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PLANS OF PROPOSED IMPROVEMENT ON THE
PRIMARY ROAD SYSTEM
CEDAR COUNTY
Bridge Replacement
US 30 at Yankee Run 2.4 mi W of Co Rd Y14

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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



D02 Field Exam Attendees on 11/6/25:

- Luka Arroyo - PMB
- Seth Kjornoe - District 6
- Sam Shea - District 6
- Jimmy Ellis - BSB
- Christine Schwienebart - LEB
- John Bartholomew - Design
- Amanda Woods - Rail
- Mark Sloppy - LEB
- Brock Struecker - LEB
- Jeff Bacon - LEB
- Christian Kennel - BSB
- Tony Bower - HR Green
- Dan Smith - HR Green
- Zach Gerst - HR Green

Remove "inflation" line item from cost estimates
MasterWorks automatically inflates costs

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN - 11/14/2025

REVISIONS

TOTAL
24

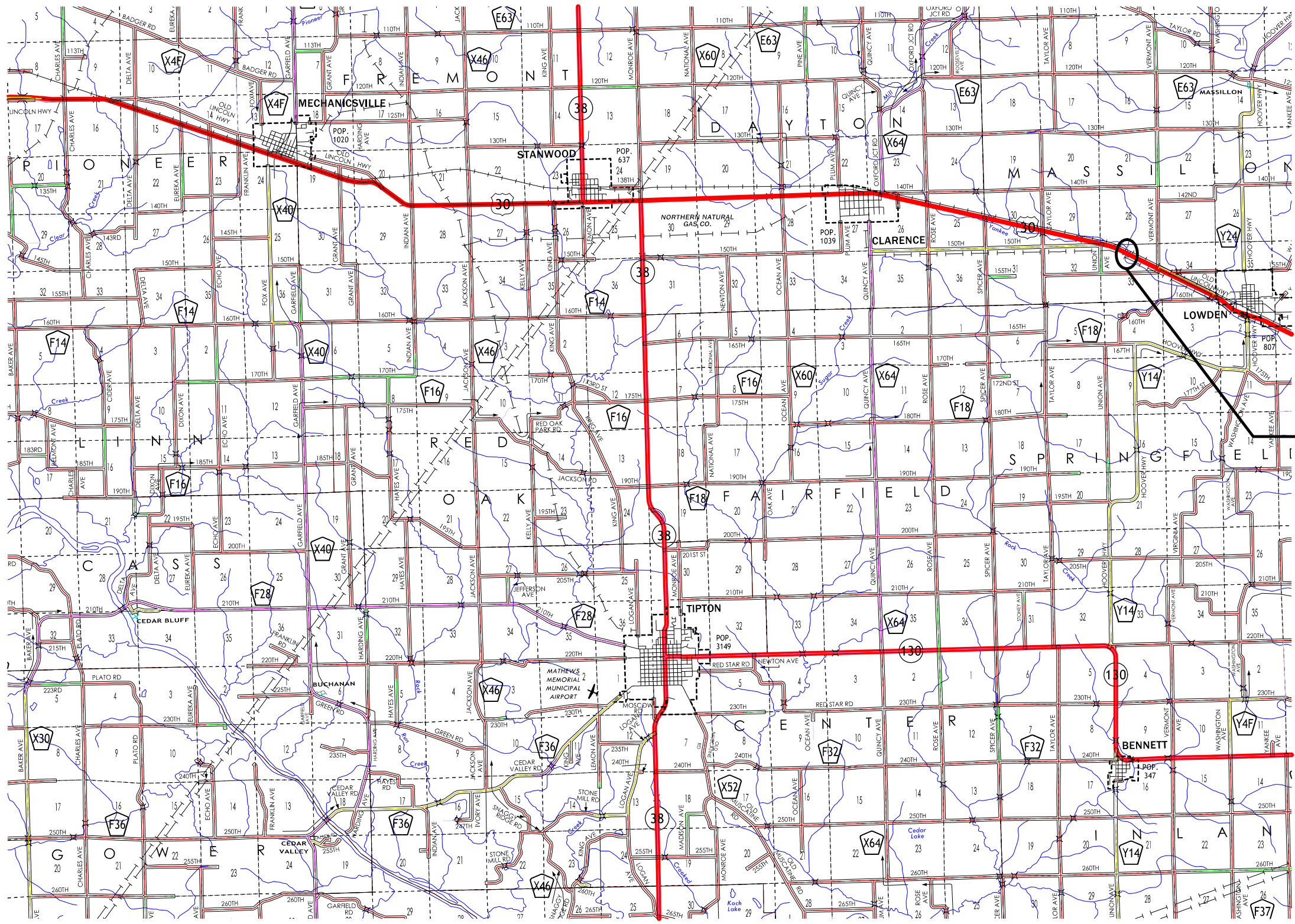
PROJECT IDENTIFICATION NUMBER

24-16-030-030

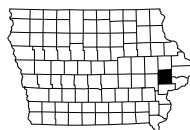
PROJECT NUMBER

BRF-030-8(060)--38-16

R.O.W. PROJECT NUMBER



**PROJECT
LOCATION
STA. 1127+08.42
FHWA NO. 18301**



Roadway	US-30			
PIN Number	24-16-030-030		Submittal Date	
Project Number	BRF-030-8(060)--38-16			Approval Date
District	District 6	Assistant District Engineer	Jesse Tibodeau	
County	CEDAR	or		
Route	US-30	Office Director		
Location	US-30 over Yankee Run Creek			
Work Type	Bridge Replacement			
Segment Manager				
Designer	HR Green, Inc.			
Design Manual Section 1C-1 Last Updated: 04-29-19	Rural Two-Lane Highways (Rural Arterials)			
Design Element		Preferred	Acceptable	Project Values
Design speed (mph)		60	50	60
Maximum superelevation rate (Refer to Section 2A-2)		6%	8%	NA
Design lane width (ft)		12	12	12
Full depth paved width (ft)		12	12	12
Right turn lane (ft)		12	10	NA
Climbing Lane (ft)		12	12	NA
Left turn lane (ft)		12	10	NA
Pavement cross-slope (on tangent sections)	Through lanes	2%	1.5% minimum, 2% maximum	2%
	Auxiliary and turn lanes	3%	3% maximum	NA
	Crown break at centerline	4%	4% maximum	4%
Shoulder cross-slope (on tangent sections)		4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4%
Curb type (Refer to Section 3C-2)	Design speed = 50 or 55 mph	6-inch sloped	6-inch standard	NA
	Design speed ≥ 60 mph	4-inch sloped	6-inch sloped	NA
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1	3:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	3:1
	Curbed roadways	2%	not steeper than 3:1	NA
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)		3:1	2.5:1	NA
Transverse Slopes	w/ drainage structures	8:1	6:1	6:1
	w/o drainage structures	10:1	6:1	6:1
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	–	Match Existing
Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	44
	Bridge length > 200 ft	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane widths	NA
Bridge width—existing*		design lane widths + no less than 2 ft left and right	design lane widths + 2 ft. offset left and right	NA
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16	NA
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14	NA
	Over railroad	23.3	23.3	NA
	Sign trusses and pedestrian bridges	17.5	17	NA
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	
Level of Service		B	B	NA
*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exeption is required)				

