

BRIDGE REPLACEMENT - CCS LETTING DATE
BRFN-009-7(38)--39-45 11-15-2022

HOWARD COUNTY - DESIGN NO. 123

LEGEND

INTERSTATE HIGHWAY	
PRIMARY HIGHWAY-DIVIDED	
PRIMARY HIGHWAY	
PORTLAND CEMENT CONCRETE ROAD	
ASPHALT ROAD	
BITUMINOUS ROAD	
GRAVEL ROAD	
EARTHEN ROAD	
INTERSTATE HIGHWAY	
UNITED STATES HIGHWAY	
STATE HIGHWAY	
COUNTY HIGHWAY	
RAILROAD	
PIPELINE	
AIRPORT	
HYDROLOGY	
BRIDGE	
STATE BOUNDARY	
COUNTY BOUNDARY	
CORPORATE BOUNDARY	
TOWNSHIP LINE	
SECTION LINE	
ROAD NAMES	
UNINCORPORATED PLACE	



Highway Division

PLANS OF PROPOSED IMPROVEMENTS ON THE

PRIMARY ROAD SYSTEM

HOWARD COUNTY

BRIDGE REPLACEMENT - CCS

IOWA 9 OVER NORTH BRANCH TURKEY RIVER

THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2015, PLUS APPLICABLE GENERAL SUPPLEMENTAL SPECIFICATIONS, DEVELOPMENTAL SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS AND SPECIAL PROVISIONS SHALL APPLY TO CONSTRUCTION WORK ON THIS PROJECT.

ENGLISH STANDARD BRIDGE PLANS

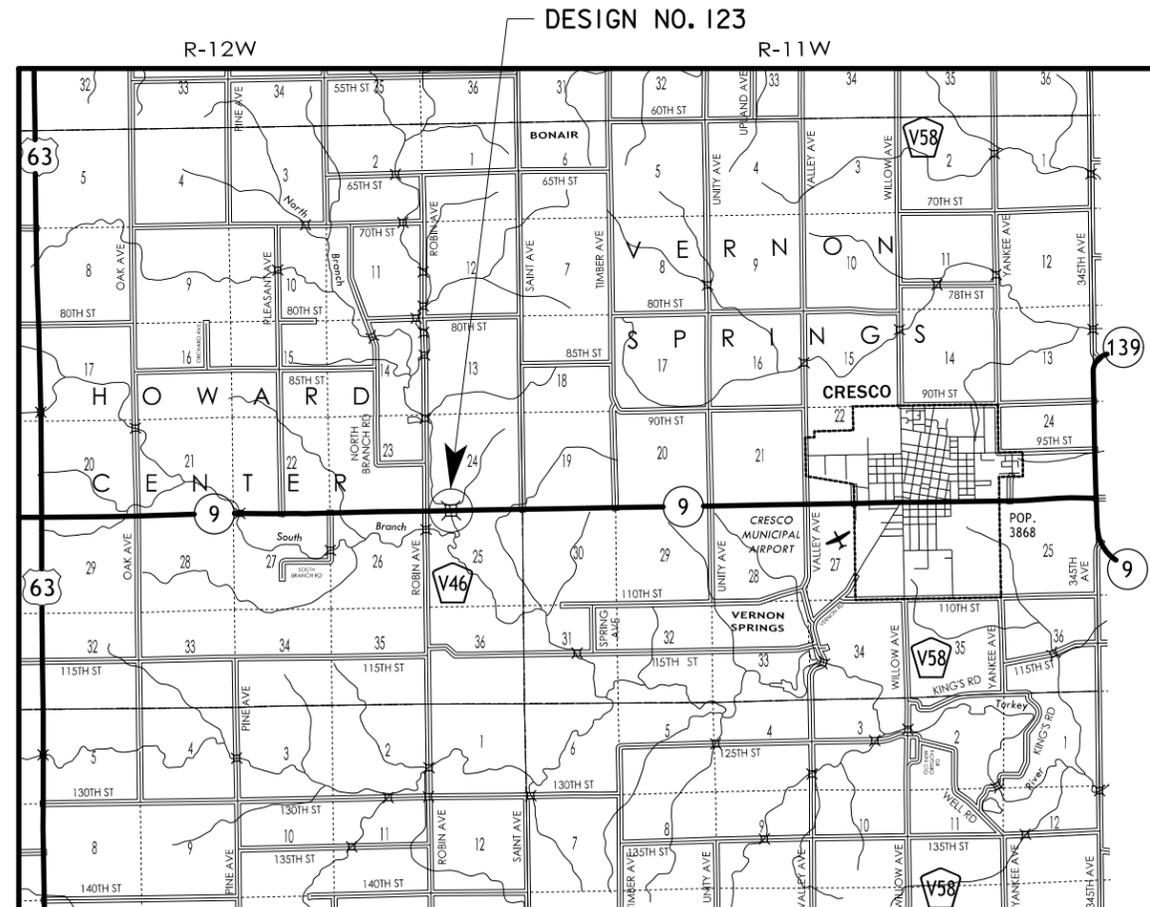
STANDARD	ISSUED	REVISED
J44-01-14	07-14	03-16
J44-08-14	07-14	
J44-09-14	07-14	
J44-20-14	07-14	04-16
J44-21-14	07-14	
J44-25-14	07-14	
J44-26-14	07-14	
J44-39-14	07-14	03-16
J44-44-14	07-14	
J44-45-14	07-14	
J44-46-14	07-14	09-14
J44-47-14	07-14	09-16
J44-50-14	07-14	03-16
J44-51-14	07-14	
J44-52-14	07-14	09-16

TOTAL SHEETS	23
PROJECT NUMBER	BRFN-009-7(38)--39-45
R.O.W. PROJECT NUMBER	
NHSN-009-7(39)--2R-45	
PROJECT IDENTIFICATION NUMBER	18-45-009-010

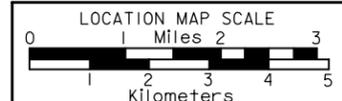
INDEX OF SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2-4	DESIGN NO. 123
B.1-B.2	TYPICAL SECTION AND DETAILS
C.1	TABULATIONS
D.1-D.2	IOWA 9 PLAN AND PROFILE
G.1-G.3	SURVEY INFORMATION
J.1-J.2	TRAFFIC CONTROL
W.1-W.9	CROSS SECTION

REVISIONS



LOCATION MAP



PROJECT DIRECTORY NAME: 4500901018



1-800-292-8989
www.iowaonecall.com

REVISIONS TO THIS DESIGN PLAN AND/OR PROJECT SPECIFICATIONS SHOULD BE SUBMITTED BY _____

STANDARD ROAD PLANS

STANDARD ROAD PLANS ARE LISTED ON SHEET NUMBER ?

DESIGN DATA RURAL

2023 AADT	3480	V.P.D.
2043 AADT	3960	V.P.D.
2043 DHV	400	V.P.H.
TRUCKS	14	%
Total Design ESALs	--	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
1	CHRISTOPHER J. CRISWELL	STRUCTURAL DESIGN
1	STEVEN A. KLOCKE	HYDRAULIC DESIGN
B.1	CINDY A. SPENCER	ROADWAY DESIGN
J44 BRIDGE STANDARDS	NORMAN L. MCDONALD	STRUCTURAL DESIGN

HYDRAULIC DESIGN

I hereby certify that the 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: Steven A. Klocke Date: _____

Printed or Typed Name: Steven A. Klocke

My license renewal date is December 31, 2021

Pages or sheets covered by this seal: 1 & 2 (HYDRAULIC DATA, CHANNEL GRADING, WING DIKES AND REVETMENT)

STRUCTURAL DESIGN

I hereby certify that the 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.

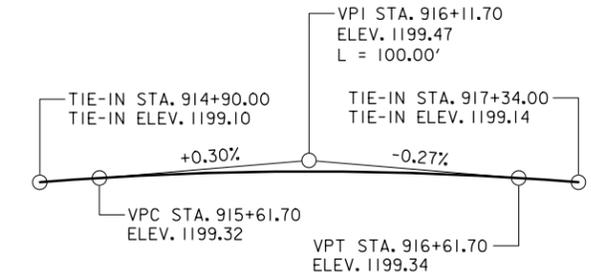
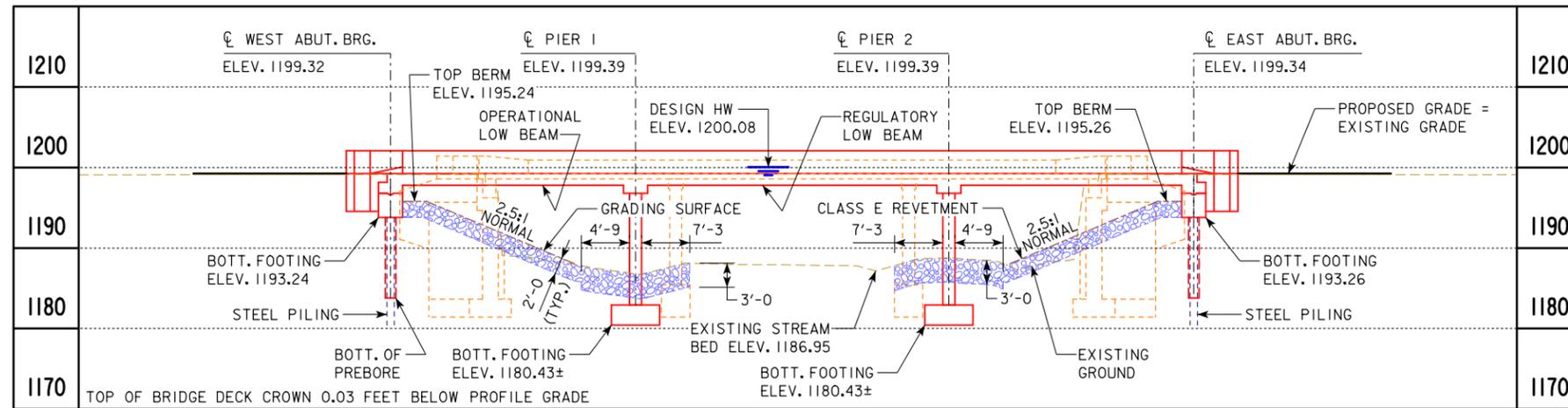
Signature: Christopher J. Criswell Date: _____

