



REVISIONS

TOTAL
47

PROJECT IDENTIFICATION NUMBER
21-90-063-020
PROJECT NUMBER
TSF-063-2(174)--92-90
R.O.W. PROJECT NUMBER
-
-
-

No.	DESCRIPTION
INDEX OF SHEETS	
A Sheets	Title Sheets
A.1	Title Sheet
A.2	Project Location Map
B Sheets	Typical Cross Sections and Details
B.1 - 2	Typical Cross Sections and Details
C Sheets	Quantities and General Information
C.1 - 2	Estimated Project Quantities
C.3 - 6	Tabulations
CS Sheets	Soils Tabulations
CS.1 - 2	Soils Tabulations
D Sheets	Mainline Plan and Profile Sheets
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2	US 63
E Sheets	Side Road Plan and Profile Sheets
* E.1	Eddyville Rd
* E.2	Chillicothe Rd
G Sheets	Survey Sheets
G.1 - 3	Survey Info. & Control Map
G.4	Horizontal Control Tab. & Super for all Alignments
J Sheets	Traffic Control and Staging Sheets
* J.1	Traffic Control Plan
* J.2	Traffic Control Geometric Detail
L Sheets	Geometric, Staking and Jointing Sheets
* L.1	Geometric & Staking "US 63 Return"
* L.2	Jointing "US 63 Return"
* L.3	Edge Profiles "US 63 Return"
* L.4	Existing Geometric & Staking "US 63 Return"
* L.5	Existing Jointing Layout "US 63 Return"
P Sheets	Lighting Layout Sheets
P.1 - 6	Lighting Layout Sheets "US 63 Return"
R Sheets	Erosion Control Sheets
* RR.1	Erosion Control Legend and Symbol Information Sheet
T Sheets	Earthwork Quantity Sheets
T.1 - 3	Earthwork Quantity Sheets
W Sheets	Mainline/Side Road Cross Sections
* W.1 - 10	Turnlane Cross Sections
	* Color Plan Sheets

PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
WAPELLO COUNTY
PCC Pavement - Grade and New
Eddyville Rd Intersection 0.8 mi S of Co Rd T67 (SB)

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



*R Sheets Currently in Progress

US 63 N	
DESIGN DATA RURAL	
2019 AADT	9400 V.P.D.
20 -- AADT	-- V.P.D.
20 -- DHV	-- V.P.H.
TRUCKS	11.95 %
Total Design ESALs	--

CHILlicothe ROAD	
DESIGN DATA RURAL	
2018 AADT	1300 V.P.D.
20 -- AADT	-- V.P.D.
20 -- DHV	-- V.P.H.
TRUCKS	-- %
Total Design ESALs	--

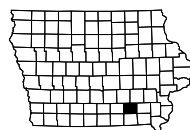
EDDYVILLE ROAD	
DESIGN DATA RURAL	
2018 AADT	2600 V.P.D.
20 -- AADT	-- V.P.D.
20 -- DHV	-- V.P.H.
TRUCKS	-- %
Total Design ESALs	--

INDEX OF SEALS		
	X	
X	X	X

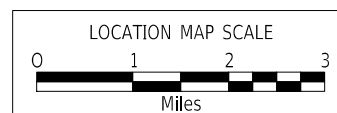
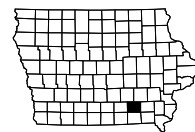
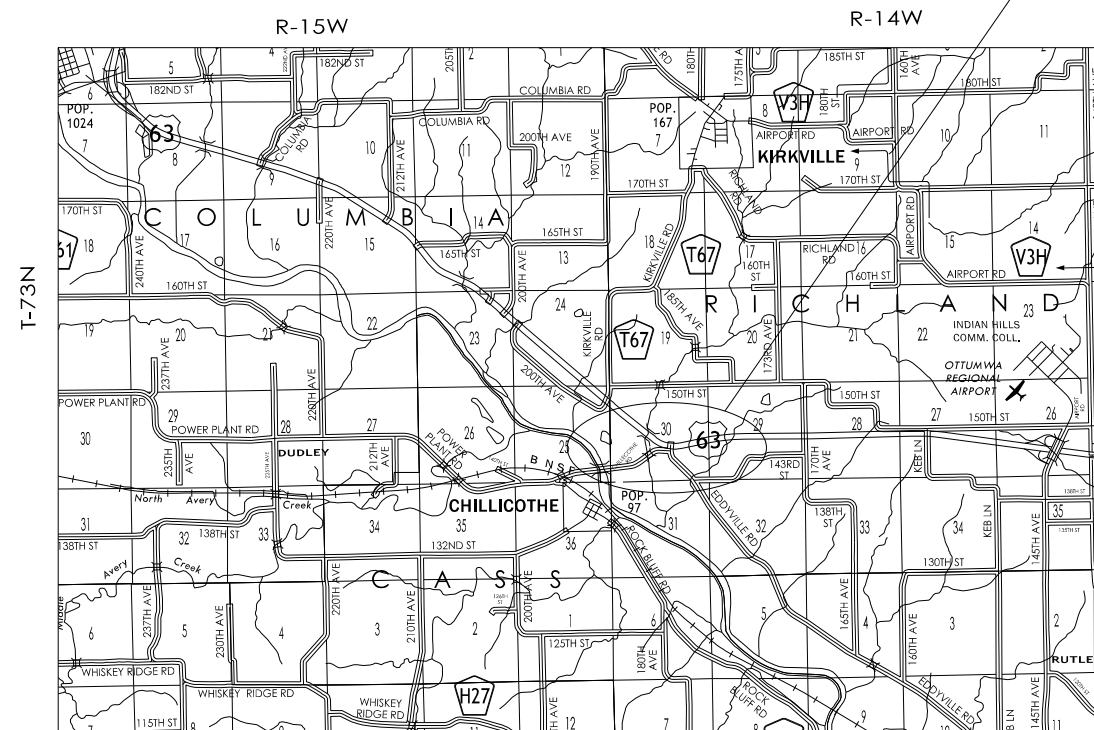
PRELIMINARY PLANS

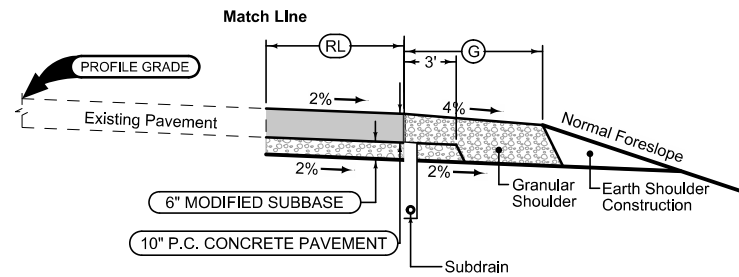
Subject to change by final design.

DM5 PLAN - Date: 01-11-2023



PROJECT LOCATION





Mainline Jointing:
 Transverse joints: Match Existing. Refer to L4 & L5.
 Longitudinal joint: BT

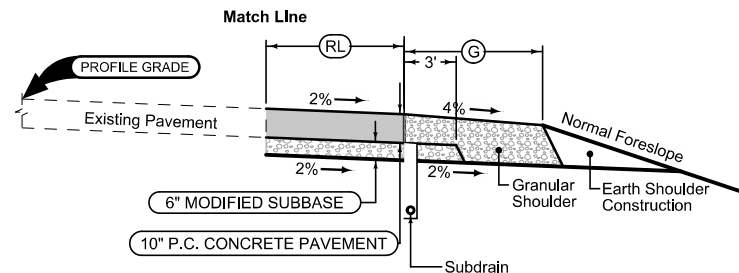
2P_ MODIFIED		
STATION TO STATION		(RL) Feet
414+47.82	420+18.99	1.35-18.89

Granular Shoulder

1R_G_ MODIFIED		
BEGIN STATION	END STATION	(G) Feet
414+47.82	418+97.43	6
418+97.43	419+52.92	6-10
419+52.92	420+18.99	10

TYPICAL DETAIL OF PAVEMENT WIDENING

US 63



Mainline Jointing:
 Transverse joints: Match Existing. Refer to L4 & L5.
 Longitudinal joint: BT

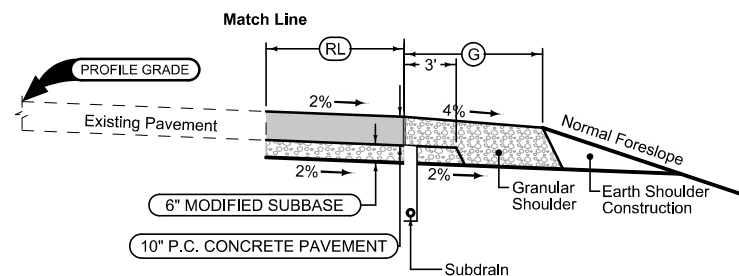
2P_ MODIFIED		
STATION TO STATION		(RL) Feet
1421+01.77	1422+63.83	5.61-18.16

Granular Shoulder

1R_G_ MODIFIED		
BEGIN STATION	END STATION	(G) Feet
1420+01.77	1422+63.83	10

TYPICAL DETAIL OF PAVEMENT WIDENING

Eddyville Rd



Mainline Jointing:
 Transverse joints: Match Existing. Refer to L4 & L5.
 Longitudinal joint: BT

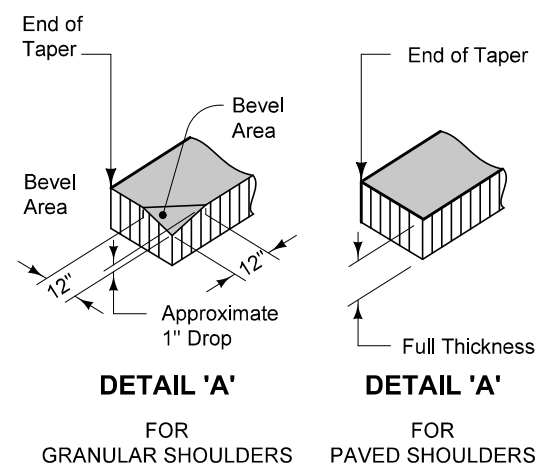
2P_ MODIFIED		
STATION TO STATION		(RL) Feet
2421+06.55	2422+58.58	2.24-6.01

Granular Shoulder

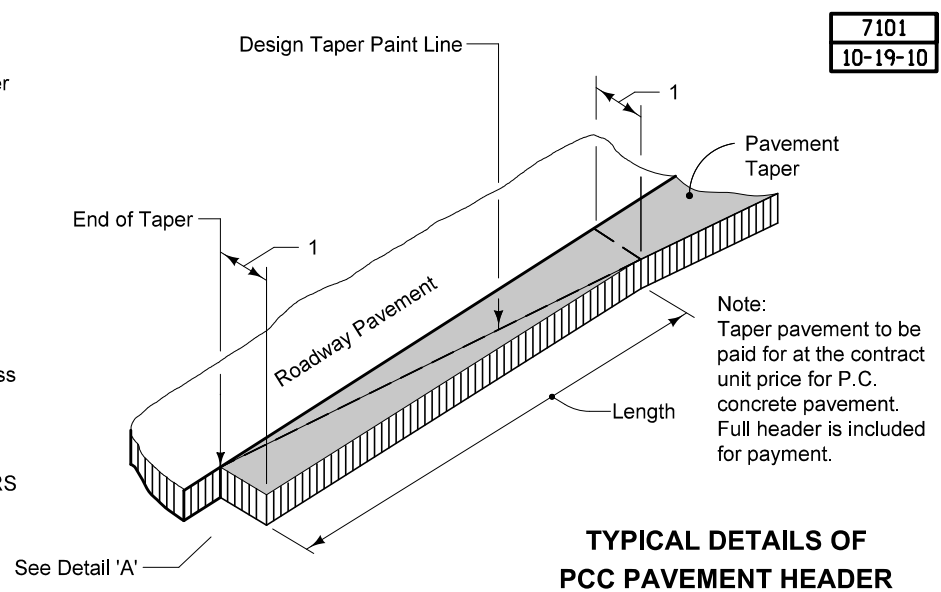
1R_G_ MODIFIED		
BEGIN STATION	END STATION	(G) Feet
2421+06.55	2422+58.58	10

TYPICAL DETAIL OF PAVEMENT WIDENING

Chillicothe Rd



1 Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).



ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items : Roadway Items

Item no.	Item Code	Item	Unit	Quantities		Estimate Reference Notes
				Estimated		
				Roadway Items		
1	2102-2625000	EMBANKMENT-IN-PLACE	CY	2,758		Refer to T sheets for more information.
2	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	207		Refer to T sheets.
3	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS	CY	5		Refer to Tab. 103-7 on CS sheets.
4	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	1,488		Refer to Tab. 103-10 on the CS sheets and T sheets.
5	2115-0100000	MODIFIED SUBBASE	CY	601.44		Refer to Typical and 108-24 on C sheets.
6	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	312.096		Refer to Tabulation 112-9.
7	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	7.2		Refer to tab 112-9 in C sheets.
8	2301-1033100	STANDARD OR SLIP FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 10 IN.	SY	935.8		Refer to Tabulation 100_24 on C sheets.
9	2502-8212024	SUBDRAIN, LONGITUDINAL, (BACKSLOPE) 4 IN. DIA.	LF	1,149.7		Refer to Tab.104-9A on CS Sheets.
10	2502-8221306	SUBDRAIN OUTLET, DR-306	EACH	6		Refer to Tabulation 104_9A on the CS Sheets.
11	2510-6745850	REMOVAL OF PAVEMENT	SY	238.7		Refer to Tabs.110-1 on C sheets.
12	2524-6765010	REMOVE AND REINSTALL SIGN AS PER PLAN	EACH	4		<p>Item is for the removal and reinstalling of signs in the disturbed areas within the project limits.</p> <p>Measurement: The Engineer will count the number of signs to be removed and reinstalled. Basis of Payment: The contractor will be paid the contract unit price for the number of signs to be removed and reinstalled. Price bid includes the following work: The contractor shall carefully remove and stockpile the signs not part of the ICWS for later installation. Any damaged items as determined by the Engineer shall be replaced by the contractor at no cost to the State. The signs shall be cleaned as directed by the Engineer before installation. The contractor shall restore any area disturbed by the removal operation to an acceptable condition.</p>
13	2526-8285000	CONSTRUCTION SURVEY	LS	1		
14	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	26.03		Refer to Tab. 108-22 on C sheets.
15	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	EACH	2		Refer to tab 108-29 on C sheets.
16	2527-9263180	PAVEMENT MARKINGS REMOVED	STA			Refer to Tab. 108-22 on C sheets.
17	2527-9263190	SYMBOLS AND LEGENDS REMOVED	EACH	2		Refer to 108-29 on C sheets.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadway Items	
18	2528-8445110	TRAFFIC CONTROL	LS	1	Refer to Traffic Control Plan on J sheets.
19	2528-8445113	FLAGGERS	EACH	0	See Proposal.
20	2533-4980005	MOBILIZATION	LS	1	--

INDEX OF TABULATIONS		
Tabulation	Tabulation Title	Sheet No.
C Sheets		
100-24	PCC Pavement	C.3
102-5	Existing Pavement	C.4
103-10	Topsoil Stripping and Placement	C.3
105-4	Standard Road Plans	C.2
108-22	Pavement Marking Line Types	C.4
108-29	Pavement Marking Symbols and Legends	C.4
110-1	Removal of Pavement	C.3
111-25	Index of Tabulations	C.2
112-9	Shoulders	C.5
253-1	ICWS and ITS Coordination	C.2
262-6	Utilities (Not a Point-25 Project)	C.2

111-25
10-18-11

STANDARD ROAD PLANS		
The following Standard Road Plans apply to construction work on this project.		
Number	Date	Title
DR-303	10-17-17	Subdrains (Longitudinal)
DR-306	10-16-18	Precast Concrete Headwall for Subdrain Outlets
PM-110	04-21-20	Line Types
PM-111	04-21-20	Symbols and Legends
PM-222	10-15-19	Passing Lane (Super Two Highway)
PV-101	04-19-22	Joints
PV-105	10-21-14	PCC Pavement Widening
SI-881	04-16-19	Special Signs for Workzones
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	10-19-21	Work Within 15 ft of Traveled Way
TC-212	04-21-20	Spot Location Lane Closure with Flaggers
TC-402	10-19-21	Work Within 15 ft of Traveled Way

105-4
10-18-11

253-1
10-18-11

ICWS AND ITS Coordination

This project requires coordination with the ITS maintenance contractor to remove the ICWS sign at the intersection and the cameras for ITS and Wapello County Sheriff's Office that are mounted on the Chillicothe Road light pole.

Contractor shall contact Jason Dale, Iowa DOT Traffic Operations, phone (515) 239-1995 at least 14 days prior to construction.

262-6
10-18-05

**UTILITIES
(NOT A POINT 25 PROJECT)**

This is NOT a POINT 25 project and is not subject to the provisions of IAC 761-115.25.

110-1
04-16-13

REMOVAL OF PAVEMENT

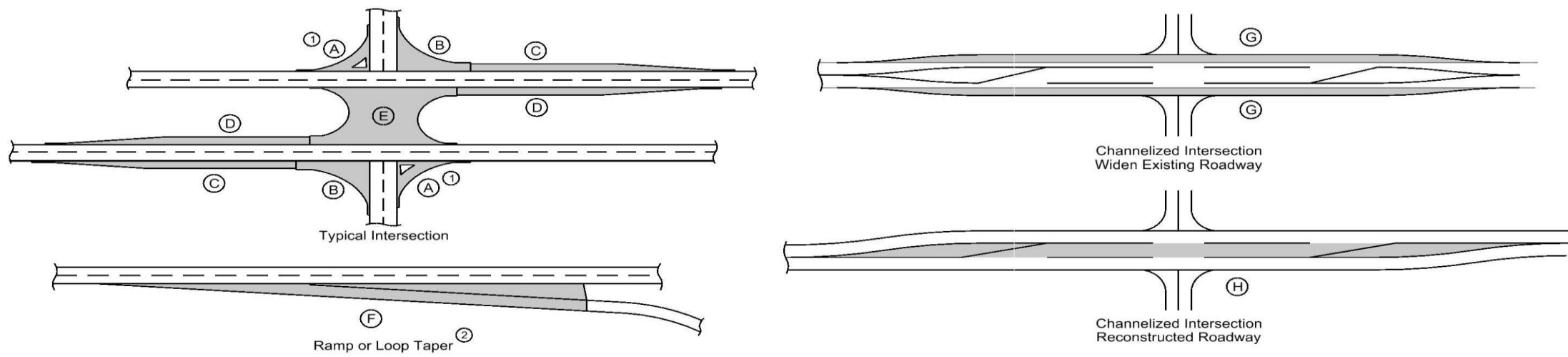
Refer to Tabulation 102-5

* Not a Bid Item

Begin Station	End Station	Side	Pavement Type	Area		Saw Cut*	Remarks
				SY	LF		
414+47.70	419+84.76	R	PCC	238.7	545.1		Shoulder removal

PCC PAVEMENT

100-24
04-21-15



- ① Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.
- ② Refer to PV-410, PV-411, PV-412, and PV-414.
- ③ Quantity includes Pavement Header.

