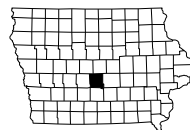


PCC PAVEMENT WIDENING
NHSX-006-4(189)--3H-77

LETTING DATE
 02-16-2021

POLK CO.



INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
* A.1	Title Sheet
A.2	Location Map Sheet
* A.3	Traffic Data Sheet
* A.4 - 5	Design Criteria
B Sheets	Typical Cross Sections and Details
B.1 - 2	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 5	U.S. Highway 6 (Hickman Road)
E Sheets	Side Road Plan and Profile Sheets
* E.1	NW 128th Street
G Sheets	Survey Sheets
G.1 - 3	Reference Ties and Bench Marks
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan & Staging Notes
* J.2	Traffic Control & Staging Legend & Symbol Info. Sheet
* J.3 - 5	Staging and Traffic Control Sheets Stage 1
* J.6 - 8	Staging and Traffic Control Sheets Stage 2
L Sheets	Geometric, Staking and Jointing Sheets
L.1	Intersection Geometry
M Sheets	Storm Sewer Sheets
M.1	Storm Sewer Tabulations
M.2	Storm Sewer Legend & Symbol Information Sheet
M.3 - 10	Storm Sewer Plan and Profile Sheets "ML or SR Name"
N Sheets	Traffic Signal Sheets
N.2	Traffic Signal Sheets 128th Street
N.7	Traffic Signal Sheets Truck Stop Ent.
V Sheets	Bridge and Culvert Situation Plans
* V.1 - 3	Retaining Wall Situation Plans
W Sheets	Mainline Cross Sections
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 59	Mainline Cross Sections
X Sheets	Side Road Cross Sections
X.1 - 21	Side Road Cross Sections
	* Color Plan Sheets



Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

POLK COUNTY

PCC PAVEMENT WIDENING

NW 128TH STREET AND U.S. HIGHWAY 6 (HICKMAN) INTERSECTION

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

NO MILEAGE SUMMARY

REVISIONS

TOTAL

120

PROJECT IDENTIFICATION NUMBER

20-77-006-010

PROJECT NUMBER

NHSX-006-4(189)--3H-77

R.O.W. PROJECT NUMBER

NHSN-006-4(190)--2R-77

Anticipated Project Development Schedule:

D02 Design Field Exam
January 21, 2020

D05 Plans to Right of Way
April 28, 2020

DM5 Design Methods Turn-In
November 3, 2020

D08 Final Plan Turn-In
December 1, 2020

L03 Letting
February 16, 2021

Preliminary Earthwork:

29,700 CY Cut (Total)
25,600 CY Fill (Total)

For Project Location Map
refer to Sheet A.2



DESIGN DATA URBAN

2016 AADT	32,000	V.P.D.
2042 AADT	48,200	V.P.D.
2042 DHV	4,400	V.P.H.
TRUCKS	5	%
Total		
Design ESALs	--	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	Nathan Carhoff	Primary Signature Block
N.1	Todd Knox	Traffic Signal Design
V.1	Steve Kunz	Retaining Wall Design

D5 Plans

Subject to change by final design.

D5 PLAN - Date: 06-24-2020

FILE NO.

ENGLISH

DESIGN TEAM **SNYDER & ASSOCIATES, INC.**

POLK COUNTY

PROJECT NUMBER

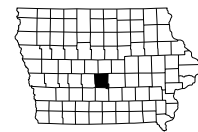
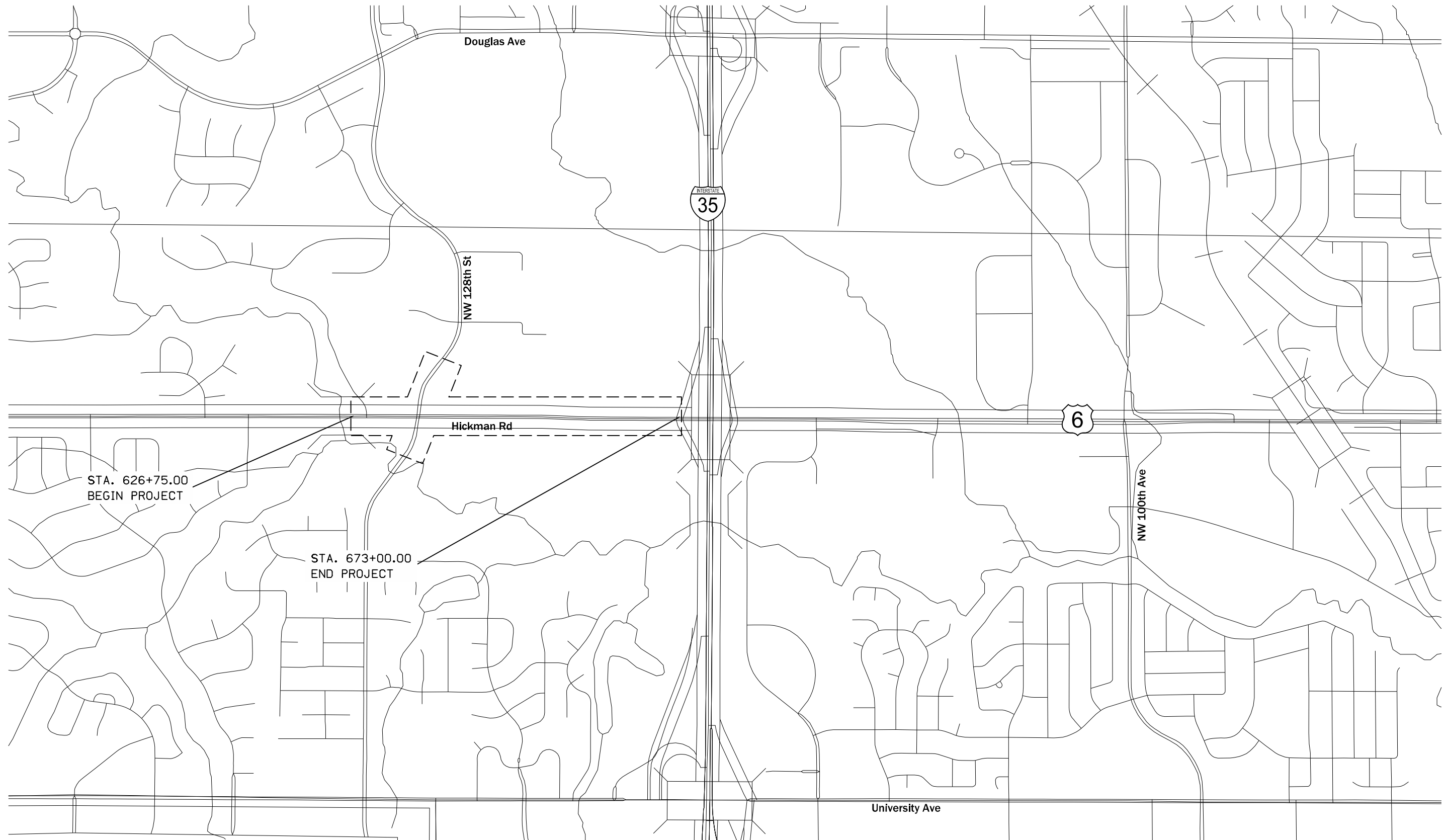
NHSX-006-4(189)--3H-77

SHEET NUMBER

A.1

R-25W

R-24W



LOCATION MAP NOT TO SCALE

Based on I35/I80/US 6 IJR, June 2019
Diverging Diamond Interchange

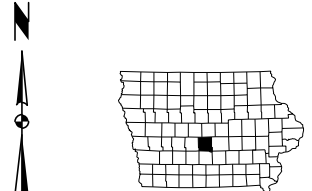
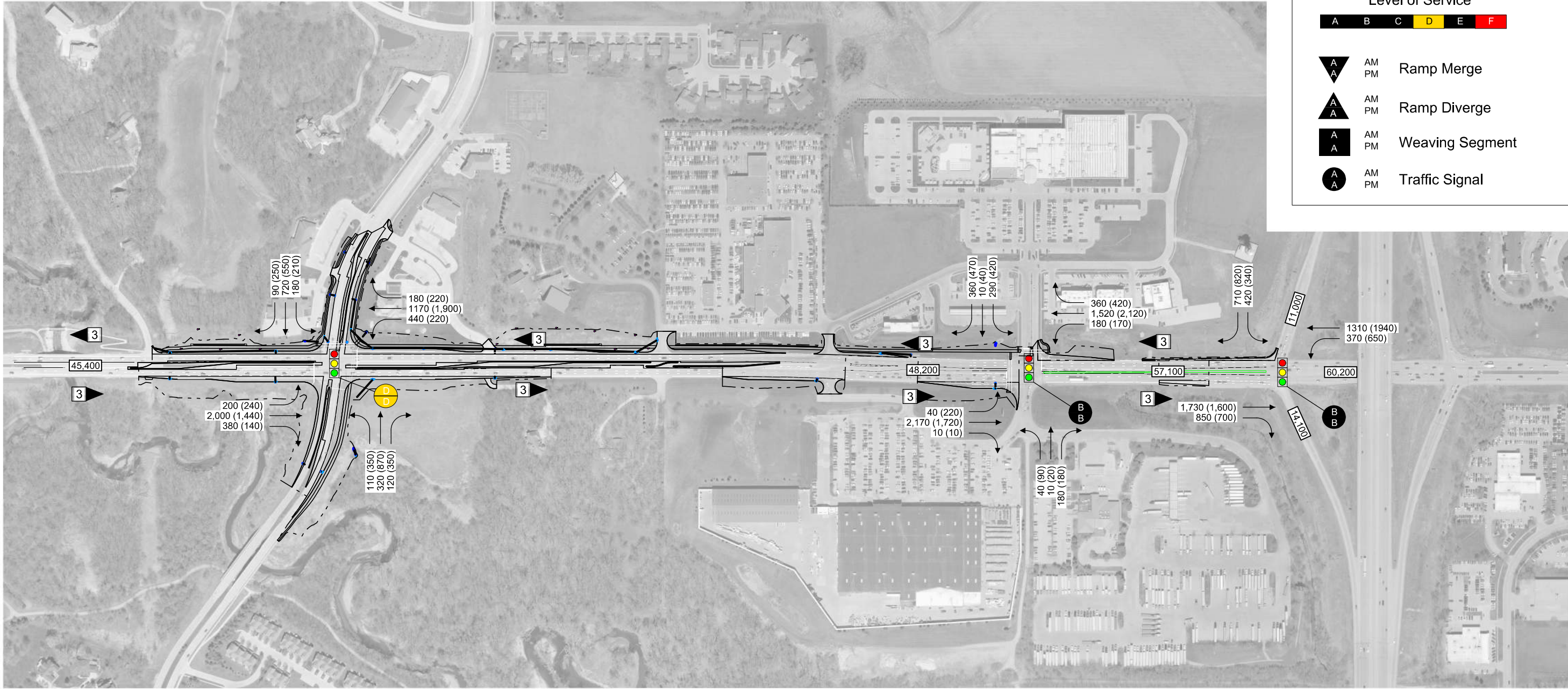
Legend

X,XXX 2042 AM Peak Hour Volumes
(X,XXX) 2042 PM Peak Hour Volumes
XX,XXX 2042 AADT
X▶ Number of Lanes

Level of Service

A B C D E F

▲ AM Ramp Merge
▲ PM Ramp Merge
▲ AM Ramp Diverge
▲ PM Ramp Diverge
■ AM Weaving Segment
■ PM Weaving Segment
● AM Traffic Signal
● PM Traffic Signal



2042 TRAFFIC DATA

Roadway		U.S. Highway 6 (Hickman Road)		Submittal Date	Approval Date
PIN Number	20-77-006-010	Assistant District Engineer	Tony Gustafson		12/04/19
Project Number	NHSX-006-4(189)--3H-77	Office Director			
District	District 1				
County	POLK				
Route	006				
Location	One Mile West of I-35/80 to Intersection of I-35/80 Southbound Ramps				
Work Type	Pavement Widening				
Segment Manager	Snyder & Associates, Inc.				
Urban Multilane Roadways (Urban Arterials)					
Design Element	Preferred	Acceptable Criteria	Project Values		
Design speed (mph)	The anticipated posted speed limit	30	45		
Maximum superelevation rate (Refer to Section 2A-2)	4%	8%	4%		
Design lane width (ft)	12	11	11		
Full depth paved width (ft)	Design lane width + curb and gutter unit or 12 feet for roadways with shoulders	Match design lane width	13.3		
Inside lane(s)	Design lane width + curb and gutter unit. 12' for roadways without a curb and gutter unit	Match design lane width	15.1		
Right turn lane or an auxiliary lane (ft)	12	10	11		
Left turn lane (ft)	With raised or painted median With depressed median	10 ft + median 10	11		
Two-way left turn lane (ft)	14	11	N/A		
Parking lane width (ft)	10	7	N/A		
Pavement cross-slope (on tangent sections)	2%. However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%	1.5% minimum, 3% maximum	2% - 3% (Match Existing)		
Shoulder cross-slope (on tangent sections)	Auxiliary and turn lanes Crown break at centerline	3% maximum 4% maximum	3%		
Curb type (Refer to Section 3C-2)	Shoulders Curb and gutter units Parking lanes Design speed ≤ 45 mph	4%	N/A		
Foreslope (For fill areas greater than 40 ft, Beyond standard ditch depth and contact the Soils Design Section design clear zone for assistance)	Adjacent to shoulder	Match pavement cross-slope 1% greater than pavement cross-slope	N/A		
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	Curbed roadways	6-inch standard	6" Sloped		
Transverse Slopes	Section for assistance with backslope benches. w/ drainage structures w/o drainage structures	10:1 for 4' then 6:1 3.5:1	N/A		
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	2%	4%		
Median width (ft) (Refer to Section 3E-1)	See Section 3E-1	3:1	3:1		
Bridge width—new*	Bridge length ≤ 200 ft	2.5:1	3:1		
Bridge width—existing*	Bridge length > 200 ft	6:1 10:1	8:1 10:1		
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary Over non-primary	--	N/A		
Structural Capacity	Sign truss and pedestrian crossings	17.5	N/A		
Level of Service	Contact Office of Bridges and Structures	D	D		
*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception required)					
** If travel lanes are less than 12 ft wide contact the Methods Section for assistance.					
Project:\7700601020\Design\Correspondence\Design_Criteria\DesignCriteria_2019-12-04_ExpresswayUrban.xlsm					

Effective Shoulder Width and Type for Multilane Arterials					
Design Manual Section 1C-1 Last Updated: 04-29-19	Preferred (Values shown in feet)				Project Values
	Rural Roadways	Urban Roadways	Auxiliary lanes or turn lanes with shoulders	Urban Roadways	
Auxiliary lanes or turn lanes with shoulders	6	6	6	0	N/A
Turn lanes with curbs	6	See Section 3C-2	Turn lanes with curbs	0	0
Expressways	Effective Shoulder Width	Outside 10	Expressways	Effective Shoulder Width	0
	Paved Width	10	Expressways	Paved Width	4
Routes where bicycles are to be accommodated	10	6	Routes where bicycles are to be accommodated	4	4
On roadways approaching urban areas (due to increased bike traffic)	10	6	On all other Expressways (Multilane Arterials)	4	4
On all curves with a superelevation rate of 7.0% or greater	10	6	On all other Expressways (Multilane Arterials)	0*	4
On roadways with design year ADT > 6500 ypd	10	6			2.27' Outside 4.1' Inside
On all other Expressways (Multilane Arterials)	10	6			
*Requires safety edge-See Section 3C-6					
Curb should be located beyond the outer edge of the effective shoulder width in rural areas					
Refer to Section 3C-2 for curb offsets in urban areas					
Notes:					

Design Criteria for Low Speed Roadways					
Design Element	Preferred Criteria			Acceptable Criteria	
	Design Speed, mph	Design Speed, mph	Design Speed, mph	Design Speed, mph	Project Values
Stopping sight distance (ft) (Refer to Section 6D-1)	25	30	35	40	45
Minimum horizontal curve radius (ft) and side friction distribution	155	200	250	305	360
Minimum vertical curve length (ft) (Refer to Section 2B-1)	See Table 10 in Section 2A-3				
Minimum rate of vertical curvature (K)	144	231	340	485	643
(Refer to Section 2B-1)	26	37	49	64	79
Minimum gradient (%) (Refer to Section 2B-1)	26	37	49	64	79
Maximum gradient (%) (Refer to Section 2B-1)	0.5				
Clear zone	Urban roadways Rural roadways				
See "Preferred Clear Zone" table in Section 8A-2					
See "Acceptable Clear Zone" table in Section 8A-2					

US Highway 6 (Hickman Road) Design Criteria

Roadway		NW 128th Street	
Project Number	20-77-006-010	Submittal Date	12/04/19
District	NHSX-006-4(189)--3H-77	Assistant District Engineer	Tony Gustafson
County	District 1	or	
Route	POLK	Office Director	
Location	006	U.S. Highway 6 (Hickman Road) Intersection, Approximately One Mile West of I-35/80	
Work Type	U.S. Highway 6 (Hickman Road) Intersection, Approximately One Mile West of I-35/80		
Segment Manager	Pavement Widening		
Designer	Snyder & Associates, Inc.		

Urban Two-Lane Roadways (Urban Arterials)		
Design Element	Preferred	Acceptable Criteria
Design Element	Preferred	Project Values
Design speed (mph)	The anticipated posted speed limit	30
Maximum superelevation rate (Refer to Section 2A-2)	4%	6%
Design lane width (ft)	12	11
Full depth paved width (ft)	Design lane width + curb and gutter unit or 14 feet for roadways with shoulders	Match design lane width
Right turn lane (ft)	12	10
Left turn lane (ft)	With raised or painted median With depressed median	10 ft + median 10
Two-way left turn lane	14	N/A
Parking lane width (ft)	10	N/A
Pavement cross-slope (on tangent sections)	Through lanes Auxiliary and turn lanes Crown break at centerline	1.5% minimum, 2% maximum 3% maximum 4% maximum
Shoulder cross-slope (on tangent sections)	Shoulders	Shoulder cross-slope cannot be less than the adjacent lane. 6% max for paved or granular shoulders, 8% max for earth shoulders
Curb type (See Section 3C-2)	Curb and gutter units Parking lanes	6% maximum any shape
Fore slope	Design speed ≤ 45 mph Adjacent to shoulder	3:1
Back slope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance)	Beyond standard ditch depth and design clear zone	3:1
Back slope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	Curbed roadways	not steeper than 3:1
Traverse Slopes	Curbed roadways w/ drainage structures w/o drainage structures	2.5:1 6:1 6:1
Ditches (See Section 3G-1)	Outside ditch (depth x width) (ft)	--
Bridge width—new*	Bridge length ≤ 200 ft Bridge length > 200 ft	design lane widths + effective shoulder widths or curb-to-curb width in curb and gutter section** design lane widths + 4 ft offset each side for roadways with shoulders or curb-to-curb width in curb and gutter section**
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary Over non-primary Over railroad Sign trusses and pedestrian bridges	design lane widths + no less than 2 ft left and right 16.5 16 23.3 17
Structural Capacity	Contact Office of Bridges and Structures	Contact Office of Bridges and Structures
Level of Service	C	D

*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception is required).
** If travel lanes are less than 12 ft wide contact the Methods Section for assistance.
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Design year ADT = > 6000

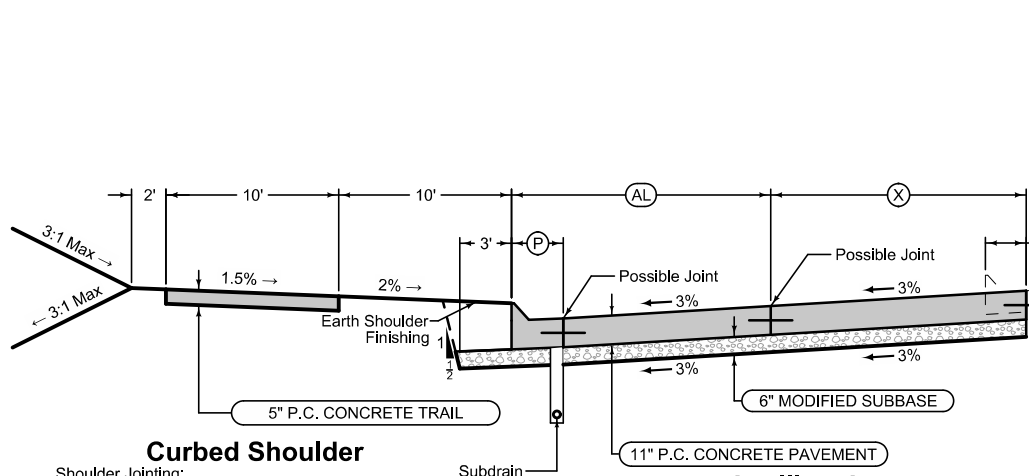
Effective Shoulder Width and Type for Two-Lane Highways						
Design Manual Section 1C-1 Last Updated: 04-29-19	Preferred (values shown in feet)			Acceptable (values shown in feet)		Project Values
	Rural Roadways	Urban Roadways	Urban Roadways	Rural Roadways	Urban Roadways	
Turn lanes with shoulders	6	6	Turn lanes with shoulders	6	0	N/A
Turn lanes with curbs	6	See Section 3C-2	Turn lanes with curbs	6	0	0
Climbing Lanes	Effective Shoulder Width	Paved Width		Effective Shoulder Width	Paved Width	
Two-Lane Highways	6	4	Climbing Lanes	4	0	N/A
Routes where bicycles are to be accommodated	Effective Shoulder Width	Paved Width	Two-Lane Highways	Effective Shoulder Width	Paved Width	
On roadways approaching urban areas (due to increased bike traffic)	10	10		Shoulder Width		
On all curves with a superelevation rate of 7.0% or greater	10	10		8	0*	
On roadways with design year ADT > 5000	10	6		6	0*	0
On all other NHS	10	6		6	0*	
On non-NHS routes with design year ADT > 3000	10	6		4	0*	
On non-NHS routes with design year ADT < 3000	8	0*				

*Requires safety edge-Refer to Section 3C-6
Curb should be located beyond the outer edge of the effective shoulder width in rural areas
Refer to Section 3C-2 for curb offsets in urban areas

Design Criteria for Low Speed Roadways					
Design Element	Preferred Criteria		Acceptable Criteria		Project Values
	Design Speed, mph	Design Speed, mph	Design Speed, mph	Design Speed, mph	
Stopping sight distance (ft) (Refer to Section 6D-1)	25	30	35	40	45
Minimum horizontal curve radius (ft) and side friction distribution	155	200	250	305	360
Minimum vertical curve length (ft) (Refer to Section 2B-1) crest vertical curves	25	30	35	40	45
Minimum rate of vertical curvature (K) sag vertical curves	144	231	340	485	643
(Refer to Section 2B-1)	--	--	--	--	--
Minimum gradient (%) (Refer to Section 2B-1)	75	90	105	120	135
Maximum gradient (%) (Refer to Section 2B-1)	12	19	29	44	61
Clear zone	26	37	49	64	79
	26	37	49	64	79
			0.5		
			5		
			See "Preferred Clear Zone" table in Section 8A-2		
			See "Acceptable Clear Zone" table in Section 8A-2		

Project:17700601020\Design\Correspondence\Design_Criteria\DesignCriteria_2019-12-04_TwoLaneUrban.xlsm

128th Street Design Criteria



Curbed Shoulder

Shoulder Jointing:
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

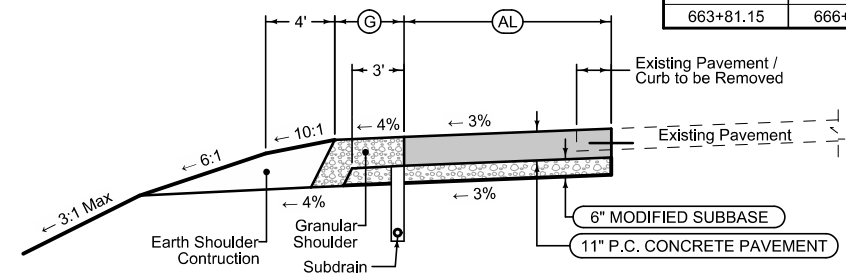
Single pour: L-2
 Staged: KT-2
 Transverse: C at 17' spacing

2_Curb_MODIFIED			
STATION TO STATION	(P) Feet	Curb Type	See PV-102
629+24.00	629+63.96	Var.	6" Sloped
629+63.96	635+30.60	3	6" Sloped
635+30.60	636+00.95	Var.	6" Sloped
636+00.95	637+54.04	Var.	6" Sloped
637+54.04	641+93.90	3	6" Sloped
641+93.90	642+08.20	Var.	6" Sloped
642+08.20	642+80.38	Var.	6" Sloped
642+80.38	645+59.00	3	6" Sloped
645+59.00	646+57.06	3 - 2	6" Sloped
648+41.00	649+19.00	Var.	6" Sloped
651+36.87	652+19.06	3 - 2	6" Sloped
655+60.81	656+01.80	Var.	6" Sloped
656+01.80	658+81.09	3	6" Sloped
658+81.09	659+81.68	3 - 2	6" Sloped
663+56.74	664+04.06	Var.	6" Sloped
664+04.06	666+76.11	3	6" Sloped
666+76.11	666+81.11	3 - 0	6" Sloped

Auxiliary Lane

Longitudinal joint: L or KT
 Transverse joint: Match Mainline

2_AuxLane_PCC_MODIFIED				
STATION TO STATION	(AL) Feet	(X) Feet		
629+24.00	629+63.96	Var.	0	
629+63.96	632+50.97	5.7 - 12	0	
632+50.97	635+30.60	12	0	
635+30.60	636+00.95	Var.	0	
636+00.95	637+54.04	Var.	Var.	
637+54.04	640+19.05	13	9	
640+19.05	641+47.63	13 - 0	9 - 9.2	
641+47.63	641+93.90	0	9.2 - 8.2	
641+93.90	642+80.38	Var.	Var.	
642+80.38	644+25.35	12	3.2 - 0	
644+25.35	644+38.53	12 - 11.7	0	
644+38.53	645+59.00	11.7	0	
645+59.00	646+57.06	11.7 - 2	0	
646+57.06	646+57.06	2 - 0	0	
646+57.06	648+41.00	0 - 2.3	0	
648+41.00	648+81.00	2.3 - 0	0	
649+19.00	649+59.00	Var.	Var.	
649+59.00	652+19.06	12	3	
652+19.06	653+18.85	12 - 0	3 - 2	
653+18.85	653+56.10	2 - 0	2 - 0	
653+56.10	655+23.32	0	0	
655+23.32	656+01.80	Var.	0	
656+01.80	658+81.09	12	0	
658+81.09	659+81.68	12 - 2	0	
659+81.68	661+02.13	2 - 0	0	
661+02.13	662+88.79	0	0	
663+27.04	663+37.31	0	0	
663+37.31	663+81.15	Var.	0	
663+81.15	666+81.11	12	0	

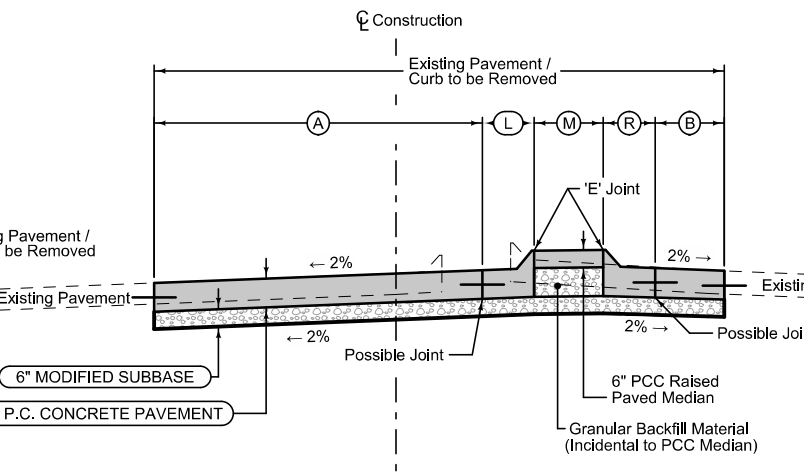


Auxiliary Lane

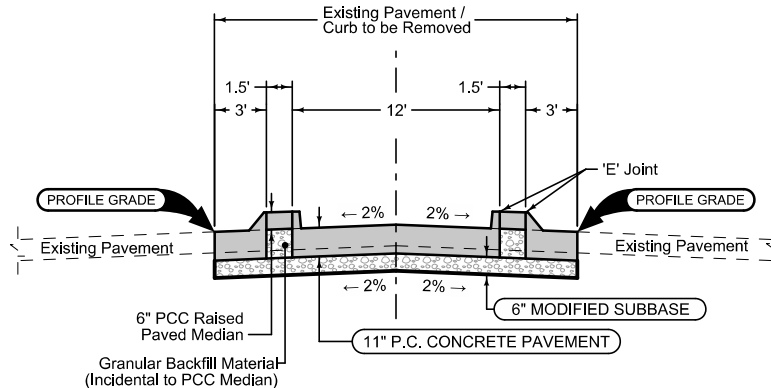
Longitudinal joint: L or KT
 Transverse joint: Match Mainline

2_AuxLane_PCC_MODIFIED			
STATION TO STATION	(AL) Feet	(G) Feet	
666+81.11	666+98.89	12 - 10	0
666+98.89	667+32.25	10 - 6.9	0 - 4
667+32.25	672+33.53	6.9 - 14.5	4
672+33.53	672+84.47	Var.	Var.

Auxiliary Lane Granular Shoulder



4DP_Raised_Out_MODIFIED						
BEGIN STATION	END STATION	(A) Feet	(B) Feet	(M) Feet	(L) Feet	(R) Feet
627+75.00	627+84.11	3.92	11.80	3.28	1.00	1.00
627+84.11	628+10.76	3.92	Var.	Var.	1.00	0.50
628+10.76	628+39.62	Var.	Var.	1.50	1.00	0.50
628+39.62	628+50.43	2.00	16.00	1.50	1.00	0.50
628+50.43	628+86.71	16.00	2.00	1.50	0.50	1.00
628+86.71	629+18.75	Var.	Var.	Var.	0.50	1.00
629+18.75	631+05.15	Var.	4.92	Var.	1.00	1.00
631+05.15	632+50.95	Var.	Var.	Var.	1.00	1.00
632+50.95	635+52.85	2.00	8.00	4.00	1.00	1.00
637+17.15	640+19.00	8.00	2.00	4.00	1.00	1.00
640+19.00	641+67.40	Var.	Var.	Var.	1.00	1.00
641+67.40	642+65.00	3.92	3.92	11.16	1.00	1.00
644+93.10	645+73.00	U.A.C.	Var.	Var.	U.A.C.	1.00
645+73.00	646+89.75	U.A.C.	12.80	3.28	U.A.C.	1.00
646+89.75	647+72.11	3.92	11.80	3.28	1.00	1.00
647+72.11	648+27.62	3.92	Var.	Var.	1.00	1.00
648+27.62	648+38.43	2.00	16.00	1.50	1.00	0.50
648+38.43	648+61.57	16.00	2.50	1.50	0.50	0.50
648+61.57	649+25.29	Var.	Var.	1.50	0.50	0.50
649+25.29	649+38.43	2.50	16.00	1.50	0.50	0.50
649+38.43	649+61.57	16.00	2.00	1.50	0.50	1.00
649+61.57	650+35.09	Var.	Var.	1.50	0.50	1.00
650+35.09	652+17.25	11.80	0.00	3.28	1.00	0.00
652+17.25	653+56.34	Var.	0.00	3.28	1.00	0.00

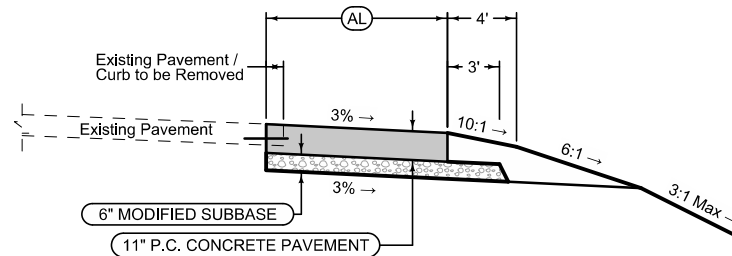


4DP_Raised_Out_MODIFIED	
BEGIN STATION	END STATION
628+50.43	628+73.57
648+38.43	648+61.57
649+38.43	649+61.57

Auxiliary Lane

Longitudinal joint: L or KT
 Transverse joint: Match Mainline

2_AuxLane_PCC_MODIFIED			
STATION TO STATION	(AL) Feet	(X) Feet	
628+02.06	629+33.45	2 - 5	0
629+33.45	629+77.85	5 - 3	0 - 3
629+77.85	630+96.71	3	3 - 5.6
630+96.71	631+22.37	3 - 3.2	5.6 - 6
631+22.37	632+51.00	3.2 - 13	6 - 9
632+51.00	635+07.70	13	9
635+07.70	637+31.14	Var.	Var.
637+31.14	640+19.03	0	12
640+19.03	644+38.00	0	12 - 2.7
644+38.00	644+70.18	0 - 2	2.7 - 2
644+70.18	652+34.47	2 - 12	0
652+34.47	655+14.87	12	0
655+14.87	655+36.91	Var.	0
655+36.91	659+46.93	2 - 12	0
659+46.93	662+31.22	12	0
662+31.22	662+84.30	Var.	0
663+28.00	663+81.22	Var.	Var.
663+81.22	663+86.22	9.5	4



Curbed Shoulder

Shoulder Jointing:
 Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
 Staged: KT-2
 Transverse: C at 17' spacing

2_Curb_MODIFIED			
STATION TO STATION	(P) Feet	Curb Type	See PV-102
628+02.06	629+33.45	2 - 3	6" Sloped
629+33.45	635+07.70	3	6" Sloped
635+07.70	635+88.63	Var.	6" Sloped
636+56.00	637+31.17	Var.	6" Sloped
637+31.17	644+25.00	3	6" Sloped
644+25.00	644+38.00	3 - 2.7	6" Sloped
644+38.00	644+70.18	2.7 - 2	6" Sloped
644+70.18	652+34.47	2 - 3	6" Sloped
652+34.47	655+14.87	3	6" Sloped
655+14.87	655+36.91	Var.	6" Sloped
658+47.20	659+46.93	2 - 3	6" Sloped
659+46.93	662+31.22	3	6" Sloped
662+31.22	662+84.30	Var.	6" Sloped
663+28.00	663+81.22	Var.	6" Sloped
663+81.22	663+86.22	3 - 0	6" Sloped

Auxiliary Lane

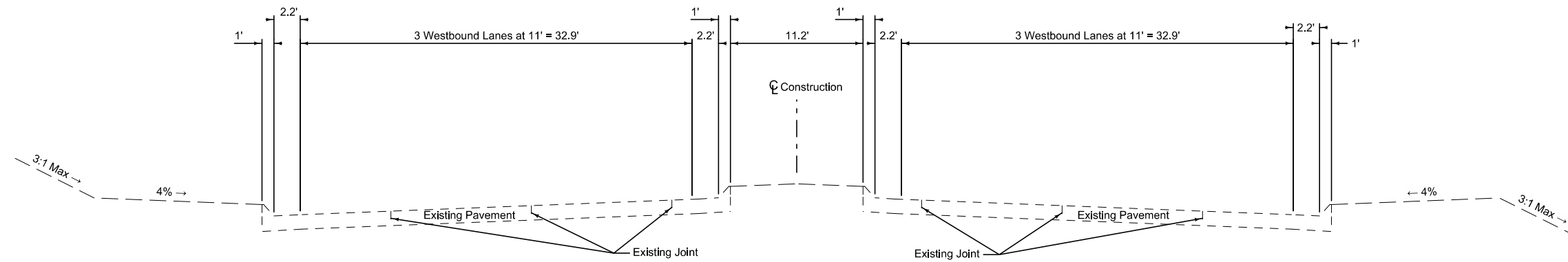
Longitudinal joint: L or KT
 Transverse joint: Match Mainline

4_AuxLane_PCC_10-18-16			
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
WB	663+86.22	663+91.00	13.5
WB	663+91.00	663+91.00	13.5 - 10.5
WB	663+91.00	668+27.50	10.5
WB	668+27.50	668+27.50	10.5 - 20
WB	668+27.50	670+20.00	20

See Tab 100-24 or 100-25 for pavement quantities.

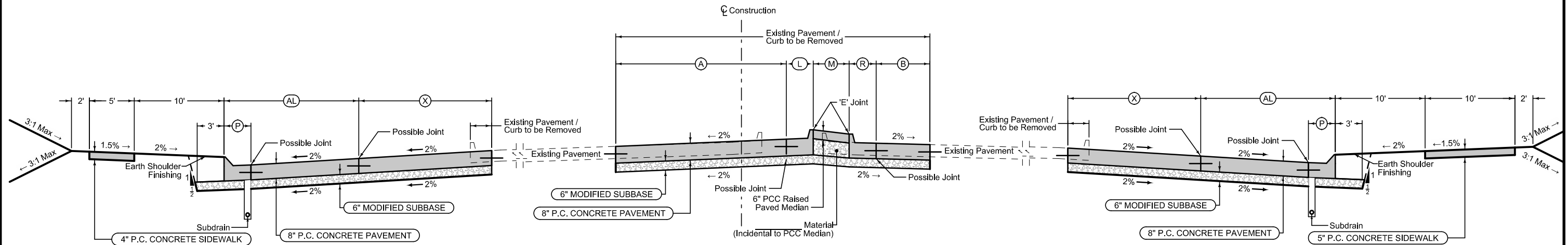
See Tab 112-9 for shoulder quantities.

HICKMAN ROAD WIDENING



6-LANE WITH REDUCED LANE WIDTHS

HICKMAN ROAD WIDENING



Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged: KT-2
Transverse: C at 17' spacing

2_Curb_MODIFIED			
STATION TO STATION		(P) Feet	Curb Type See PV-102
92494+48.94	92498+17.14	3	6" STD
92498+17.14	92498+22.14	3	6" STD - 6" Sloped
92498+22.14	92499+14.43	Var.	6" Sloped
92499+97.79	92500+63.02	Var.	6" Sloped
92500+63.02	92500+68.02	3	6" Sloped - 6" STD
92500+68.02	92502+77.03	3 - 0	6" STD
92502+77.03	92503+40.78	Var.	6" STD
92503+40.78	92504+69.60	3	6" STD

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

2_AuxLane_PCC_MODIFIED			
STATION TO STATION		(AL) Feet	(X) Feet
92494+48.94	92496+23.67	2 - 9	0
92496+23.67	92498+22.14	9	0
92498+22.14	92499+14.43	Var.	0
92499+97.79	92500+63.02	Var.	6.5
92500+63.02	92502+54.09	13	6.5
92502+54.09	92502+77.03	13 - 8.5	6.5
92502+77.03	92503+40.78	Var.	Var.
92503+40.78	92504+13.11	7.7 - 6.6	0
92504+13.11	92504+28.09	6.6 - 4	0
92504+28.09	92504+28.09	4 - 12	0
92504+28.09	92504+69.60	12 - 4.7	0

4DP_Raised_Out_MODIFIED						
BEGIN STATION	END STATION	(A) Feet	(B) Feet	(M) Feet	(L) Feet	(R) Feet
92500+52.05	92500+98.27	8.38	Var.	Var.	0.63	0.63
92500+98.27	92503+04.10	8.38	2.38	8.00	0.63	0.63
92503+04.10	92503+33.02	Var.	2.38	Var.	0.63	0.63
92494+77.00	92495+48.50	U.A.C.	Var.	Var.	U.A.C.	0.63
92495+48.50	92496+24.00	Var.	Var.	Var.	0.63	0.63
92496+24.00	92496+70.00	2.38	17.13	8.00	0.63	0.63
92496+70.00	92498+29.73	2.38	5.38	8.00	0.63	0.63
92498+29.73	92498+75.95	Var.	Var.	Var.	0.63	0.63
92503+33.02	92504+02.88	Var.	Var.	Var.	Var.	Var.
92504+02.88	92504+78.00	Var.	Var.	Var.	0.63	0.63
92504+78.00	92504+93.92	Var.	Var.	Var.	0.63	0.63

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

2_AuxLane_PCC_MODIFIED			
STATION TO STATION		(AL) Feet	(X) Feet
92492+47.48	92492+60.94	0	0
92492+60.94	92493+18.24	0	0
92493+18.24	92493+53.73	0	0
92493+53.73	92495+40.77	0	3.5
92495+40.77	92496+23.84	0 - 8	11
92496+23.84	92496+73.96	8 - 13	11
92496+73.96	92497+66.83	13	11.25
92497+66.83	92498+58.54	13	11.25
92498+58.54	92498+62.48	13	11.25
92498+62.48	92499+23.61	Var.	Var.
92500+10.53	92501+03.36	0	Var.
92501+03.36	92503+04.56	0	13
92503+04.56	92503+23.00	0	13 - 12.3
92503+23.00	92503+23.00	0	12.3 - 10.5
92503+23.00	92503+31.50	0	10.5 - 10.3
92503+31.50	92503+66.88	0	10.3 - 14.8
92503+66.88	92503+98.00	0	14.8 - 18.6
92503+98.00	92503+98.00	0	18.6 - 10
92503+98.00	92504+03.00	0	10
92504+03.00	92504+85.50	0	10 - 6.8
92504+85.50	92505+14.41	0	Var.
92505+14.41	92505+85.46	0	Var.

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged: KT-2
Transverse: C at 17' spacing

2_Curb_MODIFIED			
STATION TO STATION		(P) Feet	Curb Type See PV-102
92493+53.73	92498+57.48	3	6" STD
92498+57.48	92498+62.48	3	6" STD - 6" Sloped
92498+62.48	92499+26.31	Var.	6" Sloped
92500+10.53	92501+03.36	Var.	6" Sloped
92501+03.36	92501+08.36	3	6" Sloped - 6" STD
92501+08.36	92504+85.50	3	6" STD
92504+85.50	92505+14.41	Var.	6" STD
92505+14.41	92505+85.46	Var.	6" STD

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

128th STREET WIDENING

SURVEY SYMBOLS

- SWK sidewalk
- CU curb or center island
- GU gutter
- CON concrete or a/c slab
- IN intake-grate,curb,umbrella
- MH manhole
- FHD fire hydrants
- LUM luminaire
- WV water valve
- EB electrical box
- TEV evergreen tree
- SIGN SI sign
- ENT cl of entrance
- TDC tree deciduous
- TP TPD telephone pedestal
- UB utility box
- TSL traffic signal & lum
- C center of road (ML or SR)
- BB billboard or sign
- SIGN SL speed limit sign
- RIP rip-rap
- PIP pipes(cast iron,steel,tile,etc)
- TLNR tree line right
- SHR shrub
- PR power riser pole
- DU cl of draw upstream
- RET retaining walls
- TA tower anchor
- GV gas valve
- EP edge of paved roads
- GDL guard rails
- BRG bridge
- EG edge of gravel road
- D cl of draw or stream
- PPA power pole 1st co.
- GP guard post (less than 4 posts)
- CUL culvet
- SH shoulder
- TLNL tree line left
- TV tv dish
- INB intake-beehive
- ST alignment S.T.
- S Soil Sampling Site (wetlands)
- TVP tv pedestal
- SF Silt Fence (Wetlands)
- STP stump
- FWD wood fence
- TDL traffic detection loop
- FCL security & chain link
- BM bench mark
- ENP edge of paved entrance & parking

UTILITY LEGEND

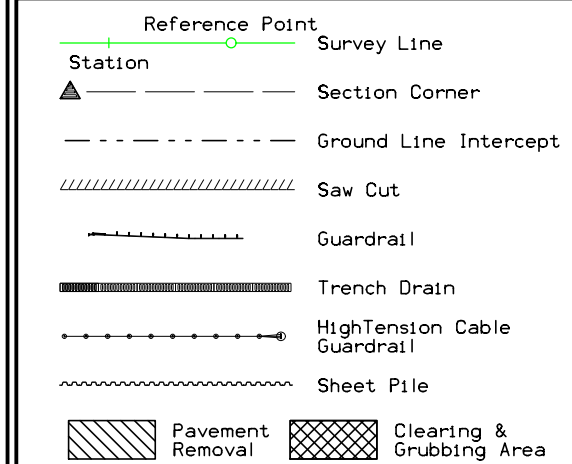
- E1** - MidAmerican Energy Company
Tim Davis (515) 242-4224
tldavis@midamerican.com
- E2** - City of Urbandale - Electric Line
Dave McKay (515) 278-3950
engpw@urbandale.org
- E3** - City of Clive - Electric Line
Jeff May (515) 223-6231
jmay@cityofclive.com
- F0** - Zaya Fiber Solutions
Steve Senger (952) 230-9660 Cell: (612) 210-8036
steven.senger@zayo.com
- F02** - CenturyLink
Steve Parker (515) 265-0968 Cell: (507) 358-1978
Steven.Parker4@centurylink.com
- F03** - MCI/Verizon Business
Jim Powers (515) 380-2208 Cell: (515) 380-2208
jim.powers1@Verizon.com
- F04** - ICN - Iowa Communication Networks
Mike Broderick (515) 725-4610 Cell: (515) 330-7139
Mike.Broderick@iowa.gov
- F05** - Windstream Communications
Luke Niles (501) 748-5893 Cell: (682) 554-6784
Luke.t.niles@windstream.com
- F06** - Unite Private Networks, LLC
Clark Lundy (515) 321-3336
clark.lundy@upnfiber.com
- F07** - City of Clive - Fiber Optic
Jeff May (515) 223-6231
jmay@cityofclive.com
- F08** - Consolidated Communications
Westen Grow (515) 867-4769
weston.grow@eventis.com
- G** - MidAmerican Energy Company - Gas
Tim Davis (515) 242-4224
tldavis@midamerican.com
- GHP** - MidAmerican Energy Company - High Pres Gas
Tim Davis (515) 242-4224
tldavis@midamerican.com
- GP** - MidAmerican Energy Company - Power Pole
Tim Davis (515) 242-4224
tldavis@midamerican.com
- GP** - MidAmerican Energy Company - Electric Riser Pole
Tim Davis (515) 242-4224
tldavis@midamerican.com
- ST S** - Clive Public Works Urbandale Public Works
Jeff May (515) 223-6231 Dave McKay (515) 278-3950
jmay@cityofclive.com engpw@urbandale.org
- SAN** - Clive Public Works Urbandale Public Works
Jeff May (515) 223-6231 Dave McKay (515) 278-3950
jmay@cityofclive.com engpw@urbandale.org
- T1** - CenturyLink
Steve Parker (515) 265-0968 Cell: (507) 358-1978
Steven.Parker4@centurylink.com
- TV** - Mediacom Communications Corporation
Paul May (515) 246-2252 Cell: (515) 554-2648
pmay@mediacomcc.com
- TV2** - TDI Cable
- W** - Clive Public Works
Jeff May (515) 223-6231
jmay@cityofclive.com
- W2** - Des Moines Water Works
Carla Schumacher (515) 323-6227 Cell: (515) 201-3292
cschumacher@dmww.com
- W3** - City of Urbandale
Dave McKay (515) 278-3950
engpw@urbandale.org

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	Description
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.	Description	
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	Description
Green	(2)	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

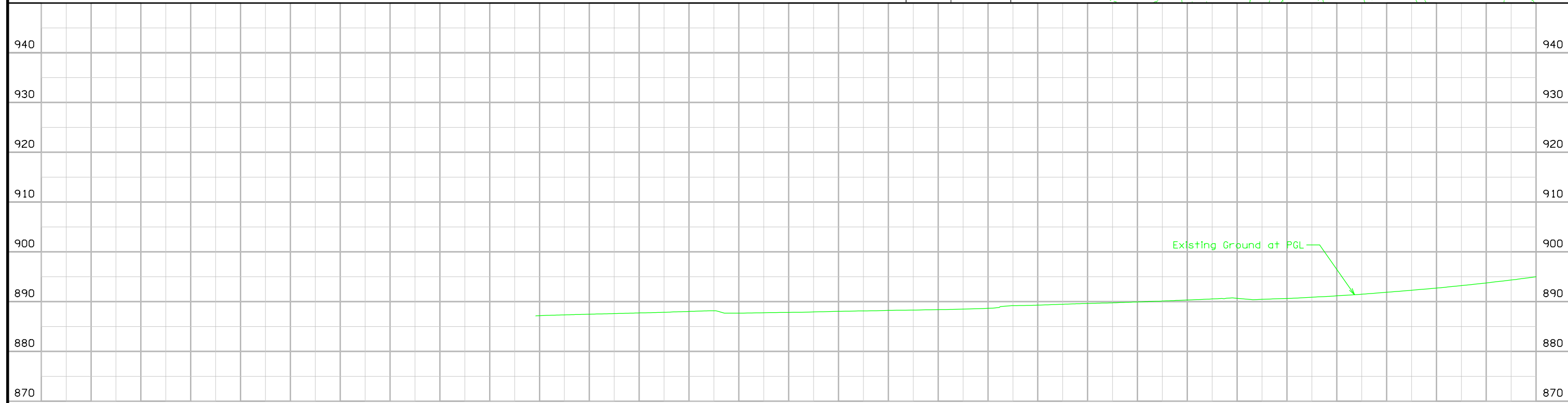
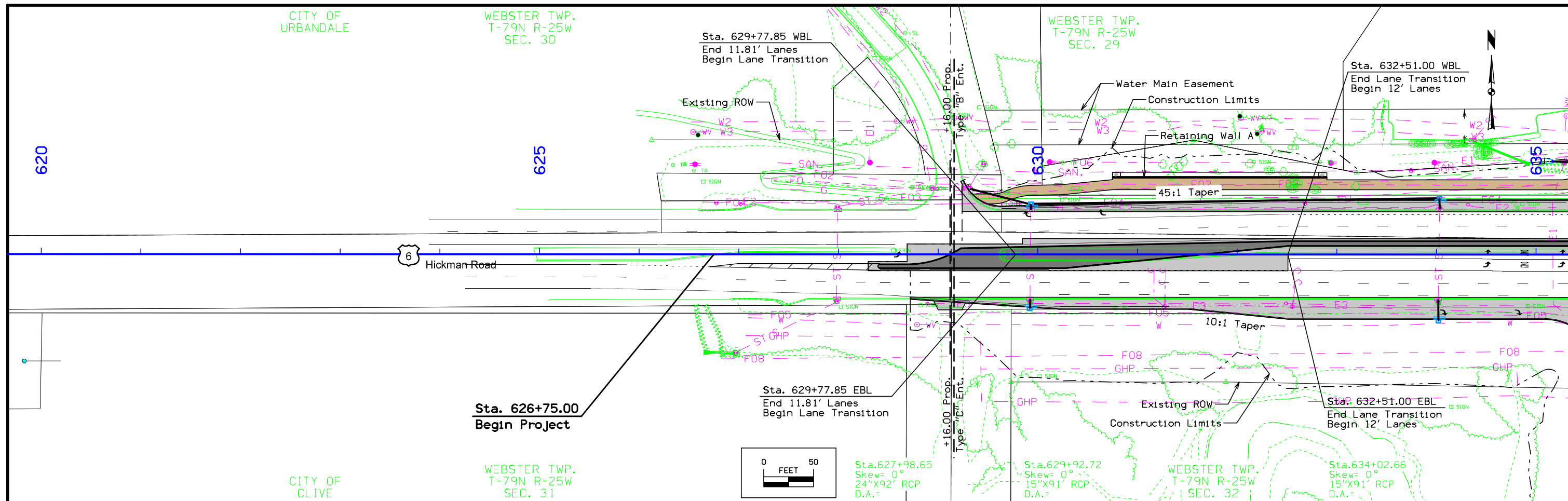


RIGHT-OF-WAY LEGEND

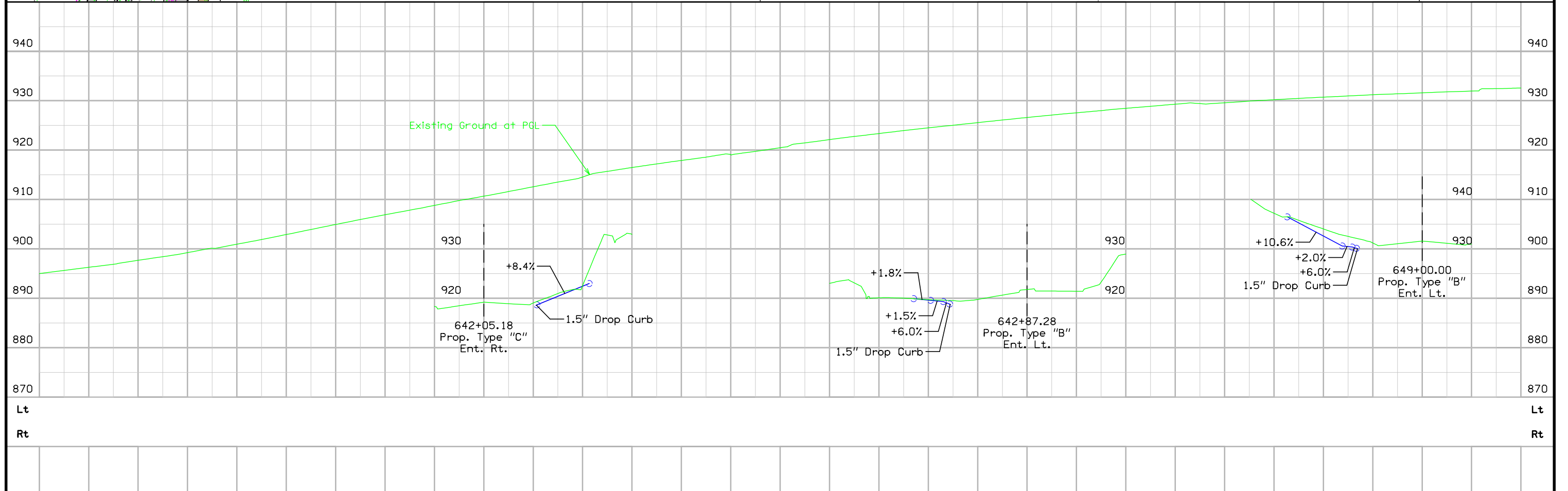
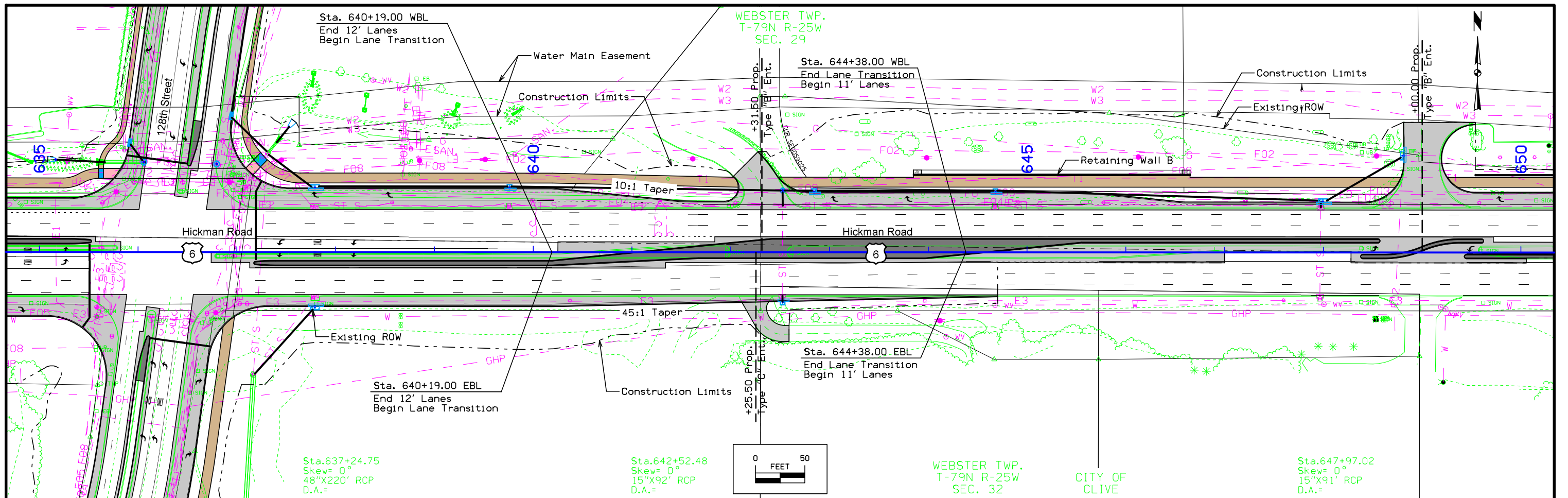
- ▲ Proposed Right-of-Way
- △ Existing Right of Way
- ▲ Existing and Proposed Right-of-Way
- ▲ Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- C/A Access Control
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

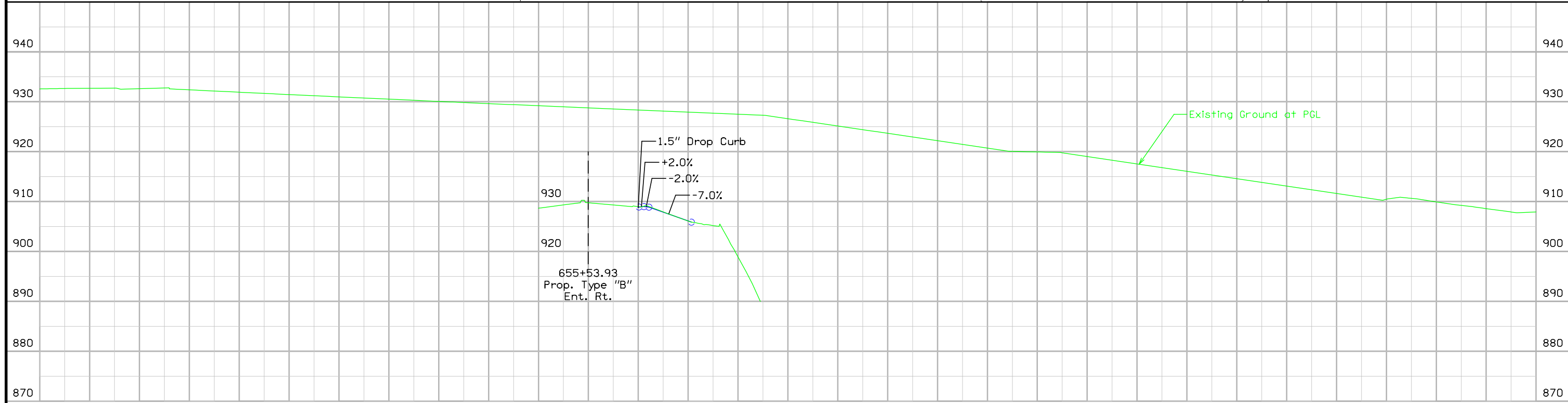
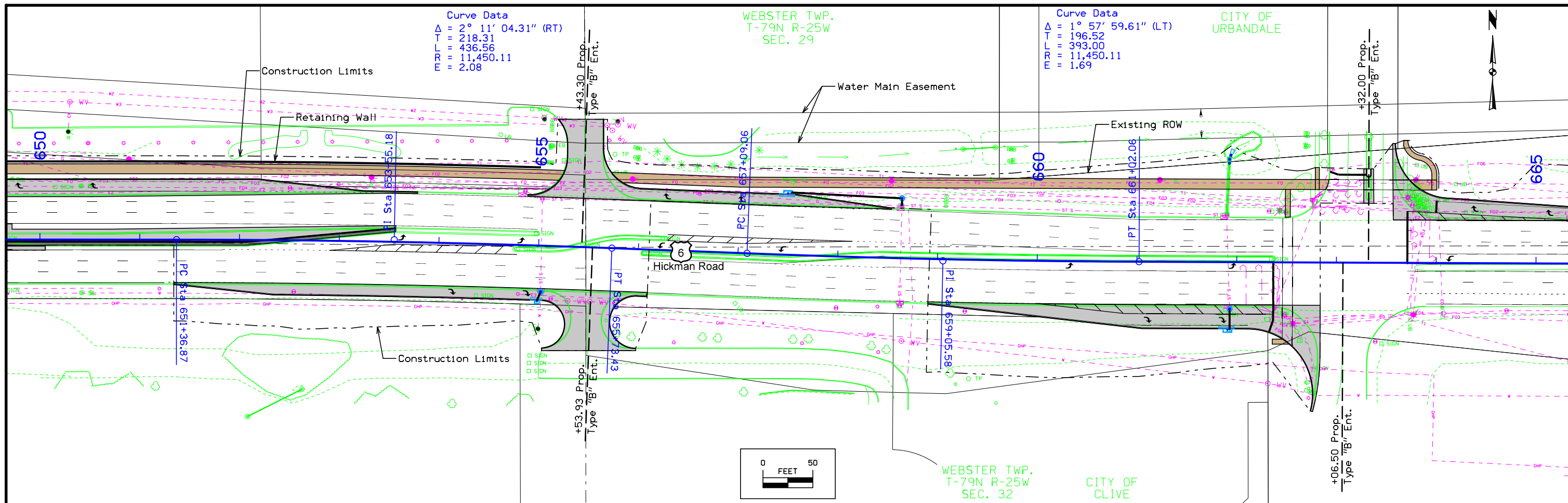
(COVERS SHEET SERIES D, E, F, & K)



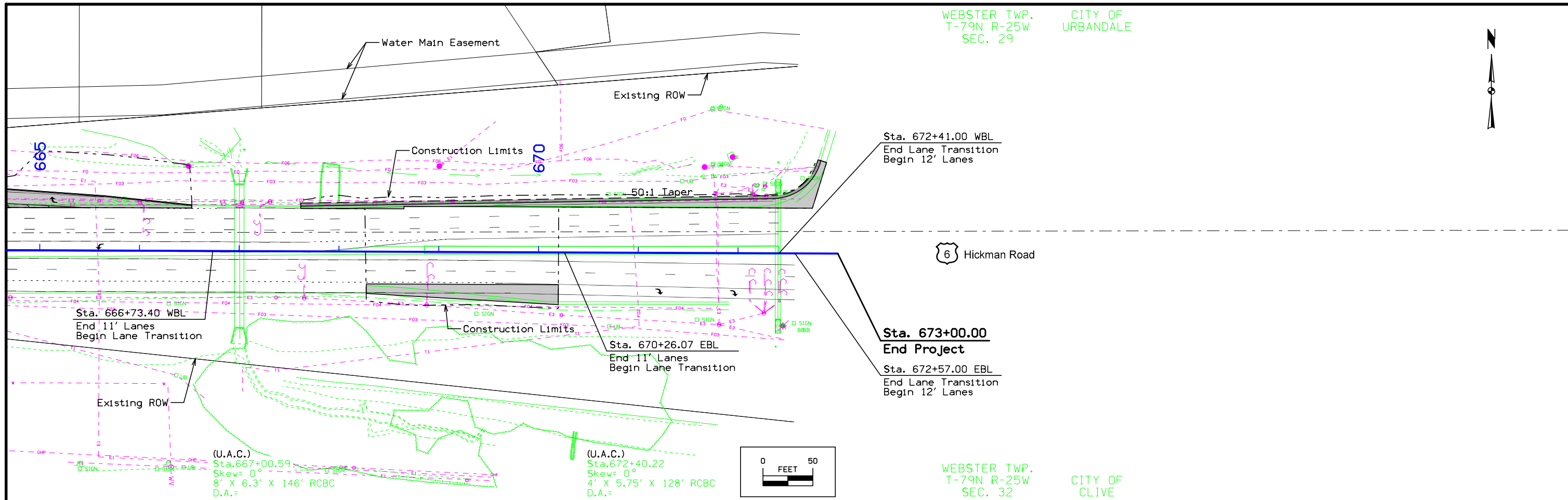
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FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.			POLK COUNTY			PROJECT NUMBER	NHSX-006-4(189)--3H-77			SHEET NUMBER	D.2	



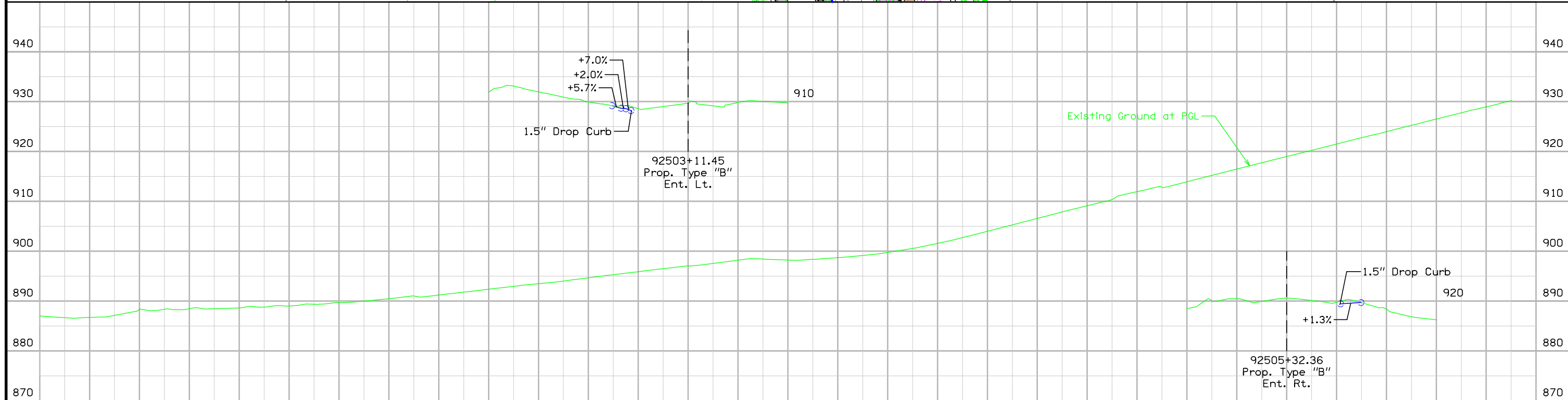
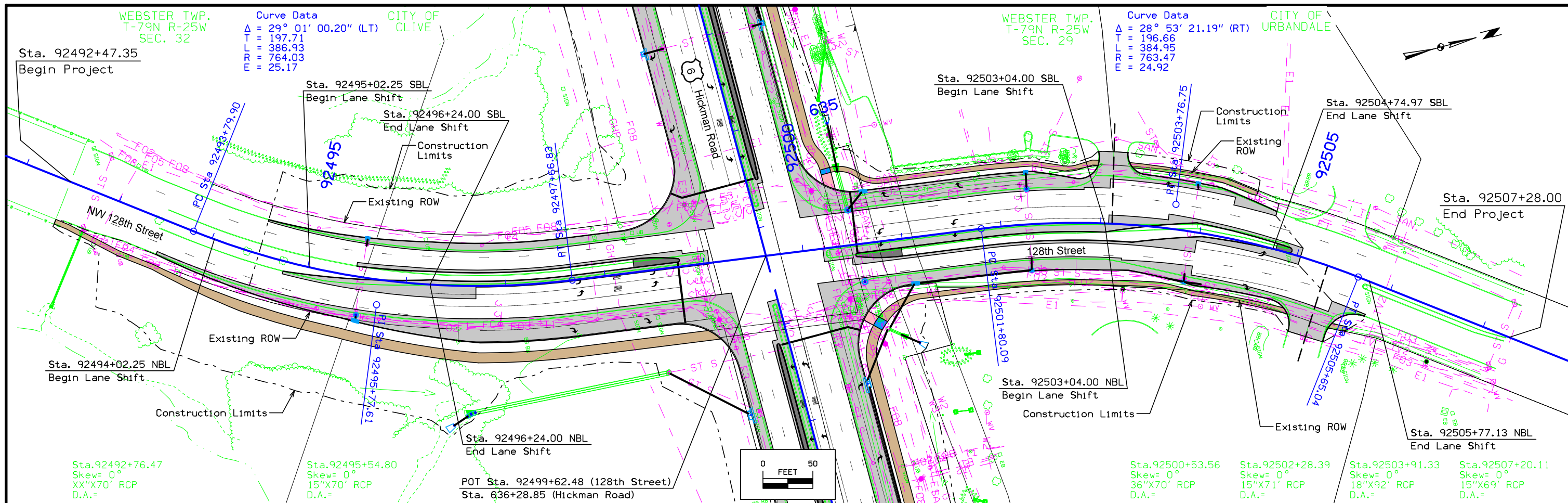
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FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.			POLK COUNTY	PROJECT NUMBER	NHSX-006-4(189)--3H-77			SHEET NUMBER	D.3			



FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	POLK COUNTY	PROJECT NUMBER	NHSX-006-4(189)--3H-77	SHEET NUMBER	D.4
650	651	652	653	654	655	656	657	658
659	660	661	662	663	664	665		



665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680
FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.			POLK COUNTY	PROJECT NUMBER	NHSX-006-4(189)--3H-77			SHEET NUMBER	D.5			



92493	92494	92495	92496	92497	92498	92499	92500	92501	92502	92503	92504	92505	92506	92507
FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.				POLK COUNTY	PROJECT NUMBER	NHSX-006-4(189)--3H-77			SHEET NUMBER	E.1	

Survey Information

Hickman Rd & NW 128th St
NHSX-006-4(189)--3H-77
Intersection Improvements
PIN 20-77-006-010
SAP-07011

General Information

Measurement units for this survey are US survey feet. This survey is for preliminary/Engineering for the proposed road improvements at the intersection of U.S. Highway 6/Hickman Road and NW 128th Street. This project is a Partial DTM survey.