Printed or Typed Name: Christopher J. Criswell

My license renewal date is December 31, 2021

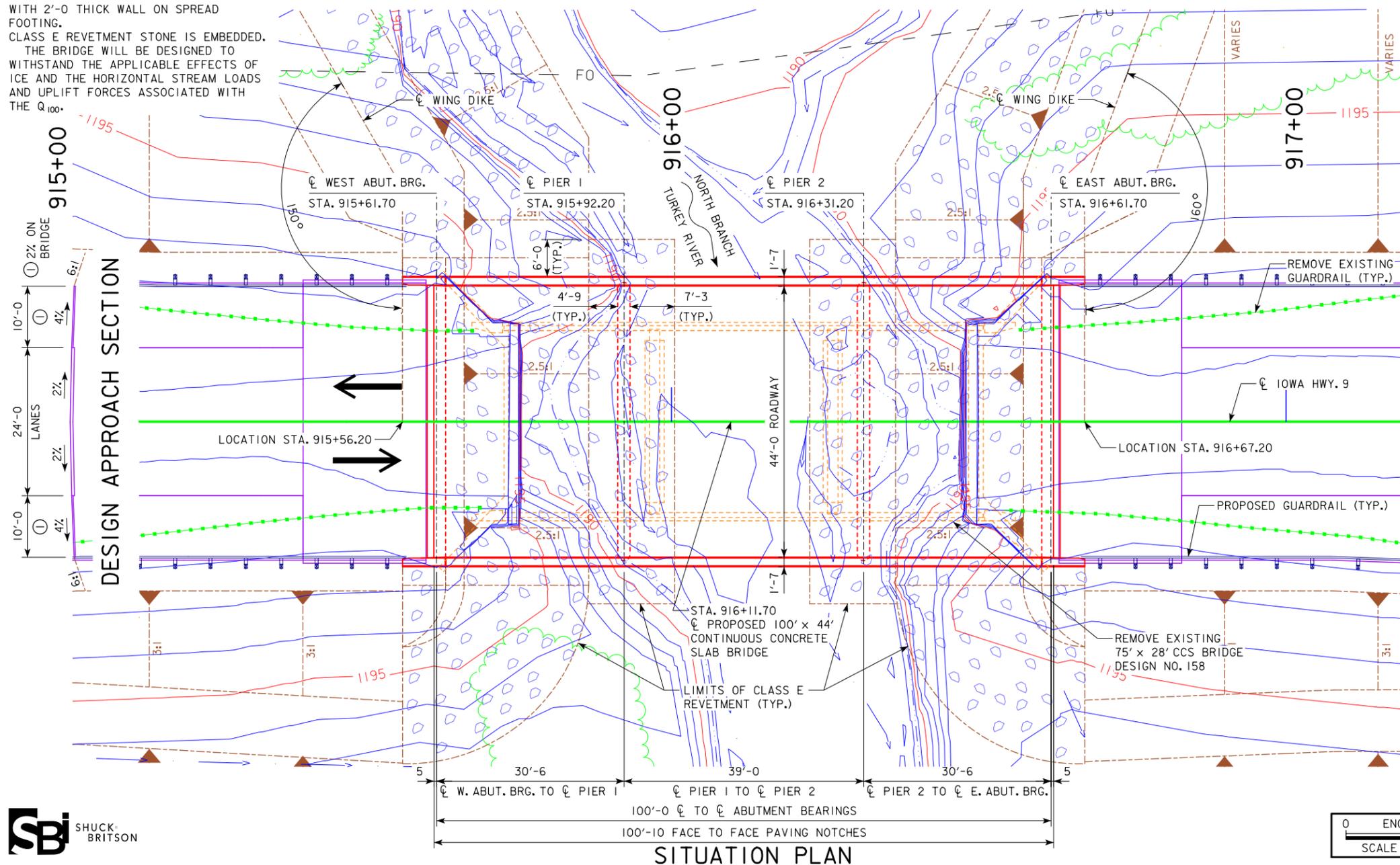
Pages or sheets covered by this seal: SHEETS ? THRU ? OF ?

CONTROL POINT 2 NORTHING 9874840.76 EASTING 12642934.97 ELEVATION 1198.92
 DESCRIPTION: BM SET FENO MON 0.32 MI EAST OF INTESC HWY 9 AND ROBIN AVE...
 76 FT SOUTH OF CTR HWY 9 AND 50 FT EAST OF CTR PARK ENT.



NOTES:
 STANDARD BRIDGE (J44-06)
 TL-4 BRIDGE RAILING PROPOSED
 PIER TYPE - MONOLITHIC DIAPHRAGM
 WITH 2'-0" THICK WALL ON SPREAD
 FOOTING.
 CLASS E REVETMENT STONE IS EMBEDDED.
 THE BRIDGE WILL BE DESIGNED TO
 WITHSTAND THE APPLICABLE EFFECTS OF
 ICE AND THE HORIZONTAL STREAM LOADS
 AND UPLIFT FORCES ASSOCIATED WITH
 THE Q₁₀₀.

LONGITUDINAL SECTION ALONG C ROADWAY



HYDRAULIC DATA

DRAINAGE AREA = 20.6 SQ. MI.
 STREAM SLOPE = 11.4 FT./MI.
 Q₅₀ (DESIGN) = 5,520 CFS
 STAGE = 1200.08 FT.
 REGULATORY LOW BEAM = 1197.48 FT.
 BACKWATER = 0.31 FT.
 AVG. BRIDGE VELOCITY = 3.16
 Q₁₀₀ = 6,520 CFS
 STAGE = 1200.58 FT.
 OPERATIONAL LOW BEAM = 1197.40 FT.
 BACKWATER = 0.20 FT.
 AVG. BRIDGE VELOCITY = 3.92 FPS
 Q₂₀₀ = 8,440 CFS
 STAGE = 1201.08 FT.
 DESIGN SCOUR ELEVATION = 1177.1
 Q OVERTOP = 3,510 CFS
 AVG. BRIDGE VELOCITY = 5.04 FPS
 CHECK SCOUR ELEVATION = 1177.99
 ROADWAY OVERTOP ELEVATION = 1199.1
 STA. 914+65.70
 Q₅₀₀ = 9,240 CFS

TRAFFIC ESTIMATE

2023 AADT	3480	V.P.D.
2043 AADT	3960	V.P.D.
2043 DHV	400	V.P.H.
TRUCKS	14	%

LOCATION

IA 9 OVER NORTH BRANCH
 TURKEY RIVER
 T-99N R-12W
 SECTION 24
 HOWARD CENTER TOWNSHIP
 HOWARD COUNTY
 FHWA NO. ?
 BRIDGE MAINT. NO. 4534.7S009
 LATITUDE 43.370931
 LONGITUDE -92.21360

UTILITY LEGEND

- E-- - ELECTRIC LINE - MI ENERGY
- T-- - TELEPHONE LINE - WINDSTREAM
- FO-- - FIBER OPTIC - FARMERS MUTUAL TELEPHONE
- - POWER POLE

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

PRELIMINARY
 DESIGN FOR 0° SKEW
100' X 44' CONTINUOUS CONCRETE SLAB BRIDGE
 30'-6" END SPANS 39'-0" CENTER SPAN
SITUATION PLAN
 STATION 916+11.70 (IA 9) NOVEMBER 2020
HOWARD COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 1 OF 3 FILE NO. 31709 DESIGN NO. 123



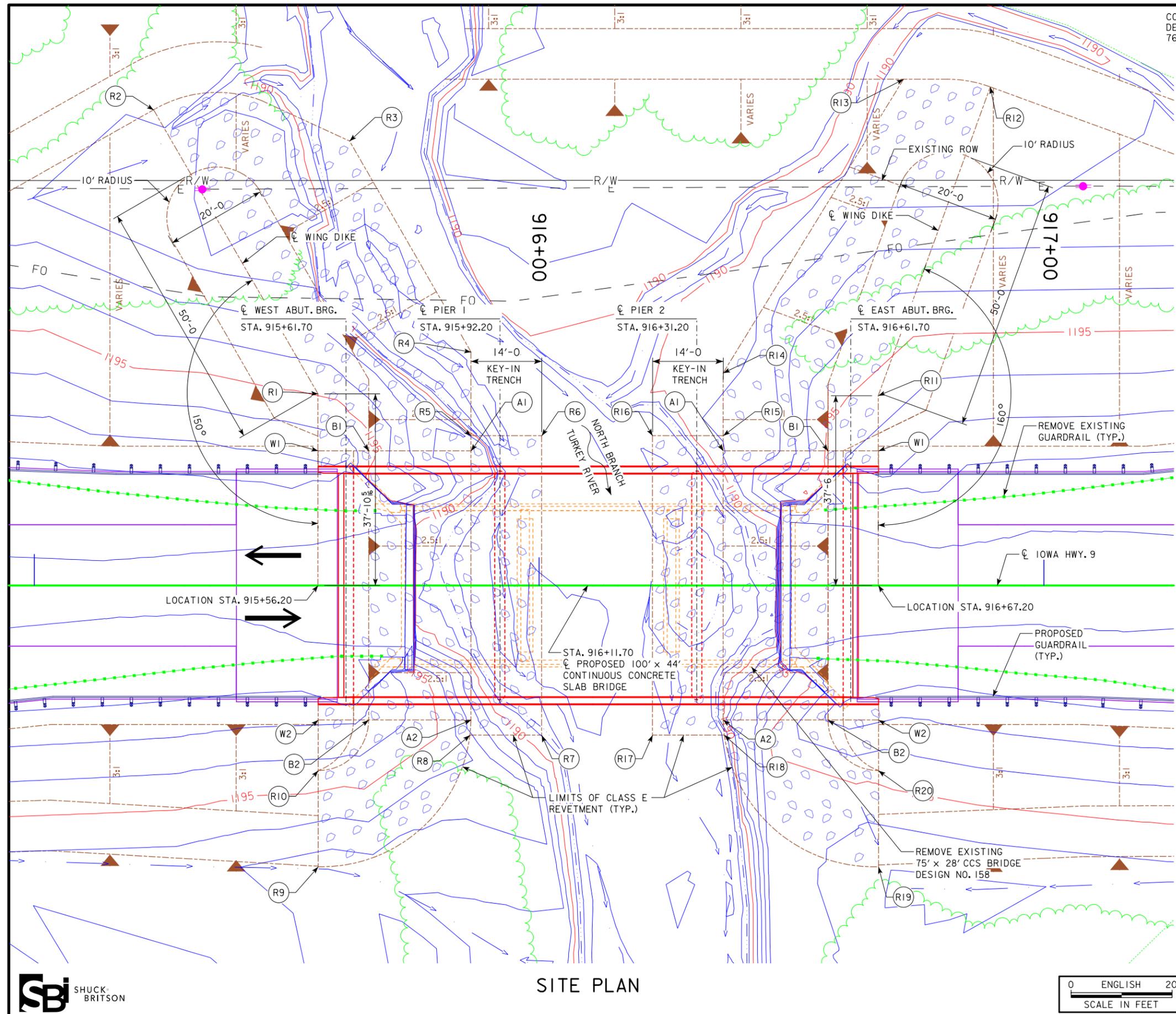
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 DESCRIPTION: BM SET FENO MON 0.32 MI EAST OF INTESC HWY 9 AND ROBIN AVE...
 76 FT SOUTH OF CTR HWY 9 AND 50 FT EAST OF CTR PARK ENT.