Road Identification	Location		Mainline			Area ③							Total Area By Pavement Thickness		Special Backfill	Modified Subbase	Granular Subbase	Remarks				
	Direction of Travel	Station to Station	Width	Length	Area	A ①	B	C	D	E	F ②	G	H	SY					TONS	CY	SY	
														10 IN								10% IN
														FT								FT
US 63	EB	414+47.82 419+52.92	419+52.92 420+18.99	Var. Var.	505.1 66.1						149.1	678.2							Includes Return			
Chillicothe Rd	WB	2421+06.55	2422+58.57	Var.	152.0						108.5								Includes Return			
TOTAL											935.8							601.4				

EXISTING PAVEMENT

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks	
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth IN	Type	Depth IN	Type	Depth IN	Type	Depth IN	Source	Type	Durability Class			Type
	90	US-63	1	041.00	046.10	1997		NHS-23-1(20)--19-90	PCC	10	GSB	6				DURHAM MINE	C.LST.	I		S001920063N 43.09543 48.18661		

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
 **NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.

***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.25
 ELY4: Edge Line Left (Yellow) @ 1.00

DCY4: Double Centerline (Yellow) @ 2.00
 CHW8: Channelizing Line (White) @ 2.00

NPY4: No Passing Zone Line (Yellow) @ 1.25
 SLW4: Solid Lane Line (White) @ 1.00

BLW4: Broken Lane Line (White) @ 0.25

ELW4: Edge Line Right (White) @ 1.00

Road ID	Location		Dir. of Travel	Marking Type	Side	BCY4*	DCY4	NPY4**	BLW4	ELW4	ELY4	Length by Line Type (Unfactored)										Remarks						
	Station to Station											L	C	R	STA	STA	STA	STA	STA	STA	STA		STA	STA	STA	STA	STA	STA
US 63	414+47.82	420+18.99	EB	Waterborne/Solvent Paint						5.71													Includes Return					
	416+95.12	420+10.47	EB	Waterborne/Solvent Paint																			Refer to PM-222 for					
	422+08.55	432+08.55	EB	Waterborne/Solvent Paint	X																		Channelization Markings					
	422+08.55	432+08.55	EB	Removal of Paint	X																							
	422+08.55	432+08.55	EB	Waterborne/Solvent Paint	X				10.00																			
Chillicothe	2421+06.55	2422+58.57	WB	Waterborne/Solvent Paint						1.52													Includes Return					
				Factored Total: Waterborne/Solvent Paint		-	-	-	2.50	7.23	-	6.30	10.00	-	-	-	-	-	-	-	-	-						
				Factored Total: Removal of Paint		-	-	-	-	-	-	-	10.00	-	-	-	-	-	-	-	-	-						
				Bid Quantity: Painted Pavement Markings, Waterborne or Solvent-Based					26.03																			
				Bid Quantity: Pavement Markings Removed					10.00																			

PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Road Identification	Location		STAW	RTAW	LTAW	CSRW	CSLW	CSTW	CRLW	FERW	LLRW	RLRW	RRCW	BLSW	WCSW	WPSB	SCHOOL	XING	STOP	AHEAD	ONLY	BIKE	LANE	EXIT	Groove Cuts	Remarks
	Station	Side																								
US 63	417+75.33	R																								
	419+53.38	R																								
			TOTAL																							

SHOULDERS

- ① Lane(s) to which the shoulder is adjacent.
- ② See Typ. 7156, 7157, or 7158.
- ③ Bid Item.
- ④ Applies only for Paved Shoulders constructed on project with existing granular shoulders.
- ⑤ Bid Item. Typ. 7156, 7157, or 7158.
- ⑥ Does not include shrink.

Calculations assume a HMA unit weight (lbs/cf) of 0, a Special Backfill unit weight (lbs/cf) of 140, and a Granular Shoulder unit weight (lbs/cf) of 140.

Road Identification	Direction Of Traffic	Location		Side	P	P _{SG}	G	L	Class 13 ^④ Excavation	Hot Mix Asphalt		Binder	Paved Shoulder	" Paved Shoulder at Guardrail	Reinforced Paved Shoulder	Special Backfill				Subbase	Granular Shoulder		Earth Shoulder Construction Alternates			Remarks																														
		Station to Station			Width	Width	Width	Length	CY ^③	TON	TON/STA	TONS	SY ^③	SY ^⑤	SY ^③	HMA Alternate		PCC Alternate		CY ^③	TON ^③	TON/STA	TON ^③	TON/STA	CY ^③		TON ^③	TON/STA	STA ^③	HMA ^⑥ CY ^⑥	PCC ^⑥ CY ^⑥																									
					FT	FT ^②	FT	FT								TON ^③	TON/STA	TON ^③	TON/STA																																					
US 63	EB	414+47.82	418+97.43	R			6.0	449.6																							157.364	35.000	4.5																							
		418+97.43	419+52.92	R			6 to 10	55.5																									27.514	49.583	0.6																					
		419+52.92	420+18.99	R			10.0	66.1																											38.541	58.333	0.7																			
Chillicothe Rd	WB	2421+06.55	2422+58.57	R			10.0	152.0																																																
TOTAL																																																			312.096	201.250	7.2			

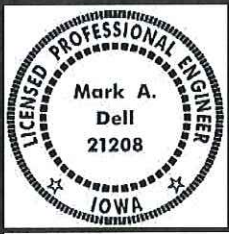
111-25
10-18-11

INDEX OF TABULATIONS

Tabulation	Tabulation Title	Sheet No.
103 7	SHRINKAGE DATA	2
103 10	TOPSOIL STRIPPING AND PLACEMENT	2
104 9A	LONGITUDINAL SUBDRAIN SHOULDER	2

GEOTECHNICAL DESIGN

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

	Signature: <u>Mark A. Dell</u>	Date: <u>12/28/22</u>
	Printed or Typed Name: <u>Mark A. Dell</u>	
	My license renewal date is December 31, 20 <u>23</u>	

Pages or sheets covered by this seal: CS.1 & CS.2

SHRINKAGE DATA		
Material	%	Remarks
Topsoil	40.0	
Class 10	30.0	
Boulders	0.0	5 CY

TOPSOIL STRIPPING AND PLACEMENT							
Line No.	Road Identification	Dir. of Traffic	Station From	Station To	Topsoil Stripping Thickness (IN)	Topsoil Placement Thickness (IN)	Remarks
1.0	Entire Project				12	8	

LONGITUDINAL SUBDRAIN SHOULDER											
* Not a bid ite											
Line No.	Road or Lane Identification	Station From	Station To	Side	Depth (IN) (D)	Subdrain Size (IN)	Length (FT)	Outlet Station	Outlet Type	Porous Backfill* (CY)	Remarks
1.0	US 63 EBL	414+47.82	417+00.00	Right	42.0	4.0	319.1	414+47.82	DR-306	29.5	
2.0				Right	42.0			417+00.00	DR-306		
3.0	US 63 EBL	417+00.00	419+00.00	Right	42.0	4.0	403.2	417+00.00	DR-306	37.3	
4.0				Right	42.0			419+00.00	DR-306		
5.0	US 63 EBL	419+00.00	2421+00.34	Right	42.0	4.0	427.4	419+00.00	DR-306	15.1	
6.0	SR - Chillicothe Rd			Left	42.0			2421+00.34	DR-306		
Total:							1149.7		DR-306=6	81.9	
ALL LONGITUDINAL SUBDRAINS ARE TYPE 7 WITH PCC OR TYPE 8 WITH HMA (ACC) UNLESS OTHERWISE NOTED IN THE REMARKS COLUMN ALL LONGITUDINAL SUBDRAINS MAY BE ADJUSTED BOTHE VERTICALLY AND HORIZONTALLY IN THE FIELD AS NECESSARY.											

SURVEY SYMBOLS

	BL, Topo Breakline
	BL, Topo Breakline
	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
	CU, Back of Curb
	CU, Back of Curb
	D, Centerline Draw or Stream -Down
	D, Centerline Draw or Stream -Down
	DU, Centerline Draw or Stream -Up
	DU, Centerline Draw or Stream -Up
	EB, Electrical Box
	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
	GR, Ground Shot
	GU, Gutter In Front of Curb
	GU, Gutter In Front of Curb
	LUM, Luminaire
	MH, Utility Access -Manhole
	OUT, Tile Outlet
	PIP, Pipe Culvert
	PIP, Pipe Culvert
	SH, Paved Shoulder
	SH, Paved Shoulder
	SI, Sign
	SNP, Unpaved Shoulder
	SNP, Unpaved Shoulder
	SOP, Size of Pipe or Culvert
	TDL, Traffic Detection Loop
	TDL, Traffic Detection Loop
	TIL, Tile Line
	TIL, Tile Line
	TSG, Traffic Signal
	UE, Utility Elevation
	UV, Underground Utility Vault
	WC, Wild Card -Misc. Field Shot

SURVEYED UTILITY OWNER SYMBOLS

Sub-Surface Utility Mapping Quality Level is in accordance with CI/ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.

Remark Abbreviations
 QLA Quality Level A Highest guideline quality level
 QLD Quality Level D Lowest guideline quality level

	E1	ELID, Iowa DOT - Quality C
	PPA	Alliant Energy
	T1	TLID, CenturyLink - 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
Yellow	(4)	Proposed Pavement Shading
Orange	(6)	Proposed Granular Shading
Orange	(70)	Proposed Shoulder Granular Shading
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading
Yellow	(132)	Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)	Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)	Grading Shading
Orange, Light	(134)	Proposed Granular Entrance Shading
Yellow	(220)	Proposed Paved Entrance Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
Green, Light	(225)	Existing Pavement Shading
Red	(3)	Proposed Structure Shading
Red	(3)	Delineates Restricted Areas

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

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

RIGHT-OF-WAY LEGEND

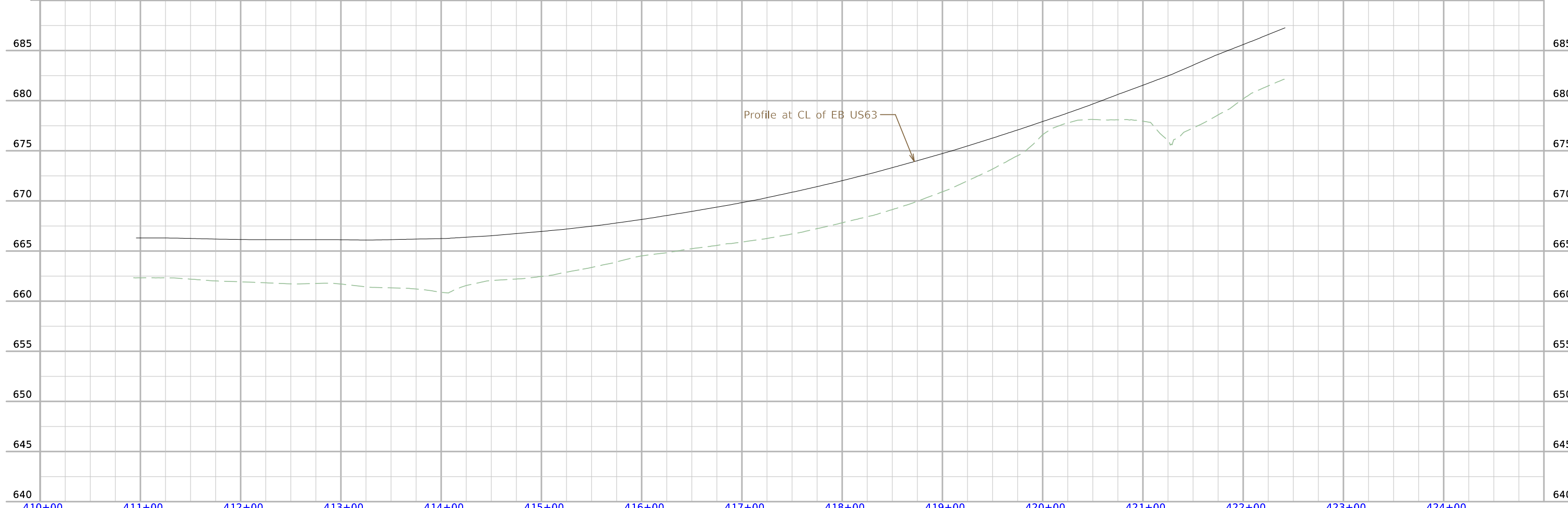
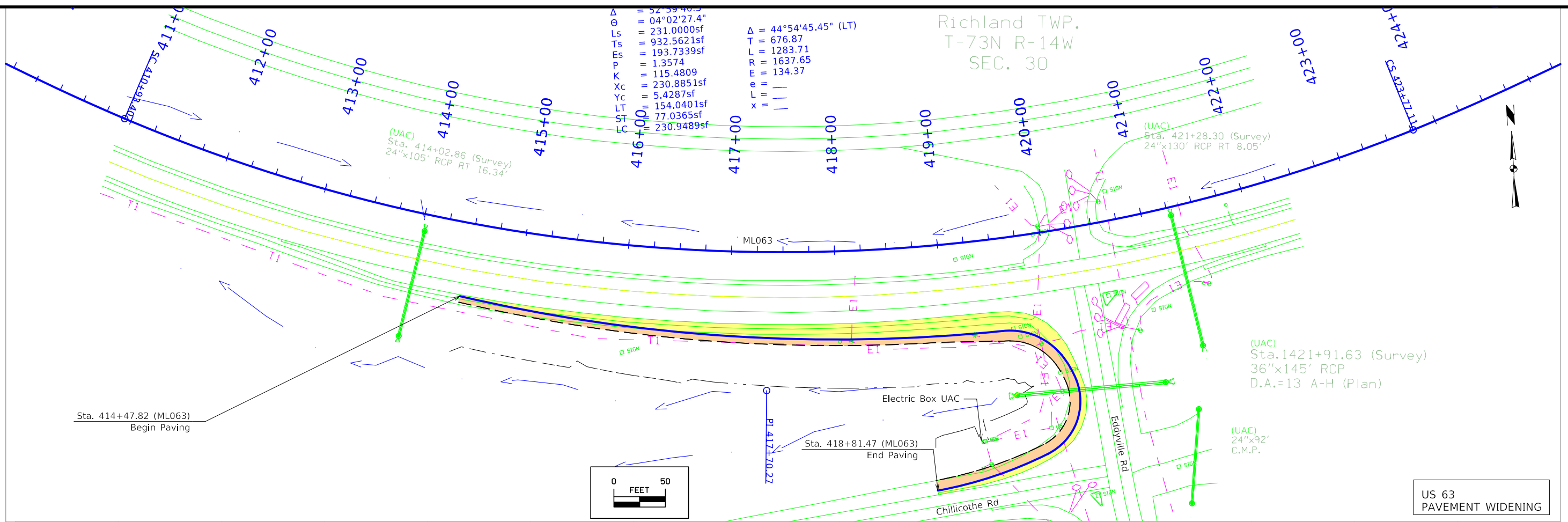
	Proposed Right-of-Way
	Existing Right of Way
	Existing and Proposed Right-of-Way
	Easement and Existing Right-of-Way
	Easement (Temporary)
	Easement
	Access Control
	Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

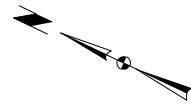
(COVERS SHEET SERIES D, E, F, & K)

Richland TWP.
T-73N R-14W
SEC. 30

$\Delta = 44^\circ 54' 45.45''$ (LT)
 $T = 676.87$
 $L = 1283.71$
 $R = 1637.65$
 $E = 134.37$
 $x =$
 $y =$
 $\Delta = 52^\circ 39' 40.5''$
 $Ts = 04^\circ 02' 27.4''$
 $Es = 231.0000sf$
 $P = 932.5621sf$
 $Xc = 1.3574$
 $Yc = 115.4809$
 $Lt = 230.8851sf$
 $Lr = 5.4287sf$
 $Ll = 154.0401sf$
 $Lx = 77.0365sf$
 $Lz = 230.9489sf$



410+00	411+00	412+00	413+00	414+00	415+00	416+00	417+00	418+00	419+00	420+00	421+00	422+00	423+00	424+00
FILE NO.	ENGLISH	DESIGN TEAM HOLST/TAMRAKAR/FINCH				WAPELLO COUNTY			PROJECT NUMBER TSF-063-2(174)--92-90			SHEET NUMBER D.2		



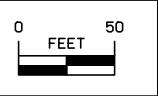
Richland TWP.
T-73N R-14W
SEC. 30

(UAC)
Sta. 421+28.30 (Survey)
24"x130' RCP RT 8.05'

(UAC)
Sta. 1421+91.63 (Survey)
36"x145' RCP
D.A.=13 A-H (Plan)

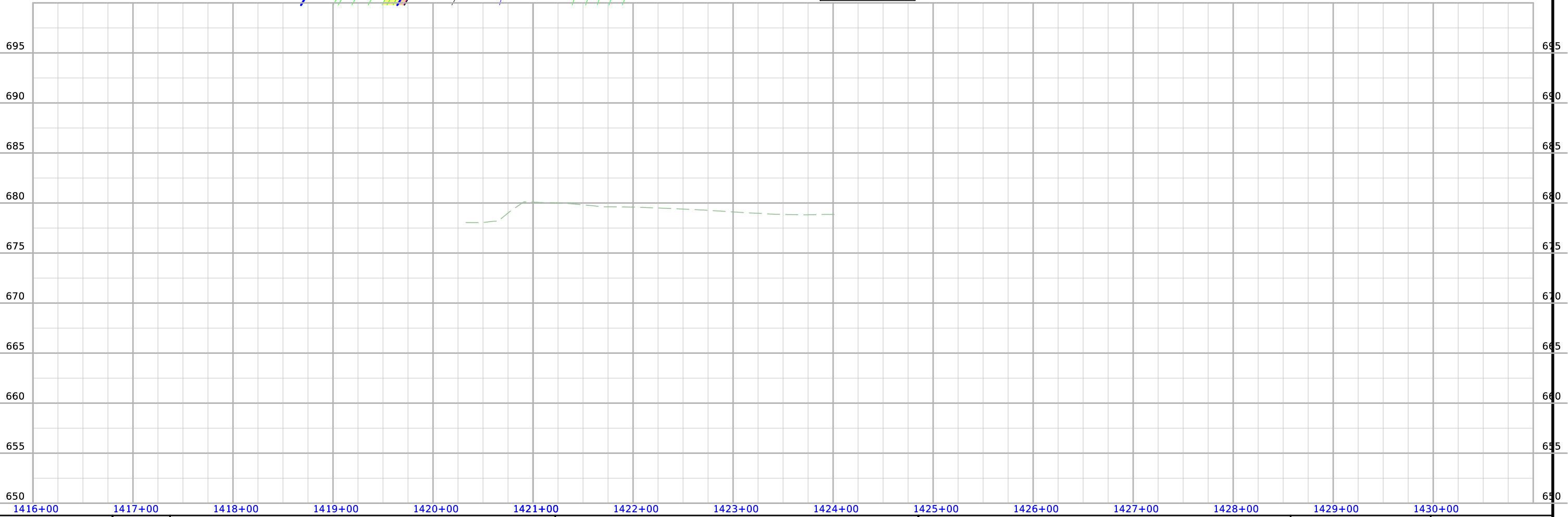
(UAC)
24"x92'
C.M.P.