Vertical Control

Vertical datum for this survey is relative to NAVD88, Geoid 12a.

Vertical positions originated from City of Urbandale published city benchmark report. BM 45 is IHC brass marker located at NE corner of northbound I-35 bridge over U.S. Highway 6. A digital level loop was run from Urbandale BM 45 through the project benchmarks and closed on Urbandale BM 57. The error met 3rd order accuracy and the error was distributed proportionately among the project bench marks.

This survey observed three City of Urbandale Benchmark Monuments with published NAVD88 elevations:

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 #55 has a published Elev. of 929.83
Survey Elev. = 929.83

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

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 U.S. Highway 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.

The horizontal alignment for 128TH Street is a retrace of as-built paving plan for project STP-6-3(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. 28192+76.893m (converted to station 92495+77.61 in U.S. survey foot) and ran back and ahead without equation.

P.I. 28189+48.339m (92484+99.68 U.S. survey foot) = P.I. 28189+43.077m (92484+82.412 U.S. survey foot) (this survey)
Found 5/8" re-rod (12" deep)

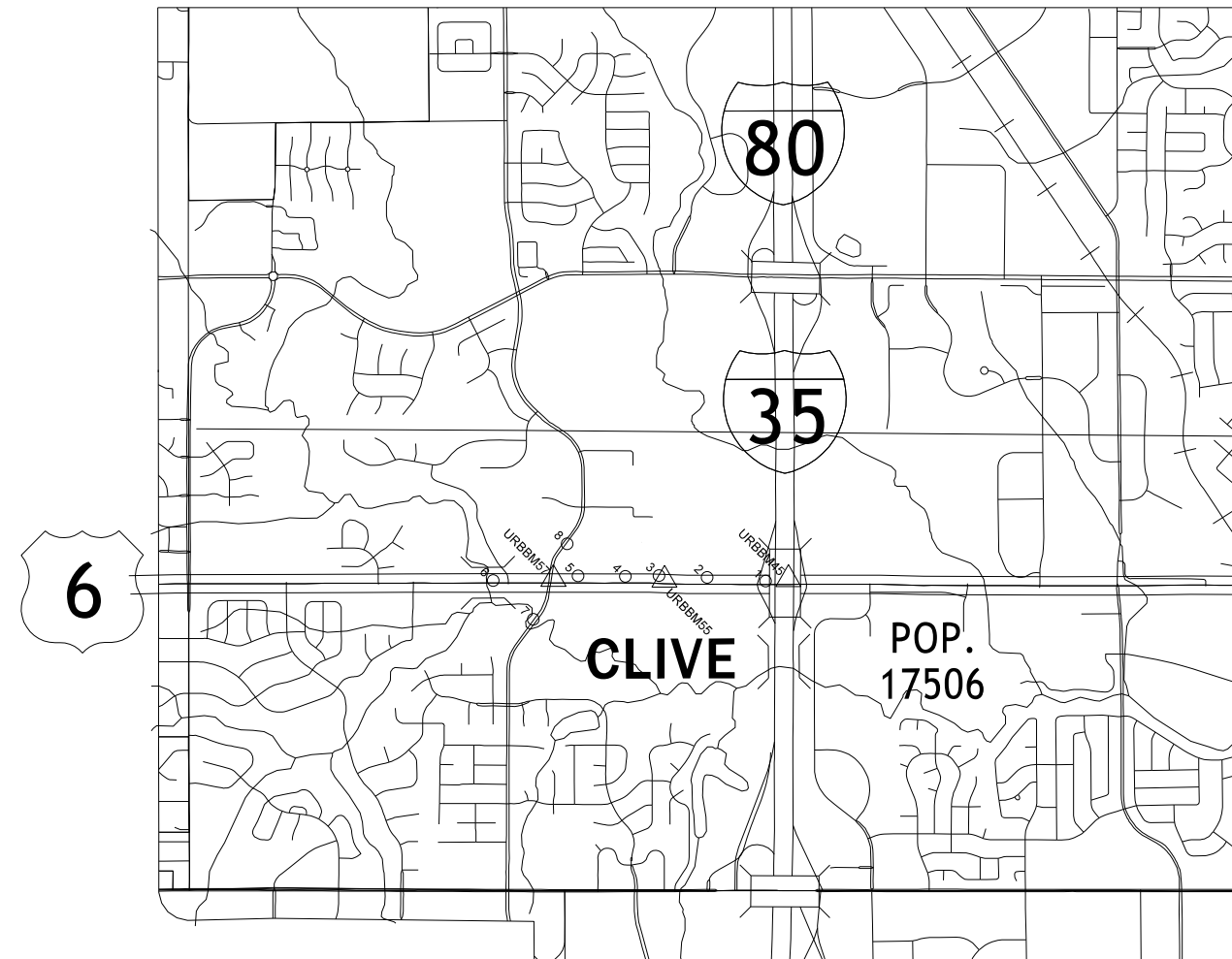
P.I. 28192+76.893m (92495+77.61 U.S. survey foot) = P.I. 28192+76.893m (92495+77.61 U.S. survey foot) (this survey)
Found "X" in the concrete pavement

P.I. 28195+20.289m (92503+76.15 U.S. survey foot) = P.I. 28195+20.475m (92503+76.76 U.S. survey foot) (this survey)
Found "X" in the concrete pavement

P.I. 28197+83.097m (92512+38.38 U.S. survey foot) = P.I. 28197+83.279m (92512+38.974 U.S. survey foot) (this survey)
Found 5/8" re-rod

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

1a. Regional Coordinate System Zone 8

Point Name	Northing	Easting	Elevation	Feature Definition	Description
1	7497371.24	18483222.37	889.91	CP	CP1//1/2IN REBAR WITH RED PLASTIC CAP/15'+/- NORTH OF HICKMAN ROAD/15'+/- EAST OF EAST EDGE OF EXIT RAMP TO I-80
2	7497434.86	18482217.36	909.13	CP	CP2//CUT X ON TOP OF EAST CURB IN MEDIAN/ENTRANCE TO LIFETIME ATHLETIC/150'+/- NORTH OF CENTERLINE OF HICKMAN ROAD
3	7497465.85	18481388.12	935.81	CP	CP3//CUT X ON TOP OF CURB/10'+/- NORTH OF HYDRANT AT STEW HANSENS EAST ENTRANCE/125'+/- NORTH OF CENTERLINE OF HICKMAN ROAD
4	7497453.84	18480810.51	936.94	CP	CP4//CUT X ON TOP OF CURB/25'+/- WEST OF STEW HANSEN SIGN/50'+/- EAST OF WALNUT HILLS CHURCH/125'+/- NORTH OF CENTERLINE OF HICKMAN ROAD
5	7497460.92	18479997.81	917.28	CP	CP5//CUT X ON TOP OF CURB/WEST SIDE OF ENTRANCE TO IOWA STATE BANK/300'+/- EAST OF NW 128TH STREET/120'+/- NORTH OF CENTERLINE OF HICKMAN ROAD
6	7497381.05	18478538.99	889.47	CP	CP6//BRASS PLUG/EAST END OF BRIDGE OVER WALNUT CREEK/NORTH SIDE OF HICKMAN ROAD/AT WEST END OF PROJECT
7	7496714.31	18479228.25	886.42	CP	CP7//CUT X ON NORTH END OF BRIDGE OVER WALNUT CREEK/WEST SIDE OF NW 128TH STREET/700'+/- SOUTH OF HICKMAN ROAD
8	7498013.3	18479810.38	929.98	CP	CP8//CUT X ON TOP OF CURB/EAST SIDE OF NW 128TH STREET/7'+/- NORTHEAST OF INTAKE AT BACK OF CURB/100'+/- WEST OF CHILDRENS OF CENTRAL IOWA
URB BM45	7497403.87	18483612.44	908.05	BM	URBANDALE BM45//FOUND BRASS MARKER/NORTH BOUND LANE I-80 OVER HICKMAN ROAD/TOP OF ABUTMENT ON EAST SIDE OF EAST BRIDGE
URB BM55	7497393.85	18481482.57	929.83	BM	URBANDALE BM55//FOUND BRASS PLUG IN CONCRETE/NORTH SIDE OF HICKMAN ROAD
URB BM57	7497407.636	18479574.72	899.61	BM	URBANDALE BM57//FOUND BRASS PLUG IN NORTHWEST CORNER OF SIGNAL BASE/NORTHEAST QUADRANT OF 128TH STREET AND HICKMAN ROAD

R-25W

R-24W

Douglas Ave



NW 128th St



Hickman Rd

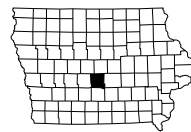
STA. 626+75.00
BEGIN PROJECT

STA. 673+00.00
END PROJECT

NW 100th Ave

University Ave

LOCATION MAP NOT TO SCALE



Poweshiek		ROW: NHSN-006-4(190)--2R-77			PIN: 20-77-006-010														
		NW 128th Street and U.S. Highway 6 Intersection																	
PARCEL NO.	OWNER NAME	STATE			COUNTY		CITY		TEMP EASE	BORROW		MITIGATION	OTHER	HOUSE	BUILDINGS	A/C ONLY	TOTAL ACQ.	NOTES	
		FEE	EASE	UF	FEE	EASE	FEE	EASE		FEE	EASE								
1	MJC Holdings, L.L.C.	0.07 AC																	
2	Clark A. Colby Jr., Et al			0.50 AC													0.50 AC	Note 1	
3	Universal Realty, Inc.			2.06 AC													2.06 AC	Note 1	
4	City of Clive	0.09 AC		1.25 AC			0.07 AC		0.52 AC									Note 2	
5	Bejofoba, L.L.C.	0.03 AC					0.08 AC		0.09 AC										
6	Abrahamson Investments, L.L.C.						0.01 AC		0.05 AC										
7	Iowa State Bank	0.10 AC					0.03 AC		0.09 AC										
8	Clark A. Colby Jr., Et al			0.53 AC													0.53 AC	Note 1	
9	Clark A. Colby Jr., Et al			0.51 AC													0.51 AC	Note 1	
10	Trustee of Linda Marie Grandquist Revocable Trust Agreement	0.51 AC		0.002 AC			0.29 AC		0.84 AC									Note 2	
11	Walnut Hills United Methodist Church	0.15 AC		1.07 AC					0.07 AC									Note 2	
12	Kyle R. Morris			3.12 AC													3.12 AC	Note 1	
13	Gerald R. Foster, Nancy J. Foster, Nancy J. Foster Revocable Trust	0.03 AC		0.17 AC					0.03 AC									Note 2	
14	James A. & Vicki J. Davison			0.35 AC														Note 1	
15	12103 Hickman Road L.L.C.	0.15 AC		0.27 AC					0.14 AC									Note 2	
16	Agree MCW L.L.C.	0.15 AC							0.03 AC										
17	Corporate Accounting, Menard Inc.	0.41 AC		0.94 AC					0.06 AC									Note 2	
18	Capo Holdings, L.L.C.	0.07 AC																	
19	Harold Dean L.L.C.								0.01 AC										
20	Love's Travel Stops & Country Stores Inc.	0.13 AC		0.01 AC					0.07 AC									Note 2	
18 Parcels	TOTALS	1.88 AC		10.79 AC			0.49 AC		2.00 AC								6.72 AC		
NOTES:																			
1. Existing ROW currently held in PE, converting to FEE																			
2. Portion of State Fee currently held in PE, converting to FEE																			

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.

ACCESS CONTROL PREVIOUSLY ACQUIRED.

SURVEY SYMBOLS

- SWK sidewalk
- CU curb or center island
- GU gutter
- CON concrete or a/c slab
- IN intake-grate,curb,umbrella
- MH manhole
- FHD fire hydrants
- LUM luminaire
- WV water valve
- EB electrical box
- TEV evergreen tree
- SIGN SI sign
- ENT cl of entrance
- TDC tree deciduous
- TPD telephone pedestal
- UB utility box
- TSL traffic signal & lum
- C center of road (ML or SR)
- BB billboard or sign
- SIGN SL speed limit sign
- RIP rip-rap
- PIP pipes(cast iron,steel,tile,etc)
- TLNR tree line right
- SHR shrub
- PR power riser pole
- DU cl of draw upstream
- RET retaining walls
- TA tower anchor
- GV gas valve
- EP edge of paved roads
- GDL guard rails
- BRG bridge
- EG edge of gravel road
- D cl of draw or stream
- PPA power pole 1st co.
- GP guard post (less than 4 posts)
- CUL culvet
- SH shoulder
- TLNL tree line left
- TV tv dish
- INB intake-beehive
- ST alignment S.T.
- S Soil Sampling Site (wetlands)
- TVP tv pedestal
- SF Silt Fence (Wetlands)
- STP stump
- FWD wood fence
- TDL traffic detection loop
- FCL security & chain link
- BM bench mark
- ENP edge of paved entrance & parking

UTILITY LEGEND

- E1 - EL1D Electric Line MidAmerican Electric - Quality D
- EL2D Electric Line City of Urbandale - Quality D
- E3 - EL3D Electric Line City of Clive - Quality D
- F0 - FO1D Fiber Optic Zayo Group LLC - Quality D
- F02 - FO2D Fiber Optic CenturyLink - Quality D
- F03 - FO3D Fiber Optic MCI/Verizon - Quality D
- F04 - FO4D Fiber Optic ICN - Iowa Communication Networks - Quality D
- F05 - FO5D Fiber Optic Windstream Communications - Quality D
- F06 - FO6D Fiber Optic Unite Private Networks, LLC - Quality D
- F07 - FO7D Fiber Optic City of Clive - Quality D
- F08 - FO8D Fiber Optic Consolidated Communications - Quality D
- G - GL1D Gas Line MidAmerican Gas - Quality D
- GHP - GH1D High Pres Gas MidAmerican Gas - Quality D
- PPA Power Pole MidAmerican Electric
- PR Electric Riser Pole MidAmerican Electric
- ST S - ST1D Storm Sewer Co. 1 - Quality D
- SAN - SA1D Sanitary Sewer Co. 1- Quality D
- T1 - TL1D Telephone Line CenturyLink - Quality D
- TV - TV1D TV Cable Mediacom - Quality D
- TV2 - TV2D TV Cable TDI Cable - Quality D
- W - WL1D Water Line Clive Public Works - Quality D
- W2 - WL2D Water Line DMWW - Des Moines Water Works - Quality D
- W3 - WL3D Water Line City of Urbandale - Quality D

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.	
Yellow	(4)	Highlight for Critical Notes or Features
Red	(3)	Delineates Restricted Areas
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK	Design Color No.	
Green	(2)	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

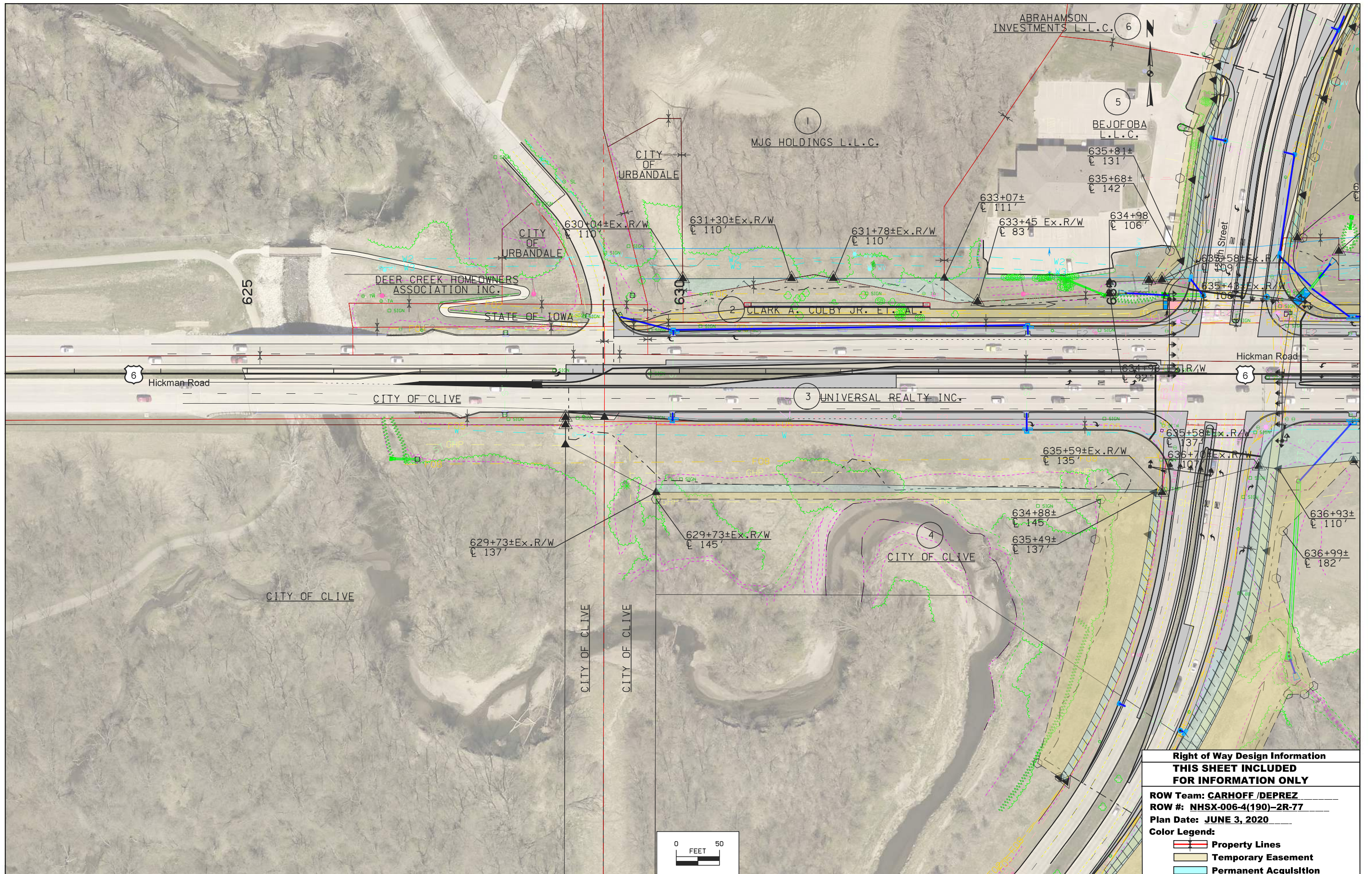
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area




RIGHT-OF-WAY LEGEND

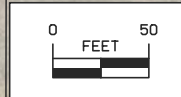
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

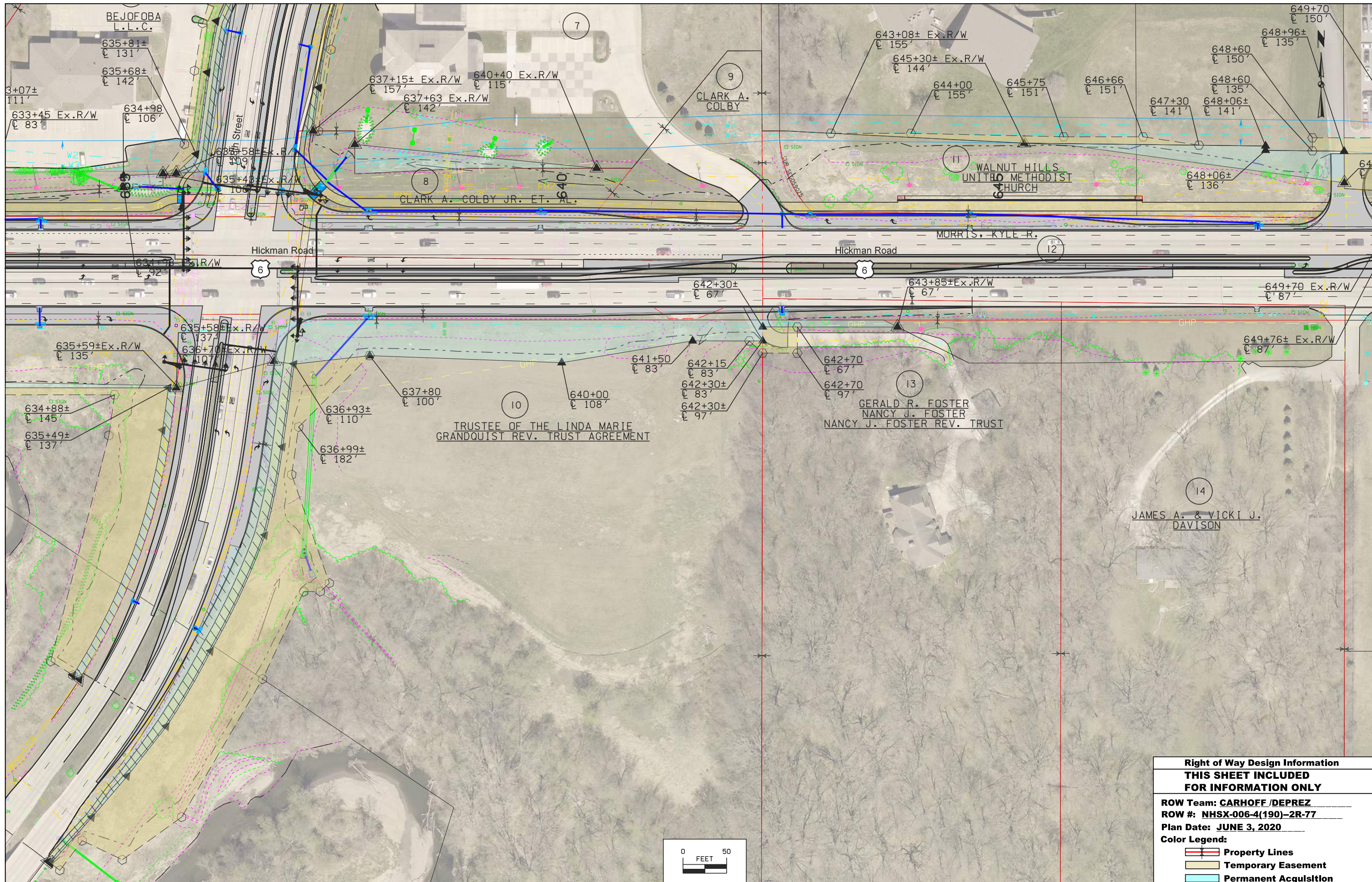
PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

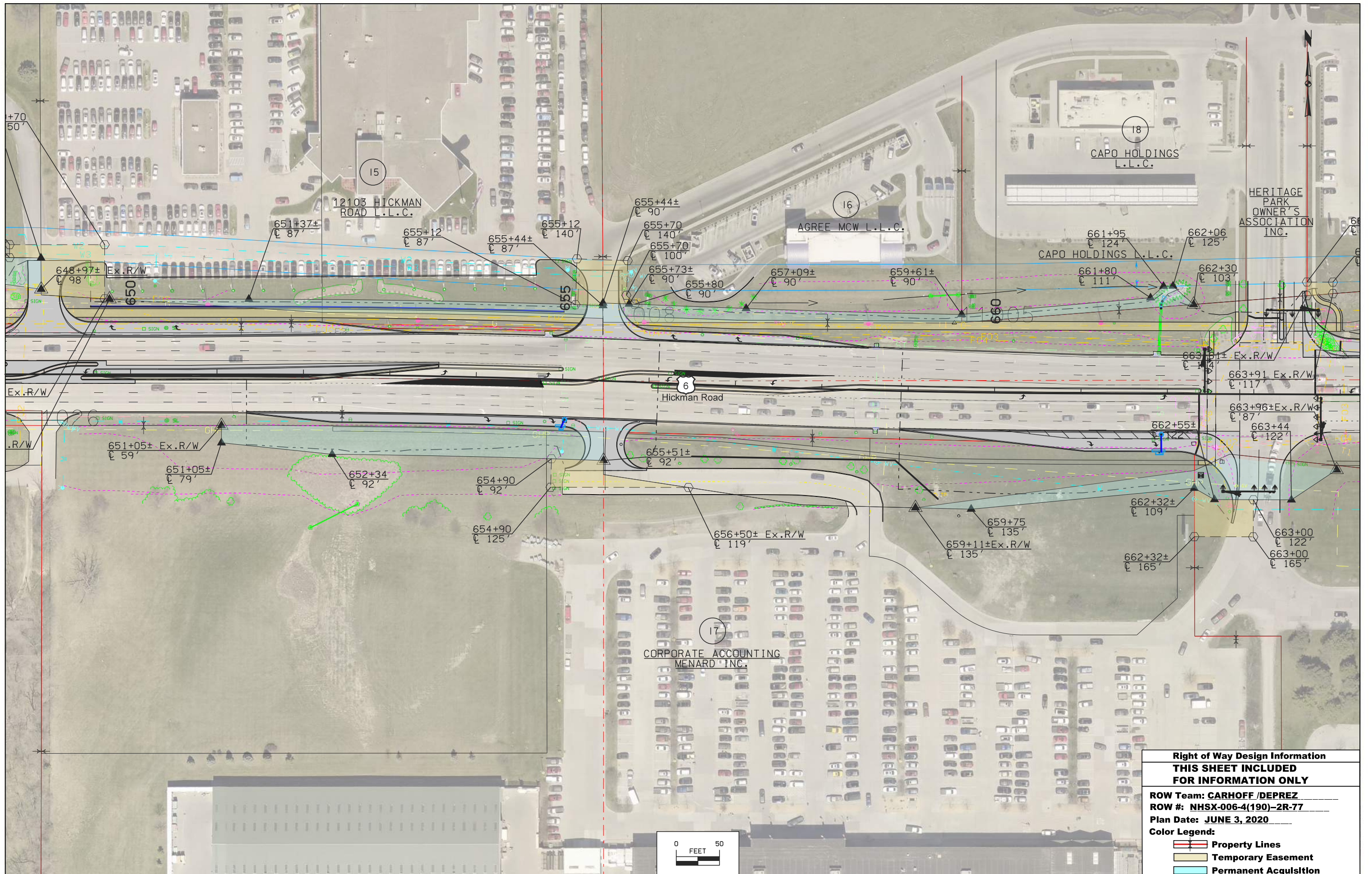





Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: CARHOFF /DEPREZ	
ROW #: NHSX-006-4(190)-2R-77	
Plan Date: JUNE 3, 2020	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition

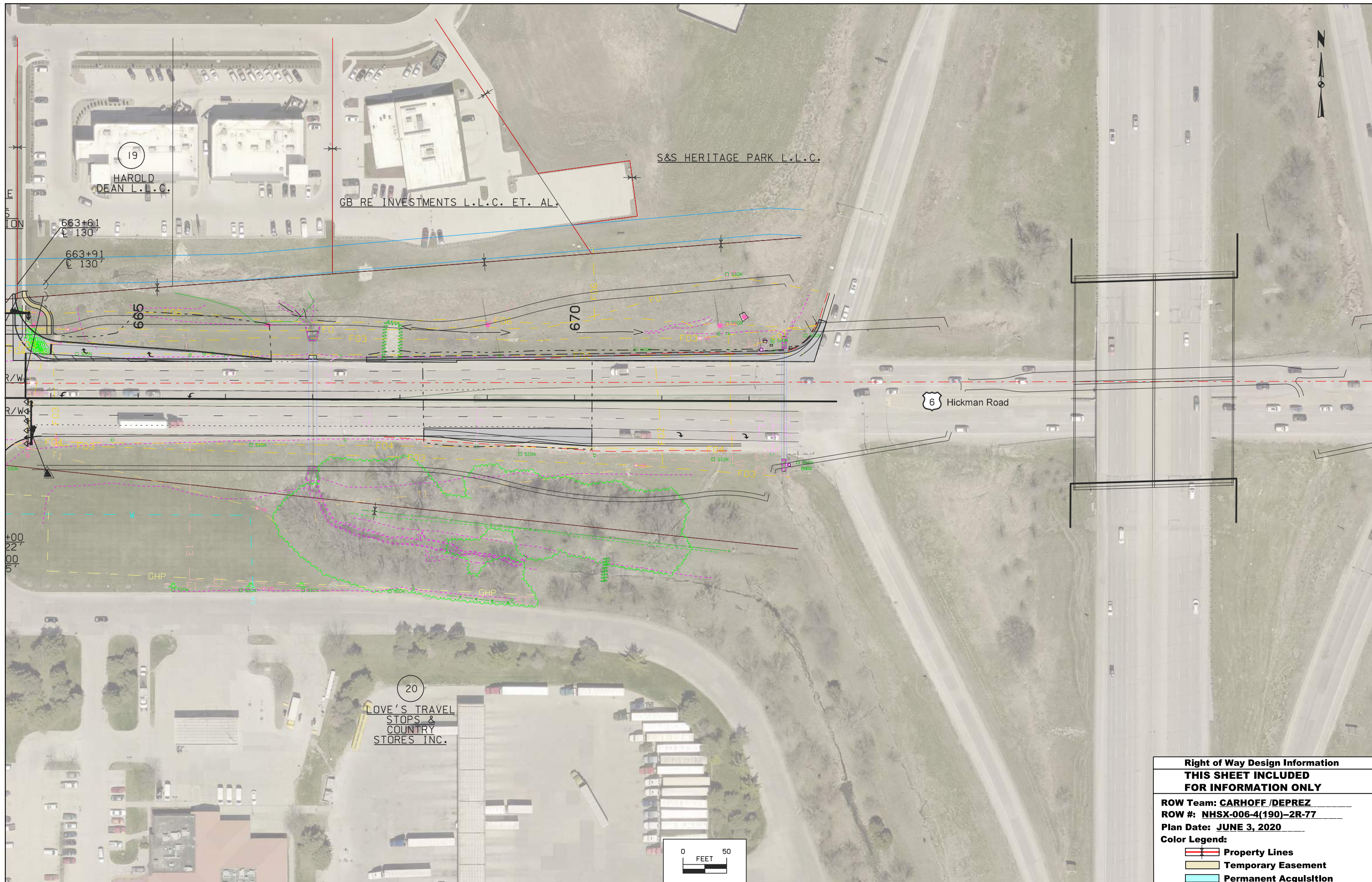




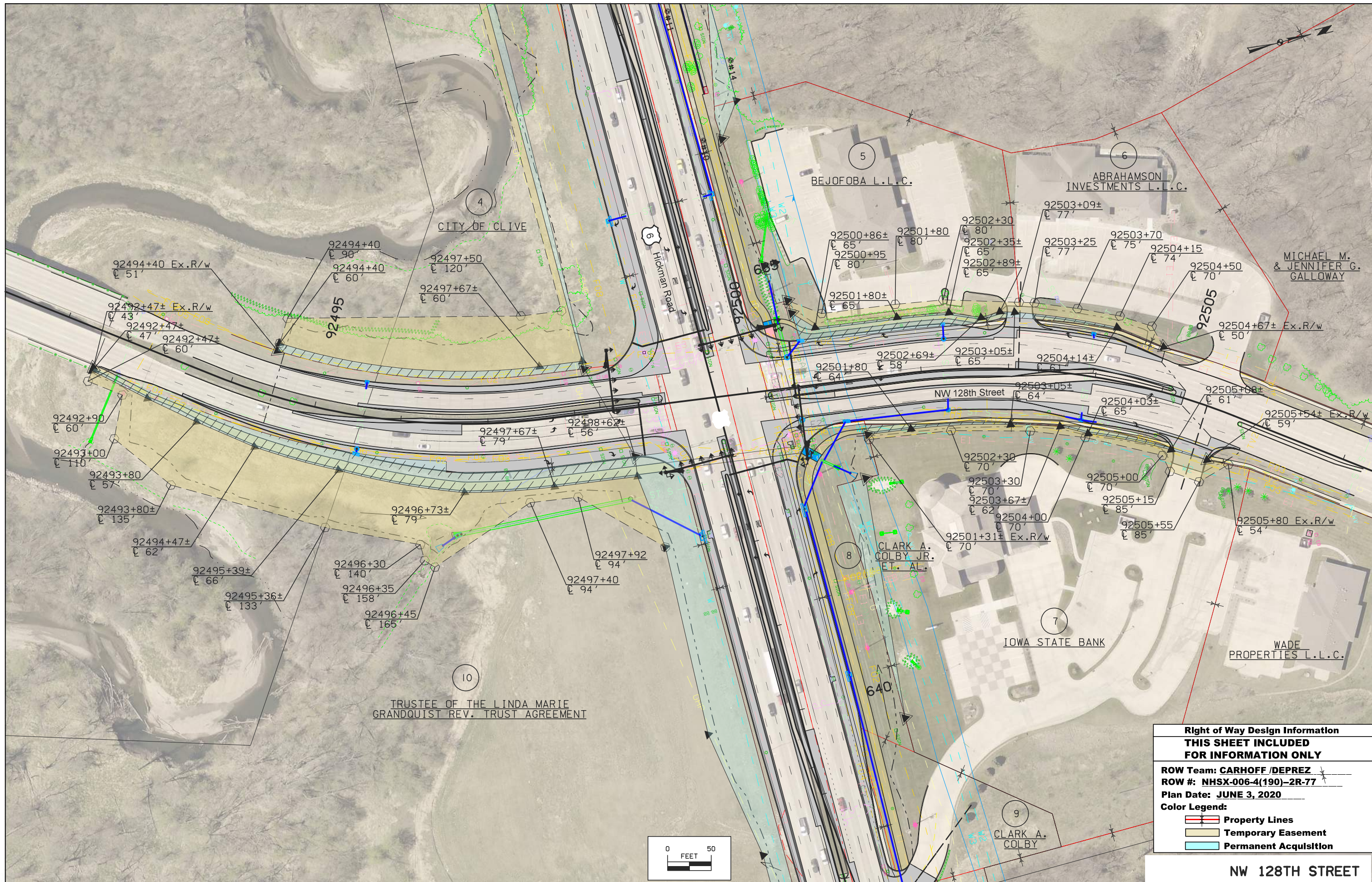
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 Plan Date: JUNE 3, 2020

Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition

NW 128TH STREET

STAGING NOTES

Highway 6 is a high volume roadway, construction activity in the area will disrupt traffic on Highway 6 and 128th Street. Therefore, it is advisable to adopt a construction sequence that directs activities in an orderly manner and minimizes disruptions to traffic as much as practical.

It is recognized that as the various activities related to construction progress, certain situations may arise which will preclude adhering to the original construction sequence or which, in the opinion of the Contractor, should result in more efficient staging operations. Should the Contractor desire to deviate from the original plan, they shall submit a written alternative plan to the Resident Construction Engineer for approval.

Stage 1 - Pavement Widening

Highway 6

- Install traffic control on US 6 per Standard Road Plan TC-402 to close the outside shoulder.
- Construct culvert extensions.
- Construct pavement widening and right turn lanes along US 6.
- Construct 10' trail north of US 6.

128th Street

- Install traffic control on 128th Street. per Standard Road Plan TC-418 to close the outside lane.
- Construct pavement widening and sidewalks along 128th Street.

Stage 2 - Median Construction

Highway 6

- Shift traffic to use the two proposed outside lanes.
- Install traffic control on US 6 per Standard Road Plan TC-402 to close the inside shoulder.
- Reconstruct median and left turn lanes along US 6.

128th Street

- Shift traffic to use the proposed travel lanes.
- Install traffic control on 128th Street. per Standard Road Plan TC-418 to close the inside lane.
- Reconstruct median and left turn lanes along 128th Street.

TRAFFIC CONTROL PLAN

In order to minimize vehicle traffic congestion, the contractor shall comply with the following restrictions, for the limits of construction.

Traffic on Highway 6 and NW 128th Street will be maintained at all times during construction.

Shoulder and/or lane closures (per Standard Road Plans TC-402 & TC-418) will be necessary for construction.

US 6

1. The Contractor shall maintain two lanes of traffic in both directions on US 6 at all times.

128th

1. The Contractor shall maintain at least one lane of traffic in both directions on 128th Street.

Use Portable Dynamic Message Signs (PDMS) in conjunction with traffic signage.

PEDESTRIAN PATH CLOSURES

Refer to TC-601.










*Assumes 6 foot wide barricade.
Closures may need to be removed and re-established.

Location	Side	Type III Barricades*	Remarks
		No.	
Highway 6 Station 624+83	LT	1	
128th Street Station 92505+00	LT	1	
Station 92509+75	RT	1	

**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

LINEWORK	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

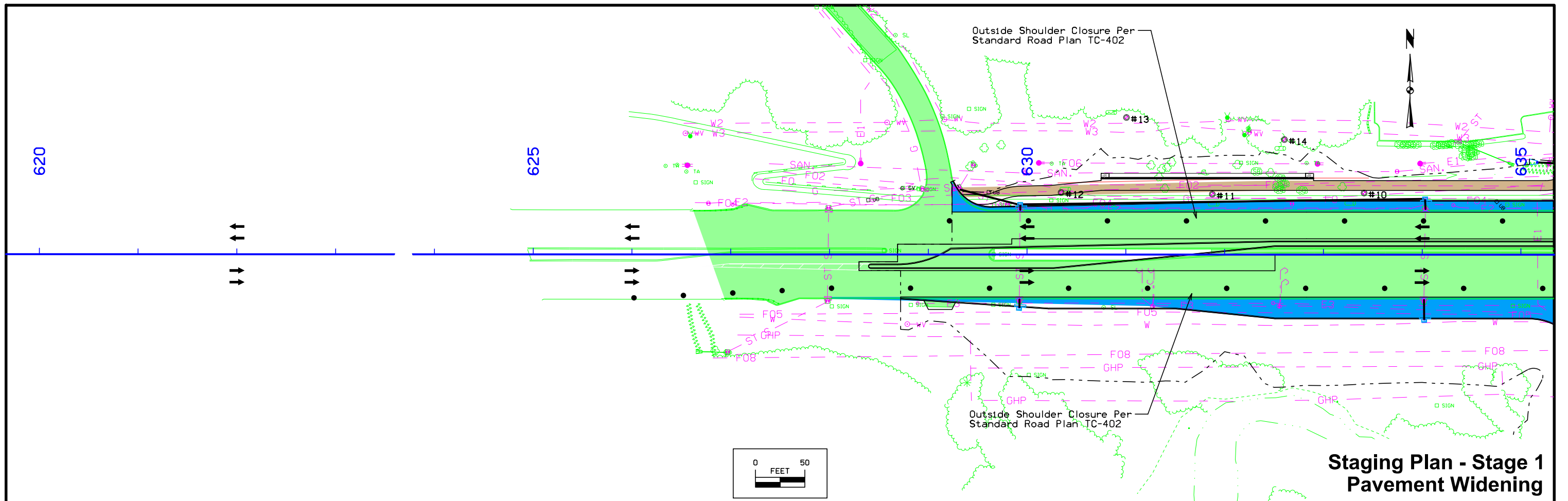
**PLAN VIEW PATTERN AND SYMBOL LEGEND
OF TRAFFIC CONTROL AND STAGING SHEETS**

●	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

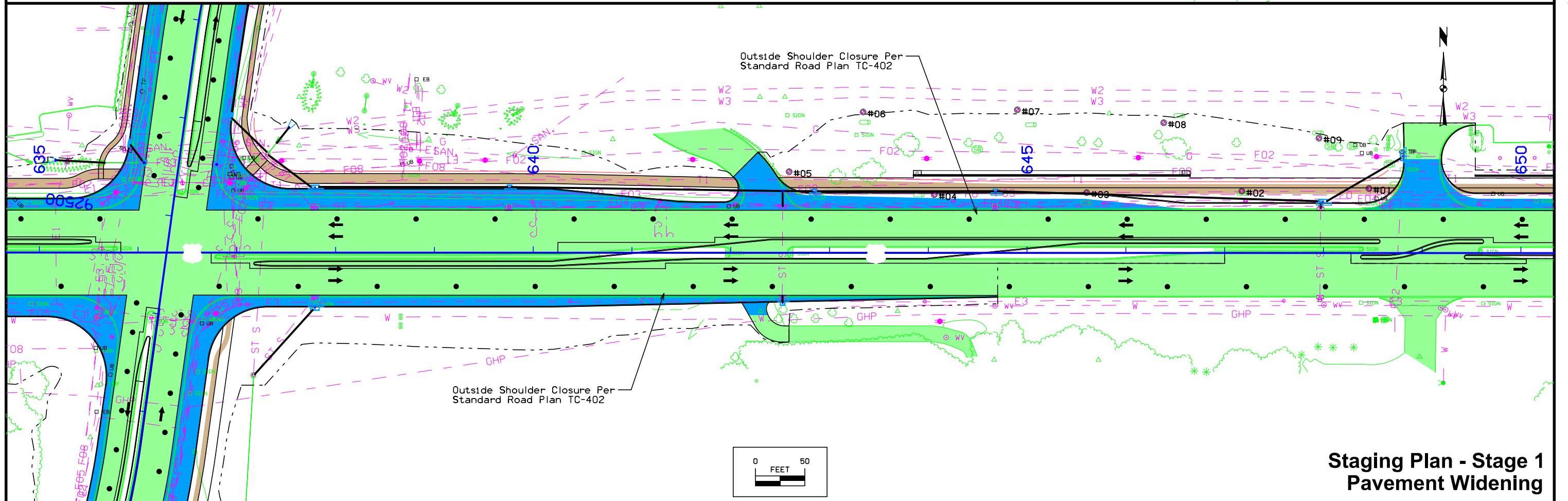
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

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

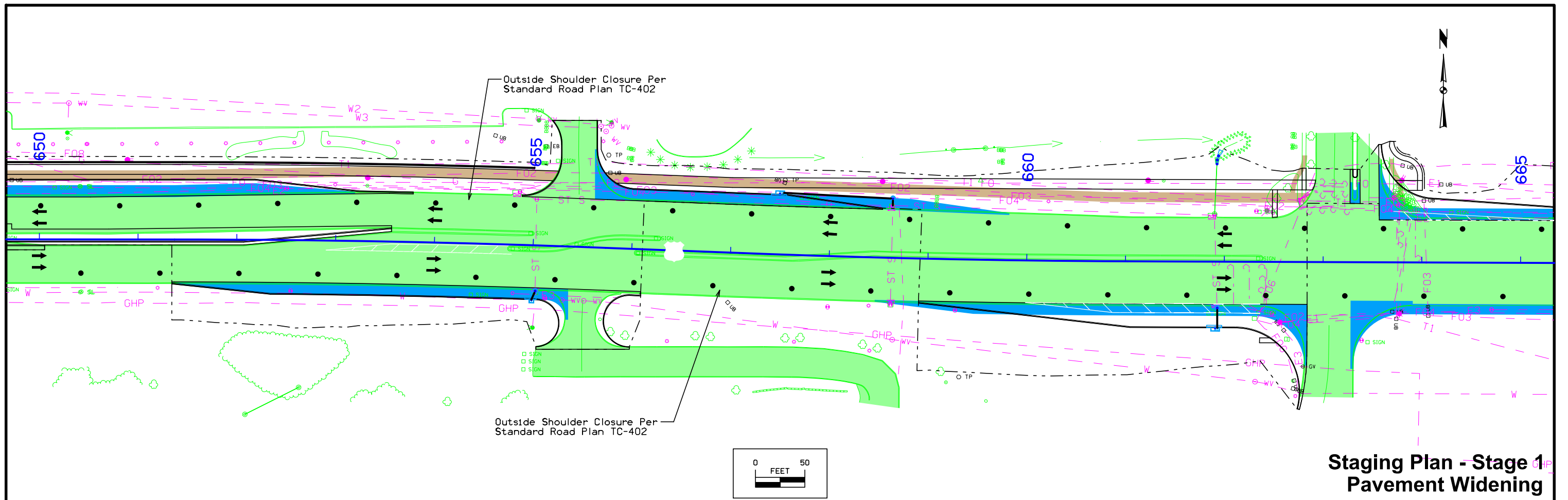
(COVERS SHEET SERIES J)



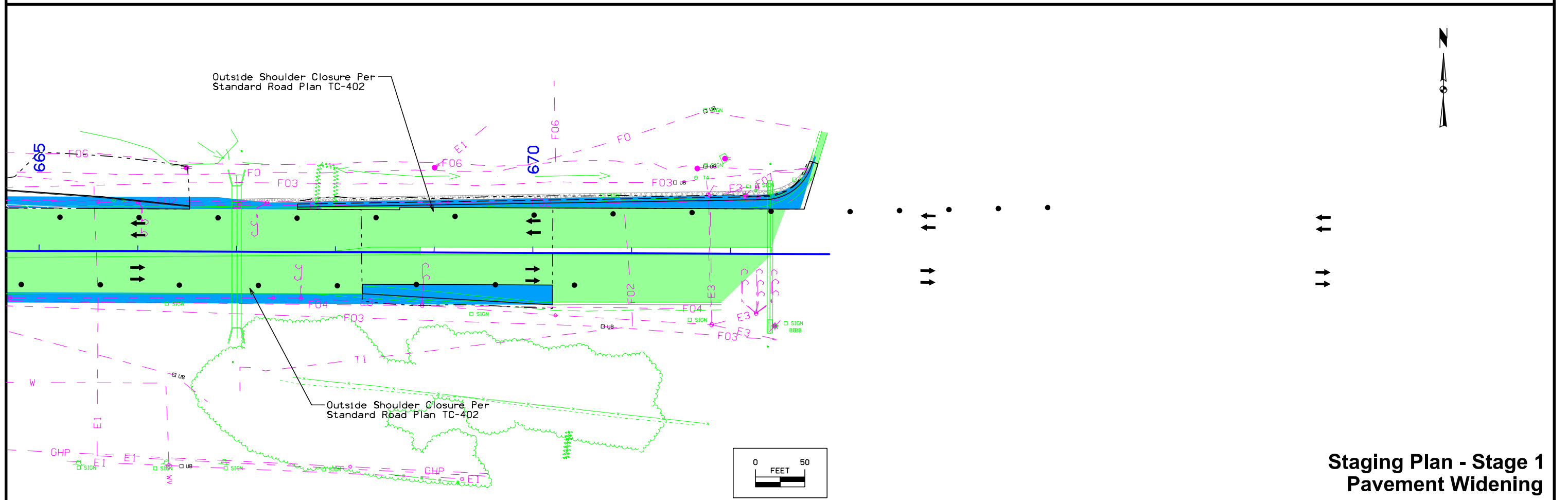
**Staging Plan - Stage 1
Pavement Widening**



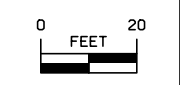
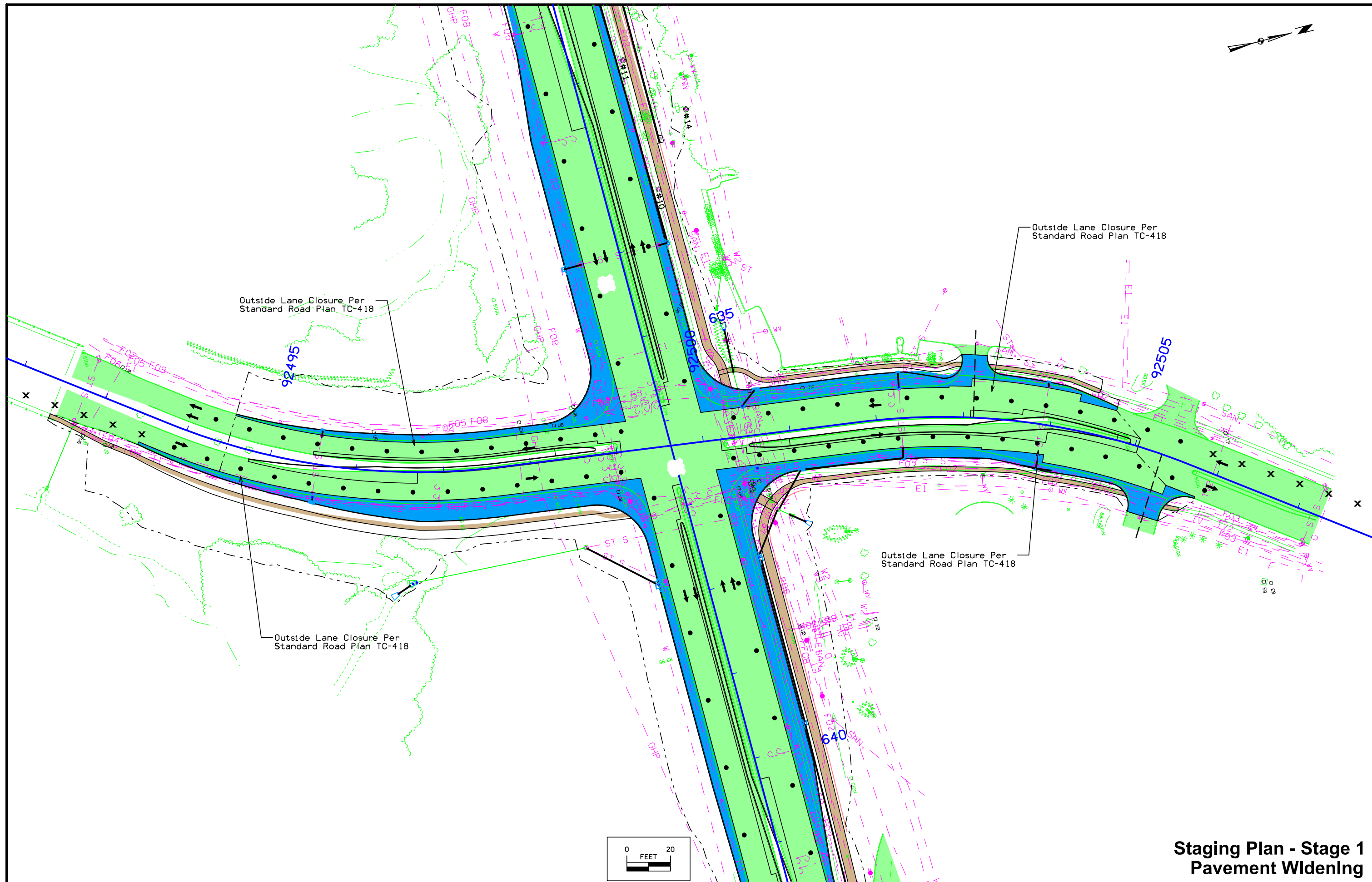
**Staging Plan - Stage 1
Pavement Widening**



**Staging Plan - Stage 1
Pavement Widening**

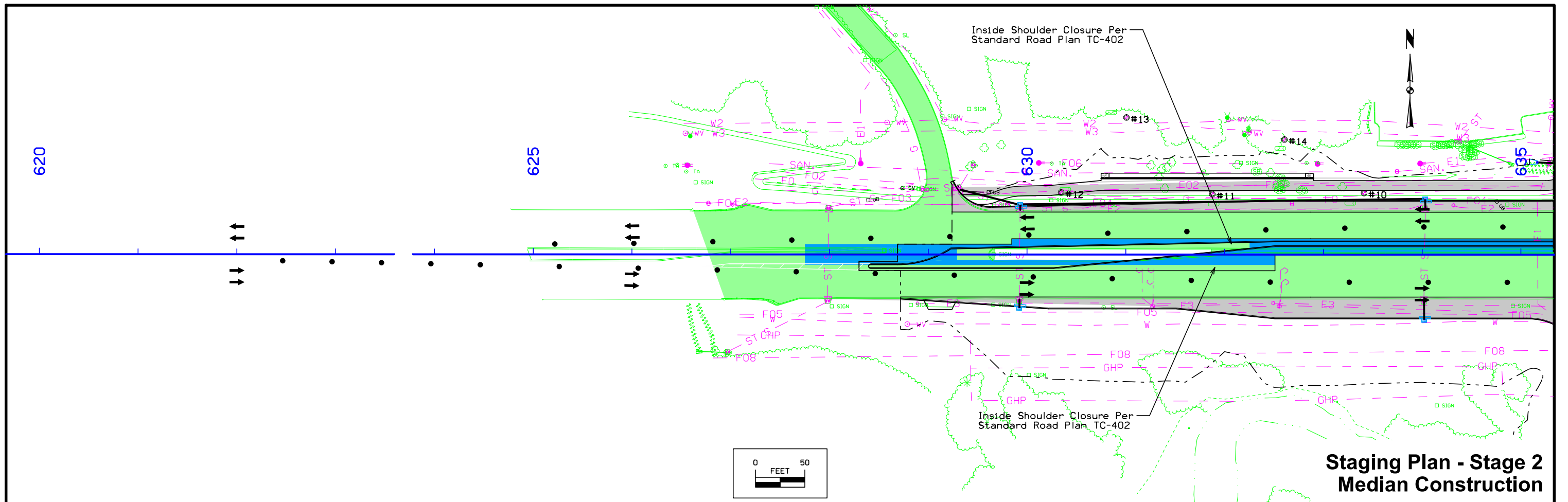


**Staging Plan - Stage 1
Pavement Widening**

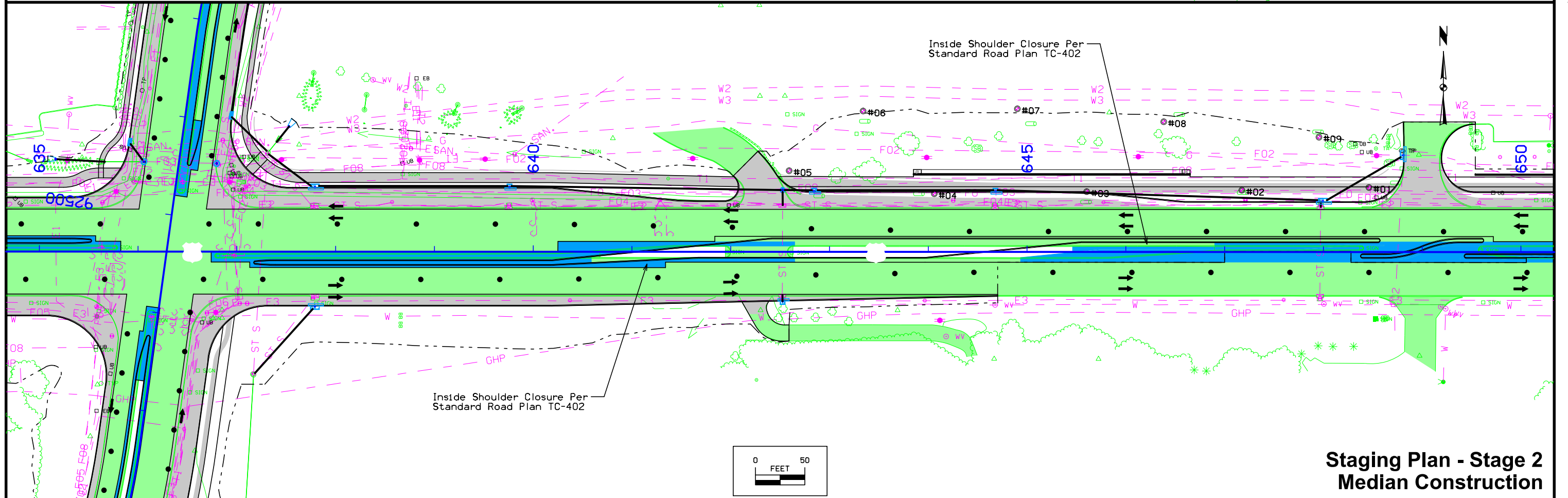


**Staging Plan - Stage 1
Pavement Widening**

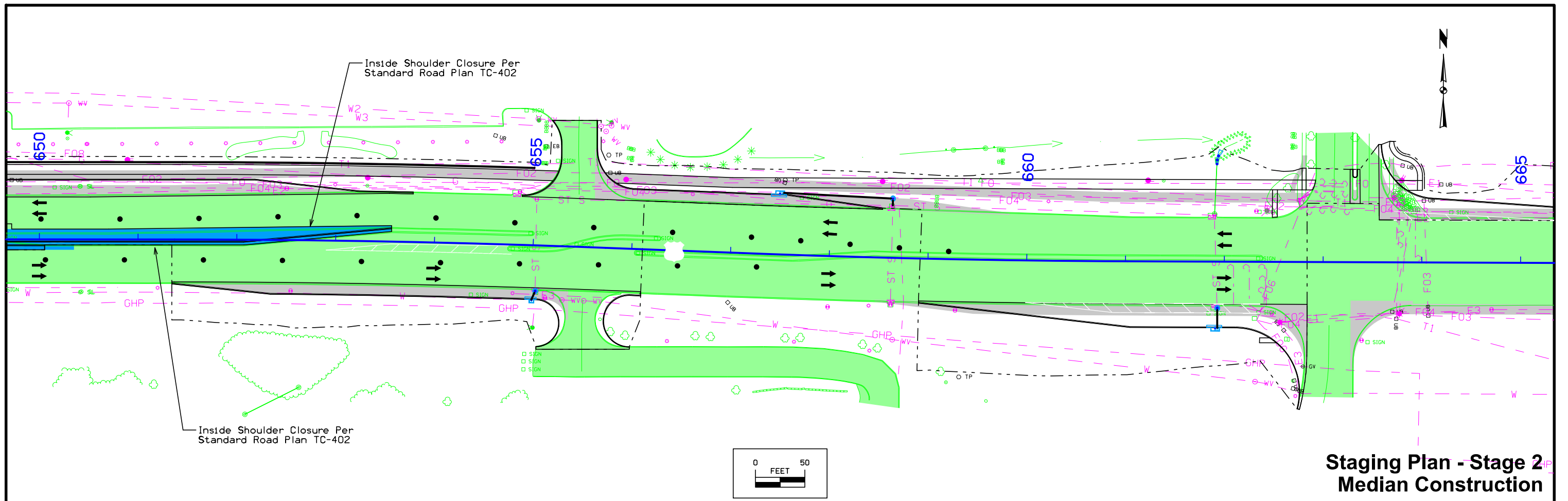
FILE NO.	ENGLISH	DESIGN TEAM	SNYDER & ASSOCIATES, INC.	POLK COUNTY	PROJECT NUMBER	NHSX-006-4(189)--3H-77	SHEET NUMBER	J.5
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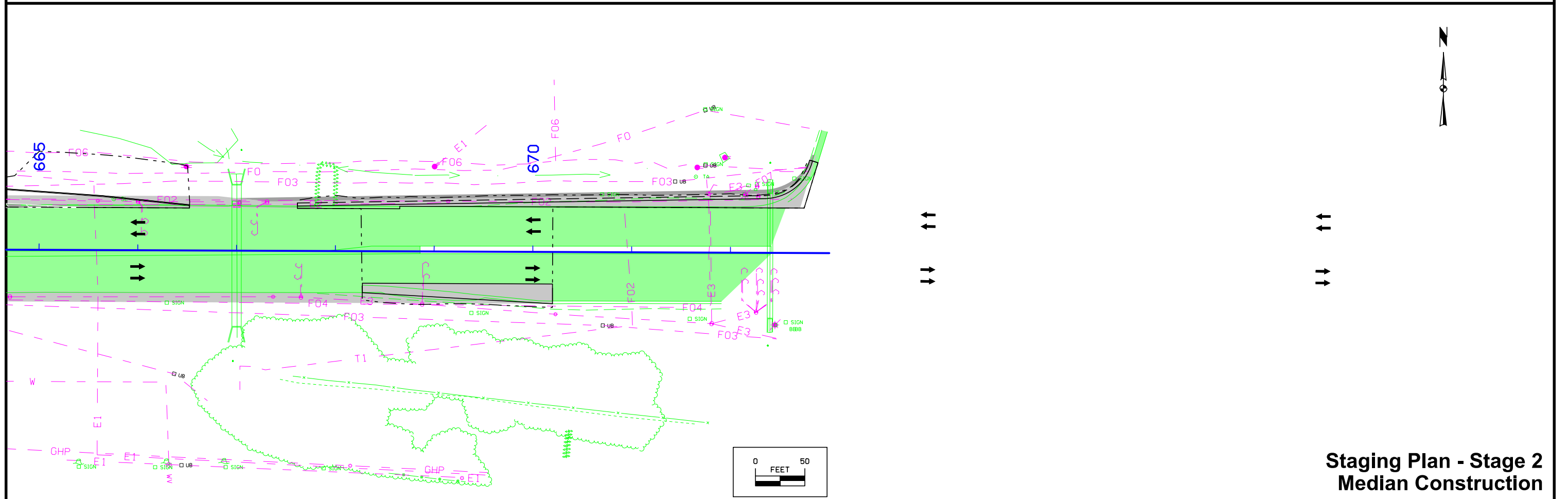
**Staging Plan - Stage 2
Median Construction**



