LINN Co.

PCC PAVEMENT - GRADE AND REPLACE
NHSX-100-1(79)--3H-57

LETTING DATE
MARCH 18, 2014

INDEX OF SHEETS

No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title Sheet
A.2	Location Map Sheet
A.3 - 6	Project Key Maps
B Sheets	**Typical Cross Sections and Details**
B.1 - 13	Typical Cross Sections and Details
C Sheets	**Quantities and General Information**
C.1	Project Description
C.1 - 3	Estimated Project Quantities
C.4 - 8	Estimate Reference Information
C.9	Standard Road Plans & Index of Tabulations
C.10	Pollution Prevention Plan
C.11	Standard Notes
C.12 - 23	Tabulations
C.24	Lighting Tabulations
CS Sheets	**Geotechnical Quantities**
CS.1 - 3	Tabulations
D Sheets	**Mainline Plan and Profile Sheets**
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 9	IA 100 Mainline
E Sheets	**Side Road Plan and Profile Sheets**
* E.1 - 6	Edgewood Road
* E.7	North River Boulevard
* E.8	South HyVee Access
F Sheets	**Detour or Temporary Pavement Sheets**
* F.1 - 13	Detour Plan and Profile Sheets
G Sheets	**Survey Sheets**
G.1 - 4	Reference Ties and Bench Marks
G.5 - 12	Horizontal Control Tab. & Super for all Alignments
G.13 - 16	Mainline and Ramp Horizontal Geometric Sheets
G.17	Right Turn Ramp Horizontal Geometric Sheets
G.18	Sideroad Horizontal Geometric Sheets
G.19	Return Horizontal Alignment Sheet
G.20 - 23	Temp. Widening & Detour Horizontal Alignment Sheet
H Sheets	**Right-of-Way Sheets**
H.1 - 4	IA 100 Mainline
HE.5 - 7	Edgewood Road
J Sheets	**Traffic Control and Staging Sheets**
* J.1	Legend and Symbol Information Sheet
* J.2 - 3	Staging, Traffic Cont., & Project Coordination Notes
* J.4 - 13	Detour Typicals
* J.14 - 56	Staging Sequence and Plan Details
* J.57 - 58	Detour/Signing Details
K Sheets	**Interchange Sheets**
* K.1	Edgewood Rd. RAMP A Plan and Profile Sheet
* K.2	Edgewood Rd. RAMP A Rt. Turn Plan and Profile Sheet
* K.3	Edgewood Rd. RAMP B Plan and Profile Sheet
* K.4	Edgewood Rd. RAMP B Rt. Turn Plan and Profile Sheet
* K.5	Edgewood Rd. RAMP C Plan and Profile Sheet
* K.6	Edgewood Rd. RAMP C Rt. Turn Plan and Profile Sheet
* K.7	Edgewood Rd. RAMP D Plan and Profile Sheet
* K.8	Edgewood Rd. RAMP D Rt. Turn Plan and Profile Sheet
* K.9 - 11	Project Grading Sheets
L Sheets	**Geometric, Staking and Jointing Sheets**
L.1 - 30	Geometric Staking & Jointing Details & Edge Profiles
M Sheets	**Storm Sewer Sheets**
M.1 - 4	Storm Sewer Tabulations
M.5	Storm Sewer Legend & Symbol Information Sheet
M.6 - 24	Storm Sewer Plan and Profile Sheets
N Sheets	**Traffic Signal Sheets**
N.1 - 2	Traffic Signal Legend & Symbol Information Sheet
N.2 - 29	Traffic Signal Layout
N.30 - 71	Temporary Signal Layout
P Sheets	**Lighting Layout Sheets**
P.1 - 2	Lighting Layout IA 100 / Edgewood Rd. Interchange
P.3	Lighting Layout Edgewood Rd. at North River Blvd.
P.4	Lighting Layout Edgewood Rd. at Hy-Vee S. Entrance
P.5	Lighting Details

Iowa Department of Transportation

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

LINN COUNTY

PCC PAVEMENT - GRADE AND REPLACE

USHERS FERRY ROAD TO EDGEWOOD ROAD

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.15 of the Specifications.

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

REVISIONS

	TOTAL
	782
PROJECT IDENTIFICATION NUMBER	
99-57-100-020-02	
PROJECT NUMBER	
NHSX-100-1(79)--3H-57	
R.O.W. PROJECT NUMBER	
NHSN-100-1(40)--R2-57	

INDEX OF SHEETS

No.	DESCRIPTION
Q Sheets	**Soils Sheets (49 Total Sheets)**
* Q.0	Soils Legend & Symbol Information Sheet
* Q.1 - 12	Mainline Soils Sheets (17 Total Sheets)
* Q.13 - 18	Side Road Soils Sheets
* Q.19 - 34	Ramp Soils Sheets
* Q.35 - 40	Retaining Wall Soils Sheets (9 Total Sheets)
S Sheets	**Sidewalk Sheets**
* S .1 - 4	Sidewalk Tabulations
* S .5	Sidewalk Legend & Symbol Information Sheet
* S .6 - 14	Sidewalk Plan Sheets
T Sheets	**Earthwork Quantity Sheets**
T.1 - 14	Earthwork Quantity Sheets
U Sheets	**500 Series, Mod.Stds. and Detail Sheets**
U.1 - 4	Modified Paving Standard Sheets
U.5 - 14	Modified Ramp Taper Detail Sheets
U.15 - 23	Modified Storm Sewer Standard Sheets
U.24 - 25	Modified Barrier Standard Sheets
U.26 - 30	Modified Bridge Approach Detail Sheets
U.31	Raised Island Detail Sheet
U.32	Abutment Backfill Detail Sheet
U.33 - 37	Barrier Transition Detail Sheets
U.38	Concrete Slope Paving Details
V Sheets	**Bridge Culvert and Retaining**
V.1 - 2	Bridge Situation Plans
* V.3 - 8	Retaining Wall Plan & Profile Sheets
V.9 - 13	Retaining Wall Detail Sheets
* V.14 - 15	Retaining Wall Staged Construction Details
W Sheets	**Mainline Cross Sections**
W.1	Legend and Symbol Information Sheet
W.2 - 145	Mainline Cross Sections
X Sheets	**Side Road Cross Sections**
X.1 - 77	Side Road Cross Sections
X.78 - 89	Detour Cross Sections
Y Sheets	**Ramp Cross Sections**
Y.1 - 113	Ramp Cross Sections
	* Color Plan Sheets

MILEAGE SUMMARY

105-1
09-27-94

Div.	Location	Lin. Ft.	Miles
	Sta 1084+50.00 to Sta 1128+50.00	4,400.00	
	Total Length of Roadway	4,400.00	0.833
	Total Net Length of Project	4,400.00	0.833

For Project Location Map
Refer to Sheet A.2

DESIGN DATA RURAL

2005	AADT	0	V.P.D.
2040	AADT	12000	V.P.D.
2040	DHV	2625	V.P.H.
TRUCKS		10	%
Total Design ESALs		TBD	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	Sirpa Hall	Primary Signature Block
CS.1	Emad Farouz	Geotechnical Design
C.24	Steven J. Junod	Lighting Design
N.1	Tyler Wiles	Traffic Signal Design

ROADWAY DESIGN

LICENSED PROFESSIONAL ENGINEER
Sirpa H. Hall
15616
IOWA

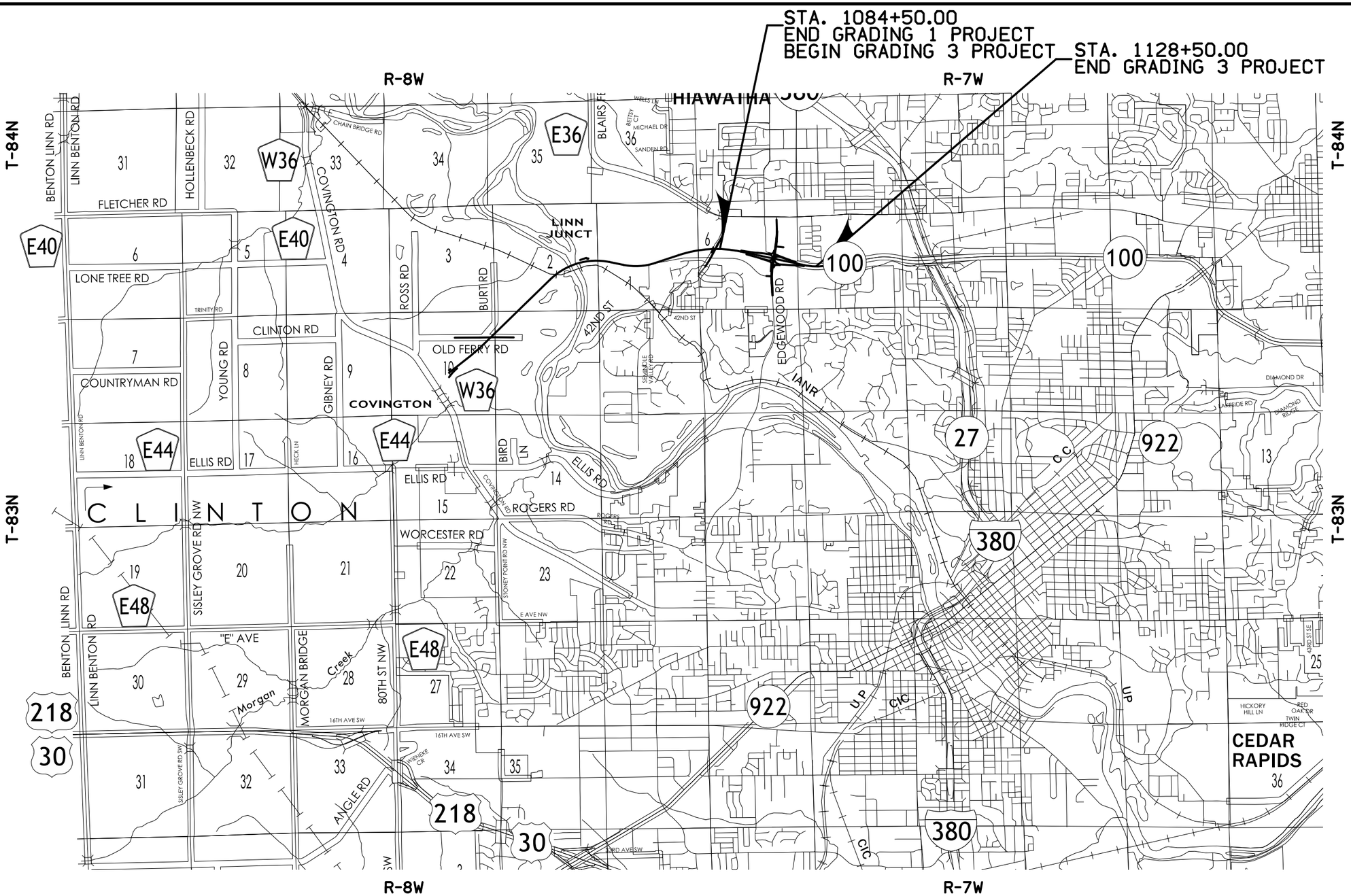
I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Signature: Sirpa H. Hall — Date: 01/03/2014

Printed or Typed Name: Sirpa H. Hall, P.E.

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: A.1-A.6,B.1-B.13,C.1-C.21,D.1-D.9,E.1-E.8,F1-F.13 G.1-G.23,H1-H.4,HE.5-HE.7,J.1-J.58,K.1-K.11,L.1-L.30,M.1-M.24,S.1-S.14,T.1-T.14,U.1-U.38,V.1-V.15 W.1-W.145,X.1-X.89,Y.1-Y.113



LOCATION MAP SCALE
0 0.5 1 1.5
Miles

Location Map

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER A.2

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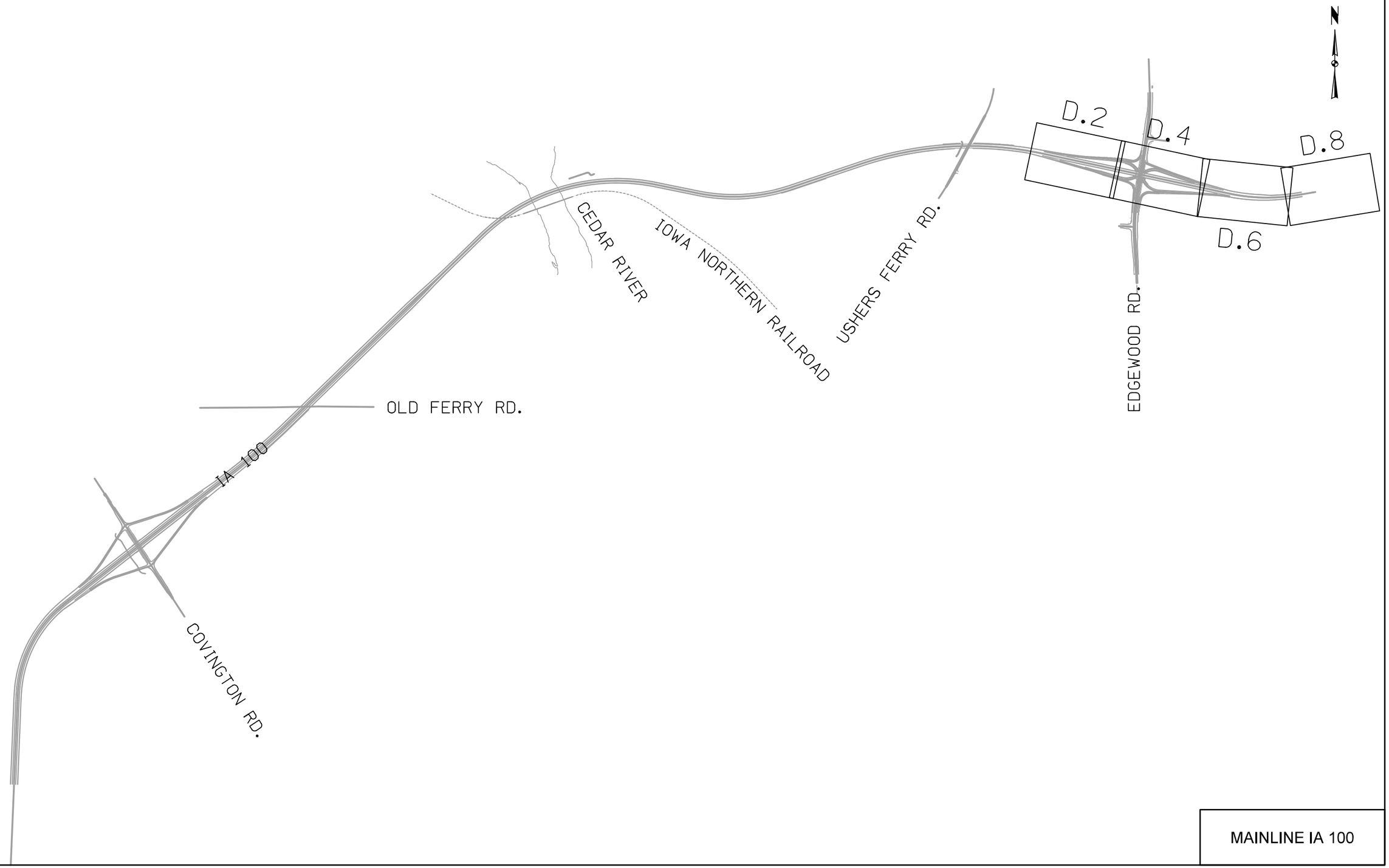

MAINLINE IA 100

Project Key Maps

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER A.3

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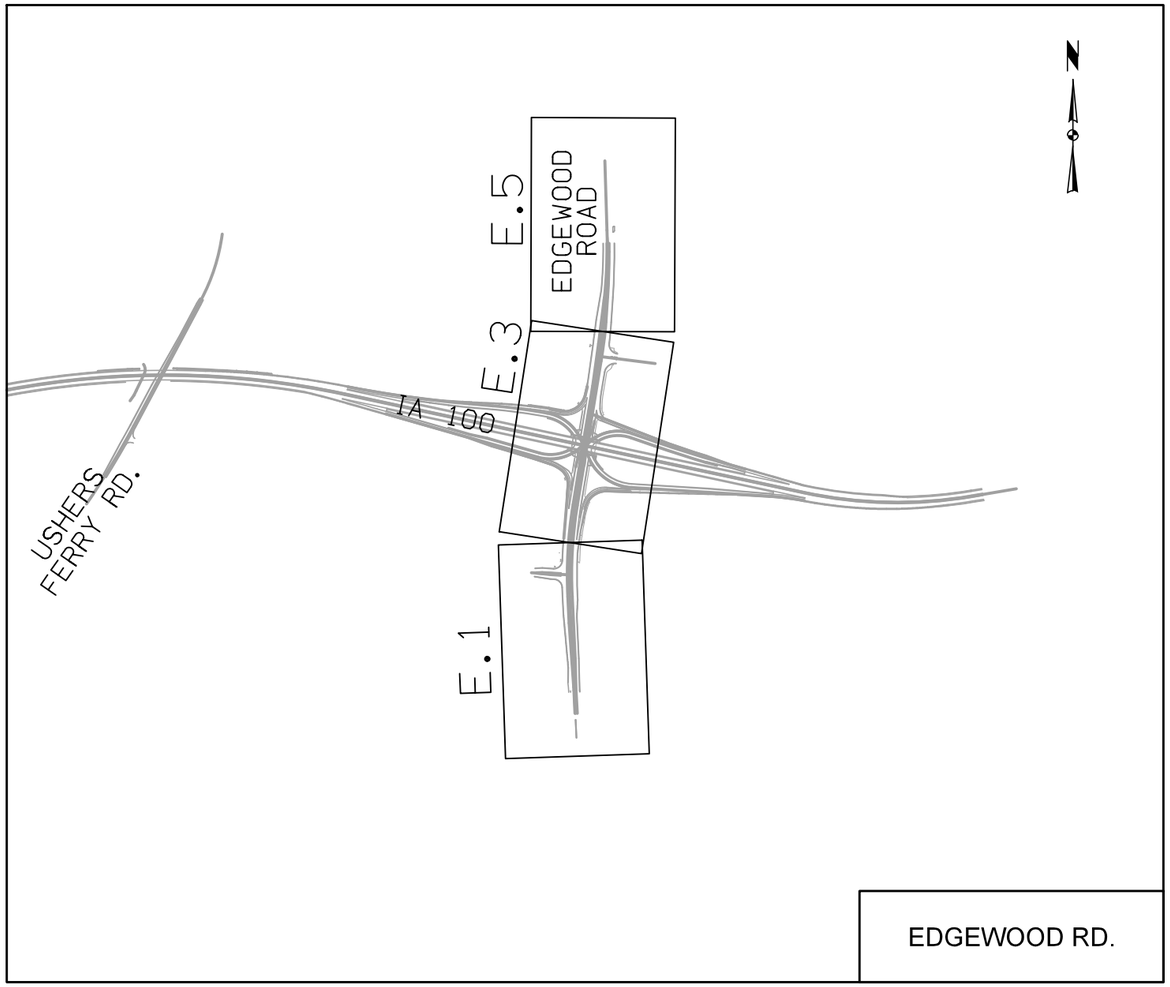
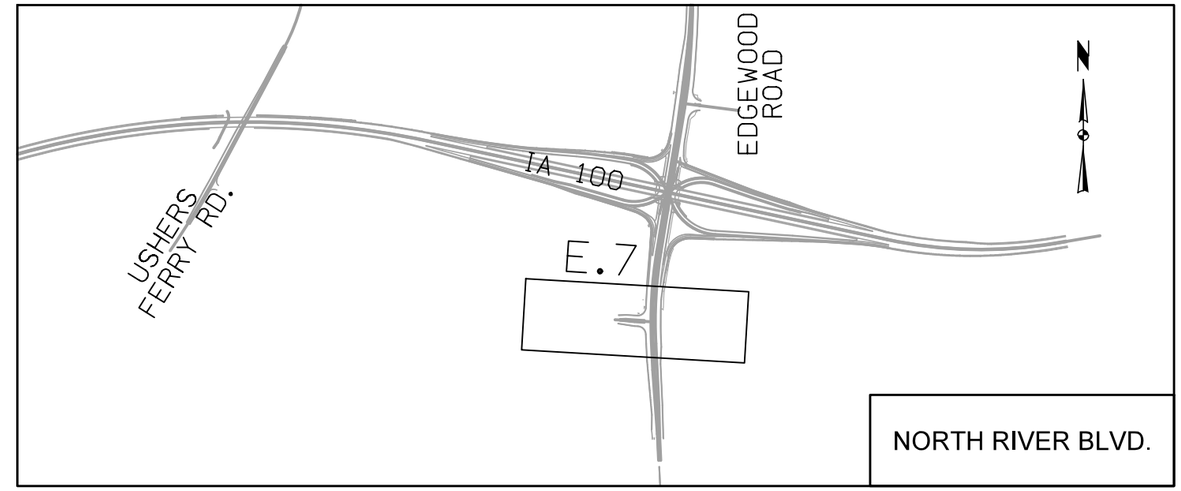
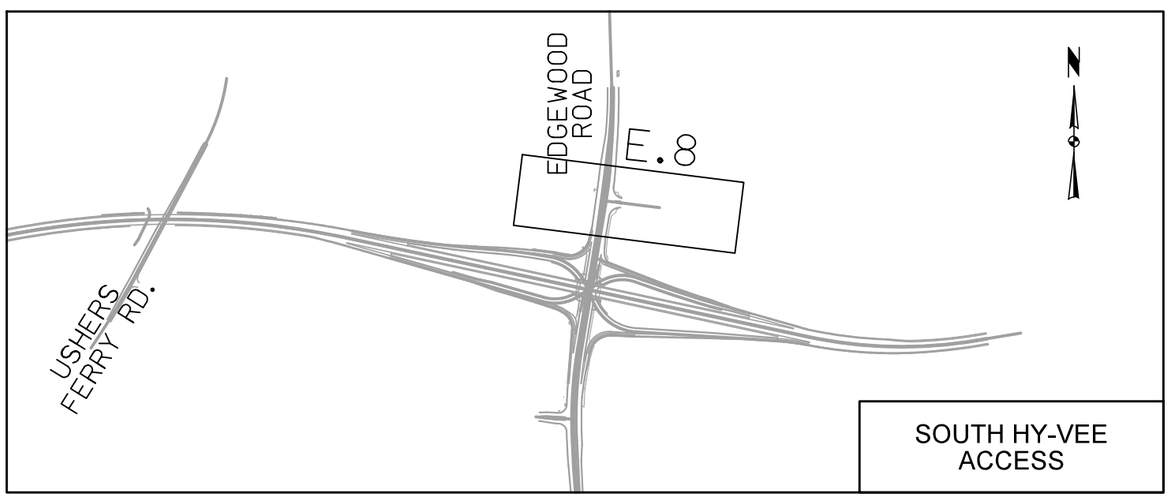


EDGEWOOD RD.



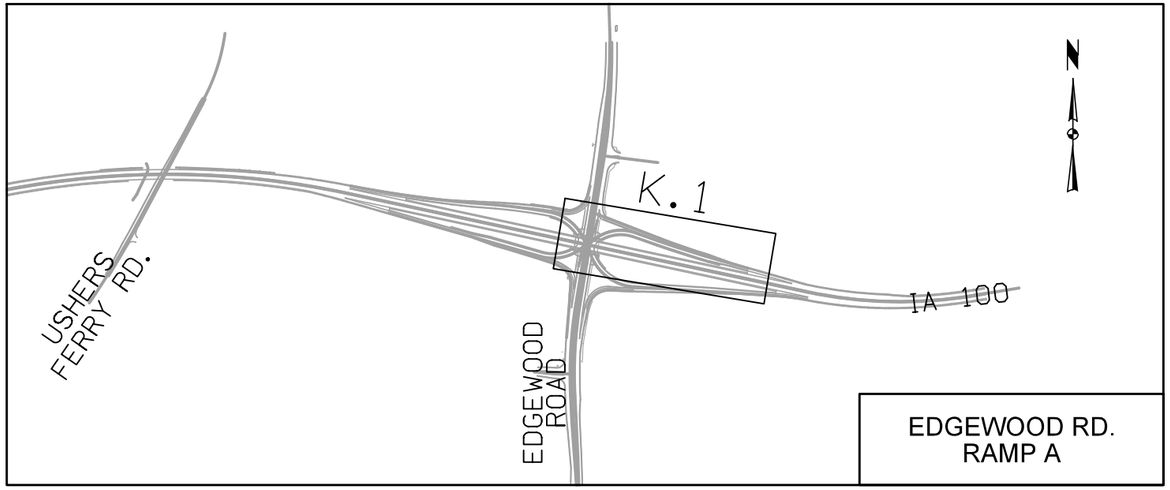
NORTH RIVER BLVD.



SOUTH HY-VEE ACCESS

Project Key Maps

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER A.4



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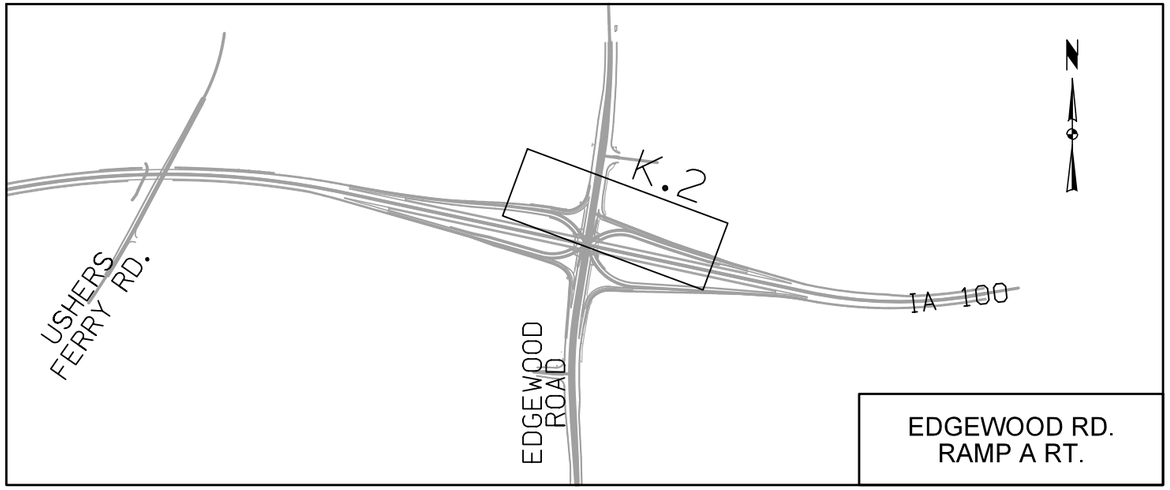
RAMP A



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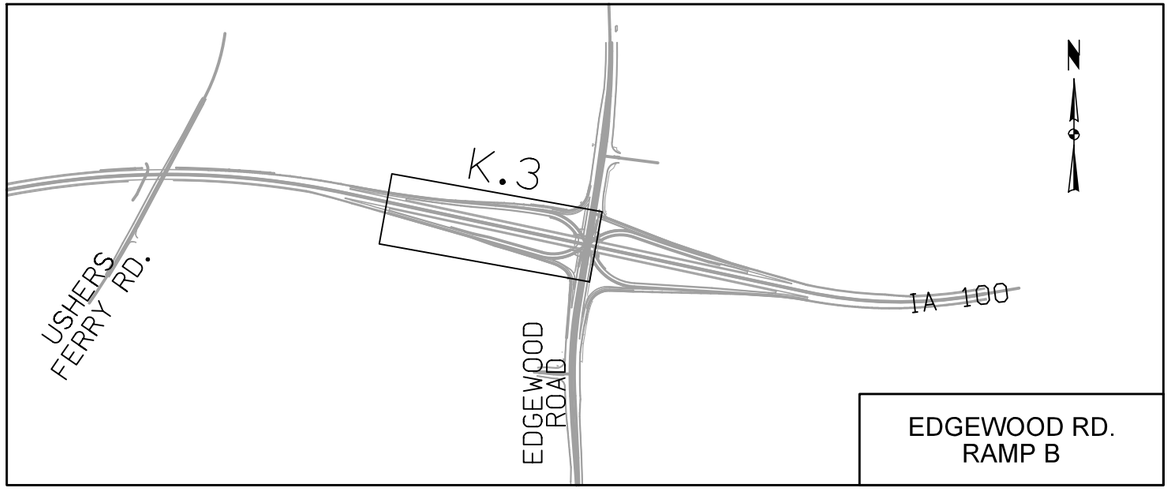
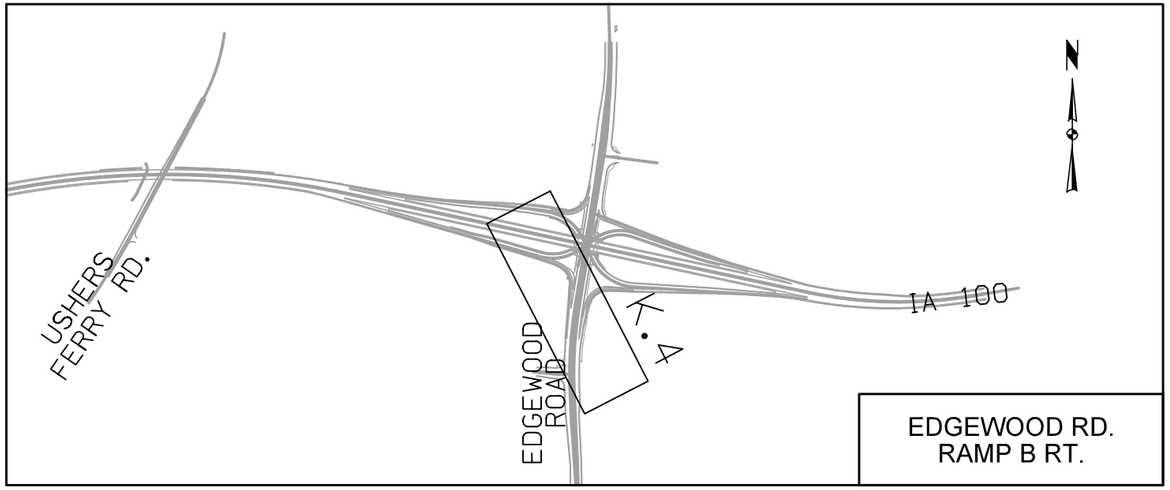
RAMP A RT.



EDGEWOOD RD.
RAMP B



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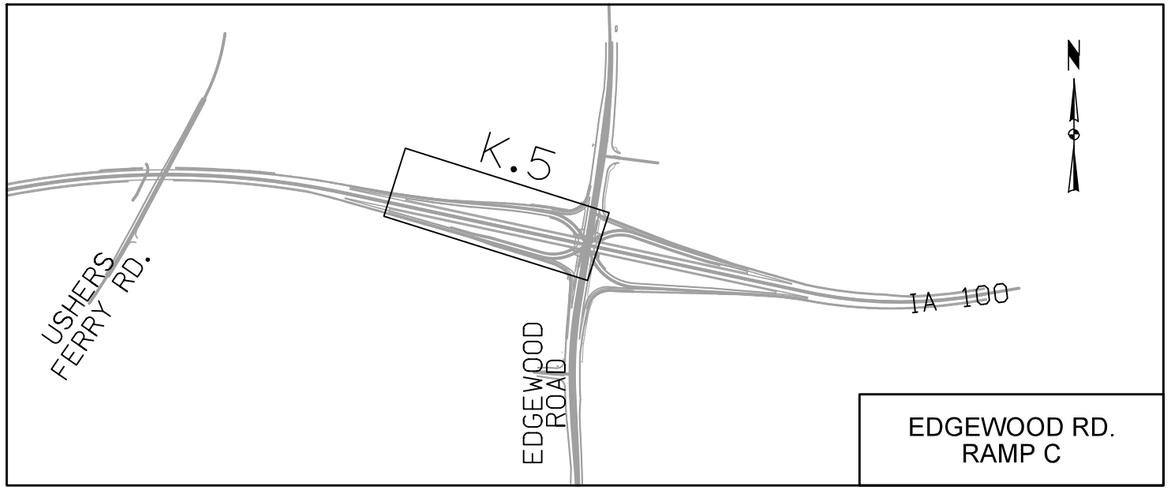
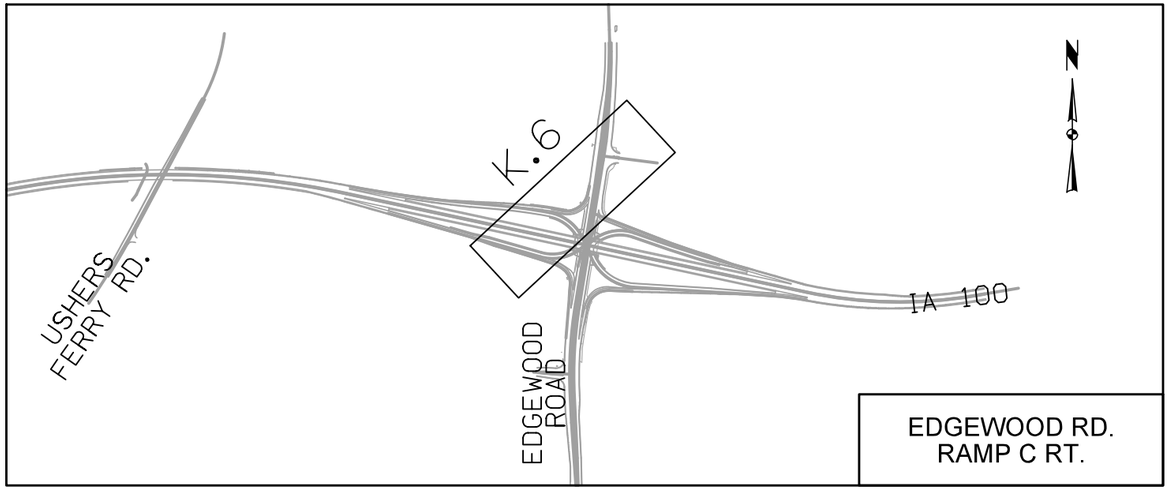
RAMP B RT.

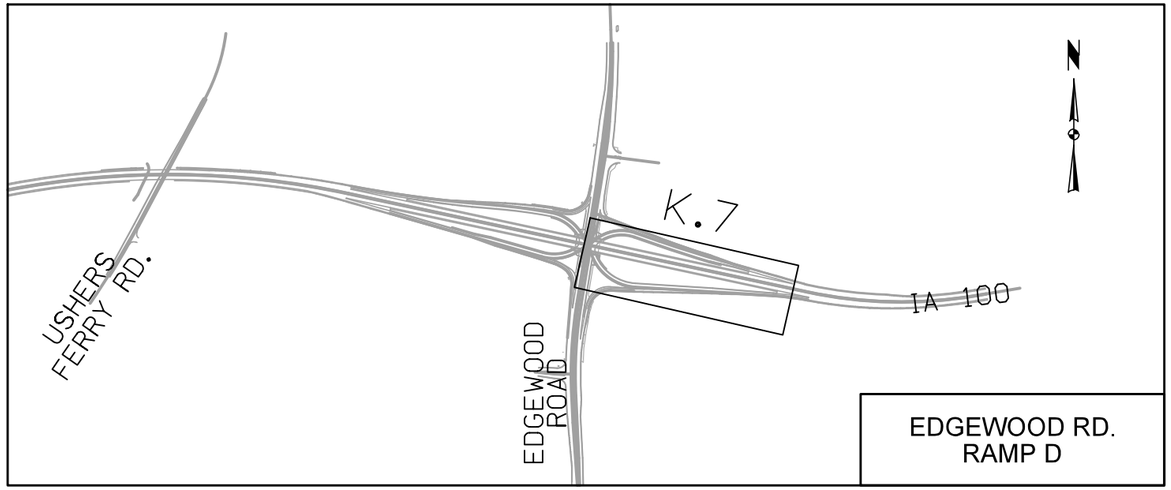


EDGEWOOD RD.
RAMP C

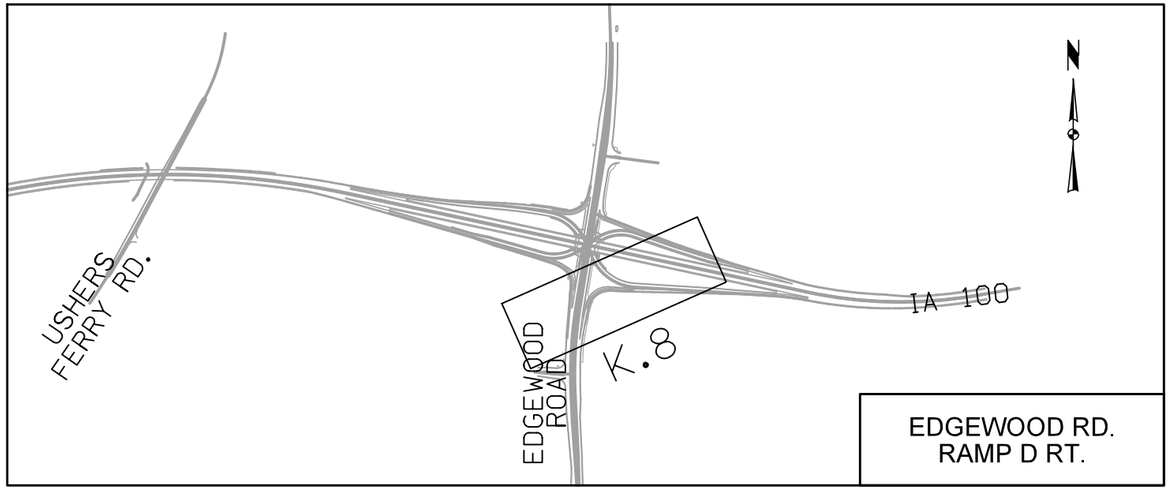


EDGEWOOD RD.
RAMP C RT.

Project Key Maps



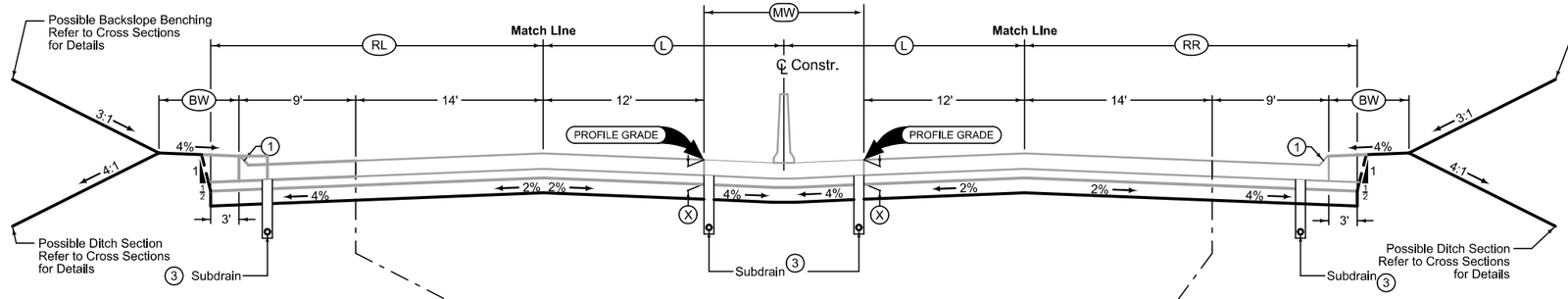
EDGEWOOD RD.
RAMP D



EDGEWOOD RD.
RAMP D RT.

Project Key Maps

Urban Grading
New



Curbed Shoulder

LOCATION		DIMENSIONS	
STATION TO STATION		RL Feet	BW Feet
1098+99.20	1099+05.64	26	6
1101+07.02	1101+10.00	26	6

Curbed Shoulder

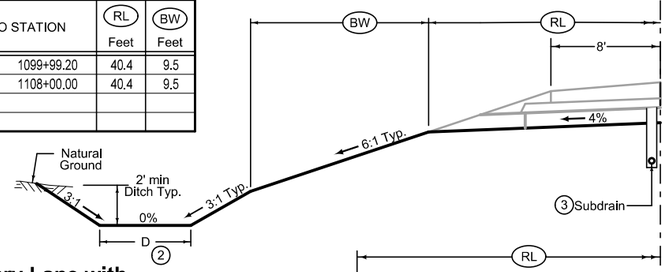
LOCATION		DIMENSIONS	
STATION TO STATION		RR Feet	BW Feet
1101+03.11	1101+05.11	26	6

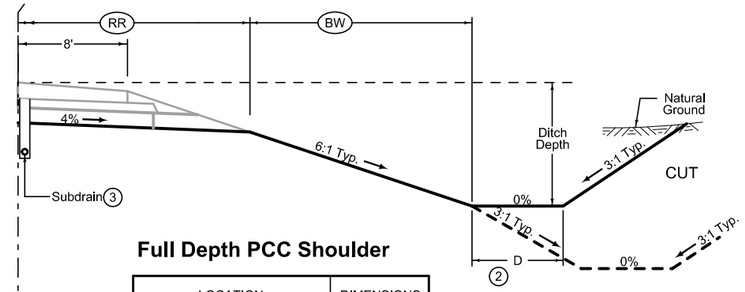
Full Depth PCC Shoulder

LOCATION		DIMENSIONS	
STATION TO STATION		RL Feet	BW Feet
1087+00.00	1099+99.20	40.4	9.5
1101+10.00	1108+00.00	40.4	9.5

4 LANE GRADING (DELAYED PAVING)

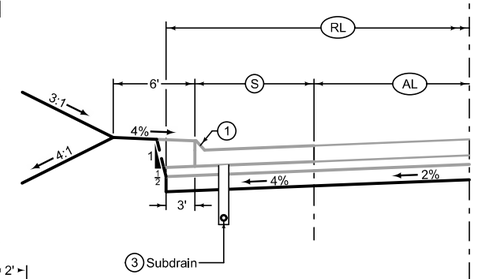
LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		L Feet	X Inches	MW Feet
IA 100	1084+50.00	1108+00.00	20	28	16





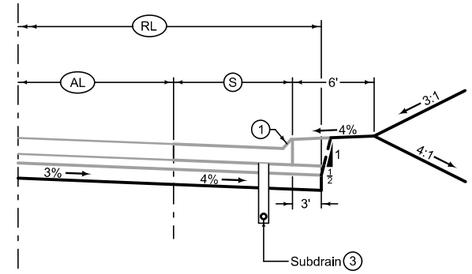
Auxillary Lane with Curbed Shoulder

LOCATION		DIMENSIONS		
STATION TO STATION		RL Feet	AL Feet	S Feet
1084+50.00	1084+75.00	48.5-49.4	24.4-25.4	7



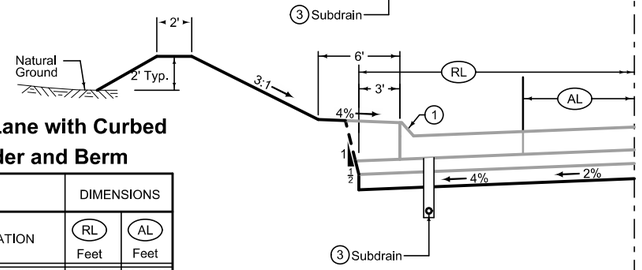
Full Depth PCC Shoulder

LOCATION		DIMENSIONS	
STATION TO STATION		RR Feet	BW Feet
1086+00.00	1098+99.20	40.4	9.5
1101+05.11	1108+00.00	40.4	9.5



Auxillary Lane with Curbed Shoulder

LOCATION		DIMENSIONS		
STATION TO STATION		RL Feet	AL Feet	S Feet
1084+50.00	1086+00.00	54-64	30-40	7



Auxillary Lane with Curbed Shoulder and Berm

LOCATION		DIMENSIONS	
STATION TO STATION		RL Feet	AL Feet
1084+75.00	1087+00.00	49.4-62.0	25.4-38

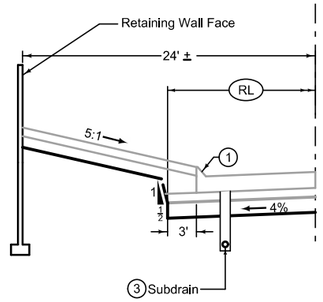
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

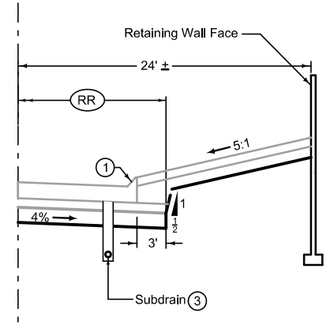
See Plan & Profile sheets and cross sections for additional details of ditches, foreslopes, and backslopes.

1. 6" Sloped Curb, See PV-102
2. 10' Standard Ditch Width. Refer to Cross Sections for Details on varied ditch width.
3. Possible Subdrain, Refer to Sheets CS.1-CS.2 and RF-19C for Details and Locations.

Full Depth PCC Shoulder With Retaining Wall

BEGIN STATION	END STATION	RL Feet
1099+05.64	1101+07.02	26.0





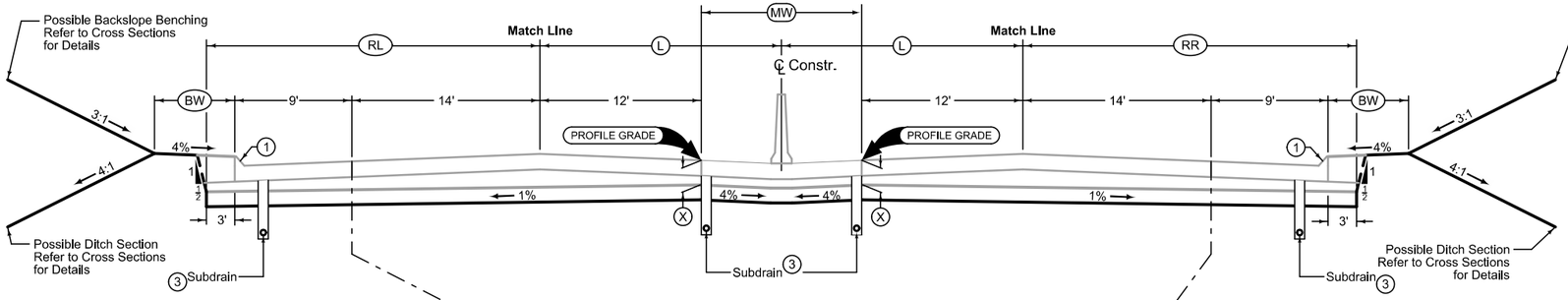
Full Depth PCC Shoulder With Retaining Wall

LOCATION		
BEGIN STATION	END STATION	RR Feet
1098+99.20	1101+03.11	26.0

Urban Grading
New

Curbed Shoulder

LOCATION		DIMENSIONS	
STATION TO STATION		RL Feet	BW Feet
1123+20.00	1127+75.00	26	6



Curbed Shoulder

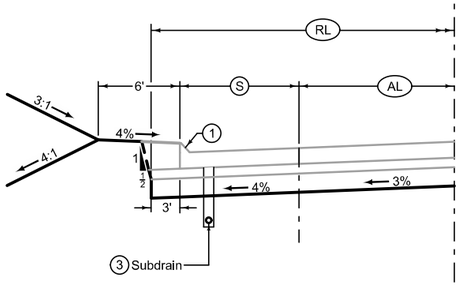
LOCATION		DIMENSIONS	
STATION TO STATION		RR Feet	BW Feet
1126+00.00	1128+50.00	26	6

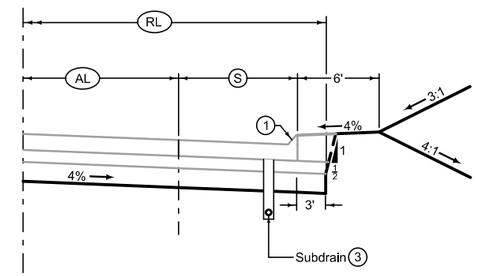
4 LANE GRADING

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	STATION TO STATION		L Feet	X Inches	MW Feet
IA 100	1108+00.00	1128+50.00	20	28	16

Auxillary Lane with Curbed Shoulder

LOCATION		DIMENSIONS		
STATION TO STATION		RL Feet	AL Feet	S Feet
1111+50.00	1115+70.00	64-36	40-12	7
1115+70.00	1121+37.34	36	12	7
1121+37.34	1122+90.20	36-28	12-2	7
1122+90.20	1123+20.00	28-26	2-0	7-9



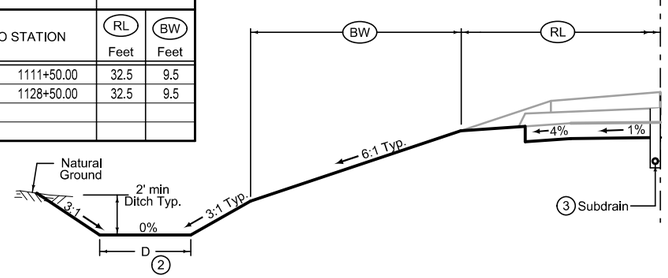


Auxillary Lane with Curbed Shoulder

LOCATION		DIMENSIONS		
STATION TO STATION		RL Feet	AL Feet	S Feet
1113+75.00	1125+00.00	64.4-28	38.4-2	7
1125+00.00	1126+00.00	28-26	2-0	7-9

Full Depth PCC Shoulder

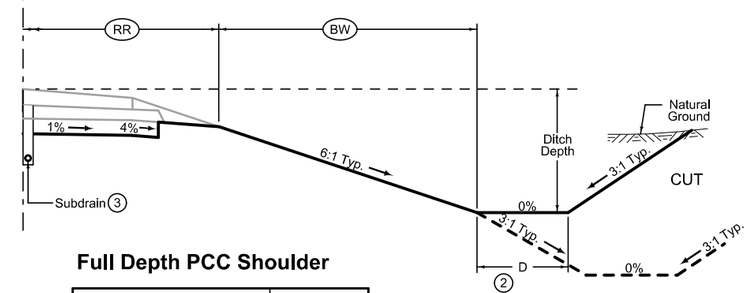
LOCATION		DIMENSIONS	
STATION TO STATION		RL Feet	BW Feet
1108+00.00	1111+50.00	32.5	9.5
1127+75.00	1128+50.00	32.5	9.5



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, foreslopes, and backslopes.

1. 6" Sloped Curb, See PV-102
2. 10' Standard Ditch Width. Refer to Cross Sections for Details on varied ditch width.
3. Possible Subdrain, Refer to Sheets CS.1-CS.2 and RF-19C for Details and Locations.



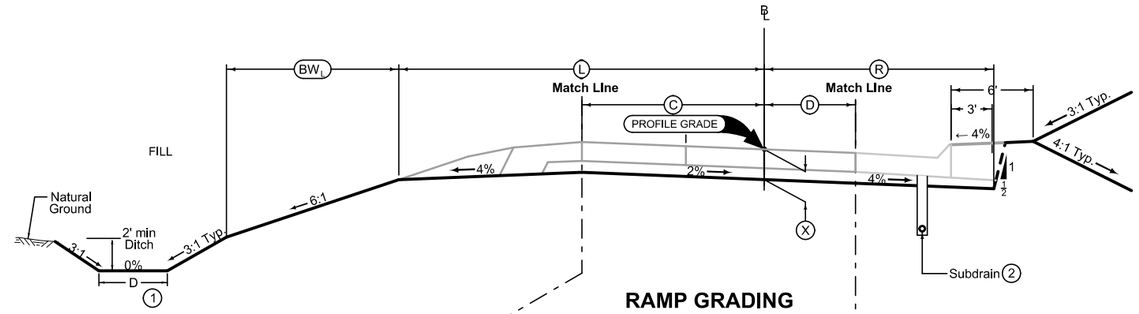
Full Depth PCC Shoulder

LOCATION		DIMENSIONS	
STATION TO STATION		RR Feet	BW Feet
1108+00.00	1113+75.00	32.5	9.5

1R_Grade
Modified

Full Depth Paved Shoulder

LOCATION			DIMENSIONS	
RAMP	BEGIN STATION	END STATION	(L) Feet	(BW_L) Feet
B	42586+00.00	42589+75.00	25.1-34.5	0
B	42589+75.00	42590+50.00	34.5	0-22.1
C	43587+00.00	43587+50.00	24.8-26.0	0
C	43587+50.00	43588+75.00	26-33	0
C	43588+75.00	43591+50.00	33-40.5	0-21.7
C	43591+50.00	43593+25.00	42.5	21.7-27.4
C	43593+25.00	43593+50.00	42.5	21.7-11.5
C	43593+50.00	43596+93.22	42.5	11.5



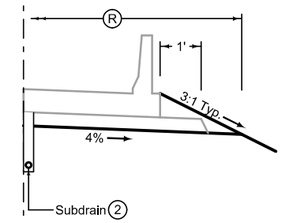
RAMP GRADING (DELAYED PAVING)

Curbed Shoulder

LOCATION			
RAMP	BEGIN STATION	END STATION	(R) Feet
B	42586+00.00	42591+95.00	10
B	42591+95.00	42593+75.00	10-22
B	42593+75.00	42597+88.76	22-40.7
C	43587+50.00	43589+75.00	10
C	43589+75.00	43591+75.00	10-18

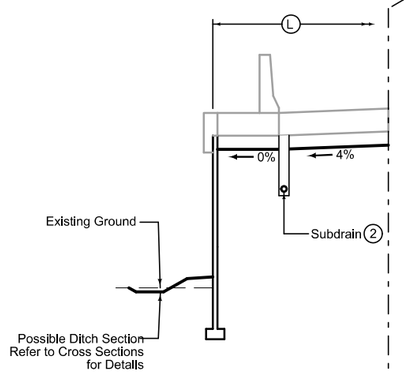
Full Depth PCC Shoulder with Barrier

LOCATION			
RAMP	BEGIN STATION	END STATION	(R) Feet
C	43591+75.00	43595+75.00	21.9-36



Full Depth PCC Shoulder with Retaining Wall

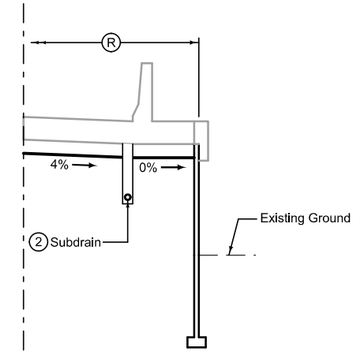
LOCATION			
RAMP	STATION TO STATION		(L) Feet
B	42590+50.00	42592+10.00	25
B	42592+10.00	42593+30.00	25-33
B	42593+30.00	42597+88.76	33

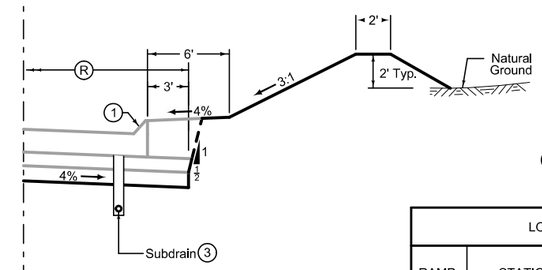


LOCATION			DIMENSIONS		
INTERCHANGE	RAMP	STATION TO STATION		(C) Feet	(D) Feet	(X) Inches
EDGEWOOD ROAD	B	42586+00.00	42591+95.00	16	0	22
EDGEWOOD ROAD	B	42591+95.00	42592+10.00	16	0-1	22
EDGEWOOD ROAD	B	42592+10.00	42593+30.00	16-24	1-9	22
EDGEWOOD ROAD	B	42593+30.00	42597+88.76	24	9-30.2	22
EDGEWOOD ROAD	C	43587+00.00	43587+50.00	16	0	22
EDGEWOOD ROAD	C	42587+50.00	43589+75.00	16+20.5	0	22
EDGEWOOD ROAD	C	43589+75.00	43591+50.00	20.5-24	0-7	22
EDGEWOOD ROAD	C	43591+50.00	43596+93.22	24	7-28.7	22

Full Depth PCC Shoulder with Retaining Wall

LOCATION			
RAMP	STATION TO STATION		(R) Feet
C	43595+75.00	43596+97.30	32.1-38





Curbed Shoulder with Berm

LOCATION			
RAMP	STATION TO STATION		(R) Feet
C	43587+00.00	43587+50.00	10

Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

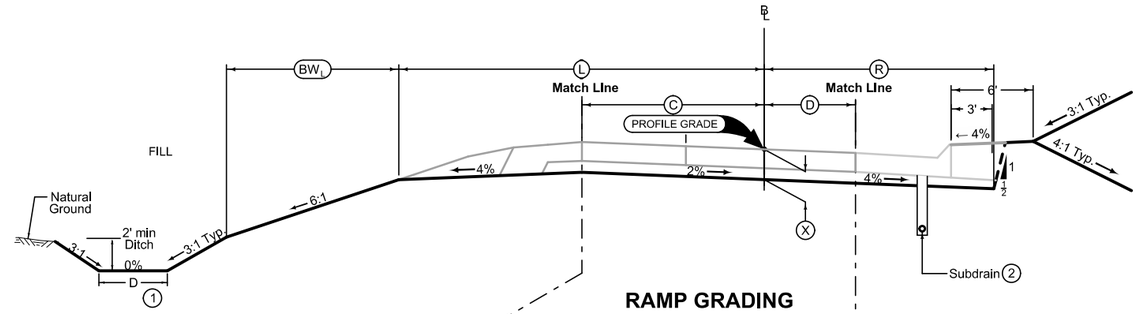
(1) 10' Standard Ditch Width. Refer to Cross Sections for Details on varied ditch width.

(2) Possible subdrain. Refer to Sheets CS.1-CS.2 and RF-19C for Details and Locations.

1R_Grade
Modified

Full Depth Paved Shoulder

LOCATION			DIMENSIONS	
RAMP	BEGIN STATION	END STATION	(L) Feet	(BW_L) Feet
A	41509+50.00	41511+50.00	37.5-25	0
C	43596+93.22	43597+25.00	42.5	11.5
D	44501+25.00	44503+25.00	42.5	11.5
D	44503+25.00	44504+00.00	42.5-44.5	9.5-11.5
D	44504+00.00	44509+25.00	42.5	11.5
D	44509+25.00	44510+50.00	42.5-40	11.5
D	44510+50.00	44513+25.00	40-26	11.5-0
D	44513+25.00	44513+75.00	26.4-24	0



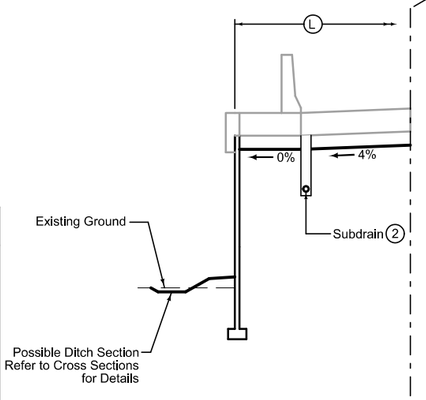
RAMP GRADING

Curbed Shoulder

LOCATION			
RAMP	BEGIN STATION	END STATION	(R) Feet
A	41500+69.91	41502+60.00	10
A	41502+60.00	41508+00.00	43-22.2
A	41509+75.00	41510+40.00	14.3-10
A	41510+40.00	41511+50.00	10
A RIGHT	41600+33.60	41602+60.00	10
B	42597+88.76	42597+95.00	40.7-43.5
B	42597+95.00	42599+33.21	10
B RIGHT	42697+95.00	42699+90.18	10
C	43597+25.00	43599+58.45	10
C RIGHT	43698+75.00	43699+75.78	10
D	44500+01.79	44503+75.00	10
D	44509+75.00	44511+25.00	16-10
D	44511+25.00	44513+75.00	10
D RIGHT	44599+92.45	44602+00.00	10

Full Depth PCC Shoulder with Retaining Wall

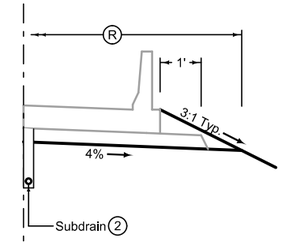
LOCATION			
RAMP	STATION TO STATION		(L) Feet
A	41500+69.91	41508+70.00	33
A	41508+70.00	41509+50.00	33-29.4
B	42597+88.76	42599+31.78	33
C	43597+25.00	43599+58.45	33
D	44500+01.79	44501+25.00	33

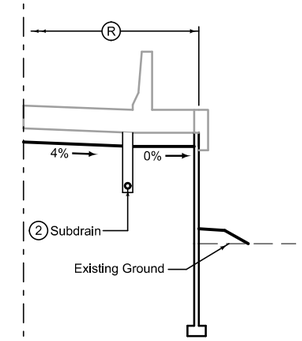


LOCATION				DIMENSIONS		
INTERCHANGE	RAMP	STATION TO STATION		(C) Feet	(D) Feet	(X) Inches
EDGEWOOD ROAD	A	41500+69.91	41502+50.00	24	0	22
EDGEWOOD ROAD	A	41502+50.00	41508+60.00	24	32-12	22
EDGEWOOD ROAD	A	41508+60.00	41508+70.00	24	12-11.3	22
EDGEWOOD ROAD	A	41508+70.00	41510+40.00	24-16.4	11.3-0	22
EDGEWOOD ROAD	A	41510+40.00	41510+50.00	16.4-16	0	22
EDGEWOOD ROAD	A	41510+50.00	41511+50.00	16	0	22
EDGEWOOD ROAD	A RIGHT	41601+19.77	41602+60.00	16	0	22
EDGEWOOD ROAD	B	42597+88.76	42597+95.00	24	30.2-33.5	22
EDGEWOOD ROAD	B	42597+95.00	42599+33.21	24	0	22
EDGEWOOD ROAD	B RIGHT	42697+95.00	42699+90.18	16	0	22
EDGEWOOD ROAD	C	43596+93.22	43597+25.00	24	28.7-30	22
EDGEWOOD ROAD	C	43597+25.00	43599+58.45	24	0	22
EDGEWOOD ROAD	C RIGHT	43697+25.00	43699+75.78	16	0	22
EDGEWOOD ROAD	D	44500+01.79	44503+75.00	24	0	22
EDGEWOOD ROAD	D	44503+75.00	44509+25.00	24	30-8	22
EDGEWOOD ROAD	D	44509+25.00	44511+25.00	24-20	8-0	22
EDGEWOOD ROAD	D	44511+25.00	44513+25.00	20-16	0	22
EDGEWOOD ROAD	D	44513+25.00	44513+75.00	16	0	22
EDGEWOOD ROAD	D RIGHT	44599+92.45	44603+75.00	16	0	22

Full Depth PCC Shoulder with Barrier

LOCATION			
RAMP	BEGIN STATION	END STATION	(R) Feet
C RIGHT	43698+25.00	43698+75.00	11.2-13.9
D	44503+75.00	44509+75.00	42.1-18.1
D RIGHT	44602+00.00	44603+75.00	22-12



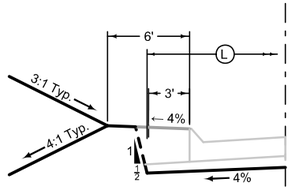


Full Depth PCC Shoulder with Retaining Wall

LOCATION			
RAMP	STATION TO STATION		(R) Feet
C	43596+93.22	43597+25.00	37-38.3
C RIGHT	43697+25.00	43698+25.00	8.3

Curbed Shoulder

LOCATION			
RAMP	BEGIN STATION	END STATION	(L) Feet
A Right	41600+39.54	41602+60.00	24
B Right	42697+95.00	42698+56.18	24
B Right	42698+56.18	42699+51.50	24-36.9
B Right	42699+51.50	42699+90.18	36.9-30.8
C Right	43697+25.00	43697+38.26	24
C Right	43697+38.26	43699+75.78	24-30.6
D Right	44599+92.45	44600+08.34	24
D Right	44600+08.34	44601+35.00	24-30.9
D Right	44601+35.00	44603+09.13	30.9-24
D Right	44603+09.13	44603+75.00	24

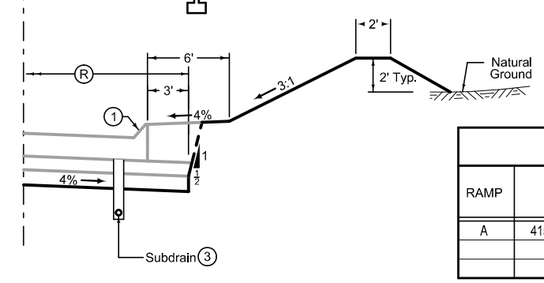


Section view is in direction of traffic.

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

(1) 10' Standard Ditch Width. Refer to Cross Sections for Details on varied ditch width.

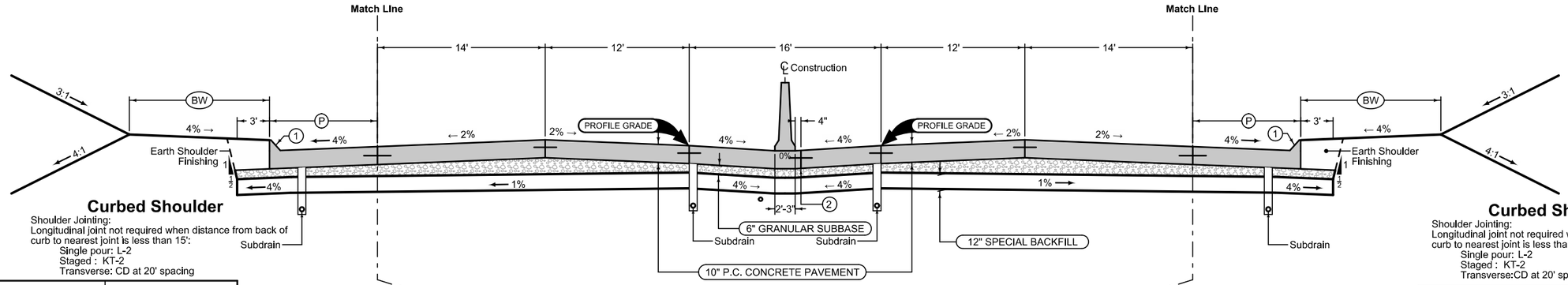
(2) Possible subdrain. Refer to Sheets CS.1-CS.2 and RF-19C for Details and Locations.



Curbed Shoulder with Berm

LOCATION			
RAMP	STATION TO STATION		(R) Feet
A	41508+00.00	41509+75.00	22.2-14.3

Urban Paving
New



Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':
Single pour: L-2
Staged : KT-2
Transverse: CD at 20' spacing

LOCATION		DIMENSIONS		
STATION TO STATION		P Feet	BW Feet	Curb Type See PV-102
1123+20.00	1127+75.00	9	6	6" SLOPED

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':
Single pour: L-2
Staged : KT-2
Transverse:CD at 20' spacing

LOCATION		DIMENSIONS		
STATION TO STATION		P Feet	BW Feet	Curb Type See PV-102
1126+00.00	1128+50.00	9	6	6" SLOPED

4 LANE UNDIVIDED ROADWAY
PCC PAVING (Paved Shoulders)

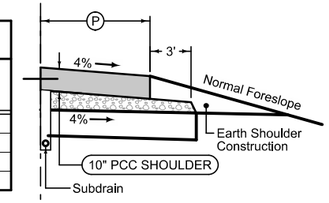
Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2 or E

LOCATION		
ROAD IDENTIFICATION	BEGIN STATION	END STATION
IA 100	1108+00.00	1128+50.00

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: CD at 20' spacing

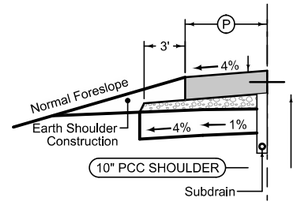
LOCATION		
BEGIN STATION	END STATION	P Feet
1108+00.00	1113+75.00	8

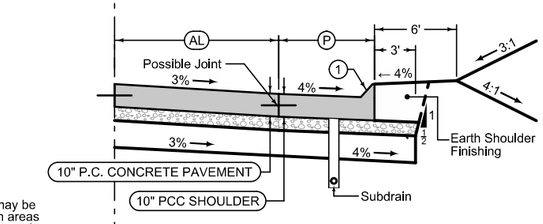


Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: CD at 20' spacing

LOCATION		
BEGIN STATION	END STATION	P Feet
1108+10.00	1111+50.00	8
1127+75.00	1128+50.00	8





Auxiliary Lane with Curbed Shoulder

Shoulder jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':
Transverse: CD at 20' spacing
Single pour: L-2
Staged : KT-2

LOCATION		DIMENSIONS		
STATION TO STATION		AL Feet	P Feet	Curb Type See PV-102
1113+75.00	1125+00.00	38.4-2	7	6" SLOPED
1125+00.00	1126+00.00	2-0	7-9	6" SLOPED

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, foreslopes, and backslopes.

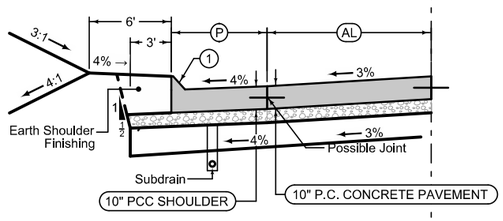
(1) 6" Sloped Curb. See PV-102

(2) Longitudinal E Joint Placed 4" From Face of Barrier. Joint Required on Only One Side of Median Barrier.

Auxiliary Lane with Curbed Shoulder

Shoulder jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':
Transverse: CD at 20' spacing
Single pour: L-2
Staged : KT-2

LOCATION		DIMENSIONS		
STATION TO STATION		AL Feet	P Feet	Curb Type See PV-102
1111+50.00	1115+70.00	40-12	7	6" SLOPED
1115+70.00	1121+40.00	12	7	6" SLOPED
1121+40.00	1122+90.20	12-2	7	6" SLOPED
1122+90.20	1123+20.00	2-0	7-9	6" SLOPED

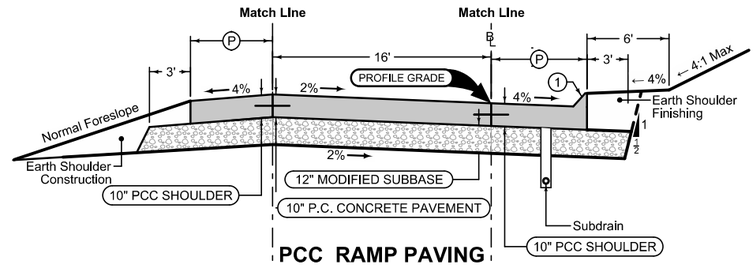


1RP_
10-19-10

Full Depth Paved Shoulder

PCC Shoulder Jointing:
Longitudinal joints: L-2 or KT-2
Transverse joints: See L Sheets

LOCATION			
RAMP	BEGIN STATION	END STATION	(P) Feet
A	41510+50.00	41511+50.00	4
D	44513+25.00	44513+75.00	4



Curbed Shoulder

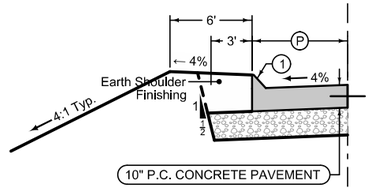
Transverse: See L Sheets
Single pour: L-2
Staged : KT-2

LOCATION			DIMENSIONS	
RAMP	BEGIN STATION	END STATION	(P) Feet	Curb Type See PV-102
A	41510+50.00	41511+50.00	7	6" SLOPED
A RIGHT	41600+33.60	41602+60.00	7	6" SLOPED
B RIGHT	42697+95.00	42699+90.18	7	6" SLOPED
C RIGHT	43698+75.00	43699+75.78	7	6" SLOPED
D	44513+25.00	44513+75.00	7	6" SLOPED
D RIGHT	44599+92.45	44602+00.00	7	6" SLOPED

Curbed Shoulder

Transverse: See L Sheets
Single pour: L-2
Staged : KT-2

LOCATION			DIMENSIONS	
RAMP	BEGIN STATION	END STATION	(P) Feet	Curb Type See PV-102
A RIGHT	41600+33.60	41602+60.00	5	6" SLOPED
B RIGHT	42697+95.00	42698+56.18	5	6" SLOPED
B RIGHT	42698+56.18	42699+51.50	5-17.9	6" SLOPED
B RIGHT	42699+51.50	42699+90.18	17.9-11.8	6" SLOPED
C RIGHT	43697+25.00	43697+38.30	5	6" SLOPED
C RIGHT	43697+38.30	43699+75.78	5-11.6	6" SLOPED
D RIGHT	44599+92.45	44600+08.34	5	6" SLOPED
D RIGHT	44600+08.34	44601+35.00	5-11.9	6" SLOPED
D RIGHT	44601+35.00	44603+09.13	11.9-5	6" SLOPED
D RIGHT	44603+09.13	44603+75.00	5	6" SLOPED

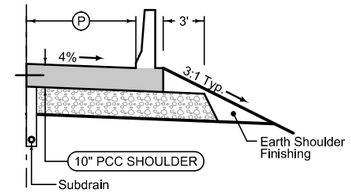


PCC RAMP PAVING (Paved Shoulders)

Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: See L Sheets

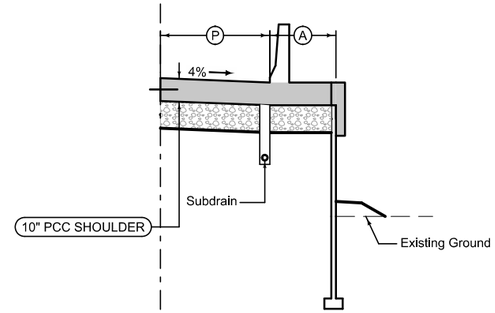
LOCATION		
RAMP	BEGIN STATION	END STATION
A	41510+50.00	41511+50.00
A RIGHT	41600+33.60	41602+60.00
B RIGHT	42697+95.00	42699+90.18
C RIGHT	43697+25.00	43699+75.78
D	44513+25.00	44513+75.00
D RIGHT	44599+92.45	44603+75.00



Full Depth PCC Shoulder with Barrier

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: See L Sheets

LOCATION			
RAMP	STATION TO STATION		(P) Feet
C RIGHT	43698+25.00	43698+75.00	6
D RIGHT	44602+00.00	44603+75.00	6



Full Depth PCC Shoulder with Retaining Wall

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: See L Sheets

LOCATION			DIMENSIONS	
RAMP	BEGIN STATION	END STATION	(P) Feet	(A) Feet
C RIGHT	43697+25.00	43698+25.00	6	2.25

Section view in the direction of travel.

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, foreslopes, and backslopes.

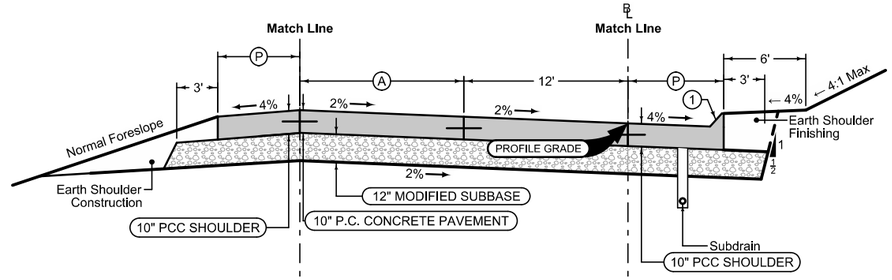
(1) 6" Sloped Curb. See PV-102

1RP_
10-19-10

Full Depth Paved Shoulder

PCC Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: See L Sheets

LOCATION			
RAMP	BEGIN STATION	END STATION	(P) Feet
A	41509+50.00	41510+50.00	4
C	43596+93.22	43597+25.00	4
D	44501+25.00	44513+25.00	4



Curbed Shoulder

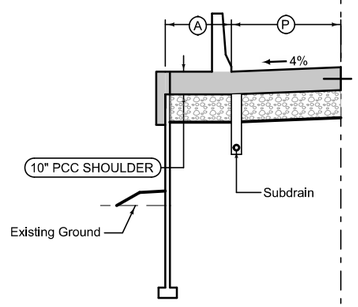
PCC Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: See L Sheets

LOCATION			DIMENSIONS	
RAMP	BEGIN STATION	END STATION	(P) Feet	Curb Type See PV-102
A	41500+69.91	41502+60.00	7	6" SLOPED
A	41510+40.00	41510+50.00	7	6" SLOPED
B	42597+95.00	42599+33.21	7	6" SLOPED
C	43597+25.00	43599+58.45	7	6" SLOPED
D	44500+01.79	44503+75.00	7	6" SLOPED
D	44511+25.00	44513+25.00	7	6" SLOPED

Full Depth PCC Shoulder with Retaining Wall

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: See L Sheets

LOCATION			DIMENSIONS	
RAMP	BEGIN STATION	END STATION	(P) Feet	(A) Feet
A	41500+69.91	41509+50.00	4	5
B	42597+88.76	42599+33.21	4	5
C	43597+25.00	43599+58.45	4	5
D	44500+01.79	44501+25.00	4	5



PCC RAMP PAVING (Paved Shoulders)

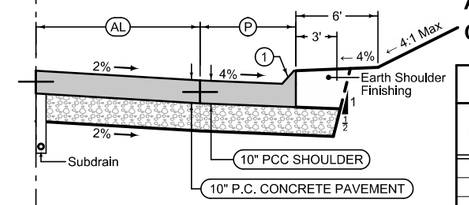
Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: See L Sheets
Longitudinal joint: L-2 or KT-2

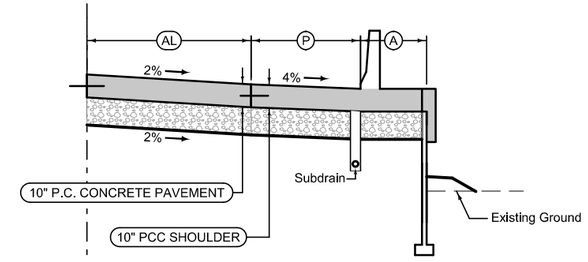
LOCATION			
RAMP	BEGIN STATION	END STATION	(A) Feet
A	41500+69.91	41508+70.00	12
A	41508+70.00	41510+50.00	12-4
B	42597+88.76	42599+33.21	12
C	43596+93.22	43599+58.45	12
D	44500+01.79	44509+25.00	12
D	44509+25.00	44513+25.00	12-4

Auxiliary Lane with Curbed Shoulder

Transverse: See L Sheets
Single pour: L-2
Staged : KT-2



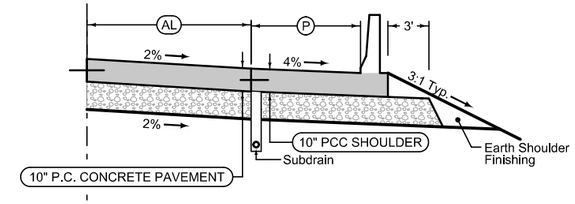
LOCATION			DIMENSIONS		
RAMP	STATION TO STATION		(AL) Feet	(P) Feet	Curb Type See PV-102
A	41502+60.00	41508+60.00	32.3-12	7	6" SLOPED
A	41508+60.00	41510+40.00	12-0	7	6" SLOPED
B	42597+88.76	42597+95.00	30.2-32.7	7	6" SLOPED
D	44509+75.00	44511+25.00	6-0	7	6" SLOPED



Auxiliary Lane with Full Depth PCC Shoulder and Retaining Wall

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: See L Sheets

LOCATION			DIMENSIONS		
RAMP	STATION TO STATION		(AL) Feet	(P) Feet	(A) Feet
C	43596+93.22	43597+25.00	28.7-30	6	2.25



Auxiliary Lane with Full Depth PCC Shoulder and Barrier

Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: See L Sheets

LOCATION			DIMENSIONS	
RAMP	STATION TO STATION		(AL) Feet	(P) Feet
D	44503+75.00	44509+75.00	30-6	6

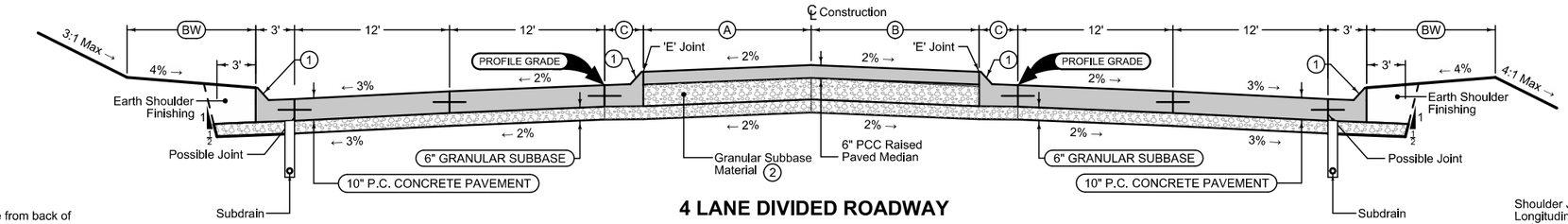
Section view is in the direction of travel.

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, foreslopes, and backslopes.

(1) 6" Sloped Curb. See PV-102

4DP_Raised_Out_
Modified



Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse: Match Mainline

LOCATION			DIMENSIONS	
ROAD IDENTIFICATION	STATION TO STATION		(BW) Feet	Curb Type See PV-102
NORTH RIVER BLVD.	7207+31.00	7208+56.30	12	6" STANDARD
NORTH RIVER BLVD.	7208+56.30	7209+37.24	12	6" SLOPED
HY-VEE ACCESS	8525+65.00	8526+48.12	5	6" STANDARD

4 LANE DIVIDED ROADWAY PCC PAVING WITH RAISED MEDIAN - SLOPED OUT

Mainline Jointing:
Transverse joints: See L Sheets
Longitudinal joint: L-2 or KT-2

LOCATION			DIMENSIONS		
ROAD IDENTIFICATION	BEGIN STATION	END STATION	(A) Feet	(B) Feet	(C) Feet
NORTH RIVER BLVD.	7207+31.00	7207+40.67	5.2-7.5	6.5-7.3	0
NORTH RIVER BLVD.	7207+40.67	7207+83.05	4.5-9	7.3-6	3
NORTH RIVER BLVD.	7207+83.05	7208+46.02	9	6-8.5	3
NORTH RIVER BLVD.	7208+46.02	7209+37.24	9	8.5	3
HY-VEE ACCESS	8525+65.00	8526+05.00	9.75	0	1
HY-VEE ACCESS	8526+05.00	8526+48.12	9.75	0-8	1

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse: Match Mainline

LOCATION			DIMENSIONS	
ROAD IDENTIFICATION	STATION TO STATION		(BW) Feet	Curb Type See PV-102
NORTH RIVER BLVD.	7207+31.00	7208+66.77	12	6" STANDARD
NORTH RIVER BLVD.	7208+66.77	7209+37.24	12	6" SLOPED
HY-VEE ACCESS	8525+65.00	8526+48.12	5	6" STANDARD

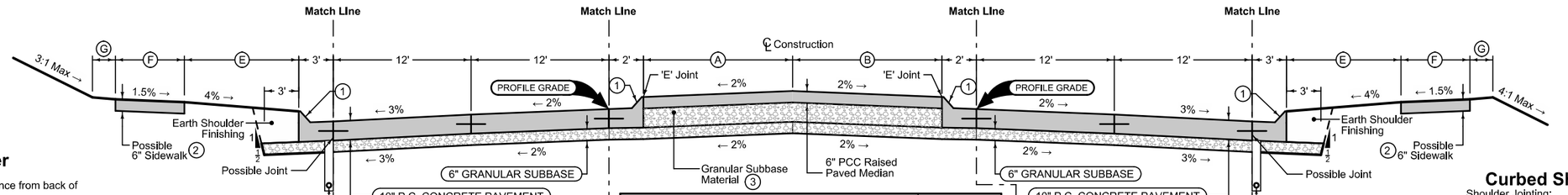
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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

(1) 6" Standard Curb. See PV-102

(2) Incidental to PCC medlan

4DP_Raised_Out_
Modified



Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse: Match Mainline

LOCATION		DIMENSIONS			
STATION TO STATION		(E) Feet	(F) Feet	(G) Feet	Curb Type See PV-102
7516+95.00	7518+26.62	10	10	2	8" SLOPED
7519+62.07	7521+25.00	10	10	2	8" SLOPED
7529+90.00	7533+20.00	10	10	2	8" SLOPED

Mainline Jointing:
Transverse joints: See L Sheets
Longitudinal joint: L-2 or KT-2

BEGIN STATION	END STATION
7501+50.00	7533+20.00

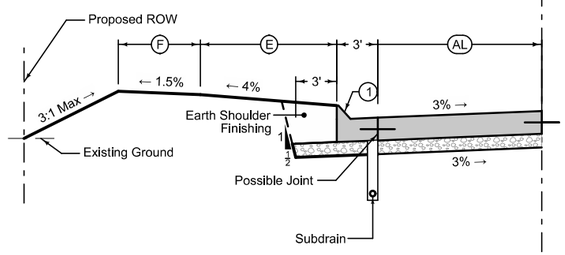
LOCATION			DIMENSIONS	
ROAD IDENTIFICATION	BEGIN STATION	END STATION	(A) Feet	(B) Feet
EDGEWOOD ROAD	7501+50.00	7501+60.00	5.5	5.5
EDGEWOOD ROAD	7501+60.00	7503+95.00	5.5-10.3	5.5-10.3
EDGEWOOD ROAD	7503+95.00	7505+22.44	10.3-12.7	10.3-0
EDGEWOOD ROAD	7505+22.44	7506+35.00	12.7-4	0
EDGEWOOD ROAD	7506+35.00	7509+26.08	4	0
EDGEWOOD ROAD	7510+46.14	7511+95.00	13	13
EDGEWOOD ROAD	7511+95.00	7513+34.97	13	13-0
EDGEWOOD ROAD	7513+34.97	7514+35.00	13-4	0
EDGEWOOD ROAD	7514+35.00	7517+30.77	4	0
EDGEWOOD ROAD	7520+44.66	7522+45.00	0	4
EDGEWOOD ROAD	7522+45.00	7523+83.26	0	16
EDGEWOOD ROAD	7523+83.26	7524+62.15	0-1.7	16
EDGEWOOD ROAD	7524+62.15	7525+00.77	1.7-0	16-4
EDGEWOOD ROAD	7525+73.03	7527+26.82	0	8-6.7
EDGEWOOD ROAD	7527+26.82	7528+14.08	0	6.7-11.8
EDGEWOOD ROAD	7528+14.08	7529+40.00	0-9.3	11.8-9.3
EDGEWOOD ROAD	7529+40.00	7532+60.00	9.3-5.4	9.3-5.4
EDGEWOOD ROAD	7532+60.00	7533+20.00	5.4-3.5	5.4-1.9

Curbed Shoulder

Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2
Transverse: Match Mainline

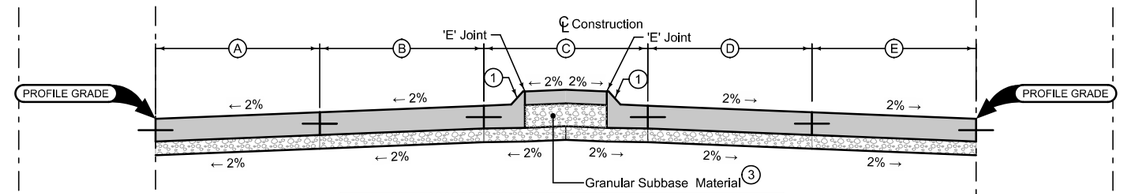
LOCATION		DIMENSIONS			
STATION TO STATION		(E) Feet	(F) Feet	(G) Feet	Curb Type See PV-102
7501+50.00	7502+00.00	9-10	6	2	8" SLOPED
7502+00.00	7503+50.00	10	6	2	8" SLOPED
7503+50.00	7505+25.00	10-7.5	6	2	8" SLOPED
7505+25.00	7506+00.00	7.5	6	2	8" SLOPED
7506+00.00	7506+75.00	7.5-10	6	2	8" SLOPED
7514+50.00	7518+22.85	10	6	2	8" SLOPED
7519+50.86	7520+99.62	10	6	2	8" SLOPED



Auxiliary Lane with Curbed Shoulder

Longitudinal joint: L-2 or KT-2
Transverse joint: Match Mainline

LOCATION		DIMENSIONS		
STATION TO STATION		(AL) Feet	(E) Feet	(F) Feet
7504+25.00	7506+00.00	5.5-9	10	12-0
7506+00.00	7507+00.00	9-12	10-5	0
7507+00.00	7507+75.00	12	5-10	0
7507+75.00	7508+20.00	12	10	0-12
7511+50.00	7511+75.00	12	3-5	7-0
7511+75.00	7512+25.00	12	5-2	0
7512+25.00	7513+75.00	12-16	2-10	0
7513+75.00	7515+00.00	16-24.5	10-8	0-10.5



BEGIN STATION	END STATION	(A) Feet	(B) Feet	(C) Feet	(D) Feet	(E) Feet
7503+95.00	7505+26.00	0	0	24.7-15.6	0	0-12
7505+26.00	7506+35.00	0	0	15.6-7	0-11	12
7506+35.00	7509+26.08	0	0	7	11	12
7511+95.00	7513+50.00	0	0	30-18	0	0-12
7513+50.00	7514+35.00	0	0	18-7	0-11	12
7514+35.00	7518+24.88	0	0	7	11	12
7519+52.88	7522+45.00	12	11	7	0	0
7522+45.00	7523+61.93	12	11-0	7-18	0	0
7523+61.93	7525+73.00	12	0	18	0	0
7525+73.00	7527+26.77	12-11.7	12	12-10.7	0	0
7527+26.77	7527+93.03	11.7-10.9	12-5.3	10.7-14.7	0	0
7527+93.03	7529+39.50	16.2-0	0	14.7-22.6	0	0
7532+60.00	7533+20.00	0	0	14.7-9.4	0-5.1	0

Auxiliary Lane with Curbed Shoulder

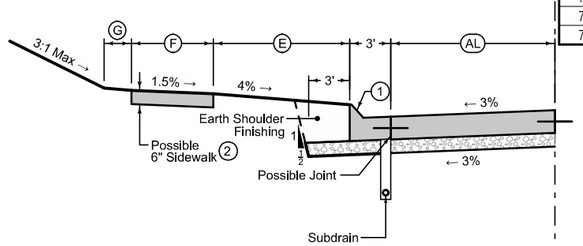
Longitudinal joint: L-2 or KT-2
Transverse joint: Match Mainline

LOCATION		DIMENSIONS			
STATION TO STATION		(AL) Feet	(E) Feet	(F) Feet	(G) Feet
7506+75.00	7507+95.00	0-12	10	6	2
7507+95.00	7511+30.00	12	10	6	2
7511+30.00	7513+10.80	12-23.3	10	6	2
7513+10.80	7513+84.80	23.3-28	10-4.7	6	2
7520+99.62	7522+77.95	61.3-12	10	6	2
7522+77.95	7533+20.00	12	10	6	2

Auxiliary Lane with Curbed Shoulder

Longitudinal joint: L-2 or KT-2
Transverse joint: Match Mainline

LOCATION		DIMENSIONS			
STATION TO STATION		(AL) Feet	(E) Feet	(F) Feet	(G) Feet
7502+20.00	7503+20.00	11.7-3.5	10	10	2
7503+20.00	7504+25.00	3.5-5.5	10-13	10	2
7508+20.00	7508+60.00	12	9-5.5	10	2
7508+60.00	7509+25.00	12	5.5	10	2
7510+30.00	7511+10.00	12	0	10	2
7511+10.00	7511+30.00	12	0-1.75	10	2
7515+25.00	7515+66.30	32.6-35.9	6	10	2
7521+80.00	7523+34.26	32.7-12	10	10	2
7523+34.26	7527+77.50	12	10	10	2
7527+77.50	7529+90.00	12-0	10	10	2



4 LANE DIVIDED ROADWAY PCC PAVING WITH RAISED MEDIAN - SLOPED OUT

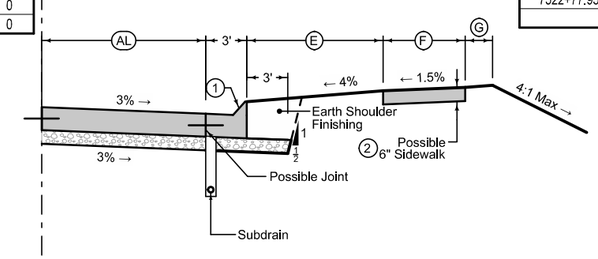
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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

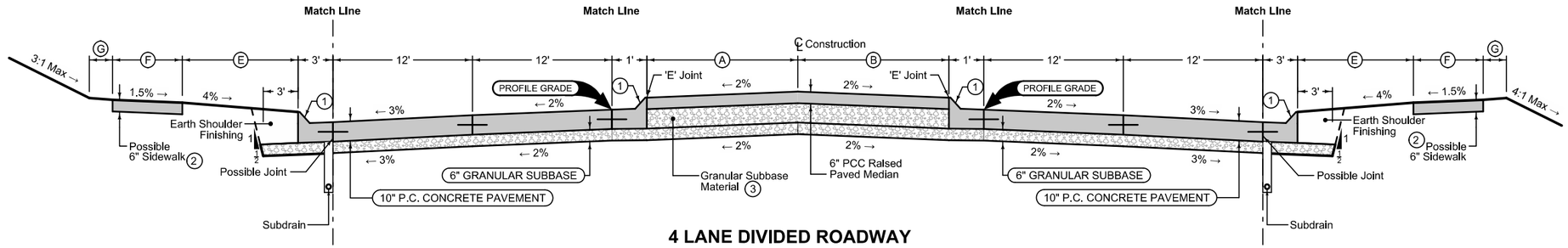
(1) 8" Sloped Curb. Refer to Sheet U.4

(2) Possible sidewalk paving. Refer to S Sheets for locations. Grading for possible future sidewalk will be accommodated when ROW allows. Refer to Cross-Sections for Details

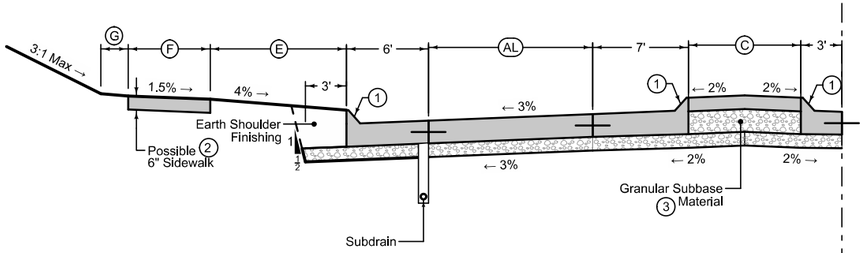
(3) Incidental to PCC Median



4DP_Raised_Out_
Modified



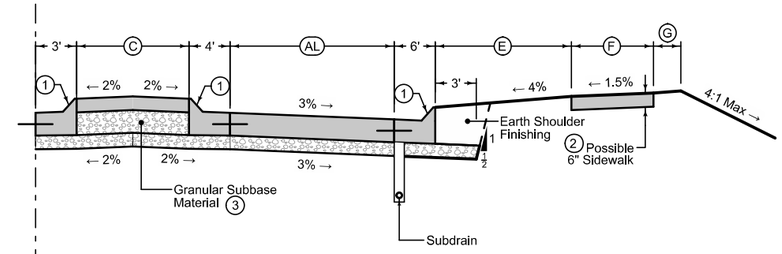
4 LANE DIVIDED ROADWAY PCC PAVING WITH RAISED MEDIAN - SLOPED OUT



Auxiliary Lane with Curbed Shoulder

Longitudinal joint: L-2 or KT-2
Transverse joint: Match Mainline

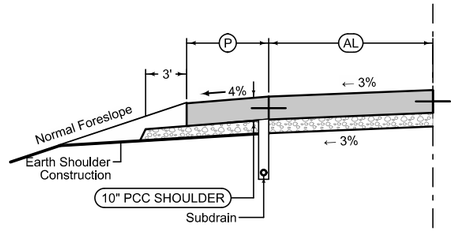
LOCATION			DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION		AL Feet	C Feet	E Feet	F Feet	G Feet
EDGEWOOD ROAD	7515+66.30	7516+28.98	16	4-7.5	6	10	2



Auxiliary Lane with Curbed Shoulder

Longitudinal joint: L-2 or KT-2
Transverse joint: Match Mainline

LOCATION			DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION		AL Feet	C Feet	E Feet	F Feet	G Feet
EDGEWOOD ROAD	7513+84.71	7514+00.00	16	4-4.8	4.7-4	6	2
EDGEWOOD ROAD	7514+00.00	7514+25.00	16	4.8-6.4	4	6	2
EDGEWOOD ROAD	7514+25.00	7514+52.13	16	6.4-8	4-6	6	2



Auxiliary Lane with Full Depth Paved Shoulder

Longitudinal joint: L-2 or KT-2
Transverse joint: Match Mainline

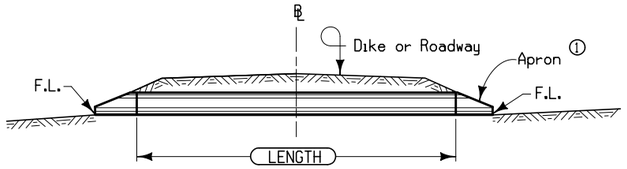
LOCATION			DIMENSIONS	
ROAD IDENTIFICATION	STATION TO STATION		AL Feet	P Feet
EDGEWOOD ROAD	7501+50.00	7501+60.00	0	13
EDGEWOOD ROAD	7501+60.00	7502+20.00	0-1.7	13

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

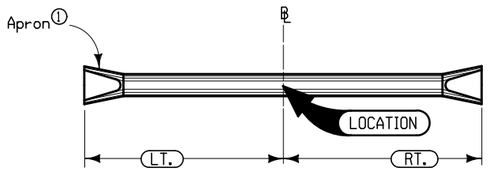
See Plan & Profile sheets and cross sections for additional details of ditches, foreslopes, and backslopes.

1. 8" Sloped Curb. Refer to Sheet U.4
2. Possible sidewalk paving. Refer to S Sheets for locations. Grading for possible future sidewalk will be accommodated when ROW allows. Refer to Cross-Sections for Details
3. Incidental to PCC Median

1101
04-30-02



SECTION



PLAN

Notes:

℄ shall be ℄ of roadway, dike, survey, or other; as detailed on plans.

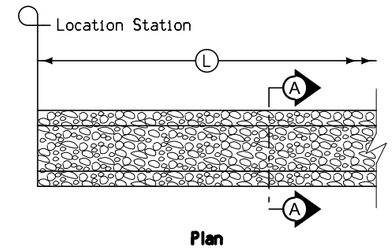
Skew angle is the angle which one end of the pipe is ahead (by stationing) of line perpendicular to the ℄ (example skew Rt. ahead 30°).

Refer to tabular listing and other plans for additional information.

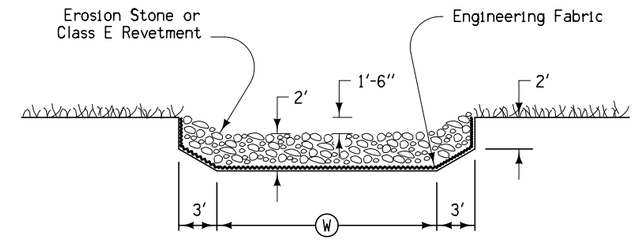
① See Standard Road Plan RF-3 For Conc. or RF-5 for Metal.

PIPE CULVERT

4402
04-16-13



Plan

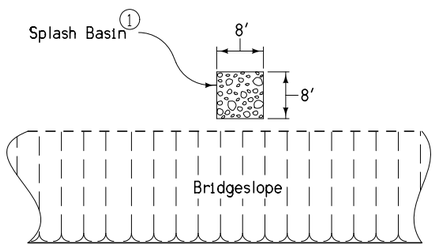


Section A-A

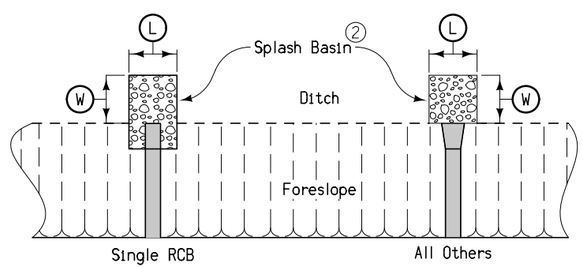
Refer to Tabulation 100-23 for additional information.

ROCK DITCH

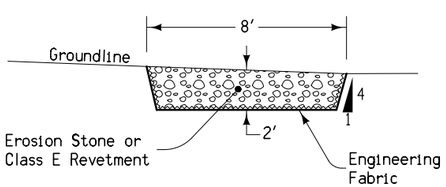
4404
10-15-13



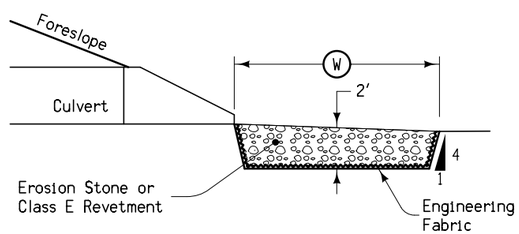
Splash Basin Under Bridge Drain
Plan View



Splash Basin at Culvert Outlet
Plan View



Splash Basin Under Bridge Drain
Typical Section



Splash Basin at Culvert Outlet
Typical Section

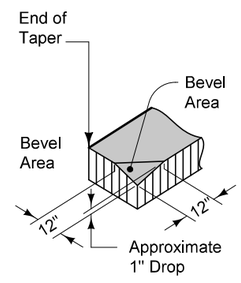
① Center splash basin directly under bridge drain.

② For single RCB, extend splash basin along the outside of the wings to the face of the parapet. Construct to a width of 3 feet and a depth of 2 feet.

Refer to Tabulation 100-23 for additional information.

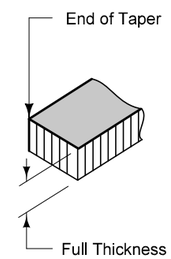
ROCK SPLASH BASIN

7101
10-19-10



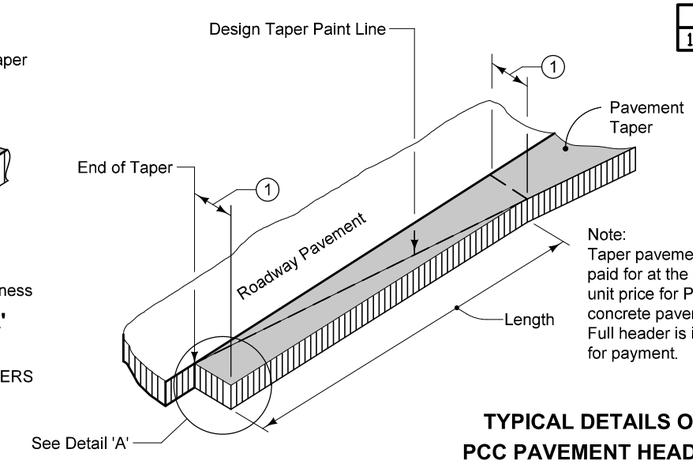
DETAIL 'A'

FOR
GRANULAR SHOULDERS



DETAIL 'A'

FOR
PAVED SHOULDERS

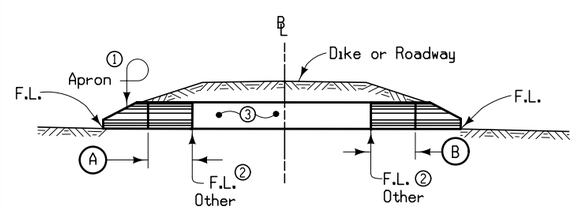


Note:
Taper pavement to be paid for at the contract unit price for P.C. concrete pavement. Full header is included for payment.

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

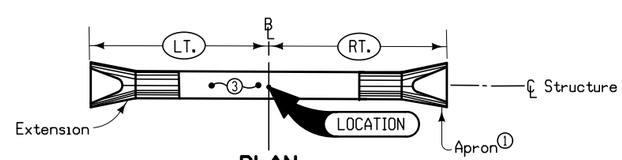
TYPICAL DETAILS OF PCC PAVEMENT HEADER

1301
10-03-00



SECTION

A+B =Length



PLAN

Notes:

℄ shall be ℄ of roadway, dike, survey, or other; as detailed on plans.

Extension shall be on line of existing structure to Lt., Rt. or both as specified. Adaptors may be required, see Standard Road Plan RF-2.

Refer to tabular listing and other plans for additional information.

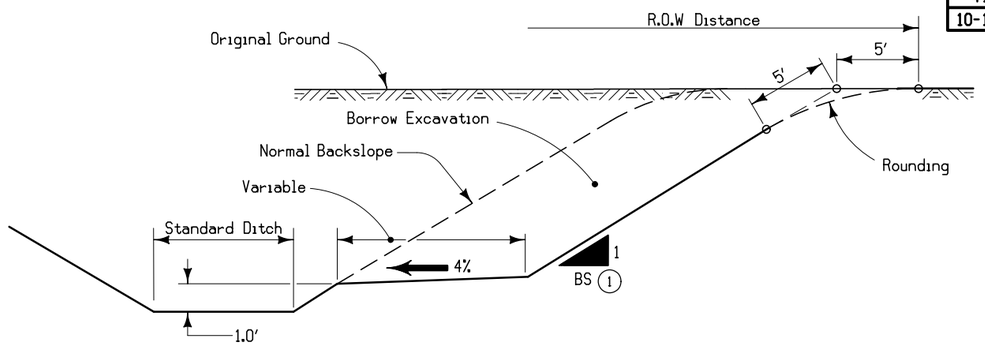
① See Standard Road Plan RF-3 for concrete, RF-5 for metal.

② Optional type "D" section only when specified in tabulation.

③ Existing structure.

PIPE EXTENSION

4108
10-15-13



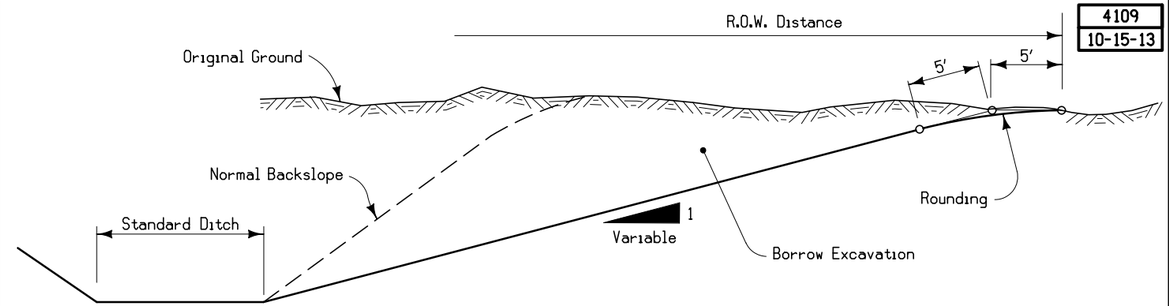
Use borrow backslope at those locations shown on plans or specifically required by the Engineer.

(1) Normal Backslope BS=2.5 unless specified otherwise on detail project plans.

See Detail 4101 where intercepting ditches are required.

TYPICAL CROSS SECTION POSSIBLE BORROW IN R. O. W. WITH BERM

4109
10-15-13

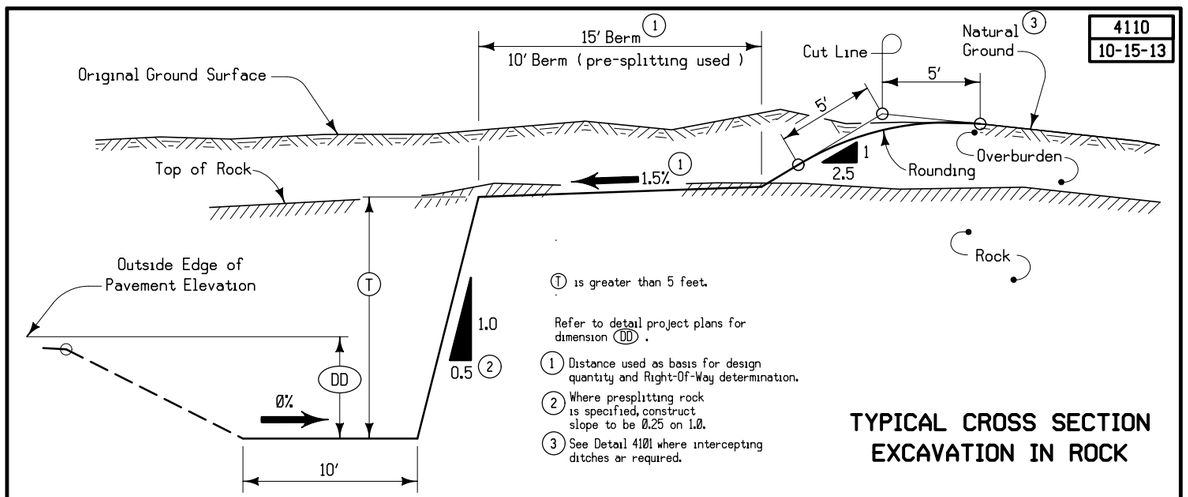


Use borrow backslope at those locations shown on plans or specifically required by the Engineer.

See Detail 4101 where intercepting ditches are required.

TYPICAL CROSS SECTION POSSIBLE BORROW IN R. O. W.

4110
10-15-13



(T) is greater than 5 feet.

Refer to detail project plans for dimension (DD).

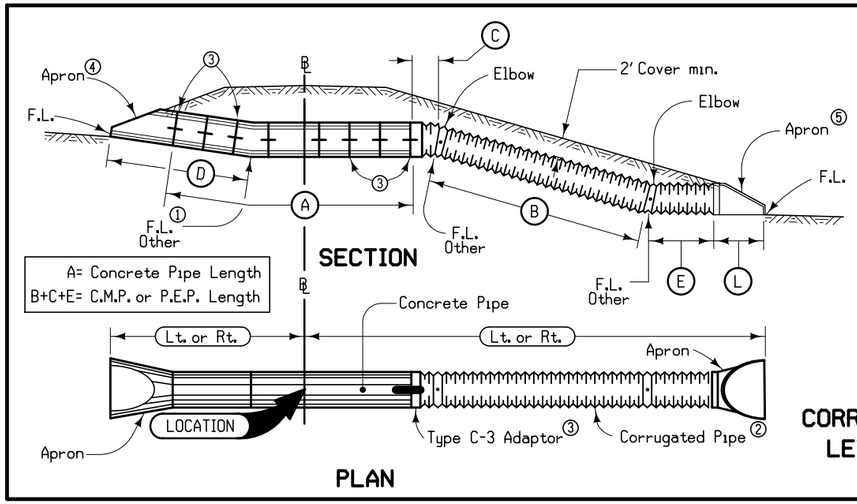
(1) Distance used as basis for design quantity and Right-Of-Way determination.

(2) Where presplitting rock is specified, construct slope to be 0.25 on 1.0.

(3) See Detail 4101 where intercepting ditches ar required.

TYPICAL CROSS SECTION EXCAVATION IN ROCK

1501
04-20-10



PLAN

℄ shall be ℄ of roadway, dike, survey, or other; as detailed on plans.

Skew angle is the angle which one end of the pipe is ahead (by stationing) of a line perpendicular to the ℄.

Refer to Tabulation 104-3.

(1) Optional D section only when specified in tabulation.

(2) Standard type joint couplings are required. (See Materials I.M. 441)

(3) See RF-2 & RF-14.

(4) See RF-3.

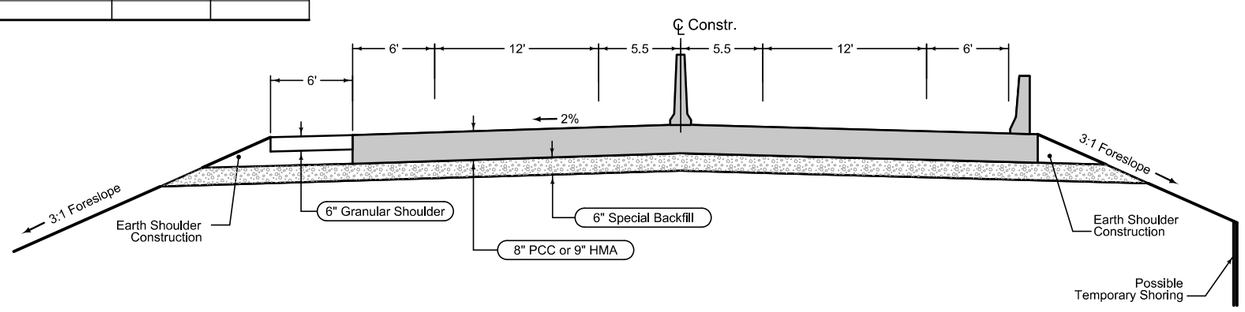
(5) See RF-5 for Metal and Polyethylene.

CORRUGATED PIPE - CONCRETE LETDOWN STRUCTURE WITH METAL APRON

DET-1

LOCATION		
ROAD IDENTIFICATION	STATION TO STATION	
DETOUR 9	170+00.00	180+84.65

Quantity calculations based on PCC Pavement Option.



DETOUR PAVING

DET-2

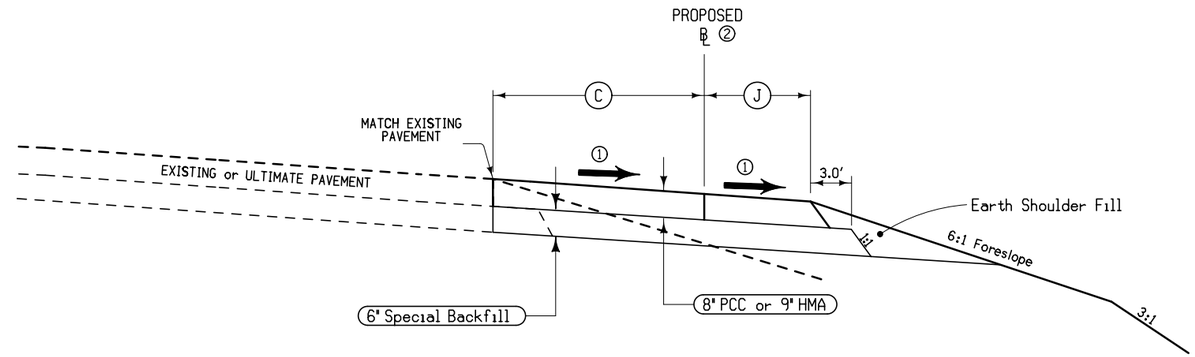
LOCATION					REMARKS
ROAD	STATION TO STATION		(C) Feet	(J) Feet	
DETOUR 3	50+00.00	51+94.54	7.4-0	0	STAGE 1D
DETOUR 8	150+00.00	160+00.00	0-4.9	0	STAGE 1B
DETOUR 10	190+00.00	193+44.57	0-6	0	STAGE 1B
DETOUR 14	270+00.00	271+40.89	0-33.8	0	STAGE 1C

Notes:

Normal section shown may be appropriately modified for areas specifically designated by the Engineer, such as intersections or superelevated curves.

(1) Refer to the F sheets for pavement slopes

(2) Location of Proposed Baseline may vary. Refer to F sheets for additional information



TYPICAL CROSS SECTION TEMPORARY PAVEMENT WIDENING

DET-3

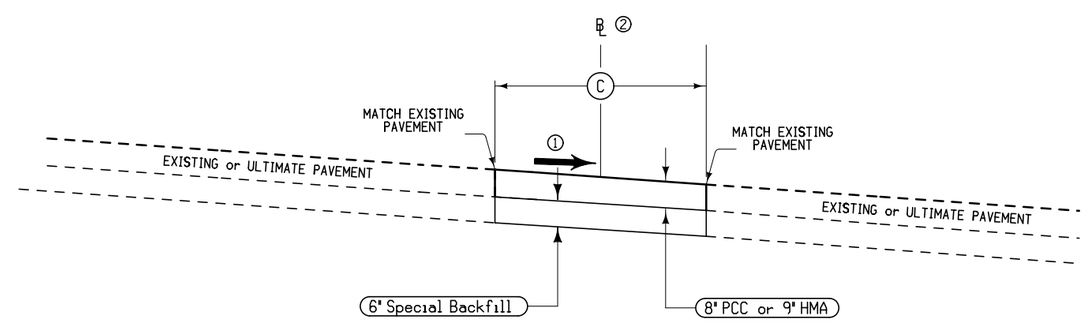
LOCATION				REMARKS
ROAD	STATION TO STATION		(C) Feet	
DETOUR 1	10+00.00	11+30.08	5.6-3	STAGE 1D
DETOUR 2	30+00.00	39+08.68	15.7-3.8	STAGE 1D
DETOUR 4	70+00.00	75+59.90	13-15.5	STAGE 1A
DETOUR 5	90+00.00	92+74.99	14.9-15.8	STAGE 1A
DETOUR 6	110+00.00	120+31.21	4.4-15.4	STAGE 1D
DETOUR 7	130+00.00	130+66.51	2.5-21	STAGE 1B
DETOUR 11	210+00.00	210+42.69	0-13.2	STAGE 1B
DETOUR 12	230+00.00	230+79.09	38	STAGE 1C
DETOUR 13	250+00.00	250+76.24	45	STAGE 1C
DETOUR 15	290+00.00	297+51.18	0-24.8	STAGE 2A
DETOUR 16	310+00.00	322+42.19	12-0.6	STAGE 2A
DETOUR 17	330+00.00	338+29.02	2.3-14.9	STAGE 2B
DETOUR 18	350+00.00	350+32.89	12	STAGE 2C
DETOUR 19	370+00.00	373+21.15	36-4	STAGE 3A
DETOUR 20	390+00.00	394+02.06	2-9	STAGE 3A
DETOUR 21	410+00.00	411+67.95	4-14.8	STAGE 3A
DETOUR 22	430+00.00	430+74.28	3.4-4.7	STAGE 3B
DETOUR 23	450+00.00	452+30.07	18	STAGE 3C

Notes:

Normal section shown may be appropriately modified for areas specifically designated by the Engineer, such as intersections or superelevated curves.

(1) Refer to the F sheets for pavement slopes

(2) Location of Proposed Baseline may vary. Refer to F sheets for additional information



TYPICAL CROSS SECTION TEMPORARY CROSSOVER PAVEMENT

100-1D
10-18-05

PROJECT DESCRIPTION

This project includes the removal of IA 100 between Station 1106+97.00 and Station 1128+50.00, the grading of proposed IA 100 between Station 1084+50.00 and Station 1128+50.00, the paving of IA 100 between Station 1108+00.00 and Station 1128+50.00, the removal and grading and paving of Edgewood Road Ramps A and D, grading Edgewood Road Ramps B and C, the paving of a portion of Edgewood Road Ramps B and C, the construction of MSE retaining walls, and the removal, grading, and paving of Edgewood Road including reconstruction of the North River Blvd. and South Hy-Vee Access Road intersections. Construction of three traffic signals along Edgewood Road, interchange lighting, and decorative lighting is included.

Construction of the Edgewood Road bridge over IA 100 is tied to this contract.

Construction of guide signing along Edgewood Road, proposed interchange ramps, and IA 100 mainline east of Edgewood Road is tied to this contract.