BERM SLOPE LOCATION TABLE						
POINTS	WEST ABUTMENT			EAST ABUTMENT		
	STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.
A1	915+86.51	26.58' LT.	1187.64	916+36.46	26.58' LT.	1187.66
A2	915+86.51	26.58' RT.	1187.64	916+36.46	26.58' RT.	1187.66
B1	915+66.20	26.58' LT.	1195.24	916+57.20	26.58' LT.	1195.26
B2	915+66.20	26.58' RT.	1195.24	916+57.20	26.58' RT.	1195.26
W1	915+56.20	26.58' LT.	1198.78	916+67.20	26.58' LT.	1198.87
W2	915+56.20	26.58' RT.	1198.78	916+67.20	26.58' RT.	1198.87

BERM SLOPE ELEVATIONS REFLECT THE GRADING SURFACE

REVETMENT LAYOUT:

- (R1) HWY. 9 915+37.86, 43.80' LT. ELEV. 1195.24
- (R2) HWY. 9 915+11.21, 93.93' LT. ELEV. 1191.00
- (R3) HWY. 9 915+50.06, 87.78' LT. ELEV. 1188.00
- (R4) HWY. 9 915+74.11, 46.11' LT. ELEV. 1188.00
- (R5) HWY. 9 915+74.11, 29.58' LT. ELEV. 1186.95
- (R6) HWY. 9 915+88.11, 29.58' LT. ELEV. 1186.95
- (R7) HWY. 9 915+88.11, 29.58' RT. ELEV. 1186.95
- (R8) HWY. 9 915+73.90, 29.58' RT. ELEV. 1186.95
- (R9) HWY. 9 915+43.84, 55.58' RT. ELEV. 1194.00
- (R10) HWY. 9 915+43.84, 36.58' RT. ELEV. 1197.07
- (R11) HWY. 9 916+54.80, 37.49' LT. ELEV. 1195.26
- (R12) HWY. 9 916+76.88, 98.51' LT. ELEV. 1192.00
- (R13) HWY. 9 916+59.79, 99.99' LT. ELEV. 1192.00
- (R14) HWY. 9 916+38.20, 27.50' LT. ELEV. 1190.00
- (R15) HWY. 9 916+24.06, 29.58' LT. ELEV. 1186.95
- (R16) HWY. 9 916+10.06, 29.58' LT. ELEV. 1186.95
- (R17) HWY. 9 916+10.06, 29.58' RT. ELEV. 1186.95
- (R18) HWY. 9 916+24.30, 29.58' RT. ELEV. 1186.95
- (R19) HWY. 9 916+54.84, 55.58' RT. ELEV. 1194.25
- (R20) HWY. 9 916+54.84, 36.58' RT. ELEV. 1197.30



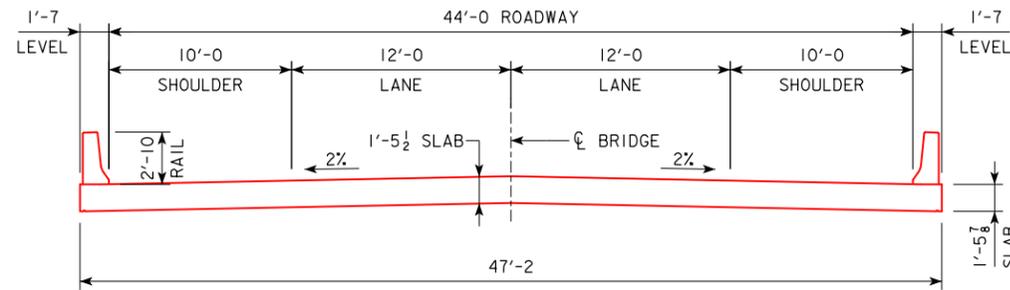
SITE PLAN



PRELIMINARY
 DESIGN FOR 0° SKEW
**100' X 44' CONTINUOUS CONCRETE
 SLAB BRIDGE**
 30'-6 END SPANS 39'-0 CENTER SPAN
SITUATION PLAN - SITE
 STATION 916+11.70 (IA 9) NOVEMBER 2020
HOWARD COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 2 OF 3 FILE NO. 31709 DESIGN NO. 123



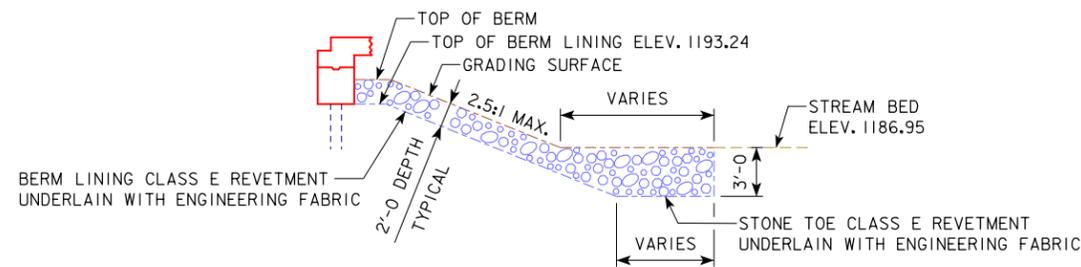
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TYPICAL SECTION
(CONTINUOUS CONCRETE SLAB)

REVETMENT QUANTITIES			
LOCATION	REVETMENT CL. E (TON)	ENGINEERING FABRIC (SY)	EXCAVATION (CY)
BERM LINING - WEST ABUTMENT	282	316	176
STONE TOE - WEST ABUTMENT	137	98	90
WING DIKE - WEST ABUTMENT	210	223	0
BERM LINING - EAST ABUTMENT	282	316	176
STONE TOE - EAST ABUTMENT	137	98	90
WING DIKE - EAST ABUTMENT	214	227	0
TOTALS	1262	1278	532

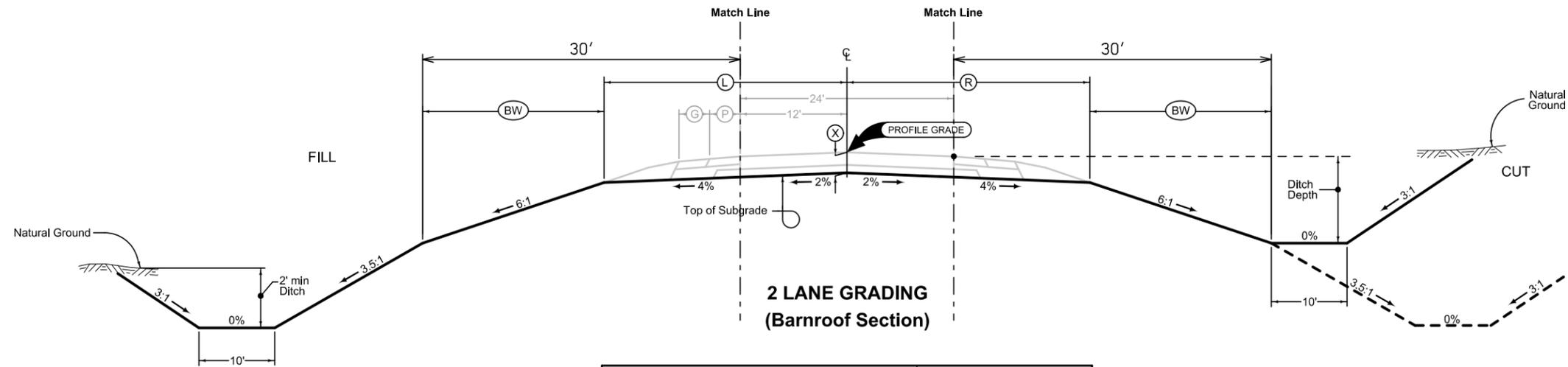
EXCAVATION QUANTITY CALCULATED FROM GRADING SURFACE.
 REVETMENT ESTIMATED AT 1.6 TON/CY.



SECTION THROUGH STONE TOE AND BERM LINING

PRELIMINARY
 DESIGN FOR 0° SKEW
**100' X 44' CONTINUOUS CONCRETE
 SLAB BRIDGE**
 DETAILS
 STATION 916+11.70 (1A 9) NOVEMBER 2020
HOWARD COUNTY
 IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
 DESIGN SHEET NO. 3 OF 3 FILE NO. 31709 DESIGN NO. 123



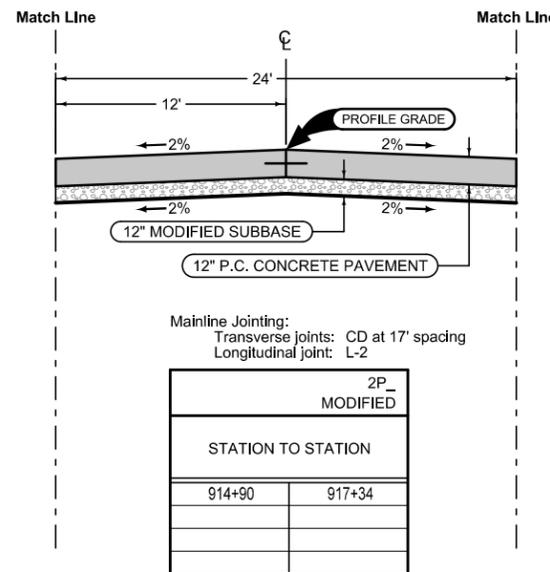


Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See Plan & Profile sheets and cross sections for additional details of ditches and backslopes.

