Pipe Culverts

NHSN-003-8(050)—2R-28

LETTING DATE 9 / 18 / 2029

DELAWARE COUNTY

INDEX OF SHEETS	
No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	**Typical Cross Sections and Details**
B.1	Typical Cross Sections and Details
C Sheets	**Quantities and General Information**
C.1	Standard Road Plans
D Sheets	**Mainline Plan Sheets**
D.1	Plan & Profile Legend & Symbol Information Sheet
D.2 - 11	IA 3 Site Plans
G Sheets	**Survey Sheets**
G.1 - 3	Reference Ties and Bench Marks
G.4	Horizontal Control Tab.
J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan
J.2	Staging and Traffic Control Sheets
V Sheets	**Bridge and Culvert Situation Plans**
V.1 - 4	IA 3 Culvert Situation Plans

IOWA DOT

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

DELAWARE COUNTY

Pipe Culverts

E Jct IA 13 to Dubuque Co Line - Various Location

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.13 of the Specifications.

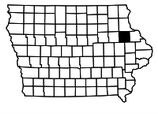
IOWA ONE CALL
1-800-292-8989
www.iowaonecall.com
811 Know what's below. Call before you dig.

REVISIONS

TOTAL 25
PROJECT IDENTIFICATION NUMBER
25-28-003-010
PROJECT NUMBER
NHSN-003-8(050)—2R-28
R.O.W. PROJECT NUMBER
NHSN-003-8(051)—2R-28

Scan the QR code or click the link below to leave plan quality feedback and help us improve future projects.

Design QR Feedback Link



DESIGN DATA RURAL			
2026	AADT	427 - 3464	V.P.D.
2029	AADT	634 - 5147	V.P.D.
20 –	DHV		V.P.H.
TRUCKS		8.7 - 34.2	%
Total Design ESALs			

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

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN - Date: 11/02/2026

FILE NO.	ENGLISH	DESIGN TEAM Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER A.1

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PROJECT LOCATION 1
M.P. 278.27
STA. 1024+42.85

PROJECT LOCATION 2
M.P. 280.56
STA. 1147+45.76

PROJECT LOCATION 3
M.P. 281.70
STA. 32+47.46

PROJECT LOCATION 4
M.P. 283.39
STA. 121+95.64

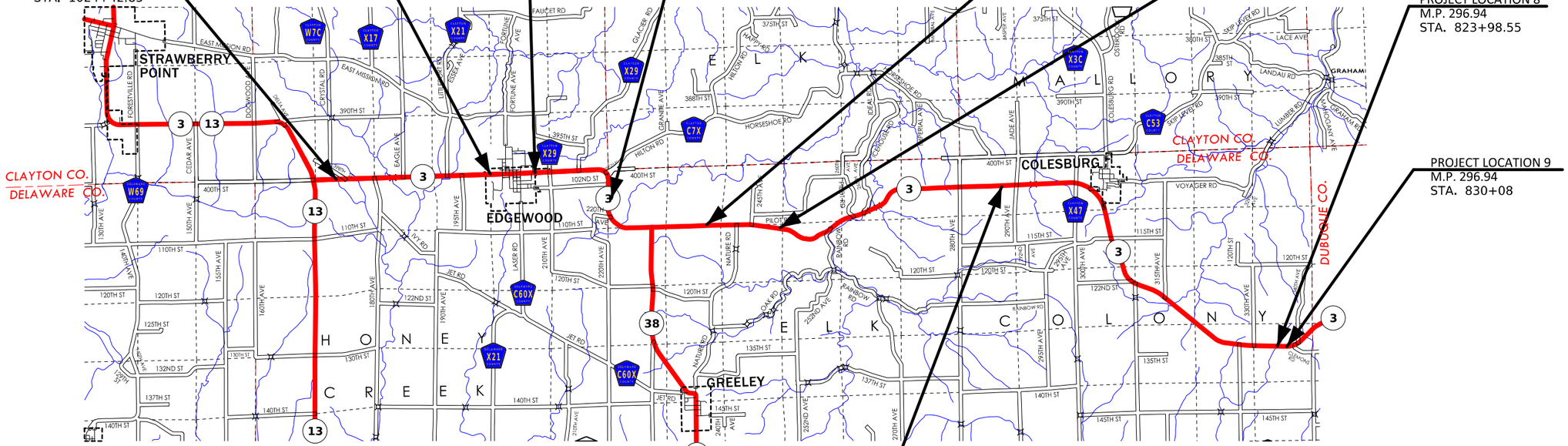
PROJECT LOCATION 5
M.P. 286.47
STA. 243+63.71

PROJECT LOCATION 6
M.P. 290.79
STA. 248+542.26

PROJECT LOCATION 8
M.P. 296.94
STA. 823+98.55

PROJECT LOCATION 9
M.P. 296.94
STA. 830+08

PROJECT LOCATION 7
M.P. 296.83
STA. 1147+45.76



LOCATION MAP SCALE
0 1 2 3
Miles

DELAWARE COUNTY

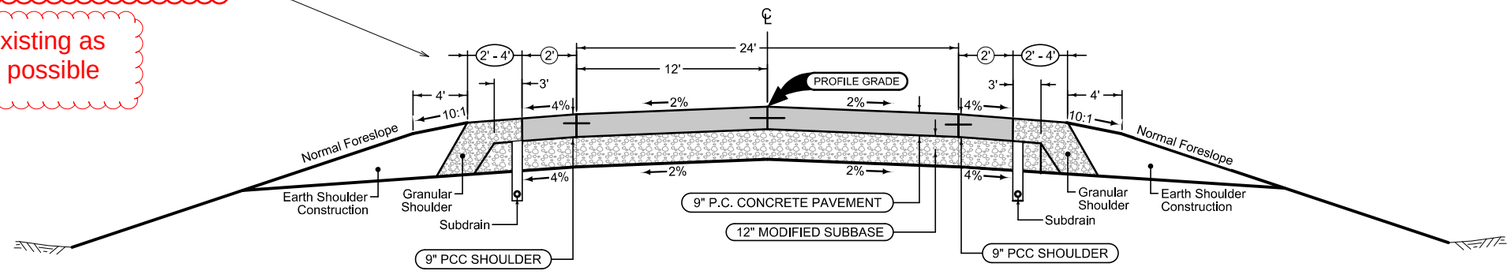
PROJECT LOCATION MAP

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER A.2

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Discuss pavement details, subdrain locations, rumble strips

Match Existing as close as possible



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

2P_ 04-21-20	
STATION TO STATION	
1147+20.83	1147+70.83
243+43.79	243+83.75
511+45.44	511+85.40
823+73.55	824+23.54
829+79.38	830+36.92

Refer to project plan for specific location.

IA 3

STANDARDS

The following Standards apply to construction work on this project.

Number	Date	Title
DR-101	04-18-17	Pipe Culvert (Bedding and Backfill)
DR-102	04-21-15	Pipe Culvert (Cover and Camber)
DR-103	04-21-15	Pipe Culvert (Installation Details)
DR-121	04-18-23	Connected Pipe Joints
DR-201	10-17-23	Concrete Aprons
DR-202	10-17-23	Low Clearance Concrete Pipe Aprons
DR-213	10-18-22	Pipe Apron Guard
DR-303	10-17-17	Subdrains (Longitudinal)
DR-601	04-18-17	Reinforced Concrete Pipe Culvert
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-301	10-18-22	Rock Erosion Control (REC)
EC-502	04-21-15	Seeding in Rural Areas
PM-110	10-15-24	Line Types
PR-120	04-21-20	Double Reinforced Pavement Over Box Culverts
PV-101	10-20-26	Joints
PV-13	10-20-26	Milled Centerline Rumble Strips
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	04-18-23	Work Within 15 ft of Traveled Way
TC-252	10-20-26	Routes Closed to Traffic

