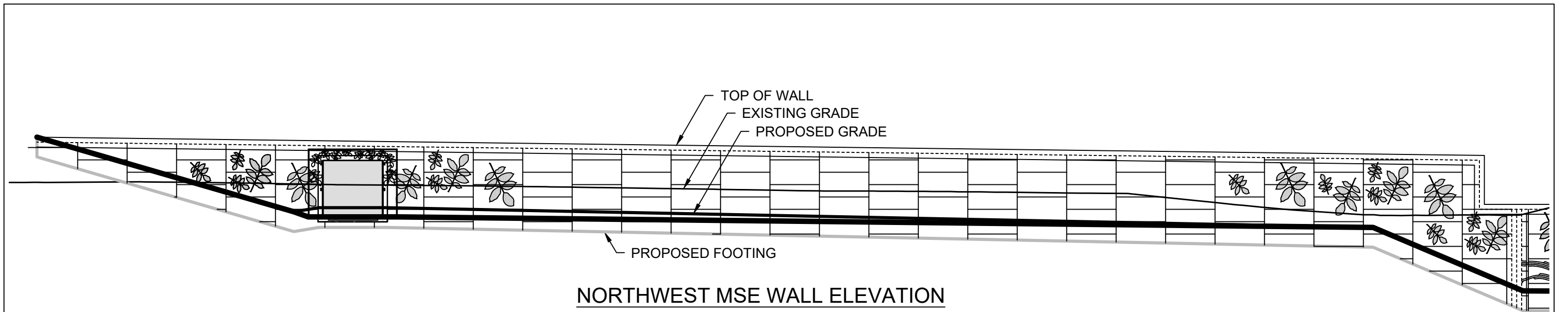
**WEST PEDESTRIAN MSE WALL**



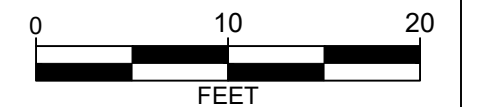
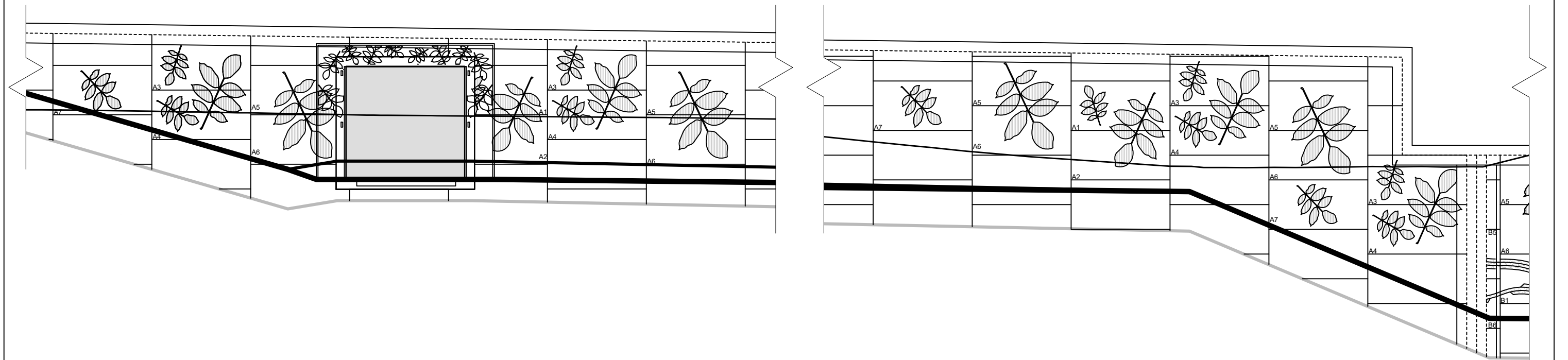
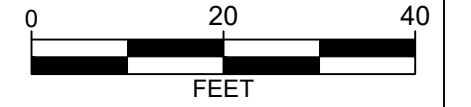
**EAST PEDESTRIAN MSE WALL**



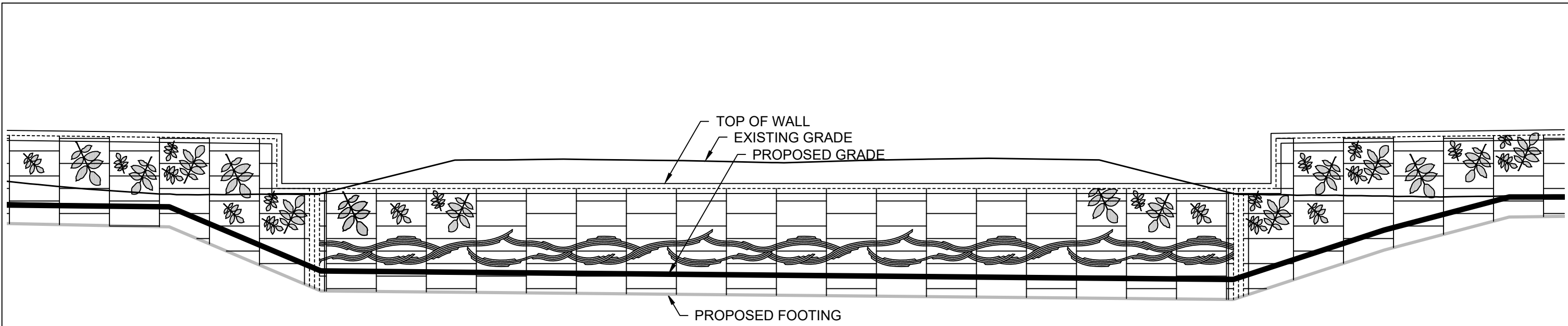
V:\Projects\20211121.0240.01B\CADD\1210240B\_U-WALL-DETL.DWG NICK HUSS, PEDESTRIAN BRIDGE MSE WALLS, 2023/08/22, 4:45 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



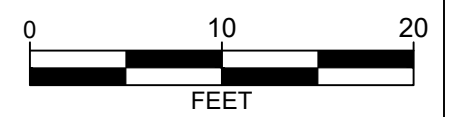
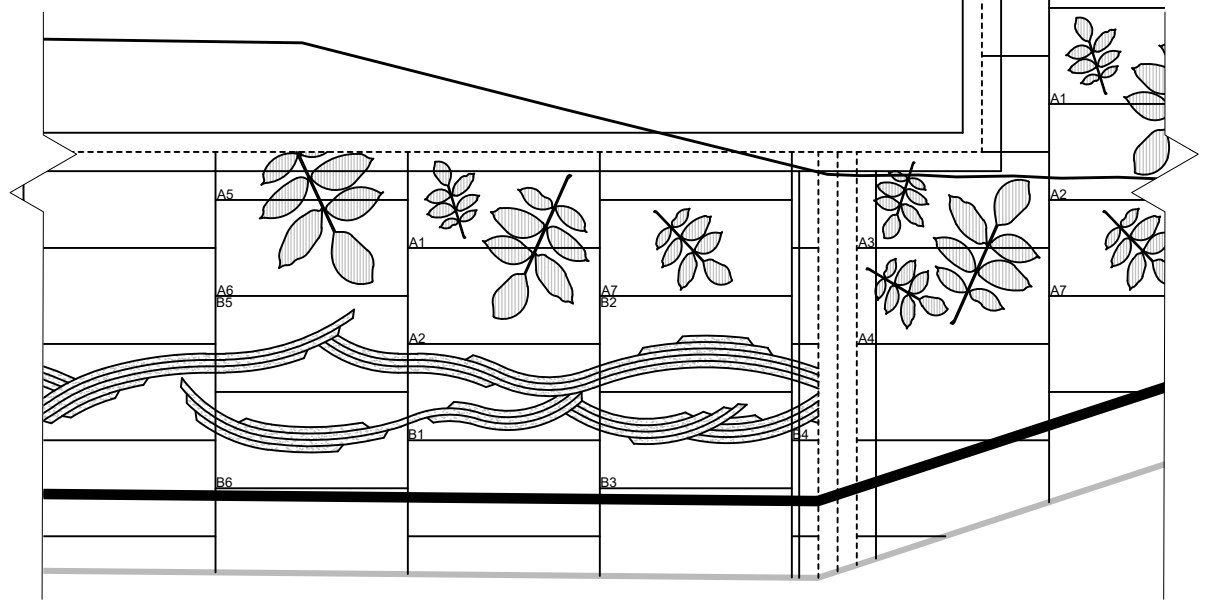
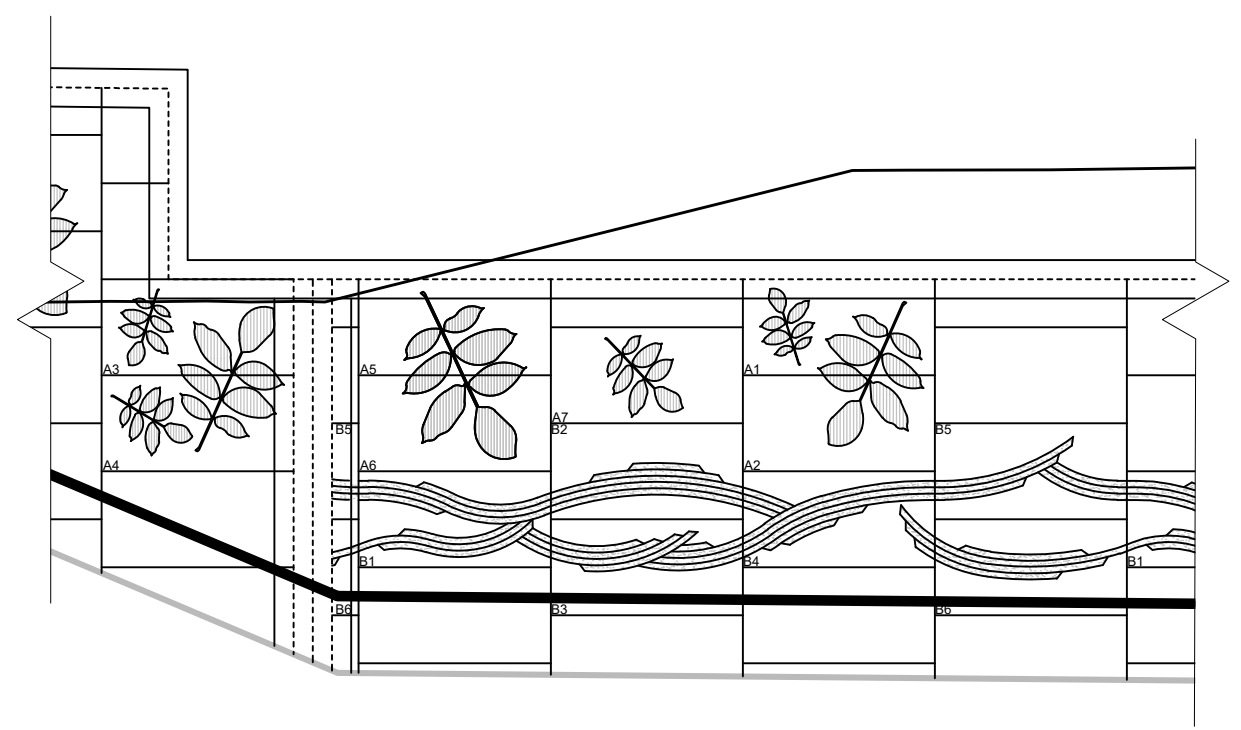
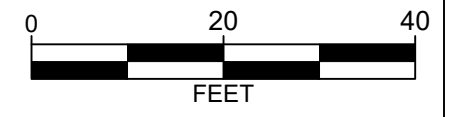
**NORTHWEST MSE WALL ELEVATION**



V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-WALL-DETL.DWG NICK HUSS, NORTH MSE WALL - WEST, 2023/08/22, 4:45 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

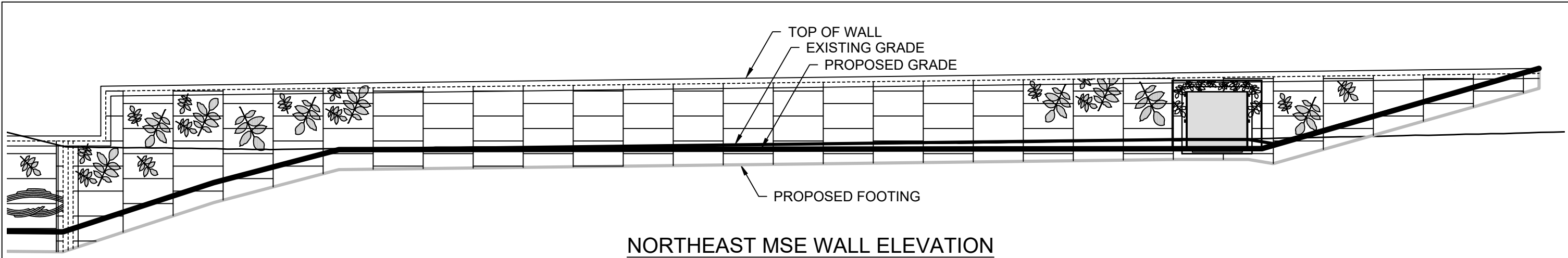


**NORTH MSE WALL ELEVATION**

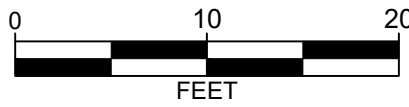
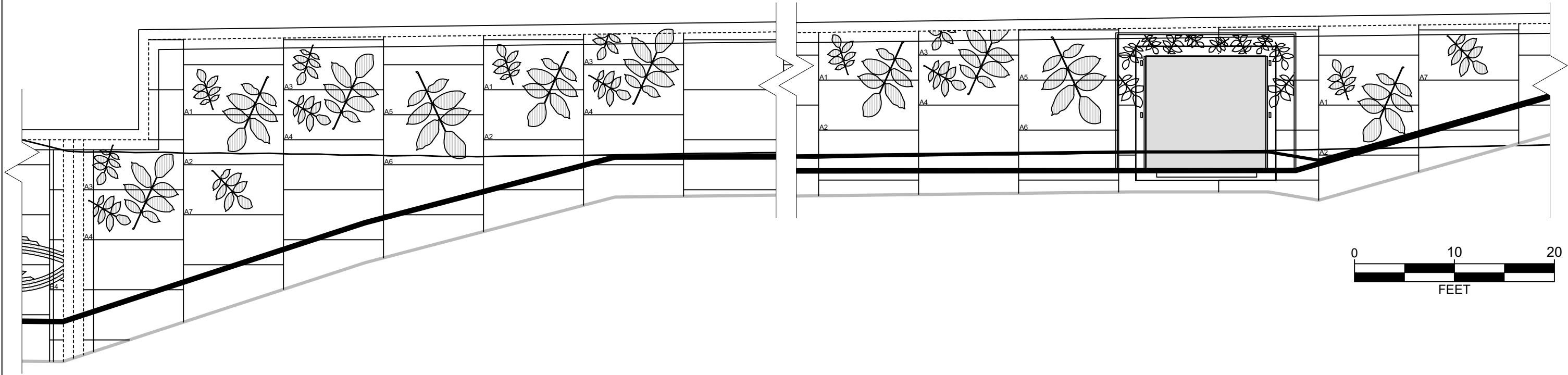
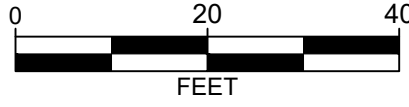


V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-WALL-DETL.DWG NICK HUSS, NORTH MSE WALL - MD, 2023/08/22, 4:45 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

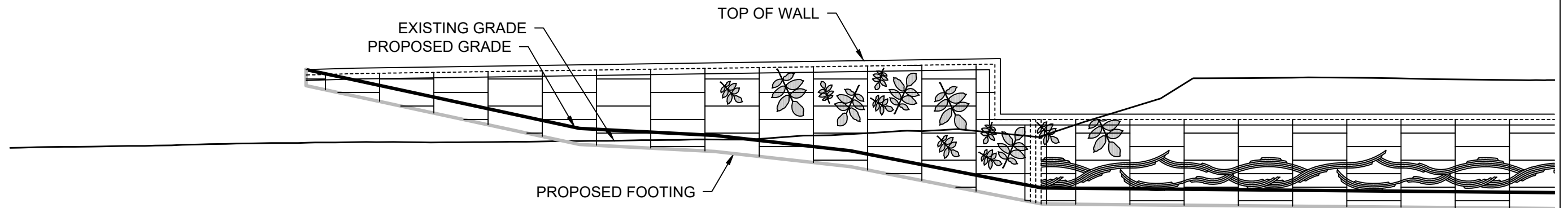




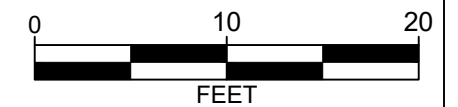
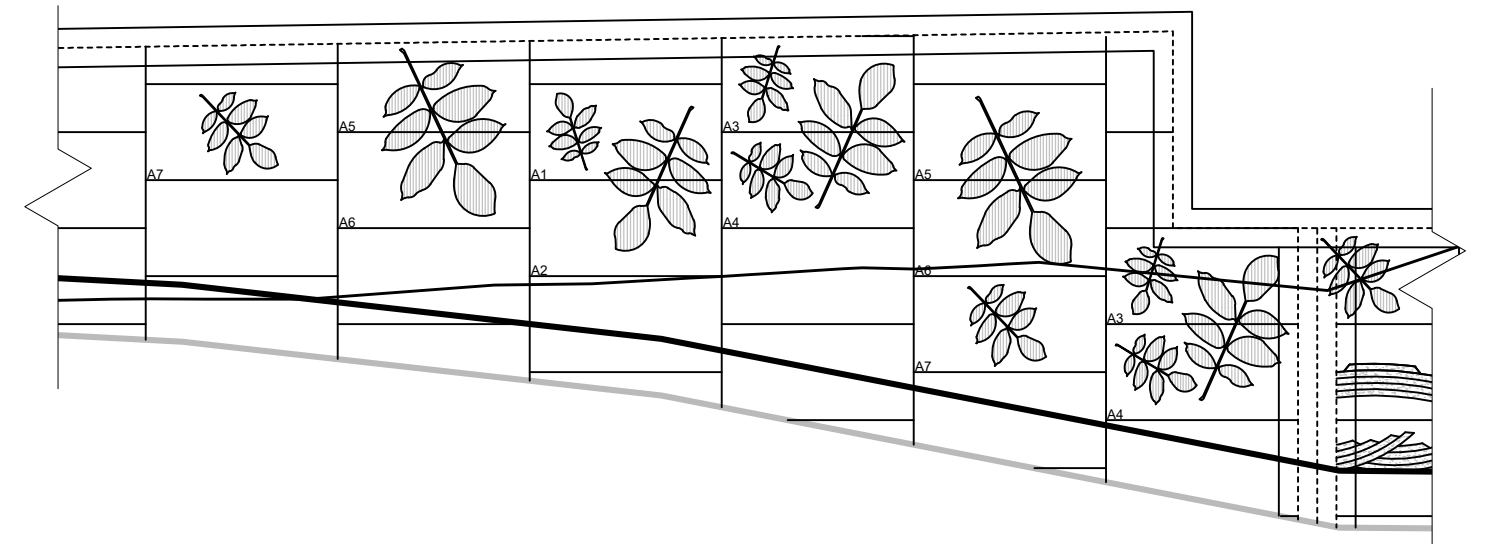
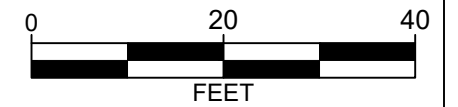
**NORTHEAST MSE WALL ELEVATION**



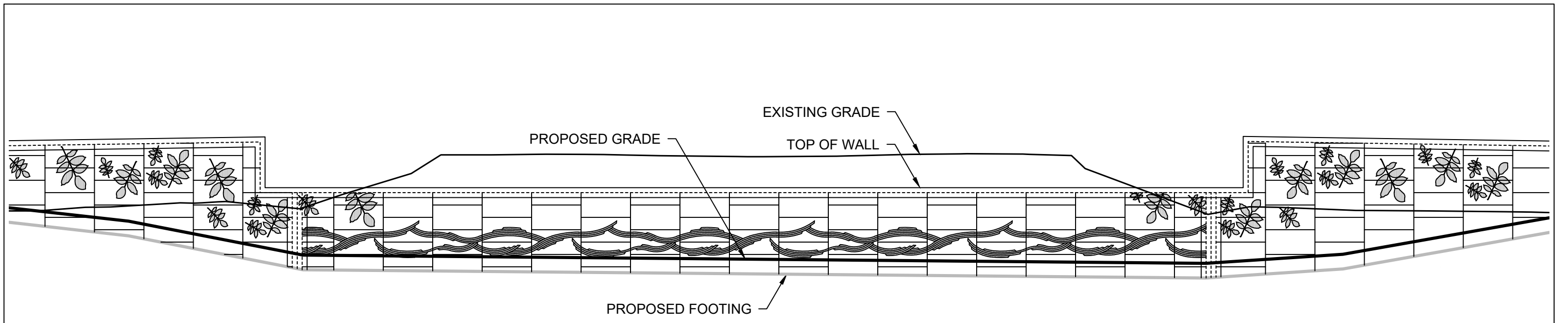
V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-WALL-DETL.DWG NICK HUSS, NORTH MSE WALL - EAST, 2023/08/22, 4:45 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



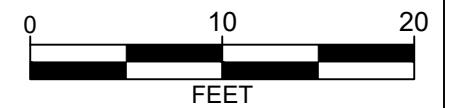
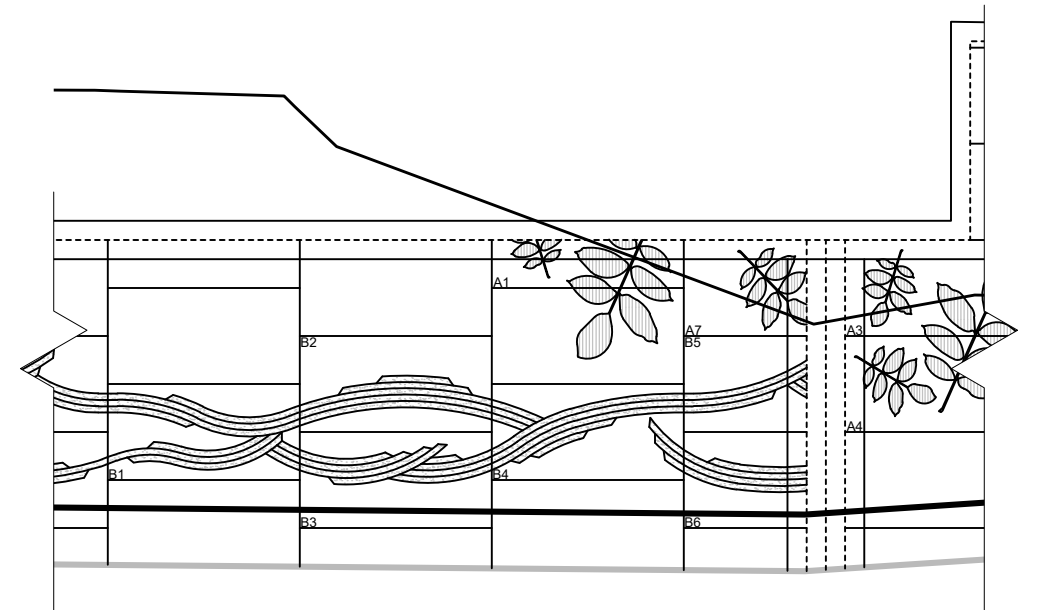
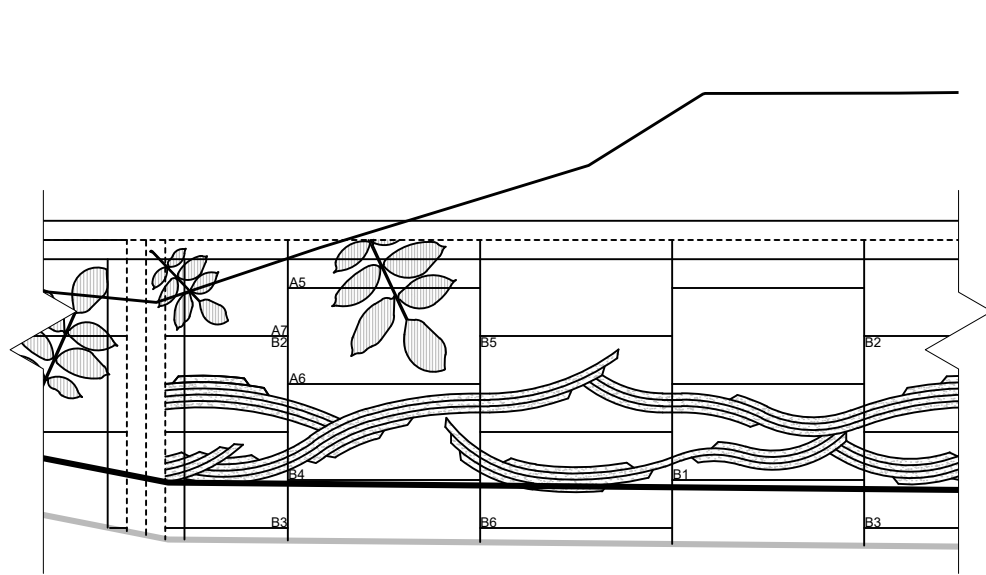
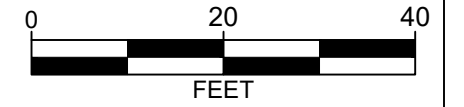
SOUTHEAST MSE WALL ELEVATION



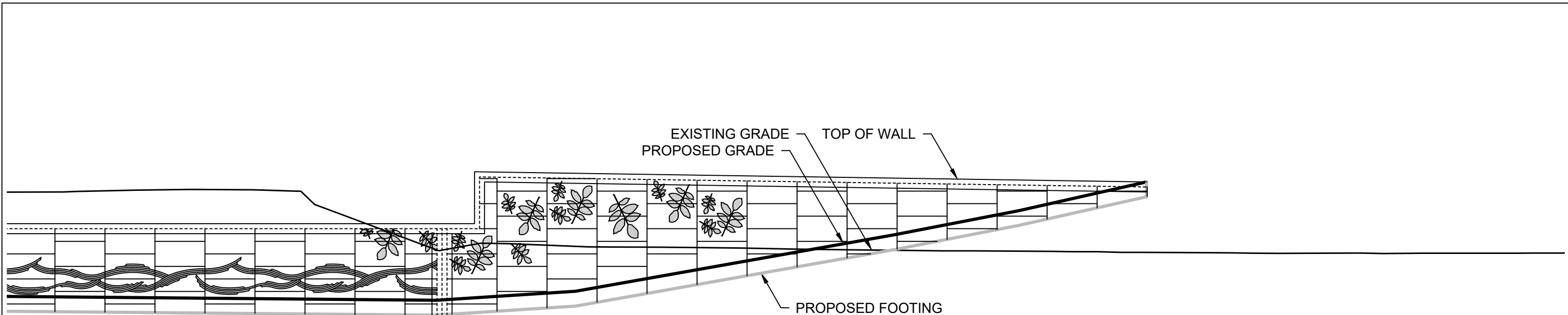
V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-WALL-DETL.DWG NICK HUSS, SOUTH MSE WALL - EAST, 2023/08/22, 4:45 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



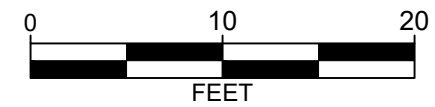
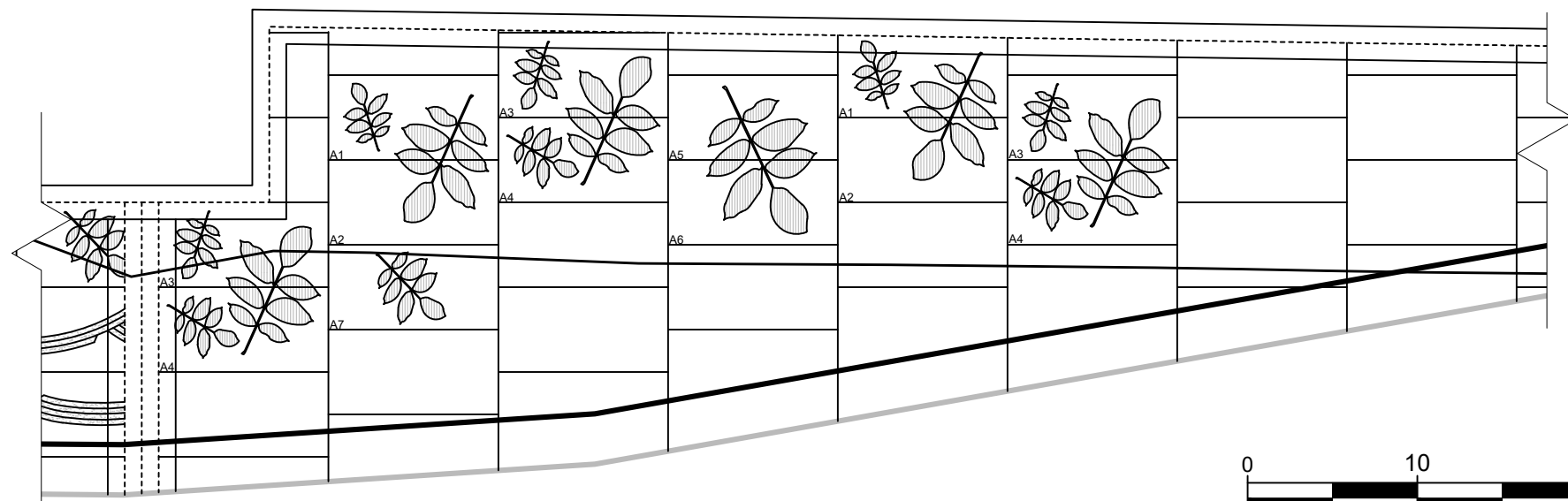
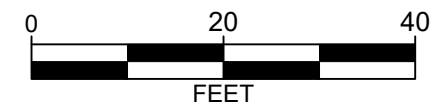
**SOUTH MSE WALL ELEVATION**



V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-WALL-DETL.DWG NICK HUSS, SOUTH MSE WALL - MID, 2023/08/22, 4:45 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

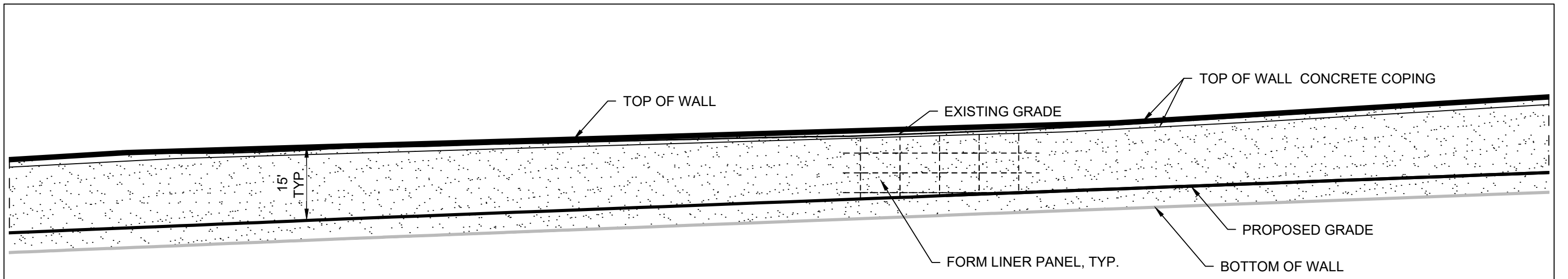


SOUTHWEST MSE WALL ELEVATION

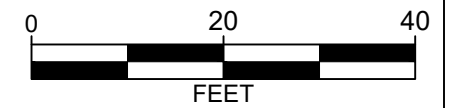


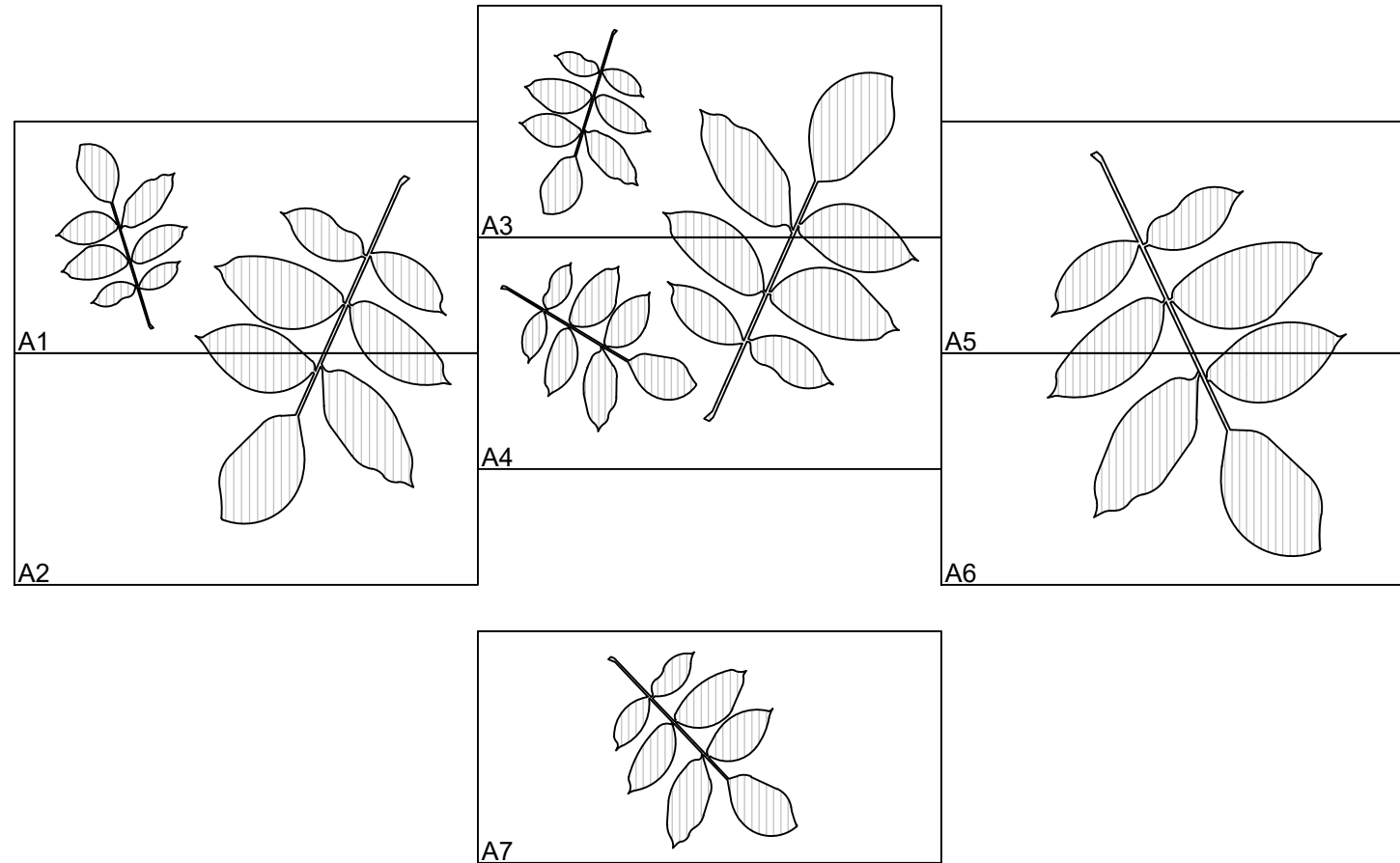
V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-WALL-DETL.DWG NICK HUSS, SOUTH MSE WALL - WEST, 2023/08/22, 4:45 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



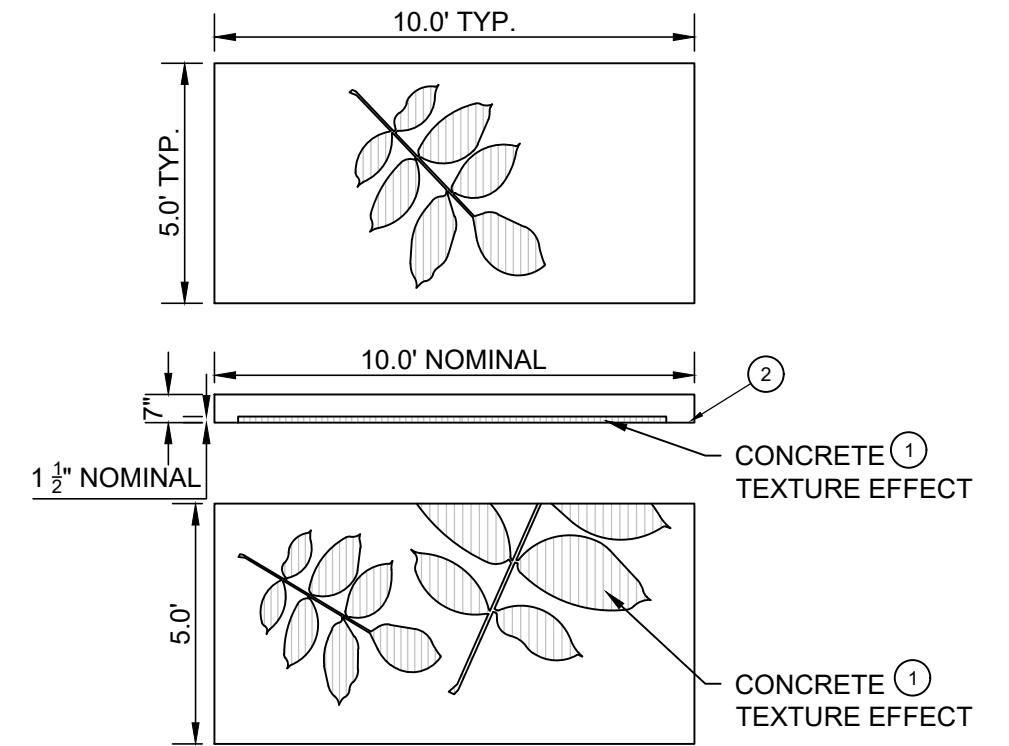


SOIL NAIL WALL ELEVATION

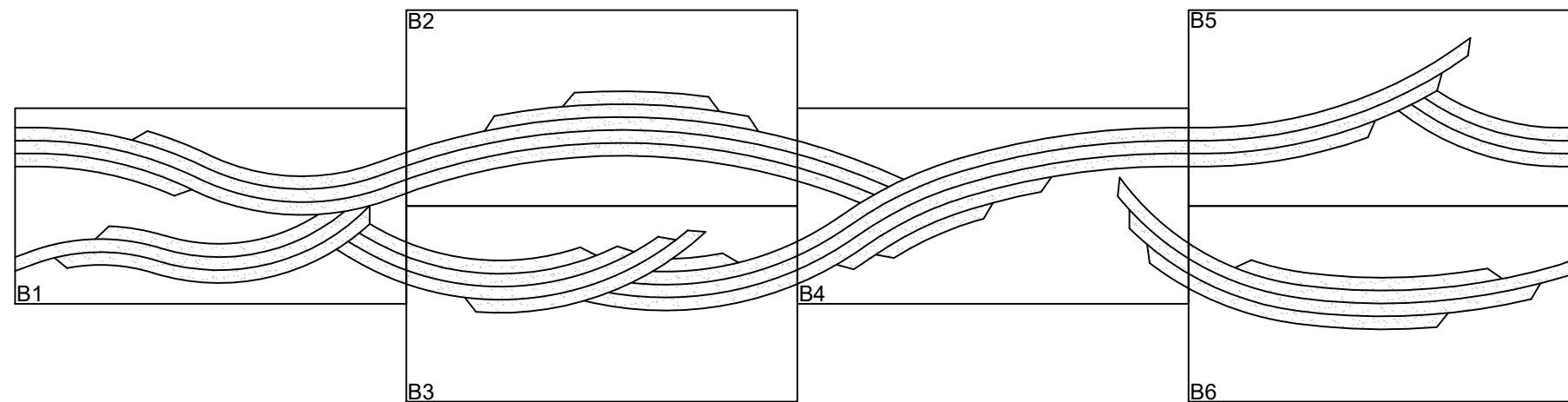




**MSE LEAF PANEL  
EMBELLISHMENTS**



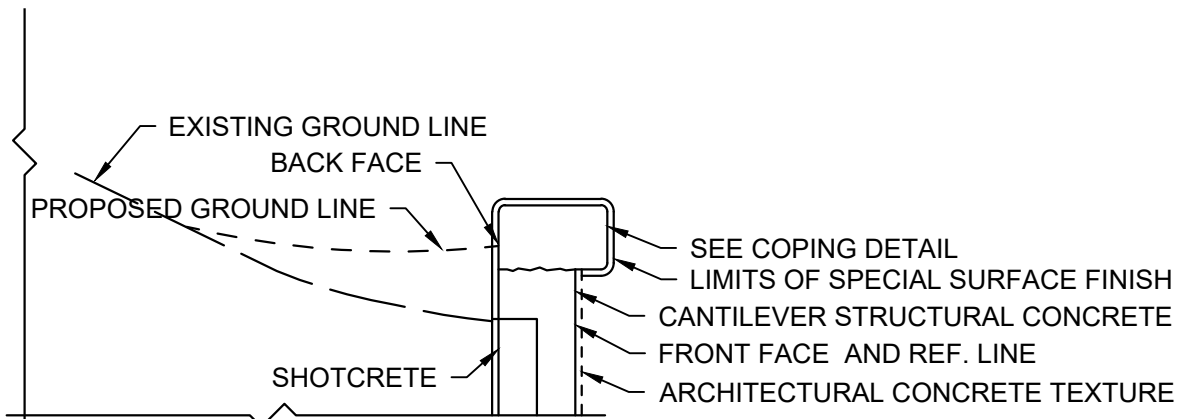
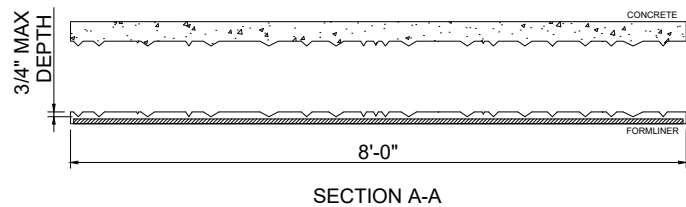
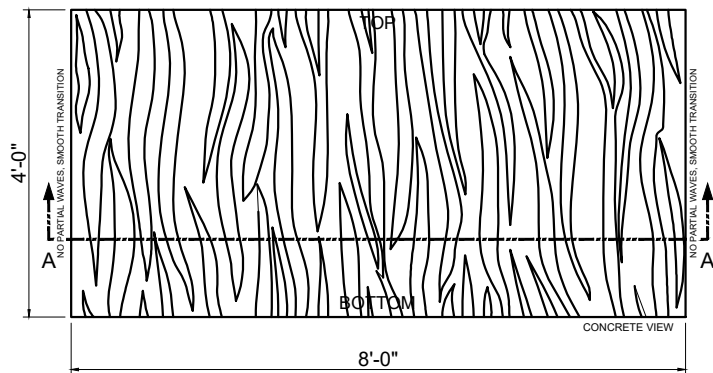
- ① VERTICAL FRACTURED-FACE RIBS ON APPROXIMATELY 2" CENTERS. NOMINAL TEXTURE DEPTH SHALL BE 1 1/2 INCHES.
- ② 1/2" CHAMFER (MAX) AT OUTSIDE CORNERS
- ③ DIMENSIONS MAY VARY PER MANUFACTURERS DESIGN. TYPICAL DIMENSIONS SHOWN.



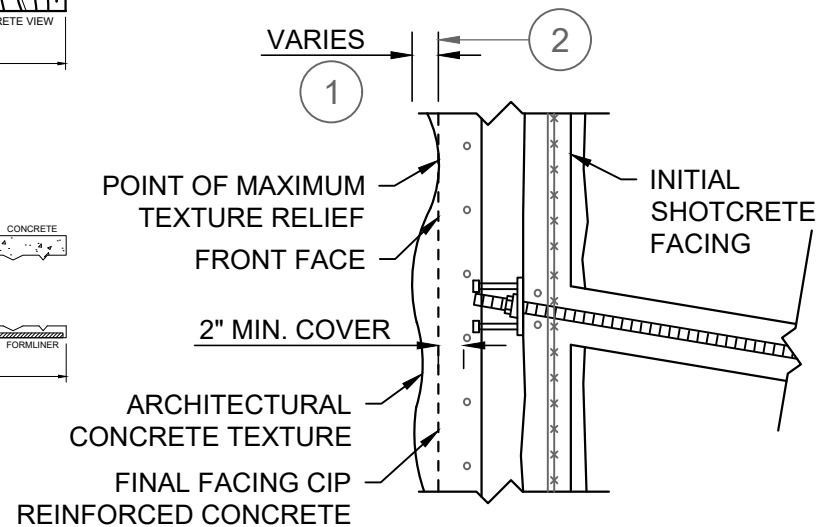
**MSE WAVE PANEL  
EMBELLISHMENTS**

## MSE WALL PANEL NOTES

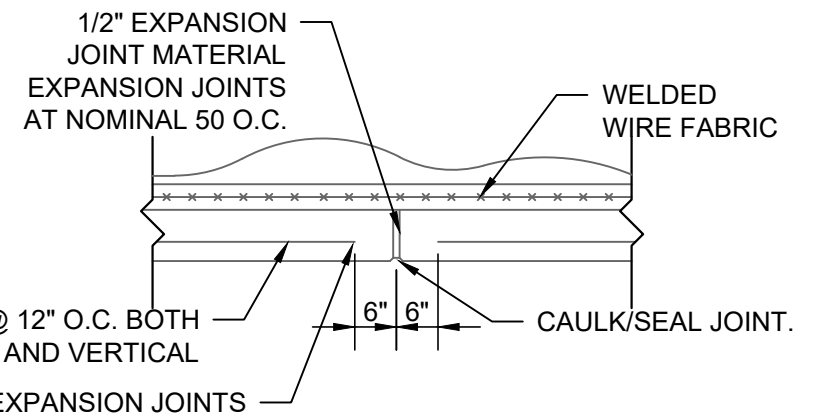
1. PROVIDE SHOP DRAWINGS THAT OUTLINE THE ARRANGEMENT OF PRECAST MSE WALL PANELS AND THE WAY THEY TERMINATE FOR ALL PANELS. INDICATE THE POSITIONS OF ELEMENTS, JOINT PLACEMENT, PATTERN ORIENTATION, AND POSITIONING. THE RESPONSIBILITY FOR LAYING OUT THE PANELS AND ENSURING THE STRUCTURAL STABILITY AND ADEQUACY OF THE WALL RESTS WITH THE CONTRACTOR.
2. PROVIDE FULL SIZE SAMPLES THAT DISPLAYS A MATCHED SERIES OF PANELS, DENOTING SERIES "A" (A1-A6) AND "B" (B1-B6). CONTRACTOR TO PRESENT REPAIR METHODS FOR ADDRESSING CHIPPED CONCRETE AND VOIDS. THE PANELS THAT GAIN ACCEPTANCE THROUGH THIS PROCESS WILL SET THE STANDARD FOR EVALUATING THE REMAINING WORK'S TECHNICAL AND AESTHETIC QUALITY. THE CONTRACTOR IS REQUIRED TO RETAIN THE APPROVED SAMPLE PANELS ON-SITE AS A REFERENCE UNTIL REACHING A SIGNIFICANT STAGE OF COMPLETION. THE CONTRACTOR MUST SUBMIT FOR APPROVAL PRIOR TO UTILIZING ANY VARIATIONS IN MATERIALS OR TECHNIQUES FROM THE ACCEPTED SAMPLE PANELS.
3. SAFEGUARD PANELS AGAINST EXPOSURE TO OIL, DIRT, AND UV RADIATION.
4. HANDLE PANELS WITH CAUTION WHEN TEMPERATURES DROP BELOW 25°F.
5. PROVIDE STURDY BACKING, BRACING, AND ADEQUATE CONNECTIONS BETWEEN PANELS AND TIEBACKS TO PREVENT ANY BENDING OR DEFLECTION.
6. ASSEMBLE THE PANELS AND ASSOCIATED COMPONENTS ACCORDING TO THE SIZES, SHAPES, LINES, AND DIMENSIONS INDICATED.
7. INSTALL ADDITIONAL BACKING, TIEBACKS AND OR CONNECTIONS AS NEEDED TO PREVENT THE PANELS FROM DEFLECTING.
8. THE CONTRACT UNIT PRICE FOR "**ITEM XXXXXX - MECHANICALLY STABILIZE EARTH RETAINING WALL SF**" IS INCLUSIVE OF ALL NECESSARY PRECAST PANELS, ALONG WITH THE CORRESPONDING MATERIALS AND CONSIDERATIONS FOR AESTHETIC APPEARANCE, AS DEPICTED IN THE PLANS.



**TOP OF WALL TREATMENT**



**DETAIL "A"**

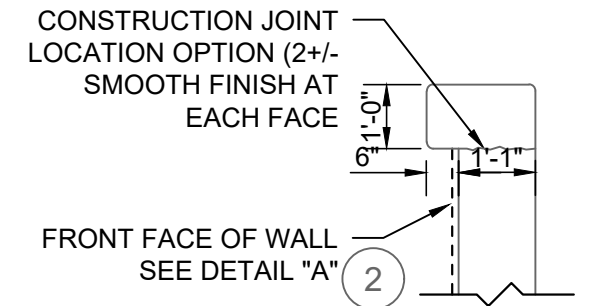


**EXPANSION JOINT DETAIL**

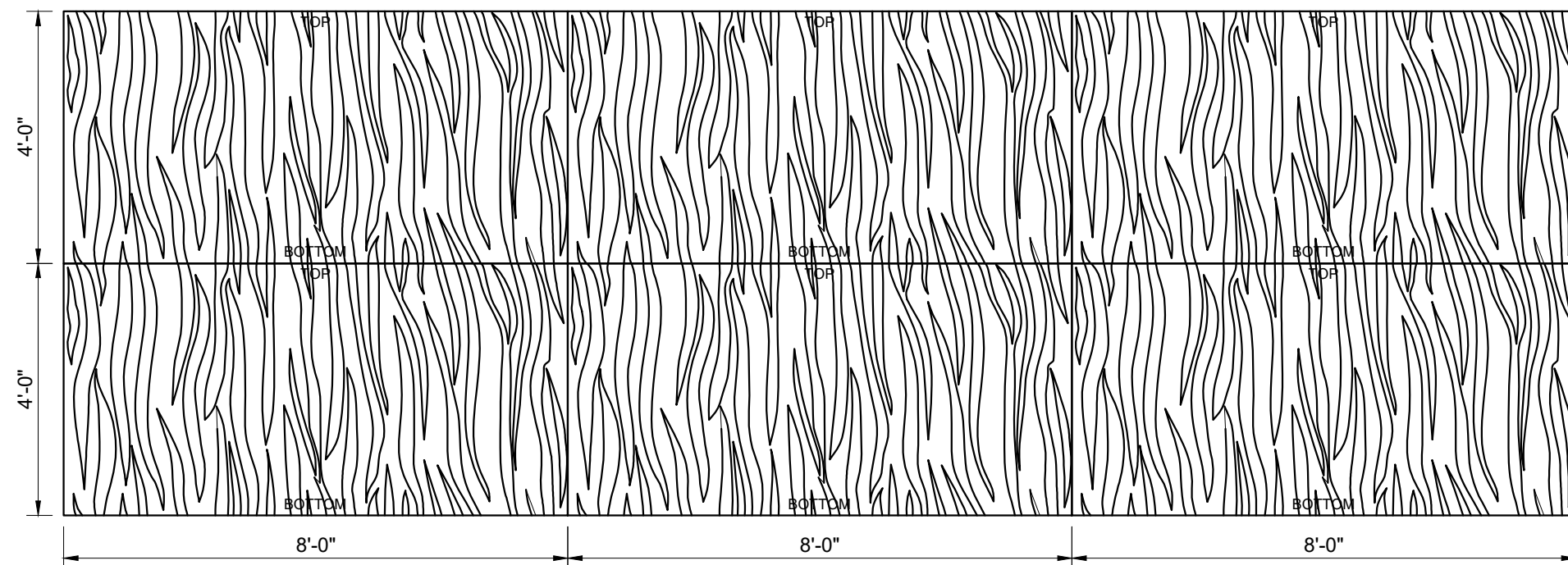
**NOTES:**  
 SEE SPECIAL PROVISIONS FOR REQUIREMENTS OF SPECIAL SURFACE FINISH, ARCHITECTURAL CONCRETE TEXTURE. ARCHITECTURAL SURFACE FINISH AND ANTI GRAFFITTI COATING.

1 THE THICKNESS OF THE ARCHITECTURAL CONCRETE TEXTURE VARIES WITH THE TEXTURE RELIEF PATTERN. CONCRETE NEEDED FOR THE TEXTURING IS INCIDENTAL AND IS NOT INCLUDED IN THE CONCRETE FACING STRUCTURAL CONCRETE.

2 DATA FOR BASELINE GEOMETRY IS TABULATED FOR WALL ALIGNMENT, SEE ALIGNMENT TABULATION SHEET. WALL ALIGNMENT IS AT FRONT FACE OF WALL.



**COPING DETAIL**



**BASIS OF DESIGN:**  
 MODEL#: 15405 ESTRELLA WAVE  
 FORMLINER AS PROVIDED BY FITZGERALD FORMLINERS, OR EQUAL.  
 1500 EAST CHESTNUT AVE. SANTA ANA, CA 92701  
 PHONE: (800) 547-7760 FAX: (714) 245-9715  
 WWW.FORMLINERS.COM

MODEL#: 2/186 DALARNA  
 FORMLINER AS PROVIDED BY US FORMLINER BY RECKLI.  
 380 COMMERCE BLVD. ATHENS, GA 30606  
 PHONE: (706) 549-6787  
 WWW.RECKLI.COM

MODEL#: 750 BECKET  
 FORMLINER AS PROVIDED BY ARCHITECTURAL POLYMERS.  
 1220 LITTLE GAP ROAD PALMERTON, PA 18071  
 PHONE: (610) 824-3322 FAX: (610) 824-3777  
 WWW.APFORMLINER.COM

INSTALL IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS, SPECIFICATIONS, AND REQUIREMENTS



## FORMLINER PANEL NOTES

1. PROVIDE SHOP DRAWINGS THAT OUTLINE THE ARRANGEMENT OF FORM LINERS AND THE WAY THEY TERMINATE FOR ALL PANELS. INDICATE THE POSITIONS OF BACKUP ELEMENTS, RUSTICATION, REVEALS, AND CHAMFER STRIPS, JOINT PLACEMENT, PATTERN ORIENTATION, AND POSITIONING. THE RESPONSIBILITY FOR DESIGNING THE FORMWORK AND ENSURING THE STRUCTURAL STABILITY AND ADEQUACY OF THE FORM LINER RESTS WITH THE CONTRACTOR.
2. FURNISH 12-INCH BY 12-INCH SAMPLES FOR EACH SPECIFIED PATTERN. THESE SAMPLES CAN BE COMPOSED OF EITHER ACTUAL FORM LINER MATERIALS OR FOAM CASTINGS DERIVED FROM THE PROPOSED LINERS INTENDED FOR USAGE IN THE PROJECT.
3. PROVIDE FULL SIZE SAMPLE THAT DISPLAYS A MATCHED PAIR OF PANELS, **DENOTING A AND B** AS THE EXEMPLAR PANELS. UTILIZE THE PRECISE MATERIALS, TECHNIQUES, AND CRAFTSMANSHIP PERTINENT TO THE PROJECT. THIS ENCOMPASSES THE CONCRETE MIX (INCLUDING CEMENT TYPE, AGGREGATE GRADATION, SLUMP, WATER-TO-CEMENT RATIOS, PLASTICIZERS, AND ADDITIVES), FORMWORK SYSTEM (CONSISTING OF LINER AND FORMWORK), FORM RELEASE AGENTS, PLACEMENT PACE, FORM PRESSURES, FORMWORK AND JOINT SEALING, VIBRATION, AND STRIPPING PROCEDURES. CONTRACTOR TO PRESENT REPAIR METHODS FOR ADDRESSING SPALLED CONCRETE, AND VOIDS BROUGHT ABOUT BY HONEYCOMBING OR BUGHOLES. THE PANELS THAT GAIN ACCEPTANCE THROUGH THIS PROCESS WILL SET THE STANDARD FOR EVALUATING THE REMAINING WORK'S TECHNICAL AND AESTHETIC QUALITY. THE CONTRACTOR IS REQUIRED TO RETAIN THE APPROVED SAMPLE PANELS ON-SITE AS A REFERENCE UNTIL REACHING A SIGNIFICANT STAGE OF COMPLETION. THE CONTRACTOR MUST SUBMIT FOR APPROVAL PRIOR TO UTILIZING ANY VARIATIONS IN MATERIALS OR TECHNIQUES FROM THE ACCEPTED SAMPLE PANELS.
4. SAFEGUARD FORM LINERS AGAINST EXPOSURE TO OIL, DIRT, AND UV RADIATION.
5. HANDLE RIGID FORM LINER PANELS WITH CAUTION WHEN TEMPERATURES DROP BELOW 25°F.
6. FOR FORM LINERS INTENDED FOR MULTIPLE USES, ENSURE EACH LINER IS CLEANED BEFORE EVERY USE. REPLACE ANY LINERS THAT ARE DAMAGED, AS CONTINUING TO USE OR ATTEMPTING REPAIRS ON SUCH LINERS COULD NEGATIVELY IMPACT THE CONCRETE'S FINAL APPEARANCE.
7. APPLY A RELEASE AGENT COMPATIBLE WITH THE FORM LINER, FOLLOWING THE MANUFACTURER'S RECOMMENDED APPLICATION RATE. WHENEVER POSSIBLE, SCHEDULE THE CONCRETE POUR SHORTLY AFTER APPLYING THE RELEASE AGENT TO MINIMIZE EXPOSURE TO PRECIPITATION, DUST, AND DEBRIS. TAKE PRECAUTIONS TO SHIELD REINFORCING STEEL FROM CONTACT WITH RELEASE AGENTS.
8. SEAL JOINTS OF THE FORM LINER TO PREVENT ANY MORTAR LEAKAGE.
9. PROVIDE STURDY BACKING AT THE BUTT JOINTS OF THE FORM LINER TO PREVENT ANY BENDING OR DEFLECTION.
10. CONSTRUCT THE FORM LINER AND ASSOCIATED COMPONENTS ACCORDING TO THE SIZES, SHAPES, LINES, AND DIMENSIONS INDICATED.
11. INSTALL ADDITIONAL BACKUP STRIPS AS NEEDED TO PREVENT THE LINER FROM DEFLECTING DUE TO THE PRESSURES EXERTED BY THE FORM.
12. THE CONTRACT UNIT PRICE FOR "**ITEM XXXXXX - MECHANICALLY STABILIZE EARTH RETAINING WALL SF**" IS INCLUSIVE OF ALL NECESSARY PRECAST PANELS, ALONG WITH THE CORRESPONDING FORM LINERS AND CONSIDERATIONS FOR AESTHETIC APPEARANCE, AS DEPICTED IN THE PLANS.

**ARCHITECTURAL COLUMN CONSTRUCTION NOTES:**

1. CORTEN STEEL PANELS TO BE LASER CUT LEAVING LEAF SILHOUETTE DESIGN AS VOID SPACE.
2. STEEL PANELS TO HAVE 2" X1" WEATHERED STEEL TUBING AROUND THE BORDER TO ACT AS A FRAME.
3. 1/4" INTERIOR PANEL THICKNESS.
4. PANELS POSITIONED AT 45 DEGREES TO MAXIMIZE VIEW POINT FROM TRAFFIC-WAYS.
5. CAST IN PLACE CONCRETE COLUMN TO HAVE A LIMESTONE BLOCK VENEER. A SAMPLE OF THE BLOCK IN EACH DIMENSION IS TO BE PROVIDED FOR APPROVAL.
6. WALL CAP TO BE CUSTOM PRECAST CONCRETE WITH DRAINAGE TO STEEL RUSTICATION STRIP. SUBMIT SAMPLE SHOWING COLOR AND FINISH FOR APPROVAL.
7. CONCRETE COLUMN AND FOOTING TO BE REINFORCED WITH REBAR. SEE STRUCTURAL NOTES.
8. RUSTICATION STRIP TO BE ATTACHED TO STRUCTURAL COLUMN. SEE STRUCTURAL DETAILS FOR ATTACHMENT METHOD.

**COLUMN VENEER**

BERKSHIRE FULL BED VENEER ASHLAR PATTERN WITH 3-HEIGHT STANDARD.

COLOR: GRAY  
 GRADE: STANDARD  
 FINISH: SPLIT FACE

AS PROVIDED BY:

**BASIS OF DESIGN:**

INDIANA LIMESTONE COMPANY  
 120 W 7TH ST SUITE 210, BLOOMINGTON, IN 47404  
 PHONE: (800) 457-4026 (812) 275 3341 FAX: (812) 287-7522  
 WWW.INDIANALIMESTONECOMPANY.COM

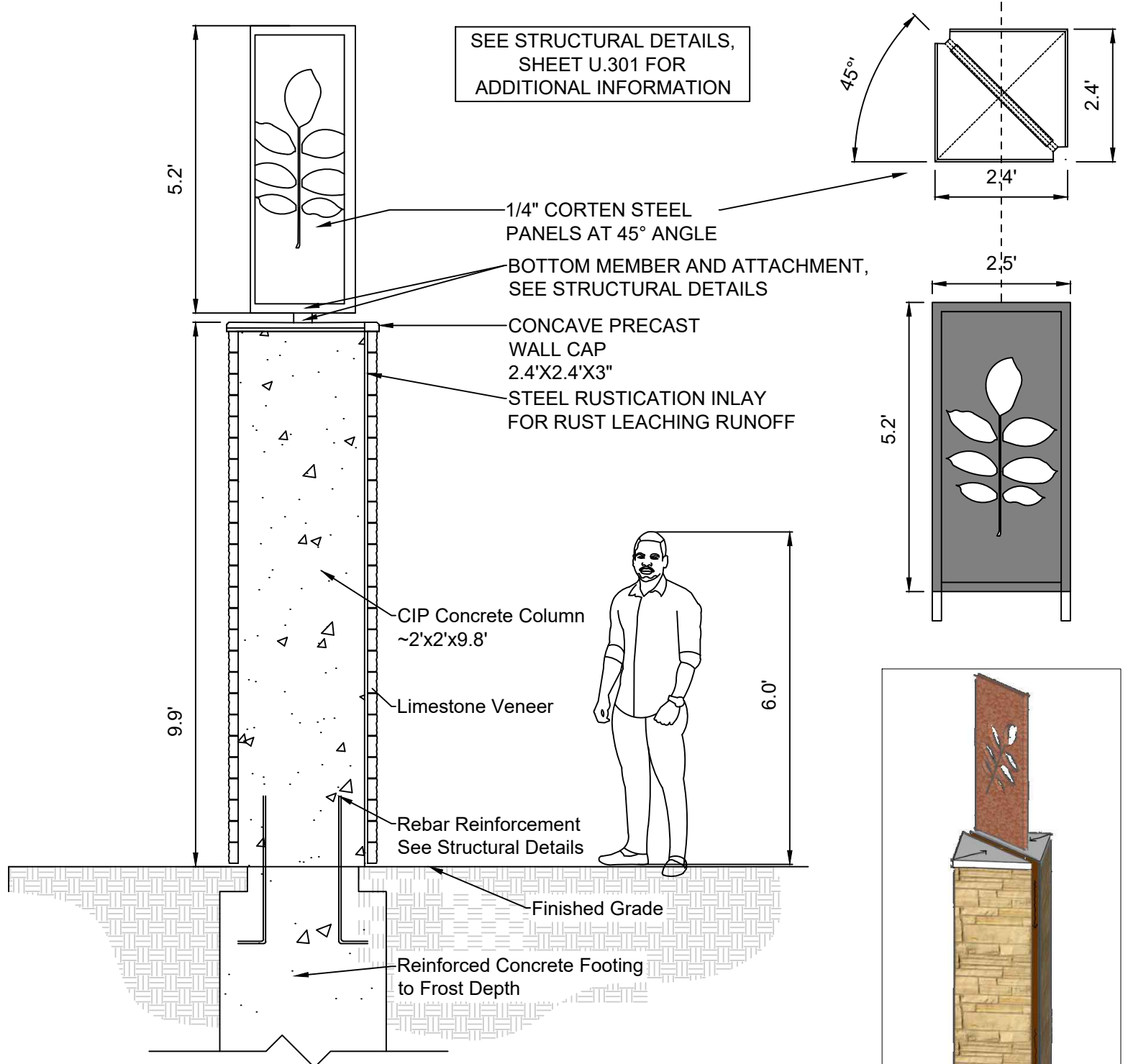
IOWA STONE SUPPLY  
 1885 SE DESTINATION DR GRIMES, IA 50111  
 PHONE: (515) 276-6655  
 EMAIL: KJOHNSON@IOWASTONESUPPLY.COM  
 WWW.IOWASTONESUPPLY.COM

STONE CONCEPTS  
 10956 FOREST CHAPEL RD ANAMOSA, IA 52205  
 PHONE: (319) 462-3669 FAX: (319) 462-6004  
 EMAIL: ABODDICKER@STONECONCEPTS.COM  
 WWW.STONECONCEPTS.COM

OR EQUAL.

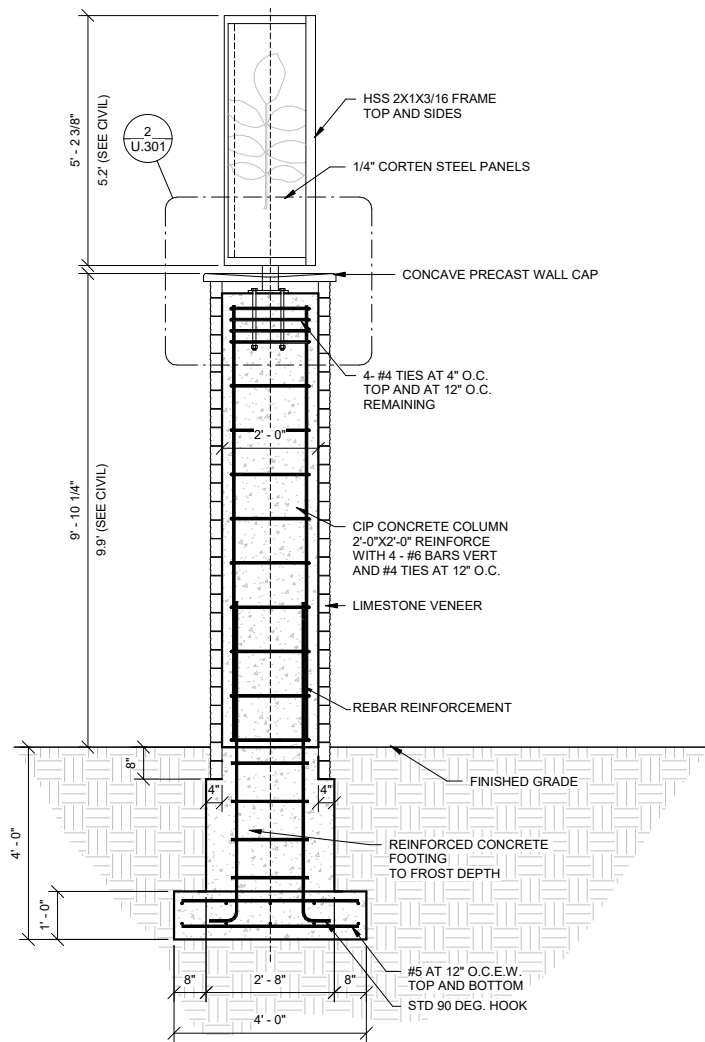
**NOTE:**

1. INSTALL IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS, SPECIFICATIONS, AND REQUIREMENTS.
2. LIMESTONE TO BE SOURCED AND PROVIDED FROM A SINGLE QUARRY AND SHALL FOLLOW ILIA GUIDELINES.

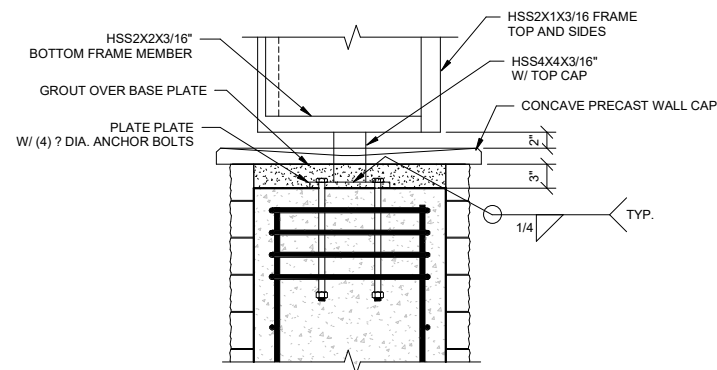


**1 ARCHITECTURAL COLUMNS**  
 U.300 NO SCALE

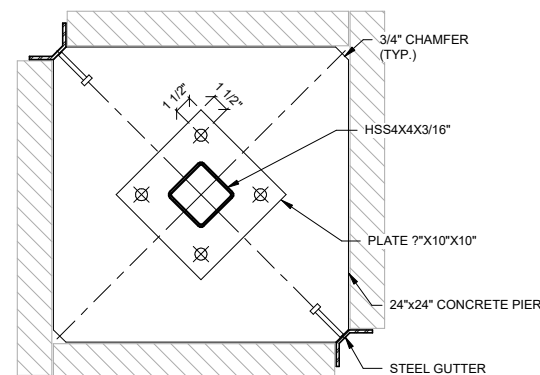
V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-ARCH-DETLB.dwg NICK HUSS, ARCHITECTURAL DETAILS - TALL COLUMNS, 2023/08/22, 4:45 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



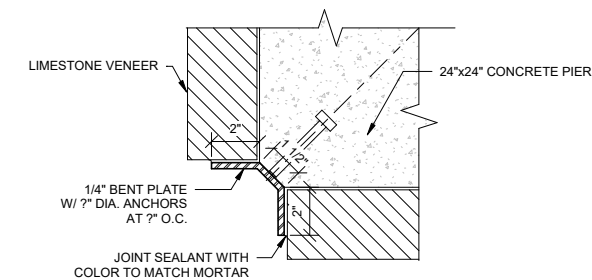
**1 SECTION OF TALL ARTWORK COLUMN**  
 1/2" = 1'-0"



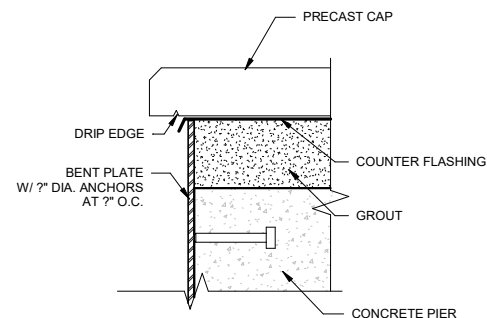
**2 DETAIL**  
 1" = 1'-0"



**3 BASE PLATE DETAIL**  
 1 1/2" = 1'-0"



**4 CORNER GUTTER DETAIL**  
 3" = 1'-0"



**5 CORNER GUTTER SECTION**  
 3" = 1'-0"

**SPECIFICATIONS:**  
 DESIGN: AASHTO LRFD 7TH EDITION, SERIES OF 2014.  
 CONSTRUCTION: IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2015, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.  
 WELDING: AASHTO/AWS D1.5 AS SPECIFIED AND MODIFIED BY THE STANDARD SPECIFICATIONS AND CURRENT SUPPLEMENTAL SPECIFICATIONS.

**DESIGN STRESS:**  
 DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AASHTO LRFD 7TH EDITION, SERIES OF 2014 INTERIM.

REINFORCING STEEL IN ACCORDANCE WITH SECTION 5, GRADE 60.

CONCRETE IN ACCORDANCE WITH SECTION 5,  $f_c = 4000$  psi.

STRUCTURAL STEEL IN ACCORDANCE WITH SECTION 6, ASTM A709, GRADE 50W AND GRADE 36.

**SUBSTRUCTURE - CONSTRUCTION**  
 THE MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR SHALL BE 2 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

**WEATHERING STEEL NOTES:**  
 ALL STRUCTURAL STEEL, EXCEPT AS NOTED, SHALL CONFORM TO ASTM A709 GRADE 50W. THE MINIMUM YIELD POINT FOR GRADE 50W STRUCTURAL STEEL IS 50 ksi FOR PLATES 4" AND UNDER IN THICKNESS, AND ALL STRUCTURAL SHAPES. THE GRADE 50W STEEL IS A WEATHERING STEEL AND IS TO REMAIN UNPAINTED, EXCEPT AS NOTED. CVN TESTING IS REQUIRED FOR MAIN BEAMS AND ALL SPLICE PLATES.  
 FLANGE DEFLECTORS ARE TO BE ASTM A709 GRADE 50W OR 36. S3 x 7.5 BEAM ERECTION SEATS ARE TO BE ASTM A709 GRADE 50W OR 36.

ALL STRUCTURAL STEEL PIECES COMPRISING THE ABUTMENT AND PIER BEARINGS SHALL COMPLY WITH THE REQUIREMENTS AS STATED IN THE NOTES IN THIS SECTION.

SHEAR STUDS ARE TO BE OF AN APPROVED TYPE LISTED IN MATERIALS I.M. 453.10, APPENDIX A.

THE PAINTED FINISH ON BEARINGS, FLANGE DEFLECTORS AND WEATHERING STEEL SHALL BE IN ACCORDANCE WITH THE PLAN NOTES AND ARTICLE 2408.02, Q, OF THE STANDARD SPECIFICATIONS. ALL WEATHERING STEEL EMBEDDED INTO AN INTEGRAL ABUTMENT SHALL BE PAINTED AND SEALED BY CAULKING AT THE ABUTMENT CONCRETE AND STEEL INTERFACE.

BOLTS FOR USE WITH WEATHERING STEEL SHALL BE A325 TYPE III WITH A563 GRADE D3 NUTS AND F436 TYPE III WASHERS.

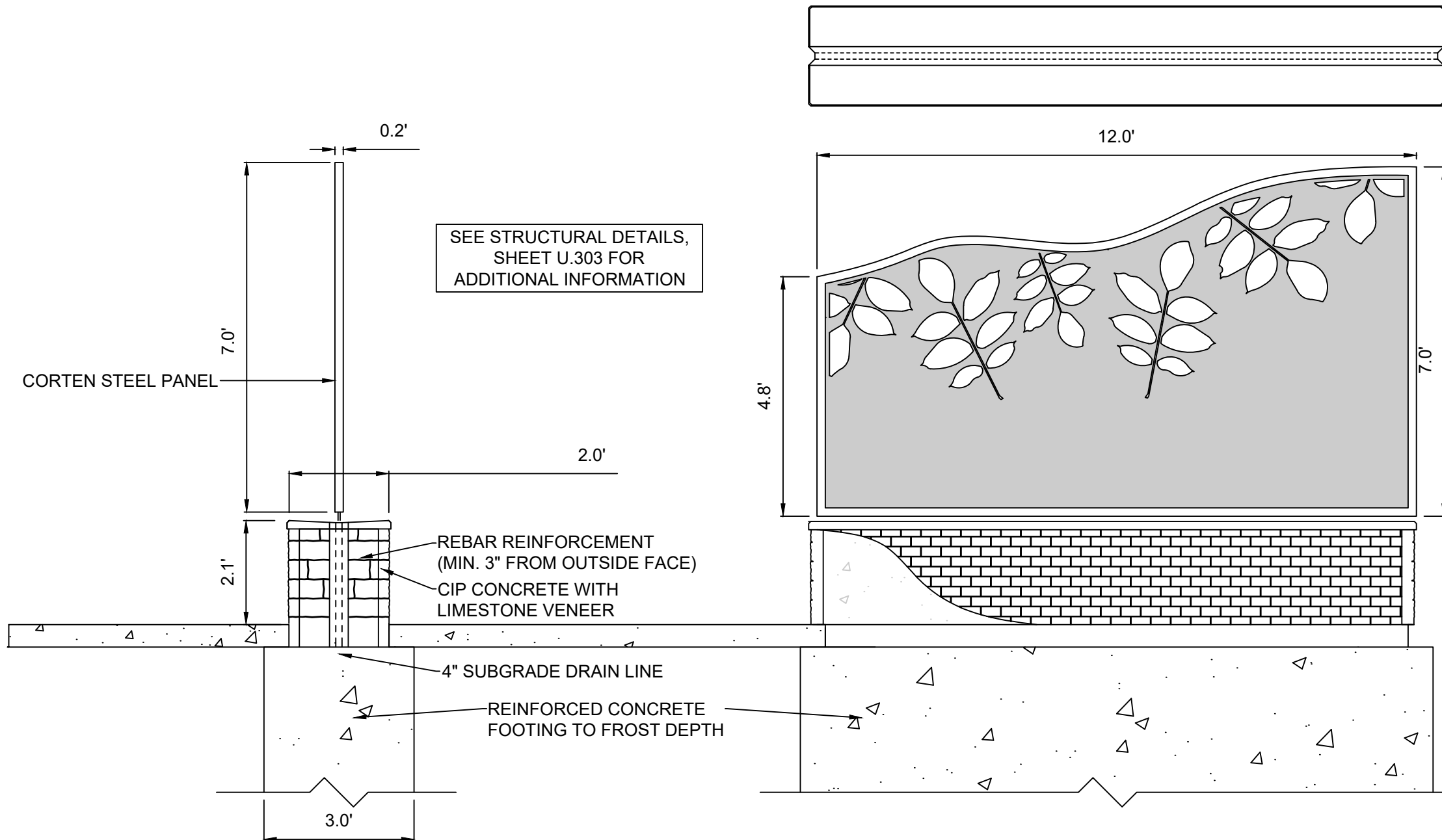
THE STEEL SHALL BE KEPT FREE OF OIL, GREASE, DIRT, CRAYON OR CHALK MARKS, CONCRETE SPATTER AND ANY OTHER FOREIGN MATTER THAT MAY AFFECT THE NATURAL OXIDATION OF THE STEEL. ANY FOREIGN MATTER REMAINING ON THE STEEL AFTER COMPLETION OF BRIDGE CONSTRUCTION SHALL BE REMOVED BY THE BRIDGE CONTRACTOR AS DIRECTED BY THE ENGINEER. THE RESULTANT SURFACE SHALL BE FREE OF ALL VISIBLE RESIDUES. ALL COSTS ASSOCIATED WITH CLEANING STEEL SURFACES SHALL BE BORNE BY THE BRIDGE CONTRACTOR.

SEAL MATERIAL FOR CAULKING SHALL BE NEUTRAL CURE AND NON SAG SILICONE. TWO PRODUCTS MEETING THESE CRITERIA ARE DOW 888, CSL342 JOINT SEALANT AND CRAFTCO ROAD SAVER SILICONE.

FILL THICKNESSES SHOWN ON PLANS ARE BASED ON NOMINAL BEAM DIMENSIONS. THESE THICKNESSES ARE TO BE VERIFIED OR ADJUSTED DURING FABRICATION TO SECURE A CLOSE FIT. EACH FILL PLATE SHALL FIT TO THE NEAREST 1/16" IN THICKNESS AND SINGLE PLATES ARE REQUIRED AT EACH FILL LOCATION.

THE DESIGN DRAWINGS INDICATE AWS PREQUALIFIED WELDED JOINTS, AND UNLESS OTHERWISE NOTED THE DESIGN JOINT DETAILS ARE FOR MANUAL SHIELDED METAL-ARC WELDING. ALTERNATE JOINT DETAILS MAY BE SUBMITTED FOR APPROVAL.

**NOT FOR CONSTRUCTION**



**ARCHITECTURAL COLUMN CONSTRUCTION NOTES:**

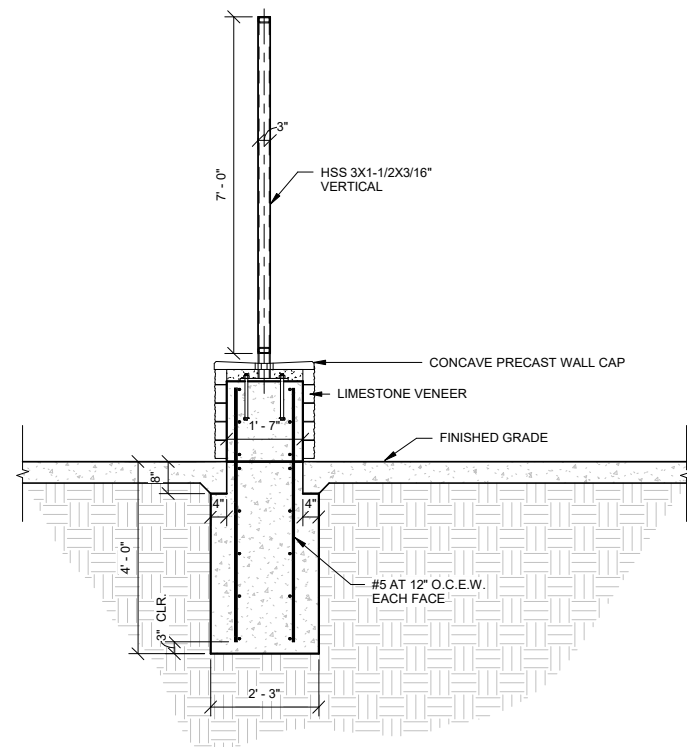
1. CORTEN STEEL PANELS TO BE LASER CUT LEAVING LEAF SILHOUETTE DESIGN AS VOID SPACE.
2. STEEL PANELS TO HAVE 3"x1" INCH WEATHERED STEEL TUBING AROUND THE BORDER TO ACT AS A FRAME.
3. 1/4" INTERIOR PANEL THICKNESS.
4. CAST IN PLACE CONCRETE COLUMN TO HAVE A LIMESTONE BLOCK VENEER. A SAMPLE OF THE BLOCK IN EACH DIMENSION IS TO BE PROVIDED FOR APPROVAL.
5. WALL CAP TO BE CUSTOM PRECAST CONCRETE WITH DRAINAGE TO STEEL RUSTICATION STRIP. SUBMIT SAMPLE SHOWING COLOR AND FINISH FOR APPROVAL.
6. CONCRETE COLUMN AND FOOTING TO BE REINFORCED WITH REBAR. SEE STRUCTURAL NOTES.
7. RUSTICATION STRIP TO BE ATTACHED TO STRUCTURAL COLUMN. SEE STRUCTURAL DETAILS FOR ATTACHMENT METHOD.

1  
U.302

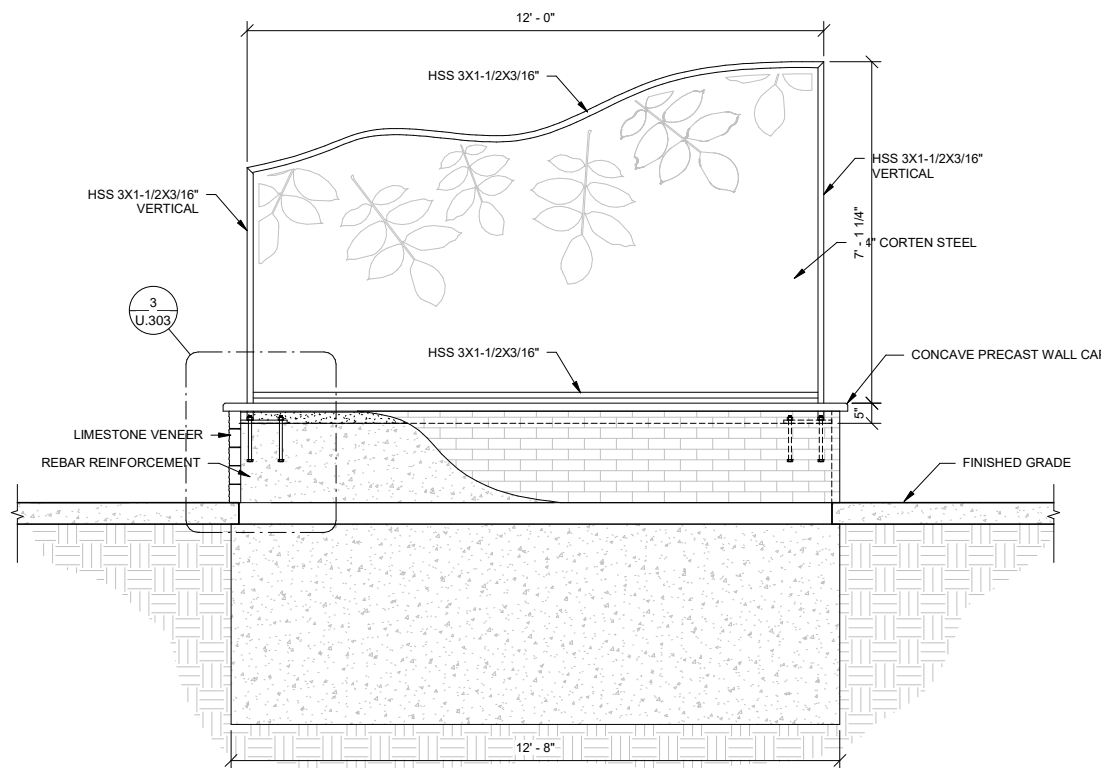
**ARCHITECTURAL MONUMENTS**

NO SCALE

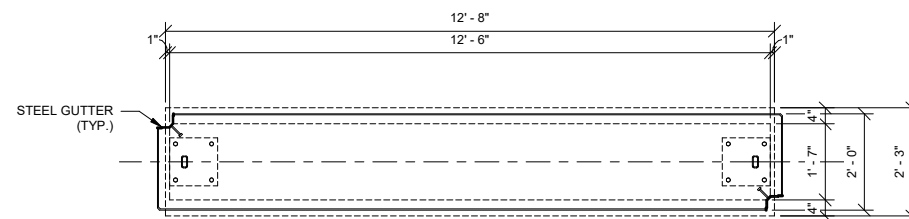




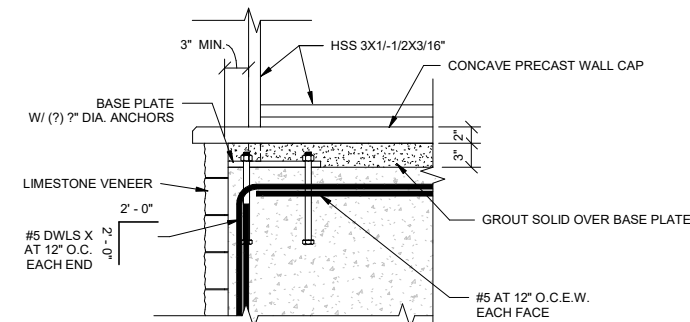
**1 SECTION OF WIDE ARTWORK COLUMNS**  
 1/2" = 1'-0"



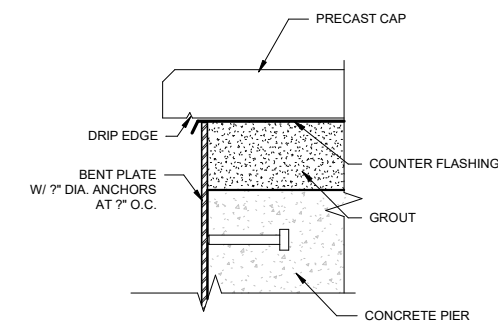
**2 ELEVATION**  
 1/2" = 1'-0"



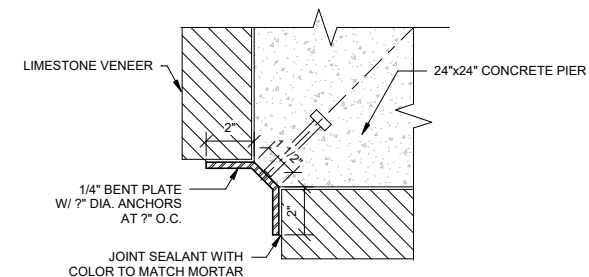
**4 PLAN**  
 1/2" = 1'-0"



**3 DETAIL**  
 1" = 1'-0"



**5 CORNER GUTTER SECTION**  
 3" = 1'-0"



**6 CORNER GUTTER DETAIL**  
 3" = 1'-0"

**NOT FOR CONSTRUCTION**

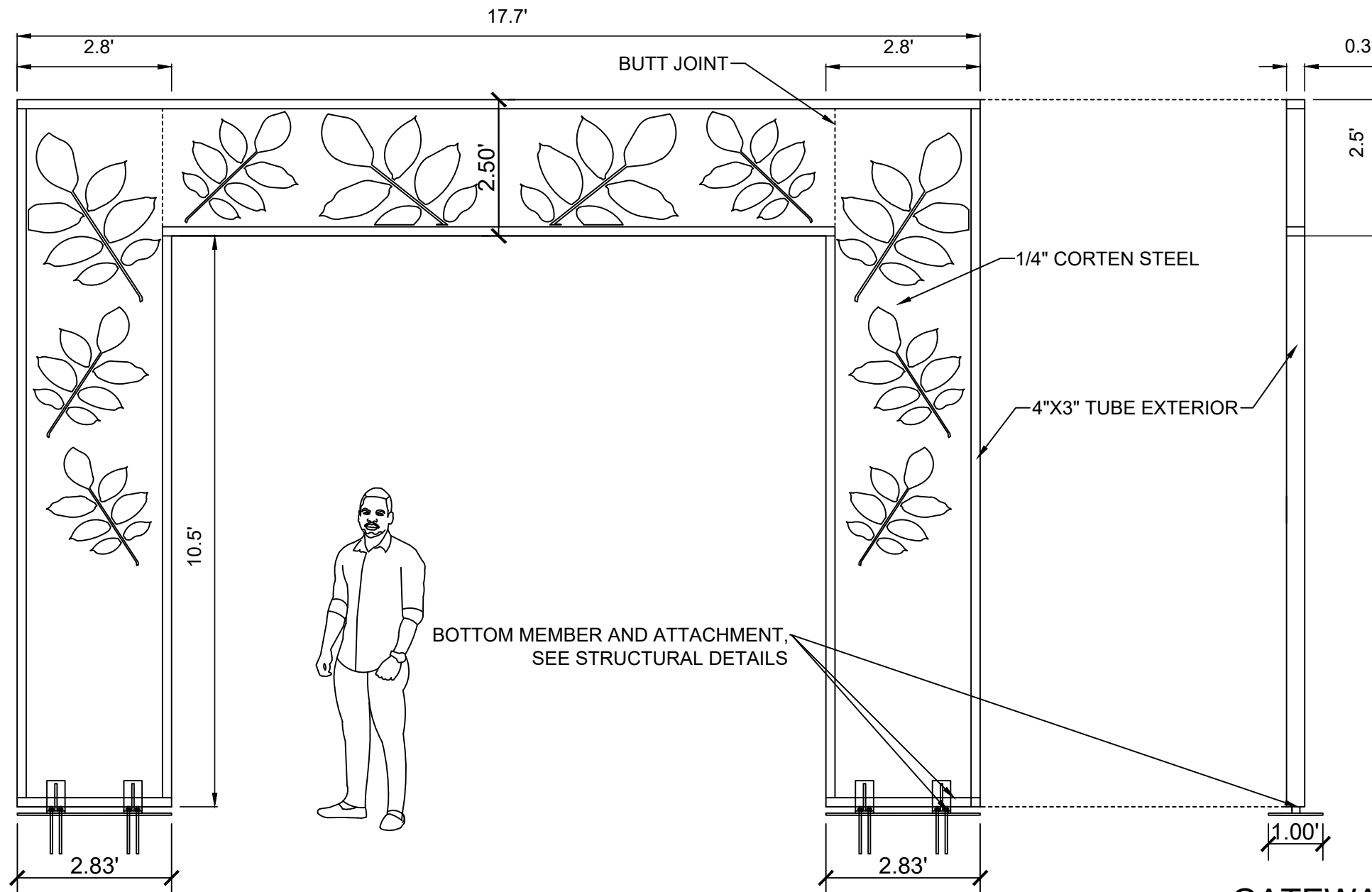
**ARCHITECTURAL GATEWAY CONSTRUCTION NOTES:**

1. CORTEN STEEL PANELS TO BE LASER CUT LEAVING LEAF SILHOUETTE DESIGN AS VOID SPACE.
2. STEEL PANELS TO HAVE 4"X3" INCH WEATHERED STEEL TUBING AROUND THE BORDER TO ACT AS A FRAME.
3. 1/4" INTERIOR PANEL THICKNESS.

ARCHITECTURAL GATEWAY FOOTING  
SEE STRUCTURAL DETAILS



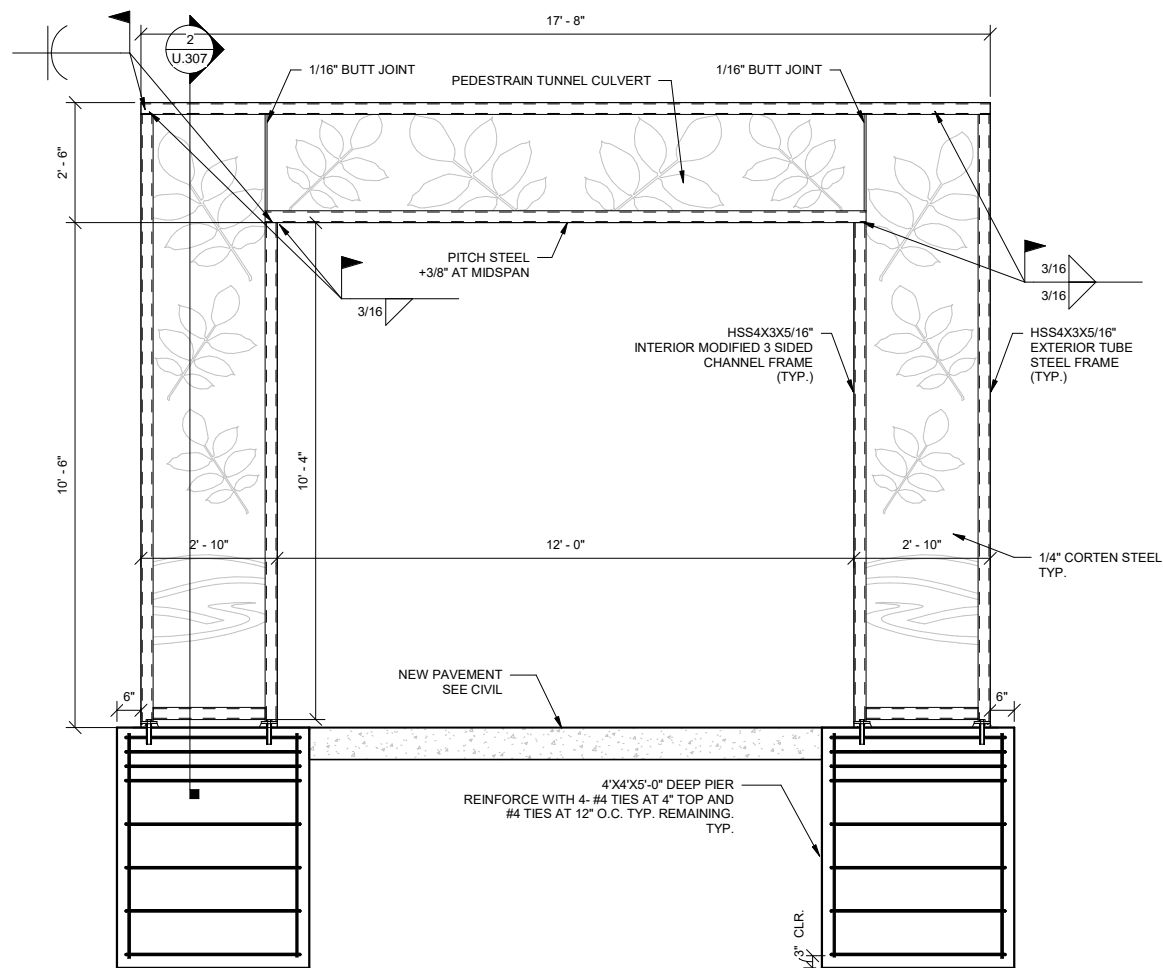
SEE STRUCTURAL DETAILS,  
SHEET U.305 FOR  
ADDITIONAL INFORMATION



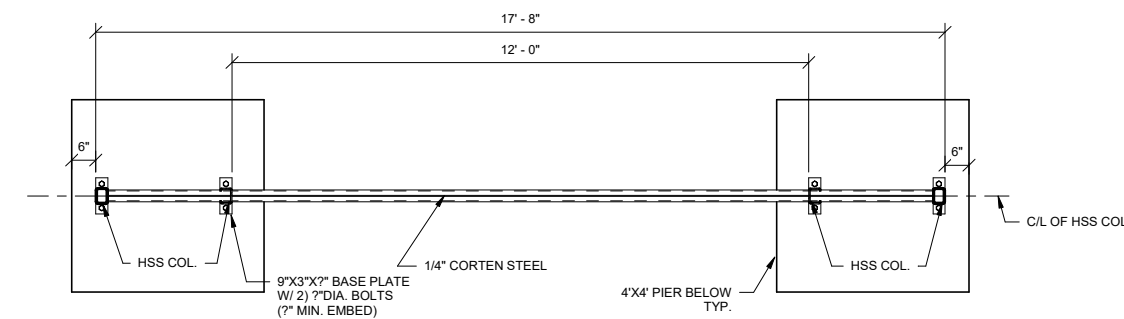
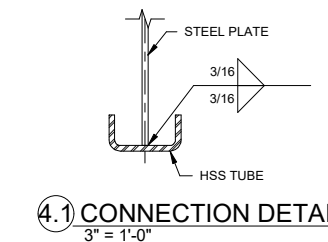
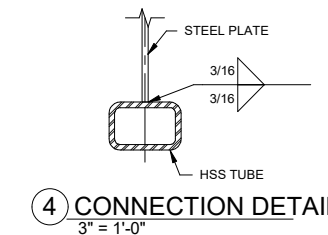
1  
U.304  
**TUNNEL ENTRY GATEWAY FEATURE**  
NO SCALE

2  
U.304  
**GATEWAY FEATURE  
SIDE ELEVATION**  
NO SCALE

V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-ARCH-DETL.DWG NICK HUSS, ARCHITECTURAL DETAILS - TUNNEL ENTRY, 2023/08/22, 4:45 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



**1 BRIDGE ENTRY FEATURE SECTION**  
 1/2" = 1'-0"



**7 TOP VIEW**  
 1/2" = 1'-0"

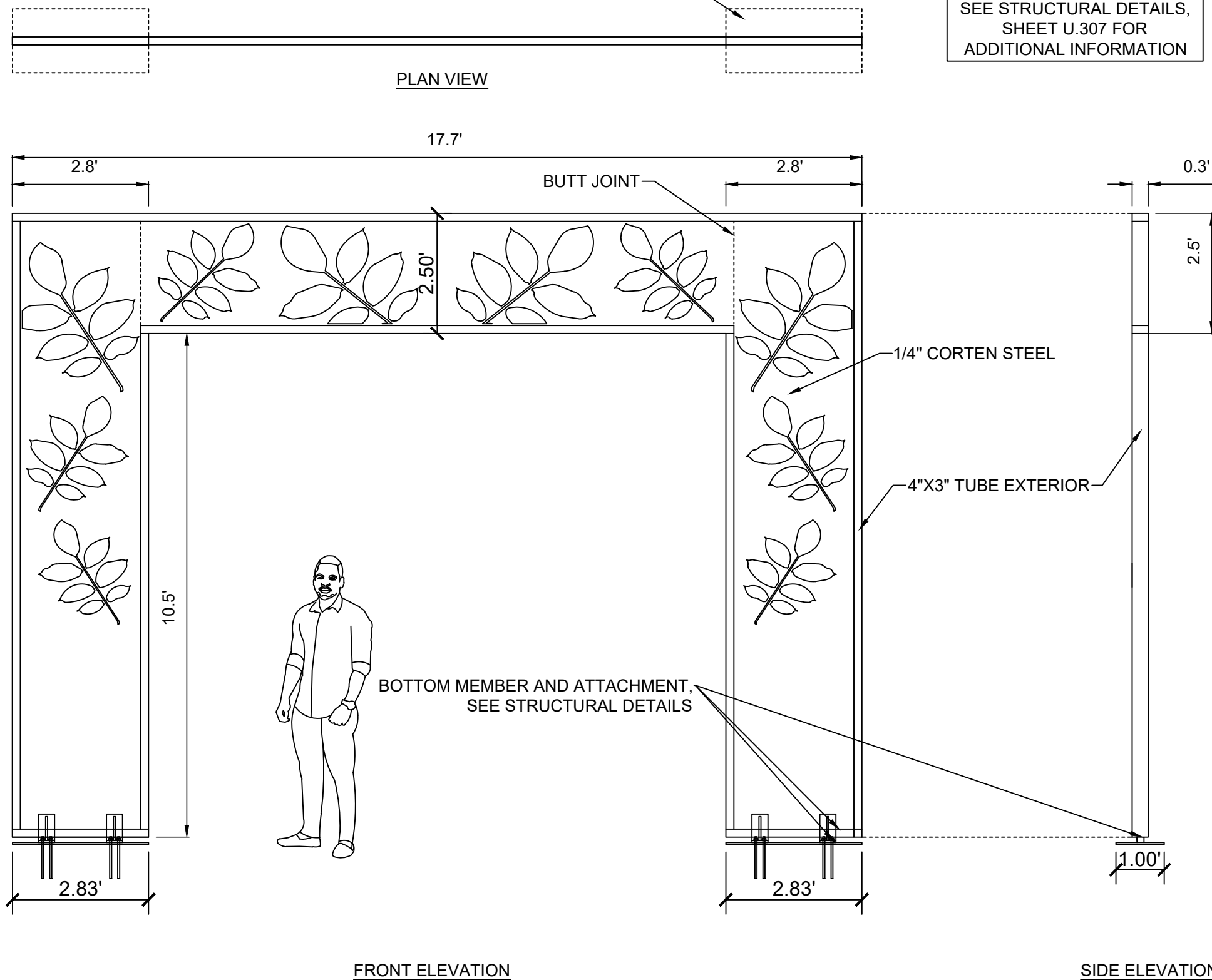
**NOT FOR CONSTRUCTION**

**ARCHITECTURAL GATEWAY CONSTRUCTION NOTES:**

1. CORTEN STEEL PANELS TO BE LASER CUT LEAVING LEAF SILHOUETTE DESIGN AS VOID SPACE.
2. STEEL PANELS TO HAVE 4"X3" INCH WEATHERED STEEL TUBING AROUND THE BORDER TO ACT AS A FRAME.
3. 1/4" INTERIOR PANEL THICKNESS.

ARCHITECTURAL GATEWAY FOOTING  
SEE STRUCTURAL DETAILS

SEE STRUCTURAL DETAILS,  
SHEET U.307 FOR  
ADDITIONAL INFORMATION



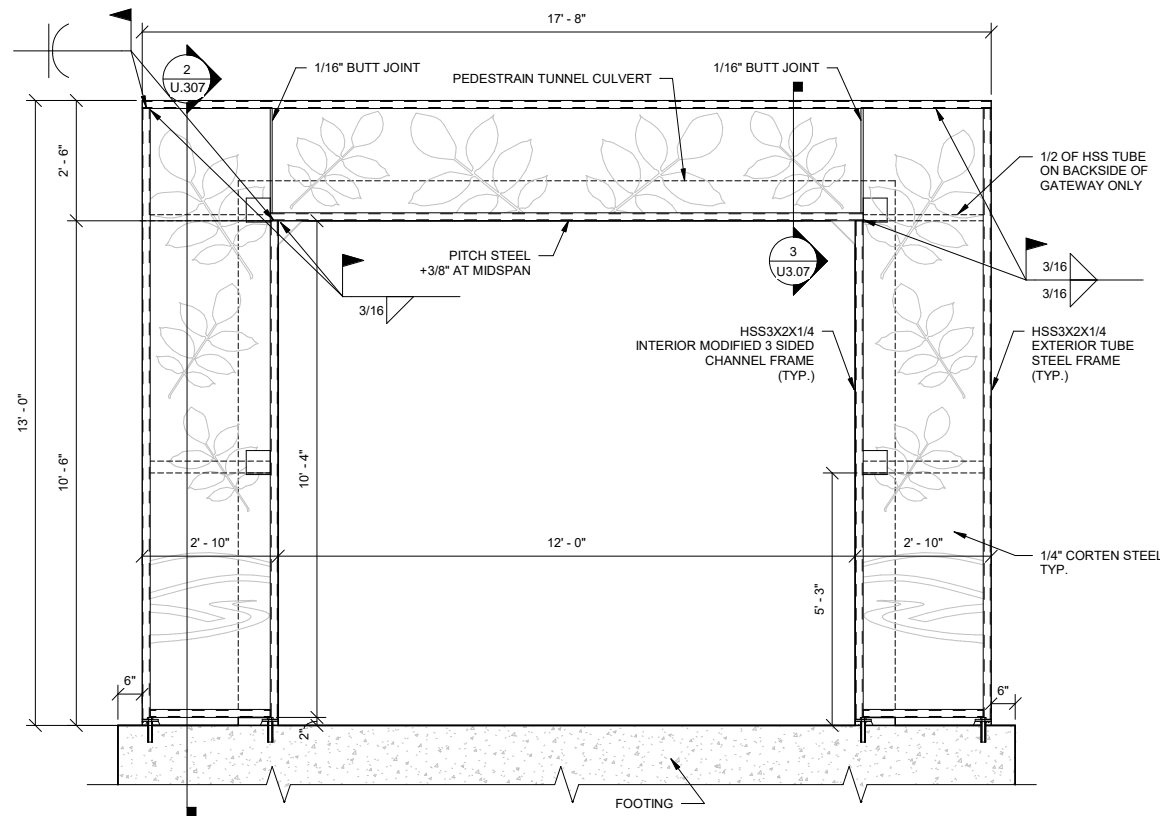
1  
U.306

**BRIDGE ENTRY GATEWAY FEATURE**

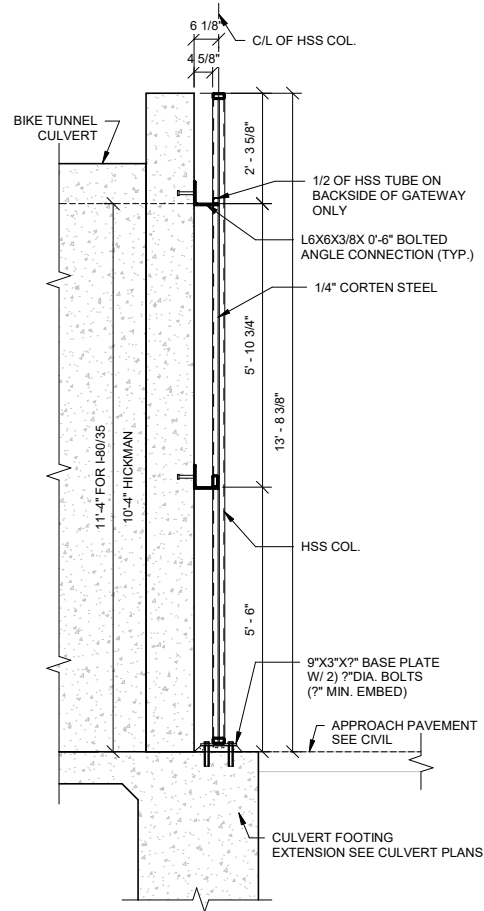
NO SCALE

V:\Projects\20211121.0240.01B\CADD\1210240B\_U-ARCH-DETLs.dwg NICK HUSS, ARCHITECTURAL DETAILS - BRIDGE ENTRY, 2023/08/22, 4:45 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

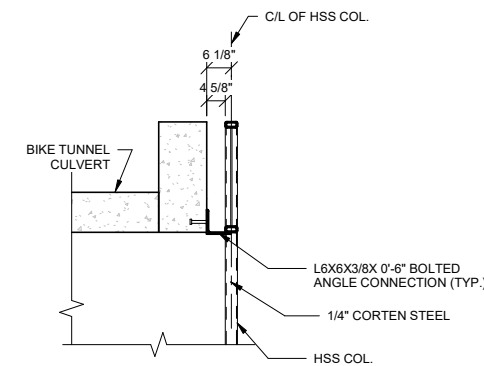




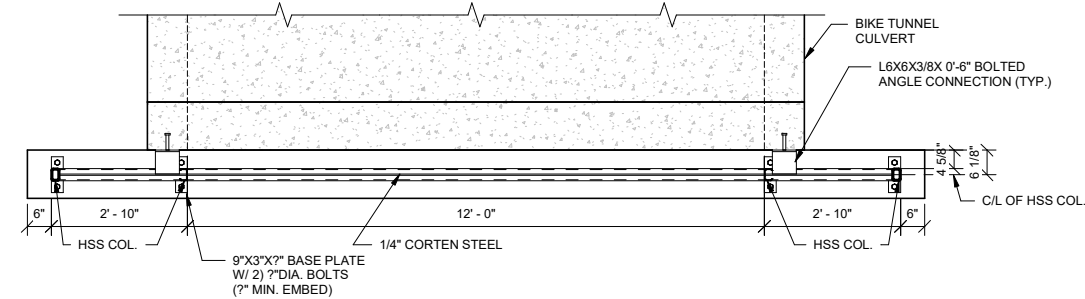
**1 TUNNEL ENTRY FEATURE**  
 1/2" = 1'-0"



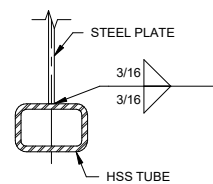
**2 SIDE SECTION**  
 1/2" = 1'-0"



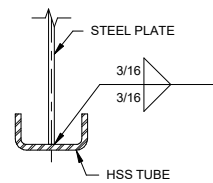
**3 SECTION**  
 1/2" = 1'-0"



**4 TOP VIEW**  
 1/2" = 1'-0"

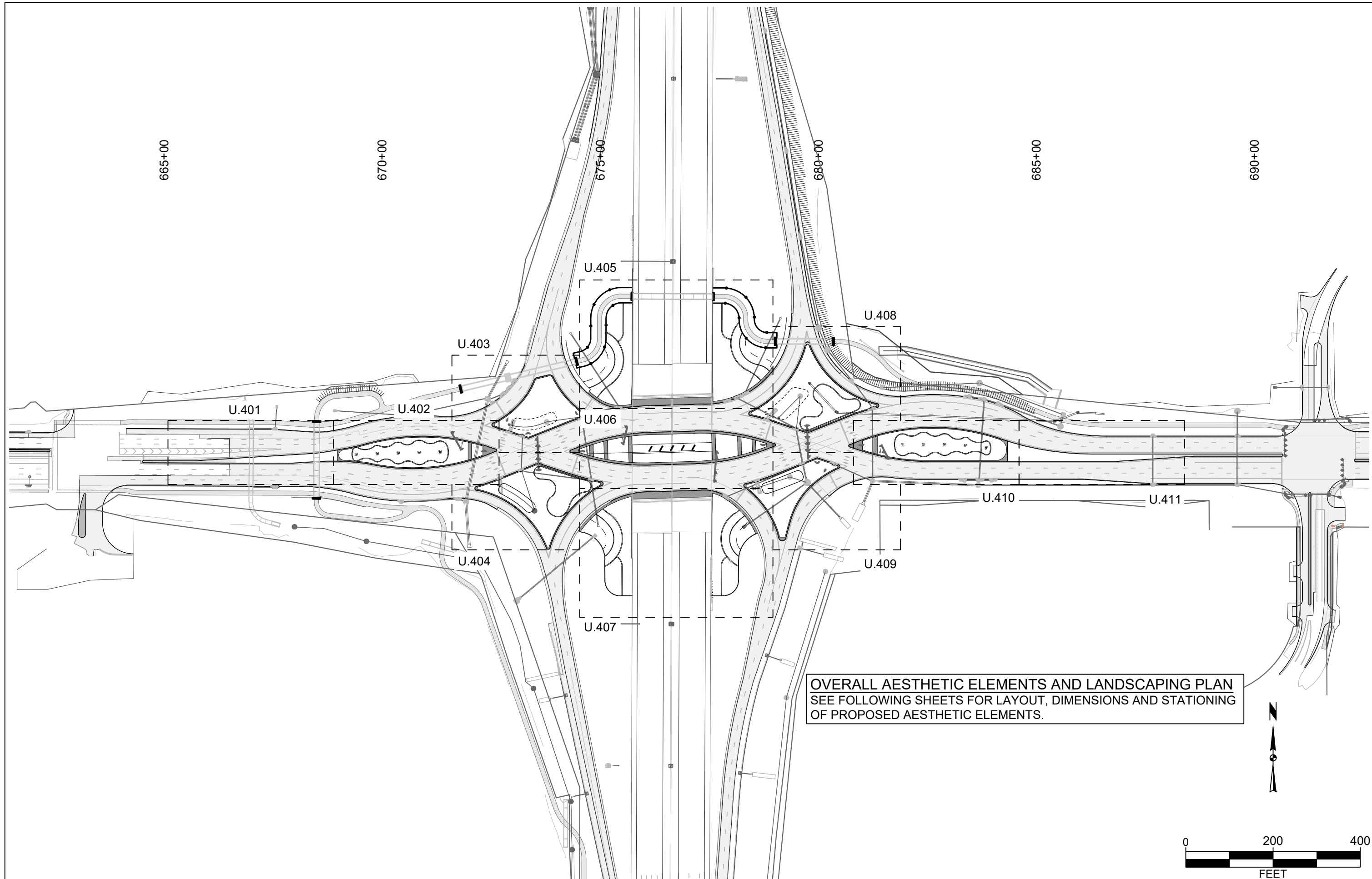


**5 CONNECTION DETAIL**  
 3" = 1'-0"

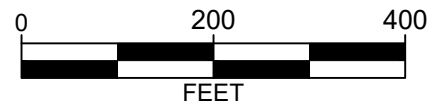


**6 CONNECTION DETAIL**  
 3" = 1'-0"

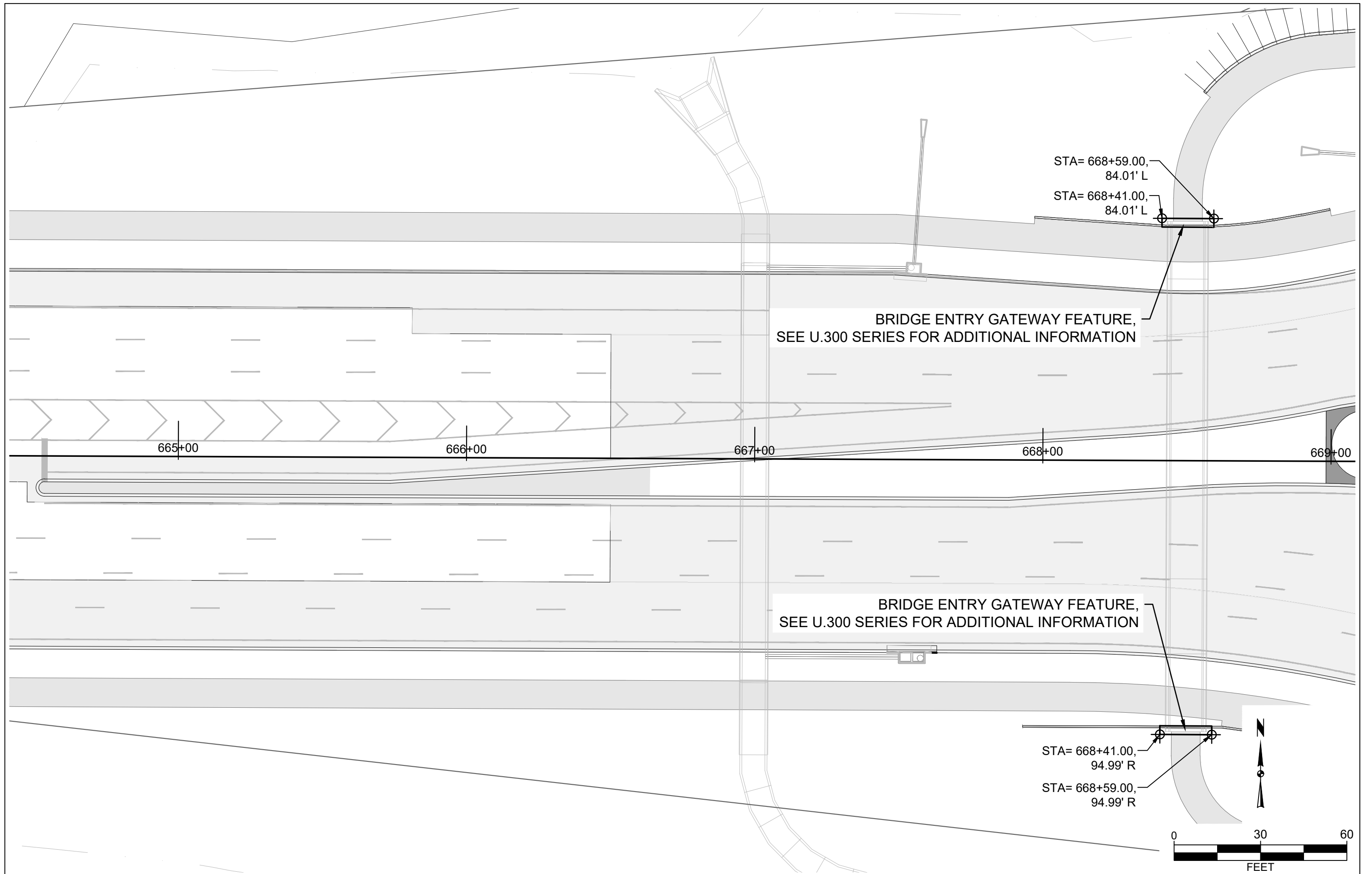
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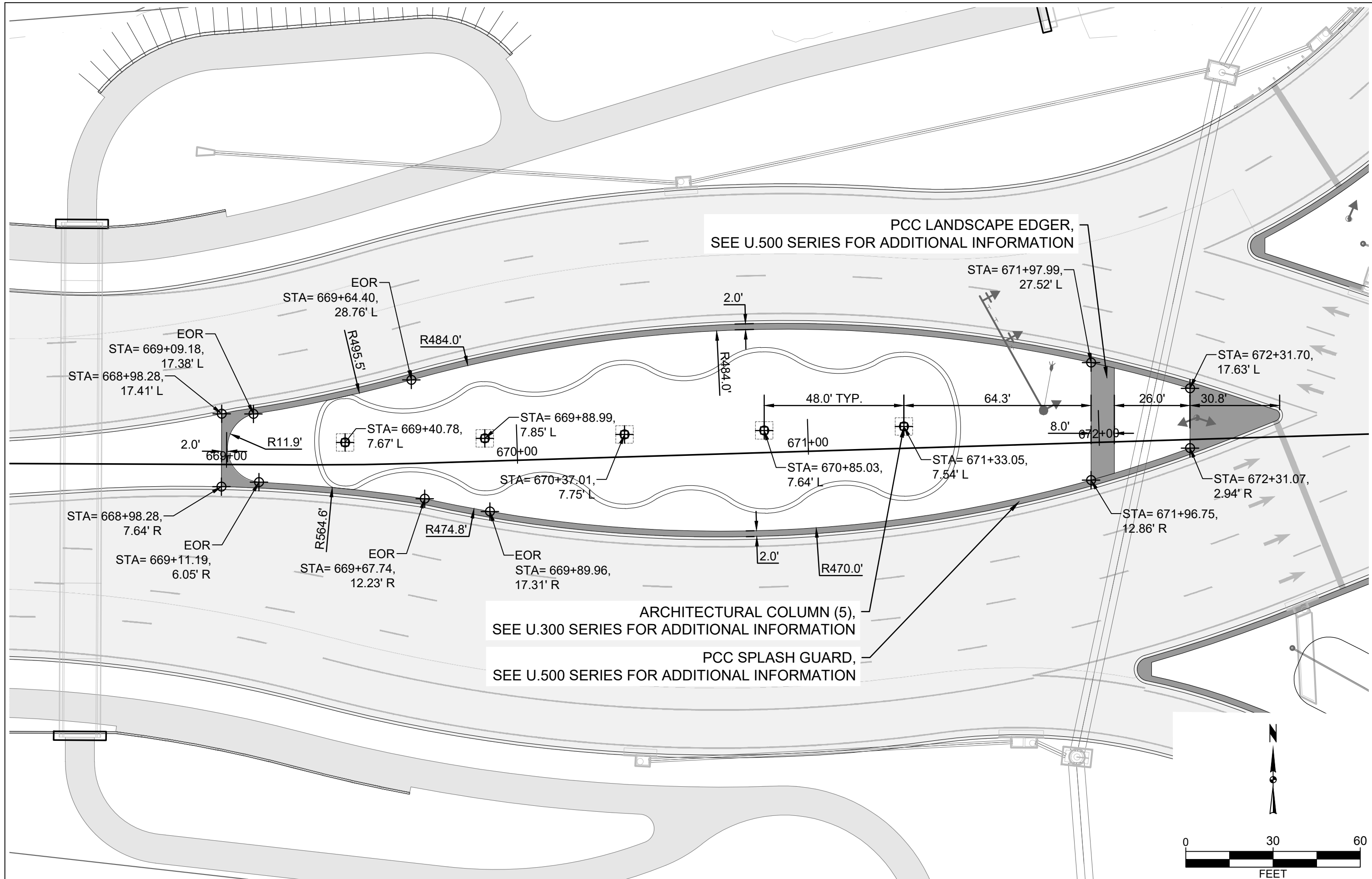


OVERALL AESTHETIC ELEMENTS AND LANDSCAPING PLAN  
 SEE FOLLOWING SHEETS FOR LAYOUT, DIMENSIONS AND STATIONING  
 OF PROPOSED AESTHETIC ELEMENTS.



V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-LAYT.dwg NICK HUSS, OVERALL LAYOUT PLAN, 2023/08/22, 4:46 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)





V:\Projects\2021121.0240.01B\CADD\1210240B\_U-LAYT.dwg NICK HUSS, WEST MEDIAN 2 LAYOUT PLAN, 2023/08/22, 4:46 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

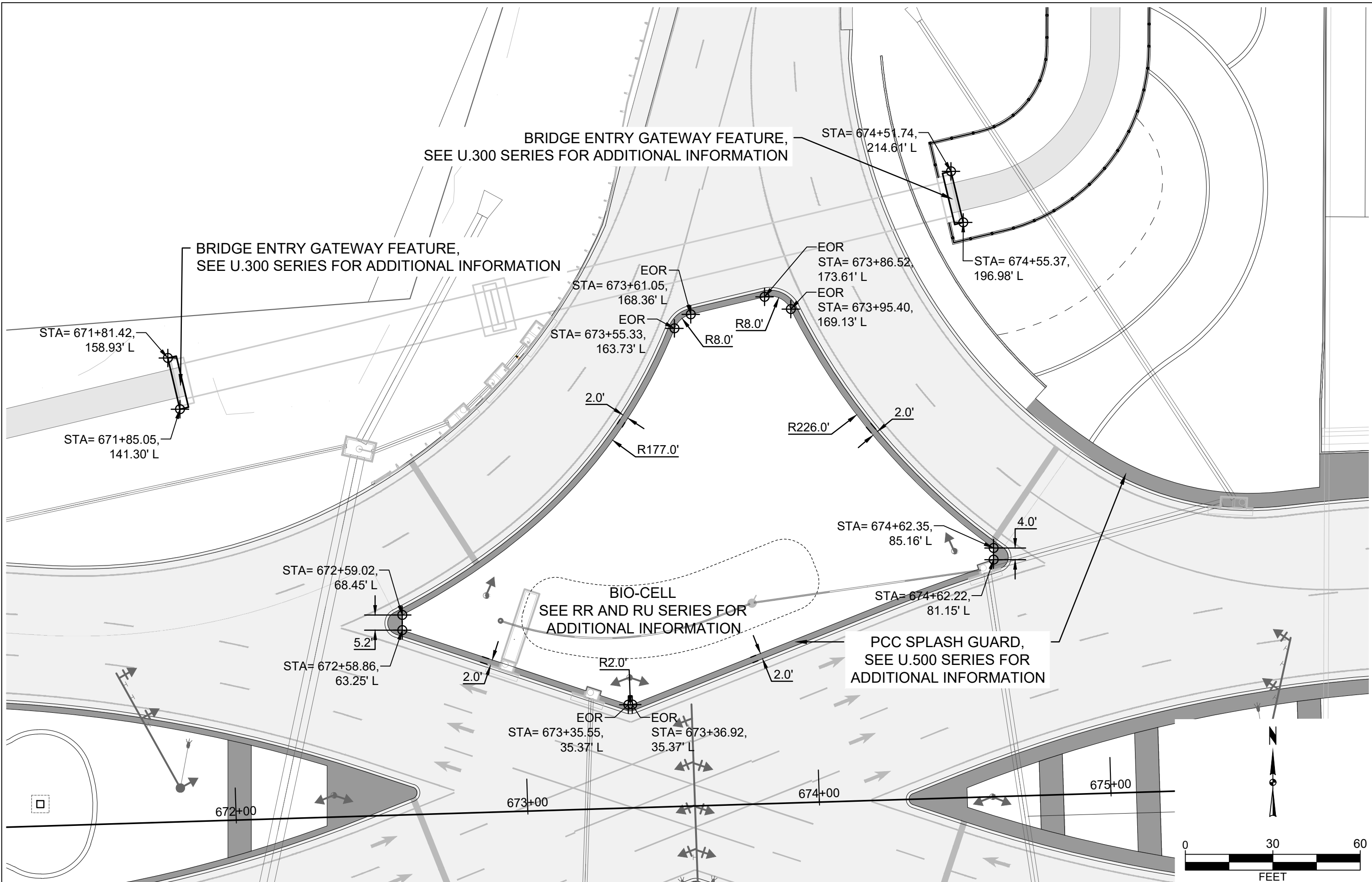


BRIDGE ENTRY GATEWAY FEATURE,  
SEE U.300 SERIES FOR ADDITIONAL INFORMATION

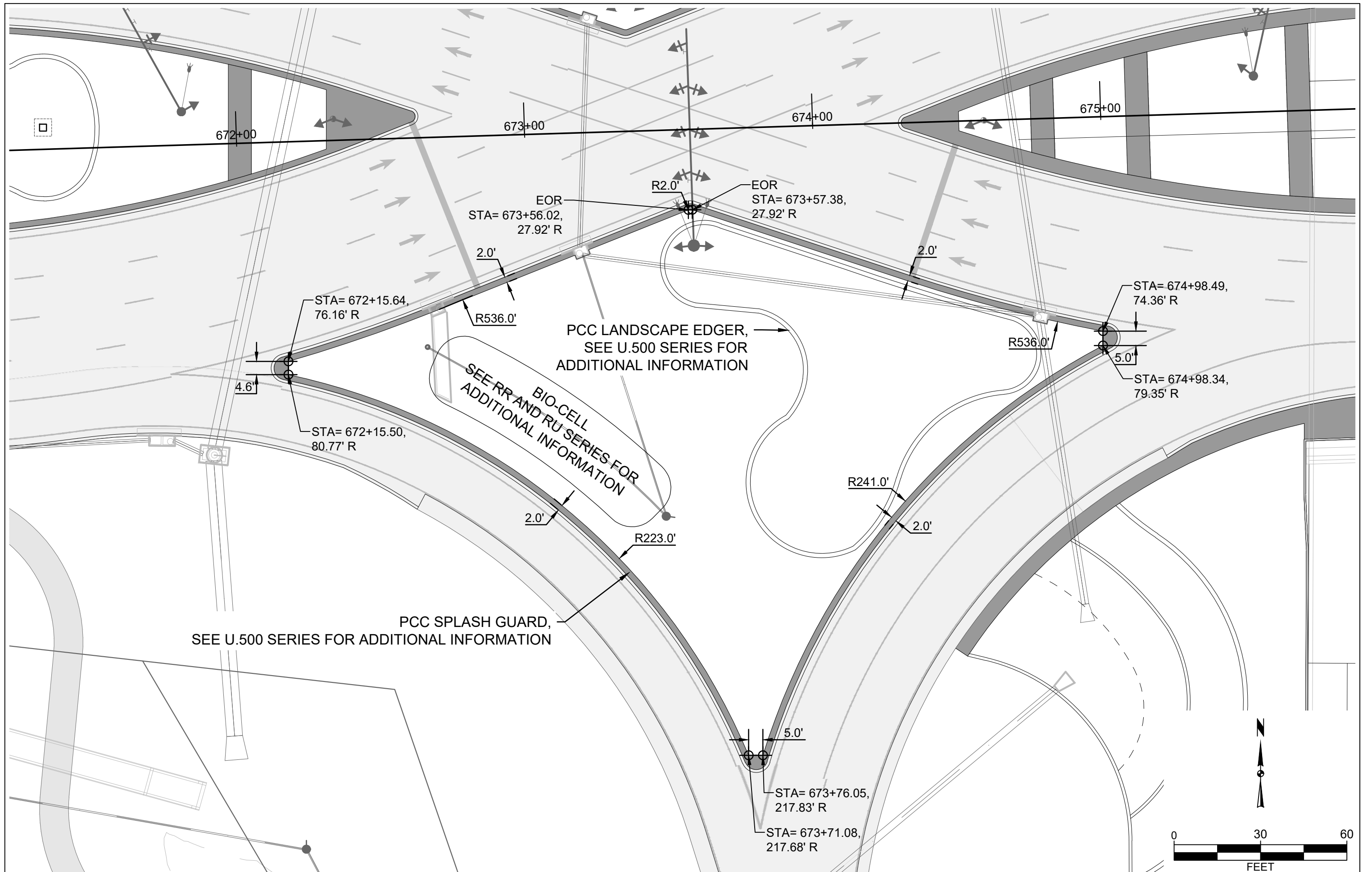
BRIDGE ENTRY GATEWAY FEATURE,  
SEE U.300 SERIES FOR ADDITIONAL INFORMATION

BIO-CELL  
SEE RR AND RU SERIES FOR  
ADDITIONAL INFORMATION

PCC SPLASH GUARD,  
SEE U.500 SERIES FOR  
ADDITIONAL INFORMATION



V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-LAYT.dwg NICK HUSS, NW DIAMOND LAYOUT PLAN, 2023/08/22, 4:46 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



STA= 672+15.64,  
76.16' R

4.6'

STA= 672+15.50,  
80.77' R

EOR  
STA= 673+56.02,  
27.92' R

R2.0'

EOR  
STA= 673+57.38,  
27.92' R

R536.0'

STA= 674+98.49,  
74.36' R

5.0'

STA= 674+98.34,  
79.35' R

SEE RR AND RU SERIES FOR  
ADDITIONAL INFORMATION

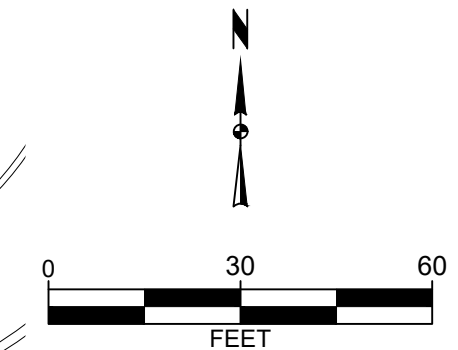
PCC LANDSCAPE EDGER,  
SEE U.500 SERIES FOR  
ADDITIONAL INFORMATION

PCC SPLASH GUARD,  
SEE U.500 SERIES FOR ADDITIONAL INFORMATION

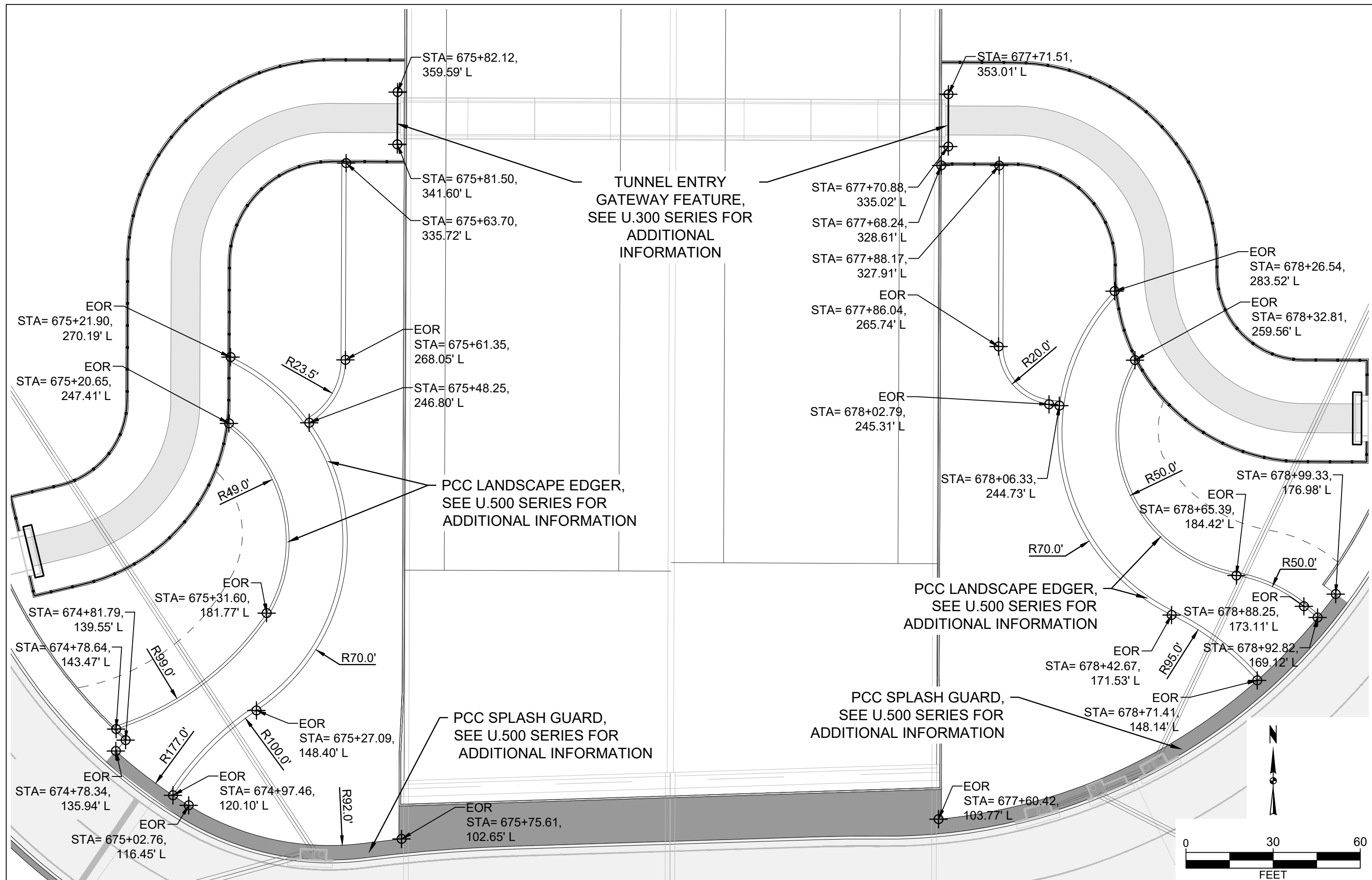
5.0'

STA= 673+76.05,  
217.83' R

STA= 673+71.08,  
217.68' R

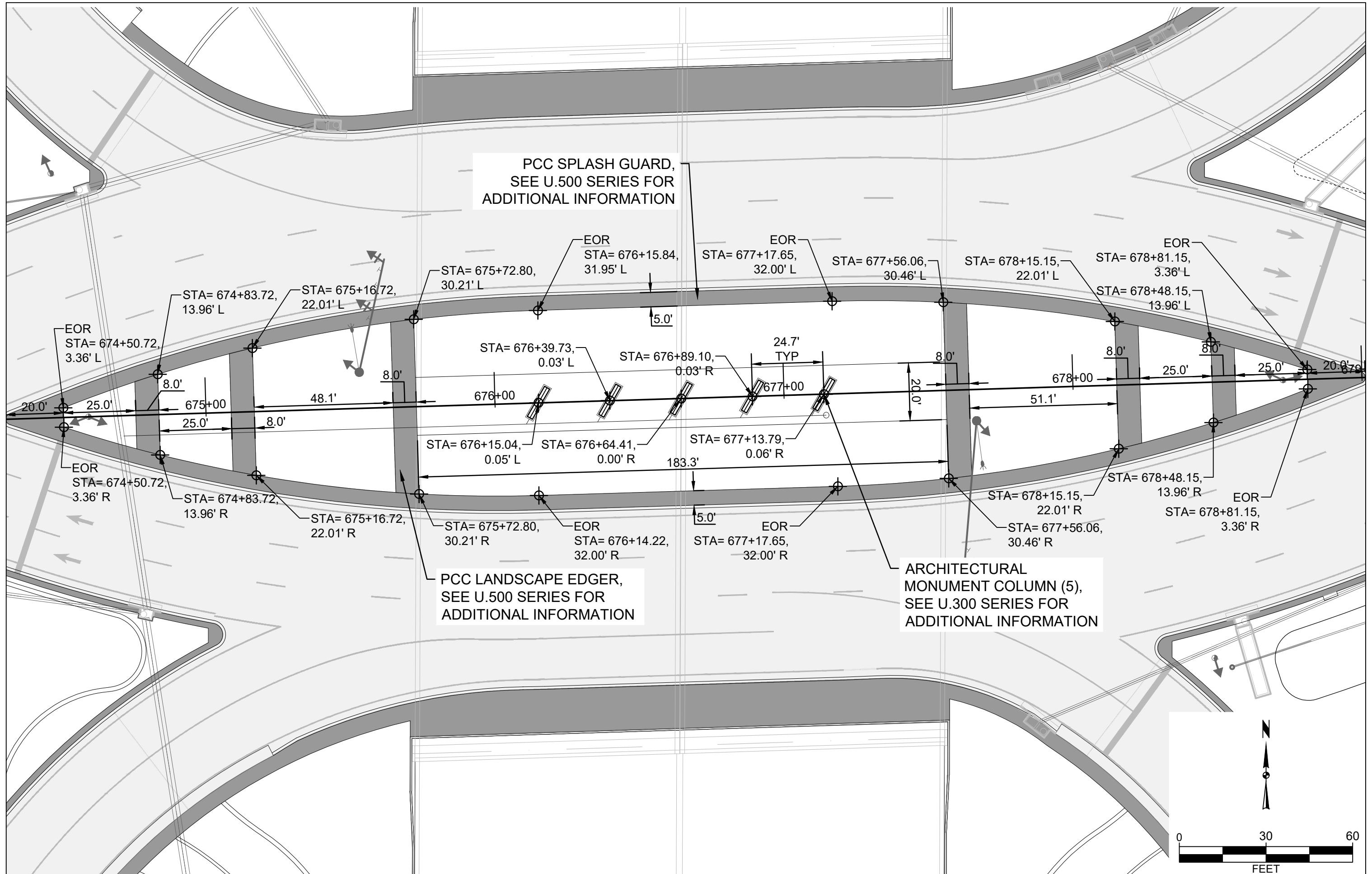


V:\Projects\2021\121.0240.01B\CADD\1210240B\_U.LAYT.dwg NICK HUSS, SW DIAMOND LAYOUT PLAN, 2023/08/22, 4:46 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



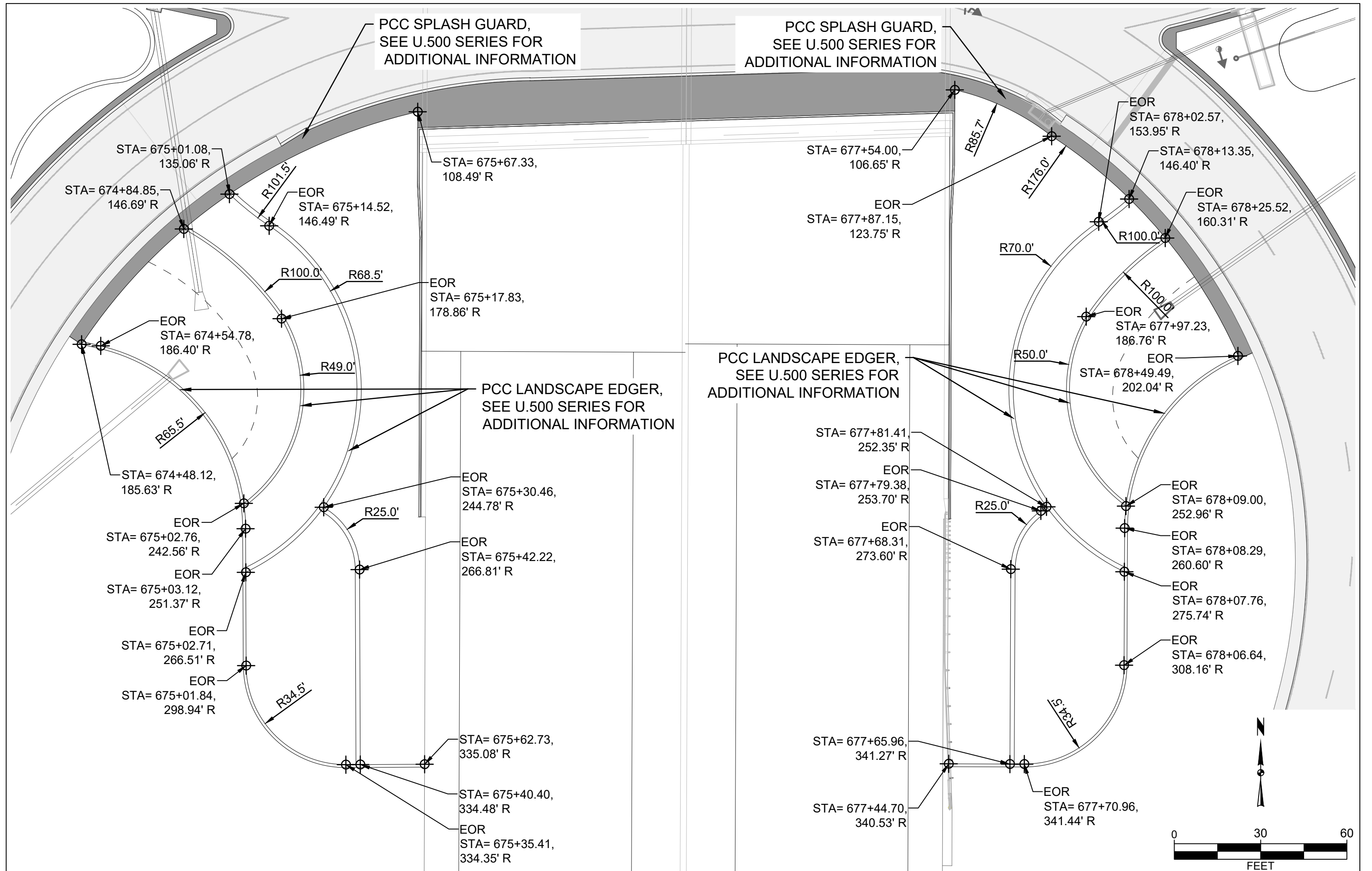
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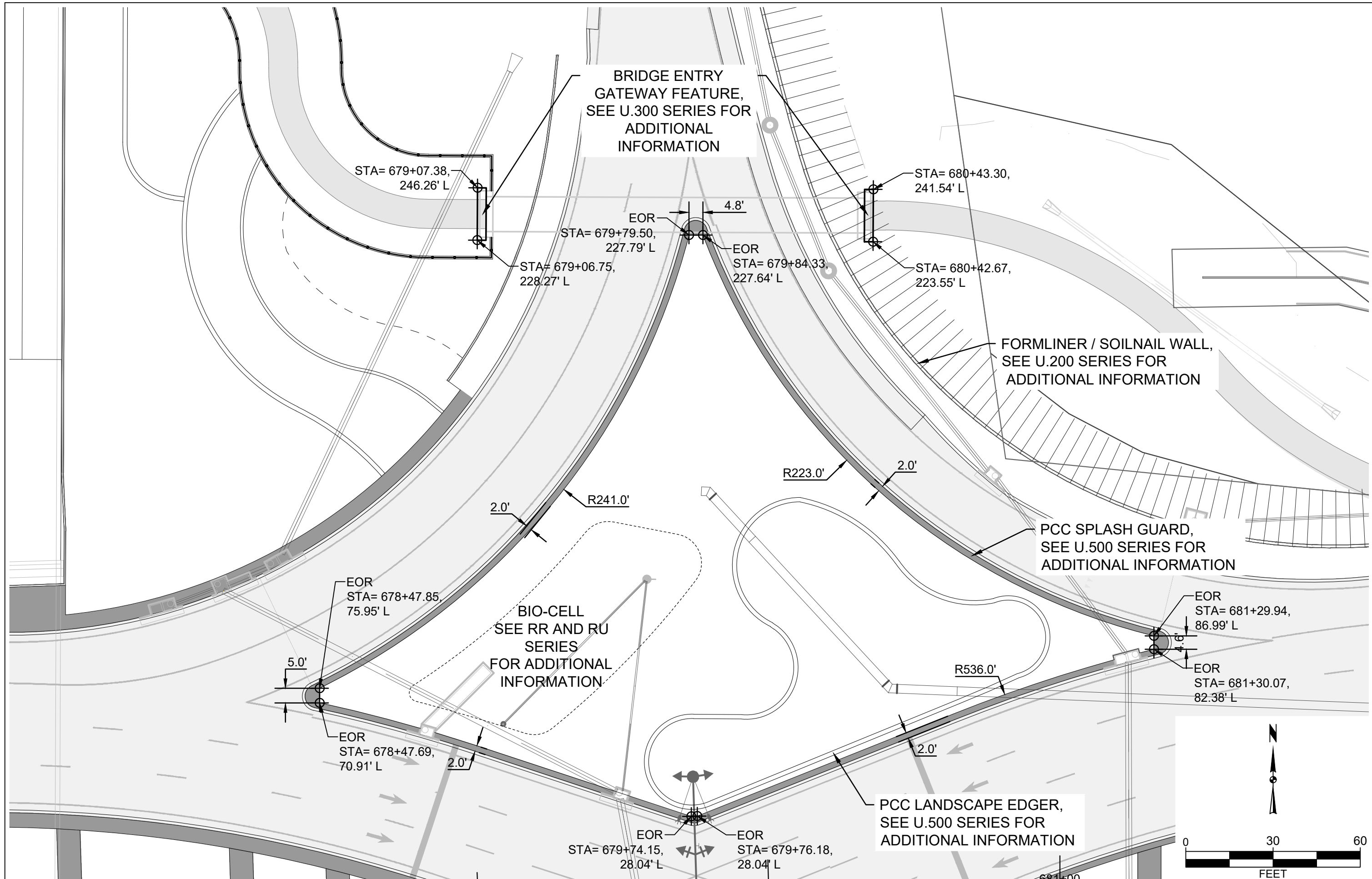


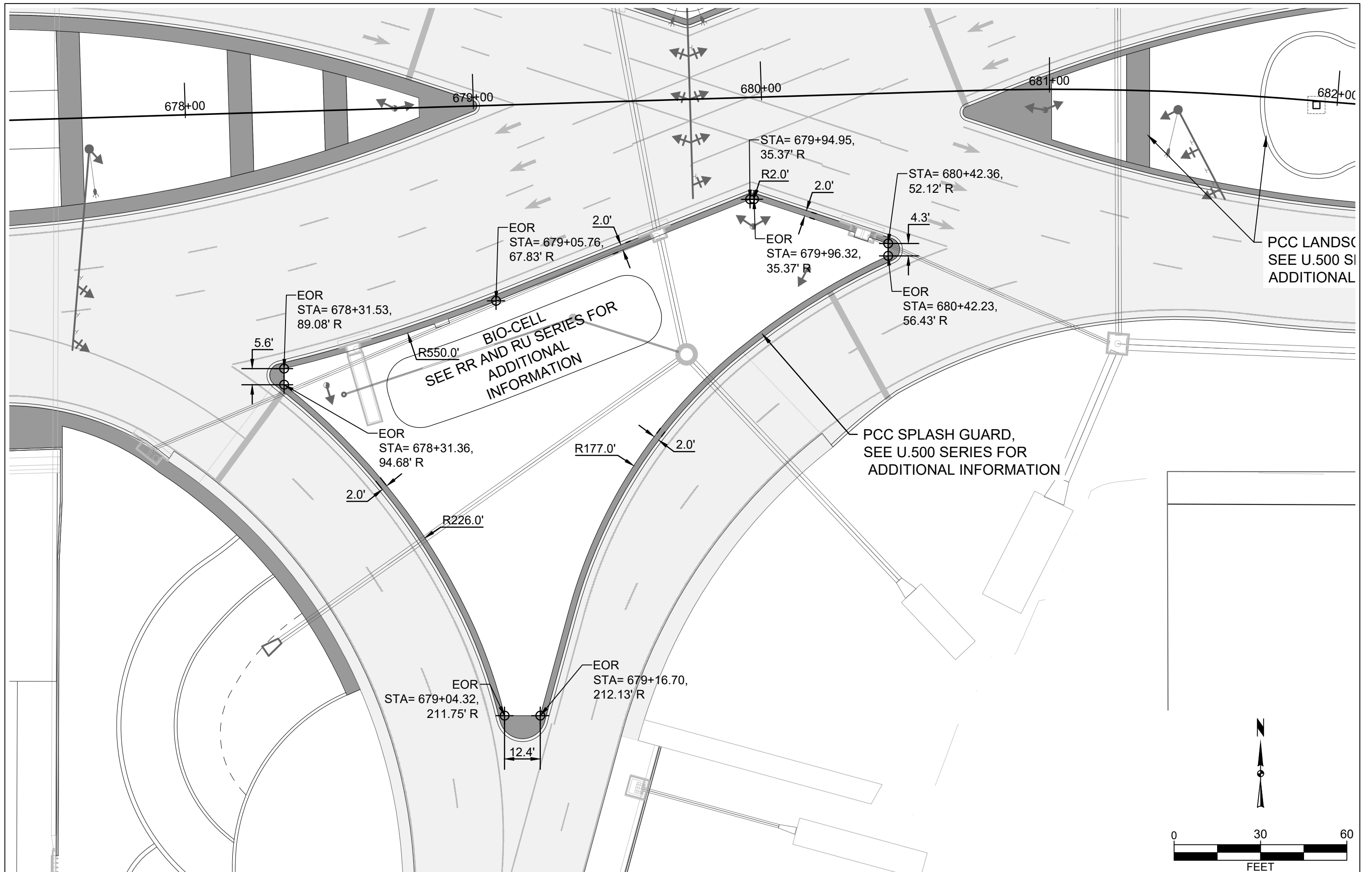
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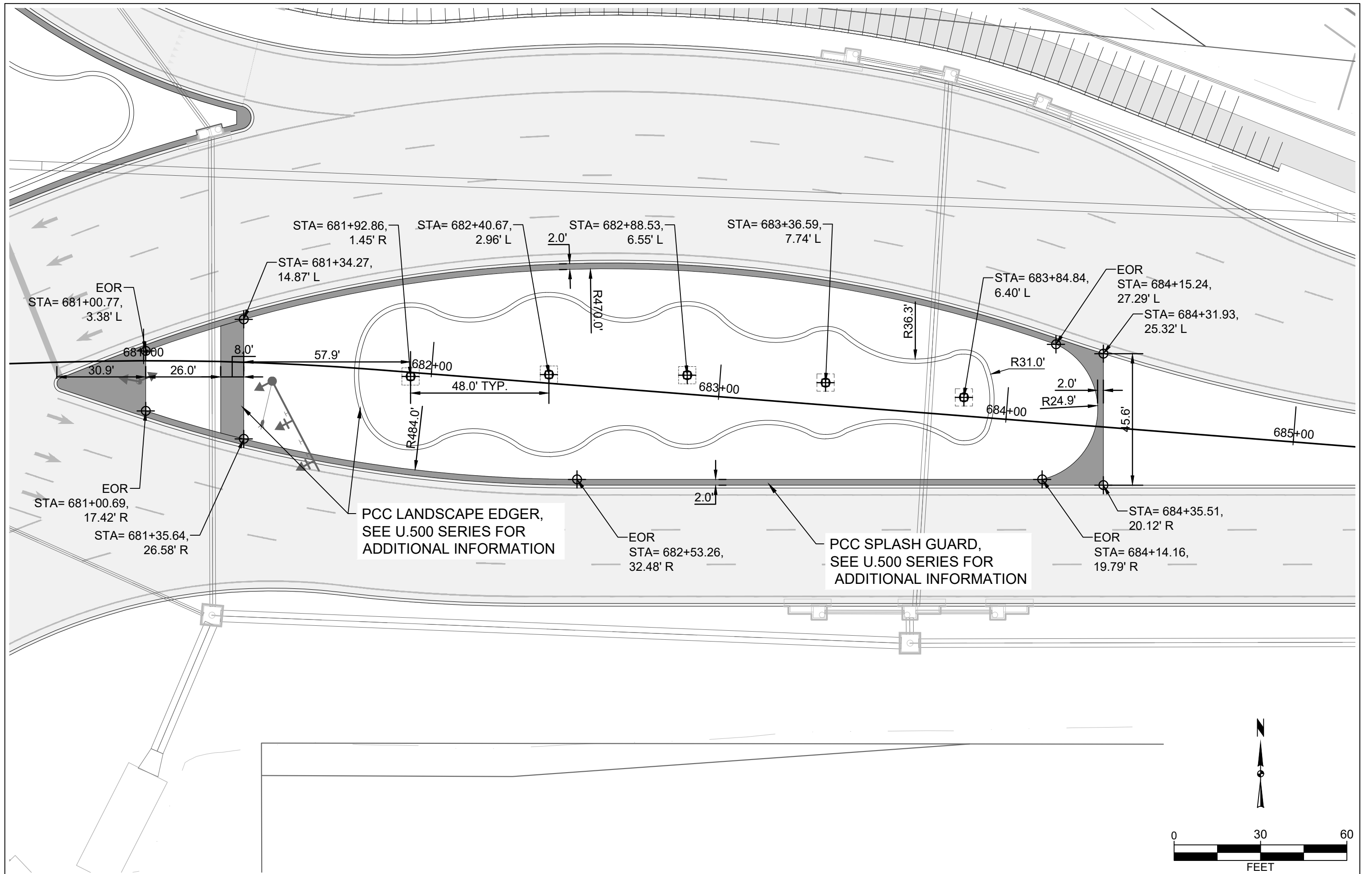


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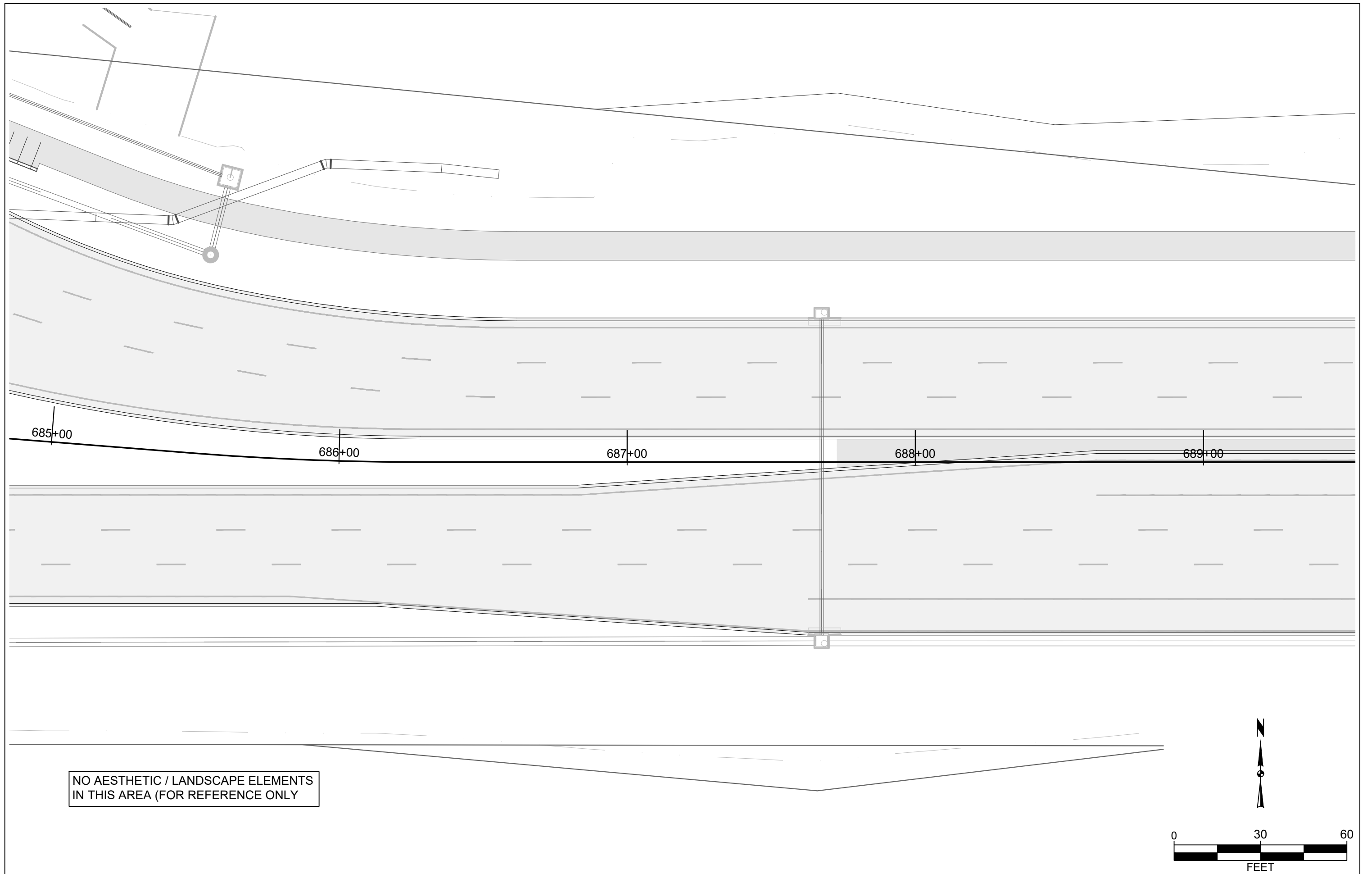




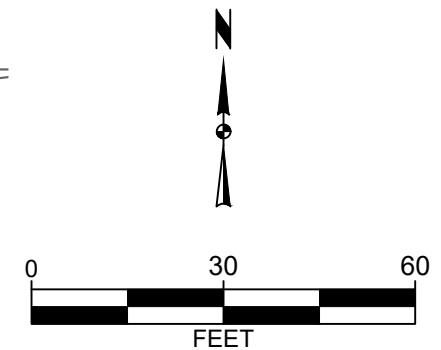
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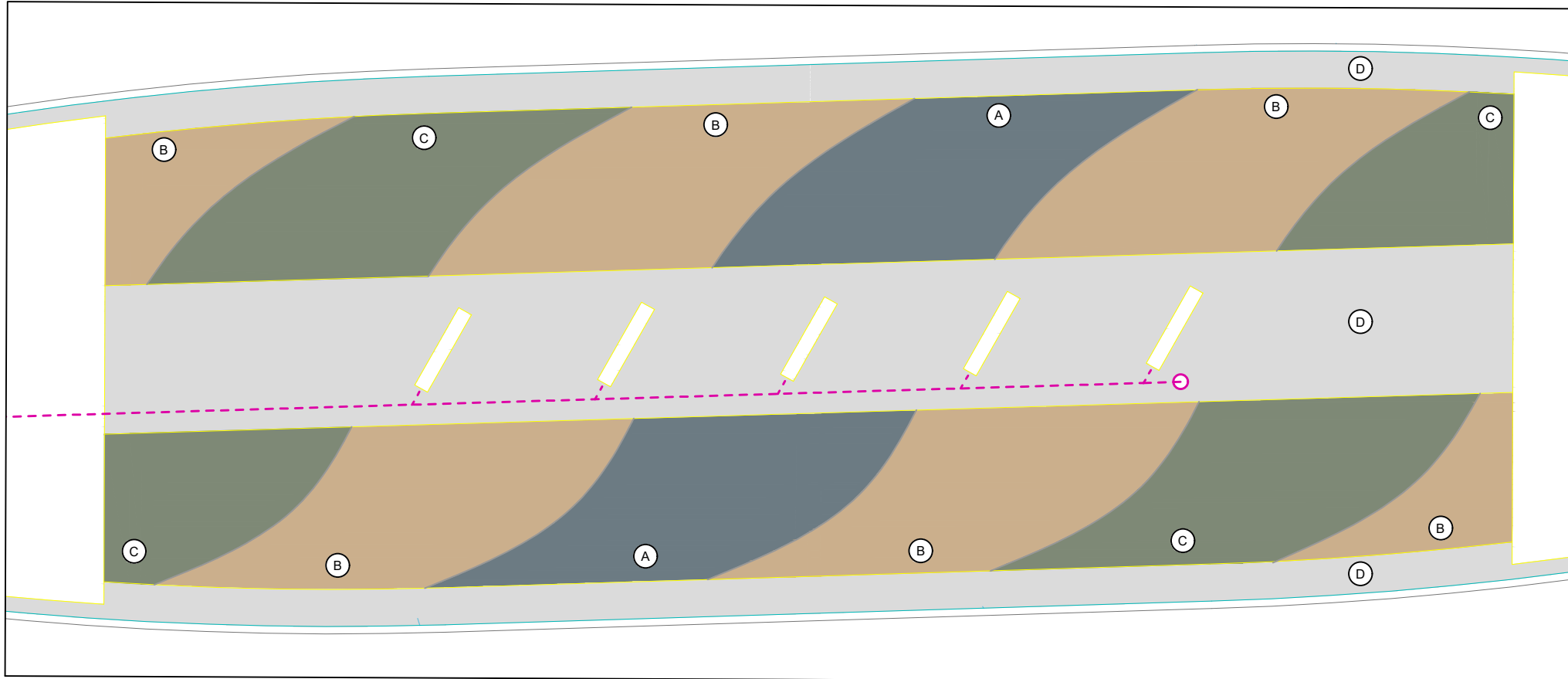


NO AESTHETIC / LANDSCAPE ELEMENTS  
IN THIS AREA (FOR REFERENCE ONLY)



V:\Projects\2021\121.0240.01B\CADD\1210240B\_U\_LAYOUT.dwg NICK HUSS, EAST MEDIAN 2 LAYOUT PLAN, 2023/08/22, 4:46 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

**CONCRETE PATTERN**



**COLORED CONCRETE**  
 COLOR CONCRETE ADMIXTURE  
 FEDERAL STANDARD COLOR NUMBER

- A: BLUE- FEDERAL STANDARD COLOR #35177
- B: TAN- FEDERAL STANDARD COLOR #12648
- C: GREEN- FEDERAL STANDARD COLOR #14260
- D: STANDARD CONCRETE, NO COLOR (FOR REFERENCE)

COLOR SYSTEM AS PER THE FOLLOWING MANUFACTURERS:

**BASIS OF DESIGN:**

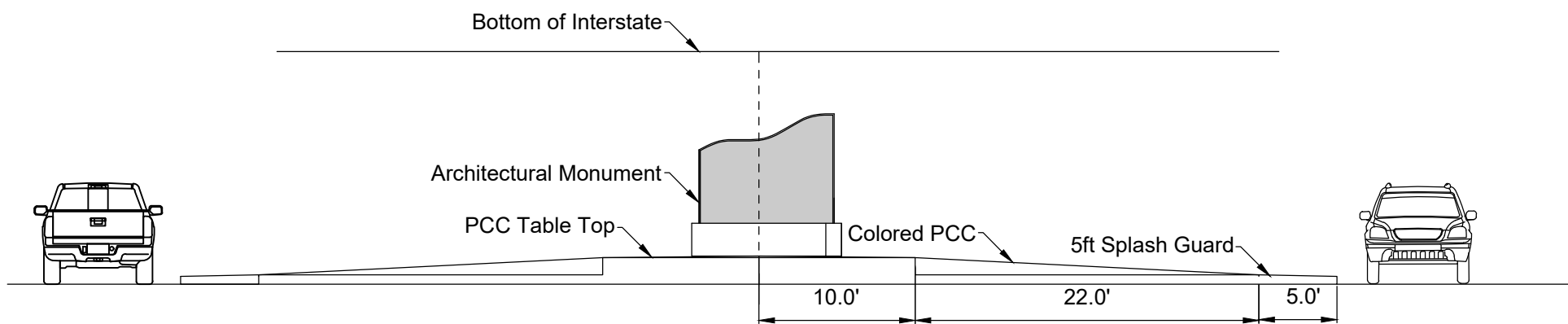
SIKA CORPORATION.  
 201 POLITO AVE. LYNDHURST, NEW JERSEY 07071  
 PHONE: (201) 933-8800  
 FAX: (201) 804-1076  
 WWW.USA.SIKA.COM

SOLOMON COLORS  
 4050 COLOR PLANT RD. SPRINGFIELD, IL 62702  
 PHONE: (800) 624-0261  
 WWW.SOLOMONCOLORS.COM

DAVIS COLORS  
 3700 EAST OLYMPIC BLVD. LOS ANGELES, CA 90023  
 PHONE: (323) 265-8323  
 EMAIL: INFO@DAVISCOLORS.COM  
 WWW.DAVISCOLORS.COM

INSTALL IN ACCORDANCE WITH MANUFACTURER  
 RECOMMENDATIONS, SPECIFICATIONS, AND REQUIREMENTS

OR EQUAL.



**COLORED CONCRETE NOTES**

**PART 1 - GENERAL**

**1.1 SUBMITTALS**

- A. PRODUCT DATA: SUBMIT MANUFACTURER'S COMPLETE TECHNICAL DATA SHEETS FOR THE FOLLOWING:
  - 1. INTEGRAL COLOR CONCRETE.
  - 2. CURING COMPOUND.
  - 3. SEALANT.
- B. DESIGN MIXES: FOR EACH TYPE OF CONCRETE.
- C. SAMPLES FOR INITIAL SELECTION: MANUFACTURER'S COLOR CHARTS SHOWING FULL RANGE OF COLORS AVAILABLE, RELATING TO FEDERAL STANDARD COLOR NUMBER.
- D. COLORED CONCRETE MOCK-UPS:
  - 1. A LOCATION FOR THE MOCK-UP PADS SHALL BE SELECTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE MOCK-UP SHALL BE LOCATED IN AN AREA THAT WILL ALLOW IT TO REMAIN IN-PLACE DURING THE DURATION OF PAVEMENT INSTALLATION. THE MOCK-UP SHALL BE SEPARATE FROM THE PROPOSED PAVING AND CAN'T BE A PART OF THE FINISHED WORK, UNLESS APPROVED BY THE ENGINEER.

- 2. CONSTRUCT MOCKUP FOR EACH TYPE OF COLOR CONCRETE APPLICATION USING PROCESSES AND TECHNIQUES INTENDED FOR USE ON PERMANENT WORK, INCLUDING CURING AND SEALING PROCEDURES. INCLUDE SAMPLES OF CONTROL, CONSTRUCTION, AND EXPANSION JOINTS IN SAMPLE PANELS. MOCK-UP SHALL BE PRODUCED BY THE INDIVIDUAL WORKERS WHO WILL PERFORM THE WORK FOR THE PROJECT.
- 3. TEST EACH MOCKUP FOR WET AND DRY SLIP RESISTANCE TO ENSURE THEY ARE SAFE.
- 4. ACCEPTED MOCK-UP PROVIDES VISUAL STANDARD FOR WORK OF SECTION.
- 5. MOCK-UP SHALL REMAIN THROUGH COMPLETION OF THE WORK FOR USE AS A QUALITY STANDARD FOR FINISHED WORK.

**1.2 DELIVERY, STORAGE AND HANDLING**

- A. COMPLY WITH MANUFACTURER'S INSTRUCTIONS. DELIVER PRODUCTS IN ORIGINAL, UNOPENED PACKAGING. STORE IN DRY CONDITIONS AND PROTECT FROM DAMAGE, WEATHER AND CONSTRUCTION ACTIVITY.

**PART 2 - PRODUCTS**

**2.1 MATERIALS**

- A. INTEGRAL COLOR CONCRETE: ADMIXTURES TO BE FACTORY PROPORTIONED, MIXED, AND PACKAGED, READY-TO-USE INTEGRAL COLOR CONCRETE.

- B. CURING COMPOUND SHALL COMPLY WITH ASTM C309 AND BE OF SAME MANUFACTURER AS COLORED ADMIXTURE, FOR USE WITH INTEGRALLY COLORED CONCRETE, OR APPROVED EQUAL.
- C. SUBSTITUTIONS: THE USE OF PRODUCTS OTHER THAN THOSE SPECIFIED WILL BE CONSIDERED PROVIDING THAT CONTRACTOR REQUESTS ITS USE IN WRITING WITHIN 10-DAYS PRIOR TO BID DATE. THIS REQUEST SHALL BE ACCOMPANIED BY THE FOLLOWING:
  - 1. A CERTIFICATE OF COMPLIANCE FROM MATERIAL MANUFACTURER STATING THAT PROPOSED PRODUCTS MEET OR EXCEED REQUIREMENTS OF THIS SECTION.
  - 2. DOCUMENTED PROOF THAT PROPOSED MATERIALS HAVE A 10-YEAR PROVEN RECORD OF PERFORMANCE CONFIRMED BY AT LEAST 5 LOCAL PROJECTS THAT ENGINEER CAN EXAMINE.

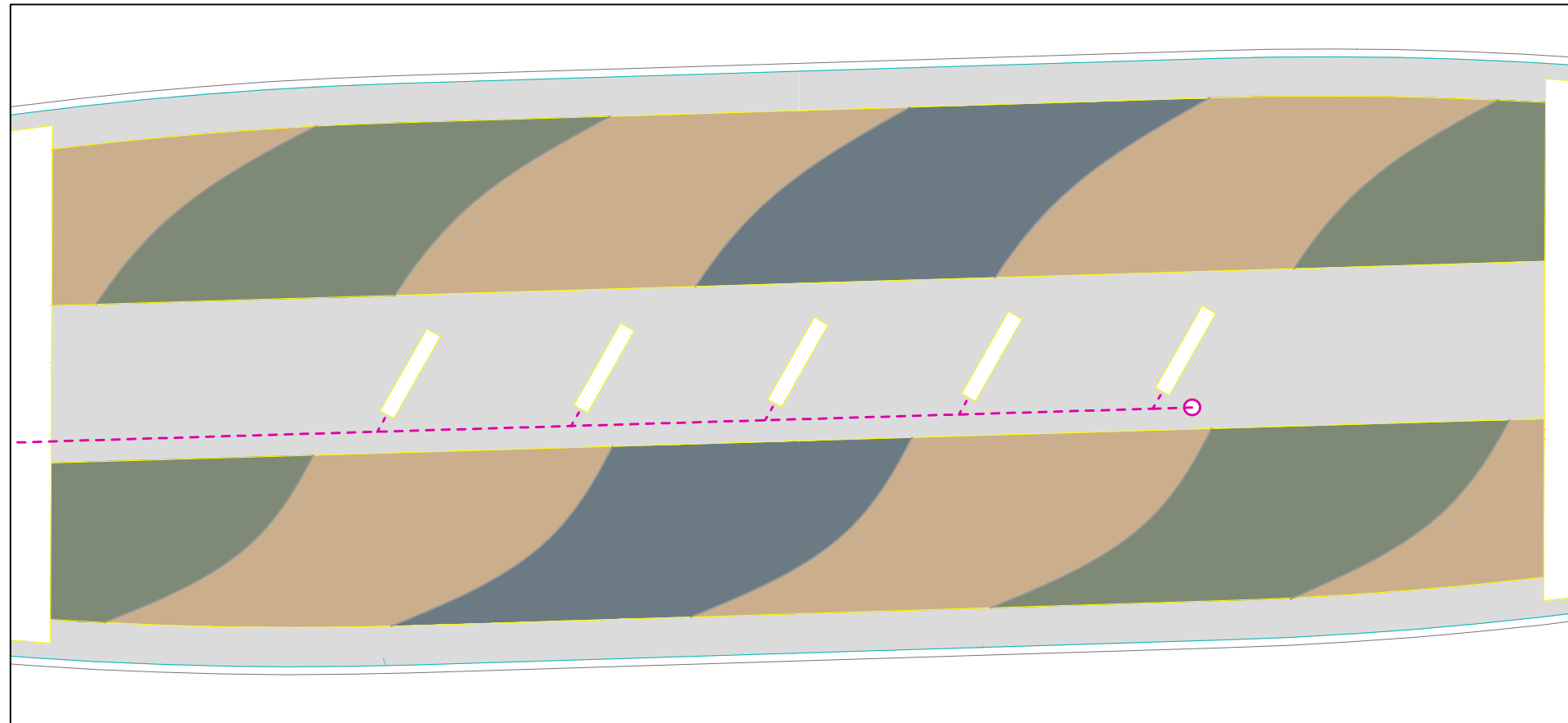
**2.2 COLORS AND PATTERNS**

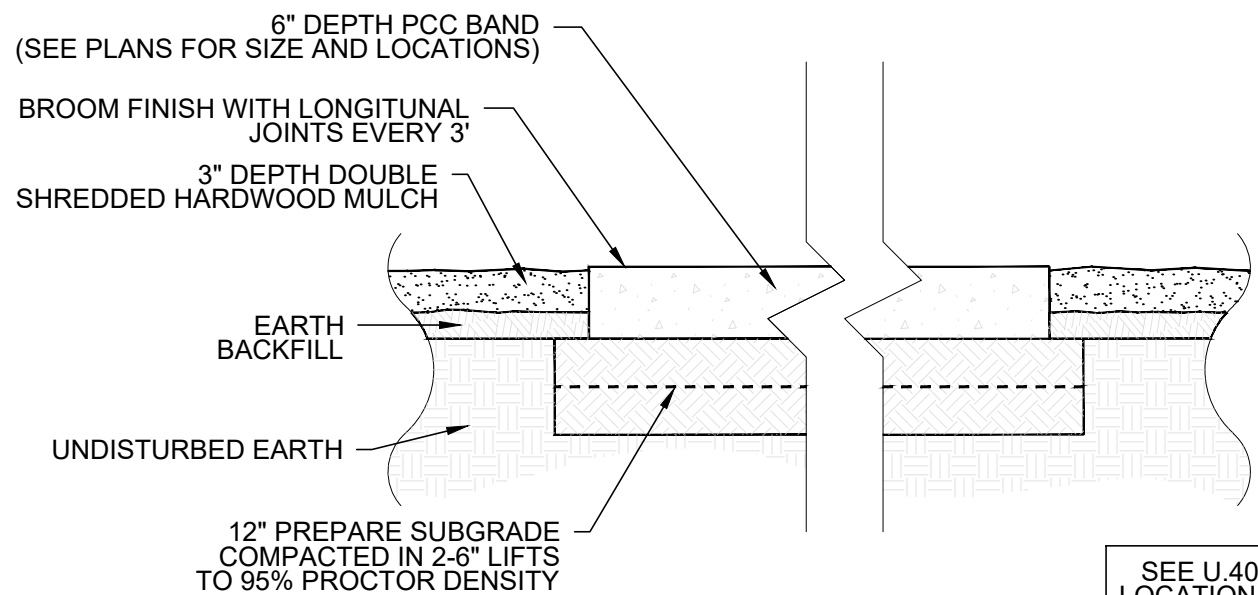
- A. COLORS: SEE PLAN.
- B. FINISH: LIGHT BROOM FINISH.

**2.3 CONCRETE MIX DESIGN**

- A. SEE IDOT SECTION 2301 FOR CONCRETE MIX DESIGN INFORMATION AND ADDITIONAL SPECIFICATIONS. CONDUCT TESTING TO DEMONSTRATE CONCRETE FROM THE MIX DESIGN MEETS ALL SLUMP, AIR CONTENT, FLOW, COMPRESSIVE STRENGTH, AND ALL REQUIRED CONCRETE SPECIFICATIONS.
- B. INTEGRAL COLOR ADMIXTURES FOR CONCRETE CAN BE INTRODUCED AT ANY POINT IN THE CONCRETE MIXING PROCESS AS LONG AS THE OTHER CONDITIONS OF THE PLANS AND SPECIFICATIONS ARE MET. ENOUGH MIXING AND TIME MUST BE GIVEN FOR THE COLOR TO REACH AN UNCHANGING UNIFORM APPEARANCE.
- C. COLOR SELECTION WILL DETERMINE THE RATIO OF BASE COLORS NEEDED, AND COLOR SATURATION, AND INTENSITY WILL DETERMINE THE AMOUNT OF LIQUID OR GRANULES REQUIRED. MIX IN ACCORDANCE WITH MANUFACTURERS REQUIREMENTS, RECOMMENDATIONS AND SPECIFICATIONS FOR COLORS SPECIFIED.
- D. SLUMP OF CONCRETE SHALL BE CONSISTENT THROUGHOUT PROJECT AT 4-INCHES OR LESS. AT NO TIME SHALL SLUMP EXCEED 5-INCHES.
- E. NO HIGH SALT AGGREGATES THAT CAN CAUSE EFFLORESCENCE AND MAKE COLOR IRREGULAR.
- F. DO NOT ADD CALCIUM CHLORIDE TO MIX AS IT CAUSES MOTTLING AND SURFACE DISCOLORATION.
- G. SUPPLEMENTAL ADMIXTURES SHALL NOT BE USED UNLESS APPROVED BY MANUFACTURER.
- H. DO NOT ADD WATER TO THE MIX DESIGN ONCE ESTABLISHED OR IN THE FIELD. DO NOT ADD WATER TO LOOSEN PARTIALLY CURED LOADS.
- I. MAXIMUM AIR CONTENT SHALL NOT EXCEED 5 PERCENT.

**CONCRETE PATTERN**



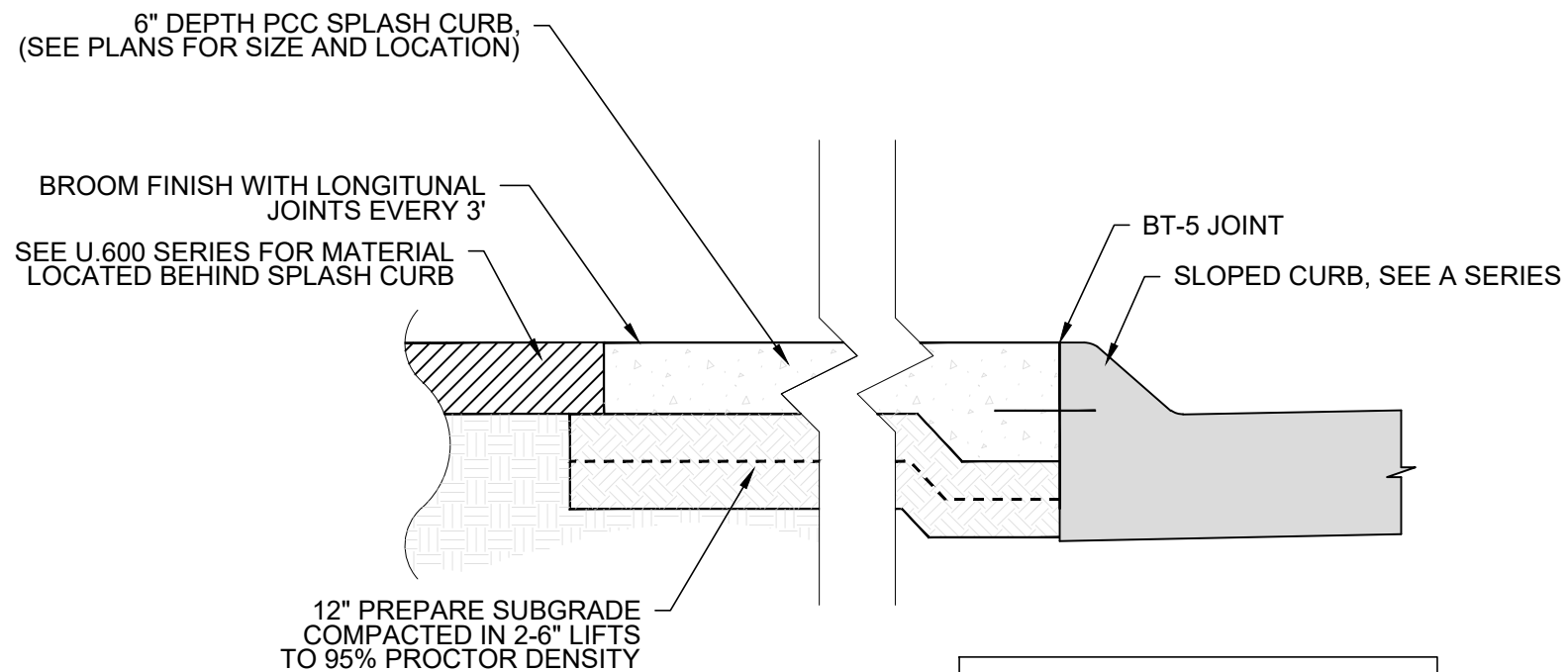


SEE U.400 SERIES FOR SIZE AND LOCATION OF LANDSCAPE EDGER

1  
U.502

**PCC LANDSCAPE EDGER**

NO SCALE



SEE U.400 SERIES FOR SIZE AND LOCATION OF LANDSCAPE EDGER

2  
U.502

**PCC SPLASH GUARD**

NO SCALE

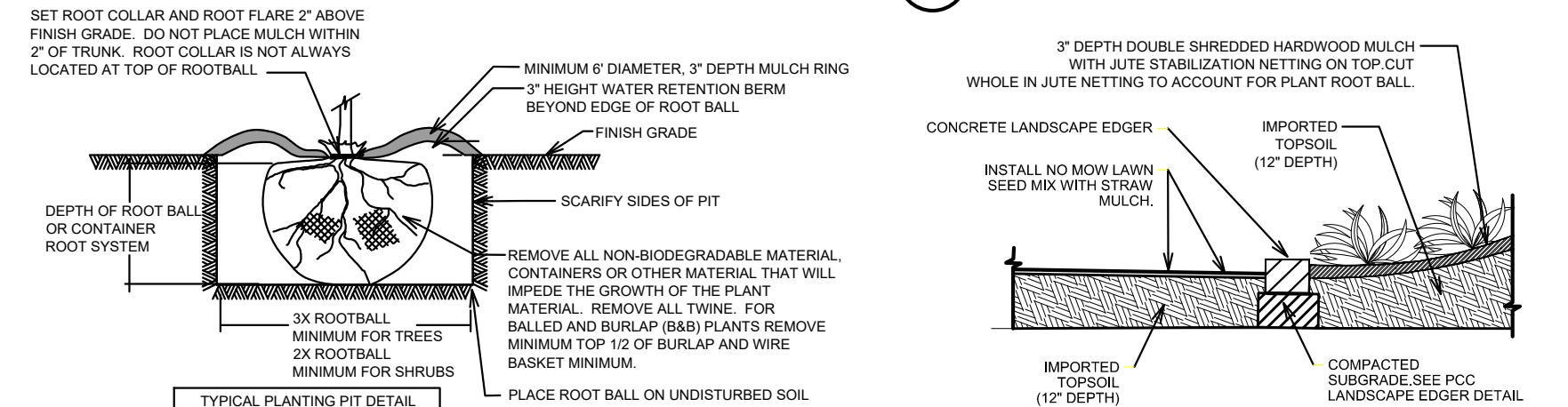
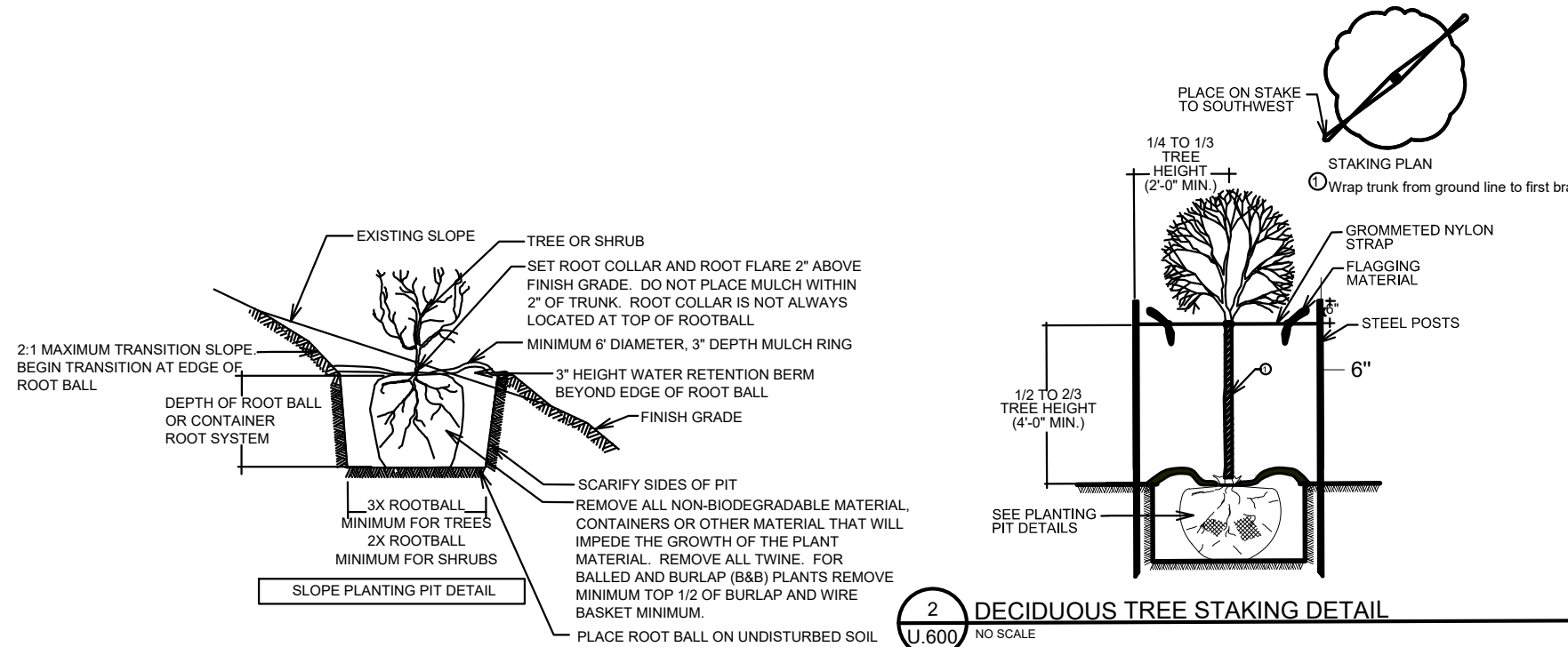


# PLANT SCHEDULE

TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	TYPE
MS	20	Malus x 'Snowdrift'	Snowdrift Crabapple	---	
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
CH	191	Cotoneaster horizontalis	Rockspray Cotoneaster	3 gal.	Pot
JB	114	Juniperus horizontalis 'Blue Chip'	Blue Chip Creeping Juniper	3 gal.	Pot
RR	114	Rosa rugosa	Rugosa Rose	3 gal.	Pot
VM	48	Viburnum acerifolium	Mapleleaf Viburnum	3 gal.	Pot
GRASSES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER
CK	102	Calamagrostis x acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	1 gal.	Pot
SP	425	Sporobolus heterolepis	Prairie Dropseed	1 gal.	Pot

# PLANTING PLAN GENERAL NOTES


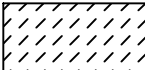
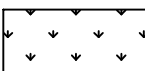
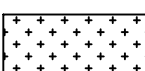
- CONTRACTOR SHALL CONSTRUCT THE PROPOSED LANDSCAPE IMPROVEMENTS PER IDOT STANDARD SPECIFICATIONS SECTION 2601, 2610 & 2611.
- CONTRACTOR IS RESPONSIBLE FOR REPAIRS OF DAMAGE TO ANY EXISTING IMPROVEMENTS DURING CONSTRUCTION, SUCH AS, BUT NOT LIMITED TO PAVEMENT, STRIPING, CURBS, ETC. REPAIRS SHALL BE EQUAL TO OR BETTER THAN EXISTING CONDITIONS.
- CONTRACTOR IS RESPONSIBLE FOR CONDUCTING A SITE VISIT PRIOR TO STARTING CONSTRUCTION ACTIVITIES TO BECOME FAMILIAR WITH EXISTING FEATURES AND CONDITIONS.
- CONTRACTOR TO LOAD, TRANSPORT AND DISPOSE OF ALL MATERIALS CONSIDERED TO BE UNDESIRABLE AND NOT TO BE INCORPORATED INTO THE PROJECT, INCLUDING BACKFILL, TO AN APPROVED OFF-SITE WASTE SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR CLEANING DIRT AND DEBRIS FROM NEIGHBORING STREETS, DRIVEWAYS, AND SIDEWALKS CAUSED BY CONSTRUCTION ACTIVITIES IN A TIMELY MANNER. THE CONTRACTOR SHALL KEEP THE PROJECT SITE NEAT AND ORDERLY AT ALL TIMES WHILE CONSTRUCTION IS IN PROGRESS. ACCESS STREETS TO THE DEVELOPMENT SHALL BE KEPT CLEAN OF MUD, DEBRIS, PAPER AND WASTE MATERIAL AT ALL TIMES.
- ALL PLANT MATERIAL AND INSTALLATION OF PLANT MATERIAL SHALL MEET MINIMUM REQUIREMENTS PER THE "AMERICAN STANDARDS FOR NURSERY STOCK" (ANSI Z60.1-LATEST EDITION).
- CONTRACTOR SHALL GUARANTEE (WARRANTY) ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR FROM DATE OF INSTALLATION.
- CONTRACTOR TO INSTALL 3" DEPTH OF DOUBLE SHREDDED HARDWOOD MULCH OVER 20 YEAR WEED BARRIER FABRIC FOR PLANTING BEDS.
- WATERING OF TREES, SHRUBS AND PERENNIAL PLANTS SHALL BE CONDUCTED AS PER IDOT 2610.03E.6.

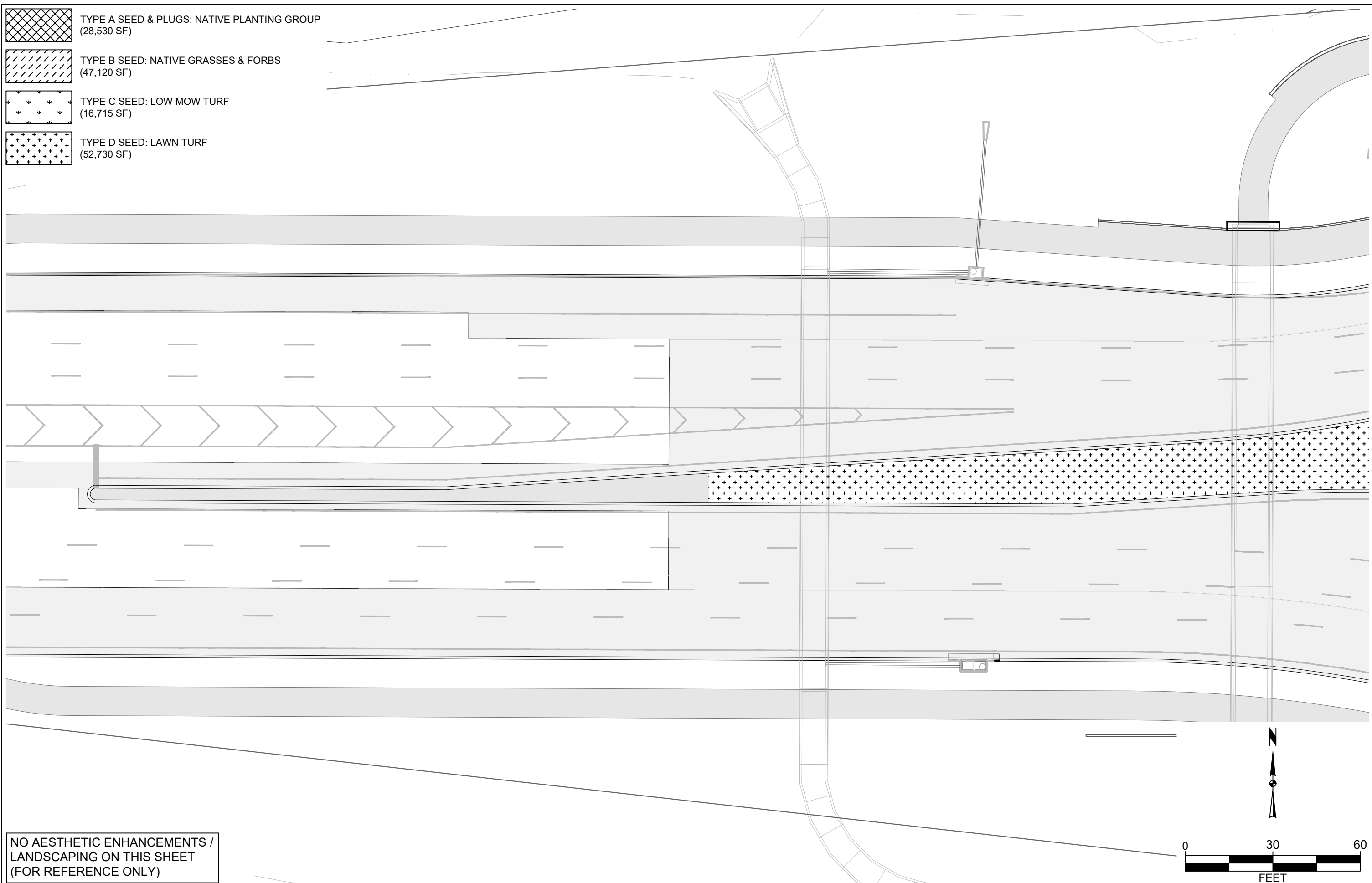


**1 PLANTING PIT DETAIL**  
U.600 NO SCALE

**3 PLANTINGS ON SLOPE AT HILLSIDE INFIELDS**  
U.600 NO SCALE

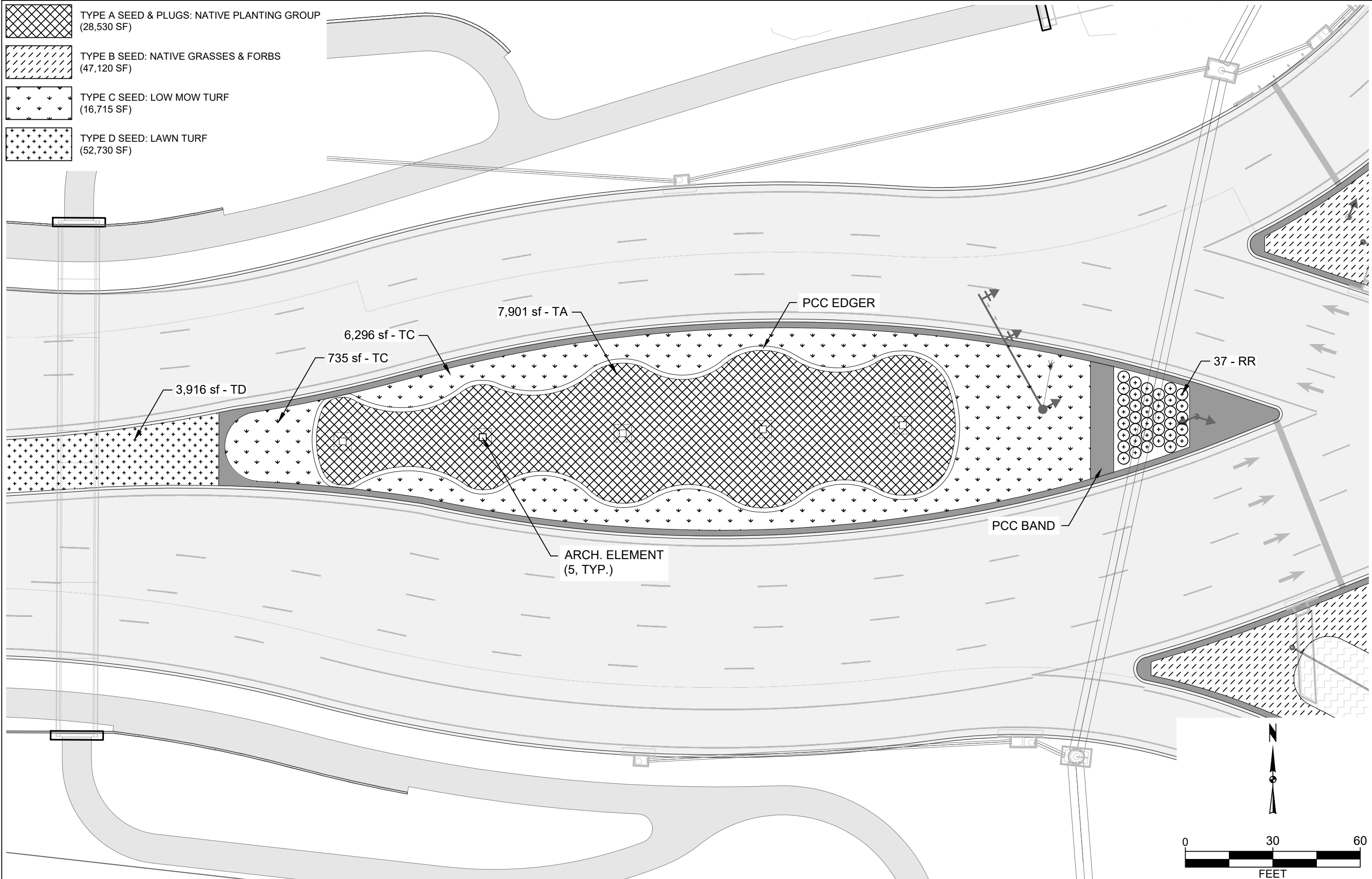
V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-LAND.dwg NICK HUSS, LANDSCAPE NOTES, 2023/08/22, 4:47 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)




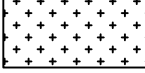
-  TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)
-  TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)
-  TYPE C SEED: LOW MOW TURF  
(16,715 SF)
-  TYPE D SEED: LAWN TURF  
(52,730 SF)



NO AESTHETIC ENHANCEMENTS /  
LANDSCAPING ON THIS SHEET  
(FOR REFERENCE ONLY)

V:\Projects\20211121.0240.01B\CADD\1210240B\_U-LAND.dwg NICK HUSS, WEST MEDIAN 1 LANDSCAPE PLAN, 2023/08/22, 4:47 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



-  TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)
-  TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)
-  TYPE C SEED: LOW MOW TURF  
(16,715 SF)
-  TYPE D SEED: LAWN TURF  
(52,730 SF)

3,916 sf - TD

735 sf - TC

6,296 sf - TC

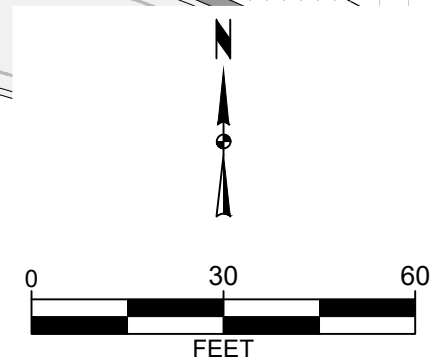
7,901 sf - TA

ARCH. ELEMENT  
(5, TYP.)