$\Delta = 49^\circ 39' 53.50''$ (LT)
TL = 266.79
PL = 499.75
PR = 576.53
X = 58.74

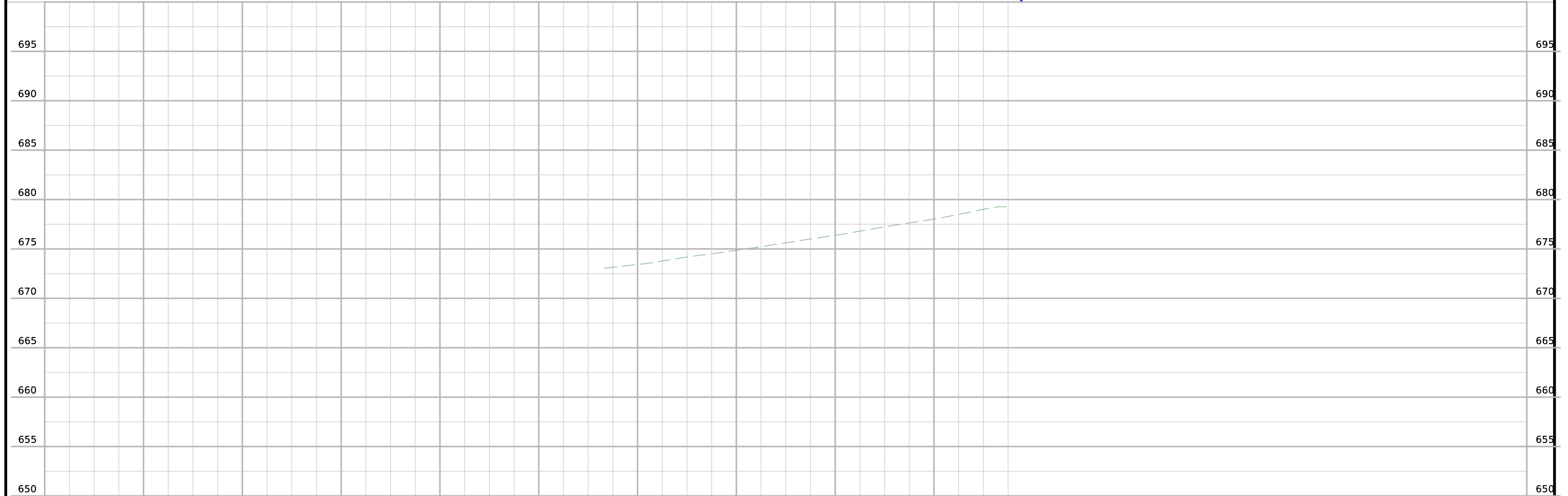
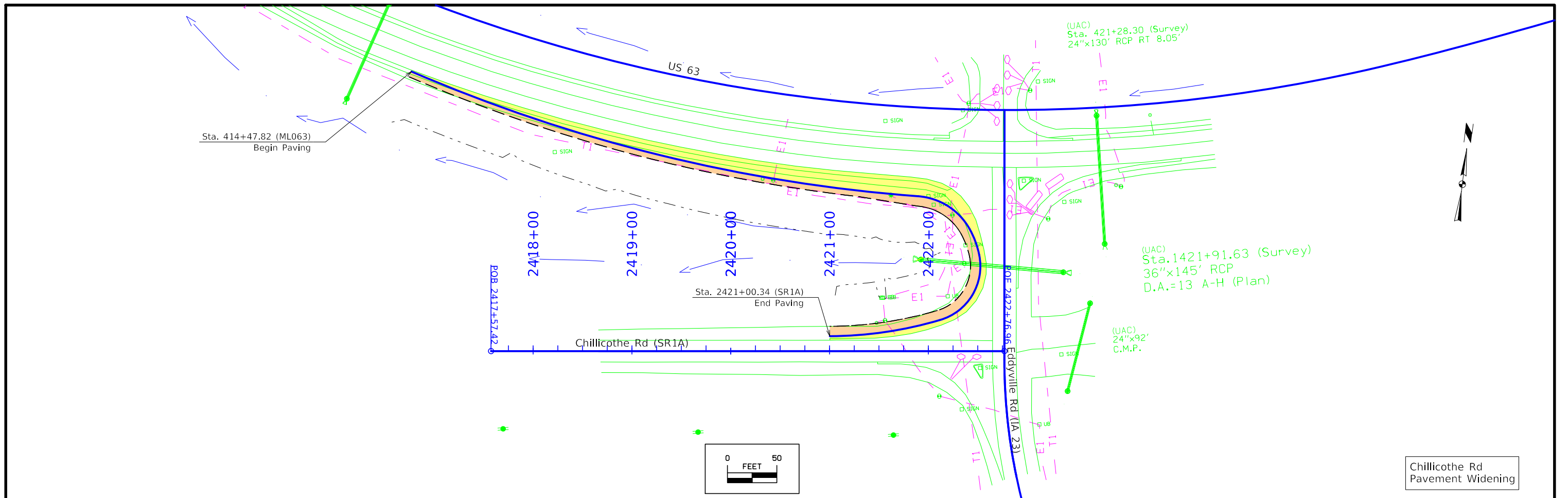


Eddyville Rd
Pavement Widening

Sta. 1422+61.68 (SR23)
End Paving



FILE NO.	ENGLISH	DESIGN TEAM	HOLST/TAMRAKAR/FINCH	WAPELLO COUNTY	PROJECT NUMBER	TSF-063-2(174)--92-90	SHEET NUMBER	E.1
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FILE NO.	ENGLISH	DESIGN TEAM	HOLST/TAMRAKAR/FINCH	WAPELLO COUNTY	PROJECT NUMBER	TSF-063-2(174)--92-90	SHEET NUMBER	E.2
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Survey Information

SURVEY INDEX

Wapello county
Pin:21-90-063-020
Project Number: NHSN-063-2(174)—2R-90
Location: Eddyville Rd Intersection 0.8 mi S of Co Rd T67 (SB)
Type of Work: Turn Lane
Project Directory: 9006302021

Survey Personnel

Nels Sutherland – Survey Party Chief
Myron Fox – Survey Party Chief

Date(s) of Survey

Begin Date 09/13/2021
End Date 09/30/2021

General Information

Measurement units for this survey are US survey feet. This survey is for US Hwy 63, pave and grade right turn lane at the intersection of IA 63 and Eddyville Rd.

Project Control

Nearby Iowa Real Time Network reference stations were utilized to obtain horizontal and vertical control on primary project control points. Two five-minute observations were taken with appropriate time spans between and used in a weighted average to obtain final coordinate values. For additional details of the control survey, contact the Preliminary Survey department.

PROJECT DATUM: NAD83(2011) EPOCH 2010.00

VERTICAL DATUM: NAVD88

COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 12

Alignments Information

SURML063 is a retrace of as-built plan RP-23-1(21)—16-90. Stationing was held at TS Sta. 408+62.40 and ran ahead and back without equation. Survey stationing relates to As-built plan stationing as follows:

PI Sta. 399+21.84 Plan
= Survey PI Sta. 399+55.59

TS Sta. 408+62.40 Plan
= Survey PC Sta. 408+62.40

SC Sta. 410+93.40 Plan
= Survey SC Sta. 410+93.40

CS Sta. 423+74.30 Plan
= Survey CS Sta. 423+77.11

ST Sta. 426+05.30 Plan
= Survey ST Sta. 426+08.11

PC Sta. 438+44.84 Plan
= Survey POT Sta. 438+47.66

SURSREddyvilleRD is a retrace of as-built plan NHS-23-1(20)—19-90. Stationing was held at POT Sta. 1422+85.93 and ran ahead and back without equation. Survey stationing relates to As-built plan stationing as follows:

PI Sta. 1420+33.17 Plan
= Survey POT Sta. 1420+32.86

POT Sta. 1422+76.71 Plan
= Survey POT Sta. 1422+76.71

PC Sta. 1422+85.93 Plan
= Survey PC Sta. 1422+85.54

ST Sta. 1427+83.57 Plan
= Survey PT Sta. 1427+85.29

SURSRChillcotheRD is a retrace of as-built plan NHS-23-1(20)—19-90. Stationing was held at PI Sta. 2422+76.71 and ran back without equation. "Best Fit"

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 12

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 12
Project Control Marks are Bench Marks

Point Name	Northing	Easting	Elevation	Code Description
900630463	6267937.631	22839921.293	663.309	CP IDOT FENO MON WITH BRASS DISC FROM THE INTERSECTION OF HWY63 AND EDDYVILLE RD PROCEED NW ALONG THE WBL OF HWY63 1110FT POINT IS 35FT NW OF THE CL WBL HWY63 4IN BELOW SURFACE
900630459	6267423.846	22841921.483	714.939	CP IDOT FENO MON WITH BRASS DISC FROM THE INTERSECTION OF HWY63 AND EDDYVILLE RD PROCEED NE ALONG THE EBL OF HWY63 1036FT POINT IS 47FT SW OF THE CL EBL HWY63 4IN BELOW SURFACE
900630451	6267871.349	22846411.945	760.418	CP FD 5/8IN REBAR FROM THE INTERSECTION OF HWY63 AND 170TH AVE PROCEED W ALONG WBL OF HWY63 1852FT POINT IS 33FT S OF THE CL WBL HWY63 4IN BELOW THE SURFACE

NOTE:

The first two digits in the control point name refer to the county number.
The next 3 digits refer to the highway number.
The next 3 digits refer to the highway milepost.
The last digit refers to the distance from the referenced milepost to the nearest tenth of a mile.

108-23A
08-01-08

TRAFFIC CONTROL PLAN

Traffic shall be maintained at all times on US 63, Eddyville Road, and Chillicothe Road with the following exceptions:

- Close outside US 63 Eastbound lane for construction of proposed turn lane. Refer to modified TC-418 for lane closure on divided highway details in the J sheets.
- Single Lane Closure with Flaggers for Eddyville Road and Chillicothe Road during paving of the intersection returns.

111-01
04-17-12

COORDINATED OPERATIONS

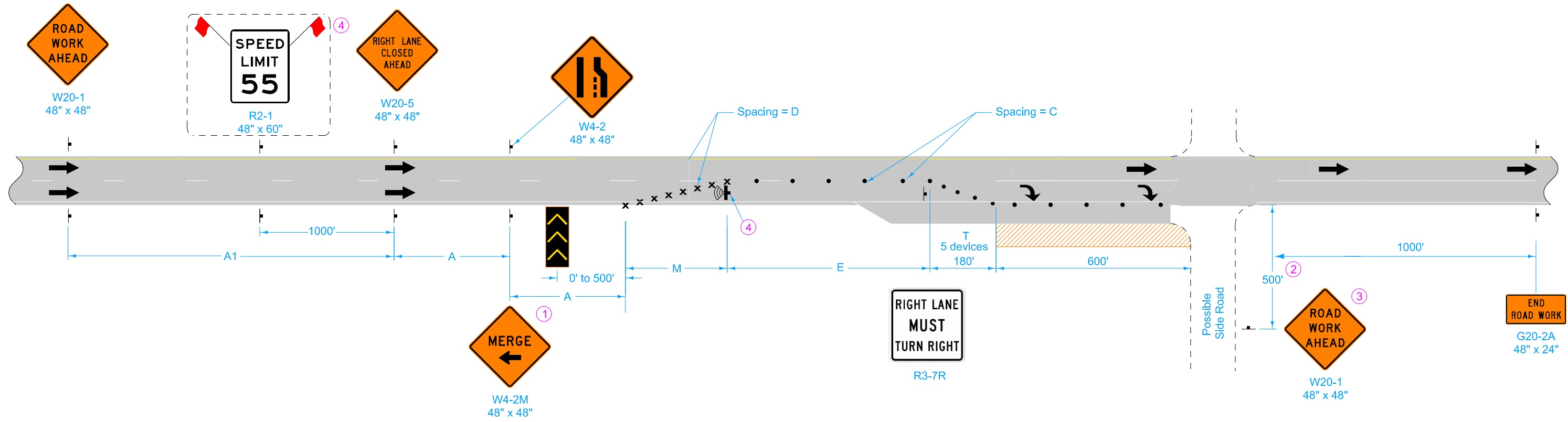
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
None Provided	

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
			None									



SPEED LIMIT (mph)*	A	C	D	E	M	T	A1
65-70	1000'	100'	65'	800'	910'	100'	2000'

* Speed Limit refers to regulatory speed limit before road work.

- ① Refer to [SI-881](#) for sign details.
- ② Where side road speed limit is 40 mph or less, a distance of 200 feet is allowed.
- ③ Place a ROAD WORK AHEAD sign on the opposite side of the intersection in a similar location.
- ④ For roadways with a posted speed limit of 60 mph or greater before road work:
 - Place SPEED LIMIT 55 signs prior to the lane closure as shown.
 - When the length of closure is greater than 1 mile, install SPEED LIMIT 55 signs in the closed lane at 1-mile intervals.
 - Remove or cover all existing signs that conflict with 55 mph speed limit while 55 mph speed limit is in effect.
 - For traffic control zones lasting more than 4 hours, place a Speed Feedback Sign at the end of the merge taper.
- ⑤ For lanes closed to traffic, place two drums every 1000 feet. For full depth excavations in a closed lane, place two drums in front of each location. Additional drums need not be placed for full depth excavations spaced closer than 150 feet.

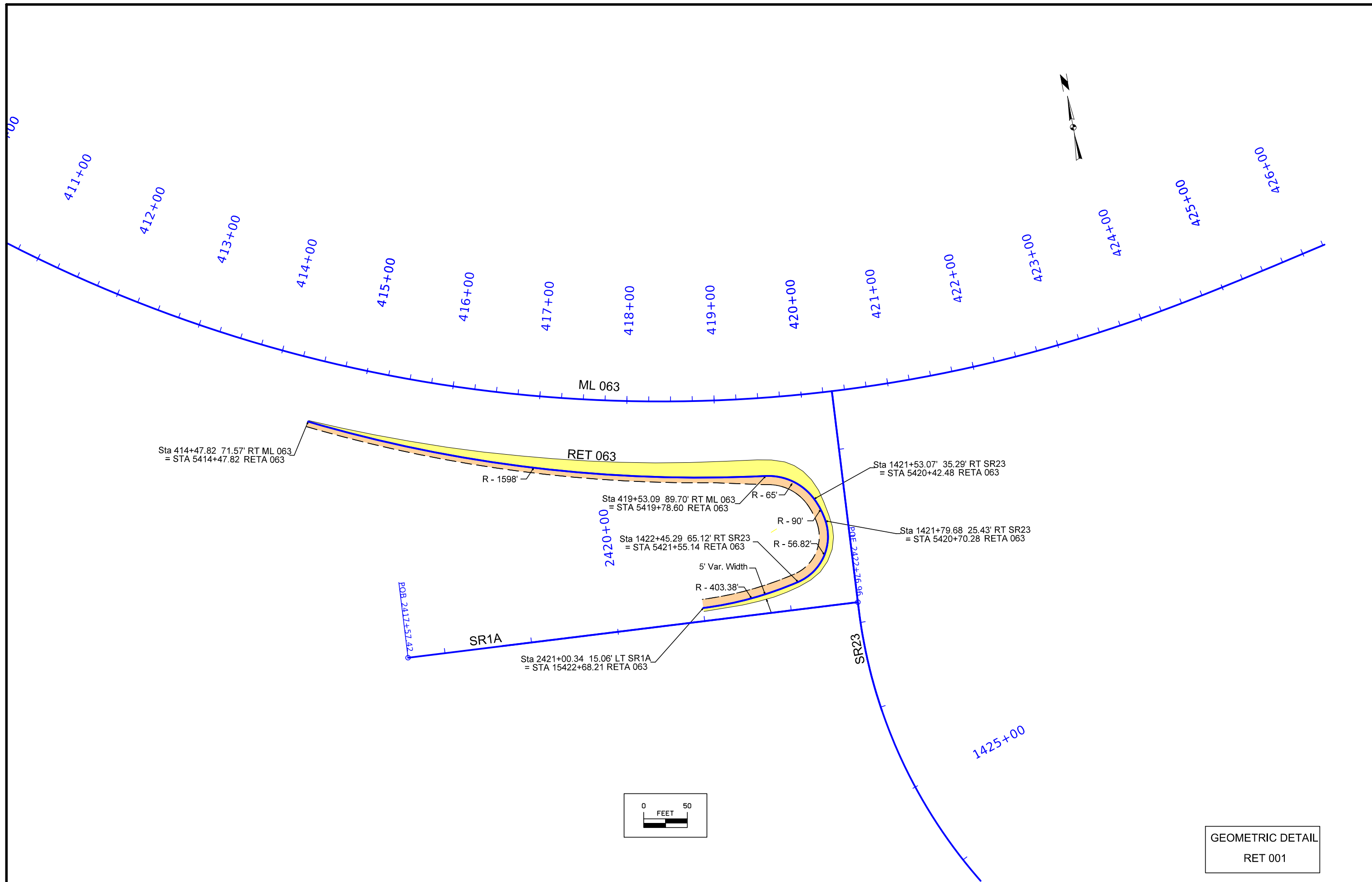
Possible Contract Item:
Traffic Control

**MODIFIED TC-418
LANE CLOSURE ON DIVIDED HIGHWAY**

LEGEND

- ➔ Direction Of Traffic
- ⊣ Traffic Sign
- X Drum
- 42" Channelizer
- ⊣ Speed Feedback Sign
- ➔➔➔ Arrow Board
- ▨ Work Area

Note:
Intersection Conflict Warning System (ICWS) to be relocated by others.