SURVEY SYMBOLS

- AST, Above Ground Storage Tank
- BB, Billboard
- BBB, Bottom of Bridge Beam
- BCL, Bridge Centerline
- BD, Bridge Deck
- BIN, Grain Bin
- BL, Topo Breakline
- BLD, Building or Foundation
- BLS, Bridge Low Steel
- BM, Bench Mark
- BNK, Stream Bank
- BRG, Bridge
- C, Centerline BL of Road -ML or SR
- CAV, Cave
- CEL, Cell Phone Tower
- CIS, Cistern
- CON, Concrete or A/C Slab
- CP, Control Point
- CRP, Corporation Line
- CS, Curve Point
- CU, Back of Curb
- CUL, Culvert
- D, Centerline Draw or Stream -Down
- DAB, Drainage Area Boundary
- DIK, Centerline of Dike or Dam
- DTM, Photogrammetry Elv Control Check
- DU, Centerline Draw or Stream -Up
- EB, Electrical Box
- EG, Edge of Gravel Road
- ENP, Edge Paved Entrance and Park Lot
- ENT, Centerline BL of Entrance
- ENU, Edge Unpaved Entrance and Parking
- EP, Edge of Paved Roads -ML or SR
- EW, Edge of Water
- FCL, Chain Link and Security Fence
- FENO, FENO Monument
- FHD, Fire Hydrants
- FLG, Flag Poles
- FP, Filler Pipe
- FW, Wire Fence
- FWD, Wood Fence
- GDC, Guard Rail Cable
- GDL, Guard Rail Steel
- GP, Guard Post -Less Than 4 Posts
- GPR, Guard Post -4 or More Posts
- GR, Ground Shot
- GRV, Grave
- GU, Gutter In Front of Curb
- GV, Gas Valve
- HDG, Hedge Row
- HS, Hydric Soil -Wetlands
- HT, Electrical Highline Tower
- IN, Storm Sewer Intake
- INB, Storm Sewer Beehive Intake
- LC, Lot Corner
- LIN, Miscellaneous Line
- LP, L.P. Tank
- LUM, Luminaire
- MH, Utility Access -Manhole
- MIS, Miscellaneous
- MM, Mile Marker Post
- OUT, Tile Outlet
- PC, Curve Point
- PCP, Photo Control Point
- PCT, Photo Control Target
- PI, Tangent Point
- PIP, Pipe Culvert
- PL, Location of Photo -Wetlands
- PLG, Location of General Photo
- POC, Curve Point
- POST, Spiral Point
- PR, Electic Riser Pole
- PRO, Profile Shot
- PT, Curve Point
- REF, Reference Tie Point
- RET, Retaining Walls
- RIP, Rip-Rap
- ROC, Rock Outcropping
- ROW, Right of Way Mark
- RR, Centerline of Railroad Tracks
- RRB, Railroad Signal Box
- RRF, Railroad Frog
- RRR, Railroad Rail
- RRS, Railroad Signal
- RRW, Railroad Switch
- RT, Radio Tower
- S, Soil Sampling Site -Wetlands
- SBR, Size of Bridge
- SC, Spiral Point
- SCR, Section Corner
- SEP, Septic Tank
- SF, Silt Fence -Wetlands
- SG, Staff Gauge -Wetlands
- SH, Paved Shoulder
- SHR, Shrub
- SI, Sign
- SL, Speed Limit Sign
- SLN, Section Line
- SLO, Silo
- SNK, Sink Hole
- SNP, Unpaved Shoulder
- SP, Stream Profile
- STP, Stump
- SWK, Sidewalk
- SWP, Swamp or Marsh
- TA, Tower Anchor
- TBO, Telephone Booth
- TCB, Traffic Signal Box
- TDC, Tree Deciduous
- TDL, Trafic Detection Loop
- TER, Terrace
- TEV, Evergeen Tree
- TFR, Tree Fruit
- TGP, Telegraph Pole
- TIL, Tile Line
- TLNL, Tree Line Left
- TLNR, Tree Line Right
- TOP, Top of Bridge Pier
- TPA, Telephone Pole Co. 1
- TPB, Telephone Pole Co. 2
- TPC, Telephone Pole Co. 3
- TR, Telephone Riser Pole
- TRL, Trail
- TS, Spiral Point
- TSB, Telephone Switch Box
- TSG, Traffic Signal
- TSL, Traffic Signal and Luminare
- TV, Satelite TV Dish
- TVP, TV Pedestal
- TW, Top of Water
- UB, Utility Box
- UE, Utility Elevation
- UPH, Utility Pot Hole - Quality A
- UST, Underground Tank
- UV, Underground Utility Vault
- VS, Channel Cross Section
- WC, Wild Card -Misc. Field Shot
- WEL, Well
- WHD, Water Hydrant
- WHU, RV Water Hook Up
- WM, Wind Mill
- WND, Wind Turbine
- WV, Water Valve

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

- EL1D, Electric Line Alliant Energy - Quality D
- EL2D, Electric Line Windstream - Quality D
- FO1D, Fiber Optic Windstream - Quality D
- GL1D, Gas Line Black Hills Energy - Quality D
- PPA, Power Pole Alliant Energy and Maquoketa Valley Electric Cooperative

UTILITY LEGEND

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.**		**Transparency**
Pink, Dark	(13)	Temporary Pavement Shading	50%
Yellow	(4)	Proposed Pavement Shading	50%
Orange	(6)	Proposed Granular Shading	50%
Orange	(70)	Proposed Shoulder Granular Shading	50%
Yellow	(68)	Proposed Shoulder Paved Full Depth Shading	50%
Yellow	(132)	Proposed Shoulder Paved Partial Depth Shading	50%
Brown, Light	(236)	Grading Shading	50%
Orange, Light	(134)	Proposed Granular Entrance Shading	50%
Yellow	(220)	Proposed Paved Entrance Shading	50%
Tan	(8)	Proposed Sidewalk Shading	50%
Blue, Light	(230)	Proposed Sidewalk Landing Shading	50%
Pink	(11)	Proposed Sidewalk Ramp Shading	50%
Red	(3)	Proposed Structure Shading	50%
Red	(3)	Delineates Restricted Areas	0%

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER D.1	

9:20:36 PM 10/6/2026 9474 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\2800301025\Design\CADD_Files\Sheet_Files\SHT_28003050_D01.dgn

U.A.C.
Sta. 1024+42.9
2'x2'x49.6' RCB
D.A.=29 A-R

Protect Utility Poles

1022+00
1023+00
1024+00
1025+00
1026+00
1027+00

Sect. No. 32

Ex. Gravel
Ex. HMA Shoulder
Ex. HMA Pvement

APPROX. SEC. LINE

IA3 (SURMLA003)

Line Box on Existing
2'x2' RCB

Honey Creek TWP
T 90N R 5W
SEC. 5

0 20
FEET

Project Location 1
MP 278.3
STA 1024+42.85

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER D.2	

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Discuss orientation,
Clear Zone

Model grading area to confirm this orientation works, if not look into other options

(REMOVE)
Sta. 1147+15.8
Skew 20° RT AH
4'x3'x48.7' RCB
D.A.=50.4 R

Protect EX. Wood Fence
Class E Revetment
Protect Utility lines
Protect Sign

1145+00
1146+00
1147+00
1148+00
1149+00
1150+00

STA 1147+20.83 (SURMLB003)
BEGIN CONSTRUCTION

Ex. Gravel
Ex. HMA Shoulder
Ex. HMA Pvement

IA3 (SURMLB003)

APPROX. SEC. LINE

Protect Utility lines

EX. Culvert

EX. 4'x3' RCB
Culvert
(To Be Removed)

STA 1147+70.83 (SURMLB003)
END CONSTRUCTION

Class E Revetment

EX. RCB
Culvert

Sta. 1147+45.76
Install 59"x36"x61' Arch 2000D
F.L. = Lt. 1126.6
Rt. 1130.0

0 20
FEET

Honey Creek TWP.
T-90N R-5W
SEC. 3

Project Location 2
MP 280.6
STA 1147+45.76

FILE NO.	ENGLISH	DESIGN TEAM Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER D.3

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Google
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FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER D.4	

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FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER D.5	

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Imagery ©2026 Airbus

ROW in this area?

See GIS sever

REMOVE
3'x3'x99.4' RCB
D.A.=20 ACRES A-VH

Elk TWP.
T-90N R-4W
SEC. 4

Protect EX. Fence

241+00
242+00
243+00
244+00
245+00
246+00

STA 243+43.79 (SURMLE003)
BEGIN CONSTRUCTION

(IA3) SURMLE003

Ex. Gravel
Ex. HMA Shoulder
Ex. HMA Pvement

APPROX. SEC. LINE

STA 243+83.75 (SURMLE003)
END CONSTRUCTION

EX. 3'x3' RCB
Culvert
(To Be Removed)

Sect. No. 9

Sta. 243+63.67
Install 42"x100' 2000D
F.L. = Lt. 1038.5
Rt. 1044.6

0 20
FEET

Project Location 5
MP 285.7
STA 243+63.67

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER D.7	

9:28:46 PM 10/6/2026 9474 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\2800301025\Design\CADD_Files\Sheet_Files\SHT_28003050_D02.dgn

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U.A.C.
Sta. 282+42.0
3'x3'x30.0' RCB
D.A.= Not Available A.H.

