

LETTING DATE
 03-15-2022
 PIPE CULVERTS
 STPN-006-8(43)--2J-70

MUSCATINE COUNTY

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	Title Sheets
A.1	Title Sheet
B Sheets	Typical Cross Sections and Details
B.1 - 3	Typical Cross Sections and Details
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	"US 6"
E Sheets	Side Road Plan and Profile Sheets
* E.1	"Noble Avenue"
* E.2	"Open Channel"
F Sheets	Detour or Temporary Pavement Sheets
* F.1	Detour Plan and Profile Sheet - DET005
G Sheets	Survey Sheets
G.1 - 3	Reference Ties and Bench Marks
G.4	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
J.1	Traffic Control Plan, Staging Notes Stage
J.1	511 Travel Restrictions
* J.2 - 3	Staging
X Sheets	Side Road Cross Sections
X.1 - 3	Noble Ave Cross Sections
X.4 - 7	Open Channel Cross Sections
X.8 - 11	DET 005 Cross Sections
	* Color Plan Sheets

H Sheets



Highway Division

PRIMARY ROAD SYSTEM MUSCATINE COUNTY PIPE CULVERTS

US 6
Near Noble Ave 3.4 mi E of Co Rd X46

SCALES: As Noted

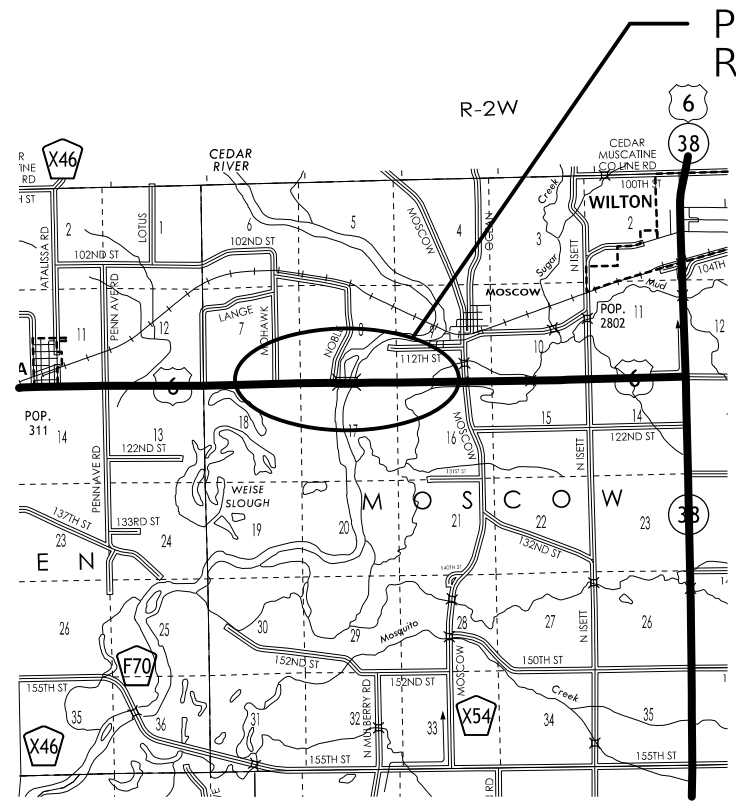
Refer to the Proposal Form for list of applicable specifications.

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



REVISIONS

TOTAL	27
PROJECT IDENTIFICATION NUMBER	21-70-006-010
PROJECT NUMBER	STPN-006-8(43)--2J-70
R.O.W. PROJECT NUMBER	STPN-006-8(44)--2J-70



PROJECT LOCATION
REF. LOC. 267.7

SCHEDULE:
 DMS - 11/30/2021
 D09 - 01/04/2022

DESIGN DATA RURAL		
2018	AADT	1070 V.P.D.
20	-- AADT	-- V.P.D.
20	-- DHV	-- V.P.H.
	TRUCKS	-- %
	Total	
	Design ESALs	--

INDEX OF SEALS		
SHEET NO.	NAME	TYPE
A.1	X	Primary Signature Block
X	X	X

PRELIMINARY PLANS

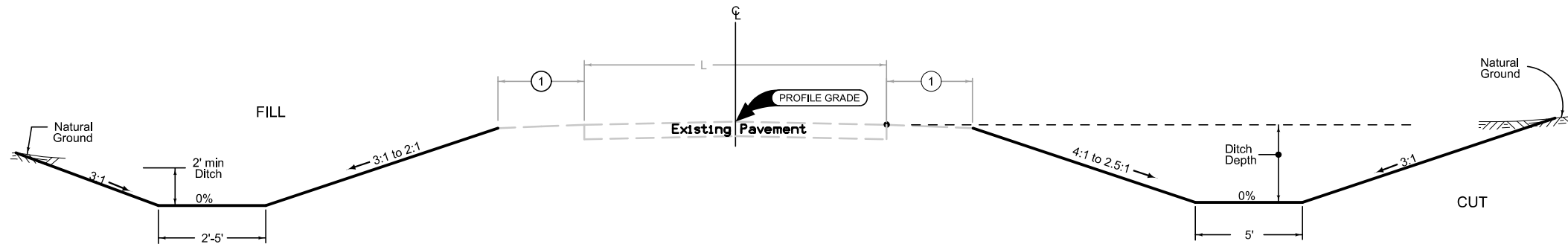
Subject to change by final design.

D5 PLAN - Date: 07-22-2021

Foreslope/Ditching

2_G_	
10-21-14	
STATION TO STATION	
1766+24.00	1766+78.70

① Existing Shoulder



Foreslope/Ditching

2_G_	
10-21-14	
STATION TO STATION	
1766+24.00	1766+78.70

① Existing Shoulder

2 LANE GRADING

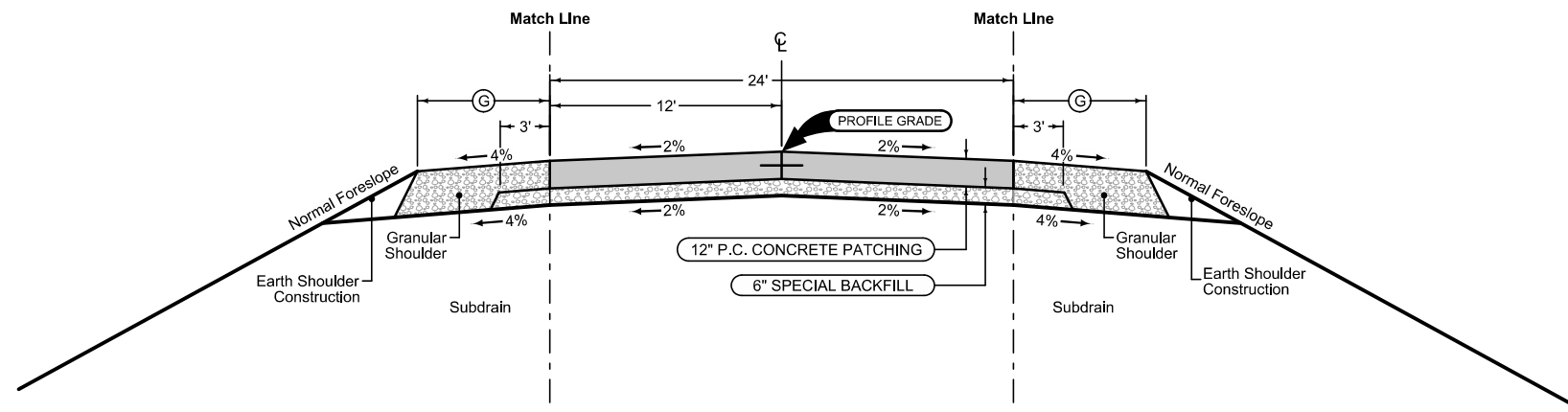
Normal section shown may be modified along intersection returns or other locations specifically designated by the Engineer.

See plan & profile sheets and cross sections for additional details of ditches and backslopes.

Noble Avenue

Granular Shoulder

2_G_SR_		Ⓞ Feet
04-21-20		
STATION TO STATION		
1766+45.57	1766+72.42	4



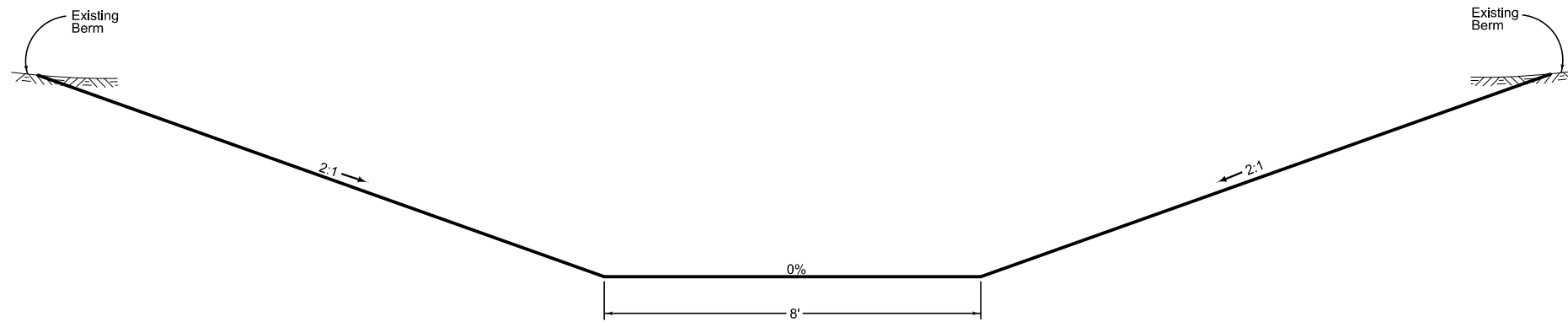
Mainline Jointing:
 Transverse joints: CD at 17' spacing
 Longitudinal joint: L-2