Sta 414+47.82 71.57' RT ML 063
= STA 5414+47.82 RETA 063

R - 1598'

RET 063

Sta 419+53.09 89.70' RT ML 063
= STA 5419+78.60 RETA 063

R - 65'

Sta 1422+45.29 65.12' RT SR23
= STA 5421+55.14 RETA 063

R - 90'

R - 56.82'

5' Var. Width

R - 403.38'

Sta 1421+53.07 35.29' RT SR23
= STA 5420+42.48 RETA 063

Sta 1421+79.68 25.43' RT SR23
= STA 5420+70.28 RETA 063

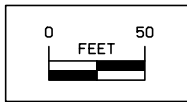
POB 2417+57.42

SR1A

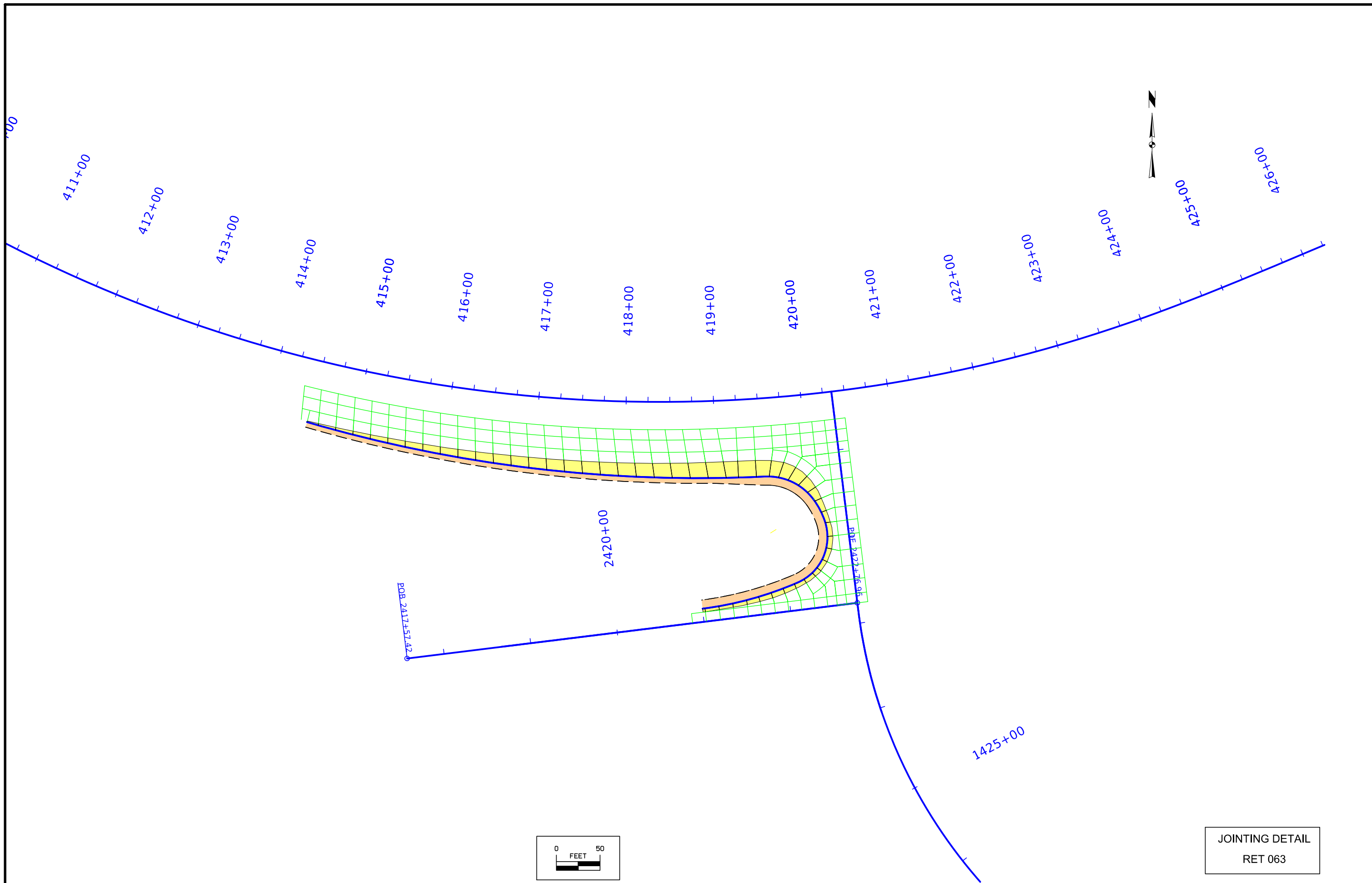
Sta 2421+00.34 15.06' LT SR1A
= STA 15422+68.21 RETA 063

SR23

1425+00



GEOMETRIC DETAIL
RET 001



Edge Profile in Progress

CIRCULAR CURVE DATA

101-10C
10-02-98

NO.	Δ	D	T	L	E	R
1.	10°50'44.04"	28°38'52.40"	18.99'	37.86'	0.90'	200.00'
2.	58°12'50.19"	81°51'04.01"	38.97'	71.12'	10.12'	70.00'
3.	5°27'18.58"	19°05'54.94"	14.29'	28.56'	0.34'	300.00'
4.	85°17'47.46"	95°29'34.68"	55.27'	89.32'	21.57'	60.00'
5.	16°23'40.32"	14°19'26.20"	57.62'	114.46'	4.13'	400.00'
6.	11°59'37.39"	28°38'52.40"	21.01'	41.87'	1.10'	200.00'
7.	51°44'18.36"	76°23'39.74"	36.37'	67.73'	8.35'	75.00'
8.	11°00'33.39"	9°32'57.47"	57.82'	115.29'	2.78'	600.00'
9.	14°48'32.52"	28°38'52.40"	25.99'	51.69'	1.68'	200.00'
10.	59°44'30.69"	63°39'43.12"	51.69'	93.84'	13.79'	90.00'
11.	9°24'26.20"	9°32'57.47"	49.37'	98.51'	2.03'	600.00'

Island Radius Points

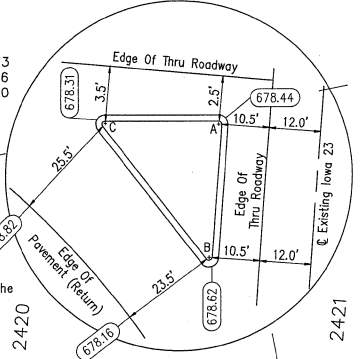
- A = 14.0' Rt. Sta. 2422+53.73
- B = 23.0' Rt. Sta. 1423+02.06
- C = 15.0' Rt. Sta. 2422+46.30

Note: Dimensions To Island Shown To Back Of Curb

Detail Of Island Exist. IA, 23 & Chillicothe (Not To Scale)

P.I. Sta. 417+92.02

2419



Sta. 2421+02.68 - 11.00'

P.O.C. Sta. 420+33.17 (ML) =
P.I. Sta. 1420+33.17 (SR 1)

Relocated Iowa 23

P.O.T. Sta. 1422+76.71 (SR 1) =
P.I. Sta. 2422+76.71 (SR 1A)

P.C. Sta. 1422+85.93

Side Road 1 Exist. Iowa 23 Conn.

Match Line Sta. 1424+00.00

Sta. 2421+51.29 - 11.00'

Sta. 2421+92.85 - 15.37'

Sta. 1424+49.93

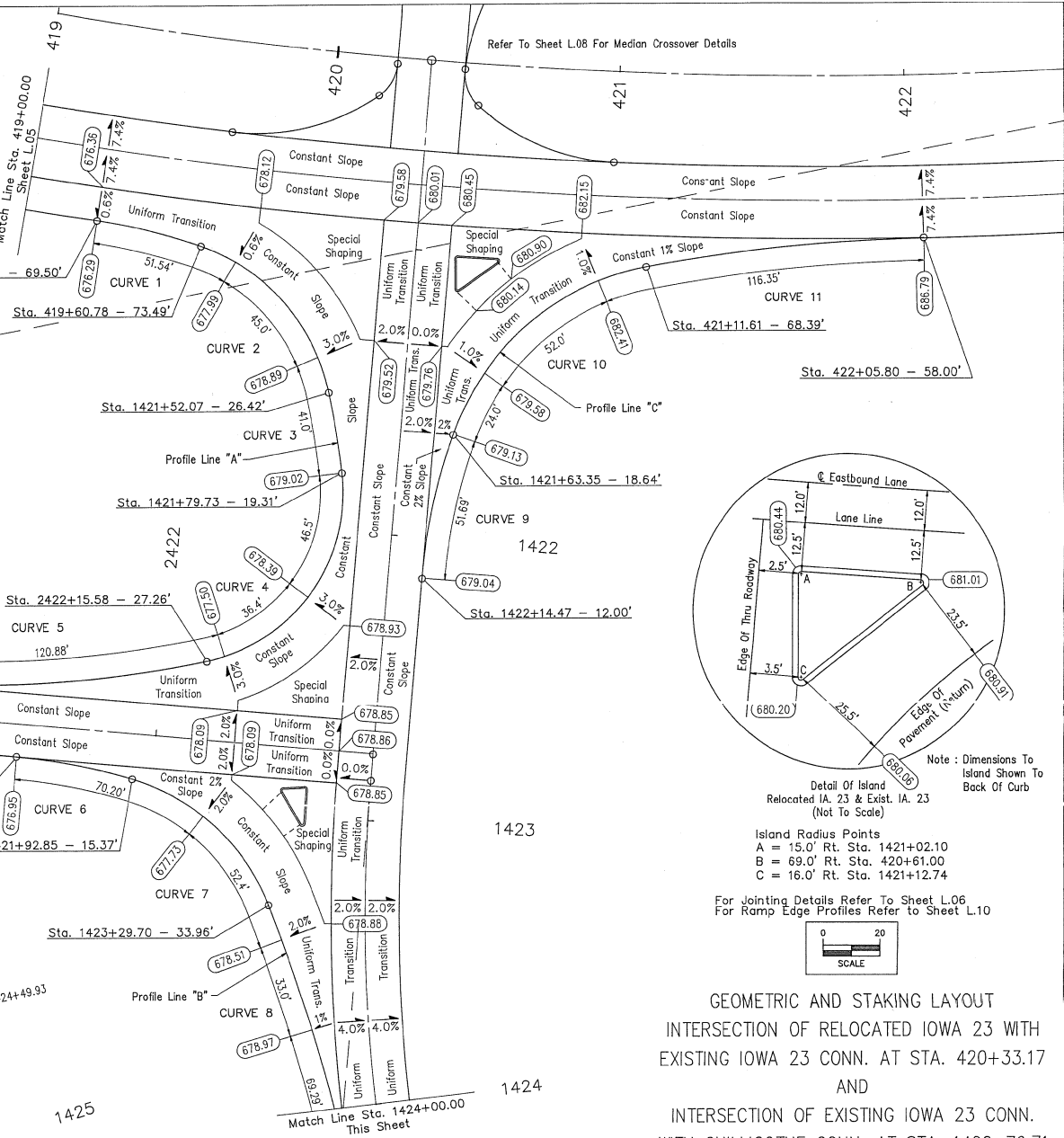
Sta. 1424+38.52 - 12.00'

1425

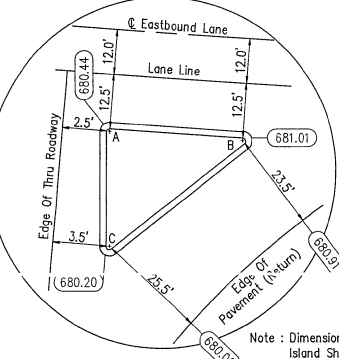
Match Line Sta. 1424+00.00 This Sheet

1424

1423



Refer To Sheet L.08 For Median Crossover Details

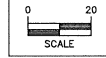


Note: Dimensions To Island Shown To Back Of Curb

Detail Of Island Relocated IA, 23 & Exist. IA, 23 (Not To Scale)

- Island Radius Points
- A = 15.0' Rt. Sta. 1421+02.10
 - B = 69.0' Rt. Sta. 420+61.00
 - C = 16.0' Rt. Sta. 1421+12.74

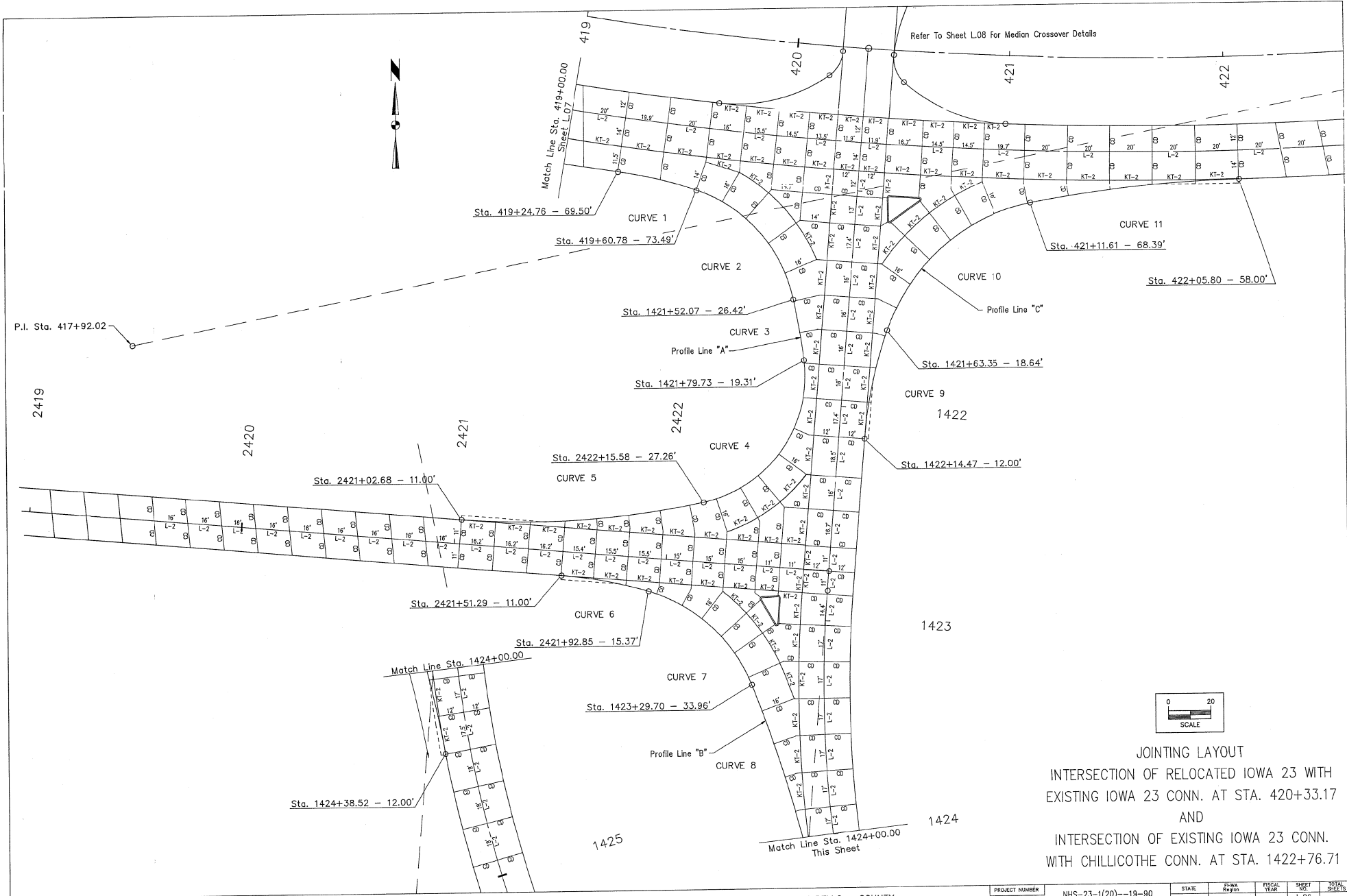
For Jointing Details Refer To Sheet L.06 For Ramp Edge Profiles Refer To Sheet L.10



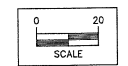
GEOMETRIC AND STAKING LAYOUT
INTERSECTION OF RELOCATED IOWA 23 WITH EXISTING IOWA 23 CONN. AT STA. 420+33.17 AND INTERSECTION OF EXISTING IOWA 23 CONN. WITH CHILICOTHE CONN. AT STA. 1422+76.71

WAPELLO COUNTY

PROJECT NUMBER	NHS-23-(120)-19-90	STATE	IOWA	FWHA Region	DESIGN YEAR	SHEET NO.	TOTAL SHEETS
						L04	



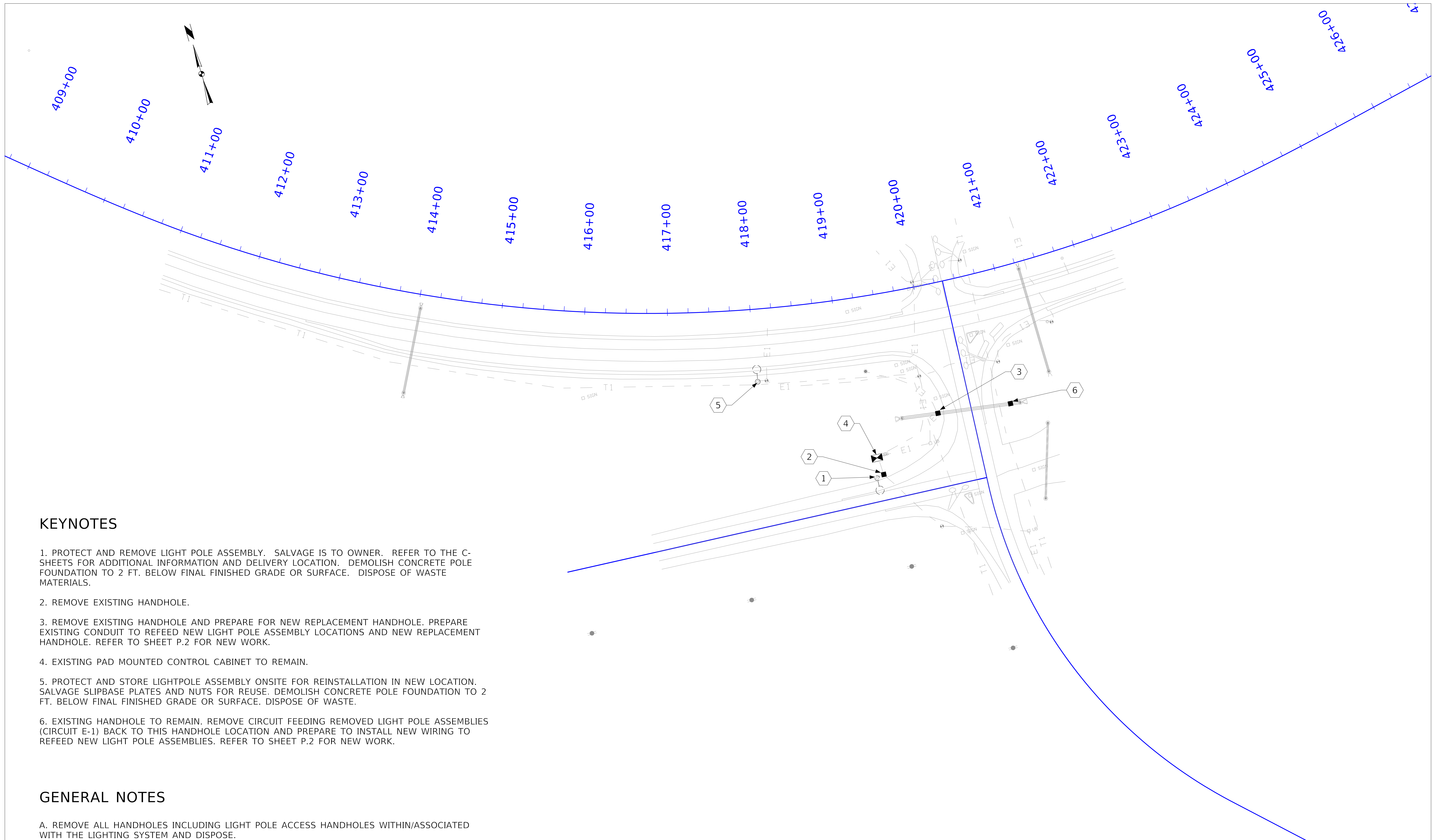
Refer To Sheet L.08 For Median Crossover Details