Protect EX. Fence

282+00
283+00
284+00
285+00
286+00
287+00

Ex. Gravel
Ex. HMA Shoulder
Ex. HMA Pvement

(IA3) SURMLE003

Line Box on Existing 3'x3' RCB

Protect Utility lines

Protect EX. Fence

Elk TWP.
T-90N R-4W
SEC. 9

0 20
FEET

Project Location 6
MP 286.5
STA 284+42.26

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER D.8	

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(REMOVE)
Sta. 511+65.4
4'x3'x98.8' RCB
D.A.= 140 ACRES A-R/F

Protect EX. Fence
Protect Sign
Protect Utility Poles

509+00
510+00
511+00
512+00
513+00
514+00

Ex. Gravel
Ex. HMA Shoulder
Ex. HMA Pvement

STA 511+45.44 (SURMLF003)
BEGIN CONSTRUCTION

IA3 (SURMLC003)

STA 511+85.40 (SURMLF003)
END CONSTRUCTION

EX. 4'X3' RCB
Culvert
(To Be Removed)

Sta. 511+65.36
Install 48"x100' 2000D
F.L. = Lt. 1075.6
Rt. 1077.5

DEED LINE

EXISITNG FENCE LINE AND DIMENSIONED
LINE ON PLAT RECORDED IN
PLAT BOOK 3, PAGE 33

0 FEET 20

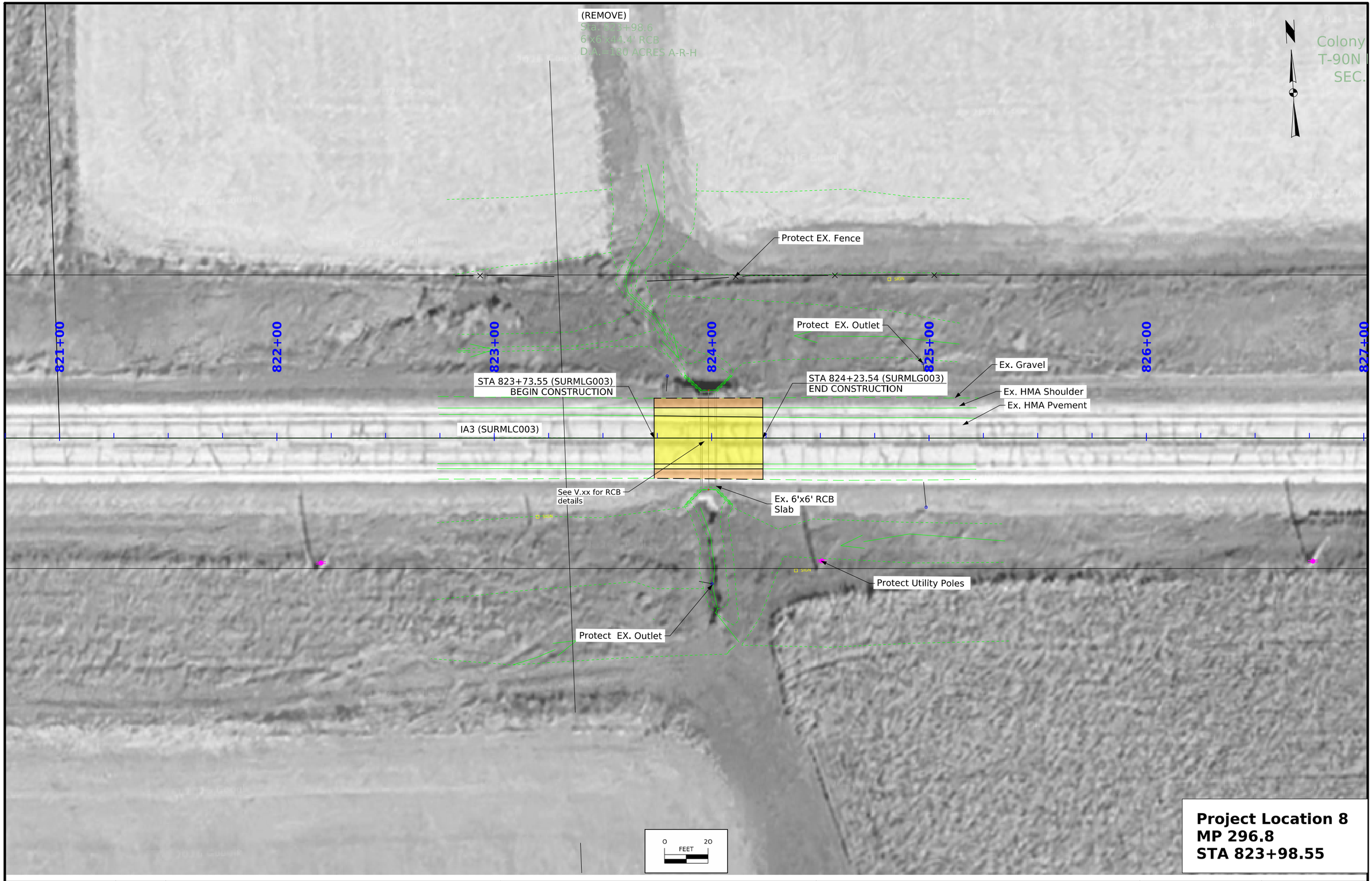
Colony TWP.
T-90N R-3W
SEC. 6

Project Location 7
MP 290.8
STA 511+65.36

FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER D.8	

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FILE NO.	ENGLISH	DESIGN TEAM Iowa DOT\Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER D.9	

9:33:36 PM 10/6/2026 9474 pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\2800301025\Design\CADD_Files\Sheet_Files\SHT_28003050_D02.dgn

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(REMOVE)

Sta. 830+08.2
Skew 30° LT AH
5'x5'x66.5' RCB
D.A.=114 ACRES A-R-H

Protect EX. Fence

Protect Utility lines

Ex ROW

828+00

829+00

830+00

831+00

832+00

833+00

Ex. Gravel

Ex. HMA Shoulder

Ex. HMA Pvement

IA3 (SURMLC003)

STA 829+79.38 (SURMLG003)
BEGIN CONSTRUCTION

STA 830+36.92 (SURMLG003)
END CONSTRUCTION

EX. 5'x5'
RCB Culvert
(To Be Removed)

Ex ROW

Sta. 830+08.41
Install 66"x72' 2000D
F.L. = Lt. 1109.7
Rt. 1108.9

0 20
FEET

Project Location 9
MP 296.9
STA 830+08.41

FILE NO.	ENGLISH	DESIGN TEAM Stanley Consultants Inc.	DELAWARE COUNTY	PROJECT NUMBER NHSN-003-8(050)—2R-28	SHEET NUMBER D.10

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Google
Imagery ©2026 Airbus

SURVEY INDEX

County : Delaware
Project Code : 25-28-003-010
Phase Number : NHSN-003-8(050)--2R-28
Location : E Jct IA 3 to Dubuque Co Line - Various Locations
Work Code : 3581-Pipe Culverts
Project Directory : 2800301025

Survey Personnel

John Hahn – Survey Party Chief

Date(s) of Survey

Begin Date	04/03/2026
End Date	08/10/2026

General Information

This survey is for various locations on IA Hwy 3 culvert replacement or repair that are in various states of deterioration. This survey request was for the IA Hwy 3 corridor only. This project is a Full Field DTM survey.

Utility Information

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

Project Control

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

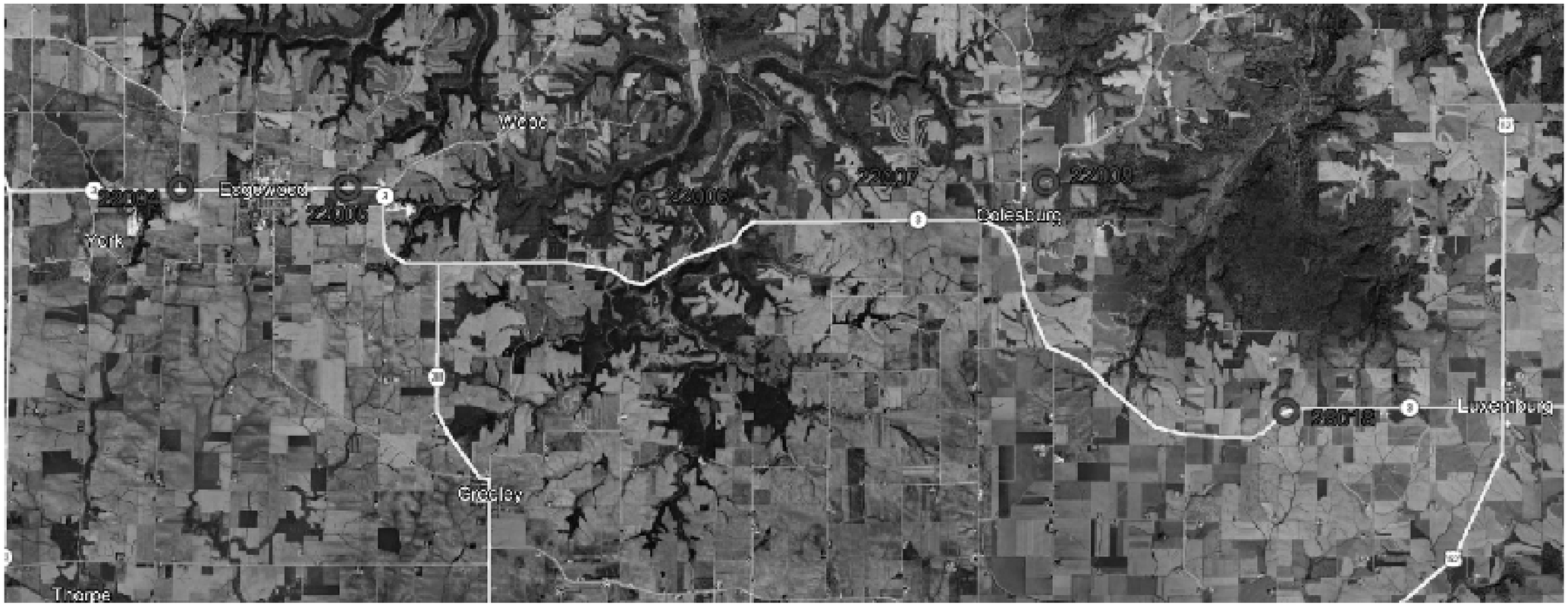
PROJECT DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 ADJUSTMENT)
COORDINATE SYSTEM: IOWA REGIONAL COORDINATE SYSTEM ZONE 3 (U.S. SURVEY FOOT)
VERTICAL DATUM: NAVD88
GEOID MODEL: 2018u3