2P_	
04-21-20	
STATION TO STATION	
1766+45.57	1766+72.42

Granular Shoulder

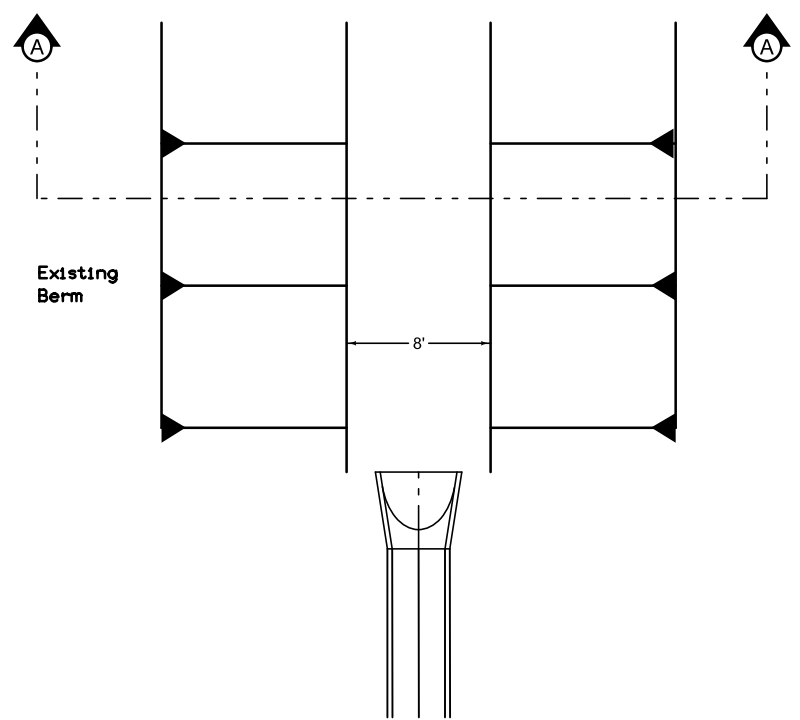
2_G_SR_		Ⓞ Feet
04-21-20		
STATION TO STATION		
1766+45.57	1766+72.42	4

Noble Avenue

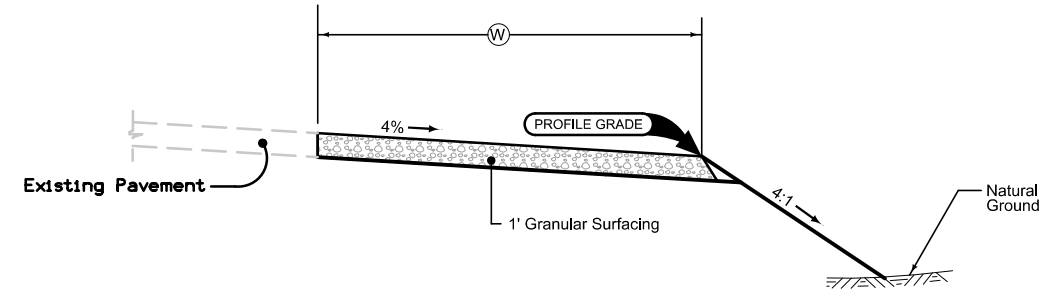


OPEN CHANNEL GRADING
Section A-A

STATION TO STATION	
100+92.86	102+95.00



LOCATION			
ROAD IDENTIFICATION	STATION TO STATION		W
DET006	2766+76.95	2769+08.45	0' - 20.75'



**GRADING AND GRANULAR SURFACING
FOR DETOUR**

See plan & profile sheets and cross sections for additional details.

SURVEY SYMBOLS

- BCL, Bridge Centerline
- BCL, Bridge Centerline
- BD, Bridge Deck
- BD, Bridge Deck
- BL, Topo Breakline
- BL, Topo Breakline
- BM, Bench Mark
- BRG, Bridge
- BRG, Bridge
- C, Centerline BL of Road -ML or SR
- C, Centerline BL of Road -ML or SR
- CON, Concrete or A/C Slab
- CON, Concrete or A/C Slab
- CP, Control Point
- D, Centerline Draw or Stream -Down
- D, Centerline Draw or Stream -Down
- ENT, Centerline BL of Entrance
- ENT, Centerline BL of Entrance
- ENU, Edge Unpaved Entrance and Parking
- ENU, Edge Unpaved Entrance and Parking
- EP, Edge of Paved Roads -ML or SR
- EP, Edge of Paved Roads -ML or SR
- Existing Terrain Boundary
- FENO, FENO Monument
- FW, Wire Fence
- FW, Wire Fence
- GDL, Guard Rail Steel
- GDL, Guard Rail Steel
- GR, Ground Shot
- LIN, Miscellaneous Line
- LIN, Miscellaneous Line
- PIP, Pipe Culvert
- PIP, Pipe Culvert
- POT, Tangent Point
- POT, Tangent Point
- RIP, Rip-Rap
- RIP, Rip-Rap
- SH, Paved Shoulder
- SH, Paved Shoulder
- SI, Sign
- SNP, Unpaved Shoulder
- SNP, Unpaved Shoulder
- SOP, Size of Pipe or Culvert
- TLNL, Tree Line Left
- TLNL, Tree Line Left

- GLID, MidAmerican Gas - Quality D
- PPA, Alliant Energy
- TLID, Windstream Communications - 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.	
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

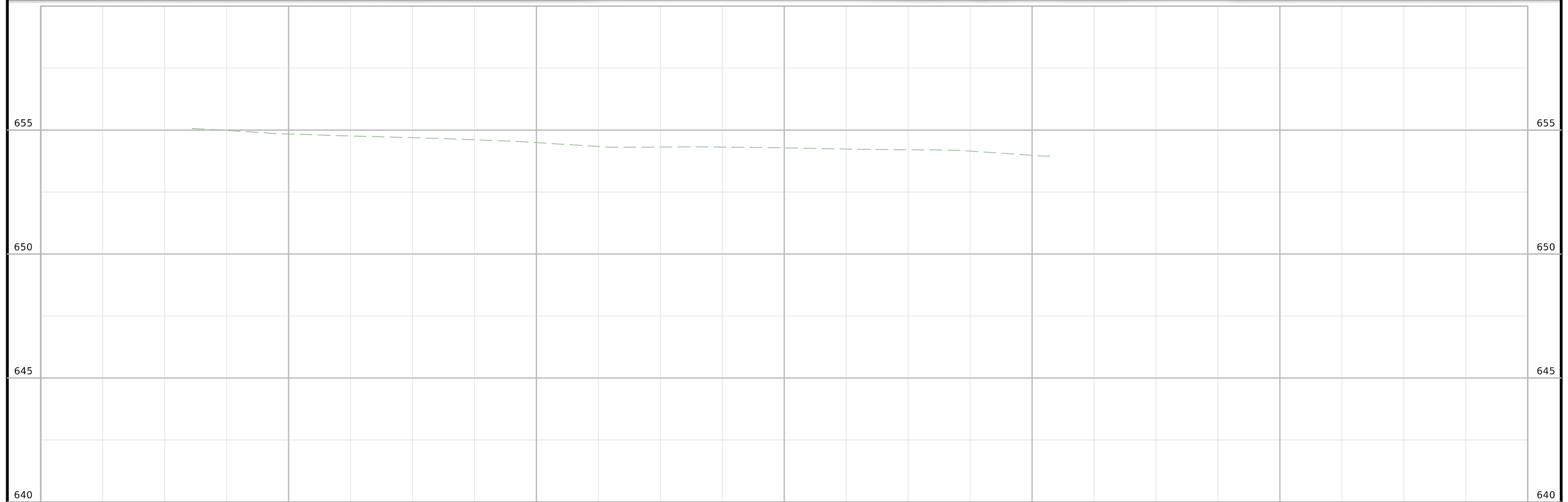
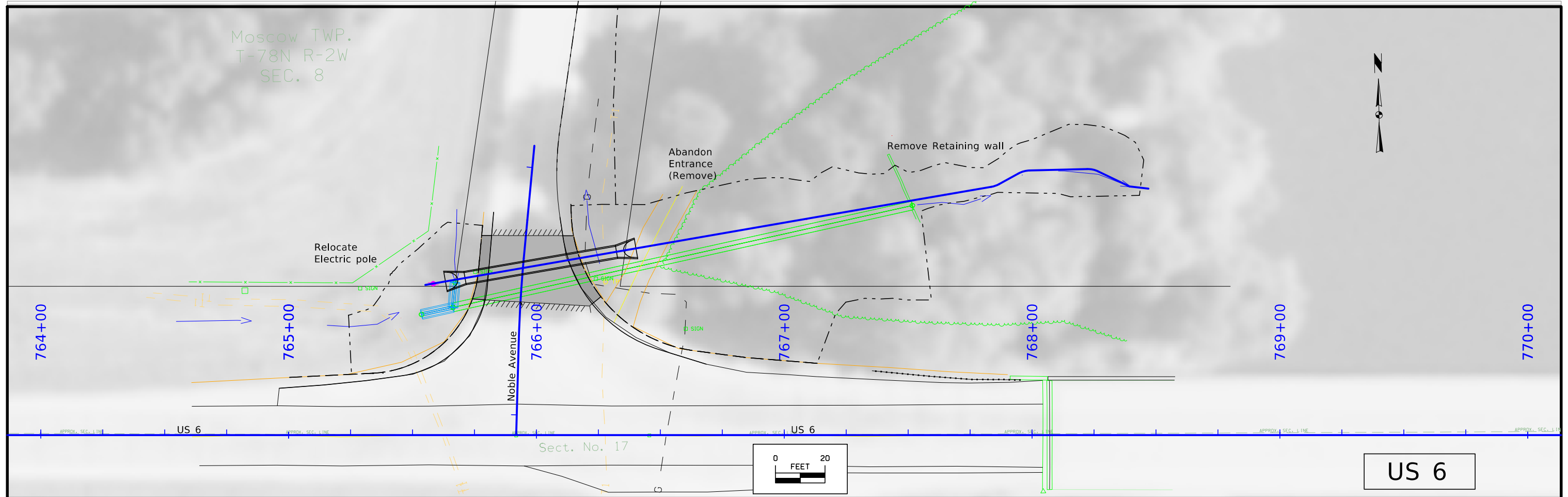
- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