JOINTING LAYOUT
 INTERSECTION OF RELOCATED IOWA 23 WITH
 EXISTING IOWA 23 CONN. AT STA. 420+33.17
 AND
 INTERSECTION OF EXISTING IOWA 23 CONN.
 WITH CHILICOTHE CONN. AT STA. 1422+76.71

WAPELLO COUNTY

PROJECT NUMBER	NHS-23-1(20)-19-90	STATE	IOWA	FEMA MAPS	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
						L.06	

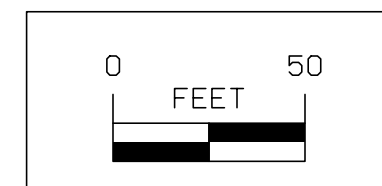


KEYNOTES

1. PROTECT AND REMOVE LIGHT POLE ASSEMBLY. SALVAGE IS TO OWNER. REFER TO THE C-SHEETS FOR ADDITIONAL INFORMATION AND DELIVERY LOCATION. DEMOLISH CONCRETE POLE FOUNDATION TO 2 FT. BELOW FINAL FINISHED GRADE OR SURFACE. DISPOSE OF WASTE MATERIALS.
2. REMOVE EXISTING HANDHOLE.
3. REMOVE EXISTING HANDHOLE AND PREPARE FOR NEW REPLACEMENT HANDHOLE. PREPARE EXISTING CONDUIT TO REFEED NEW LIGHT POLE ASSEMBLY LOCATIONS AND NEW REPLACEMENT HANDHOLE. REFER TO SHEET P.2 FOR NEW WORK.
4. EXISTING PAD MOUNTED CONTROL CABINET TO REMAIN.
5. PROTECT AND STORE LIGHTPOLE ASSEMBLY ONSITE FOR REINSTALLATION IN NEW LOCATION. SALVAGE SLIPBASE PLATES AND NUTS FOR REUSE. DEMOLISH CONCRETE POLE FOUNDATION TO 2 FT. BELOW FINAL FINISHED GRADE OR SURFACE. DISPOSE OF WASTE.
6. EXISTING HANDHOLE TO REMAIN. REMOVE CIRCUIT FEEDING REMOVED LIGHT POLE ASSEMBLIES (CIRCUIT E-1) BACK TO THIS HANDHOLE LOCATION AND PREPARE TO INSTALL NEW WIRING TO REFEED NEW LIGHT POLE ASSEMBLIES. REFER TO SHEET P.2 FOR NEW WORK.

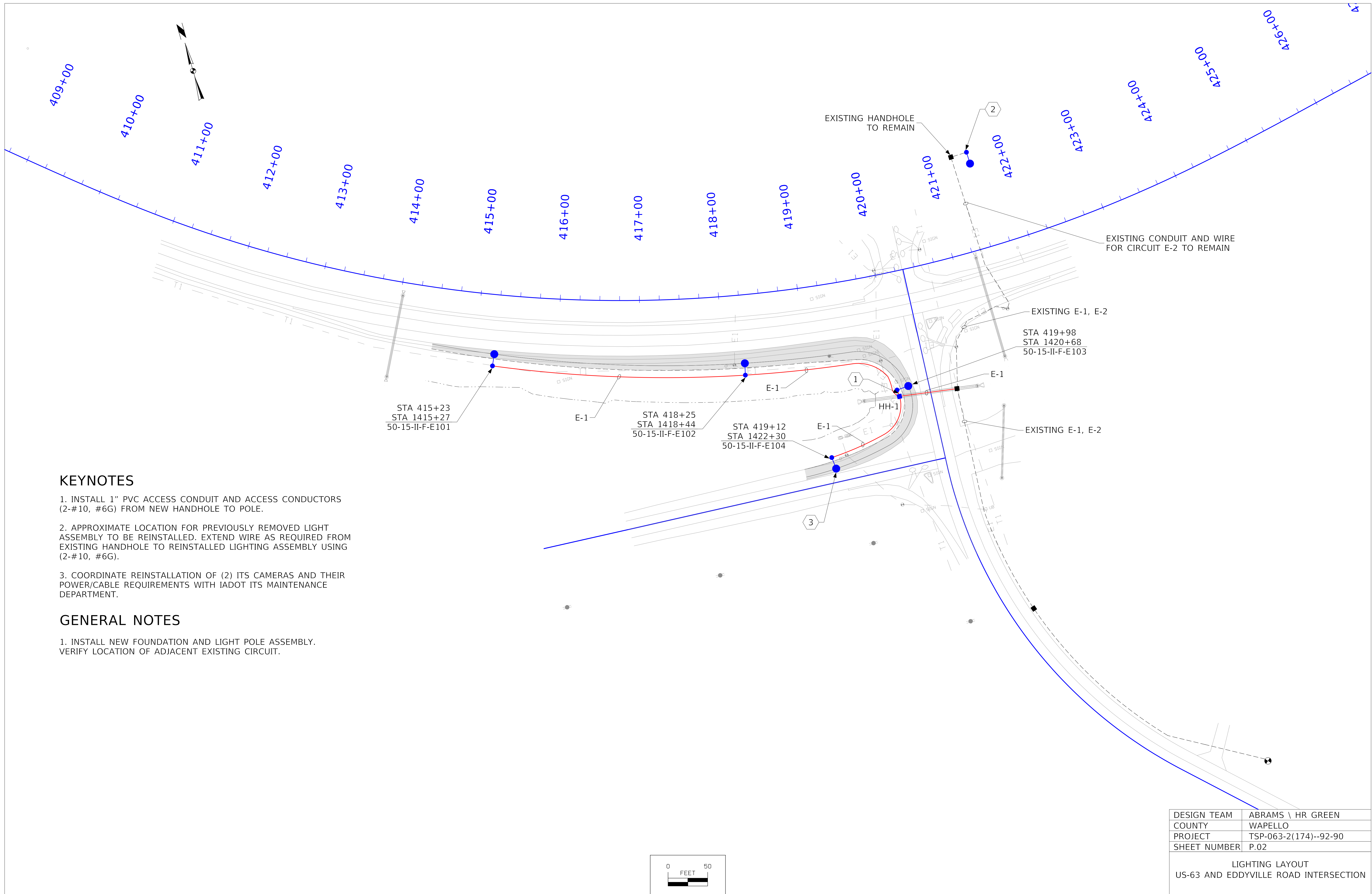
GENERAL NOTES

- A. REMOVE ALL HANDHOLES INCLUDING LIGHT POLE ACCESS HANDHOLES WITHIN/ASSOCIATED WITH THE LIGHTING SYSTEM AND DISPOSE.
- B. CUT AND REMOVE ANY LIGHTING CIRCUIT RISERS TO MINIMUM 2 FT. BELOW GRADE. REMOVE EXISTING CONDUCTORS FROM CONDUITS BACK TO EXISTING HANDHOLE.
- C. ABANDON UNDERGROUND CONDUITS IN PLACE. SALVAGE OF CONDUCTORS IS TO THE CONTRACTOR. DISPOSE OF WASTE MATERIALS.



DESIGN TEAM	ABRAMS \ HR GREEN
COUNTY	WAPELLO
PROJECT	TSP-063-2(174)--92-90
SHEET NUMBER	P.01

LIGHTING REMOVAL
US-63 AND EDDYVILLE ROAD INTERSECTION



KEYNOTES

1. INSTALL 1" PVC ACCESS CONDUIT AND ACCESS CONDUCTORS (2-#10, #6G) FROM NEW HANDHOLE TO POLE.
2. APPROXIMATE LOCATION FOR PREVIOUSLY REMOVED LIGHT ASSEMBLY TO BE REINSTALLED. EXTEND WIRE AS REQUIRED FROM EXISTING HANDHOLE TO REINSTALLED LIGHTING ASSEMBLY USING (2-#10, #6G).
3. COORDINATE REINSTALLATION OF (2) ITS CAMERAS AND THEIR POWER/CABLE REQUIREMENTS WITH IADOT ITS MAINTENANCE DEPARTMENT.

GENERAL NOTES

1. INSTALL NEW FOUNDATION AND LIGHT POLE ASSEMBLY. VERIFY LOCATION OF ADJACENT EXISTING CIRCUIT.

DESIGN TEAM	ABRAMS \ HR GREEN
COUNTY	WAPELLO
PROJECT	TSP-063-2(174)--92-90
SHEET NUMBER	P.02

LIGHTING LAYOUT
US-63 AND EDDYVILLE ROAD INTERSECTION

HIGHWAY LIGHTING DATA

108-11A
08-01-08

The Iowa DOT is revising the East bound left turn lane on highway 63 at the intersection of Eddyville Road. The revisions will impact some of the existing roadway lighting at the intersection. The revised left turn lane reconstruction will require demolition/removal of the existing intersection lighting system and installation of a new interchange lighting system.

The lighting portion of the project involves the removal of two (2) existing light poles and the installation of five (4) new light poles and reuse/reinstallation of one (1) light pole and associated circuitry. One (1) removed luminaire will be salvaged, delivered, and stockpiled at the DOT maintenance facility in Ames, and one (1) of the removed light pole structures will be salvaged and reinstalled in a new location. Refer to Tabulation 111-13, Delivery and Stockpiling for additional information.

Electrical Service: Alliant Energy is the electric utility serving power to the intersection lighting. The existing service is 240/120 volts, single-phase, routed in existing conduit. Refer to the P-Sheets for additional information.

Utility Contact: Kevin Peterson, Phone: (641) 754-1647,
E-mail: kpeterson@consumersenergy.net onecall@consumersenergy.net

Obtain One-Call services and verify the location of existing underground utilities and lighting circuits prior to proceeding with lighting/electrical removals and installations.

Coordinate with Iowa DOT's ITS contractor and verify that the existing ITS device cabinet and camera has been decommissioned and no longer needs power before powering down and removing the existing cameras (2).
Iowa DOT Contact: Jason Dale, Phone: (515) 239-1995, E-mail: Jason.Dale@iowadot.us

Light Poles: All Light Poles shall be Transformer Base type, per Standard Road Plan LI-210, Standard Specifications, and sized/dimensioned per the Layout Plans.

Roadway Luminaires: Contractor shall be responsible for supplying and installing solid state light emitting diode (LED) cobrahead style luminaires as described for the new luminaire locations. LED luminaires shall be:

Cooper Lighting - Archeon Model:
ARCH-M-PA2-110-740-U-T2R-AP-10K-PR7-PSC for Type II distribution.

or
American Electric Lighting - Autobahn Model:
ATB0-P304-MVOLT-R2-P7-SH for Type II distribution.

or
Signify Lumec - RoadFocus Model:
RFM-135W40LED-4K-G2-R2M-UNV-DMG-PH9-RCD7-GY3 for Type II distribution.

No substitutes will be allowed. All luminaires shall be rated for and connected for operation at 240 Volts.

DELIVERY AND STOCKPILING

110-13
04-20-10

Item Description	Quantity	Units	Delivery Location	Contact Name & Number	Remarks
Light Pole Structure (pole and mast arm)	14	EACH	Ames Maintenance Facility 57073 US Hwy 30 Ames, IA 50010	Scott Robinson (515) 663-6367	
LED Luminaire	15	EACH	Ames Maintenance Facility 57073 US Hwy 30 Ames, IA 50010	Scott Robinson (515) 663-6367	

STANDARD ROAD PLANS

105-4
10-18-11

The following Standard Road Plans apply to construction work on this project.		
Number	Date	Title
LI-101	10-21-14	Light Pole Location
LI-103	04-19-22	Conduit and Precast Handholes
LI-141	10-21-14	Electrical Installation (Roadway Ducts)
LI-142	04-21-15	Electrical Installation (Bases)
LI-201	04-18-17	Light Pole Foundation
LI-210	10-21-14	Transformer Base (Cast Aluminum)
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	10-19-21	Work Within 15 ft of Traveled Way
TC-402	10-19-21	Work Within 15 ft of Traveled Way

TRAFFIC CONTROL PLAN

108-23A
08-01-08

1. To the extent practicable, perform lighting installations in coordination with traffic control measures associated with Project IM-NHS-035-4(244)95--03-77.
2. For lighting installations performed on roadways otherwise open to traffic, contractor shall maintain traffic on such roadways at all times.
3. Traffic control on this project shall be in accordance with the TC series of Standard Road Plans listed on Tab. 105-4. All traffic control devices and equipment necessary to maintain traffic in accordance with the Manual of Uniform Traffic Control Devices (MUTCD) and the current Standard Specifications.

COORDINATED OPERATIONS

111-01
04-17-12

Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
	PCC Pavement - Grade and New

WIRE, CABLE AND CONNECTORS																		108-12 10-21-14
Circuit Number	Connectors							Phase Lines								Ground		Remarks
	Type	Quan.	Type	Quan.	Type	Quan.	Type	Quan.	Size	Quan.	Size	Quan.	Size	Quan.	Size	Quan.	Size	
		No.		No.		No.		No.	No.	No.	A.W.G.	LF	A.W.G.	LF	A.W.G.	LF	A.W.G.	
Highway 63/Eddyville ro																		
A-3B					Y-1	6				#6	900					#6	900	Circuit run conductors
A-3B	L-1	2												#10	400	#6	400	Light pole access/riser conductors
Connectors:																		
L-1		5	Amps															
Y-1		10	Amps															

LIGHTING INSTALLATIONS							108-1 10-21-14
No.	Station	LI-101			LI-201	Remarks	
		Type	A	E FT	Type		
E101	415+25	1	10	10.0	A		
E102	418+25	1	10	10.0	A		
E103	419+28	1	10	10.0	A		
E104	419+12	1	10	10.0	A		
E202	aged assembly						

ELECTRICAL DUCTS					108-2 08-01-08
Location	Conduit Type	Dia. IN	Length FT	Remarks	
E-1	PLASTIC	2.0	100.0	Roadway Crossing	
E-1	PLASTIC	2.0	800.0	Luminaire conduit	
Total:			900.0		

WASTE
Modified

WASTE

It shall be the contractor's responsibility to provide waste areas or disposal sites for excess materials (excavated material or broken concrete) which is not desirable to be incorporated into the work involved on this projects.

It shall be the contractor's responsibility to ensure that areas (including haul roads) selected for waste or disposal not impact 1) culturally sensitive sites or graves or 2) wetlands or "Waters of the U.S.", including streams or stream banks below the "ordinary high water mark", without an approved U.S. Army Corps of Engineers Section 404 Permit.

No payment for overhaul will be allowed for material hauled to these sites. No material shall be placed within the right-of-way, unless specifically stated in the plans.

UTILITY
Modified

UTILITY NOTES

Lighting Contractor shall check for locations of utilities, drainage structures or other facilities in the construction area. Any damage to such facilities due to the contractor's carelessness shall be corrected at the contractor's expense.

232-3A
10-19-21

**EROSION CONTROL
(RURAL SEEDING)**

Area to be seeded is estimated to be less than 1 acre. If the contractor determines the area exceeds 2 acres, notify the Engineer. Approved quantity in excess of 2 acres will be paid for as extra work according to Article 1109.03,B of the Standard Specifications.

Following the completion of work in a disturbed area and according to the seeding dates in Section 2601 of the Standard Specifications, place seed, fertilizer, and mulch on the disturbed area lying 8 feet adjacent to shoulder and median as follows:

Place seed and fertilize according to the requirements of Article 2601.03,C,3 and Section 4169 of the Standard Specifications.

Place mulch according to the requirements of Articles 2601.03,E,2,a and 4169.07,A of the Standard Specifications.

Preparing the seedbed, furnishing and applying seed, fertilizer, and mulch are all incidental to mobilization and will not be paid for separately.

TABULATION OF WIRE, CABLE AND CONNECTORS															108-12		
															MODIFIED		
CIRCUIT NUMBER	RM-40 CONNECTORS						PHASE LINES						GROUND		REMARKS		
	TYPE	QUAN. NO.	TYPE	QUAN. NO.	TYPE	QUAN. NO.	TYPE	QUAN. NO.	SIZE A.W.G.	QUAN. L.F.	SIZE A.W.G.	QUAN. L.F.	SIZE A.W.G.	QUAN. L.F.		SIZE A.W.G.	QUAN. L.F.
E-1	Y-1	6	L-1	6	Y-3	2	L-2	2	10	450			8	2502		6	1256
E-2	Y-1	6	L-1	6	Y-3	2	L-2	6	10	450			8	3054		6	732

HIGHWAY LIGHTING DATA		108-11A
		03-29-94
ROADWAY LUMINAIRES: USE HIGH-PRESSURE SODIUM, 250 WATT A.N.S.I./I.E.S. GLARE-CONTROL RATINGS SHALL BE 'CUTOFF' WITH APPROVED SOCKET POSITIONS AND REFRACTORS. USE FLAT GLASS REFRACTORS OR APPROVED GLARE SHIELDS.		