Alignment Information

The horizontal alignment for IA Hwy 3 this survey was provided by District 6 District Right of Way.

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) for EPOCH 2010.00 (IaRTN 2019 Adjustment) - Iowa RCS Zone 3 (U.S. Survey Foot)

VERT. DATUM: NAVD88 - Geoid Model: 2018u3

Coordinate listing from next sheet will be used with IaRTN for monument recovery. No other reference ties are given.

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING
HORIZ. DATUM: NAD83(2011) for EPOCH 2010.00 (IaRTN 2019 Adjustment)
Ia. Regional Coordinate System Zone 3 (U.S. Survey Foot)
VERT. DATUM: NAVD88
Geoid Model: 2018u3

Point Name	Northing	Easting	Elevation	Code/Description
22004	9172606.30	13439848.83	1104.17	CP FND DEL CO GPS CNTRL MON GD COND AS DSCRBD
22005	9172659.14	13451828.84	1126.80	CP FND DEL CO GPS CNTRL MON GD COND AS DSCRBD
22006	9171491.25	13472894.23	1122.70	CP FND DEL CO GPS CNTRL MON GD COND AS DSCRBD
22007	9172840.52	13486355.22	1048.56	CP FND DEL CO GPS CNTRL MON GD COND AS DSCRBD
22008	9172997.43	13501424.02	1173.51	CP FND DEL CO GPS CNTRL MON GD COND AS DSCRBD
28018	9156877.74	13518361.33	1168.80	CP FND DEL CO GPS CNTRL MON GD COND AS DSCRBD

ALIGNMENT COORDINATES

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	1	SURMLA003	14643+21.92	9172499.278	13429298.43															
2.0	2	SURMLA003	1020+39.73	9172499.204	13429461.99															
3.0	3	SURMLA003	1029+00.40	9172498.812	13430322.67															
4.0																				
5.0	1	SURMLB003	1138+09.30	9172553.808	13441233.42															
6.0	2	SURMLB003	1158+04.54	9172566.851	13443228.62															
7.0																				
8.0	1	SURMLC003	29+19.40	9172615.48	13447850.33															
9.0	2	SURMLC003	42+52.63	9172643.68	13449183.27															
10.0																				
11.0	1	SURMLD003	101+13.68	9171809.065	13454490.07															
12.0	2	SURMLD003	125+15.91	9169408.378	13454367.41															
13.0																				
14.0	1	SURMLE003	238+91.20	9167414.786	13464552.81															
15.0	2	SURMLE003	262+52.67	9167393.705	13466914.19															
16.0																				
17.0	2	SURMLE003	271+99.40	9167307.199	13467855.88															
18.0	3	SURMLE003	297+64.56	9166862.389	13470382.18															
19.0																				
20.0	2	SURMLF003	506+68.59	9170301.959	13489686.33															
21.0	3	SURMLF003	550+84.74	9170376.638	13494101.85															
22.0																				
23.0	1	SURMLG003	810+38.60	9155218.088	13512537.59															
24.0	2	SURMLG003	837+52.84	9155083.122	13515248.47															

108_23A

8/15/22

TRAFFIC CONTROL PLAN

IA 3
 - Close both lanes of IA 3 and utilize detour routes for the duration of the project. Offsite detour routes shall be as shown in the J Sheets
Sideroads/Private Entrances
 - Maintain access to IA 3 for the duration of the project.

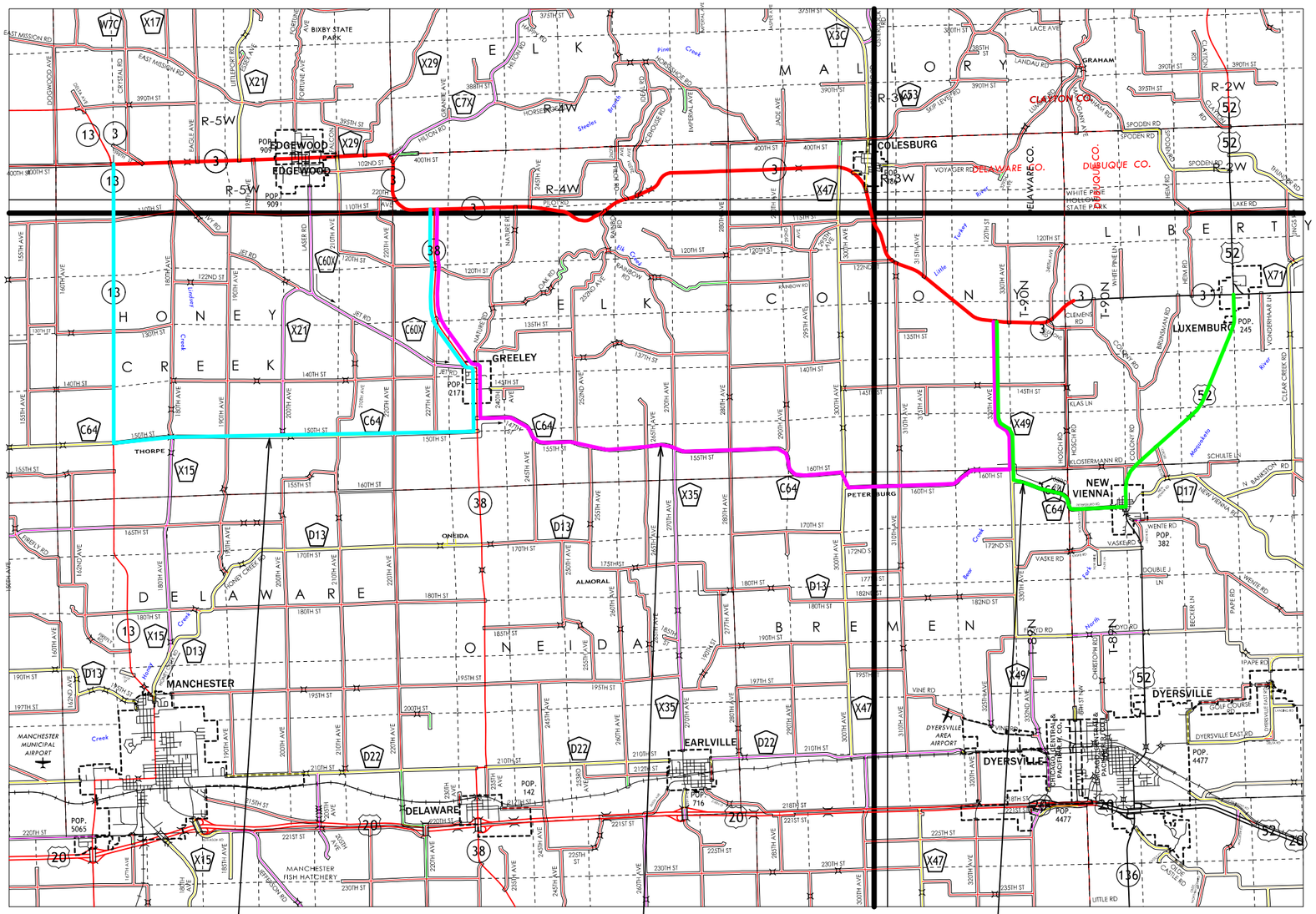
Deleware Traffic Control

Traffic will be detoured off-site during the project. Three routes will be used in order to maintain traffic patterns as much as possible.