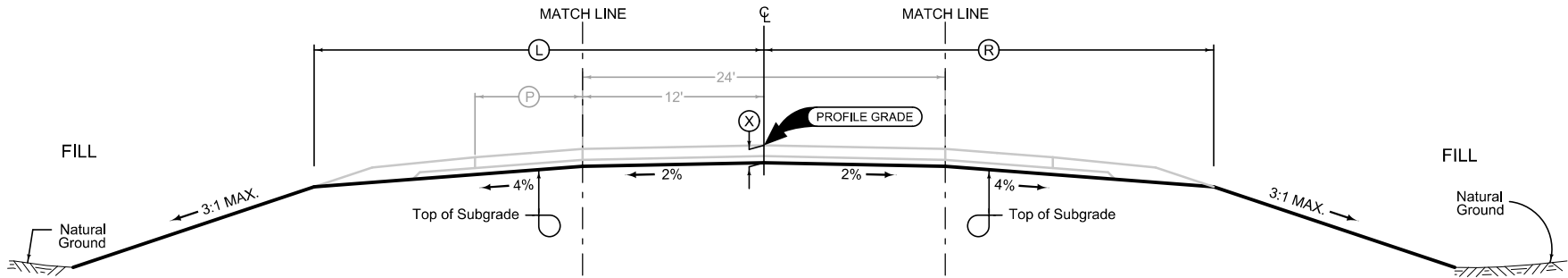
Roadway Design Speed (mph) =			60												
Design Manual Section 1C-1 Last Updated: 04-29-19			Design Criteria for High Speed Roadways												
Design Element			Preferred Criteria						Acceptable Criteria						Project Values
			Design Speed, mph						Design Speed, mph						
			50	55	60	65	70	75	50	55	60	65	70	75	
Stopping sight distance (ft) (Refer to Section 6D-1)			425	495	570	645	730	820	425	495	570	645	730	820	570
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	Method 5 superelevation and side friction distribution	e _{max} = 6%	833	1060	1330	1660	2040	2500	833	1060	1330	1660	2040	2500	NA
		e _{max} = 8%	--	--	--	--	--	--	758	960	1200	1480	1810	2210	NA
Minimum vertical curve length (ft) (Refer to Section 2B-1)			150	165	180	195	210	225	150	165	180	195	210	225	180
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	crest vertical curves		84	114	151	193	247	312	84	114	151	193	247	312	151
	sag vertical curves	roadways without fixed-source lighting	96	115	136	157	181	206	96	115	136	157	181	206	136
		roadways with fixed- source lighting	96	115	136	157	181	206	54	66	78	91	106	121	136
Minimum gradient (%)	(Refer to Section 2B-1)		0.5						0.3% with a curb, 0.0% without a curb						0.5
Maximum gradient (%)	(Refer to Section 2B-1)	Urban roadways	4		3				7	6	6	–	–	–	3
		Rural roadways							5	5	4	4	4	4	3
		Interstates							5	5	4	4	4	4	3
Clear zone			See "Preferred Clear Zone" table in Section 8A-2						See "Acceptable Clear Zone" table in Section 8A-2						26

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

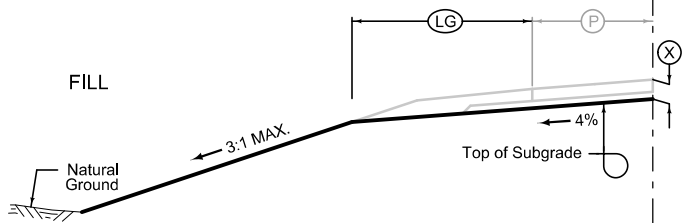
See plan & profile sheets and cross sections for additional details of ditches and backslopes.

G_2_Grade

Modified

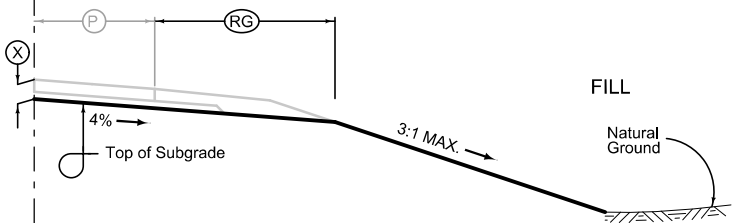


LOCATION		DIMENSIONS		
STATION TO STATION		(L) Feet	(R) Feet	(X) Inches
1125+50.00	1126+46.91	31.4	31.4	VARIES
1127+69.91	1128+50.00	31.4	31.4	VARIES



COMBINATION SHOULDER GRADING

LOCATION		DIMENSIONS	
STATION TO STATION		(LG) Feet	(X) Inches
1121+25.00	1125+14.53	9.4	22
1129+14.79	1132+90.00	9.4	22



COMBINATION SHOULDER GRADING

LOCATION		DIMENSIONS	
STATION TO STATION		(RG) Feet	(X) Inches
1121+25.00	1125+02.02	9.4	22
1129+02.29	1132+90.00	9.4	22

ML30
Grading

Refer to BR-103 for bridge approach jointing details.

PAVED SHOULDER AT GUARDRAIL

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at mainline spacing

2_P_Guard 04-21-20		
STATION TO STATION		(P) Feet
1125+14.53	1125+34.53	13.67
1125+34.53	1125+88.19	VARIES
1125+88.19	1126+26.91	11.5
1127+89.92	1128+41.90	11.5
1128+41.90	1128+94.79	VARIES
1128+94.79	1129+14.79	13.67

FULL DEPTH SHOULDER

Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5

2_FullPCC 04-21-20		
STATION TO STATION		(P) Feet
1121+25.00	1125+14.53	10
1129+14.79	1132+90.00	10