PCC EDGER

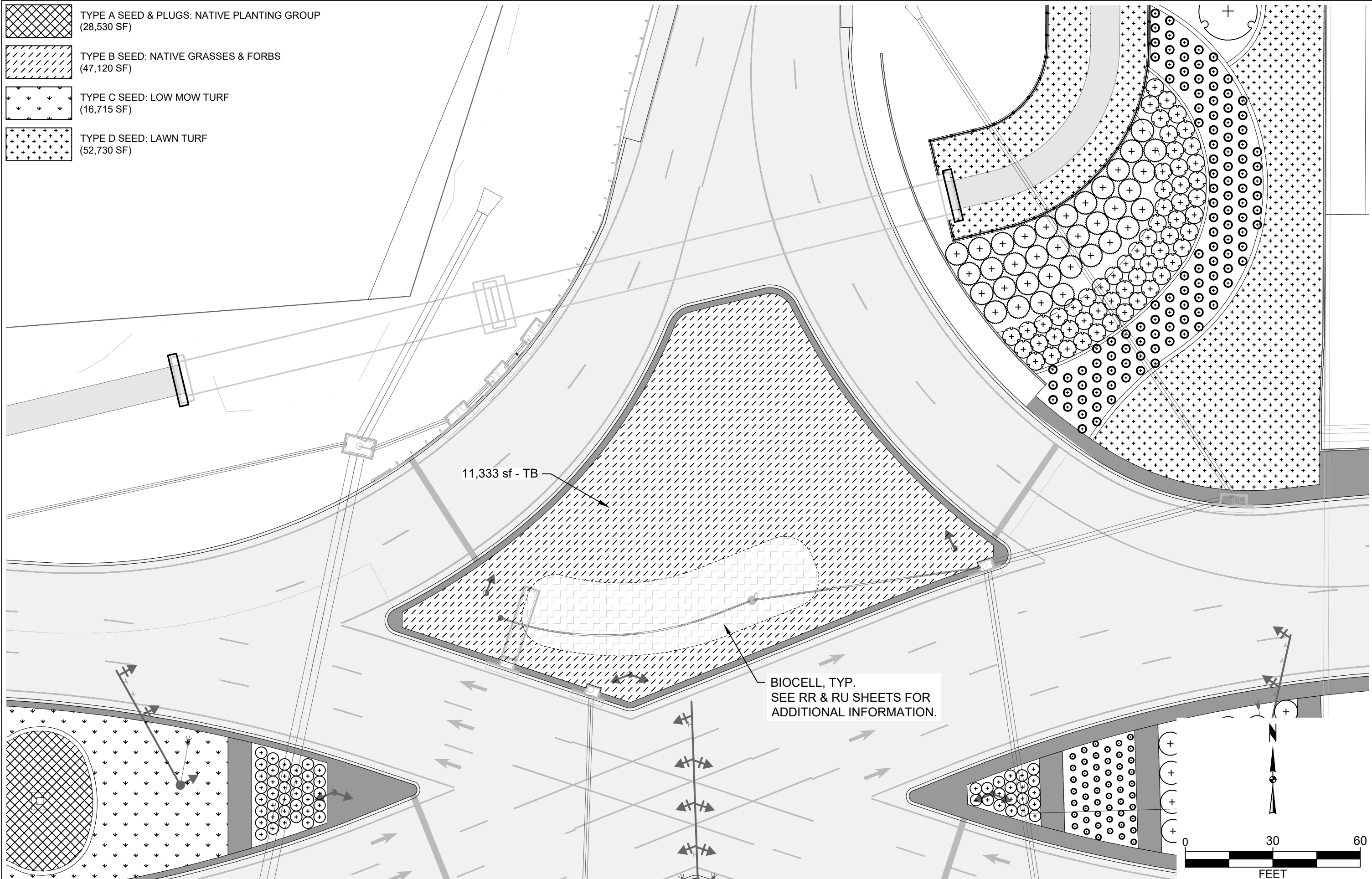
PCC BAND

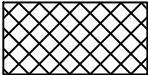
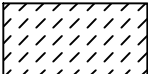
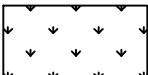
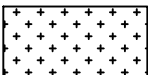
37 - RR



V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-LAND.dwg NICK HUSS, WEST MEDIAN 2 LANDSCAPE PLAN, 2023/08/22, 4:47 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

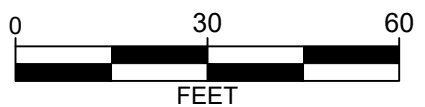




-  TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)
-  TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)
-  TYPE C SEED: LOW MOW TURF  
(16,715 SF)
-  TYPE D SEED: LAWN TURF  
(52,730 SF)


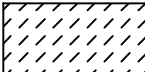
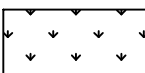
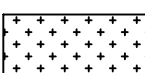
11,333 sf - TB

BIOCELL, TYP.  
SEE RR & RU SHEETS FOR  
ADDITIONAL INFORMATION.



V:\Projects\2021\121.0240.01B\CADD\1210240B\_U\_LAND.dwg NICK HUSS, NW DIAMOND LANDSCAPE PLAN, 2023/08/22, 4:48 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

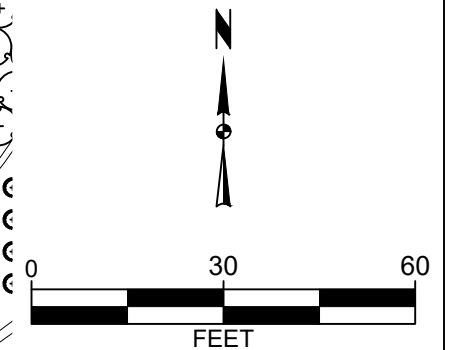


-  TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)
-  TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)
-  TYPE C SEED: LOW MOW TURF  
(16,715 SF)
-  TYPE D SEED: LAWN TURF  
(52,730 SF)


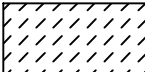
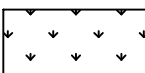
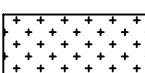
BIOCELL, TYP.  
SEE RR & RU SHEETS FOR  
ADDITIONAL INFORMATION.

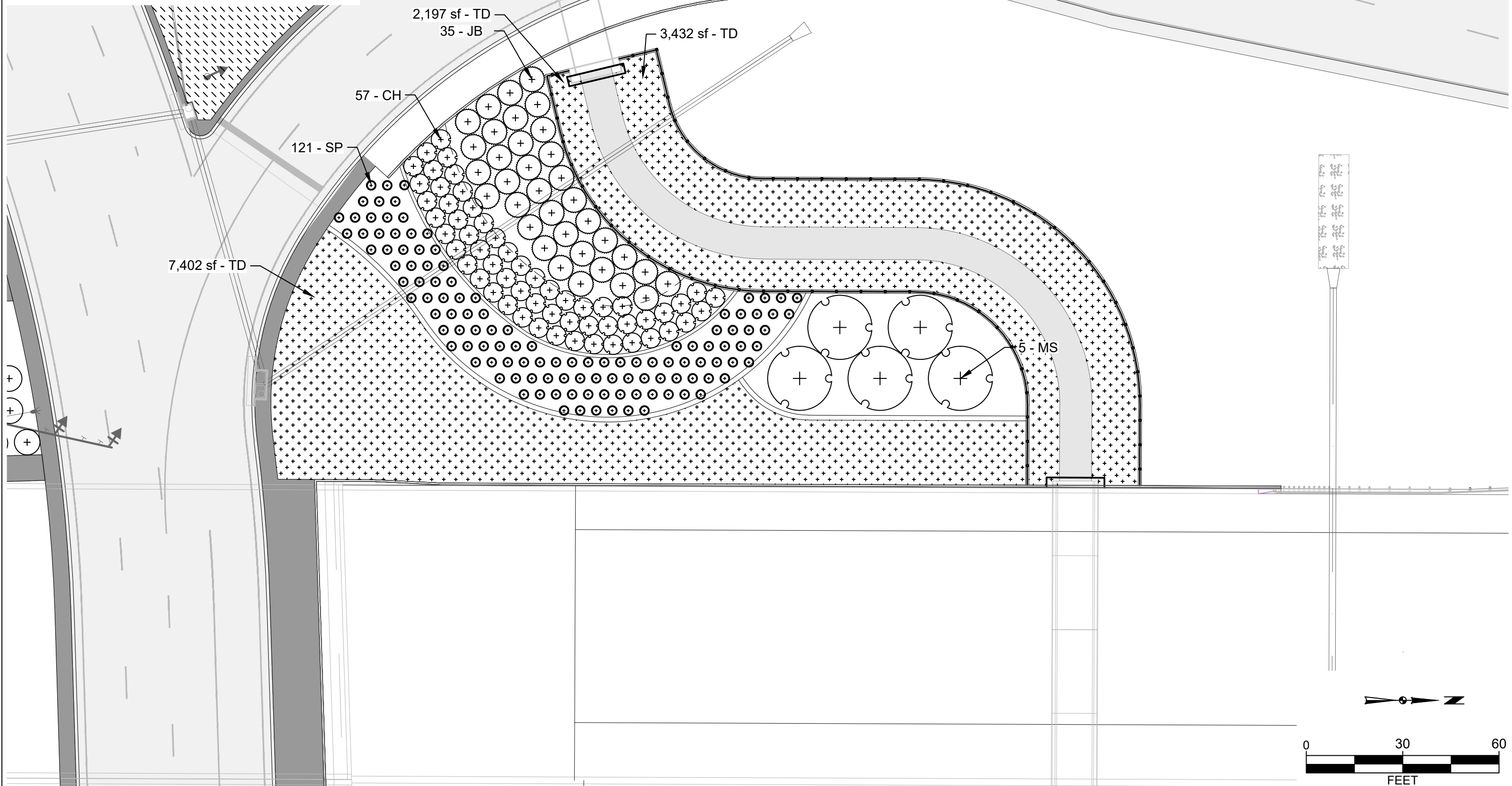
12,287 sf - TB

6,481 sf - TA


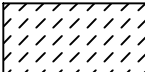
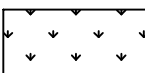
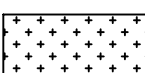


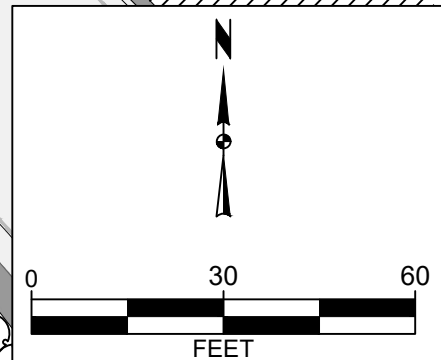
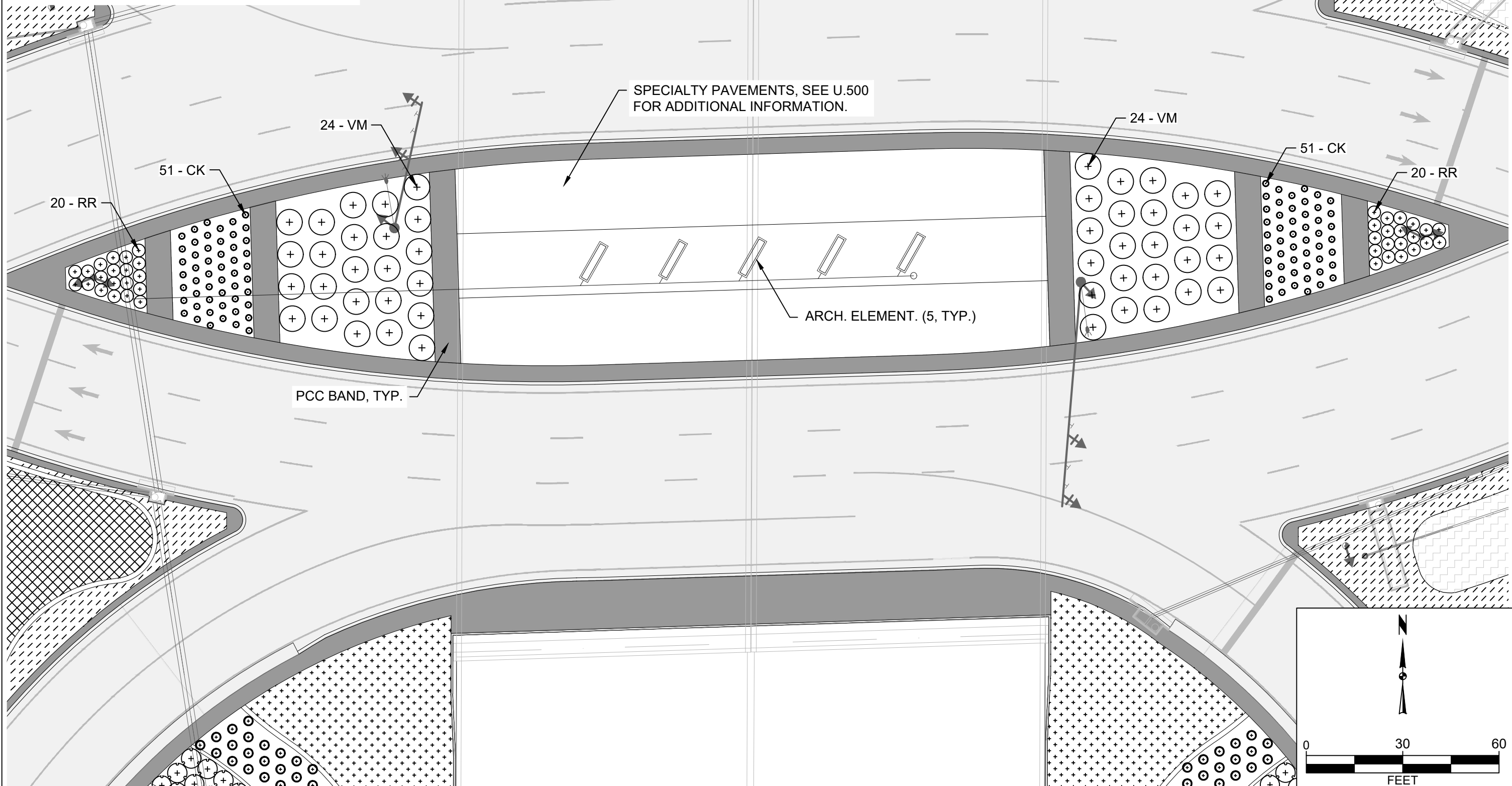
V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-LAND.dwg NICK HUSS, SW DIAMOND LANDSCAPE PLAN, 2023/08/22, 4:48 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

-  TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)
-  TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)
-  TYPE C SEED: LOW MOW TURF  
(16,715 SF)
-  TYPE D SEED: LAWN TURF  
(52,730 SF)






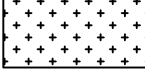
V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-LAND.dwg NICK HUSS, NORTH MSE WALL LANDSCAPE PLAN, 2023/08/22, 4:48 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

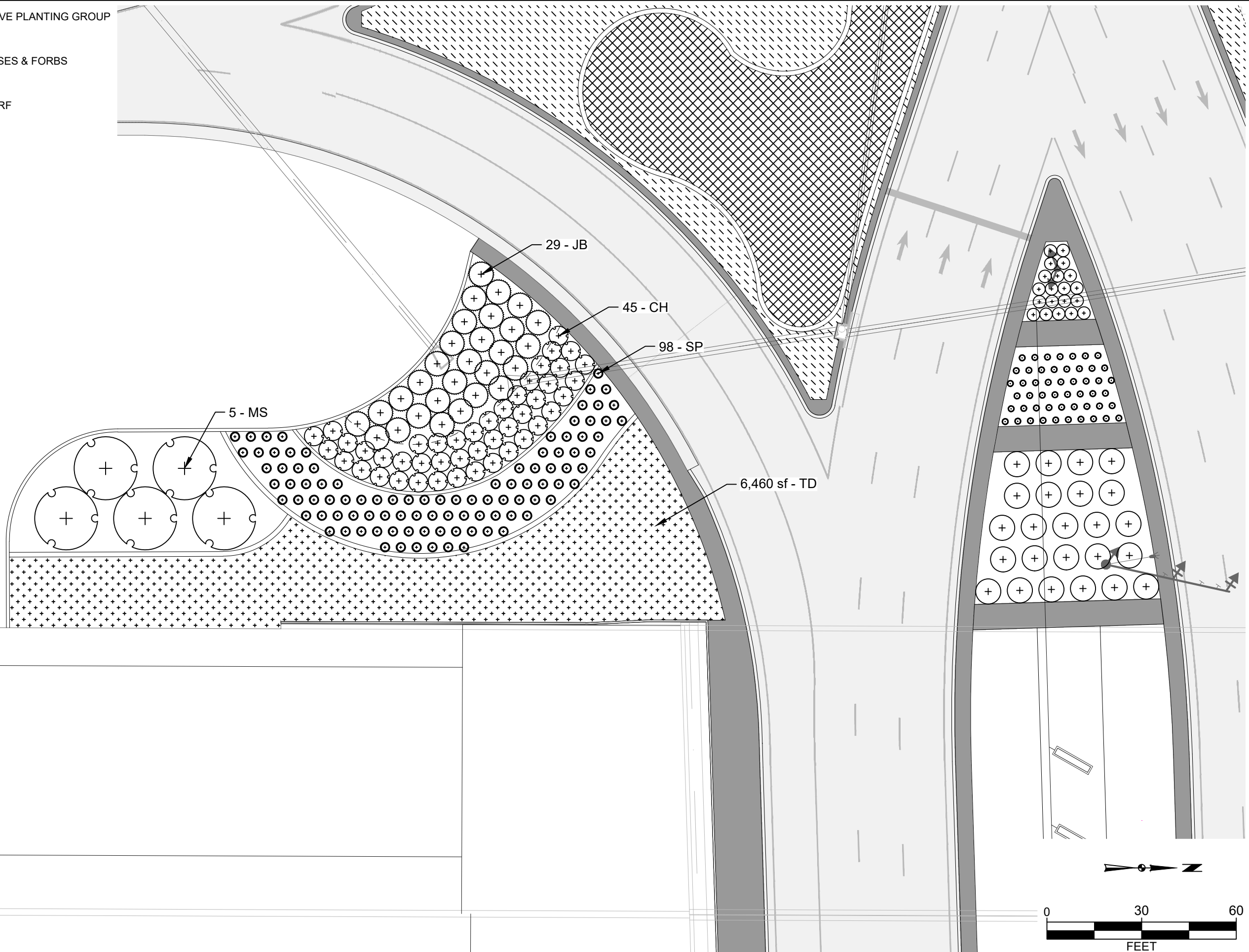
-  TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)
-  TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)
-  TYPE C SEED: LOW MOW TURF  
(16,715 SF)
-  TYPE D SEED: LAWN TURF  
(52,730 SF)



V:\Projects\2021121.0240.01B\CADD\1210240B\_U-LAND.dwg NICK HUSS, CENTER MEDIAN LANDSCAPE PLAN, 2023/08/22, 4:48 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)


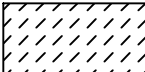
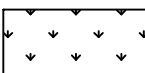
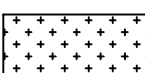


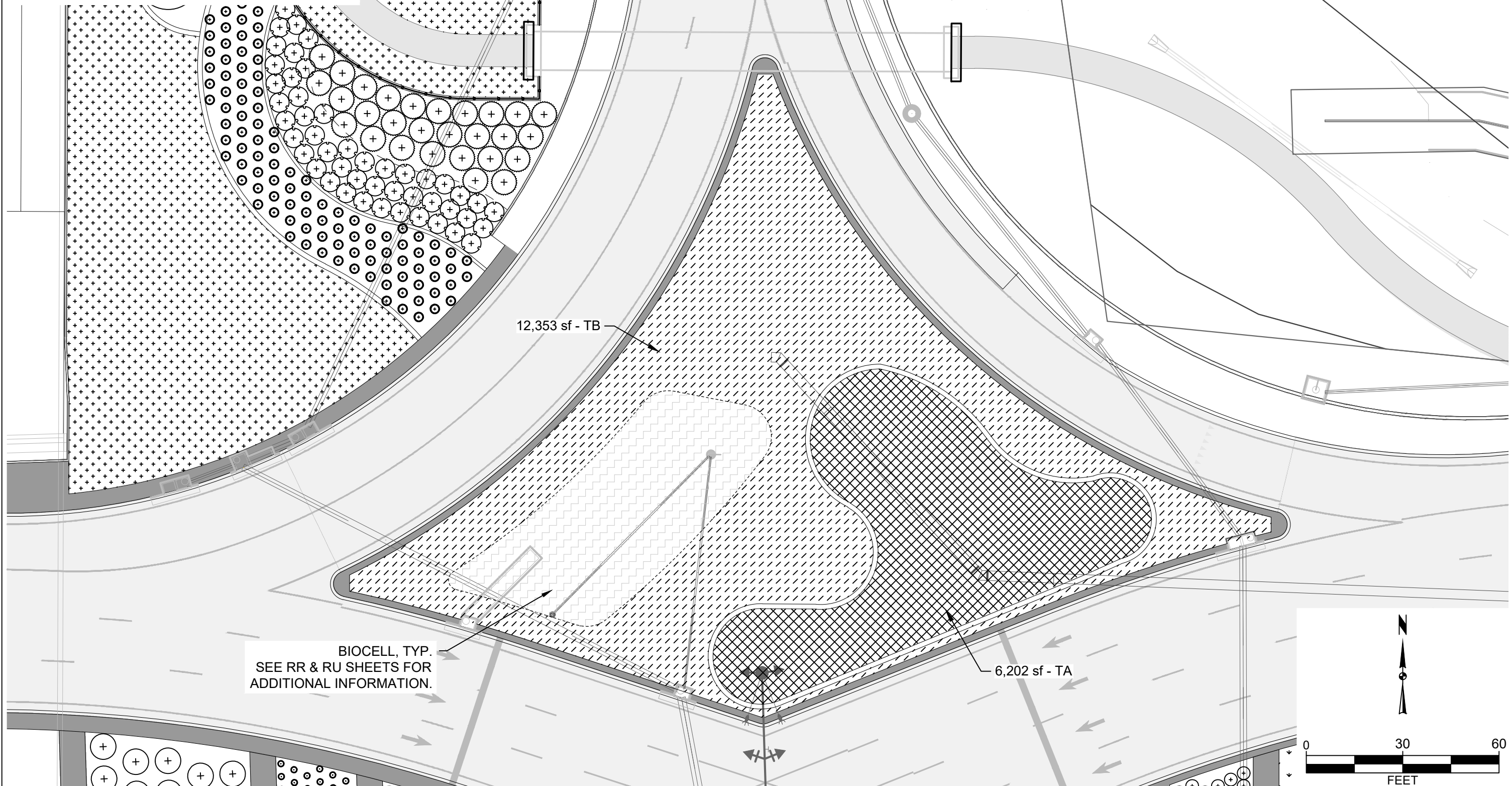
-  TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)
-  TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)
-  TYPE C SEED: LOW MOW TURF  
(16,715 SF)
-  TYPE D SEED: LAWN TURF  
(52,730 SF)



V:\Projects\2021\121.0240.01B\CADD\1210240B\_U\_LAND.dwg NICK HUSS, SOUTH MSE WALL LANDSCAPE PLAN, 2023/08/22, 4:48 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



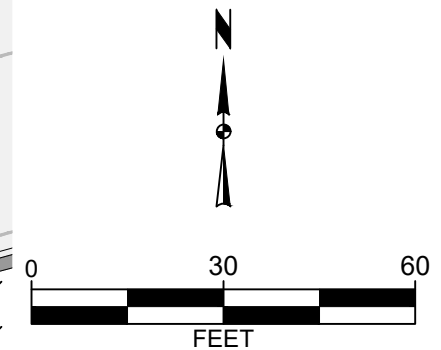
-  TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)
-  TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)
-  TYPE C SEED: LOW MOW TURF  
(16,715 SF)
-  TYPE D SEED: LAWN TURF  
(52,730 SF)






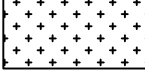
12,353 sf - TB

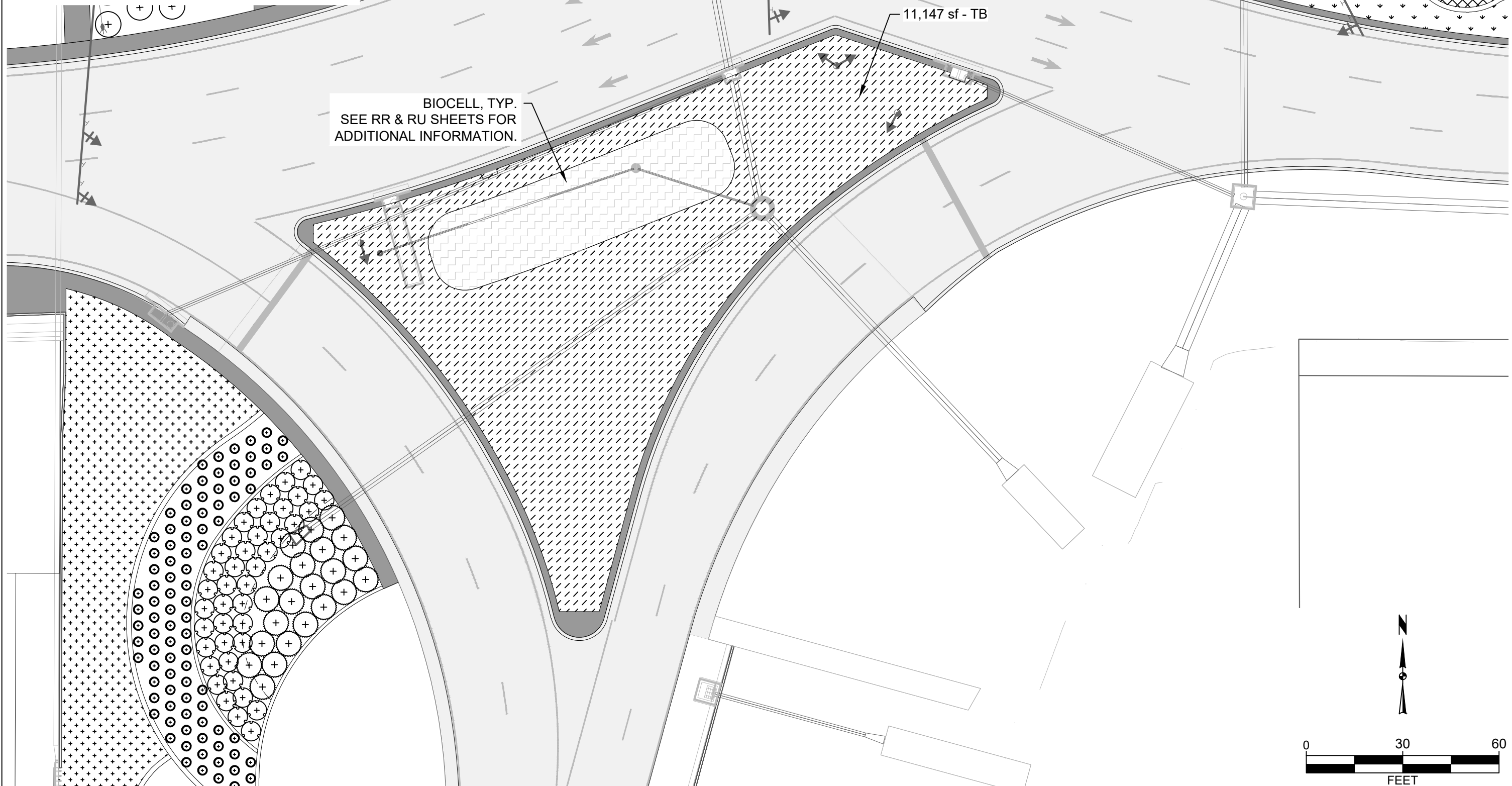
BIOCELL, TYP.  
SEE RR & RU SHEETS FOR  
ADDITIONAL INFORMATION.

6,202 sf - TA


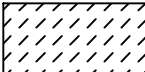
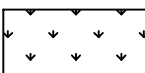
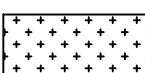


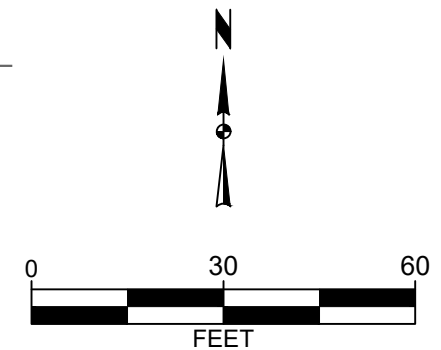
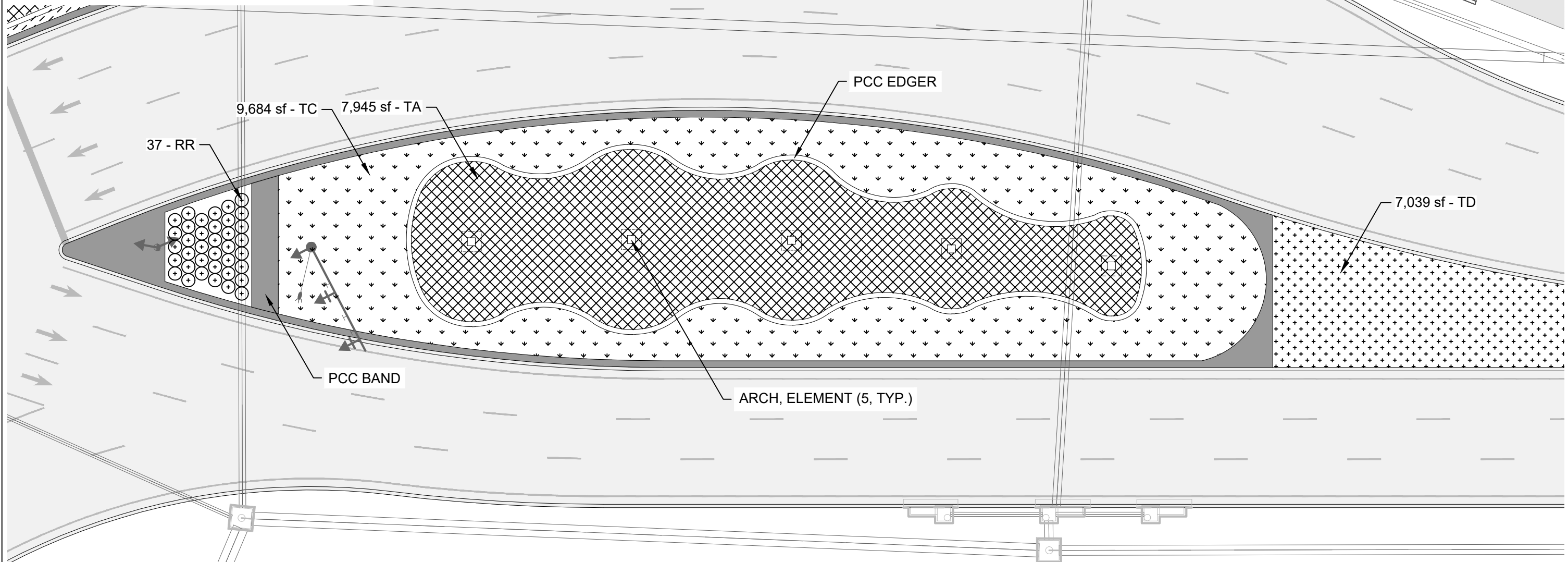
V:\Projects\2021121.0240.01B\CADD\1210240B\_U-LAND.dwg NICK HUSS, NE DIAMOND LANDCAPE PLAN, 2023/08/22, 4:48 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

-  TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)
-  TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)
-  TYPE C SEED: LOW MOW TURF  
(16,715 SF)
-  TYPE D SEED: LAWN TURF  
(52,730 SF)



V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-LAND.dwg NICK HUSS, SE DIAMOND LANDSCAPE PLAN, 2023/08/22, 4:49 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

-  TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)
-  TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)
-  TYPE C SEED: LOW MOW TURF  
(16,715 SF)
-  TYPE D SEED: LAWN TURF  
(52,730 SF)



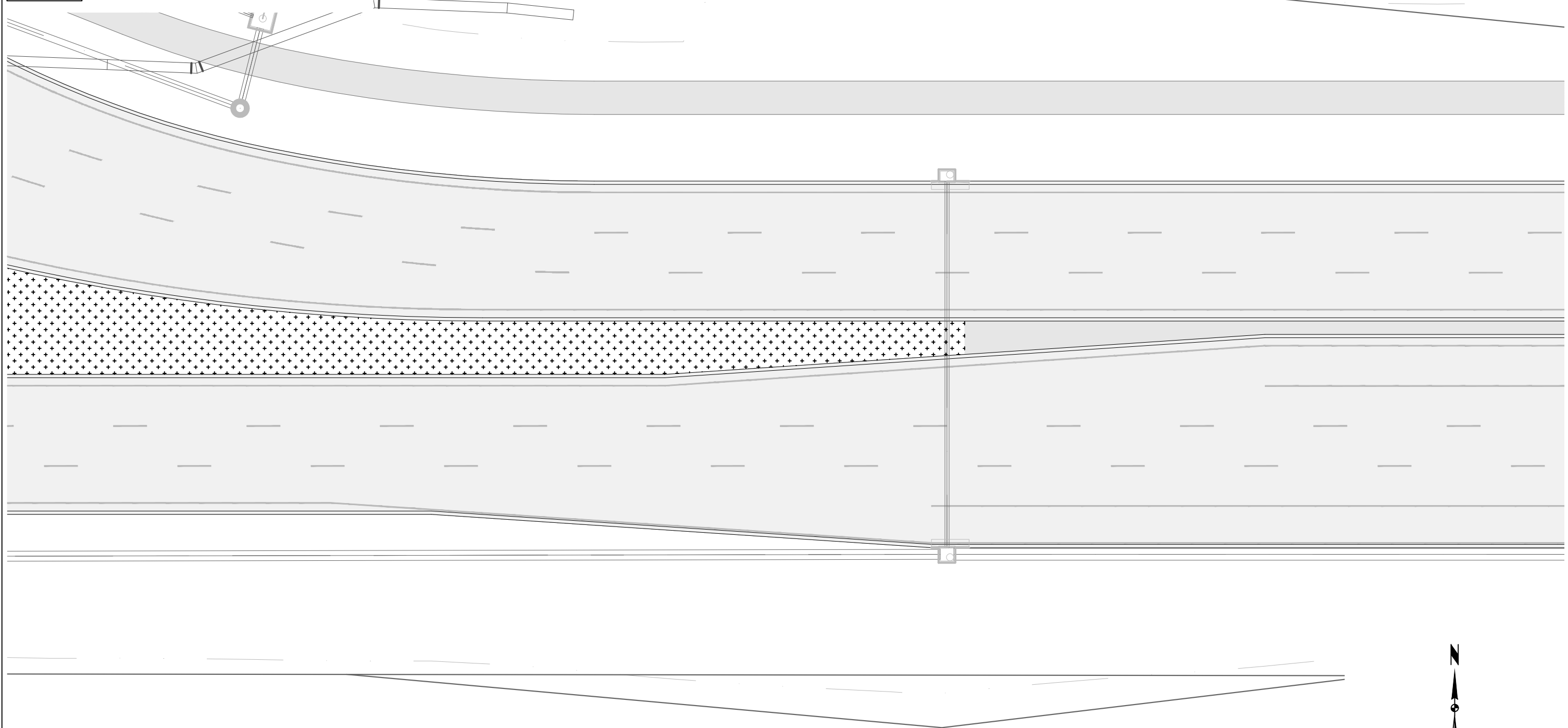
V:\Projects\20211121.0240.01B\CADD\1210240B\_U-LAND.dwg NICK HUSS, EAST MEDIAN 1 LANDSCAPE PLAN, 2023/08/22, 4:49 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)

TYPE A SEED & PLUGS: NATIVE PLANTING GROUP  
(28,530 SF)

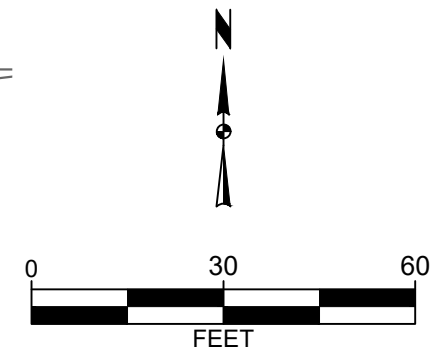
TYPE B SEED: NATIVE GRASSES & FORBS  
(47,120 SF)

TYPE C SEED: LOW MOW TURF  
(16,715 SF)

TYPE D SEED: LAWN TURF  
(52,730 SF)

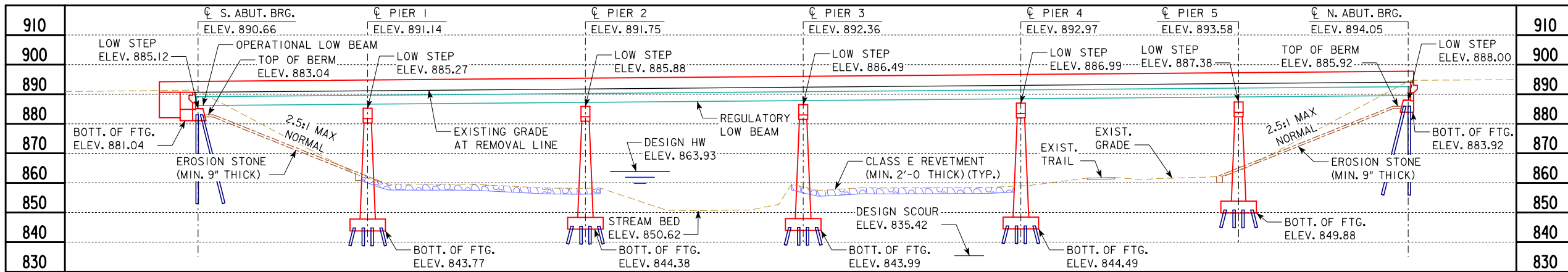


NO AESTHETIC ENHANCEMENTS /  
LANDSCAPING ON THIS SHEET  
(FOR REFERENCE ONLY)



V:\Projects\2021\121.0240.01B\CADD\1210240B\_U-LAND.dwg NICK HUSS, EAST MEDIAN 2 LANDSCAPE PLAN, 2023/08/22, 4:49 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)





### HYDRAULIC DATA

DRAINAGE AREA = 52.8 SQ. MI.  
 STREAM SLOPE = 7.0 FT./MI.  
 AVG. LOW WATER STAGE = 852.0

Q<sub>50</sub> = 13,020 CFS  
 STAGE = 863.27  
 REGULATORY LOW BEAM = 887.56  
 BACKWATER = 1.73 FT.  
 AVG. BRIDGE VELOCITY = 10.9 FPS

Q<sub>100</sub> = 16,110 CFS  
 STAGE = 863.93  
 OPERATIONAL LOW BEAM = 886.20  
 BACKWATER = 2.45 FT.  
 AVG. BRIDGE VELOCITY = 12.1 FPS

Q<sub>200</sub> = 19,000 CFS  
 STAGE = 864.79  
 CALCULATED DESIGN SCOUR = 835.42

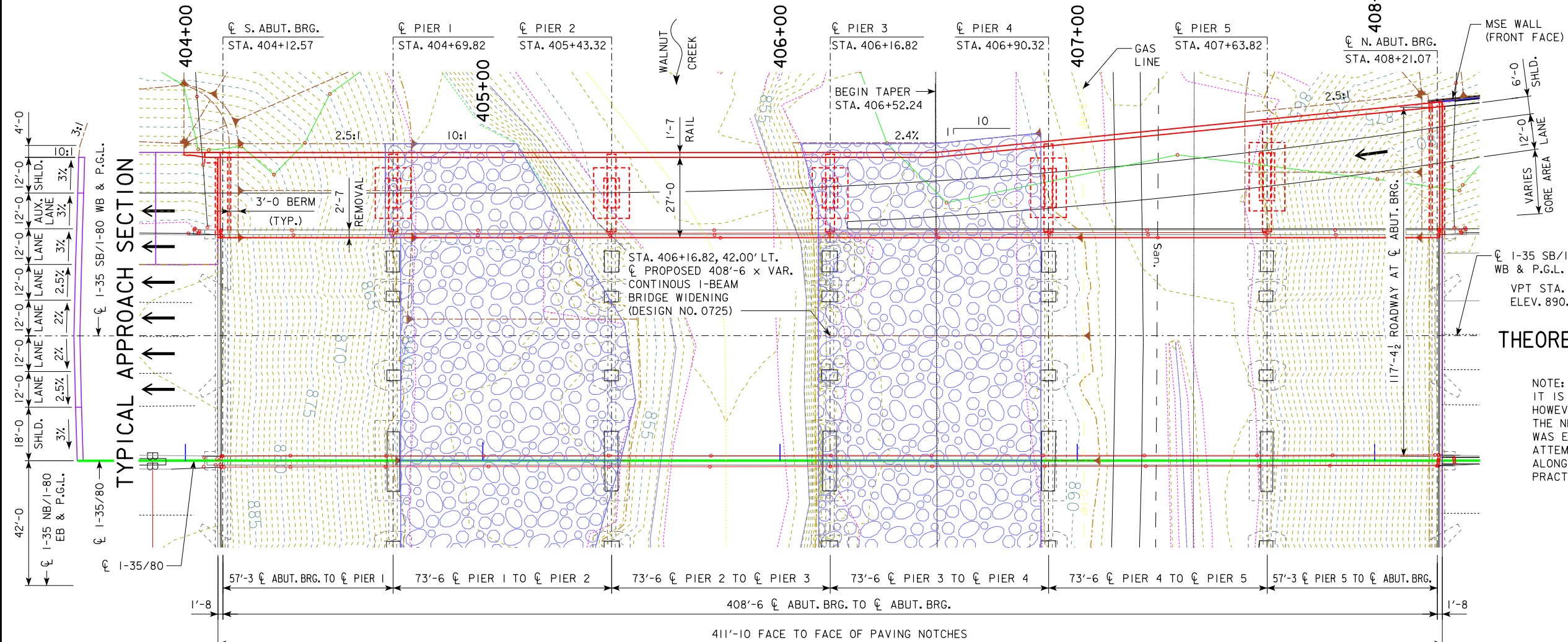
Q<sub>500</sub> = 22,605 CFS  
 STAGE = 865.83  
 AVG. BRIDGE VELOCITY = 13.8 FPS  
 CALCULATED CHECK SCOUR = 833.17

ROADWAY OVERTOP 889.95  
 STA. 402+50

EXTREME HW STAGE = 863.0  
 DATE = UNKNOWN

50, 100 & 500 YR. STAGES AND DISCHARGES FROM POLK COUNTY F.I.S., DATED FEBRUARY 1, 2019. F.I.S. DATUM 0.00 FT. ABOVE PROJECT DATUM.

### LONGITUDINAL SECTION ALONG I-35 SB/I-80 WB AT REMOVAL LINE



### THEORETICAL GRADE S.B. I-35/80 AT REMOVAL LINE

NOTE:  
 IT IS INTENDED TO U.A.C. THE EXISTING GRADE. HOWEVER, IN ORDER TO SHOW ELEVATIONS FOR THE NEW CONSTRUCTION, A THEORETICAL GRADE WAS ESTABLISHED ALONG THE REMOVAL LINE THAT ATTEMPTS TO MATCH THE ROADWAY SURFACE ALONG THE REMOVAL LINE AS CLOSE AS PRACTICABLE.

### LOCATION

I-35 SB AND I-80 WB OVER WALNUT CREEK & BIKE TRAIL  
 T-79N R-25W SECTION 32  
 WALNUT TOWNSHIP POLK COUNTY  
 FHWA NO. 41290  
 BRIDGE MAINT. NO. 7724.8L080  
 LATITUDE 41.611277°  
 LONGITUDE -93.777003°

### I-35 SB/I-80 WB TRAFFIC ESTIMATE

2019 AADT	55,400	V.P.D.
2042 AADT	84,800	V.P.D.
2042 DHV	7,680	V.P.H.
TRUCKS	14	%
TOTAL DESIGN ESALS	-	

### NOTES:

THIS DESIGN IS FOR THE WIDENING OF THE EXISTING 408'-6 X 74'-6 CONTINUOUS I-BEAM BRIDGE, POLK DESIGN NO. 787, FHWA NO. 41290, MAINT. NO. 7724.8L080.  
 ALL OFFSETS ARE MEASURED FROM CL I-35/80.  
 ALL DIMENSIONS ARE IN FEET U.N.O.  
 BEAM TYPE - CONTINUOUS I-BEAM, DEPTH = 3'-0.  
 TL-5 BRIDGE RAILING PROPOSED.  
 PIER TYPE - TEE PIER.  
 BERM SLOPES TO BE CONFIRMED DURING FINAL DESIGN.  
 SEE SHEET V.2 FOR ADDITIONAL NOTES.  
 SEE SHEET V.3 FOR FRAMING PLAN AND V.4-V.5 FOR STAGING.

### SITUATION PLAN

### UTILITY LEGEND

--G--HP--	GAS
--San--	SANITARY SEWER
--SAN.2--	SANITARY SEWER
--W--	WATER

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

### HYDRAULIC DESIGN

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

*David J. Mulholland* 05/24/2022  
 Signature Date

David J. Mulholland  
 Printed or Typed Name

My license renewal date is December 31, 2022

Pages or sheets covered by this seal: SHEETS V.1 AND V.2 (HYDRAULIC DESIGN, CHANNEL GRADING, RETVEMENT)

PRELIMINARY

DESIGN FOR 0° SKEW

### 408'-6 X VAR. CONTINUOUS I-BEAM BRIDGE WIDENING TO 408'-6 X VAR.

57'-3 END SPANS 4 - 73'-6 INTERIOR SPANS

### SITUATION PLAN - SB/WB

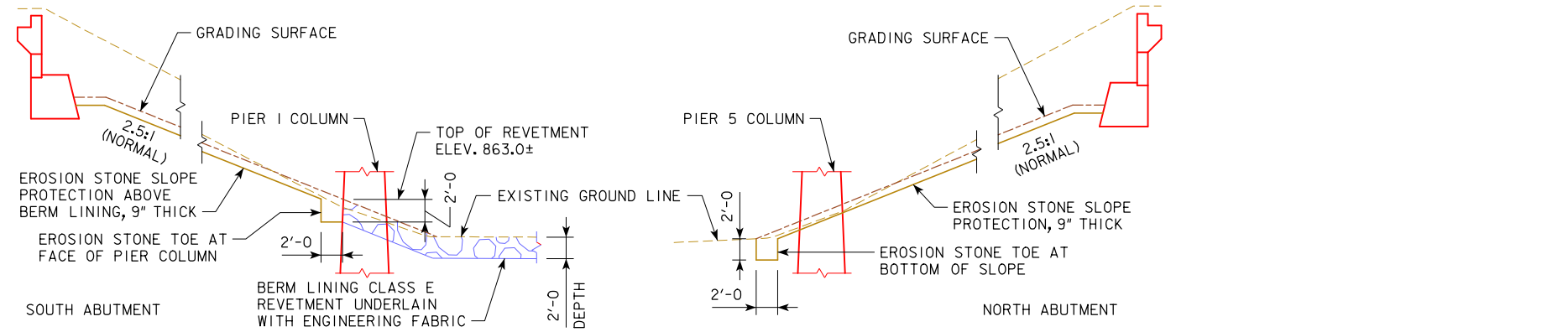
STATION 406+16.82, 42.00' LT. (CL I-35/80) MAY, 2022

### POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 5 FILE NO. 32251 DESIGN NO. 0725





SECTION THRU EROSION STONE AND EMBEDDED REVETMENT BERM

### ESTIMATED BERM ARMORING QUANTITIES

LOCATION	REVETMENT CL. E (TON)	EROSION STONE (TON)	ENGINEERING FABRIC (SY)	EXCAVATION, CLASS IO CHANNEL (CY)
BERM LINING - SOUTH ABUTMENT	---	76.3	227.3	47.7
BERM LINING - NORTH ABUTMENT	---	131.0	374.8	81.9
STONE TOE - SOUTH ABUTMENT	---	7.7	11.4	4.8
STONE TOE - NORTH ABUTMENT	---	10.1	16.4	6.3
CHANNEL LINING - SOUTH	848.5	---	872.6	530.3
CHANNEL LINING - NORTH	959.7	---	982.6	599.8
TOTALS	1808.2	225.1	2485.1	1270.8

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. REVETMENT, CLASS E AND EROSION STONE ESTIMATED AT 1.6 TON/CY.

### BERM SLOPE LOCATION TABLE

POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	404+76.09	106.58' LT.	861.00	407+56.37	117.01' LT.	862.50
A2	404+76.09	75.00' LT.	861.00	407+56.37	75.00' LT.	862.50
B1	404+17.74	106.58' LT.	883.04	408+15.90	122.96' LT.	885.92
B2	404+17.74	75.00' LT.	883.04	408+15.90	75.00' LT.	885.92
W1	403+99.49	106.58' RT.	889.64	---	---	---
W2	---	---	---	---	---	---

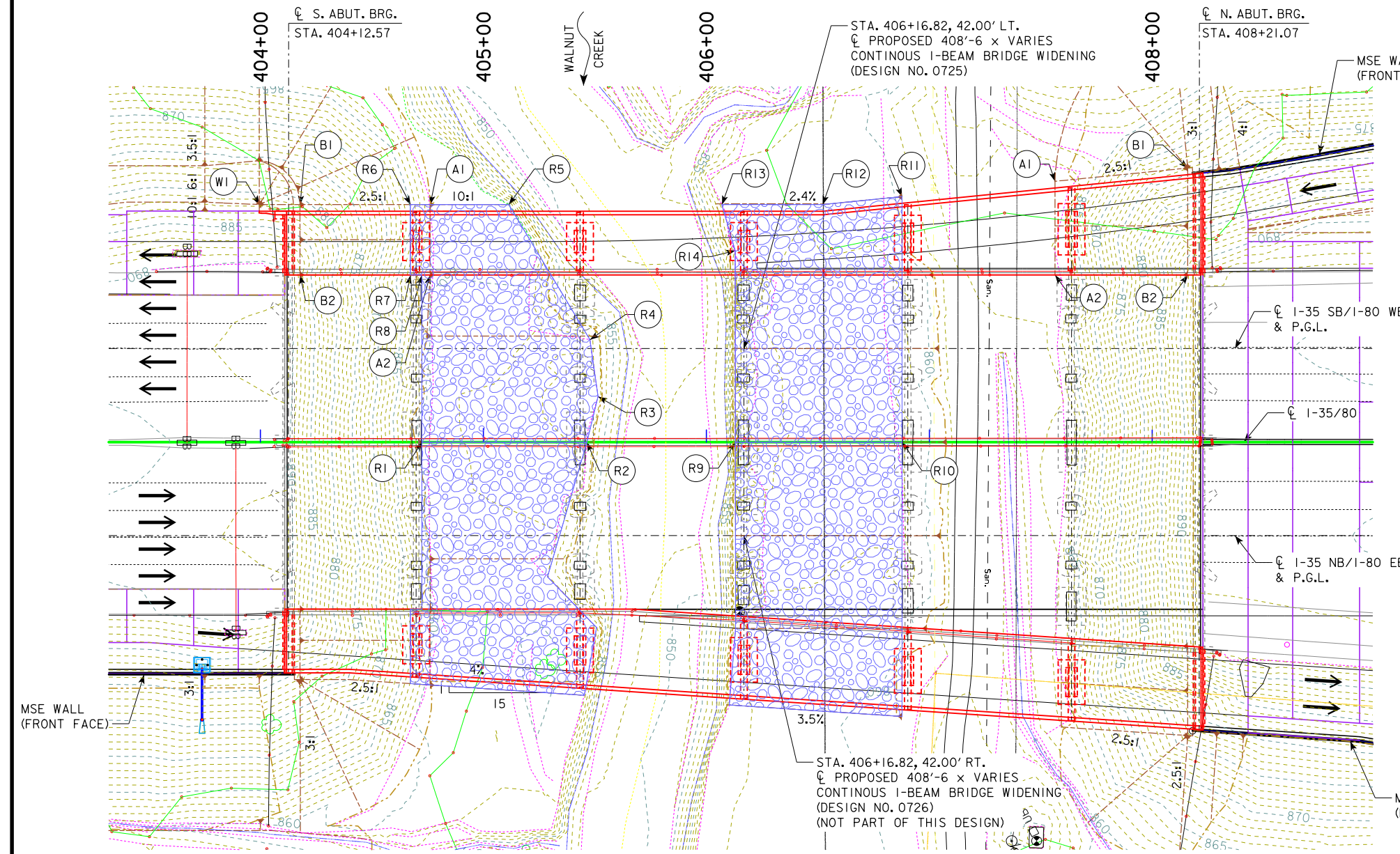
BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

REVETMENT LAYOUT:

- |   |  |
|---|--|
| R1 404+72.40, 0.00' LT., END CHANNEL LINING   | R8 404+72.40, 75.00' LT., END CHANNEL LINING   |
| R2 405+46.37, 0.00' LT., END CHANNEL LINING   | R9 406+13.01, 0.00' LT., END CHANNEL LINING    |
| R3 405+51.40, 20.46' LT., END CHANNEL LINING  | R10 406+87.74, 0.00' LT., END CHANNEL LINING   |
| R4 405+47.73, 45.97' LT., END CHANNEL LINING  | R11 406+87.74, 110.15' LT., END CHANNEL LINING |
| R5 405+11.33, 106.58' LT., END CHANNEL LINING | R12 406+52.09, 106.58' LT., END CHANNEL LINING |
| R6 404+67.24, 106.58' LT., END CHANNEL LINING | R13 406+06.96, 106.58' LT., END CHANNEL LINING |
| R7 404+67.24, 75.00' LT., END CHANNEL LINING  | R14 406+12.90, 85.95' LT., END CHANNEL LINING  |

**NOTES:**

- THE EXISTING BRIDGE WAS SURVEYED APPROXIMATELY 2.67' NORTH OF STATIONS SHOWN ON THE EXISTING PLANS. THE EXISTING BRIDGE WAS DRAWN PER EXISTING PLAN DIMENSIONS AND BEST-FIT TO THE SURVEYED BRIDGE.
- AN IOWA DNR FLOOD PLAIN PERMIT IS REQUIRED. SNYDER AND ASSOCIATES WILL SUBMIT THE APPLICATION AND PLACE THE PERMIT IN THE PW REGULATORY PERMITS SUBDIRECTORY FOLDER UPON RECEIPT.
- REQUIREMENTS FOR A STATE WATER TRAIL OR PADDLING ROUTE MAY BE APPLICABLE. WALNUT CREEK IN THE PROJECT AREA IS DESIGNATED "UNDER DEVELOPMENT" AS A PADDLING ROUTE. PRIOR TO THE BID LETTING DATE A CHECK SHOULD BE MADE AS TO THE STATUS OF THE ROUTE. IF WALNUT CREEK IS DESIGNATED AS A PADDLING ROUTE THE APPLICABLE SIGNAGE PLAN NOTES AND BID ITEMS SHOULD BE ADDED TO THE PLAN SET AS NECESSARY. NOTIFICATION TO THE DNR WITH THE PROJECT DETAILS WILL ALSO BE REQUIRED.
- ALL REVETMENT AND EROSION STONE IS EMBEDDED.



**SITE PLAN**

ALL DIMENSIONS IN FEET UNLESS NOTED OTHERWISE

#### UTILITY LEGEND

---G---HP---	GAS
---San---	SANITARY SEWER
---SAN,2---	SANITARY SEWER
---W---	WATER

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

PRELIMINARY

DESIGN FOR 0° SKEW

## 408'-6 X VAR. CONTINUOUS I-BEAM BRIDGE WIDENING TO 408'-6 X VAR.

57'-3 END SPANS 4 - 73'-6 INTERIOR SPANS

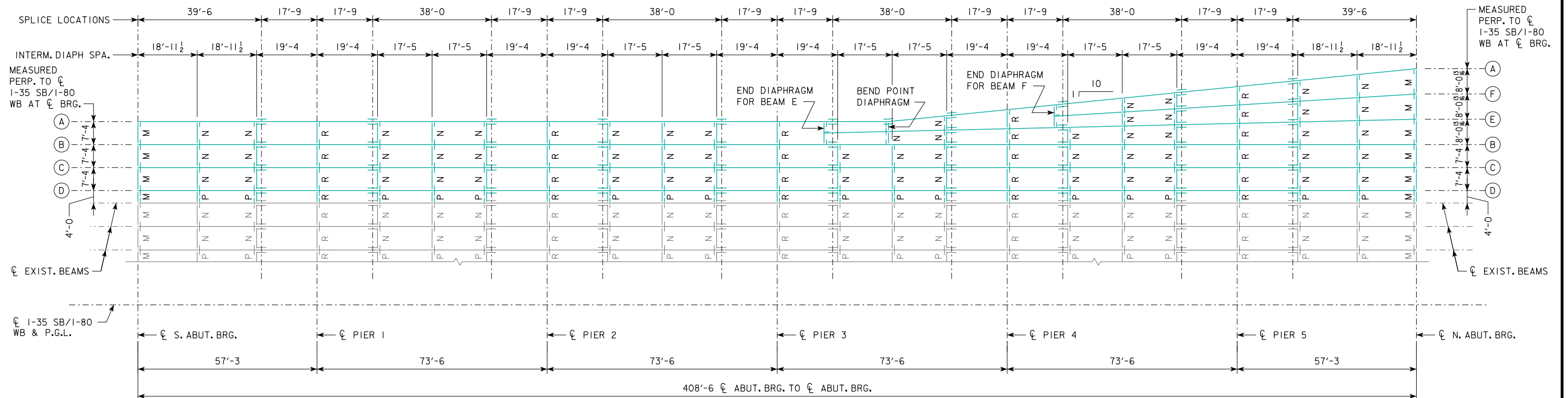
### SITE PLAN - SB/WB

STATION 406+16.82, 42.00' LT. (CL 1-35/80)

## POLK COUNTY

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 2 OF 5 FILE NO. 32251 DESIGN NO. 0725



CONCEPTUAL FRAMING PLAN

- M - DENOTES MC18x42.7 ABUTMENT DIAPHRAGM
- N - DENOTES MC18x42.7 INTERMEDIATE DIAPHRAGM
- P - DENOTES W16x36 INTERMEDIATE DIAPHRAGM
- R - DENOTES W24x68 PIER DIAPHRAGM

PRELIMINARY

DESIGN FOR 0° SKEW

**408'-6 X VAR. CONTINUOUS I-BEAM**  
**BRIDGE WIDENING TO 408'-6 X VAR.**

57'-3 END SPANS                      4 - 73'-6 INTERIOR SPANS

**FRAMING PLAN - SB/WB**

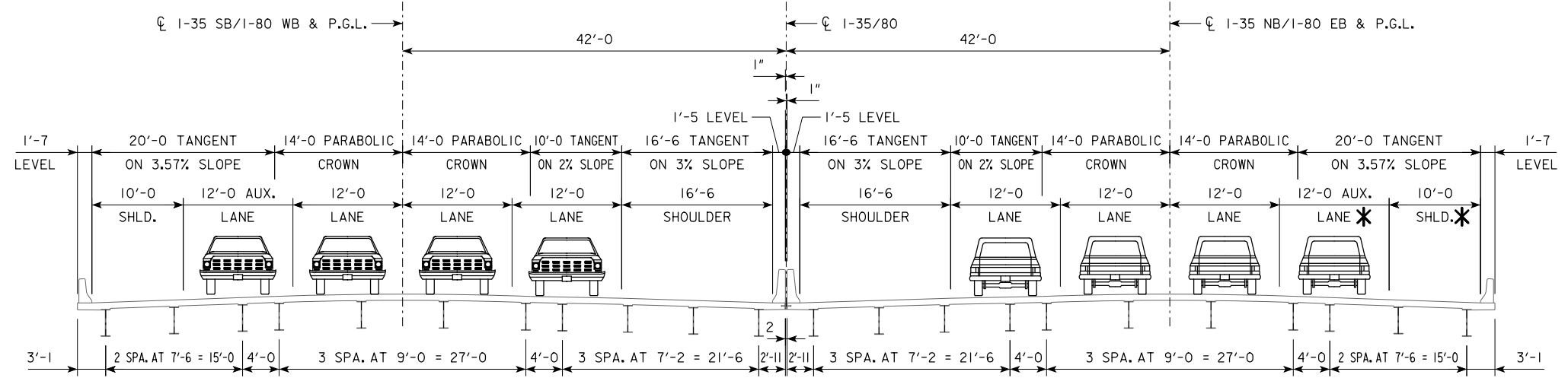
STATION 406+16.82, 42.00' LT. (CL 1-35/80)                      MAY, 2022

**POLK COUNTY**

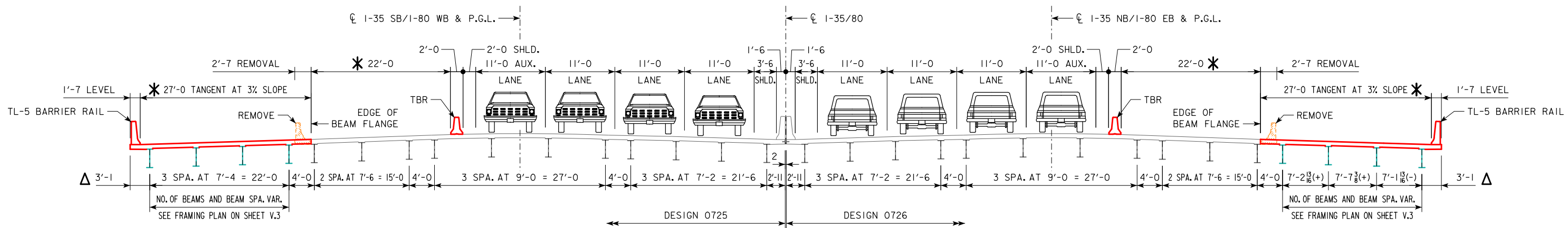
IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 3 OF 5 FILE NO. 32251 DESIGN NO. 0725

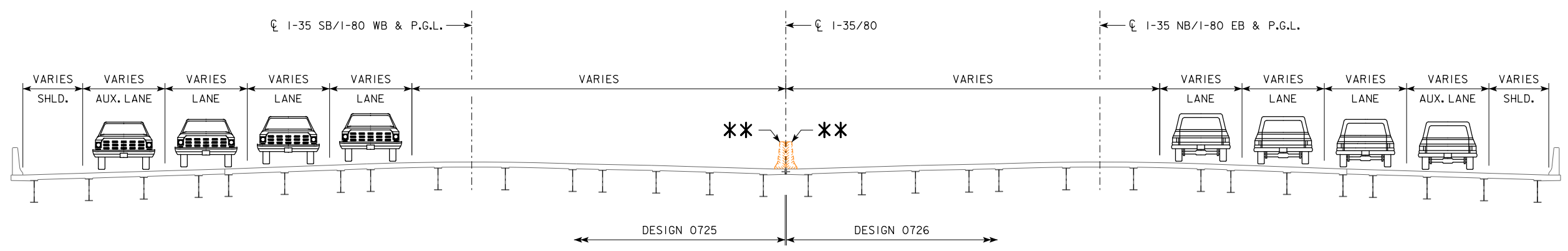




**EXISTING I-35/80 TYPICAL SECTION**  
(LOOKING NORTH; AT SOUTH ABUTMENT)



**STAGE IA**  
(LOOKING NORTH; AT SOUTH ABUTMENT)



**STAGE 2B**  
(LOOKING NORTH; AT SOUTH ABUTMENT)

**STAGING NOTES:**

STAGE NUMBERING SHOWN CORRESPONDS WITH THE STAGES IN THE ROADWAY PLANS.  
SEE TRAFFIC STAGING SHEETS IN THESE PLANS FOR LOCATION OF TBR.

△ PERPENDICULAR TO EDGE OF DECK

\* DIMENSION VARIES THROUGHOUT BRIDGE

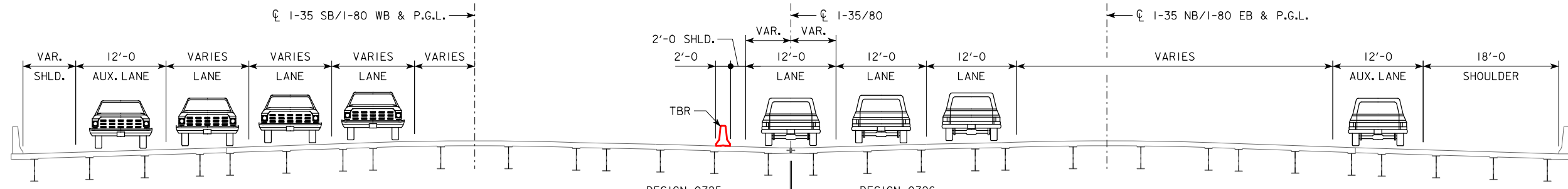
NOTE:  
TBR = TEMPORARY BARRIER RAIL

\*\* REMOVE EXISTING MEDIAN BARRIER RAILS  
FLUSH WITH TOP OF CONCRETE DECK. GRIND  
EXISTING REBAR FLUSH WITH DECK. PRESERVE  
EXISTING MEDIAN SLOTTED DRAIN.

PRELIMINARY  
DESIGN FOR 0° SKEW  
**408'-6 X VAR. CONTINUOUS I-BEAM  
BRIDGE WIDENING TO 408'-6 X VAR.**  
57'-3 END SPANS      4 - 73'-6 INTERIOR SPANS  
**STAGING**  
STATION 406+16.82, 42.00' LT. (CL I-35/80)      MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 4 OF 5      FILE NO. 32251      DESIGN NO. 0725

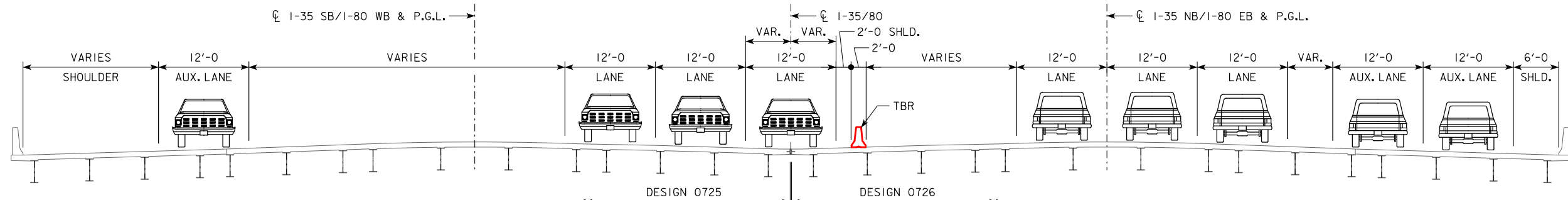






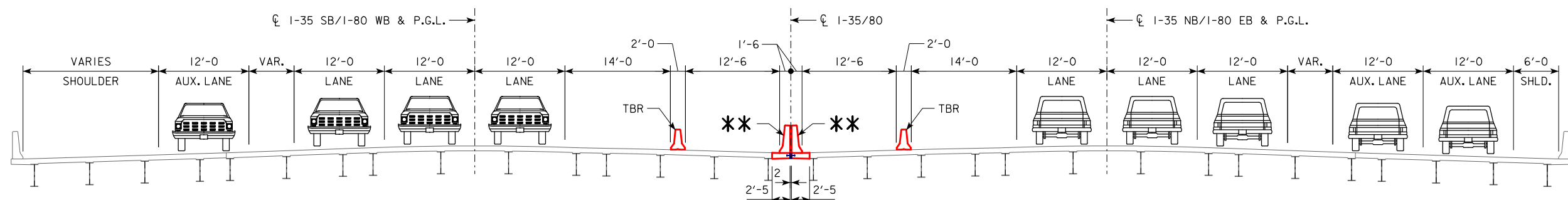
**STAGE 2C**

(LOOKING NORTH; AT SOUTH ABUTMENT)



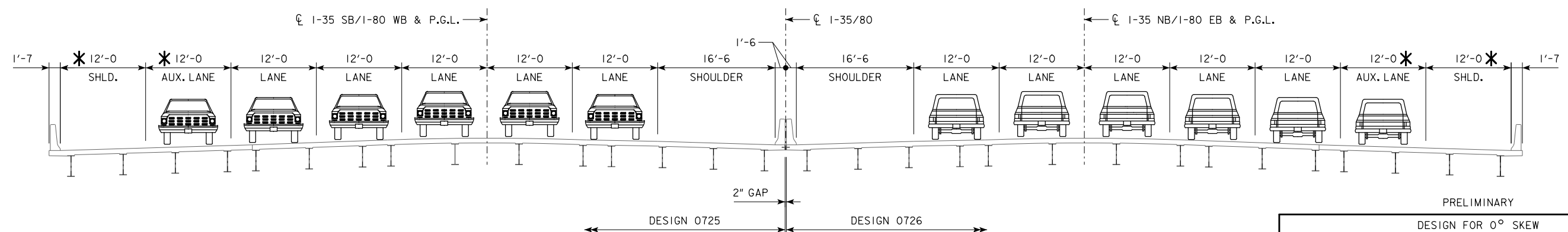
**STAGE 2D**

(LOOKING NORTH; AT SOUTH ABUTMENT)



**STAGE 2E**

(LOOKING NORTH; AT SOUTH ABUTMENT)



**FINAL STAGE**

(LOOKING NORTH; AT SOUTH ABUTMENT)

**STAGING NOTES:**

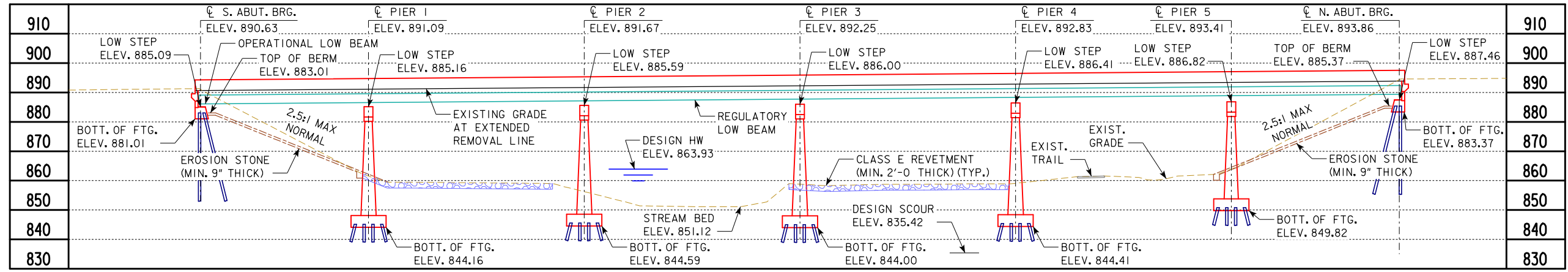
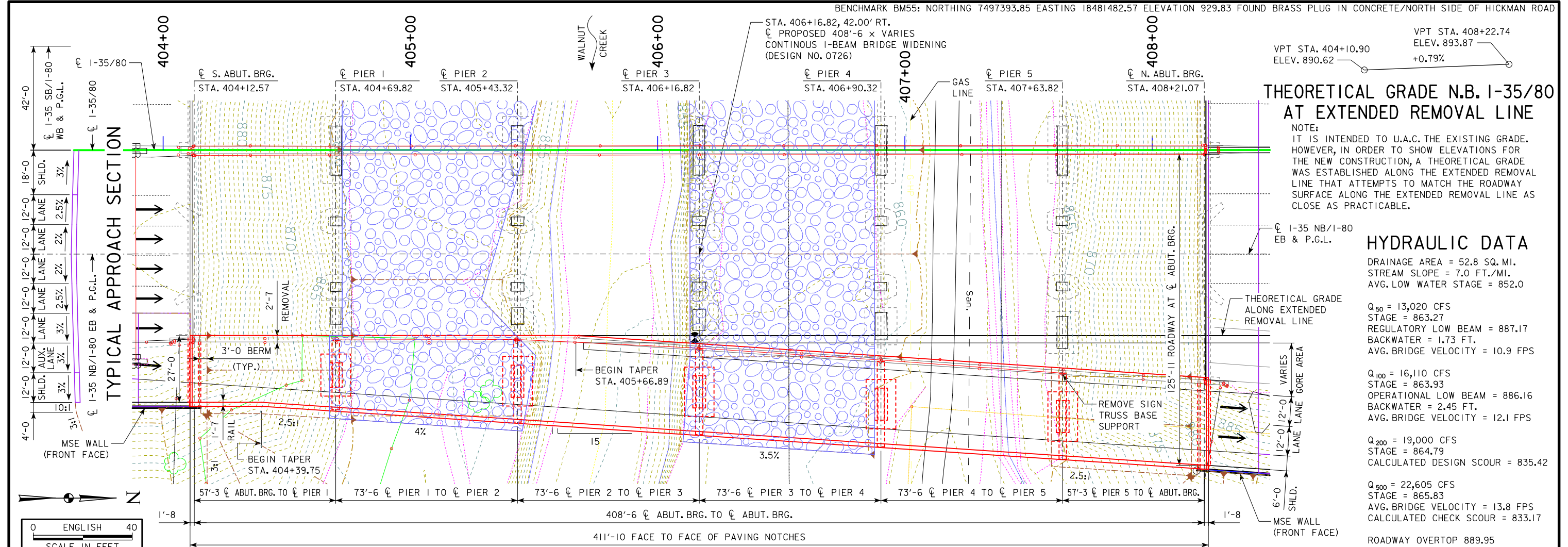
STAGE NUMBERING SHOWN CORRESPONDS WITH THE STAGES IN THE ROADWAY PLANS.  
SEE TRAFFIC STAGING SHEETS IN THESE PLANS FOR LOCATION OF TBR.

\* DIMENSION VARIES THROUGHOUT BRIDGE  
NOTE:  
TBR = TEMPORARY BARRIER RAIL

\*\* REMOVE EXISTING DECK TO EDGE OF EXTERIOR BEAM FLANGE. REMOVE EXISTING MEDIAN SLOTTED DRAIN. PRESERVE EXISTING TRANSVERSE DECK REINFORCING. REPLACE DECK AND MEDIAN SLOTTED DRAIN. CONSTRUCT NEW TL-5 BARRIER RAIL.

PRELIMINARY  
DESIGN FOR 0° SKEW  
**408'-6" X VAR. CONTINUOUS I-BEAM  
BRIDGE WIDENING TO 408'-6" X VAR.**  
57'-3" END SPANS 4 - 73'-6" INTERIOR SPANS  
**STAGING**  
STATION 406+16.82, 42.00' LT. (CL I-35/80) MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 5 OF 5 FILE NO. 32251 DESIGN NO. 0725





**I-35 NB/I-80 EB  
 TRAFFIC ESTIMATE**

2019 AADT	56,400	V.P.D.
2042 AADT	83,000	V.P.D.
2042 DHV	8,000	V.P.H.
TRUCKS	14	%
TOTAL DESIGN ESALS	-	

**NOTES:**

THIS DESIGN IS FOR THE WIDENING OF THE EXISTING 408'-6 X VAR. CONTINUOUS I-BEAM BRIDGE, POLK DESIGN NO. 787, FHWA NO. 41280, MAINT. NO. 7724.8R080.

ALL OFFSETS ARE MEASURED FROM ☉ I-35/80.

ALL DIMENSIONS ARE IN FEET U.N.O.

BEAM TYPE - CONTINUOUS I-BEAM, DEPTH = 3'-0.

TL-5 BRIDGE RAILING PROPOSED.

PIER TYPE - TEE PIER.

BERM SLOPES TO BE CONFIRMED DURING FINAL DESIGN.

SEE SHEET V.7 FOR ADDITIONAL NOTES.

SEE SHEET V.8 FOR FRAMING PLAN AND V.9-V.10 FOR STAGING.

**UTILITY LEGEND**

--G--HP--	GAS
--San.--	SANITARY SEWER
--SAN.2--	SANITARY SEWER
--W--	WATER

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

**HYDRAULIC DESIGN**

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

*David J. Mulholland* 05/24/2022  
 Signature Date

David J. Mulholland  
 Printed or Typed Name

My license renewal date is December 31, 2022

Pages or sheets covered by this seal: SHEETS V.6 AND V.7  
 (HYDRAULIC DESIGN, CHANNEL GRADING, RETVEMENT)

PRELIMINARY

DESIGN FOR 0° SKEW

**408'-6 X VAR. CONTINUOUS I-BEAM  
 BRIDGE WIDENING TO 408'-6 X VAR.**

57'-3 END SPANS 4 - 73'-6 INTERIOR SPANS

**SITUATION PLAN - NB/EB**

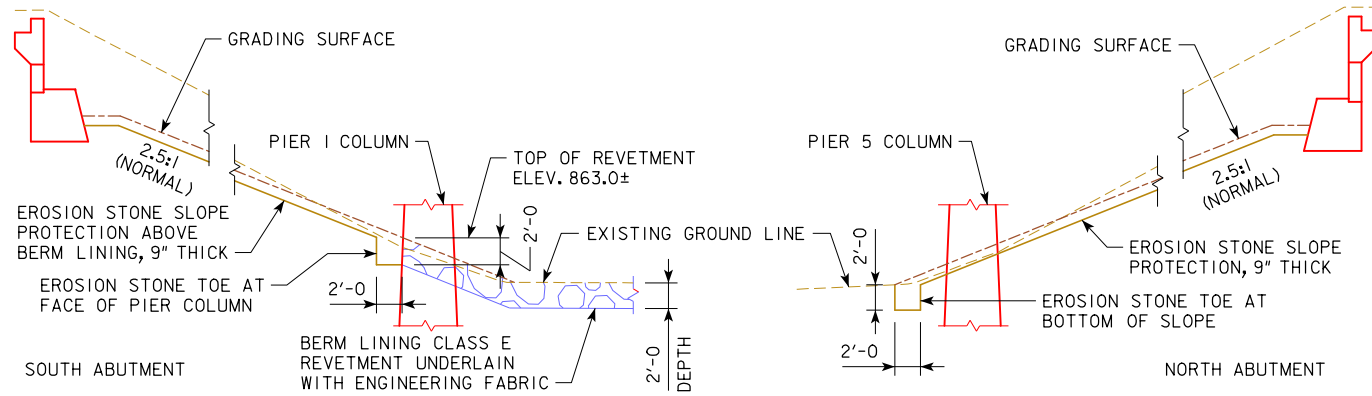
STATION 406+16.82, 42.00' RT. (☉ I-35/80) MAY, 2022

**POLK COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 5 FILE NO. 32251 DESIGN NO. 0726





SECTION THRU EROSION FABRIC AND EMBEDDED REVETMENT BERM

ESTIMATED BERM ARMORING QUANTITIES				
LOCATION	REVTMENT CL. E (TON)	EROSION STONE (TON)	ENGINEERING FABRIC (SY)	EXCAVATION, CLASS IO CHANNEL (CY)
BERM LINING - SOUTH ABUTMENT	---	77.4	230.4	48.4
BERM LINING - NORTH ABUTMENT	---	110.6	320.1	69.1
STONE TOE - SOUTH ABUTMENT	---	8.0	12.1	5.0
STONE TOE - NORTH ABUTMENT	---	9.4	14.5	5.9
CHANNEL LINING - SOUTH	920.3	---	949.7	575.2
CHANNEL LINING - NORTH	1073.3	---	1093.6	670.8
TOTALS	1993.6	205.4	2620.4	1374.4

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. REVETMENT, CLASS E AND EROSION STONE ESTIMATED AT 1.6 TON/CY.

BERM SLOPE LOCATION TABLE						
POINTS	SOUTH ABUTMENT			NORTH ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	404+76.09	75.00' RT.	860.00	407+59.24	87.82' RT.	862.75
A2	404+76.09	109.01' RT.	860.00	407+59.24	127.89' RT.	862.75
B1	404+17.74	75.00' RT.	883.01	408+15.90	91.60' RT.	885.37
B2	404+17.74	106.58' RT.	883.01	408+15.90	131.67' RT.	885.37
W1	---	---	---	---	---	---
W2	---	---	---	---	---	---

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

REVTMENT LAYOUT:

- (R1) 404+72.40, 0.00' RT., END CHANNEL LINING
- (R2) 405+46.37, 0.00' RT., END CHANNEL LINING
- (R3) 405+28.72, 60.49' RT., END CHANNEL LINING
- (R4) 405+50.72, 83.23' RT., END CHANNEL LINING
- (R5) 405+45.22, 113.62' RT., END CHANNEL LINING
- (R6) 404+67.24, 108.42' RT., END CHANNEL LINING
- (R7) 404+67.24, 75.00' RT., END CHANNEL LINING
- (R8) 404+72.40, 75.00' RT., END CHANNEL LINING
- (R9) 406+13.01, 0.00' RT., END CHANNEL LINING
- (R10) 406+87.74, 0.00' RT., END CHANNEL LINING
- (R11) 406+87.74, 123.12' RT., END CHANNEL LINING
- (R12) 406+10.26, 117.96' RT., END CHANNEL LINING
- (R13) 406+13.11, 84.01' RT., END CHANNEL LINING

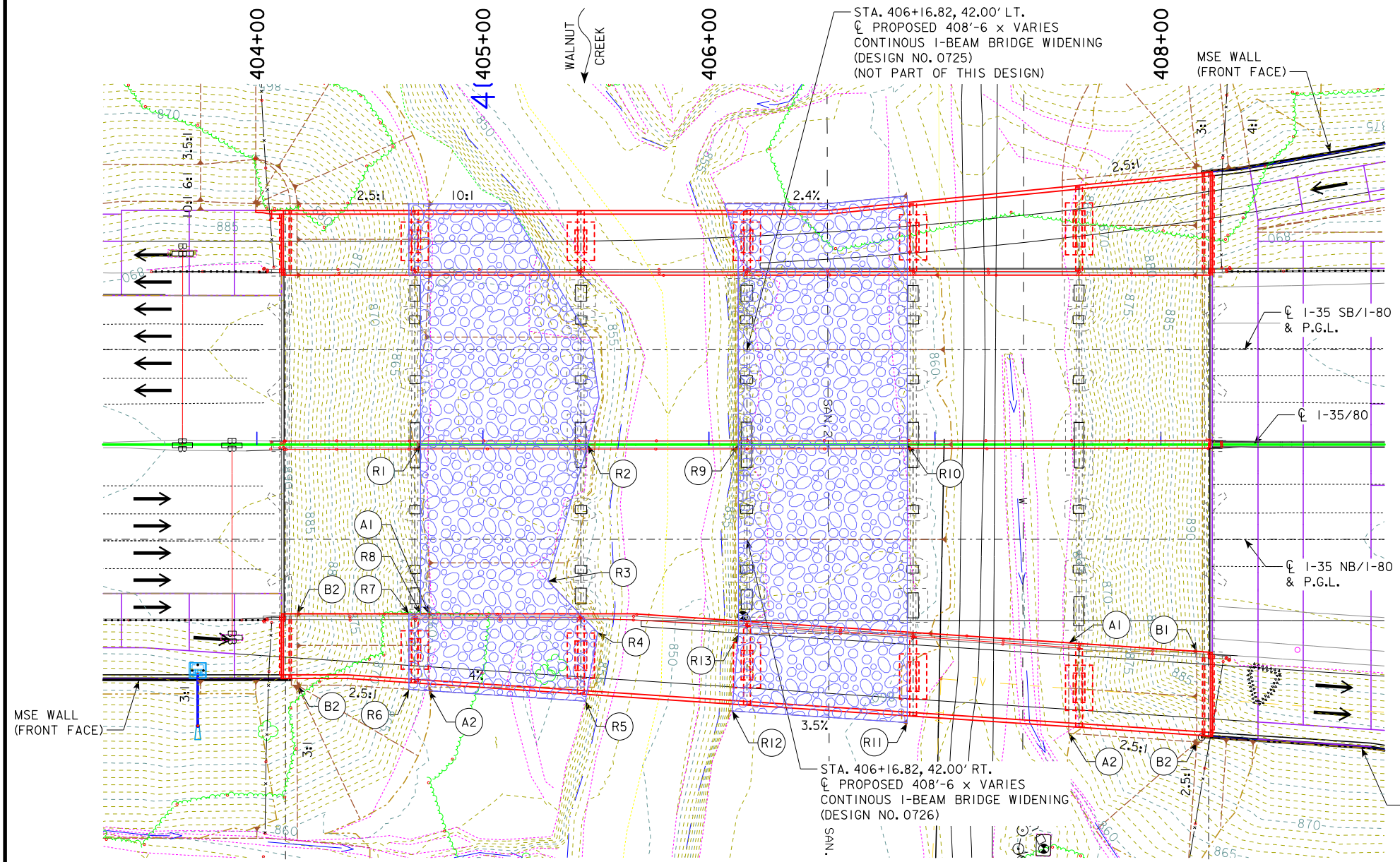
**NOTES:**

THE EXISTING BRIDGE WAS SURVEYED APPROXIMATELY 2.67' NORTH OF STATIONS SHOWN ON THE EXISTING PLANS. THE EXISTING BRIDGE WAS DRAWN PER EXISTING PLAN DIMENSIONS AND BEST-FIT TO THE SURVEYED BRIDGE.

AN IOWA DNR FLOOD PLAIN PERMIT IS REQUIRED. SNYDER AND ASSOCIATES WILL SUBMIT THE APPLICATION AND PLACE THE PERMIT IN THE PW REGULATORY PERMITS SUBDIRECTORY FOLDER UPON RECEIPT.

REQUIREMENTS FOR A STATE WATER TRAIL OR PADDLING ROUTE MAY BE APPLICABLE. WALNUT CREEK IN THE PROJECT AREA IS DESIGNATED "UNDER DEVELOPMENT" AS A PADDLING ROUTE. PRIOR TO THE BID LETTING DATE A CHECK SHOULD BE MADE AS TO THE STATUS OF THE ROUTE. IF WALNUT CREEK IS DESIGNATED AS A PADDLING ROUTE THE APPLICABLE SIGNAGE PLAN NOTES AND BID ITEMS SHOULD BE ADDED TO THE PLAN SET AS NECESSARY. NOTIFICATION TO THE DNR WITH THE PROJECT DETAILS WILL ALSO BE REQUIRED.

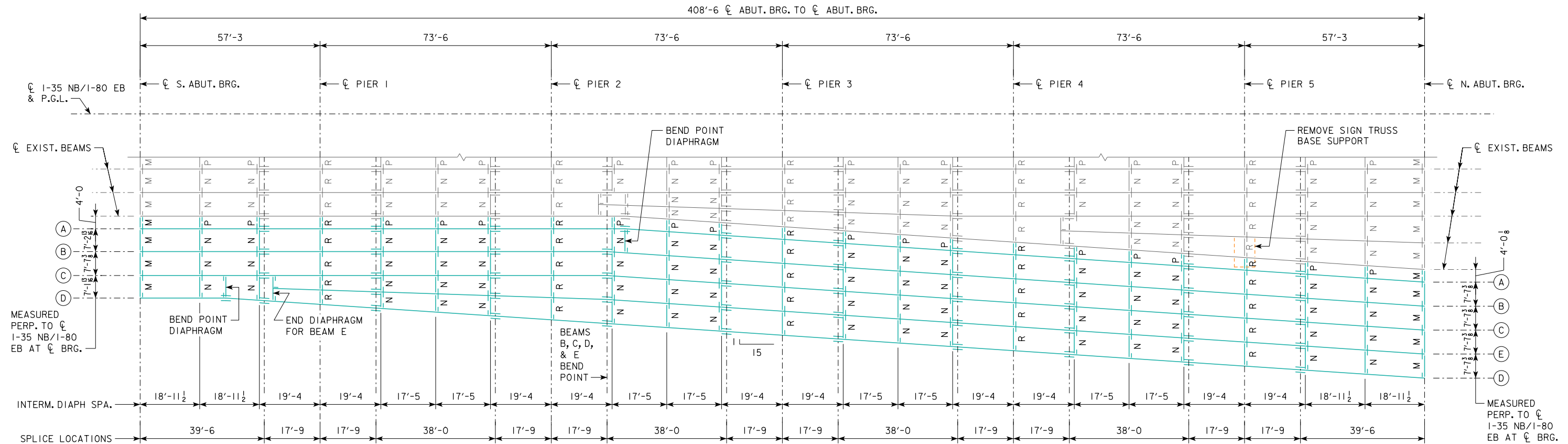
ALL REVETMENT AND EROSION STONE IS EMBEDDED.



UTILITY LEGEND	
--G-HP--	GAS
--San.--	SANITARY SEWER
--SAN.2--	SANITARY SEWER
--W--	WATER

ALL DIMENSIONS IN FEET UNLESS NOTED OTHERWISE  
 UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

PRELIMINARY  
 DESIGN FOR 0° SKEW  
**408'-6 X VAR. CONTINUOUS I-BEAM BRIDGE WIDENING TO 408'-6 X VAR.**  
 57'-3 END SPANS 4 - 73'-6 INTERIOR SPANS  
**SITE PLAN - NB/EB**  
 STATION 406+16.82, 42.00' RT. (CL 1-35/80)  
 POLK COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. 2 OF 5 FILE NO. 32251 DESIGN NO. 0726



### CONCEPTUAL FRAMING PLAN

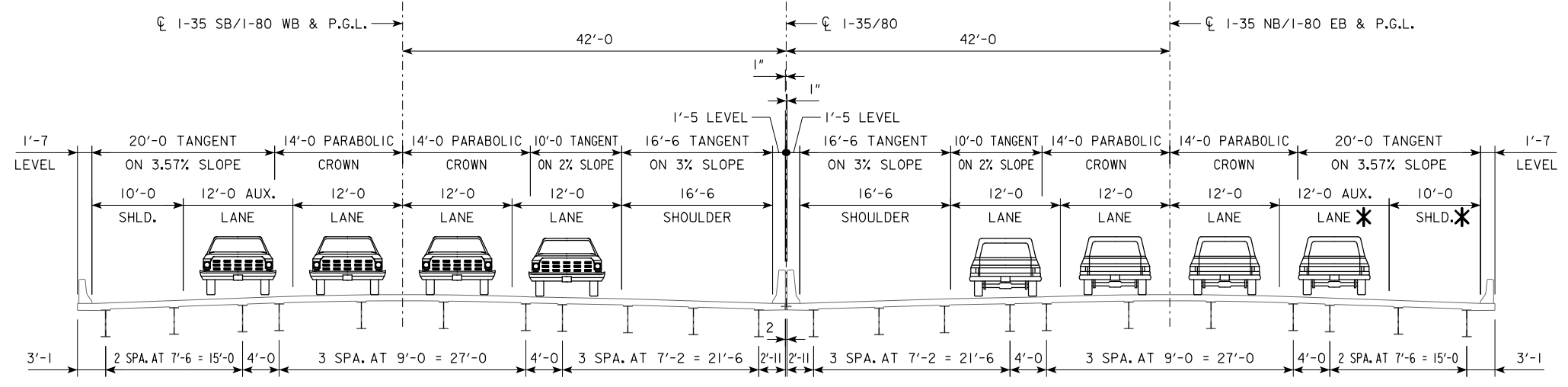
M - DENOTES MC18x42.7 ABUTMENT DIAPHRAGM  
 N - DENOTES MC18x42.7 INTERMEDIATE DIAPHRAGM  
 P - DENOTES W16x36 INTERMEDIATE DIAPHRAGM  
 R - DENOTES W24x68 PIER DIAPHRAGM

PRELIMINARY

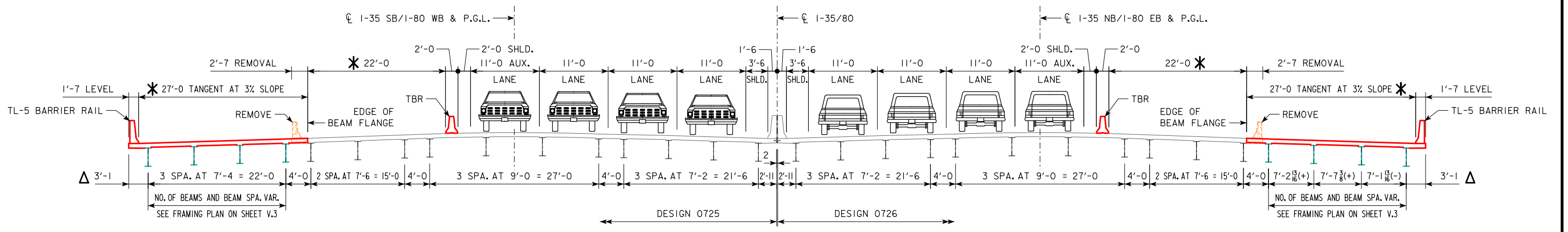
DESIGN FOR 0° SKEW  
**408'-6" X VAR. CONTINUOUS I-BEAM**  
**BRIDGE WIDENING TO 408'-6" X VAR.**  
 57'-3" END SPANS 4 - 73'-6" INTERIOR SPANS  
**FRAMING PLAN - NB/EB**  
 STATION 406+16.82, 42.00' RT. ( $\phi$  1-35/80) MAY, 2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. 3 OF 5 FILE NO. 32251 DESIGN NO. 0726



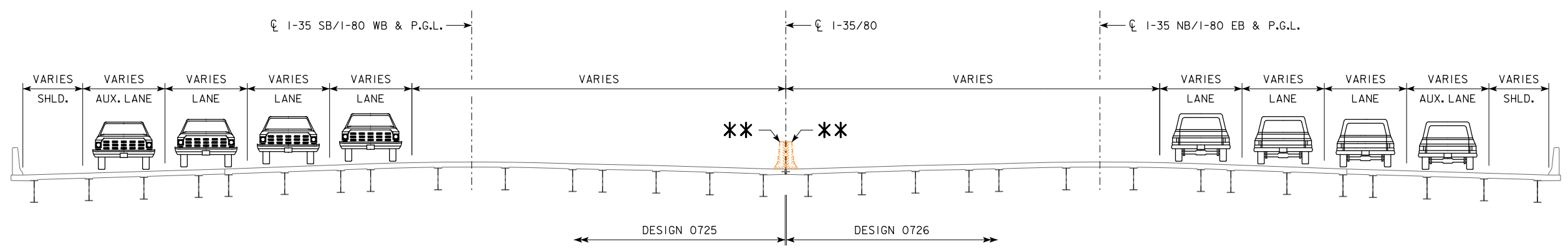




**EXISTING I-35/80 TYPICAL SECTION**  
(LOOKING NORTH; AT SOUTH ABUTMENT)



**STAGE IA**  
(LOOKING NORTH; AT SOUTH ABUTMENT)



**STAGE 2B**  
(LOOKING NORTH; AT SOUTH ABUTMENT)

**STAGING NOTES:**

STAGE NUMBERING SHOWN CORRESPONDS WITH THE STAGES IN THE ROADWAY PLANS.  
SEE TRAFFIC STAGING SHEETS IN THESE PLANS FOR LOCATION OF TBR.

△ PERPENDICULAR TO EDGE OF DECK

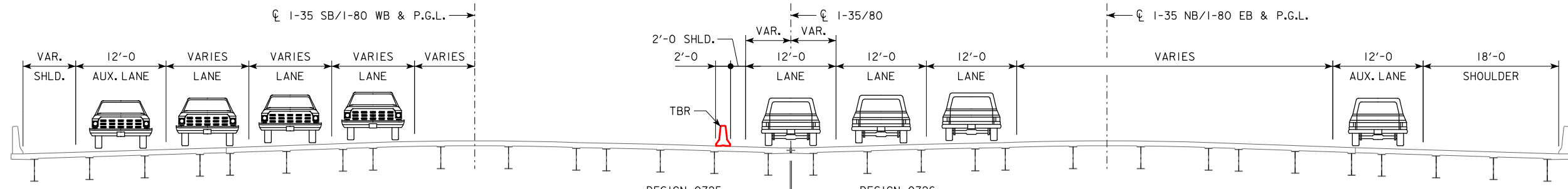
\* DIMENSION VARIES THROUGHOUT BRIDGE

NOTE:  
TBR = TEMPORARY BARRIER RAIL

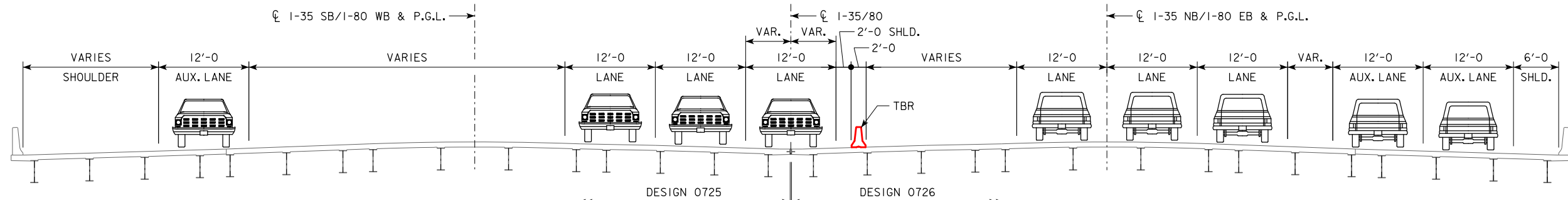
\*\* REMOVE EXISTING MEDIAN BARRIER RAILS  
FLUSH WITH TOP OF CONCRETE DECK. GRIND  
EXISTING REBAR FLUSH WITH DECK. PRESERVE  
EXISTING MEDIAN SLOTTED DRAIN.

PRELIMINARY  
DESIGN FOR 0° SKEW  
**408'-6 X VAR. CONTINUOUS I-BEAM  
BRIDGE WIDENING TO 408'-6 X VAR.**  
57'-3 END SPANS      4 - 73'-6 INTERIOR SPANS  
**STAGING**  
STATION 406+16.82, 42.00' RT. (CL I-35/80)      MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 4 OF 5      FILE NO. 32251      DESIGN NO. 0726

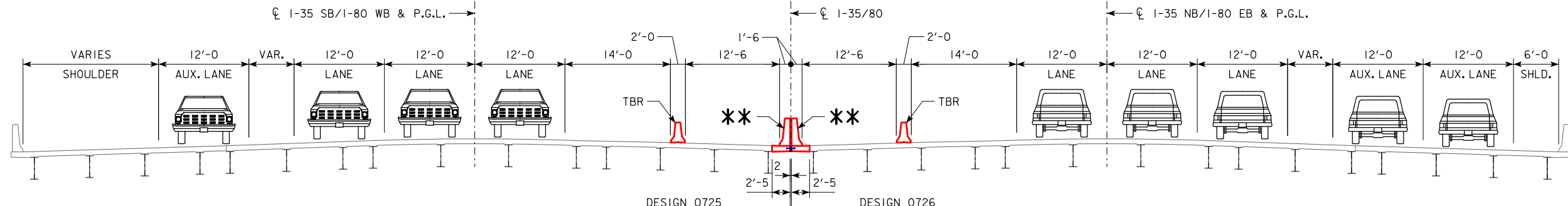




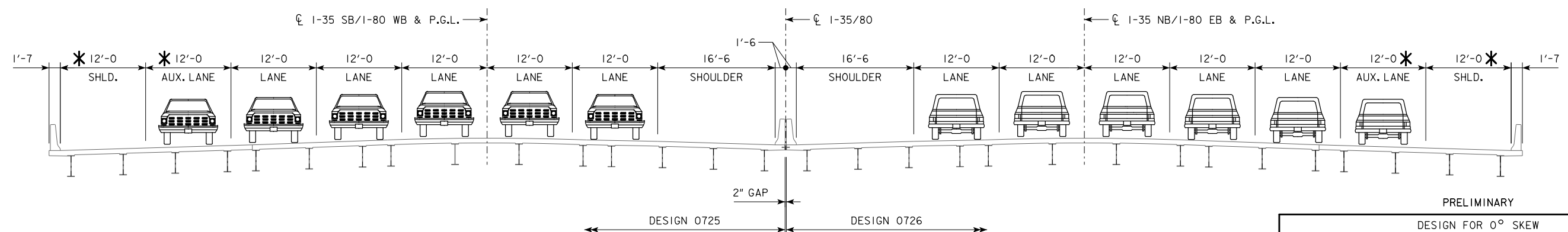
**STAGE 2C**  
(LOOKING NORTH; AT SOUTH ABUTMENT)



**STAGE 2D**  
(LOOKING NORTH; AT SOUTH ABUTMENT)



**STAGE 2E**  
(LOOKING NORTH; AT SOUTH ABUTMENT)



**FINAL STAGE**  
(LOOKING NORTH; AT SOUTH ABUTMENT)

**STAGING NOTES:**

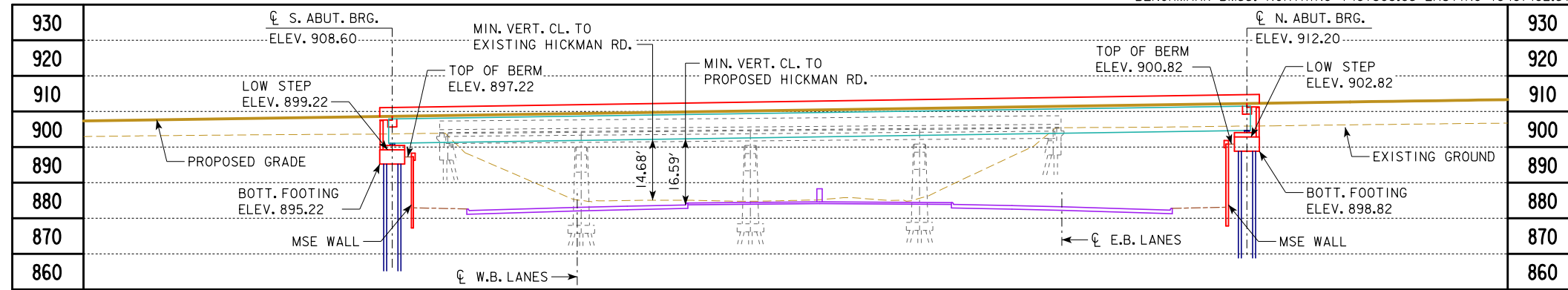
STAGE NUMBERING SHOWN CORRESPONDS WITH THE STAGES IN THE ROADWAY PLANS.  
SEE TRAFFIC STAGING SHEETS IN THESE PLANS FOR LOCATION OF TBR.

\* DIMENSION VARIES THROUGHOUT BRIDGE  
NOTE:  
TBR = TEMPORARY BARRIER RAIL

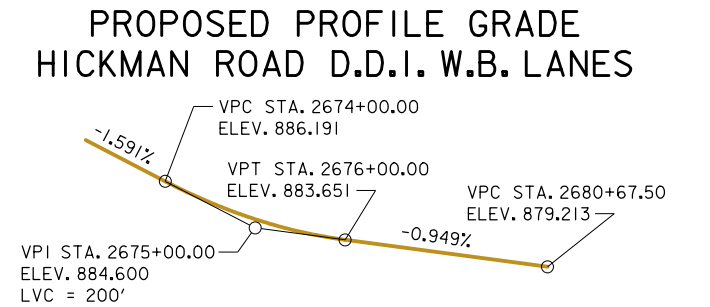
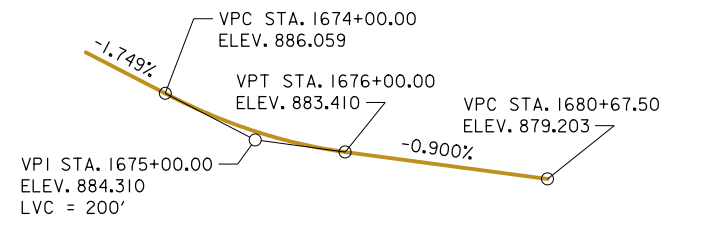
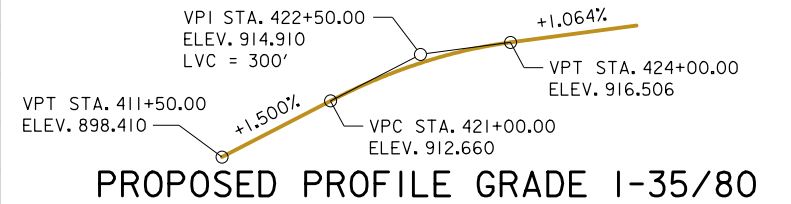
\*\* REMOVE EXISTING DECK TO EDGE OF EXTERIOR BEAM FLANGE. REMOVE EXISTING MEDIAN SLOTTED DRAIN. PRESERVE EXISTING TRANSVERSE DECK REINFORCING. REPLACE DECK AND MEDIAN SLOTTED DRAIN. CONSTRUCT NEW TL-5 BARRIER RAIL.

PRELIMINARY  
DESIGN FOR 0° SKEW  
**408'-6 X VAR. CONTINUOUS I-BEAM BRIDGE WIDENING TO 408'-6 X VAR.**  
57'-3 END SPANS      4 - 73'-6 INTERIOR SPANS  
**STAGING**  
STATION 406+16.82, 42.00' RT. (CL I-35/80)      MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 5 OF 5      FILE NO. 32251      DESIGN NO. 0726



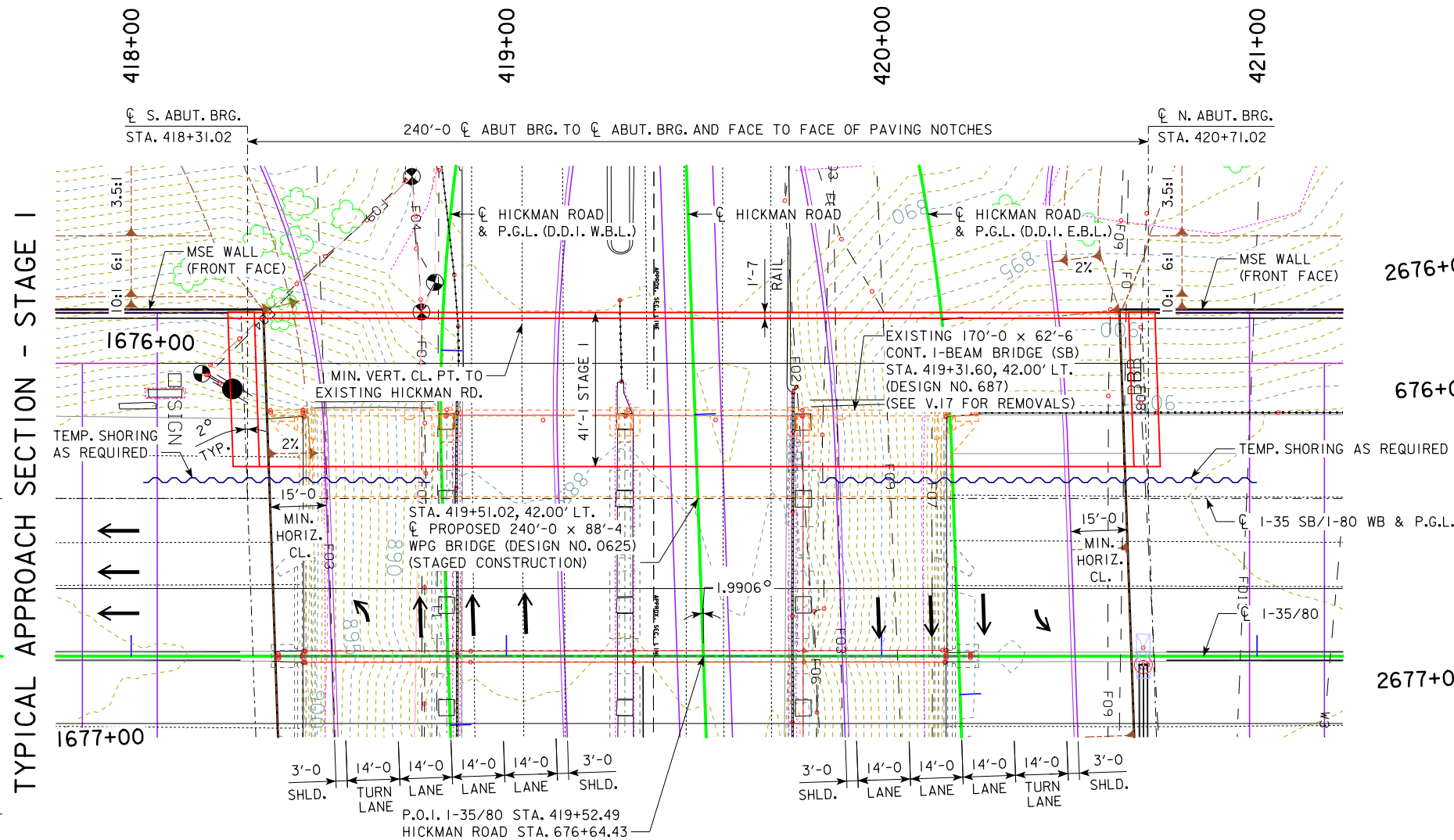


**LONGITUDINAL SECTION ALONG CL 1-35 SB/1-80 WB**  
TOP OF BRIDGE DECK AT CL 1-35 SB/1-80 WB IS 0.03' BELOW THE PROFILE GRADE TO ACCOUNT FOR THE PARABOLIC CROWN.



**NOTES:**

THIS DESIGN IS FOR THE REPLACEMENT OF THE EXISTING 170'-0" X 62'-6" CONTINUOUS I-BEAM BRIDGE, POLK DESIGN NO. 687, FHWA NO. 041310, MAINT. NO. 7725.1L080. SEMI-INTEGRAL ABUTMENTS PROPOSED WITH NON-STANDARD WIDTH (7'-0"), NON-STANDARD DEPTH (4'-0"), NON-BATTERED PILING, AND TIE-ROD ANCHORS FOR LATERAL RESISTANCE. ALL OFFSETS ARE MEASURED FROM CL 1-35/80. ALL DIMENSIONS ARE IN FEET U.N.O. BEAM TYPE - WPG, DEPTH = 6'-10". TL-5 BRIDGE RAILING PROPOSED. BRIDGE AESTHETICS TO BE INCORPORATED DURING FINAL DESIGN. SEE BRIDGE CROSS SECTION AND STAGING ON SHEETS V.17-V.18.



UTILITY LEGEND	
--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
⊕	POWER POLE

**LOCATION**  
1-35 SB AND 1-80 WB OVER U.S. 6 (HICKMAN ROAD)  
T-79N R-25W  
SECTIONS 29 & 32  
WALNUT TOWNSHIP  
POLK COUNTY  
EXISTING FHWA NO. 041310  
NEW FHWA NO. 41311  
BRIDGE MAINT. NO. 7725.1L080  
LATITUDE 41.614938°  
LONGITUDE -93.776987°

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION. PRELIMINARY



**MINIMUM VERTICAL CLEARANCE TO EXISTING HICKMAN ROAD**

OVERHEAD STATION = 419+04.15, OFFSET 88.50' LT.  
OVERHEAD ELEVATION = 908.51  
DEPTH OF SUPERSTRUCTURE = 7.58'  
LIVE LOAD DEFLECTION = 0.30'  
UNDERPASS STATION (CL HICKMAN RD.) = 675+74.30, OFFSET 45.23' RT.  
UNDERPASS ELEVATION = 885.94  
MINIMUM VERTICAL CLEARANCE = 14.68'



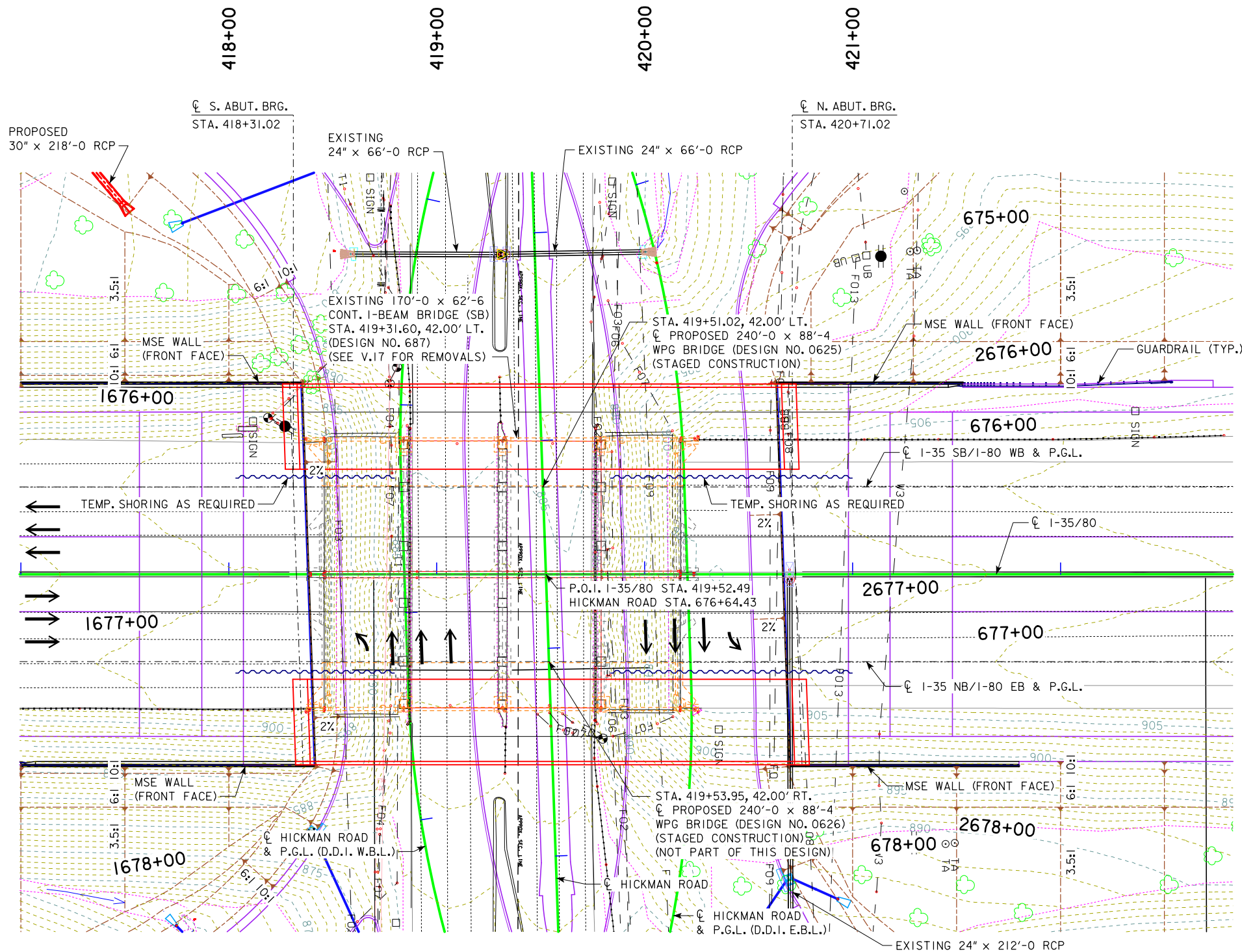
**HICKMAN ROAD 1-35 SB/1-80 WB TRAFFIC ESTIMATE**

	2019 AADT	2042 AADT	2042 DHV	TRUCKS	TOTAL DESIGN ESALS
HICKMAN ROAD	32,500	49,600	4,530	4 %	-
1-35 SB/1-80 WB	49,700	73,200	6,560	14 %	-

**240'-0" X 41'-1" WELDED PLATE GIRDER BRIDGE**

240'-0" SPAN  
**SITUATION PLAN - STAGE I SB/WB**  
STATION 419+51.02, 42.00' LT. (CL 1-35/80)  
MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 1 OF 8 FILE NO. 32251 DESIGN NO. 0625





**SITE PLAN - STAGE I**  
ALL DIMENSIONS IN FEET UNLESS NOTED OTHERWISE

UTILITY LEGEND	
--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
	POWER POLE

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

PRELIMINARY

DESIGN FOR 2° SKEW (R.A.)

**240'-0" X 41'-1" WELDED PLATE GIRDER BRIDGE**

240'-0" SPAN

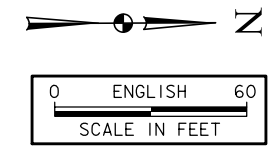
**SITE PLAN - STAGE I SB/WB**

STATION 419+51.02, 42.00' LT. (CL I-35/80) MAY, 2022

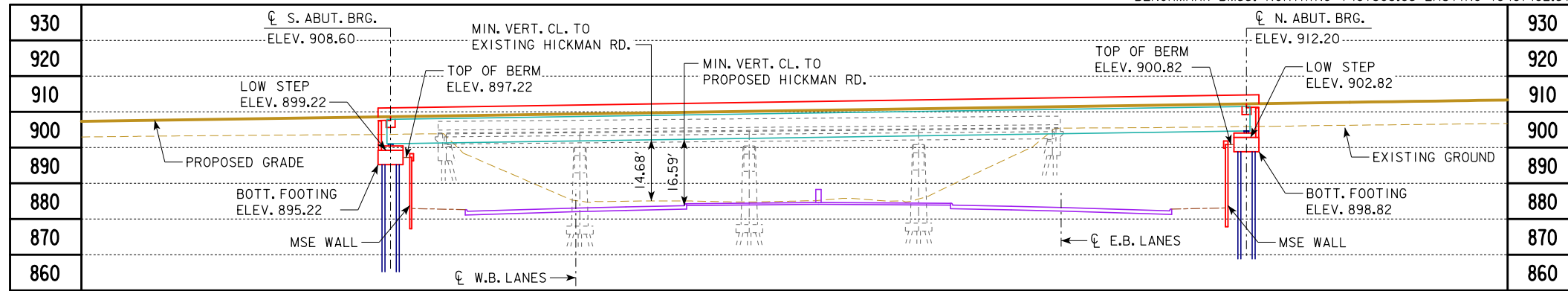
**POLK COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION

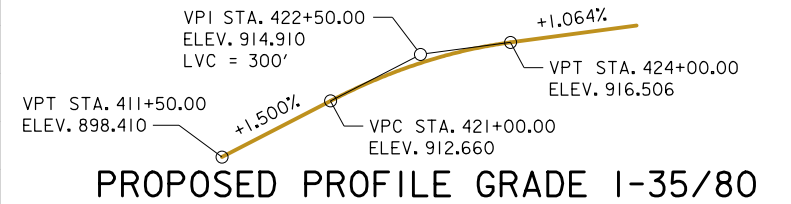
DESIGN SHEET NO. 2 OF 8 FILE NO. 32251 DESIGN NO. 0625



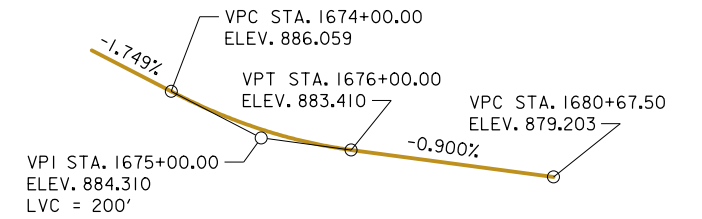




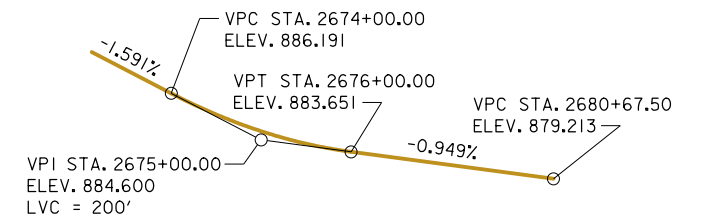
**LONGITUDINAL SECTION ALONG CL 1-35 SB/1-80 WB**  
TOP OF BRIDGE DECK AT CL 1-35 SB/1-80 WB IS 0.03' BELOW THE PROFILE GRADE TO ACCOUNT FOR THE PARABOLIC CROWN.



**PROPOSED PROFILE GRADE 1-35/80**



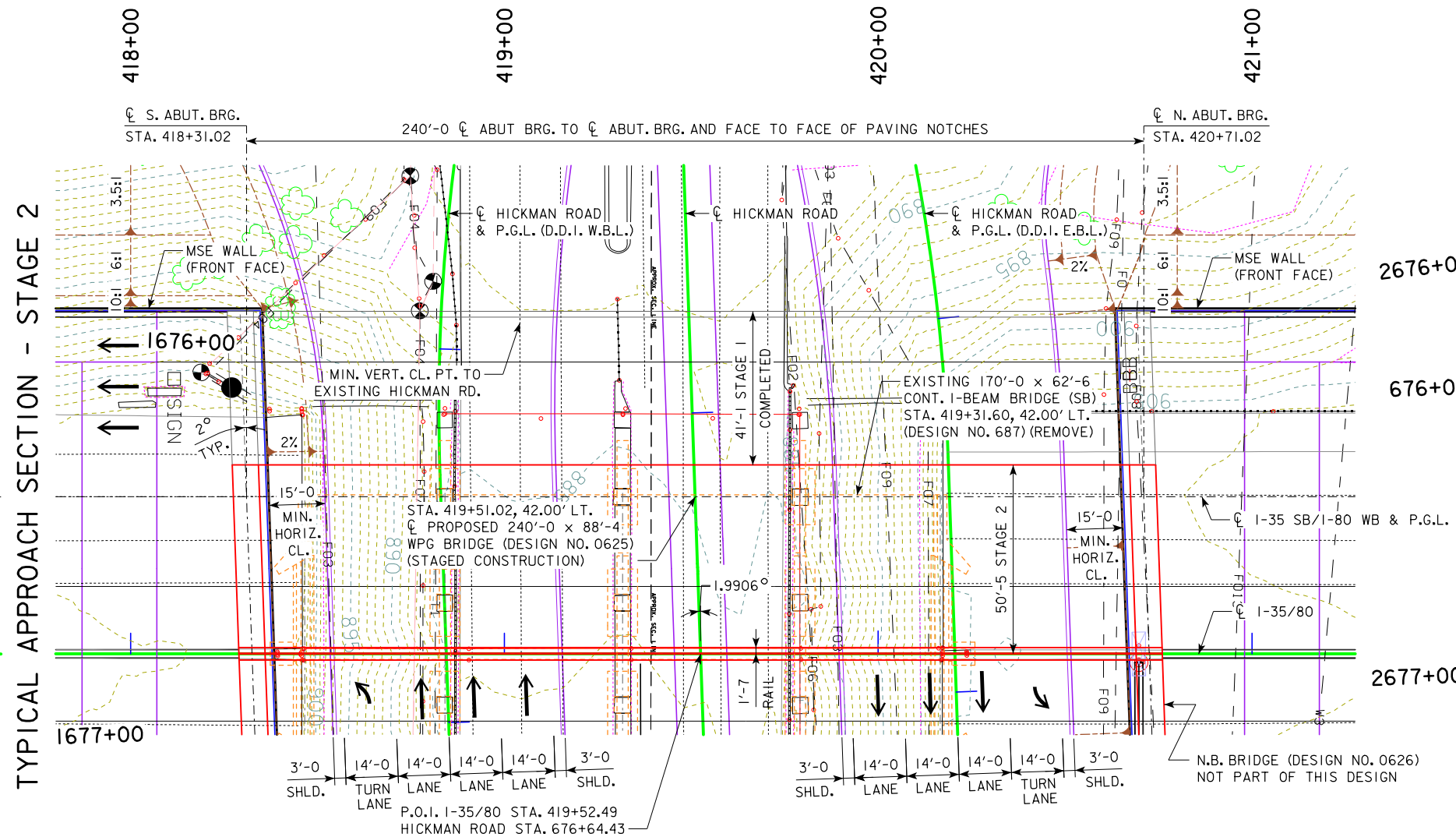
**PROPOSED PROFILE GRADE HICKMAN ROAD D.D.I. W.B. LANES**



**PROPOSED PROFILE GRADE HICKMAN ROAD D.D.I. E.B. LANES**

**NOTES:**

THIS DESIGN IS FOR THE REPLACEMENT OF THE EXISTING 170'-0" X 62'-6" CONTINUOUS I-BEAM BRIDGE, POLK DESIGN NO. 687, FHWA NO. 041310, MAINT. NO. 7725.IL080. SEMI-INTEGRAL ABUTMENTS PROPOSED WITH NON-STANDARD WIDTH (7'-0"), NON-STANDARD DEPTH (4'-0"), NON-BATTERED PILING, AND TIE-ROD ANCHORS FOR LATERAL RESISTANCE. ALL OFFSETS ARE MEASURED FROM CL 1-35/80. ALL DIMENSIONS ARE IN FEET U.N.O. BEAM TYPE - WPG, DEPTH = 6'-10". TL-5 BRIDGE RAILING PROPOSED. BRIDGE AESTHETICS TO BE INCORPORATED DURING FINAL DESIGN. SEE BRIDGE CROSS SECTION AND STAGING ON SHEETS V.17-V.18.



UTILITY LEGEND	
--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
⊕	POWER POLE

**LOCATION**  
1-35 SB AND 1-80 WB OVER U.S. 6 (HICKMAN ROAD)  
T-79N R-25W  
SECTIONS 29 & 32  
WALNUT TOWNSHIP  
POLK COUNTY  
EXISTING FHWA NO. 041310  
NEW FHWA NO. 41311  
BRIDGE MAINT. NO. 7725.IL080  
LATITUDE 41.614938°  
LONGITUDE -93.776987°

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION. PRELIMINARY



**MINIMUM VERTICAL CLEARANCE TO EXISTING HICKMAN ROAD**

OVERHEAD STATION = 419+04.15, OFFSET 88.50' LT.  
OVERHEAD ELEVATION = 908.51  
DEPTH OF SUPERSTRUCTURE = 7.58'  
LIVE LOAD DEFLECTION = 0.30'  
UNDERPASS STATION (CL HICKMAN RD.) = 675+74.30, OFFSET 45.23' RT.  
UNDERPASS ELEVATION = 885.94  
MINIMUM VERTICAL CLEARANCE = 14.68'

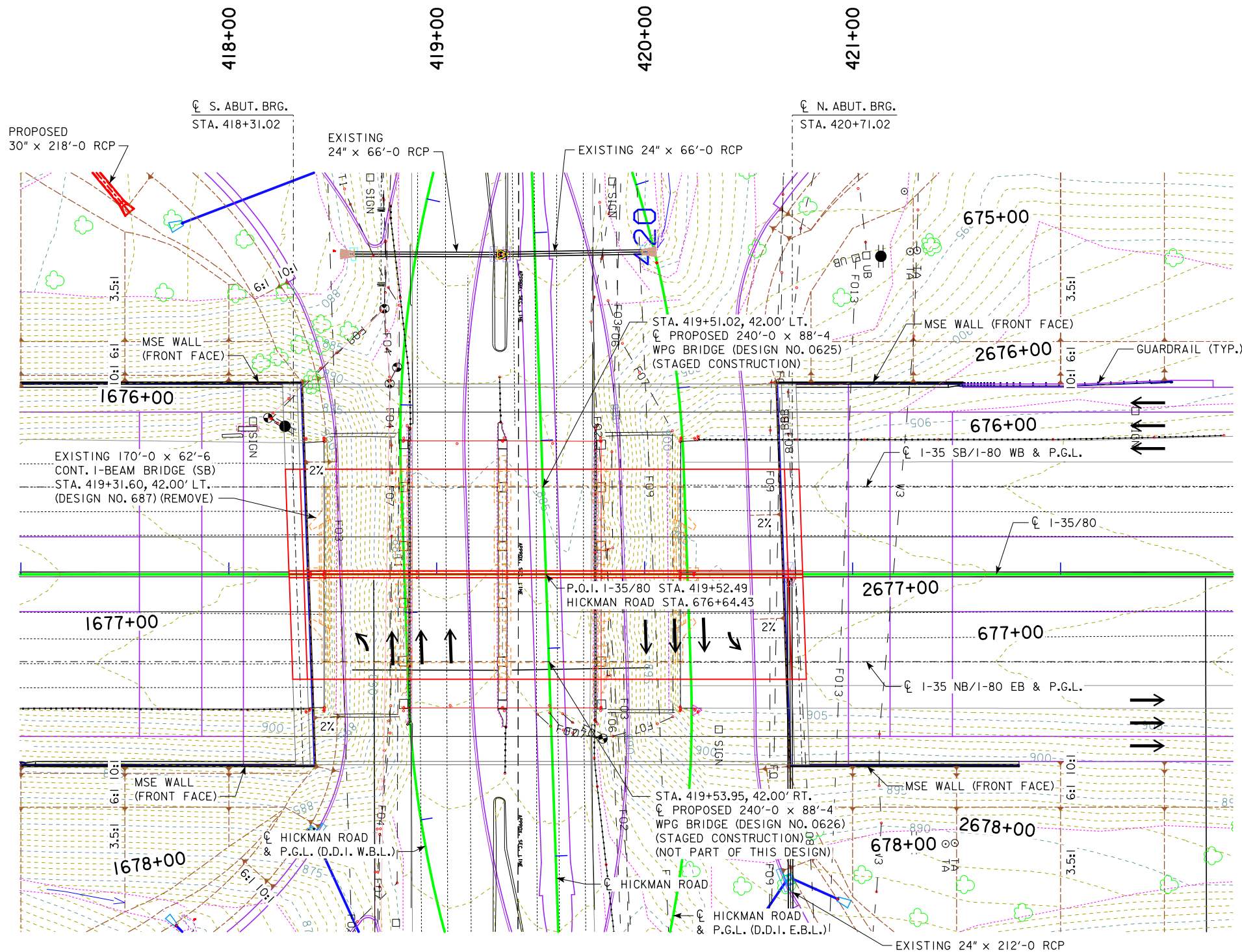


**HICKMAN ROAD 1-35 SB/1-80 WB TRAFFIC ESTIMATE**

	2019 AADT	2042 AADT	2042 DHV	TRUCKS	TOTAL DESIGN ESALS
2019 AADT	32,500	49,600	4,530	4 %	-
2042 AADT	49,600	73,200	6,560	14 %	-
2042 DHV	4,530	6,560	-	-	-
TRUCKS	4 %	14 %	-	-	-
TOTAL DESIGN ESALS	-	-	-	-	-

**240'-0" X 41'-1" WELDED PLATE GIRDER BRIDGE WIDENING TO 240'-0" X 88'-4"**

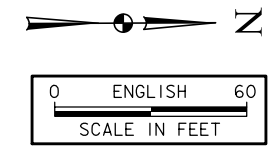
240'-0" SPAN  
**SITUATION PLAN - STAGE 2 SB/WB**  
STATION 419+51.02, 42.00' LT. (CL 1-35/80)  
MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 3 OF 8 FILE NO. 32251 DESIGN NO. 0625



**SITE PLAN - STAGE 2**  
ALL DIMENSIONS IN FEET UNLESS NOTED OTHERWISE

UTILITY LEGEND	
--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
⊕	POWER POLE

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.



PRELIMINARY

DESIGN FOR 2° SKEW (R.A.)

**240'-0 X 41'-1 WELDED PLATE GIRDER BRIDGE WIDENING TO 240'-0 X 88'-4**

240'-0 SPAN

**SITE PLAN - STAGE 2 SB/WB**

STATION 419+51.02, 42.00' LT. (☉ I-35/80) MAY, 2022

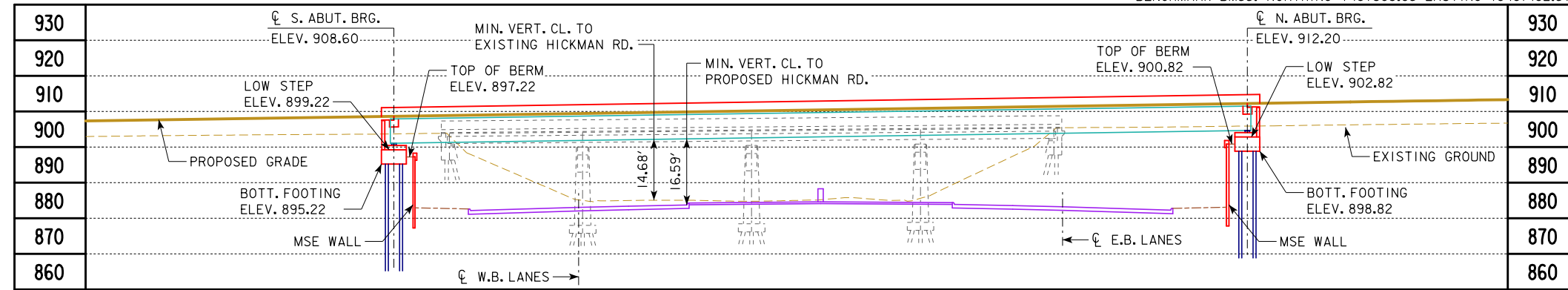
**POLK COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION

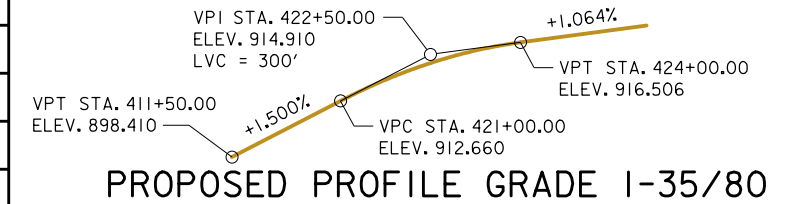
DESIGN SHEET NO. 4 OF 8 FILE NO. 32251 DESIGN NO. 0625



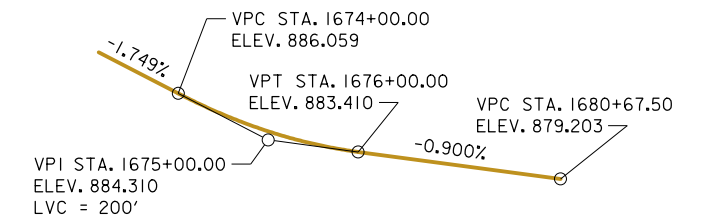




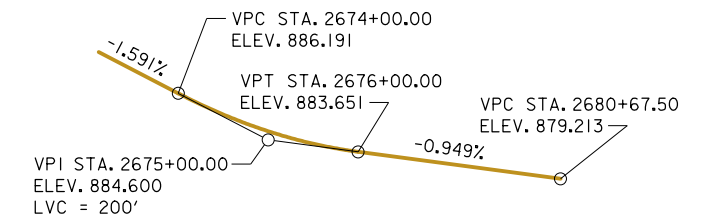
**LONGITUDINAL SECTION ALONG CL 1-35 SB/1-80 WB**  
TOP OF BRIDGE DECK AT CL 1-35 SB/1-80 WB IS 0.03' BELOW THE PROFILE GRADE TO ACCOUNT FOR THE PARABOLIC CROWN.



**PROPOSED PROFILE GRADE 1-35/80**



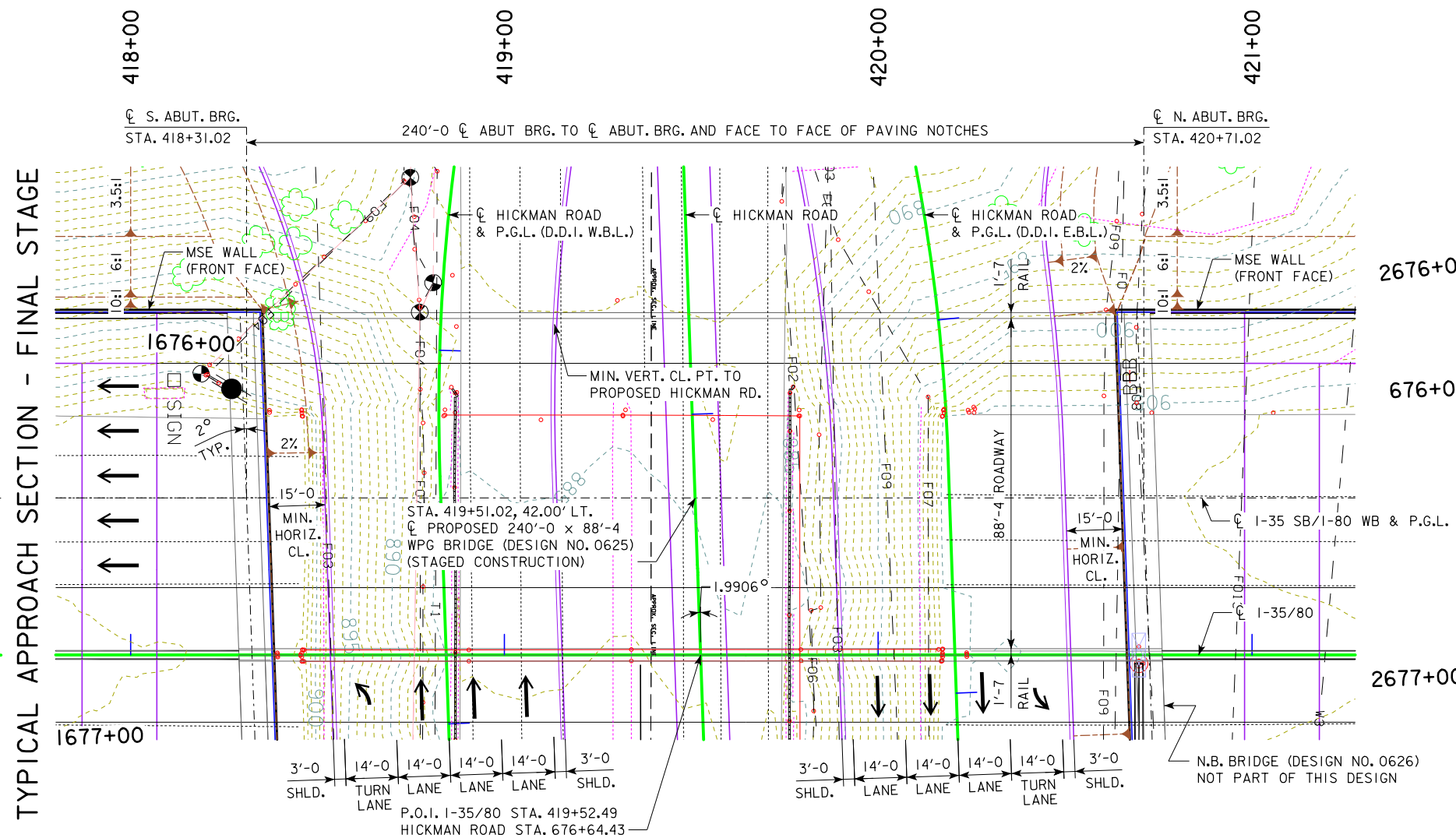
**PROPOSED PROFILE GRADE HICKMAN ROAD D.D.I. W.B. LANES**



**PROPOSED PROFILE GRADE HICKMAN ROAD D.D.I. E.B. LANES**

**NOTES:**

THIS DESIGN IS FOR THE REPLACEMENT OF THE EXISTING 170'-0" X 62'-6" CONTINUOUS I-BEAM BRIDGE, POLK DESIGN NO. 687, FHWA NO. 041310, MAINT. NO. 7725.IL080. SEMI-INTEGRAL ABUTMENTS PROPOSED WITH NON-STANDARD WIDTH (7'-0"), NON-STANDARD DEPTH (4'-0"), NON-BATTERED PILING, AND TIE-ROD ANCHORS FOR LATERAL RESISTANCE. ALL OFFSETS ARE MEASURED FROM CL 1-35/80. ALL DIMENSIONS ARE IN FEET U.N.O. BEAM TYPE - WPG, DEPTH = 6'-10. TL-5 BRIDGE RAILING PROPOSED. BRIDGE AESTHETICS TO BE INCORPORATED DURING FINAL DESIGN. SEE BRIDGE CROSS SECTION AND STAGING ON SHEETS V.17-V.18.



UTILITY LEGEND	
--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
⊕	POWER POLE

**LOCATION**  
1-35 SB AND 1-80 WB OVER U.S. 6 (HICKMAN ROAD)  
T-79N R-25W  
SECTIONS 29 & 32  
WALNUT TOWNSHIP  
POLK COUNTY  
EXISTING FHWA NO. 041310  
NEW FHWA NO. 41311  
BRIDGE MAINT. NO. 7725.IL080  
LATITUDE 41.614938°  
LONGITUDE -93.776987°

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION. PRELIMINARY



**MINIMUM VERTICAL CLEARANCE TO PROPOSED HICKMAN ROAD**

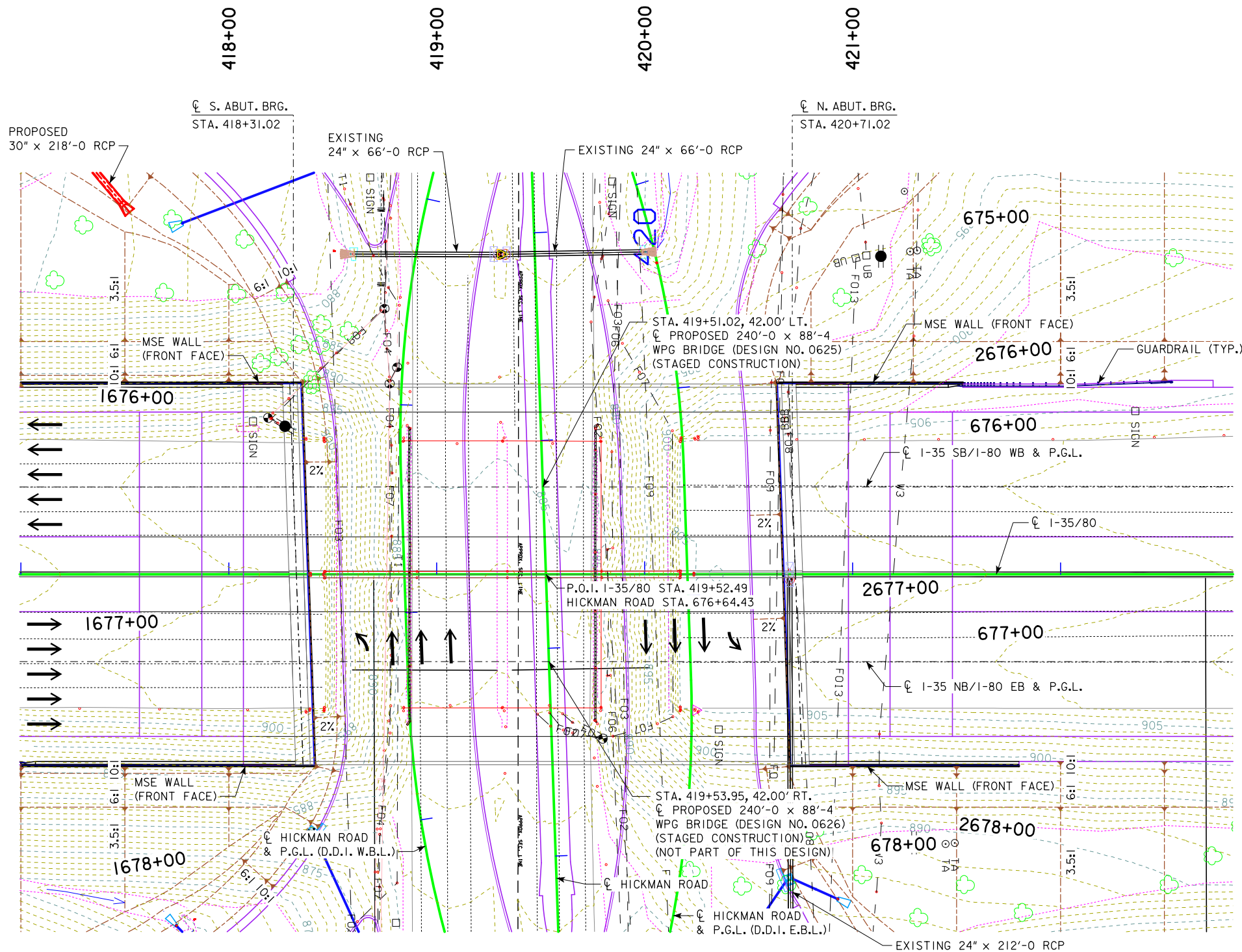
OVERHEAD STATION = 419+13.38, OFFSET 88.50' LT.  
OVERHEAD ELEVATION = 908.65  
DEPTH OF SUPERSTRUCTURE = 7.58'  
LIVE LOAD DEFLECTION = 0.30'  
UNDERPASS STATION (D.D.I. W.B.) = 1675+91.59, OFFSET 30.38' LT.  
UNDERPASS ELEVATION = 884.17  
MINIMUM VERTICAL CLEARANCE = 16.59'



**HICKMAN ROAD 1-35 SB/1-80 WB TRAFFIC ESTIMATE**

	2019 AADT	2042 AADT	2042 DHV	TRUCKS	TOTAL DESIGN ESALS
HICKMAN ROAD	32,500	49,600	4,530	4 %	-
1-35 SB/1-80 WB	49,700	73,200	6,560	14 %	-

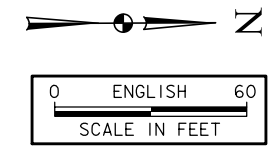
DESIGN FOR 2° SKEW (R.A.)  
**240'-0" X 88'-4" WELDED PLATE GIRDER BRIDGE**  
240'-0" SPAN  
**SITUATION PLAN - FINAL SB/WB**  
STATION 419+51.02, 42.00' LT. (CL 1-35/80)  
MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 5 OF 8 FILE NO. 32251 DESIGN NO. 0625



UTILITY LEGEND	
--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
⊕	POWER POLE

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

**SITE PLAN - FINAL**  
ALL DIMENSIONS IN FEET UNLESS NOTED OTHERWISE



PRELIMINARY

DESIGN FOR 2° SKEW (R.A.)

**240'-0 X 88'-4 WELDED  
PLATE GIRDER BRIDGE**

240'-0 SPAN

**SITE PLAN - FINAL SB/WB**

STATION 419+51.02, 42.00' LT. (☉ I-35/80) MAY, 2022

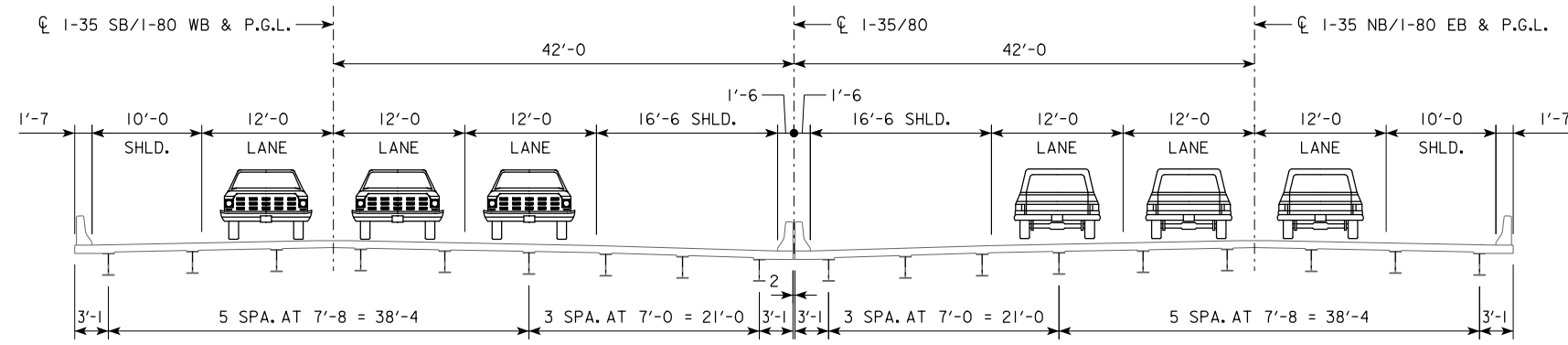
**POLK COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION

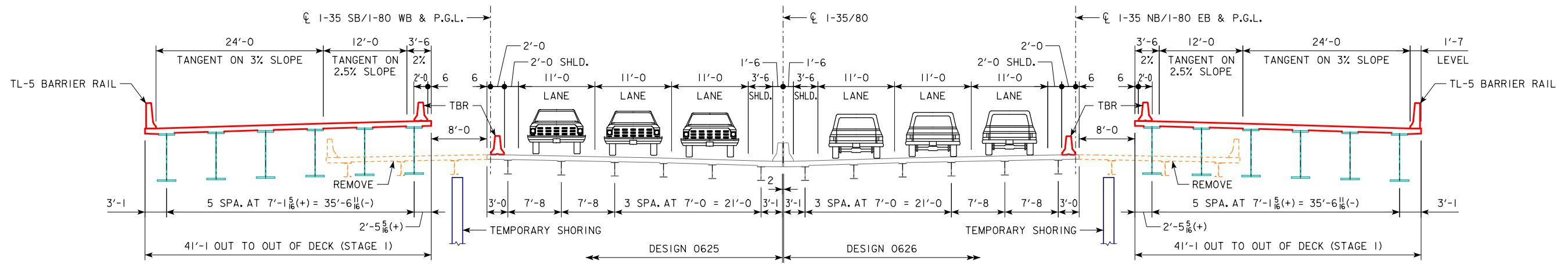
DESIGN SHEET NO. 6 OF 8 FILE NO. 32251 DESIGN NO. 0625





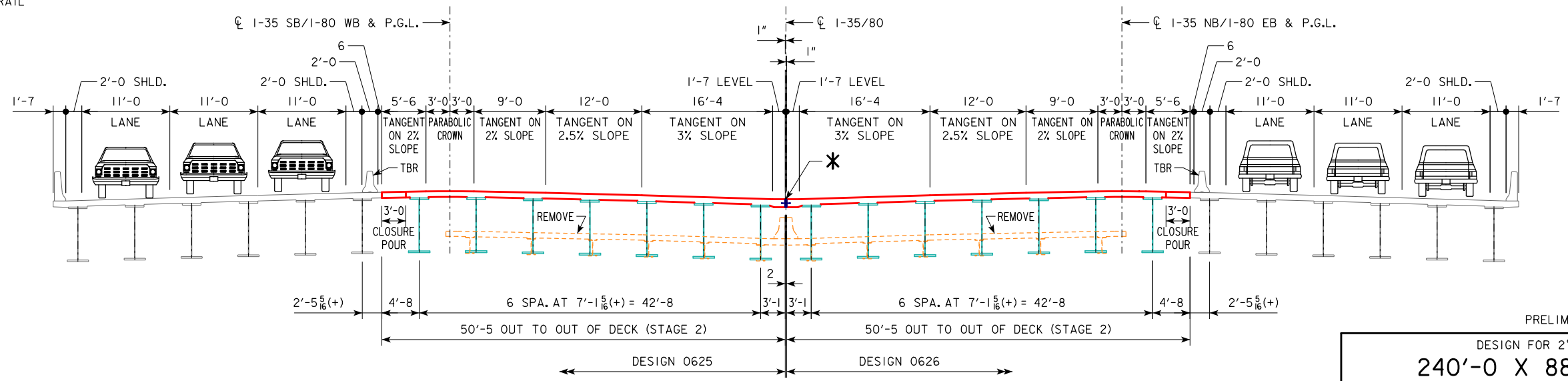


**EXISTING I-35/80 TYPICAL SECTION**  
(LOOKING NORTH)



**STAGE 1A**  
(LOOKING NORTH)

NOTE:  
TBR = TEMPORARY BARRIER RAIL



**STAGE 2B**  
(LOOKING NORTH)

\* INSTALL NEW MEDIAN SLOTTED DRAIN.  
EDGE OF DECK THICKNESS = 1'-0".

**STAGING NOTES:**

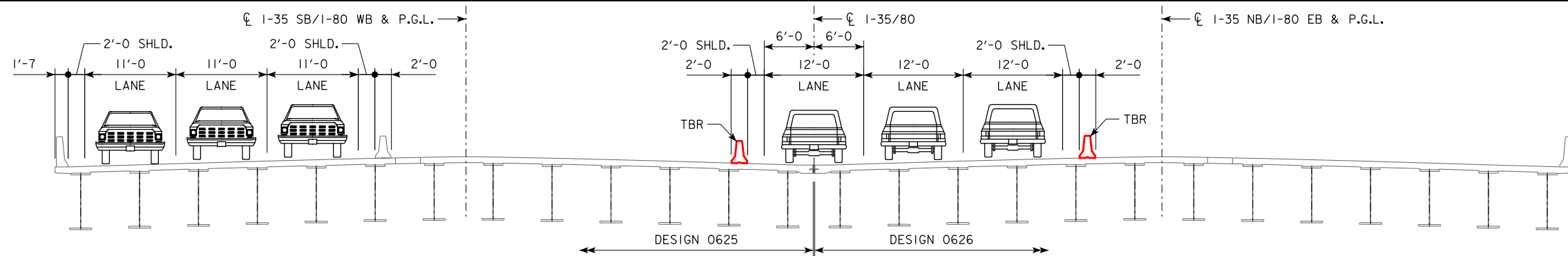
STAGE NUMBERING SHOWN CORRESPONDS WITH THE STAGES IN THE ROADWAY PLANS.  
SEE TRAFFIC STAGING SHEETS IN THESE PLANS FOR LOCATION OF TBR.

PRELIMINARY

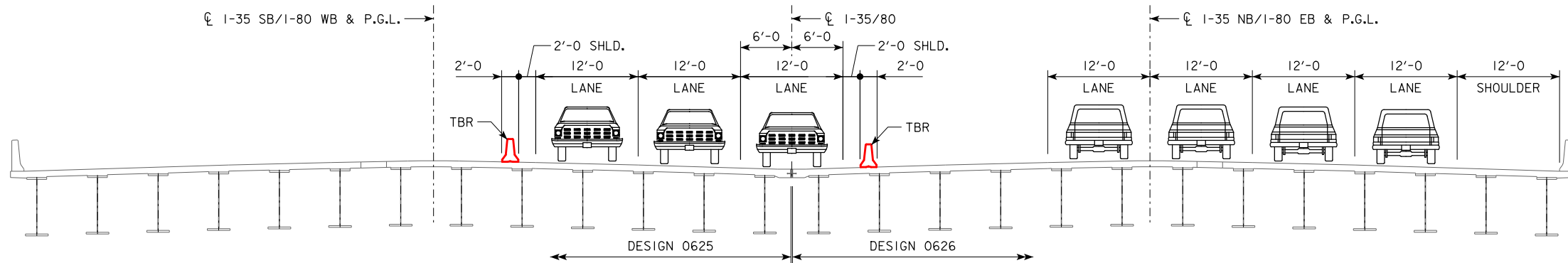
DESIGN FOR 2° SKEW (R.A.)  
**240'-0" X 88'-4" WELDED  
PLATE GIRDER BRIDGE**  
240'-0" SPAN

**STAGING**  
STATION 419+51.02, 42.00' LT. (CL I-35/80) MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 7 OF 8 FILE NO. 32251 DESIGN NO. 0625

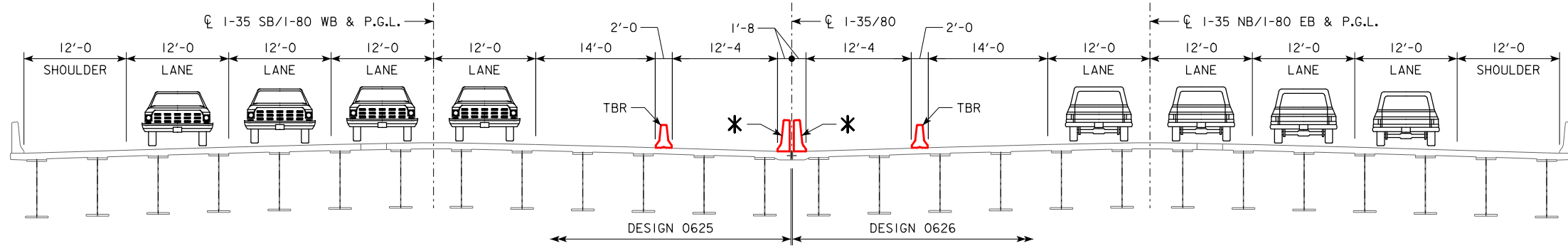




**STAGE 2C**  
(LOOKING NORTH)



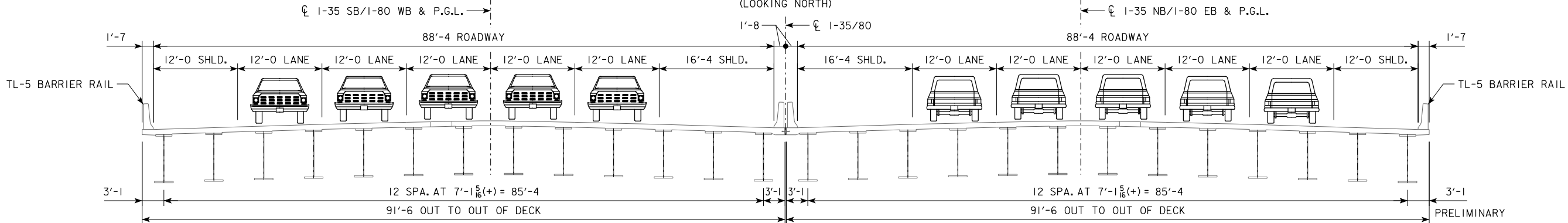
**STAGE 2D**  
(LOOKING NORTH)



\* INSTALL TL-5 BARRIER RAIL BY DRILLING AND DOWELING INTO EXISTING DECK

NOTE:  
TBR = TEMPORARY BARRIER RAIL

**STAGE 2E**  
(LOOKING NORTH)



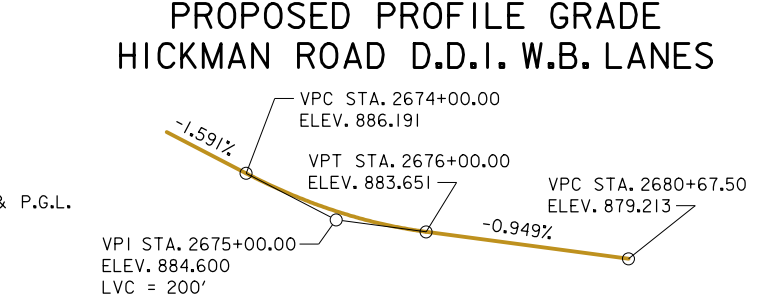
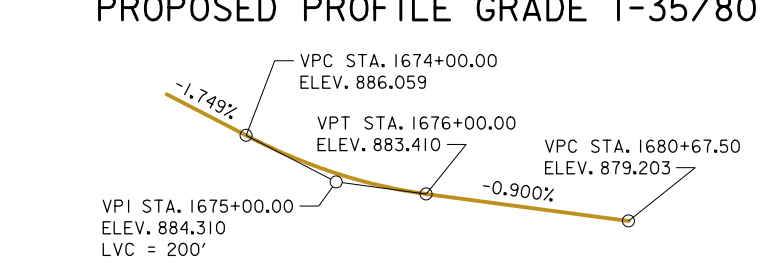
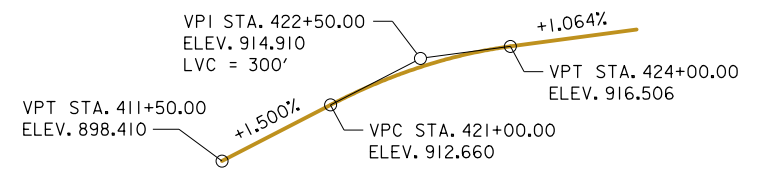
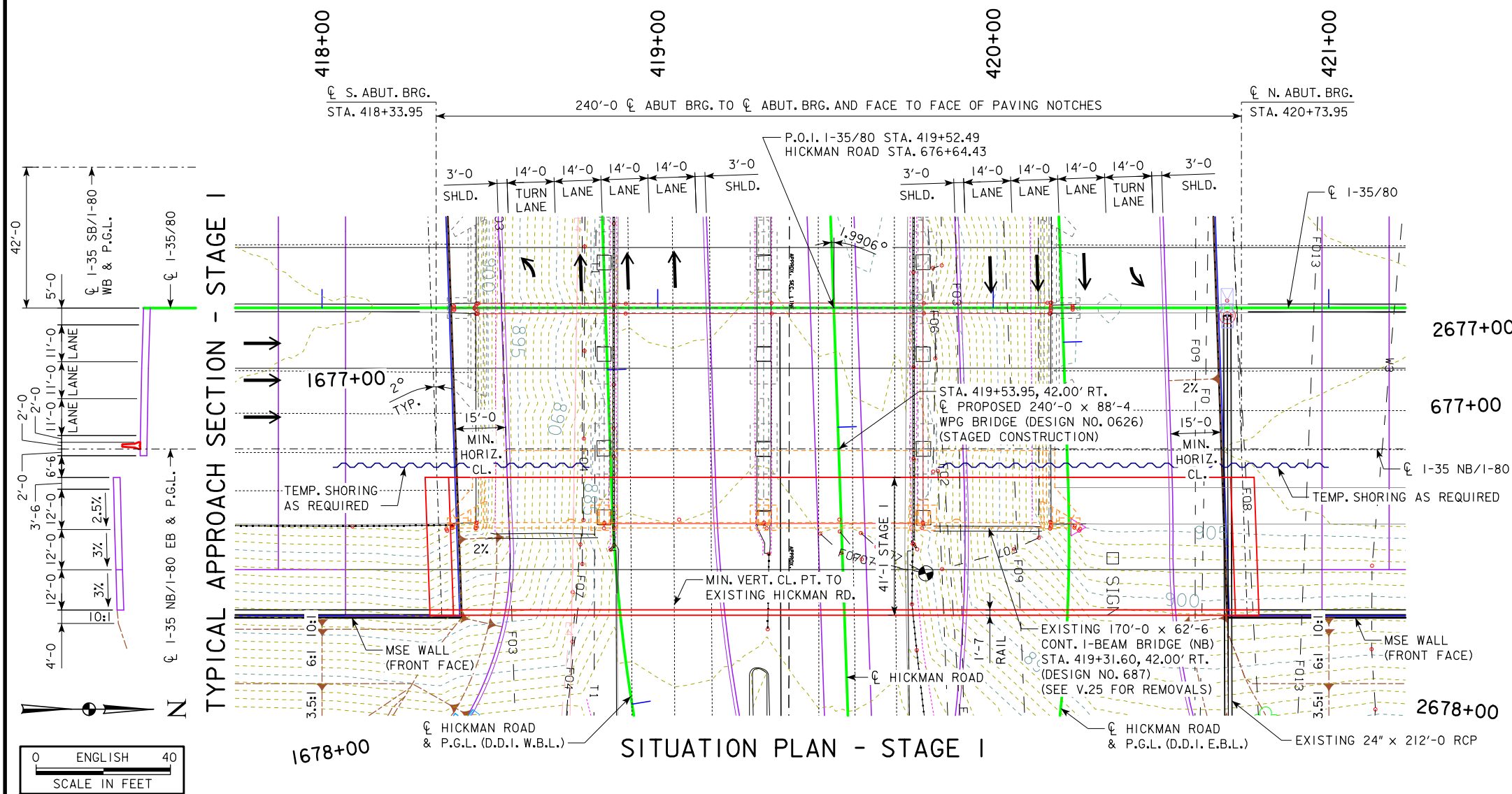
**FINAL STAGE**  
(LOOKING NORTH)

**STAGING NOTES:**

STAGE NUMBERING SHOWN CORRESPONDS WITH THE STAGES IN THE ROADWAY PLANS.  
SEE TRAFFIC STAGING SHEETS IN THESE PLANS FOR LOCATION OF TBR.

DESIGN FOR 2° SKEW (R.A.)  
**240'-0" X 88'-4" WELDED PLATE GIRDER BRIDGE**  
240'-0" SPAN  
**STAGING**  
STATION 419+51.02, 42.00' LT. (CL 1-35/80) MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 8 OF 8 FILE NO. 32251 DESIGN NO. 0625





**NOTES:**

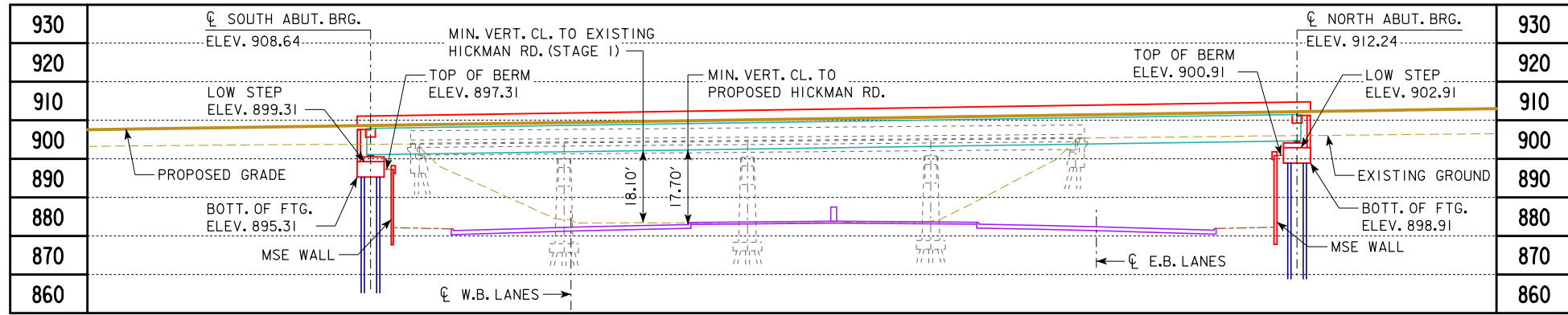
THIS DESIGN IS FOR THE REPLACEMENT OF THE EXISTING 170'-0" X 62'-6" CONTINUOUS I-BEAM BRIDGE, POLK DESIGN NO. 687, FHWA NO. 041300, MAINT. NO. 7725.1R080. SEMI-INTEGRAL ABUTMENTS PROPOSED WITH NON-STANDARD WIDTH (7'-0"), NON-STANDARD DEPTH (4'-0"), NON-BATTERED PILING, AND TIE-ROD ANCHORS FOR LATERAL RESISTANCE. ALL OFFSETS ARE MEASURED FROM CL I-35/80. ALL DIMENSIONS ARE IN FEET U.N.O. BEAM TYPE - WPG, DEPTH = 6'-10. TL-5 BRIDGE RAILING PROPOSED. BRIDGE AESTHETICS TO BE INCORPORATED DURING FINAL DESIGN. SEE BRIDGE CROSS SECTION AND STAGING ON SHEETS V.25-V.26.

**UTILITY LEGEND**

--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
⊕	POWER POLE

**LOCATION**

I-35 NB AND I-80 EB OVER U.S. 6 (HICKMAN ROAD)  
T-79N R-25W  
SECTIONS 29 & 32  
WALNUT TOWNSHIP  
POLK COUNTY  
EXISTING FHWA NO. 041300  
NEW FHWA NO. 41301  
BRIDGE MAINT. NO. 7725.1R080  
LATITUDE 41.614945°  
LONGITUDE -93.776680°



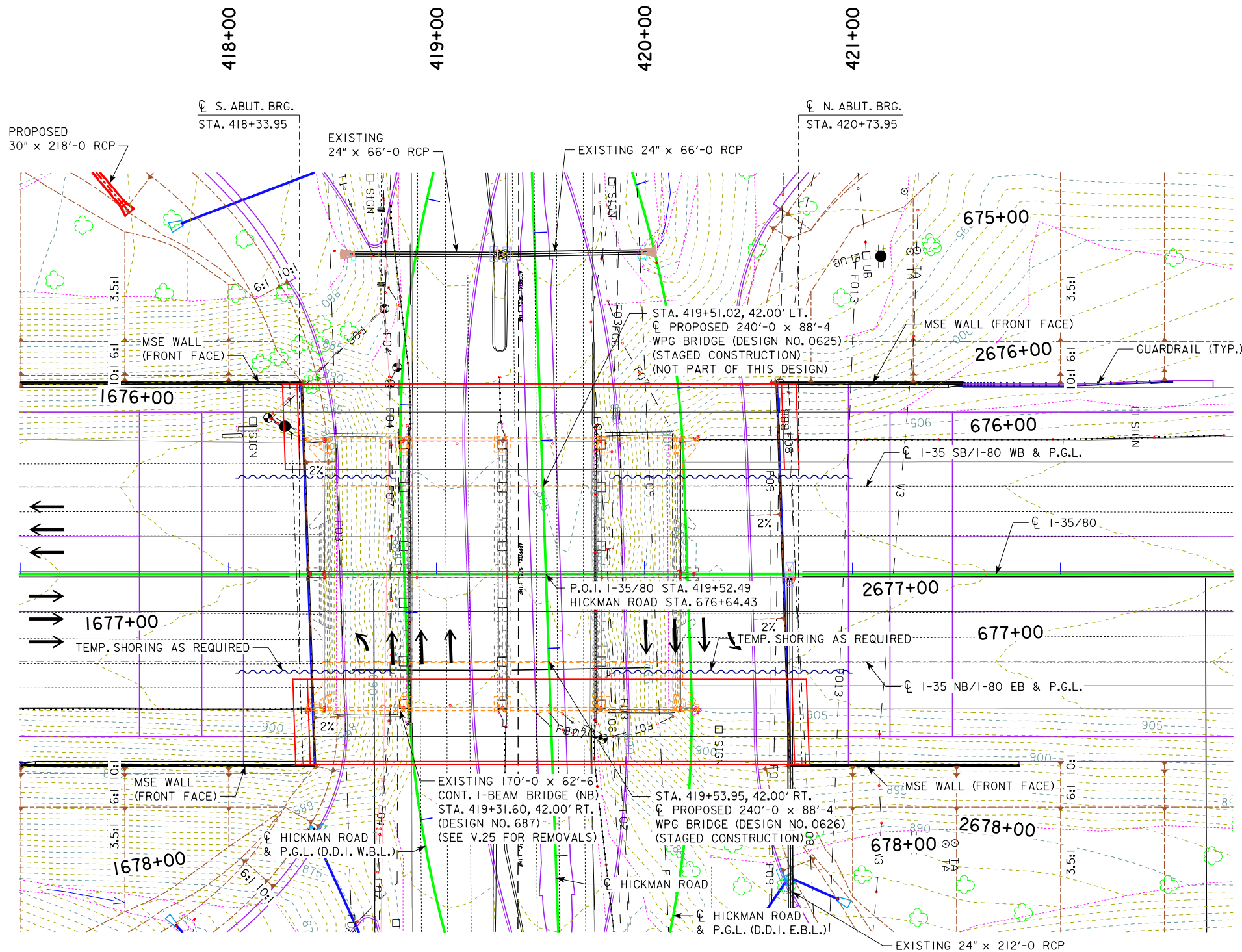
**MINIMUM VERTICAL CLEARANCE TO EXISTING HICKMAN ROAD (STAGE I)**

OVERHEAD STATION = 419+04.97, OFFSET 88.50' RT.  
OVERHEAD ELEVATION = 908.52  
DEPTH OF SUPERSTRUCTURE = 7.58'  
LIVE LOAD DEFLECTION = 0.30'  
UNDERPASS STATION (CL HICKMAN RD.) = 677+51.23, OFFSET 50.56' RT.  
UNDERPASS ELEVATION = 882.54  
MINIMUM VERTICAL CLEARANCE = 18.10'

HICKMAN ROAD TRAFFIC ESTIMATE		I-35 NB/I-80 EB TRAFFIC ESTIMATE	
2019 AADT	32,500 V.P.D.	2019 AADT	51,400 V.P.D.
2042 AADT	49,600 V.P.D.	2042 AADT	68,700 V.P.D.
2042 DHV	4,530 V.P.H.	2042 DHV	6,810 V.P.H.
TRUCKS	4 %	TRUCKS	14 %
TOTAL DESIGN ESALS	-	TOTAL DESIGN ESALS	-

DESIGN FOR 2° SKEW (R.A.)  
**240'-0" X 41'-1" WELDED PLATE GIRDER BRIDGE**  
240'-0" SPAN  
**SITUATION PLAN - STAGE I NB/EB**  
STATION 419+53.95, 42.00' RT. (CL I-35/80) MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 1 OF 8 FILE NO. 32251 DESIGN NO. 0626

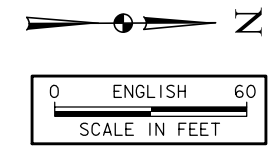




**SITE PLAN - STAGE I**  
ALL DIMENSIONS IN FEET UNLESS NOTED OTHERWISE

UTILITY LEGEND	
--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
⊕	POWER POLE

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.



PRELIMINARY

DESIGN FOR 2° SKEW (R.A.)

**240'-0 X 41'-1 WELDED PLATE GIRDER BRIDGE**

240'-0 SPAN

**SITE PLAN - STAGE I NB/EB**

STATION 419+53.95, 42.00' RT. (☉ I-35/80) MAY, 2022

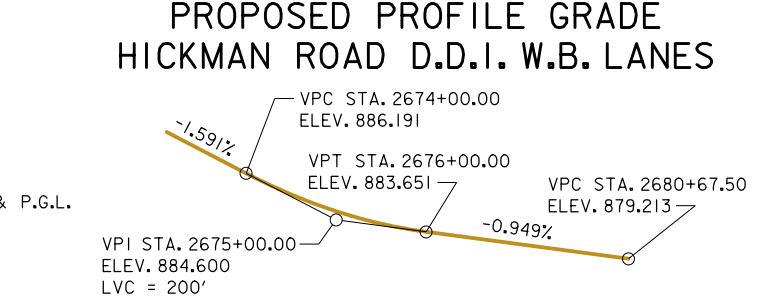
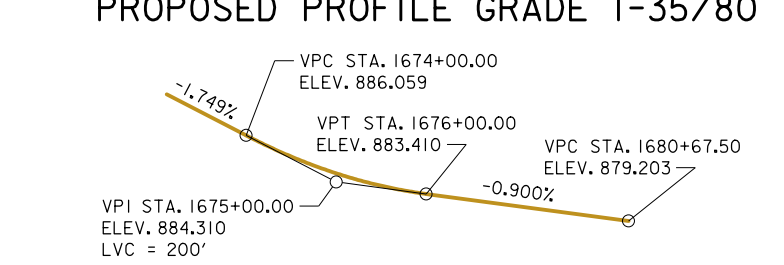
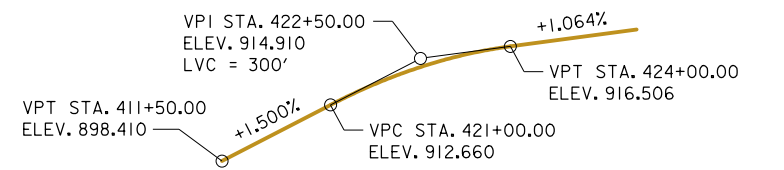
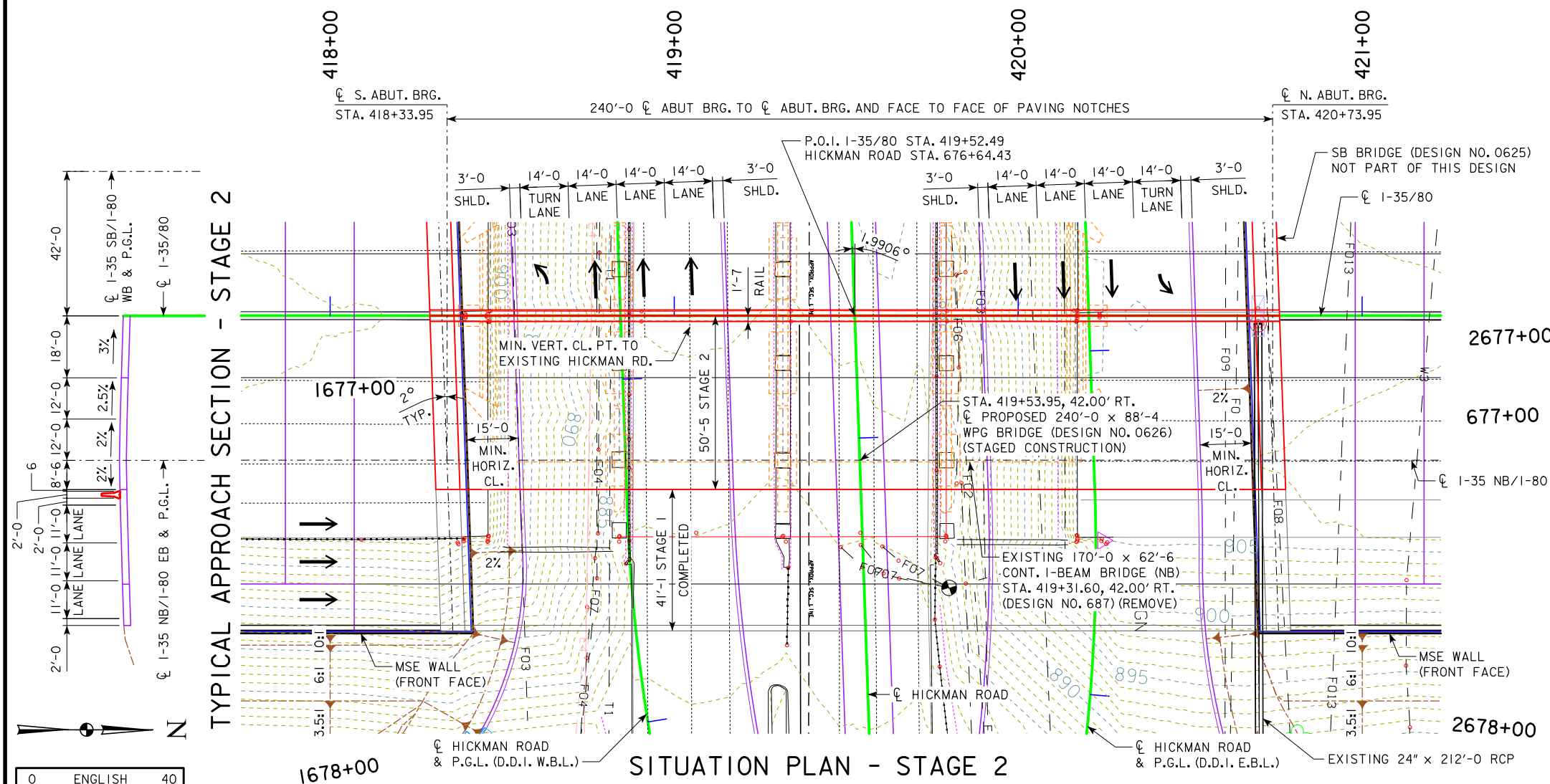
**POLK COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 2 OF 8 FILE NO. 32251 DESIGN NO. 0626





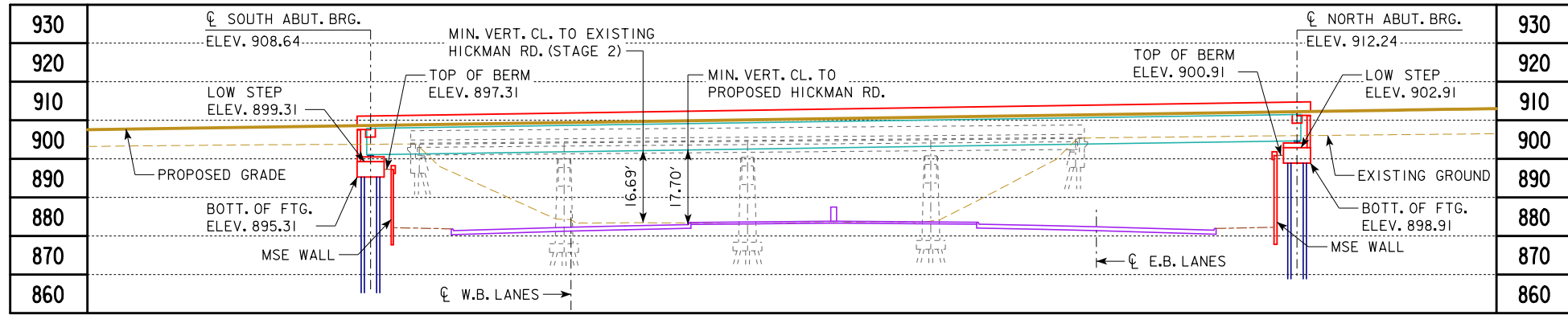


**NOTES:**  
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**UTILITY LEGEND**

--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
⊕	POWER POLE

**LOCATION**  
 I-35 NB AND I-80 EB OVER U.S. 6 (HICKMAN ROAD)  
 T-79N R-25W  
 SECTIONS 29 & 32  
 WALNUT TOWNSHIP  
 POLK COUNTY  
 EXISTING FHWA NO. 041300  
 NEW FHWA NO. 41301  
 BRIDGE MAINT. NO. 7725.1R080  
 LATITUDE 41.614945°  
 LONGITUDE -93.776680°



LONGITUDINAL SECTION ALONG CL I-35 NB/I-80 EB

TOP OF BRIDGE DECK AT CL I-35 NB/I-80 EB IS 0.03' BELOW THE PROFILE GRADE TO ACCOUNT FOR THE PARABOLIC CROWN.

**MINIMUM VERTICAL CLEARANCE TO EXISTING HICKMAN ROAD (STAGE 2)**

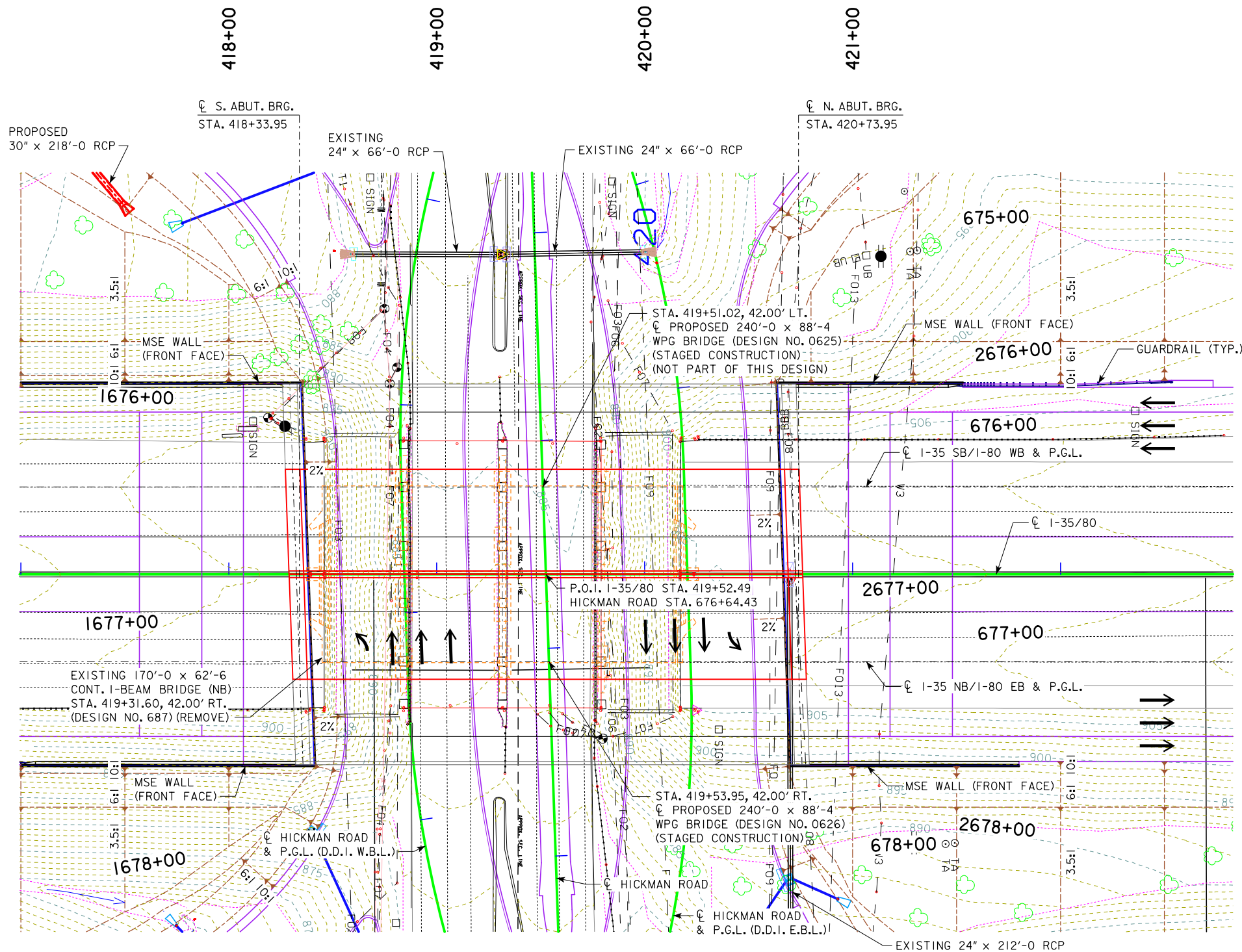
OVERHEAD STATION = 419+04.54, OFFSET 3.17' RT.  
 OVERHEAD ELEVATION = 908.74  
 DEPTH OF SUPERSTRUCTURE = 7.58'  
 LIVE LOAD DEFLECTION = 0.30'  
 UNDERPASS STATION (CL HICKMAN RD.) = 676+65.93, OFFSET 48.03' RT.  
 UNDERPASS ELEVATION = 884.17  
 MINIMUM VERTICAL CLEARANCE = 16.69'

**HICKMAN ROAD TRAFFIC ESTIMATE I-35 NB/I-80 EB TRAFFIC ESTIMATE**

2019 AADT	32,500	V.P.D.	2019 AADT	51,400	V.P.D.
2042 AADT	49,600	V.P.D.	2042 AADT	68,700	V.P.D.
2042 DHV	4,530	V.P.H.	2042 DHV	6,810	V.P.H.
TRUCKS	4	%	TRUCKS	14	%
TOTAL DESIGN ESALS	-		TOTAL DESIGN ESALS	-	

DESIGN FOR 2° SKEW (R.A.)  
**240'-0 X 41'-1 WELDED PLATE GIRDER BRIDGE WIDENING TO 240'-0 X 88'-4**  
 240'-0 SPAN  
**SITUATION PLAN - STAGE 2 NB/EB**  
 STATION 419+53.95, 42.00' RT. (CL I-35/80) MAY, 2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. 3 OF 8 FILE NO. 32251 DESIGN NO. 0626

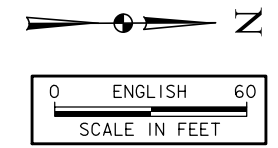




**SITE PLAN - STAGE 2**  
ALL DIMENSIONS IN FEET UNLESS NOTED OTHERWISE

UTILITY LEGEND	
--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
⊕	POWER POLE

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.



PRELIMINARY

DESIGN FOR 2° SKEW (R.A.)

**240'-0" X 41'-1" WELDED PLATE GIRDER BRIDGE WIDENING TO 240'-0" X 88'-4"**

240'-0" SPAN

**SITE PLAN - STAGE 2 NB/EB**

STATION 419+53.95, 42.00' RT. (☉ I-35/80) MAY, 2022

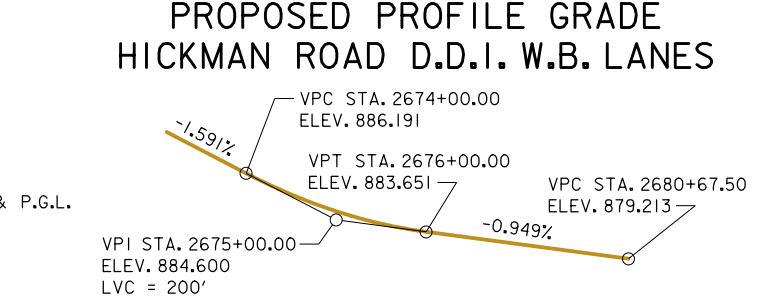
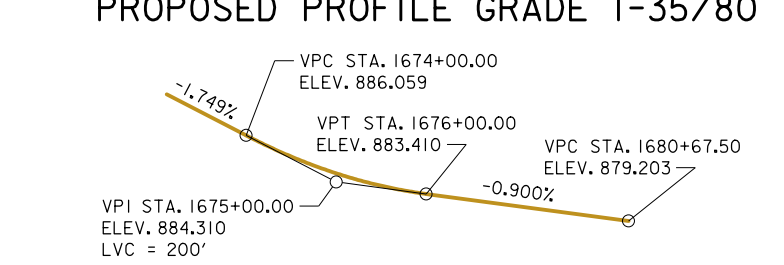
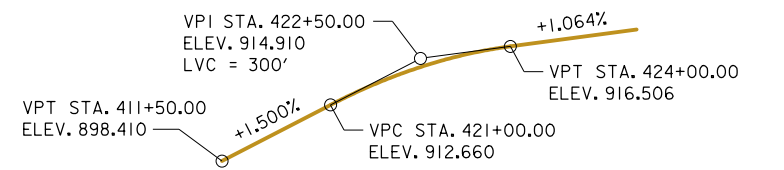
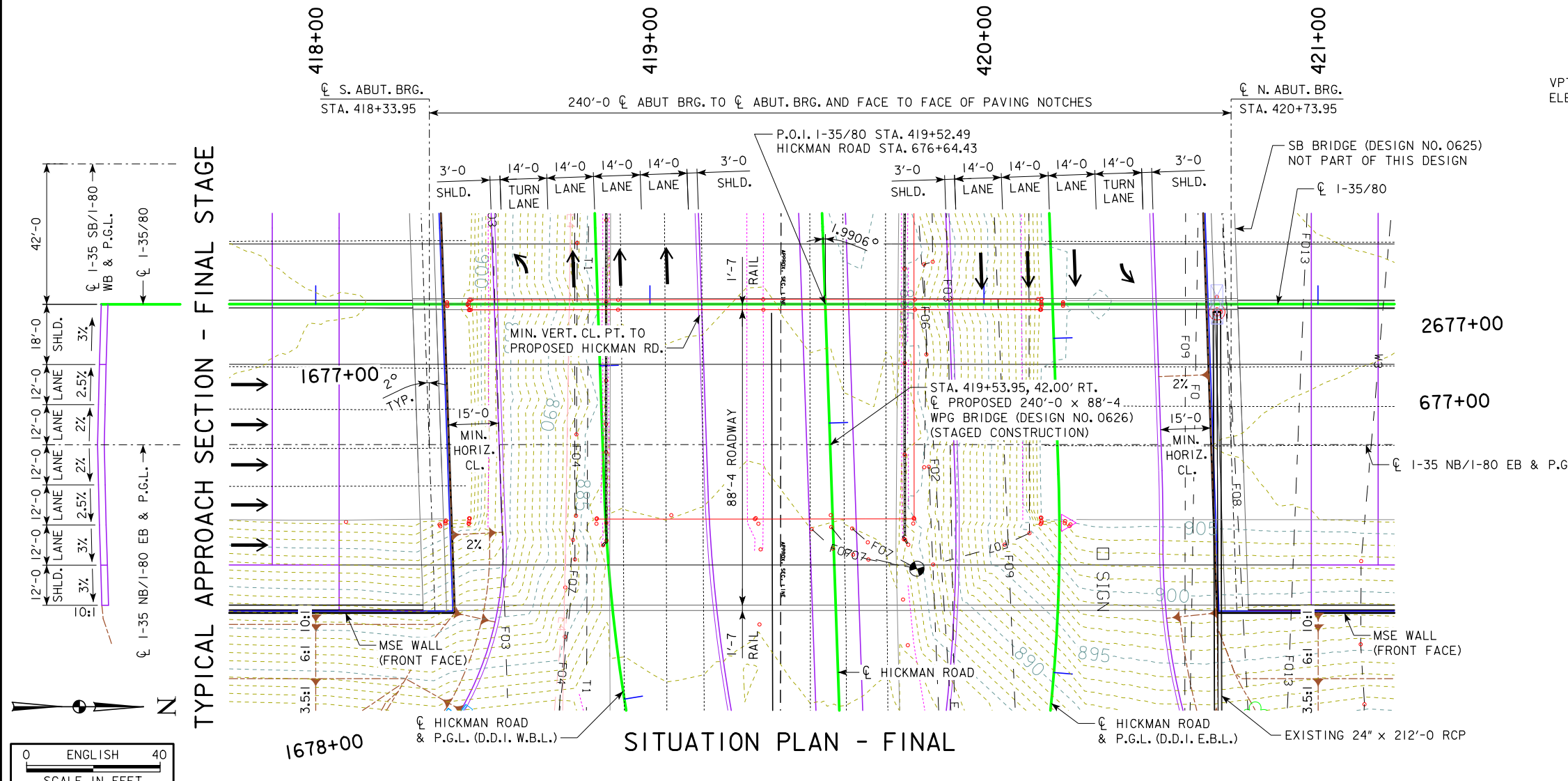
**POLK COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 4 OF 8 FILE NO. 32251 DESIGN NO. 0626





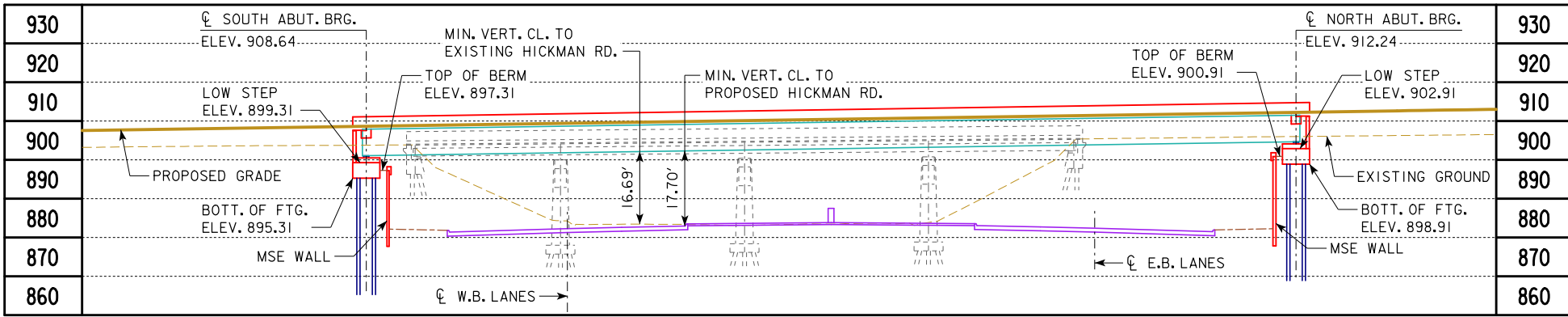


**NOTES:**  
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**UTILITY LEGEND**

--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
⊕	POWER POLE

**LOCATION**  
 I-35 NB AND I-80 EB OVER U.S. 6 (HICKMAN ROAD)  
 T-79N R-25W  
 SECTIONS 29 & 32  
 WALNUT TOWNSHIP  
 POLK COUNTY  
 EXISTING FHWA NO. 041300  
 NEW FHWA NO. 41301  
 BRIDGE MAINT. NO. 7725.IR080  
 LATITUDE 41.614945°  
 LONGITUDE -93.776680°



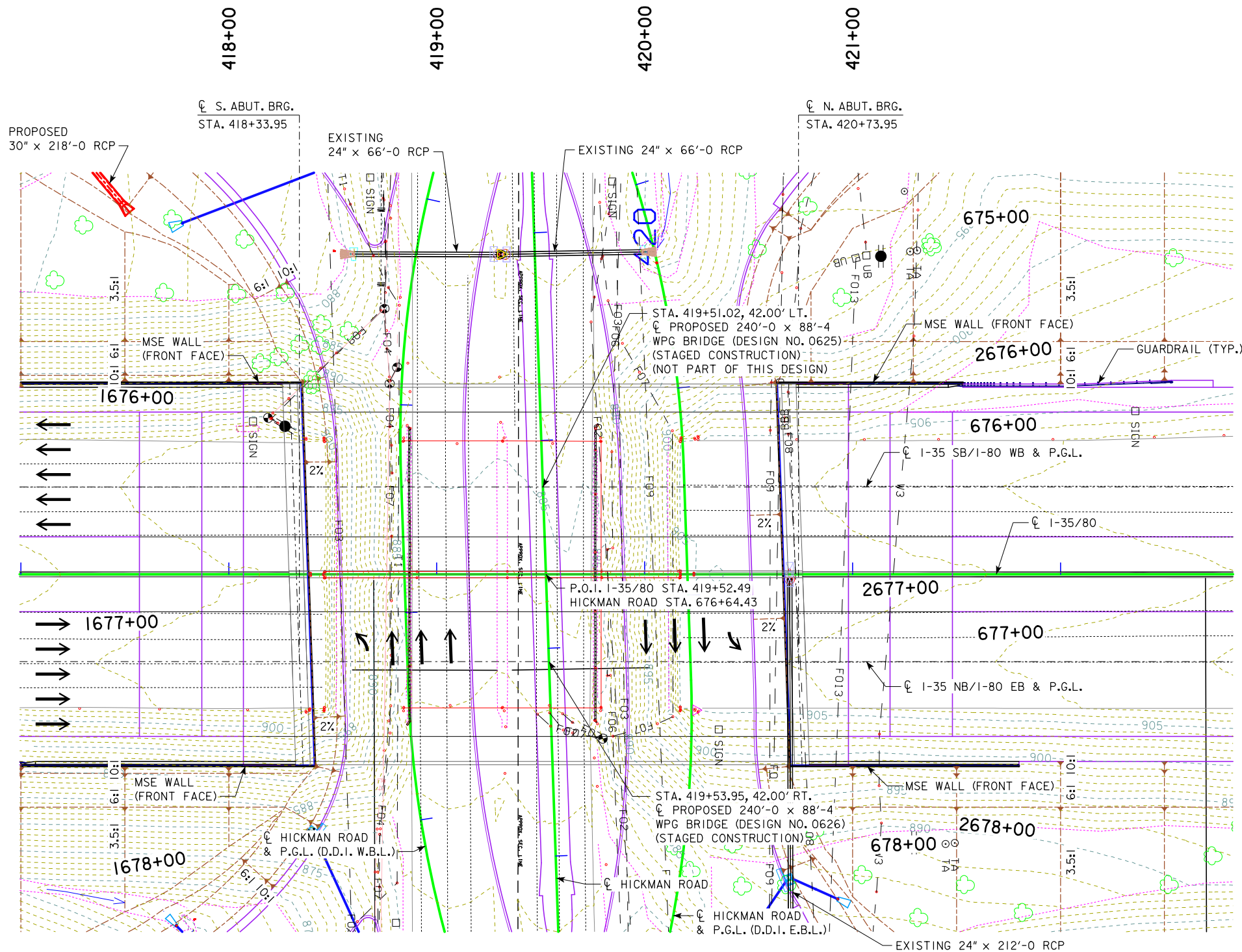
LONGITUDINAL SECTION ALONG CL I-35 NB/I-80 EB  
 TOP OF BRIDGE DECK AT CL I-35 NB/I-80 EB IS 0.03' BELOW THE PROFILE GRADE TO ACCOUNT FOR THE PARABOLIC CROWN.