Detour Route 1 - South on IA 13, East on County Hwy C64, then North on IA 38

Detour Route 2 - South on IA 38, East on 147th St, East on 155th St, East on 160th St/C64, North on 330th Ave

Detour Route 3 - South on 330th Ave, East on 163rd St, East on Petersburg Rd/W Main St, North on US 52



Detour Route 1 - 16 miles

Detour Route 2 - 17 miles

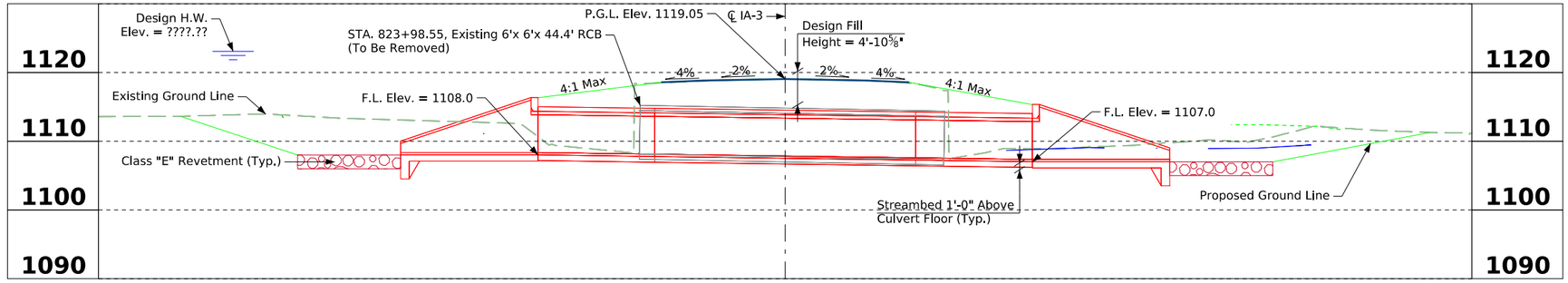
Detour Route 3 - 9 miles

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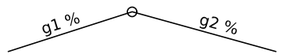
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Map data ©2026

Control Point:

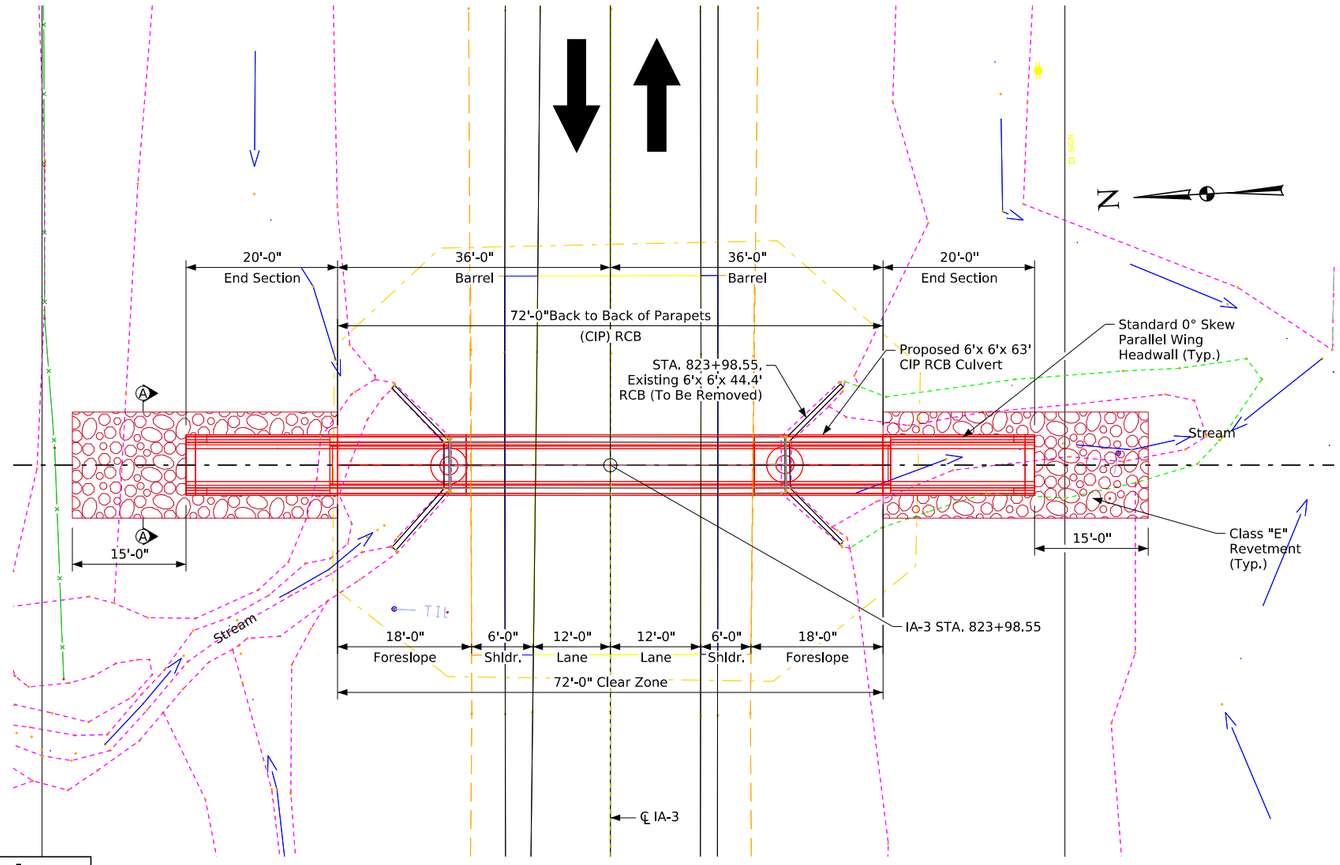


Longitudinal Section Along ℄ Culvert

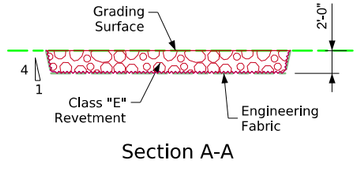


VPI Sta. = ? VC = ?'
VPI Elev. = ?

Proposed Profile Grade IA 3



Situation Plan



Section A-A

Utilities Note:

Utilities shown on this sheet are for information only.
See Road Design sheets for utility information.

General Utility Symbols:

E - Electric Line
G - Gas Line
SAN. - Sanitary Sewer
T - Telephone Line
W - Water Line
FO - Fiber Optic Line
GHP - Gas High Pressure
ST S - Storm Sewer
TV - TV
- Power Poles

Location

IA 3 over Unnamed Stream
T-90N R-03W
Section 24
Colony Township
Delaware County
FHWA No. ?? (if applicable)
Bridge Maint. No. ?? (if applicable)
Asset ID No. ?? (if applicable)
FRA No. (if applicable)
Latitude 44.596789°
Longitude -91.148400°

Hydraulic Data

Drainage Area = ??.? Acres
Stream Slope = ??.? Ft./Mi.
Q_{50} = ?,??? cfs
HW Elev. = ???? ft.
Backwater = ?.? ft.

Traffic Estimate

2025 AADT	560	V.P.D.
20?? AADT	???	V.P.D.
20?? DHV	???	V.P.H.
TRUCKS	20	%
Total Design ESALs	???	

Hydraulic Design

LICENSED PROFESSIONAL ENGINEER
John Q. Sample
?????
IOWA

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 — Date: XX-XX-XXXX
John Q. Sample
Printed or Typed Name
My license renewal date is December 31, XXXX
Pages or sheets covered by this seal: XXXX

Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet	XX	XX	XX
Outlet			
Totals			

Excavation quantity calculated from grading surface.
Quantities shown for information only. See Road Sheets.

Preliminary

Design For 0° Skew

6' X 6' X 72' Cast-In-Place Reinforced Concrete Box Culvert

Situation Plan

STA. 823+98.55 (IA-3)
Turn-in Date: Nov 2026

Delaware County

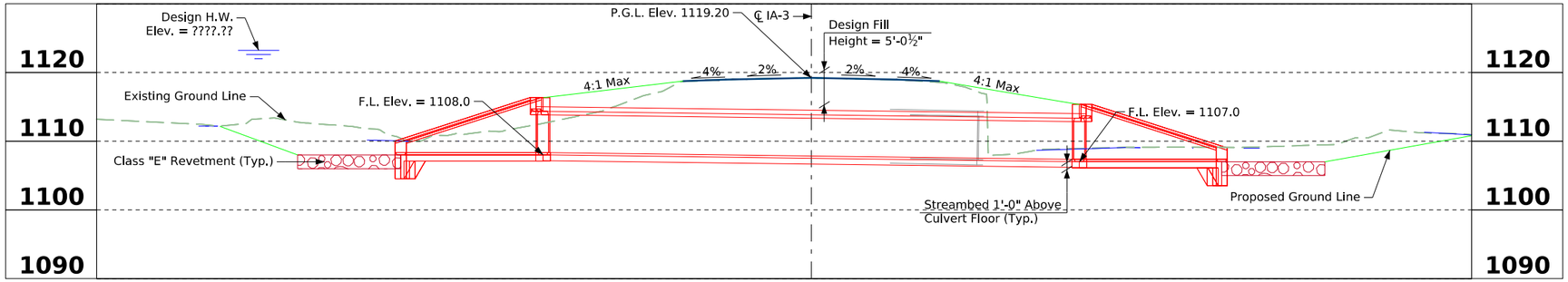
IOWA DEPARTMENT OF TRANSPORTATION

Design No. ???? Design Sheet No. 1 of 5 FHWA/Asset ??????