**2 LANE GRADING
(Barnroof Section)**

LOCATION		DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION	(L) Feet	(R) Feet	(X) Inches	(BW) Feet
Iowa 9	914+90 917+34			24	

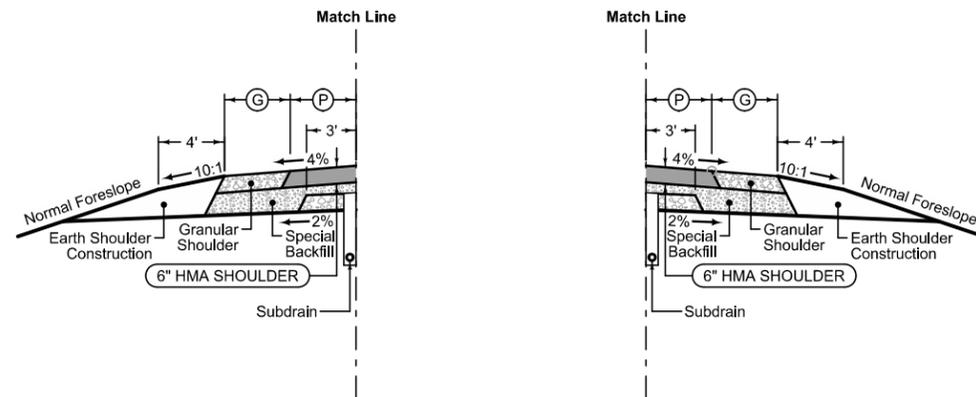


2P_ MODIFIED	
STATION TO STATION	
914+90	917+34

Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: B

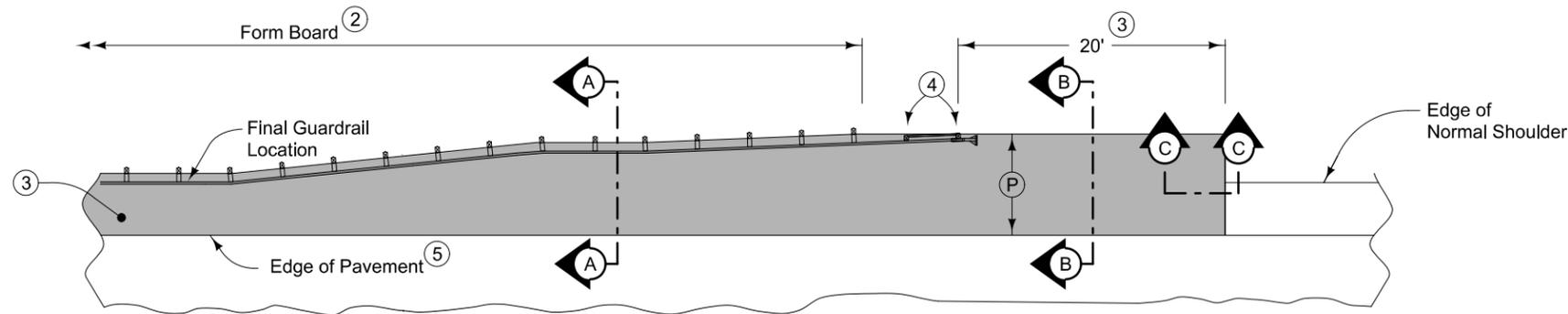
2_C_ 10-15-13		(P) Feet	(G) Feet
STATION TO STATION			
914+90	917+34	4	6



Combination Shoulder

Shoulder Jointing:
 Longitudinal joint: B

2_C_ 10-15-13		(P) Feet	(G) Feet
STATION TO STATION			
914+90	917+34	4	6



PLAN VIEW

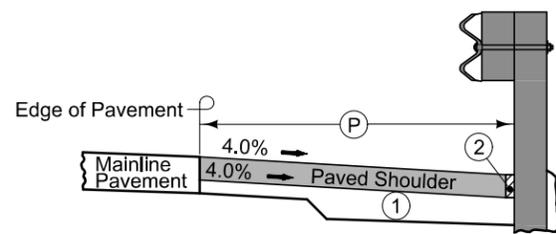
9" HMA Paved Shoulder at guardrail. 8" PCC may be substituted with the following jointing layout:

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.

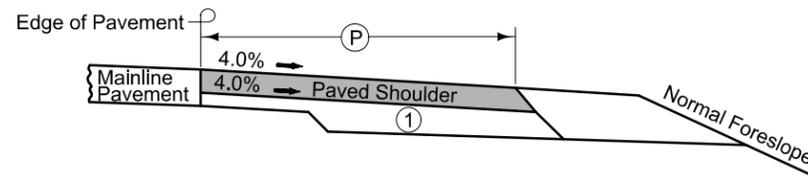
Compaction of HMA is required to face of guardrail post. Hand compaction will be allowed under guardrail. Removal and reinstallation of guardrail will be allowed with no additional payment.

Refer to Tabulation 112-9 for shoulder quantities.

- ① For subgrade treatment, refer to other details in the plan.
- ② PCC option only: 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. Refer to note 4 for final 2 posts.
- ③ Continue paved shoulder to existing paved shoulder or 20 feet beyond the center of the first post.
- ④ Shoulder may be notched for final 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ⑤ 'KT-1 joint for PCC shoulder.
'B' joint for HMA shoulder.

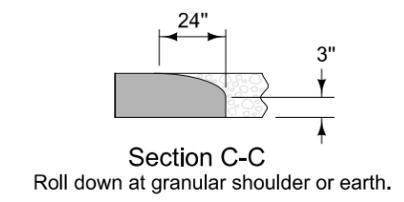


Section A-A



Section B-B

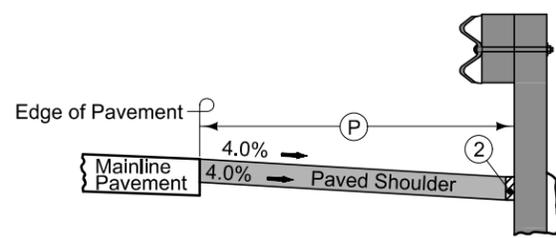
NEW CONSTRUCTION



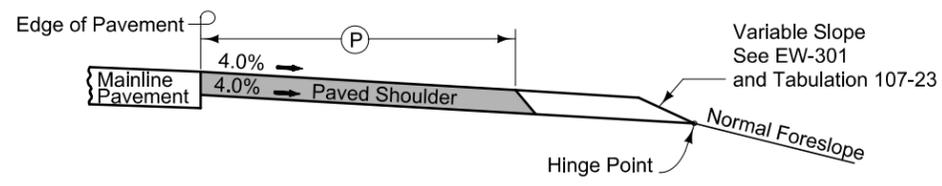
Section C-C

Roll down at granular shoulder or earth.

PAVED SHOULDER AT GUARDRAIL



Section A-A



Section B-B

EXISTING SHOULDER

SURVEY SYMBOLS

- BM Bench Mark
- PCP Photo Control Point
- ENT Centerline BL of Entrance
- CP Control Point
- SCR Section Corner
- WC Wild Card (Misc. Field Shot)
- REF Reference Tie Point
- ROW Right of Way Mark
- SBR Size of Bridge
- PLG Location of General Photo
- DTM Photogrammetry Elv Control Check
- SNP Unpaved Shoulder
- SH Paved Shoulder
- EP Edge of Paved Roads (ML or SR)
- C Centerline BL of Road (ML or SR)
- BL Topo Breakline
- CON Concrete or A/C Slab
- BRG Bridge
- EW Edge of Water
- GR Ground Shot
- DU Centerline Draw or Stream (Up)
- MIS Miscellaneous
- BNK Stream Bank
- PR Electric Riser Pole
- EL1D Electric Line MiEnergy - Quality D
- TPD Telephone Pedestal
- TL1D Telephone Line Windstream - Quality D
- FO1D Fiber Optic Farmers Mutual Telephone - Quality D
- D Centerline Draw or Stream (Down)
- PIP Pipe Culvert
- TIL Tile Line
- PRO Profile Shot
- BD Bridge Deck
- BCL Bridge Centerline
- TOP Top of Bridge Pier
- BLS Bridge Low Steel
- TW Top of Water

UTILITY LEGEND

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
- EL1D Electric Line MiEnergy - Quality D
- TL1D Telephone Line Windstream - Quality D
- FO1D Fiber Optic Farmers Mutual Telephone - Quality D

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	
Yellow	(4)		Highlight for Critical Notes or Features
Red	(3)		Delineates Restricted Areas
Lavender	(9)		Temporary Pavement Shading
Gray, Light	(48)		Proposed Pavement Shading
Gray, Med	(80)		Proposed Granular Shading
Gray, Dark	(112)		Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)		Grading Shading
Tan	(8)		Proposed Sidewalk Shading
Blue, Light	(230)		Proposed Sidewalk Landing Shading
Pink	(11)		Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