100-1C
04-17-12

ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)

Division 1: State of Iowa
Division 2: City of Cedar Rapids
Division 3: 73% State of Iowa and 27% City of Cedar Rapids

Item No.	Item Code	Item	Unit	Quantities										
				Estimated						As Built				
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5
1	2101-0850001	CLEARING AND GRUBBING	ACRE	27					27					
2	2102-0425070	SPECIAL BACKFILL	TON	21138					21138					
3	2102-2200000	INTERCEPTING DITCHES AND FLUMES	LF	484					484					
4	2102-2625001	EMBANKMENT-IN-PLACE, CONTRACTOR FURNISHED	CY	24301					24301					
5	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	209543					209543					
6	2102-2710090	EXCAVATION, CLASS 10, WASTE	CY	136548					136548					
7	2102-2712070	EXCAVATION, CLASS 12, ROADWAY AND BORROW	CY	20090					20090					
8	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS	CY	200					200					
9	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	17933					17933					
10	2107-0875000	COMPACTION WITH MOISTURE AND DENSITY CONTROL	CY	79583					79583					
11	2107-0875100	COMPACTION WITH MOISTURE CONTROL	CY	64331					64331					
12	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN	CY	4129					4129					
13	2111-8174100	GRANULAR SUBBASE	SY	60862					60862					
14	2115-0100000	MODIFIED SUBBASE	CY	3340					3340					
15	2122-5190010	PAVED SHOULDER, P.C. CONCRETE, 10 IN.	SY	7552					7552					
16	2122-5191004	REINFORCED PAVED SHOULDER	SY	4786					4786					
17	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	21					21					
18	2123-7450020	SHOULDER FINISHING, EARTH	STA	130					130					
19	2301-0690270	BRIDGE APPROACH, RK-27	SY	2941					2941					
20	2301-1033100	STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 10 IN.	SY	54798					54798					
21	2301-4875008	MEDIAN, P.C. CONCRETE, 8 IN.	SY	3615.7					3615.7					
22	2301-6911722	PORTLAND CEMENT CONCRETE PAVEMENT SAMPLES	LS	1					1					
23	2304-0100000	DETOUR PAVEMENT	SY	15017					15017					
24	2401-6745625	REMOVAL OF EXISTING BRIDGE	LS	1					1					
25	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1					1					
26	2401-6745765	REMOVAL OF LIGHT POLES	EACH	2					2					
27	2401-6745830	REMOVAL OF P.C. CONCRETE MEDIAN BARRIER	LF	810					810					
28	2402-0425030	GRANULAR BACKFILL	CY	79254					79254					
29	2402-0425040	FLOODED BACKFILL	CY	261					261					
30	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	487					487					
31	2412-0000100	LONGITUDINAL GROOVING IN CONCRETE	SY	2513					2513					
32	2414-6424119	CONCRETE BARRIER RAILING, AESTHETIC	LF	19					19					
33	2416-0100015	APRONS, CONCRETE, 15 IN. DIA.	EACH	5	1	1			7					
34	2416-0100021	APRONS, CONCRETE, 21 IN. DIA.	EACH			1			1					
35	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	1	2				3					
36	2416-0100060	APRONS, CONCRETE, 60 IN. DIA.	EACH	1					1					
37	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	70					70					
38	2416-1180060	CULVERT, CONCRETE ROADWAY PIPE, 60 IN. DIA.	LF	32					32					
39	2417-0225024	APRONS, METAL, 24 IN. DIA.	EACH	1					1					
40	2417-1060024	CULVERT, CORRUGATED METAL ROADWAY PIPE, 24 IN. DIA.	LF	70					70					
41	2417-1060036	CULVERT, CORRUGATED METAL ROADWAY PIPE, 36 IN. DIA.	LF	198					198					
42	2432-0000100	MECHANICALLY STABILIZED EARTH RETAINING WALL	SF	42937					42937					
43	2435-0140148	MANHOLE, STORM SEWER, SW-401, 48 IN.	EACH	3	3	7			13					
44	2435-0140160	MANHOLE, STORM SEWER, SW-401, 60 IN.	EACH			1			1					
45	2435-0140200	MANHOLE, STORM SEWER, SW-402	EACH		3				3					
46	2435-0250700	INTAKE, SW-507	EACH		1				1					
47	2435-0250800	INTAKE, SW-508	EACH	22	2				24					
48	2435-0250802	INTAKE, SW-508, WELL ONLY	EACH	9					9					
49	2435-0250900	INTAKE, SW-509	EACH		22				22					
50	2435-0251000	INTAKE, SW-510	EACH	3					3					
51	2435-0251218	INTAKE, SW-512, 18 IN.	EACH		1				1					
52	2435-0251224	INTAKE, SW-512, 24 IN.	EACH	9	4	1			14					
53	2435-0251236	INTAKE, SW-512, 36 IN.	EACH		1	1			2					
54	2435-0254600	INTAKE, SW-546	EACH	3					3					
55	2435-0254602	INTAKE, SW-546, WELL ONLY	EACH	2					2					
56	2435-0254710	BARRIER INTAKE, SW-547 MODIFIED	EACH	6					6					
57	2435-0254702	BARRIER INTAKE, SW-547, WELL ONLY	EACH	6					6					

ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)

Division 1: State of Iowa
Division 2: City of Cedar Rapids
Division 3: 73% State of Iowa and 27% City of Cedar Rapids

Item No.	Item Code	Item	Unit	Quantities										
				Estimated						As Built				
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5
58	2435-0254900	BARRIER INTAKE, SW-549	EACH	1					1					
59	2435-0254910	BARRIER INTAKE, SW-549 MODIFIED	EACH	10					10					
60	2435-0254912	BARRIER INTAKE, SW-549, MODIFIED, WELL ONLY	EACH	2					2					
61	2435-0600010	MANHOLE ADJUSTMENT, MINOR	EACH		2				2					
62	2435-0700010	CONNECTION TO EXISTING MANHOLE	EACH		4				4					
63	2502-8212024	SUBDRAIN, LONGITUDINAL, (BACKSLOPE) 4 IN. DIA.	LF	2275					2275					
64	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.	LF	19306					19306					
65	2502-8212036	SUBDRAIN, LONGITUDINAL, (SHOULDER) 6 IN. DIA.	LF	7330					7330					
66	2502-8212104	SUBDRAIN, PLASTIC PIPE, 4 IN.	LF	3599					3599					
67	2502-8220193	SUBDRAIN OUTLET, RF-19C	EACH	85					85					
68	2502-8220196	SUBDRAIN OUTLET, RF-19E	EACH	18					18					
69	2502-8220197	SUBDRAIN OUTLET, RF-19F	EACH	12					12					
70	2503-0114215	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 15 IN.	LF	4424	1191	226			5841					
71	2503-0114218	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 18 IN.	LF	581	1141	1633			3355					
72	2503-0114221	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 21 IN.	LF		593	400			993					
73	2503-0114224	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 24 IN.	LF	109	89	619			817					
74	2503-0114230	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 30 IN.	LF	53		689			742					
75	2503-0114236	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 36 IN.	LF	310		2012			2322					
76	2503-0114248	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 48 IN.	LF		156				156					
77	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.	LF	1270					1270					
78	2503-0200136	REMOVE STORM SEWER PIPE GREATER THAN 36 IN.	LF	123					123					
79	2507-3250005	ENGINEERING FABRIC	SY	32					32					
80	2507-8029000	EROSION STONE	TON	27.8					27.8					
81	2510-6745850	REMOVAL OF PAVEMENT	SY	75635					75635					
82	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES	EACH	21					21					
83	2511-0302600	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN.	SY	373	118				491					
84	2511-6745900	REMOVAL OF SIDEWALK	SY		36				36					
85	2511-7526006	SIDEWALK, P.C. CONCRETE, 6 IN.	SY	265	630				895					
86	2511-7528101	DETECTABLE WARNINGS	SF	134	136				270					
87	2512-1725306	CURB AND GUTTER, P.C. CONCRETE, 3.0 FT.	LF	6219					6219					
88	2513-0001000	CONCRETE BARRIER, BA-100	LF	2860					2860					
89	2513-0001020	CONCRETE BARRIER, BA-102	LF	2234					2234					
90	2513-0001070	CONCRETE BARRIER, BA-107	EACH	1					1					
91	2513-0001081	CONCRETE BARRIER, TAPERED END, BA-108	EACH	2					2					
92	2513-4870003	MEDIAN BARRIER, P.C. CONCRETE	LF	810					810					
93	2518-6745880	REMOVAL OF ROAD CLOSURE BARRICADE	EACH	1					1					
94	2518-6910000	SAFETY CLOSURE	EACH	15					15					
95	2520-3350010	FIELD LABORATORY	EACH	1					1					
96	2520-3350015	FIELD OFFICE	EACH	1					1					
97	2523-0000100	LIGHTING POLES	EACH	4					4					
98	2523-0000200	ELECTRICAL CIRCUITS	LF	1420					1420					
99	2523-0000310	HANDHOLES AND JUNCTION BOXES	EACH	7					7					
100	2523-0000400	CONTROL CABINET	EACH	1					1					
101	2525-0000100	TRAFFIC SIGNALIZATION	LS	1					1					
102	2526-8285000	CONSTRUCTION SURVEY	LS	1					1					
103	2527-9263109	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED	STA	1150					1150					
104	2527-9263128	PERMANENT TAPE MARKINGS, INTERSECTION MARKING TAPE	STA	5					5					
105	2527-9263131	WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS	STA	29					29					
106	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	EACH	86					86					
107	2527-9263180	PAVEMENT MARKINGS REMOVED	STA	228					228					
108	2527-9263190	SYMBOLS AND LEGENDS REMOVED	EACH	43					43					
109	2527-9270111	GROOVES CUT FOR PAVEMENT MARKINGS	STA	3					3					
110	2528-3800000	MODULAR GLARE SCREEN SYSTEM	LF	8328					8328					
111	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE	LF	22316					22316					
112	2528-8400157	TEMPORARY FLOODLIGHTING LUMINAIRE	EACH	4					4					
113	2528-8445110	TRAFFIC CONTROL	LS	1					1					
114	2533-4980005	MOBILIZATION	LS	1					1					
115	2551-0000110	TEMP CRASH CUSHION	EACH	20					20					
116	2551-0000230	PERMANENT CRASH CUSHION, SEVERE USE (SU)	EACH	1					1					
117	2551-0000300	PERMANENT CRASH CUSHION SPARE PARTS KIT	EACH	1					1					
118	2552-0000140	ROCK EXCAVATION	CY	7887					7887					
119	2554-0210201	FIRE HYDRANT ASSEMBLY, WM-201	EACH		2				2					
120	2590-0000020	PROJECT MANAGEMENT	LS	1					1					
121	2599-9999005	POST TOP LIGHTS	EACH		10				10					
122	2599-9999005	ROADWAY LIGHTING - LUMINAIRE ONLY	EACH	16	4				20					
123	2599-9999010	TEMPORARY TRAFFIC SIGNAL - EDGEWOOD ROAD & AEGON ACCESS INTERSECTION	LS	1					1					
124	2599-9999010	TEMPORARY TRAFFIC SIGNAL - EDGEWOOD ROAD & NORTH RIVER BLVD. INTERSECTION	LS	1					1					
125	2599-9999010	TEMPORARY TRAFFIC SIGNAL - EDGEWOOD ROAD EXISTING EB TERMINAL INTERSECTION	LS	1					1					
126	2599-9999010	TEMPORARY TRAFFIC SIGNAL - EDGEWOOD ROAD EXISTING WB TERMINAL INTERSECTION	LS	1					1					
127	2599-9999010	TEMPORARY TRAFFIC SIGNAL - EDGEWOOD ROAD & SOUTH HY-VEE ACCESS INTERSECTION	LS	1					1					
128	2599-9999010	16 IN. DIA. DIP WATER MAIN ABANDONMENT & REMOVAL	LS		1				1					
129	2599-9999014	PORTLAND CEMENT CONCRETE (PCC) PAVERS	SF	1707					1707					
130	2599-9999014	INTEGRAL THIN VENEER BRICK FOR STRUCTURAL CONCRETE	SF	67					67					
131	2599-9999018	SLOPE PROTECTION, WASHED GRAVEL	SY	118					118					
132	2601-2634100	MULCHING	ACRE	22.5					22.5					
133	2601-2638610	CONCRETE SLOPE PROTECTION	SY	602					602					

ESTIMATED PROJECT QUANTITIES
(UP TO A 5 DIVISION PROJECT)

Division 1: State of Iowa
Division 2: City of Cedar Rapids
Division 3: 73% State of Iowa and 27% City of Cedar Rapids

Item No.	Item Code	Item	Unit	Quantities										
				Estimated						As Built				
				Division 1	Division 2	Division 3	Division 4	Division 5	Total	Division 1	Division 2	Division 3	Division 4	Division 5
134	2601-2642120	STABILIZING CROP - SEEDING AND FERTILIZING (URBAN)	ACRE	22.5					22.5					
135	2602-0000020	SILT FENCE	LF	12346.9					12346.9					
136	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	25.8					25.8					
137	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	4947					4947					
138	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	989					989					
139	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	988					988					
140	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	988					988					
141	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE	LF	493					493					
142	2602-0010010	MOBILIZATION, EROSION CONTROL	EA	1					1					
143	2602-0010020	MOBILIZATION, EMERGENCY EROSION CONTROL	EA	1					1					

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
1	2101-0850001	CLEARING AND GRUBBING Refer to Standard Specification 2101. Includes removal of approximately 1763 feet of field fence. Includes approximately 5451 units of downed timber and logs that were felled as part of a previous project (NHSN-100-1(81)–2R-57). Grubbing operations shall include removal of stumps and downed timber in these areas. Clearing of all trees shall be completed in accordance with Standard Notations 232-6, 232-9 and 232-10 on Sheet C.11. The Contractor may salvage cut and felled timber and logs if desired but the salvaging operations will not be considered for payment. Burning and/or burying of clearing and grubbing spoils will not be allowed unless approval from the Engineer is received prior to operations. Clearing and grubbing spoils shall be removed from the project site and properly disposed of by the contractor.
2	2102-0425070	SPECIAL BACKFILL Item includes 15,426 tons of special backfill for 12" of subgrade treatment to be placed under IA 100 mainline pavement. Item includes 5712 tons for detour and temporary pavement construction.
3	2102-2200000	INTERCEPTING DITCHES AND FLUMES See Tabulation 100-16 "Tabulation of Intercepting Ditches" on Sheet C.12 for locations.
4	2102-2625001	EMBANKMENT-IN-PLACE, CONTRACTOR FURNISHED Item is for construction of Detour 9 which is required to maintain Edgewood Road traffic in the initial stages of construction. Refer to Developmental Specification Contractor Furnished Borrow. The Contractor shall provide suitable material to complete the detour roadway embankment construction as specified in Standard Specification 2102.02. The Contractor is responsible for finding off-site borrow location(s), obtaining necessary environmental clearances and permits, and all equipment, resources, and operations to excavate and haul material to the project site without additional cost to the Contracting Authority. Overhaul will not be paid for separately. Refer to Q sheets for possible dewatering locations. Provide dewatering elsewhere as necessary. If needed, dewatering is considered incidental to roadway excavation. The Contractor may choose to use automated machine guidance (AMG) for this project. Refer to Standard Specification 1105.17 for details.
5	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW Item is for excavation and construction of roadway embankments within the project corridor. An estimated 178,835 cy of suitable Class 10 material is available for embankment construction within the project corridor. Refer to Standard Specification 2102. Roadway fills consider a shrinkage of 30%. Item includes excavation of 2606 cy of Unsuitable Type C material and 28,102 cy of muck. Unsuitable Type C material shall not be used in roadway embankment construction but rather wasted on site as additional slope dressing. Muck material shall be removed from the project site. Wasting the muck material will be paid for separately. Overhaul will not be paid for. The Contractor may choose to use automated machine guidance (AMG) for this project. Refer to Standard Specification 1105.17 for details.
6	2102-2710090	EXCAVATION, CLASS 10, WASTE Item is for wasting approximately 84,145 cy of excess suitable Class 10 material and 28,102 cy of muck. Item also includes the removal of 24,301 cy of material used to construct the Edgewood Road Detour 9 roadway. Refer to Standard Specification 1106.07. Prior to wasting suitable Class 10 material, the Contractor shall verify adequate suitable Class 10 volume remains within the project corridor to complete all roadway embankment and grading construction as defined in the contract documents. Overhaul will not be paid for.
7	2102-2712070	EXCAVATION, CLASS 12, ROADWAY AND BORROW Item is for rock excavation for roadway template construction. Refer to cross-sections and Q sheets for anticipated rock locations. Item includes rock undercut to a minimum depth of one foot below finished subgrade per Standard Specification 2102.03. Backfill for rock undercuts will be measured and paid for separately. Production blasting is allowed with approval from the Engineer and if used will be considered incidental to Class 12 excavation. Refer to Standard Specification 2103. Item includes removal and proper disposal of all Class 12 excavated material from the project site.
8	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS Refer to Standard Specification 2102. Item is a provision for encountering unexpected boulders and rock fragments during roadway Class 10 excavation operations. Any boulders or rock fragments encountered shall be removed from the project site and properly disposed of.

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
9	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD Item is for stripping, salvaging, and spreading topsoil for slope dressing as defined in the contract documents. Refer to Tabulation 103-4 "Spreading Topsoil" on Sheet CS.3 for details. The quantity considers a shrinkage factor of 40%. The Contractor shall strip and salvage topsoil from all areas of roadway cut for topsoil dressing. Payment for Topsoil, Strip, Salvage and Spread is for the quantity required for slope dressing per contract documents. The Contractor shall spread topsoil at a minimum thickness of 8". Excess topsoil stripped and excavated shall be wasted on the project site as additional dressing. Excess topsoil is not eligible for use in roadway embankment construction. On-Site stockpiling of stripped topsoil is only allowed within proposed and future ROW limits. Stockpiles may not be placed in areas designated as not to be disturbed in the contract documents. The Contractor may stockpile material at an appropriate off-site location if desired. Identifying a suitable off-site stockpile location and hauling operations to and from the project site will not be paid for separately.
10	2107-0875000	COMPACTION WITH MOISTURE AND DENSITY CONTROL Compaction with Moisture and Density Control shall be used for placement of granular backfill at the Edgewood Road bridge abutments and MSE retaining wall core out, reinforced zone, and temporary excavation locations as specified in the contract documents. Refer to Tabulation 103-1 "Embankment with Moisture and Density Control" on Sheet CS.3 for details.
11	2107-0875100	COMPACTION WITH MOISTURE CONTROL All roadway embankment construction shall be completed with moisture control unless specified otherwise in contract documents. Refer to Standard Specification 2107 for additional information. Locations specified in contract documents to be constructed with moisture and density control are not included in this item and will be measured and paid for separately. Refer to Tabulation 103-6 "Embankment with Moisture Control" on Sheet CS.3 for more details.
12	2107-3825025	GRANULAR MATERIAL FOR BLANKET AND SUBDRAIN Refer to Standard Specification 2107.03.K for details. Item includes granular material for drainage blankets identified in the contract documents. See Q sheets for blanket locations. Granular material shall meet the requirements of Standard Specification 4133 except that the percent passing the No. 200 sieve shall be less than 5%. Refer to Tabulation 104-5C "List of Subdrain Work" for granular blanket locations on Sheet CS.3. The Contractor is advised that working blankets may be necessary depending on ground conditions. Refer to Q sheets for possible locations. Working blankets are considered incidental to Class 10 excavation.
13	2111-8174100	GRANULAR SUBBASE Item is for construction of local side roads and IA 100; refer to Typicals Urban Paving and 4DP Raised Out on Sheets B.5 and B.8-B.10 for details.
14	2115-0100000	MODIFIED SUBBASE Item is for construction areas of Edgewood Road ramp paving; refer to Typical 1RP on Sheets B.6-B.7 for details.
15	2122-5190010	PAVED SHOULDER, P.C. CONCRETE, 10 IN. Item is for paved shoulders along IA 100 and Edgewood Road Interchange Ramps. See Tabulation 112-9 "Shoulders" on Sheet C.23 for locations and details. Includes approximately 7899 feet of integral 6" sloped curb.
16	2122-5191004	REINFORCED PAVED SHOULDER Item is for paved shoulders next to concrete barrier rail along IA 100 and Edgewood Road Interchange Ramps. See Tabulation 112-9 "Shoulders" on Sheet C.23 for locations and details.
17	2123-7450000	SHOULDER CONSTRUCTION, EARTH Item is for the construction of paved shoulders along Edgewood Road Interchange ramps and IA 100. See Tabulation 112-9 "Shoulders" on Sheet C.23 for details. Refer to Typicals Urban Paving and 1RP on Sheets B.5-B.7.
18	2123-7450020	SHOULDER FINISHING, EARTH Item includes all work and materials needed to complete shoulder construction behind sloped curb along Edgewood Road, Edgewood Road Interchange Ramps and IA 100. See Typical Sections Urban Paving, 4DP Raised Out and 1RP on Sheets B.5 thru B.10 for locations.
19	2301-0690270	BRIDGE APPROACH, RK-27 Item includes placement, finishing, curing, texturing and grooving of the approach pavement to the proposed Edgewood Road bridge over IA 100. Item includes the approach pavement, steel reinforcement, joints, polymer grid, sloped curb, 4” subdrain and subdrain outlet, modified subbase, porous backfill, and crushed stone backfill. Refer to Tabulation 112-6 "Bridge Approach Section" on Sheet C.13 for details. Refer to Sheets U.26-U.30 for modified RK-27 details.
20	2301-1033100	STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, CLASS C, CLASS 3 DURABILITY, 10 IN. Item is for the paving of Edgewood Road, local side roads, Edgewood Road Interchange Ramps and IA 100 per construction documents. Opening strength will be determined using the maturity method as described in materials I.M. 383. Refer to Standard Specification 2301.03.U for additional information. Longitudinal tinning will be required for IA 100 mainline, Edgewood Road interchange Ramps, and Edgewood Road. Refer to 2301.03.H for details.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
21	2301-4875008	MEDIAN, P.C. CONCRETE, 8 IN. Item is for raised concrete medians along Edgewood Road. See Tabulation 112-5 "Tabulation of Concrete Medians" on Sheet C.21 for location and details. Granular subbase material between the road subbase and median concrete is incidental to this item. Includes approximately 6811 feet of integral 8" Sloped curb.
22	2301-6911722	PORTLAND CEMENT CONCRETE PAVEMENT SAMPLES Item is for coring proposed pavement for thickness measurements along IA 100 mainline east of Edgewood Road, Edgewood Road interchange Ramps A and B, and Edgewood Road and other local roadways. Refer to Standard Specification 2301.
23	2304-0100000	DETOUR PAVEMENT Item is for the temporary pavement needs during the staged construction of the Edgewood Road interchange and IA 100 mainline. See Sheets F.1-F.13 for location and details. The contractor may choose PCC or HMA pavement types. Refer to Standard Specification 2304 for details. Removal of temporary pavement will be paid for separately. Plan quantities assume 8" PCC pavement is used for temporary pavement needs.
24	2401-6745625	REMOVAL OF EXISTING BRIDGE Refer to Standard Specification 2401. Item is for removal of the old Edgewood Road bridge located within the existing Edgewood Road roadway embankment. The previous Edgewood Road bridge was partially removed and buried as part of a previous project. The Contractor can expect to encounter flowable mortar and sand material used to fill in around and under the original structure. This bid item includes removing remaining bridge superstructure and substructure elements required to construct proposed IA 100 mainline and the Edgewood Road interchange, flowable mortar, and any other unsuitable material encountered within the existing roadway embankment. Materials removed as part of this item shall become the property of the Contractor and disposed of properly without additional cost to the Contracting Authority.
25	2401-6745650	REMOVAL OF EXISTING STRUCTURES Item is for removal of an existing 4' by 4' RCB culvert. Materials removed as part of this item shall become the property of the Contractor and disposed of properly without additional cost to the Contracting Authority.
26	2401-6745765	REMOVAL OF LIGHT POLES Item is for the removal of street light poles located near the existing Edgewood Road and IA 100 ramp terminal intersections. The removal includes the light pole and mast arm, luminaries, and concrete footings as needed to construct the Edgewood Road finished roadway template. Light pole, luminaries, other lighting components, and concrete footings removed shall become the property of the Contractor and appropriately disposed of without additional cost to the Contracting Authority. The Contractor shall coordinate with the City of Cedar Rapids and Alliant Energy to schedule the removal of the existing lights and light poles identified in the contract documents.
27	2401-6745830	REMOVAL OF P.C. CONCRETE MEDIAN BARRIER Item is for removal of existing IA 100 mainline concrete median barrier east of Edgewood Road to accommodate median crossovers for maintenance of traffic and construction staging purposes. After removing the concrete barrier, the contractor shall improve the road surface as directed by the Engineer to provide for smooth vehicular transitions through the median cross-over. Surface improvements following barrier removal and necessary saw cuts are considered incidental to this item. Removed median barrier shall become property of the Contractor and disposed of properly without additional cost to the Contracting Authority.
28	2402-0425030	GRANULAR BACKFILL Item is for furnishing and placing granular backfill at locations of over excavation; MSE Retaining Wall reinforced zones, core outs, and temporary excavations; and behind the Edgewood Road bridge abutments as shown in construction documents. Item includes 12,997 cy of granular backfill for areas of over excavation, 55,076 cy at MSE wall locations, and 994 cy at Edgewood Road bridge abutments. This item assumes 15% additional quantity for backfilling areas of over excavation west of Edgewood Road due to the variability in bedrock elevation. Areas of over excavation shall be backfilled with granular backfill to at least existing grade or as specified in contract documents. Granular backfill at Edgewood Road bridge abutments and MSE wall core outs, reinforced zones, and temporary excavations shall be placed per Standard Specification 2432.03.G. All granular backfill material used shall meet the requirements of Standard Specification 4133 except that the percent passing the No. 200 sieve shall be less than 5%.
29	2402-0425040	FLOODED BACKFILL Item is for construction of Concrete Roadway Pipes and includes Floodable Backfill and Porous Backfill quantities. See Tabulation 104-3 "Drainage Structures by Road Contractor" on Sheet C.13.
30	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT Item is for excavation beyond that required for the construction of the roadway template for the purposes of constructing roadway culverts. See Tabulation 104-3 "Drainage Structures by Road Contractor" on Sheet C.13. Excavated material becomes property of the contractor.
31	2412-0000100	LONGITUDINAL GROOVING IN CONCRETE Item is for longitudinal grooving of proposed Edgewood Road bridge deck constructed by others (NHSX-100-1(66)--3H-57). See Tabulation 100-28 "Longitudinal Grooving" on Sheet C.15.

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
32	2414-6424119	CONCRETE BARRIER RAILING, AESTHETIC Item is for construction of proposed aesthetic barrier rail in the southeast quadrant of the Edgewood Road interchange bridge. Concrete shall be Class C. Slip forming of the aesthetic barrier is not allowed. Cast in place forms, reinforcing steel, and concrete light pole pedestal are considered incidental to this item. Aesthetic brick veneer finishing on the interior and exterior faces of the barrier will be paid for separately. Refer to Sheets U.35-U.36 for additional details.
33	2416-0100015	APRONS, CONCRETE, 15 IN. DIA.
34	2416-0100021	APRONS, CONCRETE, 21 IN. DIA.
35	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.
36	2416-0100060	APRONS, CONCRETE, 60 IN. DIA.
37	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.
38	2416-1180060	CULVERT, CONCRETE ROADWAY PIPE, 60 IN. DIA.
39	2417-0225024	APRONS, METAL, 24 IN. DIA.
40	2417-1060024	CULVERT, CORRUGATED METAL ROADWAY PIPE, 24 IN. DIA. Items include payment for Apron Guards, Elbows, and Connected Pipe Joints. See Tabulation 104-3 "Drainage Structure by Road Contractor" on Sheet C.13 for pipe culvert details. Includes 7- 15" Dia., 1-21" Dia. And 2-24" Dia. aprons are for storm sewer outlet locations. Refer to Tabulation 104-5B "Storm Sewer" on Sheets M.1-M.4 for storm sewer outlet details.
41	2417-1060036	CULVERT, CORRUGATED METAL ROADWAY PIPE, 36 IN. DIA. Item is for a temporary pipe culvert under Detour 9 to facilitate drainage during construction. Temporary pipe shall be removed with Detour 9 and remain the property of the Contractor. Removal of culvert is incidental to Class 10 excavation.
42	2432-0000100	MECHANICALLY STABILIZED EARTH RETAINING WALL Refer to Standard Specification 2432. Item includes all materials, equipment, and operations necessary to design and erect MSE retaining walls including the leveling pads, concrete aesthetic panels, coping, slip joints, concrete gutter, earth reinforcement placement, gutter drains, and subdrains. Refer to Sheets V.3-V.8 for proposed retaining wall geometrics and profile details and Sheets V.9-V.15 for MSE wall typical details. Refer to Special Provision "Aesthetic Treatment of MSE Retaining Wall Concrete Panels." Staged MSE wall construction will be required for Retaining Walls at the Edgewood Road Interchange. MSE retaining wall plan and profile sheets provide estimated limits of approximately 5142 sf of wire face retaining wall to be used to retain MSE wall backfill material between construction stages. Temporary shoring/bracing may be required to complete over excavation needs identified in the Q sheets and cross-sections. The wire mesh retaining wall and temporary shoring/bracing if required is considered incidental to the Mechanically Stabilized Earth Retaining Wall bid item. Approximately 5142 sy of wire mesh retaining wall may be needed. Design and construction of the MSE retaining walls adjacent to the Edgewood Road bridge abutments shall accommodate drilled shafts and other structural elements. Refer to NHSX-100-1(66)—3H-57 for bridge details. Backfill behind the abutment shall be granular backfill placed in conjunction and in the same manner as the MSE wall granular backfill material. Subdrain placed behind the bridge abutment shall tie to the subdrains located near the base of the MSE wall. Use a solid vertical PVC pipe and fittings to connect subdrains. Vertical PVC pipe, fittings, and geotextile fabric placed at the bridge abutments are considered incidental to the MSE wall construction. Refer to the abutment backfill detail on Sheet U.32. MSE supplier shall submit MSE Retaining Wall design plans for Engineer review. Approval from Engineer is required prior to the start of retaining wall construction. The MSE wall supplier shall consider the interaction between MSE wall reinforcement and proposed bridge drilled shaft foundations. MSE wall bid quantity based on the minimum 4' embedment at the base of the wall. Additional MSE wall area measured from the leveling pad to top of wall shall be identified by the MSE Wall Supplier in the final wall design plans to be approved by the Engineer. Additional wall area included in the Engineer approved final MSE Wall design plans will be paid for at the contract unit price per SF for Mechanically Stabilized Earth Retaining Wall. Temporary excavation, granular backfill, washed gravel slope protection, and finished grade earthwork will be paid for separately.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
43	2435-0140148	MANHOLE, STORM SEWER, SW-401, 48 IN.
44	2435-0140160	MANHOLE, STORM SEWER, SW-401, 60 IN.
45	2435-0140200	MANHOLE, STORM SEWER, SW-402
46	2435-0250700	INTAKE, SW-507
47	2435-0250800	INTAKE, SW-508
48	2435-0250802	INTAKE, SW-508, WELL ONLY
49	2435-0250900	INTAKE, SW-509
50	2435-0251000	INTAKE, SW-510
51	2435-0251218	INTAKE, SW-512, 18 IN.
52	2435-0251224	INTAKE, SW-512, 24 IN.
53	2435-0251236	INTAKE, SW-512, 36 IN.
54	2435-0254600	INTAKE, SW-546
55	2435-0254602	INTAKE, SW-546, WELL ONLY
56	2435-0254710	BARRIER INTAKE, SW-547 MODIFIED
57	2435-0254702	BARRIER INTAKE, SW-547, WELL ONLY
58	2435-0254900	BARRIER INTAKE, SW-549
59	2435-0254910	BARRIER INTAKE, SW-549 MODIFIED
60	2435-0254912	BARRIER INTAKE, SW-549, MODIFIED, WELL ONLY See Tabulation 104-5B "Storm Sewer" on Sheet M.1-M.4. Refer to Sheets U.15-U.18 for Modified SW-547 and Sheets U.19-U.23 for Modified SW-549 details.
61	2435-0600010	MANHOLE ADJUSTMENT, MINOR Refer to Standard Specification 2435. Refer to Tabulation 104-5B "Storm Sewer" on Sheets M.1-M.4 for location details.
62	2435-0700010	CONNECTION TO EXISTING MANHOLE Item is for connections to existing structures along Edgewood Road. Refer to Standard Specification 2435 and Tabulation 104-5B "Storm Sewer" on Sheets M.1-M.4 for location and details.
63	2502-8212024	SUBDRAIN, LONGITUDINAL, (BACKSLOPE) 4 IN. DIA.
64	2502-8212034	SUBDRAIN, LONGITUDINAL, (SHOULDER) 4 IN. DIA.
65	2502-8212036	SUBDRAIN, LONGITUDINAL, (SHOULDER) 6 IN. DIA.
66	2502-8212104	SUBDRAIN, PLASTIC PIPE, 4 IN.
67	2502-8220193	SUBDRAIN OUTLET, RF-19C
68	2502-8220196	SUBDRAIN OUTLET, RF-19E
69	2502-8220197	SUBDRAIN OUTLET, RF-19F Item includes 1478.8 cy of Porous Backfill and 24.8 cy of Class A Crushed Stone. See Tabulation 104-9 "Subdrain Shoulder and Backslope" on Sheets CS.1-CS.2 and Tabulation 104-5C "List of Subdrain Work" on Sheet CS.3.
70	2503-0114215	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 15 IN.
71	2503-0114218	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 18 IN.
72	2503-0114221	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 21 IN.
73	2503-0114224	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 24 IN.
74	2503-0114230	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 30 IN.
75	2503-0114236	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 36 IN.
76	2503-0114248	STORM SEWER GRAVITY MAIN, TRENCHED, RCP, 2000D (CLASS III), 48 IN. Refer to Standard Specification 2503 and see Tabulation 104-5B "Storm Sewer" on Sheets M.1-M.4 for details. Trench excavation, bedding, and backfill for storm sewer placement will be considered incidental to the Storm Sewer Gravity Main Trenched items. Rock Excavation for trench construction will be measured and paid for separately. Refer to project cross-sections for locations of anticipated rock excavation.
77	2503-0200036	REMOVE STORM SEWER PIPE LESS THAN OR EQUAL TO 36 IN.
78	2503-0200136	REMOVE STORM SEWER PIPE GREATER THAN 36 IN. See Tabulation 110-14 "Sanitary or Storm Sewer Abandonment or Removal" on Sheet C.21 and Tabulation 104-5B "Storm Sewer" on Sheets M.1-M.4 for locations and details. Storm sewer pipe removed shall become the property of the Contractor and removed from the project site.
79	2507-3250005	ENGINEERING FABRIC Item is for the construction of rock slash basins. See Tabulation 100-23 "Rock Ditch Checks/Ditches/Flumes/Splash Basins/Slope Protection" on Sheet C.13.
80	2507-8029000	EROSION STONE Item is for the construction of rock slash basins. See Tabulation 100-23 "Rock Ditch Checks/Ditches/Flumes/Splash Basins/Slope Protection" on Sheet C.13.
81	2510-6745850	REMOVAL OF PAVEMENT Item includes removal of 26,377 sy of existing Edgewood Road, 9185 sy of existing Edgewood Road interchange ramp pavement, 22,911 sy of IA 100 mainline pavement, 1281 sy of North River Boulevard pavement, and 629 sy of South Hy-Vee Access Road pavement. Item includes removal of 15,017 sy of temporary pavement placed for construction staging. Item also includes removal of 235 sy of PCC raised median along Edgewood Road to accommodate traffic shifts during staging. At these locations only the raised median pavement and curb are to be removed. See Tabulation 110-1 "Removal of Pavement" on Sheet C.22 for details.
82	2510-6750600	REMOVAL OF INTAKES AND UTILITY ACCESSES Item is for removal of existing manholes and storm sewer intakes adjacent to Edgewood Road. See Tabulation 110-15 "Removal of Intakes and Utility Accesses" on Sheet C.22 and Tabulation 104-5B "Storm Sewer" on Sheets M.1-M.4 for locations and details. Manholes, intakes, and utility accesses removed shall become the property of the Contractor and removed from the project site.

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
83	2511-0302600	RECREATIONAL TRAIL, PORTLAND CEMENT CONCRETE, 6 IN. Item is for paving the proposed 10' trail west of Edgewood Road per the limits specified in the contract documents. Refer to S Sheets and Standard Road Plan MI-220 for details on pedestrian ramps. Refer to Standard Specification 2511.03 for construction controls and tolerances. All pedestrian ramps shall be constructed to conform with current ADA requirements. Refer to Tabulation 113-1 "Sidewalks" on Sheet C.23 for details. Detectable warnings will be paid for separately.
84	2511-6745900	REMOVAL OF SIDEWALK Item is for removal of existing sidewalk in the northeast corner of the South Hy-Vee Access Road intersection to allow for connection of new proposed sidewalk with existing sidewalk locations. Refer to Standard Specification 2511.03. Refer to Sheet S.13 for limits of removal and Tabulation 110-5 "Sidewalk Removal" on Sheet C.21 for details.
85	2511-7526006	SIDEWALK, P.C. CONCRETE, 6 IN.
86	2511-7528101	DETECTABLE WARNINGS Items are for paving the proposed 6' sidewalk east of Edgewood Road per the limits specified in the contract documents. Refer to S Sheets and Standard Road Plan MI-220 for details on pedestrian ramp and detectable warnings. Refer to Standard Specification 2511.03 for construction controls and tolerances. All pedestrian ramps and detectable warnings shall be constructed to conform with current ADA requirements and shall comply with Material I.M. 411. Refer to Tabulation 113-1 "Sidewalks" on Sheet C.23 for details. Detectable warning color shall be brick red.
87	2512-1725306	CURB AND GUTTER, P.C. CONCRETE, 3.0 FT. Item is for placing, finishing, and curing of concrete 8" sloped curb and gutter section along Edgewood Road and 6" standard curb and gutter section along North River Blvd. and South Hy-Vee Access Road. Refer to Sheet U.4 for 8" sloped curb details. Refer to Tabulation 112-04 "Curbs and Islands" on Sheet C.22 for details.
88	2513-0001000	CONCRETE BARRIER, BA-100
89	2513-0001020	CONCRETE BARRIER, BA-102
90	2513-0001070	CONCRETE BARRIER, BA-107
91	2513-0001081	CONCRETE BARRIER, TAPERED END, BA-108 Item is for construction of IA 100 concrete median barrier and side barrier at locations identified in the contract documents along IA 100 mainline and interchange ramps. Refer to Tabulation 108-18 "Concrete Barrier" and 108-18B "Concrete Barrier at Side Locations" on Sheet C.15 for details. Concrete barrier tapered end sections will be constructed on the approach side of concrete barriers placed at side locations. Refer to Standard Road Plan BA-108 for tapered end section details.
92	2513-4870003	MEDIAN BARRIER, P.C. CONCRETE Item is for replacing concrete median barrier along IA 100 removed to accommodate traffic shifts and construction staging. Refer to Sheet D.8 for limits of construction. Dimensions and shape of the concrete barrier shall match the existing barrier that is to remain in place and used as constructed. Payment will include all materials, equipment, and operations required for constructing the replacement concrete median barrier.
93	2518-6745880	REMOVAL OF ROAD CLOSURE BARRICADE Item is for the removal of an existing Road Closed barricade at the intersection of Edgewood Road and Buffalo Road. The road closure barricade and associated signs shall become the property of the Contractor.
94	2518-6910000	SAFETY CLOSURE See Tabulation 108-13A "Safety Closure" on Sheet C.15 for locations and details.
95	2520-3350010	FIELD LABORATORY
96	2520-3350015	FIELD OFFICE Refer to Standard Specification 2520.
97	2523-0000100	LIGHTING POLES Standard Iowa DOT light pole structure and footing as per Standard Specifications and Standard Road Plans RM-31 and RM-39 except that the luminaire shall be an LED type as specified on the P-Sheets.
98	2523-0000200	ELECTRICAL CIRCUITS Provision and installation of RM-40 cable splices and connectors shall be included with and considered incidental to the installation of Electrical Circuits. Provide 600 Volt fuses rated at 5 Amps for luminaire tap circuit supply Y-1 connectors located in base of each pole. Un-fused connectors are used in each circuit run handhole for sectionalizing circuits for testing and repair. Included in Electric Circuits on project are fourteen (14) Type L-2 and eight (8) Type Y-1 connectors.
99	2523-0000310	HANDHOLES AND JUNCTION BOXES All handholes to be RM-42, Type 1.
100	2523-0000400	CONTROL CABINET RM-36 type control cabinet with circuits as per One-Line Diagram on P-Sheets.
101	2525-0000100	TRAFFIC SIGNALIZATION This lump sum item is for the installation of signals and interconnect as shown on Sheets N.3-N.29. Refer to Bill of Materials on Sheets N.16-N.23 for individual items included in the lump sum. This item includes all conduit handholes shown in Sheets N.3-N.18. Refer to Special Provision "Traffic Signalization" for additional information.

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
102	2526-8285000	CONSTRUCTION SURVEY Prior to construction, perform a survey to lay out the proposed grading design per Standard Specification 2526. The contractor may choose to use automated machine guidance construction. Refer to Standard Specification 1105.17. If automated machine grading is used, after finished grading and prior to seeding, the Contractor shall prepare a topographic survey, using the established baselines to show conformance to the proposed grades. The survey shall include the established baselines and the finished grades shown in 0.5 foot contours. Survey all grading areas, including stockpile areas. The Contractor shall provide the Engineer with the electronic file (TIN file or ASCII file). Survey right-of-way line between permanent right-of-way corners at 100 foot intervals or less if needed. Mark these points by placement of lath to clearly identify the right-of-way line. Permanent right-of-way corners will be surveyed and marked in the field by the Engineer.
103 104	2527-9263109 2527-9263128	PAINTED PAVEMENT MARKING, WATERBORNE OR SOLVENT-BASED PERMANENT TAPE MARKINGS, INTERSECTION MARKING TAPE See Tabulation 108-22 "Pavement Marking Line Types" on Sheets C.17-C.21 for details.
105	2527-9263131	WET RETROREFLECTIVE REMOVABLE TAPE MARKINGS Item is for temporary pavement markings during staged construction of Edgewood Road, Edgewood Road Interchange ramps and IA 100. See Tabulation 108-22 "Pavement Marking Line Types" on Sheets C.17-C.21 for details.
106	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED See Tabulation 108-29 "Pavement Marking Symbols and Legends" on Sheet C.16 for details.
107 108	2527-9263180 2527-9263190	PAVEMENT MARKINGS REMOVED SYMBOLS AND LEGENDS REMOVED Item is for the removal of temporary pavement markings placed during staged construction. See Tabulation 108-22 "Pavement Marking Line Types" and Tabulation 108-29 "Pavement Marking Symbols and Legends" on Sheets C.16-C.21 for details.
109	2527-9270111	GROOVES CUT FOR PAVEMENT MARKINGS Items are for permanent intersection tape pavement markings grooved into the approach side road and ramp roadways at the Edgewood Road interchange. Markings on the bridge structure will not be grooved in. Refer to Special Provision XXXXX for details on grooved in permanent tape markings. Refer to Standard Specification 2527.03.D for placement of permanent tape markings on the Edgewood Road bridge deck.
110	2528-3800000	MODULAR GLARE SCREEN SYSTEM Item is for placement, maintenance, and removal of glare screen systems for construction staging along IA 100 mainline and Edgewood Road interchange ramps east of Edgewood Road. Refer to J Sheets for additional details. Refer to Standard Specification 2528.03.F.
111	2528-8400048	TEMPORARY BARRIER RAIL, CONCRETE Item includes furnishing, maintaining, moving and removal of temporary barrier rail during staged construction of the Edgewood Road Interchange. See Tabulation 108-33 "Temporary Barrier Rail" on Sheet C.22 for location and details.
112	2528-8400157	TEMPORARY FLOODLIGHTING LUMINAIRE Refer to Standard Specification 2528 and Tabulation 108-27 "Temporary Floodlighting Luminaires" on Sheet C.23 for additional details.
113	2528-8445110	TRAFFIC CONTROL Refer to the traffic control plan on Sheet J.2. Payment for traffic control will be the contract unit price per Standard Specification 2528. Item includes furnishing, placing and removing temporary traffic control devices used in accordance with Chapter 6 of the MUTCD and not bid separately in the contract documents (i.e. drums, tubular markers, barricades, warning signs, etc.) For additional information refer to Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD), current Iowa DOT TC Standard Road Plans, and current Standard Specifications.
114	2533-4980005	MOBILIZATION Payment will be based on the contract unit price per Standard Specification 2533.
115	2551-0000110	TEMPORARY CRASH CUSHION Refer to Tabulation 108-30 "Crash Cushions" on Sheet C.15 and Standard Specification 2551 for details. Crash cushions shall be removed after they are no longer required and will remain the property of the Contractor.
116 117	2551-0000230 2551-0000300	PERMANENT CRASH CUSHION, SEVERE USE (SU) PERMANENT CRASH CUSHION SPARE PARTS KIT Refer to Tabulation 108-30 "Crash Cushions" on Sheet C.15 and Standard Specification 2551 for details.
118	2552-0000140	ROCK EXCAVATION Item is for Rock Excavation for storm sewer trench construction. Excavated rock shall become the property of the contractor and removed from the project site. Production Blasting is allowed with prior approval from the Engineer. If used, Production Blasting will be considered incidental to Rock Excavation for trench construction.

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
119	2554-0210201	FIRE HYDRANT ASSEMBLY, WM-201 Item is for the installation of new fire hydrant assemblies along Edgewood Road. Refer to Sheets E.1 and E.3 for locations and Standard Specification 2554 for details. The City of Cedar Rapids will provide the Contractor the following materials: tees to the hydrants, pipe to the hydrants, hydrant shut off valves, and the hydrant units. Pipe to be provided will conform to Iowa DOT Standard Specification Section 4150 with the exception that Type 3 CLOW TR Flex Restrained Joint for buried installation or equal is required. Thrust blocking is required; see Standard Road Plan WM-101 for details. All work for this item must be performed by a plumber/pipe layer licensed with the Metro Plumbing Licensing Board per City of Cedar Rapids specification 2500 1.06. Licensing may be obtained at the Cedar Rapids Building Department. Method of Measurement: Each hydrant assembly will be counted. Basis of Payment: The Contractor will be paid the contract unit price for each installation successfully completed. Payment will be full compensation for providing all necessary materials per Standard Specification 2554 that are not provided to the Contractor by the City of Cedar Rapids as defined in the contract documents and the installation, testing, and disinfection of the hydrant assemblies.
120	2590-0000020	PROJECT MANAGEMENT Refer to SP-120106, Special Provisions for Project Management, for details.
121	2599-9999005	POST TOP LIGHTS Refer to P-Sheets for description, materials, and construction of each Post-Top Style Lighting Pole. Method of measurement will be by count. The Contractor will be paid the unit price per each Lighting Pole. Payment is full compensation for materials, equipment and installation of the pole, luminaire, and wiring within the pole according to the contract documents. Refer to Tabulation 108-1 "Lighting Installations" on Sheet C.24.
122	2599-9999005	ROADWAY LIGHTING - LUMINAIRE ONLY Refer to P-Sheets for description, materials, and construction of each Roadway Style LED Luminaire. Method of measurement will be by count. The Contractor will be paid the unit price per each luminaire. Payment is full compensation for materials, equipment, and installation of each roadway style luminaire onto a traffic signal pole luminaire arm, according to the contract documents. This quantity does not include traffic signal pole structures or portions thereof, nor any wiring within the traffic signal pole structures. Refer to Tabulation 108-1 "Lighting Installations" on Sheet C.24.
123 124 125 126 127	2599-9999010 2599-9999010 2599-9999010 2599-9999010 2599-9999010	TEMPORARY TRAFFIC SIGNAL - EDGEWOOD ROAD & AEGON ACCESS INTERSECTION TEMPORARY TRAFFIC SIGNAL - EDGEWOOD ROAD & NORTH RIVER BLVD. INTERSECTION TEMPORARY TRAFFIC SIGNAL - EDGEWOOD ROAD EXISTING EB TERMINAL INTERSECTION TEMPORARY TRAFFIC SIGNAL - EDGEWOOD ROAD EXISTING WB TERMINAL INTERSECTION TEMPORARY TRAFFIC SIGNAL - EDGEWOOD ROAD & SOUTH HY-VEE ACCESS INTERSECTION This item is for the modification, operation, and removal of each temporary signal required during the various traffic control stages within the project. Refer to Sheets N.30-N.71 for additional information. Refer to Special Provision "Temporary Traffic Signalization."

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
128	2599-9999010	16 IN. DIA. DIP WATER MAIN ABANDONMENT & REMOVAL This item is for abandonment or removal of approximately 1730 linear feet of 16-inch diameter ductile iron pipe water main and appurtenances generally between North River Boulevard and the South Hy-Vee Access Road. The location of the existing water main is expected to be a minimum of 5’-6” below existing grade. The Contractor shall cut and remove the existing water main pipe and appurtenances as needed at locations where proposed or temporary excavation exposes the existing pipe or where existing water main will be within 48" of the proposed finished grade. Areas of removal shall be backfilled with suitable Class 10 material as part of roadway embankment and interchange grading construction. Water main removal includes the removal of any appurtenances such as valves, valve boxes, hydrants, elbows/bends, air relief valve risers, sleeves, fittings, and pipe restraining structures and equipment. that are located along the section of pipe being removed. As-built plans suggest that joints have gripper gaskets. Locations where the existing pipe remains a minimum 48" below finished grade and does not conflict with future roadway and drainage elements can remain in place and abandoned. Sections abandoned shall be capped and grouted solid. All appurtenances located above existing grade along the section of abandoned water main shall be removed. Fill the water main being abandoned with flowable mortar or CLSM per SUDAS Standard Specification Section 3010 by gravity flow or pumping. The Engineer estimates that approximately 690 linear feet of the existing water main will need to be removed with the other 1040 feet being able to remain in place and abandoned. The existing 16-inch water main cannot be removed from service until a new water main located along Ushers Ferry Road between IA 100 and Blairs Ferry Road is constructed and operational. The Contractor shall coordinate with the City of Cedar Rapids and the Ushers Ferry utility contractor to verify the date the existing main along Edgewood Road can be taken out of service. The Ushers Ferry water main is being constructed under a separate City of Cedar Rapids project number 2014058. While the existing 16-inch water main is in service, it will be necessary to remove some water utility appurtenances located above existing grade. This is to accommodate detour and staging needs for construction of the proposed Edgewood Road bridge over IA 100 mainline. These removals include at a minimum a fire hydrant and valve box located on the west side of Edgewood Road near Station 7515+00. Removal of such appurtenances shall be completed without service interruption. Once the existing water main is taken out of service, all other above ground appurtenances shall be removed. In areas of water main abandonment, removal of these appurtenances shall be to a minimum depth of 48-inches below the existing or finished grade elevation. Method of Measurement: Lump Sum Basis of Payment: The contractor will be paid the contract unit price for this lump sum item. The lump sum payment will be full compensation for all materials, equipment, and operations necessary for removal or abandonment of water main pipe and appurtenances including water valves and valve boxes, hydrants, air relief valve risers, bends/elbows, sleeves, and fittings, and pipe restraining structures and equipment. Backfill in the case of water main removal and grout for water main abandonment are considered incidental to the removal or abandonment of the water main pipe.
129	2599-9999014	PORTLAND CEMENT CONCRETE (PCC) PAVERS Includes all costs associated with furnishing and installing the pavers in accordance with plans and special provisions. Refer to Special Provision "PCC Pavers" and Sheet U.31 for details.
130	2599-9999014	INTEGRAL THIN VENEER BRICK FOR STRUCTURAL CONCRETE Refer to Special Provision "Integral Thin Veneer Brick for Structural Concrete". Item is to be applied to both faces of the aesthetic concrete barrier. Construction of the concrete aesthetic barrier will be paid for separately.
131	2599-9999018	SLOPE PROTECTION, WASHED GRAVEL Includes furnishing and placing engineering fabric and washed gravel at front face of bridge abutments. Refer to Sheet V.13 for details. All excavation and compaction required to place washed gravel is incidental to this item.
132	2601-2634100	MULCHING Mulching shall be applied as described in Standard Specification 2601. After seeding, mulch all areas disturbed by clearing and grubbing, grading and paving operations.
133	2601-2638610	CONCRETE SLOPE PROTECTION Includes furnishing and placing engineering fabric, granular subbase, Class “C” Structural Concrete, #4 reinforcing, preformed joint filler, commercial bituminous patching material, and all required excavation, shaping, and compacting. Refer to Sheet U.38 for concrete slope protection details.
134	2601-2642120	STABILIZING CROP - SEEDING AND FERTILIZING (URBAN) See Standard Specification 2601.03.B for Urban Seeding mix details. Seed and Fertilize all areas disturbed by clearing and grubbing, grading, and paving operations.
135	2602-0000020	SILT FENCE Refer to Tabulation 100-17 "Tabulation of Silt Fence" on Sheet C.12. The tabulation includes estimated locations for placement of "Silt Fence" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 25% additional quantity for field adjustments and replacements.

100-4A
10-29-02

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
136	2602-0000030	SILT FENCE FOR DITCH CHECKS Refer to Tabulation 100-18 "Silt Fence for Ditch Checks" on Sheet C.12. The tabulation includes estimated locations for placement of "Silt Fence for Ditch Checks" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 50% additional quantity for field adjustments and replacements.
137	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS This item is included for silt fence and silt fence for ditch check removal required for staging reasons, removal to allow for replacement (replacement to be paid separately), or for areas that have achieved 70% permanent growth.
138	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK This item is included for clean-out and repair of the silt fence and silt fence for ditch checks during the project.
139 140	2602-0000312 2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA. PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA. Refer to Standard Specification 2602. These temporary erosion control devices can be used when weather, site conditions, or contractor staging do not lend themselves to silt fence placement. Prior to placement, the Engineer shall approval placement of these devices in lieu of silt fence. All perimeter and slope sediment control devices shall be removed and replaced with silt fence prior to the end of construction unless approved by the Engineer. Quantity estimated using 10% of the silt fence quantity up to a maximum of 1000 feet for each of the 12-inch and 20-inch perimeter and slope sediment control devices. Installation of silt fence in place of these devices will be paid for at the contract unit price for Silt Fence and per Standard Specification 2602.
141	2602-0000350	REMOVAL OF PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE Item is for removal of perimeter slope control devices placed as part of this project required to meet construction staging and site needs. Quantity is assumed to be 50% of the quantity installed for both 12 inch diameter and 20 inch diameter devices. Refer to Standard Specification 2602 for additional information.
142 143	2602-0010010 2602-0010020	MOBILIZATION, EROSION CONTROL MOBILIZATION, EMERGENCY EROSION CONTROL See Standard Specification 2602.

105-4
10-18-11

STANDARD ROAD PLANS

The following Standard Road Plans apply to construction work on this project.

Number	Date	Title
BA-100	04-20-10	44" Concrete Median Barrier (Full Section)
BA-102	04-19-11	44" Concrete Barrier (Half Section)
BA-106	04-17-12	Reinforced Paved Shoulder for Concrete Barrier
BA-107	10-18-11	Concrete Barrier End Section
BA-108	04-19-11	Concrete Barrier Tapered End Section
BA-401	04-16-13	Temporary Barrier Rail (Precast Concrete)
BA-500	04-20-10	Temporary Crash Cushions Sand Barrel
EC-201	04-20-10	Silt Fence
EC-204	10-16-12	Perimeter and Slope Sediment Control Devices
EW-102	10-15-13	Allowable Placement of Unsuitable Soil in Embankments
MI-220	10-16-12	Detectable Warnings and Pedestrian Ramp
PM-110	04-16-13	Line Types
PM-111	10-16-12	Symbols and Legends
PM-120	10-15-13	Stop Lines and Islands
PM-310	04-16-13	Entrance and Exit Ramps
PM-521	04-19-11	Two-Lane Roadway with Right Turn Lanes
PM-522	10-16-12	Two-Lane Roadway with Left Turn Lanes
PV-3	10-18-11	Safety Edge
PV-20	10-15-13	Paved Islands
PV-101	10-15-13	Joints
PV-102	04-16-13	PCC Curb Details
PV-103	04-19-11	Manhole Boxouts in PCC Pavement
PV-104	04-19-11	Ramped Median Nose
PV-301	04-19-11	Superelevation Details Two Lane Roadway
PV-303	04-19-11	Superelevation Details Ramps
PV-410	10-18-11	Deceleration Taper for 16' Exit Ramp
PV-411	10-18-11	Acceleration Taper for 16' Entrance Ramp
RF-2	10-18-11	Construction of Type "C" Concrete Adaptors for Pipe Culvert Connections
RF-3	10-15-13	Concrete Aprons
RF-5	04-16-13	Metal Pipe Aprons and Beveled Ends
RF-13	10-18-11	Pipe Bends and Half Pipe
RF-14	04-16-13	Connected Pipe Joints
RF-19C	10-16-12	Subdrains (Longitudinal)
RF-19E	10-16-12	Outlets for Longitudinal, Transverse and Backslope Subdrains
RF-26	10-15-13	Pipe Apron Guard
RF-30A	10-19-10	Culvert (Bedding and Backfill)
RF-30B	10-19-10	Pipe Culvert (Cover and Camber)
RF-30C	04-16-13	Pipe Culvert (Installation Details)
RF-31	03-28-95	Depth of Cover Tables for Concrete Pipe
RF-32	10-19-10	Depth of Cover Tables for Corrugated Pipe
RK-20	04-16-13	Double Reinforced 12" Approach
RK-21	10-16-12	Bridge Approach (abutting PCC or Composite Pavement)
RM-41	04-25-00	Underdeck Lighting (High Pressure Sodium Luminaire)
RM-48	10-16-12	Temporary Floodlighting
SW-101	04-21-09	Trench Bedding and Backfill Zones
SW-102	04-21-09	Rigid Gravity Pipe Trench Bedding
SW-401	04-21-09	Circular Storm Sewer Manhole
SW-402	04-21-09	Rectangular Storm Sewer Manhole
SW-507	10-20-09	Single Open-Throat Intake, Small Box
SW-508	10-20-09	Single Open-Throat Intake, Large Box
SW-509	10-18-11	Double Open-Throat Curb Intake, Small Box
SW-510	10-18-11	Double Open-Throat Curb Intake, Large Box
SW-512	10-20-09	Circular Area Intake
SW-546	04-19-11	Single Open-Throat Barrier Intake
SW-547	10-16-12	Triple-Grate Barrier Intake
SW-549	04-19-11	Single-Grate Barrier Intake, Rectangular
SW-602	10-20-09	Castings for Storm Sewer Manholes
SW-603	10-15-13	Castings for Grate Intakes
SW-604	10-20-09	Castings for Area Intakes
TC-1	04-16-13	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-273	04-20-10	Construction Site Entrance
TC-601	10-18-11	Pedestrian Detour
WM-101	04-21-09	Thrust Blocks
WM-201	04-19-11	Fire Hydrant Assembly

111-25
10-18-11

INDEX OF TABULATIONS

Tabulation	Tabulation Title	Sheet No.
100-16	TABULATION OF INTERCEPTING DITCHES	C.12
100-17	TABULATION OF SILT FENCES	C.12
100-18	TABULATION OF SILT FENCES FOR DITCH CHECKS	C.12
100-1C	ESTIMATED PROJECT QUANTITIES (UP TO A 5 DIVISION PROJECT)	C.1-C.3
100-1D	PROJECT DESCRIPTION	C.1
100-23	ROCK DITCH CHECKS/DITCHES/FLUMES/SPLASH BASINS/SLOPE PROTECTION	C.13
100-24	PCC PAVEMENT	C.14
100-27	PAVEMENT SMOOTHNESS + PCC TEXTURE	C.13
100-28	LONGITUDINAL GROOVING	C.15
100-4A	ESTIMATE REFERENCE INFORMATION	C.4-C.8
102-5	EXISTING PAVEMENT	C.14
103-1	EMBANKMENT WITH MOISTURE AND DENSITY CONTROL	CS.3
103-4	TABULATION OF SPREADING TOPSOIL	CS.3
103-6	EMBANKMENT WITH MOISTURE CONTROL	CS.3
103-7	SHRINKAGE DATA	CS.3
104-3	DRAINAGE STRUCTURE BY ROAD CONTRACTOR	C.13
104-5C	LIST OF SUBDRAIN WORK	CS.3
104-9	SUBDRAIN SHOULDER AND BACKSLOPE	CS.1-CS.2
105-4	STANDARD ROAD PLANS	C.9
108-1	LIGHTING INSTALLATIONS	C.24
108-2	ELECTRICAL DUCTS	C.24
108-11A	HIGHWAY LIGHTING DATA	C.24
108-12	WIRE, CABLE AND CONNECTORS	C.24
108-13A	SAFETY CLOSURES	C.15
108-18	CONCRETE BARRIER	C.15
108-18B	CONCRETE BARRIER AT SIDE LOCATIONS	C.15
108-22	PAVEMENT MARKING LINE TYPES	C.17-C.21
108-23A	TRAFFIC CONTROL PLAN	J.2
108-26A	STAGING NOTES	J.2-J.3
108-27	TEMPORARY FLOODLIGHTING LUMINAIRES	C.23
108-29	PAVEMENT MARKING SYMBOLS AND LEGENDS	C.16
108-30	CRASH CUSHIONS	C.15
108-33	TEMPORARY BARRIER RAIL	C.22
110-1	REMOVAL OF PAVEMENT	C.22
110-5	SIDEWALK REMOVAL	C.21
110-12A	POLLUTION PREVENTION PLAN	C.10
110-14	SANITARY OR STORM SEWER ABANDONMENT OR REMOVAL	C.21
110-15	REMOVAL OF INTAKES AND UTILITY ACCESSES	C.22
110-16	REMOVAL OF LIGHT POLES AND CONCRETE FOOTINGS	C.22
111-01	COORDINATED OPERATIONS	J.2
111-25	INDEX OF TABULATIONS	C.9
112-04	CURBS AND ISLANDS	C.22
112-5	CONCRETE MEDIANS	C.21
112-6	BRIDGE APPROACH SECTION	C.13
112-9	SHOULDERS	C.23
113-1	SIDEWALKS	C.23
113-2	PEDESTRIAN PATH CLOSURES	J.2
213-3	SUBSOIL TILLAGE	C.11
232-11	EROSION CONTROL (STABILIZING CROP SEEDING)	C.11
232-6	EROSION CONTROL (SELECTIVE CLEARING)	C.11
232-9	INDIANA BAT	C.11
232-10	EMERALD ASH BORER	C.11
254-1	INCIDENT MANAGEMENT	C.11
262-5	UTILITIES (POINT 25 PROJECT)	C.11
281-1	SECTION 404 PERMIT AND CONDITIONS	C.11

POLLUTION PREVENTION PLAN

This Base Pollution Prevention Plan (PPP) includes information on Roles and Responsibilities, Project Site Description, Controls, Maintenance Procedures, Inspection Requirements, Non-Storm Water Controls, Potential Sources of Off Right-of-Way Pollution, and Definitions. This plan references other documents rather than repeating the information contained in the documents. A copy of this Base Pollution Prevention Plan, amended as needed per plan revisions or by contract modification, will be readily available for review.

All contractors shall conduct their operations in a manner that controls pollutants, minimizes erosion, and prevents sediments from entering waters of the state and leaving the highway right-of-way. The prime contractor shall be responsible for compliance and

implementation of the PPP for their entire contract. This responsibility shall be further shared with subcontractors whose work is a source of potential pollution as defined in this PPP.

I. ROLES AND RESPONSIBILITES
- A. Designer:
  1. Prepares Base PPP included in the project plan.
  2. Prepares Notice of Intent (NOI) submitted to Iowa DNR.
  3. Signature authority on the Base PPP and NOI.
- B. Contractor/Subcontractor:
  1. Affected contractors/subcontractors are co-permittees with the IDOT and will sign a certification statement adhering to the requirements of the NPDES permit and this PPP plan. All co-permittees are legally required under the Clean Water Act and the Iowa Administrative Code to ensure compliance with the terms and conditions of this PPP.
  2. Submit a detailed schedule according to Article 2602 of the Specifications and any additional plan notes.
  3. Install and maintain appropriate controls.
  4. Supervise and implement good housekeeping practices.
  5. Conduct joint required inspections of the site with inspection staff.
  6. Signature authority on Co-Permittee Certification Statements and storm water inspection reports.
- C. RCE/Inspector:
  1. Update PPP whenever there is a change in design, construction, operation or maintenance, which has a significant effect on the discharge of pollutants from the project.
  2. Maintain an up-to-date list that identifies contractors and subcontractors as co-permittees.
  3. Make these plans available to the DNR upon their request.
  4. Conduct joint required inspections of the site with the contractor/subcontractor.
  5. Complete an inspection report after each inspection.
  6. Signature authority on storm water inspection reports and Notice of Discontinuation (NOD).

II. PROJECT SITE DESCRIPTION
- A. This Pollution Prevention Plan (PPP) is for the construction of the IA 100 Phase I construction packages.
- B. This PPP covers approximately 192 acres with an estimated 147 acres being disturbed. The portion of the PPP covered by this contract has 39 acres disturbed.
- C. The PPP is located in an area of 2 soil associations - (1) Dinsdale - Klinger and (2) Kenyon - Clyde - Floyd The estimated average SCS runoff curve number for this PPP after completion will be 80.
- D. Storm Water Site Map - Multiple sources of information comprise the base storm water site map including:
  1. Drainage patterns – Plan and Profile sheets and Situation plans.
  2. Proposed Slopes – Cross Sections.
  3. Areas of Soil Disturbance – construction limits shown on Plan and Profile sheets.
  4. Location of Structural Controls – Tabulations on C sheets.
  5. Locations of Non-structural Controls – Tabulations on C sheets.
  6. Locations of Stabilization Practices – generally within construction limits shown on Plan and Profile sheets.
  7. Surface Waters (including wetlands) – Plan and Profile sheets.
  8. Locations where storm water is discharged – Plan and Profile sheets.
- E. The base site map is amended by contract modifications and progress payments of completed erosion control work.
- F. Runoff from this work will flow into Ushers Ferry Creek.

III. CONTROLS
- A. The contractor’s work plan and sequence of operations specified in Article 2602.03 for accomplishment of storm water controls should clearly describe the intended sequence of major activities and for each activity define the control measure and the timing during the construction process that the measure will be implemented.
- B. Preserve vegetation in areas not needed for construction.
- C. Section 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water monitoring inspections. If the work involved is not applicable to any contract items, the work will be paid for according to Article 1109.03 paragraph B.
  1. EROSION AND SEDIMENT CONTROLS
     - a. Stabilization Practices
       1) Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized.
       2) Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased.
       3) Temporary stabilizing seeding shall be completed as the disturbed areas are constructed. If construction activity is not planned to occur in a disturbed area for at least 21 days, the area shall be stabilized by temporary seeding or mulching within 14 days. Other stabilizing methods shall be used outside the seeding time period.
       4) Stabilization measures to be used for this project are located in the Estimated Project Quantities (100-1A) and Estimate Reference Information (100-4A) located on the C sheets of the plan. Additional items may be found in the Inspector’s Daily Reports (IDR) or Contract Modifications.
     - b. Structural Practices
       1) Structural practices will be implemented to divert flows from exposed soils and detain or otherwise limit runoff and the discharge of pollutants from exposed areas of the site.
       2) Structural items to be used for this project are located in the Estimated Project Quantities (100-1A) and Estimate Reference Information (100-4A) located on the C sheets of the plan, as well as all other item specific Tabulations. Typical drawings detailing construction of the devices to be used on this project can be found on the B sheets of the plan or are referenced in the Standard Road Plans Tabulation.
     - c. Storm Water Management
       1) Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.
  2. OTHER CONTROLS
     - a. Contractor disposal of unused construction materials and construction material wastes shall comply with applicable state and local waste disposal, sanitary sewer, or septic system regulations. In the event of a conflict with other governmental laws, rules and regulations, the more restrictive laws, rules or regulations shall apply.
       1) Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.
       2) Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.
       3) Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.
       4) Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.
       5) Spill Prevention and Control - Implement procedures to contain and clean-up spills and prevent material discharges to the storm drain system and waters of the state.
       6) Concrete Residuals and Washout Wastes - Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located.
       7) Vehicle and Equipment Cleaning - Employ washing practices that prevent contamination of surface and ground water from wash water.
       8) Vehicle and Equipment Fueling and Maintenance - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onside fuels and proper disposal of used engine oil or other fluids on site.
       9) Litter Management - Ensure employees properly dispose of litter.
  3. APPROVED STATE OR LOCAL PLANS
     During the course of this construction, it is possible that situations will arise where unknown materials will be encountered. When such situations are encountered, they will be handled according to all federal, state, and local regulations in effect at the time.

IV. MAINTENANCE PROCEDURES
The contractor is required to maintain all temporary erosion and sediment control measures in proper working order, including cleaning, repairing, or replacing them throughout the contract period. This shall begin when the features have lost 50% of their capacity.

V. INSPECTION REQUIREMENTS
- A. Inspections shall be made jointly by the contractor and the contracting authority at least once every seven calendar days. Storm water monitoring inspections will include:
  1. Date of the inspection.
  2. Summary of the scope of the inspection.
  3. Name and qualifications of the personnel making the inspection.
  4. Rainfall amount.
  5. Review erosion and sediment control measures within disturbed areas for the effectiveness in preventing impacts to receiving waters.
  6. Major observations related to the implementation of the PPP.
  7. Identify corrective actions required to maintain or modify erosion and sediment control measures.
- B. Include storm water monitoring inspection reports in the Amended PPP. Incorporate any additional erosion and sediment control measures determined as a result of the inspection. Immediately begin corrective actions on all deficiencies found and complete all actions within 3 calendar days of the inspection.

VI. NON-STORM WATER DISCHARGES
This includes subsurface drains (i.e. longitudinal and standard subdrains) and slope drains. The velocity of the discharge from these features may be controlled by the use of patio blocks, Class A stone, erosion stone or other appropriate materials.

VII. POTENTIAL SOURCES OF OFF RIGHT-OF-WAY (ROW) POLLUTION
Silts, sediment, and other forms of pollution may be transported onto highway right-of-way (ROW) as a result of a storm event. Potential sources of pollution located outside highway ROW are beyond the control of this PPP. Pollution within highway ROW will be conveyed and controlled per this PPP.

VIII. DEFINITIONS
- A. Base PPP - Initial Pollution Prevention Plan.
- B. Amended PPP - May include Plan Revisions or Contract Modifications for new items and fieldbook entries made by the inspector.
- C. IDR - Inspector’s Daily Report – this contains the inspector’s daily diary and item postings.
- D. Controls - Methods, practices, or measures to minimize or prevent erosion, control sedimentation, control storm water, or minimize contaminants from other types of waste or materials.
- E. Signature Authority - Representative from Designer, Contractor/Subcontractor, or RCE/Inspector authorized to sign various storm water documents.

213-3
Modified

SUBSOIL TILLAGE

All stockpile areas, haul roads, and areas used for equipment on this project require subsoil tillage to an average depth of 16 to 20 inches prior to placement of topsoil and/or stabilizing crop seeding. Complete this tillage at 3 foot maximum centers and at right angles to the finished slope.

Use tillage equipment equipped with an arrowhead type shoe that will provide lateral displacement and limit the movement of the subsoil to the surface. Obtain the Engineer's approval for the equipment. This work is incidental to other work on the project.

Following the subsoil tillage, the area is to remain in a "loosened" condition. Additional compaction or the operation of heavy equipment, other than required for topsoil placement and shaping, will not be allowed on areas which have received subsoil tillage.

232-6
10-18-11

EROSION CONTROL (SELECTIVE CLEARING)

Selective clearing will be required on this project. Do not remove any trees outside of the construction limits without the Engineer's approval.

232-10
Modified

EMERALD ASH BORER

Dispose of all wood material generated as a result of clearing and/or grubbing according to the Iowa Department of Agriculture and Land Stewardship's Emerald Ash Borer (EAB) Quarantine Order. For more information refer to http://www.iowatreepests.com/eab regulations.html.

232-9
10-18-11

INDIANA BAT

Cut down all trees included in Clearing and Grubbing after September 15 and before April 15. These trees may be inhabited by the Indiana Bat (Myotis sodalist), a State and Federal listed endangered species. Removing a tree between April 15 and September 15 being used by an Indiana Bat constitutes a "taking" of a protected species, which is punishable by law.

254-1
10-02-01

INCIDENT MANAGEMENT

An incident management plan, provided by the District Office, will be discussed at the pre-construction conference.

262-5
10-18-05

UTILITIES (POINT 25 PROJECT)

This is a POINT 25 project and is subject to the provisions of IAC 761-115.25.

281-1
10-18-11

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers Permit No. CEMVER-0D-P-2013-13. A copy of this permit is available from the Iowa DOT Office of Contracts upon request. The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

NEW

ROW

Locations identified as Proposed ROW delineates the limits of the ROW to be purchased by the State. Locations identified as Future ROW delineates the ultimate ROW for the project. The contractor shall not disturb areas beyond the Future ROW limit or beyond construction limits specified in the contract documents.

100-16
10-19-10

TABULATION OF INTERCEPTING DITCHES

Location Station to Station		Side	Length LF	Remarks
Edgewood Ramp A				
41507+75.00	41509+75.00	LT	208.4	
Edgewood Ramp C				
43584+75.09	43587+50.00	LT	276.0	

100-18
04-20-10

TABULATION OF SILT FENCES FOR DITCH CHECKS

Refer to EC-201

Location Station	Side	Length LF	Remarks
1127+25.00	LT	17.2	

100-17
04-20-10

TABULATION OF SILT FENCES

Refer to EC-201

Location Begin Station	End Station	Side	Length LF	Remarks
IA 100				
1087+05.00		LT	62.8	Inlet Protection
1090+27.70		LT	62.8	Inlet Protection
1094+28.00		LT	62.8	Inlet Protection
1097+35.00		LT	62.8	Inlet Protection
1101+86.00		LT	62.8	Inlet Protection
1104+00.00		LT	62.8	Inlet Protection
1107+00.00		LT	62.8	Inlet Protection
1111+57.00		LT	62.8	Inlet Protection
1112+50.00		LT	62.8	Inlet Protection
1113+75.00		LT	62.8	Inlet Protection
1115+00.00		LT	62.8	Inlet Protection
1116+50.00		LT	62.8	Inlet Protection
1117+50.00		LT	62.8	Inlet Protection
1118+75.00		LT	62.8	Inlet Protection
1120+00.00		LT	62.8	Inlet Protection
1124+00.00		LT	62.8	Inlet Protection
1127+00.00		LT	62.8	Inlet Protection
1087+75.00		M	62.8	Inlet Protection
1091+50.00		M	62.8	Inlet Protection
1095+00.00		M	62.8	Inlet Protection
1099+00.00		M	62.8	Inlet Protection
1101+25.00		M	62.8	Inlet Protection
1103+00.00		M	62.8	Inlet Protection
1107+00.00		M	62.8	Inlet Protection
1110+50.00		M	62.8	Inlet Protection
1113+75.00		M	62.8	Inlet Protection
1116+50.00		M	62.8	Inlet Protection
1118+75.00		M	62.8	Inlet Protection
1124+00.00		M	62.8	Inlet Protection
1127+00.00		M	62.8	Inlet Protection
1086+15.00		RT	62.8	Inlet Protection
1087+75.00		RT	62.8	Inlet Protection
1090+97.00		RT	62.8	Inlet Protection
1101+56.50		RT	62.8	Inlet Protection
1113+75.28		RT	62.8	Inlet Protection
1115+25.00		RT	62.8	Inlet Protection
1116+50.00		RT	62.8	Inlet Protection
1127+00.00		RT	62.8	Inlet Protection
Edgewood				
7502+25.00	7504+24.63	LT	220.0	Start, J-Hook
7504+24.63	7505+23.83	LT	120.0	J-Hook
7505+23.83	7506+35.00	LT	131.2	End, J-Hook
7507+95.00	7508+25.00	LT	50.1	Start, J-Hook, End
7511+25.00	7513+19.58	LT	220.0	Start, J-Hook
7513+19.58	7515+11.73	LT	220.0	J-Hook
7515+11.73	7516+09.57	LT	120.0	J-Hook
7516+09.57	7516+66.94	LT	144.0	End, J-Hook
7513+84.71	7514+90.06	RT	126.5	Start, J-Hook, End
7521+25.00	7522+50.00	RT	173.4	Start, 2 - J-Hooks
7522+50.00	7523+75.00	RT	146.0	End, J-Hook
7521+56.25	7523+25.00	LT	209.0	Start, J-Hook, End
7526+25.00	7527+00.00	RT	96.5	Start, J-Hook, End
7531+00.00	7532+50.00	LT	175.3	Start, J-Hook, End
7504+99.93		LT	62.8	Inlet Protection
7506+00.00		LT	62.8	Inlet Protection
7506+50.00		LT	62.8	Inlet Protection
7506+51.00		LT	62.8	Inlet Protection
7507+73.00		LT	62.8	Inlet Protection
7508+31.00		LT	62.8	Inlet Protection
7510+43.00		LT	62.8	Inlet Protection
7510+78.60		LT	62.8	Inlet Protection
7517+51.16		LT	62.8	Inlet Protection
7517+77.80		LT	62.8	Inlet Protection
7520+63.38		LT	62.8	Inlet Protection
7521+53.00		LT	62.8	Inlet Protection
7523+62.93		LT	62.8	Inlet Protection
7527+50.00		LT	62.8	Inlet Protection
7528+75.00		LT	62.8	Inlet Protection
7529+60.50		LT	62.8	Inlet Protection
7530+11.20		LT	62.8	Inlet Protection
7530+62.00		LT	62.8	Inlet Protection
7532+65.00		M	62.8	Inlet Protection
7505+75.00		RT	62.8	Inlet Protection
7506+00.00		RT	62.8	Inlet Protection
7506+00.00		RT	62.8	Inlet Protection
7507+72.85		RT	62.8	Inlet Protection

100-17
04-20-10

TABULATION OF SILT FENCES

Refer to EC-201

Location Begin Station	End Station	Side	Length LF	Remarks
7508+31.00		RT	62.8	Inlet Protection
7508+90.00		RT	62.8	Inlet Protection
7509+50.00		RT	62.8	Inlet Protection
7510+52.95		RT	62.8	Inlet Protection
7514+03.66		RT	62.8	Inlet Protection
7517+77.80		RT	62.8	Inlet Protection
7520+42.13		RT	62.8	Inlet Protection
7520+94.95		RT	62.8	Inlet Protection
7524+13.60		RT	63.8	Inlet Protection
7528+50.00		RT	62.8	Inlet Protection
7529+58.00		RT	62.8	Inlet Protection
7530+10.00		RT	62.8	Inlet Protection
7560+62.00		RT	62.8	Inlet Protection
Edgewood Ramp A				
41501+12.24		RT	62.8	Inlet Protection
41501+92.33		RT	62.8	Inlet Protection
41502+75.00		RT	62.8	Inlet Protection
41506+75.00		RT	62.8	Inlet Protection
41509+42.40		RT	62.8	Inlet Protection
41509+75.00		RT	62.8	Inlet Protection
41503+22.80		LT	62.8	Inlet Protection
41505+25.00		LT	62.8	Inlet Protection
41505+25.00		LT	62.8	Inlet Protection
41506+75.00		LT	62.8	Inlet Protection
41508+77.00		LT	62.8	Inlet Protection
41509+69.00		LT	62.8	Inlet Protection
41510+02.20		LT	62.8	Inlet Protection
41510+33.60		LT	62.8	Inlet Protection
Edgewood Ramp A RT				
41601+22.00		LT	62.8	Inlet Protection
gewood Ramp B				
42590+50.00		LT	62.8	Inlet Protection
42596+00.00		LT	62.8	Inlet Protection
42598+04.20		LT	62.8	Inlet Protection
42598+99.40		LT	62.8	Inlet Protection
42586+12.00		RT	62.8	Inlet Protection
42587+00.00		RT	62.8	Inlet Protection
42589+75.00		RT	62.8	Inlet Protection
42590+50.00		RT	62.8	Inlet Protection
42592+50.00		RT	62.8	Inlet Protection
42593+75.00		RT	62.8	Inlet Protection
42596+00.00		RT	62.8	Inlet Protection
42597+85.00		RT	62.8	Inlet Protection
Edgewood Ramp B RT				
42698+50.00		RT	62.8	Inlet Protection
Edgewood Ramp C				
43586+93.00		LT	62.8	Inlet Protection
43588+25.00		LT	62.8	Inlet Protection
43589+55.00		LT	62.8	Inlet Protection
43590+00.00		LT	62.8	Inlet Protection
43590+75.00		LT	62.8	Inlet Protection
43591+58.00		LT	62.8	Inlet Protection
43592+50.00		LT	62.8	Inlet Protection
43595+00.00		LT	62.8	Inlet Protection
43597+00.00		LT	62.8	Inlet Protection
43597+50.00		RT	62.8	Inlet Protection
43598+35.00		RT	62.8	Inlet Protection
43599+37.10		RT	62.8	Inlet Protection
Edgewood Ramp C RT				
43698+38.50		LT	62.8	Inlet Protection
Edgewood Ramp D				
44501+15.00		LT	62.8	Inlet Protection
44504+00.09		RT	62.8	Inlet Protection
44506+25.00		RT	62.8	Inlet Protection
44508+25.00		RT	62.8	Inlet Protection
44509+50.00		RT	62.8	Inlet Protection
44511+39.00		RT	62.8	Inlet Protection
44511+80.00		RT	62.8	Inlet Protection
44512+20.00		RT	62.8	Inlet Protection

100-23
10-19-10

* Design shown for mandatory locations is the minimum allowed.

ROCK DITCH CHECKS/DITCHES/FLUMES/SPLASH BASINS/SLOPE PROTECTION

Refer to Typicals 4401, 4402, 4403, 4404, and 4405

Location				Type								Material			
Road Identification	Station	Side	Mandatory* Location (yes or no)	Rock Ditch Check	Rock Ditch	Rock Flume	Rock Splash Basin	Rock Slope Protection		L	W	Erosion Stone	Class E Revetment	Eng. Fabric	Remarks
		Lt./Rt.								FT	FT	TON	TON	SY	
IA 100	1107+00.00	Rt.	Yes				x			8.0	15.0	13.9		16.1	
Edgewood Ramp D	44502+00.00	Lt.	Yes				x			8.0	15.0	13.9		16.1	

104-3
10-16-12

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.
* Not a bid item
(1) UNCL = Unclassified Pipe CMP = Corrugated Metal Pipe RCP = Reinforced Concrete Pipe LCP = Arch or Elliptical Low Clearance Pipe SARC = Steel Arch Pipe

Drainage Area	Location	Type	Size	Kind Of Pipe (1)	Length New Const.	Bedding Class	Design Cover (H)	Camber* (RF-30B)	Apron No.		Apron Guard* (RF-26)	Elbow* (RF-13)	Diaphragm* (RF-7)	Tee Section* (RF-21)	"D" Section* (RF-13)	Reducer*	Adaptors* (RF-2)		Connected Pipe Joint* (RF-14)	4" Perforated Subdrain*	Flow Line Elevations				Dimensions Lin. Ft. Total		Dimensions Lin. Ft. Extensions		Skew Ahead Degrees		Dike				Class 20	Flowable Mortar	Floodable* Backfill	Porous* Backfill	Flooded Backfill	Remarks
																															Rt. / Lt.	Location Station	Top Elevation	Type			(A)	(B)	(A+B)	
ACRE			IN		LF		FT	FT	IN	OUT	No.	No.	No.	No.	No.	No.	Type	No.	Type	FT	Lt.	Rt.	Other	Other	Lt.	Rt.	Lt.	Rt.	Lt.	Rt.					CY	CY	CY	CY	CY	
0.4	44502+00.00	1501	24	RCP	70	B	4.5		1		1						C-3	1	3			848.21	844.34		42.0	34.1									239.4		96.6	5.6	102.2	(1)
				CMP	70					1		2									826.93		843.63	828.22	71.0															
82.8	7529+82.05	1301	60	RCP	32	B	6.9			1							C-2	1	3		820.52		820.80				40.0		14						218.0					(2)
41.7	175+08.91	1101	36	CMP	198		22.9														825.86	827.55			102.0	96.0									29.9		143.9	15.3	159.2	Temp Pipe under Detour 9

Notes:
(1) A=70', B=50', C=4', E=16', 1-15 degree CMP elbow, 1-14 degree CMP elbow, 1 RF-2 Type C-3 Adapter
(2) RF-14 Type 3 Pipe Connectors; RF-2 Type C-2 Adapter

100-27
10-20-09

PAVEMENT SMOOTHNESS + PCC TEXTURE

Road Identification	Begin Station	End Station	Proposed Posted Speed			Remarks
			35 or less	40 - 45	over 45	
IA 100	1108+00.00	1128+50.00			x	
Edgewood Road	7501+50.00	7533+20.00		x		
Edgewood Ramp A	41500+69.91	41511+50.00			x	
Edgewood Ramp A Right	41600+33.60	41602+60.00	x			Longitudinal tining still required
Edgewood Ramp B	42597+88.76	42599+33.21			x	
Edgewood Ramp B Right	42697+95.00	42700+17.98	x			Longitudinal tining still required
Edgewood Ramp C	43596+97.30	43599+58.45			x	
Edgewood Ramp C Right	43697+25.00	43699+75.78	x			Longitudinal tining still required
Edgewood Ramp D	44500+01.79	44513+75.00			x	
Edgewood Ramp D Right	44599+92.45	44603+75.00	x			Longitudinal tining still required

112-6
04-16-13

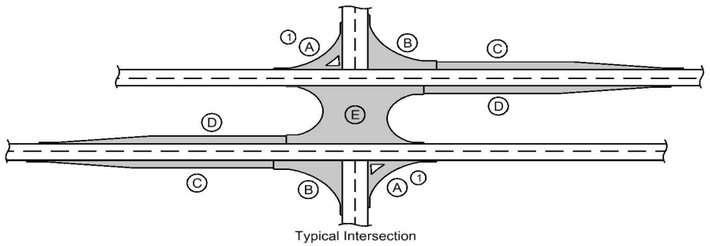
BRIDGE APPROACH SECTION

Refer to the RK-Series.

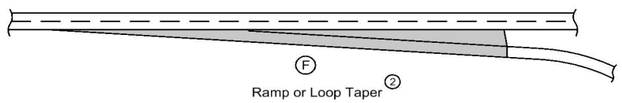
* Not a bid item

Location				Approach Pavement					Fixed or Movable Abutment	Subdrain							Remarks
Bridge Station	End	Skew Ahead Degrees		(T) Thickness	Pay Length	Non-Reinf. Pavement Area	Single-Reinf. Pavement Area	Double-Reinf. Pavement Area		* Perforated Subdrain 4"	* Subdrain Outlet		* Porous Backfill	Class 'A'* Crushed Stone Backfill	* Modified Subbase	* Polymer Grid	
		LEFT	RIGHT	Inches	FT	SY	SY	SY	F or M	LF	STA	Side	CY	CY	TON	SY	
7518+88.74	A		53.5	12.0	87.8	203.4	81.5	150.5	M	56.0	42598+73.34	RT	2.9	0.4	197.100	374.5	Ramp B Approach
7518+88.74	A	2.8		12.0	70.0	280.0	187.2	179.3	M	124.0	7517+64.46	LT	7.7	0.7	311.400	657.5	Edgewood Approach
7518+88.74	T		36.4	12.0	77.0	180.7	93.9	81.0	M	56.0	44500+60.90	RT	2.9	0.4	151.100	301.0	Ramp D Approach
7518+88.74	T		47.7	12.0	82.7	179.3	81.5	135.6	M	56.0	43598+98.74	LT	2.9	0.4	185.100	359.1	Ramp C Approach
7518+88.74	T	2.8		12.0	70.0	280.0	186.7	260.4	M	120.0	7520+13.30	RT	7.7	0.6	354.600	730.0	Edgewood Approach
7518+88.74	A		50.4	12.0	86.0	156.0	81.5	142.2	M	56.0	41501+29.94	LT	2.9	0.4	188.900	369.6	Ramp A Approach

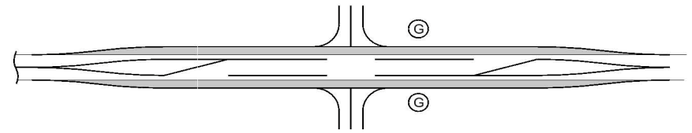
PCC PAVEMENT



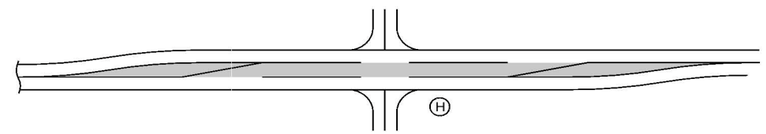
Typical Intersection



Ramp or Loop Taper 2



Channelized Intersection
Widen Existing Roadway



Channelized Intersection
Reconstructed Roadway

1. Does not include 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.

Location				Mainline			Area 3								Total Area By Pavement Thickness		Special Backfill	Modified Subbase	Granular Subbase	Remarks
Road Identification	Direction of Travel	Station to Station		Width	Length	Area	A 2	B	C	D	E	F	G	H	SY					
				FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	10 IN	10½ IN	TONS	CY	SY	
Edgewood	NB	7501+50.00	7517+54.46	24.0	1604.5	4302.6			520.2	2040.7	436.4	697.2			7997				11653	
Edgewood	SB	7501+50.00	7517+54.46	24-36	1604.5	5507.6						774.5			6282				7963	
Edgewood	NB	7520+23.30	7533+20.00	24-36	1296.7	4881.6				17.5					4899				7893	
Edgewood	SB	7520+23.30	7533+20.00	24-48	1296.7	5425.2				590.1	245.1	234.1			6494				7160	
North River Blvd	Both	7207+31.00	7208+71.77	26.0	140.8	1102.8	71.1	92.3							1266				1221	
S. Hy-Vee Access	Both	8525+77.01	8526+48.11	24.0	71.1	455.6	121.6	122.7							700				762	
IA 100	WB	1108+00.00	1128+50.00	26.0	2050.0	5899.3						2082.1			7981		4142.8		12212	
IA 100	EB	1108+00.00	1128+50.00	26.0	2050.0	5945.2						1800.2			7745		4020.2		11996	
Edgewood Ramp A		41501+39.26	41511+00.00	16-24	960.7	2510.7			1304.1						3815			1041.0		
Edgewood Ramp A RT		41600+33.60	41602+60.00	16.0	226.4	385.0	416.9								802			145.0		
Edgewood Ramp B		42597+88.76	42598+65.43	24.0	76.7	193.0									193			117.0		
Edgewood Ramp B RT		42697+85.64	42700+17.98	16.0	232.3	432.0									432			154.0		
Edgewood Ramp C		43596+97.30	43598+91.00	24.0	193.7	494.5									494			240.0		
Edgewood Ramp C RT		43697+25.00	43699+75.78	16.0	250.8	515.3									515			169.0		
Edgewood Ramp D		44500+70.43	44513+75.00	16-24	1304.6	3227.9						1251.0			4479			1215.0		
Edgewood Ramp D RT		44599+92.45	44603+75.00	16.0	382.5	701.3									701			259.0		

EXISTING PAVEMENT

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks
	County	Route	Dir. of Travel	Begin Milepost	End Milepost				Type	Depth	Type	Depth	Type	Depth	Type	Depth	Source	Type	Durability Class	Type	
										IN		IN		IN		IN					
	Linn	IA 100	EB	0	1.35	2008		NHSN-100-1(57)--2R-57	HMA	3	HMA	1.5									
						1984		F-I-100-1(6)--2X-57	PCC	10							Crawford	C. LST.			
	Linn	Edgewood							HMA	3											
									PCC	10											
	Linn	WB Ramp							PCC	8			SBF	6							
	Linn	EB Ramp							PCC	8			SBF	6							
	Linn	Hy-Vee Access							PCC	6			GSB	8							
	Linn	North River							PCC	8											

108-18
10-18-11

CONCRETE BARRIER

See BA-100, BA-101, BA-102, and BA-103

No.	Begin Station	End Station	Side	Barrier Type: Standard Road Plan	Barrier Type: Length (LF)	Transition Section: Detail Sheet	Transition Section: (L)	Footing: Length (LF)	Remarks	Expansion Joints: Station	Expansion Joints: Side	Expansion Joints: Remarks
1	1108+00.00	1128+50.00	MED	BA-100	2050.0							
2	1128+50.00	1136+60.00	MED		810.0				Remove and Replace Existing Barrier			

108-18B
10-16-12

CONCRETE BARRIER AT SIDE LOCATIONS

Refer to BA-102, BA-103, BA-104, BA-105, BA-106, BA-107, and BA-150.

(1) Lane(s) to which the installation is adjacent.
(2) Refer to the Shoulders tabulation (112-9) for quantities.
* Bid Item

Location: No.	Location: (1) Direction of Traffic	Location: Station to Station		Location: Side	(L2) Offset (FT)	Side Barrier: Barrier Type (BA-102, BA-103, or BA-104)	Side Barrier: (L) Length of Barrier* (LF)	Side Barrier: BA-105 Transition Section* (No.)	Side Barrier: BA-107 End Section* (No.)	Side Barrier: Reinforced Paved (2) Shoulder (Required?) (Yes/No)	Remarks	Expansion Joints: Station	Expansion Joints: Side	Expansion Joints: Remarks
1	WB	41500+70.63	41509+50.00	RT	4.0	BA-102	855.7		1	Yes				
2	EB	42597+88.76	42599+30.94	LT	4.0	BA-102	128.9			Yes				
3	WB	43597+25.00	43599+56.76	RT	4.0	BA-102	209.2			Yes				
4	WB	43697+25.00	43698+75.00	LT	6.0	BA-102	176.8			Yes				
5	EB	44500+12.13	44500+29.40	LT	4.0		19.1			Yes	Aesthetic Barrier			
6	EB	44500+29.40	44501+25.00	LT	4.0	BA-102	87.2			Yes				
7	EB	44602+00.00	44603+75.00	RT	6.0	BA-102	174.4			Yes	1 BA-108 Tapered End Section			
8	EB	44503+75.00	44509+75.00	RT	6.0	BA-102	600.9			Yes	1 BA-108 Tapered End Section			

108-30
04-16-13

CRASH CUSHIONS

* Bid Item
(1) Lane(s) to which the installation is adjacent.
(2) Complete this section when using the Temporary Crash Cushion bid item and Earthwork is needed for Sand Barrel placement. Refer to BA-500

No.	(1) Direction of Traffic	Location Station	Side	Obstacle Width (FT)	Crash Cushion (Select One)*: Temporary	Crash Cushion (Select One)*: Temporary Redirective	Crash Cushion (Select One)*: Temporary Severe Use	Crash Cushion (Select One)*: Permanent	Crash Cushion (Select One)*: Permanent Severe Use	Sand Barrel Details (2): (V) Length (FT)	Sand Barrel Details (2): (W) Length (FT)	Sand Barrel Details (2): (X) Length (FT)	Sand Barrel Details (2): (Y) Length (FT)	Sand Barrel Details (2): (Z) Length (FT)	Earthwork*: Excavation Class 10 (CY)	Earthwork*: Embankment in Place (CY)	Spare Parts Kit (Select One)*: Permanent (EACH)	Spare Parts Kit (Select One)*: Permanent Severe Use (EACH)	Obstacle Description	Remarks
1	WB	41509+50.00	RT	1.58					1									1	End of Ramp A Side Barrier	
2	NB	171+12.47	RT	2.00			1												End of Detour 9 TBR	
3	SB	178+27.76	MED	2.00			1												End of Detour 9 TBR	
4	WB	7521+53.41	MED	2.00			1												End of Existing Exit Ramp TBR	
5	EB	1108+83.72	RT	2.00			1												End of Existing IA 100 TBR	
6	EB	7207+17.49	LT	2.00			1												End of Existing North River TBR	
7	NB	7501+00.31	LT	2.00			1												End of Edgewood TBR	
8	WB	7209+16.74	RT	2.00			1												End of North River TBR	
9	NB	7520+57.29	RT	2.00			1												End of Edgewood TBR	
10	SB	7533+69.77	LT	2.00			1												End of Edgewood TBR	
11	SB	7508+61.23	LT	2.00			1												End of Edgewood TBR	
12	NB	N-3476834.95	RT	2.00			1												End of Edgewood TBR	
		E-5409704.56																		
13	WB	41501+21.39	MED	2.00			1												End of Existing Exit Ramp TBR	
14	WB	7521+85.02	RT	2.00			1												End of Edgewood TBR	
15	WB	7525+61.45	RT	2.00			1												End of S. Hy-Vee TBR	
16	EB	1108+83.72	RT	2.00			1												End of Existing IA 100 TBR	
17	WB	7525+17.84	RT	2.00			1												End of S. Hy-Vee TBR	
18	NB	7525+72.13	RT	2.00			1												End of S. Hy-Vee TBR	
19	NB	7518+54.65	RT	2.00			1												End of Edgewood TBR	
20	EB	44501+36.06	MED	2.00			1												End of Edgewood Ramp D TBR	
21	WB	1130+79.58	RT	2.00			1												End of IA 100 TBR	

108-13A
08-01-08

SAFETY CLOSURES

Refer to Section 2518 of the Standard Specifications

Station	Closure Type: Road Qty.	Closure Type: Hazard Qty.	Remarks
7518+00.00		1	Edgewood Bridge
7519+75.00		1	Edgewood Bridge
41500+75.00		1	Edgewood Bridge Ramp A - Stg 1D
42599+25.00		1	Edgewood Bridge Ramp B - Stg 1D
43599+50.00		1	Edgewood Bridge Ramp C - Stg 1D
44500+50.00		1	Edgewood Bridge Ramp D - Stg 1D
44501+22.78	1		Existing Entrance Ramp
43699+76.37	1		Edgewood Ramp C RT
1113+68.65	1		IA 100 WB
7515+50.00	1		Edgewood Road - Stage 1C
7516+30.00	1		Existing IA 100 On Ramp
7521+85.00	1		Edgewood Road Ramp C Rt.
1113+75.00	1		IA 100 EB - Stage 4
1111+50.00	1		IA 100 WB - Stage 4
1129+00.00	1		IA 100 WB - Stage 5

100-28
10-19-10

LONGITUDINAL GROOVING

Location	Total (SY)	Remarks
7518+88.74	2513.0	Edgewood Bridge Deck

PAVEMENT MARKING SYMBOLS AND LEGENDS

Refer to PM-111

Road Identification	Location Station	Location Side	STAW	RTAW	LTAW	CSRW	CSLW	CSTW	CRLW	FERW	LLRW	RLRW	RRCW	BLSW	WCSW	WPSB	SCLW	XNGW	STPW	AHDW	ONLW	BIKW	LANW	XITW	Remarks
Edgewood	7507+50.00	LT										1													
Edgewood	7508+25.00	RT			2																				
Edgewood	7508+50.00	LT										1													
Edgewood	7508+60.00	RT																			2				
Edgewood	7509+00.00	RT			2																				
Edgewood	7510+50.00	RT		1																					
Edgewood	7511+25.00	RT		1																					
Edgewood	7516+25.00	RT			2																				
Edgewood	7516+65.00	RT																			2				
Edgewood	7517+00.00	RT			2																				
Edgewood	7520+75.00	LT			2																				
Edgewood	7521+10.00	LT																			2				
Edgewood	7521+50.00	LT			2																				
Edgewood	7523+25.00	LT		1																					
Edgewood	7524+00.00	LT		1																					
Edgewood	7526+00.00	LT			1																				
Edgewood	7526+35.00	LT																			1				
Edgewood	7526+75.00	LT			1																				
Edgewood	7507+45.00	RT			1																				Stage 1A; Temp to be Removed
Edgewood	7509+25.00	RT			1																				Stage 1A; Temp to be Removed
Edgewood	7516+60.00	LT			1																				Stage 1A; Temp to be Removed
Edgewood	7519+20.00	LT			1																				Stage 1A; Temp to be Removed
Edgewood	7525+75.00	LT			1																				Stage 1A; Temp to be Removed
Edgewood	7527+65.00	LT			1																				Stage 1A; Temp to be Removed
Edgewood	7512+25.00	RT		1																					Stage 1C; Temp to be Removed
Edgewood	7513+35.00	RT		1																					Stage 1C; Temp to be Removed
DET 9	178+35.00	RT				1																			Stage 1C
DET 9	179+90.00	LT	1																						Stage 1C
DET 9	179+90.00	LT			1																				Stage 1C
Edge Ramp A	41501+30.00	LT			1																				Stage 1C; Temp to be Removed
Edge Ramp A	41501+35.00	LT		1																					Stage 1C; Temp to be Removed
Edgewood	7524+30.00	LT	1																						Stage 1C
Edgewood	7524+30.00	LT			1																				Stage 1C; Temp to be Removed
Edgewood	7499+50.00	RT			1																				Stage 1D; Temp to be Removed
Edgewood	7507+45.00	RT			1																				Stage 1D; Temp to be Removed
Edgewood	7509+25.00	RT			1																				Stage 1D; Temp to be Removed
Edgewood	7527+60.00	LT			1																				Stage 1D
Edgewood	7535+90.00	RT			1																				Stage 1D; Temp to be Removed
Edgewood	7501+15.00	RT				1																			Stage 2A; Temp to be Removed
Edgewood	7508+75.00	RT	1		1																				Stage 2A; Temp to be Removed
North River	7209+45.00	RT							1																Stage 2A
Edgewood	7510+55.00	RT				1																			Stage 2A
Edgewood	7520+50.00	RT				1																			Stage 2A
Edge Ramp A	41501+40.00	LT		1	1																				Stage 2A; Temp to be Removed
Edgewood	7522+25.00	LT	1																						Stage 2A; Temp to be Removed
Edgewood	7522+25.00	LT			1																				Stage 2A
Edgewood	7525+80.00	RT	1		1																				Stage 2A
Edgewood	7499+50.00	RT	1																						Stage 2A; Temp to be Removed
Edgewood	7509+30.00	RT	1		1																				Stage 2B; Temp to be Removed
North River	7209+50.00	LT							1																Stage 2B; Temp to be Removed
Edgewood	7508+70.00	RT	1		1																				Stage 2C
North River	7209+60.00	RT		1																					Stage 2C; Temp to be Removed
North River	7209+65.00	RT			1																				Stage 2C; Temp to be Removed
Edgewood	7499+50.00	RT	1		1																				Stage 3A; Temp to be Removed
Edgewood	7520+45.00	RT	1		1																				Stage 3A; Temp to be Removed
Edge Ramp A	41501+20.00	LT		1	1																				Stage 3A
Edgewood	7522+30.00	LT	1		1																				Stage 3A; Temp to be Removed
Edgewood	7524+45.00	LT				1																			Stage 3A; Temp to be Removed
Hy-vee	8525+35.00	LT							1																Stage 3A; Temp to be Removed
Edgewood	7526+45.00	LT	1		1																				Stage 3A; Temp to be Removed
Hy-vee	8525+35.00	RT							1																Stage 3B; Temp to be Removed
Edgewood	7499+50.00	RT			1																				Stage 4; Temp to be Removed
Edgewood	7509+45.00	RT			1																				Stage 4; Temp to be Removed
Edgewood	7515+90.00	RT	1																						Stage 4; Temp to be Removed
Edge Ramp D	44501+30.00	RT			1																				Stage 4
Edgewood	7516+80.00	LT	1		1																				Stage 4; Temp to be Removed

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.

DLY4: Dotted Line (Yellow) @ 0.33
ELY4: Edge Line Left (Yellow) @ 1.00
SLW2: Stop Line (White) @ 6.00
DLW4: Dotted Line (White) @ 0.33
SLW4: Solid Lane Line (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 1.00
NPY4: No Passing Zone Line (Yellow) @ 1.25
CHW8: Channelizing Line (White) @ 2.00
RLW4: Ramp Edge Line Right (White) @ 1.00
BLW4: Broken Lane Line (White) @ 0.25
SPY6: Sloped Curb 6" (Yellow) @ 3.40
LDW8: Lane Drop (White) @ 0.50
ELW4: Edge Line Right (White) @ 1.00
MNY4: Median Nose (Yellow) @ 1.00
SPW6: Sloped Curb 6" (White) @ 3.40

Location								Length by Line Type (Unfactored)															
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			DLY4	DLW4	NPY4**	BLW4	ELW4	ELY4	SLW4	CHW8	SPY6	MNY4***	SLW2	RLY4	RLW4	LDW8	SPW6	Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
Edgewood			SB	Waterborne/Solvent Paint	X											1.27							
Edgewood			NB	Waterborne/Solvent Paint	X											1.27							
Edgewood			NB	Waterborne/Solvent Paint	X												0.34						
Edgewood	7500+25.54	7500+29.47	NB	Waterborne/Solvent Paint	X												0.64						
Edgewood	7501+50.00	7514+50.00	NB	Waterborne/Solvent Paint			X					12.89											
Edgewood	7501+50.00	7517+30.77	NB	Waterborne/Solvent Paint		X					15.74												
Edgewood	7500+27.97	7509+26.08	NB	Waterborne/Solvent Paint	X											9.01							
Edgewood	7509+26.08	7509+29.07	NB	Waterborne/Solvent Paint	X												0.42						
Edgewood	7506+35.00	7509+26.08	NB	Waterborne/Solvent Paint	X									2.90									
Edgewood	7506+35.00	7509+26.08	NB	Waterborne/Solvent Paint	X									2.91									
Edgewood	7509+26.08	7509+26.08	NB	Waterborne/Solvent Paint		X												0.60					
Edgewood	7507+95.00	7511+83.78	NB	Waterborne/Solvent Paint			X							3.84									
Edgewood	7510+31.13	7510+46.14	NB	Waterborne/Solvent Paint	X												10.60						
Edgewood	7510+46.14	7517+30.77	NB	Waterborne/Solvent Paint	X											6.85							
Edgewood	7517+30.77	7517+33.77	NB	Waterborne/Solvent Paint	X												0.42						
Edgewood	7511+83.78	7513+86.74	NB	Waterborne/Solvent Paint			X								2.00								
Edgewood	7511+83.78	7513+86.27	NB	Waterborne/Solvent Paint			X								2.00								
Edgewood	7513+86.27	7514+50.00	NB	Waterborne/Solvent Paint			X												0.63				
Edgewood	7513+86.74	7517+89.31	NB	Waterborne/Solvent Paint			X					4.01											
Edgewood	7514+35.00	7517+30.77	NB	Waterborne/Solvent Paint	X									2.96									
Edgewood	7514+35.00	7517+30.77	NB	Waterborne/Solvent Paint	X									2.96									
Edgewood	7517+30.77	7517+30.77	NB	Waterborne/Solvent Paint		X												0.48					
Edgewood	7517+30.77	43598+74.45	NB	Permanent Intersection Tape		X					3.43												
Edgewood	7517+30.77	43599+99.54	NB	Permanent Intersection Tape		X					2.30												
Edgewood	7518+01.67	7519+41.34	NB	Waterborne/Solvent Paint			X															1.63	
Edgewood	42598+50.00	7520+68.66	NB	Permanent Intersection Tape		X					3.77												
Edgewood	42599+98.45	7520+68.66	NB	Permanent Intersection Tape		X					2.43												
Edgewood	7519+52.36	7520+99.62	NB	Waterborne/Solvent Paint			X					1.47											
Edgewood	7520+42.16	7520+44.45	NB	Waterborne/Solvent Paint	X												0.28						
Edgewood	7520+44.45	7525+05.98	NB	Waterborne/Solvent Paint	X											4.62							
Edgewood	7525+05.98	7525+08.93	NB	Waterborne/Solvent Paint	X												0.36						
Edgewood	7520+68.66	7524+45.25	NB	Waterborne/Solvent Paint		X					3.77												
Edgewood	7520+99.62	7521+61.31	NB	Waterborne/Solvent Paint			X								0.62								
Edgewood	7521+61.31	7524+45.25	NB	Waterborne/Solvent Paint		X					2.84												
Edgewood	7521+62.60	7524+20.29	NB	Waterborne/Solvent Paint			X					2.58											
Edgewood	7524+45.25	7524+45.25	NB	Waterborne/Solvent Paint		X												0.40					
Edgewood	7525+67.11	7525+73.03	NB	Waterborne/Solvent Paint	X												1.65						
Edgewood	7525+73.03	7535+93.23	NB	Waterborne/Solvent Paint	X											10.23							
Edgewood	7526+26.69	7533+20.00	NB	Waterborne/Solvent Paint		X					6.97												
Edgewood	7526+26.69	7533+20.00	NB	Waterborne/Solvent Paint		X					6.99												
Edgewood	7526+26.69	7533+20.00	NB	Waterborne/Solvent Paint			X					7.01											
Edgewood	7535+93.23	7535+95.73	NB	Waterborne/Solvent Paint	X												0.29						
Edgewood	7501+50.00	7508+87.76	SB	Waterborne/Solvent Paint			X					7.39											
Edgewood	7501+50.00	7508+87.76	SB	Waterborne/Solvent Paint		X					7.38												
Edgewood	7500+29.47	7509+26.08	SB	Waterborne/Solvent Paint	X											8.97							
Edgewood	7508+31.25	7508+87.76	SB	Waterborne/Solvent Paint			X														0.57		
Edgewood	7510+46.15	7510+46.15	SB	Waterborne/Solvent Paint		X												0.42					
Edgewood	7510+72.05	42699+40.00	SB	Waterborne/Solvent Paint			X					6.07											
Edgewood	7510+46.15	7513+64.63	SB	Waterborne/Solvent Paint		X					3.22												
Edgewood	7510+46.15	7517+30.76	SB	Waterborne/Solvent Paint		X					6.88												
Edgewood	7510+46.15	7517+30.77	SB	Waterborne/Solvent Paint	X											6.86							
Edgewood	7513+64.63	7515+67.55	SB	Waterborne/Solvent Paint			X								2.05								
Edgewood	7513+64.63	7515+68.30	SB	Waterborne/Solvent Paint			X								2.05								
Edge B RT	42699+40.00	42700+45.48	SB	Waterborne/Solvent Paint	X										1.15								
Edge B RT	42699+40.00	42700+45.48	SB	Waterborne/Solvent Paint	X										0.82								Chevron Marking
Edgewood	7515+68.30	7518+42.49	SB	Waterborne/Solvent Paint			X					2.74											
Edgewood	7517+30.76	41500+29.99	SB	Permanent Intersection Tape		X					2.38												
Edgewood	7517+30.76	41500+29.99	SB	Permanent Intersection Tape		X					2.28												
Edge Ramp B	42598+50.00	42599+43.87	SB	Waterborne/Solvent Paint	X														0.87				
Edge Ramp B	42598+50.00	42599+98.46	SB	Waterborne/Solvent Paint			X													1.48			
Edge Ramp B	42599+98.46	42599+98.46	SB	Waterborne/Solvent Paint		X												0.30					
Edgewood	42599+43.87	43599+56.00	SB	Waterborne/Solvent Paint			X															1.49	
Edge Ramp C	43598+74.45	43599+56.00	SB	Waterborne/Solvent Paint	X														0.75				
Edge Ramp C	43598+74.45	43599+99.54	SB	Waterborne/Solvent Paint			X													1.25			
Edgewood	44500+15.73	7520+44.66	SB	Permanent Intersection Tape		X					2.64												
Edgewood	44500+15.73	7520+44.66	SB	Permanent Intersection Tape		X					2.57												
Edgewood	7519+51.80	7521+71.40	SB	Waterborne/Solvent Paint			X					2.20											
Edgewood	7520+44.66	7520+44.66	SB	Waterborne/Solvent Paint		X												0.49					
Edgewood	7520+44.66	7524+61.70	SB	Waterborne/Solvent Paint		X					4.17												
Edgewood	7520+44.66	7522+45.00	SB	Waterborne/Solvent Paint	X									2.00									
Edgewood	7520+44.66	7522+45.00	SB	Waterborne/Solvent Paint	X									2.00									
Edgewood	7520+44.66	7525+07.09	SB	Waterborne/Solvent Paint	X											4.66							

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.