PAVED SHOULDER AT GUARDRAIL

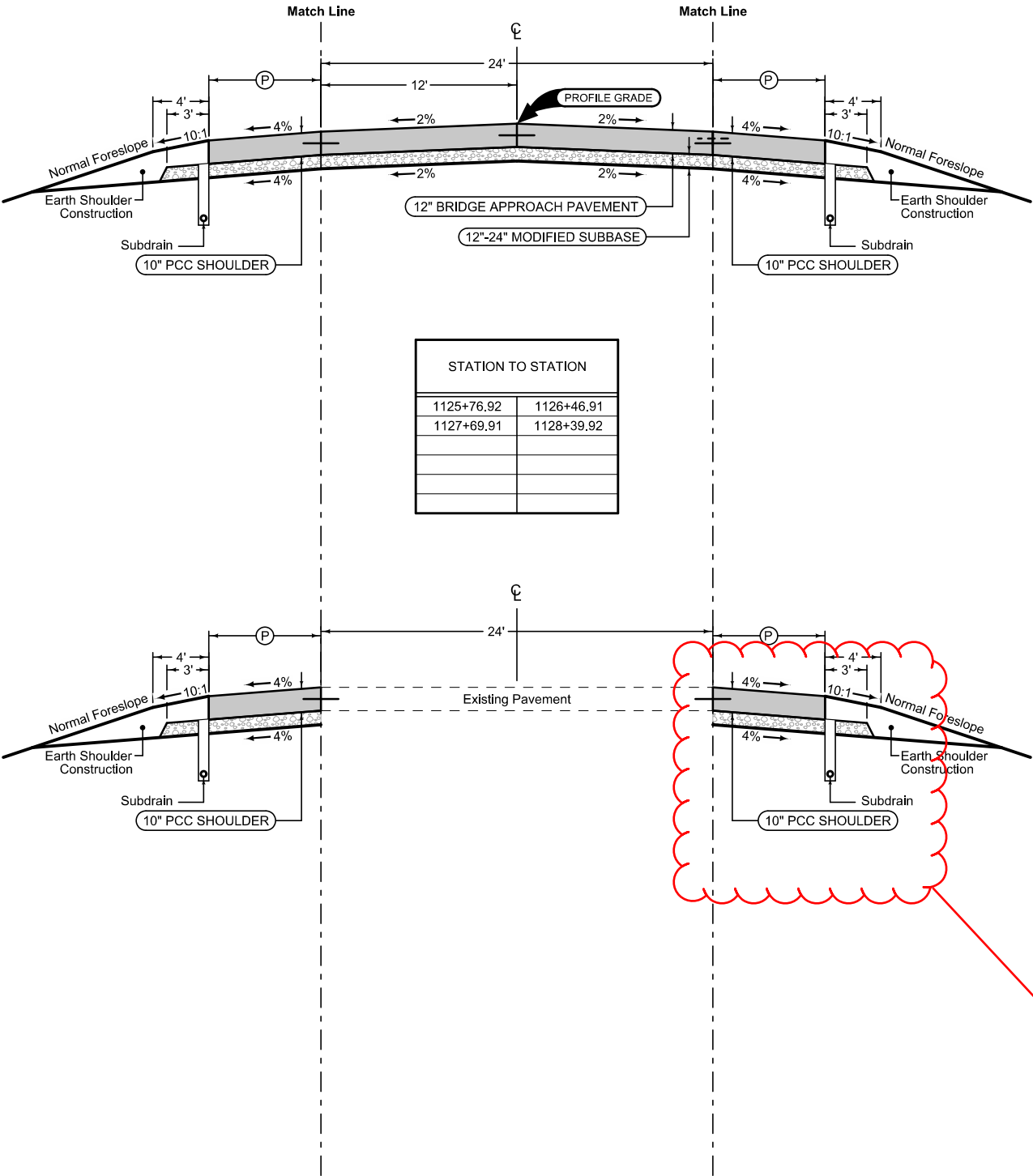
PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at mainline spacing

2_P_Guard 04-21-20		
STATION TO STATION		(P) Feet
1125+02.02	1125+22.02	13.67
1125+22.02	1125+74.16	VARIES
1125+74.16	1126+26.93	11.5
1126+26.93	1128+29.17	11.5
1128+29.17	1128+82.29	VARIES
1128+82.29	1129+02.29	13.67

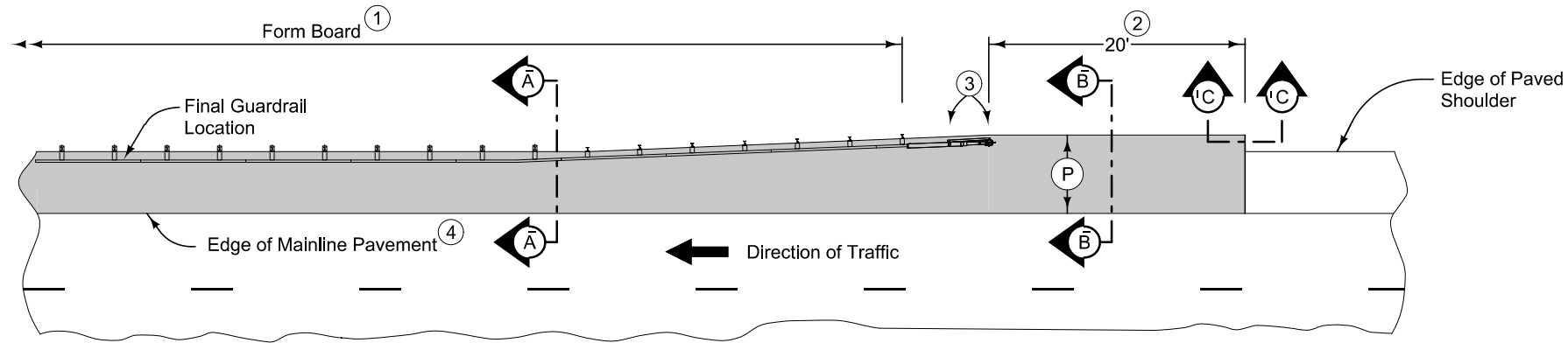
FULL DEPTH SHOULDER

Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5

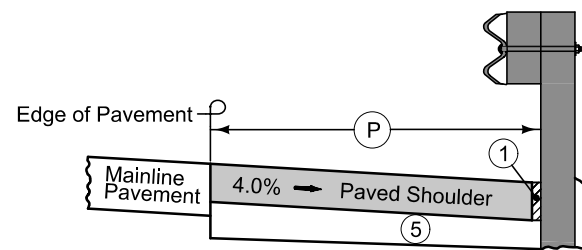
2_FullPCC 04-21-20		
STATION TO STATION		(P) Feet
1121+25.00	1125+02.02	10
1129+02.29	1132+90.00	10