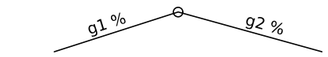
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Control Point:

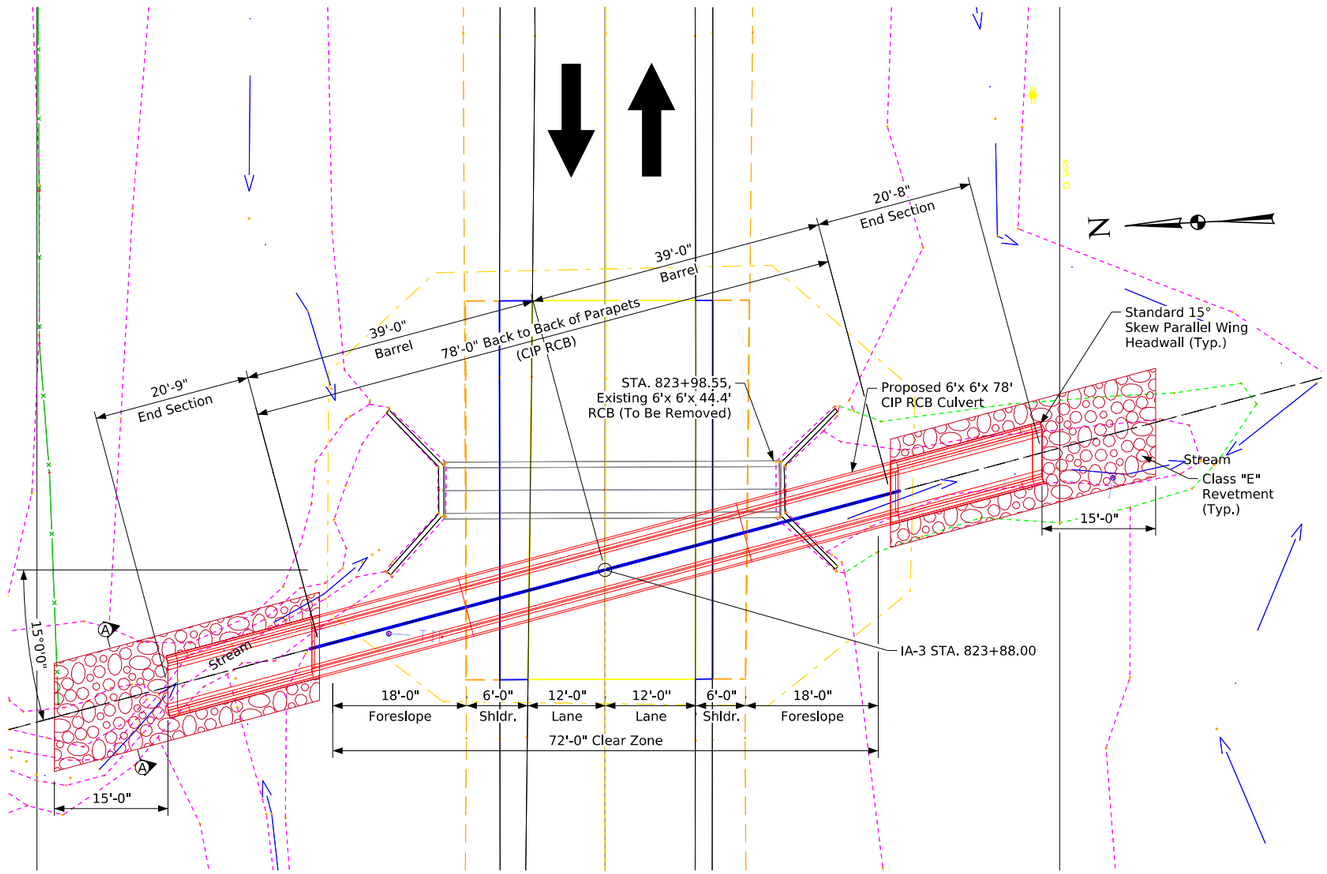


Longitudinal Section Along ℄ Culvert



VPI Sta. = ? VC = ?'
VPI Elev. = ?

Proposed Profile Grade IA 3



Situation Plan

Utilities Note:

Utilities shown on this sheet are for information only.
See Road Design sheets for utility information.

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SAN. - Sanitary Sewer
T - Telephone Line
W - Water Line
FO - Fiber Optic Line
GHP - Gas High Pressure
ST S - Storm Sewer
TV - TV
- Power Poles

Location

IA 3 over Unnamed Stream
T-90N R-03W
Section 24
Colony Township
Delaware County
FHWA No. ?? (if applicable)
Bridge Maint. No. ?? (if applicable)
Asset ID No. ?? (if applicable)
FRA No. (if applicable)
Latitude 44.596789°
Longitude -91.148400°

Hydraulic Data

Drainage Area = ??.? Acres
Stream Slope = ??.? Ft./Mi.
Q_{50} = ?,??? cfs
HW Elev. = ???? ft.
Backwater = ?.? ft.

Traffic Estimate

2025 AADT	560	V.P.D.
20?? AADT	???	V.P.D.
20?? DHV	???	V.P.H.
TRUCKS	20	%
Total Design ESALs	???	

Hydraulic 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.

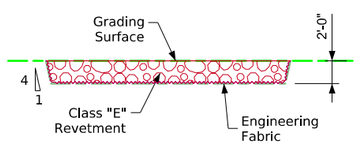
LICENSED PROFESSIONAL ENGINEER
John Q. Sample
?????
IOWA

XX-XX-XXXX
Signature Date
John Q. Sample
Printed or Typed Name
My license renewal date is December 31, XXXX
Pages or sheets covered by this seal: XXXX

Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet	XX	XX	XX
Outlet			
Totals			

Excavation quantity calculated from grading surface.
Quantities shown for information only. See Road Sheets.



Section A-A

Preliminary

Design For 15° Skew (R.A.)

6' X 6' X 78' Cast-In-Place Reinforced Concrete Box Culvert

Situation Plan

STA. 823+88.00 (IA-3) Turn-in Date: Nov 2026

Delaware County

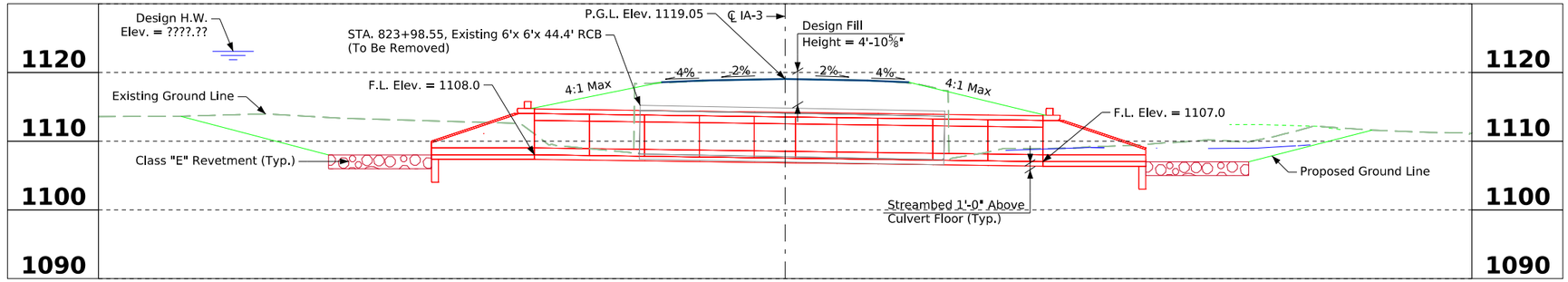
IOWA DEPARTMENT OF TRANSPORTATION

Design No. ???? Design Sheet No. 2 of 5 FHWA/Asset ??????