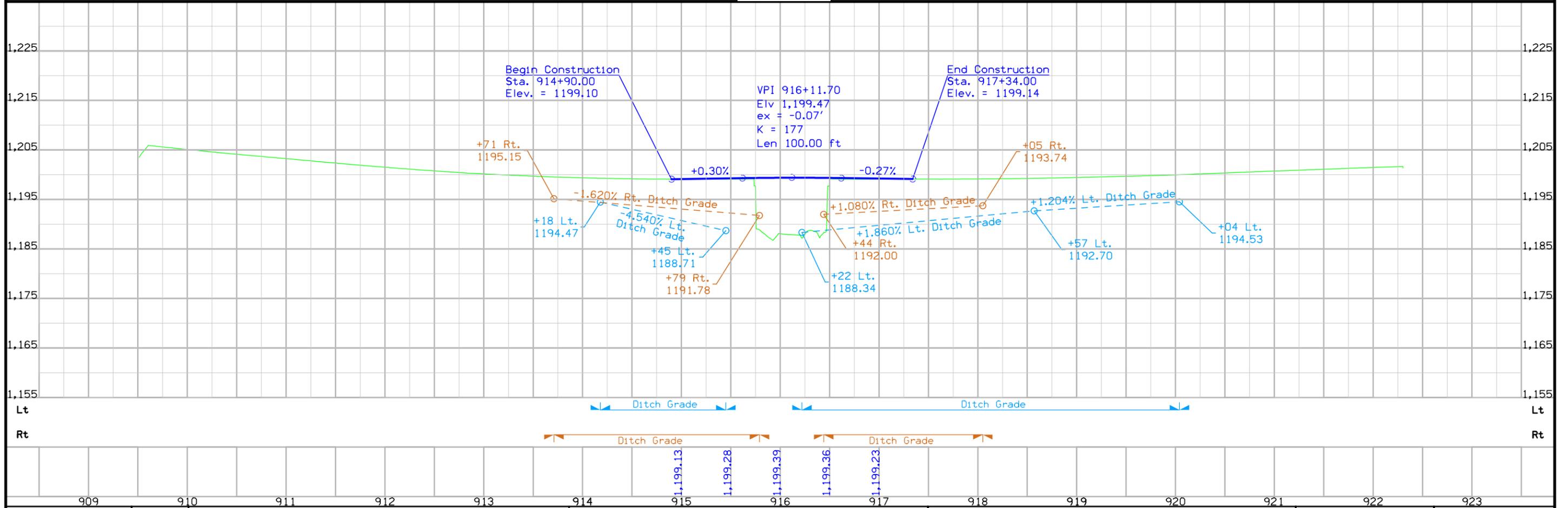
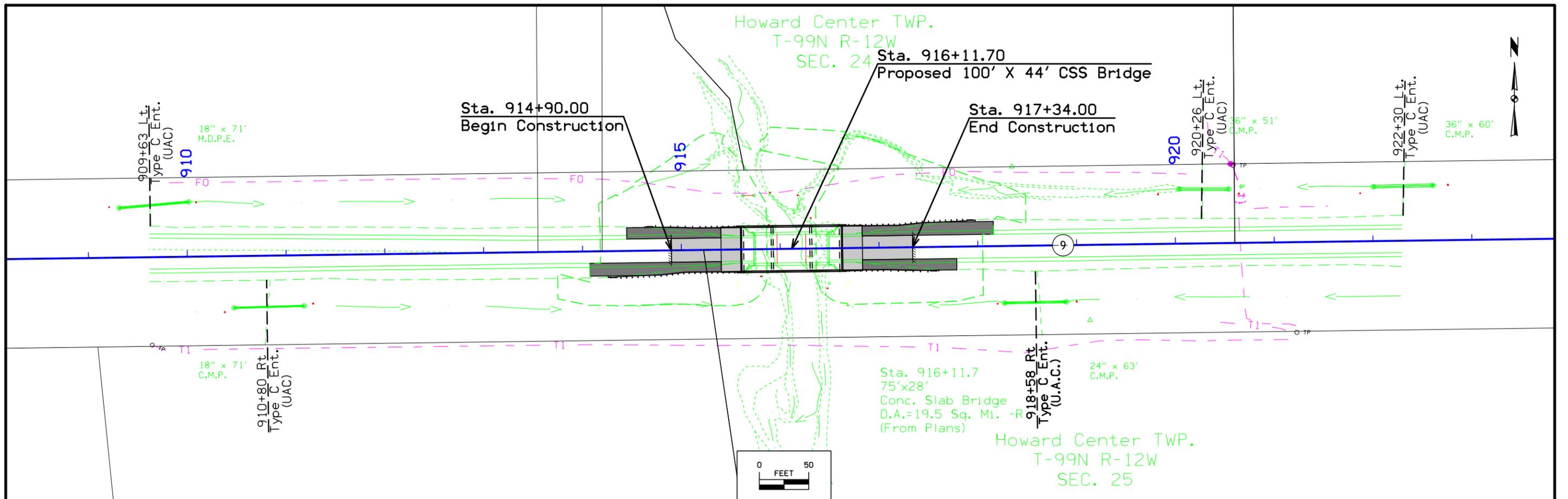
LINEWORK		Design Color No.	
Green	(2)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

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

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

PLAN AND PROFILE

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



Survey Information

Howard County
BRFN-009-7(38)--39-45
North Branch Turkey River 4.3 mi E of US 63
Bridge - Unspecified
PIN 18-45-009-010
Sap-0808.1

General Information

Measurement units for this survey are US survey feet. This survey is for proposed replacement of the Iowa Hwy. 9 bridge over the North Branch of the Turkey River. Project datum and control information is provided by Design Survey Office. This project is a Partial DTM with Photo control. This survey request was for the Iowa Hwy. 9 corridor only.

Vertical Control

Vertical datum for this survey is NAVD88 (Computed using Geoid12b). GRS80 Ellipsoidal Height was computed at project Pts. 2000-411, CRESCO, OREGON, CP1, CP2 & CP3 by conducting one concurrent 5 ½-hour static session. Additional benchmarks were placed throughout the project using a GNSS Base-Rover setup relative to Pt. CP1 and Pt. CP2. Two observations with a minimum of 4-hours between were collected and used in a weighted average.

This survey observed 1 NGS Control Monument with published NAVD88 height to compare to local ground control:

NGS 2nd. order class 0 mark designated CRESCO has a published Elev. Of 1297.75
Survey Elev. = 1297.79

This survey observed 1 local area county Control Monument with published NAVD88 height to compare to local ground control:

Howard County Control mark designated 2000-411 has a published Elev. of 1266.13
Survey Elev. = 1266.26

This survey observed 1 As-built plan bench mark to compare to local ground control:

BM 24B As-built Plans Project No. FN-9-7(6)--21-45 Culverts Elev. 1209.35
BM 502 Survey Elev. = 1209.38
The vertical difference at this mark is +0.03 to be applied to as-built plan elevations.

Bridge seat elevation from As-built Plans FN-31 Design No. 158 = 1198.71
Bridge seat average elevation this survey = 1197.72
The vertical difference is -1.01 to be applied to as-built plan elevations.

This survey established two additional local bench marks:

BM 500 Survey Elev. = 1199.62
BM 501 Survey Elev. = 1201.81

Horizontal Control

The project coordinate system for this survey is Iowa RCS Zone 2 (U.S. Survey Feet). This survey control is relative to IaRTN reference stations. IaRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. Coordinates were determined by conducting one concurrent 5 ½-hour static session. Additional control points were placed throughout the project using a GNSS Base-Rover setup relative to Pt. CP1 and Pt. CP2. Two observations with a minimum of 4-hours between were collected and used in a weighted average.

Alignment Information

The horizontal alignment for this survey is a retrace of As-built Plans Project No. FN-9-7(6)--21-45 Grade and Pave. Survey stationing was equated to the plan PI at Sta. 928+85.20 and run back and ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

PI Sta. 955+52.00 As-built Plans Project No. FN-9-7(6)--21-45
Survey PI Sta. 955+51.58

PI Sta. 928+85.20 As-built Plans Project No. FN-9-7(6)--21-45
Survey PI Sta. 928+85.20

PI Sta. 902+19.46 As-built Plans Project No. FN-9-7(6)--21-45
Survey PI Sta. 902+19.91

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 2

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 2

Point Name	Northing	Easting	Elevation	Feature Code-Monument Description
CP1	9875036.34	12641177.06	1224.47	BM DRILL HOLE IN FLANGE ROW RAIL...140 FT NORTH AND 64 FT WEST OF INTSEC HWY 9 AND ROBIN AVE
CP2	9874840.76	12642934.97	1198.92	BM SET FENO MON 0.32 MI EAST OF INTSEC HWY 9 AND ROBIN AVE...76 FT SOUTH OF CTR HWY 9 AND 50 FT EAST OF CTR PARK ENT.
CP3	9874843.14	12646491.85	1205.91	BM FD CONC MON WITH #4 RBR CTR...108 FT SOUTH AND 80 FT WEST OF INTSEC HWY 9 AND SAINT AVE

NO ACCESS RIGHTS ARE TO BE ACQUIRED ON THIS PROJECT.

ACCESS CONTROL PREVIOUSLY ACQUIRED.



Lot 1 of 1 of 1

MARK A. & REBECCA S. BURKE

Lot 2 of 1 of 4

Lot 2 of 1 of 1

915+29
±126'

916+59
±126'

914+67
±80'±Ex.R/W

917+78
±80'±Ex.R/W

Sta. 914+90.00
Begin Construction

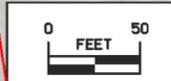
920
920+26 Lt.
Type C Ent.
(UAC)

922+30 Lt.
Type C Ent.
(UAC)

909+63 Lt.
Type C Ent.
(UAC)
910

910+80 Rt.
Type C Ent.
(UAC)

918+58 Rt.
Type C Ent.
(U.A.C.)

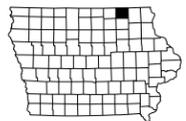
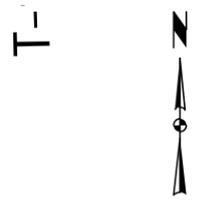
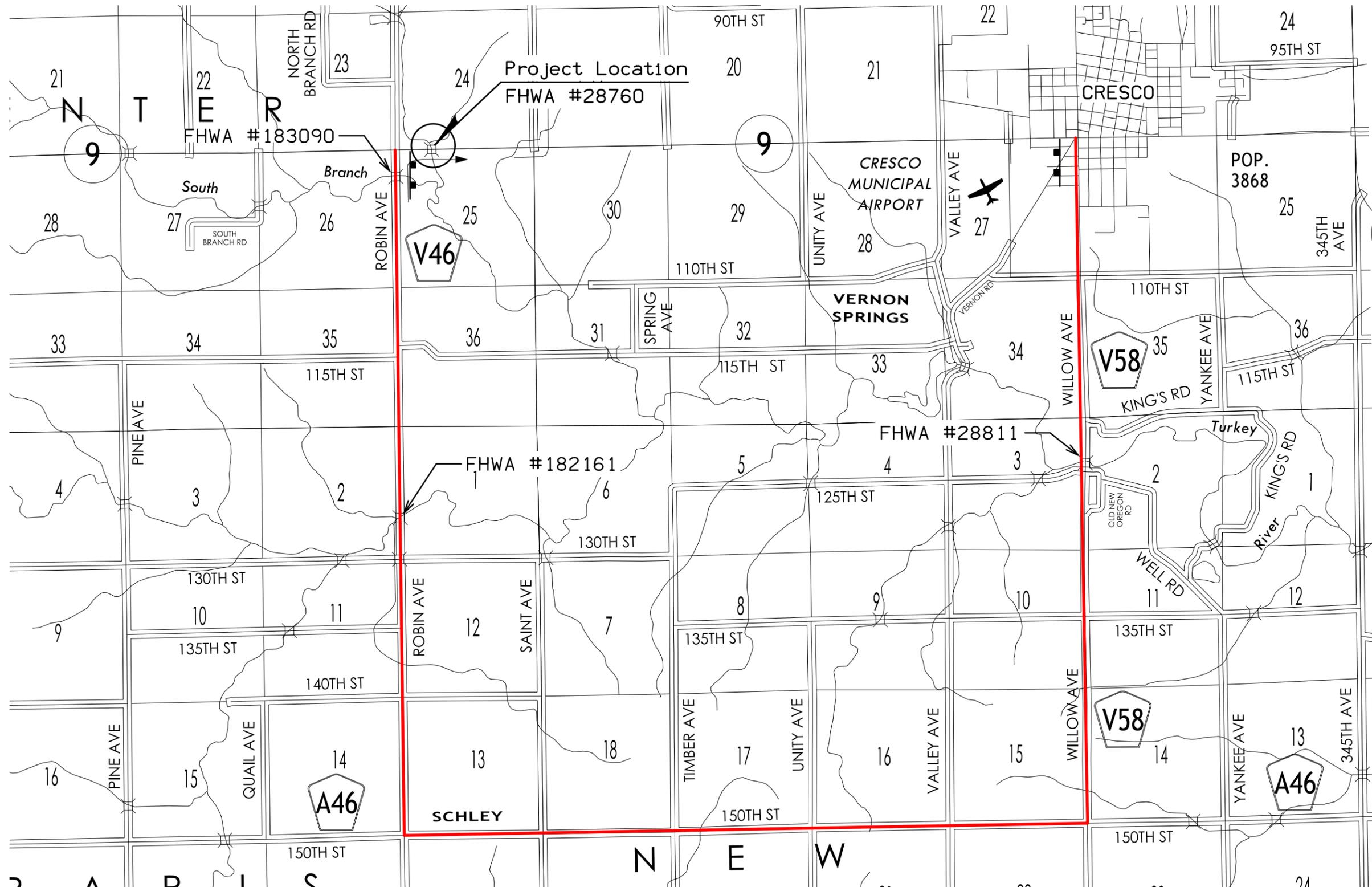