TABULATION OF ELECTRICAL DUCTS					108-2
					08-20-85
LOCATION	CONDUIT TYPE	DIA. Inches	LENGTH Feet	REMARKS	
STATION 1428+00	RIGID PVC	2	35	ROADWAY CROSSING	
STATION 1422+10	RIGID PVC	2	60	ROADWAY CROSSING	
STATION 421+50	RIGID PVC	2	180	ROADWAY CROSSING	
CONTROL STATION E	RIGID PVC	2	25	RISER	
CIRCUIT E-1	PLASTIC	2	1115	CIRCUIT DUCTS	
CIRCUIT E-2	PLASTIC	2	560	CIRCUIT DUCTS	

ESTIMATED PROJECT QUANTITIES						100-1A
						07-15-97
ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUAN.	
	2523-0955200	CONDUIT, PLASTIC, 2" DIA.	LF	1975		
	2523-8925180	CABLE, 1/C, NO. 8 AWG, 600 VOLT	LF	5815		
	2523-8925200	CABLE, 1/C, NO. 10 AWG, 600 VOLT	LF	900		
	2523-8925244	CONNECTOR, RM-40, AS PER PLAN	EACH	36		
	2523-8925450	CONTROL CABINET, AS PER PLAN	EACH	1		
	2523-8925697	FOOTING, RM-47	EACH	6		
	2523-8925750	GROUND ROD, AS PER PLAN	EACH	7		
	2523-8925775	GROUND WIRE, NO. 6 AWG, BARE COPPER	LF	2240		
	2523-8925942	HANDHOLE, RM-42A, AS PER PLAN	EACH	2		
	2523-8930010	LUMINAIRE, ROADWAY, AS PER PLAN	EACH	6		
	2523-8950035	POLE, CLASS 4, WOOD, 35 FT.	EACH	1		
	2523-8970460	SLIP BASE, RM-46	EACH	6		
ALTERNATE BID ITEMS:						
	2523-8950250	POLE WITH 15'-0" MASTARM (STEEL)	EACH	6		
	2523-8950450	POLE WITH 15'-0" MASTARM (ALUM)	EACH	6		

TABULATION OF LIGHTING INSTALLATIONS						108-1
						MODIFIED
NO.	STATION	TYPE	RM-32		FOOTING TYPE	REMARKS
			A	E		
E101	2421+50	1	8	10	RM-47	
E102	418+00	1	6	11	RM-47	
E103	421+50	1	8	12	RM-47	
E201	9418+00	1	6	12	RM-47	
E202	9420+50	1	5	12	RM-47	
E203	9423+00	1	5	12	RM-47	

ESTIMATE REFERENCE INFORMATION			100-4
			07-15-97
Data listed below is for informational purpose only and shall not constitute a basis for any extra work orders.			
ITEM NO.	ITEM CODE	DESCRIPTION	
	2523-8930010	BID TO INCLUDE ANSI S50VA-250 LAMPS. ALL LUMINAIRES SHALL BE TYPE II-M.	
	2523-8925450	REFER TO 'HIGHWAY LIGHTING DATA' NOTES.	
	2523-8925244	BID TO INCLUDE 600 VOLT FUSES AT 5 AMPERES FOR LUMINAIRE SUPPLY (L-1 CONNECTORS) AND 20 AMPERES FOR TAP CIRCUIT PROTECTION (Y-1 CONNECTORS) LOCATED IN THE HANDHOLES. INCLUDED ARE (12) TYPE Y-1, (4) TYPE Y-3, (12) TYPE L-1, AND (8) TYPE L-2 CONNECTORS.	
	2523-8925942	ALL HANDHOLES TO BE TYPE 1.	

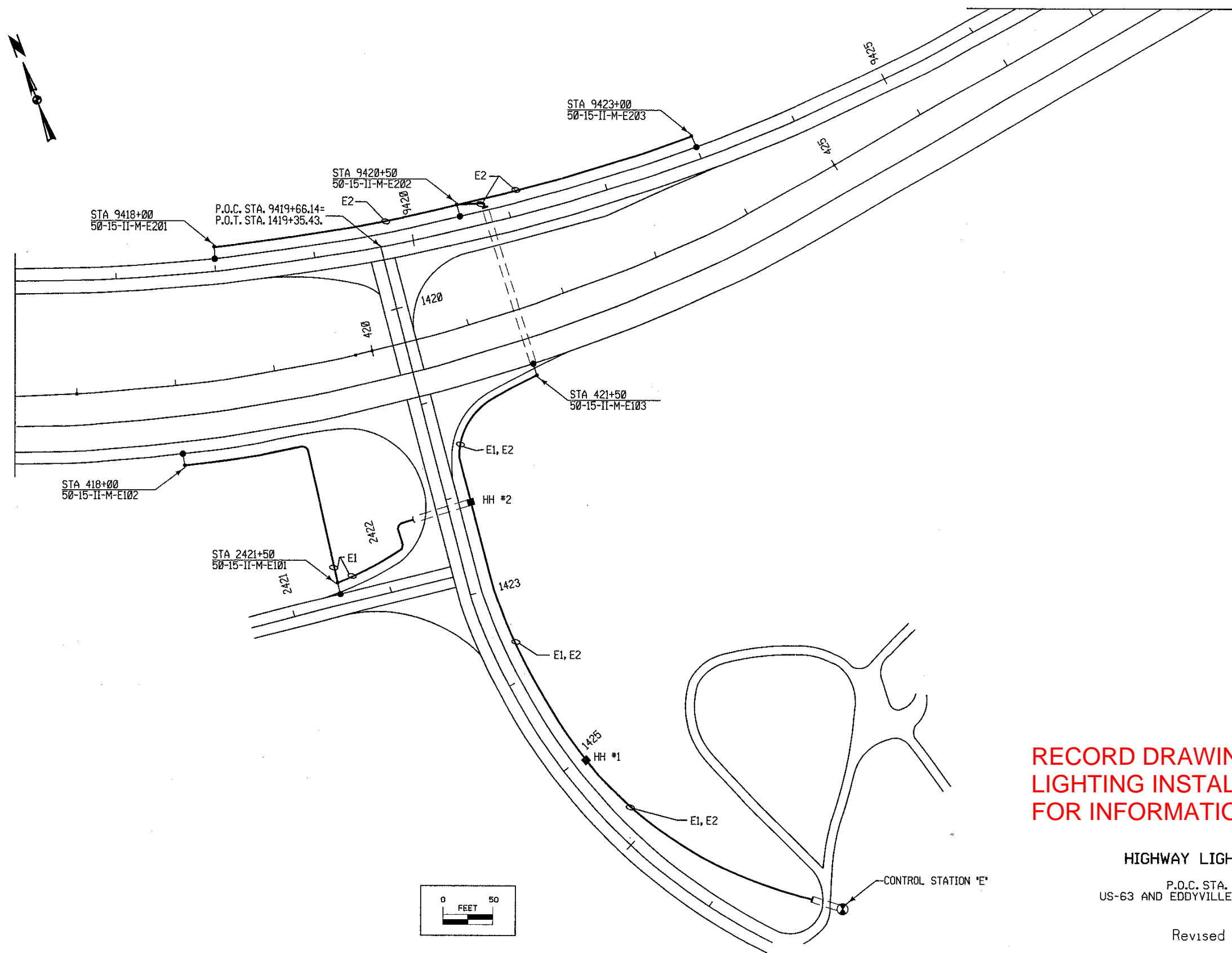
RECORD DRAWING OF ORIGINAL LIGHTING INSTALLATION PROVIDED FOR INFORMATION ONLY (1 OF 2)

GENERAL NOTES AND ESTIMATE OF QUANTITIES

EXISTING INTERSECTION
US. 63 AND EDDYVILLE RD./CHILLICOTHE RD.

Revised 9/29/99

P.5



STA 9418+00
50-15-II-M-E201

P.O.C. STA. 9419+66.14=
P.O.T. STA. 1419+35.43.

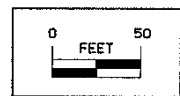
STA 9420+50
50-15-II-M-E202

STA 9423+00
50-15-II-M-E203

STA 418+00
50-15-II-M-E102

STA 2421+50
50-15-II-M-E101

STA 421+50
50-15-II-M-E103



**RECORD DRAWING OF ORIGINAL
LIGHTING INSTALLATION PROVIDED
FOR INFORMATION ONLY (2 OF 2)**

HIGHWAY LIGHTING LAYOUT

P.O.C. STA. 9419+66.42
US-63 AND EDDYVILLE RD./CHILLICOTHE RD.

Revised 9/29/99

P.6

OFFICE OF DESIGN	• CADD • PRODUCED	STATE OF IOWA	FHWA REGION 7	FISCAL YEAR	Wapello	COUNTY	PROJECT NUMBER	NHSN-63-2(61)--2R-90	SHEET NUMBER	P.03
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01-OCT-1999 13:00 p.jensen s:\USERS\Design\Lighting\projects\Wapello\90063061.p01

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R Sheets in Progress

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

	Cut					Fill					Checks (EW-102)		Topsoil					[17]	[18]	[19]	[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]								
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink								
-6	5	6	2	5	6		6	8	-3	0	0	6	0	0	6									
-8	6	4	2	6	4		4	5	1	0	0	4	0	0	4									
-9	5	4	2	5	4		4	5	1	0	0	4	0	0	4									
-8	4	6	2	4	6		6	8	-4	0	0	6	0	0	6									
-6	4	7	2	4	7		7	9	-5	0	0	7	0	0	7									
-5	3	7	2	3	7		7	9	-5	0	0	7	0	0	7									
-3	3	7	2	3	7		7	9	-6	0	0	7	0	0	7									
-1	3	7	2	3	7		7	10	-7	0	0	7	0	0	7									
1	3	9	2	3	9		9	11	-9	0	0	9	0	0	9									
3	3	10	2	3	10	1	11	14	-11	0	0	10	0	0	10									
5	2	10	2	2	12	2	14	18	-16	0	0	10	0	0	10									
9	2	13	2	2	15	6	21	27	-25	0	0	13	0	0	13									
13	2	17	2	2	18	11	29	38	-36	0	0	17	0	0	17									
15	2	19	2	2	21	14	35	46	-44	0	0	19	0	0	19									
18	2	22	2	2	24	16	41	53	-52	0	0	22	0	0	22									
20	2	23	2	2	27	19	45	59	-58	0	0	23	0	0	23									
22	2	25	2	2	29	20	49	64	-63	0	0	25	0	0	25									
23	2	26	2	2	31	22	52	68	-66	0	0	26	0	0	26									
24	2	27	2	2	32	23	54	71	-69	0	0	27	0	0	27									
26	2	28	1	2	34	24	58	75	-73	0	0	28	0	0	28									
21	2	23	2	2	36	19	55	71	-70	0	0	23	0	0	23									
21	2	24	2	2	37	19	56	73	-71	0	0	24	0	0	24									
28	2	30	2	2	37	26	64	83	-81	0	0	30	0	0	30									
29	2	32	2	2	40	28	67	88	-86	0	0	32	0	0	32									
30	2	33	2	2	42	29	70	92	-90	0	0	33	0	0	33									
31	2	34	2	2	43	29	72	94	-93	0	0	34	0	0	34									
32	2	34	2	2	44	30	74	97	-95	0	0	34	0	0	34									
32	2	35	2	2	46	31	76	99	-98	0	0	35	0	0	35									
33	2	36	2	2	47	32	79	102	-101	0	0	36	0	0	36									
34	2	37	2	2	48	33	81	105	-103	0	0	37	0	0	37									
35	2	38	2	2	49	33	82	107	-105	0	0	38	0	0	38									
36	2	38	2	2	50	34	83	109	-107	0	0	38	0	0	38									
36	2	39	2	2	50	34	84	109	-107	0	0	39	0	0	39									
36	2	39	2	2	50	34	84	109	-108	0	0	39	0	0	39									
36	2	39	2	2	50	34	84	109	-108	0	0	39	0	0	39									
36	2	39	2	2	50	34	84	109	-107	0	0	39	0	0	39									
36	2	39	2	2	50	34	83	109	-107	0	0	39	0	0	39									
35	2	38	2	2	49	34	83	108	-106	0	0	38	0	0	38									
35	2	38	1	2	49	33	82	107	-105	0	0	38	0	0	38									
35	2	38	1	2	49	33	82	107	-105	0	0	38	0	0	38									
35	2	38	1	2	49	33	82	107	-105	0	0	38	0	0	38									
34	2	37	1	2	49	32	81	105	-103	0	0	37	0	0	37									
32	4	39	2	4	52	28	80	104	-100	0	0	39	0	0	40									
32	6	44	2	6	56	27	82	107	-102	0	0	44	0	0	44									
33	5	44	2	5	56	28	84	109	-104	0	0	44	0	0	44									
31	6	41	2	6	54	25	79	102	-97	0	0	41	0	0	41									
29	7	40	2	7	51	22	73	96	-89	0	0	40	0	0	40									
27	8	39	2	8	50	19	69	89	-82	0	0	39	0	0	39									
21	8	35	1	8	45	14	58	76	-68	0	0	35	0	0	35									
16	7	32	2	7	40	8	48	63	-55	0	0	32	0	0	32									
8	8	31	2	8	36		36	47	-39	0	0	31	0	0	31									
3	10	26	2	10	34		34	44	-34	0	0	26	0	0	26									
3	11	21	1	11	27		27	35	-24	0	0	21	0	0	21									
-11	11	11	0	11	11		11	14	-3	0	0	11	0	0	11									
-19	14	1	0	14	1		1	1	14	0	0	1	0	0	1									
-6	9	0	0	9	0		0	0	9	0	0	0	0	0	0									
0	0	0	0	0	0		0	0	0	0	0	0	0	0	0									

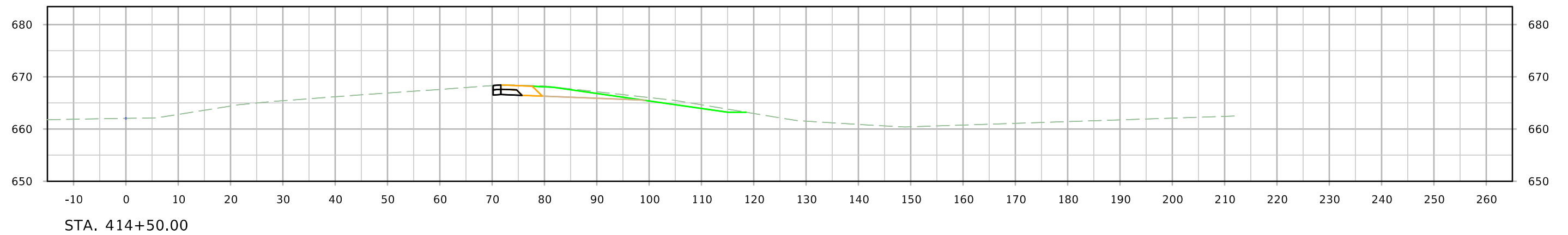
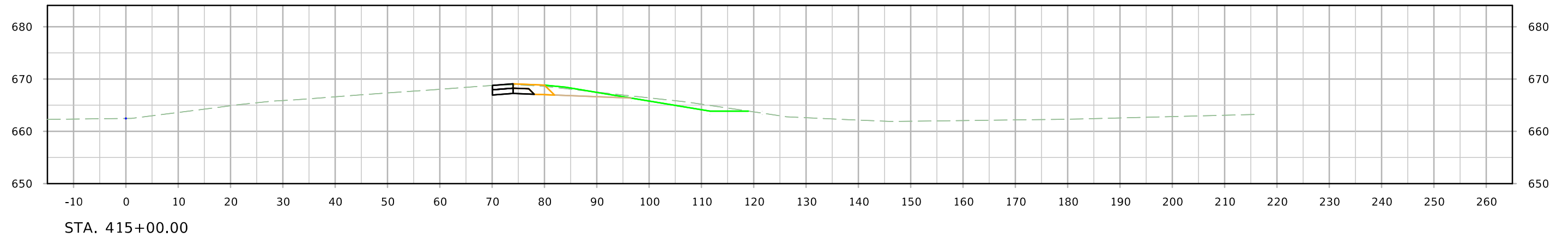
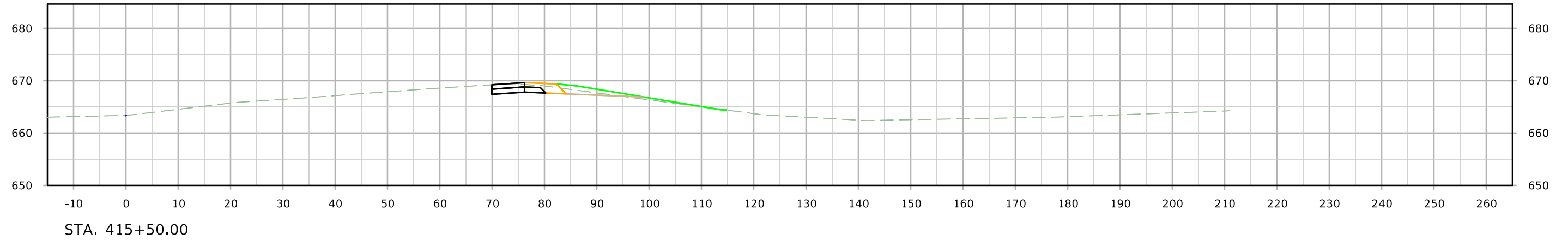
TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut					Fill					Checks (EW-102)		Topsoil					[17]	[18]	[19]	[20]	[21]	[22]	
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]								
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink								
414+30.00																								
414+40.00	-8	6	4	2	6	4		4	5	1	0	0	4	0	0	4								
414+50.00	-9	5	4	2	5	4		4	5	1	0	0	4	0	0	4								
414+60.00	-8	4	6	2	4	6		6	8	-4	0	0	6	0	0	6								
414+70.00	-6	4	7	2	4	7		7	9	-5	0	0	7	0	0	7								
414+80.00	-5	3	7	2	3	7		7	9	-5	0	0	7	0	0	7								
414+90.00	-3	3	7	2	3	7		7	9	-6	0	0	7	0	0	7								
415+00.00	-1	3	7	2	3	7		7	10	-7	0	0	7	0	0	8								
415+10.00	1	3	9	2	3	9		9	11	-9	0	0	9	0	0	9								
415+20.00	3	3	10	2	3	10	1	11	14	-11	0	0	10	0	0	10								
415+30.00	5	2	10	2	2	12	2	14	18	-16	0	0	10	0	0	10								
415+40.00	9	2	13	2	2	15	6	21	27	-25	0	0	13	0	0	13								
415+50.00	13	2	17	2	2	18	11	29	38	-36	0	0	17	0	0	17								
415+60.00	15	2	19	2	2	21	14	35	46	-44	0	0	19	0	0	19								
415+70.00	18	2	22	2	2	24	16	41	53	-52	0	0	22	0	0	22								
415+80.00	20	2	23	2	2	27	19	45	59	-58	0	0	23	0	0	23								
415+90.00	22	2	25	2	2	29	20	49	64	-63	0	0	25	0	0	25								
416+00.00	23	2	26	2	2	31	22	52	68	-66	0	0	26	0	0	26								
416+10.00	24	2	27	2	2	32	23	54	71	-69	0	0	27	0	0	27								
416+20.00	26	2	28	1	2	34	24	58	75	-73	0	0	28	0	0	28								
416+30.00	21	2	23	2	2	36	19	55	71	-70	0	0	23	0	0	23								
416+40.00	21	2	24	2	2	37	19	56	73	-71	0	0	24	0	0	24								
416+50.00	28	2	30	2	2	37	26	64	83	-81	0	0	30	0	0	30								
416+60.00	29	2	32	2	2	40	28	67	88	-86	0	0	32	0	0	32								
416+70.00	30	2	33	2	2	42	29	70	92	-90	0	0	33	0	0	33								
416+80.00	31	2	34	2	2	43	29	72	94	-93	0	0	34	0	0	34								
416+90.00	32	2	34	2	2	44	30	74	97	-95	0	0	34	0	0	34								
417+00.00	32	2	35	2	2	46	31	76	99	-98	0	0	35	0	0	35								
417+10.00	33	2	36	2	2	47	32	79	102	-101	0	0	36	0	0	36								
417+20.00	34	2	37	2	2	48	33	81	105	-103	0	0	37	0	0	37								
417+30.00	35	2	38	2	2	49	33	82	107	-105	0	0	38	0	0	38								
417+40.00	36	2	38	2	2	50	34	83	109	-107	0	0	38	0	0	38								
417+50.00	36	2	39	2	2	50	34	84	109	-107	0	0	39	0	0	39								
417+60.00	36	2	39	2	2	50	34	84	109	-108	0	0	39	0	0	39								
417+70.00	36	2	39	2	2	50	34	84	109	-108	0	0	39	0	0	39								
417+80.00	36	2	39	2	2	50	34	84	109	-107	0	0	39	0	0	39								
417+90.00	36	2	39	2	2	50	34	83	109	-107	0	0	39	0	0	39								
418+00.00	35	2	38	2	2	49	34	83	108	-106	0	0	38	0	0	38								
418+10.00	35	2	38	1	2	49	33	82	107	-105	0	0	38	0	0	38								
418+20.00	35	2	38	1	2	49	33	82	107	-105	0	0	38	0	0	38								
418+30.00	35	2	38	1	2	49	33	82	107	-105	0	0	38	0	0	38								
418+40.00	35	2	38	1	2	49	33	82	107	-105	0	0	38	0	0	38								
418+50.00	34	2	37	1	2	49	32	81	105	-103	0	0	37	0	0	37								
418+60.00	32	4	39	2	4	52	28	80	104	-100	0	0	39	0	0	40								
418+70.00	32	6	44	2	6	56	27	82	107	-102	0	0	44	0	0	44								
418+80.00	33	5	44	2	5	56	28	84	109	-104	0	0	44	0	0	44								
418+90.00	31	6	41	2	6	54	25	79	102	-97	0	0	41	0	0	41								
419+00.00	29	7	40	2	7	51	22	73	96	-89	0	0	40	0	0	40								
419+10.00	27	8	39	2	8	50	19	69	89	-82	0	0	39	0	0	39								
419+20.00	21	8	35	1	8	45	14	58	76	-68	0	0	35	0	0	35								
419+30.00	16	7	32	2	7	40		48	63	-55	0	0	32	0	0	32								
419+40.00	8	8	31	2	8	36		36	47	-39	0	0	31	0	0	31								
419+50.00	3	10	26	2	10	34		34	44	-34	0	0	26	0	0	26								
419+60.00	3	11	21	1	11	27		27	35	-24	0	0	21	0	0	21								
419+70.00	-11	11	11	0	11	11		11	14	-3	0	0	11	0	0	11								
419+80.00	-19	14	1	0	14	1		1	1	14	0	0	1	0	0	1								
419+90.00	-6	9	0	0	9	0		0	0	9	0	0	0	0	0	0								
420+00.00	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0								
420+10.00	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0								
420+20.00	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0								
414+30.00 Totals:	1,088	207	1,488	83	207	1,876	1,038	2,913	3,790	-3,585	0	0	1,488	0	0	1,491								