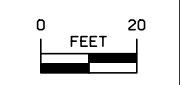
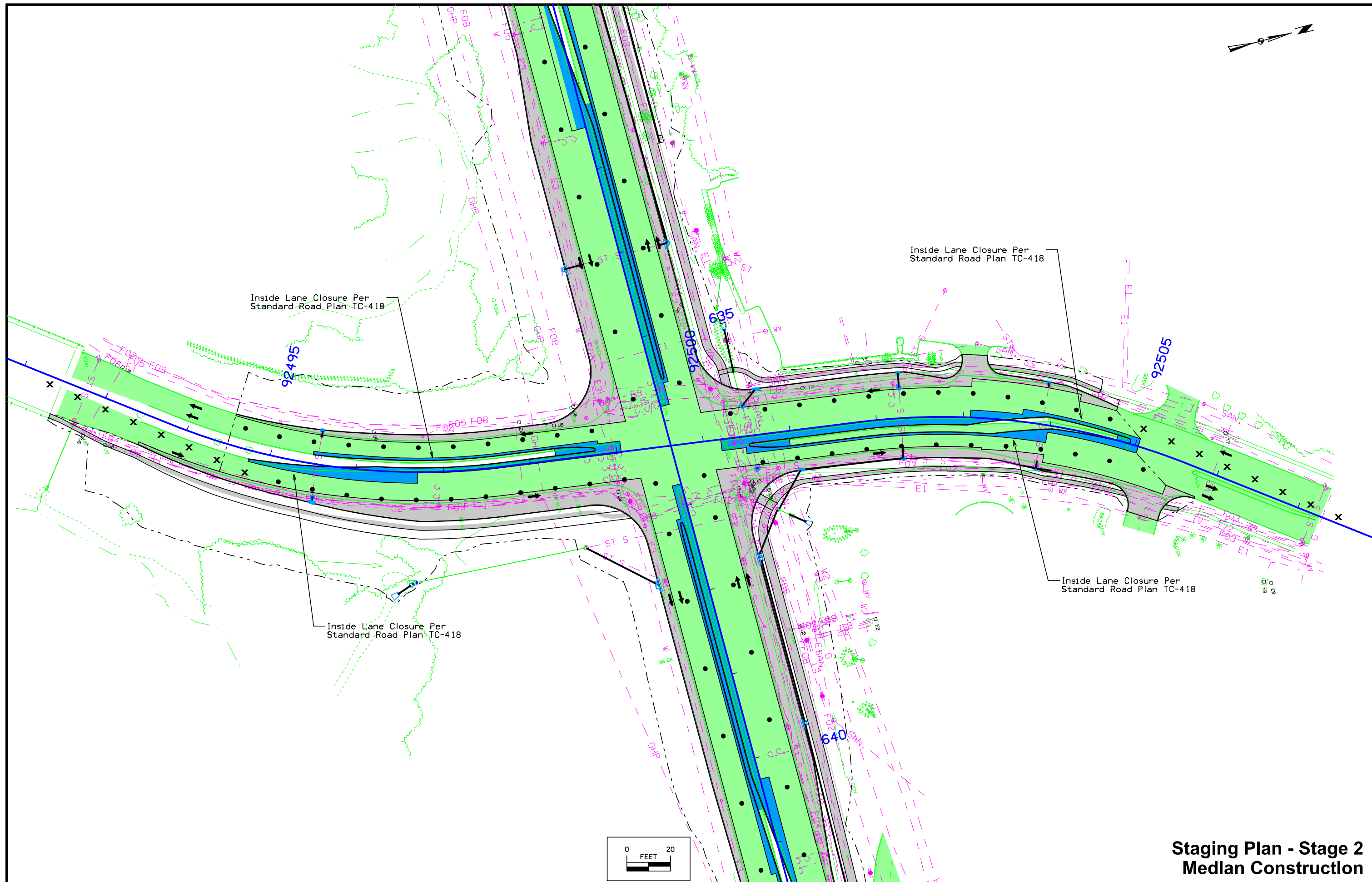
**Staging Plan - Stage 2
Median Construction**



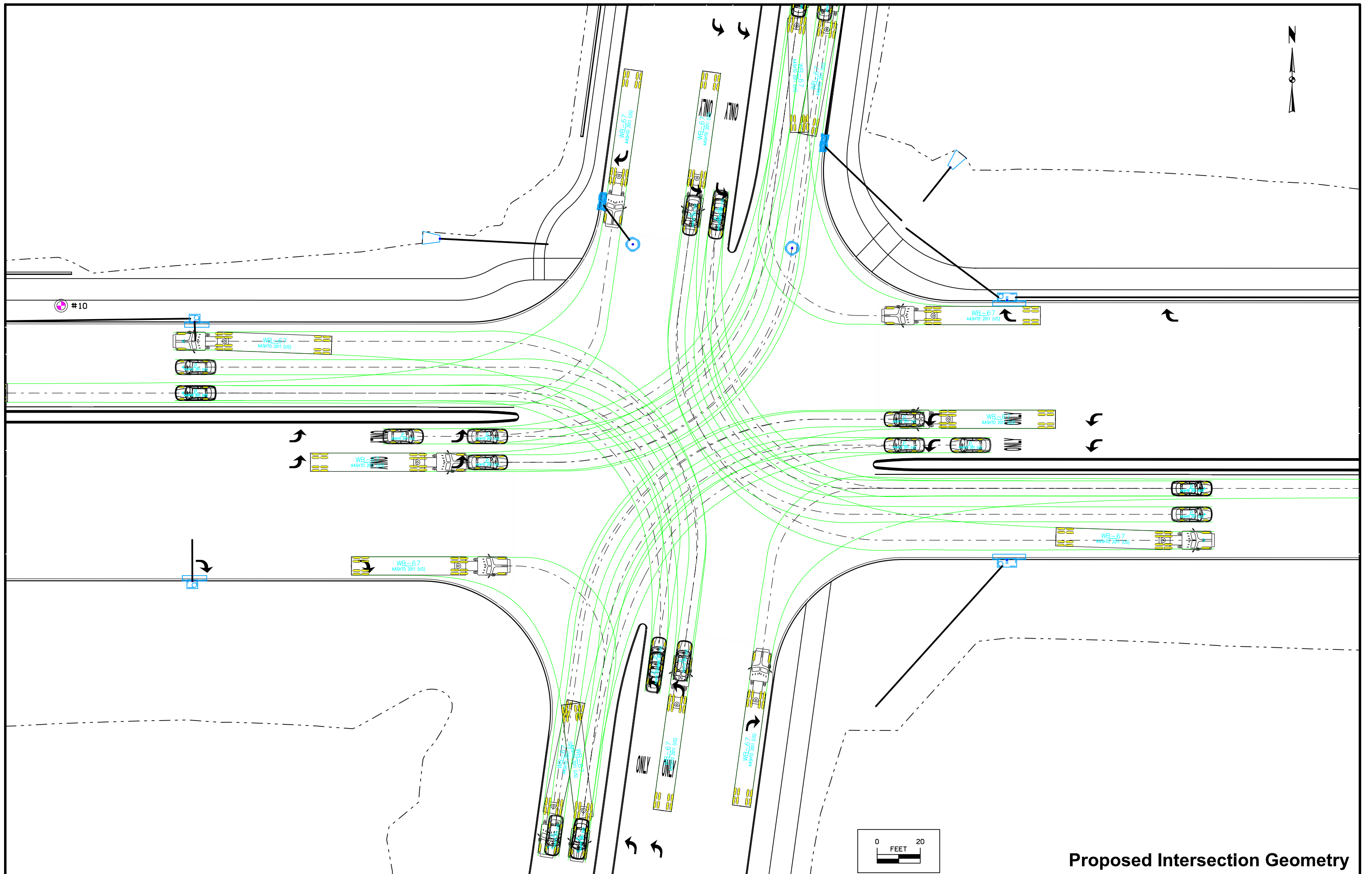
**Staging Plan - Stage 2
Median Construction**



**Staging Plan - Stage 2
Median Construction**



**Staging Plan - Stage 2
Median Construction**



Proposed Intersection Geometry

① Diameter or equivalent diameter

* Bid Item
** For SW-545

STORM SEWER

INTAKES AND UTILITY ACCESSES							PIPES															
							Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional length is added to each side of the Design Length to account for estimated length to center of structures.															
No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade	Bottom Well	Extension Length**	Notes	Line Number	Intake/Utility Access No.		Class 'D'	Pipe Size ①	Bid* Length	Design Length	Slope %	Connected Pipe Joint (DR-121)	Flow Lines			Pipe Profile Sheet No.	Notes		
			Elev.	Elev.	FT			From	To							IN	FT	FT			Type	Inlet Elevation
ST-01	634+02.00, 65.00' RT	SW-507					P-01	ST-01	ST-01A	2000	15								M.3			
ST-01A	634+01.85, 45.06' RT	SW-507 (Existing Structure)						ST-01AST-02A													Existing Pipe	
ST-02A	634+03.25, 44.19' LT	SW-507 (Existing Structure)					P-02A	ST-02A	ST-02	2000	15								M.3			
ST-02	634+03.00, 55.00' LT	SW-507					P-02	ST-02	ST-04	2000	15								M.3			
ST-03	629+92.00, 53.02' RT	SW-507					P-03	ST-03	ST-03A	2000	15								M.3			
ST-03A	629+92.34, 44.64' RT	SW-507 (Existing Structure)						ST-03AST-04A													Existing Pipe	
ST-04A	629+93.10, 45.03' LT	SW-507 (Existing Structure)					P-04A	ST-04A	ST-04	2000	15								M.3			
ST-04	629+93.00, 49.27' LT	SW-507					P-04	ST-04	ST-05	2000	24								M.3			
ST-05	629+29.47, 66.80' LT	SW-507 (Existing Structure)																				
ST-06A	647+97.38, 44.92' LT	SW-507 (Existing Structure)					P-06A	ST-06A	ST-06	2000	15											
ST-06	647+97.50, 50.97' LT	SW-507					P-06	ST-06	ST-07	2000	18											
ST-07	644+68.00, 60.97' LT	SW-507					P-07	ST-07	ST-08	2000	18											
ST-08	642+84.23, 60.97' LT	SW-507					P-08	ST-08	ST-10	2000	18											
ST-09	642+52.50, 49.81' RT	SW-507					P-09	ST-09	ST-09A	2000	15											
ST-09A	642+52.34, 43.82' RT	SW-507 (Existing Structure)						ST-09AST-10A														Existing Pipe
ST-10A	642+52.33, 46.85' LT	SW-511 (Existing Structure)					P-10A	ST-10A	ST-10	2000	15											
ST-10	642+52.50, 62.50' LT	SW-401 (48")					P-10	ST-10	ST-11	2000	18											
ST-11	639+76.00, 65.00' LT	SW-507					P-11	ST-11	ST-12	2000	18											
ST-12	637+79.00, 65.00' LT	SW-509					P-12	ST-12	ST-24	2000	18											
ST-13	92500+39.39, 132.06' LT	DR-201 (36")					P-13	ST-13	ST-13A	2000	36											
ST-13A	92500+44.08, 74.25' LT	DR-201 (36" Existing)						ST-13AST-15														Existing Pipe
ST-14	92500+67.19, 53.00' LT	SW-505					P-14	ST-14	ST-15	2000	15											
ST-15	92500+49.44, 35.24' LT	SW-401 (60")						ST-15	ST-16													Existing Pipe
ST-16	92500+57.76, 38.00' RT	SW-401 (60")						ST-16	ST-24													Existing Pipe
ST-17	92503+91.00, 49.54' LT	SW-501					P-17	ST-17	ST-17A	2000	15											
ST-17A	92503+91.69, 46.91' lt	SW-501 (Existing Structure)						ST-17AST-18A														Existing Pipe
ST-18A	92503+90.88, 45.39' rt	SW-501 (Existing Structure)					P-18A	ST-18A	ST-18	2000	15											
ST-18	92503+91.00, 51.88' RT	SW-501					P-18	Ex. ST-18		2000	15											
ST-19	92502+28.00, 53.00' LT	SW-501					P-18B	ST-18	Ex.	2000	24											
ST-20	92502+27.84, 35.55' LT	SW-401 (48")					P-19	ST-19	ST-20	2000	15											
ST-21A	92502+28.64, 36.34' RT	SW-501 (Existing Structure)						ST-20ST-21A														Existing Pipe
ST-21	92502+28.01, 47.01' RT	SW-501					P-21A	ST-21A	ST-21	2000	15											
ST-22	92501+08.00, 47.00' RT	SW-505					P-21	ST-21	ST-22	2000	24											
ST-23	92501+11.66, 109.59' RT	DR-201 (24")					P-22	ST-22	ST-24	2000	24											
ST-23A	92500+87.70, 95.31' RT	DR-201 (24" Existing)						ST-23AST-24														Existing Pipe
ST-24	92500+74.74, 87.59' RT	SW-401 (Existing Structure)																				
ST-25	637+79.00, 55.00' RT	SW-509					P-25	ST-25	ST-26	2000	15											
ST-26	92498+52.19, 104.31' RT	SW-401 (Existing Structure)						ST-26	ST-27													Existing Pipe
ST-27	92496+69.78, 126.77' RT	DR-201 (48" Existing)					P-27	ST-27	ST-28	2000	48											
ST-28	92496+46.52, 144.56' RT	DR-201 (48")																				
ST-29	92495+55.14, 40.26' LT	SW-501					P-29	ST-29	ST-29A	2000	15											
ST-29A	92495+55.30, 35.88' LT	SW-501 (Existing Structure)						ST-29AST-30														Existing Pipe
ST-30	92495+55.00, 38.16' RT	SW-401 (48")					P-30	ST-31	ST-30	2000	15											
ST-31	92495+55.00, 45.10' RT	SW-505																				
ST-32	655+00.00, 54.97' RT	SW-507					P-32	ST-32	ST-33	2000	15											
ST-33	655+03.50, 46.20' RT	SW-401 (48")						ST-33	ST-33A													Existing Pipe
ST-33A	655+02.35, 46.53' LT	SW-401 (Existing Structure)																				
ST-34	658+63.50, 64.45' RT	SW-507					P-34	ST-34	ST-34	2000	15											
ST-35	658+63.32, 47.64' RT	SW-401 (48")																				
ST-36	661+91.00, 67.00' RT	SW-509					P-36	ST-36	ST-37	2000	15											
ST-37	661+93.00, 47.00' RT	SW-401 (48")						ST-37	ST-38A													Existing Pipe
ST-38A	661+90.07, 46.83' LT	SW-507 (Existing Structure)						ST-38AST-38A														Existing Pipe
ST-38	661+92.29, 98.87' LT	DR-201 (24" Existing)					P-38	ST-38	ST-39	2000	24											
ST-39	661+96.33, 112.62' LT	DR-201 (24")																				

SURVEY SYMBOLS

- SWK sidewalk
- CU curb or center island
- GU gutter
- CON concrete or a/c slab
- IN intake-grate,curb,umbrella
- ⊙ MH manhole
- ⊙ FHD fire hydrants
- ⊙ LUM luminaire
- ⊙ WV water valve
- ⊙ EB electrical box
- * TEV evergreen tree
- ⊙ SIGN SI sign
- - - ENT cl of entrance
- ⊙ TDC tree deciduous
- ⊙ TP TPD telephone pedestal
- ⊙ UB utility box
- * TSL traffic signal & lum
- C center of road (ML or SR)
- BB billboard or sign
- ⊙ SIGN SL speed limit sign
- △ RIP rip-rap
- PIP pipes(cast iron,steel,tile,etc)
- TLNR tree line right
- SHR shrub
- PR power riser pole
- DU cl of draw upstream
- RET retaining walls
- ⊙ TA tower anchor
- ⊙ GV gas valve
- EP edge of paved roads
- GDL guard rails
- BRG bridge
- EG edge of gravel road
- D cl of draw or stream
- PPA power pole 1st co.
- GP guard post (less than 4 posts)
- CUL culvet
- SH shoulder
- TLNL tree line left
- TV tv dish
- ⊙ INB intake-beehive
- ST alignment S.T.
- ⊙ S Soil Sampling Site (wetlands)
- ⊙ TVP tv pedestal
- SF Silt Fence (Wetlands)
- STP stump
- FWD wood fence
- - - TDL traffic detection loop
- # FCL security & chain link
- △ BM bench mark
- ENP edge of paved entrance & parking

UTILITY LEGEND

- E1 - EL1D Electric Line MidAmerican Electric - Quality D
- EL2D Electric Line City of Urbandale - Quality D
- E3 - EL3D Electric Line City of Clive - Quality D
- F0 - FO1D Fiber Optic Zayo Group LLC - Quality D
- F02 - FO2D Fiber Optic CenturyLink - Quality D
- F03 - FO3D Fiber Optic MCI/Verizon - Quality D
- F04 - FO4D Fiber Optic ICN - Iowa Communication Networks - Quality D
- F05 - FO5D Fiber Optic Windstream Communications - Quality D
- F06 - FO6D Fiber Optic Unite Private Networks, LLC - Quality D
- F07 - FO7D Fiber Optic City of Clive - Quality D
- F08 - FO8D Fiber Optic Consolidated Communications - Quality D
- G - GL1D Gas Line MidAmerican Gas - Quality D
- GHP - GH1D High Pres Gas MidAmerican Gas - Quality D
- PPA Power Pole MidAmerican Electric
- PR Electric Riser Pole MidAmerican Electric
- ST S - ST1D Storm Sewer Co. 1 - Quality D
- SAN - SA1D Sanitary Sewer Co. 1- Quality D
- T1 - TL1D Telephone Line CenturyLink - Quality D
- TV - TV1D TV Cable Mediacom - Quality D
- TV2 - TV2D TV Cable TDI Cable - Quality D
- W - WL1D Water Line Clive Public Works - Quality D
- W2 - WL2D Water Line DMWW - Des Moines Water Works - Quality D
- W3 - WL3D Water Line City of Urbandale - Quality D

PLAN VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design Color No.	Description
Gray, Dark	(112)	Existing Topographic Features, Utilities, and Labels
Black	(17)	Proposed Storm Sewer Details, Alignment, Stationing, Tlc Marks, and Alignment Annotation
SHADING	Design Color No.	Description
Gray, Light	(48)	Proposed Pavement Shading

PROFILE VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design Color No.	Description
Gray, Dark	(112)	Existing Ground Line Profile and Existing Utilities Information
Black	(17)	Proposed Pipes and Intakes

PLAN VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

- Plug and Abandon Existing Pipe or Structure
- Removal of Existing Pipe or Structure
- Previously Constructed Pipe or Structure
- Direction of Pipe Flow

PROFILE VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

- Existing Ground
- Proposed Ground
- Previously Constructed Pipe or Structure
- Proposed Pipe or Structure

Reference Point

Station

Survey Line

Section Corner

Ground Line Intercept

Saw Cut

Guardrail

Clearing & Grubbing Area

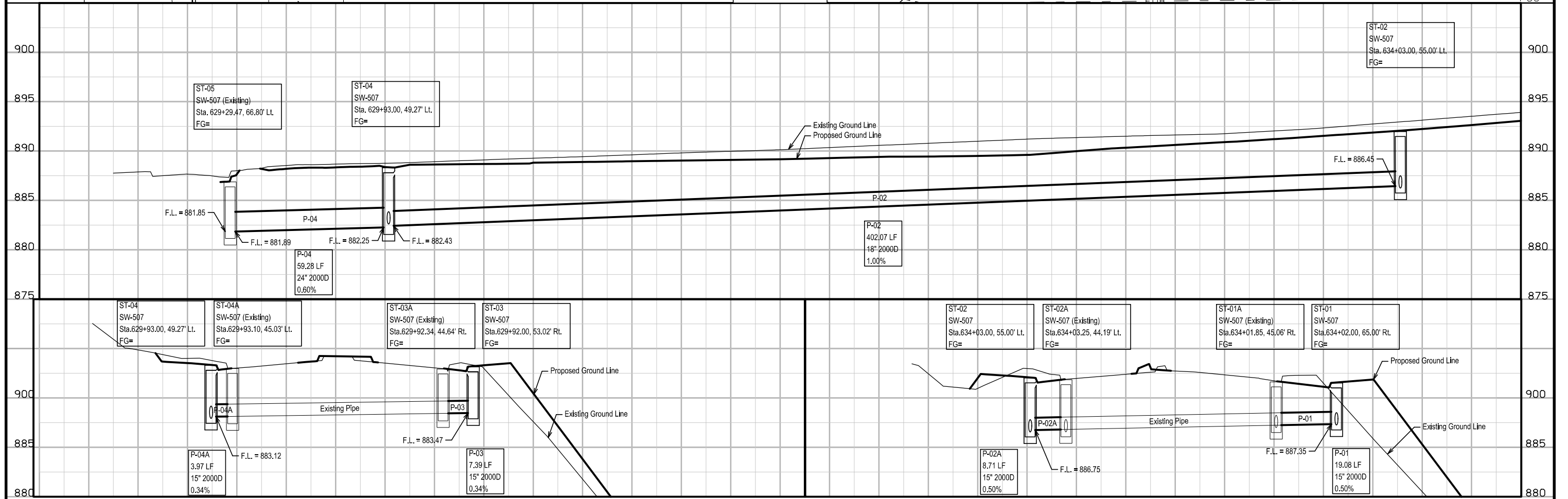
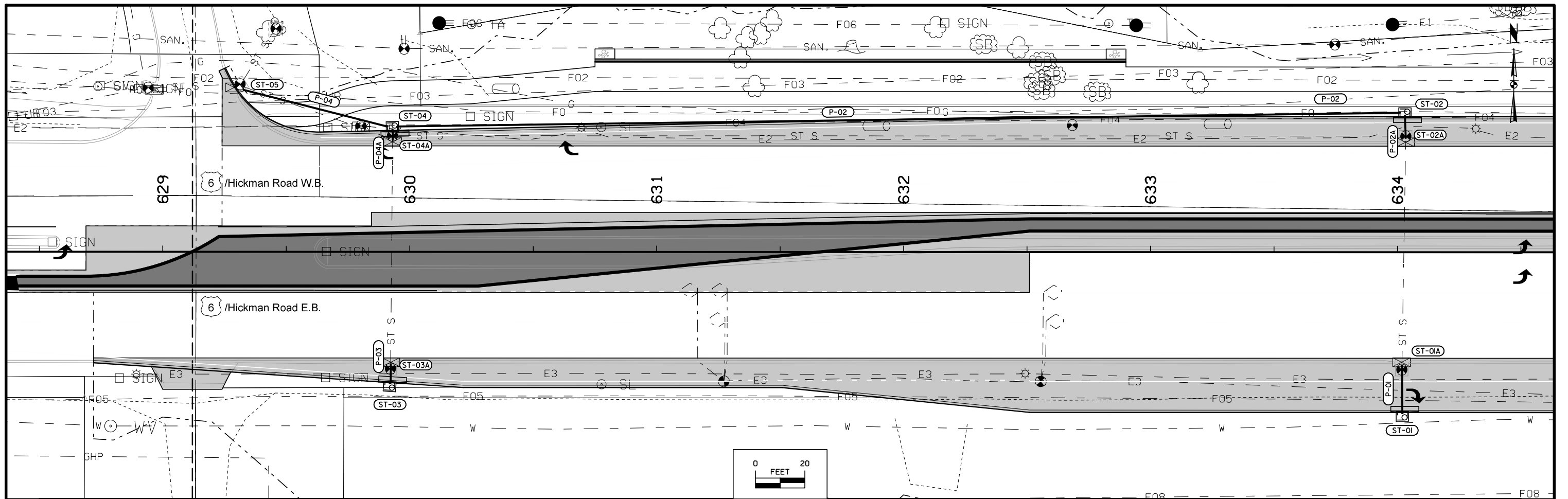
Pavement Removal

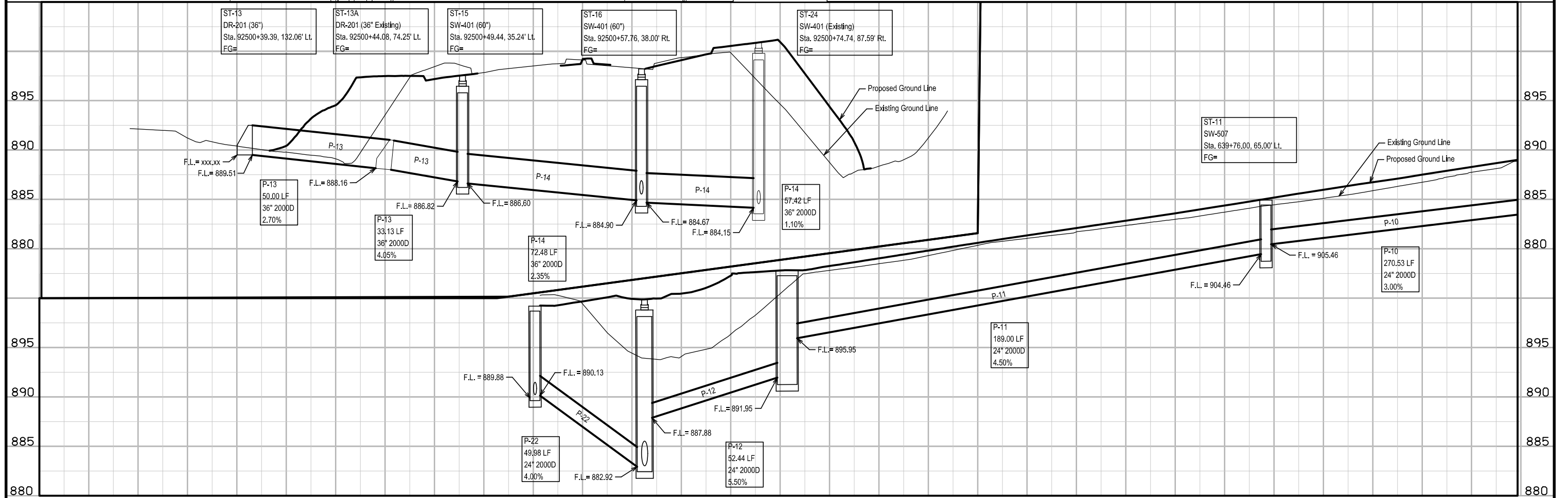
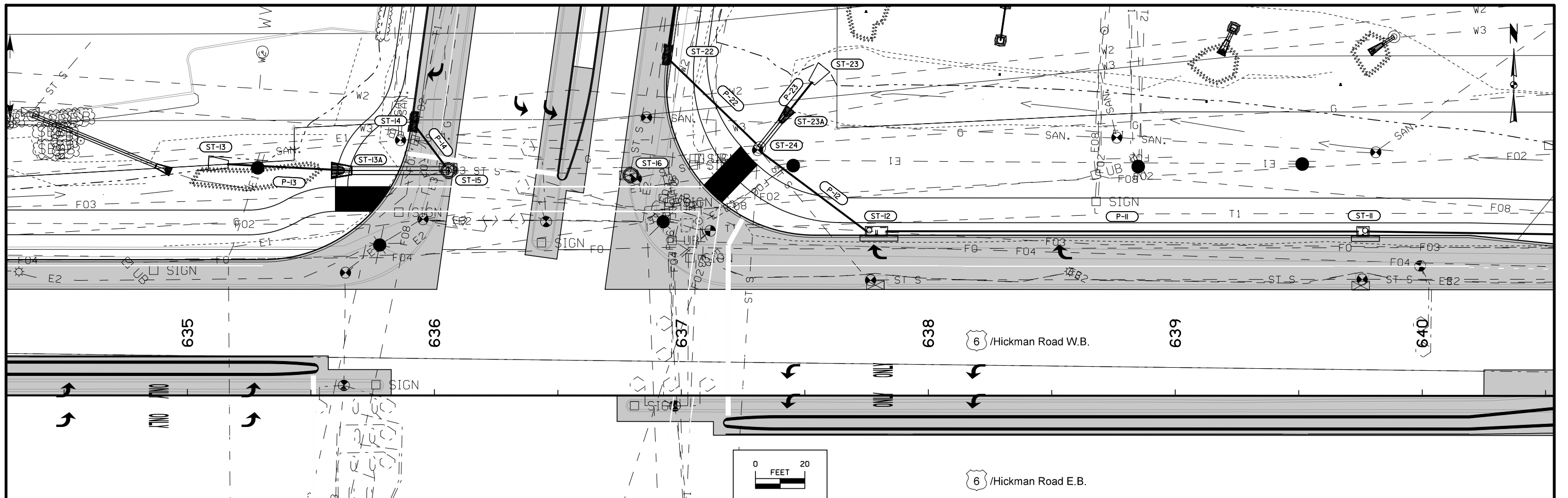
RIGHT-OF-WAY LEGEND

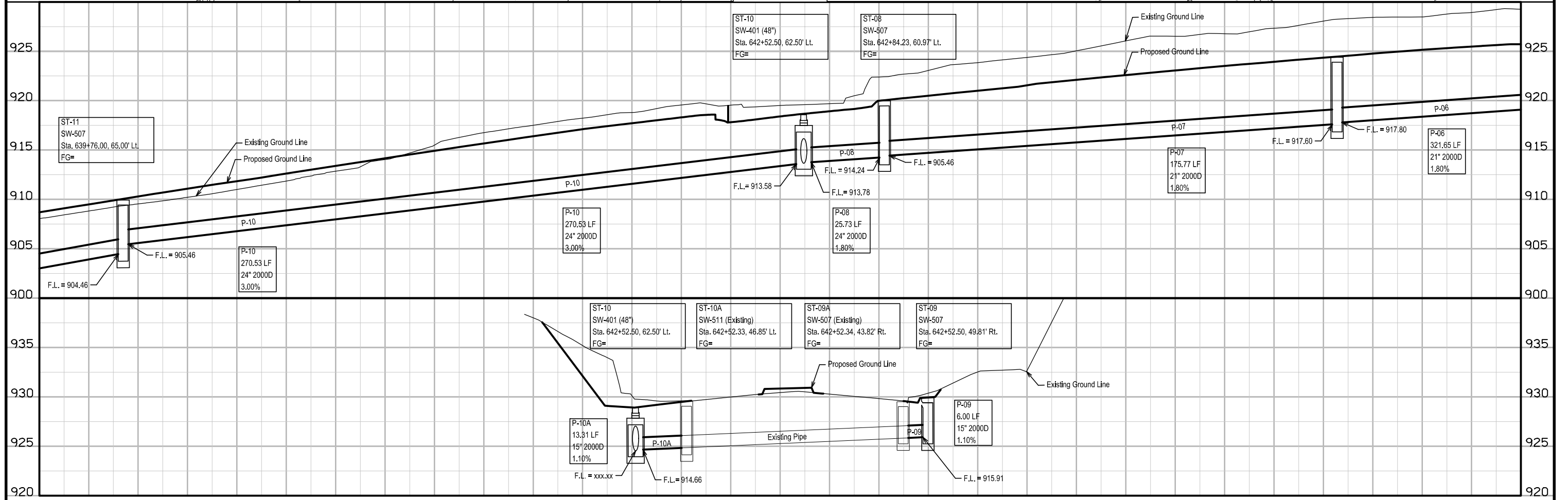
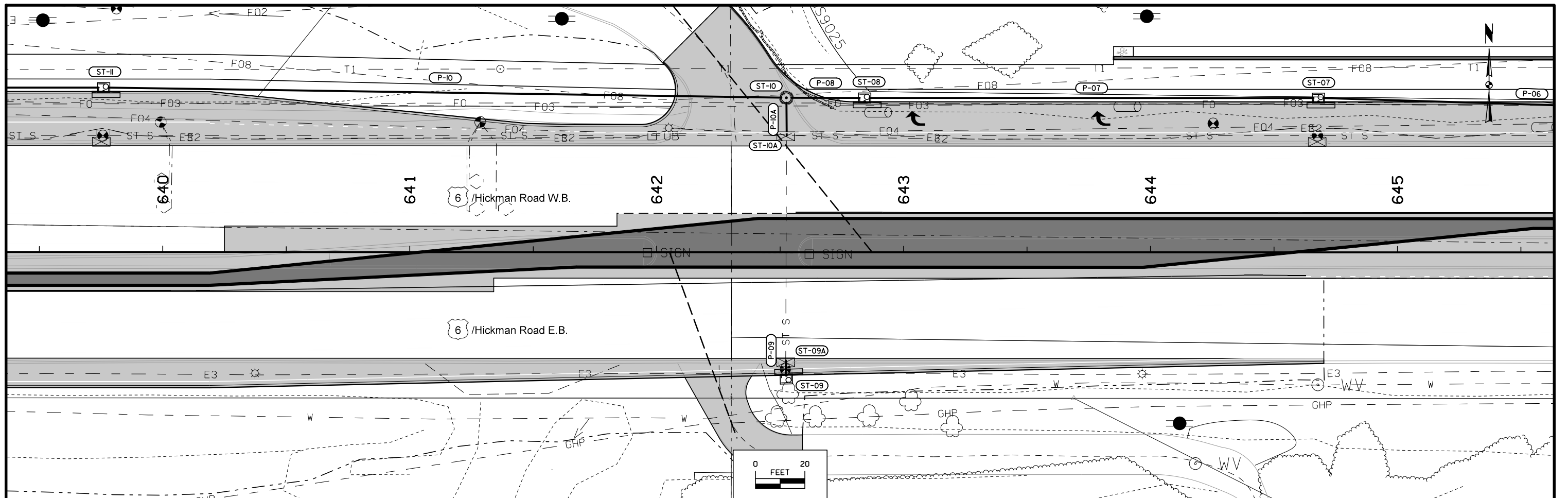
- ▲ Proposed Right-of-Way
- ▲ Existing and Proposed Right-of-Way
- ▲ Easement and Existing Right-of-Way
- Borrow
- Easement (Temporary)
- Easement
- X Excess
- A/C Access Control

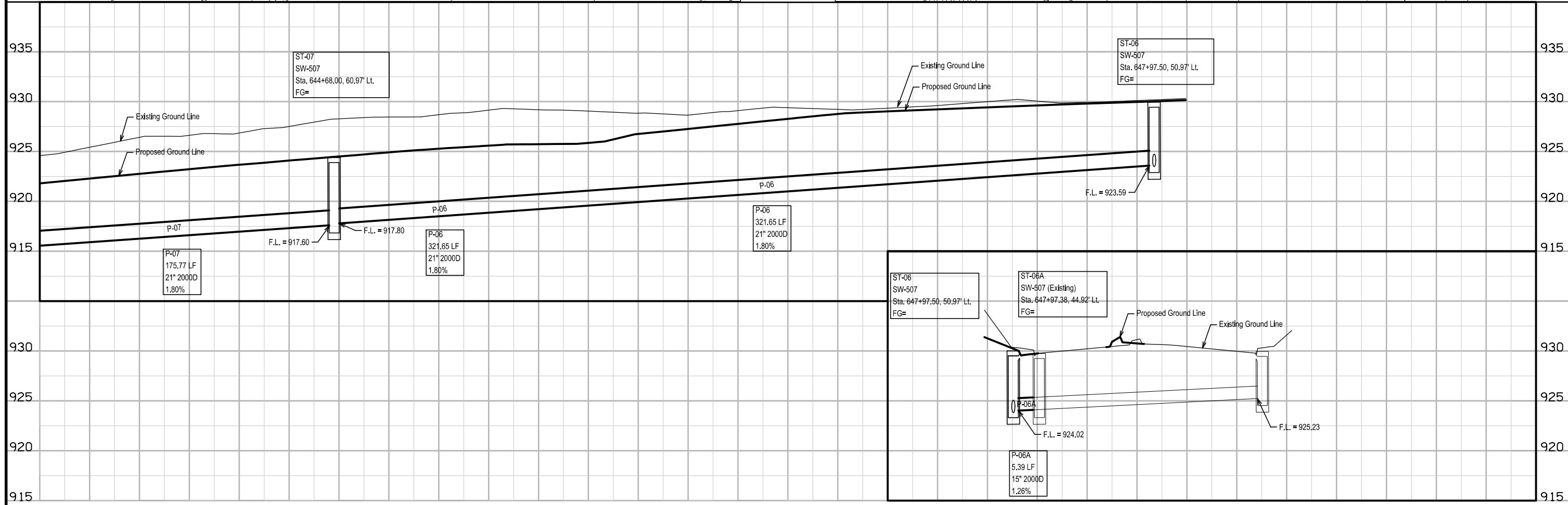
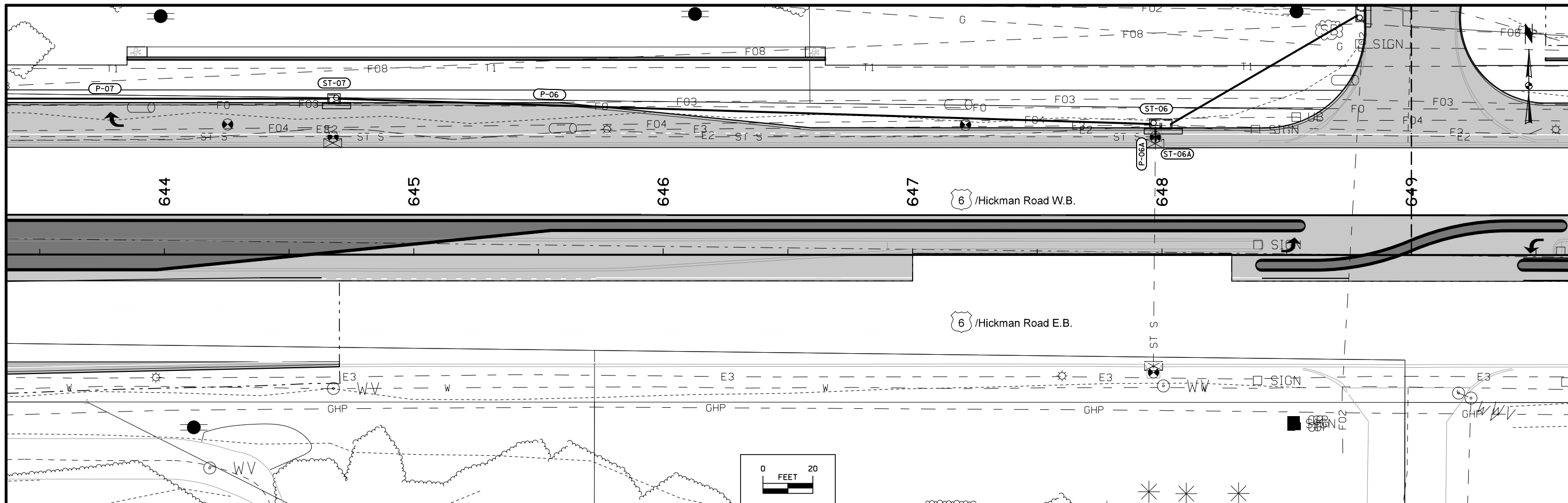
STORM SEWER LEGEND AND SYMBOL INFORMATION SHEET

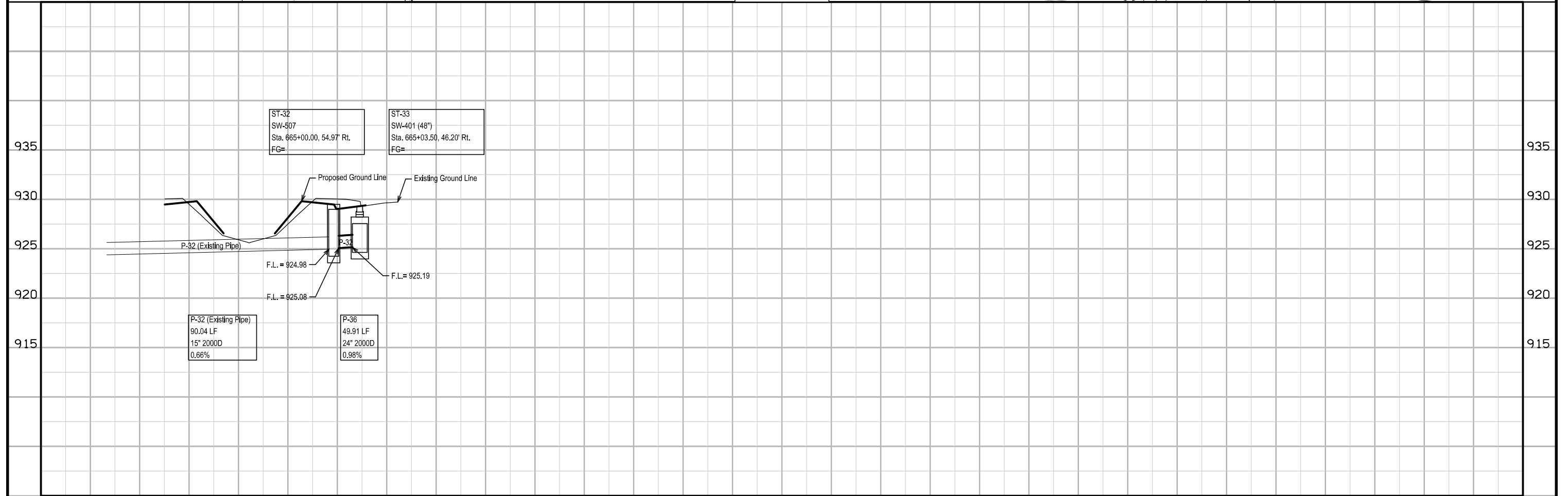
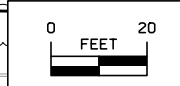
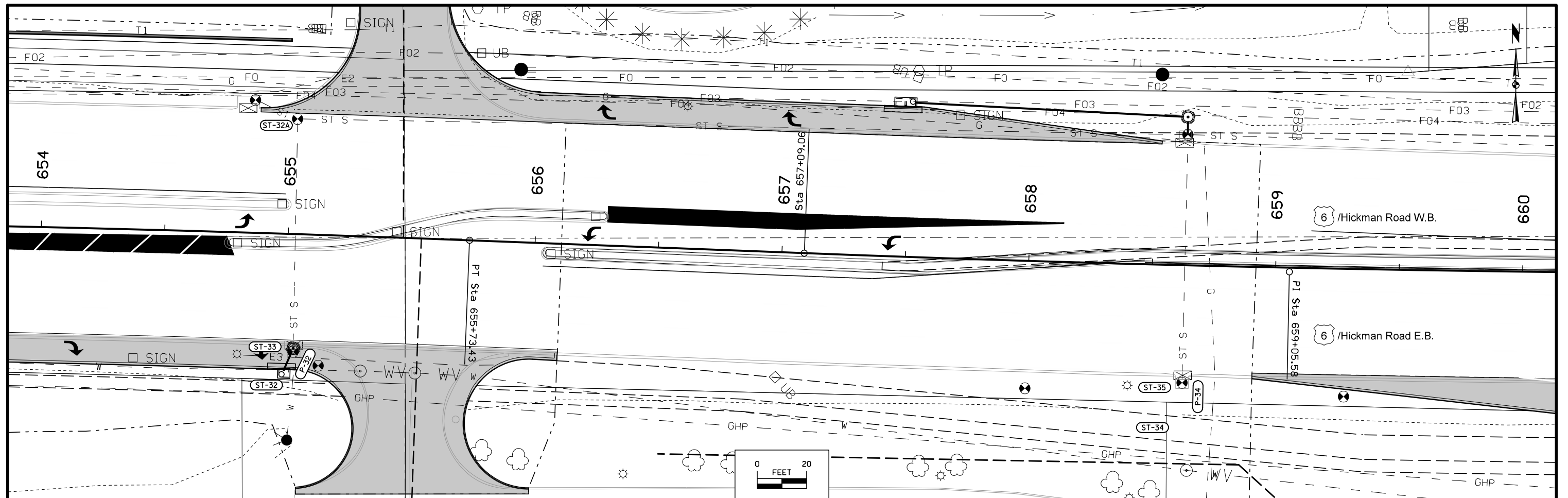
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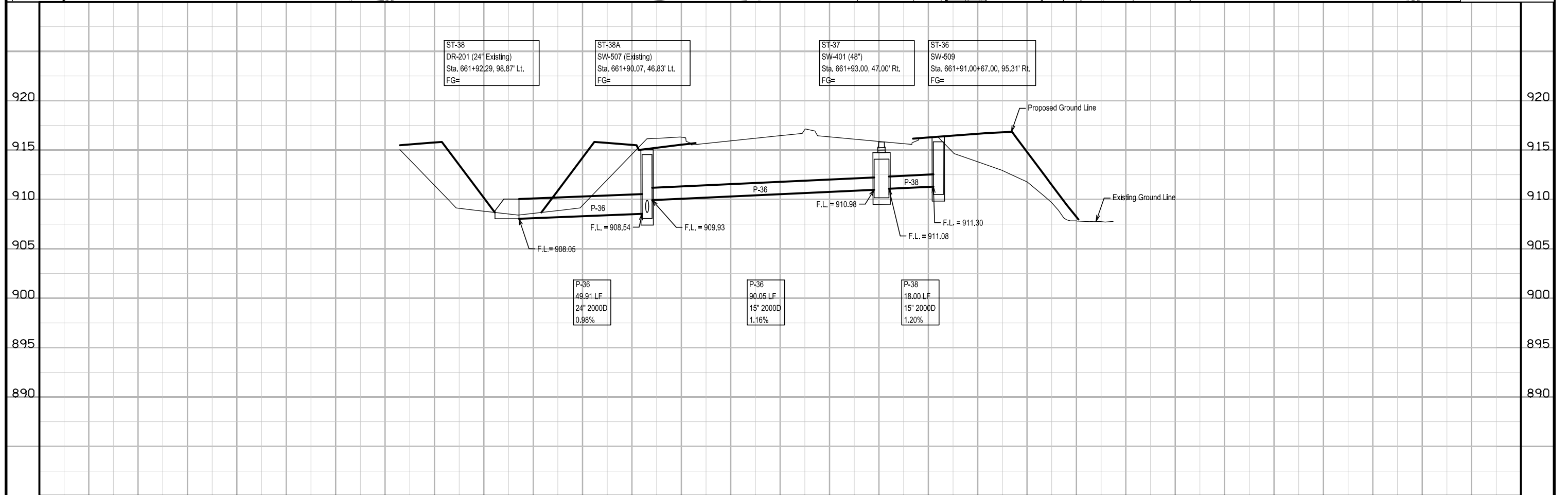
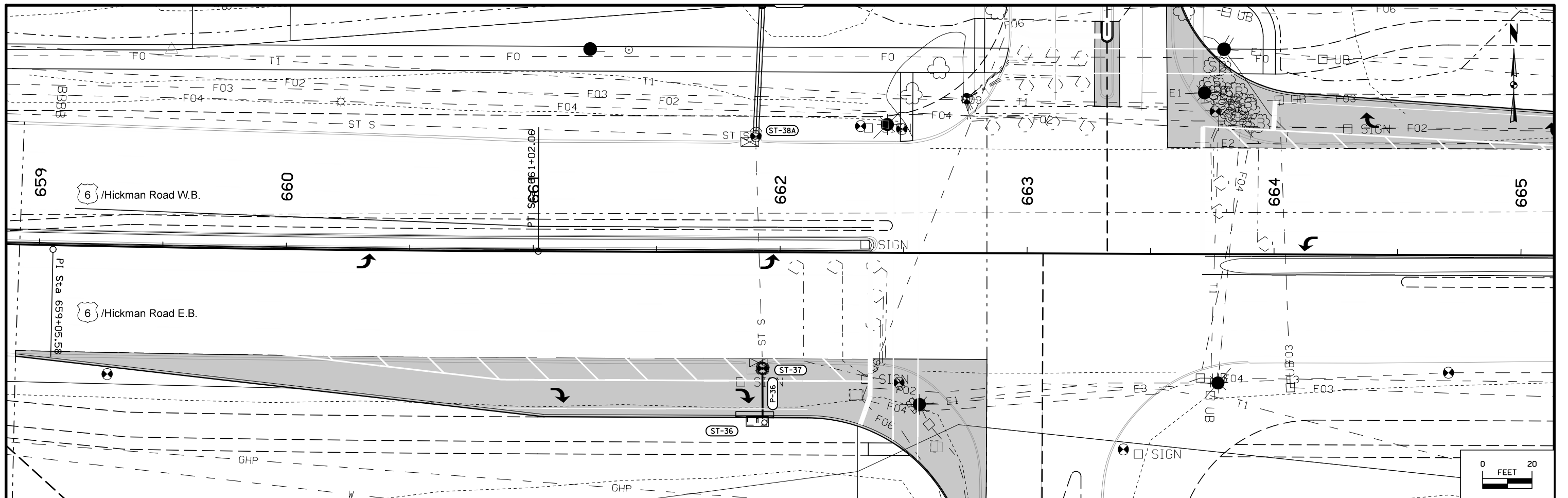


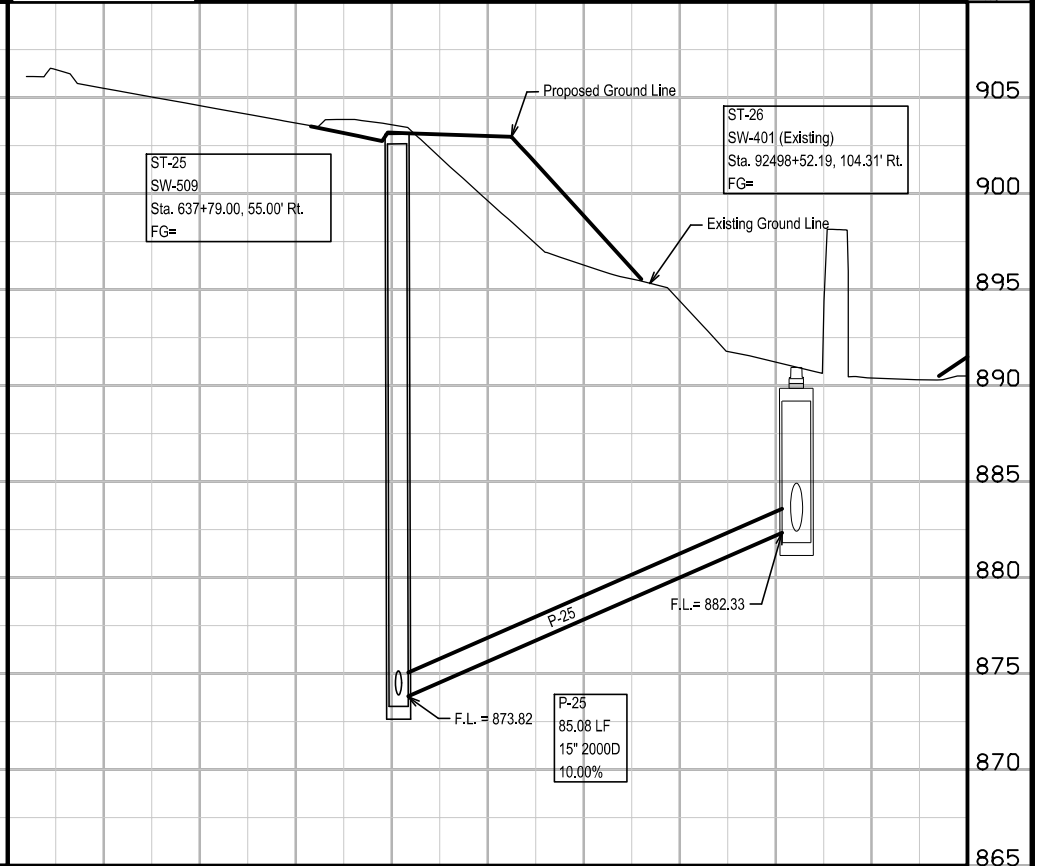
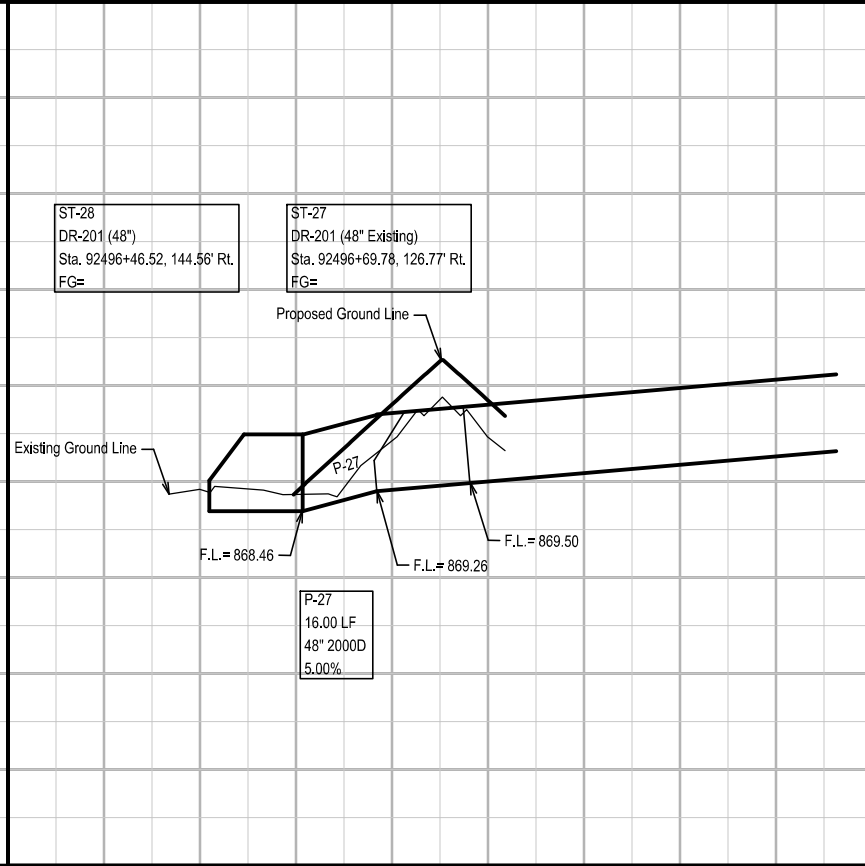
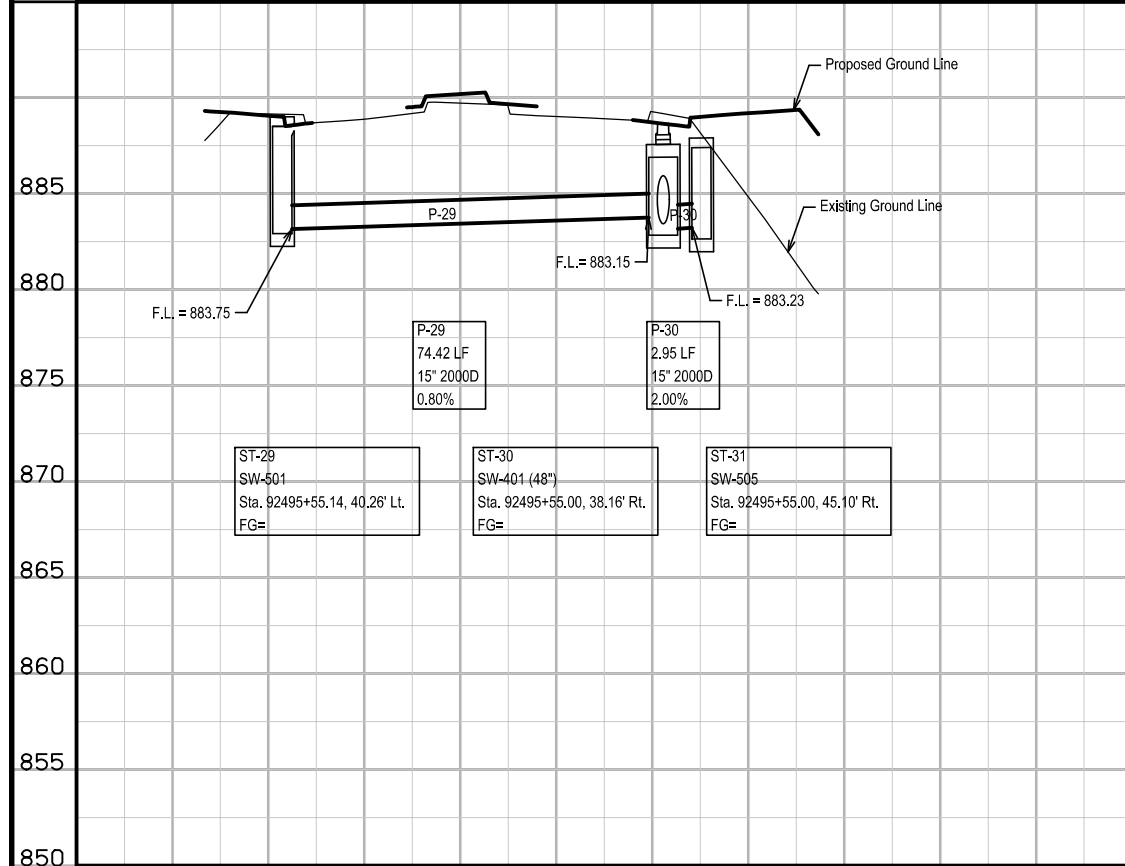
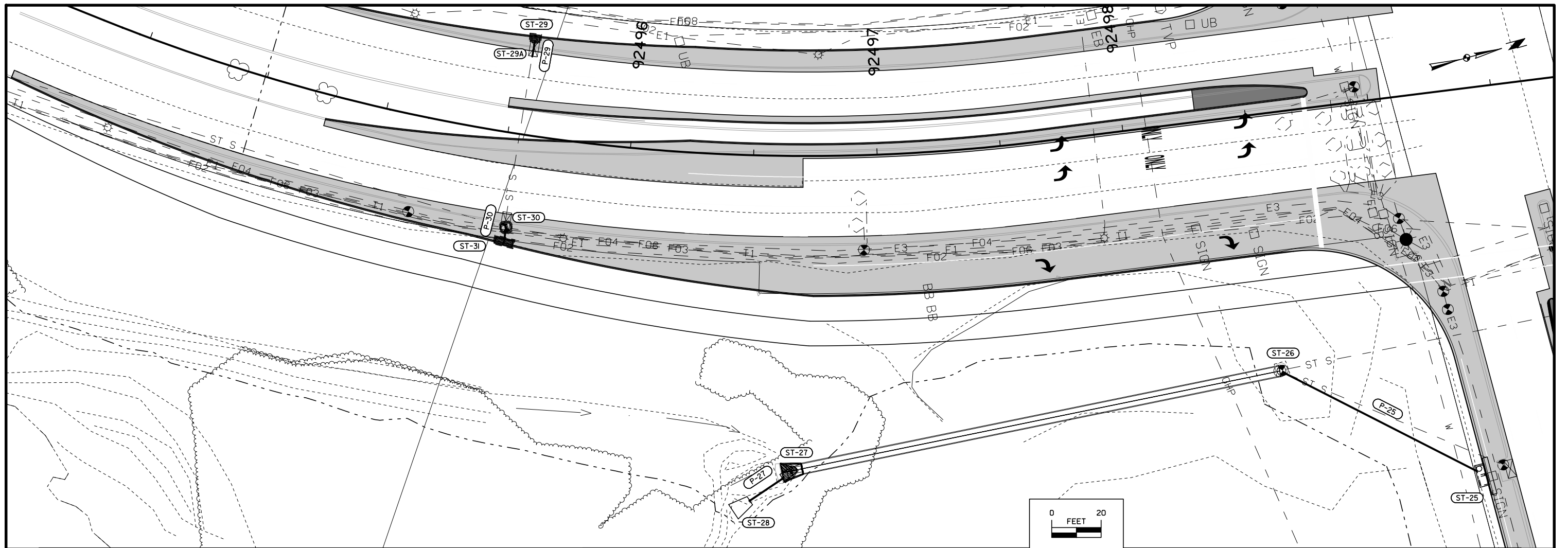


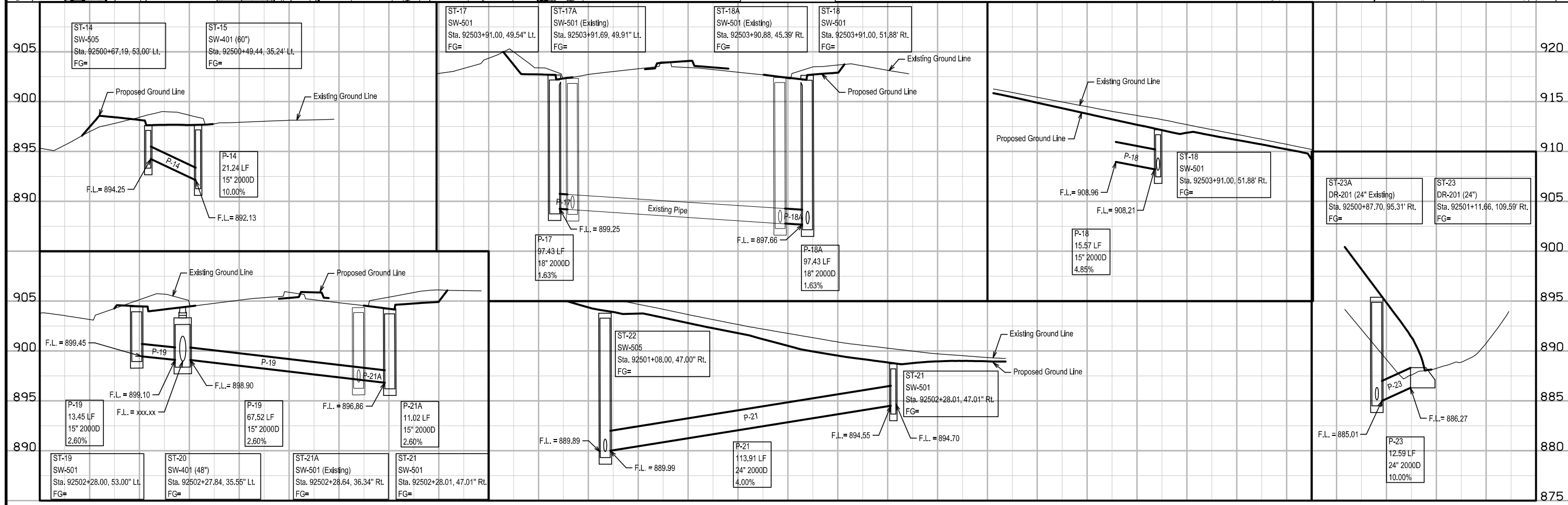
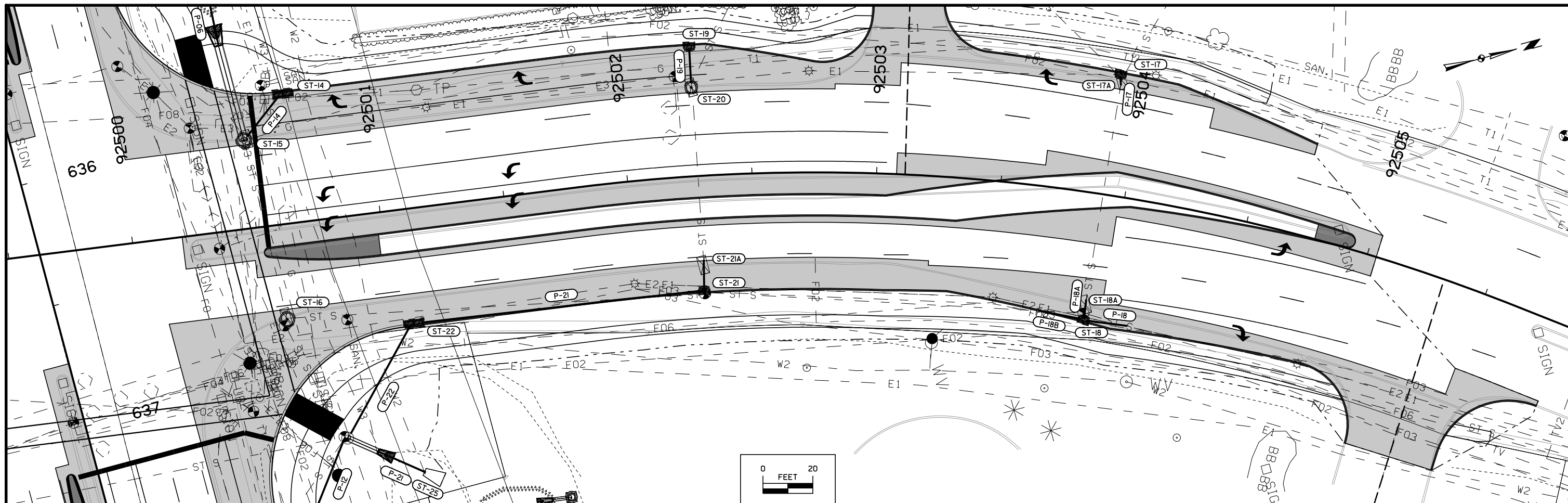


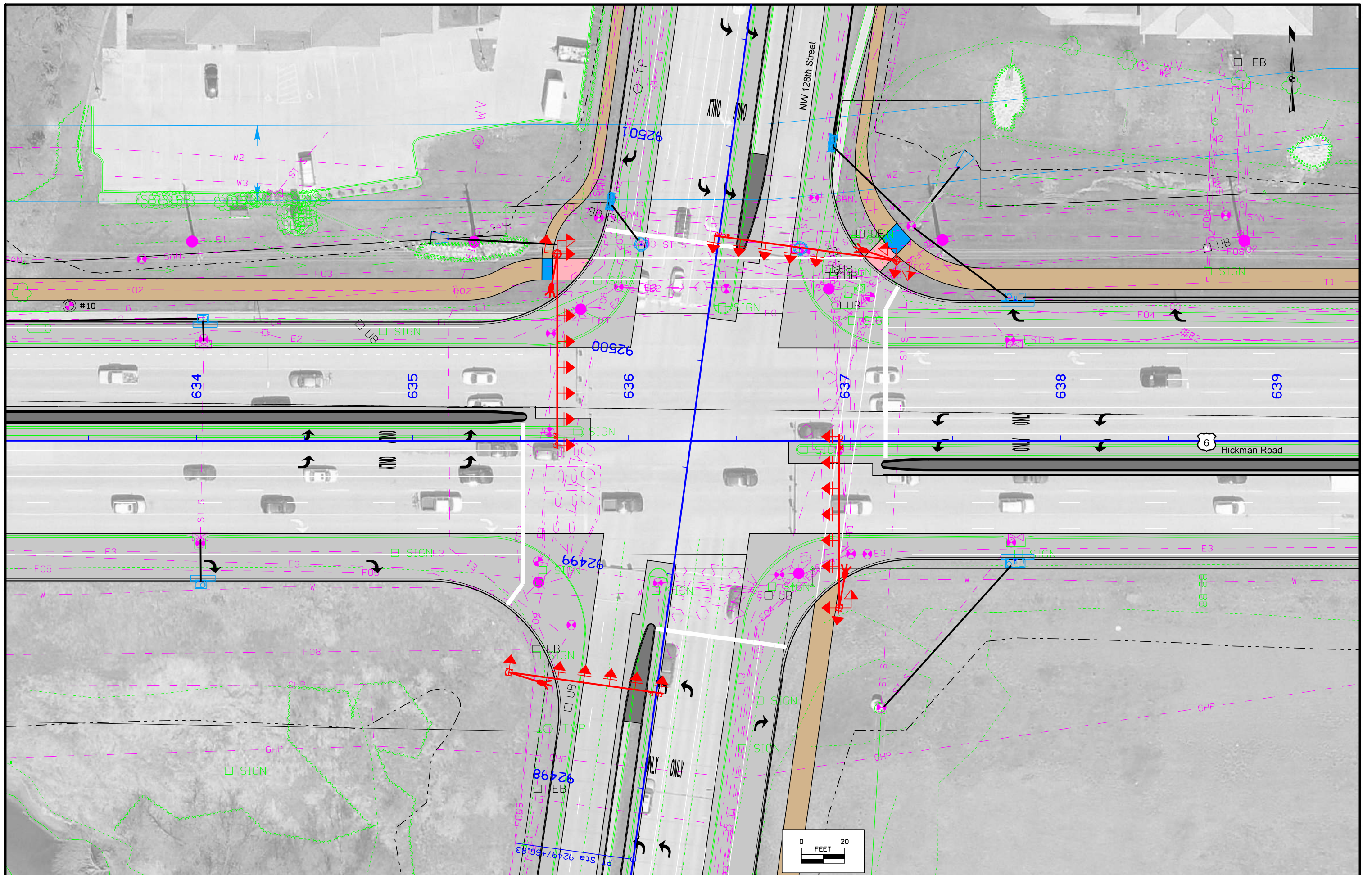


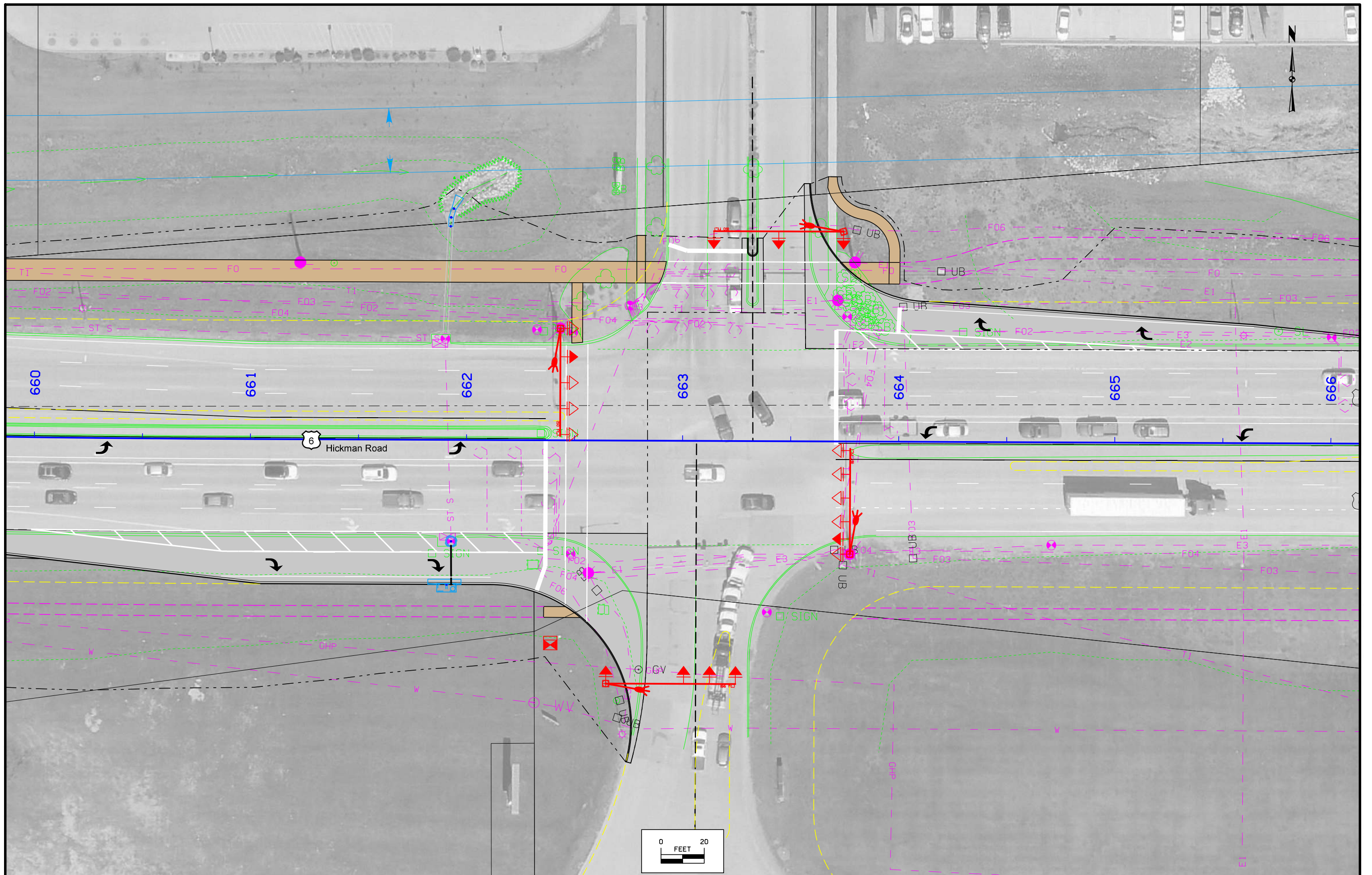




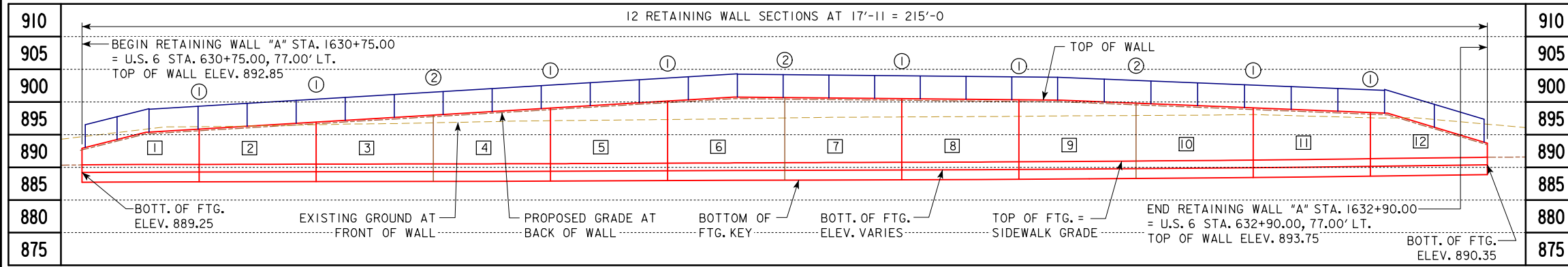




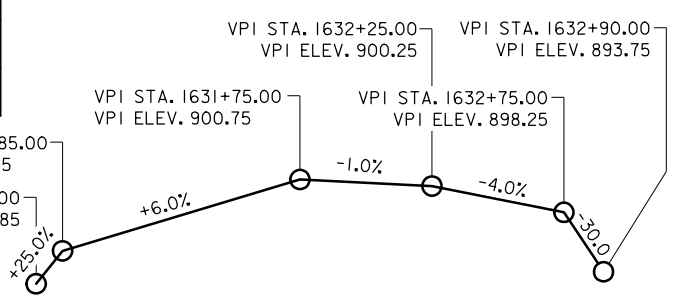




BENCH MARK URB BM57: NORTHING 7497407.636 EASTING 18479574.720
 ELEV. 899.61 FOUND BRASS PLUG IN NORTHWEST CORNER OF SIGNAL
 BASE/NORTHEAST QUADRANT OF 182TH STREET AND HICKMAN ROAD.