- ### 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

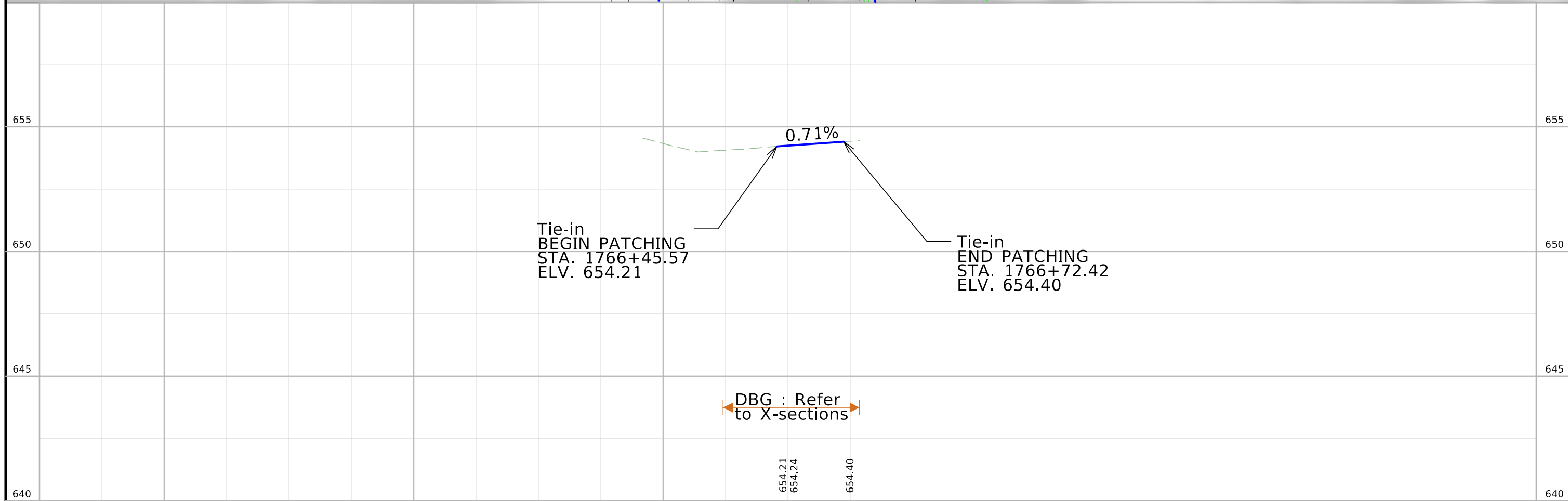
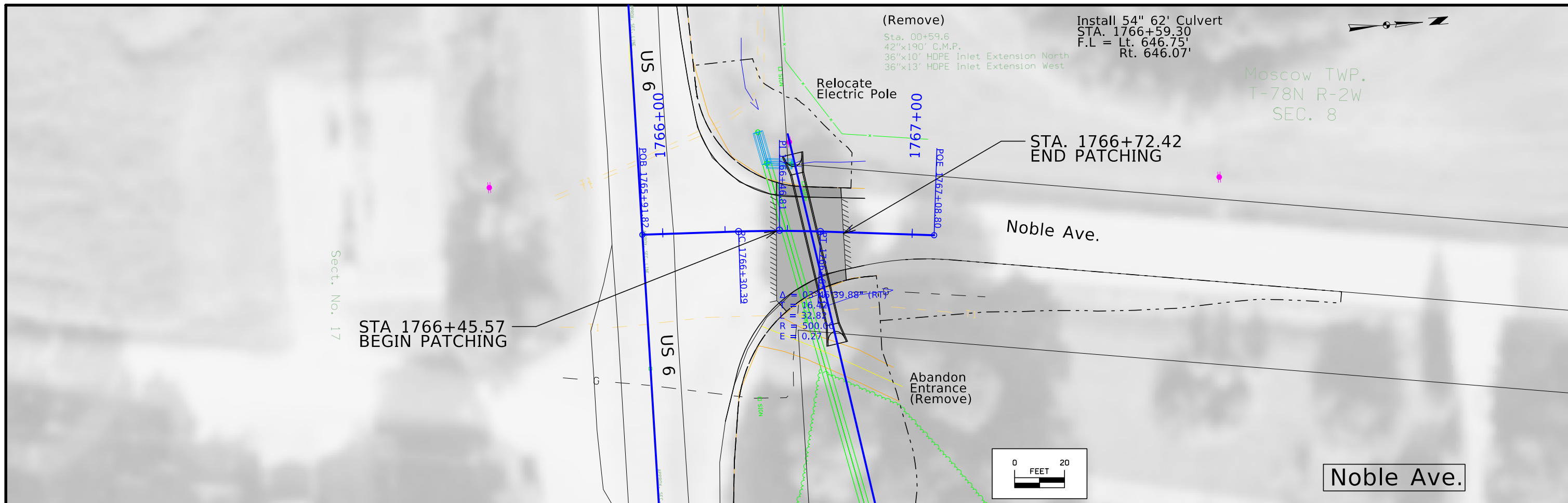
PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

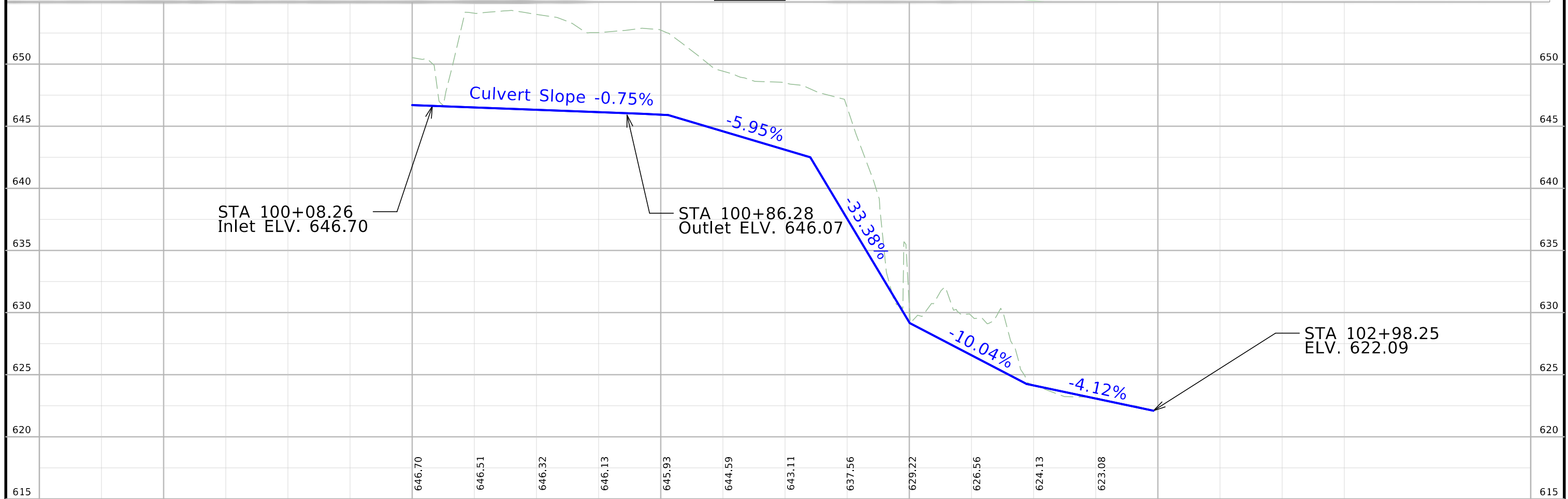
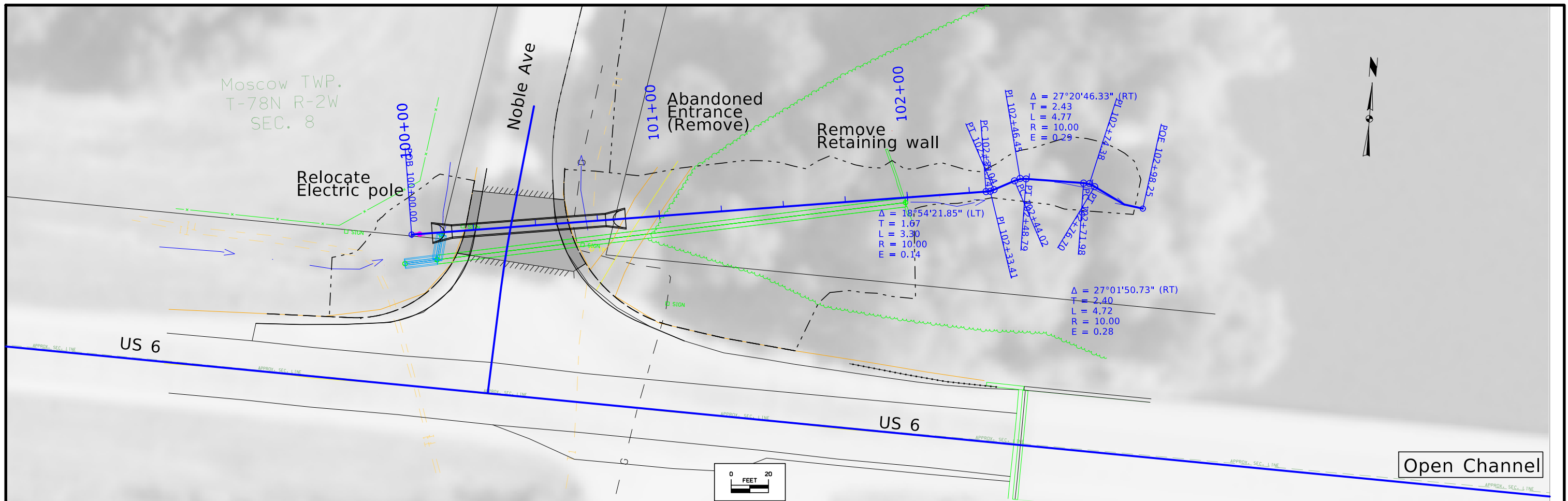
Moscow TWP.
T-78N R-2W
SEC. 8