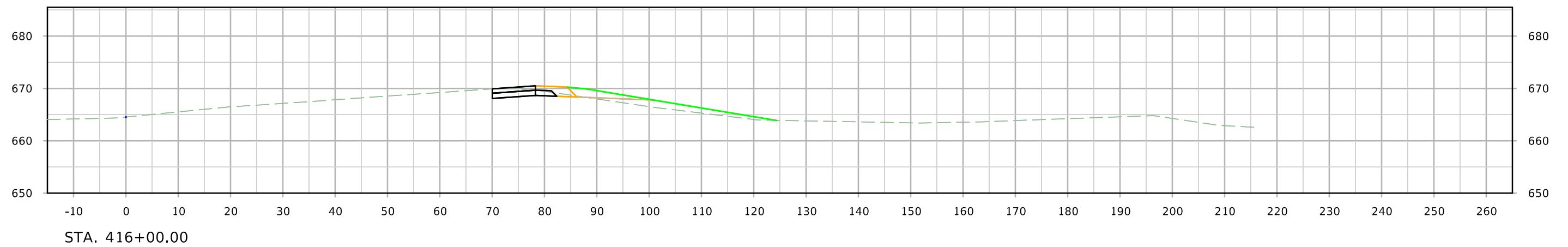
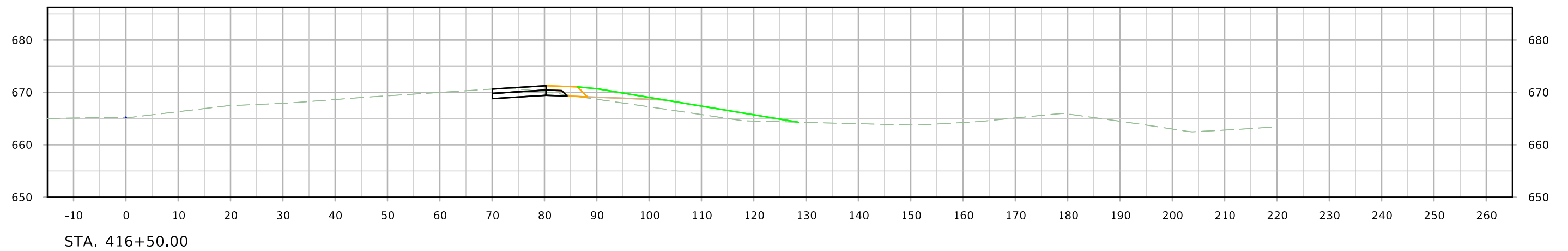
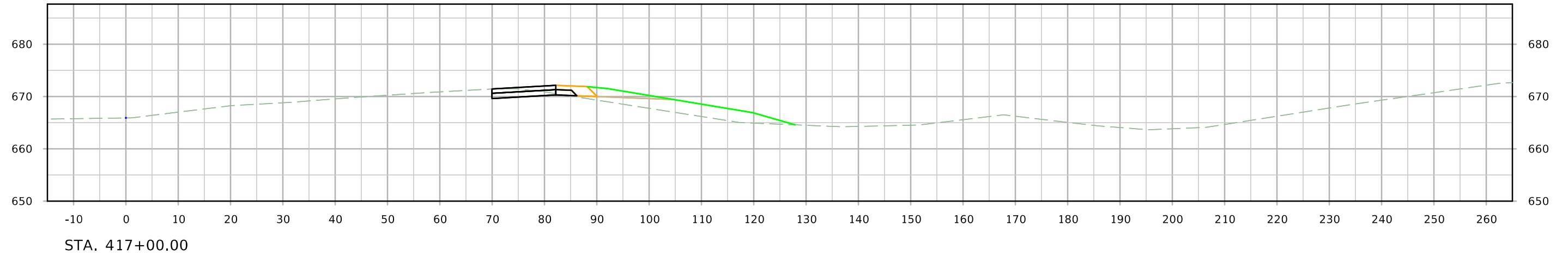
TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut					Fill					Checks (EW-102)		Topsoil				[17]	[18]	[19]	[20]	[21]	[22]			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]									
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Pavement Removal Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Existing Topsoil Stripping Undercut (+ Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink									
Summary:																									
414+30.00 Project Totals:	-6	5	6	2	5	6		6	8	-3	0	0	6	0	0	6									
	1,088	207	1,488	83	207	1,876	1,038	2,913	3,790	-3,585	0	0	1,488	0	0	1,491									
						EXCAVATION, CLASS 10, ROADWAY AND BORROW					3790 CY			TOPSOIL, STRIP, SALVAGE AND SPREAD				1488 CY							
						EMBANKMENT-IN-PLACE					3585/1.3=	2758 CY													