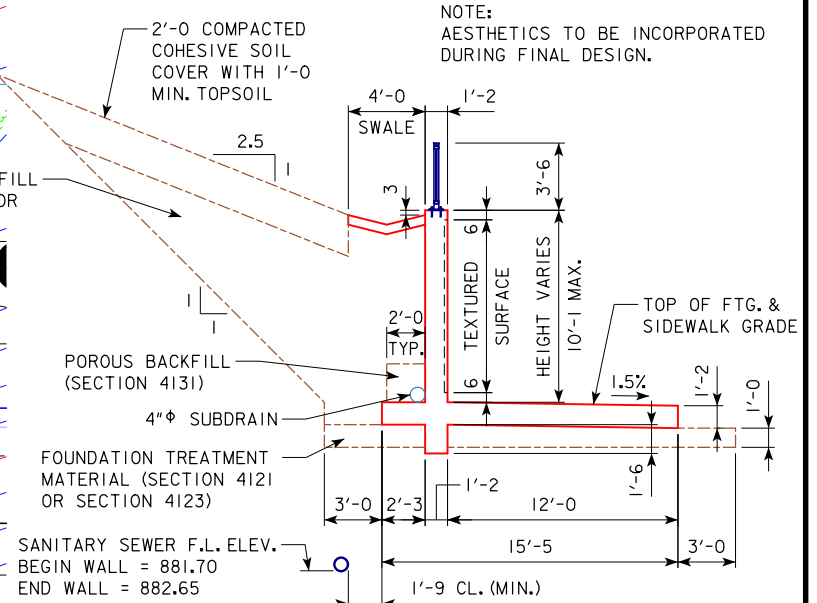
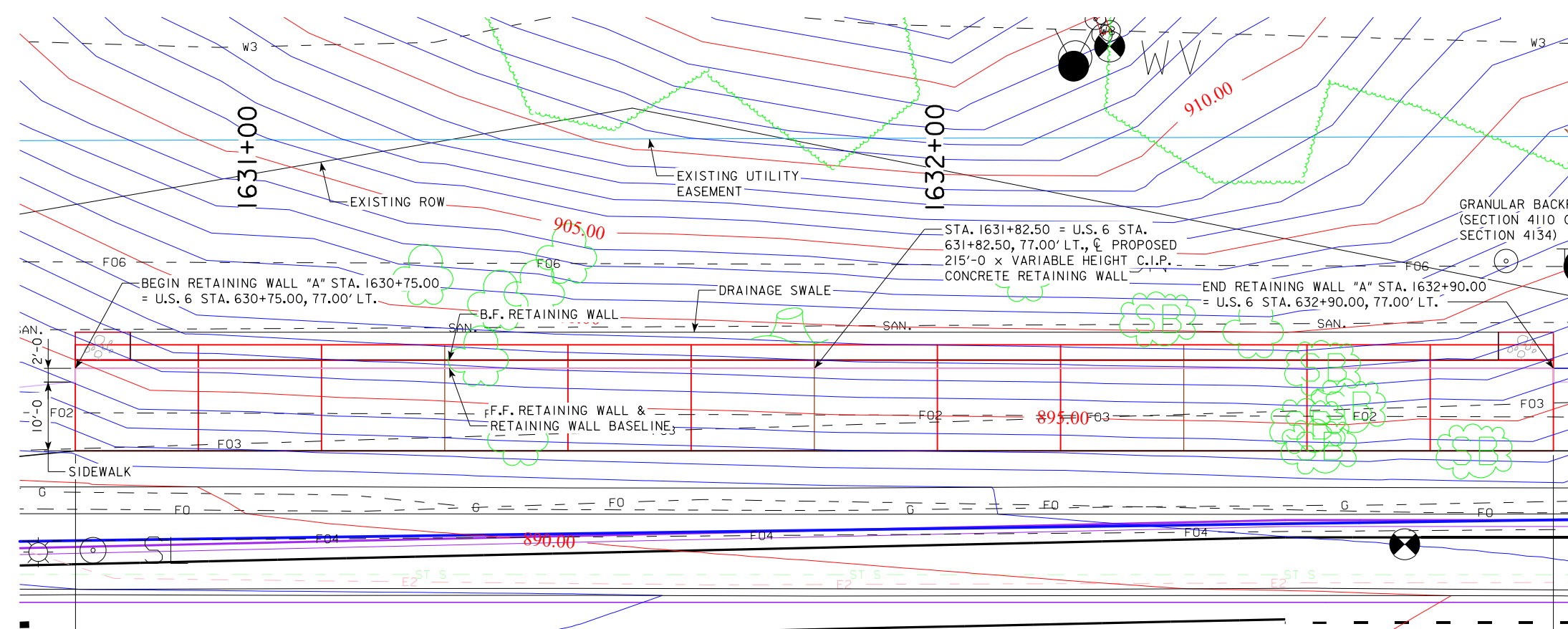


PROFILE GRADE U.S. 6
 (USE AS CONSTRUCTED)



RETAINING WALL "A" ELEVATION
 STA. 1630+75.00 TO STA. 1632+90.00

TOP OF RETAINING WALL "A" PROFILE



WALL TYPICAL SECTION
 (LOOKING EAST)

TRAFFIC ESTIMATE

2016 AADT	32,000	V.P.D.
2042 AADT	48,200	V.P.D.
2042 DHV	4,400	V.P.H.
TRUCKS	5	%
TOTAL DESIGN ESALS		

LOCATION

RETAINING WALL "A"
 NORTH OF US 6 (HICKMAN ROAD)
 T-79N R-25W
 SECTION 29
 WEBSTER TOWNSHIP
 CITY OF URBANDALE
 POLK COUNTY
 LATITUDE: 41.615167°
 LONGITUDE: -93.793500°

UTILITIES LEGEND

- E2 - ELECTRIC (TRAFFIC) - CITY OF URBANDALE
- F0 - FIBER OPTIC - ZAYO
- F02 - FIBER OPTIC - CENTURYLINK
- F03 - FIBER OPTIC - MCI/VERIZON
- F04 - FIBER OPTIC - ICN
- F06 - FIBER OPTIC - UPN
- SAN. - SANITY SEWER - CITY OF URBANDALE
- G - GAS - MIDAMERICAN ENERGY
- ST S - STORM SEWER
- W2 - WATER - CITY OF URBANDALE
- W3 - WATER - DMWW

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

RETAINING WALL "A" - SITUATION PLAN
 ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

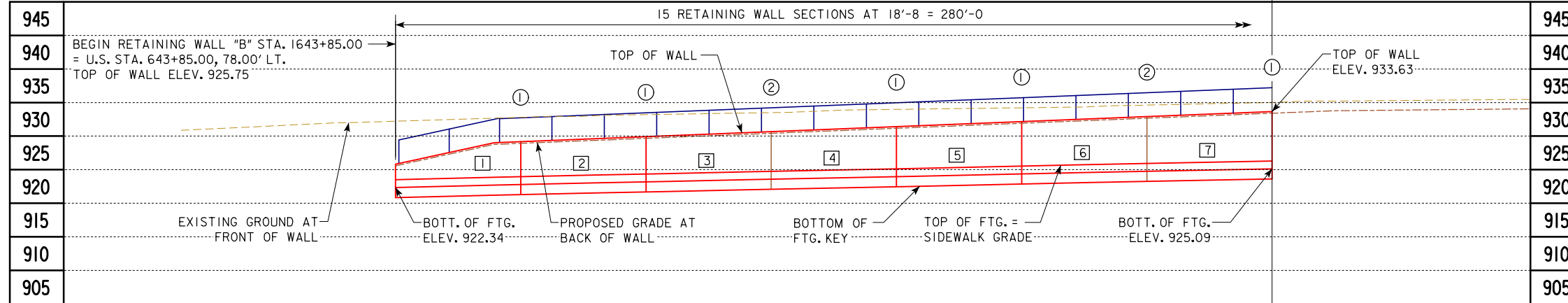


PRELIMINARY
 DESIGN FOR A
215'-0" x VARIABLE HEIGHT C.I.P. CONCRETE RETAINING WALL
 SITUATION PLAN

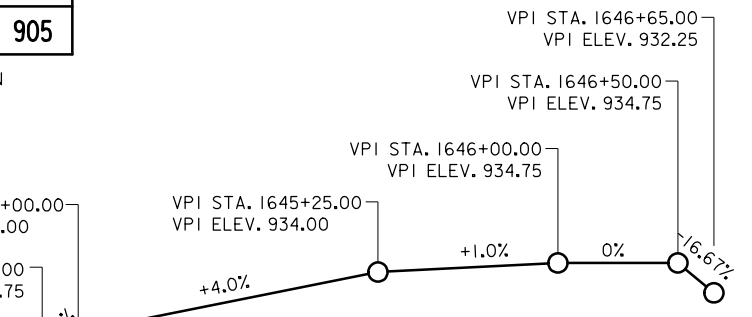
STA. 1631+82.50 JUNE, 2020
 POLK COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. _____ OF _____ FILE NO. 31935 DESIGN NO. 521



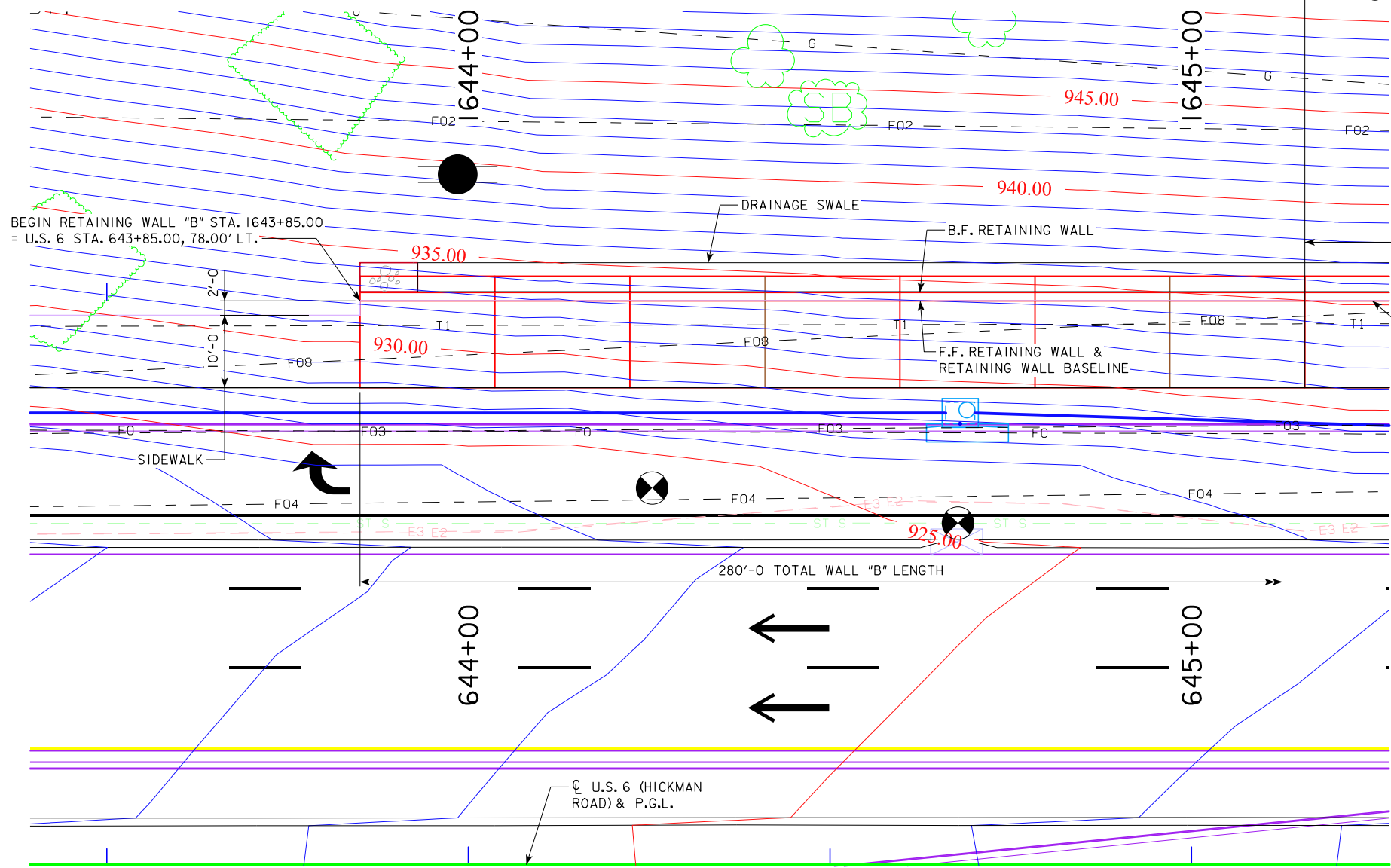
CONTROL POINT NO. 5: NORTHING 7497460.92 EASTING 18479997.81
 ELEV. 917.28 CUT X ON TOP OF CURB/WEST SIDE OF ENTRANCE TO
 IOWA STATE BANK/300'+/- EAST OF NW 128" STREET/120'+/-
 NORTH OF CENTERLINE OF HICKMAN ROAD.



PROFILE GRADE U.S. 6
 (USE AS CONSTRUCTED)



- ① - ⑮ = RETAINING WALL SECTION
- ① = CONTRACTION JOINT
- ② = EXPANSION JOINT



MATCH LINE
 RETAINING WALL "B" STA. 1645+15.67
 = U.S. 6 STA. 645+15.67, 78.00' FT

STA. 1645+25.00 = U.S. 6 STA.
 645+25.00, 78.00' LT., C. PROPOSED
 280'-0" x VARIABLE HEIGHT C.I.P.
 CONCRETE RETAINING WALL

LOCATION

RETAINING WALL "B"
 NORTH OF US 6 (HICKMAN ROAD)
 T-79N R-25W
 SECTION 29
 WEBSTER TOWNSHIP
 CITY OF URBANDALE
 POLK COUNTY
 LATITUDE: 41.615167°
 LONGITUDE: -93.789028°

NOTE:
 AESTHETICS TO BE INCORPORATED
 DURING FINAL DESIGN.

TRAFFIC ESTIMATE

2016 AADT	32,000	V.P.D.
2042 AADT	48,200	V.P.D.
2042 DHV	4,400	V.P.H.
TRUCKS	5	%
TOTAL DESIGN ESALS		

UTILITIES LEGEND

- E2 - ELECTRIC (TRAFFIC) - CITY OF URBANDALE
- E3 - ELECTRIC (TRAFFIC) - CITY OF CLIVE
- F0 - FIBER OPTIC - ZAYO
- F02 - FIBER OPTIC - CENTURYLINK
- F03 - FIBER OPTIC - MCI/VERIZON
- F04 - FIBER OPTIC - ICN
- F08 - FIBER OPTIC - CONSOLIDATED COMM
- G - GAS - MIDAMERICAN ENERGY
- ST S - STORM SEWER
- T1 - TELEPHONE - CENTURYLINK
- W2 - WATER - CITY OF URBANDALE

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

RETAINING WALL "B" - SITUATION PLAN
 ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

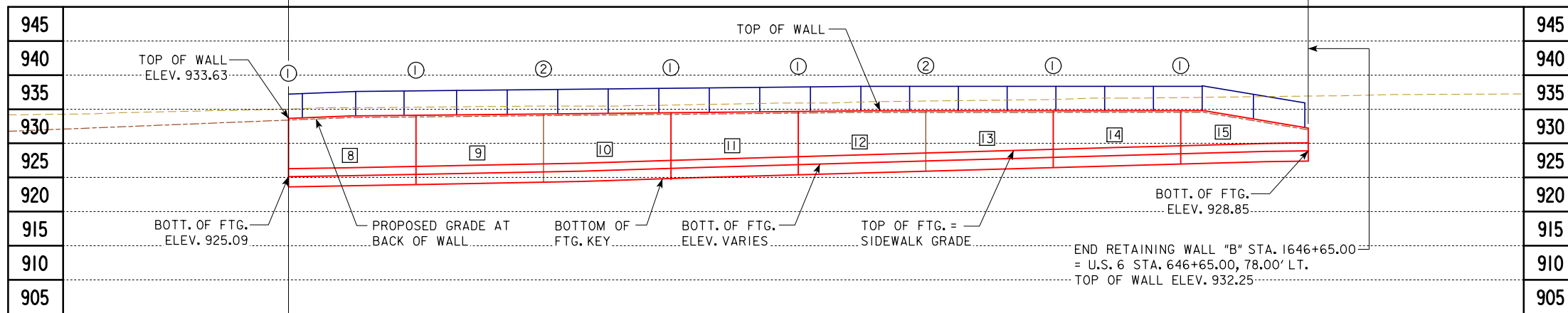
PRELIMINARY
 DESIGN FOR A
**280'-0" x VARIABLE HEIGHT
 C.I.P. CONCRETE RETAINING WALL**
 SITUATION PLAN (1 OF 2)
 STA. 1645+25.00 JUNE, 2020
POLK COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. ___ OF ___ FILE NO. 31935 DESIGN NO. 621



MATCH LINE
RETAINING WALL "B" STA. 1645+15.67
= U.S. 6 STA. 645+15.67, 78.00' LT.

15 RETAINING WALL SECTION AT 18'-8" = 280'-0"

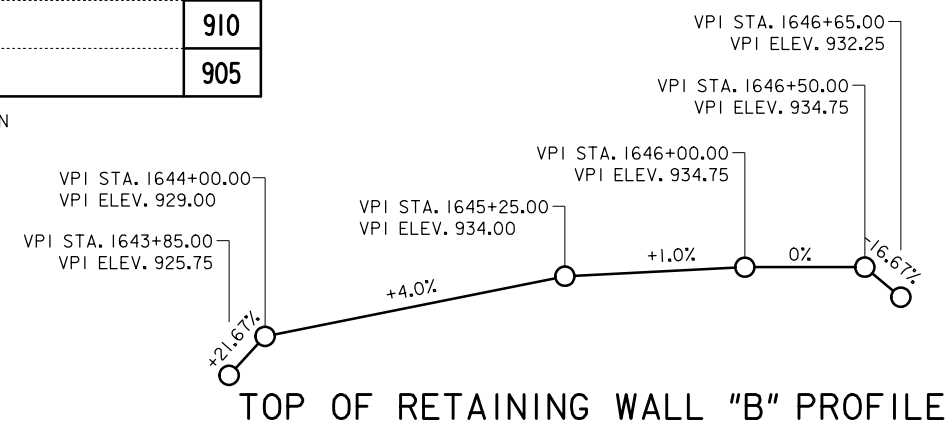
CONTROL POINT NO. 5: NORTHING 7497460.92 EASTING 18479997.81
ELEV. 917.28 CUT X ON TOP OF CURB/WEST SIDE OF ENTRANCE TO
IOWA STATE BANK/300'+/- EAST OF NW 128" STREET/120'+/-
NORTH OF CENTERLINE OF HICKMAN ROAD.



PROFILE GRADE U.S. 6
(USE AS CONSTRUCTED)

RETAINING WALL "B" ELEVATION
STA. 1643+85.00 TO STA. 1646+65.00

1 - 15 = RETAINING WALL SECTION
① = CONTRACTION JOINT
② = EXPANSION JOINT



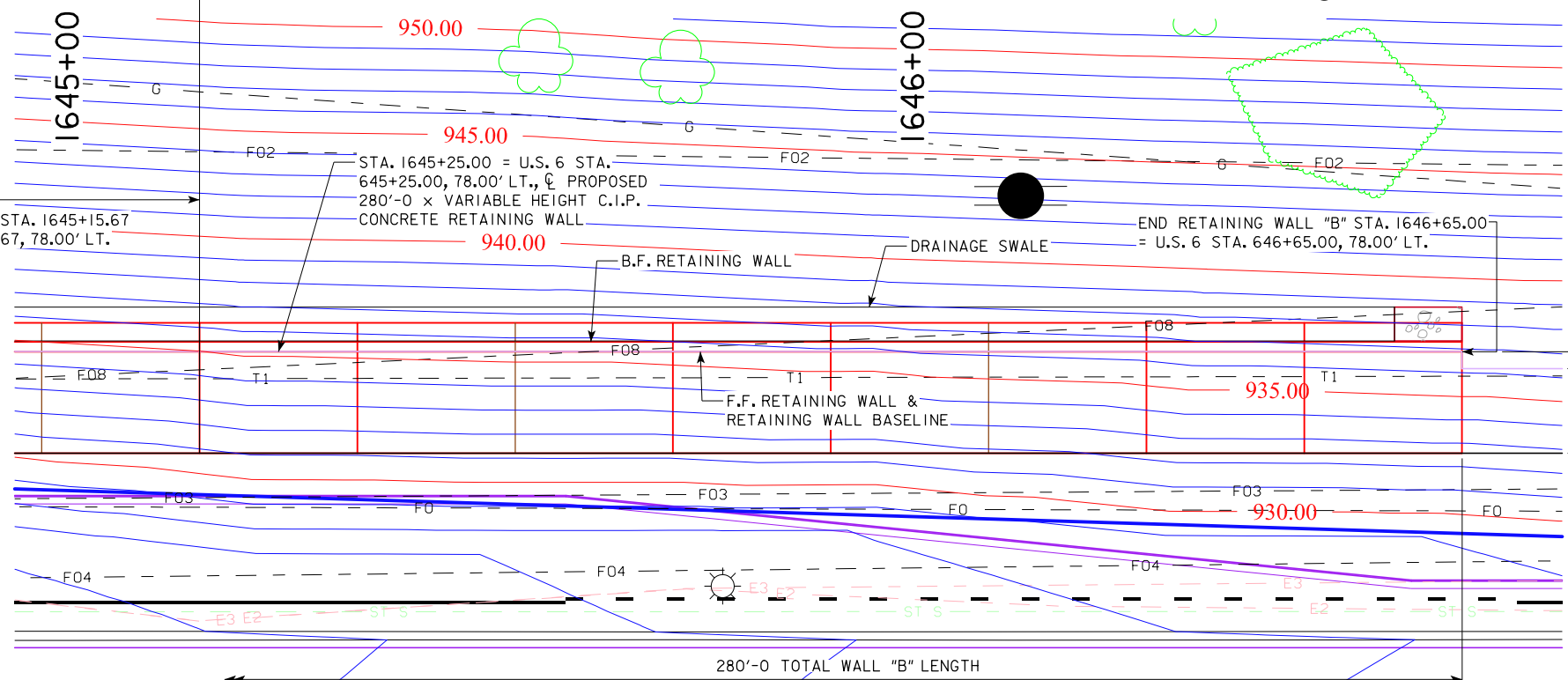
TOP OF RETAINING WALL "B" PROFILE

NOTE:
AESTHETICS TO BE INCORPORATED
DURING FINAL DESIGN.

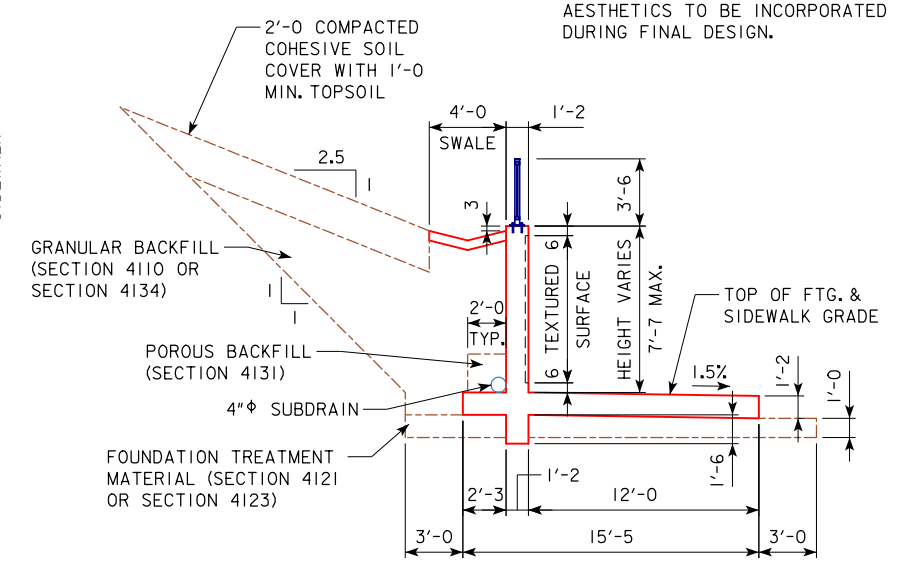
MATCH LINE
RETAINING WALL "B" STA. 1645+15.67
= U.S. 6 STA. 645+15.67, 78.00' LT.

STA. 1645+25.00 = U.S. 6 STA.
645+25.00, 78.00' LT., CL PROPOSED
280'-0" X VARIABLE HEIGHT C.I.P.
CONCRETE RETAINING WALL

END RETAINING WALL "B" STA. 1646+65.00
= U.S. 6 STA. 646+65.00, 78.00' LT.



280'-0" TOTAL WALL "B" LENGTH



WALL TYPICAL SECTION
(LOOKING EAST)

UTILITIES LEGEND

- E2 - ELECTRIC (TRAFFIC) - CITY OF URBANDALE
- E3 - ELECTRIC (TRAFFIC) - CITY OF CLIVE
- F0 - FIBER OPTIC - ZAYO
- F02 - FIBER OPTIC - CENTURYLINK
- F03 - FIBER OPTIC - MC1/VERIZON
- F04 - FIBER OPTIC - ICN
- F08 - FIBER OPTIC - CONSOLIDATED COMM
- G - GAS - MIDAMERICAN ENERGY
- ST S - STORM SEWER
- T1 - TELEPHONE - CENTURYLINK
- W2 - WATER - CITY OF URBANDALE

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



RETAINING WALL "B" - SITUATION PLAN
ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED OR SHOWN.

PRELIMINARY
DESIGN FOR A
**280'-0" X VARIABLE HEIGHT
C.I.P. CONCRETE RETAINING WALL**
SITUATION PLAN (2 OF 2)
STA. 1645+25.00
POLK COUNTY
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ___ OF ___ FILE NO. 31935 DESIGN NO. 621



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\RCB
- Proposed Pipe\RCB
- 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 LO ——— Select Loams And Clay-Loams
- SEL SA ——— Select Sand
- UNS A ——— Unsuitable Type A Disposal
- UNS B ——— Unsuitable Type B Disposal
- UNS C ——— Unsuitable Type C Disposal
- SHALE ——— Shale
- WASTE ——— Waste
- B&W LS ——— Broken and Weathered Rock
- ROCK ——— Solid Rock
- BLDRS ——— 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.

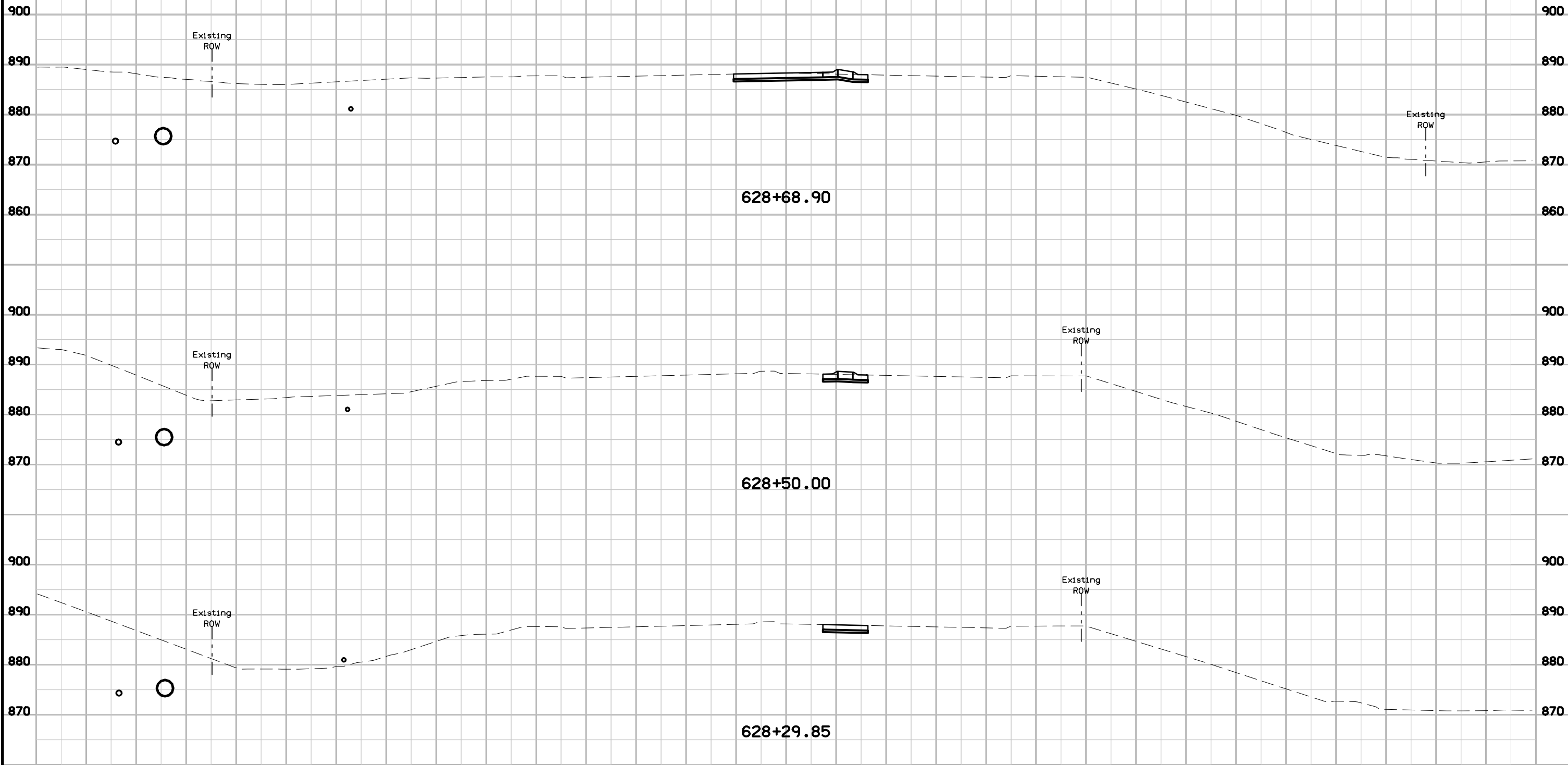
SYMBOL LEGEND OF CROSS SECTION SHEETS

- 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)**

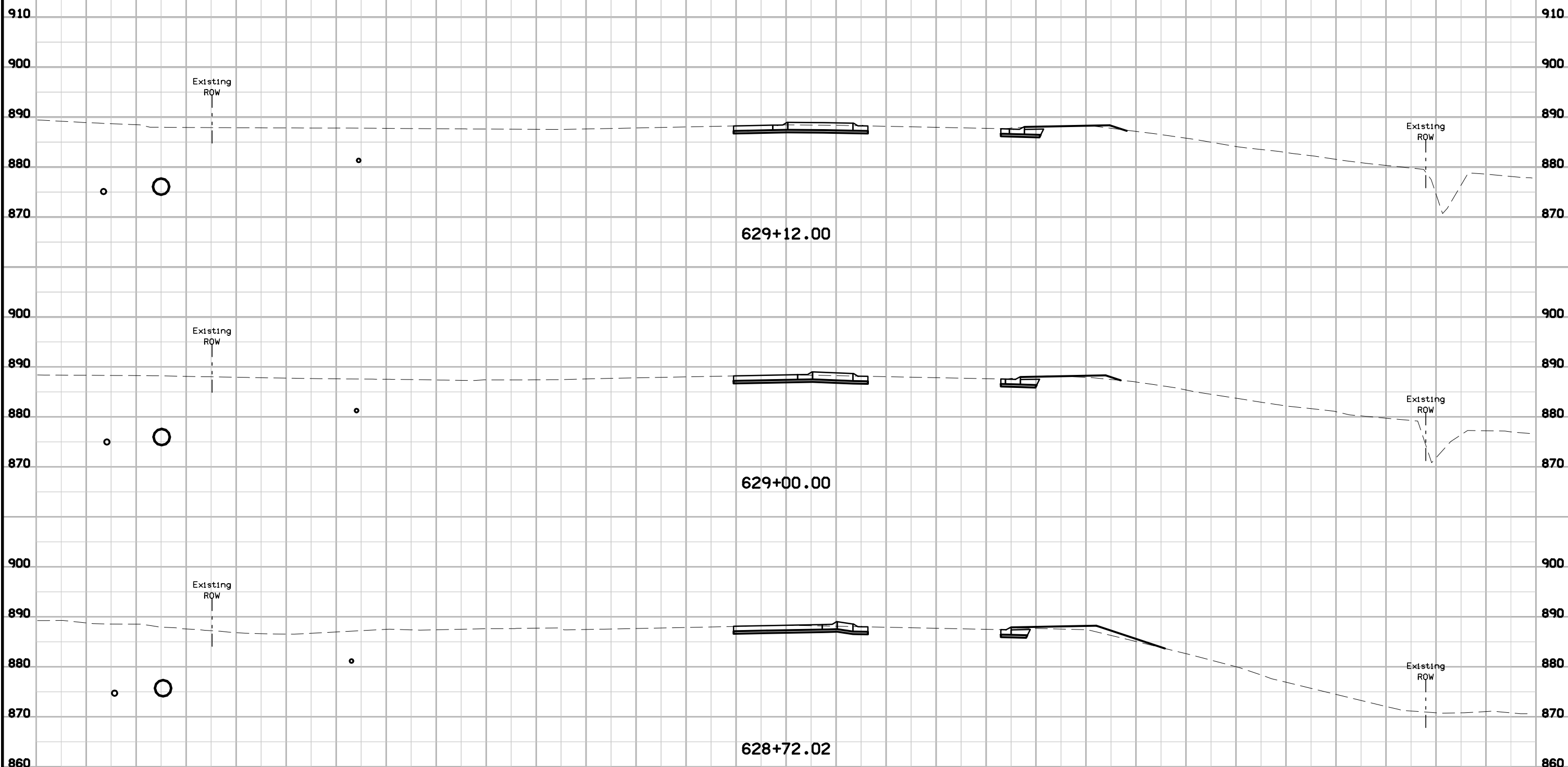
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ML006 / HICKMAN ROAD Preliminary

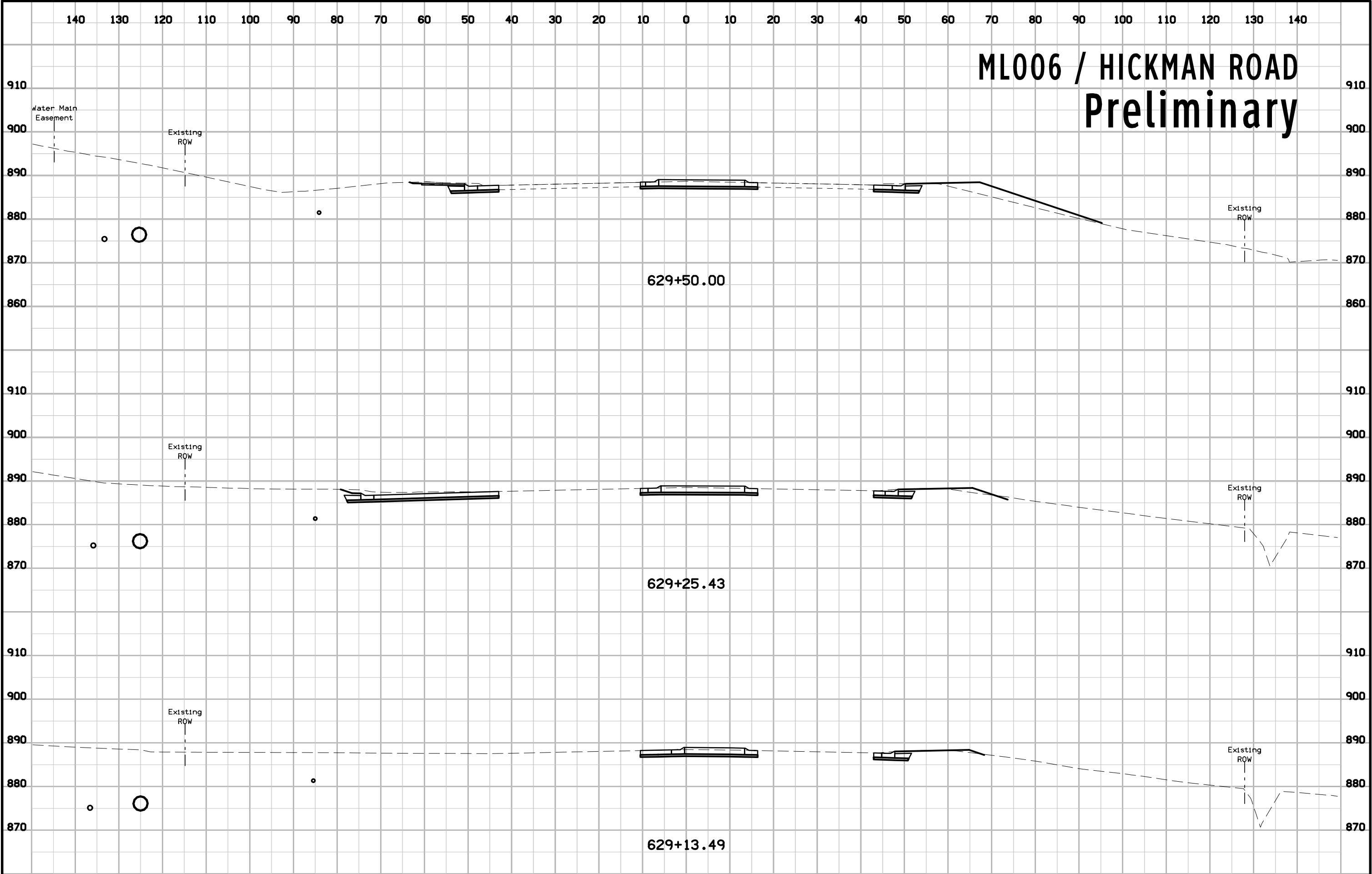


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ML006 / HICKMAN ROAD Preliminary

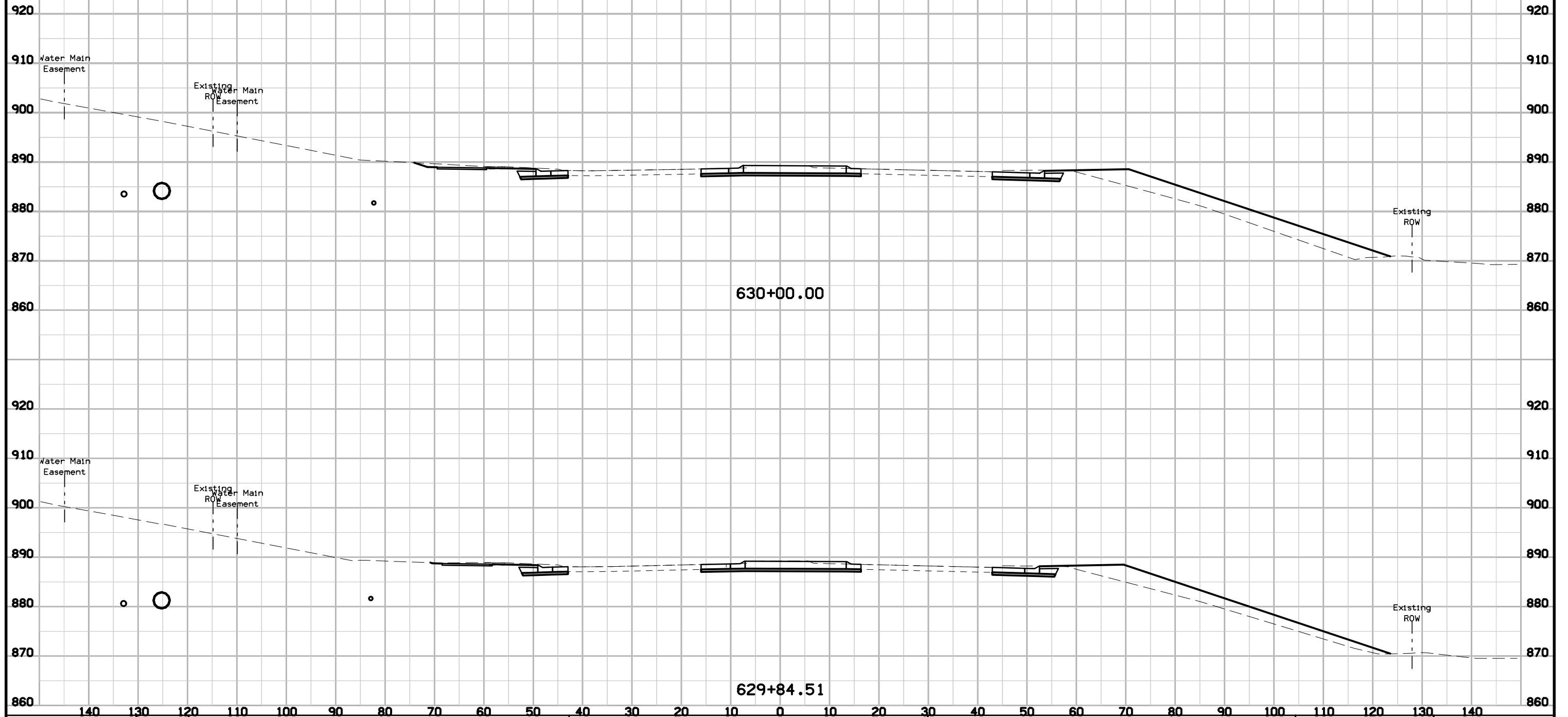


ML006 / HICKMAN ROAD Preliminary



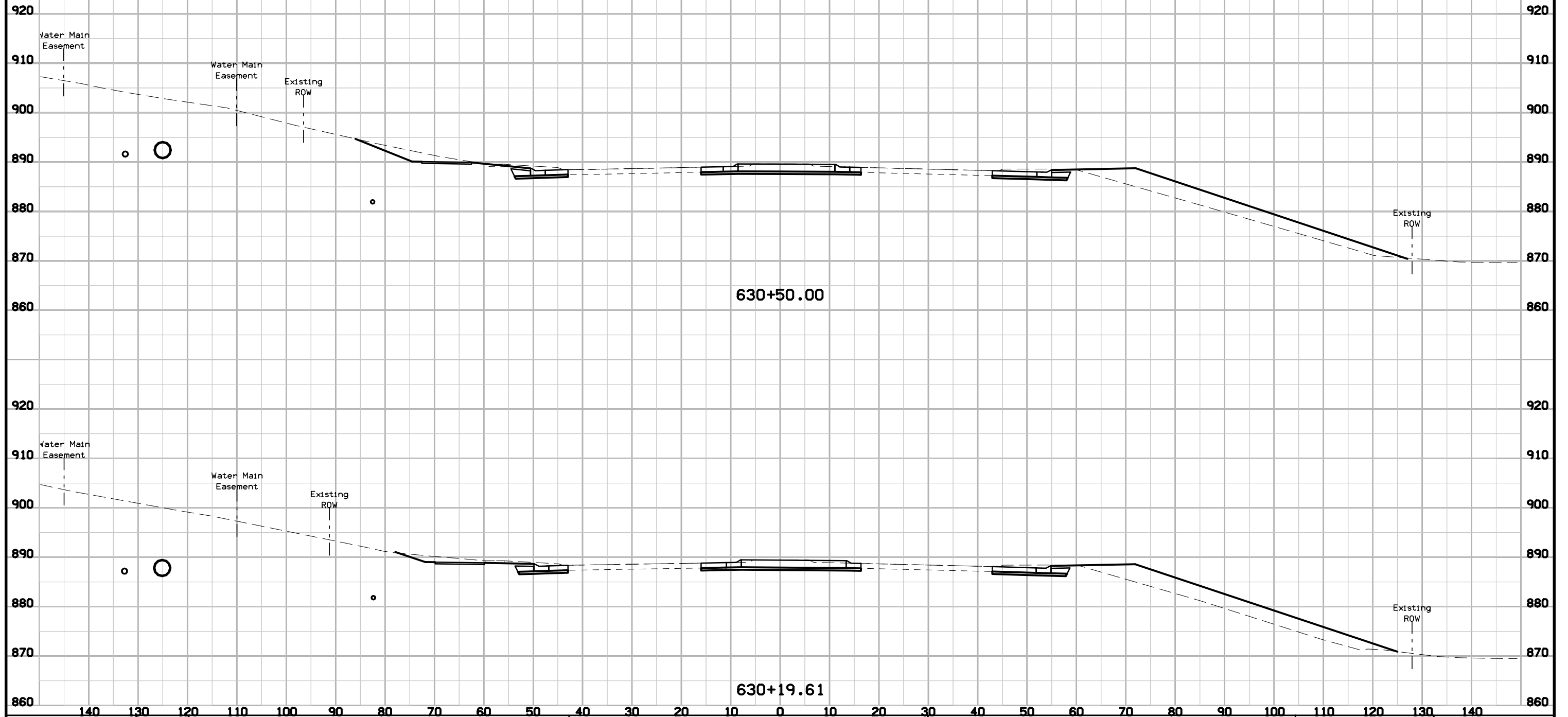
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ML006 / HICKMAN ROAD Preliminary



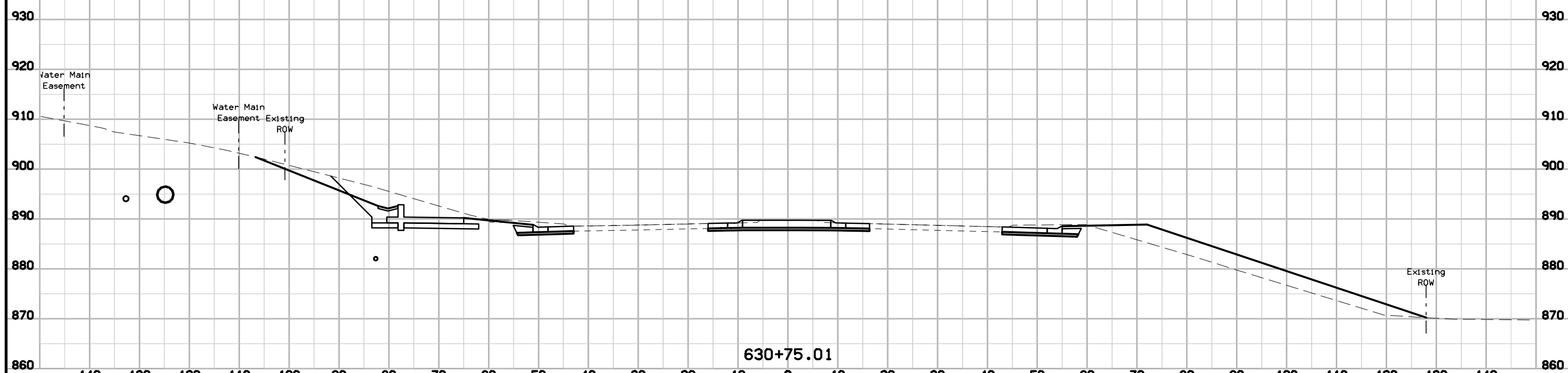
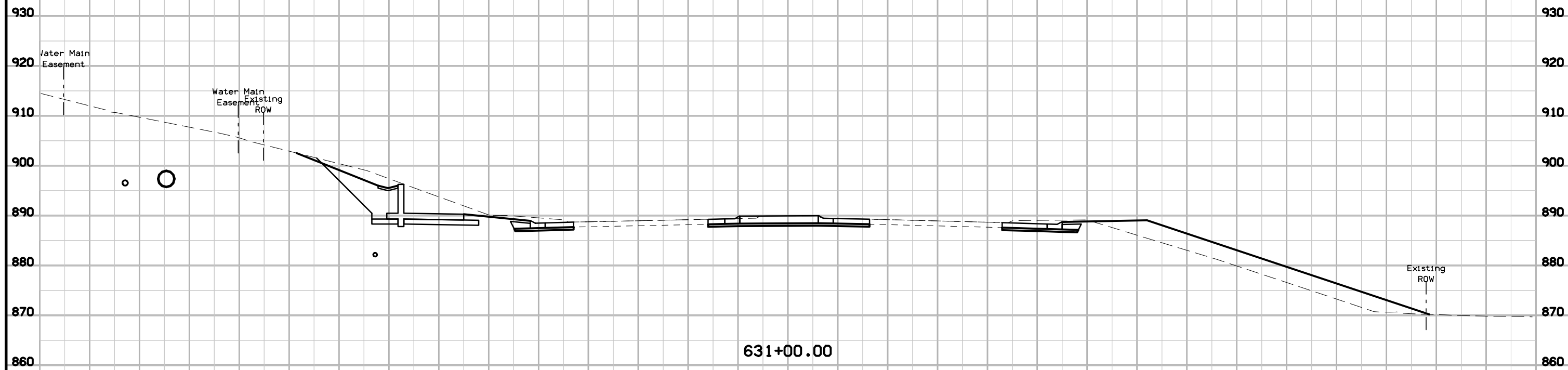
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ML006 / HICKMAN ROAD Preliminary



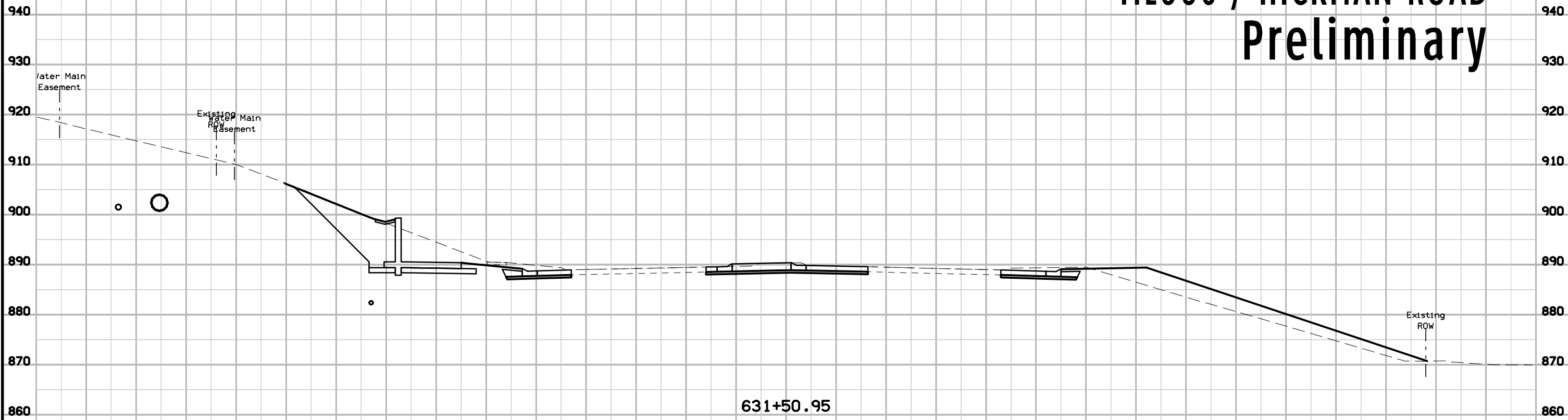
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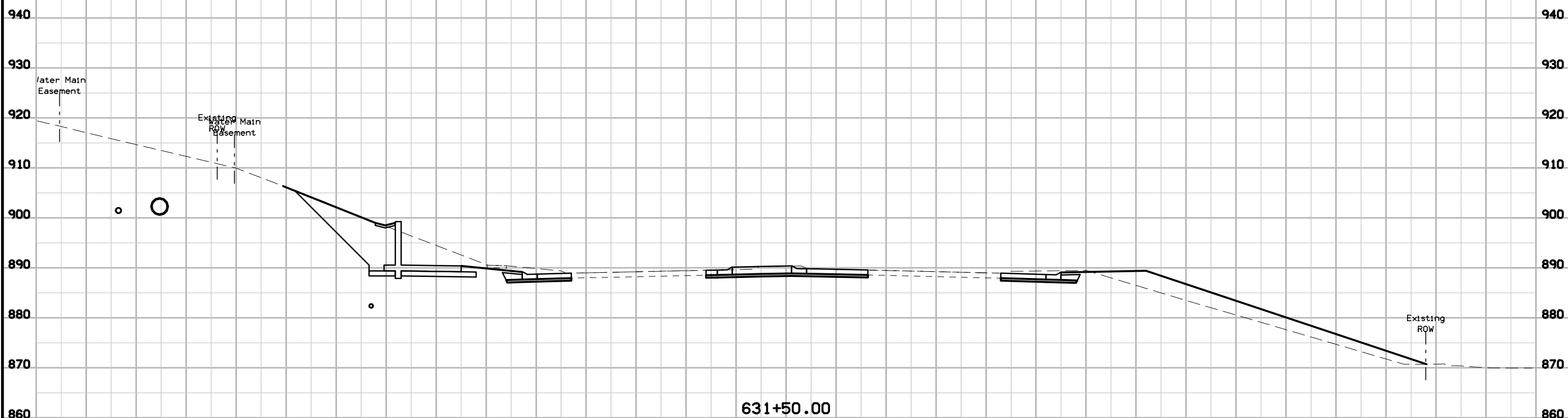


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ML006 / HICKMAN ROAD Preliminary