**MINIMUM VERTICAL CLEARANCE TO PROPOSED HICKMAN ROAD**  
 OVERHEAD STATION = 419+14.95, OFFSET 3.17' RT.  
 OVERHEAD ELEVATION = 908.90  
 DEPTH OF SUPERSTRUCTURE = 7.58'  
 LIVE LOAD DEFLECTION = 0.30'  
 UNDERPASS STATION (D.D.I. W.B.) = 1676+85.78, OFFSET 30.38' LT.  
 UNDERPASS ELEVATION = 883.32  
 MINIMUM VERTICAL CLEARANCE = 17.70'

HICKMAN ROAD TRAFFIC ESTIMATE		I-35 NB/I-80 EB TRAFFIC ESTIMATE	
2019 AADT	32,500 V.P.D.	2019 AADT	51,400 V.P.D.
2042 AADT	49,600 V.P.D.	2042 AADT	68,700 V.P.D.
2042 DHV	4,530 V.P.H.	2042 DHV	6,810 V.P.H.
TRUCKS	4 %	TRUCKS	14 %
TOTAL DESIGN ESALS	-	TOTAL DESIGN ESALS	-

DESIGN FOR 2° SKEW (R.A.)  
**240'-0 X 88'-4 WELDED PLATE GIRDER BRIDGE**  
 240'-0 SPAN  
**SITUATION PLAN - FINAL NB/EB**  
 STATION 419+53.95, 42.00' RT. (CL I-35/80)  
 POLK COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. 5 OF 8 FILE NO. 32251 DESIGN NO. 0626

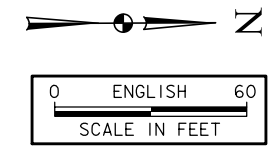




**SITE PLAN - FINAL**  
ALL DIMENSIONS IN FEET UNLESS NOTED OTHERWISE

UTILITY LEGEND	
--E3--	ELECTRIC
--F0--	FIBER OPTIC
--F02--	FIBER OPTIC
--F03--	FIBER OPTIC
--F04--	FIBER OPTIC
--F06--	FIBER OPTIC
--F08--	FIBER OPTIC
--F09--	FIBER OPTIC
--T1--	TELEPHONE
--W3--	WATER
	POWER POLE

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.



PRELIMINARY

DESIGN FOR 2° SKEW (R.A.)

**240'-0 X 88'-4 WELDED PLATE GIRDER BRIDGE**

240'-0 SPAN

**SITE PLAN - FINAL NB/EB**

STATION 419+53.95, 42.00' RT. (I-35/80) MAY, 2022

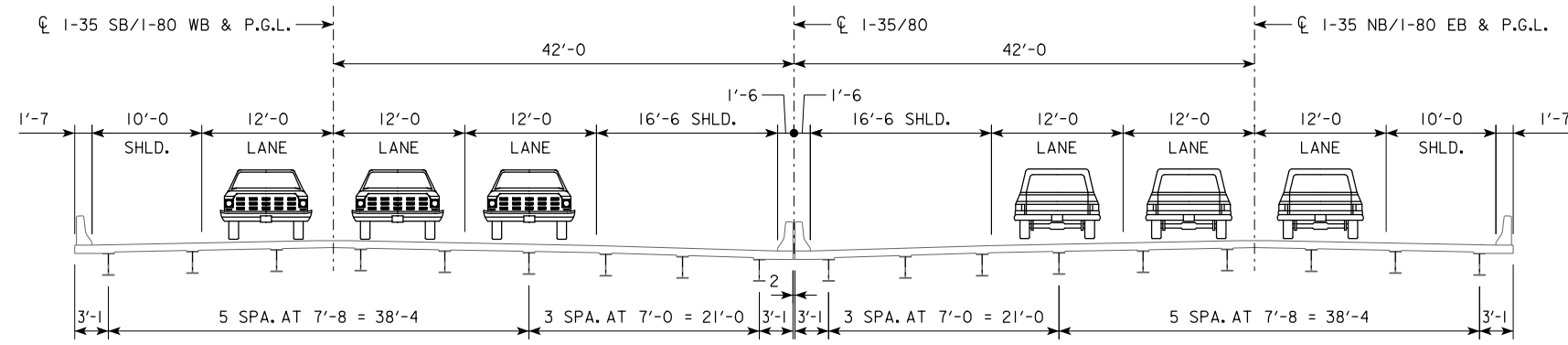
**POLK COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION

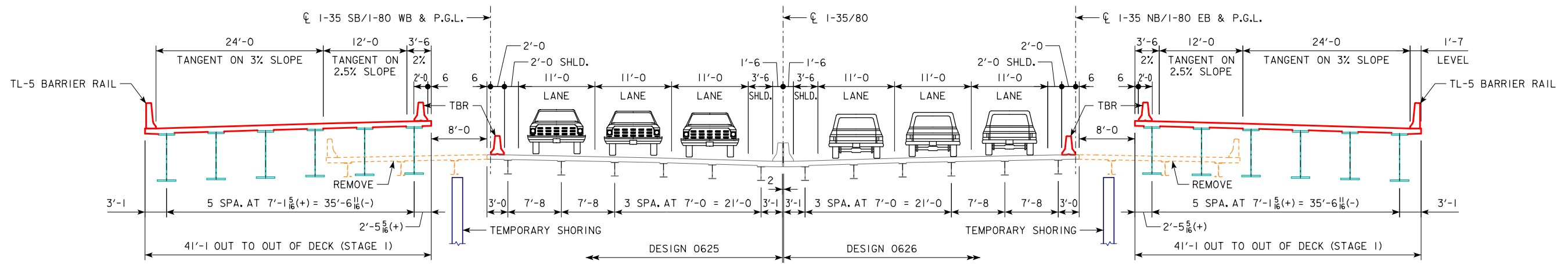
DESIGN SHEET NO. 6 OF 8 FILE NO. 32251 DESIGN NO. 0626





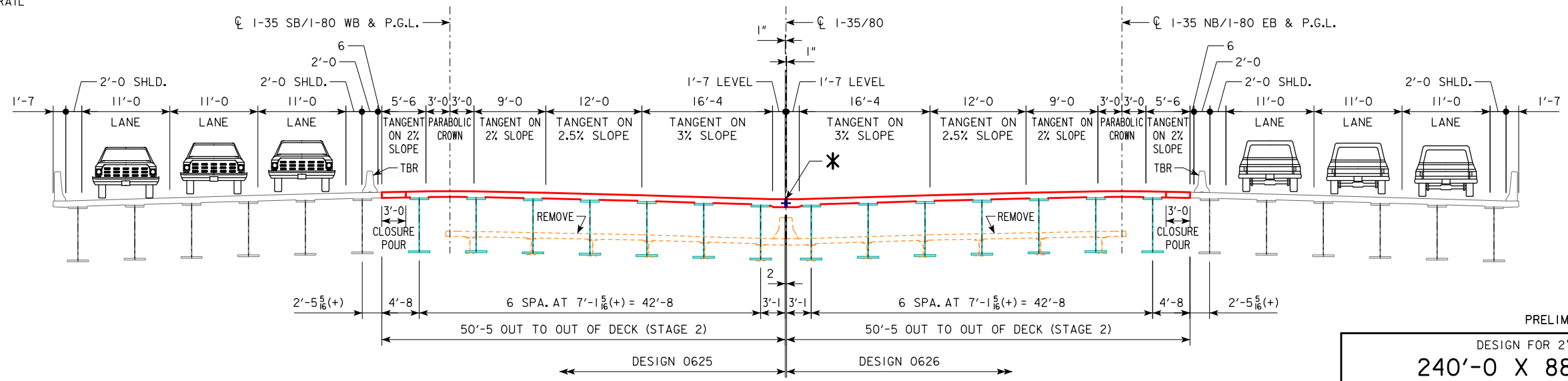


**EXISTING I-35/80 TYPICAL SECTION**  
(LOOKING NORTH)



**STAGE 1A**  
(LOOKING NORTH)

NOTE:  
TBR = TEMPORARY BARRIER RAIL



**STAGE 2B**  
(LOOKING NORTH)

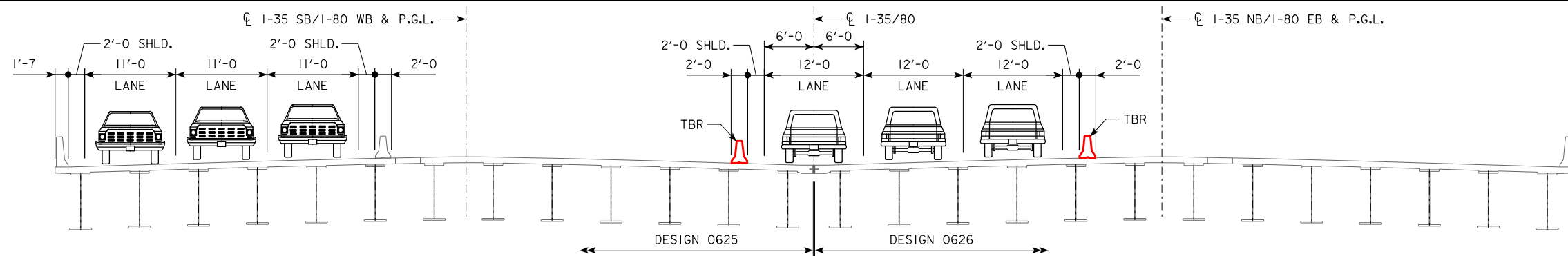
\* INSTALL NEW MEDIAN SLOTTED DRAIN.  
EDGE OF DECK THICKNESS = 1'-0."

**STAGING NOTES:**

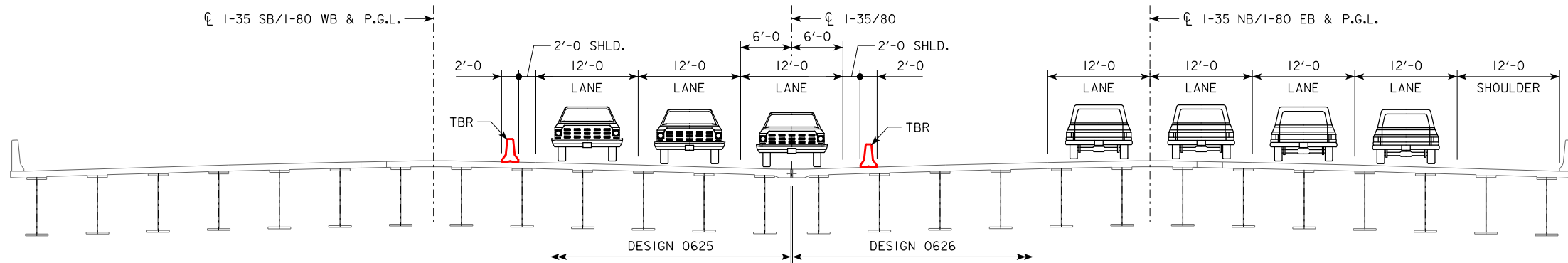
STAGE NUMBERING SHOWN CORRESPONDS WITH THE STAGES IN THE ROADWAY PLANS.  
SEE TRAFFIC STAGING SHEETS IN THESE PLANS FOR LOCATION OF TBR.

PRELIMINARY  
DESIGN FOR 2° SKEW (R.A.)  
**240'-0" X 88'-4" WELDED  
PLATE GIRDER BRIDGE**  
240'-0" SPAN  
**STAGING**  
STATION 419+53.95, 42.00' RT. (CL I-35/80) MAY, 2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. 7 OF 8 FILE NO. 32251 DESIGN NO. 0626

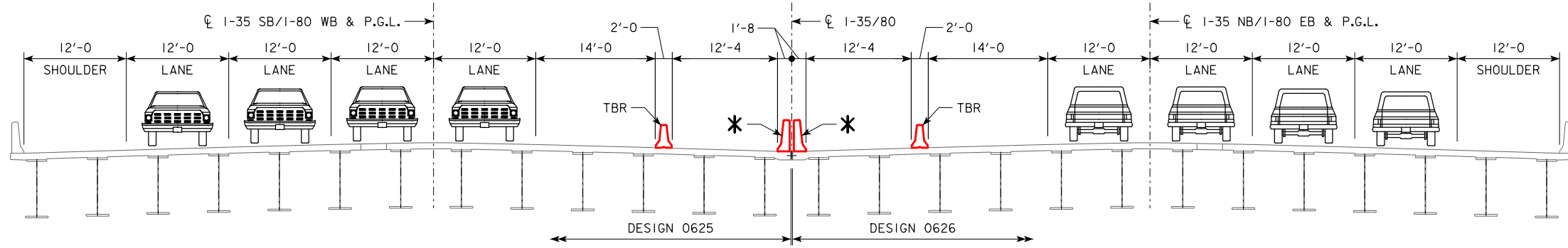




**STAGE 2C**  
(LOOKING NORTH)



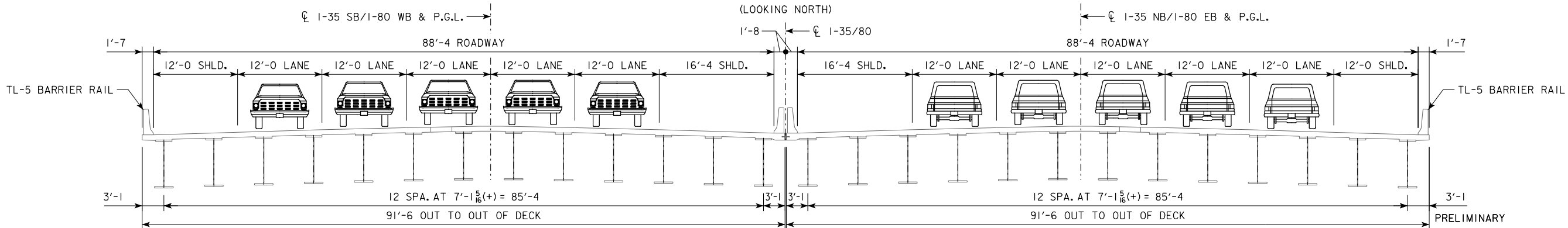
**STAGE 2D**  
(LOOKING NORTH)



**STAGE 2E**  
(LOOKING NORTH)

\* INSTALL TL-5 BARRIER RAIL BY DRILLING AND DOWELING INTO EXISTING DECK

NOTE:  
TBR = TEMPORARY BARRIER RAIL



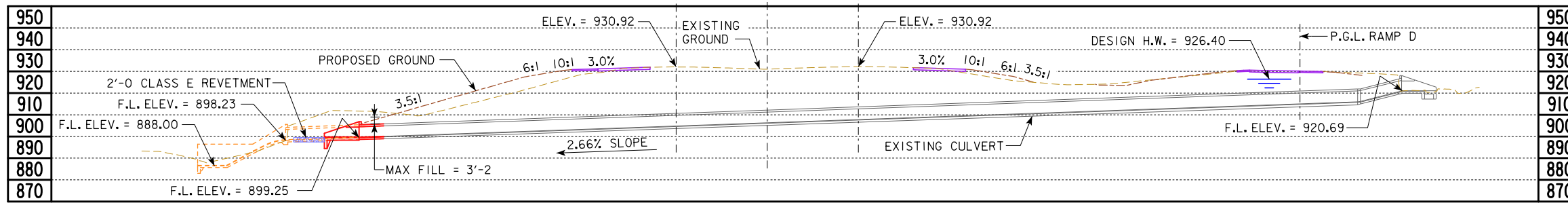
**FINAL STAGE**  
(LOOKING NORTH)

**STAGING NOTES:**

STAGE NUMBERING SHOWN CORRESPONDS WITH THE STAGES IN THE ROADWAY PLANS.  
SEE TRAFFIC STAGING SHEETS IN THESE PLANS FOR LOCATION OF TBR.

DESIGN FOR 2° SKEW (R.A.)  
**240'-0" X 88'-4" WELDED PLATE GIRDER BRIDGE**  
 240'-0" SPAN  
**STAGING**  
 STATION 419+53.95, 42.00' RT. (CL 1-35/80) MAY, 2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. 8 OF 8 FILE NO. 32251 DESIGN NO. 0626





**LONGITUDINAL SECTION ALONG CULVERT**  
 (RCP AND SPLASH PAD NOT SHOWN.)

**LOCATION**

I-35/80  
 T-79N R-25W  
 SECTION 32  
 WALNUT TOWNSHIP  
 POLK COUNTY  
 LATITUDE 41.602500°  
 LONGITUDE -93.776889°

**UTILITIES LEGEND:**

F05 - FIBER OPTIC - WIND STREAM  
 W - WATER - CLIVE PUBLIC WATER WORKS  
 UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

**PROFILE GRADE I-35/80**

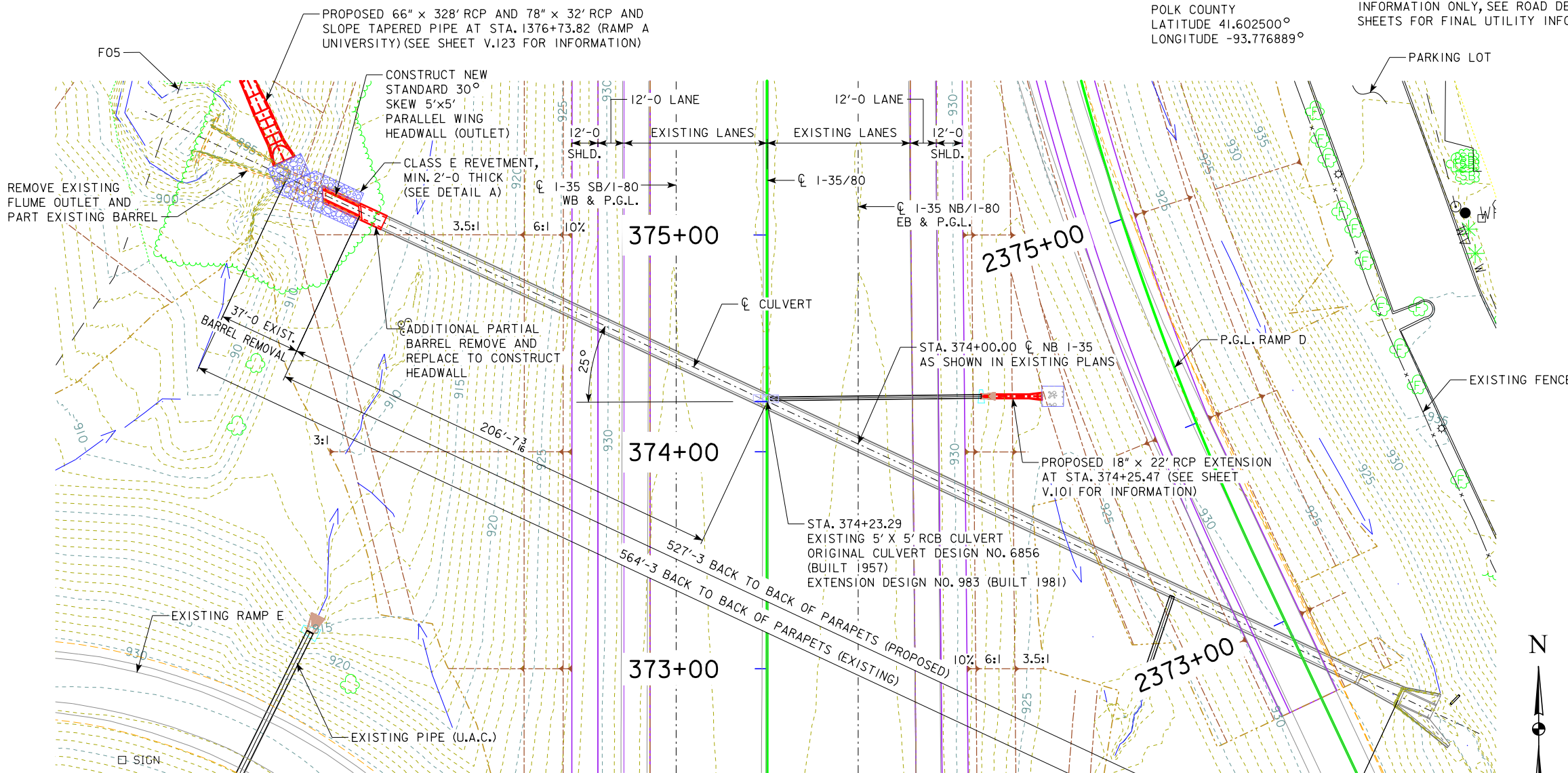
(USE AS CONSTRUCTED)

**HYDRAULIC DATA**

DRAINAGE AREA = 166.2 ACRES  
 Q<sub>50</sub> = 300 CFS  
 HW ELEV. = 926.40  
 STREAM SLOPE = 28.5 FT./MI.

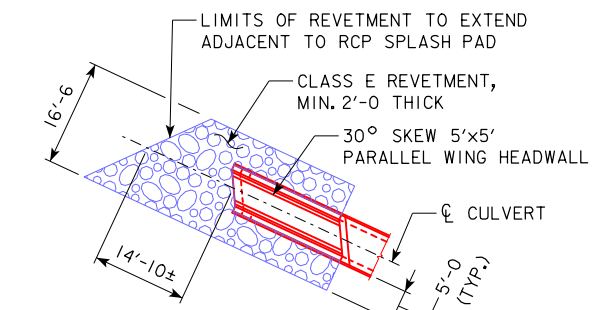
**I-35/80 TRAFFIC ESTIMATE**

2015 AADT	90,100	V.P.D.
2042 AADT	139,800	V.P.D.
2042 DHV	12,870	V.P.H.
TRUCKS	13	%
TOTAL DESIGN ESALS		



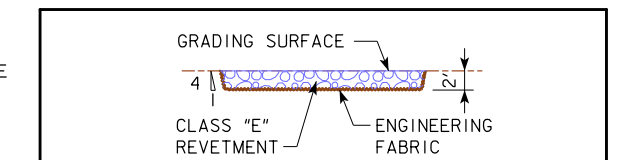
**SITUATION PLAN**

ALL DIMENSIONS ARE IN FEET UNLESS NOTED OTHERWISE.



**DETAIL A**

SHOWING EXTENTS OF CLASS E REVETMENT AT OUTLET. RCP AND SPLASH PAD NOT SHOWN.



**TYPICAL CHANNEL PROTECTION**

**ESTIMATED REVETMENT QUANTITIES INCLUDED WITH ROAD PLANS**

LOCATION	REVETMENT CL. "E" (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	---	---	---
OUTLET	51.1	79.6	31.9
TOTALS	51.1	79.6	31.9

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.

PRELIMINARY

DESIGN FOR 25° SKEW  
**5'-0 X 5'-0 RCB CULVERT PARTIAL REMOVAL (WB)**  
**SITUATION PLAN**

STA. 374+23.29 (CULVERT I-35/80)

MAY, 2022

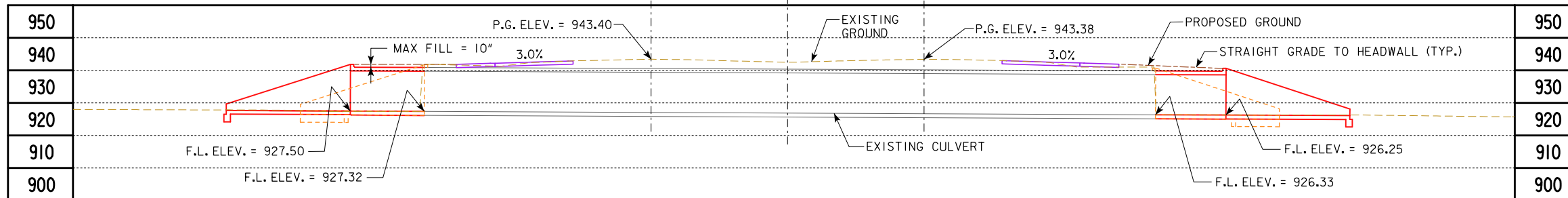
**POLK COUNTY**

IOWA DEPARTMENT OF TRANSPORTATION

DESIGN SHEET NO. 1 OF 1 FILE NO. 32251 DESIGN NO. 0825







LONGITUDINAL SECTION ALONG  $\phi$  CULVERT

**PROPOSED GRADE FOR LIVING HISTORY FARMS ACCESS ROAD**

VERTICAL CURVE FOR LIVING HISTORY FARMS ACCESS ROAD HAS NOT BEEN DEFINED, CULVERT EXTENSIONS WILL BE BUILT ON A STRAIGHT GRADE FROM EXISTING CULVERT ENDS TO ELEVATIONS SHOWN ON LONGITUDINAL SECTION.

**PROFILE GRADE I-35/80**

(USE AS CONSTRUCTED)

**I-35/80 M.L. LHF S.R. CURVE DATA**

VPC STA. 437+32.90 VPI STA. 440+32.90 VPT STA. 443+32.89 $\Delta = 0^\circ 42' 0.00''$ (LT.) T = 300.00 L = 599.99 R = 49,109.96 E = 0.92	PC STA. 1436+03.29 PI STA. 1437+74.27 PT STA. 1439+44.42 $\Delta = 9^\circ 46' 22.03''$ (RT.) T = 170.98 L = 341.13 R = 2,000.00 E = 7.30
--	--

**UTILITIES LEGEND:**

NO KNOWN UTILITIES

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

**I-35/80 TRAFFIC ESTIMATE**

2015 AADT	108,600	V.P.D.
2042 AADT	163,400	V.P.D.
2042 DHV	15,610	V.P.H.
TRUCKS	13	%
TOTAL DESIGN ESALS		

**NOTES:**

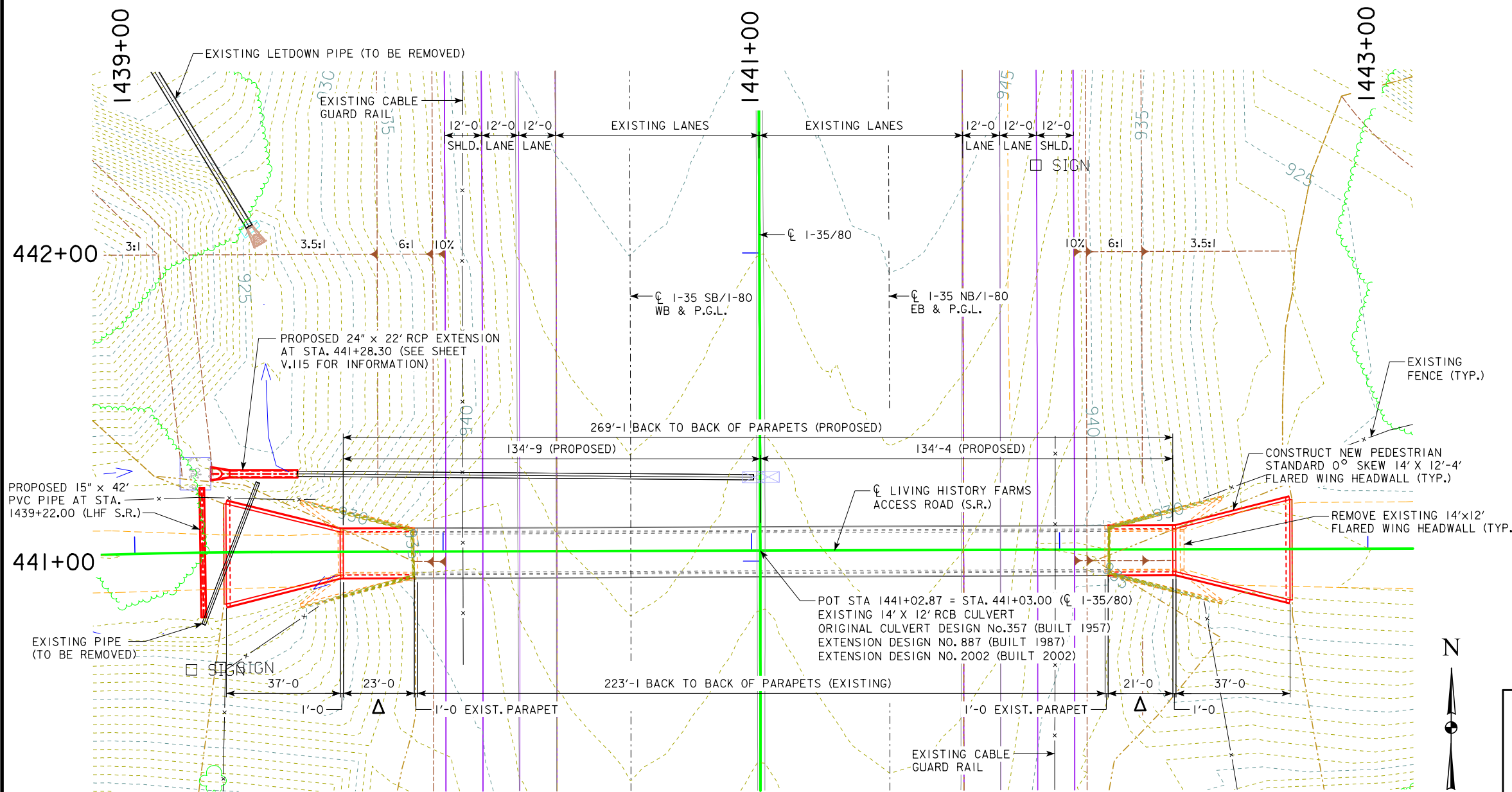
HEADWALL IN-KIND AESTHETICS AND SAFETY RAIL TO BE INCORPORATED IN FINAL DESIGN.

EXISTING FROST TROUGHS TO BE TRANSITIONED TO MATCH CURRENT PEDESTRIAN TUNNEL STANDARD.

$\Delta$  EXTENSION LENGTH FROM FRONT OF EXISTING PARAPET TO BACK OF NEW PARAPET.

**LOCATION**

LIVING HISTORY FARMS TRAIL UNDER I-35/80  
 T-79N R-25W SECTION 29  
 WALNUT TOWNSHIP  
 POLK COUNTY  
 LATITUDE 41.620833°  
 LONGITUDE -93.776806°



**SITUATION PLAN**

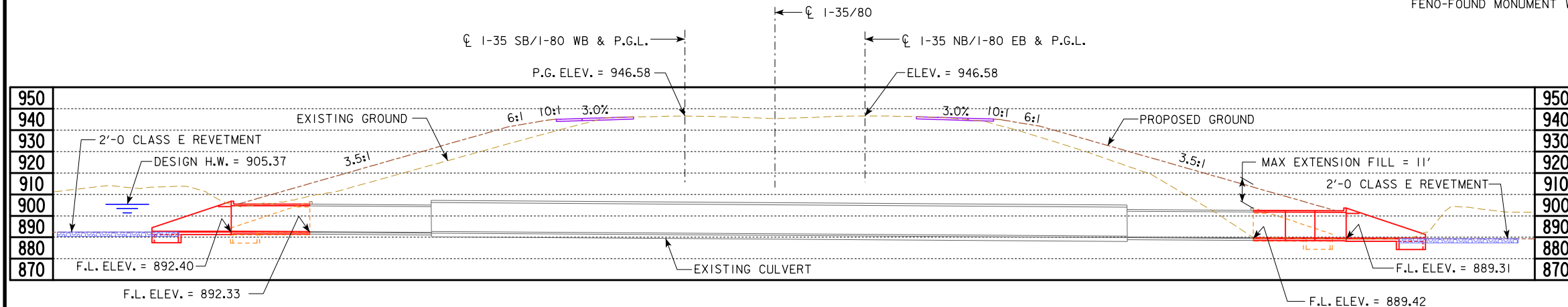
ALL DIMENSIONS ARE IN FEET UNLESS NOTED OTHERWISE.



PRELIMINARY  
 DESIGN FOR 0° SKEW  
**14'-0" X 12'-0" RCB  
 CULVERT EXTENSION (WB)**  
 SITUATION PLAN  
 STA. 441+03.00 ( $\phi$  I-35/80) MAY, 2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. 1 OF 1 FILE NO. 32251 DESIGN NO. 1125







**PROFILE GRADE I-35/80**

(USE AS CONSTRUCTED)

**HYDRAULIC DATA**

DRAINAGE AREA = 1,419 ACRES  
 Q<sub>50</sub> = 1,653 CFS  
 HW ELEV. = 905.37  
 Q<sub>100</sub> = 1,931 CFS  
 HW ELEV. = 906.80  
 STREAM SLOPE = 32.2 FT./MI.

**UTILITIES LEGEND:**

NO KNOWN UTILITIES

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

**NOTES:**

AN IOWA DNR FLOOR PLAIN PERMIT IS REQUIRED.

△ EXTENSION LENGTH FROM FRONT OF EXISTING PARAPET TO BACK OF NEW PARAPET.

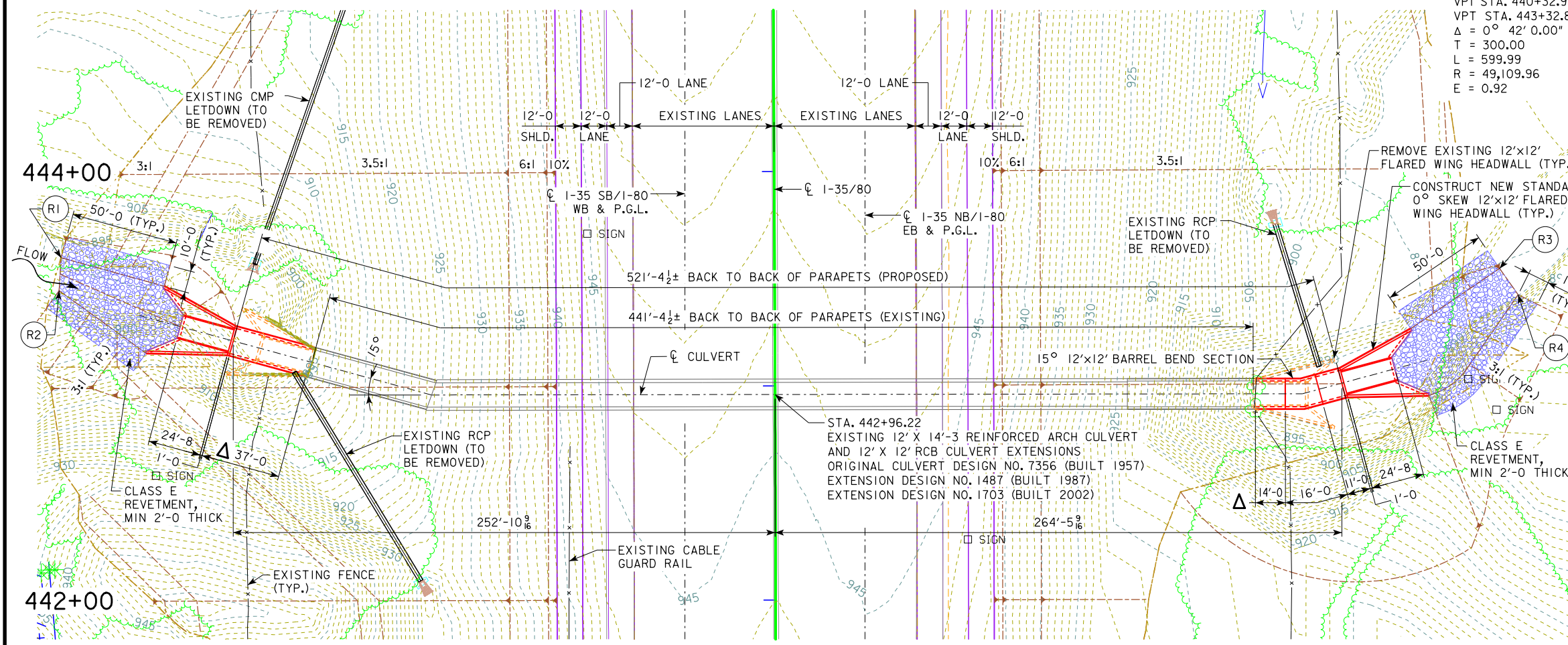
**LONGITUDINAL SECTION ALONG CULVERT**

**CURVE DATA**

VPC STA. 437+32.90  
 VPI STA. 440+32.90  
 VPT STA. 443+32.89  
 Δ = 0° 42' 0.00" (LT.)  
 T = 300.00  
 L = 599.99  
 R = 49,109.96  
 E = 0.92

**I-35/80 TRAFFIC ESTIMATE**

2015 AADT	108,600	V.P.D.
2042 AADT	163,400	V.P.D.
2042 DHV	15,610	V.P.H.
TRUCKS	13	%
TOTAL DESIGN ESALS	-	



ESTIMATED REVETMENT QUANTITIES INCLUDED WITH ROAD PLANS			
LOCATION	REVETMENT CL. "E" (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	282.9	309.6	176.8
OUTLET	335.8	364.0	209.9
TOTALS	618.7	673.6	386.7

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.

**SITUATION PLAN**

ALL DIMENSIONS ARE IN FEET UNLESS NOTED OTHERWISE.



**LOCATION**

I-35/80  
 T-79N R-25W  
 SECTION 29  
 WALNUT TOWNSHIP  
 POLK COUNTY  
 LATITUDE 41.621361°  
 LONGITUDE -93.776806°

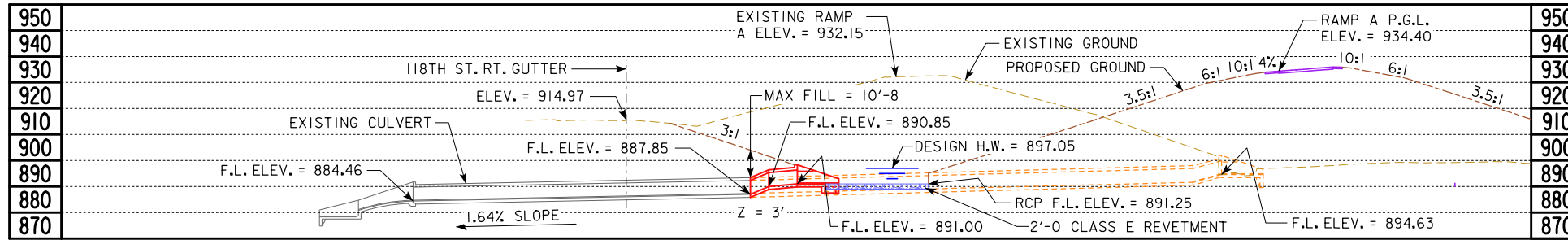
**12'-0" X 12'-0" RCB CULVERT EXTENSION (WB) SITUATION PLAN**

STA. 442+96.22 (CULVERT I-35/80) MAY, 2022  
 POLK COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. 1 OF 1 FILE NO. 32251 DESIGN NO. 1225

- REVETMENT LAYOUT:
- (R1) 443+61.32, 332.98' LT., END CHANNEL LINING
  - (R2) 443+45.94, 333.93' LT., END CHANNEL LINING
  - (R3) 443+53.25, 338.35' RT., END CHANNEL LINING
  - (R4) 443+40.96, 346.96' RT., END CHANNEL LINING

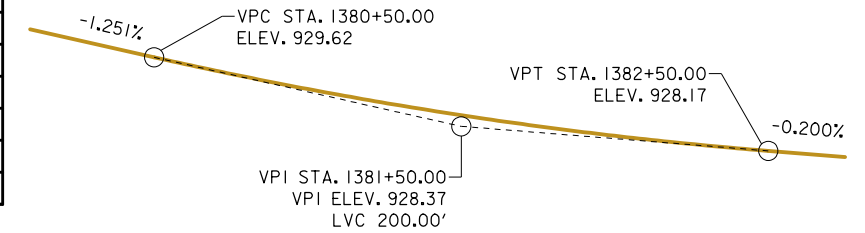


BENCH MARK NO. FENO1: NORTHING 7494509.38 EASTING 18483375.02 ELEVATION 915.02  
 FENO-FOUNDED MONUMENT WEST SIDE OF I-35 AT START OF UNIVERSITY OFF RAMP.

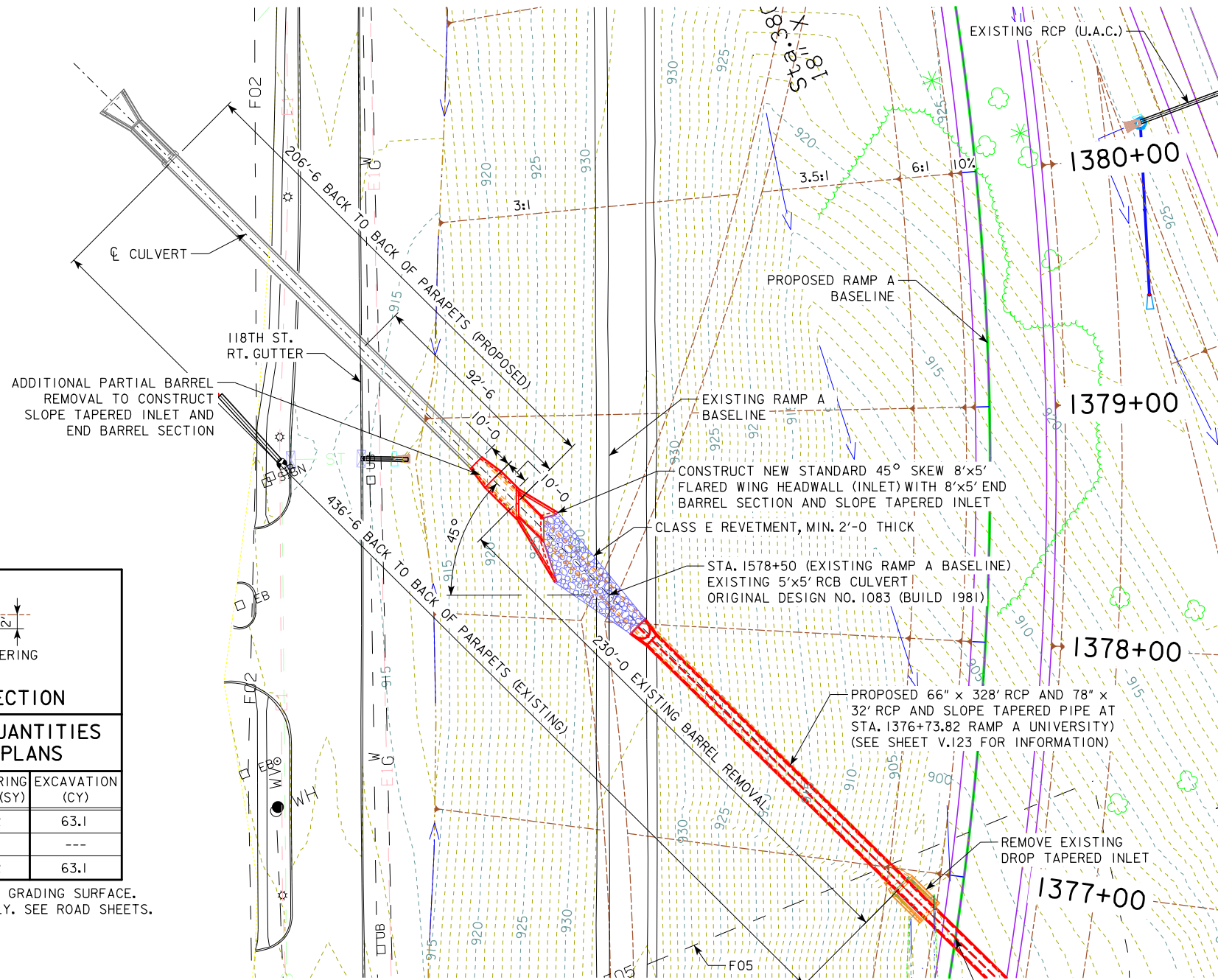


**LONGITUDINAL SECTION ALONG CL CULVERT**

PROPOSED RCP AND SLOPE TAPERED PIPE NOT SHOWN FOR CLARITY.



**PROPOSED PROFILE GRADE RAMP A**



**CURVE DATA PROPOSED RAMP A**

PRC STA. 1373+62.42  
 $\Delta = 39^\circ 01' 11.45''$  (LT.)  
 T = 474.78  
 L = 912.57  
 E = 81.62  
 R = 1,340.00  
 PI STA. 1378+37.20  
 PT STA. 1382+75.00

**HYDRAULIC DATA**

DRAINAGE AREA = 188.7 ACRES  
 $Q_{50} = 320$  CFS  
 HW ELEV. = 897.05  
 STREAM SLOPE = 86.6 FT./MI.

**UTILITIES LEGEND:**

F02 - FIBER OPTIC - CENTURYLINK  
 F05 - FIBER OPTIC - WINDSTREAM  
 EI - ELECTRIC - MIDAMERICAN ENERGY  
 G - GAS - MIDAMERICAN ENERGY  
 W - WATER - CLIVE PUBLIC WATER WORKS

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.

**I-35/80 TRAFFIC ESTIMATE**

2015 AADT	90,100	V.P.D.
2042 AADT	139,800	V.P.D.
2042 DHV	12,870	V.P.H.
TRUCKS	13	%
TOTAL DESIGN ESALs	-	

**RAMP A TRAFFIC ESTIMATE**

2015 AADT	10,600	V.P.D.
2042 AADT	16,400	V.P.D.
2042 DHV	1,160	V.P.H.
TRUCKS	1.4	%
TOTAL DESIGN ESALs	-	

**LOCATION**

I-35 SB/I-80 WB EXIT TO UNIVERSITY EXISTING RAMP A T-79N R-25W SECTION 32 WALNUT TOWNSHIP POLK COUNTY LATITUDE 41.603806° LONGITUDE -93.778306°

**TYPICAL CHANNEL PROTECTION**

**ESTIMATED REVETMENT QUANTITIES INCLUDED WITH ROAD PLANS**

LOCATION	REVETMENT CL. "E" (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	101.0	126.2	63.1
OUTLET	---	---	---
TOTALS	101.0	126.2	63.1

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.

**SITUATION PLAN**

ALL DIMENSIONS ARE IN FEET UNLESS NOTED OTHERWISE.

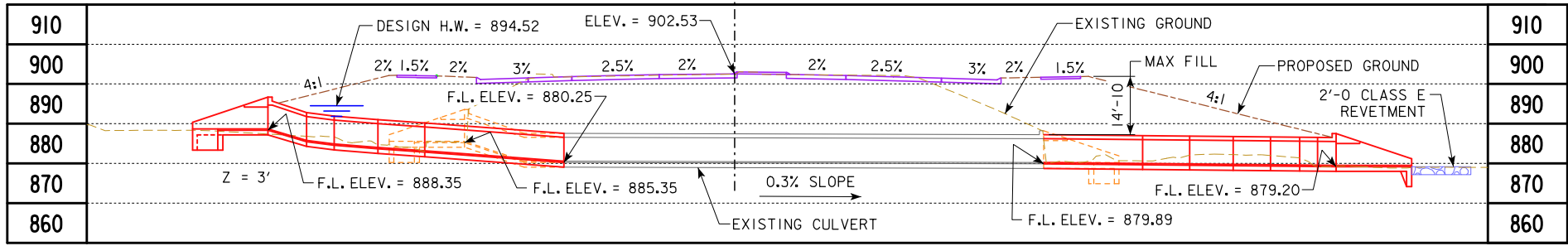


PRELIMINARY  
 DESIGN FOR 45° SKEW  
**5'-0 X 5'-0 RCB CULVERT PARTIAL REMOVAL (WB)**  
**SITUATION PLAN**  
 STA. 1578+50.00 (B EXISTING RAMP A - UNIVERSITY)  
 STA. 1376+73.82 (CL PROPOSED RAMP A - UNIVERSITY)  
 POLK COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. 1 OF 1 FILE NO. 32251 DESIGN NO. 0925

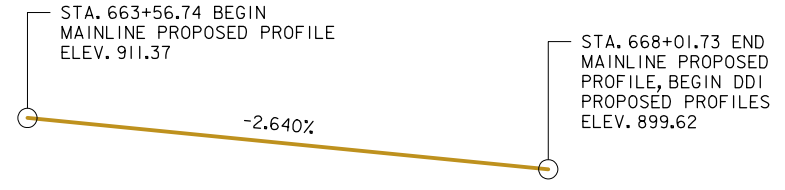




BENCH MARK NO. BM55: NORTHING 7497393.85 EASTING 18481482.57 ELEVATION 929.83  
 URBAN DALE BM55//FOUND BRASS PLUG IN CONCRETE/NORTH SIDE OF HICKMAN ROAD.



LONGITUDINAL SECTION ALONG CULVERT



PROPOSED PROFILE GRADE (U.S. 6)

**U.S. 6 TRAFFIC ESTIMATE**

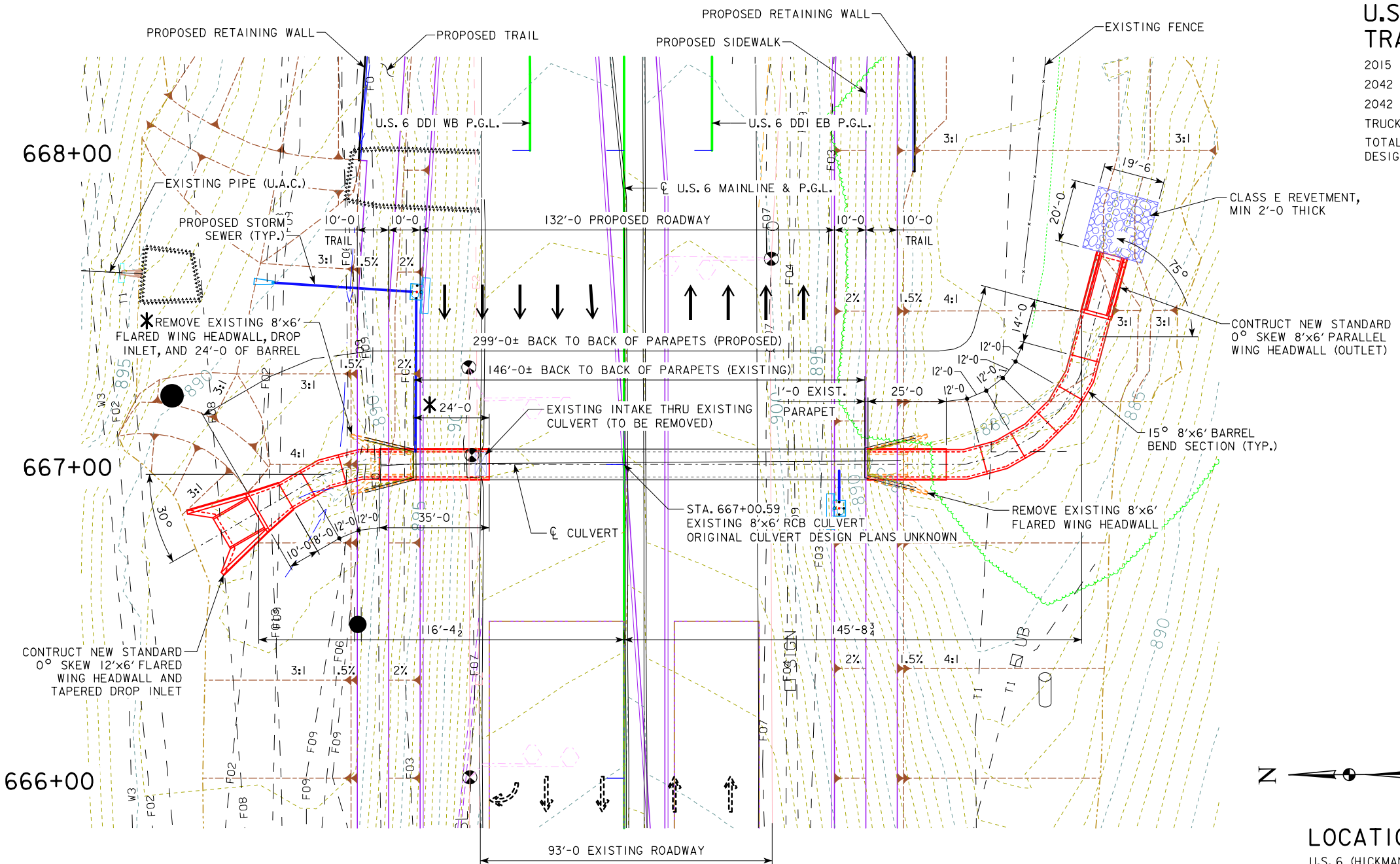
2015 AADT	39,600	V.P.D.
2042 AADT	57,100	V.P.D.
2042 DHV	5,060	V.P.H.
TRUCKS	6	%
TOTAL DESIGN ESALS		

**HYDRAULIC DATA**

DRAINAGE AREA	= 239.6 ACRES
Q <sub>50</sub>	= 520 CFS
HW ELEV.	= 894.52
STREAM SLOPE	= 76.2 FT./MI.

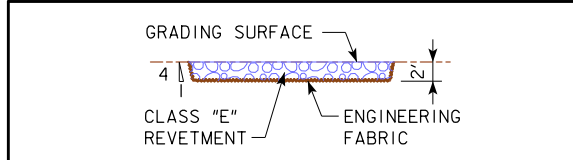
- UTILITIES LEGEND:**
- E2 - ELECTRIC - CITY OF URBAN DALE
  - F0 - FIBER OPTIC - ZAYO
  - F02 - FIBER OPTIC - CENTURYLINK
  - F03 - FIBER OPTIC - MCI/VERIZON
  - F04 - FIBER OPTIC - ICN
  - F06 - FIBER OPTIC - UNITE
  - F07 - FIBER OPTIC - CITY OF CLIVE
  - F08 - FIBER OPTIC - CONSOLIDATED COMMUNITY
  - F09 - FIBER OPTIC - UNKNOWN
  - F13 - FIBER OPTIC - METRONET
  - T1 - TELEPHONE - CENTURY LINK
  - W - WATER - CLIVE PUBLIC WORKS
  - W3 - WATER - DES MOINES WATER WORKS
  - - UTILITY POLE
  - - MANHOLE

UTILITIES SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY, SEE ROAD DESIGN SHEETS FOR FINAL UTILITY INFORMATION.



SITUATION PLAN

ALL DIMENSIONS ARE IN FEET UNLESS NOTED OTHERWISE.



TYPICAL CHANNEL PROTECTION

ESTIMATED REVETMENT QUANTITIES INCLUDED WITH ROAD PLANS

LOCATION	REVETMENT CL. "E" (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
INLET	--	--	--
OUTLET	46.2	60.9	28.9
TOTALS	46.2	60.9	28.9

EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE. EXCAVATION QUANTITY IS FOR EMBEDDED REVETMENT AND CORE OUT ONLY, AND DOES NOT INCLUDE EXCAVATION TO THE GRADING SURFACE. EXCAVATION QUANTITY TO THE GRADING SURFACE IS DETERMINED BY ROAD DESIGN AND INCLUDED IN THE ROAD PLANS. QUANTITIES SHOWN FOR INFORMATION ONLY. SEE ROAD SHEETS.



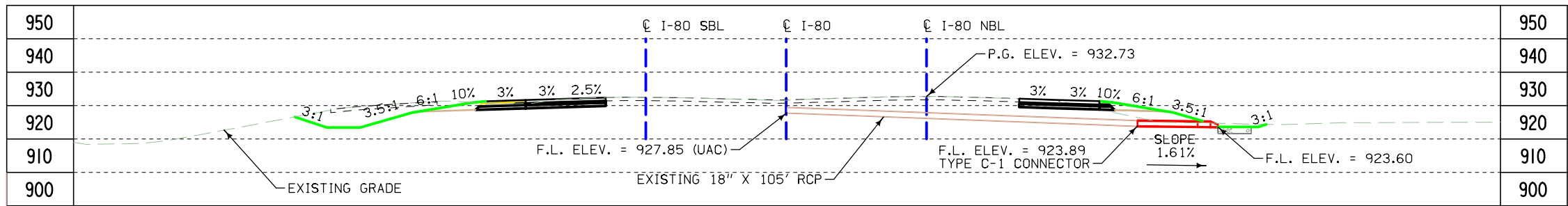
**LOCATION**

U.S. 6 (HICKMAN ROAD)  
 T-79N R-25W  
 SECTION 29/32  
 WALNUT TOWNSHIP  
 POLK COUNTY  
 LATITUDE 41.614889°  
 LONGITUDE -93.780361°

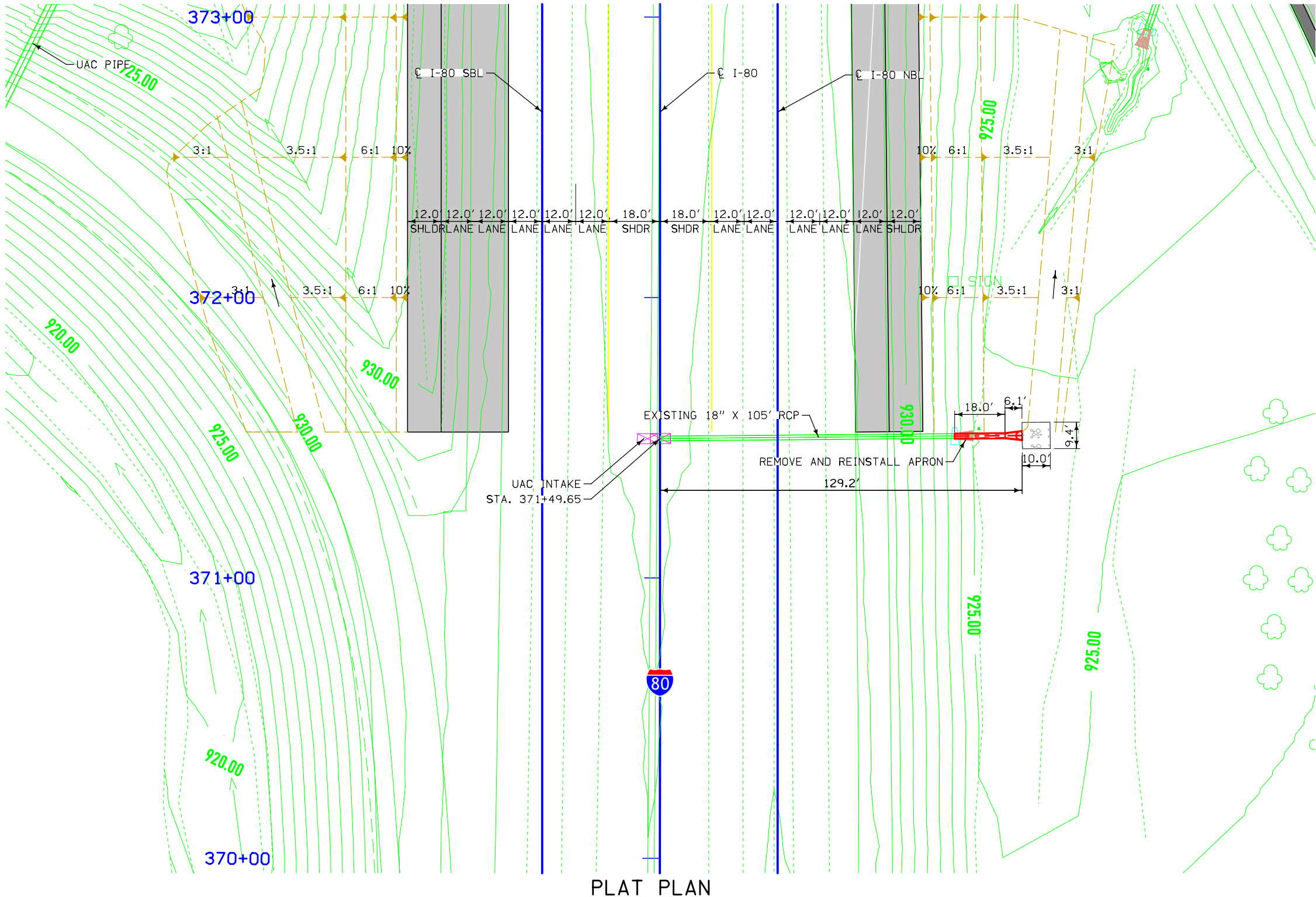
PRELIMINARY  
 DESIGN FOR 0° SKEW  
**8'-0 X 6'-0 RCB CULVERT EXTENSION (WB)**  
**SITUATION PLAN**

STA. 667+00.59 (U.S.6) MAY, 2022  
 POLK COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. 1 OF 1 FILE NO. 32251 DESIGN NO. 1025





LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

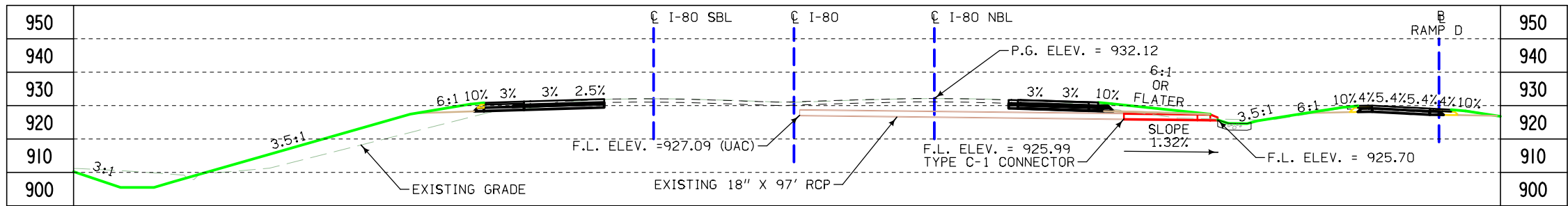
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

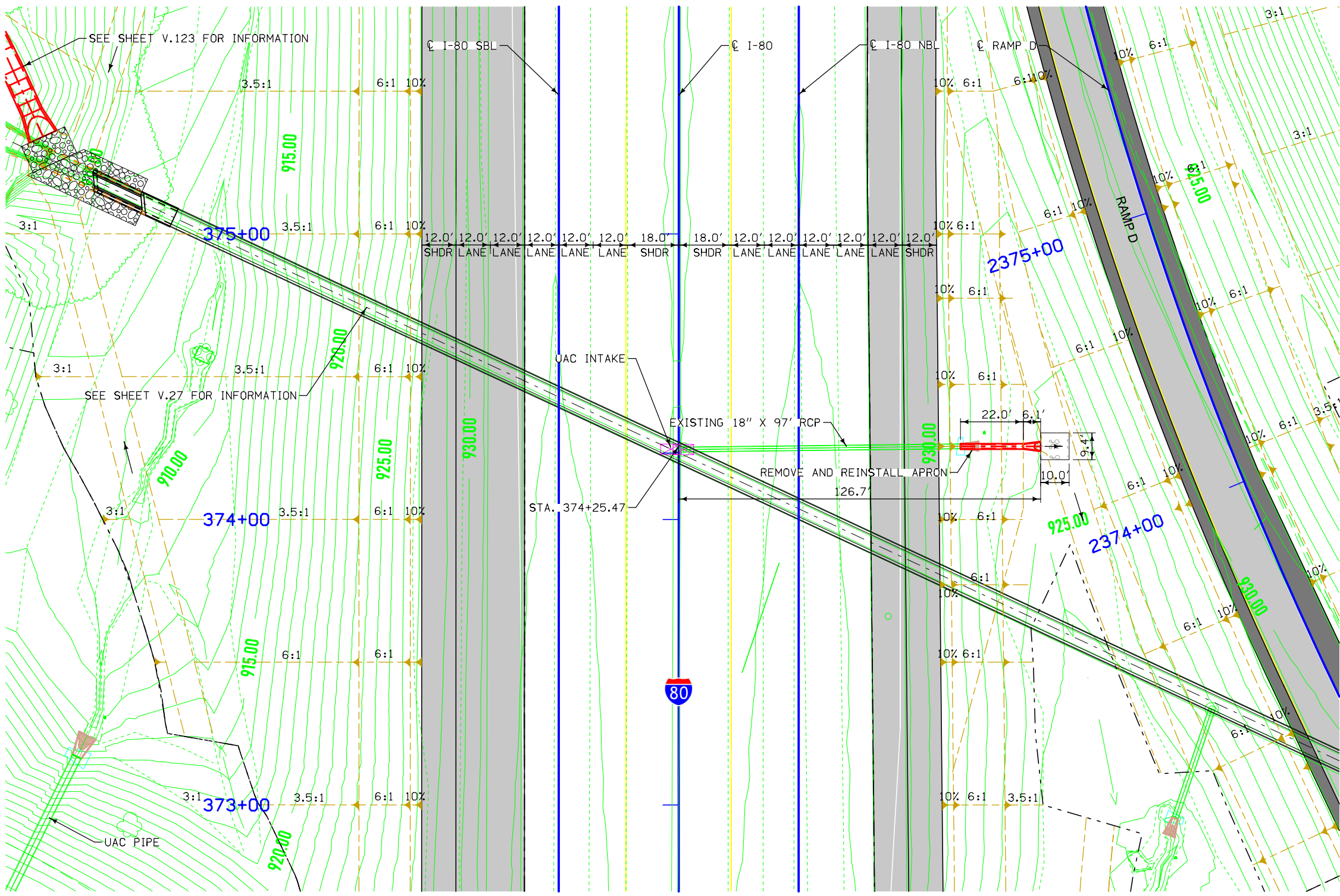
LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 18'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
STATION 371+49.65 NBL 5/24/2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_

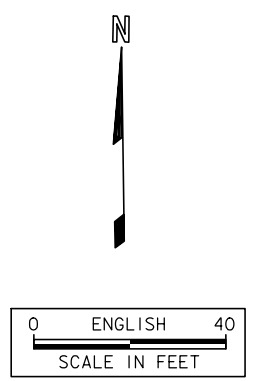




LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

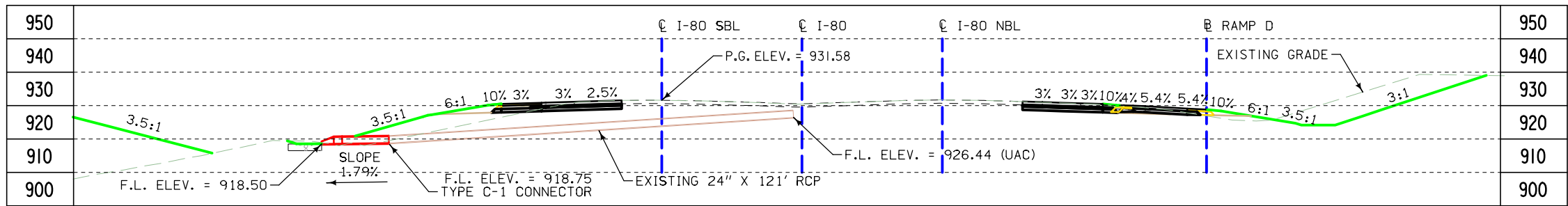


UTILITIES LEGEND:  
REFER TO D.I

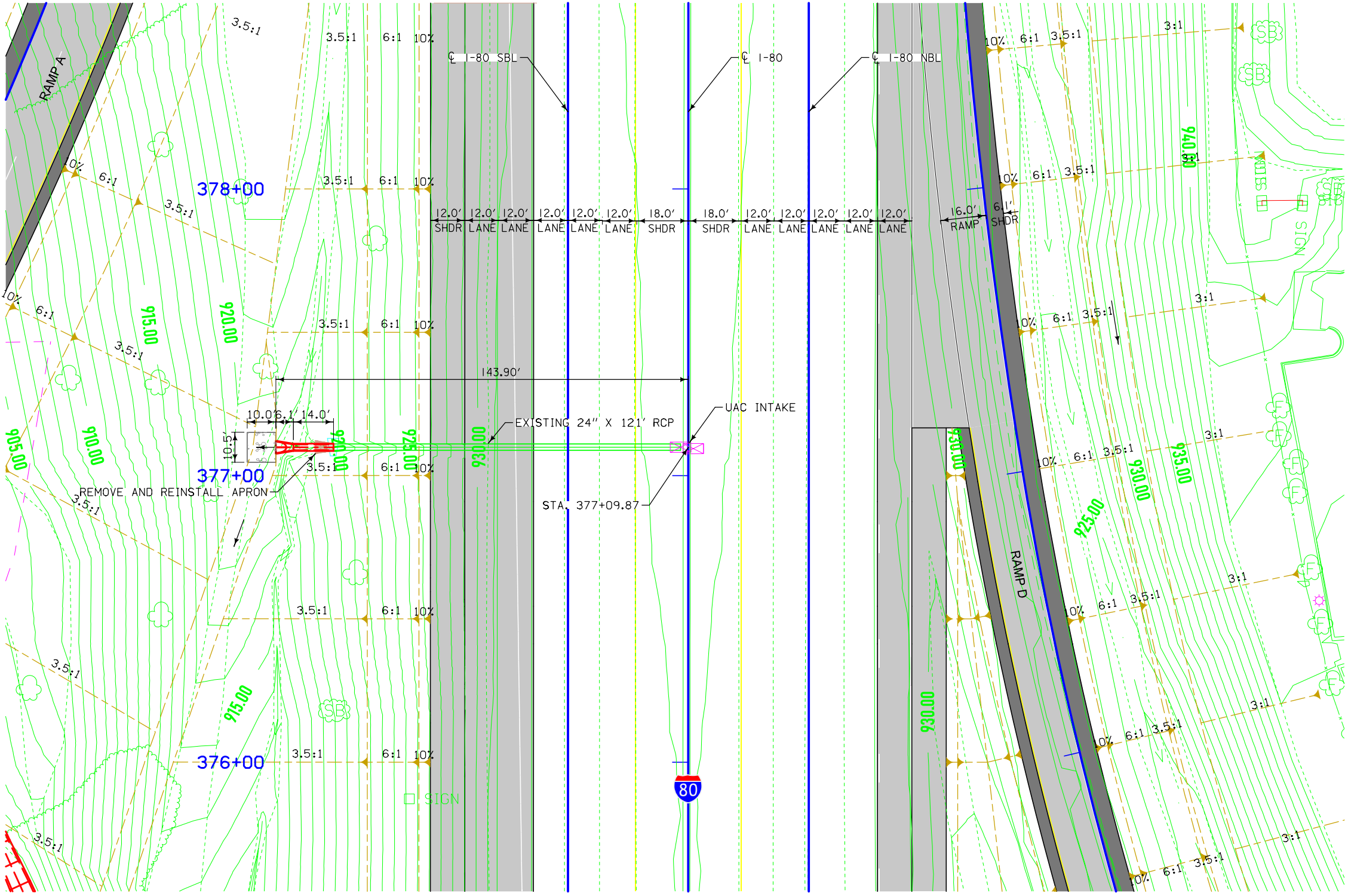
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 22'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 374+25.47 NBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\bar{C}$  CULVERT



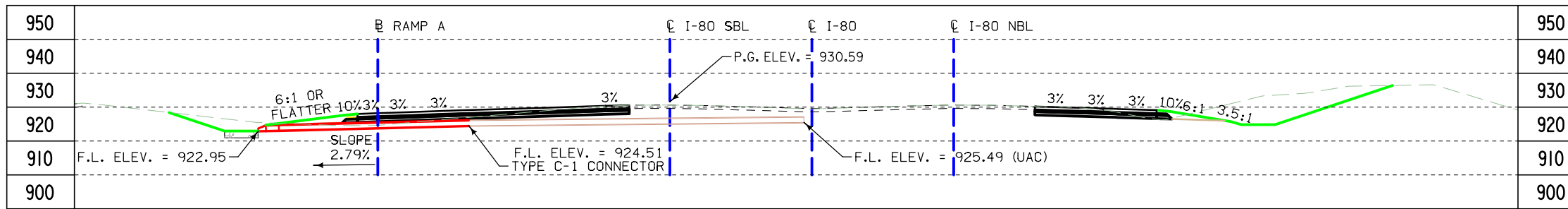
PLAT PLAN

UTILITIES LEGEND:  
REFER TO D.I

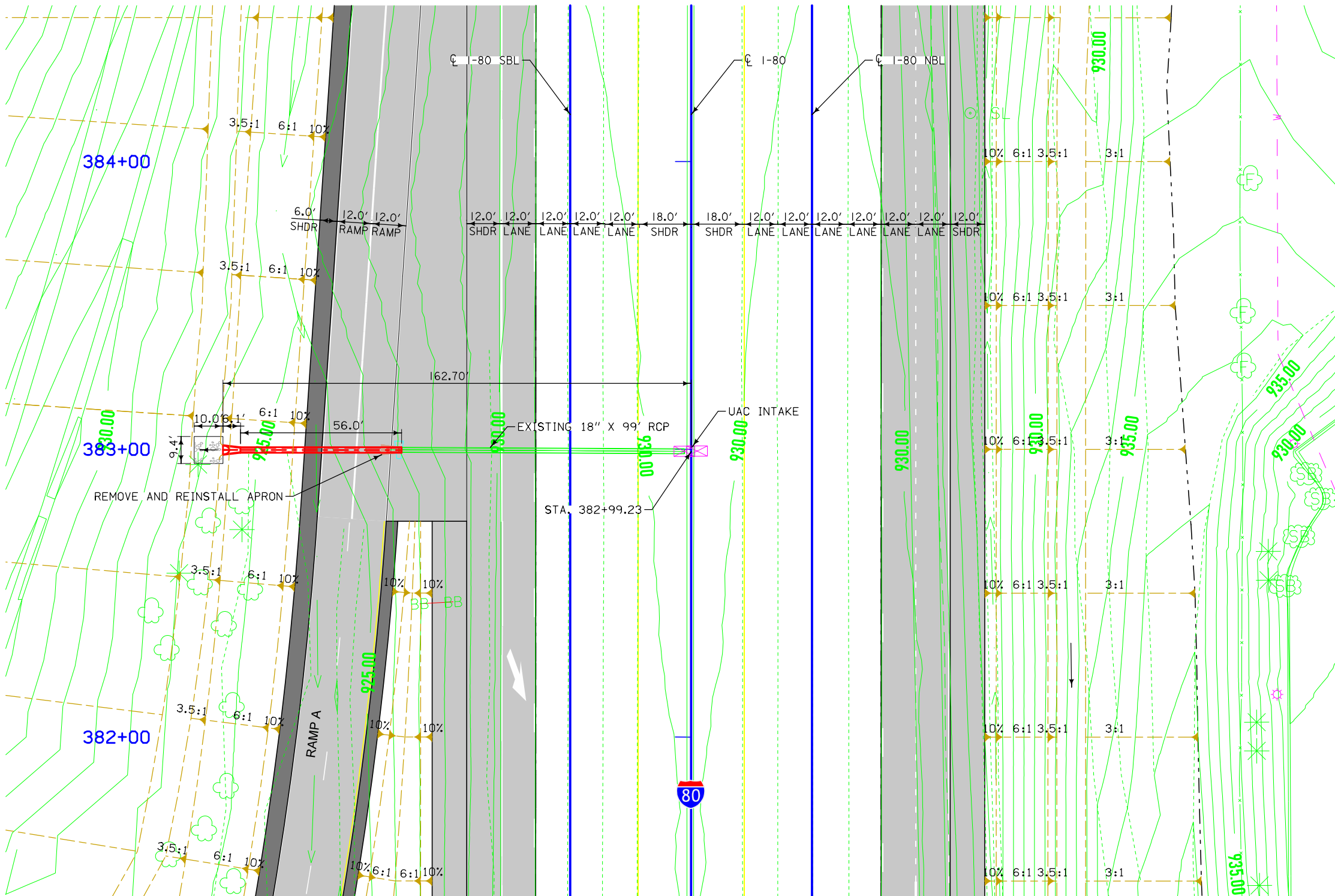
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

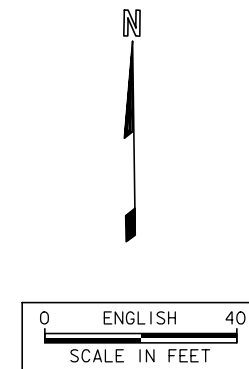
DESIGN FOR 0° SKEW  
**24" X 14'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 377+09.87 SBL  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN



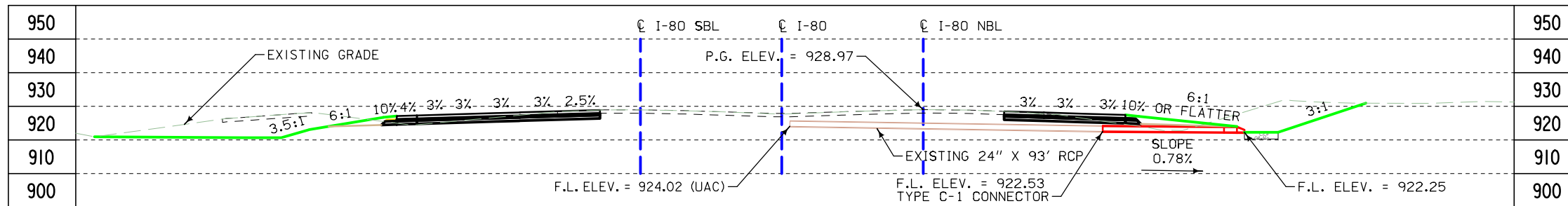
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

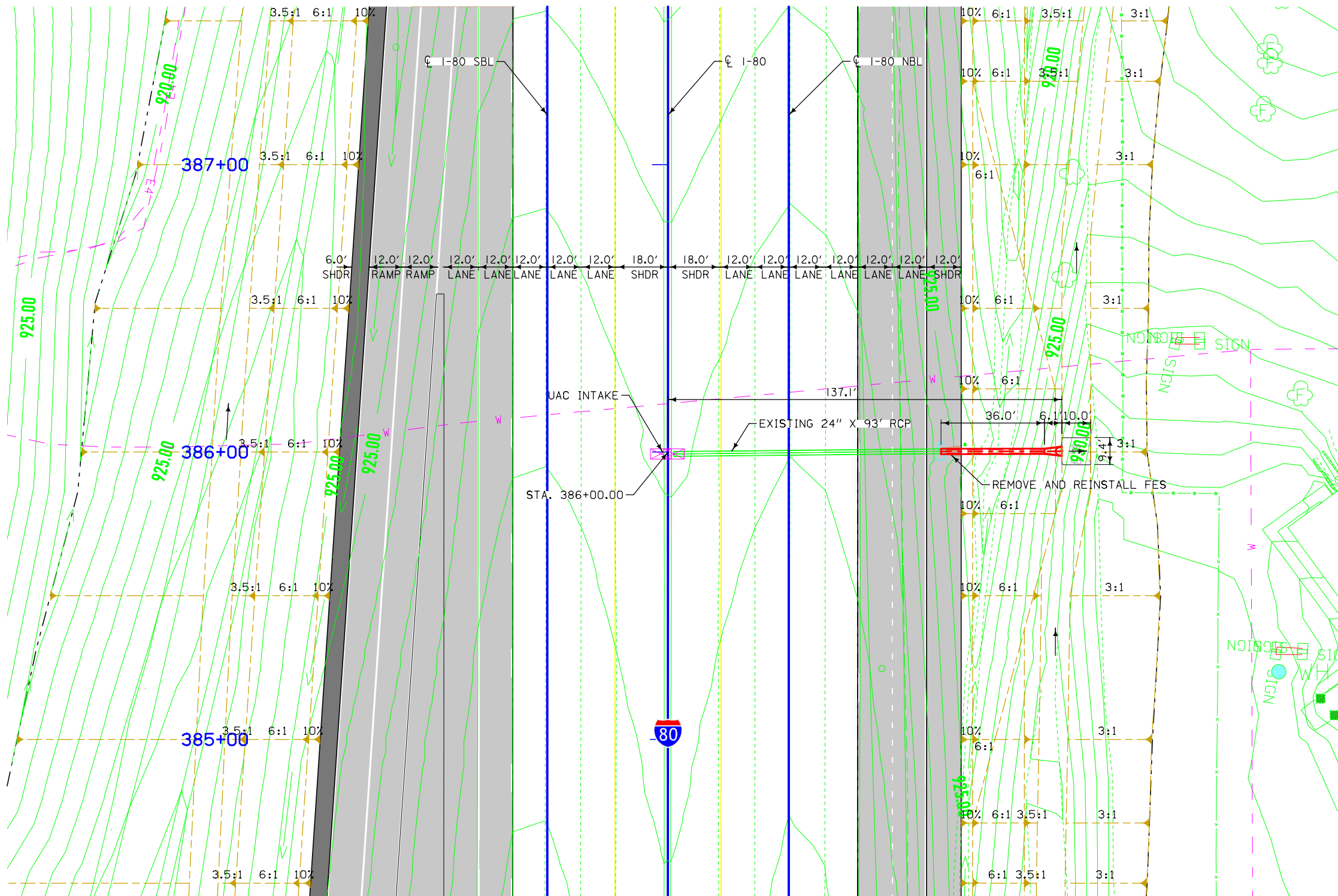
LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 56'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
STATION 382+99.23 SBL  
POLK COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_





LONGITUDINAL SECTION ALONG  $\bar{C}$  CULVERT



PLAT PLAN



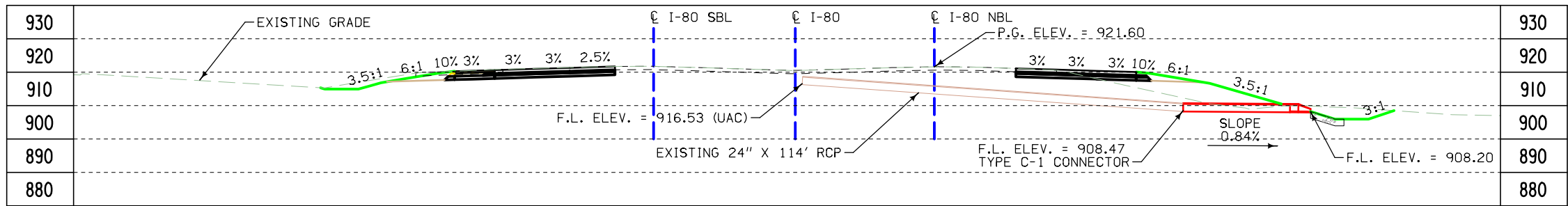
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REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

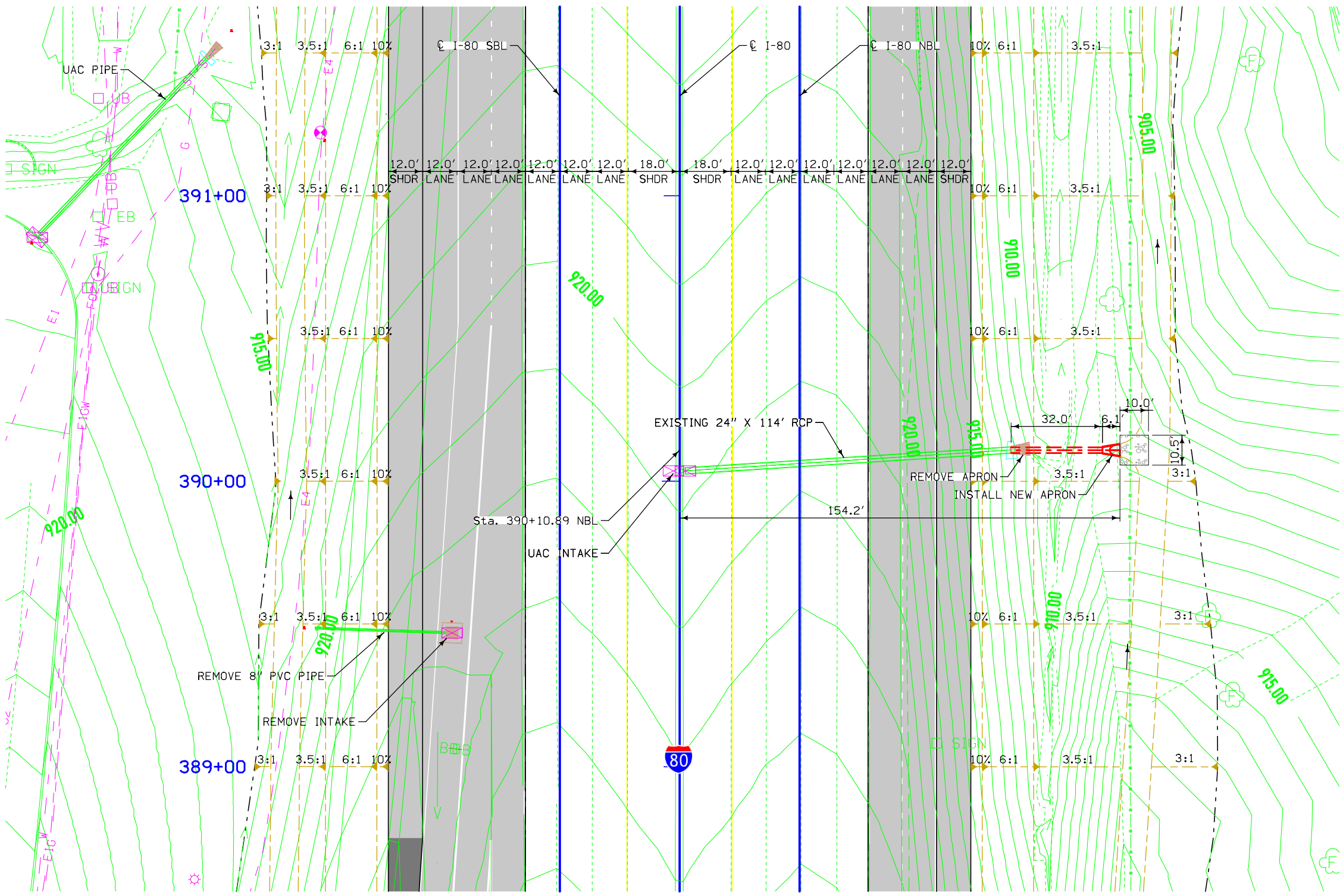
LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 36'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 386+00.00 NBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_

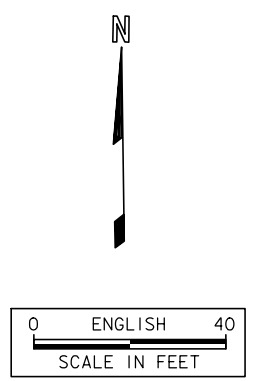




LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

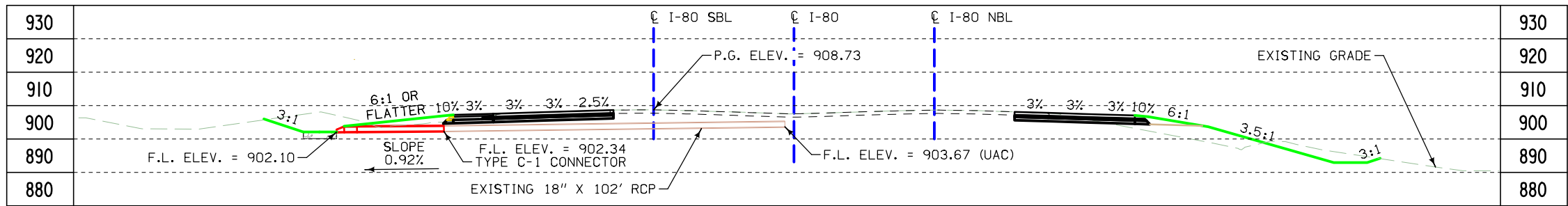


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REFER TO D.I

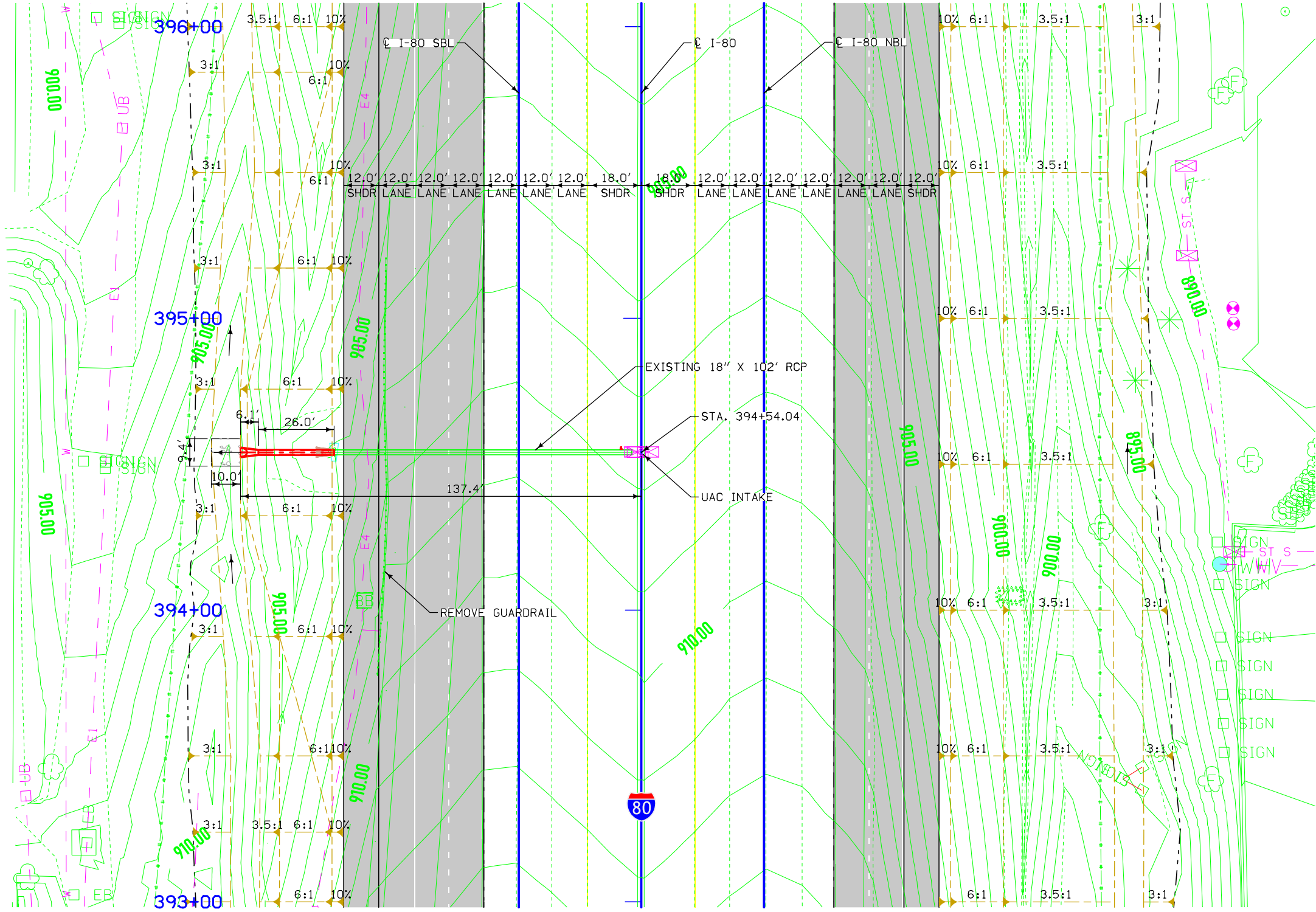
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**24" X 32'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 390+10.89 NBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



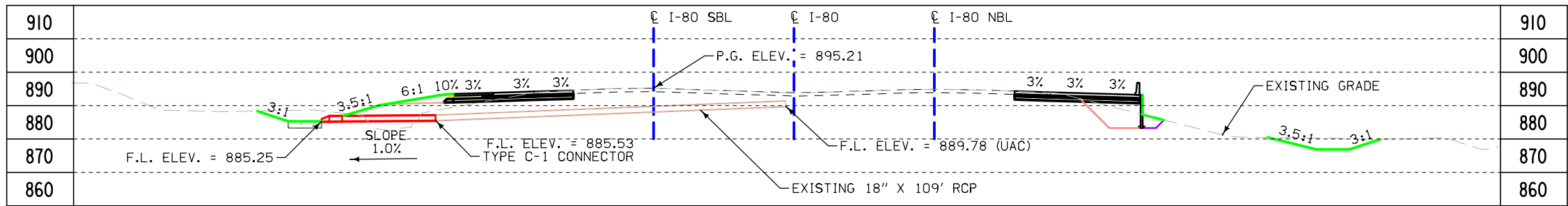
PLAT PLAN

UTILITIES LEGEND:  
REFER TO D.I

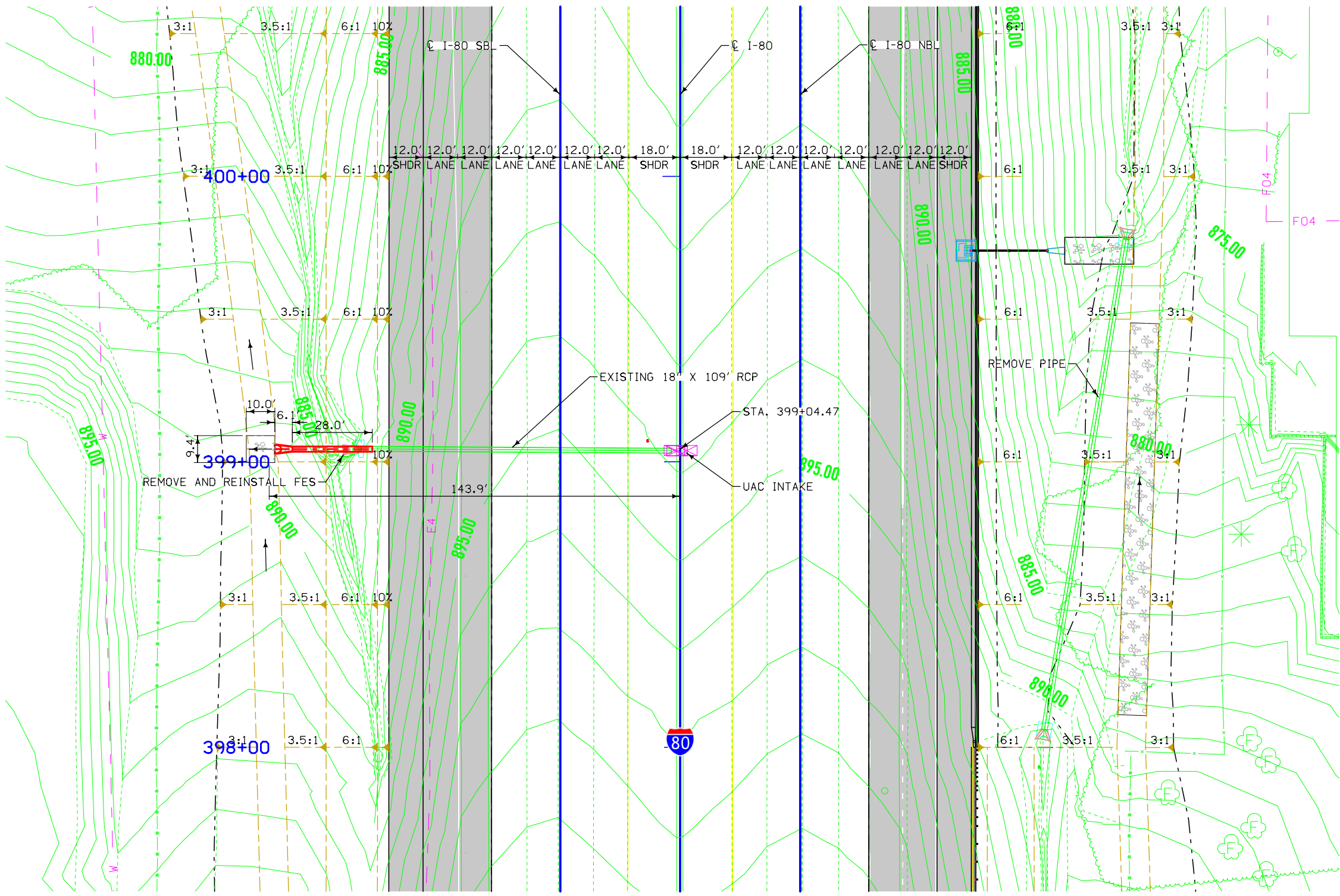
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

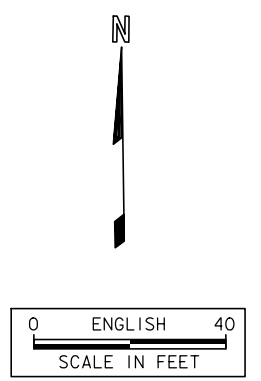
DESIGN FOR 0° SKEW  
**18" X 26'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 394+54.04 SBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN



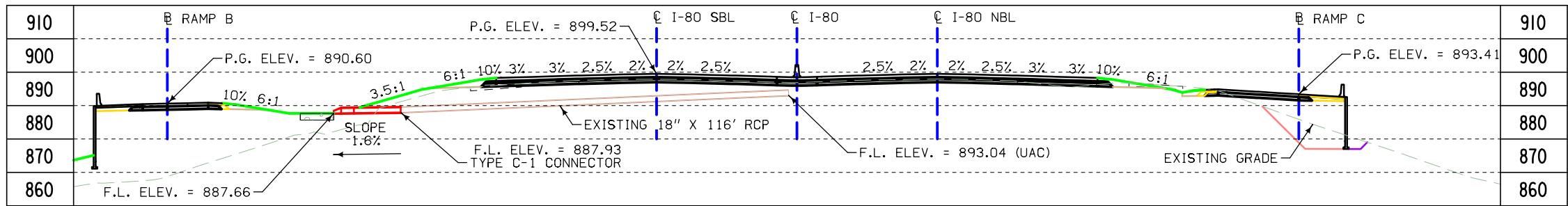
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

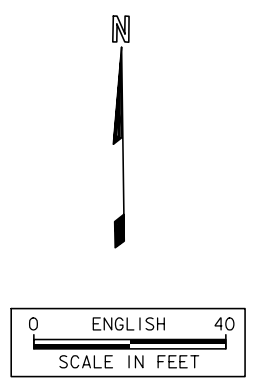
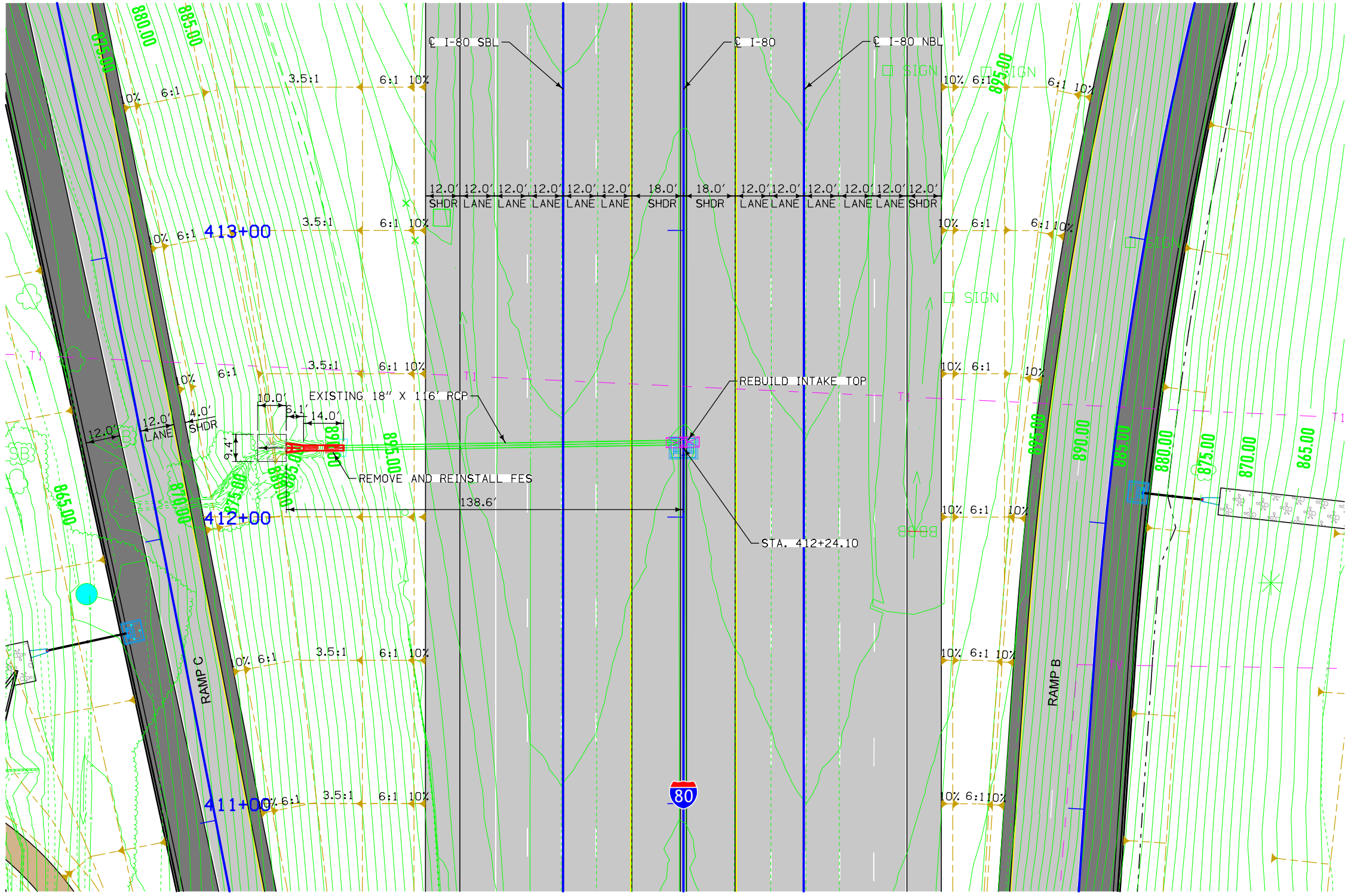
LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 30'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 399+04.47 SBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_





LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



UTILITIES LEGEND:  
REFER TO D.I

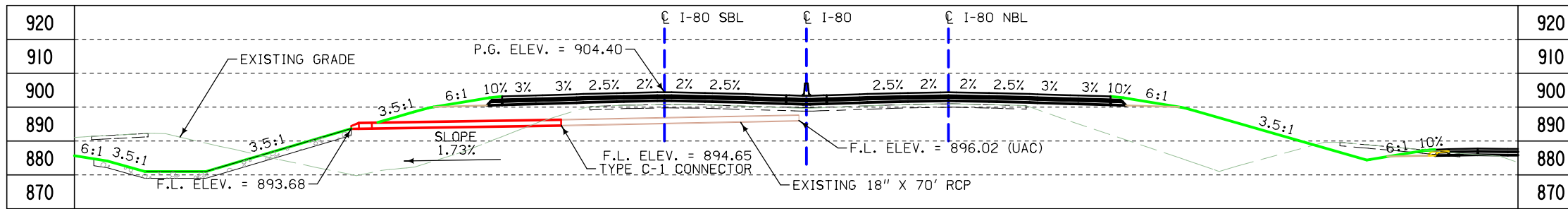
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

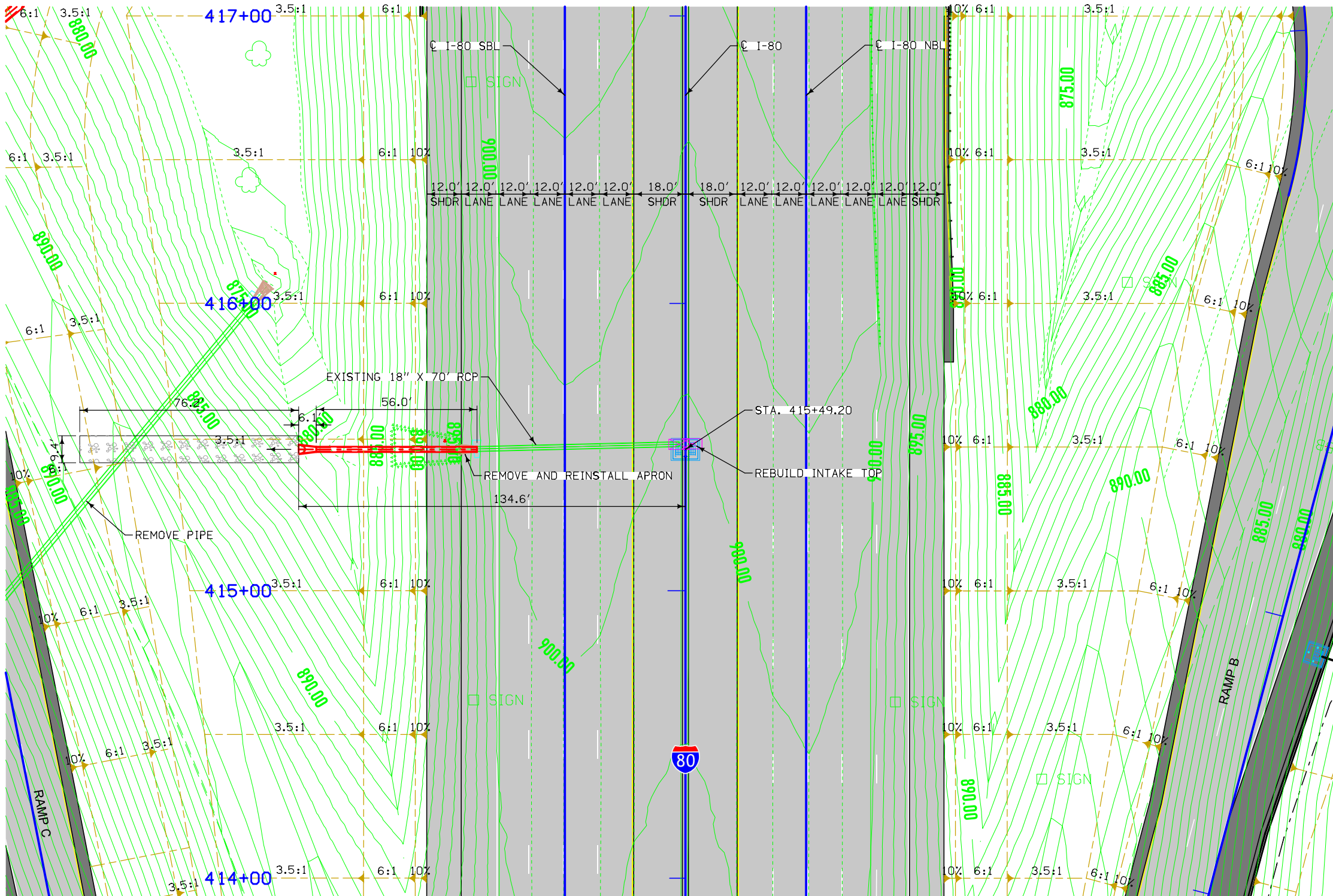
DESIGN FOR 0° SKEW  
**18" X 14'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
STATION 412+24.10 SBL  
POLK COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_

PLAT PLAN

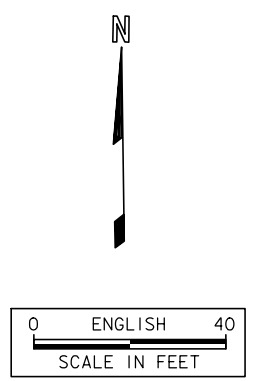




LONGITUDINAL SECTION ALONG  $\bar{C}$  CULVERT



PLAT PLAN

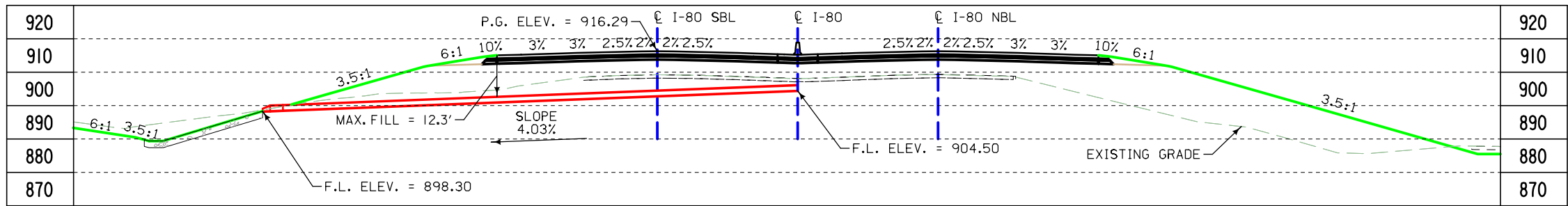


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REFER TO D.I

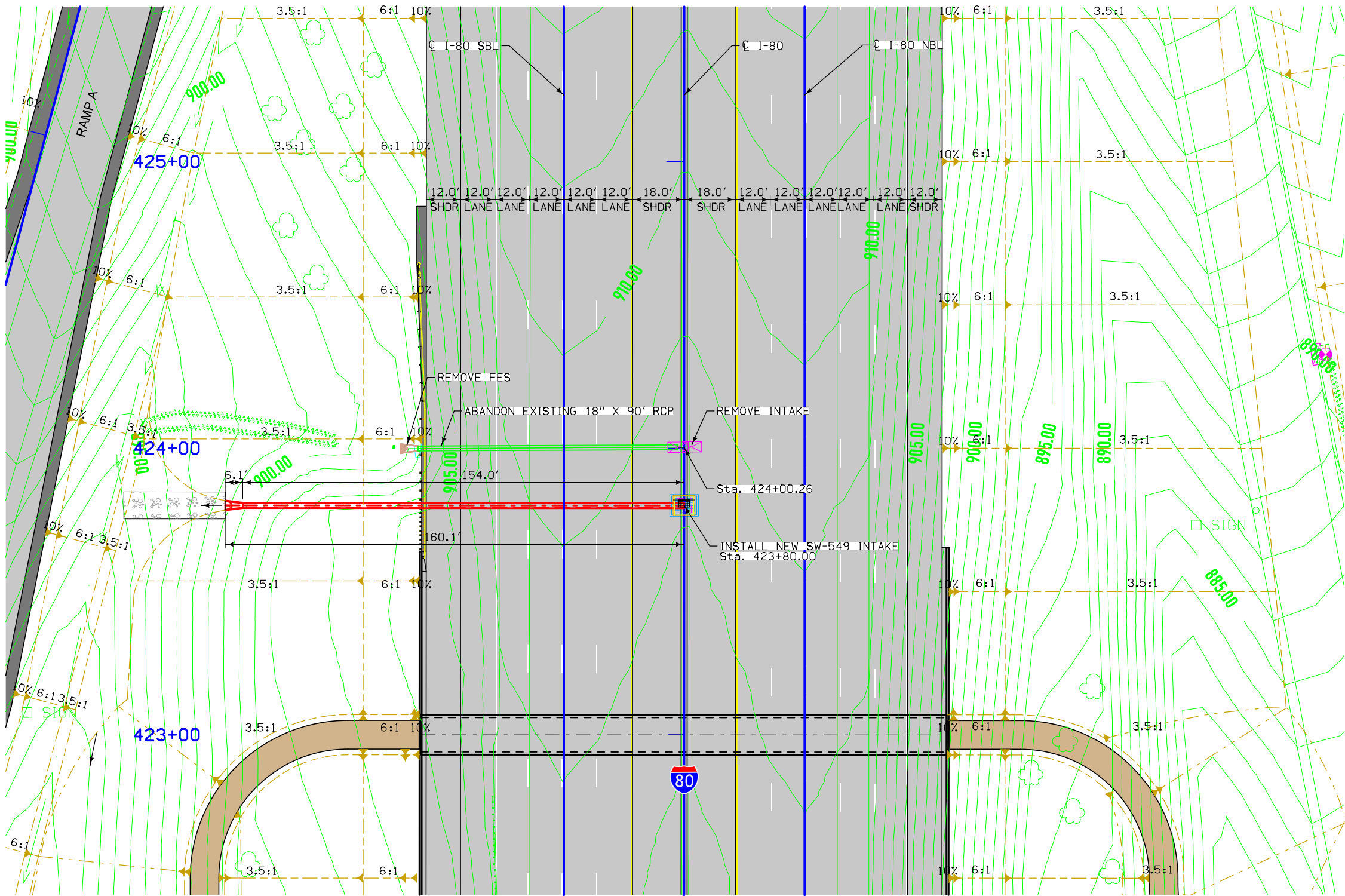
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 56'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 415+49.20 SBL  
 POLK COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN



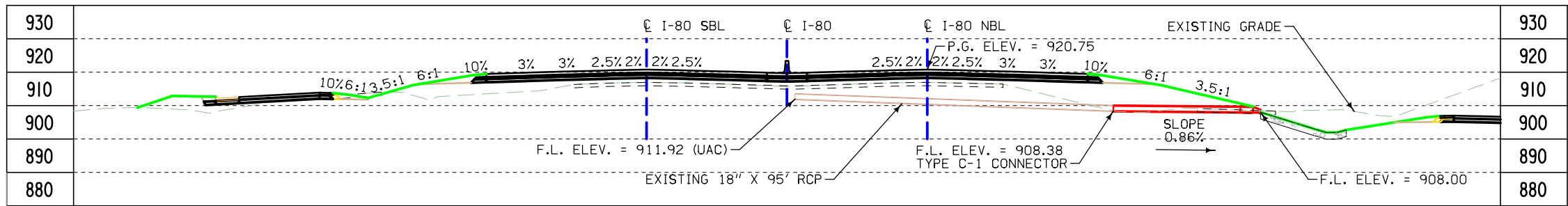
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

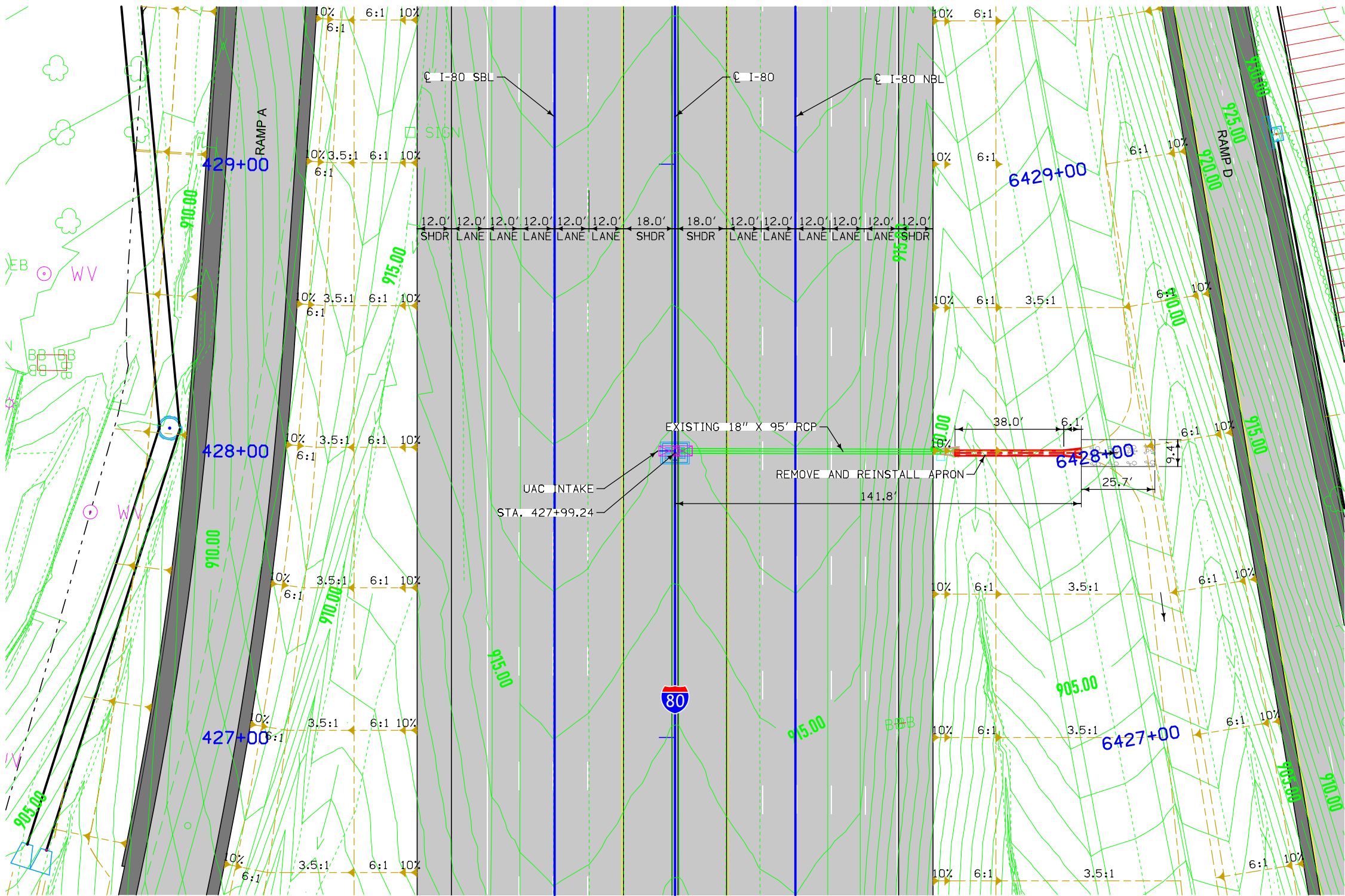
LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 154'**  
**2000D REINFORCED CONCRETE PIPE**  
**PLAT PLAN**  
STATION 423+80.00 SBL  
POLK COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_

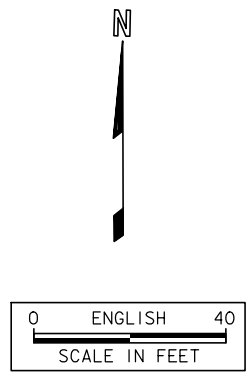




LONGITUDINAL SECTION ALONG  $\varnothing$  CULVERT



PLAT PLAN



UTILITIES LEGEND:  
REFER TO D.I

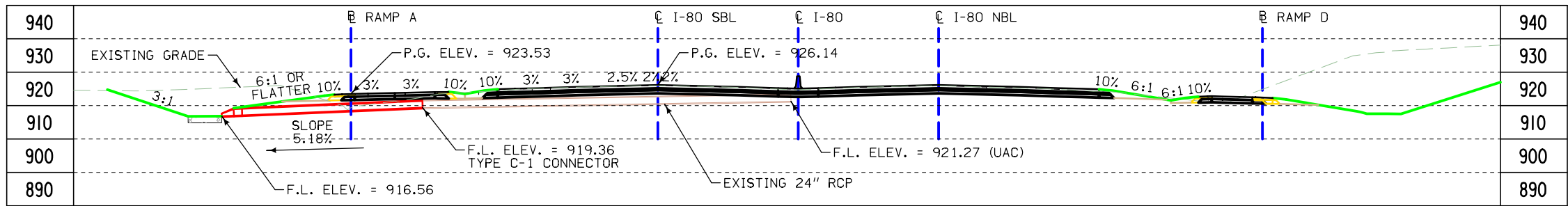
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

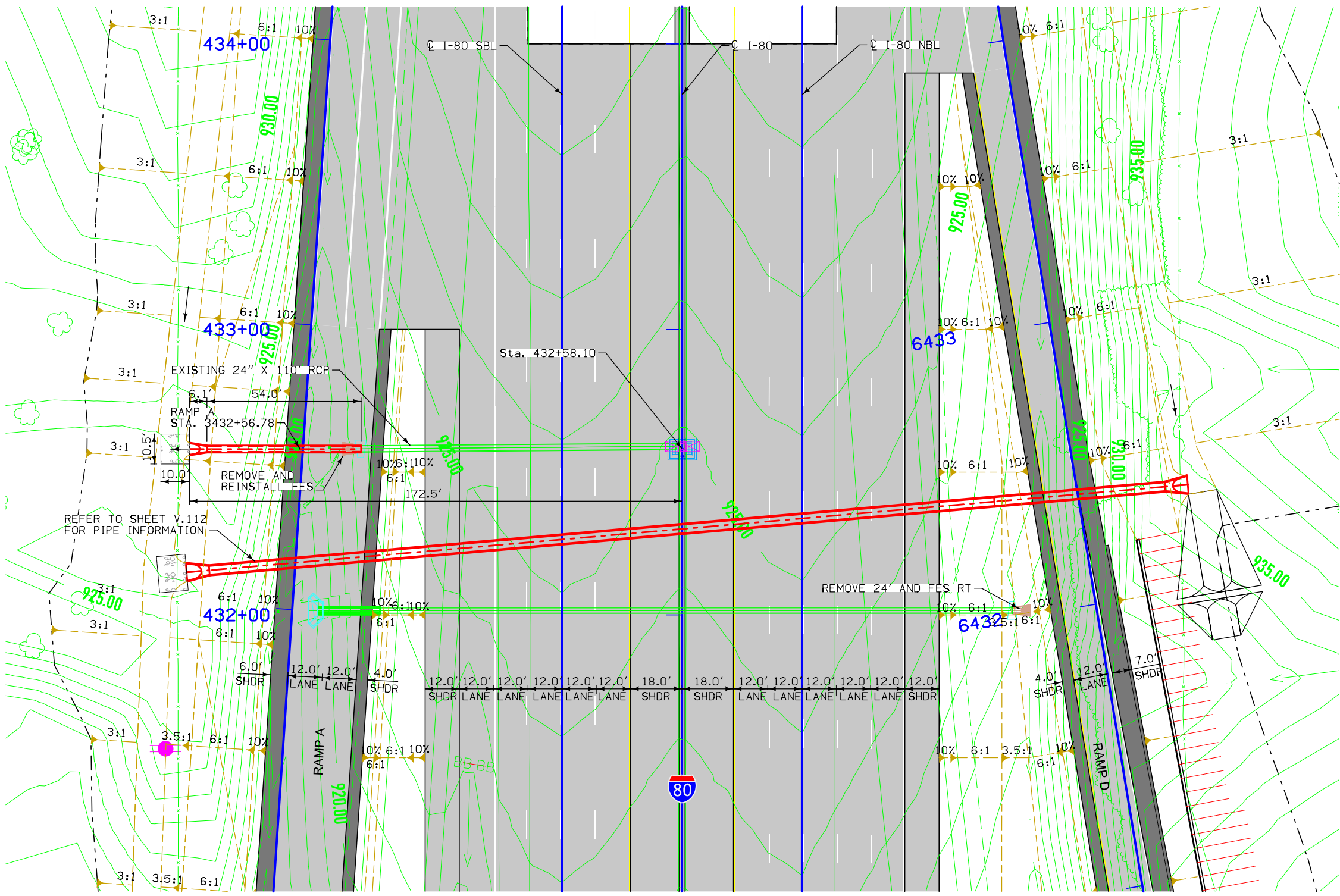
DESIGN FOR 0° SKEW  
**18" X 38'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
STATION 427+99.24 NBL 5/24/2022  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



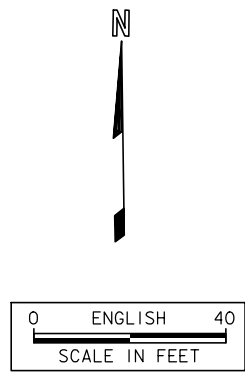




LONGITUDINAL SECTION ALONG  $\bar{C}$  CULVERT



PLAT PLAN



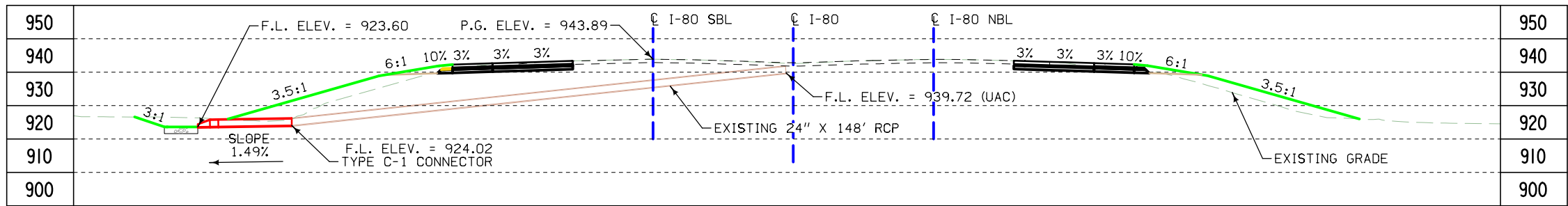
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

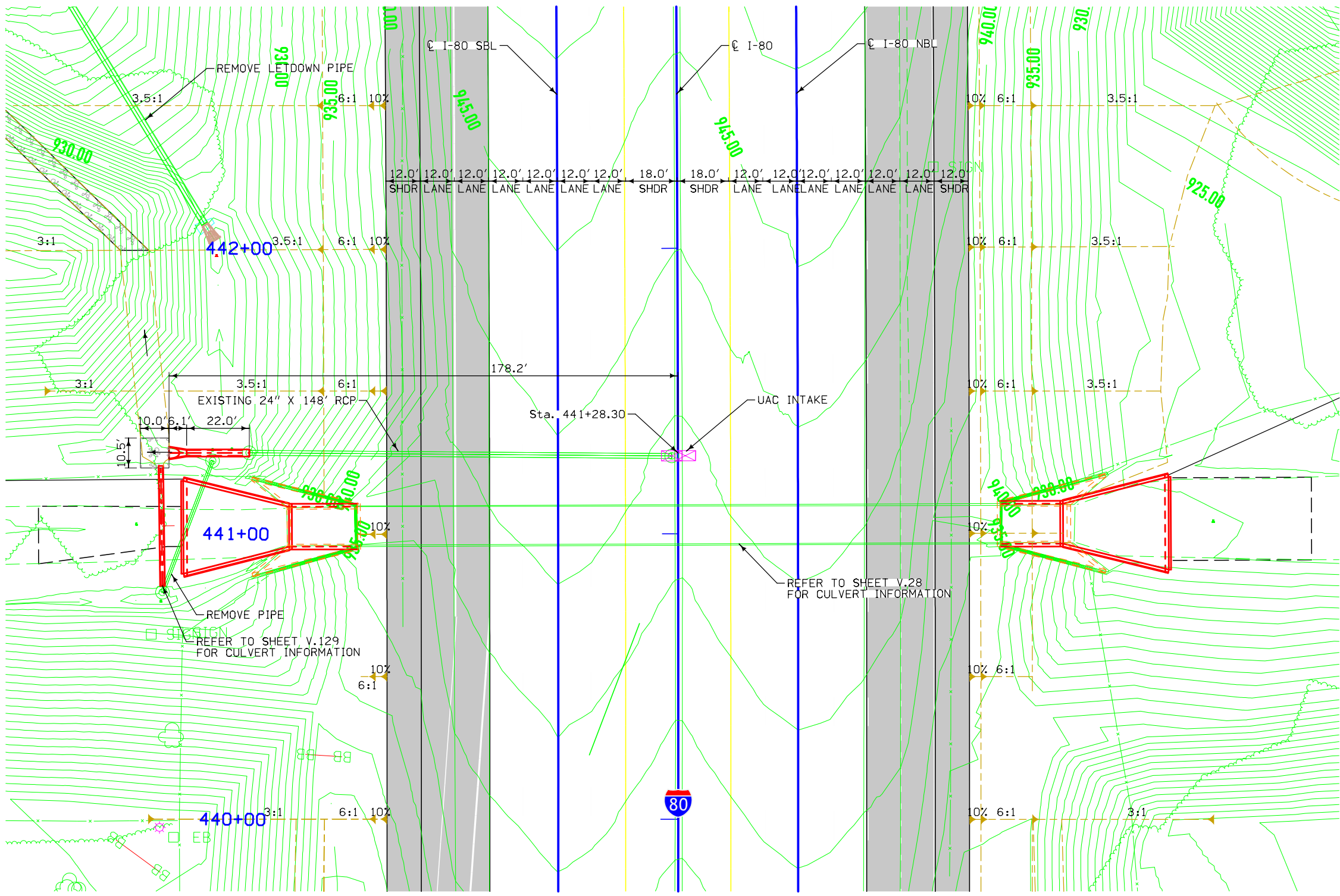
LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 5° SKEW RT AH  
**24" X 54'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
STATION 432+58.10 SBL  
**POLK COUNTY**  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_

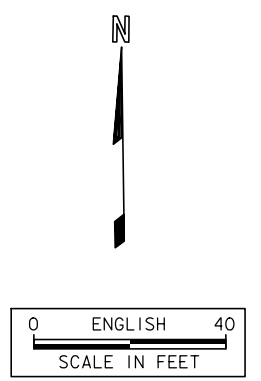




LONGITUDINAL SECTION ALONG  $\text{CL}$  CULVERT



PLAT PLAN



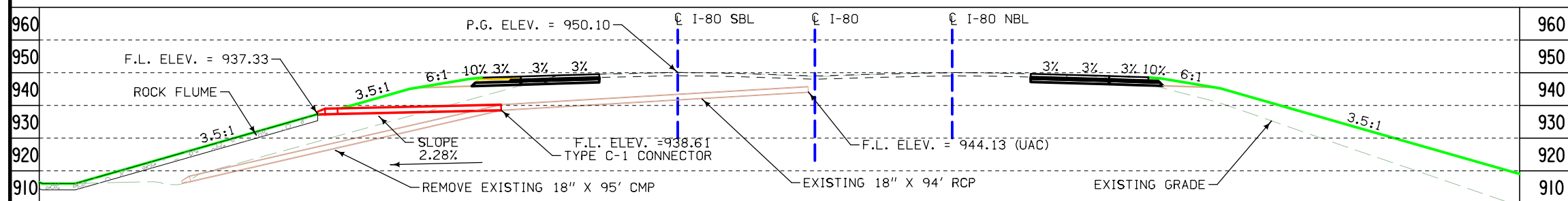
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

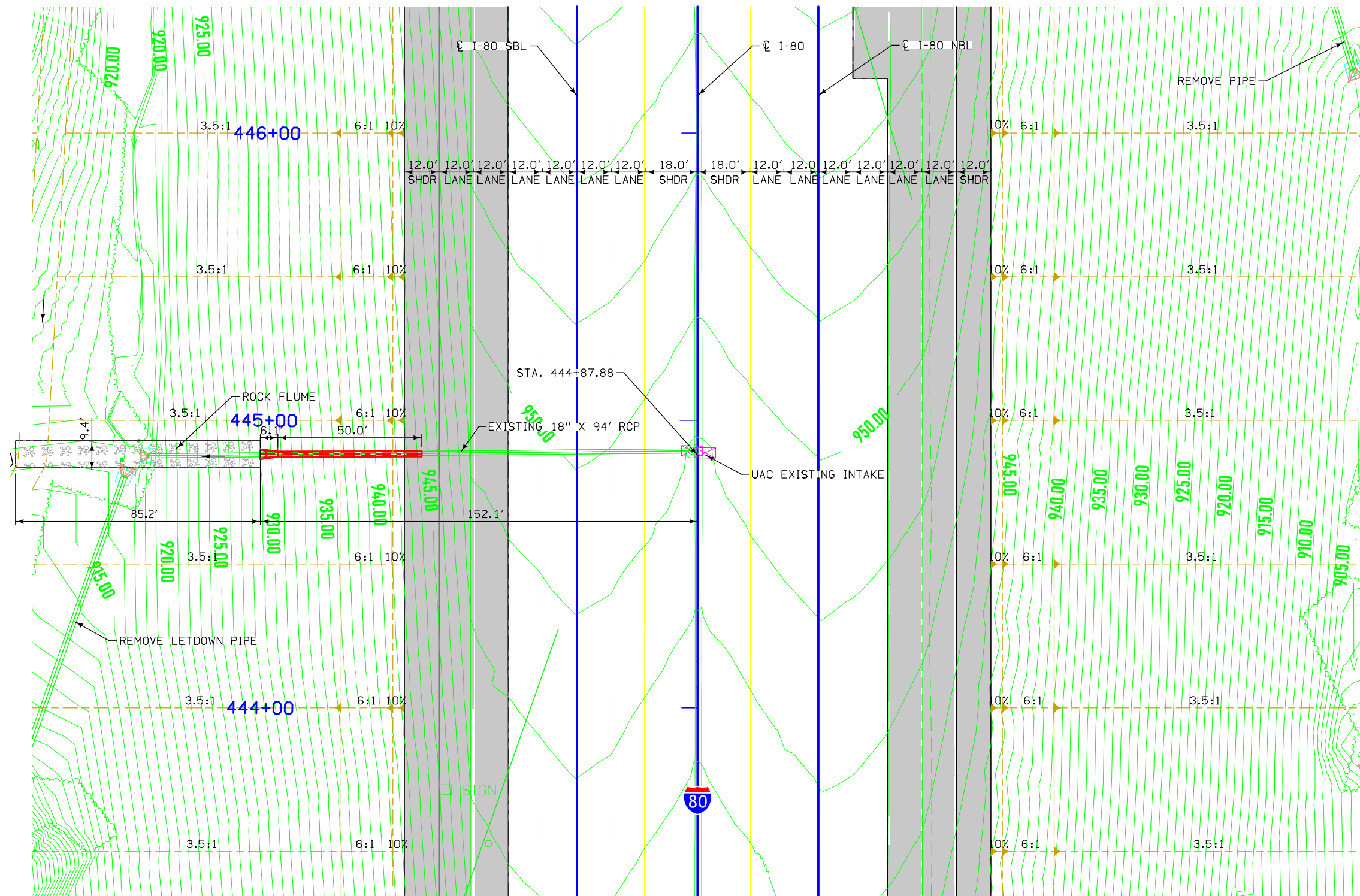
LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**24" X 22'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 441+28.30 SBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_

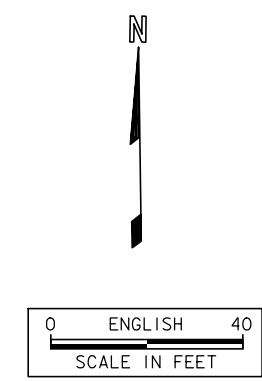




LONGITUDINAL SECTION ALONG  $\varnothing$  CULVERT



PLAT PLAN



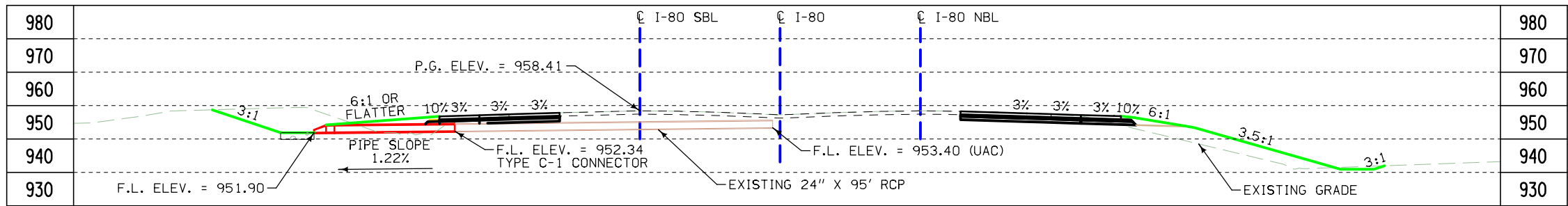
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

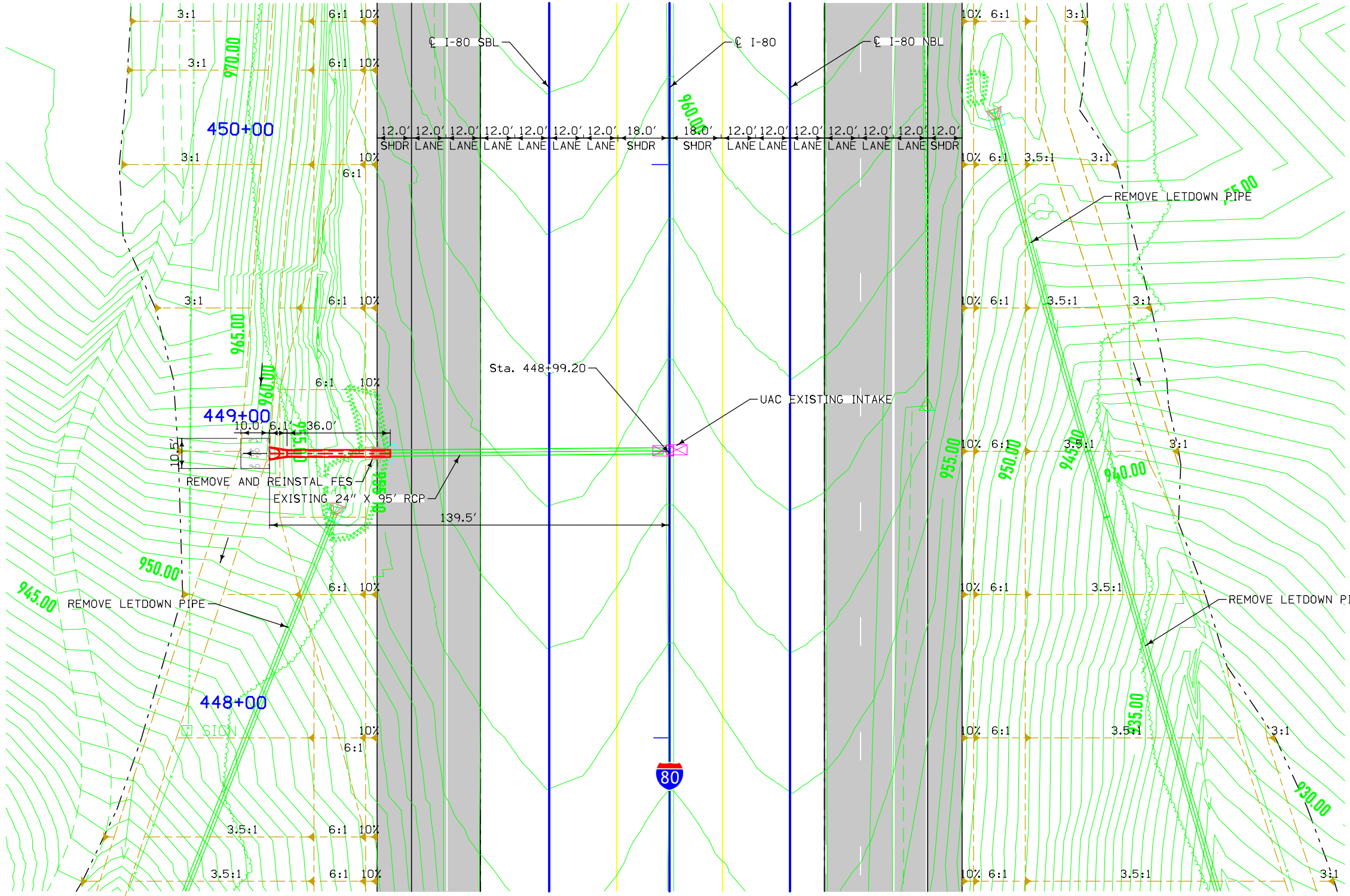
LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 50'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 444+87.88 SBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_

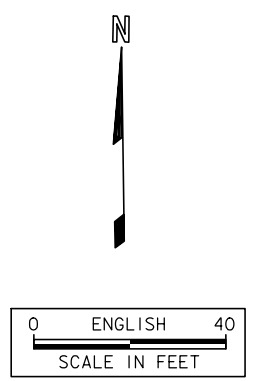




LONGITUDINAL SECTION ALONG  $\bar{C}$  CULVERT



PLAT PLAN

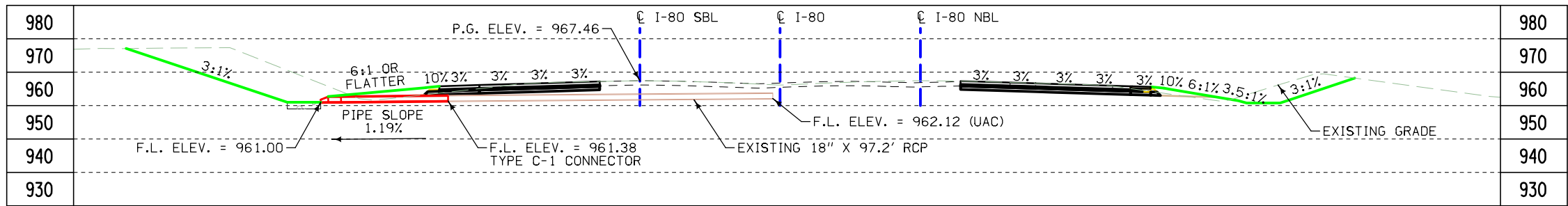


UTILITIES LEGEND:  
REFER TO D.I

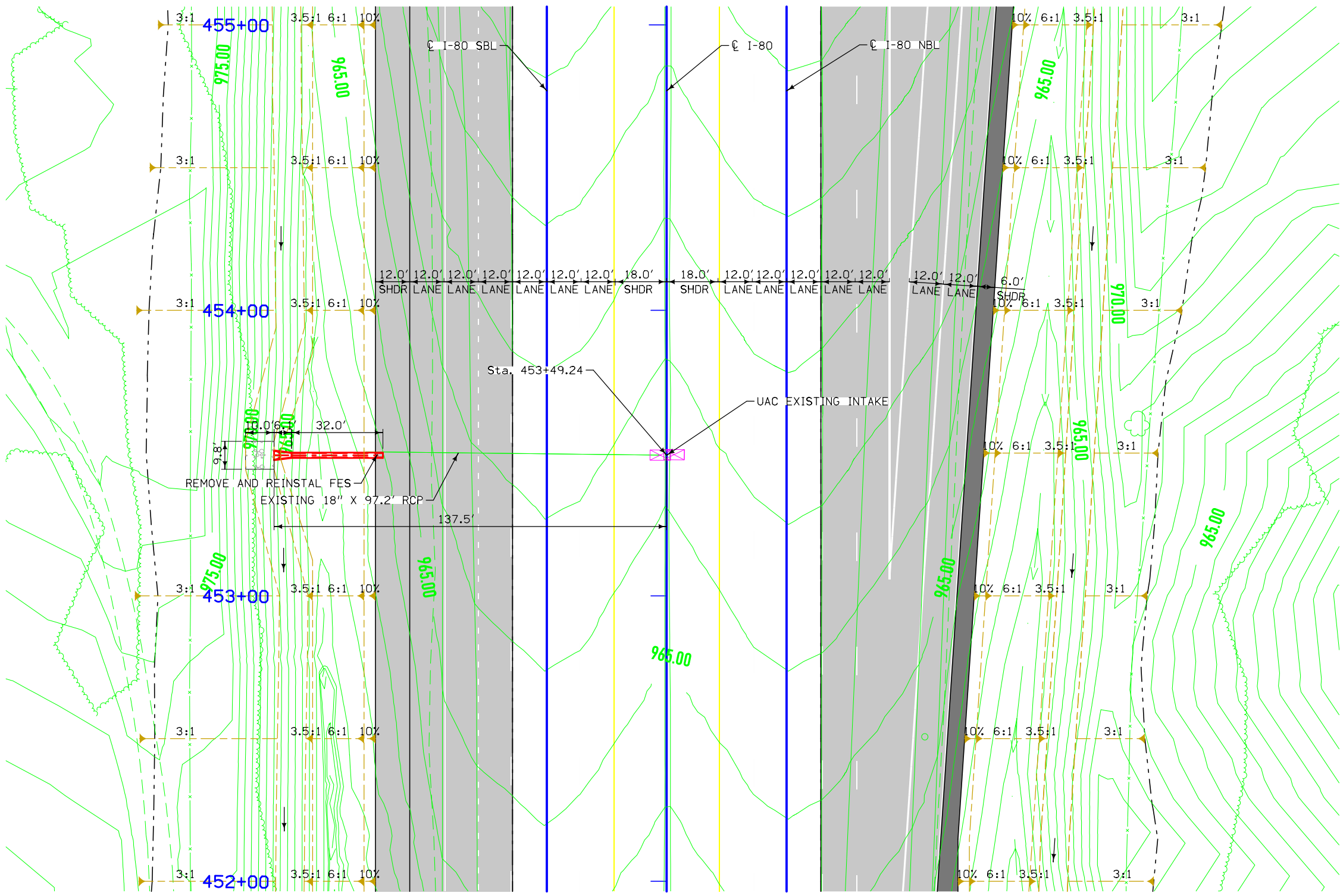
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WALNUT TOWNSHIP  
POLK COUNTY

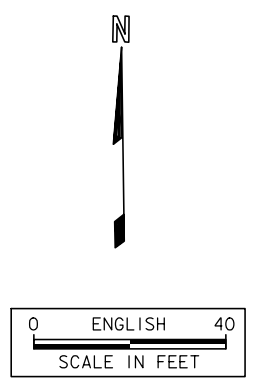
DESIGN FOR 0° SKEW  
**24" X 36'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 448+99.20 SBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

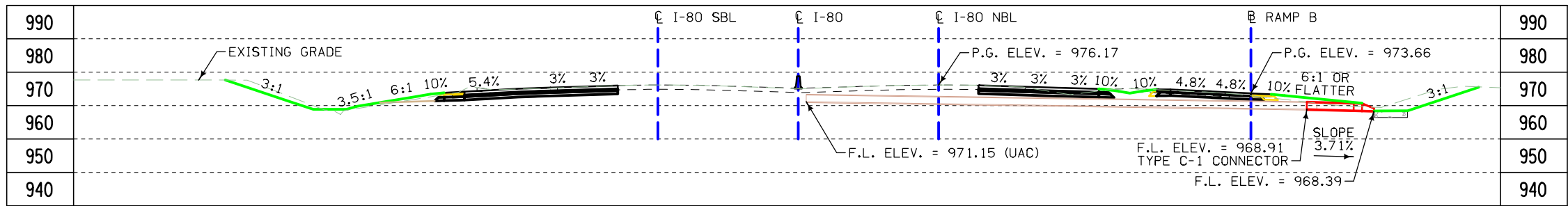


UTILITIES LEGEND:  
REFER TO D.I

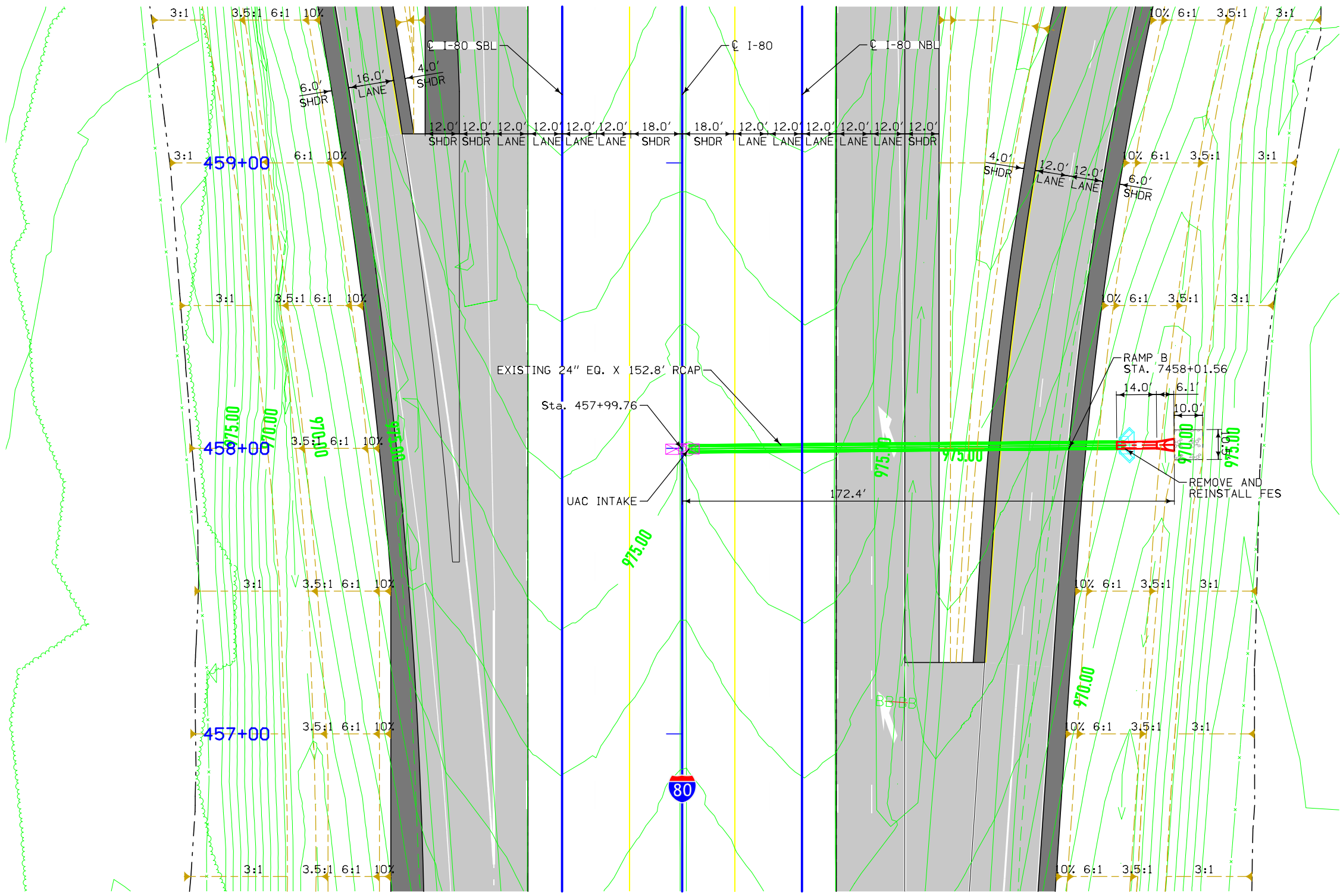
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 32'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 453+49.24 SBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\bar{C}$  CULVERT



PLAT PLAN

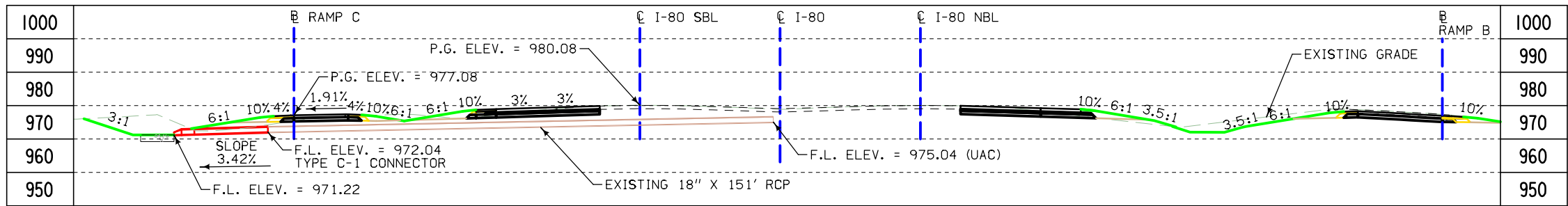
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

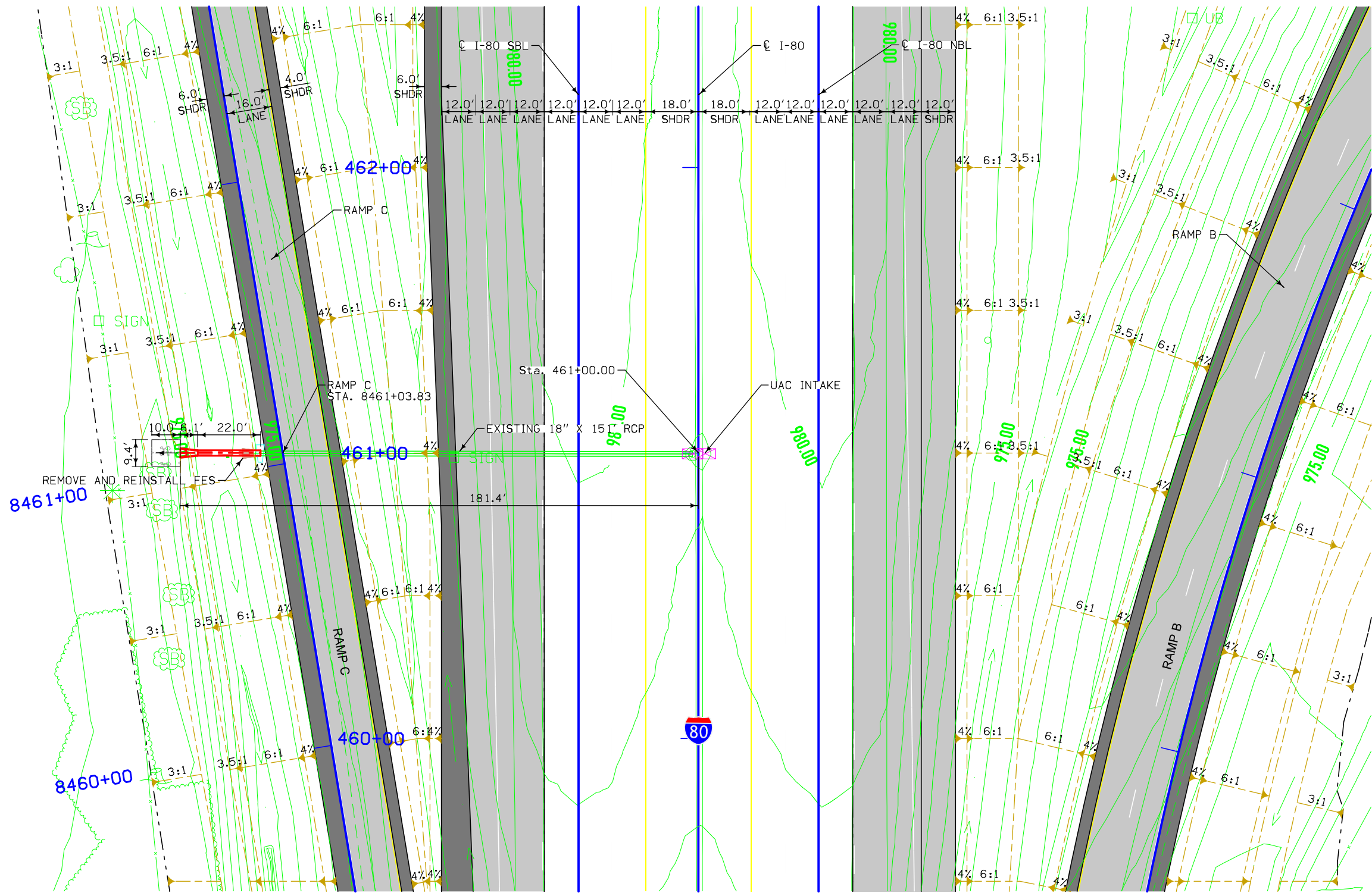
LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**24" EQ. X 14'**  
**2000D REINFORCED CONCRETE**  
**ARCH PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 457+99.76 NBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_

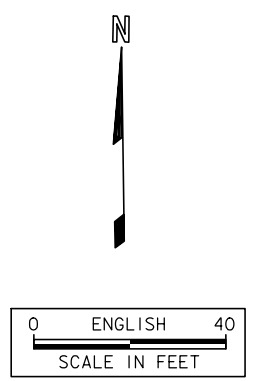




LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN



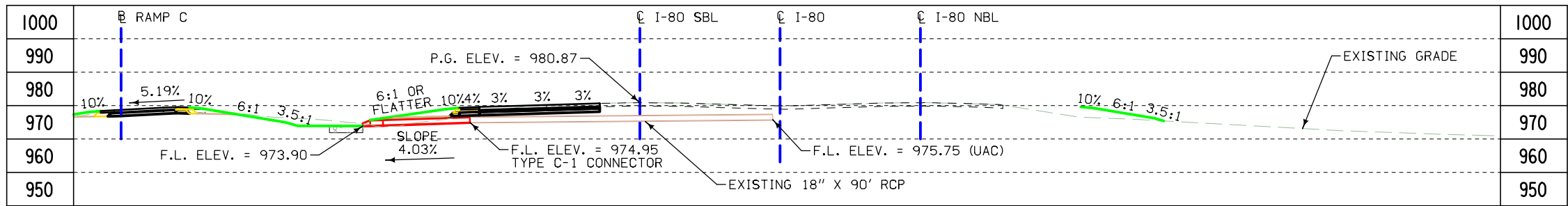
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

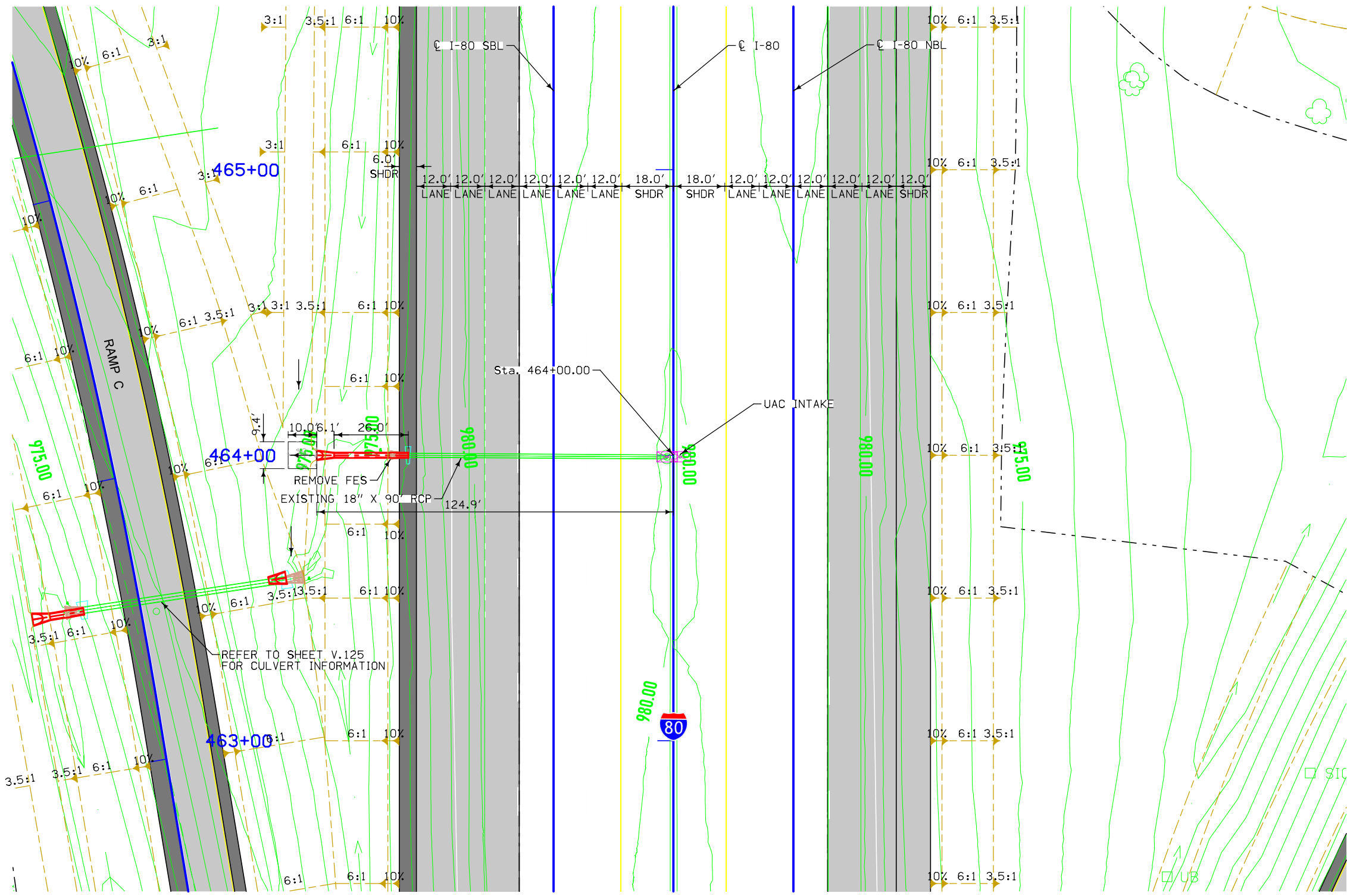
LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WBSTER TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 22'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
STATION 461+00.00 SBL  
POLK COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_

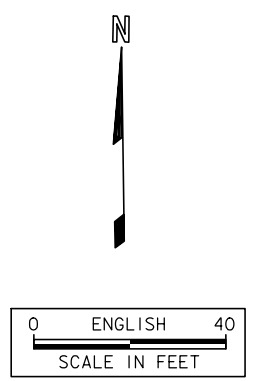




LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

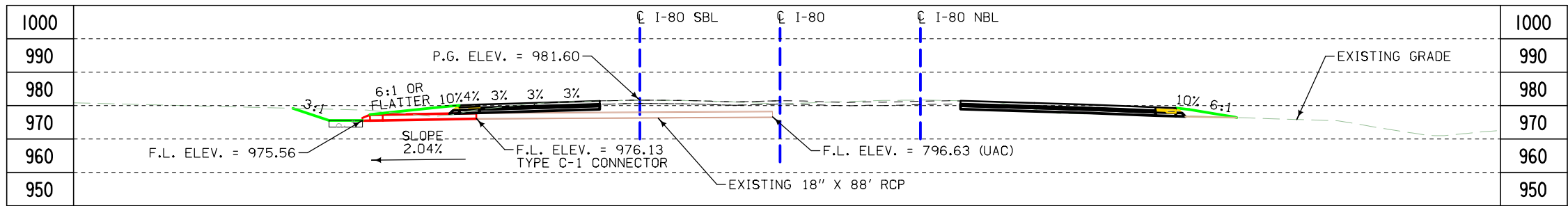


UTILITIES LEGEND:  
REFER TO D.I

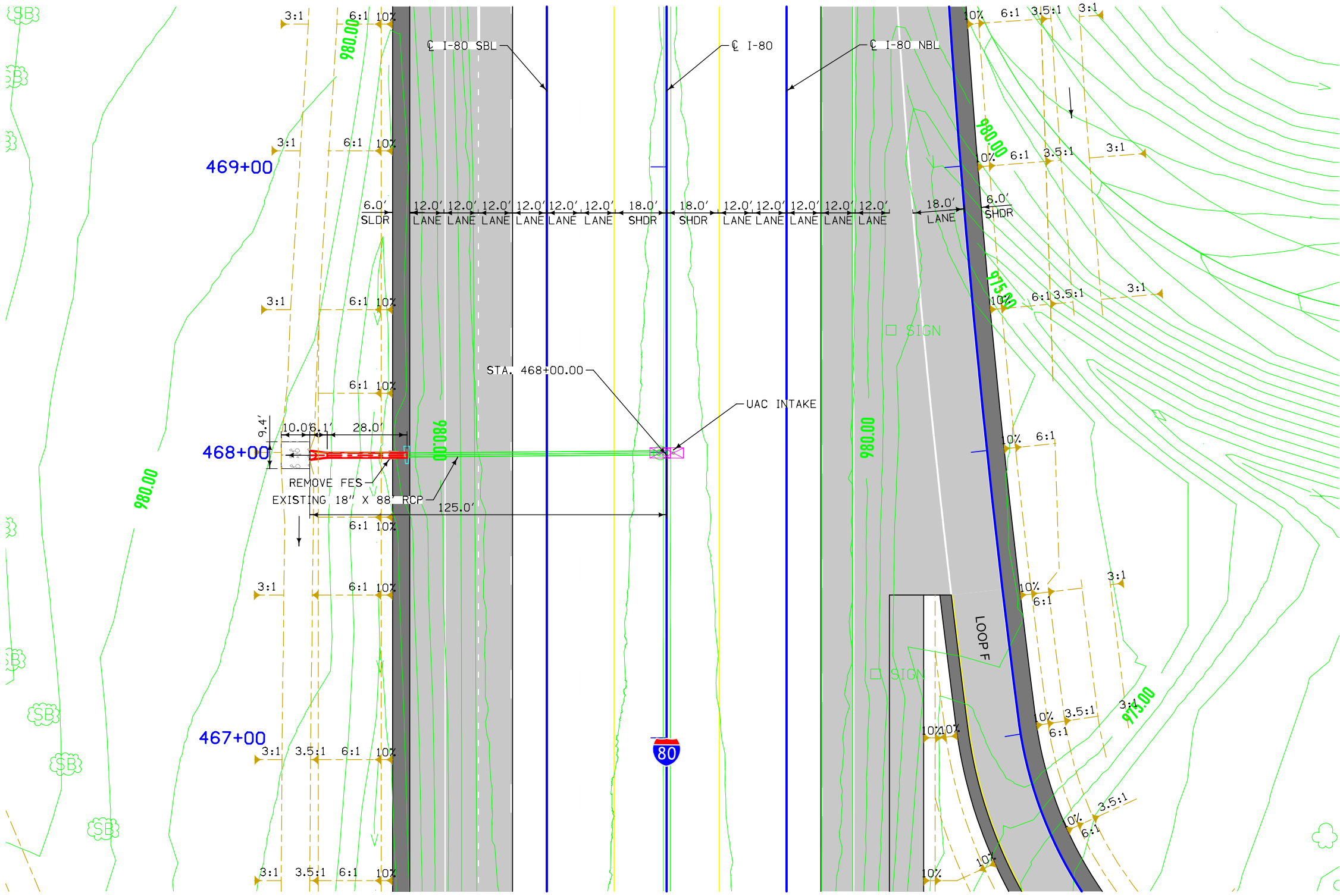
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WEBSTER TOWNSHIP  
POLK COUNTY

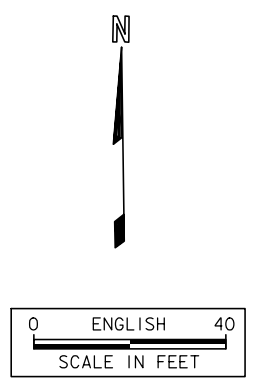
DESIGN FOR 0° SKEW  
**18" X 26'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 464+00.00 SBL  
 POLK COUNTY  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

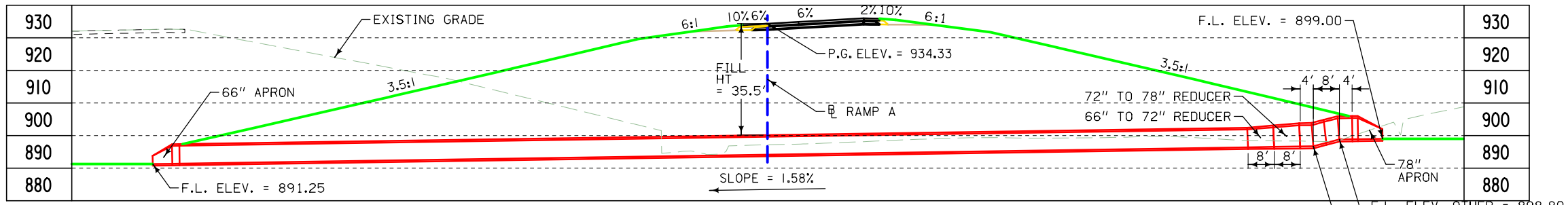


UTILITIES LEGEND:  
REFER TO D.I

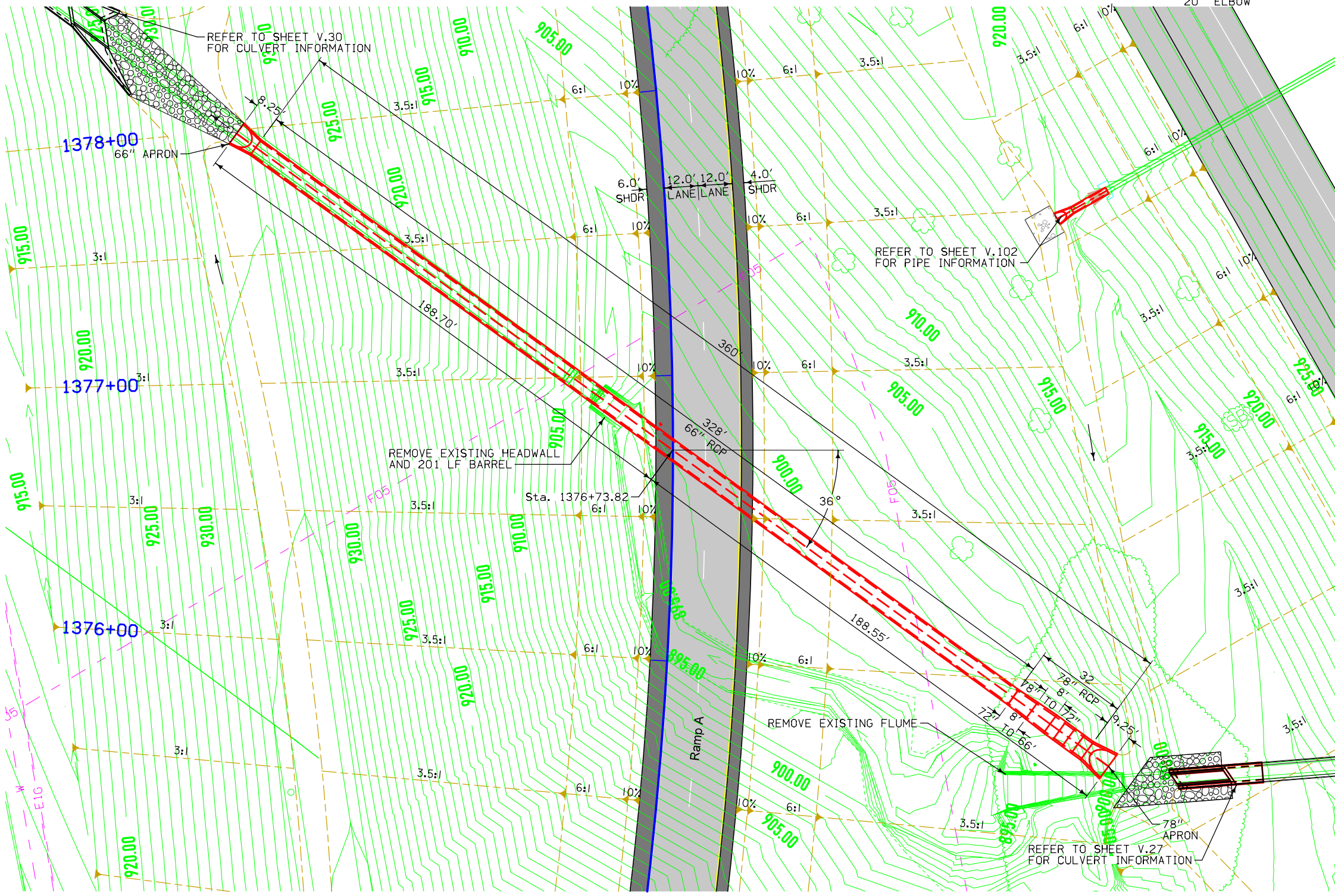
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WEBSTER TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**18" X 28'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 468+00.00 SBL 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

UTILITIES LEGEND:  
REFER TO D.I

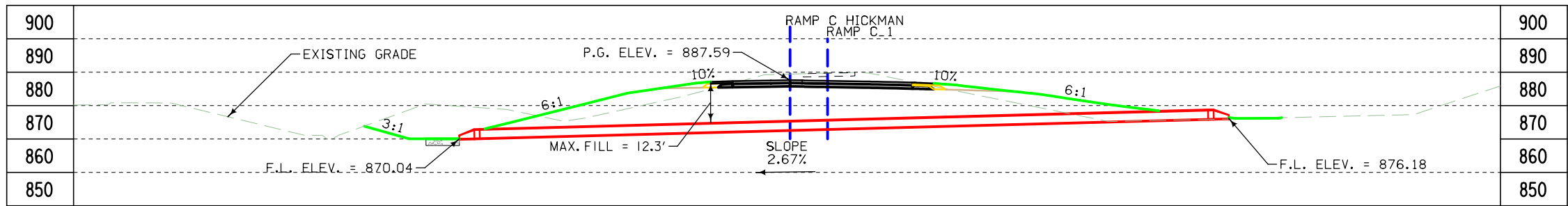
HYDRAULIC DATA  
DRAINAGE AREA = 209.3 ACRES HILLY/ROLLING  
DESIGN DISCHARGE,  $Q_{50}$  = 295.8 CFS

LOCATION  
1-80  
T-79N R-25W  
SECTION 32  
WALNUT TOWNSHIP  
POLK COUNTY

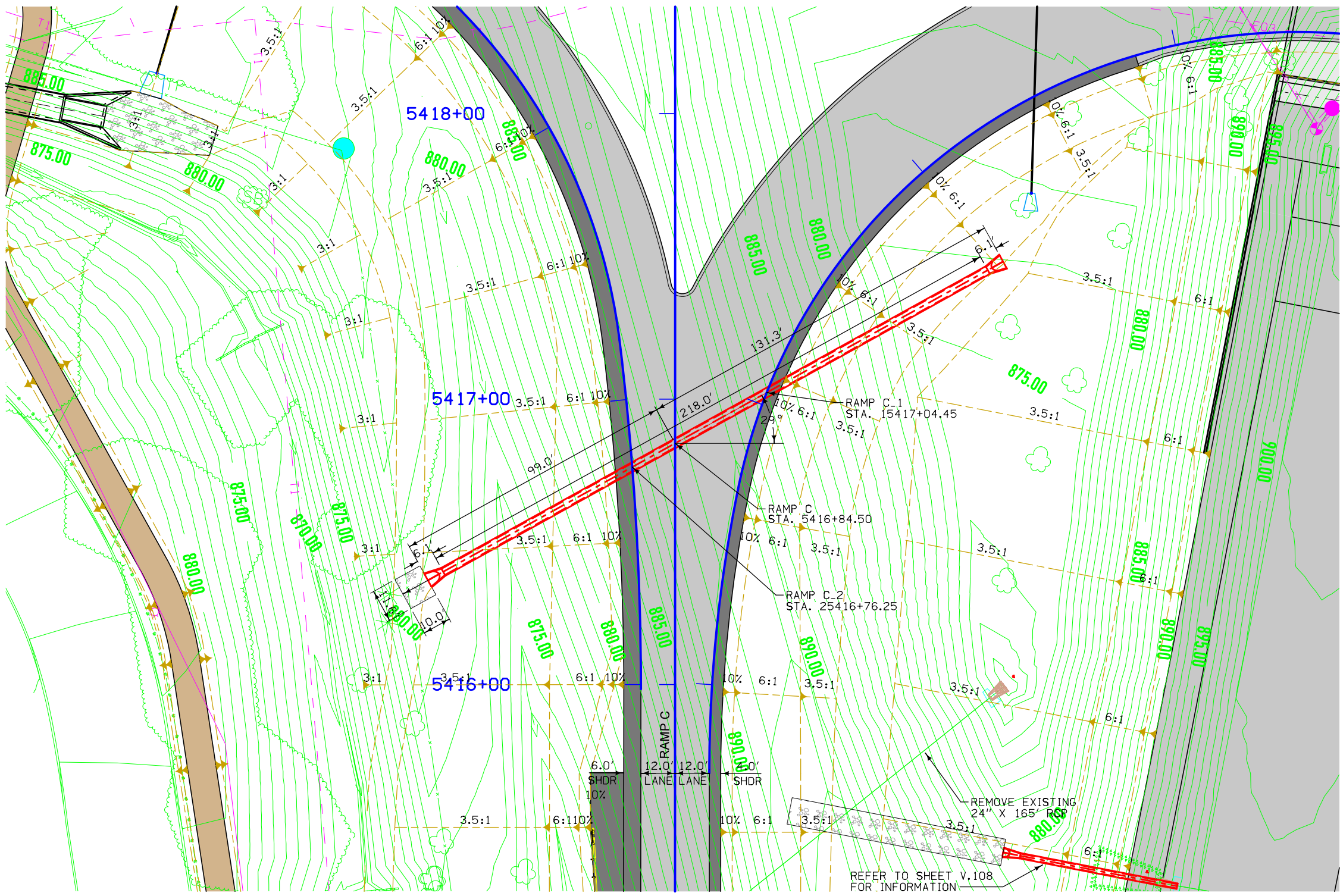
NOTE:  
SPECIAL BEDDING REQUIRED

DESIGN FOR 36° SKEW LT AH  
66" X 328' AND  
78" X 32'  
3750D REINFORCED CONCRETE  
SLOPE TAPERED PIPE  
PLAT PLAN  
POLK COUNTY  
STATION 1376+73.82  
(RAMP A UNIVERSITY) 5/24/2022  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. OF FILE NO. DESIGN NO.





LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN



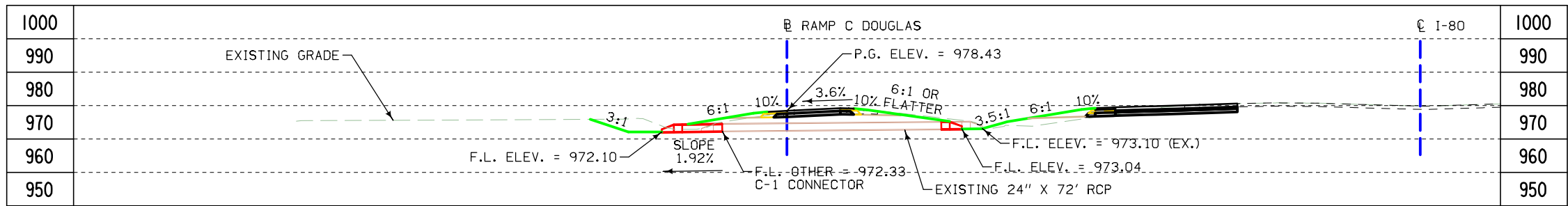
UTILITIES LEGEND:  
 REFER TO D.I

HYDRAULIC DATA  
 DRAINAGE AREA = 9.6 ACRES HILLY/ROLLING  
 DESIGN DISCHARGE,  $Q_{50}$  = 50.00 CFS

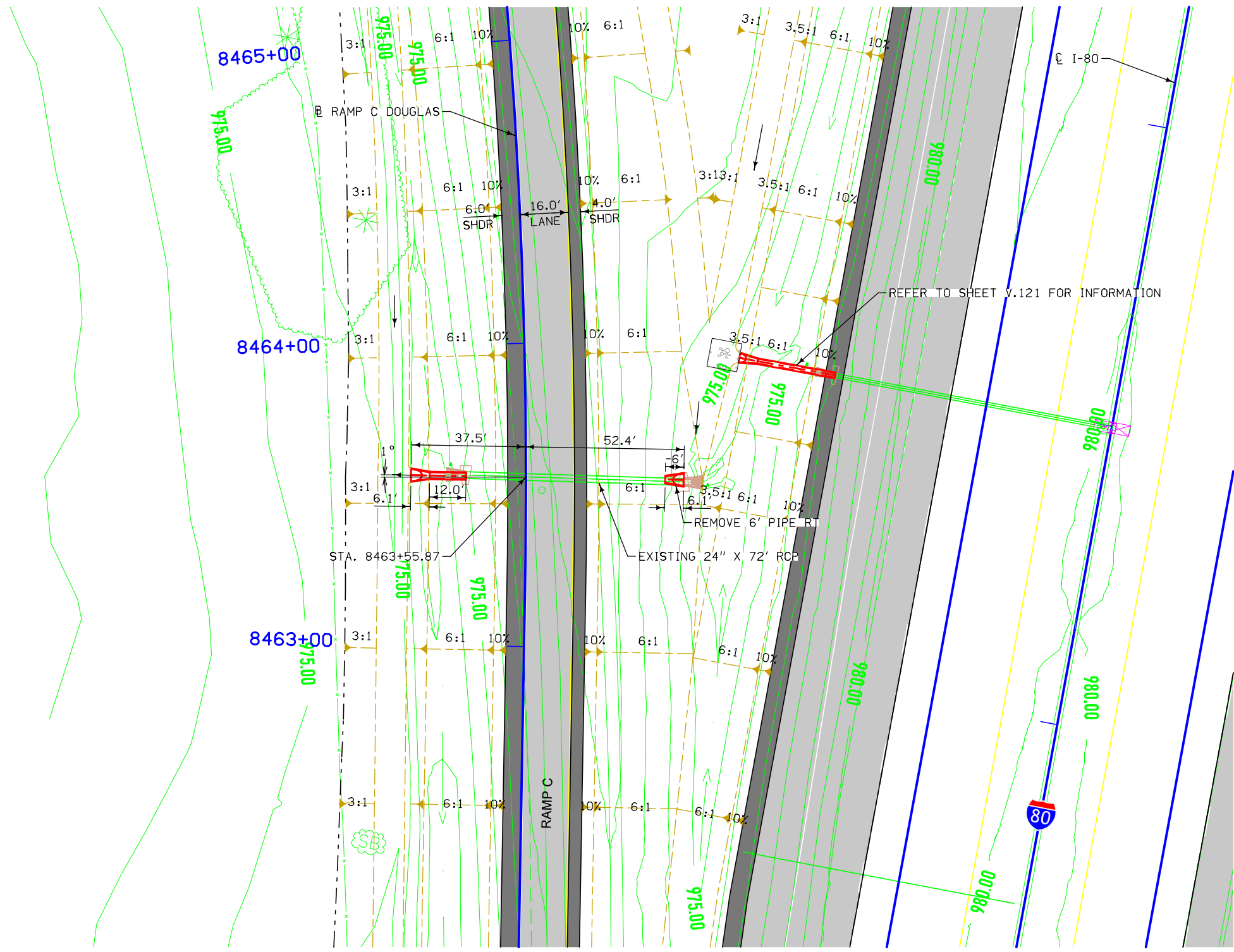
LOCATION  
 I-80  
 T-79N R-25W  
 SECTION 32  
 WALNUT TOWNSHIP  
 POLK COUNTY

DESIGN FOR 27° SKEW RT AH  
**30" X 218'**  
**2000D REINFORCED CONCRETE PIPE**  
**PLAT PLAN**  
 STATION 5416+84.50 (RAMP C HICKMAN)  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_





LONGITUDINAL SECTION ALONG CULVERT



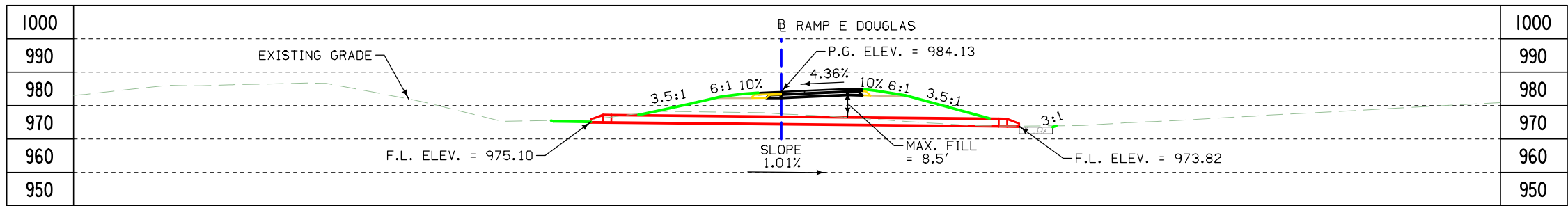
PLAT PLAN

UTILITIES LEGEND:  
REFER TO D.I

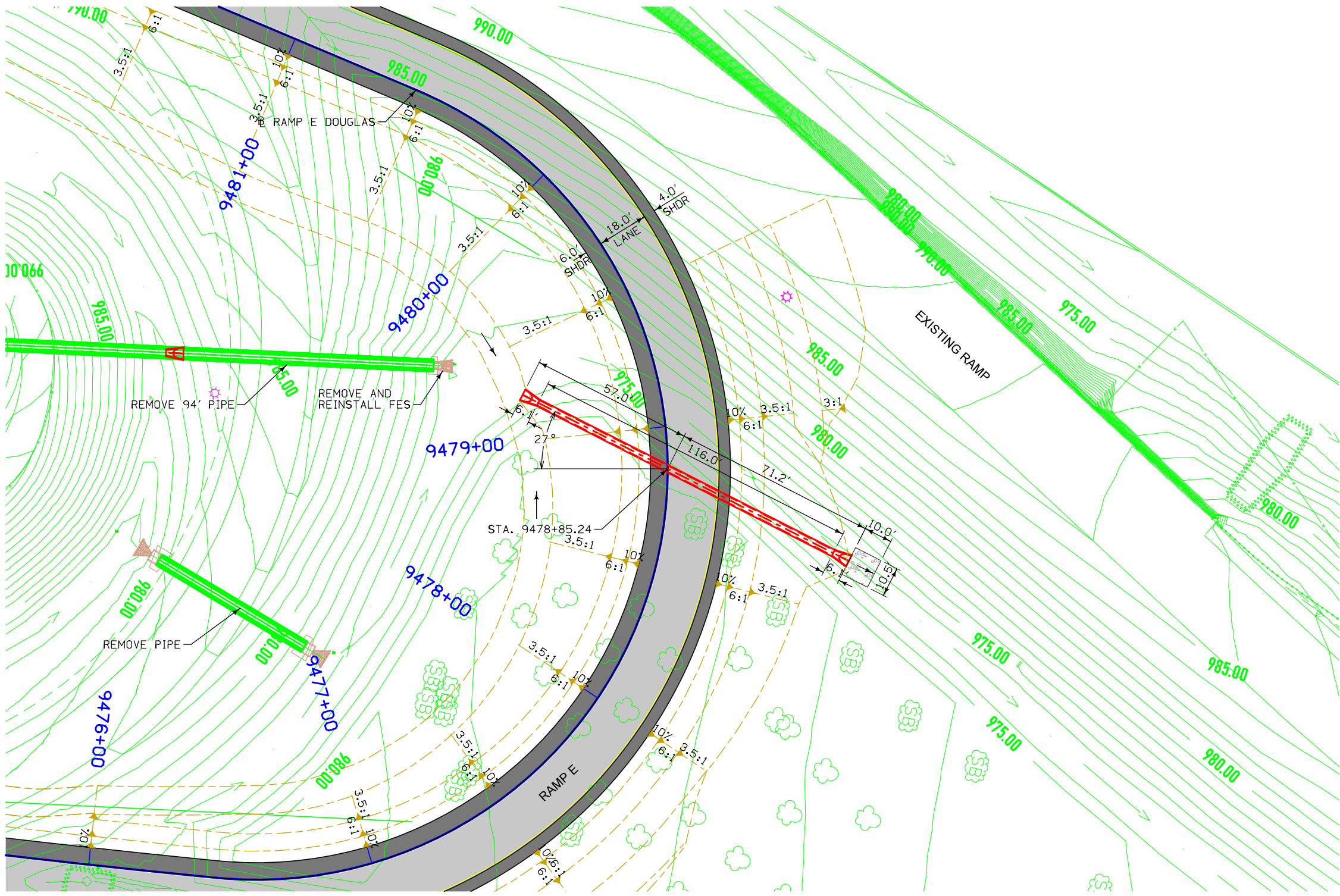
HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WEBSTER TOWNSHIP  
POLK COUNTY

DESIGN FOR 1° SKEW LT AH  
**24" X 12'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 8463+55.87  
 (RAMP C DOUGLAS) **POLK COUNTY** 5/24/2022  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN

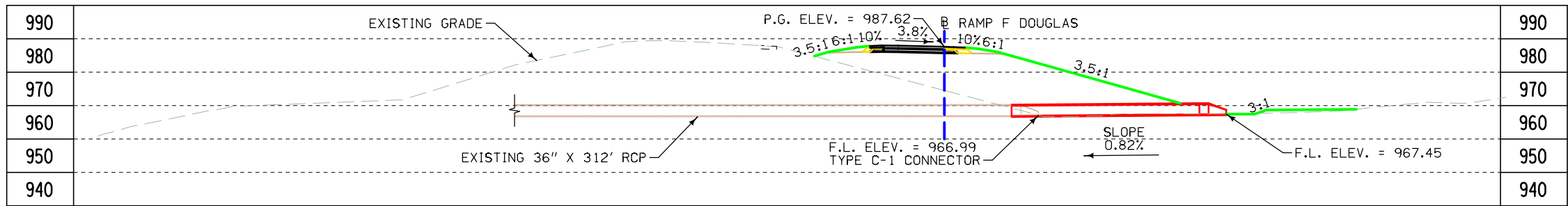


UTILITIES LEGEND:  
REFER TO D.1

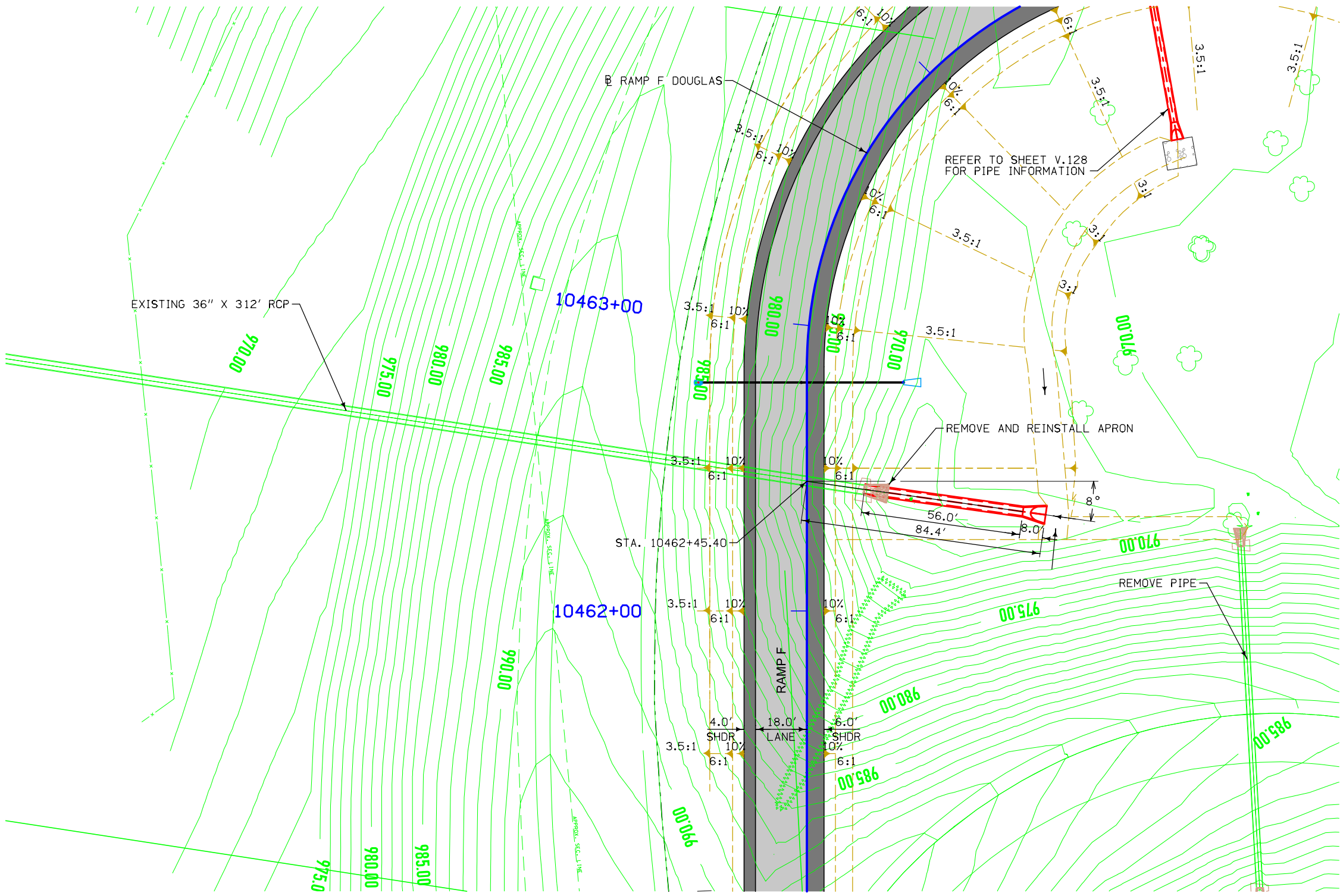
HYDRAULIC DATA  
DRAINAGE AREA = 5.00 ACRES ROLLING / HILLY  
DESIGN DISCHARGE,  $Q_{50}$  = 17.3 CFS

LOCATION  
1-80  
T-79N R-25W  
SECTION 20  
WEBSTER TOWNSHIP  
POLK COUNTY

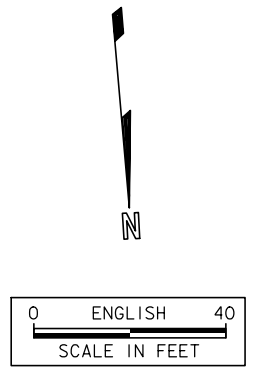
DESIGN FOR 27° SKEW LT AH  
**24" X 116'**  
**2000D REINFORCED CONCRETE PIPE**  
**PLAT PLAN**  
STATION 9478+85.24 (RAMP E DOUGLAS)  
POLK COUNTY  
IOWA DEPARTMENT OF TRANSPORTATION  
DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_



LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN



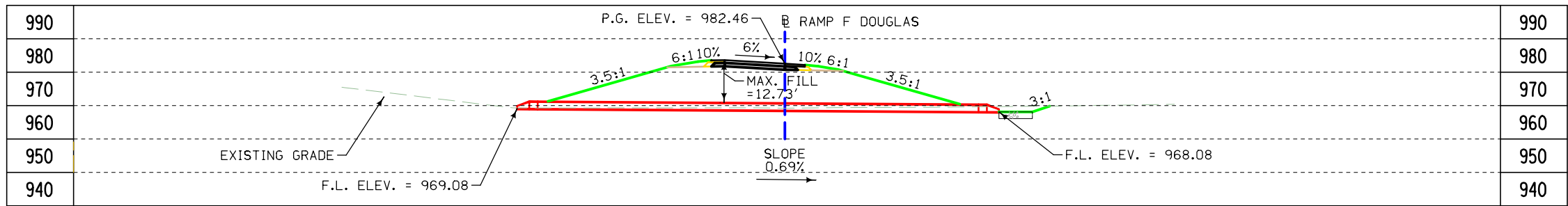
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = MEDIAN

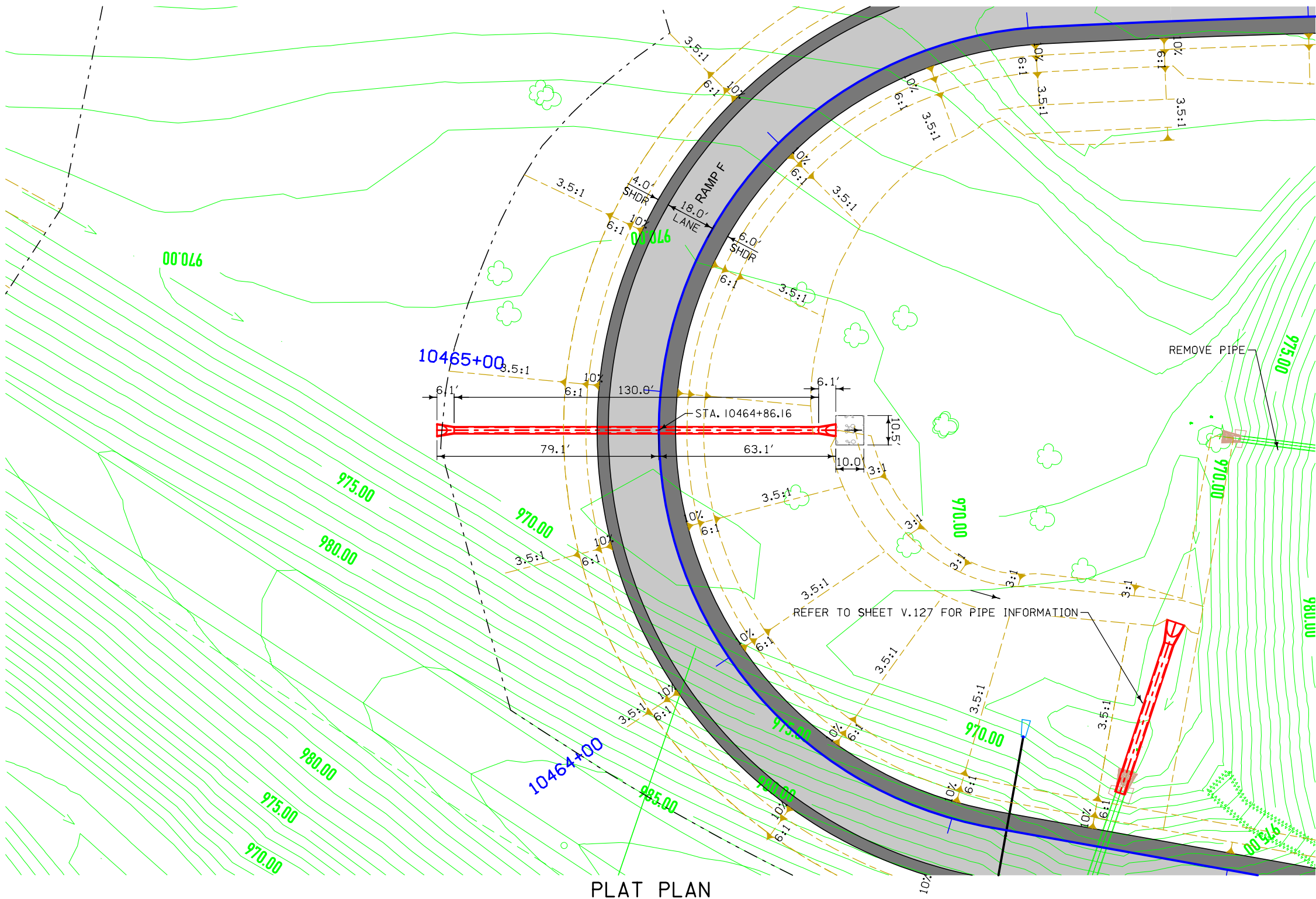
LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WEBSTER TOWNSHIP  
POLK COUNTY

DESIGN FOR 8° SKEW LT AH  
**36" X 56'**  
**2000D REINFORCED CONCRETE**  
**PIPE EXTENSION**  
**PLAT PLAN**  
 STATION 10462+45.40  
 (RAMP F DOUGLAS)  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_





LONGITUDINAL SECTION ALONG  $\phi$  CULVERT



PLAT PLAN



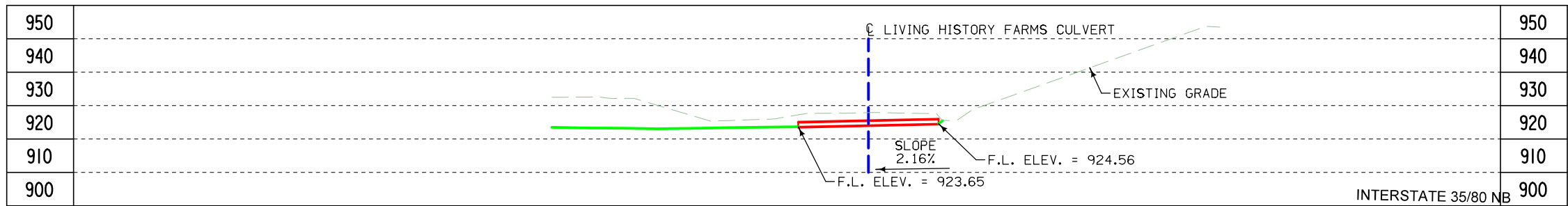
UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA = 3.86 ACRES ROLLING  
DESIGN DISCHARGE,  $Q_{50}$  = 12.19 CFS

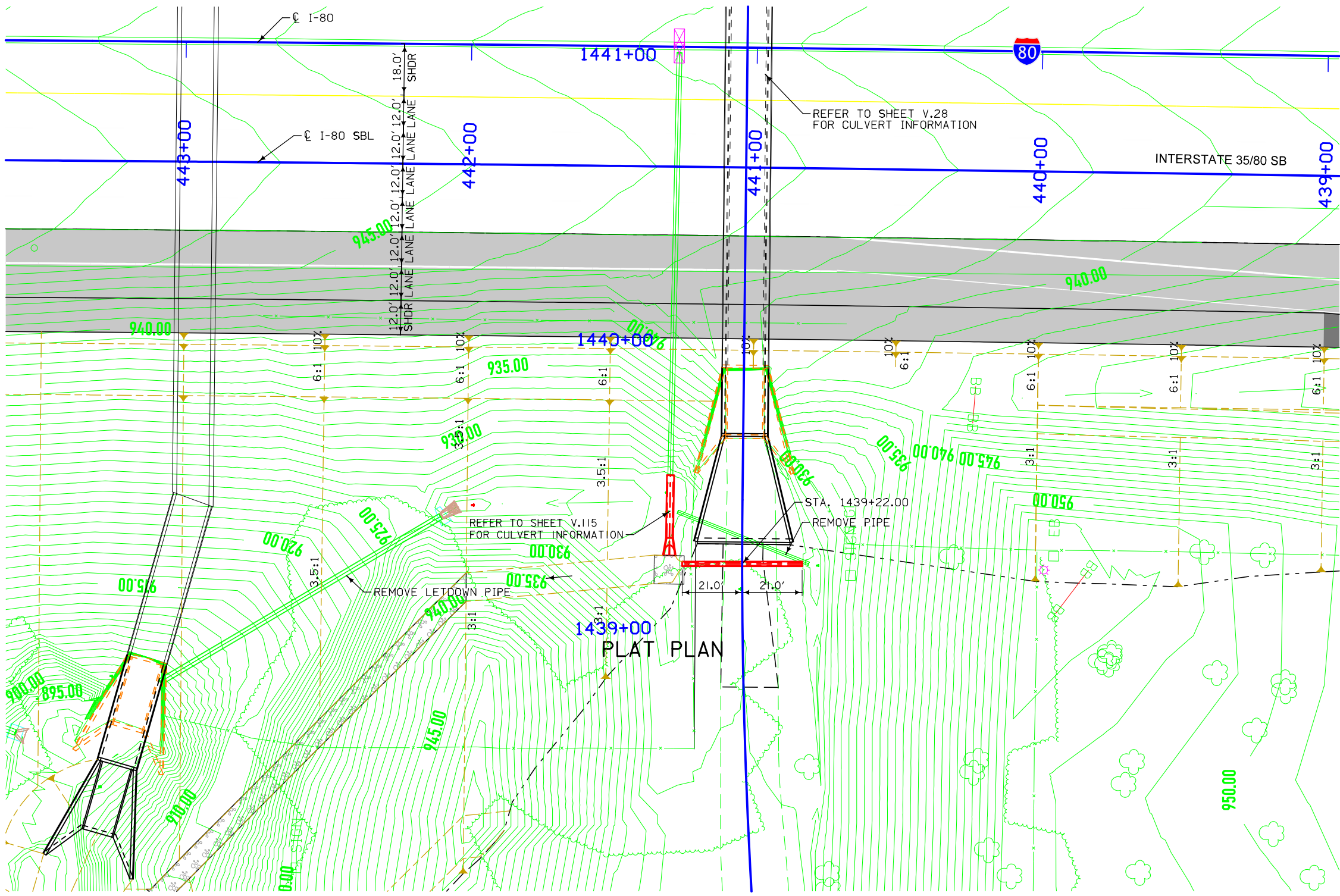
LOCATION  
1-80  
T-79N R-25W  
SECTION 29  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**24" X 130'**  
**2000D REINFORCED CONCRETE**  
**PIPE**  
**PLAT PLAN**  
 STATION 10464+86.16  
 (RAMP F DOUGLAS)  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_ FILE NO. \_\_\_\_\_ DESIGN NO. \_\_\_\_\_





LONGITUDINAL SECTION ALONG  $\bar{C}$  CULVERT



UTILITIES LEGEND:  
REFER TO D.I

HYDRAULIC DATA  
DRAINAGE AREA =

LOCATION  
I-80  
T-79N R-25W  
SECTION 29  
WALNUT TOWNSHIP  
POLK COUNTY

DESIGN FOR 0° SKEW  
**15" X 42'**  
**PVC PIPE**  
**CULVERT**  
**PLAT PLAN**  
 STATION 1439+22.00 5/24/2022  
**POLK COUNTY**  
 IOWA DEPARTMENT OF TRANSPORTATION  
 DESIGN SHEET NO. OF FILE NO. DESIGN NO.

**LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)**

- - - - - - Existing Ground Line
- Proposed Template
- Proposed Topsoil Placement
- - - - - Additional Topsoil Removal
- Subgrade Treatment
- - - - - Granular Shoulder
- Pavement
- - - - - Existing Pipe\R/CB
- Proposed Pipe\R/CB
- Proposed Dike
- All Elements Associated with Proposed Entrances

**LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)**

- TOPSOIL ————— Topsoil (Class 10)
- Slope Dressing Only
- CL 10 ————— Class 10 Materials
- SEL 10 ————— Select Loams And Clay-Loams
- SEL SA ————— Select Sand
- UMS A ————— Unsuitable Type A Disposal
- UMS B ————— Unsuitable Type B Disposal
- UMS C ————— Unsuitable Type C Disposal
- SHALE ————— Shale
- WASTE ————— Waste
- BW LS ————— Broken and Weathered Rock
- ROCK ————— Solid Rock
- BLDGS ————— Boulders

Note: All layer lines and descriptions identify layers above the line.

Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

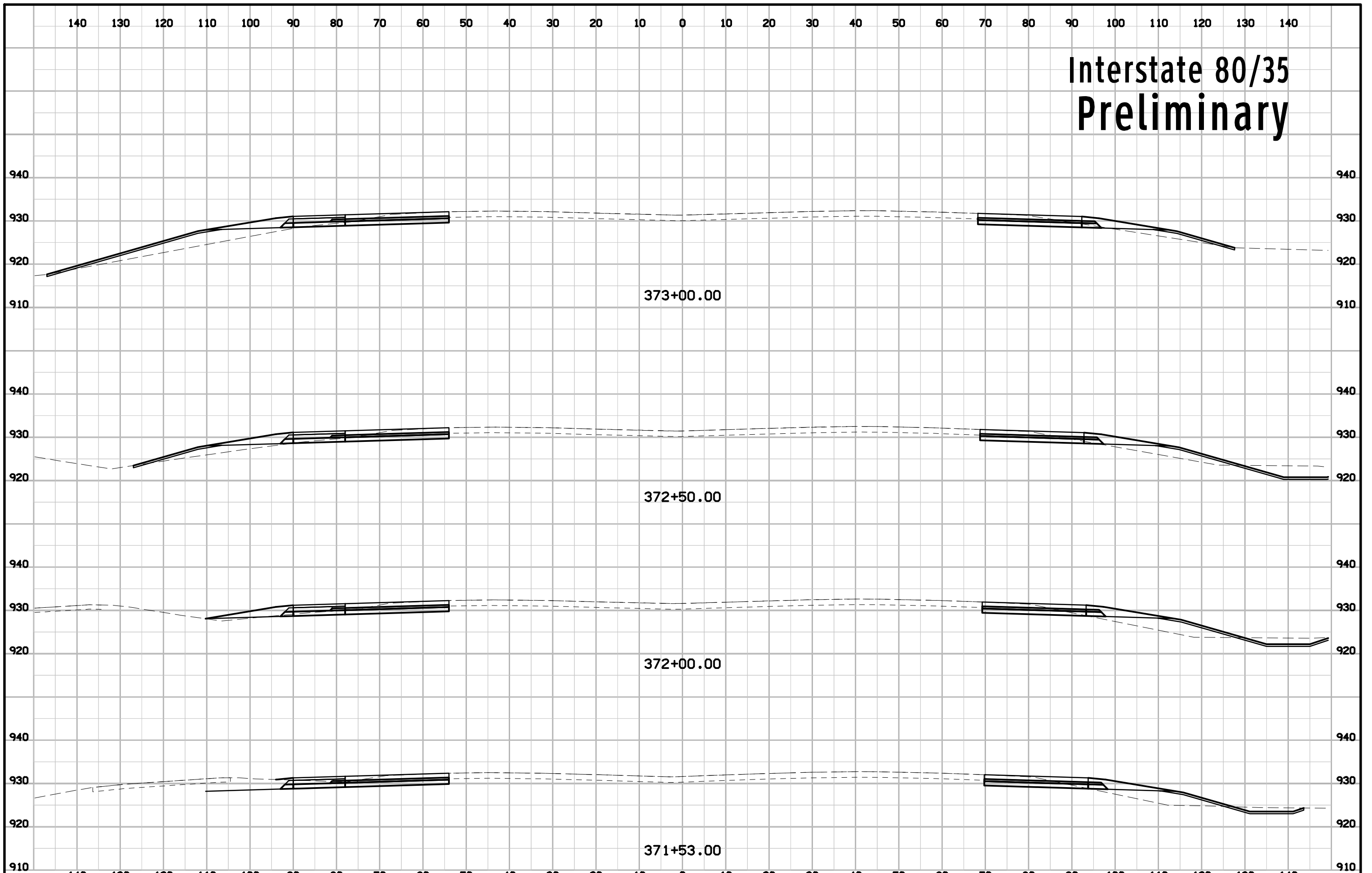
**SYMBOL LEGEND OF CROSS SECTION SHEETS**

- Existing ROW  
|  
Existing Right-of-Way Limit
- Proposed ROW  
|  
Proposed Right-of-Way Limit
- Temporary ROW  
|  
Temporary Right-of-Way Limit

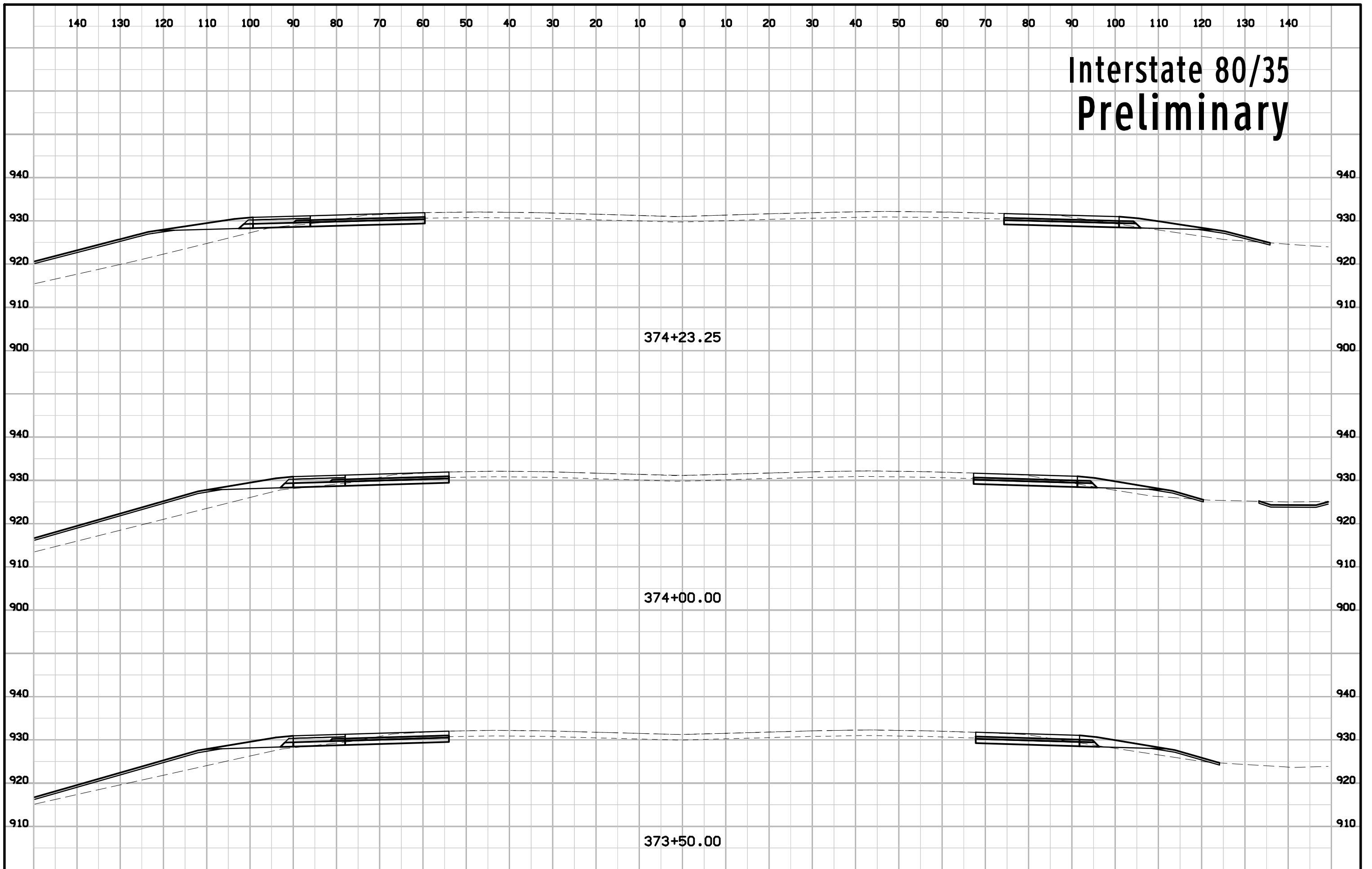
**CROSS SECTION  
LEGEND AND SYMBOL  
INFORMATION SHEET**

(COVERS SHEET SERIES W, X, Y, & Z)

# Interstate 80/35 Preliminary

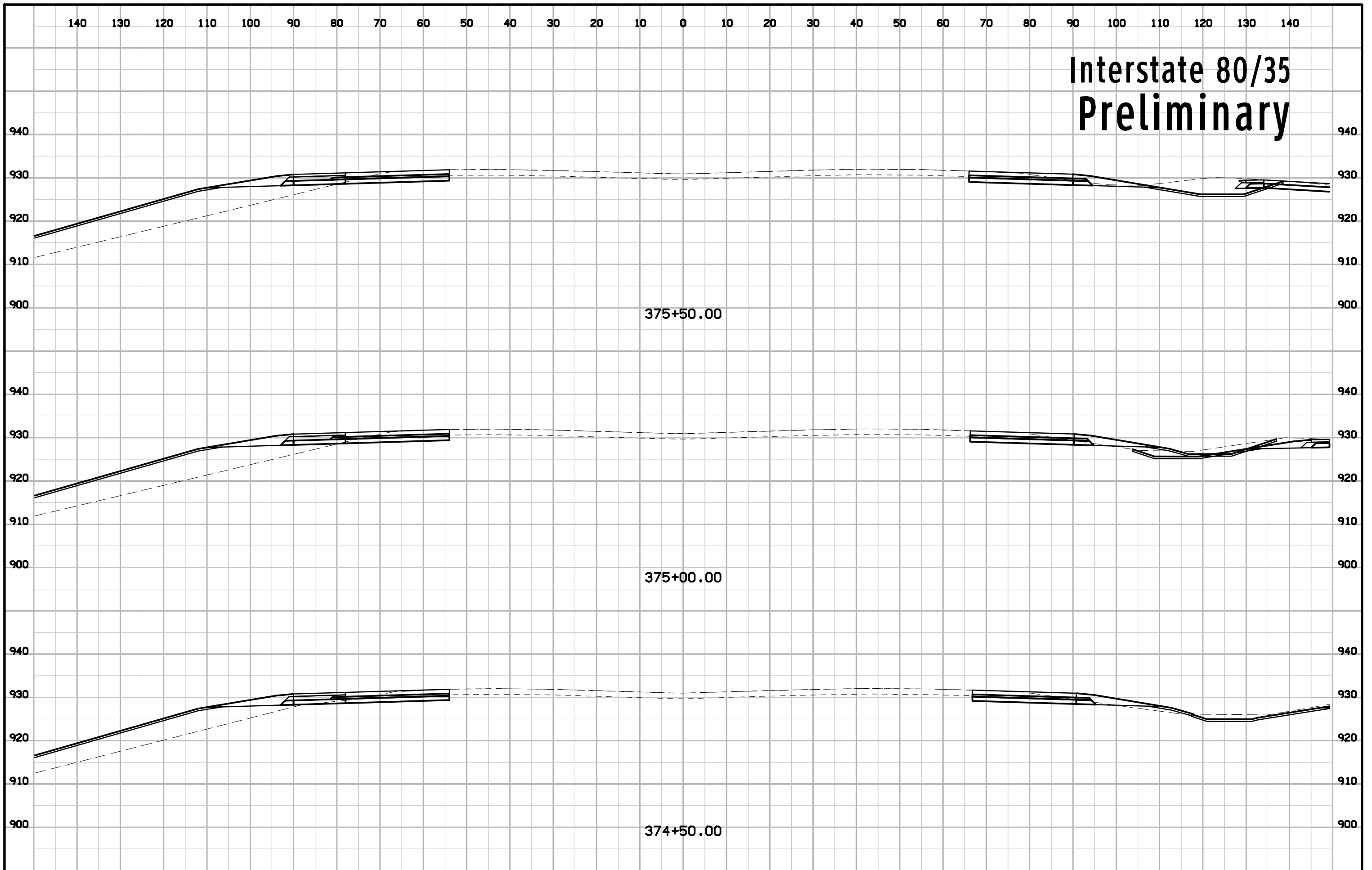


# Interstate 80/35 Preliminary

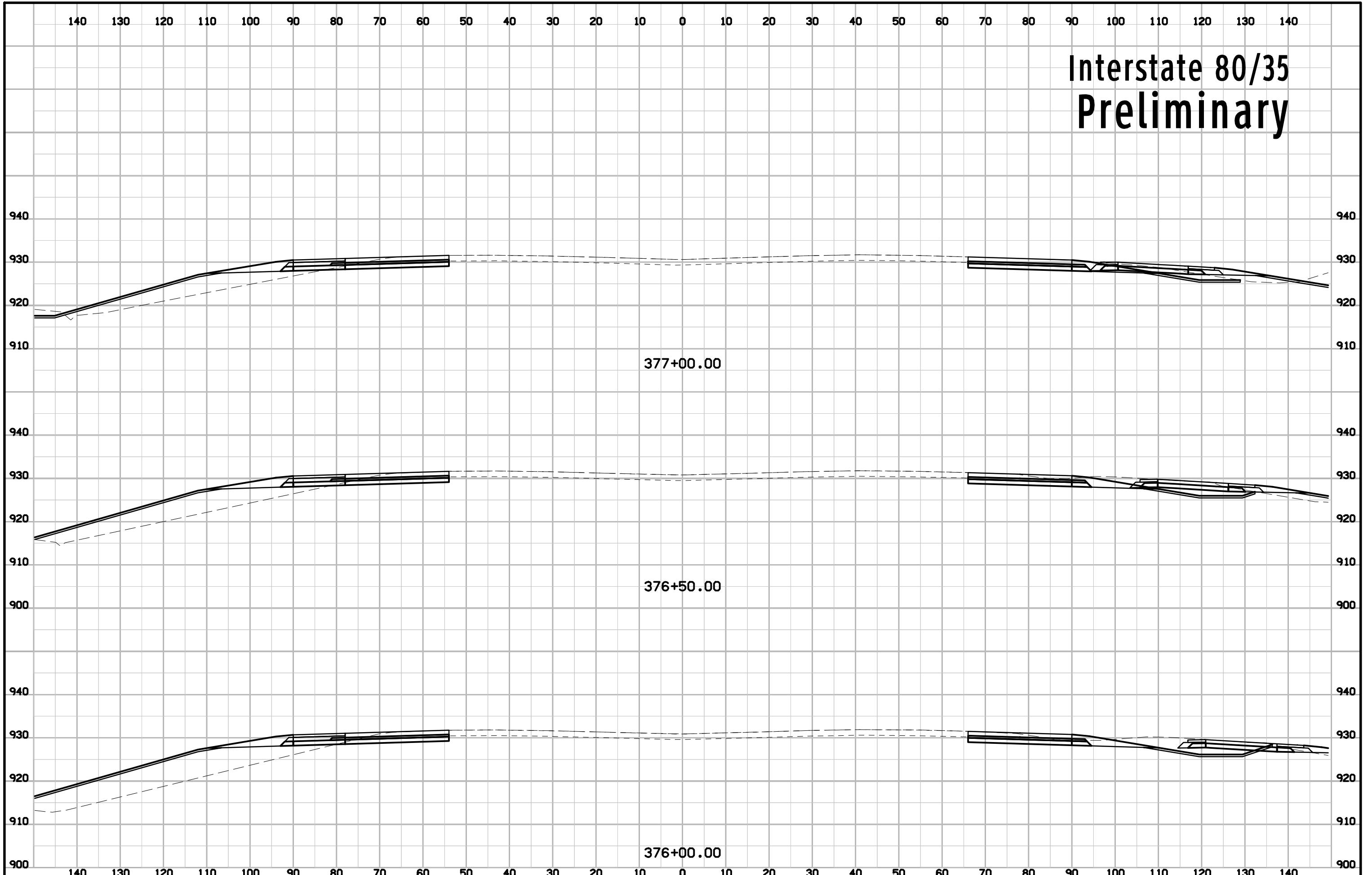




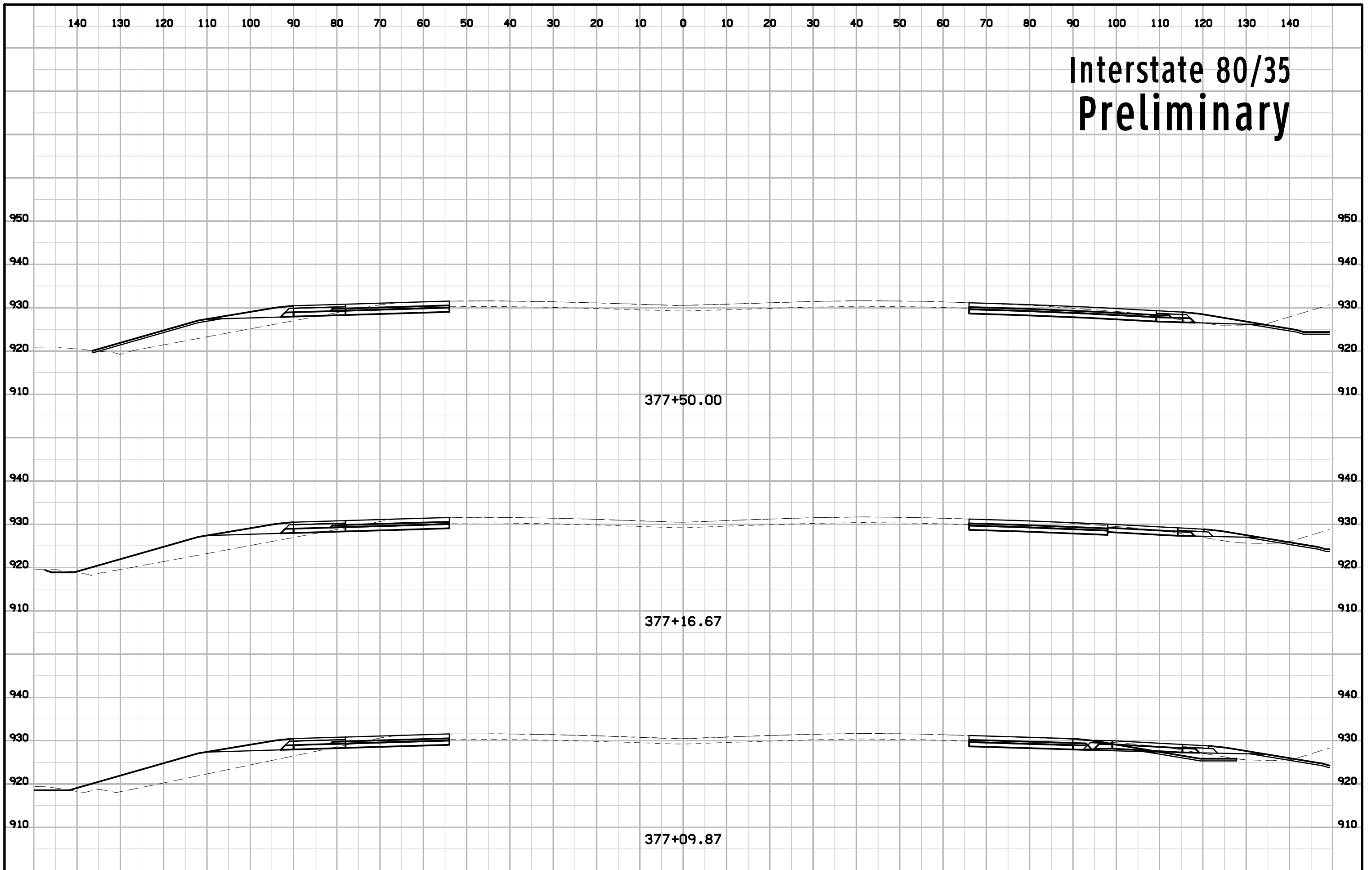
# Interstate 80/35 Preliminary



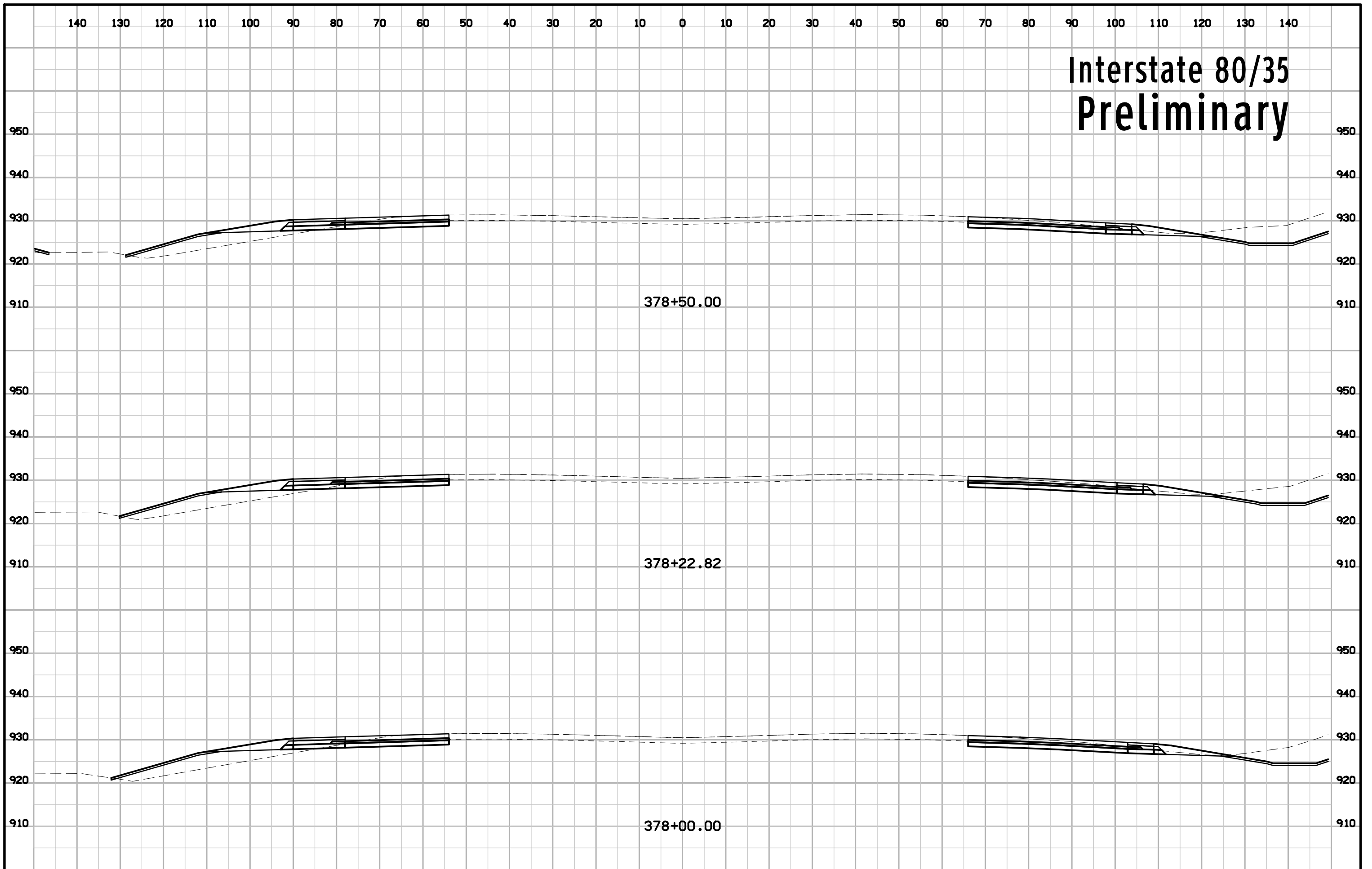
# Interstate 80/35 Preliminary



# Interstate 80/35 Preliminary

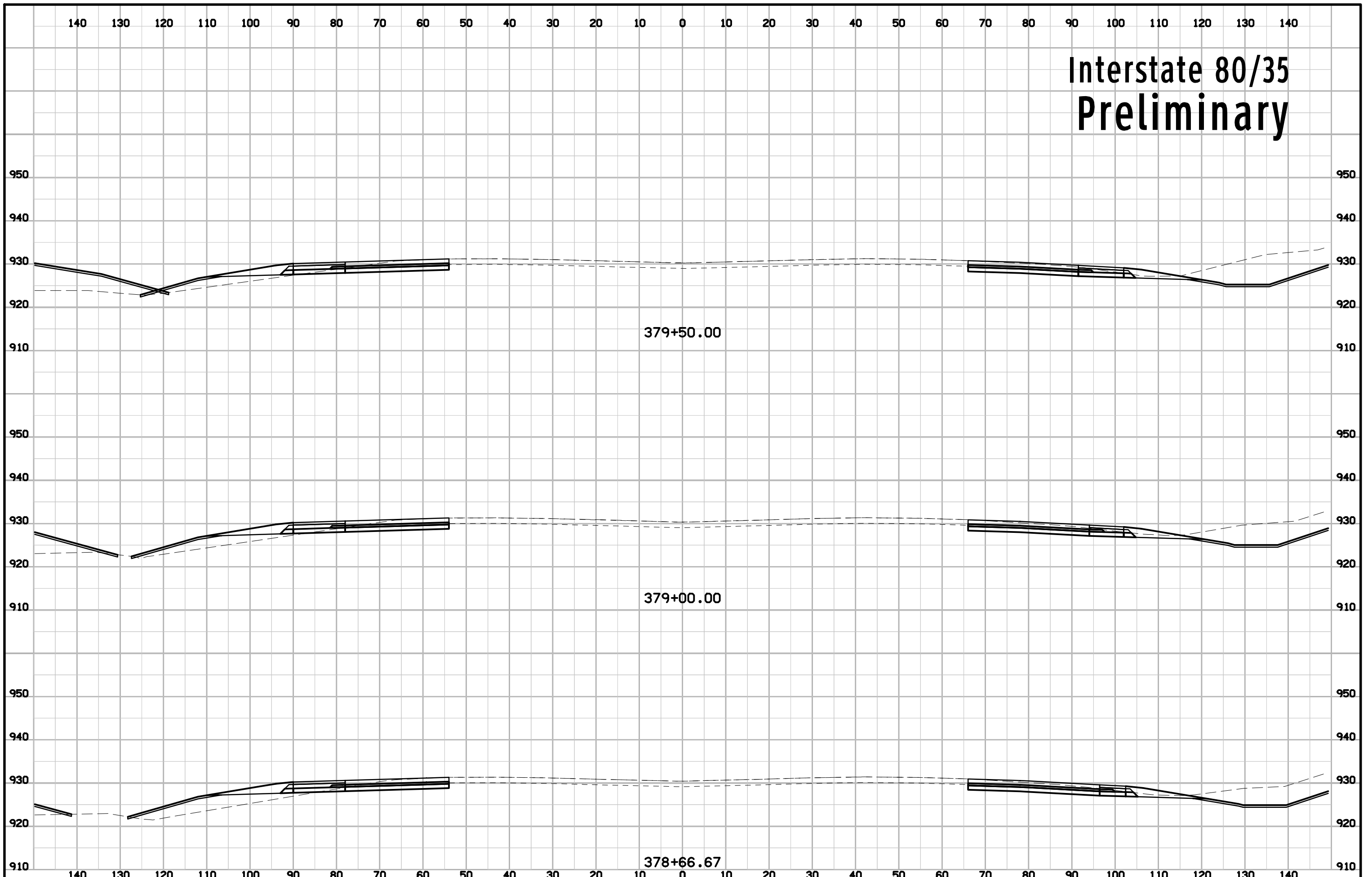


# Interstate 80/35 Preliminary

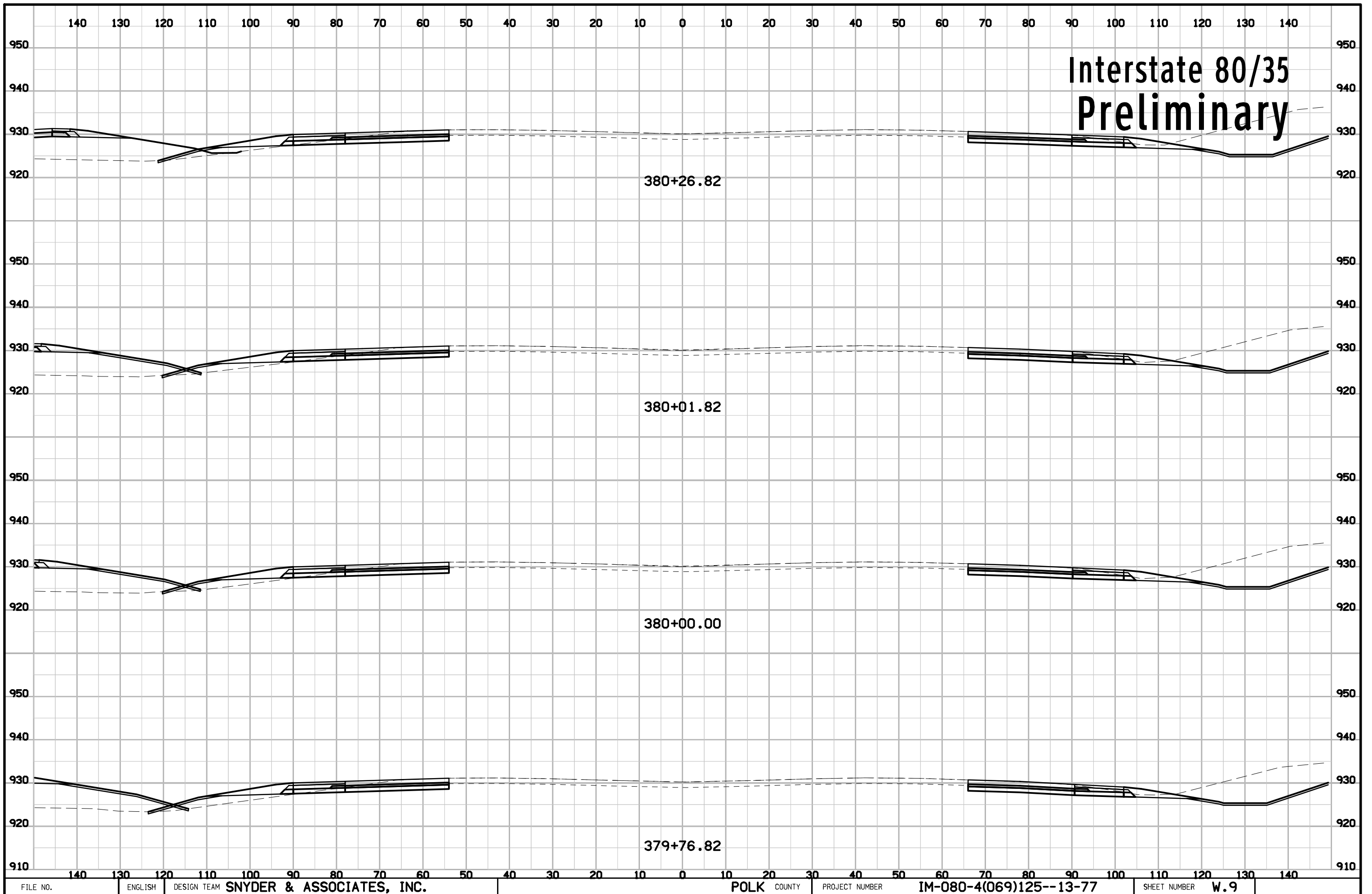




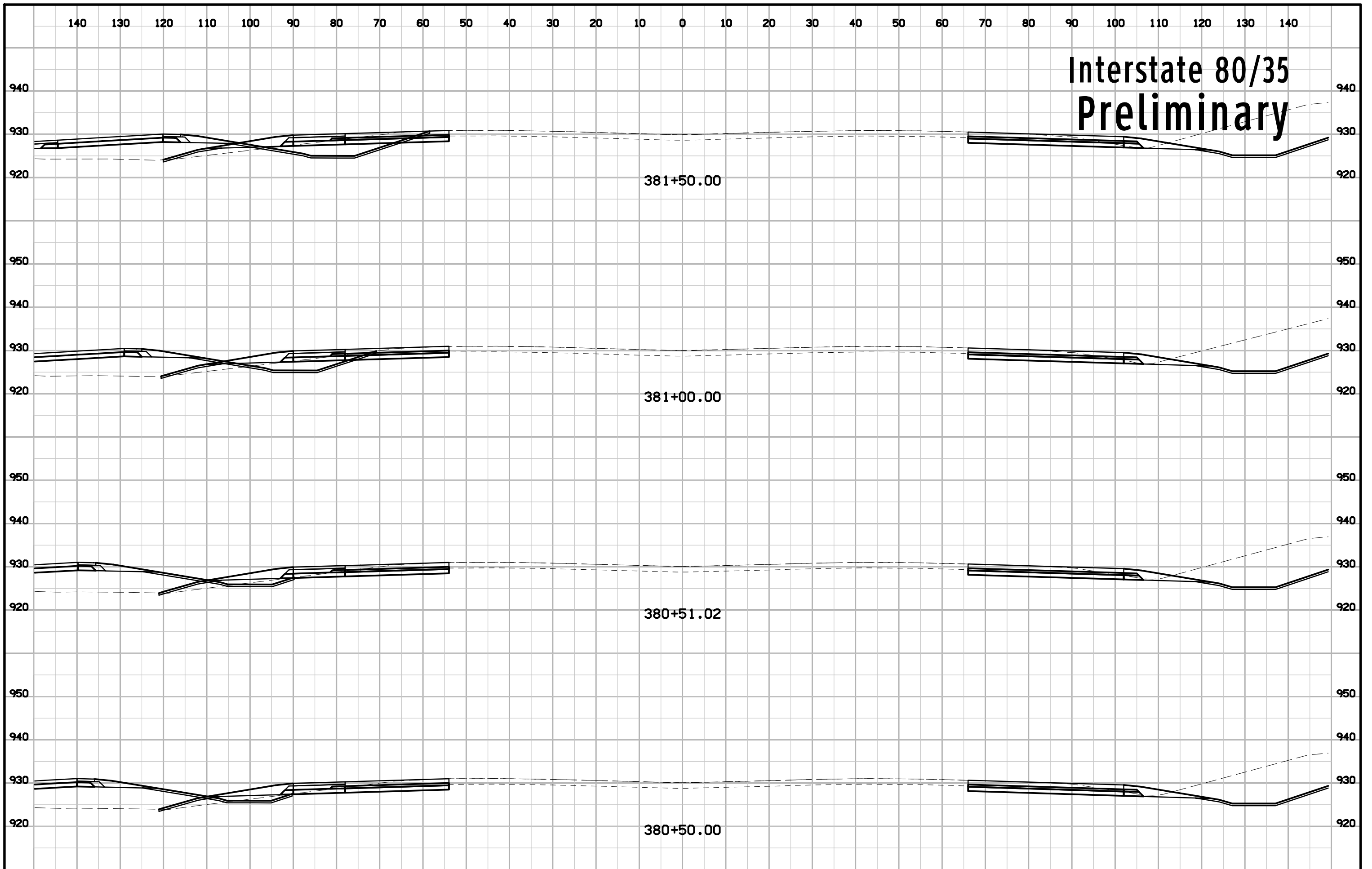
# Interstate 80/35 Preliminary

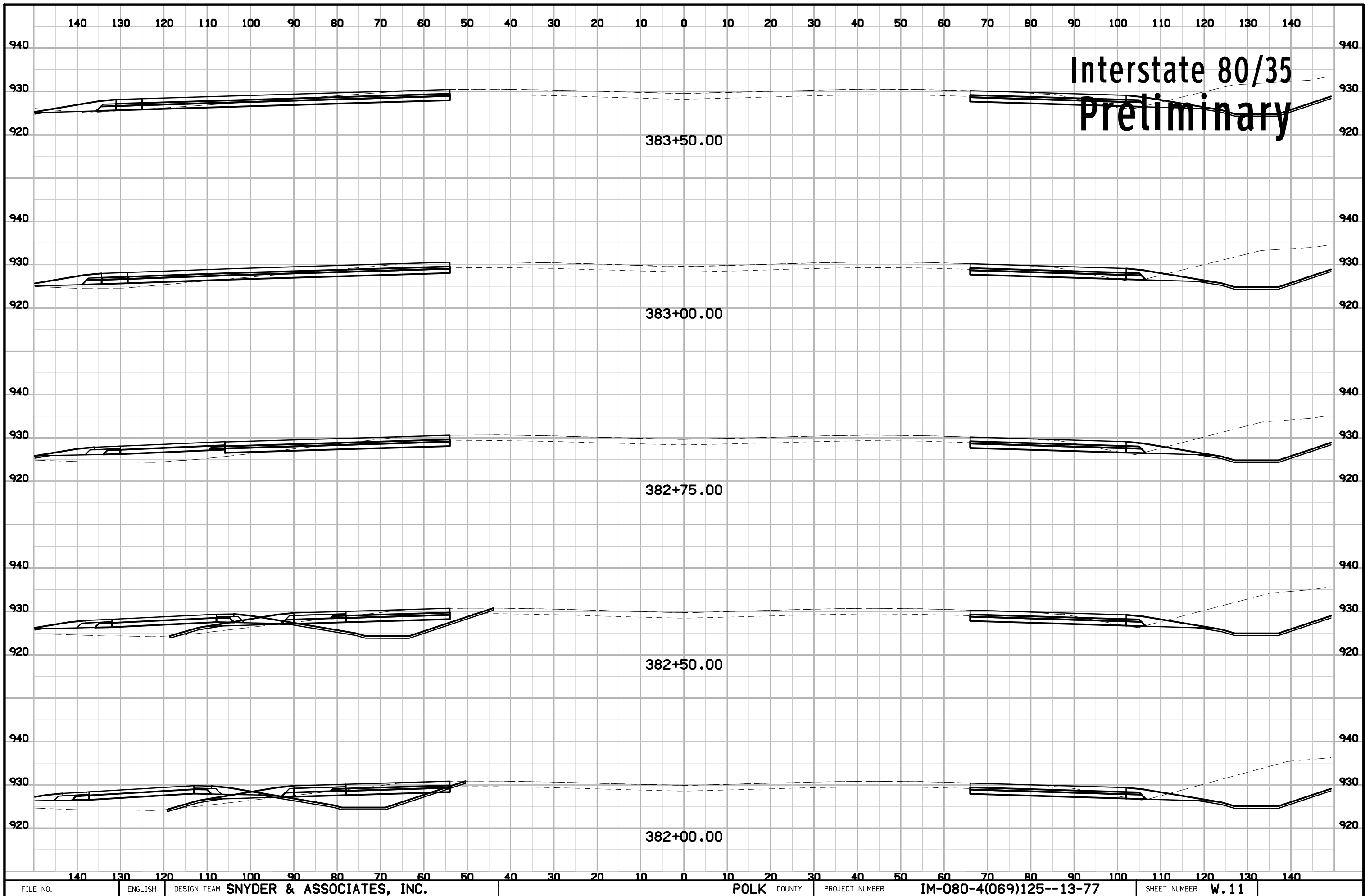


# Interstate 80/35 Preliminary

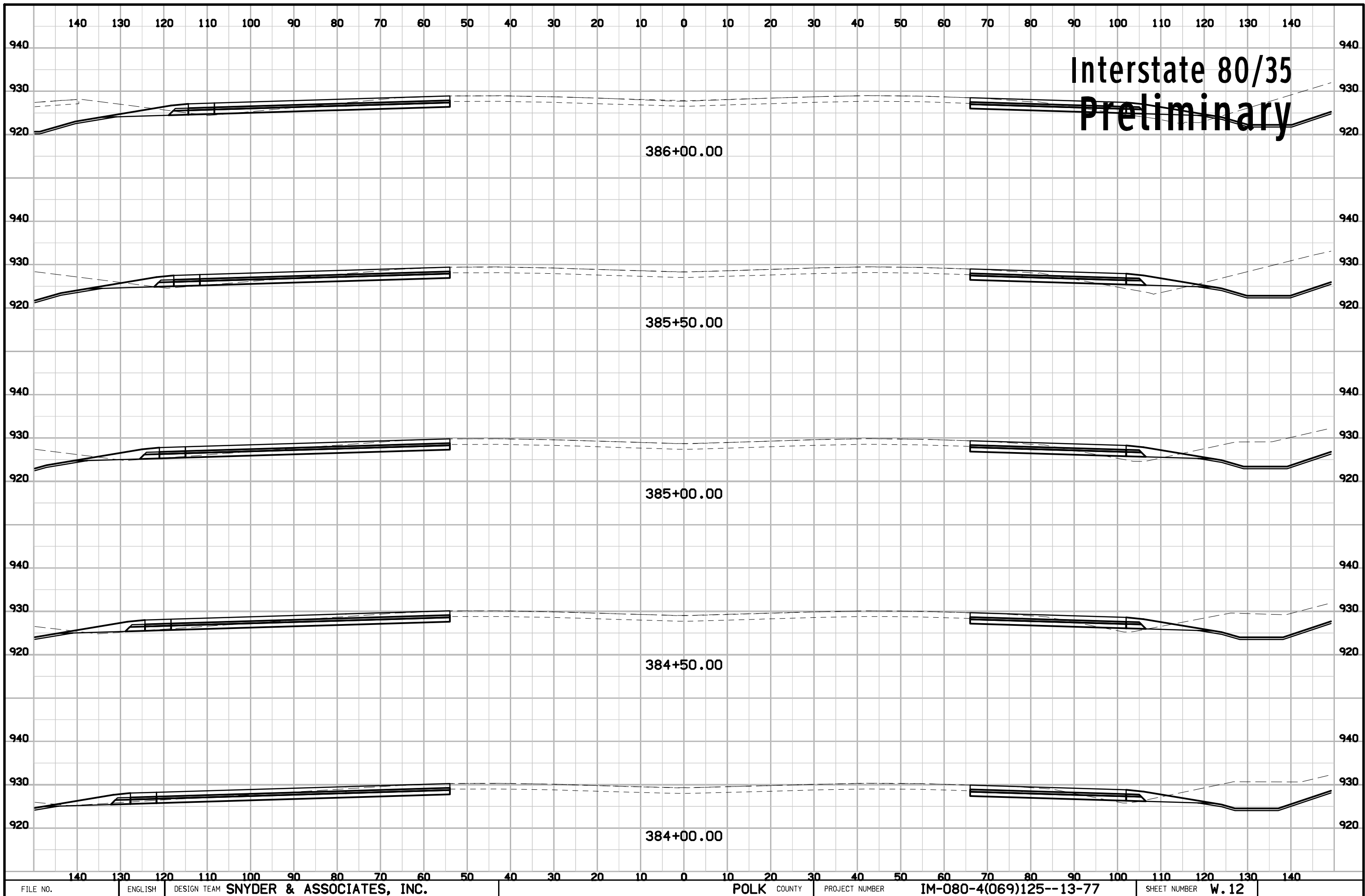


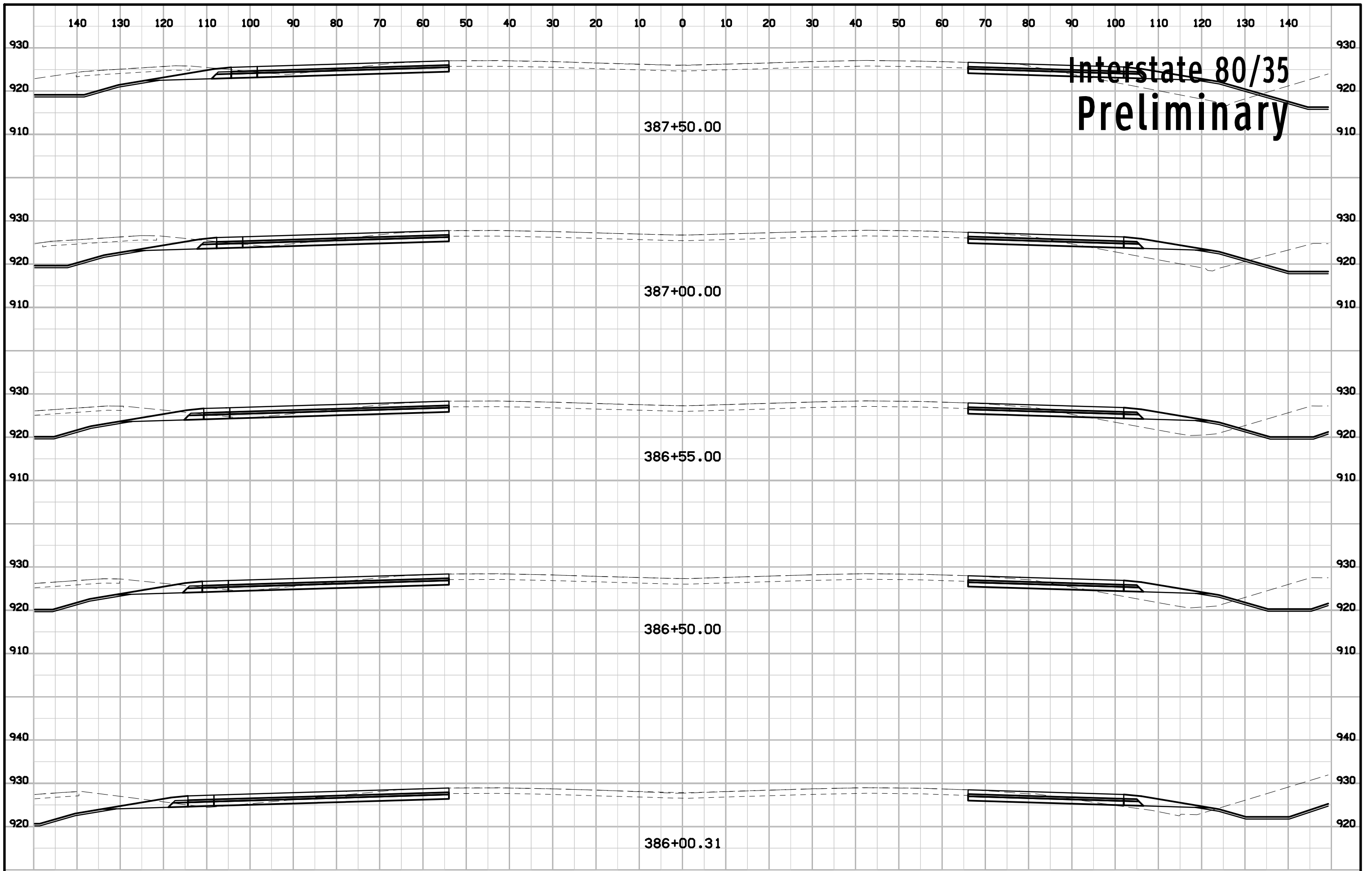
# Interstate 80/35 Preliminary











**Interstate 80/35  
Preliminary**

387+50.00

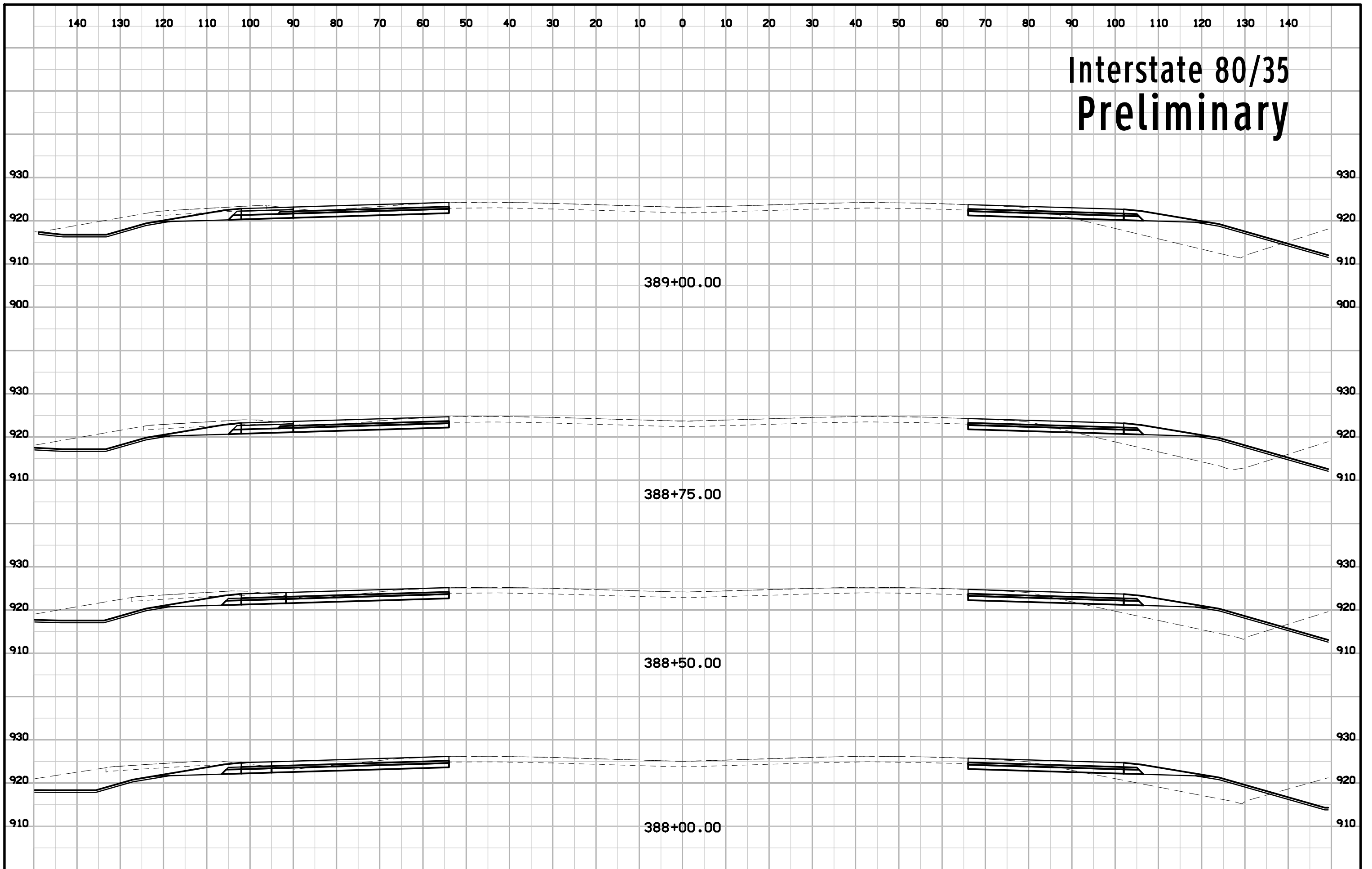
387+00.00

386+55.00

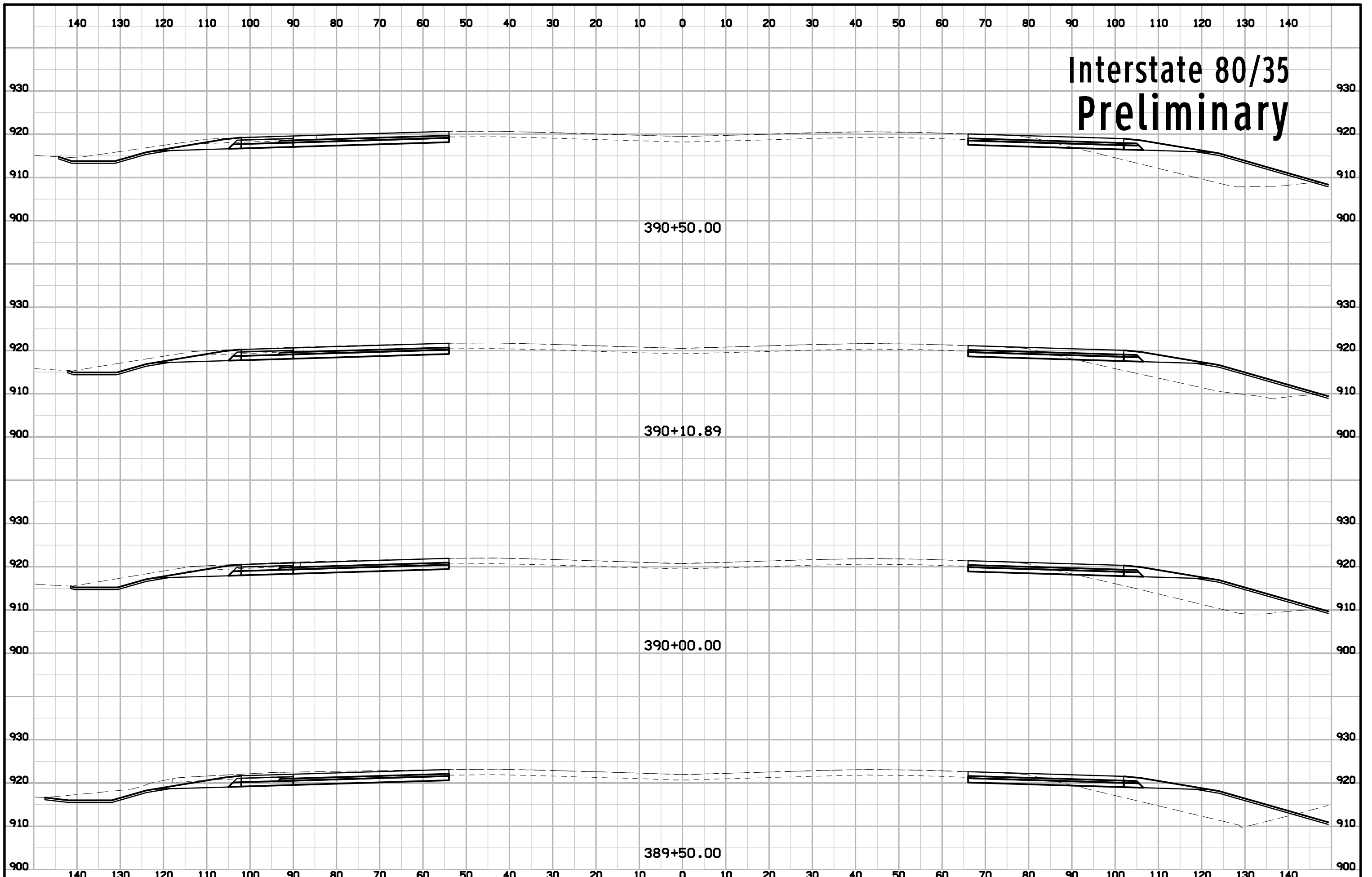
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386+00.31

# Interstate 80/35 Preliminary

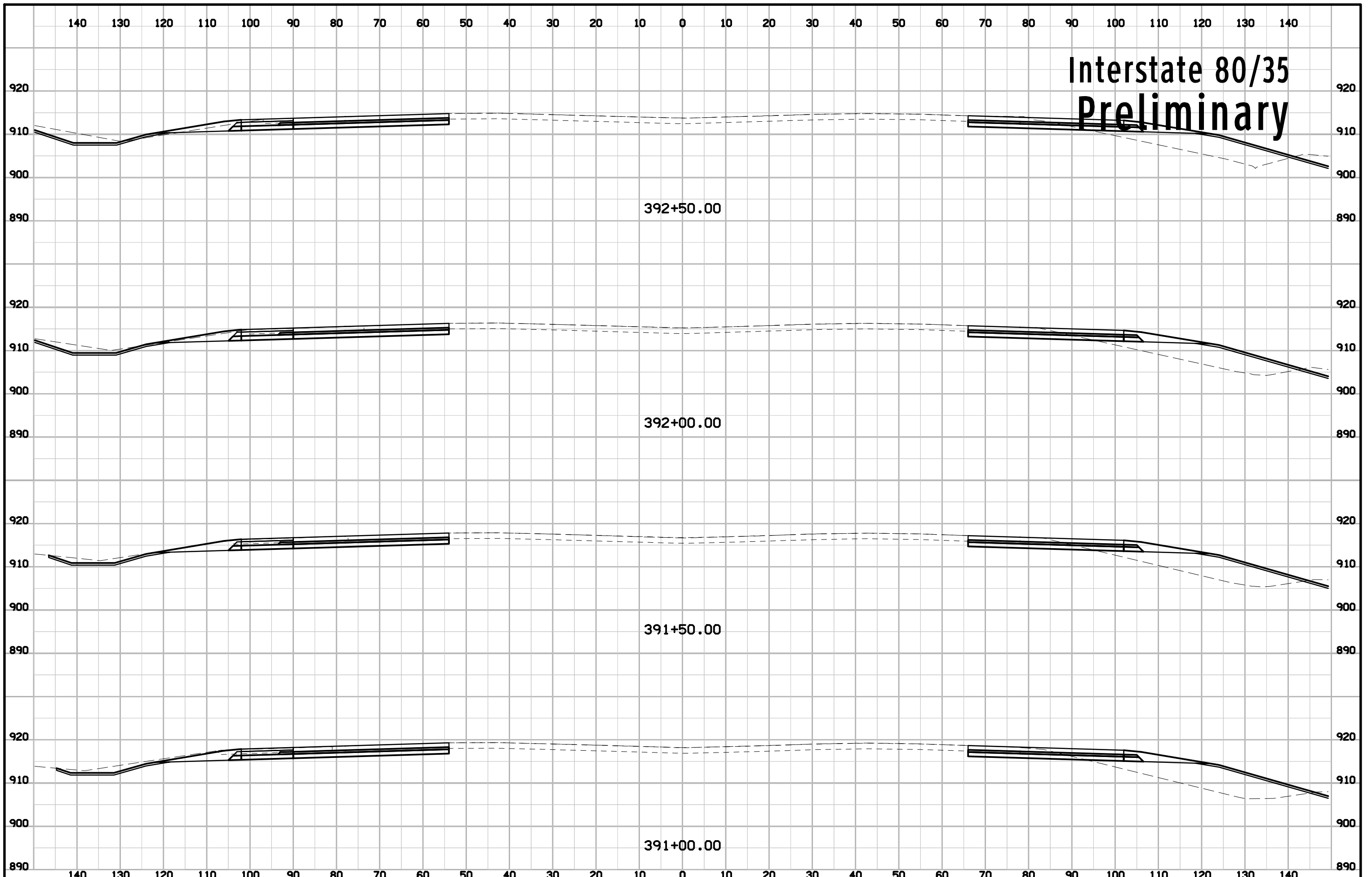


# Interstate 80/35 Preliminary

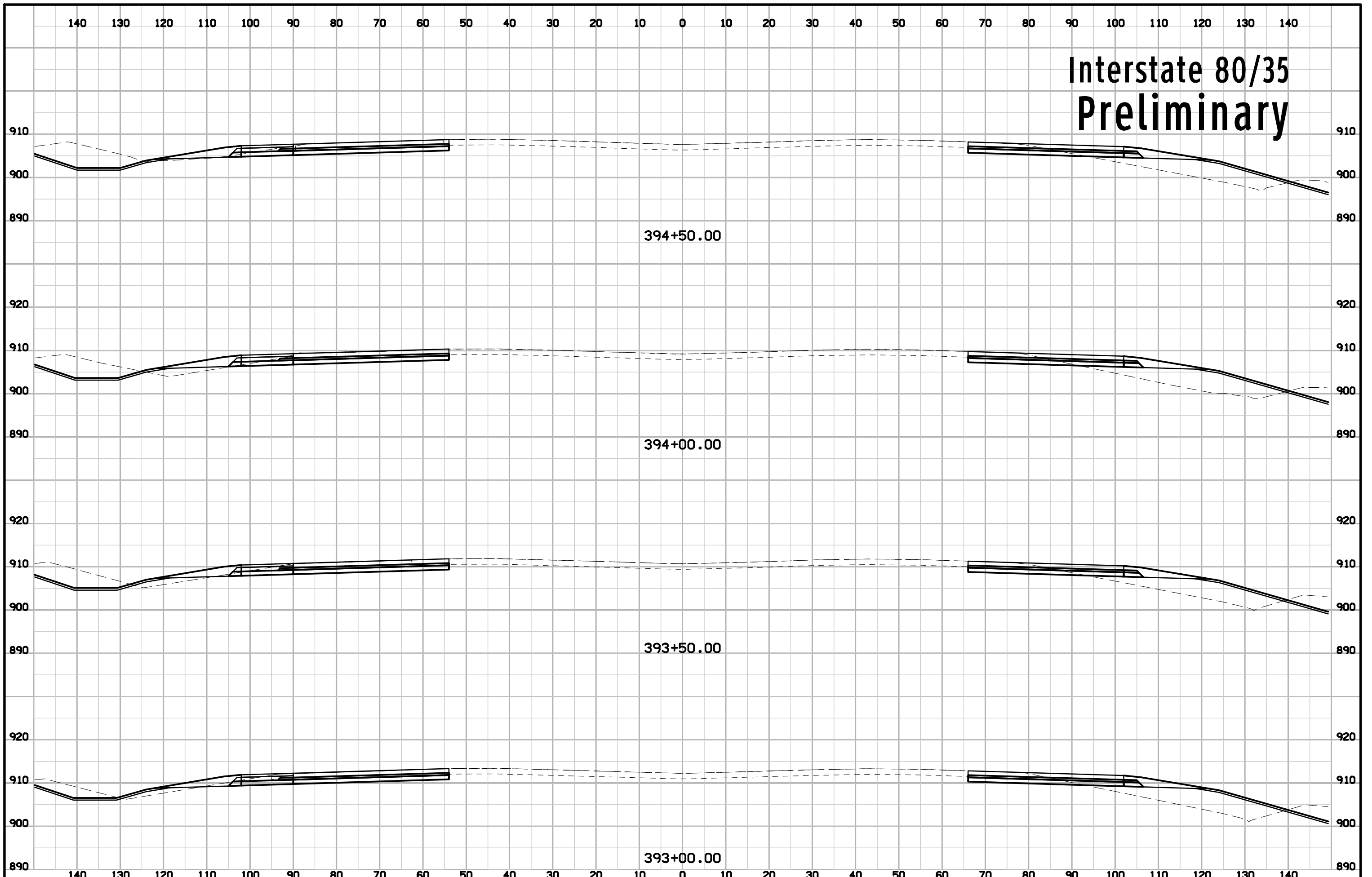




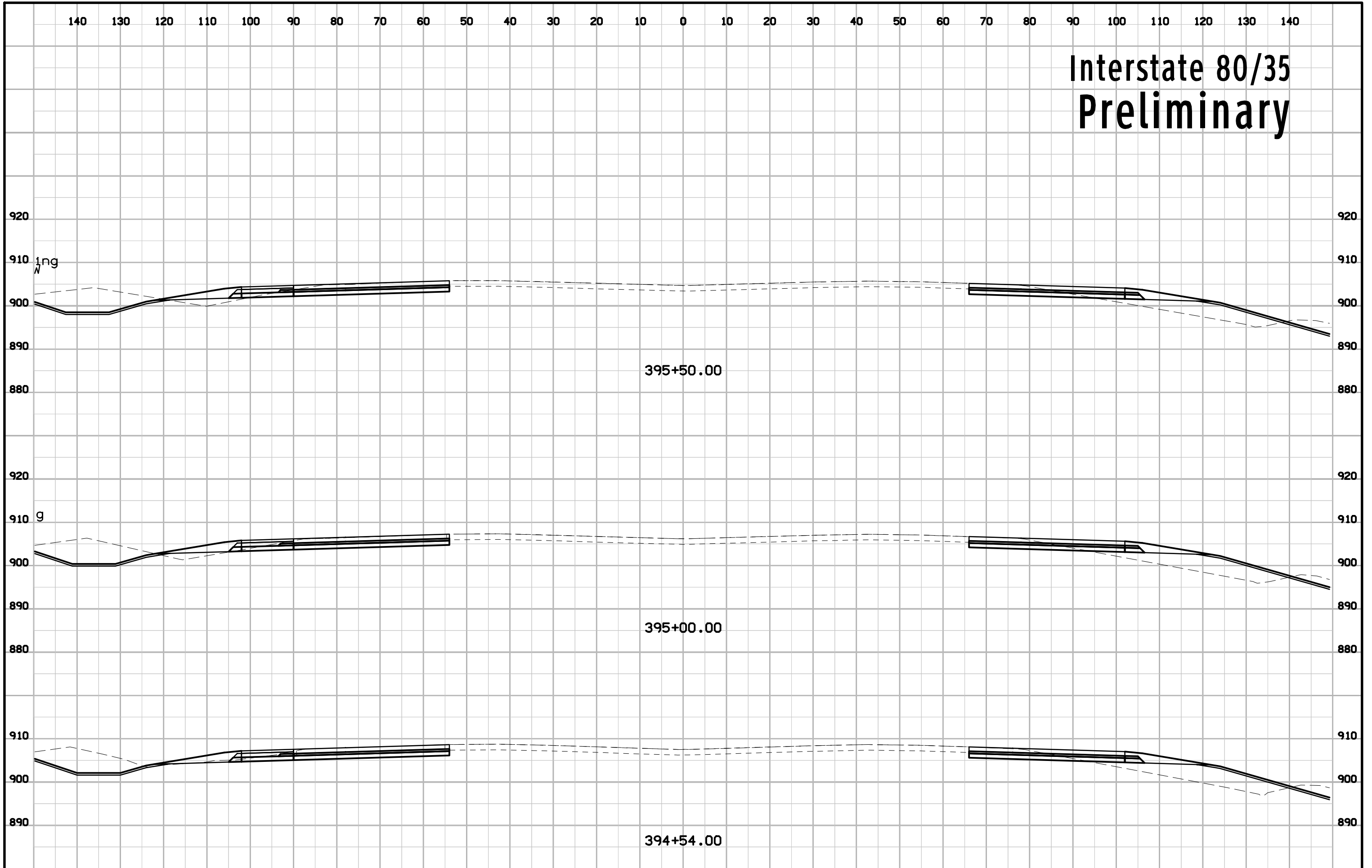
# Interstate 80/35 Preliminary



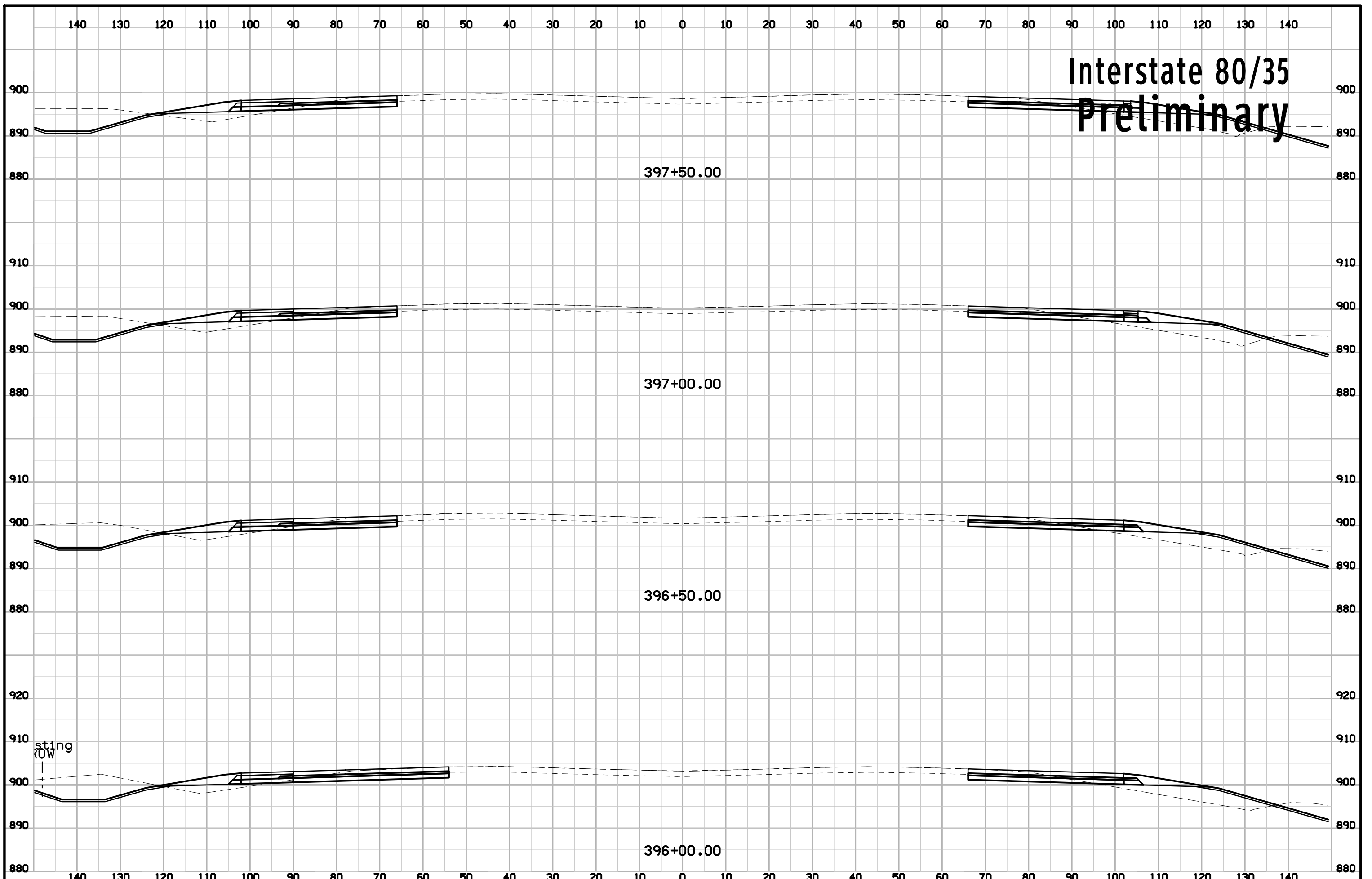
# Interstate 80/35 Preliminary



# Interstate 80/35 Preliminary

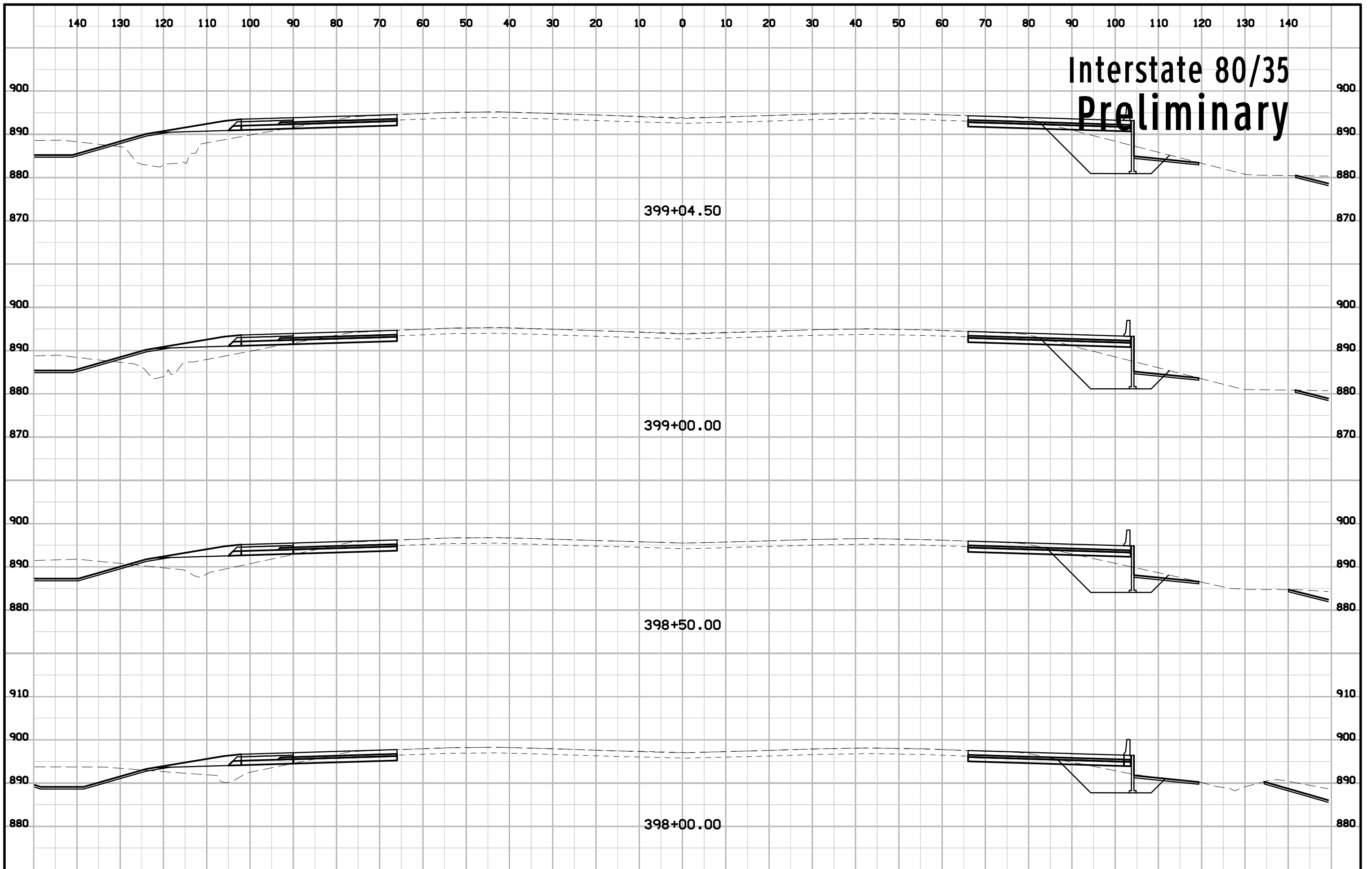


# Interstate 80/35 Preliminary

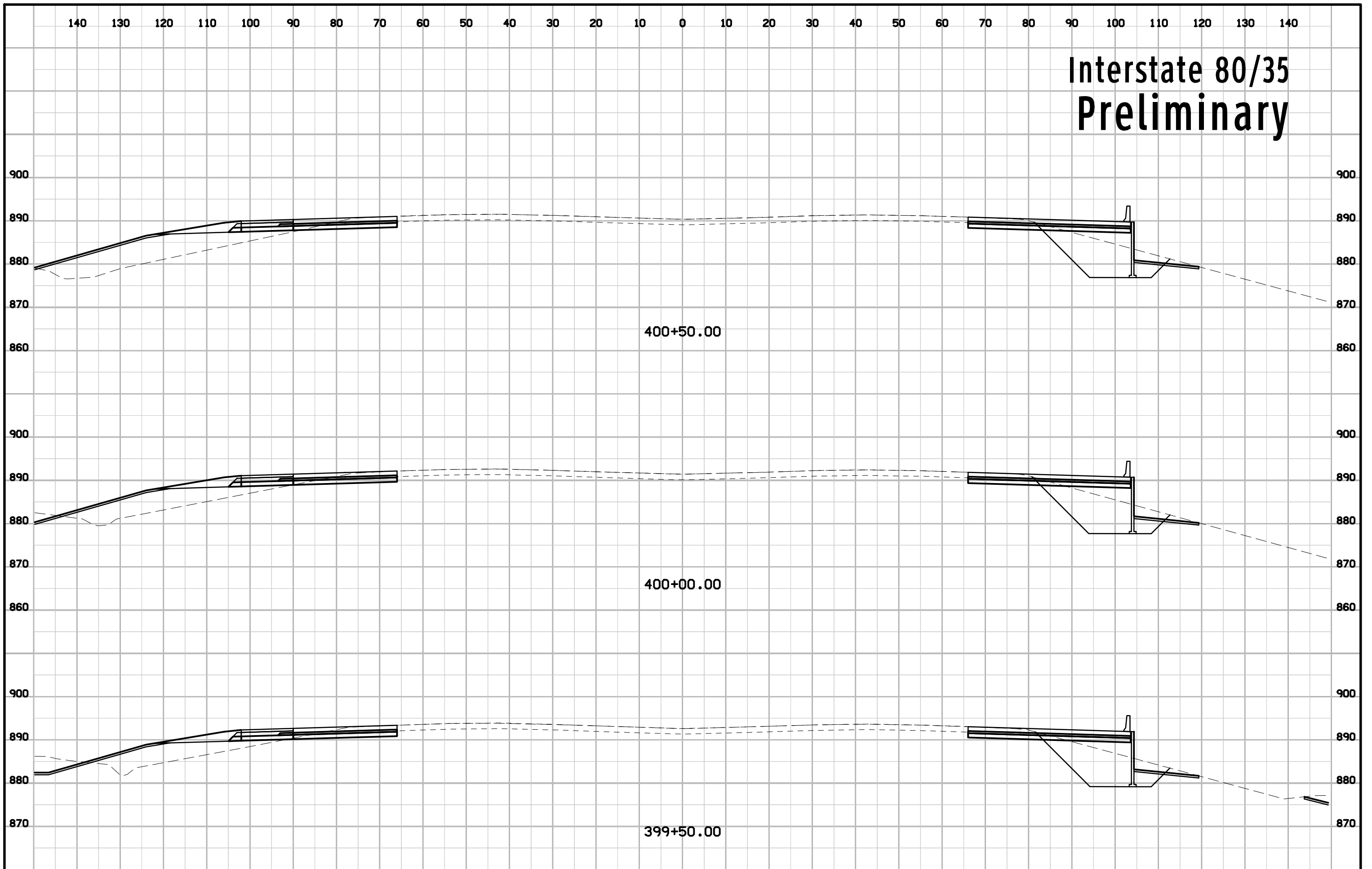




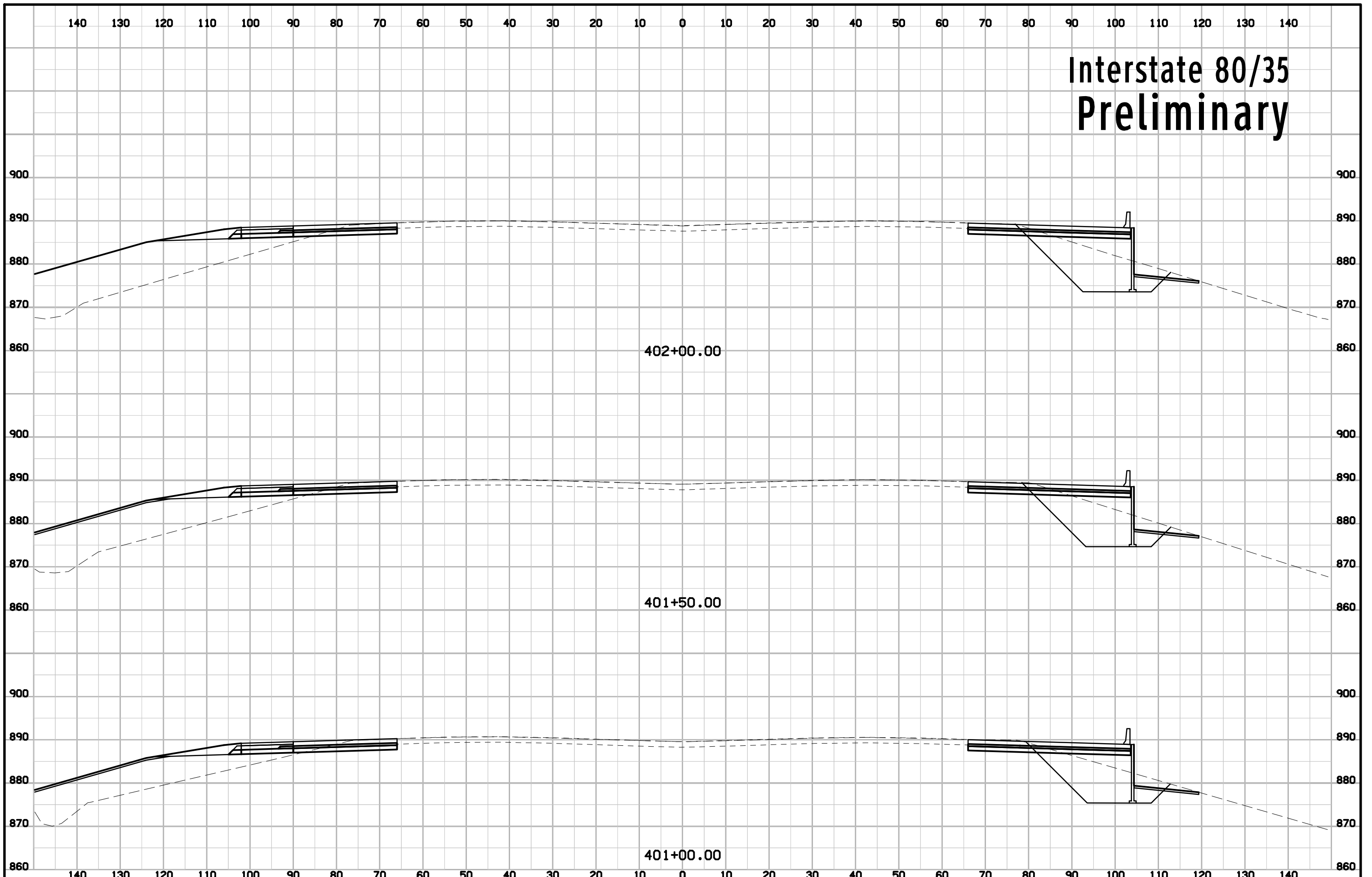
# Interstate 80/35 Preliminary



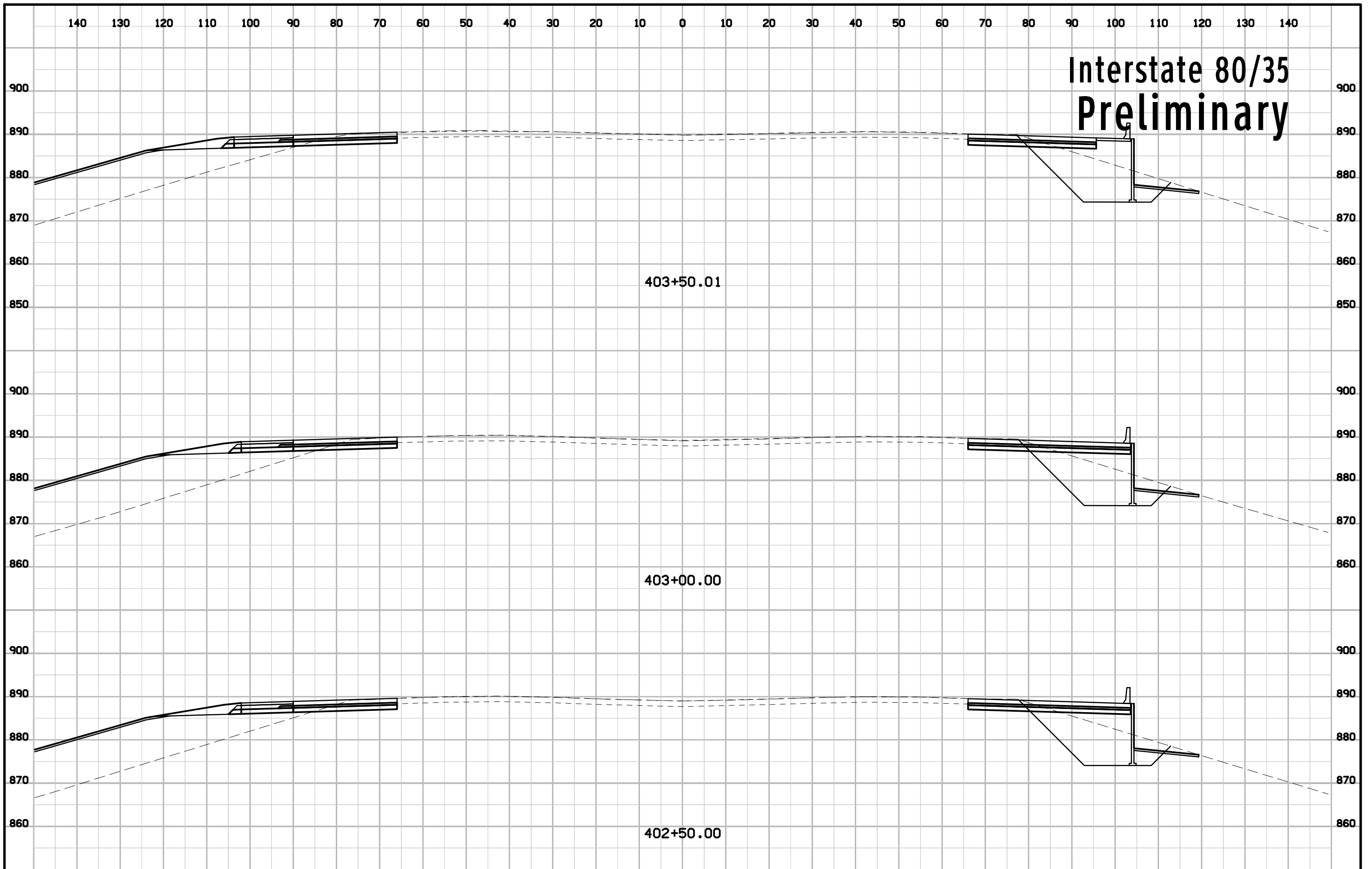
# Interstate 80/35 Preliminary



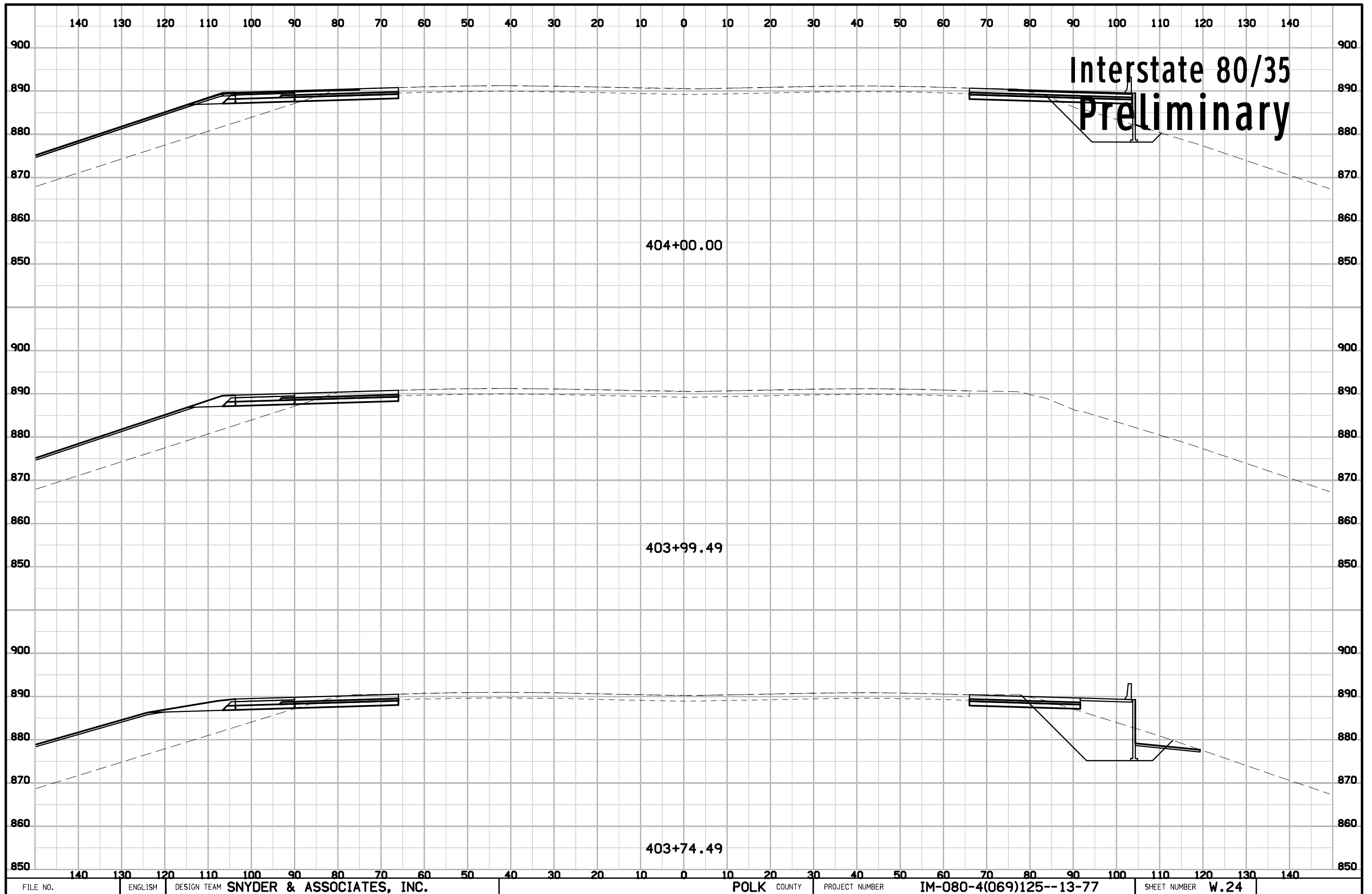
# Interstate 80/35 Preliminary



# Interstate 80/35 Preliminary





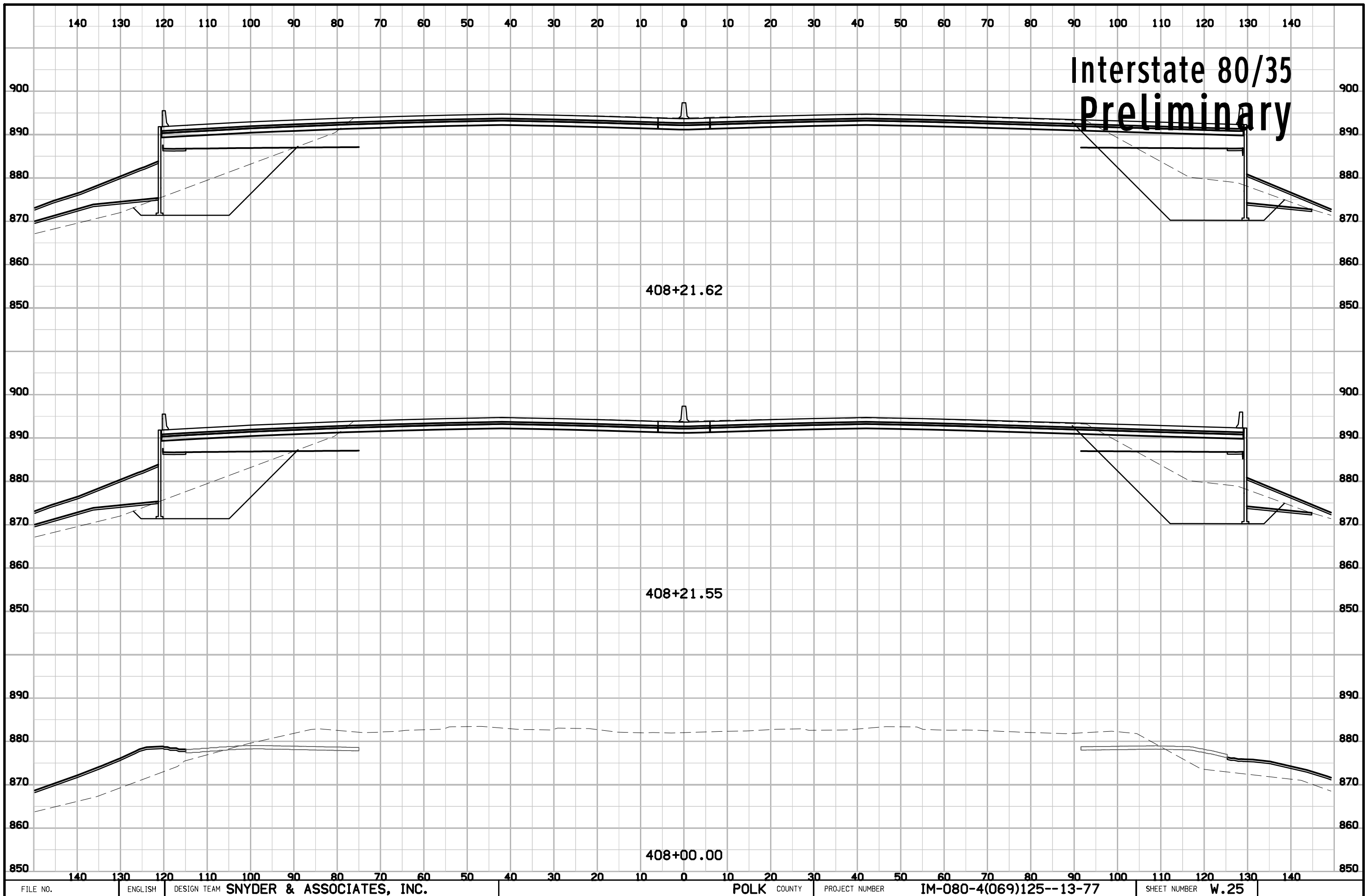


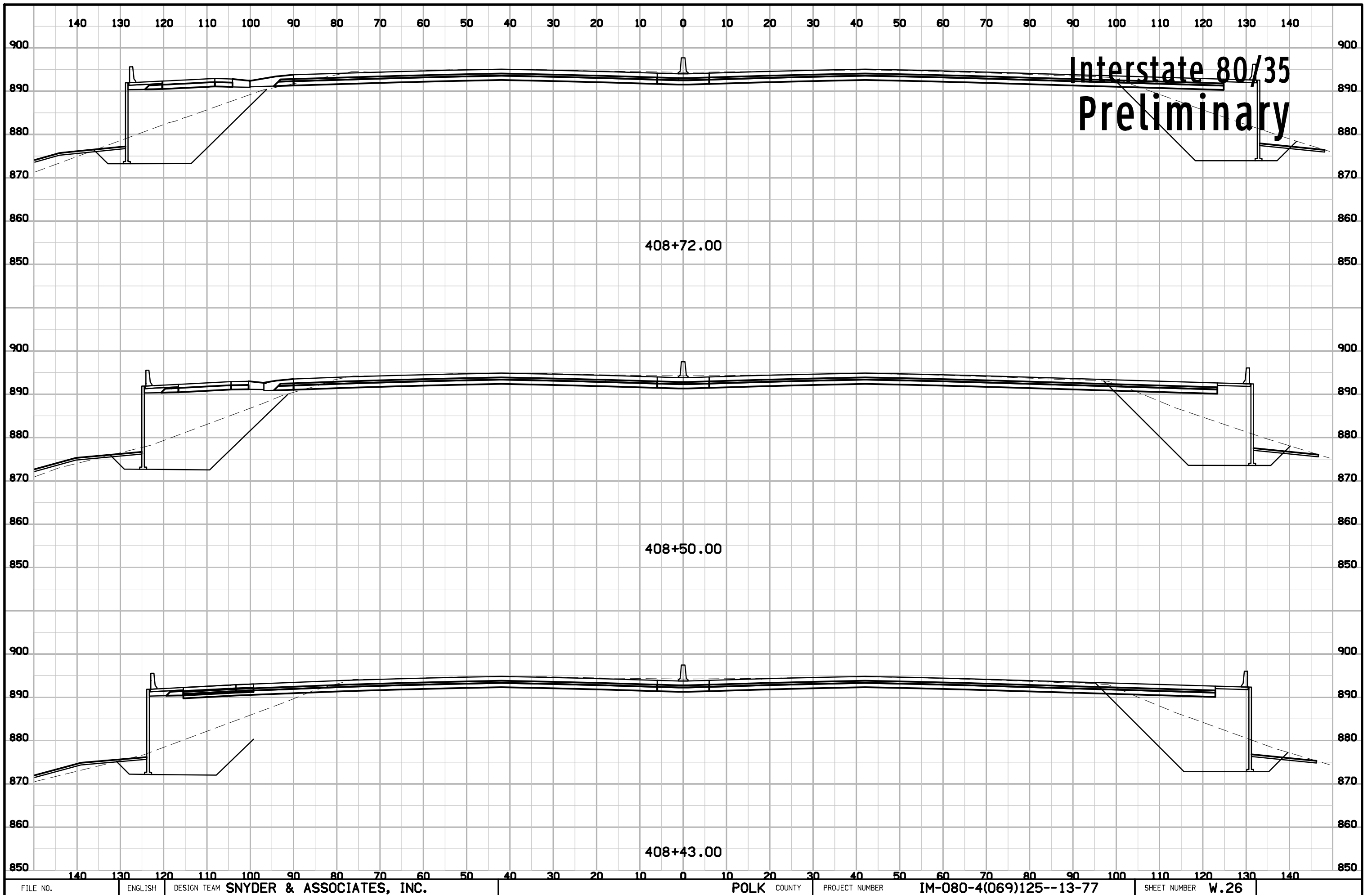
**Interstate 80/35**  
**Preliminary**

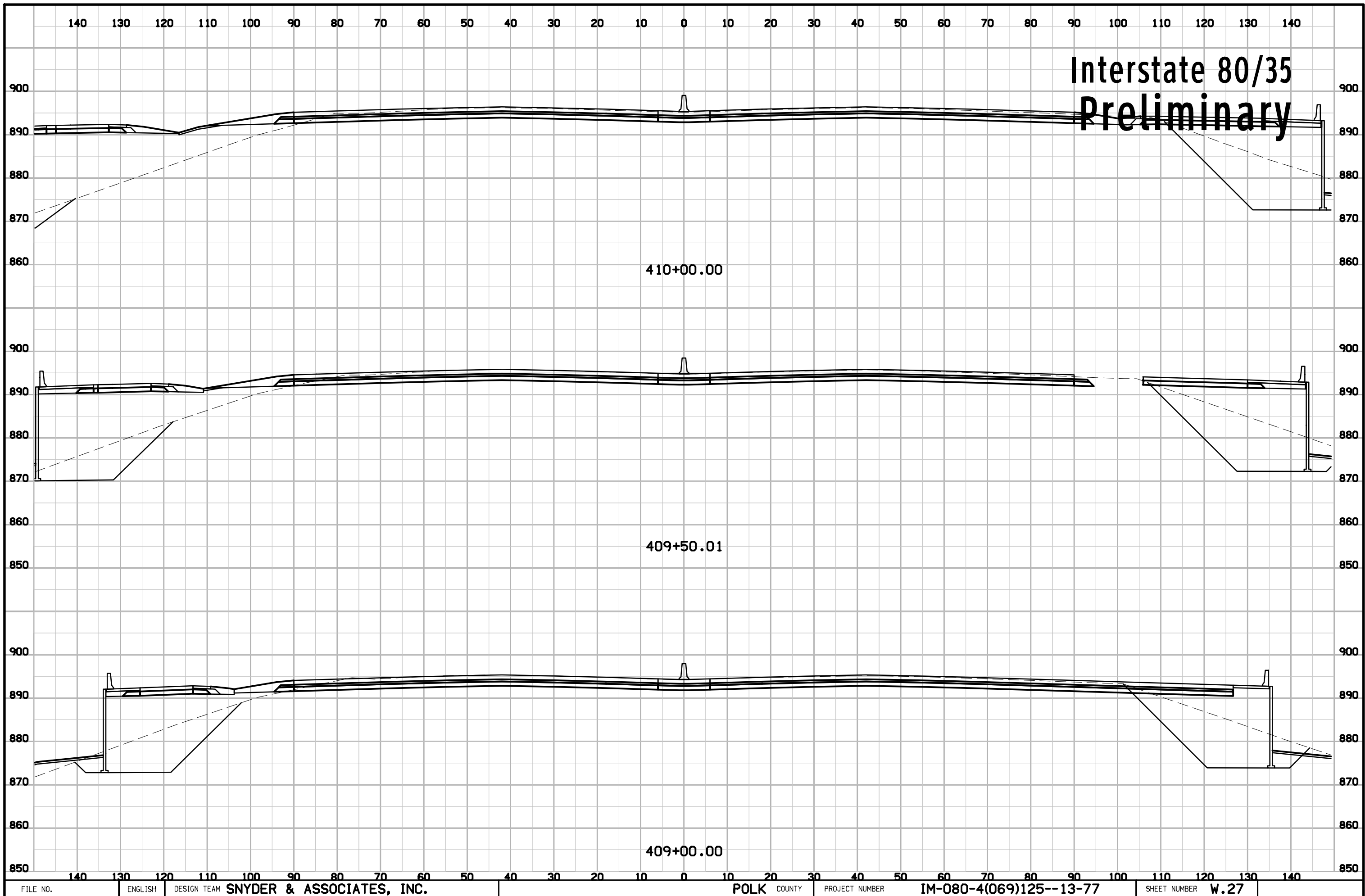
404+00.00

403+99.49

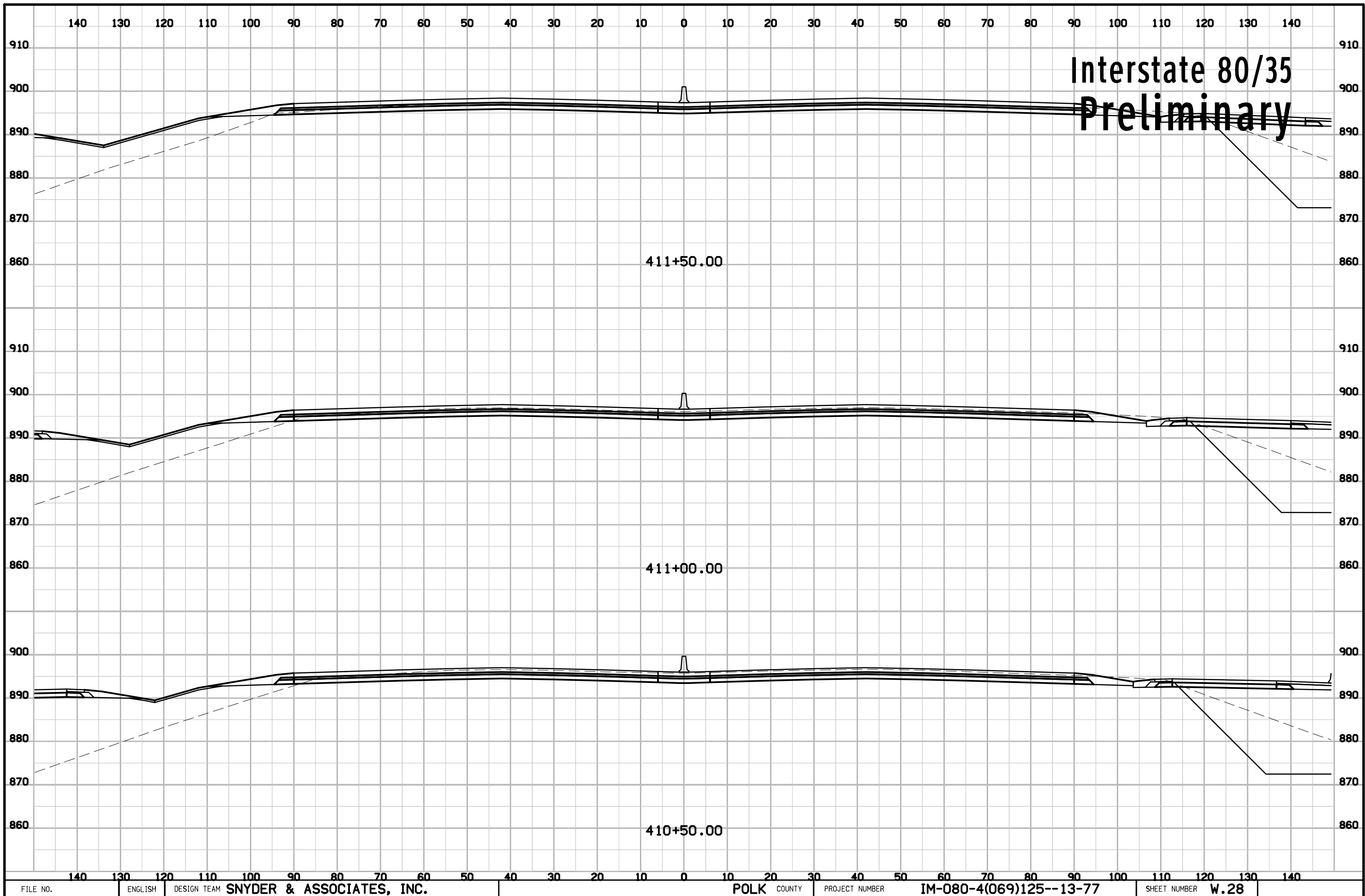
403+74.49

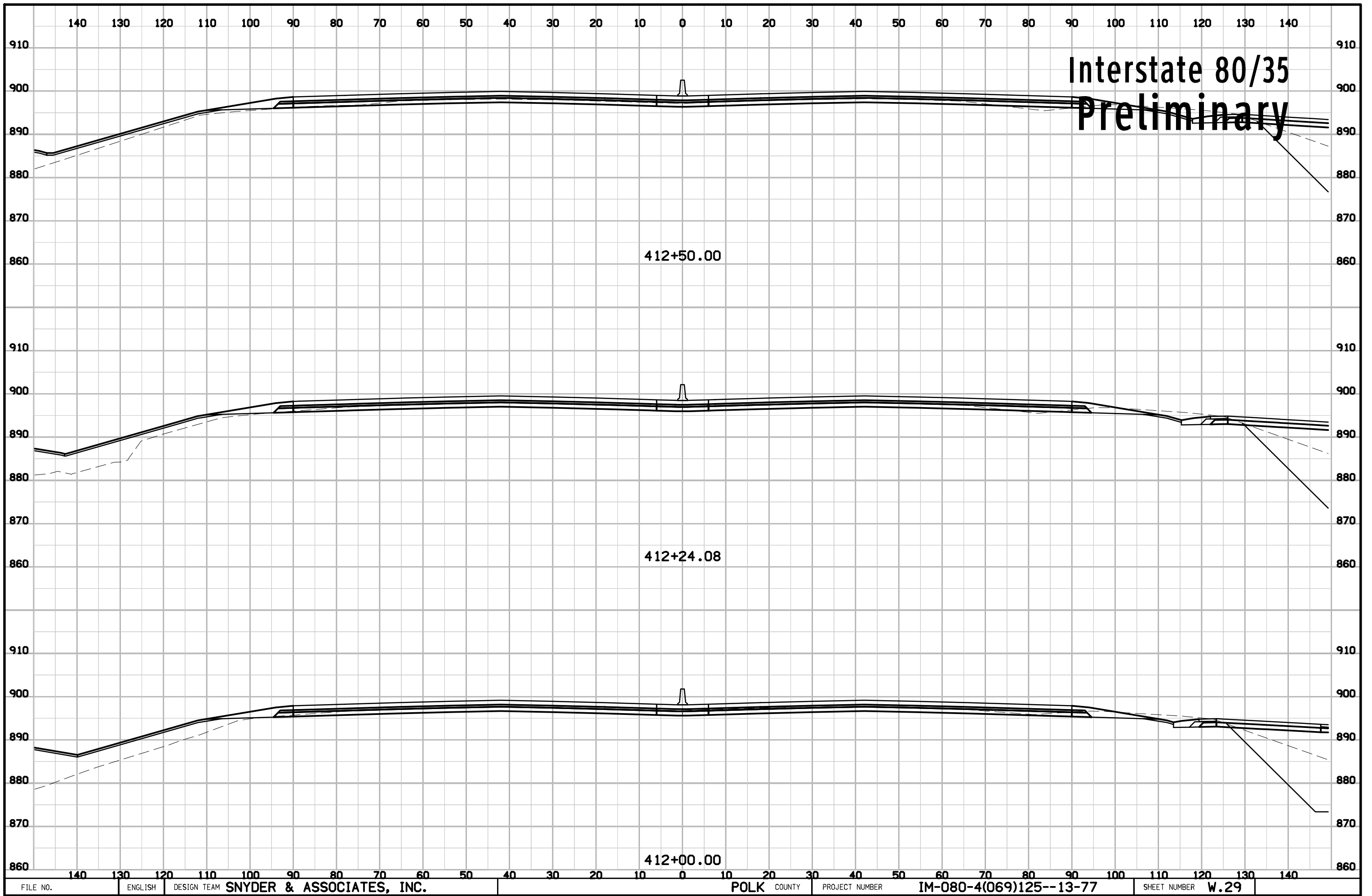












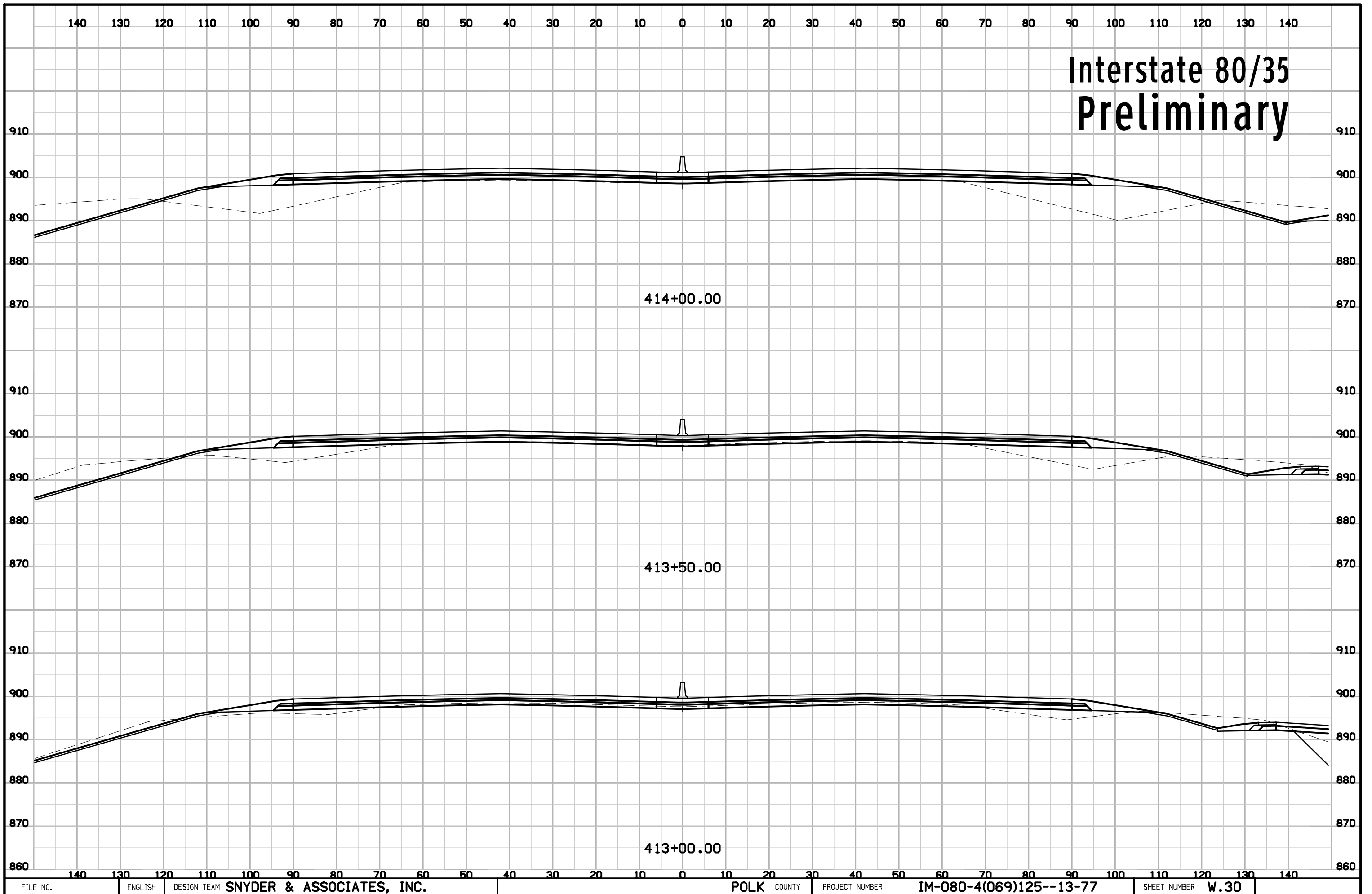
Interstate 80/35  
Preliminary

412+50.00

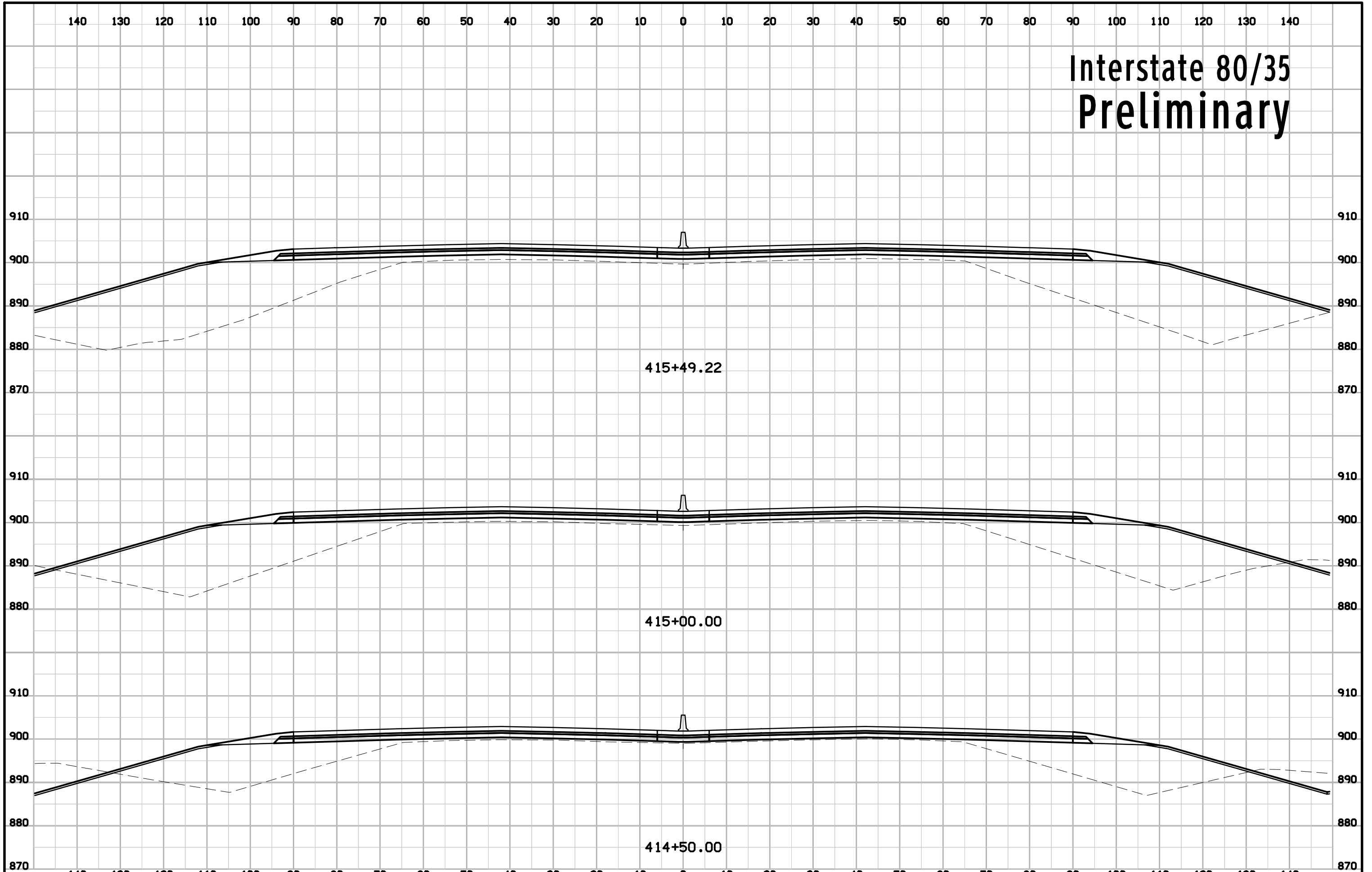
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412+00.00

# Interstate 80/35 Preliminary

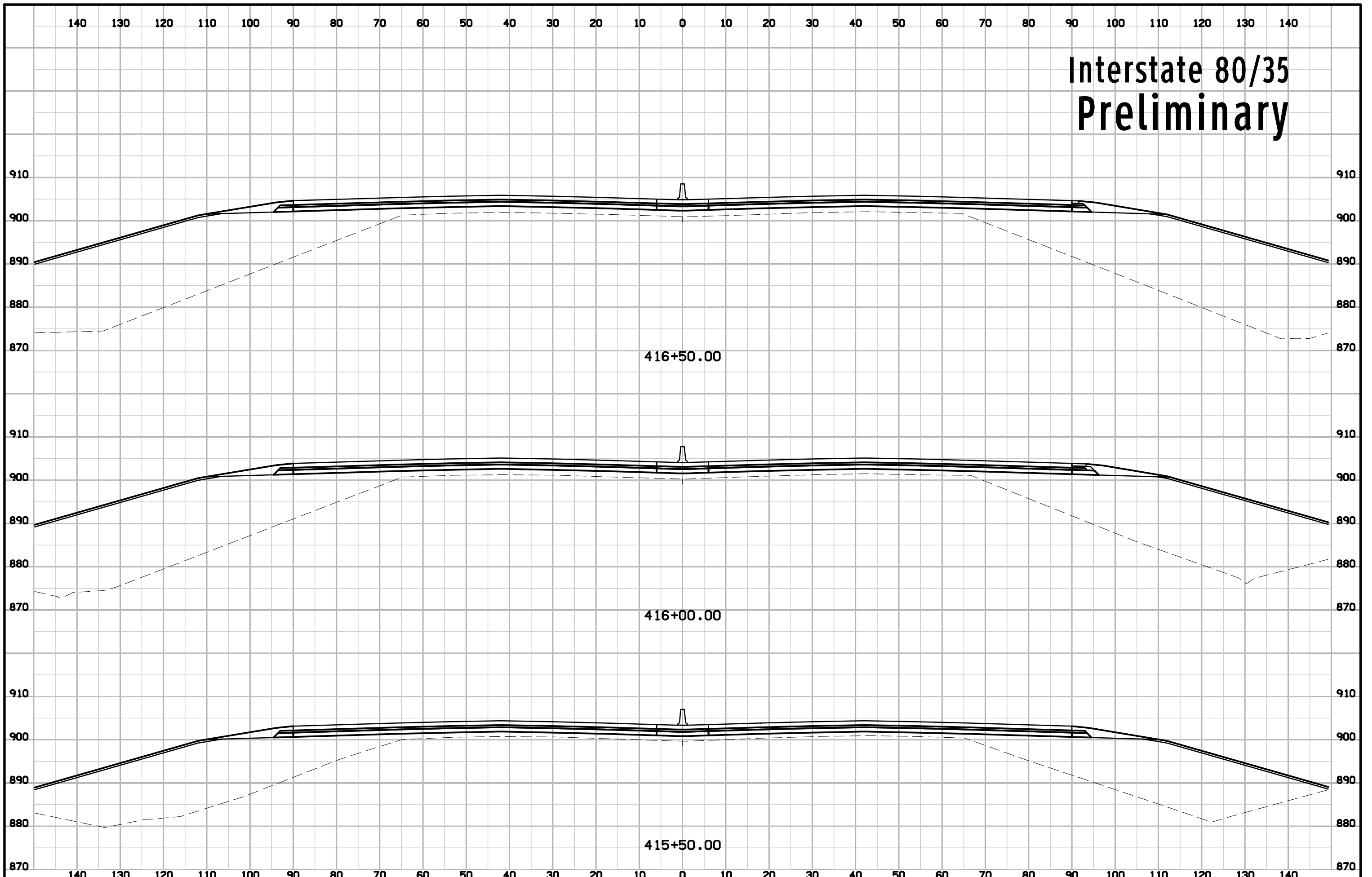


# Interstate 80/35 Preliminary

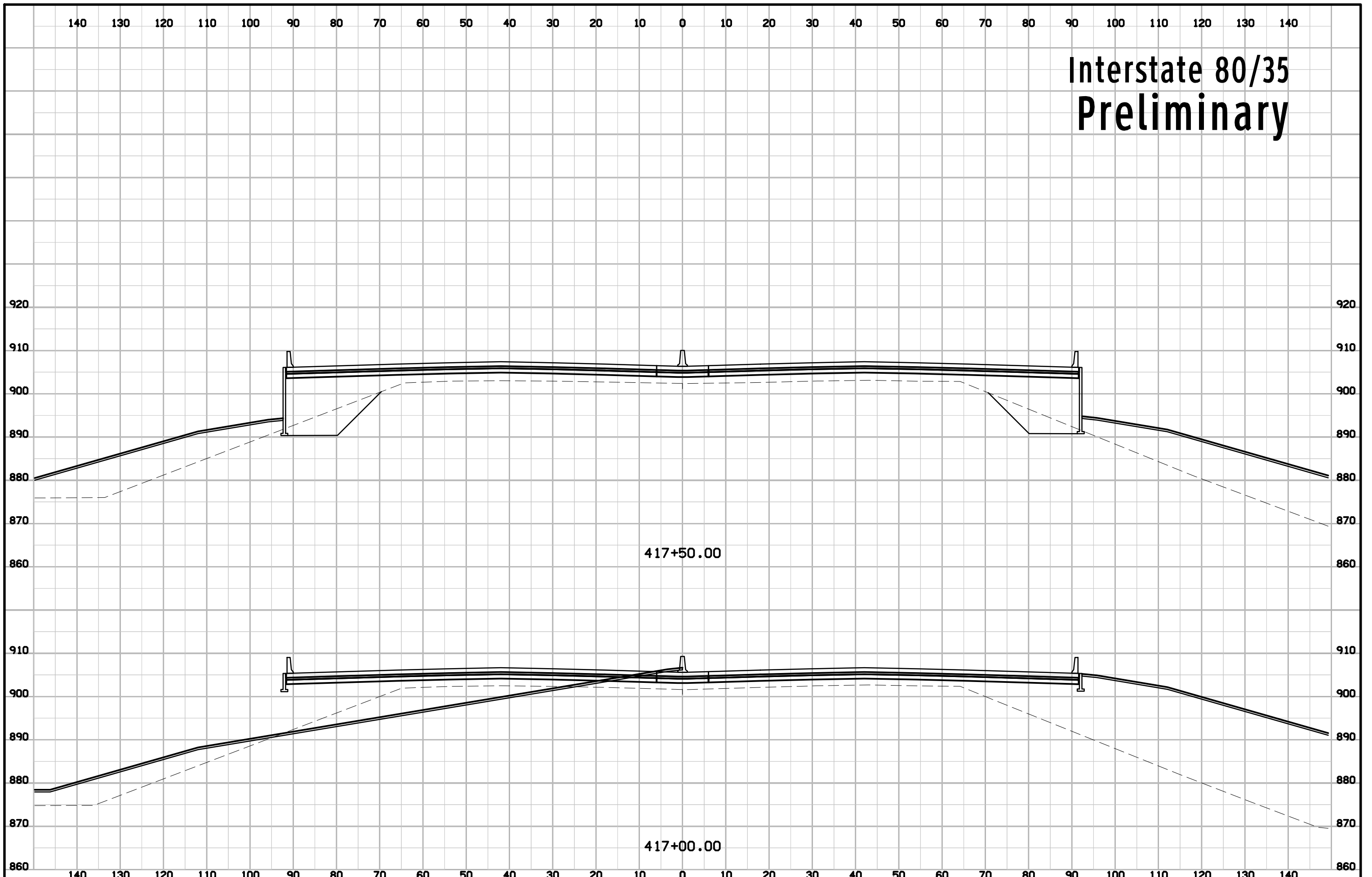




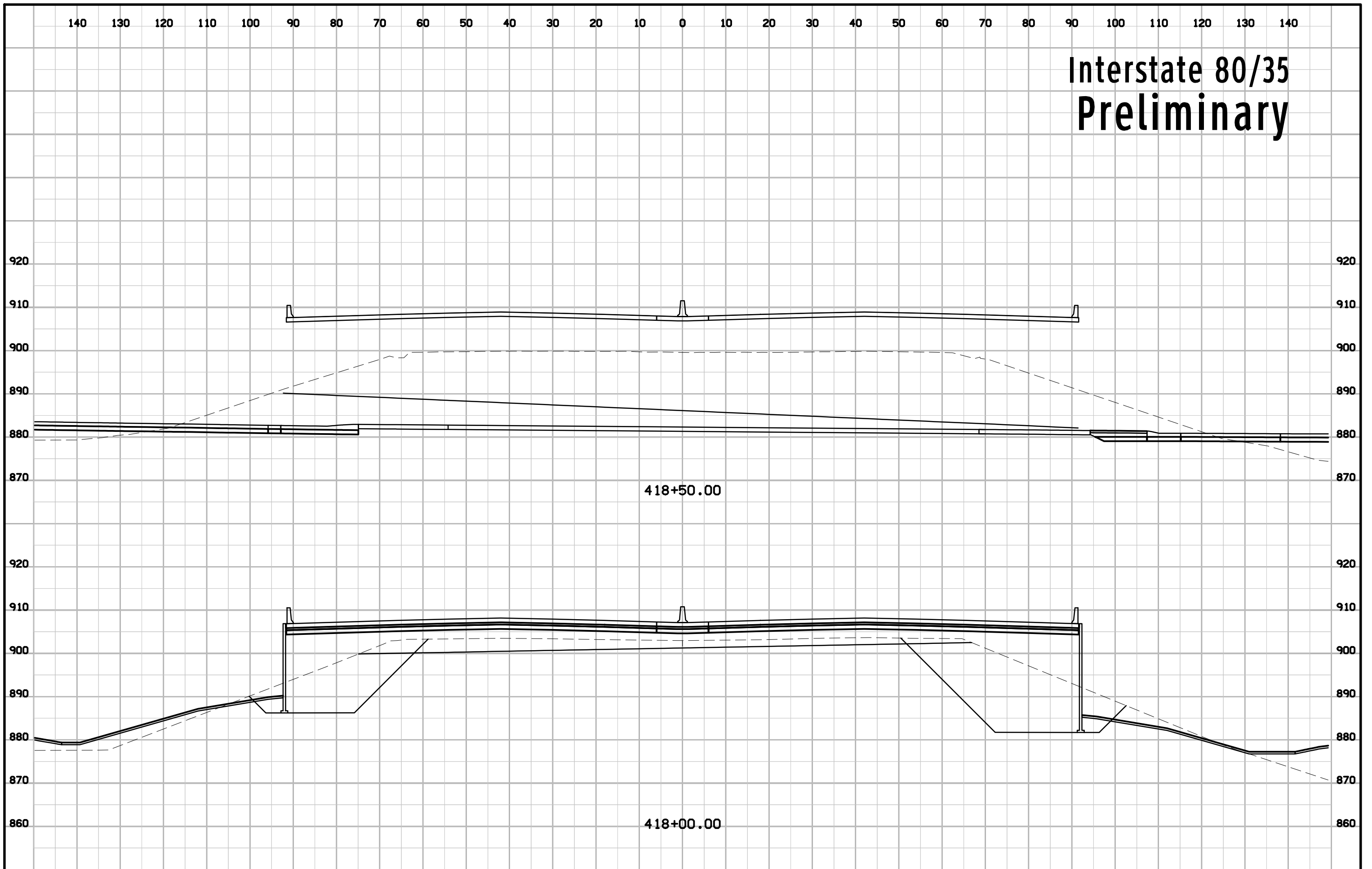
# Interstate 80/35 Preliminary

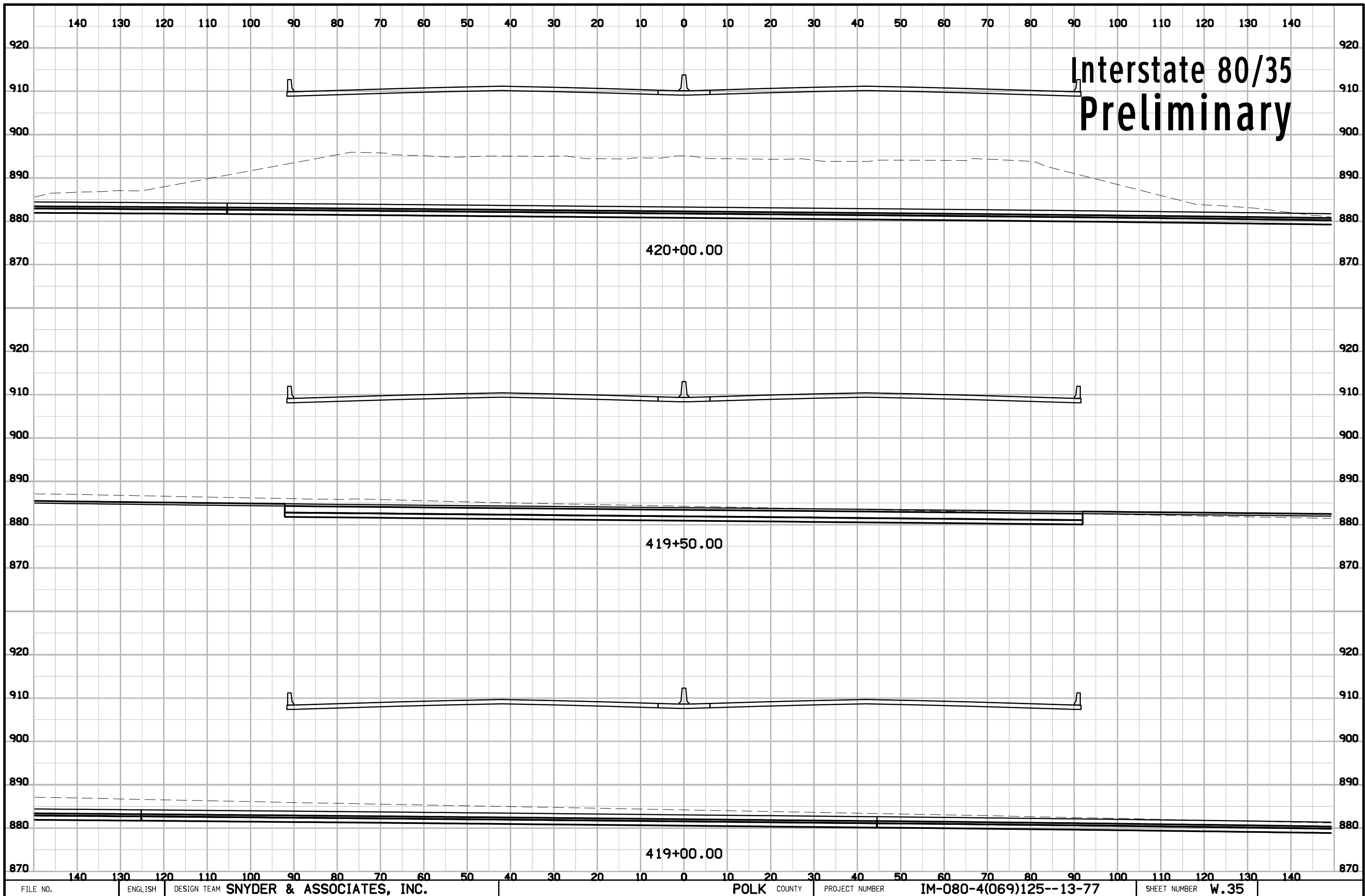


# Interstate 80/35 Preliminary

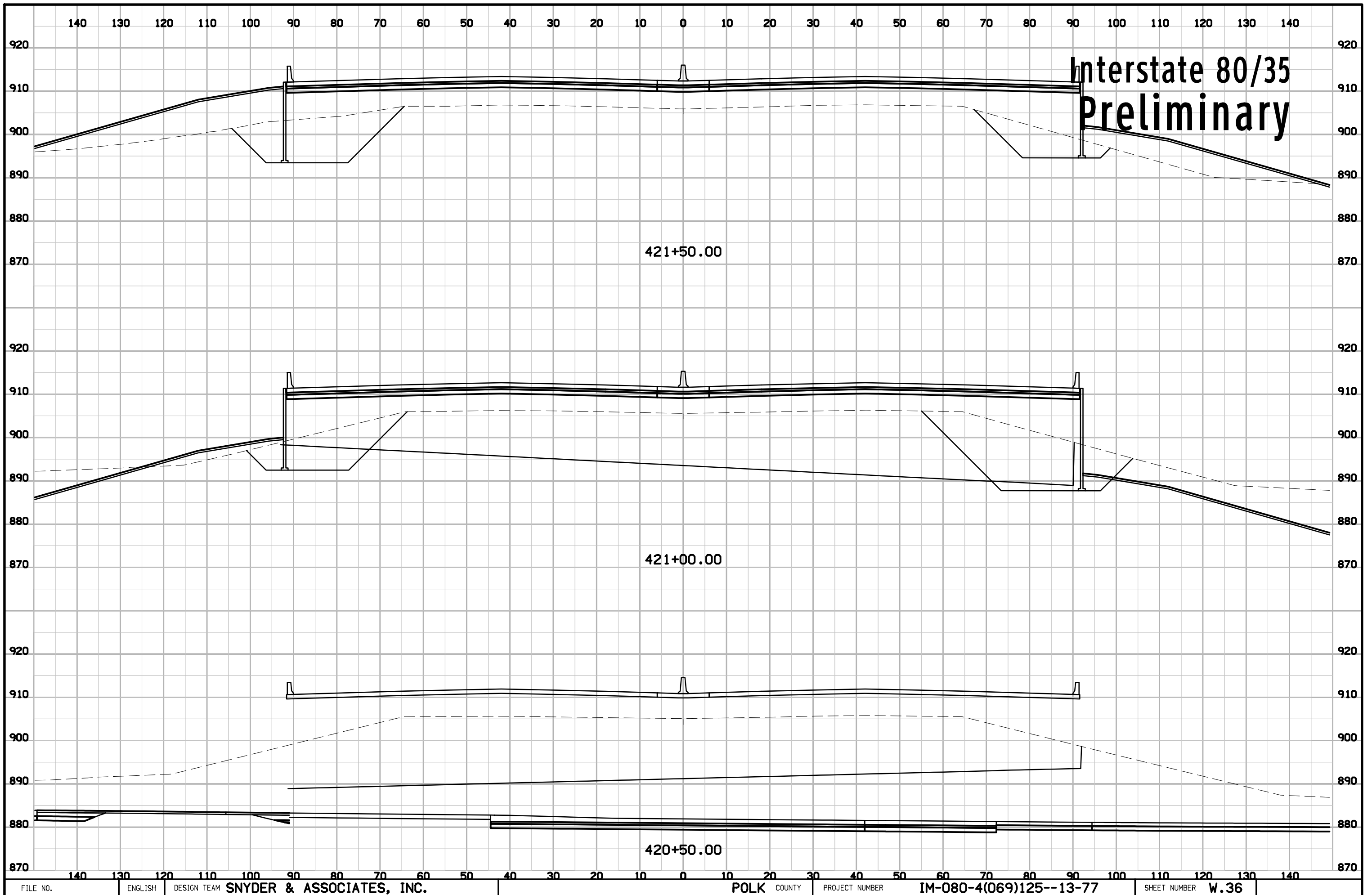


# Interstate 80/35 Preliminary







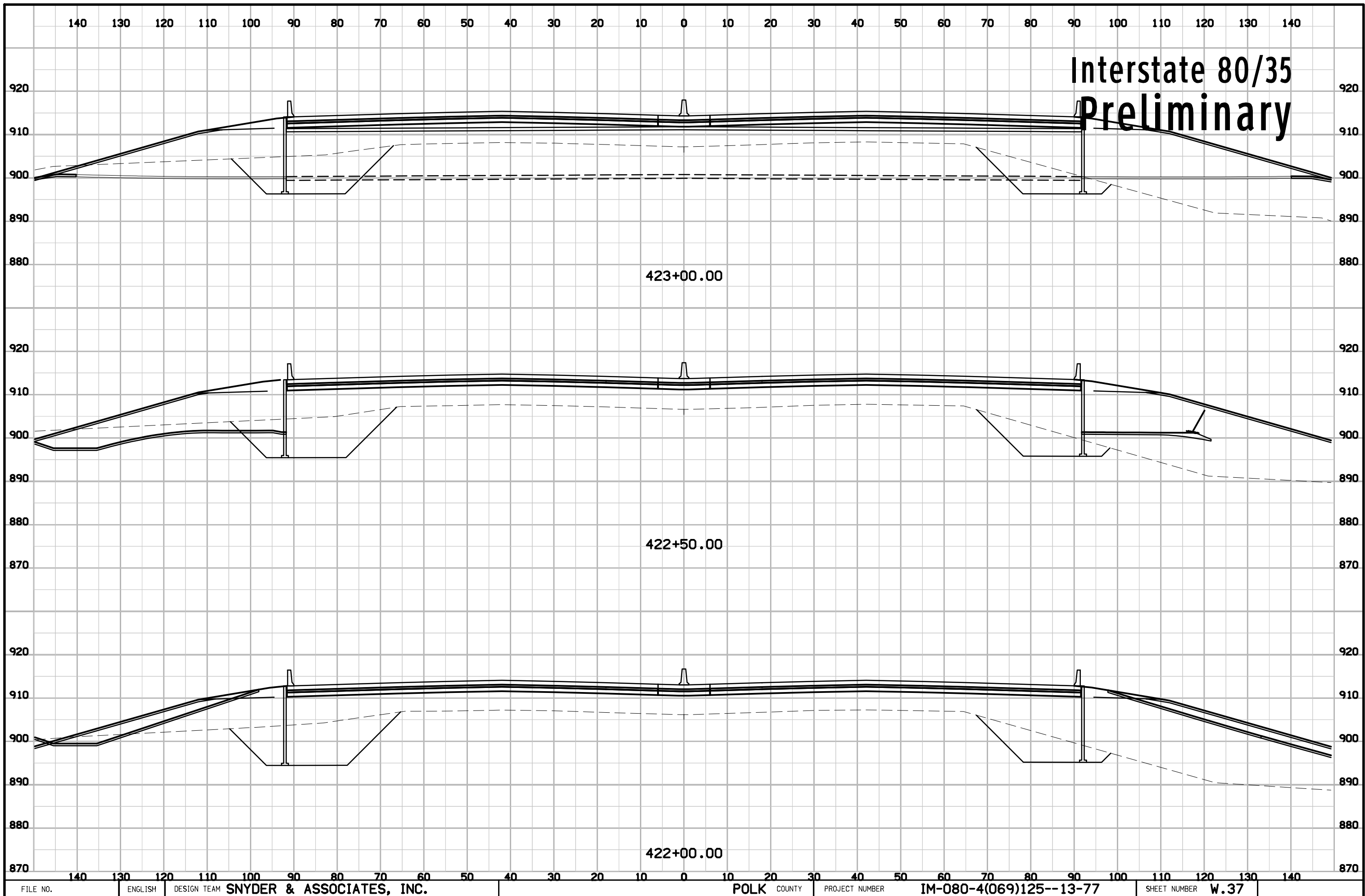


**Interstate 80/35  
Preliminary**

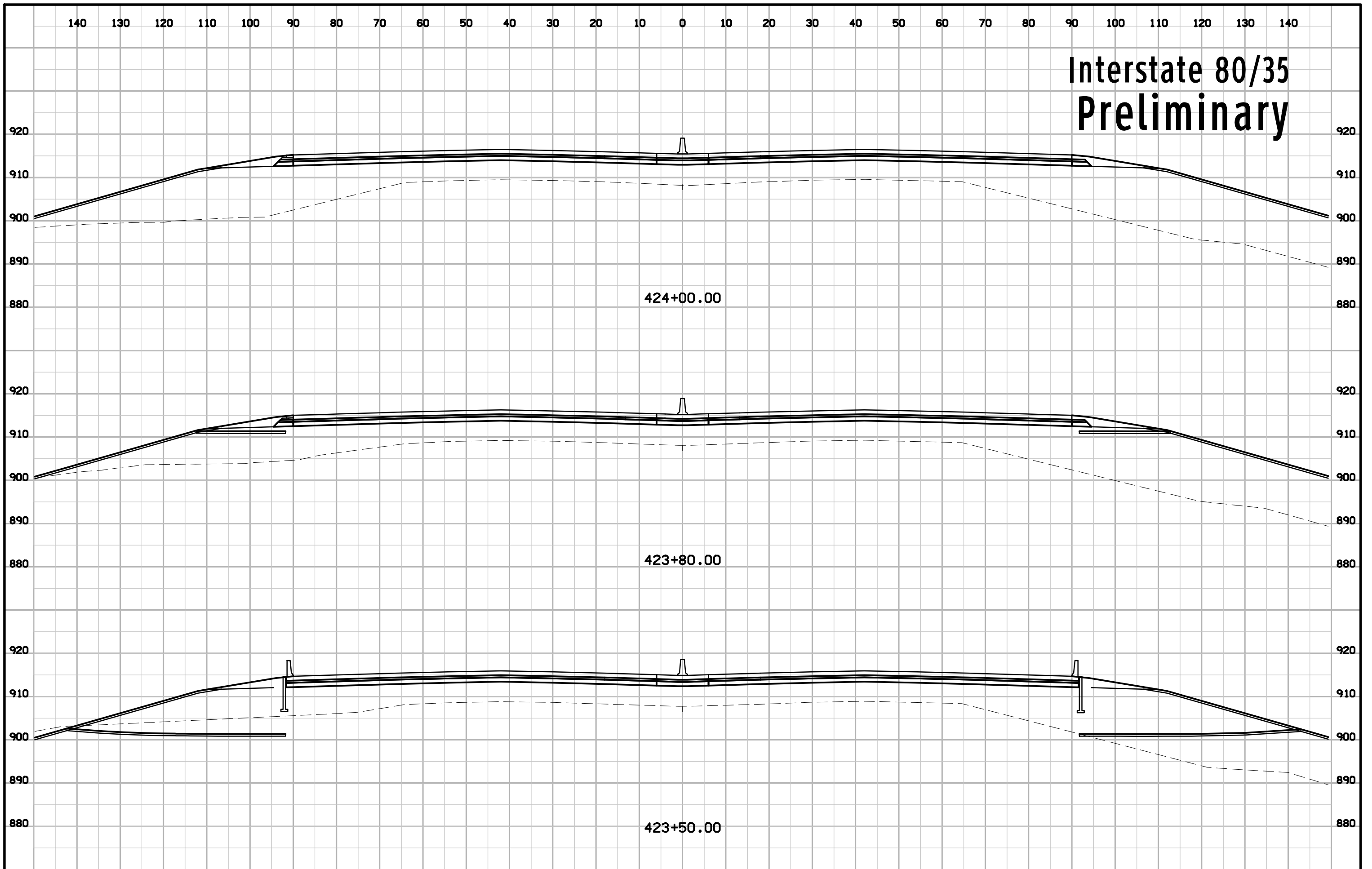
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421+00.00

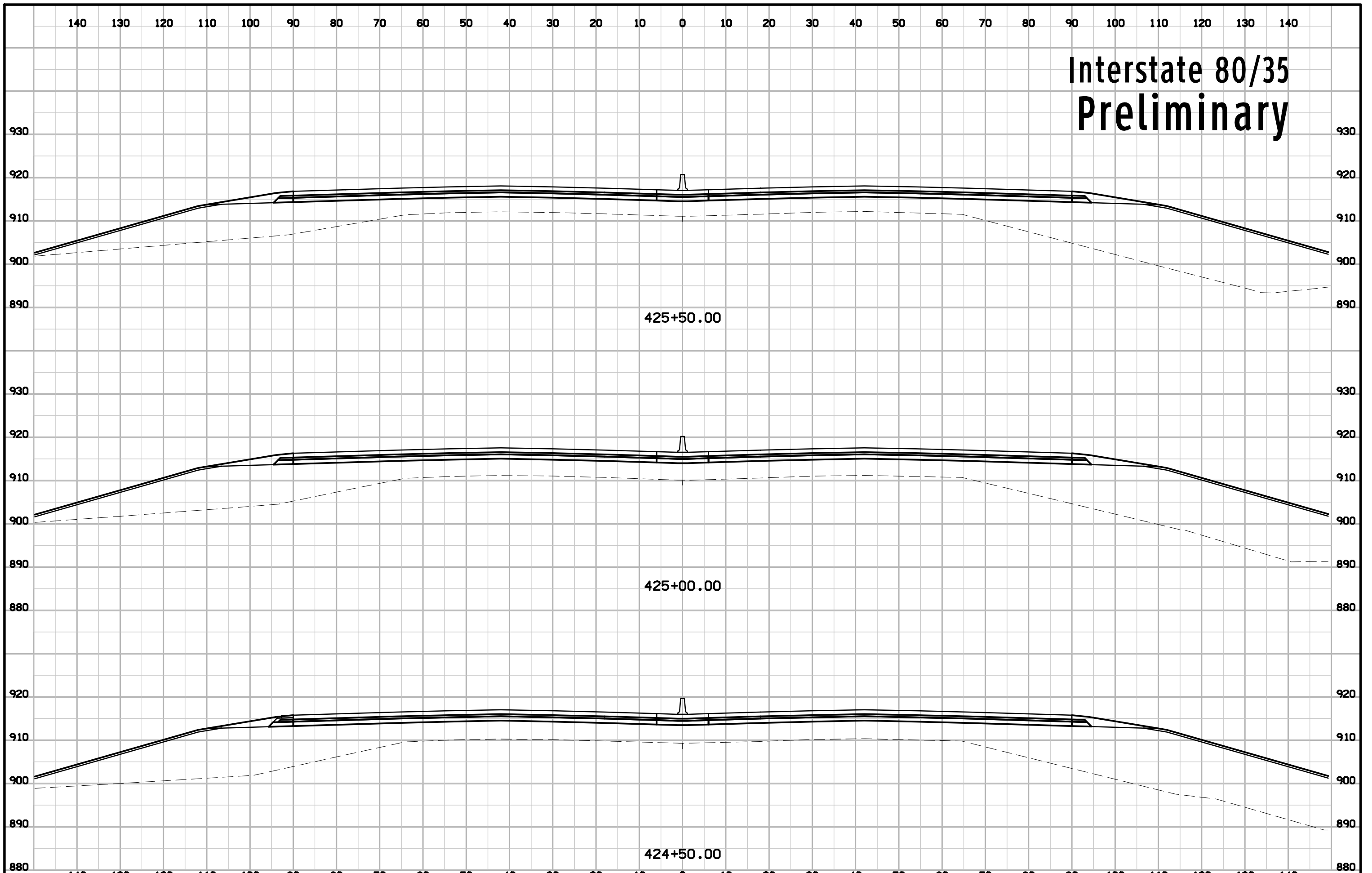
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# Interstate 80/35 Preliminary

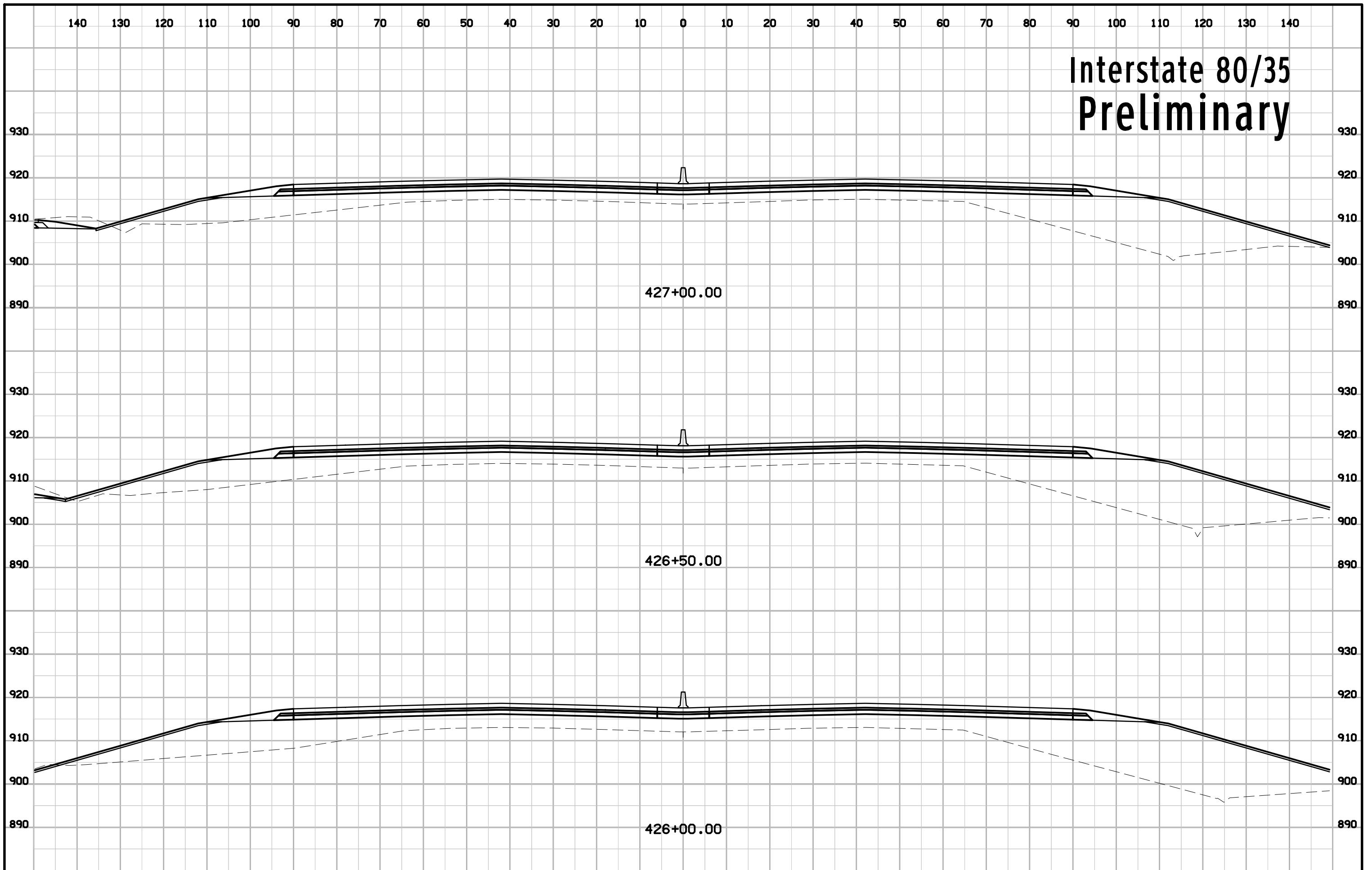


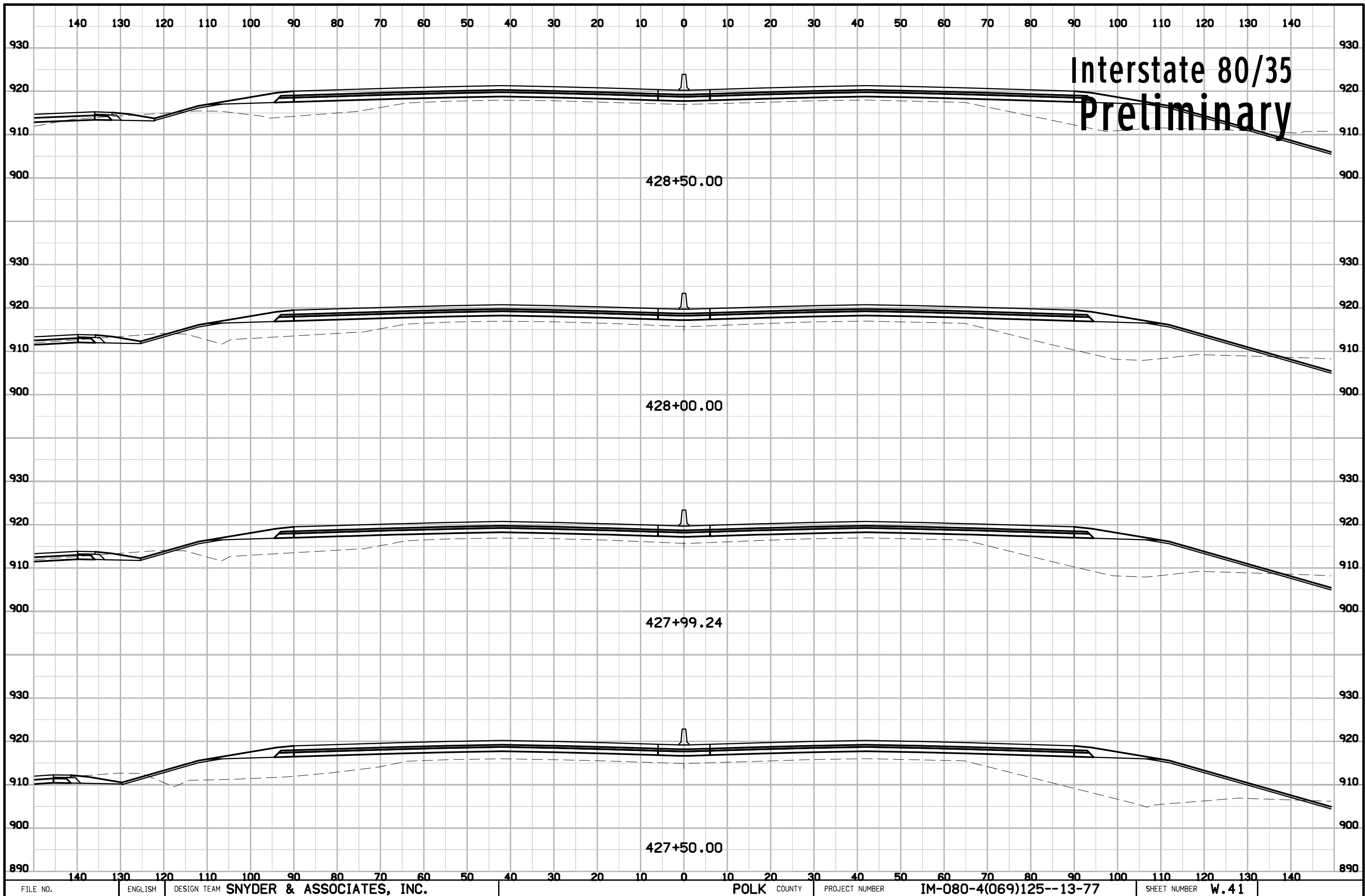
# Interstate 80/35 Preliminary





# Interstate 80/35 Preliminary





**Interstate 80/35  
Preliminary**

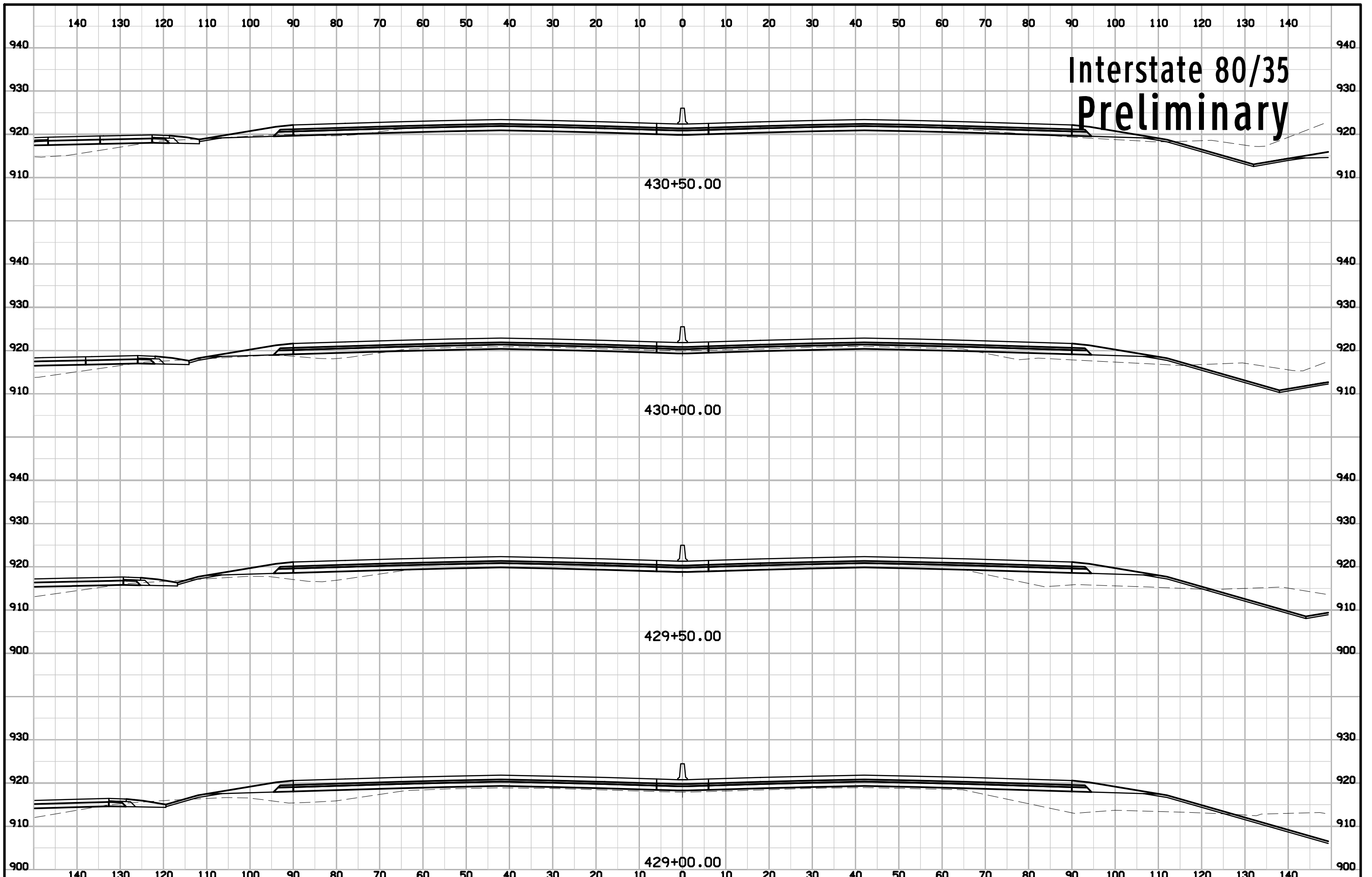
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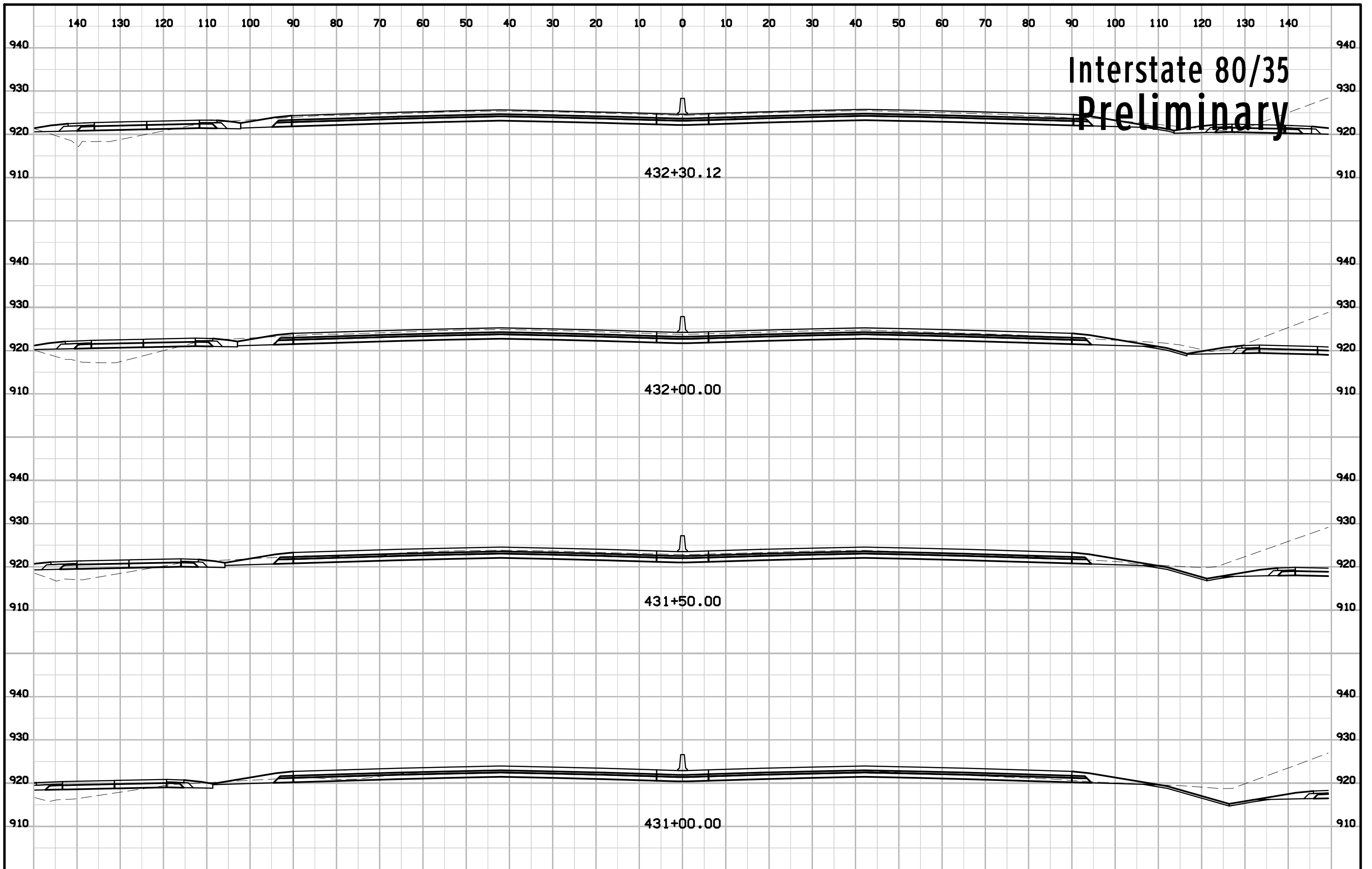
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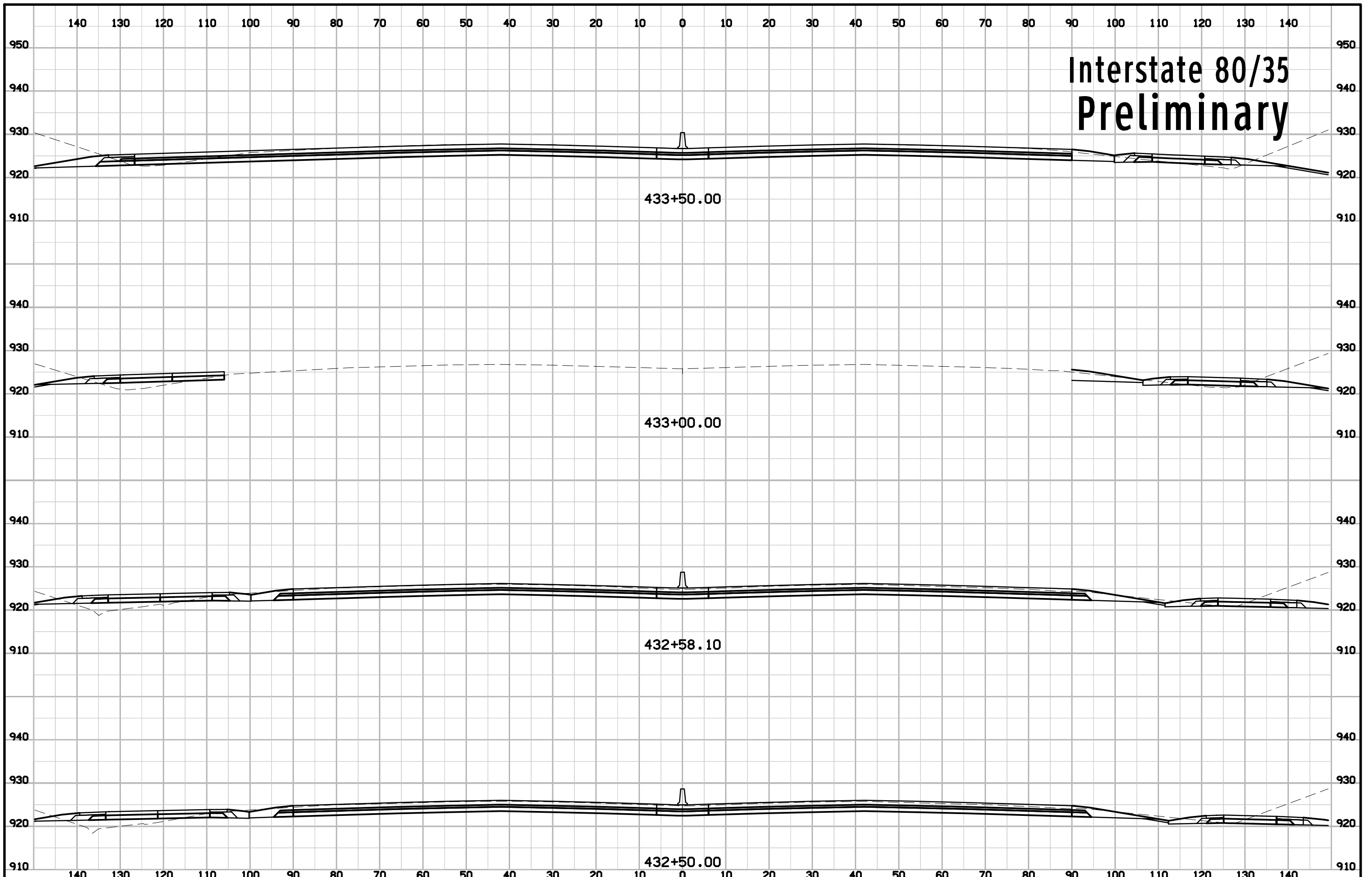


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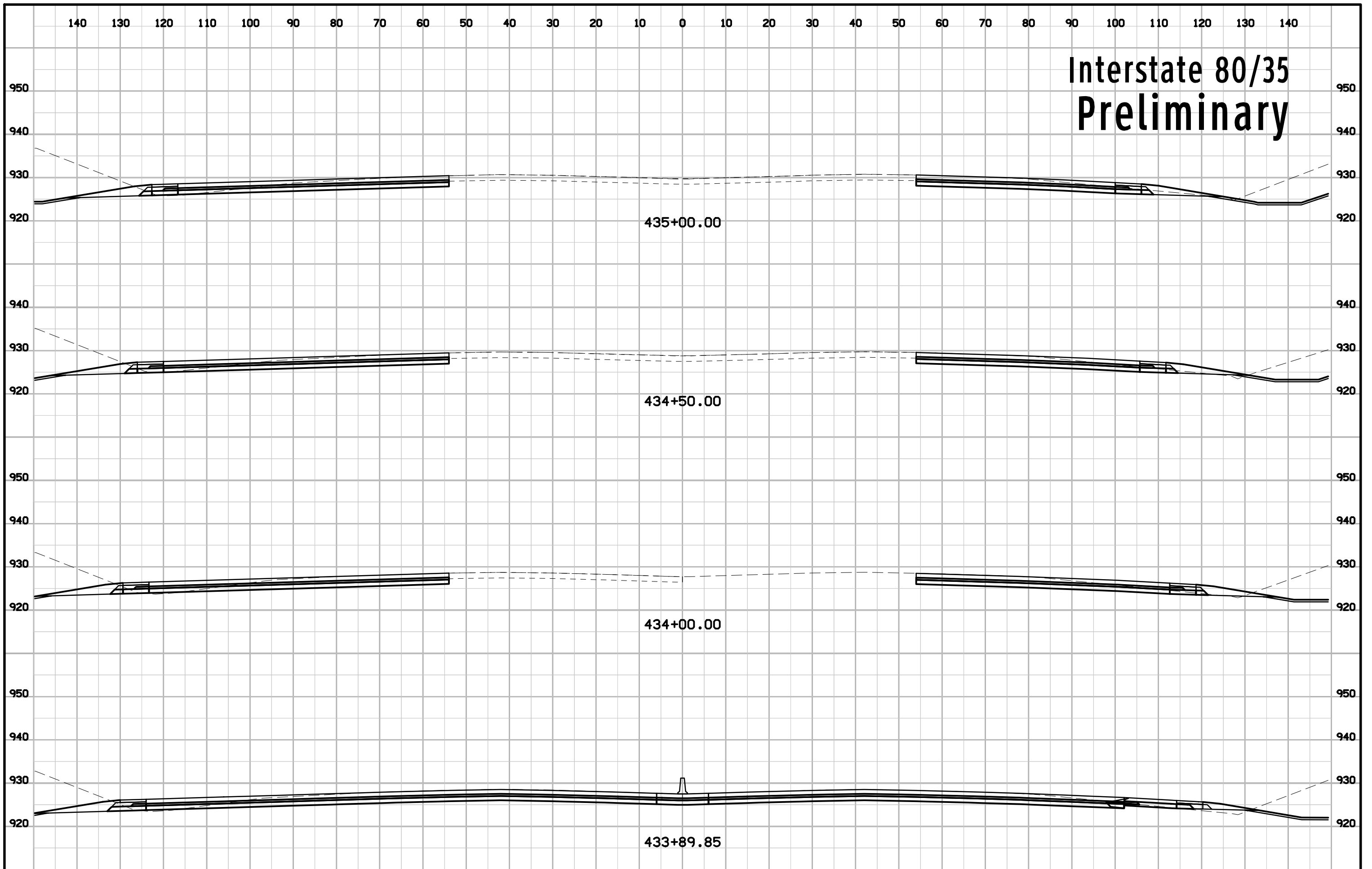


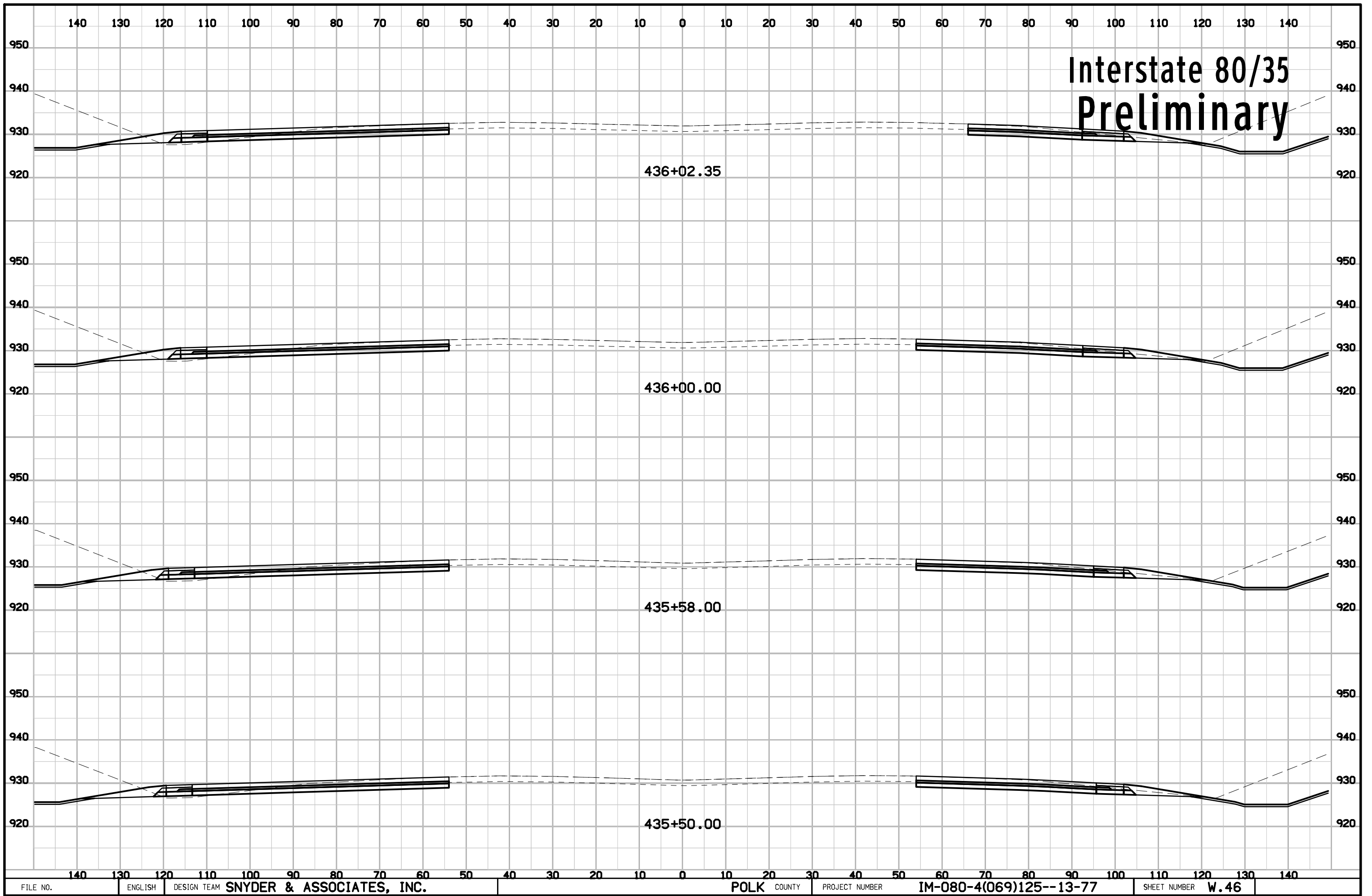


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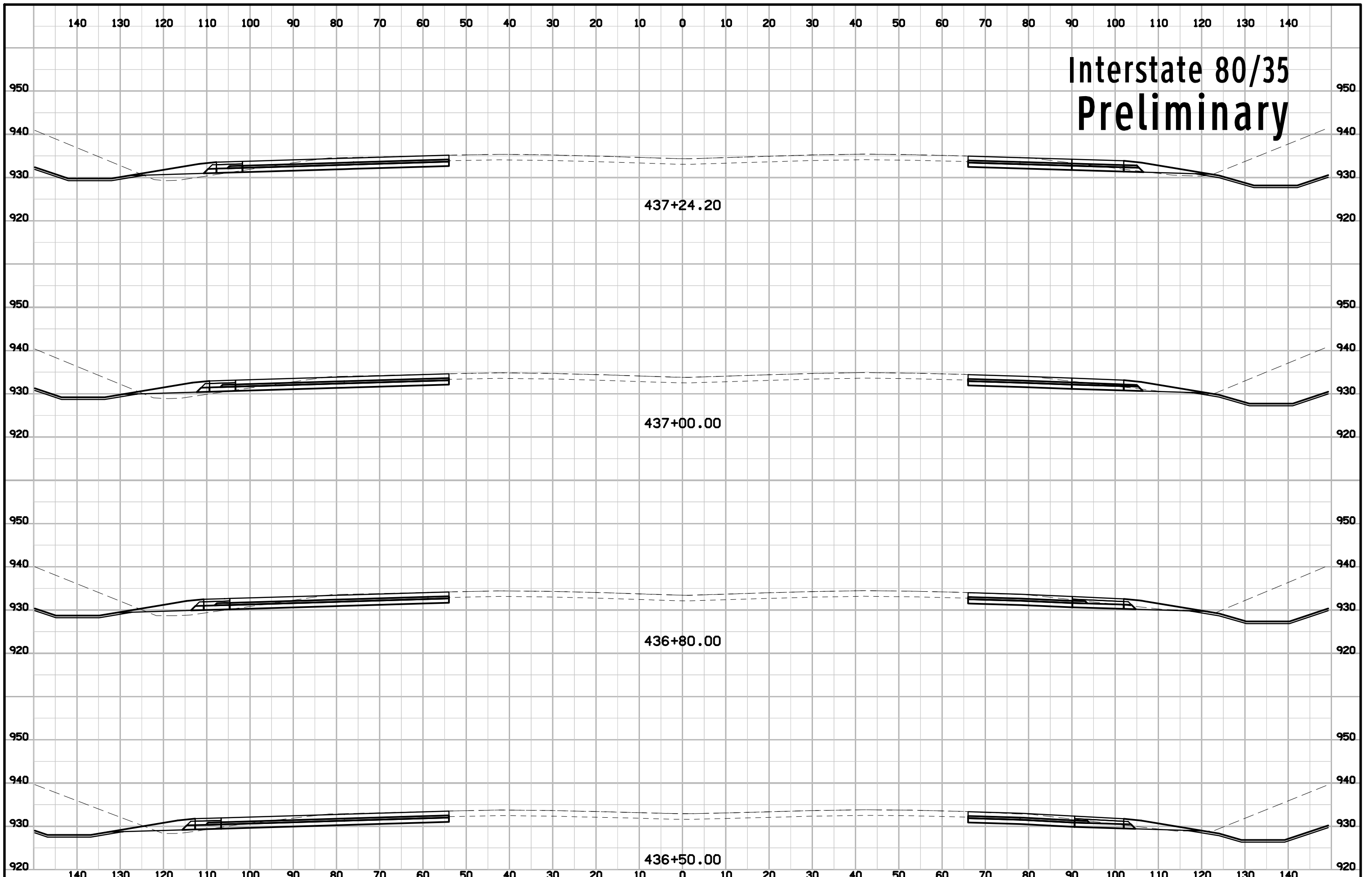


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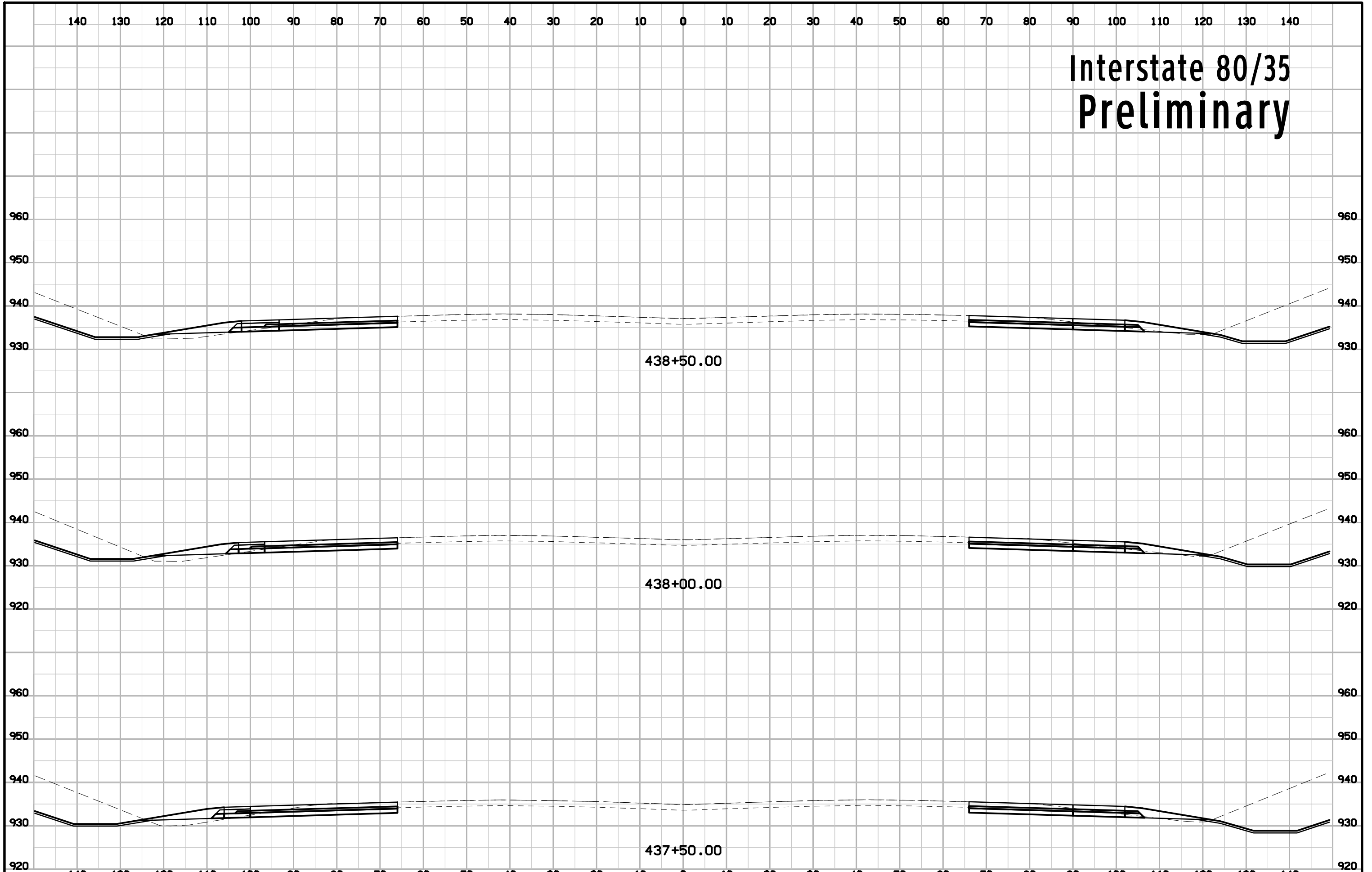


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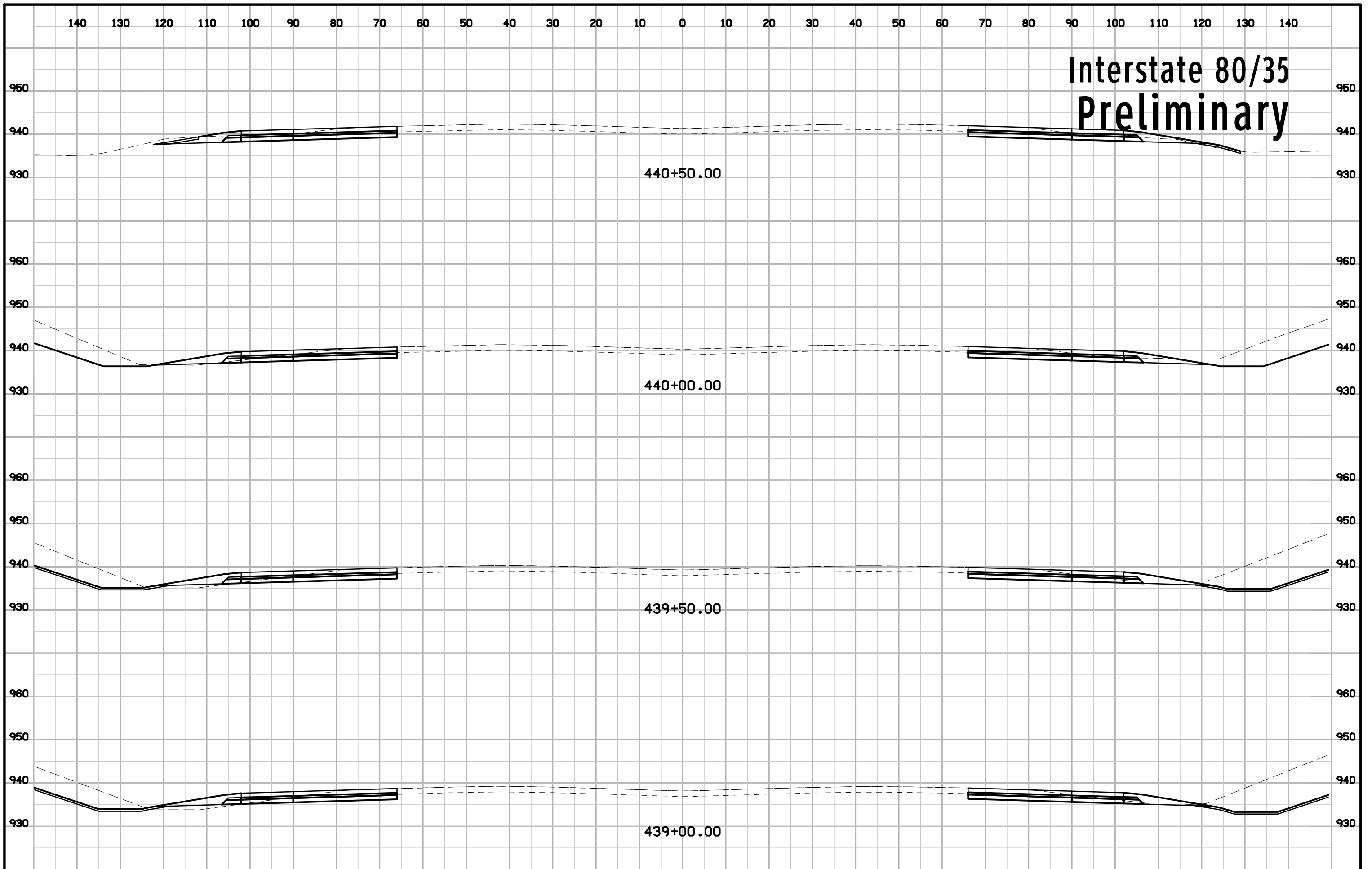




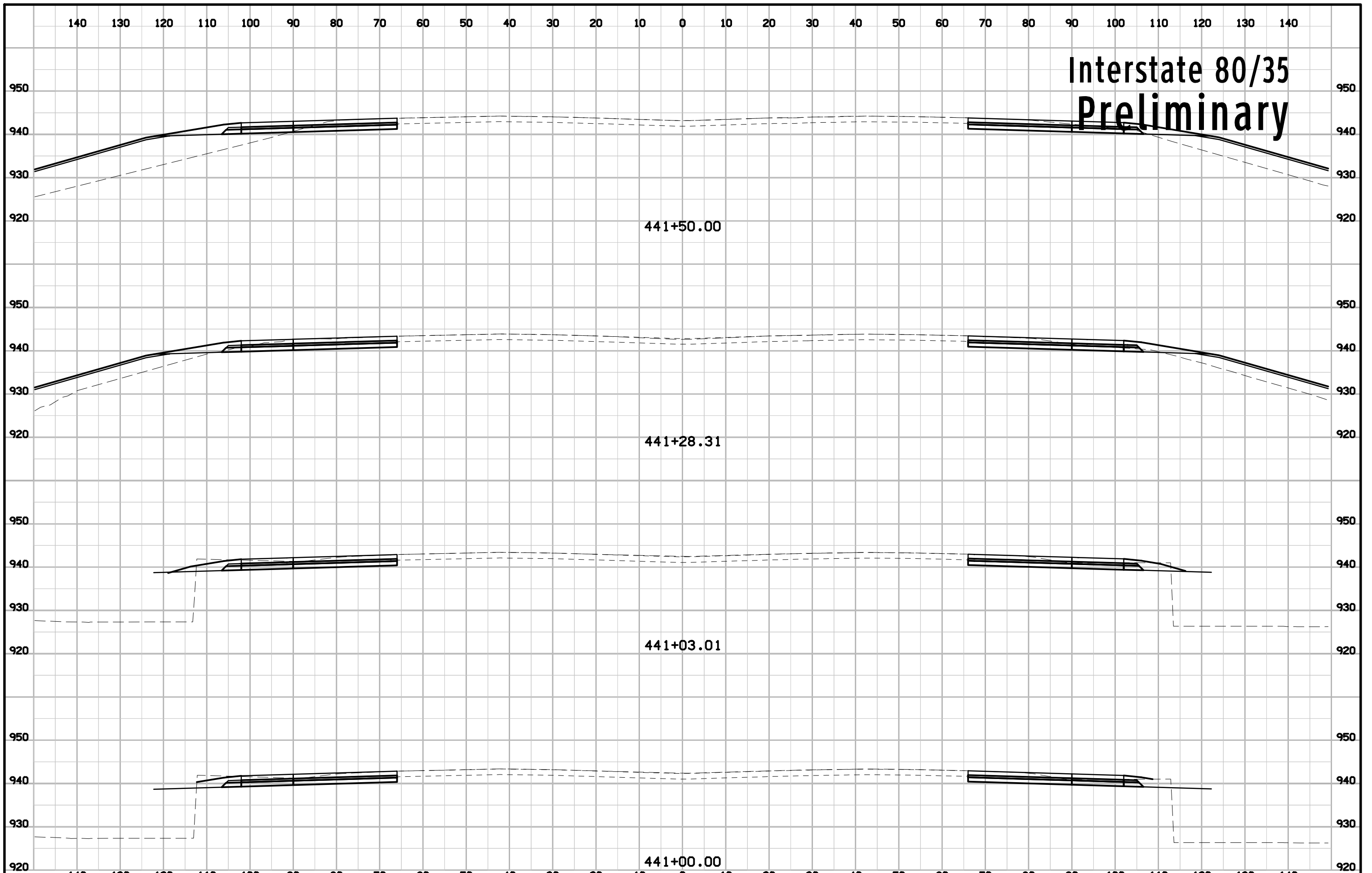
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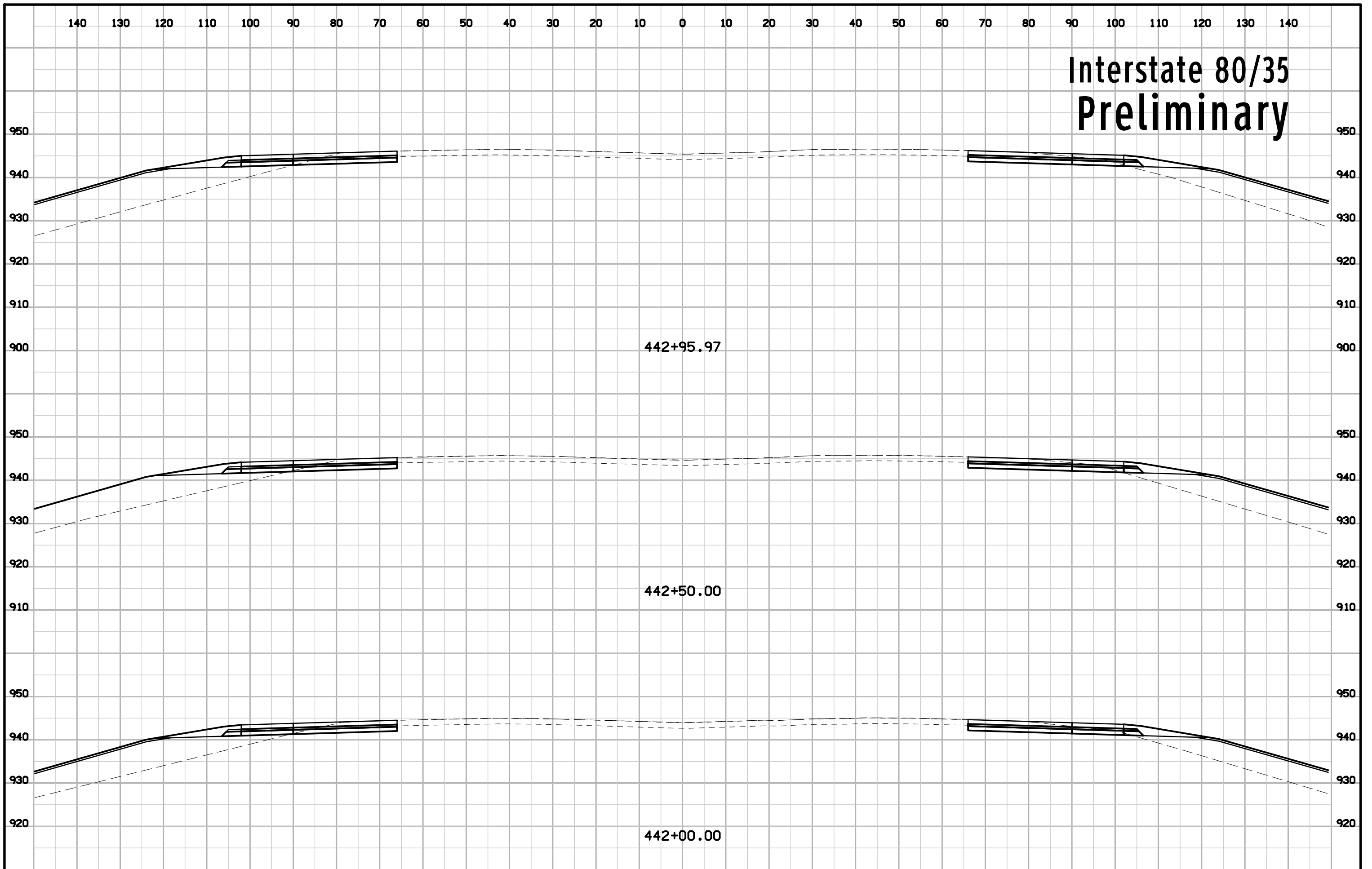
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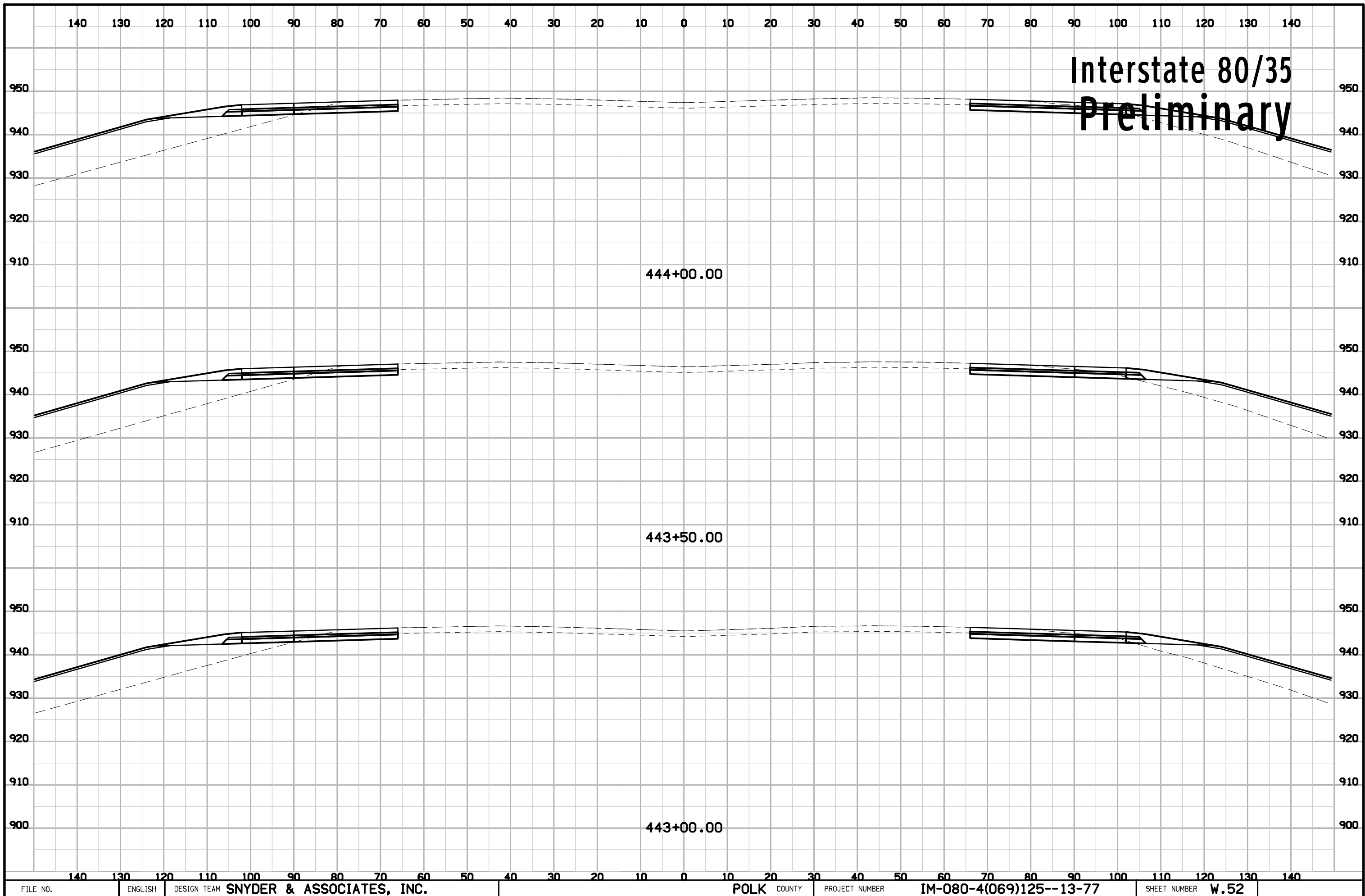
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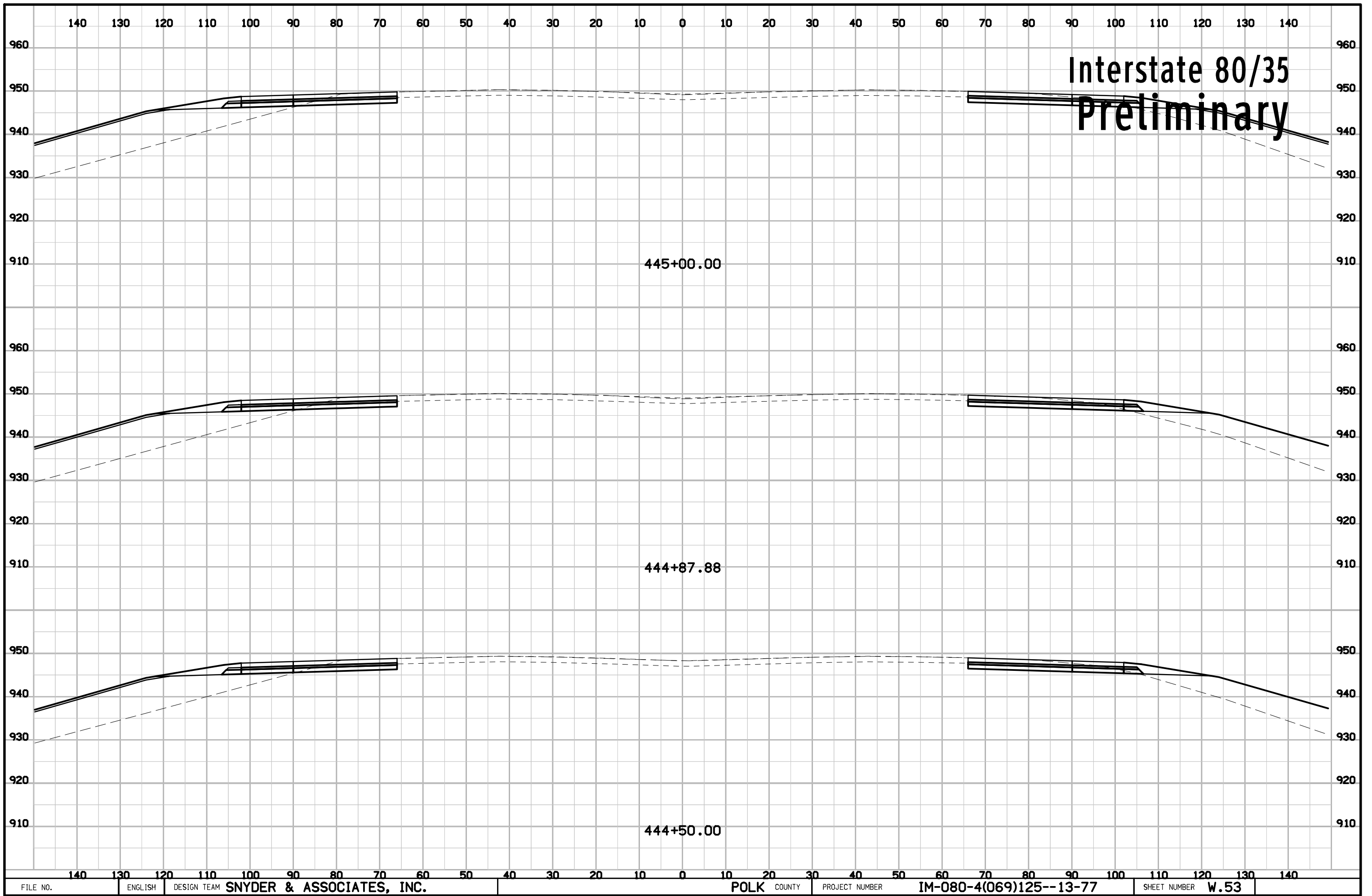