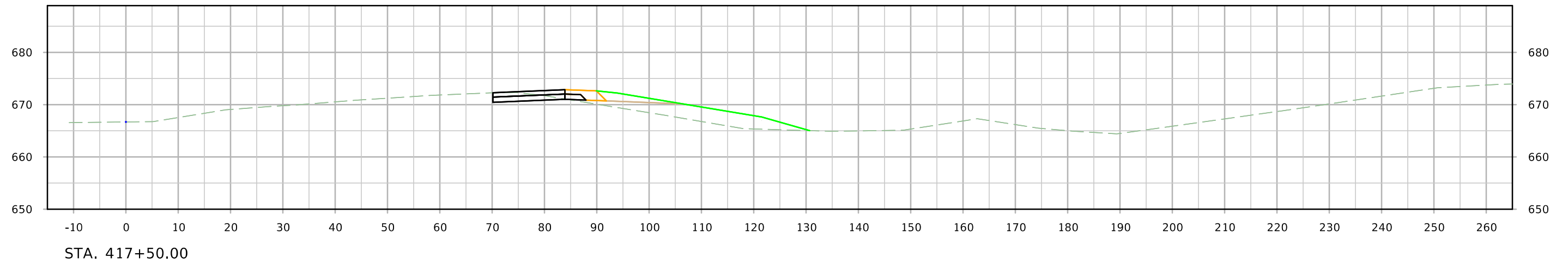
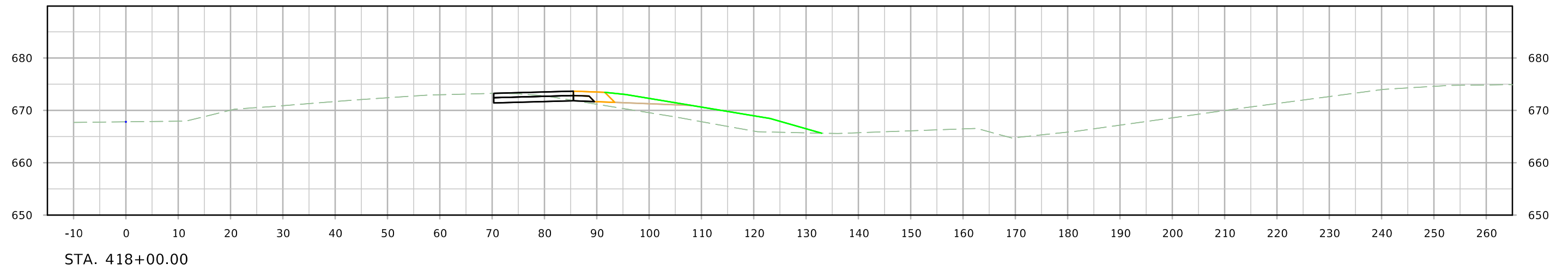
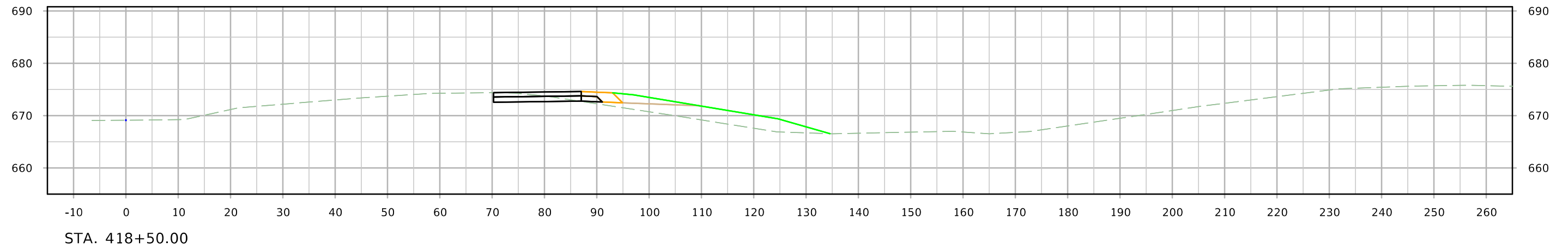
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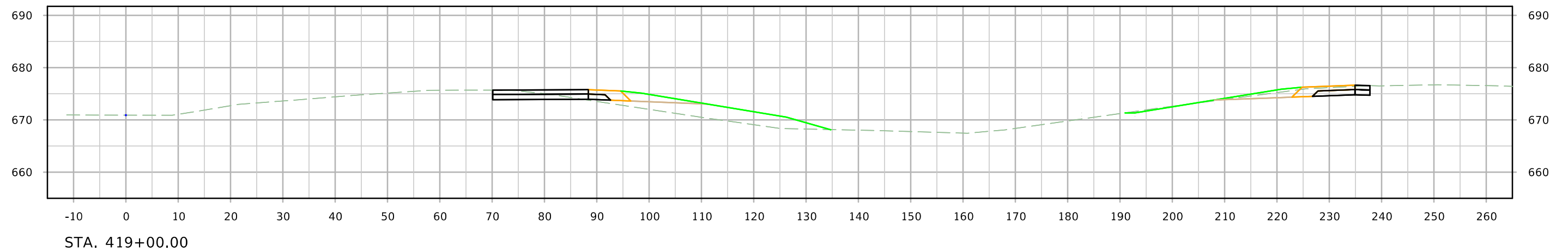
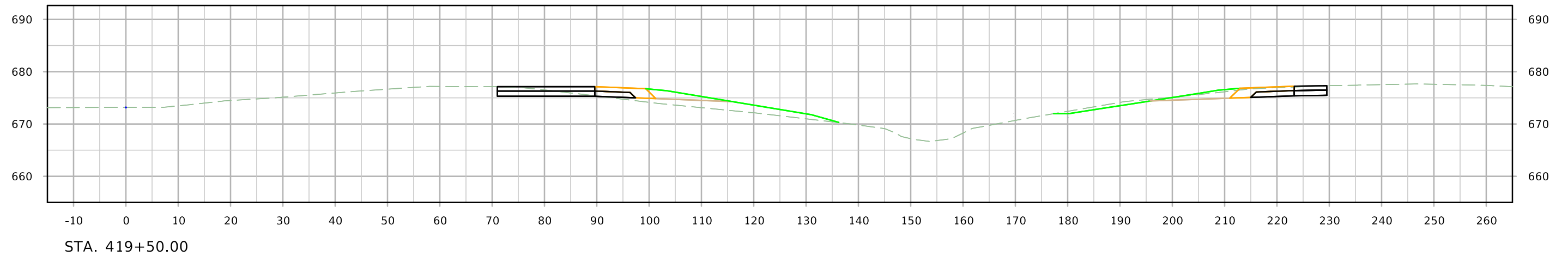
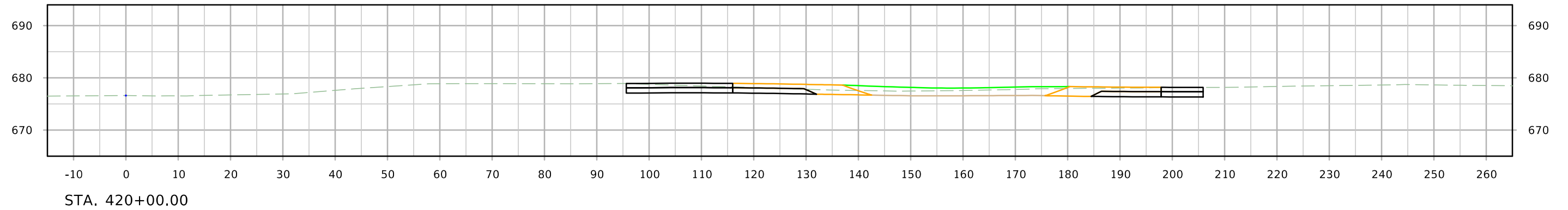
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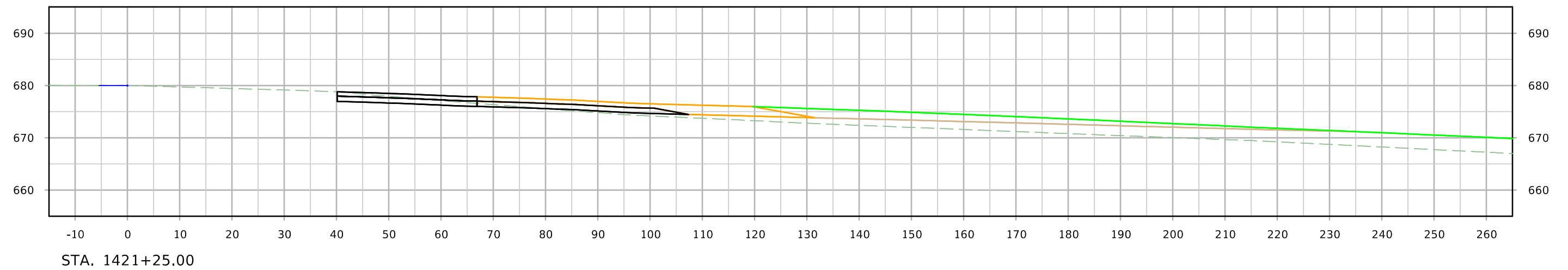
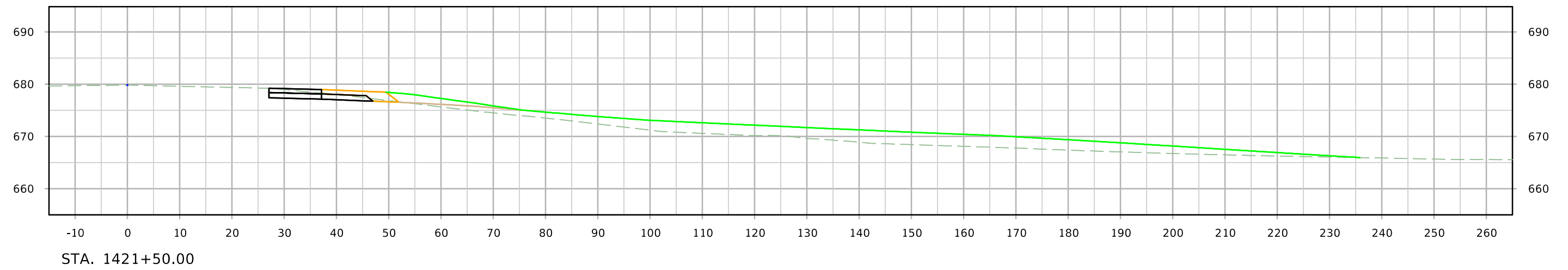
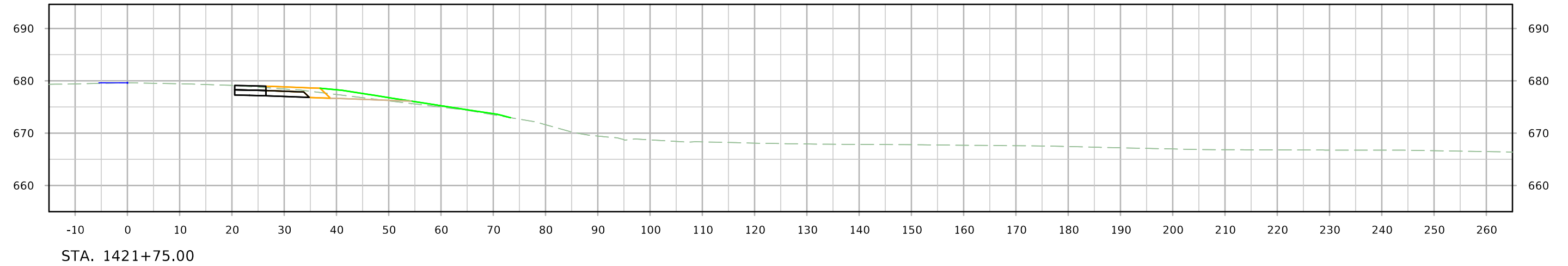
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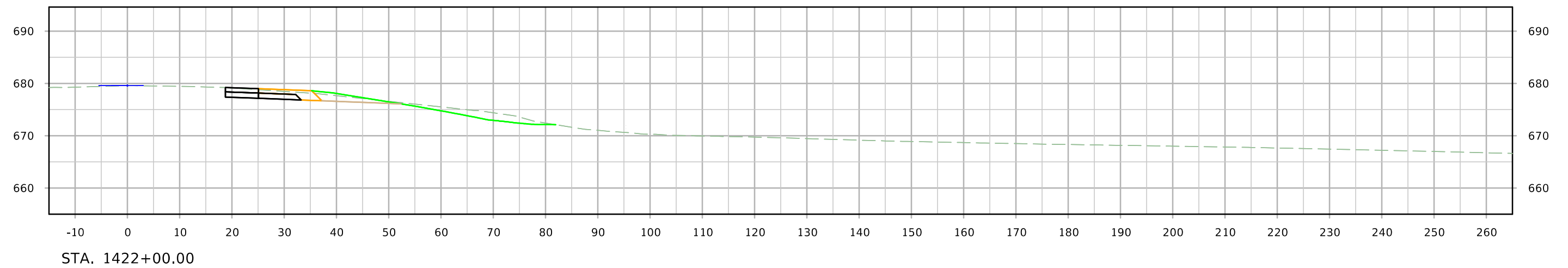
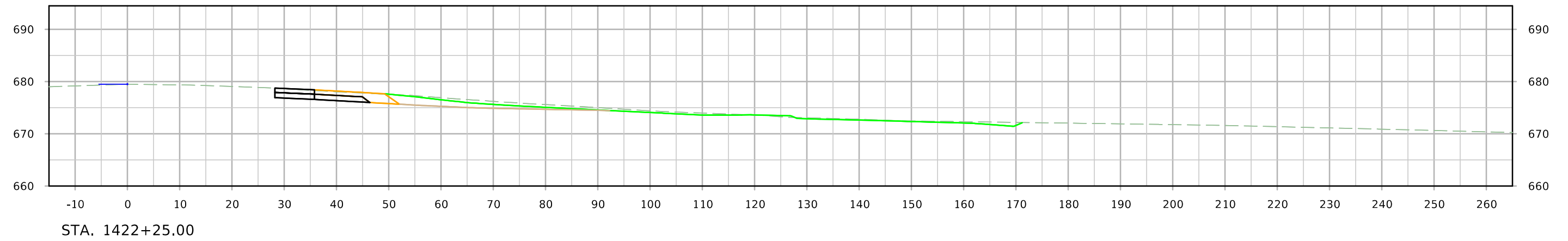
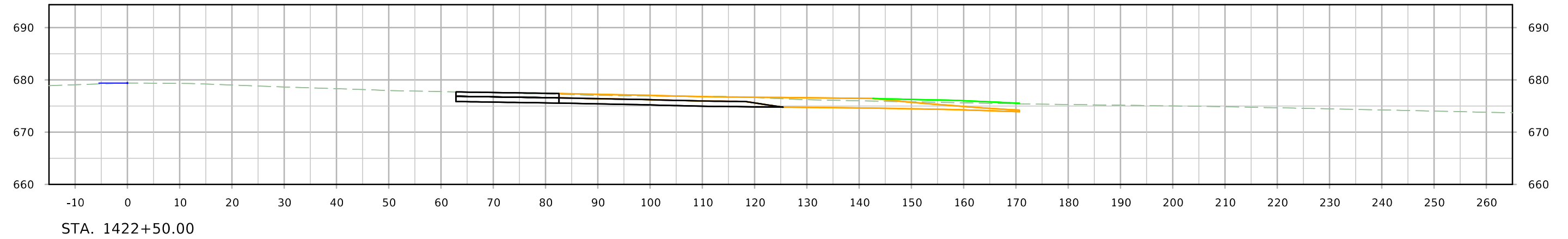
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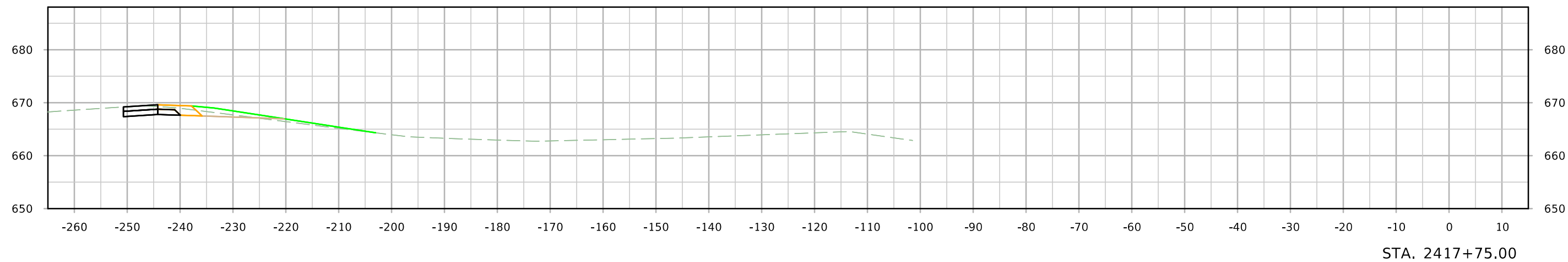
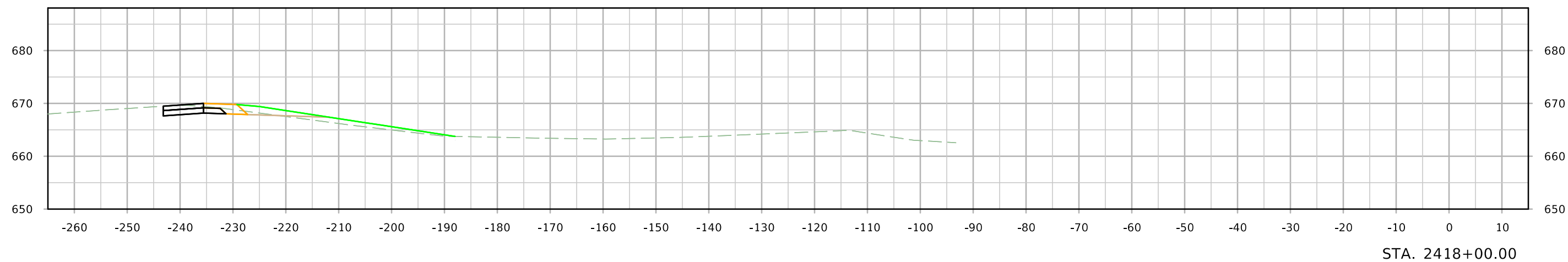
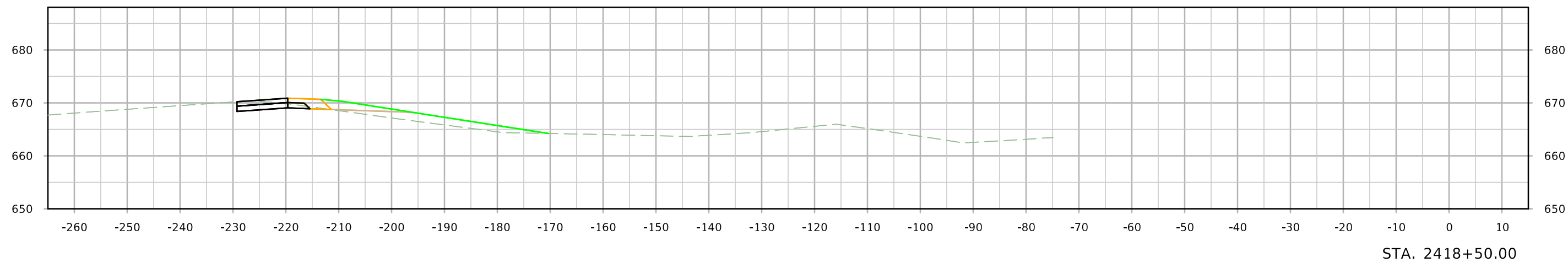
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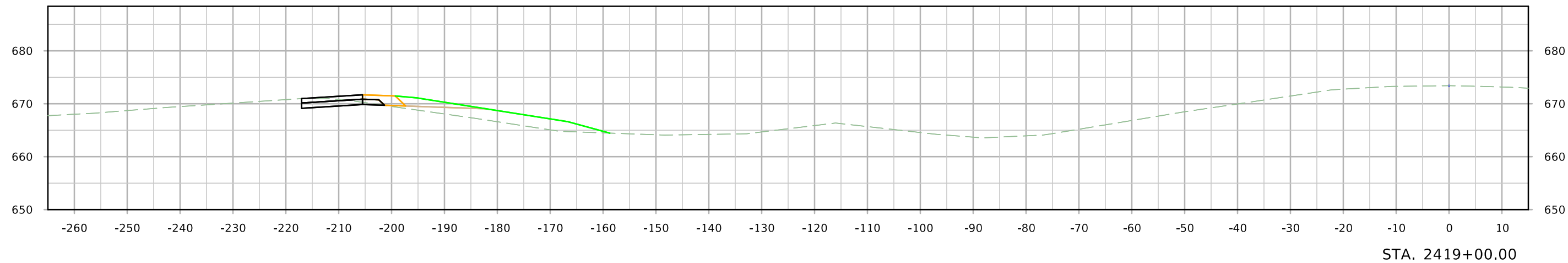
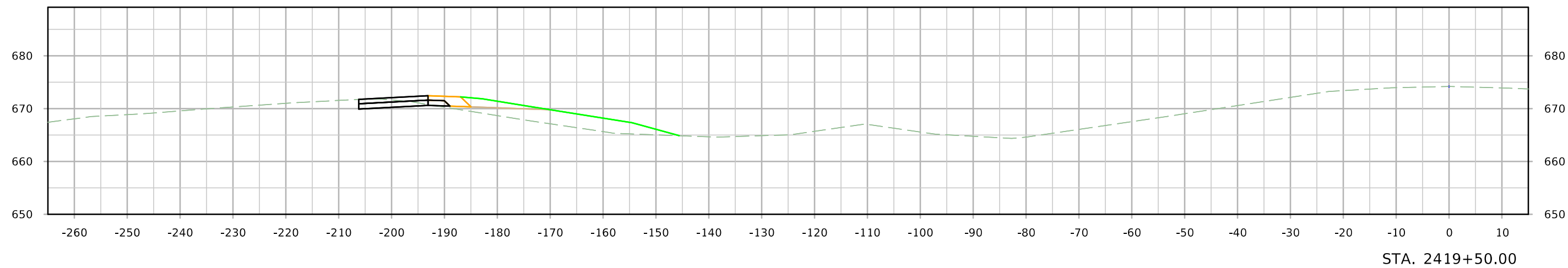
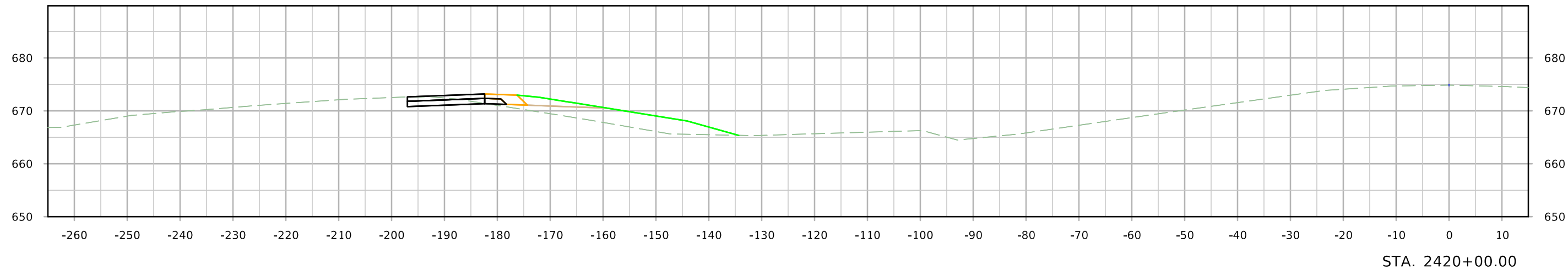
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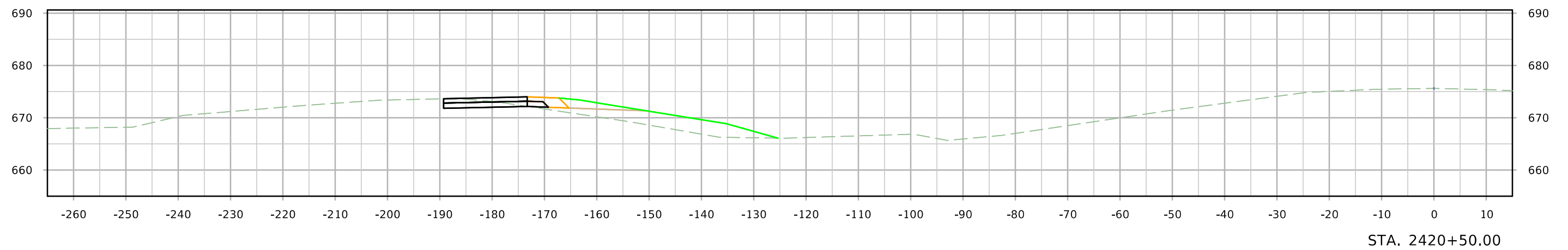
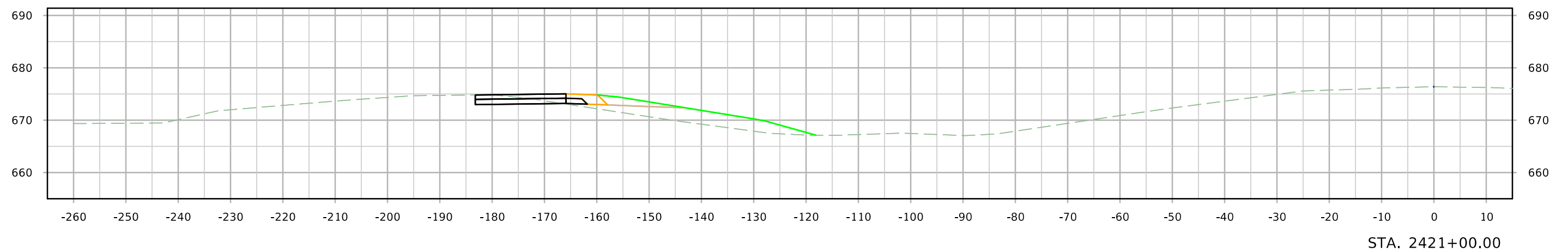
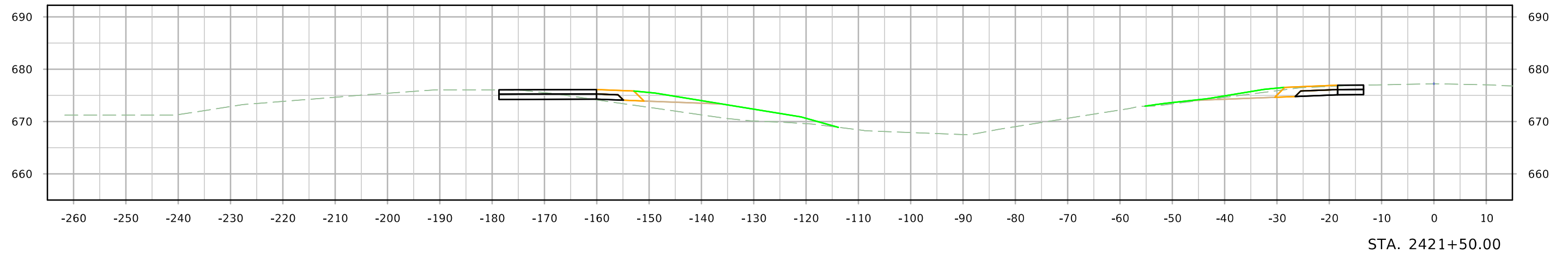
SR - Chillicothe Rd



SR - Chillicothe Rd



SR - Chillicothe Rd



SR - Chillicothe Rd