DLY4: Dotted Line (Yellow) @ 0.33
ELY4: Edge Line Left (Yellow) @ 1.00
SLW2: Stop Line (White) @ 6.00
DLW4: Dotted Line (White) @ 0.33
SLW4: Solid Lane Line (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 1.00
NPY4: No Passing Zone Line (Yellow) @ 1.25
CHW8: Channelizing Line (White) @ 2.00
RLW4: Ramp Edge Line Right (White) @ 1.00
BLW4: Broken Lane Line (White) @ 0.25
SPY6: Sloped Curb 6" (Yellow) @ 3.40
LDW8: Lane Drop (White) @ 0.50
ELW4: Edge Line Right (White) @ 1.00
MNY4: Median Nose (Yellow) @ 1.00
SPW6: Sloped Curb 6" (White) @ 3.40

Location								Length by Line Type (Unfactored)															
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			DLY4	DLW4	NPY4**	BLW4	ELW4	ELY4	SLW4	CHW8	SPY6	MNY4***	SLW2	RLY4	RLW4	LDW8	SPW6	Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
Edgewood	7521+71.40	7522+49.48	SB	Waterborne/Solvent Paint			X								0.78								
Edgewood	7521+77.14	7522+49.48	SB	Waterborne/Solvent Paint			X								0.75								
Edge C RT	43699+40.65	43699+72.91	SB	Waterborne/Solvent Paint	X														0.36				
Edge C RT	43699+40.65	43700+91.20	SB	Waterborne/Solvent Paint			X													1.51			
Edgewood	7522+49.48	7523+00.00	SB	Waterborne/Solvent Paint			X							0.51									
Edgewood	7523+00.00	7524+61.41	SB	Waterborne/Solvent Paint		X					1.61												
Edgewood	7523+00.00	7533+20.00	SB	Waterborne/Solvent Paint			X					10.14											
Edgewood	7522+45.00	7524+62.00	SB	Waterborne/Solvent Paint		X					2.17												
Edgewood	7525+72.55	7525+72.98	SB	Waterborne/Solvent Paint		X												0.60					
Edgewood	7525+72.64	7527+77.08	SB	Waterborne/Solvent Paint		X					2.03												
Edgewood	7525+72.74	7533+20.00	SB	Waterborne/Solvent Paint		X					7.44												
Edgewood	7525+72.84	7528+29.69	SB	Waterborne/Solvent Paint		X					2.56												
Edgewood	7525+72.89	7527+26.77	SB	Waterborne/Solvent Paint	X									1.54									
Edgewood	7525+72.98	7535+93.23	SB	Waterborne/Solvent Paint	X											10.21							
Edge D RT	44599+92.45	44603+75.00	EB	Waterborne/Solvent Paint			X													3.83			
Edge D RT	44599+92.45	44603+71.20	EB	Waterborne/Solvent Paint	X														4.02				
Edge Ramp D	44500+15.73	44503+70.43	EB	Waterborne/Solvent Paint			X													3.55			
Edge Ramp D	44500+15.73	44509+34.50	EB	Waterborne/Solvent Paint		X					9.06												
Edge Ramp D	44500+28.37	44513+75.00	EB	Waterborne/Solvent Paint	X														13.23				
Edge Ramp D	44503+70.43	44507+41.35	EB	Waterborne/Solvent Paint			X								3.71								
Edge Ramp D	44503+70.76	44507+41.35	EB	Waterborne/Solvent Paint			X								3.71								
Edge Ramp D	44503+75.00	44515+98.94	EB	Waterborne/Solvent Paint			X													12.25			
Edge A RT	41600+43.11	41608+61.68	WB	Waterborne/Solvent Paint			X													8.43			
Edge A RT	41600+23.23	41601+08.60	WB	Waterborne/Solvent Paint	X										1.17								
Edge A RT	41600+23.23	41601+08.60	WB	Waterborne/Solvent Paint	X										0.67								Chevron Marking
Edge A RT	41601+08.60	41602+57.91	WB	Waterborne/Solvent Paint	X														1.49				
Edge A RT	41602+57.91	41606+02.47	WB	Waterborne/Solvent Paint			X								3.45								
Edge Ramp A	41500+58.15	41511+50.00	WB	Waterborne/Solvent Paint	X														10.74				
Edge Ramp A	41500+29.99	41500+29.99	WB	Waterborne/Solvent Paint		X												0.30					
Edge Ramp A	41500+29.99	41508+70.00	WB	Waterborne/Solvent Paint		X					8.29												
Edge Ramp A	41500+29.99	41502+56.44	WB	Waterborne/Solvent Paint			X													2.26			
Edge Ramp A	41502+56.44	41507+29.97	WB	Waterborne/Solvent Paint			X								4.73								
Edge Ramp A	41507+29.97	41510+39.70	WB	Waterborne/Solvent Paint			X		3.10														
Edge Ramp A	41508+60.00	41511+50.00	WB	Waterborne/Solvent Paint			X													2.90			
IA 100	1108+00.00	1111+50.00	WB	Waterborne/Solvent Paint			X					3.50											
IA 100	1108+00.00	1128+50.00	WB	Waterborne/Solvent Paint		X					20.42												
IA 100	1108+00.00	1128+50.00	WB	Waterborne/Solvent Paint	X								20.47										
IA 100	1108+00.00	1128+50.00	EB	Waterborne/Solvent Paint	X								20.53										
IA 100	1108+00.00	1128+50.00	EB	Waterborne/Solvent Paint		X					20.58												
IA 100	1108+00.00	1113+75.00	EB	Waterborne/Solvent Paint			X					5.75											
IA 100	1111+50.00	1128+50.00	EB	Waterborne/Solvent Paint			X					16.86											
IA 100	1111+50.00	1115+49.48	EB	Waterborne/Solvent Paint			X								4.00								
IA 100	1111+50.00	1118+55.00	EB	Waterborne/Solvent Paint			X								7.02								
IA 100	1118+55.00	1123+50.00	EB	Waterborne/Solvent Paint			X		4.90														
IA 100	1113+75.00	1119+04.58	WB	Waterborne/Solvent Paint			X								5.33								
IA 100	1113+75.00	1119+04.58	WB	Waterborne/Solvent Paint			X								5.34								
IA 100	1116+00.00	1128+50.00	WB	Waterborne/Solvent Paint			X					12.66											
North River	7209+12.82	7209+12.82	EB	Waterborne/Solvent Paint		X												0.39					
Edgewood	7506+29.33	7509+30.50	NB	Waterborne/Solvent Paint	X									3.00									Stage 1A; Temp to be Removed
Edgewood	7516+52.89	7519+52.64	SB	Waterborne/Solvent Paint	X									3.00									Stage 1A; Temp to be Removed
Edgewood	7525+66.49		SB	Waterborne/Solvent Paint		X												0.10					Stage 1A; Temp to be Removed
Edgewood	7525+66.70	7528+16.33	SB	Waterborne/Solvent Paint	X									2.50									Stage 1A; Temp to be Removed
Edgewood	7512+21.26	7514+31.06	NB	Waterborne/Solvent Paint		X															2.07		Stage 1C; Temp to be Removed
Edgewood	7514+31.06	7515+12.71	NB	Waterborne/Solvent Paint		X						0.89											Stage 1C; Temp to be Removed
DET9	170+03.61	171+66.71	NB	Waterborne/Solvent Paint			X					1.75											Stage 1C; Temp to be Removed
DET9	171+66.71	178+46.96	NB	Waterborne/Solvent Paint			X					6.61											Stage 1C
DET9	170+25.91	180+84.65	SB	Waterborne/Solvent Paint			X					10.59											Stage 1C
DET9	170+03.62	170+85.81	NB	Waterborne/Solvent Paint	X								1.47										Stage 1C; Temp to be Removed
DET9	171+44.14	178+46.63	NB	Waterborne/Solvent Paint	X								6.97										Stage 1C
DET9	170+25.91	170+85.81	SB	Waterborne/Solvent Paint	X								0.59										Stage 1C; Temp to be Removed
DET9	170+85.81	178+44.49	SB	Waterborne/Solvent Paint	X								7.64										Stage 1C
DET9	178+48.38		NB	Waterborne/Solvent Paint		X												0.10					Stage 1C
DET9	178+44.91	179+18.47	SB	Waterborne/Solvent Paint			X		0.92														Stage 1C
DET9	179+18.47	179+28.92	SB	Waterborne/Solvent Paint			X		0.48														Stage 1C; Temp to be Removed
DET9	178+44.11	179+82.38	SB	Waterborne/Solvent Paint	X				1.36														Stage 1C
DET9	178+44.11	179+07.98	SB	Waterborne/Solvent Paint	X				0.81														Stage 1C
DET9	179+07.98	179+20.65	SB	Waterborne/Solvent Paint	X				0.53														Stage 1C; Temp to be Removed
DET9	178+46.63	179+63.87	NB	Waterborne/Solvent Paint	X				1.19														Stage 1C
DET9	179+63.87	179+79.74	NB	Waterborne/Solvent Paint	X				0.17														Stage 1C; Temp to be Removed
DET9	178+46.96	179+42.19	NB	Waterborne/Solvent Paint			X		0.98														Stage 1C
DET9	179+42.19	179+76.20	NB	Waterborne/Solvent Paint			X		0.37														Stage 1C; Temp to be Removed
Edge Ramp A	41501+93.63	41508+79.10	EB	Waterborne/Solvent Paint			X					7.19											Stage 1C

PAVEMENT MARKING LINE TYPES

See PM-110

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

DLY4: Dotted Line (Yellow) @ 0.33
ELY4: Edge Line Left (Yellow) @ 1.00
SLW2: Stop Line (White) @ 6.00
DLW4: Dotted Line (White) @ 0.33
SLW4: Solid Lane Line (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 1.00
NPY4: No Passing Zone Line (Yellow) @ 1.25
CHW8: Channelizing Line (White) @ 2.00
RLW4: Ramp Edge Line Right (White) @ 1.00
BLW4: Broken Lane Line (White) @ 0.25
SPY6: Sloped Curb 6" (Yellow) @ 3.40
LDW8: Lane Drop (White) @ 0.50
ELW4: Edge Line Right (White) @ 1.00
MNY4: Median Nose (Yellow) @ 1.00
SPW6: Sloped Curb 6" (White) @ 3.40

Location								Length by Line Type (Unfactored)															
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			DLY4	DLW4	NPY4**	BLW4	ELW4	ELY4	SLW4	CHW8	SPY6	MNY4***	SLW2	RLY4	RLW4	LDW8	SPW6	Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
IA 100	1108+76.72	1136+77.00	EB	Waterborne/Solvent Paint			X					27.84											Stage 1C
Edge Ramp A	41501+23.17	41508+79.10	EB	Waterborne/Solvent Paint	X								8.55										Stage 1C
IA 100	1108+77.63	1136+77.00	EB	Waterborne/Solvent Paint	X								27.78										Stage 1C
Edge Ramp A	41501+25.25	41508+79.10	WB	Waterborne/Solvent Paint	X								8.55										Stage 1C
IA 100	1108+78.08	1130+18.34	WB	Waterborne/Solvent Paint	X								21.33										Stage 1C
Edge Ramp A	41501+24.52		WB	Waterborne/Solvent Paint		X												0.11					Stage 1C; Temp to be Removed
Edge Ramp A	41501+28.92		WB	Waterborne/Solvent Paint		X												0.10					Stage 1C; Temp to be Removed
Edge Ramp A	41501+35.56		WB	Waterborne/Solvent Paint		X												0.15					Stage 1C; Temp to be Removed
Edge Ramp A	41501+26.83	41503+11.71	WB	Waterborne/Solvent Paint		X								2.90									Stage 1C
Edgewood	7521+66.30	7523+46.13	NB	Waterborne/Solvent Paint			X					2.10											Stage 1C; Temp to be Removed
Edge Ramp A	41501+58.12	41508+79.10	WB	Waterborne/Solvent Paint			X					8.04											Stage 1C
IA 100	1108+78.98	1130+18.49	WB	Waterborne/Solvent Paint			X					21.28											Stage 1C
Edgewood	7521+84.95	7523+45.95	NB	Waterborne/Solvent Paint	X							1.67											Stage 1C; Temp to be Removed
Edgewood	7521+36.04	7521+79.99	EB	Waterborne/Solvent Paint			X		0.70														Stage 1C; Temp to be Removed
Edgewood	7521+79.99	7522+60.98	EB	Waterborne/Solvent Paint			X		0.84														Stage 1C
Edgewood	7521+47.33	7522+12.85	EB	Waterborne/Solvent Paint	X				0.91														Stage 1C; Temp to be Removed
Edgewood	7522+12.85	7522+57.43	EB	Waterborne/Solvent Paint	X				0.45														Stage 1C
Edgewood	7522+45.55	7523+02.05	NB	Waterborne/Solvent Paint	X							0.61											Stage 1C; Temp to be Removed
Edgewood	7522+52.67	7523+45.76	NB	Waterborne/Solvent Paint	X								0.97										Stage 1C; Temp to be Removed
Edgewood	7522+57.43	7523+60.13	SB	Waterborne/Solvent Paint	X								1.04										Stage 1C; Temp to be Removed
Edgewood	7522+60.98	7523+59.73	SB	Waterborne/Solvent Paint			X							1.00									Stage 1C
Edgewood	7522+56.43		SB	Waterborne/Solvent Paint		X												0.10					Stage 1C; Temp to be Removed
Edgewood	7522+59.39		SB	Waterborne/Solvent Paint		X												0.11					Stage 1C; Temp to be Removed
Edgewood	7523+59.73	7524+48.58	SB	Waterborne/Solvent Paint			X		0.89														Stage 1C
Edgewood	7525+66.56		SB	Waterborne/Solvent Paint		X												0.10					Stage 1C
Edgewood	7499+58.75		NB	Wet Retroreflective Removable Tape		X												0.10					Stage 1D; Temp to be Removed
Edgewood	7498+35.64	7499+40.39	SB	Wet Retroreflective Removable Tape			X					1.05											Stage 2A; Temp to be Removed
Edgewood	7499+40.39	7500+54.37	SB	Wet Retroreflective Removable Tape			X		1.16														Stage 2A; Temp to be Removed
Edgewood	7498+88.00	7501+49.96	SB	Waterborne/Solvent Paint	X			2.63															Stage 2A; Temp to be Removed
Edgewood	7499+56.85		NB	Wet Retroreflective Removable Tape		X												0.09					Stage 2A; Temp to be Removed
Edgewood	7499+56.85	7501+49.93	NB	Waterborne/Solvent Paint	X			1.93															Stage 2A; Temp to be Removed
Edgewood	7499+56.85	7500+76.85	NB	Waterborne/Solvent Paint			X					1.20											Stage 2A; Temp to be Removed
Edgewood	7500+76.85	7515+04.43	NB	Waterborne/Solvent Paint			X					13.29											Stage 2A
Edgewood	7501+02.84		SB	Wet Retroreflective Removable Tape		X												0.09					Stage 2A; Temp to be Removed
Edgewood	7501+49.93	7505+82.87	NB	Waterborne/Solvent Paint	X								4.33										Stage 2A
Edgewood	7501+49.96	7505+82.87	SB	Waterborne/Solvent Paint	X								4.33										Stage 2A
Edgewood	7501+05.78	7509+39.42	SB	Waterborne/Solvent Paint			X					8.69											Stage 2A
Edgewood	7505+82.89	7508+86.24	BOTH	Waterborne/Solvent Paint		X					3.03												Stage 2A
Edgewood	7508+85.98		NB	Waterborne/Solvent Paint		X												0.09					Stage 2A
Edgewood	7508+86.34		NB	Waterborne/Solvent Paint		X												0.90					Stage 2A
North River	7207+15.48	7207+31.00	BOTH	Waterborne/Solvent Paint		X					0.16												Stage 2A; Temp to be Removed
North River	7207+31.00	7209+53.95	BOTH	Waterborne/Solvent Paint		X					2.23												Stage 2A
North River	7209+52.98		EB	Waterborne/Solvent Paint		X												0.17					Stage 2A
North River	7205+77.82	7207+31.00	WB	Wet Retroreflective Removable Tape			X					1.53											Stage 2A; Temp to be Removed
North River	7207+31.00	7209+23.83	WB	Waterborne/Solvent Paint			X					1.94											Stage 2A
Edgewood	7509+67.06	7510+83.19	SB	Waterborne/Solvent Paint			X					1.44											Stage 2A; Temp to be Removed
Edgewood	7510+83.19	7516+75.00	SB	Waterborne/Solvent Paint			X					5.91											Stage 2A
Edgewood	7516+75.00	7517+54.14	SB	Waterborne/Solvent Paint			X					0.79											Stage 2A; Temp to be Removed
Edgewood	7510+44.99		SB	Waterborne/Solvent Paint		X												0.10					Stage 2A
Edgewood	7510+51.12	7516+05.84	SB	Waterborne/Solvent Paint	X								5.52										Stage 2A
Edgewood	7510+51.25	7516+05.94	NB	Waterborne/Solvent Paint	X								5.51										Stage 2A
Edgewood	7514+24.86	7515+10.95	EB	Waterborne/Solvent Paint	X							0.94											Stage 2A
Edgewood	7514+24.86	7517+52.35	NB	Waterborne/Solvent Paint			X					3.25											Stage 2A
Edgewood	7520+21.35	7520+90.73	NB	Waterborne/Solvent Paint			X					2.18											Stage 2A; Temp to be Removed
Edgewood	7520+64.14		NB	Waterborne/Solvent Paint		X												0.08					Stage 2A; Temp to be Removed
Edgewood	7520+23.14	7522+59.60	SB	Waterborne/Solvent Paint			X					2.18											Stage 2A; Temp to be Removed
Edgewood	7522+59.60	7525+09.67	SB	Waterborne/Solvent Paint			X					3.01											Stage 2A
Edgewood	7525+09.67	7525+84.40	SB	Waterborne/Solvent Paint			X					0.75											Stage 2A; Temp to be Removed
Edgewood	7525+84.40	7530+76.13	SB	Waterborne/Solvent Paint			X					4.93											Stage 2A
Edgewood	7530+76.13	7533+19.70	SB	Waterborne/Solvent Paint			X					4.93											Stage 2A; Temp to be Removed
Edgewood	7533+19.70	7535+13.02	SB	Wet Retroreflective Removable Tape			X					1.95											Stage 2A; Temp to be Removed
Edgewood	7522+15.32		SB	Waterborne/Solvent Paint		X												0.08					Stage 2A; Temp to be Removed
Edgewood	7522+15.32		SB	Waterborne/Solvent Paint		X												0.08					Stage 2A
Edgewood	7522+17.92	7523+09.48	SB	Waterborne/Solvent Paint		X								0.92									Stage 2A
Edgewood	7522+17.92	7524+49.83	BOTH	Waterborne/Solvent Paint		X					2.33												Stage 2A
Edgewood	7521+64.44	7524+50.15	NB	Waterborne/Solvent Paint			X					3.20											Stage 2A
Edgewood	7523+09.48	7524+49.48	SB	Waterborne/Solvent Paint		X			1.40														Stage 2A
Edgewood	7525+65.45		SB	Waterborne/Solvent Paint		X												0.09					Stage 2A; Temp to be Removed
Edgewood	7525+65.72		SB	Waterborne/Solvent Paint		X												0.09					Stage 2A; Temp to be Removed
Edgewood	7525+67.64	7525+74.32	SB	Waterborne/Solvent Paint		x								0.07									Stage 2A; Temp to be Removed
Edgewood	7525+74.32	7527+71.93	SB	Waterborne/Solvent Paint		X								1.99									Stage 2A
Edgewood	7525+67.62	7533+19.40	BOTH	Waterborne/Solvent Paint		X					7.57												Stage 2A
Edgewood	7533+19.40	7535+12.97	BOTH	Wet Retroreflective Removable Tape		X					1.96												Stage 2A; Temp to be Removed

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
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***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

DLY4: Dotted Line (Yellow) @ 0.33
ELY4: Edge Line Left (Yellow) @ 1.00
SLW2: Stop Line (White) @ 6.00
DLW4: Dotted Line (White) @ 0.33
SLW4: Solid Lane Line (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 1.00
NPY4: No Passing Zone Line (Yellow) @ 1.25
CHW8: Channelizing Line (White) @ 2.00
RLW4: Ramp Edge Line Right (White) @ 1.00
BLW4: Broken Lane Line (White) @ 0.25
SPY6: Sloped Curb 6" (Yellow) @ 3.40
LDW8: Lane Drop (White) @ 0.50
ELW4: Edge Line Right (White) @ 1.00
MNY4: Median Nose (Yellow) @ 1.00
SPW6: Sloped Curb 6" (White) @ 3.40

Location								Length by Line Type (Unfactored)															
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			DLY4	DLW4	NPY4**	BLW4	ELW4	ELY4	SLW4	CHW8	SPY6	MNY4***	SLW2	RLY4	RLW4	LDW8	SPW6	Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
Edgewood	7529+80.34	7533+19.06	NB	Waterborne/Solvent Paint	X						3.41												Stage 2A
Edgewood	7533+19.06	7534+76.89	NB	Wet Retroreflective Removable Tape	X						1.59												Stage 2A; Temp to be Removed
Edgewood	7525+68.18	7533+18.74	NB	Waterborne/Solvent Paint			X					7.58											Stage 2A
Edgewood	7533+93.91	7534+37.87	NB	Waterborne/Solvent Paint			X					0.44											Stage 2A; Temp to be Removed
Edgewood	7508+64.67	7509+88.32	SB	Waterborne/Solvent Paint			X					1.60											Stage 2B; Temp to be Removed
Edgewood	7508+86.24	7509+42.82	BOTH	Waterborne/Solvent Paint		X				0.56													Stage 2B; Temp to be Removed
Edgewood	7508+85.91	7509+42.92	NB	Waterborne/Solvent Paint		X								0.56									Stage 2B; Temp to be Removed
Edgewood	7509+42.87		NB	Waterborne/Solvent Paint		X												0.10					Stage 2B; Temp to be Removed
Edgewood	7509+42.97		NB	Waterborne/Solvent Paint		X												0.10					Stage 2B; Temp to be Removed
North River	7209+59.44		EB	Waterborne/Solvent Paint		X												0.17					Stage 2B; Temp to be Removed
North River	7209+08.93	7209+66.19	WB	Wet Retroreflective Removable Tape			X					0.67											Stage 2B; Temp to be Removed
North River	7206+40.58	7207+31.00	BOTH	Wet Retroreflective Removable Tape		X				0.91													Stage 2B; Temp to be Removed
North River	7207+31.00	7209+12.61	BOTH	Waterborne/Solvent Paint		X				1.82													Stage 2B; Temp to be Removed
Edgewood	7510+39.25	7510+83.19	SB	Waterborne/Solvent Paint			X					0.77											Stage 2B; Temp to be Removed
Edgewood	7508+83.01		NB	Waterborne/Solvent Paint		X												0.09					Stage 2C
Edgewood	7508+83.29		NB	Waterborne/Solvent Paint		X												0.09					Stage 2C
North River	7209+67.49		EB	Waterborne/Solvent Paint		X												0.13					Stage 2C
North River	7209+69.22		EB	Waterborne/Solvent Paint		X												0.15					Stage 2C
Edgewood	7510+47.55	7510+59.47	SB	Wet Retroreflective Removable Tape			X					0.15											Stage 2C; Temp to be Removed
Edgewood	7510+59.47	7511+15.91	SB	Waterborne/Solvent Paint			X					0.59											Stage 2C
Edgewood	7498+35.54	7501+50.00	NB	Wet Retroreflective Removable Tape			X					3.16											Stage 3A; Temp to be Removed
Edgewood	7501+50.00	7517+54.33	NB	Waterborne/Solvent Paint			X					16.07											Stage 3A
Edgewood	7517+54.33	7520+22.64	NB	Waterborne/Solvent Paint			X					2.69											Stage 3A; Temp to be Removed
Edgewood	7520+22.64	7520+96.53	NB	Waterborne/Solvent Paint			X					2.30											Stage 3A
Edge Ramp A	41501+22.51	41501+60.72	WB	Waterborne/Solvent Paint			X					1.13											Stage 3A
Edge Ramp A	41501+26.86	41501+08.92	EB	Waterborne/Solvent Paint	X								0.42										Stage 3A
Edge Ramp A	41501+29.57	41501+11.51	WB	Waterborne/Solvent Paint	X								0.42										Stage 3A
Edge Ramp A	41501+13.67		WB	Waterborne/Solvent Paint		X												0.10					Stage 3A
Edge Ramp A	41501+19.81		WB	Waterborne/Solvent Paint		X												0.10					Stage 3A
Edge Ramp A	41501+16.90	41501+34.85	WB	Waterborne/Solvent Paint		X								0.42									Stage 3A
Edgewood	7522+20.73	7524+58.50	NB	Waterborne/Solvent Paint			X					2.40											Stage 3A; Temp to be Removed
Edgewood	7522+16.50		SB	Wet Retroreflective Removable Tape		X												0.10					Stage 3A; Temp to be Removed
Edgewood	7522+16.97		SB	Wet Retroreflective Removable Tape		X												0.10					Stage 3A; Temp to be Removed
Edgewood	7522+17.21	7524+58.24	BOTH	Waterborne/Solvent Paint		X				2.41													Stage 3A; Temp to be Removed
Edgewood	7522+16.51	7523+19.70	SB	Waterborne/Solvent Paint		X								1.03									Stage 3A; Temp to be Removed
Edgewood	7523+19.70	7524+57.95	SB	Waterborne/Solvent Paint		X			1.38														Stage 3A; Temp to be Removed
Edgewood	7524+59.80		NB	Wet Retroreflective Removable Tape		X												0.10					Stage 3A; Temp to be Removed
Hy-Vee	8525+23.08	8525+32.03	BOTH	Waterborne/Solvent Paint		X				0.09													Stage 3A; Temp to be Removed
Hy-Vee	8525+32.03	8526+48.46	BOTH	Waterborne/Solvent Paint		X				1.16													Stage 3A
Hy-Vee	8526+48.46	8528+66.85	BOTH	Waterborne/Solvent Paint		X				2.18													Stage 3A; Temp to be Removed
Hy-Vee	8525+27.81		WB	Waterborne/Solvent Paint		X												0.10					Stage 3A
Hy-Vee	8525+28.83		WB	Waterborne/Solvent Paint		X												0.10					Stage 3A
Edgewood	7526+32.60		SB	Wet Retroreflective Removable Tape		X												0.10					Stage 3A; Temp to be Removed
Edgewood	7526+32.85		SB	Wet Retroreflective Removable Tape		X												0.10					Stage 3A; Temp to be Removed
Edgewood	7526+35.02	7528+00.00	SB	Waterborne/Solvent Paint		X								1.64									Stage 3A; Temp to be Removed
Edgewood	7526+37.72	7529+89.47	BOTH	Waterborne/Solvent Paint		X				3.53													Stage 3A; Temp to be Removed
Edgewood	7533+19.37	7534+55.87	BOTH	Wet Retroreflective Removable Tape		X							1.38										Stage 3A; Temp to be Removed
Hy-Vee	8525+23.27	8526+47.78	BOTH	Wet Retroreflective Removable Tape		X				1.24													Stage 3B; Temp to be Removed
Hy-Vee	8526+47.78	8528+58.81	BOTH	Waterborne/Solvent Paint		X				2.11													Stage 3B; Temp to be Removed
Hy-Vee	8525+28.23		WB	Waterborne/Solvent Paint		X												0.10					Stage 3B
Hy-Vee	8525+29.65		WB	Waterborne/Solvent Paint		X												0.10					Stage 3B
Edgewood	7523+19.96	7524+57.95	SB	Waterborne/Solvent Paint		X								1.38									Stage 3C; Temp to be Removed
Edgewood	7524+58.24	7526+35.02	SB	Wet Retroreflective Removable Tape	X								1.77										Stage 3C; Temp to be Removed
Edgewood	7499+58.77		NB	Wet Retroreflective Removable Tape		X												0.10					Stage 4; Temp to be Removed
Edgewood	7506+16.89	7509+54.54	NB	Waterborne/Solvent Paint		X								3.36									Stage 4; Temp to be Removed
Edgewood	7509+54.86		NB	Wet Retroreflective Removable Tape		X												0.10					Stage 4; Temp to be Removed
Edgewood	7513+00.30	7516+02.51	NB	Waterborne/Solvent Paint			X					3.01											Stage 4; Temp to be Removed
Edgewood	7516+02.77		NB	Wet Retroreflective Removable Tape		X												0.10					Stage 4; Temp to be Removed
Edge Ramp D	44501+21.57	44503+44.65	EB	Waterborne/Solvent Paint			X					2.90											Stage 4
Edge Ramp D	44501+24.95	44502+83.28	EB	Waterborne/Solvent Paint	X								2.07										Stage 4
Edge Ramp D	44502+83.28	44513+75.55	EB	Waterborne/Solvent Paint	X								10.95										Stage 4; Temp to be Removed
Edge Ramp D	44509+74.62	44513+75.55	EB	Waterborne/Solvent Paint			X					4.01											Stage 4; Temp to be Removed
IA 100	1113+78.27	1136+71.26	EB	Waterborne/Solvent Paint			X					23.10											Stage 4; Temp to be Removed
IA 100	1113+76.64	1131+96.45	EB	Waterborne/Solvent Paint	X								17.07										Stage 4; Temp to be Removed
Edge Ramp D	44501+21.87	44502+63.89	WB	Waterborne/Solvent Paint	X								1.91										Stage 4
Edge Ramp D	44502+63.89	44513+75.55	WB	Waterborne/Solvent Paint	X								11.12										Stage 4; Temp to be Removed
IA 100	1113+75.82	1136+71.16	WB	Waterborne/Solvent Paint	X								23.07										Stage 4; Temp to be Removed
Edge Ramp D	44501+26.14		WB	Waterborne/Solvent Paint		X												0.10					Stage 4
Edge Ramp D	44501+06.65	44502+32.42	WB	Waterborne/Solvent Paint			X					8.70											Stage 4
Edge Ramp D	44502+32.42	44502+80.33	WB	Wet Retroreflective Removable Tape			X					0.51											Stage 4; Temp to be Removed
IA 100	1113+75.00	1136+73.60	WB	Waterborne/Solvent Paint			X					23.05											Stage 4; Temp to be Removed
Edgewood	7516+46.58	7519+10.72	NB	Wet Retroreflective Removable Tape			X					2.65											Stage 4; Temp to be Removed
Edgewood	7516+68.92		SB	Wet Retroreflective Removable Tape		X												0.10					Stage 4; Temp to be Removed

108-22
04-16-13

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.

DLY4: Dotted Line (Yellow) @ 0.33
ELY4: Edge Line Left (Yellow) @ 1.00
SLW2: Stop Line (White) @ 6.00
DLW4: Dotted Line (White) @ 0.33
SLW4: Solid Lane Line (White) @ 1.00
RLY4: Ramp Edge Line Left (Yellow) @ 1.00
NPY4: No Passing Zone Line (Yellow) @ 1.25
CHW8: Channelizing Line (White) @ 2.00
RLW4: Ramp Edge Line Right (White) @ 1.00
BLW4: Broken Lane Line (White) @ 0.25
SPY6: Sloped Curb 6" (Yellow) @ 3.40
LDW8: Lane Drop (White) @ 0.50
ELW4: Edge Line Right (White) @ 1.00
MNY4: Median Nose (Yellow) @ 1.00
SPW6: Sloped Curb 6" (White) @ 3.40

Location								Length by Line Type (Unfactored)															
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			DLY4	DLW4	NPY4**	BLW4	ELW4	ELY4	SLW4	CHW8	SPY6	MNY4***	SLW2	RLY4	RLW4	LDW8	SPW6	Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
Edgewood	7516+68.92		SB	Wet Retroreflective Removable Tape		X												0.10					Stage 4; Temp to be Removed
Edgewood	7516+69.28	7519+79.67	SB	Waterborne/Solvent Paint		X								3.10									Stage 4; Temp to be Removed
Edgewood	7519+42.67	7522+39.40	SB	Waterborne/Solvent Paint		X								0.97									Stage 5; Temp to be Removed
Edgewood	7525+71.22	7527+34.97	SB	Waterborne/Solvent Paint		X								1.63									Stage 5; Temp to be Removed
				Factored Total: Waterborne/Solvent Paint				1.52	7.13	36.48	33.88	342.81	212.61	51.09	102.70	217.43	15.00	48.36	32.09	37.46	1.32	10.61	
				Factored Total: Permanent Intersection Tape				-	-	-	5.45	-	-	-	-	-	-	-	-	-	-	-	
				Factored Total: Wet Retroreflective Removable Tape				-	0.39	5.14	0.40	11.67	3.15	-	-	-	-	7.68	-	-	-	-	
				Bid Quantity: Painted Pavement Markings, Waterborne or Solvent-Based							1150.48												
				Bid Quantity: Permanent Tape Markings, Intersection Marking Tape							5.45												
				Bid Quantity: Wet Retroreflective Removable Tape Markings							28.42												

108-22
04-16-13

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.

DDY4: Double Dotted Line (Yellow) @ 0.67

Location								Length by Line Type (Unfactored)															
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			DDY4															Remarks
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
North River	7205+79.01	7207+15.48	BOTH	Wet Retroreflective Removable Tape		X		1.37															Stage 2A; Temp to be Removed
				Factored Total: Wet Retroreflective Removable Tape				0.91	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
				Bid Quantity: Wet Retroreflective Removable Tape Markings							0.91												

110-14
04-16-13

SANITARY OR STORM SEWER ABANDONMENT OR REMOVAL

* Not a bid item

Location/Description	Sanitary or Storm Sewer	Abandonment, Plug Only or Abandonment, Plug and Fill or Removal	Length of Pipe		Fill Material*	Remarks
			≤ 36 inch diameter	> 36 inch diameter	Flowable Mortar or CLSM	
			LF	LF	CY	
Edgewood Pipe along Median, Sta. 7504+50 to 7506+18	Storm Sewer	Removal	168			
Edgewood SB Cross Road Pipe, Sta. 7506+18 to 7506+19	Storm Sewer	Removal		67		
Edgewood NB Cross Road Pipe, Sta. 7506+18 to 7506+19	Storm Sewer	Removal		56		
Edgewood Left Side Outside Pipe, Sta. 7506+19 to 7506+51	Storm Sewer	Removal	33			
Edgewood Pipe along Median, Sta. 7506+18 to 7506+72	Storm Sewer	Removal	54			
Edgewood Left Side Outside Pipe, Sta. 7506+51 to 7507+47	Storm Sewer	Removal	99			
Edgewood Pipe along Median, Sta. 7506+72 to 7507+46	Storm Sewer	Removal	74			
Edgewood SB Cross Road Pipe, Sta. 7507+46 to 7507+47	Storm Sewer	Removal	47			
Edgewood Pipe along Median, Sta. 7507+46 to 7508+22	Storm Sewer	Removal	75			
Edgewood SB Cross Road Pipe, Sta. 7510+53 to 7510+55	Storm Sewer	Removal	63			
Edgewood Left Side Outside Pipe, Sta. 7510+34 to 7510+55	Storm Sewer	Removal	61			
Edgewood Ramp D Cross Road Pipe, Sta. 44501+97 to 44501+63	Storm Sewer	Removal	80			
Edgewood Pipe along Median, Sta. 7524+57 to 7526+04	Storm Sewer	Removal	147			
Edgewood SB Cross Road Pipe, Sta. 7526+03 to 7526+04	Storm Sewer	Removal	62			
Edgewood SB Cross Road Pipe, Sta. 7528+53 to 7528+55	Storm Sewer	Removal	65			
Edgewood Right Side Outside Pipe, Sta. 7529+65 to 7530+16	Storm Sewer	Removal	54			
Edgewood Right Side Outside Pipe, Sta. 7530+16 to 7531+45	Storm Sewer	Removal	131			
Edgewood SB Cross Road Pipe, Sta. 7530+95 to 7530+95	Storm Sewer	Removal	57			

112-5
08-01-08

TABULATION OF CONCRETE MEDIANS

Begin Station	End Station	Area SY	Remarks
Edgewood Road			
		48.4	Median S. of North River. See Sheet E.1 for details.
7500+26.52	7509+28.08	1020.0	
7510+33.13	7510+61.01	72.4	
7510+70.97	7517+32.77	911.6	
7513+84.71	7514+52.13	43.9	
7515+66.30	7516+28.98	40.3	
7520+43.16	7525+02.72	438.8	
7525+69.00	7525+88.81	16.9	
7525+98.71	7535+94.23	1023.6	

110-5
08-01-08

SIDEWALK REMOVAL

Begin Station	End Station	Area SY	Remarks
8526+19.21, 73.0' LT	8526+48.74, 42.5' LT	36.0	

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 SY	Saw Cut* LF	Remarks
7501+50.00	7533+20.00		ACC	26377.0	134.7	
7207+31.00	7208+39.00		PCC	1281.0	59.4	
8525+75.00	8526+48.62		PCC	629.0	69.0	
			ACC	80.0	269.5	Removal of Raised Median Only; Refer to Sheet E.1 for location details
7533+20.00	7535+96.14		ACC	155.0	554.7	Removal of Raised Median Only
1106+97.39	1128+50.00		ACC/PCC	22911.0	84.8	
41501+20.70	41508+79.45		PCC	4180.0		
44501+11.04	44511+94.41		ACC	5005.0		
10+00.00	11+30.08		Detour	80.0		DET1
30+00.00	39+08.68		Detour	1033.0		DET2
50+00.00	51+94.54		Detour	96.0		DET3
70+00.00	75+59.90		Detour	878.0		DET4
90+00.00	92+74.99		Detour	444.0		DET5
110+00.00	120+31.20		Detour	977.0		DET6
130+00.00	130+66.51		Detour	58.0		DET7
150+00.00	160+71.00		Detour	467.0		DET8
170+00.00	180+84.65		Detour	4828.0		DET9
190+00.00	193+44.57		Detour	139.0		DET10
210+00.00	210+42.69		Detour	57.0		DET11
230+00.00	230+79.38		Detour	489.0		DET12
250+00.00	250+76.24		Detour	387.0		DET13
270+00.00	271+40.89		Detour	177.0		DET14
290+00.00	297+51.18		Detour	886.0		DET15
310+00.00	322+42.19		Detour	1247.0		DET16
330+00.00	338+29.02		Detour	809.0		DET17
350+00.00	350+32.99		Detour	44.0		DET18
370+00.00	373+21.15		Detour	959.0		DET19
390+00.00	349+02.06		Detour	262.0		DET20
410+00.00	411+67.95		Detour	178.0		DET21
430+00.00	430+74.28		Detour	63.0		DET22
450+00.00	452+30.07		Detour	459.0		DET23

112-04
Modified

CURBS AND ISLANDS

Refer to Modified PV-102 on Sheet U.4.

(1) Bid Item

Point No.	Station	Offset	Island Interior Area (1) SY	Curb and Gutter: Curb Type	Gutter Width FT	Length (1) LF	Remarks
	7501+50.00	39		8" Sloped PCC	3.0	1152.6	
	7502+19.94	-40.46		8" Sloped PCC	3.0	668.4	
	7508+86.79	-50		8" Sloped PCC	3.0	86.2	
	7207+31.00	26.23		6" Standard PCC	3.0	141.4	
	7207+31.00	-33.13		6" Standard PCC	3.0	130.5	
	7510+16.08	-109.96		8" Sloped PCC	3.0	92.5	
	7510+72.05	-50		8" Sloped PCC	3.0	416.9	
	7514+52.13	44		8" Sloped PCC	3.0	304.3	
	7516+28.98	-38		8" Sloped PCC	3.0	172.7	
	7519+87.07	44		8" Sloped PCC	3.0	120.2	
	7519+90.86	-38		8" Sloped PCC	3.0	187.2	
	7521+02.38	104.4		8" Sloped PCC	3.0	332.1	
	7523+34.23	-50.6		8" Sloped PCC	3.0	979.1	
	7524+20.29	56		8" Sloped PCC	3.0	111.4	
	7525+60.44	124.6		8" Sloped PCC	3.0	107.0	
	7526+26.69	56		8" Sloped PCC	3.0	701.0	
	41600+42.59	6.4		8" Sloped PCC	3.0	37.5	
	7207+41.29	0		6" Standard PCC	3.0	374.1	
	8526+03.82	-7.3		6" Standard PCC	3.0	103.1	

110-16
04-16-13

REMOVAL OF LIGHT POLES AND CONCRETE FOOTINGS

Location: No.	Station	Offset: Left	Offset: Right	Removal of Light Pole	Removal of Concrete Footing for Light Pole	Remarks
1	7515+82.31	20.79		1		
2	7520+99.57	22.75		1		

110-15
04-16-13

REMOVAL OF INTAKES AND UTILITY ACCESSES

No.	Location/Description	Type	Remarks
EX-7000	Edgewood, Sta. 7504+49.53, Offset 4.50'	Intakes	Storm Sewer
EX-7001	Edgewood, Sta. 7506+17.89, Offset 2.14'	Intakes	Storm Sewer
EX-7002	Edgewood, Sta. 7506+19.18, Offset 58.79'	Intakes	Storm Sewer
EX-7003	Edgewood, Sta. 7506+18.73, Offset -65.23'	Intakes	Storm Sewer
EX-7010	Edgewood, Sta. 7506+50.87, Offset -72.05'	Intakes	Storm Sewer
EX-7004	Edgewood, Sta. 7506+71.77, Offset -0.26'	Intakes	Storm Sewer
EX-7005	Edgewood, Sta. 7507+46.97, Offset -47.10'	Intakes	Storm Sewer
EX-7006	Edgewood, Sta. 7507+46.24, Offset -0.08'	Intakes	Storm Sewer
EX-7007	Edgewood, Sta. 7508+21.53, Offset 0.80'	Intakes	Storm Sewer
EX-7022	Edgewood, Sta. 7510+53.11, Offset 12.71'	Intakes	Storm Sewer
EX-7021	Edgewood, Sta. 7510+55.08, Offset -50.10'	Intakes	Storm Sewer
EX-7091	Edgewood, Sta. 7516+13.94, Offset 162.64'	Intakes	Storm Sewer
EX-7092	Edgewood, Sta. 7516+93.39, Offset 160.59'	Intakes	Storm Sewer
EX-7093	Edgewood, Sta. 7524+57.40, Offset 21.10'	Intakes	Storm Sewer
EX-7094	Edgewood, Sta. 7426+04.09, Offset 16.41'	Intakes	Storm Sewer
EX-7095	Edgewood, Sta. 7526+02.62, Offset -45.65'	Intakes	Storm Sewer
EX-7096	Edgewood, Sta. 7528+54.70, Offset 10.36'	Intakes	Storm Sewer
EX-7097	Edgewood, Sta. 7528+53.33, Offset -54.64'	Intakes	Storm Sewer
EX-7101	Edgewood, Sta. 7530+16.43, Offset 55.97'	Intakes	Storm Sewer
EX-7114	Edgewood, Sta. 7530+95.06, Offset -51.60'	Intakes	Storm Sewer
EX-8000	IA 100, Sta. 1117+16.26, Offset 2.77'	Intakes	Storm Sewer

108-33
04-16-13

TEMPORARY BARRIER RAIL

Refer to BA-400 and BA-401

* Not a bid item. Anchorage requirements are based on TBR locations shown in the plans. TBR alignments that vary from what is shown in the plans may result in additional TBR sections requiring anchorage.

No.	Station to Station		Length LF	(Select One) Steel BA-400	Concrete BA-401	Anchored* (Y/N)	Remarks
1	170+27.76	178+27.76	800.0		X	Yes	Along Detour 9 Median; Stage 1C-1D
2	171+12.47	178+37.33	700.0		X	Yes	Along Detour 9 Right ; Stage 1C-1D
3	41500+58.16	41501+93.63	250.0		X	No	Along Existing Exit Ramp Right; Stage 1C-1D
4	41501+27.67	41508+79.39	887.5		X	No	Along Existing Exit Ramp Median; Stage 1C-3C
5	1109+20.01	N-3478551.28	2737.5		X	No	Along Existing IA100 Median; Stage 1C-3C
		E-5413327.26					
6	1108+83.72	1128+53.40	1975.0		X	No	Along Existing IA 100 Right; Stage 3A-3C
7	7501+00.31	7508+14.77	712.5		X	No	Along Edgewood Left; Stage 2A-2C
8	7508+14.77	7509+36.50	150.0		X	No	Along Edgewood Left; Stage 2A
9	7207+17.49	7208+89.49	175.0		X	No	Along North River Median; Stage 2A
10	7511+15.84	7533+69.77	2250.0		X	No	Along Edgewood Left; Stage 2A-2C
11	41500+86.33	41502+04.32	175.0		X	No	Along Existing Exit Ramp Right; Stage 2A-2C
12	7509+65.89	7511+15.84	200.0		X	No	Along Edgewood Left; Stage 2A
13	7508+14.77	7509+85.38	200.0		X	No	Along Edgewood Left; Stage 2B
14	7510+15.05	7511+15.84	150.0		X	No	Along Edgewood Left; Stage 2B
15	7508+14.77	7508+61.23	50.0		X	No	Along Edgewood Left; Stage 2C
16	7510+49.54	7511+15.84	75.0		X	No	Along Edgewood Left; Stage 2C
17	N-3476834.95	7521+08.85	2187.5		X	No	Along Edgewood Right; Stage 3A-3C
	E-5409704.56						
18	41501+20.87	41501+92.08	100.0		X	No	Along Existing Exit Ramp Right; Stage 3A-3C
19	41501+21.39	41501+28.06	12.5		X	No	Along Existing Exit Ramp Median; Stage 3A-3C
20	7521+85.02	7523+50.55	187.5		X	No	Along Edgewood Right; Stage 3A-3C
21	7524+50.55	7525+24.04	187.5		X	No	Along Edgewood Right; Stage 3A
22	7525+61.45	7526+93.70	175.0		X	No	Along Edgewood Right; Stage 3A
23	7526+93.70	7533+19.04	625.0		X	No	Along Edgewood Right; Stage 3A-3C
24	1130+88.07		1115.4		X	No	Along Existing IA100 Median West of Construction Limits; Stage 3B-3C
25	7524+50.55	7524+88.56	175.0		X	No	Along Edgewood Right; Stage 3B
26	7525+17.84	7526+93.70	225.0		X	No	Along Edgewood Right; Stage 3B
27	7525+72.13	7526+93.70	162.5		X	No	Along Edgewood Right; Stage 3C
28	7518+54.65	7522+45.00	400.0		X	No	Along Edgewood Right; Stage 4
29	44501+36.06	44515+98.94	1500.0		X	No	Along Edgewood Ramp D Median; Stage 4
30	1115+99.78	N-3478551.28	2075.0		X	No	Along IA 100 Median; Stage 4
		E-5413327.26					
31	1113+76.38	1130+79.58	1700.0		X	No	Along IA 100 Left; Stage 4

SHOULDERS

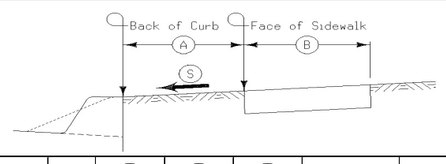
(1) Lane(s) to which the shoulder is adjacent.
(2) Bid Item
(3) Applies only for Paved Shoulders constructed on project with existing granular shoulders.
(4) Does not include shrink.

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.

Location								Quantities																
Road Identification	(1) Direction Of Traffic	Station to Station		Side	(P) Width	(G) Width	(L) Length	Class 13 (3) Excavation	Hot Mix Asphalt		Binder	Paved Shoulder	Reinforced Paved Shoulder	Special Backfill				Modified Subbase	Granular Shoulder		Earth Shoulder Construction Alternates			Remarks
														HMA Alternate		PCC Alternate								
					FT	FT	FT	CY (2)	TON	TON/STA	TONS	SY (2)	SY (2)	TON (2)	TON/STA	TON (2)	TON/STA	CY (2)	TON (2)	TON/STA	STA (2)	HMA CY (4)	PCC CY (4)	
IA 100	WB	1108+00.00	1111+50.00	LT	8.0		350.0					311.1									3.5		71.0	Earth Shldr Const.
IA 100	WB	1111+50.47	1128+50.00	LT	7 to 9		1699.5					1421.4									17.0		22.0	16 Sta Shldr Finishing
IA 100	WB	1108+00.00	1128+00.00	RT	16.0		2000.0						3644.4											
IA 100	EB	1108+00.00	1113+75.00	LT	8.0		575.0					511.1									5.8		93.0	Earth Shldr Const.
IA 100	EB	1113+77.19	1128+50.00	LT	7 to 9		1472.8					1226.8									14.7			Earth Shldr Finishing
Edgewood Ramp A		41501+39.26	41502+60.00	LT	7.0		120.7					95.4									1.2			Earth Shldr Finishing
Edgewood Ramp A		41502+63.15	41511+50.00	LT	7.0		886.9					693.6									8.9			Earth Shldr Finishing
Edgewood Ramp A		41501+39.26	41509+49.78	RT	4.0		810.5						354.1								8.1			Earth Shldr Finishing
Edgewood Ramp A		41509+49.78	41511+50.00	RT	4.0		200.2					89.6									2.0		40.0	Earth Shldr Const.
Edgewood Ramp A RT		41600+96.29	41602+60.00	LT	3 to 7		163.7					124.0									1.6			Earth Shldr Finishing
Edgewood Ramp A RT		41600+76.50	41602+60.00	RT	10.9 to 5		183.5					109.6									1.8			Earth Shldr Finishing
Edgewood Ramp B		42597+88.76	42598+63.99	LT	4.0		75.2						30.7								0.8			Earth Shldr Finishing
Edgewood Ramp B		42597+88.76	42598+63.99	RT	7.0		75.2					60.6									0.8			Earth Shldr Finishing
Edgewood Ramp B RT		42697+85.64	42700+17.98	LT	17.1 to 6.5		232.3					276.3									2.3			Earth Shldr Finishing
Edgewood Ramp B RT		42697+85.64	42701+30.00	RT	7 to 3		344.4					255.3									3.4			Earth Shldr Finishing
Edgewood Ramp C		43596+97.30	43598+89.38	LT	7.0		192.1					150.0									1.9			Earth Shldr Finishing
Edgewood Ramp C		43596+97.30	43597+25.00	RT	4.0		27.7					11.8									0.3		12.0	Earth Shldr Const.
Edgewood Ramp C		43597+25.00	43598+89.38	RT	4.0		164.4						67.1								1.6		18.0	Earth Shldr Const.
Edgewood Ramp C RT		43697+25.00	43699+79.93	RT	10.2 to 10.6		254.9					311.4									2.5			Earth Shldr Finishing
Edgewood Ramp C RT		43697+25.00	43698+75.00	LT	6.0		150.0						150.4								1.5			Earth Shldr Finishing
Edgewood Ramp C RT		43698+75.00	43700+91.20	LT	7.0		216.2					165.3									2.2			Earth Shldr Finishing
Edgewood	SB	7523+00.00	7523+34.34	LT	7 to 3		34.3					18.9									0.3			Earth Shldr Finishing
Edgewood Ramp D		44500+70.43	44501+25.00	LT	4.0		54.6						22.4								0.5			Earth Shldr Finishing
Edgewood Ramp D		44501+25.00	44513+75.00	LT	4.0		1250.0					547.3									12.5		508.0	Earth Shldr Const.
Edgewood Ramp D		44500+70.43	44503+75.00	RT	6 to 7		304.6					240.2									3.0			Earth Shldr Finishing
Edgewood Ramp D		44503+75.00	44509+75.00	RT	6.0		600.0						400.5								6.0			Earth Shldr Finishing
Edgewood Ramp D		44509+75.00	44513+75.00	RT	7.0		400.0					311.2									4.0			Earth Shldr Finishing
Edgewood Ramp D RT		44599+92.45	44603+75.00	LT	4 to 11.9		382.5					366.1									3.8			Earth Shldr Finishing
Edgewood Ramp D RT		44599+92.45	44602+00.00	RT	7.0		207.5					157.9									2.1			Earth Shldr Finishing
Edgewood Ramp D RT		44602+00.00	44603+75.00	RT	6.0		175.0						116.5								1.8			Earth Shldr Finishing
Edgewood	NB	7513+10.80	7514+50.00	RT	3 to 7		139.2					97.1									1.4			Earth Shldr Finishing

SIDEWALKS

See MI-220 and S Sheets



Road Identification	Station to Station		Side	(A)	(B)	(S)	4" PCC Sidewalk	6" PCC Sidewalk	6" PCC Trail	Detectable Warnings	Remarks
				FT	FT	%	SY	SY	SY	SF	
Edgewood	7510+61.04	7510+83.53	LT	4.5-4	10.00	4.00%			26.6	12	Division 2
Edgewood	7510+56.85	7515+11.57	RT	13-4	6.00	4.00%		309.5		24	Division 2
Edgewood	7515+26.57	7517+83.29	RT	10.00	6.00	4.00%		172.4		24	Division 1
Edgewood	7516+24.55	7516+51.82	LT	6.00	10.00	4.00%			28.9	20	Division 2
Edgewood	7516+72.45	7518+27.51	LT	10.00	10.00	4.00%			174.0	34	Division 1
										6	By Others
Edgewood	7518+49.18	7519+49.70	LT	9.4-10	10.00	2.00%			111.0	40	By Others
Edgewood	7518+08.00	7519+30.80	RT	22.8-10	6.00	2.00%		85.4		12	By Others
										12	Division 1
Edgewood	7519+54.45	7520+87.86	RT	10.00	6.00	4.00%		92.9		24	Division 1
Edgewood	7519+62.07	7521+44.58	LT	10.00	10.00	4.00%			199.1	40	Division 1
Edgewood	7521+61.56	7521+85.97	LT	6.00	10.00	4.00%			25.3	20	Division 2
Edgewood	7521+13.30	7524+87.31	RT	10.00	6.00	4.00%		263.0		24	Division 2
Edgewood	7525+65.07	7525+99.29	RT	4.5-18	6.00	4.00%		57.9		24	Division 2
Edgewood	7525+77.64	7526+01.11	LT	13.00	10.00	4.00%			37.2	12	Division 2

TEMPORARY FLOODLIGHTING LUMINAIRES

No.	Location Station	Offset	Number Lumin.	Remarks
1	7514+32.00	25' RT	1	Edgewood Road - Stage 1C-1D
2	1128+50.00	5' RT	1	Existing IA 100 Median
				Stage 1C-3C
3	N-3478460.1		1	Existing IA 100 EB Shldr.
	E-5413058.74			Stage 1C-3C
4	1129+85.00		1	Existing IA 100 EB Shldr.
				Stage 4

108-11A
08-01-08

HIGHWAY LIGHTING DATA

Electrical service: Alliant Energy Company is the electric utility and will provide secondary service (240/120 volts single phase) for the lighting control station. The contractor shall be responsible for making the necessary contacts with the utility to coordinate electrical service connections to the utility transformer and provide meter sockets per utility specifications. All services shall be metered.

Verify the location of existing underground utilities prior to proceeding with lighting installations. Contractor shall be responsible for coordinating the installation of all lighting/electrical construction/equipment with the construction of other underground utilities throughout the construction corridor.

Handholes HH1 through HH4 shall be RM-42, Type 1, unless noted otherwise.

Roadway Light Pole Assemblies along Ramp A and Ramp B shall consist of Iowa DOT Standard Specification transformer base style light poles with mast arms, but with LED roadway style luminaires. Refer to Tab 108-1 and the P-Sheets for LED roadway style luminaire information/specifications. Each light pole assembly shall be installed per Standard Road Plans RM-31 and RM-34B.

Post-Top Light Pole Assemblies shall be as specified on the P-Sheets. Install assemblies as per manufacturer's instructions/recommendations.

Roadway Luminaires mounted on traffic signal pole structures shall be solid-state LED type as specified on the P-Sheets.

The material quantities and construction for Electric Circuits A-0, A-1, and A-2 are included on the P-Sheets and in Tabulations 108-2 and 108-12. The material quantities and construction of the electric circuits serving the traffic signal mounted roadway luminaires and the post-top light pole assemblies are included in the quantity tabulations for the traffic signals on the N-Sheets.

108-1
08-01-08

LIGHTING INSTALLATIONS

(1) RM-39 and RM-47

Location		RM-31			Footing Type (1)	Remarks
No.	Station	Type	A	E		
A101	42597+10.80	2	n/a	6	RM-39	[1], [6]
A102	42595+10.70	2	n/a	6	RM-39	[1], [6]
A201	41503+59.80	2	n/a	6	RM-39	[1], [6]
A202	41505+60.05	2	n/a	6	RM-39	[1], [6]
S1101						[2], [4]
S1102						[2], [4]
S1103						[2], [4]
S1104						[2], [5]
S1105						[2], [4]
S1106						[2], [4]
S1201						[2], [4]
S1202						[2], [4]
S1203						[2], [4]
S1204						[2], [5]
S1205						[2], [4]
S1206						[2], [4]
S2101						[2], [4]
S2102						[2], [4]
S2103						[2], [4]
S2104						[2], [4]
S3101						[2], [4]
S3102						[2], [4]
S3103						[2], [4]
S3104						[2], [4]
P101						[3]
P102						[3]
P103						[3]
P104						[3]
P105						[3]
P201						[3]
P202						[3]
P203						[3]
P204						[3]
P205						[3]

[1]-Roadway Light Pole Assembly w/ LED Luminaire
[2]-LED Roadway Luminaire on Traffic Signal Luminaire Arm
[3]-Post-Top Light Pole Assembly on Bridge Rail
[4]-135W,Type III
[5]-80W, Type II
[6]-135W,Type II

108-2
08-01-08

ELECTRICAL DUCTS

Location	Conduit Type	Dia. IN	Length FT	Remarks
Circuit A-0	Plastic	2.0	90.0	
Circuit A-1	Plastic	2.0	575.0	
7521+07.50	SCH 80 PVC	2.0	195.0	
42698+96.00	SCH 80 PVC	2.0	50.0	
Circuit A-2	Plastic	2.0	510.0	

108-12
08-01-08

WIRE, CABLE AND CONNECTORS

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. LF	Size A.W.G.	Quan. LF	Size A.W.G.	Quan. LF	Size A.W.G.	Quan. LF	Size A.W.G.	Quan. LF	
A-0									2	195									Quantity includes 2 phase and 1 neutral conductors
A-1			L-2	12	Y-1	4					6	2450					6	1225	
A-1													10	240					Light pole riser conductors
A-2			L-2	2	Y-1	4					6	1240						530	
A-2													10	240					Light pole riser conductors

LICENSED PROFESSIONAL ENGINEER
STEVEN R. JUNOD
13829
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 1/3/14 Date

Steven R. Junod
Printed or Typed Name
My license renewal date is December 31, 2014

Pages or sheets covered by this seal: C.24, P.1 thru P.5

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

(1) Refer to EW-203, EW-204, or EW-211.
*Not a bid item

Location						Longitudinal Subdrain (RF-19C)							Subdrain Outlet					
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (1)			RF-19C, RF-19E, or RF-19F			Porous* Backfill	Class "A"* Crushed Stone	Remarks
						Size	Length	Size	Length	Size	Type	Length	Station	Size	Standard Road Plan and Type			
1	ML100 EB	1084+50.00	1087+73.75	LT	24.0	4.0	343.8									15.9		Connect to Grading 1 Subdrain
2	ML100 EB	1087+76.25	1091+48.75	LT	24.0	4.0	374.6						1087+76.25	6.0	RF-19C	17.3	0.3	Connects to Intake
3	ML100 EB	1091+51.12	1094+98.75	LT	24.0	4.0	349.6						1091+51.12	6.0	RF-19C	16.2	0.3	Connects to Intake
4	ML100 EB	1095+01.25	1098+98.75	LT	24.0	4.0	399.6						1095+01.25	6.0	RF-19C	18.5	0.3	Connects to Intake
5	ML100 EB	1099+01.25	1102+98.75	LT	24.0	4.0	399.6						1099+01.25	6.0	RF-19C	18.5	0.3	Connects to Intake
6	ML100 EB	1103+01.25	1106+98.75	LT	24.0	4.0	399.6						1103+01.25	6.0	RF-19C	18.5	0.3	Connects to Intake
7	ML100 EB	1107+01.25	1110+48.75	LT	24.0	4.0	349.6						1107+01.25	6.0	RF-19C	16.2	0.3	Connects to Intake
8	ML100 EB	1110+51.25	1113+73.75	LT	24.0	4.0	324.6						1110+51.25	6.0	RF-19C	15.0	0.3	Connects to Intake
9	ML100 EB	1113+76.25	1116+48.75	LT	24.0	4.0	274.7						1113+76.25	6.0	RF-19C	12.7	0.3	Connects to Intake
10	ML100 EB	1116+51.25	1121+37.34	LT	24.0	4.0	489.3						1116+51.25	6.0	RF-19C	22.7	0.3	Connects to Intake
11	ML100 EB	1121+37.34	1123+98.75	LT	24.0	4.0	264.1						1123+98.75	6.0	RF-19C	12.2	0.3	Connects to Intake
12	ML100 WB	1084+50.00	1087+73.75	RT	24.0	4.0	323.8									15.0		Connect to Grading 1 Subdrain
13	ML100 WB	1087+76.25	1091+48.75	RT	24.0	4.0	374.6						1087+76.25	6.0	RF-19C	17.3	0.3	Connects to Intake
14	ML100 WB	1091+51.25	1094+98.75	RT	24.0	4.0	349.6						1091+51.25	6.0	RF-19C	16.2	0.3	Connects to Intake
15	ML100 WB	1095+01.25	1098+98.75	RT	24.0	4.0	399.6						1095+01.25	6.0	RF-19C	18.5	0.3	Connects to Intake
16	ML100 WB	1099+01.25	1102+98.75	RT	24.0	4.0	399.6						1099+01.25	6.0	RF-19C	18.5	0.3	Connects to Intake
17	ML100 WB	1103+01.25	1106+98.75	RT	24.0	4.0	399.6						1103+01.25	6.0	RF-19C	18.5	0.3	Connects to Intake
18	ML100 WB	1107+01.25	1110+48.75	RT	24.0	4.0	349.6						1107+01.25	6.0	RF-19C	16.2	0.3	Connects to Intake
19	ML100 WB	1110+51.25	1114+74.36	RT	24.0	4.0	425.2						1110+51.25	6.0	RF-19C	19.7	0.3	Connects to Intake
20	ML100 EB	1086+15.00	1090+74.50	RT	24.0	4.0	474.6						1086+15.00	6.0	RF-19C	22.0	0.3	Connects to Intake
21	ML100 EB	1107+75.00	1110+74.50	RT	24.0	4.0	313.5						1107+75.00	6.0	RF-19E	14.5	0.3	
22	ML100 EB	1110+75.00	1113+75.00	RT	24.0	4.0	314.0						1110+75.00	6.0	RF-19E	14.5	0.3	
23	ML100 WB	1087+05.00	1090+27.25	LT	24.0	4.0	332.3						1087+05.00	6.0	RF-19C	15.4	0.3	Connects to Intake
24	ML100 WB	1090+27.70	1093+74.50	LT	24.0	4.0	362.6						1090+27.70	6.0	RF-19C	16.8	0.3	Connects to Intake
25	ML100 WB	1107+50.00	1111+50.00	LT	24.0	4.0	414.0						1107+50.00	6.0	RF-19E	19.2	0.3	
26	ML100 WB	1115+01.00	1117+48.98	LT	24.0	4.0	248.7						1115+01.00	6.0	RF-19C	11.5	0.3	Connects to Intake
27	ML100 WB	1117+51.02	1121+37.34	LT	24.0	4.0	381.2						1117+51.02	6.0	RF-19C	17.6	0.3	Connects to Intake
28	ML100 WB	1121+37.34	1123+98.99	LT	24.0	4.0	259.4						1123+98.99	6.0	RF-19C	12.0	0.3	Connects to Intake
29	ML100/EDGEB	1084+50.00	42586+99.00	RT	24.0	4.0	249.1									11.5		Connect to Grading 1 Subdrain
30	EDGEWOOD B	42587+01.00	42589+74.00	RT	24.0	4.0	274.0						42587+01.00	6.0	RF-19C	12.7	0.3	Connects to Intake
31	EDGEWOOD B	42589+76.00	42592+49.20	RT	24.0	4.0	274.3						42589+76.00	6.0	RF-19C	12.7	0.3	Connects to Intake
32	EDGEWOOD B	42592+51.00	42595+99.07	RT	24.0	4.0	349.2						42592+51.00	6.0	RF-19C	16.2	0.3	Connects to Intake
33	EDGEB/EDGEBRT	42596+01.00	42695+98.31	RT	24.0	4.0	448.3						42596+01.00	6.0	RF-19C	20.8	0.3	Connects to Intake
34	EDGEWOOD B	42590+52.50	42595+53.50	LT	24.0	4.0	499.3						42590+52.50	6.0	RF-19C	23.1	0.3	Connects to Intake
35	EDGEWOOD B	42595+54.00	42595+97.50	LT	24.0	4.0	41.5						42595+97.50	6.0	RF-19C	1.9	0.3	Slope Towards Intake
36	EDGEWOOD B	42596+02.50	42598+02.26	LT	24.0	4.0	189.8						42596+02.50	6.0	RF-19C	8.8	0.3	Connects to Intake
37	EDGEWOOD B	42598+09.93	42599+02.26	LT	24.0	4.0	84.2						42598+09.93	6.0	RF-19C	3.9	0.3	Connects to Intake
38	EDGEWOOD B	42599+07.74	42599+32.44	LT	24.0	4.0	20.5						42599+07.74	6.0	RF-19C	0.9	0.3	Connects to Intake
39	EDGEWOOD C	43584+50.89	43588+24.00	LT	24.0	4.0	372.9									17.3		Connect to Grading 1 Subdrain
40	EDGEWOOD C	43588+26.00	43592+49.10	LT	24.0	4.0	423.9						43588+26.00	6.0	RF-19C	19.6	0.3	Connects to Intake
41	EDGEWOOD C	43592+51.00	43596+96.00	LT	24.0	4.0	451.2						43592+51.00	6.0	RF-19C	20.9	0.3	Connects to Intake
42	EDGEC/EDGECRT	43597+02.48	43698+89.19	LT	24.0	4.0	182.6						43597+02.48	6.0	RF-19C	8.5	0.3	Connects to Intake
43	EDGEWOOD C	43597+52.74	43598+32.26	RT	24.0	4.0	70.7						43597+52.74	6.0	RF-19C	3.3	0.3	Connects to Intake
44	EDGEWOOD C	43598+37.74	43599+27.26	RT	24.0	4.0	79.8						43598+37.74	6.0	RF-19C	3.7	0.3	Connects to Intake
45	EDGEWOOD C	43599+32.74	43599+55.86	RT	24.0	4.0	43.1						43599+32.74	6.0	RF-19C	2.0	0.3	Connects to Intake
46	EDGEWOOD A	41500+70.63	41501+13.25	RT	24.0	4.0	36.7						41501+13.25	6.0	RF-19C	1.7	0.3	Connects to Intake
47	EDGEWOOD A	41501+18.75	41502+72.25	RT	24.0	4.0	137.4						41502+72.25	6.0	RF-19C	6.4	0.3	Connects to Intake
48	EDGEWOOD A	41502+77.75	41506+72.50	RT	24.0	4.0	389.9						41506+72.50	6.0	RF-19C	18.1	0.3	Connects to Intake
49	EDGEWOOD A	41506+77.49	41509+48.00	RT	24.0	4.0	269.5						41509+48.00	6.0	RF-19C	12.5	0.3	Connects to Intake
50	EDGE A RT	41600+95.81	41601+18.92	LT	24.0	4.0	24.1						41601+18.92	6.0	RF-19C	1.1	0.3	Connects to Intake
51	EDGE A RT	41601+20.75	41601+67.05	LT	24.0	4.0	47.3						41601+20.75	6.0	RF-19C	2.2	0.3	Connects to Intake
52	EDGEART/EDGEA	41601+67.05	41505+24.00	LT	24.0	4.0	359.9						41505+24.00	6.0	RF-19C	16.7	0.3	Connects to Intake
53	EDGEWOOD A	41505+25.90	41509+99.12	LT	24.0	4.0	473.5						41509+99.12	6.0	RF-19C	21.9	0.3	Connects to Intake
54	EDGEA/ML100	41510+00.95	1114+98.80	LT	24.0	4.0	499.6						41510+00.95	6.0	RF-19C	23.1	0.3	Connects to Intake
55	EDGEWOOD D	44500+03.48	44501+12.29	LT	24.0	4.0	98.2						44501+12.29	6.0	RF-19C	4.5	0.3	Connects to Intake
56	EDGEWOOD D	44501+17.69	44506+00.00	LT	24.0	4.0	475.9						44506+00.00	6.0	RF-19E	22.0	0.3	
57	EDGEWOOD D	44506+01.00	44509+25.00	LT	24.0	4.0	336.0						44509+25.00	6.0	RF-19E	15.6	0.3	
58	EDGEWOOD D	44509+26.00	44511+30.00	LT	24.0	4.0	216.0						44511+30.00	6.0	RF-19E	10.0	0.3	
59	EDGEWOOD D	44511+30.75	44512+25.00	LT	24.0	4.0	106.3						44511+30.75	6.0	RF-19E	4.9	0.3	
60	EDGEDRT/EDGED	44600+27.56	44503+99.00	RT	24.0	4.0	367.4						44503+99.00	6.0	RF-19C	17.0	0.3	Connects to Intake
61	Edgewood D	44504+00.90	44508+24.00	RT	24.0	4.0	423.8						44508+24.00	6.0	RF-19C	19.6	0.3	Connects to Intake
62	Edgewood D	44508+25.90	44511+81.25	RT	24.0	4.0	356.6						44511+81.25	6.0	RF-19C	16.5	0.3	Connects to Intake
63	Edgewood D	44511+83.08	44513+70.81	RT	24.0	4.0	188.7						44511+83.08	6.0	RF-19C	8.7	0.3	Connects to Intake
64	EDGED/ML100	44513+72.82	1117+25.00	RT	24.0	4.0	353.9						44513+72.82	6.0	RF-19C	16.4	0.3	Connects to Intake
65	Edgewood	7501+50.00	7505+71.92	RT	24.0	6.0	423.0						7505+71.92	8.0	RF-19C	19.6	0.3	Connects to Intake
66	Edgewood	7505+73.75	7508+27.86	RT	24.0	6.0	255.6						7508+27.86	8.0	RF-19C	11.8	0.3	Connects to Intake
67	Edgewood	7508+29.73	7510+54.22	RT	24.0	6.0	221.5						7508+29.73	8.0	RF-19C	10.3	0.3	Connects to Intake
68	EDGE/EDGEDRT	7510+56.09	44600+27.56	RT	24.0	6.0	421.9						7510+56.09	8.0	RF-19C	19.5	0.3	Connects to Intake
69	Edgewood	7514+04.72	7515+60.44	RT	24.0	6.0	155.8						7514+04.72	8.0	RF-19C	7.2	0.3	Connects to Intake
70	Edgewood	7515+60.44	7517+73.88	RT	24.0	6.0	214.4						7517+73.88	8.0	RF-19C	9.9	0.3	Connects to Intake
71	Edgewood	7519+52.38	7520+93.95	RT	24.0	6.0	142.6						7520+93.95	8.0	RF-19C	6.6	0.3	Connects to Intake
72	Edgewood	7521+00.49	7524+10.48	RT	24.0	6.0	326.2						7524+10.48	8.0	RF-19C	15.1	0.3	Connects to Intake
73	Edgewood	7524+12.35	7524+95.17	RT	24.0	6.0	123.4						7524+12.35	8.0	RF-19C	5.7	0.3	Slope Towards Intake

GEOTECHNICAL DESIGN

LICENSED PROFESSIONAL ENGINEER
Emad Farouz
15897
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: Emad Farouz — Date: 1/3/2013

EMAD FAROUZ
Printed or Typed Name

My license renewal date is December 31, 20 14

Pages or sheets covered by this seal: CS.1-CS.3, Q.0-Q.40

104-9
10-15-13

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

(1) Refer to EW-203, EW-204, or EW-211.
*Not a bid item

Location						Longitudinal Subdrain (RF-19C)							Subdrain Outlet					
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (1)			RF-19C, RF-19E, or RF-19F			Porous* Backfill	Class "A"* Crushed Stone	Remarks
						Size	Length	Size	Length	Size	Type	Length	Station	Size	Standard Road Plan and Type			
74	Edgewood	7525+58.49	7530+06.95	RT	24.0	6.0	495.6						7530+06.95	8.0	RF-19C	22.9	0.3	Connects to Intake
75	Edgewood	7530+08.76	7533+20.00	RT	24.0	6.0	315.4						7530+08.76	8.0	RF-19C	14.6	0.3	Connects to Intake
76	Edgewood	7501+50.00	7504+96.92	LT	24.0	6.0	348.0						7504+96.92	8.0	RF-19C	16.1	0.3	Connects to Intake
77	Edgewood	7504+96.92	7508+27.97	LT	24.0	6.0	330.4						7508+27.97	8.0	RF-19C	15.3	0.3	Connects to Intake
78	Edgewood	7508+29.77	7509+25.12	LT	24.0	6.0	101.5						7508+29.77	8.0	RF-19C	4.7	0.3	Connects to Intake
79	North River	7207+31.00	7208+62.70	RT	24.0	6.0	221.2						7208+62.70	8.0	RF-19C	10.2	0.3	Conntect to Intake
																		on Left Side of Road
80	North River	7207+31.00	7208+62.70	LT	24.0	6.0	131.8						7208+62.70	8.0	RF-19C	6.1	0.3	Connects to Intake
81	North River	7208+63.70	7209+13.85	RT	24.0	6.0	142.0						7208+63.70	8.0	RF-19C	6.6	0.3	Slope Towards Intake
																		Connect to Intake on
																		Left Side of Road
82	NRB/Edgewood	7208+63.70	7510+75.58	LT	24.0	6.0	96.7						7208+63.70	8.0	RF-19C	4.5	0.3	Connects to Intake
83	Edgewood	7510+77.38	7515+60.44	LT	24.0	6.0	490.5						7510+77.38	8.0	RF-19C	22.7	0.3	Connects to Intake
84	Edgewood	7515+65.30	7517+73.92	LT	24.0	6.0	209.6						7517+73.92	8.0	RF-19C	9.7	0.3	Connects to Intake
85	Edgewood	7519+56.14	7521+49.92	LT	24.0	6.0	194.8						7521+49.92	8.0	RF-19C	9.0	0.3	Connects to Intake
86	EDGECRT/Edge	43698+89.19	7523+64.18	LT	24.0	6.0	263.4						7523+64.18	8.0	RF-19C	12.2	0.3	Connects to Intake
87	Edgewood	7523+66.09	7527+46.88	LT	24.0	6.0	378.9						7527+46.88	8.0	RF-19C	17.5	0.3	Connects to Intake
88	Edgewood	7527+48.68	7530+08.09	LT	24.0	6.0	258.8						7530+08.09	8.0	RF-19C	12.0	0.3	Connects to Intake
89	Edgewood	7530+09.94	7533+20.00	LT	24.0	6.0	309.3						7530+09.94	8.0	RF-19C	14.3	0.3	Connects to Intake
90	ML100 WB	1098+27.00	1101+82.00	LT	24.0	6.0	395.0						1098+27.00	6.0	RF-19E	18.3	0.3	See U.38 for Details
													1101+82.00	6.0	RF-19E		0.3	See U.38 for Details
91	ML100 EB	1098+17.00	1101+40.00	RT	24.0	6.0	363.0						1098+17.00	6.0	RF-19E	16.8	0.3	See U.38 for Details
													1101+40.00	6.0	RF-19E		0.3	See U.38 for Details
	Totals						26636.4								89	1233.0	23.9	

SPECIAL ATTENTION (SLIVER FILL)

Special attention should be given to Section 2107.03.C of Standard Specifications on this project

104-9
10-15-13

LONGITUDINAL SUBDRAIN SHOULDER AND BACKSLOPE

Refer to Soils Sheets

(1) Refer to EW-203, EW-204, or EW-211.
*Not a bid item

Location						Longitudinal Subdrain (RF-19C)							Subdrain Outlet					
Line No.	Road or Lane Ident.	Station to Station		Side	Depth (D)	Shoulder		Backslope		Bridge Berm (1)			RF-19C, RF-19E, or RF-19F			Porous* Backfill	Class "A"* Crushed Stone	Remarks
						Size	Length	Size	Length	Size	Type	Length	Station	Size	Standard Road Plan and Type			
					IN	IN	FT	IN	FT	IN		FT		IN		CY	CY	
95	ML100 WB	1091+50.00	1094+25.00	LT	66.0			4.0	295.0				1094+25.00	6.0	RF-19E	36.4	0.3	
96	ML100 WB	1094+25.00	1097+20.00	LT	66.0			4.0	315.0				1094+25.00	6.0	RF-19E	38.9	0.3	
97	ML100 WB	1097+25.00	1098+60.00	LT	66.0			4.0	165.0				1097+25.00	6.0	RF-19E	20.4	0.3	
98	ML100 WB	1101+20.00	1102+50.00	LT	66.0			4.0	170.0				1101+20.00	6.0	RF-19E	21.0	0.3	
99	ML100 WB	1102+50.00	1103+25.00	RT	66.0			4.0	115.0				1102+50.00	6.0	RF-19E	14.2	0.3	
100	ML100 WB	1103+25.00	1105+00.00	RT	66.0			4.0	215.0				1103+25.00	6.0	RF-19E	26.5	0.3	
101	ML100 WB	1105+00.00	1110+00.00	RT	66.0			4.0	540.0				1105+00.00	6.0	RF-19E	66.7	0.3	
	TOTALS								1935.0						7	224.1	2.1	

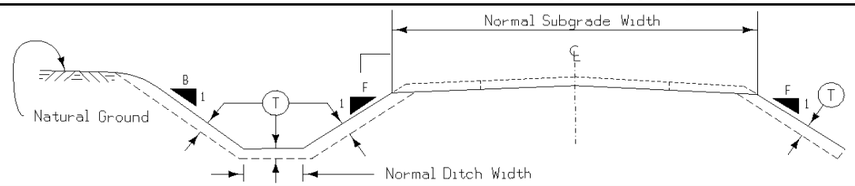
TABLE 1

Subdrain No.	Start/End Station & Offset	Flowline Elvn (ft)	Remarks
95	1091+50 LT 73'	825	Plug and Cap
	1094+25 LT 83'	823	RF 19E Outlet
96	1094+25 LT 83'	823	RF 19E Outlet
	1097+20 LT 90'	830	Plug and Cap
97	1097+25 LT 125'	838	RF 19E Outlet
	1098+60 LT 90'	828	Plug and Cap
98	1101+20 RT 91'	827	RF 19E Outlet
	1102+50 RT 128'	828	Plug and Cap
99	1102+50 RT 128'	828	RF 19E Outlet
	1103+25 RT 156'	829	Plug and Cap
100	1103+25 RT 156'	829	RF 19E Outlet
	1105+00 RT 140'	830	Plug and Cap
101	1105+00 RT 140'	829.5	RF 19E Outlet
	1110+00 RT 83'	831.5	Plug and Cap

Notes:
1. Back slope drains shall be provided at the locations and for the extents as outlined in CS. and Q. sheets. All corresponding estimates are according to typical depth 'D' dimension of 66" as per Type 11 installation for back slopedrains. The CS, Q and Cross Section Sheets provide approximate flow line elevations for the back slope drains(see table 1). The exact flow line elevations of the back slope drains shall be determined in the field by the Contractor based on the actual elevation of bedrock at the corresponding station ranges, such that any rock excavation that may be required to install the back slope drains is minimized. The contractor shall ensure that all backslope drains will maintain positive drainage to carry the water away from the slopes and to the outlets. Any changes necessary will be accomplished with approval from The Engineer and at no additional cost to the DOT.

103-4
04-19-11

TABULATION OF SPREADING TOPSOIL



Perform this work according to Section 2105. Prior to placing topsoil on any cohesive soil, scarify the area to be covered to a minimum depth of 3 inches.

Appropriate adjustments have been made in the template quantities to reflect the placement of topsoil on foreslope, backslope and ditch bottom as detailed hereon.

Placement Description								Topsoil Excavation Available From			
Area	Quantity	Location		Side	Slope	T	Remarks	Amount Reserved	Station to Station		Remarks
No.	CY	Station to Station		L. or R.	B. or F.	IN		CY			
1	7126.0	1084+50.00	1129+00.00	ALL	ALL	8.0		8163.0	1084+50.00	1129+00.00	ML100
2	1029.0	41500+69.91	41511+50.00	ALL	ALL	8.0		1180.0	41500+69.91	41511+50.00	EDGE A
3	132.0	41600+50.00	41602+60.00	ALL	ALL	8.0		151.0	41600+50.00	41602+60.00	EDGE A RT
4	1830.0	42586+00.00	42599+33.21	ALL	ALL	8.0		2095.0	42586+00.00	42599+33.21	EDGE B
5	65.0	42697+95.00	42700+17.98	ALL	ALL	8.0		73.0	42697+95.00	42700+17.98	EDGE B RT
6	1937.0	43587+00.00	43599+58.45	ALL	ALL	8.0		2225.0	43587+00.00	43599+58.45	EDGE C
7	198.0	43697+25.00	43699+75.78	ALL	ALL	8.0		226.0	43697+25.00	43699+75.78	EDGE C RT
8	1654.0	44500+25.00	44513+75.00	ALL	ALL	8.0		1893.0	44500+25.00	44513+75.00	EDGE D
9	50.0	44599+92.45	44603+75.00	ALL	ALL	8.0		56.0	44599+92.45	44603+75.00	EDGE D RT
10	3912.0	7501+50.00	7533+20.00	ALL	ALL	8.0		4482.0	7501+50.00	7533+20.00	SR EDGE
	17933.0	TOTAL						20544.0	TOTAL		

103-7
08-01-08

SHRINKAGE DATA

Material	%	Remarks
Class 10	30%	
Topsoil Salvage	40%	
Boulder Estimate		200 CY

104-5C
04-17-12

LIST OF SUBDRAIN WORK

Refer to Standard Road Plans RF-3, RF-5, RF-14, RF-19A, RF-19B, RF-19C, RF-19E and RF-19F

* Not a bid item

Location				Pipe			Aprons		Outlets									
No.	Station to Station		Type of Installation	Concrete C.M.P., C.M.P. Coated, or Plastic	Dia.	Length	RF-3	RF-5	RF-19E	RF-19F		Connected Pipe Joints (RF-14)*	Trench Drain	Granular Material Blanket	Porous Backfill*	Class "A" Crushed Stone*	Remarks
					IN	LF	No.	No.	No.	Type	No.	Type	LF	CY	CY	CY	
	1098+82.00	1109+25.00												4217.0			Granular Blanket
105	1098+81.90	1101+21.00	Type 2	Plastic	4.0	330				A	2						22.5' RT
106	1101+27.00	1102+97.00	Type 2	Plastic	4.0	260				A	2						22.5' RT
107	1103+03.00	1106+97.00	Type 2	Plastic	4.0	484				A	2						22.5' RT
108	1107+03.00	1109+25.00	Type 2	Plastic	4.0	267				A	1						22.5' RT, Cap and Plug Sta. 1109+25
109	1098+81.90	1101+26.60	Type 2	Plastic	4.0	335				A	2						22.5' LT
110	1101+32.60	1104+97.00	Type 2	Plastic	4.0	455				A	2						22.5' LT
111	1105+03.00	1109+25.00	Type 2	Plastic	4.0	467				A	1						22.5' LT, Cap and Plug Sta. 1109+25
112	1099+04.00	1101+22.50	Type 2	Plastic	4.0	219					2*						Along Centerline
113	1101+27.60	1102+96.20	Type 2	Plastic	4.0	169					2*						Along Centerline
114	1103+03.80	1106+96.20	Type 2	Plastic	4.0	392					2*						Along Centerline
115	1107+03.80	1109+25.00	Type 2	Plastic	4.0	221					1*						Along Centerline, Cap and Plug Sta. 1109+25
	Totals					3599					21			4217.0			

*Connect to intake, RF-19C outlets

103-6
04-19-11

EMBANKMENT WITH MOISTURE CONTROL

Moisture content shall be within the limits of minus 2 and plus 2 percentage points of Optimum Moisture Content for maximum density within the area described and listed below.

Moisture Control is required for all Class 10 fill placed in all locations and depths. Stability berms placed outside the normal foreslope template and topsoil will not require Moisture Control.

Quantity: 79,583 cy

Remarks:
Includes class 10 fill placement for mainline, sideroads, ramps and temporary detours.

103-1
10-19-10

EMBANKMENT WITH MOISTURE AND DENSITY CONTROL

Moisture content shall be within the limits of minus 2 and plus 2 percentage points of optimum for maximum density within the area described and listed below.

Location		Lane	Depth	Compact	Remarks
Station to Station			FT	CY	
1089+00.00	1110+00.00			64331.0	Includes 63,337 cy placement of granular fillin MSE wall reinforced zones and MSE wall over-excavation areas as per section 2432.03.G of Standard Specifications. Also included is 994 cy of granular fill to be placed behind abutments as shown in detail on U.32

SURVEY SYMBOLS

- EW Edge of Water
- HDG Hedge Row
- INB Storm Sewer Beehive Intake
- BNK Stream Bank
- ENU Edge Unpaved Entrance & Parking
- SNP Unpaved Shoulder
- FCL Chain Link and Security Fence
- FWD Wood Fence
- GDL Guard Rail (Rail and Cable)
- RR Centerline of Railroad Tracks
- RET Retaining Walls
- RIP Rip-Rap
- TEV Evergeen Tree
- TDC Tree Deciduous
- LUM Luminaire
- PPA Power Pole Co. 1
- SIGN SI Sign
- TA TA Tower Anchor
- SWP Swamp or Marsh
- MIS Miscellaneous
- UB UB Utility Box
- MH Utility Access (Manhole)
- IN Storm Sewer Intake
- TV Satelite TV Dish
- GP GP Guard Post (Less Than 4 Posts)
- FHD Fire Hydrants
- Flg FLG Flag Poles
- TSG Traffic Signal

UTILITY LEGEND

------E3------ ------E4------	Alliant Energy Contact: Jason Hogan Phone: 608-458-4871
— — San. — — — — W — — — — St. S. — —	City of Cedar Rapids Contact: Ken Russell (Water) Phone: 319-286-5950 Contact: Dave Wallace (Sanitary Sewer) Phone: 319-286-5910
— —San.2 — —	City of Palo Contact: Glenn Lange Phone: 319-540-6746
— — —T1— — —	IMON Communication Contact: Lennox Marnor Phone: 319-261-4640
— — —FO— — —	Iowa Communications Network Contact: Larry Klawitter Phone: 515-725-4741
— — -FO2— — —	Iowa Network Services Contact: Jeff Klocko Phone: 515-240-2644
------E1------ ------E2------	Linn County REC Contact: Kim Colberg Phone: 319-377-1587
— — — G— — —	MidAmerican Energy - Gas Distribution Contact: Greg Wildebour Phone: 319-298-5162
— — — TV — — — — — -FO5— — —	Mediacom Broadband, LLC Contact: Joe Ernster Phone: 319-395-9699
— — — TV — — — — — -FO5— — —	Windstream/PAETEC Contact: Gregory Troeger Phone: 319-790-7678
— — - T2 — — — — — - T3 — — —	Centurylink (Formerly Qwest) Contact: Carroll Wheaton Phone: 515-554-9711
------E5------	ITC Midwest Contact: Chad Levi Phone: 319-297-6765
	Iowa Department of Transportation Contact: Dennis Perrin Phone: 319-364-8189
	City of Cedar Rapids - Joint Communications Network Contact: Keith Nuehring Phone: 319-286-5622
	City of Cedar Rapids - Traffic Engineering Contact: Tom Peterson Phone: 319-286-5847
	Atkins Telephone Contact: Todd Christerson Phone: 319-446-7331

UNIQUE SYMBOLS FOR THIS PROJECT

— — -G-HP— — -	Proposed 10" High Pressure Gas
GP	Fence Gate Post
MB	Mailbox
	SW-401
	SW-402
	SW-508
	SW-509
	SW-510
	SW-512
	SW-546
	SW-547
	SW-549

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

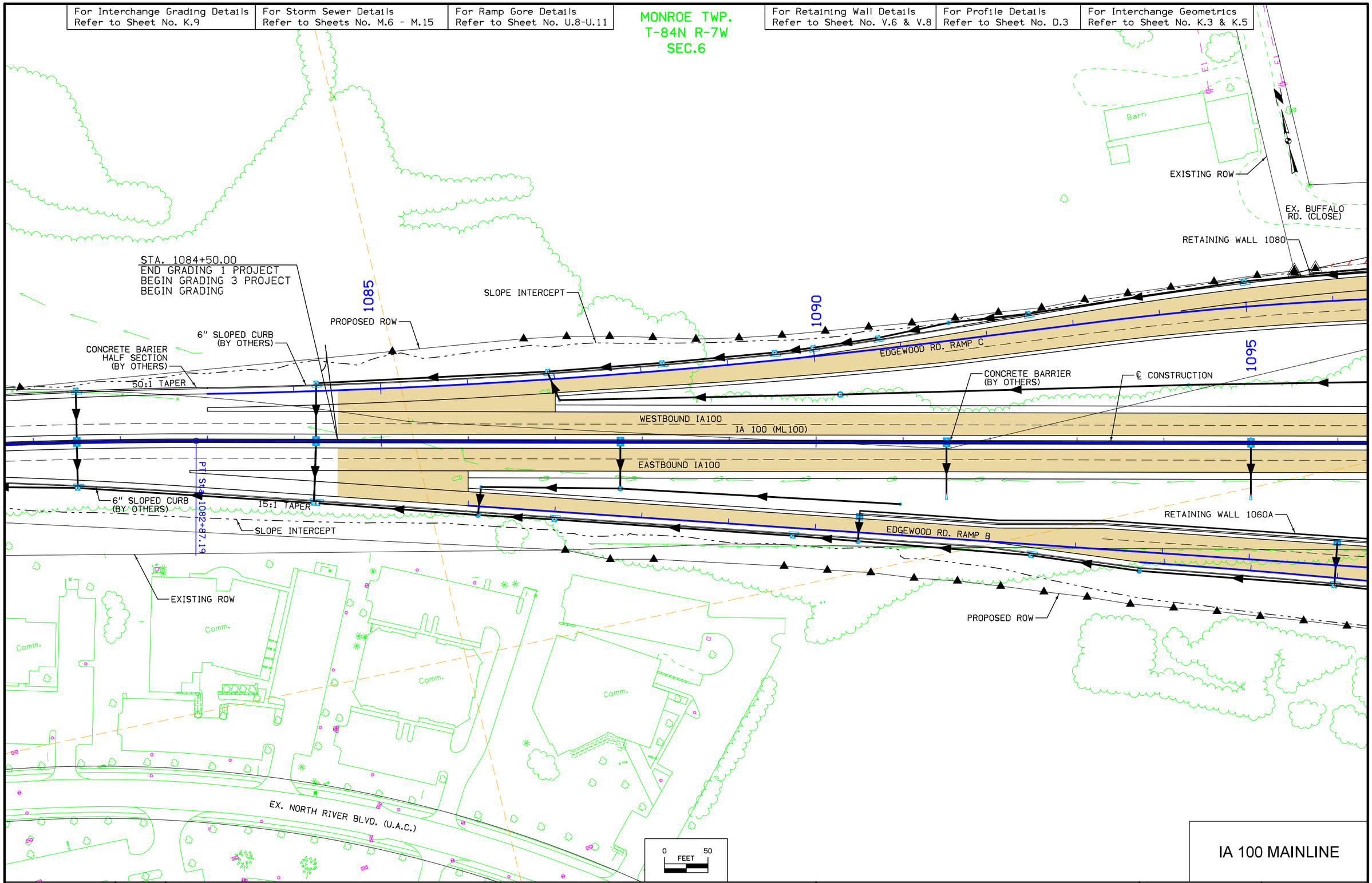
- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- C/A Access Control
- Property Line

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

For Interchange Grading Details Refer to Sheet No. K.9	For Storm Sewer Details Refer to Sheets No. M.6 - M.15	For Ramp Gore Details Refer to Sheet No. U.8-U.11	For Retaining Wall Details Refer to Sheet No. V.6 & V.8	For Profile Details Refer to Sheet No. D.3	For Interchange Geometrics Refer to Sheet No. K.3 & K.5

MONROE TWP.
T-84N R-7W
SEC.6



IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER D.2

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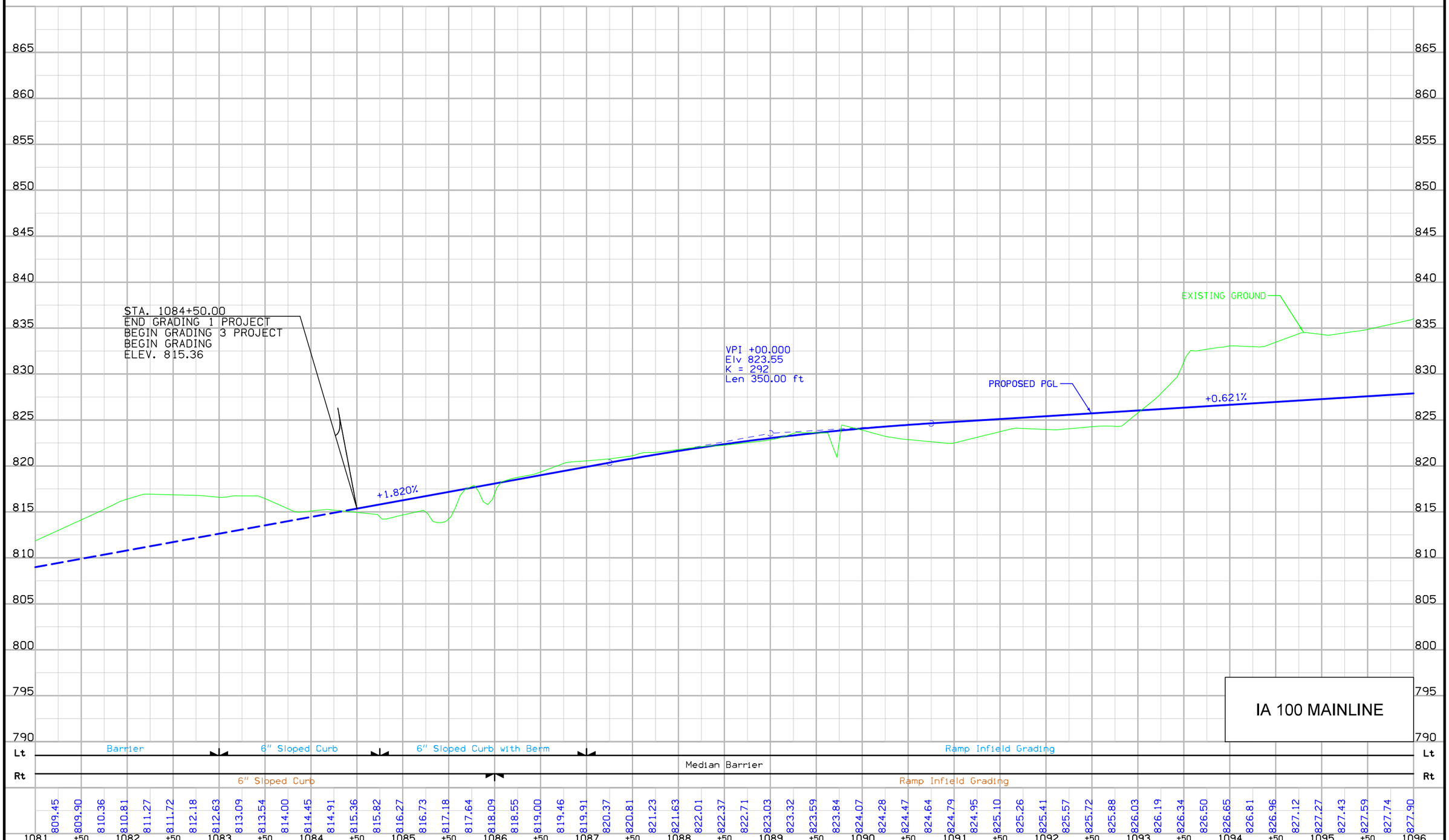

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER D.3

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For Bridge Situation Plan
Refer to Sheet No. V.1 & V.2

For Retaining Wall Details
Refer to Sheet No. V.3-V.8

For Profile Details
Refer to Sheet No. D.5

For Interchange Geometrics
Refer to Sheet No. K.1 - K.8

For Interchange Grading Details
Refer to Sheet No. K.9

MONROE TWP.
T-84N R-7W
SEC.6

PROPOSED ROW
PROPOSED 10" HP GAS
(BY OTHERS)
SLOPE INTERCEPT
RETAINING WALL 1080
EX. BUFFALO RD. (CLOSE)
FUTURE ROW
EDGEWOOD RD. RAMP C RT. TURN
EDGEWOOD RD. RAMP C
RETAINING WALL 1050B
RETAINING WALL 1050A
SOD FLUME
LETDOWN
6" SLOPED CURB
(BY OTHERS)
℄ CONSTRUCTION
6" SLOPED CURB
(BY OTHERS)
SOD FLUME
LETDOWN
RETAINING WALL 1060A
RETAINING
WALL 1060B
EDGEWOOD RD. RAMP B
EDGEWOOD RD. RAMP B
RT. TURN
PROPOSED ROW
(REMOVE)
Sta. 1100+34.50, 29.6' Rt.
4' X 4' X 280.6' Conc. Box
SLOPE INTERCEPT
EDGEWOOD RD.
EXISTING ROW
EX. EDGEWOOD RD. RAMP A (REMOVE)
EDGEWOOD RD. RAMP A
RT. TURN
1105
SLOPE INTERCEPT
EDGEWOOD RD. RAMP A
1110
RETAINING WALL 1050C
92°45'49.44"
WESTBOUND IA100
IA 100 (ML100)
EASTBOUND IA100
POT STA. 1100+10.73 (IA 100) =
POT STA. 7518+88.88 (EDGEWOOD RD.)
RETAINING
WALL 1060B
ROCK
SPLASH
BASIN
CONCRETE BARRIER
(BY OTHERS)
ROCK
SPLASH
BASIN
CONCRETE BARRIER
EX. EDGEWOOD RD. RAMP D (REMOVE)
EDGEWOOD RD. RAMP D
EDGEWOOD RD. RAMP D
RT. TURN
SLOPE INTERCEPT
EXISTING ROW
EX. EDGEWOOD RD.
RAMP D (REMOVE)
Comm.
Comm.
Sta. 1101+71.50, 72.0' LT
Install SW-512 24"
Top of Grate Elev. 826.40
(REMOVE)
Sta. 1106+01.50, 118.6' Lt.
24" X 68.5' Conc. Pipe
(REMOVE)
Sta. 1109+__.__,
__" X ___.__' Conc. Pipe
STA. 1108+00.00
END GRADING
BEGIN GRADE & PAVE
(REMOVE)
Sta. 1108+97.50, 114.6' Rt.
24" X 69.3' Conc. Pipe
(REMOVE)
Sta. 1109+06.10, 113.7' Rt.
24" X 69.0' Conc. Pipe
Sta. 1101+25.00, 68.0' RT
Install SW-512 36"
Top of Grate Elev. 826.11
Sta. 1103+00.00, 65.6' RT
Install RF-3 15"
Outlet F.L. 827.20
Sta. 1107+00.00, 67.6' RT
Install RF-3 15"
Outlet F.L. 829.04

0 50
FEET

For Ramp Gore Details
Refer to Sheet No. U.7-U.14

For Edgewood Rd. Details
Refer to Sheets No. E.3-E.4

For Storm Sewer Details
Refer to Sheets No. M.7 & M.14

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER D.4

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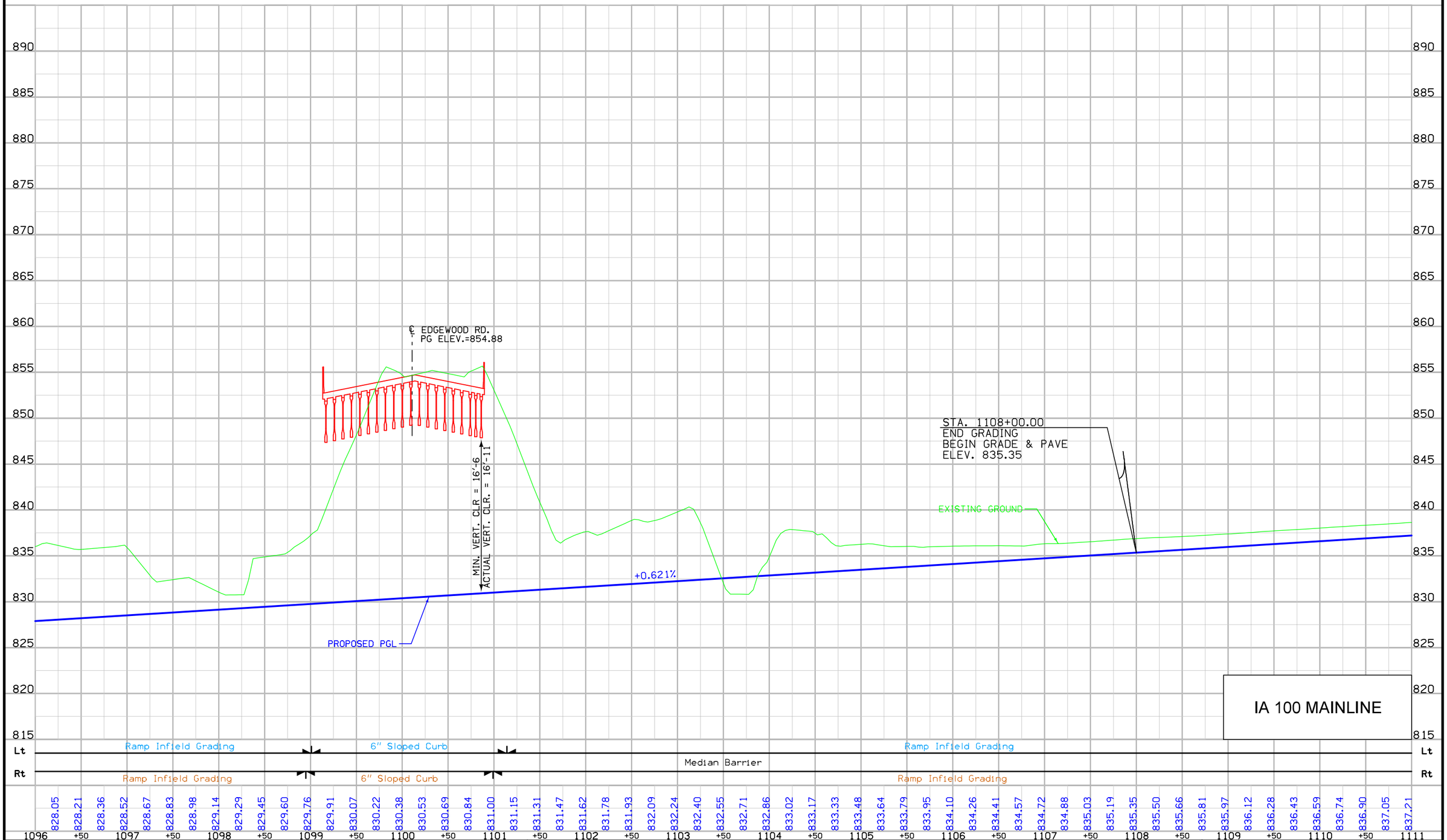

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER D.5	

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For Storm Sewer Details Refer to Sheets No. M.8 - M.17

For Ramp Gore Details Refer to Sheet No. U.5 - U.13

For Profile Details Refer to Sheet No. D.7

For Interchange Geometrics Refer to Sheet No. K.1 & K.7

MONROE TWP.
T-84N R-7W
SEC.6

Curve Data

Δ = 21° 39′ 01.53″ (LT)
D = 1° 49′ 28.94″
R = 3,140.00
T = 600.42
L = 1,186.52
E = 56.89
e = 4.20%
L = 178.00
x = 85.00
m = 53.40
DS = 60mph

STA. 1115+70.00, 46.00′ LT.
BEGIN TAPER

+75 SIGN BRIDGE
(BY OTHERS)

PC Sta 1115+83.96

EXISTING ROW

1115

EDGEWOOD RD. RAMP A

15:1 TAPER

SLOPE INTERCEPT

STA. 1121+40, 46.00′ LT.
BEGIN TAPER

1120

6″ SLOPED CURB

STA. 1123+20, 34.00′ LT.
END TAPER

1125

15:1 TAPER

WESTBOUND IA100

IA 100 (ML100)

EASTBOUND IA100

EDGEWOOD RD. RAMP D

STA. 1116+00.00, 54.00′ RT.
BEGIN TAPER

50:1 TAPER

CONCRETE BARRIER

℄ CONSTRUCTION

STA. 1126+00, 34.00′ RT.
END TAPER

PI Sta 1121+84.38

6″ SLOPED CURB

SLOPE INTERCEPT

EXISTING ROW

STOCKPILE

W.E.
836.3

Sta. 1115+25.00, 86.9′ RT
Install SW-512 24″
Top of Grate Elev. 835.27

0 FEET 50

For Grading Details
Refer to Sheet No. K.9 & K.10

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER D.6

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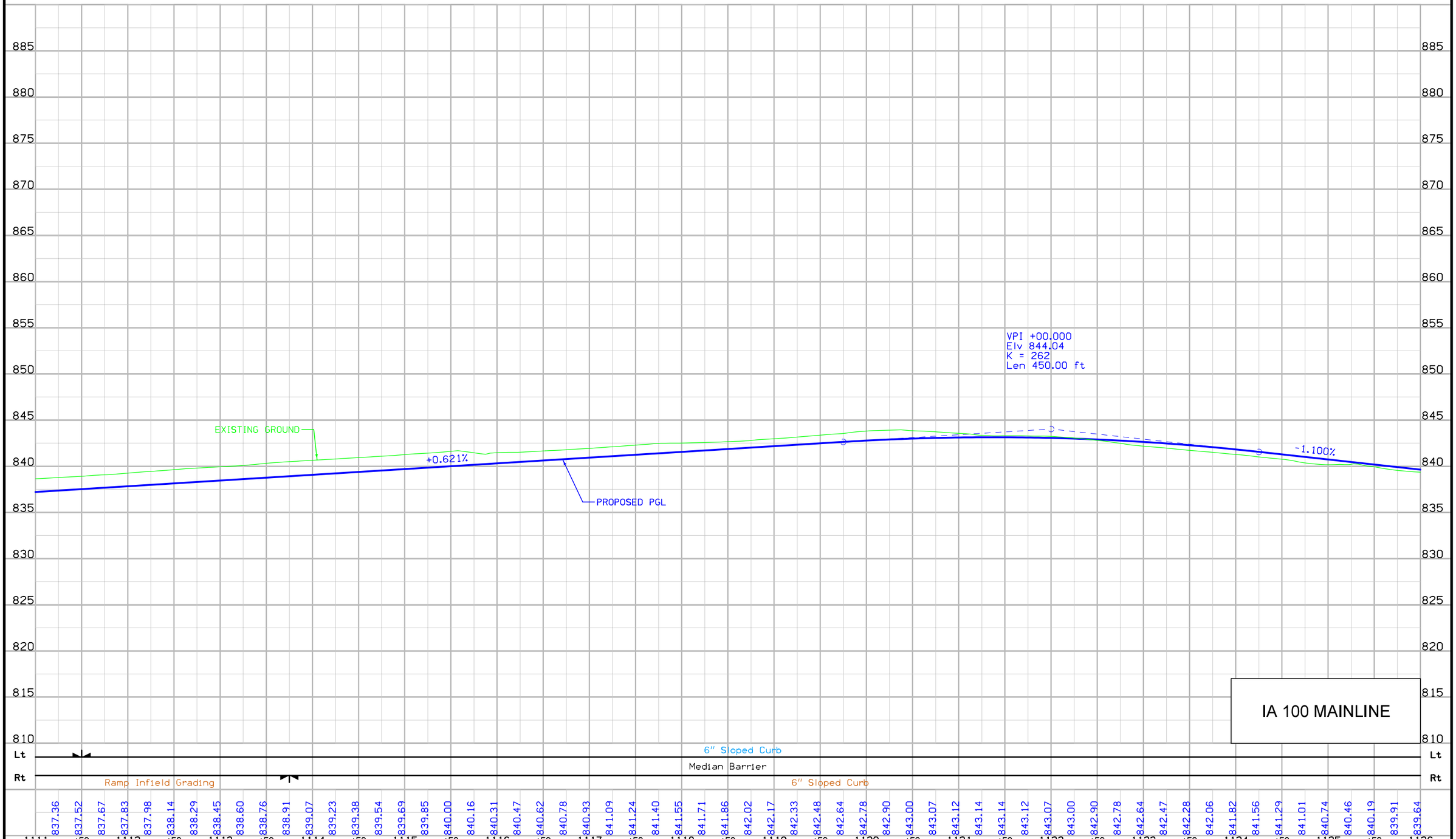

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER D.7

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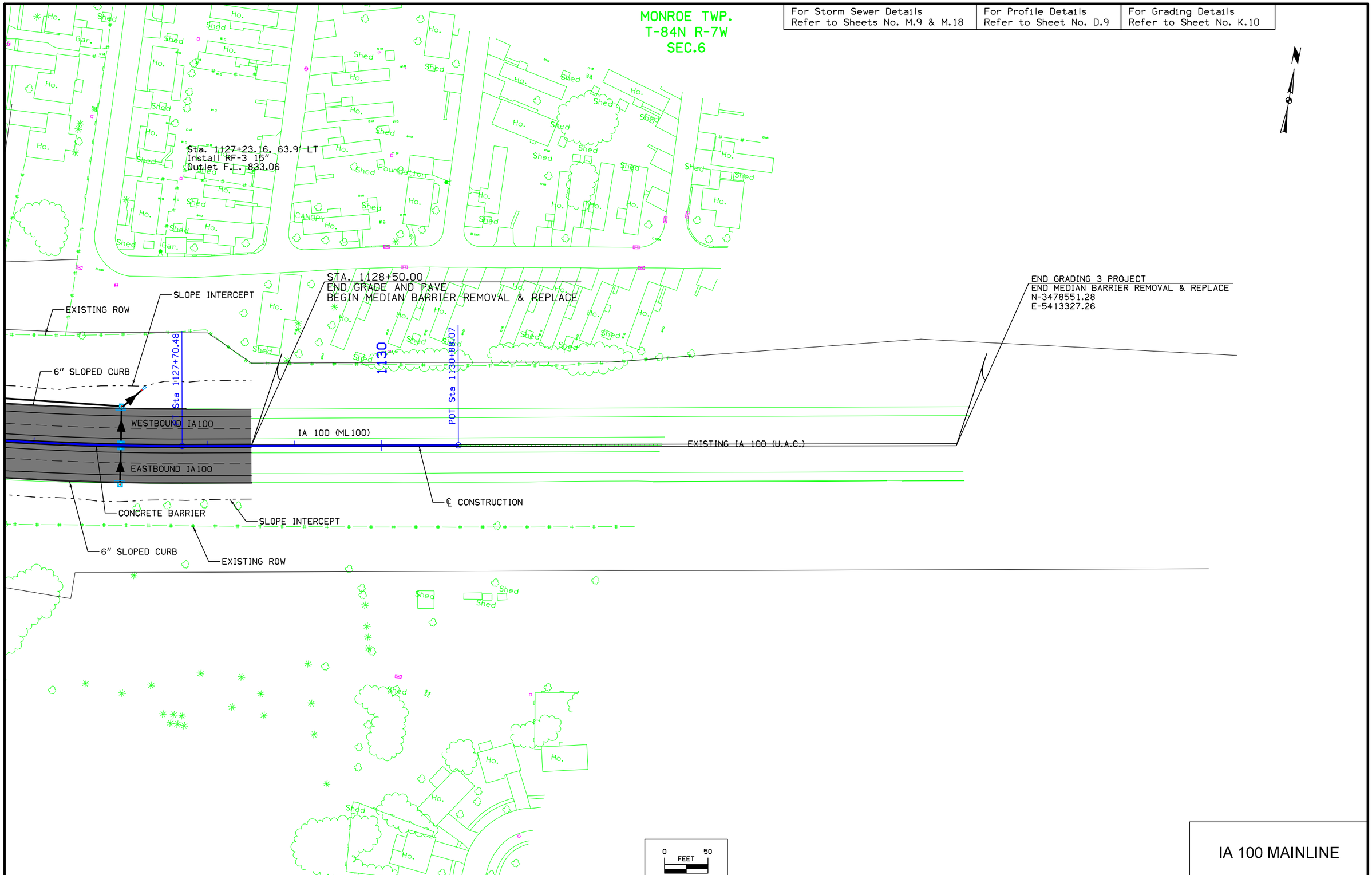
For Storm Sewer Details Refer to Sheets No. M.9 & M.18	For Profile Details Refer to Sheet No. D.9	For Grading Details Refer to Sheet No. K.10



IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER D.8

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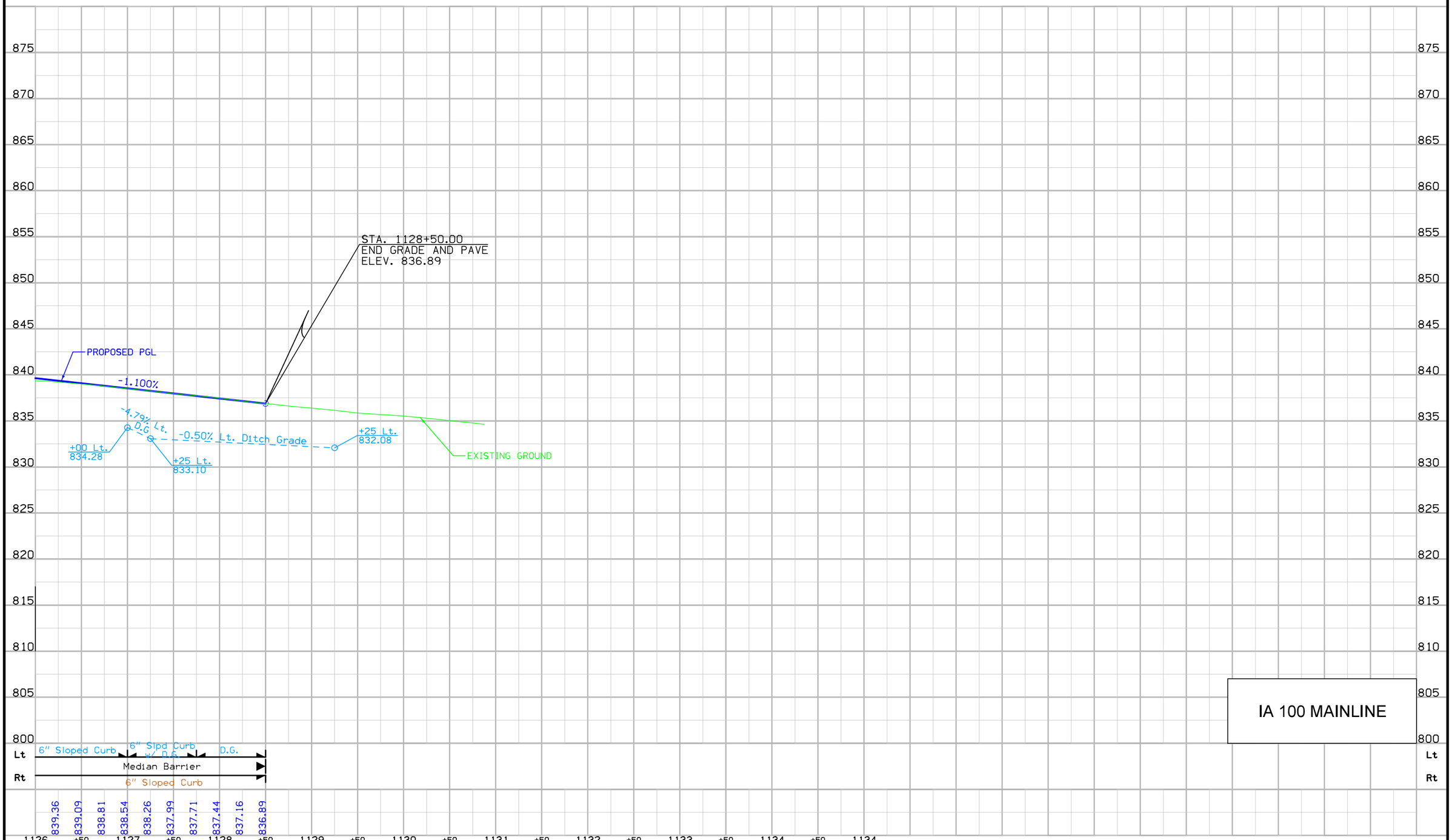

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER D.9	

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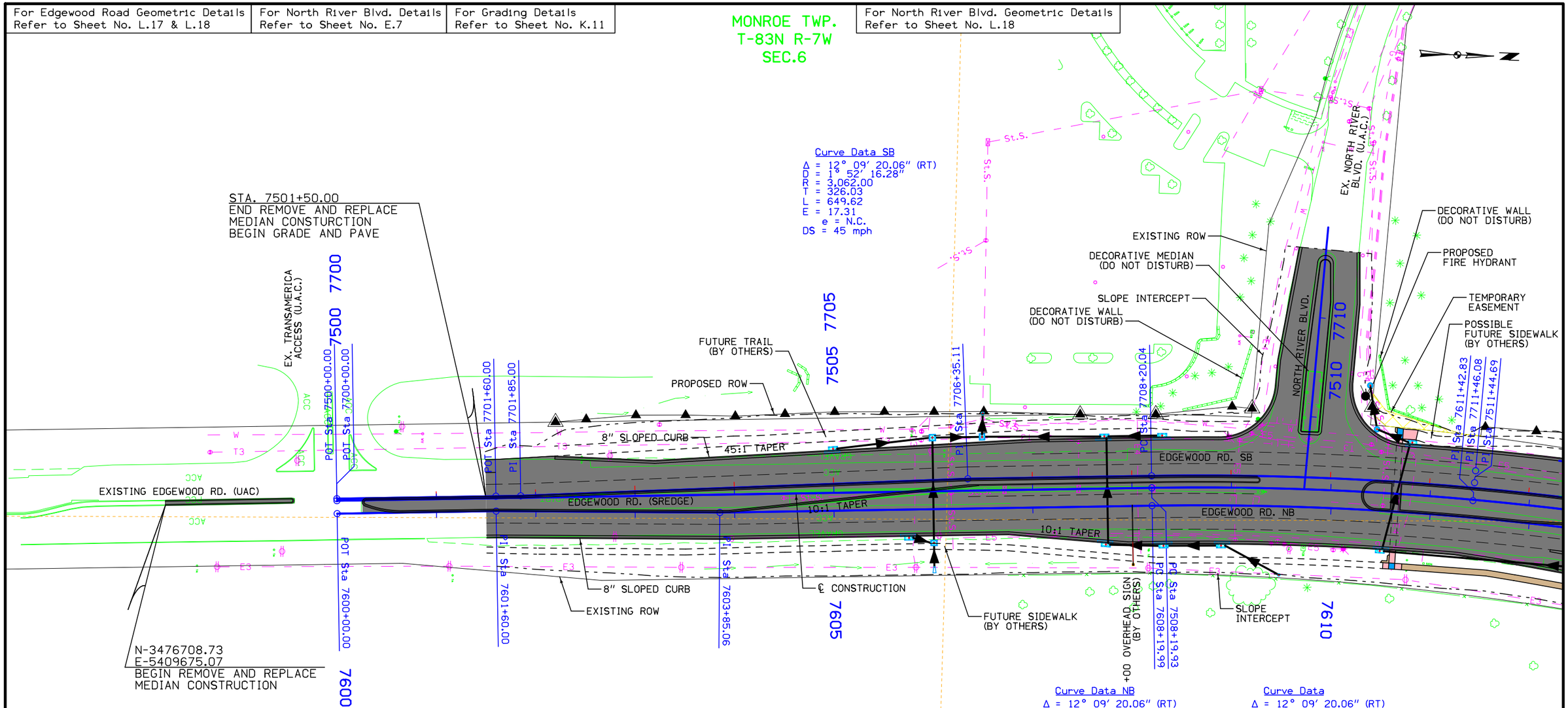
For Edgewood Road Geometric Details
Refer to Sheet No. L.17 & L.18

For North River Blvd. Details
Refer to Sheet No. E.7

For Grading Details
Refer to Sheet No. K.11

MONROE TWP.
T-83N R-7W
SEC.6

For North River Blvd. Geometric Details
Refer to Sheet No. L.18



STA. 7510+30.00, 96.3′ LT
INSTALL FIRE HYDRANT ASSEMBLY

ABANDONED EXISTING 16″ DIA WATER MAIN
FROM APPROX. STA. 7511+00 55′ LT ±
TO STA. 7515+75, 110′ RT ±

REMOVE EXISTING 16″ DIA WATER MAIN
FROM APPROX STA. 7510+40, 56.0′ LT ±
TO STA. 7511+00, 55′ LT ±

EDGEWOOD ROAD

For Signal & Ped. Control Details
Refer to N Sheets

For Sidewalk Details
Refer to S Sheets

0 50
FEET

For Profile Details
Refer to Sheet No. E.2

For Storm Sewer Details
Refer to Sheets No. M.19-M.20

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER E.1

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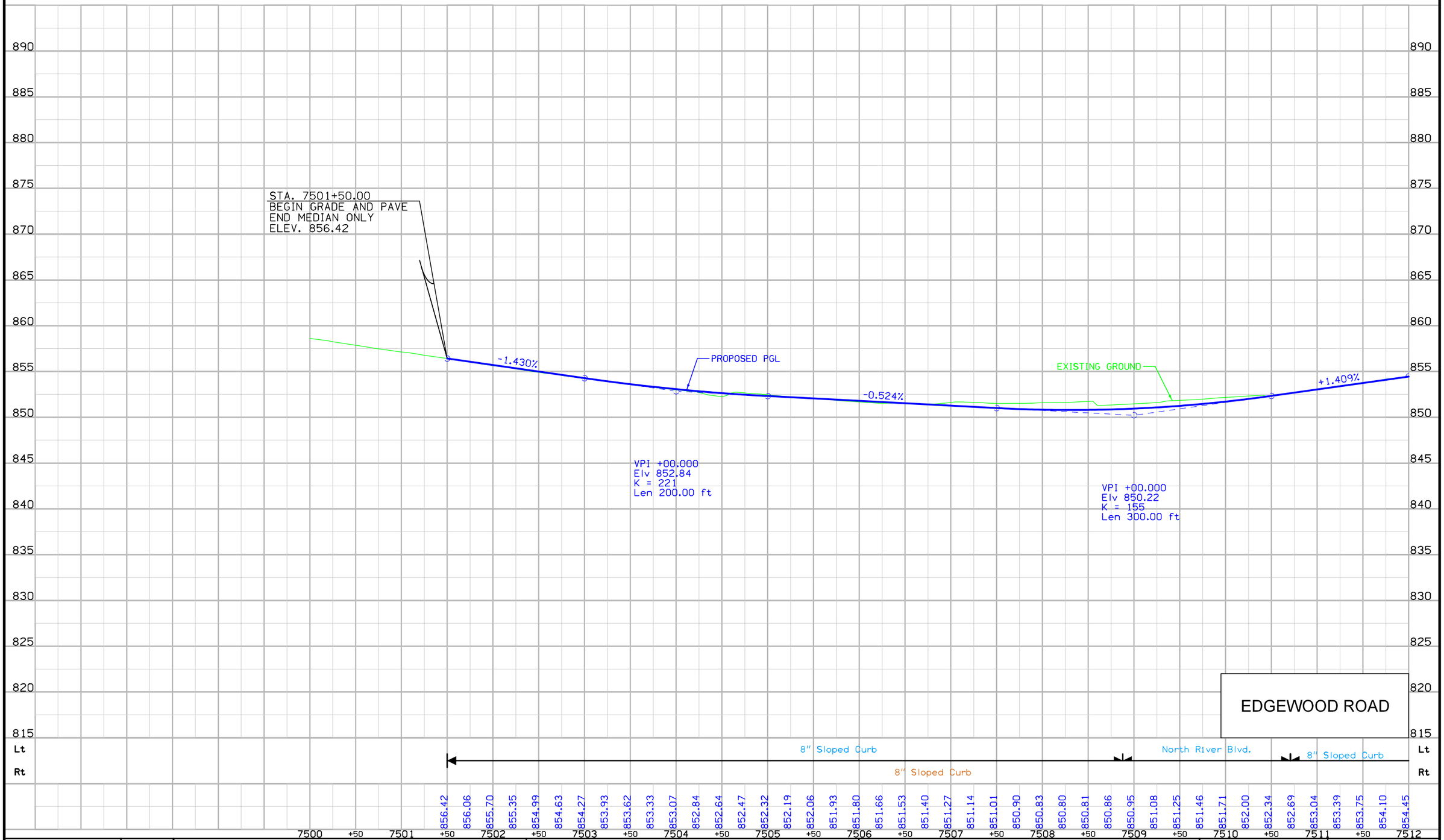

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER E.2

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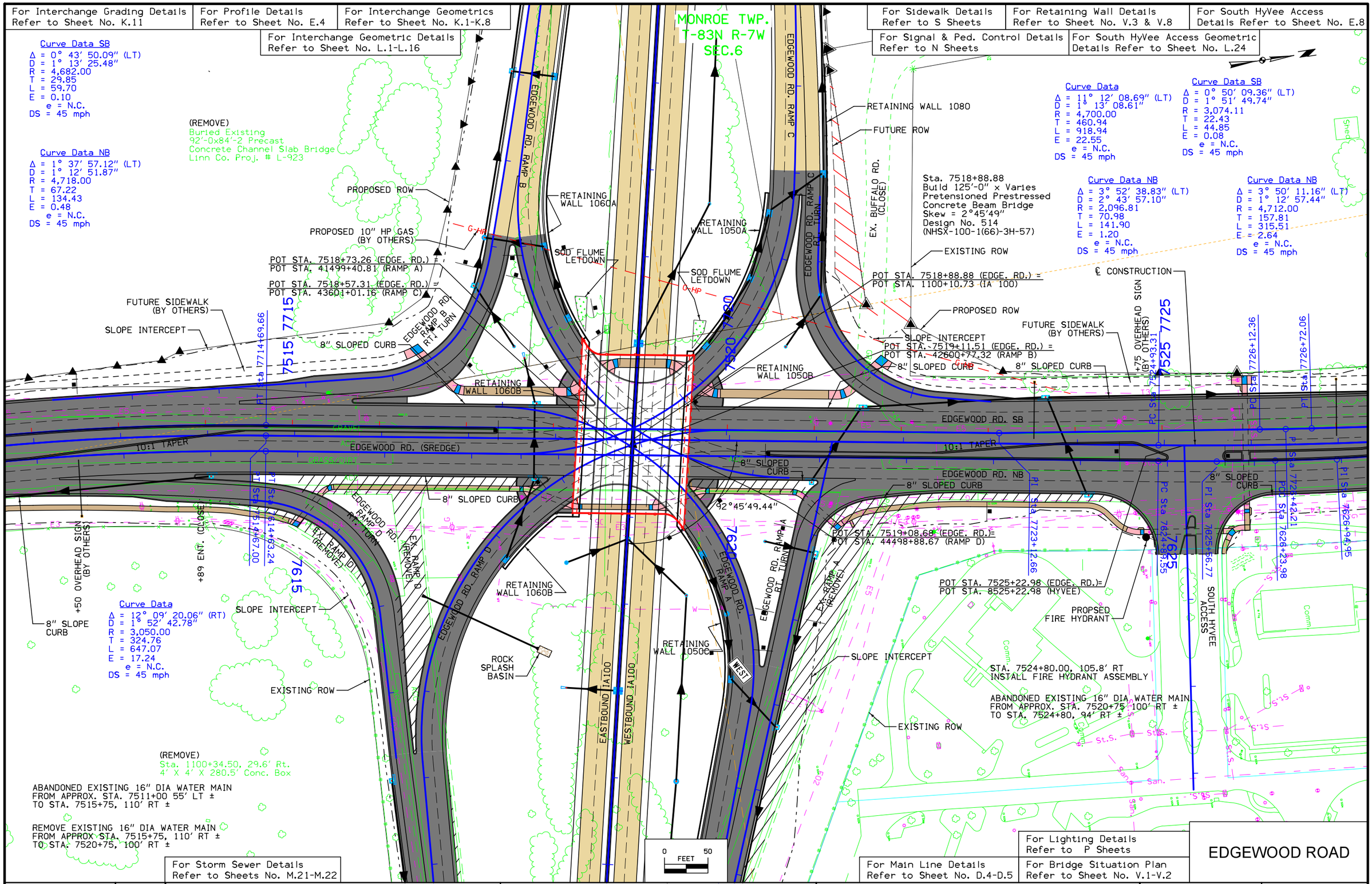
For Interchange Grading Details Refer to Sheet No. K.11 | For Profile Details Refer to Sheet No. E.4 | For Interchange Geometrics Refer to Sheet No. K.1-K.8 | For Interchange Geometric Details Refer to Sheet No. L.1-L.16

For Sidewalk Details Refer to S Sheets | For Retaining Wall Details Refer to Sheet No. V.3 & V.8 | For South HyVee Access Details Refer to Sheet No. E.8 | For Signal & Ped. Control Details Refer to N Sheets | For South HyVee Access Geometric Details Refer to Sheet No. L.24



For Storm Sewer Details Refer to Sheets No. M.21-M.22

For Main Line Details Refer to Sheet No. D.4-D.5

For Lighting Details Refer to P Sheets

For Bridge Situation Plan Refer to Sheet No. V.1-V.2

EDGEWOOD ROAD

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER E.3

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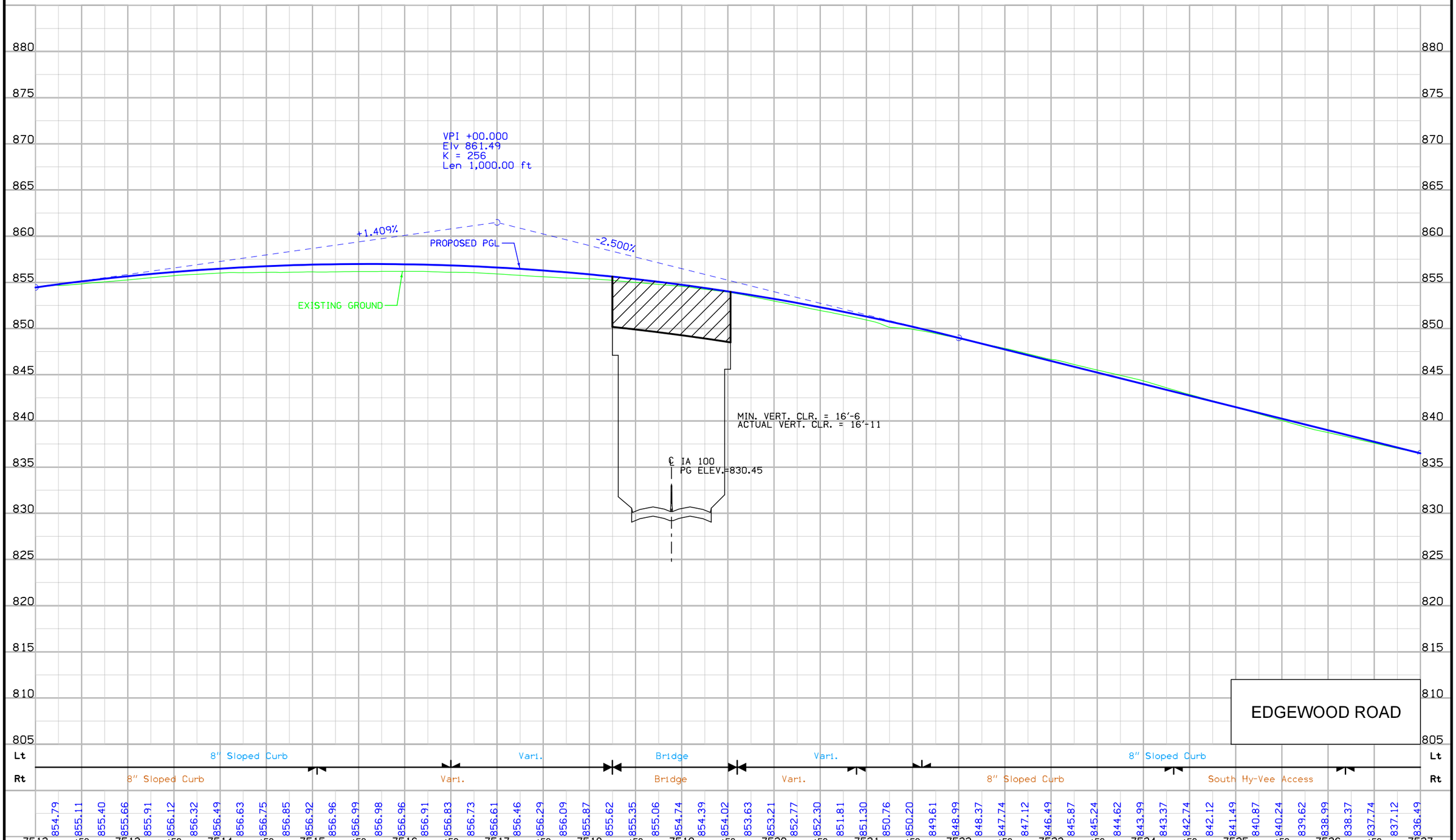

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER E.4

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For Edgewood Road Geometric Details Details Refer to Sheet No. L.24 & L.25

For Grading Details Refer to Sheet No. K.11

MONROE TWP.
T-83N R-7W
SEC.6

Curve Data
Δ = 11° 12′ 08.69″ (LT)
D = 1° 13′ 08.61″
R = 4,700.00
T = 460.94
L = 918.94
E = 22.55
e = N.C.
DS = 45 mph

Curve Data SB
Δ = 0° 50′ 09.36″ (LT)
D = 1° 51′ 49.74″
R = 3,074.11
T = 22.43
L = 44.85
E = 0.08
e = N.C.
DS = 45 mph

Curve Data NB
Δ = 3° 50′ 11.16″ (LT)
D = 1° 12′ 57.44″
R = 4,712.00
T = 157.81
L = 315.51
E = 2.64
e = N.C.
DS = 45 mph

Sta. 7529+82.05
Install 60″x32′ 1301 RCP EXTENSION
Skew = 13.9° Lt. Ahd.
F.L. = Lt. 820.52
Other 820.80

Curve Data SB
Δ = 7° 05′ 16.63″ (LT)
D = 1° 51′ 56.46″
R = 3,071.03
T = 190.20
L = 379.91
E = 5.88
e = N.C.
DS = 45 mph

Curve Data NB
Δ = 0° 43′ 53.17″ (LT)
D = 1° 12′ 57.44″
R = 4,712.00
T = 30.08
L = 60.15
E = 0.10
e = N.C.
DS = 45 mph

STA. 7533+20.00
END GRADE AND PAVE
BEGIN REMOVE AND REPLACE
MEDIAN CONSTRUCTION

STA. 7535+95.73
END REMOVE AND REPLACE
MEDIAN CONSTRUCTION

FUTURE SIDEWALK (BY OTHERS)
EXISTING ROW
+75 OVERHEAD SIGN (BY OTHERS)
SLOPE INTERCEPT
8″ SLOPED CURB
℄ CONSTRUCTION
PROPOSED ROW
10:1 TAPER
EDGEWOOD RD. SB
EDGEWOOD RD. (SREDGE)
EDGEWOOD RD. NB
EXISTING EDGEWOOD RD. (UAC)
EX. BLAIRS FERRY (U.A.C.)
EX. NORTH HYVEE ACCESS (U.A.C.)
7630 7630 7535

Sta 7726+72.06
PC Sta 7728+96.12
PCD Sta 7729+40.97
PT Sta 7729+96.95
PI Sta 7627+65.88
PI Sta 7629+18.55
PC Sta 7629+43.13
PI Sta 7626+54.25
PI Sta 7631+00.94
PI Sta 7631+31.17
PCD Sta 7632+58.64
PT Sta 7632+88.71
PT Sta 7633+18.79
PI Sta 7633+20.88
PT Sta 7534+12.25
PDT Sta 7539+00.00

For Signal & Ped. Control Details Refer to N Sheets

0 FEET 50

For Profile Details Refer to Sheet No. E.6

For Storm Sewer Details Refer to Sheets No. M.23-M.24

EDGEWOOD ROAD

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER E.5

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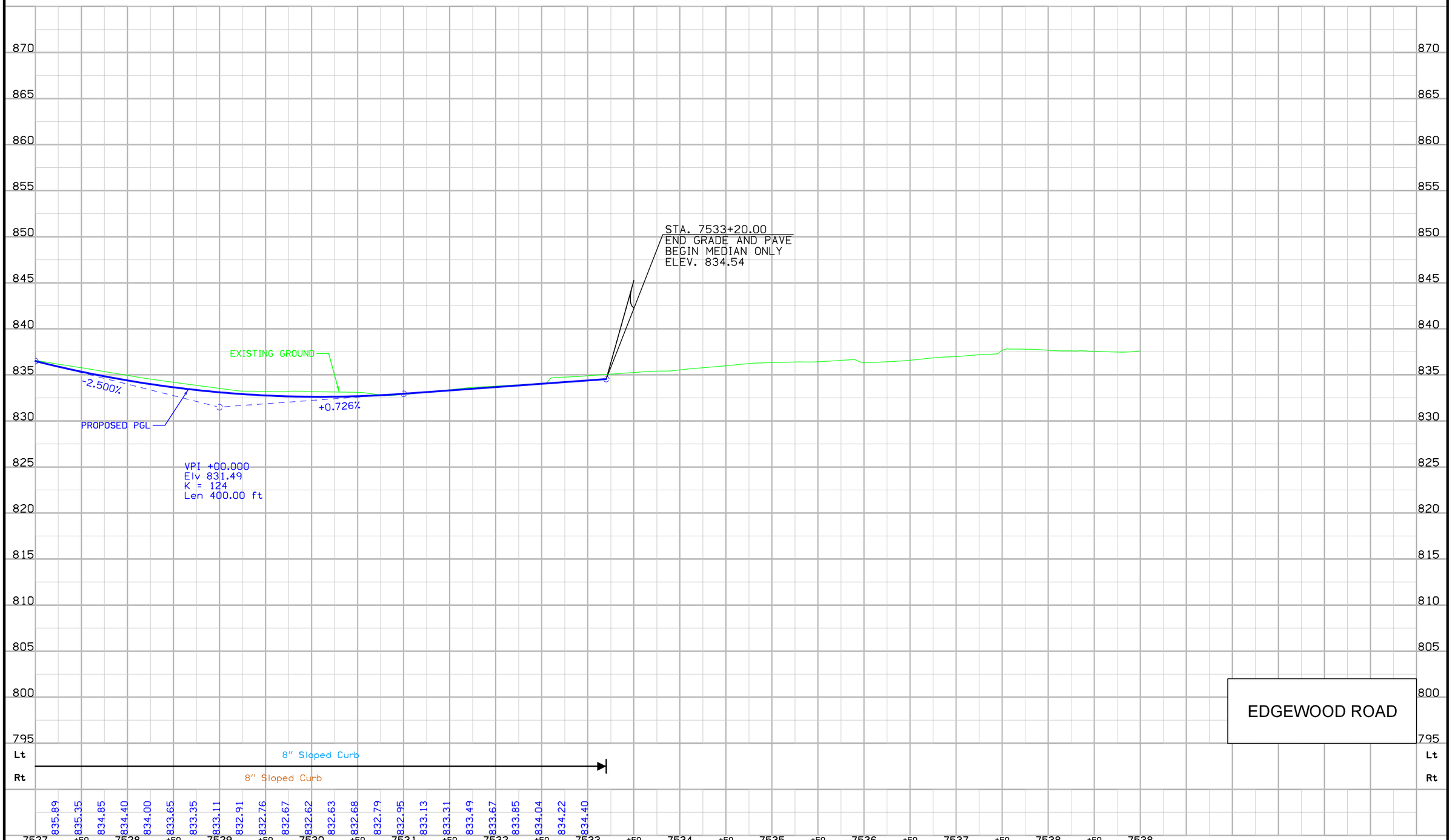

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER E.6	

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For Grading Details
Refer to Sheet No. K.11

For Storm Sewer Details
Refer to Sheets No. M.19-M.20

MONROE TWP.
T-83N R-7W
SEC.6

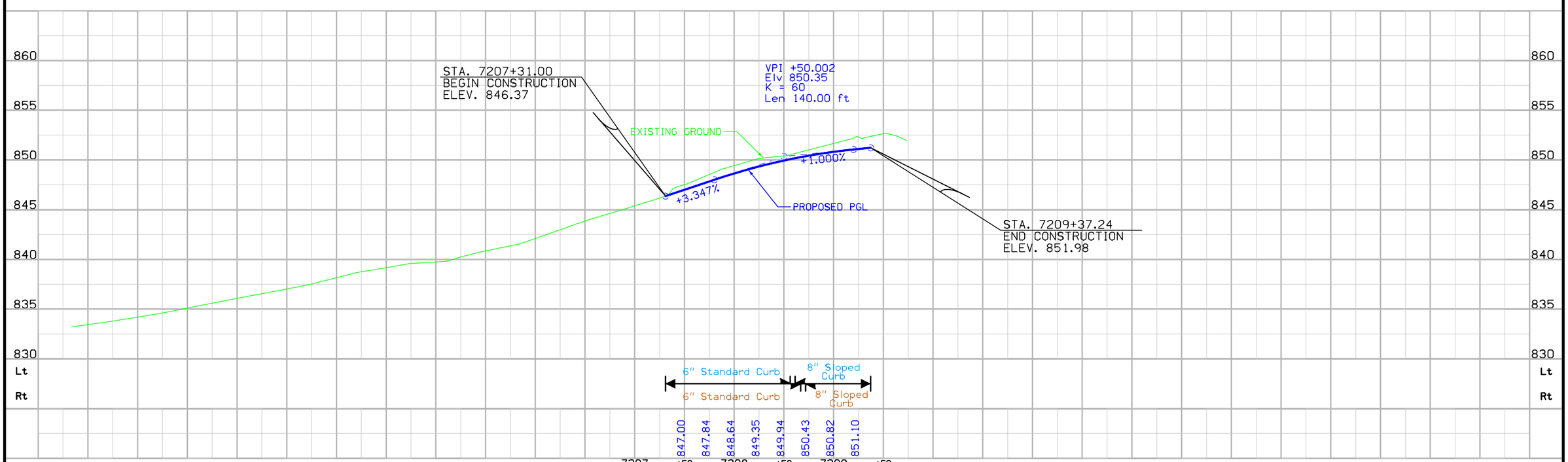
FUTURE SIDEWALK (BY OTHERS)
PROPOSED ROW
DECORATIVE WALL (DO NOT DISTURB)
TEMPORARY EASEMENT
8" SLOPED CURB
SLOPE INTERCEPT
℄ CONSTRUCTION
6" STANDARD CURB
EXISTING ROW
EX. NORTH RIVER BLVD. (U.A.C.)
W.E.
825.4
Comm.
Comm.
(U.A.C.)
EXISTING ROW
STA. 7207+31.00
BEGIN CONSTRUCTION
NORTH RIVER BLVD. (SRNRBLVD)
87°9'19.08"
6" STANDARD CURB
DECORATIVE MEDIAN (DO NOT DISTURB)
8" SLOPED CURB
DECORATIVE WALL (DO NOT DISTURB)
FUTURE TRAIL (BY OTHERS)
SLOPE INTERCEPT
EDGEWOOD RD.
SLOPE INTERCEPT
POT STA. 7209+73.30 (NORTH RIVER BLVD.) =
POT STA. 7509+73.30 (EDGEWOOD RD.)
FUTURE SIDEWALK (BY OTHERS)
STA. 7209+37.24
END CONSTRUCTION
EXISTING ROW
0 50
FEET
N

For Sidewalk Details
Refer to S Sheets

For Edgewood Road Details
Refer to Sheets No. E.1-E.2

For North River Blvd. Geometric
Details Refer to Sheet No. L.18

NORTH RIVER BLVD.