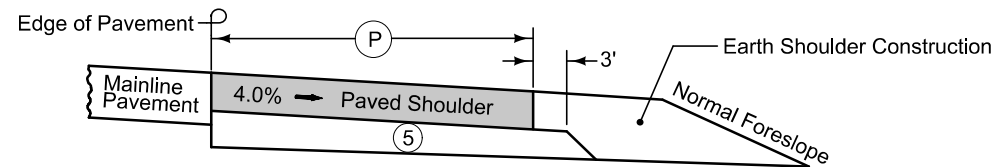
ML30
Paving



PLAN VIEW



Section A-A



Section B-B

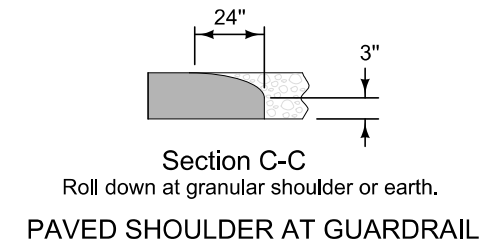
NEW CONSTRUCTION

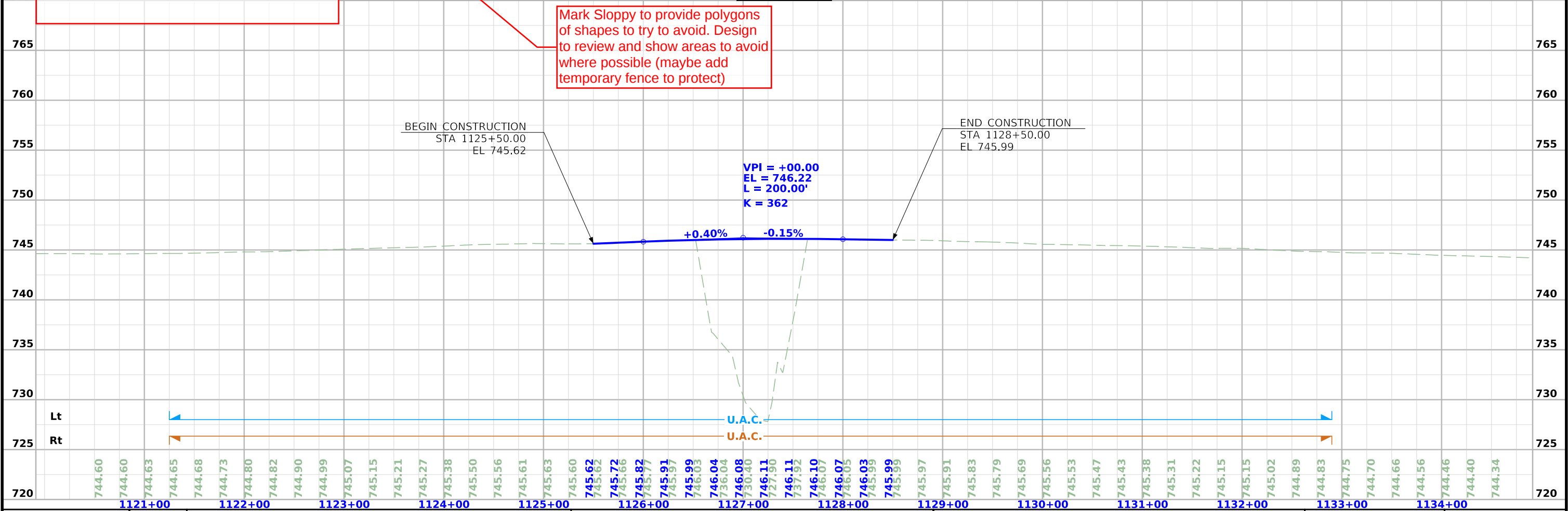
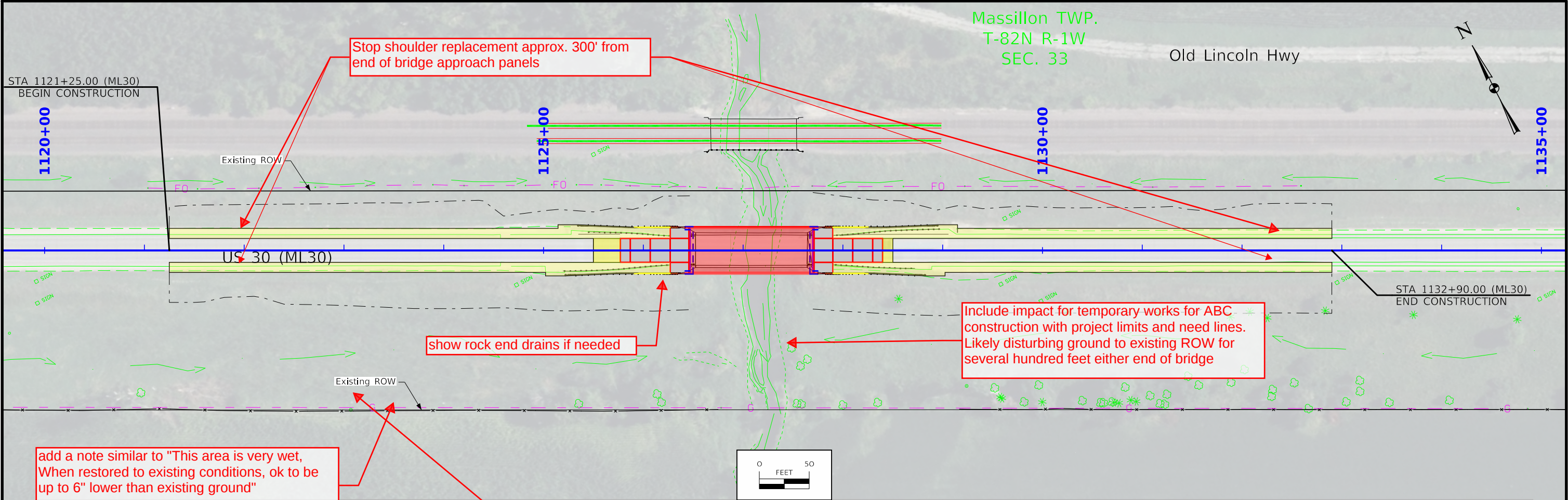
8" PCC Paved Shoulder at guardrail. Use the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

Refer to Tabulation 112-9 for shoulder quantities.

- ① When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'BT' joint (per PV-101) for PCC shoulder.
- ⑤ Refer to other details in the plan.