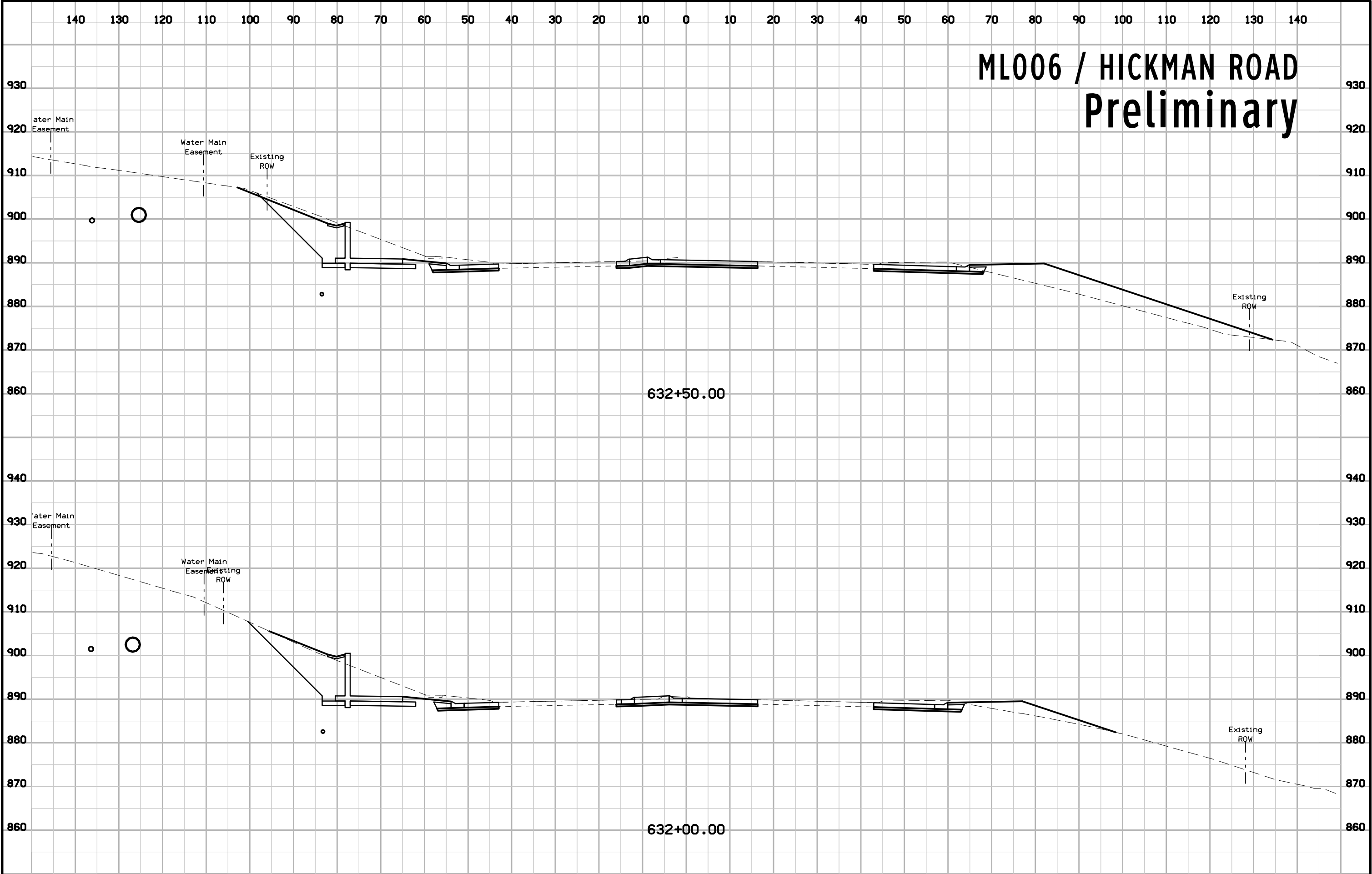


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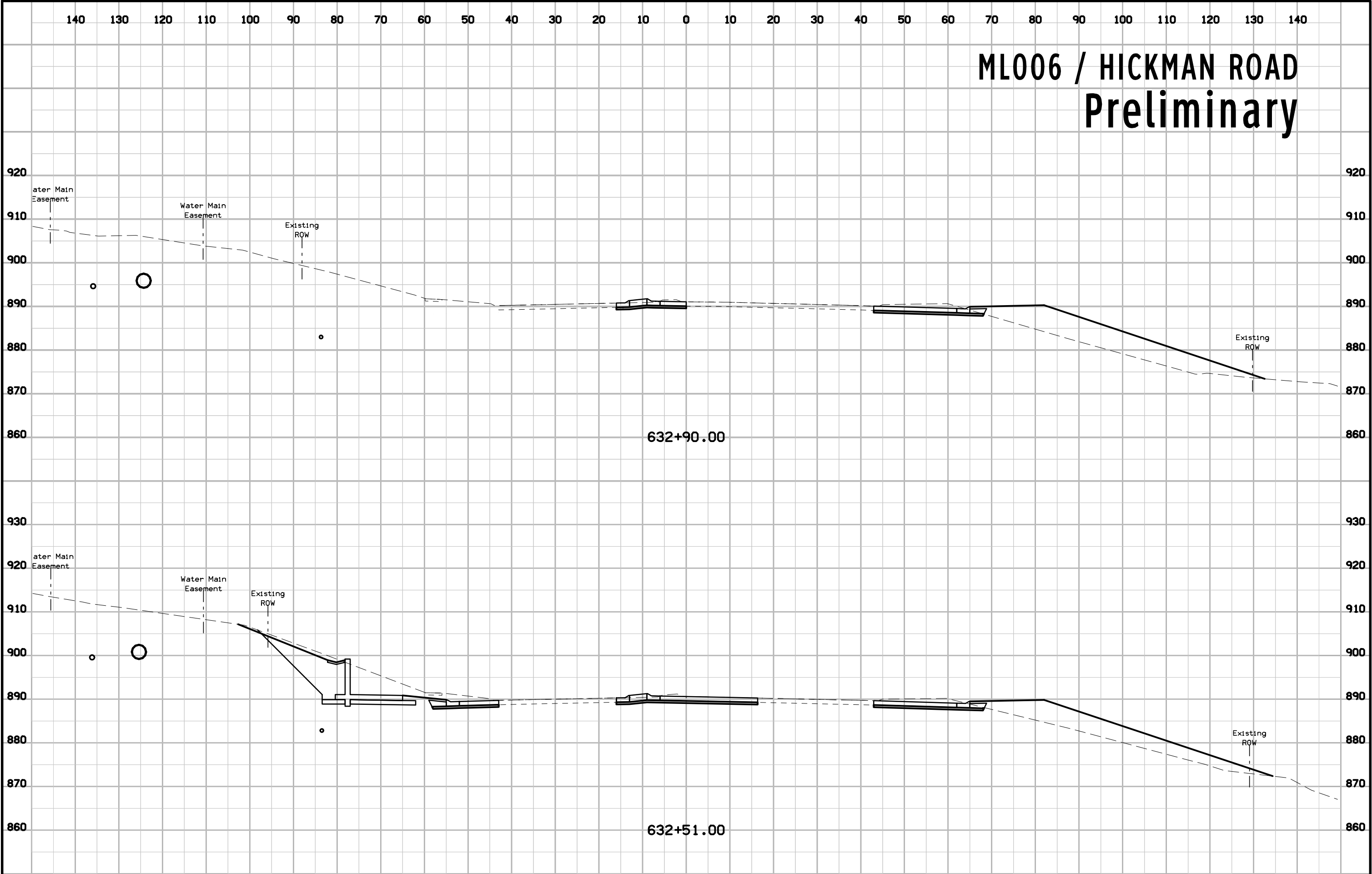


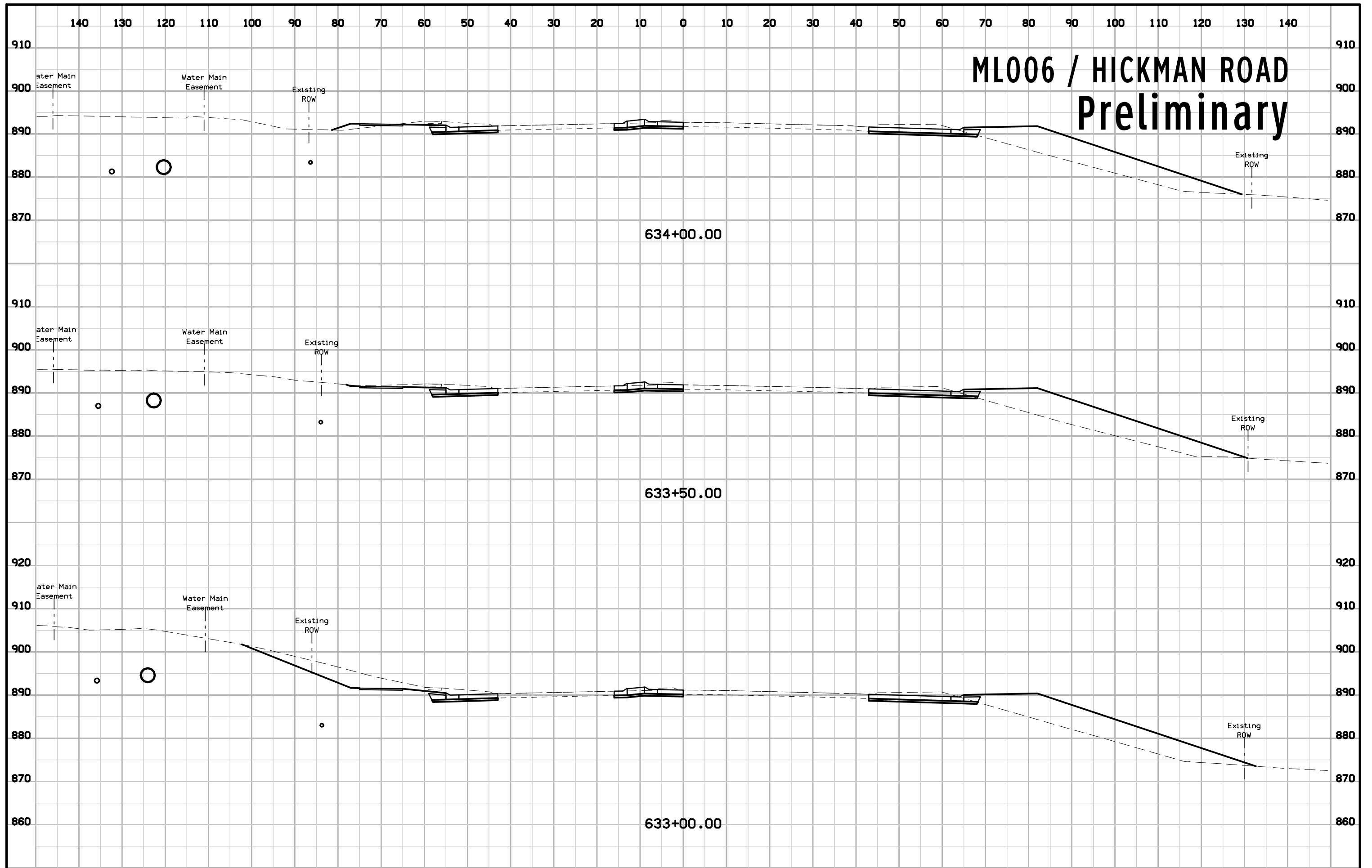
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ML006 / HICKMAN ROAD Preliminary



ML006 / HICKMAN ROAD Preliminary





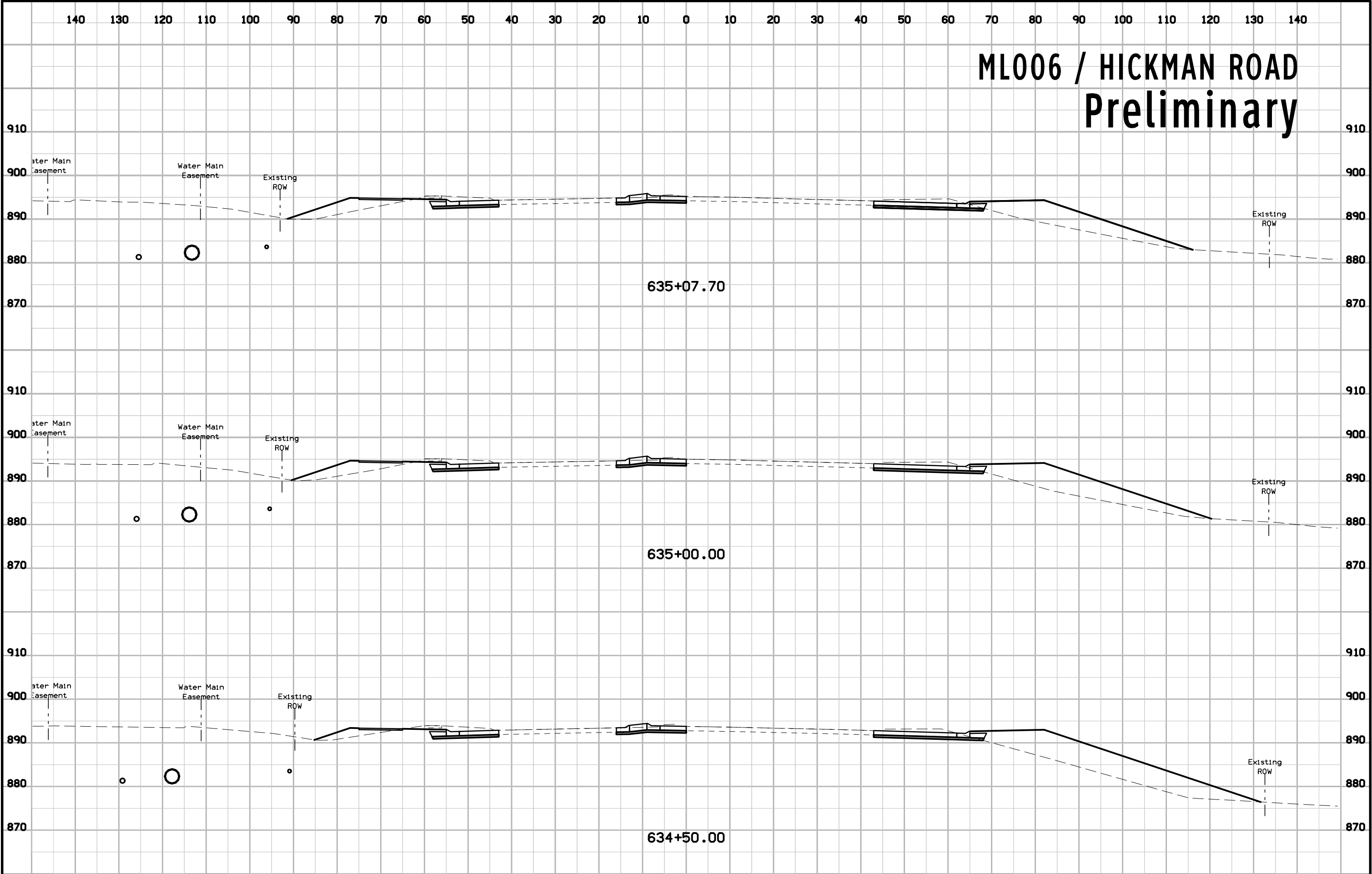
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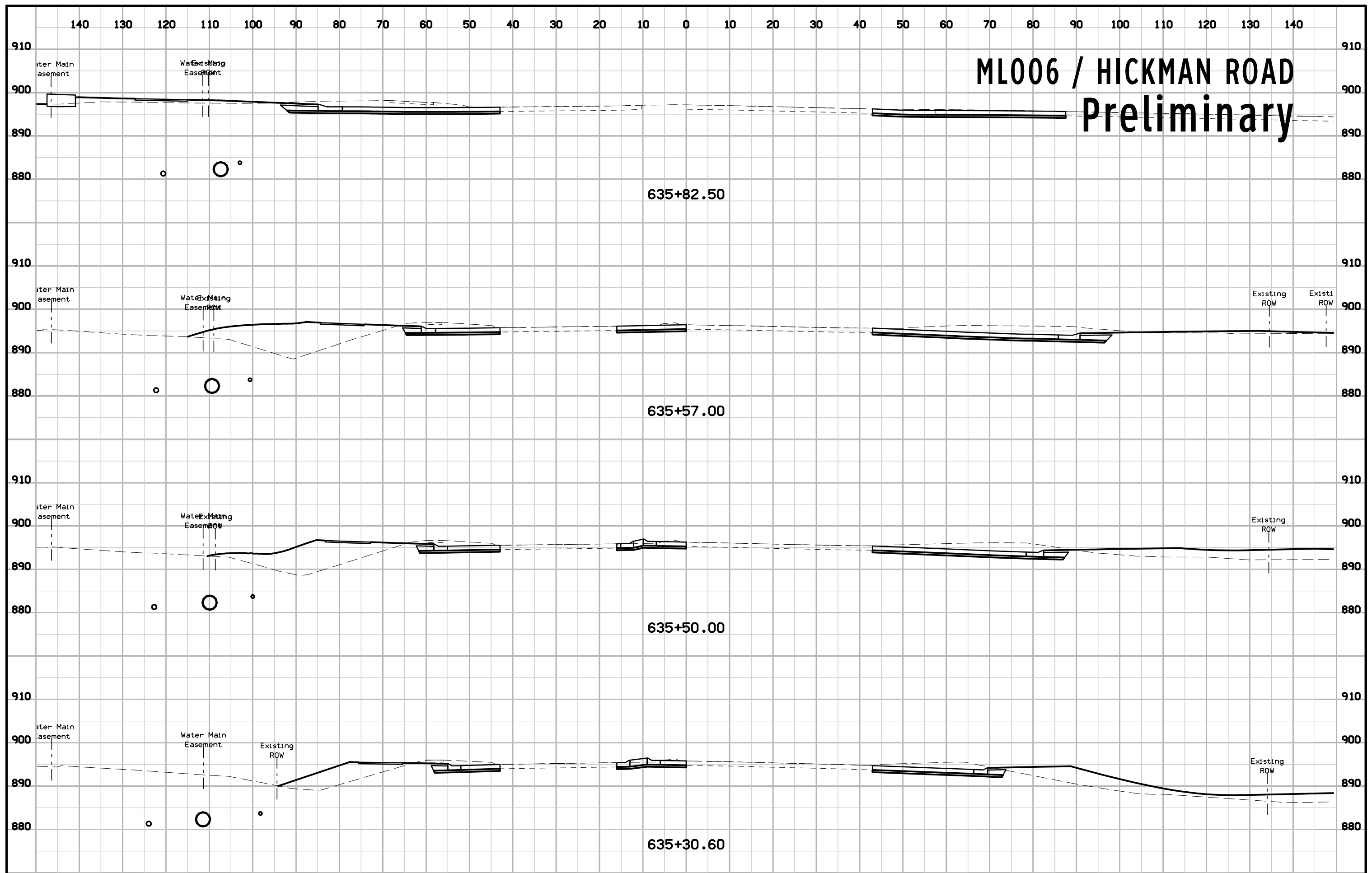
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633+00.00

ML006 / HICKMAN ROAD Preliminary





ML006 / HICKMAN ROAD Preliminary

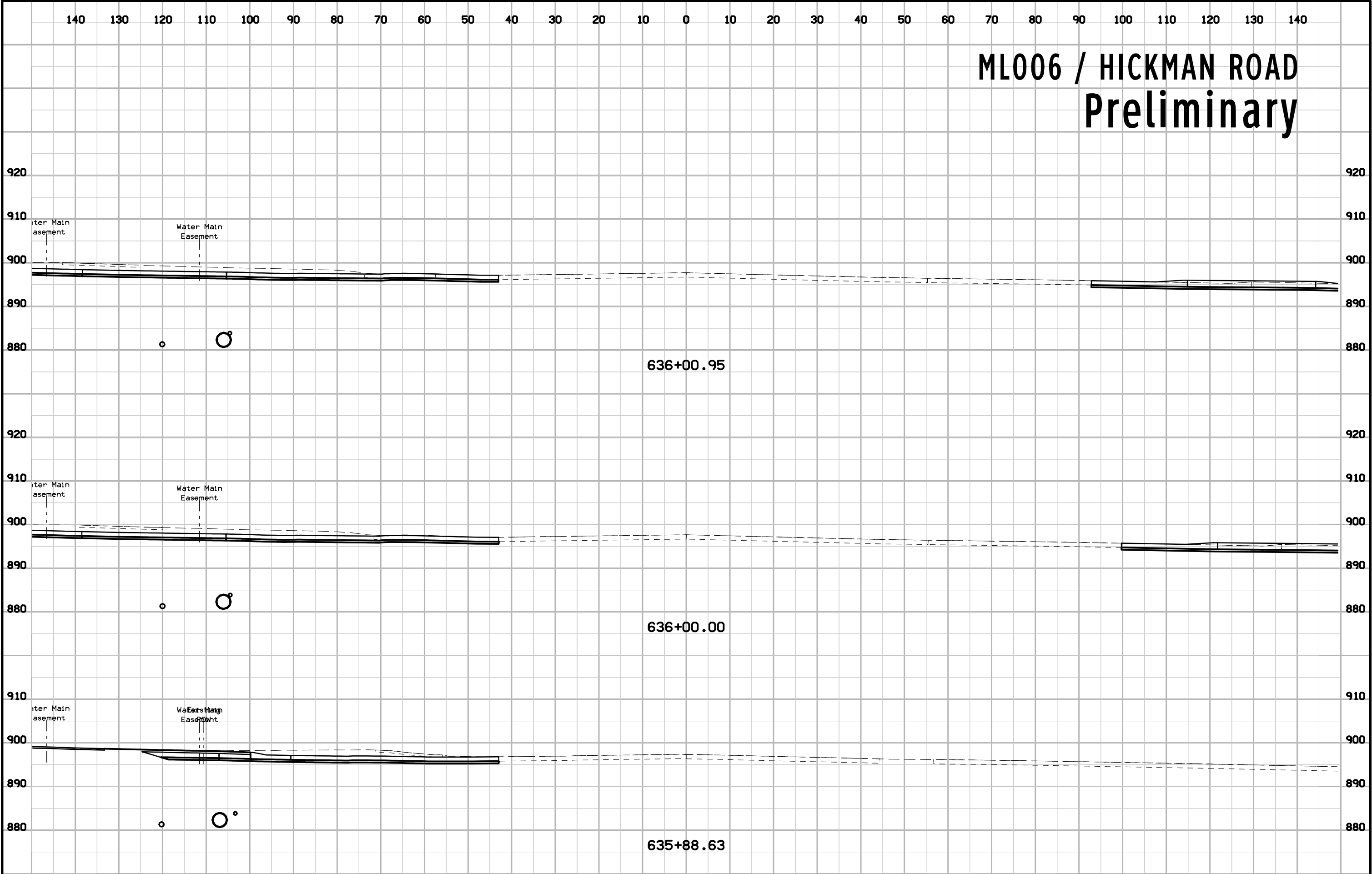
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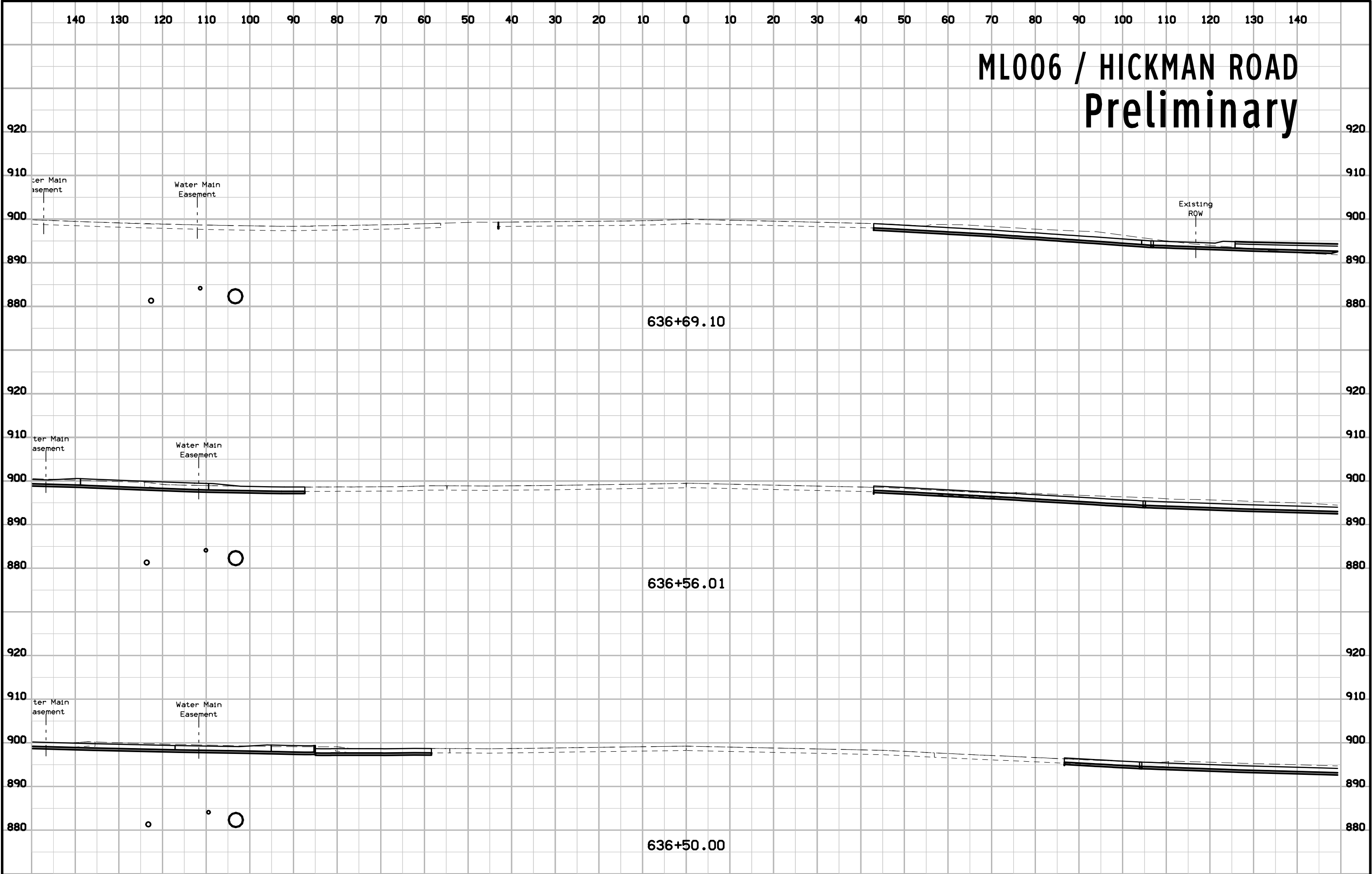
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635+30.60

ML006 / HICKMAN ROAD Preliminary

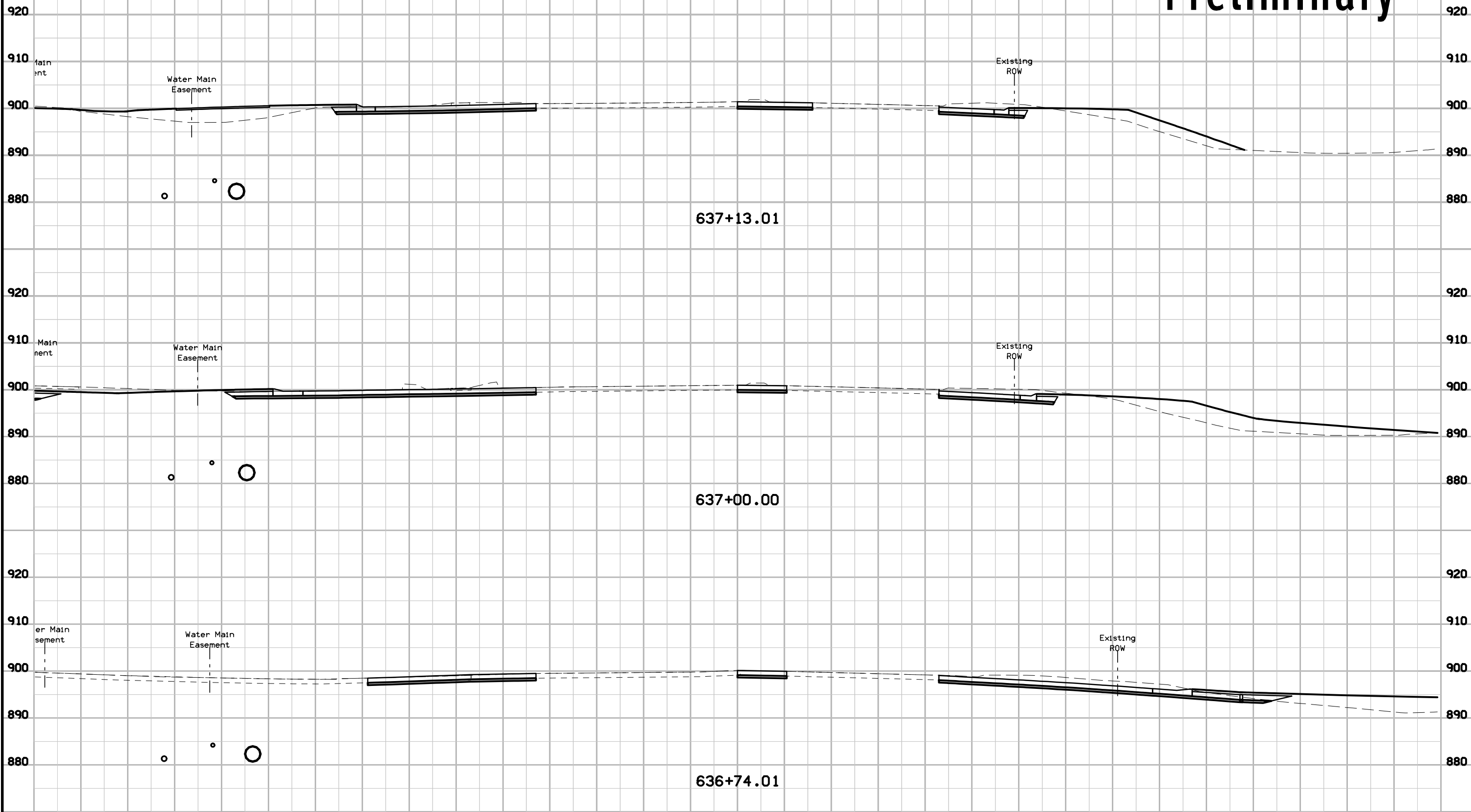


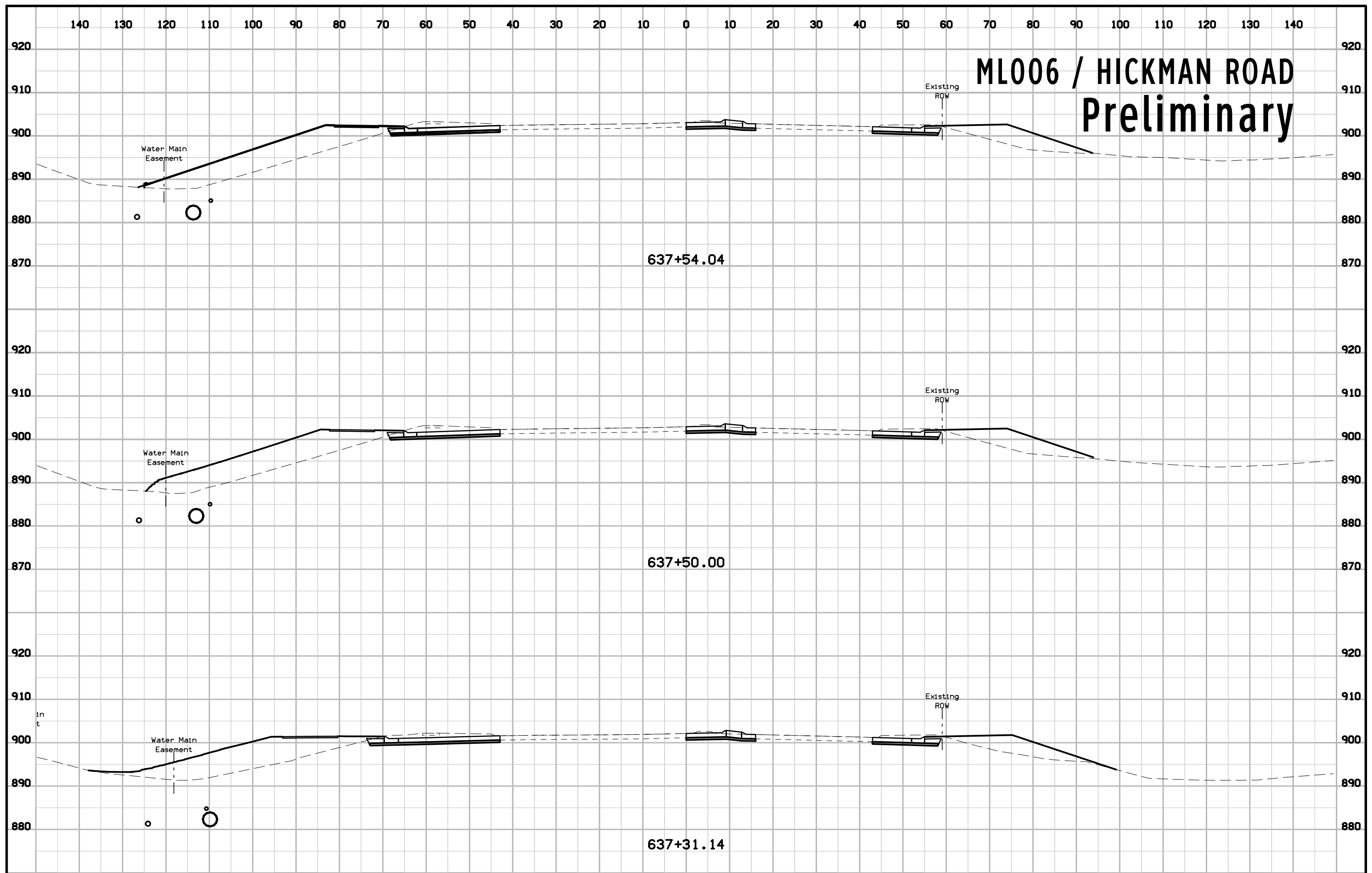
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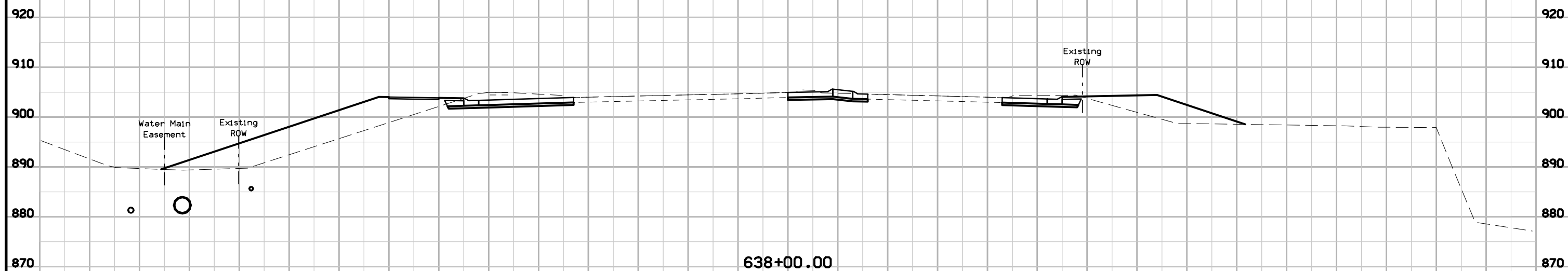
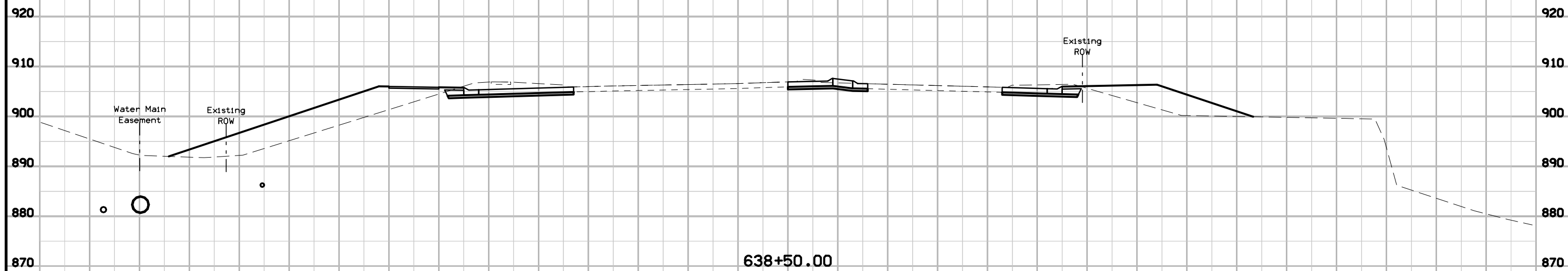




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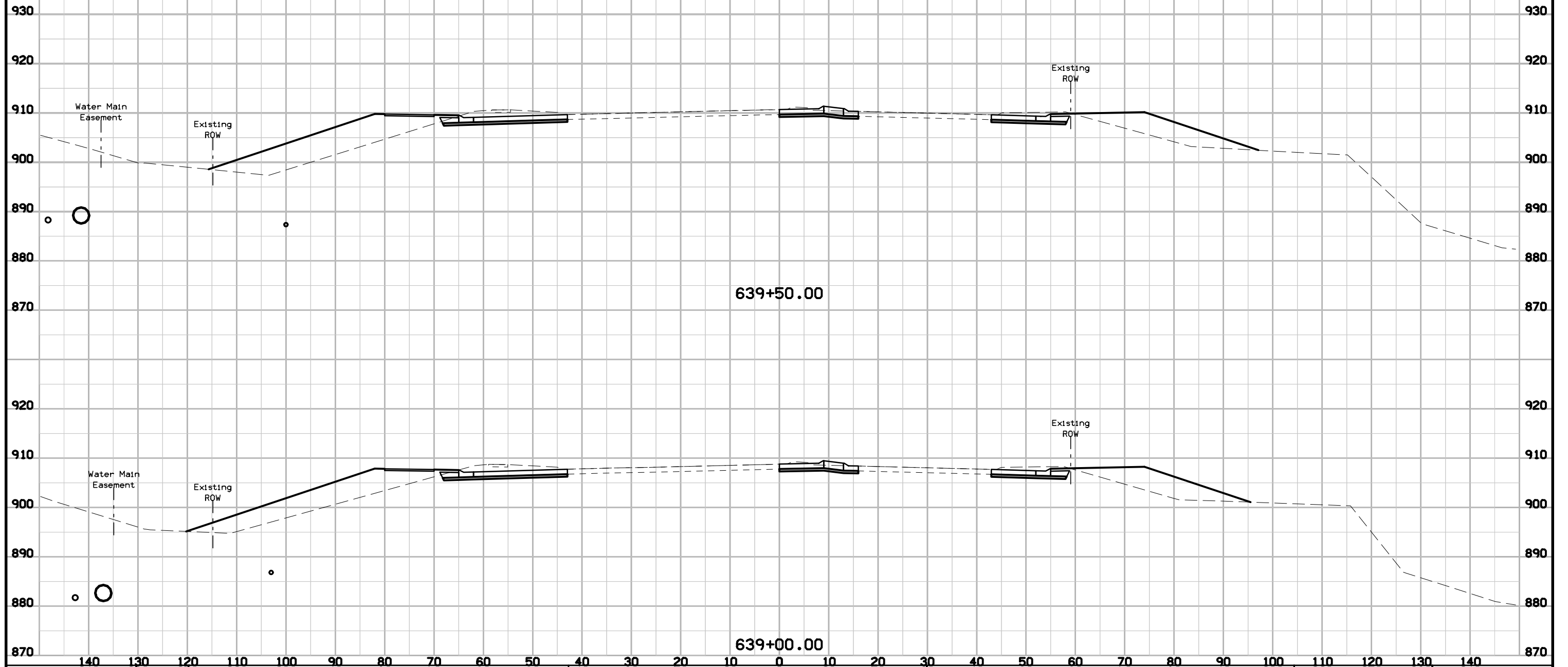
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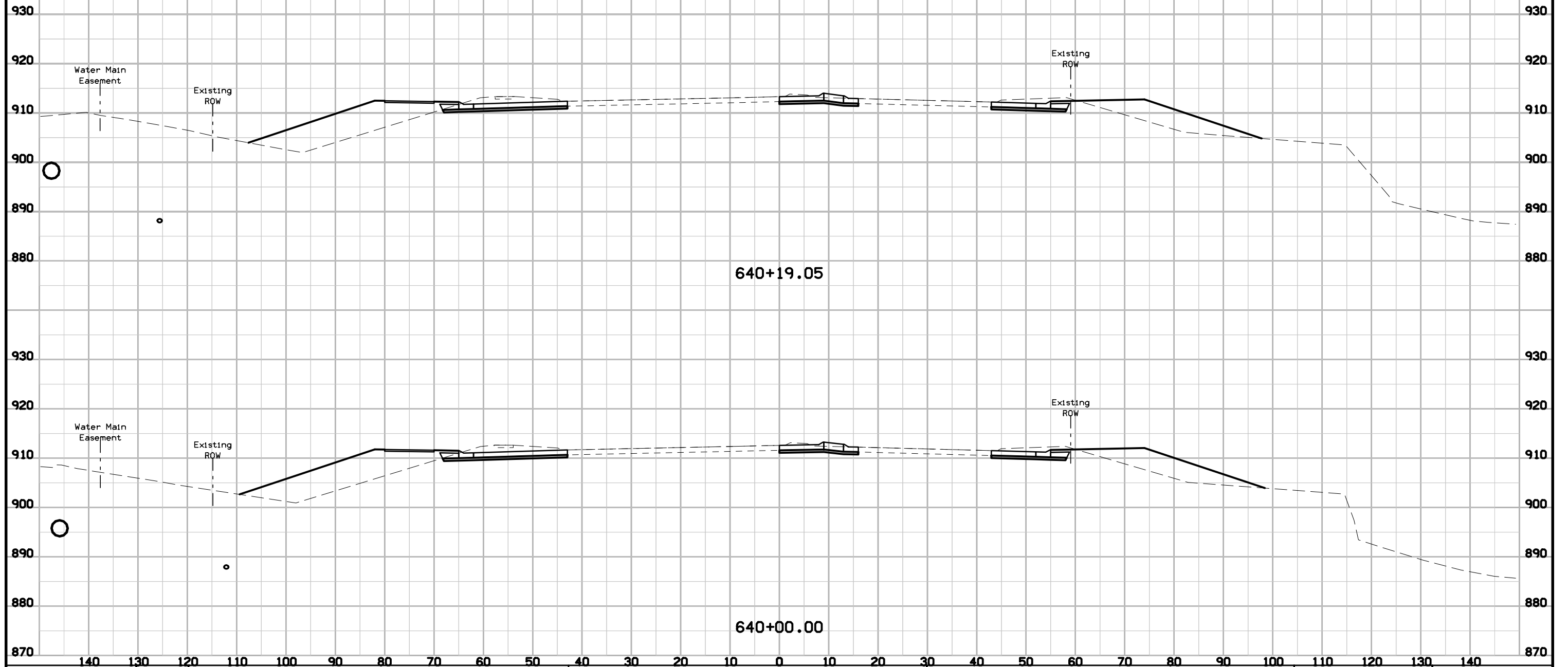
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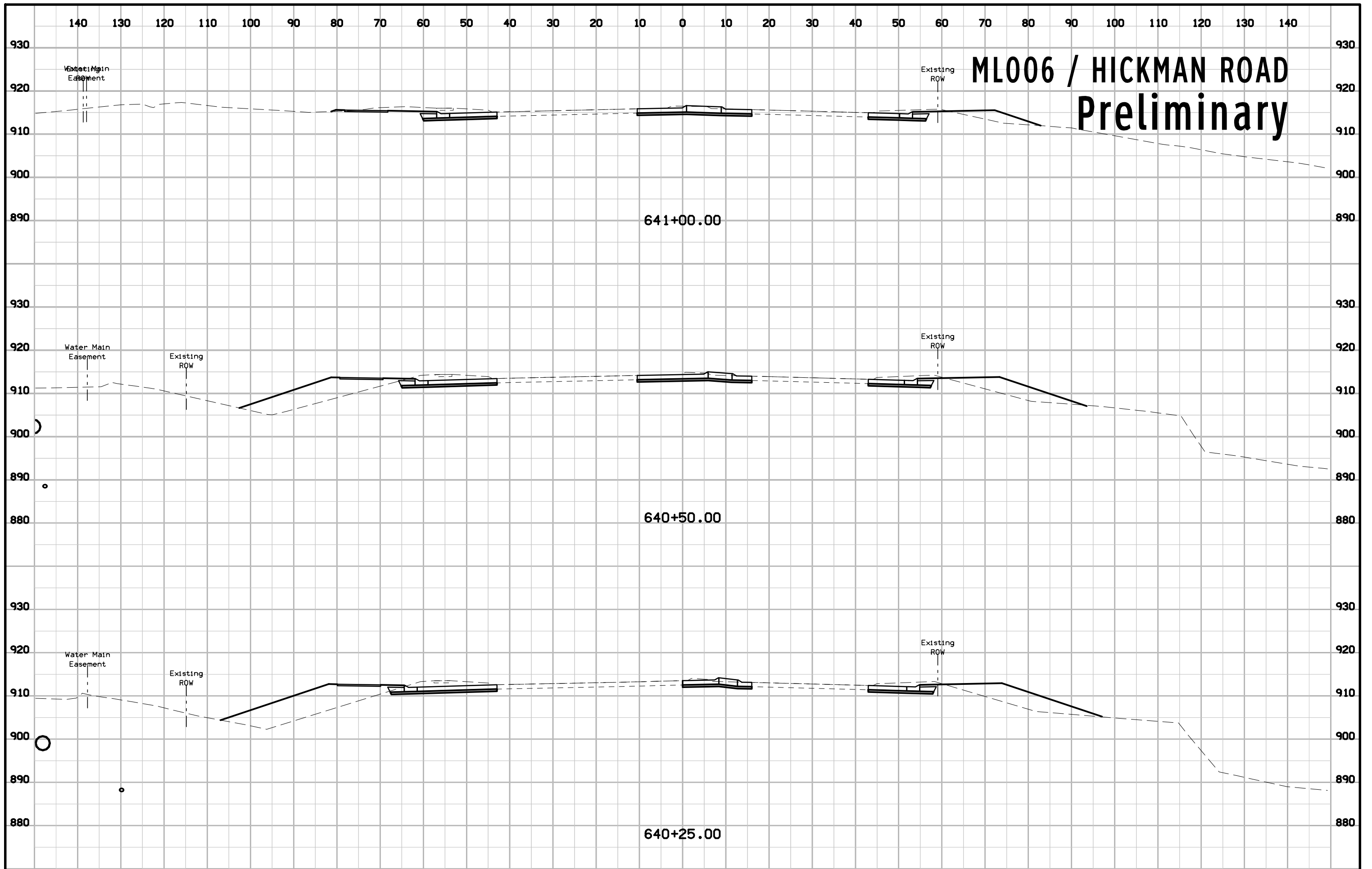
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ML006 / HICKMAN ROAD Preliminary





ML006 / HICKMAN ROAD Preliminary

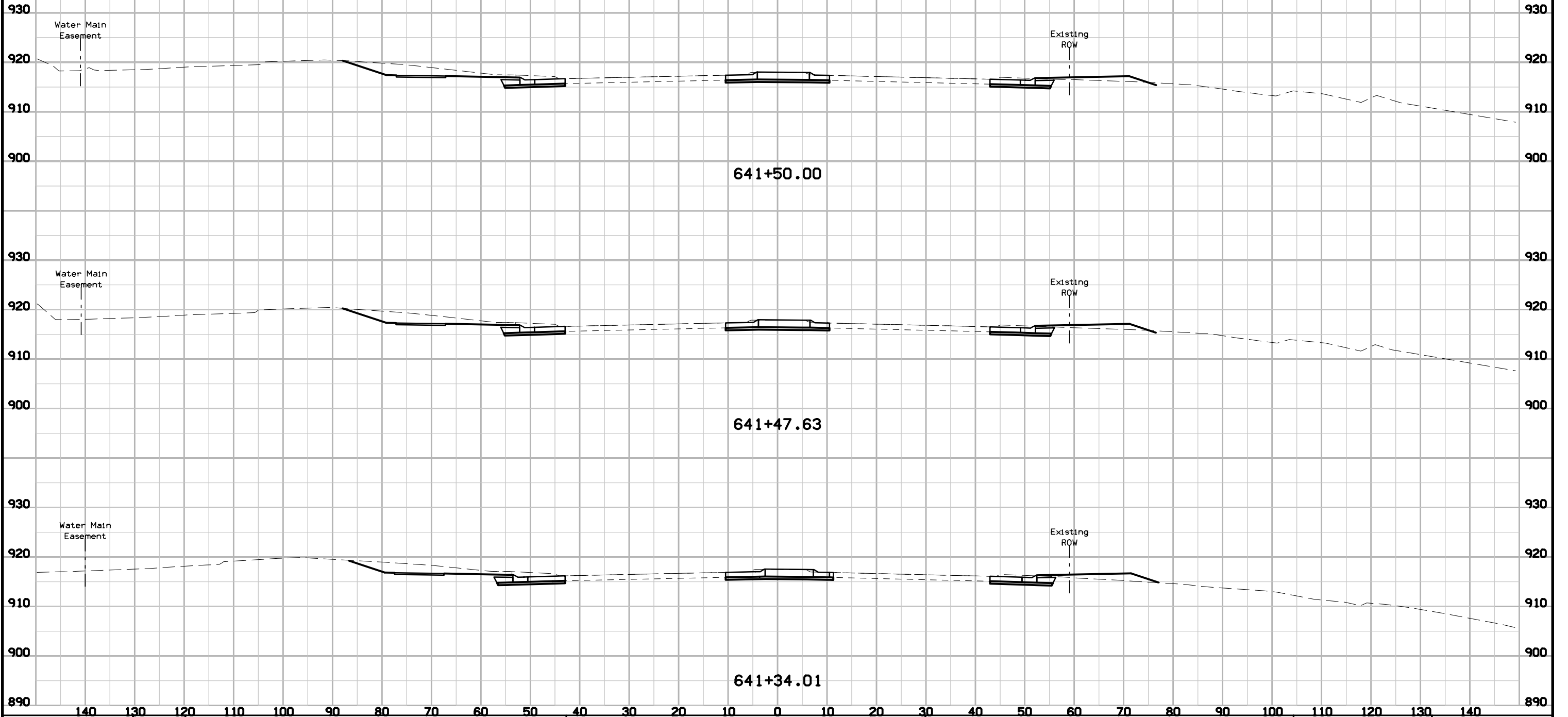
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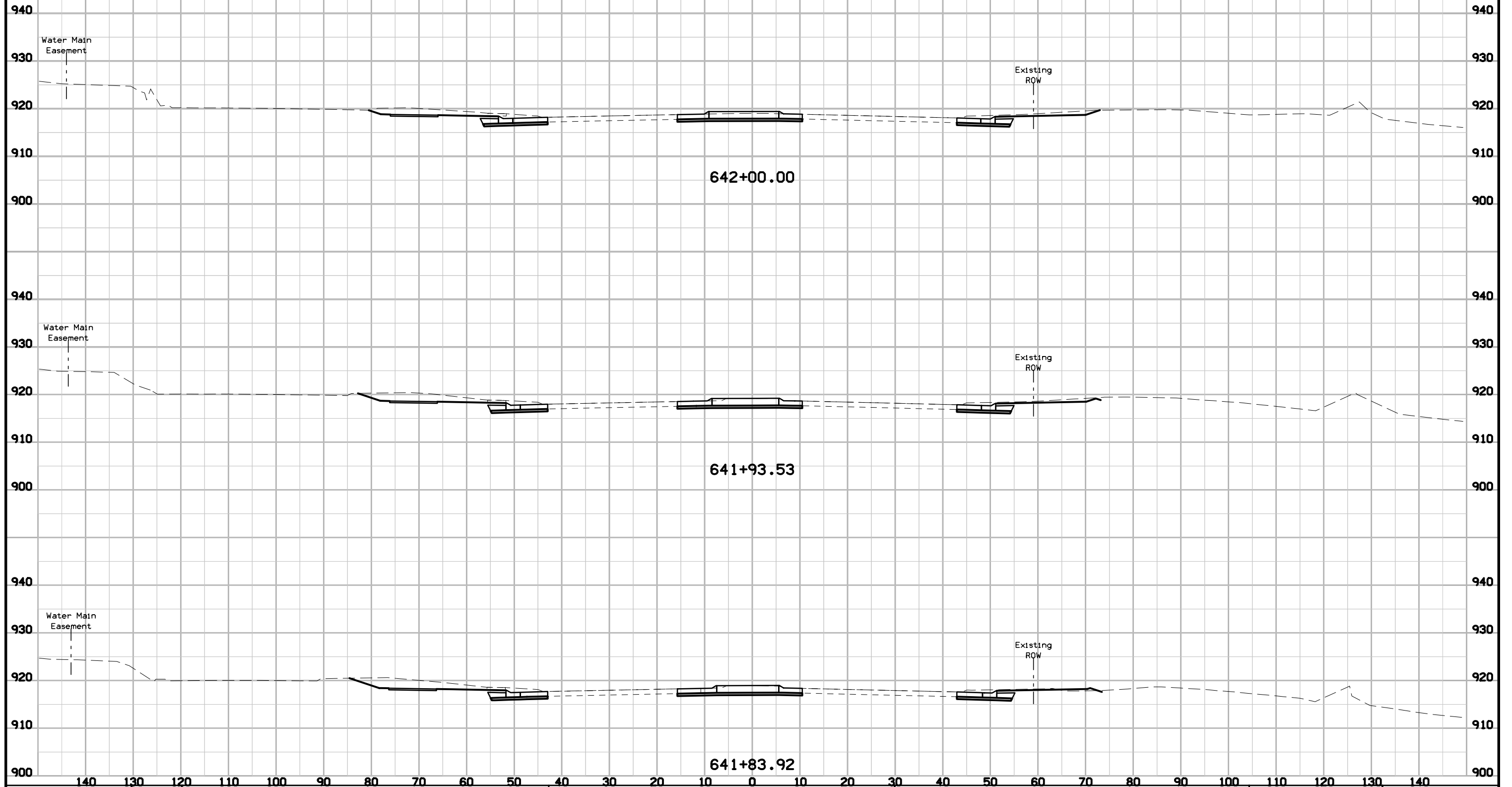
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ML006 / HICKMAN ROAD Preliminary



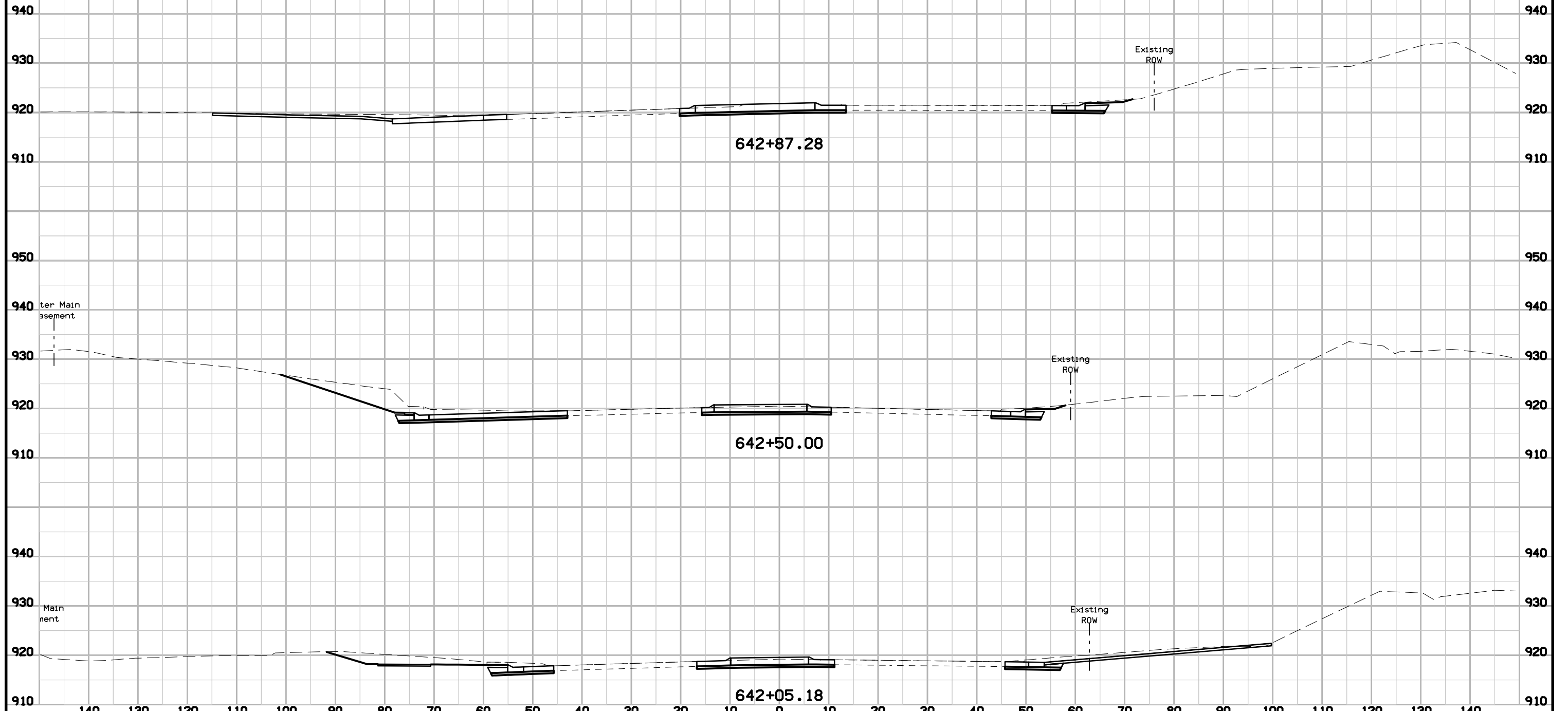
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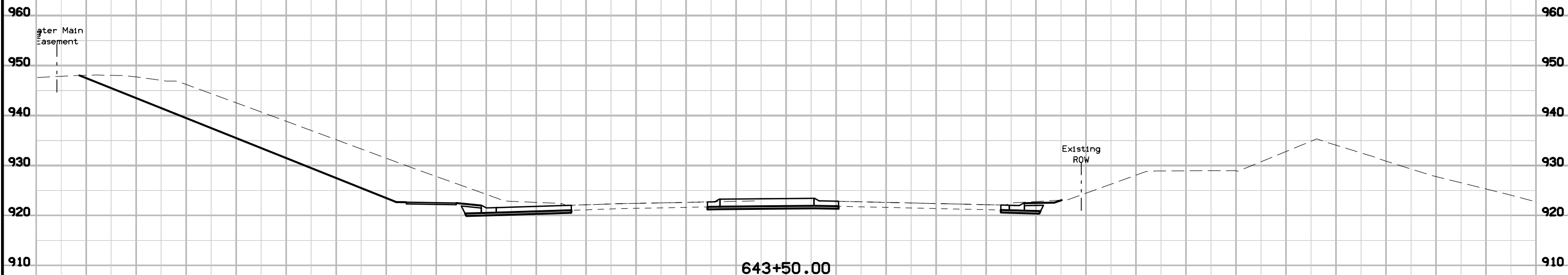
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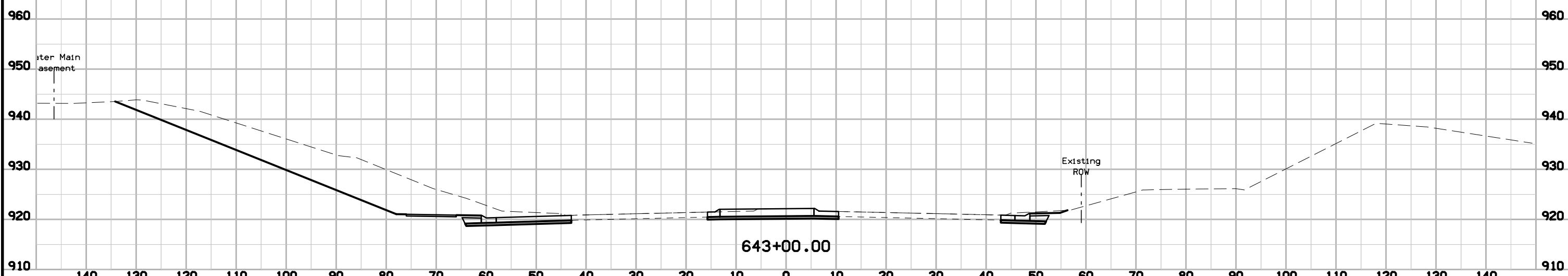


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ML006 / HICKMAN ROAD Preliminary



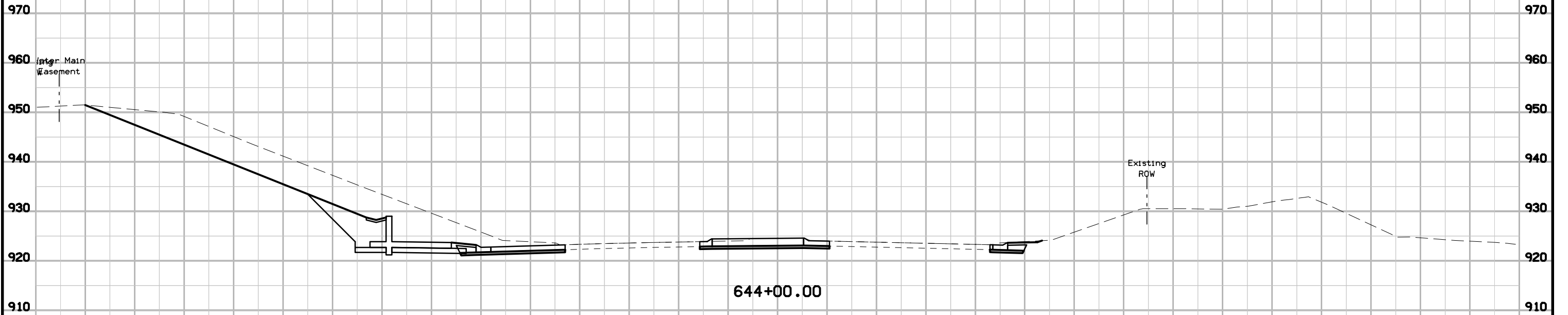
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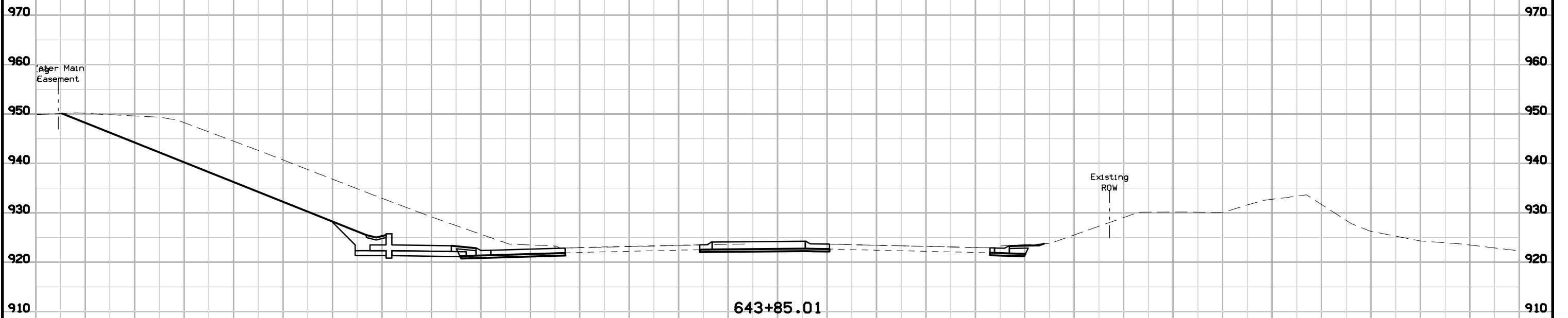
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ML006 / HICKMAN ROAD Preliminary



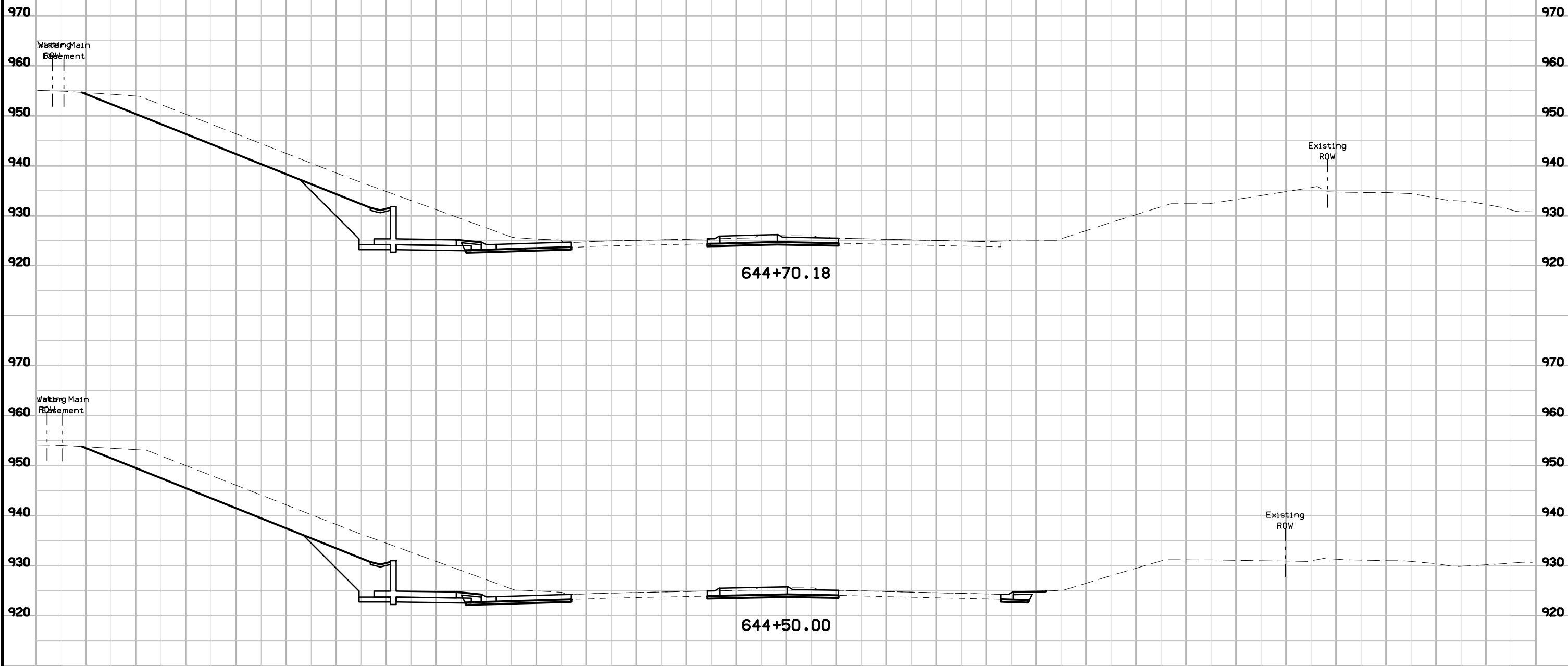
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643+85.01