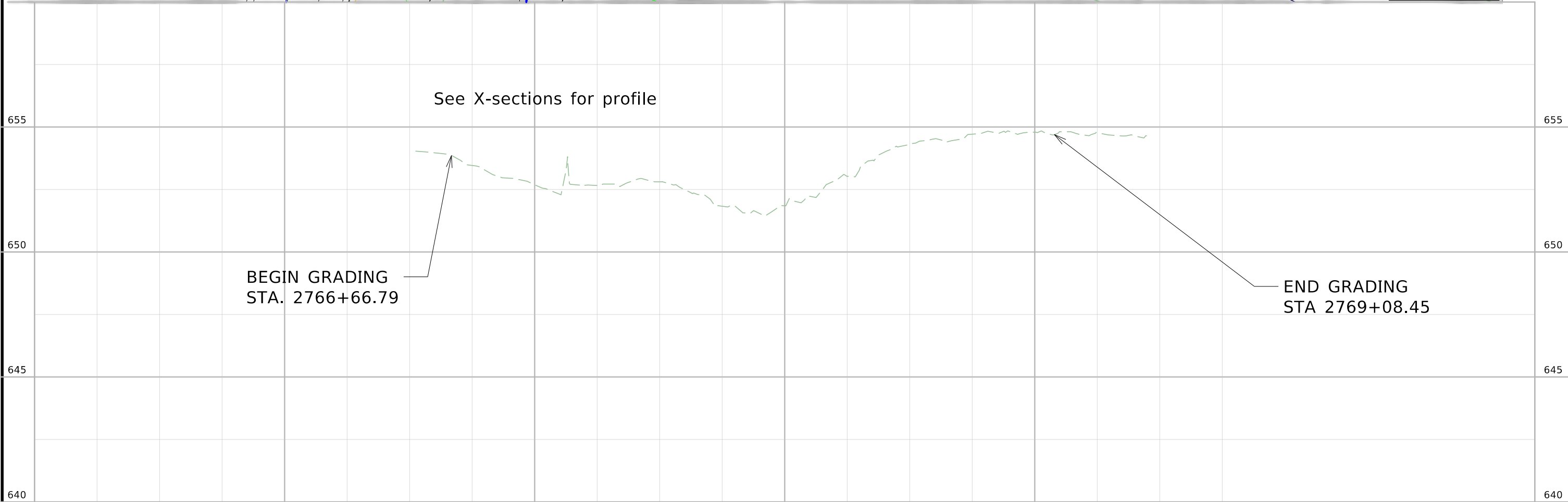
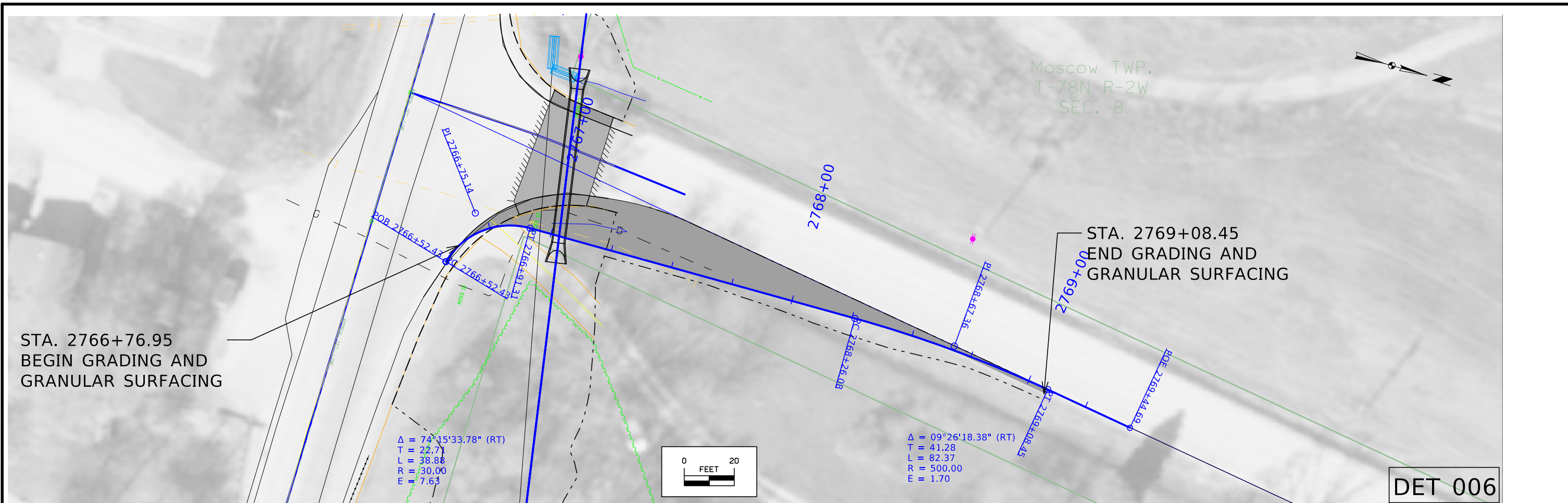
FILE NO.	ENGLISH	DESIGN TEAM	HOLST/TAMRAKAR/ACKERMAN	MUSCATINE COUNTY	PROJECT NUMBER	STPN-006-8(43)--2J-70	SHEET NUMBER	D.2
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FILE NO.	ENGLISH	DESIGN TEAM HOLST/TAMRAKAR/ACKERMAN	MUSCATINE COUNTY	PROJECT NUMBER STPN-006-8(43)--2J-70	SHEET NUMBER E.1
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FILE NO.	ENGLISH	DESIGN TEAM HOLST/TAMRAKAR/ACKERMAN	MUSCATINE COUNTY	PROJECT NUMBER STPN-006-8(43)--2J-70	SHEET NUMBER E.2
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FILE NO.	ENGLISH	DESIGN TEAM HOLST/TAMRAKAR/ACKERMAN	MUSCATINE COUNTY	PROJECT NUMBER STPN-006-8(43)--2J-70	SHEET NUMBER F1
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Survey Information

County: Muscatine

SAP 624.2

PIN: 21-70-006-010

Project Number: STPN-006-8(43)--2J-70

Location: Near Noble Ave 3.4 mi E of Co Rd X46

Type of Work: Pipe Culverts

Project Directory: 7000601021

Survey Personnel

Nels Sutherland- Survey Party Chief

Myron Fox- Assistant Survey Party Chief

Date(s) of Survey

Begin Date 02/15/2021

End Date 03/15/2021

General Information

Measurement units for this survey are US survey feet. This survey is for a proposed removal and replacement of a 42" CMP & Headwall in the ROW of US 6. Project datum and control information is provided by Design Survey Office. This project is a Full Field Survey.

Project Control

Primary geodetic style three-dimensional project control monuments are found or placed at approximate ½ to 1 mile intervals throughout this project. Datum was accessed via GNSS static survey observations using Iowa Real Time Network reference stations in the area. Other legacy datum monuments in the area were surveyed comparing legacy coordinates to validate the results of the local project network adjustment. Comparisons validate results. For additional details of the control survey see the control survey report in the CONTROL file folder of the PrelimSurvey project directory.

PROJECT DATUM: NAD86(2011) EPOCH 2010.00

VERTICAL DATUM: NAVD88

COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 14

Alignments Information

Alignment for this project will be provided by the District 5 Land Survey Office.

Utility Information

For logging data and other utility details see Utility Survey and Ownership Report in the Utility folder of the PrelimSurvey project directory.