FILE NO. 98765	ENGLISH	DESIGN TEAM HR Green, Inc.	CEDAR COUNTY	PROJECT NUMBER BRF-030-8(060)--38-16	SHEET NUMBER D.2
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ALIGNMENT COORDINATES																				101_16 10/25/24
Line No.	Name	Location	Point on Tangent Station	Point on Tangent Y Northing	Point on Tangent X Easting	Begin Spiral Station	Begin Spiral Y Northing	Begin Spiral X Easting	Begin Curve Station	Begin Curve Y Northing	Begin Curve X Easting	Simple Curve PI or Master PI Station	Simple Curve PI or Master PI Y Northing	Simple Curve PI or Master PI X Easting	End Curve Station	End Curve Y Northing	End Curve X Easting	End Spiral Station	End Spiral Y Northing	End Spiral X Easting
1.0	ML30	1119+50.00		8015026.97	20689851.89															
2.0	ML30	1135+50.00		8014291.44	20691272.81															

108_23A
8/15/22

TRAFFIC CONTROL PLAN

Traffic control on this project shall be in accordance with the specific layouts shown on these plans. For additional information, refer to Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD) and the Standard Specifications.

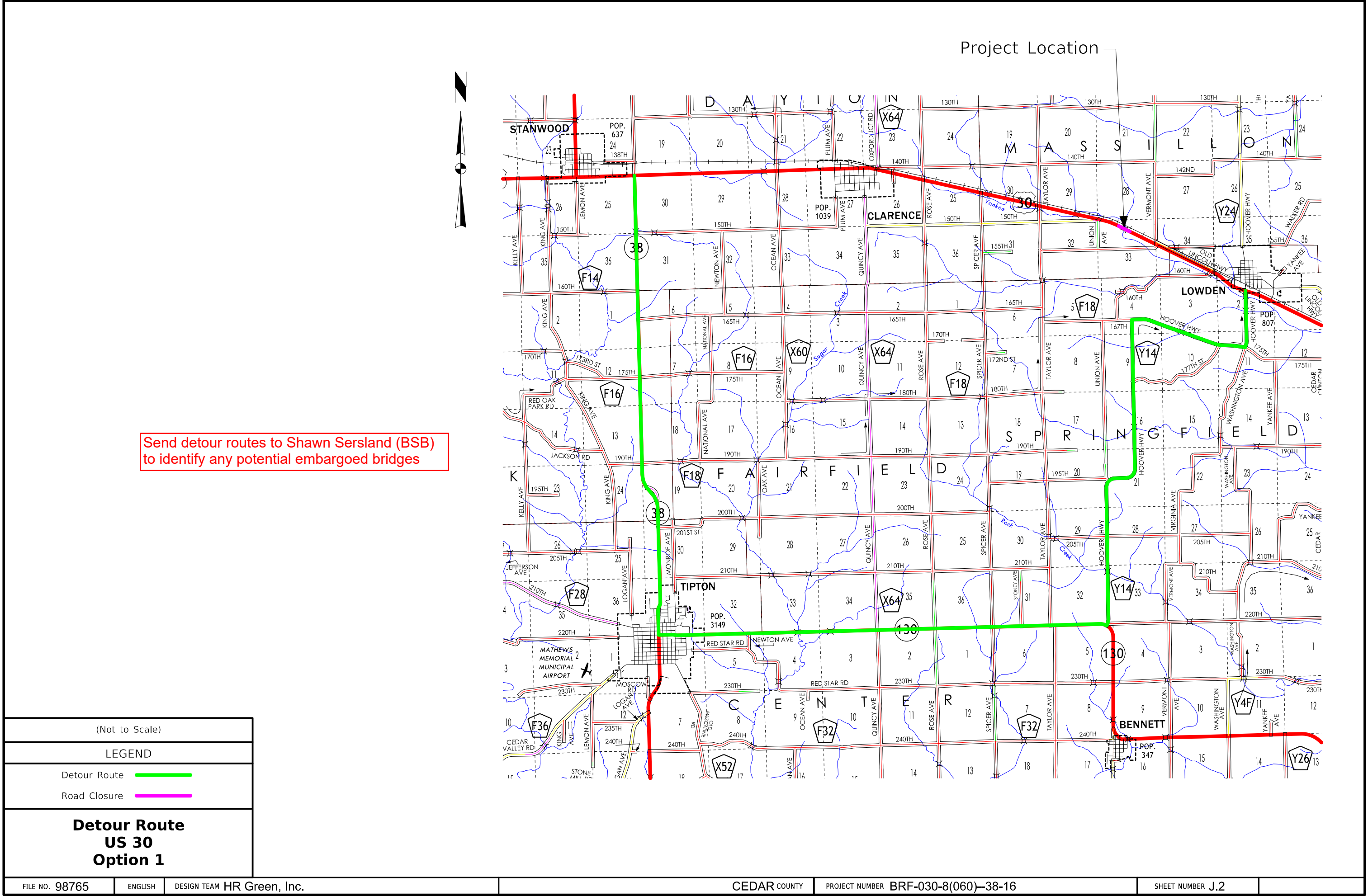
Maximum road closure duration is limited to 30 days. If the closure is expected to exceed this timeframe, notify the Engineer no later than 7 days prior to the end of the 30-day closure period.

Contractor shall sign and maintain detours for US 30. Permanent signing that conveys a message contrary to the message of the temporary detour signing or is not applicable to the working conditions shall be covered by the Contractor, as directed by the Engineer and stated in the Standard Specifications.

Construction will utilize Accelerated Bridge Construction methods that includes construction of the proposed superstructure within the adjacent US 30 roadside. During this construction, traffic shall be maintained along US 30 at all times. When the superstructure is ready to be moved into place, US 30 shall be closed and utilize an offsite detour.

Confirmed 30 days is reasonable duration.

Confirmed Contractor to maintain detour signage.