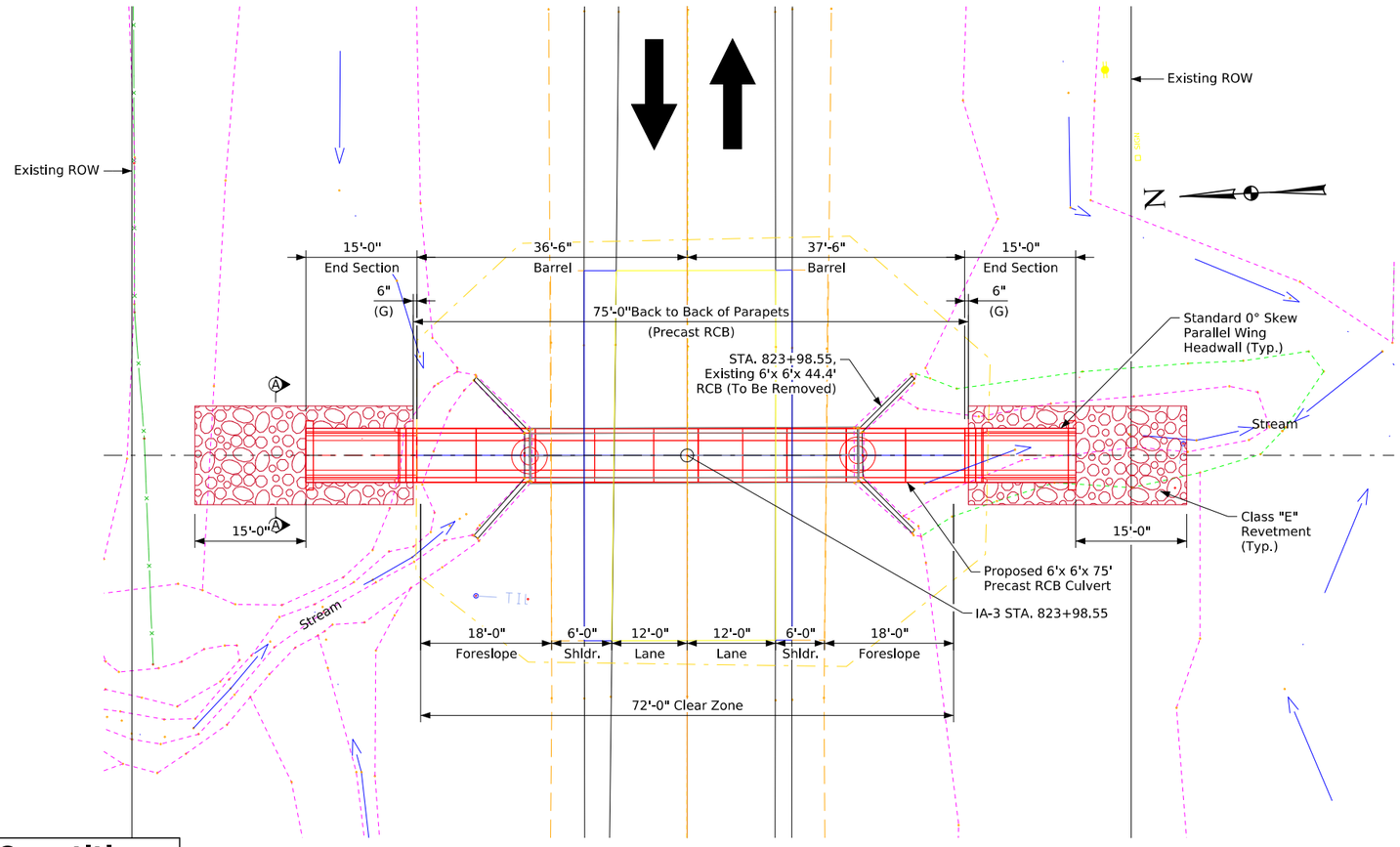
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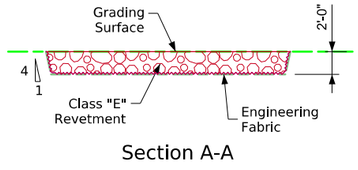
Control Point:



Longitudinal Section Along ℄ Culvert



Situation Plan

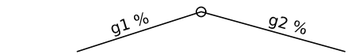


Section A-A

Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet	XX	XX	XX
Outlet			
Totals			

Excavation quantity calculated from grading surface.
Quantities shown for information only. See Road Sheets.



VPI Sta. = ? VC = ?'
VPI Elev. = ?

Proposed Profile Grade IA 3

Utilities Note:

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See Road Design sheets for utility information.

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SAN. - Sanitary Sewer
T - Telephone Line
W - Water Line
FO - Fiber Optic Line
GHP - Gas High Pressure
ST S - Storm Sewer
TV - TV
- Power Poles

Location

IA 3 over Unnamed Stream
T-90N R-03W
Section 24
Colony Township
Delaware County
FHWA No. ?? (if applicable)
Bridge Maint. No. ?? (if applicable)
Asset ID No. ?? (if applicable)
FRA No. (if applicable)
Latitude 44.596789°
Longitude -91.148400°

Hydraulic Data

Drainage Area = ??.? Acres
Stream Slope = ??.? Ft./Mi.
Q_{50} = ?,??? cfs
HW Elev. = ???? ft.
Backwater = ?.? ft.

Traffic Estimate

2025 AADT	560	V.P.D.
20?? AADT	???	V.P.D.
20?? DHV	???	V.P.H.
TRUCKS	20	%
Total Design ESALs	???	

Hydraulic Design

LICENSED PROFESSIONAL ENGINEER
John Q. Sample
?????
IOWA

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 — Date: XX-XX-XXXX
John Q. Sample
Printed or Typed Name
My license renewal date is December 31, XXXX
Pages or sheets covered by this seal: XXXX

Preliminary

Design For 0° Skew

6' X 6' X 75' Precast Reinforced Concrete Box Culvert

Situation Plan

STA. 823+98.55 (IA-3)
Turn-in Date: Nov 2026

Delaware County

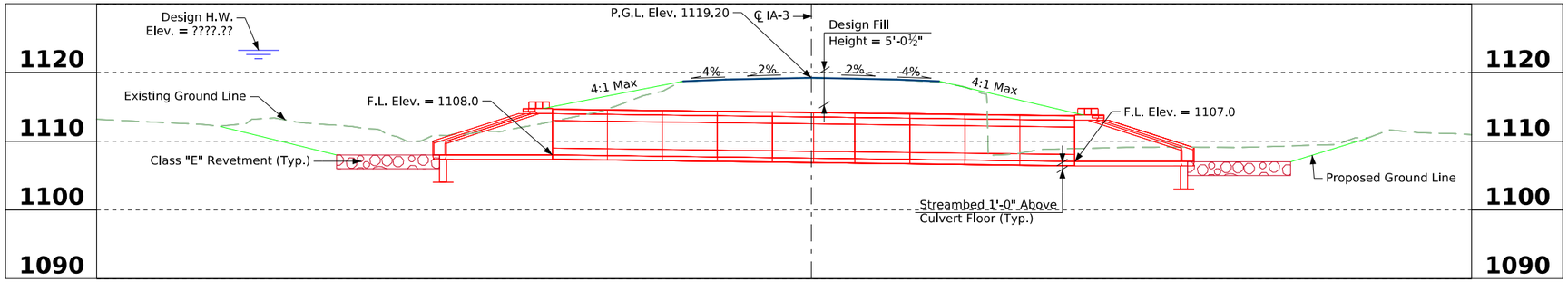
IOWA DEPARTMENT OF TRANSPORTATION

Design No. ???? Design Sheet No. 3 of 5 FHWA/Asset ??????