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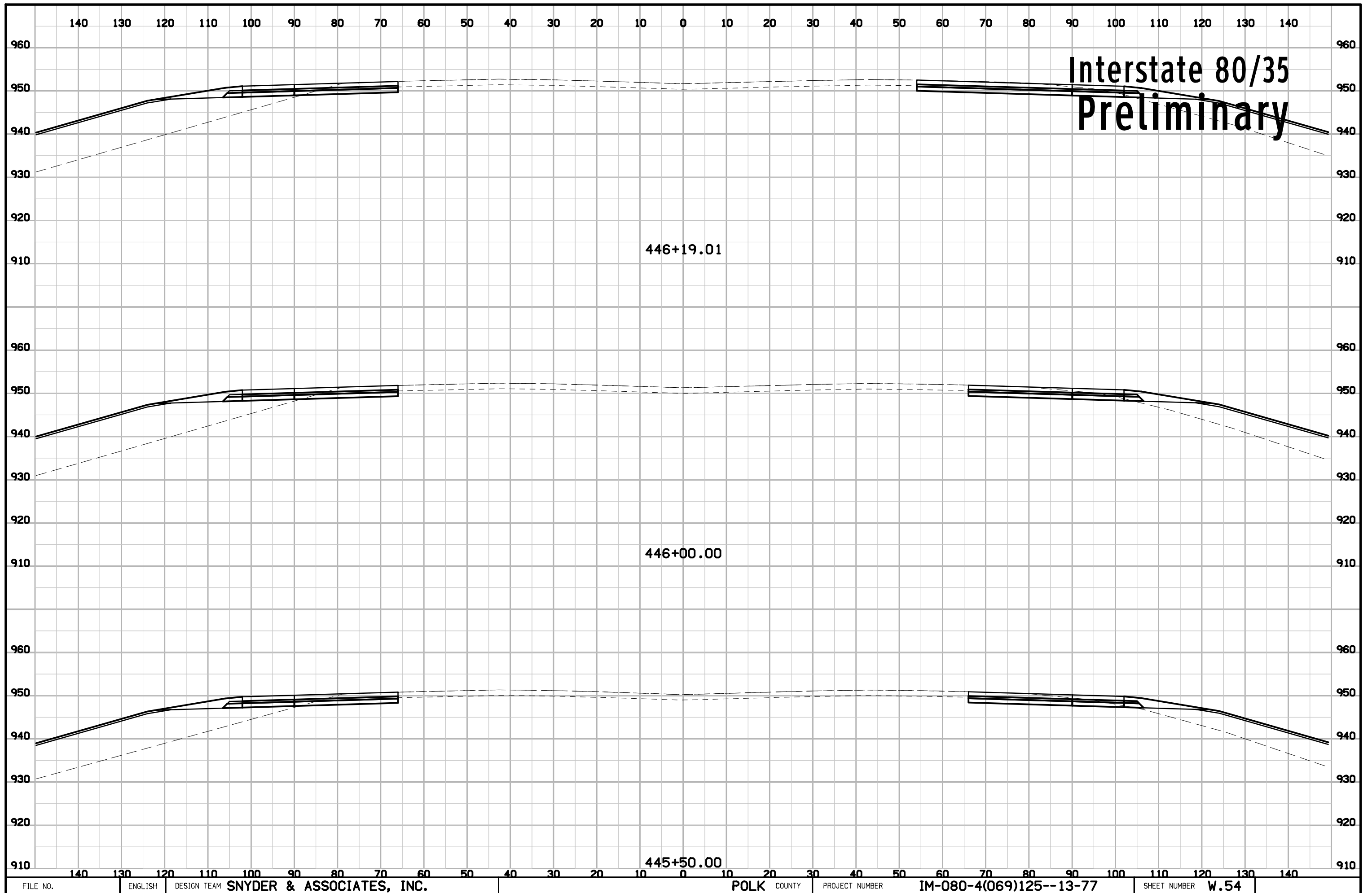


Interstate 80/35  
Preliminary

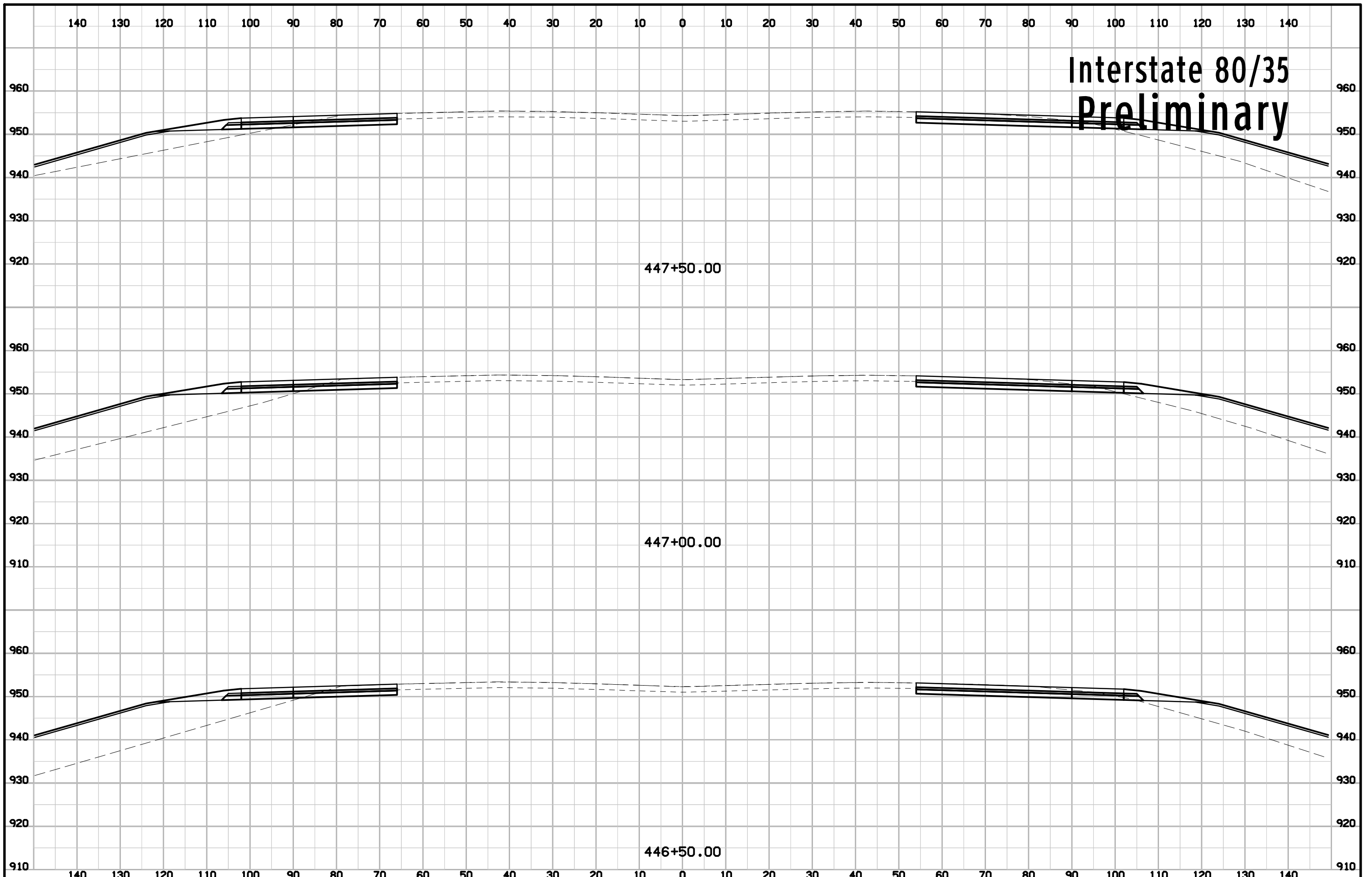
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444+87.88

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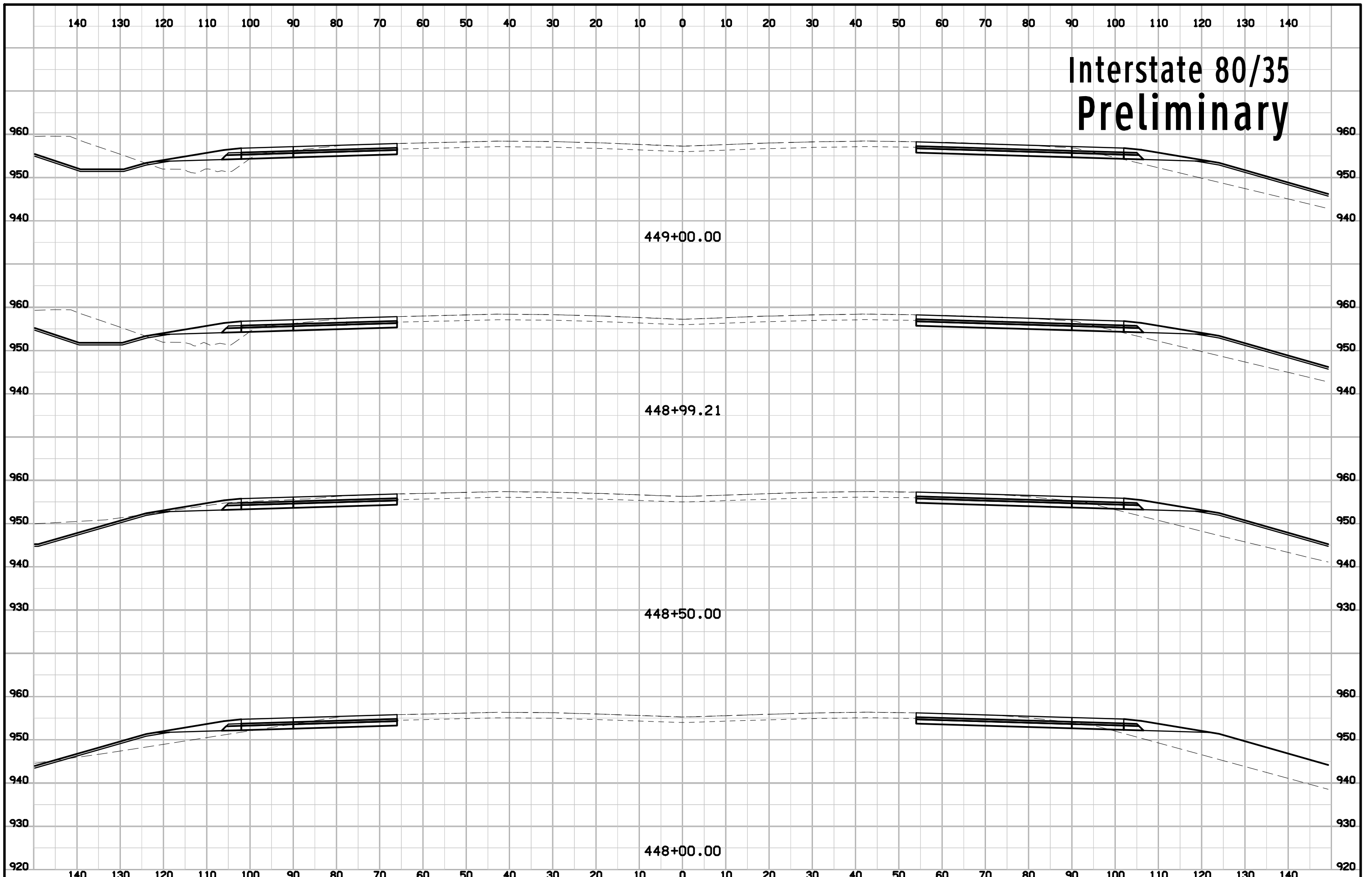


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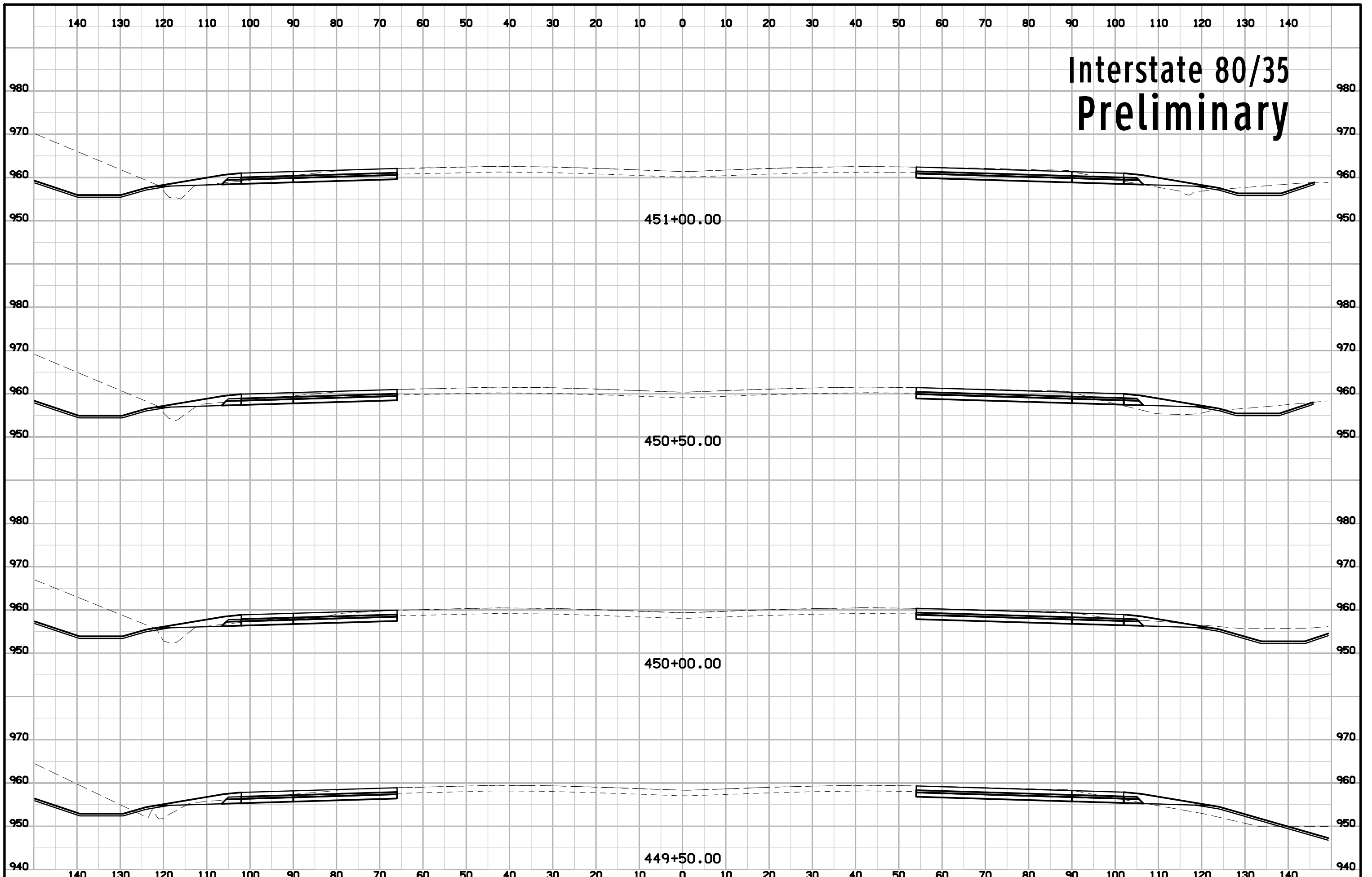




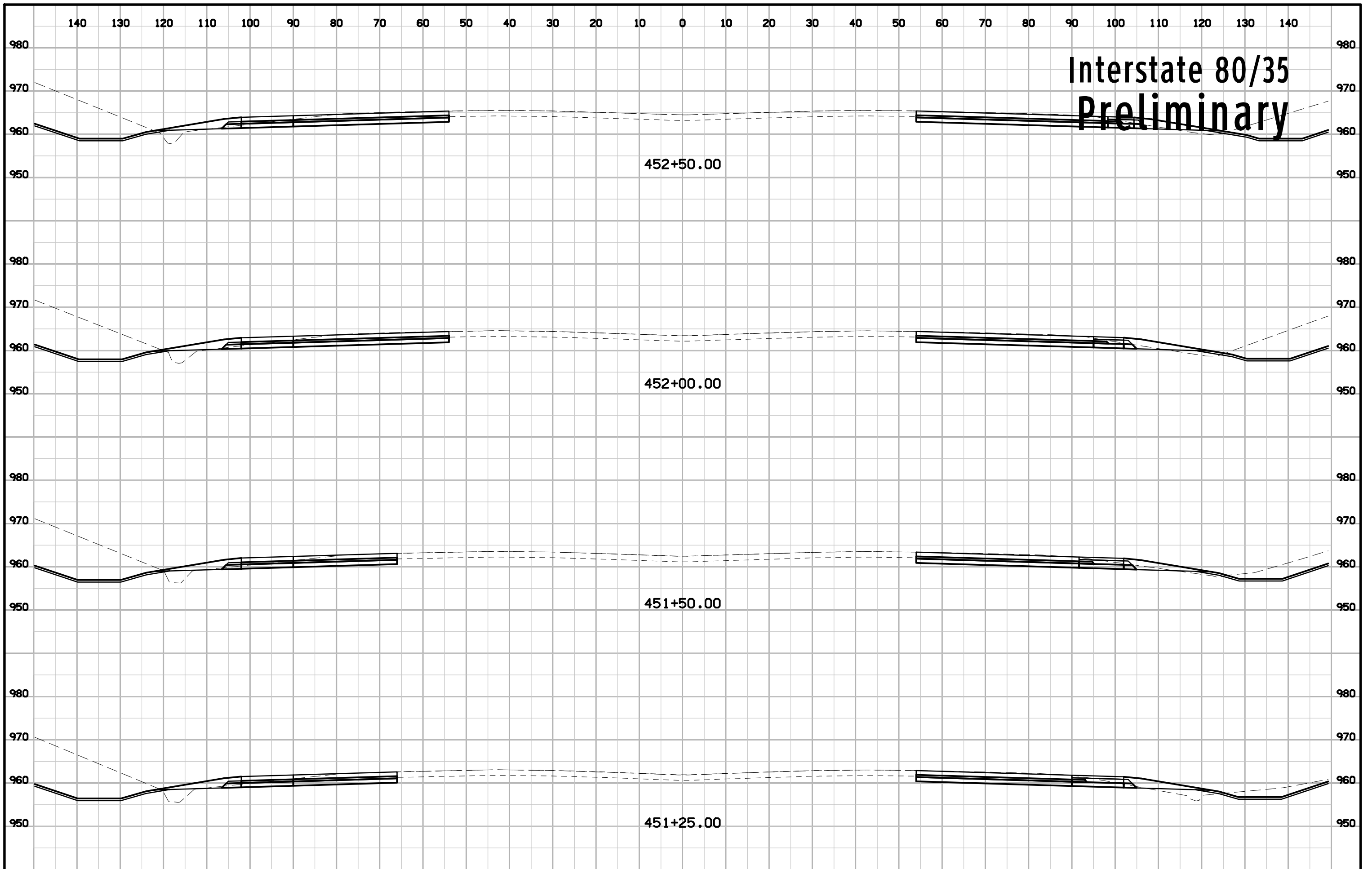
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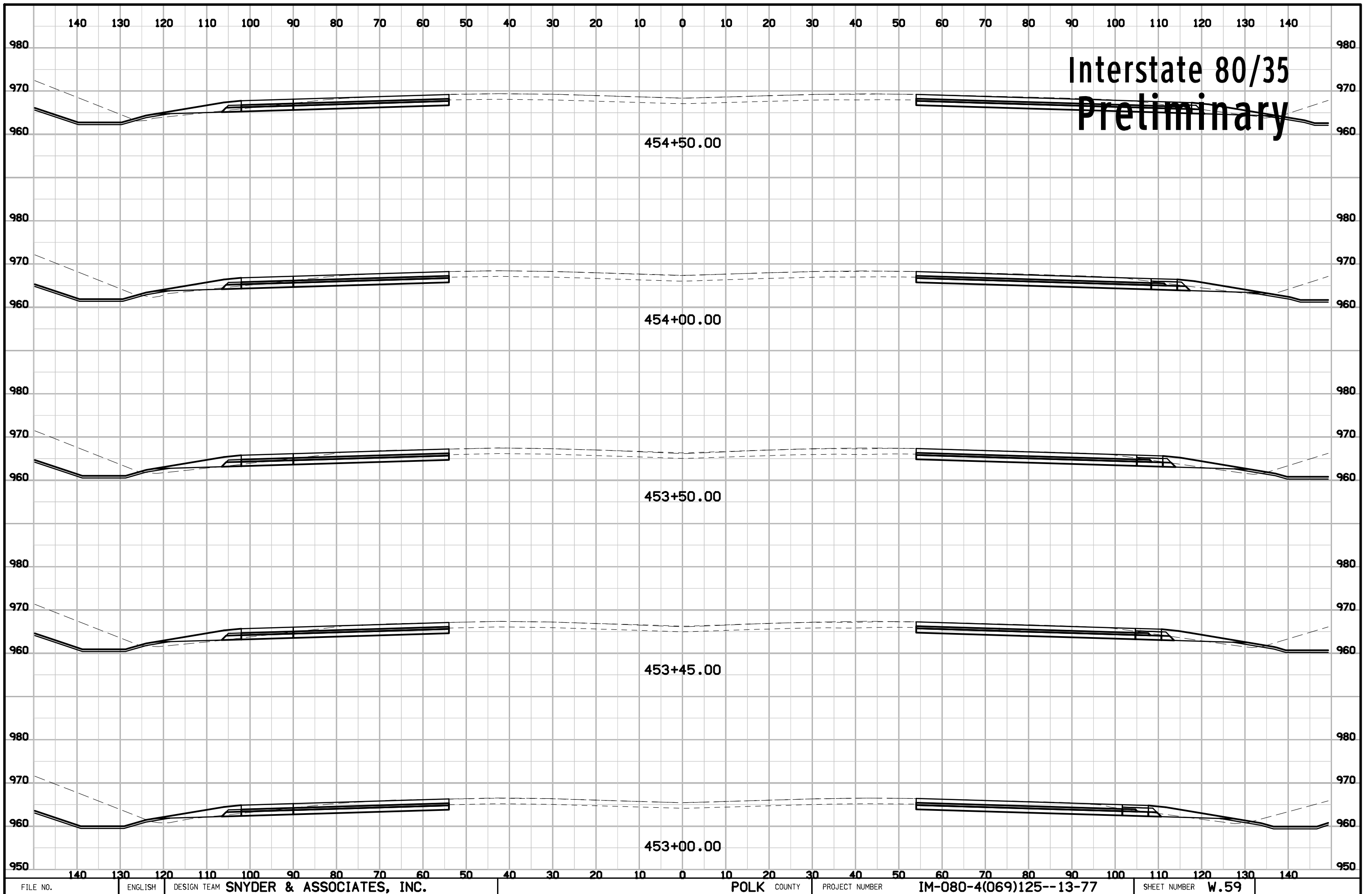
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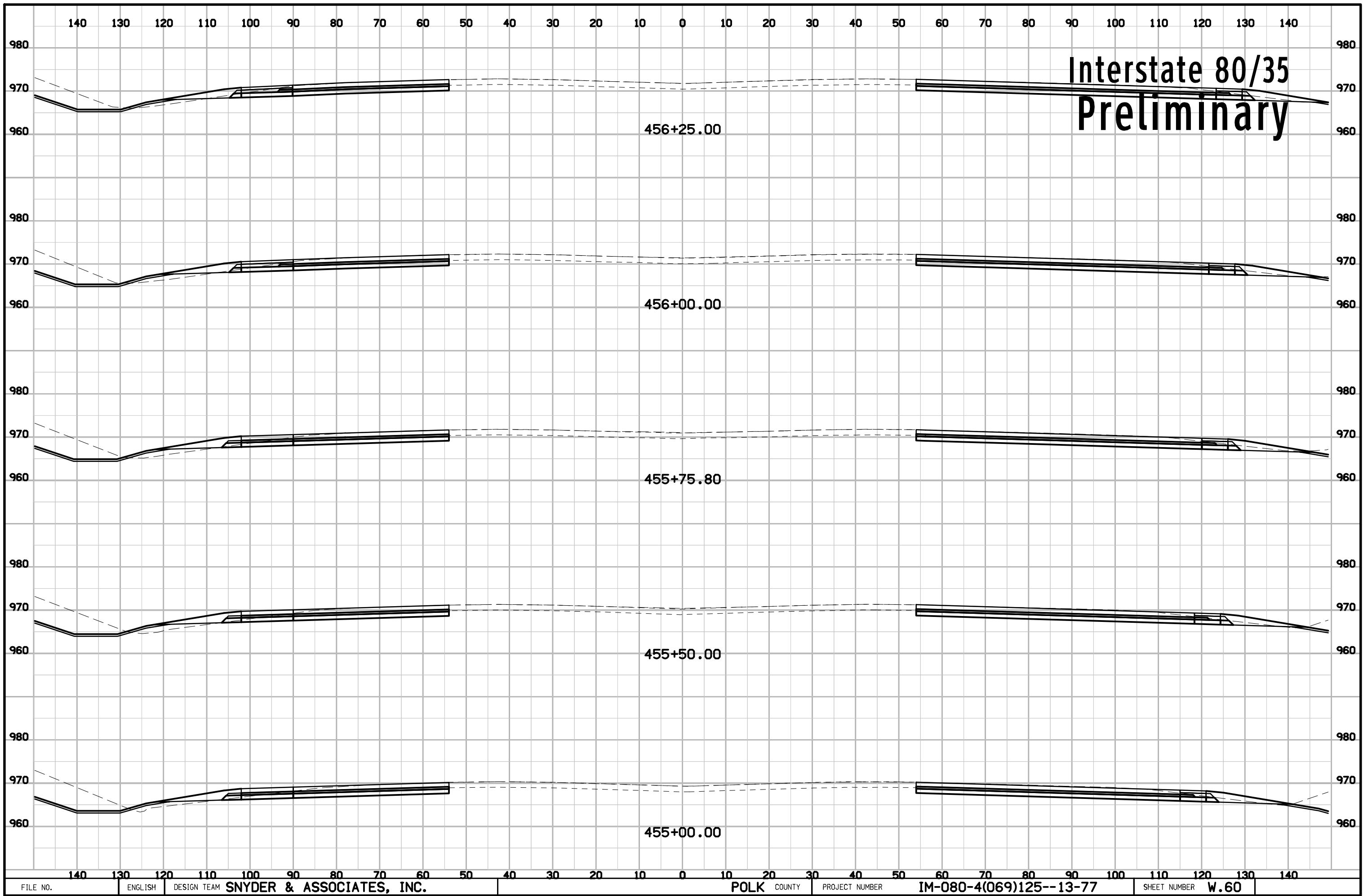
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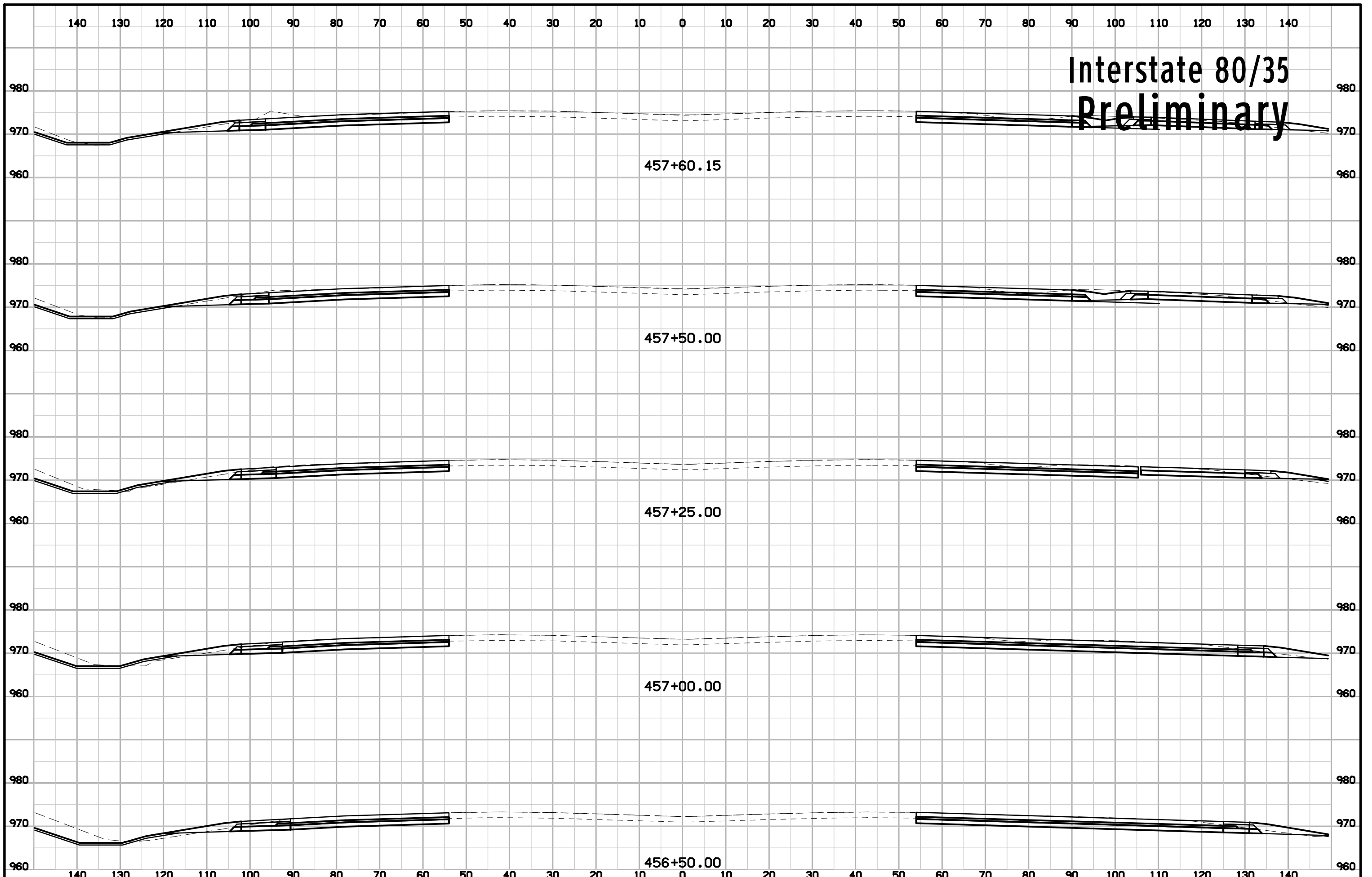
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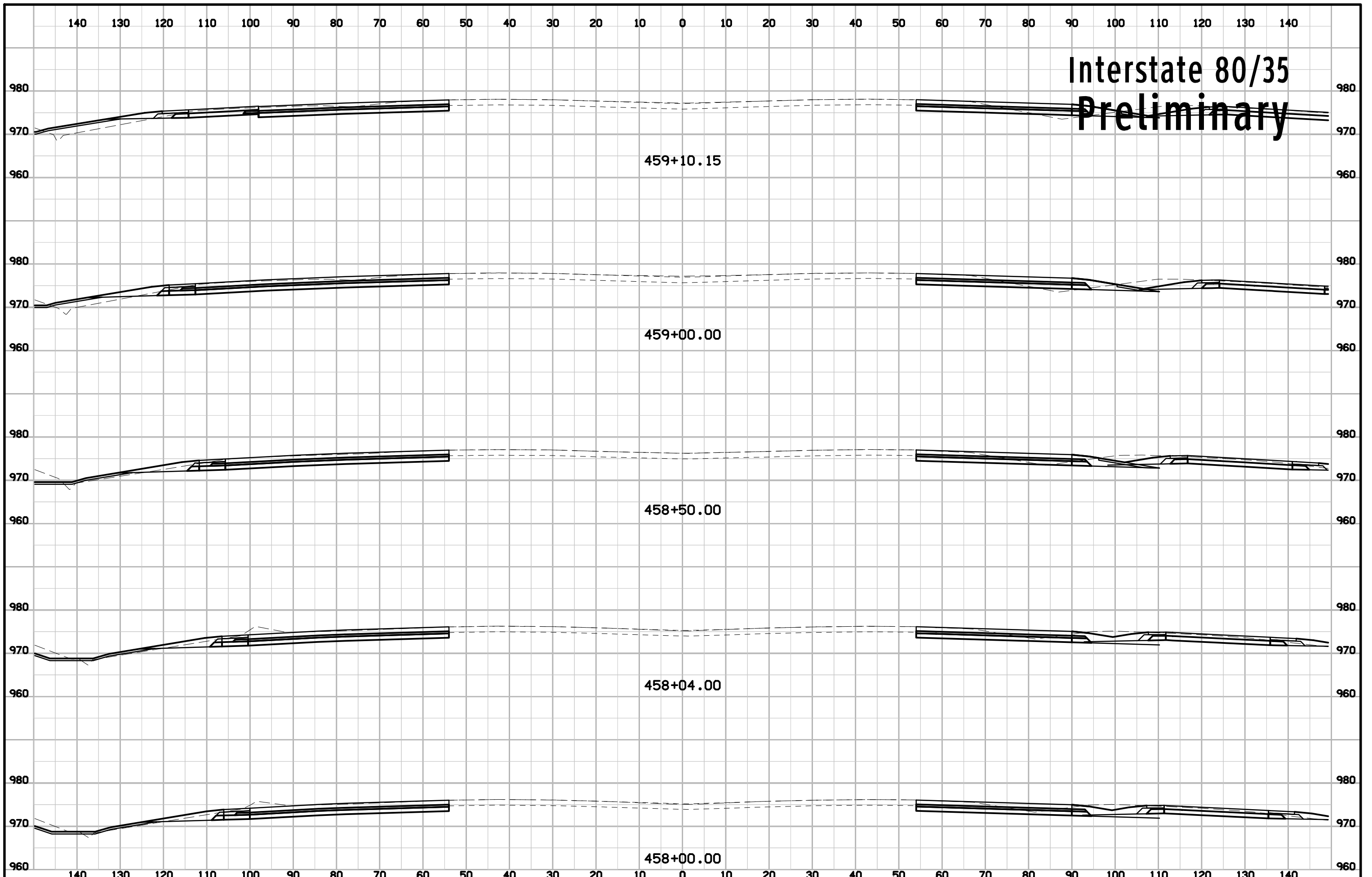




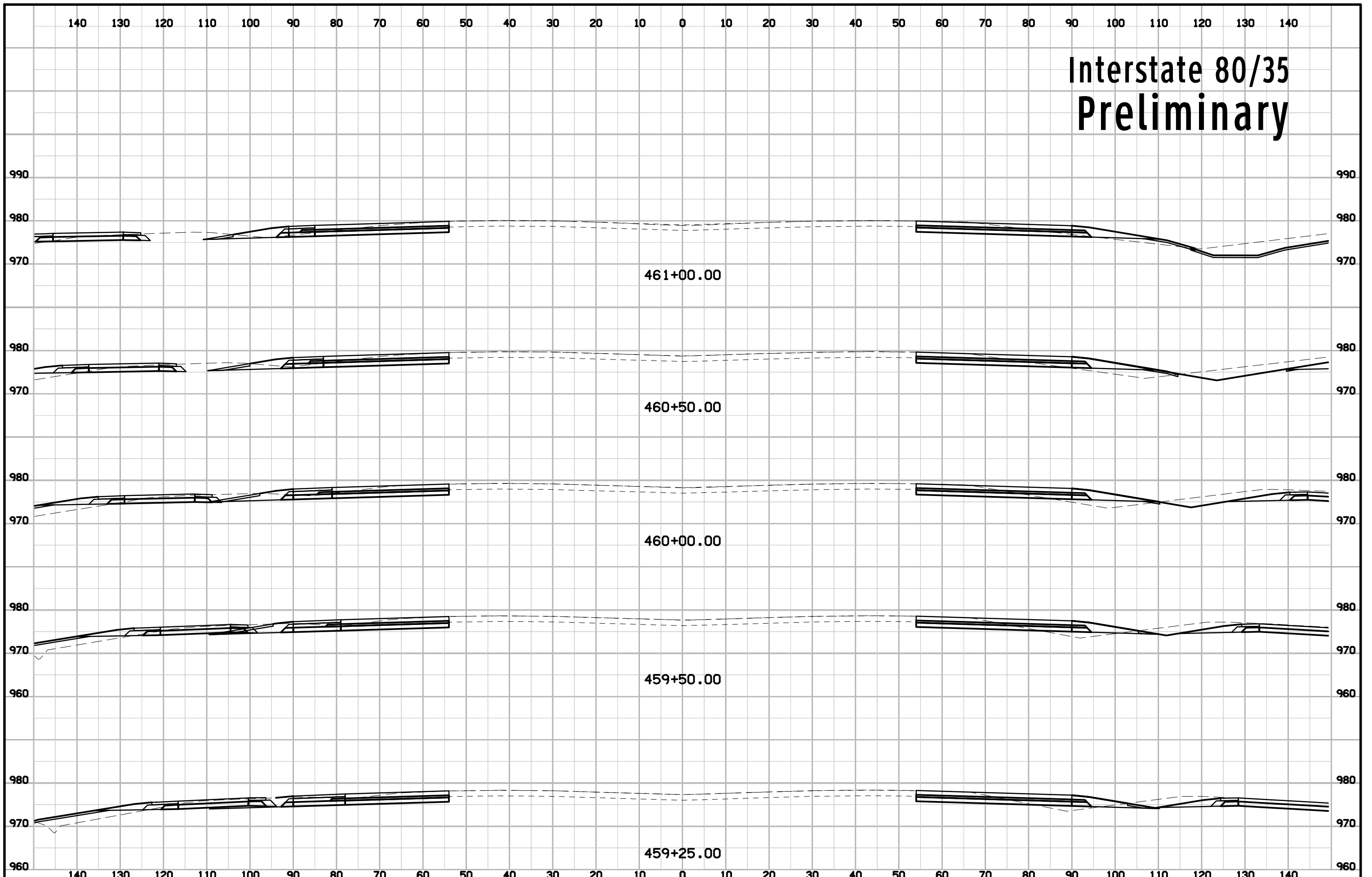
# Interstate 80/35 Preliminary



# Interstate 80/35 Preliminary

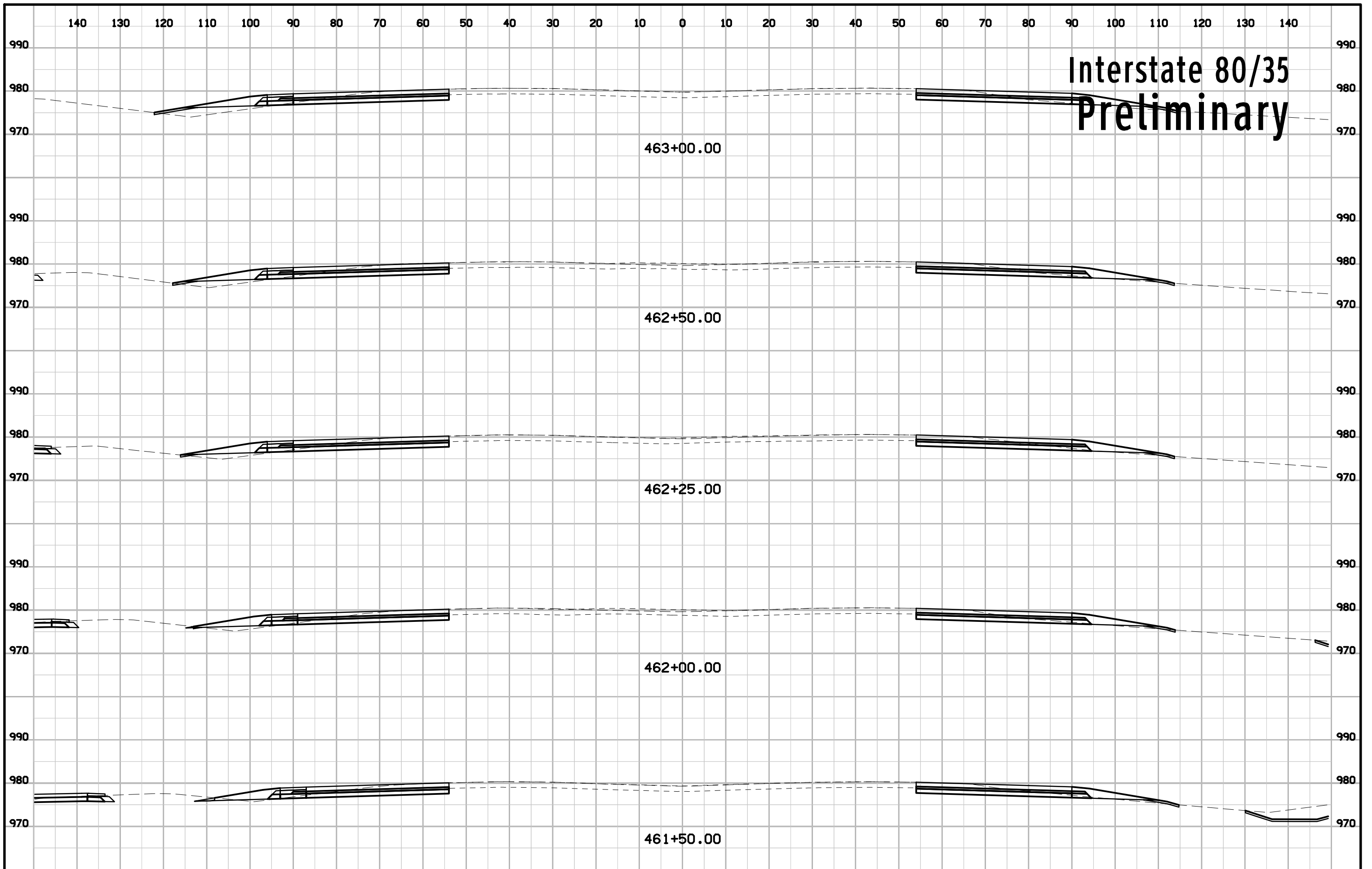


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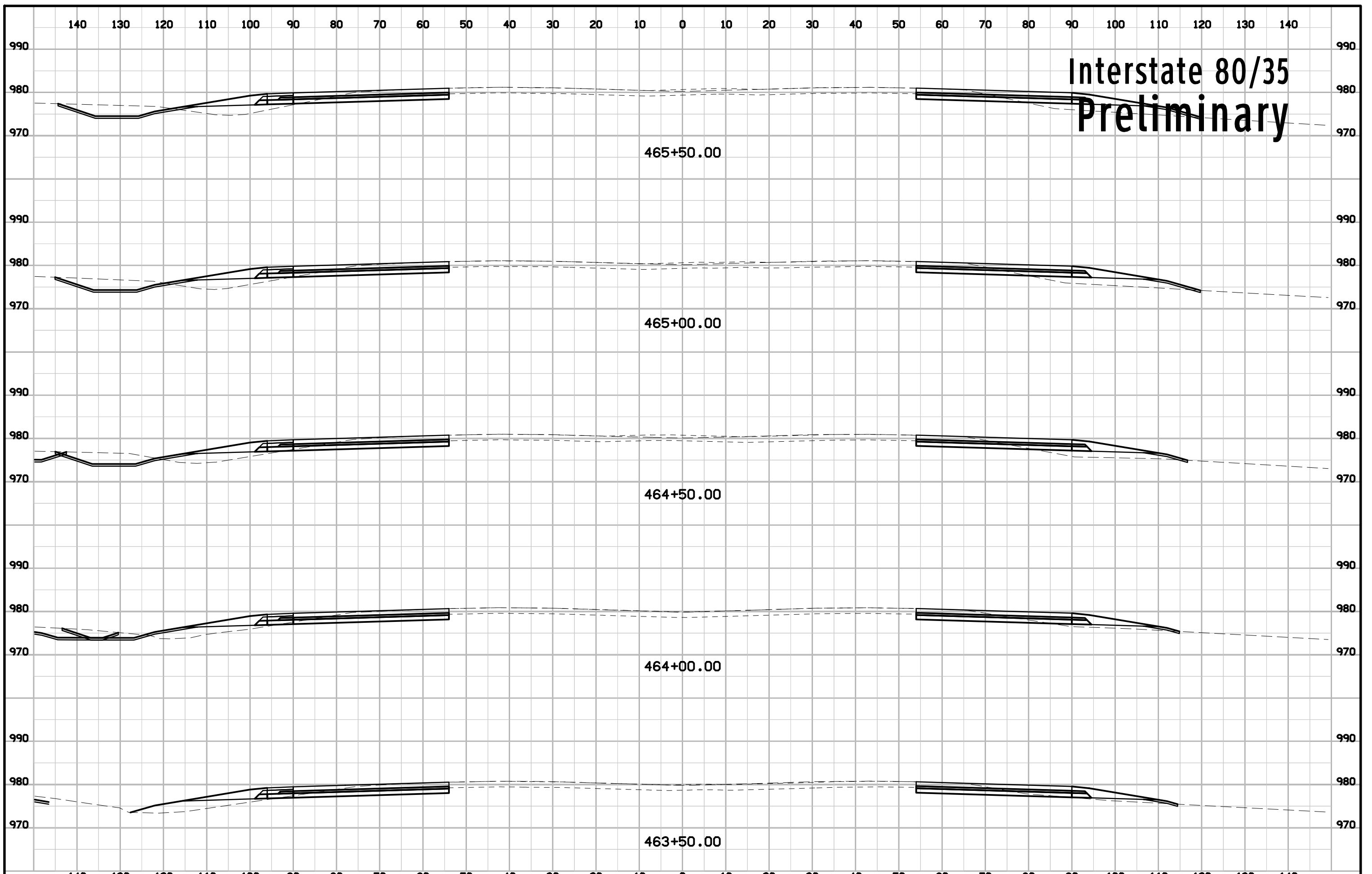




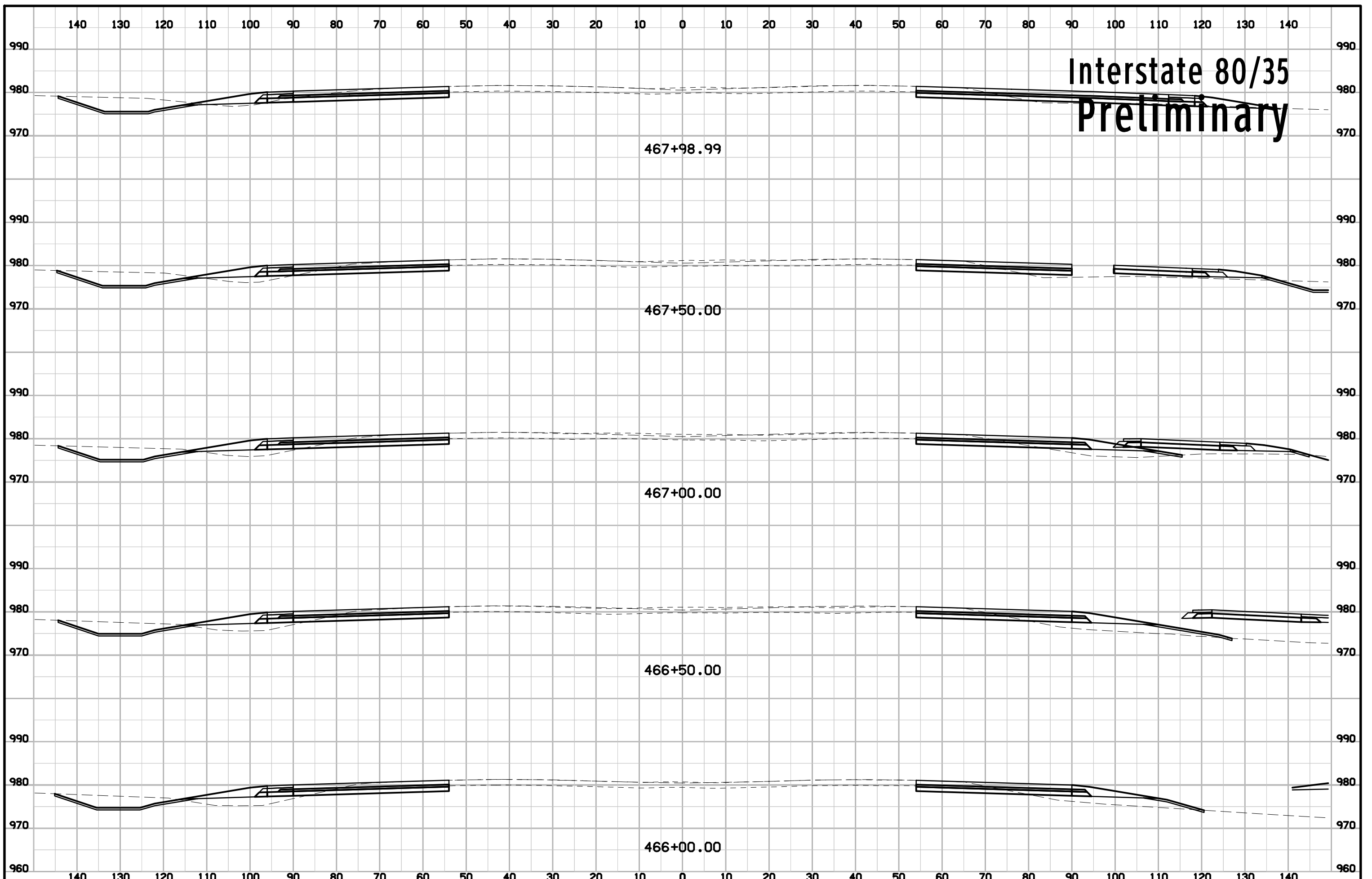
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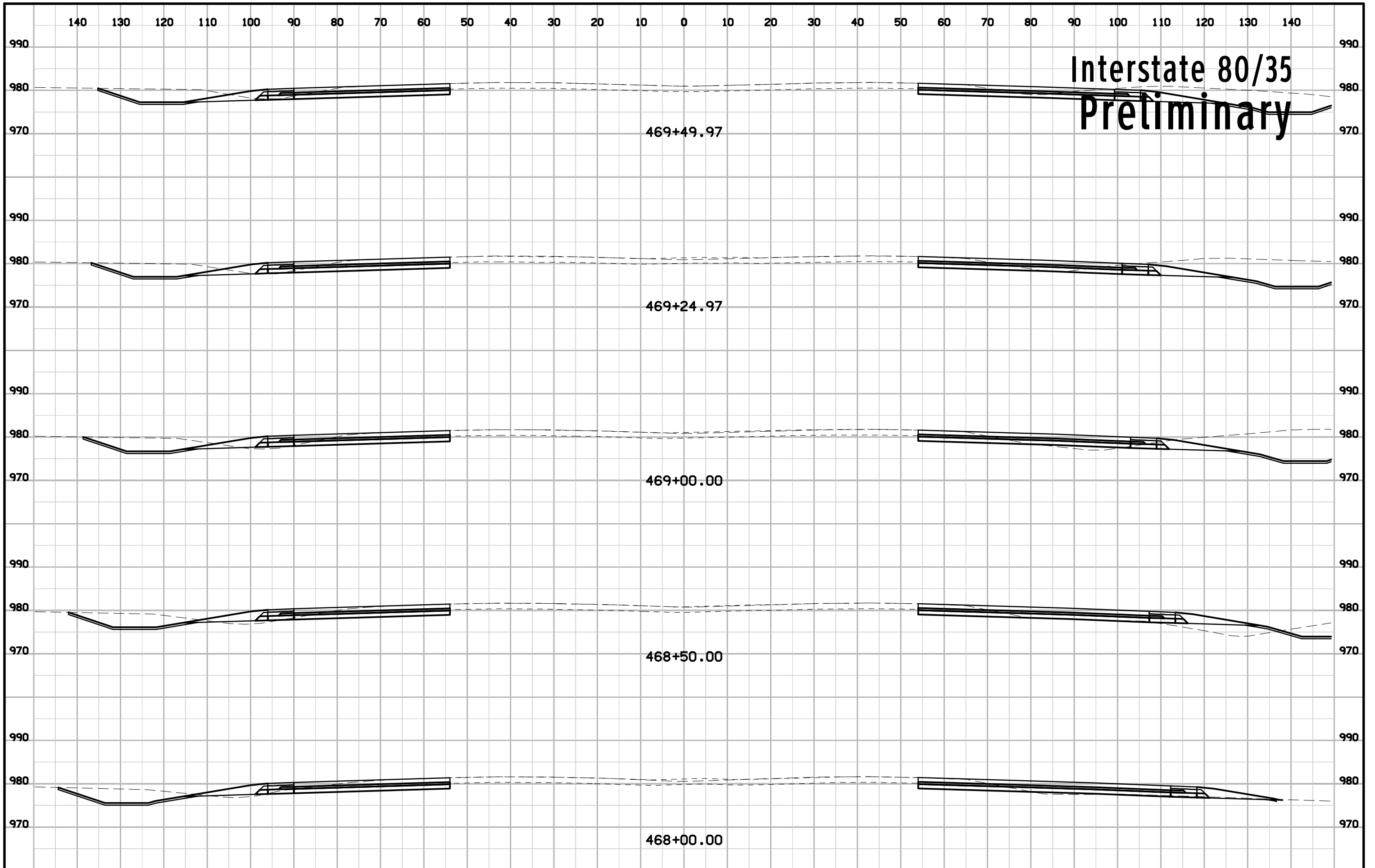
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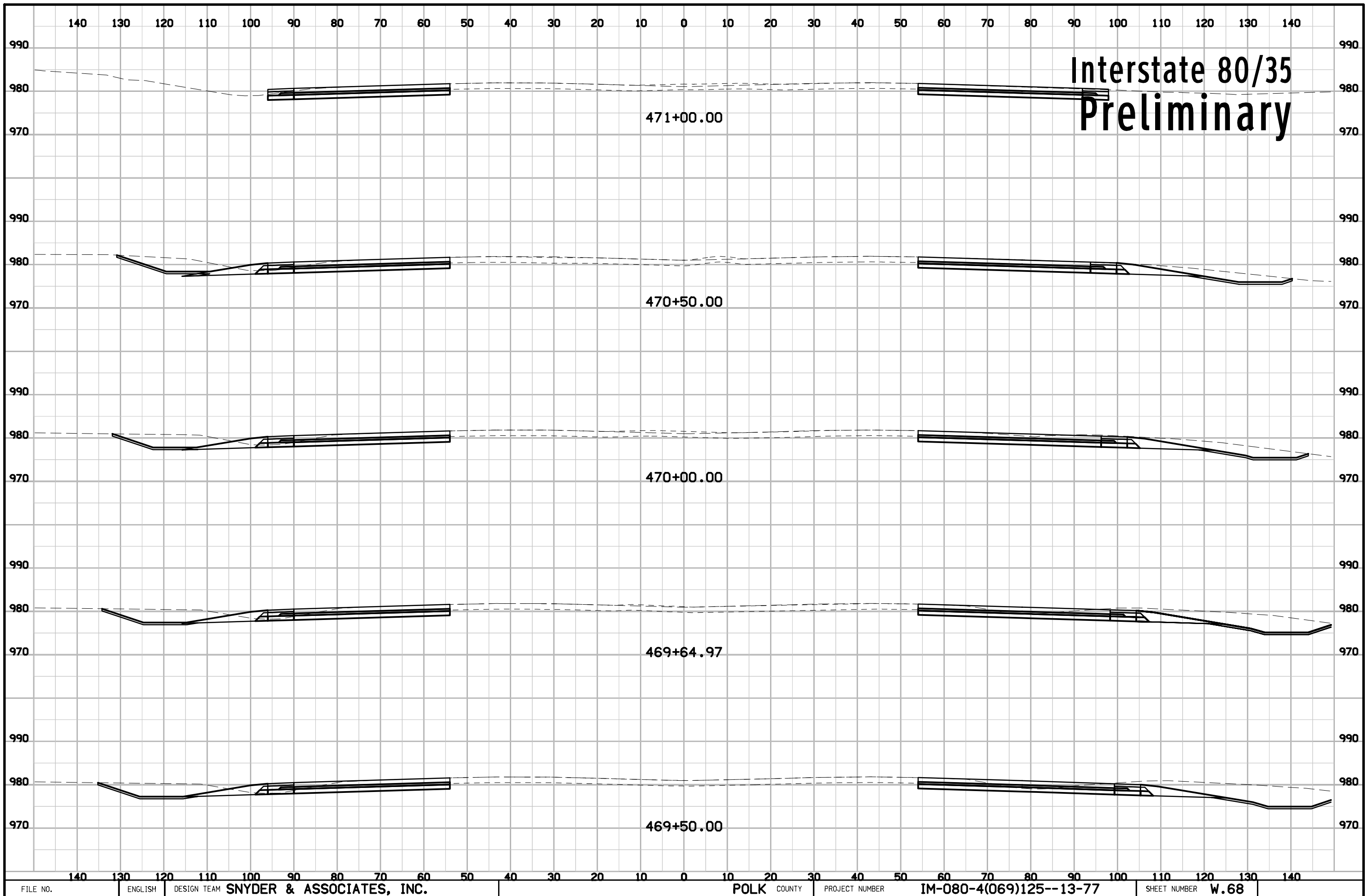
# Interstate 80/35 Preliminary



# Interstate 80/35 Preliminary







Interstate 80/35  
Preliminary

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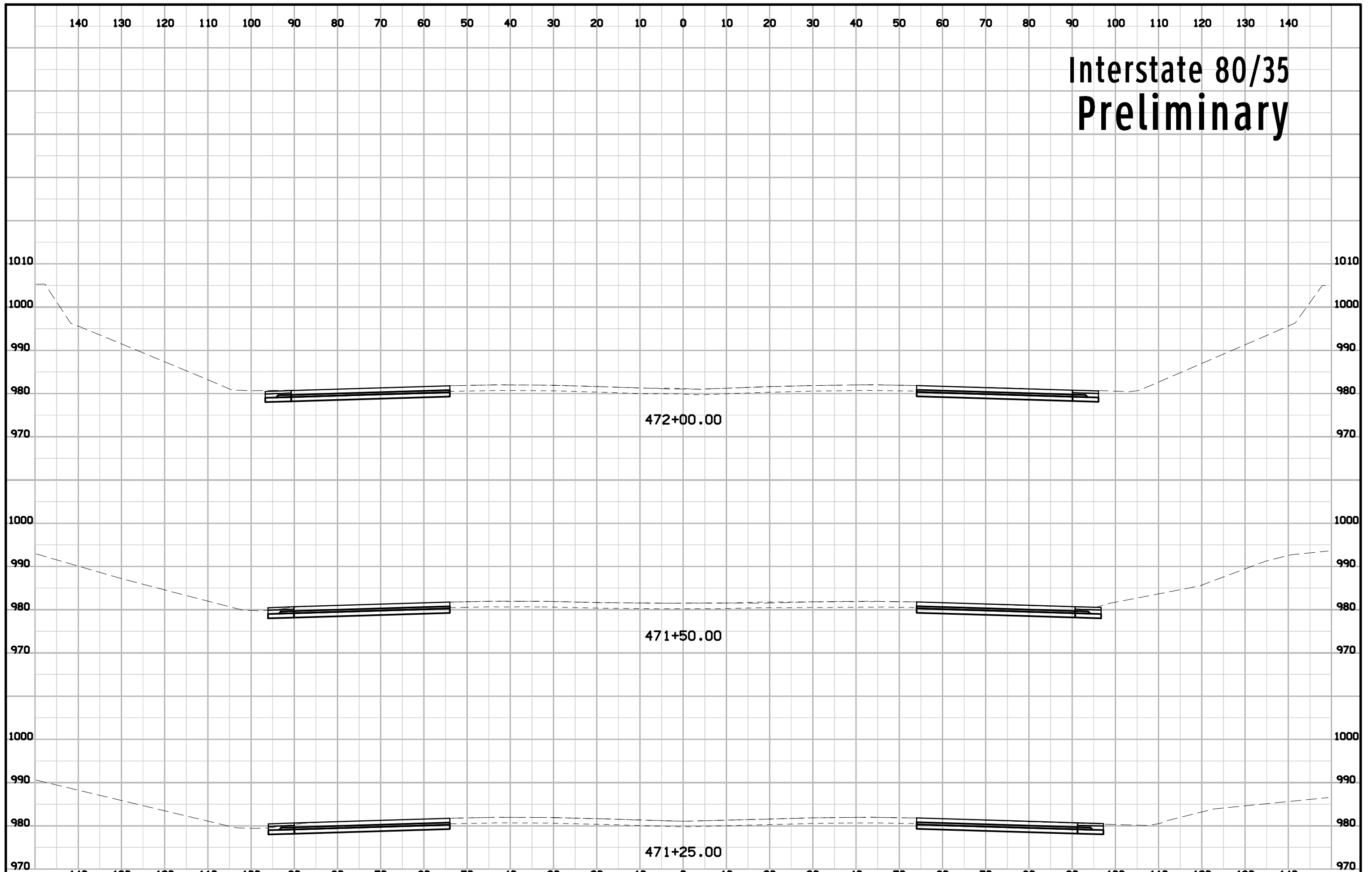
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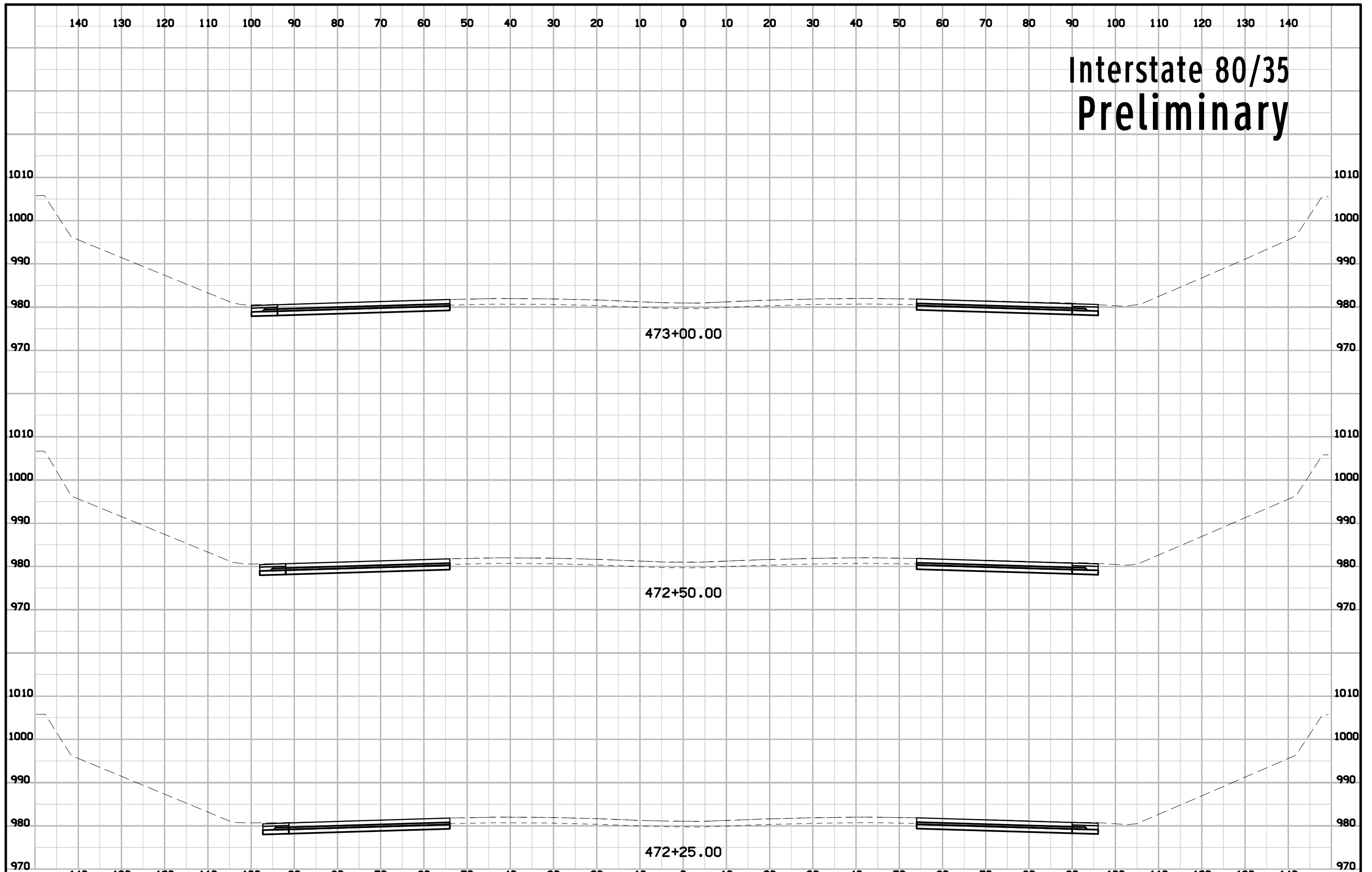
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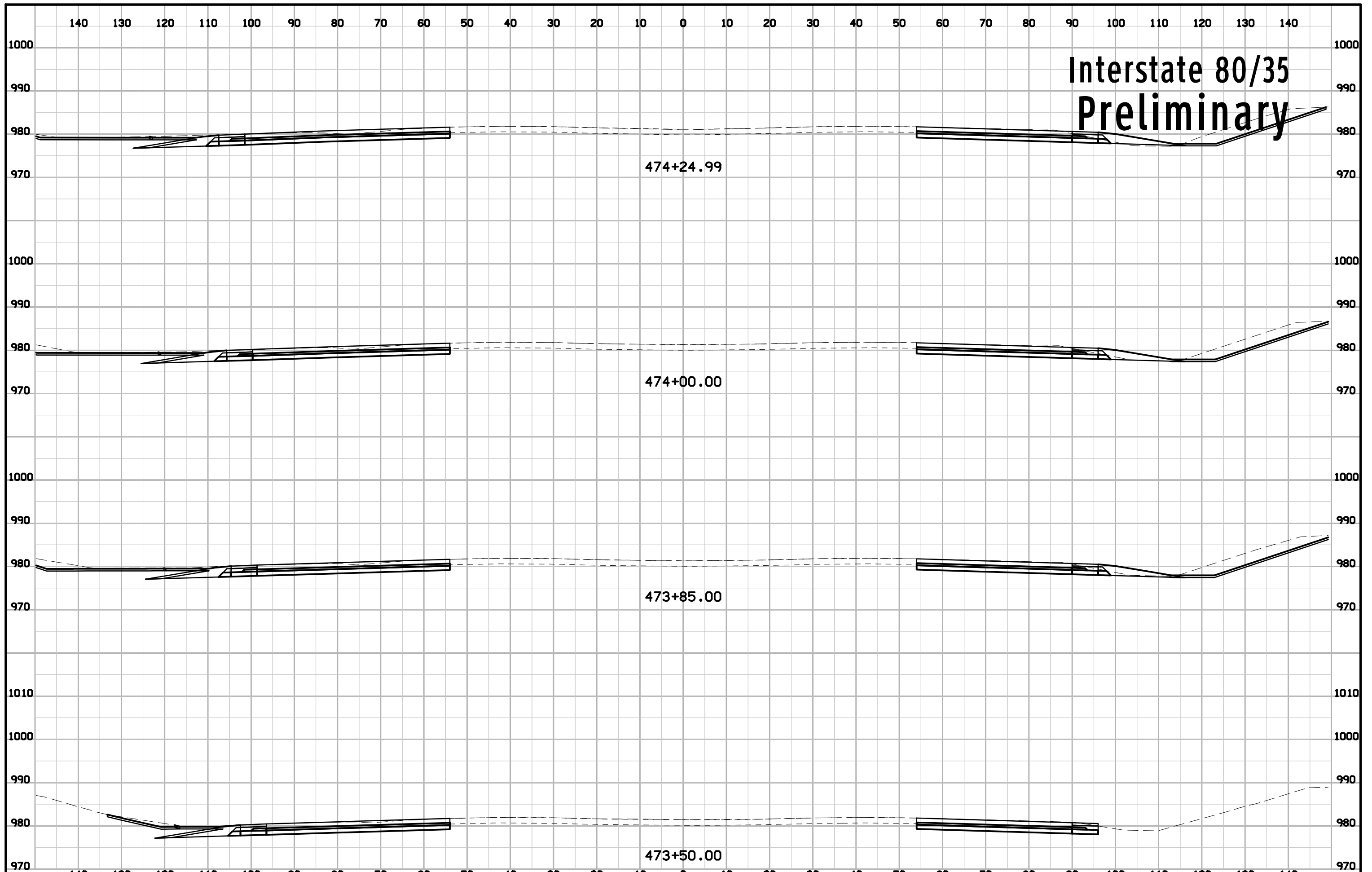
# Interstate 80/35 Preliminary



# Interstate 80/35 Preliminary

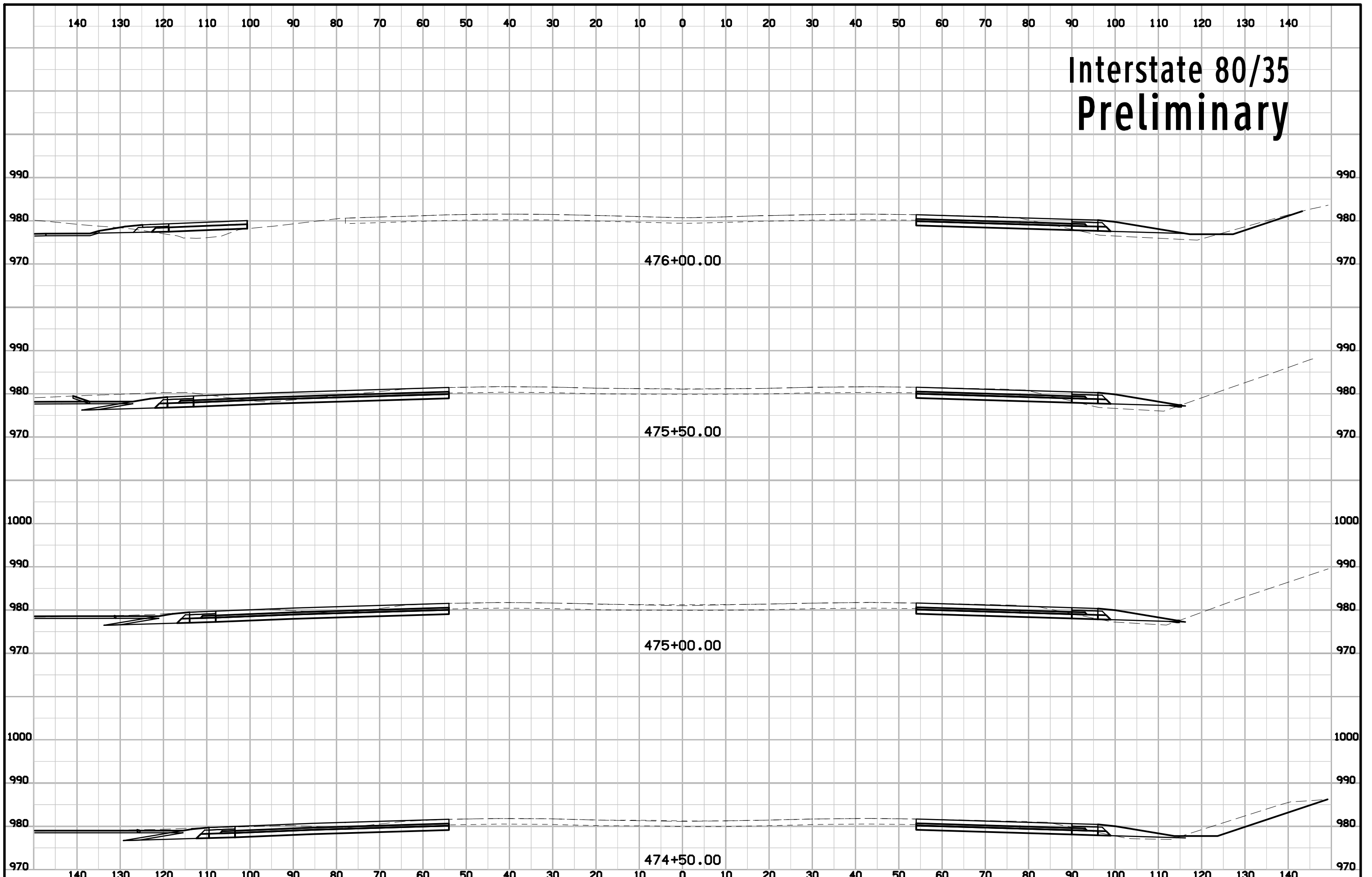


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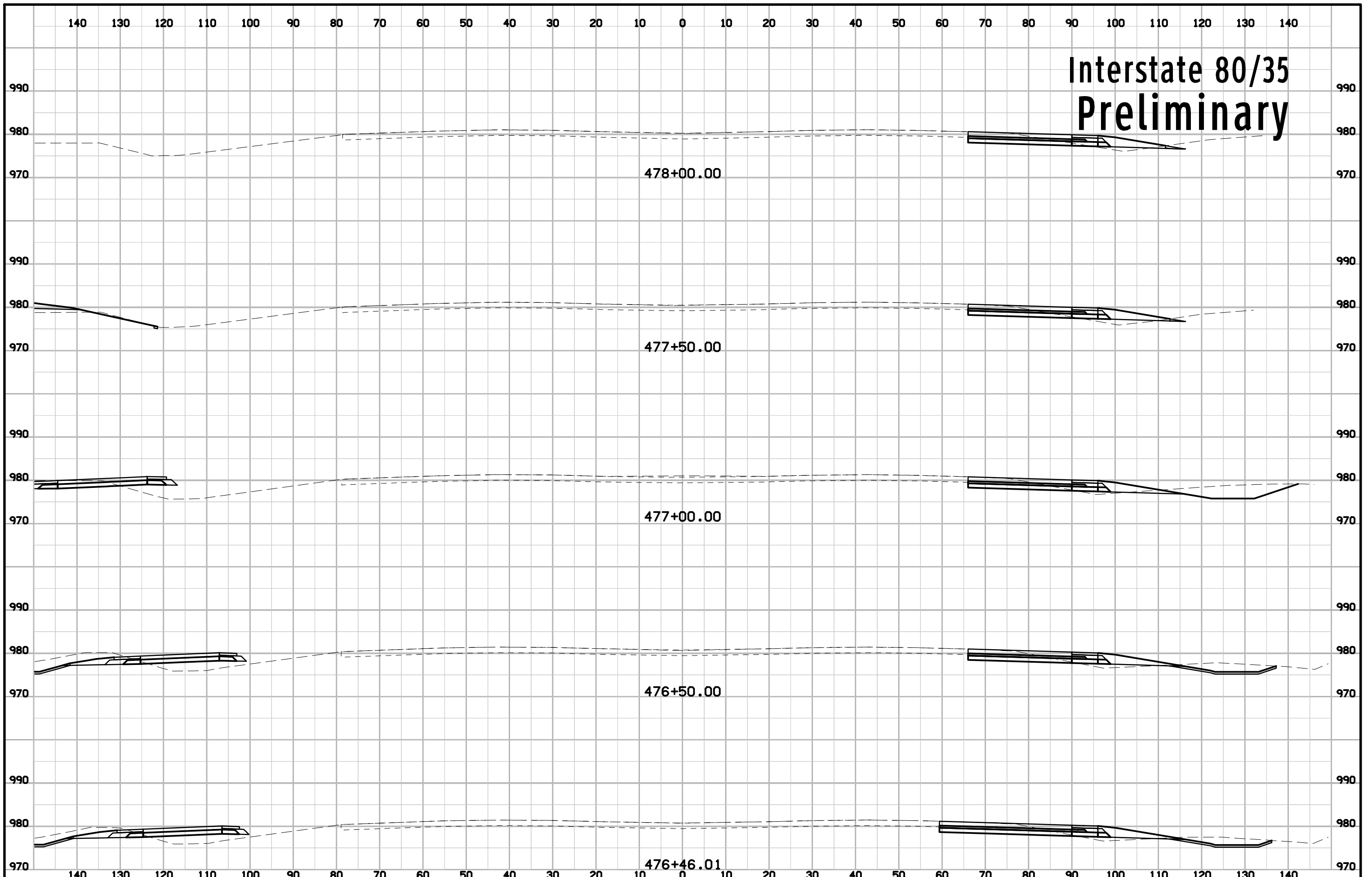


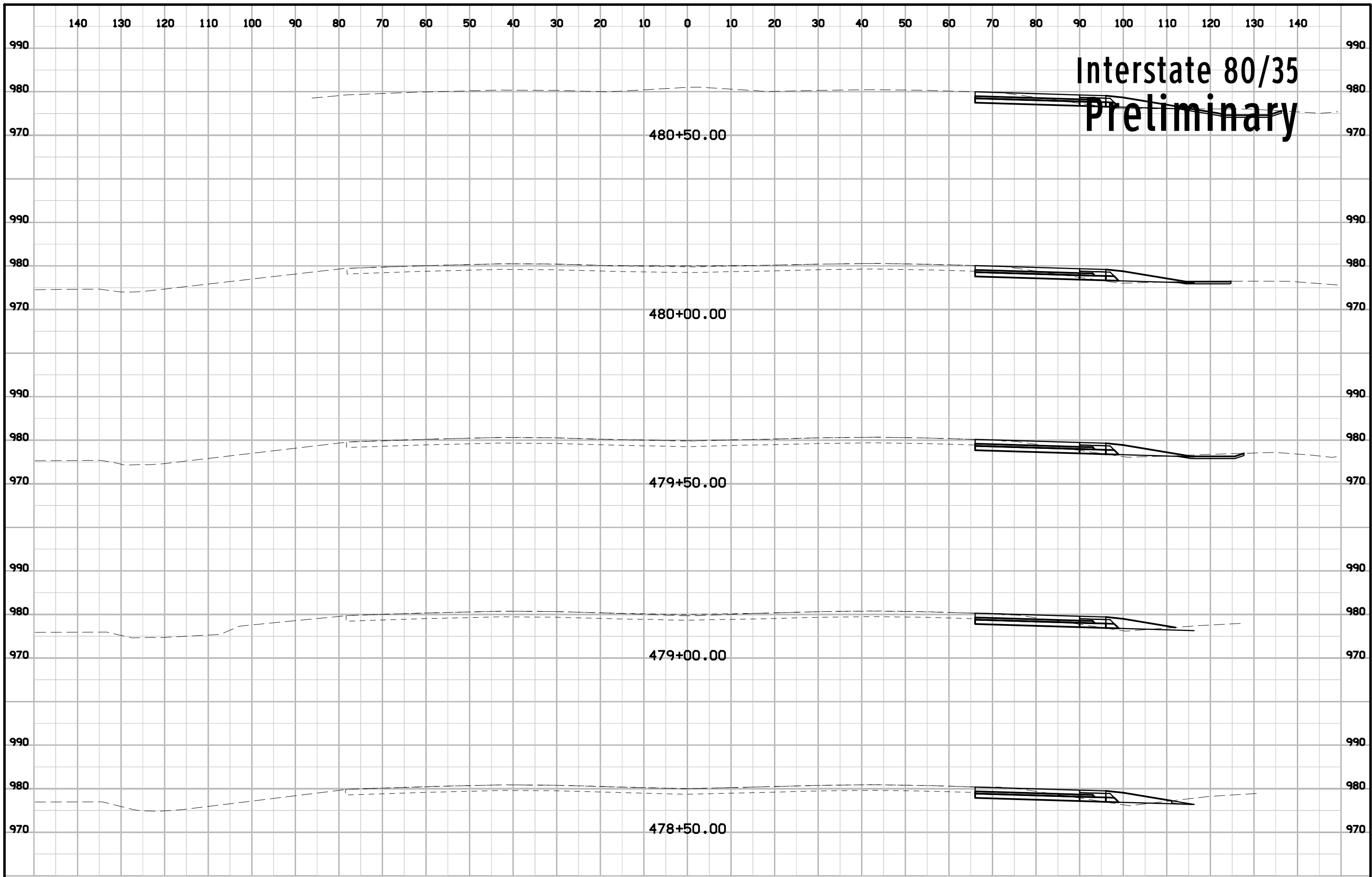


# Interstate 80/35 Preliminary



# Interstate 80/35 Preliminary

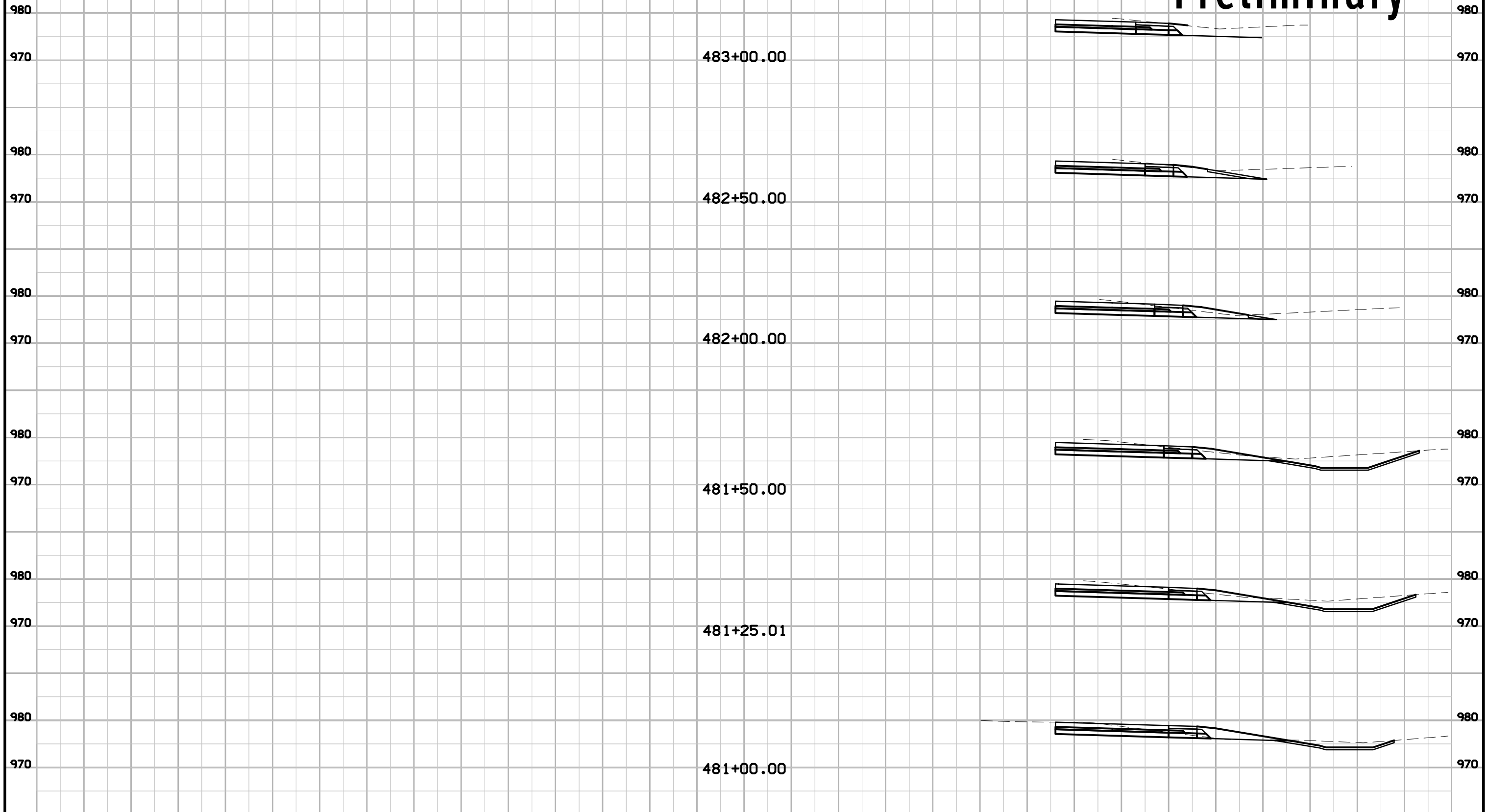




Interstate 80/35  
Preliminary

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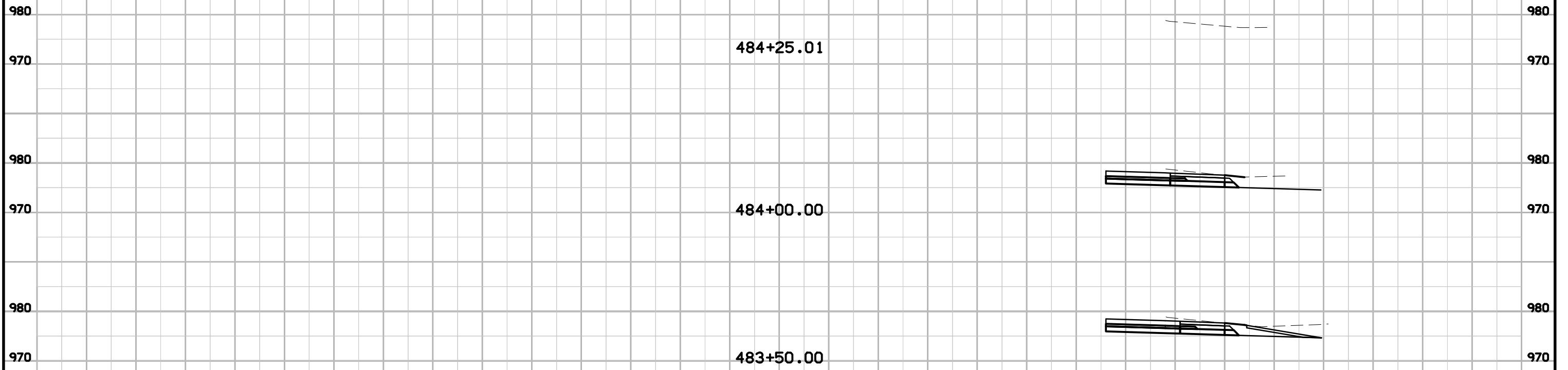
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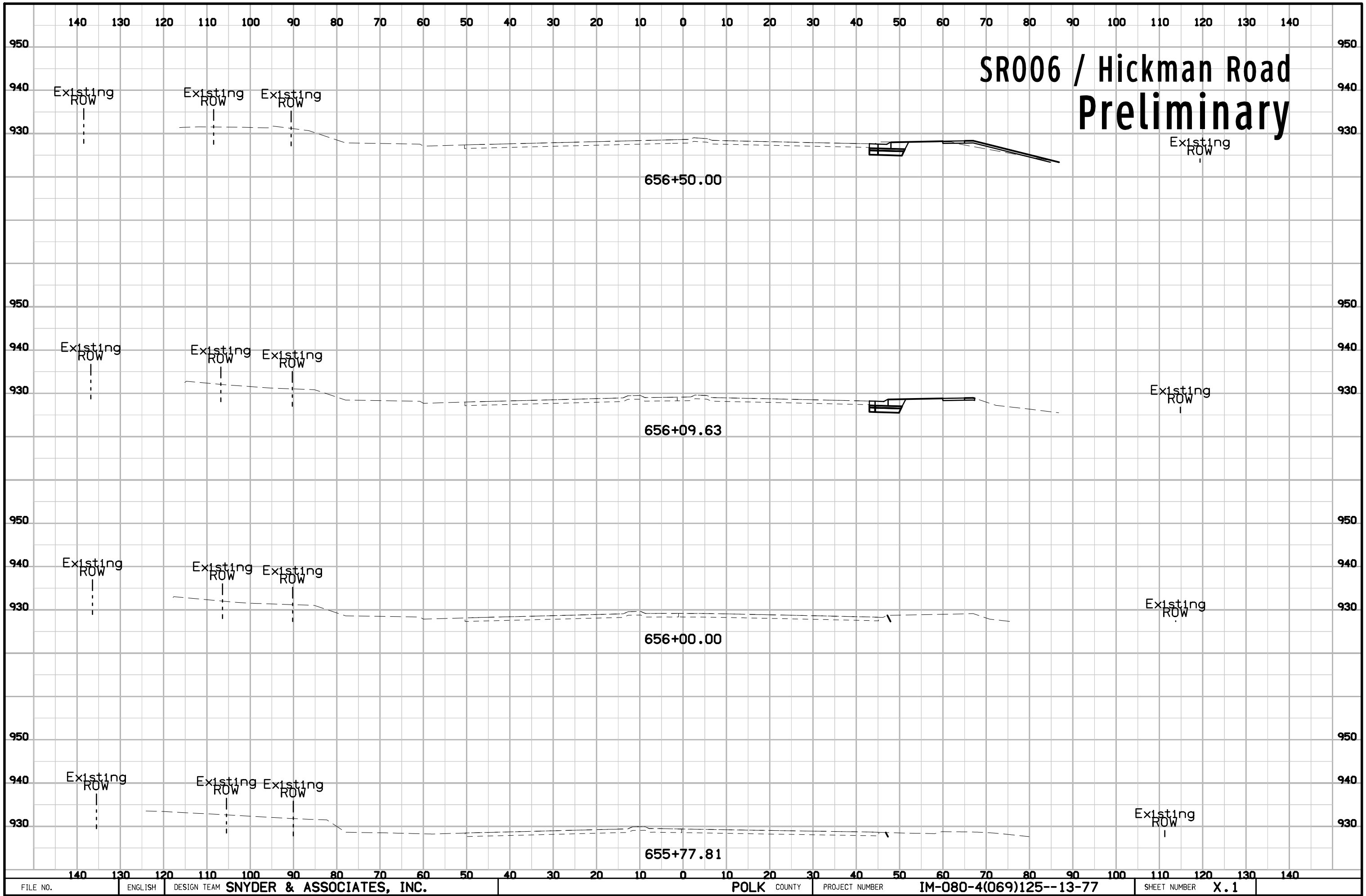




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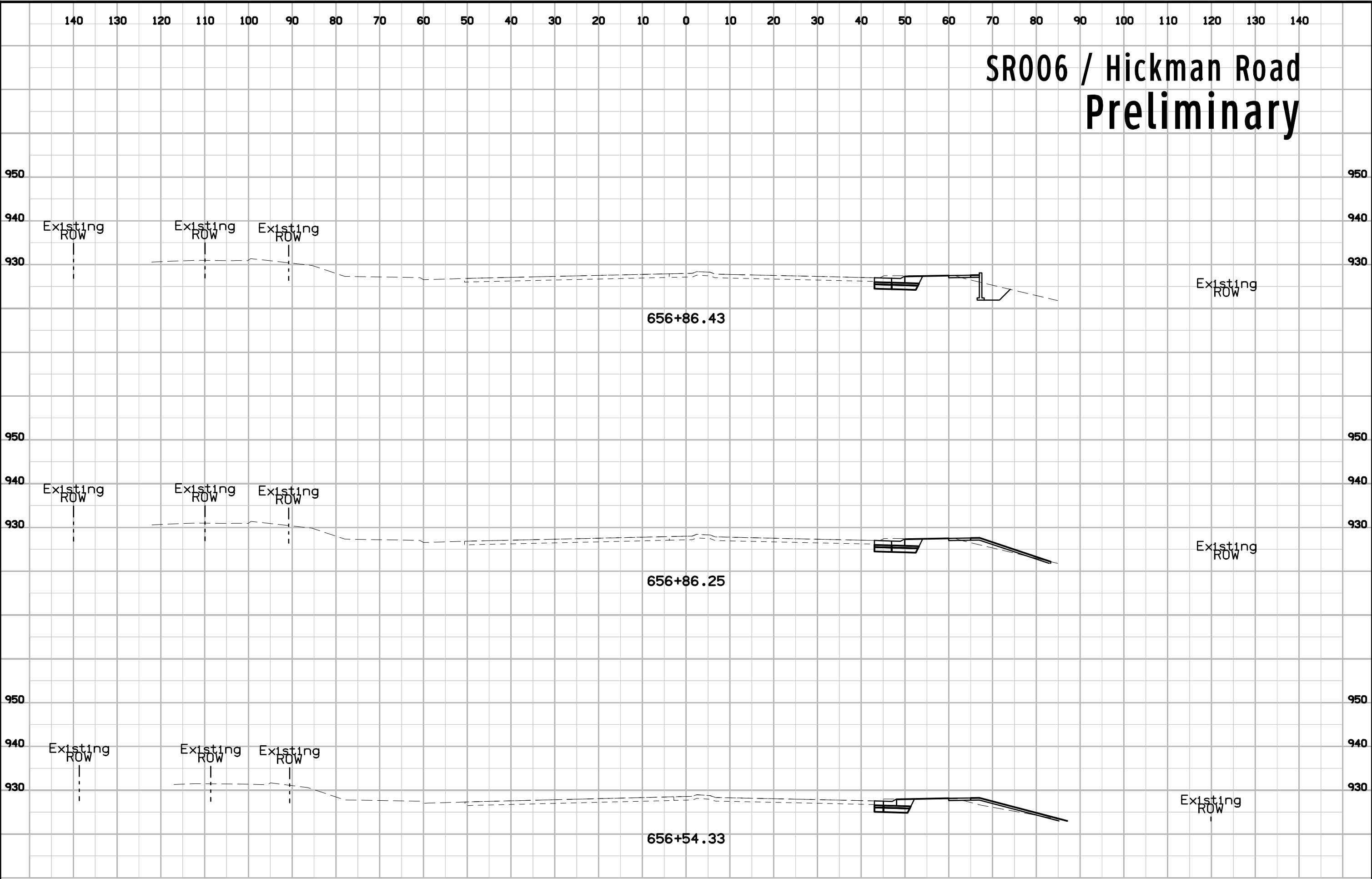
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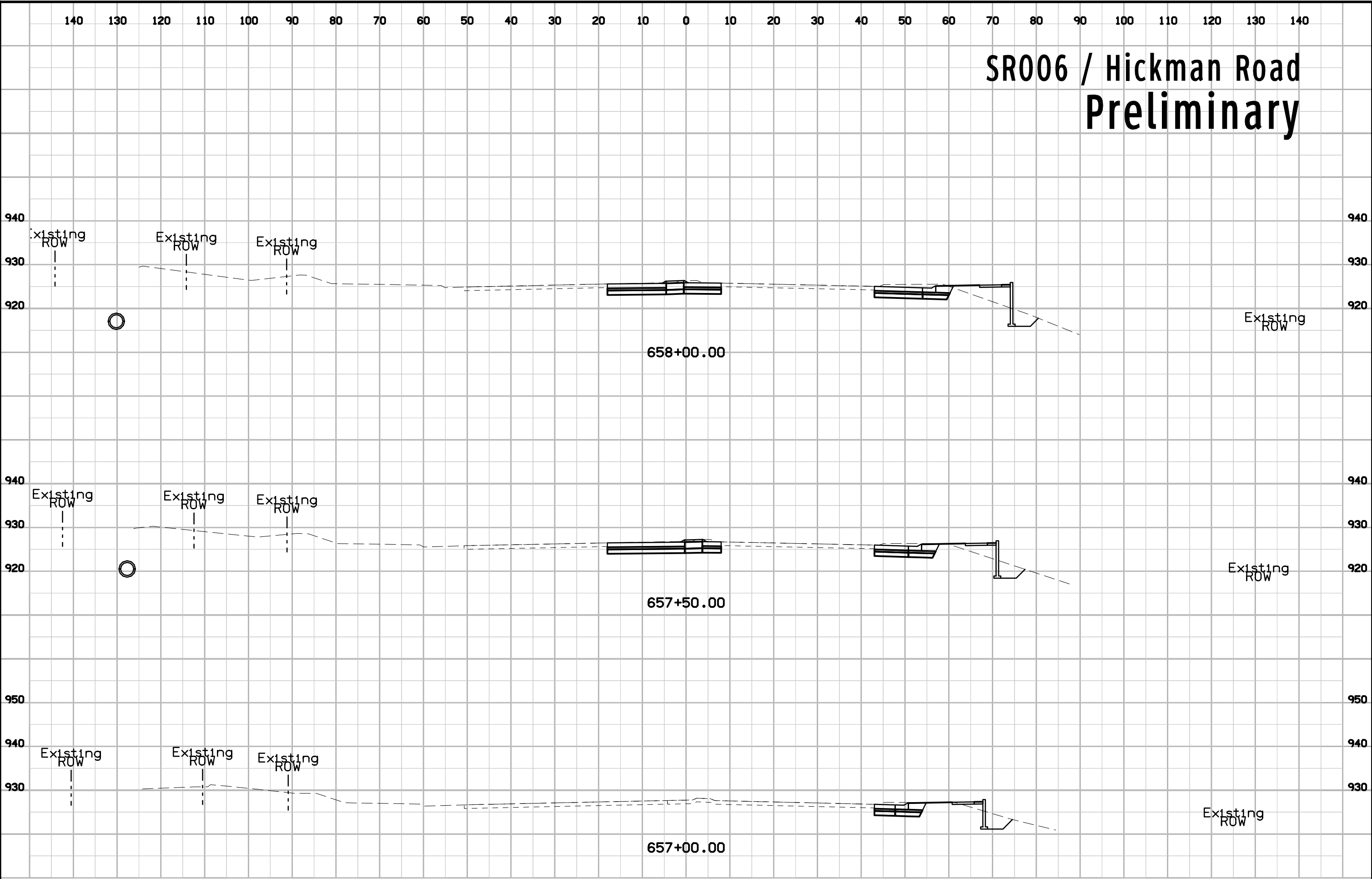


# SR006 / Hickman Road Preliminary

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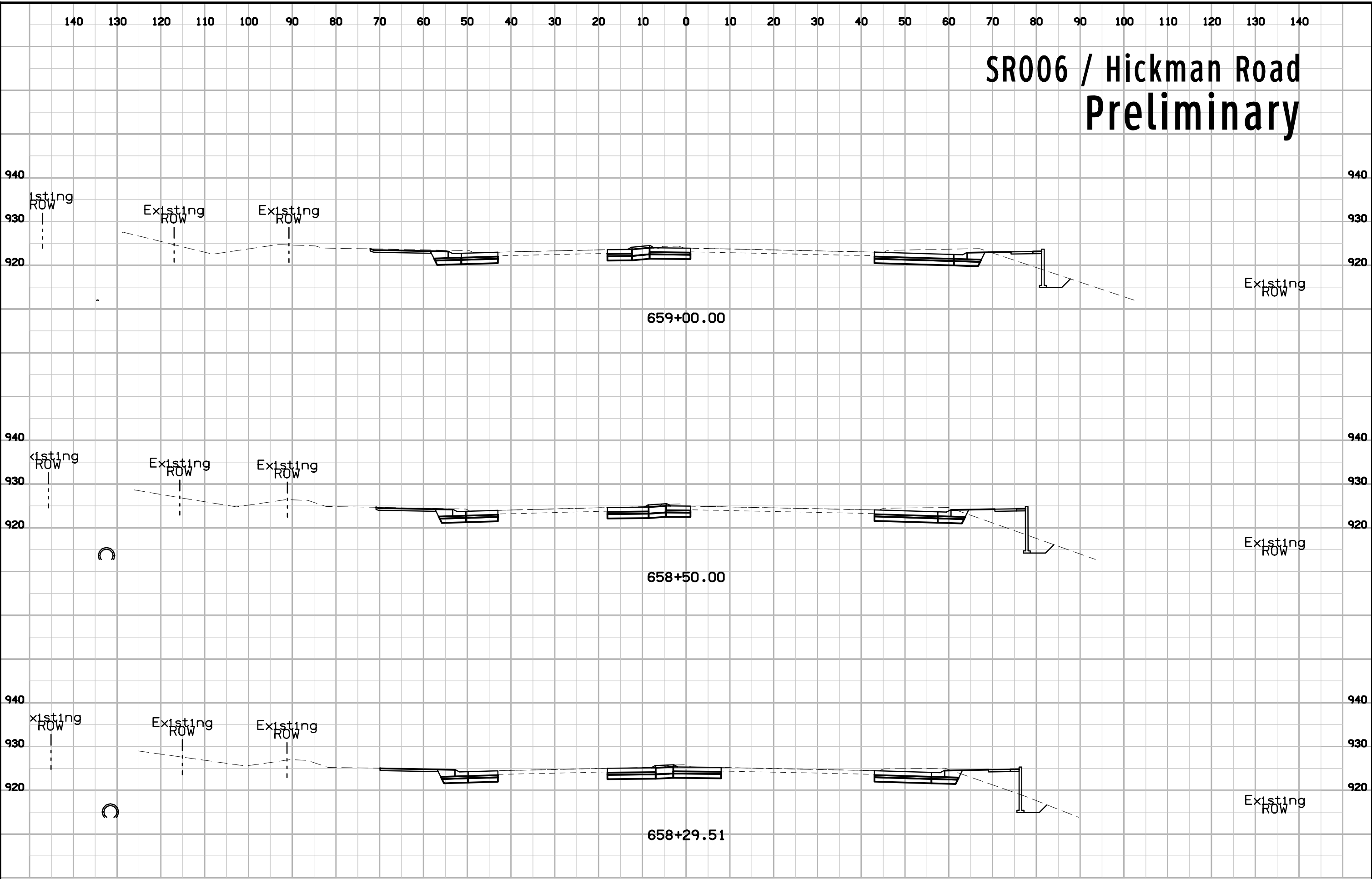


# SR006 / Hickman Road Preliminary

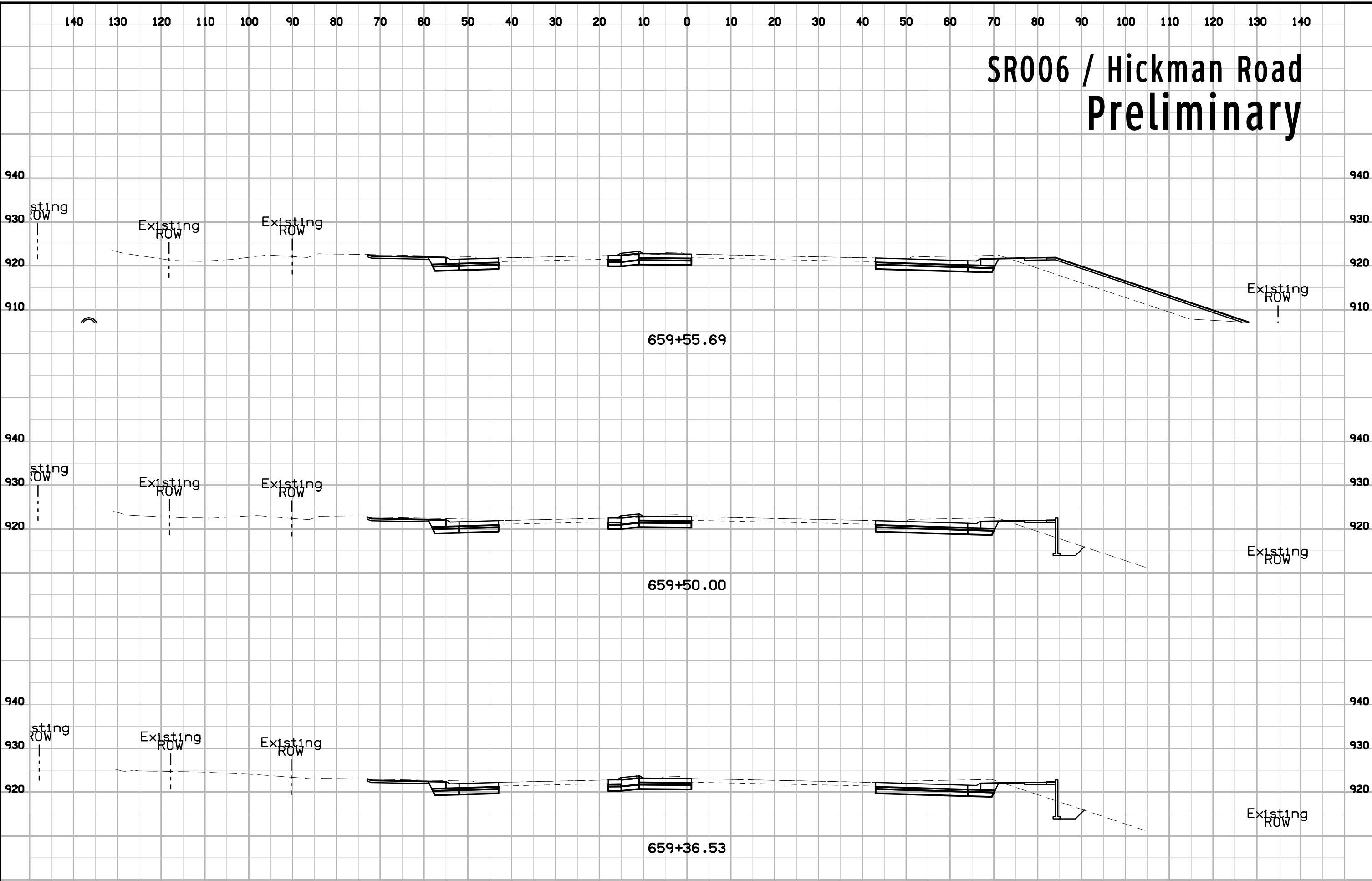


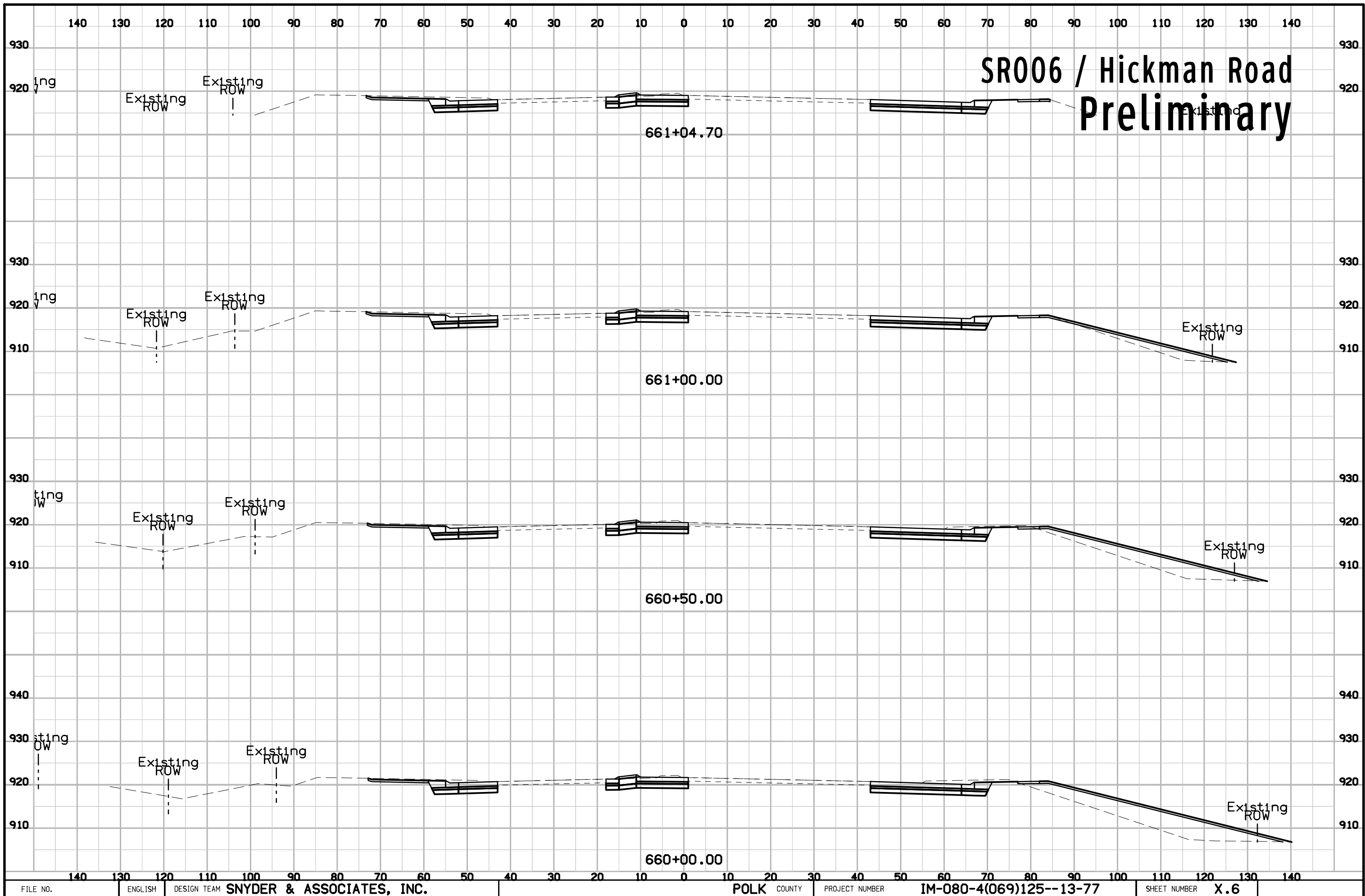


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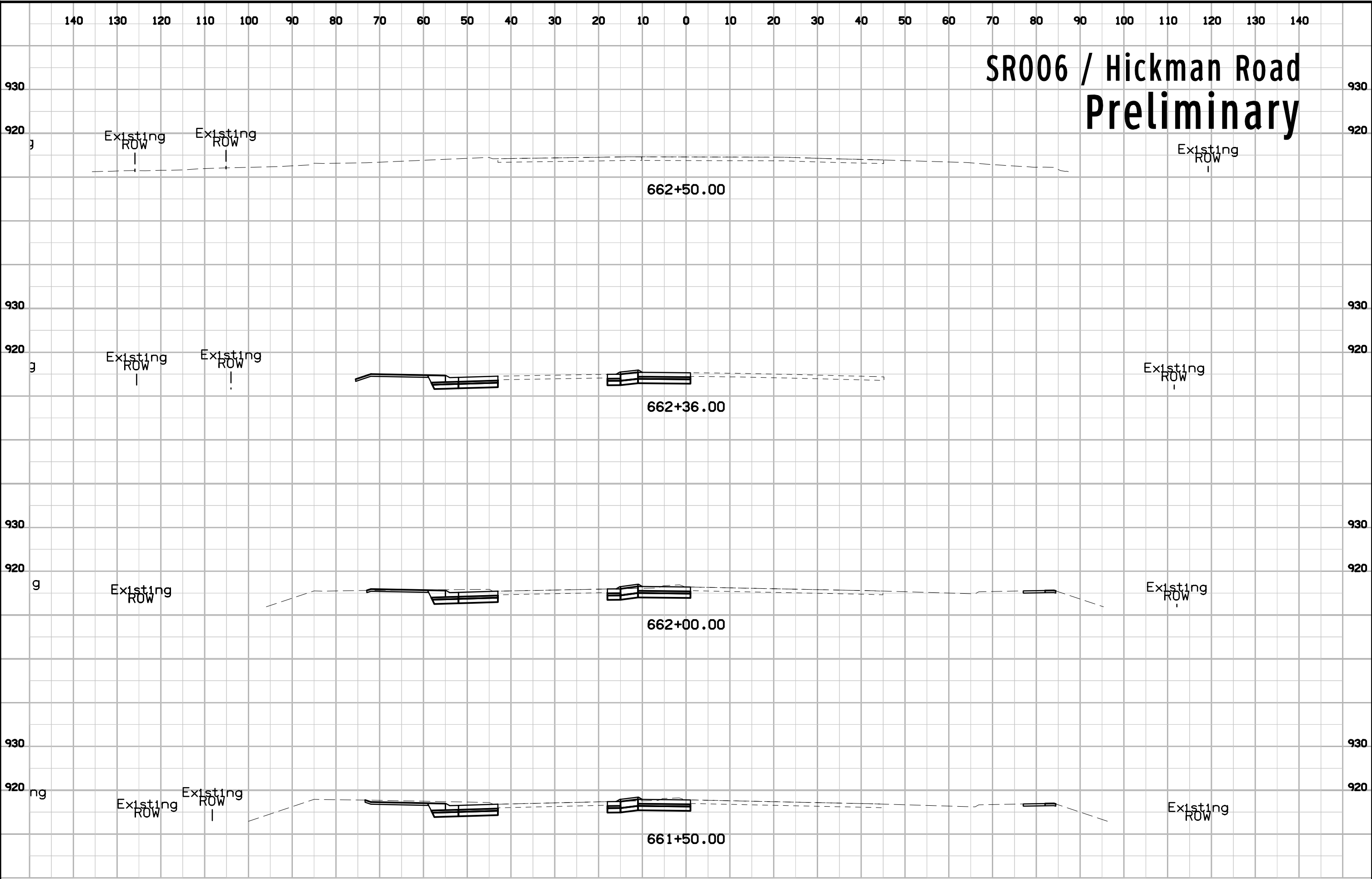
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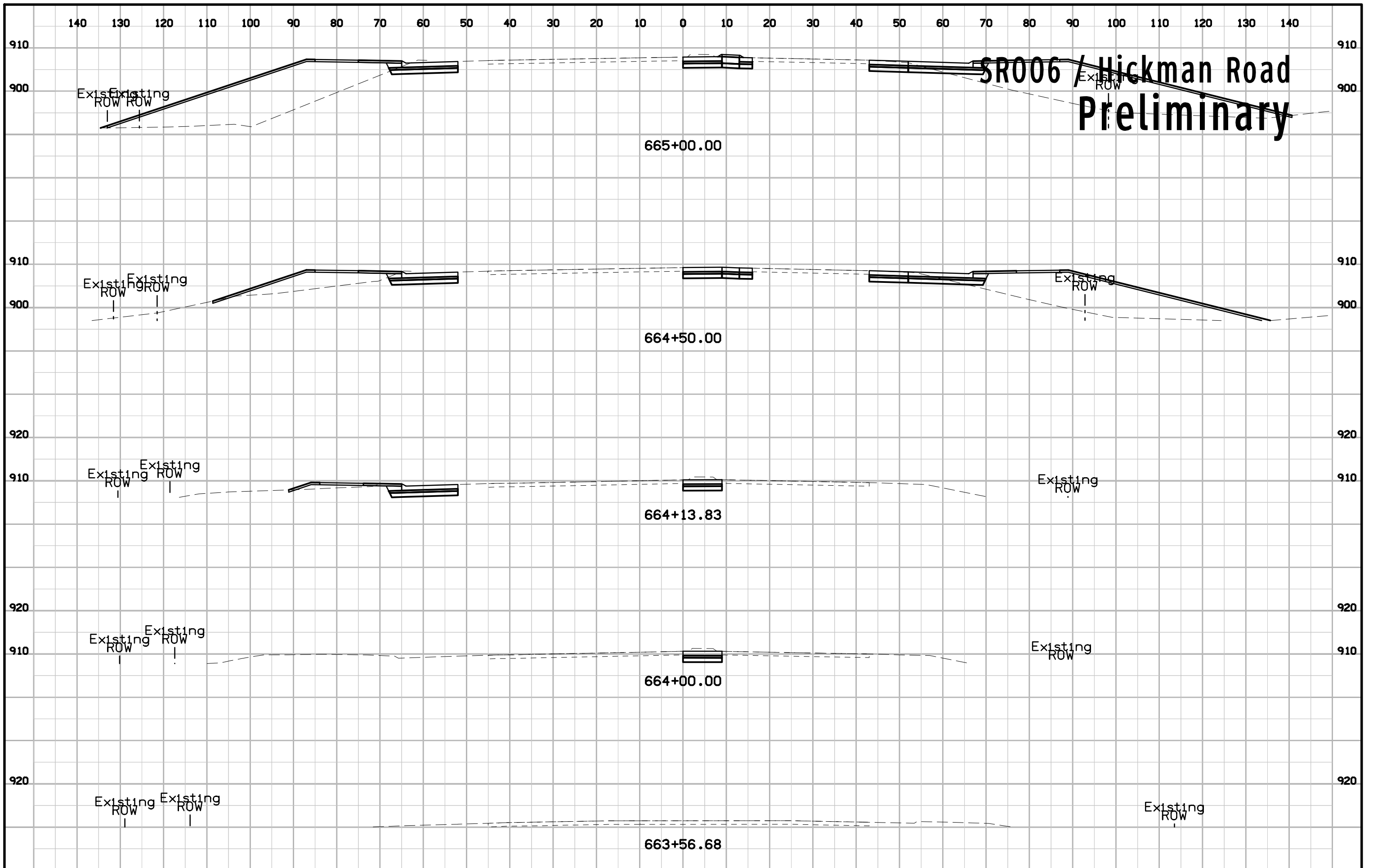


# SR006 / Hickman Road Preliminary

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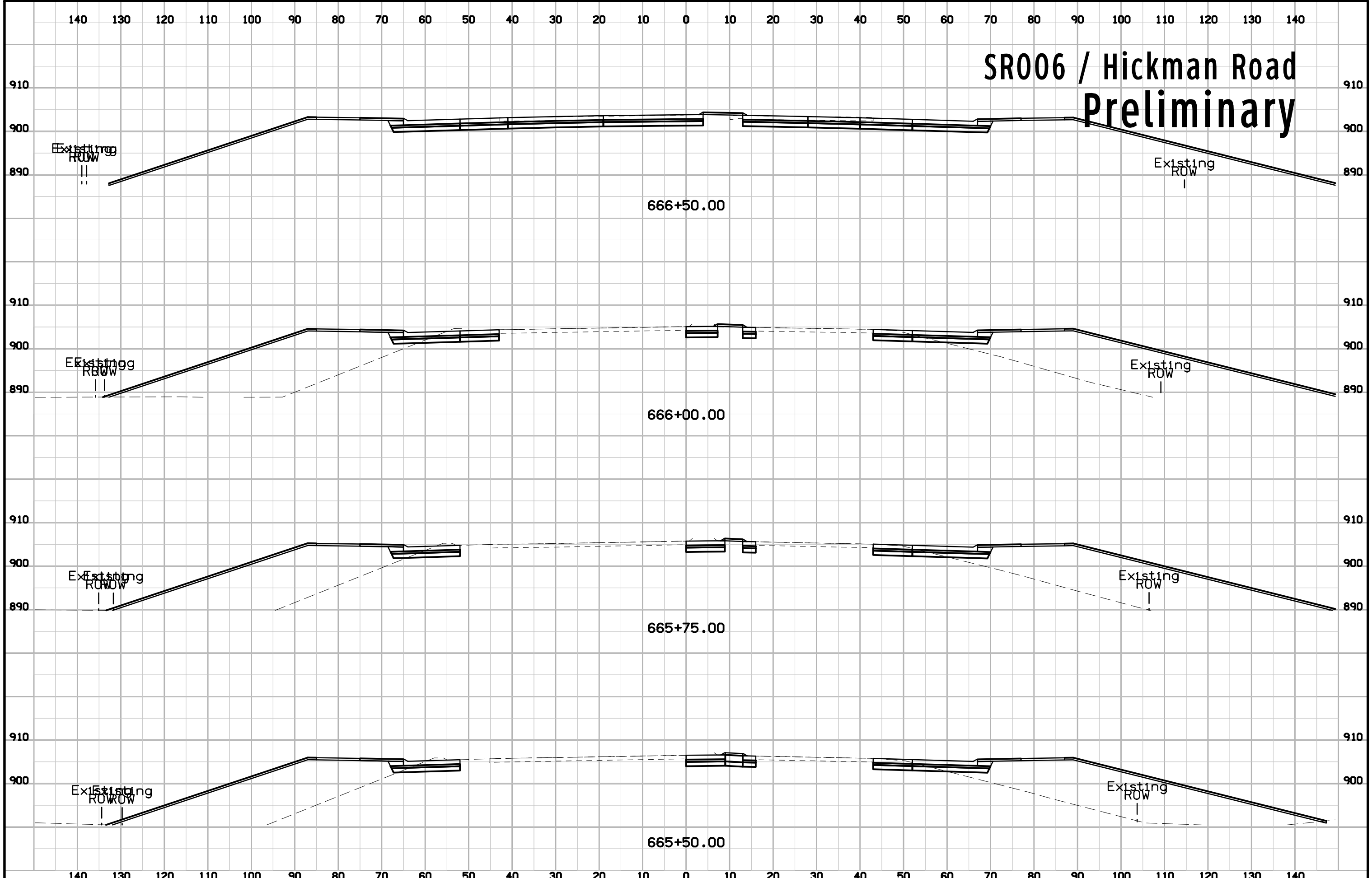




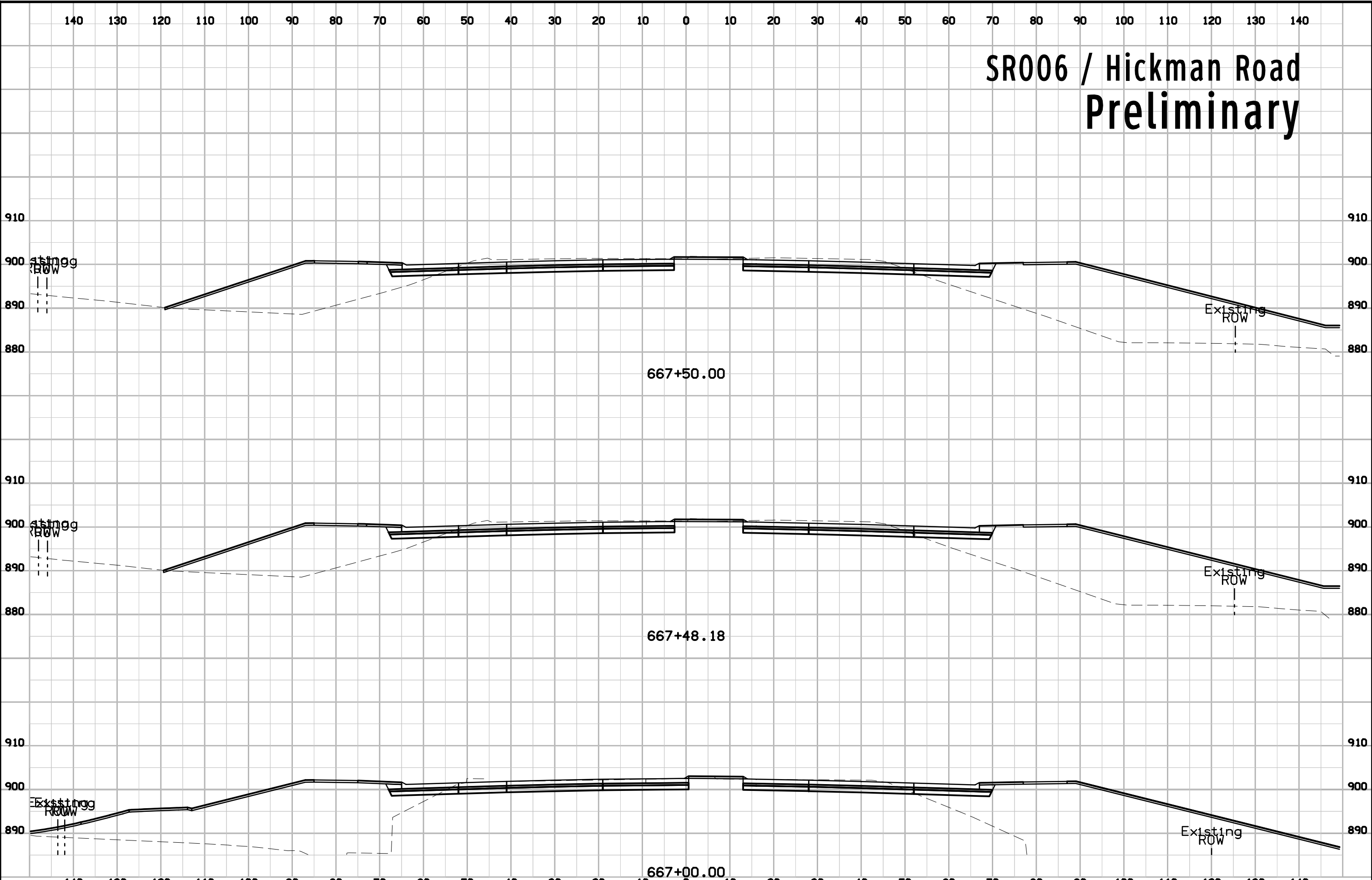


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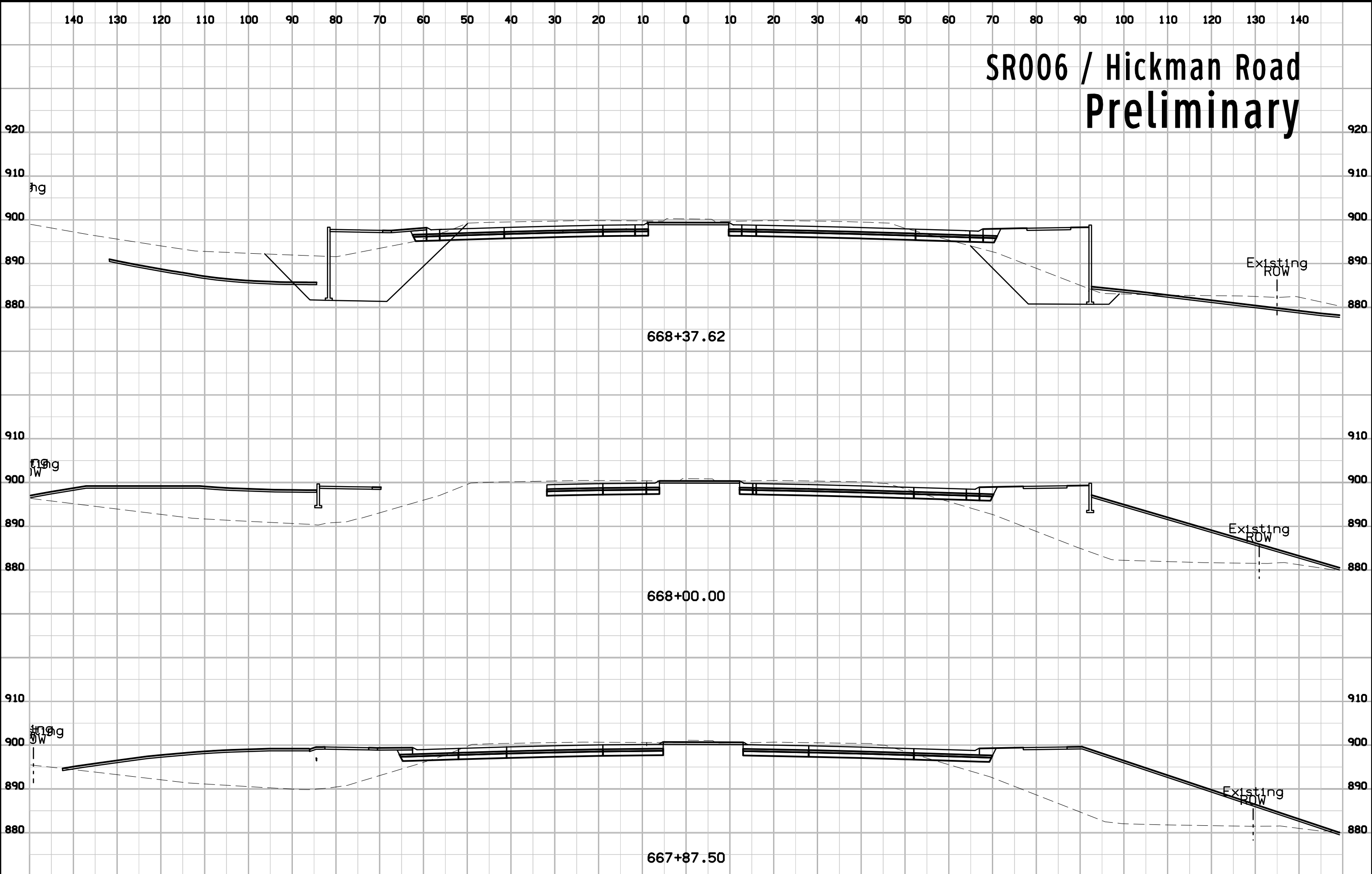
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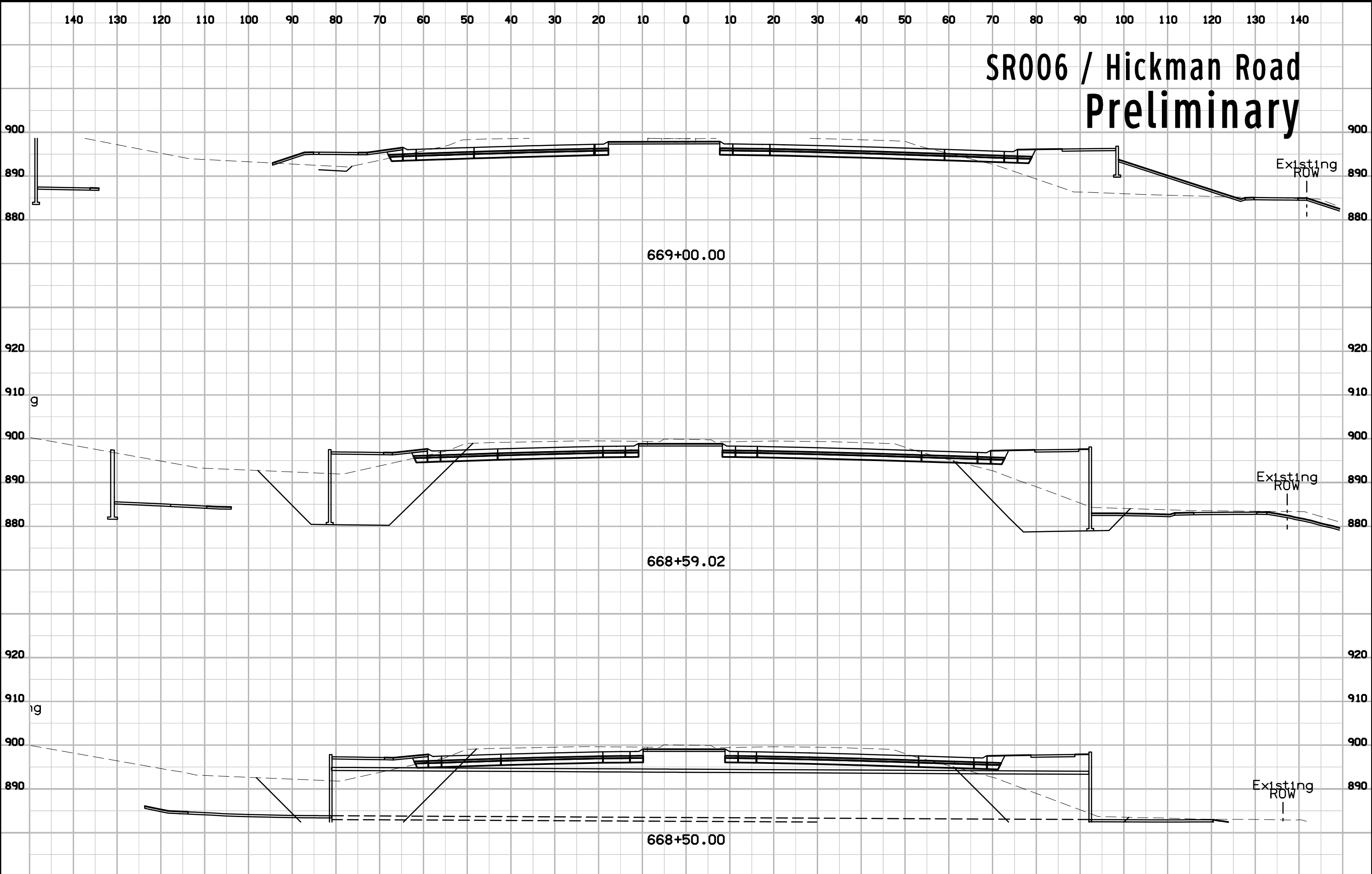
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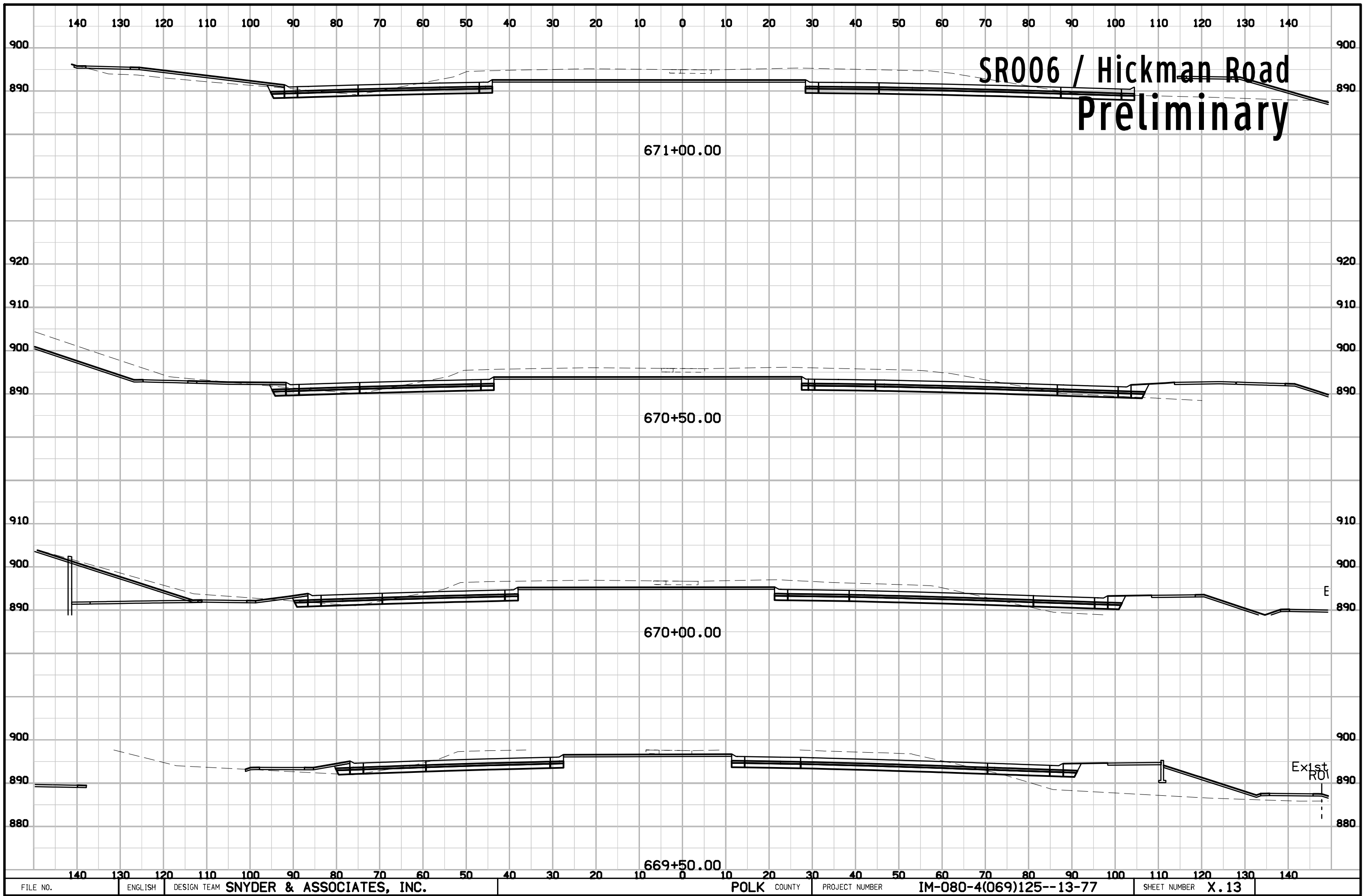
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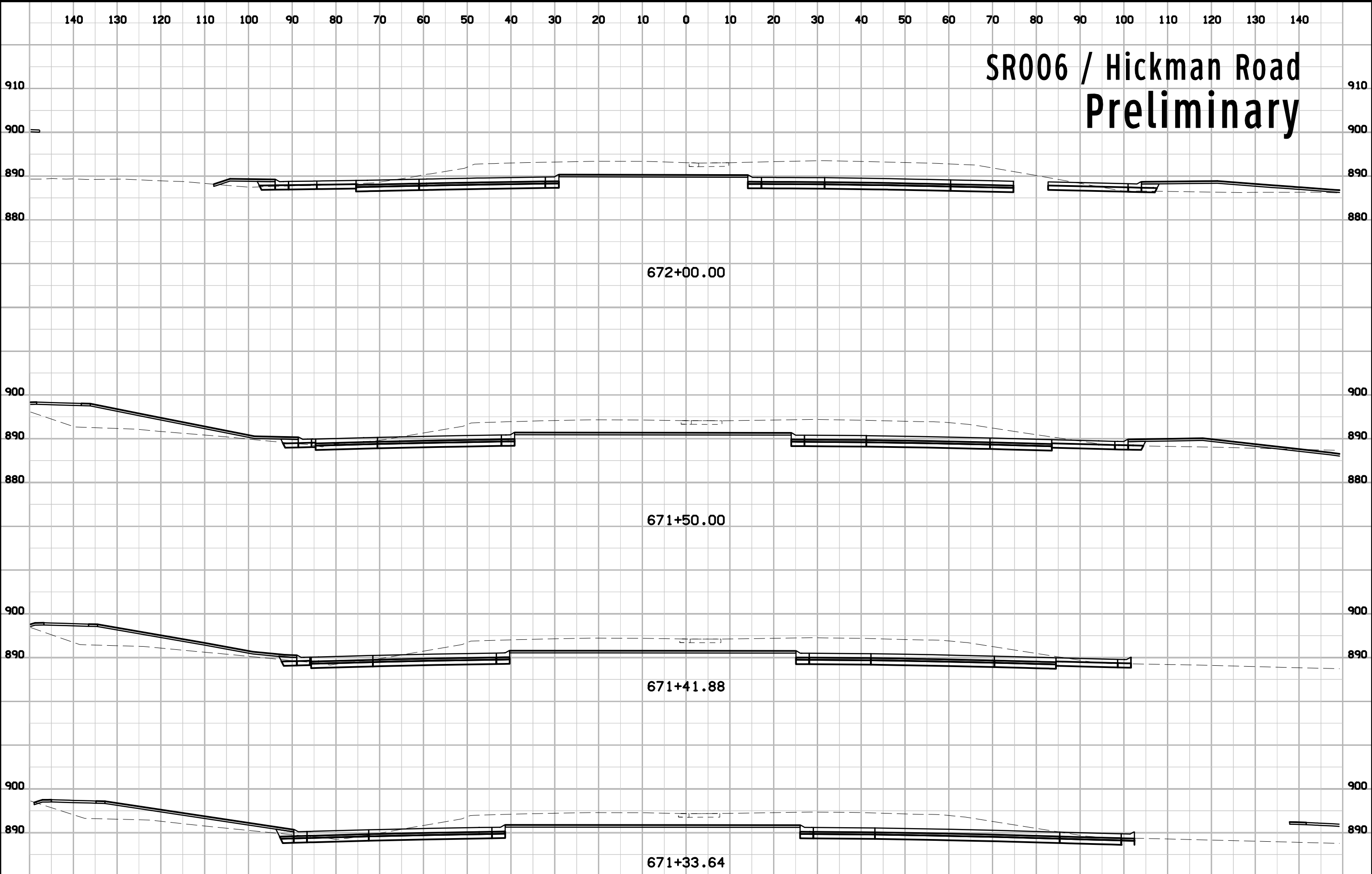
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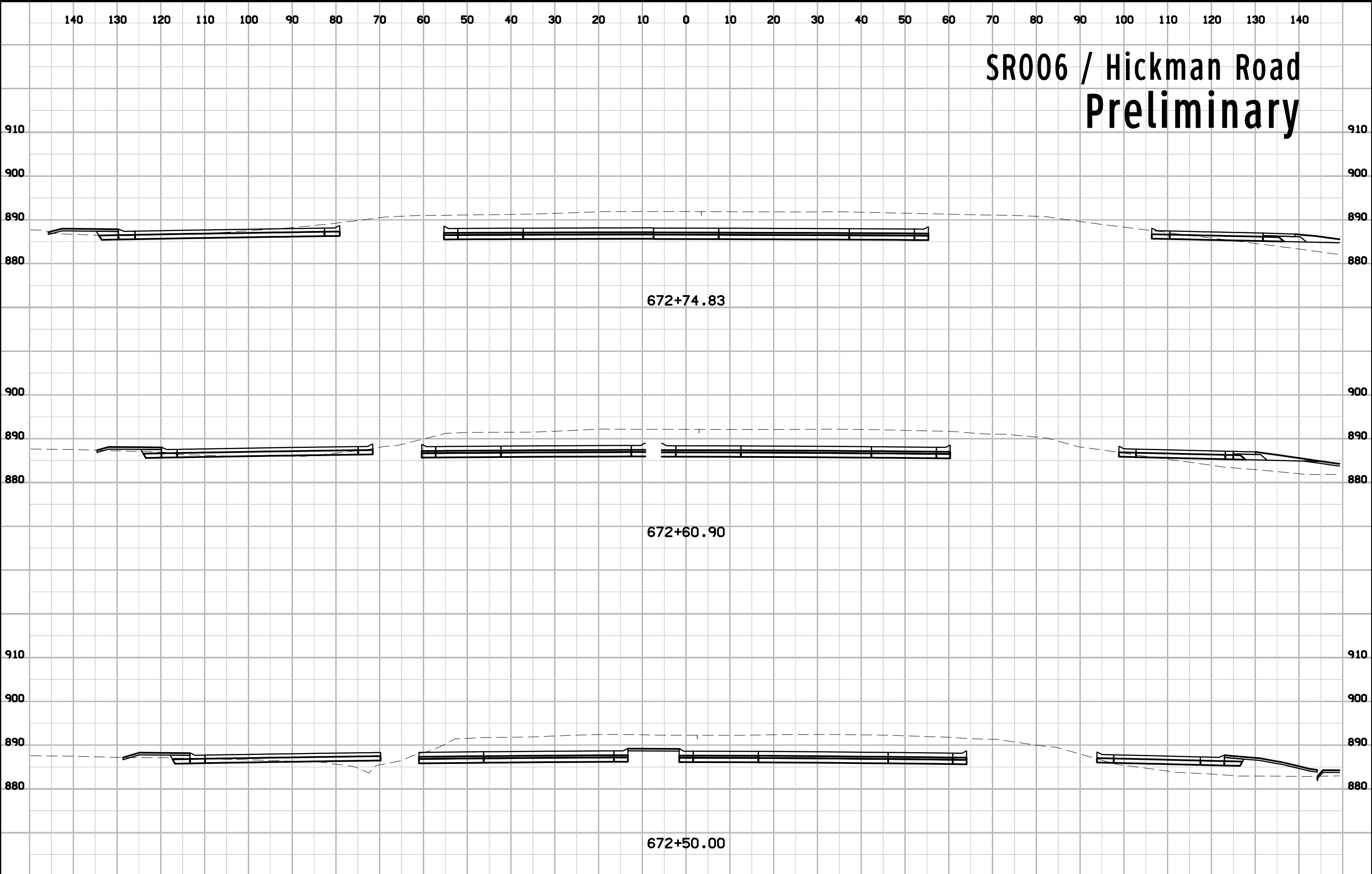




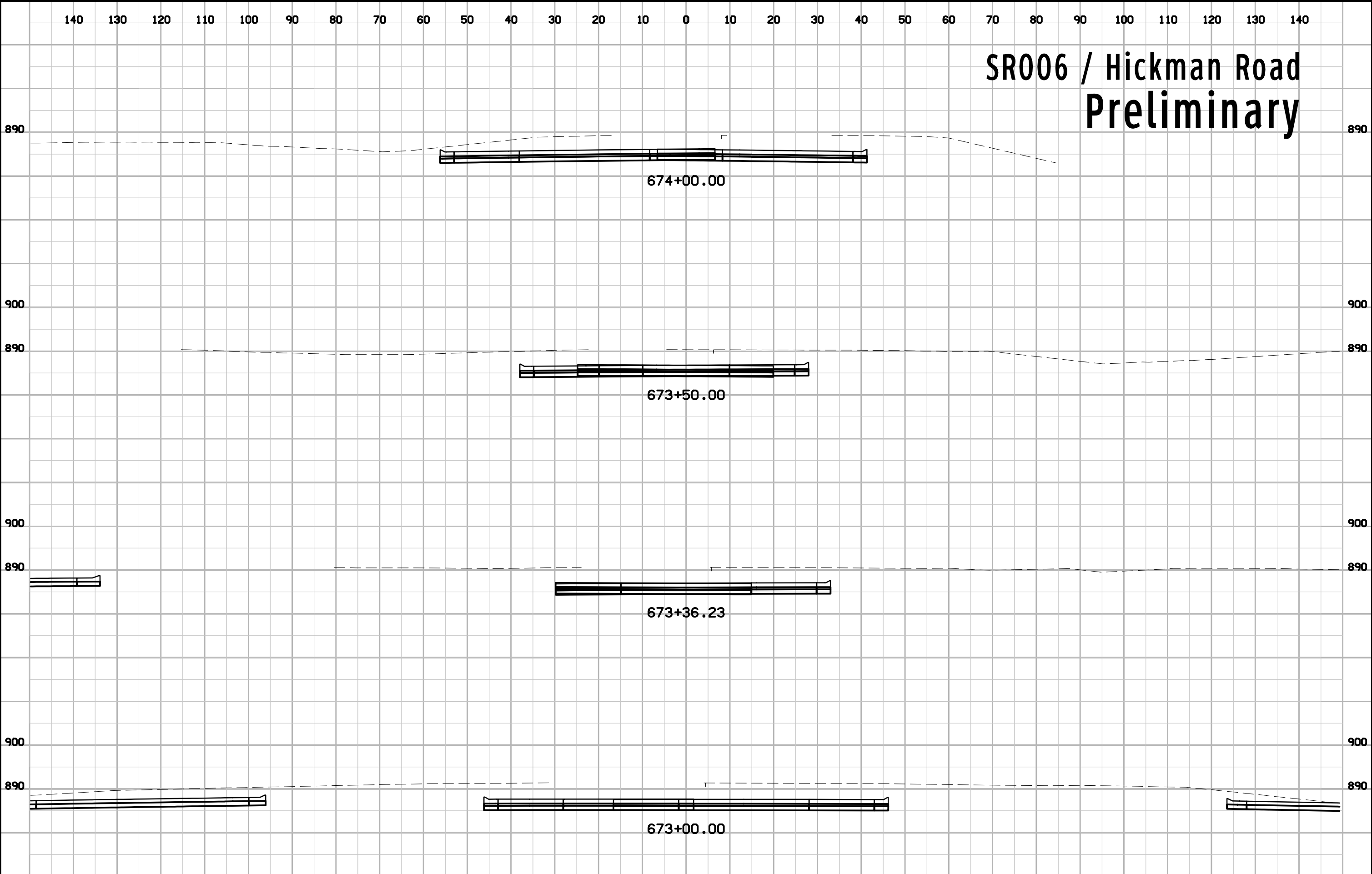
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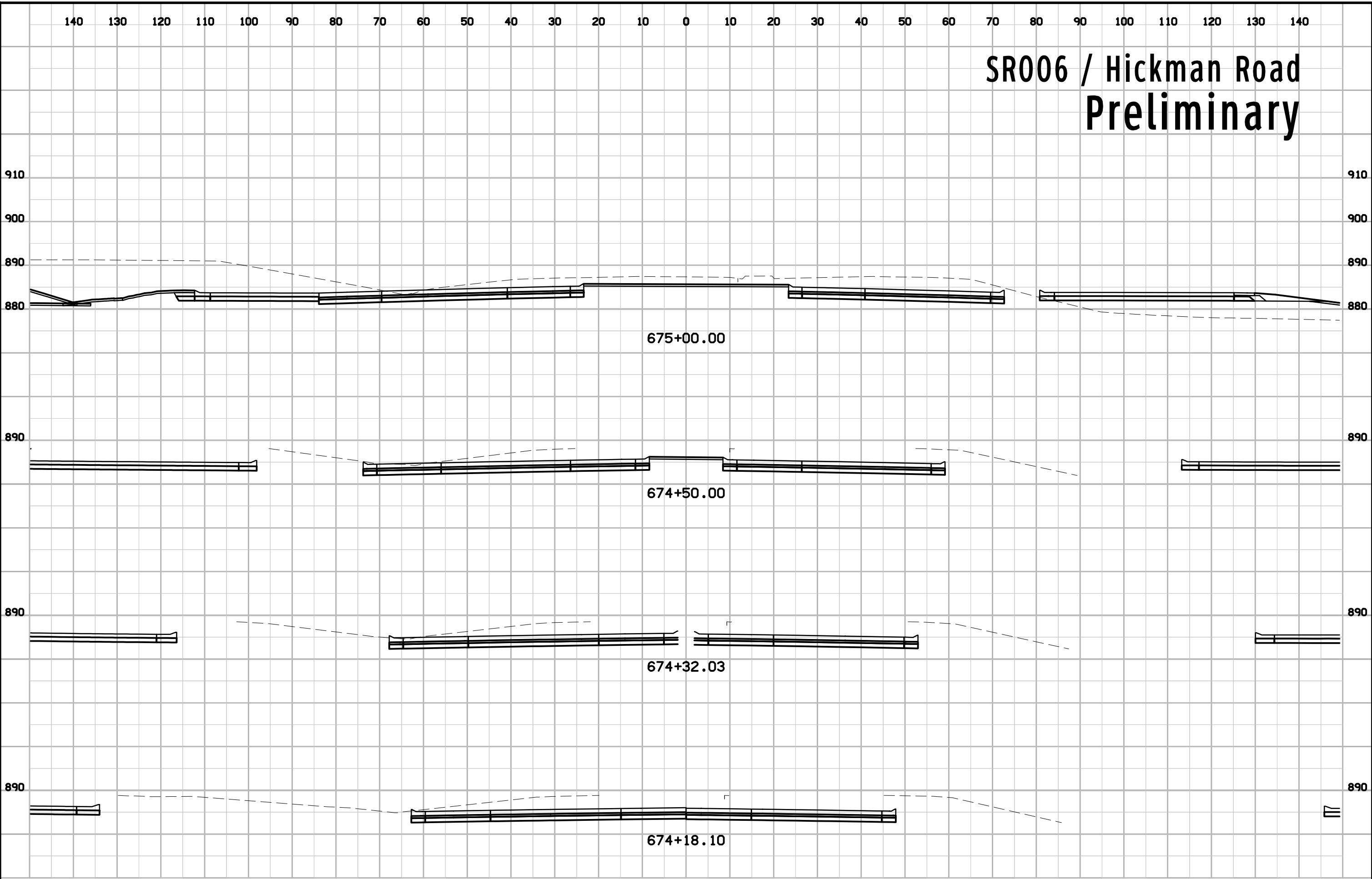
# SR006 / Hickman Road Preliminary



# SR006 / Hickman Road Preliminary

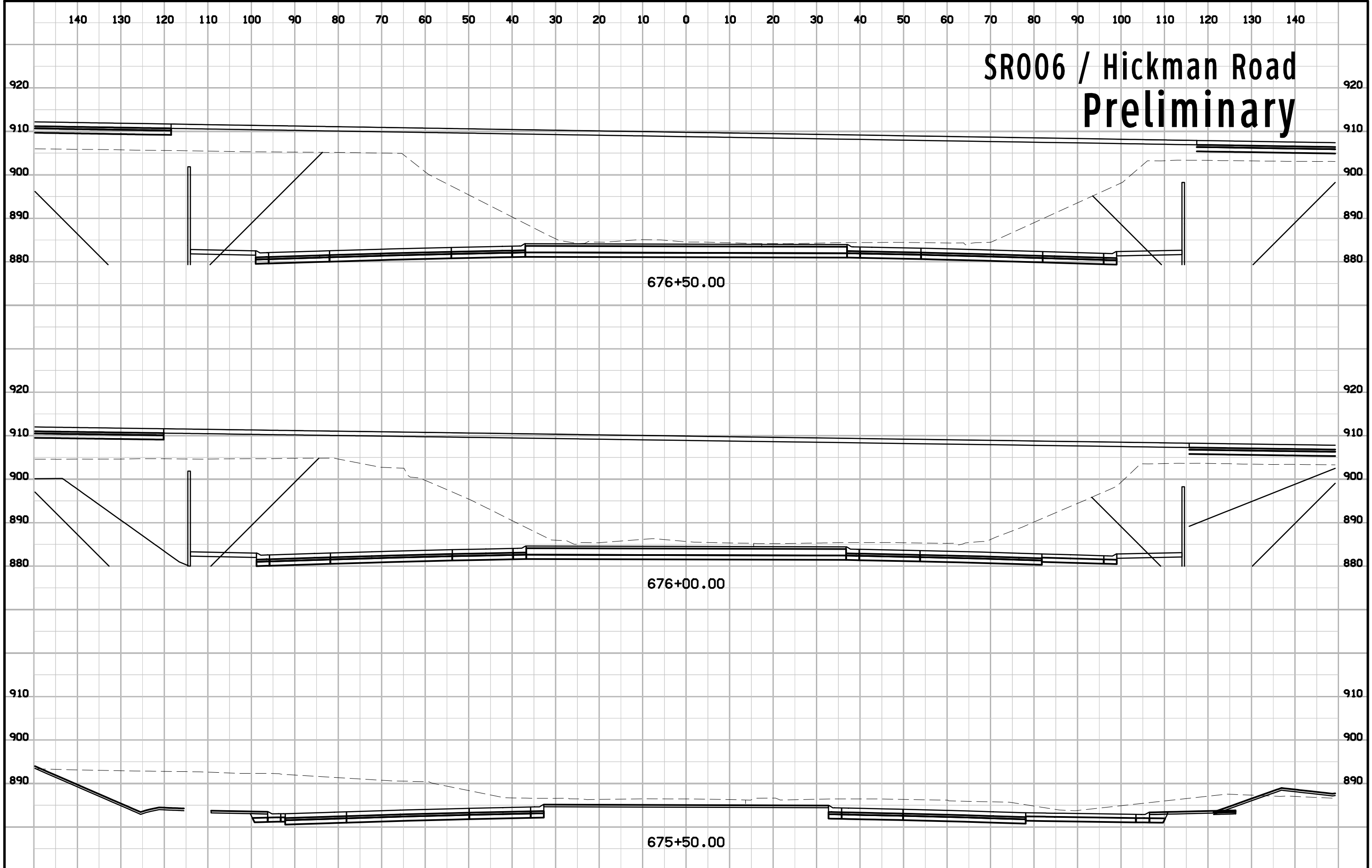


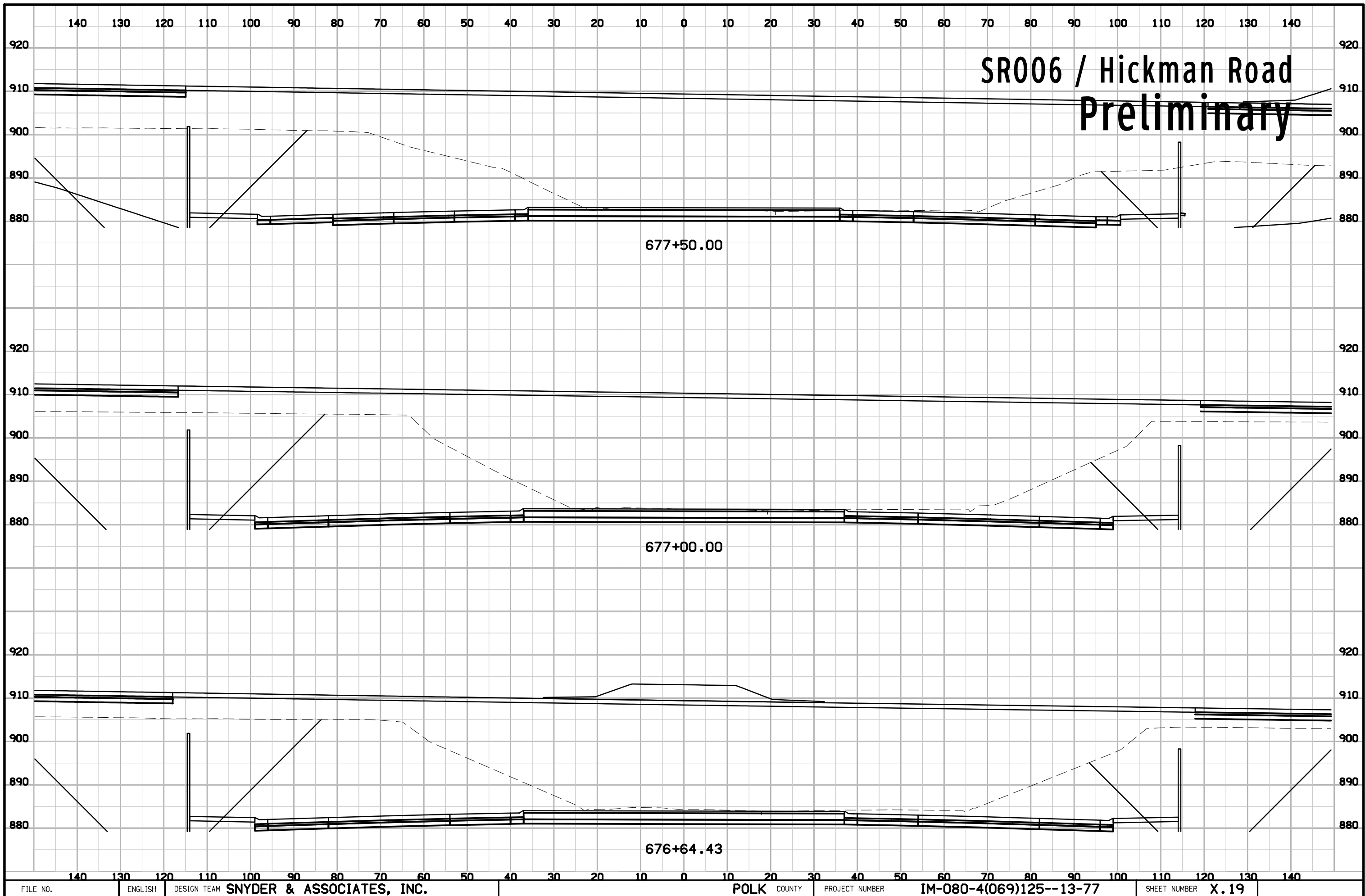
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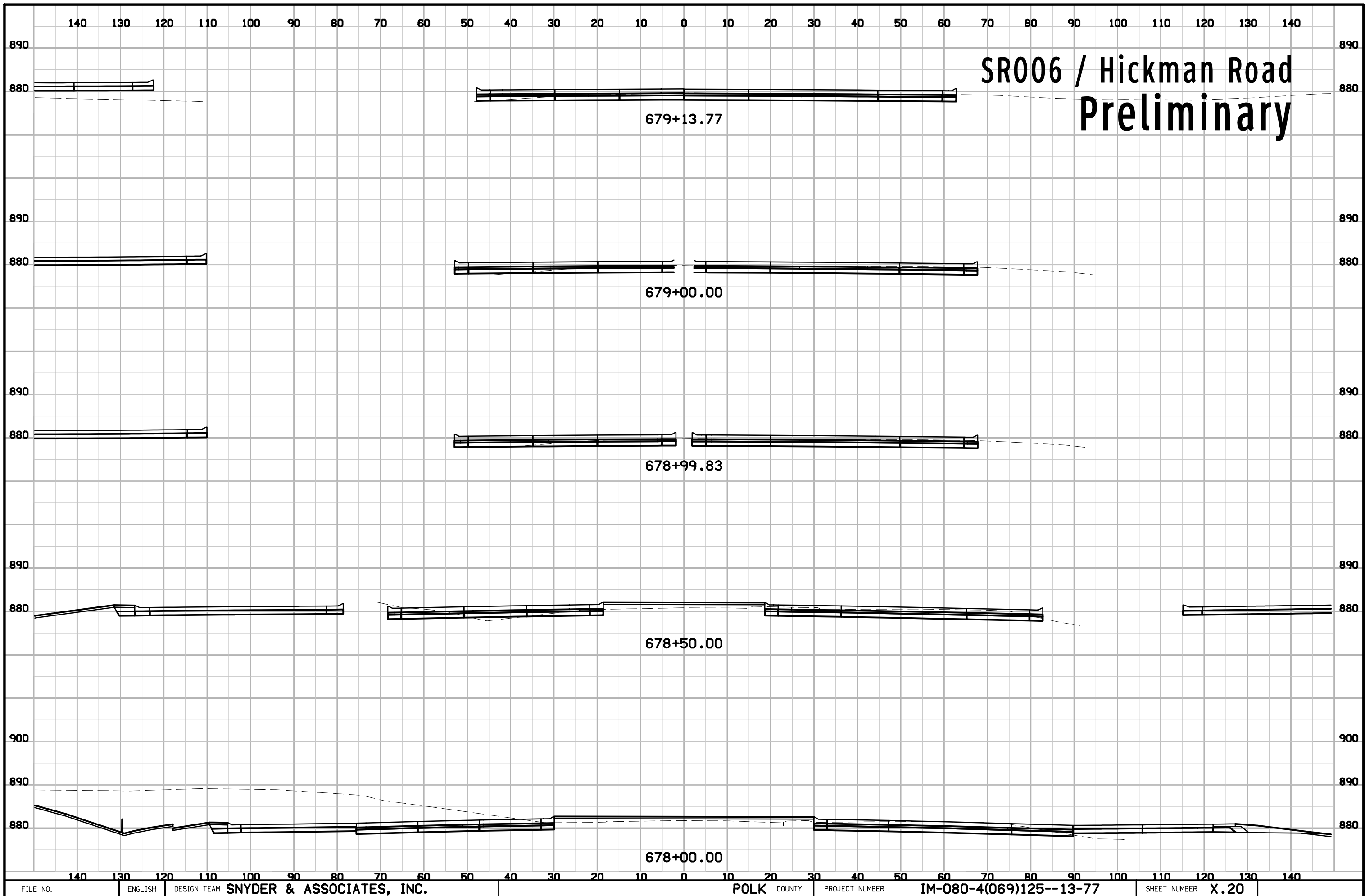




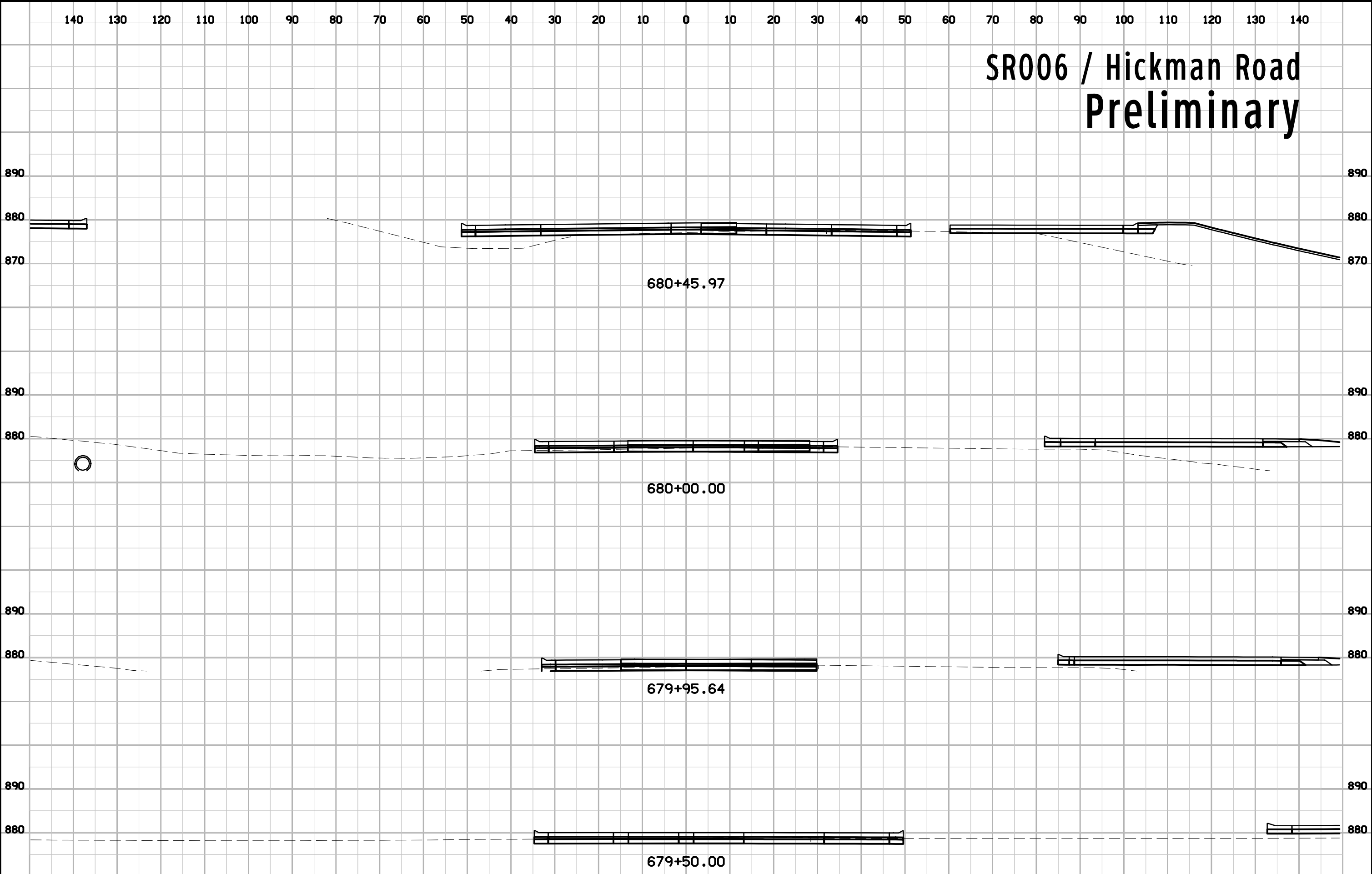
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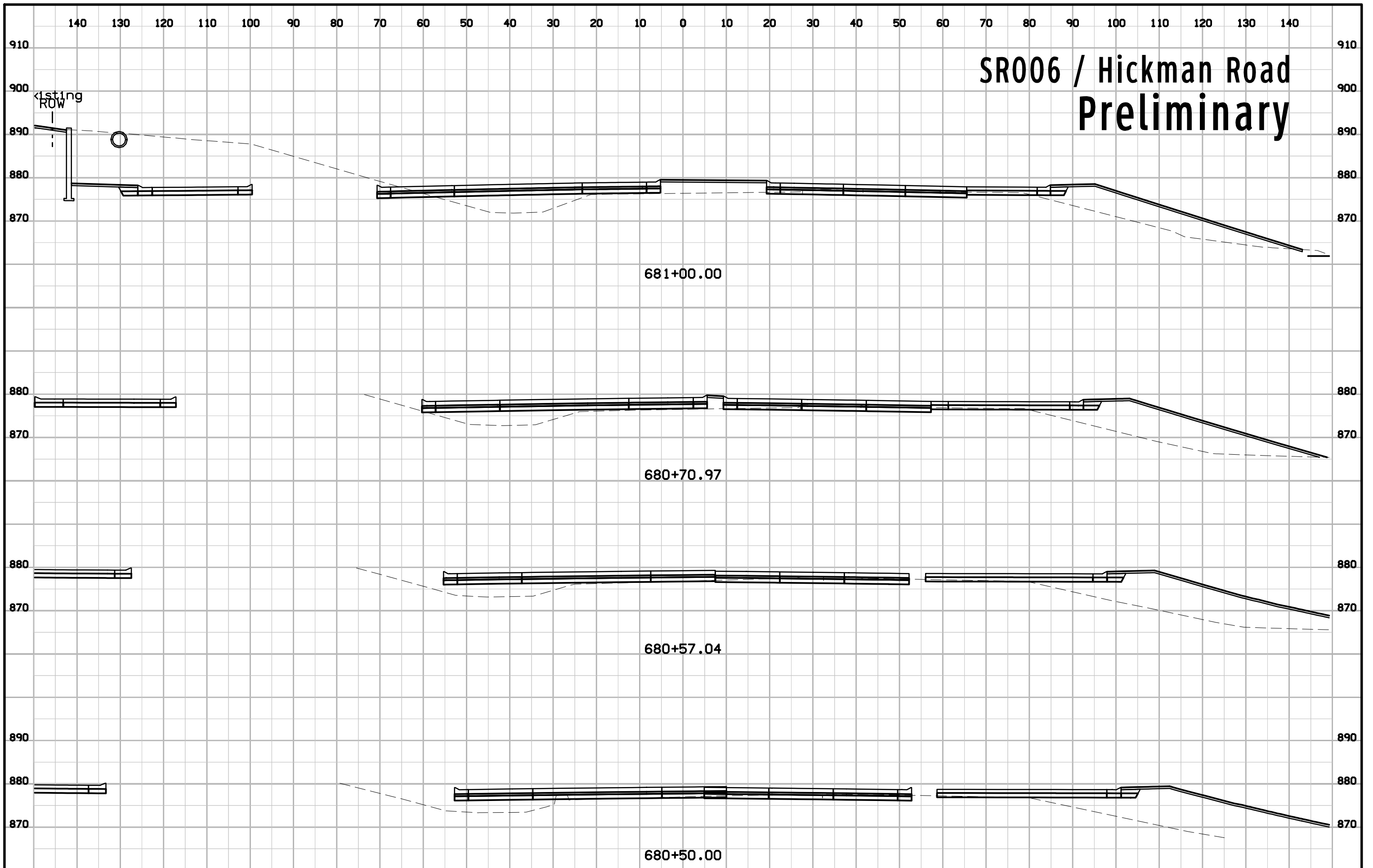




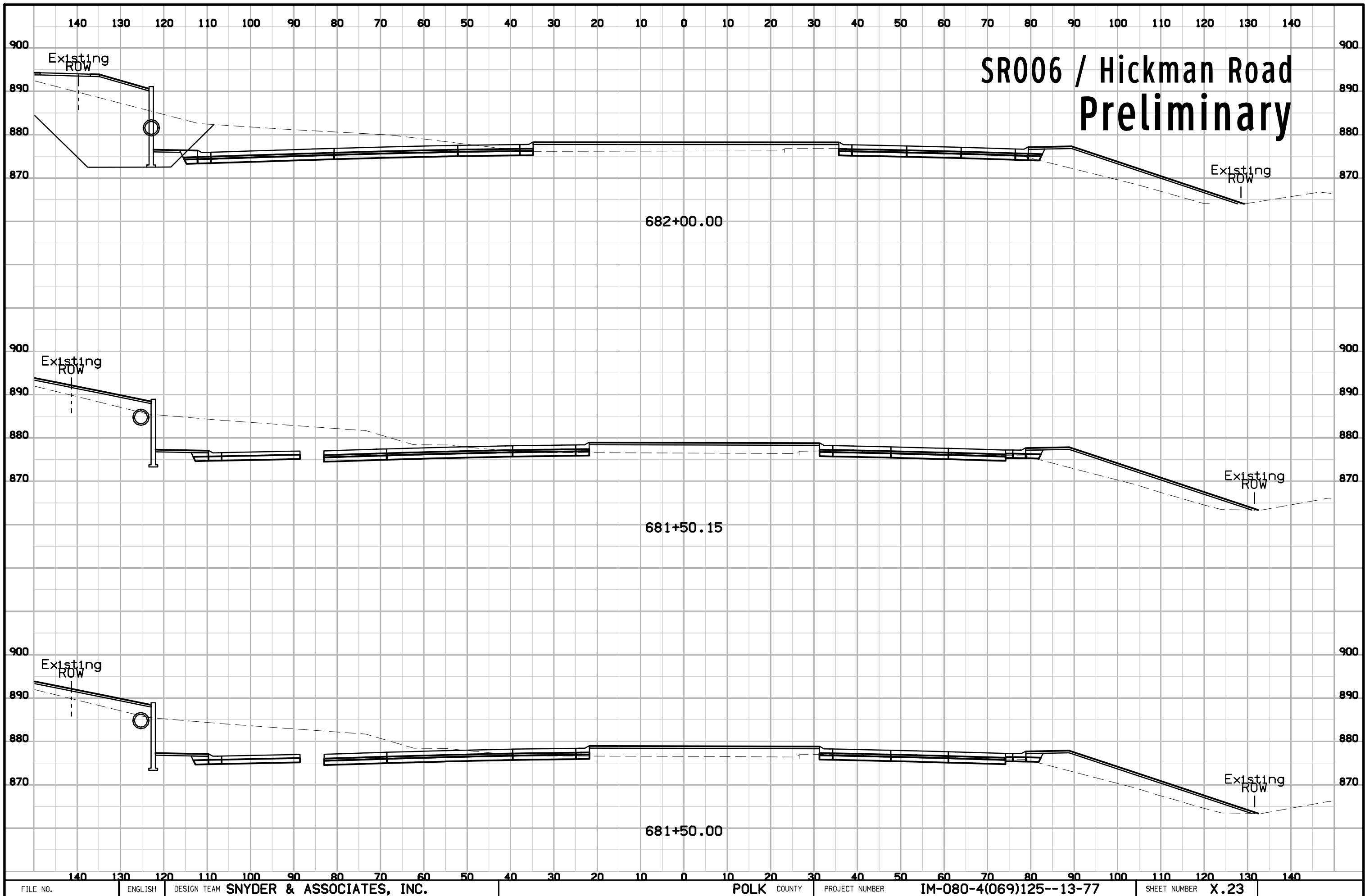
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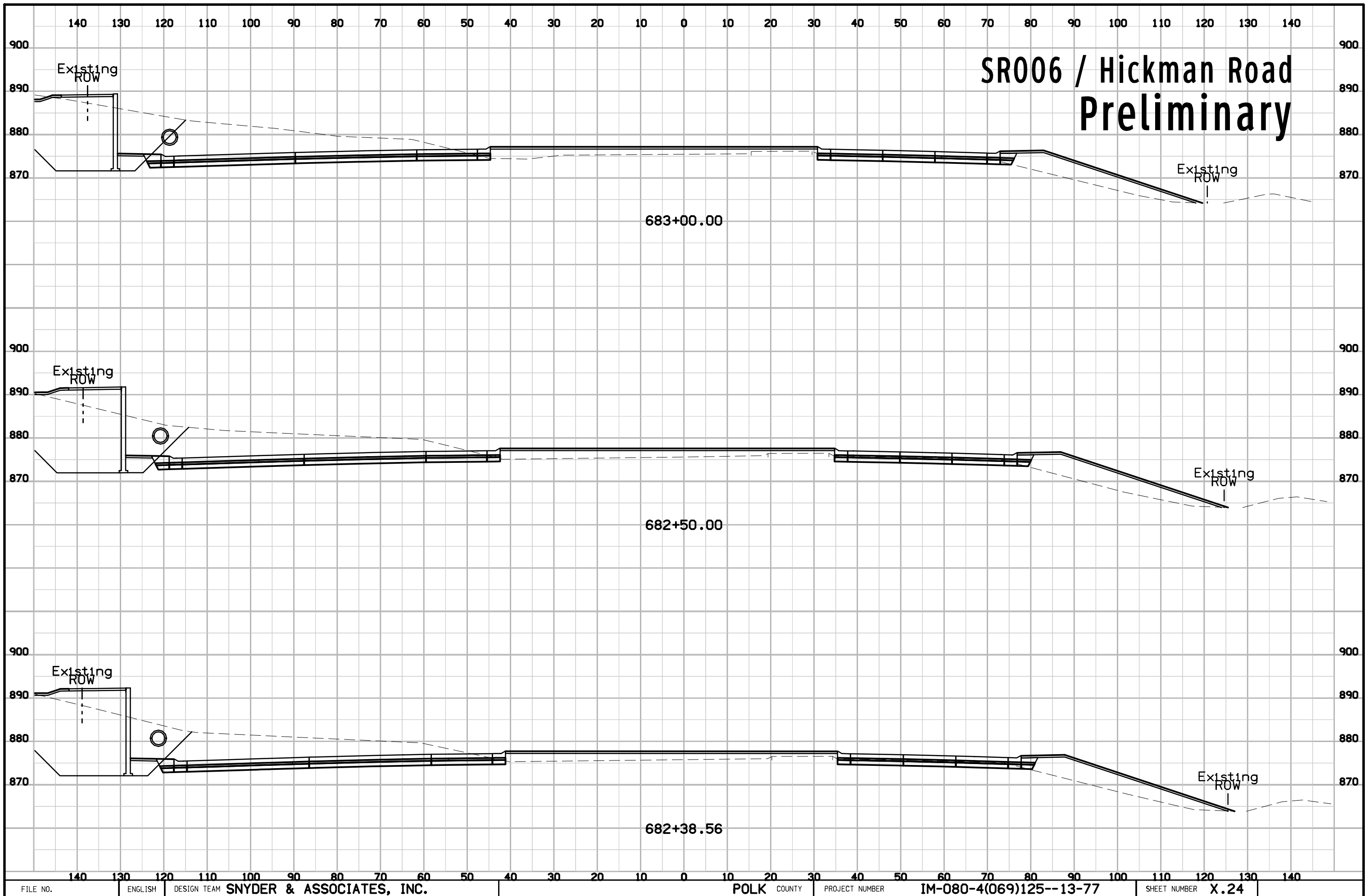


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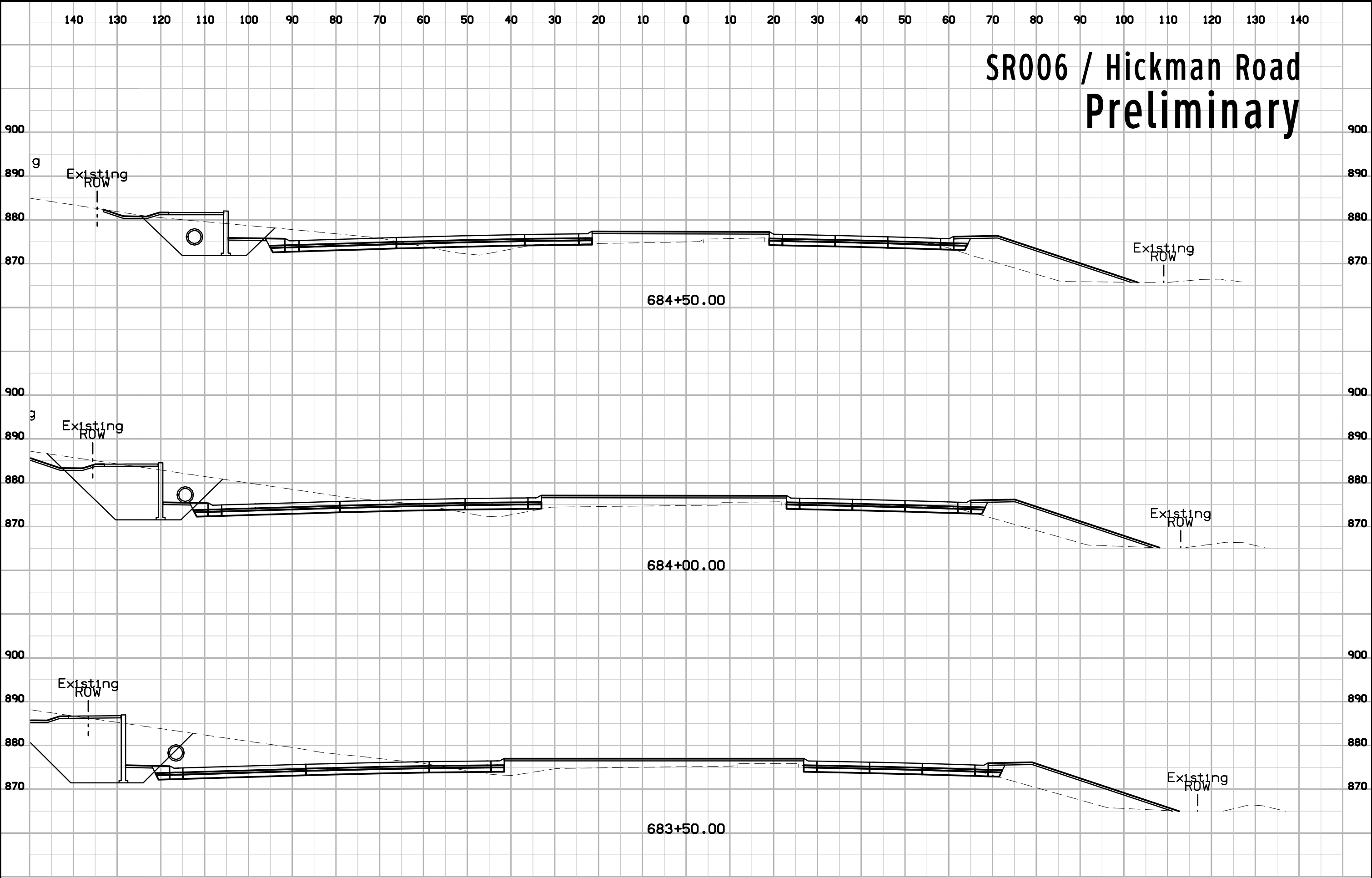




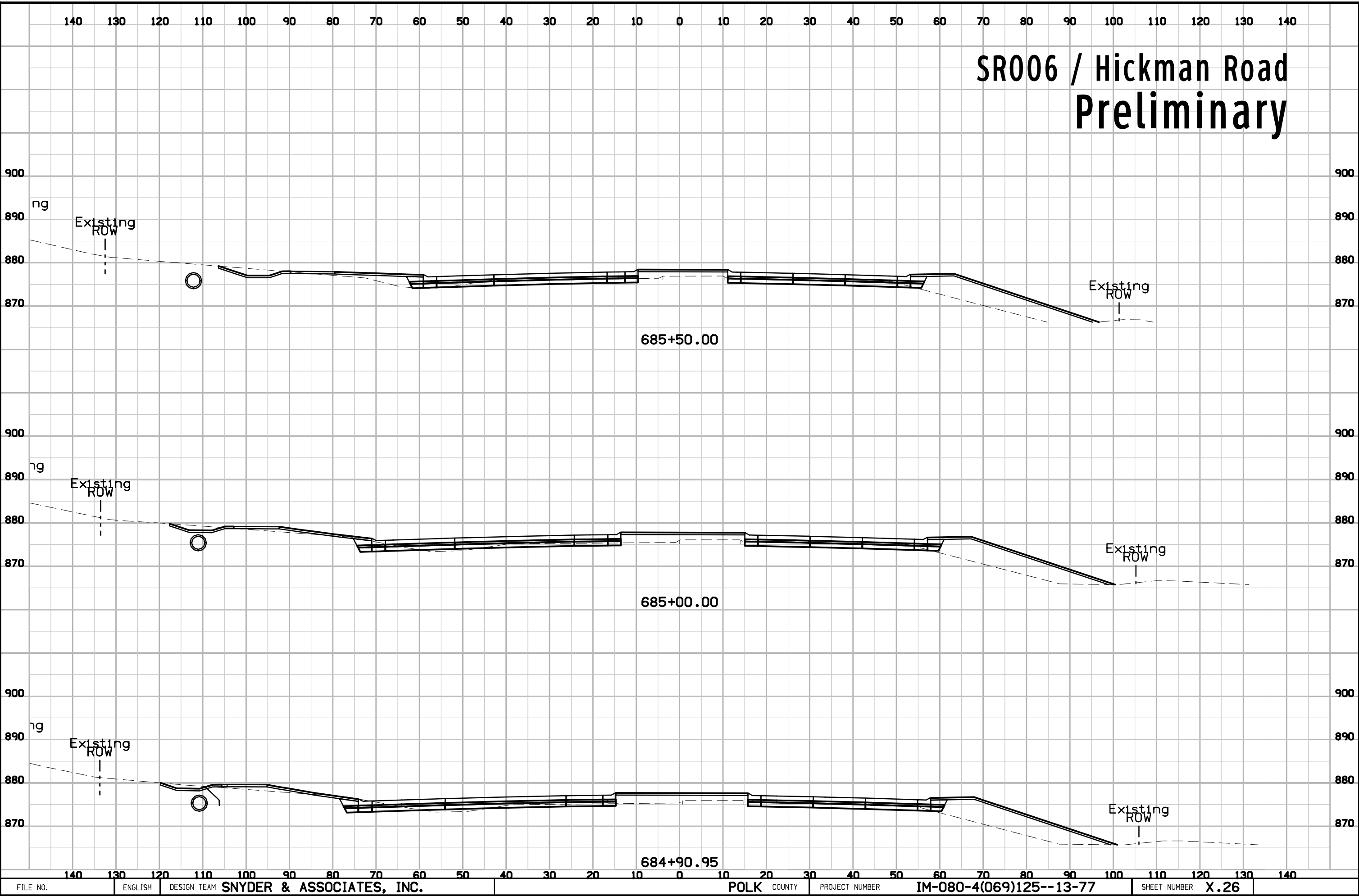




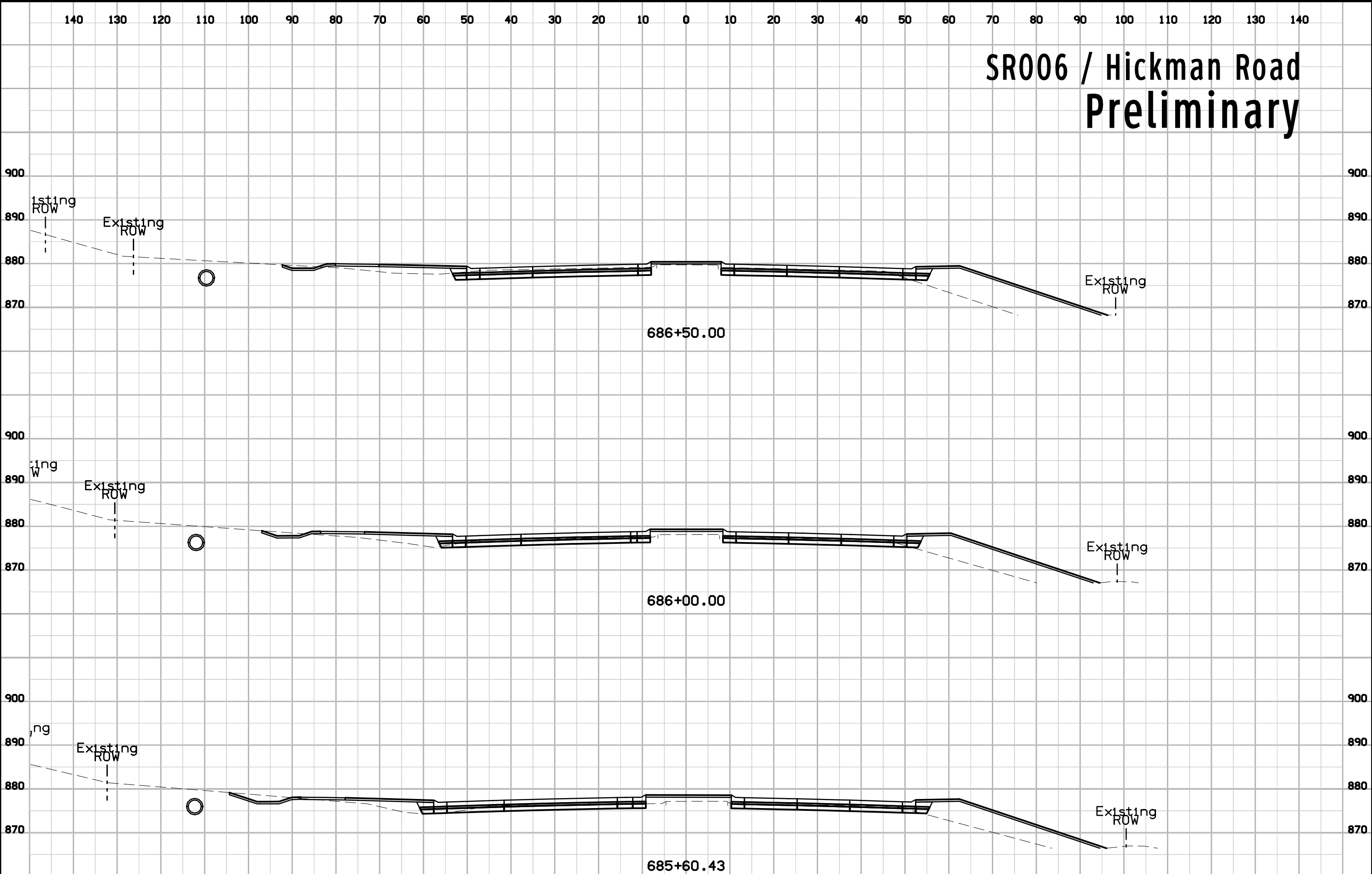
# SR006 / Hickman Road Preliminary



# SR006 / Hickman Road Preliminary

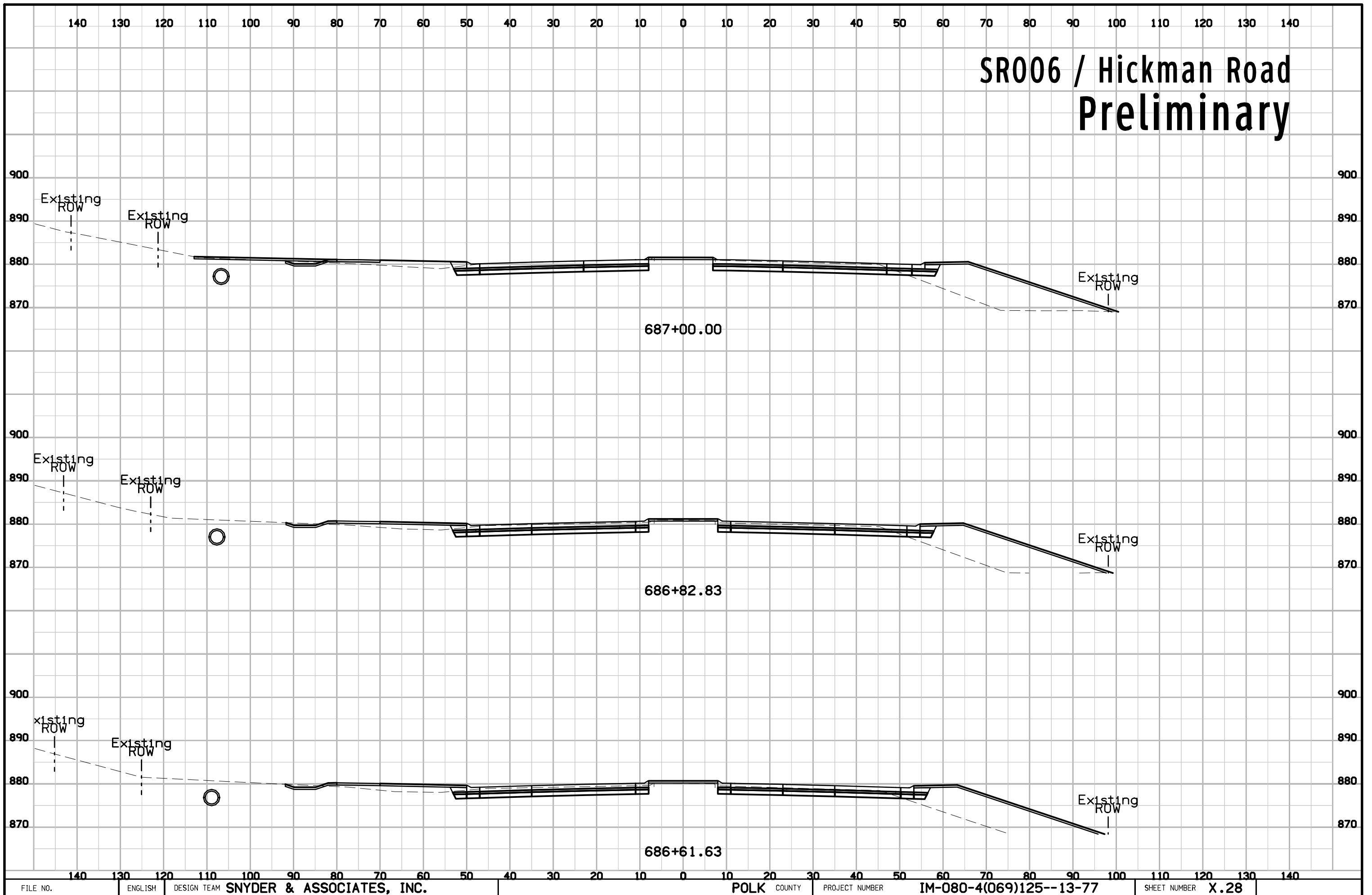


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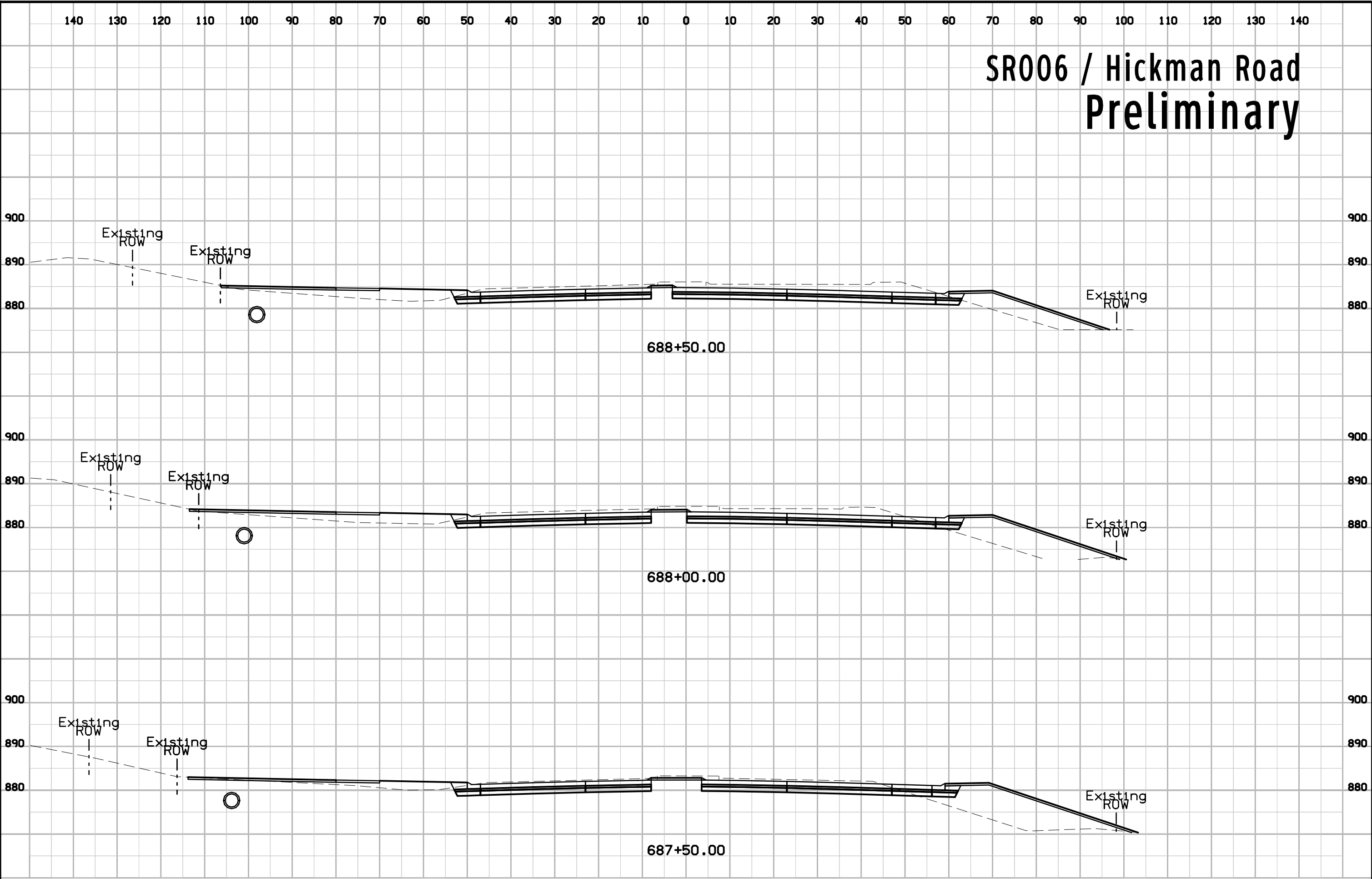