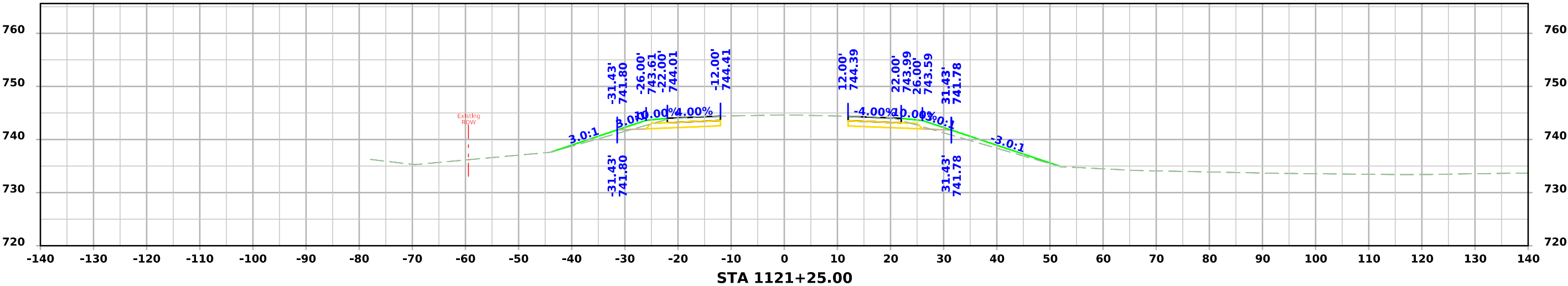
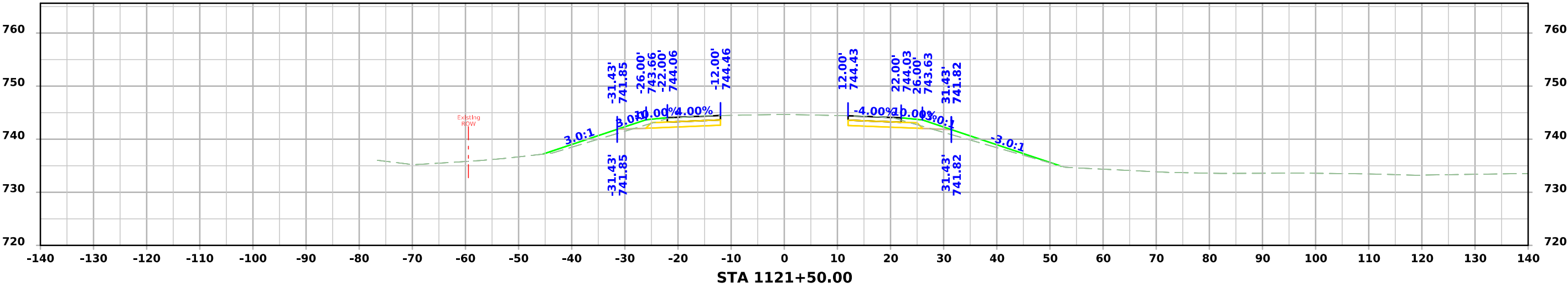
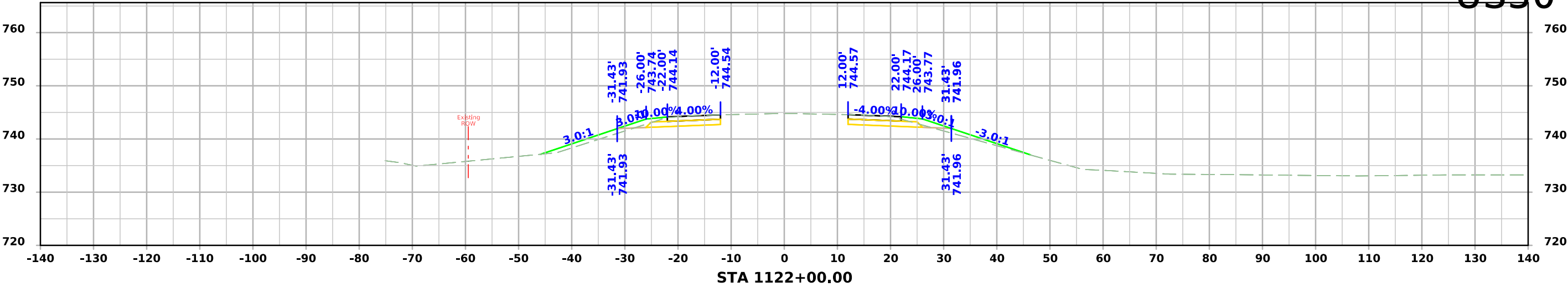
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CROSS SECTION VIEW COLOR LEGEND			
Design Color No.	Feature	Design Color No.	Feature
Aggregate		Grading	
(64)	Choke Stone	(8)	Behind Curb Cut
(42)	Engineering Fabric	(6)	Granular
(8)	Flooded Backfill	(13)	Granular Back Fill
(92)	Macadam Stone	(48)	Rock Undercut
(20)	Modified	(8)	Shoulder Earth Fill
(12)	Plowing Shaping	(2)	Side Slopes
(14)	Porous Backfill	(226)	Side Slopes Dressing
(8)	Revetment Class A	Substrata	
(6)	Revetment Class B	(128)	Boulder
(62)	Revetment Class C	(209)	Boulder Removed
(188)	Revetment Class D	(48)	Broken Weathered
(28)	Revetment Class E	(210)	Broken Weathered Removed
(12)	Shoulder Special Backfill	(3)	Core Out
(12)	Special Backfill	(115)	Core Out Remove Only
(20)	Subbase	(195)	Core Out Remove and Replace
(20)	Subbase Lower	(203)	Existing Pavement
(20)	Subbase Upper	(184)	Existing Pavement Remove Only
(118)	Subgrade Treatment	(200)	Existing Pavement Remove and Replace
Asphalt		(6)	Loam
(207)	HMA Base Course	(211)	Loam Removed
(207)	HMA Interim Course	(80)	Rock
(207)	HMA Surface Course	(212)	Rock Removed
Bridge		(4)	Select Sand
(0)	Bridge	(214)	Select Sand Removed
Concrete		(3)	Shale
(0)	Barrier Concrete	(215)	Shale Removed
(0)	Barrier Concrete Footing	(10)	Topsoil
(0)	Curb Gutter	(2)	Topsoil Remove Only
(48)	Flowable Mortar	(4)	Topsoil Remove and Replace
(0)	Median Concrete	Unsuitable / Waste	
(0)	PCC Pavement	(3)	Unsuitable Type A
(0)	Sidewalk	(216)	Unsuitable Type A Removed
Existing		(13)	Unsuitable Type B
(0)	Existing Pavement	(217)	Unsuitable Type B Removed
Shoulder		(11)	Unsuitable Type C
(209)	Shoulder HMA	(218)	Unsuitable Type C Removed
(0)	Shoulder PCC	(3)	Waste
(6)	Shoulder Granular	(219)	Waste Removed
Structural			
(112)	Noise Wall		
(112)	Noise Wall Footing		
(112)	Retaining Wall Back		
(112)	Retaining Wall Back Excavate		
(112)	Retaining Wall Face		
(112)	Retaining Wall Front Excavate		
(112)	Retaining Wall Front Footing		
(112)	Retaining Wall MSE Gutter		
(112)	Retaining Wall Reinforced Earth		