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER E.7

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For Grading Details
Refer to Sheet No. K.11

MONROE TWP.
T-83N R-7W
SEC.6

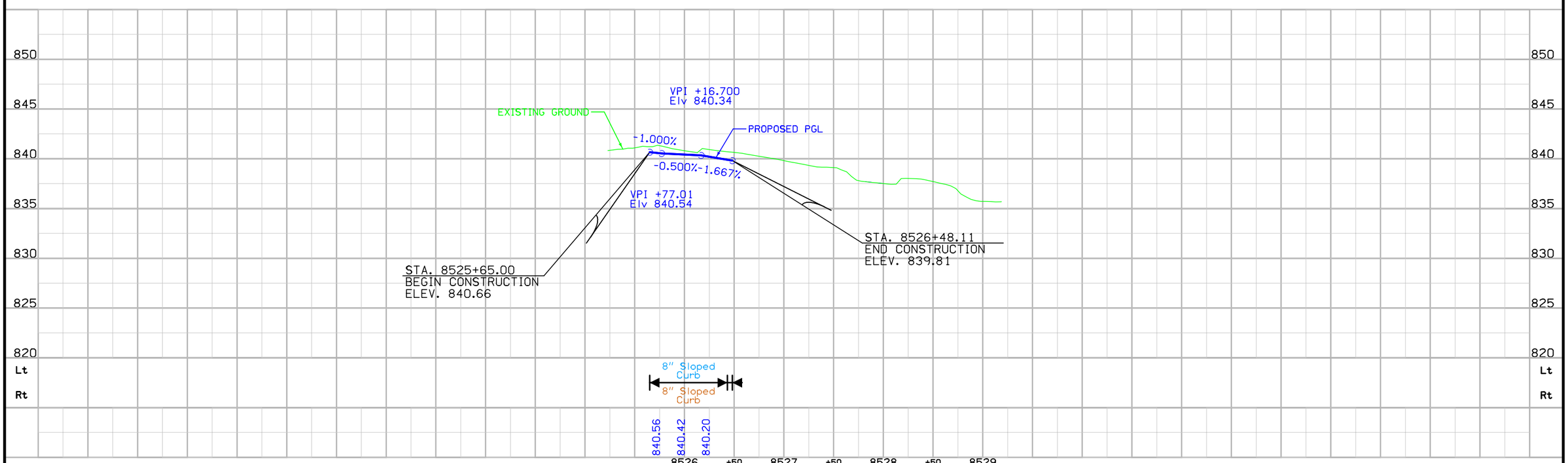
SLOPE INTERCEPT
FUTURE SIDEWALK (BY OTHERS)
EXISTING ROW
EDGEWOOD RD.
SLOPE INTERCEPT
8" SLOPED CURB
6" STANDARD CURB
DRIVEWAY (U.A.C.)
STA. 8526+48.11
END CONSTRUCTION
℄ CONSTRUCTION
88°25'18.68"
SOUTH HYVEE ACCESS (SRHYVEE)
POT STA. 8525+22.98 (HYVEE ACCESS) =
POT STA. 7525+22.98 (EDGEWOOD RD.)
DRIVEWAY (U.A.C.)
STA. 8525+65.00
BEGIN CONSTRUCTION
8" SLOPED CURB
EXISTING ROW
SLOPE INTERCEPT
PROPOSED ROW
0 50
FEET

For South HyVee Access Geometric Details Refer to Sheet No. L.24

For Edgewood Road Details Refer to Sheets No. E.3-E.4

For Sidewalk Details Refer to S Sheets

SOUTH HYVEE ACCESS



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER E.8

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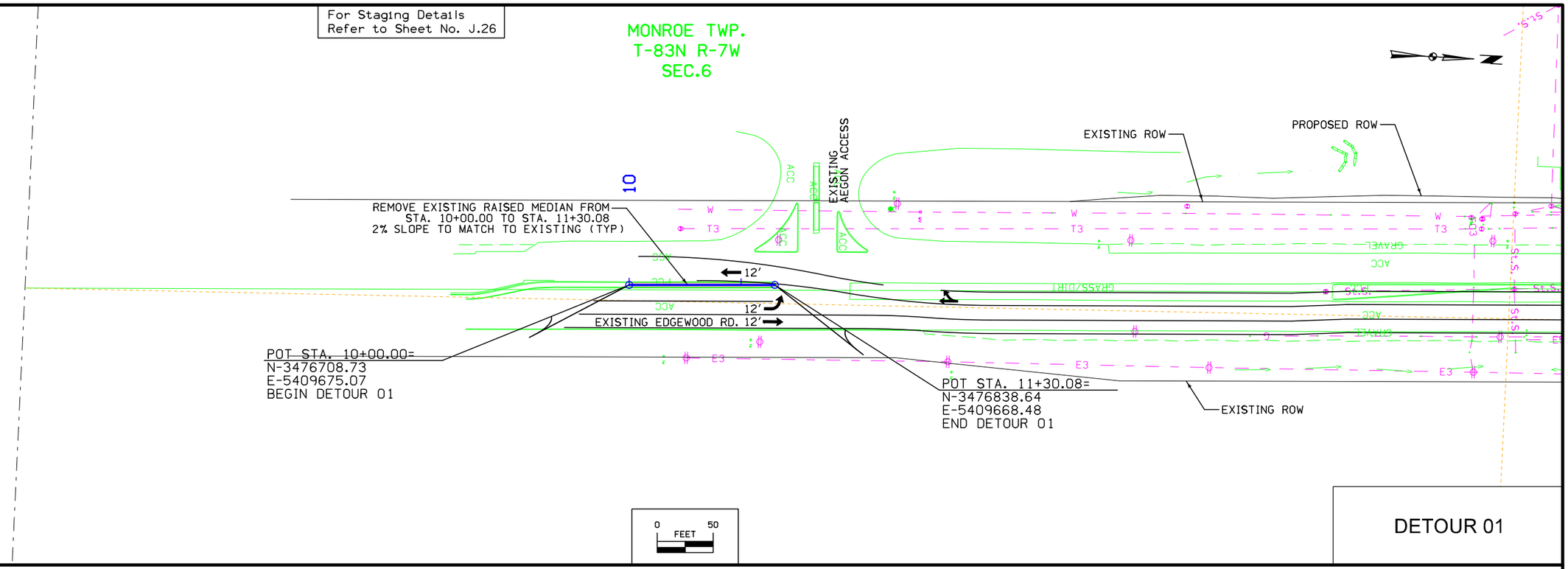
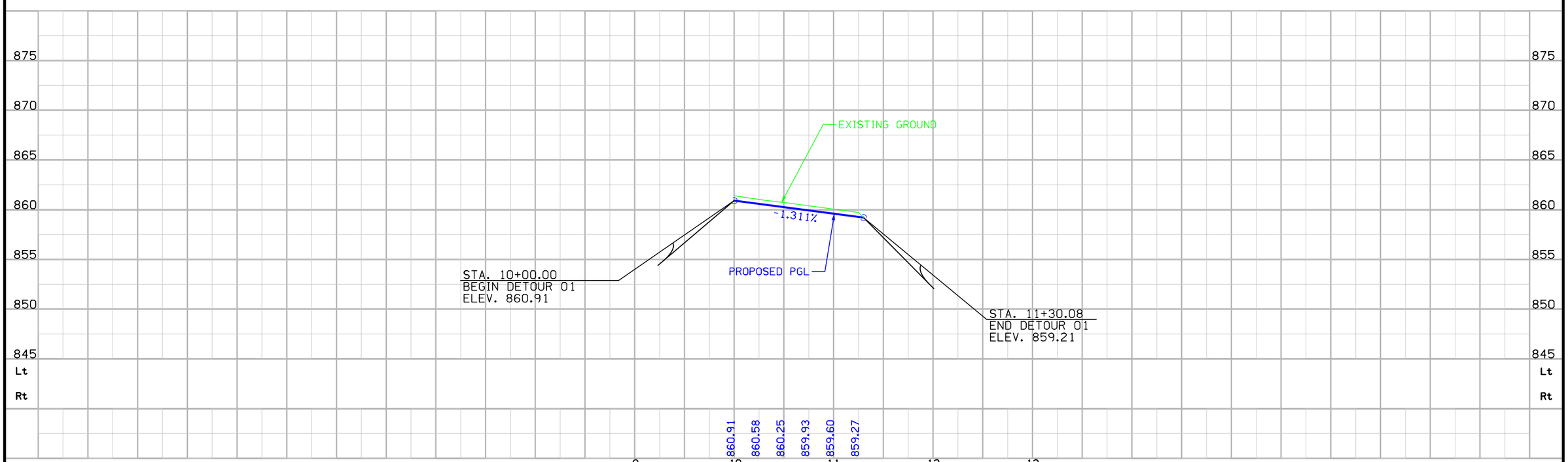
For Staging Details
Refer to Sheet No. J.26

MONROE TWP.
T-83N R-7W
SEC.6



DETOUR 01



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.1

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For Staging Details
Refer to Sheet No. J.26

MONROE TWP.
T-83N R-7W
SEC.6

Curve Data
Δ = 4° 31′ 13.09″ (RT)
D = 1° 48′ 37.81″
R = 3,164.64
T = 124.90
L = 249.67
E = 2.46

REMOVE EXISTING RAISED MEDIAN FROM
STA. 34+30.97 TO STA. 39+08.68

EXISTING ROW

PROPOSED ROW

EXISTING AEGON ACCESS

EXISTING NORTH RIVER BLVD.

TEMPORARY EASEMENT

PT Sta 34+30.76

PI. Sta 35+93.26

PI Sta 37+83.91

2% SLOPE TO MATCH TO EXISTING (TYP.)

EXISTING EDGEWOOD RD.

PI Sta 32+15.38

PC Sta 36+59.01

12′
12′
13′
12′
12′
13′
12′

PC STA. 30+00.00=
STA. 7500+24.56, 4.8′ RT (SREDGE)
BEGIN DETOUR 02

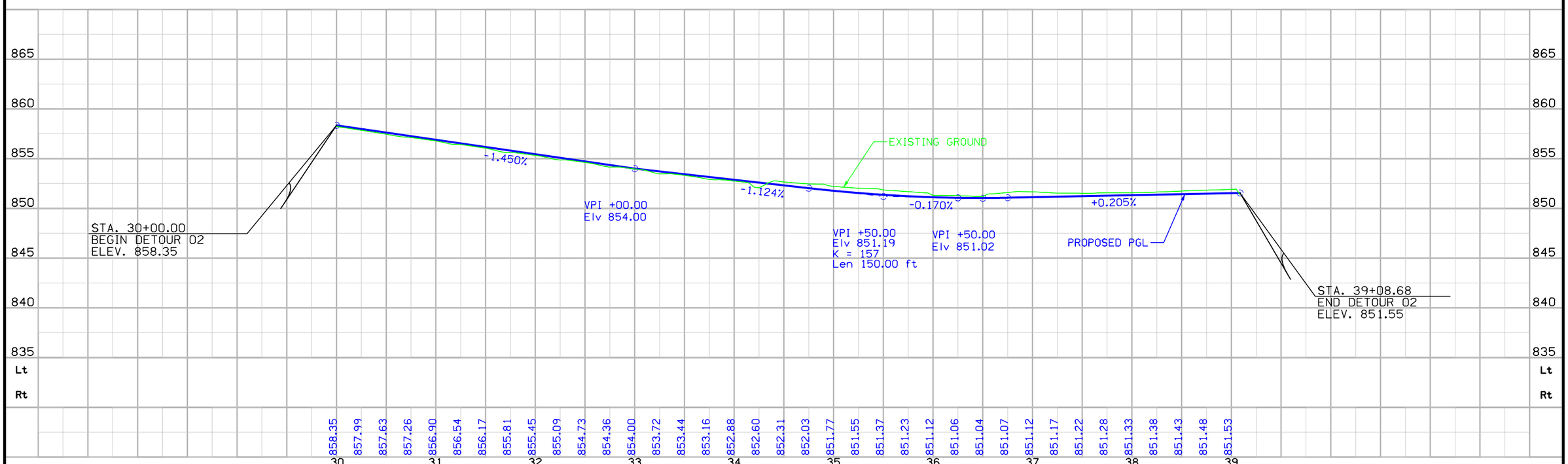
EXISTING ROW

Curve Data
Δ = 0° 19′ 26.74″ (LT)
D = 0° 04′ 30.86″
R = 76,152.95
T = 215.38
L = 430.76
E = 0.30

POT STA. 39+08.68=
STA. 7509+33.18, 4.1′ RT
END DETOUR 02

0 FEET 50

DETOUR 02



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.2

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For Staging Details
Refer to Sheet No. J.26

MONROE TWP.
T-83N R-7W
SEC.6

Curve Data
Δ = 26° 42′ 23.91″ (LT)
D = 69° 52′ 22.45″
R = 82.00
T = 19.46
L = 38.22
E = 2.28

PROPOSED ROW

TEMPORARY EASEMENT

50

PI Sta 50+50.20

PC Sta 51+56.31

PI Sta 51+75.78

EXISTING NORTH RIVER BLVD.

200′ SHIFTING TAPER

15′
15′

12′
12′

POT STA. 50+00.00=
STA. 7207+34.04, 2.8′ LT (SRNRBLVD)
BEGIN DETOUR 03

PT STA. 51+64.54=
STA. 7209+26.98, 2.5′ RT
(SRNRBLVD)
END DETOUR 03

EXISTING ROW

0 FEET 50

DETOUR 03

For Staging Details
Refer to Sheet No. J.17

MONROE TWP.
T-83N R-7W
SEC.6

PROPOSED ROW

EXISTING EDGEWOOD RD.

130

POT STA. 130+66.51=
N-3476920.15
E-5409636.49
END DETOUR 07

SLOPE TO MATCH TO EXISTING GRADE

EXISTING
AEGON ACCESS

PI Sta 130+37.77=
N-3476891.43
E-5409637.81

EXISTING ROW

12′
12′

POT STA. 130+00.00=
N-3476889.90
E-5409600.07
BEGIN DETOUR 07

EXISTING ROW

0 FEET 50

DETOUR 07

For Staging Details
Refer to Sheet No. J.17

Curve Data
Δ = 4° 06′ 09.35″ (RT)
D = 7° 32′ 20.11″
R = 760.00
T = 27.22
L = 54.42
E = 0.49

MONROE TWP.
T-83N R-7W
SEC.6

PROPOSED ROW

EXISTING ROW

EXISTING
AEGON ACCESS

150

155

160

EXISTING NORTH RIVER BLVD.

TEMPORARY EASEMENT

EXISTING
EDGEWOOD RD.

PI Sta 150+39.75

PT Sta 151+24.31

PI Sta 153+93.54

PI Sta 158+57.02

POT Sta 160+71.00

12′
13′
12′

MATCH EXISTING SLOPES

PC Sta 150+12.53

PRC Sta 150+66.95

PI Sta 150+95.64

4′ MIN SHOULDER

EXISTING ROW

PC Sta 156+91.79

PT Sta 160+21.98

Curve Data
Δ = 4° 06′ 09.35″ (LT)
D = 7° 09′ 10.91″
R = 801.00
T = 28.69
L = 57.35
E = 0.51

Curve Data
Δ = 5° 36′ 50.19″ (RT)
D = 1° 42′ 00.88″
R = 3,369.85
T = 165.22
L = 330.18
E = 4.05

POT STA. 150+00.00=
STA. 7500+25.76, 38.8′ RT(SREDGE)
BEGIN DETOUR 08

POT STA. 160+71.00=
STA. 7511+00.96, 49.1′ RT(SREDGE)
END DETOUR 08

0 FEET 50

DETOUR 08

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.3

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For Staging Details
Refer to Sheets No. J.14-J.15

MONROE TWP.
T-83N R-7W
SEC.6

Curve Data
Δ = 0° 28′ 34.25″ (LT)
Δ = 0° 52′ 2.36″
R = 6,606.04
T = 27.45
L = 54.90
E = 0.06

Curve Data
Δ = 2° 54′ 49.78″ (RT)
D = 2° 15′ 17.95″
R = 2,540.85
T = 64.62
L = 129.22
E = 0.82

TEMPORARY EASEMENT
EXISTING ROW
PROPSED ROW
EXISTING NORTH RIVER BLVD.
EXISTING EDGEWOOD RD.
2% SLOPE TO MATCH TO EXISTING (TYP.)
PC Sta 70+58.43
PCC Sta 71+76.74
PRC Sta 73+05.96
PI Sta 71+17.59
PI Sta 72+41.36
PI Sta 73+60.86
PI Sta 73+33.41
70
75
12′
13′
12′
EXISTING ROW
POT STA. 70+00.00=
STA. 7510+50.75, 12.9′ RT(SREDGE)
BEGIN DETOUR 04

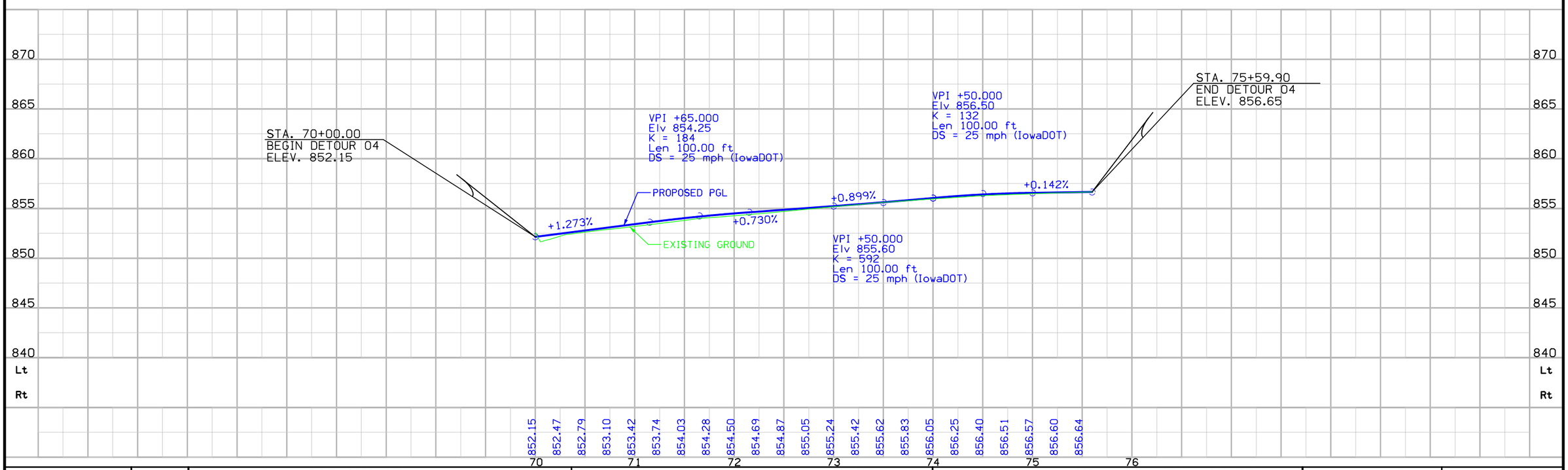
Curve Data
Δ = 1° 28′ 57.65″ (RT)
D = 1° 15′ 11.64″
R = 4,571.83
T = 59.16
L = 118.31
E = 0.38
E = 0.38

0 50
FEET

EXISTING EDGEWOOD RAMP D

POT STA. 75+59.90=
STA. 7516+13.14, 24.3′ RT (SREDGE)
END DETOUR 01

DETOUR 04



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.4	

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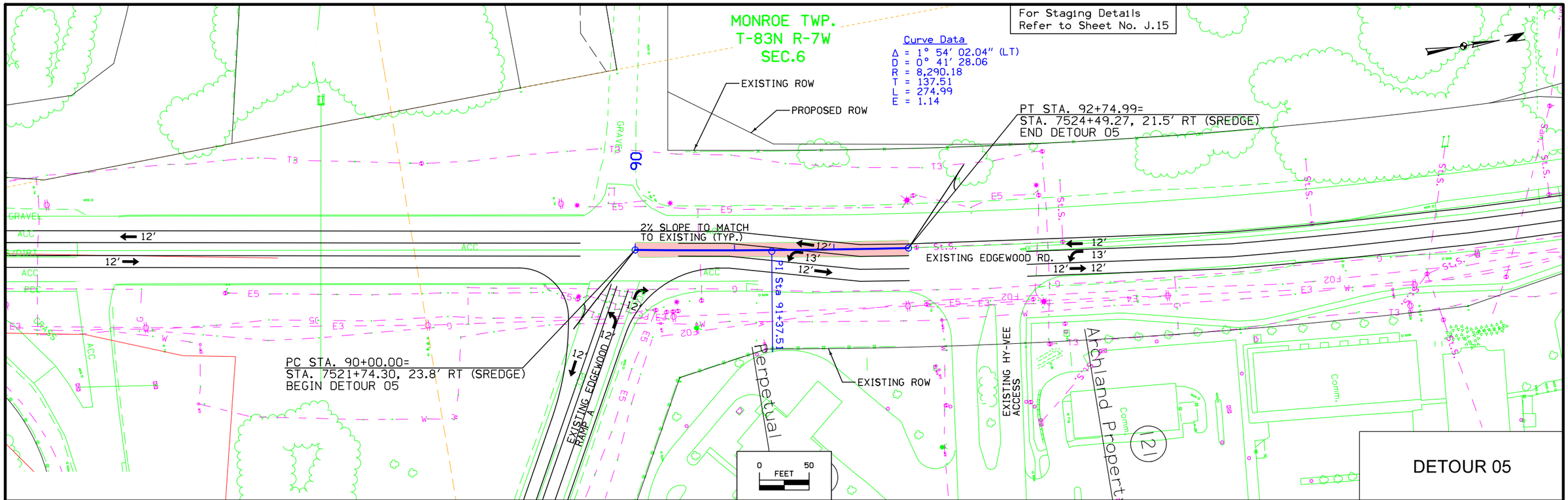

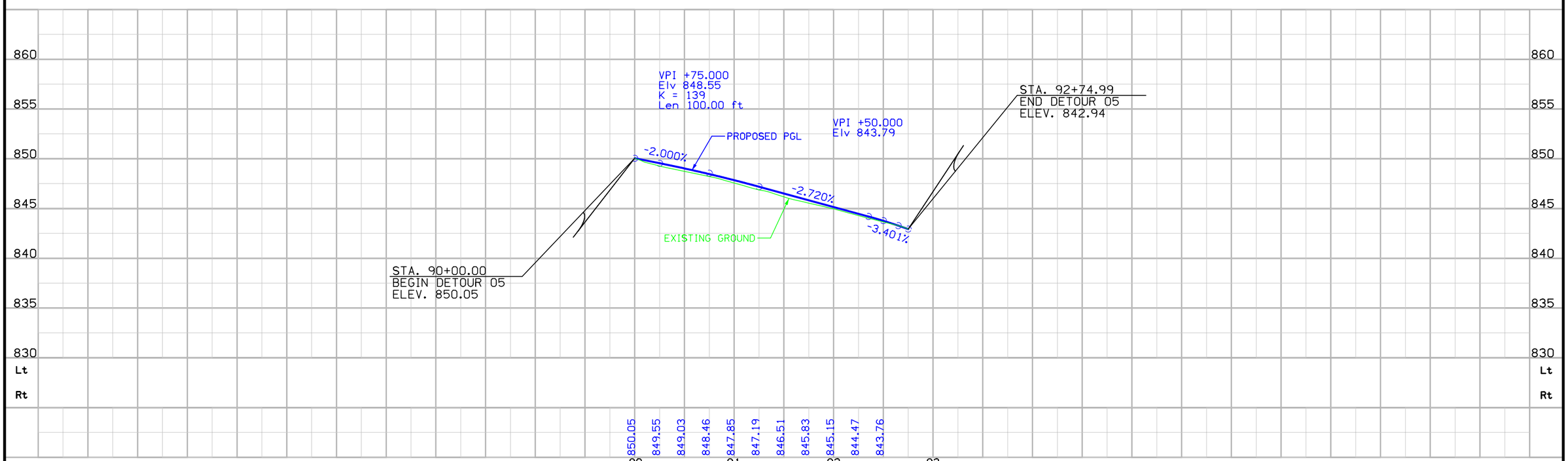

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.5

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For Staging Details
Refer to Sheet No. J.27-J.28

MONROE TWP.
T-83N R-7W
SEC.6

Curve Data
Δ = 2° 59′ 48.08″ (LT)
D = 1° 02′ 33.39″
R = 5,495.43
T = 143.74
L = 287.42
E = 1.88

REMOVE EXISTING RAISED MEDIAN FROM
STA. 110+00.00 TO STA. 114+14.62

EXISTING ROW

PC STA. 110+00.00=
STA. 7525+67.29, 22.7′ RT (SREDGE)
BEGIN DETOUR 06

110 115 120

PCC Sta 112+87.42
PRC Sta 113+48.12
PI Sta 113+84.45
PCC Sta 116+86.74
PRC Sta 117+41.65
PI Sta 117+83.60
PT Sta 120+35.15

Curve Data
Δ = 3° 23′ 43.21″ (LT)
D = 6° 11′ 01.04″
R = 926.57
T = 27.46
L = 54.91
E = 0.41

PROPOSED ROW

Curve Data
Δ = 0° 56′ 46.15″ (RT)
D = 1° 07′ 39.64″
R = 5,080.86
T = 41.95
L = 83.90
E = 0.17

2% SLOPE TO MATCH TO EXISTING (TYP.)

EXISTING EDGEWOOD RD.

12′ 13′ 12′

PI Sta 111+43.74
PI Sta 113+17.79
PRC Sta 114+20.73
PI Sta 115+53.77
PI Sta 117+14.20
PRC Sta 118+25.55
PI Sta 119+30.35

EXISTING ROW

EXISTING SOUTH HY-VEE ACCESS

Archland Property

Perpetual Savings

119 121

Curve Data
Δ = 4° 41′ 15.82″ (LT)
D = 7° 43′ 22.98″
R = 741.88
T = 30.37
L = 60.70
E = 0.62

Curve Data
Δ = 4° 27′ 54.00″ (RT)
D = 6° 08′ 56.72″
R = 931.78
T = 36.32
L = 72.61
E = 0.71

Curve Data
Δ = 3° 04′ 34.02″ (LT)
D = 1° 09′ 23.04″
R = 4,954.66
T = 133.04
L = 266.01
E = 1.79

0 50
FEET

EXISTING NORTH HY-VEE ACCESS

REMOVE EXISTING RAISED MEDIAN FROM
STA. 116+92.23 TO STA. 120+31.20

Curve Data
Δ = 0° 08′ 21.82″ (LT)
D = 0° 03′ 59.41″
R = 86,154.46
T = 104.80
L = 209.60
E = 0.06

POC STA. 120+31.20=
STA. 7535+96.13,
0.1′ RT (SREDGE)
END DETOUR 06

DETOUR 06

850 845 840 835 830 825 820
Lt
Rt

POT STA. 120+31.20
END DETOUR 06
ELEV. 836.31

VPI +25.000
Elv 835.80

EXISTING GROUND

-2.317% -2.068% -1.595% +0.091% +0.636% +0.638% +0.460%

VPI +75.000
Elv 838.00

VPI +50.000
Elv 836.45

VPI +60.000
Elv 833.10
K = 119
Len 200.00 ft

VPI +25.000
Elv 833.25

VPI +90.000
Elv 834.30

PROPOSED PGL

STA. 110+00.00
BEGIN DETOUR 06
ELEV. 839.74

839.74 839.16 838.58 838.00 837.48 836.97 836.45 836.05 835.65 835.25 834.85 834.47 834.12 833.84 833.60 833.42 833.29 833.21 833.19 833.20 833.23 833.28 833.41 833.57 833.73 833.89 834.05 834.20 834.36 834.52 834.68 834.84 835.00 835.16 835.32 835.48 835.64 835.79 835.91 836.03 836.14 836.26

110 111 112 113 114 115 116 117 118 119 120

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.6

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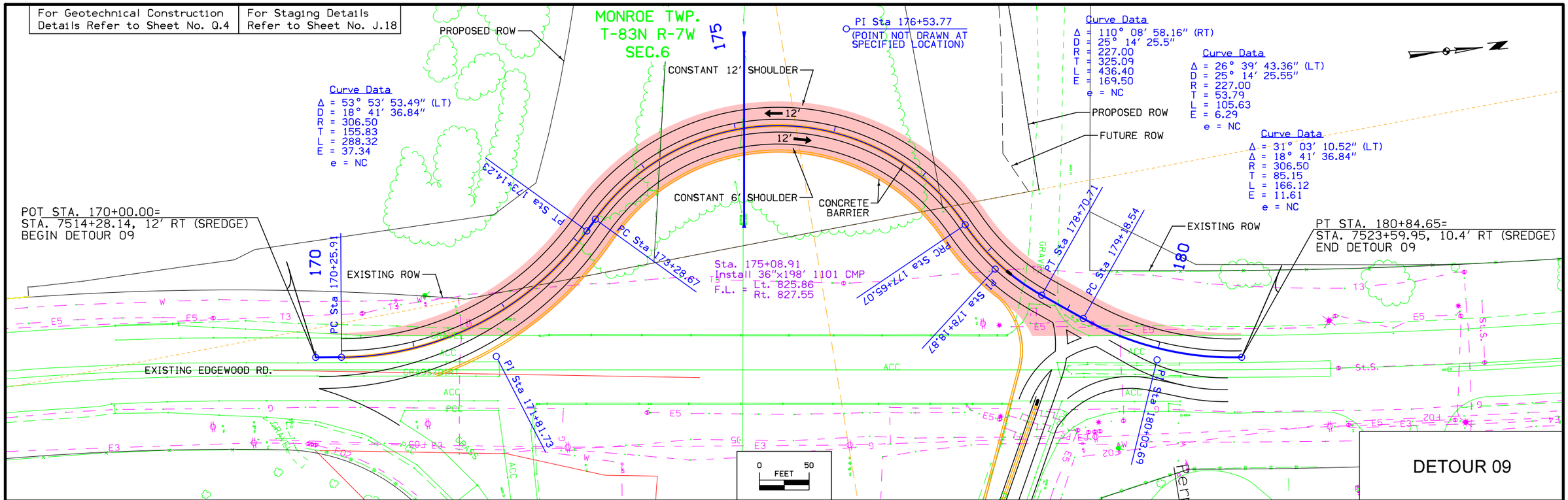
For Geotechnical Construction Details Refer to Sheet No. Q.4	For Staging Details Refer to Sheet No. J.18



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.7

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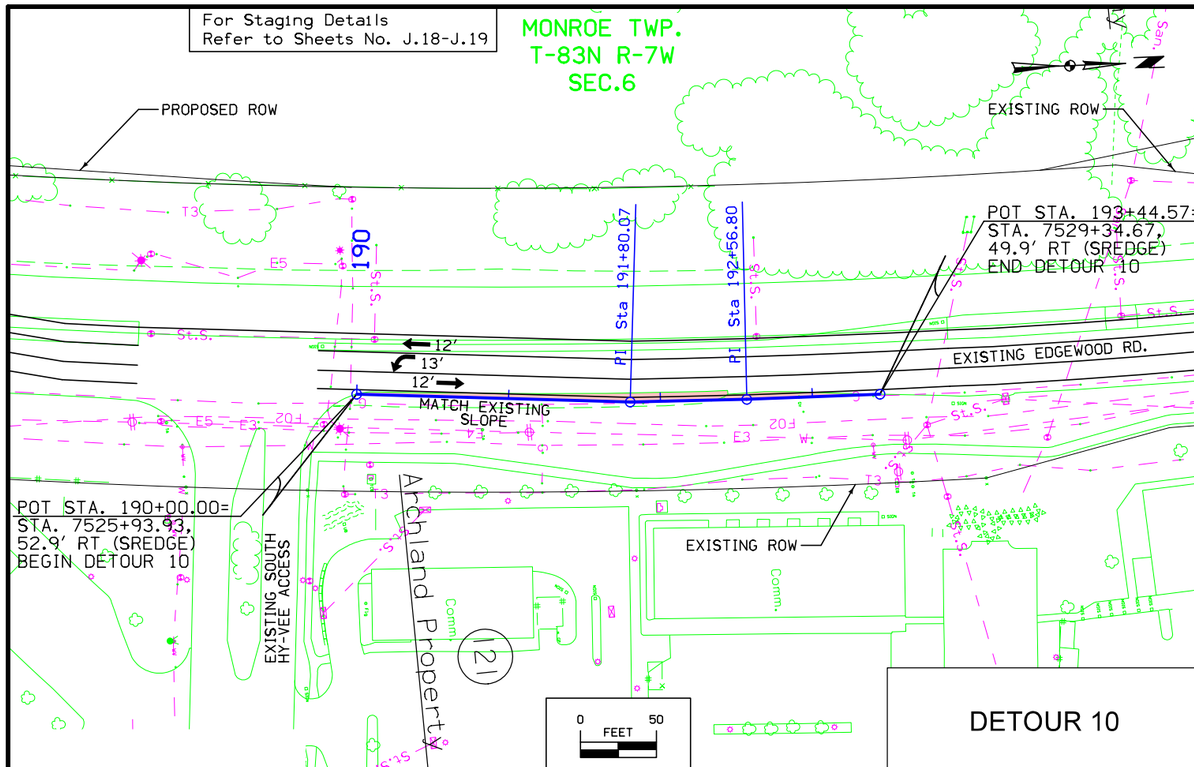

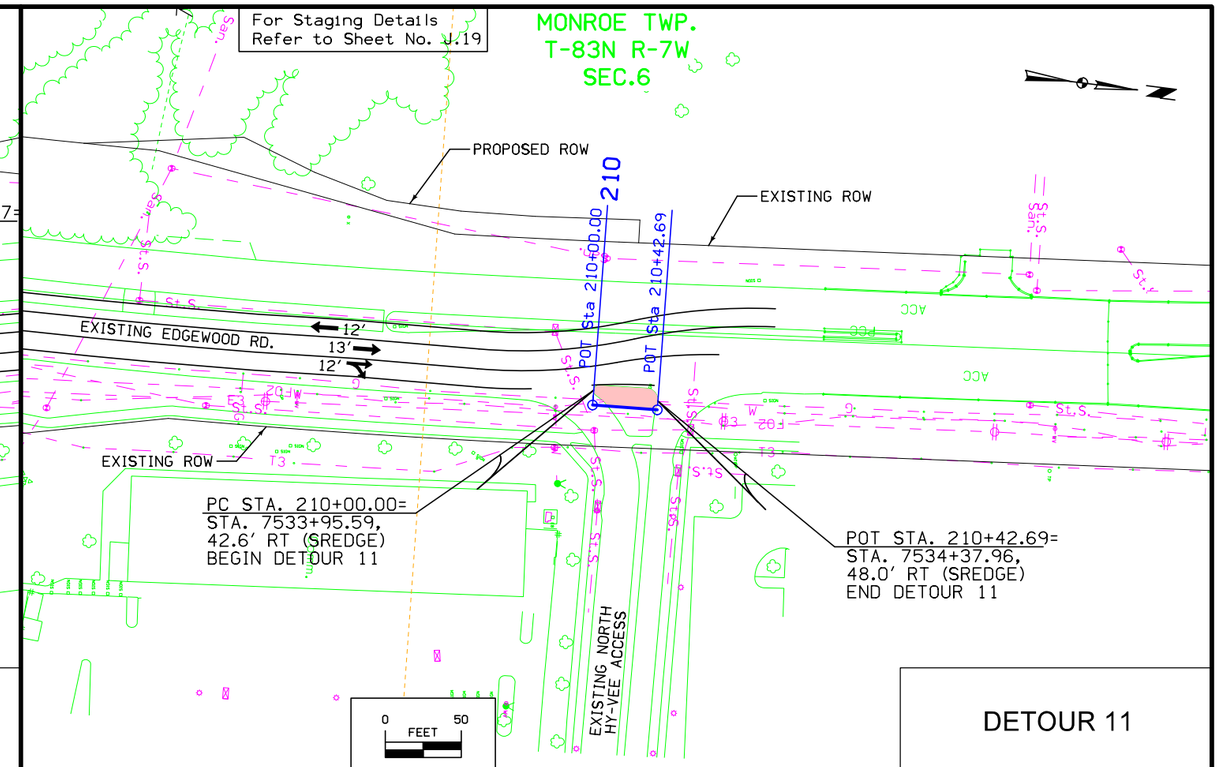

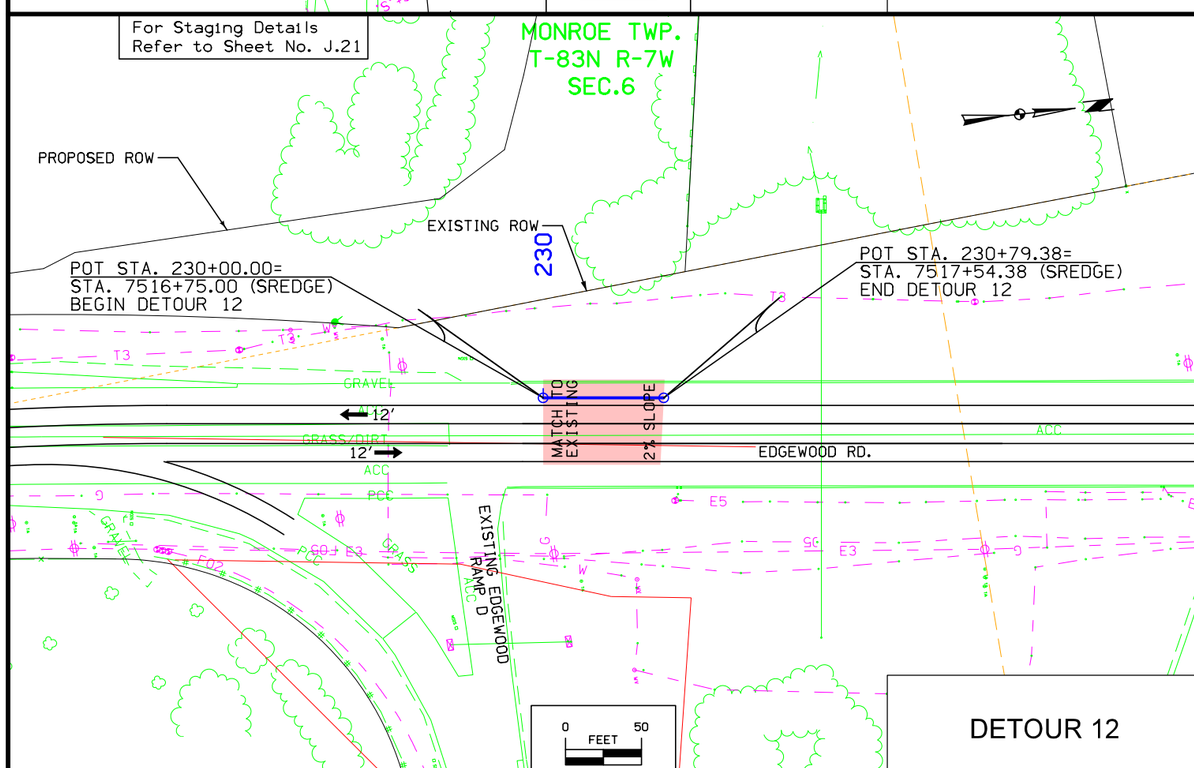

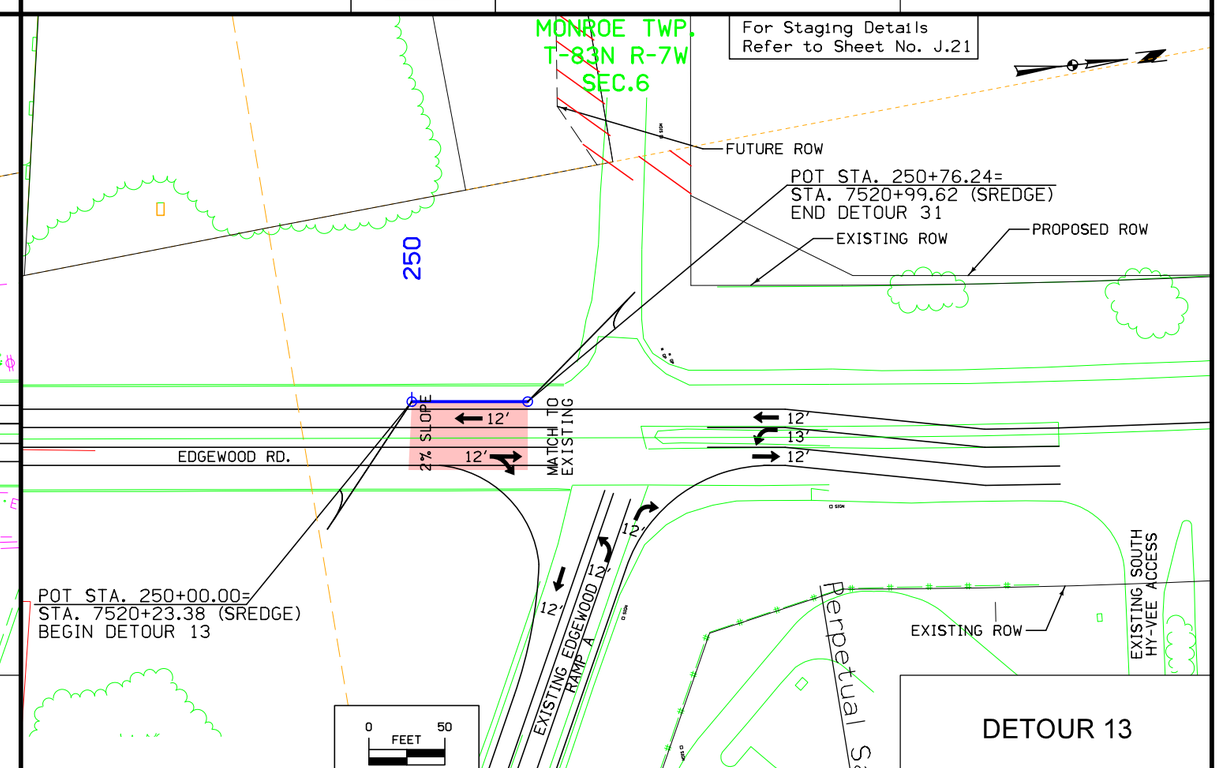

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.8

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For Staging Details
Refer to Sheet No. J.21

MONROE TWP.
T-83N R-7W
SEC.6

PROPOSED ROW
EXISTING ROW

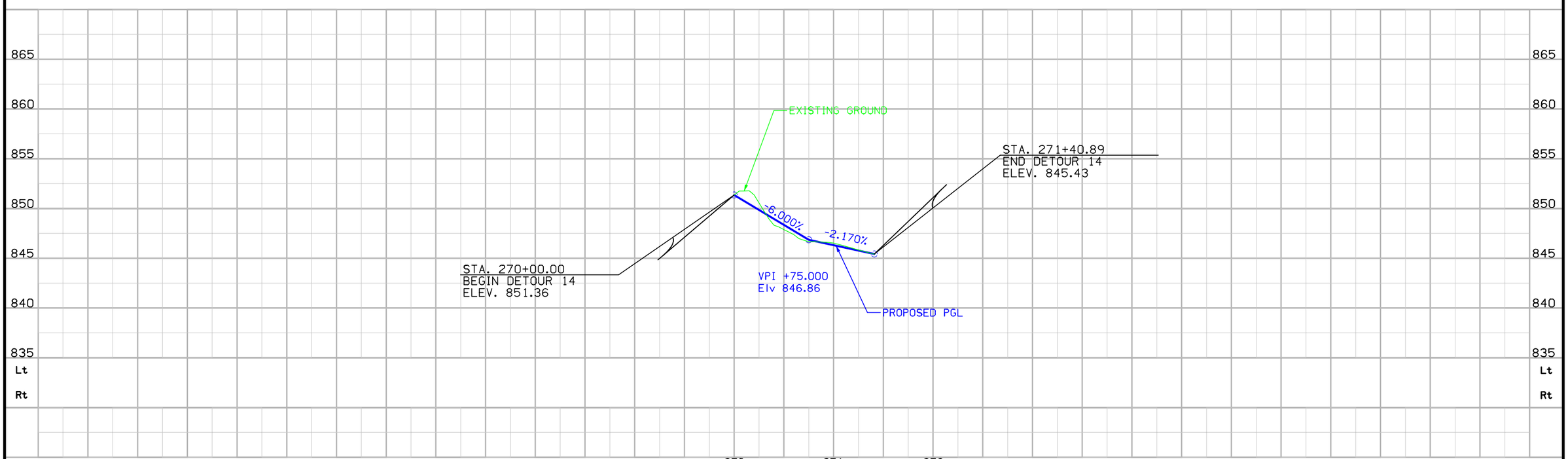
Curve Data
Δ = 19° 51′ 51.33″ (RT)
D = 19° 25′ 20.27″
R = 295.00
T = 51.66
L = 102.28
E = 4.49

EDGEWOOD RD.
12′
13′
PI Sta 270+20.59
PC Sta 270+38.61
PT Sta 270+90.27
MATCH EXISTING SLOPE
6′
PC STA. 270+00.00=
STA. 7520+86.28, 57.6′ RT (SREDGE)
BEGIN DETOUR 14

Curve Data
Δ = 49° 09′ 54.24″ (RT)
D = 127° 19′ 26.24″
R = 45.00
T = 20.59
L = 38.61
E = 4.49

EXISTING EDGEWOOD RD. RAMP D
EXISTING EDGEWOOD RD. RAMP A
Perpetual Savings B
EXISTING ROW
EXISTING SOUTH HY-VEE ACCESS
Archland Property
PT STA. 271+40.89=
STA 41601+85.09 8′ RT (EDGEA_RT)
END DETOUR 14
0 50 FEET

DETOUR 14



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.9

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For Staging Details
Refer to Sheets No. J.29-J.30

MONROE TWP.
T-83N R-7W
SEC.6

TEMPORARY EASEMENT

Curve Data
Δ = 7° 54′ 21.13″ (RT)
D = 1° 52′ 16.28″
R = 3,062.00
T = 211.59
L = 422.51
E = 7.30

PROPOSED ROW

EXISTING ROW

POT STA. 290+00.00
7509+73.58, 60.6′ LT (SREDGE)
BEGIN DETOUR 15

POT STA. 297+51.18=
STA. 7516+75.00, 12′ LT (SREDGE)
END DETOUR 15

290 295

NORTH RIVER BLVD.

PI Sta 290+25.98
PI Sta 290+61.18
PC Sta 291+08.67
PC Sta 291+20.67
PI Sta 293+32.26
PT Sta 295+43.18

VARIES 0.5%-4.0% SLOPE

EDGEWOOD RD.

12′ 13′ 12′ 12′ 12′ 13′

EXISTING ROW

EXISTING EDGEWOOD RAMP D

0 FEET 50

DETOUR 15

For Staging Details
Refer to Sheets No. J.30-J.31

MONROE TWP.
T-83N R-7W
SEC.6

FUTURE ROW

PC STA. 310+00.00=
STA. 7520+99.62, 12.0′ LT (SREDGE)
BEGIN DETOUR 16

Curve Data
Δ = 1° 25′ 32.76″ (LT)
D = 1° 13′ 14.22″
R = 4,694.00
T = 58.41
L = 116.81
E = 0.36

Curve Data
Δ = 7° 05′ 22.54″ (LT)
D = 1° 51′ 49.74″
R = 3,074.11
T = 190.43
L = 380.38
E = 5.89

EXISTING ROW

PROPOSED ROW

PT STA. 322+42.19=
STA. 7533+20.07, 2.5′ LT (SREDGE)
END DETOUR 16

310 315 320

PI Sta 312+10.38
PI Sta 312+26.82
PI Sta 313+00.28
PI Sta 313+79.21
PC Sta 315+27.01
PT Sta 316+43.81
PI Sta 317+09.93
PC Sta 318+61.81
PI Sta 315+85.41
PI Sta 320+52.24

VARIES 0.5%-4.0% SLOPE
PI Sta 317+15.25

EXISTING EDGEWOOD RD

12′ 12′ 12′ 12′ 12′ 12′

EXISTING ROW

Perpetual Sa
Archland Pro

0 FEET 50

DETOUR 16

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.10

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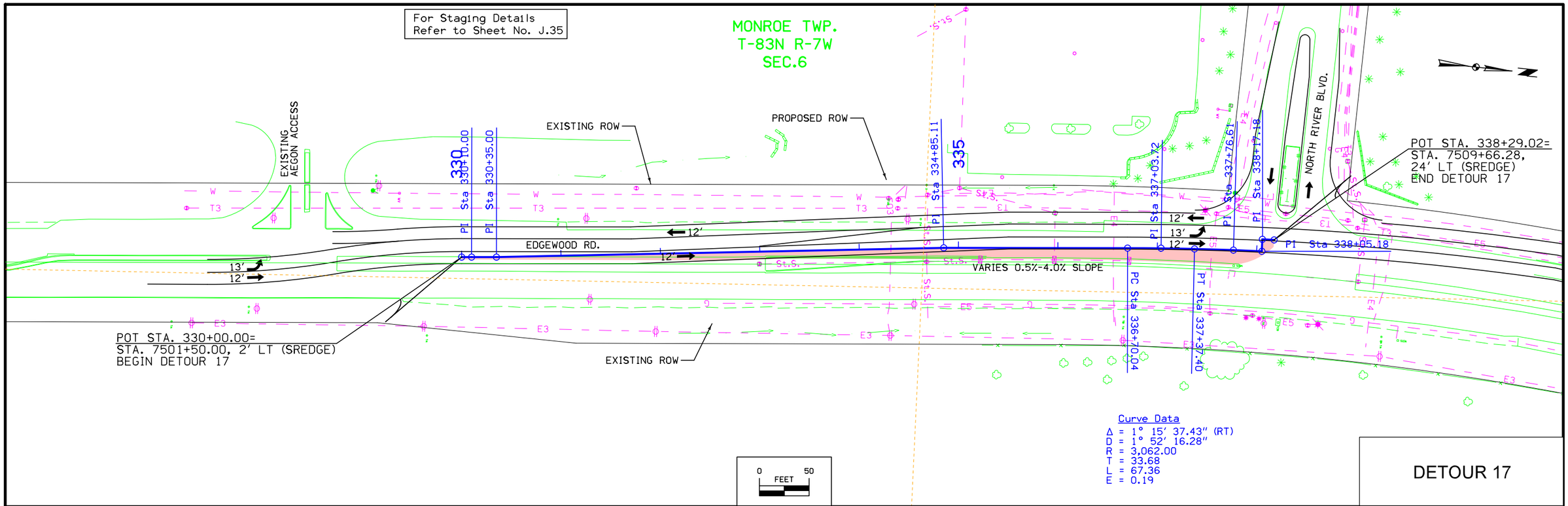

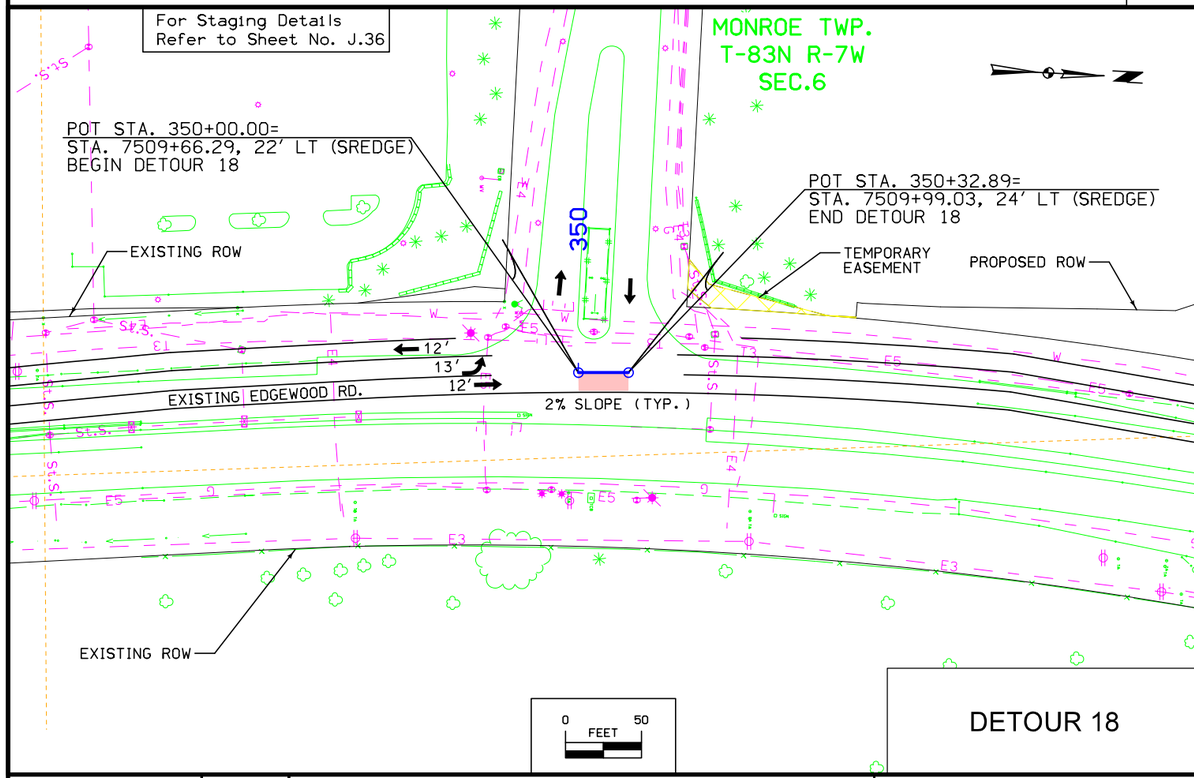

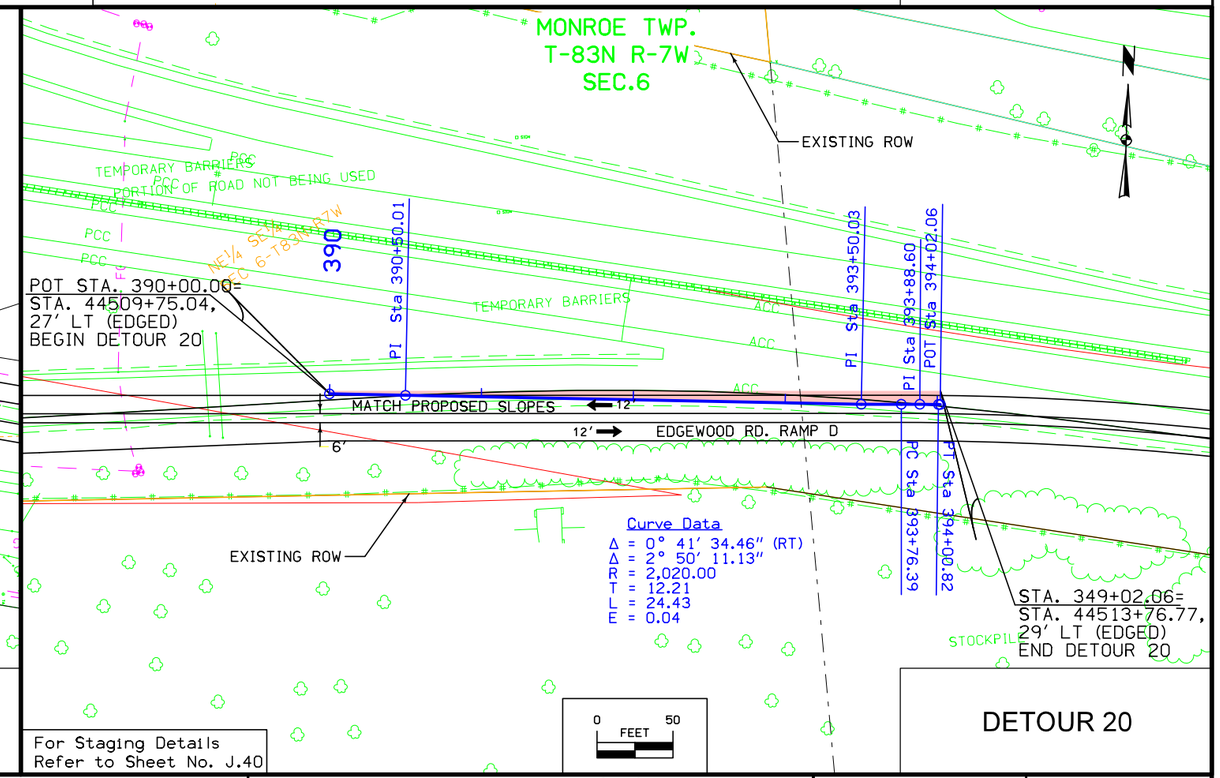

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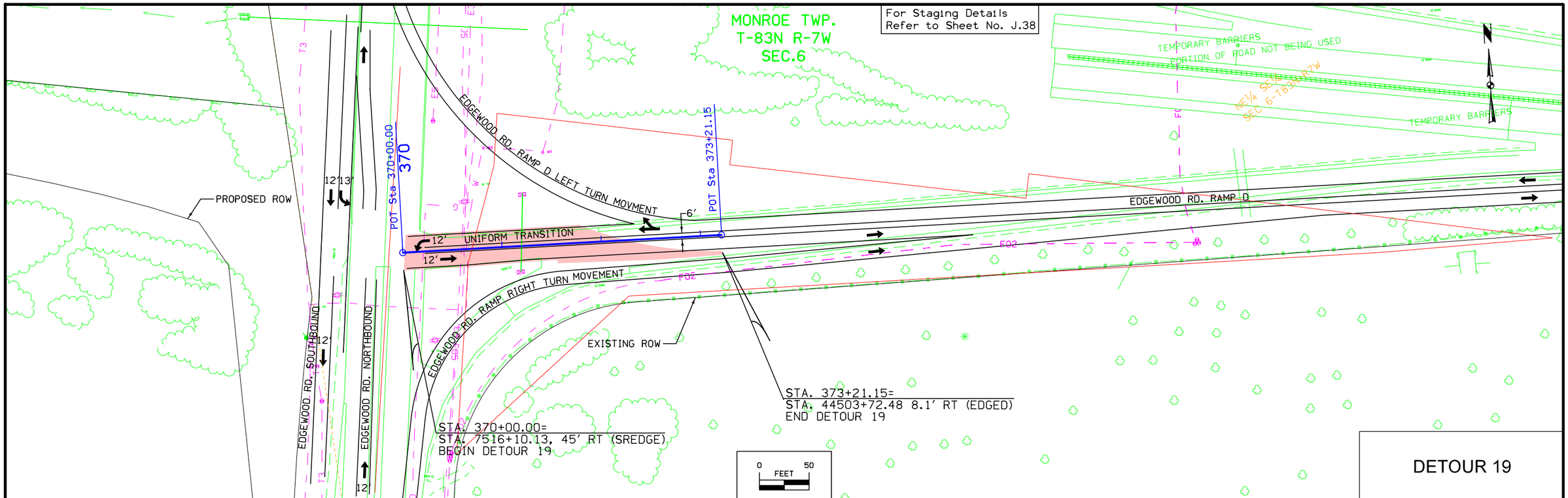

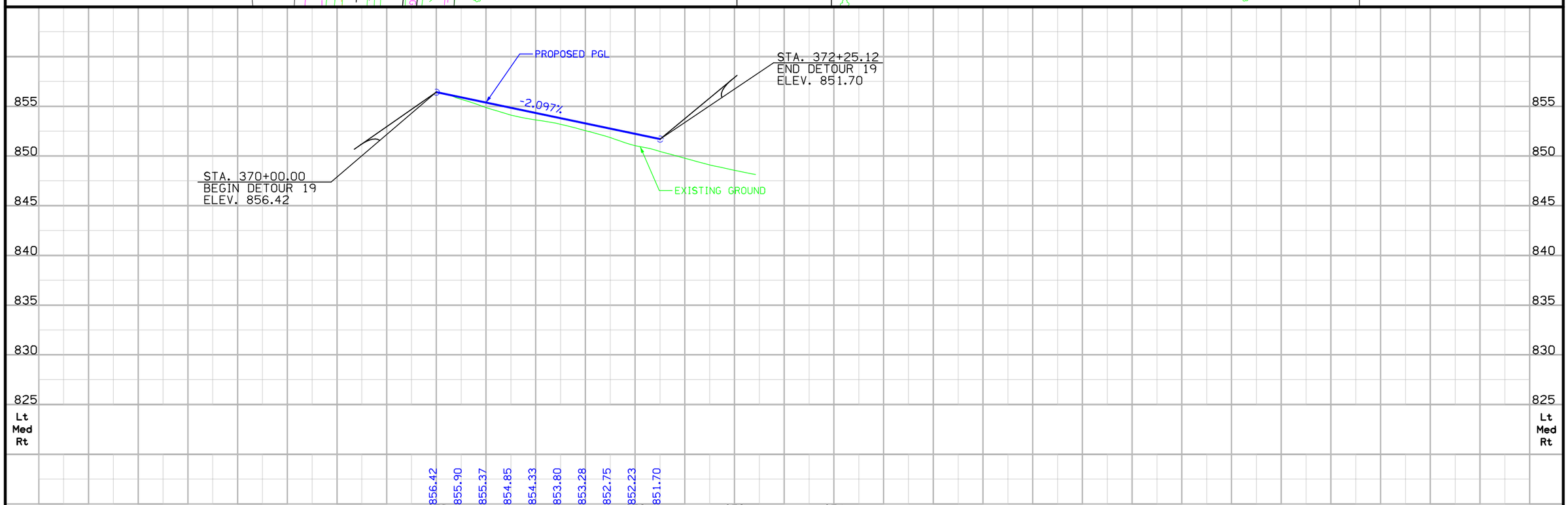

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER F.12	

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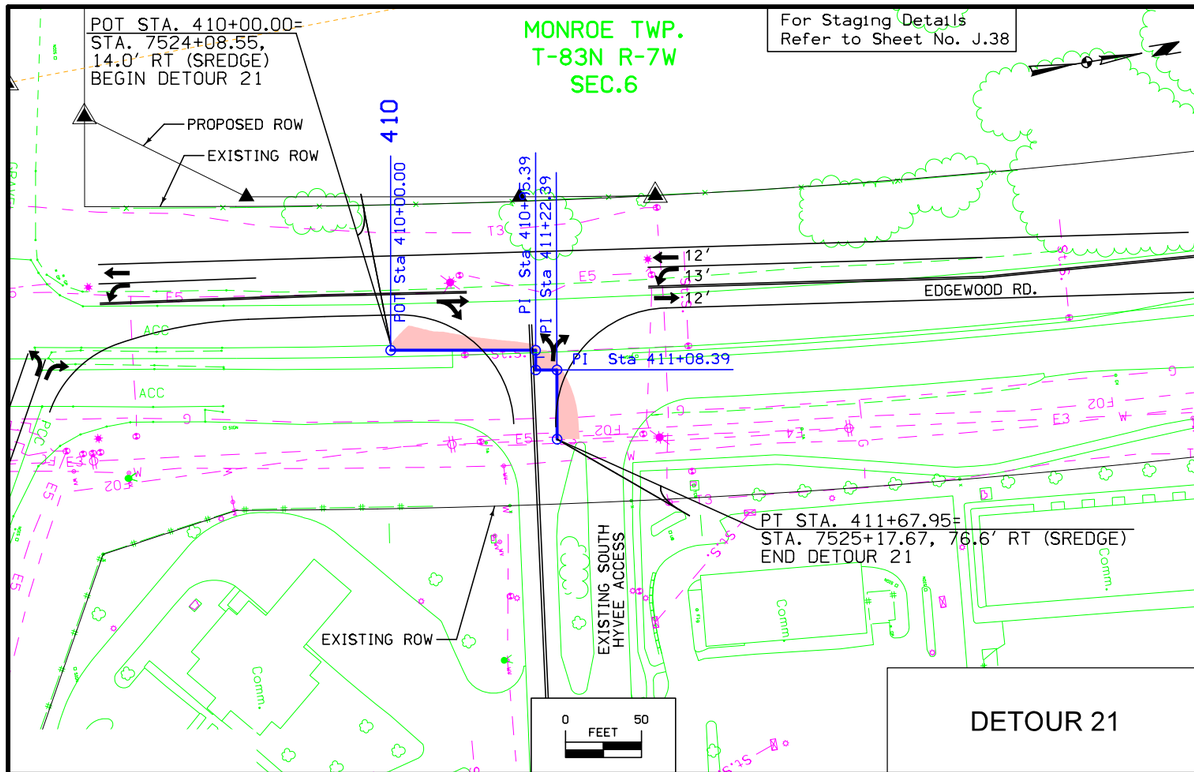
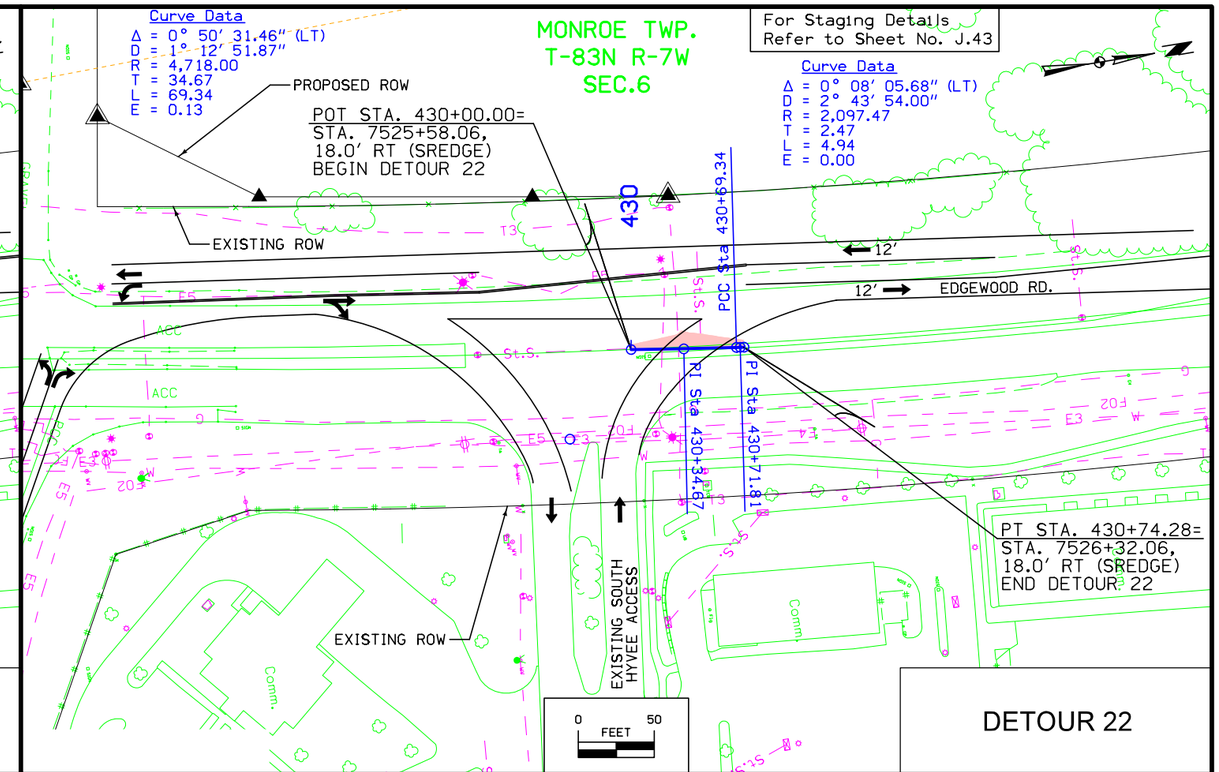
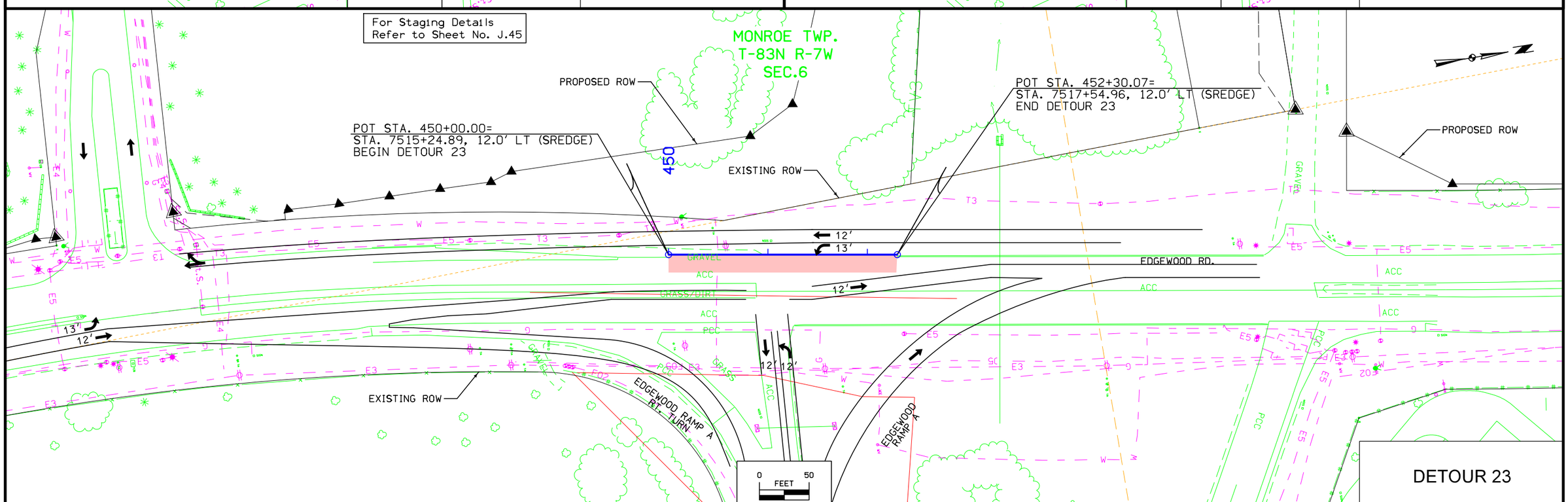






C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER F.13

4:21:57 PM 2014\01\03 untitled c:\pw_workdir\ch2mhill_tbg\aduongl\d0179917\57100079F01.sht

HORIZONTAL CONTROL INFORMATION:

UTILIZING THE IOWA REAL-TIME-NETWORK GRID IN NAD(83)(1996), GPS OBSERVATIONS WERE MADE ON 14 CONTROL POINTS POSITIONED ALONG THE PROJECT ROUTE. CHECKS WERE MADE TO 9 PUBLISHED CONTROL MONUMENTS. GRID COORDINATES ON THE 14 CONTROL POINTS WERE SCALED TO GROUND AROUND POINT PUBLISHED CONTROL MONUMENT 8B. HORIZONTAL TRAVERSE WAS RUN THROUGH THE POINTS. A LEAST-SQUARES ADJUSTMENT WAS USED ON THE TRAVERSE TO OBTAIN COORDINATES ON A LOCAL PROJECT COORDINATE SYSTEM.

VERTICAL DATUM INFORMATION:

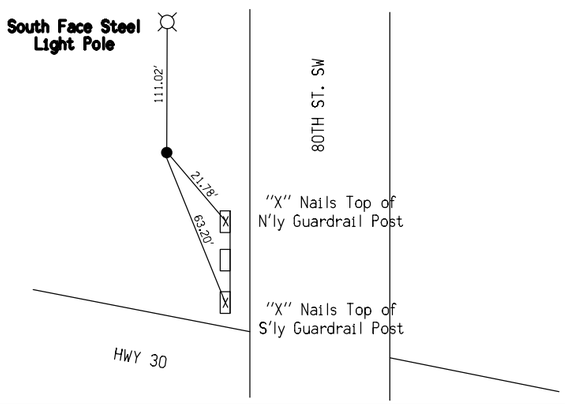
STANDARD ELEVATIONS BASED ON THE SEA-LEVEL DATUM NAVD 1988 ADJUSTED THROUGH A DIGITAL LEVEL LOOP STARTING AT BM 500 AND TURNING THROUGH ORIGINAL PROJECT BM's 513, 521, 528, & 564. PROJECT NHS-100-1(36)--19-57

DETAILS OF REFERENCE INFORMATION

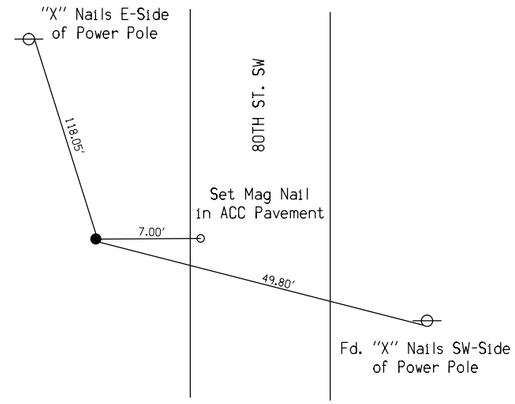
All References are Plumb Distances unless otherwise noted.

Benchmarks		Description	Station (ML100)	Offset (ML100)	Coordinates		Elevation
					Northing	Easting	
IDOT BM	500	FD. IDOT PLUG IN WINGWALL - S. END OF FAIRFAX ROAD BRIDGE OVER HIGHWAY 30	-	-	3452333	5390473	876.25
IDOT BM	501	FD. RR SPIKE EAST SIDE P. POLE - FIRST P. POLE SOUTH OF WIENEKE CIRCLE - WEST SIDE OF ROAD	-	-	3453289	5390414	848.17
IDOT BM	502	FD. RR SPIKE EAST SIDE P. POLE - S.W. QAUD 16TH AVE. S.W. & 80TH ST. S.W.	-	-	3454576	5390394	828.37
IDOT BM	504	FD. RR SPIKE WEST SIDE P. POLE - APPROX. 1750 FT NORTH OF INTERSECTION 80TH ST. S.W. & 16TH AVE. S.W. EAST SIDE OF ROAD ALONG 80TH ST. S.W.	-	-	3456471	5390498	794.67
IDOT BM	505	FD. RR SPIKE EAST SIDE P. POLE - WEST SIDE OF ROAD 1/4 MILE SOUTH OF N.E. COR. 28-83-8W, ALONG 80TH ST. S.W.	-	-	3458662	5390392	783.76
IDOT BM	507	FD. LINN COUNTY DISK S.W. COR. CONC. HANDRAIL - APPX 650 FT NORTH OF N.E. COR. 28-83-8W ALONG, 80TH ST. N.W.	-	-	3460758	5390363	762.90
IDOT BM	508	FD. RR. SPIKE EAST SIDE P. POLE APPROX. 625 FT. SOUTH E. 1/4 COR 21-83-8W - WEST SIDE OF ROAD ALONG 80TH ST. N.W.	-	-	3462008	5390330	793.86
IDOT BM	509	FD. RR. SPIKE EAST SIDE P. POLE APPROX. 275 FT. SOUTH E. 1/4 COR. 21-83-8W - WEST SIDE OF ROAD, ALONG 80TH ST. N.W.	-	-	3462456	5390322	821.36
IDOT BM	510	FD. RR. SPIKE EAST SIDE P. POLE APPROX. 300 FT. NORTH E. 1/4 COR. 21-83-8W - W. SIDE OF ROAD, ALONG 80TH ST. N.W.	-	-	3463109	5390311	789.16
IDOT BM	511	FD. CUT X S.W. BOLT FIRE HYD. N.W. QUAD. OF 80TH ST. N.W. & WORCHESTER ROAD	-	-	3464097	5390361	822.19
IDOT BM	512	FD. RR SPIKE EAST SIDE P. POLE APPROX. 30 FT WEST OF N.E. COR. 21-83-8W ALONG 80TH ST. N.W.	-	-	3465388	5390275	821.57
IDOT BM	513	FD. LINN COUNTY DISK N.HDWL. TWIN 12x8 RCB CULVERT - APPROX. 225 FT WEST OF E. 1/4 COR. 16-83-8W	-	-	3468075	5390056	767.75
IDOT BM	521	FD. RR SPIKE NW. SIDE P. POLE	935+85.74	266.50' LT	3474701	5394859	796.80
IDOT BM	528	FD. CUT X CONC. RR ABUTMENT	1016+77.92	441.43' RT	3478104	5401490	786.05
AMENT BM	564	NE FLANGE BOLT HYD. @ SW COR N. RIVER BLVD. NE & EDGEWOOD ROAD	1100+37.11	973.11' RT	3477804	5409554	853.55
BM	570	SET CHISELED X ON WEST FACE MANHOLE RIM, EAST SIDE OF 80TH ST., 100 FT. SOUTH OF 4TH P. POLE SOUTH OF ELIS BLVD. & 80TH ST. INTERSECTION	-	-	3467205	5390297	793.46
BM	571	SET RR SPIKE IN WEST FACE 18" DECIDUOUS TREE, APPROX. 1925 FT. S.W. OF CONVINGTON RD. BRIDGE OVER ABANDON RR TRACKS	879+88.52	770.43'RT	3470484	5391330	758.03
BM	572	SET SURVEY NAIL IN S.W. BRIDGE PIER OF BRIDGE OVER ABANDONED RR ON CONVINGTON RD.	900+73.22	495.44' RT	3471902	5392630	762.66
BM	573	SET RR SPIKE IN P. POLE, EAST SIDE BURT RD. APPROX. 215' NORTH OF BEND IN ROAD, APPROX. 20 FT. N.W. OF CP #210	948+20.29	571.36' LT	3475781	5395530	819.08
BM	574	SET RR SPIKE IN SOUTH FACE 24" DECIDUOUS TREE, APPROX. 385 FT. SOUTH RAILROAD TRACKS & APPROX. 600 FT. WEST OF WEST BANK CEDAR RIVER	985+42.69	403.66' RT	3477635	5398854	728.02
BM	577	SET RR SPIKE IN EAST FACE 18" DECIDUOUS TREE APPROX. 40 FT EAST OF EAST BANK CEDAR RIVER & 1000 FT WEST OF CP #217	999+63.80	851.40' RT	3477734	5400079	733.38
BM	578	SET PK NAIL IN SOUTH FACE P. POLE ON NORTH SIDE OF PRIVATE LANE & APPROX. 400' EAST OF EAST BANK CEDAR RIVER & 30 FT WEST OF CP #216	1005+85.86	1003.16' RT	3477648	5400546	779.18
BM	579	SET RR SPIKE IN SOUTH FACE P. POLE ON SOUTH SIDE SWAN POND	1034+74.74	106.12' LT	3478553	5403333	795.19
BM	580	SET CHISELED X ON S.W. BOLT OF OLD CONC RR SIGNAL BASE ALONG ABANDONED RR APPROX. 200 FT NORTH OF HOUSE #5404 OAK CREEK DR. N.E.	1053+83.77	82.11' RT	3478955	5405195	806.65
BM	581	FD. 60d NAIL IN WEST FACE P. POLE ON EAST SIDE OF USHERS FERRY RD. APPROX. 1000 FT NORTH OF INTERSECTION OF USHERS FERRY RD. & N. RIVER BLVD. N.E.	1072+36.35	439.72' LT	3479691	5407021	783.25
BM	582	SET CHISELED X ON NE BOLT OF FIRE HYD. AT N.E. COR. PARKING OF #4700 N. RIVER BLVD. N.E.	1089+46.50	268.67' RT	3478722	5408635	831.41
BM	583	SET RR SPIKE IN EAST FACE P. POLE AT S.W. COR. OF INTERSECTION OF EDGEWOOD RD. & W. BOUND HWY 100 (COLLINS RD.) OFF RAMP	1099+80.12	210.18' LT	3478973	5409746	852.21

CONTROL POINT #200
SET 5/8" REBAR
Xc=5390453.302,X Yc=3452782.589

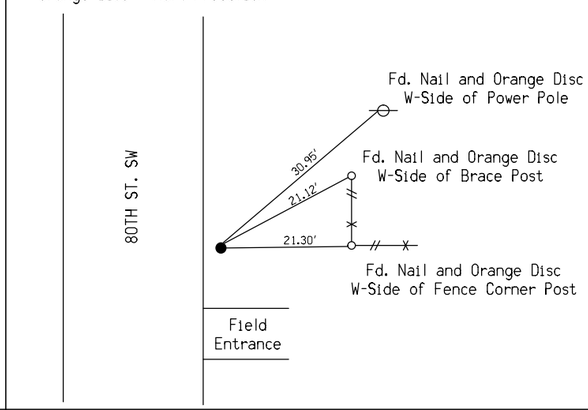


CONTROL POINT #201
SET 5/8" REBAR
Xc=5390460.332, Yc=3456088.161

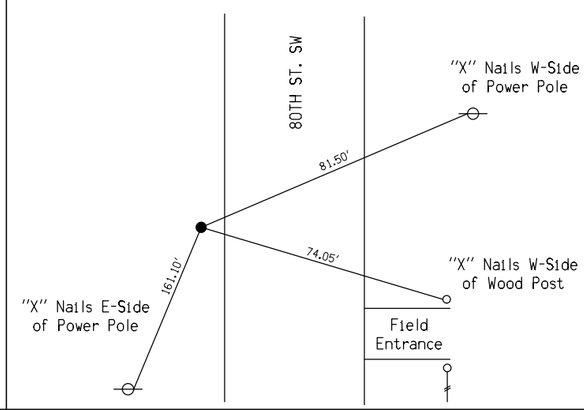


CONTROL POINT #202
SET 5/8" REBAR
Xc=5390459.117, Yc=3457455.705

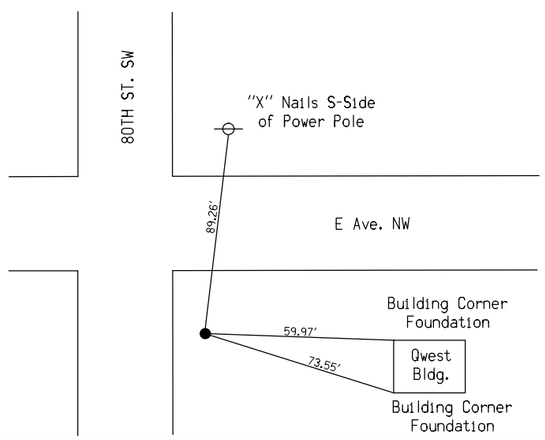
* Orange Disc = Hart-Frederick



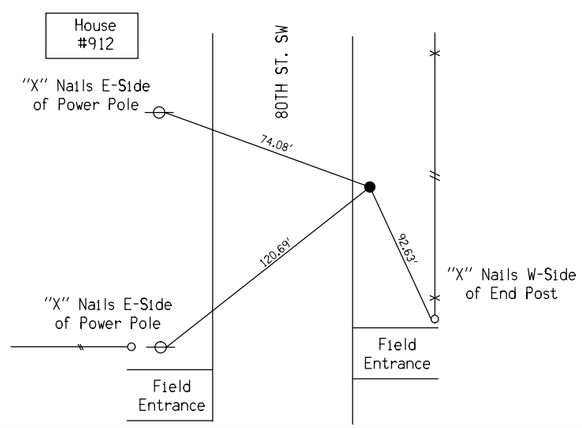
CONTROL POINT #203
SET 5/8" REBAR
Xc=5390404.624, Yc=3458822.274



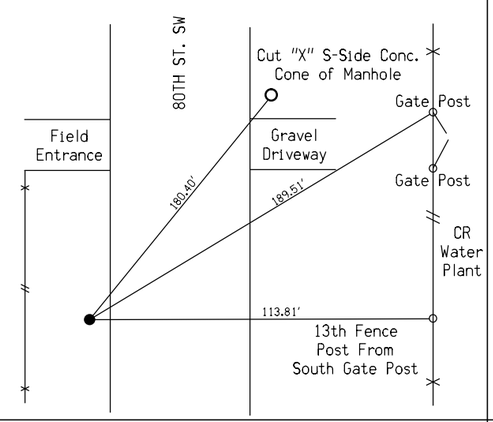
CONTROL POINT #204
SET 5/8" REBAR
Xc=5390423.162, Yc=3460036.475



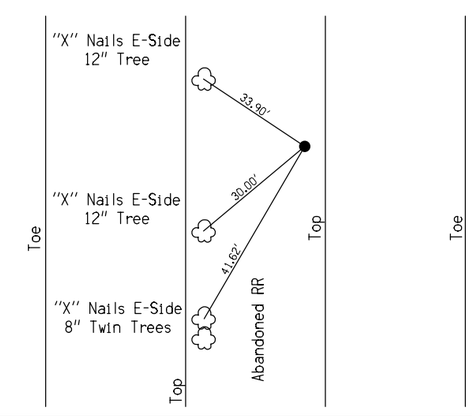
CONTROL POINT #205
SET 5/8" REBAR
Xc=5390387.872, Yc=3461529.234



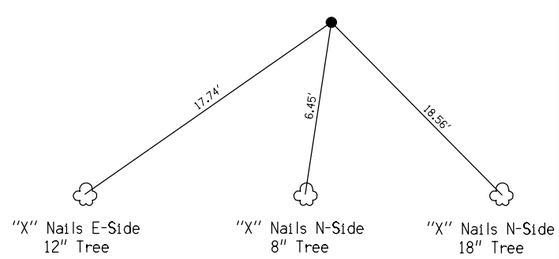
CONTROL POINT #206
SET 5/8" REBAR
Xc=5390253.638, Yc=3467028.096



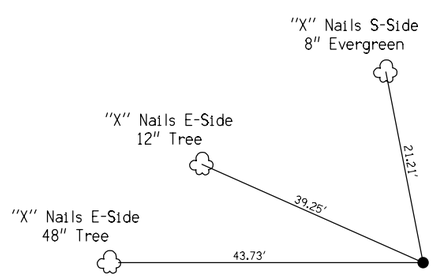
CONTROL POINT #207
SET 5/8" REBAR
Xc=5390507.381, Yc=3469423.415



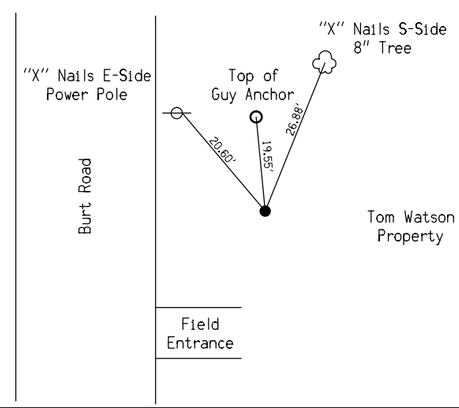
CONTROL POINT #208
SET 5/8" REBAR
Xc=5390759.885, Yc=3470756.782



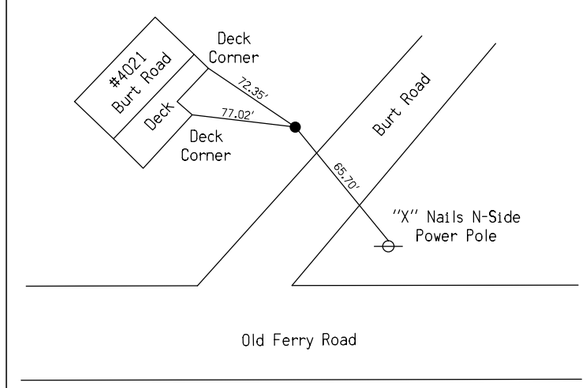
CONTROL POINT #209
SET 5/8" REBAR
Xc=5393566.652, Yc=3473389.196



CONTROL POINT #210
SET 5/8" REBAR
Xc=5395536.388, Yc=3475762.267

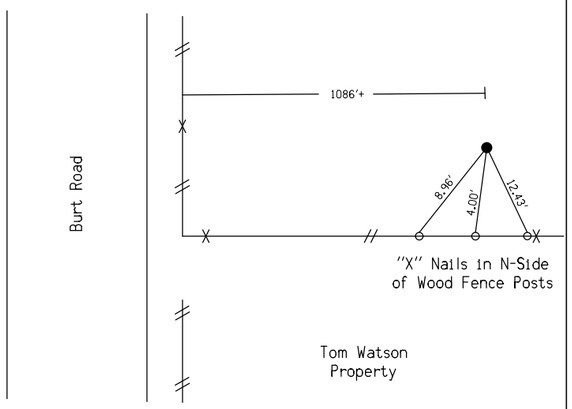


CONTROL POINT #211
SET 5/8" REBAR
Xc=5395036.496, Yc=3474978.586

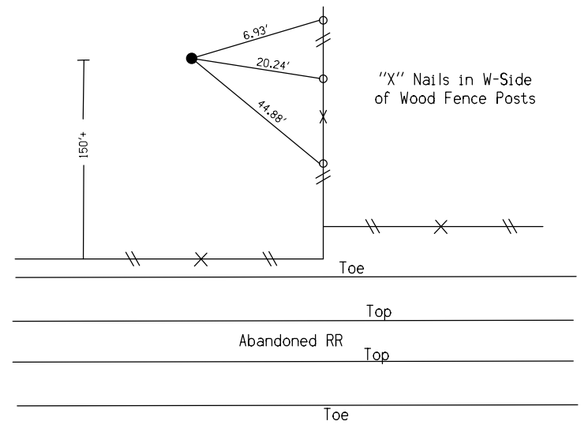


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER G.2

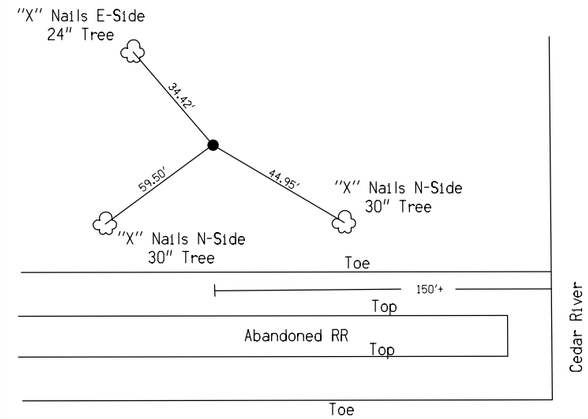
CONTROL POINT #212
SET 5/8" REBAR
Xc=5396578.459, Yc=3477115.968



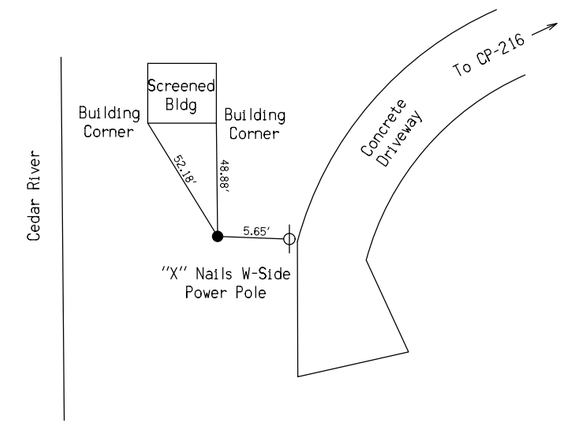
CONTROL POINT #213
SET 5/8" REBAR
Xc=5397976.081, Yc=3477644.189



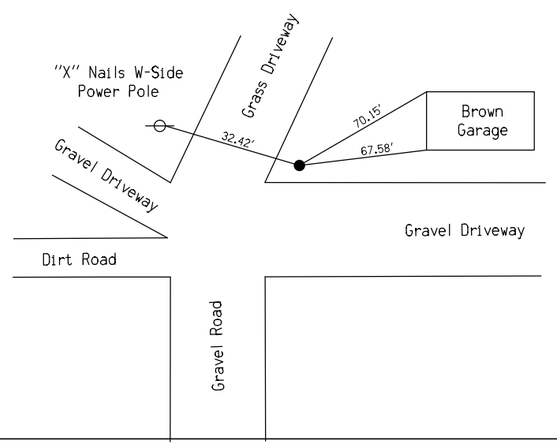
CONTROL POINT #214
SET 5/8" REBAR
Xc=5398998.050, Yc=3477668.551



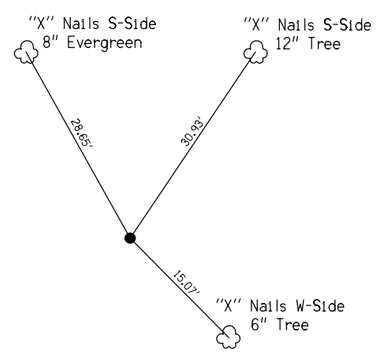
CONTROL POINT #215
SET 5/8" REBAR
Xc=5400225.952, Yc=3477615.353



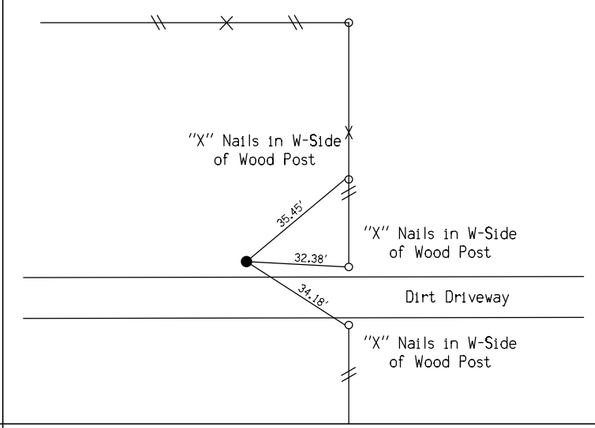
CONTROL POINT #216
SET 5/8" REBAR
Xc=5400574.857, Yc=3477663.984



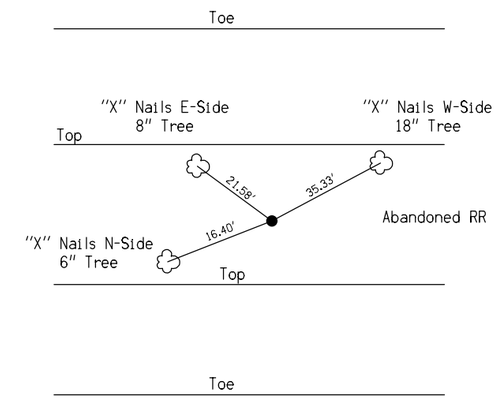
CONTROL POINT #217
SET 5/8" REBAR
Xc=5400963.863, Yc=3477963.765



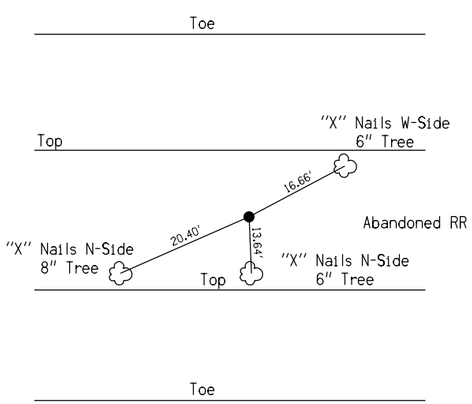
CONTROL POINT #218
SET 5/8" REBAR
Xc=5403021.252, Yc=3478441.174



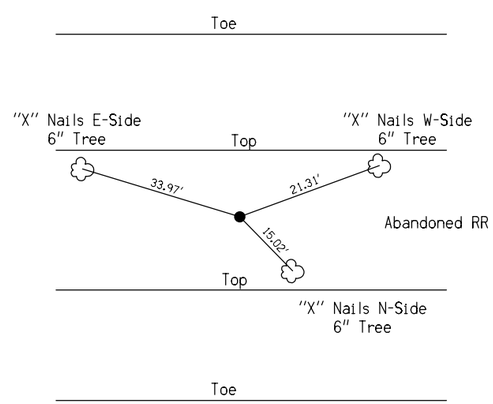
CONTROL POINT #219
SET 5/8" REBAR
Xc=5403911.638, Yc=3478637.706



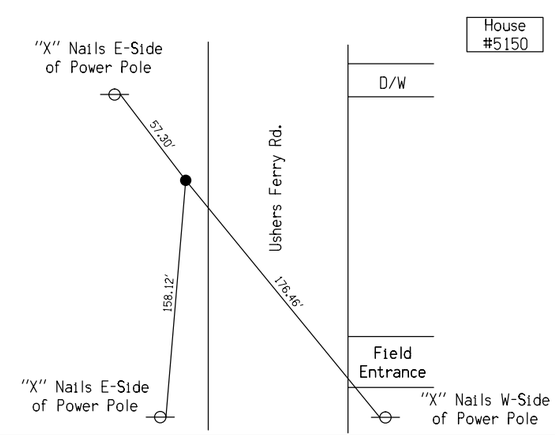
CONTROL POINT #220
SET 5/8" REBAR
Xc=5404721.715, Yc=3478825.490



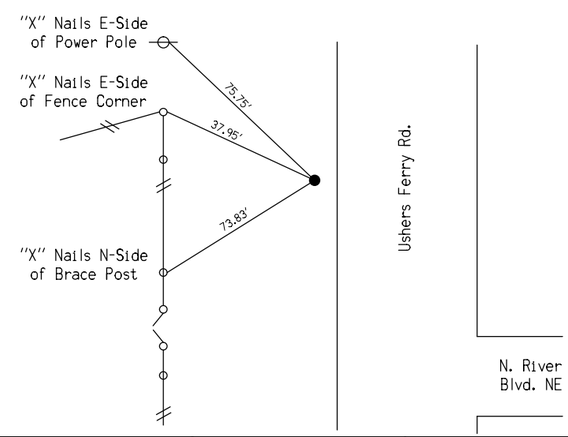
CONTROL POINT #221
SET 5/8" REBAR
Xc=5405574.711, Yc=3479020.396



CONTROL POINT #224
SET 5/8" REBAR
Xc=5407061.832, Yc=3479862.893



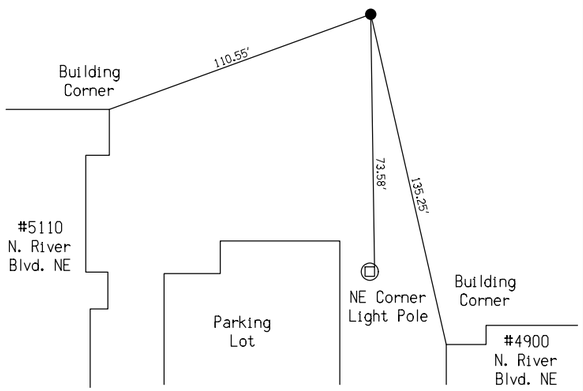
CONTROL POINT #225
SET 5/8" REBAR
Xc=5406626.270, Yc=3479048.819



CONTROL POINT #226

SET 5/8" REBAR

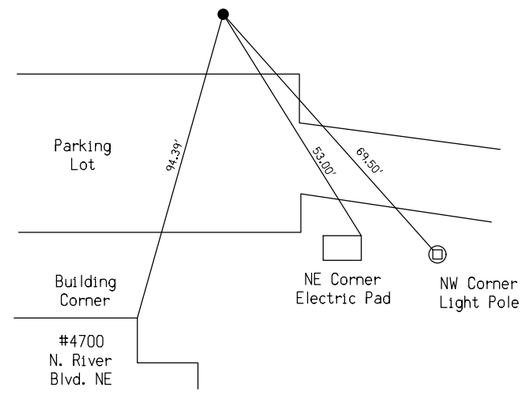
Xc=5407715.302, Yc=3479096.455



CONTROL POINT #227

SET 5/8" REBAR

Xc=5408584.907, Yc=3478830.311



ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
ML100	MAINLINE 100																		
20025								981+53.23	3,477,700.54	5,398,313.82	999+37.17	3,478,944.03	5,399,592.96	1014+34.66	3,478,585.33	5,401,340.46			
20026								1021+57.54	3,478,439.97	5,402,048.59	1030+05.69	3,478,269.44	5,402,879.41	1038+14.29	3,478,540.40	5,403,683.10			
20027								1050+69.20	3,478,941.31	5,404,872.25	1067+17.91	3,479,468.03	5,406,434.55	1082+87.19	3,479,122.48	5,408,046.64			
20028								1115+83.96	3,478,431.50	5,411,270.18	1121+84.38	3,478,305.66	5,411,857.27	1127+70.48	3,478,405.30	5,412,449.36			
20029		1130+88.07	3,478,458.00	5,412,762.56															
EDGEA	RAMP A																		
94000		41497+92.33	3,478,611.06	5,409,670.72															
94001								41497+92.33	3,478,611.06	5,409,670.72	41501+48.81	3,478,962.82	5,409,728.55	41503+15.06	3,478,845.76	5,410,065.26			
94002								41504+91.77	3,478,787.73	5,410,232.18	41507+20.95	3,478,712.48	5,410,448.64	41509+50.00	3,478,649.65	5,410,669.04			
94003		41511+50.00	3,478,594.81	5,410,861.37															
EDGEA_RT	RAMP A RIGHT TURN																		
94100		41599+90.68	3,478,987.56	5,409,769.10															
94101								41604+94.53	3,478,805.14	5,410,238.76	41606+78.21	3,478,738.64	5,410,409.98	41608+61.68	3,478,686.31	5,410,586.04			
94102		41608+61.68	3,478,686.31	5,410,586.04															
EDGEB	RAMP B																		
95000		42586+00.00	3,478,984.56	5,408,336.99															
95001								42597+10.88	3,478,679.99	5,409,405.31	42600+64.29	3,478,583.10	5,409,745.17	42602+41.85	3,478,931.83	5,409,802.50			
95002		42602+41.85	3,478,931.83	5,409,802.50															
EDGEB_RT	RAMP B RIGHT TURN																		
95100		42693+72.14	3,478,760.54	5,409,079.00															
95105								42693+72.14	3,478,760.54	5,409,079.00	42695+88.64	3,478,701.17	5,409,287.21	42698+05.08	3,478,632.86	5,409,492.66			
95110								42698+05.08	3,478,632.86	5,409,492.66	42698+50.41	3,478,618.56	5,409,535.67	42698+94.77	3,478,590.07	5,409,570.93			
95115								42698+94.77	3,478,590.07	5,409,570.93	42699+60.95	3,478,548.46	5,409,622.40	42700+16.50	3,478,482.50	5,409,616.92			
95102		42703+91.44	3,478,108.85	5,409,585.89															
EDGEC	RAMP C																		
96000		43583+00.67	3,479,172.59	5,408,070.48															
96002								43583+00.67	3,479,172.59	5,408,070.48	43587+30.45	3,479,090.94	5,408,492.43	43591+59.40	3,479,054.95	5,408,920.70			
96003								43593+28.28	3,479,040.82	5,409,088.98	43595+21.04	3,479,024.68	5,409,281.07	43597+13.47	3,478,989.19	5,409,470.53			
96004								43597+13.47	3,478,989.19	5,409,470.53	43600+26.42	3,478,931.56	5,409,778.13	43602+09.00	3,478,622.75	5,409,727.37			
96005		43602+09.00	3,478,622.75	5,409,727.37															
EDGEC_RT	RAMP C RIGHT TURN																		
96100		43697+25.00	3,479,016.13	5,409,488.41															
96101								43698+02.17	3,479,002.22	5,409,564.31	43699+45.10	3,478,976.45	5,409,704.90	43700+30.35	3,479,115.64	5,409,737.42			
96102		43700+91.20	3,479,174.70	5,409,751.21															
EDGED	RAMP D																		
97000		44497+96.75	3,478,872.38	5,409,738.00															
97001								44497+96.75	3,478,872.38	5,409,738.00	44501+83.88	3,478,490.38	5,409,675.21	44503+81.76	3,478,466.29	5,410,061.59			
97002								44513+51.36	3,478,405.97	5,411,029.31	44514+75.31	3,478,398.25	5,411,153.02	44515+98.94	3,478,375.33	5,411,274.83			
97003		44515+98.94	3,478,375.33	5,411,274.83															
EDGED_RT	RAMP D RIGHT TURN																		
97100		44599+92.45	3,478,316.57	5,409,733.84															
97101								44600+08.34	3,478,331.93	5,409,737.88	44601+29.07	3,478,448.69	5,409,768.57	44602+11.65	3,478,443.67	5,409,889.19			
97102		44603+75.00	3,478,436.88	5,410,052.40															
SRNRBLVD	NORTH RIVER BLVD.																		
81500		7201+33.42	3,478,099.32	5,408,845.66															
81501								7201+33.42	3,478,099.32	5,408,845.66	7204+34.43	3,477,886.30	5,409,058.33	7207+08.61	3,477,868.81	5,409,358.84			
81502		7209+73.30	3,477,853.44	5,409,623.08															
SRHYVEE	S. HY-VEE ACCESS																		
83000		8525+22.98	3,479,386.96	5,409,834.65															
83001		8529+18.79	3,479,337.59	5,410,227.37															
SREDGE	EDGEWOOD RD.																		
90000		7500+00.00	3,476,881.19	5,409,667.13															
90001								7508+19.93	3,477,700.13	5,409,626.77	7511+44.69	3,478,024.49	5,409,610.79	7514+67.00	3,478,344.95	5,409,663.46			
90002								7524+93.31	3,479,357.66	5,409,829.93	7529+54.25	3,479,812.50	5,409,904.70	7534+12.25	3,480,273.19	5,409,889.67			
90003		7539+00.00	3,480,760.68	5,409,873.77															

ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
SREDGENB	EDGEWOOD RD. NB																		
90020		7600+00.00	3,476,881.83	5,409,680.11															
90021		7601+60.00	3,477,041.64	5,409,672.24															
90022		7603+85.06	3,477,266.61	5,409,666.16															
90025								7608+19.99	3,477,701.02	5,409,644.75	7611+42.83	3,478,023.47	5,409,628.86	7614+63.24	3,478,342.03	5,409,681.23			
90026								7624+89.55	3,479,354.74	5,409,847.69	7625+56.77	3,479,421.07	5,409,858.60	7626+23.98	3,479,487.69	5,409,867.61			
90027								7626+23.98	3,479,487.69	5,409,867.61	7626+94.95	3,479,558.02	5,409,877.12	7627+65.88	3,479,628.84	5,409,881.85			
90028								7629+43.13	3,479,805.70	5,409,893.68	7631+00.94	3,479,963.16	5,409,904.20	7632+58.64	3,480,120.98	5,409,904.17			
90029								7632+58.64	3,480,120.97	5,409,904.17	7632+88.71	3,480,151.05	5,409,904.16	7633+18.79	3,480,181.13	5,409,903.78			
SREDGESB	EDGEWOOD RD. SB																		
90040		7700+00.00	3,476,881.10	5,409,665.13															
90041		7701+60.00	3,477,040.90	5,409,657.25															
90042		7701+85.00	3,477,065.87	5,409,656.02															
90043		7706+35.11	3,477,514.83	5,409,623.89															
90044								7708+20.04	3,477,699.54	5,409,614.79	7711+46.08	3,478,025.18	5,409,598.74	7714+69.66	3,478,346.89	5,409,651.62			
90045		7723+12.66	3,479,178.73	5,409,788.36															
90046								7726+12.36	3,479,475.58	5,409,829.61	7726+42.21	3,479,505.15	5,409,833.72	7726+72.06	3,479,534.76	5,409,837.45			
90047								7728+96.12	3,479,757.07	5,409,865.46	7729+18.55	3,479,779.32	5,409,868.26	7729+40.97	3,479,801.60	5,409,870.74			
90048								7729+40.97	3,479,801.60	5,409,870.74	7731+31.17	3,479,990.64	5,409,891.76	7733+20.88	3,480,180.82	5,409,889.29			
EDGEA_RET_2	RAMP A																		
EDGEA_RET_2-1								1+00.00	3,478,962.41	5,409,814.27	1+09.37	3,478,953.92	5,409,818.22	1+18.53	3,478,947.43	5,409,824.99			
EDGEA_RET_2-2								1+18.53	3,478,947.43	5,409,824.99	1+28.50	3,478,940.53	5,409,832.19	1+38.22	3,478,936.92	5,409,841.49			
EDGEA_RET_3	RAMP A																		
EDGEA_RET_3-1								1+00.00	3,479,005.38	5,409,816.62	1+12.28	3,478,993.12	5,409,817.37	1+24.38	3,478,981.65	5,409,821.76			
EDGEA_RET_3-2								1+24.38	3,478,981.65	5,409,821.76	1+64.27	3,478,944.40	5,409,836.03	1+99.48	3,478,929.96	5,409,873.22			
EDGEA_RET_4	RAMP A																		
94140		40+00.00	3,478,940.46	5,409,890.38															
94145								40+00.00	3,478,940.46	5,409,890.38	40+35.72	3,478,953.39	5,409,857.08	40+67.19	3,478,986.82	5,409,844.48			
94146								40+67.19	3,478,986.82	5,409,844.48	40+84.92	3,479,003.40	5,409,838.23	41+02.24	3,479,021.13	5,409,838.38			
94147								41+02.24	3,479,021.13	5,409,838.38	41+60.26	3,479,079.14	5,409,838.87	42+18.05	3,479,136.39	5,409,848.28			
94144		42+18.05	3,479,136.39	5,409,848.28															
EDGEB_RET_1	RAMP B																		
EDGEB_RET_1-1								1+00.00	3,478,655.05	5,409,492.16	1+31.57	3,478,645.92	5,409,522.39	1+62.86	3,478,630.08	5,409,549.70			
EDGEB_RET_1-2								1+62.86	3,478,630.08	5,409,549.70	2+00.38	3,478,611.26	5,409,582.16	2+37.83	3,478,589.09	5,409,612.42			
EDGEB_RET_1-3								2+37.83	3,478,589.09	5,409,612.42	2+60.38	3,478,575.76	5,409,630.61	2+81.67	3,478,554.67	5,409,638.59			
EDGEB_RET_1-4								2+81.67	3,478,554.67	5,409,638.59	3+03.63	3,478,534.13	5,409,646.35	3+24.76	3,478,512.31	5,409,643.90			
95106		3+73.56	3,478,463.81	5,409,638.45															
95107		3+85.70	3,478,451.72	5,409,637.44															
EDGEB_RET_2	RAMP B																		
EDGEB_RET_2-1								1+00.00	3,478,648.05	5,409,497.71	1+48.23	3,478,632.83	5,409,543.48	1+95.43	3,478,602.51	5,409,580.99			
EDGEB_RET_2-2								1+95.43	3,478,602.51	5,409,580.99	2+70.08	3,478,555.58	5,409,639.05	3+32.74	3,478,481.18	5,409,632.87			
EDGEC_RET_1	RAMP C																		
95105		1+00.00	3,478,995.62	5,409,483.79															
95106		1+14.14	3,478,993.08	5,409,497.70															
EDGEC_RET_1-1								1+68.45	3,478,979.70	5,409,550.34	2+88.32	3,478,950.18	5,409,666.52	3+78.91	3,479,047.47	5,409,736.54			
EDGED_RET_1	RAMP D																		
97105		1+00.00	3,478,321.54	5,409,713.43															
EDGED_RET_1-1								1+27.72	3,478,348.35	5,409,720.48	1+45.92	3,478,365.95	5,409,725.11	1+64.00	3,478,382.29	5,409,733.15			
EDGED_RET_1-2								1+64.00	3,478,382.2859	5,409,733.1476	2+70.09	3,478,477.46	5,409,780.01	3+50.33	3,478,468.87	5,409,885.74			
97106		4+52.42	3,478,460.60	5,409,987.50															
SRHYVEE_RET_3	S. HY-VEE ACCESS																		
83030		30+00.00	3,479,215.18	5,409,861.24															
83035								30+62.50	3,479,276.85	5,409,871.37	31+34.20	3,479,347.60	5,409,883.00	331+76.93	3,479,339.17	5,409,954.20			
SRHYVEE_RET_4	S. HY-VEE ACCESS																		
83040								40+00.00	3,479,545.09	5,409,910.77	40+31.61	3,479,513.65	5,409,907.45	40+63.22	3,479,482.32	5,409,903.21			
83045								40+63.22	3,479,482.32	5,409,903.21	41+33.41	3,479,412.77	5,409,893.78	41+73.36	3,479,403.53	5,409,963.36			
SRNRBLVD_RET1	NORTH RIVER BLVD.																		
81510		10+00.00	3,477,899.51	5,409,450.96															
81515								10+62.49	3,477,895.88	5,409,513.36	11+24.00	3,477,892.31	5,409,574.75	11+58.22	3,477,953.78	5,409,576.81			
81516								11+58.22	3,477,953.78	5,409,576.81	11+95.80	3,477,991.33	5,409,578.06	12+33.37	3,478,028.84	5,409,580.23			

ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
SRNRBLVD_RET2	NORTH RIVER BLVD.																		
81520		20+00.00	3,477,825.39	5,409,494.03															
81525								20+25.76	3,477,823.89	5,409,519.74	20+80.84	3,477,820.69	5,409,574.73	21+14.88	3,477,765.63	5,409,576.23			
81526								21+14.88	3,477,765.63	5,409,576.23	21+31.38	3,477,749.13	5,409,576.68	21+47.89	3,477,732.64	5,409,577.31			
DET1	TEMPORARY WIDENING 1																		
9000100		10+00.00	3,476,708.73	5,409,675.07															
9000101		11+30.08	3,476,838.64	5,409,668.48															
DET2	TEMPORARY WIDENING 2																		
DET2-1								30+00.00	3,476,905.96	5,409,670.71	32+15.38	3,477,121.11	5,409,660.84	34+30.76	3,477,336.21	5,409,649.75			
9000201		35+93.26	3,477,498.15	5,409,636.35															
DET2-2								36+59.01	3,477,563.84	5,409,633.46	37+83.91	3,477,688.48	5,409,625.53	39+08.68	3,477,813.37	5,409,627.44			
DET3	TEMPORARY WIDENING 3																		
9000300		50+00.00	3,477,870.14	5,409,384.38															
9000301		50+50.20	3,477,860.32	5,409,433.62															
DET3-1								51+56.31	3,477,848.89	5,409,539.11	51+75.78	3,477,846.80	5,409,558.46	51+94.54	3,477,853.62	5,409,576.69			
DET4	TEMPORARY WIDENING 4																		
9000400		70+00.00	3,477,930.54	5,409,637.07															
DET4-1								70+58.43	3,477,988.79	5,409,641.64	71+17.59	3,478,047.77	5,409,646.26	71+76.74	3,478,106.61	5,409,652.40			
DET4-2								71+76.74	3,478,106.61	5,409,652.40	72+41.36	3,478,170.78	5,409,660.02	73+05.96	3,478,234.48	5,409,670.90			
DET4-3								73+05.96	3,478,234.48	5,409,670.90	73+33.41	3,478,261.55	5,409,675.45	73+60.86	3,478,288.66	5,409,679.77			
9000401		75+59.90	3,478,485.21	5,409,711.14															
DET5	TEMPORARY WIDENING 5																		
DET5-1								90+00.00	3,479,039.02	5,409,801.64	91+37.51	3,479,174.52	5,409,825.09	92+74.99	3,479,310.72	5,409,844.03			
DET6	TEMPORARY WIDENING 6																		
DET6-1								110+00.00	3,479,427.42	5,409,863.80	111+43.74	3,479,570.19	5,409,880.56	112+87.42	3,479,713.63	5,409,889.83			
DET6-2								112+87.42	3,479,713.63	5,409,889.83	113+17.79	3,479,743.94	5,409,891.79	113+48.12	3,479,774.30	5,409,891.26			
DET6-3								113+48.12	3,479,774.30	5,409,891.26	113+84.45	3,479,810.60	5,409,890.14	114+20.73	3,479,846.89	5,409,891.85			
DET6-4								114+20.73	3,479,846.89	5,409,891.85	115+53.77	3,479,979.78	5,409,898.10	116+86.74	3,480,112.81	5,409,897.21			
DET6-5								116+86.74	3,480,112.81	5,409,897.21	117+14.20	3,480,140.27	5,409,897.03	117+41.65	3,480,167.68	5,409,895.22			
DET6-6								117+41.65	3,480,167.68	5,409,895.22	117+83.60	3,480,209.54	5,409,892.45	118+25.55	3,480,251.44	5,409,890.38			
DET6-7								118+25.55	3,480,251.44	5,409,890.38	119+30.35	3,480,356.19	5,409,887.16	120+35.15	3,480,460.93	5,409,883.68			
DET7	TEMPORARY WIDENING 7																		
9000700		130+00.00	3,476,889.90	5,409,600.07															
9000701		130+37.77	3,476,891.43	5,409,637.81															
9000702		130+66.51	3,476,920.15	5,409,636.49															
DET8	TEMPORARY WIDENING 8																		
9000800		150+00.00	3,476,908.84	5,409,704.65															
DET8-1								150+12.53	3,476,921.35	5,409,705.29	150+39.75	3,476,948.54	5,409,704.01	150+66.95	3,476,975.76	5,409,704.68			
DET8-2								150+66.95	3,476,975.76	5,409,704.68	150+95.64	3,477,004.44	5,409,705.38	151+24.31	3,477,033.09	5,409,704.03			
9000801		153+93.54	3,477,302.03	5,409,691.35															
DET8-3								156+91.79	3,477,599.88	5,409,675.89	158+57.02	3,477,764.89	5,409,667.33	160+21.98	3,477,929.93	5,409,674.94			
9000802		160+71.00	3,477,978.95	5,409,674.99															
DET9	DETOUR 9																		
9000900		170+00.00	3,478,304.67	5,409,669.89															
DET9-1								170+25.91	3,478,330.26	5,409,673.89	171+81.73	3,478,484.22	5,409,697.95	173+14.23	3,478,594.38	5,409,587.74			
DET9-2								173+28.67	3,478,604.59	5,409,577.52	176+53.77	3,478,834.40	5,409,347.59	177+65.07	3,478,971.10	5,409,642.54			
DET9-3								177+65.07	3,478,971.10	5,409,642.54	178+18.87	3,478,993.72	5,409,691.34	178+70.71	3,479,035.83	5,409,724.81			
DET9-4								179+18.54	3,479,073.28	5,409,754.57	180+03.69	3,479,139.95	5,409,807.54	180+84.65	3,479,224.38	5,409,818.54			
DET10	TEMPORARY WIDENING 10																		
9001000		190+00.00	3,479,449.65	5,409,897.58															
9001001		191+80.07	3,479,628.31	5,409,920.04															
9001002		192+56.80	3,479,704.84	5,409,925.68															
9001003		193+44.57	3,479,792.46	5,409,930.79															
DET11	TEMPORARY WIDENING 11																		
9001101		210+00.00	3,480,257.74	5,409,942.52															
9001102		210+42.69	3,480,300.43	5,409,942.70															
DET12	TEMPORARY WIDENING 12																		
9001200		230+00.00	3,478,550.19	5,409,697.20															
9001201		230+79.38	3,478,628.52	5,409,710.08															

ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
DET13	TEMPORARY WIDENING 13																		
9001300		250+00.00	3,478,893.96	5,409,753.71															
9001301		250+76.24	3,478,969.19	5,409,766.08															
DET14	TEMPORARY WIDENING 14																		
9001401								270+00.00	3,478,946.69	5,409,820.73	270+20.59	3,478,960.07	5,409,836.37	270+38.61	3,478,956.99	5,409,856.73			
9001402								270+38.61	3,478,956.99	5,409,856.73	270+90.27	3,478,949.26	5,409,907.80	271+40.89	3,478,924.63	5,409,953.21			
DET15	TEMPORARY WIDENING 15																		
9001501		290+00.00	3,477,853.79	5,409,562.52															
9001502		290+25.98	3,477,879.73	5,409,564.03															
9001503		290+61.18	3,477,879.39	5,409,599.21															
9001504		291+08.67	3,477,926.89	5,409,600.03															
9001505		291+20.67	3,477,926.59	5,409,612.03															
9001506								291+20.67	3,477,926.59	5,409,612.03	293+32.26	3,478,138.11	5,409,617.30	295+43.18	3,478,346.89	5,409,651.62			
9001507		297+51.18	3,478,552.14	5,409,685.36															
DET16	TEMPORARY WIDENING 16																		
9001601		310+00.00	3,478,971.13	5,409,754.23															
9001602		312+10.38	3,479,178.73	5,409,788.36															
9001603		312+26.82	3,479,176.06	5,409,804.58															
9001604		313+00.28	3,479,249.30	5,409,810.28															
9001605		313+79.21	3,479,327.48	5,409,821.14															
DET16-1								315+27.01	3,479,473.87	5,409,841.49	315+85.41	3,479,531.72	5,409,849.53	316+43.81	3,479,589.75	5,409,856.12			
9001606		317+09.93	3,479,655.45	5,409,863.59															
9001607		317+15.25	3,479,654.78	5,409,868.88															
DET16-2								318+61.81	3,479,801.33	5,409,870.71	320+52.24	3,479,990.59	5,409,891.76	322+42.19	3,480,181.01	5,409,889.29			
DET17	TEMPORARY WIDENING 17																		
9001700		330+00.00	3,477,030.91	5,409,657.75															
9001701		330+10.00	3,477,040.90	5,409,657.25															
9001702		330+35.00	3,477,065.87	5,409,656.02															
9001703		334+85.11	3,477,514.83	5,409,623.89															
9001704								336+70.04	3,477,699.54	5,409,614.79	337+03.72	3,477,733.18	5,409,613.13	337+37.40	3,477,766.85	5,409,612.21			
9001705		337+37.40	3,477,766.85	5,409,612.21															
9001706		337+76.61	3,477,806.05	5,409,611.40															
9001707		338+05.18	3,477,834.62	5,409,611.12															
9001708		338+17.18	3,477,834.56	5,409,599.12															
9001709		338+29.02	3,477,846.40	5,409,599.08															
DET18	TEMPORARY WIDENING 18																		
9001800		350+00.00	3,477,846.40	5,409,599.08															
9001801		350+32.99	3,477,879.39	5,409,599.21															
DET19	DETOUR 19																		
9001900		370+00.00	3,478,496.85	5,409,732.20															
9001901		373+21.15	3,478,476.86	5,410,052.74															
DET20	TEMPORARY WIDENING 20																		
9002000		390+00.00	3,478,456.33	5,410,655.40															
9002001		390+50.01	3,478,452.22	5,410,705.24															
9002002		393+50.03	3,478,427.57	5,411,004.24															
9002003		393+76.39	3,478,425.93	5,411,030.55															
9002004								393+76.39	3,478,425.93	5,411,030.55	393+88.60	3,478,425.17	5,411,042.74	394+00.82	3,478,424.26	5,411,054.92			
9002005		394+02.06	3,478,424.17	5,411,056.16															
DET21	TEMPORARY WIDENING 21																		
9002100		410+00.00	3,479,271.10	5,409,833.95															
9002101		410+95.39	3,479,365.23	5,409,849.40															
9002102		411+08.39	3,479,363.15	5,409,862.24															
9002103		411+22.39	3,479,376.97	5,409,864.46															
9002104		411+67.95	3,479,369.69	5,409,909.43															
DET22	TEMPORARY WIDENING 22																		
9002200								430+00.00	3,479,418.95	5,409,857.79	430+34.67	3,479,453.24	5,409,862.95	430+69.34	3,479,487.60	5,409,867.59			
9002201								430+69.34	3,479,487.60	5,409,867.59	430+71.81	3,479,490.04	5,409,867.92	430+74.28	3,479,492.49	5,409,868.25			
DET23	TEMPORARY WIDENING 23																		
9002300		450+00.00	3,478,404.01	5,409,661.01															
9002301		452+30.07	3,478,631.04	5,409,698.33															

SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

Name	Location	Δ_{scs}	Horizontal Alignment Data													Remarks
			Spiral Data								Curve Data					
			θs	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	Δ_c	T	L	R	E	
ML100	MAINLINE 100															
20025											55° 47' 23.56" RT	1,783.94'	3,281.43'	3,370.00'	443.05'	
20026											30° 13' 50.88" LT	848.14'	1,656.75'	3,140.00'	112.53'	
20027											30° 43' 46.23" RT	1,648.71'	3,217.99'	6,000.00'	222.40'	
20028											21° 39' 01.53" LT	600.42'	1,186.52'	3,140.00'	56.89'	
EDGEA	RAMP A															
94001											99° 50' 06.67" RT	356.48'	522.74'	300.00'	165.92'	
94002											3° 15' 26.57" LT	229.18'	458.23'	8,060.00'	3.26'	
EDGEA_RT	RAMP A RIGHT TURN															
94101											4° 40' 29.08" LT	183.68'	367.15'	4,500.00'	3.75'	
EDGEB	RAMP B															
95001											96° 34' 40.11" LT	353.41'	530.96'	315.00'	158.42'	
EDGEB_RT	RAMP B RIGHT TURN															
95105											2° 28' 50.10" RT	216.51'	432.94'	10,000.00'	2.34'	
95110											20° 33' 16.24" RT	45.33'	89.69'	250.00'	4.08'	
95115											55° 48' 00.62" RT	66.18'	121.74'	125.00'	16.44'	
EDGEC	RAMP C															
96002											6° 09' 00.74" LT	429.78'	858.73'	8,000.00'	11.54'	
96003											5° 48' 28.11" RT	192.76'	385.19'	3,800.00'	4.89'	
96004											88° 43' 27.94" RT	312.95'	495.53'	320.00'	127.59'	
EDGEC_RT	RAMP C RIGHT TURN															
96101											87° 14' 08.85" LT	142.93'	228.38'	150.00'	57.19'	
EDGED	RAMP D															
97001											95° 46' 02.79" LT	387.13'	585.01'	350.00'	171.89'	
97002											7° 05' 33.80" RT	123.95'	247.58'	2,000.00'	3.84'	
EDGED_RT	RAMP D RIGHT TURN															
97101											77° 39' 28.37" RT	120.72'	203.31'	150.00'	42.55'	
SREDGE																
90001											12° 09' 20.06" RT	324.756'	647.07'	3,050.00'	17.24'	
90002											11° 12' 08.69" LT	460.94'	918.94'	4,700.00'	22.55'	
SREDGENB	EDGEWOOD RD. NB															
90025											12° 09' 20.06" RT	322.84'	643.25'	3,032.00'	17.14'	
90026											1° 37' 57.12" LT	67.22'	134.43'	4,718.00'	0.48'	
90027											3° 52' 38.83" LT	70.98'	141.90'	2,096.81'	1.20'	
90028											3° 50' 11.16" LT	157.81'	315.51'	4,712.00'	2.64'	
90029											0° 43' 53.17" LT	30.08'	60.15'	4,712.00'	0.10'	
SREDGESB	EDGEWOOD RD. SB															
90044											12° 09' 20.06" RT	326.03'	649.62'	3,062.00'	17.31'	
90046											0° 43' 50.09" LT	29.85'	59.70'	4,682.00'	0.10'	
90047											0° 50' 09.36" LT	22.43'	44.85'	3,074.11'	0.08'	
90048											7° 05' 16.63" LT	190.20'	379.91'	3071.03'	5.88'	
SRNRBLVD	NORTH RIVER BLVD.															
81501											41° 42' 58.98" LT	301.01'	575.1897'	790.0000'	55.4093'	
EDGEA_RET_2																
EDGEA_RET_2-1											21° 14' 02.72" LT	9.3726'	18.53'	50.00'	0.87'	
EDGEA_RET_2-2											22° 33' 28.61" LT	9.97'	19.69'	50.00'	0.98'	
EDGEA_RET_3																
EDGEA_RET_3-1											17° 27' 31.29" LT	12.28'	24.38'	80.00'	0.94'	
EDGEA_RET_3-2											47° 48' 37.48" LT	39.89'	75.10'	90.00'	8.44'	
EDGEA_RET_4																
94145											48° 07' 17.69" RT	35.72'	67.19'	80.00'	7.61'	
94146											21° 08' 21.07" RT	17.73'	35.05'	95.00'	1.64'	
94147											8° 50' 48.85" RT	58.02'	115.81'	750.00'	2.24'	

SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

Name	Location	Δ_{scs}	Horizontal Alignment Data													Remarks
			Spiral Data								Curve Data					
			θs	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	Δ_c	T	L	R	E	
EDGEB_RET_1																
EDGEB_RET_1-1											13° 17' 27.64" RT	31.57'	62.86'	271.00'	1.83'	
EDGEB_RET_1-2											6° 07' 37.08" RT	37.52'	74.96'	701.01'	1.00'	
EDGEB_RET_1-3											33° 03' 24.84" RT	22.55'	43.84'	75.99'	3.28'	
EDGEB_RET_1-4											27° 07' 29.10" RT	21.95'	43.09'	91.01'	2.61'	
EDGEB_RET_2																
EDGEB_RET_2-1											20° 33' 17.50" RT	48.23'	95.43'	266.00'	4.34'	
EDGEB_RET_2-2											55° 47' 59.36" RT	74.65'	137.32'	141.00'	18.54'	
EDGEC_RET_1																
EDGEC_RET_1-1											68° 30' 52.14" LT	119.87'	210.46'	176.00'	36.94'	
EDGED_RET_1																
EDGED_RET_1-1											11° 29' 12.94" RT	18.20'	36.29'	181.00'	0.91'	
EDGED_RET_1-2											68° 26' 01.95" RT	106.08'	186.33'	156.00'	32.65'	
SRNRBLVD_RET1																
81515											91° 24' 55.08" LT	61.50'	95.73'	60.00'	25.92'	
SRNRBLVD_RET2																
81525											85° 06' 16.18" RT	55.08'	89.12'	60.00'	21.45'	
81526											0° 36' 37.94" LT	16.51'	33.01'	3,098.00'	0.04'	
SRHYVEE_RET_3																
83035											87° 25' 16.21" RT	71.70'	114.43'	75.00'	28.76'	
SRHYVEE_RET_4																
83040											1° 41' 51.99" RT	31.61'	63.22'	2,133.47'	0.23'	
83045											90° 09' 17.82" RT	70.19'	110.15'	70.00'	29.13'	
DET2	DETOUR 2															
DET2-1											0° 19' 26.74" LT	215.38'	430.76'	76,152.95'	0.30'	
DET2-2											4° 31' 13.09" RT	124.90'	249.67'	3,164.64'	2.46'	
DET3	DETOUR 3															
DET3-1											26° 42' 23.91" LT	19.46'	38.22'	82.00'	2.28'	
DET4	DETOUR 4															
DET4-1											1° 28' 57.65" RT	59.16'	118.31'	4,571.83'	0.38'	
DET4-2											2° 54' 49.78" RT	64.62'	129.22'	2,540.85'	0.82'	
DET4-3											0° 28' 34.25" LT	27.45'	54.90'	6,606.04'	0.06'	
DET5	DETOUR 5															
DET5-1											1° 54' 02.04" LT	137.51'	274.99'	8,290.18'	1.14'	
DET6	DETOUR 6															
DET6-1											2° 59' 48.08" LT	143.74'	287.42'	5,495.43'	1.88'	
DET6-2											4° 41' 15.82" LT	30.37'	60.70'	741.88'	0.62'	
DET6-3											4° 27' 54.00" RT	36.32'	72.61'	931.78'	0.71'	
DET6-4											3° 04' 34.02" LT	133.04'	266.01'	4,954.66'	1.79'	
DET6-5											3° 23' 43.21" LT	27.46'	54.91'	926.57'	0.41'	
DET6-6											0° 56' 46.15" RT	41.95'	83.90'	5,080.86'	0.17'	
DET6-7											0° 08' 21.82" LT	104.80'	209.60'	86,154.46'	0.06'	
DET8	DETOUR 8															
DET8-1											4° 06' 09.35" RT	27.22'	54.42'	760.00'	0.49'	
DET8-2											4° 06' 09.35" LT	28.69'	57.35'	801.00'	0.51'	
DET8-3											5° 36' 50.19" RT	165.22'	330.18'	3,369.85'	4.05'	
DET9	DETOUR 9															
DET9-1											53° 53' 53.49" LT	155.83'	288.32'	306.50'	37.34'	
DET9-2											110° 08' 58.16" RT	325.09'	436.40'	227.00'	169.50'	
DET9-3											26° 39' 43.36" LT	53.79'	105.63'	227.00'	6.29'	
DET9-4											31° 03' 10.52" LT	85.15'	166.12'	306.50'	11.61'	
DET14	DETOUR 14															
9001401											49° 09' 54.24" RT	20.59'	38.61'	45.00'	4.49'	
9001402											19° 51' 51.33" RT	51.66'	102.28'	295.00'	4.49'	

SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

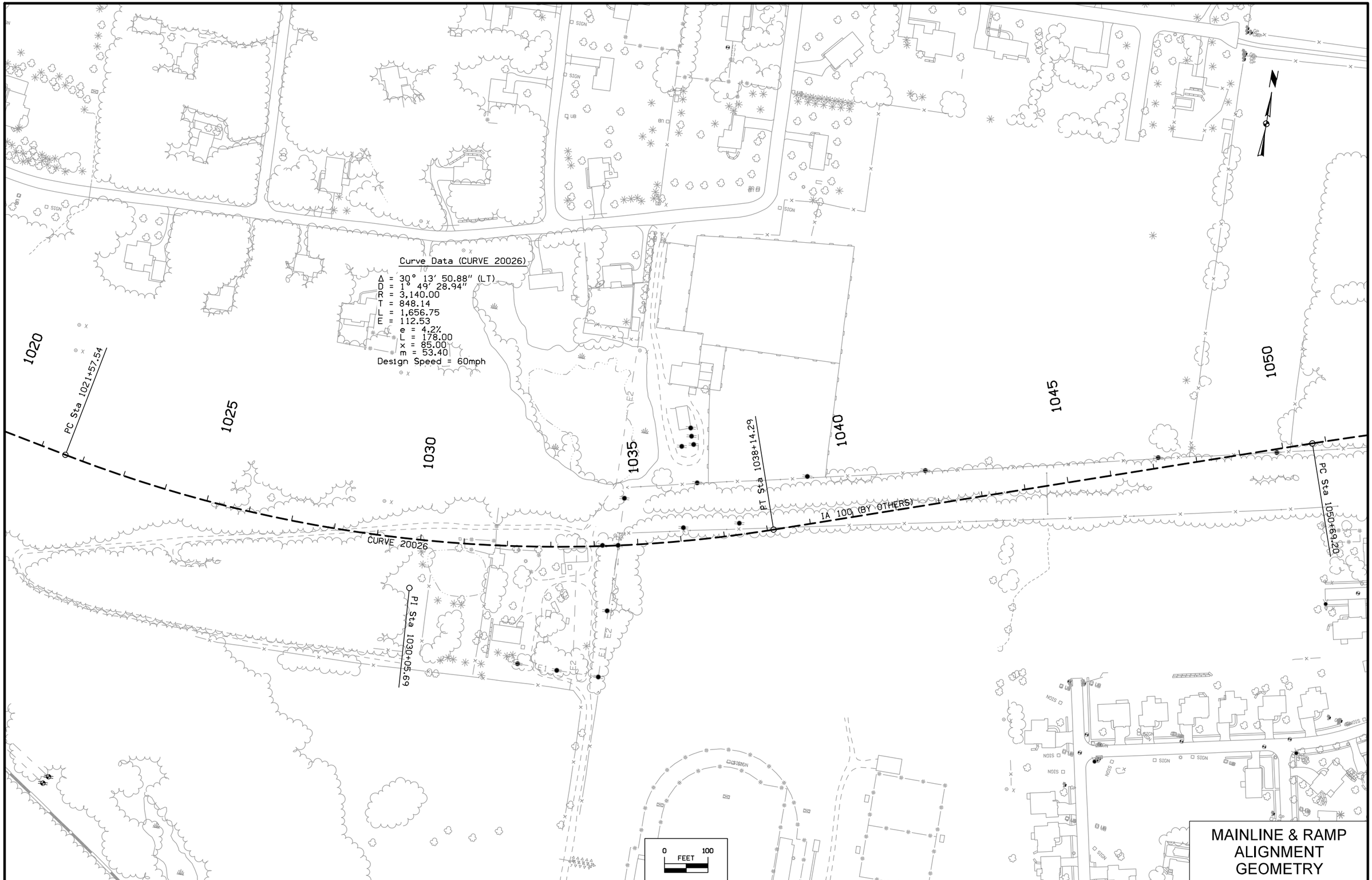
Name	Location	Δ_{SCS}	Horizontal Alignment Data													Remarks
			Spiral Data								Curve Data					
			θs	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	Δ_c	T	L	R	E	
DET15	DETOUR 15															
9001506											7° 54' 21.13" RT	211.59'	422.51'	3,062.00'	7.30'	
DET16	DETOUR 16															
DET16-1											1° 25' 32.76" LT	58.41'	116.81'	4,694.00'	0.36'	
DET16-2											7° 05' 22.54" LT	190.43'	380.38'	3,074.11'	5.89'	
DET17	DETOUR 17															
9001704											1° 15' 37.43" RT	33.68'	67.36'	3,062.00'	0.19'	
DET20	DETOUR 20															
9002004											0° 41' 34.46" RT	12.21'	24.43	2,020.00	0.04'	
DET22	DETOUR 22															
9002200											0° 50' 31.46" LT	34.67'	69.34'	4,718.00'	0.13'	
9002201											0° 08' 05.68" LT	2.47	4.94	2,097.47	0.00'	

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
		FT	%	FT	FT														
ML100	20028	3140	4.2	178	85	PV-302	1113+74.36	1114+59.36	1115+44.36	1116+37.36			1115+83.96			1116+28.88	1116+28.88		
							1129+80.08	1128+95.08	1128+10.08	1127+17.08			1127+70.48			1127+25.56	1127+25.56		
EDGEA	94001	300	3.0	82	55	PV-303	41496+79.93	41497+34.93	41497+92.33	41498+16.93									(1)
							41504+27.46	41503+72.46	41503+15.06	41502+90.46									
EDGEB	95001	315	3.0	82	55	PV-303	42595+98.48	42596+53.48	42597+10.88	42597+35.48									(1)
							42603+54.25	42602+99.25	42602+41.85	42602+17.25									
EDGEC	96002	8000	2.0	63	63	PV-303	43583+19.57		43583+00.67	43583+19.57									
							43591+40.50		43591+59.40	43591+40.50									
EDGEC	96003	3800	2.0	62	62	PV-303	43593+26.21	43593+88.21	43594+31.61	43594+50.21									
							43598+18.68	43597+56.68	43597+13.28	43596+94.68									
EDGEC	96004	320	3.0	82	55	PV-303	43596+00.88	43596+55.88	43597+13.28	43597+37.88									
							43603+21.21	43602+66.21	43602+08.81	43601+84.21									(1)
EDGED	97001	350	5.6	153	55	PV-303	44496+34.65	44496+89.65	44497+96.75	44498+42.65						44497+98.94	44497+98.94		(1)
							44505+43.86	44504+88.86	44503+81.76	44503+35.86						44503+79.57	44503+79.57		
EDGED	97002	2000	4.4	123	56	PV-303	44513+21.26		44513+51.36	44513+88.26						44513+77.08	44513+77.08		
							44516+29.04		44515+98.94	44515+62.04						44515+73.22	44515+73.22		
EDGEB_RT	95110	250	3.0	57	38	PV-303	42698+03.18		42698+05.08	42698+22.18									
							42698+96.67		42698+94.77	42698+77.67									(2)
EDGEC_RT	96101	150	3.0	57	38	PV-303	43697+99.97		43698+01.87	43698+18.97									
							43700+32.24		43700+30.34	43700+13.24									(2)
EDGED_RT	97101	150	3.0	57	38	PV-303	44600+06.44		44600+08.34	44600+25.44									(2)
							44602+13.55		44602+11.65	44601+94.55									

Notes:
(1) Pavement and Shoulder Cross Slopes transition to 2.0% as they approach the Edgewood Road Bridge to match sideroad cross slopes. See L Sheets for details.
(2) Maintain 3.0% Cross Slopes at the tie in to Edgewood Road



MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER G.13

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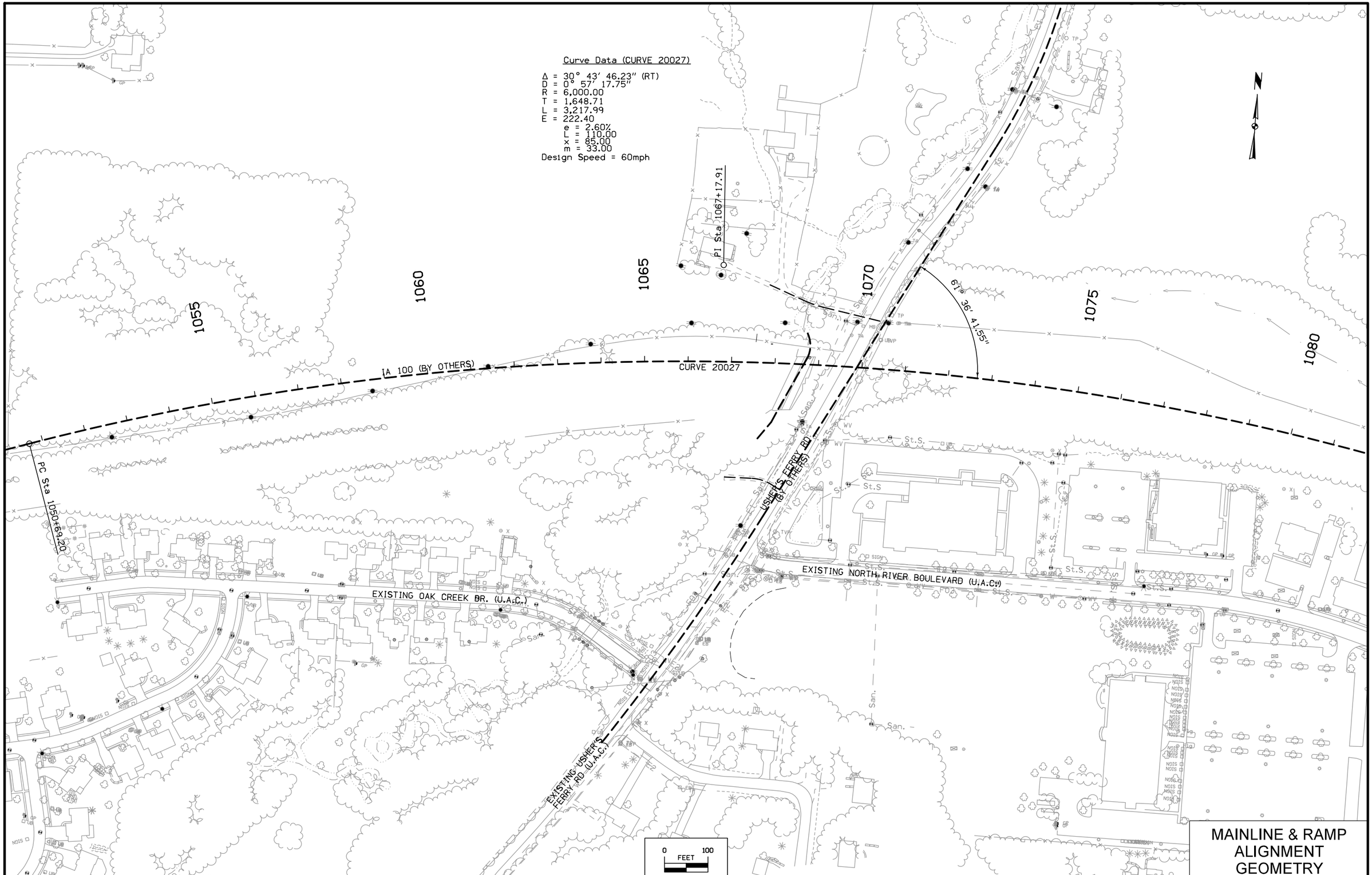

MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER G.14

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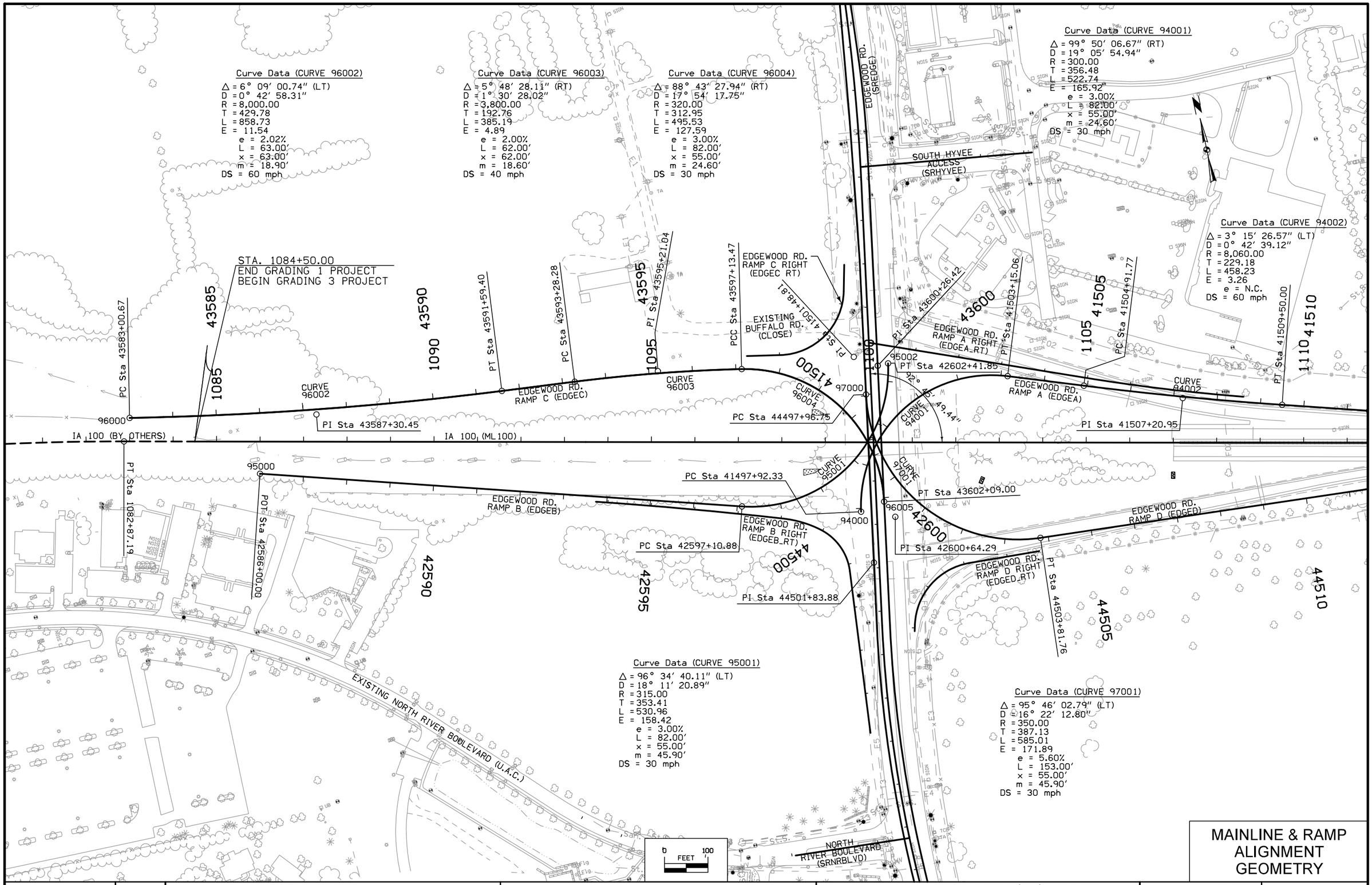

MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER G.15

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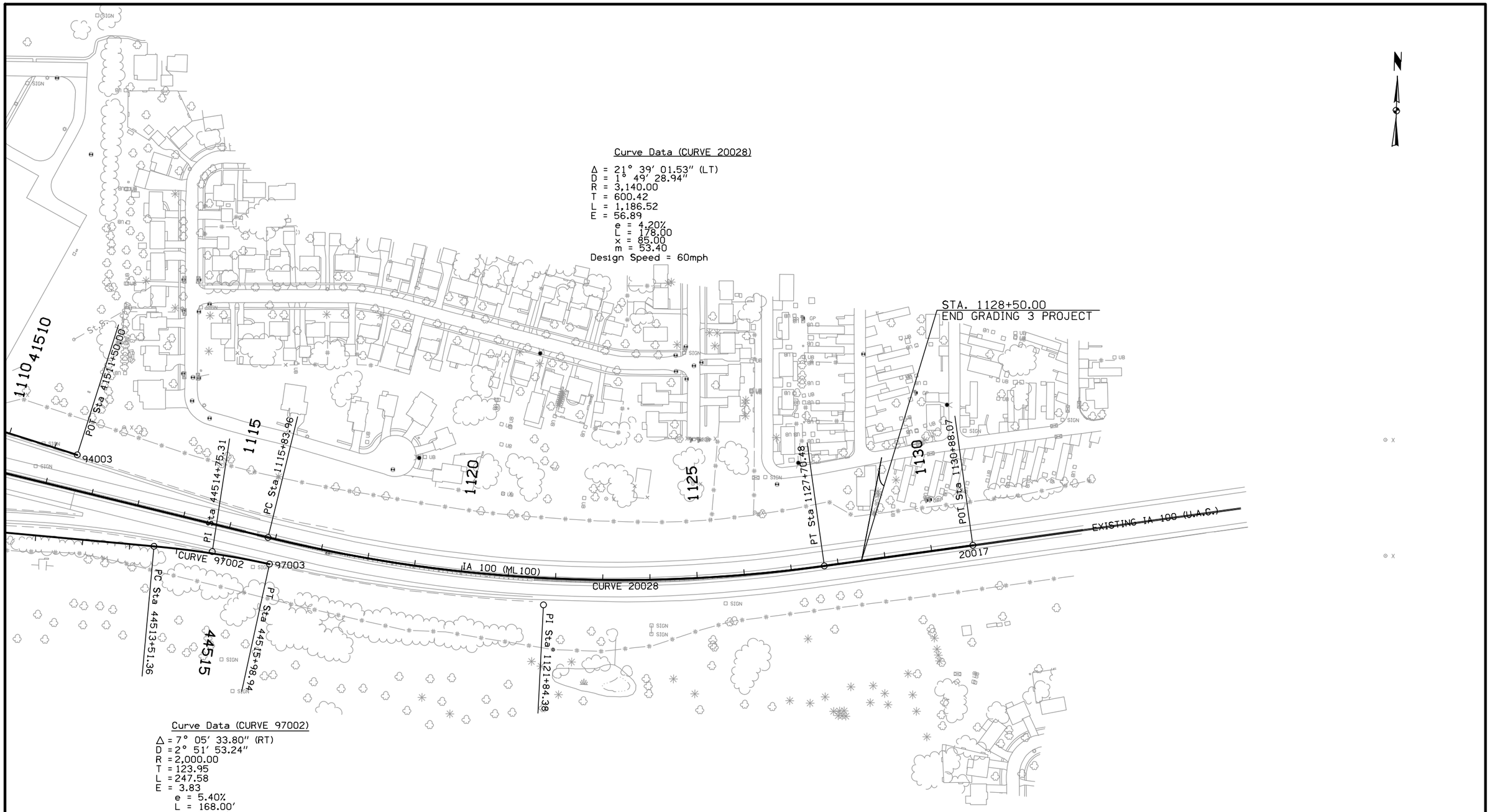

MAINLINE & RAMP ALIGNMENT GEOMETRY

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER	G.16

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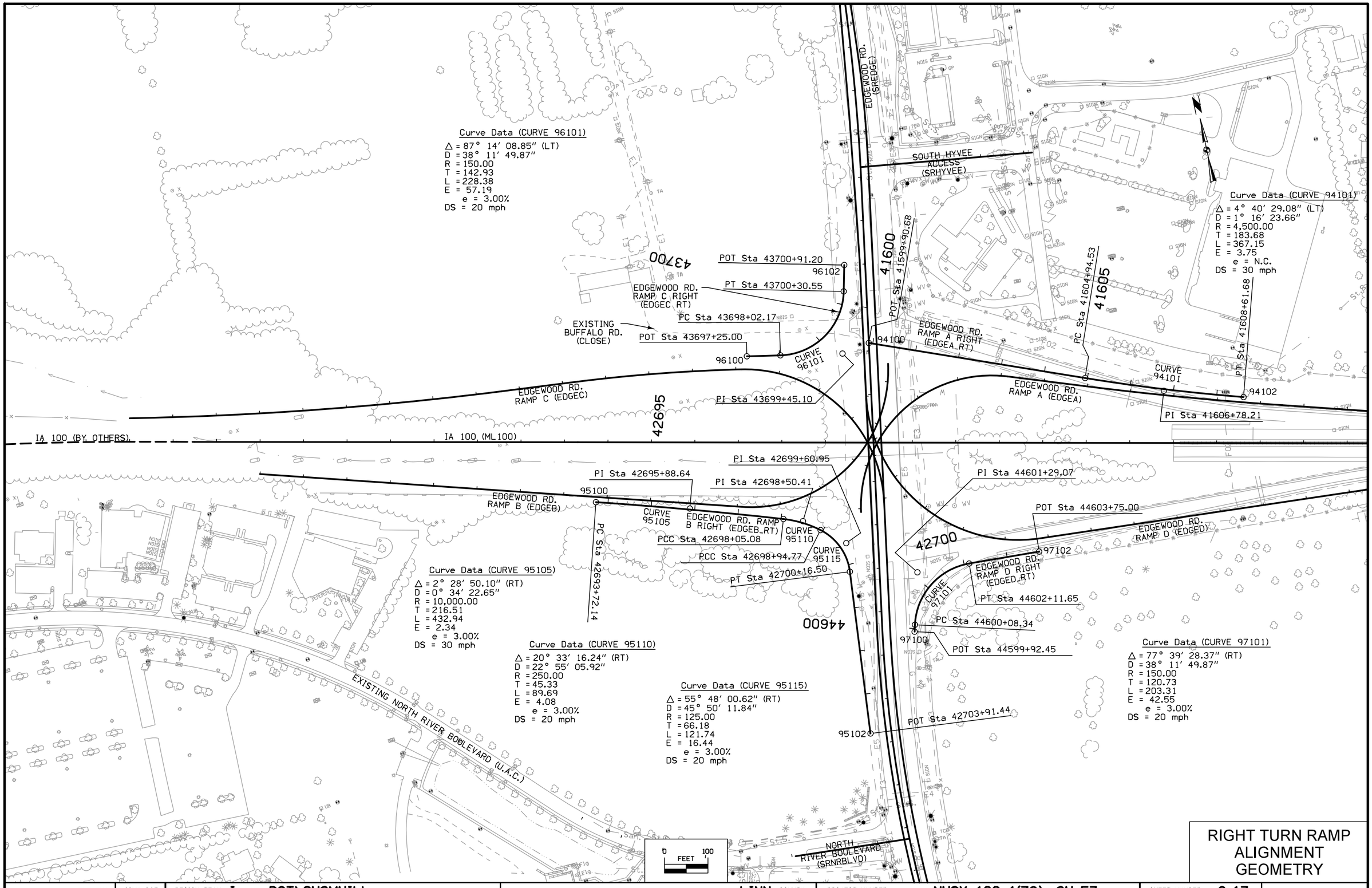

RIGHT TURN RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER G.17

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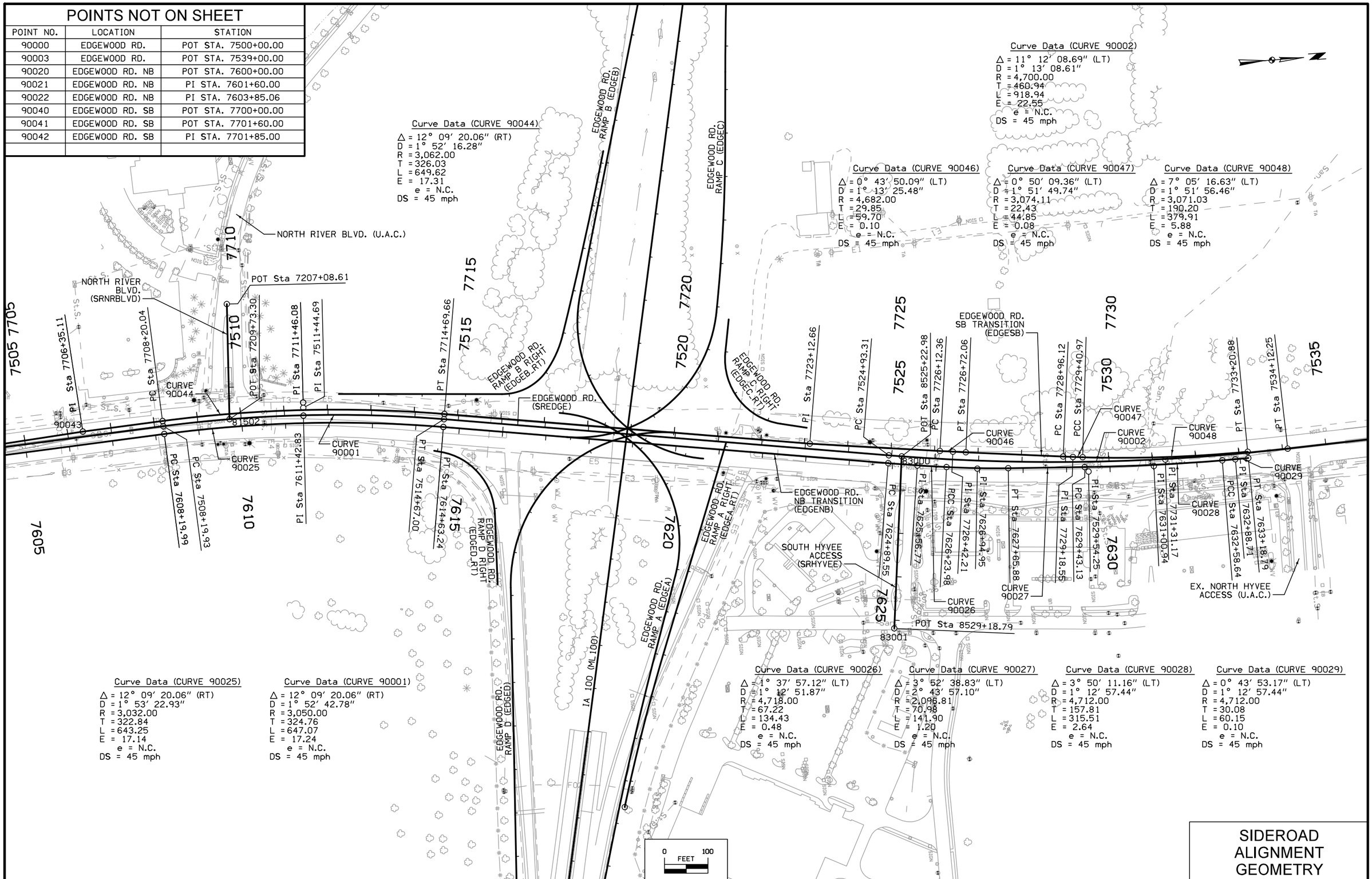
POINTS NOT ON SHEET

POINT NO.	LOCATION	STATION
90000	EDGEWOOD RD.	POT STA. 7500+00.00
90003	EDGEWOOD RD.	POT STA. 7539+00.00
90020	EDGEWOOD RD. NB	POT STA. 7600+00.00
90021	EDGEWOOD RD. NB	PI STA. 7601+60.00
90022	EDGEWOOD RD. NB	PI STA. 7603+85.06
90040	EDGEWOOD RD. SB	POT STA. 7700+00.00
90041	EDGEWOOD RD. SB	POT STA. 7701+60.00
90042	EDGEWOOD RD. SB	PI STA. 7701+85.00



SIDEROAD ALIGNMENT GEOMETRY

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER G.18

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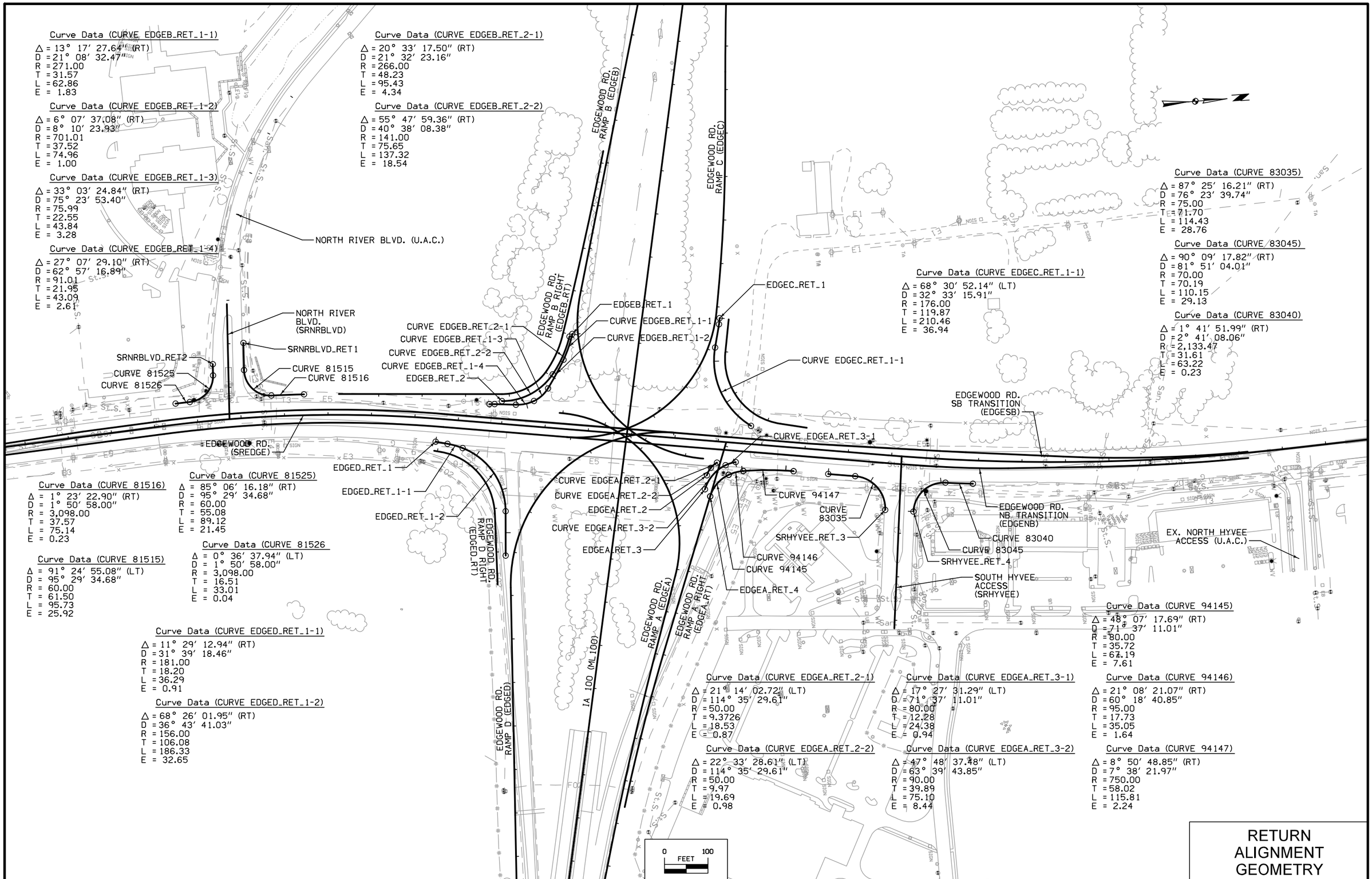


Curve Data (CURVE EDGEB_RET_1-1)
Δ = 13° 17′ 27.64″ (RT)
D = 21° 08′ 32.47″
R = 271.00
T = 31.57
L = 62.86
E = 1.83

Curve Data (CURVE EDGEB_RET_1-2)
Δ = 6° 07′ 37.08″ (RT)
D = 8° 10′ 23.93″
R = 701.01
T = 37.52
L = 74.96
E = 1.00

Curve Data (CURVE EDGEB_RET_1-3)
Δ = 33° 03′ 24.84″ (RT)
D = 75° 23′ 53.40″
R = 75.99
T = 22.55
L = 43.84
E = 3.28

Curve Data (CURVE EDGEB_RET_1-4)
Δ = 27° 07′ 29.10″ (RT)
D = 62° 57′ 16.89″
R = 91.01
T = 21.95
L = 43.09
E = 2.61

Curve Data (CURVE EDGEB_RET_2-1)
Δ = 20° 33′ 17.50″ (RT)
D = 21° 32′ 23.16″
R = 266.00
T = 48.23
L = 95.43
E = 4.34

Curve Data (CURVE EDGEB_RET_2-2)
Δ = 55° 47′ 59.36″ (RT)
D = 40° 38′ 08.38″
R = 141.00
T = 75.65
L = 137.32
E = 18.54

Curve Data (CURVE EDGEC_RET_1-1)
Δ = 68° 30′ 52.14″ (LT)
D = 32° 33′ 15.91″
R = 176.00
T = 119.87
L = 210.46
E = 36.94

Curve Data (CURVE 83035)
Δ = 87° 25′ 16.21″ (RT)
D = 76° 23′ 39.74″
R = 75.00
T = 71.70
L = 114.43
E = 28.76

Curve Data (CURVE 83045)
Δ = 90° 09′ 17.82″ (RT)
D = 81° 51′ 04.01″
R = 70.00
T = 70.19
L = 110.15
E = 29.13

Curve Data (CURVE 83040)
Δ = 1° 41′ 51.99″ (RT)
D = 2° 41′ 08.06″
R = 2,133.47
T = 31.61
L = 63.22
E = 0.23

Curve Data (CURVE 81516)
Δ = 1° 23′ 22.90″ (RT)
D = 1° 50′ 58.00″
R = 3,098.00
T = 37.57
L = 75.14
E = 0.23

Curve Data (CURVE 81525)
Δ = 85° 06′ 16.18″ (RT)
D = 95° 29′ 34.68″
R = 60.00
T = 55.08
L = 89.12
E = 21.45

Curve Data (CURVE 81515)
Δ = 91° 24′ 55.08″ (LT)
D = 95° 29′ 34.68″
R = 60.00
T = 61.50
L = 95.73
E = 25.92

Curve Data (CURVE 81526
Δ = 0° 36′ 37.94″ (LT)
D = 1° 50′ 58.00″
R = 3,098.00
T = 16.51
L = 33.01
E = 0.04

Curve Data (CURVE EDGED_RET_1-1)
Δ = 11° 29′ 12.94″ (RT)
D = 31° 39′ 18.46″
R = 181.00
T = 18.20
L = 36.29
E = 0.91

Curve Data (CURVE EDGED_RET_1-2)
Δ = 68° 26′ 01.95″ (RT)
D = 36° 43′ 41.03″
R = 156.00
T = 106.08
L = 186.33
E = 32.65

Curve Data (CURVE EDGEA_RET_2-1)
Δ = 21° 14′ 02.72″ (LT)
D = 114° 35′ 29.61″
R = 50.00
T = 9.3726
L = 18.53
E = 0.87

Curve Data (CURVE EDGEA_RET_2-2)
Δ = 22° 33′ 28.61″ (LT)
D = 114° 35′ 29.61″
R = 50.00
T = 9.97
L = 19.69
E = 0.98

Curve Data (CURVE EDGEA_RET_3-1)
Δ = 17° 27′ 31.29″ (LT)
D = 71° 37′ 11.01″
R = 80.00
T = 12.28
L = 24.38
E = 0.94

Curve Data (CURVE EDGEA_RET_3-2)
Δ = 47° 48′ 37.48″ (LT)
D = 63° 39′ 43.85″
R = 90.00
T = 39.89
L = 75.10
E = 8.44

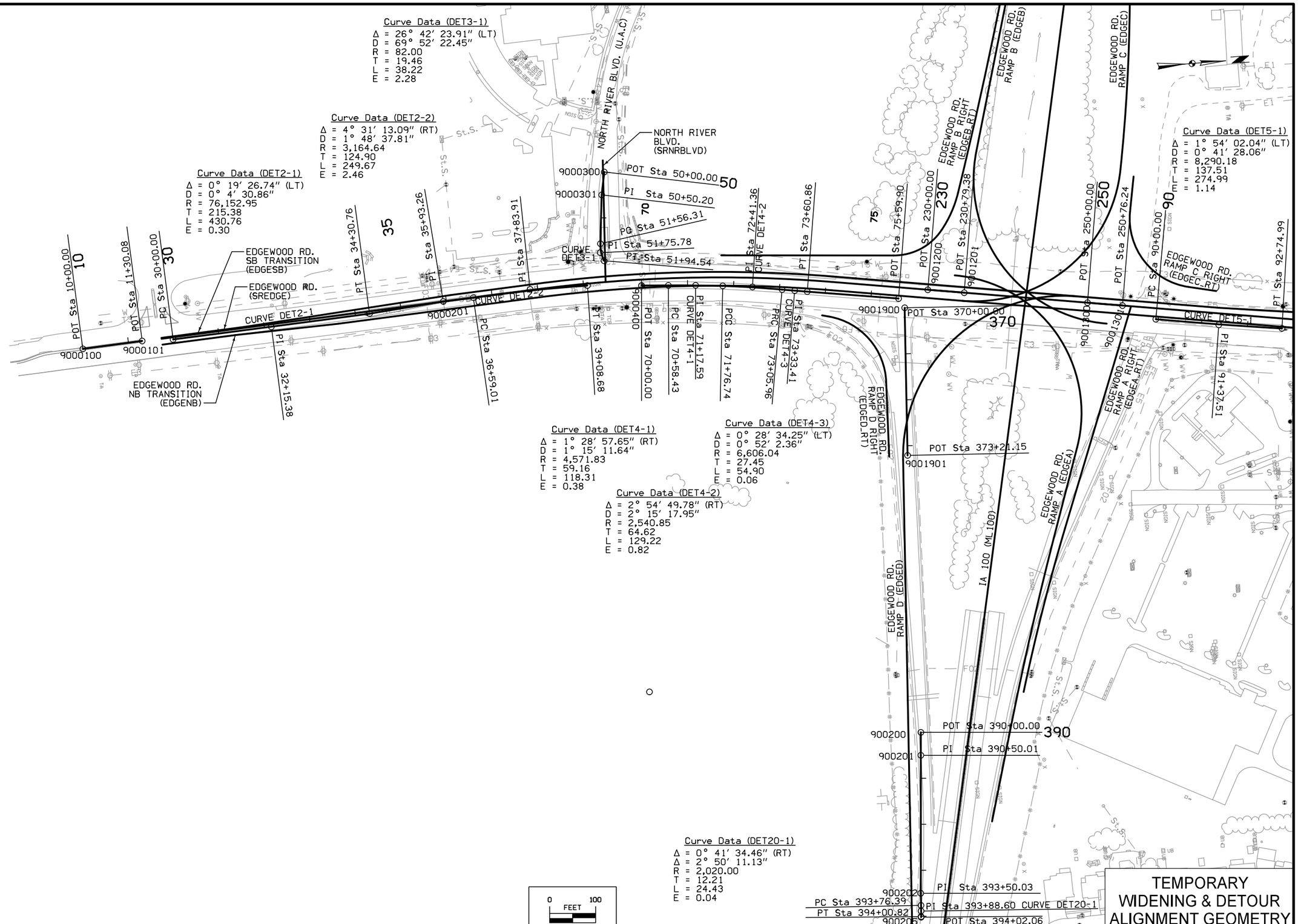
Curve Data (CURVE 94145)
Δ = 48° 07′ 17.69″ (RT)
D = 71° 37′ 11.01″
R = 80.00
T = 35.72
L = 67.19
E = 7.61

Curve Data (CURVE 94146)
Δ = 21° 08′ 21.07″ (RT)
D = 60° 18′ 40.85″
R = 95.00
T = 17.73
L = 35.05
E = 1.64

Curve Data (CURVE 94147)
Δ = 8° 50′ 48.85″ (RT)
D = 7° 38′ 21.97″
R = 750.00
T = 58.02
L = 115.81
E = 2.24

RETURN ALIGNMENT GEOMETRY

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER	G.19



TEMPORARY WIDENING & DETOUR ALIGNMENT GEOMETRY

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER G.20

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TEMPORARY
WIDENING & DETOUR
ALIGNMENT GEOMETRY

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER G.21

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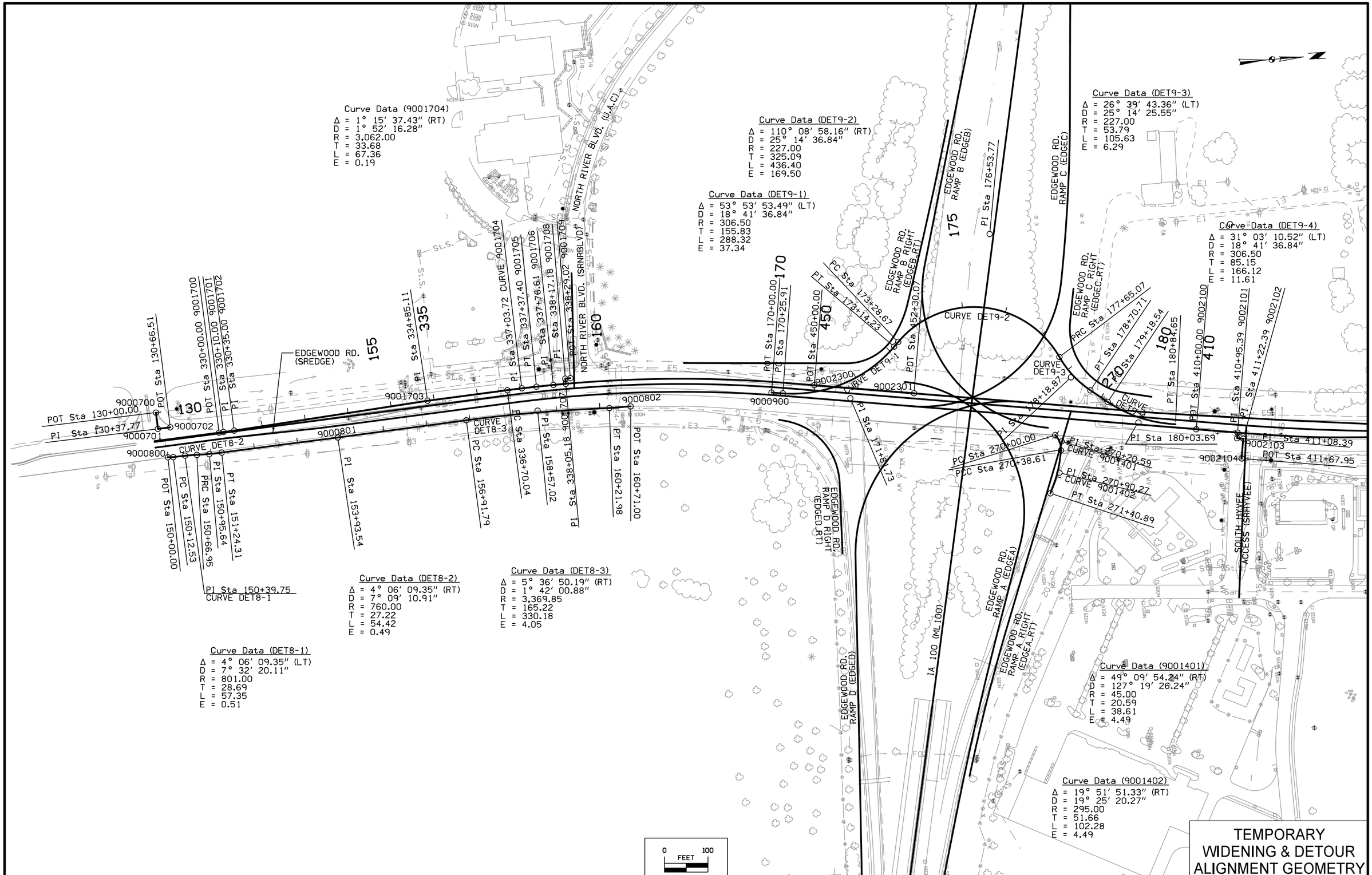

TEMPORARY WIDENING & DETOUR ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER G.22

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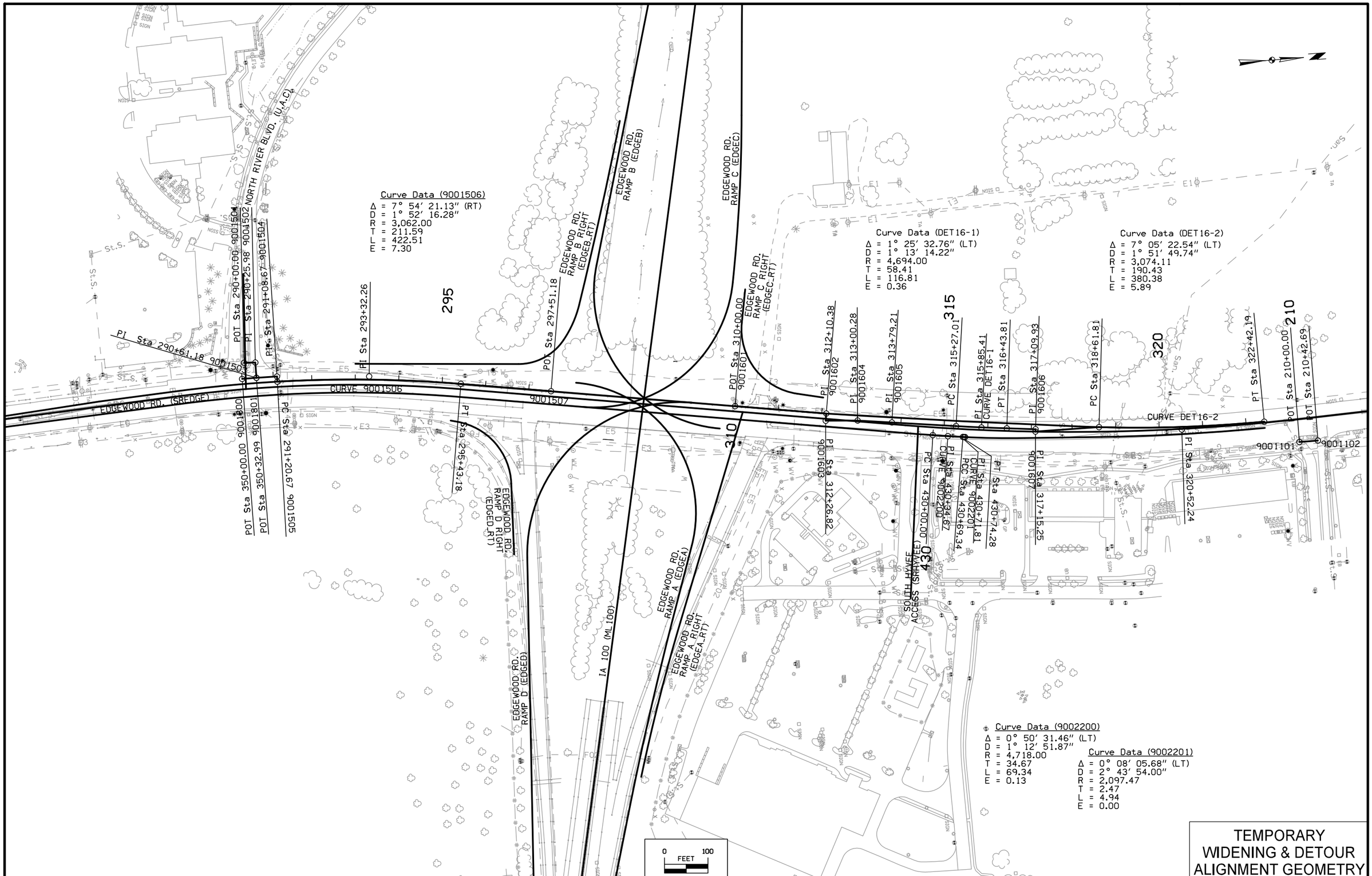

TEMPORARY
WIDENING & DETOUR
ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER G.23

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MONROE TWP.
T-84N R-7W
SEC.6

Barn

(112) WATERHOUSE, BARBARA L.

(113) LIFE INVESTORS INSURANCE COMPANY OF AMERICA

STA. 1084+50.00
END GRADING 1 PROJECT
BEGIN GRADING 3 PROJECT

1085

1080+87
℄ 64′

PROPOSED ROW

1085+13±P
℄ 103′

1086+64
℄ 118′

1087+13
℄ 121′

1087+62
℄ 121′

1088+12
℄ 120′

1088+62
℄ 118′

1089+11
℄ 120′

1089+61
℄ 123′

1090+10
℄ 128′

1090

1090+60
℄ 133′

1091+10
℄ 137′

1091+60
℄ 143′

1092+09
℄ 150′

1092+59
℄ 155′

1093+08
℄ 165′

1093+58
℄ 172′

1094+08
℄ 179′

1094+57
℄ 185′

1095+07
℄ 193′

1095+49
℄ 198′±P

1095+50
℄ 196′±P

1095+74
℄ 201′±P

1095

EDGEWOOD RD. RAMP C

℄ CONSTRUCTION

IA 100 (ML100)

PT Sta. 1082+87.19

STATE OF IOWA

EDGEWOOD RD. RAMP B

PROPOSED ROW

Comm.

(117) FINANCIAL STRUCTURES, LLC

(110) ASK JERRY REAL ESTATE COMPANY, L.C.

1087+12±P
℄ 125′

1087+64±P
℄ 135′

1088+14
℄ 135′

1089+63
℄ 143′

1090+13
℄ 147′

1090+63
℄ 150′

1091+13
℄ 156′

1091+63
℄ 159′

1092+13
℄ 165′

1092+62
℄ 172′

1093+12
℄ 178′

1093+62
℄ 186′

1094+12
℄ 190′

1094+61
℄ 194′

1095+11
℄ 199′

1095+61
℄ 204′

1096+11
℄ 210′

(116) BBQ, LLC

(109) PFL LIFE INSURANCE COMPANY

EX. NORTH RIVER BLVD. (U.A.C.)

0 FEET 50

Right of Way Design Information

ROW Team: Iowa DOT/CH2MHILL
ROW #: NHSN-100-1(40)--R2-57
Plan Date: 03/18/2014
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

IA 100 MAINLINE

This Sheet
For Information Only

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER H.1

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MONROE TWP.
T-84N R-7W
SEC.6

(123) PFL LIFE INSURANCE COMPANY

PROPOSED ROW

(119) PERPETUAL SAVINGS BANK FSB

(120) HVIACE-0001 ARC, LLC

1098+40
℄ 259'±℄

1097+56
℄ 217'

1096+06
℄ 204'

1096+56
℄ 209'

1098+06
℄ 221'

1095+74
℄ 201'±℄

EX. BUFFALO RD. (CLOSE)

1097+06
℄ 214'

EDGEWOOD RD. RAMP C RT. TURN

1098+43
℄ 249'

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

EDGEWOOD RD. RAMP C

FUTURE ROW

EX. EDGEWOOD RD. RAMP A

EDGEWOOD RD. RAMP A
RT. TURN

1105

EXISTING ROW

1110

EDGEWOOD RD. RAMP A

1100

92°45'49.44"

STATE OF IOWA

IA 100 (ML100)

℄ CONSTRUCTION

POT STA. 1100+10.73 (IA 100) =
POT STA. 7518+88.88 (EDGEWOOD RD.)

EX. EDGEWOOD RD. RAMP D

EDGEWOOD RD.
RAMP B

EDGEWOOD RD. RAMP B
RT. TURN

EDGEWOOD RD. RAMP D

EDGEWOOD RD. RAMP D
RT. TURN

EXISTING ROW

1096+11
℄ 210'

1096+60
℄ 216'

1097+60
℄ 228'

1097+10
℄ 222'

1098+10
℄ 237'

1098+59
℄ 247'

EX. EDGEWOOD RD.
RAMP D

(109) PFL LIFE INSURANCE COMPANY

PROPOSED ROW

0 50
FEET

Right of Way Design Information

ROW Team: Iowa DOT/CH2MHILL
ROW #: NHSN-100-1(40)--R2-57
Plan Date: 03/18/2014
Color Legend:
- Property Lines
- Temporary Easement
- Permanent Acquisition

IA 100 MAINLINE

This Sheet
For Information Only

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER H.2

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MONROE TWP.
T-84N R-7W
SEC.6

EXISTING ROW

EDGEWOOD RD. RAMP A

1115

PC Sta 1115+83.96

1120

1125

TEMPORARY BARRIERS

IA 100 (ML100)

EDGEWOOD RD. RAMP D

℄ CONSTRUCTION

PI Sta 1121+84.38

EXISTING ROW

STOCKPILE

W.E.
836.3

0 FEET 50

Right of Way Design Information

ROW Team: Iowa DOT/CH2MHILL
ROW #: NHSN-100-1(40)--R2-57
Plan Date: 03/18/2014
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

IA 100 MAINLINE

This Sheet
For Information Only

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER H.3

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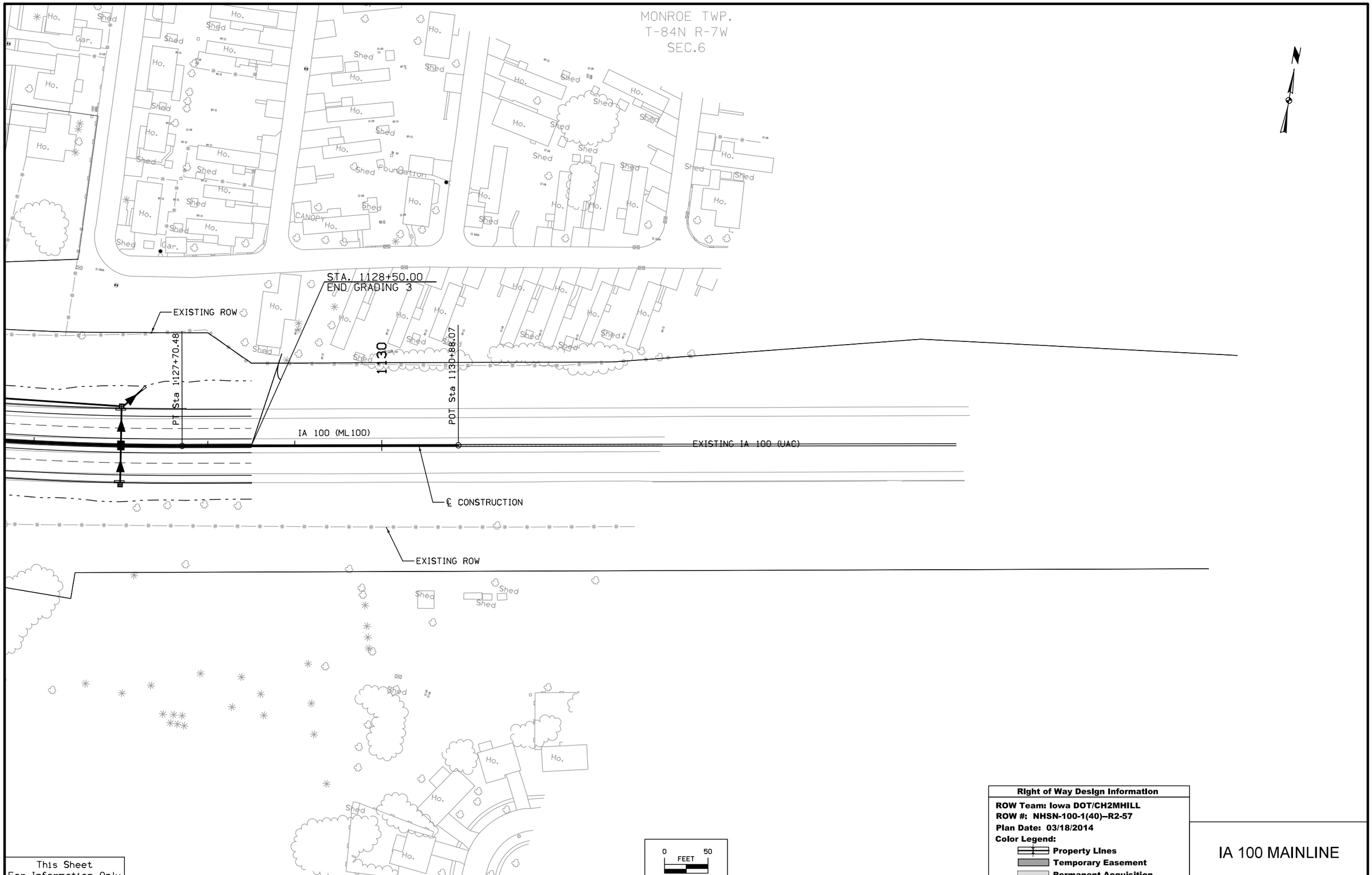

Right of Way Design Information

ROW Team: Iowa DOT/CH2MHILL
ROW #: NHSN-100-1(40)--R2-57
Plan Date: 03/18/2014
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

IA 100 MAINLINE

This Sheet
For Information Only

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER H.4

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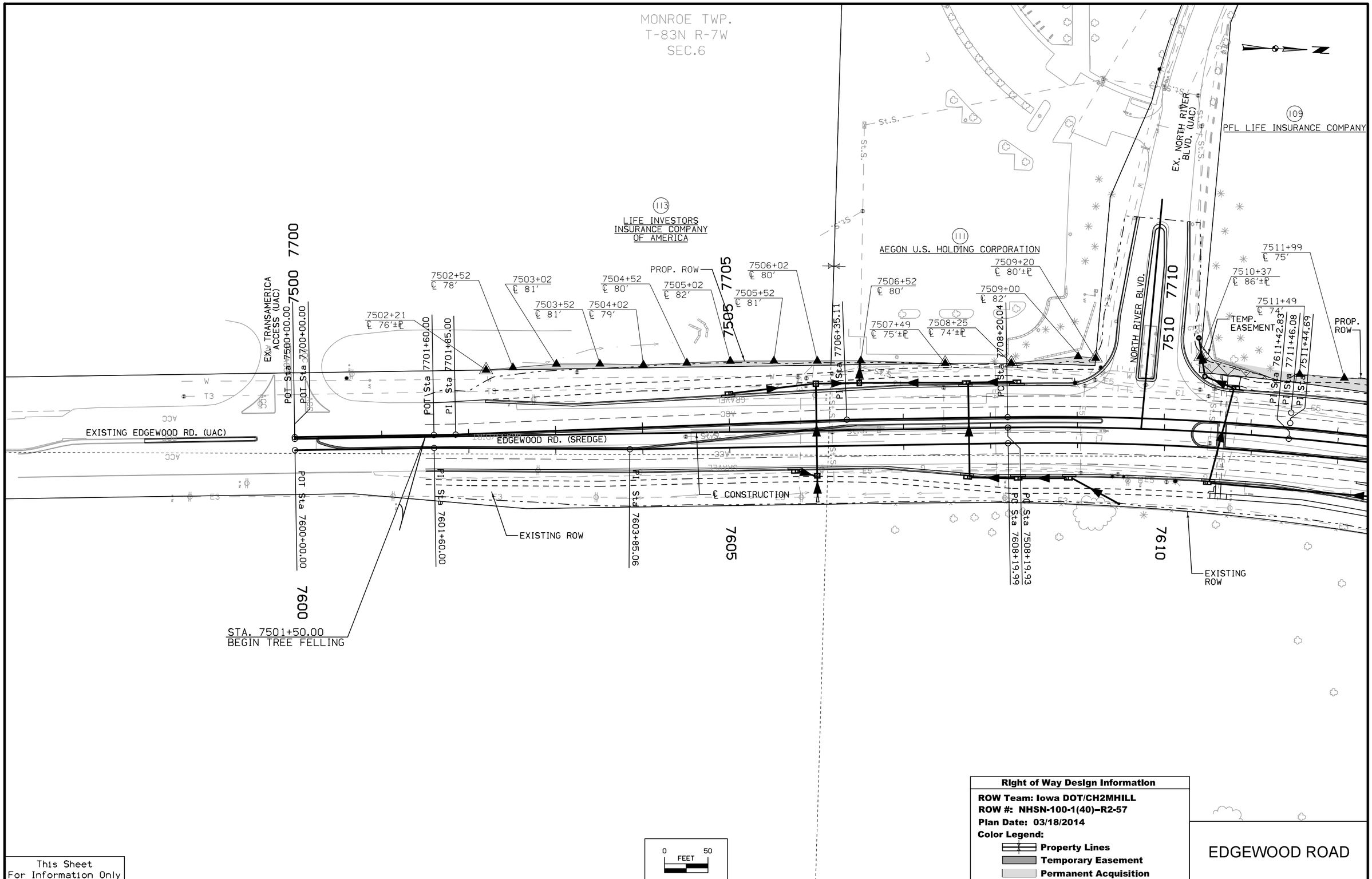

Right of Way Design Information

ROW Team: Iowa DOT/CH2MHILL
ROW #: NHSN-100-1(40)–R2-57
Plan Date: 03/18/2014
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

EDGEWOOD ROAD

This Sheet For Information Only

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER HE.5

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MONROE TWP.
T-83N R-7W
SEC.6

LIFE INVESTORS INSURANCE COMPANY OF AMERICA (113)

FUTURE ROW

NOTE: AREA RESTRICTED. DO NOT DISTURB.

Curve Data
Δ = 11° 12′ 08.69″ (LT)
D = 1° 13′ 08.61″
R = 4,700.00
T = 460.94
L = 918.94
E = 22.55
e = N.C.
DS = 45 mph

PFL LIFE INSURANCE COMPANY (109)

PFL LIFE INSURANCE COMPANY (123)

EDGEWOOD RD. RAMP B
EDGEWOOD RD. RAMP B RT. TURN
EDGEWOOD RD. RAMP C
EDGEWOOD RD. RAMP C RT. TURN
EX. BUFFALO RD. (CLOSE)

POT STA. 7518+73.26 (EDGE. RD.) =
POT STA. 41499+40.81 (RAMP A)
POT STA. 7518+57.31 (EDGE. RD.) =
POT STA. 43601+01.16 (RAMP C)

POT STA. 7518+88.88 (EDGE. RD.) =
POT STA. 1100+10.73 (IA 100)
POT STA. 7519+11.51 (EDGE. RD.) =
POT STA. 42600+77.32 (RAMP B)

PROPOSED ROW
PROP. ROW
7512+49 ℄ 79′
7513+00 ℄ 83′
7513+50 ℄ 87′
7513+70 ℄ 97′
7516+07 ℄ 131′
7522+07 ℄ 136′±℄
7526+14 ℄ 83′
7524+93 ℄ 83′
7525+84 ℄ 83′±℄
℄ CONSTRUCTION
7715
7720
7725
PT Sta 7714+69.66
PC Sta 7524+93.31
PC Sta 7726+12.36
PT Sta 7726+72.06
PI Sta 7723+42.21
PCC Sta 7626+23.98
PI Sta 7626+94.95
PI Sta 7625+56.77
PC Sta 7624+88.55
PI Sta 7723+ 2.66
EDGEWOOD RD. (SREDGE)
GRASS/DIRT
ACC
EDGEWOOD RD. RAMP D RT. TURN
EX. RAMP D
EDGEWOOD RD. RAMP D
PT Sta 7614+63.24
PT Sta 7614+67.00
7615
92°45′49.44″
7620
EDGEWOOD RD. RAMP A
EDGEWOOD RD. RAMP A RT. TURN
EX. RAMP A
POT STA. 7519+08.68 (EDGE. RD.)=
POT STA. 44498+88.67 (RAMP D)
POT STA. 7525+22.98 (EDGE. RD.)=
POT STA. 8525+22.98 (HYVEE)
7625
SOUTH HYVEE ACCESS (CLOSED)
Comm.
St.S.
PERPETUAL SAVINGS BANK FSB (119)
ARCHLAND PROPERTY I, LLC (121)
Shed
IA100
E1
E5
T3
W
E02

Curve Data
Δ = 12° 09′ 20.06″ (RT)
D = 1° 52′ 42.78″
R = 3,050.00
T = 324.76
L = 647.07
E = 17.24
e = N.C.
DS = 45 mph

0 50
FEET

Right of Way Design Information

ROW Team: Iowa DOT/CH2MHILL
ROW #: NHSN-100-1(40)–R2-57
Plan Date: 03/18/2014
Color Legend:
- **Property Lines**
- **Temporary Easement**
- **Permanent Acquisition**

EDGEWOOD ROAD

This Sheet For Information Only

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER HE.6

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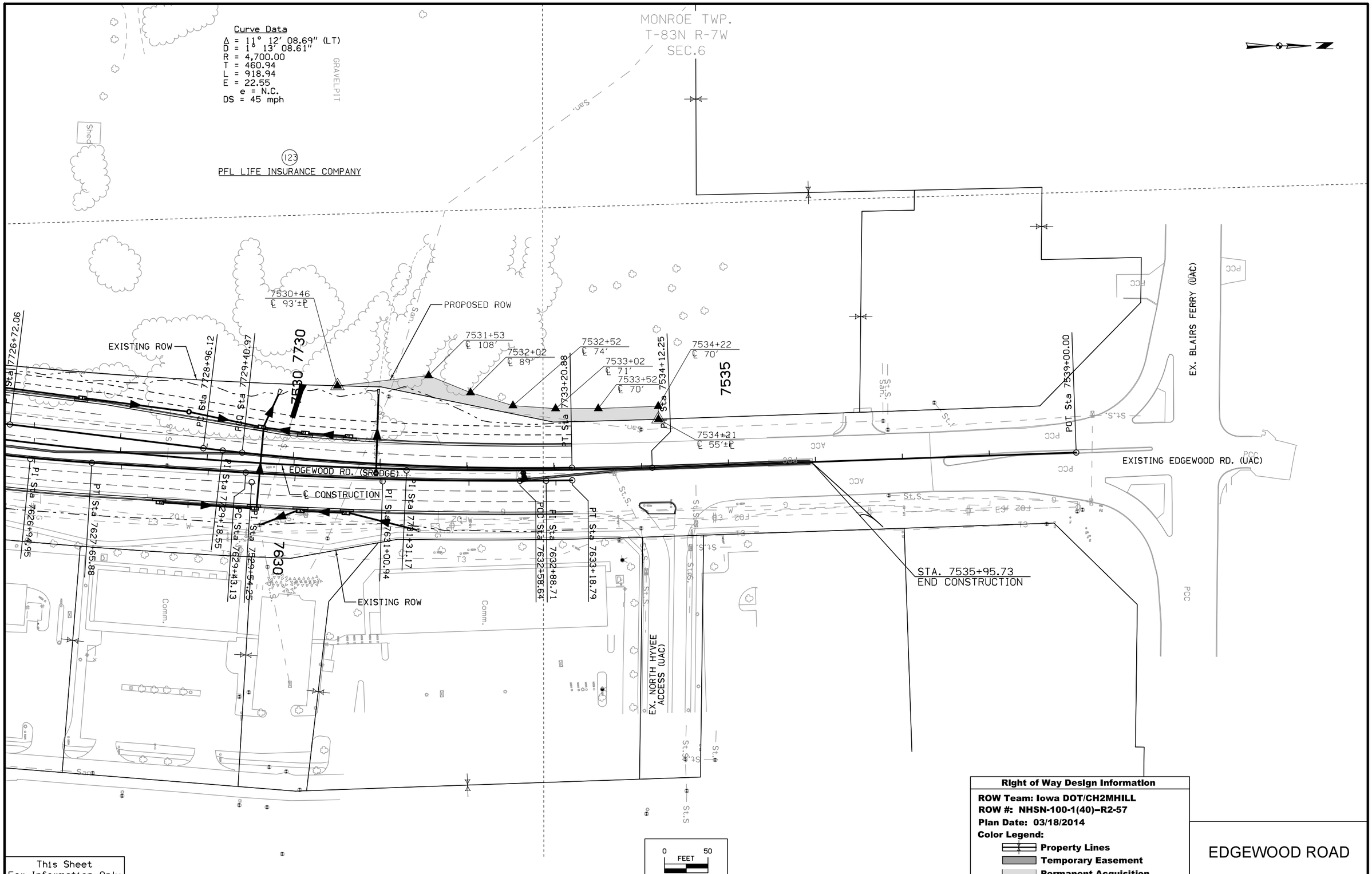

This Sheet
For Information Only

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER HE.7

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CROSS SECTION VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Blue, Light	(223)	Previously Constructed Temporary Pavement Shading
Gray, Med	(80)	Previously Constructed Pavement Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(211)	Temporary Pavement Shading
Brown, Med	(237)	Future Proposed Pavement Shading

CROSS SECTION VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

- Pavement Removal
- Proposed Granular Subbase
- Proposed Special Backfill
- Temporary Barrier Rail
- Temporary Barrier Rail With Glare Screen
- Proposed Granular Shoulder
- Temporary Shoulder
- Existing Shoulder Strengthening
- Permanent Barrier Rail
- Channelizing Device

PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

- Channelizing Device
- Drum
- Temporary Lane Seperator
- Tubular Marker
- Channelizer Marker
- Concrete Barrier Marker
- Delineator
- Temporary Barrier Rail
- Pavement Removal
- Temporary Traffic Signal
- Crash Cushion
- Temporary Traffic Signal
- Flagger
- Temporary Floodlighting
- Traffic Sign
- Type III Barricade
- Type A Warning Light
- Direction of Traffic
- Safety Closure
- Designated Detour Route
- Arrow Board

- SLW4 — Solid Lane Line (White)
- ELW4 — Edge Line Right (White)
- ELY4 — Edge Line Left (Yellow)
- BLW4 — Broken Lane Line (White)
- DDY4 — Double Dotted Line (Yellow)
- LDW8 — Lane Drop (White)
- DCY4 — Double Centerline (Yellow)
- DLW4 — Dotted Line (White)
- DLY4 — Dotted Line (Yellow)

NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

UTILITY LEGEND

------E3------ / ------E4------	Alliant Energy Contact: Jason Hogan Phone: 608-458-4871
— — San.— — / — - - W— - - / — - St. S.— -	City of Cedar Rapids Contact: Ken Russell (Water) Phone: 319-286-5950 Contact: Dave Wallace (Sanitary Sewer) Phone: 319-286-5910
— —San.2— —	City of Palo Contact: Glenn Lange Phone: 319-540-6746
— — —T1— — —	IMON Communication Contact: Lennox Marnor Phone: 319-261-4640
— — —FO— — —	Iowa Communications Network Contact: Larry Klawitter Phone: 515-725-4741
— — -FO2— — —	Iowa Network Services Contact: Jeff Klocko Phone: 515-240-2644
------E1------ / ------E2------	Linn County REC Contact: Kim Colberg Phone: 319-377-1587
— — — G— — —	MidAmerican Energy - Gas Distribution Contact: Greg Wildebour Phone: 319-298-5162
— — - TV — — — / — — -FO5— — —	Mediacom Broadband, LLC Contact: Joe Ernster Phone: 319-395-9699
— — - TV — — — / — — -FO5— — —	Windstream/PAETEC Contact: Gregory Troeger Phone: 319-790-7678
— — - T2 — — — / — — - T3 — — —	Centurylink (Formerly Qwest) Contact: Carroll Wheaton Phone: 515-554-9711
------E5------	ITC Midwest Contact: Chad Levi Phone: 319-297-6765
	Iowa Department of Transportation Contact: Dennis Perrin Phone: 319-364-8189
	City of Cedar Rapids - Joint Communications Network Contact: Keith Nuehring Phone: 319-286-5622
	City of Cedar Rapids - Traffic Engineering Contact: Tom Peterson Phone: 319-286-5847
	Atkins Telephone Contact: Todd Christerson Phone: 319-446-7331

PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Pavement Marking Call Outs
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Yellow	(4)	Pavement Markings, Yellow
Off White	(254)	Pavement Markings, White

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Blue, Light	(223)	Previously Constructed Temporary Pavement Shading
Gray, Med	(80)	Previously Constructed Pavement Shading Shading
Blue, Light	(230)	Proposed Grading/Paving Shading
Lavender	(211)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Pink, Dark	(13)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure
Gray, Light	(48)	Construction by Others
Gray, Light	(48)	Previously Constructed Grading Limits
Gray, Light	(48)	Tree Felling By Others

TRAFFIC SIGNAL LEGEND

PROPOSED

- Pole-Mounted Controller Cabinet
- 1 — Traffic Signal Pole, Footing Symbol, And Identifying Number
- 3 — Pedestrian Pushbutton Pole, Footing Symbol, And Indentifying Number
- 61 — Traffic Signal Head Symbol and Identifying Number
- 65 — Pedestrian Head Symbol And Indetifying Number
- C — Mast Arm Mounted Sign Symbol And Identifying Number
- Detection Zone
- Emergency Vehicle Preemption
- 12 — 30"x48" "TUB" Handhole Symbol And Identifying Number
- 15 — 24" Handhole Symbol And Indentifying Number
- 60 — Pushbutton Symbol And Identifying Number
- Aerial Span Wire
- Signal Conduit
- Wood Strain Pole, 35' Minimum
- Work Area
- Temporary Traffic Control Device

108-23A
08-01-08

TRAFFIC CONTROL PLAN

Edgewood Road shall remain open during all stages of construction. One lane of travel in each direction will be maintained with left turn lanes at intersections.

Traffic shall be maintained on all other local roadways when possible. Short duration closures may be required to complete construction at the Edgewood Road intersections with North River Blvd. and South Hy-Vee Entrance. Coordinate restrictions/closures with Engineer.

Maintain access to businesses at all times.

Traffic control for this project shall be in accordance with Standard Road Plans: TC-1, TC-61, TC-252, TC-253, TC-402, TC-418, TC-419, TC-420, TC-422, TC-433.

Refer to Staging Notes for Traffic Control Plan details.

For additional information refer to Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD) and the current standard specifications.

The contractor shall coordinate traffic control with other projects in the area as needed.

113-2
04-16-13

PEDESTRIAN PATH CLOSURES

Refer to TC-601.

*Assumes 6 foot wide barricade.
Closures may need to be removed and re-established.

Location	Side	Type III Barricades* No.	Remarks
South Hy-Vee Access & Edgewood; S. Hy-Vee Access Sta. 8526+48.70	LT	1	
South Hy-Vee Access & Edgewood; Edgewood Road Sta. 7525+97.50	RT	1	

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
NHSN-100-1(81)--2R-57	Tree Felling
NHSX-100-1(77)--3H-57	Grading
NHSX-100-1(84)--3H-57	Traffic Signs
NHSX-100-1(65)--3H-57	Dual Bridges over Ushers Ferry
NHSX-100-1(66)--3H-57	Edgewood Rd. Bridge over IA 100
2013034	Hwy 100 Water Distribution System

108-26A
08-01-08

STAGING NOTES

Phase I Grading III NHSX-100-1(79)--3H-57

Project Limits: East of Ushers Ferry Road to East of Edgewood Road and North of South Hy-Vee Entrance to South of North River Blvd.

GENERAL NOTES:
1. Contractor furnished borrow will be used for this project.
2. Construction activities in areas noted as not to be disturbed are prohibited.
3. Grading contractor to complete clearing and grubbing activities.
4. Access to the project site will be available from Edgewood Road.
5. Coordinate with Phase I Grading I contractor (NHSX-100-1(42) - - 3H-57) to gain construction site access from Ushers Ferry Road if possible.

CONSTRUCTION STAGING

STAGE 1A
Traffic Control:
-NB and SB Edgewood traffic to remain in existing travel lanes. Maintain a minimum of 1 lane NB and SB along Edgewood Road.
-Maintain all lanes of traffic on North River Boulevard. Maintain turning movements into and out of the S. Hy-Vee Access Road and to the existing IA 100 ramps.
-Modified existing left turn movements on Edgewood Road (at North River Boulevard, IA 100 EB, and S. Hy-Vee Access Road). Modified existing left turn movements on IA 100 WB exit ramp (at Edgewood Road).

108-26A
08-01-08

STAGING NOTES

Construction:
-Modify existing signals prior to traffic shifts at North River Boulevard, S. Hy-Vee Access Road, and WB IA 100 exit ramp.
-Construct temporary pavement in existing medians on Detours 04 and 05.
-Vertically adjust storm sewer intake at Sta. 7510+53 (Edge Rd), +0.6'. Match grate elevation to new temporary median pavement.

STAGE 1B
Traffic Control:
-NB and SB Edgewood traffic to remain in existing travel lanes. Maintain a minimum of 1 lane NB and SB along Edgewood Road.
-Maintain all lanes of traffic on North River Boulevard. Maintain turning movements into and out of the S. Hy-Vee Access Road and to the existing IA 100 ramps.
-Maintain modified existing left turn movements on IA 100 WB exit ramp (at Edgewood Road).

Construction:
-Maintain signal modification at WB IA 100 exit ramp. Return existing signals to original configuration at North River Boulevard and S. Hy-Vee Access Road.
-Construct embankment and temporary pavement along Detour 09. Match existing pavement grade and cross slope at the merge points along Edgewood Road. Install TBR along Detour 09.
-Construct temporary pavement widening along the east side of Edgewood Road along Detours 08, 10, and 11. Match existing cross slope pavement of Edgewood Road.
-Construct temporary pavement in the existing pork chop island following Detour 07.
-Remove fire hydrant at Sta. 7515+38 (Edge Rd). Remove light pole at Sta. 7515+82 (Edge Rd).
-Remove existing signal pole (west leg) at WB IA 100 exit ramp. Move to temporary supports until new temporary signal is constructed in Stage 1C.
-Mill and overlay existing rumble strips in WB IA 100 right shoulder.

STAGE 1C
Traffic Control:
-Maintain a minimum of 1 lane NB and SB along Edgewood Road. Shift traffic from existing pavement onto temporary pavement constructed in Stage 1B (Detour 09) while bridge and approach pavement is constructed. NB Edgewood Road will utilize temporary median pavement in cross over movement to Dettour 09.
-Maintain all lanes of traffic on North River Boulevard. Maintain turning movements into and out of the S. Hy-Vee Access Road.
-Modified existing left turn movement on Edgewood Road (at S. Hy-Vee Access Road).
-Modify existing IA 100 WB exit ramp to receive SB Edgewood Road to IA 100 EB traffic (run TBR separated head-to-head traffic on the existing ramp - 1 lane minimum EB and WB IA 100).
-Cross over EB IA 100 traffic past the eastern Grading 3 construction limits and merge with existing IA 100 EB traffic.
-Maintain Edgewood Road NB right turns and SB left turns to IA 100 at the new temporary signal. Maintain WB IA 100 left and right turns onto Edgewood Road.
-Maintain NB Edgewood Road right turns onto the existing IA 100 EB ramp.

Construction:
-Prior to shifting traffic, install temporary striping and legends, remove existing striping that conflict. Install TBR on existing WB IA 100 mainline and exit ramp. Complete installation of TBR from Detour 09 onto Edgewood Road. Remove existing median barrier along mainline IA 100 to facilitate cross over traffic.
-Construct new temporary signal at WB IA 100 exit ramp. Modify existing signal at S. Hy-Vee Access Road.
-Construct Edgewood Road Bridge and reinforced approach pavement.
-Construct 1st stage of retaining walls along Ramps A-D.
-Construct temporary pavement (lateral wedge transition) between finished proposed pavement and existing grade along Detours 12 and 13. Construct temporary pavement widening on Detour 14.

STAGE 1D
Traffic Control:
-Maintain all traffic control from Stage 1C.
-Modified existing left turn movements on Edgewood Road (at TransAmerica Driveway, North River Boulevard, and S. Hy-Vee Access Road). Modified existing left turn movement on North River Boulevard (at Edgewood Road).

Construction:
-Construct temporary pavement in existing medians on Detours 01 -03, and 06.
-Vertically adjust storm sewer intakes at Sta. 7504+50(+0.5'), Sta. 7530+95(+1.2'), and Sta. 7533+69(-0.1'). Match grate elevation to new temporary median pavement. Remove intakes at Sta. 7506+72, Sta. 7507+46, and Sta. 7508+22 (Edge Rd).

STAGE 2A
Traffic Control:
-Shift NB and SB Edgewood Road traffic to the eastern side of Edgewood Road under a new 3 lane striping configuration (1 lane NB, 1 lane SB, and 1 shared left turn lane). Edgewood Road traffic will utilize temporary pavement (Detours 01-14) for turning and cross over movements.
-Cross over SB Edgewood Road traffic past the northern and southern Grading 3 construction limits.
-Maintain TBR separated head-to-head IA 100 traffic on the existing WB exit ramp. Maintain IA 100 cross over.
-Maintain turning movements into and out of the S. Hy-Vee Access Road.
-Shift WB North River Boulevard traffic to the south side of the existing median. Maintain 1 lane EB and 1 lane WB on North River Boulevard.
-Maintain closure of the SB Edgewood Road to EB IA 100 on-ramp.
-Modified NB Edgewood Road left turn and SB Edgewood Road right turn (at TransAmerica Driveway)

Construction:
-Construct new SB lanes of Edgewood Road and WB lanes of North River Boulevard.
-Construct temporary pavement (lateral wedge transition) between finished proposed pavement and existing grade along Detours 15 and 16.

STAGE 2B
Traffic Control:
-Maintain all traffic control from Stage 2A except:
-Shift EB and WB North River Boulevard traffic to the newly constructed pavement on the north side of the existing median. Maintain 1 lane EB and 1 lane WB on North River Boulevard.

Construction:
-Construct EB lanes of North River Boulevard.
-Construct temporary pavement (lateral wedge transition) between finished proposed pavement and existing grade along Detour 17.

STAGING NOTES

STAGE 2C
Traffic Control:
-Maintain all traffic control from Stage 2B except:
-Shift EB North River Boulevard traffic to the newly constructed pavement on the south side of the existing median. Maintain 1 lane EB and 1 lane WB on North River Boulevard.

Construction:
-Construct center lane pavement around existing North River Boulevard median.
-Construct temporary pavement transition along Detour 18.

STAGE 3A
Traffic Control:
-Shift NB and SB Edgewood Road traffic to the newly constructed pavement on the western side of Edgewood Road. Maintain similar 3 lane configuration (1 lane NB, 1 lane SB, and 1 shared left turn lane) using channelizers and temporary striping/tape. Edgewood Road traffic will utilize additional temporary pavement (Detours 15-18) for turning and cross over movements.
-Cross over NB Edgewood Road traffic past the northern and southern Grading 3 construction limits.
-Maintain TBR separated head-to-head IA 100 traffic on the existing WB exit ramp. Maintain IA 100 cross over.
-Shift EB S. Hy-Vee Access traffic to the north side of the existing median. Maintain turning movements into and out of the S. Hy-Vee Access Road.
-Maintain 1 lane EB and 1 lane WB on North River Boulevard.

Construction:
-Construct new NB lanes of Edgewood Road and EB lanes of S. Hy-Vee Access Road.
-Construct new EB IA 100 mainline and EB IA 100 on ramp (Ramp D) lanes.

STAGE 3B
Traffic Control:
-Maintain all traffic control from Stage 3A except:
-Shift EB and WB S. Hy-Vee Access traffic to the newly constructed pavement on the south side of the existing median. Maintain 1 lane EB and 1 lane WB on S. Hy-Vee Access Road.

Construction:
-Construct new NB lanes of Edgewood Road and WB lanes of S. Hy-Vee Access Road.

STAGE 3C
Traffic Control:
-Maintain all traffic control from Stage 3B except:
-Shift WB S. Hy-Vee Access traffic to the newly constructed pavement on the north side of the existing median. Maintain 1 lane EB and 1 lane WB on S.Hy-Vee Access Road.

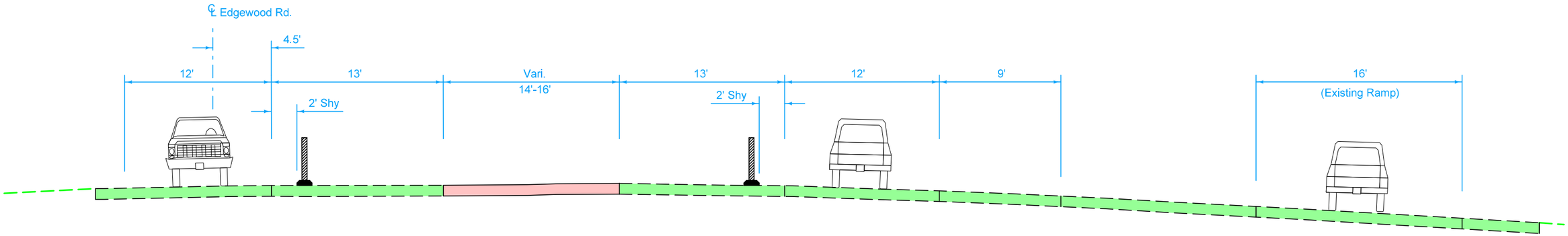
Construction:
-Construct center lane pavement around proposed S. Hy-Vee Access Road median.

STAGE 4
Traffic Control:
-Shift NB Edgewood Road traffic to the newly constructed pavement on the eastern side of Edgewood Road. Maintain a minimum 1 lane NB with left turns at TransAmerica Driveway and North River Boulevard and right turns onto the newly constructed IA 100 EB on ramp.
-Shift SB Edgewood Road traffic (already on new pavement) to allow for left turns onto temporary EB IA 100 on ramp. Traffic will utilize temporary pavement (Detours 19-20) to connect to EB IA 100 mainline. Maintain a minimum 1 lane SB with right turns at North River Boulevard and TransAmerica Driveway.
-Cross over WB IA 100 traffic past the eastern Grading 3 construction limits and run TBR separated head-to-head traffic on the newly constructed EB IA 100 mainline pavement and on ramp.
-At the temporary signal to the temporary EB IA 100 on ramp, maintain left turns from WB IA 100 to Edgewood Road and from Edgewood Road to EB IA 100.
-Maintain right-in/right-out turning movements at the S. Hy-Vee Access Road. Maintain 1 lane EB and 1 lane WB on S.Hy-Vee Access Road.
-Maintain 1 lane EB and 1 lane WB on North River Boulevard with left turns onto Edgewood Road.

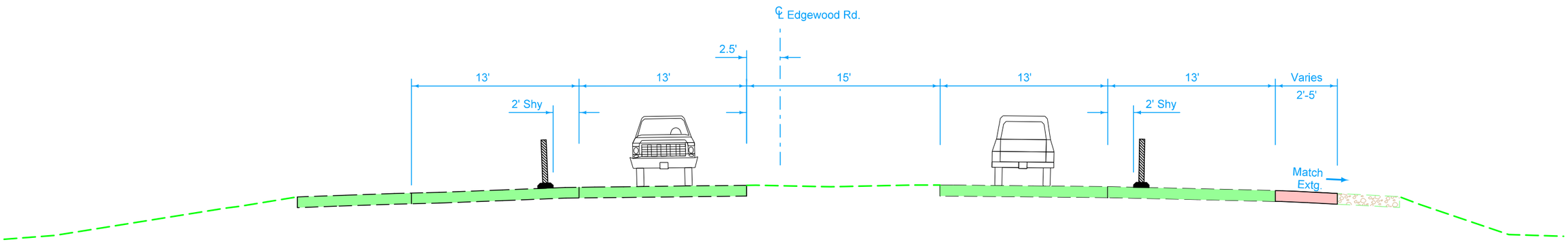
Construction:
-Construct new medians along Edgewood Road and intersection pavement at S. Hy-Vee Access Road.
-Construct new WB IA 100 mainline and WB IA 100 off ramp (Ramp A) lanes. Construct final stage of retaining wall along Ramp A.

STAGE 5
Traffic Control:
-Maintain a minimum 1 lane NB on Edgewood Road in permanent travel lanes where possible. Maintain right turns to new EB IA 100 on ramp and S. Hy-Vee Access Road.
-Maintain a minimum 1 lane SB on Edgewood Road on permanent pavement utilizing temporary striping/tape and channelizers for delineation. Maintain right turns onto North River Boulevard and TransAmerica Driveway and left turns onto new EB IA 100 on ramp.
-Maintain a minimum 1 lane on the new WB IA 100 exit ramp to NB and SB Edgewood Road.
-Maintain a minimum 1 lane on the new EB IA 100 on ramp from NB and SB Edgewood Road.
-Maintain 1 lane EB and 1 lane WB on S.Hy-Vee Access Road. Maintain all turning movements into and out of the S. Hy-Vee Access Road.
-Maintain 1 lane EB and 1 lane WB on North River Boulevard.

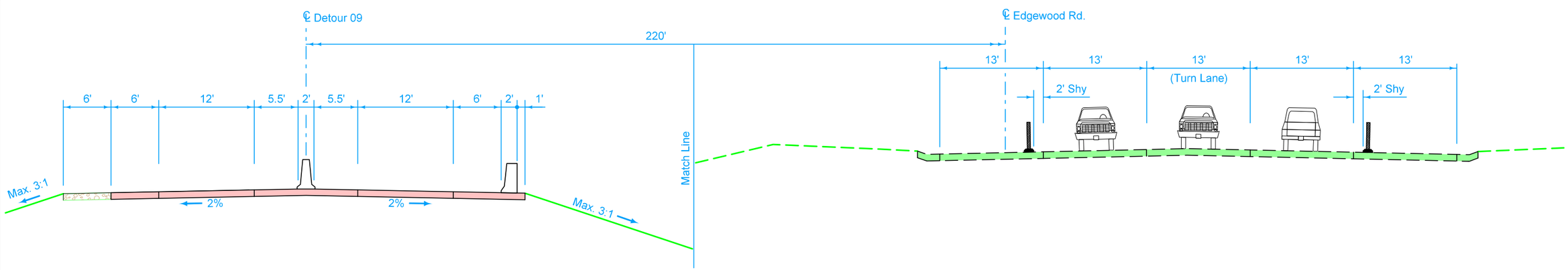
Construction:
-Construct new medians along Edgewood Road and intersection pavement at North River Boulevard.
-Re-construct raised islands at the TransAmerica Driveway and N. Hy-Vee Access Road.
-Construct final stage of retaining walls along Ramps B and C.
-Construct WB IA 100 on ramp (Ramp C) and EB IA 100 off ramp (Ramp B) as well as remainder of IA 100 mainline.