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 14

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 14
Project Control Marks are Bench Marks

Point Name	North	East	Height	Code Description
1659	6679817.339	24549995.912	663.940	CP 5/8TH REBAR FROM THE INTERSECTION OF HWY6 AND N ISETT AVE PROCEED W 0.5 MILES ALONG HWY6 POINT IS 18FT N OF CL HWY6 4IN BELOW SURFACE
6242001	6680015.344	24538484.822	651.204	FENO IDOT BRASS DISC FROM THE INTERSECTION OF HWY6 AND NOBEL AVE PROCEED W 110FT ALONG HWY6 POINT IS 58FT N OF CL HWY6 4IN BELOW SURFACE
735	6680040.901	24535406.392	697.867	CP CUT X IN ROW RAIL FROM THE INTERSECTION OF HWY6 AND MOHAWK AVE PROCEED W 40FT ALONG HWY6 POINT IS 46FT N OF CL HWY6 4IN BELOW SURFACE

ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
1	ML006	748+13.80	6679988.65	24536815.43															
2	SR006	1765+91.82	6679955.017	24538593.14															
3	SR006						1766+30.39	6679993.54	24538594.94	1766+46.81	6680009.94	24538595.71	1766+63.21	6680026.26	24538597.55				
1	OPN006	10000.000 R1	6680016.29	24538557.63															
2	OPN006	10202.229 R1	6680047.03	24538757.51															
3	OPN006						10231.744 R1	6680051.51	24538786.69	10233.409 R1	6680051.76	24538788.33	10235.044 R1	6680052.53	24538789.81				
5	OPN006						10244.019 R1	6680056.69	24538797.76	10246.451 R1	6680057.82	24538799.92	10248.791 R1	6680057.83	24538802.35				
7	OPN006						10271.981 R1	6680057.94	24538825.54	10274.384 R1	6680057.95	24538827.94	10276.699 R1	6680056.87	24538830.09				
9	OPN006	10290.566 R1	6680050.63	24538842.47															
1	DET006						276652.430 R1	6679986.93	24538654.37	276675.143 R1	6679993.02	24538632.48	276691.312 R1	6680015.73	24538632.40				
3	DET006						276826.084 R1	6680150.50	24538631.93	276867.360 R1	6680191.78	24538631.78	276908.450 R1	6680232.52	24538638.41				

SPIRAL OR CIRCULAR CURVE DATA

Name	Location	ΔSCS	Horizontal Alignment Data												Remarks										
			Spiral Data						Curve Data																
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R		E									
C1	SR006																								
C1	OPN006																								
C2	OPN006																								
C3	OPN006																								
C1	DET006																								
C2	DET006																								

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.

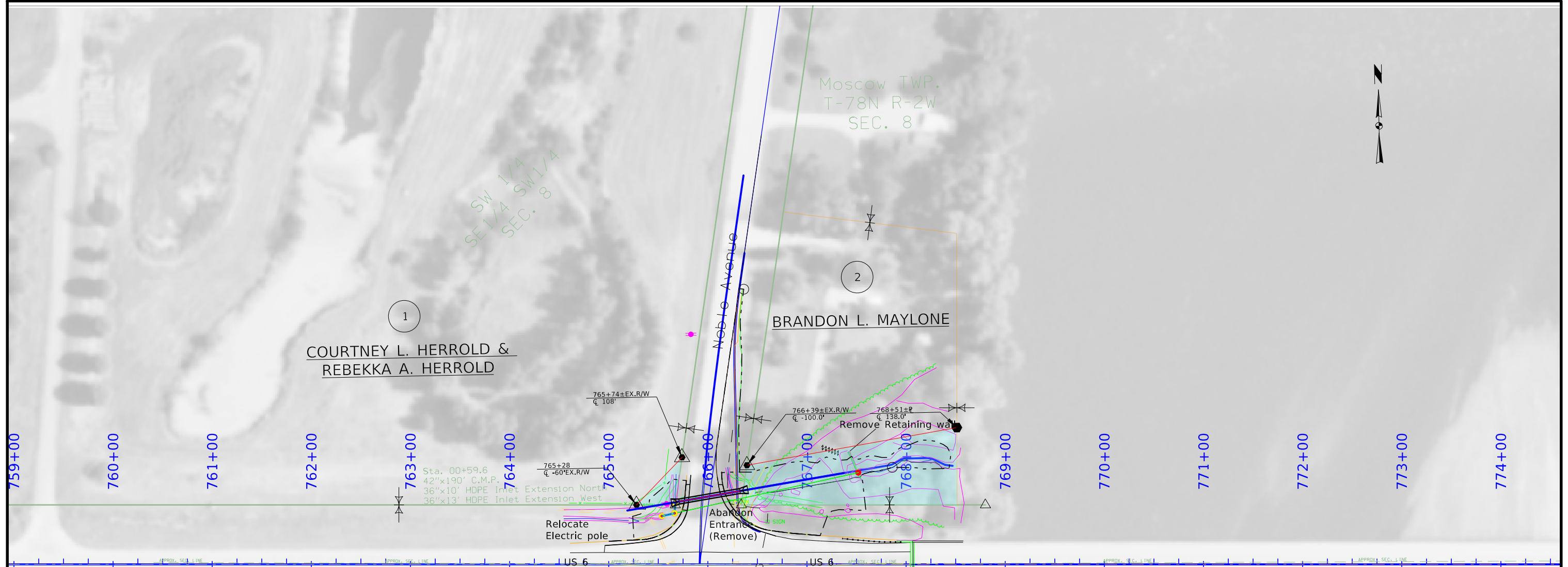
Muscatine	ROW: STPN-006-8(44)--2J-70																			
	Near Noble Ave 3.4 mi E of Co Rd X46																			
			STATE		COUNTY		CITY			TEMP EASE	BORROW									
PARCEL NO.	OWNER NAME	FEE	EASE	FEE	EASE	FEE	EASE	EXCESS			FEE	T.E.	MITIGATION	OTHER	HOUSE	BUILDING(S)	A/C ONLY	TOTAL ACQ.		
1	Courtney L Harrold - Fee		0.02 AC																	
2	Brandon L Maylone - Fee		0.29 AC																	
2 Parcels	"TOTALS	0 AC	0.31 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC	0 AC						
		0 SF		0 SF	0 SF		0 SF	0 SF		0 SF	0 SF		0 SF							

SW 1/4
SE 1/4 SW 1/4
SEC. 8

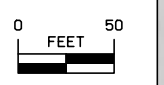
Moscow TWP.
T-78N R-2W
SEC. 8

1
COURTNEY L. HERROLD &
REBEKKA A. HERROLD

2
BRANDON L. MAYLONE



Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: Larson / Hughes	
ROW #: STPN-006-8(44)--2J-70	
Plan Date: 8-17-2017	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition

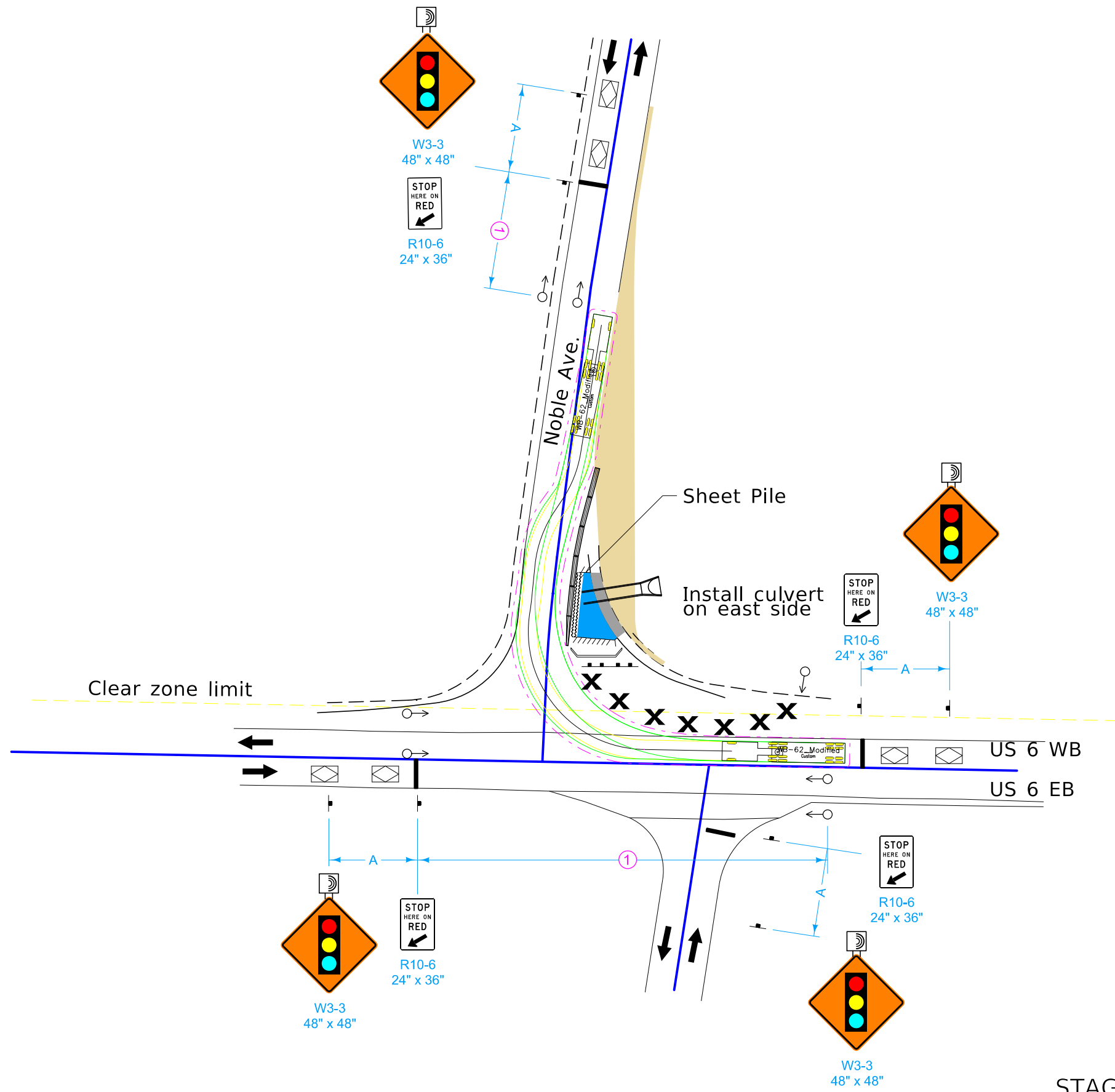


108-23A 08-01-08
TRAFFIC CONTROL PLAN
<p>US 6 traffic shall be maintained at all times.</p> <p>Noble Ave. traffic will be maintained using temporary traffic signal.</p>