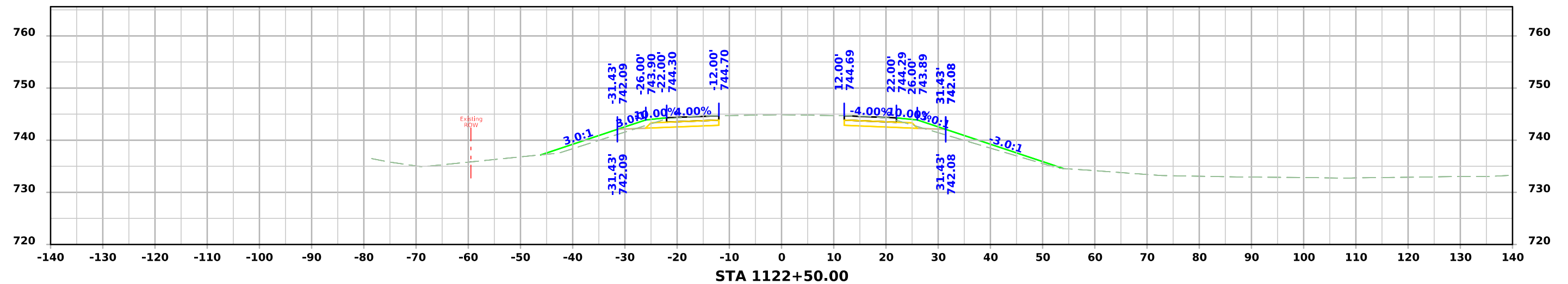
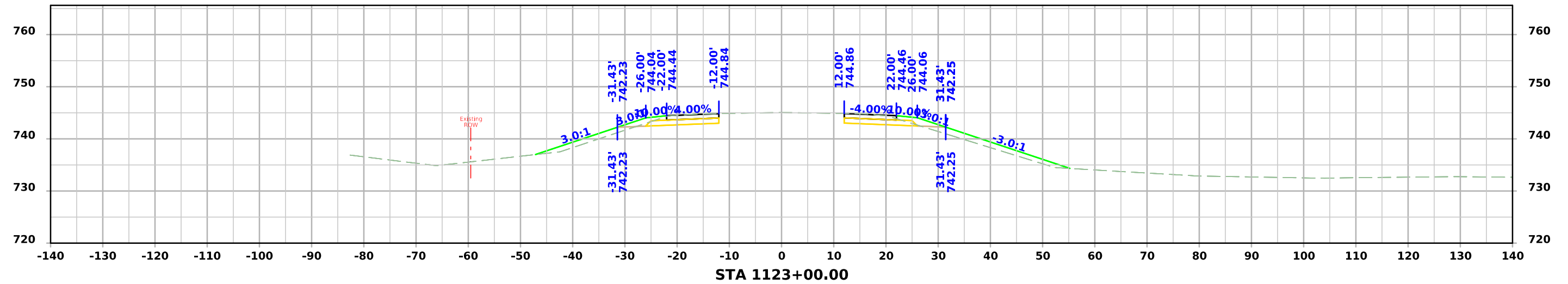
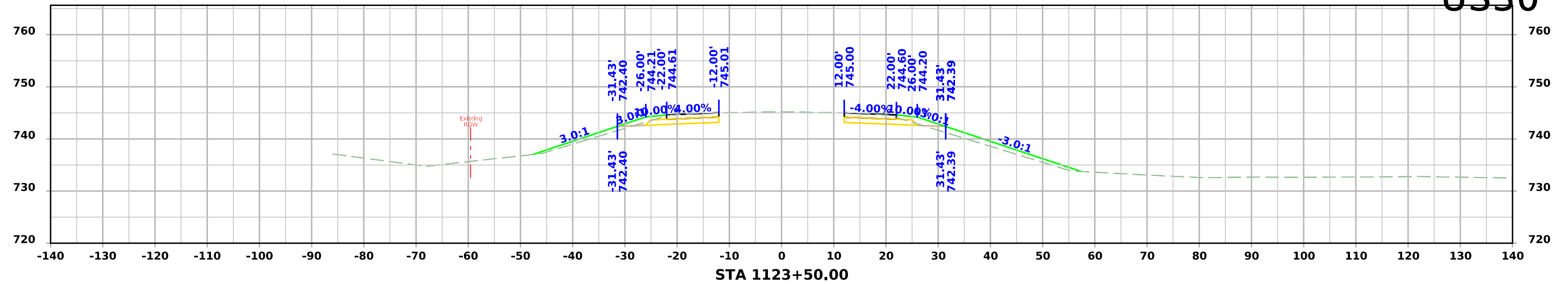
CROSS SECTIONS

LEGEND AND INFORMATION SHEET

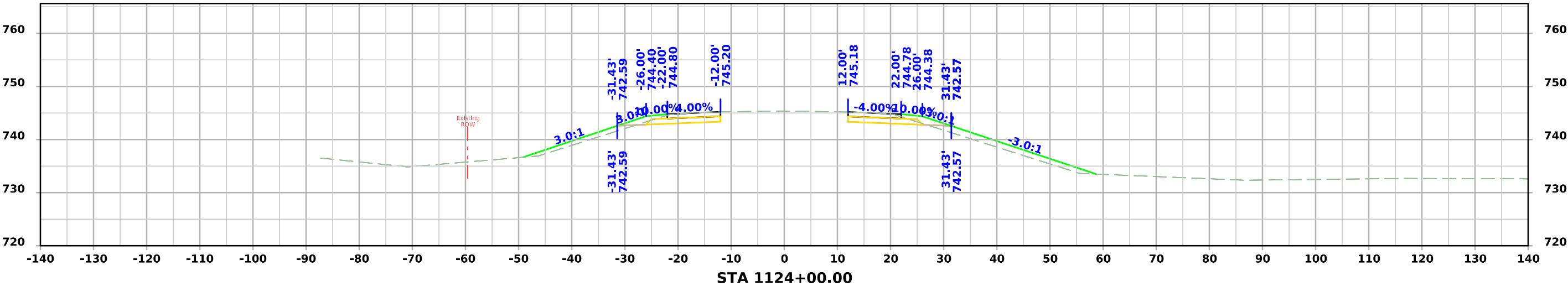
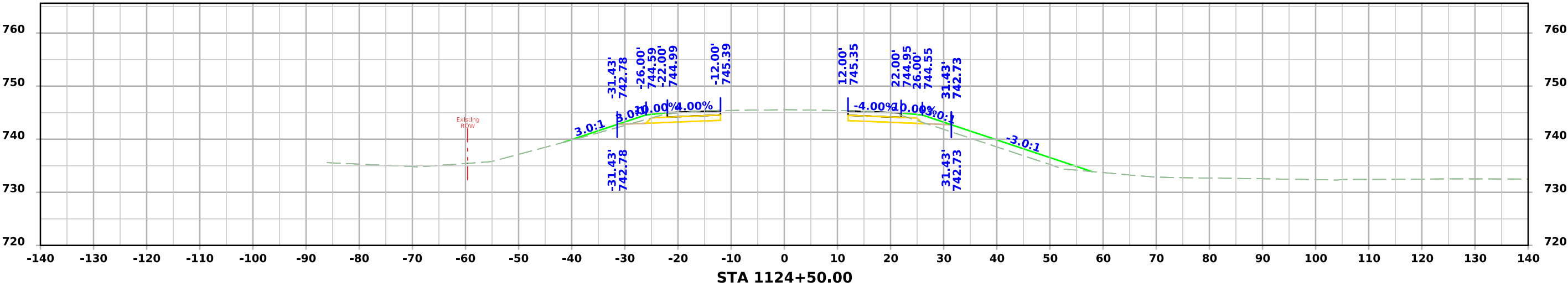
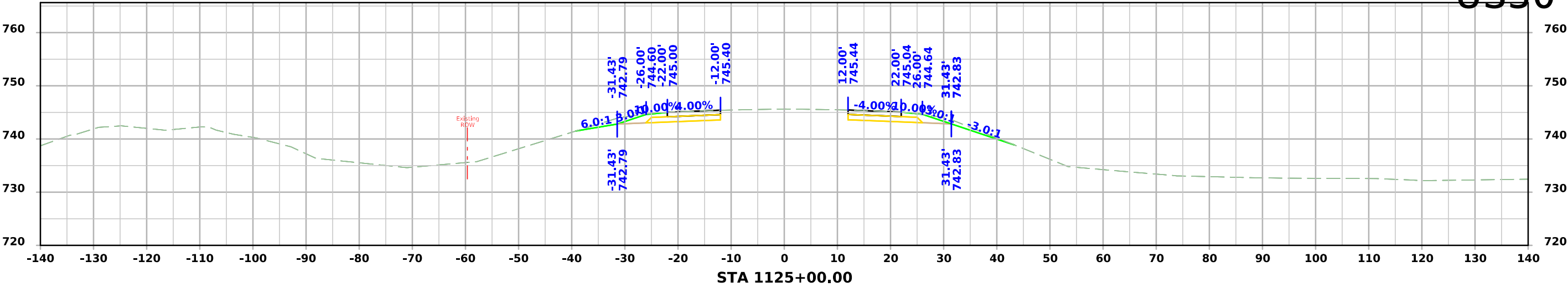
(COVERS SHEET SERIES W)