EDGEWOOD ROAD - STAGE 1A : STATION 7515+00
SECTION A-A



EDGEWOOD ROAD - STAGE 1B : STATION 7502+50
SECTION B-B



DETOUR 09 - STAGE 1B : STATION 175+50
SECTION C-C

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.4

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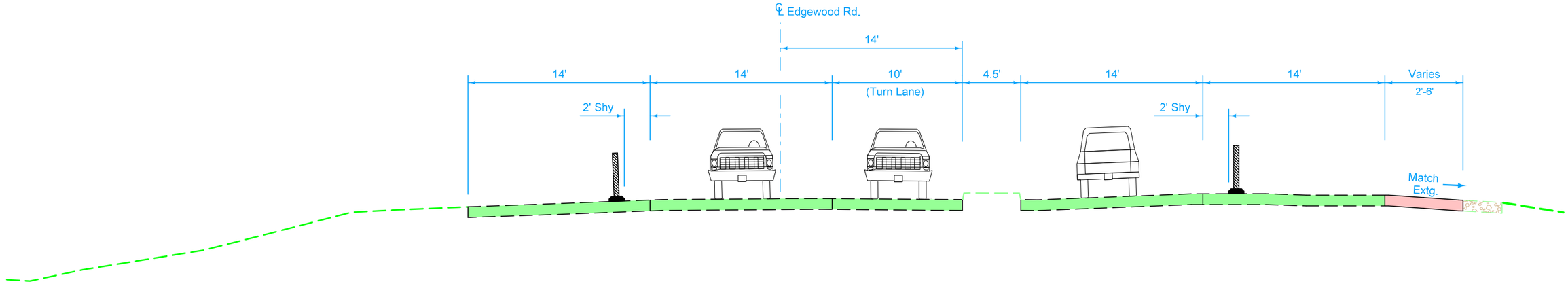

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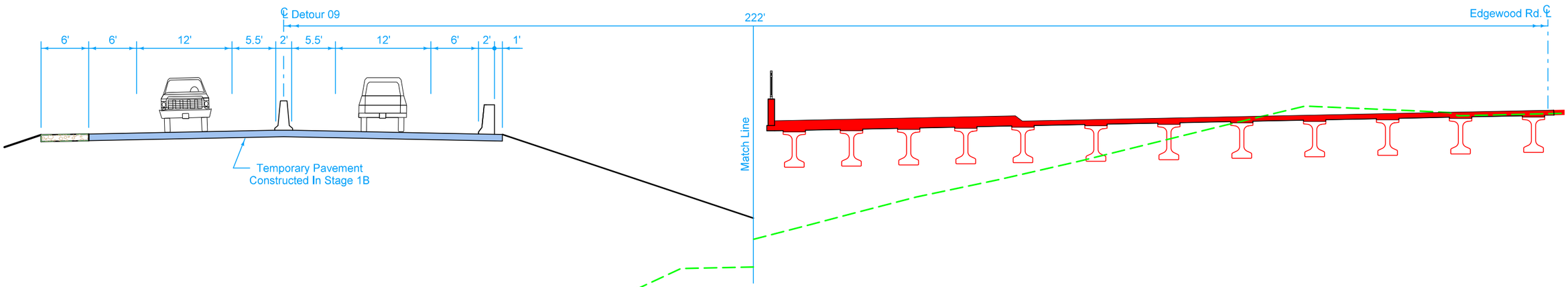
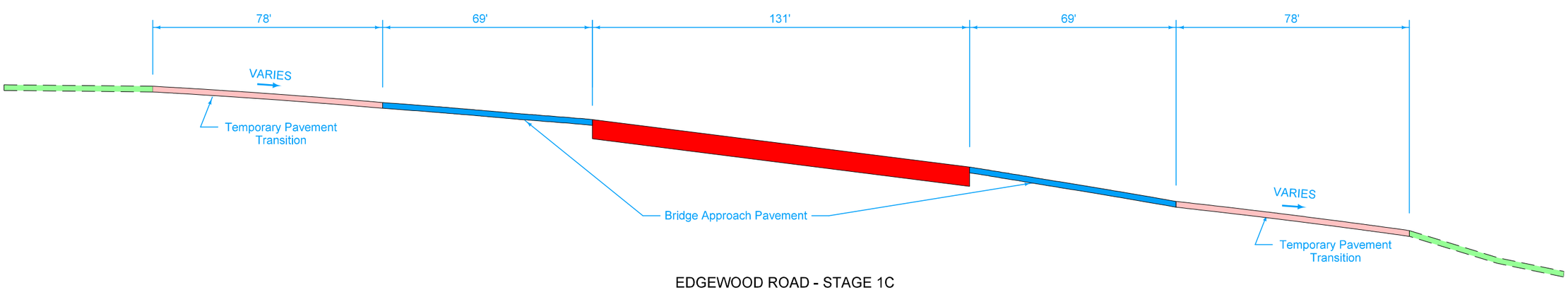
SECTION D-D



DETOUR 09 - STAGE 1C : STATION 175+50.00
SECTION E-E



EDGEWOOD ROAD - STAGE 1C
SECTION F-F

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.5	

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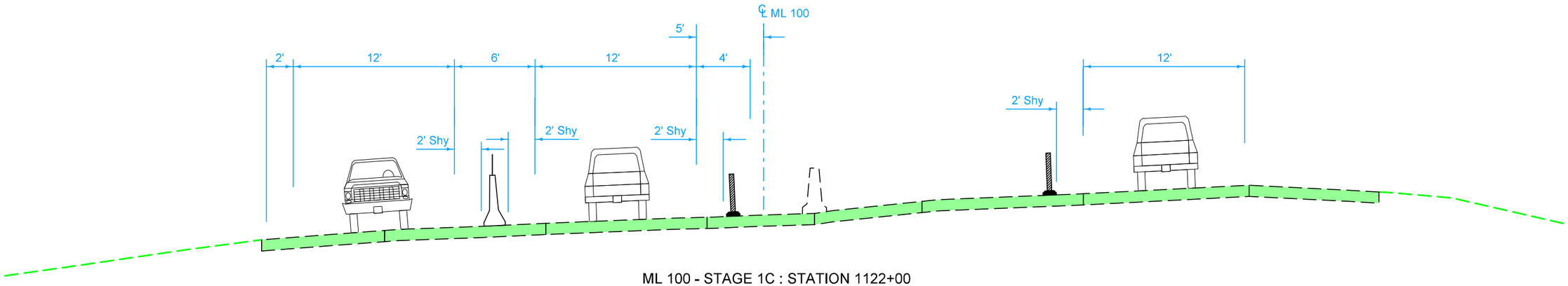

ML 100 - STAGE 1C : STATION 1122+00
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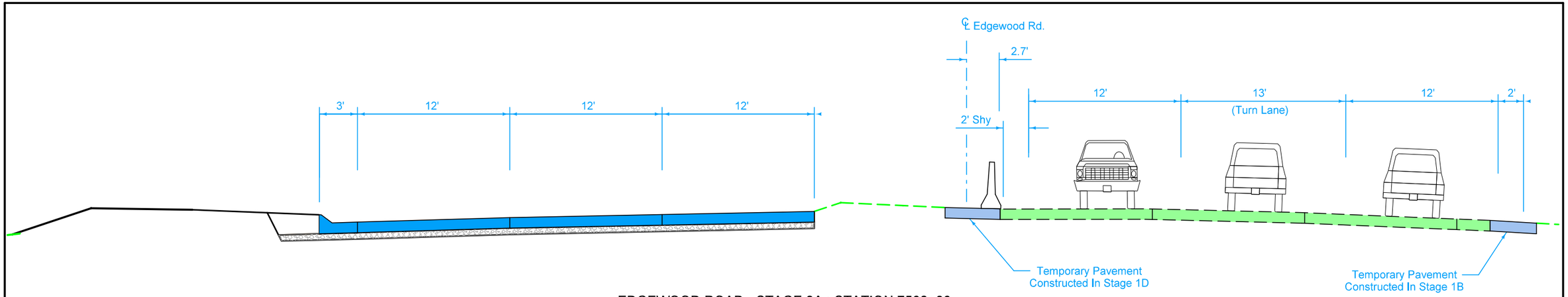
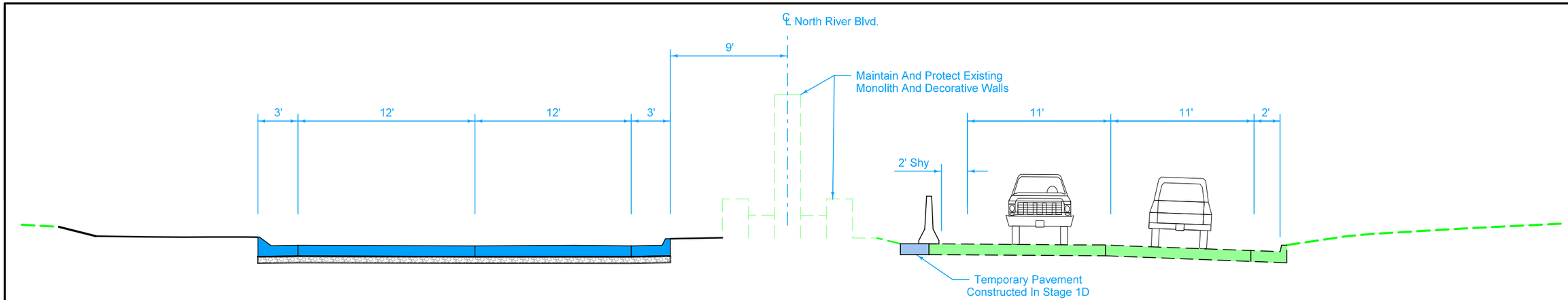
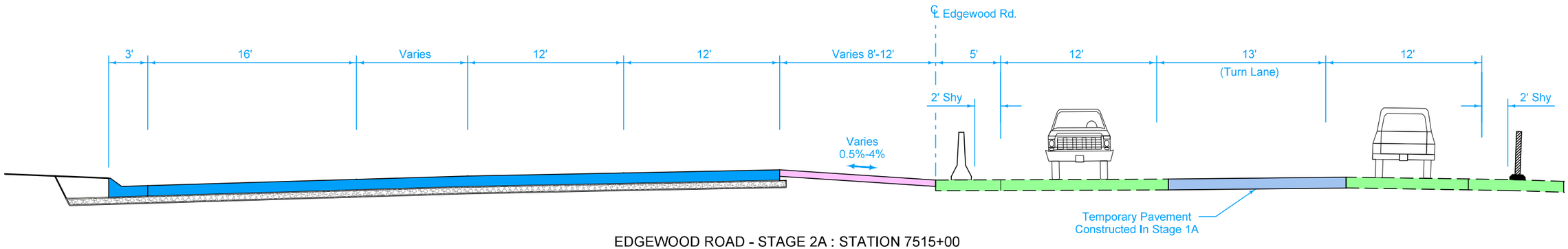


EDGEWOOD ROAD - STAGE 2A : STATION 7508+00
SECTION H-H



NORTH RIVER BLVD - STAGE 2A : STATION 7208+75
SECTION I-I



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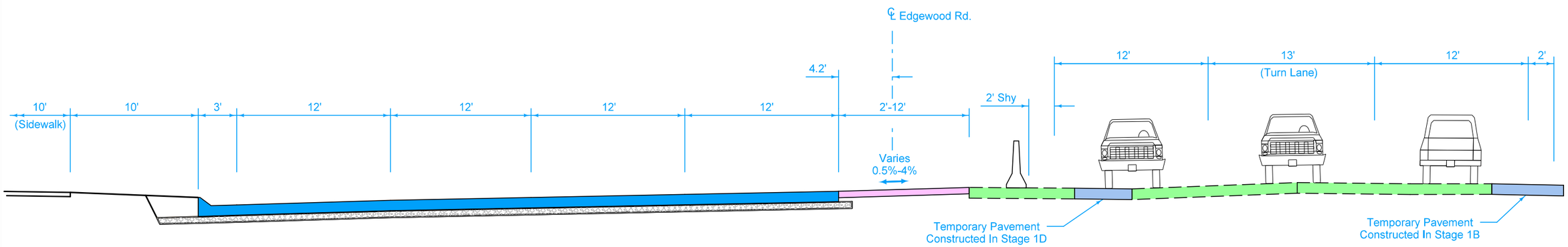
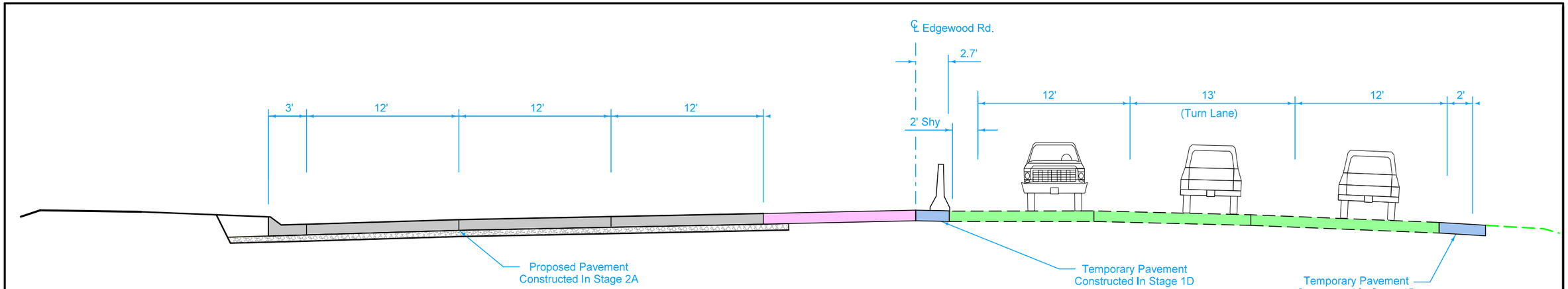
SECTION J-J



EDGEWOOD ROAD - STAGE 2A : STATION 7528+00
SECTION K-K



EDGEWOOD ROAD - STAGE 2B : STATION 7508+00
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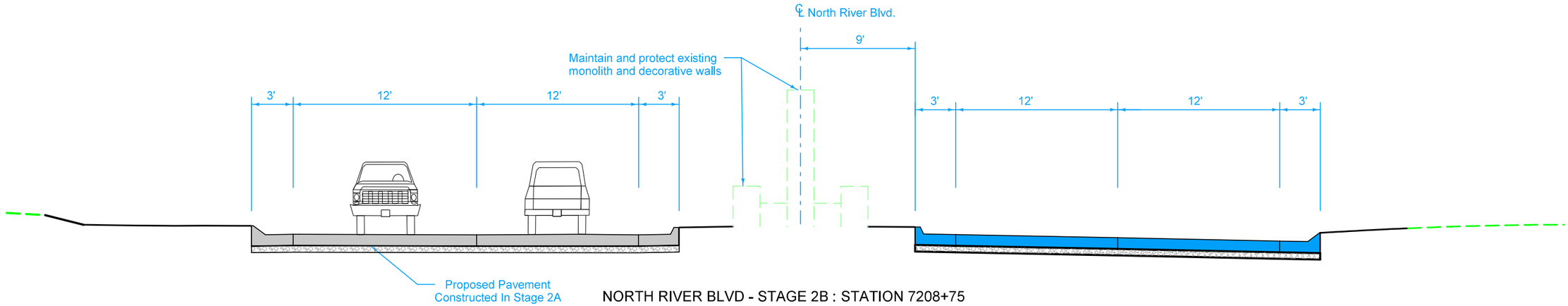
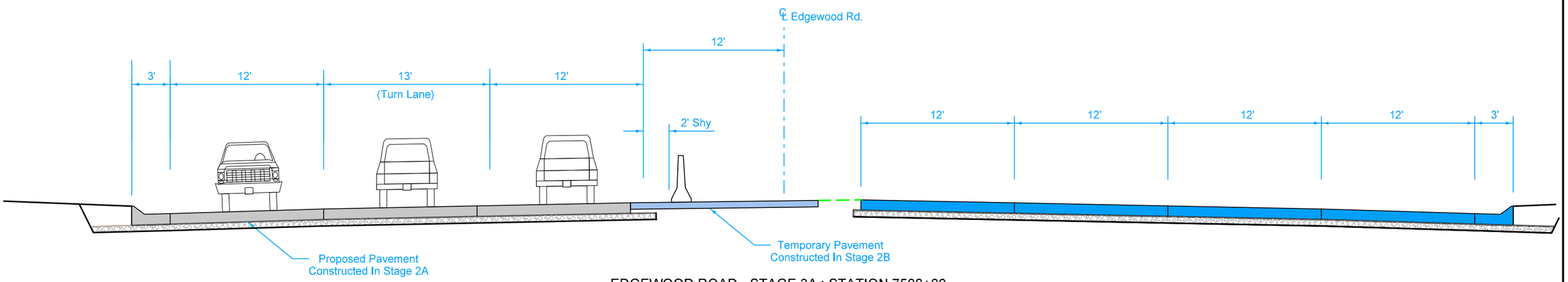
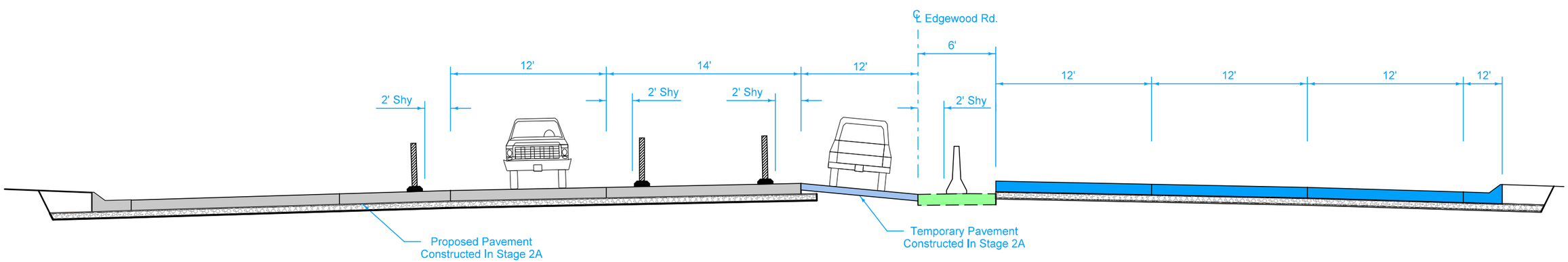


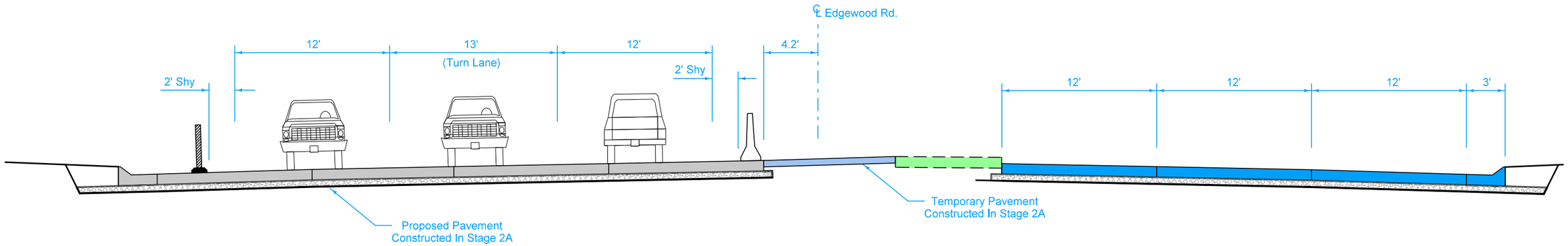
NORTH RIVER BLVD - STAGE 2B : STATION 7208+75
SECTION M-M



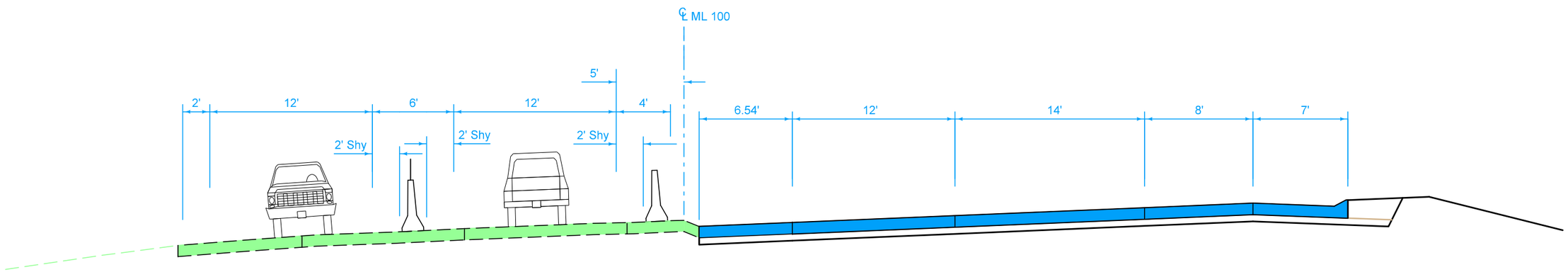
EDGEWOOD ROAD - STAGE 3A : STATION 7508+00
SECTION N-N



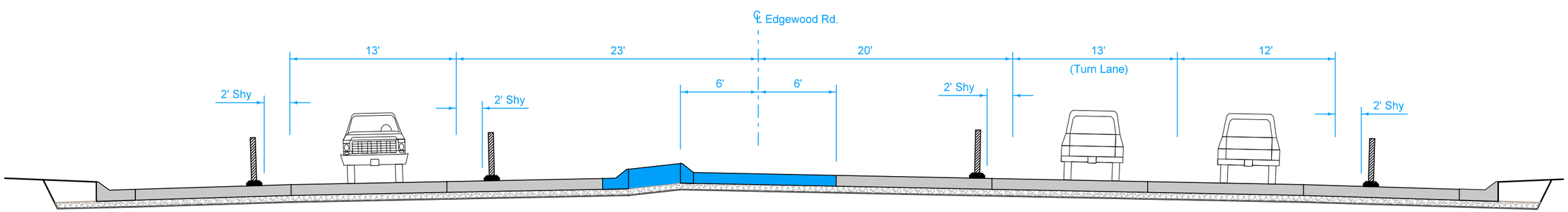
EDGEWOOD ROAD - STAGE 3A : STATION 7515+00
SECTION O-O



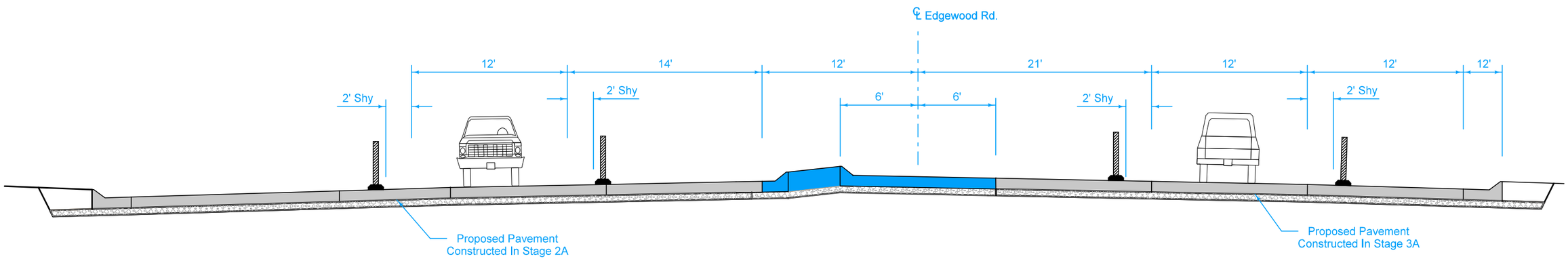
EDGEWOOD ROAD - STAGE 3A : STATION 7528+00
SECTION P-P



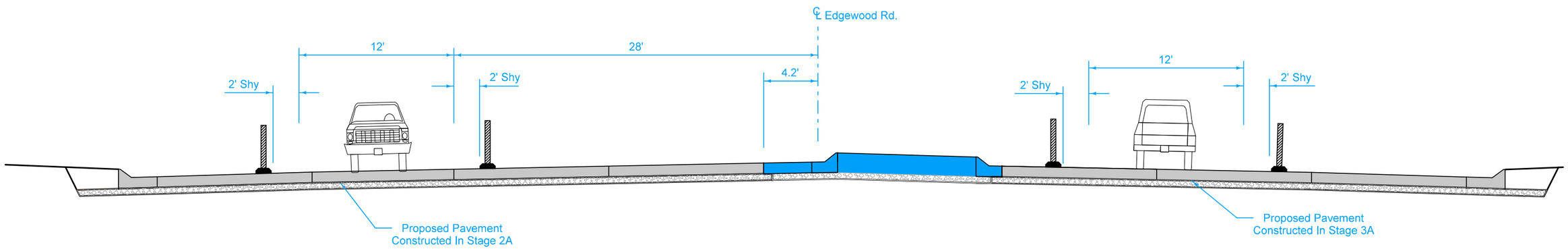
ML 100 - STAGE 3A : STATION 1122+00
SECTION Q-Q



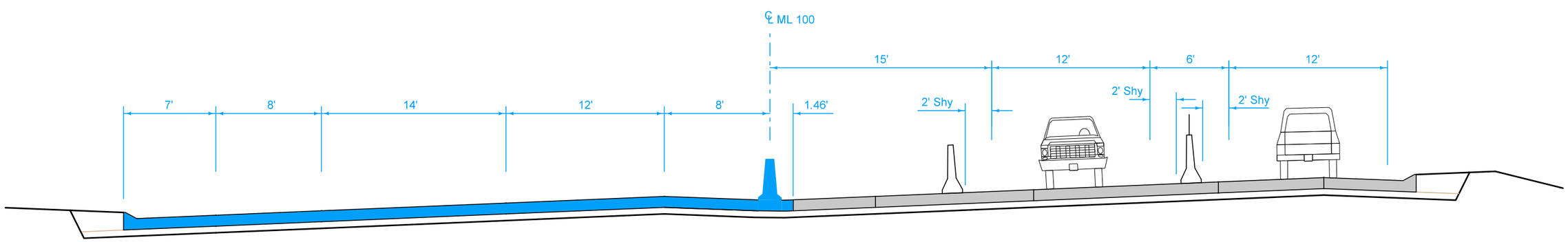
EDGEWOOD ROAD - STAGE 4 : STATION 7508+00
SECTION R-R



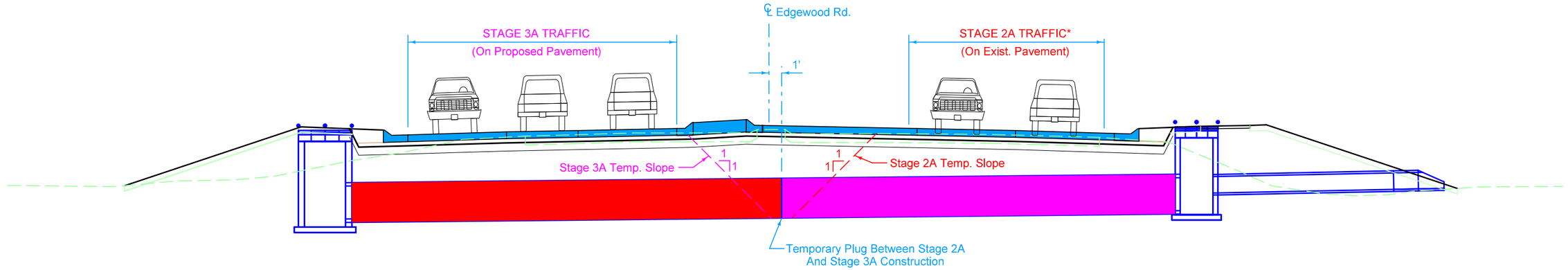
EDGEWOOD ROAD - STAGE 4 : STATION 7515+00
SECTION S-S



EDGEWOOD ROAD - STAGE 4 : STATION 7528+00
SECTION T-T

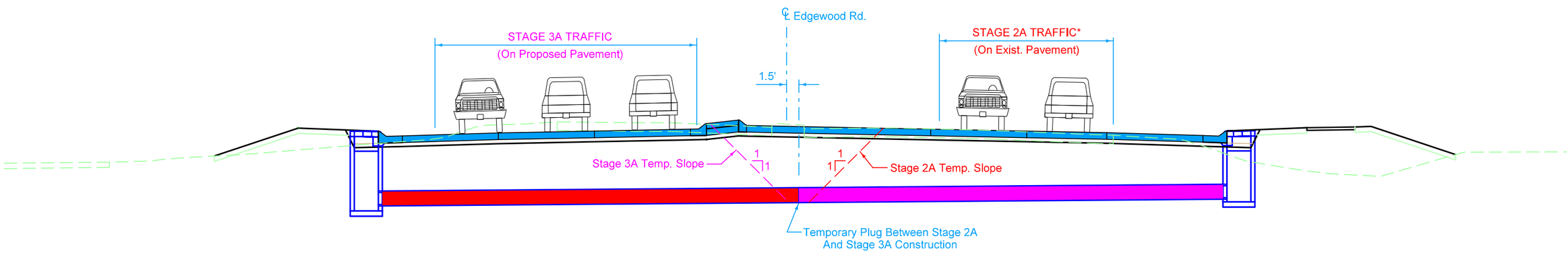


ML 100 - STAGE 3A : STATION 1122+00
SECTION U-U



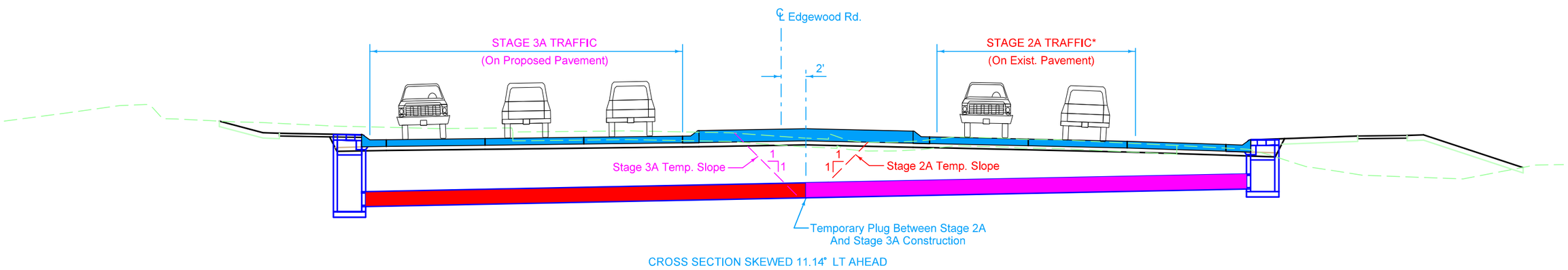
EDGEWOOD ROAD - STORM INTAKE/LATERAL STAGING: STATION 7506+00
SECTION AA-AA

*Note: Temporarily Reduce Edgewood Rd. Traffic
To Two Lanes (One Northbound, One Southbound)
For Lateral Storm Construction



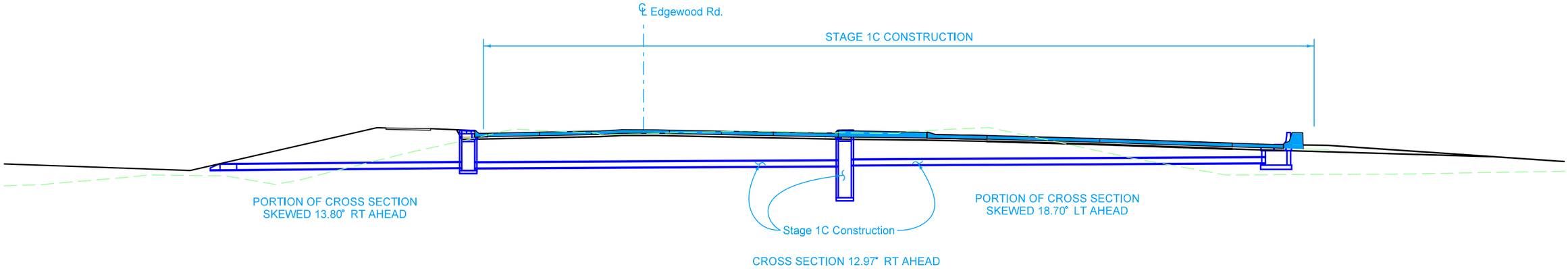
EDGEWOOD ROAD - STORM INTAKE/LATERAL STAGING: STATION 7507+75.16
SECTION BB-BB

*Note: Temporarily Reduce Edgewood Rd. Traffic
To Two Lanes (One Northbound, One Southbound)
For Lateral Storm Construction

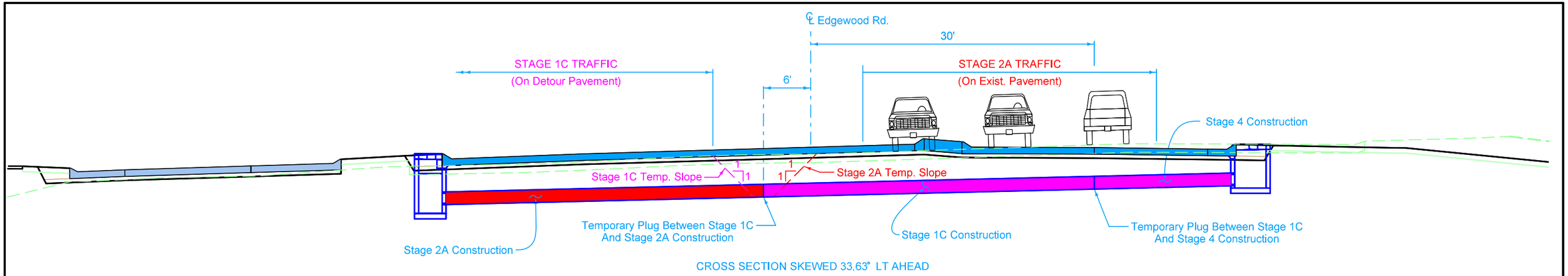


EDGEWOOD ROAD - STORM INTAKE/LATERAL STAGING: STATION 7510+66.60
SECTION CC-CC

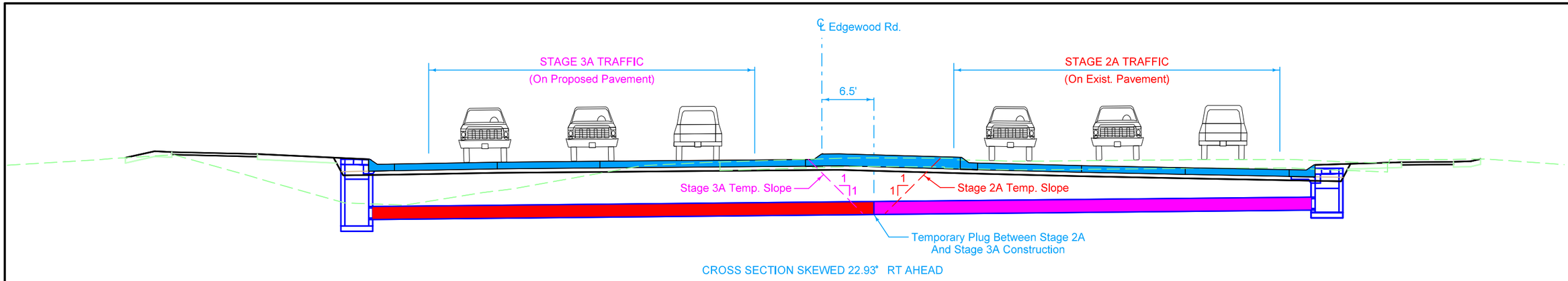
*Note: Temporarily Reduce Edgewood Rd. Traffic
To Two Lanes (One Northbound, One Southbound)
For Lateral Storm Construction



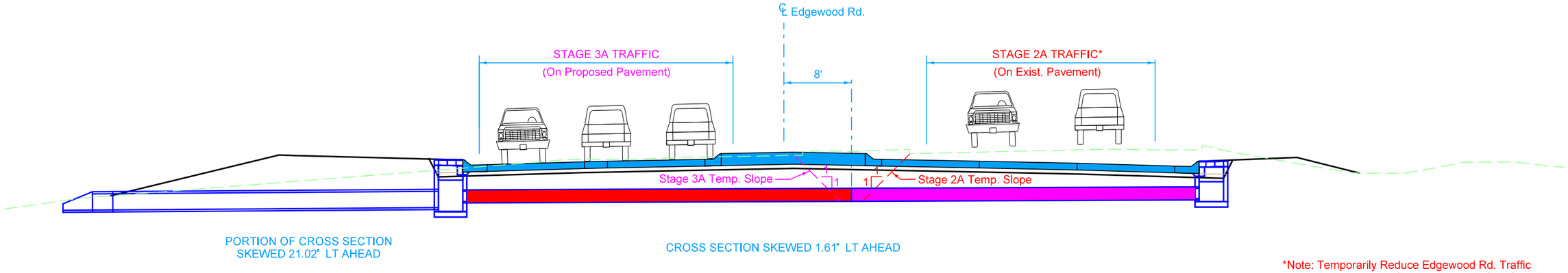
EDGEWOOD ROAD - STORM INTAKE/LATERAL STAGING: STATION 7517+75.60
SECTION DD-DD



EDGEWOOD ROAD - STORM INTAKE/LATERAL STAGING: STATION 7521+24.89
SECTION EE-EE

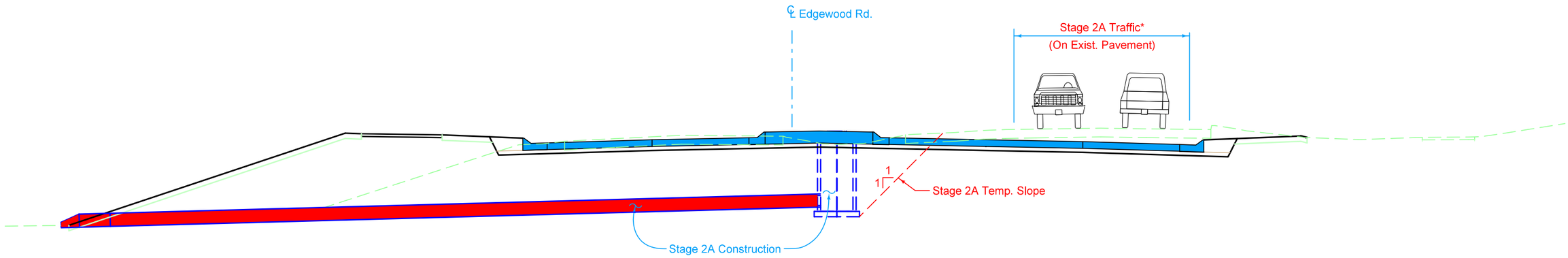


EDGEWOOD ROAD - STORM INTAKE/LATERAL STAGING: STATION 7523+87.25
SECTION FF-FF



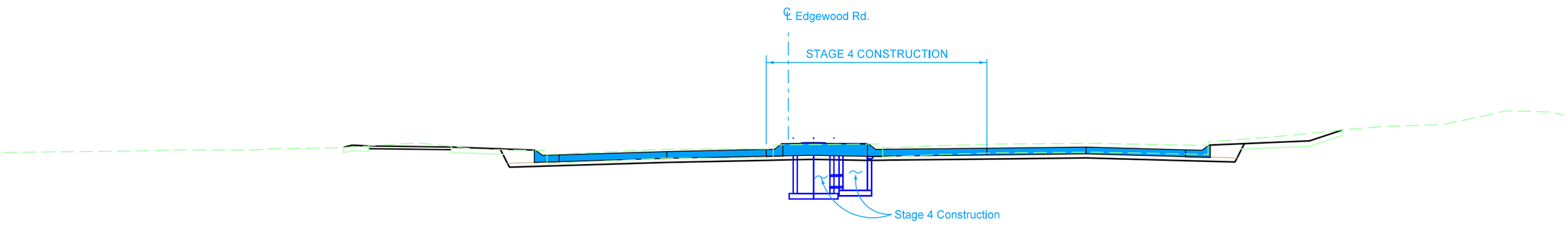
EDGEWOOD ROAD - STORM INTAKE/LATERAL STAGING: STATION 7529+61.55
SECTION GG-GG

*Note: Temporarily Reduce Edgewood Rd. Traffic
To Two Lanes (One Northbound, One Southbound)
For Lateral Storm Construction



EDGEWOOD ROAD - STORM INTAKE/LATERAL STAGING: STATION 7530+94.68
SECTION HH-HH

*Note: Temporarily Reduce Edgewood Rd. Traffic
To Two Lanes (One Northbound, One Southbound)
For Lateral Storm Construction

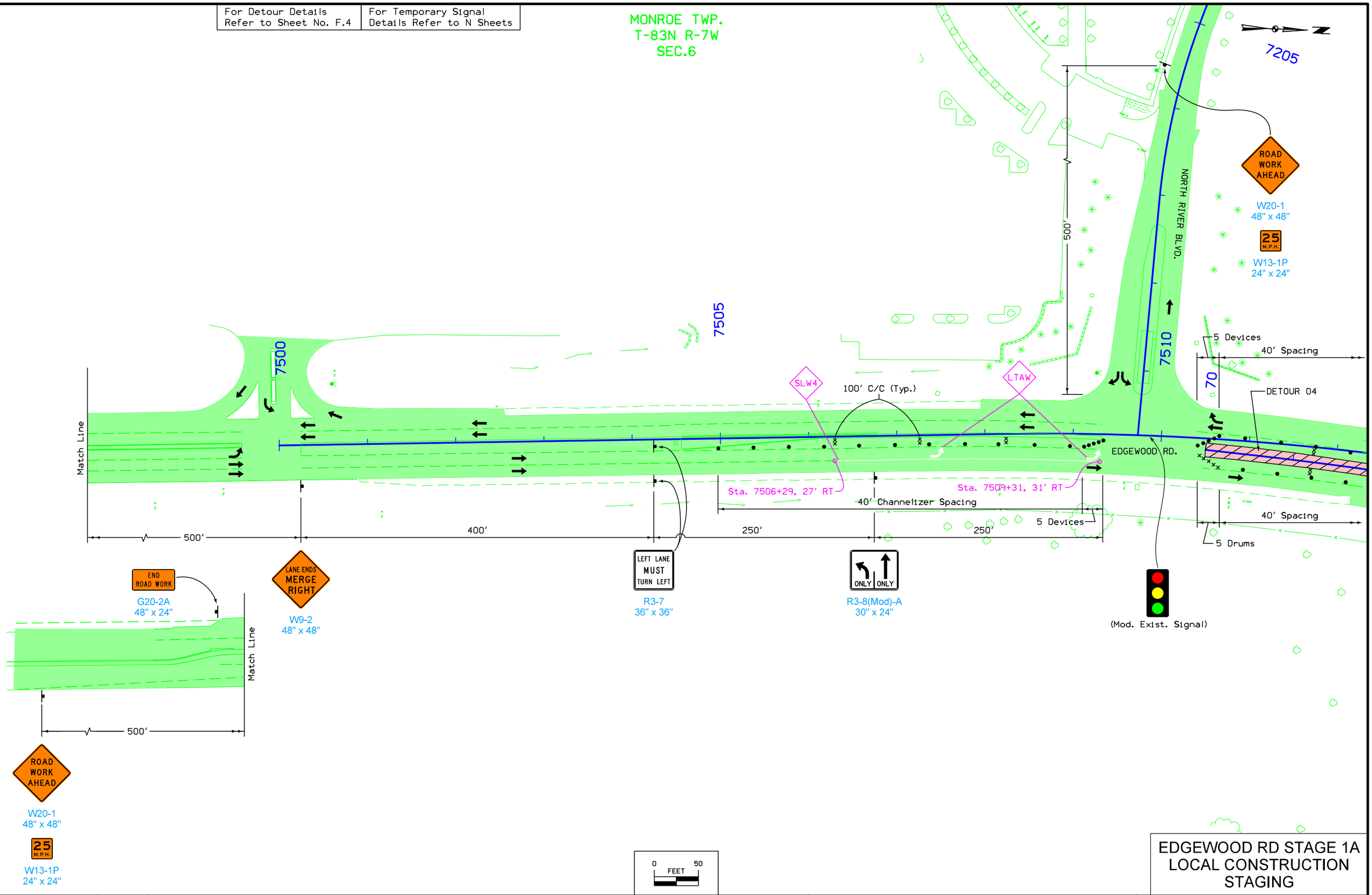


CROSS SECTION SKEWED 9.97° RT AHEAD

EDGEWOOD ROAD - STORM INTAKE/LATERAL STAGING: STATION 7532+63.39
SECTION II-II

For Detour Details Refer to Sheet No. F.4	For Temporary Signal Details Refer to N Sheets

MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD RD STAGE 1A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.14

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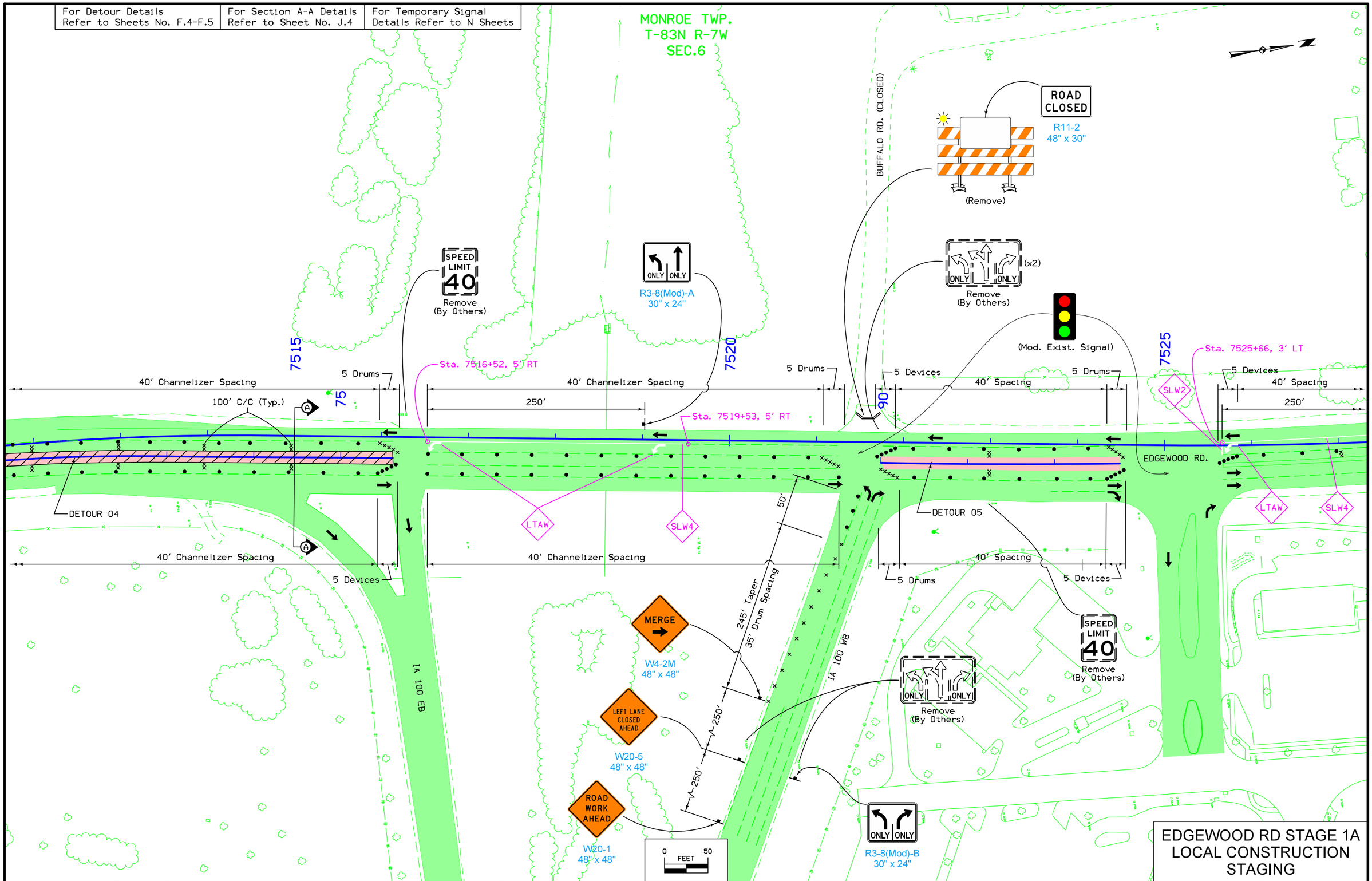
For Detour Details Refer to Sheets No. F.4-F.5	For Section A-A Details Refer to Sheet No. J.4	For Temporary Signal Details Refer to N Sheets



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.15

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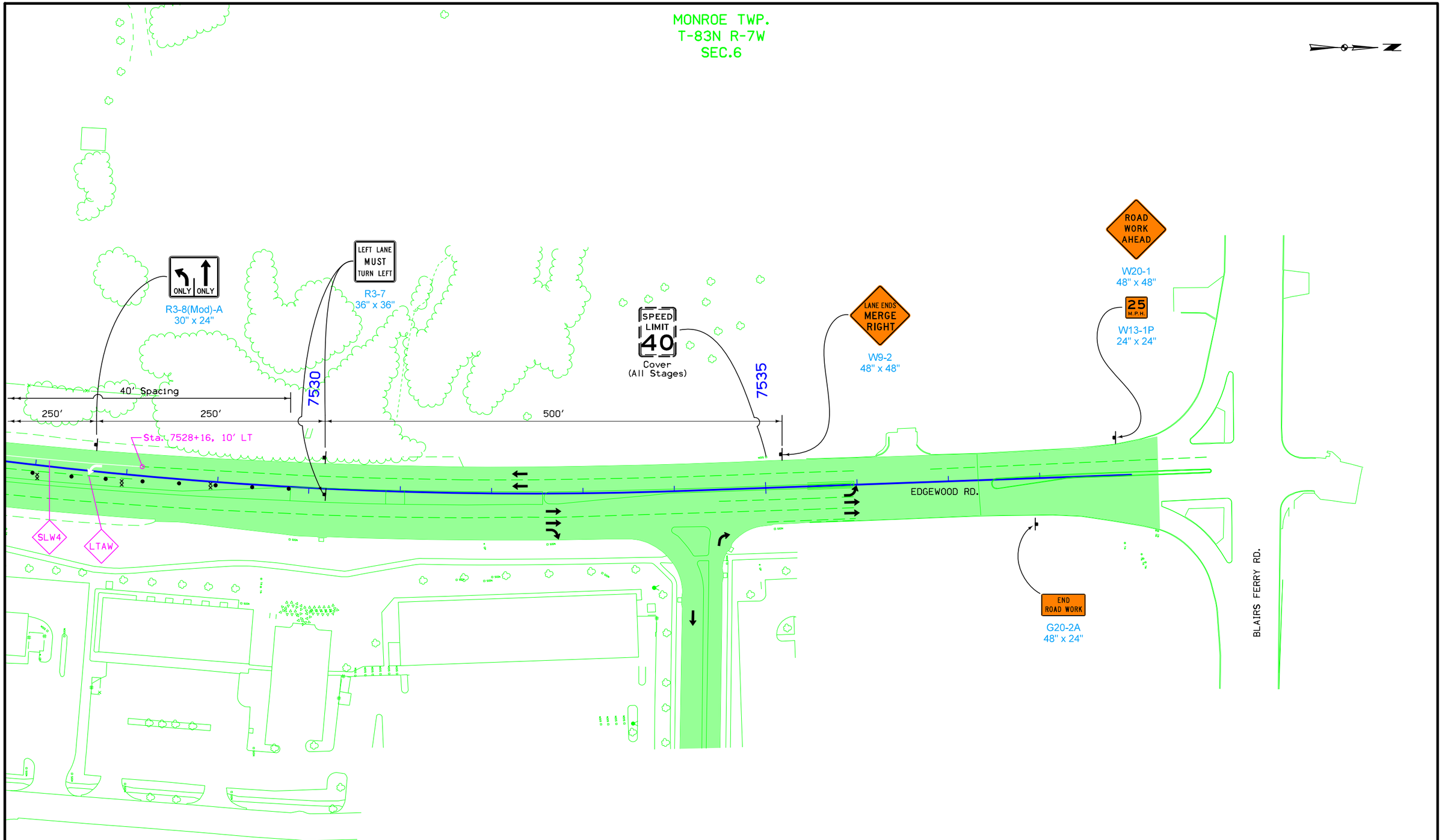
MONROE TWP.
T-83N R-7W
SEC.6



0 50
FEET

EDGEWOOD RD STAGE 1A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.16

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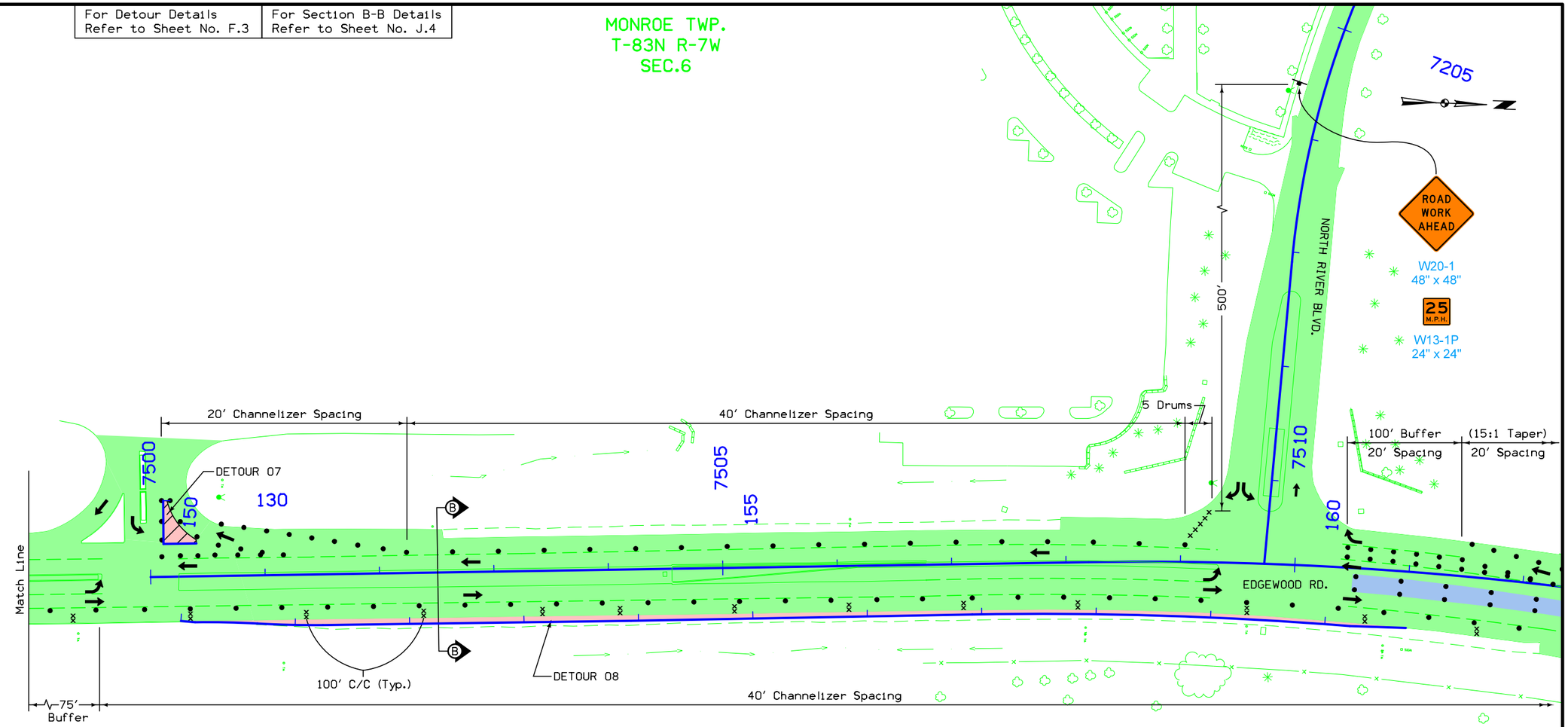
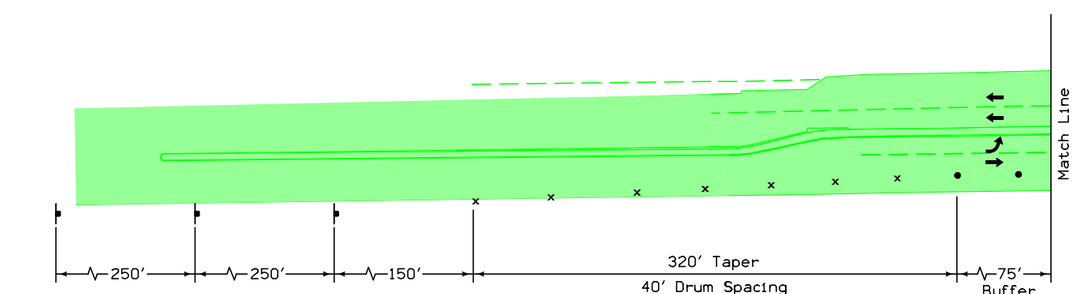
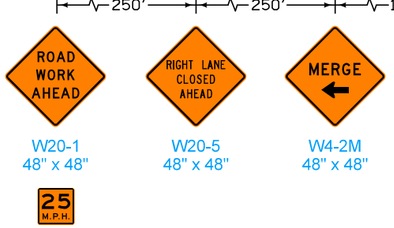
For Detour Details Refer to Sheet No. F.3	For Section B-B Details Refer to Sheet No. J.4

MONROE TWP.
T-83N R-7W
SEC.6







0 50 FEET

EDGEWOOD RD STAGE 1B
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.17

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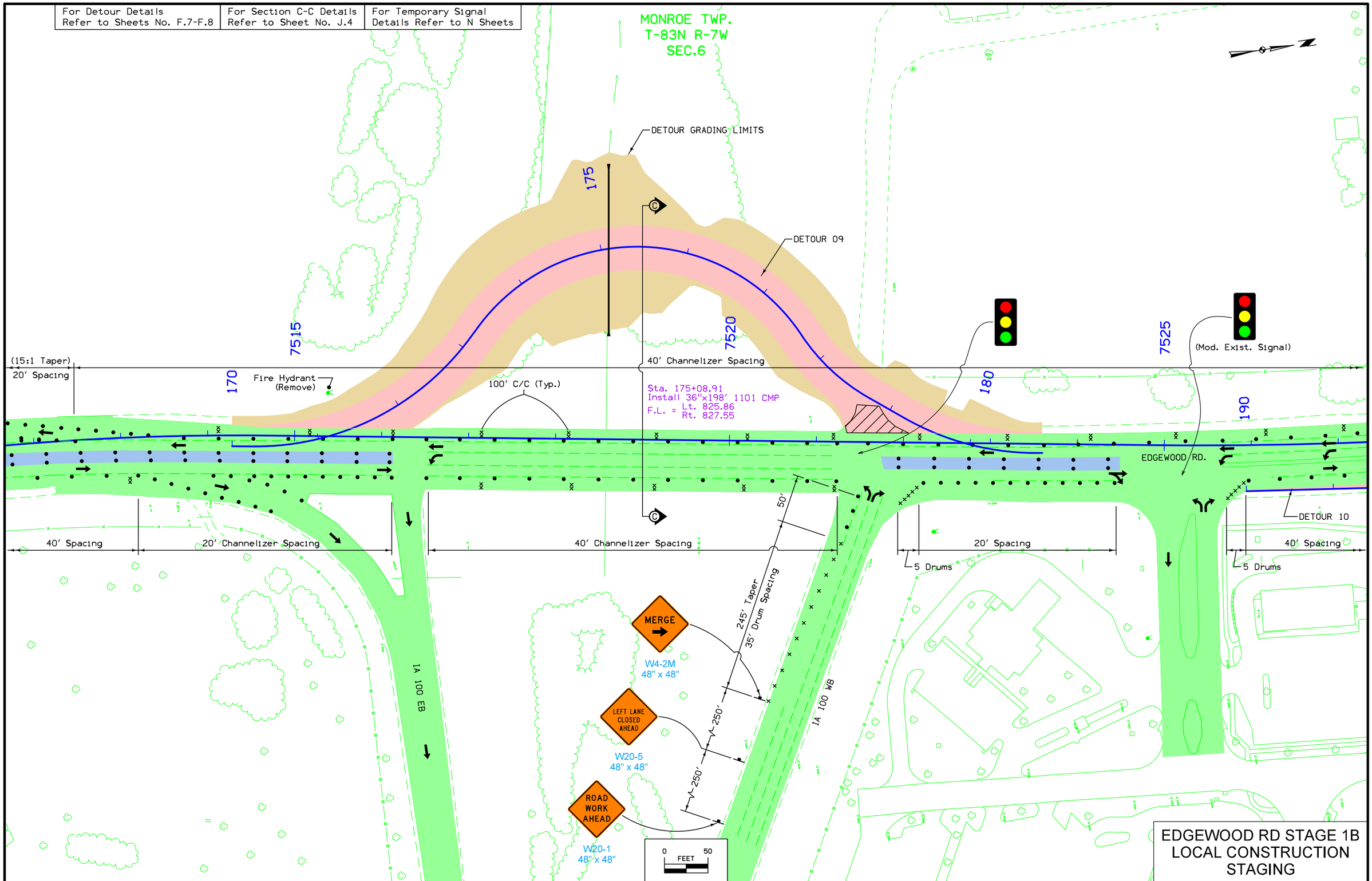
For Detour Details Refer to Sheets No. F.7-F.8	For Section C-C Details Refer to Sheet No. J.4	For Temporary Signal Details Refer to N Sheets



EDGEWOOD RD STAGE 1B
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.18

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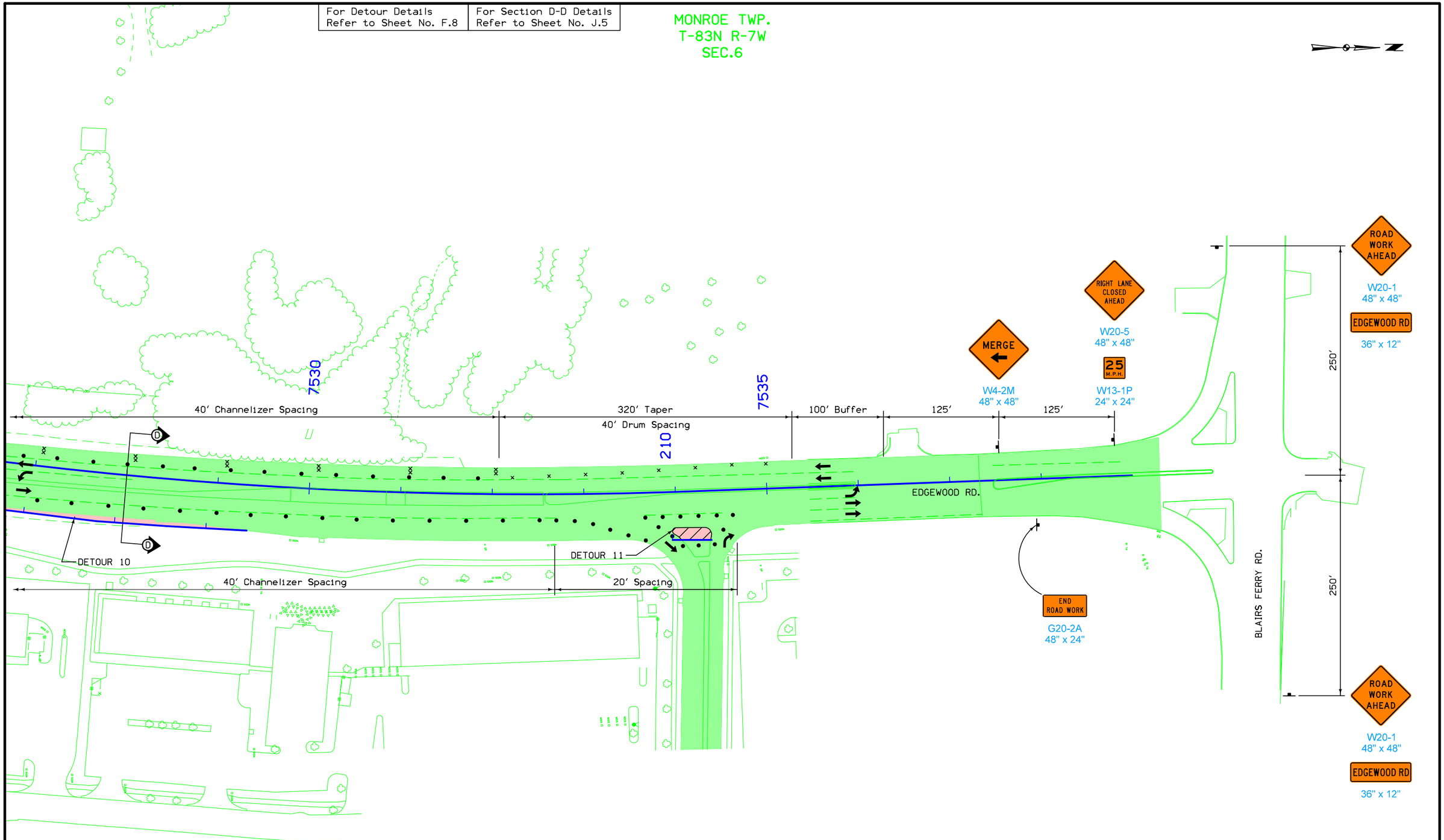
For Detour Details Refer to Sheet No. F.8	For Section D-D Details Refer to Sheet No. J.5

MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD RD STAGE 1B
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.19

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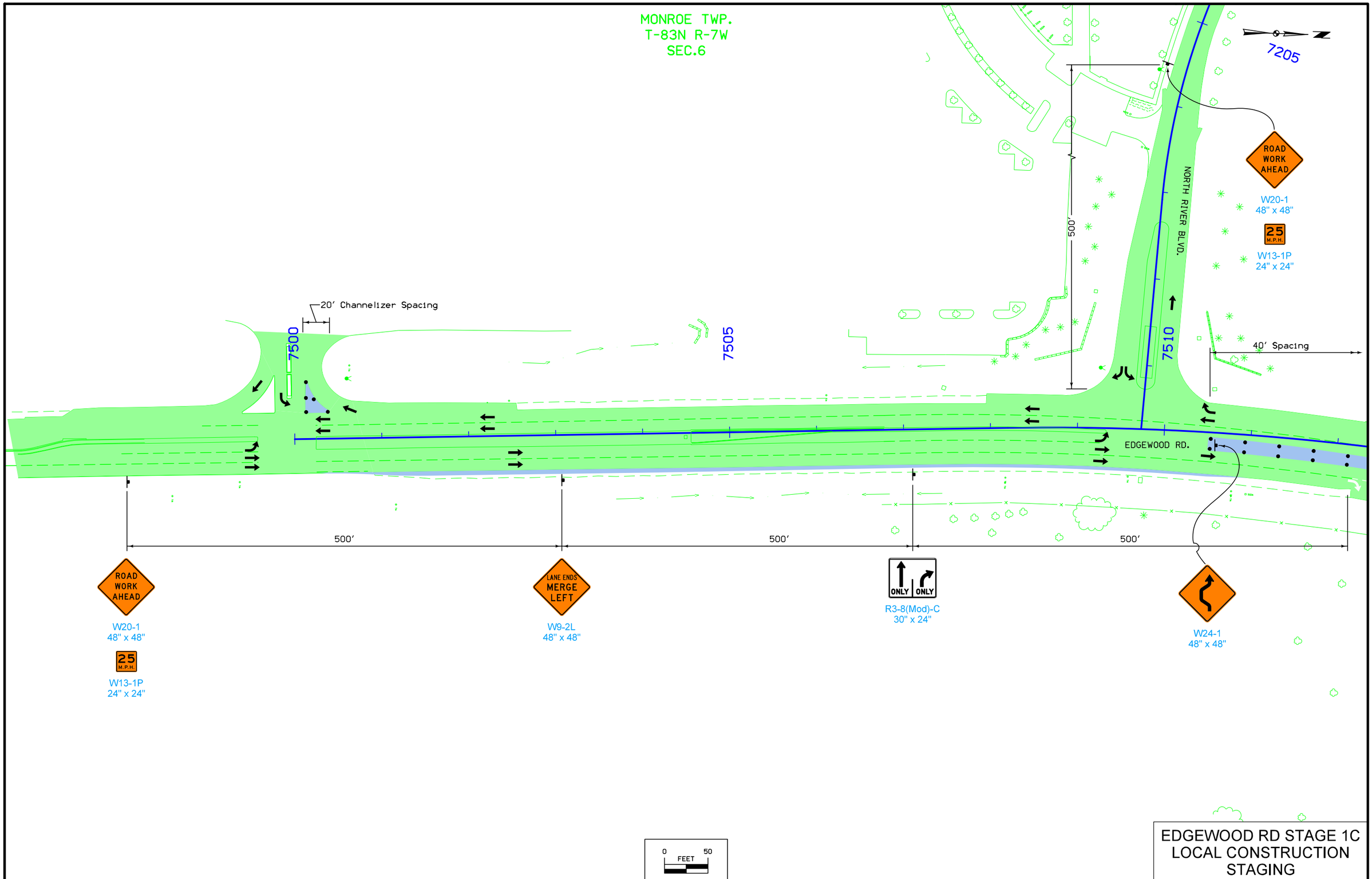
MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD RD STAGE 1C
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.20

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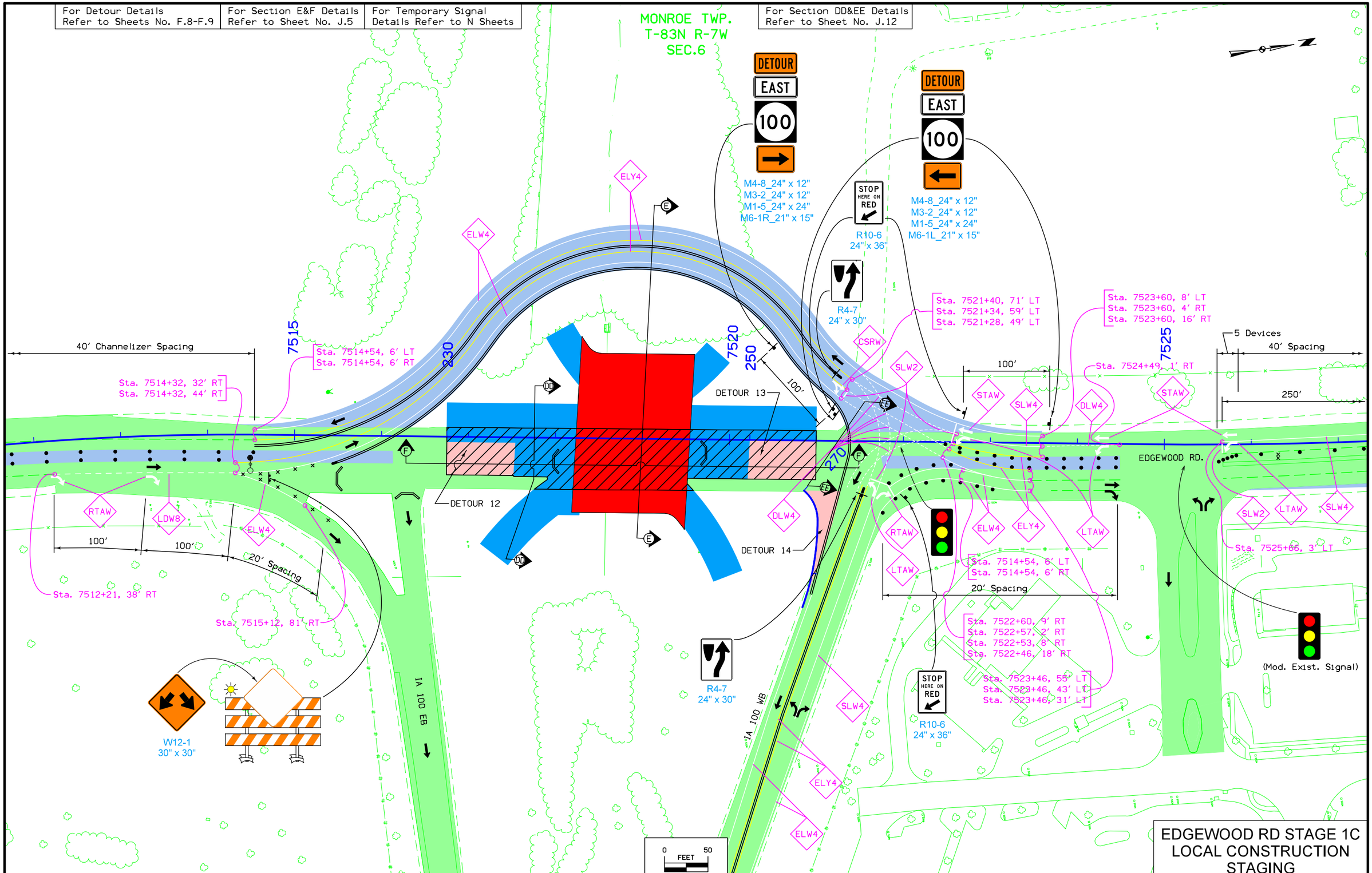
For Detour Details Refer to Sheets No. F.8-F.9

For Section E&F Details Refer to Sheet No. J.5

For Temporary Signal Details Refer to N Sheets

For Section DD&EE Details Refer to Sheet No. J.12



EDGEWOOD RD STAGE 1C
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.21

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MONROE TWP.
T-83N R-7W
SEC.6

LEFT LANE MUST TURN LEFT
R3-7
36" x 36"

ONLY ONLY
R3-8(Mod)-A
30" x 24"

W24-1
48" x 48"

25 M.P.H.
W13-1P
24" x 24"

LEFT LANE CLOSED AHEAD
W20-5
48" x 48"

EDGEWOOD RD
36" x 12"

ROAD WORK AHEAD
W20-1
48" x 48"

EDGEWOOD RD
36" x 12"

40' Spacing
(15:1 Taper)
20' Spacing
250'
250'
7530
Sta. 7528+16, 10' LT
40' Channelizer Spacing
500'
100' C/C (Typ.)
7535
5 Drums
20' Channelizer Spacing
5 Drums
250'
250'
250'
250'
250'

SLW4
LTAW

EDGEWOOD RD.

END ROAD WORK
G20-2A
48" x 24"

BLAIRS FERRY RD.

LEFT LANE CLOSED AHEAD
W20-5
48" x 48"

EDGEWOOD RD
36" x 12"

ROAD WORK AHEAD
W20-1
48" x 48"

EDGEWOOD RD
36" x 12"

0 50
FEET

EDGEWOOD RD STAGE 1C
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.22

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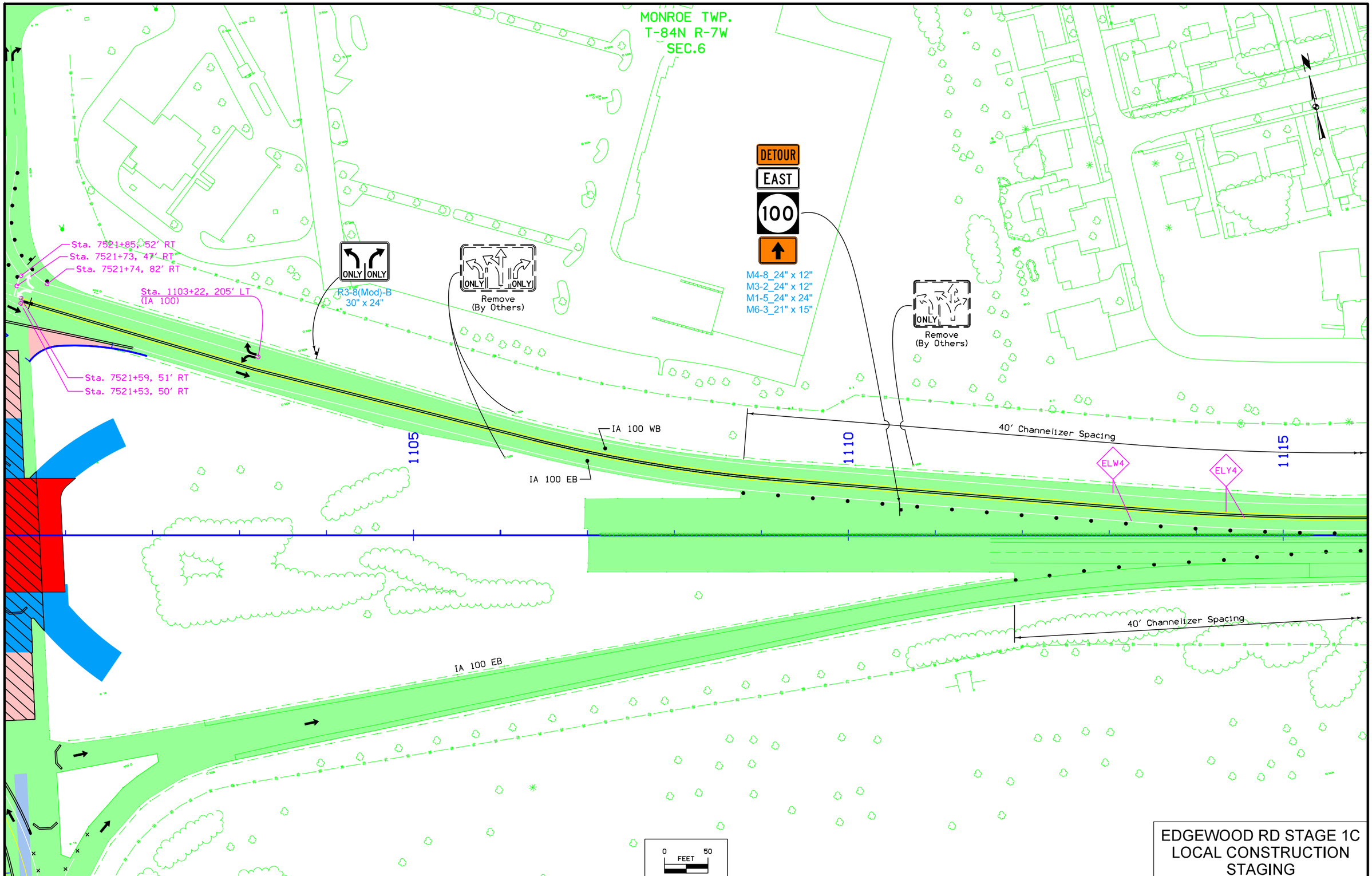

EDGEWOOD RD STAGE 1C
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.23

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For Section G-G Details
Refer to Sheet No. J.6

MONROE TWP.
T-84N R-7W
SEC.6

DETOUR
EAST
100

M4-8_24" x 12"
M3-2_24" x 12"
M1-5_24" x 24"
M6-3_21" x 15"

W1-4R
48" x 48"

45 M.P.H.
W13-1P
24" x 24"

STA. 1128+50.00 (IA 100)
BEGIN EXIST. BARRIER REMOVAL

1130

600' Buffer

Sta. 1130+18, 33' LT
Sta. 1130+18, 21' LT
(IA 100)

1125

500'

40' Channelizer Spacing

R= 3120'

1120

ELW4

ELY4

IA 100 WB

IA 100 EB

G

500'

40' Channelizer Spacing

W4-3L
48" x 48"

0 FEET 50

EDGEWOOD RD STAGE 1C
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.24

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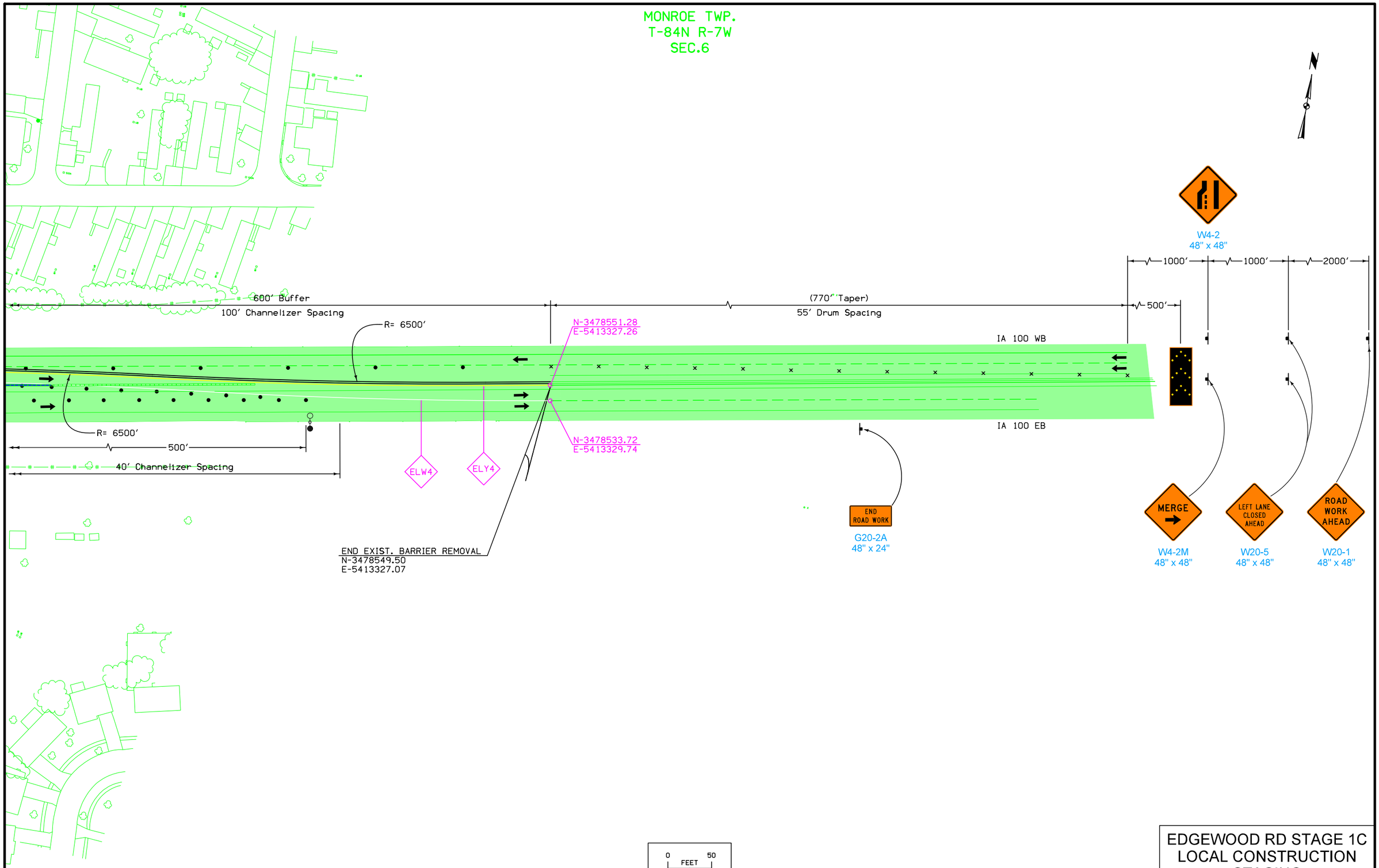
MONROE TWP.
T-84N R-7W
SEC.6

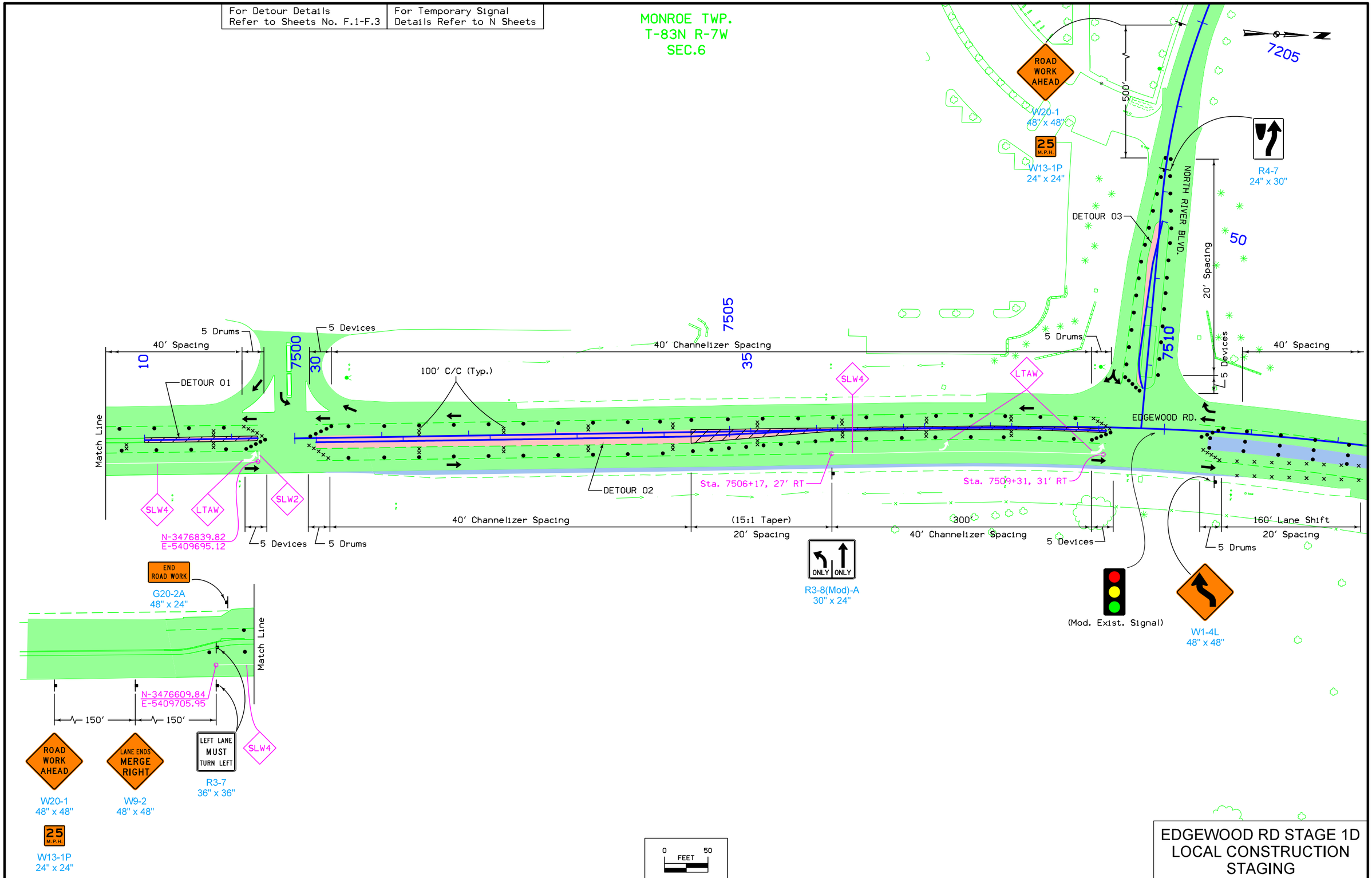


EDGEWOOD RD STAGE 1C
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.25

For Detour Details Refer to Sheets No. F.1-F.3	For Temporary Signal Details Refer to N Sheets

MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD RD STAGE 1D
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.26

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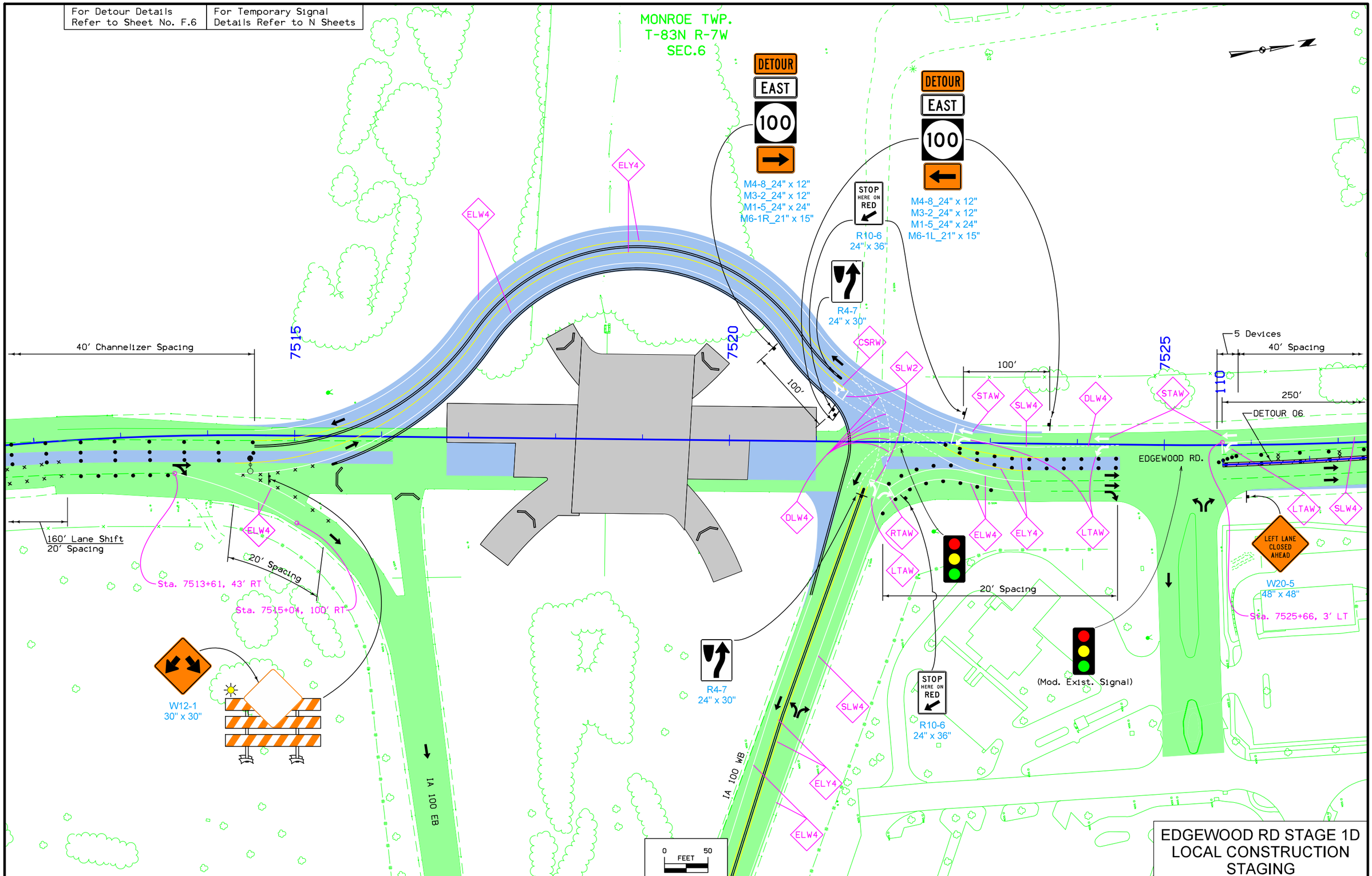
For Detour Details Refer to Sheet No. F.6	For Temporary Signal Details Refer to N Sheets



EDGEWOOD RD STAGE 1D LOCAL CONSTRUCTION STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.27

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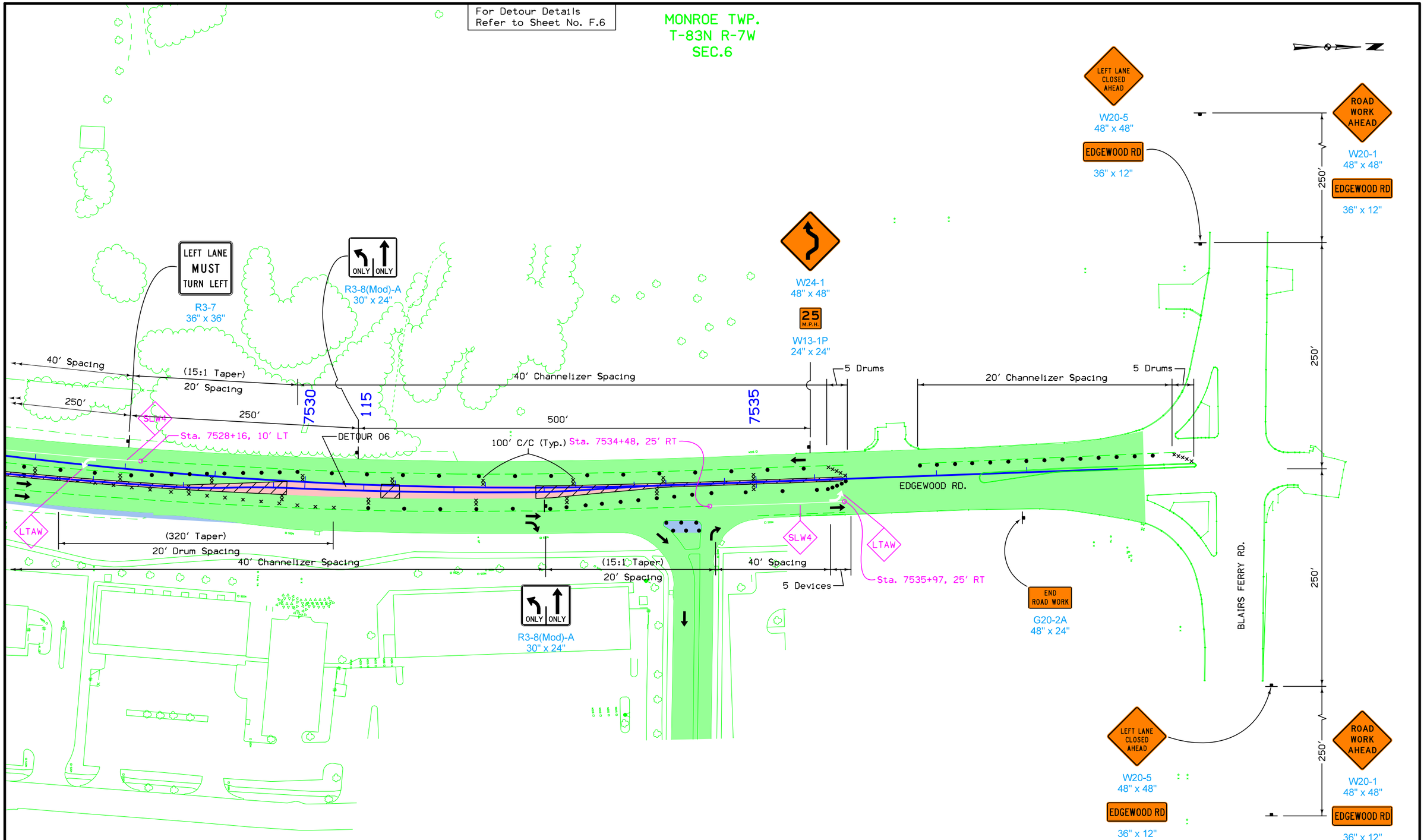
For Detour Details
Refer to Sheet No. F.6

MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD RD STAGE 1D
LOCAL CONSTRUCTION
STAGING

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.28	

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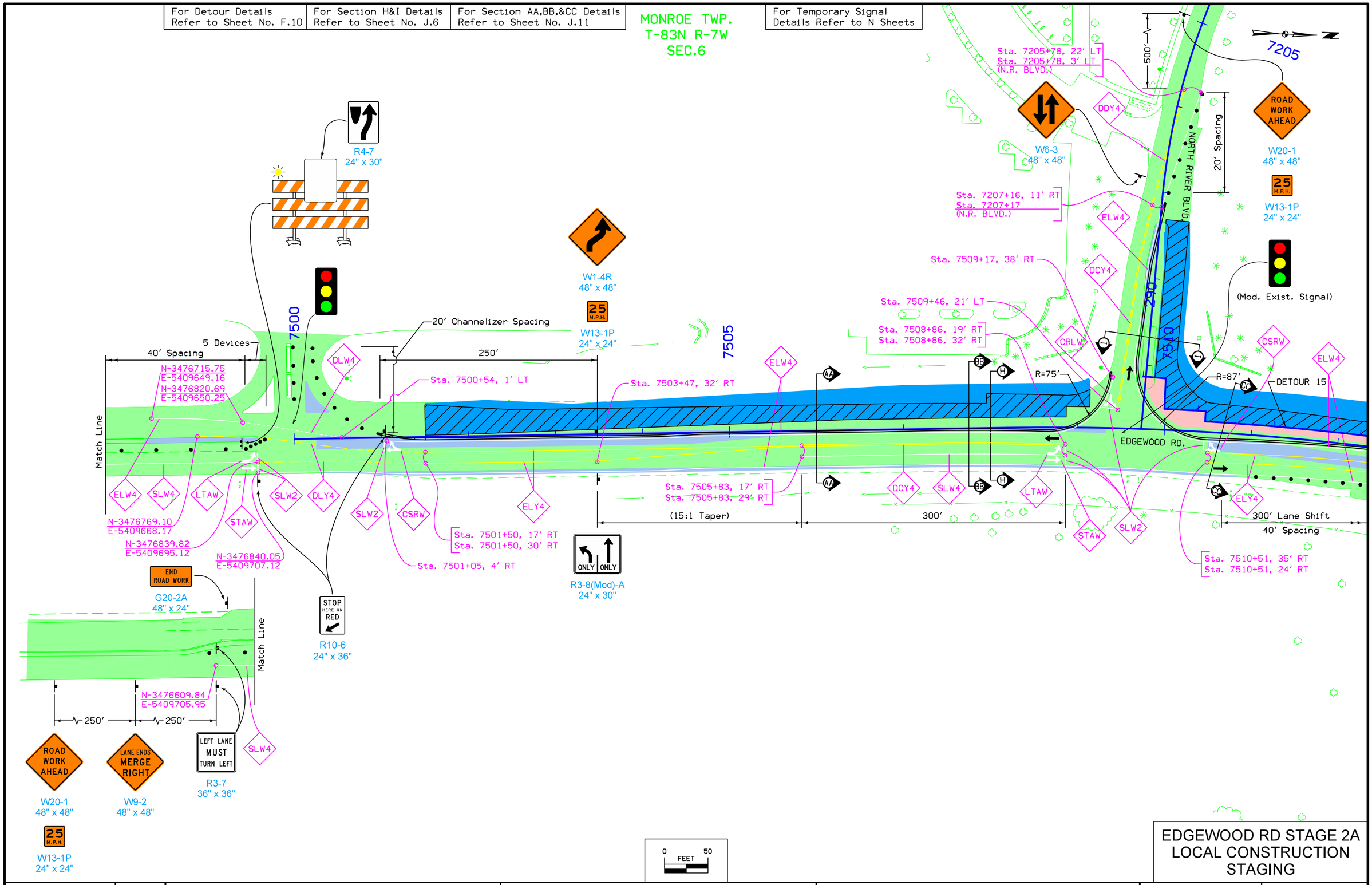
For Detour Details Refer to Sheet No. F.10	For Section H&I Details Refer to Sheet No. J.6	For Section AA,BB,&CC Details Refer to Sheet No. J.11	For Temporary Signal Details Refer to N Sheets

MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD RD STAGE 2A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.29

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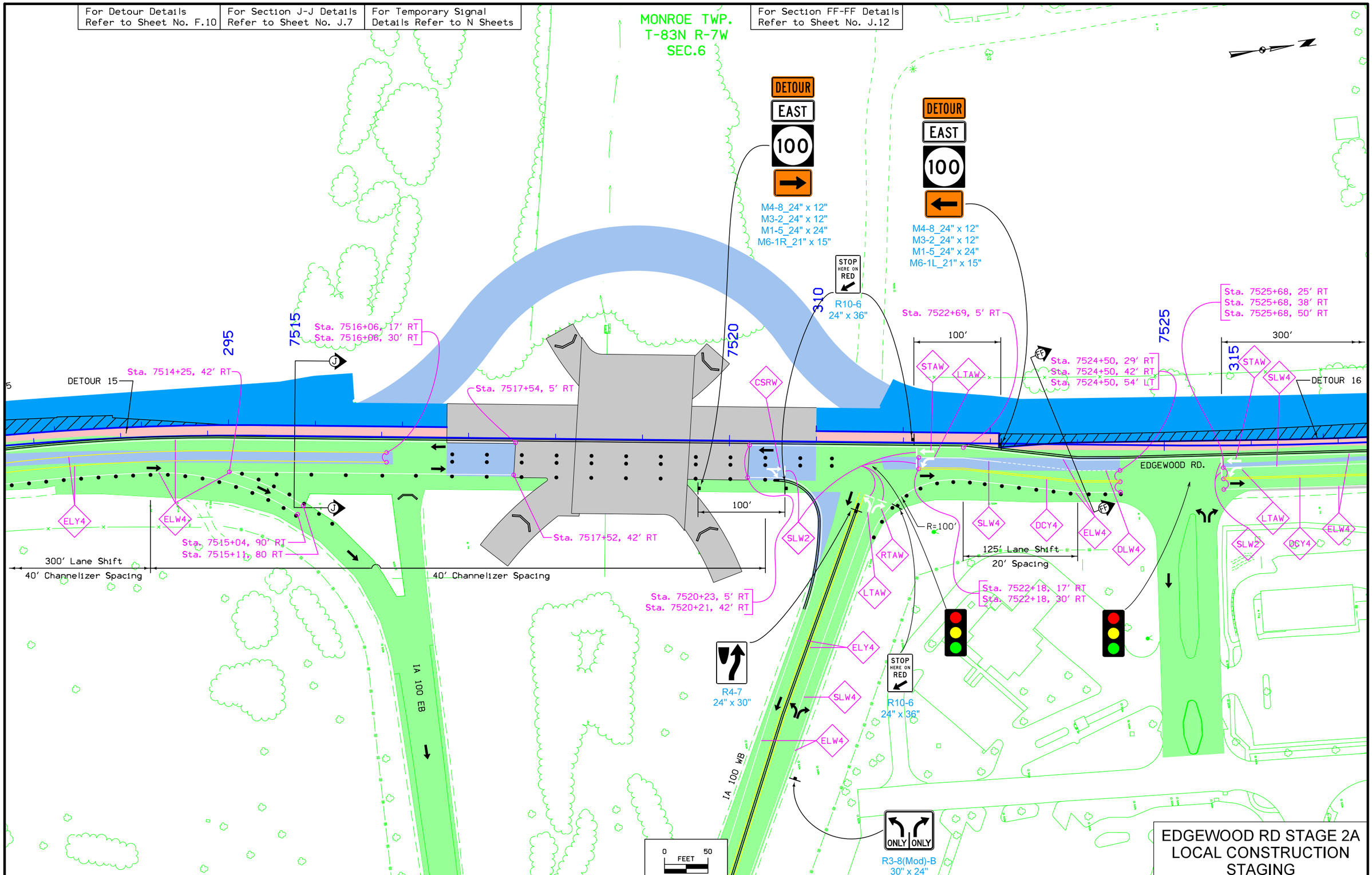
For Detour Details Refer to Sheet No. F.10 | For Section J-J Details Refer to Sheet No. J.7 | For Temporary Signal Details Refer to N Sheets | For Section FF-FF Details Refer to Sheet No. J.12



EDGEWOOD RD STAGE 2A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.30

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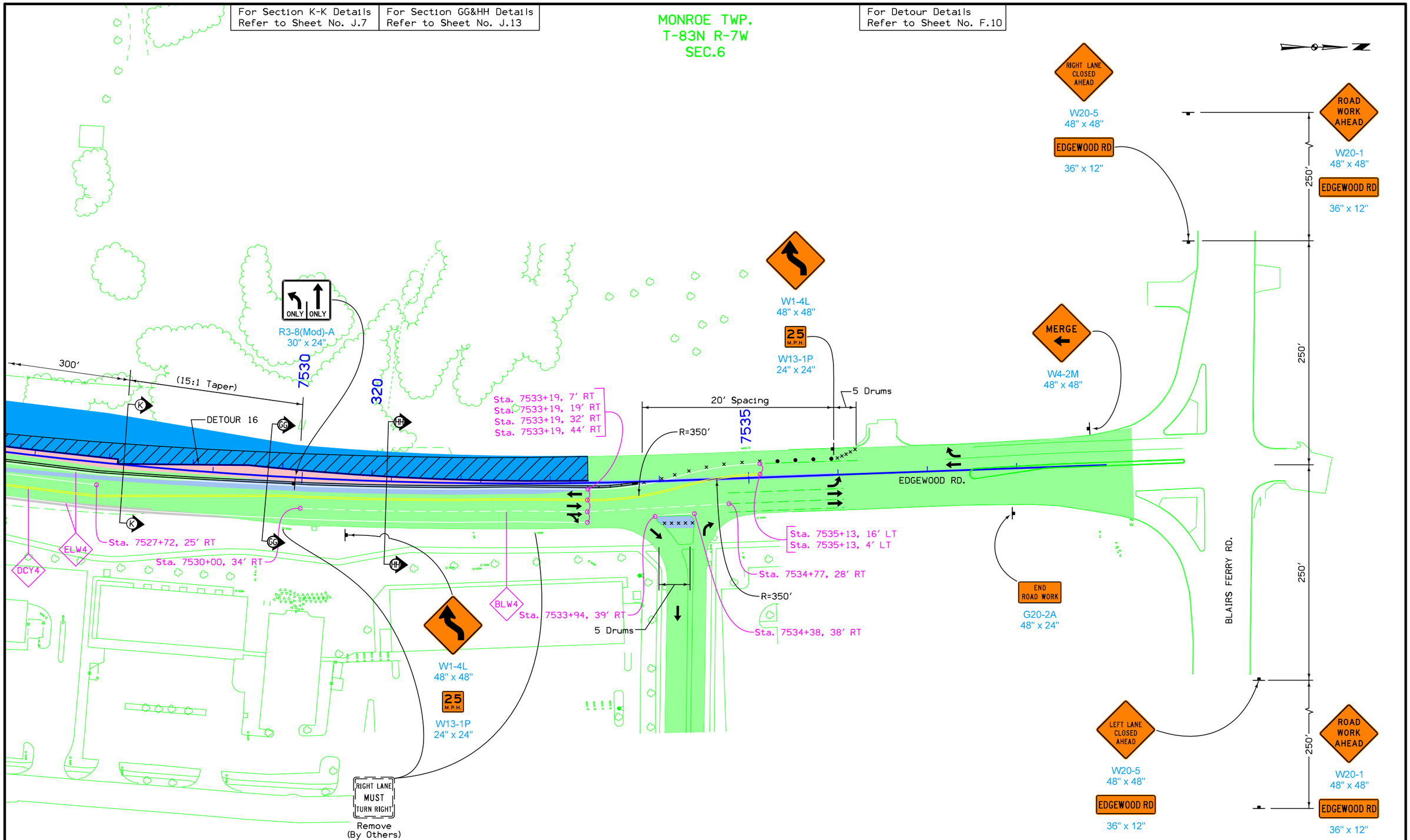
For Section K-K Details
Refer to Sheet No. J.7

For Section GG&HH Details
Refer to Sheet No. J.13

MONROE TWP.
T-83N R-7W
SEC.6

For Detour Details
Refer to Sheet No. F.10



EDGEWOOD RD STAGE 2A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.31

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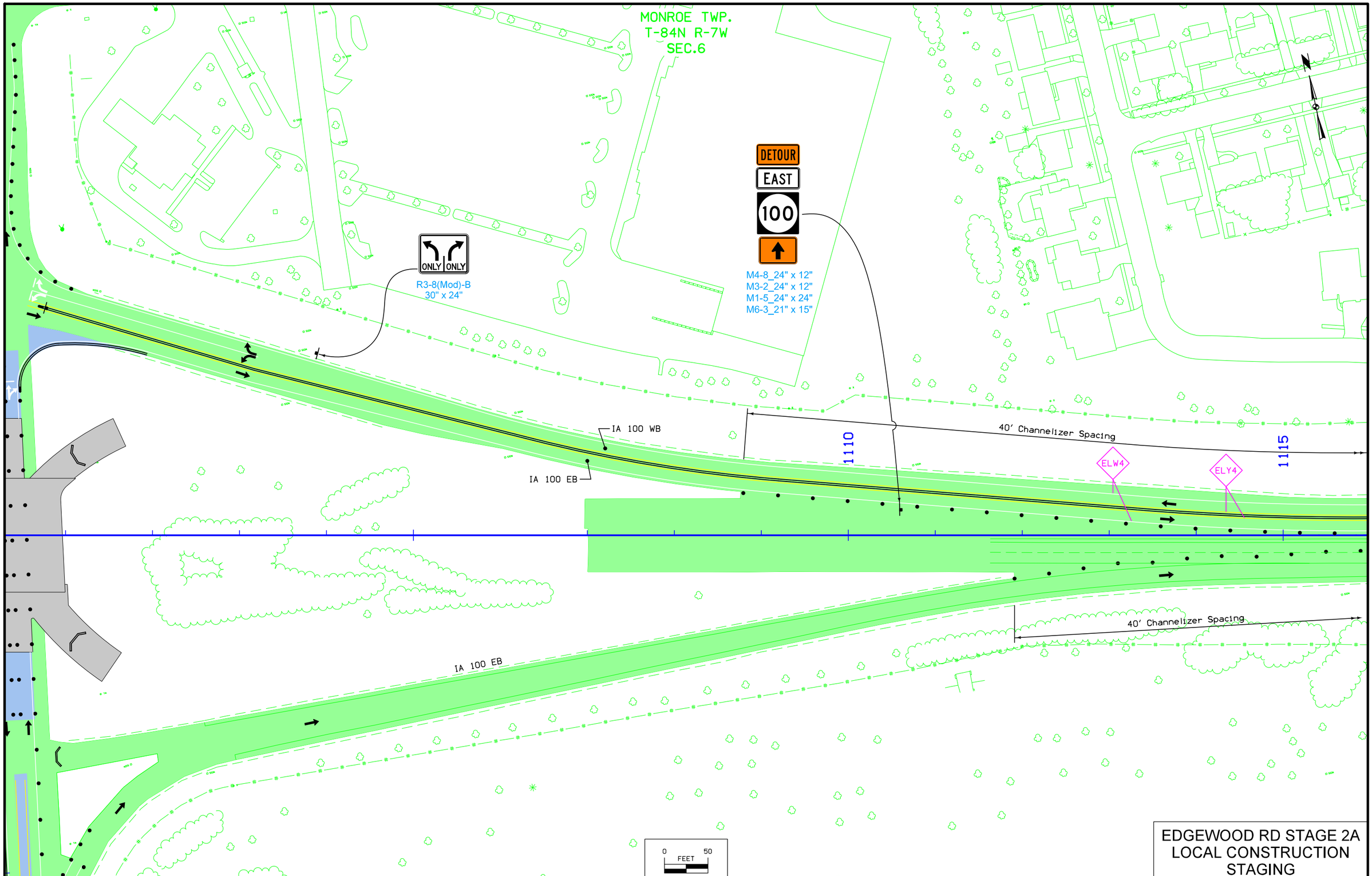

EDGEWOOD RD STAGE 2A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.32

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MONROE TWP.
T-84N R-7W
SEC.6

DETOUR
EAST
100

M4-8_24" x 12"
M3-2_24" x 12"
M1-5_24" x 24"
M6-3_21" x 15"

W1-4R
48" x 48"

45 M.P.H.
W13-1P
24" x 24"

W4-3L
48" x 48"

1120
1125
1130

ELW4
ELY4

IA 100 WB
IA 100 EB

40' Channelizer Spacing
40' Channelizer Spacing

500'
500'
600' Buffer

Sta. 1130+18, 33' LT
Sta. 1130+18, 21' LT
(IA 100)

0 FEET 50

EDGEWOOD RD STAGE 2A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.33

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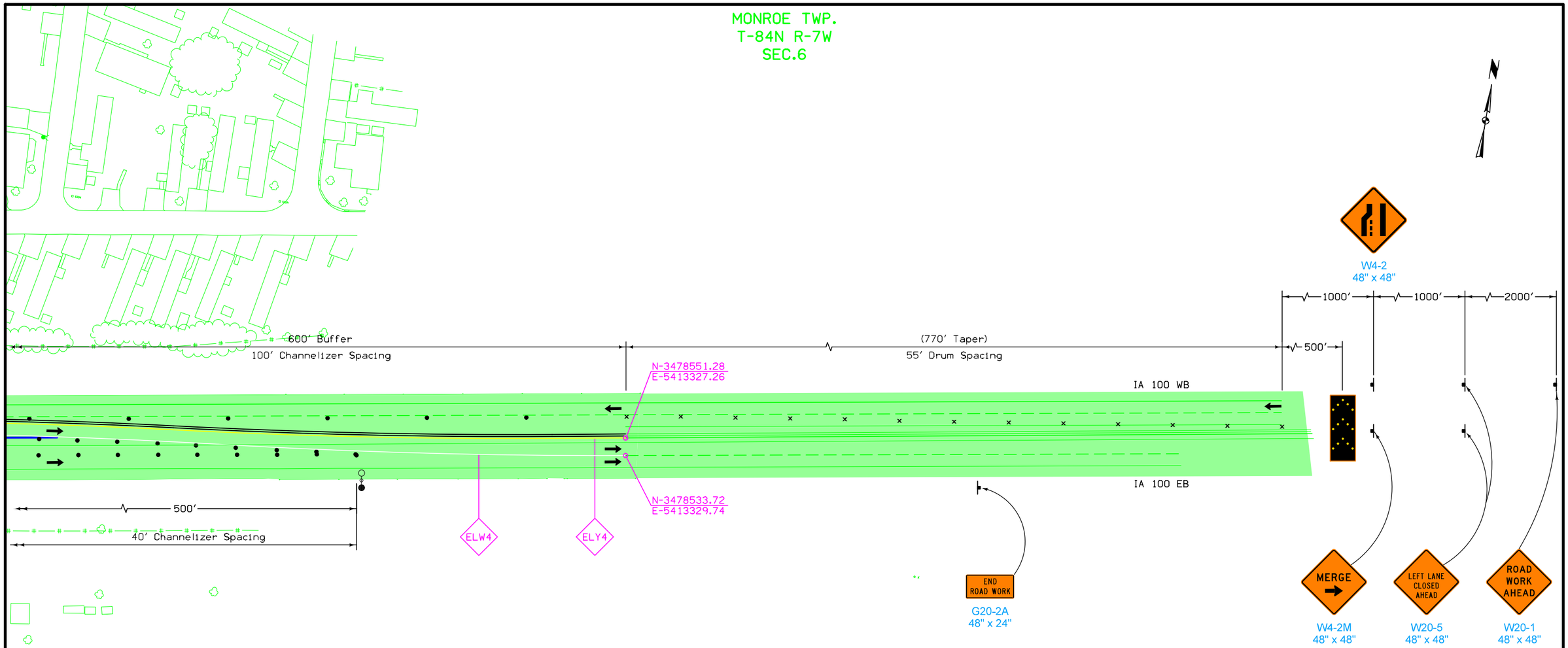
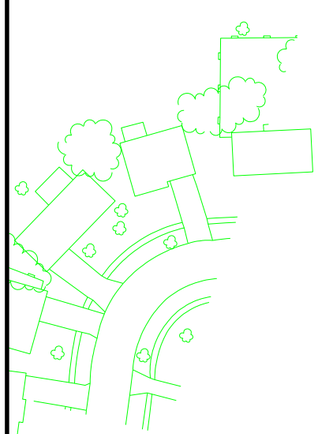
MONROE TWP.
T-84N R-7W
SEC.6





0 FEET 50

EDGEWOOD RD STAGE 2A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.34

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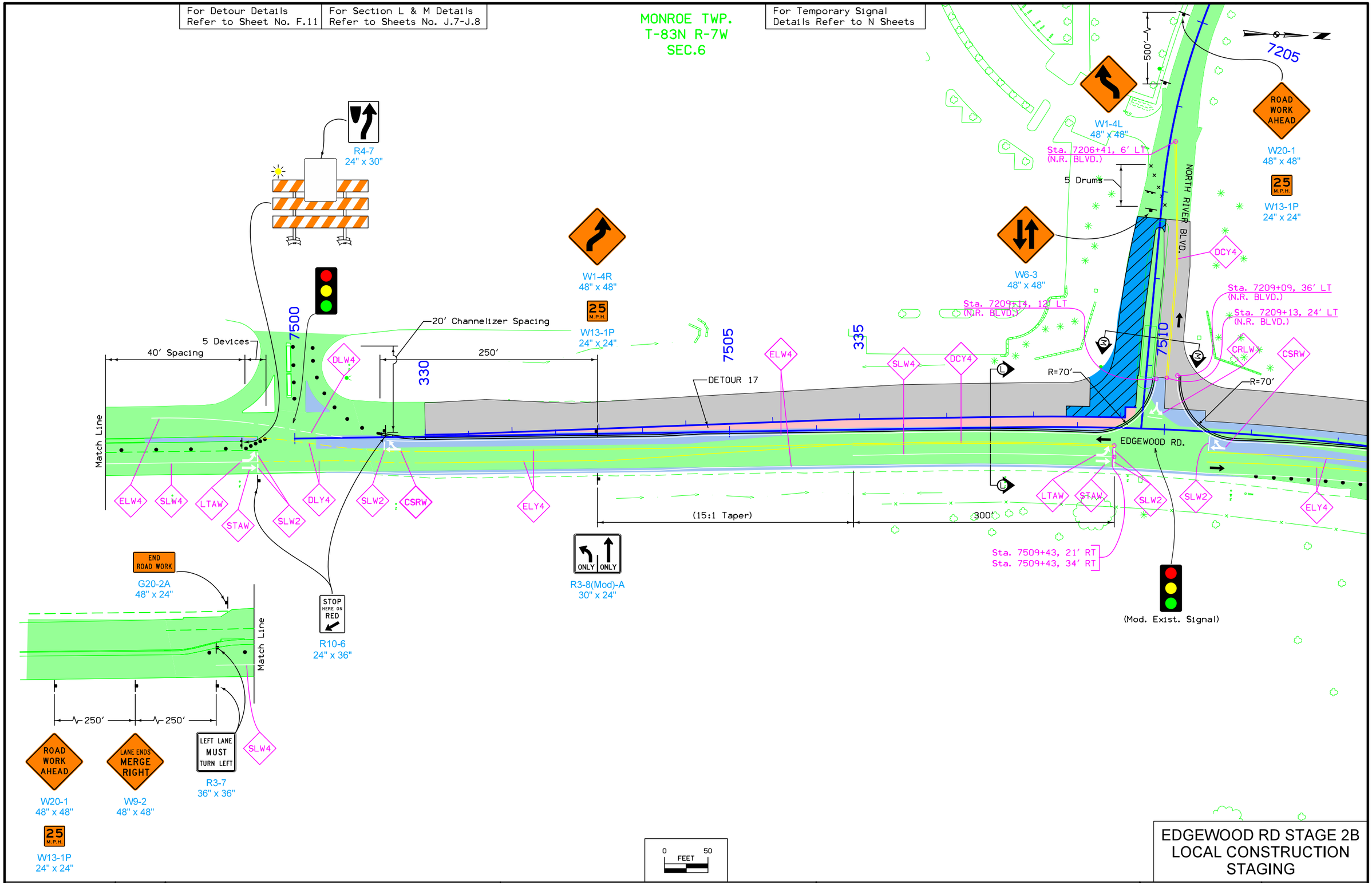
For Detour Details Refer to Sheet No. F.11

For Section L & M Details Refer to Sheets No. J.7-J.8

MONROE TWP.
T-83N R-7W
SEC.6

For Temporary Signal Details Refer to N Sheets



EDGEWOOD RD STAGE 2B
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.35

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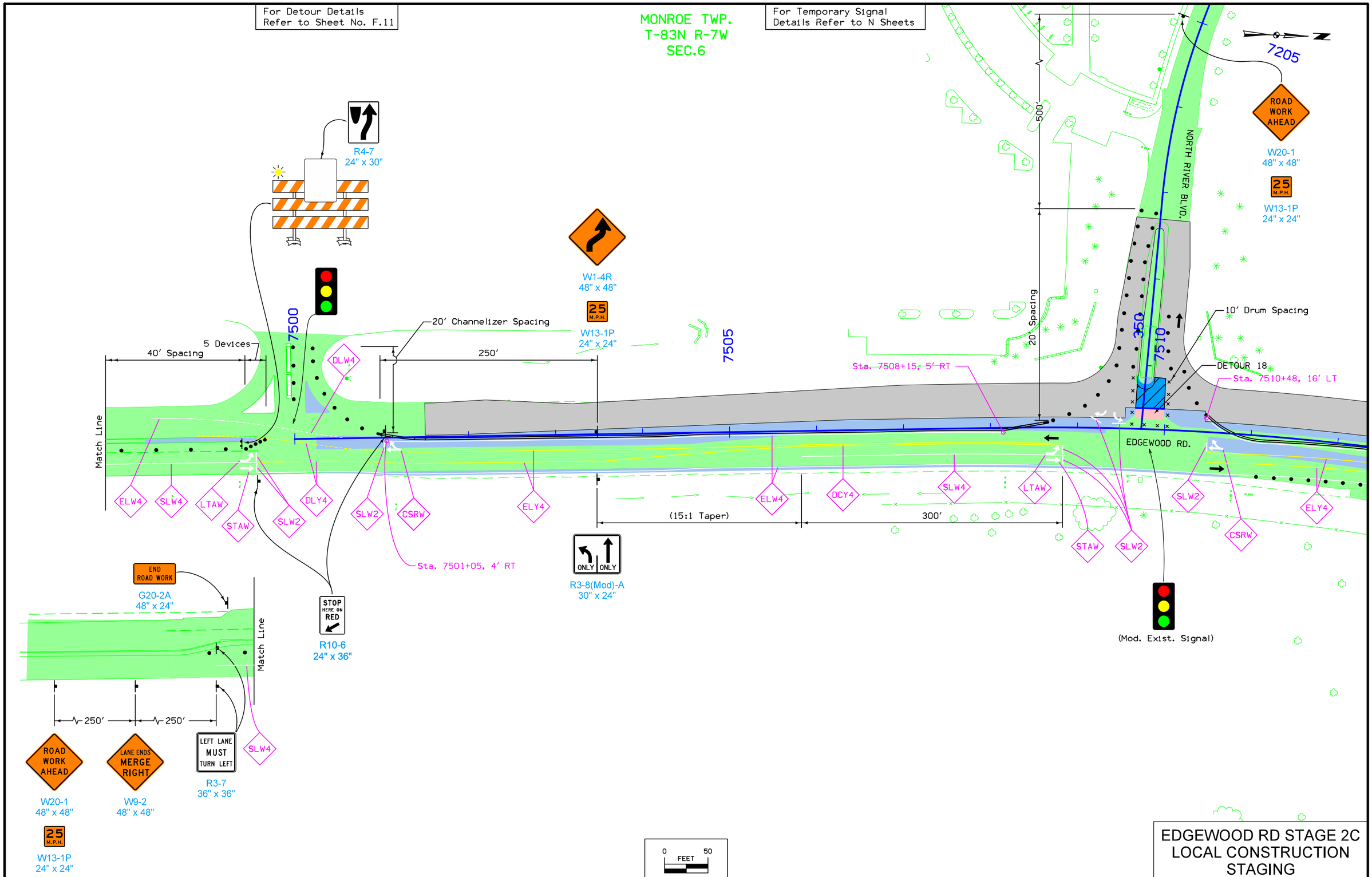
For Detour Details
Refer to Sheet No. F.11

MONROE TWP.
T-83N R-7W
SEC.6

For Temporary Signal
Details Refer to N Sheets



EDGEWOOD RD STAGE 2C
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.36

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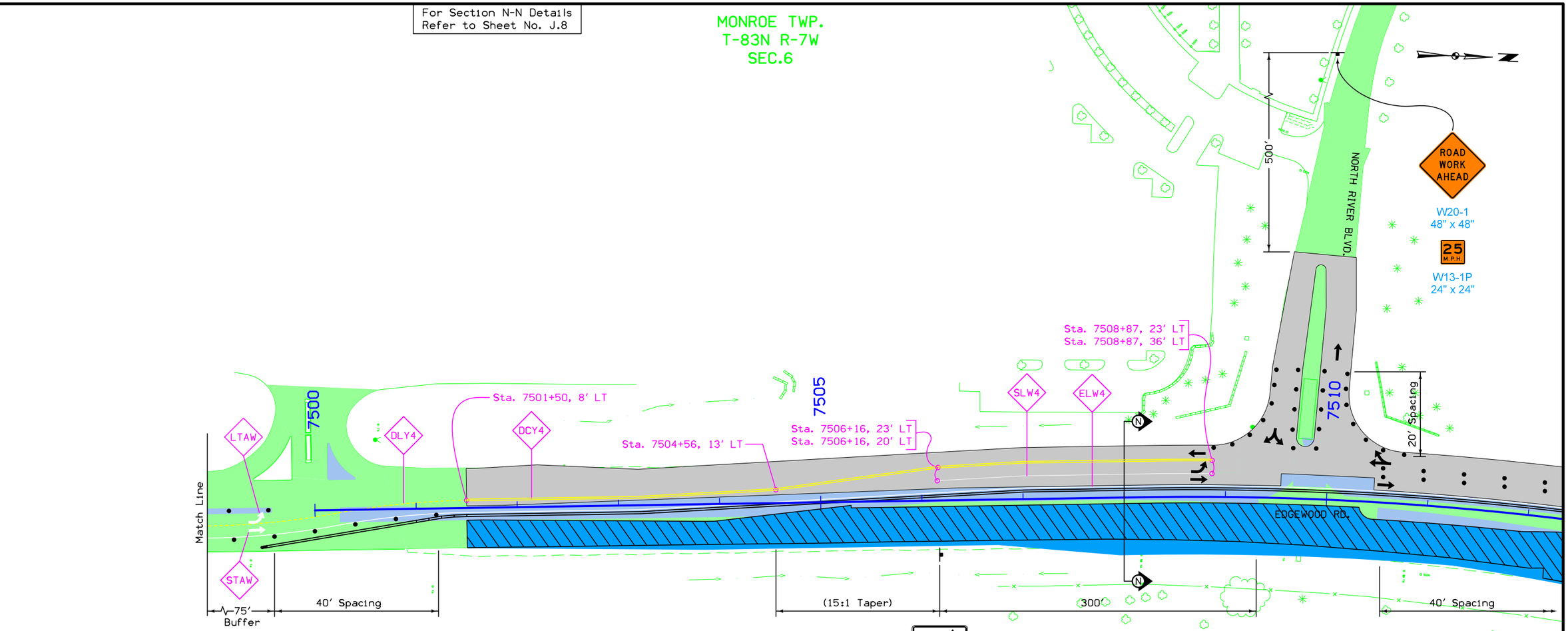
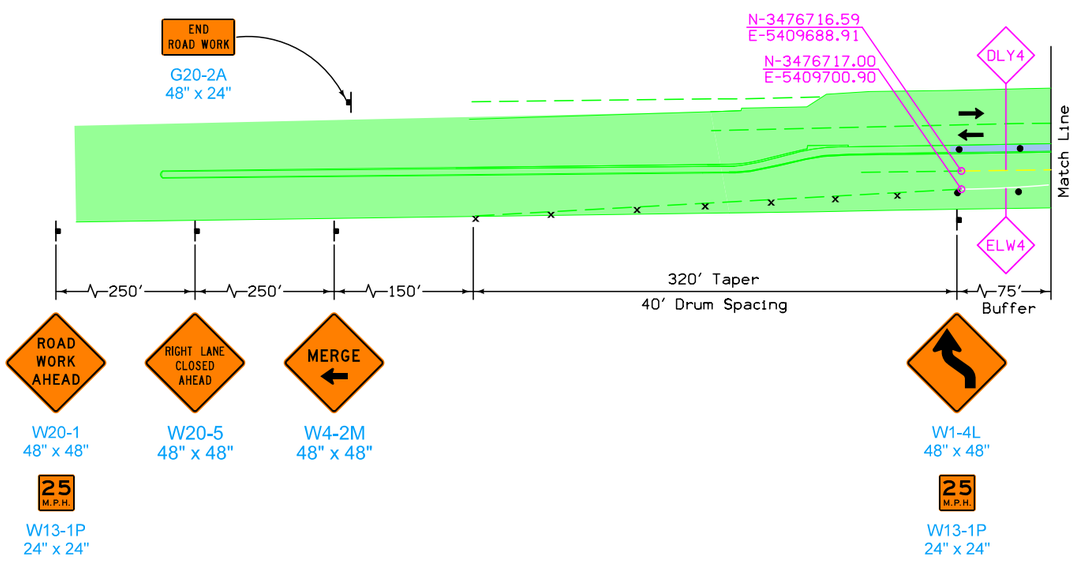
For Section N-N Details
Refer to Sheet No. J.8

MONROE TWP.
T-83N R-7W
SEC.6





0 FEET 50

EDGEWOOD RD STAGE 3A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.37

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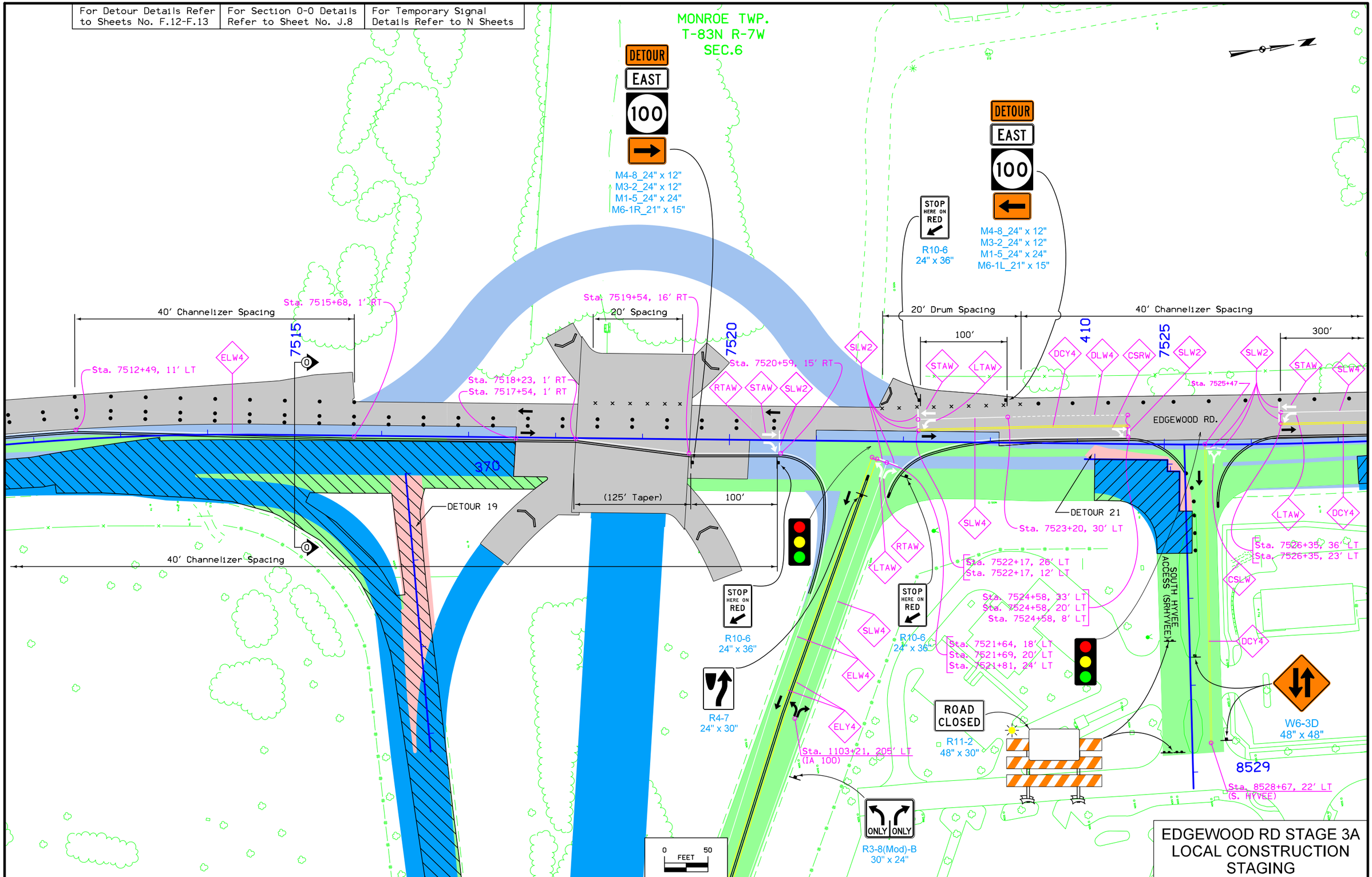
For Detour Details Refer to Sheets No. F.12-F.13	For Section O-O Details Refer to Sheet No. J.8	For Temporary Signal Details Refer to N Sheets



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.38

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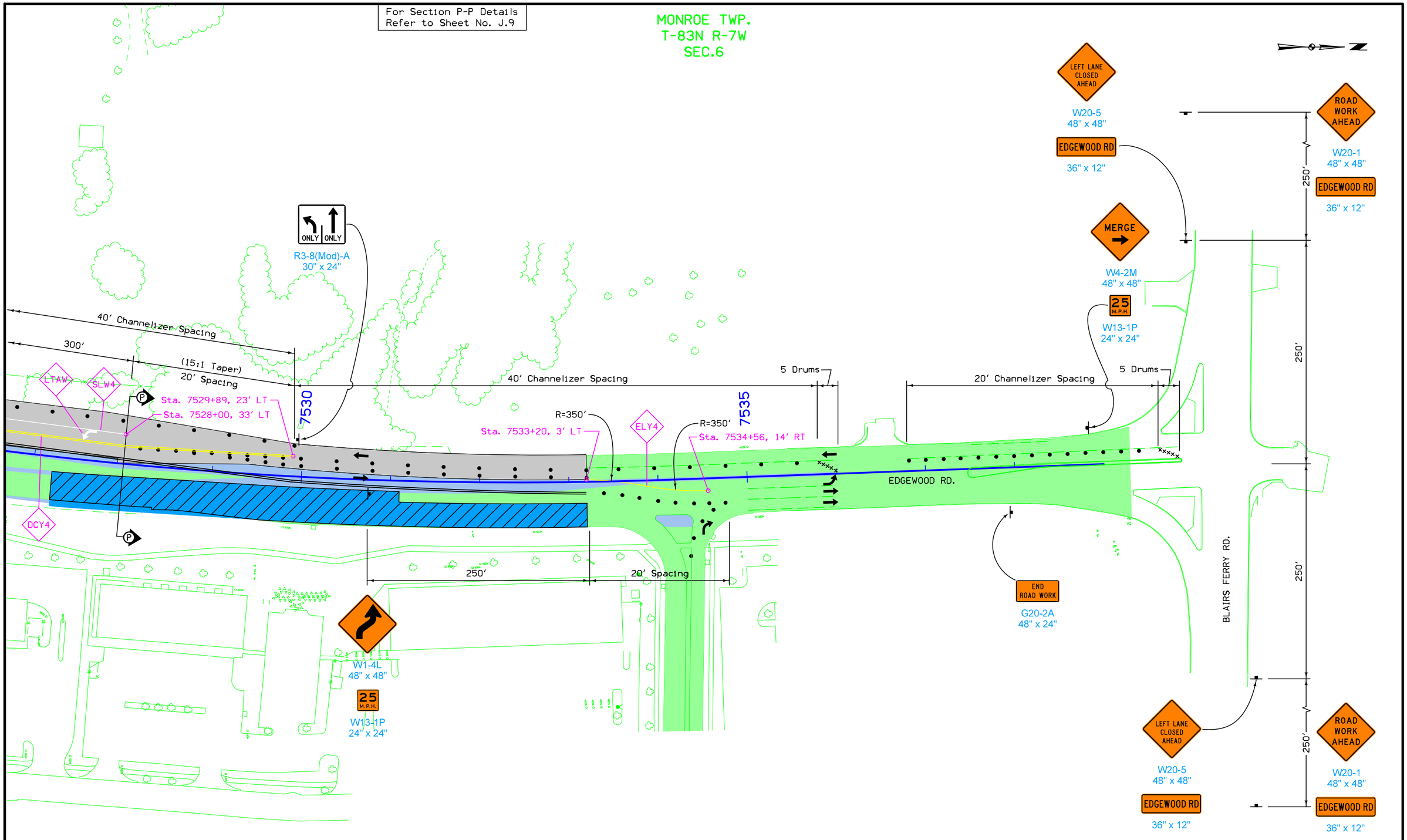
For Section P-P Details
Refer to Sheet No. J.9

MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD RD STAGE 3A
LOCAL CONSTRUCTION
STAGING

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.39

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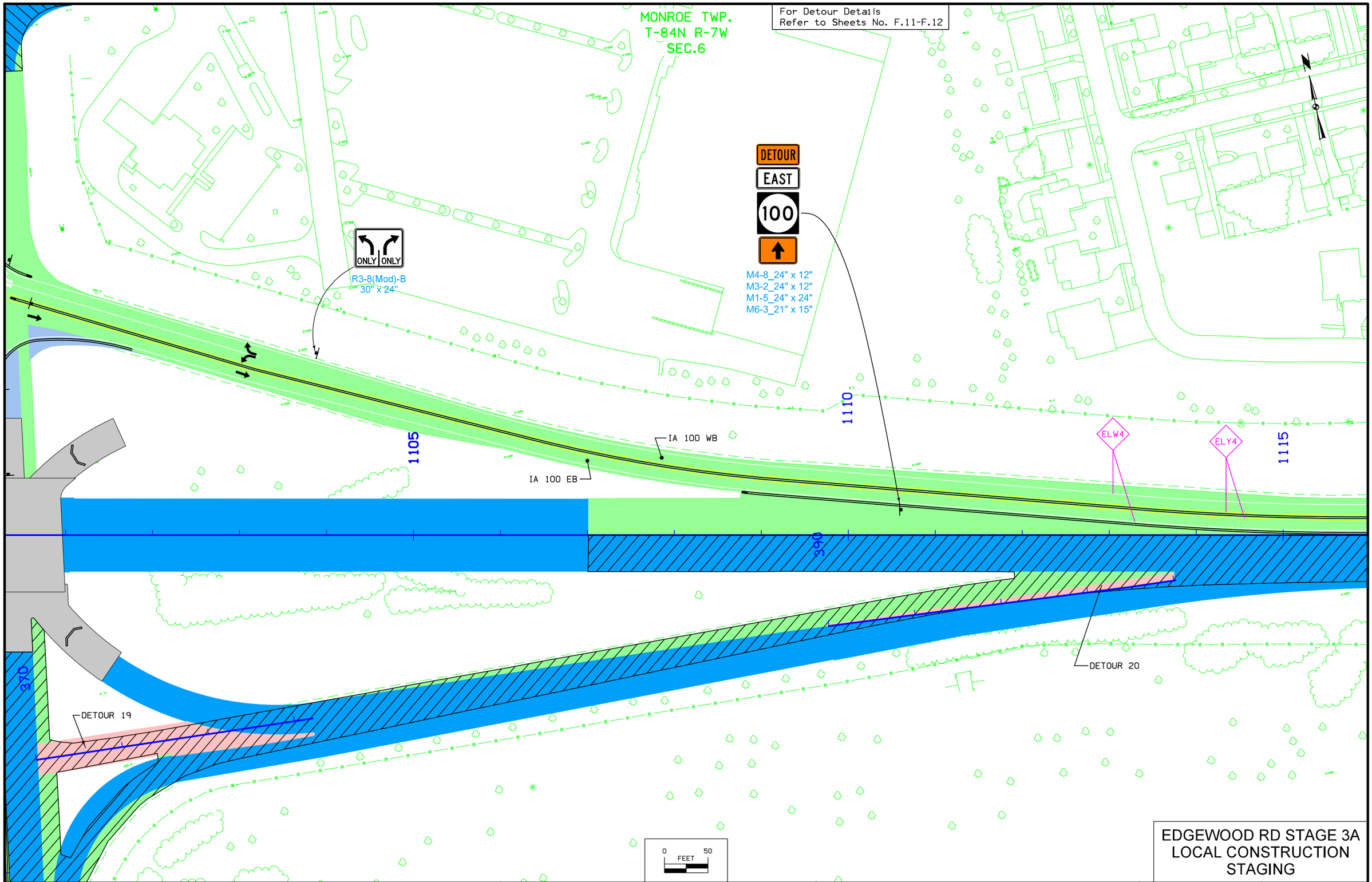

EDGEWOOD RD STAGE 3A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.40

11:35:55 AM 2014\01\03 untitled c:\pw_workdir\ch2mhill_tbg\aduong1\d0179917\57100079J02.sht

For Section Q-Q Details
Refer to Sheet No. J.9

MONROE TWP.
T-84N R-7W
SEC.6

DETOUR
EAST
100

M4-8_24" x 12"
M3-2_24" x 12"
M1-5_24" x 24"
M6-3_21" x 15"

W1-4R
48" x 48"

45 M.P.H.
W13-1P
24" x 24"

ELW4

ELY4

1120

1125

1130

500'

600' Buffer

Sta. 1130+18, 33' LT
Sta. 1130+18, 21' LT
(IA 100)

40' Channelizer Spacing

IA 100 WB
IA 100 EB

Q

Q

0 FEET 50

EDGEWOOD RD STAGE 3A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.41

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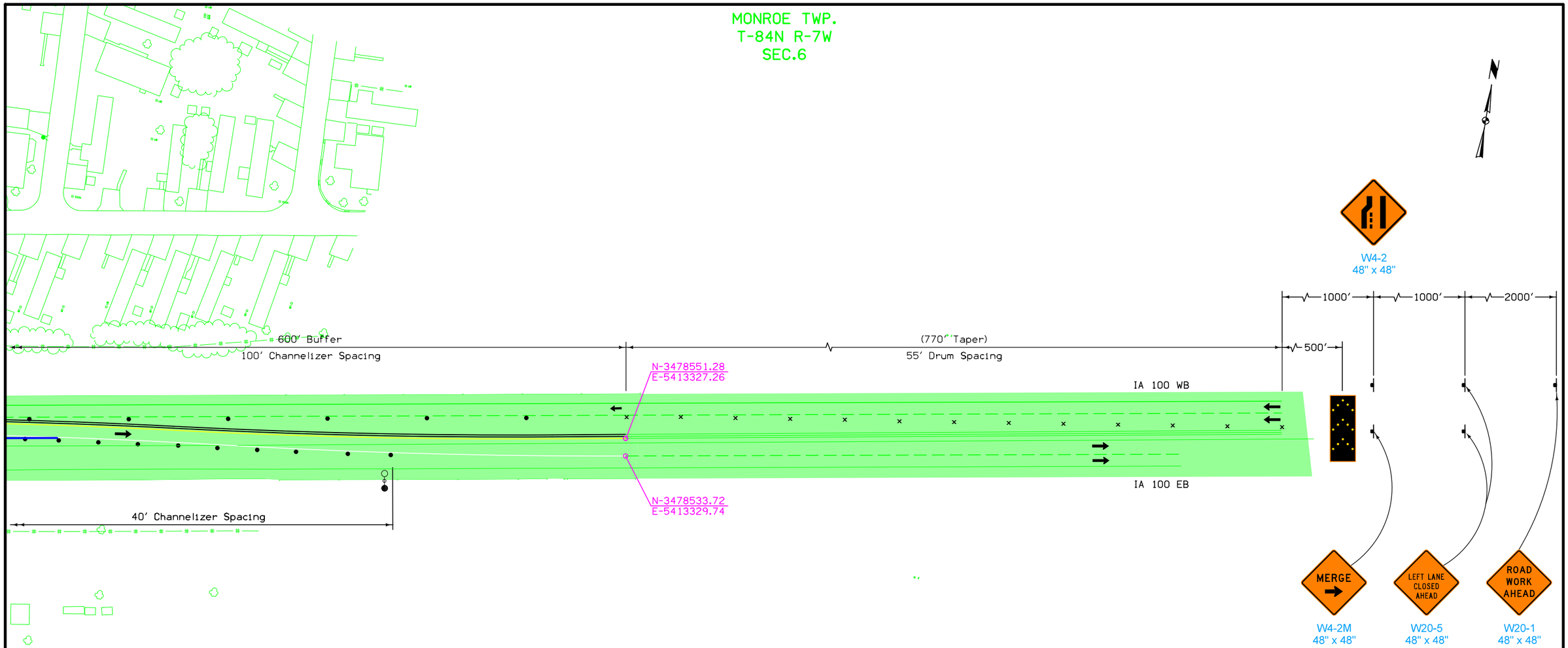
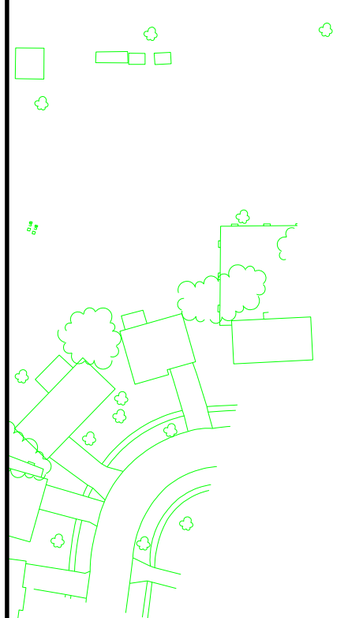
MONROE TWP.
T-84N R-7W
SEC.6





0 FEET 50

EDGEWOOD RD STAGE 3A
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.42

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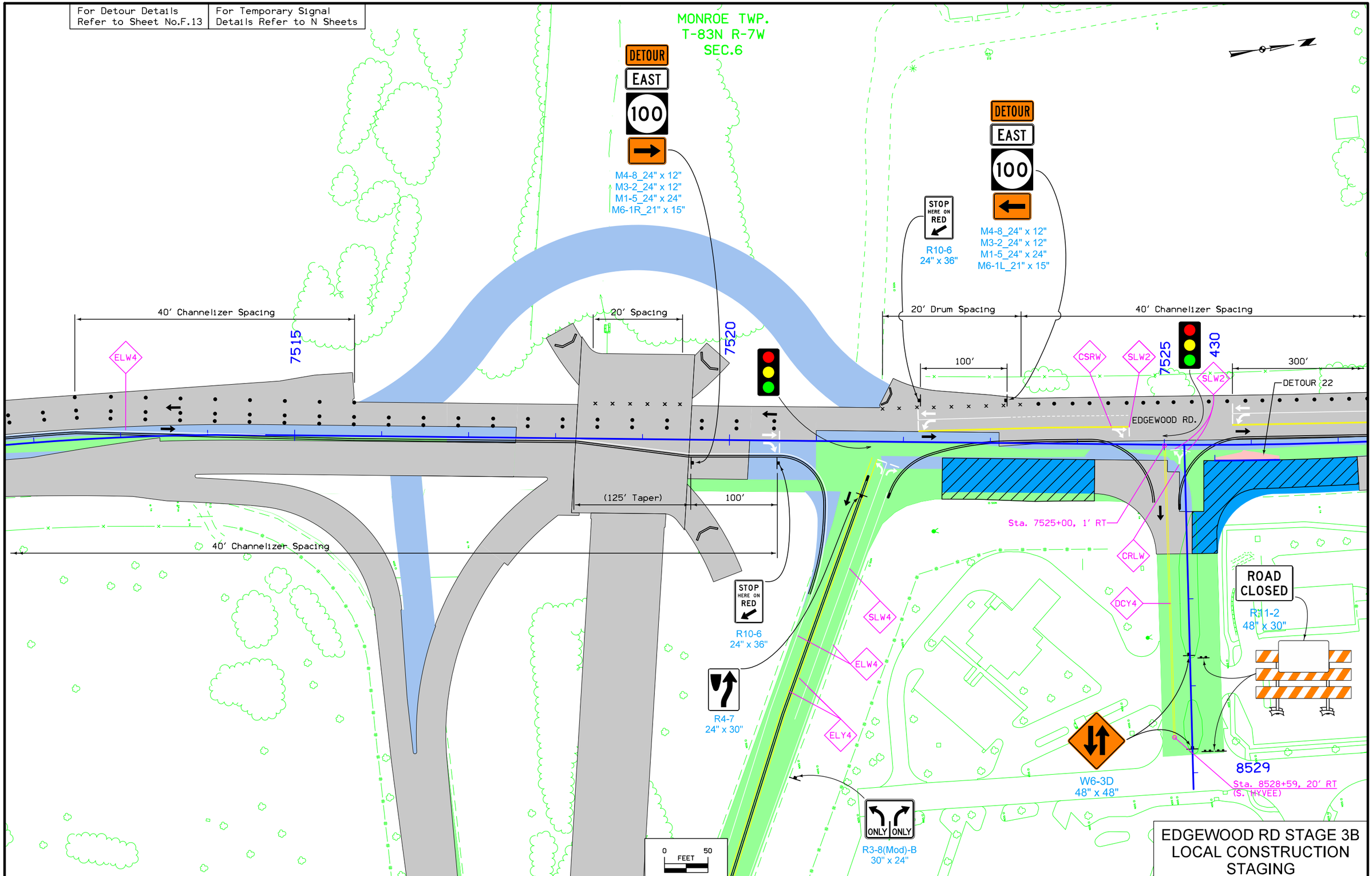
For Detour Details Refer to Sheet No.F.13	For Temporary Signal Details Refer to N Sheets



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.43

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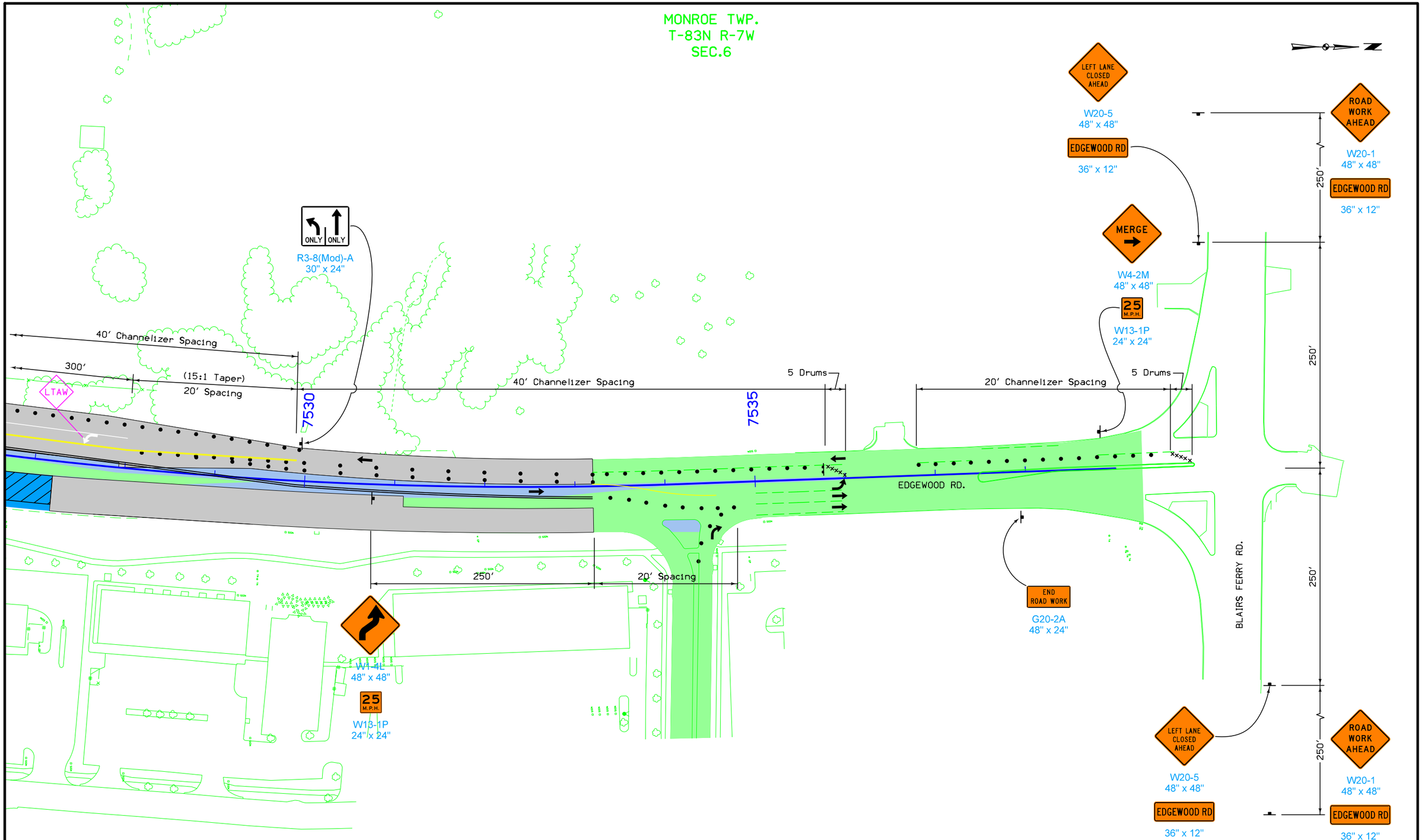
MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD RD STAGE 3B
LOCAL CONSTRUCTION
STAGING

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.44	

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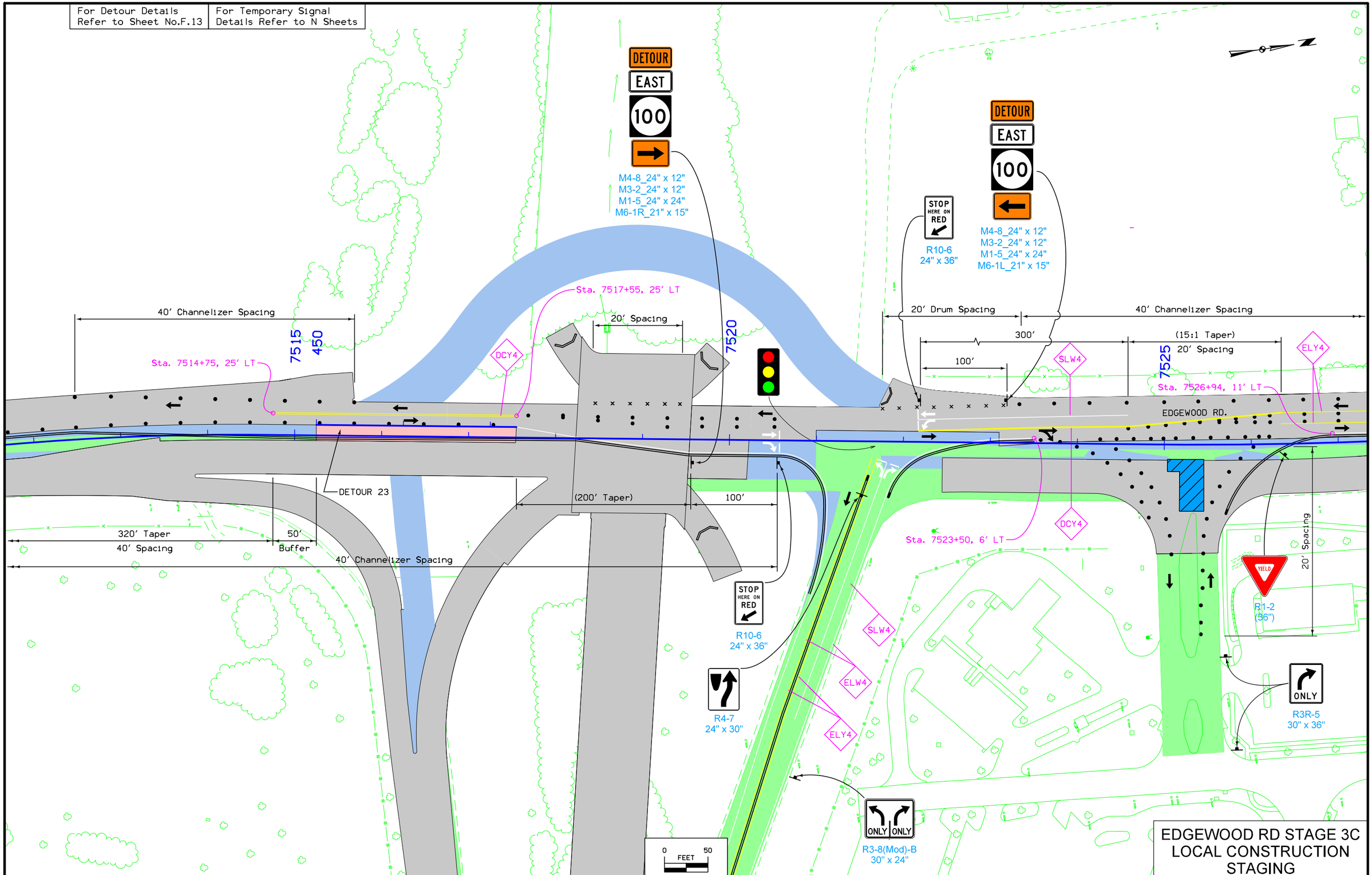
For Detour Details Refer to Sheet No.F.13	For Temporary Signal Details Refer to N Sheets



EDGEWOOD RD STAGE 3C
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.45

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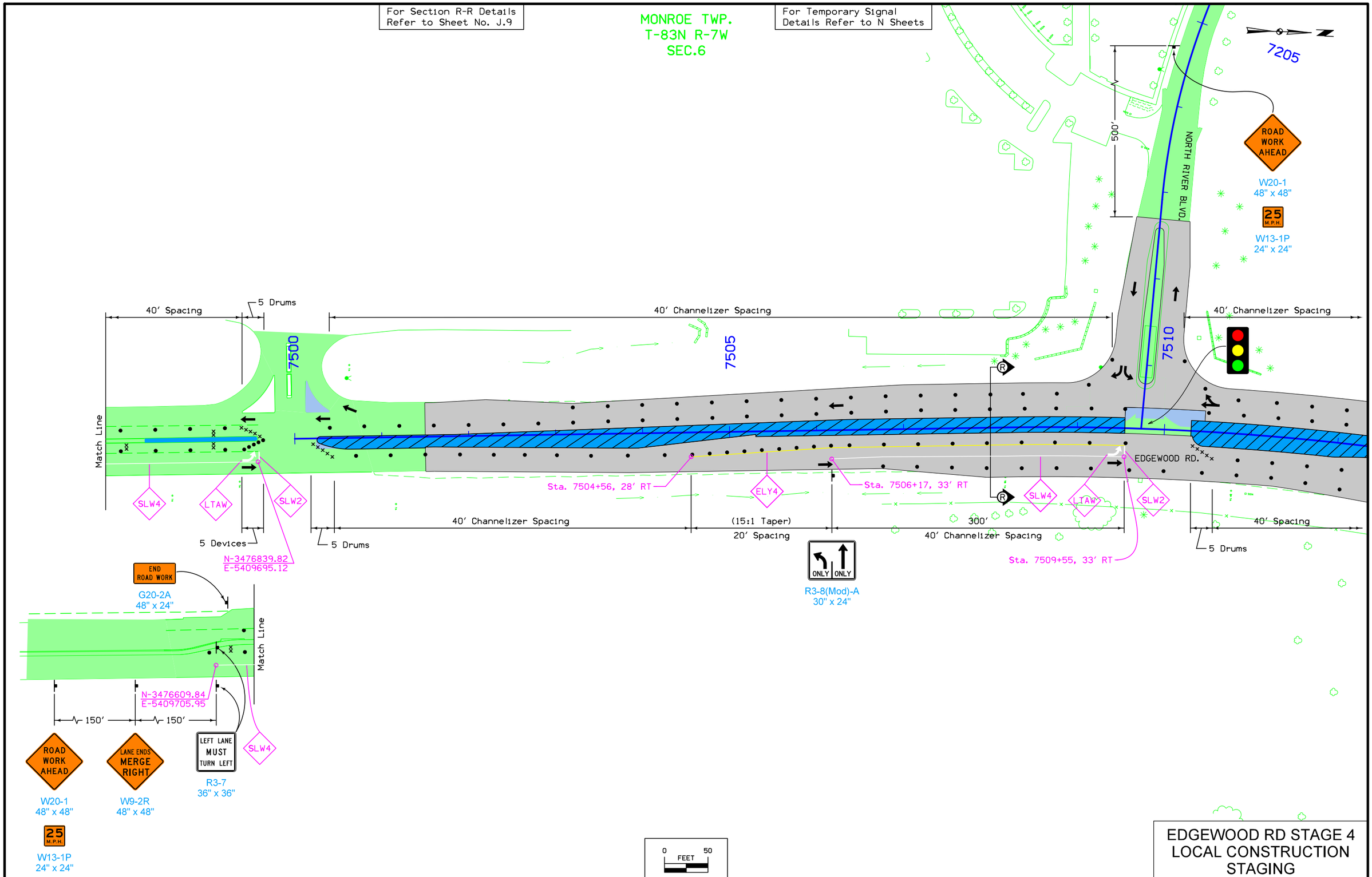
For Section R-R Details
Refer to Sheet No. J.9

MONROE TWP.
T-83N R-7W
SEC.6

For Temporary Signal
Details Refer to N Sheets



EDGEWOOD RD STAGE 4
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.46

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For Section S-S Details Refer to Sheet No. J.10

For Temporary Signal Details Refer to N Sheets

MONROE TWP.
T-83N R-7W
SEC.6

W12-1
30" x 30"

R4-7
24" x 30"

STOP HERE ON RED
R10-6
24" x 36"

DETOUR
EAST
100
M4-8_24" x 12"
M3-2_24" x 12"
M1-5_24" x 24"
M6-1L_21" x 15"

R4-7
24" x 30"

40' Channelizer Spacing

300'
20' Channelizer Spacing
20' Spacing

(15:1 Taper)
20' Spacing

20' Drum Spacing

40' Channelizer Spacing

7515

7520

7525

Sta. 7516+02, 33' RT

Sta. 7513+00, 40' RT

Sta. 7516+69, 24' LT

Sta. 7519+80, 24' LT

Sta. 7516+46, 60' RT

Sta. 7519+10, 11' RT

STAW

SLW2

SLW4

LTAW

ELW4

EDGEWOOD RD.

100'

40' Channelizer Spacing

125' Lane Shift
20' Spacing

180' Lane Shift
20' Spacing

125' Lane Shift
20' Spacing

20' Channelizer Spacing

40' Spacing

EAST
100
M3-2_24" x 12"
M1-5_24" x 24"
M6-2R_21" x 15"

W1-4L
48" x 48"

25 M.P.H.
W13-1P
24" x 24"

Sta. 7516+28, 66' RT
Sta. 7516+34, 65' RT

STOP HERE ON RED
R10-6
24" x 36"

ONLY
R10-6_24" x 36"
R3-5L_30" x 36"

W12-1
30" x 30"

YIELD
R1-2
36" x 36"

DETOUR
NORTH
EDGEWOOD RD
M4-8_24" x 12"
M3-1_24" x 12"
(Mod)_36" x 12"
M6-2R_21" x 15"

W1-4R
48" x 48"

25 M.P.H.
W13-1P
24" x 24"

YIELD
R1-2
(36")

ONLY
R3-5R
30" x 36"

0 FEET 50

EDGEWOOD RD STAGE 4
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.47

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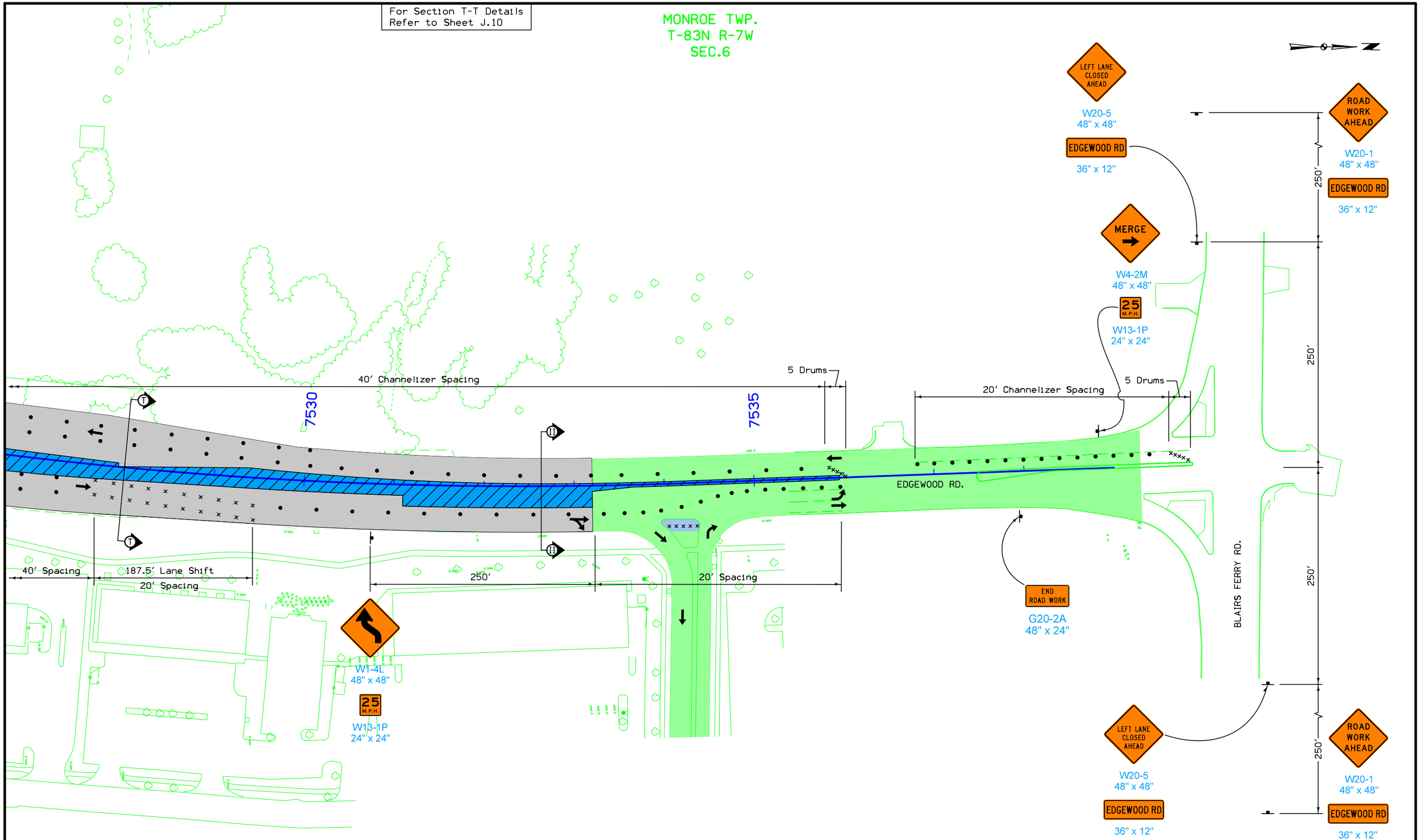
For Section T-T Details
Refer to Sheet J.10

MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD RD STAGE 4
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.48

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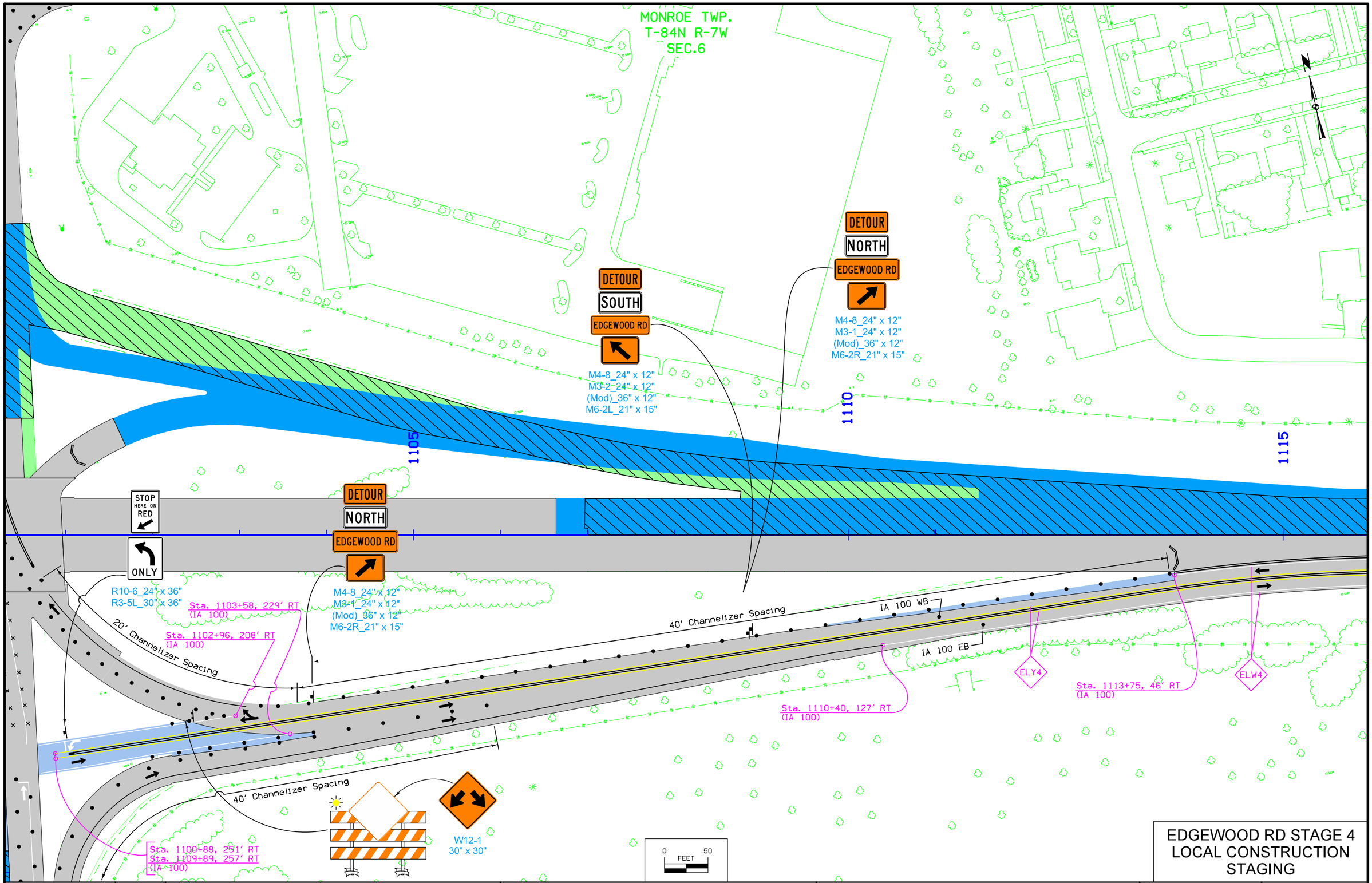

EDGEWOOD RD STAGE 4
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.49	

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For Section U-U Details
Refer to Sheet J.10

MONROE TWP.
T-84N R-7W
SEC.6

1120

1125

1130

85'

U

U

IA 100 EB

IA 100 WB

ELY4

ELW4

0 FEET 50

EDGEWOOD RD STAGE 4
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.50	

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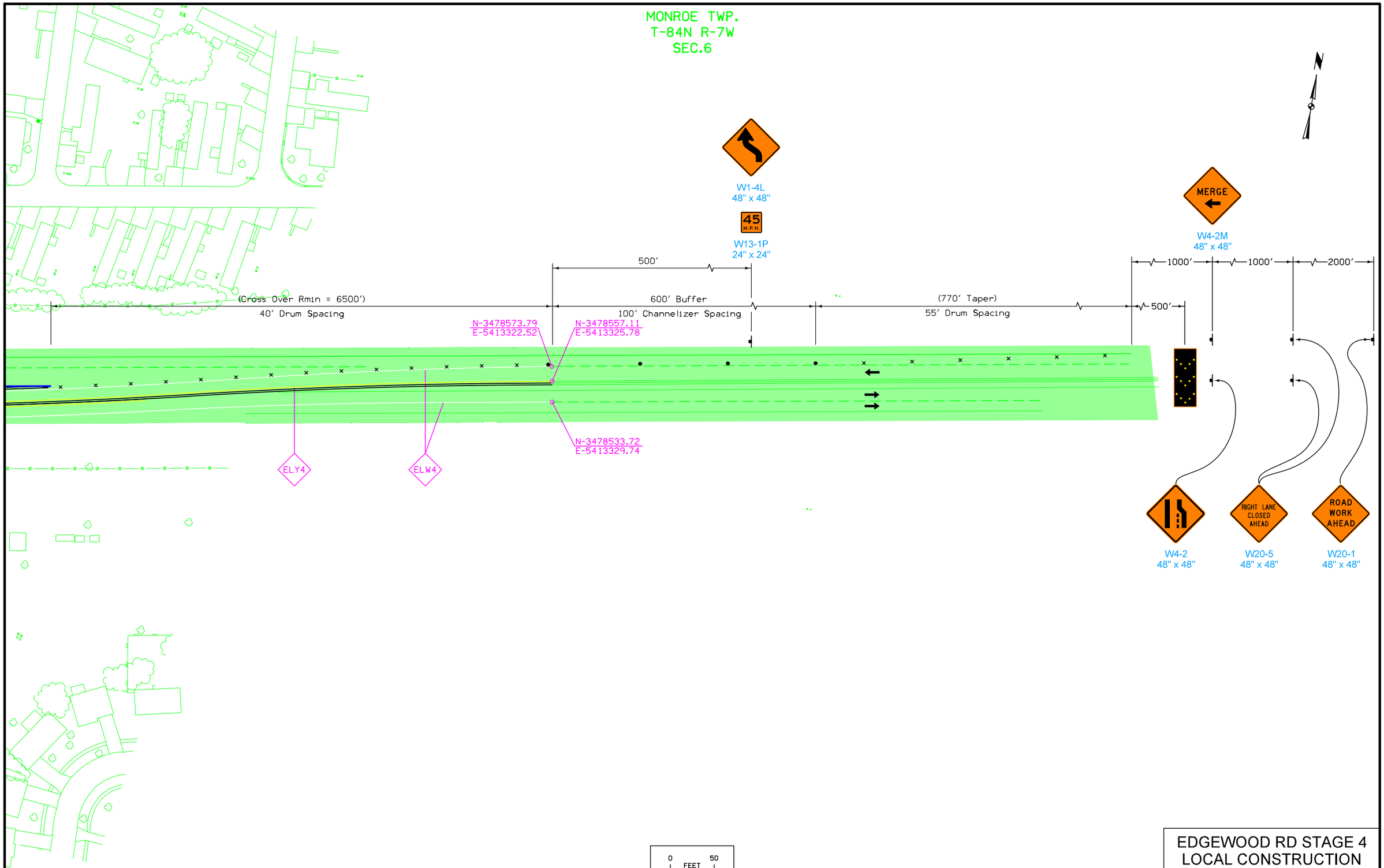
MONROE TWP.
T-84N R-7W
SEC.6



EDGEWOOD RD STAGE 4
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.51

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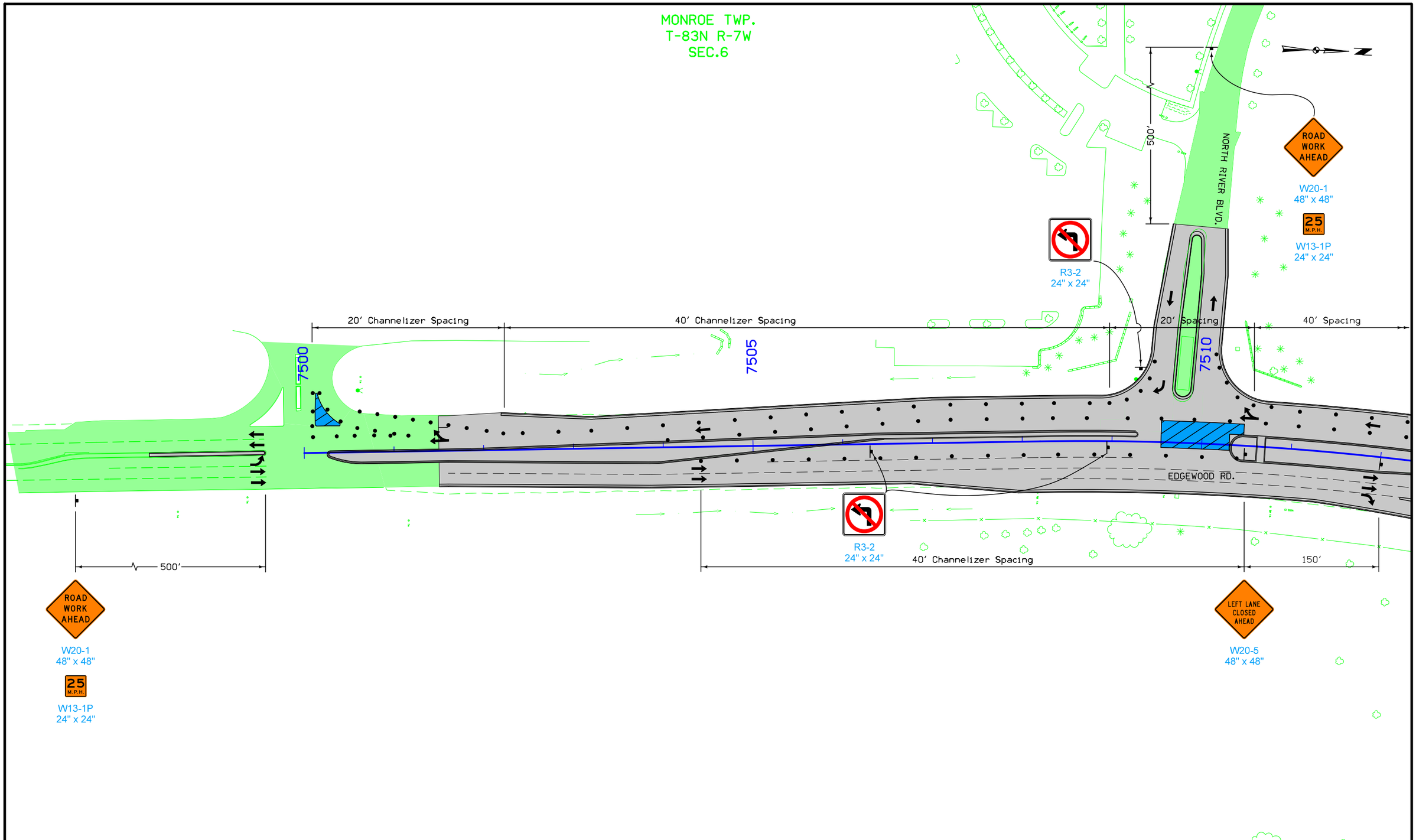
MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD RD STAGE 5
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.52

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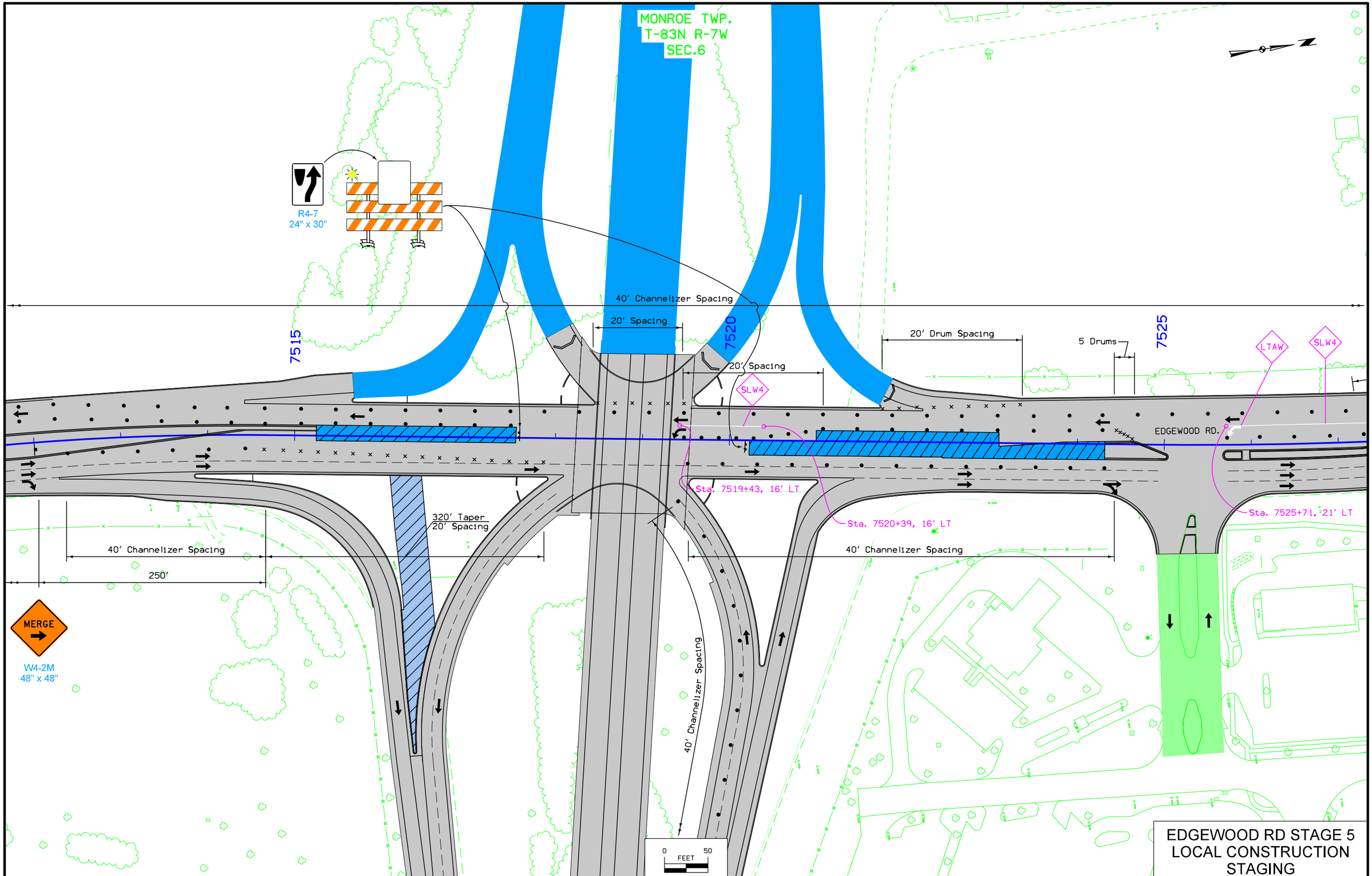


EDGEWOOD RD STAGE 5
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.53

11:36:31 AM 2014\01\03 untitled c:\pw_workdir\ch2mhill_tbg\aduong1\d0179917\57100079J02.sht

MONROE TWP.
T-83N R-7W
SEC.6

LEFT LANE MUST TURN LEFT
R3-7
36" x 36"

SLW4

(15:1 Taper)
20' Spacing

40' Channelizer Spacing

7530

320' Taper
20' Drum Spacing

7535

125'

125'

MERGE
W4-2M
48" x 48"

RIGHT LANE CLOSED AHEAD
W20-5
48" x 48"

25 M.P.H.
W13-1P
24" x 24"

ROAD WORK AHEAD
W20-1
48" x 48"

EDGEWOOD RD
36" x 12"

250'

250'

EDGEWOOD RD.

BLAIRS FERRY RD.

Sta. 7527+35, 22' LT

END ROAD WORK
G20-2A
48" x 24"

ROAD WORK AHEAD
W20-1
48" x 48"

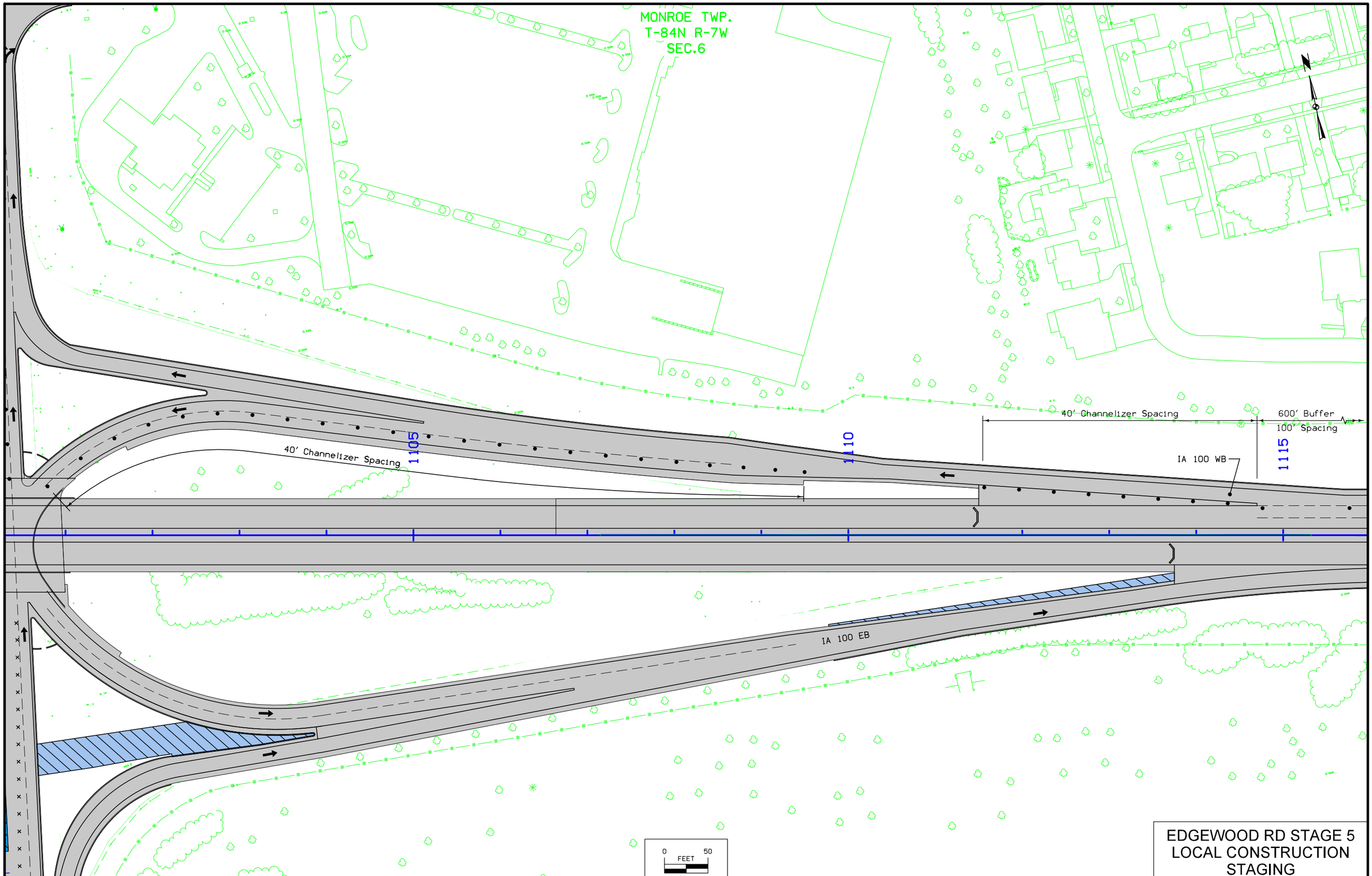
EDGEWOOD RD
36" x 12"

0 50
FEET

EDGEWOOD RD STAGE 5
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.54

1:17:35 PM 2014\01\03 untitled c:\pw_workdir\ch2mhill_tbg\aduong1\d0179917\57100079J02.sht



EDGEWOOD RD STAGE 5
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER J.55	

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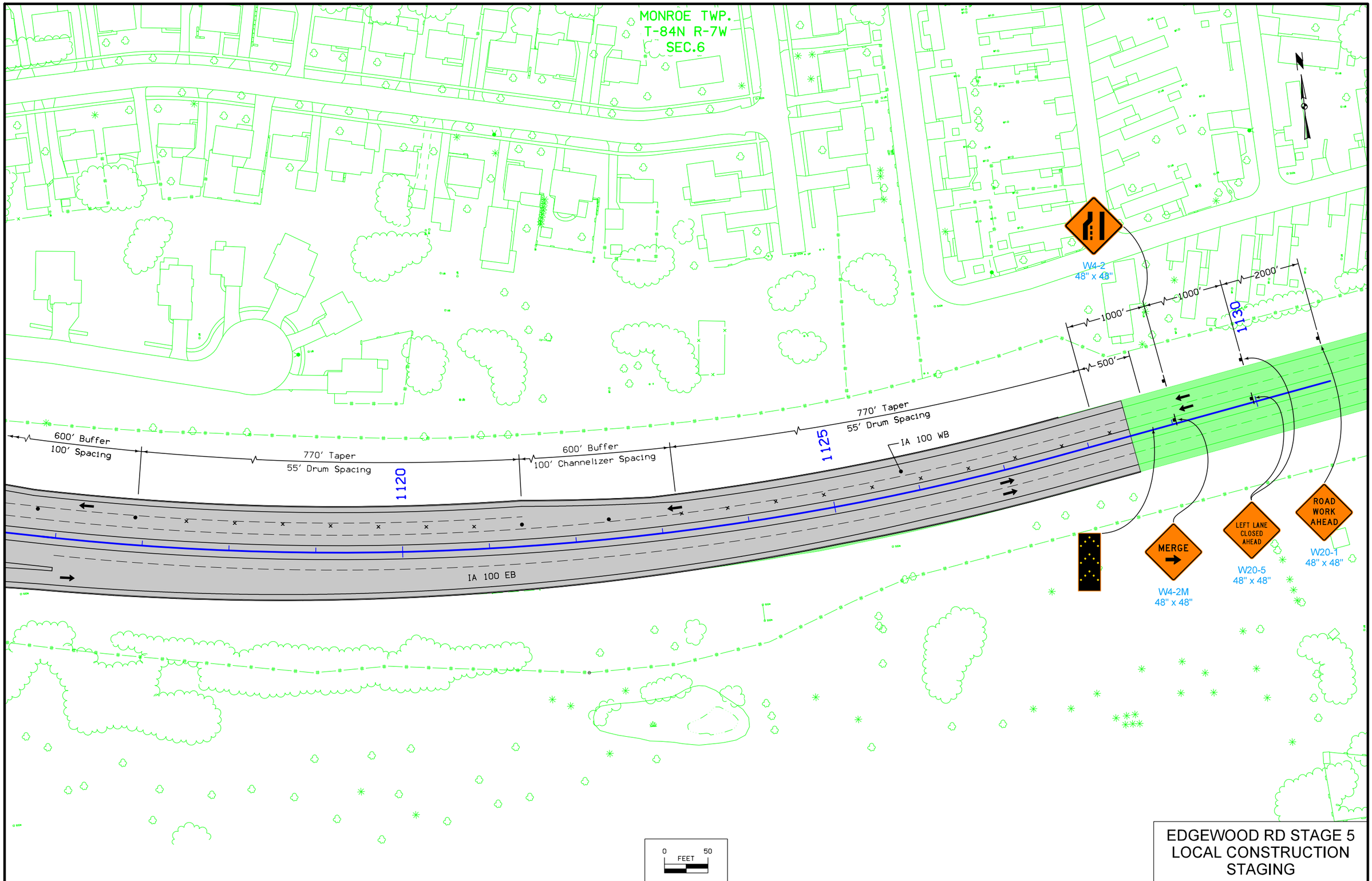
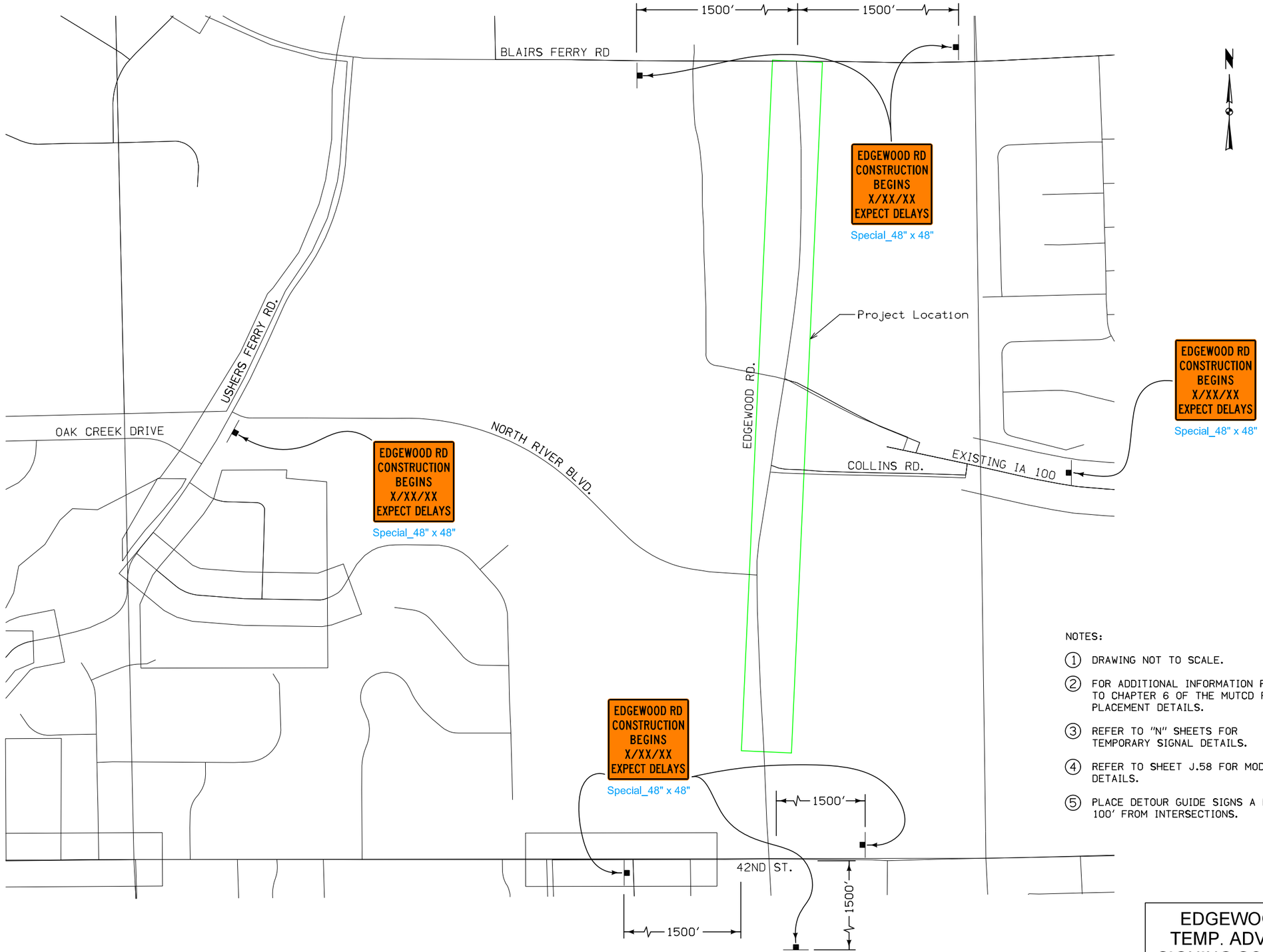


EDGEWOOD RD STAGE 5
LOCAL CONSTRUCTION
STAGING

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.56

11:36:39 AM 2014\01\03 untitled c:\pw_workdir\ch2mhill_tbg\aduongl\d0179917\57100079J02.sht



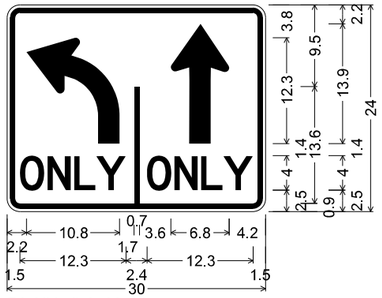
NOTES:

1. DRAWING NOT TO SCALE.
2. FOR ADDITIONAL INFORMATION REFER TO CHAPTER 6 OF THE MUTCD FOR PLACEMENT DETAILS.
3. REFER TO "N" SHEETS FOR TEMPORARY SIGNAL DETAILS.
4. REFER TO SHEET J.58 FOR MODIFIED SIGN DETAILS.
5. PLACE DETOUR GUIDE SIGNS A MINIMUM OF 100' FROM INTERSECTIONS.

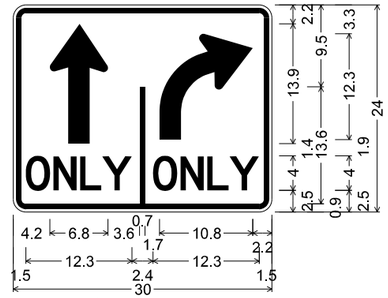
EDGEWOOD RD TEMP. ADVANCED SIGNING SCHEMATIC

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER J.57

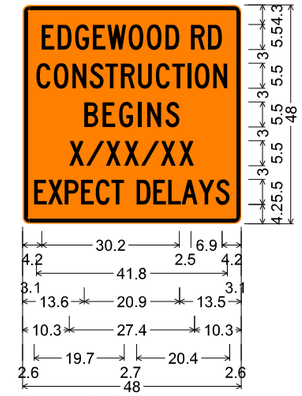
11:48:51 AM 2014\01\03 untitled c:\pw_workdir\ch2mhill_tbg\aduong1\d0179917\57100079J02.sht



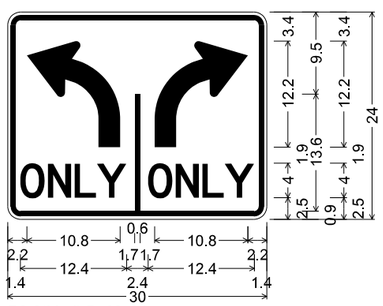
R3-8(Mod)-A_30x24;
1.5" Radius, 0.6" Border, 0.3" Indent, Black on White;
R3-8a left turn arrow ir=5.813, s=2.5;
[ONLY] D 2K specified length;
R3-8a right turn arrow ir=5.813, s=2.5;
[ONLY] D 2K specified length;



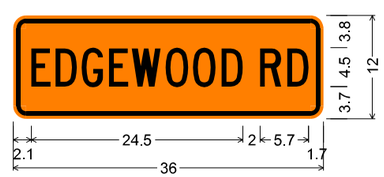
R3-8(Mod)-C_30x24;
1.5" Radius, 0.6" Border, 0.3" Indent, Black on White;
R3-8a right turn arrow ir=5.813, s=2.5;
[ONLY] D 2K specified length;
R3-8a left turn arrow ir=5.813, s=2.5;
[ONLY] D 2K specified length;



Special_48x48;
1.5" Radius, 0.8" Border, 0.3" Indent, Black on Orange;
[EDGEWOOD] C 2K 75% spacing;
[RD] C 2K 75% spacing;
[CONSTRUCTION] C 2K 75% spacing;
[BEGINS] C 2K;
[X/XX/XX] C 2K;



R3-8(Mod)-B_30x24;
1.5" Radius, 0.6" Border, 0.3" Indent, Black on White;
R3-8a left turn arrow ir=5.813, s=2.5;
[ONLY] D 2K specified length;
R3-8a left turn arrow ir=5.813, s=2.5;
[ONLY] D 2K specified length;



1.5" Radius, 0.5" Border, 0.4" Indent, Black on Orange;
[EDGEWOOD] C 75% spacing;
[RD] C 75% spacing;

EDGEWOOD RD
SIGNING DETAILS

For Retaining Wall Details
Refer to Sheet No. V.3-V.5

For Sidewalk Details
Refer to S Sheets

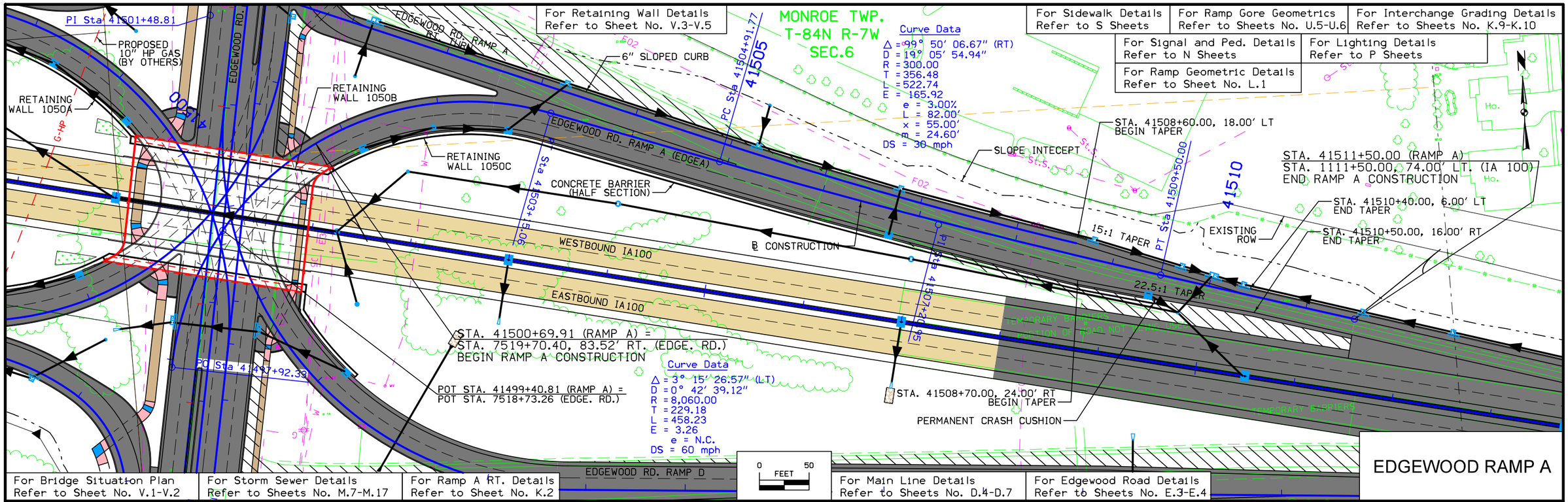
For Ramp Gore Geometrics
Refer to Sheets No. U.5-U.6

For Interchange Grading Details
Refer to Sheets No. K.9-K.10

For Signal and Ped. Details
Refer to N Sheets

For Lighting Details
Refer to P Sheets

For Ramp Geometric Details
Refer to Sheet No. L.1



For Bridge Situation Plan
Refer to Sheet No. V.1-V.2

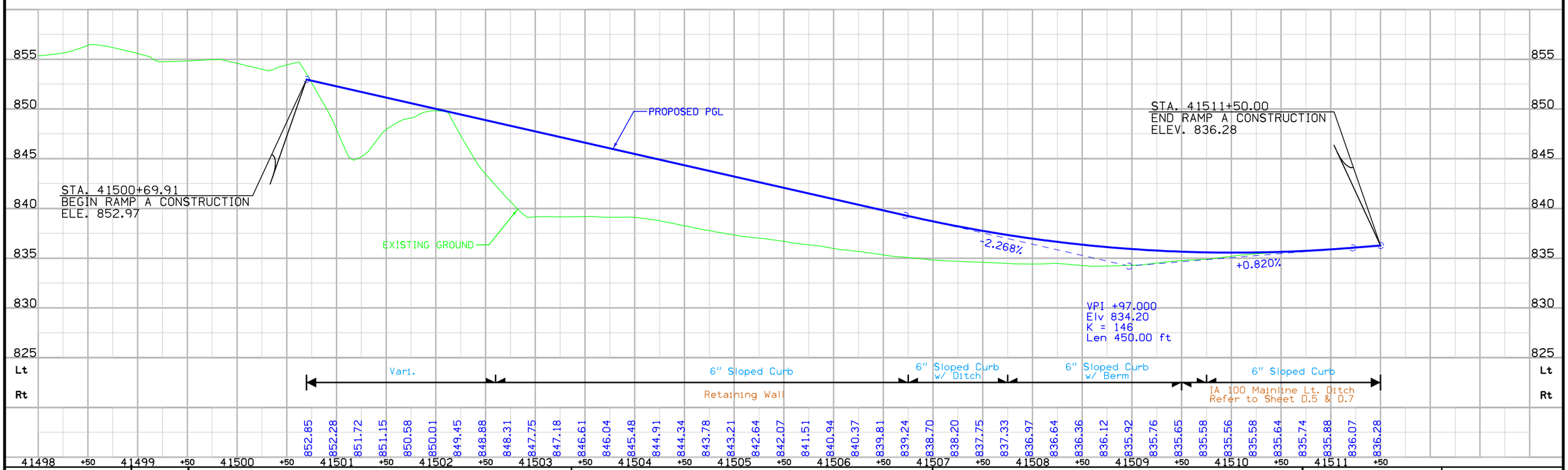
For Storm Sewer Details
Refer to Sheets No. M.7-M.17

For Ramp A RT. Details
Refer to Sheet No. K.2

For Main Line Details
Refer to Sheets No. D.4-D.7

For Edgewood Road Details
Refer to Sheets No. E.3-E.4

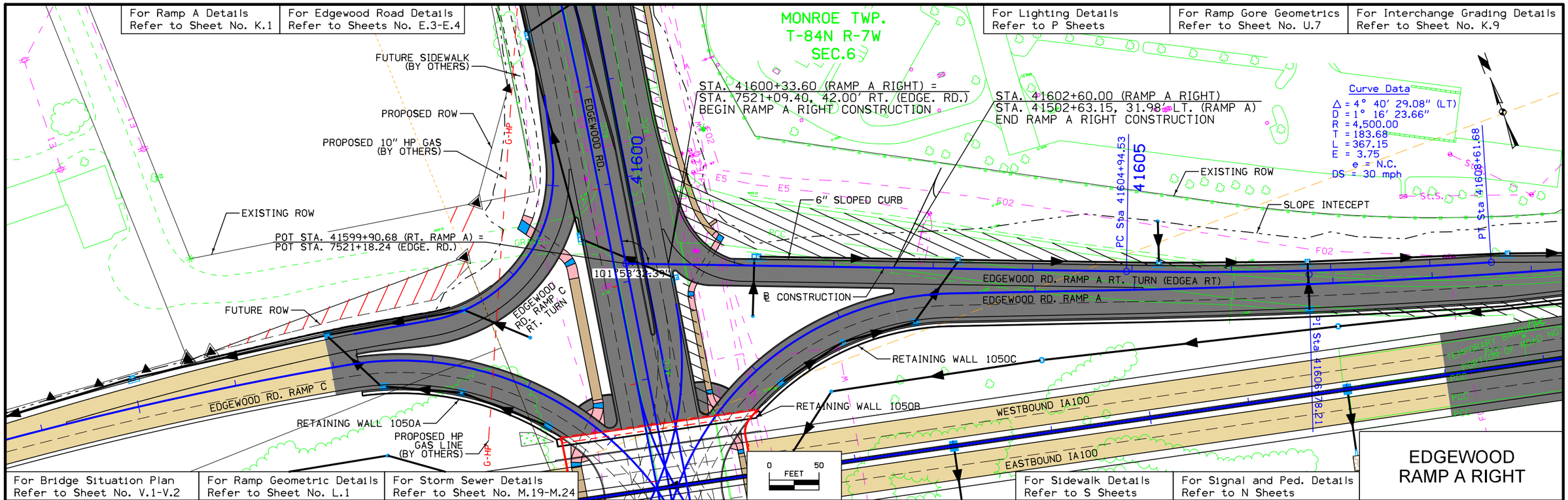
EDGEWOOD RAMP A



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER K.1

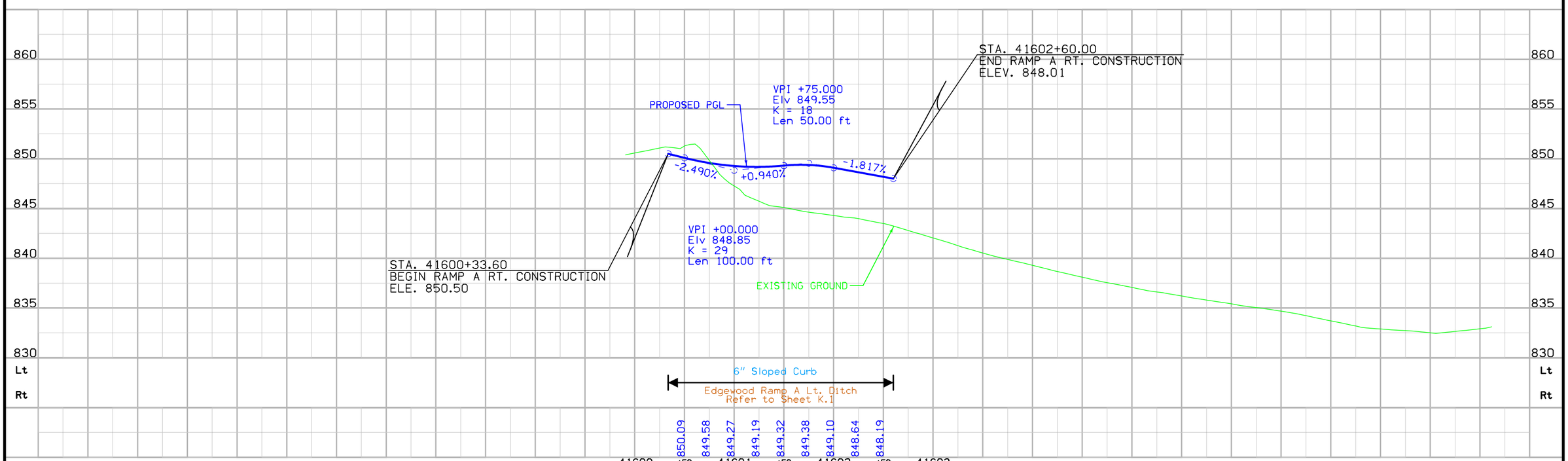
2:32:50 PM 2014\01\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0179917\57100079K01.sht

For Ramp A Details Refer to Sheet No. K.1 | For Edgewood Road Details Refer to Sheets No. E.3-E.4 | For Lighting Details Refer to P Sheets | For Ramp Gore Geometrics Refer to Sheet No. U.7 | For Interchange Grading Details Refer to Sheet No. K.9



For Bridge Situation Plan Refer to Sheet No. V.1-V.2 | For Ramp Geometric Details Refer to Sheet No. L.1 | For Storm Sewer Details Refer to Sheet No. M.19-M.24 | For Sidewalk Details Refer to S Sheets | For Signal and Ped. Details Refer to N Sheets

EDGEWOOD RAMP A RIGHT



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER K.2

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For Storm Sewer Details
Refer to Sheets No. M.6-7 & M.10-11

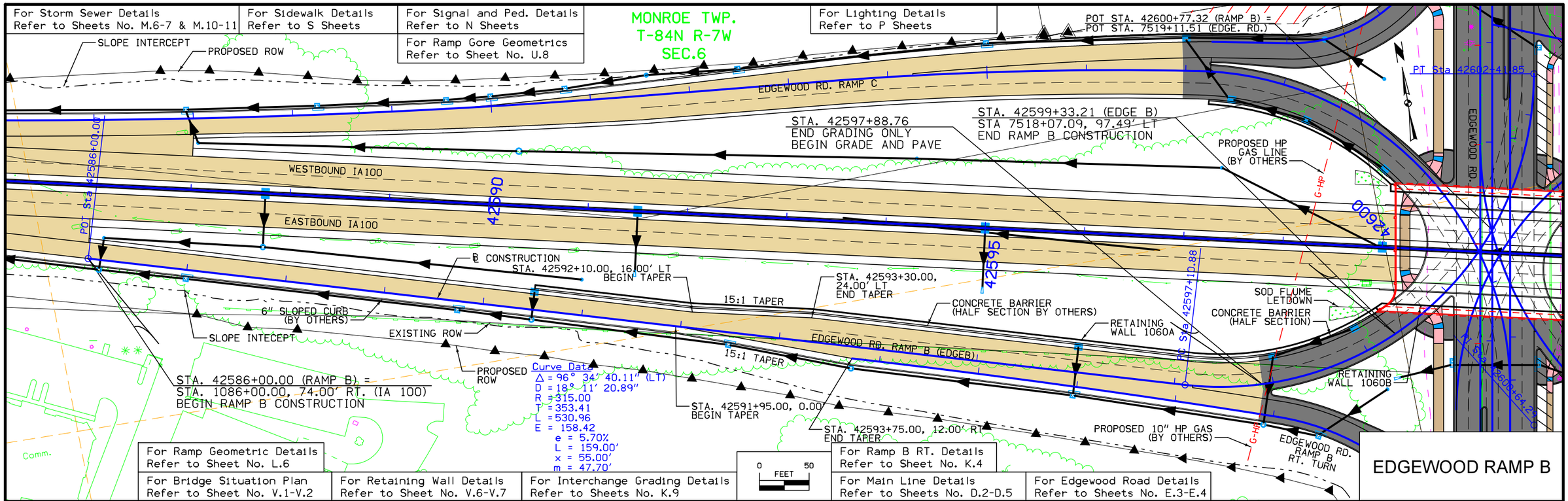
For Sidewalk Details
Refer to S Sheets

For Signal and Ped. Details
Refer to N Sheets

For Ramp Gore Geometrics
Refer to Sheet No. U.8

MONROE TWP.
T-84N R-7W
SEC.6

For Lighting Details
Refer to P Sheets



For Ramp Geometric Details
Refer to Sheet No. L.6

For Bridge Situation Plan
Refer to Sheet No. V.1-V.2

For Retaining Wall Details
Refer to Sheet No. V.6-V.7

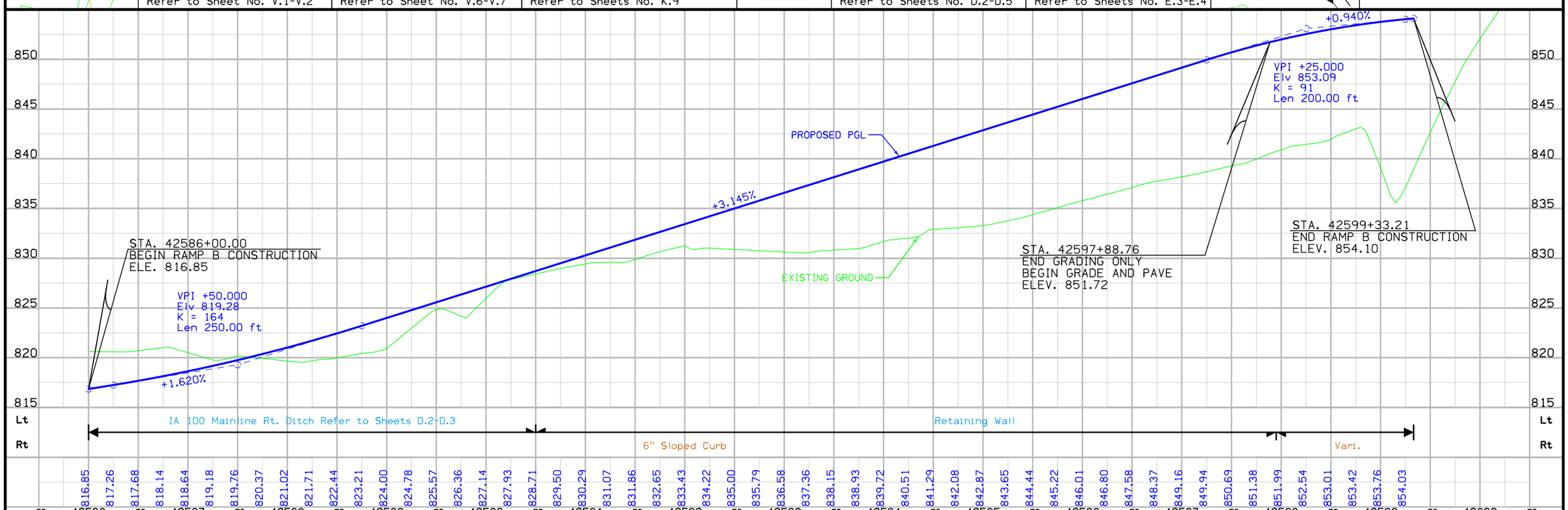
For Interchange Grading Details
Refer to Sheets No. K.9

For Ramp B RT. Details
Refer to Sheet No. K.4

For Main Line Details
Refer to Sheets No. D.2-D.5

For Edgewood Road Details
Refer to Sheets No. E.3-E.4

EDGEWOOD RAMP B



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER K.3

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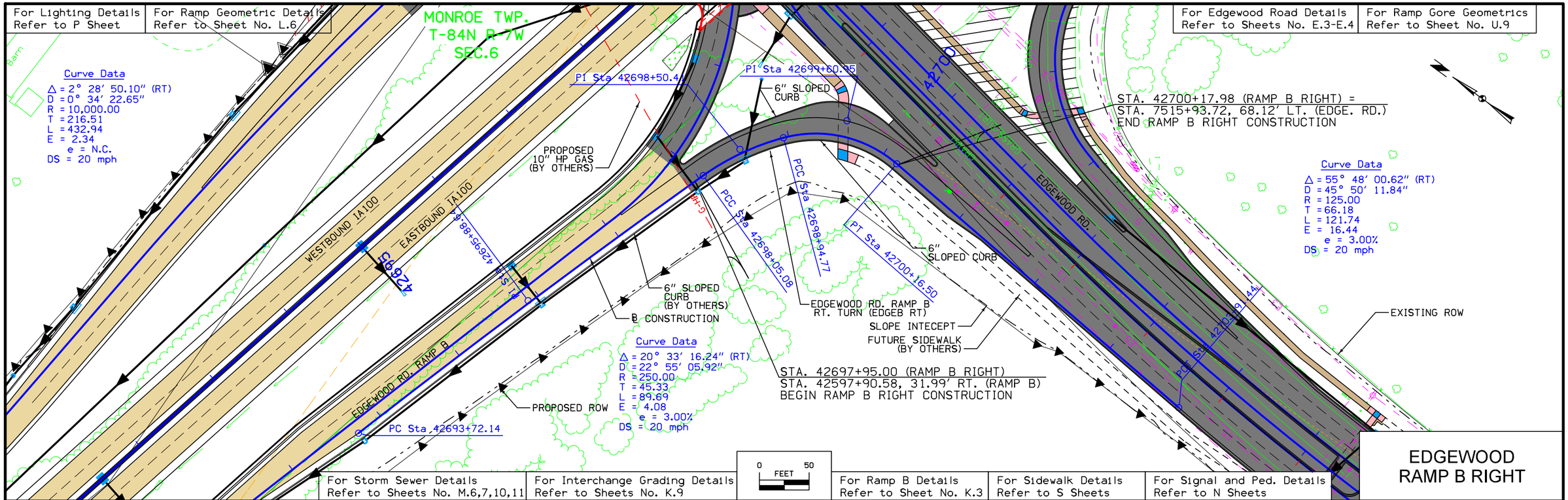
For Lighting Details
Refer to P Sheet

For Ramp Geometric Details
Refer to Sheet No. L.6

For Edgewood Road Details
Refer to Sheets No. E.3-E.4

For Ramp Gore Geometrics
Refer to Sheet No. U.9



For Storm Sewer Details
Refer to Sheets No. M.6,7,10,11

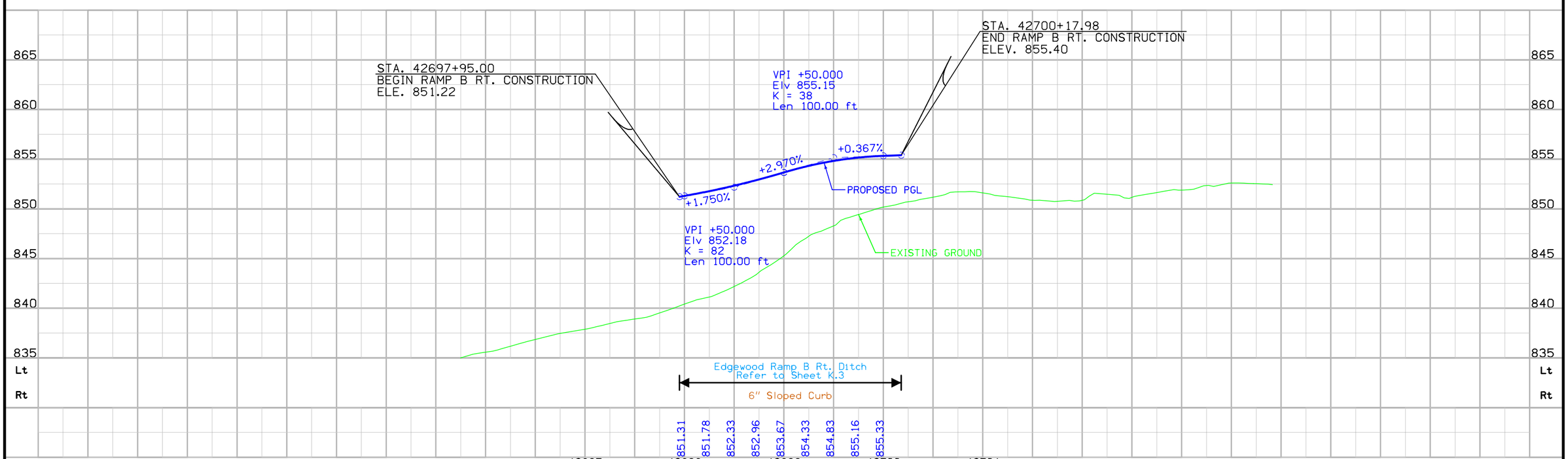
For Interchange Grading Details
Refer to Sheets No. K.9

For Ramp B Details
Refer to Sheet No. K.3

For Sidewalk Details
Refer to S Sheets

For Signal and Ped. Details
Refer to N Sheets

EDGEWOOD RAMP B RIGHT



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER K.4

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For Retaining Wall Details Refer to Sheet No. V.3, V.4 & V.8 | For Bridge Situation Plan Refer to Sheet No. V.1-V.2 | For Ramp C RT. Details Refer to Sheet No. K.6

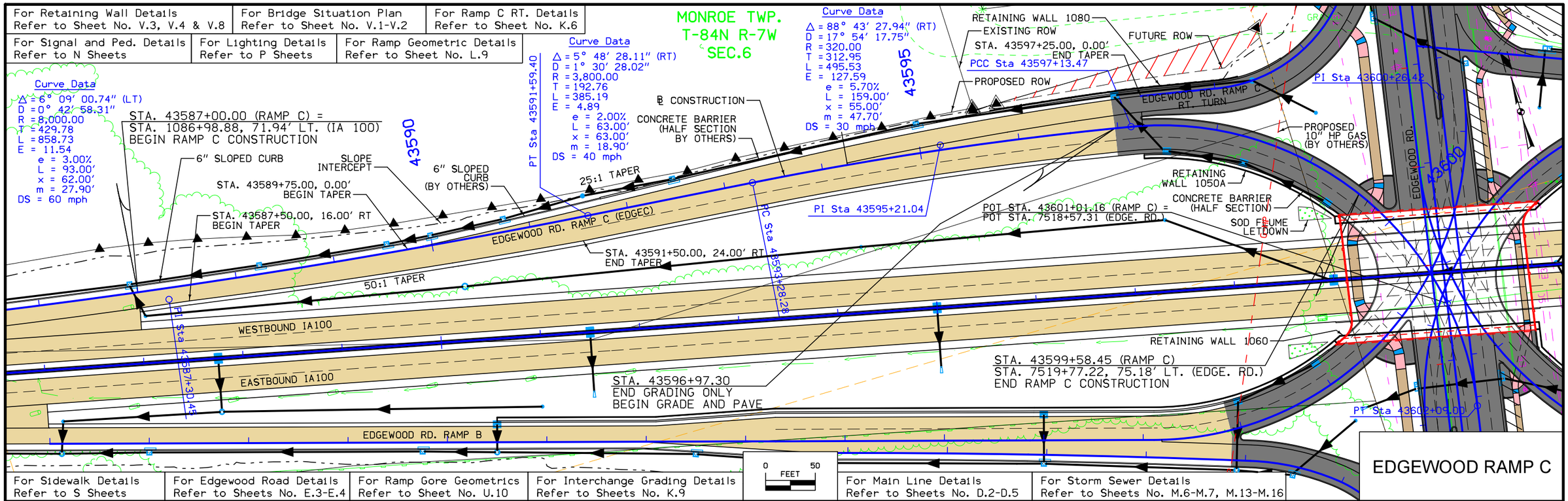
For Signal and Ped. Details Refer to N Sheets | For Lighting Details Refer to P Sheets | For Ramp Geometric Details Refer to Sheet No. L.9

MONROE TWP.
T-84N R-7W
SEC.6

Curve Data
Δ = 6° 09′ 00.74″ (LT)
D = 0° 42′ 58.31″
R = 8,000.00
T = 429.78
L = 858.73
E = 11.54
e = 3.00%
L = 93.00′
x = 62.00′
m = 27.90′
DS = 60 mph

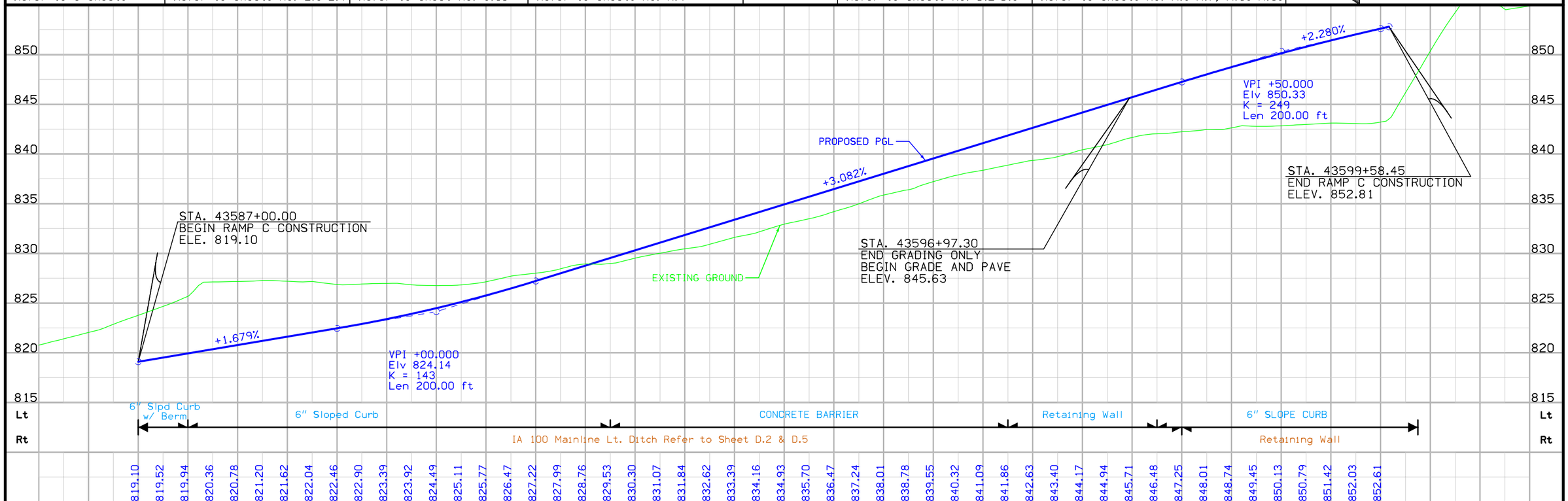
Curve Data
Δ = 5° 48′ 28.11″ (RT)
D = 1° 30′ 28.02″
R = 3,800.00
T = 192.76
L = 385.19
E = 4.89
e = 2.00%
L = 63.00′
x = 63.00′
m = 18.90′
DS = 40 mph

Curve Data
Δ = 88° 43′ 27.94″ (RT)
D = 17° 54′ 17.75″
R = 320.00
T = 312.95
L = 495.53
E = 127.59
e = 5.70%
L = 159.00′
x = 55.00′
m = 47.70′
DS = 30 mph



EDGEWOOD RAMP C

For Sidewalk Details Refer to S Sheets | For Edgewood Road Details Refer to Sheets No. E.3-E.4 | For Ramp Gore Geometrics Refer to Sheet No. U.10 | For Interchange Grading Details Refer to Sheets No. K.9 | For Main Line Details Refer to Sheets No. D.2-D.5 | For Storm Sewer Details Refer to Sheets No. M.6-M.7, M.13-M.16



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER K.5

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STA. 43697+25.00 (RAMP C RIGHT) =
STA. 43597+25.00, 30.00' LT. (RAMP C)
BEGIN RAMP C RIGHT CONSTRUCTION

Curve Data
Δ = 87° 14' 08.85" (LT)
D = 38° 11' 49.87"
R = 150.00
T = 142.93
L = 228.38
E = 57.19
e = 3.00%
DS = 20 mph

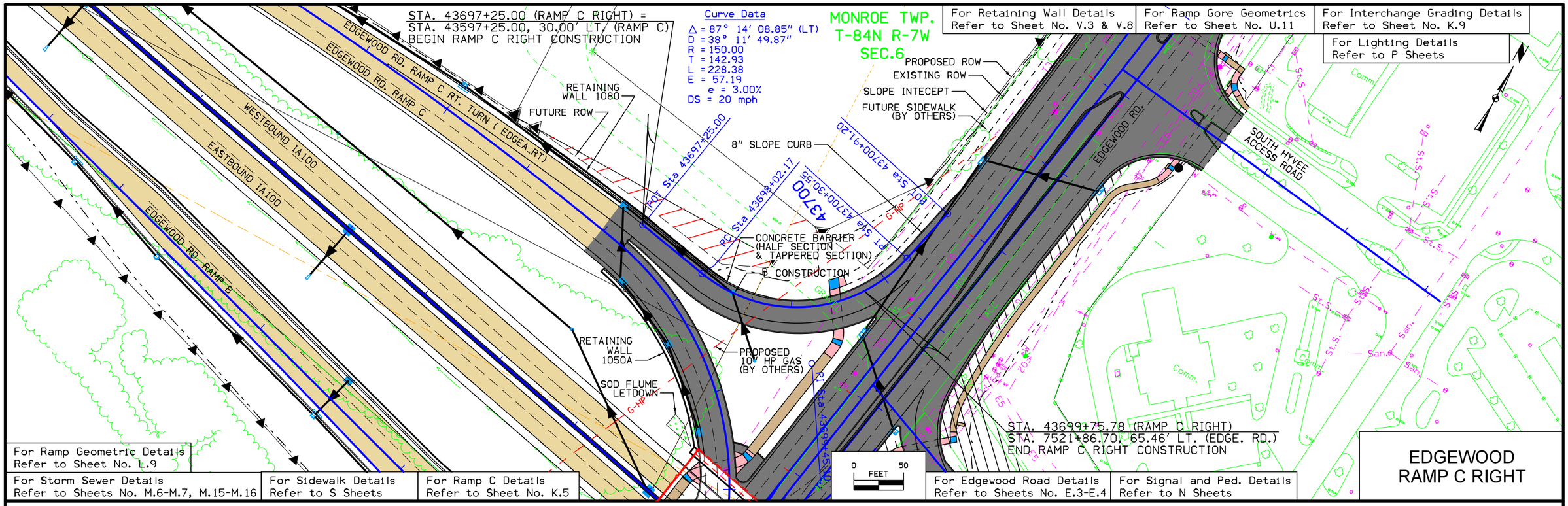
MONROE TWP.
T-84N R-7W
SEC.6

For Retaining Wall Details
Refer to Sheet No. V.3 & V.8

For Ramp Gore Geometrics
Refer to Sheet No. U.11

For Interchange Grading Details
Refer to Sheet No. K.9

For Lighting Details
Refer to P Sheets



STA. 43699+75.78 (RAMP C RIGHT)
STA. 7521+86.70, 65.46' LT. (EDGE. RD.)
END RAMP C RIGHT CONSTRUCTION

For Ramp Geometric Details
Refer to Sheet No. L.9

For Storm Sewer Details
Refer to Sheets No. M.6-M.7, M.15-M.16

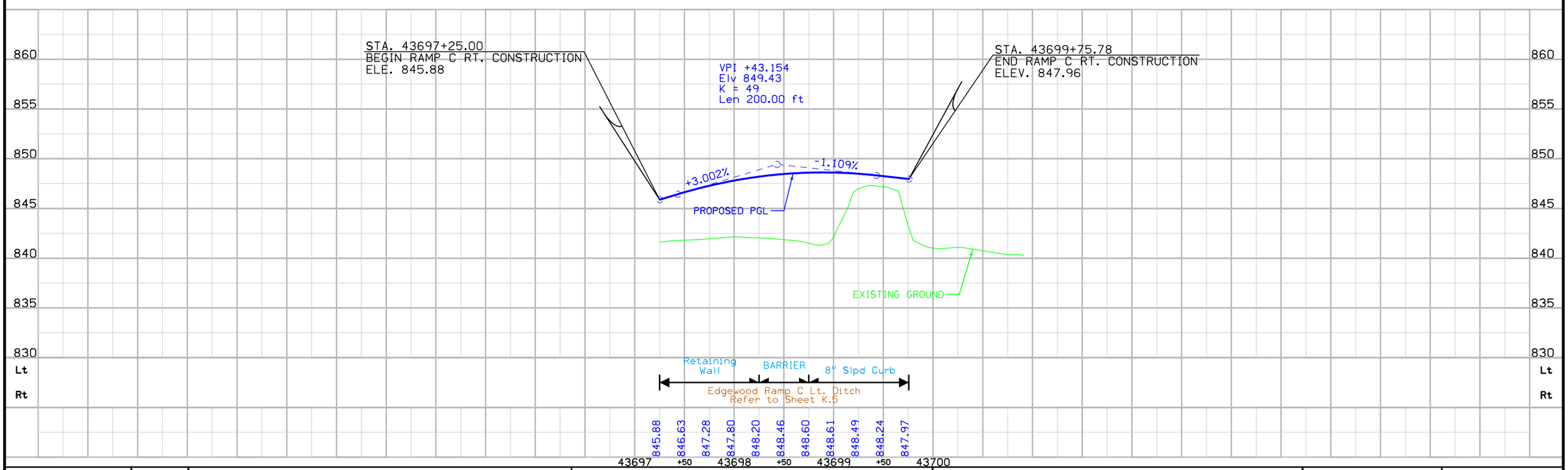
For Sidewalk Details
Refer to S Sheets

For Ramp C Details
Refer to Sheet No. K.5

For Edgewood Road Details
Refer to Sheets No. E.3-E.4

For Signal and Ped. Details
Refer to N Sheets

EDGEWOOD RAMP C RIGHT



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER K.6

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For Lighting Details
Refer to P Sheets

For Sidewalk Details
Refer to S Sheets

For Signal and Ped. Details
Refer to N Sheets

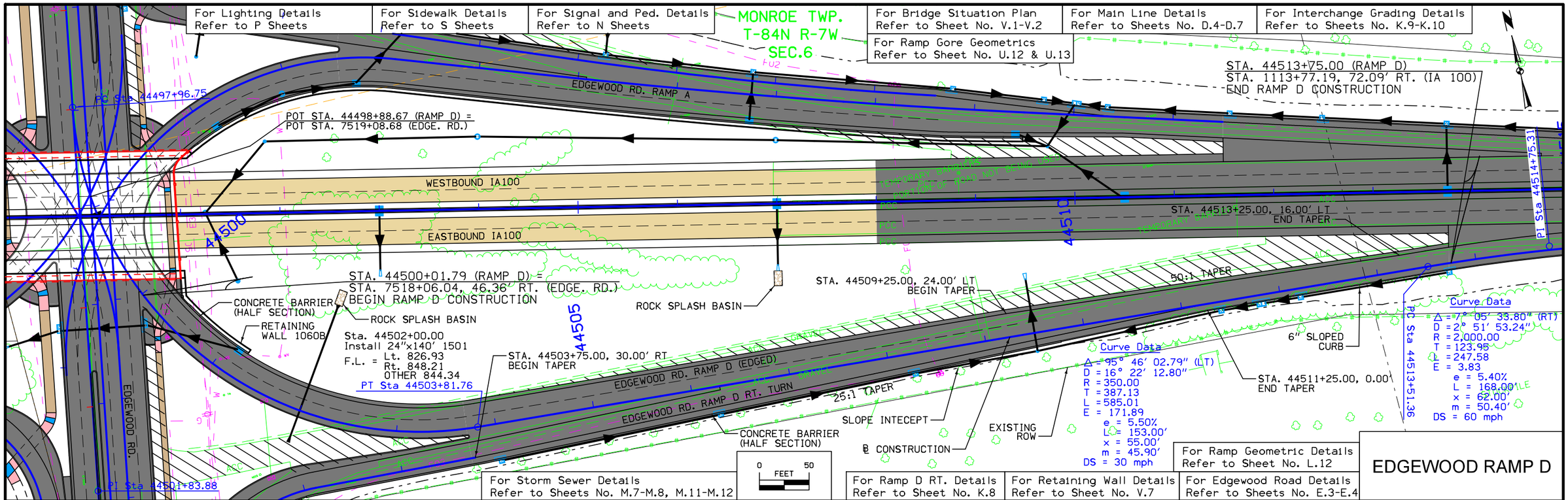
MONROE TWP.
T-84N R-7W
SEC.6

For Bridge Situation Plan
Refer to Sheet No. V.1-V.2

For Ramp Gore Geometrics
Refer to Sheet No. U.12 & U.13

For Main Line Details
Refer to Sheets No. D.4-D.7

For Interchange Grading Details
Refer to Sheets No. K.9-K.10



For Storm Sewer Details
Refer to Sheets No. M.7-M.8, M.11-M.12

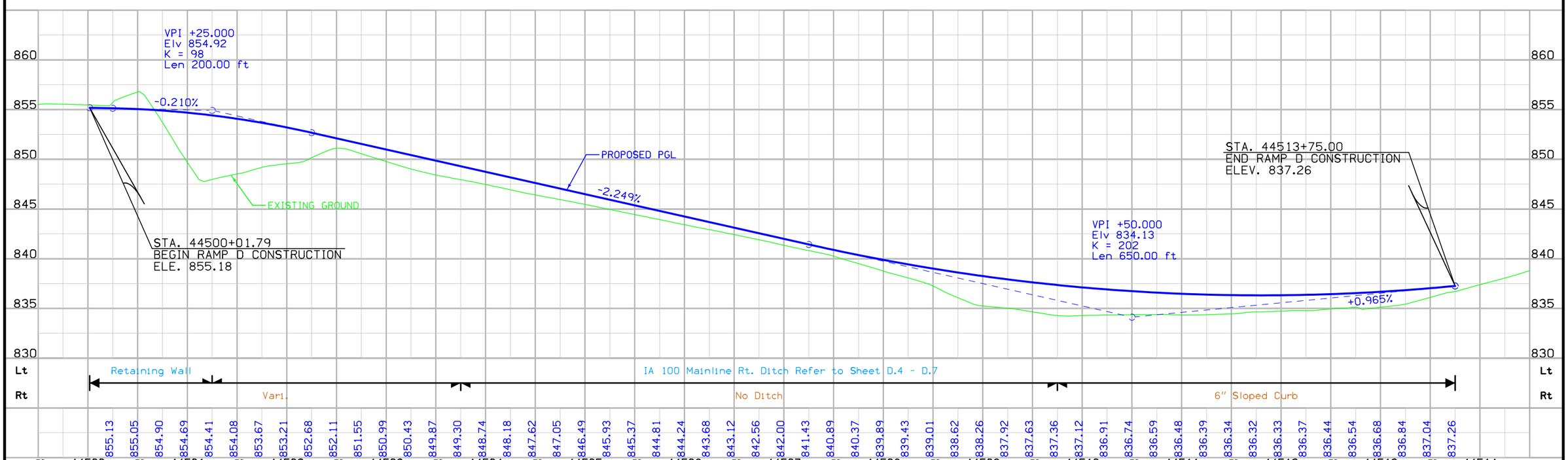
For Ramp D RT. Details
Refer to Sheet No. K.8

For Retaining Wall Details
Refer to Sheet No. V.7

For Ramp Geometric Details
Refer to Sheet No. L.12

For Edgewood Road Details
Refer to Sheets No. E.3-E.4

EDGEWOOD RAMP D



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER K.7

2:33:08 PM 2014\01\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0179917\57100079K01.sht

For Ramp Gore Geometrics Refer to Sheet No. U.14

For Interchange Grading Details Refer to Sheet No. K.9

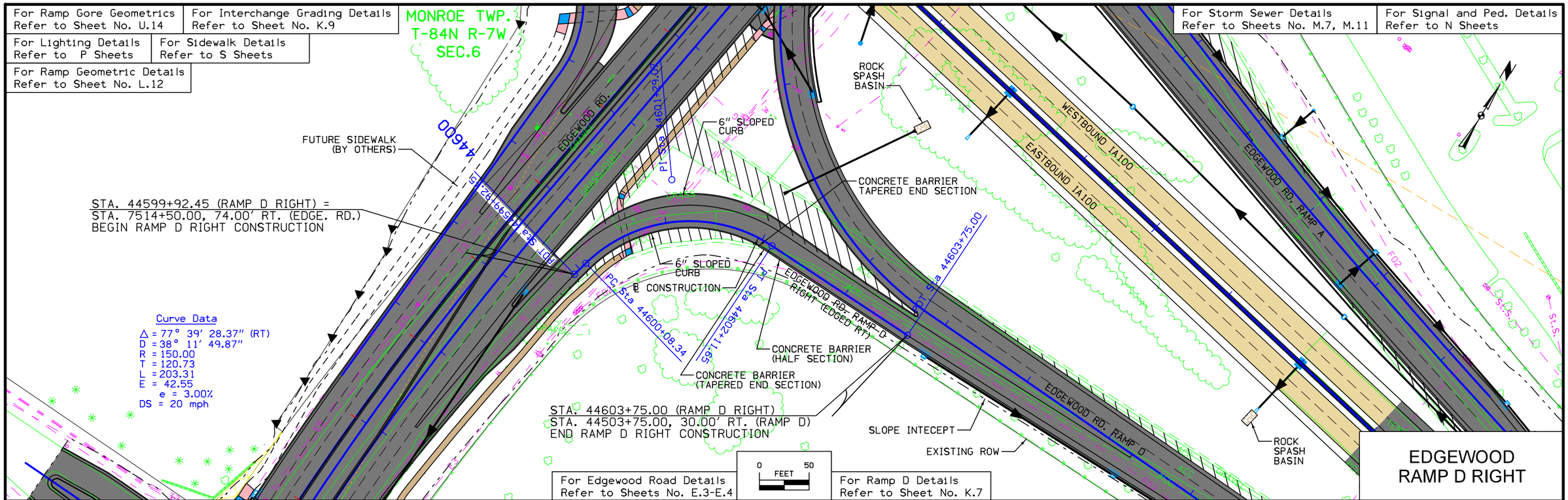
For Lighting Details Refer to P Sheets

For Sidewalk Details Refer to S Sheets

For Ramp Geometric Details Refer to Sheet No. L.12

For Storm Sewer Details Refer to Sheets No. M.7, M.11

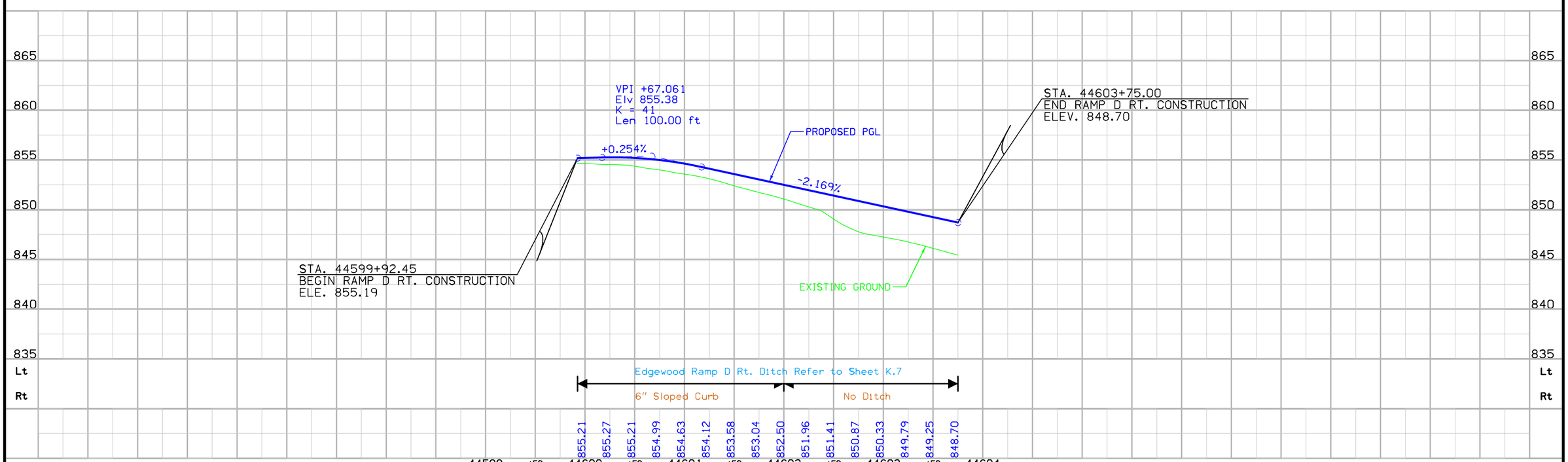
For Signal and Ped. Details Refer to N Sheets



For Edgewood Road Details Refer to Sheets No. E.3-E.4

For Ramp D Details Refer to Sheet No. K.7

EDGEWOOD RAMP D RIGHT



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER K.8	

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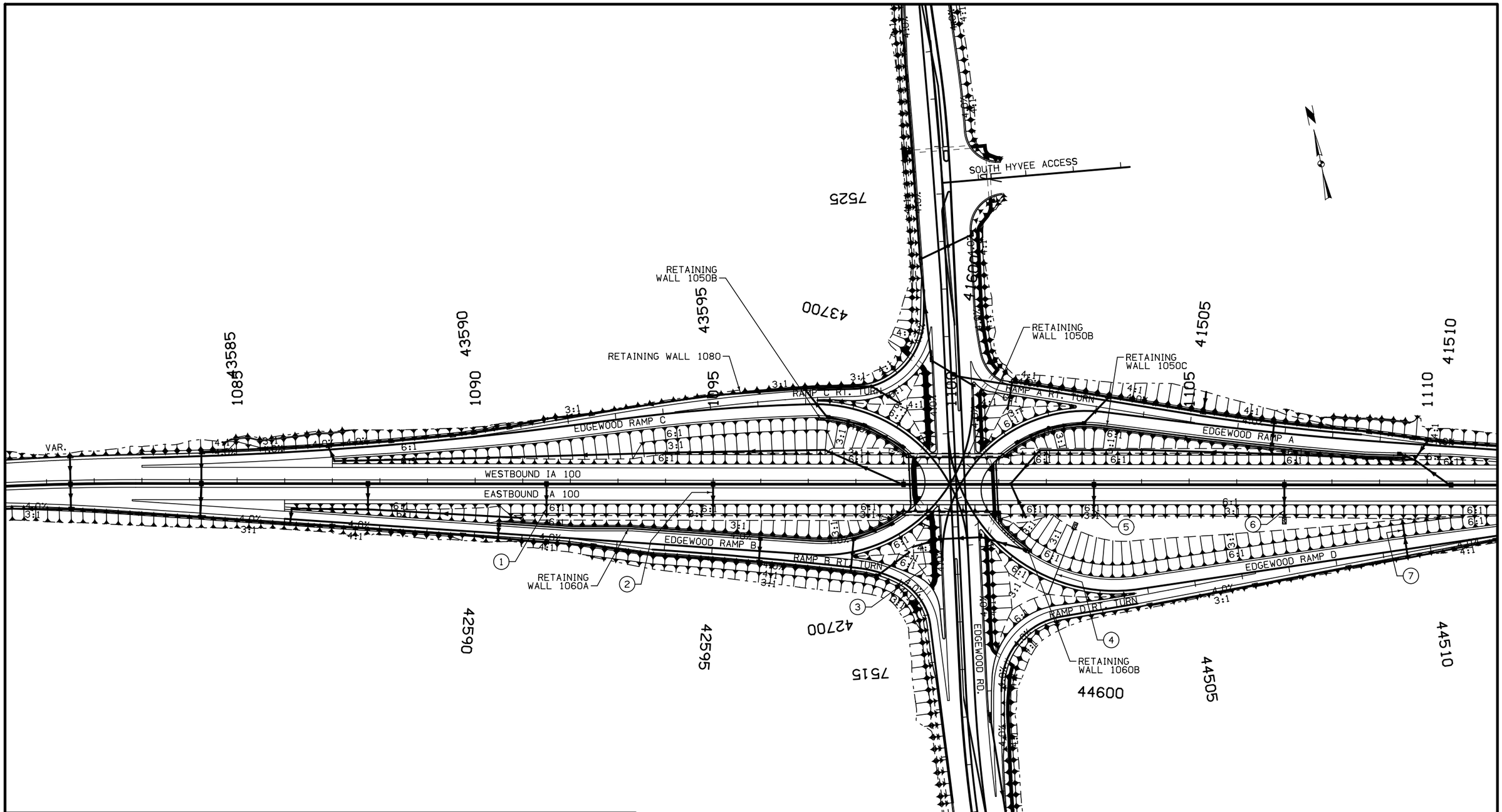
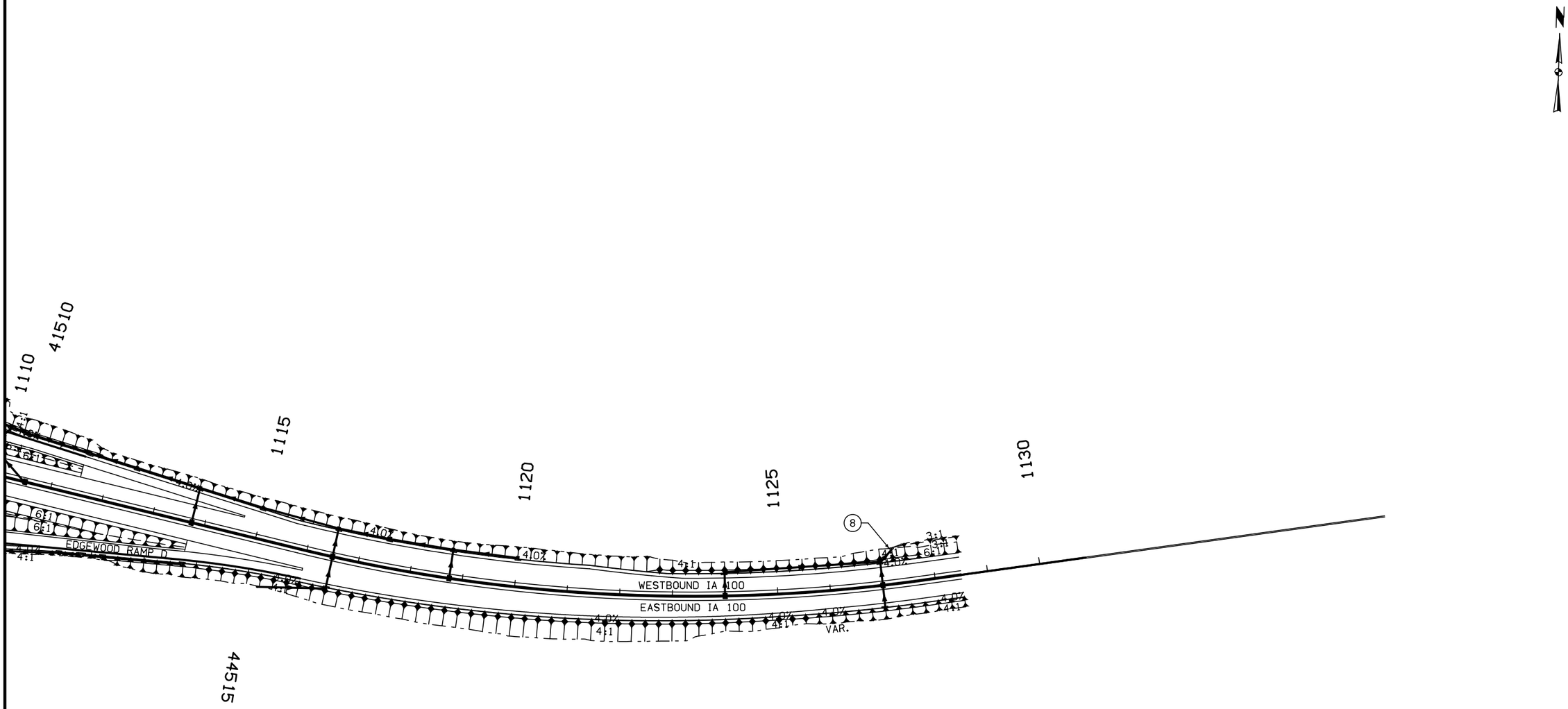


TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES Left	FLOWLINES Right	FLOWLINES Other			
1	1091+50.00	15″x56′	1101 RCP	820.43	820.06	819.93			
2	1095+00.00	15″x56′	1101 RCP	822.61	822.23	822.11			
3	7517+82.83	15″x48′	1101 RCP	847.00	847.29	846.79			
4	44502+00.00	24″x70′	1501 RCP & CMP	826.93	848.21	844.34	843.63	828.22	
5	1103+00.00	15″x56′	1101 RCP	827.70	827.20	827.20			
6	1107+00.00	15″x58′	1101 RCP	830.00	829.04	829.50			
7	44509+50.00	21″x72′	1101 RCP	829.51	829.80	829.30			

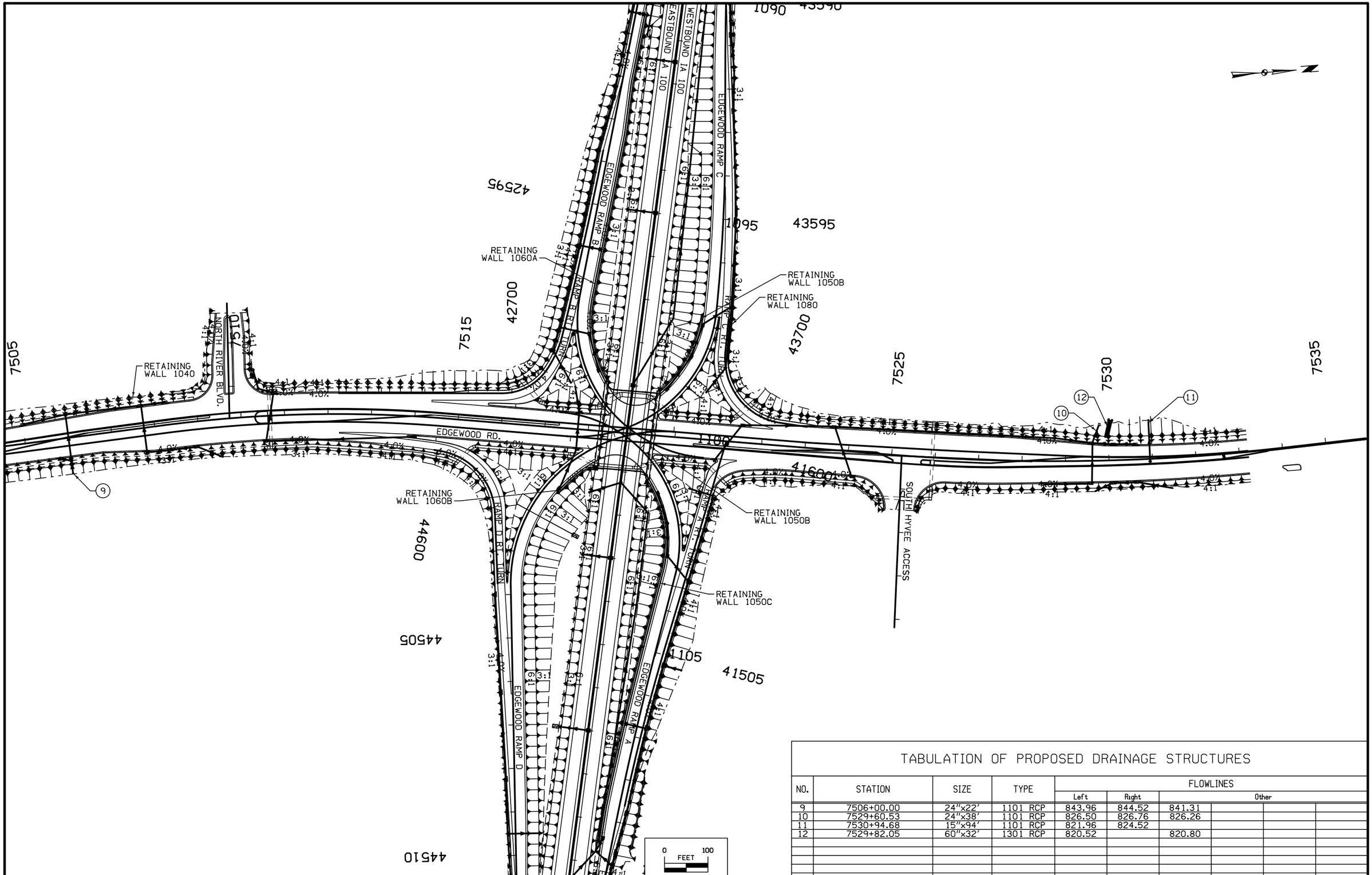


TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES					
				Left	Right	Other			
8	1127+00.00	15"x28'	1101 RCP	833.06	833.47	832.97			

0 FEET 100

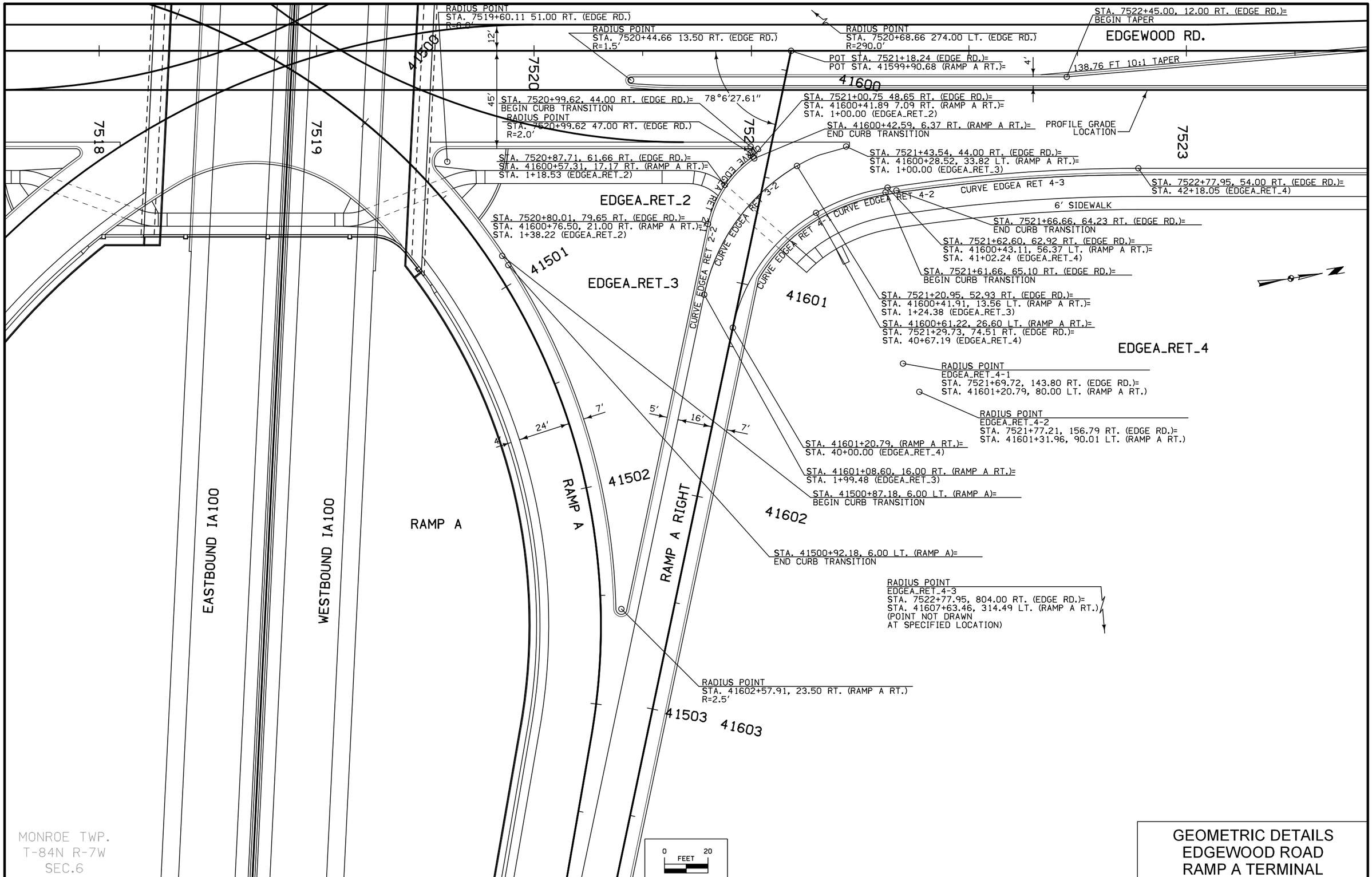
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER K.10



TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES Left	FLOWLINES Right	FLOWLINES Other			
9	7506+00.00	24″x22′	1101 RCP	843.96	844.52	841.31			
10	7529+60.53	24″x38′	1101 RCP	826.50	826.76	826.26			
11	7530+94.68	15″x94′	1101 RCP	821.96	824.52				
12	7529+82.05	60″x32′	1301 RCP	820.52		820.80			

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER K.11



GEOMETRIC DETAILS
EDGEWOOD ROAD
RAMP A TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.1

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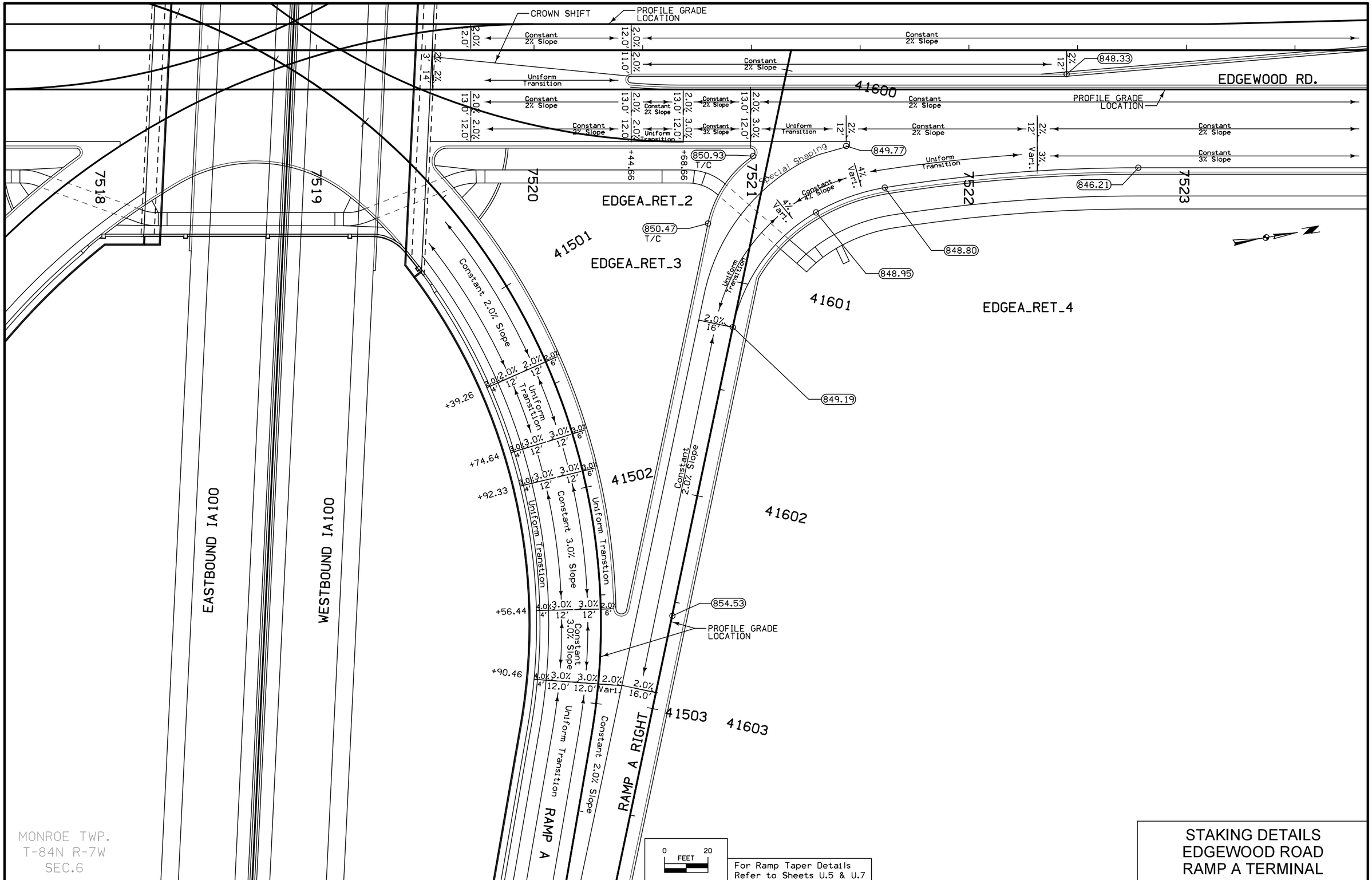

STAKING DETAILS
EDGEWOOD ROAD
RAMP A TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.2

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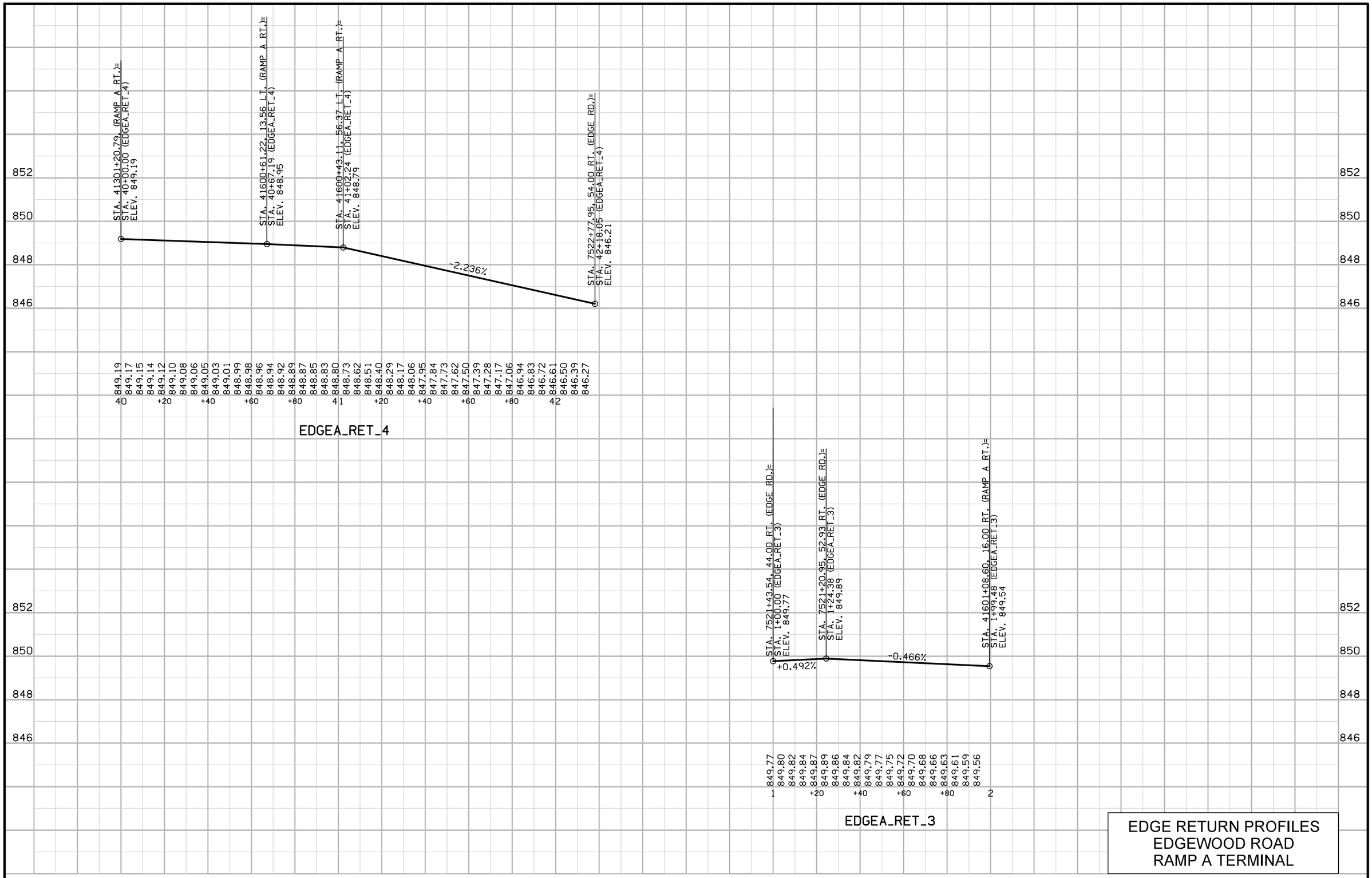

EDGE RETURN PROFILES
EDGEWOOD ROAD
RAMP A TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.3

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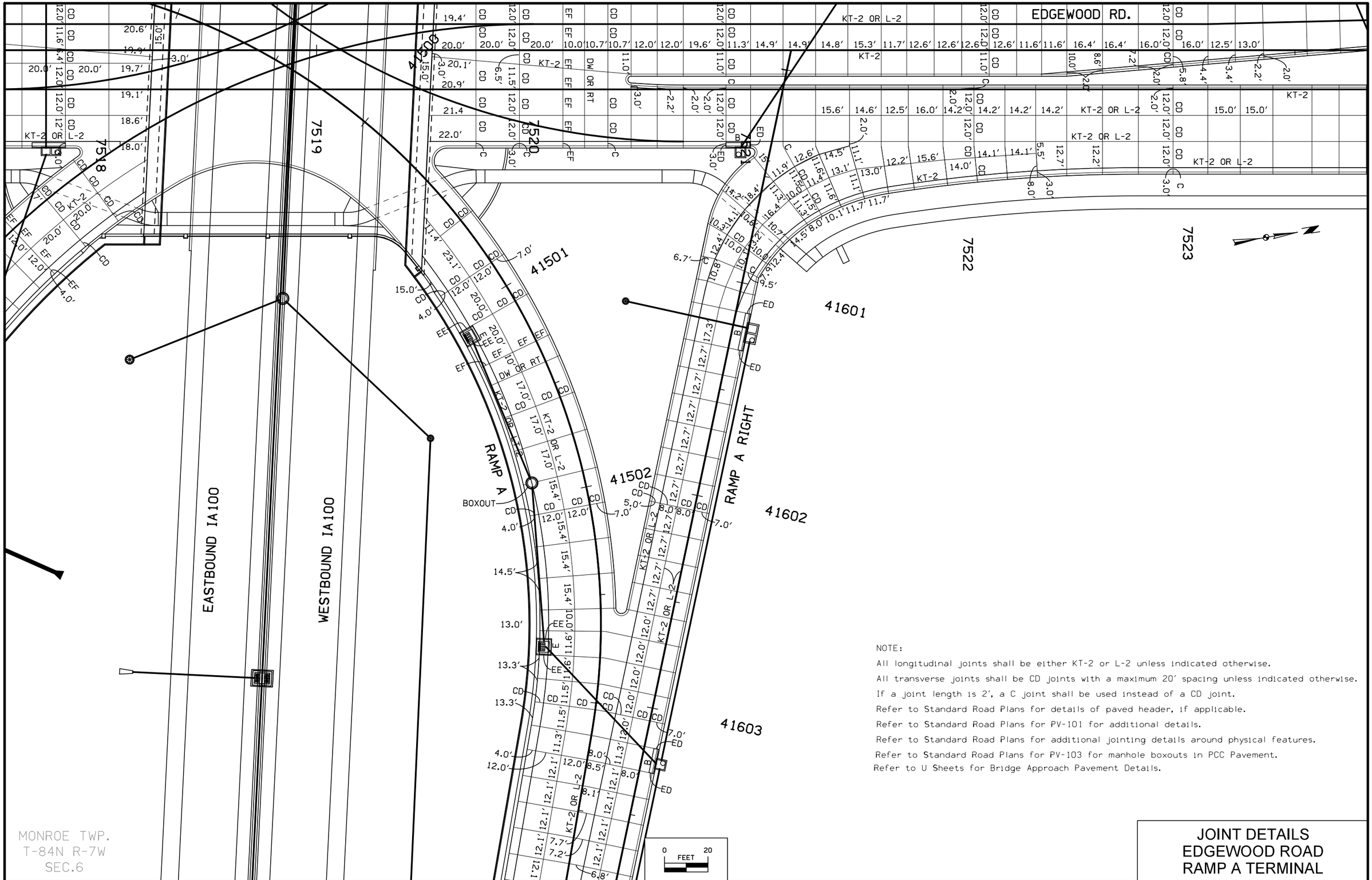

NOTE:

All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.