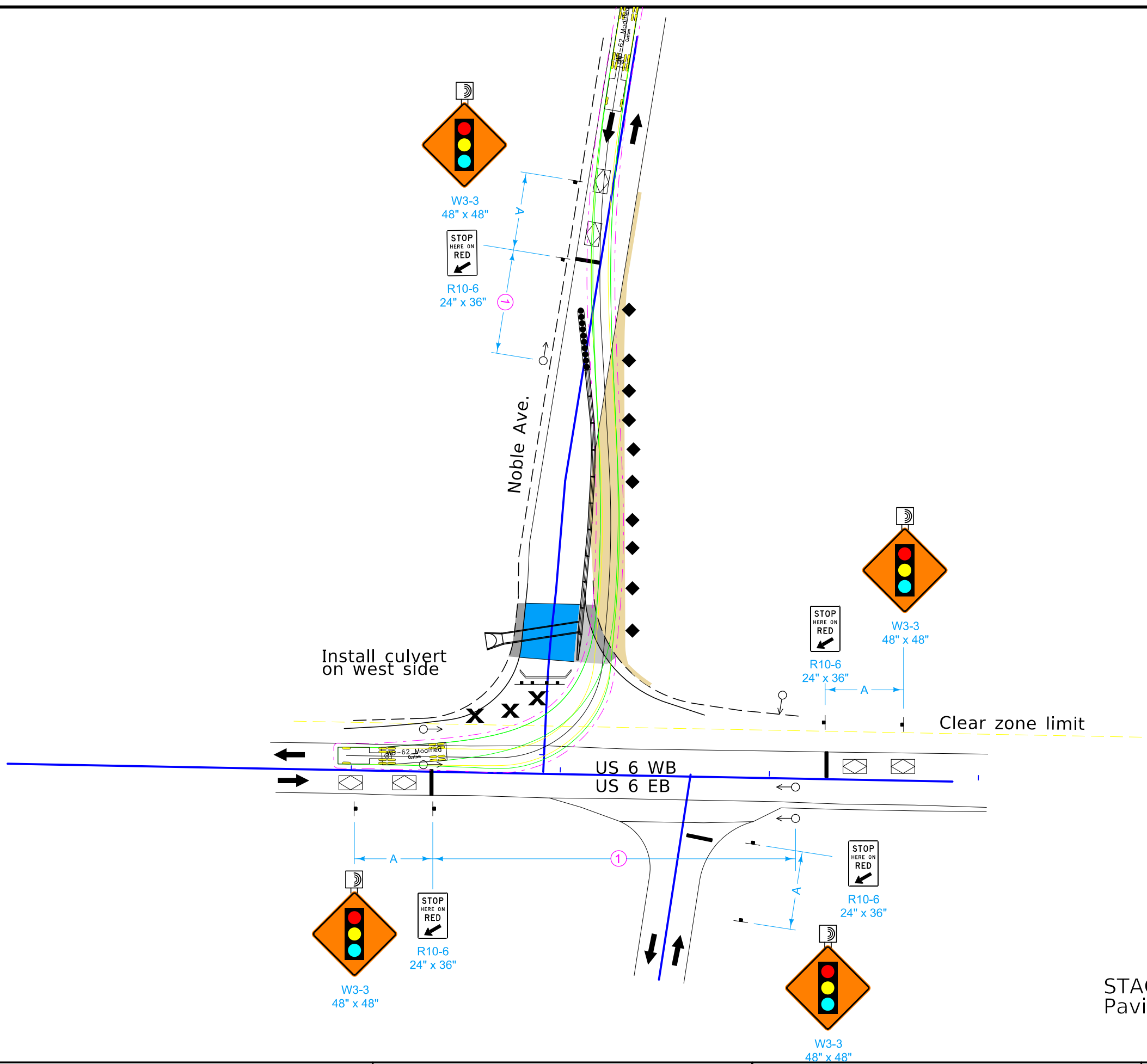
108-26A 08-01-08
STAGING NOTES
<p>Stage 1: Traffic: Noble Ave. traffic will be maintained using temporary traffic signal. Refer to Noble Ave. Staged Traffic Control details on J-sheets.</p> <p>Construct: Remove existing NB pavement and existing culvert. Install outlet culvert section at East side. Temporary detour as shown in J.2. Grade right return and open channel section.</p> <p>Stage 2: Traffic: Noble Ave. traffic will be reduced to one lane in both direction and maintained as one-lane, two-way operations. Refer to Noble Ave. Staged Traffic Control details on J-sheets.</p> <p>Construct: Remove existing SB pavement and existing culvert. Install inlet culvert section at West side. Grade left return.</p> <p>Stage 3: Traffic: Noble Ave. traffic will return to normal two-lanes, one lane in each direction, two-way operations.</p> <p>Construct: Remove temporary detour.</p>

108-25 10-21-14
511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			No travel restrictions expected.									



STAGE1 Noble Ave. :
Paving NB and Granular surfacing NB

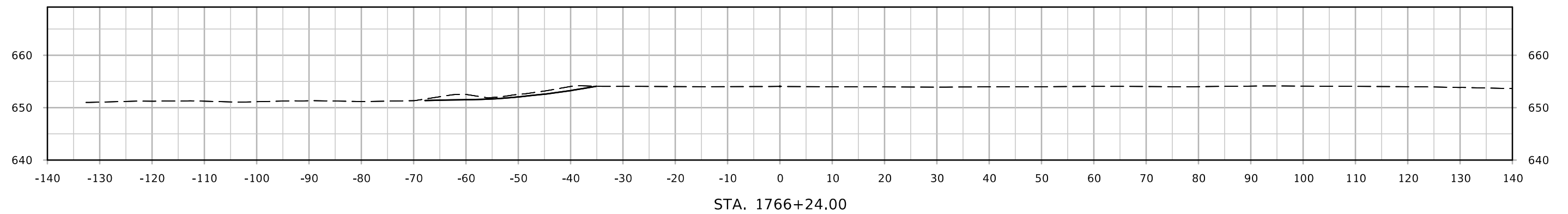
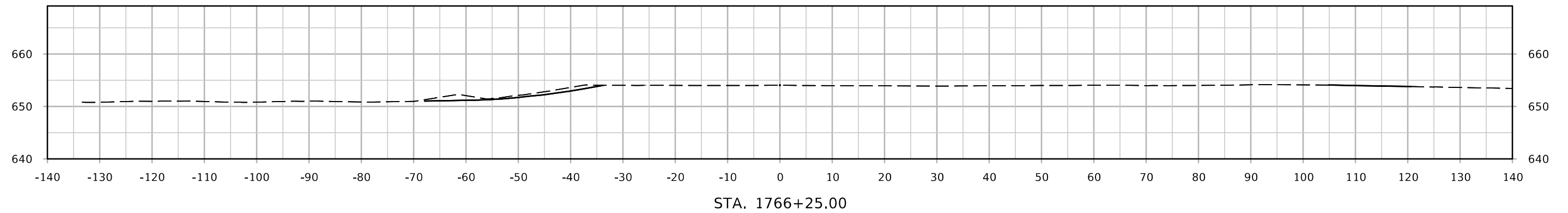
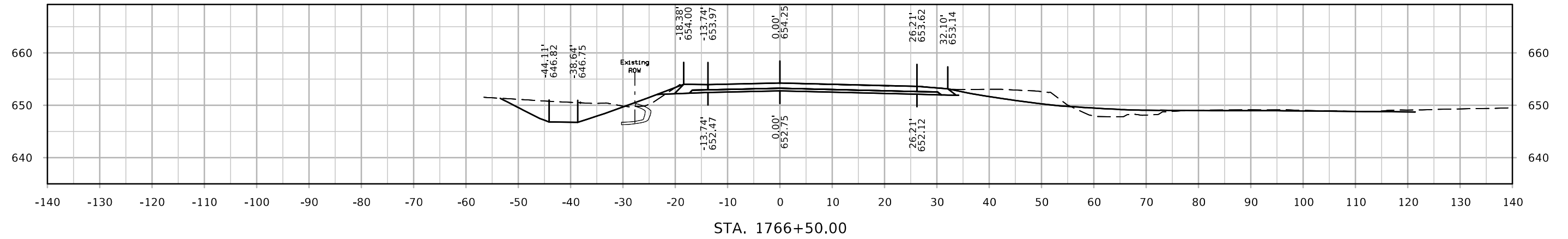