Right of Way Design Information	
THIS SHEET INCLUDED FOR INFORMATION ONLY	
ROW Team: CUVA /CARMAN	
ROW #: NHSN-009-7(39)--2R-45	
Plan Date: 12/02/2020	
Color Legend:	
	Property Lines
	Temporary Easement
	Permanent Acquisition

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. Iowa 9 will be closed to traffic during construction. Traffic will be detoured as shown on Sheet J.2. Detour signage will be the responsibility of District 2.
2. Local access shall be maintained at all times.



Not to Scale

- LEGEND
- Road Closure
 - Detour Route

LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

- Existing Ground Line
- ===== Proposed Template
- ===== Proposed Topsoil Placement
- Additional Topsoil Removal
- Subgrade Treatment
- Granular Shoulder
- ===== Pavement
- Existing Pipe\R/CB
- ===== Proposed Pipe\R/CB
- ===== Proposed Dike
- ===== All Elements Associated with Proposed Entrances

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TOPSOIL ----- Topsoil (Class 10)
- Slope Dressing Only
- CL 10 ----- Class 10 Materials
- SL 10 ----- Select Loams And Clay-Loams
- SL 20 ----- Select Sand
- UNS A ----- Unsuitable Type A Disposal
- UNS B ----- Unsuitable Type B Disposal
- UNS C ----- Unsuitable Type C Disposal
- SHALE ----- Shale
- WASTE ----- Waste
- BRK LS ----- Broken and Weathered Rock
- ROCK ----- Solid Rock
- BLDGS ----- Boulders

Note: All layer lines and descriptions identify layers above the line.

Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

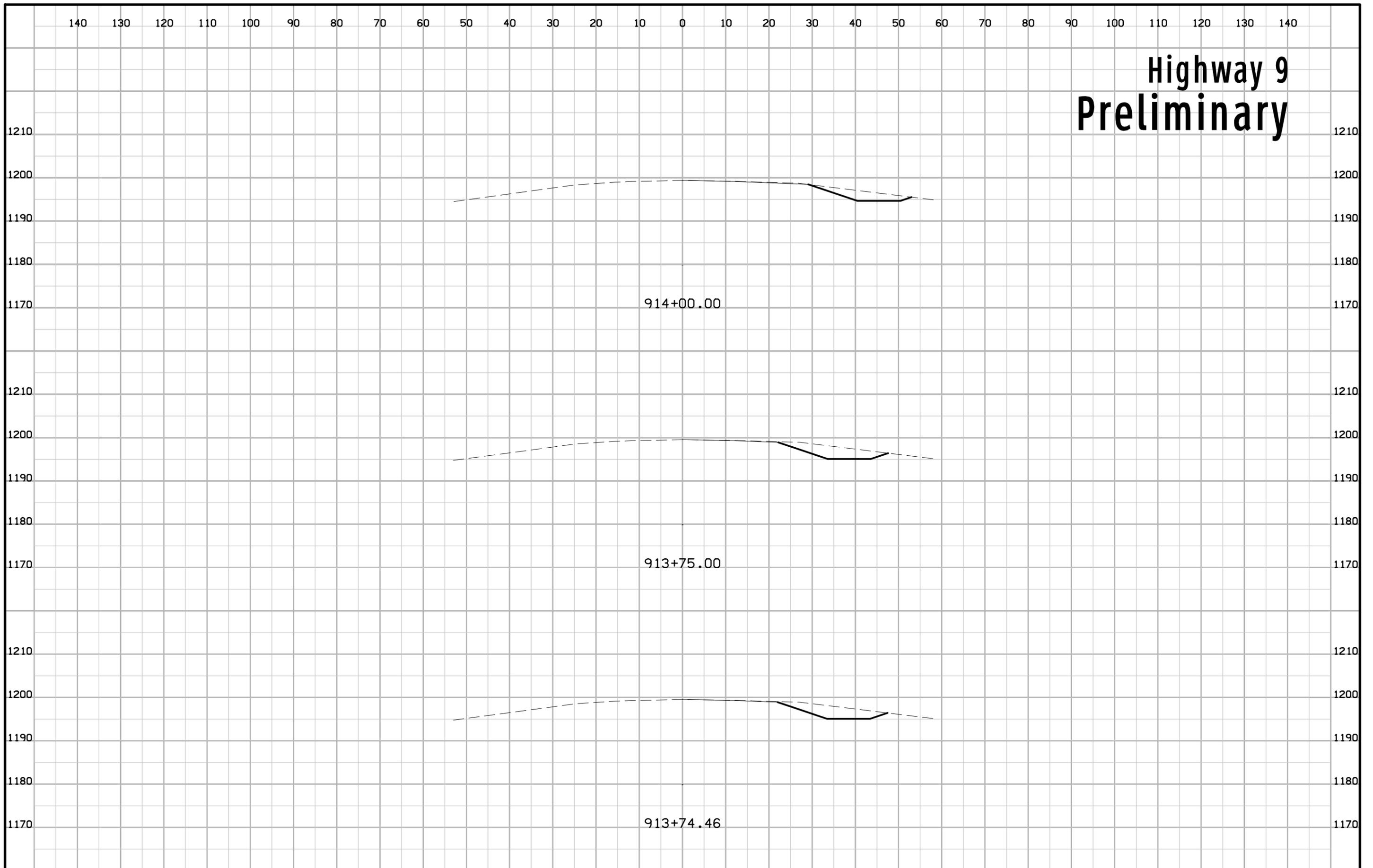
SYMBOL LEGEND OF CROSS SECTION SHEETS

- Existing ROW
----- Existing Right-of-Way Limit
- Proposed ROW
----- Proposed Right-of-Way Limit
- Temporary ROW
----- Temporary Right-of-Way Limit

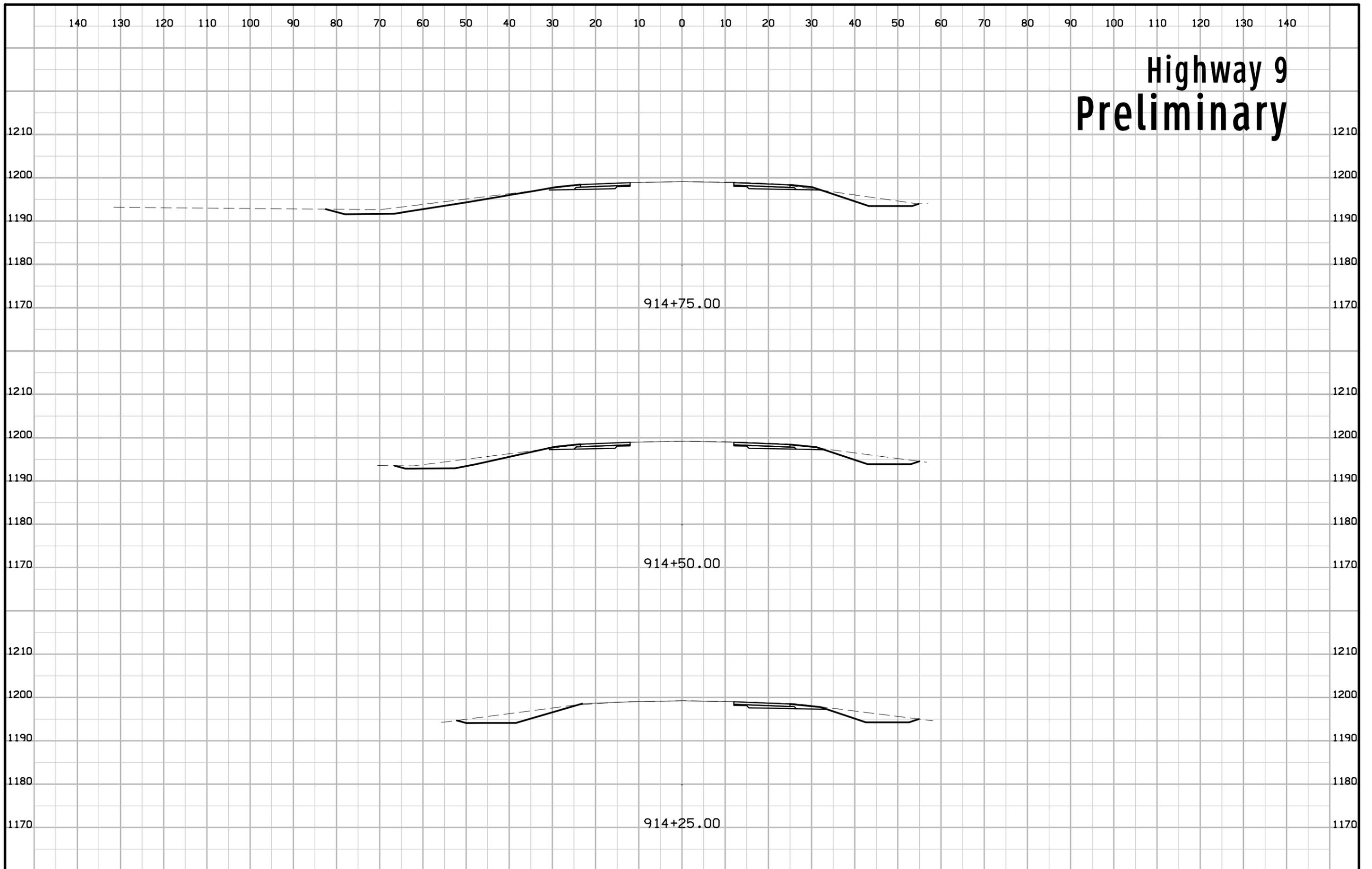
**CROSS SECTION
LEGEND AND SYMBOL
INFORMATION SHEET**

(COVERS SHEET SERIES W, X, Y, & Z)