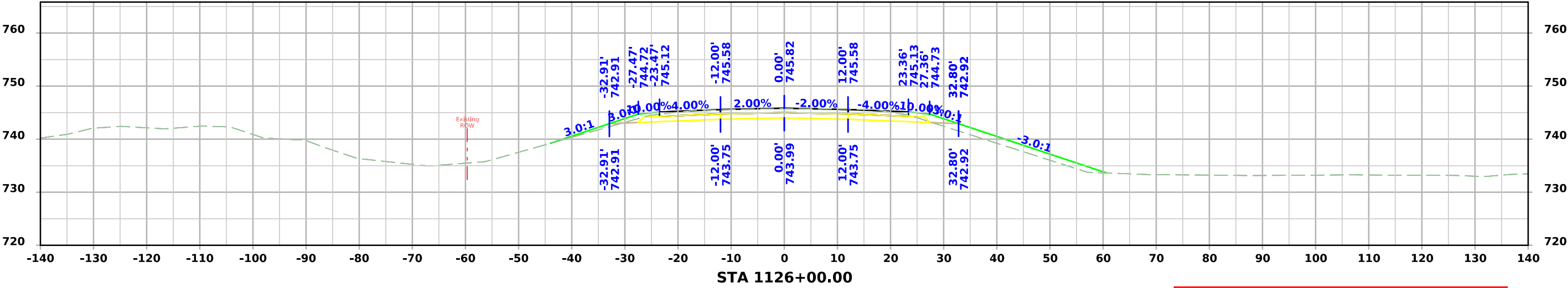
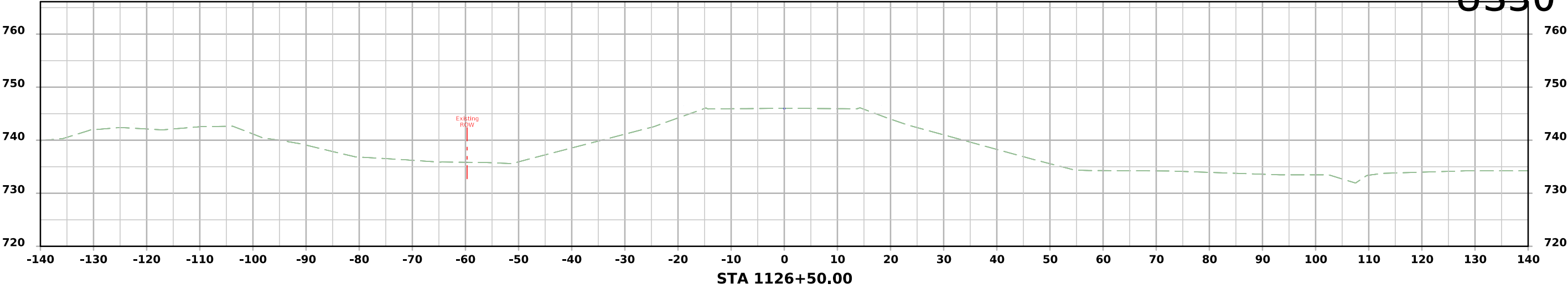
US30



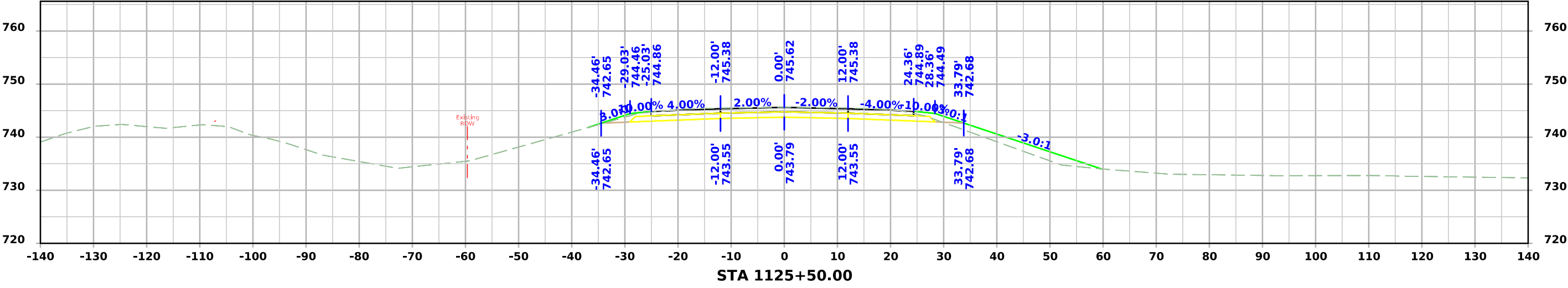
US30



US30



Confirmed 3:1 foreslope behind guardrail is preferred as along as no ROW impact.



US30