Install culvert on west side

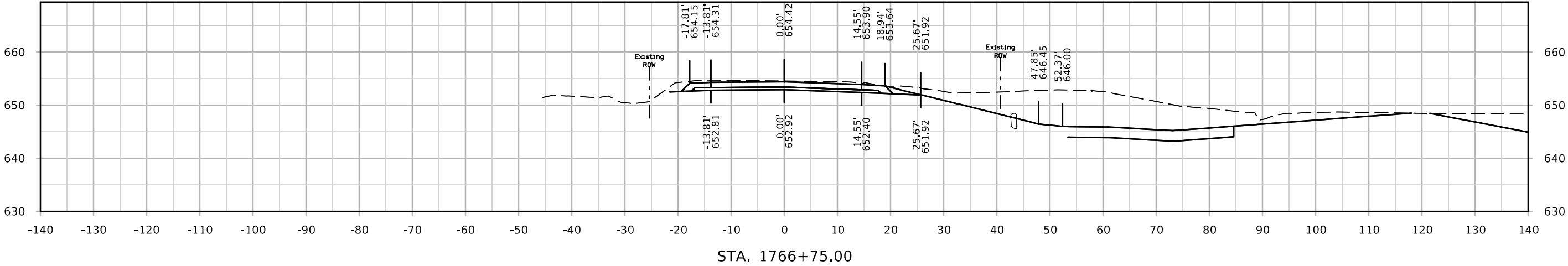
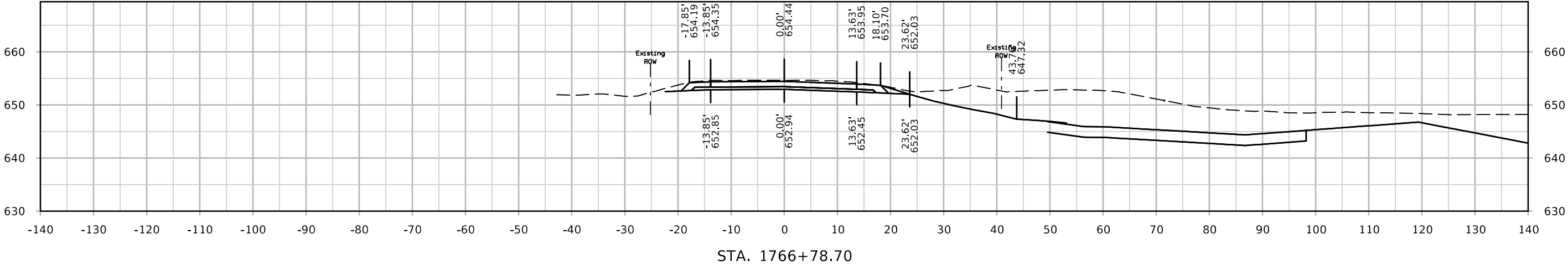
Clear zone limit

STAGE 2 Noble Ave. :
Paving SB

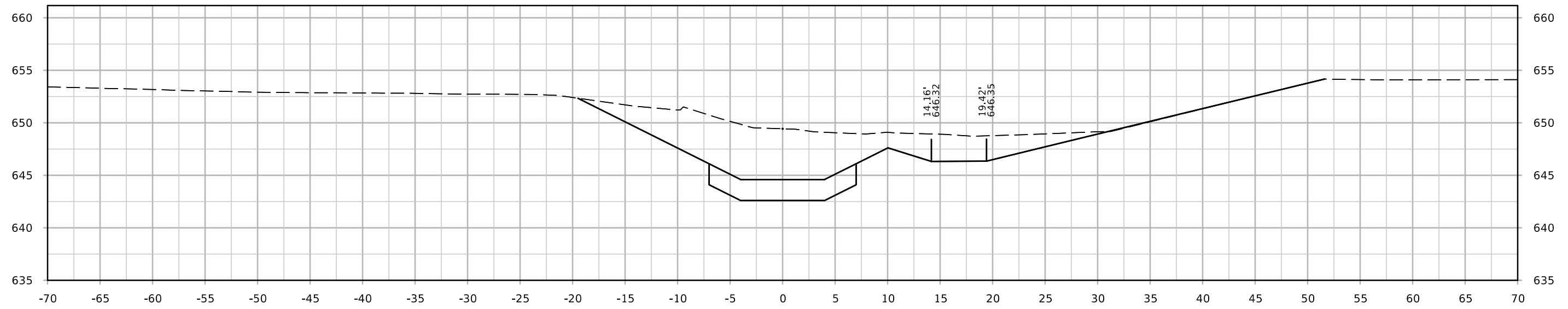
Noble Ave.



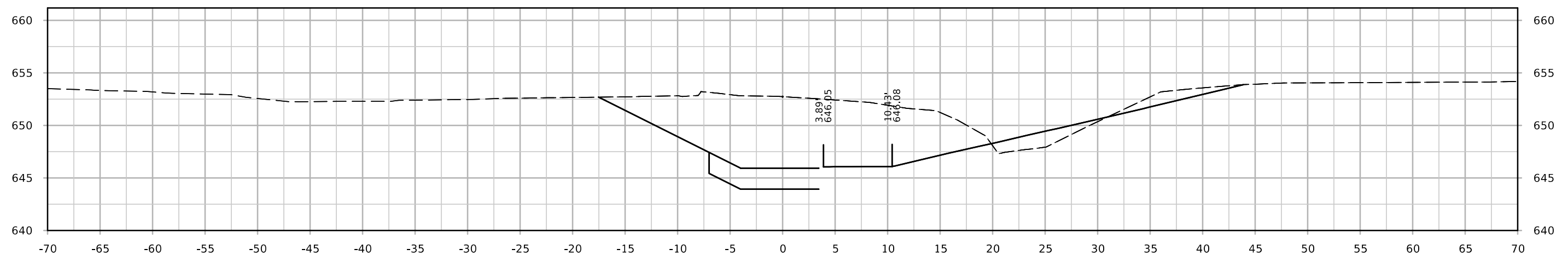
Noble Ave.