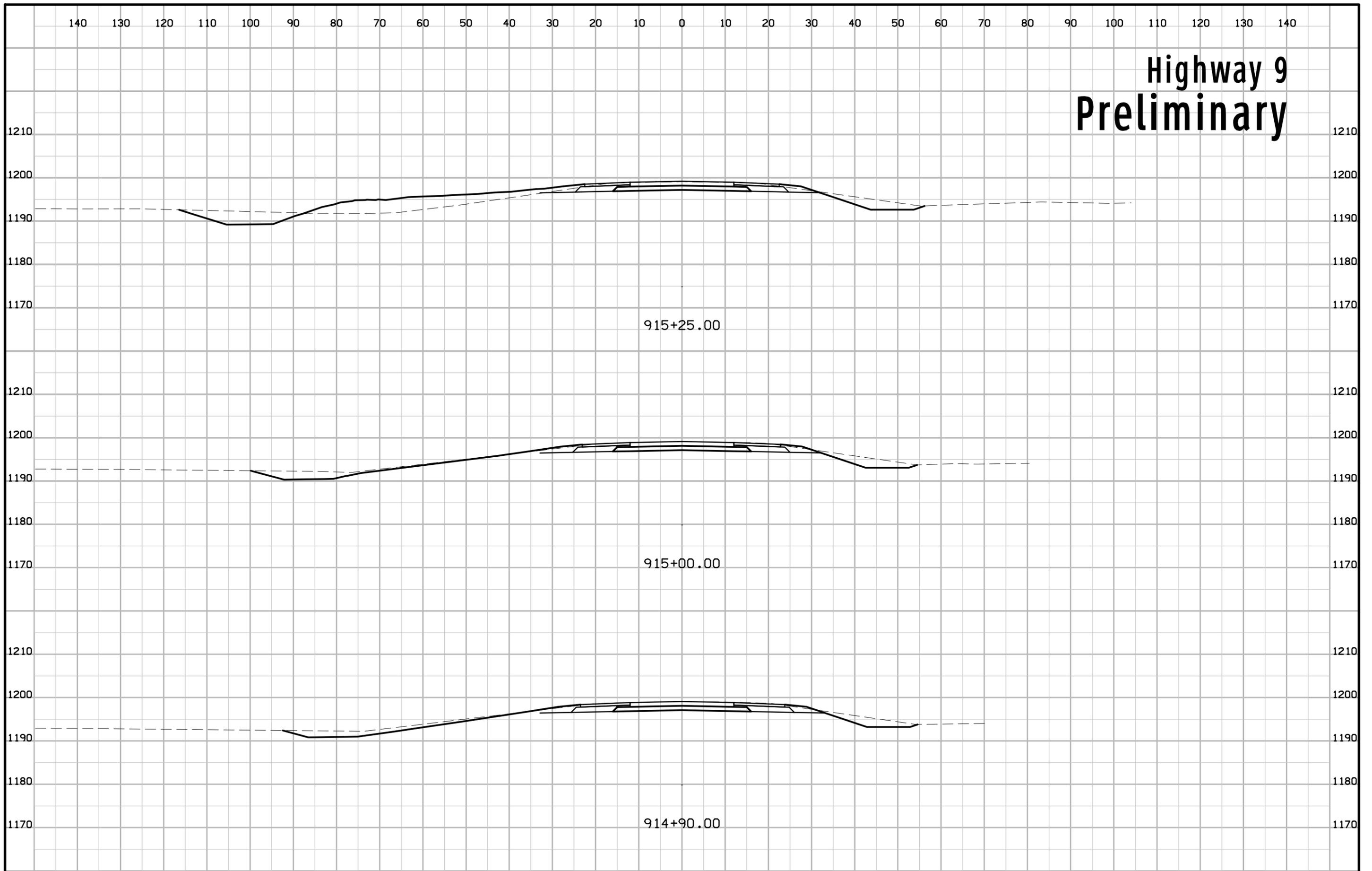
Highway 9 Preliminary



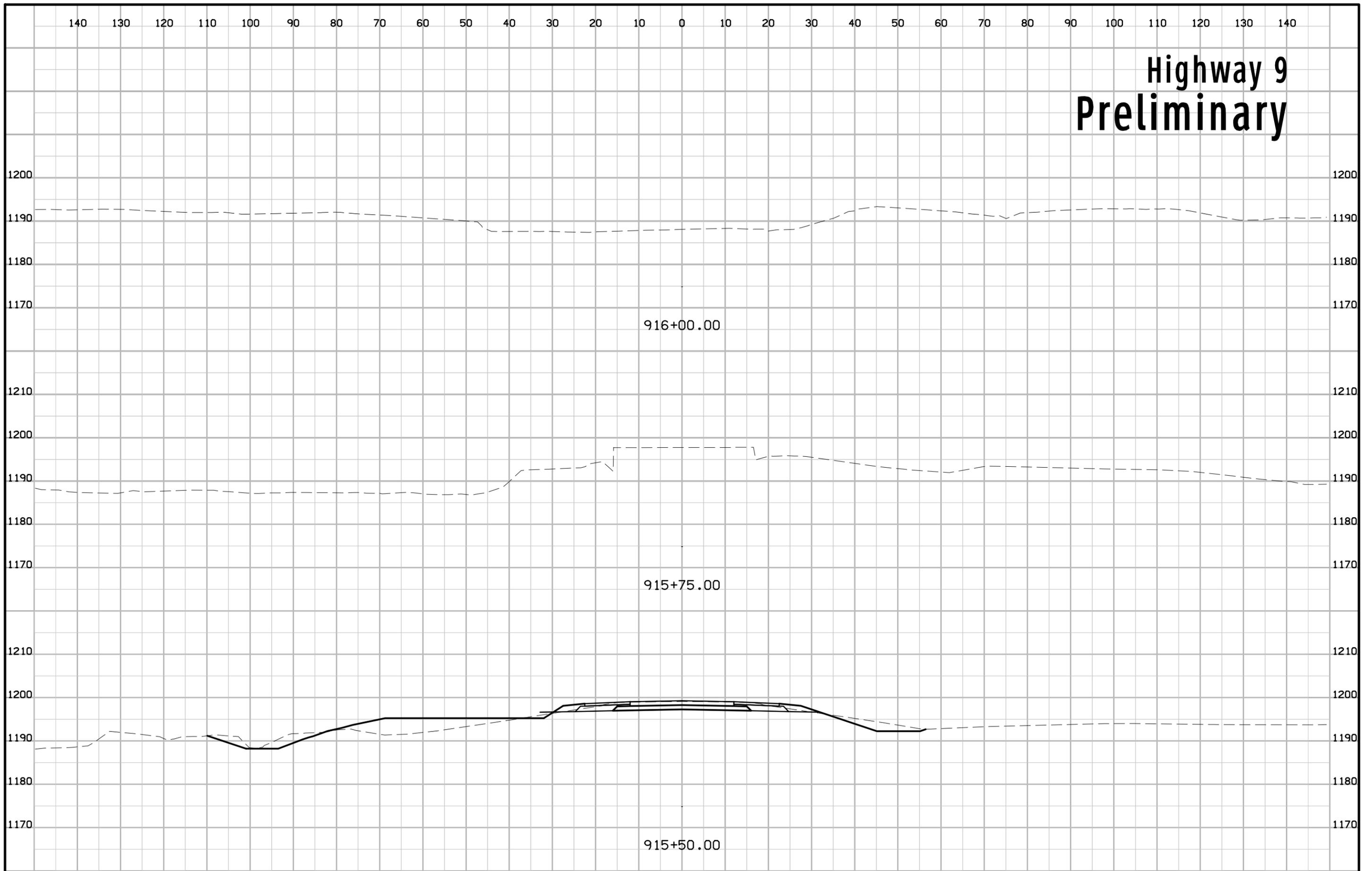
Highway 9 Preliminary



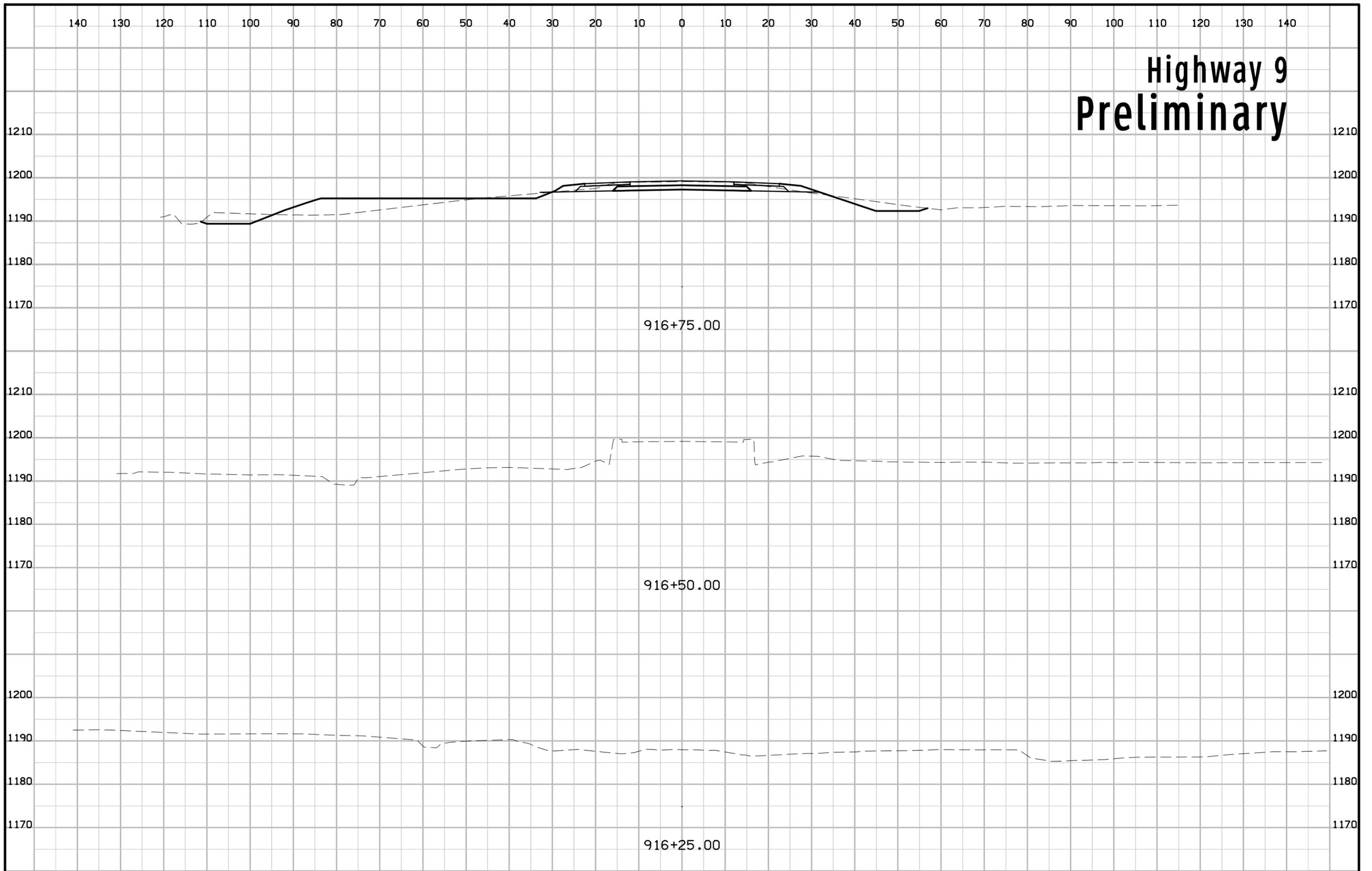
Highway 9 Preliminary