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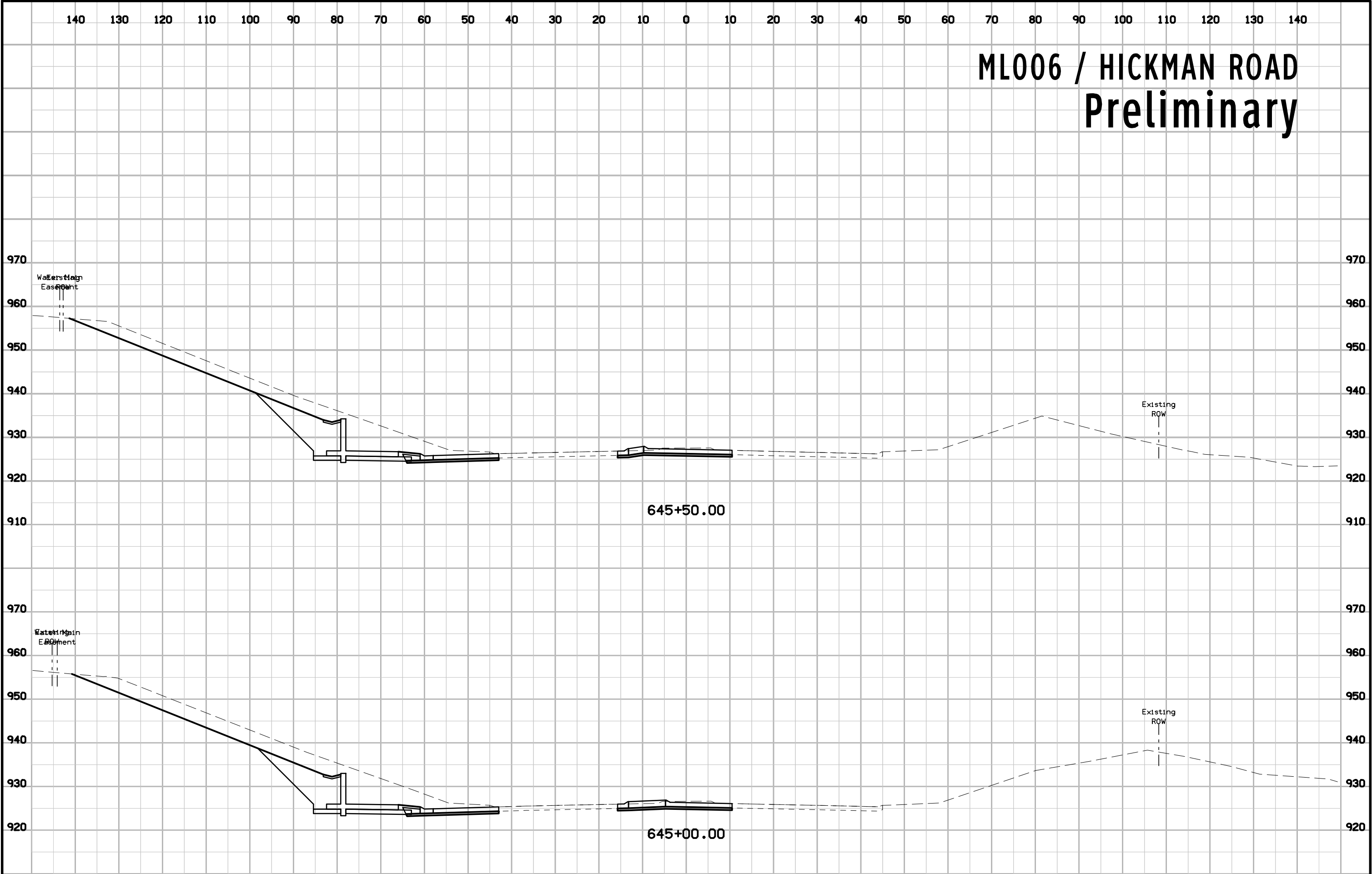
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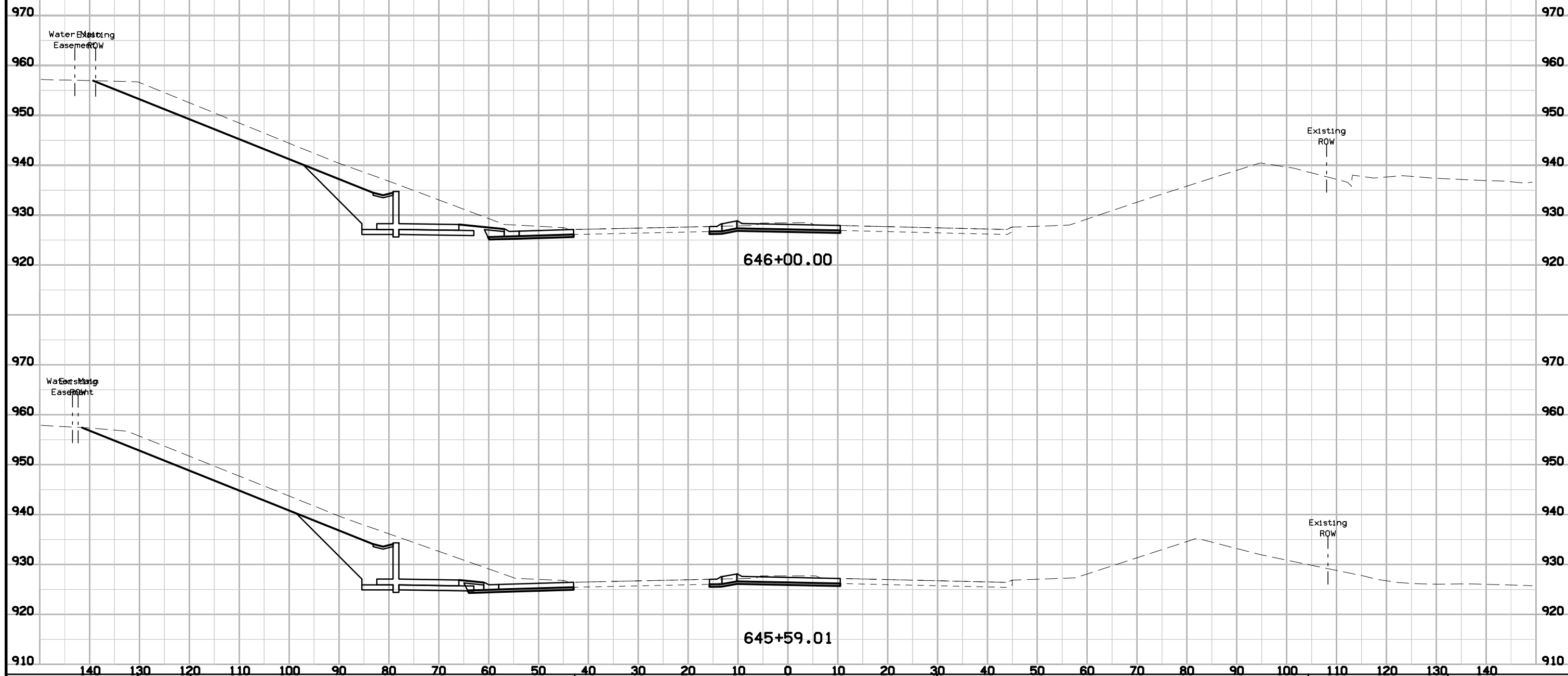
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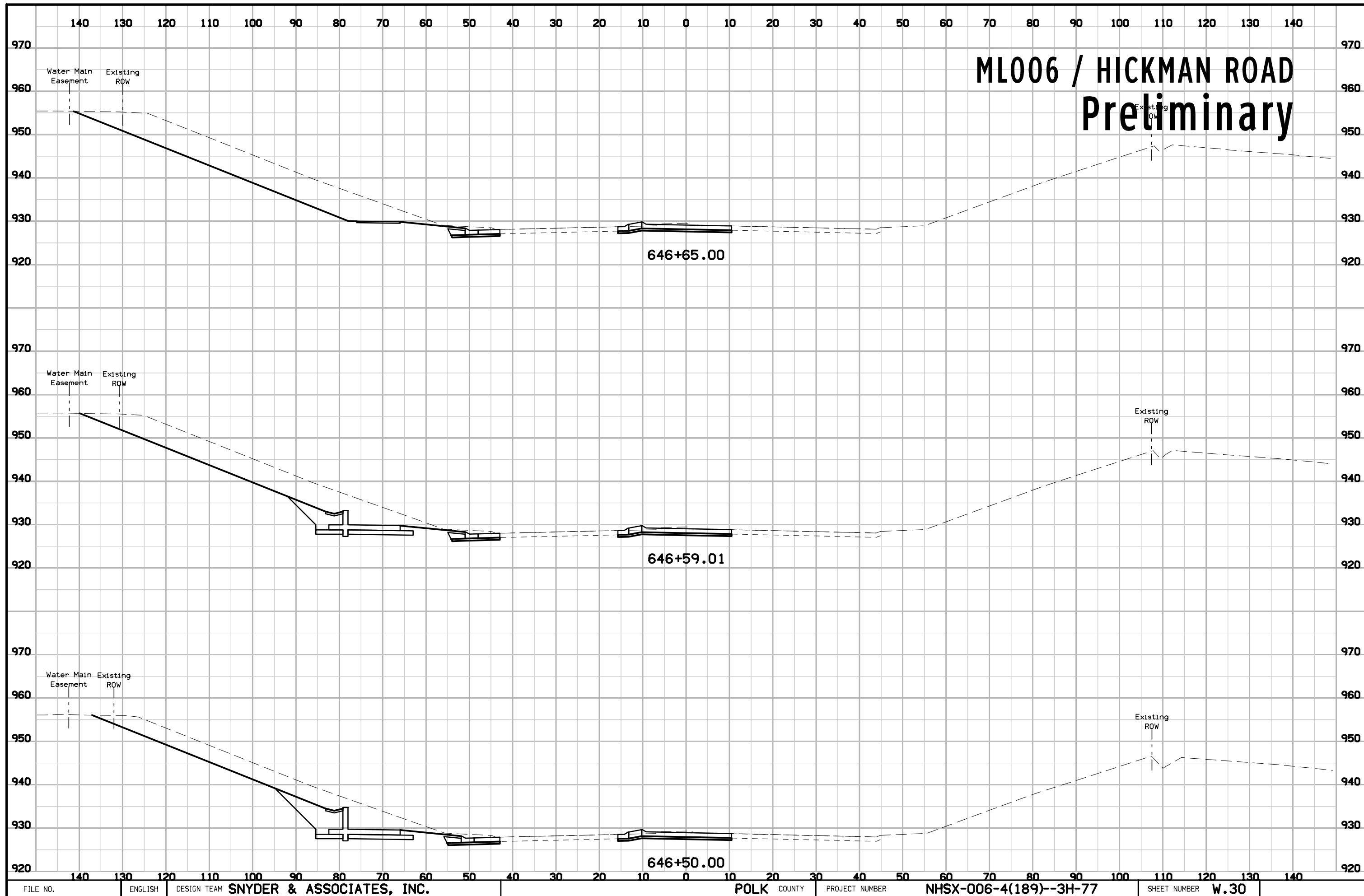
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ML006 / HICKMAN ROAD Preliminary





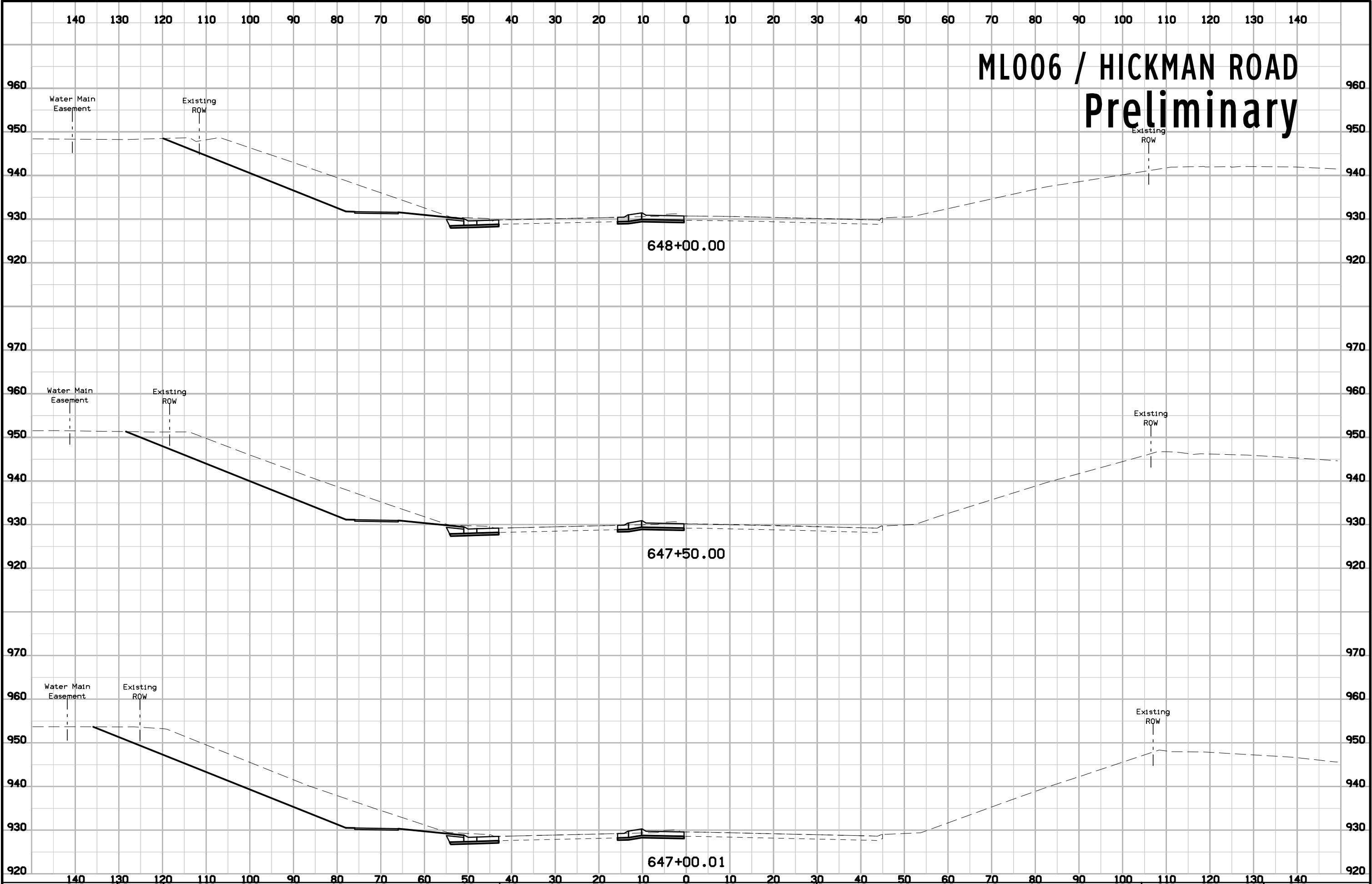
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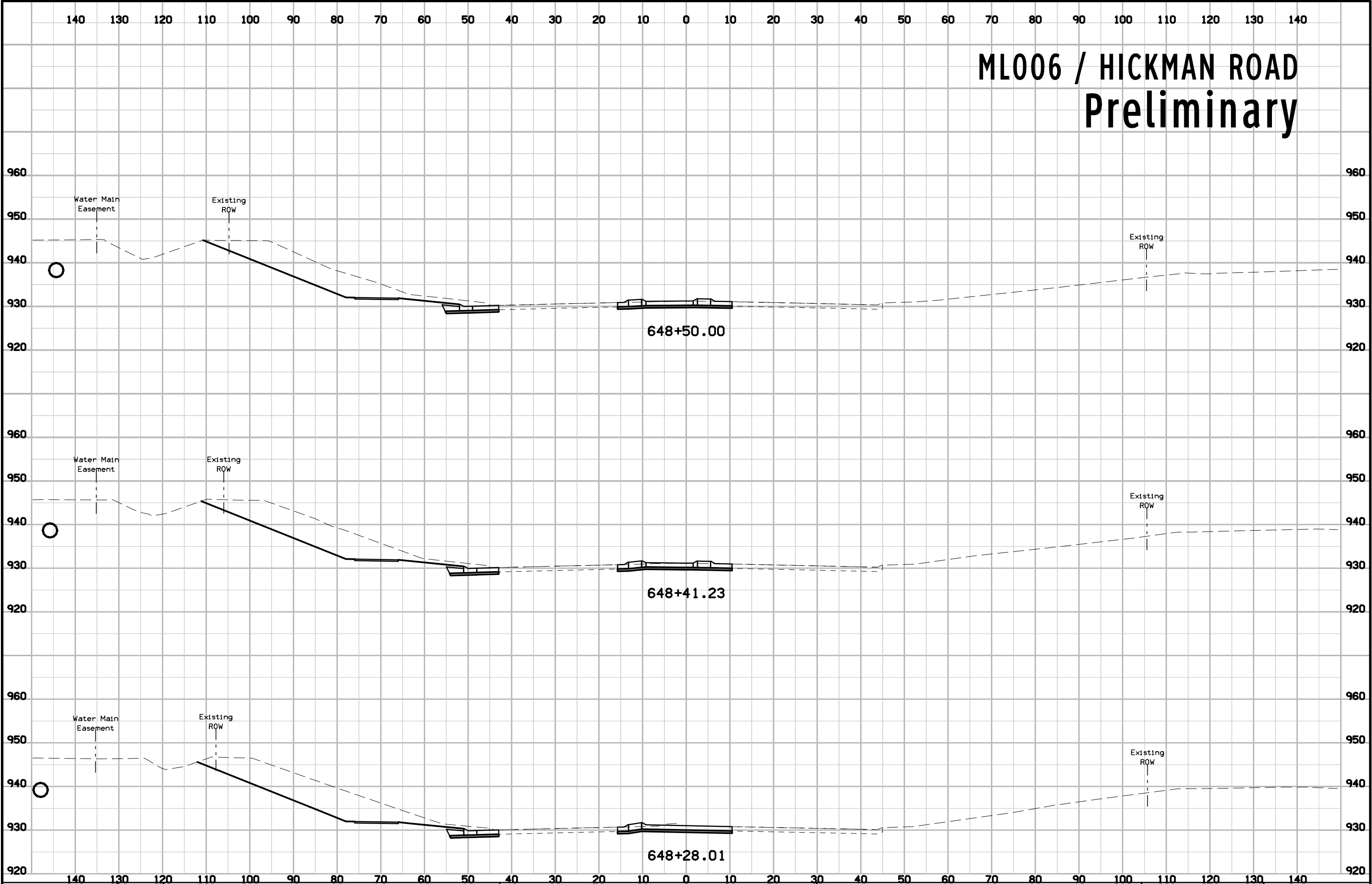
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646+50.00

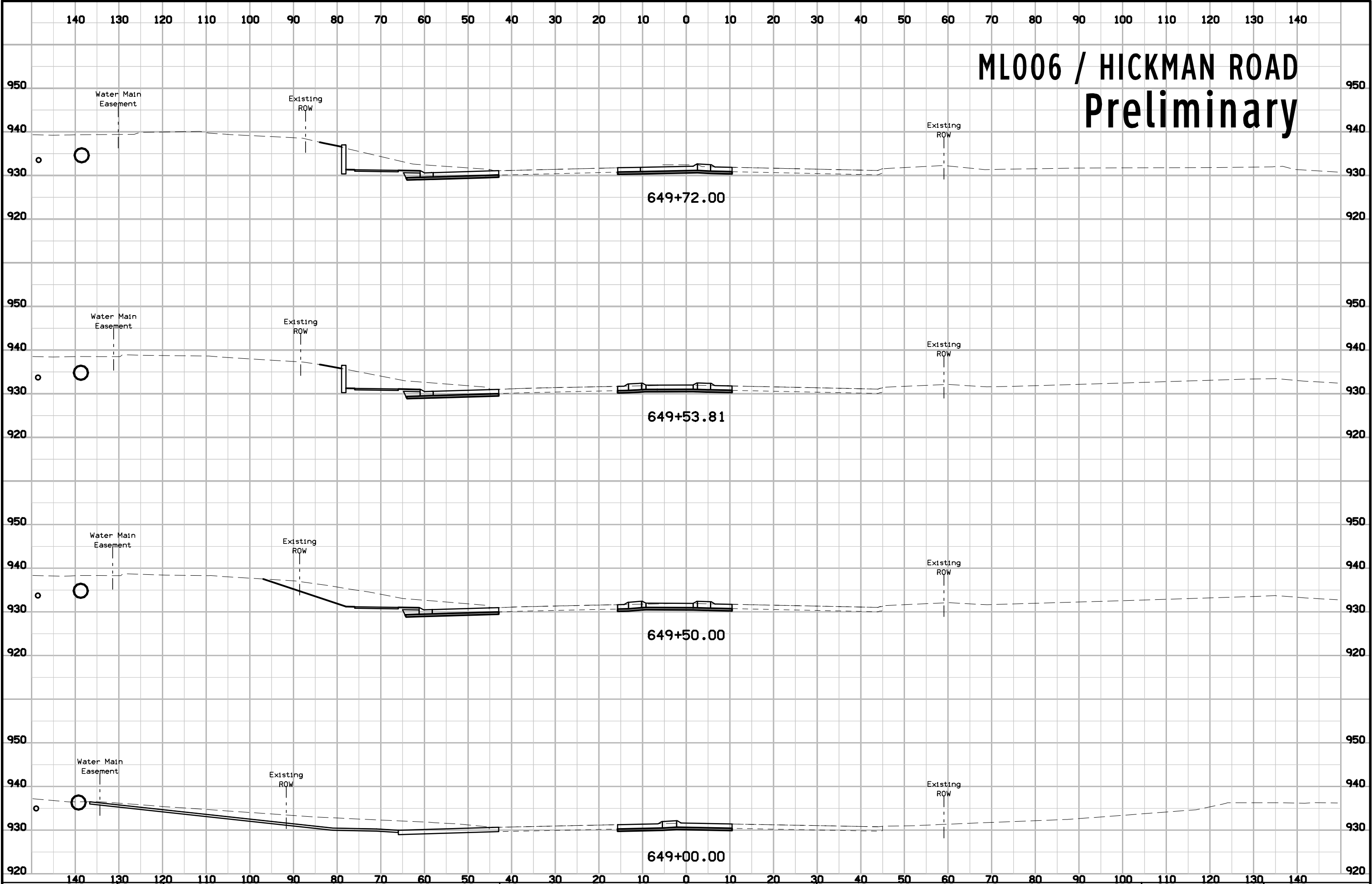
ML006 / HICKMAN ROAD Preliminary



ML006 / HICKMAN ROAD Preliminary

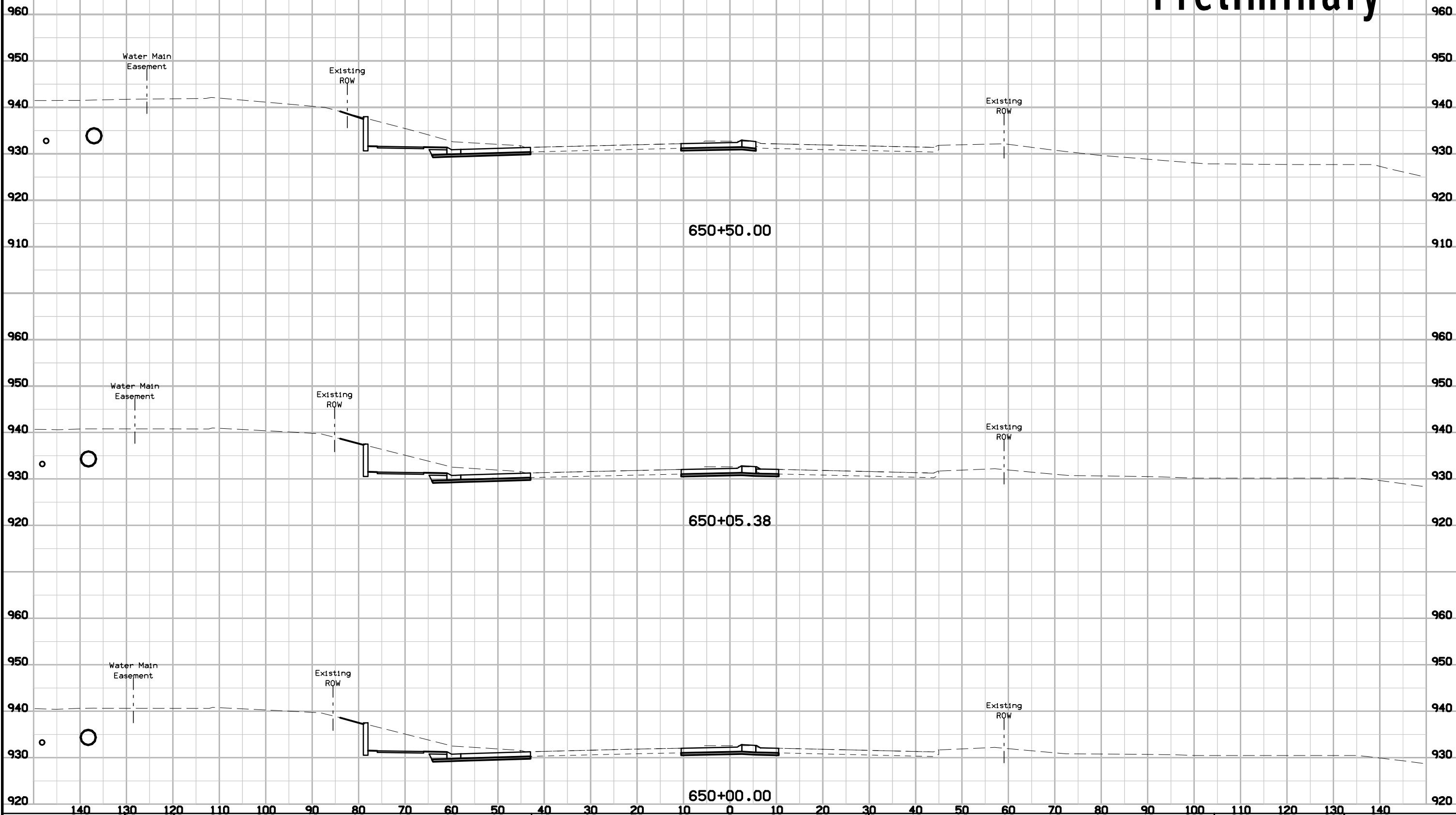


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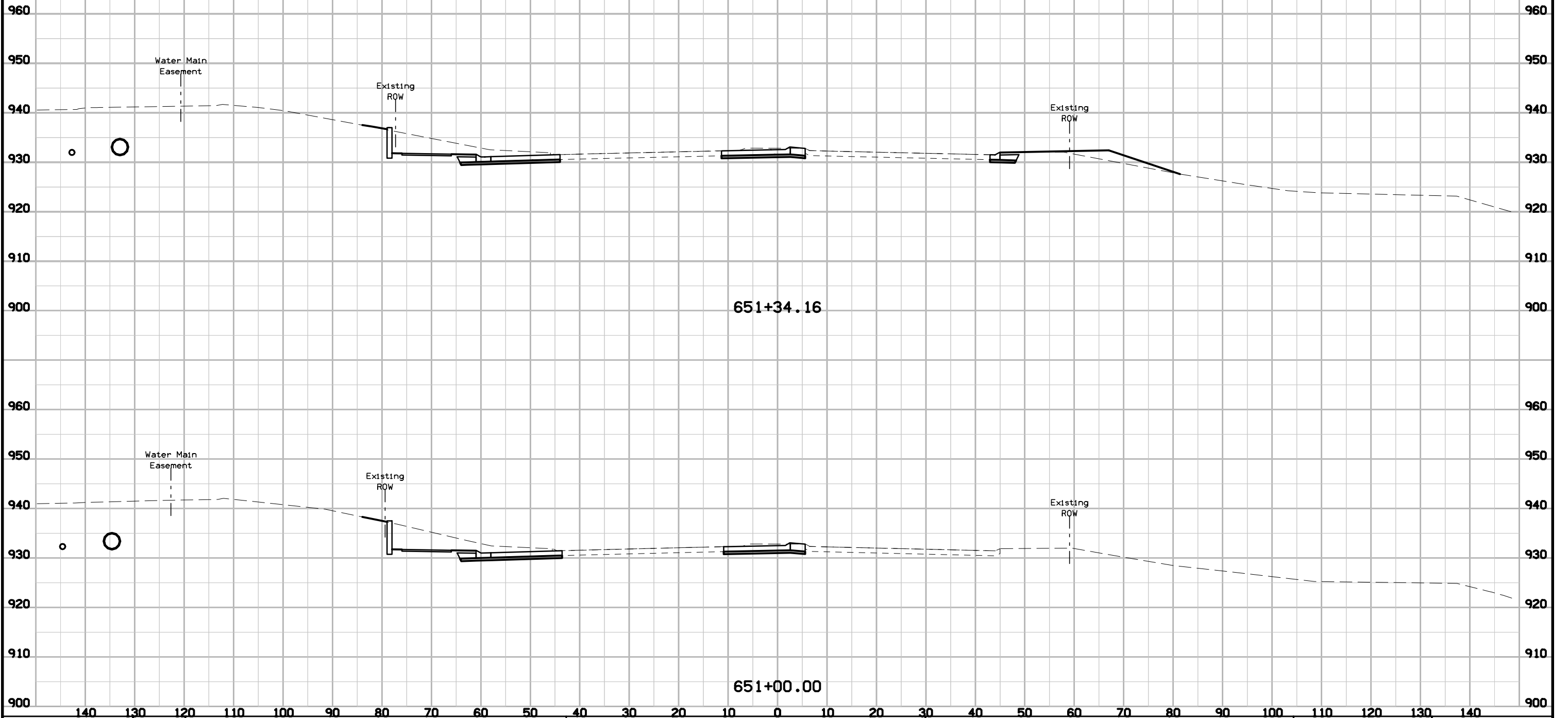
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ML006 / HICKMAN ROAD Preliminary



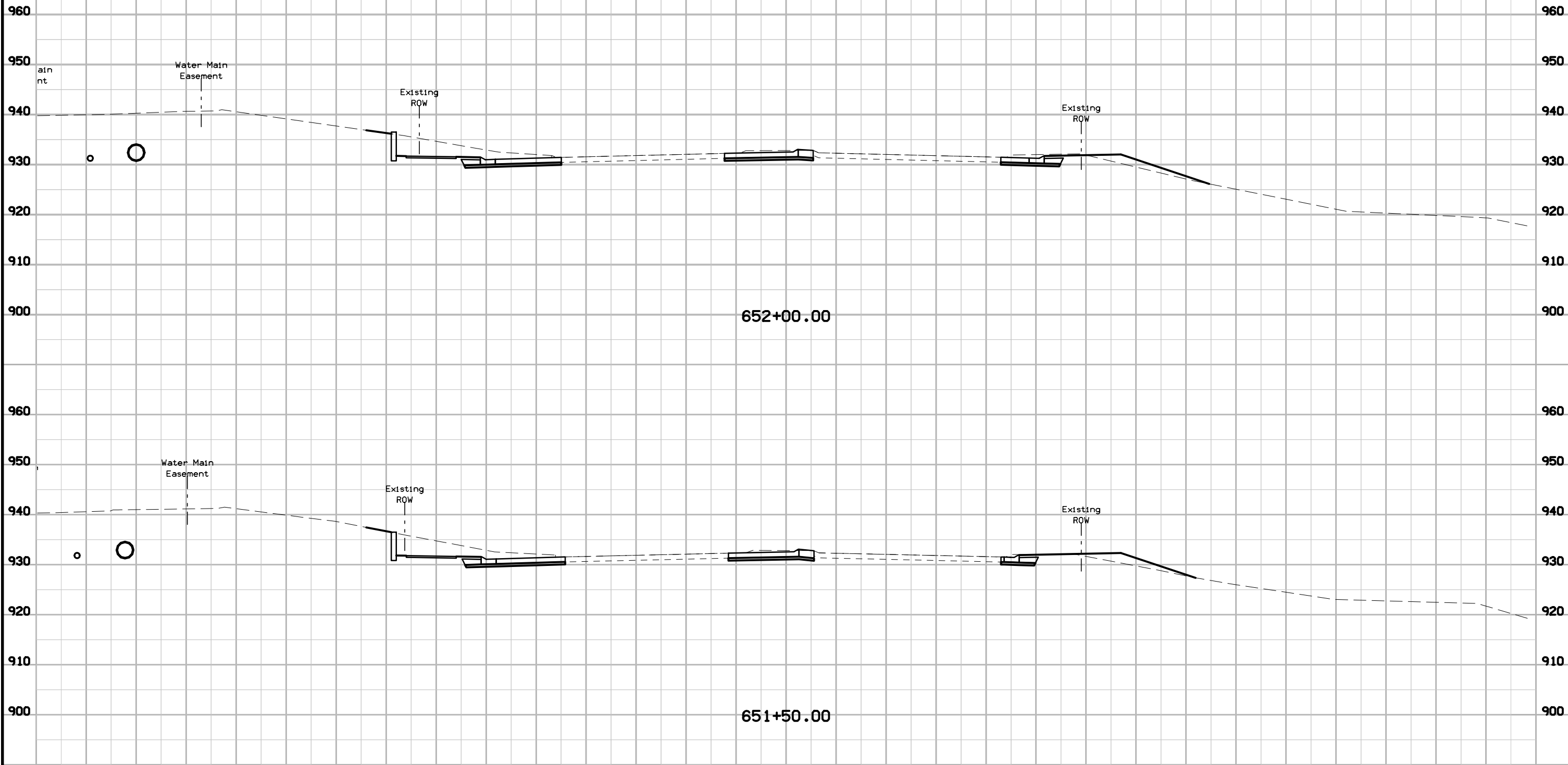
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ML006 / HICKMAN ROAD Preliminary



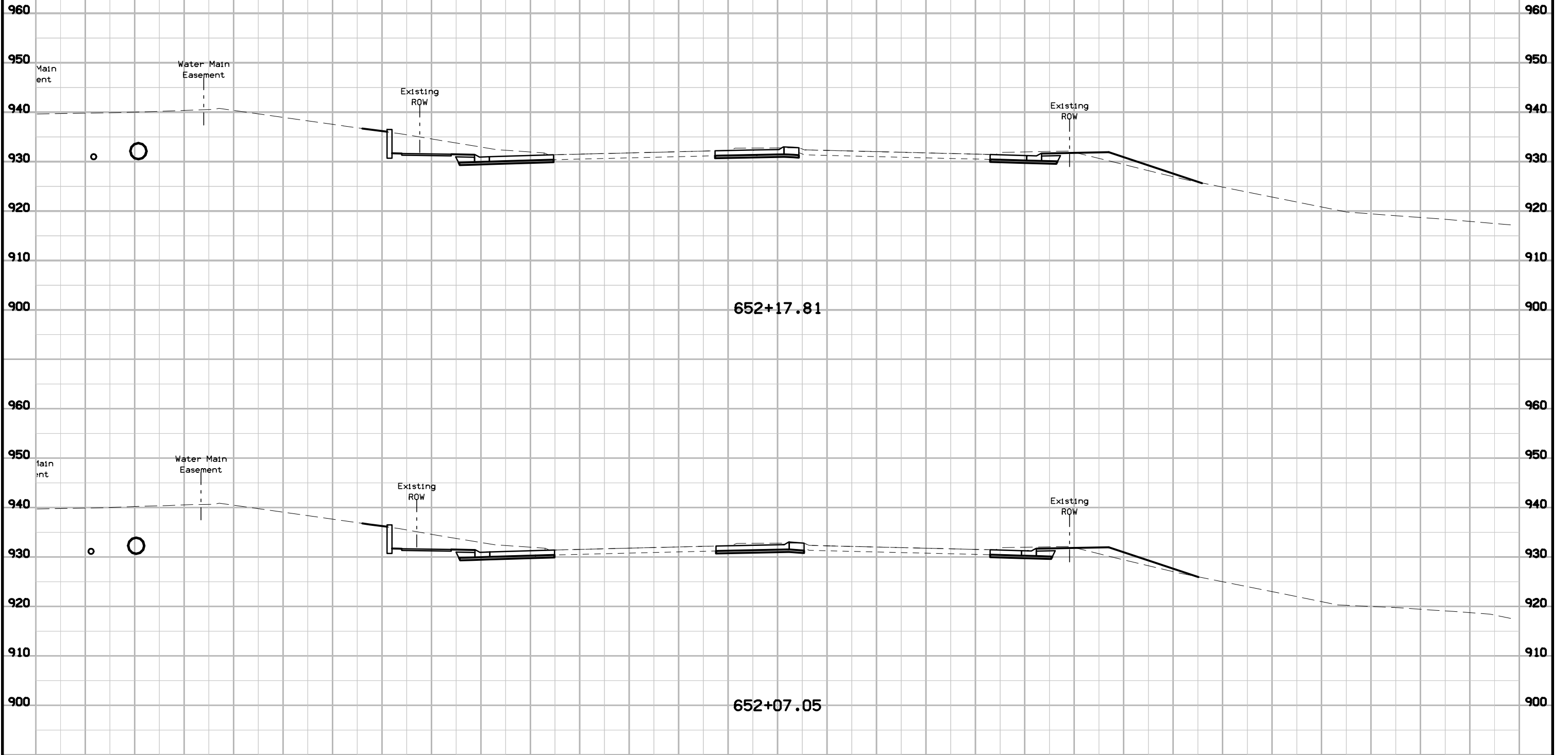
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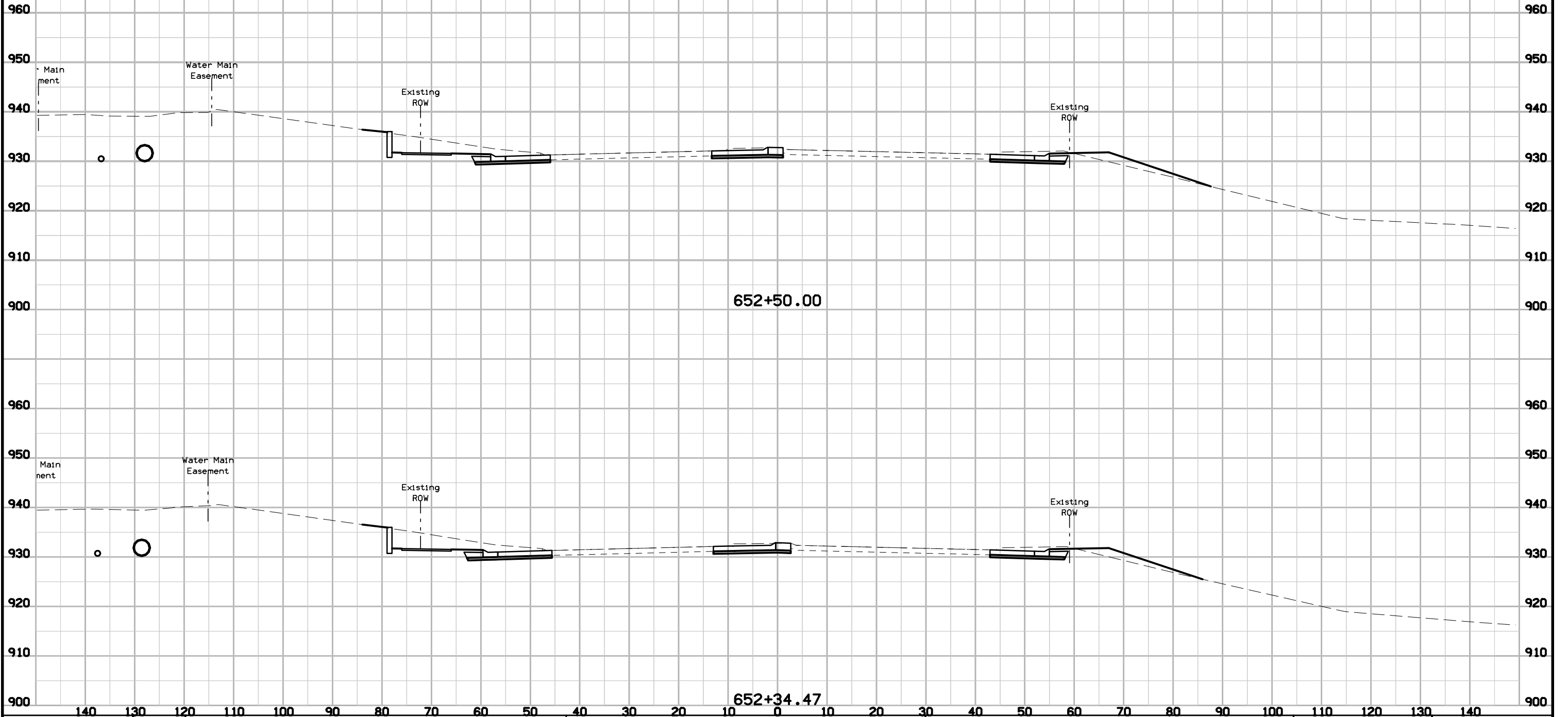
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ML006 / HICKMAN ROAD Preliminary



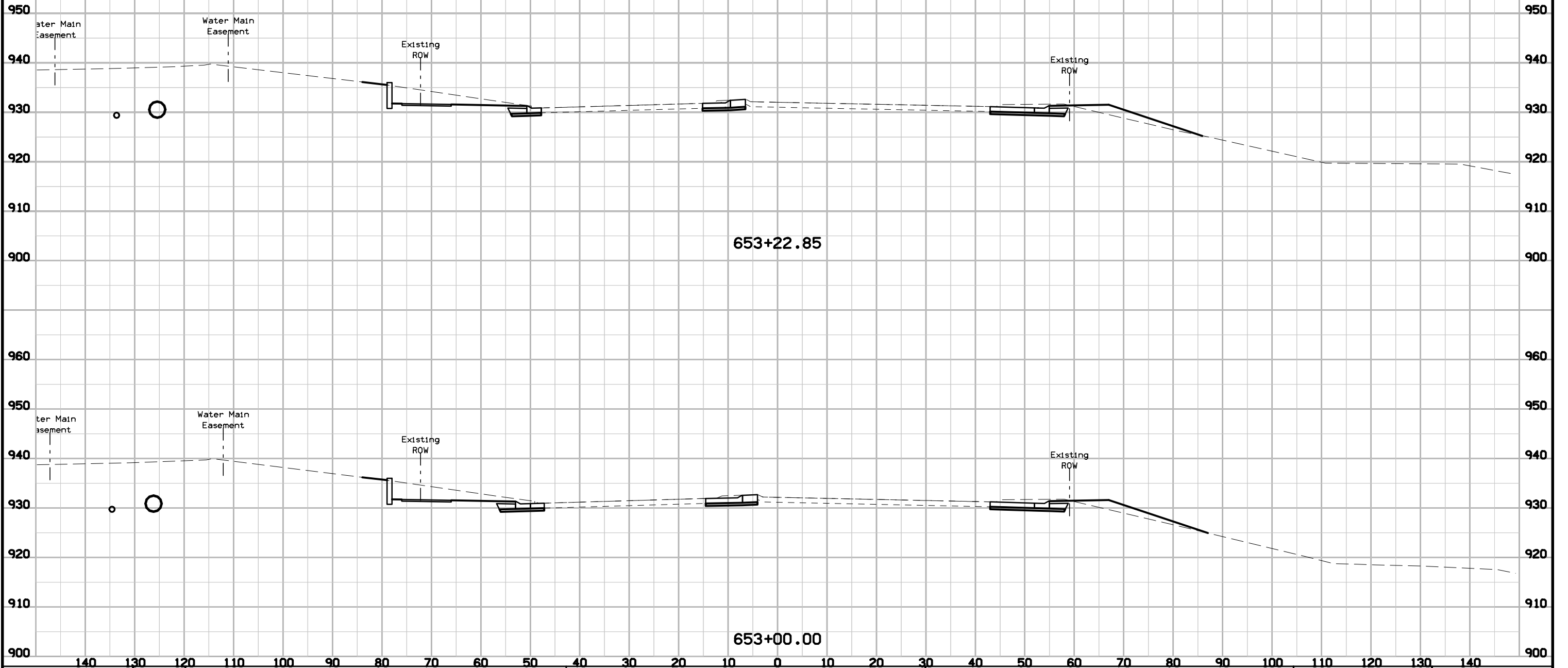
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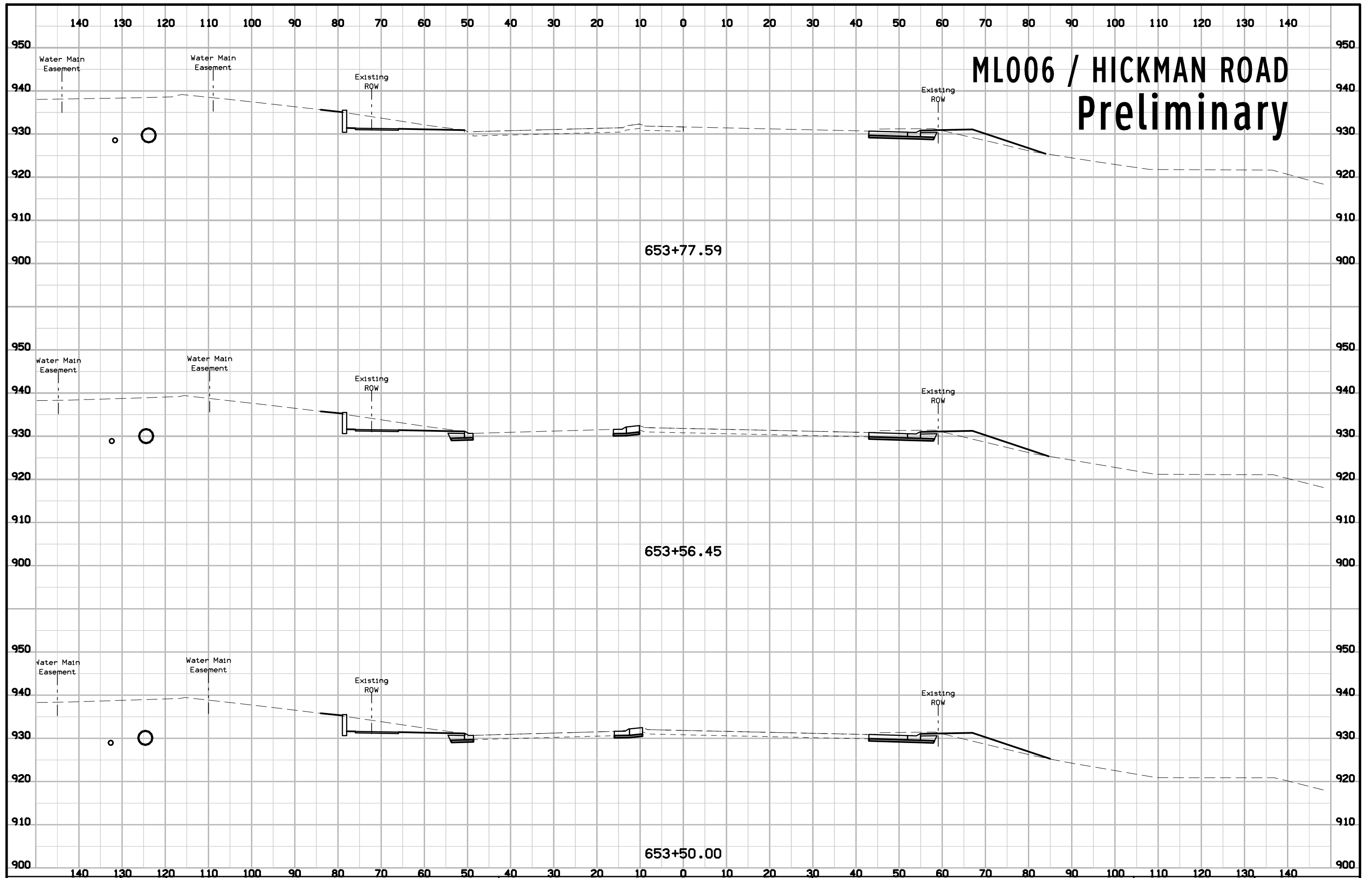
ML006 / HICKMAN ROAD Preliminary



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ML006 / HICKMAN ROAD Preliminary



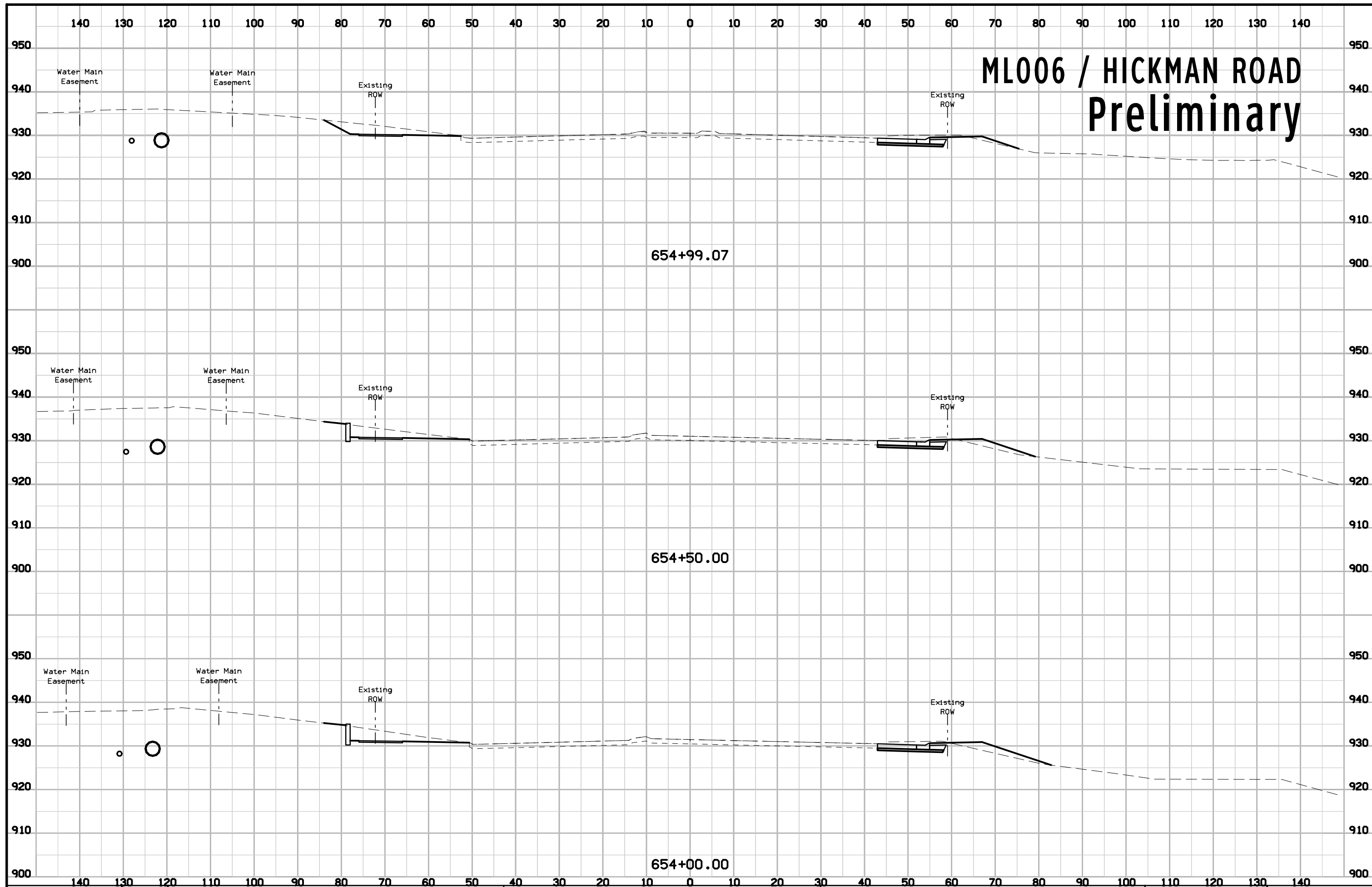


ML006 / HICKMAN ROAD Preliminary

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653+56.45

653+50.00

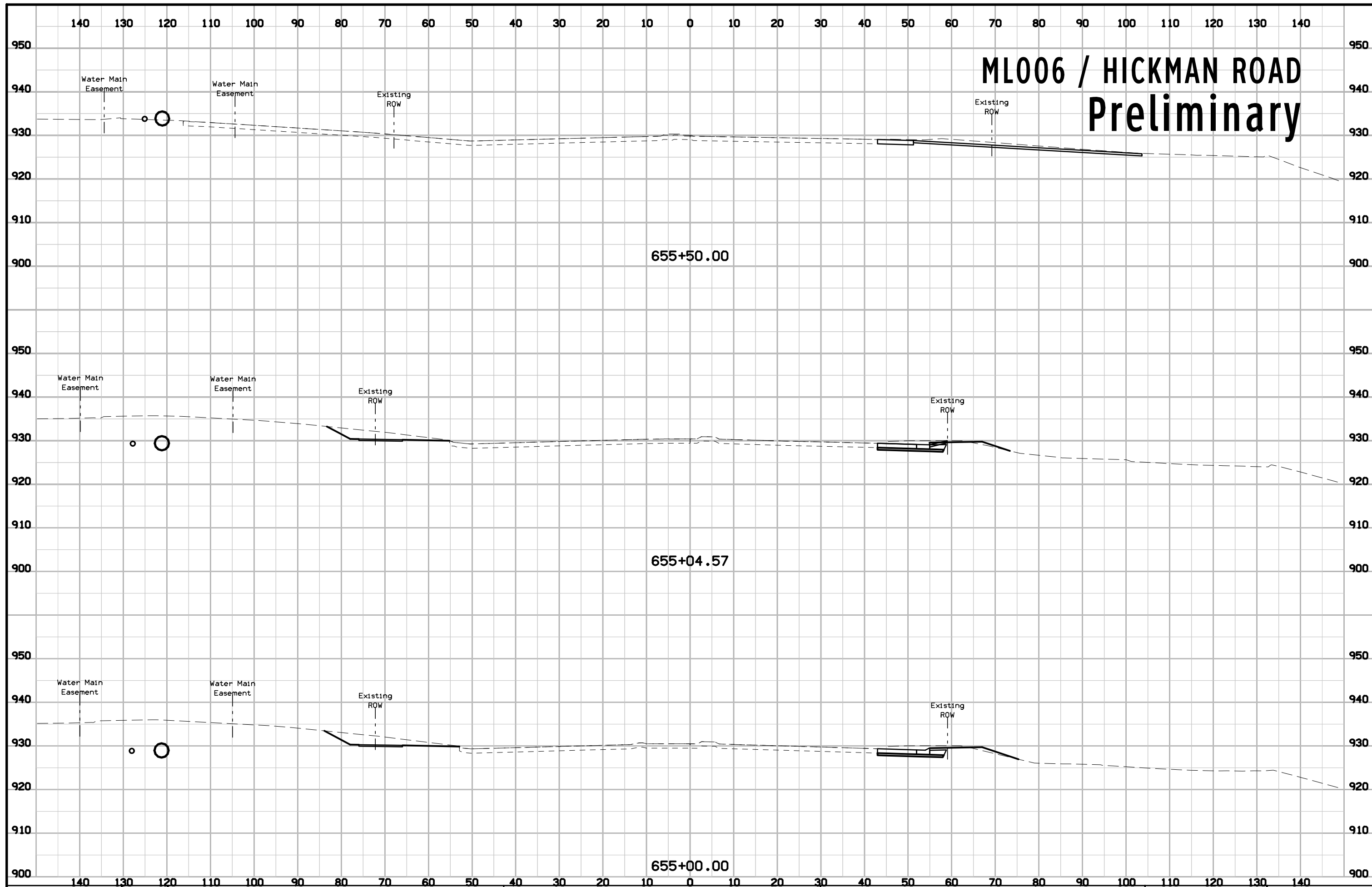


ML006 / HICKMAN ROAD Preliminary

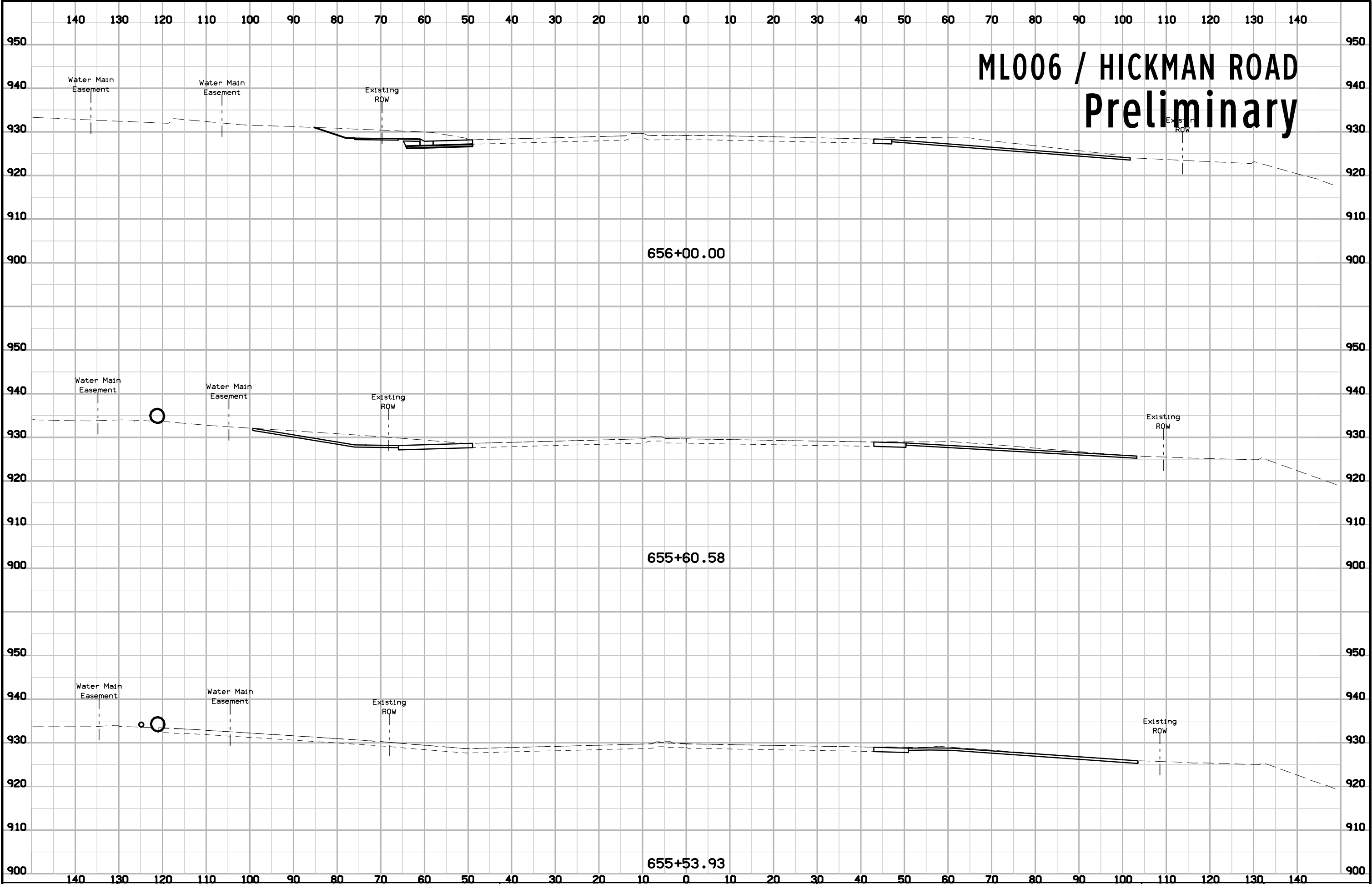
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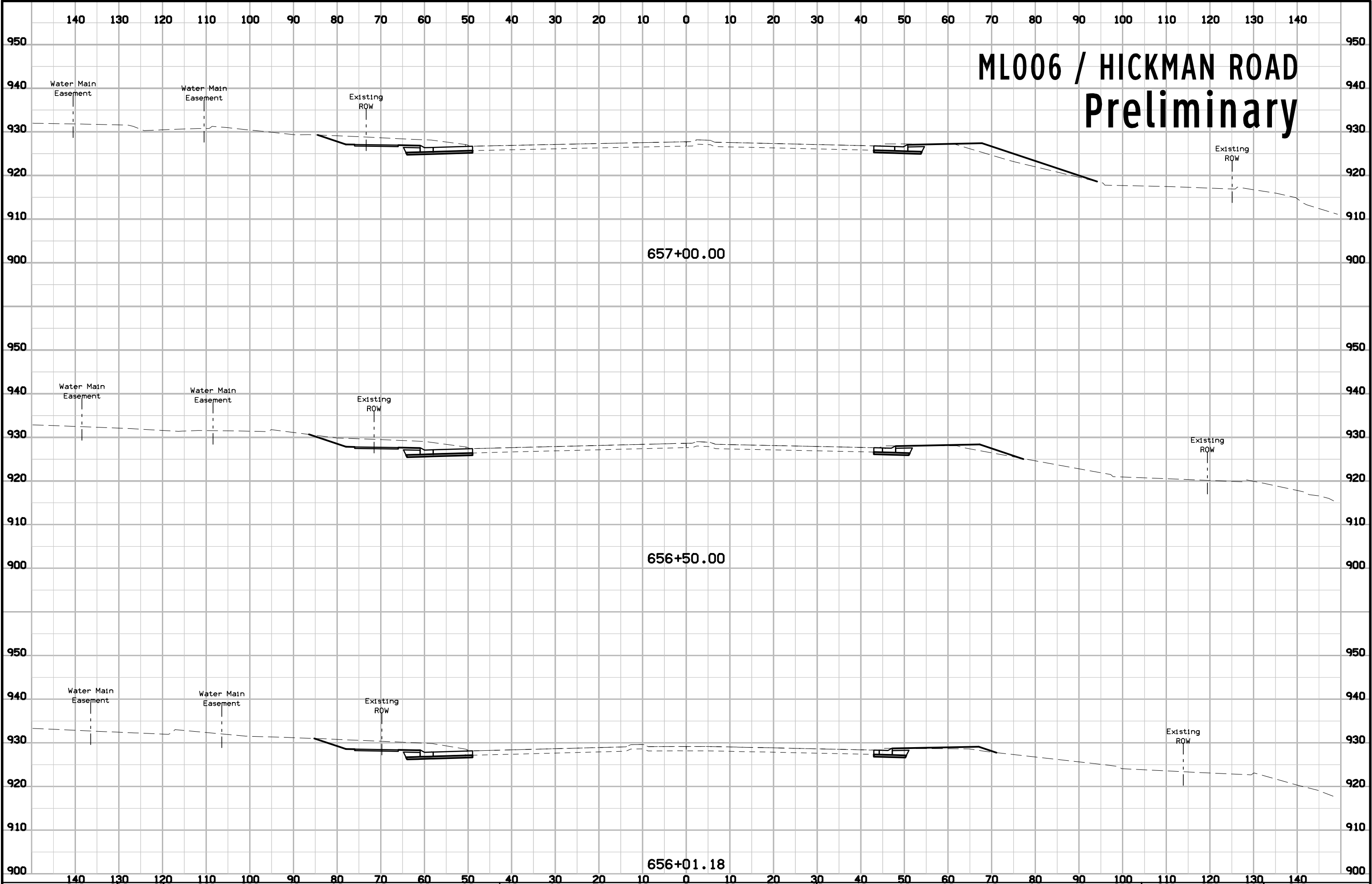
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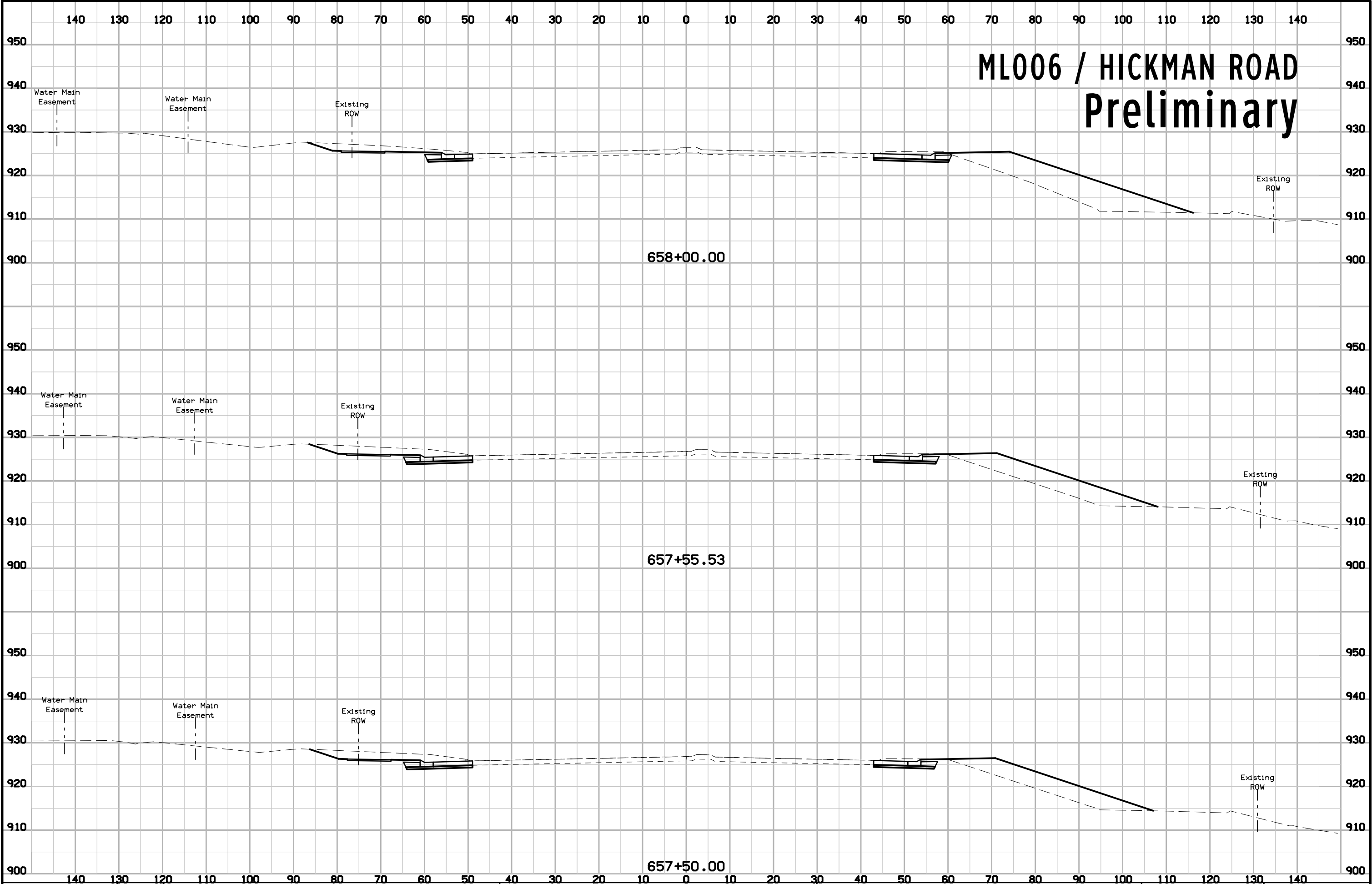
ML006 / HICKMAN ROAD Preliminary