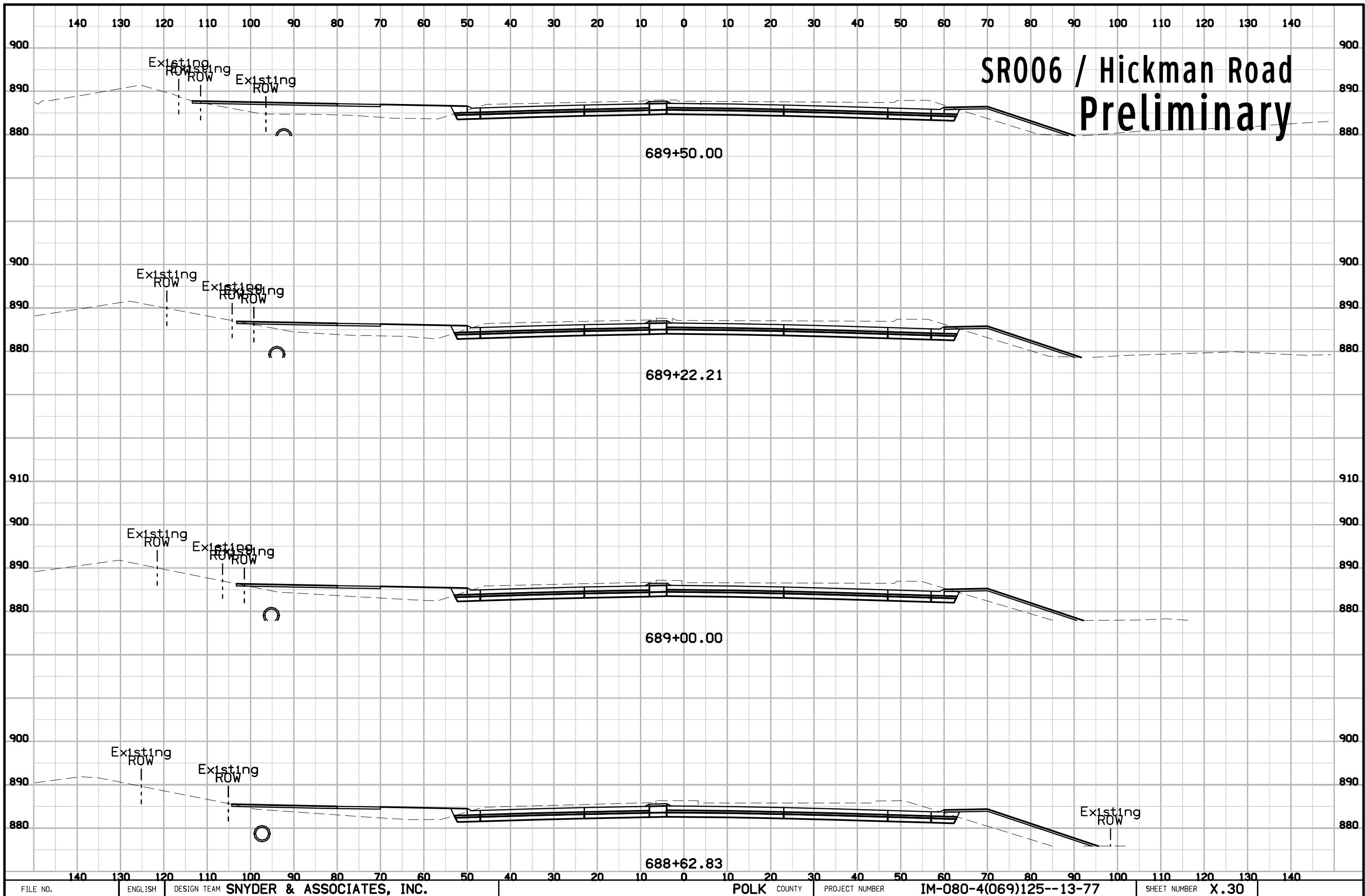


# SR006 / Hickman Road Preliminary



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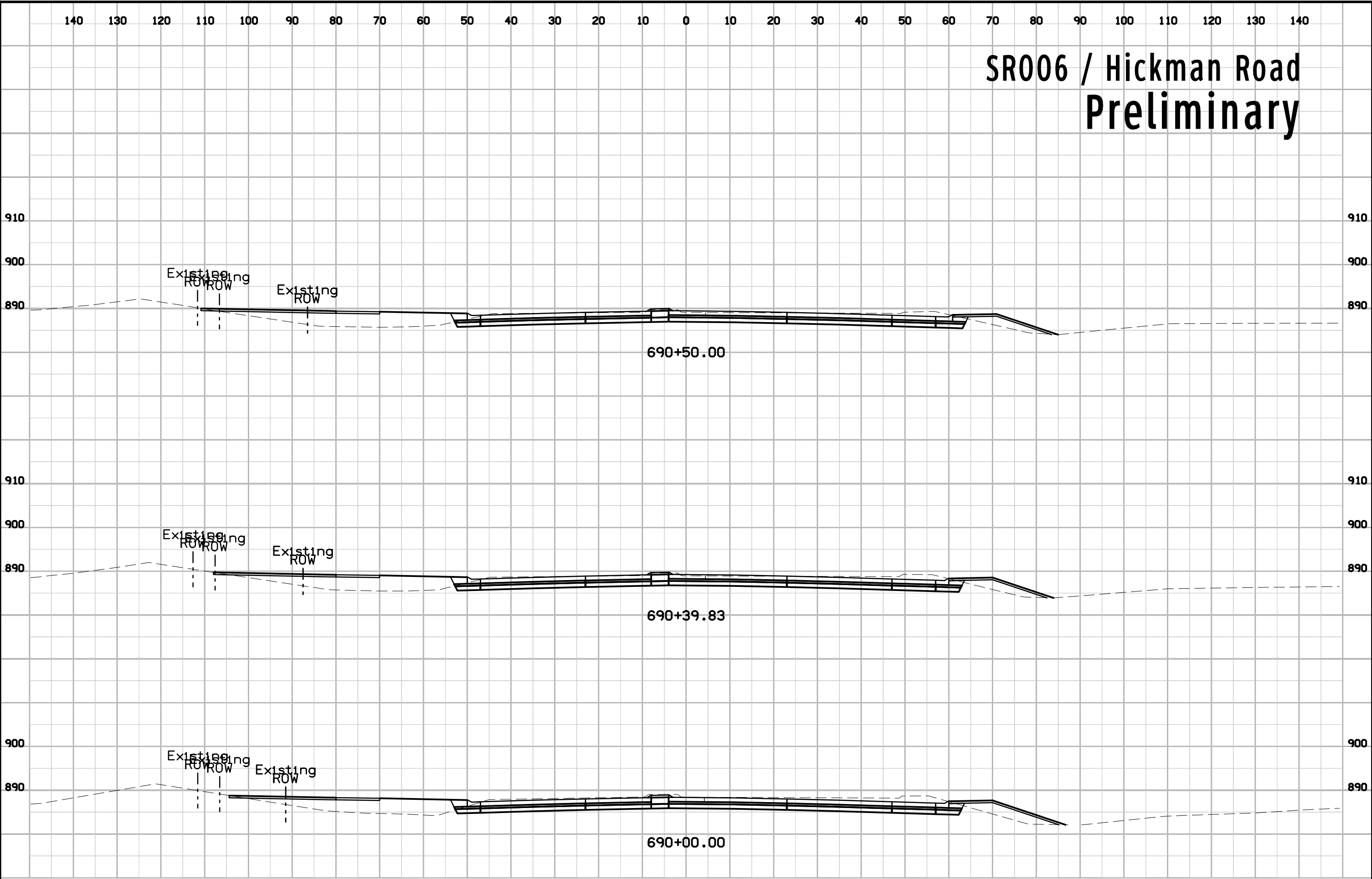
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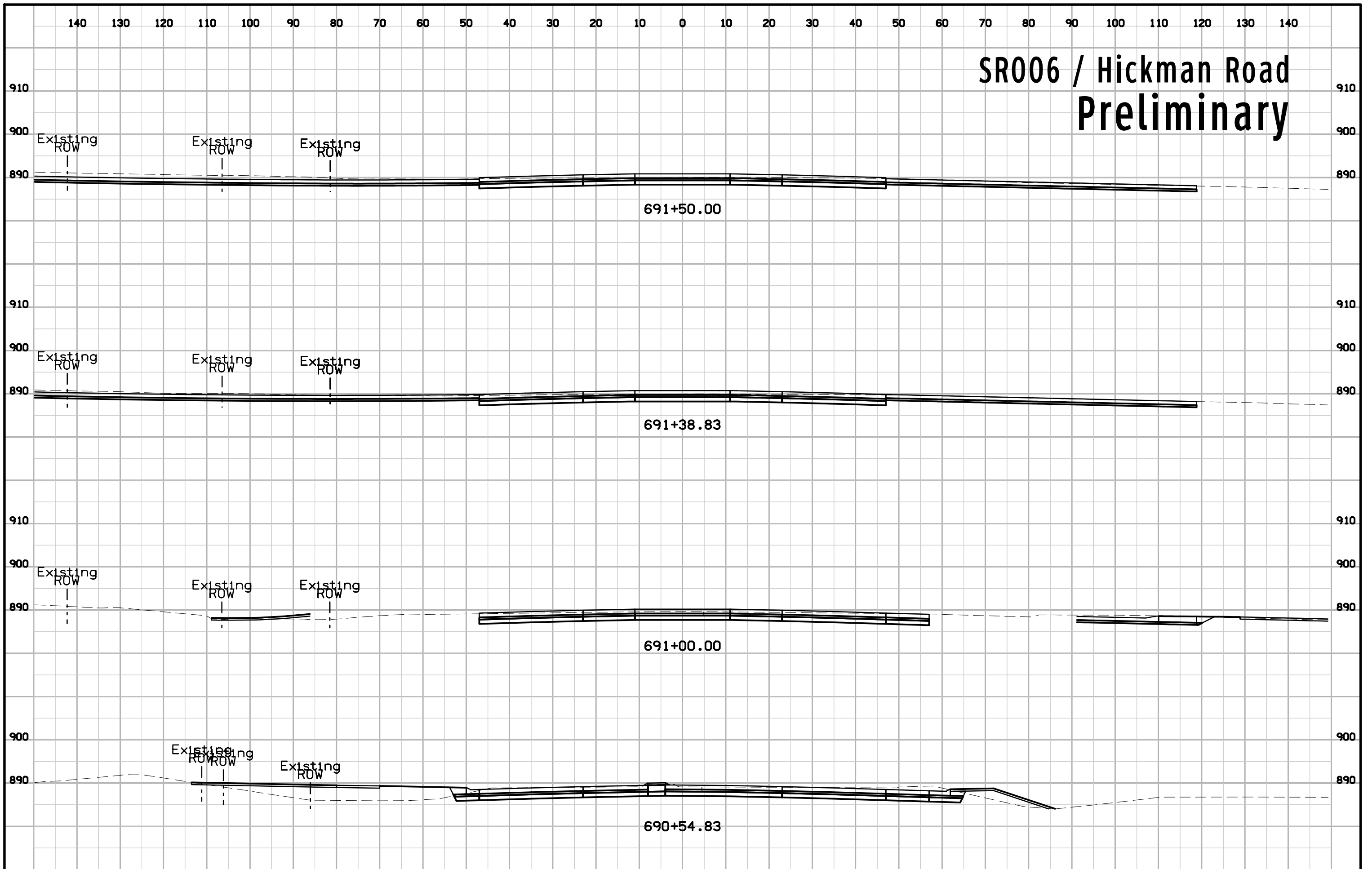
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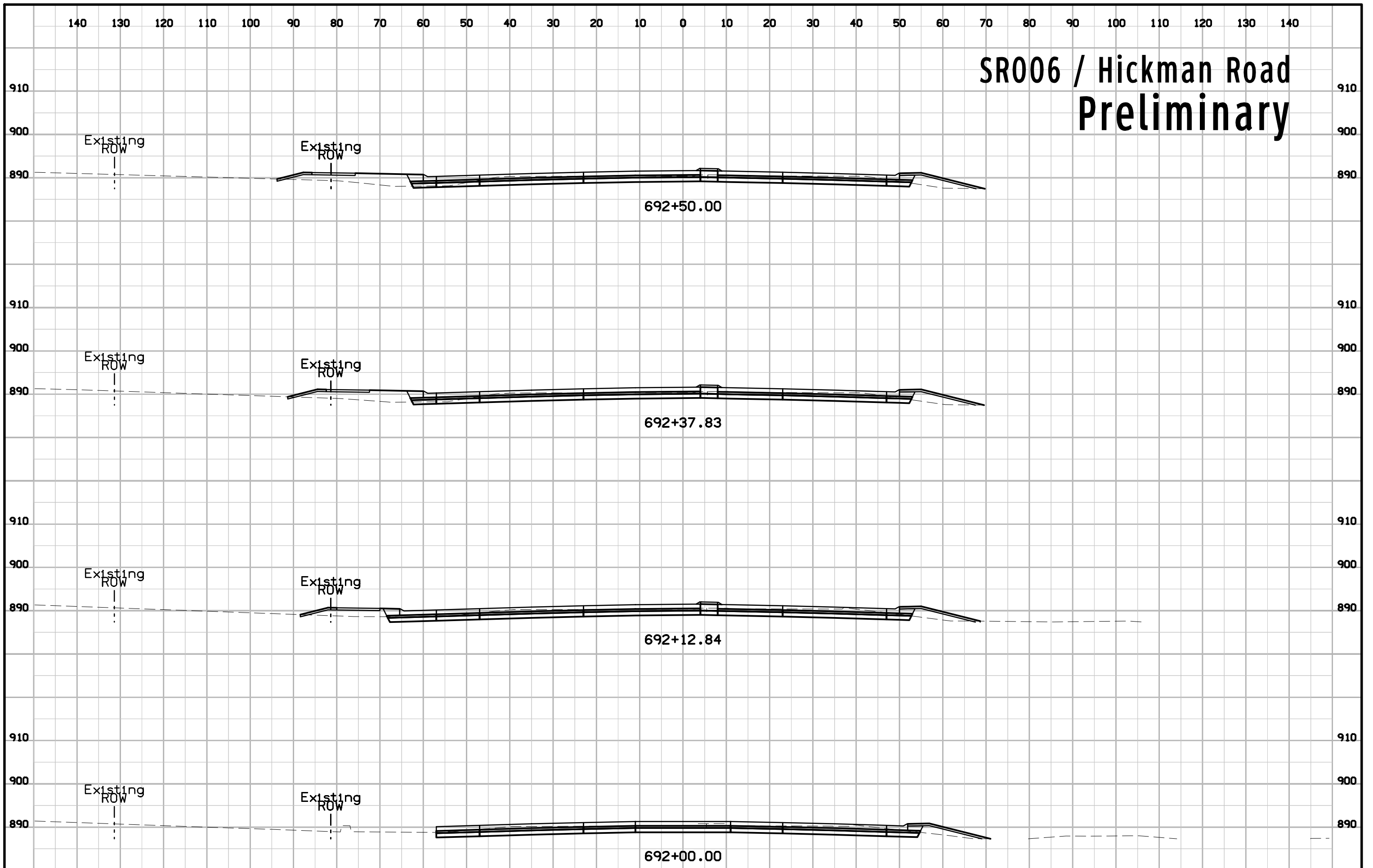


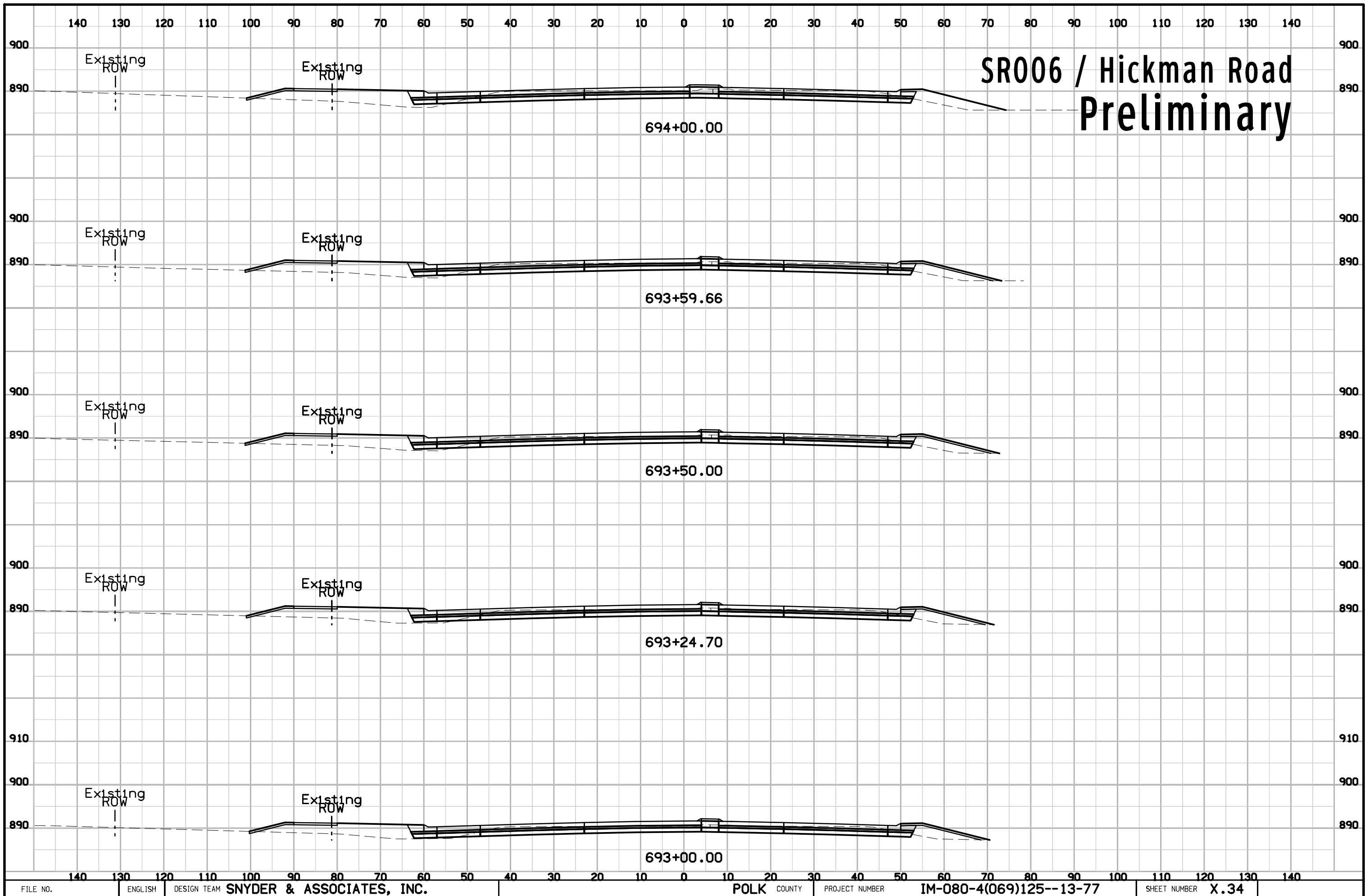
# SR006 / Hickman Road Preliminary





# SR006 / Hickman Road Preliminary





# SR006 / Hickman Road Preliminary

694+00.00

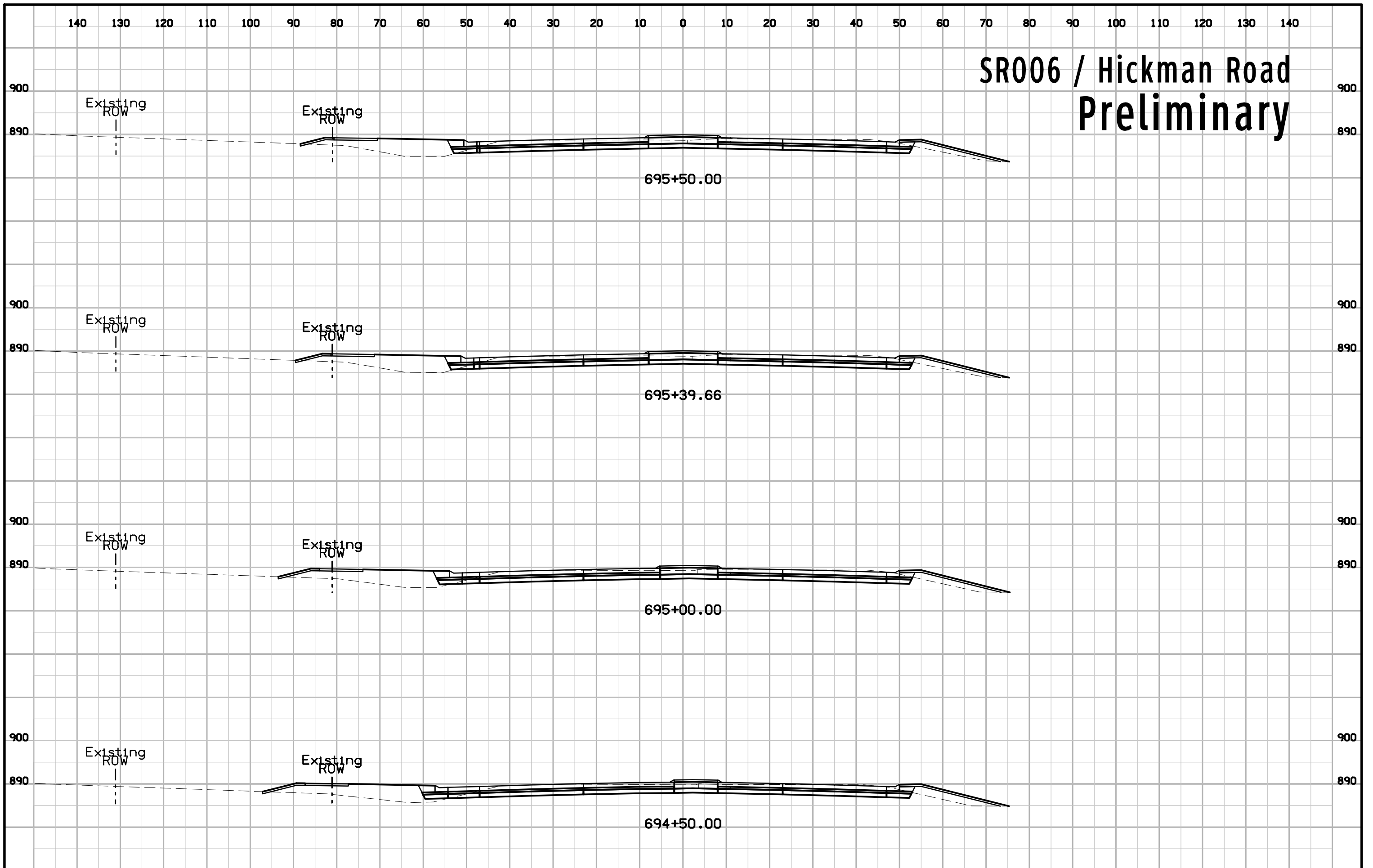
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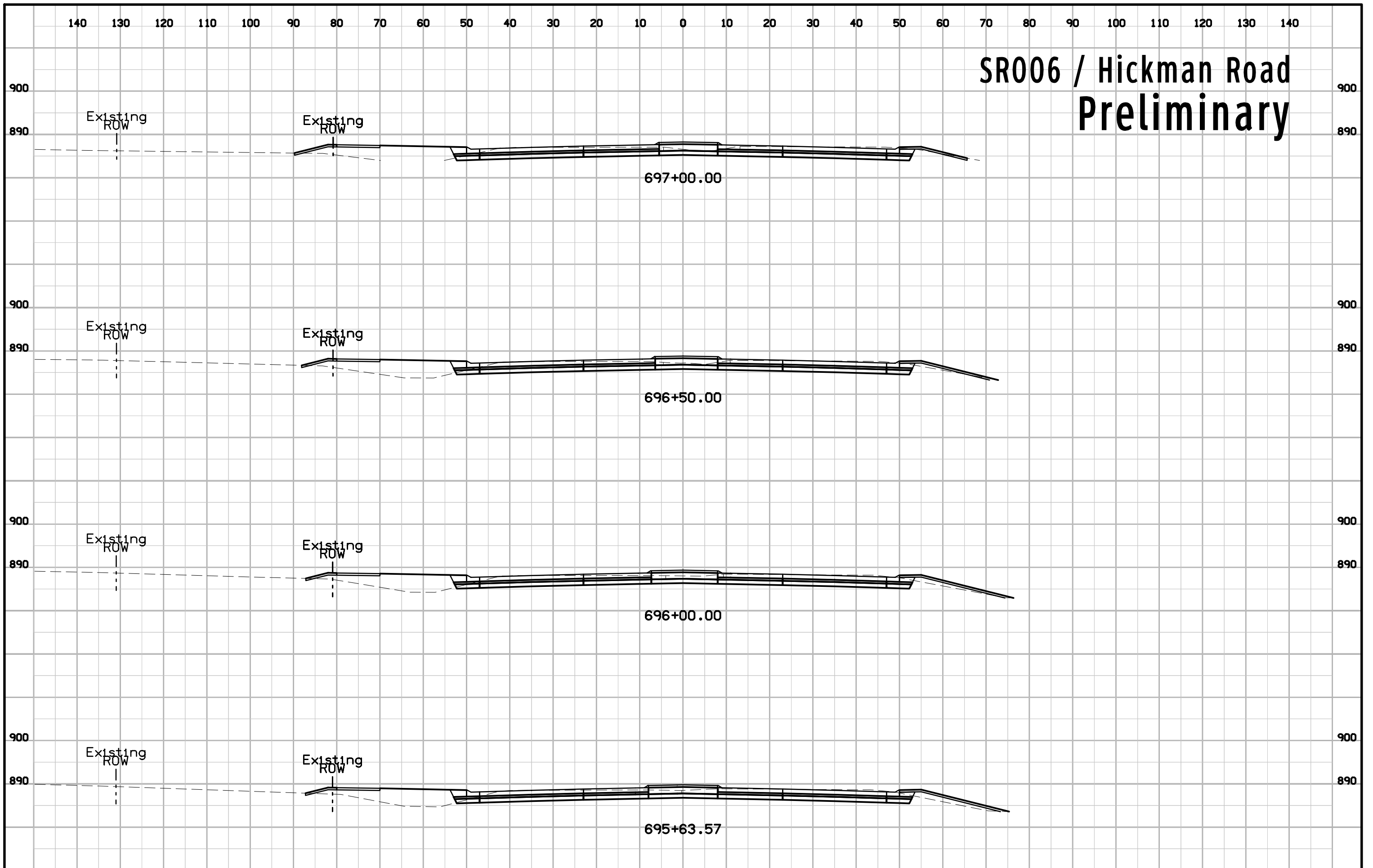
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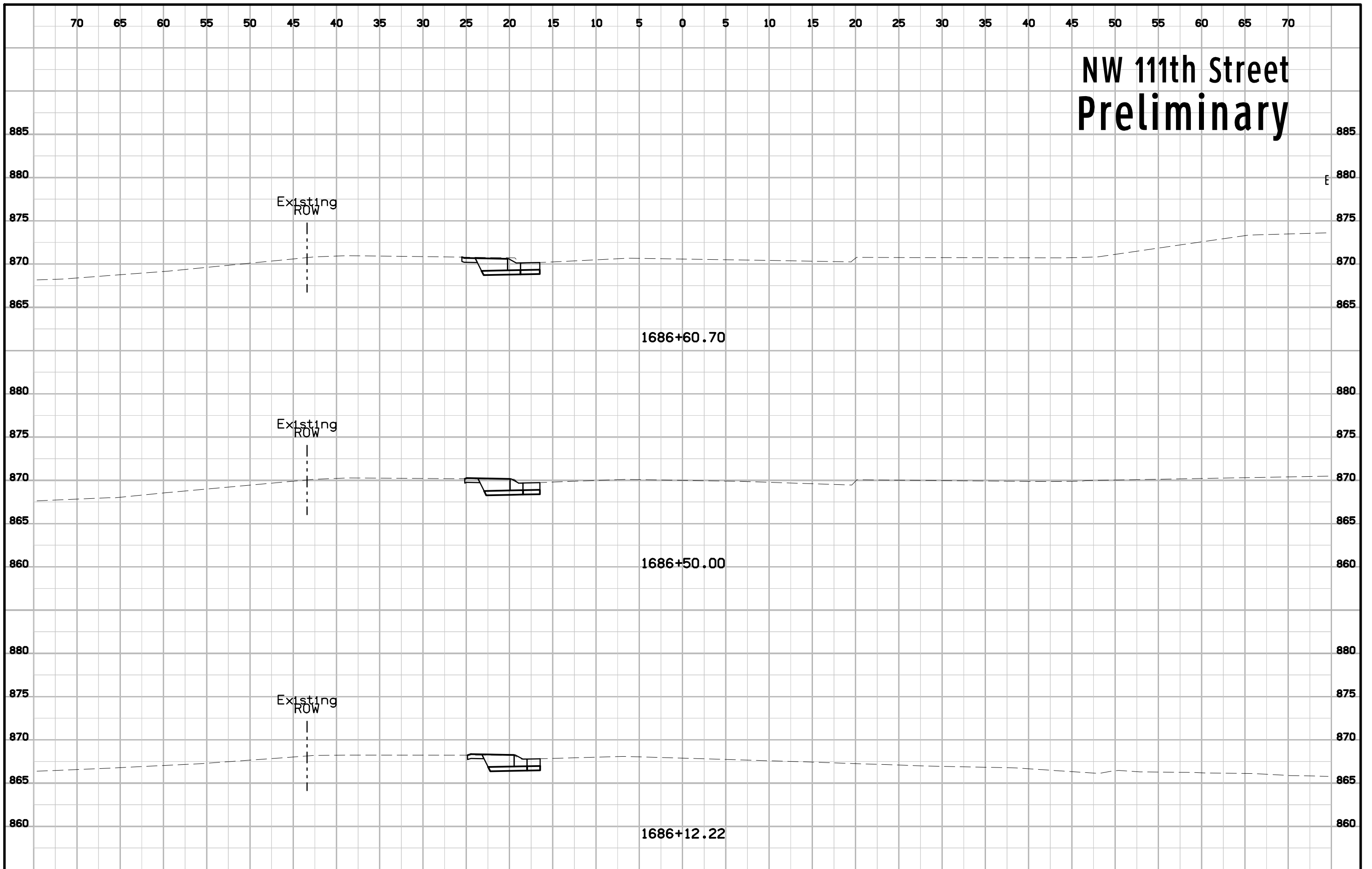
# SR006 / Hickman Road Preliminary



# SR006 / Hickman Road Preliminary

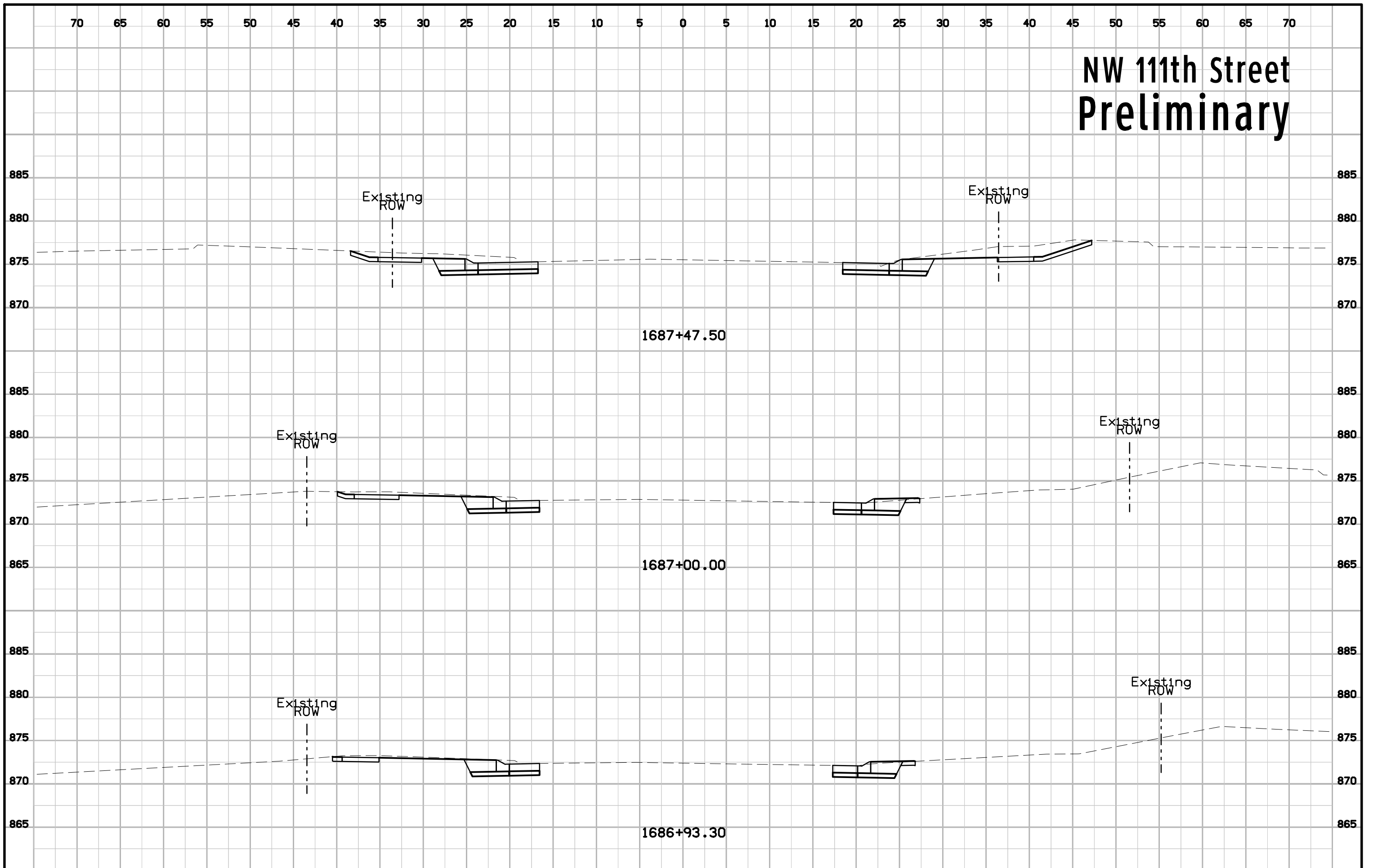


# NW 111th Street Preliminary

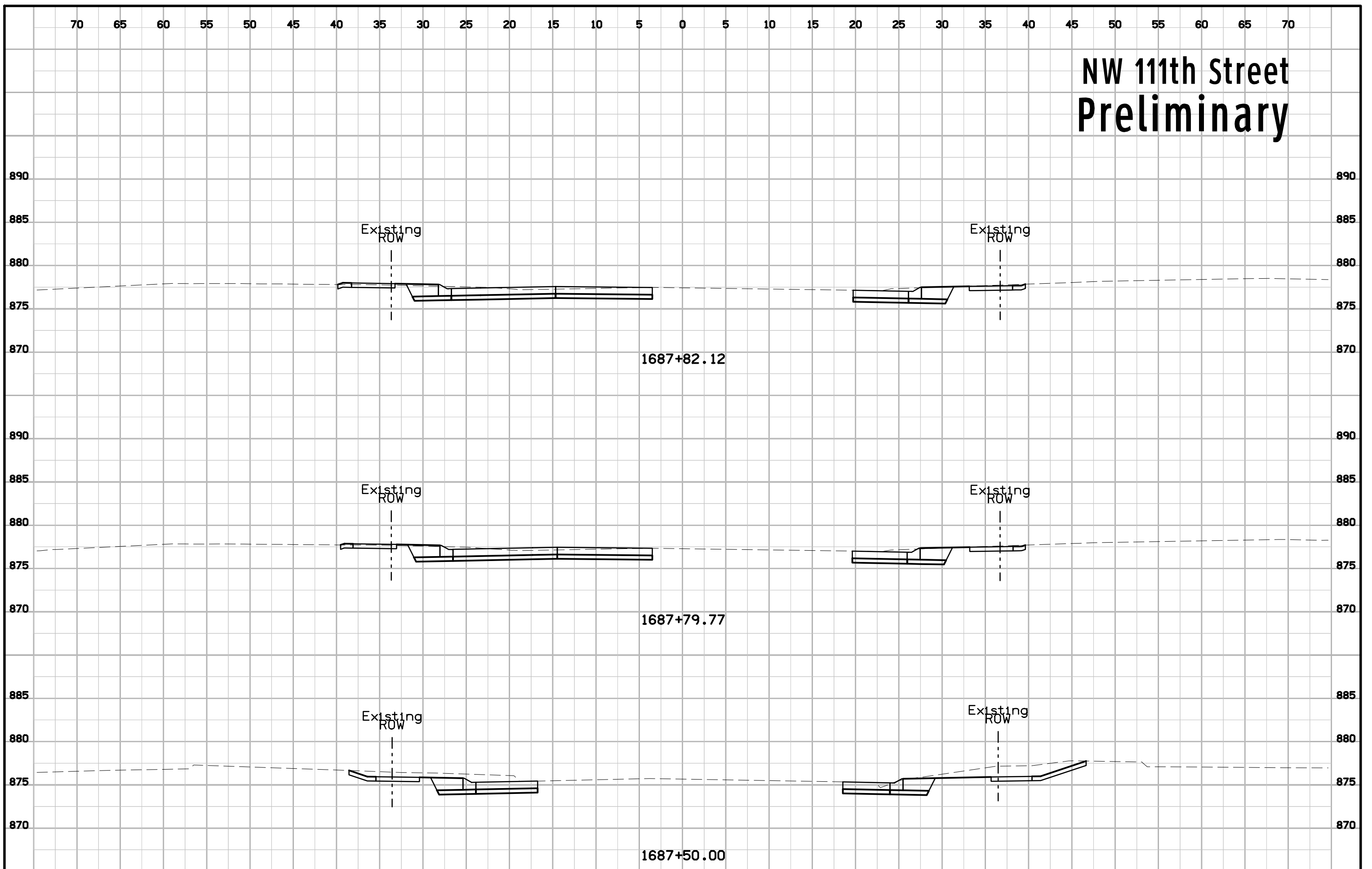




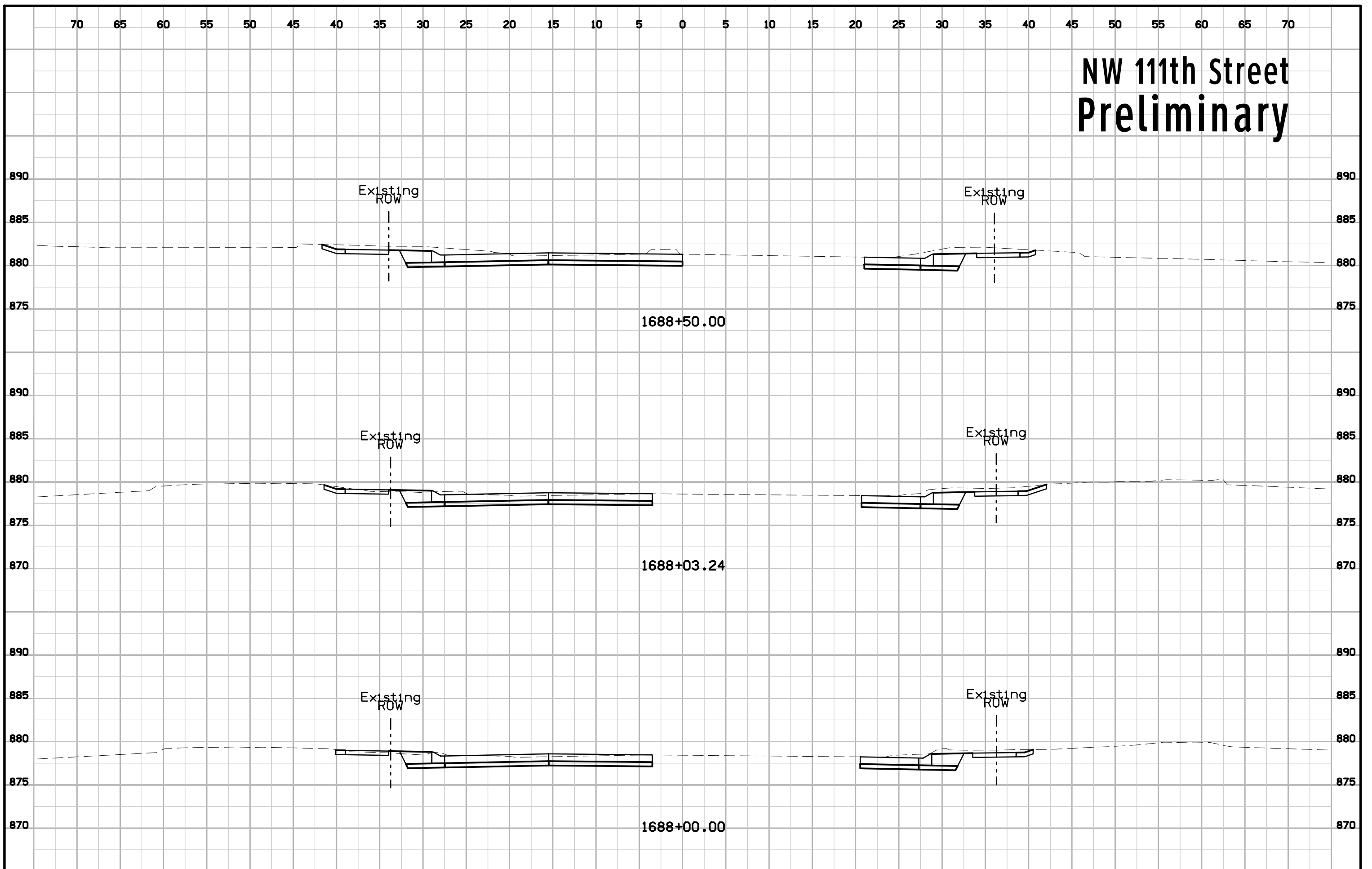
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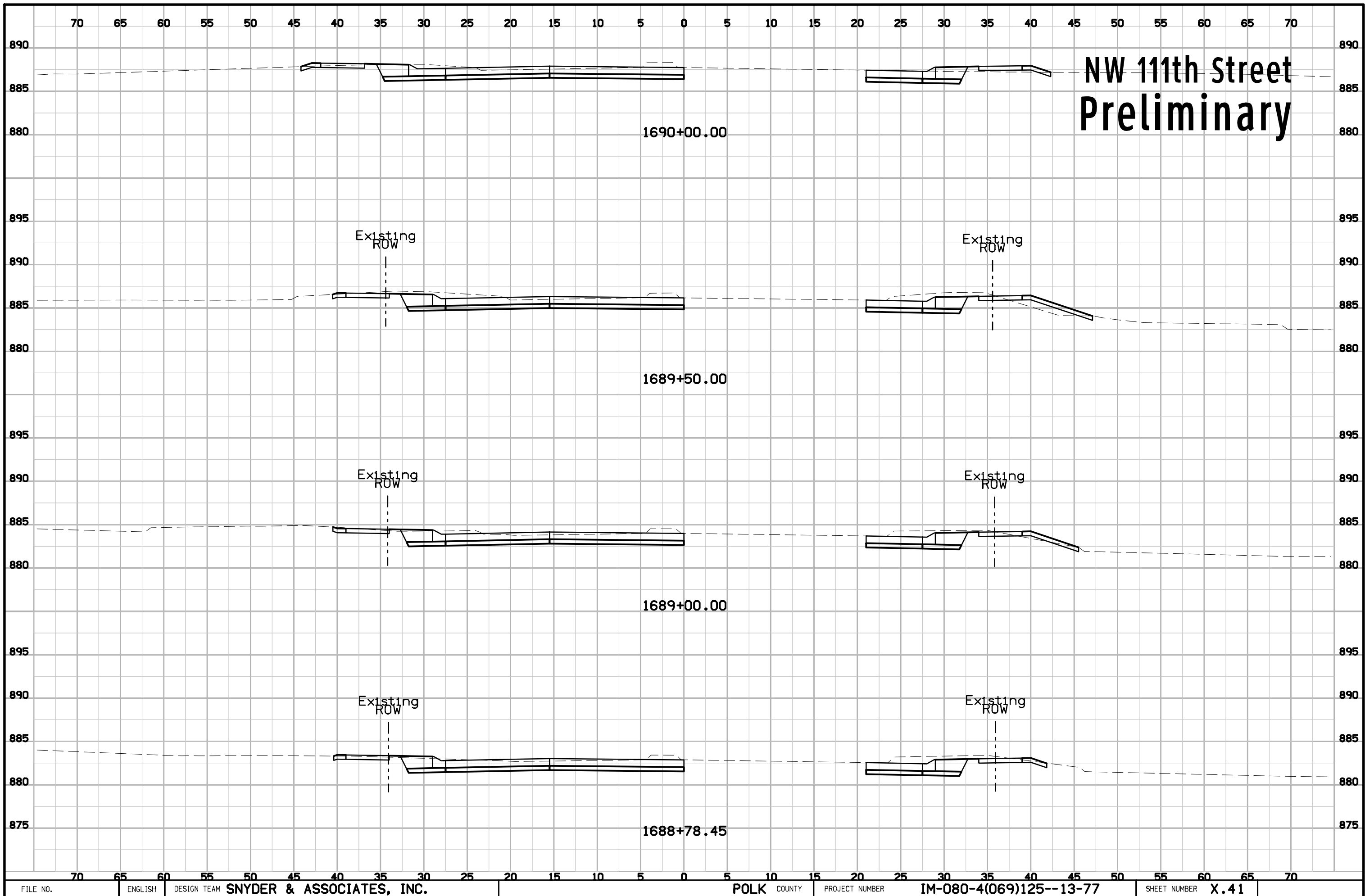


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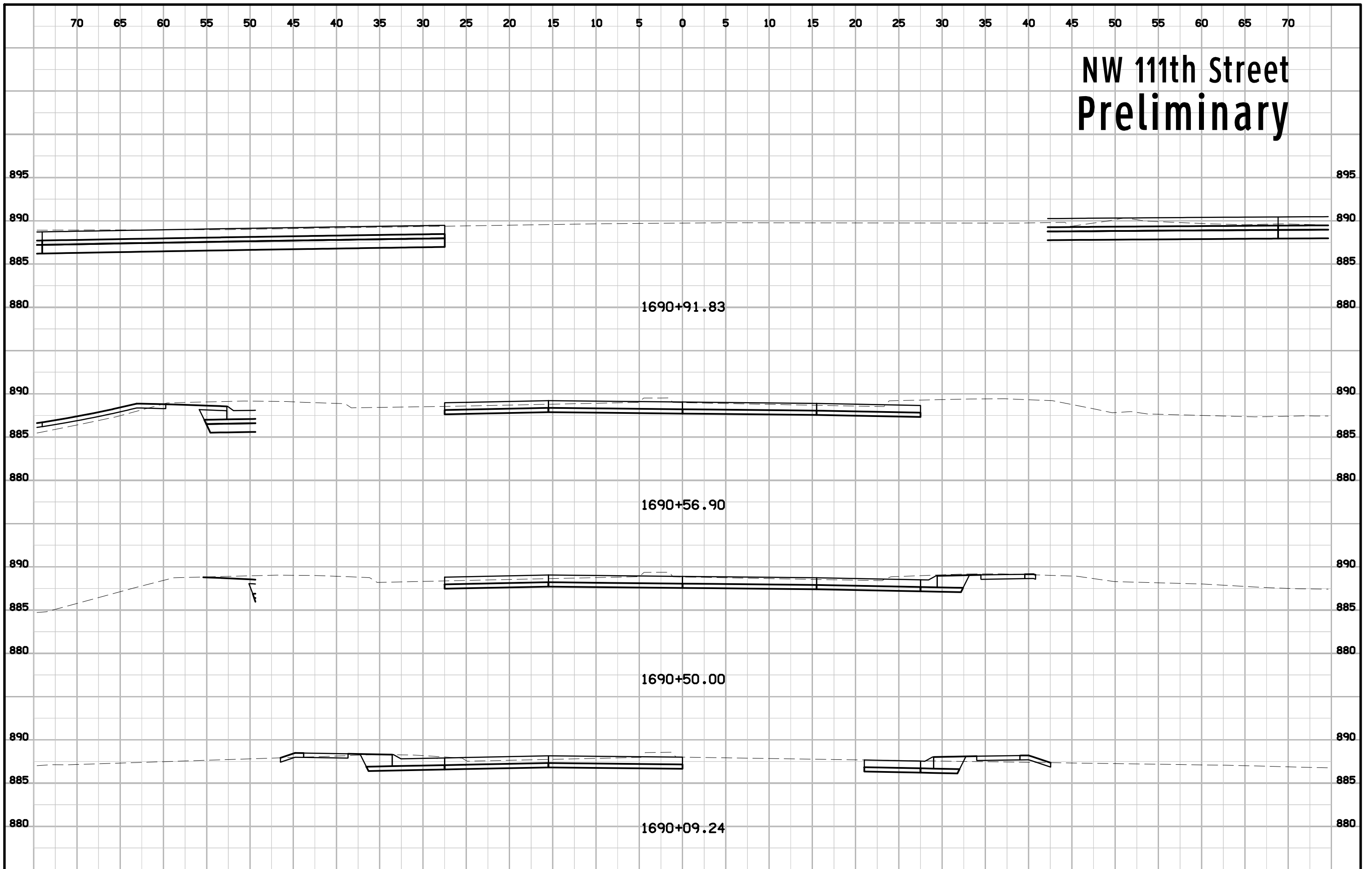


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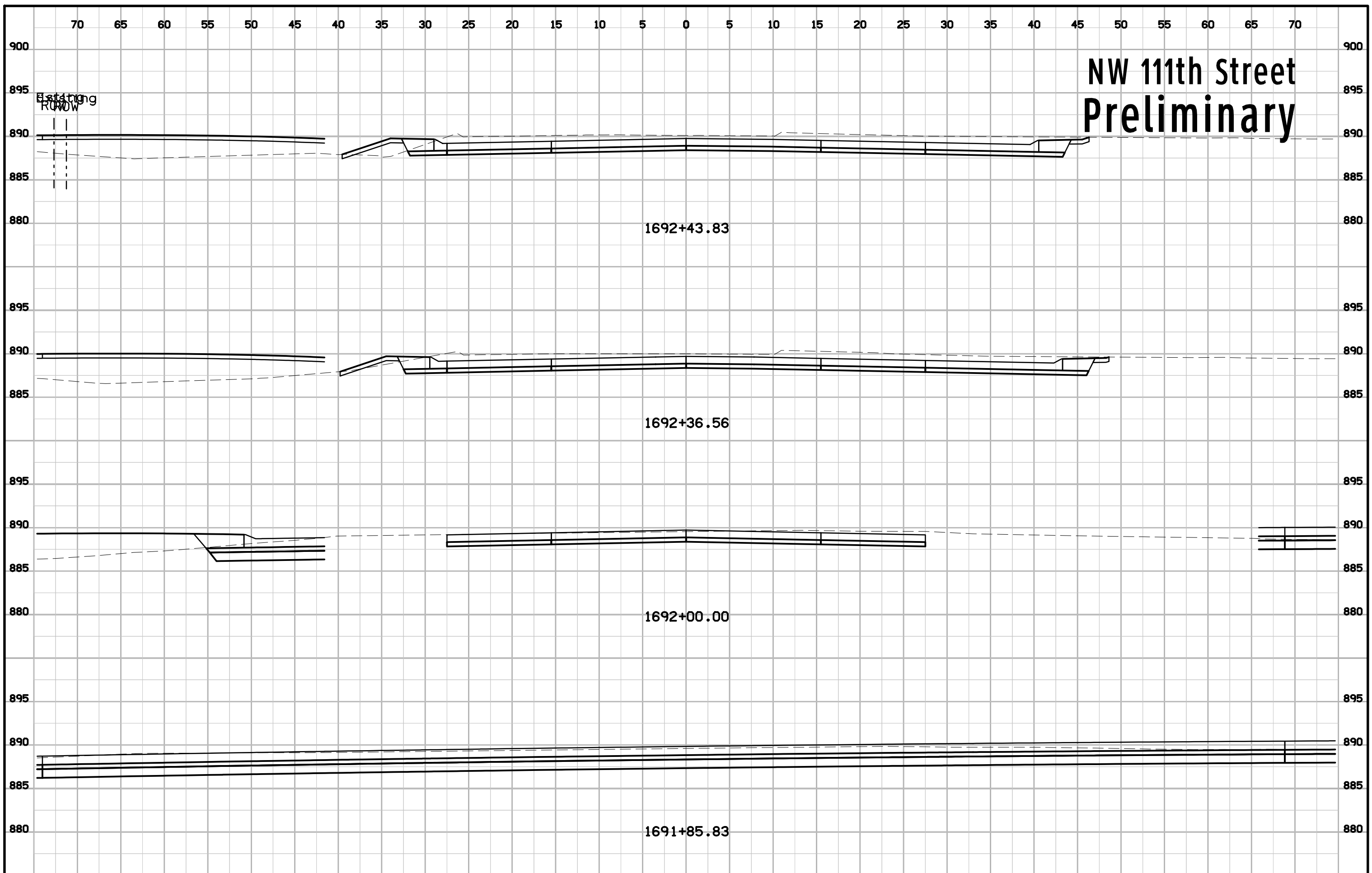


# NW 111th Street Preliminary

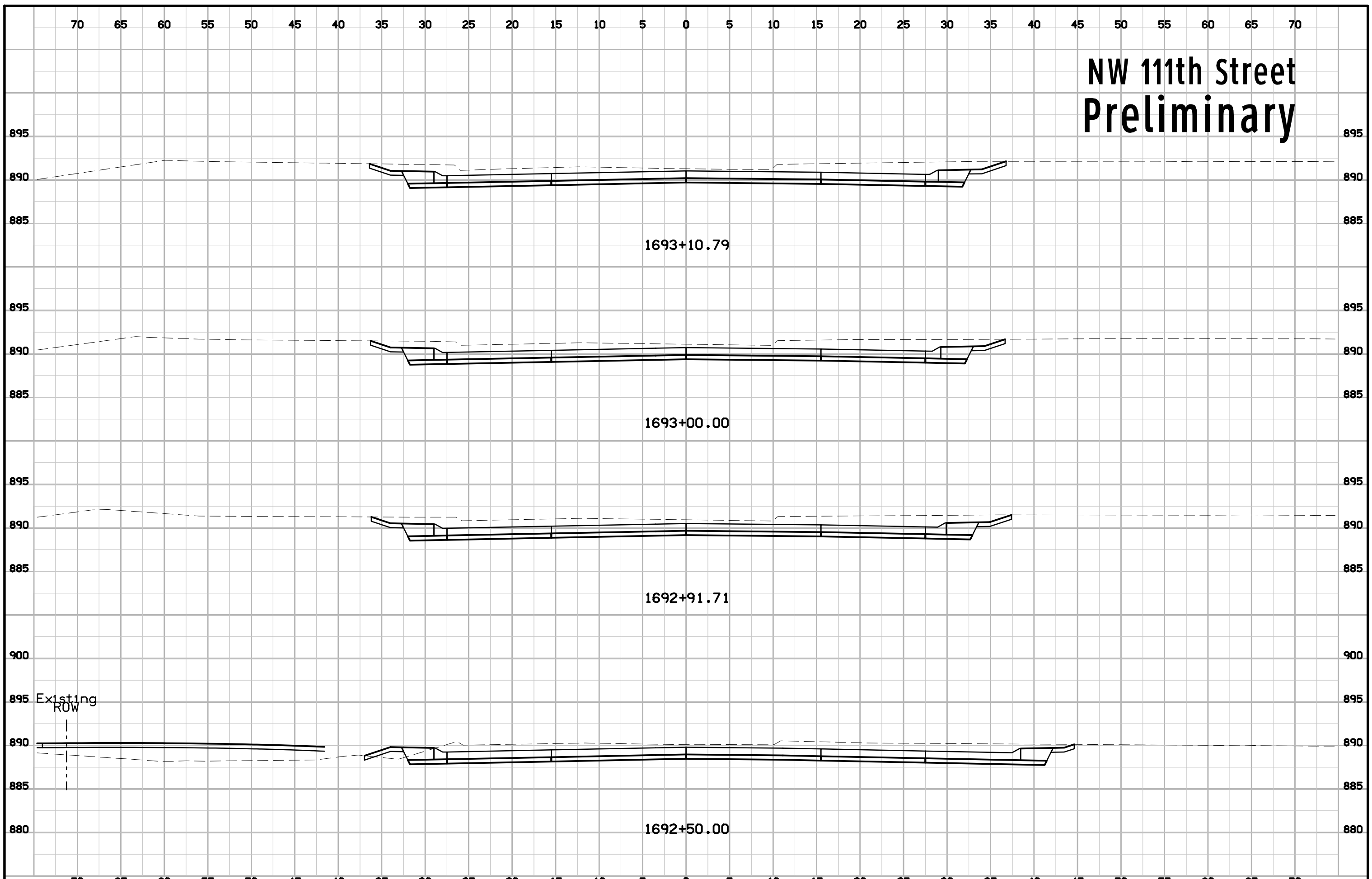




# NW 111th Street Preliminary

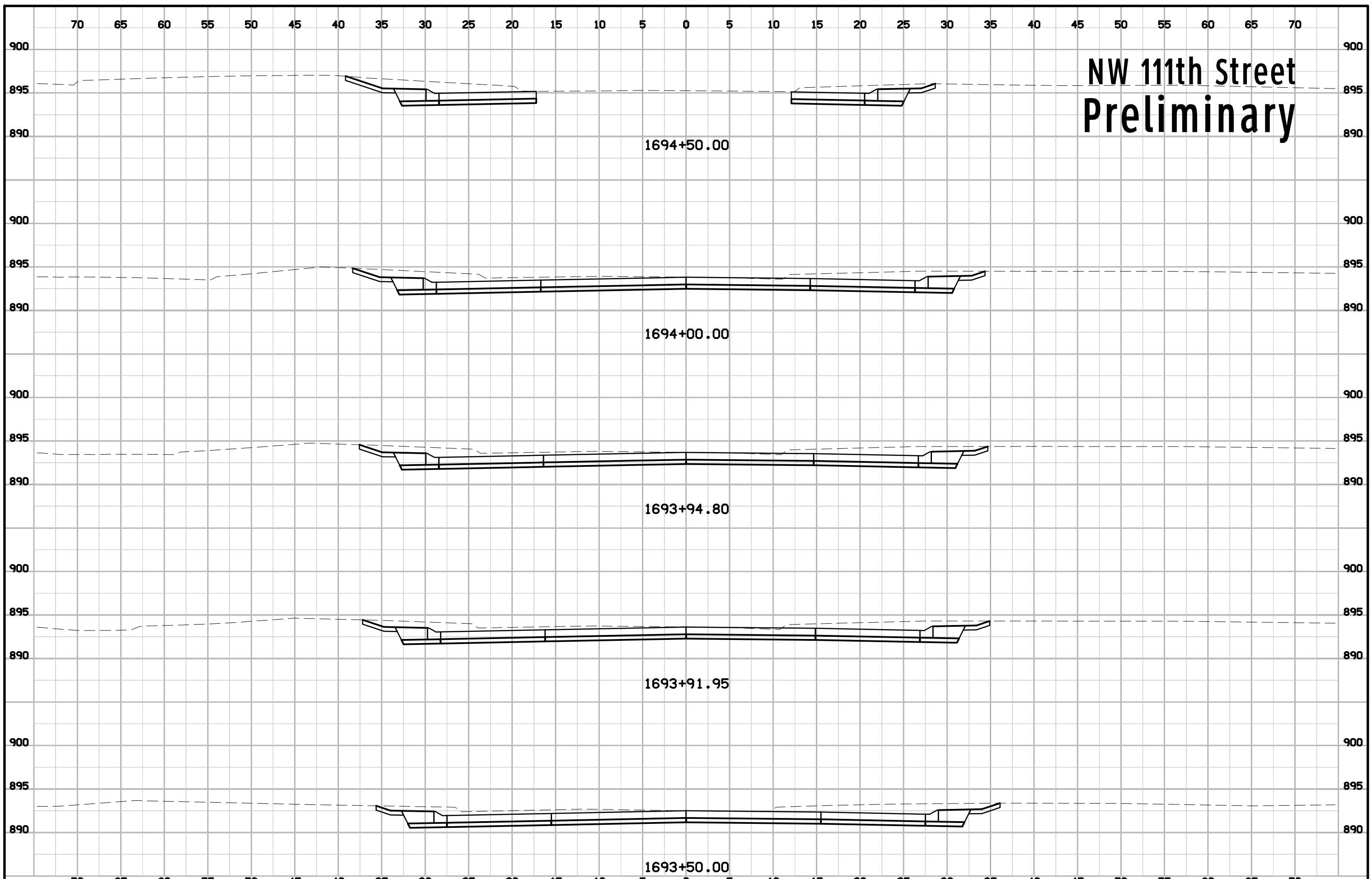


# NW 111th Street Preliminary

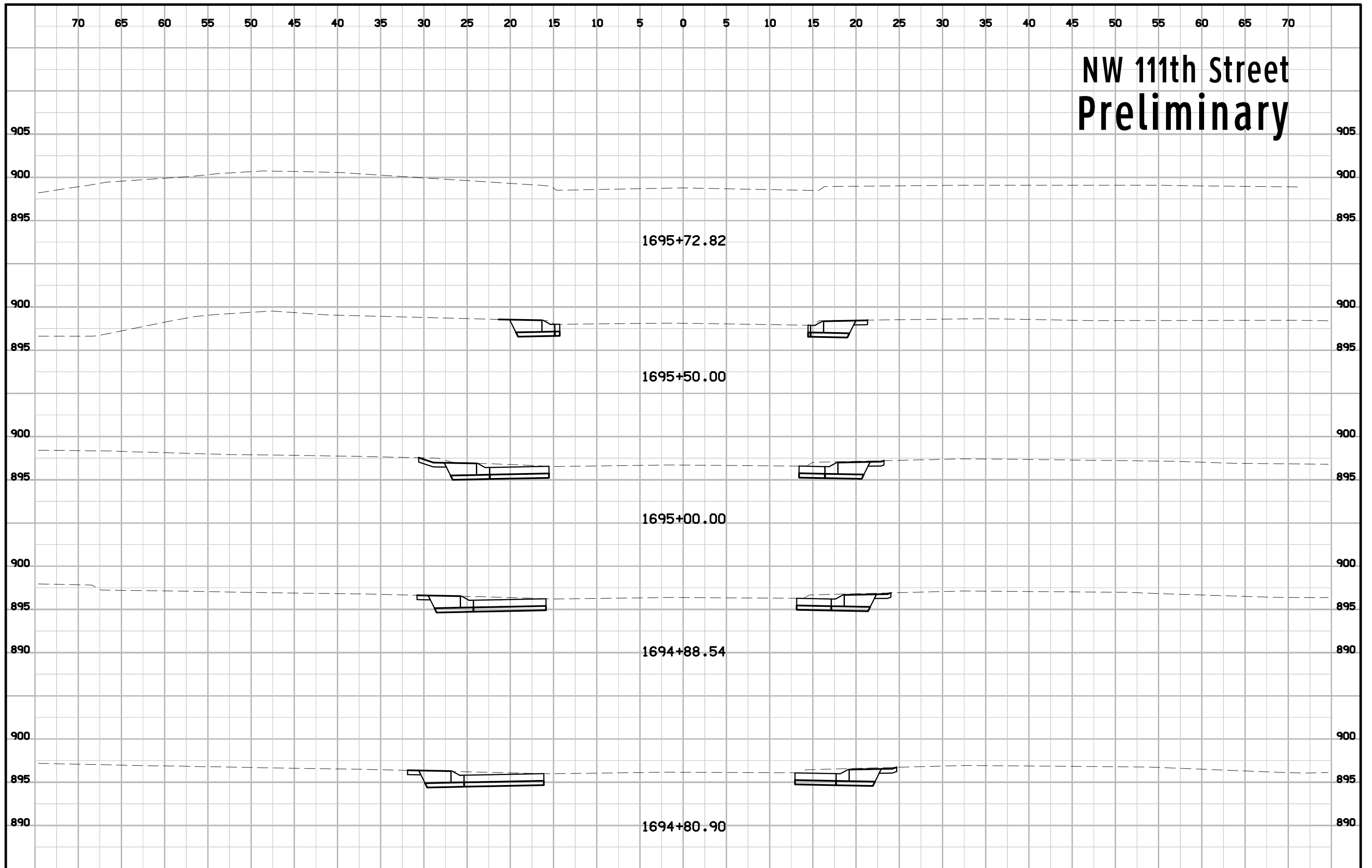


Existing  
ROW

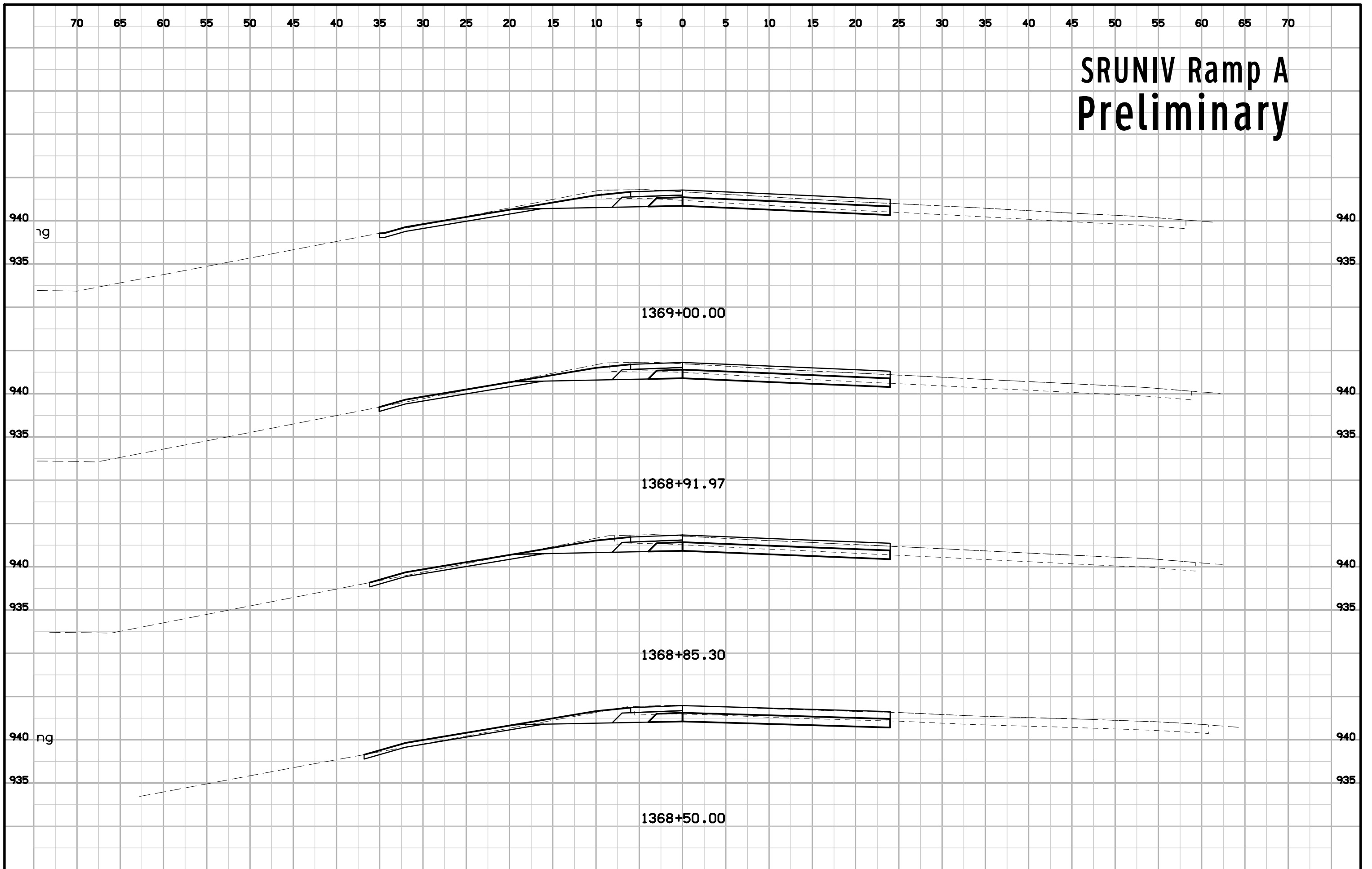
# NW 111th Street Preliminary



# NW 111th Street Preliminary

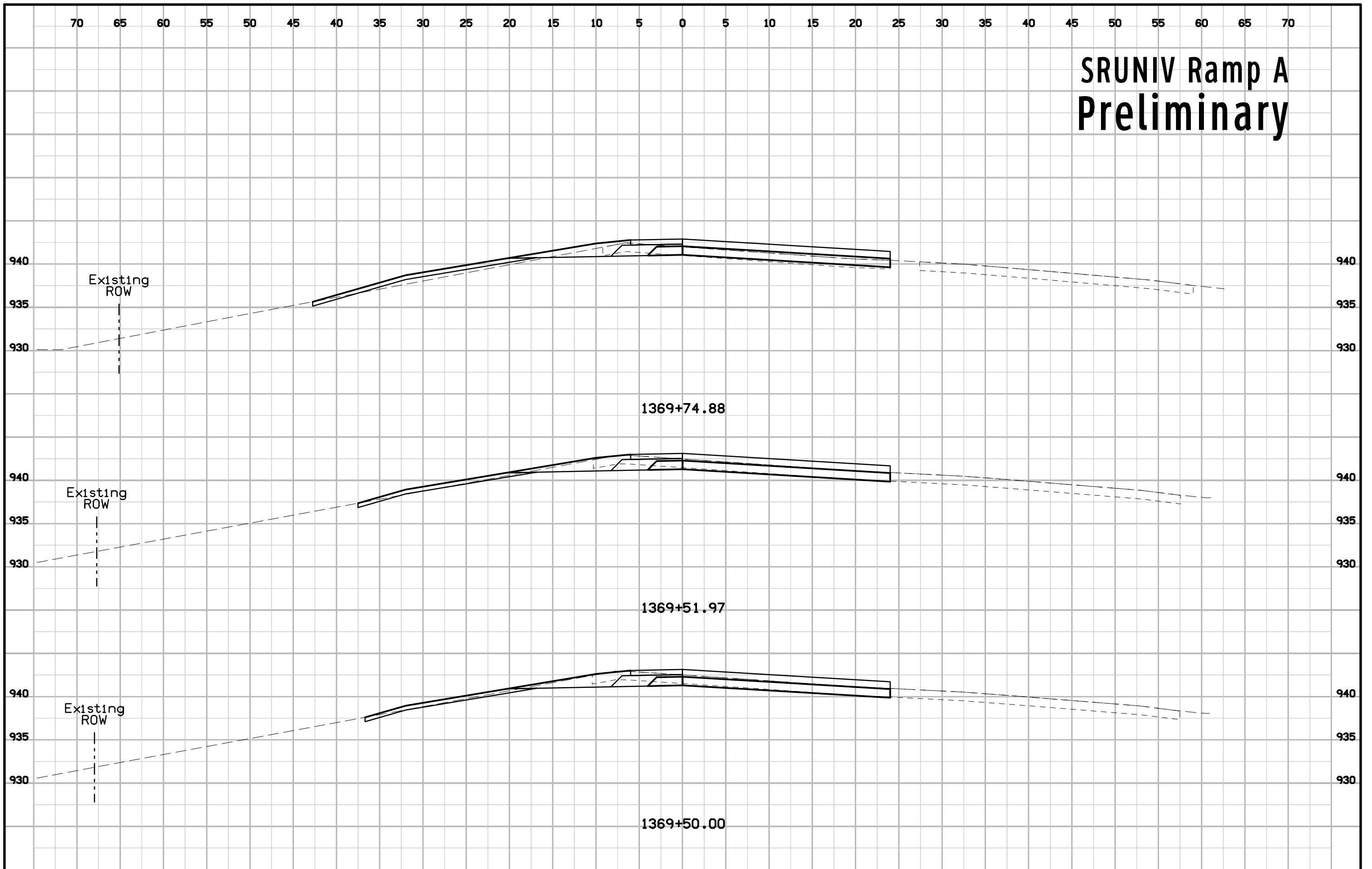


# SRUNIV Ramp A Preliminary

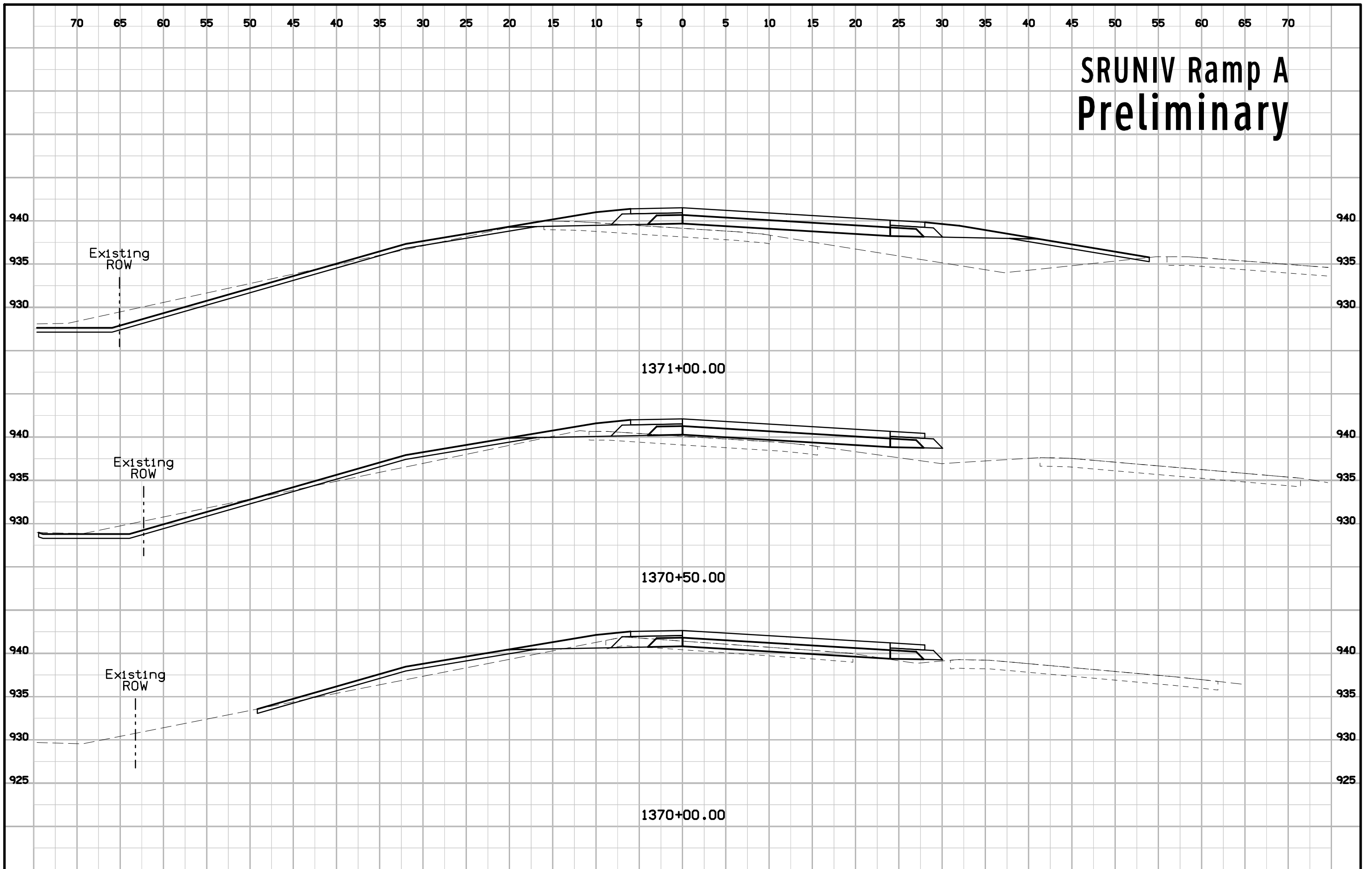




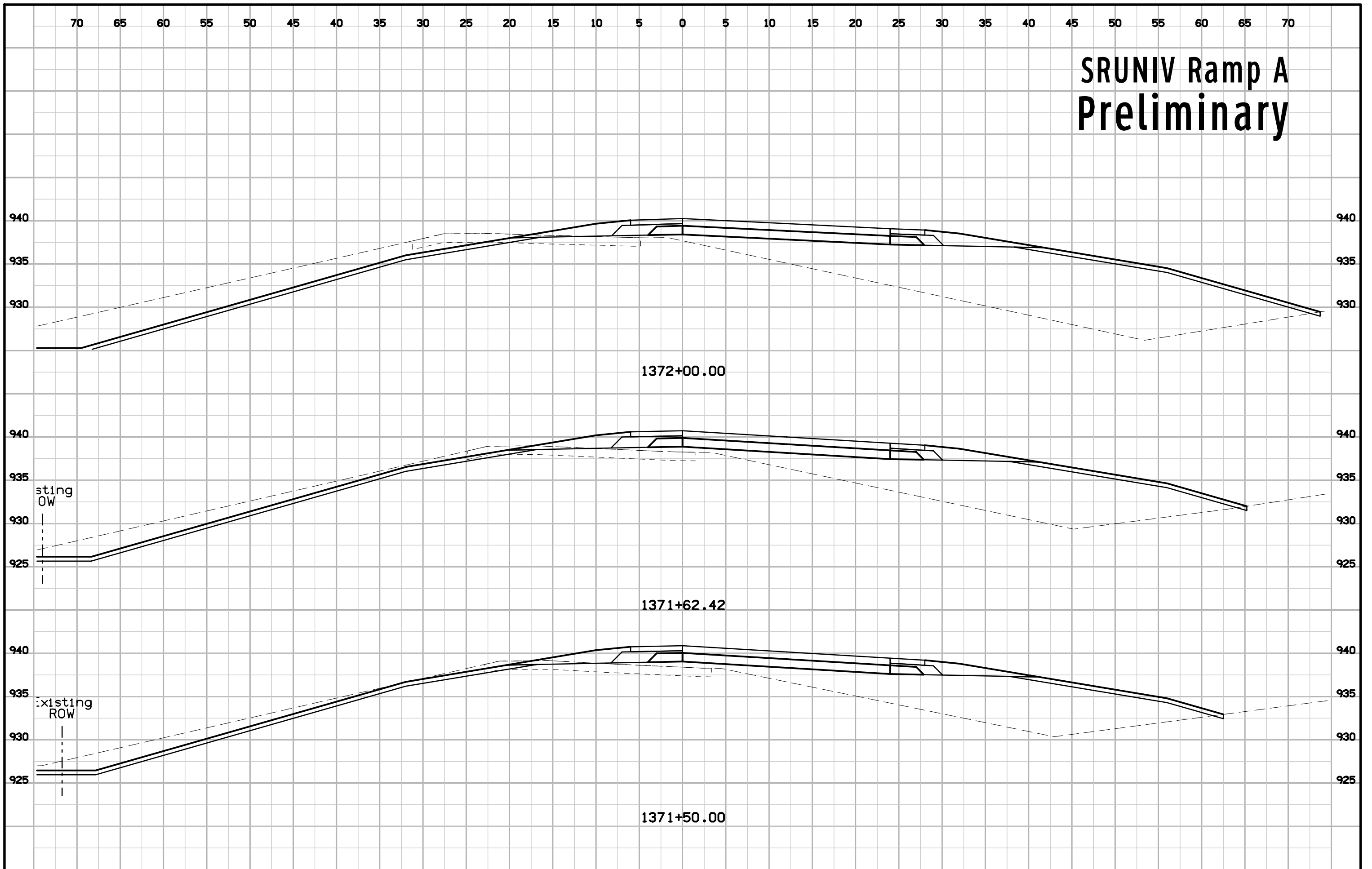
# SRUNIV Ramp A Preliminary



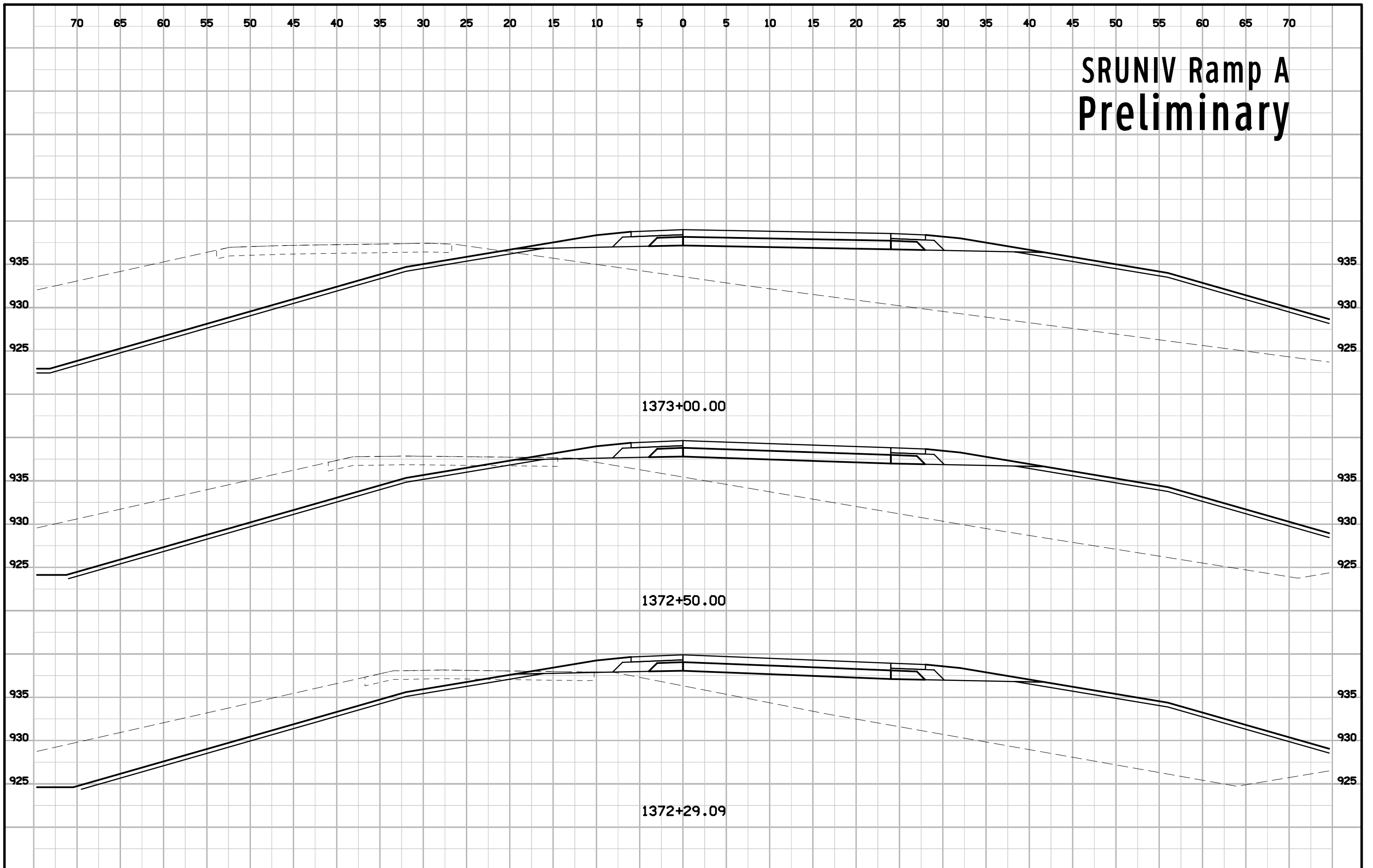
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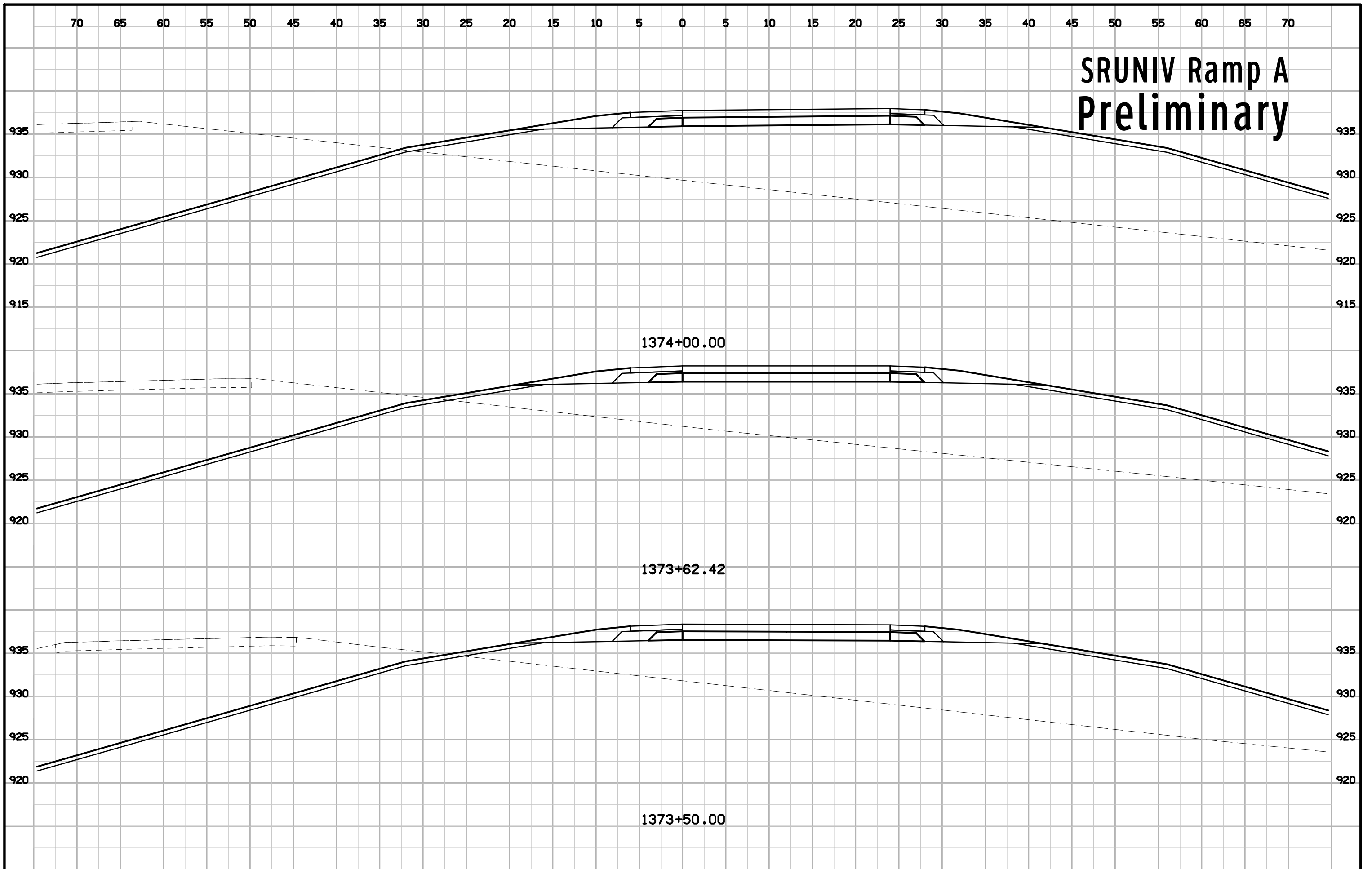
# SRUNIV Ramp A Preliminary



# SRUNIV Ramp A Preliminary

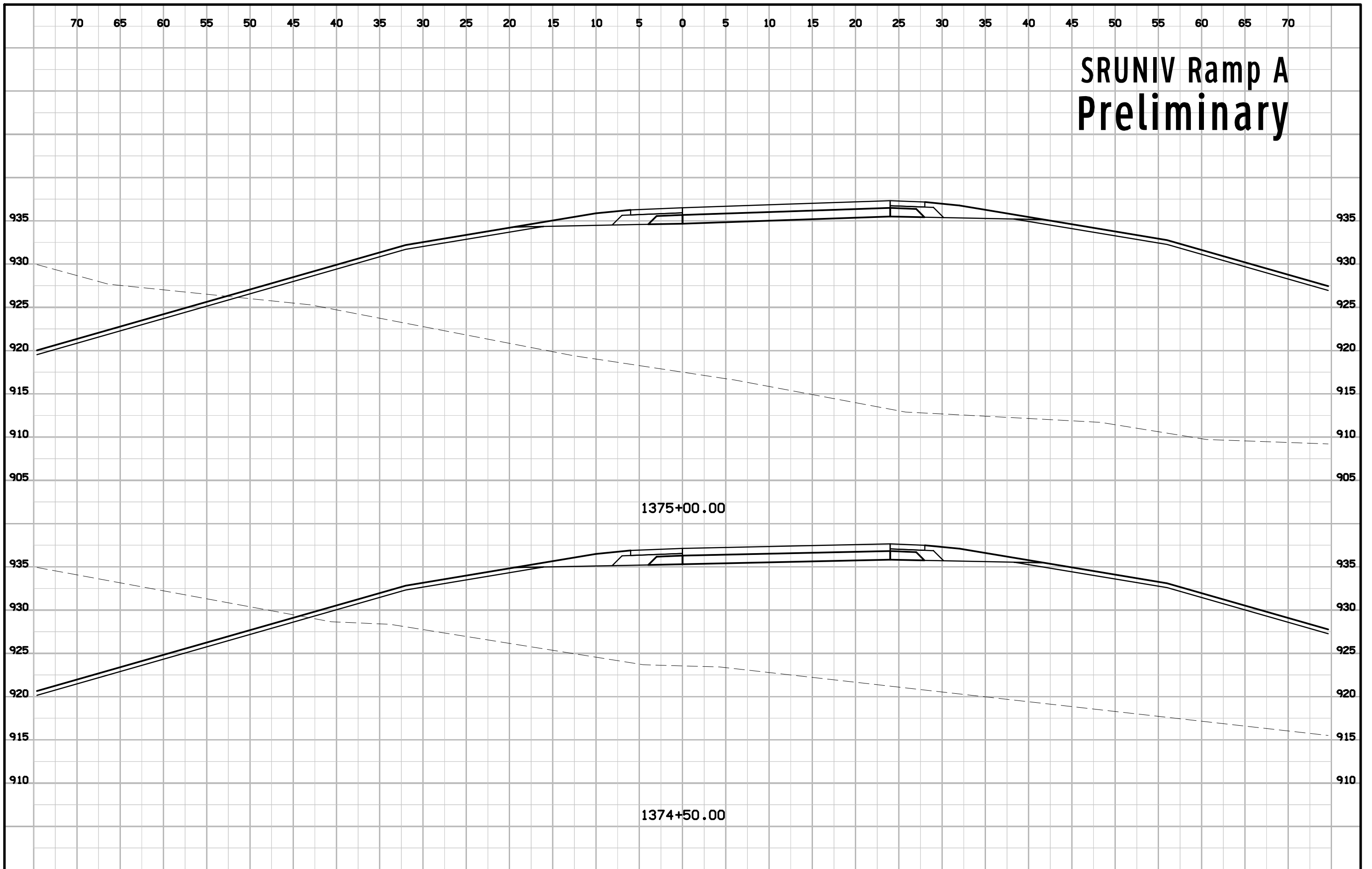


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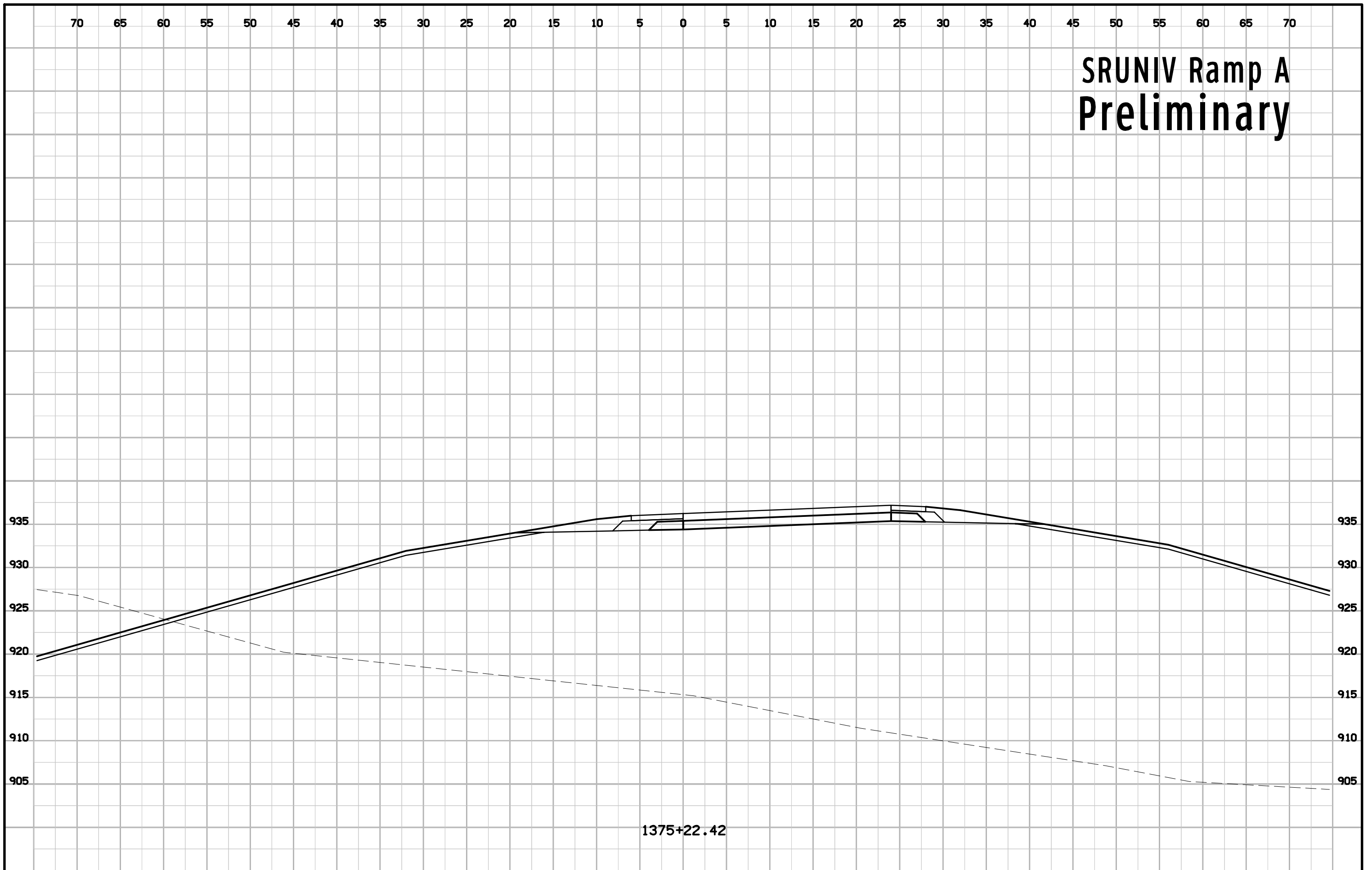




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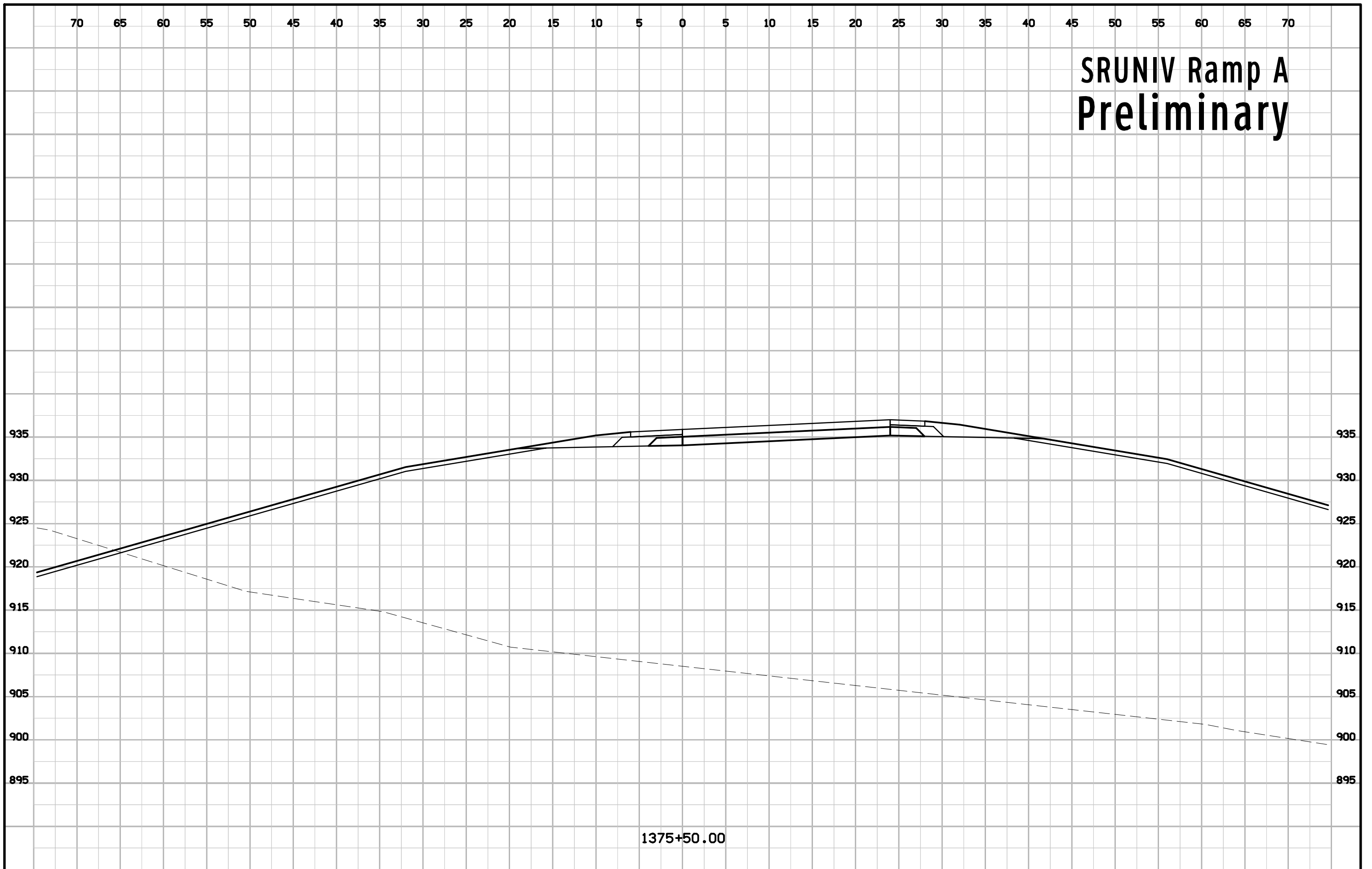


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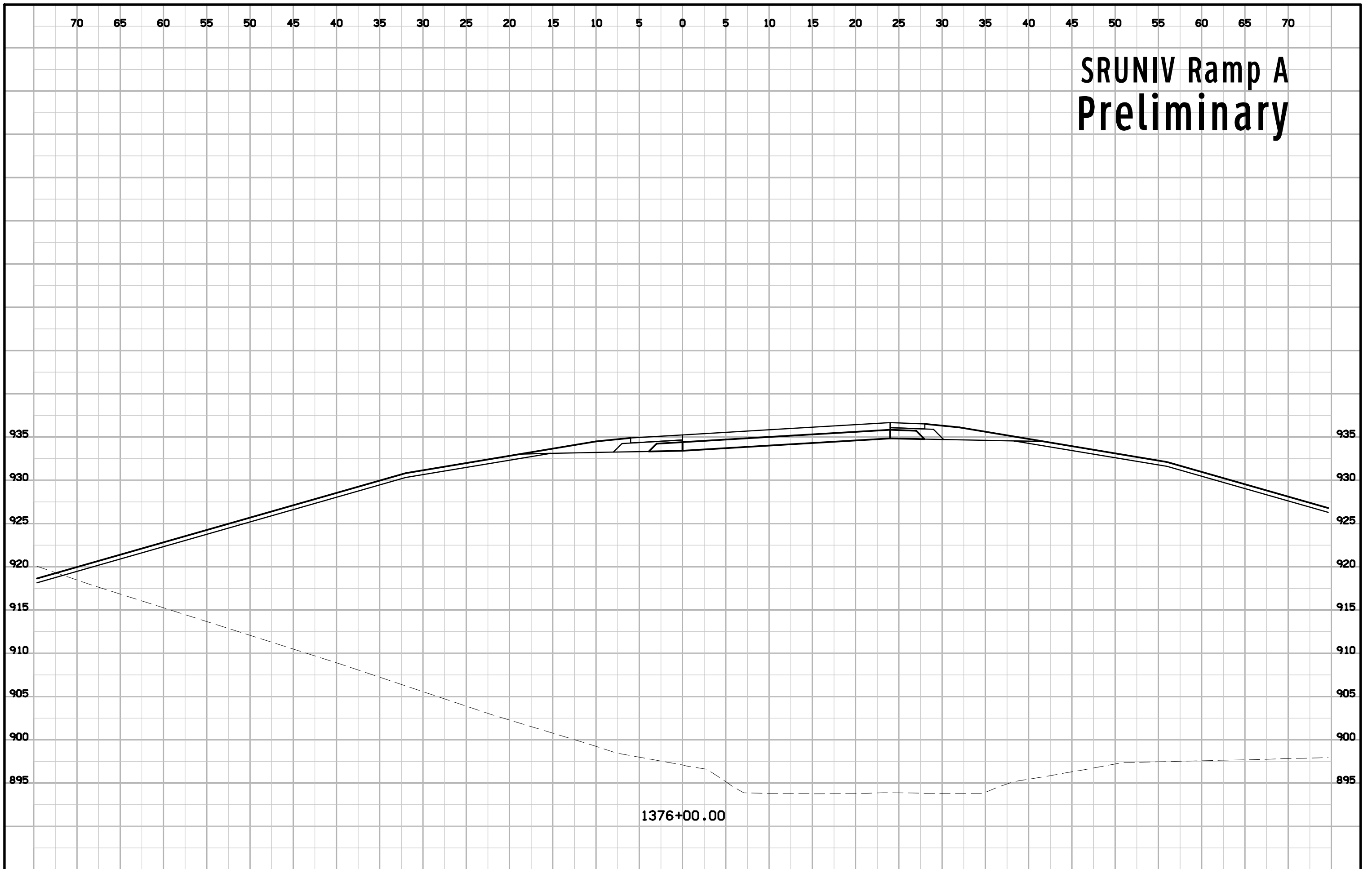
1375+22.42

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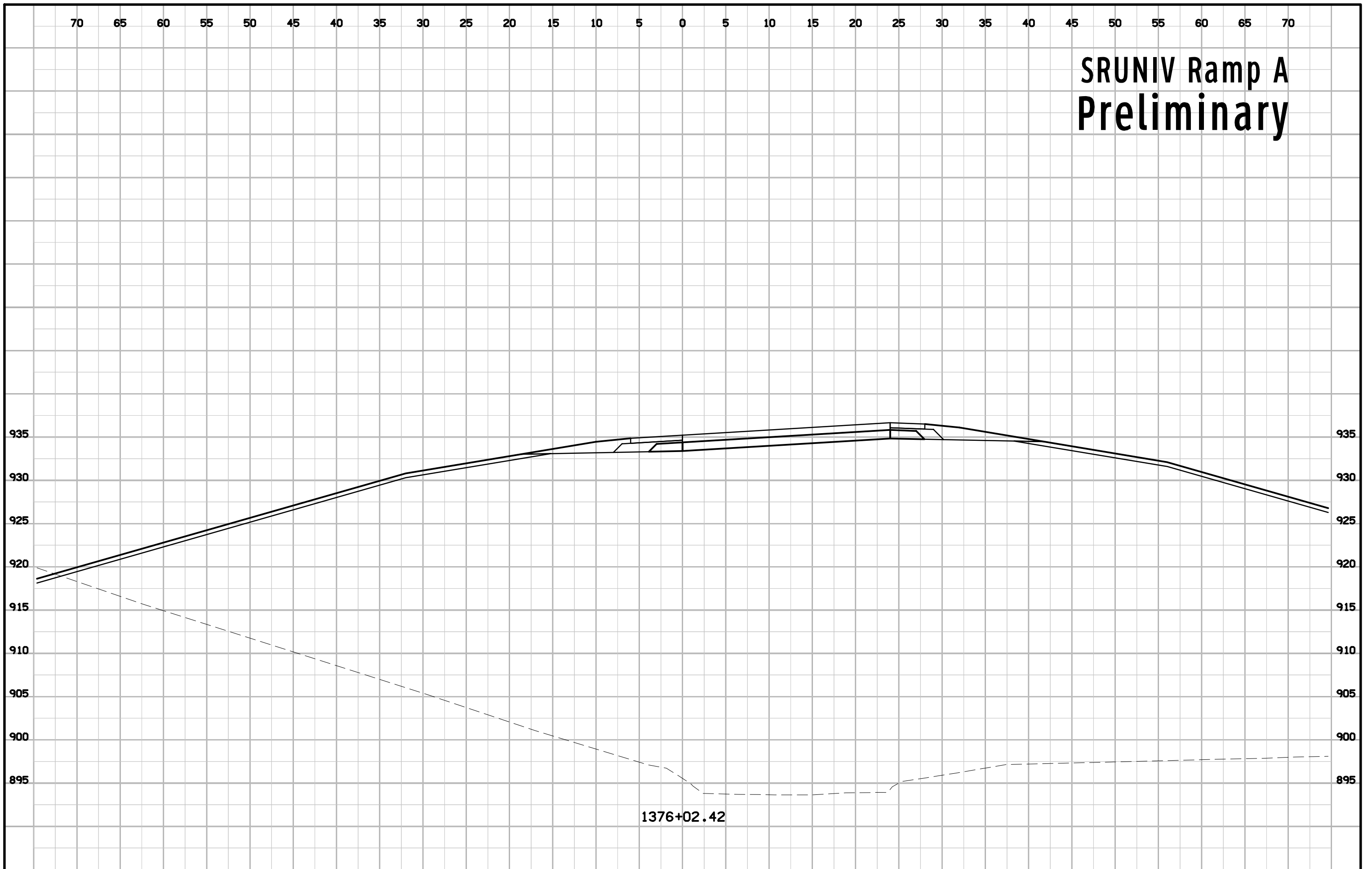
1375+50.00

# SRUNIV Ramp A Preliminary



1376+00.00

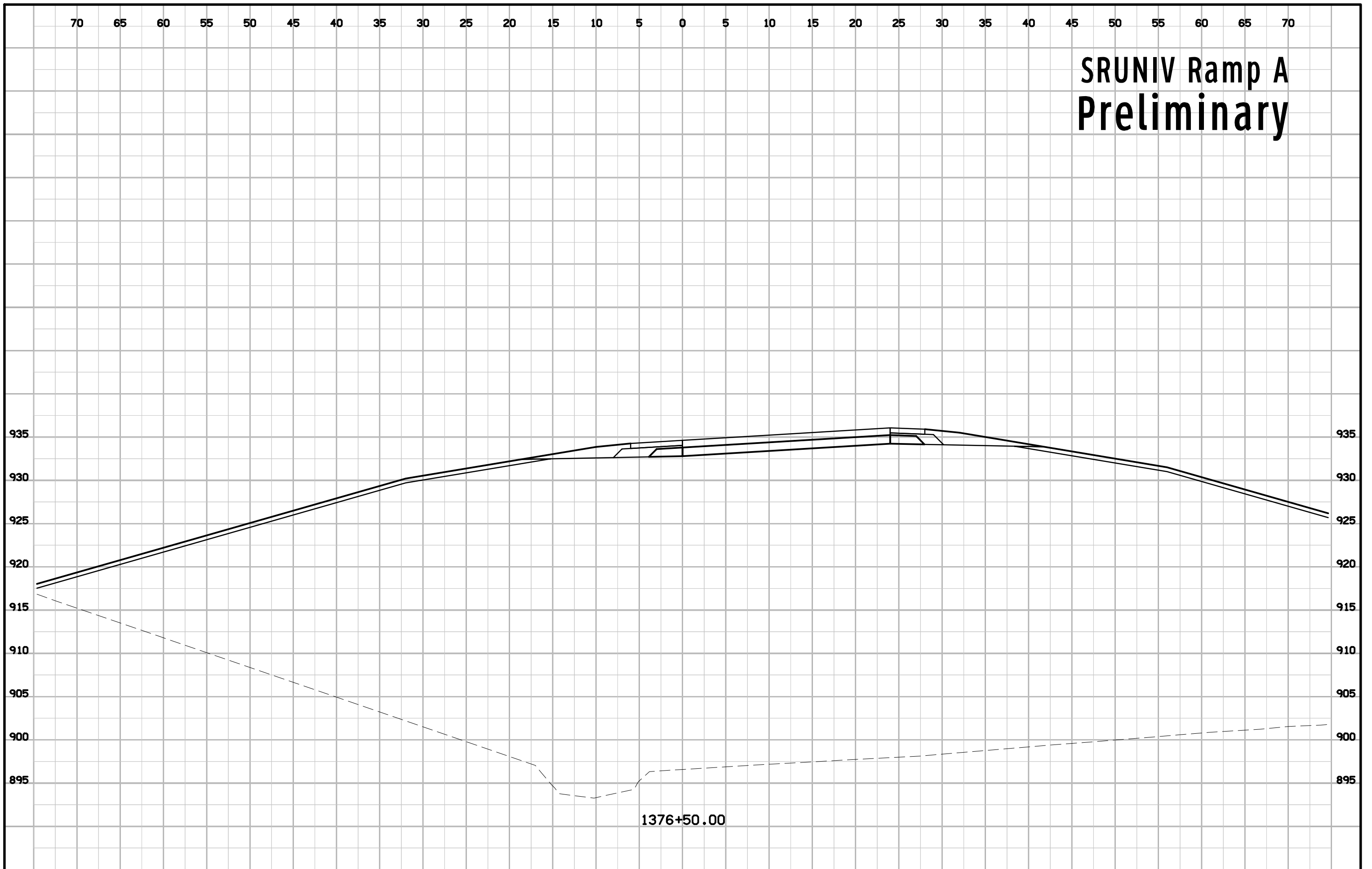
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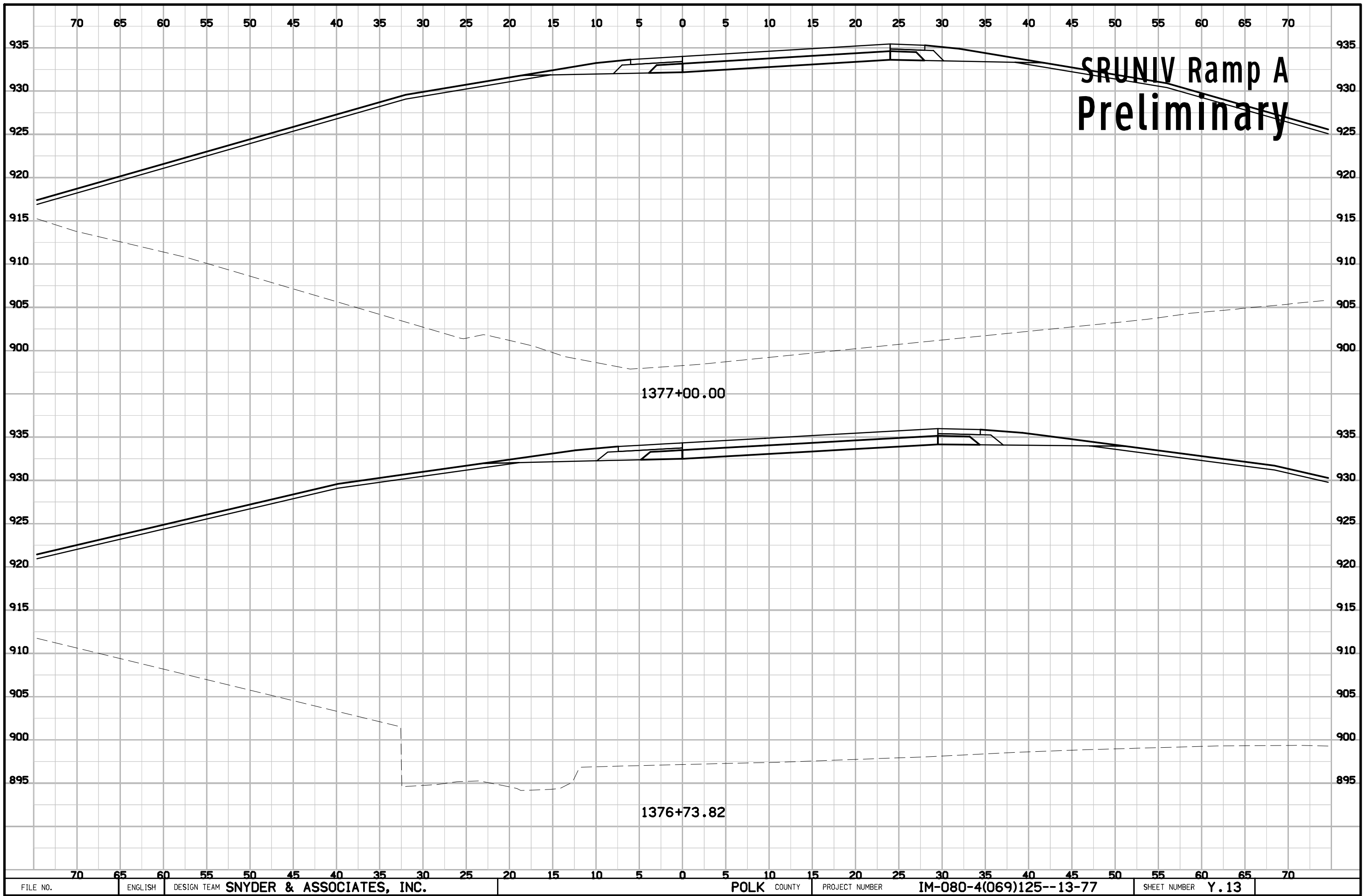
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# SRUNIV Ramp A Preliminary



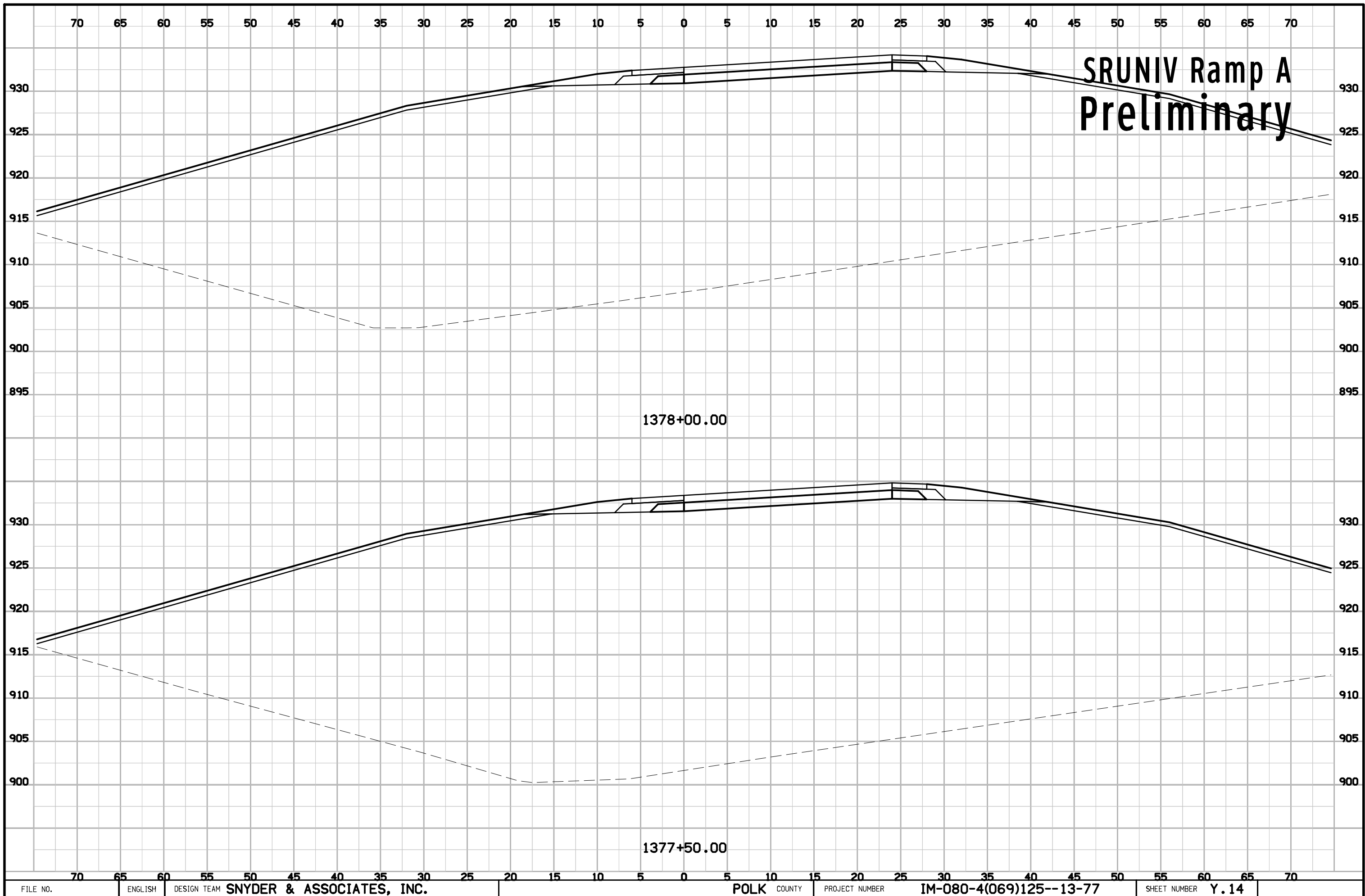
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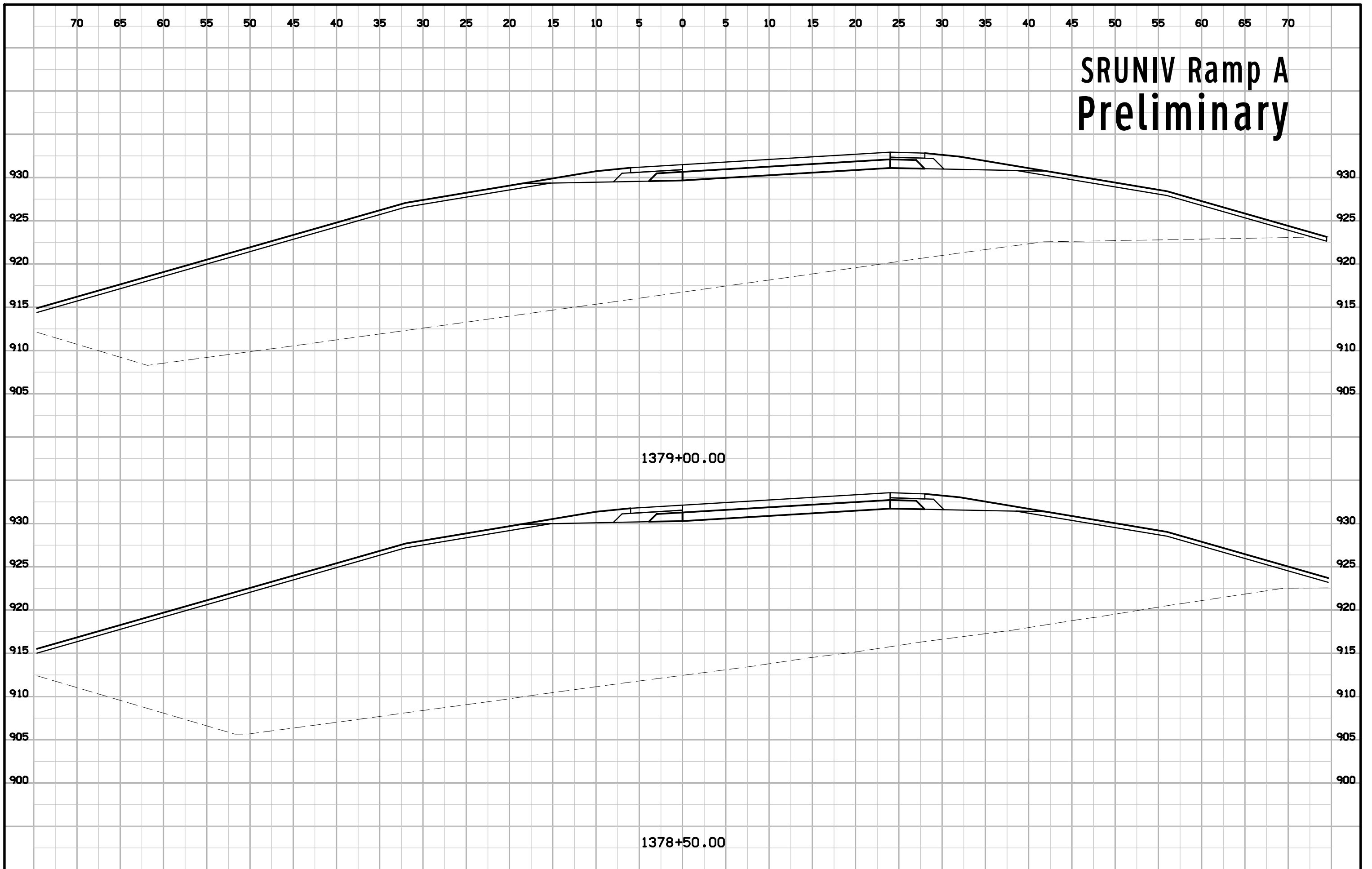
**SRUNIV Ramp A  
Preliminary**

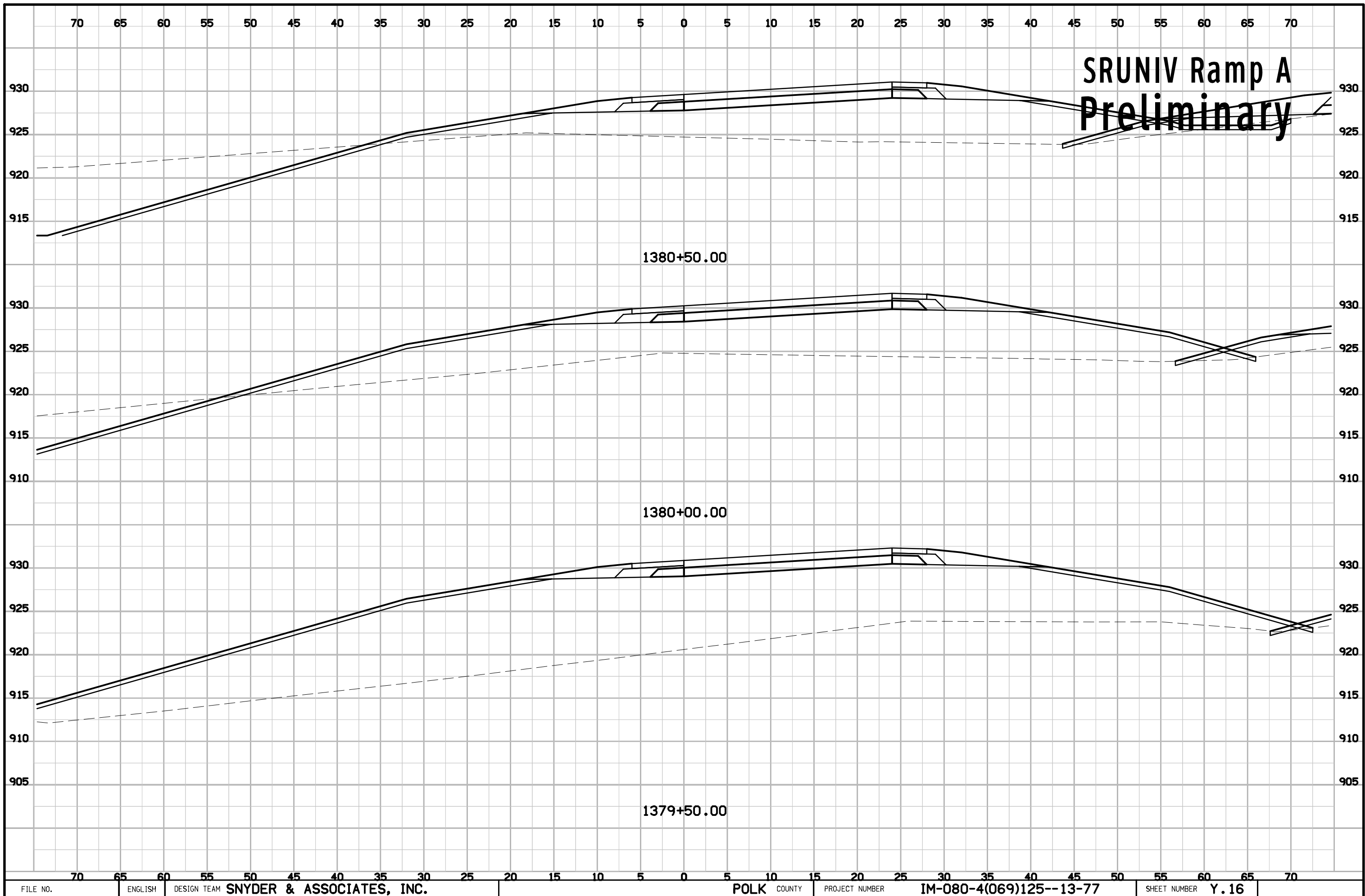
1377+00.00

1376+73.82



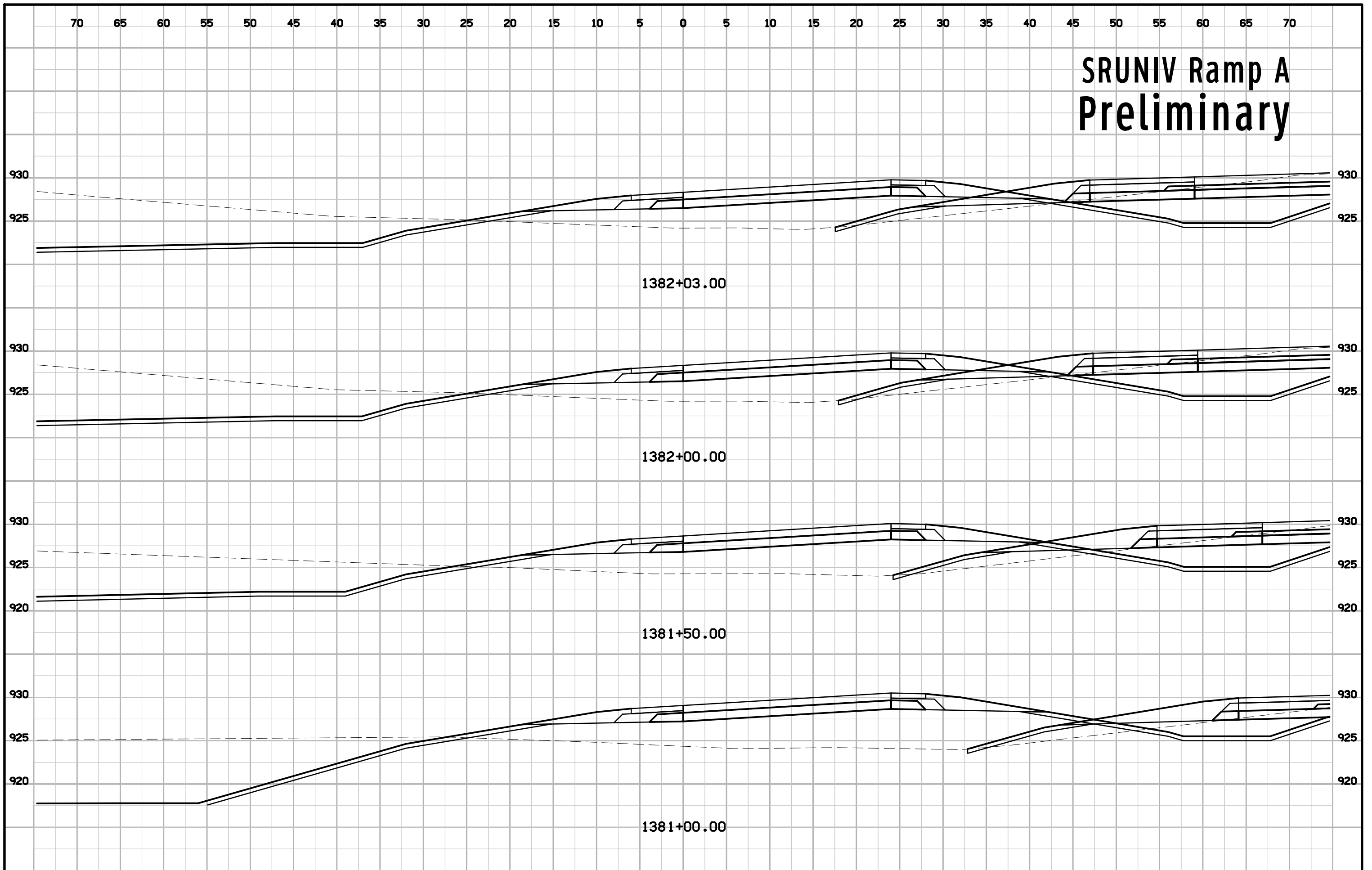
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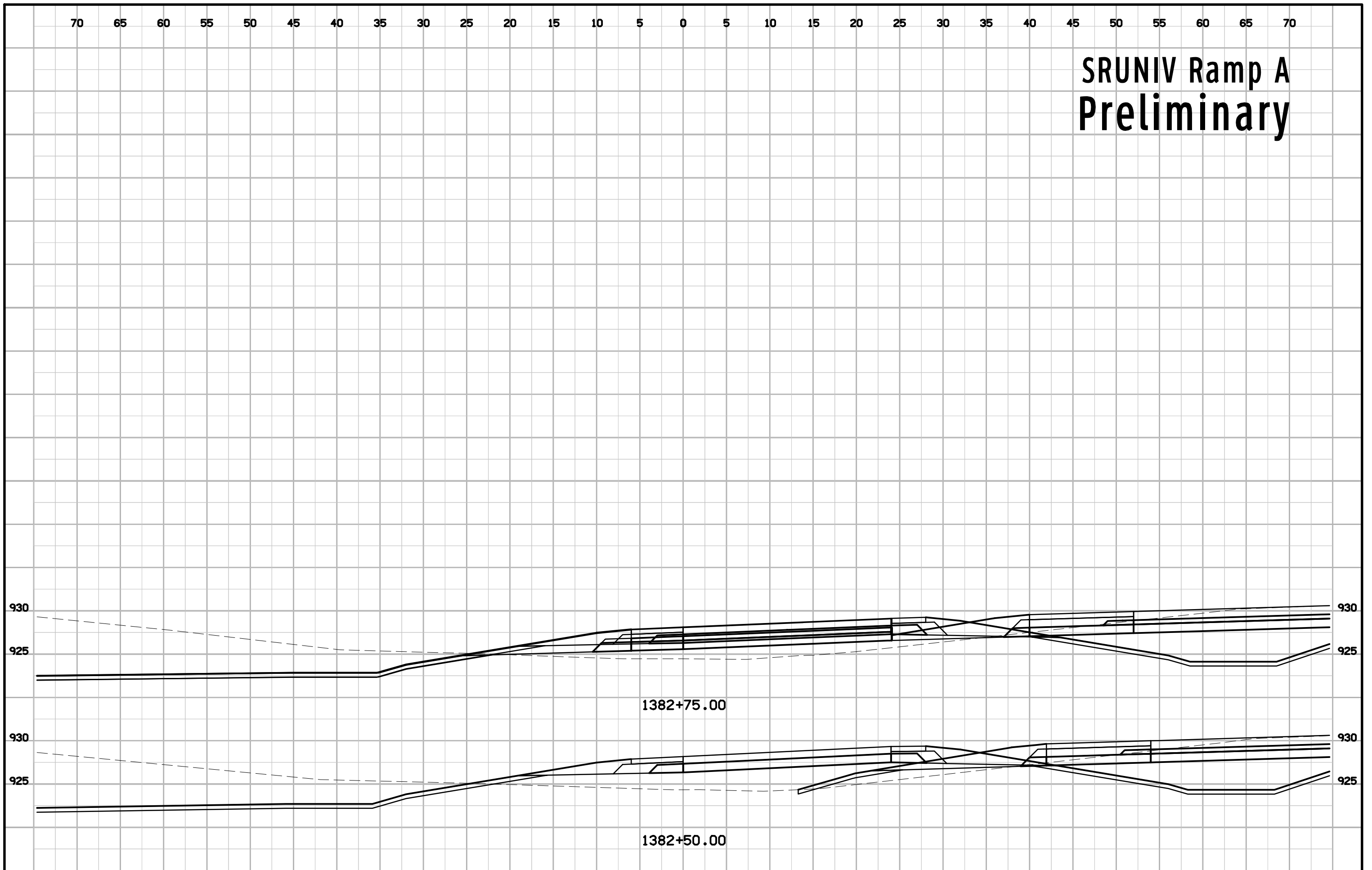




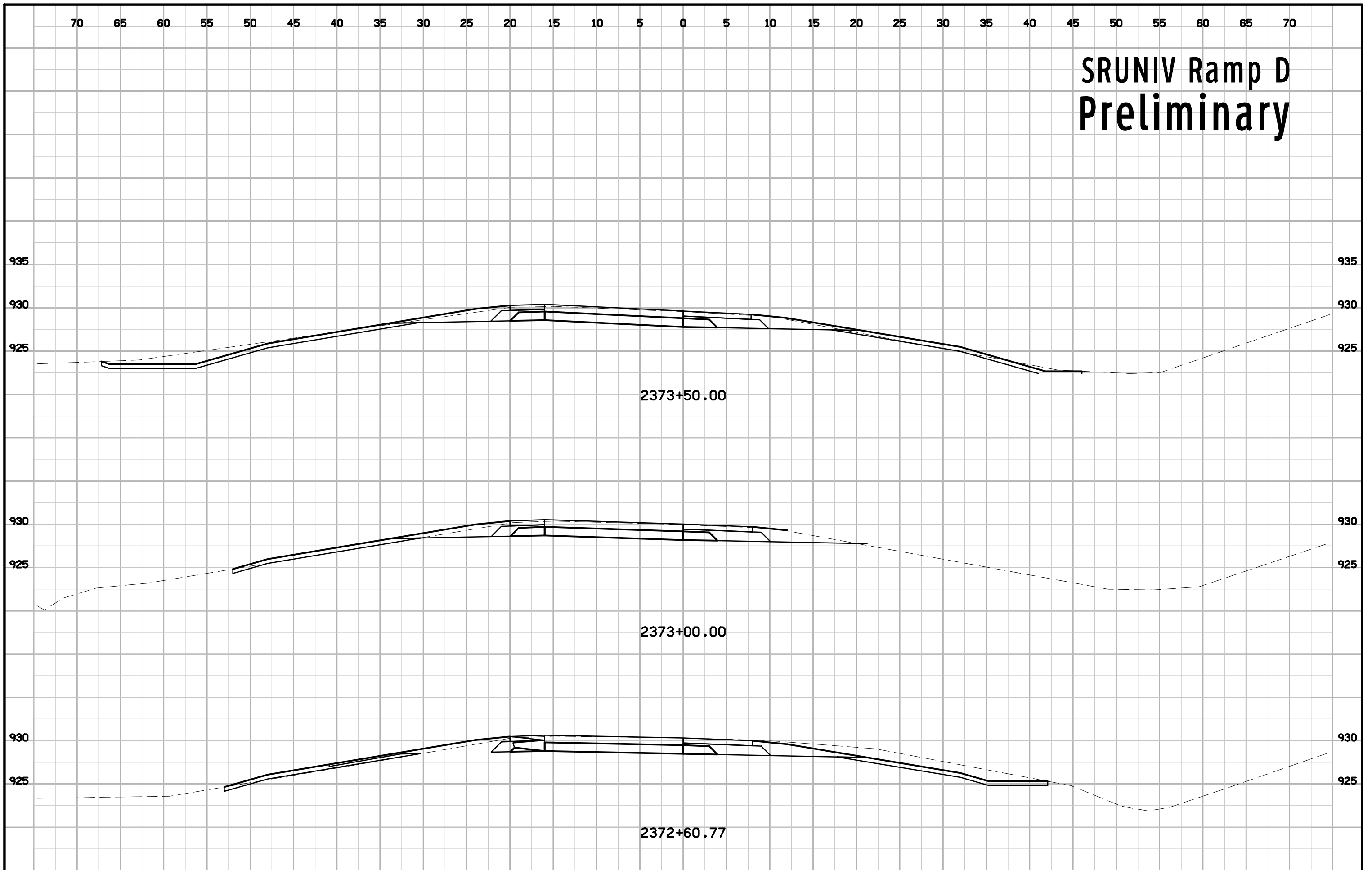
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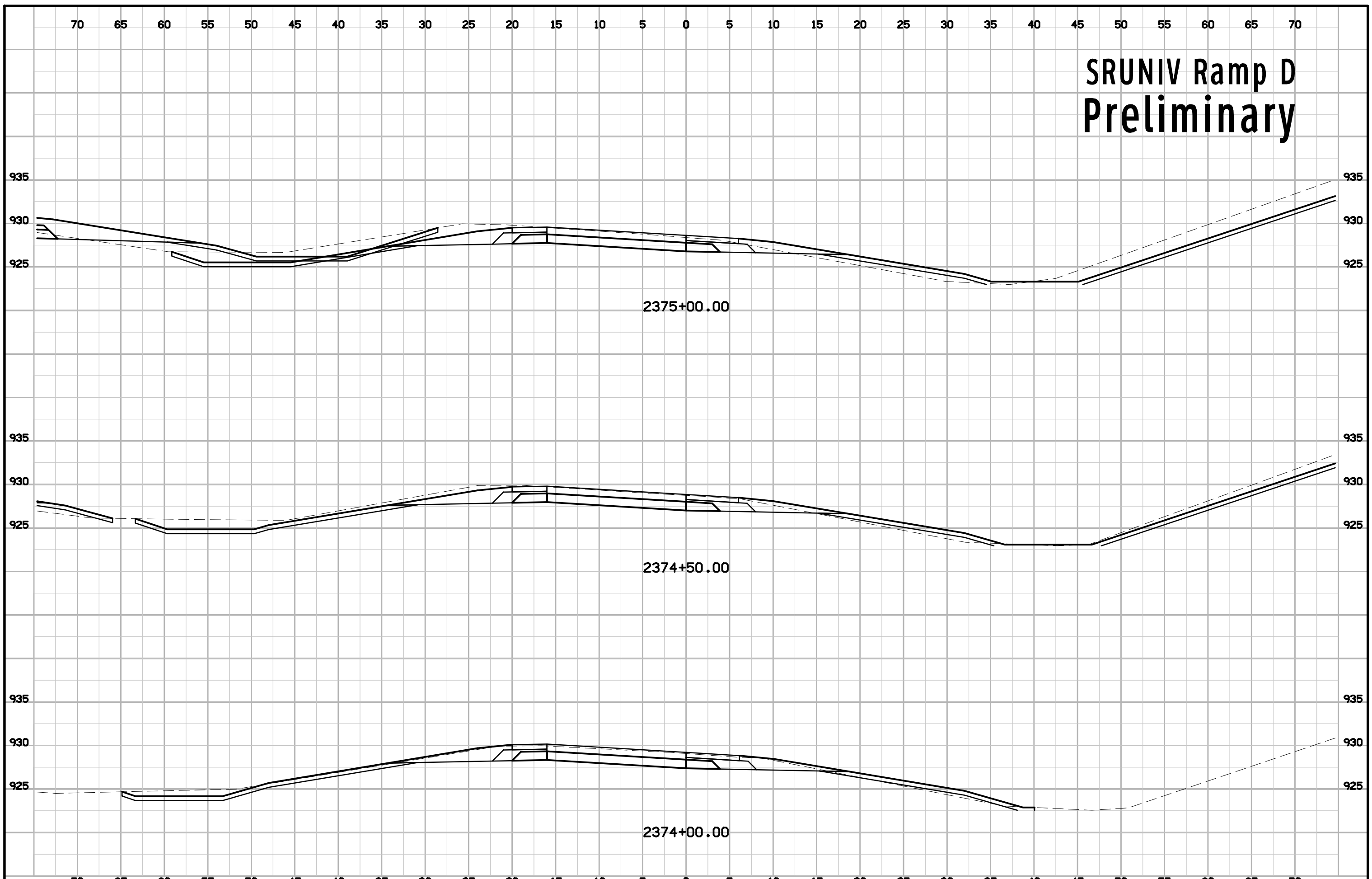
# SRUNIV Ramp A Preliminary



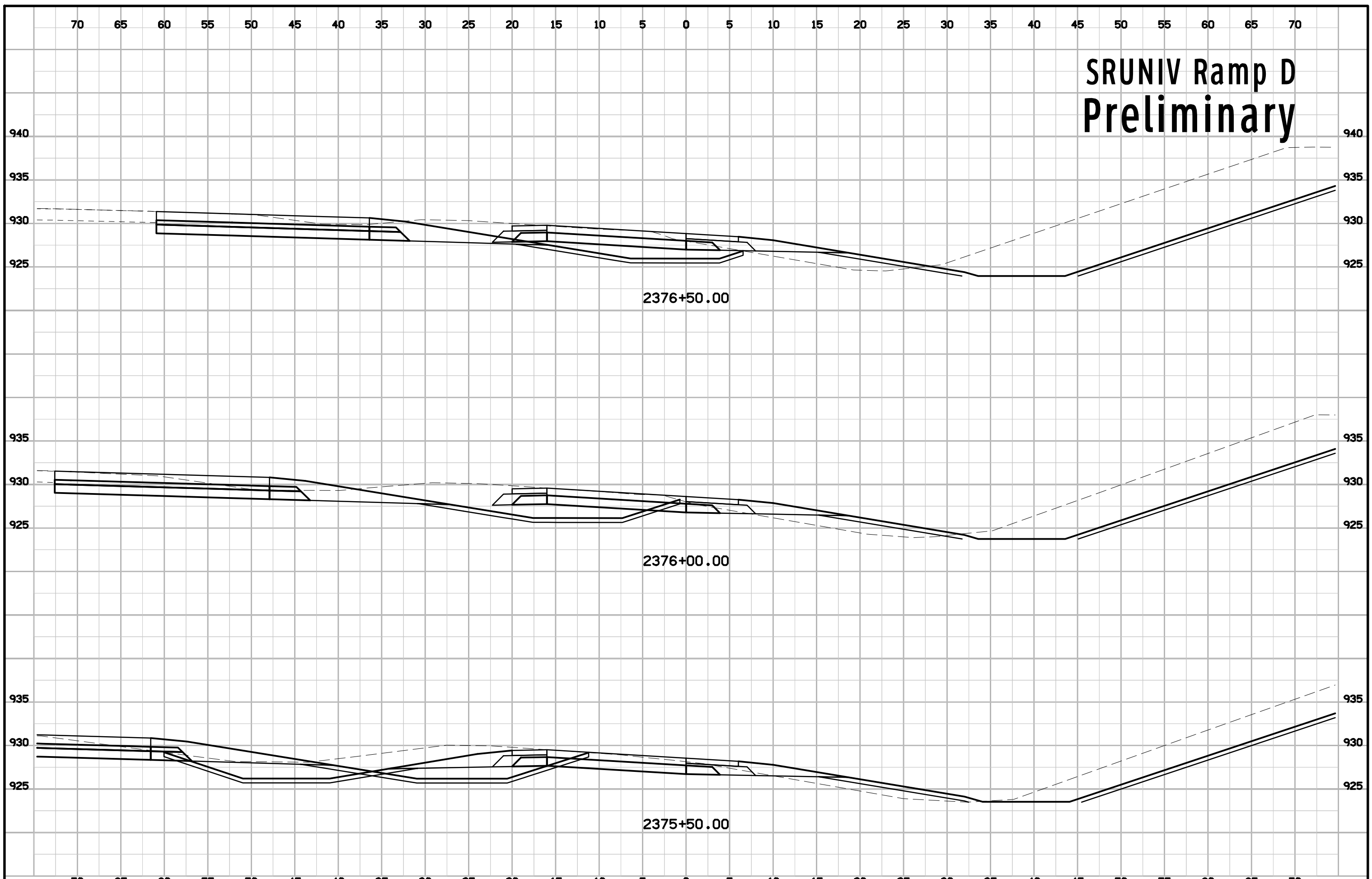
# SRUNIV Ramp D Preliminary



# SRUNIV Ramp D Preliminary

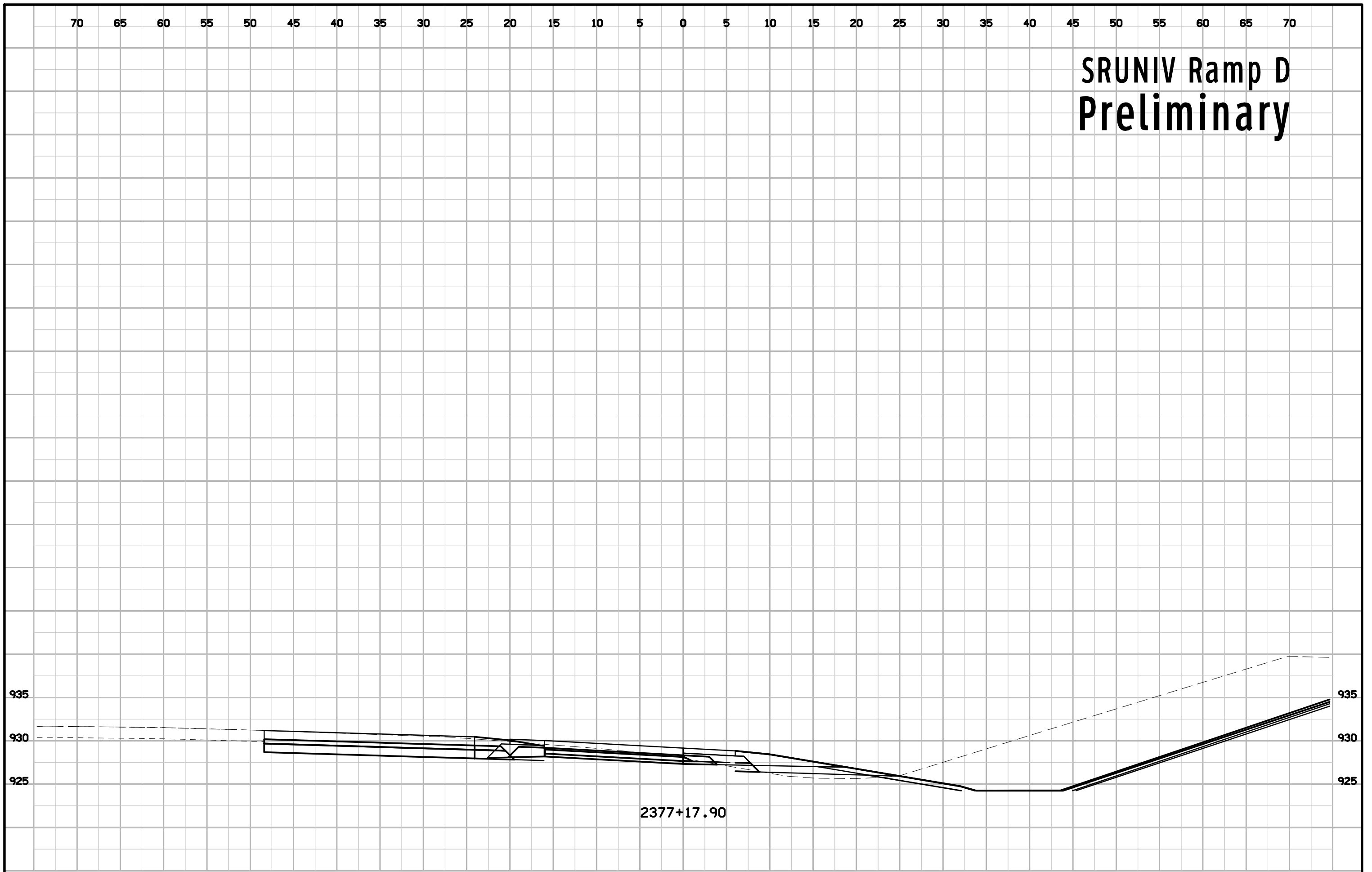


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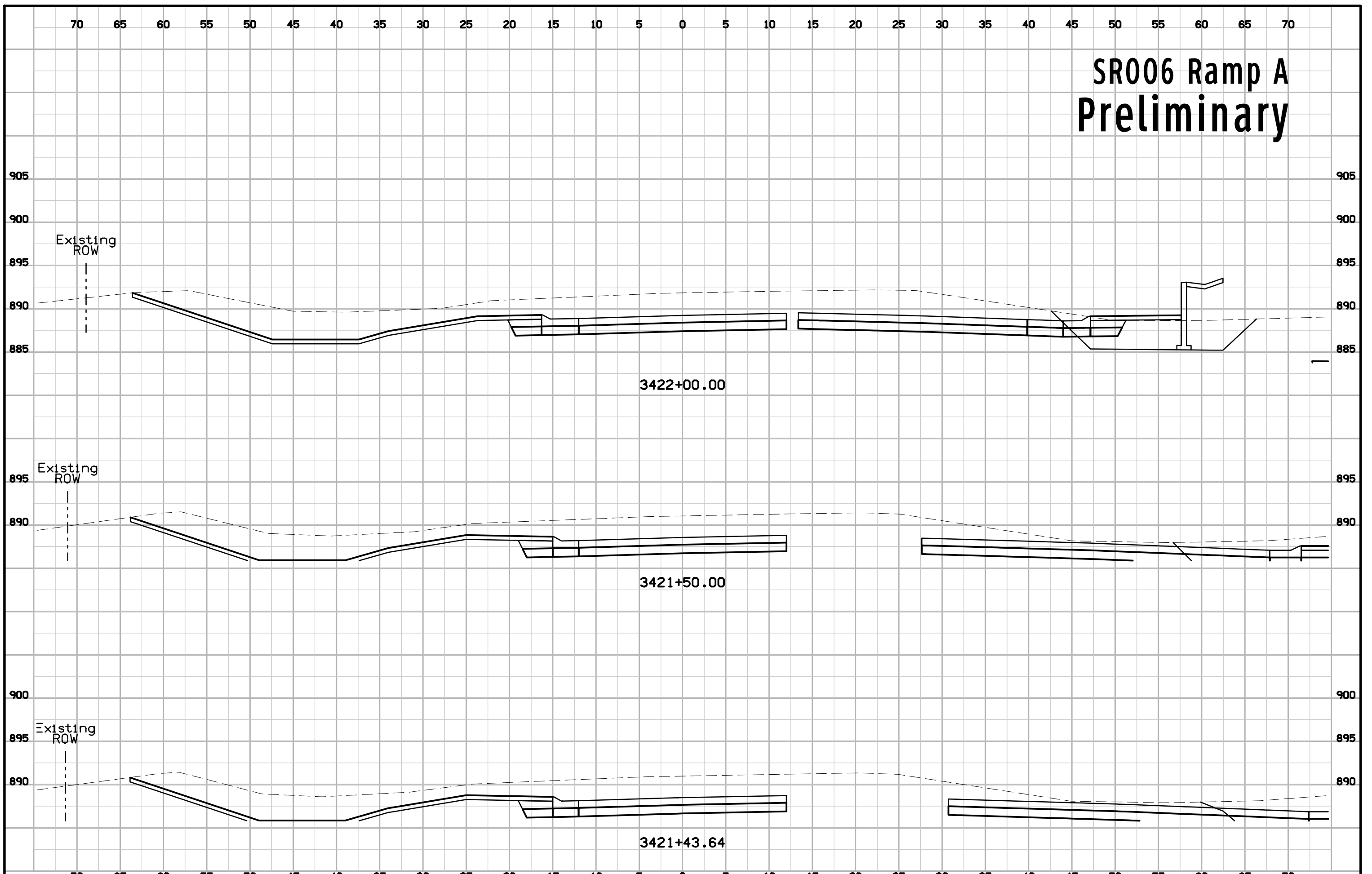


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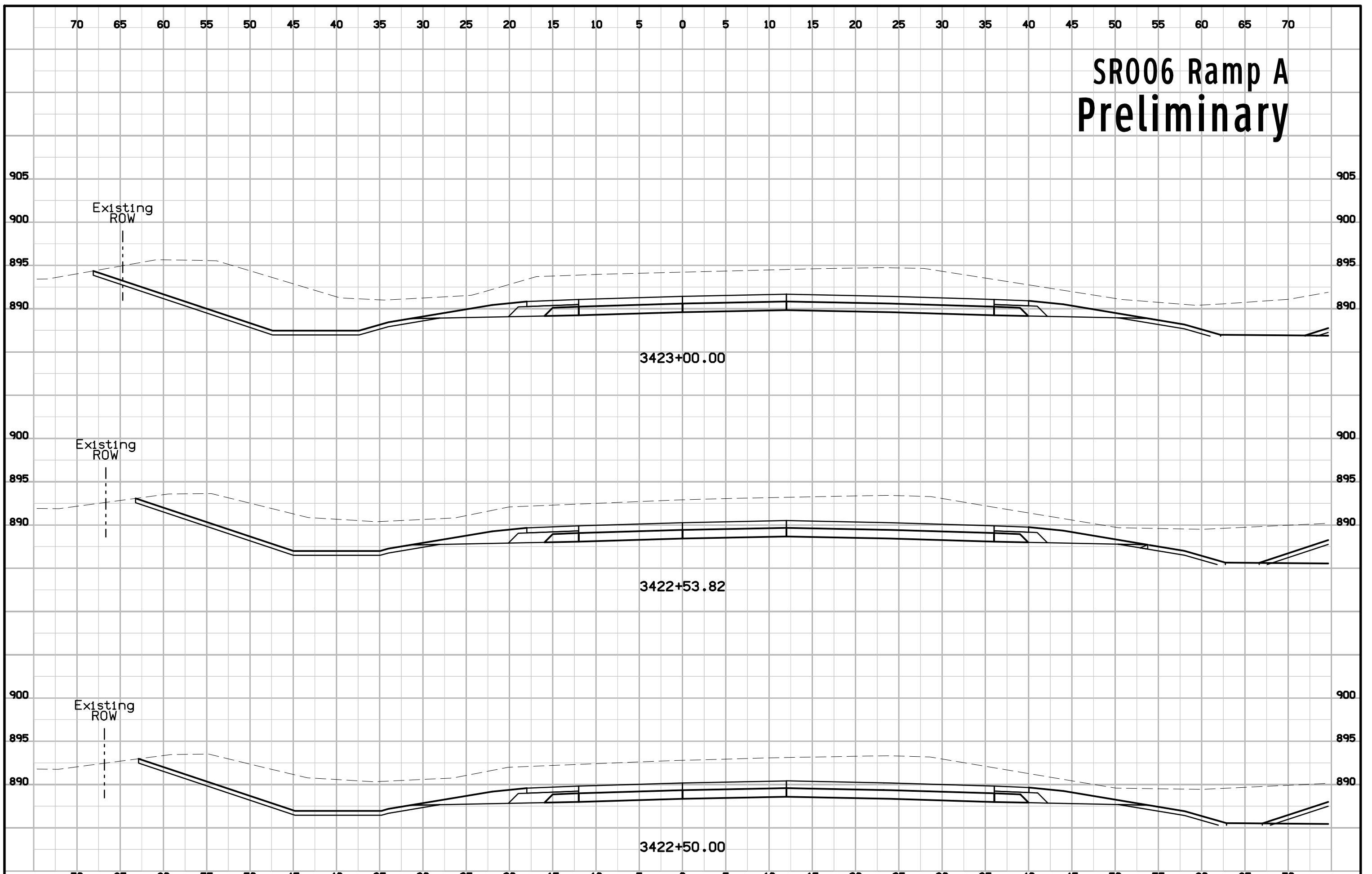


2377+17.90

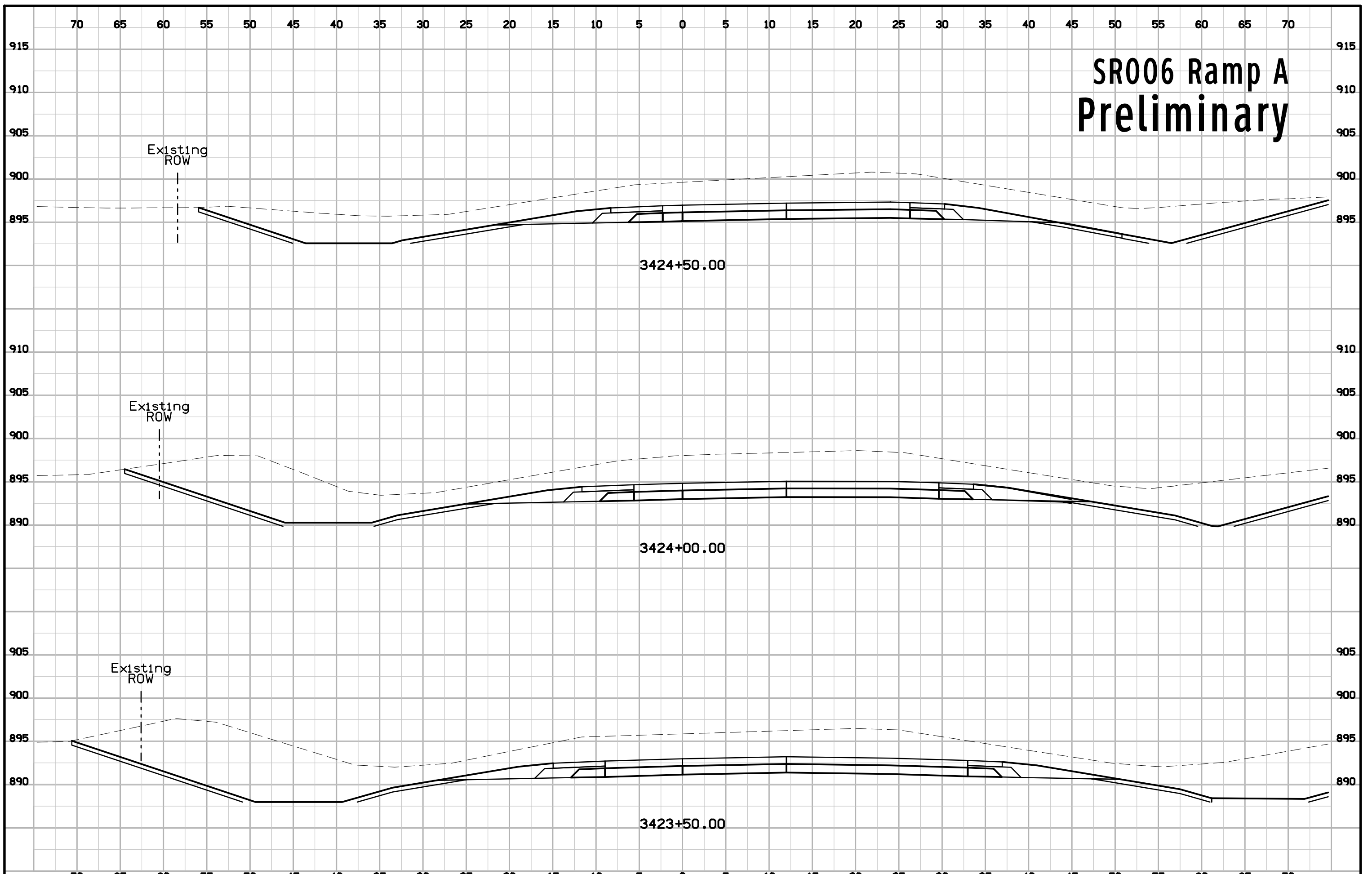
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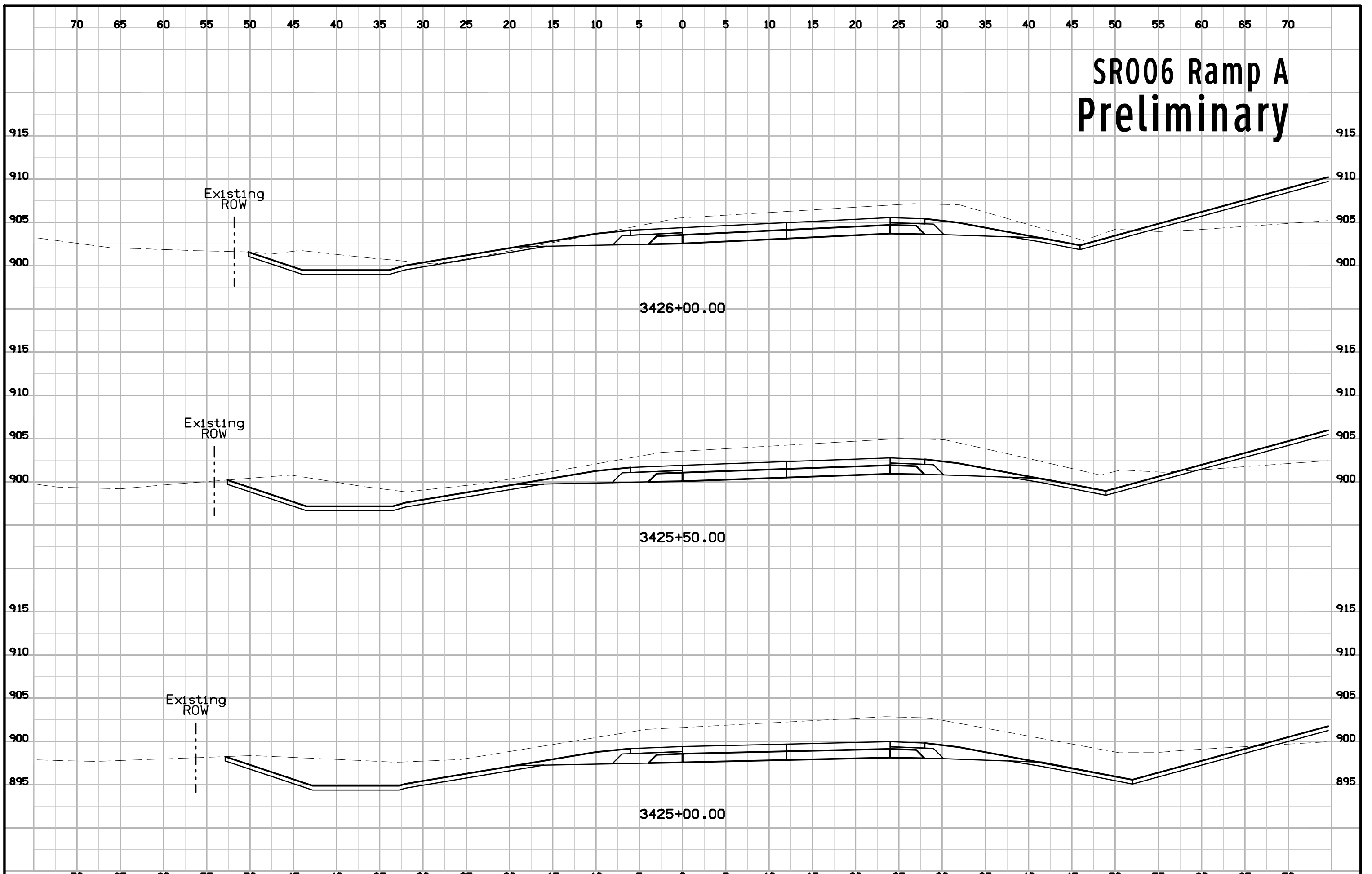
# SR006 Ramp A Preliminary



# SR006 Ramp A Preliminary

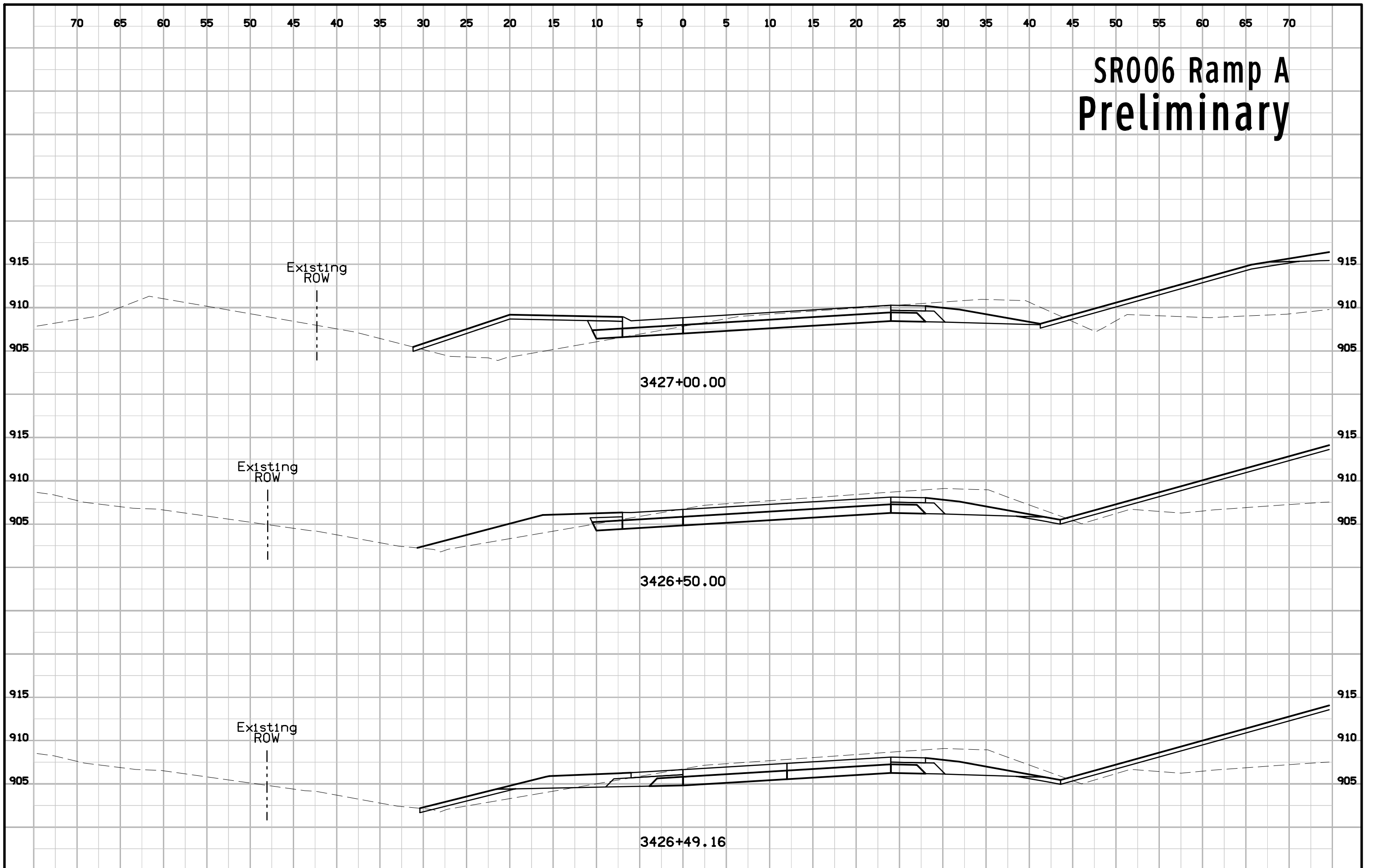


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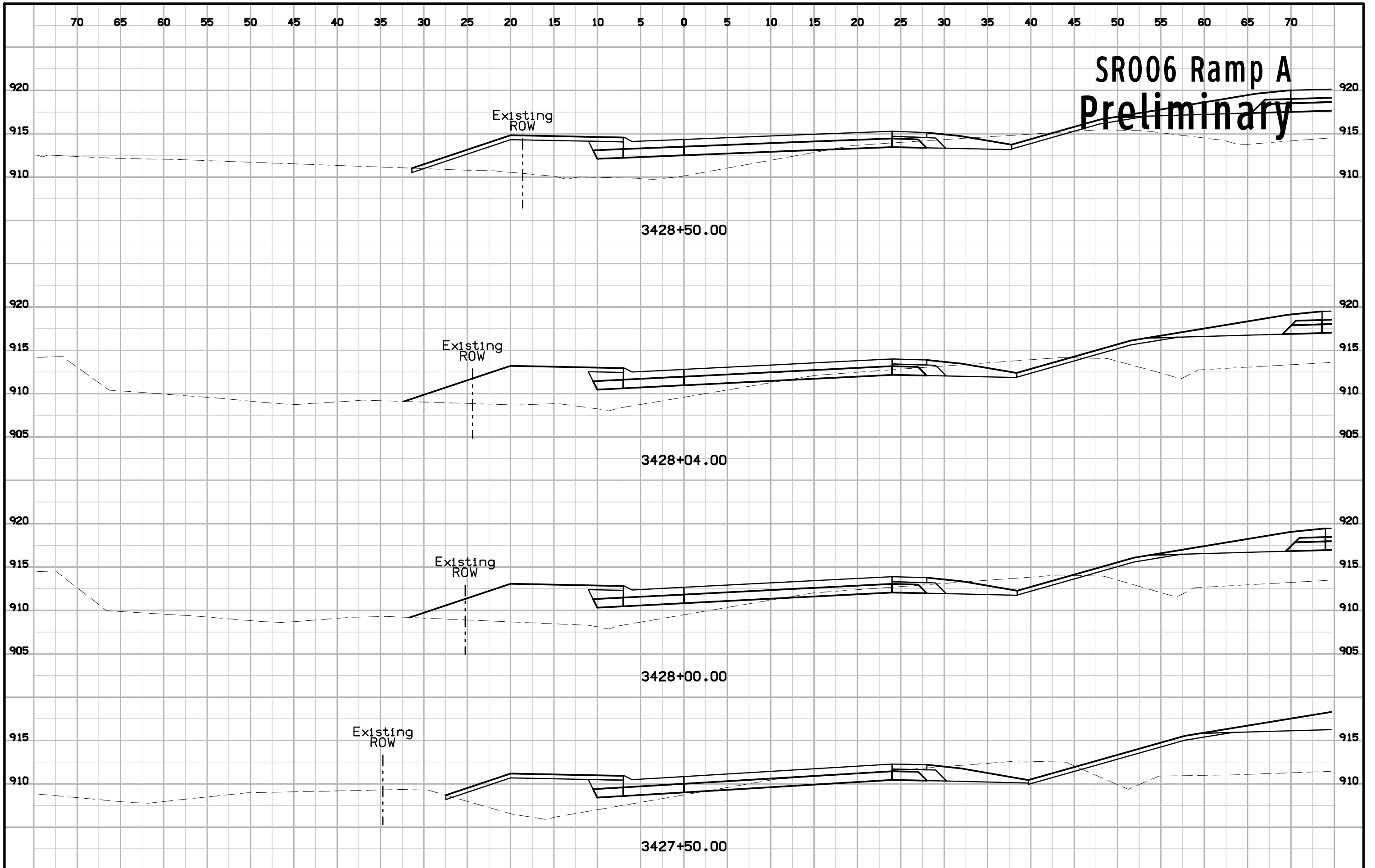




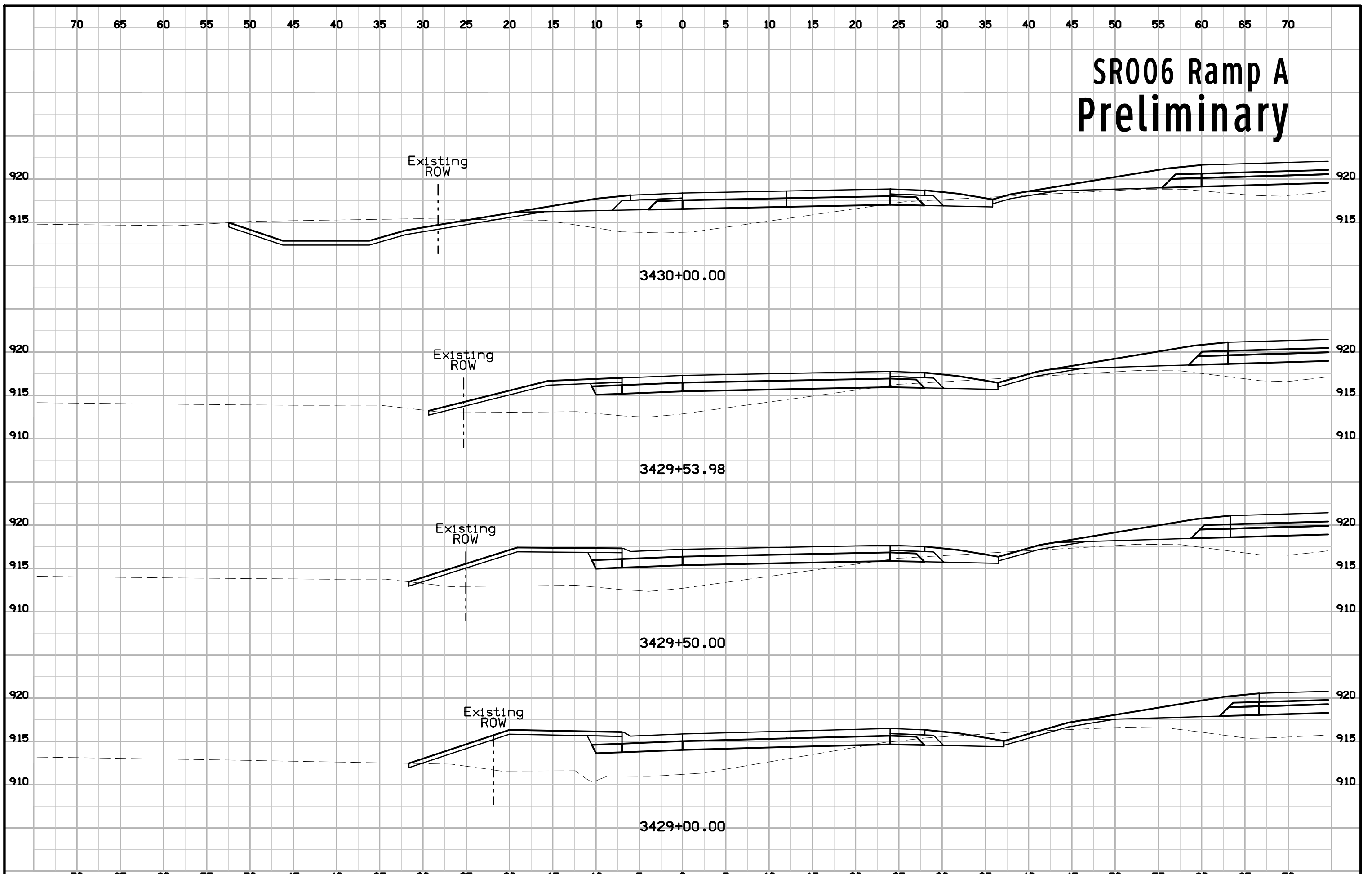
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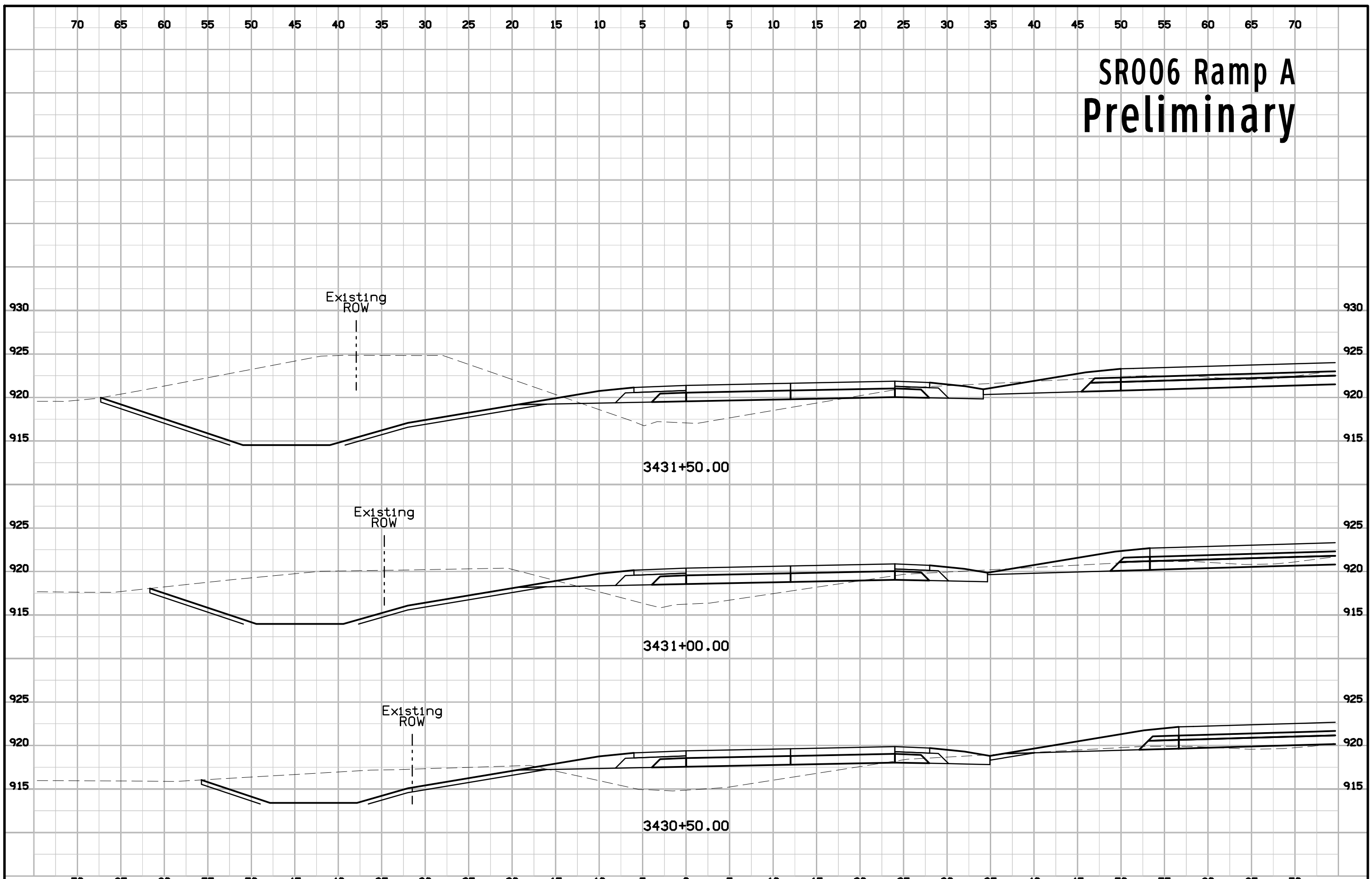
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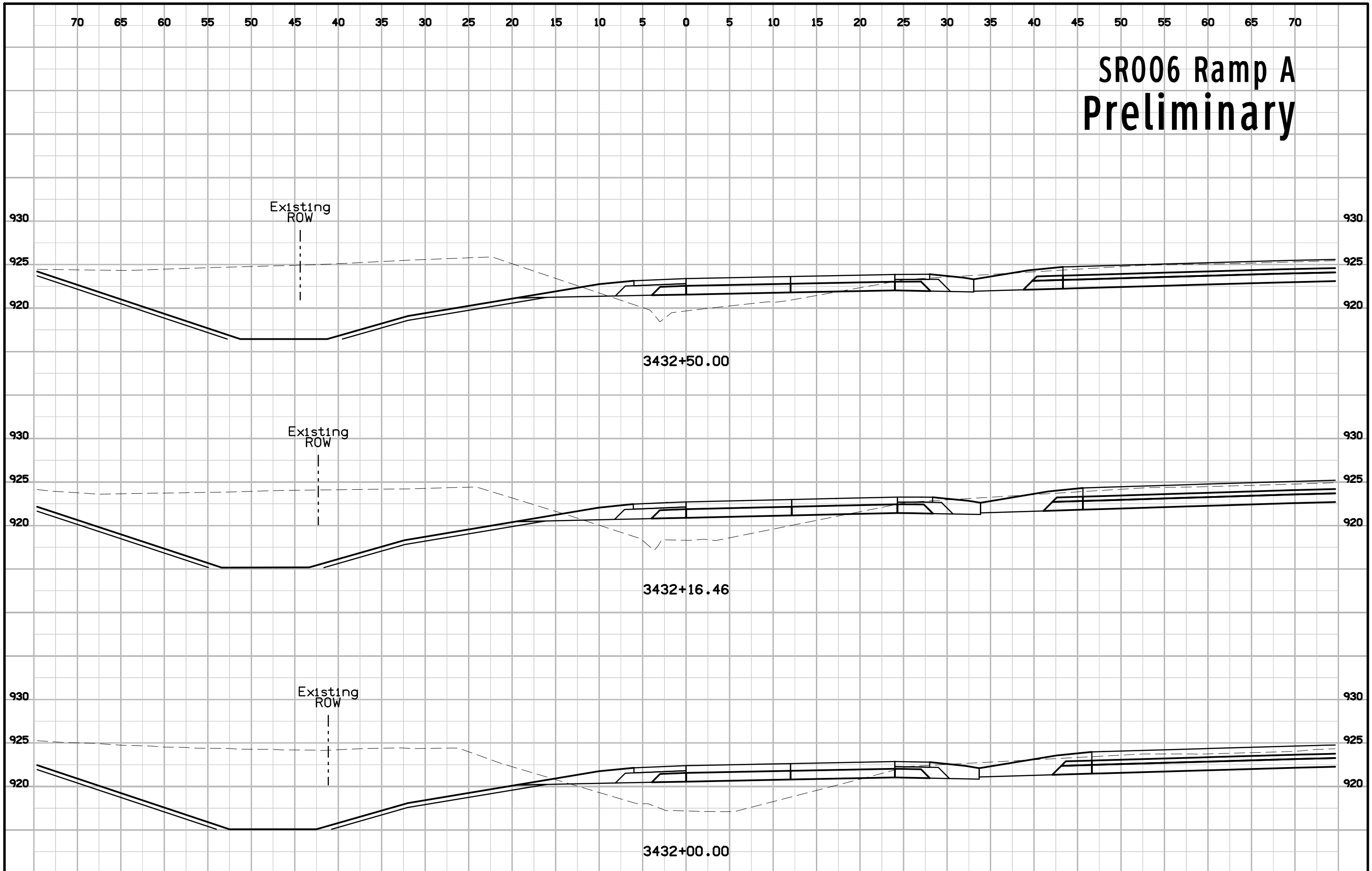
# SR006 Ramp A Preliminary



# SR006 Ramp A Preliminary

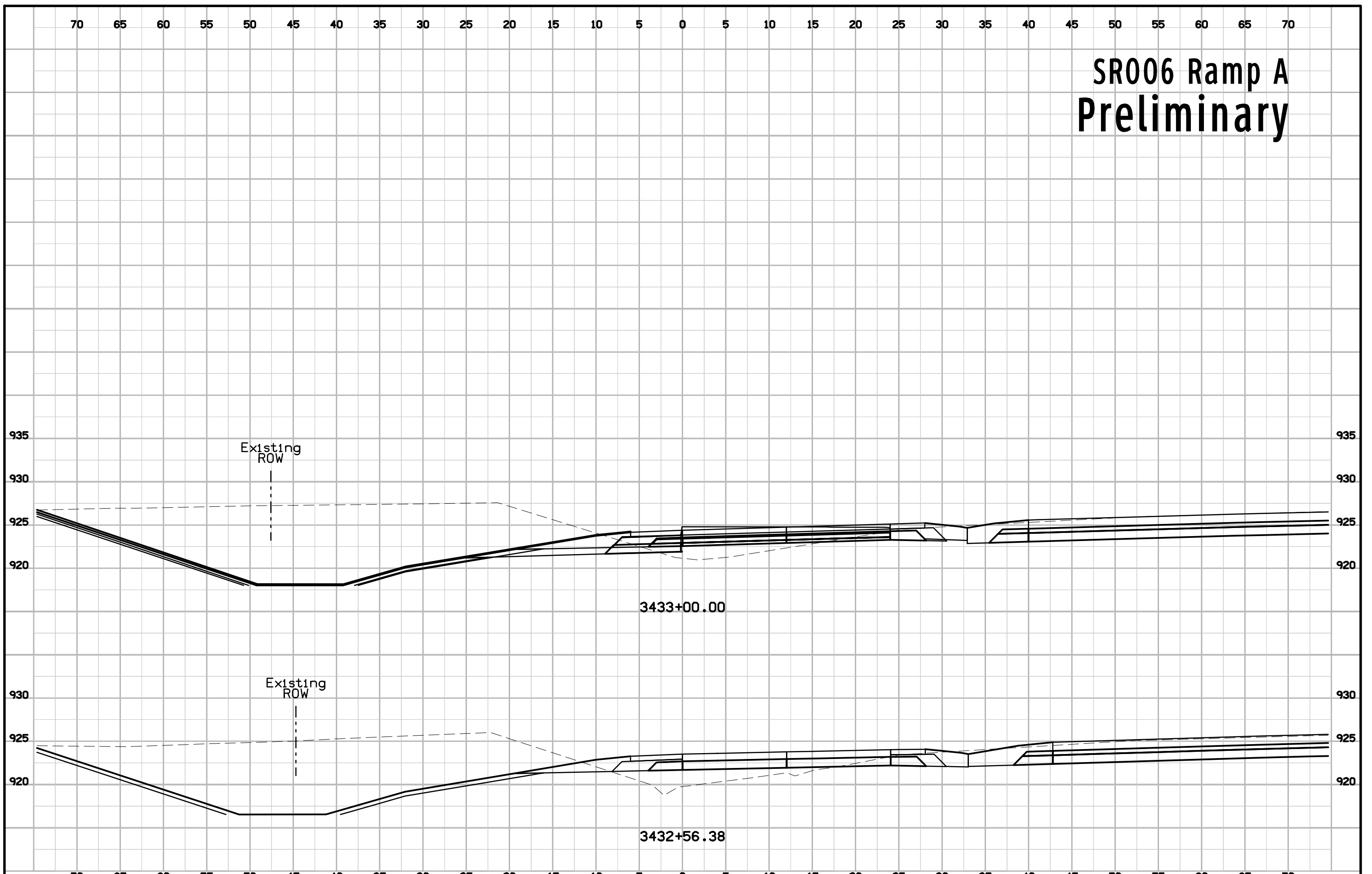


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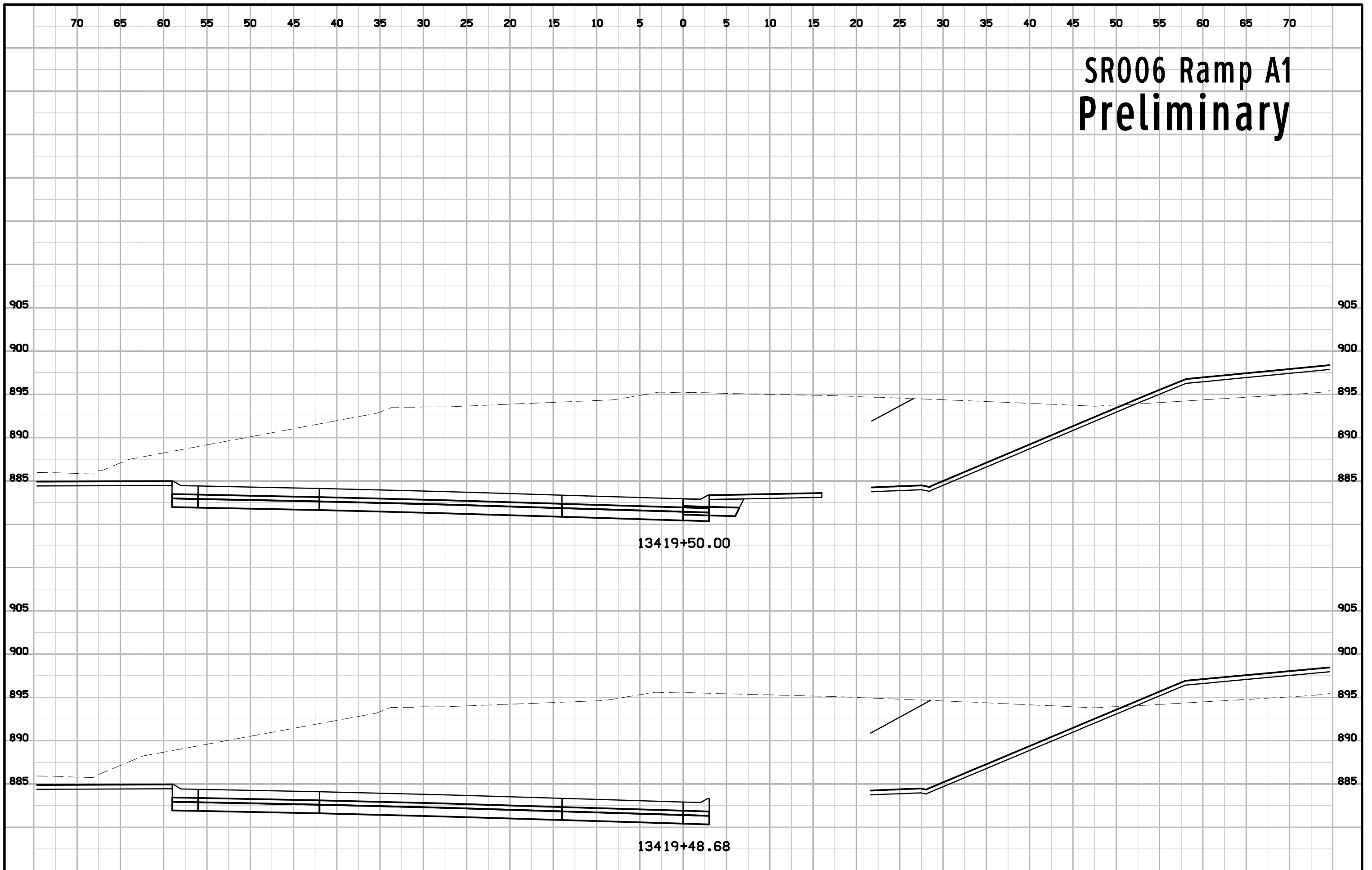




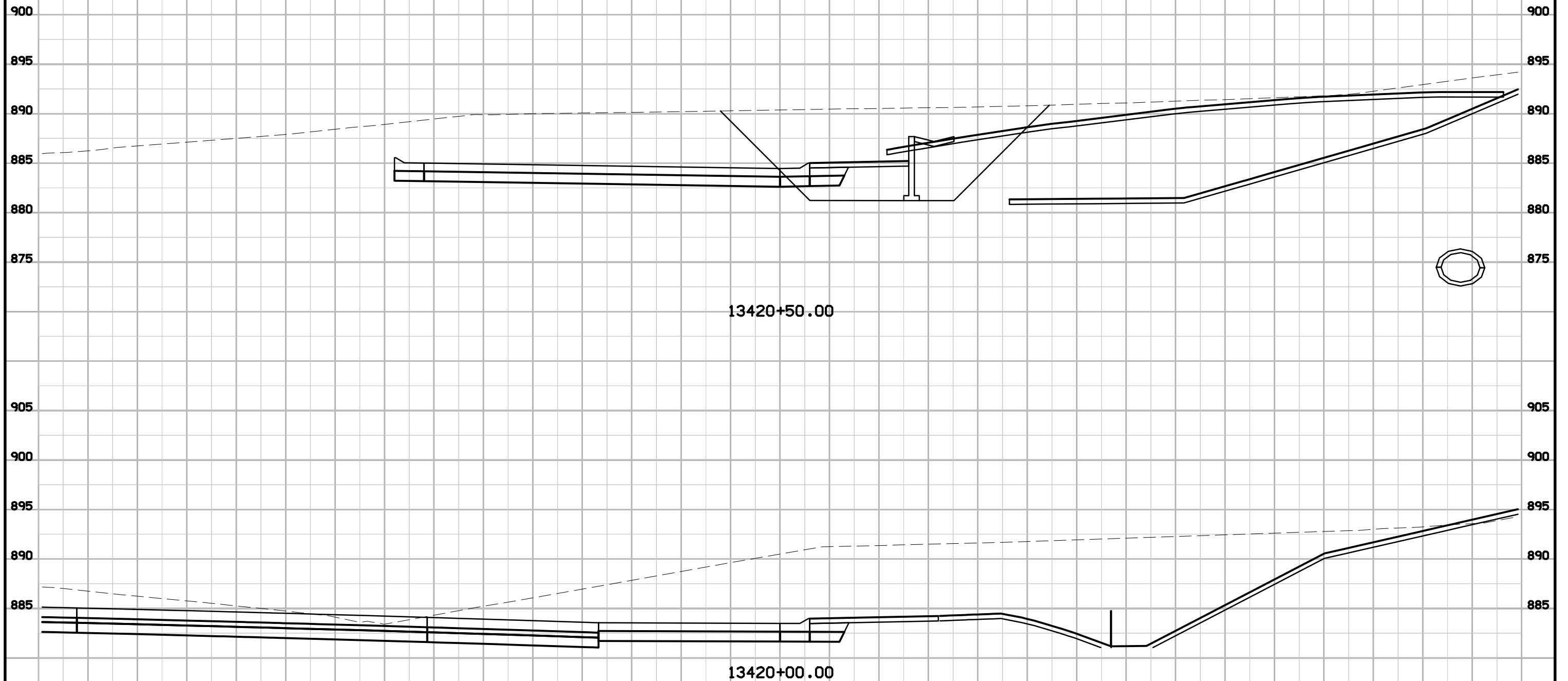
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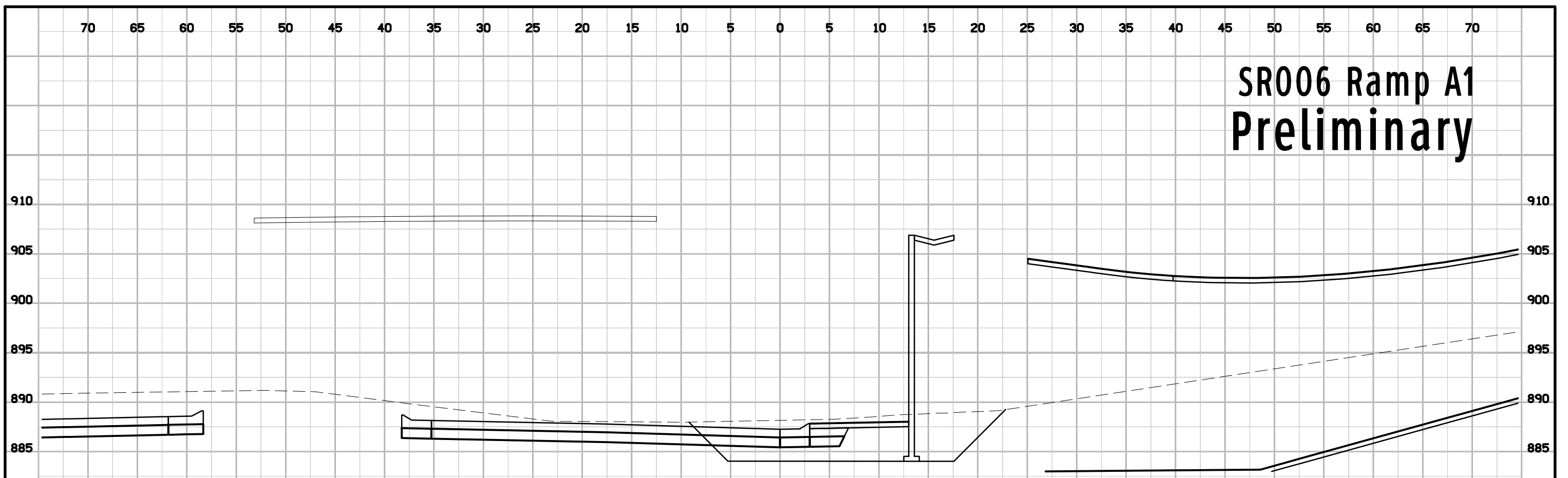
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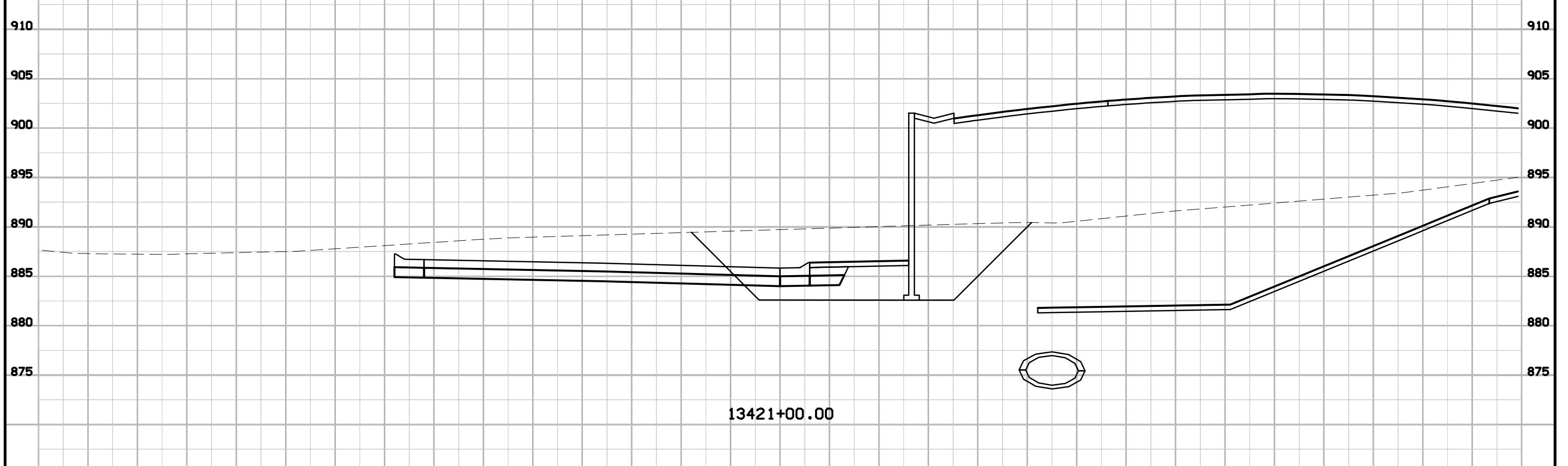
# SR006 Ramp A1 Preliminary