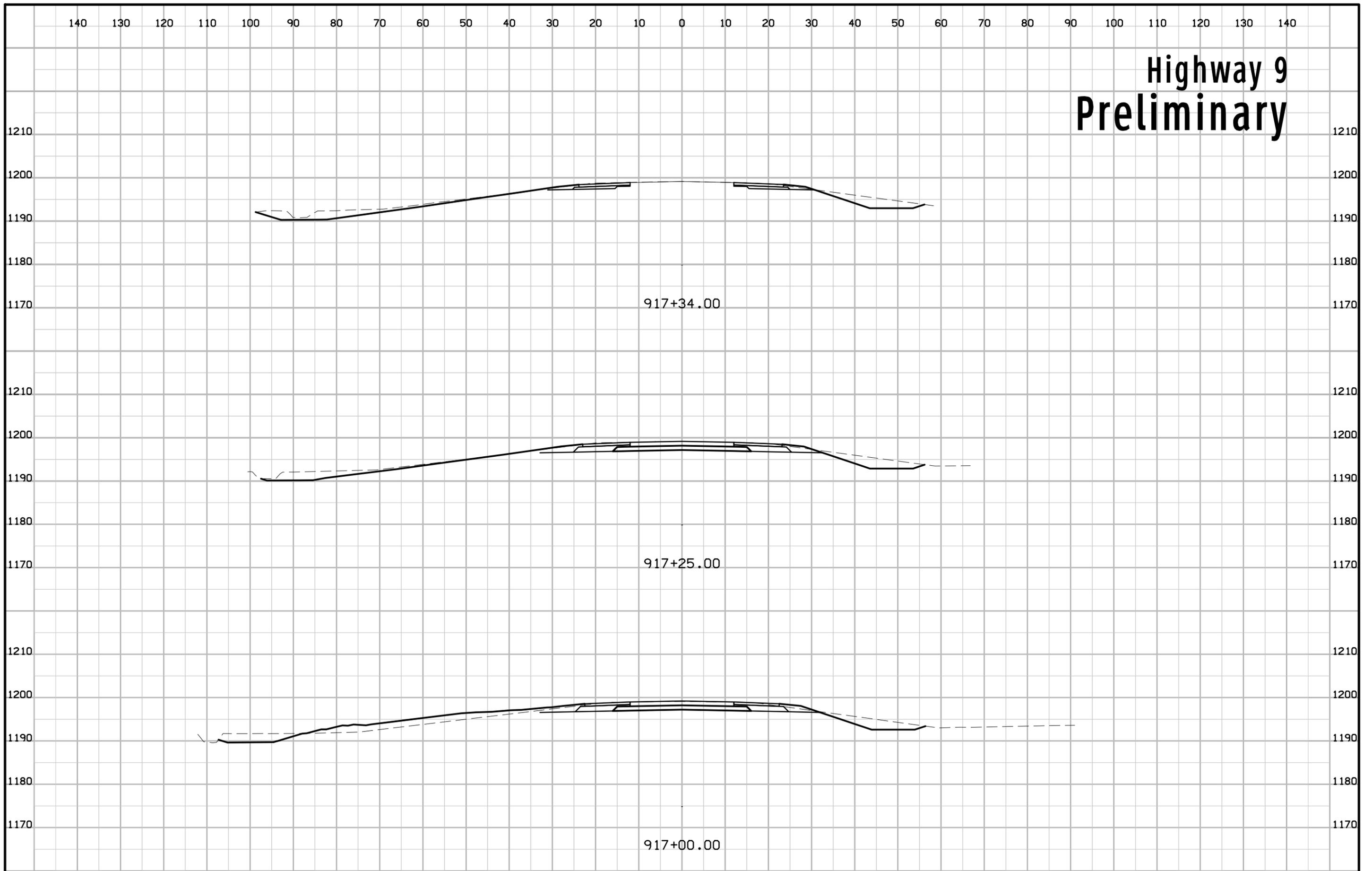
Highway 9 Preliminary



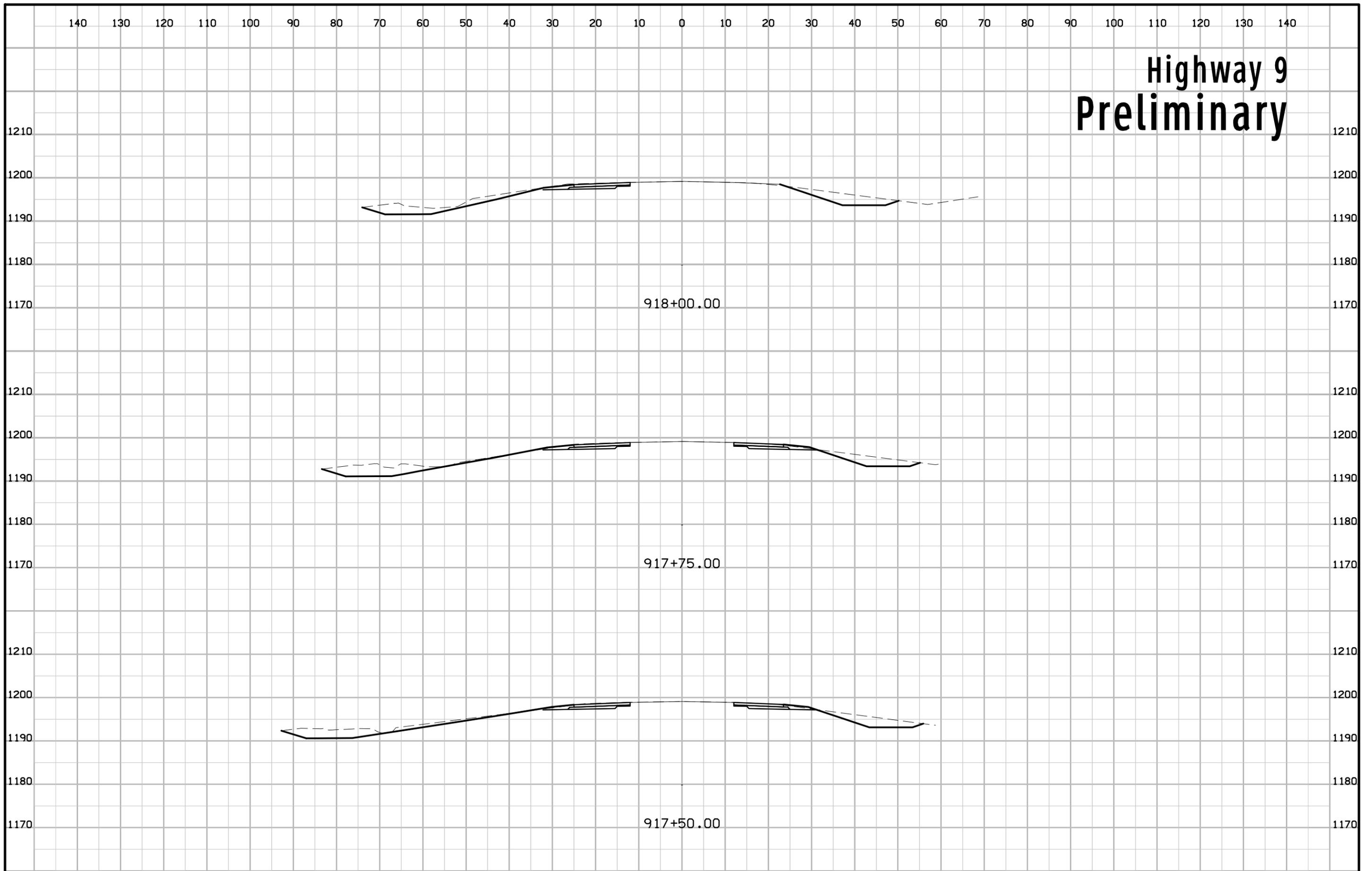
Highway 9 Preliminary



Highway 9 Preliminary



Highway 9 Preliminary



Highway 9 Preliminary