ML006 / HICKMAN ROAD Preliminary

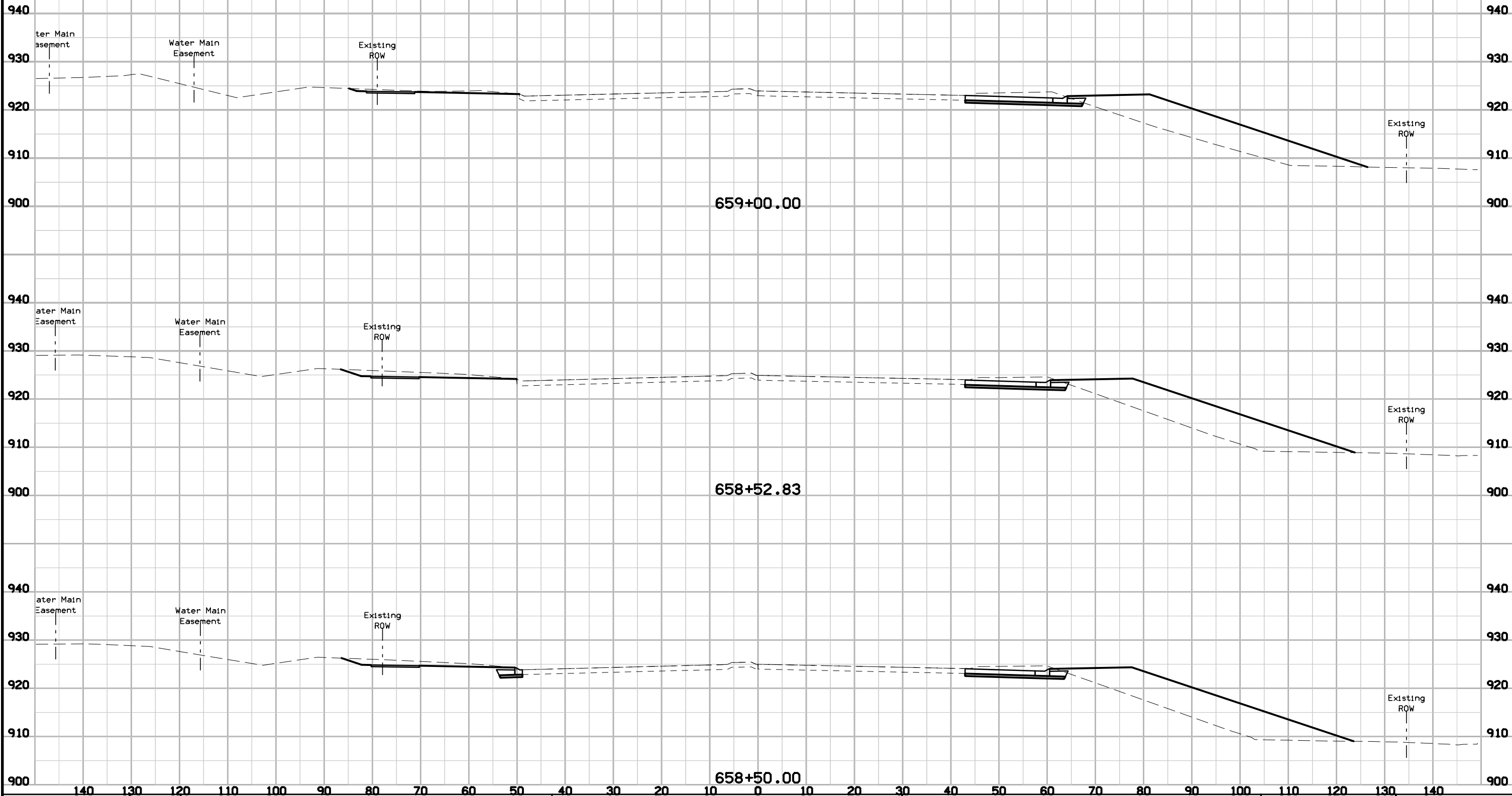


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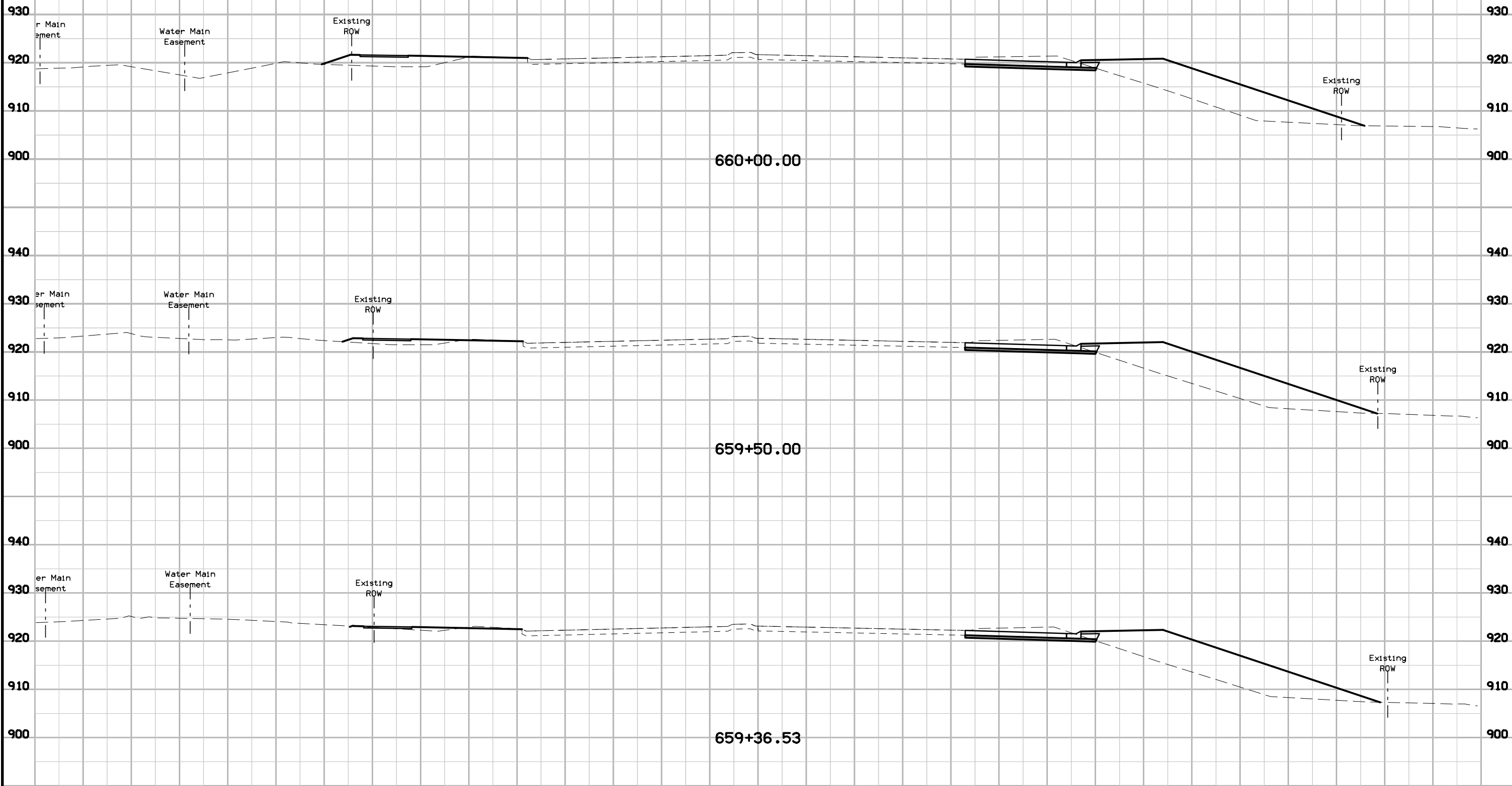
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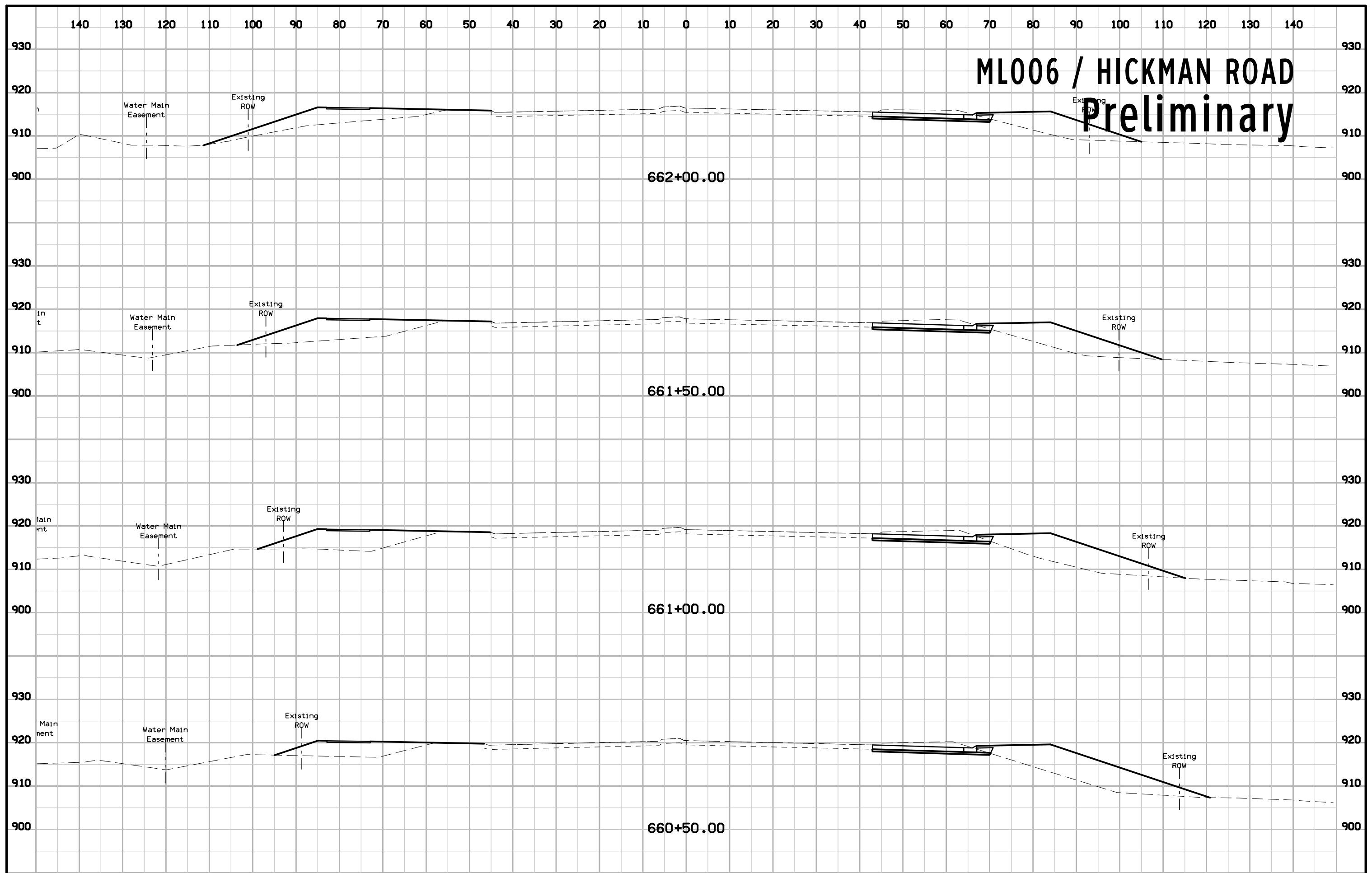
ML006 / HICKMAN ROAD Preliminary



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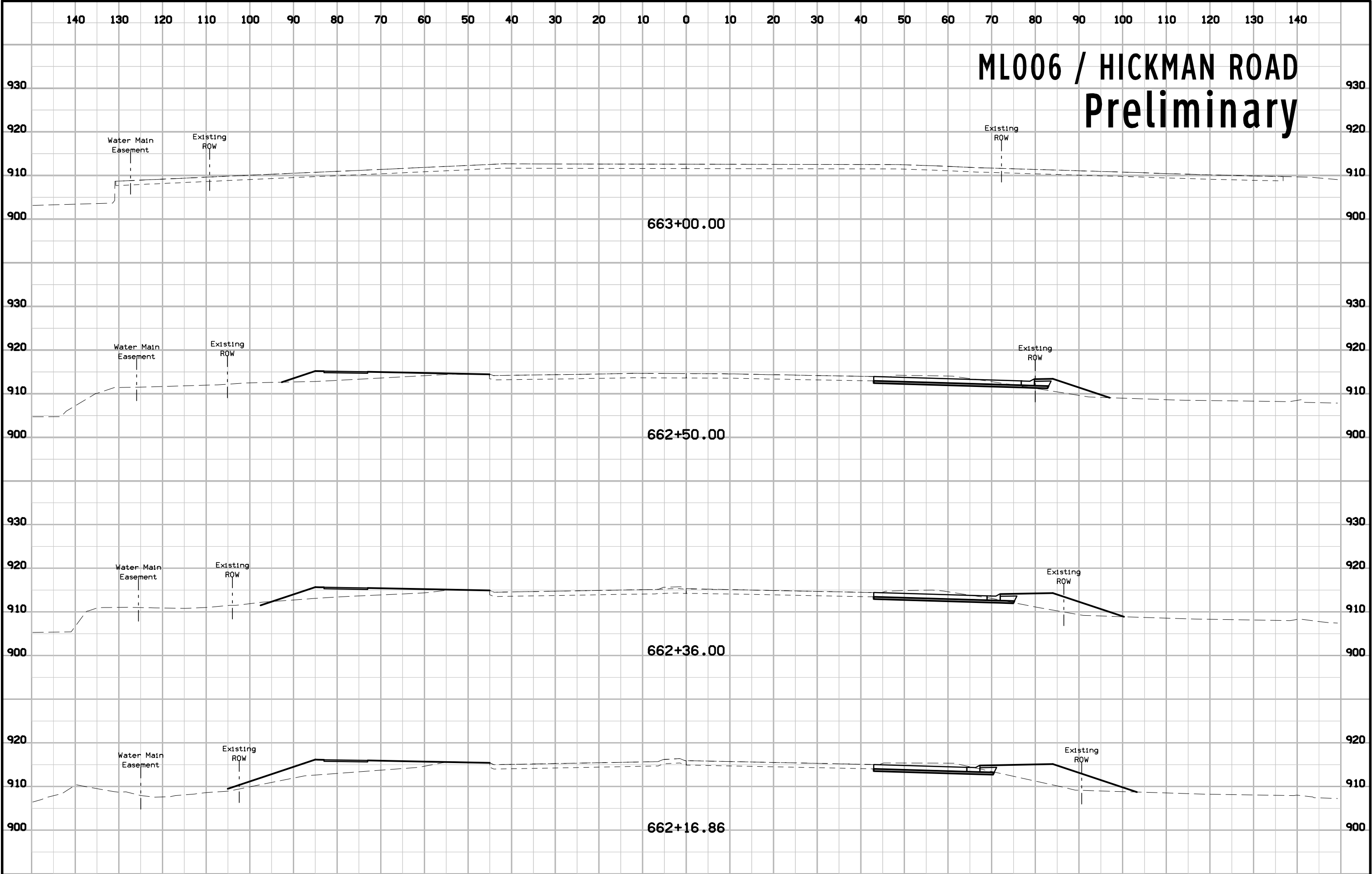
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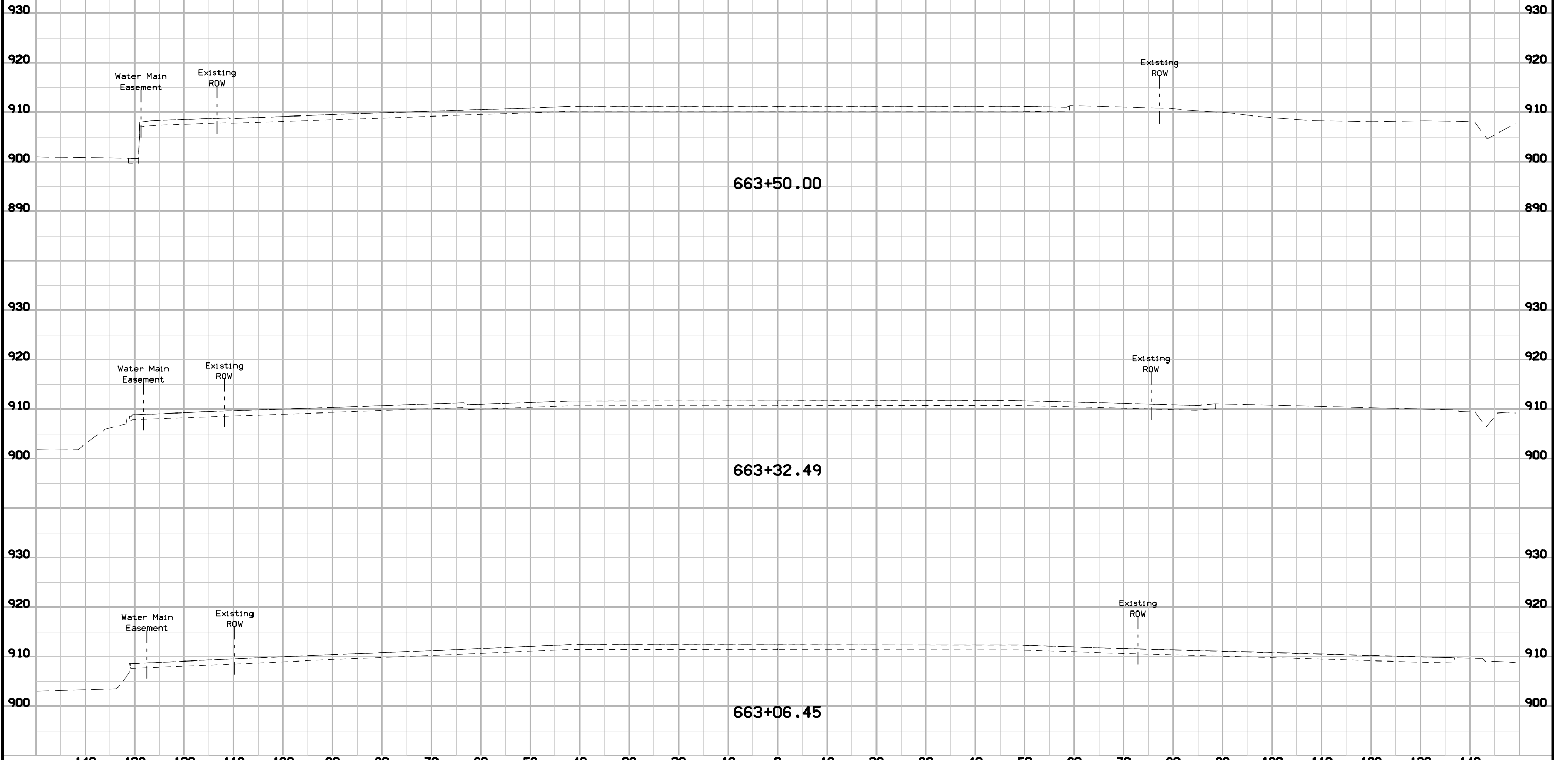
ML006 / HICKMAN ROAD Preliminary

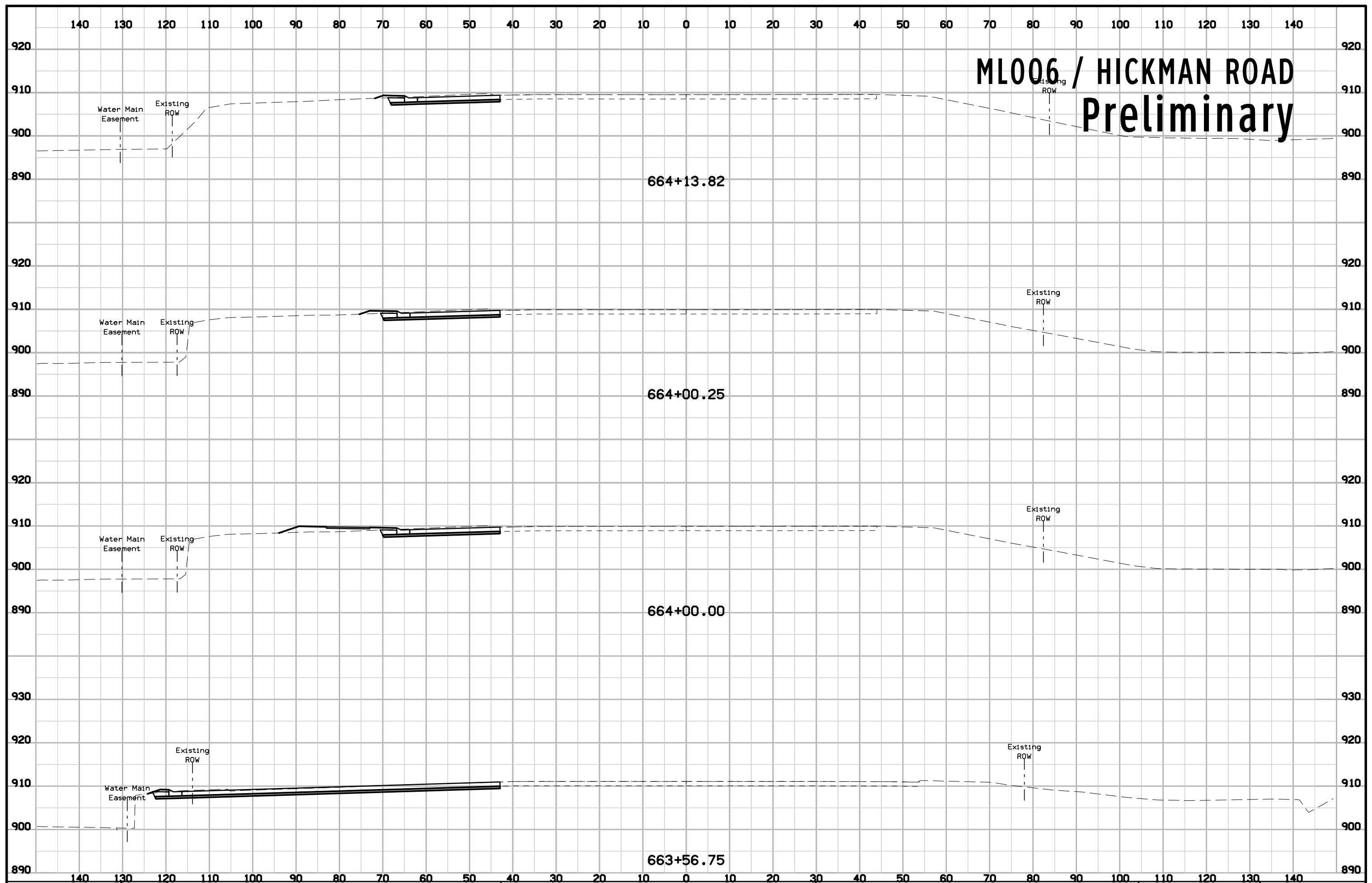
ML006 / HICKMAN ROAD Preliminary



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ML006 / HICKMAN ROAD Preliminary





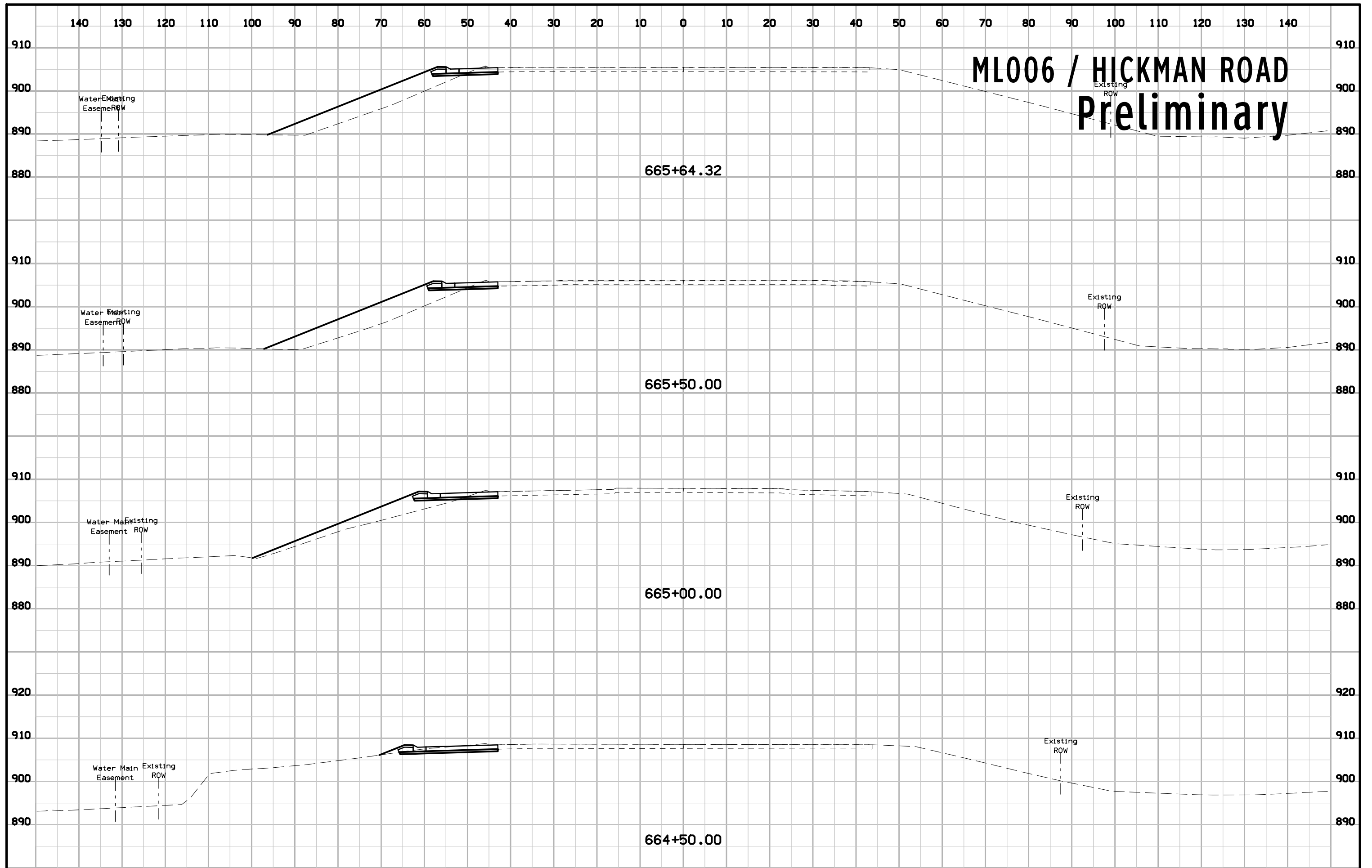
ML006 / HICKMAN ROAD Preliminary

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664+00.25

664+00.00

663+56.75



**ML006 / HICKMAN ROAD
Preliminary**

665+64.32

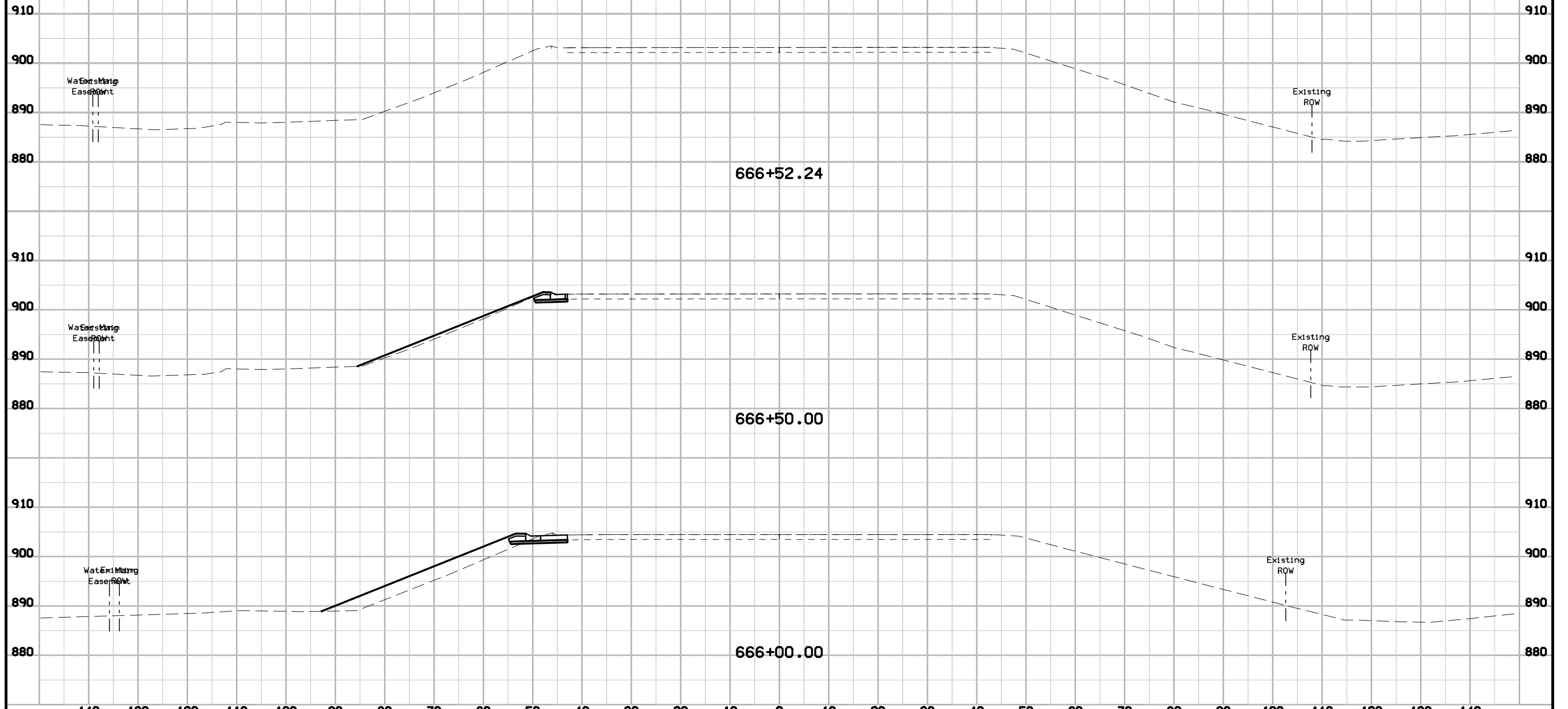
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665+00.00

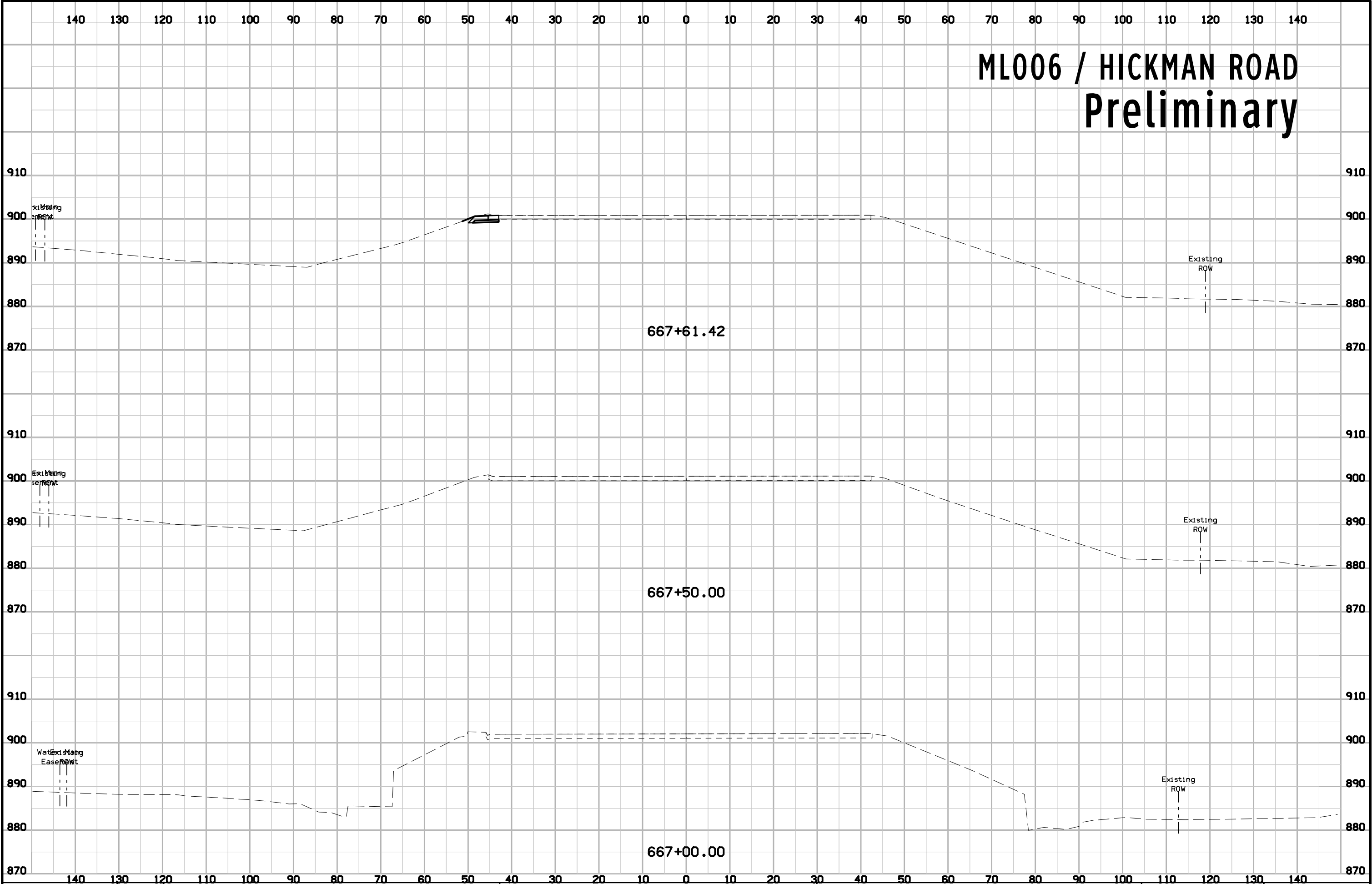
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ML006 / HICKMAN ROAD Preliminary

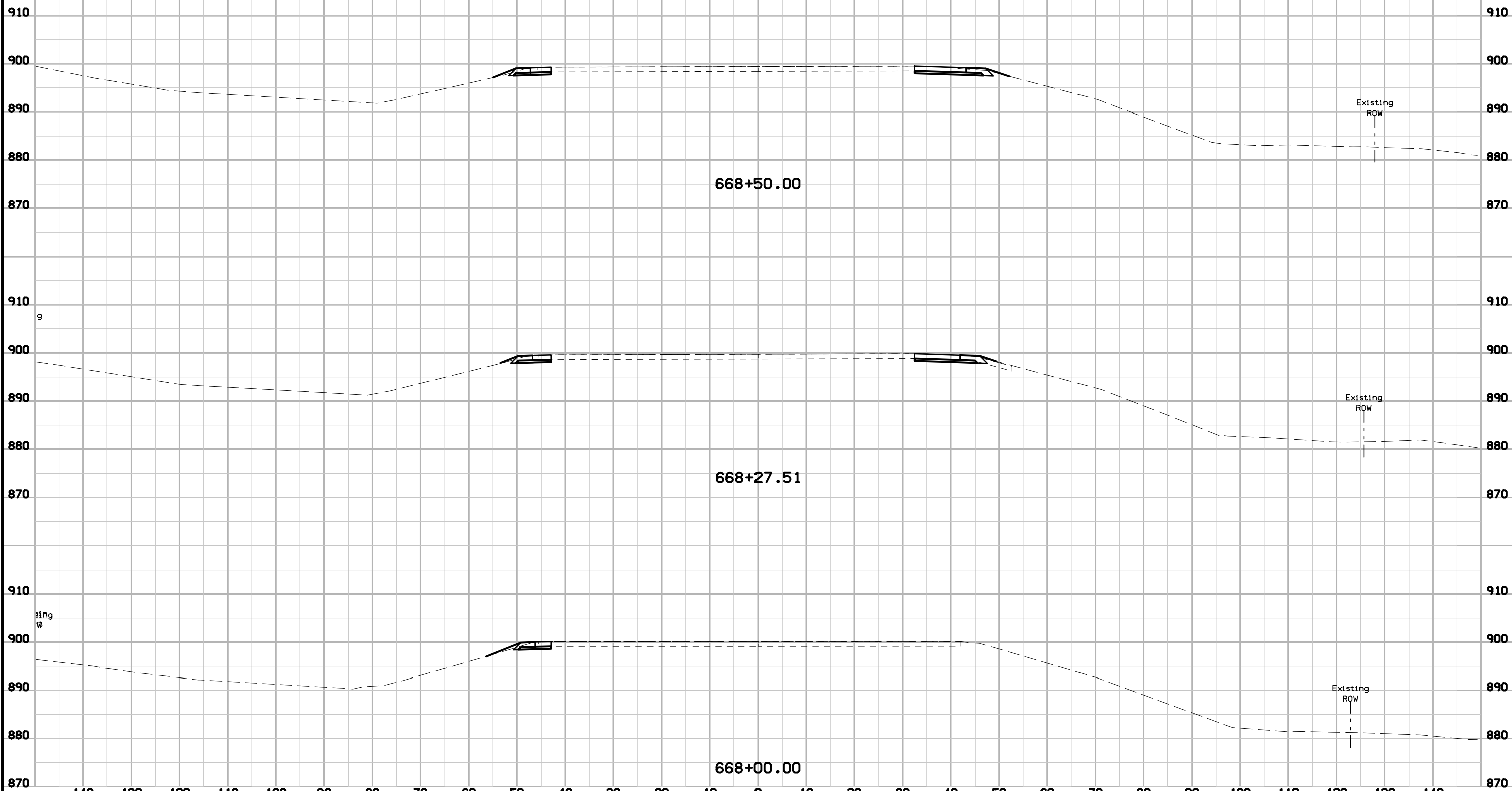


ML006 / HICKMAN ROAD Preliminary



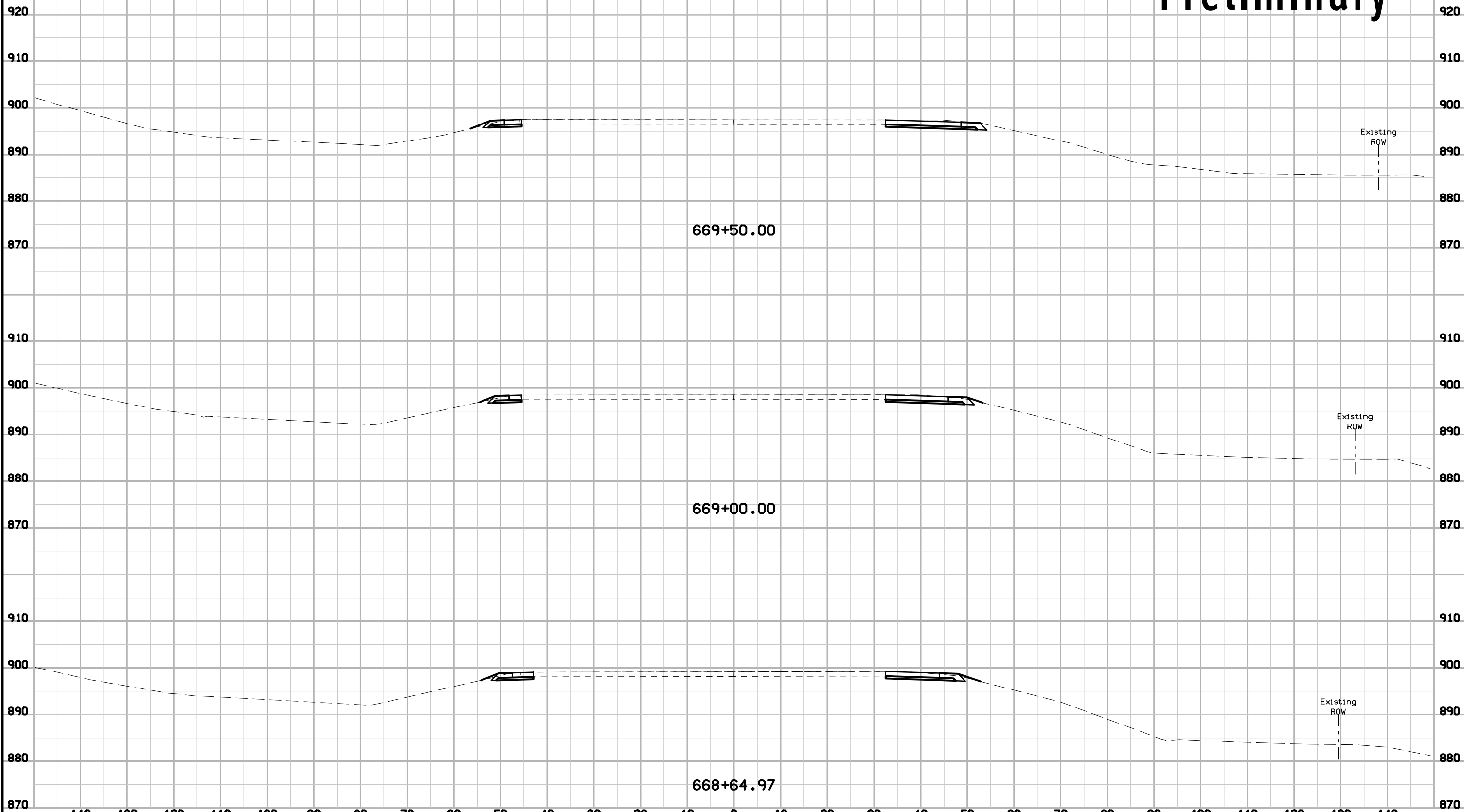
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ML006 / HICKMAN ROAD Preliminary



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ML006 / HICKMAN ROAD Preliminary



669+50.00

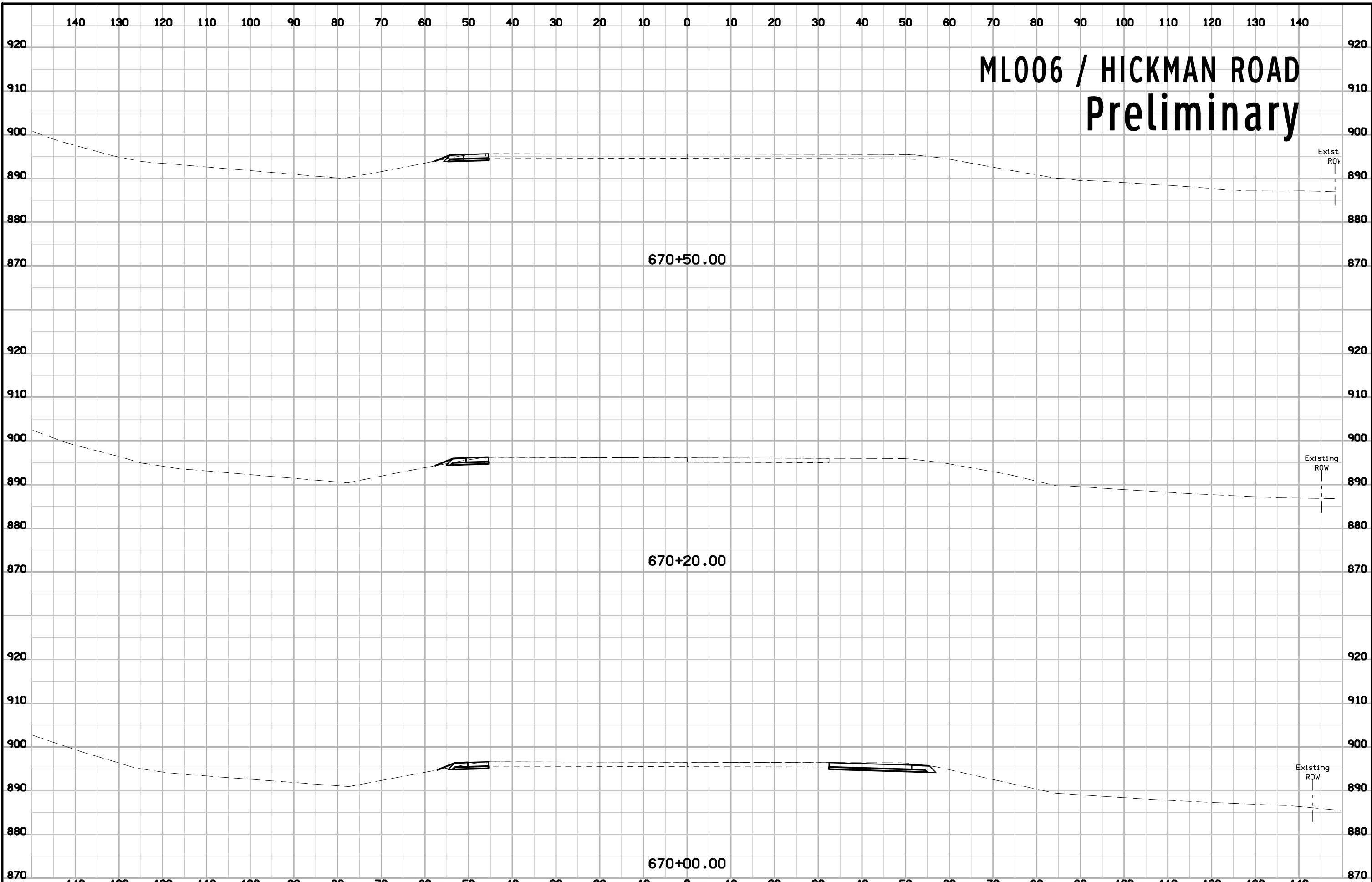
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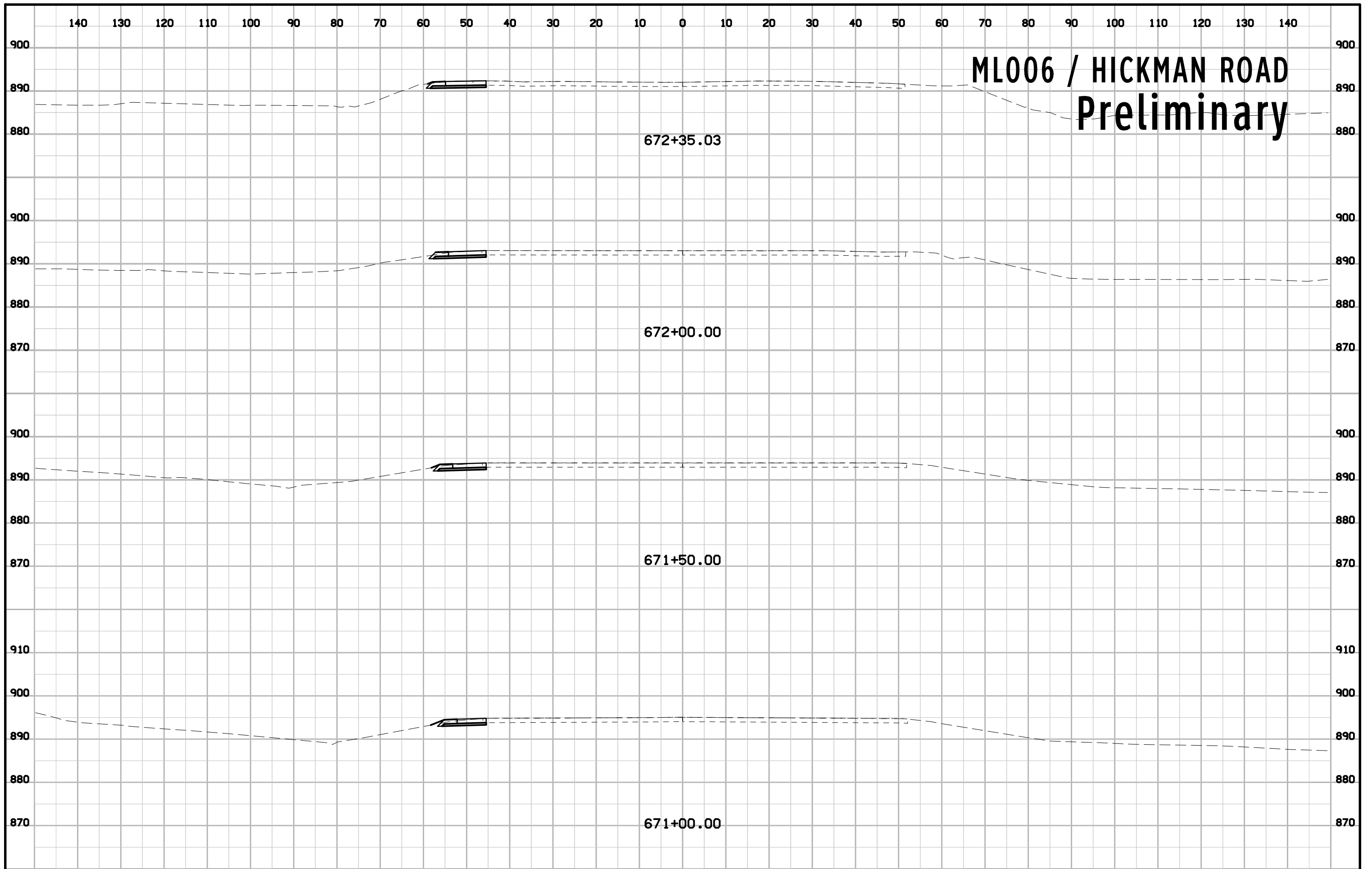
668+64.97

Existing ROW

Existing ROW

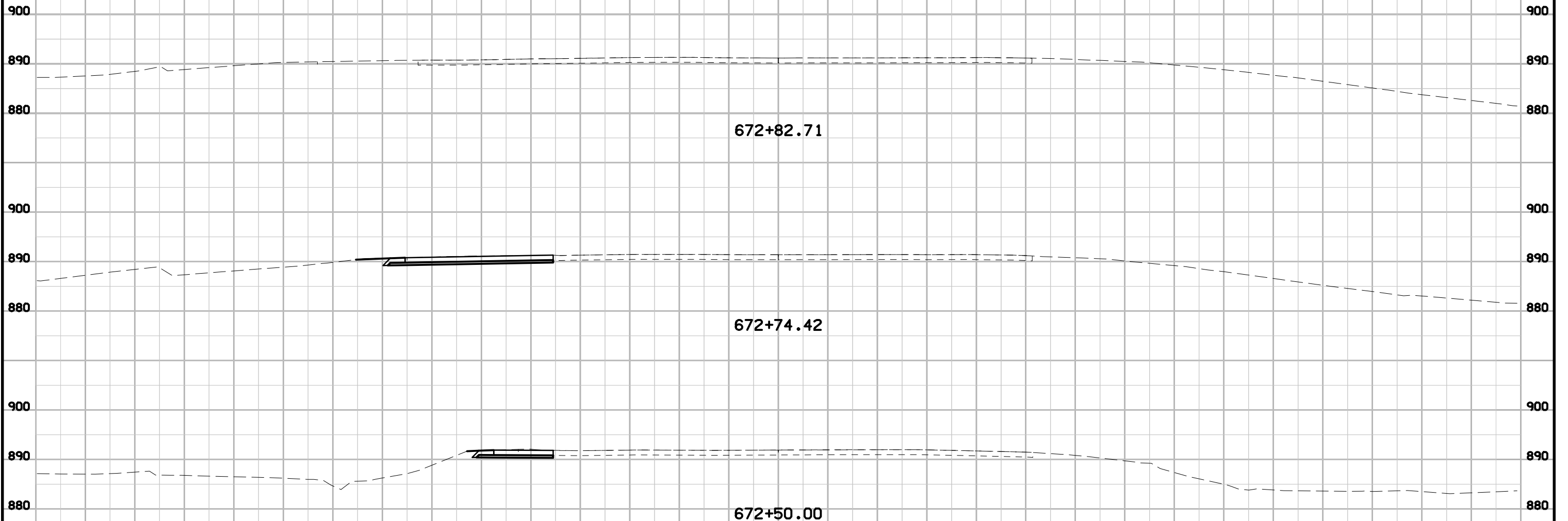
Existing ROW

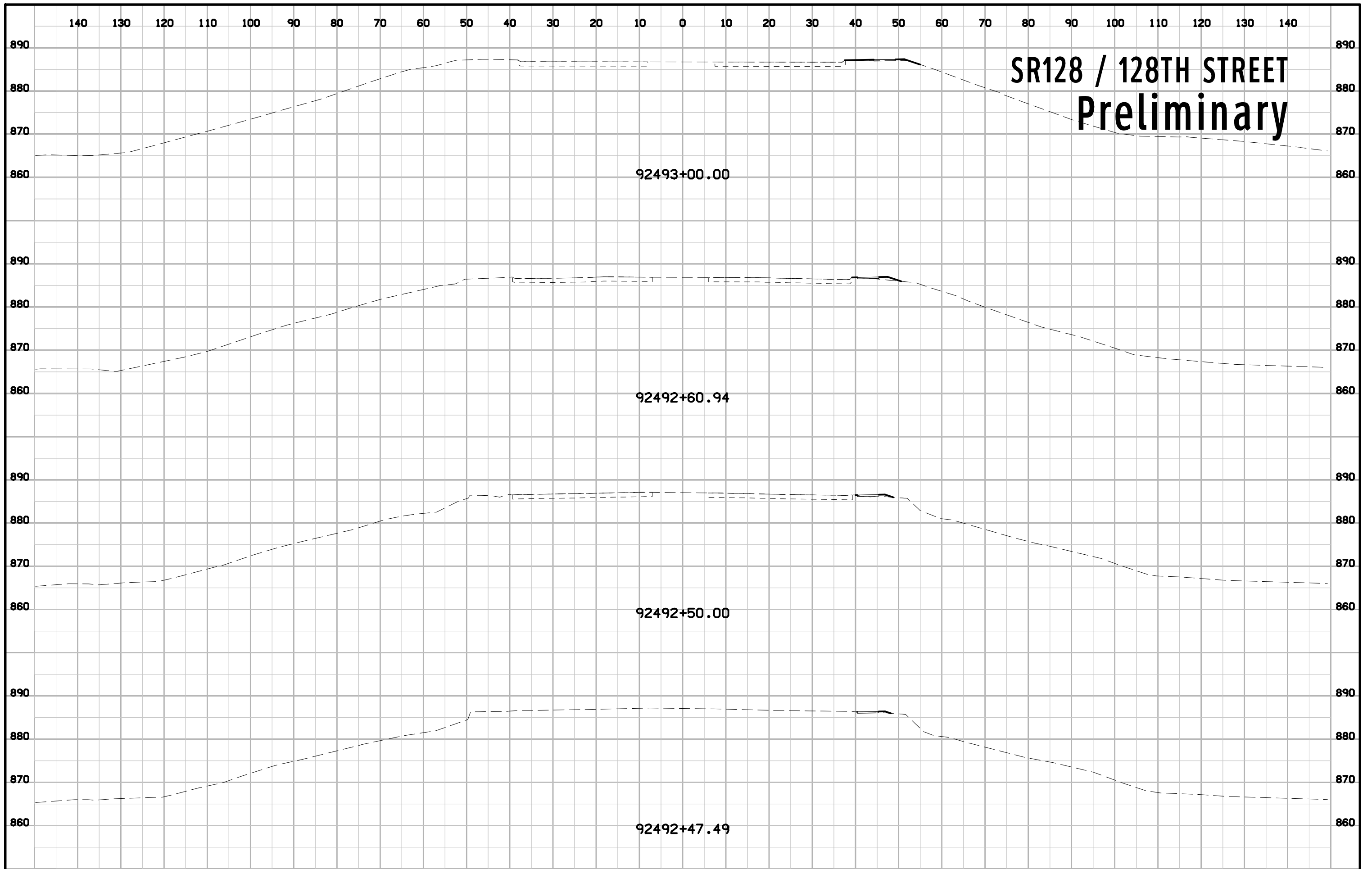




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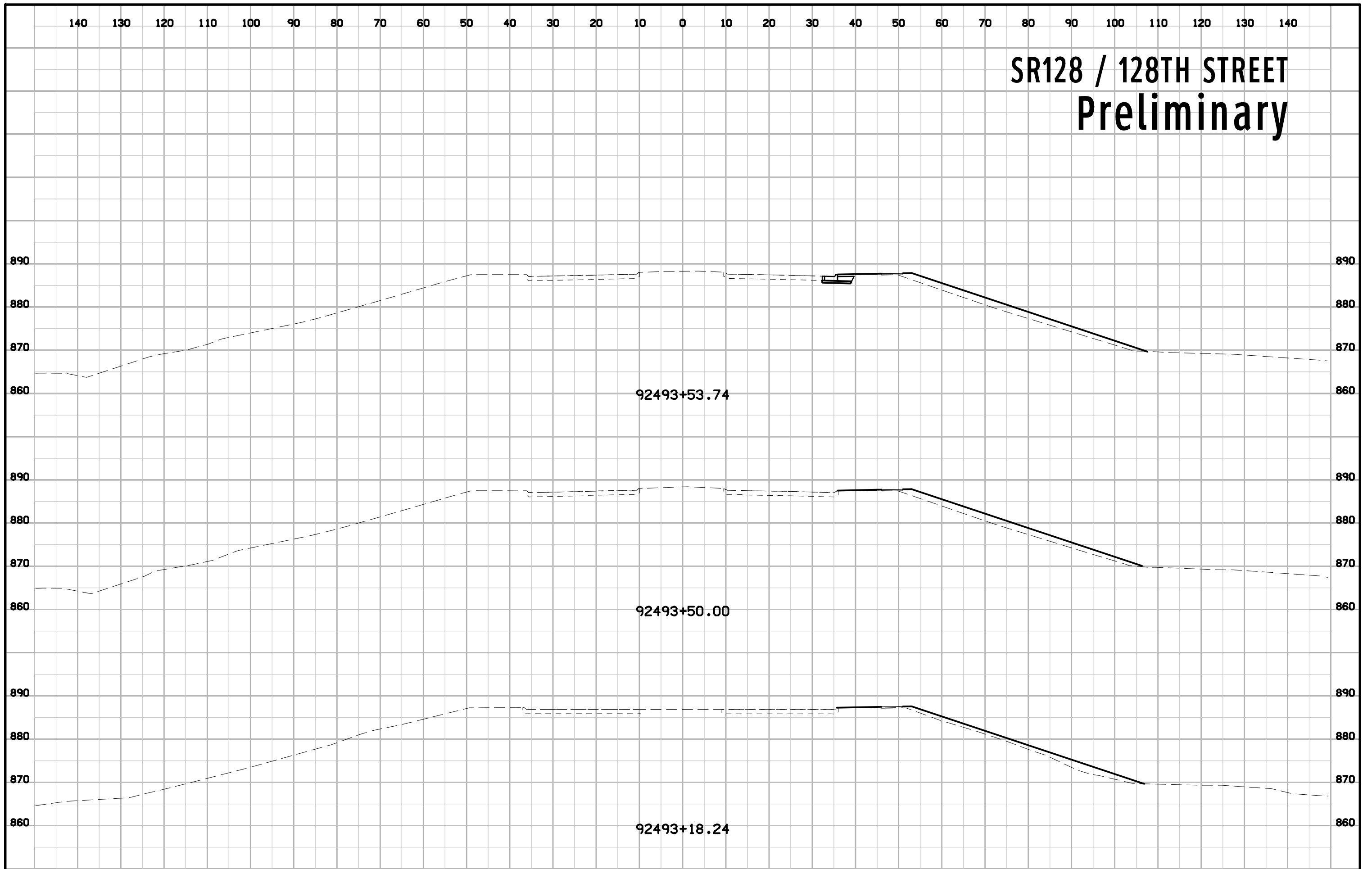
ML006 / HICKMAN ROAD Preliminary