# SR006 Ramp A1 Preliminary

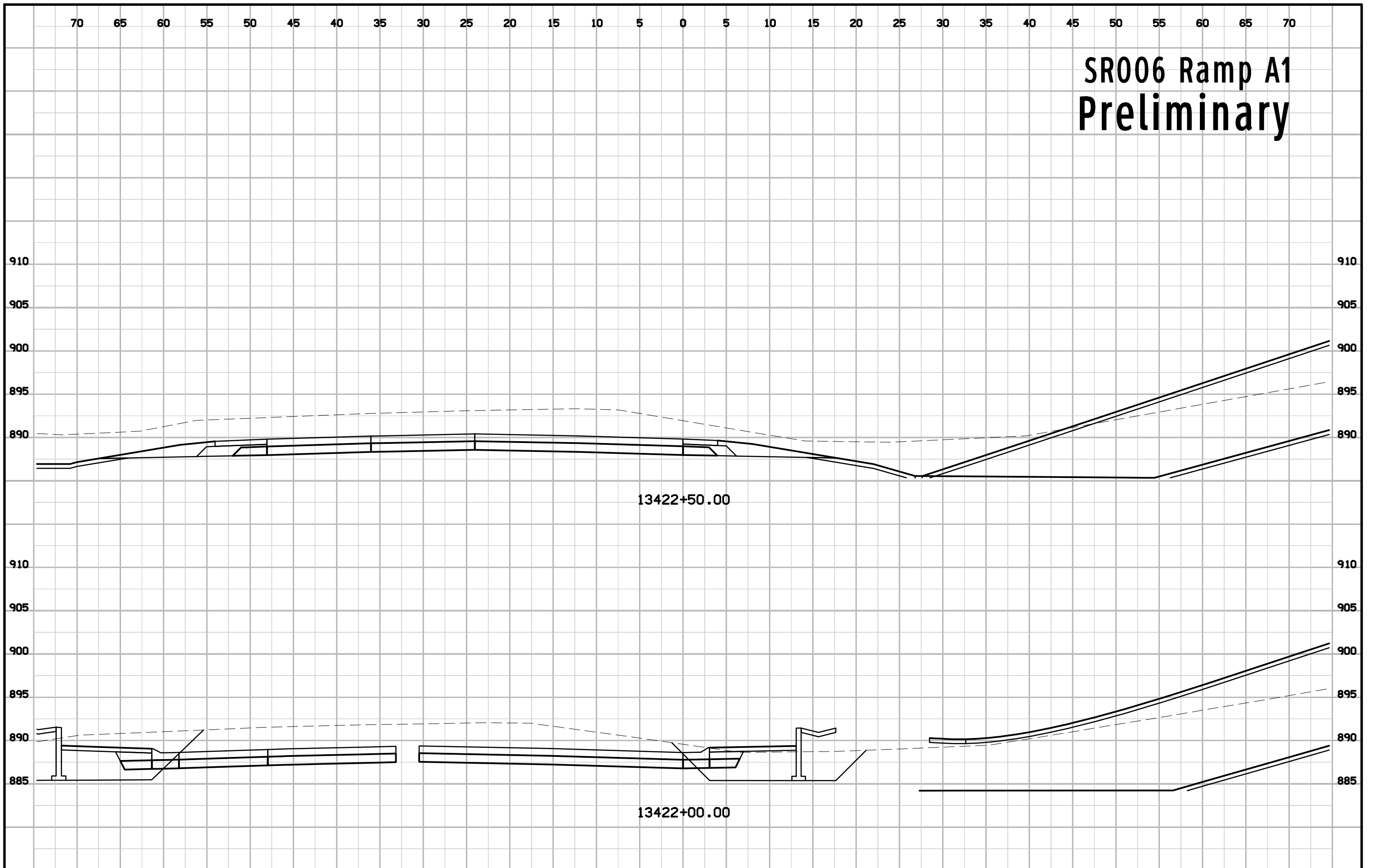


13421+50.00



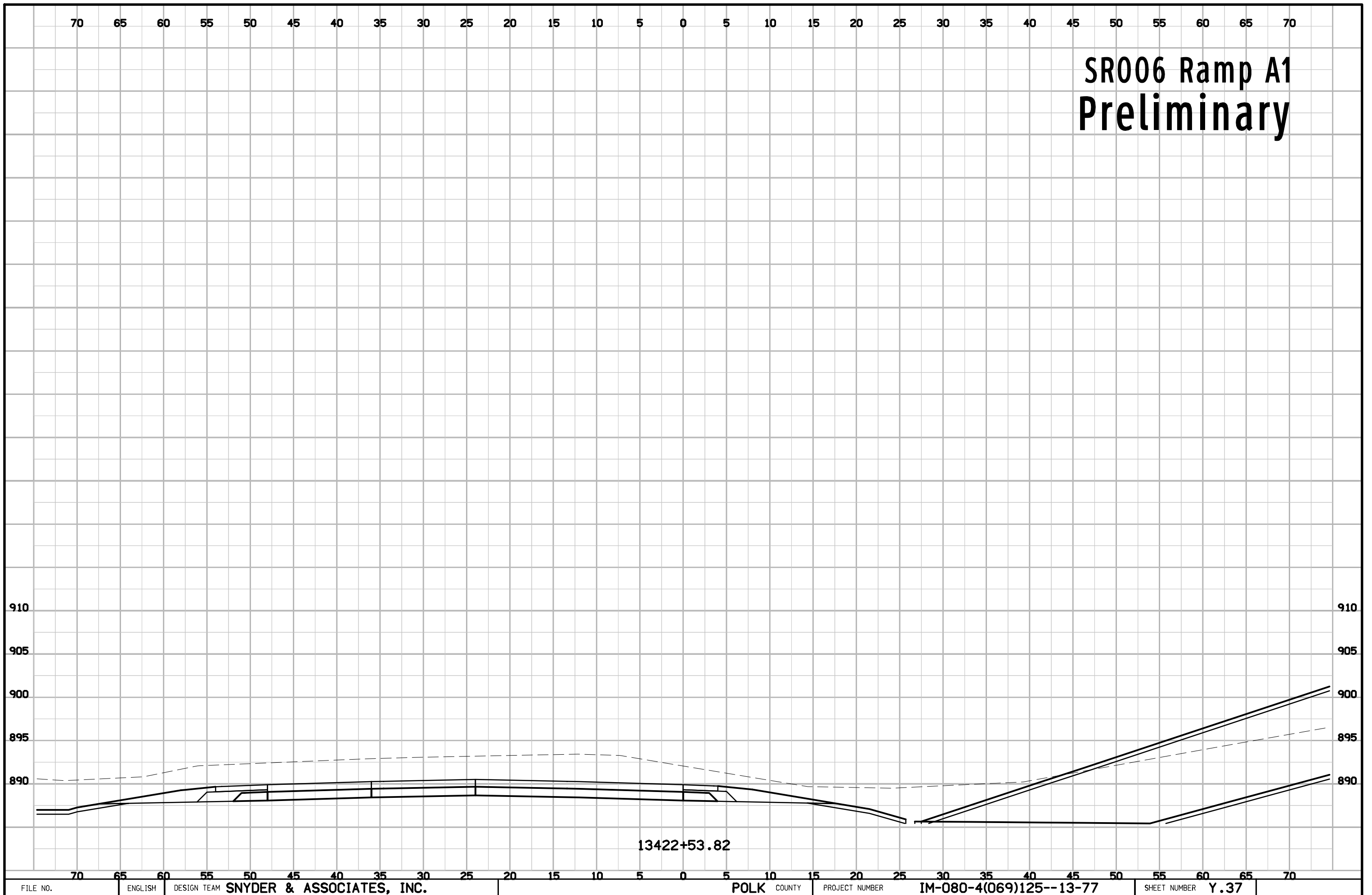
13421+00.00

# SR006 Ramp A1 Preliminary

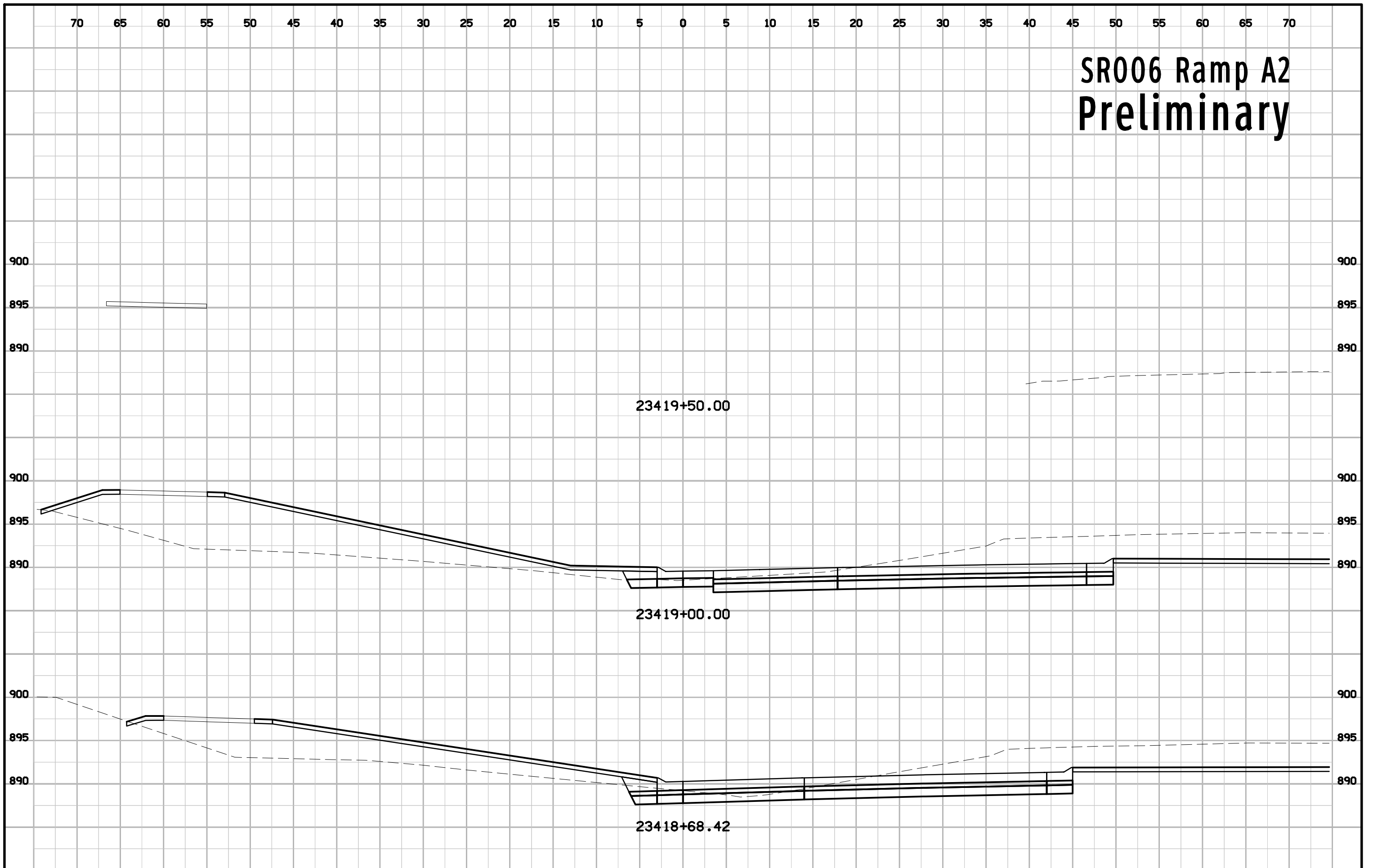




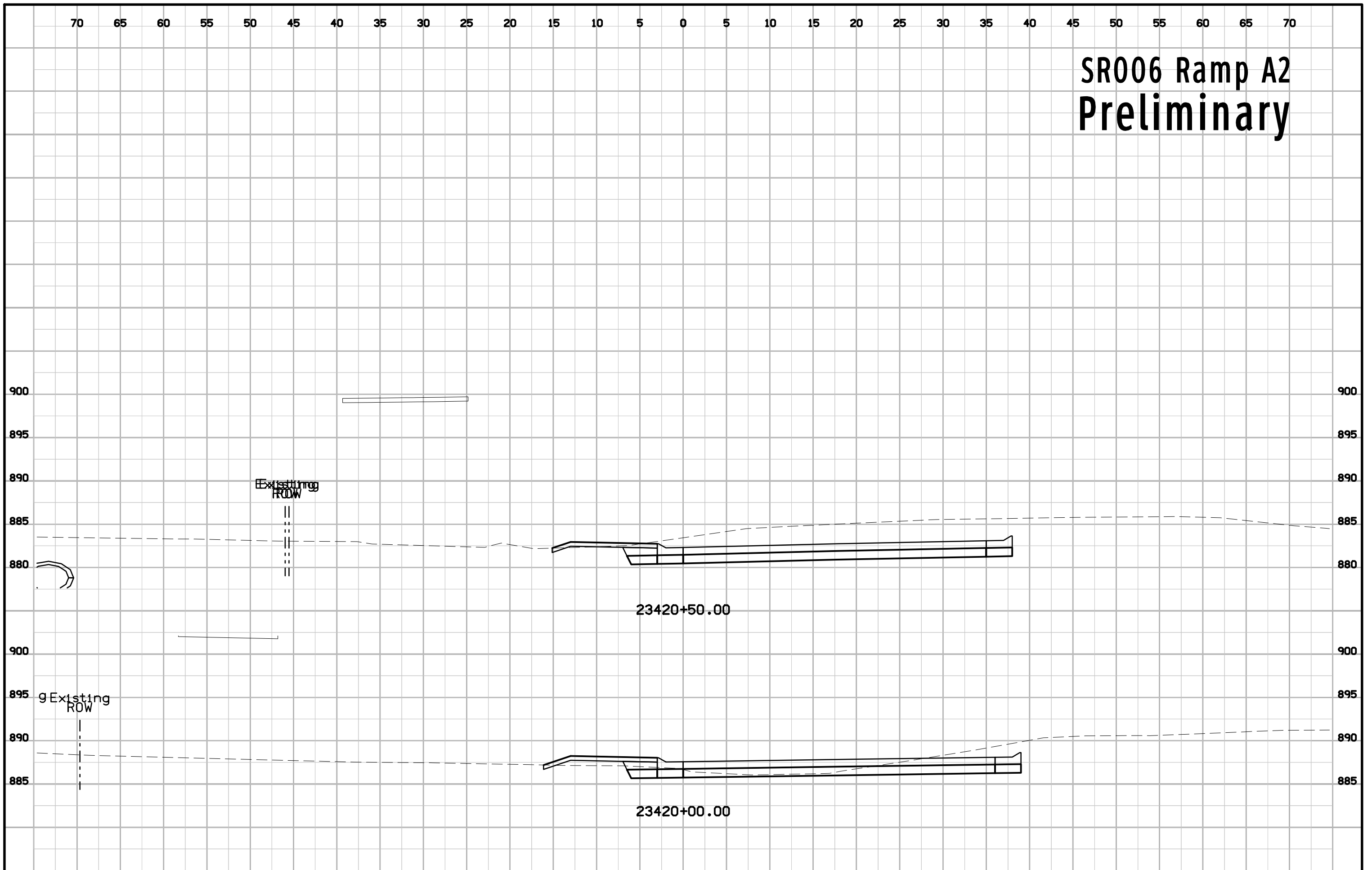
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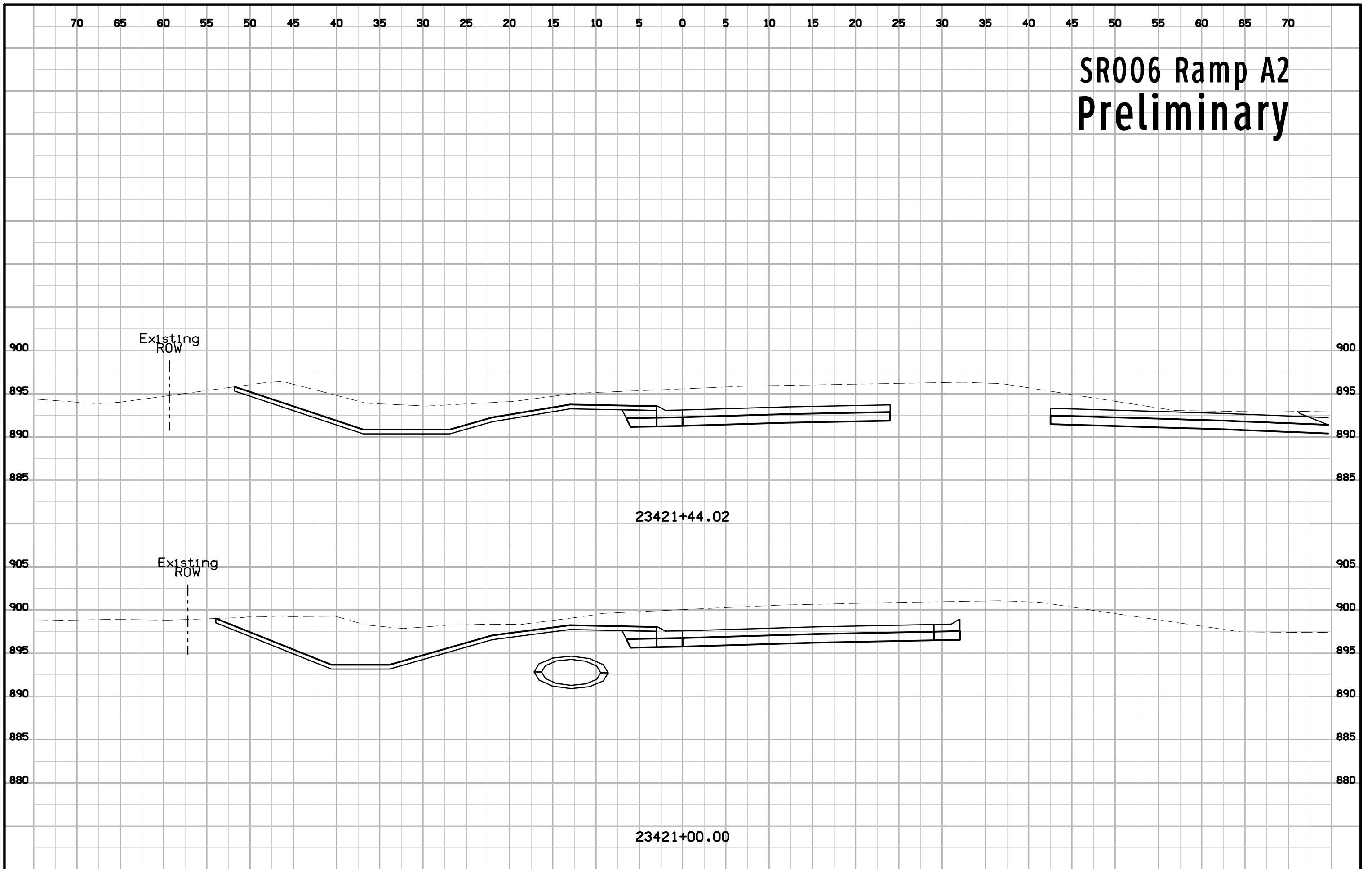
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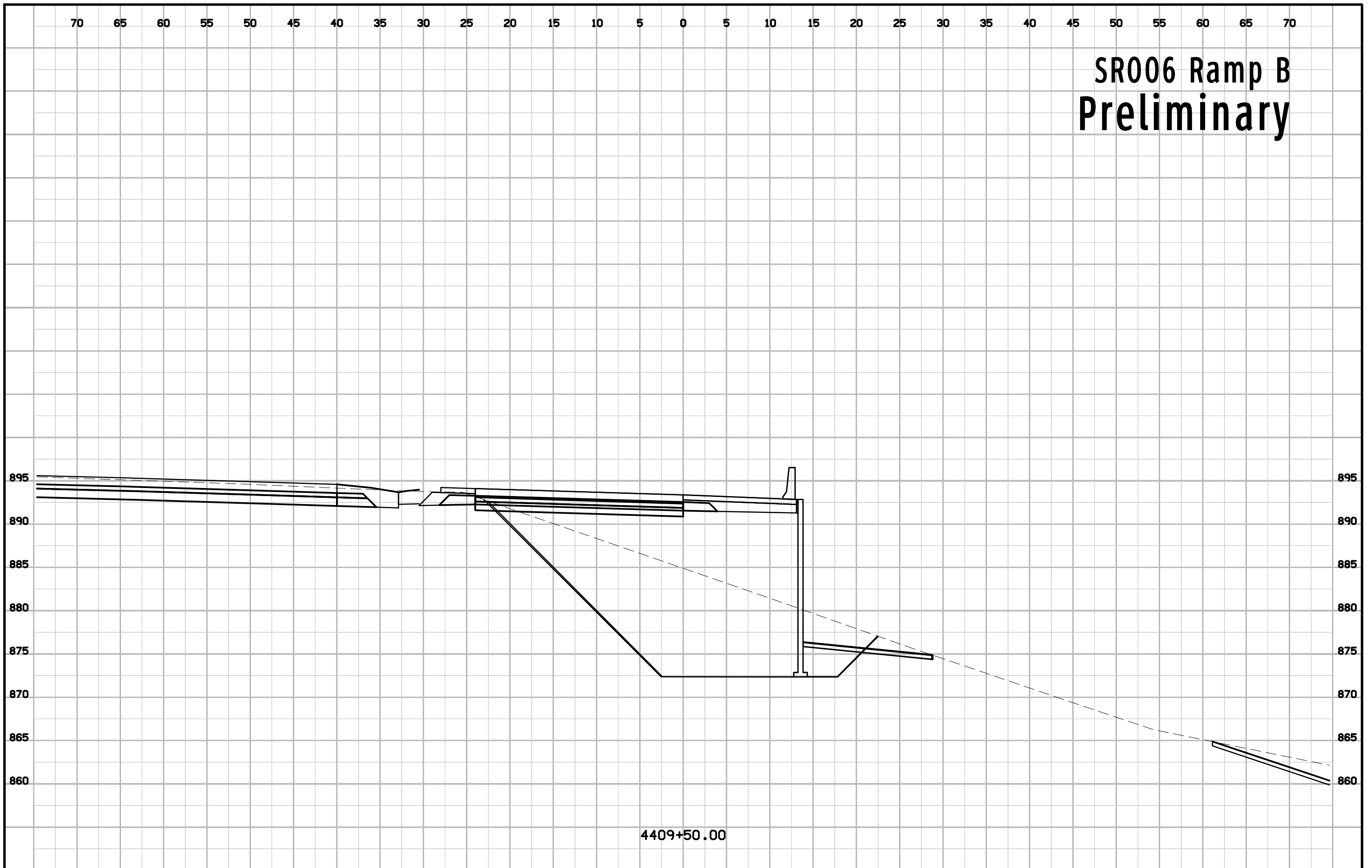
# SR006 Ramp A2 Preliminary



# SR006 Ramp A2 Preliminary



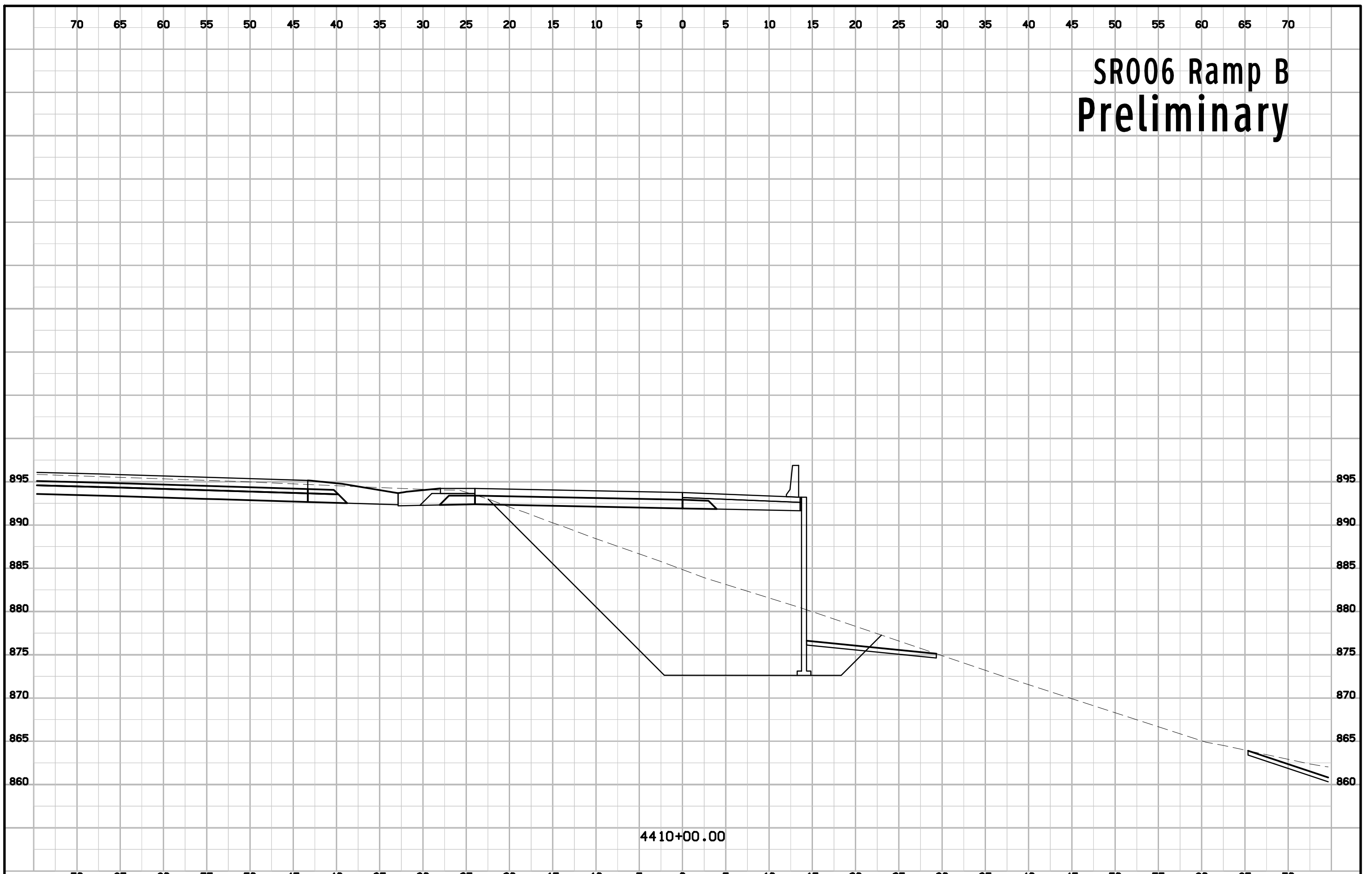
# SR006 Ramp B Preliminary



4409+50.00

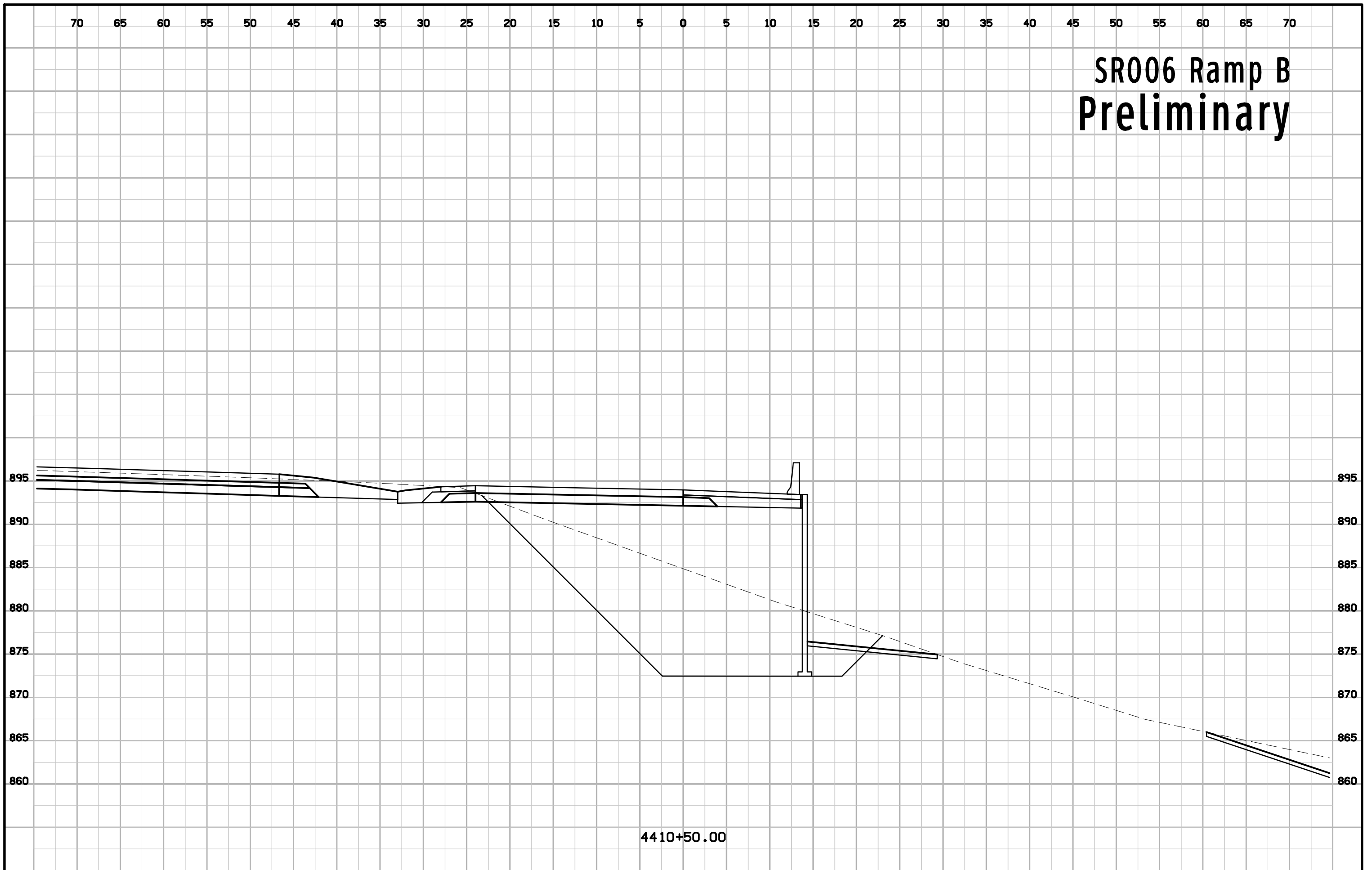


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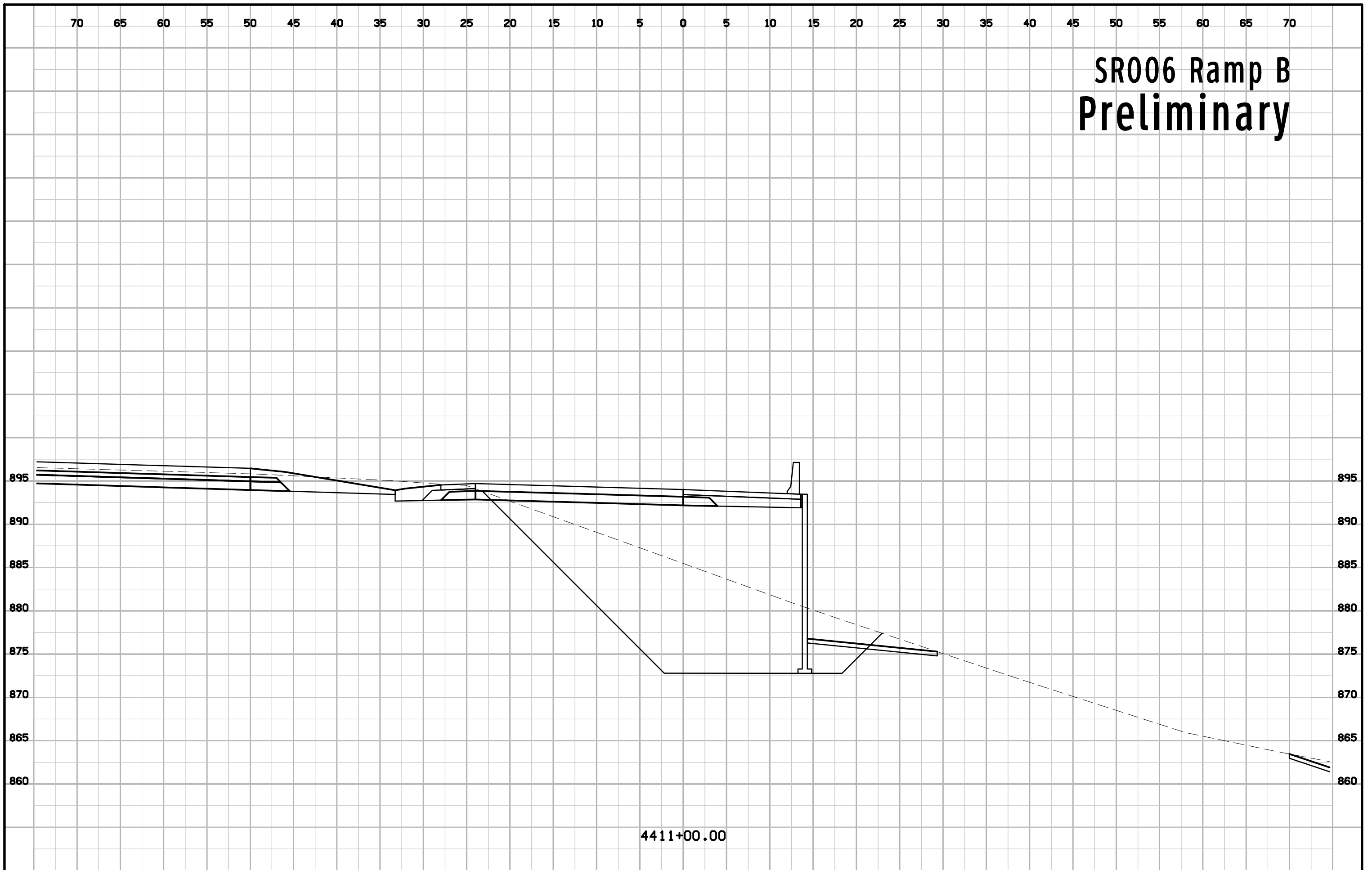
4410+00.00

# SR006 Ramp B Preliminary



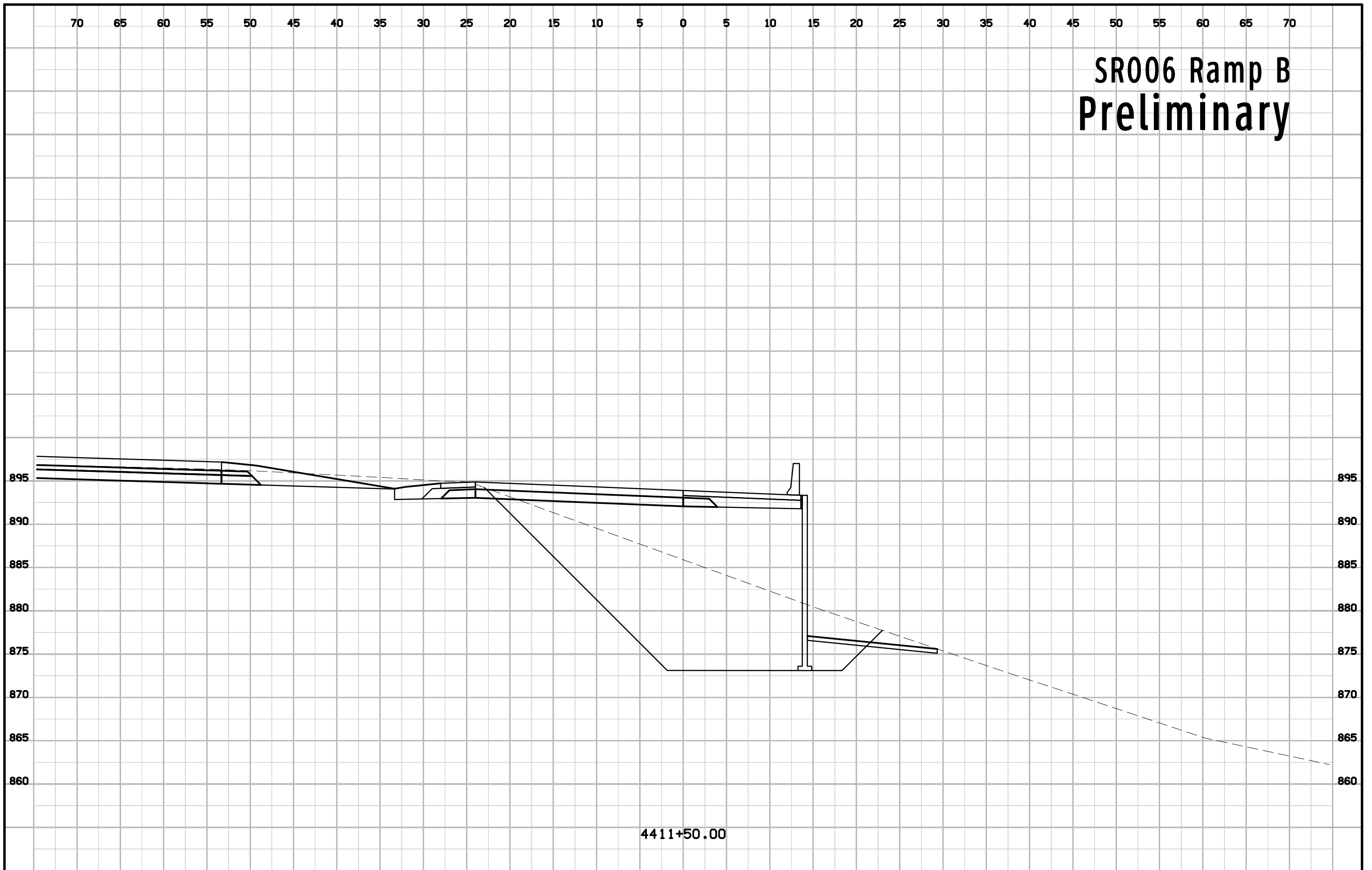
44 10+50.00

# SR006 Ramp B Preliminary



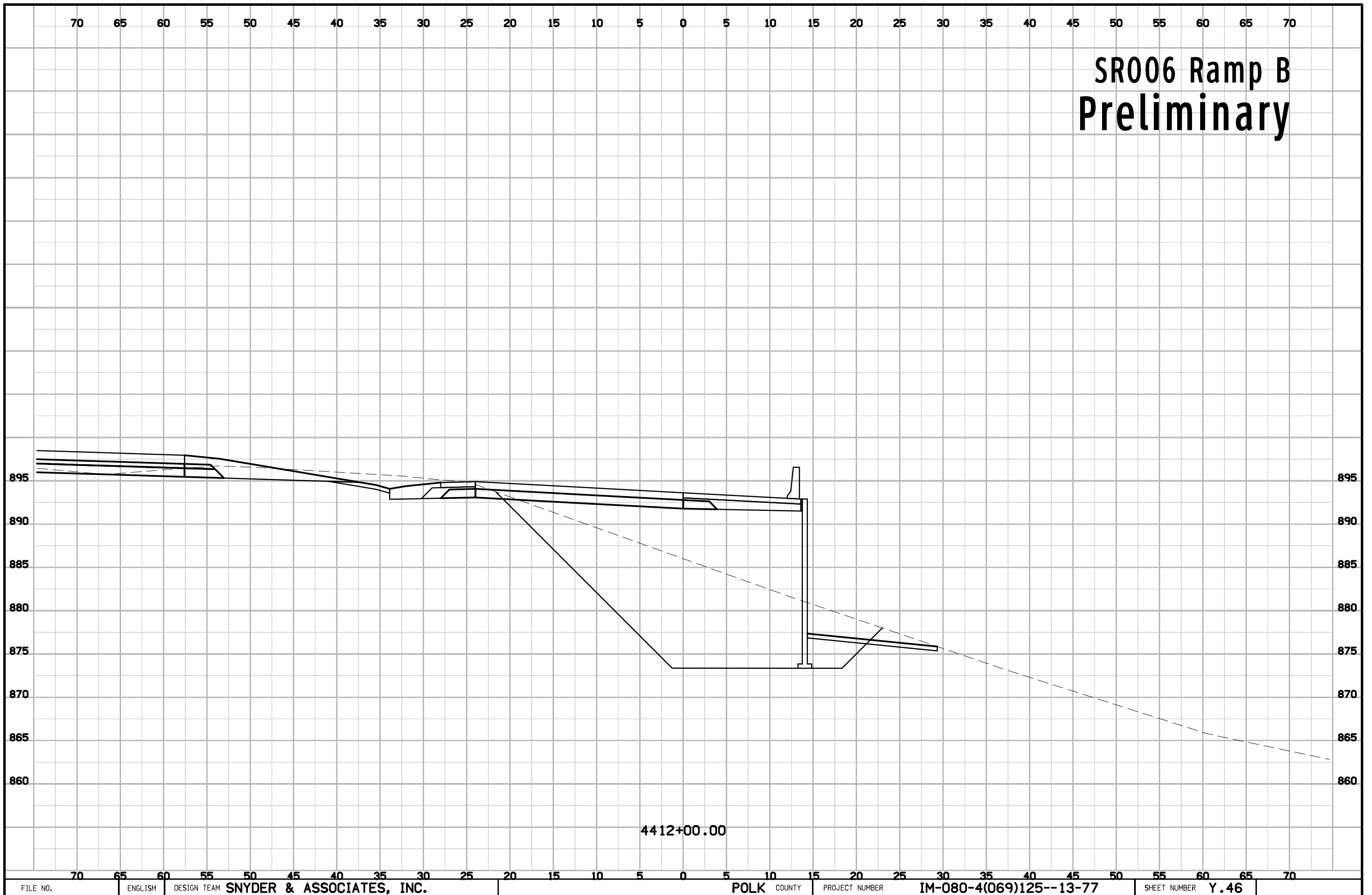
4411+00.00

# SR006 Ramp B Preliminary



4411+50.00

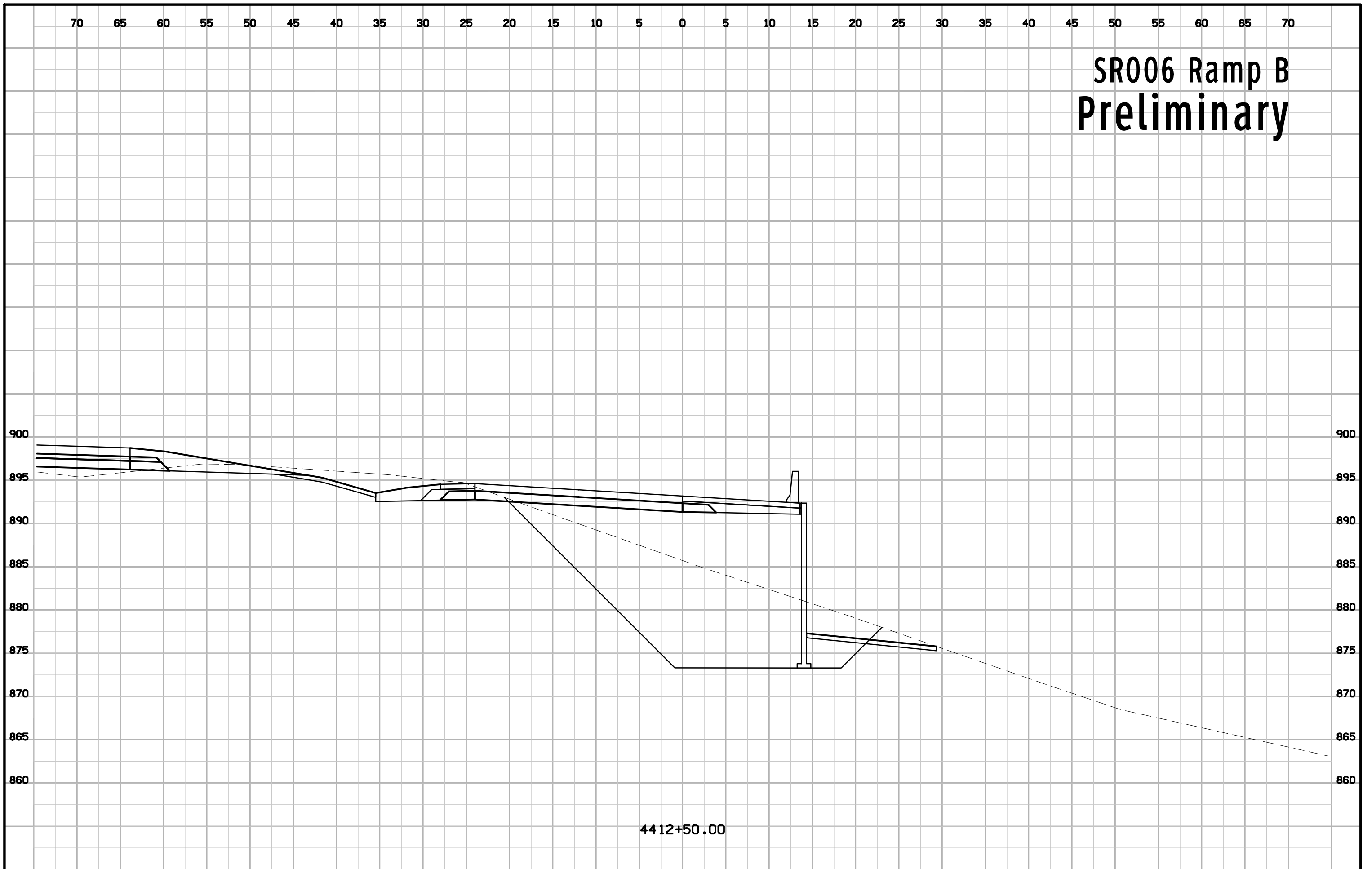
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4412+00.00

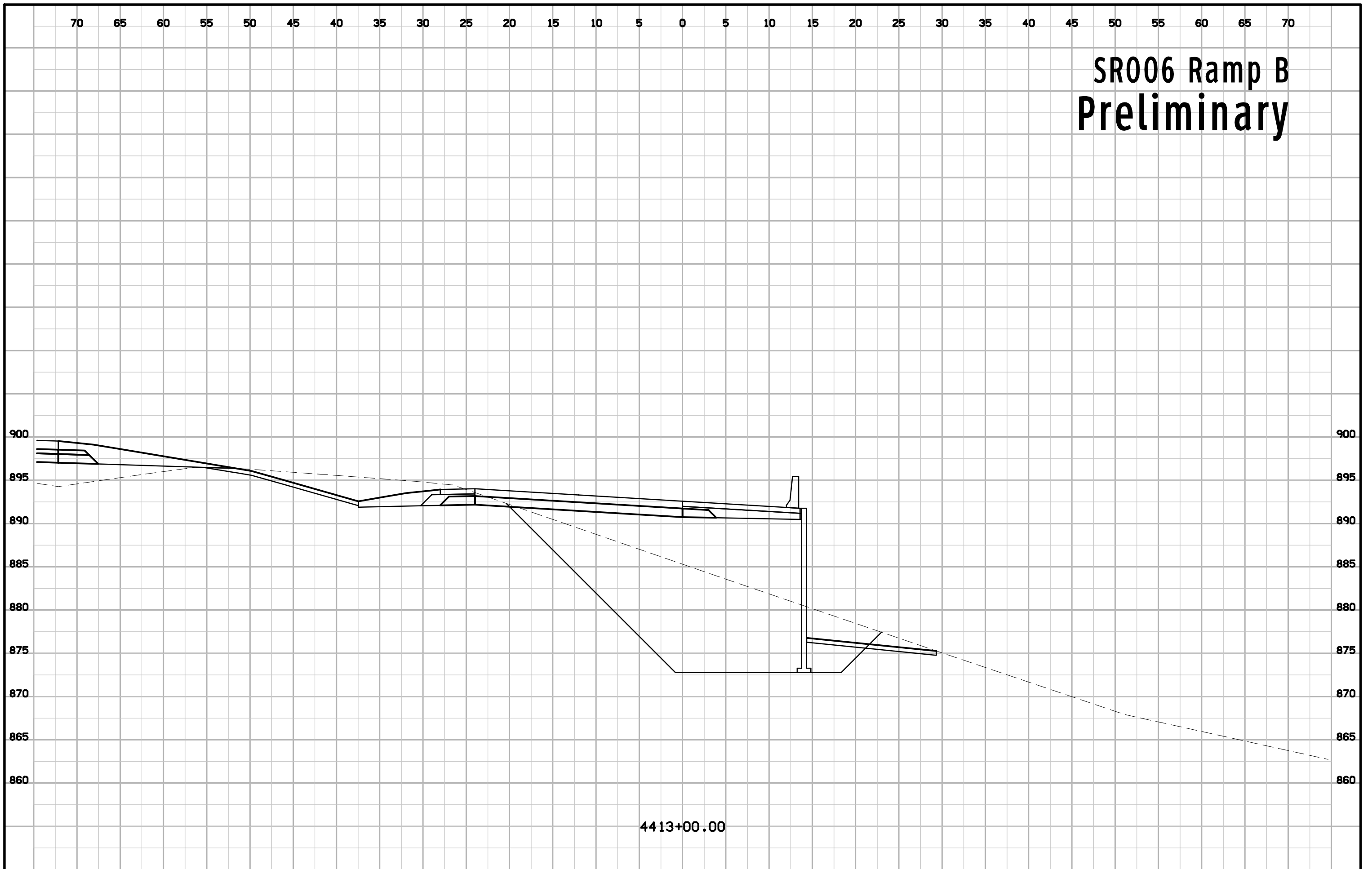


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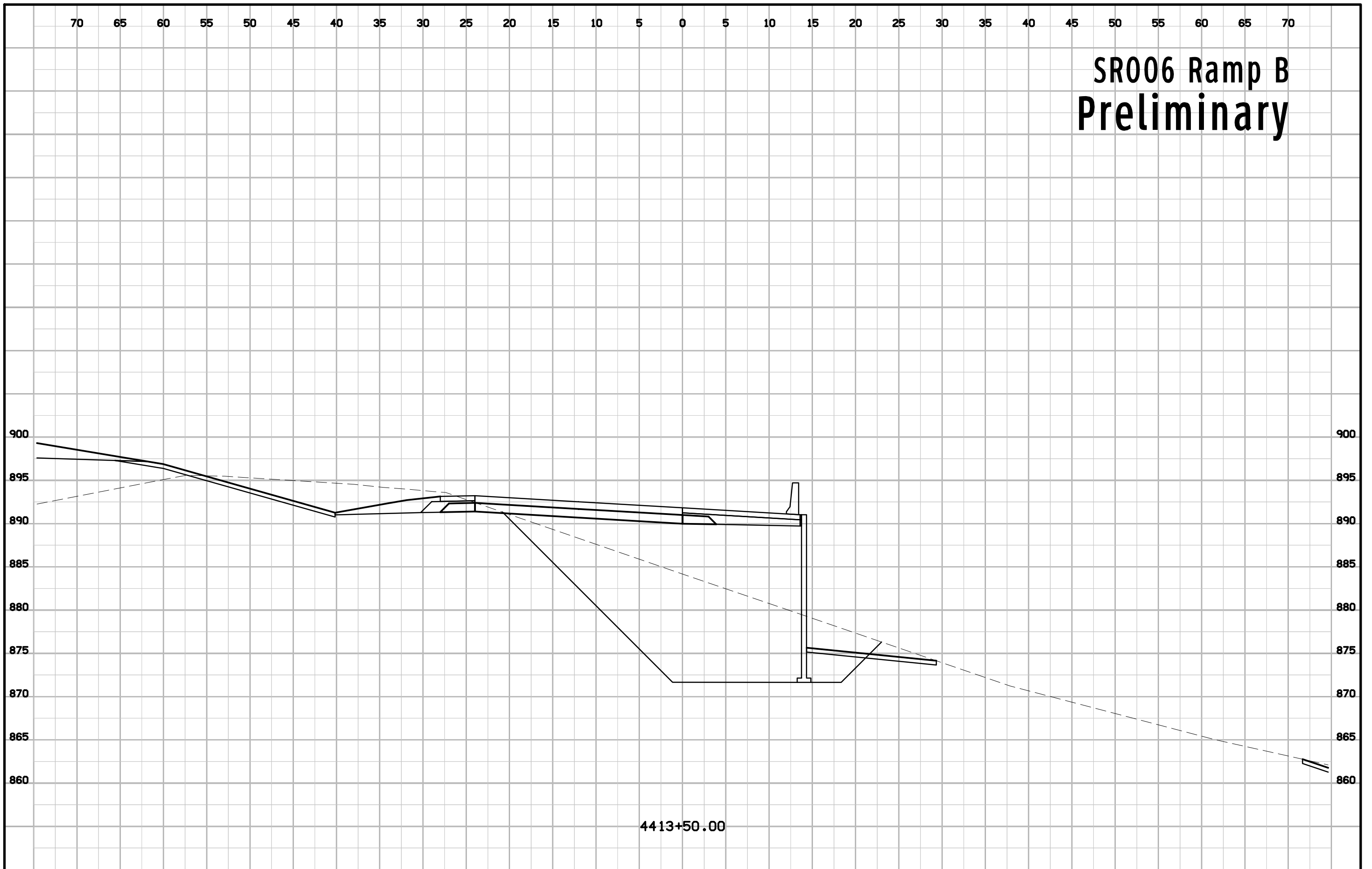
4412+50.00

# SR006 Ramp B Preliminary



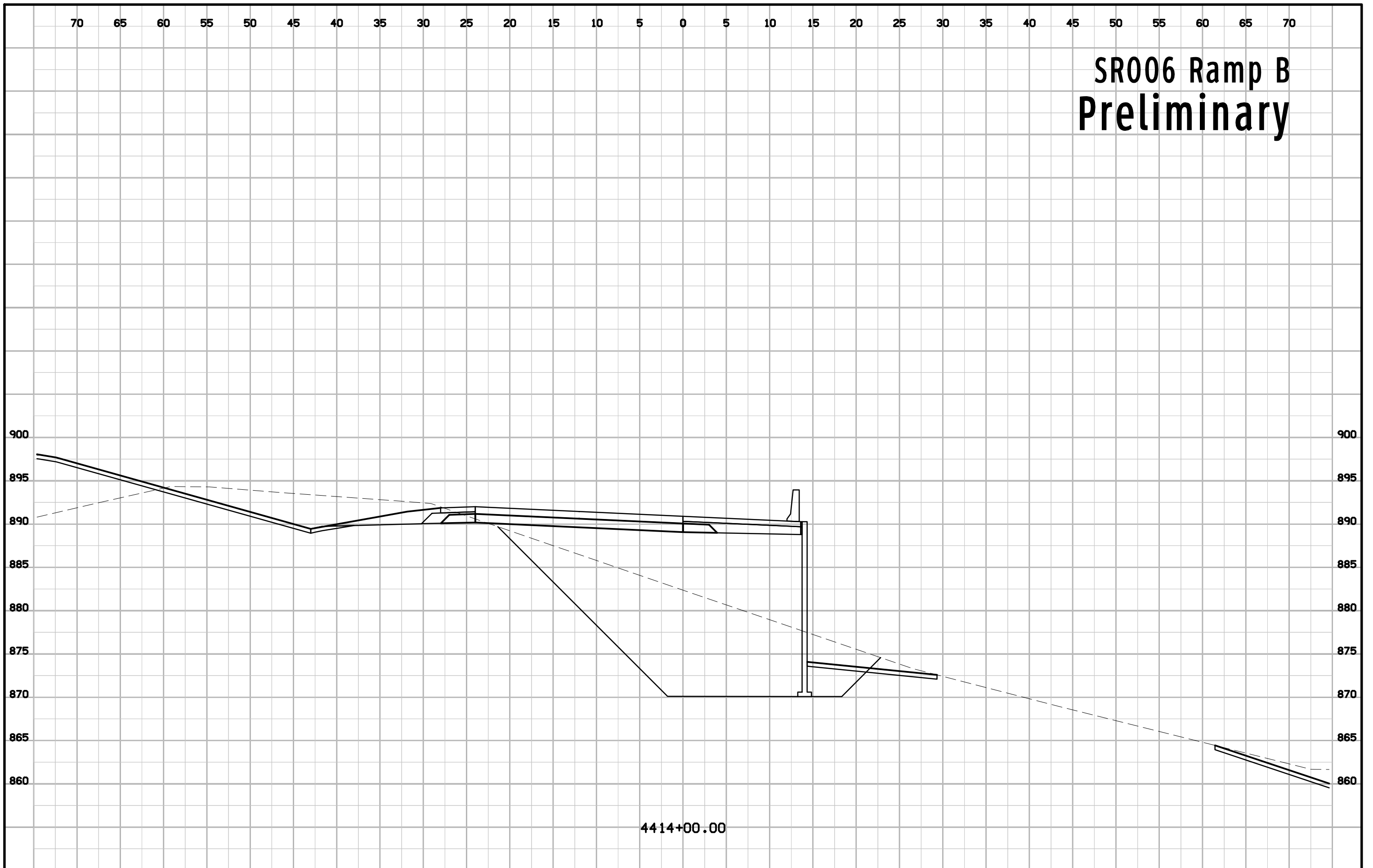
4413+00.00

# SR006 Ramp B Preliminary



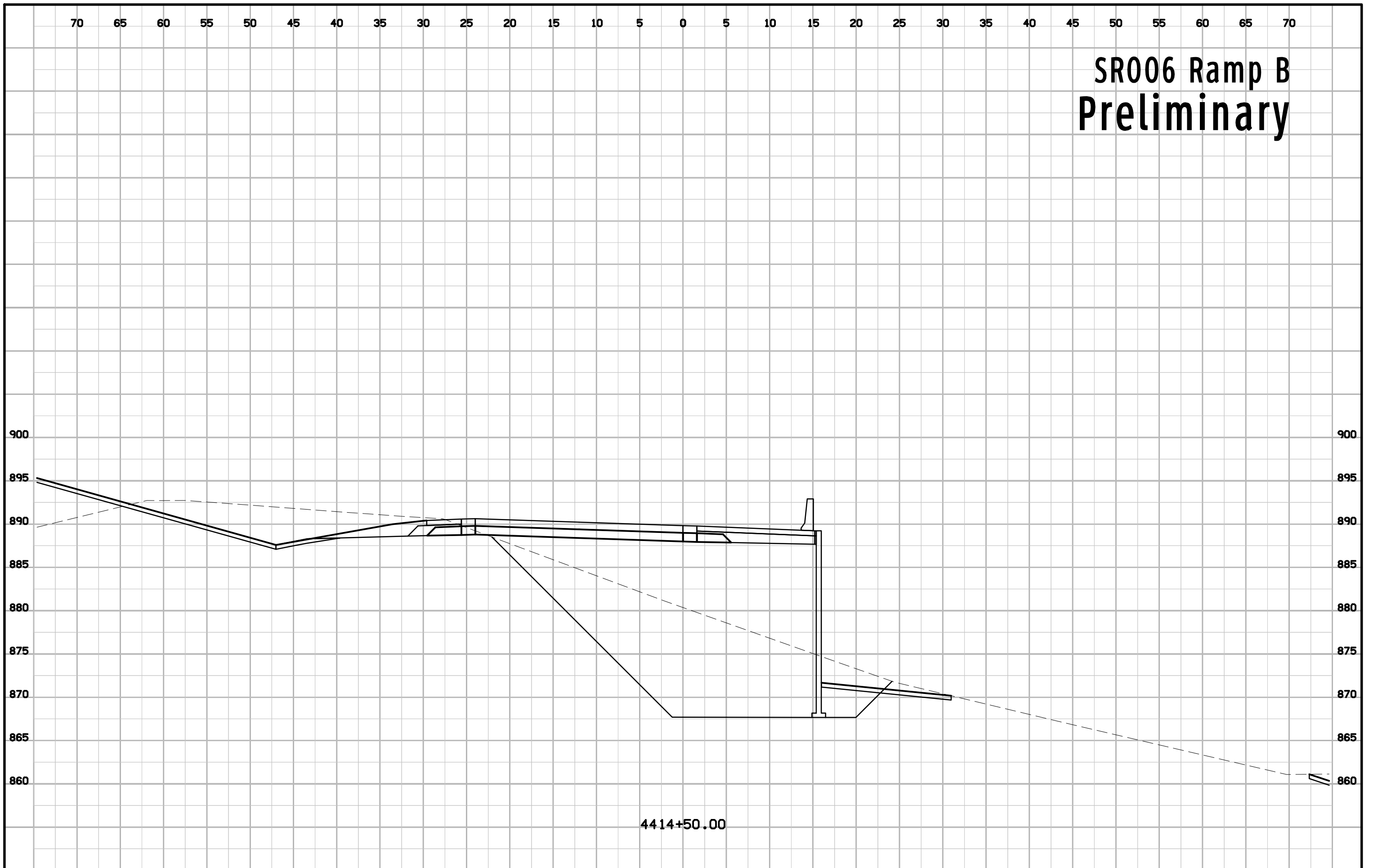
4413+50.00

# SR006 Ramp B Preliminary



4414+00.00

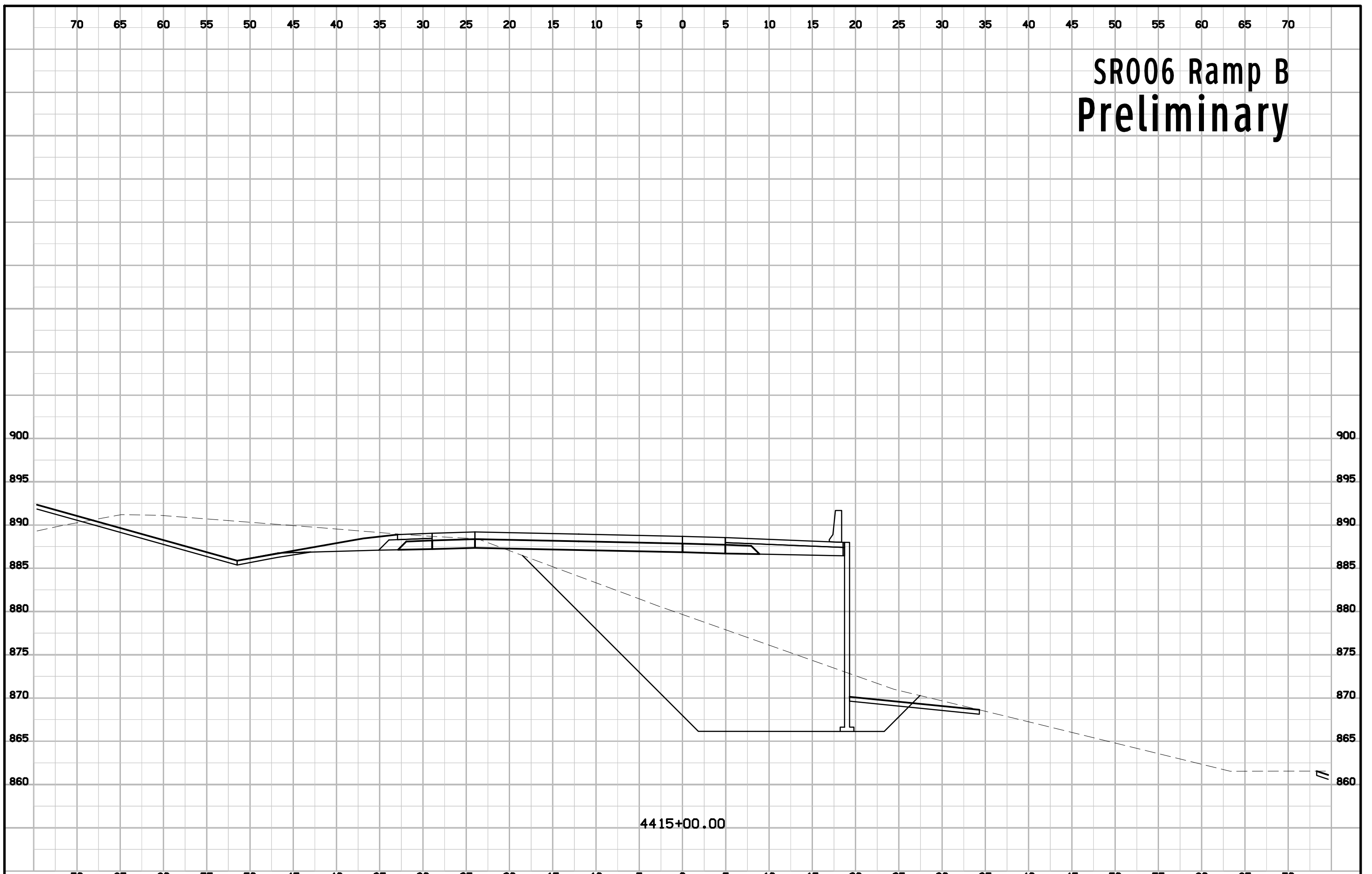
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4414+50.00

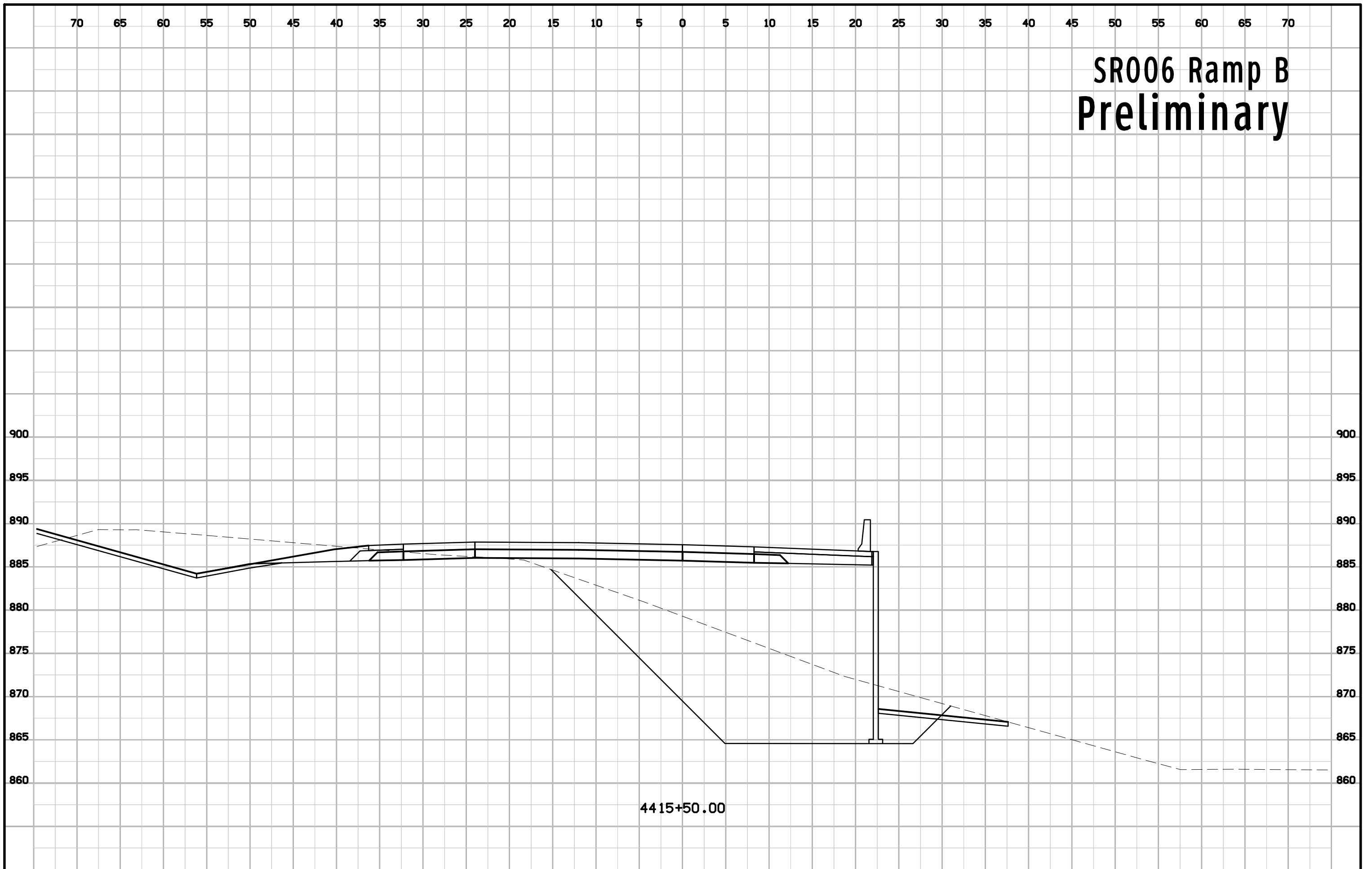


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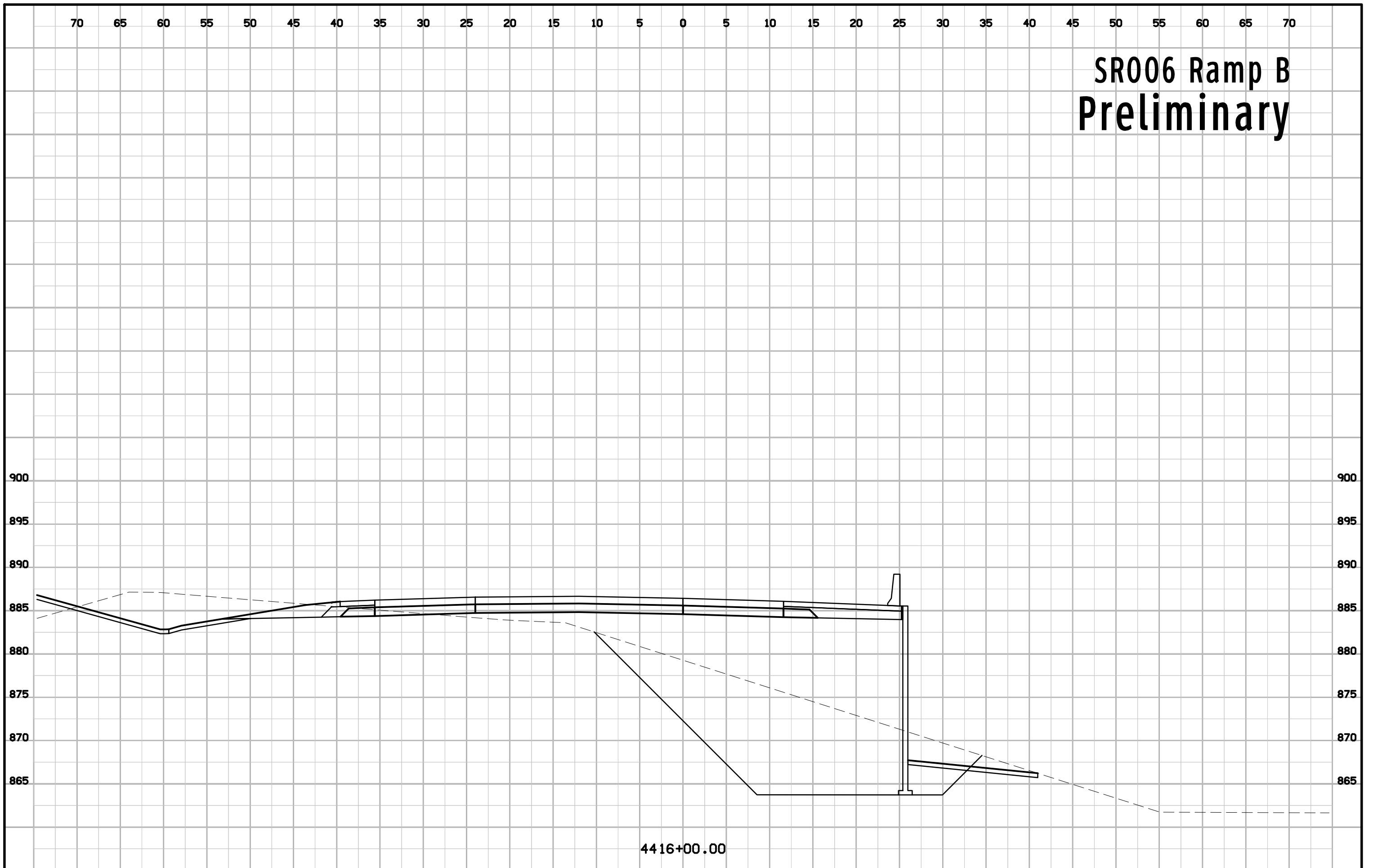
4415+00.00

# SR006 Ramp B Preliminary



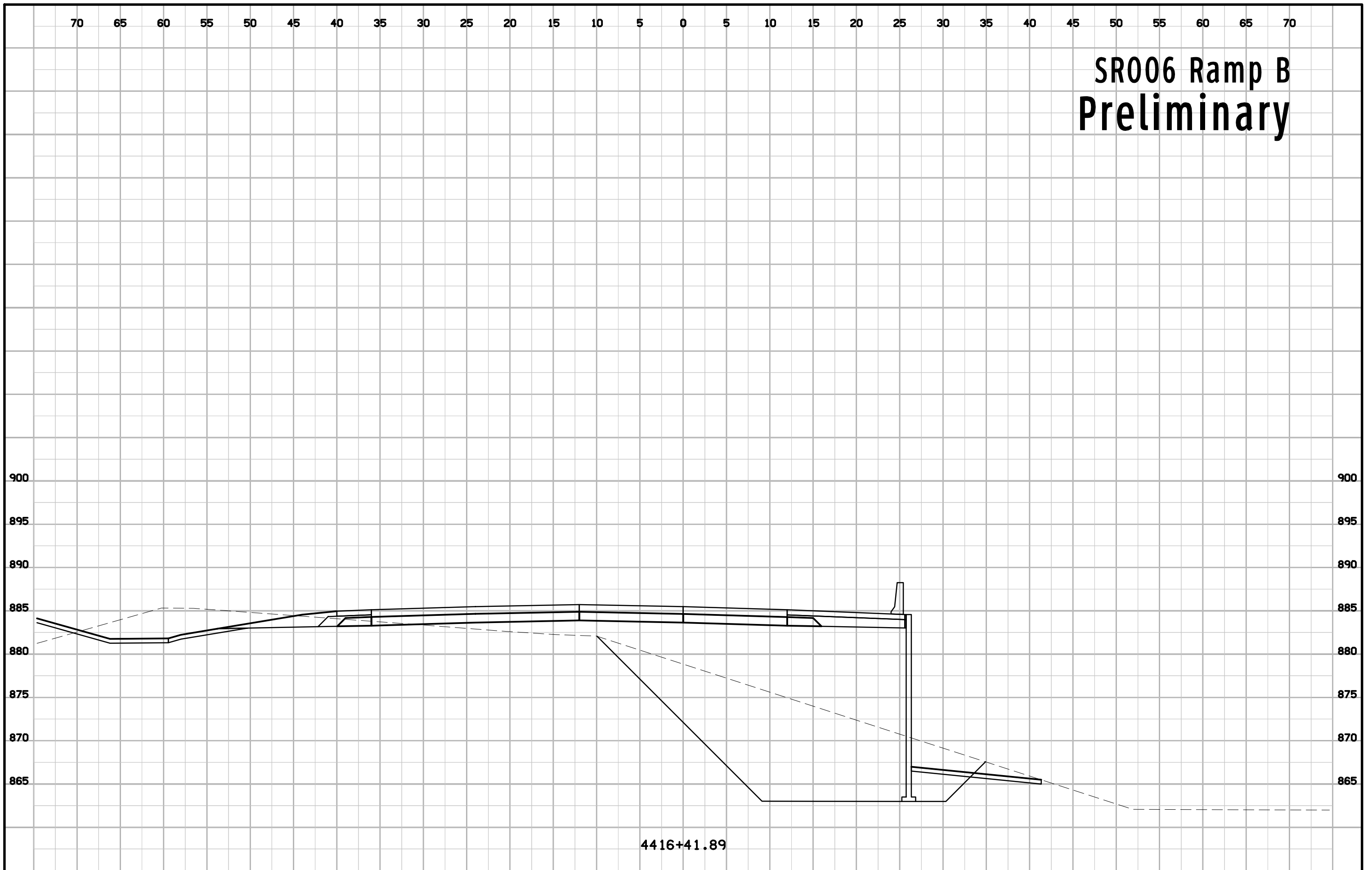
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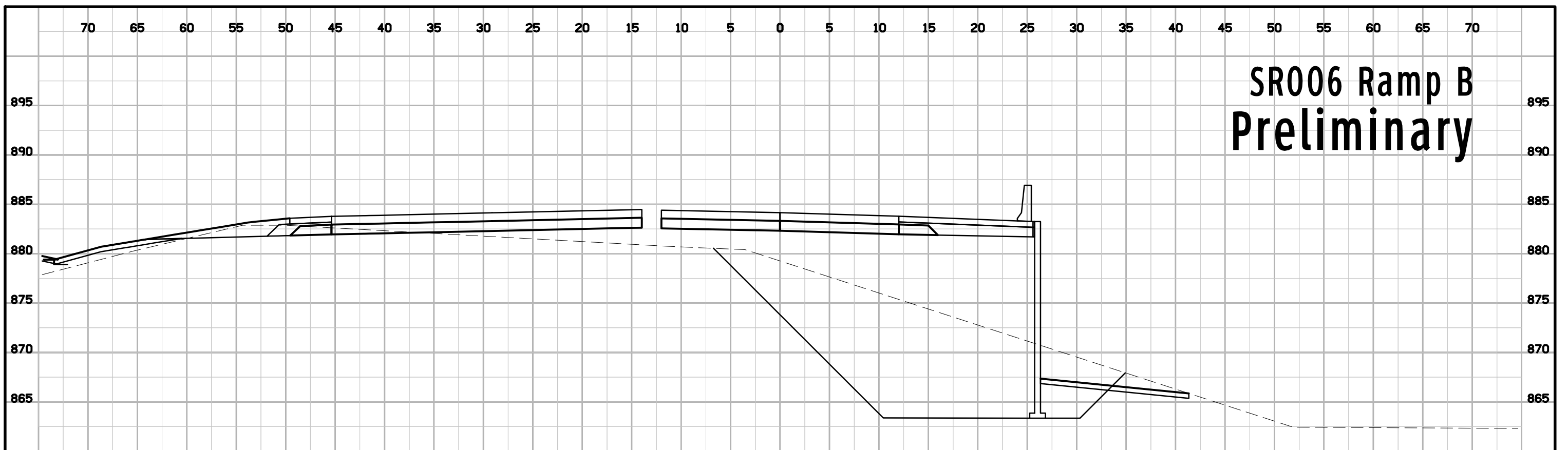
4416+00.00

# SR006 Ramp B Preliminary

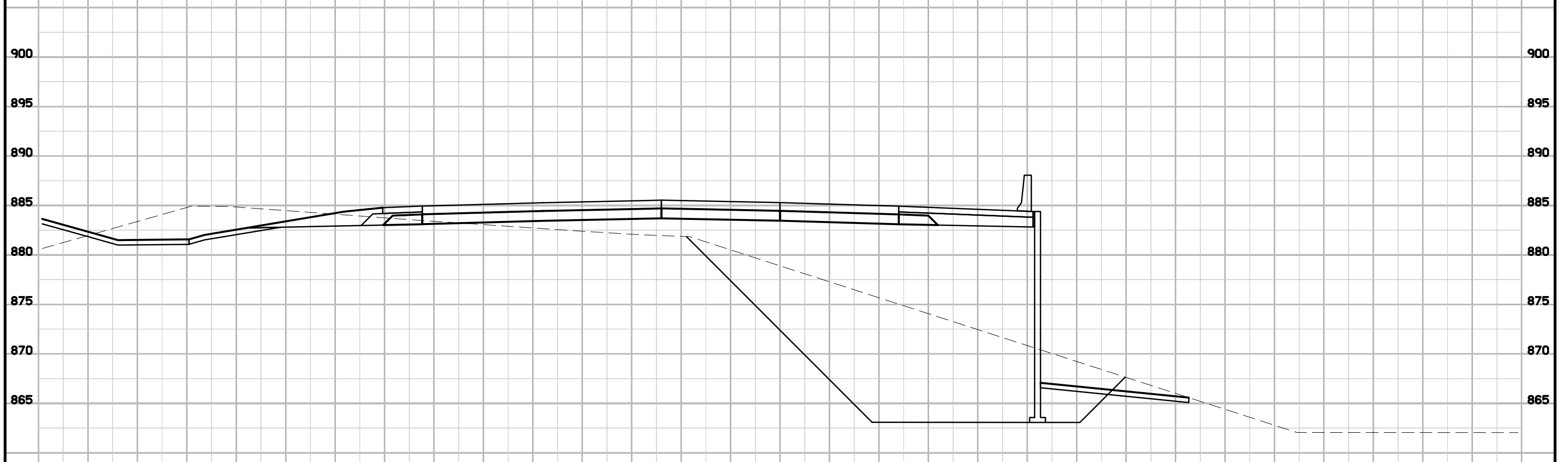


4416+41.89

# SR006 Ramp B Preliminary



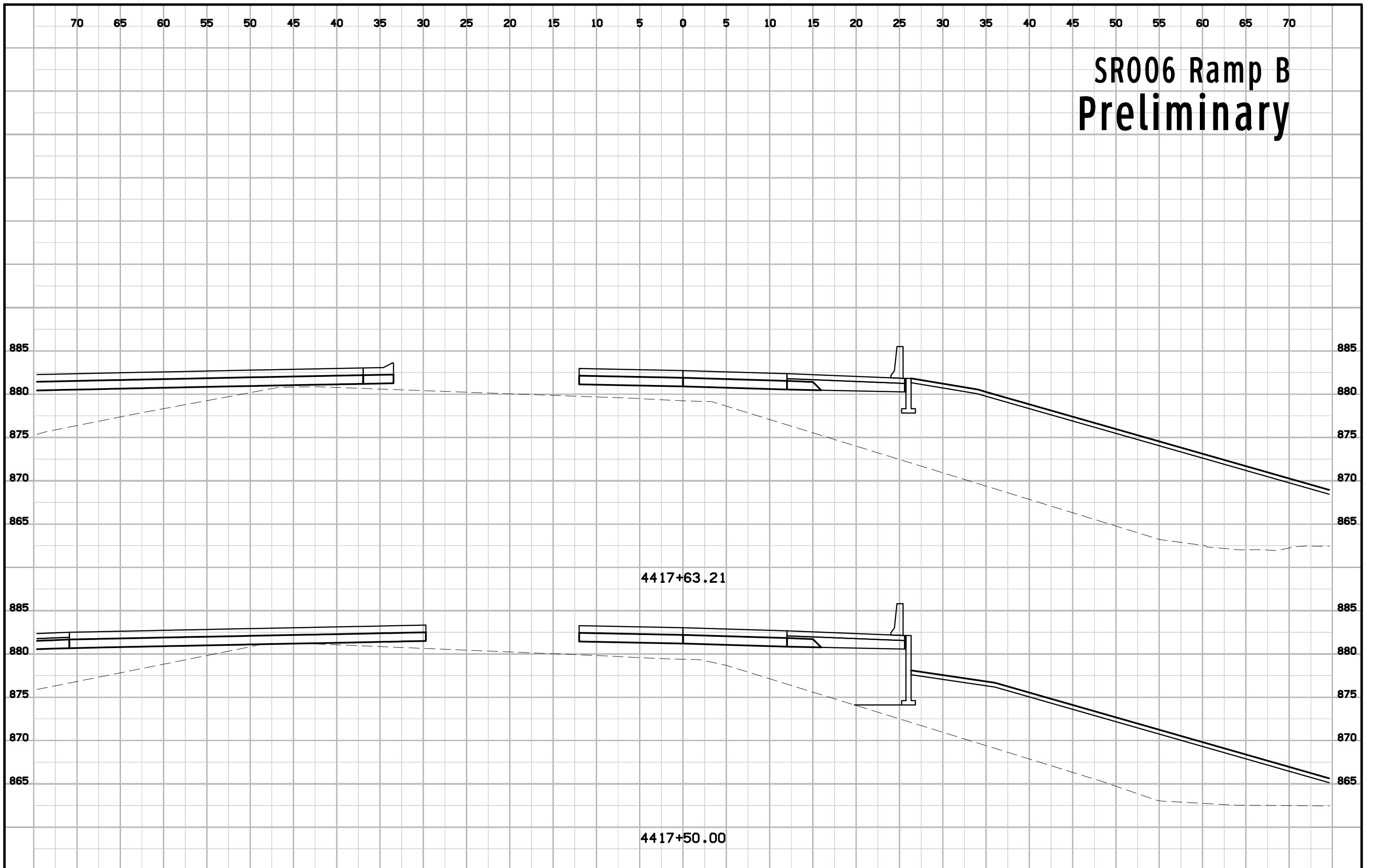
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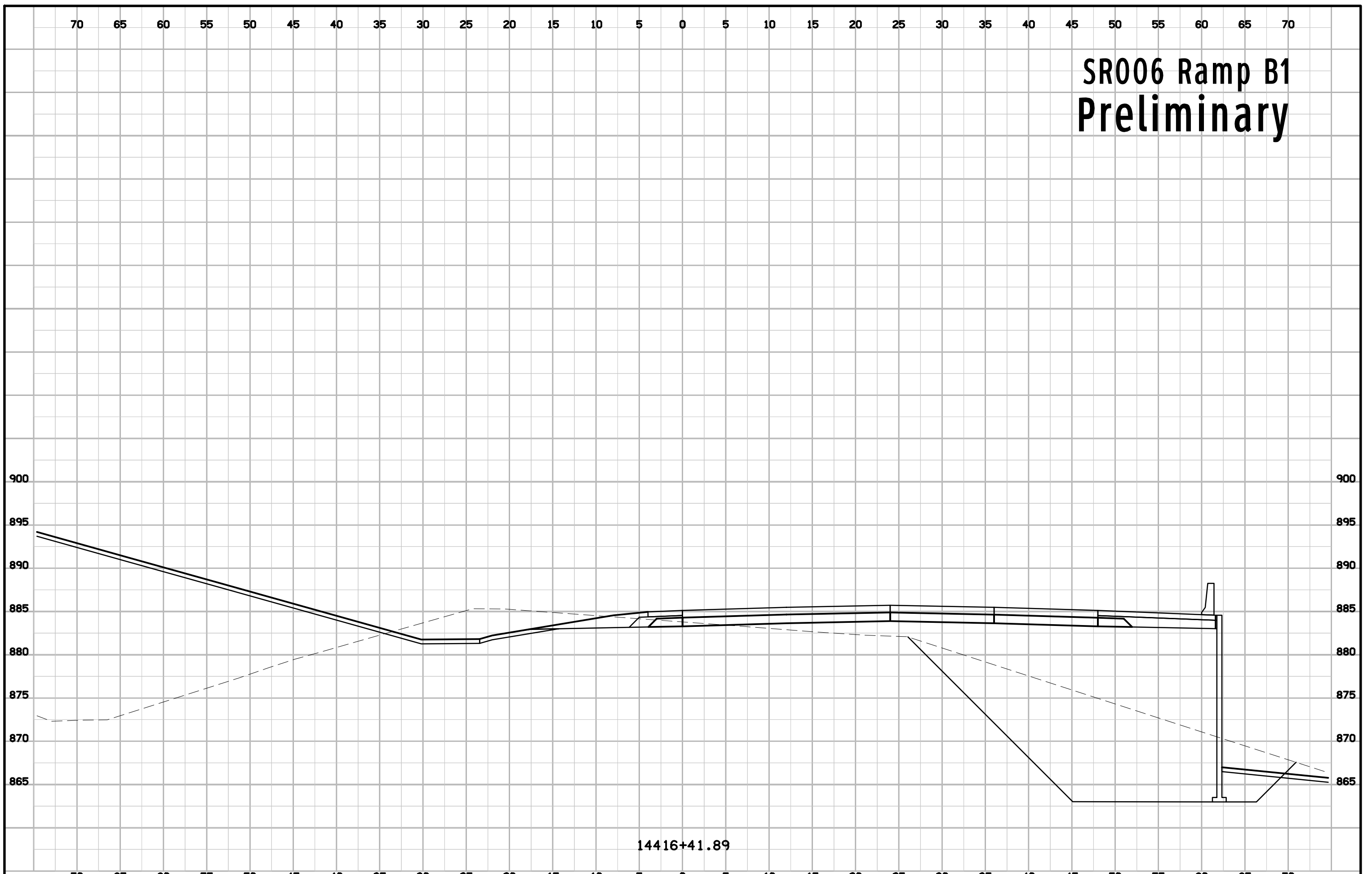
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# SR006 Ramp B Preliminary

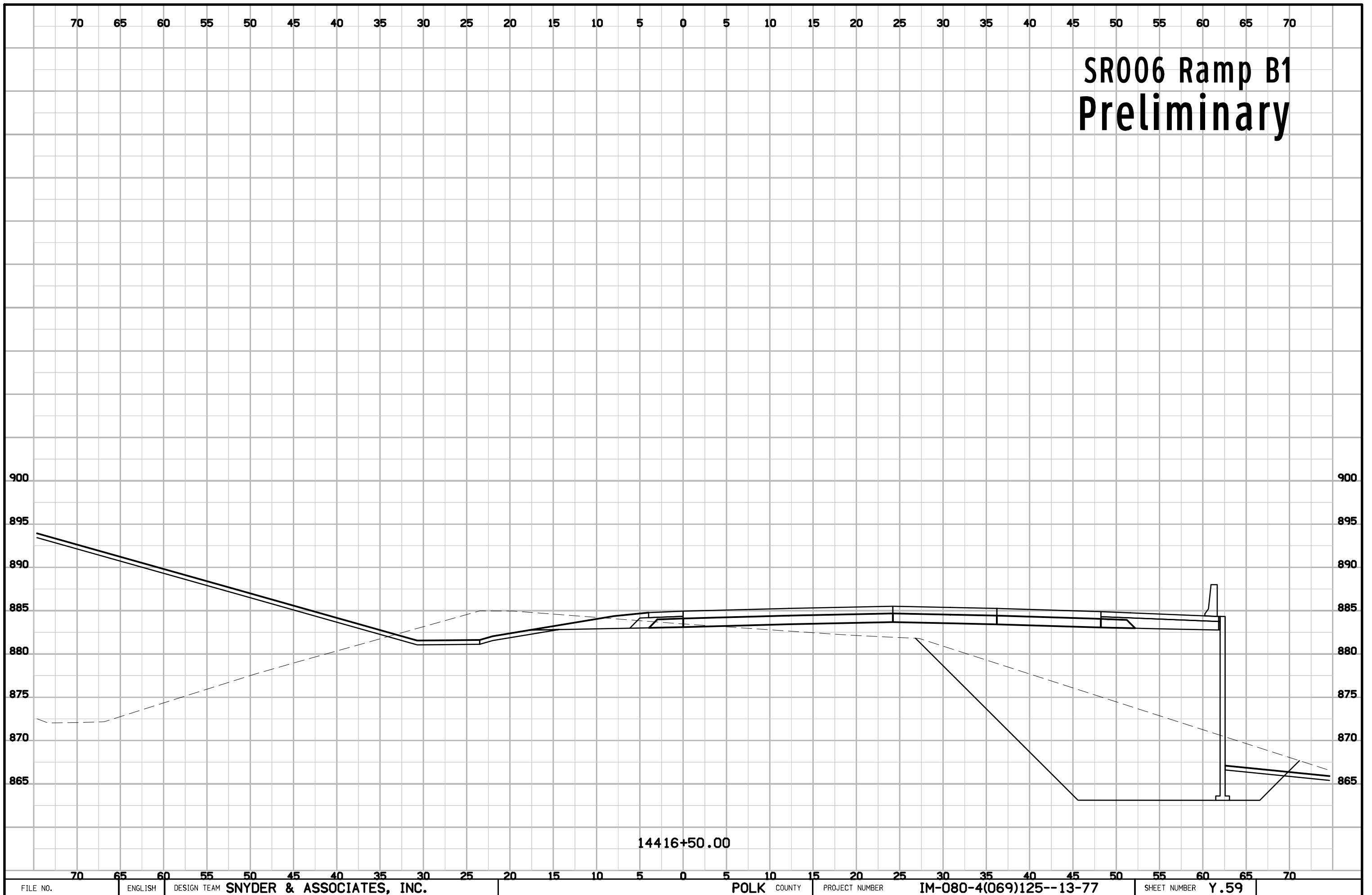


# SR006 Ramp B1 Preliminary

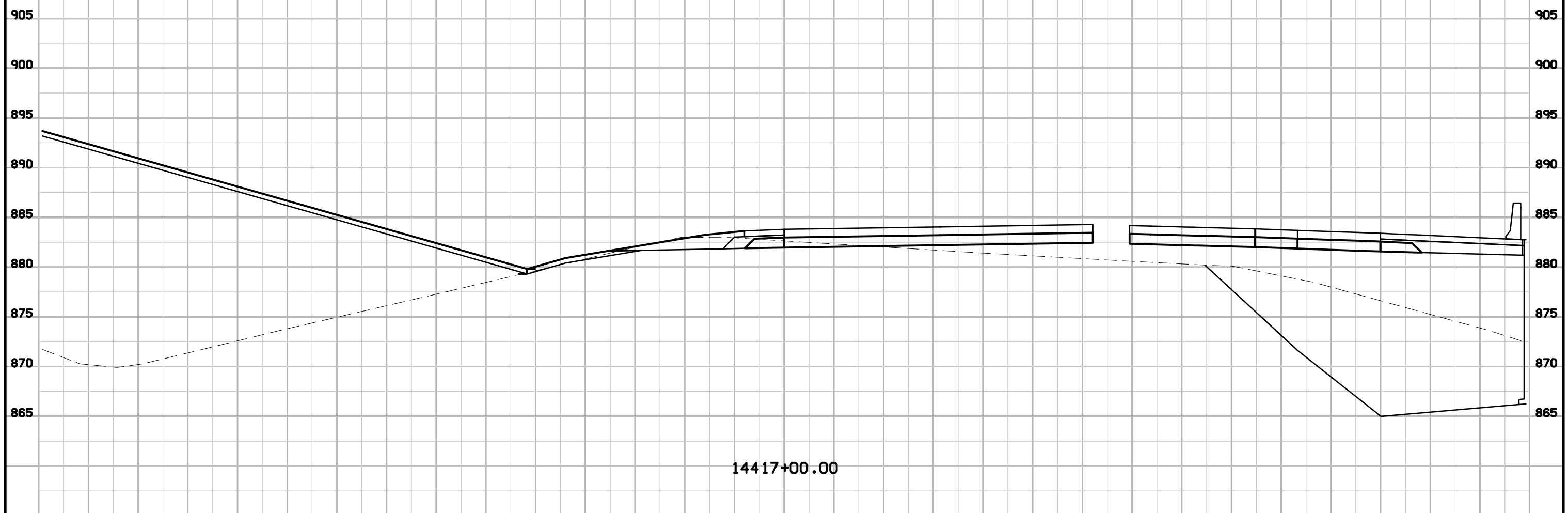
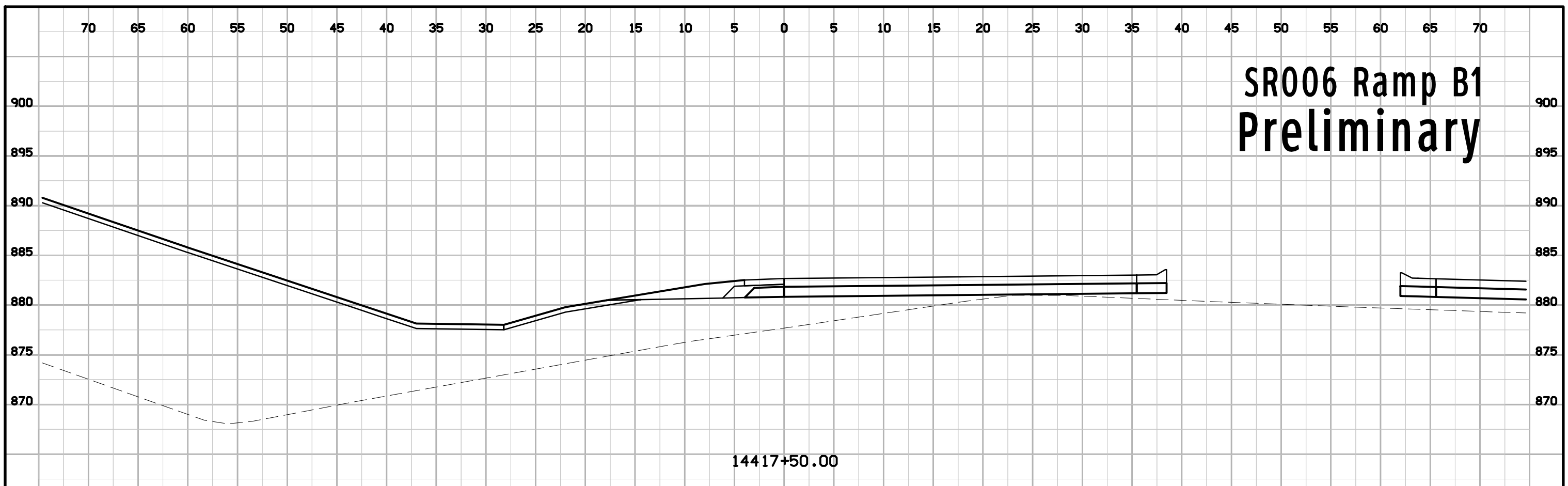


14416+41.89

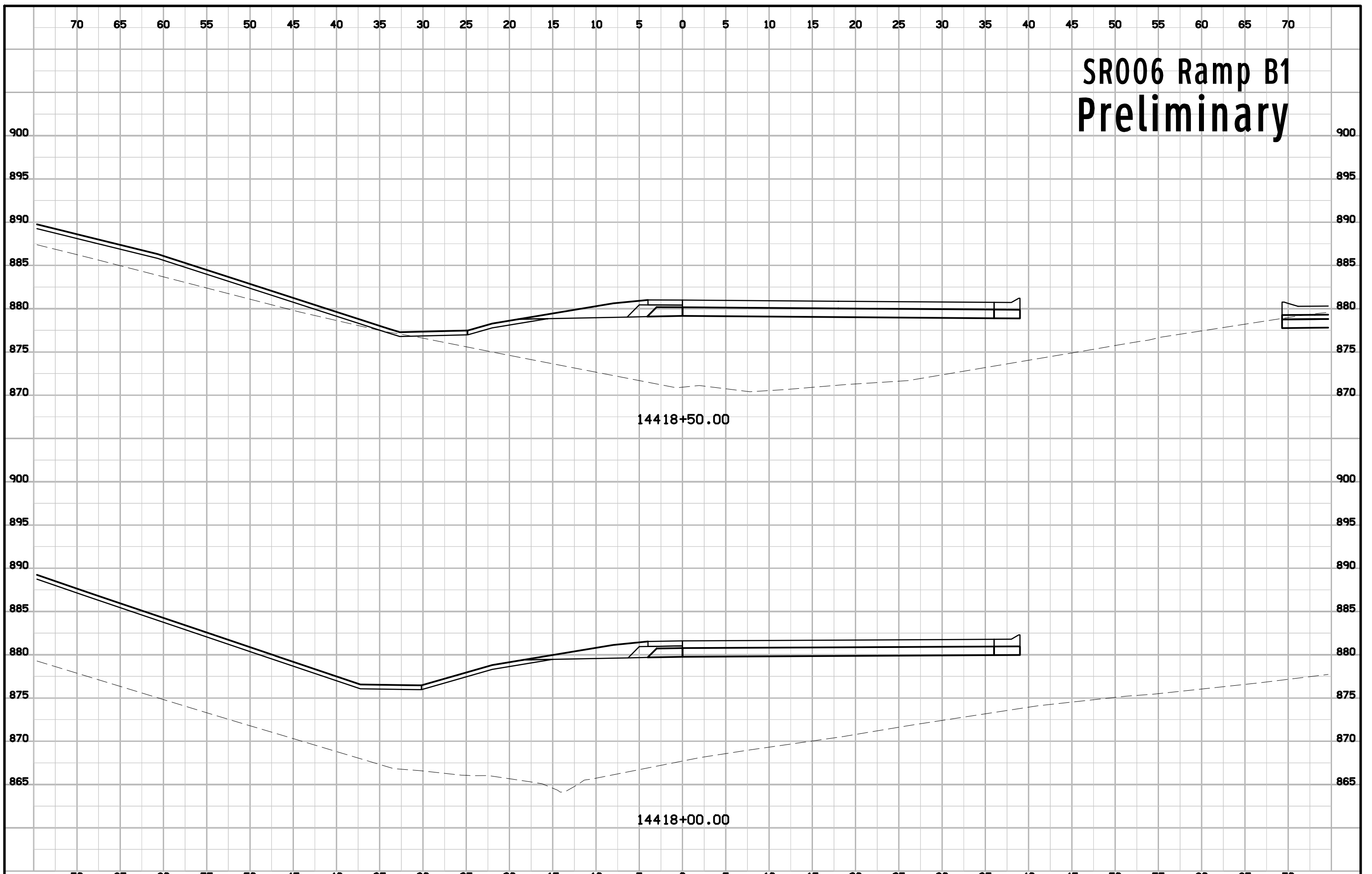
# SR006 Ramp B1 Preliminary



# SR006 Ramp B1 Preliminary

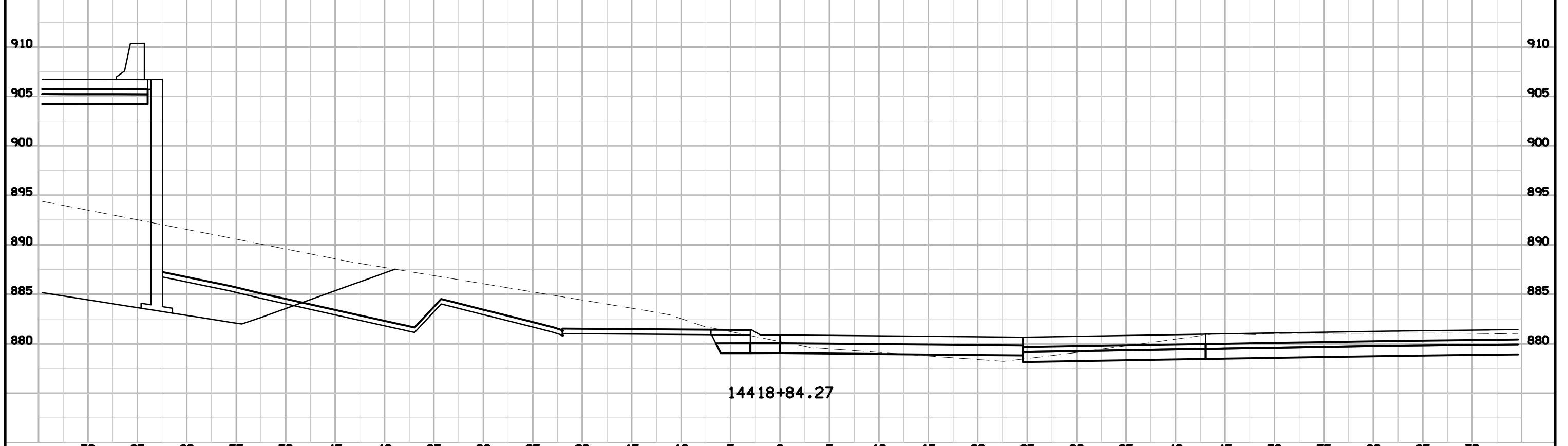
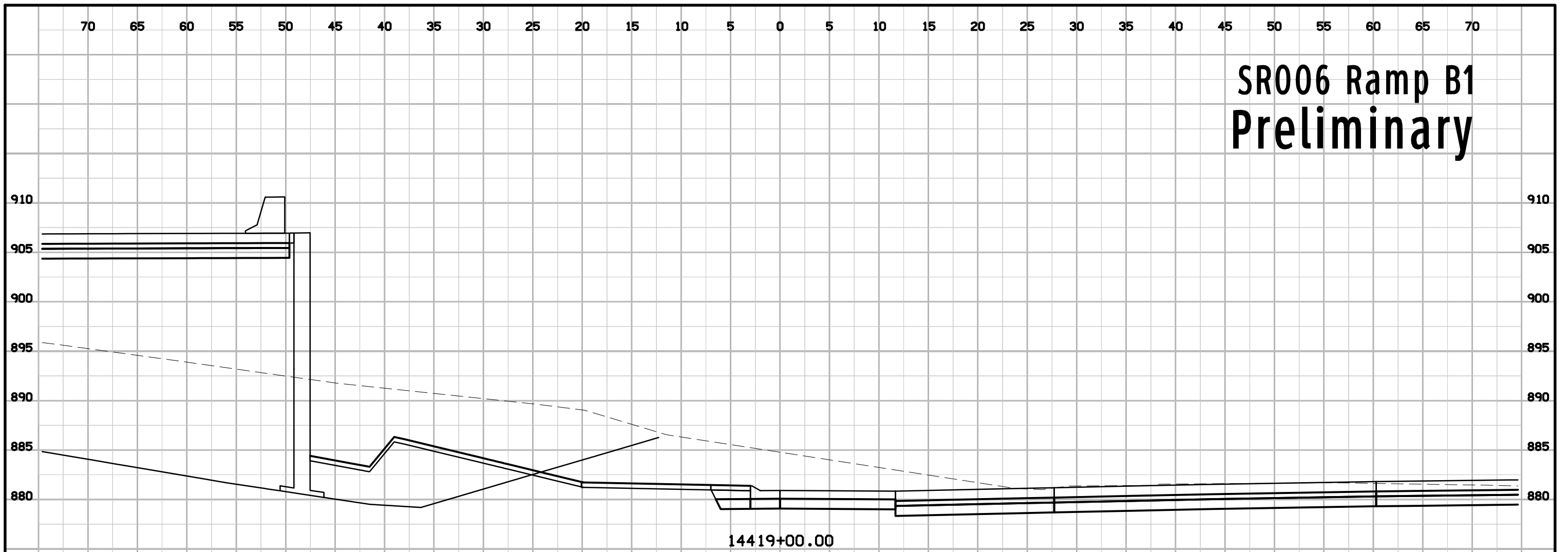


# SR006 Ramp B1 Preliminary

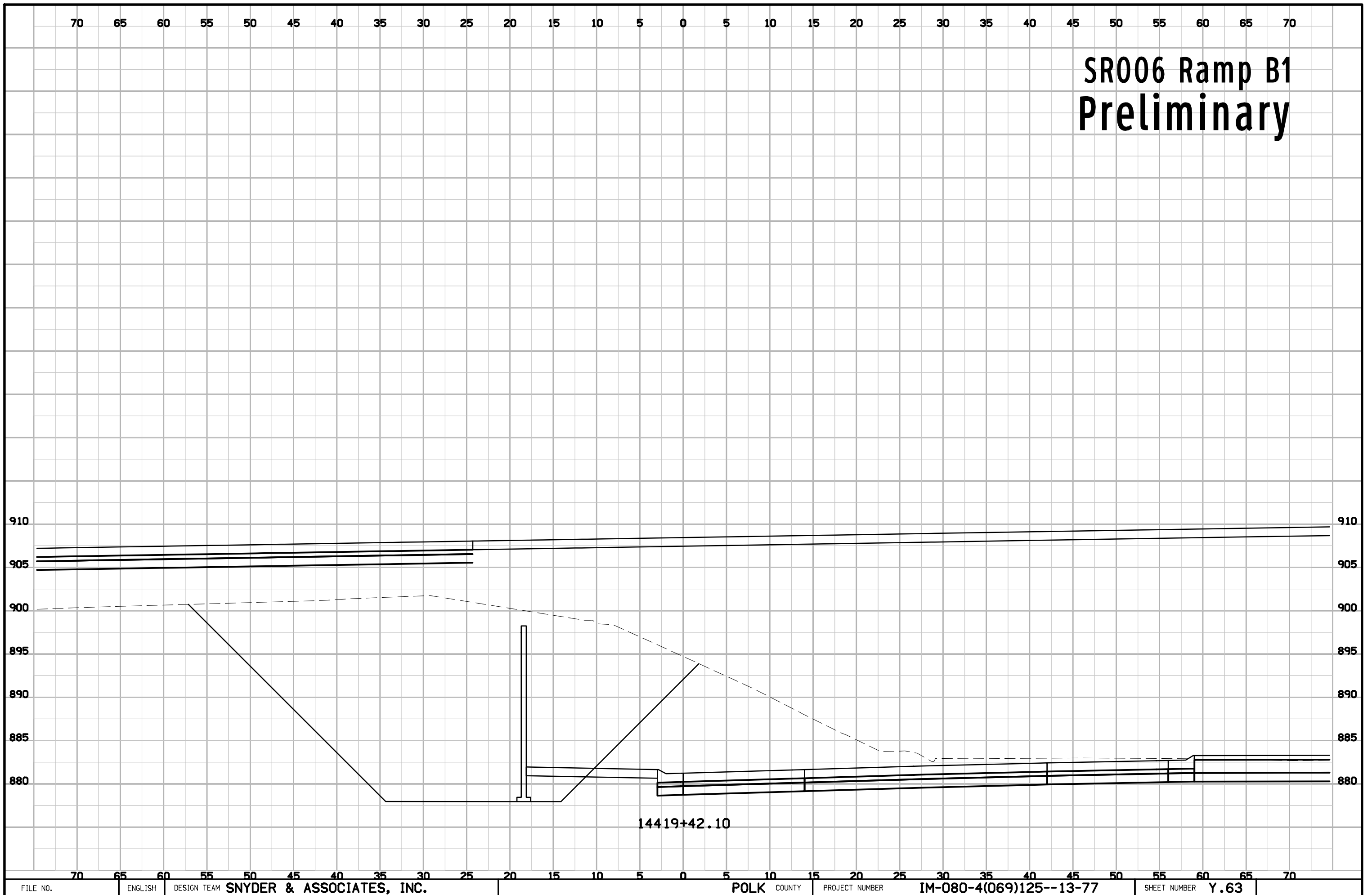




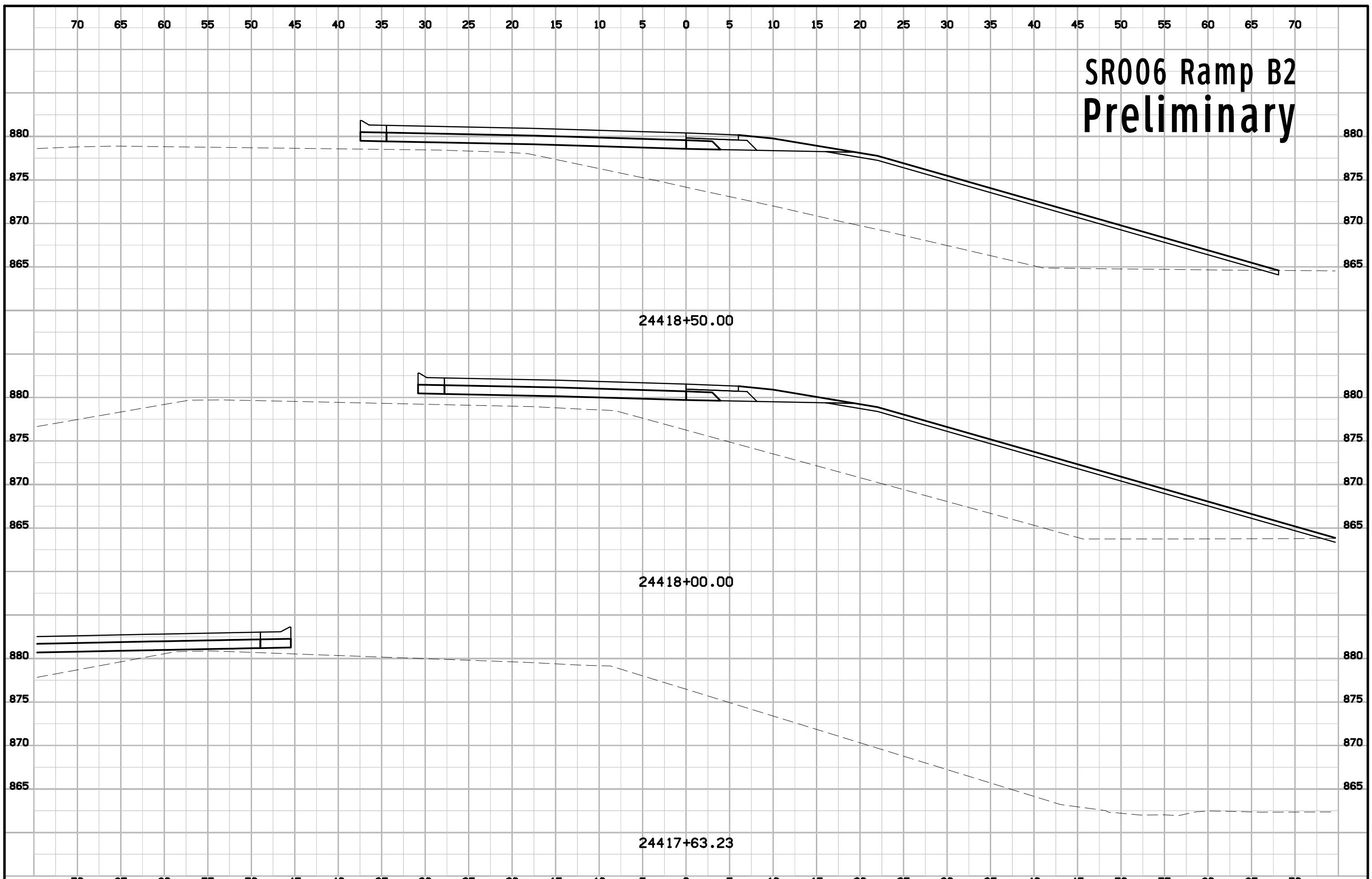
# SR006 Ramp B1 Preliminary



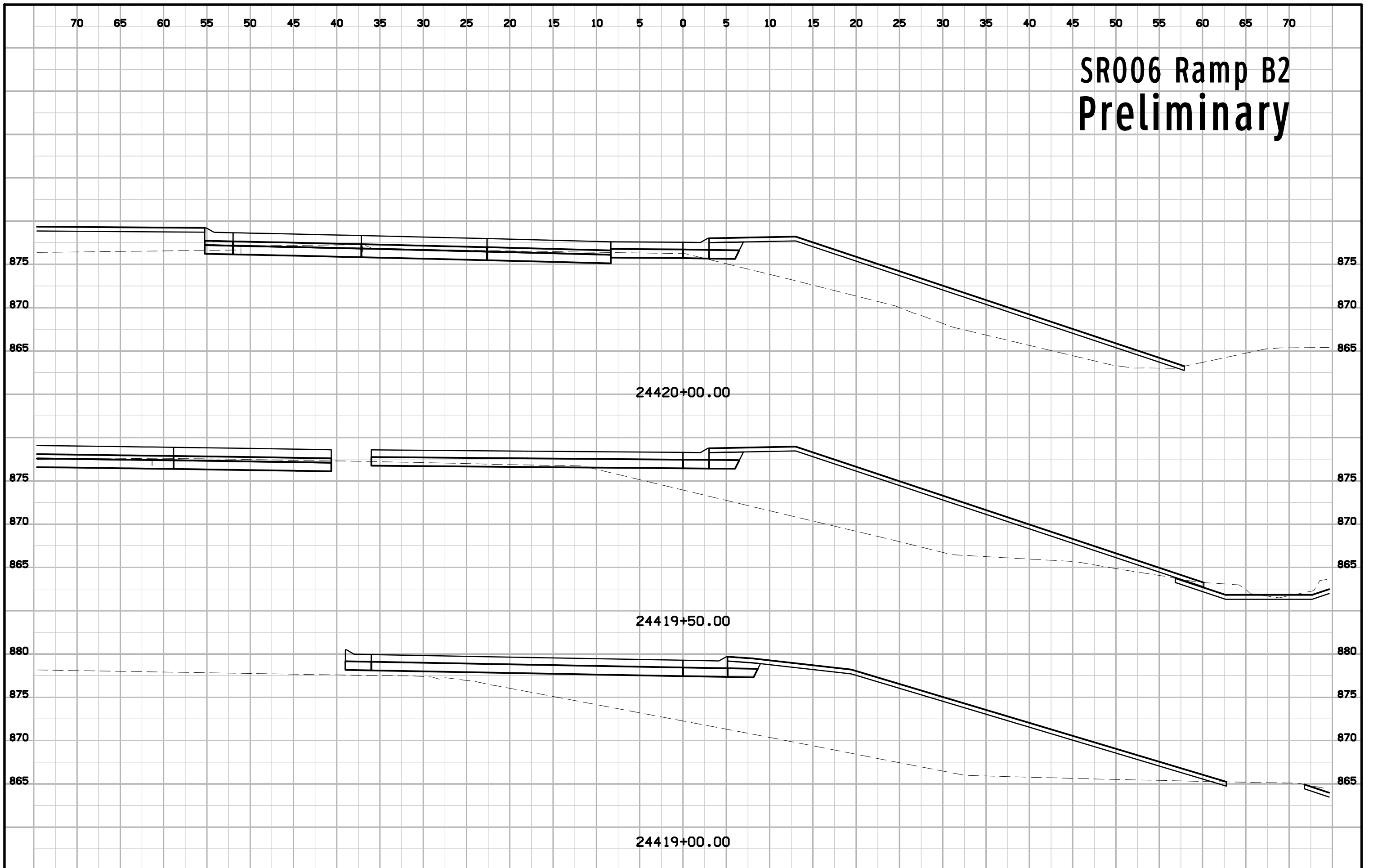
# SR006 Ramp B1 Preliminary



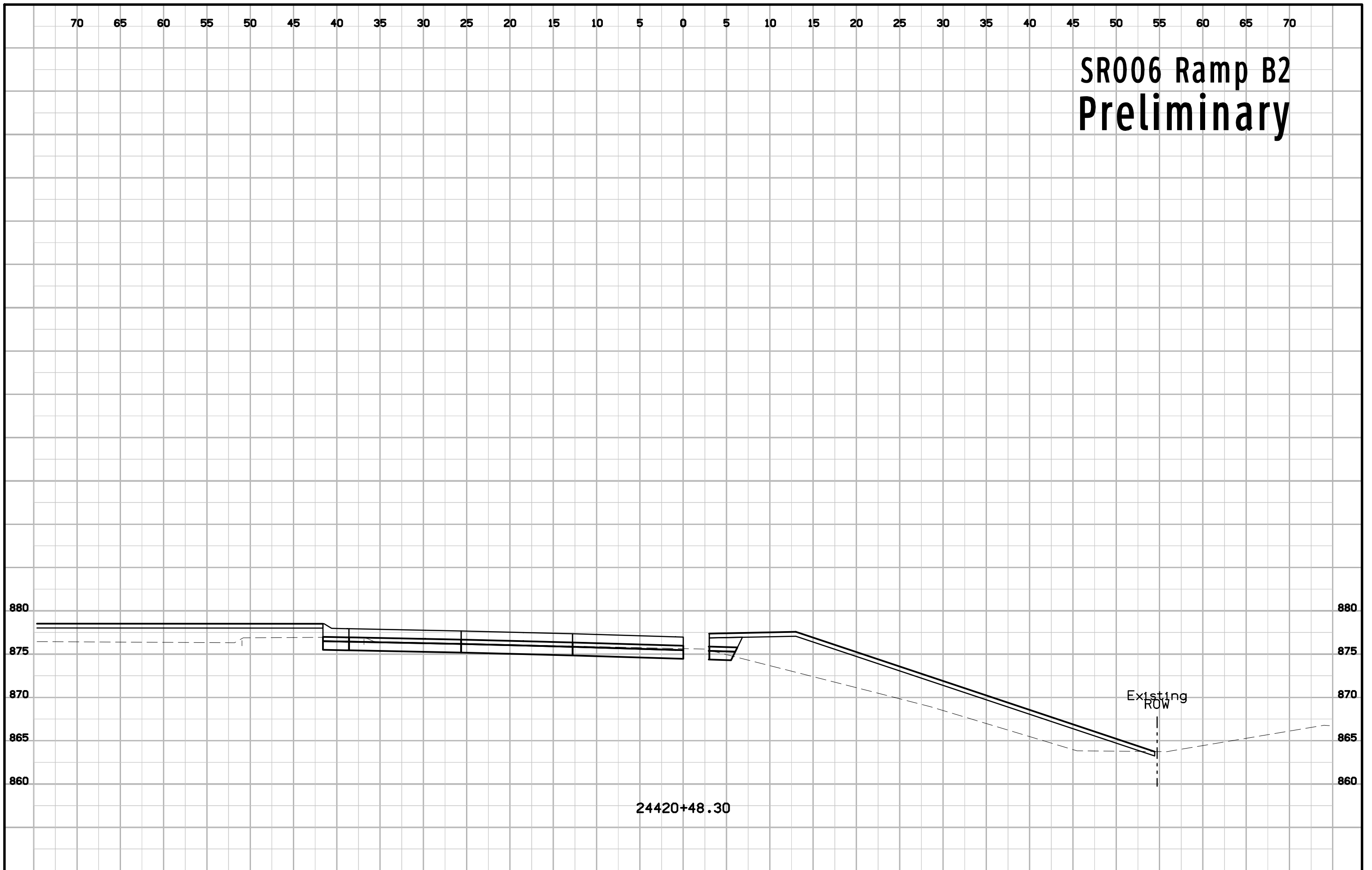
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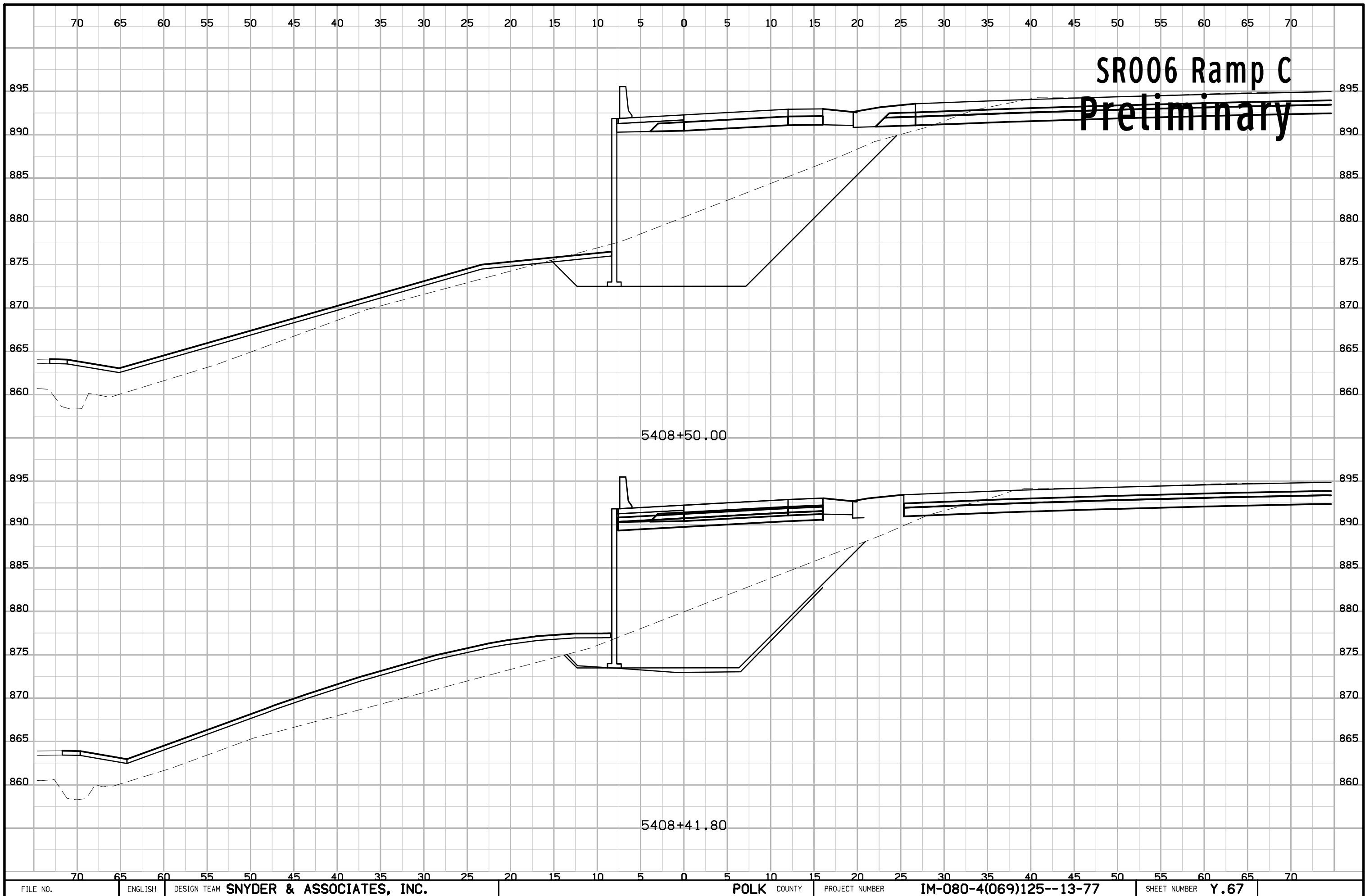
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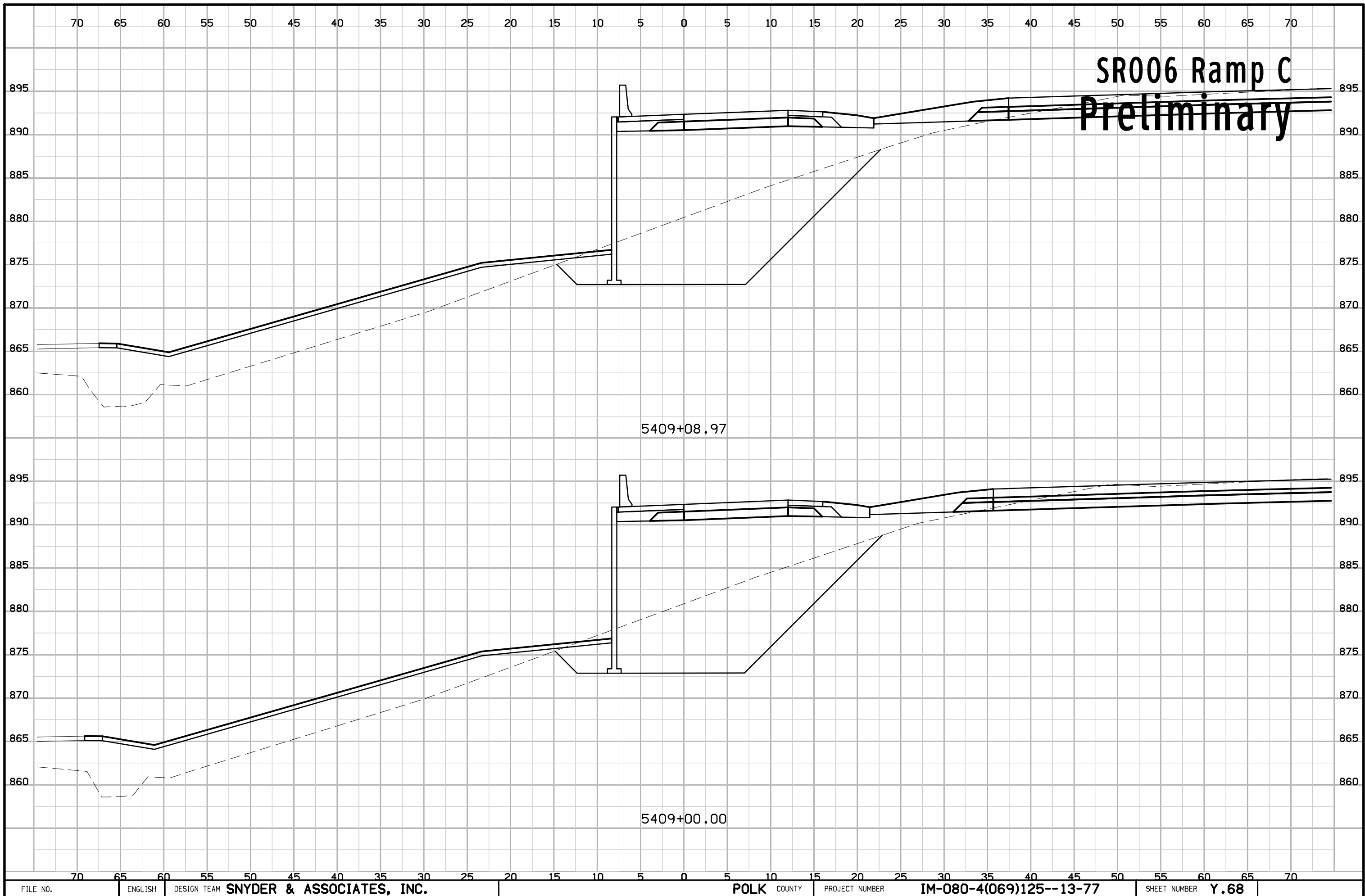


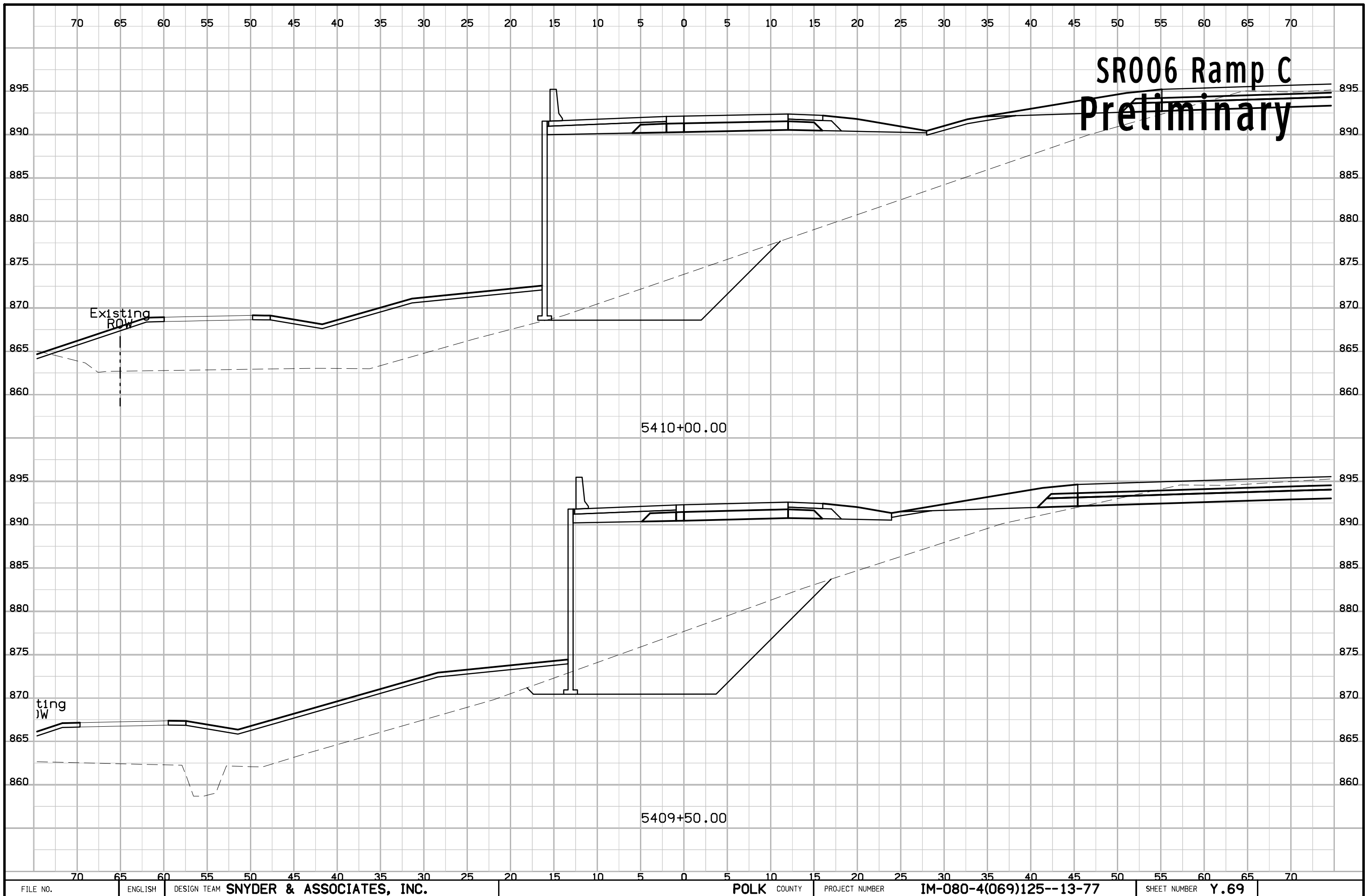
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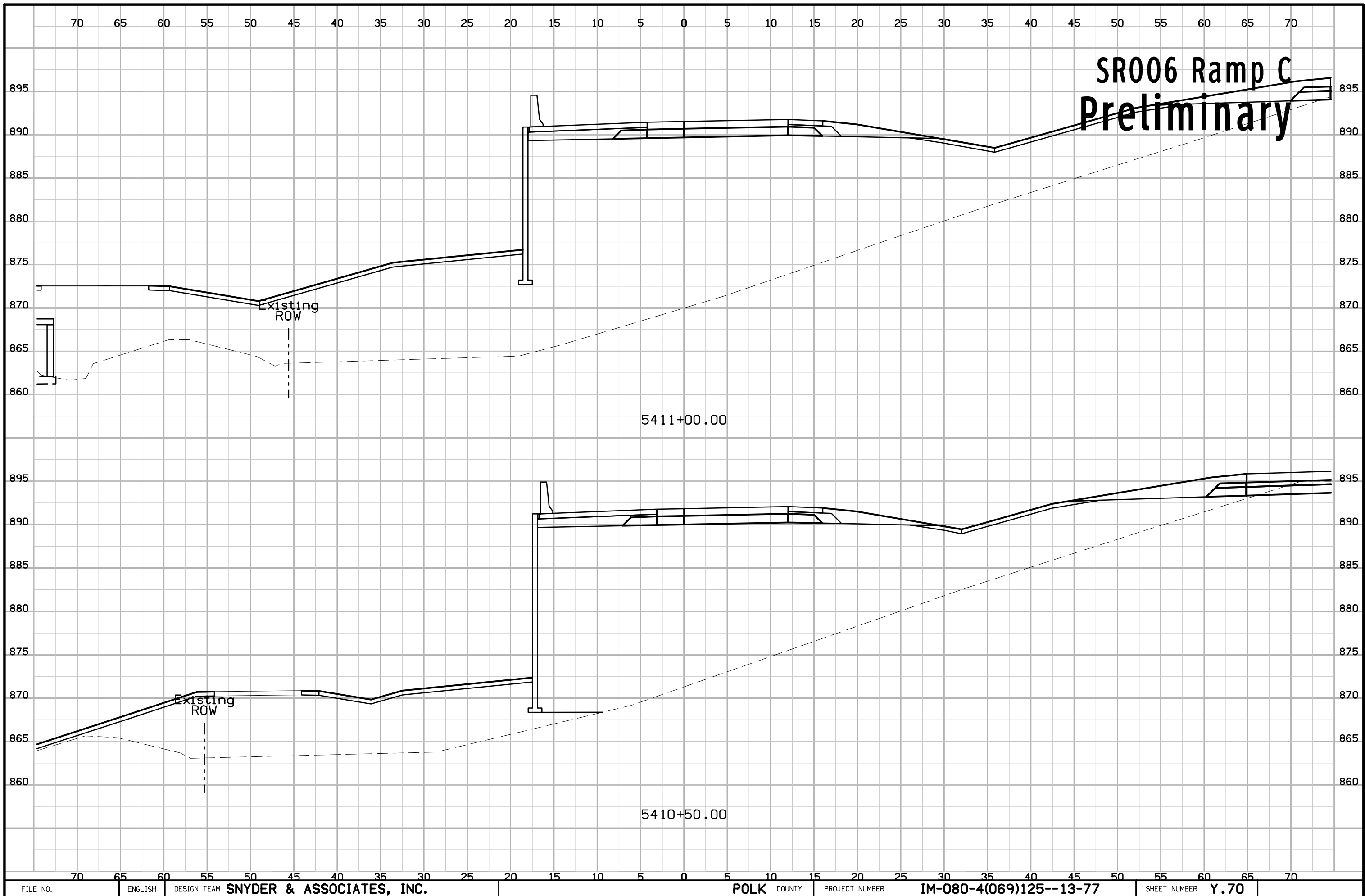




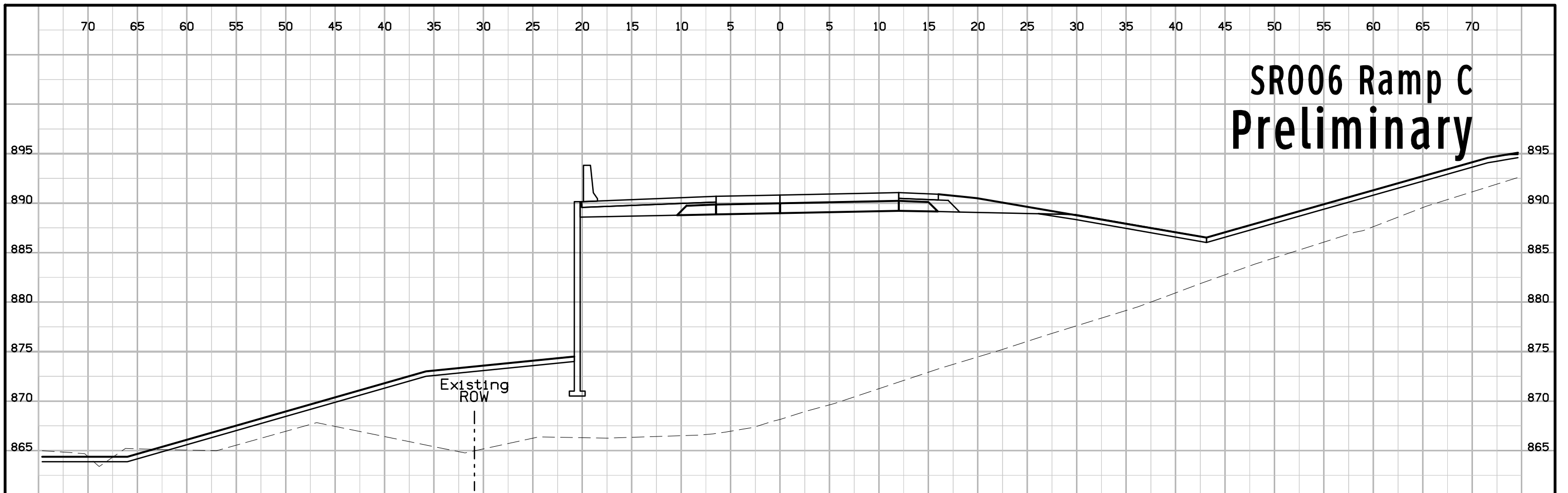




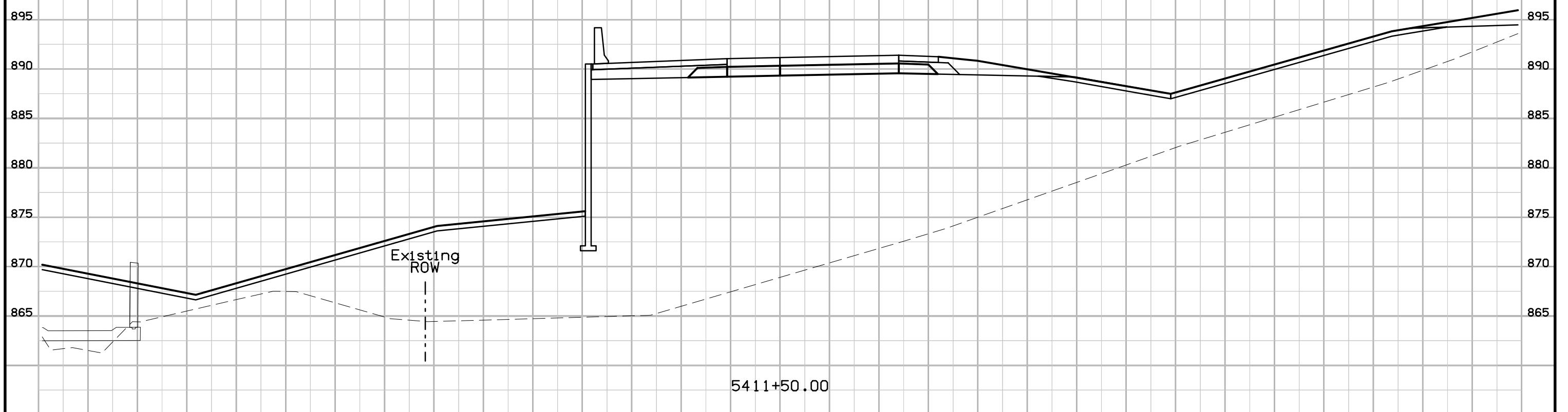




# SR006 Ramp C Preliminary

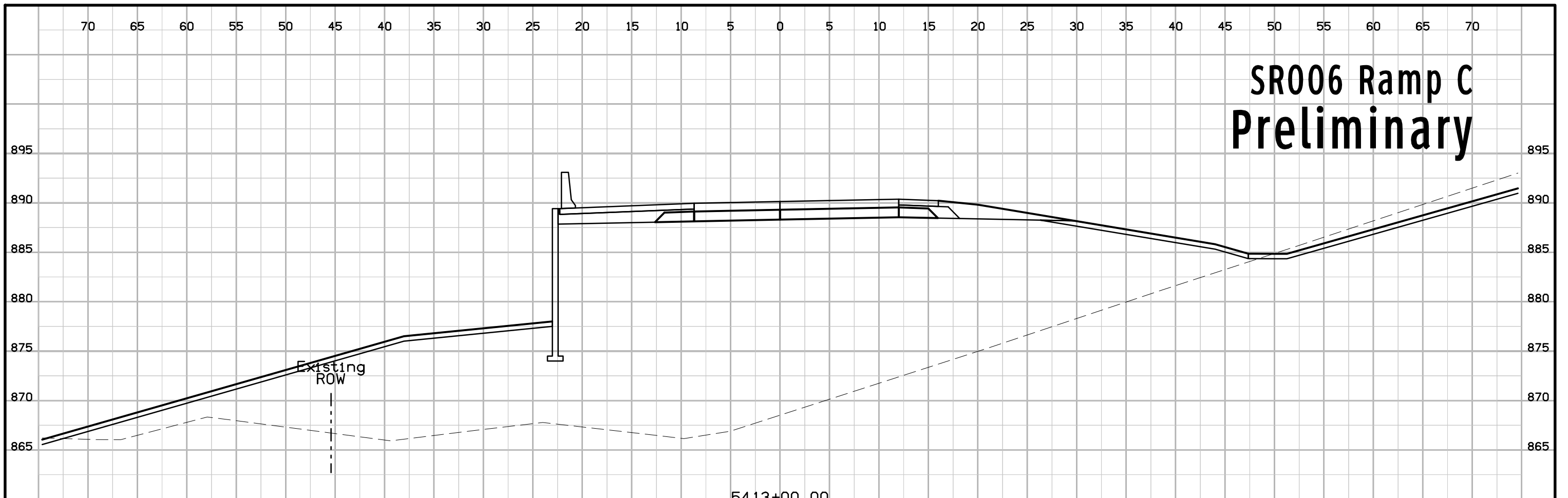


5412+00.00

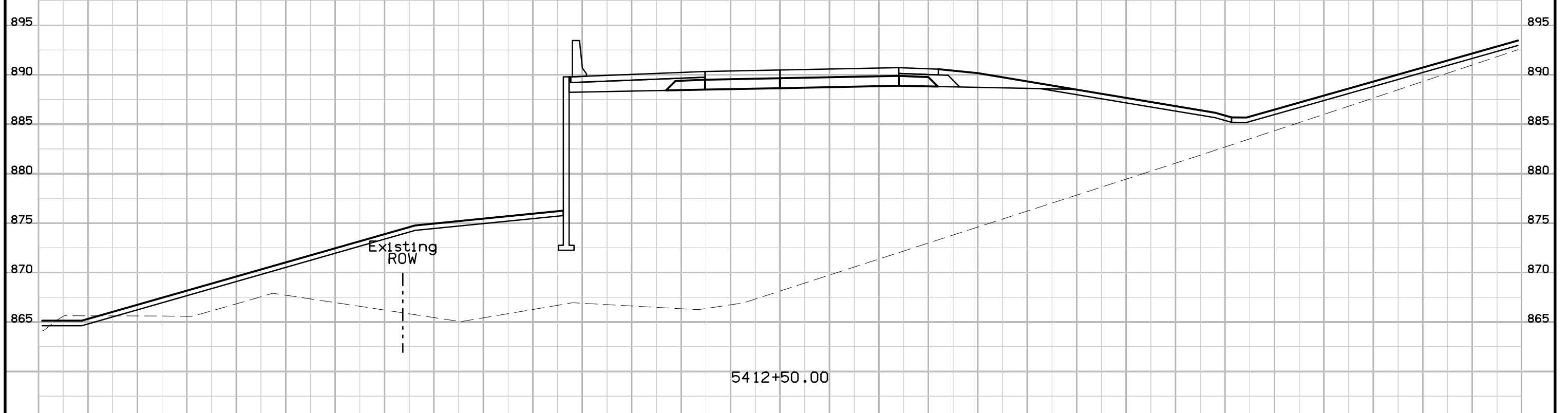


5411+50.00

# SR006 Ramp C Preliminary



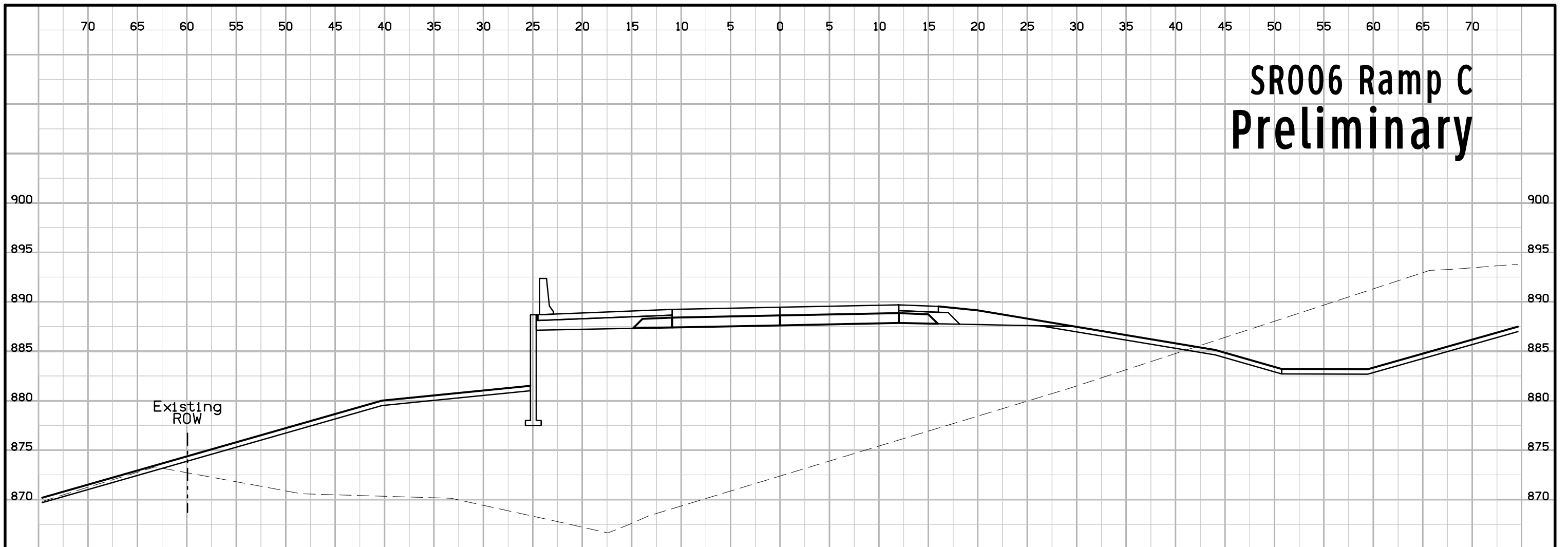
5413+00.00



5412+50.00



# SR006 Ramp C Preliminary

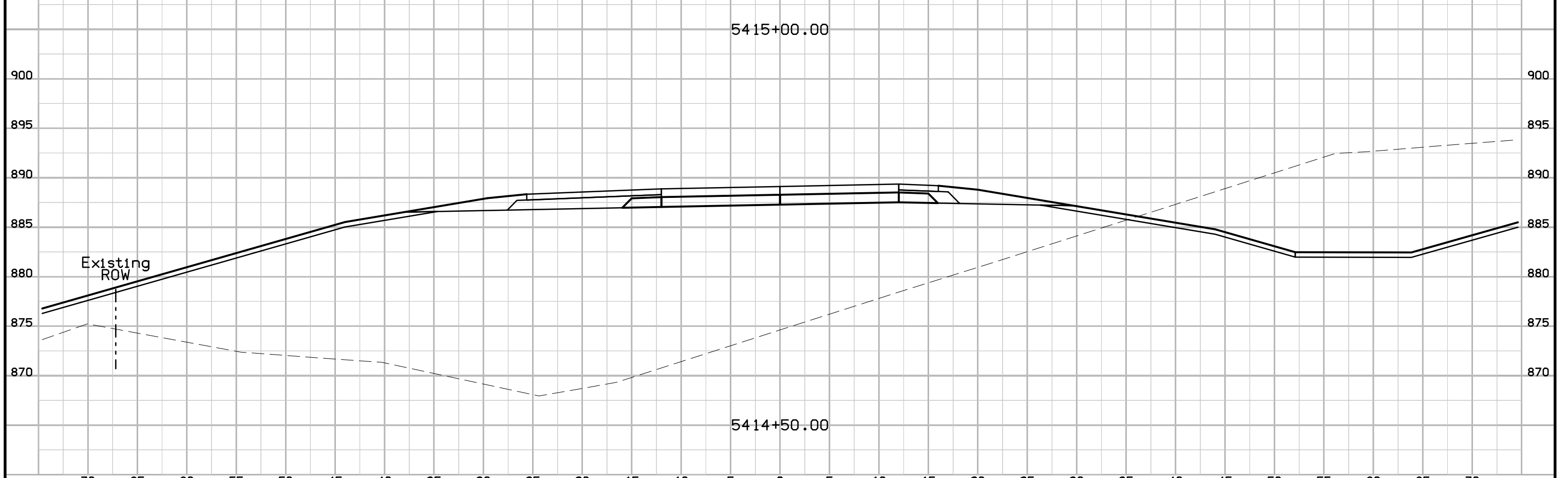
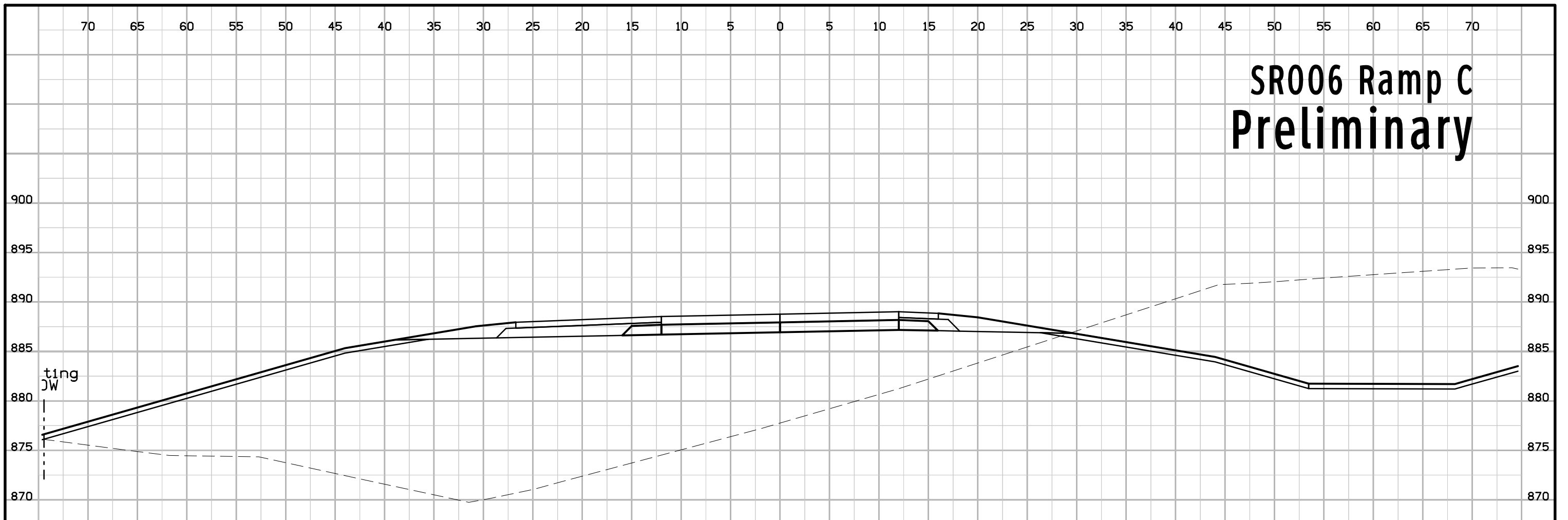


5414+00.00

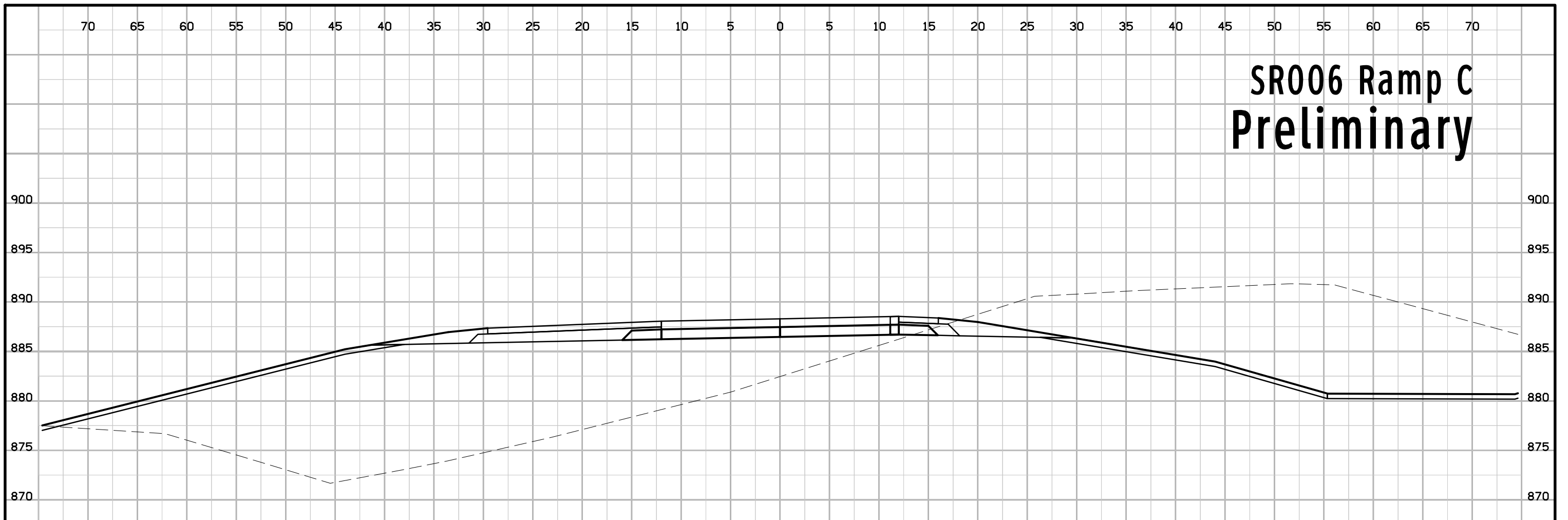


5413+50.00

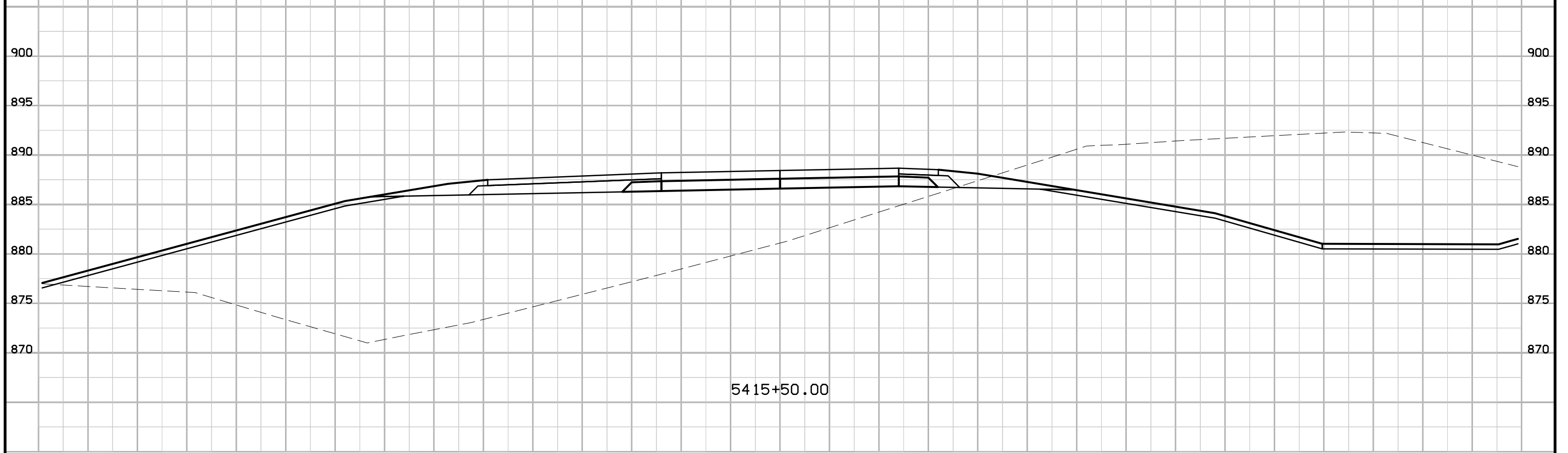
# SR006 Ramp C Preliminary



# SR006 Ramp C Preliminary

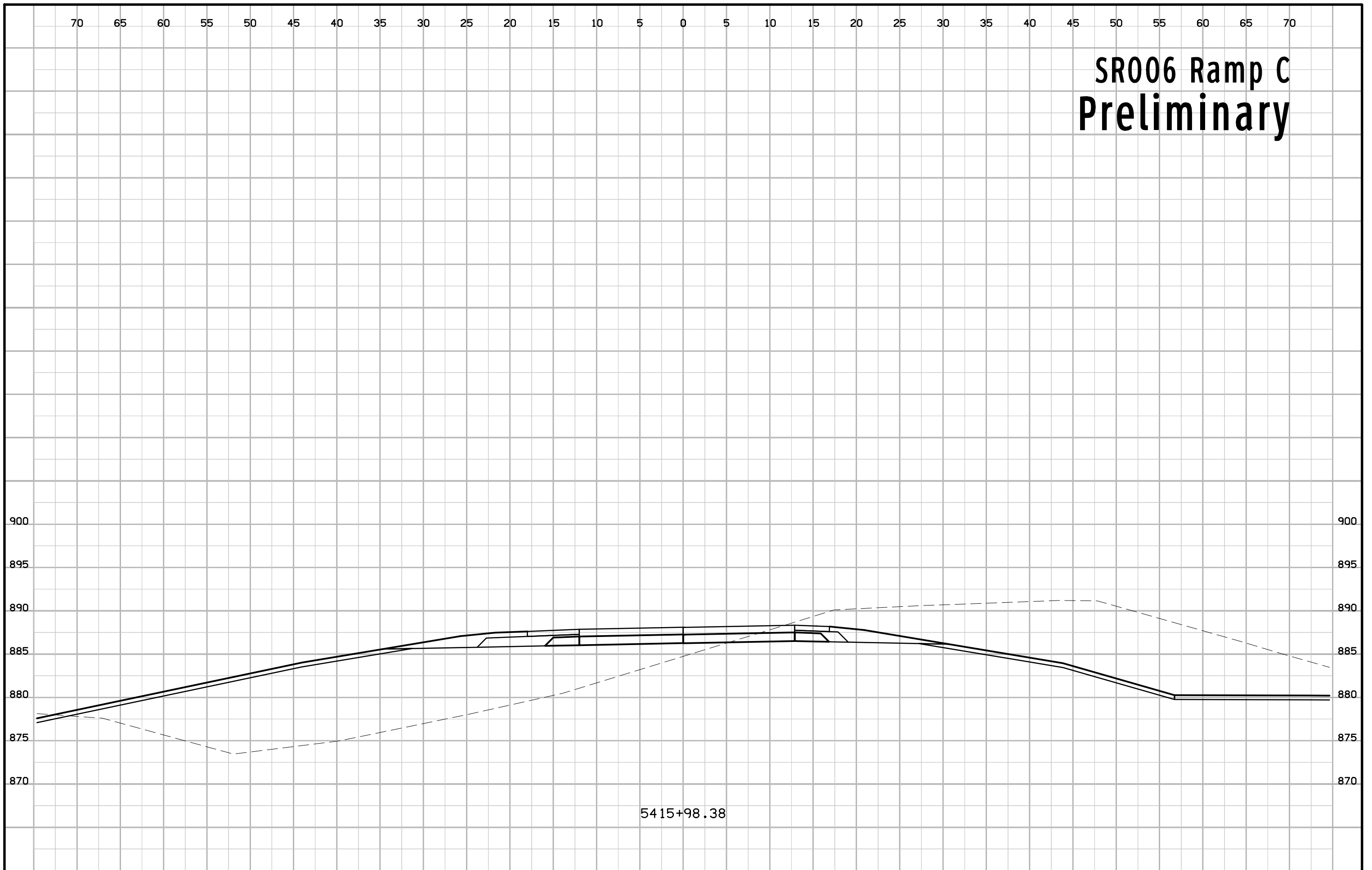


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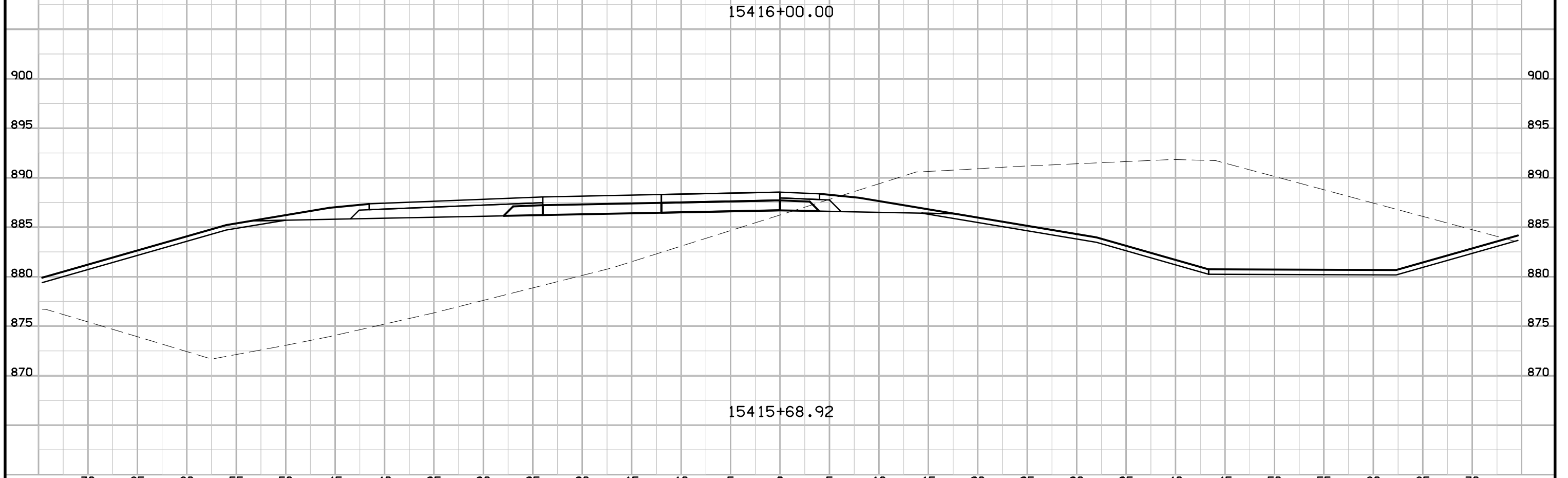
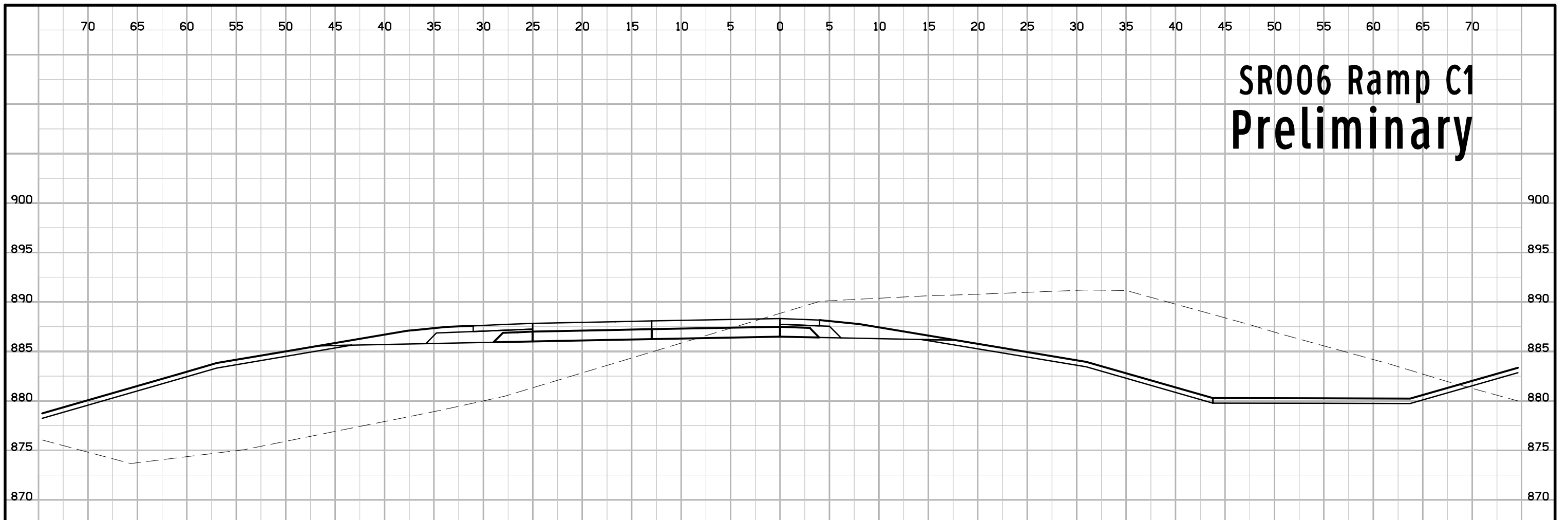
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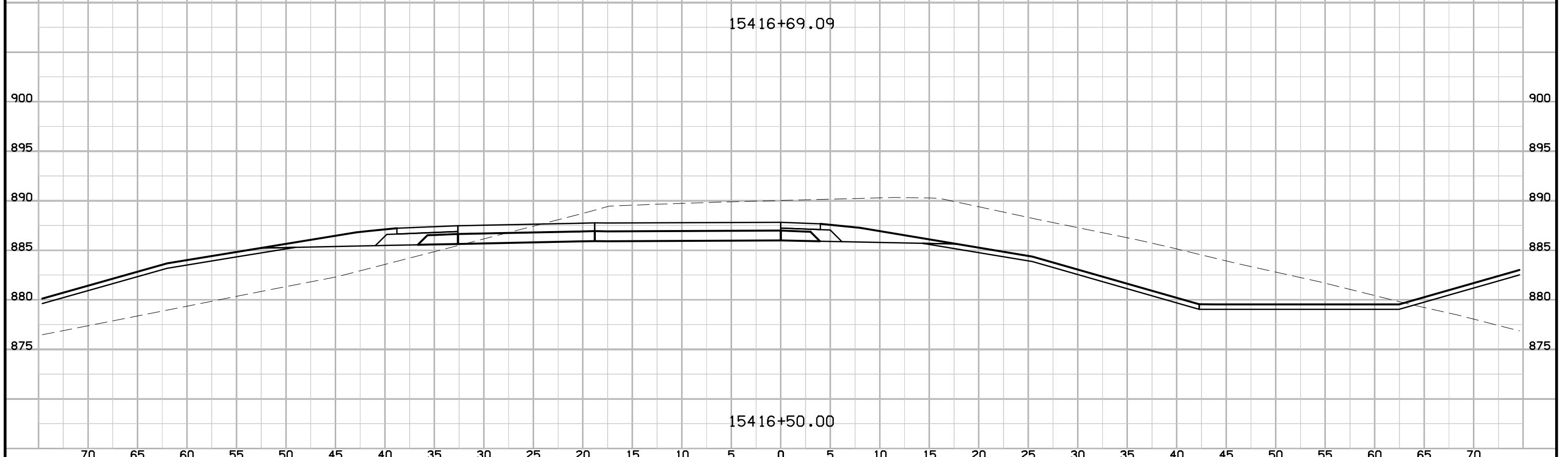
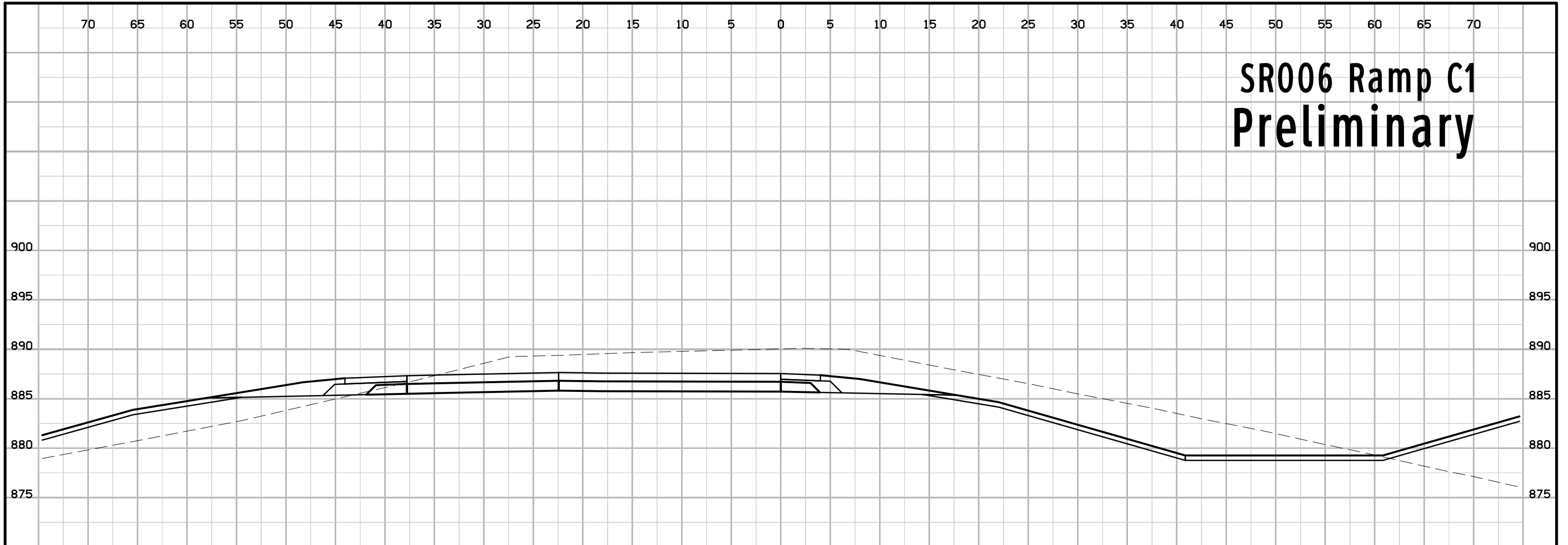


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# SR006 Ramp C1 Preliminary

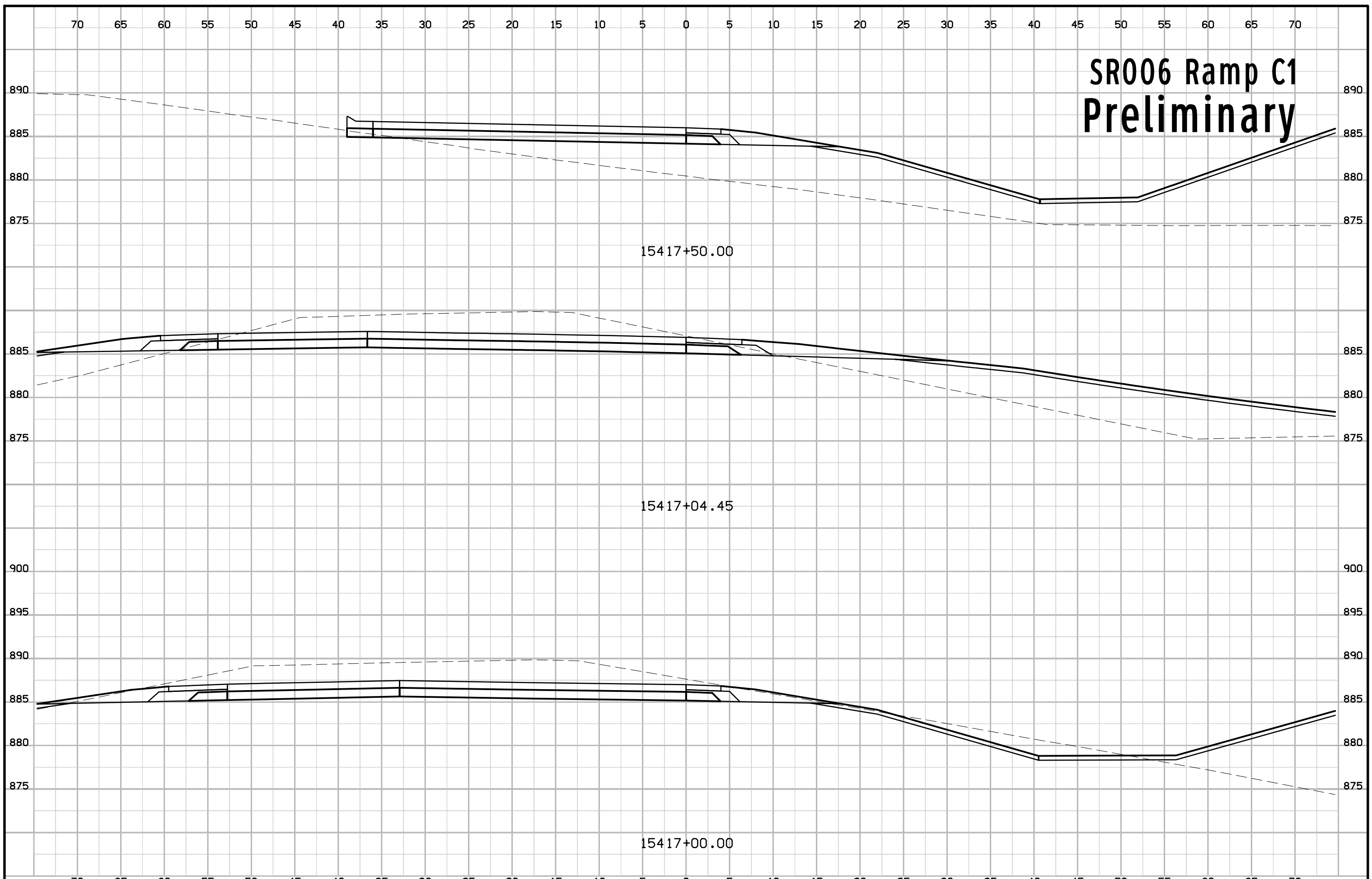


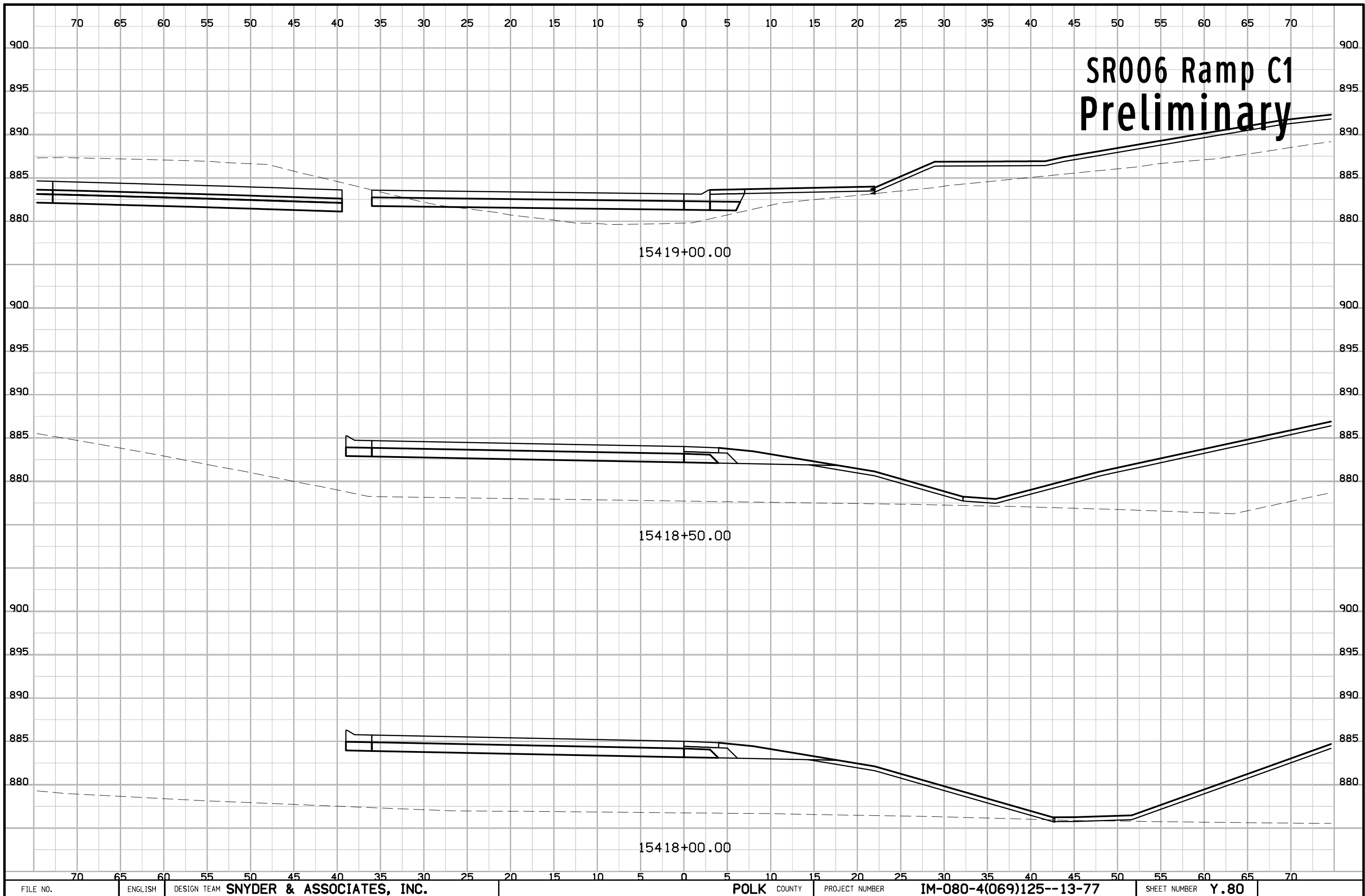
# SR006 Ramp C1 Preliminary





# SR006 Ramp C1 Preliminary





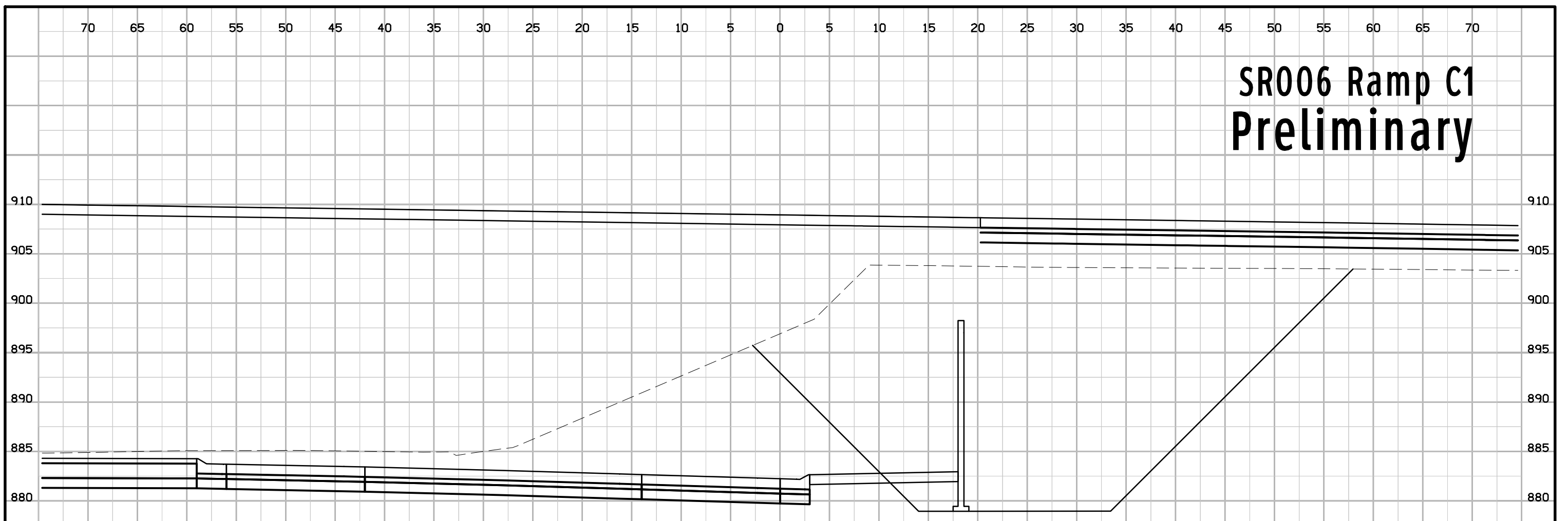
**SR006 Ramp C1  
Preliminary**

15419+00.00

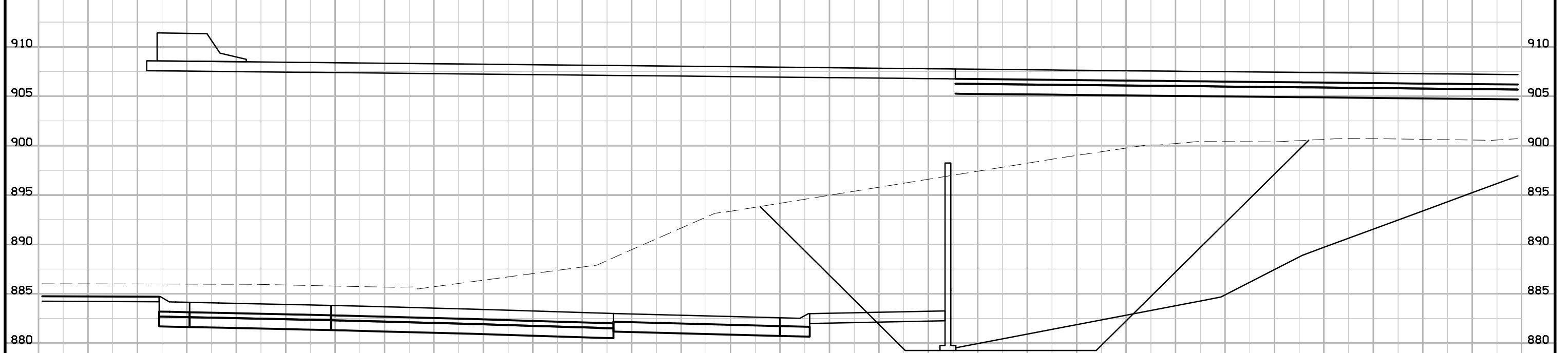
15418+50.00

15418+00.00

# SR006 Ramp C1 Preliminary

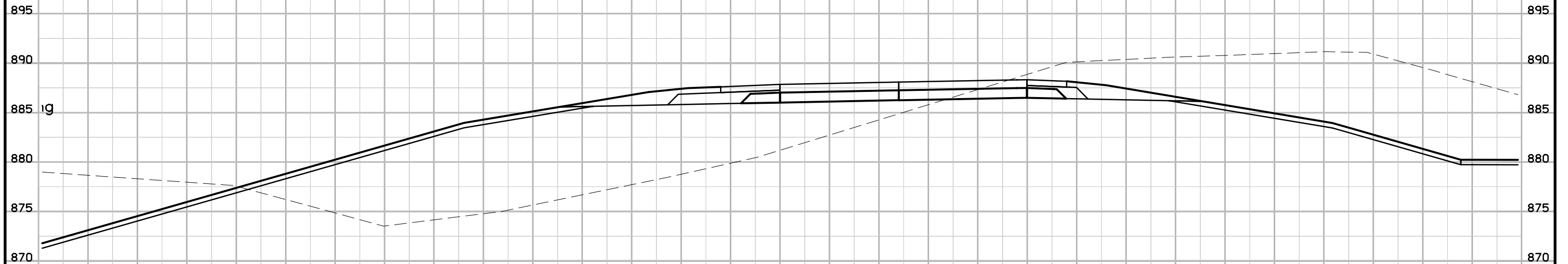


15419+87.36

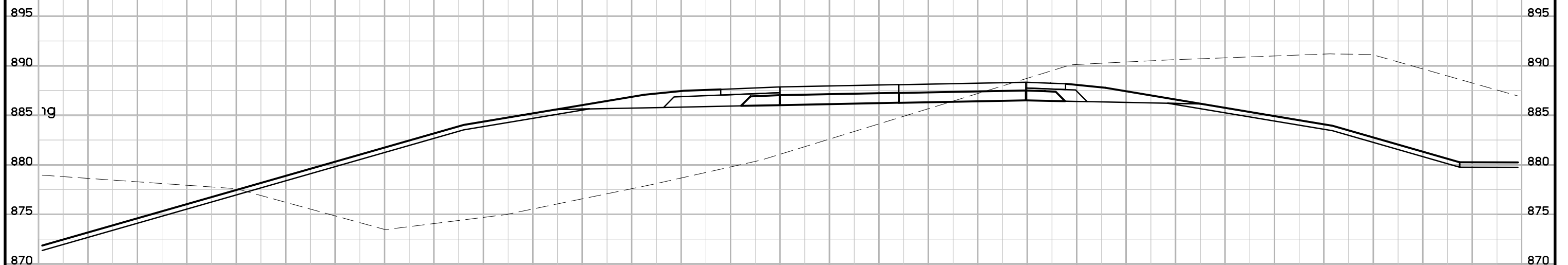


15419+50.00

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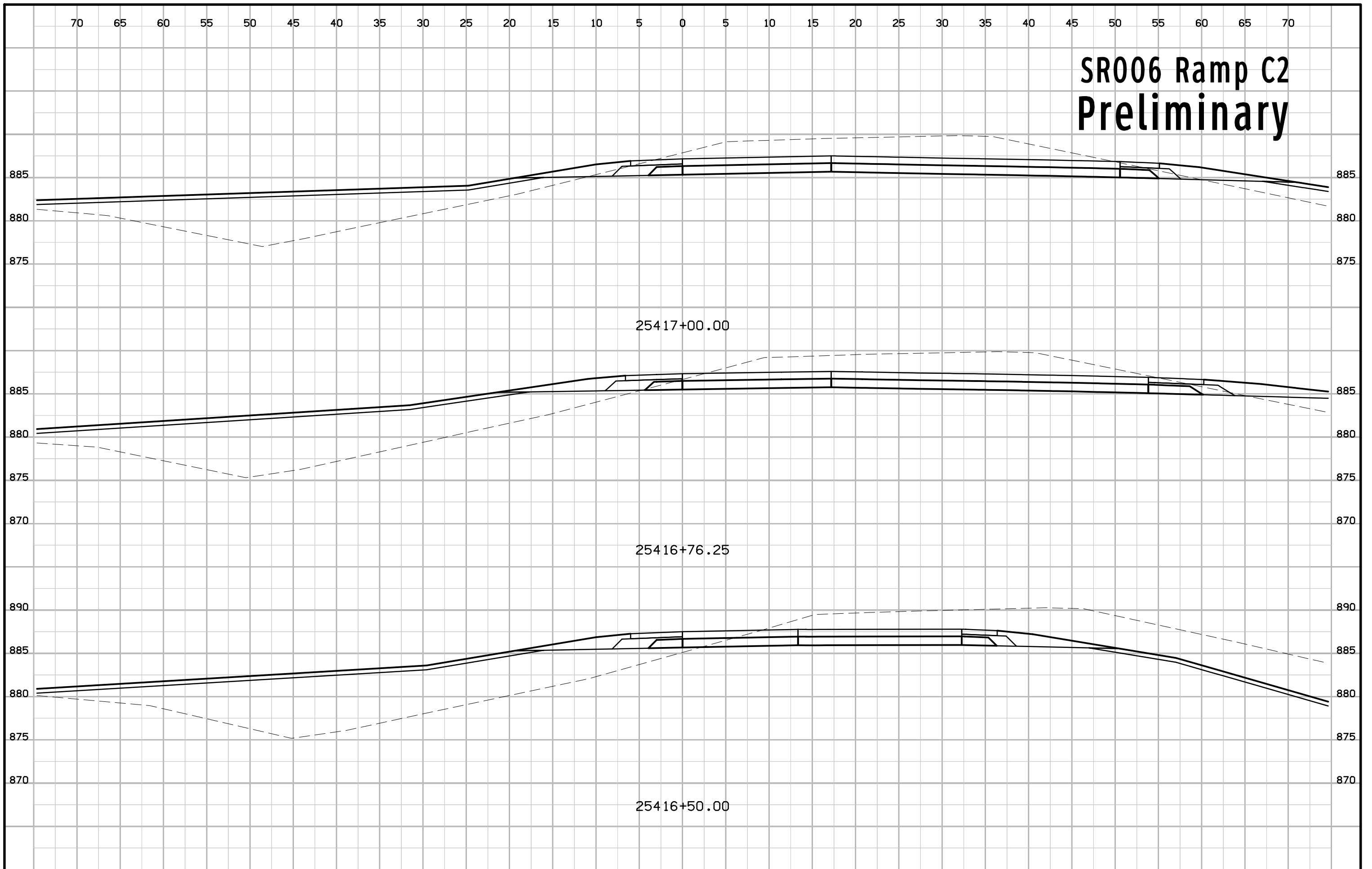


25416+00.00

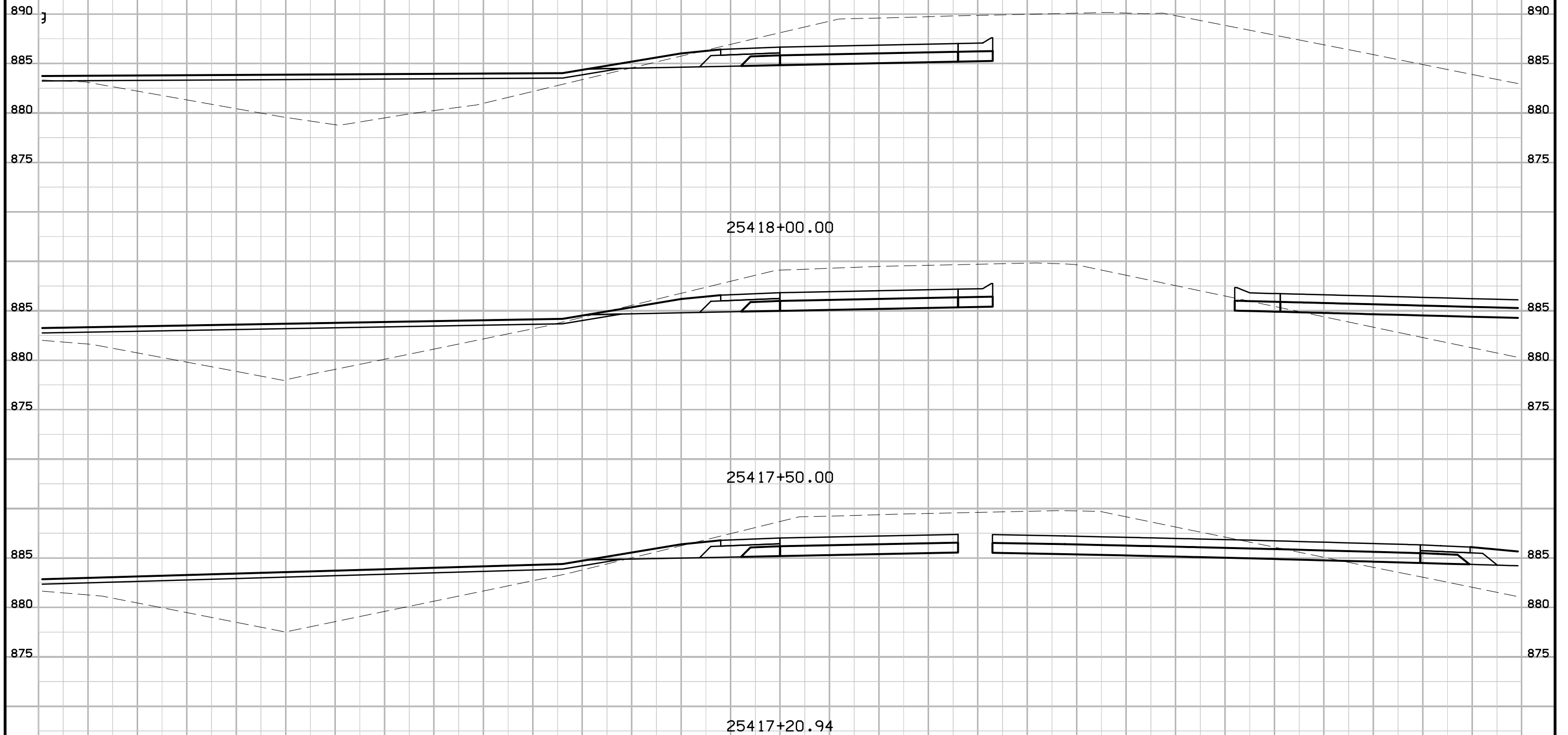


25415+98.39

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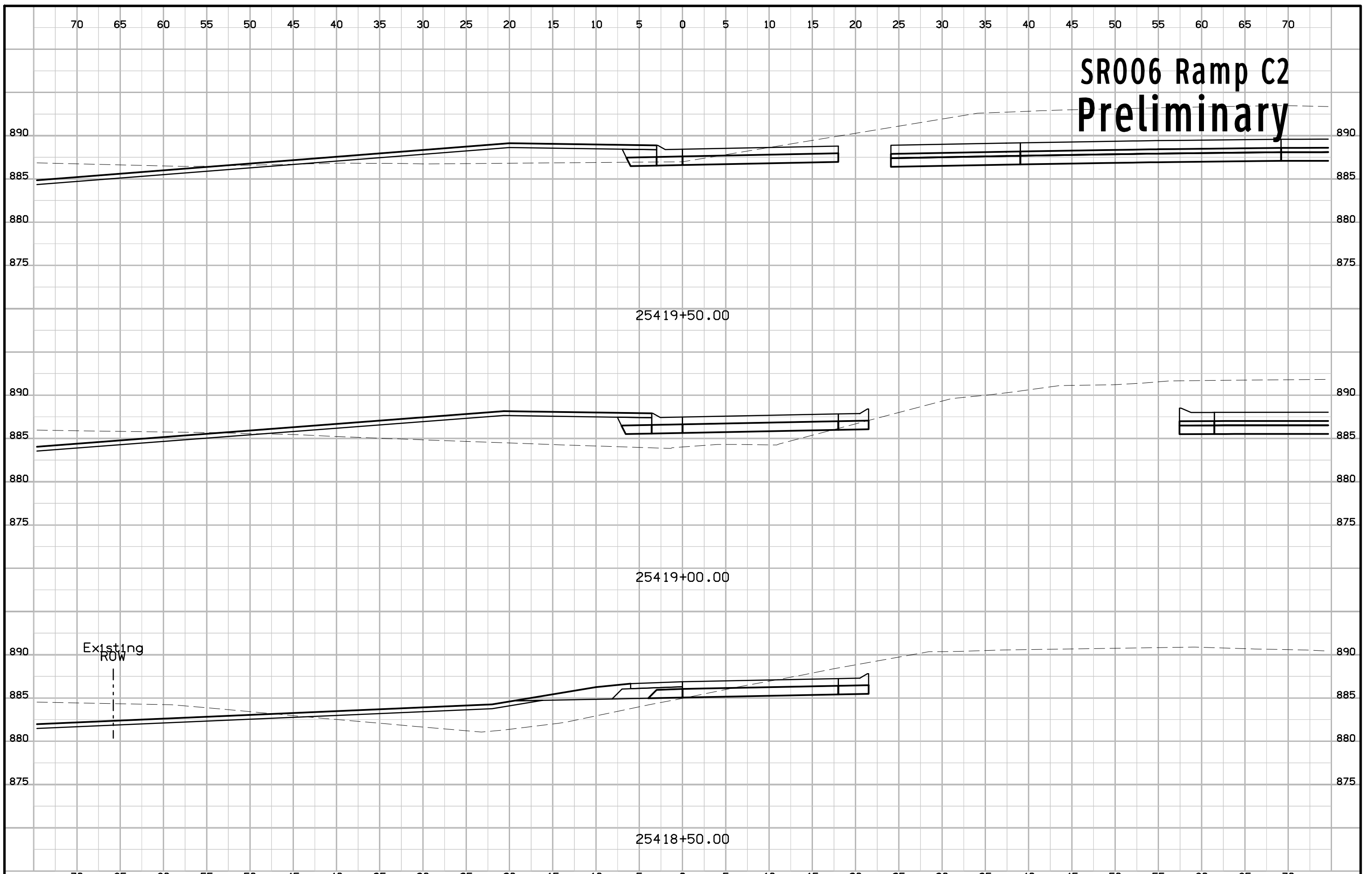