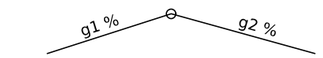
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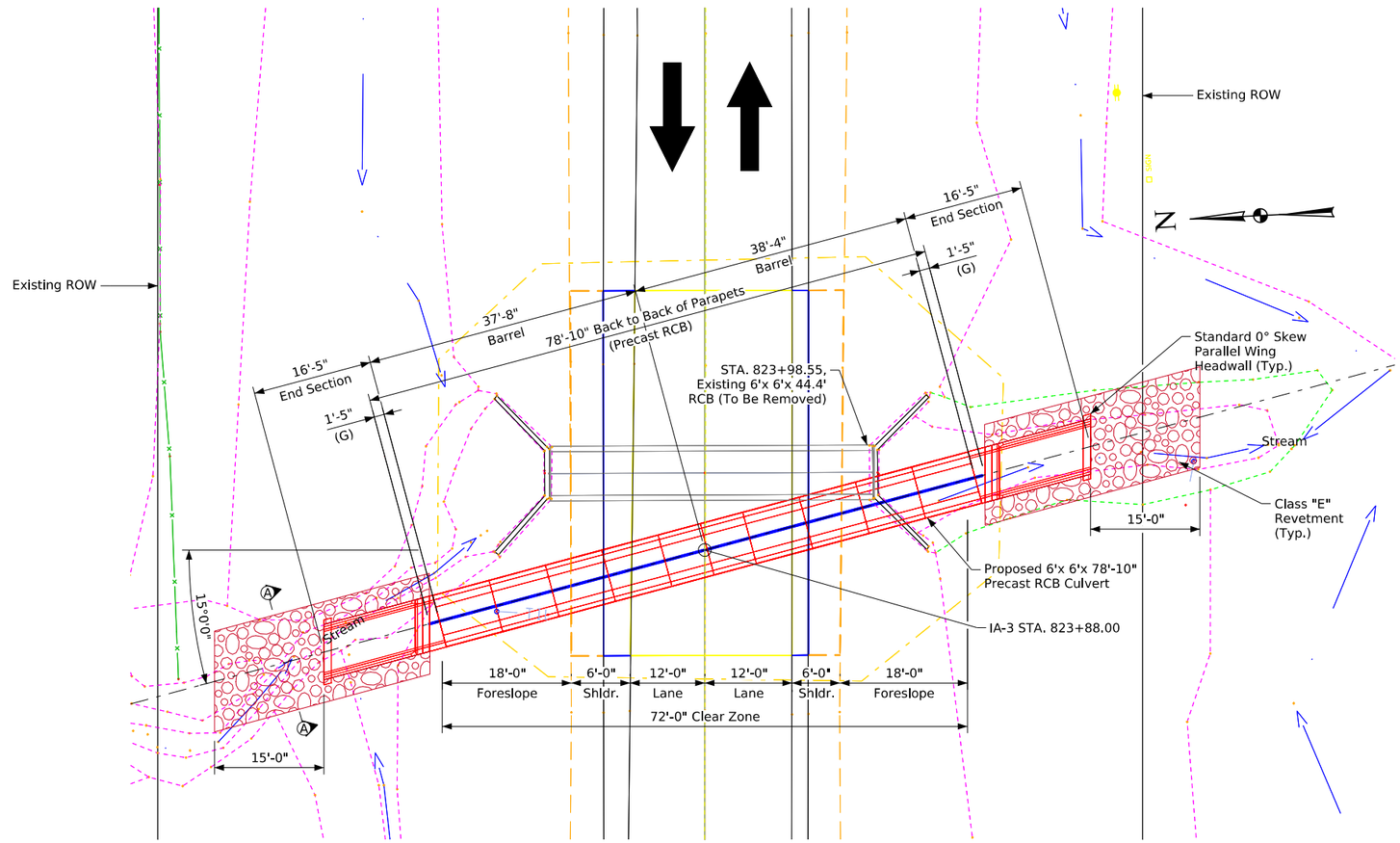


Longitudinal Section Along ℄ Culvert



VPI Sta. = ? VC = ?'
VPI Elev. = ?

Proposed Profile Grade IA 3



Situation Plan

Utilities Note:

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See Road Design sheets for utility information.

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- Power Poles

Location

IA 3 over Unnamed Stream
T-90N R-03W
Section 24
Colony Township
Delaware County
FHWA No. ?? (if applicable)
Bridge Maint. No. ?? (if applicable)
Asset ID No. ?? (if applicable)
FRA No. (if applicable)
Latitude 44.596789°
Longitude -91.148400°

Hydraulic Data

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Stream Slope = ??.? Ft./Mi.
Q_{50} = ?,??? cfs
HW Elev. = ???? ft.
Backwater = ?.? ft.

Traffic Estimate

2025 AADT	560	V.P.D.
20?? AADT	???	V.P.D.
20?? DHV	???	V.P.H.
TRUCKS	20	%
Total Design ESALs	???	

Hydraulic Design

LICENSED PROFESSIONAL ENGINEER
John Q. Sample
?????
IOWA

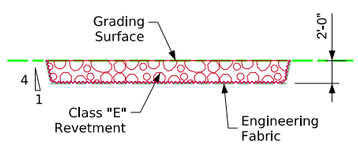
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature — Date: XX-XX-XXXX
John Q. Sample
Printed or Typed Name
My license renewal date is December 31, XXXX
Pages or sheets covered by this seal: XXXX

Estimated Revetment Quantities Included With Road Plans

Location	Revetment Class "E" (Ton)	Engineering Fabric (SY)	CL. 10 Channel Excavation (CY)
Inlet	XX	XX	XX
Outlet			
Totals			

Excavation quantity calculated from grading surface.
Quantities shown for information only. See Road Sheets.



Section A-A

Preferred option

Preliminary

Design For 15° Skew (R.A.)

6' X 6' X 78'-10" Precast Reinforced Concrete Box Culvert

Situation Plan

STA. 823+88.00 (IA-3)
Turn-in Date: Nov 2026

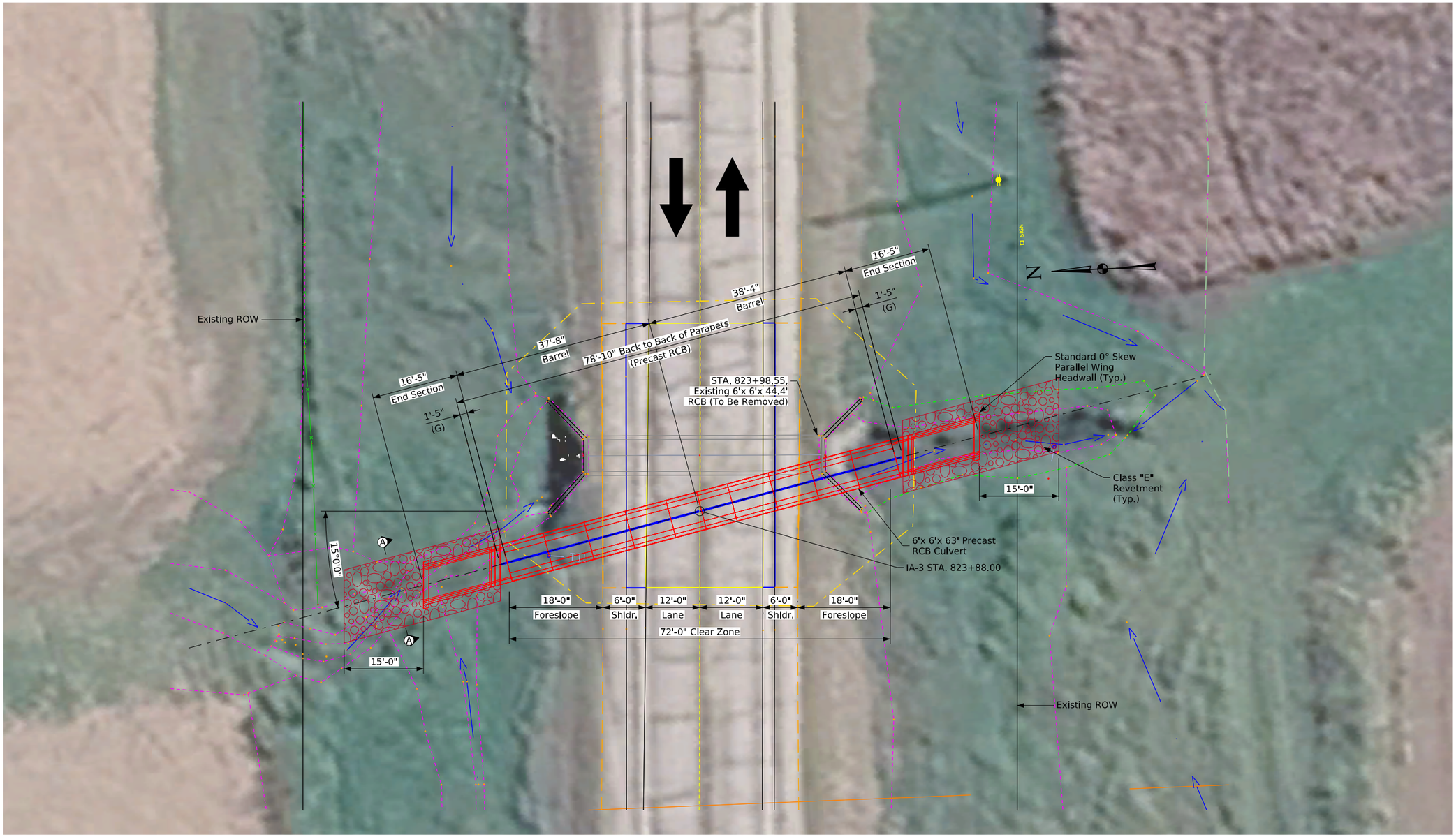
Delaware County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. ???? Design Sheet No. 4 of 5 FHWA/Asset ??????

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Situation Plan

Design For 15° Skew (R.A.)

6' X 6' X 78'-10" Precast Reinforced Concrete Box Culvert

Aerial Situation Plan

STA. 823+88.00 (IA-3)

Turn-in Date: Nov 2026

Delaware County

IOWA DEPARTMENT OF TRANSPORTATION

Design No. ???? Design Sheet No. 5 of 5 FHWA/Asset ??????

FILE NO. 98765	ENGLISH	DESIGN TEAM **Stanley Consultants Inc.**	**Delaware** COUNTY	PROJECT NUMBER **NHSN-003-8(050)--2R-28**	SHEET NUMBER V.5

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