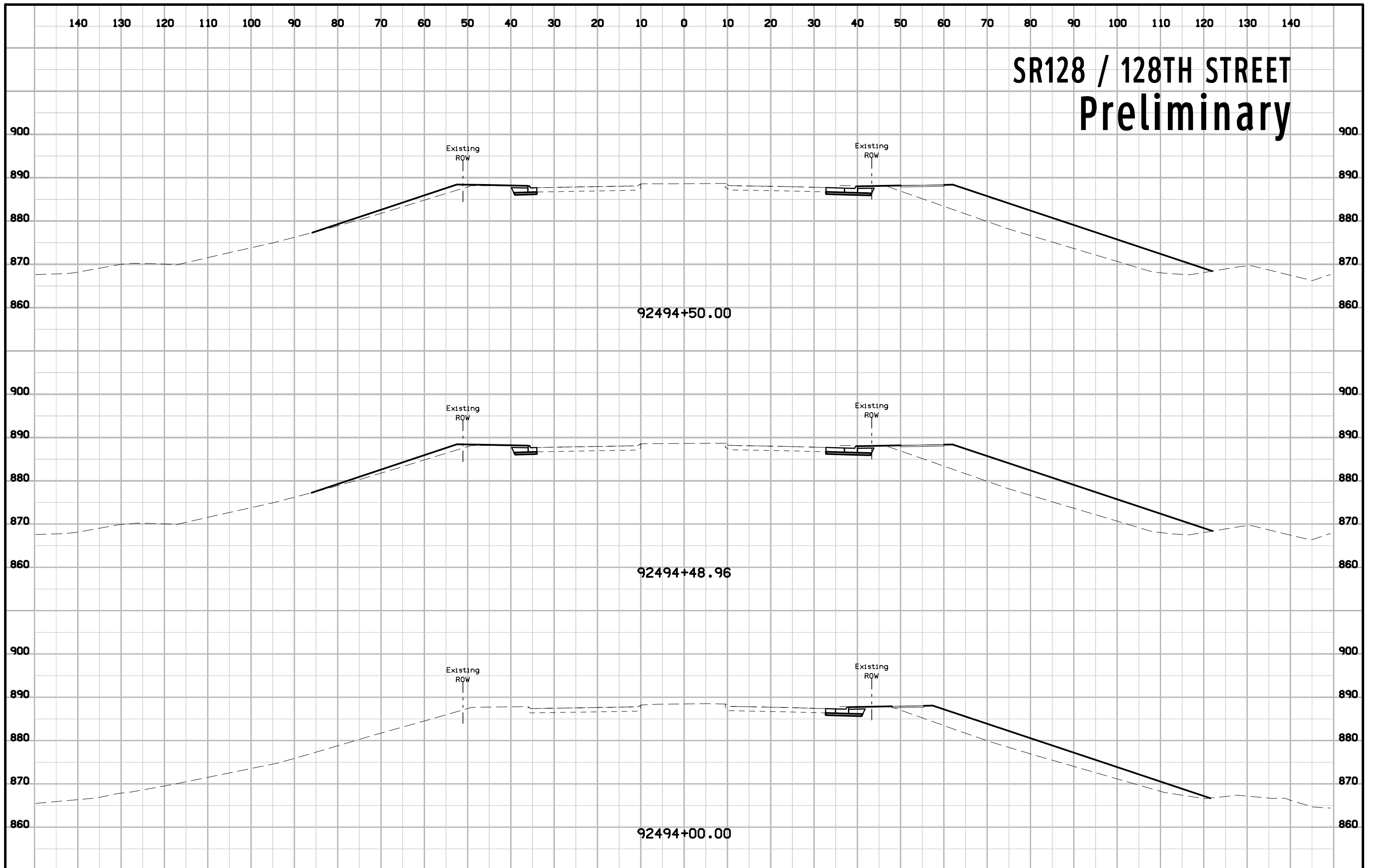


SR128 / 128TH STREET Preliminary

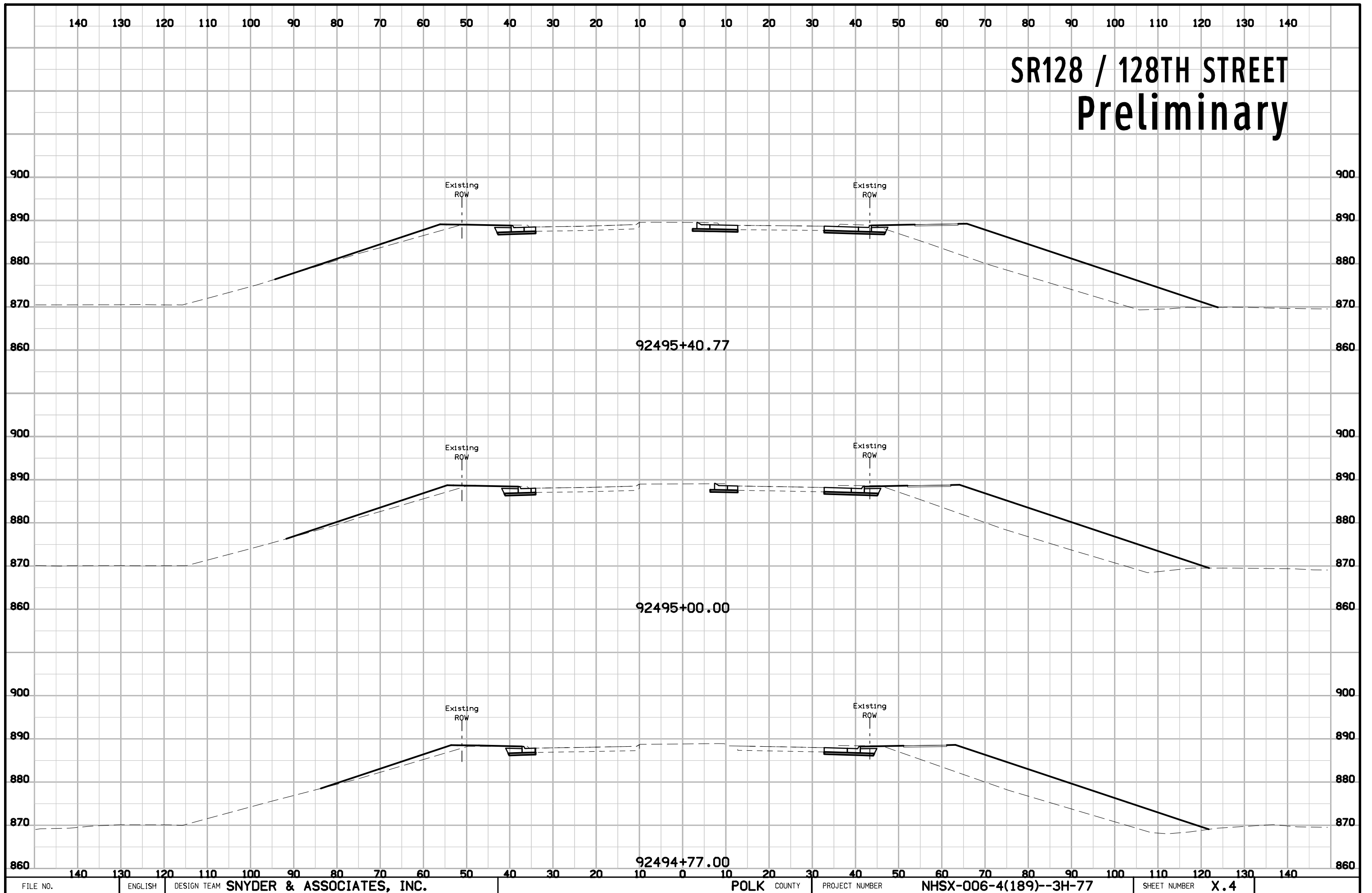
SR128 / 128TH STREET Preliminary



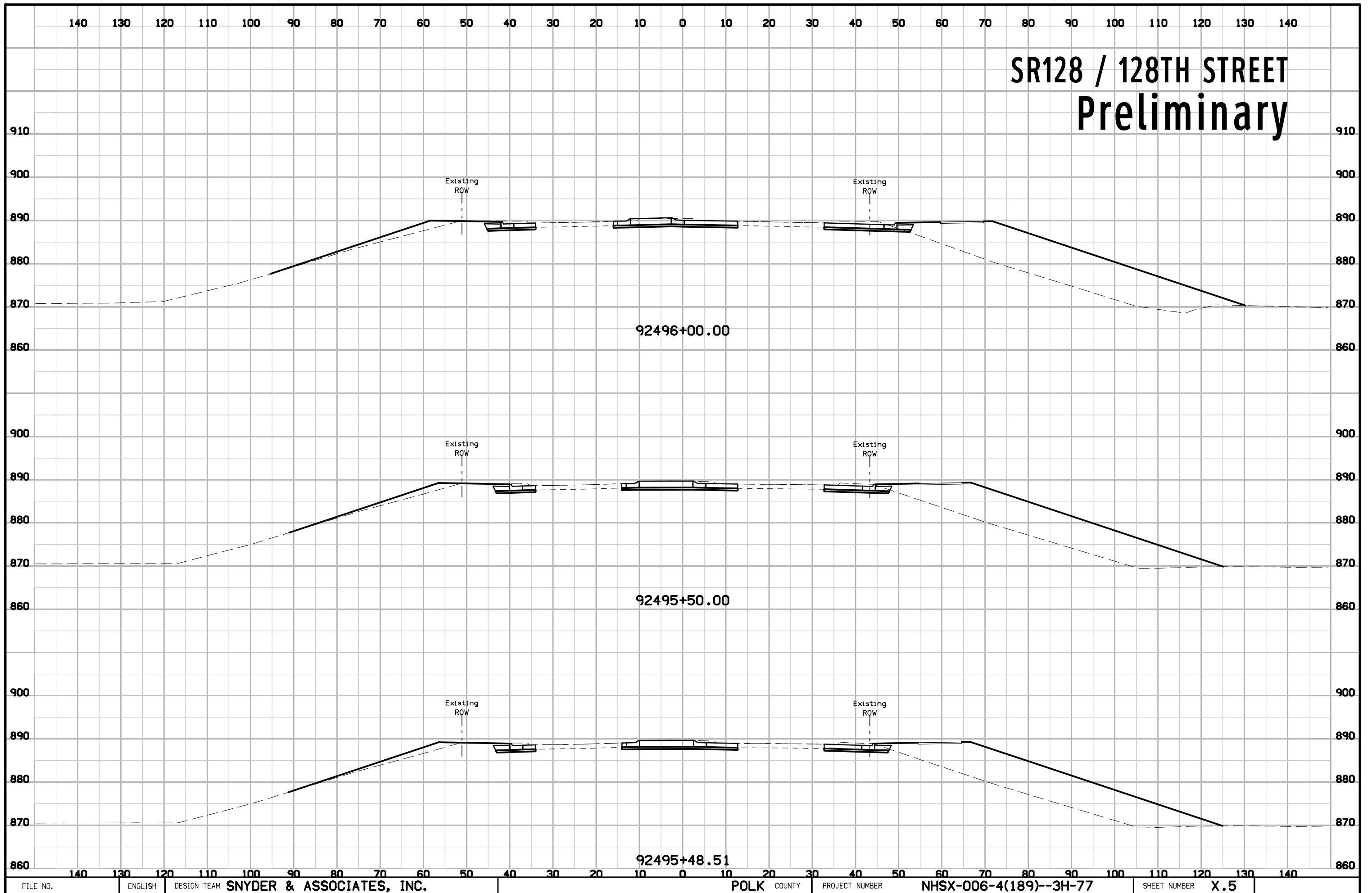
SR128 / 128TH STREET Preliminary



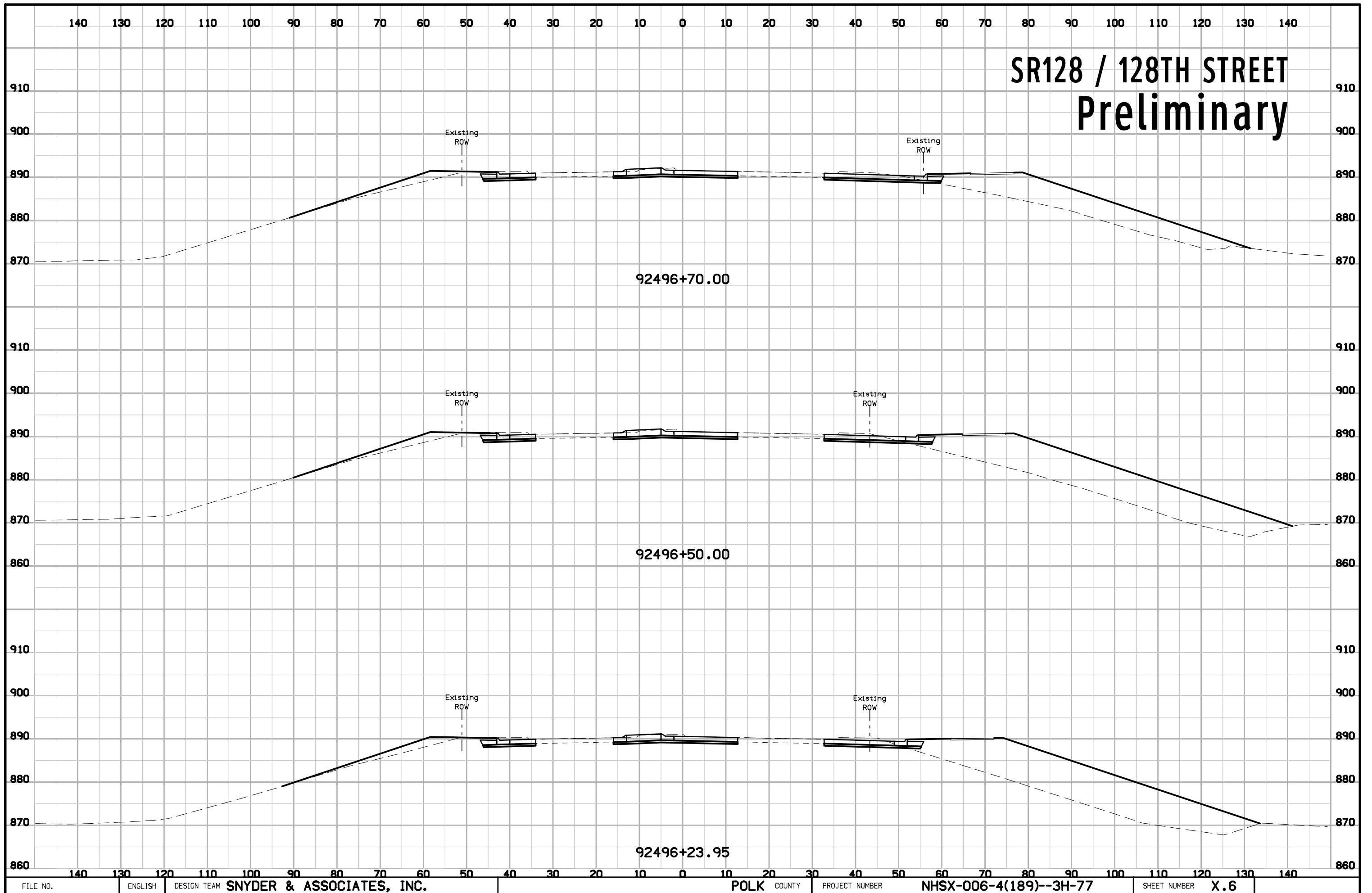
SR128 / 128TH STREET Preliminary



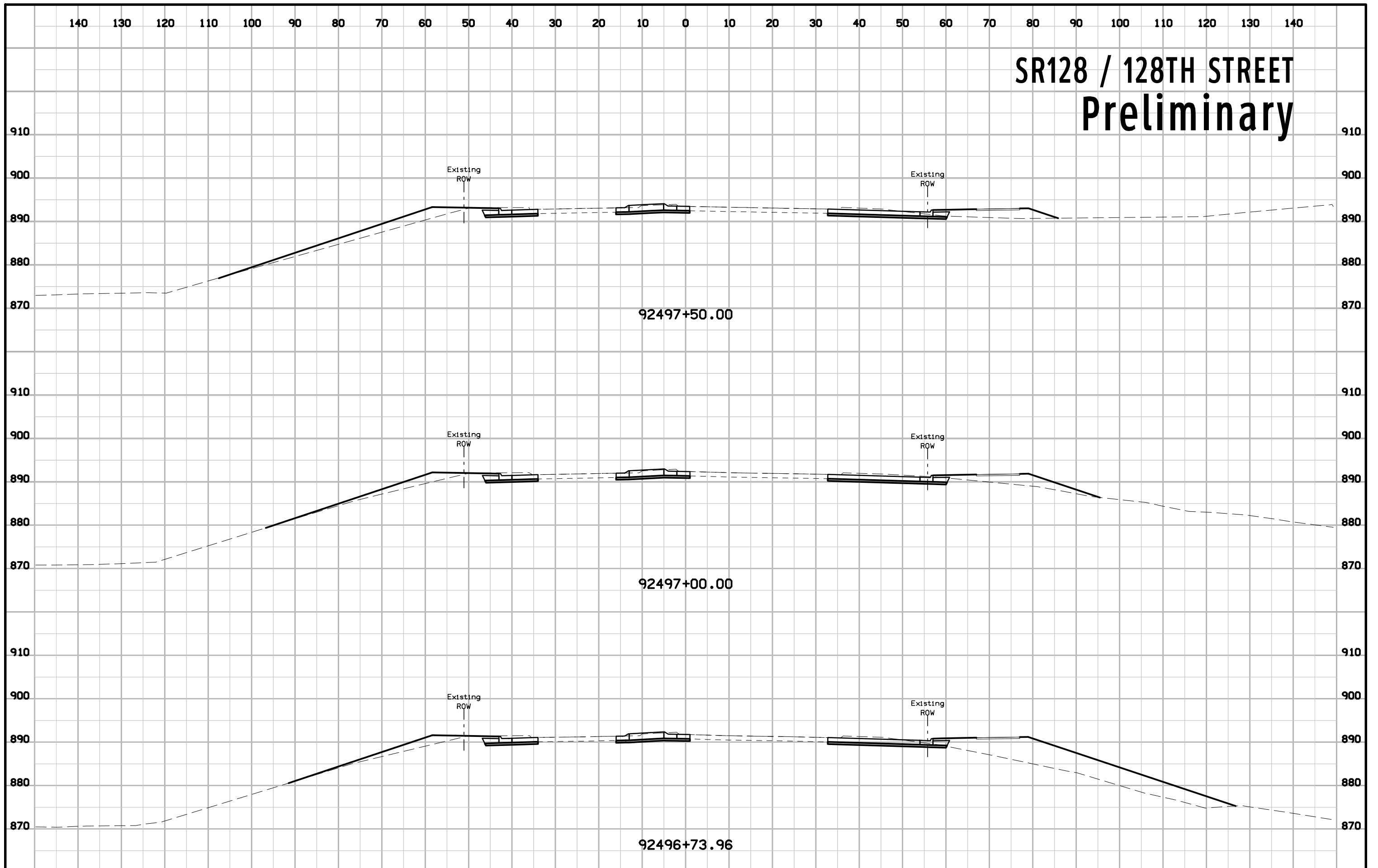
SR128 / 128TH STREET Preliminary



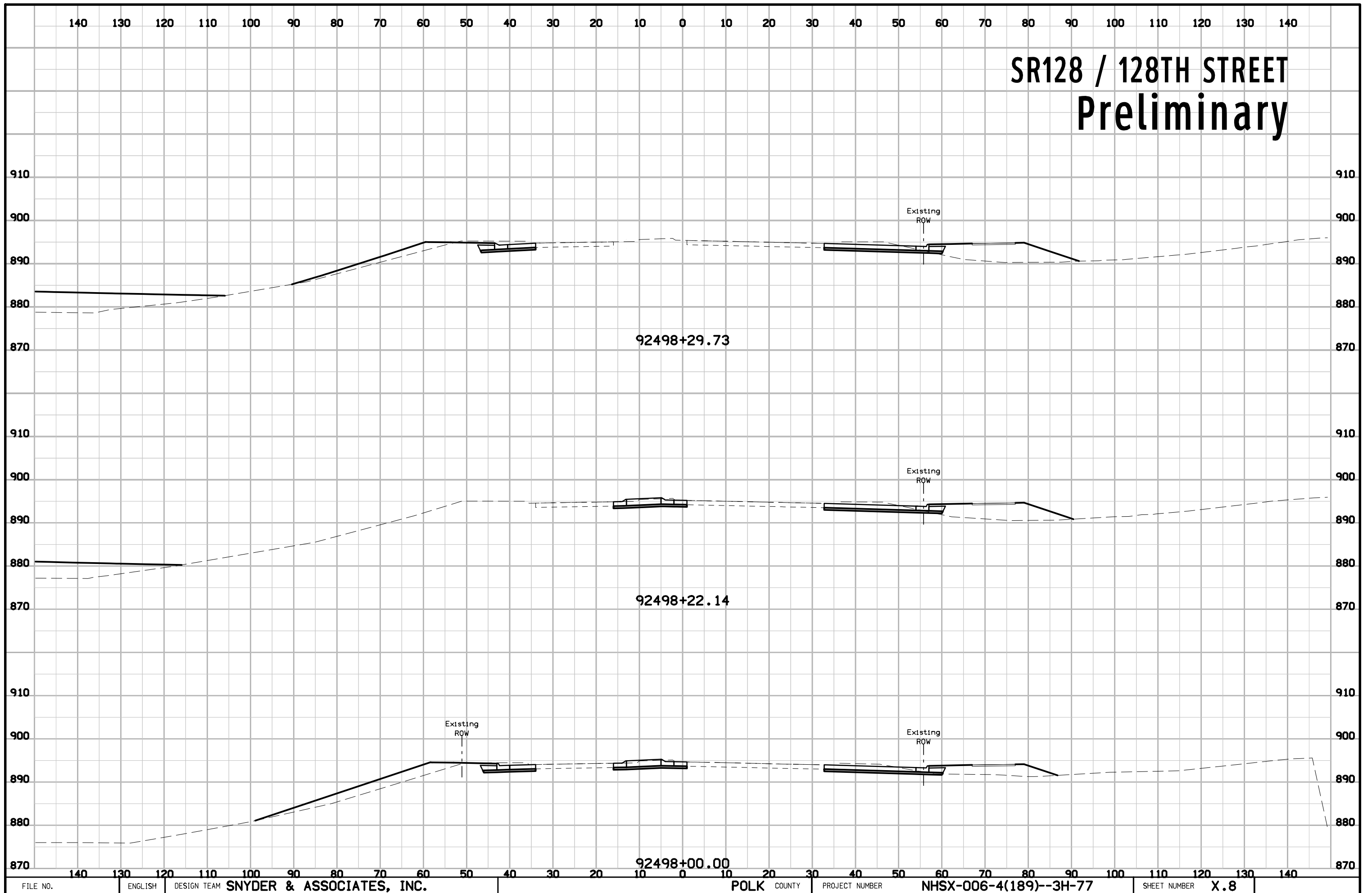
SR128 / 128TH STREET Preliminary



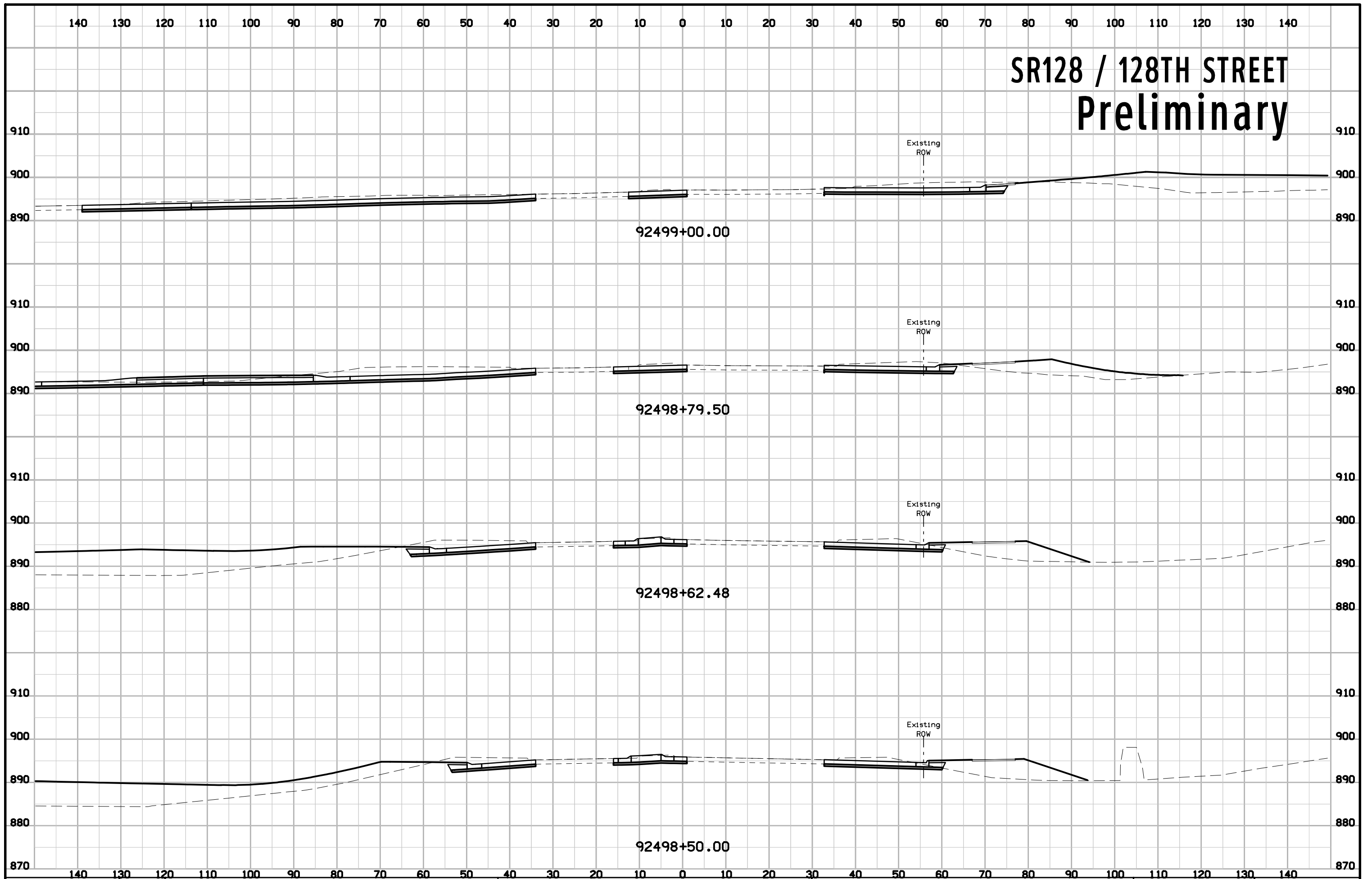
SR128 / 128TH STREET Preliminary



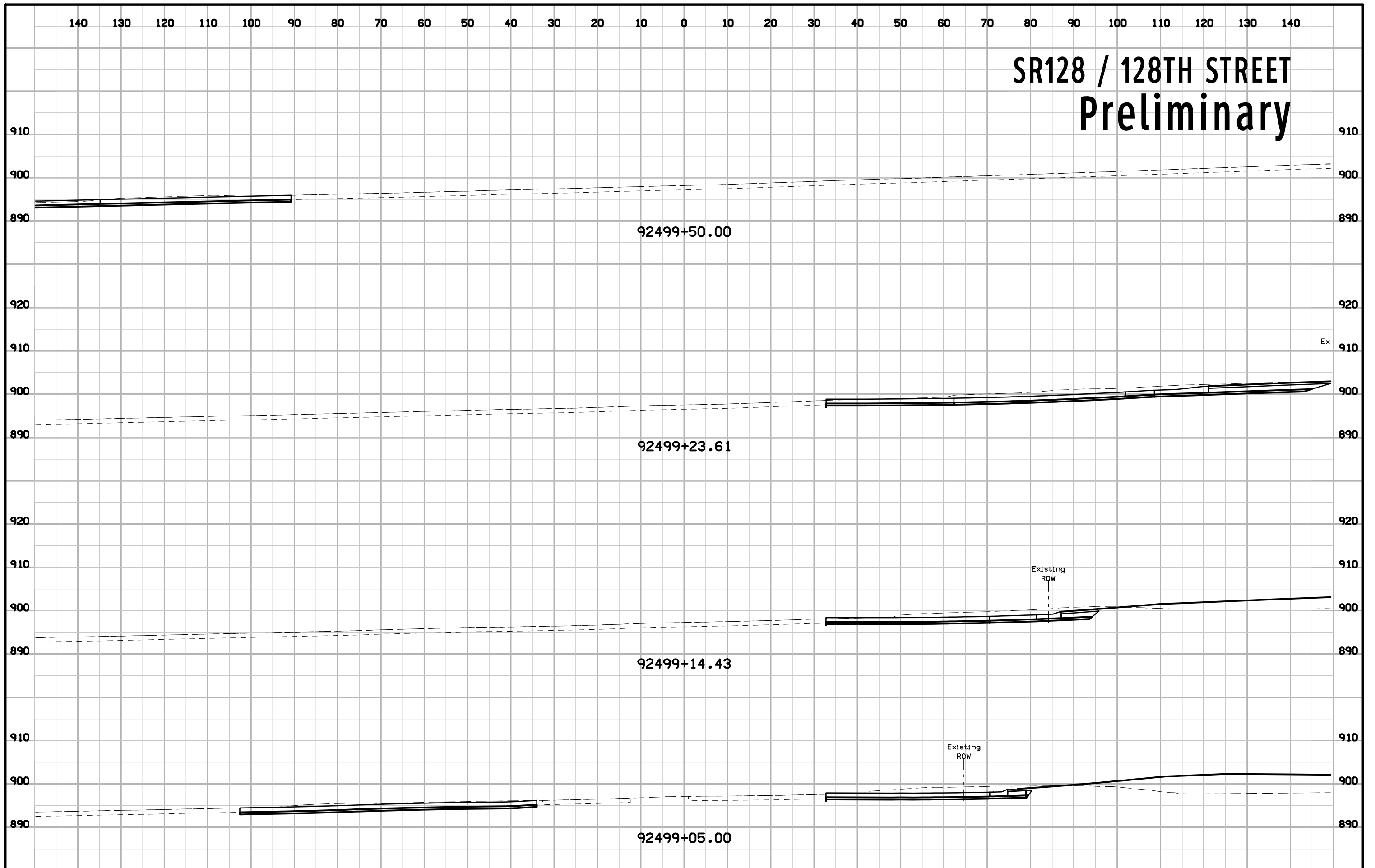
SR128 / 128TH STREET Preliminary



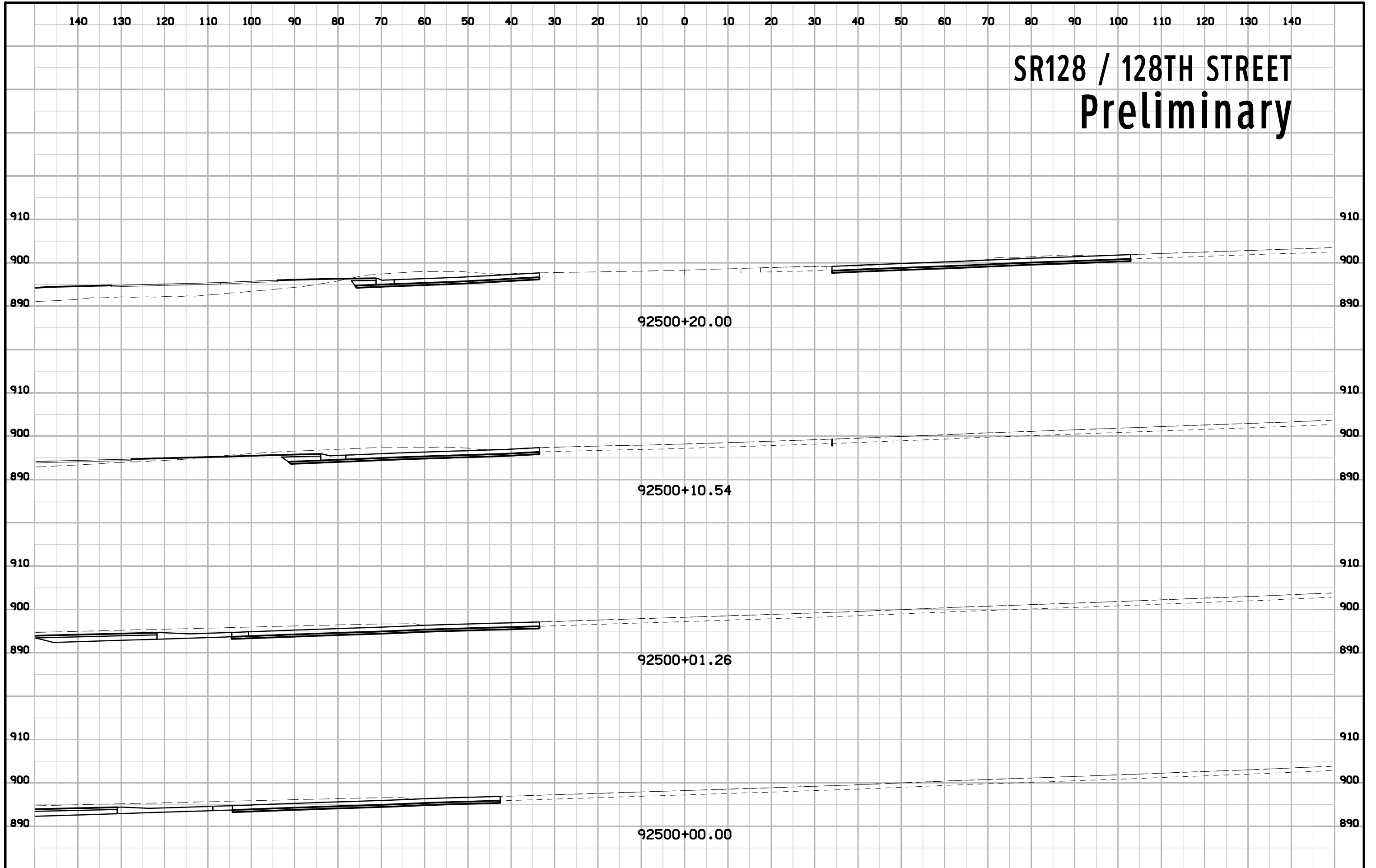
SR128 / 128TH STREET Preliminary



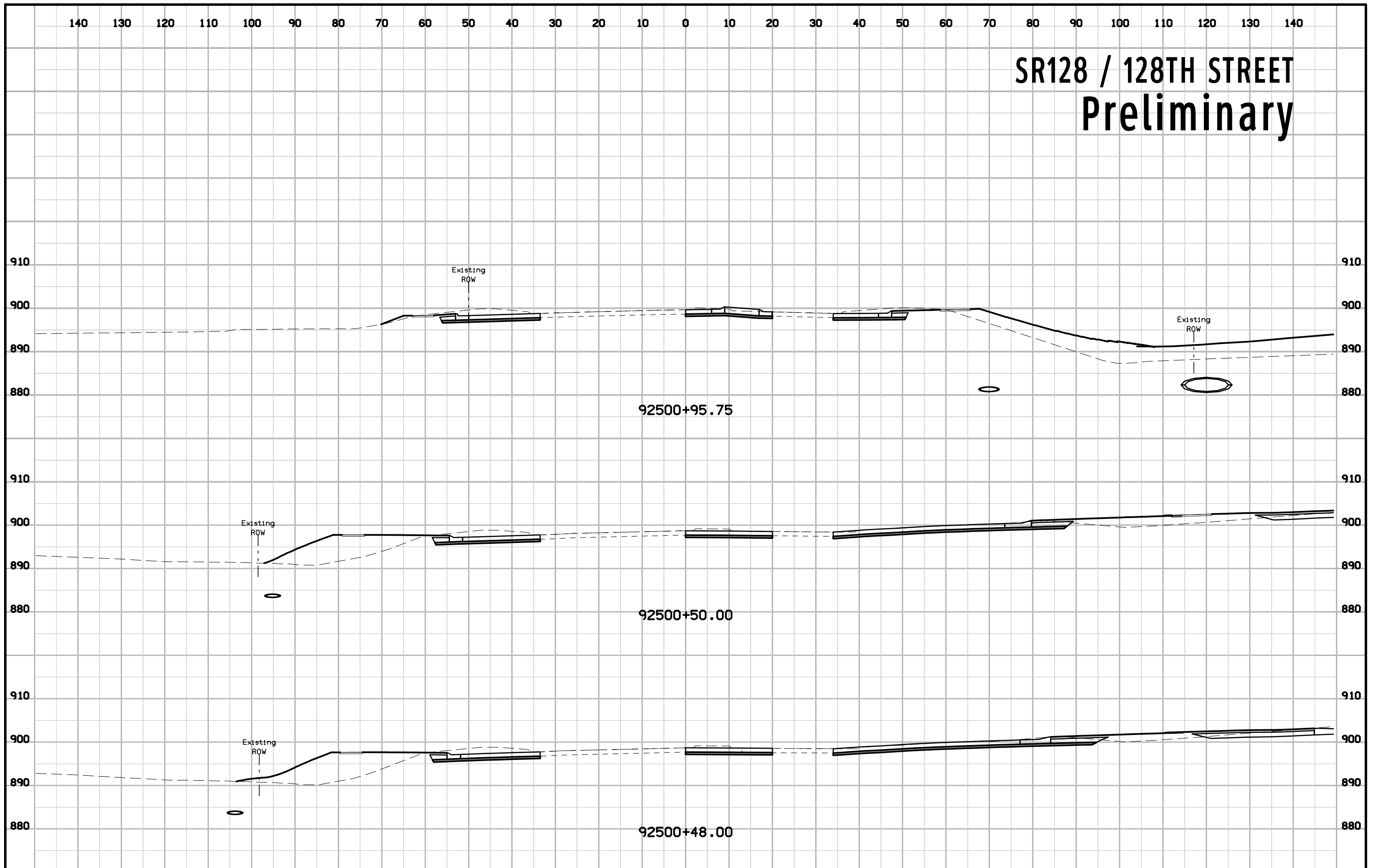
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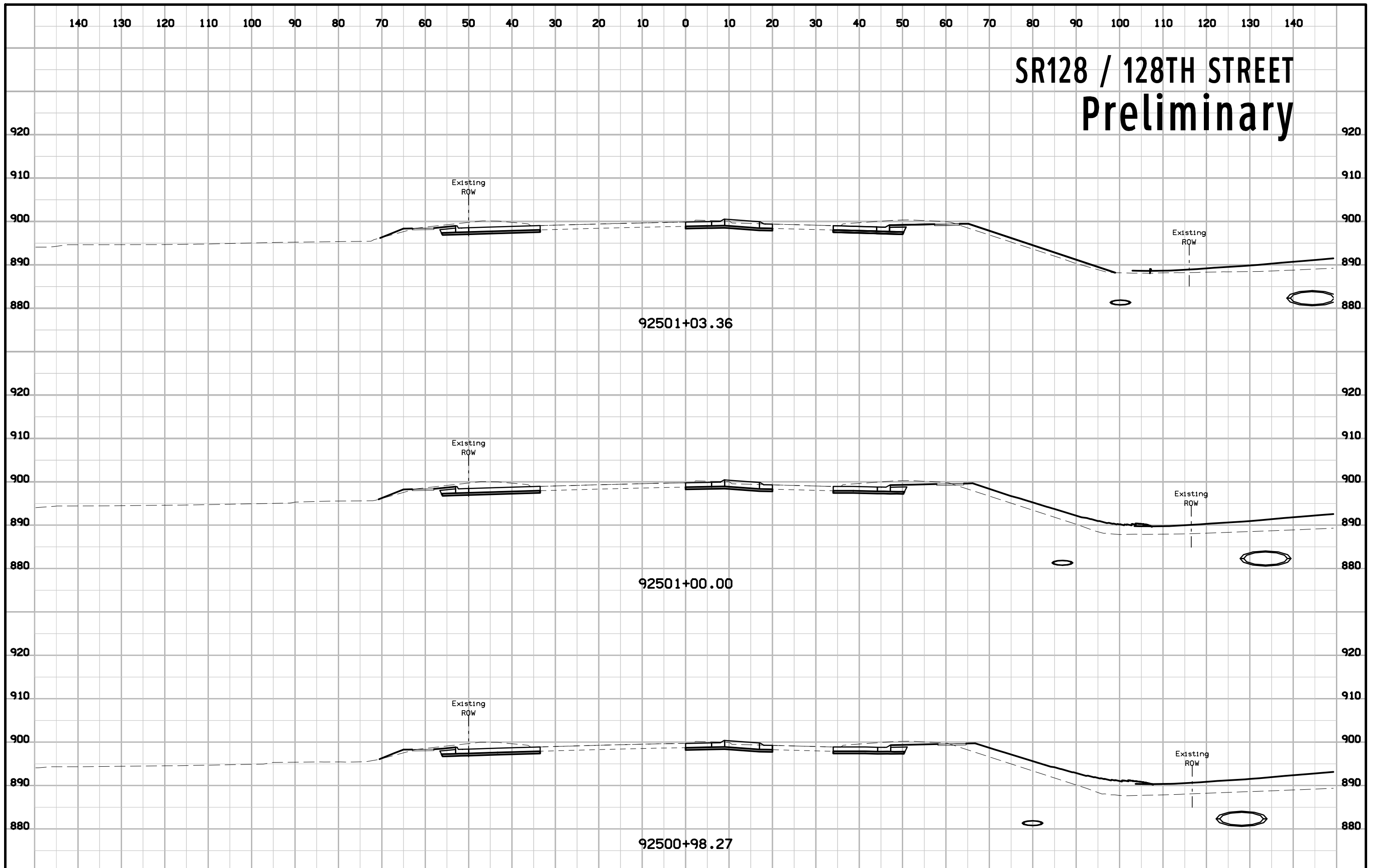
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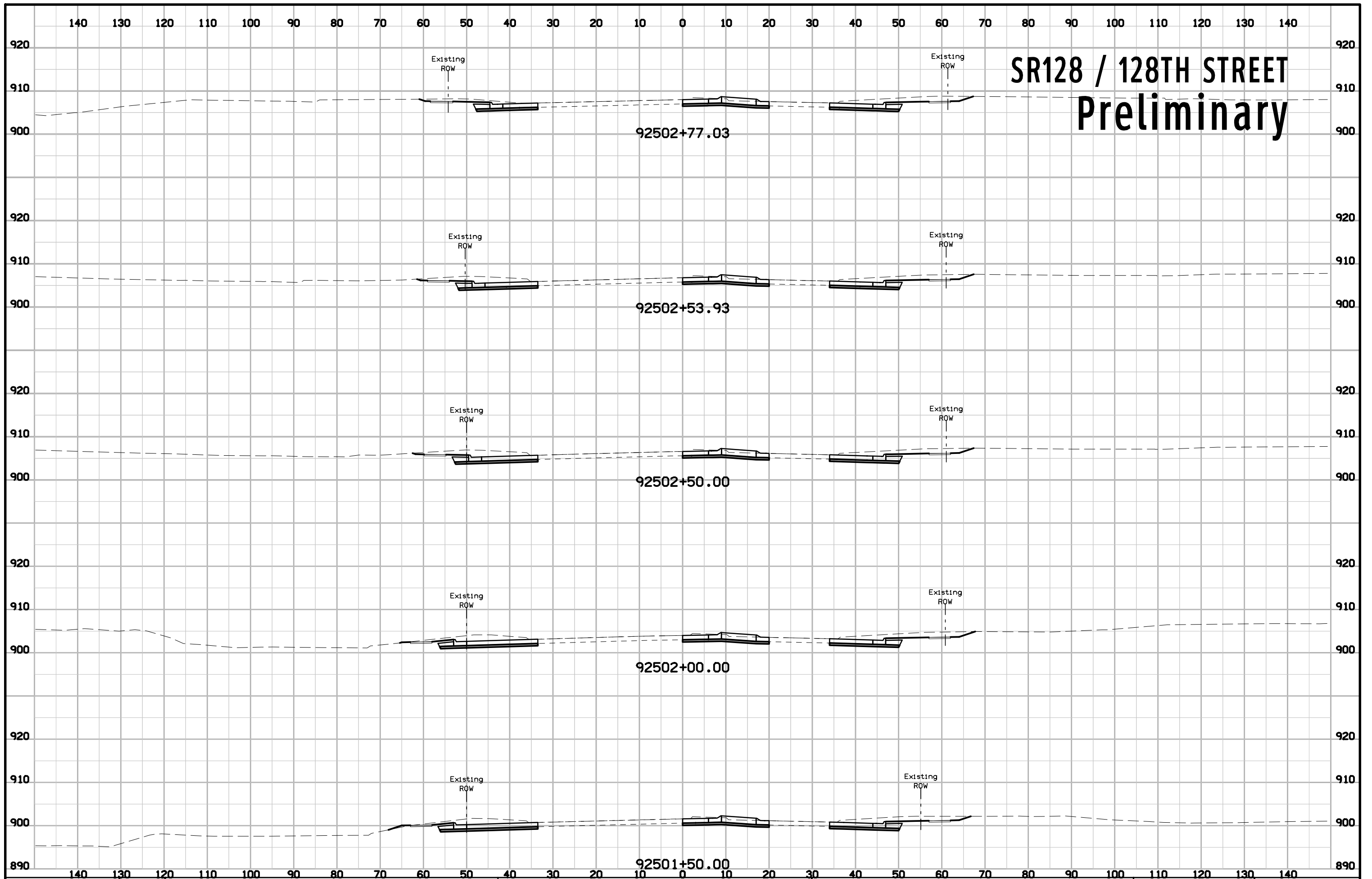
SR128 / 128TH STREET Preliminary



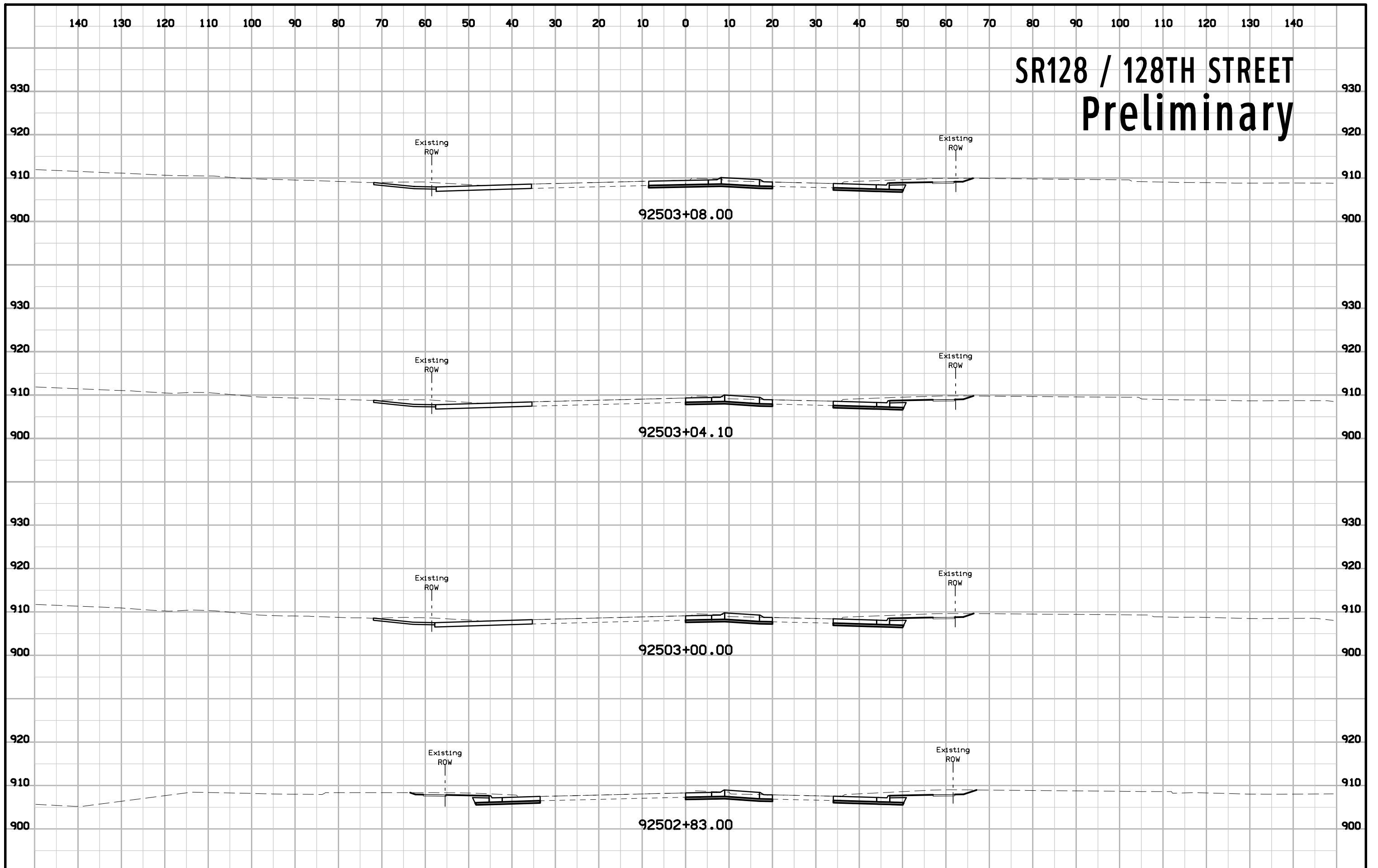
SR128 / 128TH STREET Preliminary



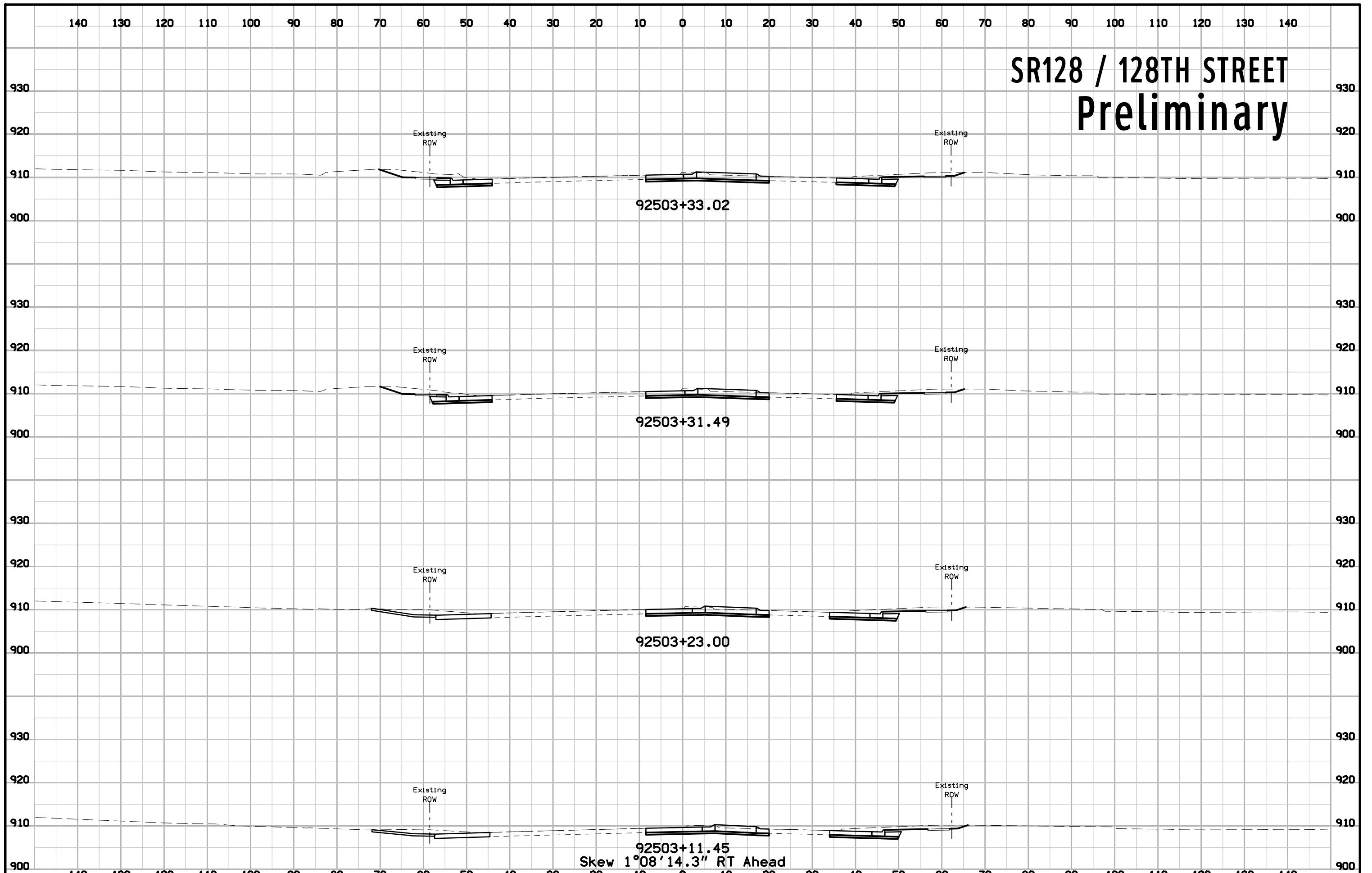
SR128 / 128TH STREET Preliminary



SR128 / 128TH STREET Preliminary

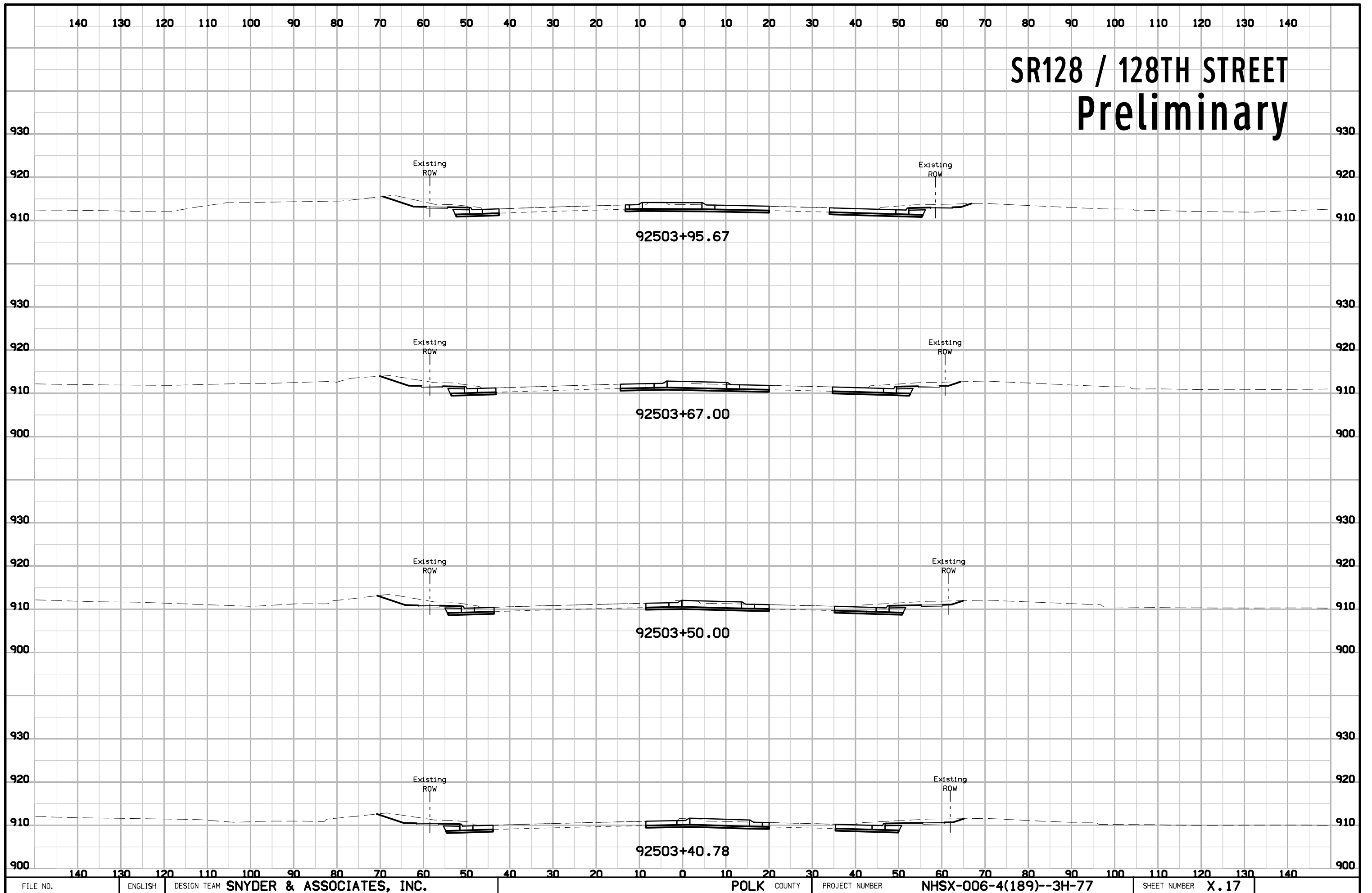


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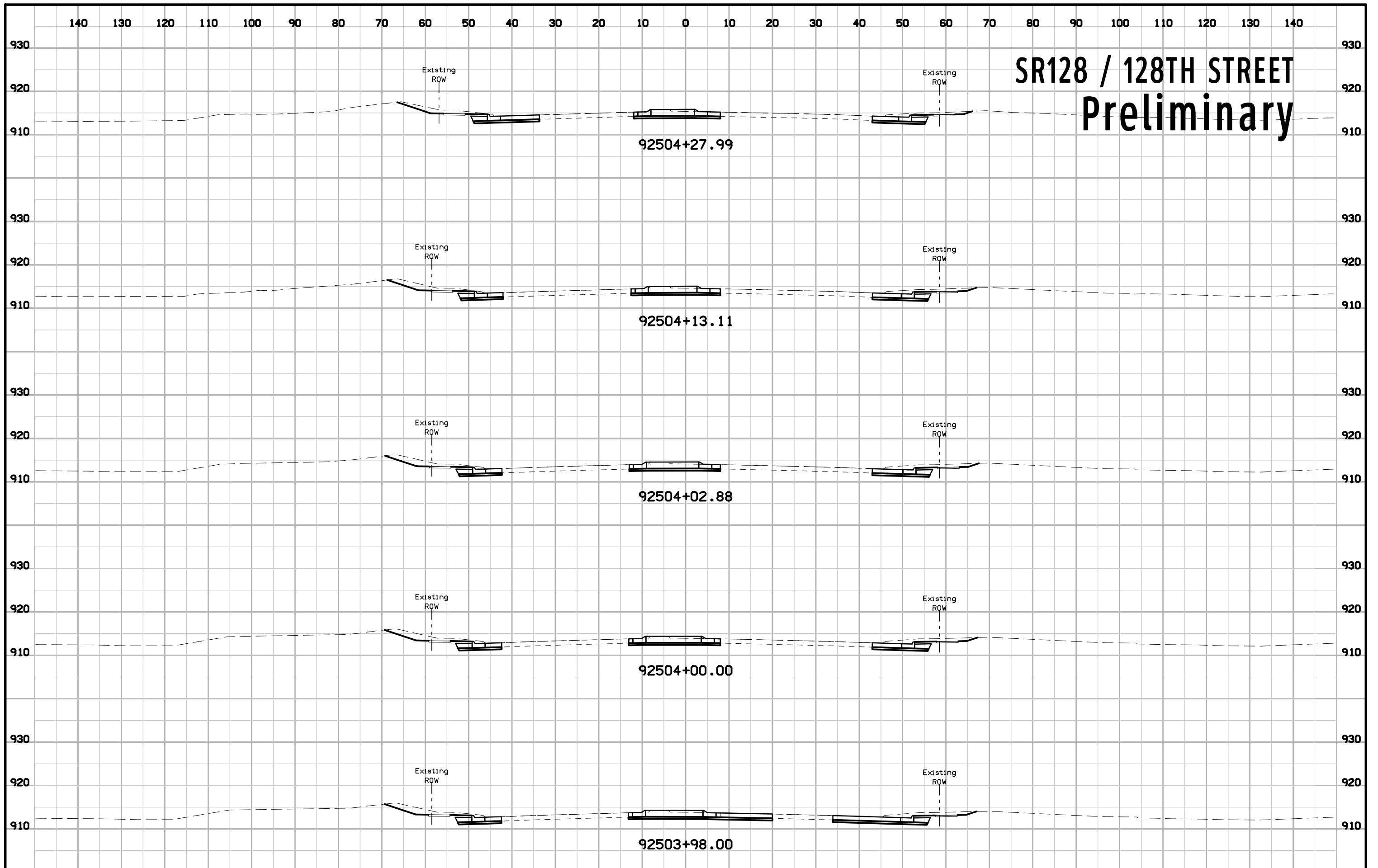


92503+11.45
Skew 1°08'14.3" RT Ahead

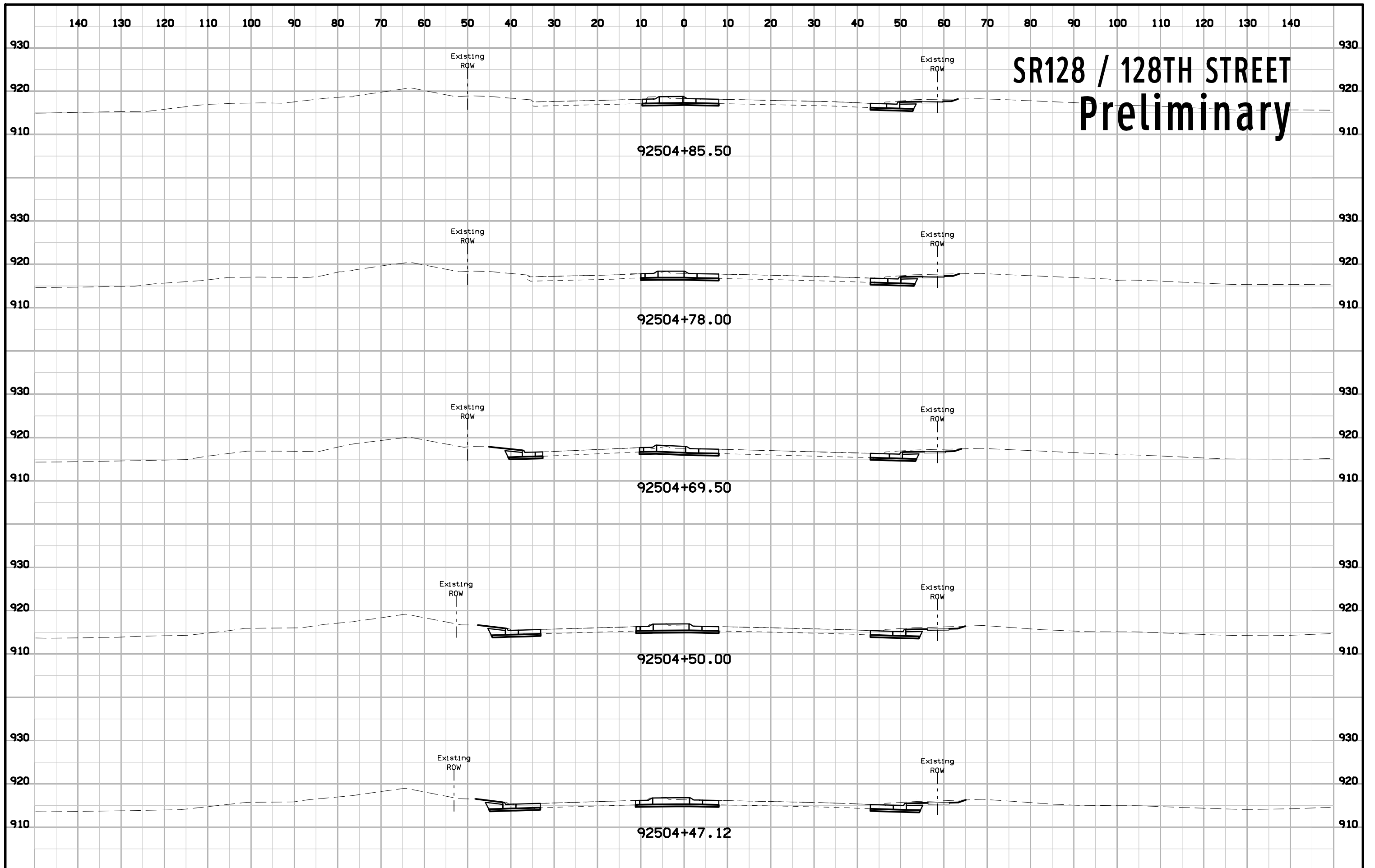
SR128 / 128TH STREET Preliminary



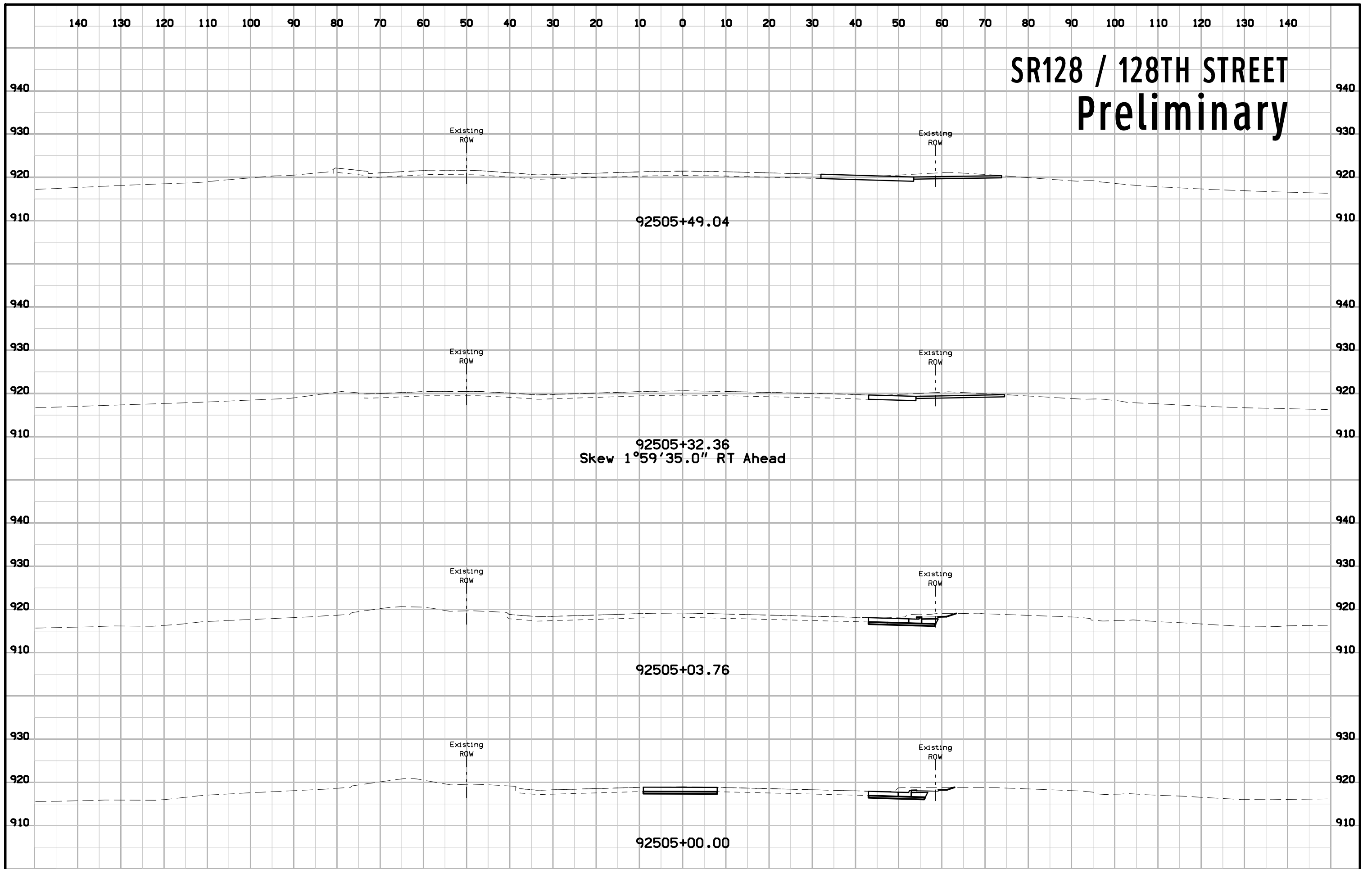
SR128 / 128TH STREET Preliminary



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