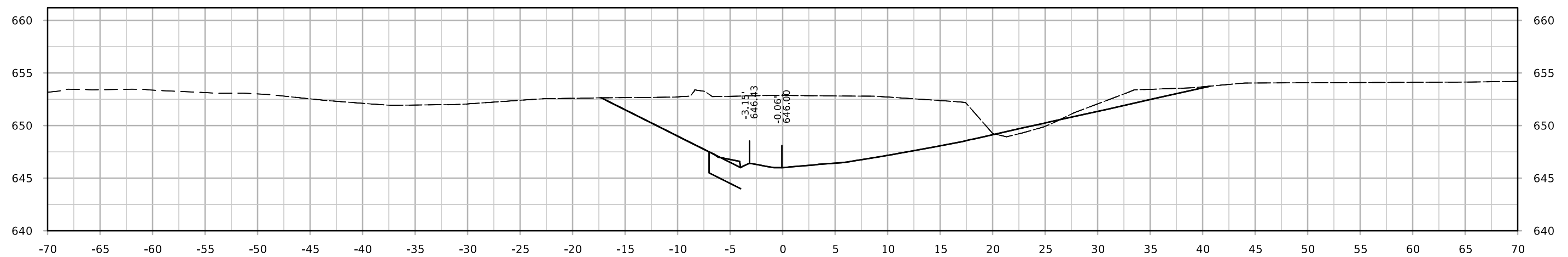
Open Channel



STA. 101+25.00

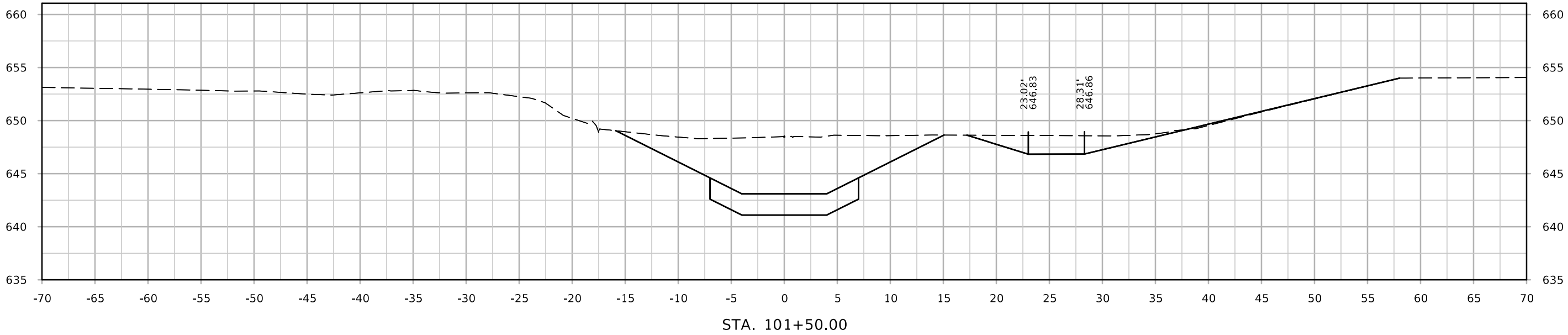
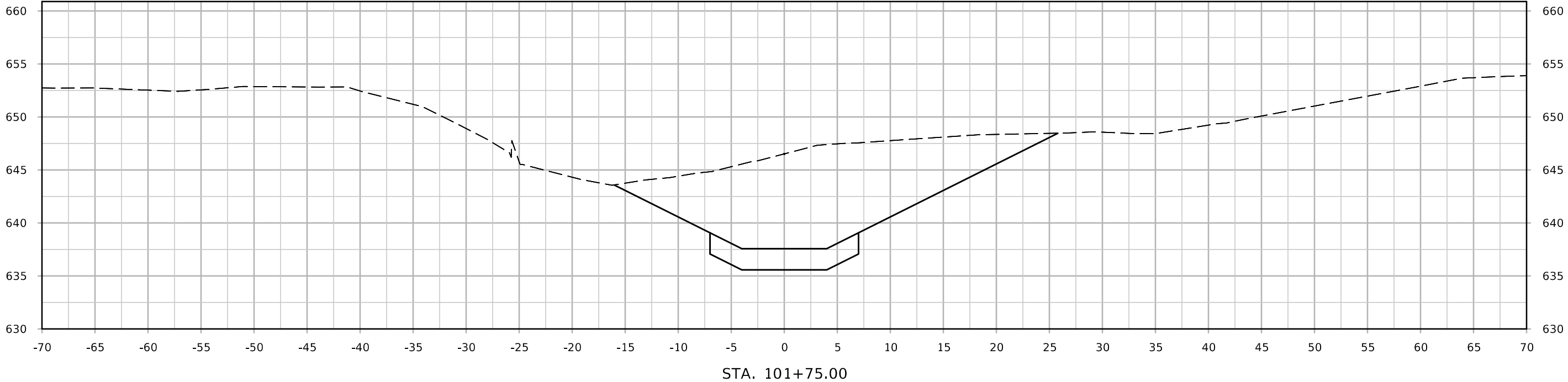


STA. 101+00.00

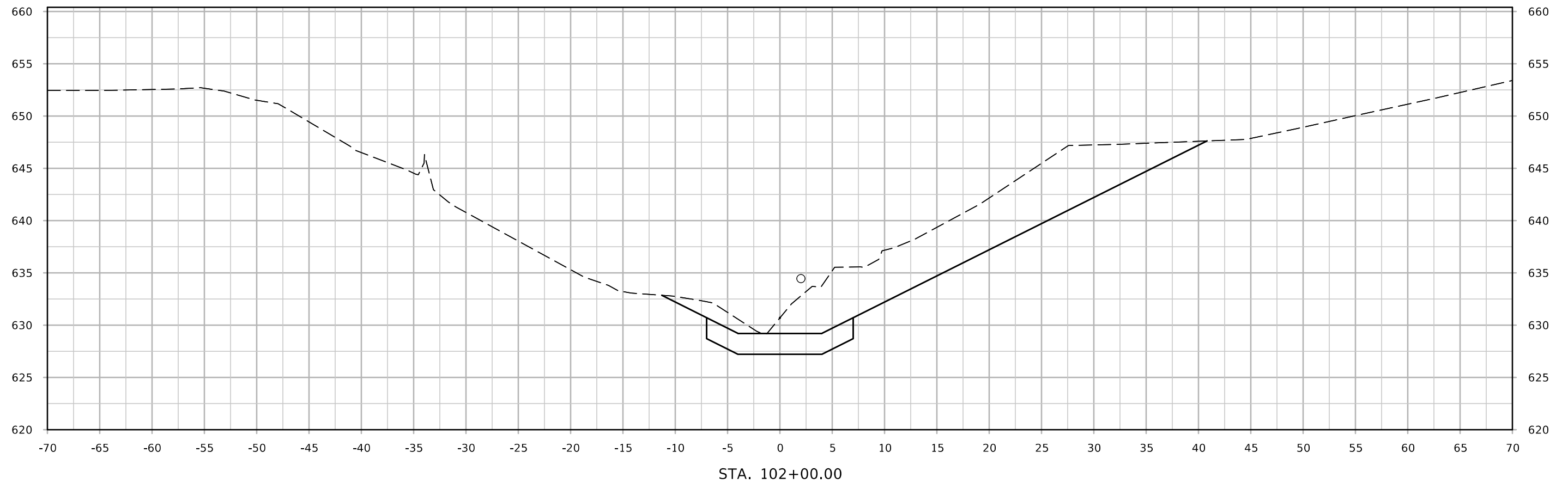
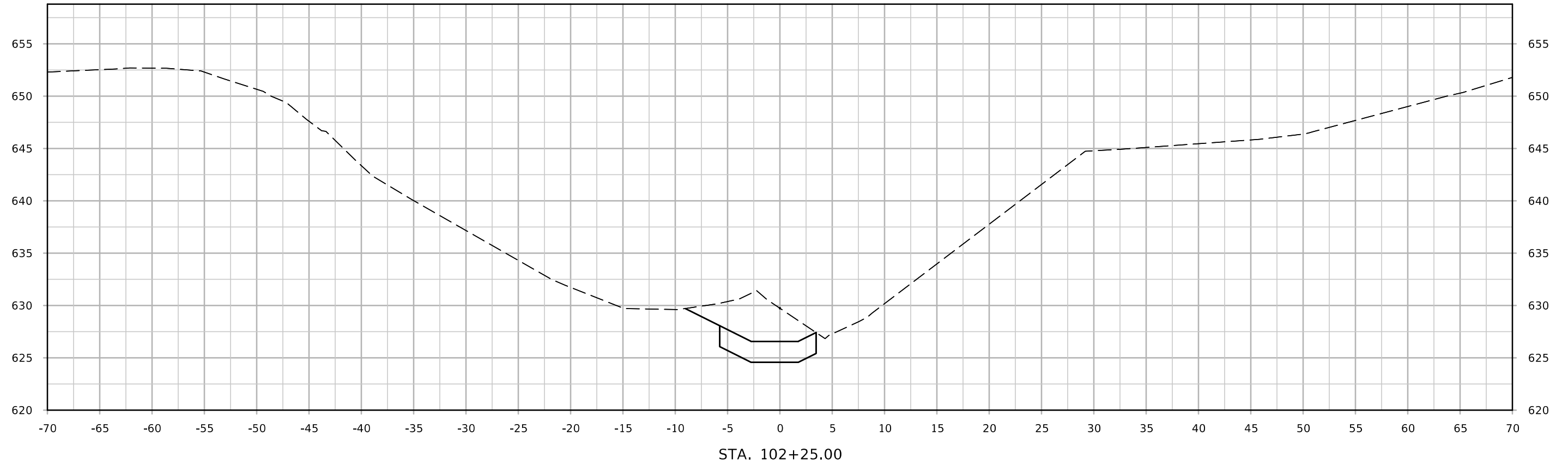


STA. 100+92.86

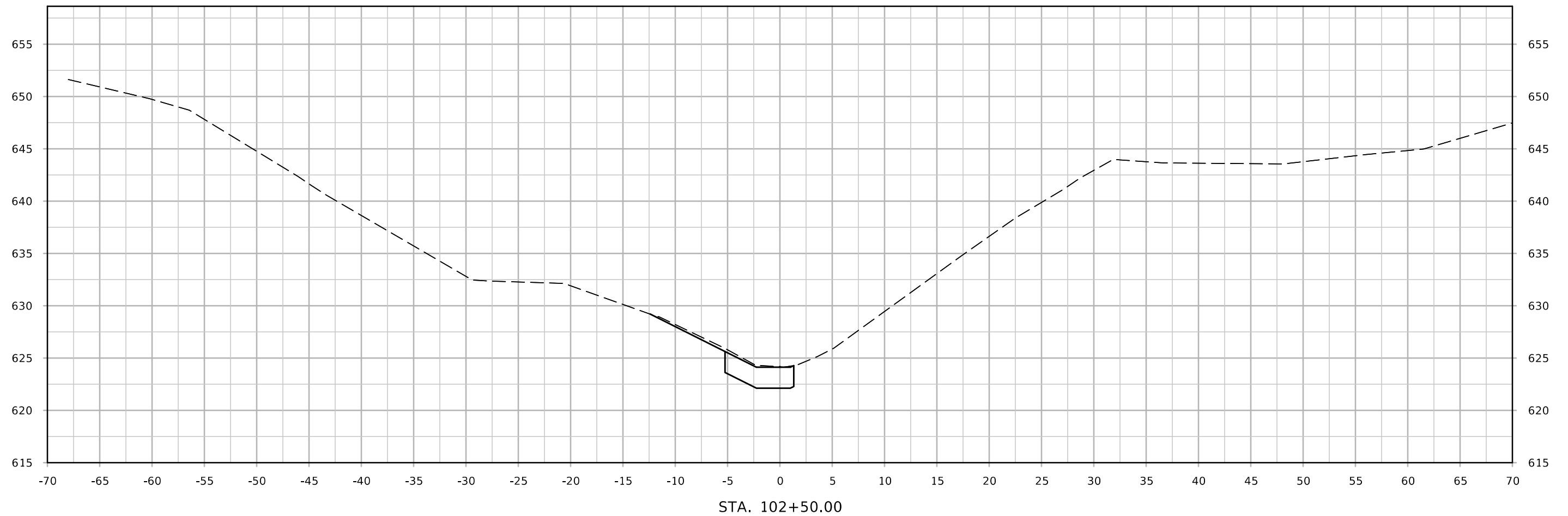
Open Channel



Open Channel



Open Channel



Open Channel