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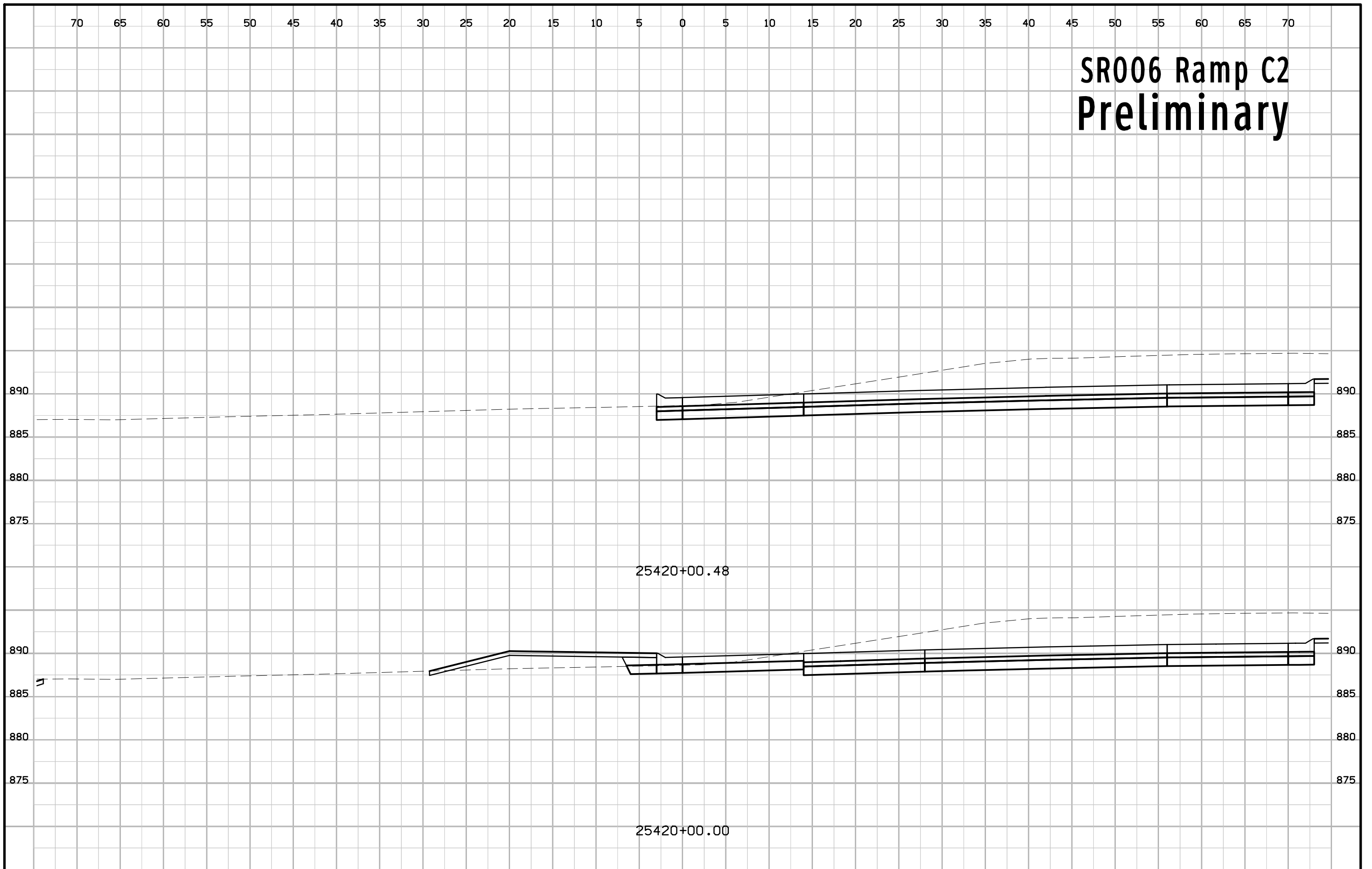




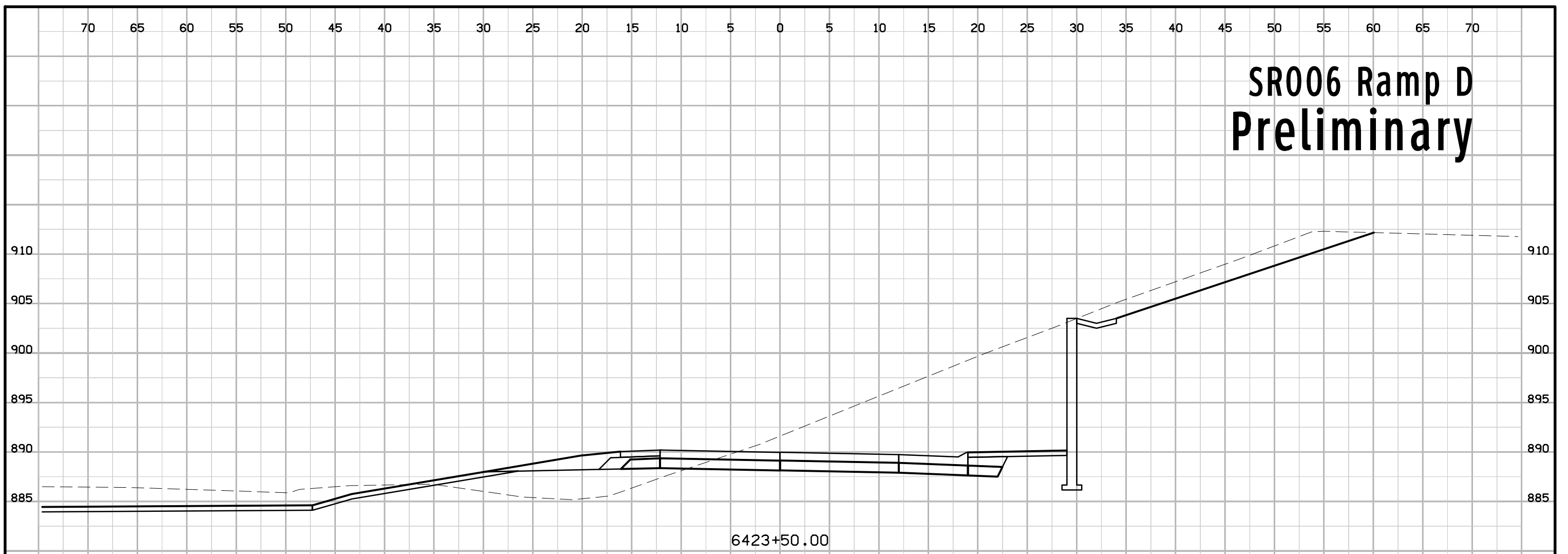
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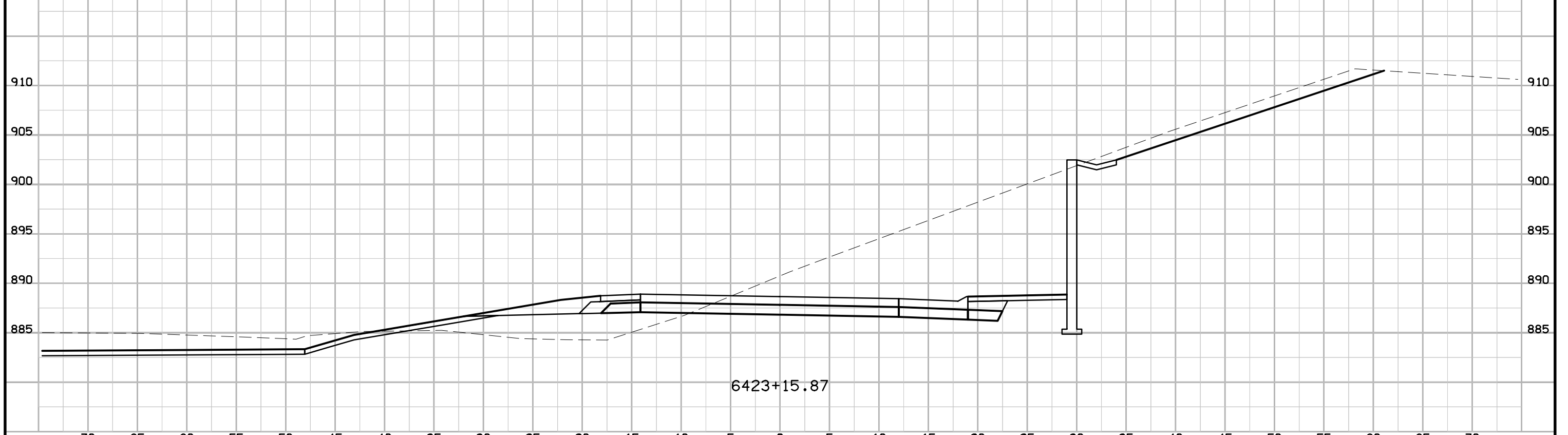
# SR006 Ramp C2 Preliminary



# SR006 Ramp D Preliminary

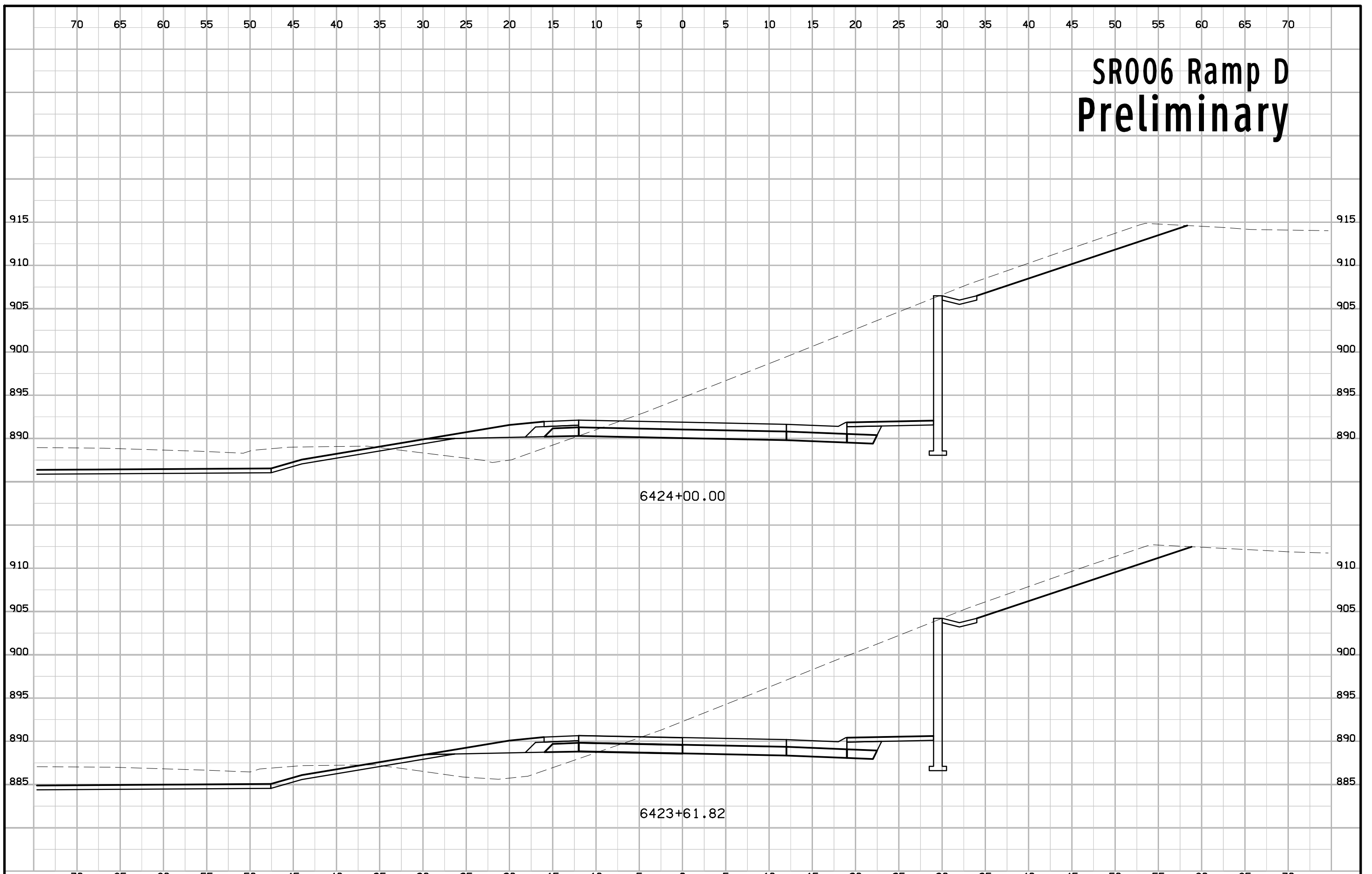


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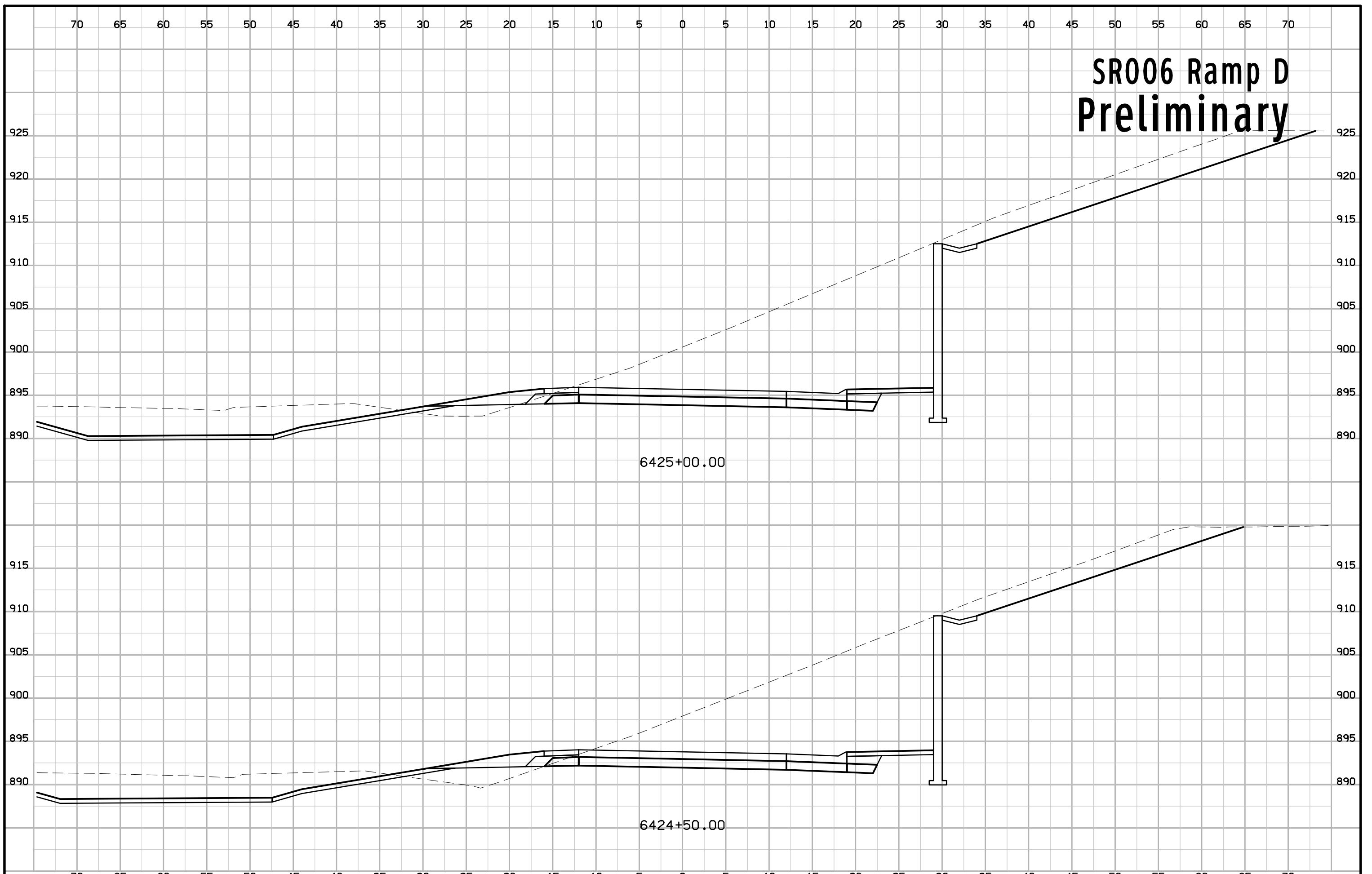


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# SR006 Ramp D Preliminary

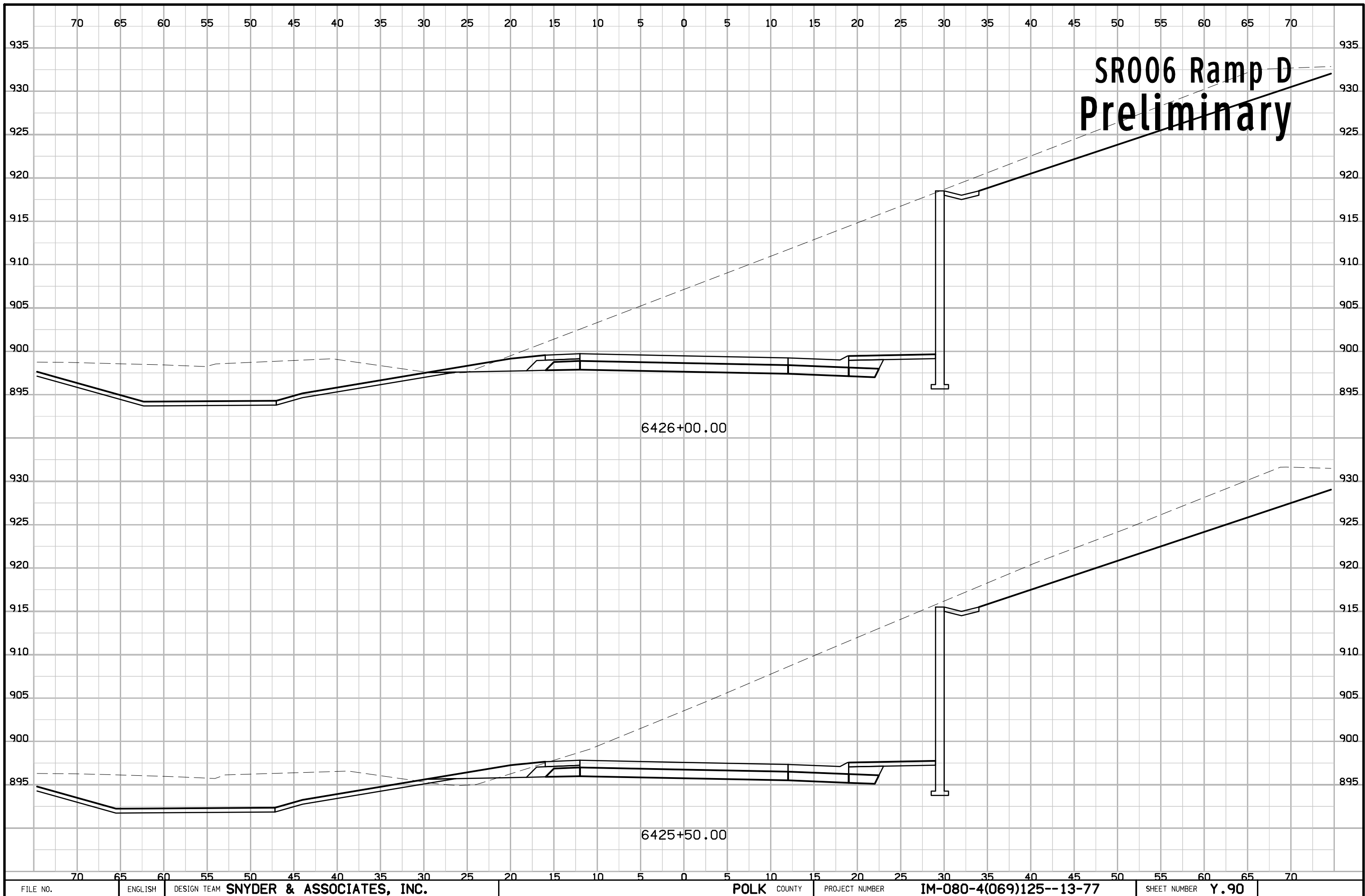


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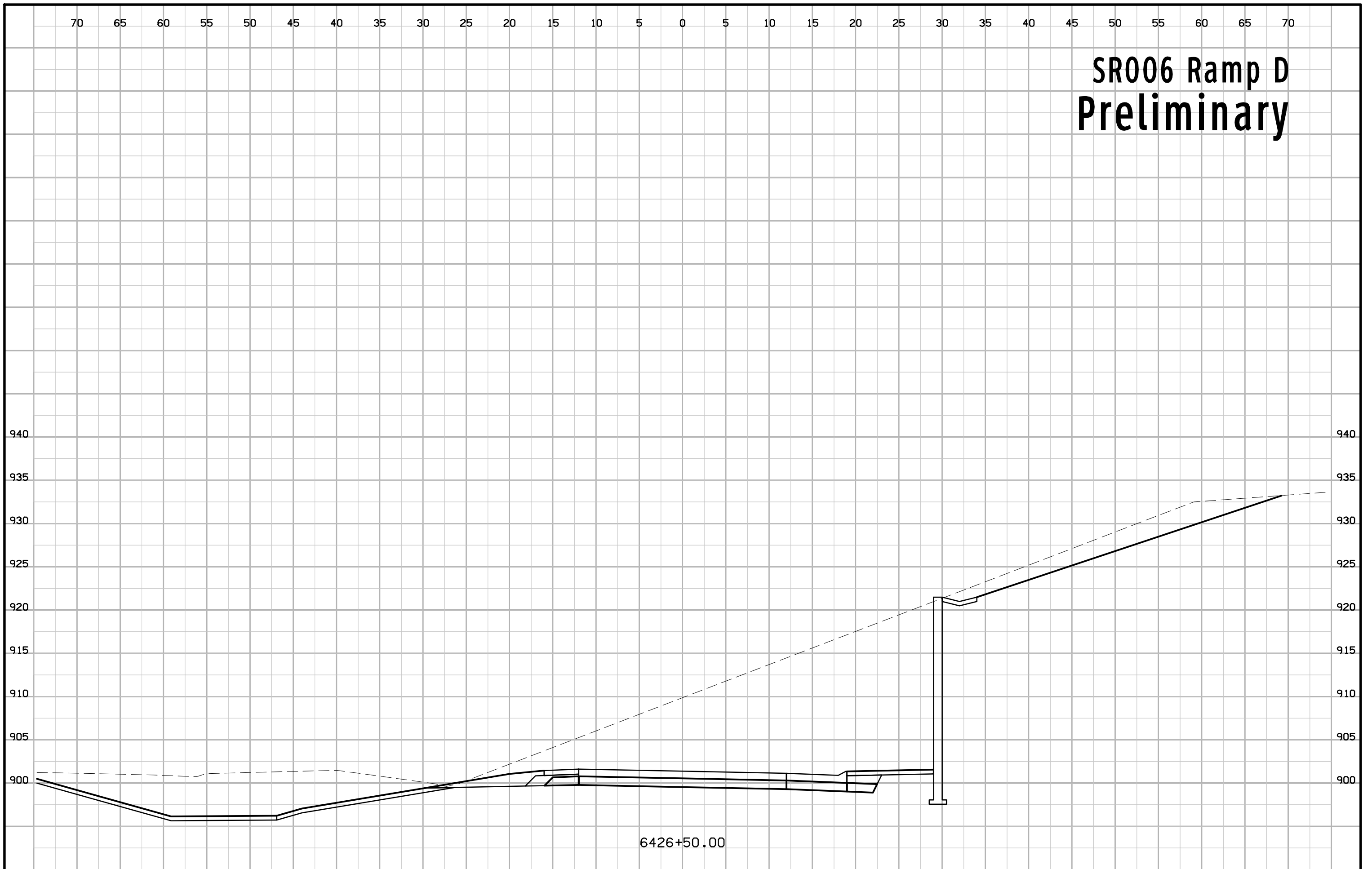
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6424+50.00



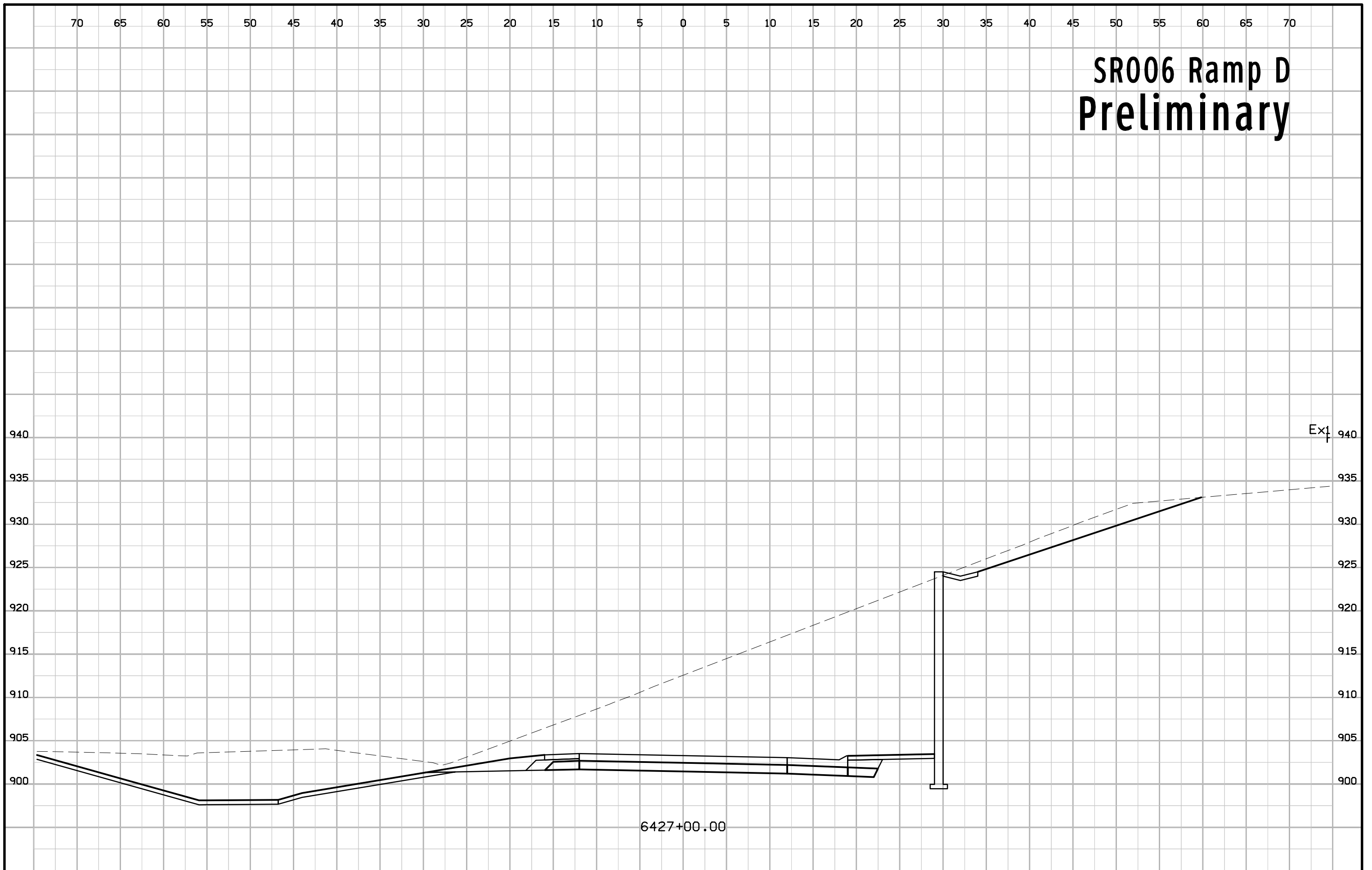


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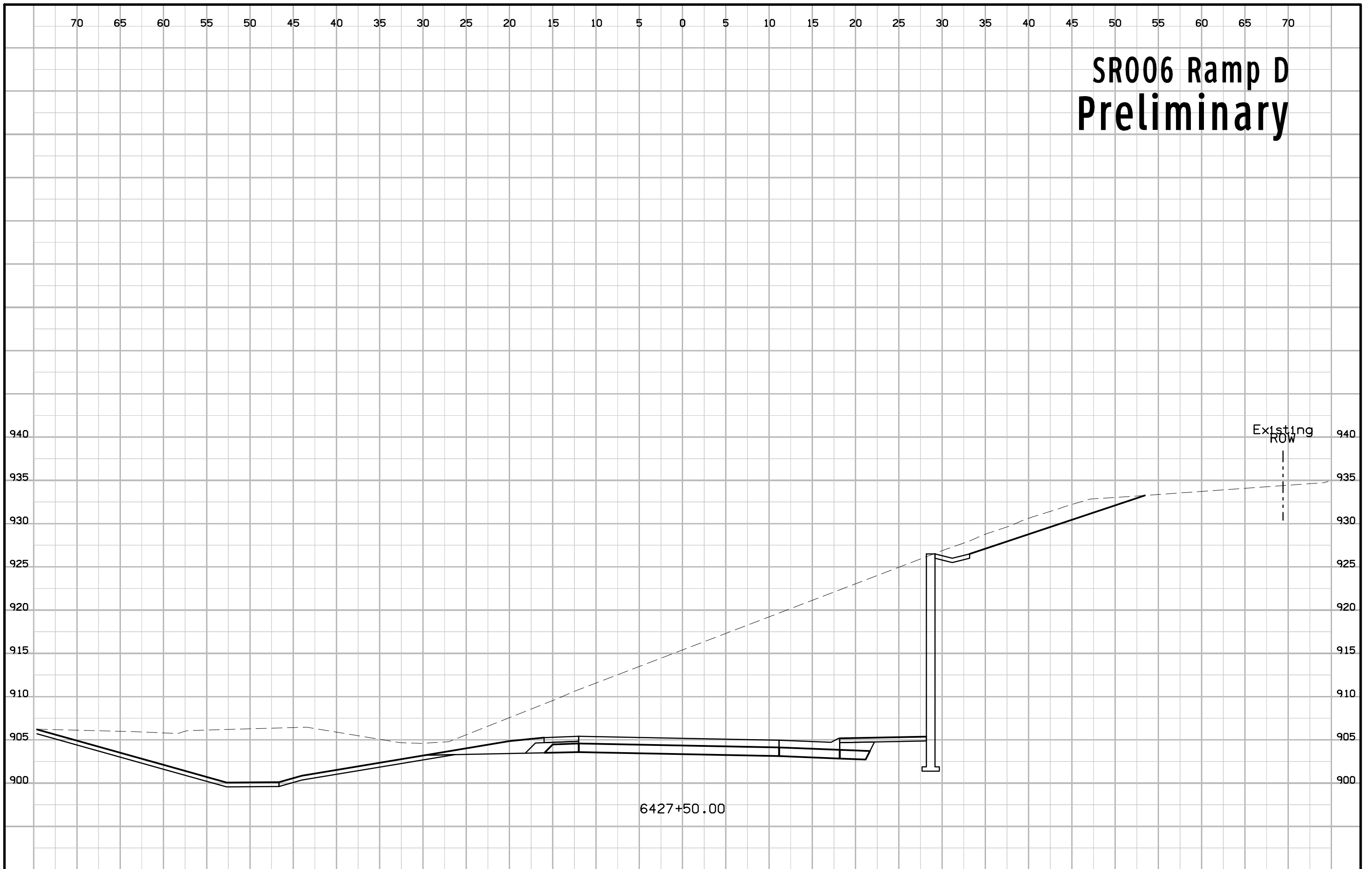


6426+50.00

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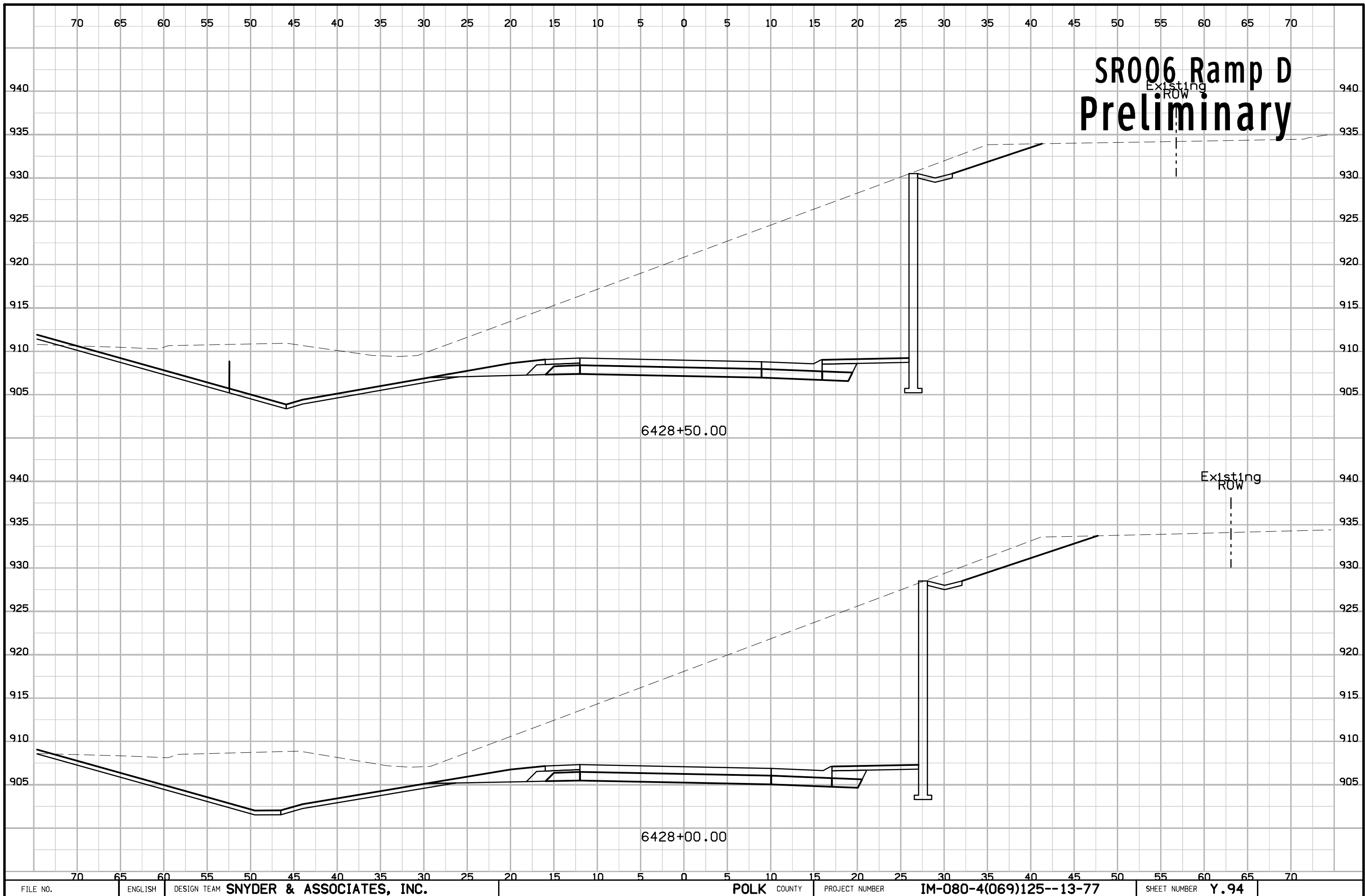


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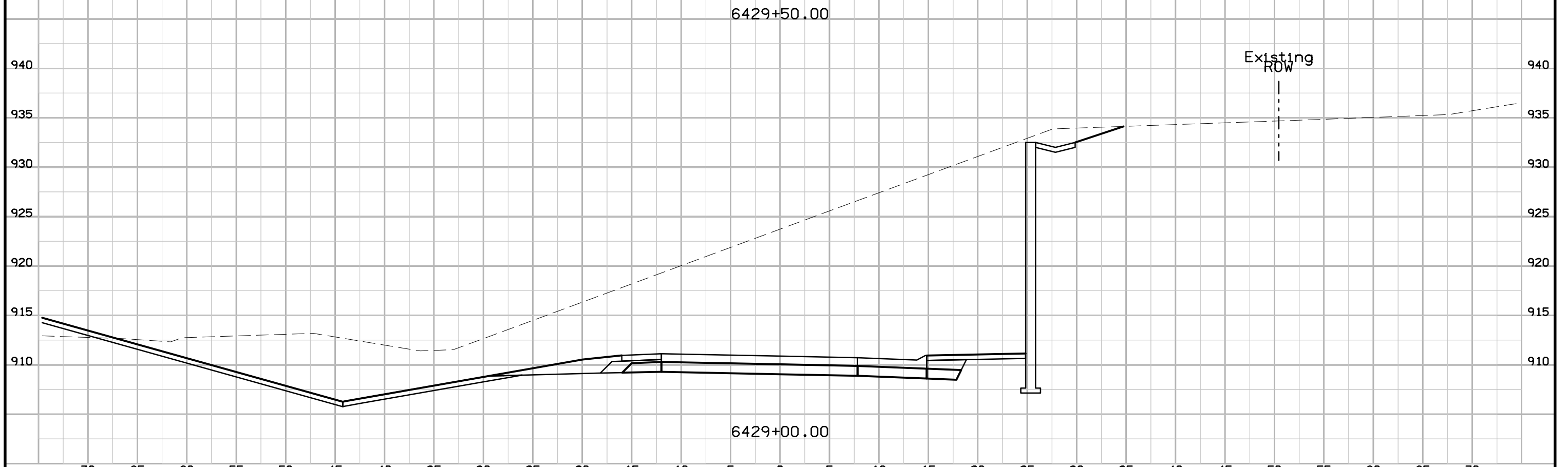
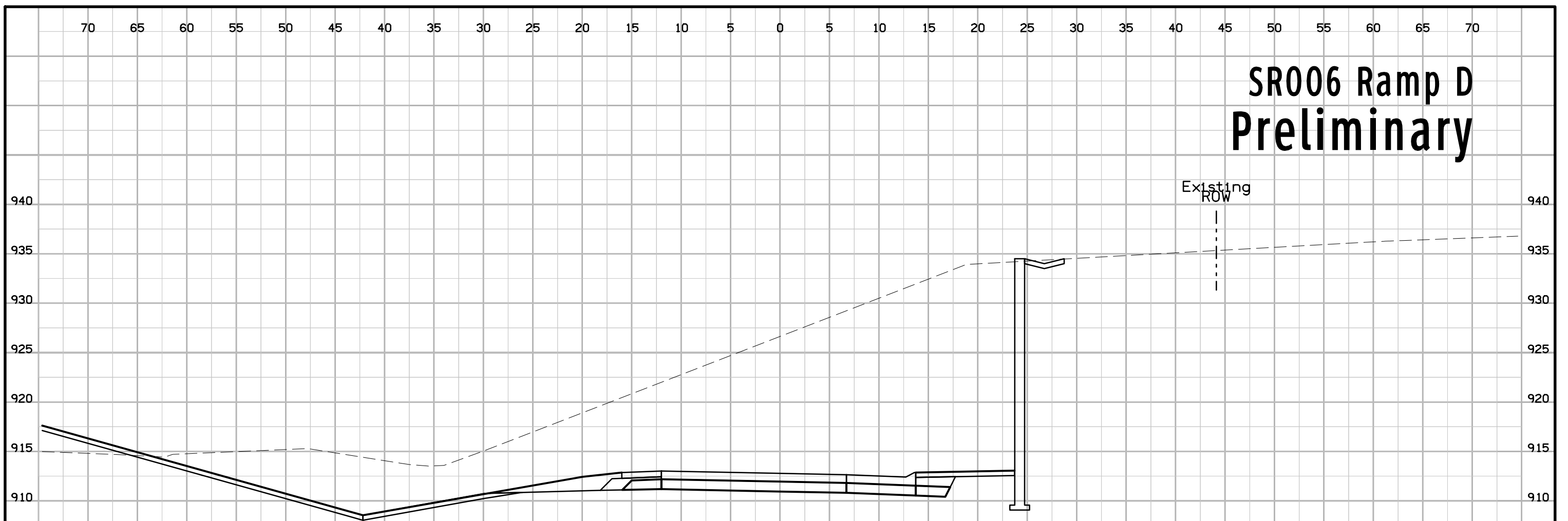


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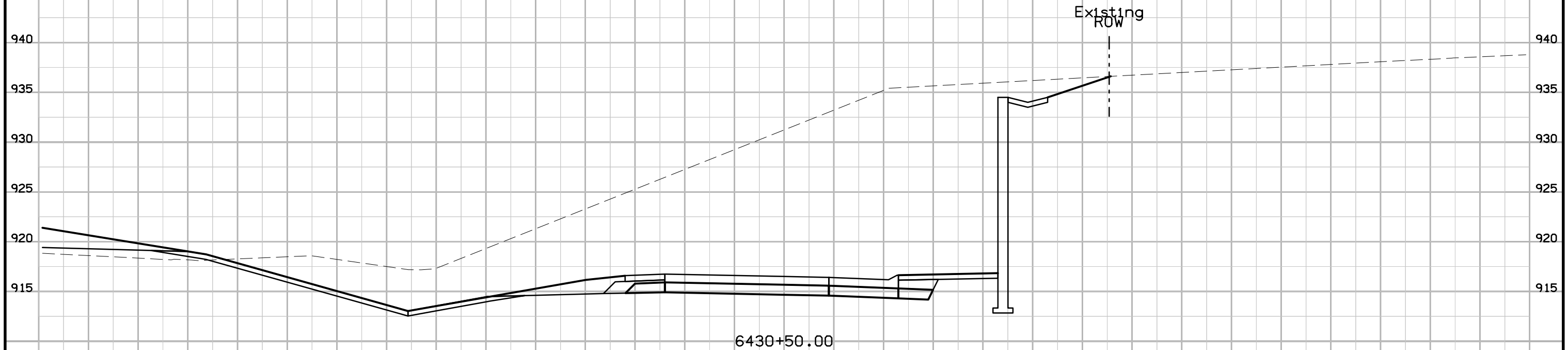
Existing  
ROW



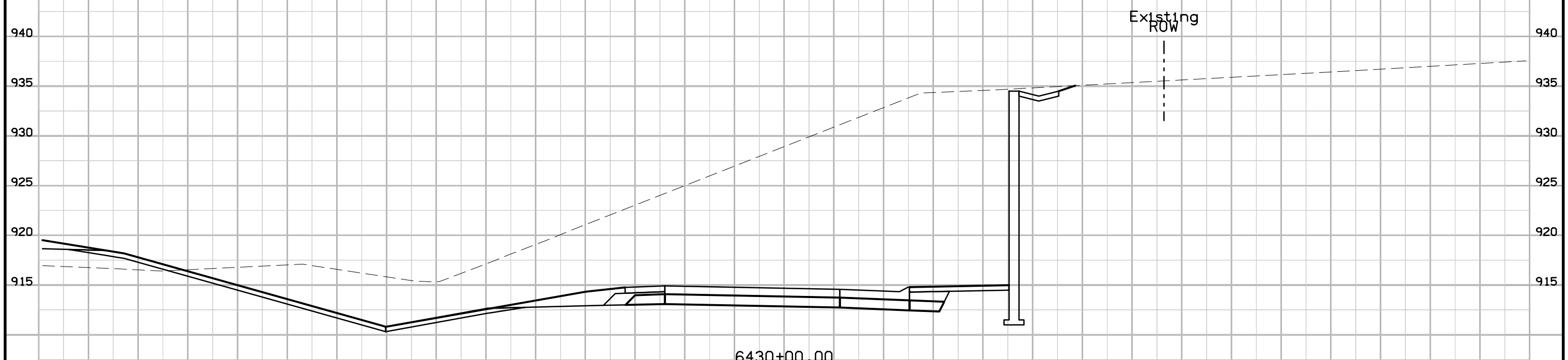
# SR006 Ramp D Preliminary



# SR006 Ramp D Preliminary



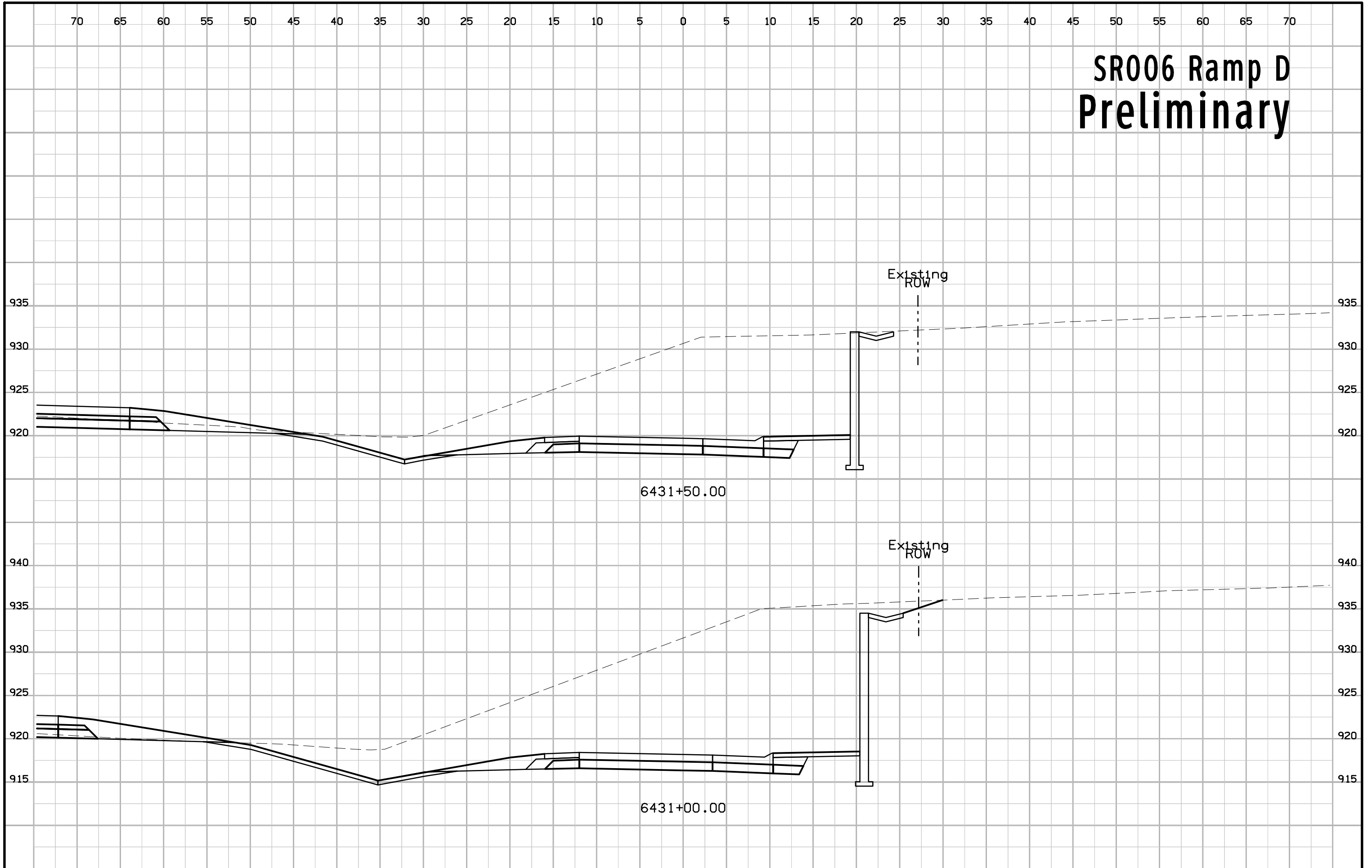
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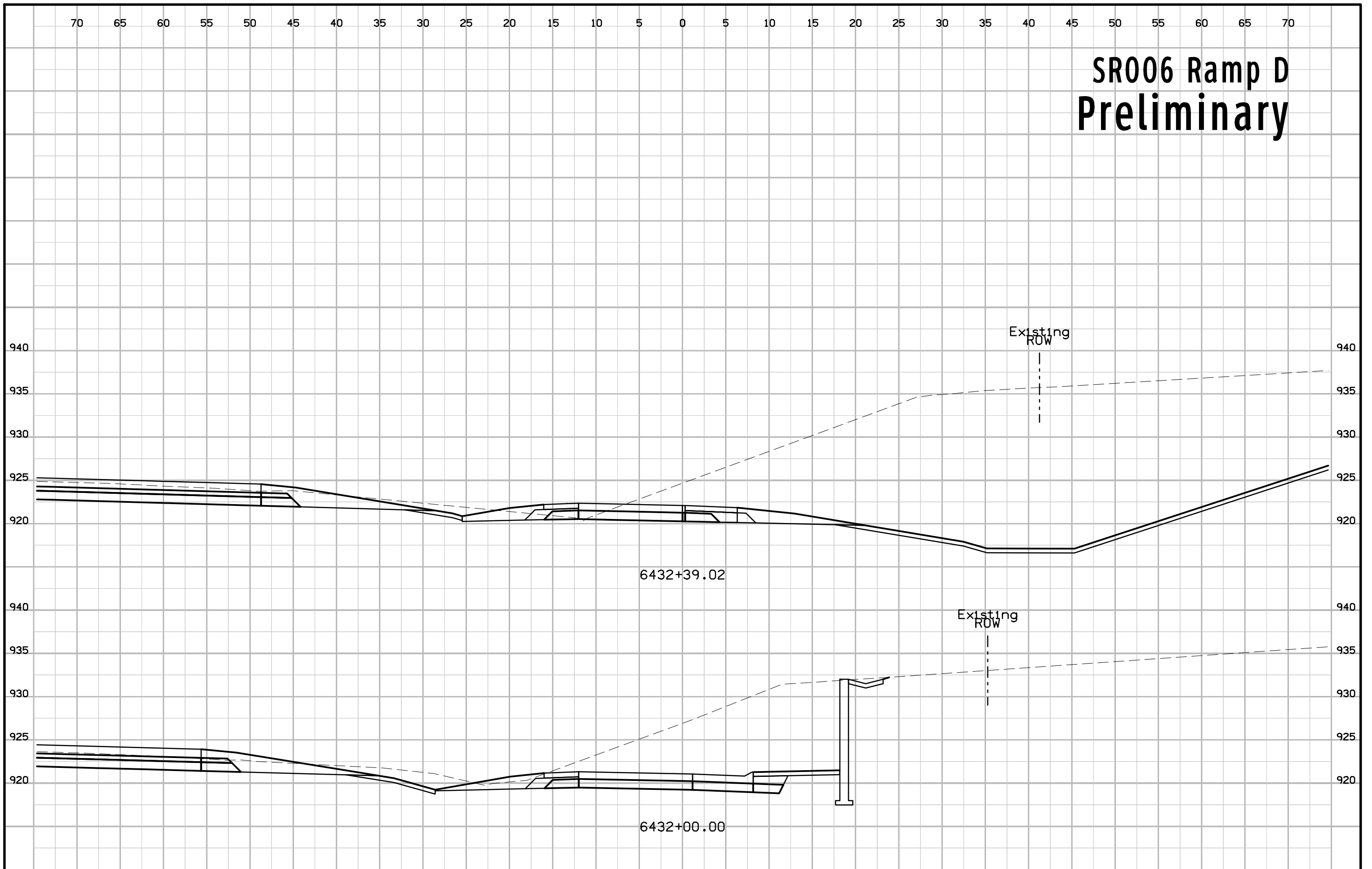
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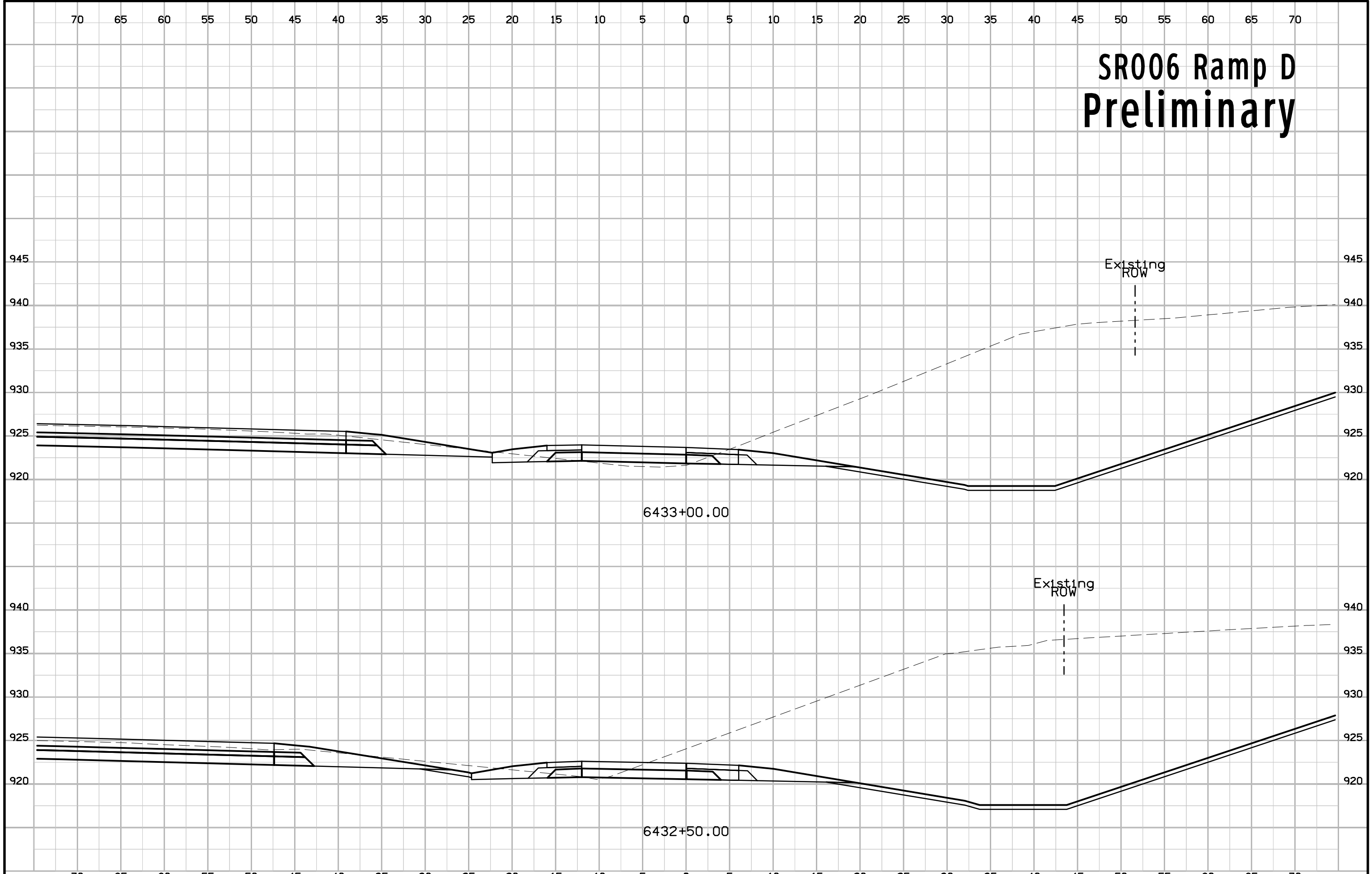
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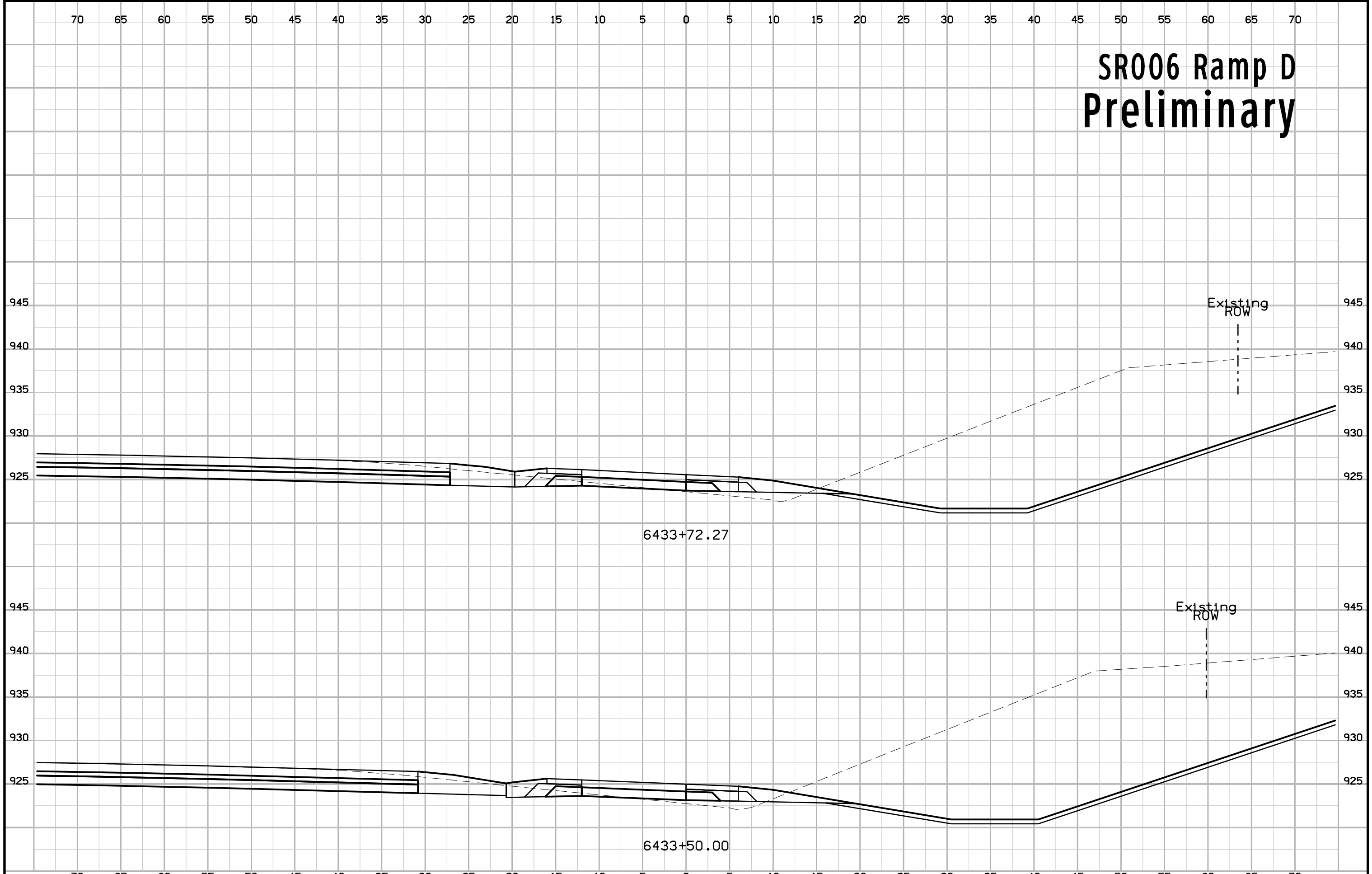
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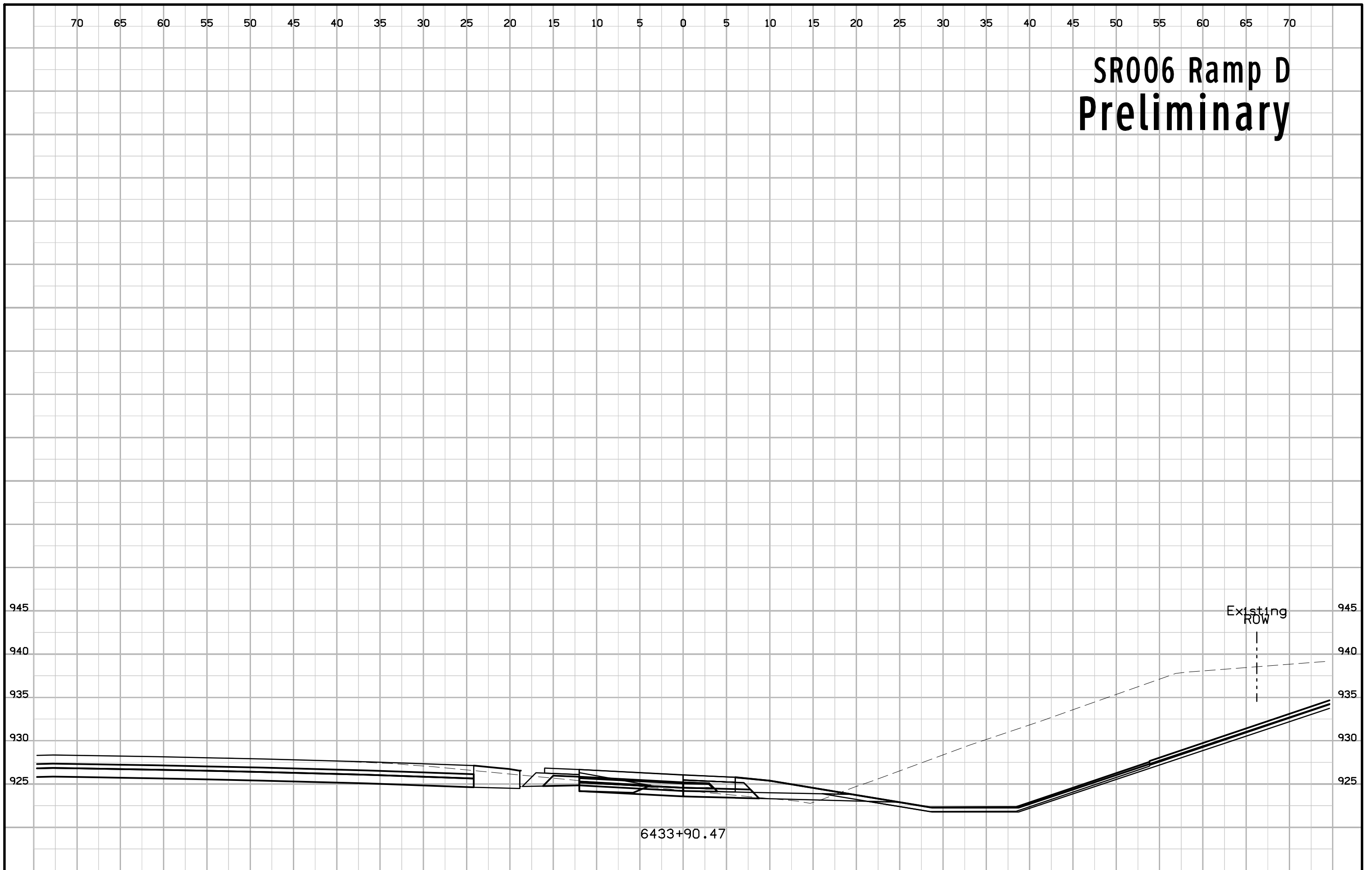
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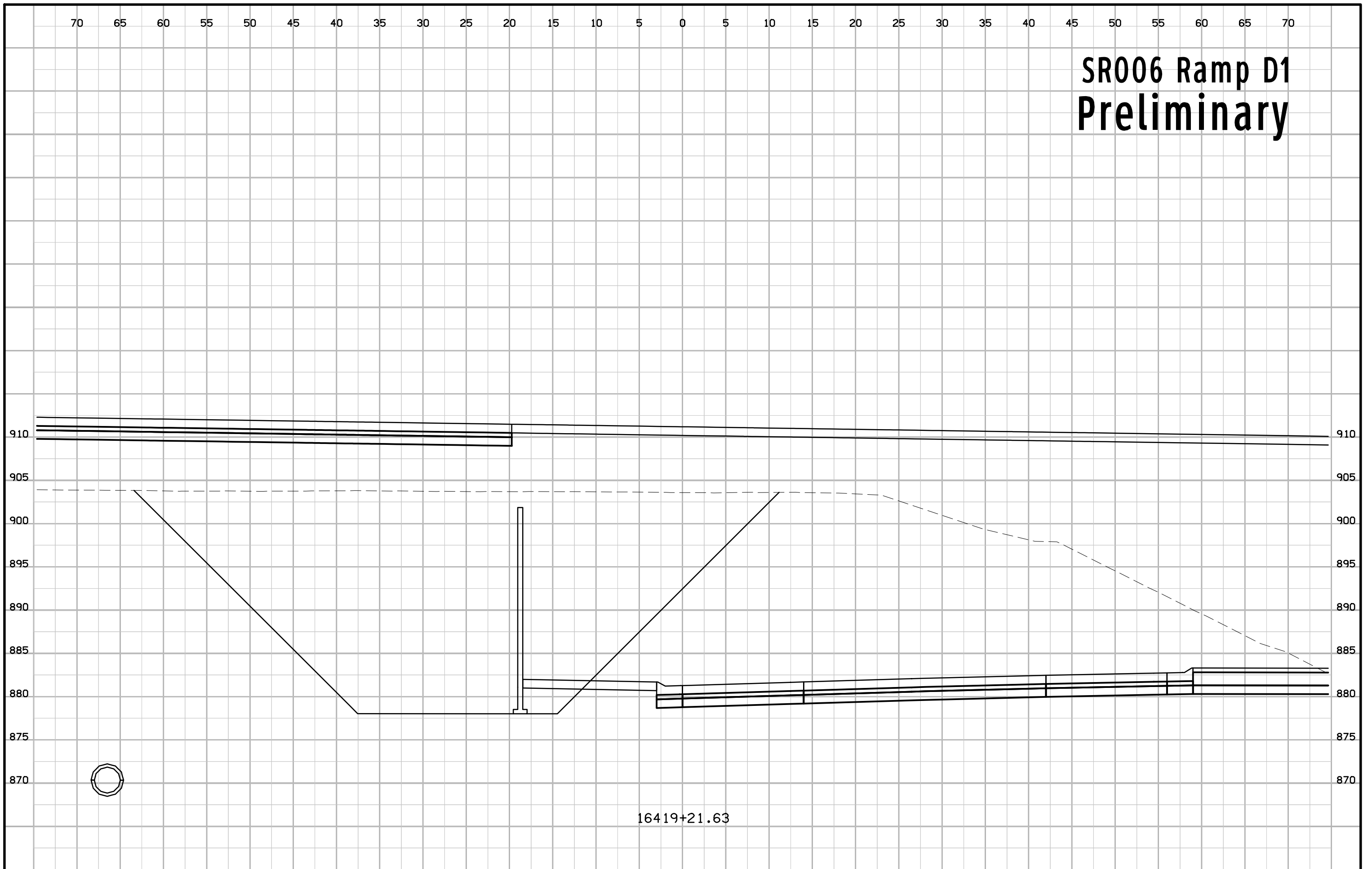
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# SR006 Ramp D Preliminary



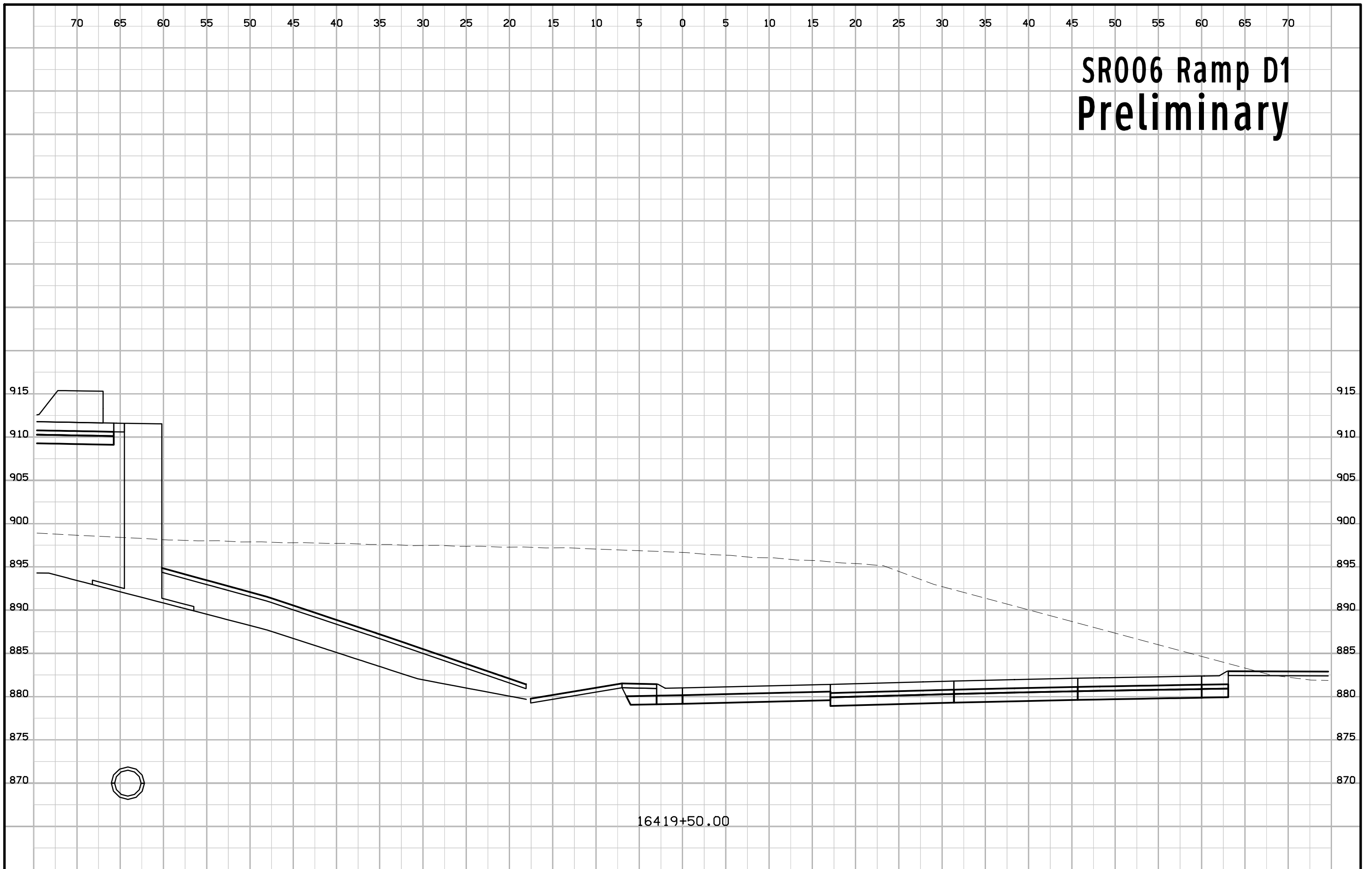
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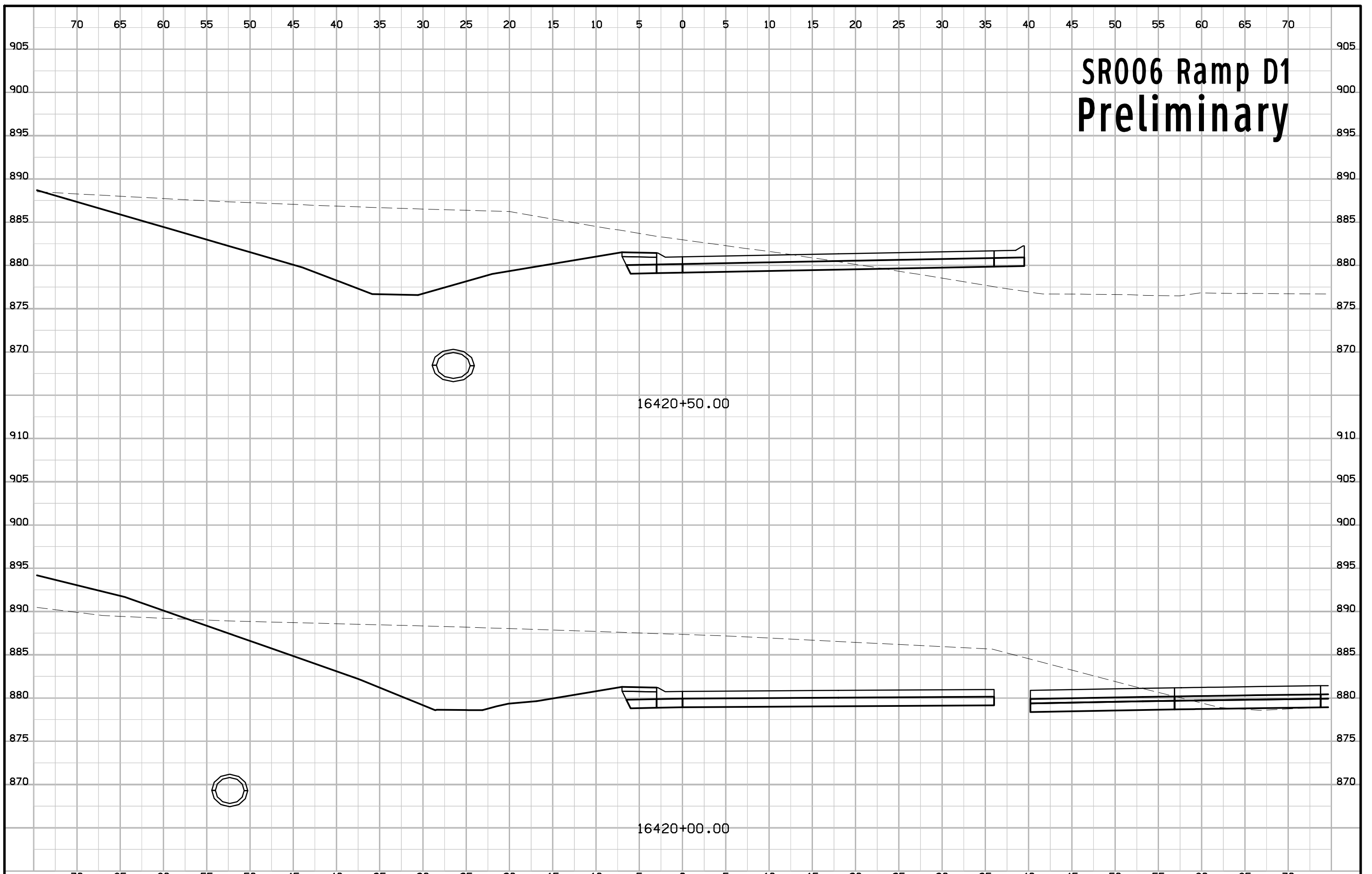
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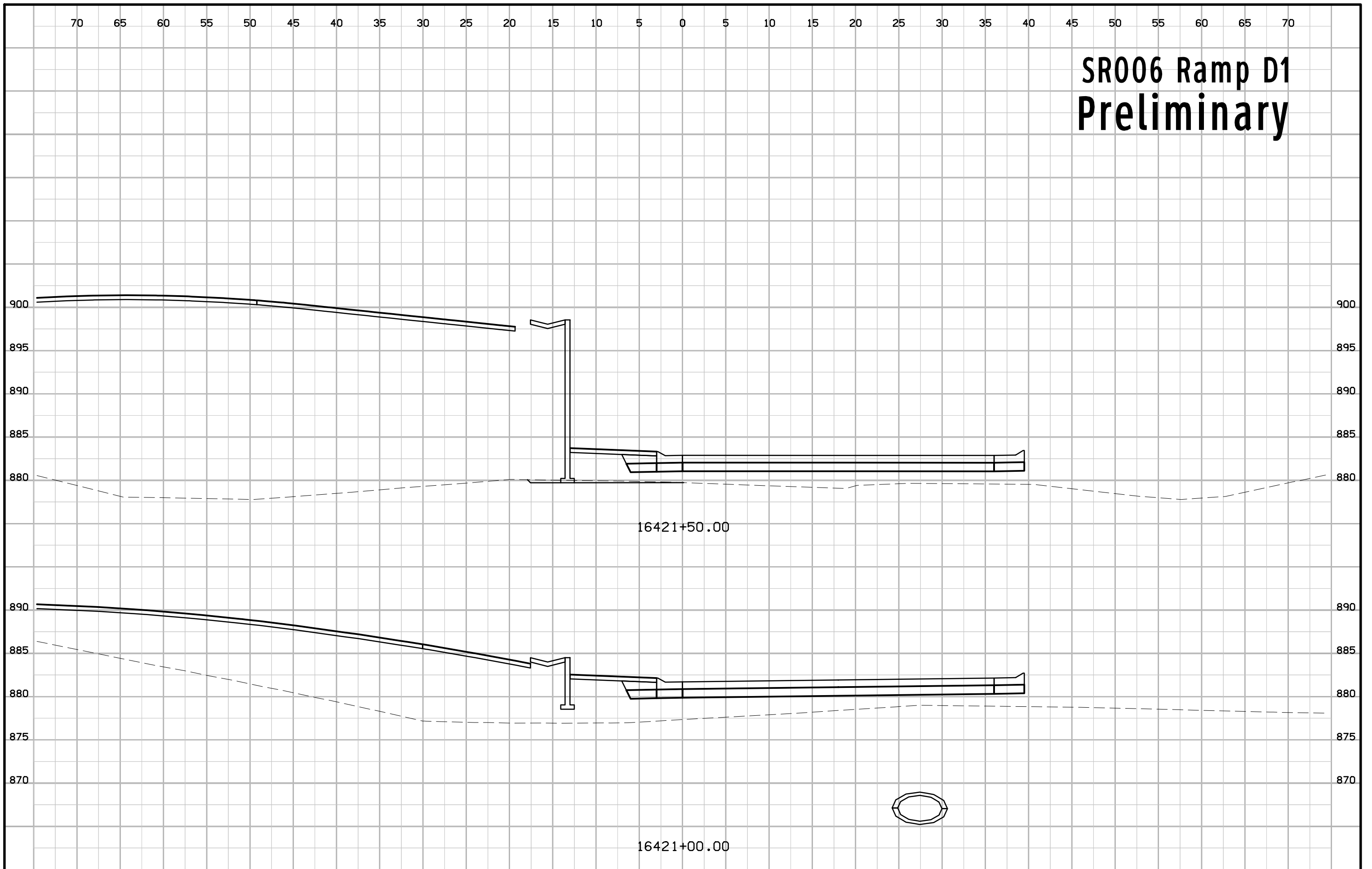
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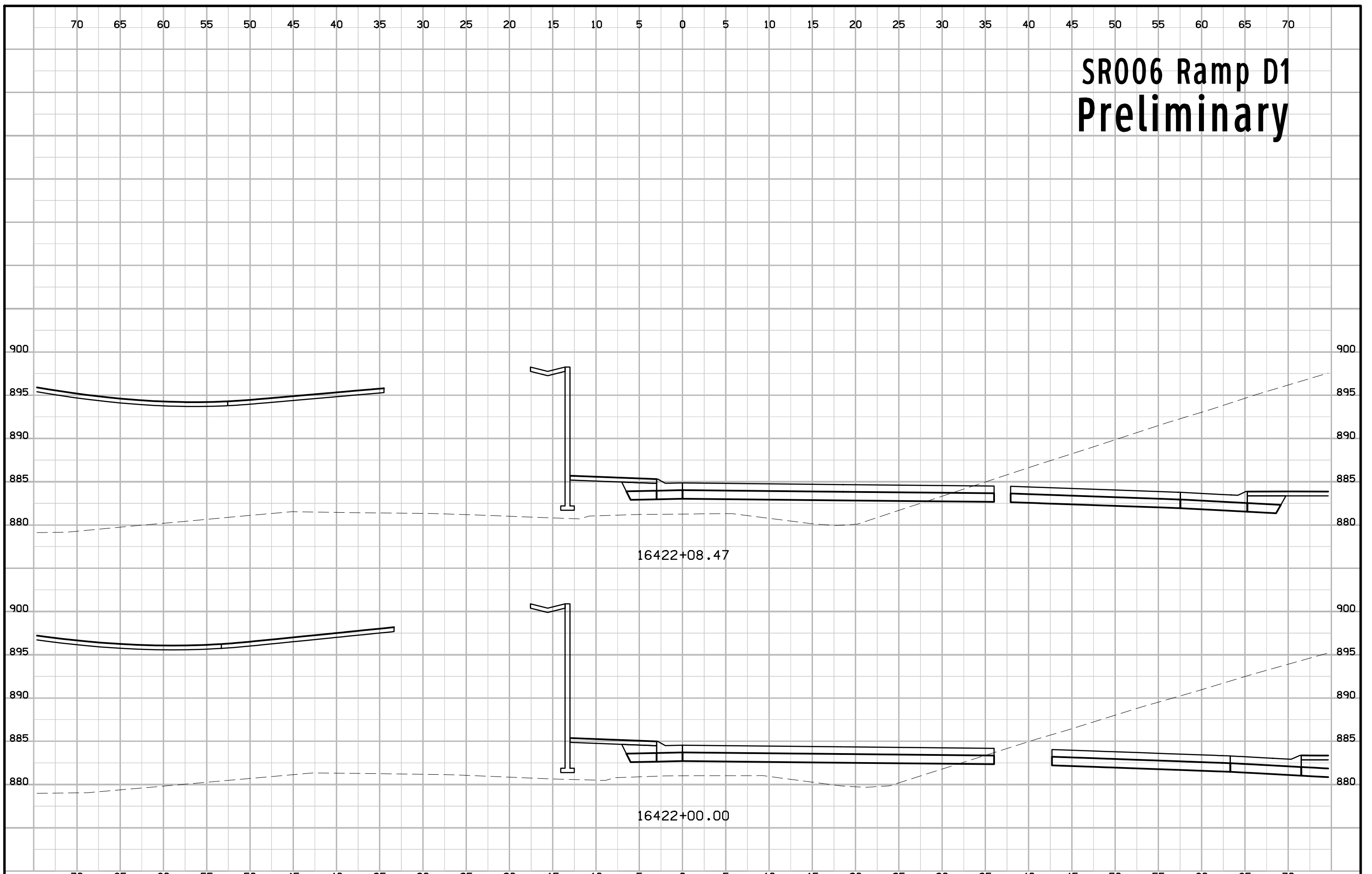
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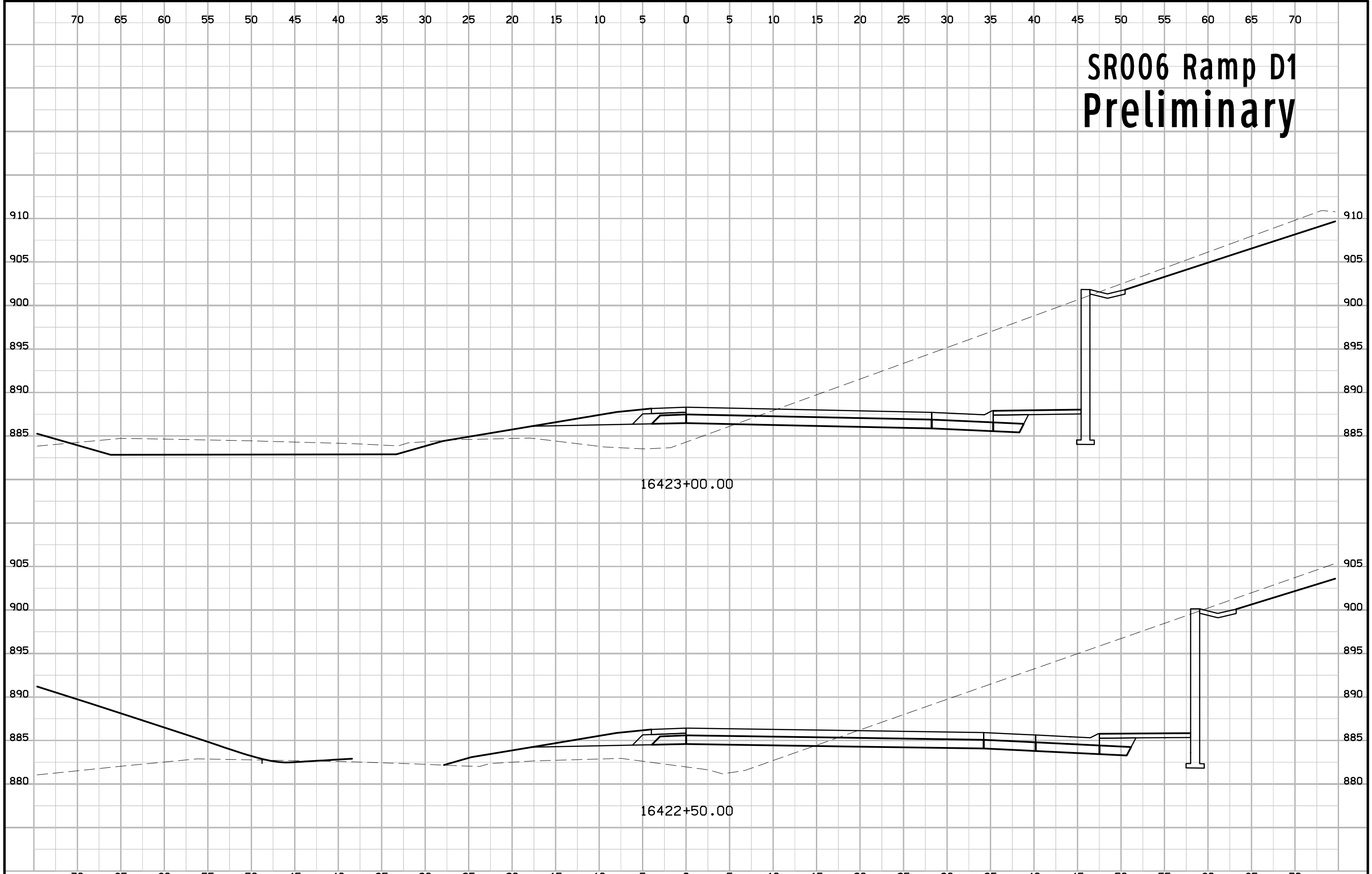
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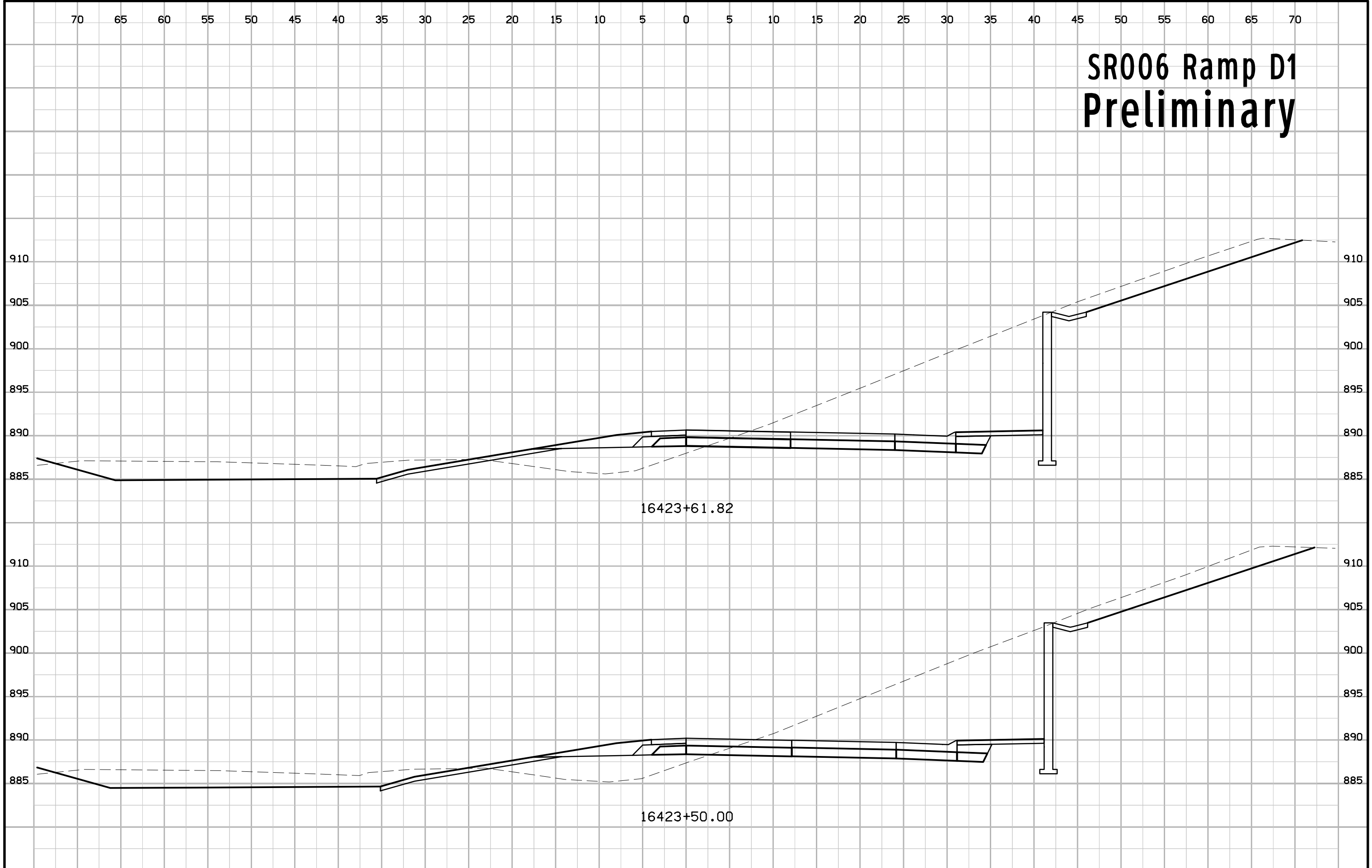
# SR006 Ramp D1 Preliminary



# SR006 Ramp D1 Preliminary

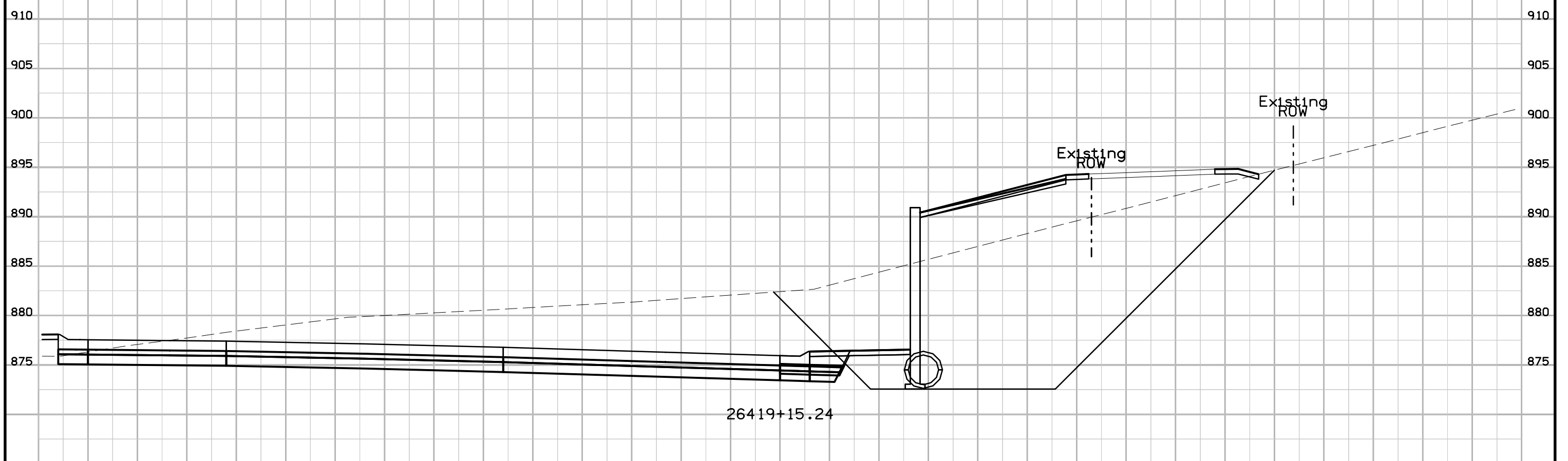
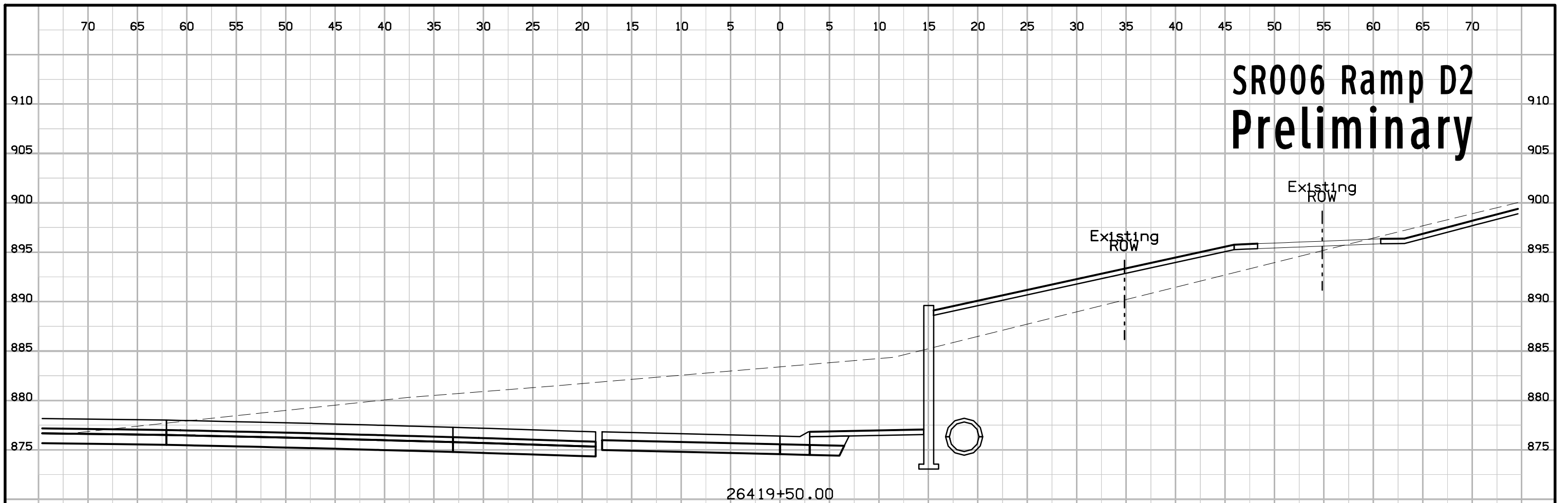


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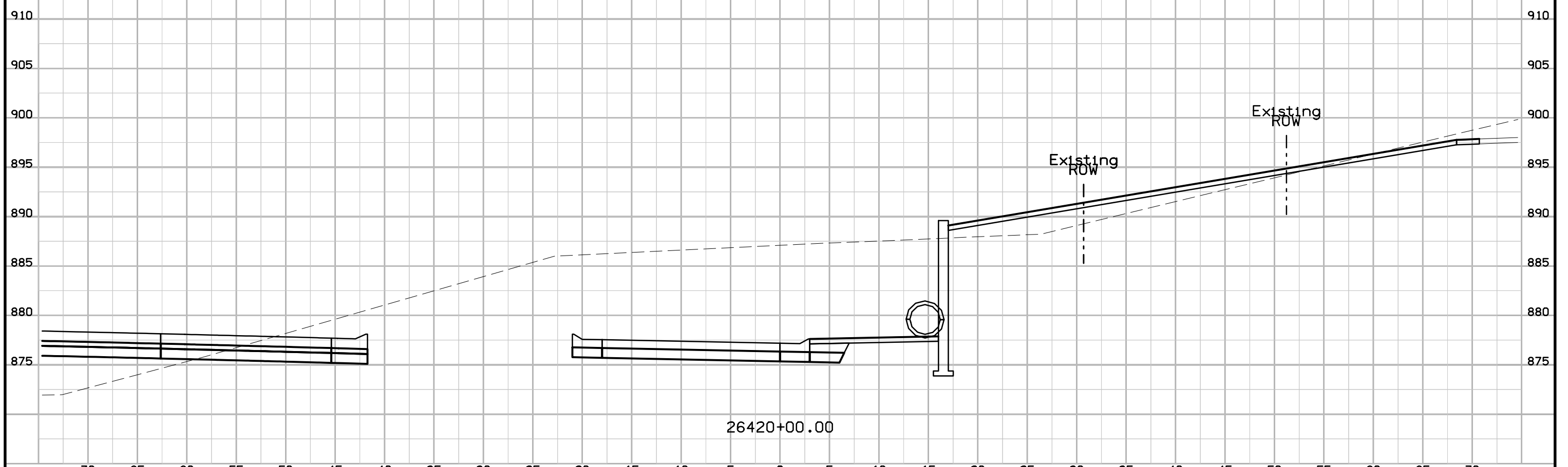
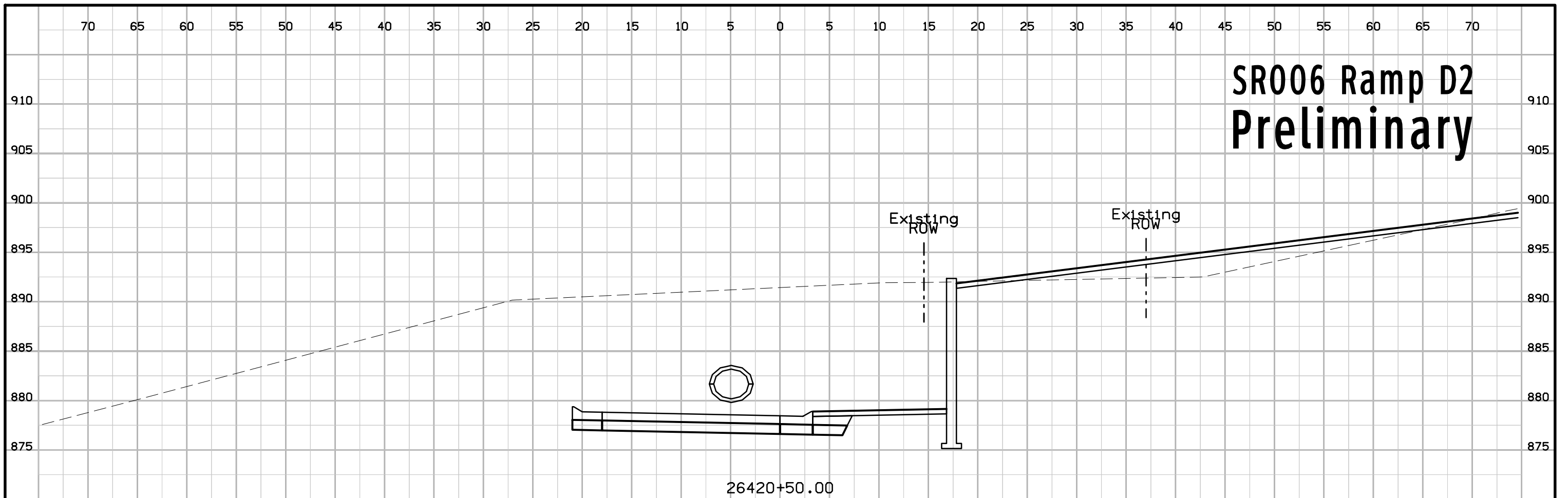




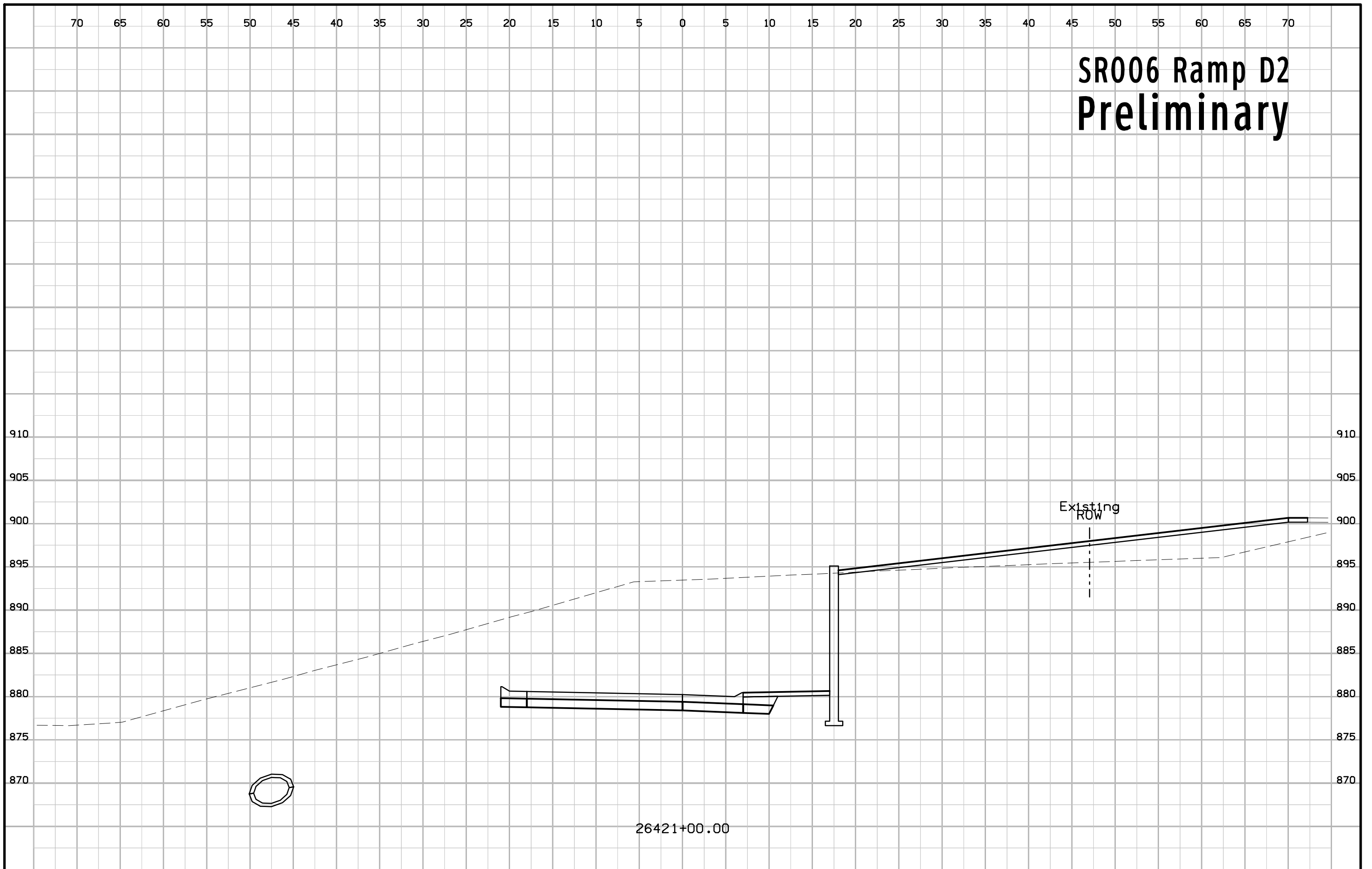
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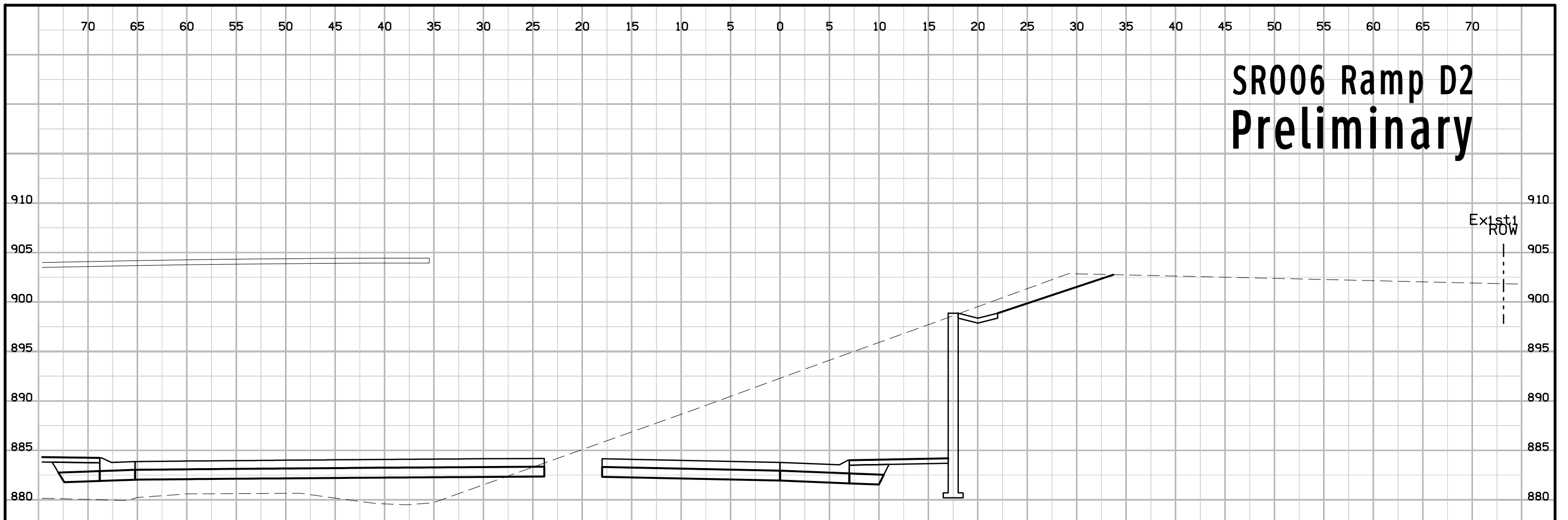
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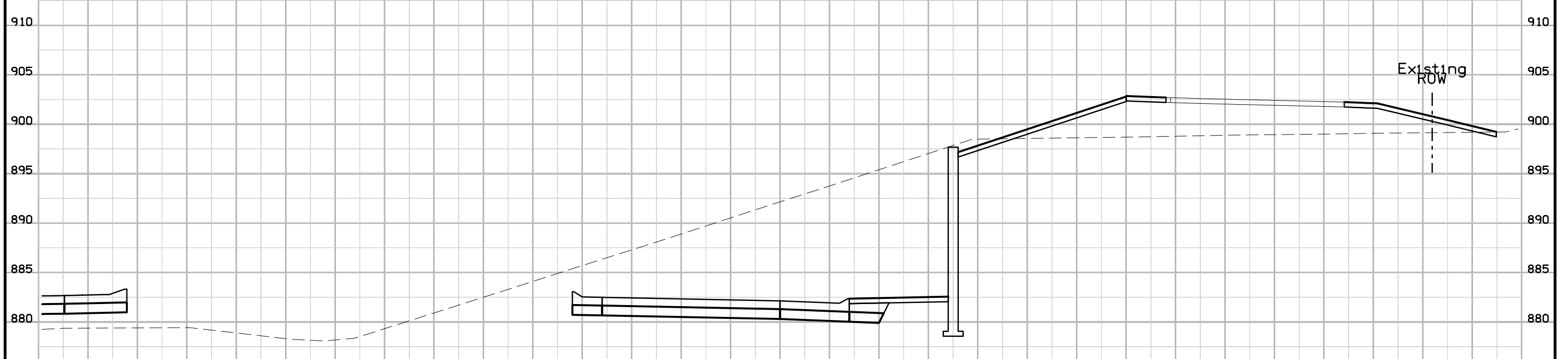
# SR006 Ramp D2 Preliminary



# SR006 Ramp D2 Preliminary

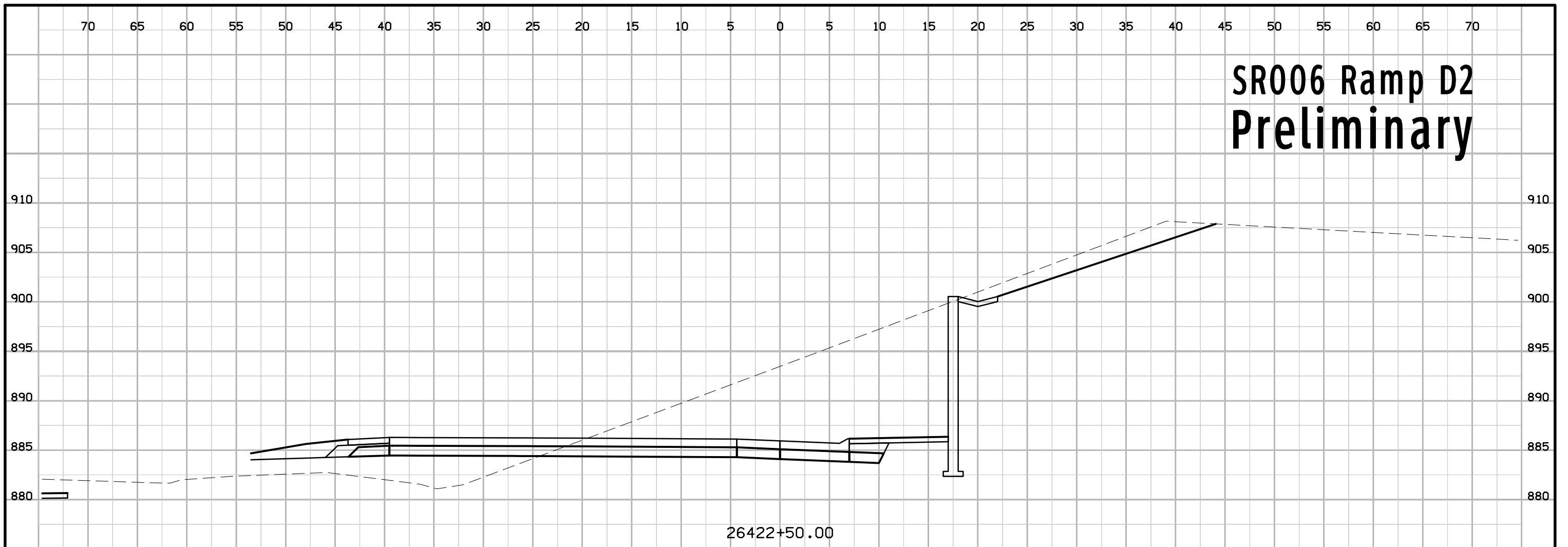


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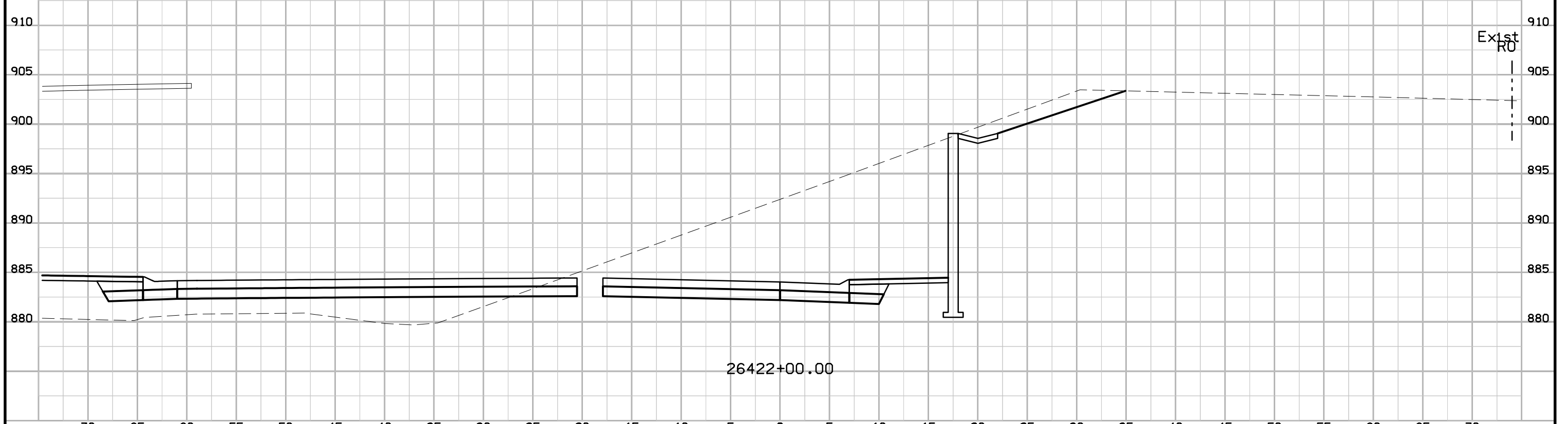


26421+50.00

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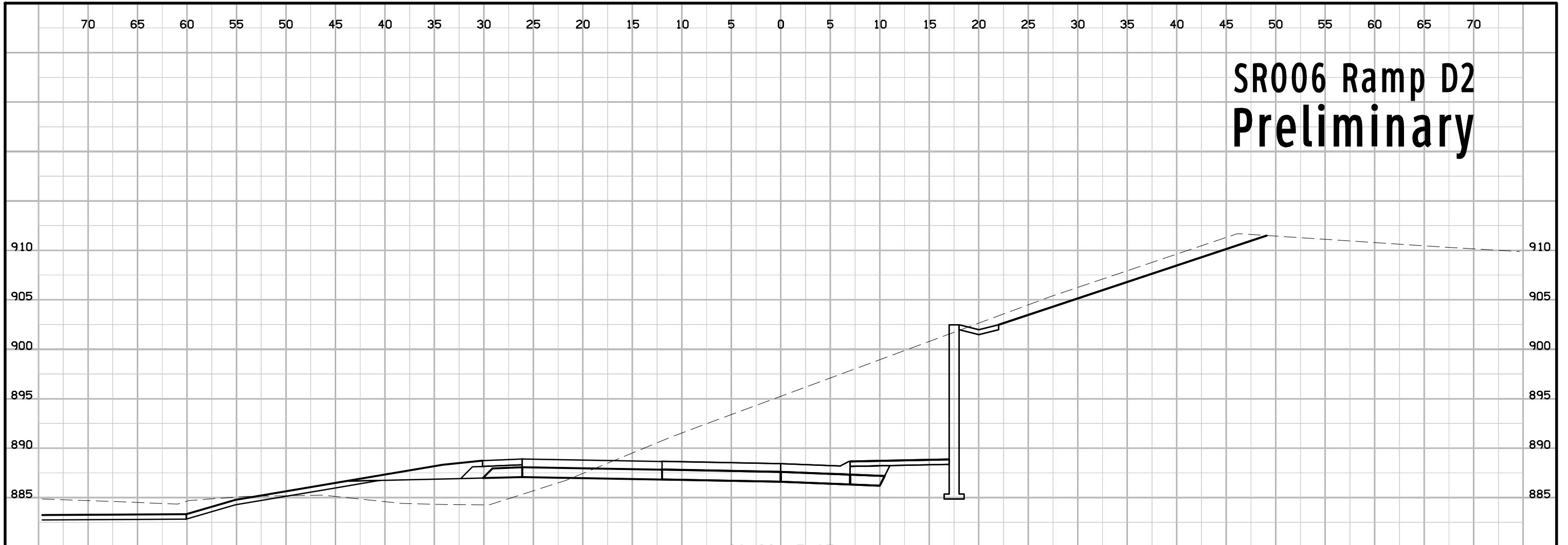


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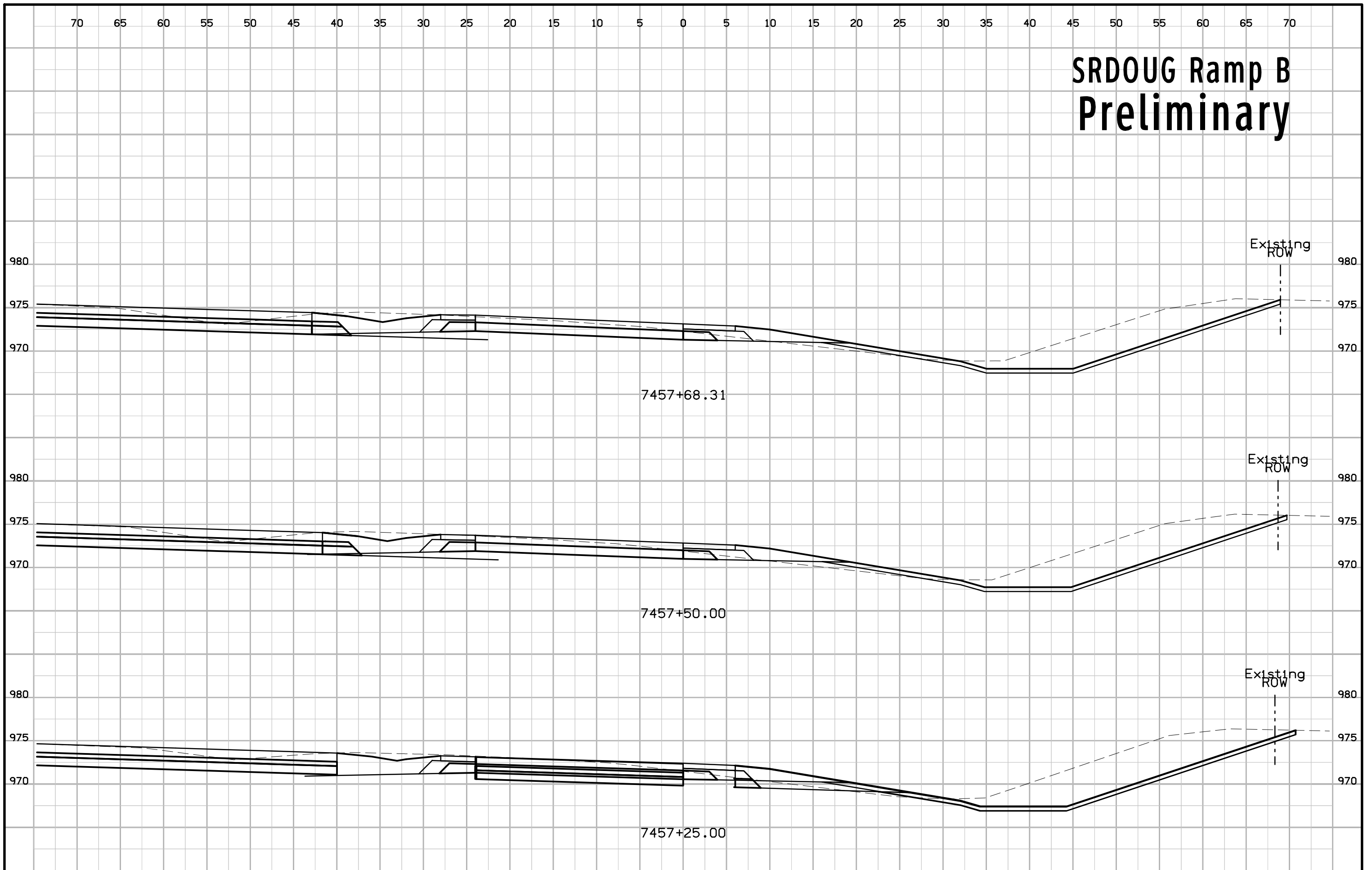
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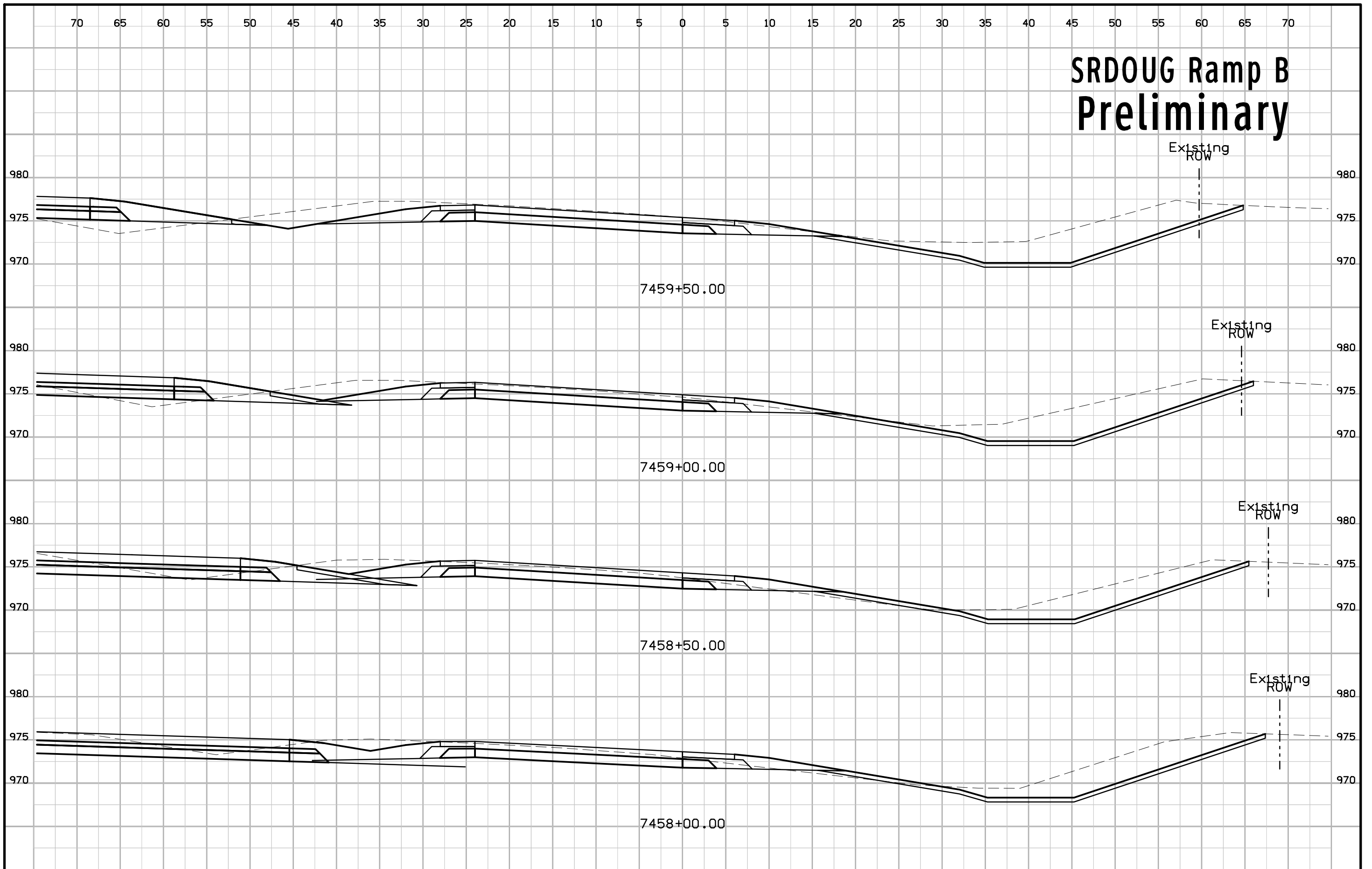




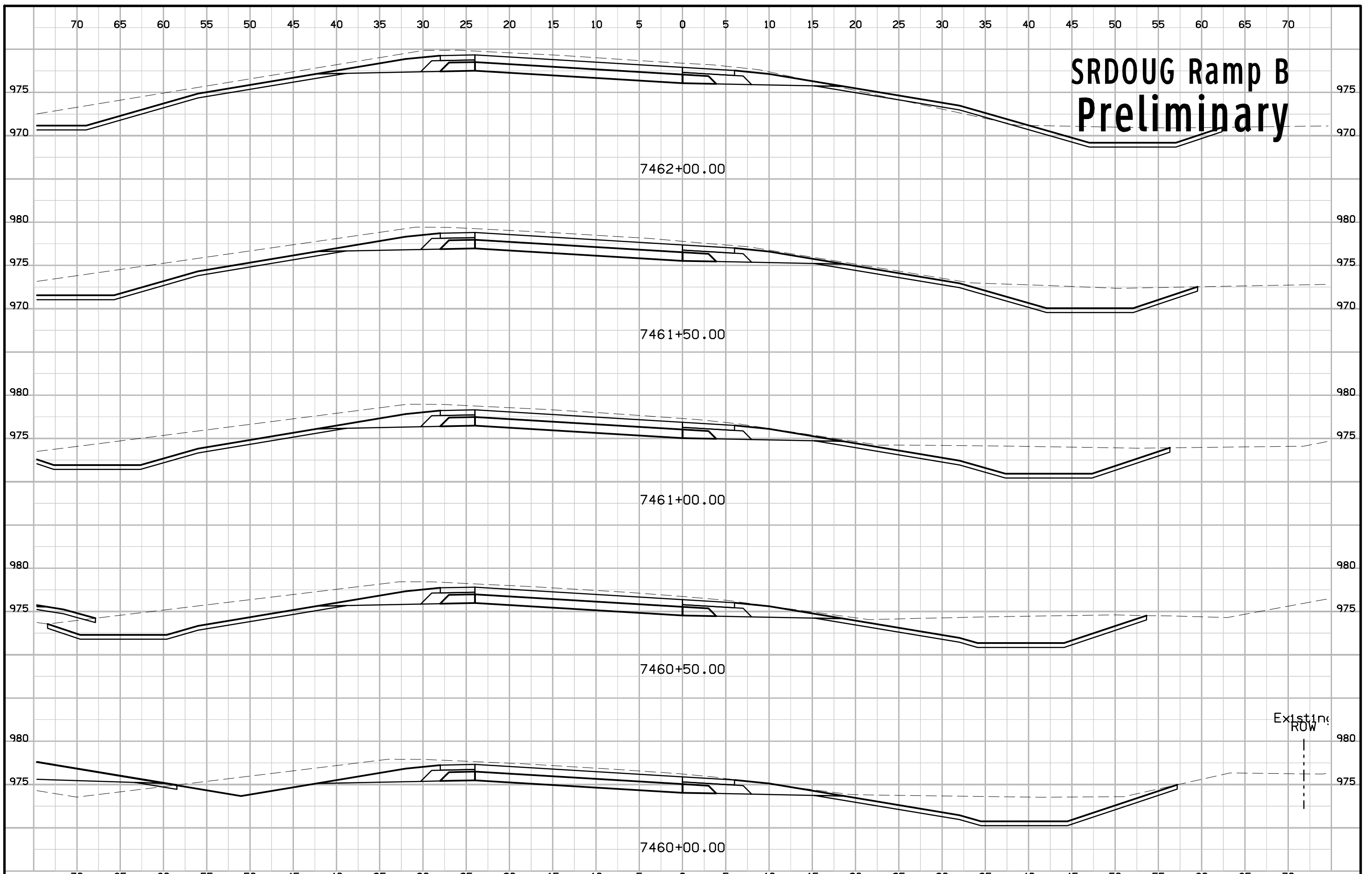
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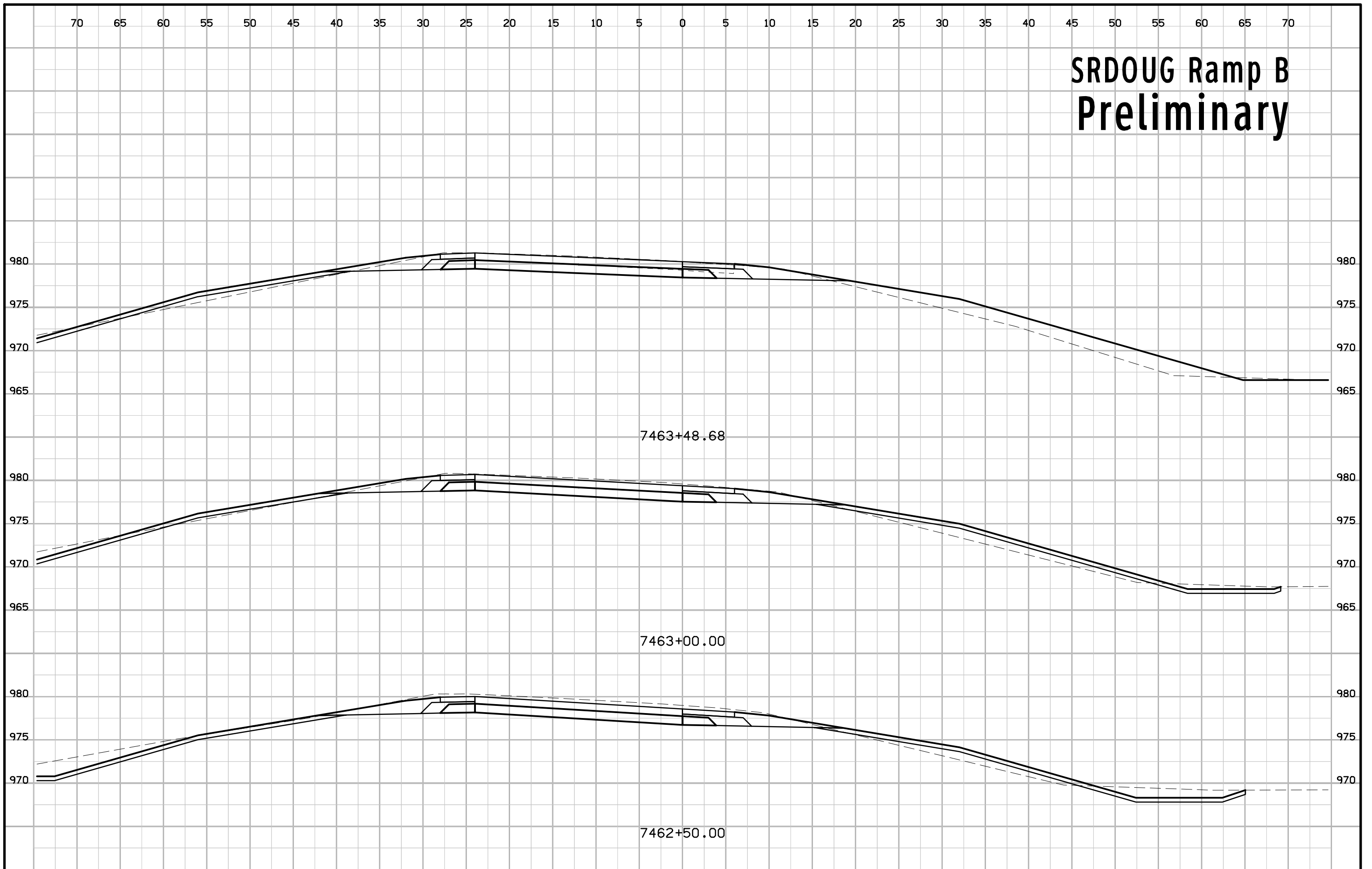
# SRDOUG Ramp B Preliminary



# SRDOUG Ramp B Preliminary



# SRDOUG Ramp B Preliminary

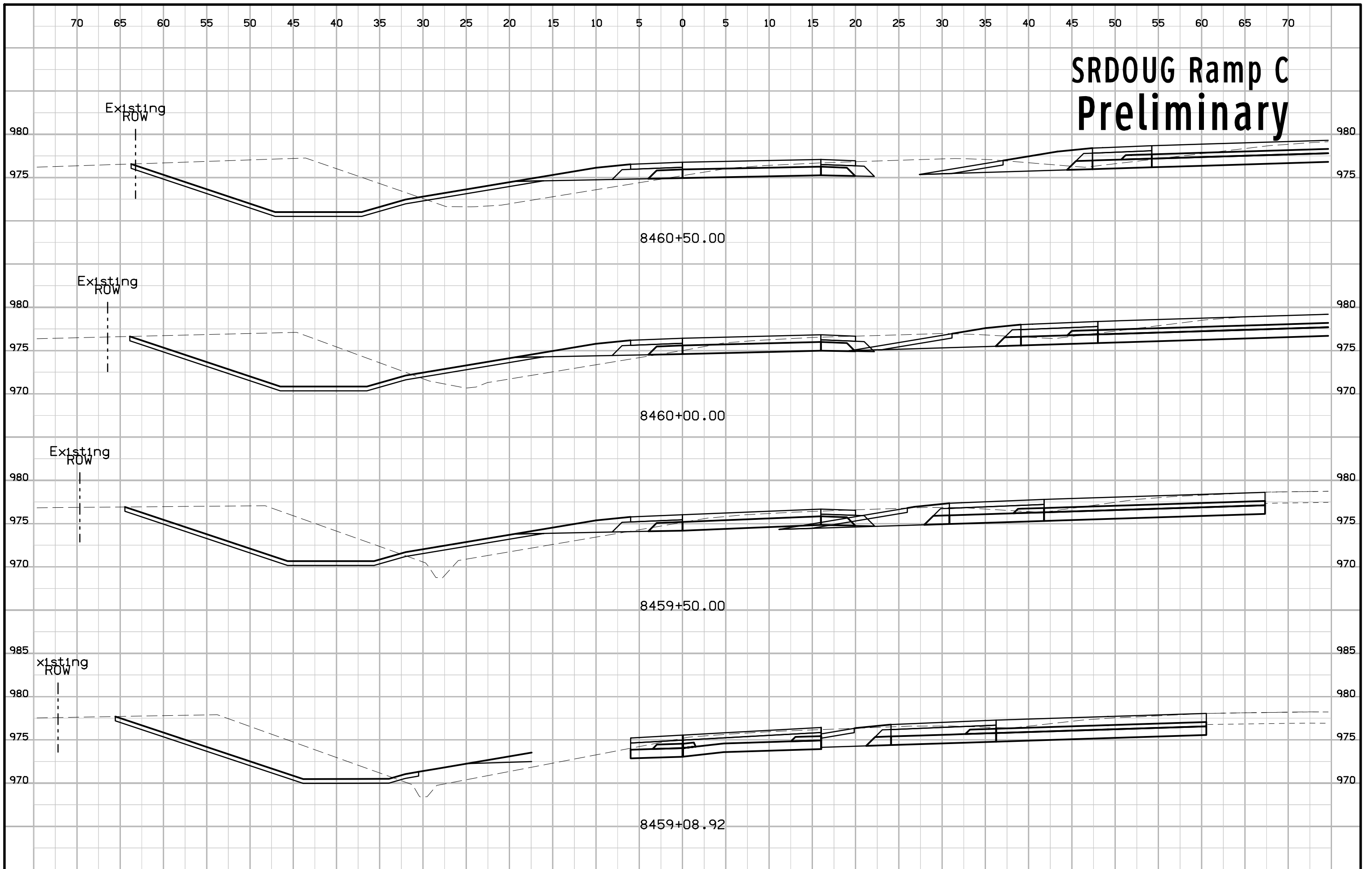


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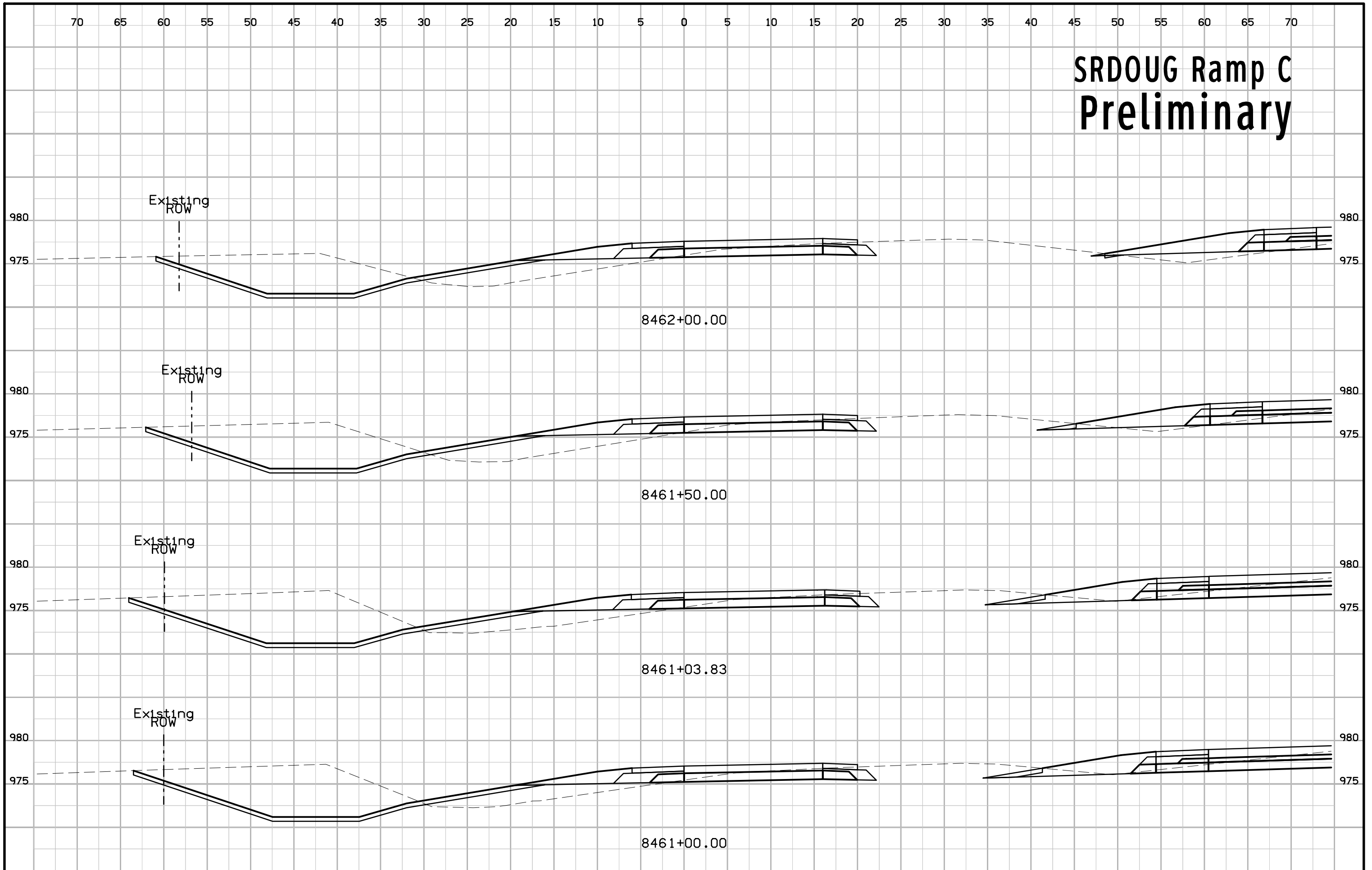
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7462+50.00

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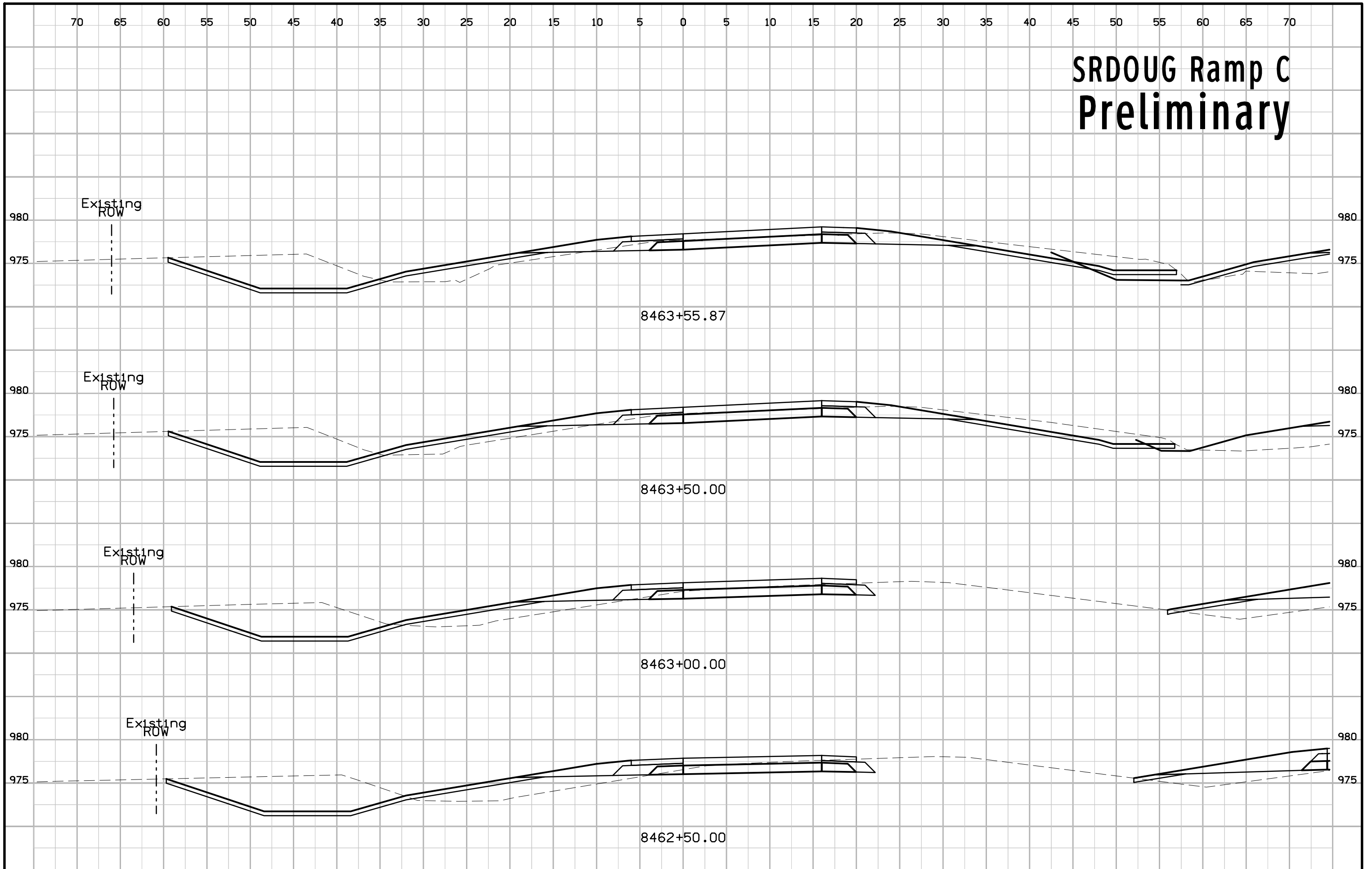


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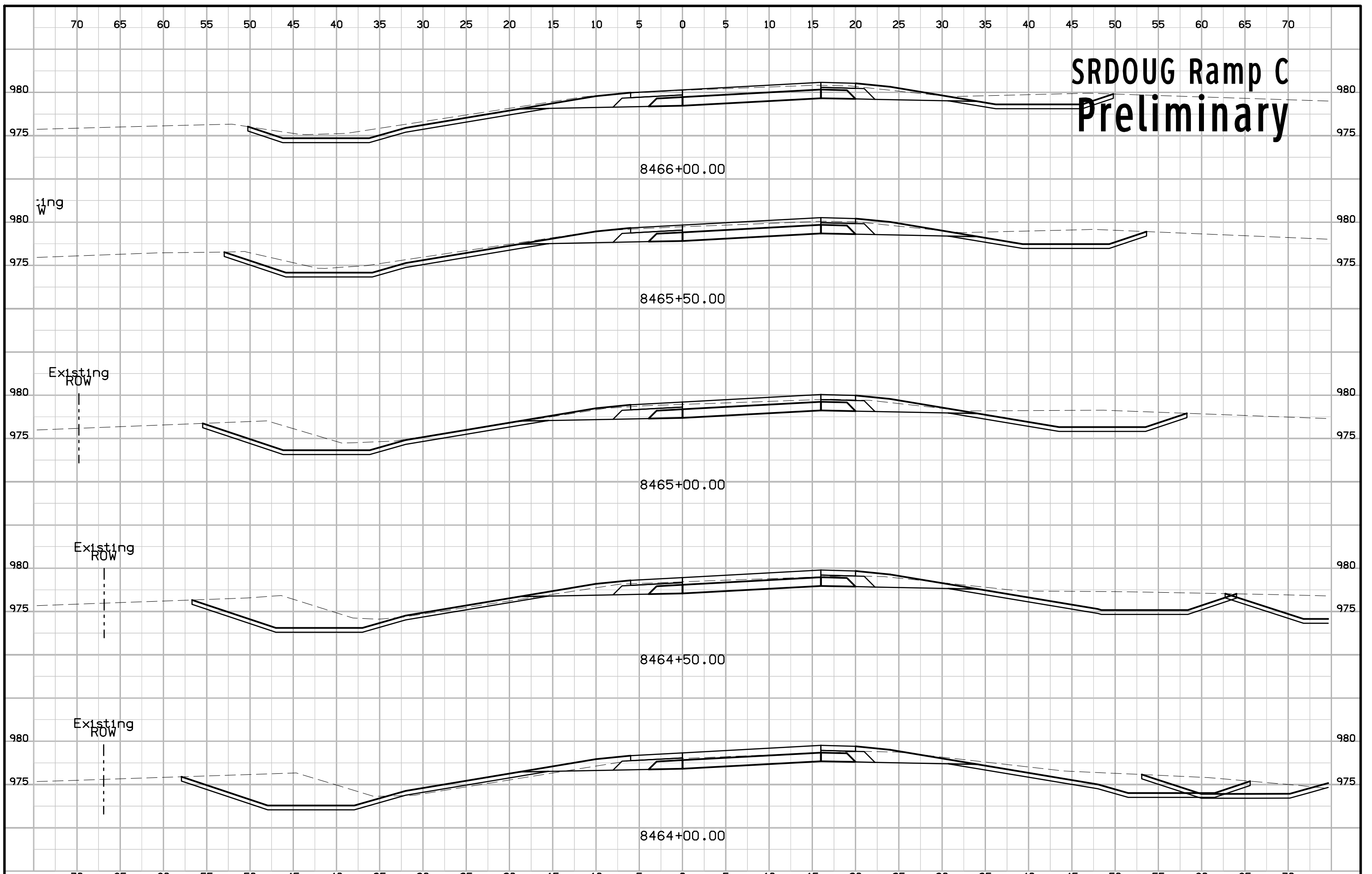




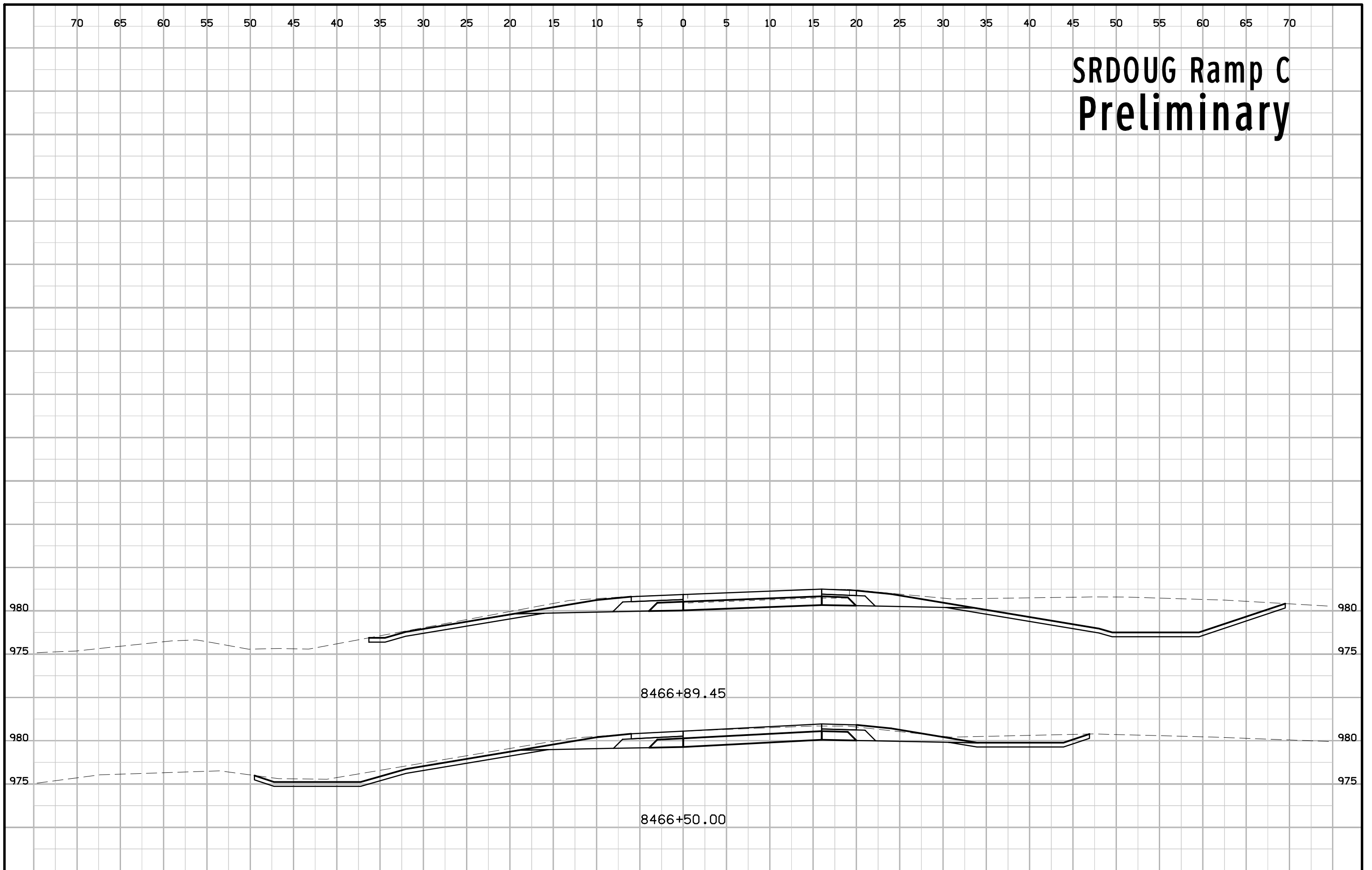
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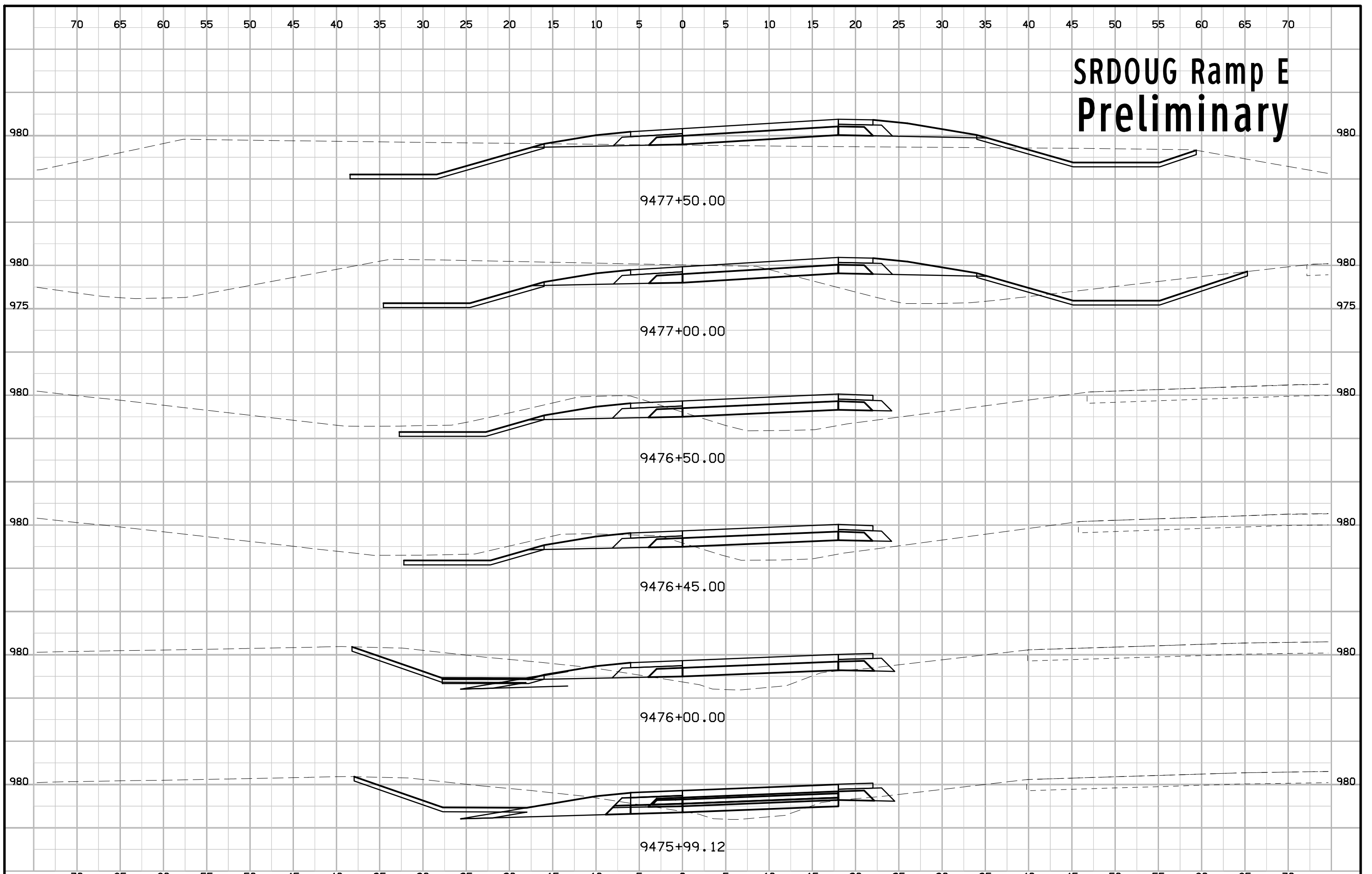
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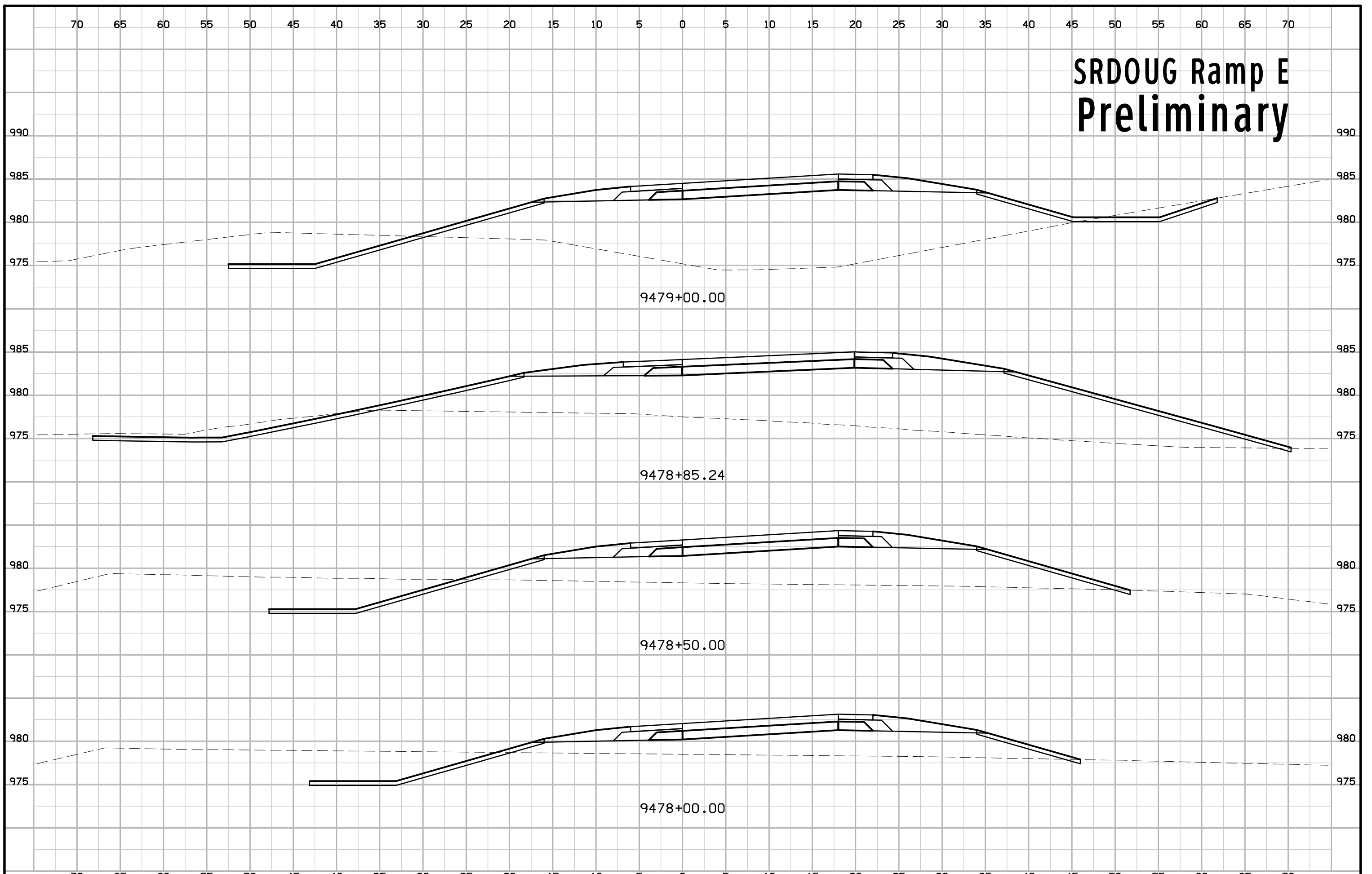
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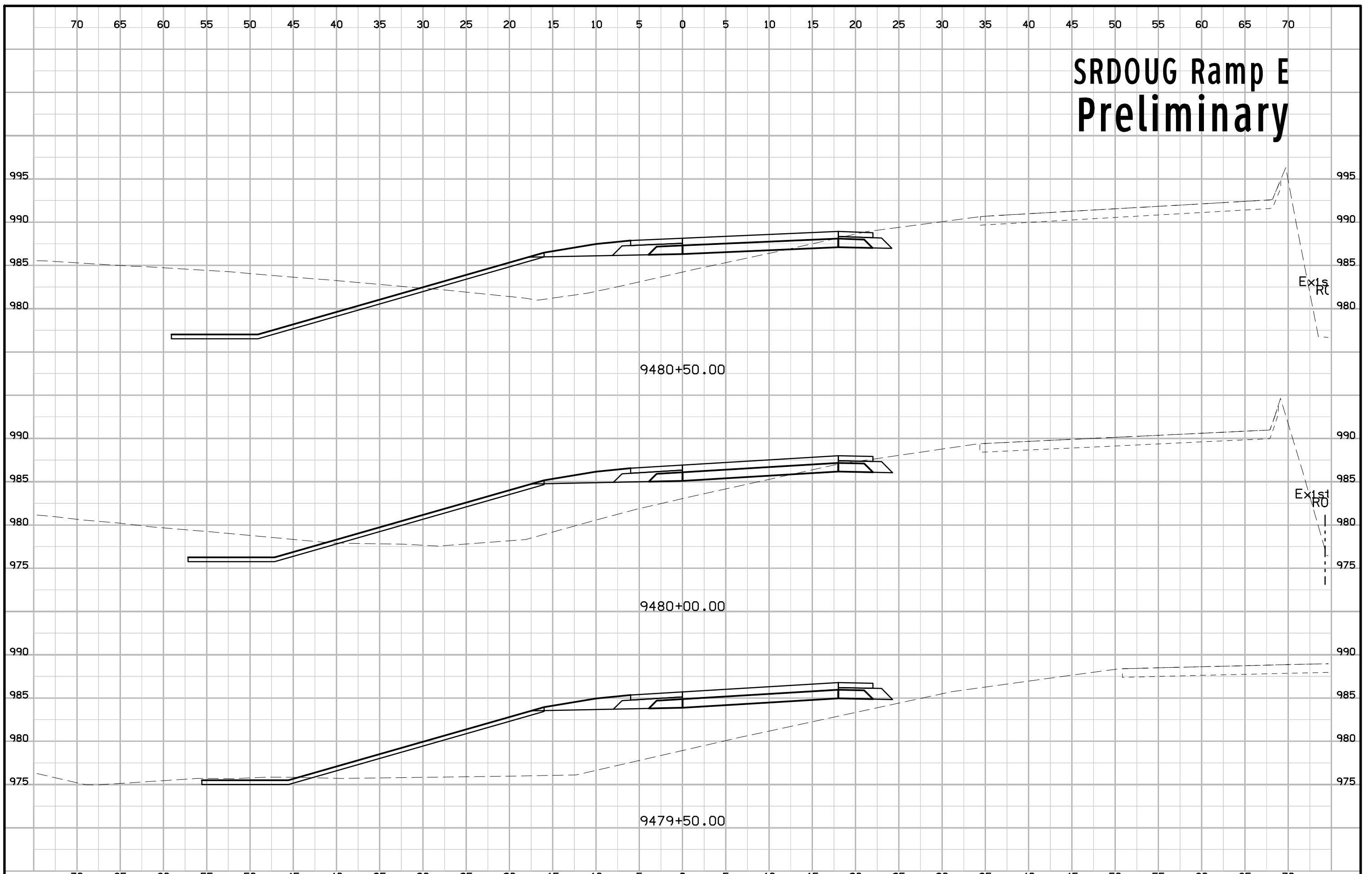
# SRDOUG Ramp E Preliminary



# SRDOUG Ramp E Preliminary

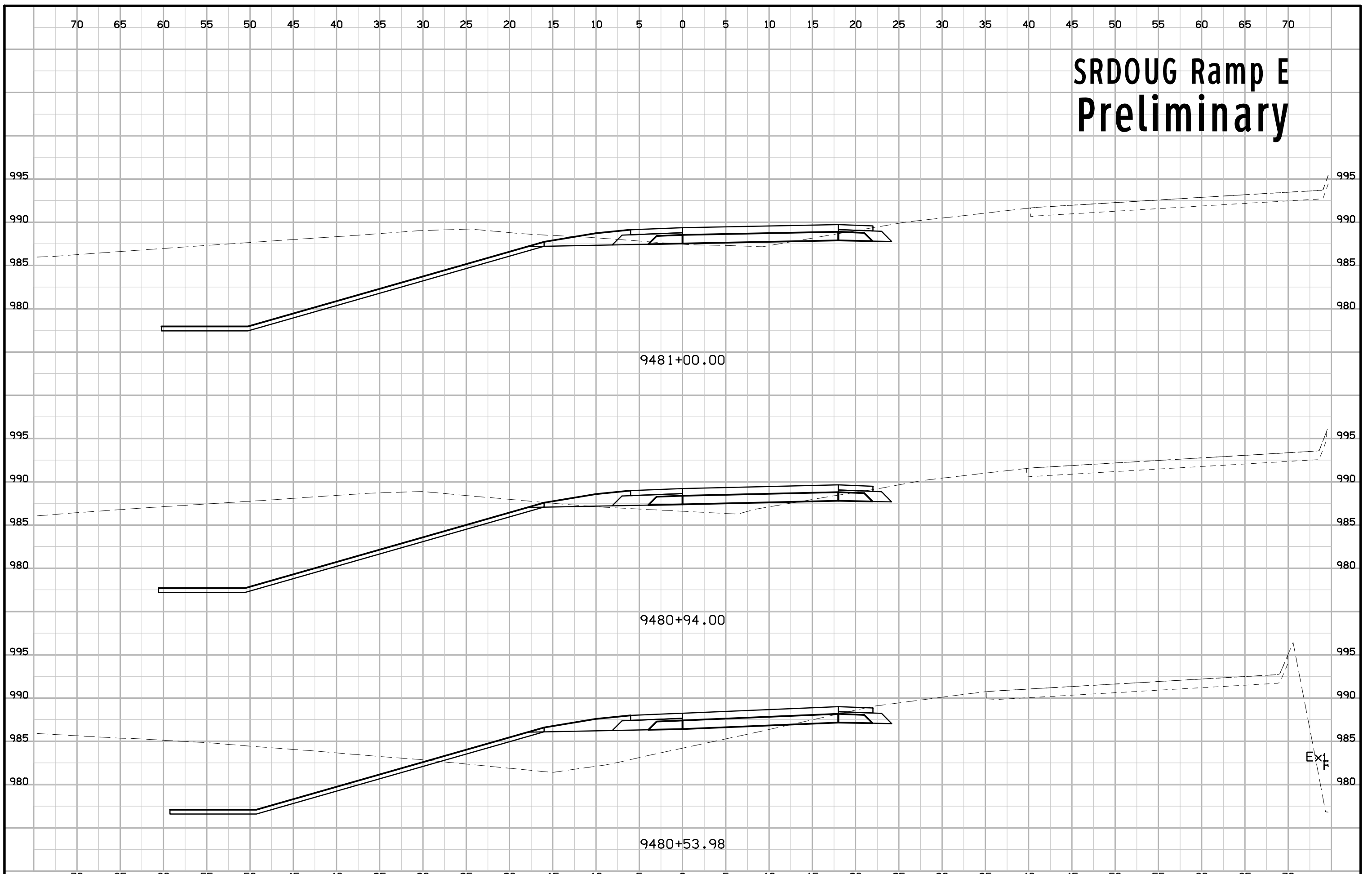


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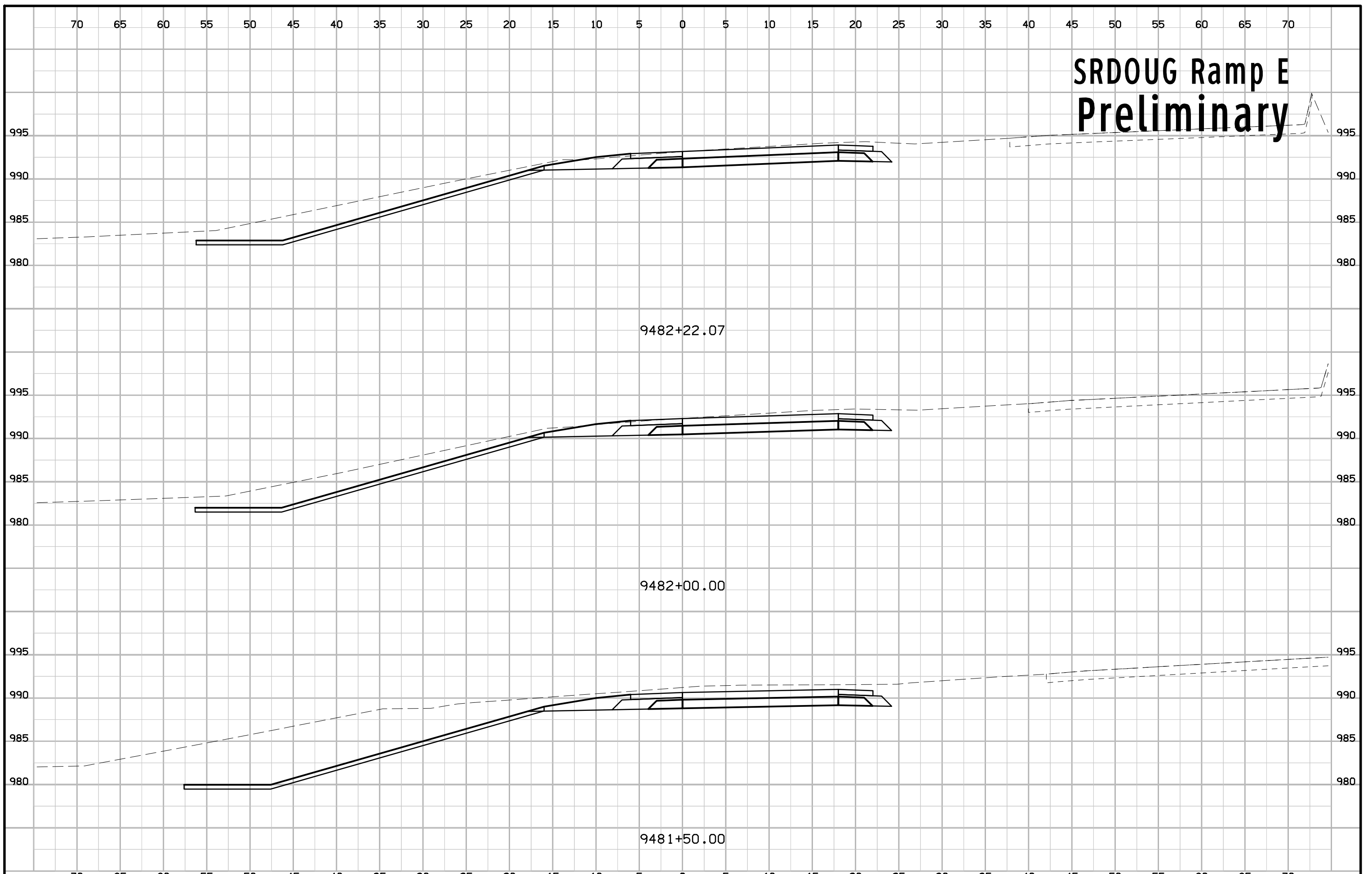




# SRDOUG Ramp E Preliminary



# SRDOUG Ramp E Preliminary

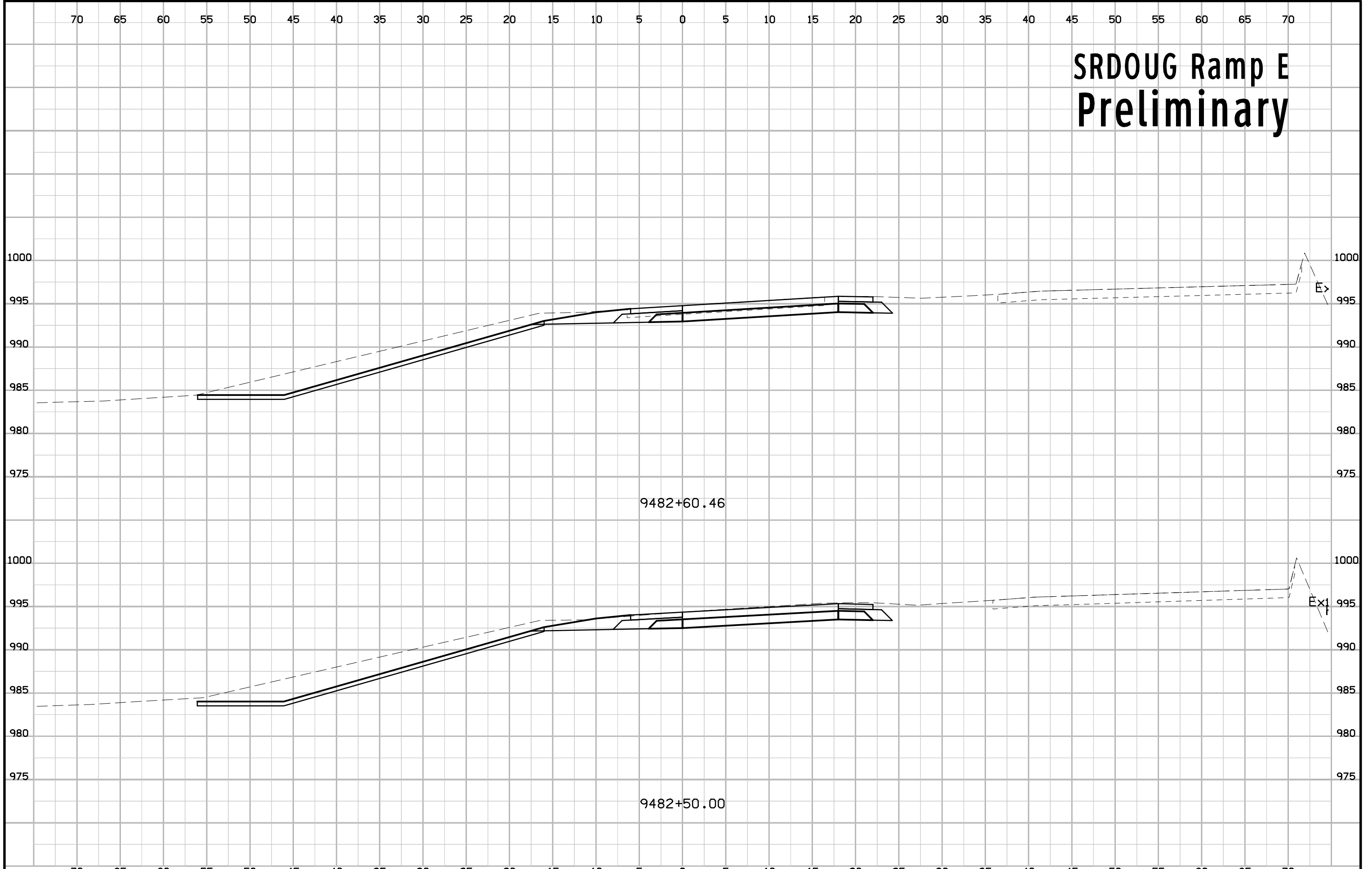


9482+22.07

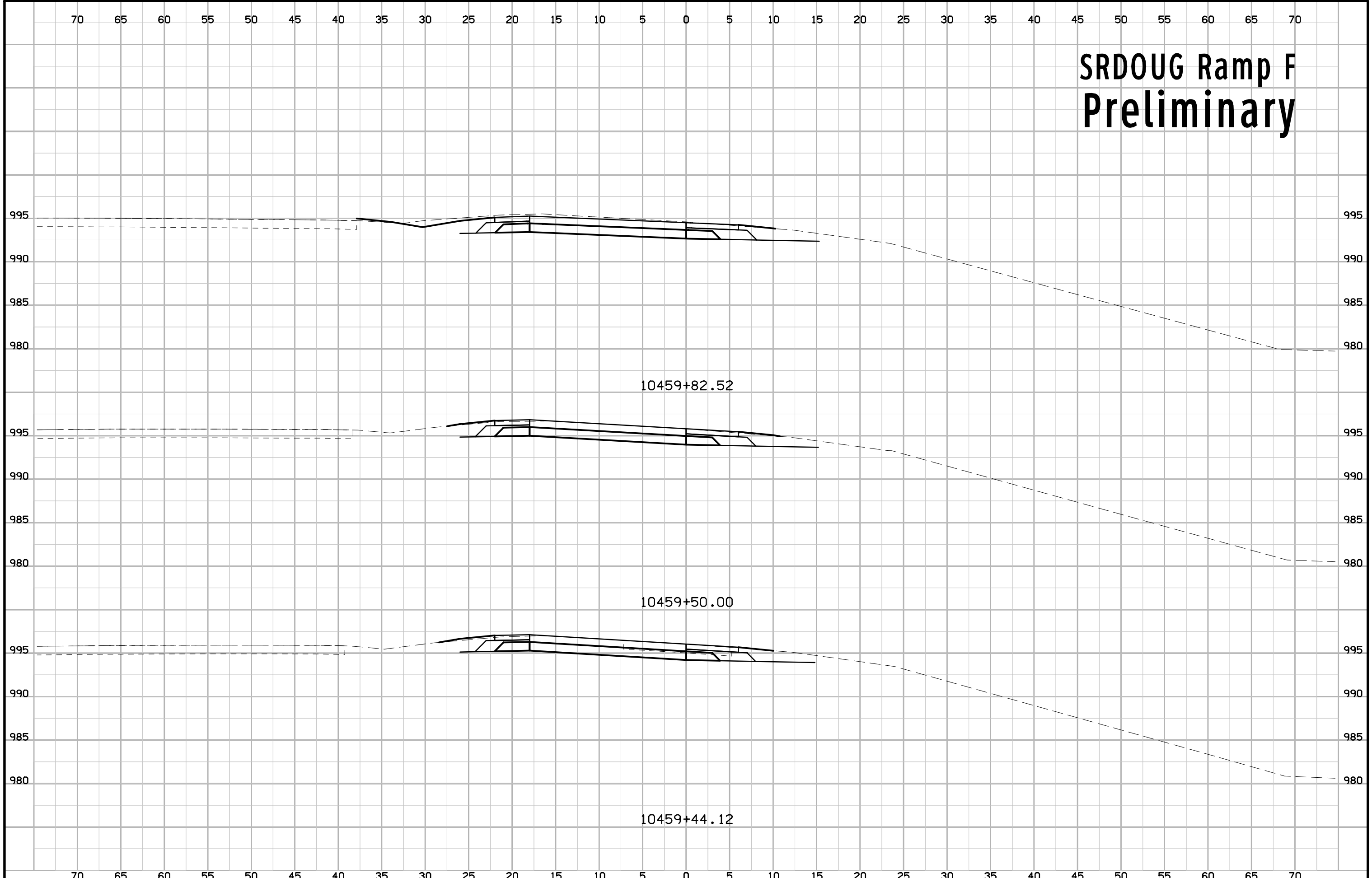
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9481+50.00

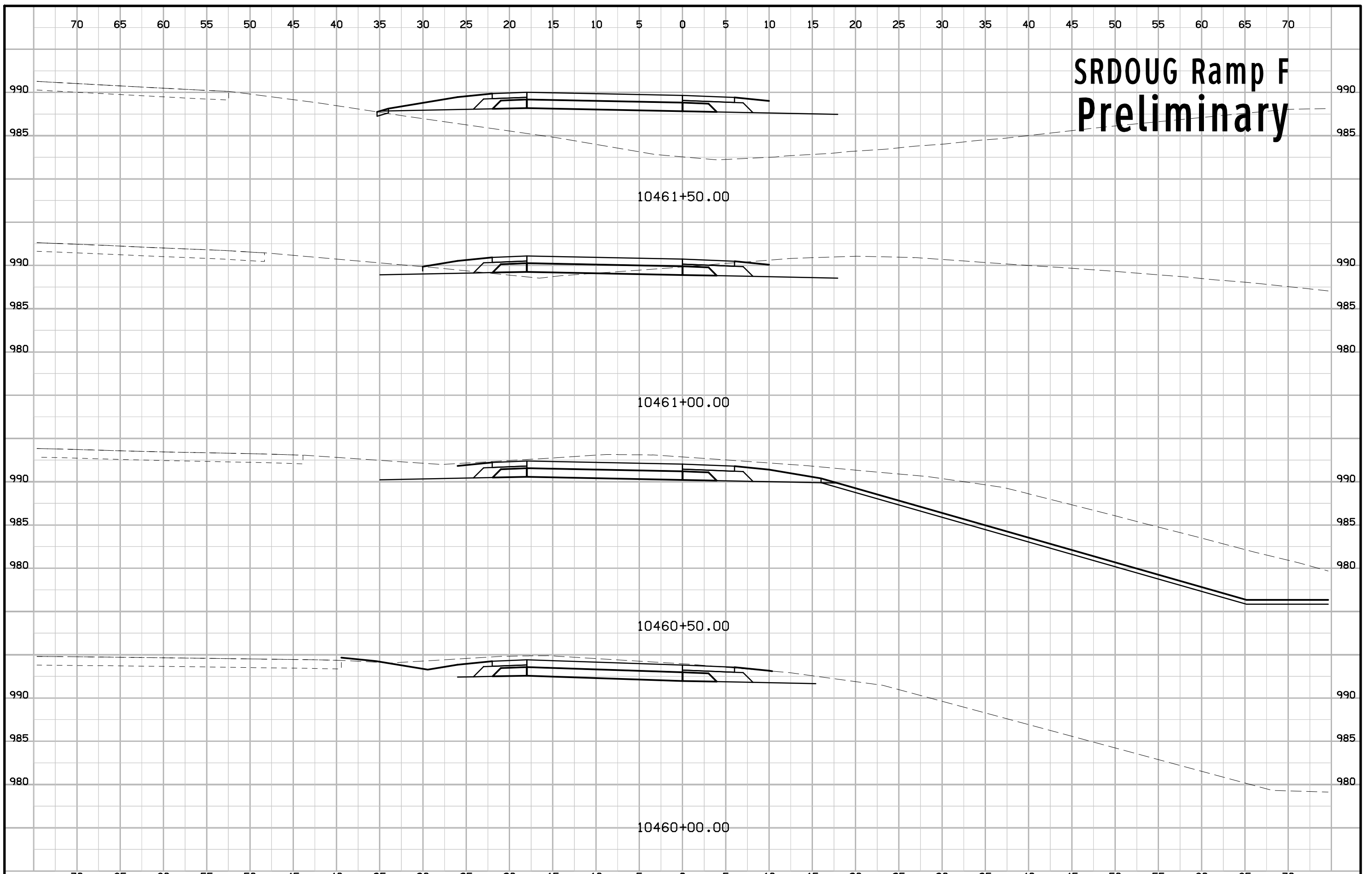
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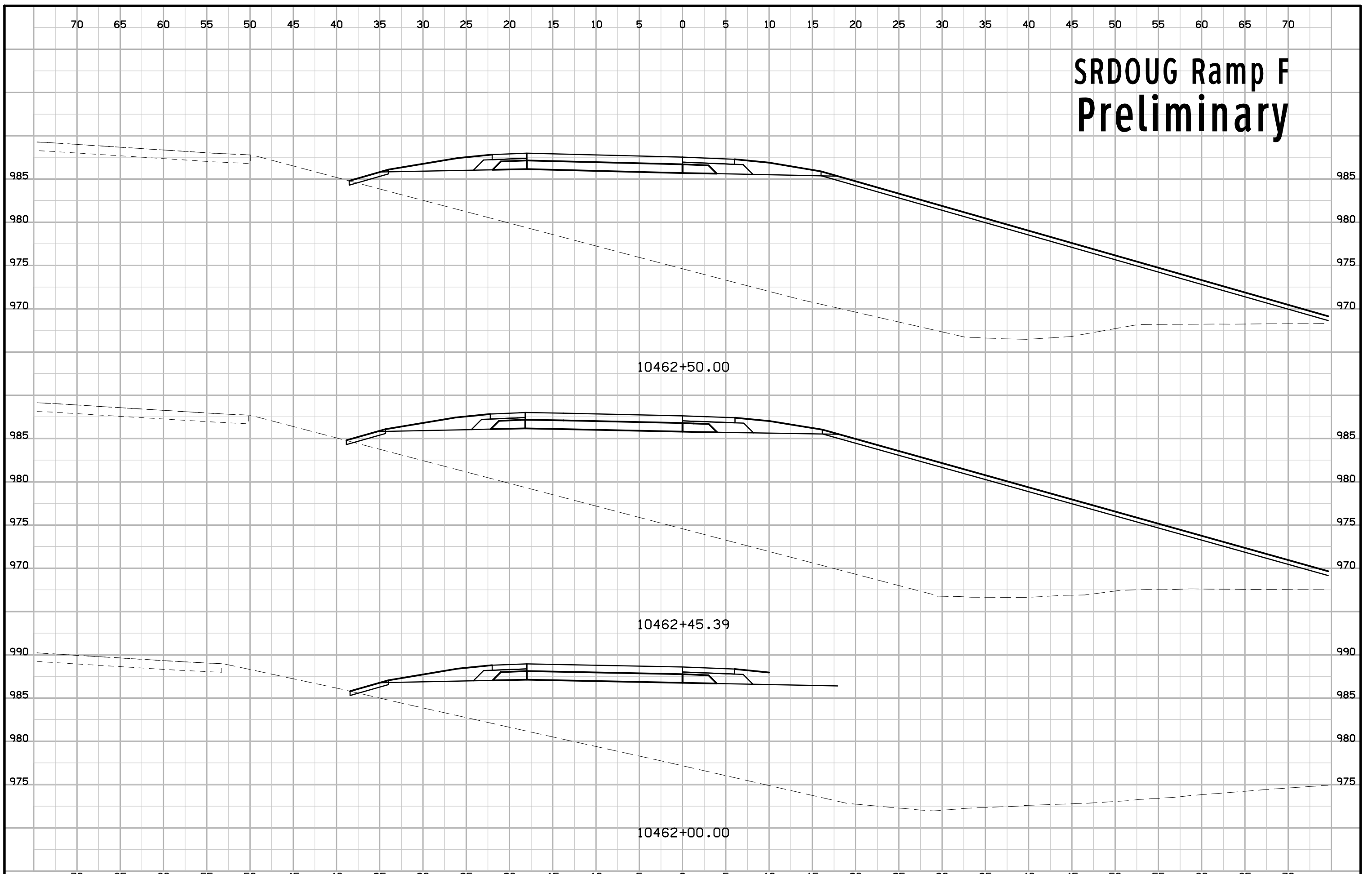
# SRDOUG Ramp F Preliminary



# SRDOUG Ramp F Preliminary

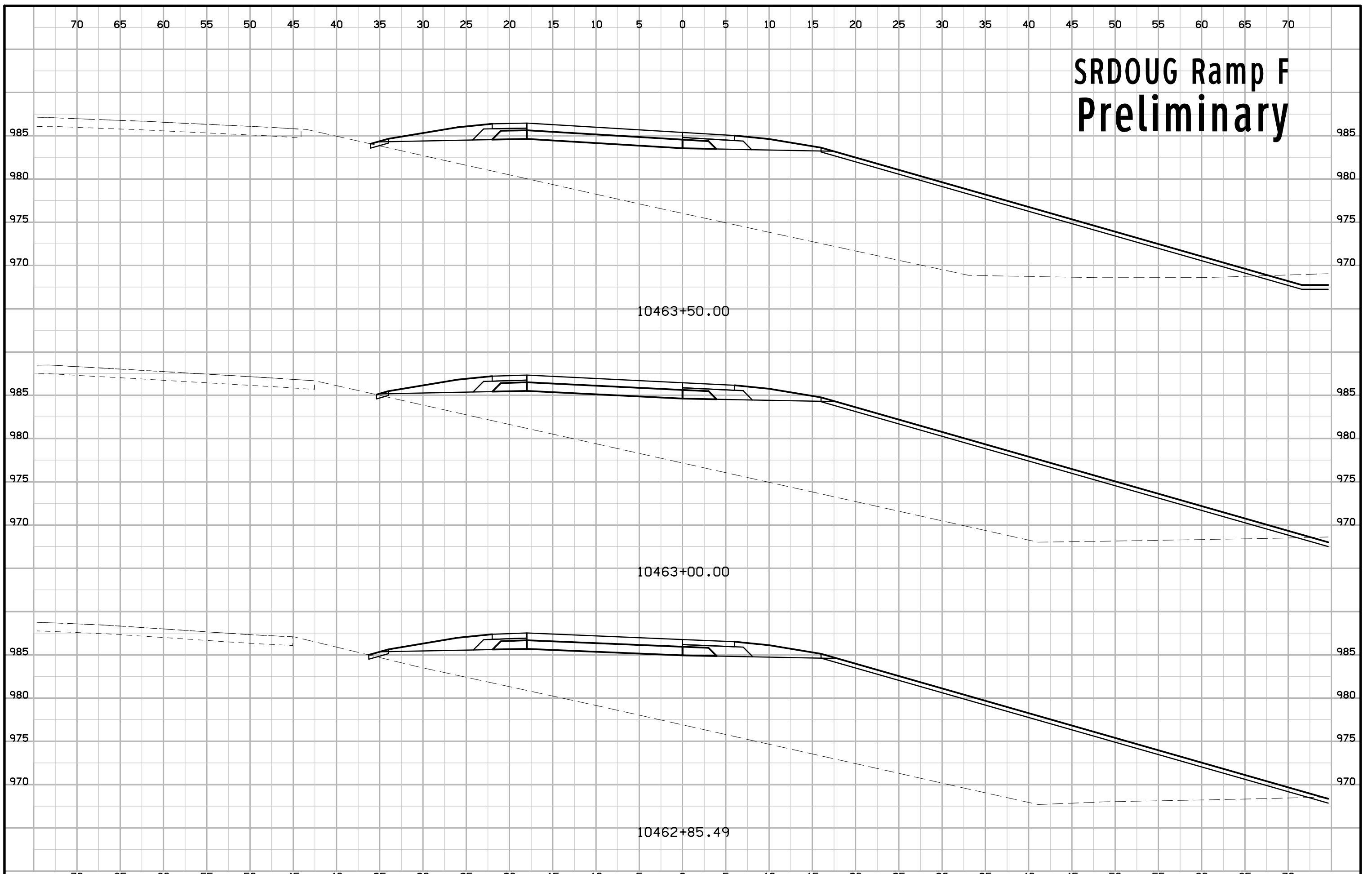


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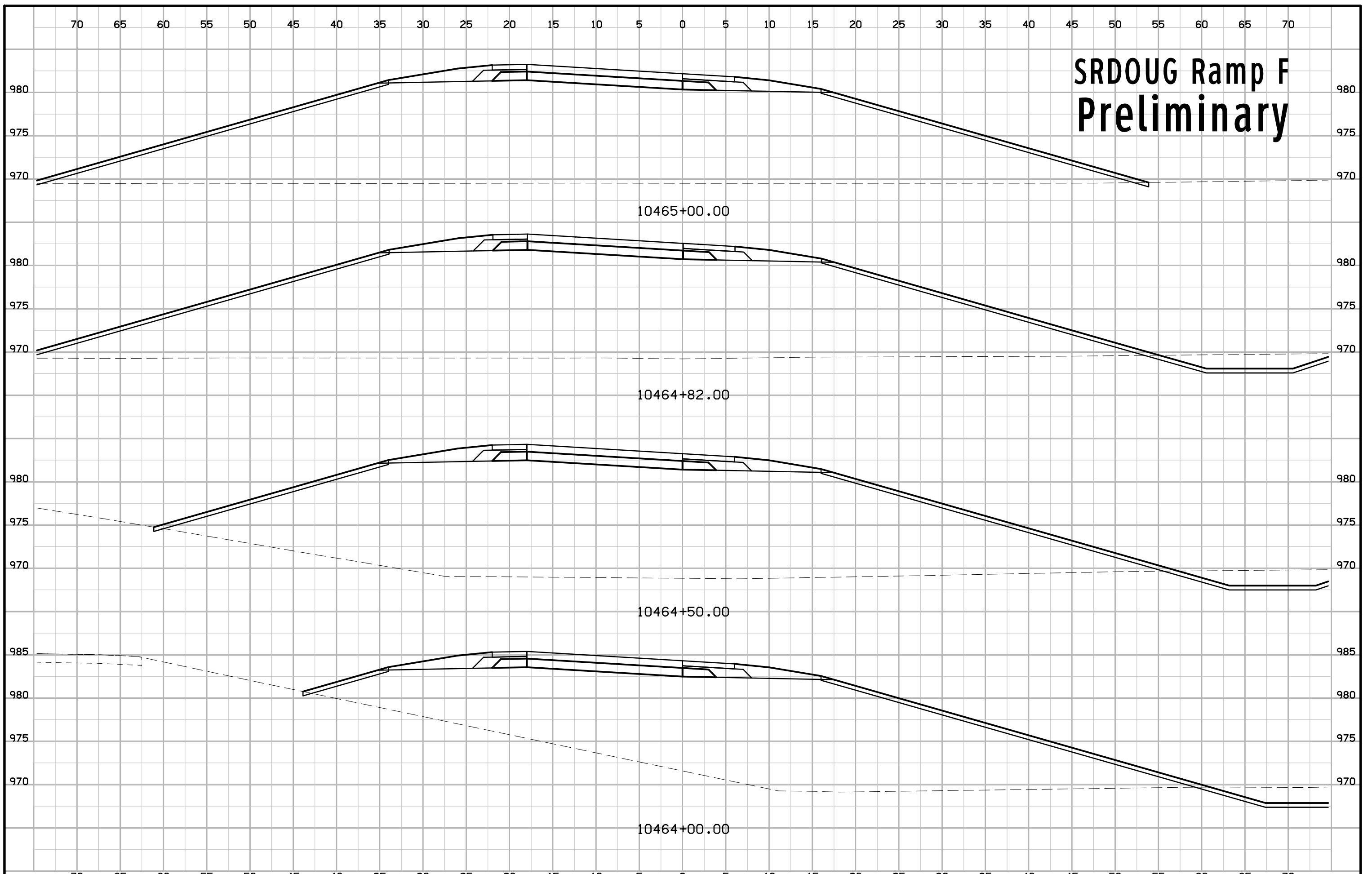




# SRDOUG Ramp F Preliminary



# SRDOUG Ramp F Preliminary



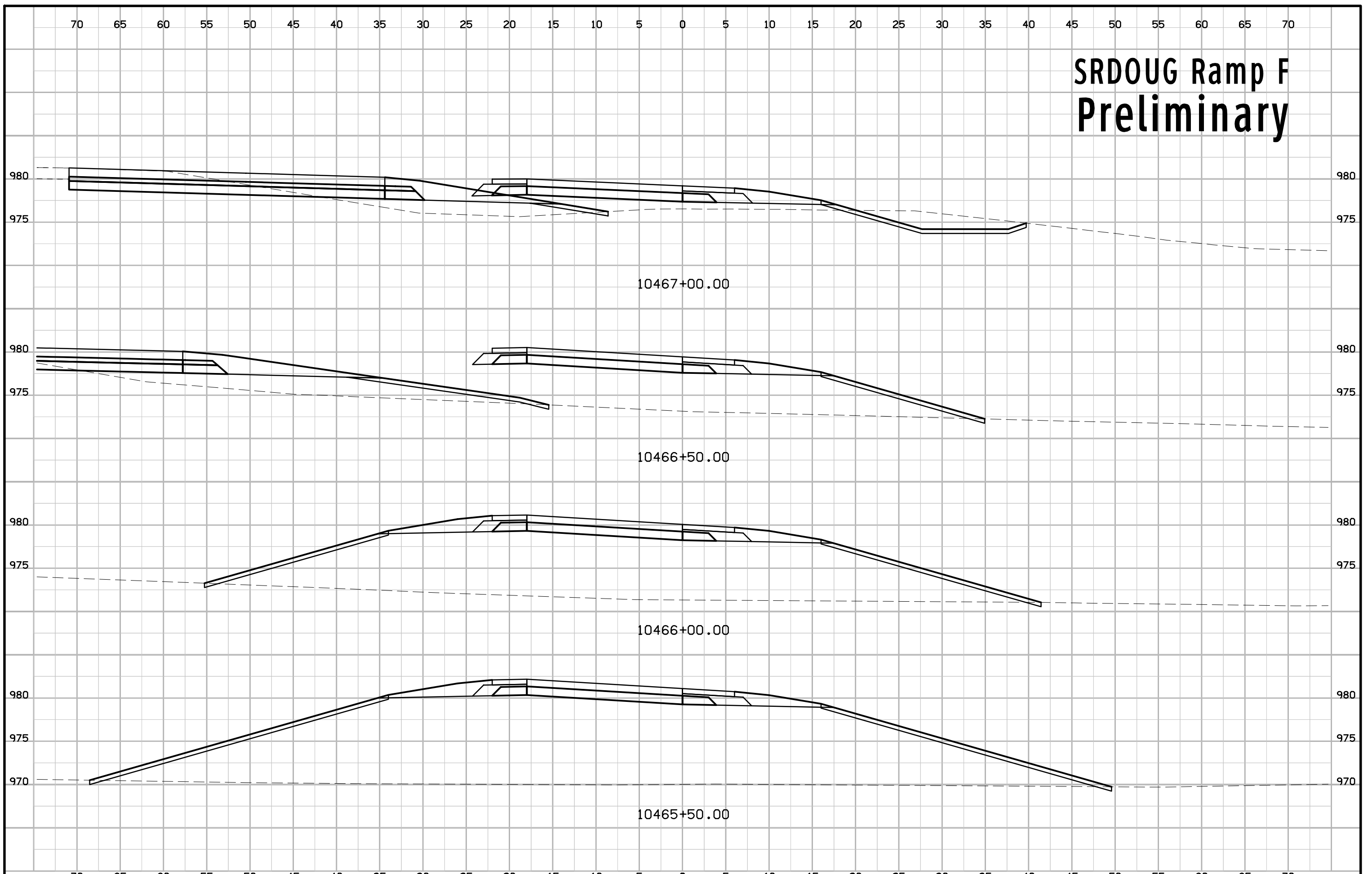
10465+00.00

10464+82.00

10464+50.00

10464+00.00

# SRDOUG Ramp F Preliminary



# SRDOUG Ramp F Preliminary