All transverse joints shall be CD joints with a maximum 20' spacing unless indicated otherwise.

If a joint length is 2', a C joint shall be used instead of a CD joint.

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Refer to Standard Road Plans for PV-101 for additional details.

Refer to Standard Road Plans for additional jointing details around physical features.

Refer to Standard Road Plans for PV-103 for manhole boxouts in PCC Pavement.

Refer to U Sheets for Bridge Approach Pavement Details.

MONROE TWP.
T-84N R-7W
SEC.6

JOINT DETAILS
EDGEWOOD ROAD
RAMP A TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.4

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MONROE TWP.
T-84N R-7W
SEC.6

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All transverse joints shall be CD joints with a maximum 20′ spacing unless indicated otherwise.
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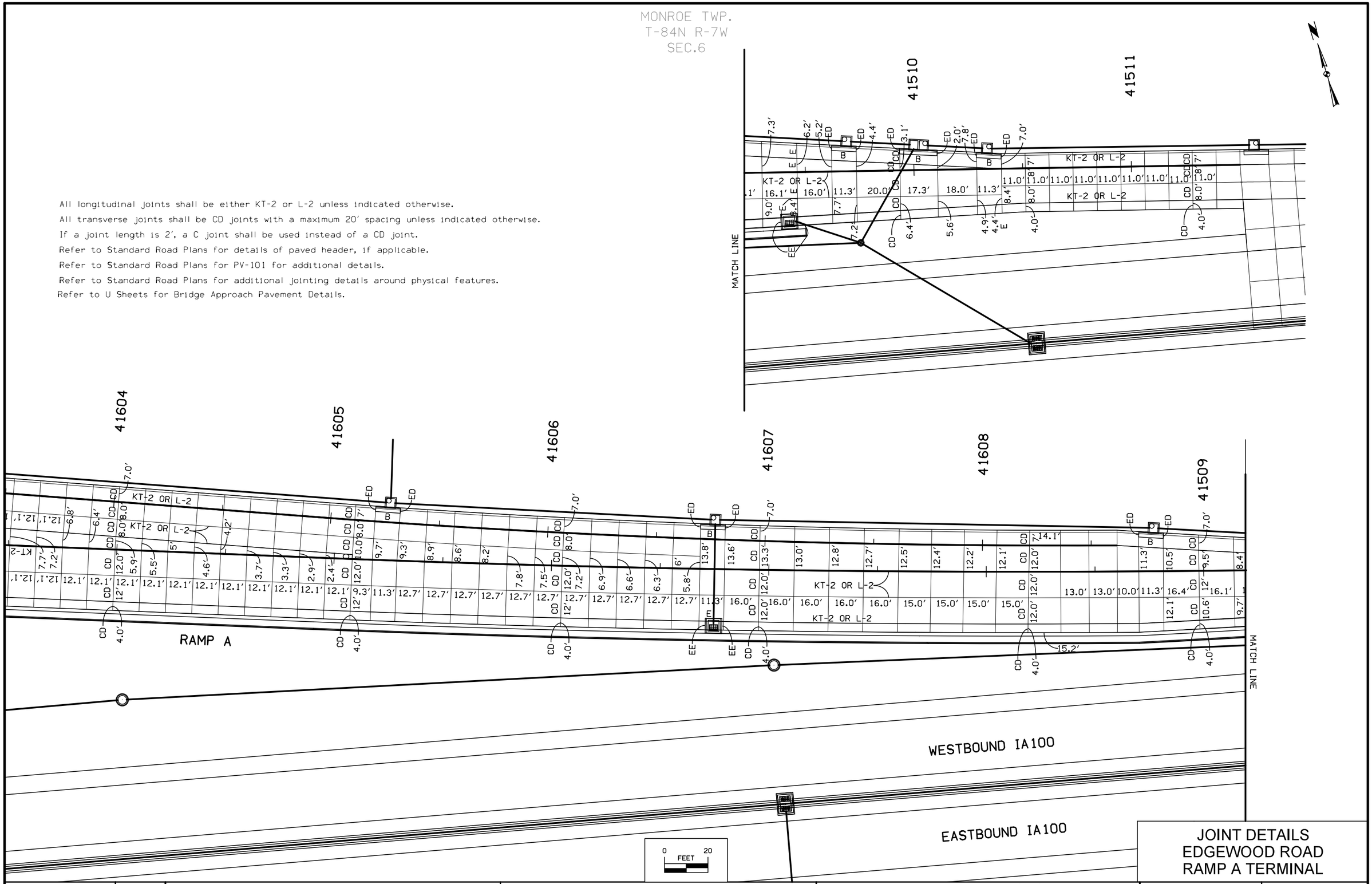
Refer to Standard Road Plans for additional jointing details around physical features.
Refer to U Sheets for Bridge Approach Pavement Details.



JOINT DETAILS
EDGEWOOD ROAD
RAMP A TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.5

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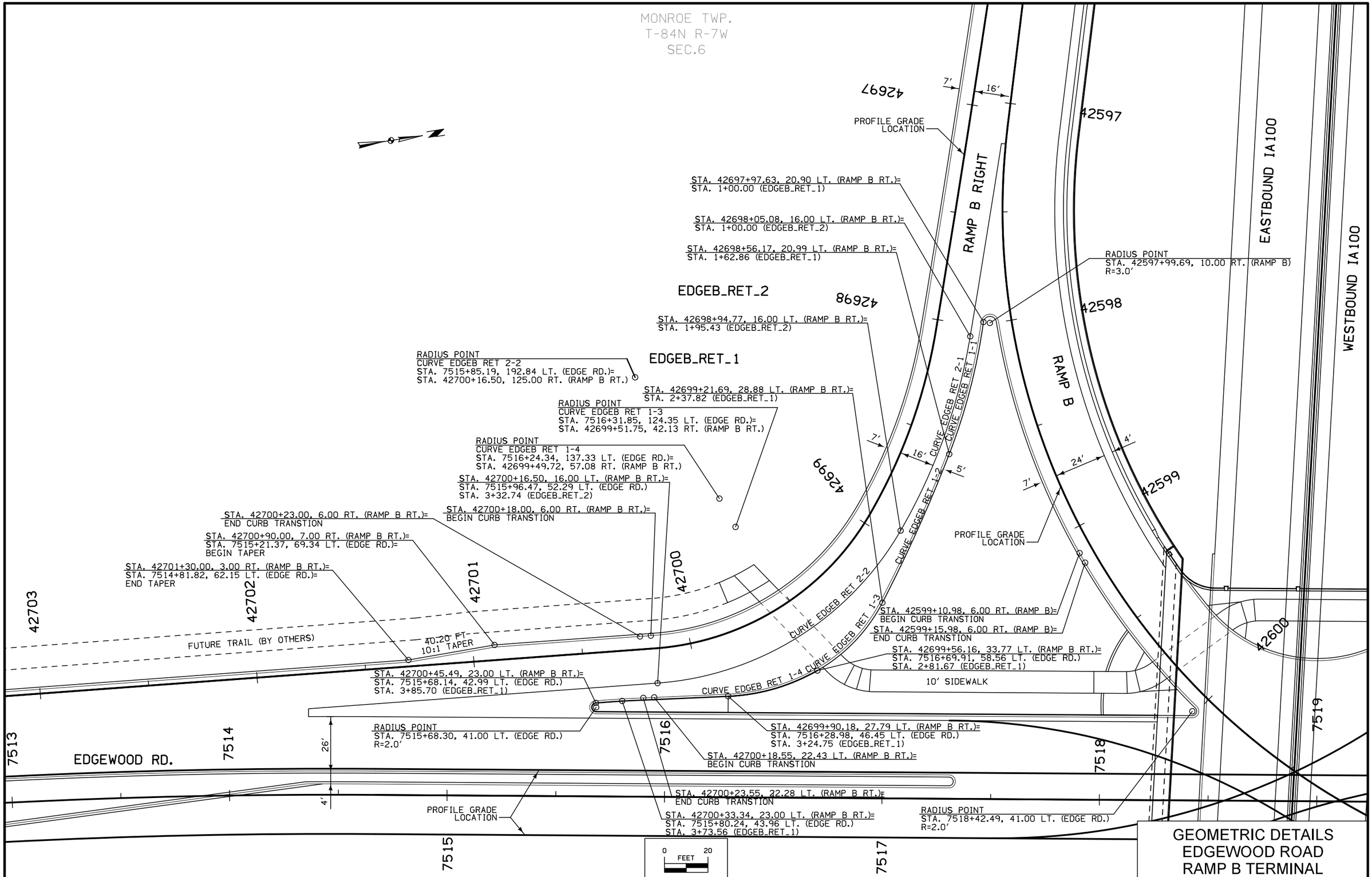

GEOMETRIC DETAILS
EDGEWOOD ROAD
RAMP B TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.6

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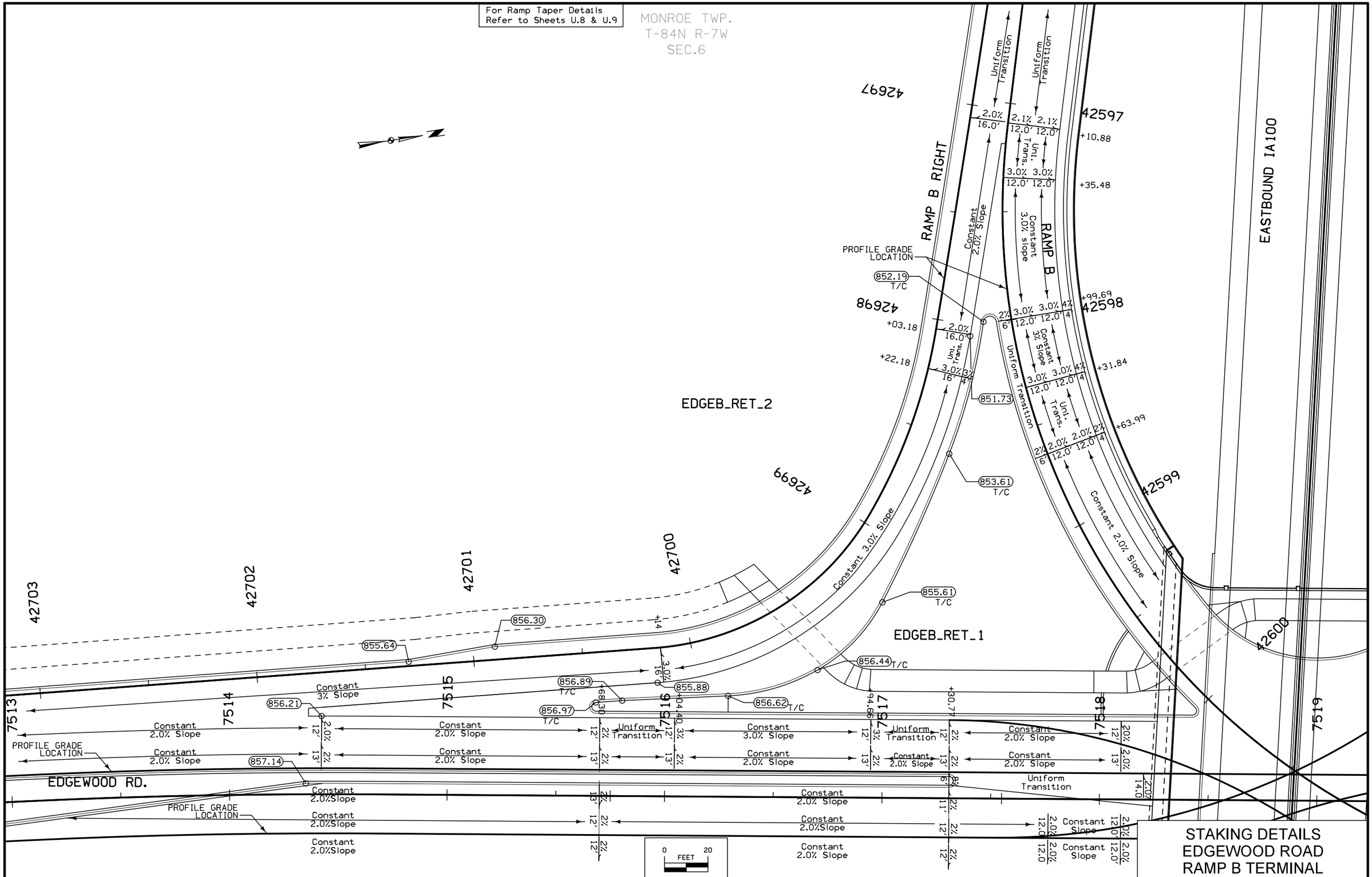
For Ramp Taper Details
Refer to Sheets U.8 & U.9

MONROE TWP.
T-84N R-7W
SEC.6



STAKING DETAILS
EDGEWOOD ROAD
RAMP B TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.7

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MONROE TWP.
T-84N R-7W
SEC.6

NOTE:

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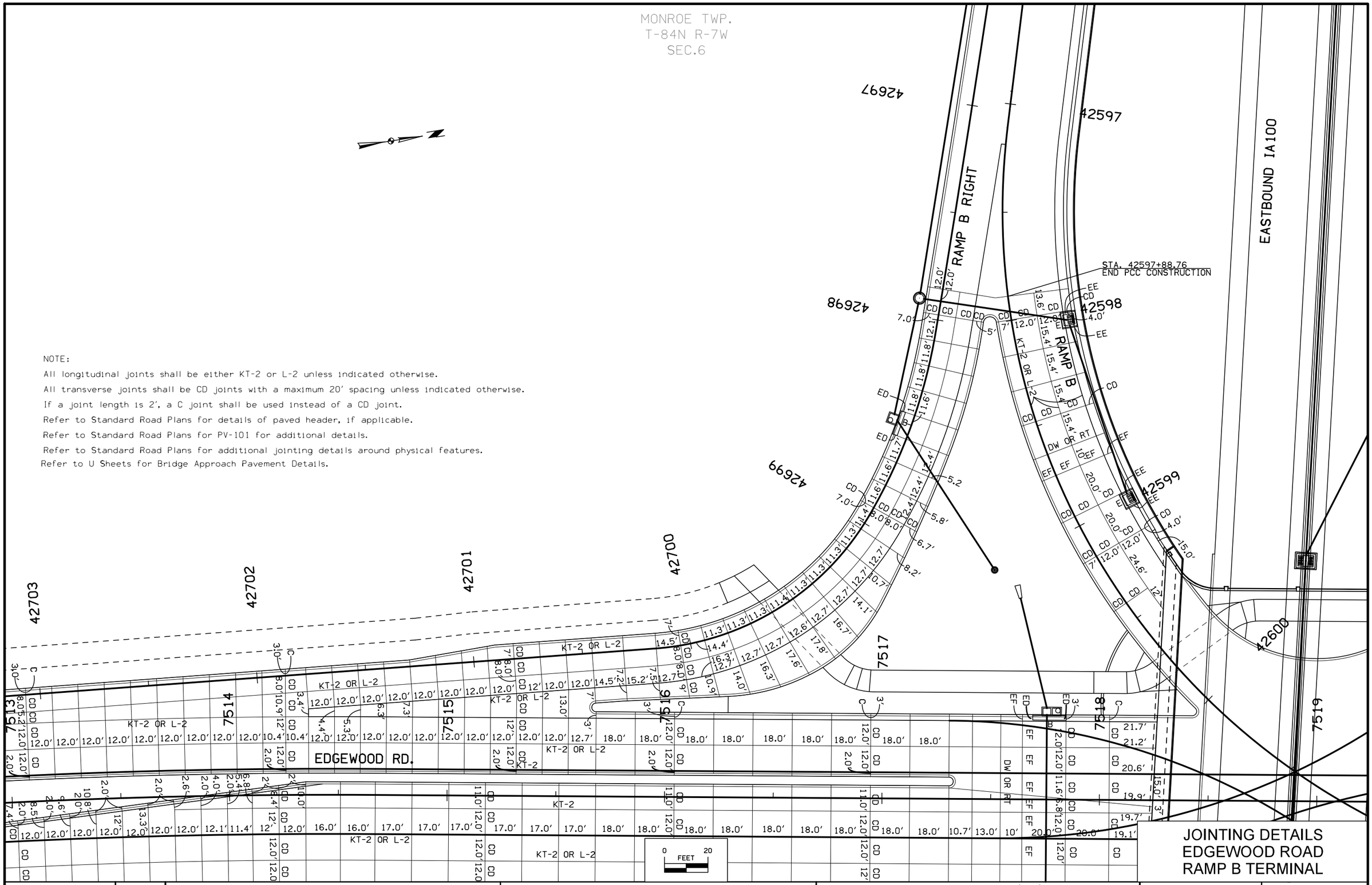

JOINTING DETAILS
EDGEWOOD ROAD
RAMP B TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.8

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MONROE TWP.
T-84N R-7W
SEC.6

EASTBOUND IA100

WESTBOUND IA100

RAMP C RIGHT

RAMP C

43597

43598

43599

43600

43602

43698

43699

43700

EDGEC_RET_1

CURVE EDGEC_RET_1-1

RADUIS POINT
STA. 43597+25.42, 8.00 LT. (RAMP C)
R=1.0'

STA. 43697+25.00, 21.00 RT. (RAMP C RT.)=
STA. 1+00.00 (EDGEC_RET_1)

STA. 43697+38.30, 21.00 RT. (RAMP C RT.)=
STA. 1+14.14 (EDGEC_RET_1)

STA. 43697+92.49, 24.67 RT. (RAMP C RT.)=
STA. 1+68.45 (EDGEC_RET_1)

RADIUS POINT
CURVE EDGEC RET 1-1
STA. 7522+50.35, 199.48 LT. (EDGE RD.)
STA. 43700+31.58, 147.84 LT. (RAMP C RT.)

PROFILE GRADE LOCATION

PROFILE GRADE LOCATION

4'

24'

7'

VARIES

16'

6'

STA. 43699+72.91, 26.61 RT. (RAMP C RT.)=
BEGIN CURB TRANSTION

STA. 43699+75.78, 6.00 LT. (RAMP C RT.)=
BEGIN CURB TRANSTION

STA. 43699+72.91, 27.61 RT. (RAMP C RT.) =
STA. 7521+72.07, 41.84 LT. (EDGE RD.)
STA. 3+78.91 (EDGEC_RET_1)

STA. 43699+80.78, 6.00 LT. (RAMP C RT.)=
END CURB TRANSTION

STA. 7522+39.90, 59.02 LT. (EDGE RD.)=
STA. 43700+30.39, 7.00 LT. (RAMP C RT.)

FUTURE SIDEWALK (BY OTHERS)

STA. 43599+36.33, 6.00 LT. (RAMP C)=
BEGIN CURB TRANSTION

STA. 43599+41.33, 6.00 LT. (RAMP C)=
END CURB TRANSTION

10' SIDEWALK

7518

7519

7520

7521

7522

7523

RADIUS POINT
STA. 7519+66.02, 46.00 LT. (EDGE RD.)
R=7.0'

39'

STA. 7512+71.40, 38.00 LT. (EDGE RD.)=
END CURB TRANSTION

RADIUS POINT
STA. 7521+71.40, 40.50 LT. (EDGE RD.)
R=1.5'

EDGEWOOD RD.

PROFILE GRADE LOCATION

12'

0 FEET 20

GEOMETRIC DETAILS
EDGEWOOD ROAD
RAMP C TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.9

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For Ramp Taper Details
Refer to Sheets U.10 & U.11

MONROE TWP.
T-84N R-7W
SEC.6

EDGEC_RET_1

EASTBOUND IA100

WESTBOUND IA100

RAMP C

RAMP C RIGHT

Constant 2.0% Slope

Constant 4.0% Slope

Constant 3.0% Slope

Uniform Transition

Uni. Trans.

43597

43598

43599

43600

43601

43602

43698

43699

43700

7518

7519

7520

7521

7522

7523

+10.53

+25.00

+37.88

+95.00

+50.38

+89.38

+99.97

+18.97

+82.09

+44.66

+68.66

+71.40

+05.22

846.82 T/C

847.20 T/C

848.65 T/C

849.31 T/C

847.97

845.49

844.74

848.33

PROFILE GRADE LOCATION

EDGEWOOD RD.

0 20
FEET

STAKING DETAILS
EDGEWOOD ROAD
RAMP C TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.10

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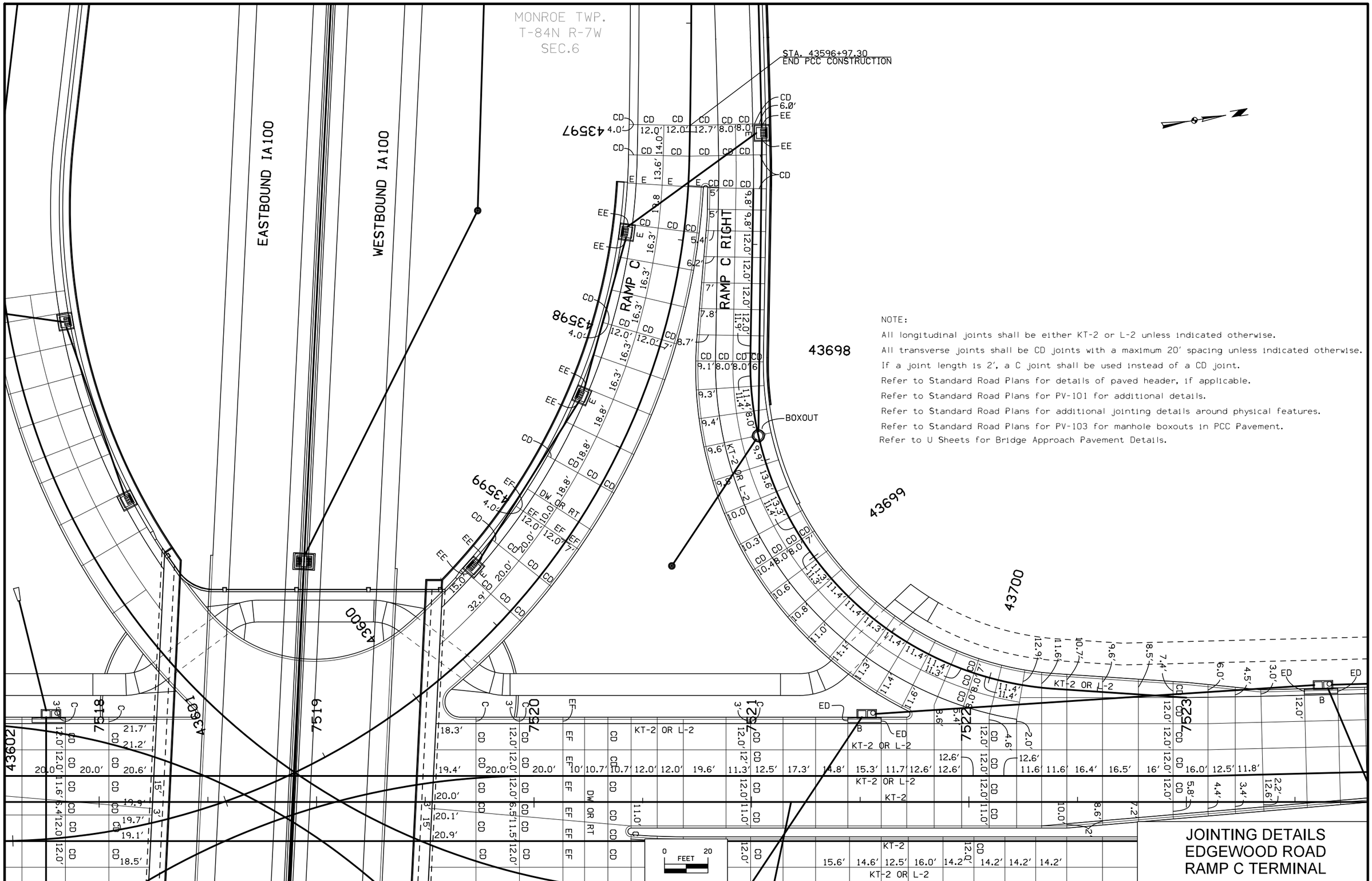

NOTE:

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JOINTING DETAILS
EDGEWOOD ROAD
RAMP C TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.11

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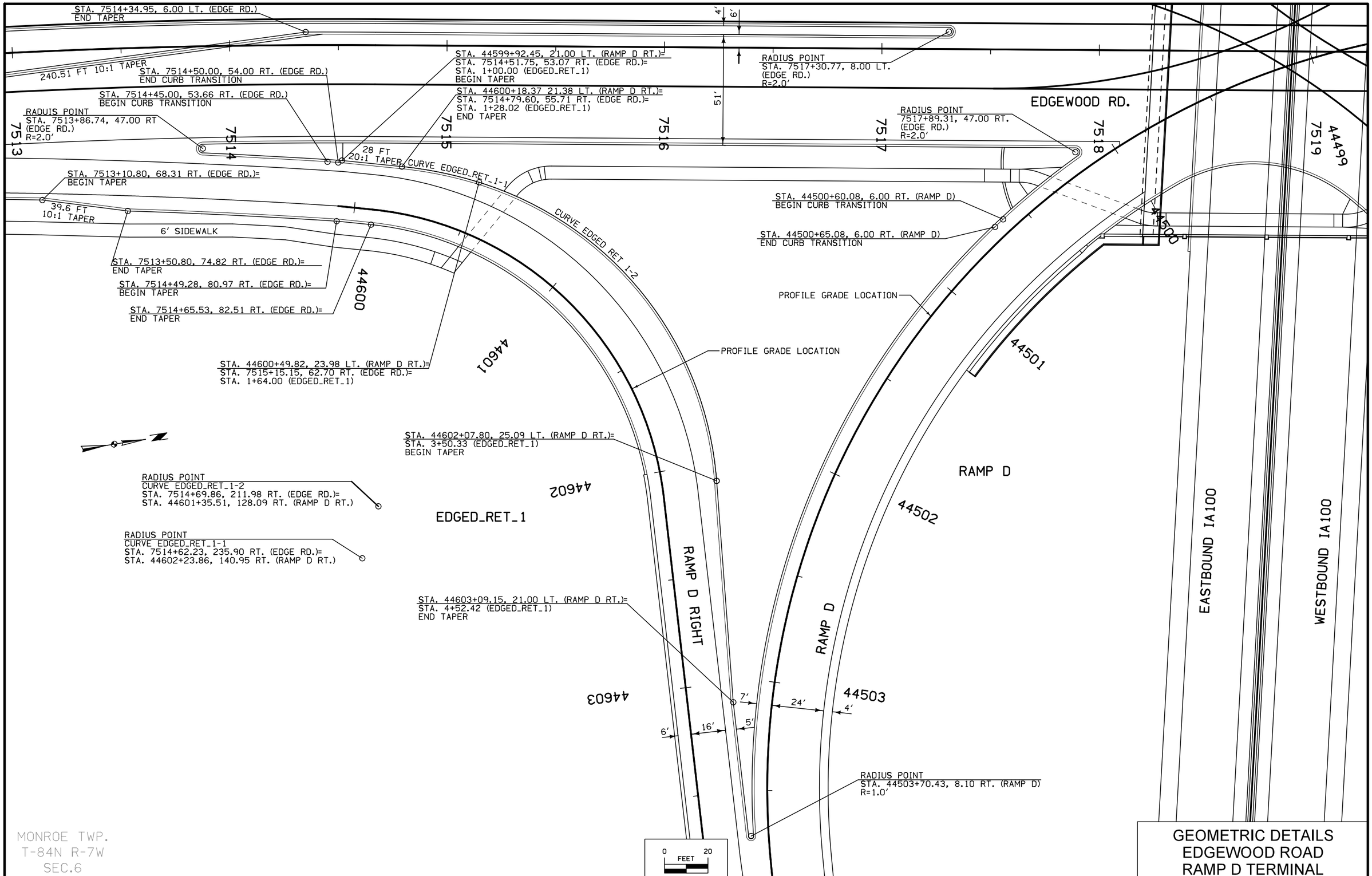

MONROE TWP.
T-84N R-7W
SEC.6

GEOMETRIC DETAILS
EDGEWOOD ROAD
RAMP D TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.12

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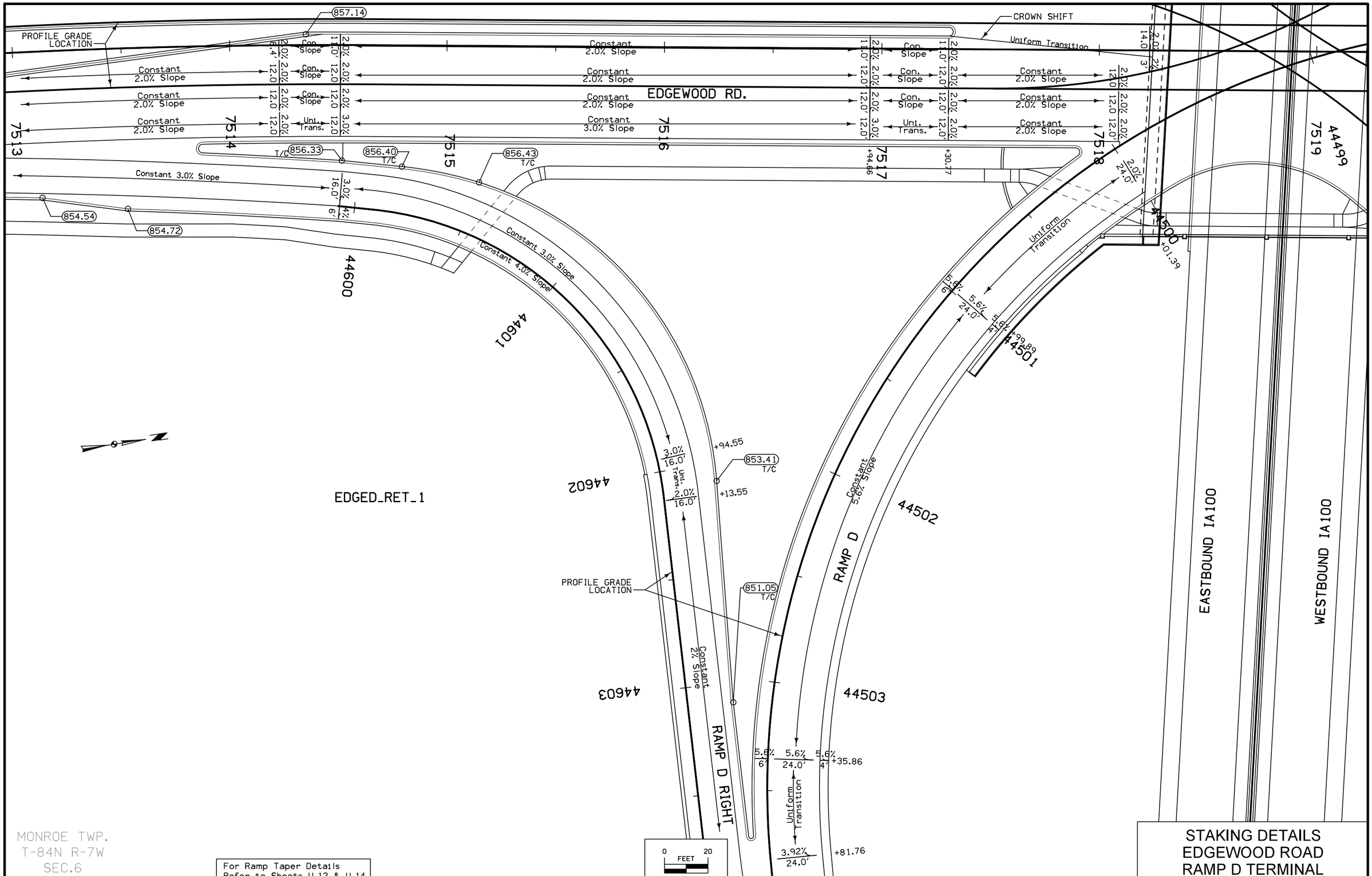

MONROE TWP.
T-84N R-7W
SEC.6

For Ramp Taper Details
Refer to Sheets U.12 & U.14

STAKING DETAILS
EDGEWOOD ROAD
RAMP D TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.13

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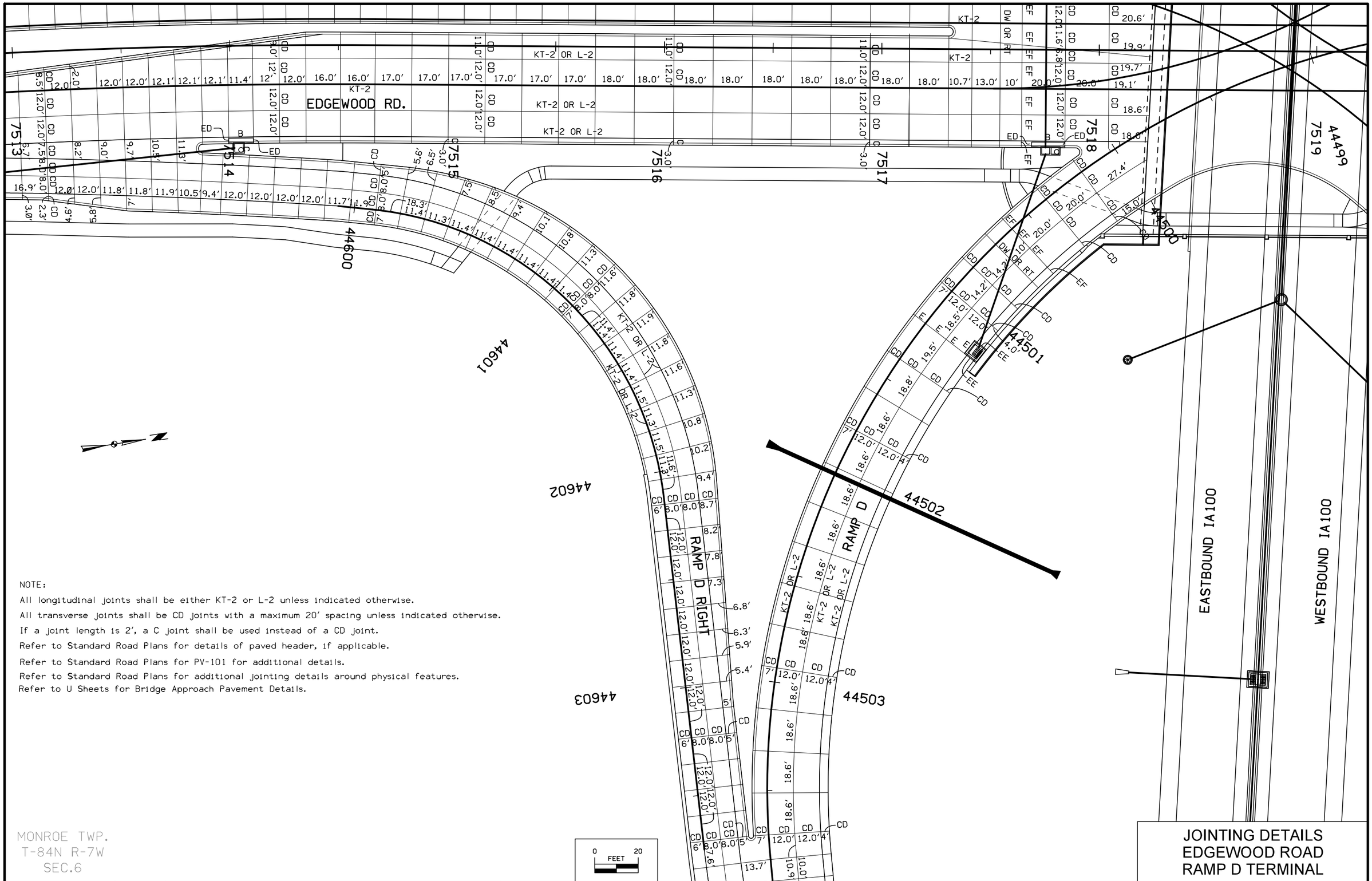

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MONROE TWP.
T-84N R-7W
SEC.6

JOINTING DETAILS
EDGEWOOD ROAD
RAMP D TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.14

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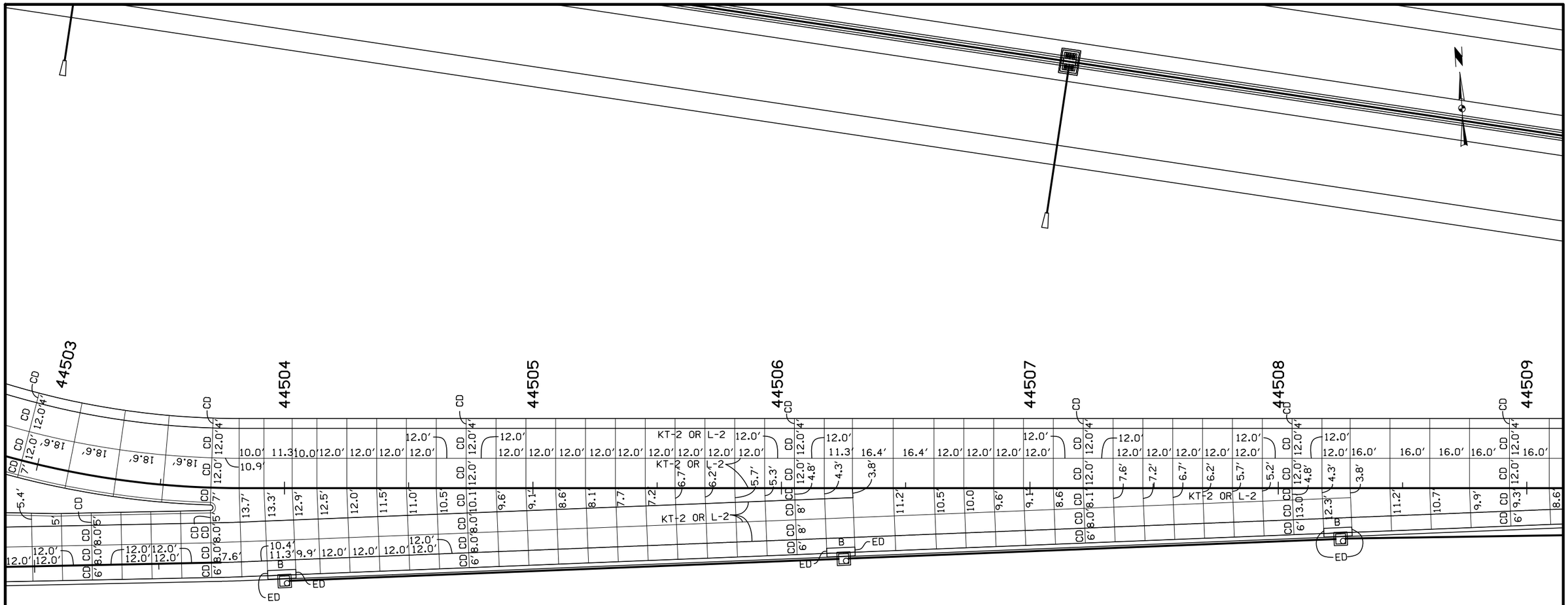

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0 20
FEET

MONROE TWP.
T-84N R-7W
SEC.6

JOINTING DETAILS
EDGEWOOD ROAD
RAMP D TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.15

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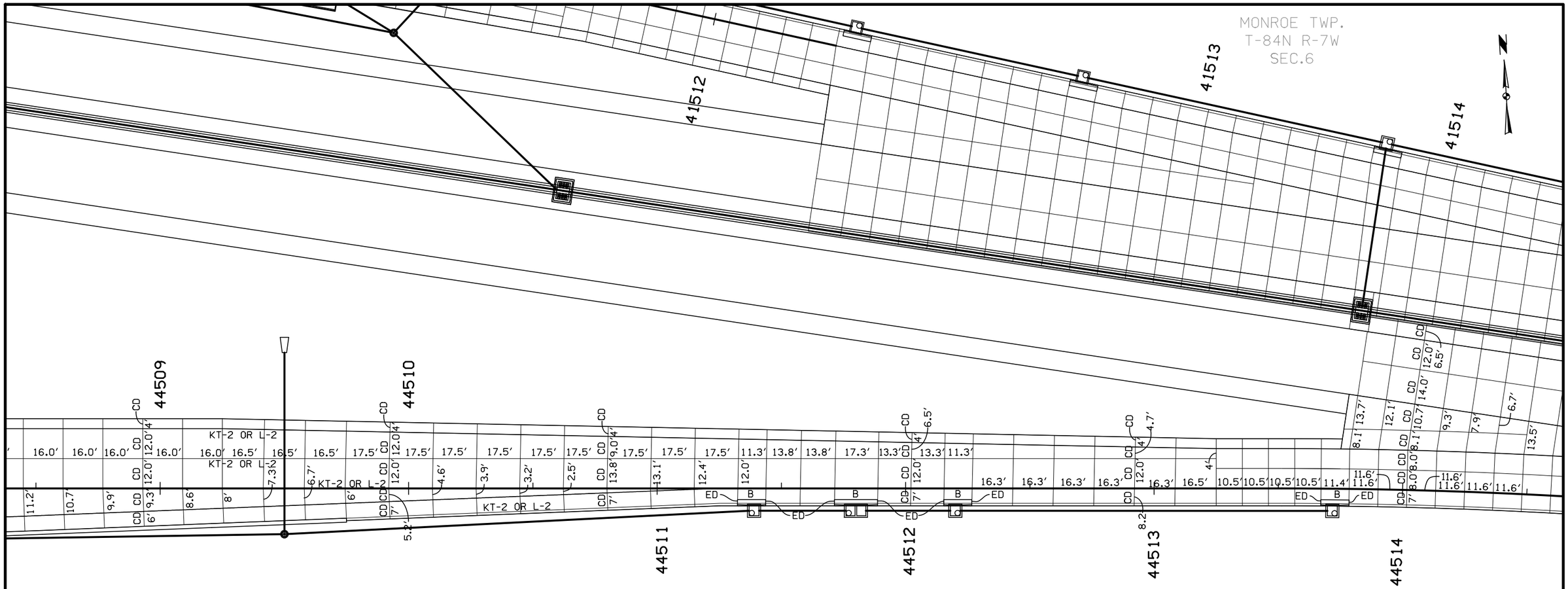

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0 20 FEET

JOINTING DETAILS
EDGEWOOD ROAD
RAMP D TERMINAL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.16

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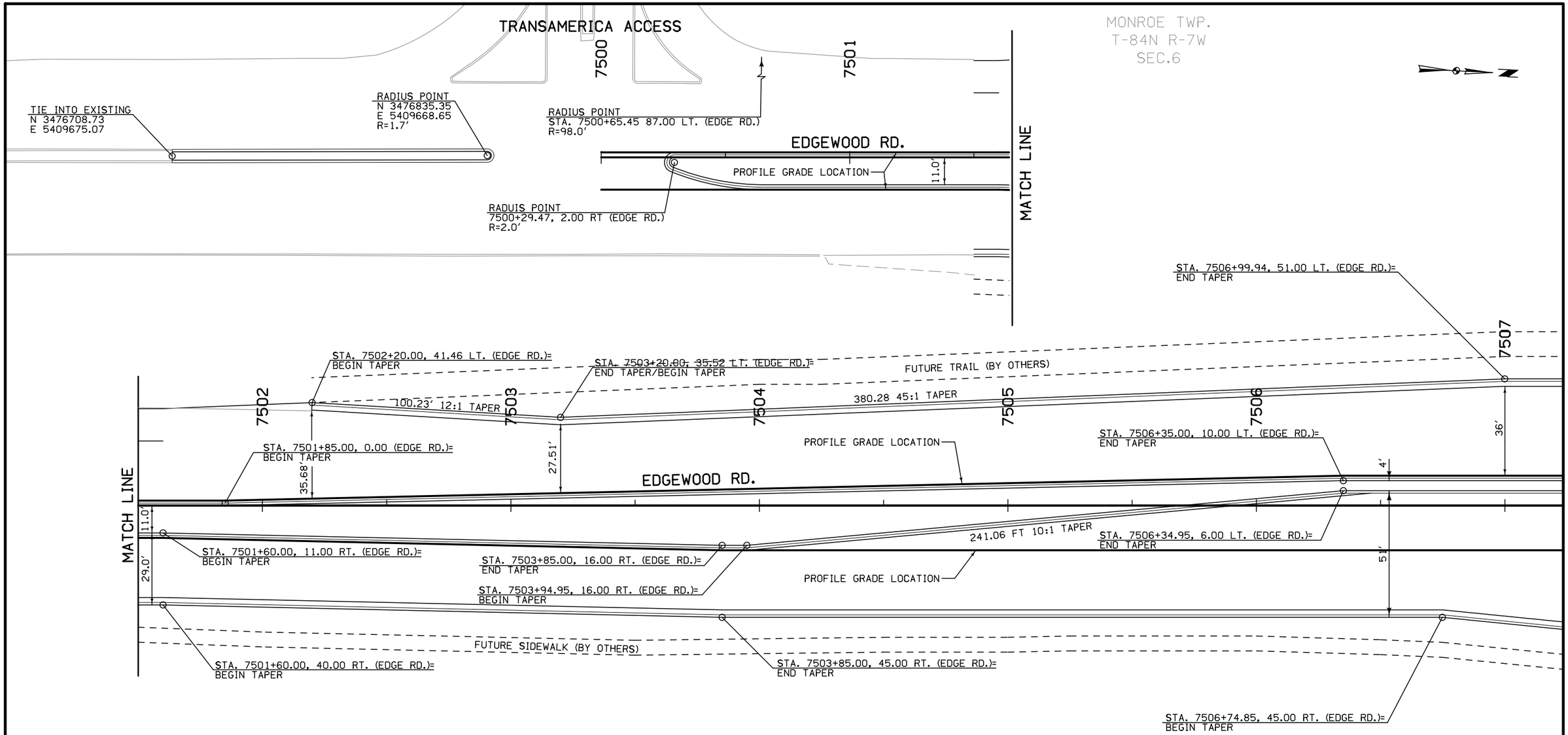

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FEET

GEOMETRIC DETAILS
NORTH RIVER BLVD /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.17

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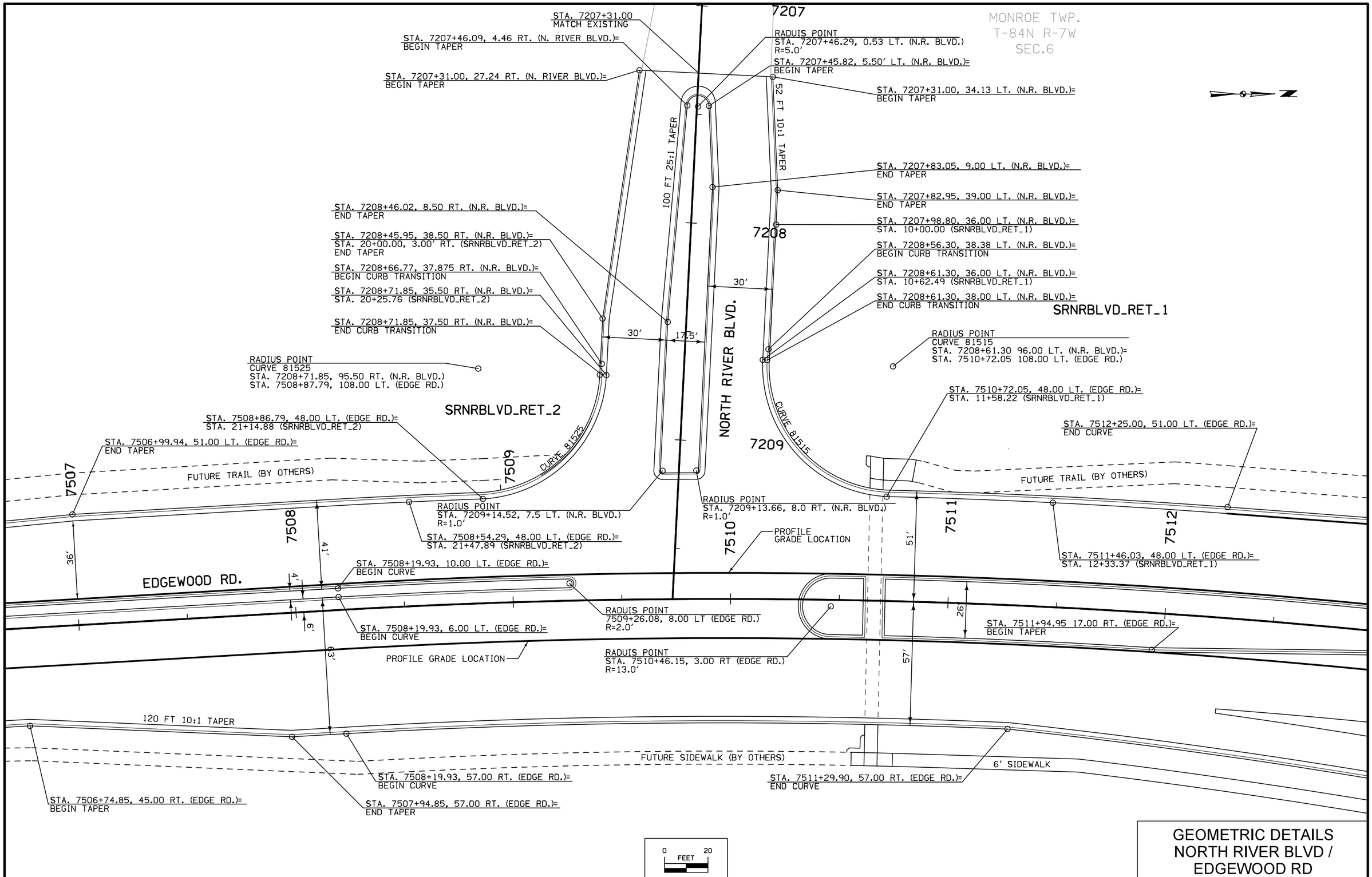

GEOMETRIC DETAILS
NORTH RIVER BLVD / EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.18

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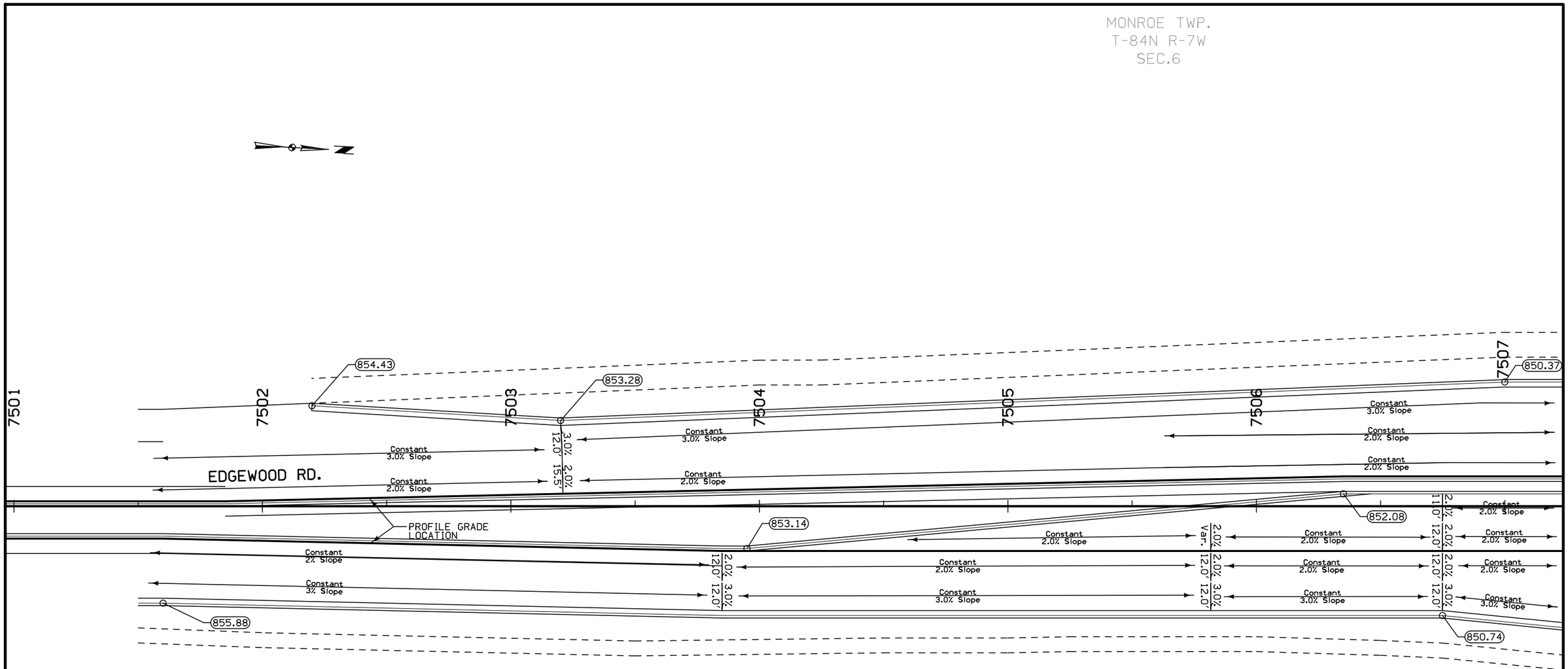
MONROE TWP.
T-84N R-7W
SEC.6



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STAKING DETAILS
NORTH RIVER BLVD /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.19

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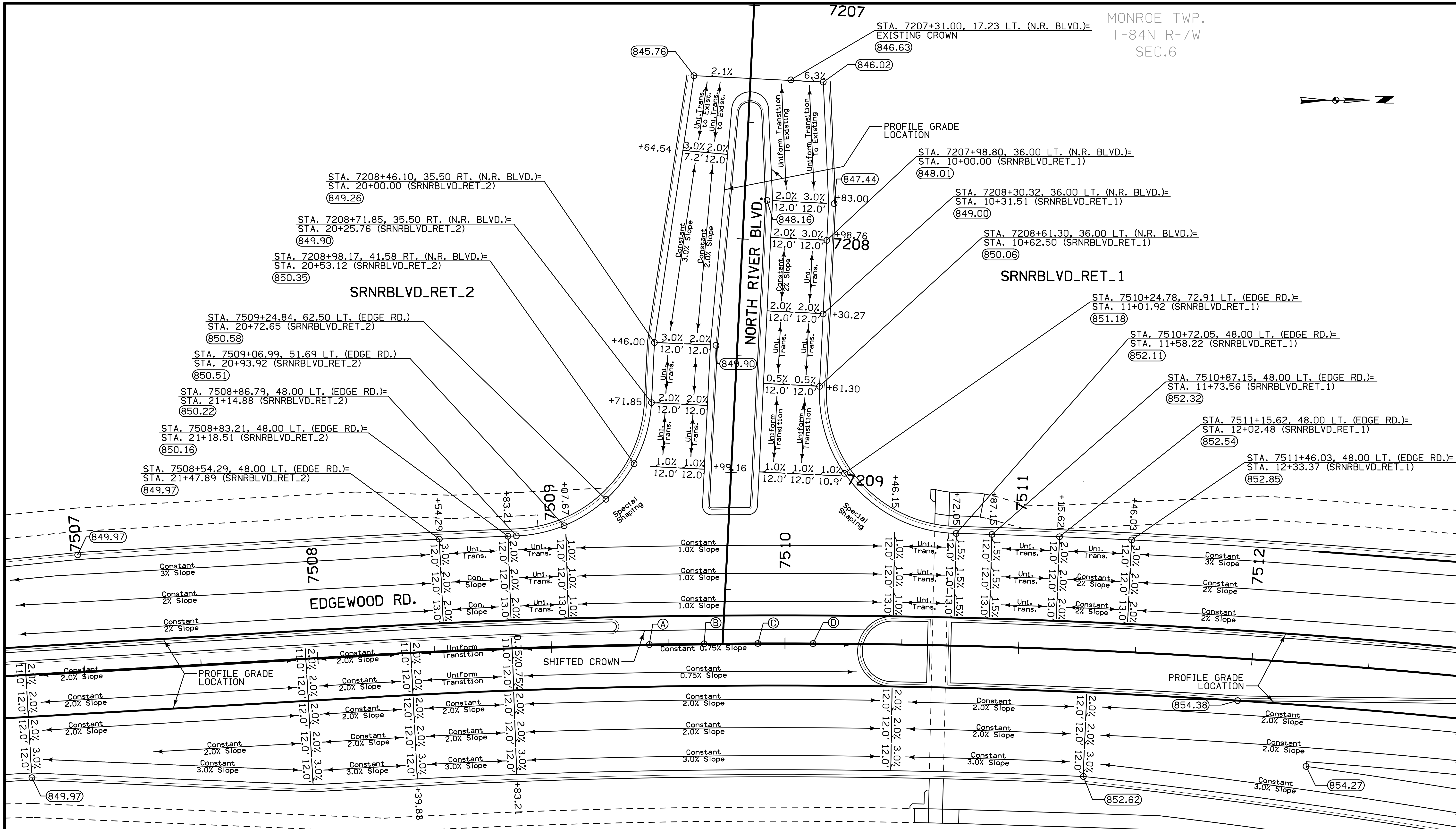

	ROADWAY	STATION	C.L. ELEVATION	SHIFTING CROWN ELEV.	SHIFTING CROWN DIST. FROM C.L.
A	EDGE RD.	7509+41.95	851.33	851.36	5.00 LT.
B	EDGE RD.	7509+65.42	851.51	851.55	5.00 LT.
C	EDGE RD.	7509+88.43	851.73	851.76	5.00 LT.
D	EDGE RD.	7510+12.00	851.98	852.02	5.00 LT.

0 FEET 20

STAKING DETAILS
NORTH RIVER BLVD / EDGEWOOD RD

ENGLISH | IOWA DOT | DESIGN TEAM **Iowa DOT\CH2MHILL** | **LINN** COUNTY | PROJECT NUMBER **NHSX-100-1(79)--3H-57** | SHEET NUMBER **L.20**

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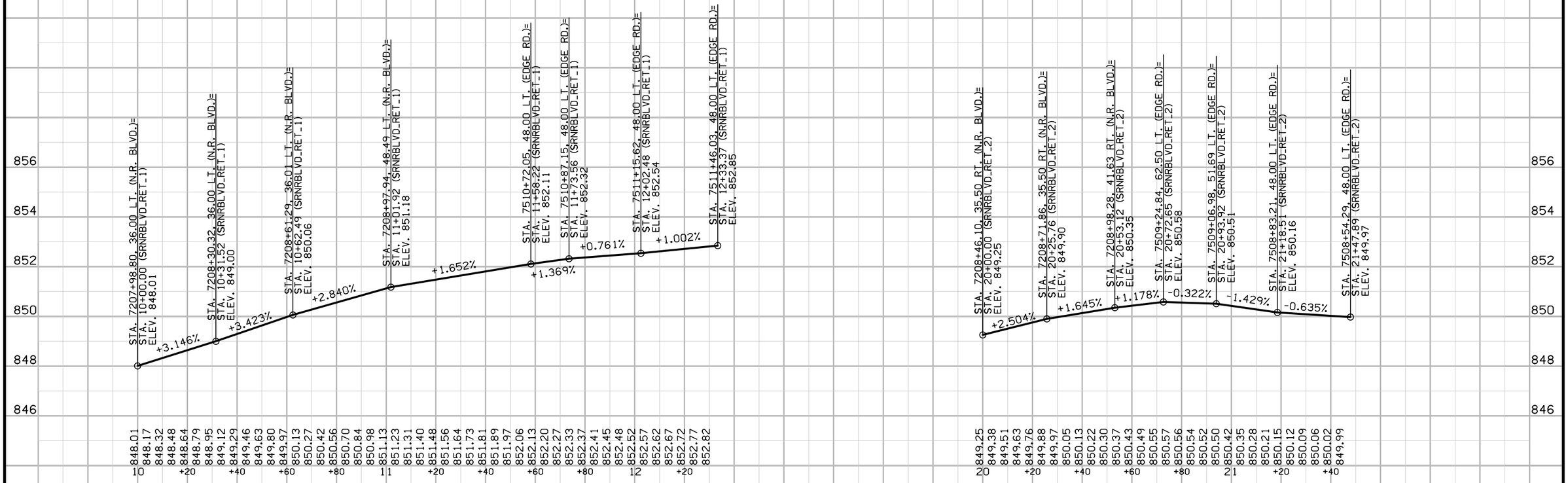
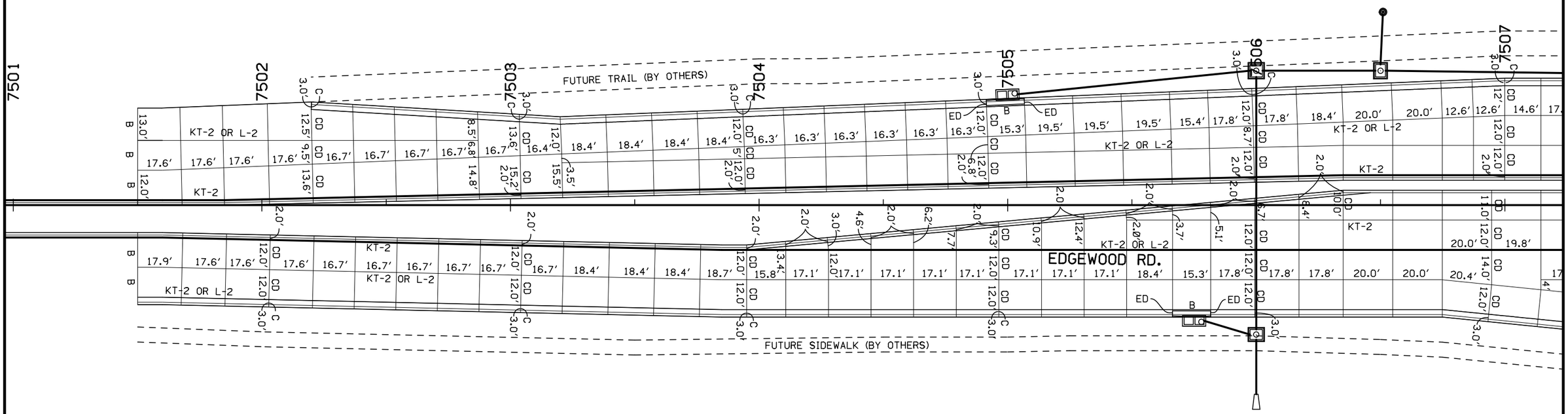


EDGE RETURN PROFILES
NORTH RIVER BLVD /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.21

MONROE TWP.
T-84N R-7W
SEC.6



NOTE:

All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.

All transverse joints shall be CD joints with a maximum 20' spacing unless indicated otherwise.

If a joint length is 2', a C joint shall be used instead of a CD joint.

Refer to Standard Road Plans for details of paved header, if applicable.

Refer to Standard Road Plans for PV-101 for additional details.

Refer to Standard Road Plans for additional jointing details around physical features.

Refer to U Sheets for Bridge Approach Pavement Details.

0 20
FEET

JOINTING DETAILS
NORTH RIVER BLVD /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.22

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NOTE:

All longitudinal joints shall be either KT-2 or L-2 unless indicated otherwise.

All transverse joints shall be CD joints with a maximum 20' spacing unless indicated otherwise.

If a joint length is 2', a C joint shall be used instead of a CD joint.

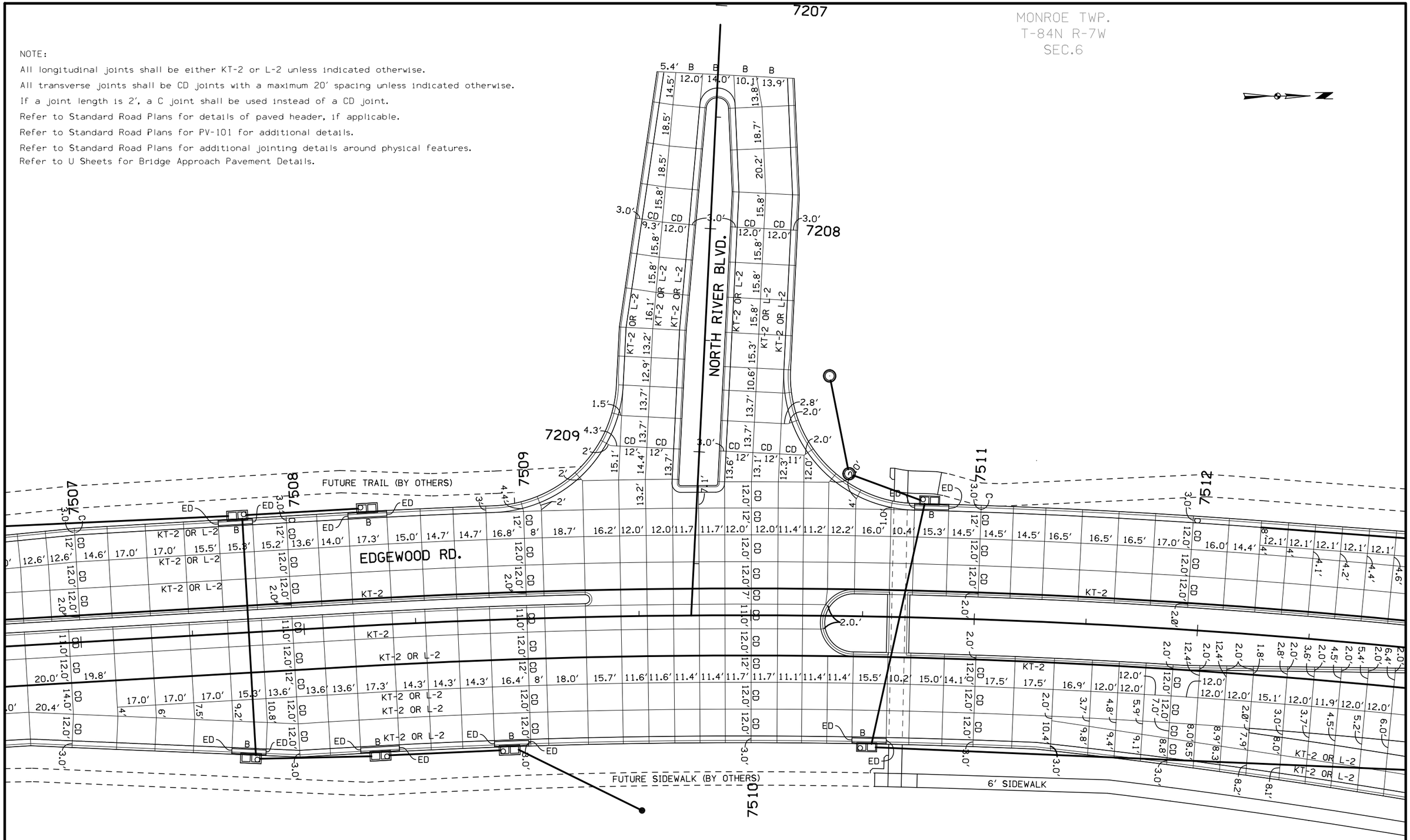
Refer to Standard Road Plans for details of paved header, if applicable.

Refer to Standard Road Plans for PV-101 for additional details.

Refer to Standard Road Plans for additional jointing details around physical features.

Refer to U Sheets for Bridge Approach Pavement Details.

MONROE TWP.
T-84N R-7W
SEC.6



JOINTING DETAILS
NORTH RIVER BLVD /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.23

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STA. 7523+00.47, 54.98 LT. (EDGE RD.)=
BEGIN TAPER

STA. 7523+34.26, 51.60 LT. (EDGE RD.)=
END TAPER/BEGIN TAPER

33.97 FT
10:1 TAPER

FUTURE TRAIL (BY OTHERS)

274.64 FT 40:1 TAPER

STA. 7526+10.24, 57.00 LT. (EDGE RD.)=
END TAPER

STA. 7526+70.00, 57.00 LT. (EDGE RD.)=
BEGIN TAPER

108.21 FT 89:1 TAPER

STA. 7527+77.49, 55.79 LT. (EDGE RD.)=
END TAPER/BEGIN TAPER

211.47 FT 10:1 TAPER

EDGEWOOD RD.

39'

STA. 7524+62.15, 1.78 LT. (EDGE RD.)=
END TAPER

STA. 7524+69.59, 0.46 LT. (EDGE RD.)=
BEGIN TAPER

STA. 7525+01.50, 12.14 RT. (EDGE RD.)=
END TAPER

PROFILE GRADE
LOCATION

57'

STA. 7523+83.26, 0.18 RT. (EDGE RD.)=
END TAPER / BEGIN TAPER

14'

78.94 FT 40:1 TAPER

RADIUS POINT
STA. 7525+00.77, 14.00 RT. (EDGE RD.)
R=2.0'

34.32 FT
3.25:1 TAPER

7527

8'

STA. 7527+26.82, 8.00 RT. (EDGE RD.)=
BEGIN TAPER

213.23 FT 10:1 TAPER

138.76 FT 10:1 TAPER

15.82'

8'

PROFILE GRADE
LOCATION

RADIUS POINT
STA. 7524+62.62, 17.22 RT. (EDGE RD.)
R=19.0''

41'

7523

7524

STA. 7524+93.31, 16.00 RT. (EDGE RD.)
BEGIN CURVE

7525

RADIUS POINT
STA. 7525+72.99, 12.00 RT. (EDGE RD.)
R=4.0'

7526

STA. 7526+27.23, 16.00 RT. (EDGE RD.)=
POINT OF COMPOUND CURVE

41'

STA. 7527+68.53, 13.33 RT. (EDGE RD.)=
END CURVE

7528

7529

STA. 8526+06.96, 03.84 LT. (EDGE RD.)=
BEGIN TAPER

RADIUS POINT
STA. 8526+07.79, 06.73 LT. (S. HYVEE)
R=3.0'

6' SIDEWALK

STA. 7523+57.79, 54.00 RT. (EDGE RD.)=
STA. 30+00.00 (SRHYVEE_RET_3)

CURVE 83035

8526

CURVE 83045

STA. 7527+70.05, 54.30 RT. (EDGE RD.)=
END CURVE

STA. 7526+89.19, 53.49 RT. (EDGE RD.)=
STA. 40+00.00 (SRHYVEE_RET_4)

STA. 7524+20.29, 54.00 RT. (EDGE RD.)=
STA. 8525+73.15, 104.67 RT. (S. HYVEE)=
STA. 30+62.50 (SRHYVEE_RET_3)

SRHYVEE_RET_3

42.69 FT
3.48:1 TAPER

STA. 7526+26.69, 54.00 RT. (EDGE RD.)=
STA. 8525+79.11, 103.17 LT. (S. HYVEE)=
STA. 40+63.22 (SRHYVEE_RET_4)

STA. 7526+26.69, 57.00 RT. (EDGE RD.)=
POINT OF COMPOUND CURVE

SRHYVEE_RET_4

35.51'

35.5'

RADIUS POINT
CURVE 83035
STA. 8526+48.09, 107.51 RT. (S. HYVEE)
STA. 7524+20.29, 129.00 RT. (EDGE RD.)

RADIUS POINT
CURVE 83045
STA. 8526+49.10, 102.50 RT. (S. HYVEE)
STA. 7526+26.68, 124.00 RT. (EDGE RD.)

STA. 31+71.93, 2.00 RT. (SRHYVEE_RET_3)
BEGIN CURB TRANSITION

STA. 8526+47.56, 32.51 RT. (S. HYVEE)=
STA. 31+76.93 (SRHYVEE_RET_3)
END CURB TRANSITION

STA. 8526+47.99, 7.95 RT. (S. HYVEE)=
END TAPER

SOUTH HYVEE ACCESS

8527

STA. 41+68.36, 2.00 LT. (SRHYVEE_RET_4)
BEGIN CURB TRANSITION

STA. 8526+48.62, 32.50 LT. (S. HYVEE)=
STA. 41+73.36 (SRHYVEE_RET_4)
END CURB TRANSITION

8528

MONROE TWP.
T-84N R-7W
SEC.6

0 20
FEET

GEOMETRIC DETAILS
SOUTH HYVEE ACCESS /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.24

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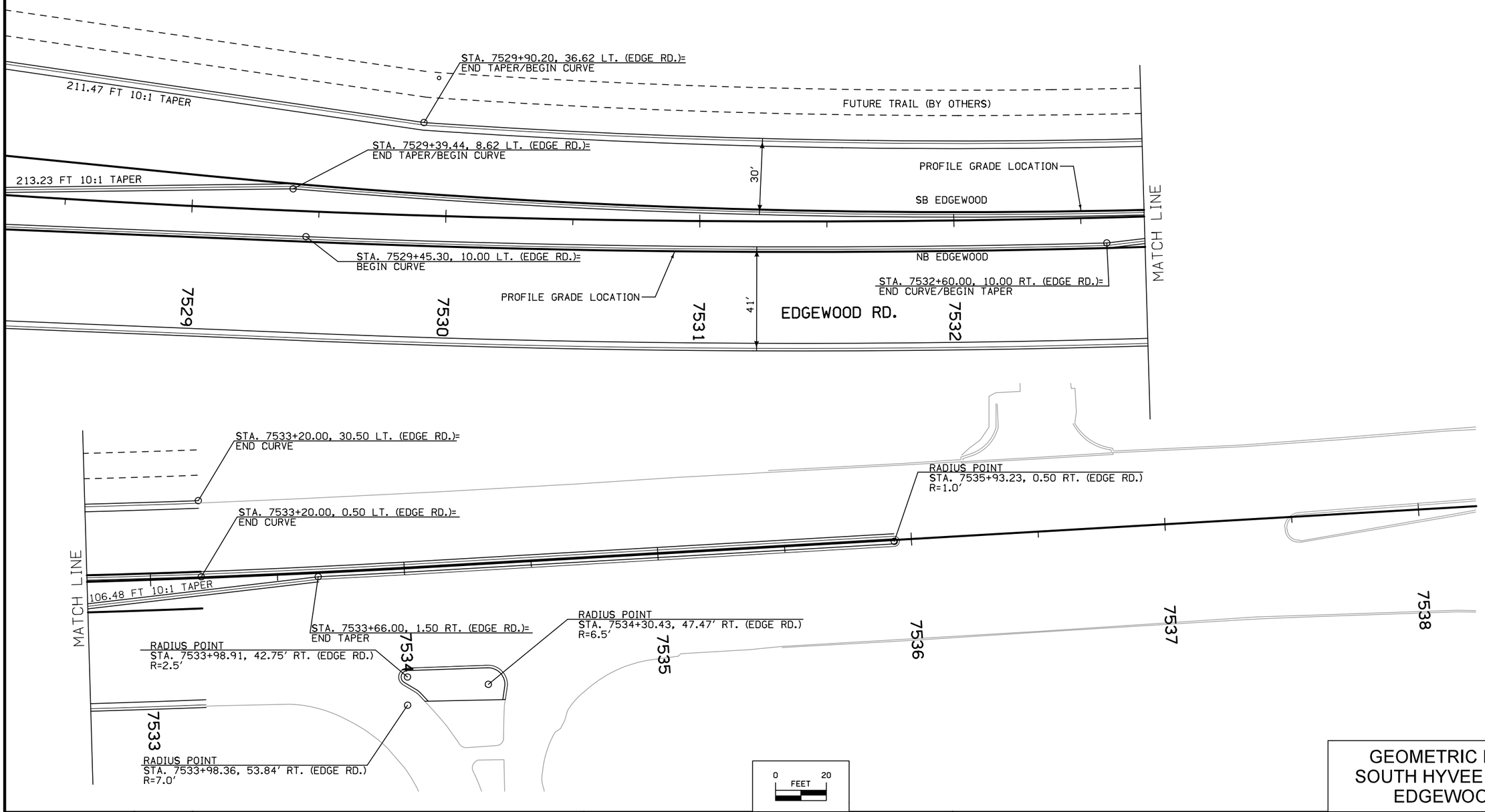
MONROE TWP.
T-84N R-7W
SEC.6



GEOMETRIC DETAILS
SOUTH HYVEE ACCESS /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.25

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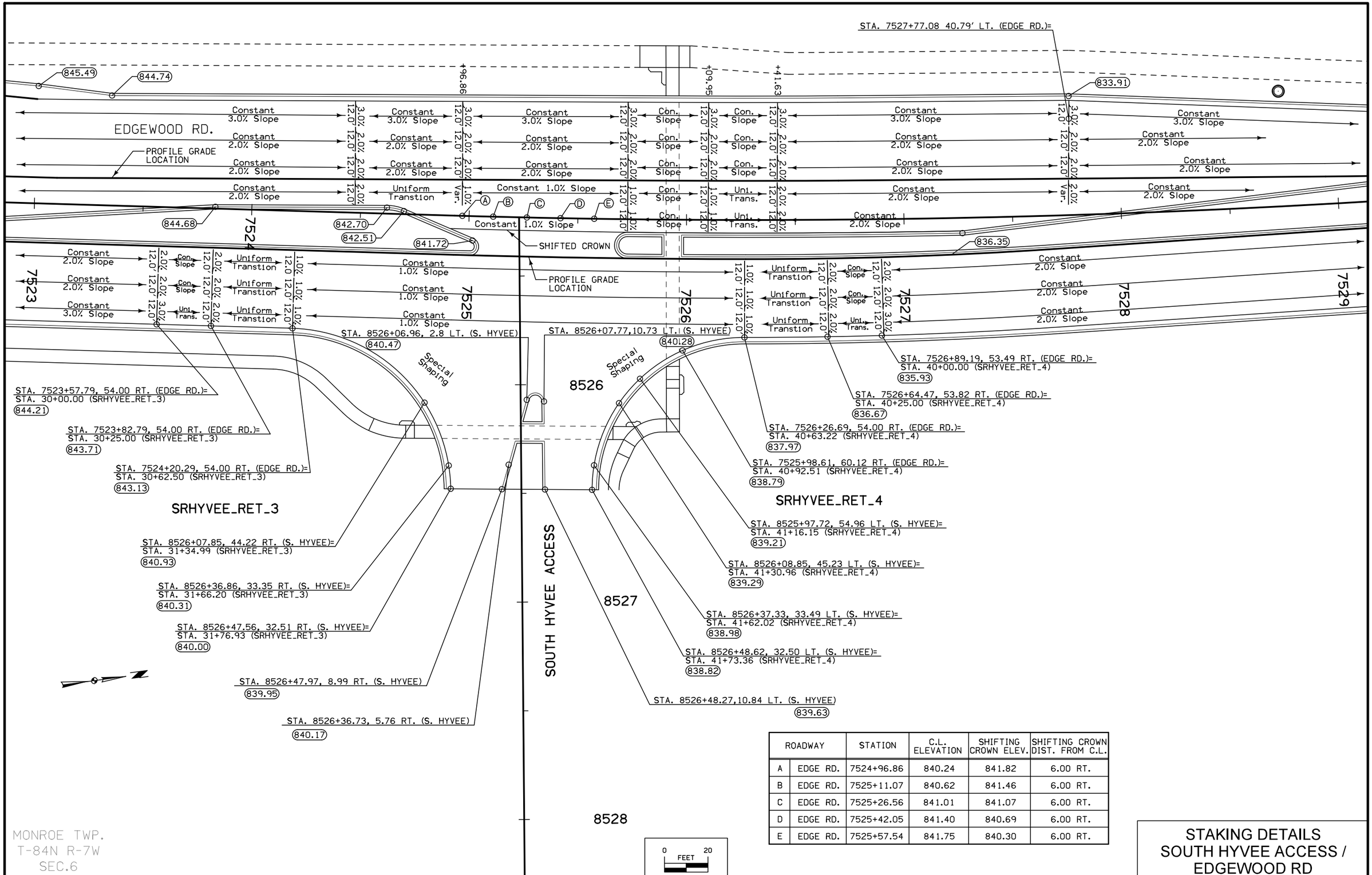
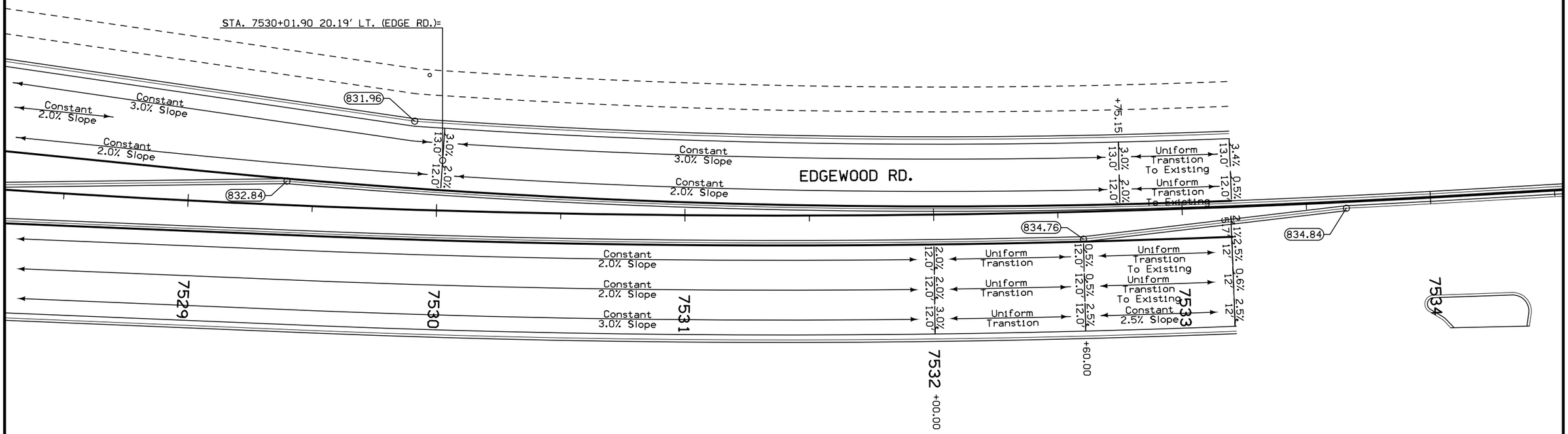


ROADWAY		STATION	C.L. ELEVATION	SHIFTING CROWN ELEV.	SHIFTING CROWN DIST. FROM C.L.
A	EDGE RD.	7524+96.86	840.24	841.82	6.00 RT.
B	EDGE RD.	7525+11.07	840.62	841.46	6.00 RT.
C	EDGE RD.	7525+26.56	841.01	841.07	6.00 RT.
D	EDGE RD.	7525+42.05	841.40	840.69	6.00 RT.
E	EDGE RD.	7525+57.54	841.75	840.30	6.00 RT.

MONROE TWP.
T-84N R-7W
SEC.6

STAKING DETAILS
SOUTH HYVEE ACCESS / EDGEWOOD RD

MONROE TWP.
T-84N R-7W
SEC.6



0 FEET 20

STAKING DETAILS
SOUTH HYVEE ACCESS /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.27

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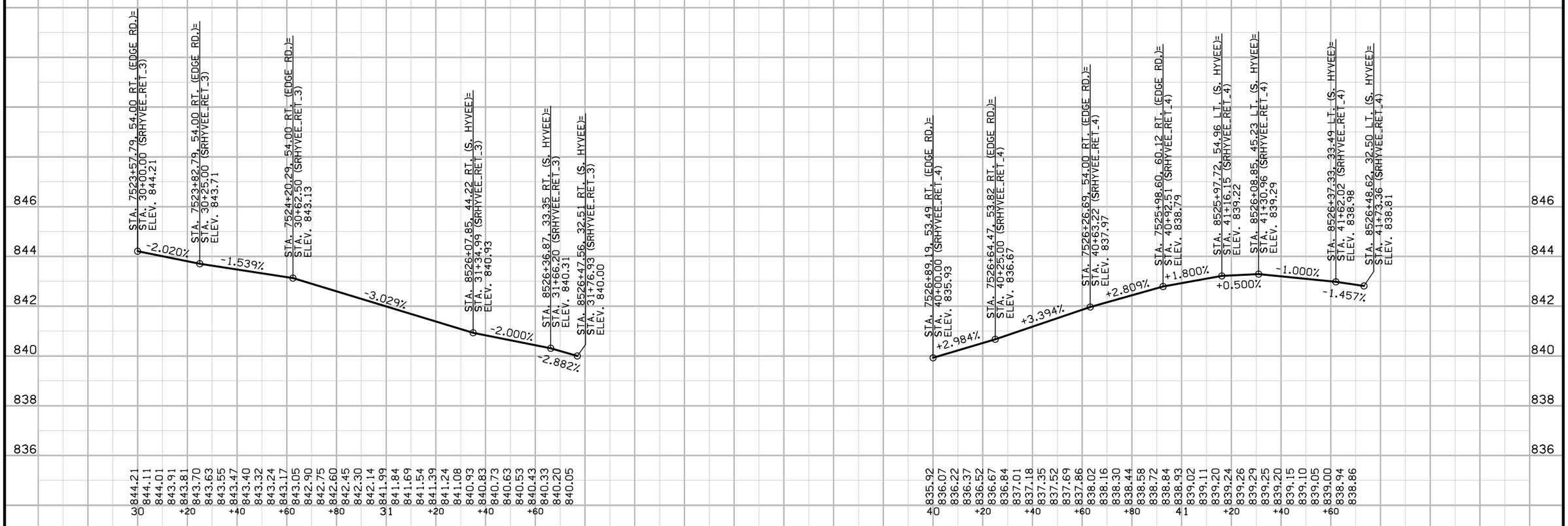

EDGE RETURN PROFILES
SOUTH HYVEE ACCESS /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.28

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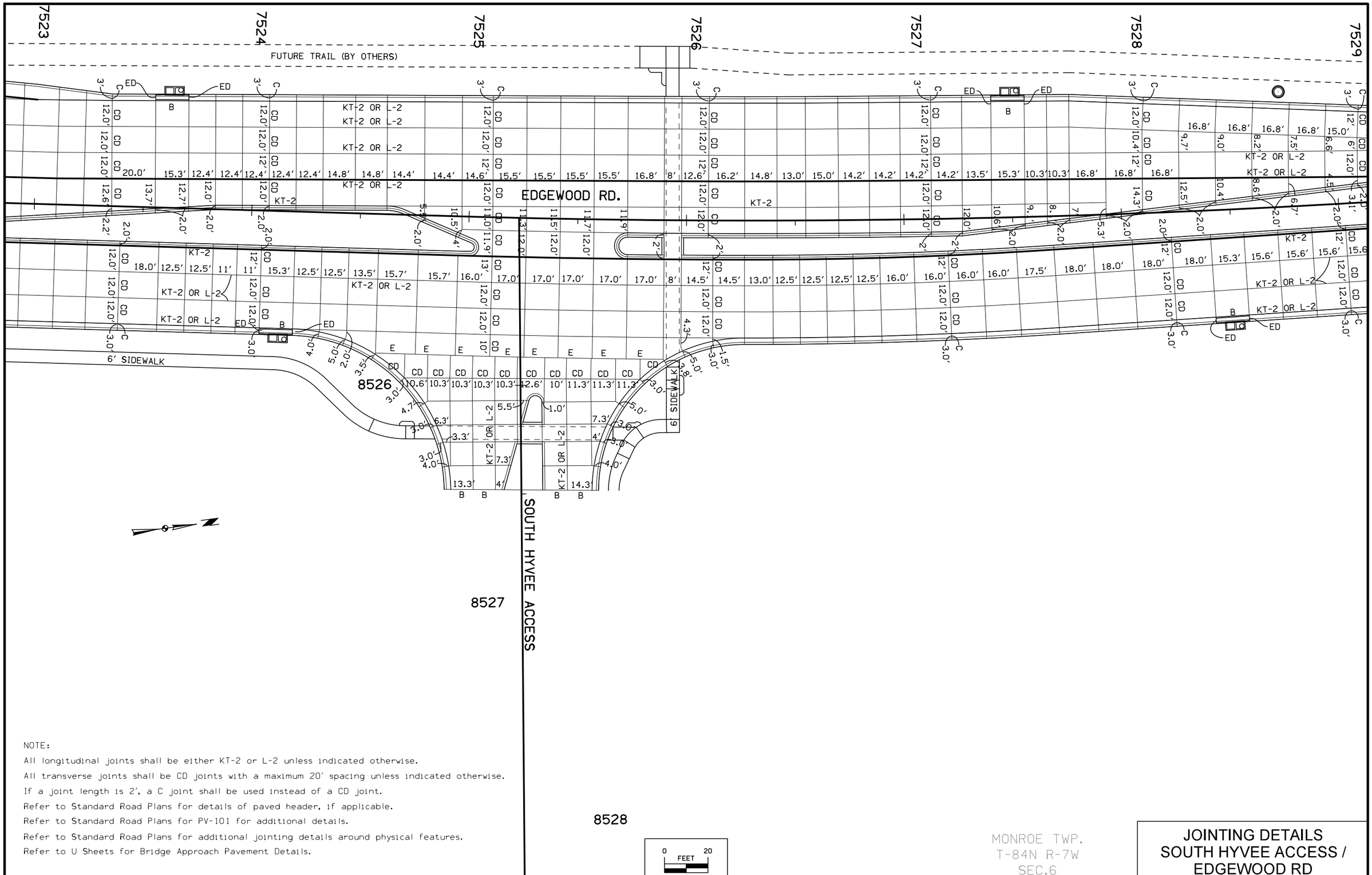

NOTE:

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All transverse joints shall be CD joints with a maximum 20' spacing unless indicated otherwise.

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Refer to Standard Road Plans for details of paved header, if applicable.

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Refer to Standard Road Plans for additional jointing details around physical features.

Refer to U Sheets for Bridge Approach Pavement Details.

0 FEET 20

MONROE TWP.
T-84N R-7W
SEC.6

JOINTING DETAILS
SOUTH HYVEE ACCESS /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.29

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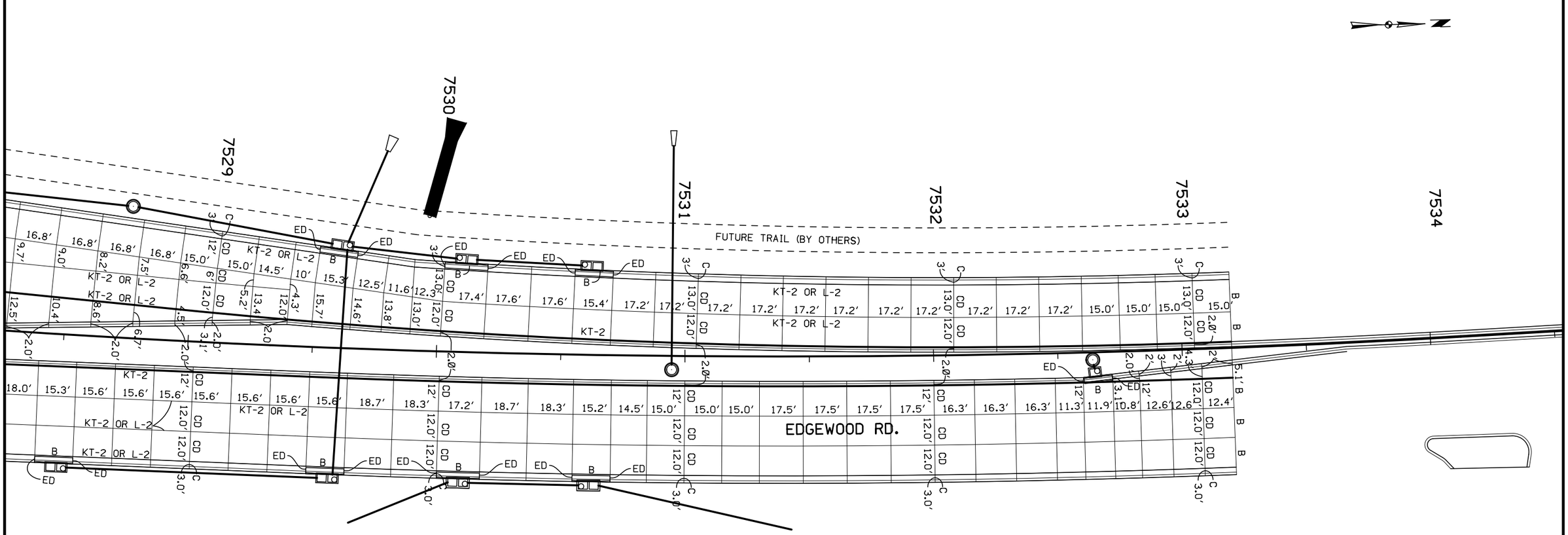
MONROE TWP.
T-84N R-7W
SEC.6



NOTE:

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0 20
FEET

JOINTING DETAILS
SOUTH HYVEE ACCESS /
EDGEWOOD RD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER L.30

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STORM SEWER

* Bid Item
** For SW-545

For bedding and backfill purposes under Primary roads, use material complying with Article 4120.04 (Class A Crushed Stone) of the Standard Specifications for all bedding and backfill. Place and compact the material according to Article 2435.03, A and Article 2552.03, E (Class I materials).

INTAKES AND UTILITY ACCESSES

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade Elev.	Bottom Well Elev.	Extension Length** FT	Notes
Existing Structures (For Information Only)						
EX-7000	7504+49.53, 4.50	Manhole	852.05	847.55		Remove
EX-7001	7506+17.89, 2.14	Manhole	851.03	841.75		Remove
EX-7002	7506+19.18, 58.79	42" Outlet	842.53			Remove
EX-7003	7506+18.73, -65.23	Manhole	845.43	841.08		Remove
EX-7010	7506+50.87, -72.05	Grate Intake	842.95	838.67		Remove
EX-7004	7506+71.77, -0.26	Intake	851.33	847.23		Remove
EX-7005	7507+46.97, -47.10	Manhole	848.29	842.19		Remove
EX-7006	7507+46.24, -0.08	Intake	851.31	847.46		Remove
EX-7007	7508+21.53, 0.80	Intake	851.28	847.83		Remove
EX-MH7015	7506+56.99, -251.59	Manhole	841.50	837.17		UAC
EX-MH7017	7506+60.53, -350.42	Manhole	841.50	836.20		UAC
EX-MH7060	7205+90.01, 89.69	Manhole	840.04	832.14		UAC
EX-7090	7203+91.70, 50.5	Area Intake w/2.8" Dia Lid	833.06	Unknown		UAC
EX-O7090	7203+13.83, 70	30" Outlet	821.97			UAC
EX-MH7050	7205+82.45, 19.55	Manhole	841.71	838.21		UAC
EX-7022	7510+53.11, 12.71	Manhole	851.55	847.55		Remove
EX-7021	7510+55.08, -50.10	Manhole	853.38	845.96		Remove
EX-MH7020	7208+63.18, -56.6	Manhole	850.99	841.79		UAC
EX-MH7030	7206+16.52, -32.09	Manhole	842.94	838.34		UAC
EX-MH7040	7205+81.84, -20.33	Manhole	841.22	837.06		UAC
EX-MH7070	7203+32.90, -19.5	Manhole	836.77	829.67		UAC
EX-MH7080	7203+32.20, 20.8	Manhole	836.57	828.82		UAC
EX-O7080	7203+03.47, 61.93	30" Outlet	823.82			UAC
EX-7091	7516+13.94, 162.64	Intake	852.18	847.18		Remove
EX-7092	7516+93.39, 160.59	18" Outlet	847.15			Remove
EX-7093	7524+57.40, 21.10	Intake	842.55	838.75		Remove
EX-7094	7426+04.09, 16.41	Manhole	838.61	834.31		Remove
EX-7095	7526+02.62, -45.65	18" Outlet	833.39			Remove
EX-7096	7528+54.70, 10.36	Manhole	833.94	827.74		Remove
EX-7097	7528+53.33, -54.64	15" Outlet	827.35			Remove
EX-MH6206	7529+64.73, 71.06	Manhole	830.99	821.63		Adjust Minor
EX-7101	7530+16.43, 55.97	Intake	833.93	825.73		Remove
EX-MH7110	7531+44.74, 70.03	Manhole	834.33	827.28		UAC
EX-7111	7533+97.14, 69.07	Manhole	835.18	829.98		UAC
EX-7112	7533+68.83, 4.03	Intake	834.39	831.29		UAC
EX-7113	7530+94.68, 5.54	Manhole	831.82	824.52		Adjust Minor
EX-7114	7530+95.06, -51.60	15" Outlet	820.27			Remove
EX-8000	1117+16.26, 2.77	Intake	842.50			Remove
Proposed Structures						
MH-2395	42586+12.00, 10	SW-401 (48")	817.38	804.42		Division 3
I-1395	1086+15.00 R 2, 52.5	SW-512 (24" Type 4B Casting)	816.25	805.51		Division 1
2400	42587+00.00, 7	SW-508	818.40	805.76		Division 1
MH-1405	1087+75.00 R 2, 54	SW-401 (48")	818.87	809.15		Division 1
2410	42589+75.00, 7	SW-508	826.12	814.39		Division 1
I-1412	1090+97.00 R 2, 71.3	SW-512 (24" Type 5 Casting)	819.73	814.68		Division 1
1400	1087+75.00 R 2, 0	SW-547 (Box)	820.96	811.37		Division 1
MH-2415	42590+50.00, 10	SW-401 (48")	829.05	817.39		Division 3
3400	43586+93.00, -7	SW-508	818.71	806.51		Division 1
2420	42592+50.00, 10.68	SW-508	834.65	824.27		Division 1
2700	42590+50.00, -19.79	SW-549 Modified	828.88	819.14		Division 1
I-1397	1087+05.00 R 2, -47.5	SW-512 (24" Type 4B Casting)	818.76	806.94		Division 1
3405	43588+25.00, -7	SW-508	820.92	810.07		Division 1
MH-2425	42593+75.00, 22	SW-401 (48")	839.03	828.91		Division 3
MH-1414	43590+25.00, 46.8	SW-401 (60")	821.83	810.33		Division 3
3410	43589+55.00, -7	SW-508	823.21	813.99		Division 1
2430	42596+00.00, 21.53	SW-508	845.44	834.74		Division 1
I-1415	1094+28.00 R 2, -66.49	SW-512 (24" Type 5 Casting)	822.39	814.40		Division 1
3415	43590+00.00, -8.01	SW-508	824.19	816.30		Division 1
MH-2435	42597+85.00, 40.5	SW-401 (48")	851.39	838.84		Division 3
2710	42596+00.00, -27.79	SW-549 Modified	846.33	836.99		Division 1

PIPES

Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. Bid length is measured from center of structure to center of structure.

Line Number	Intake/ Utility Access No. From	Intake/ Utility Access No. To	Class 'D'	Pipe Diameter IN	Bid* Length FT	Design Length FT	Slope %	Flow Lines Inlet Elevation	Flow Lines Outlet Elevation	Flow Lines Other Elevation	Pipe Profile Sheet No.	Notes
Existing Pipes (For Information Only)												
EX-7000	EX-7000	EX-7001		12		168.00	1.40	847.55	845.25			Remove
EX-7001	EX-7001	EX-7003		42		67.00	0.63	841.75	841.33			Remove
EX-7002	EX-7002	EX-7001		42		56.00	1.39	842.53	841.75			Remove
EX-7003	EX-7003	EX-7010		24		33.00	6.55	841.08	838.92			Remove
EX-7010	EX-7010	EX-MH7015		24		180.00	0.65	838.67	837.50			UAC
EX-7004	EX-7004	EX-7001		12		54.00	4.07	847.23	845.03			Remove
EX-7005	EX-7005	EX-7010		18		99.00	3.20	842.19	839.02			Remove
EX-7006	EX-7006	EX-7004		12		74.00	0.24	847.46	847.28			Remove
EX-7006a	EX-7006	EX-7005		15		47.00	3.96	847.75	845.89			Remove
EX-7007	EX-7007	EX-7006		12		75.00	0.36	847.83	847.56			Remove
EX-7015	EX-MH7015	EX-MH7017		36		94.89	0.92	837.17	836.30			UAC
EX-7017	EX-MH7017	EX-MH7060		36		276.02	1.43	836.20	832.24			UAC
EX-7060	EX-MH7060	EX-7090		36		215.32		832.14	Unknown			UAC
EX-7090	EX-7090	EX-O7090		36		78.36		Unknown	821.97			UAC
EX-7050	EX-MH7050	EX-MH7060		18		66.60	3.86	838.26	835.69			UAC
EX-7050a	EX-MH7050	EX-MH7040		15		35.89	1.39	838.21	837.71			UAC
EX-7022	EX-7022	EX-7021		15		63.00	1.73	847.55	846.46			Remove
EX-7021	EX-7021	EX-MH7020		15		61.00	6.51	845.96	841.99			Remove
EX-7020	EX-MH7020	EX-MH7030		15		239.49	1.44	841.79	838.34			UAC
EX-7030	EX-MH7030	EX-MH7040		15		31.53	2.32	838.34	837.61			UAC
EX-7040	EX-MH7040	EX-MH7070		18		237.66	2.42	837.06	831.32			UAC
EX-7070	EX-MH7070	EX-MH7080		30		36.31	1.93	829.67	828.97			UAC
EX-7080	EX-MH7080	EX-O7080		30		42.89	12.82	828.82	823.32			UAC
EX-7091	EX-7091	EX-7092		18		80.00	0.66	847.68	847.15			Remove
EX-7093	EX-7093	EX-7094		15		147.00	2.92	838.75	834.46			Remove
EX-7094	EX-7094	EX-7095		15		62.00	1.48	834.31	833.39			Remove
EX-7096	EX-7096	EX-7097		15		65.00	0.60	827.74	827.35			Remove
EX-7101	EX-7101	EX-MH6206		15		54.00	3.31	825.73	823.94			Remove
EX-7110	EX-7110	EX-7101		15		131.00	1.26	827.53	825.88			Remove
EX-7111	EX-7111	EX-7110		15		256.00	0.94	829.98	827.57			UAC
EX-7112	EX-7112	EX-7113		15		274.00	1.96	831.29	825.92			UAC
EX-7113	EX-7113	EX-7114		15		57.00	7.46	824.52	820.27			Remove
posed Pi												
P-2395	MH-2395	2390	2000	30	166	159.92	1.00	804.92	803.11		M.10	Division 3
P-1395	I-1395	MH-2395	2000	24	32	29.49	2.00	806.01	805.42		M.10	Division 1
P-2400	2400	MH-2395	2000	24	88	84.01	1.00	806.26	805.42		M.10	Division 3
P-1405	MH-1405	I-1395	2000	18	160	157.01	2.00	809.65	806.51		M.10	Division 1
P-2410	2410	2400	2000	18	275	271.00	3.00	814.89	806.76		M.10	Division 3
P-1412	I-1412	MH-1405	2000	18	322	319.46	1.70	815.18	809.75		M.10	Division 1
P-1400	1400	MH-1405	2000	15	54	48.50	2.00	811.87	810.90		M.10	Division 1
P-2415	MH-2415	2410	2000	18	75	71.01	3.00	817.89	815.76		M.10	Division 3
P-3400	3400	3390	2000	36	243	238.72	1.00	807.01	804.38		M.15	Division 3
P-2420	2420	MH-2415	2000	18	200	195.89	3.00	824.77	818.89		M.10	Division 3
P-2700	2700	MH-2415	2000	15	29	25.08	2.00	819.64	819.14		M.10	Division 1
P-1397	I-1397	3400	2000	36	36	32.79	1.00	807.44	807.11		M.13	Division 1
P-3405	3405	3400	2000	24	132	127.85	2.00	810.57	808.01		M.15	Division 3
P-2425	MH-2425	2420	2000	18	125	121.48	3.00	829.41	825.77		M.10	Division 3
P-1414	MH-1414	I-1397	2000	36	323	319.28	1.00	810.83	807.64		M.13	Division 3
P-3410	3410	3405	2000	18	130	125.85	2.00	814.49	811.97		M.15	Division 3
P-2430	2430	MH-2425	2000	18	225	220.96	2.50	835.24	829.71		M.10	Division 3
P-1415	I-1415	MH-1414	2000	36	400	396.98	1.00	814.90	810.93		M.13	Division 3
P-3415	3415	3410	2000	18	45	40.88	2.00	816.80	815.99		M.15	Division 3
P-2435	MH-2435	2430	2000	18	194	189.94	2.00	839.34	835.54		M.11	Division 3
P-2710	2710	2430	2000	15	50	46.62	3.00	837.49	836.09		M.10	Division 1

STORM SEWER

* Bid Item
** For SW-545

For bedding and backfill purposes under Primary roads, use material complying with Article 4120.04 (Class A Crushed Stone) of the Standard Specifications for all bedding and backfill. Place and compact the material according to Article 2435.03, A and Article 2552.03, E (Class I materials).

INTAKES AND UTILITY ACCESSES

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade Elev.	Bottom Well Elev.	Extension Length** FT	Notes
I-3800	1097+35.00 R 2, -72	SW-512 (24" Type 5 Casting)	823.69	816.03		Division 1
3417	42596+00.00, -11	SW-508	826.11	818.72		Division 1
I-3420	43591+58.00, -20.5	SW-512 (36" Type 4D Casting)	829.13	820.72		Division 2
2440	42698+50.00, 7	SW-508	852.05	840.19		Division 1
2720	42598+04.20, -27.79	SW-549 Modified	851.22	842.41		Division 1
1430	1099+00.00 R 2, 0	SW-547 (Box)	829.48	817.01		Division 1
3430	43592+50.00, -17.42	SW-546	831.40	823.67		Division 1
I-3765	42599+00.00, 44	SW-512 (24" Type 5 Casting)	847.00	842.23		Division 3
2725	42598+99.40, -27.79	SW-549 Modified	852.95	846.06		Division 1
MH-1435	1101+25.00 R 2, -1.13	SW-401 (48")	830.88	818.22		Division 3
3440	43595+00.00, -27.42	SW-546	839.00	829.11		Division 1
I-1439	1101+56.50 R 2, 67.9	SW-512 (36" Type 4D Casting)	826.31	820.74		Division 3
I-1441	1101+86.00 R 2, -72.06	SW-512 (24" Type 5 Casting)	826.49	818.77		Division 1
3450	43597+00.00, -34.79	SW-549	844.90	833.56		Division 1
MH-1442	1104+00.00 R 2, -73	SW-401 (48")	827.82	819.95		Division 3
MH-3455	43698+38.50, 0	SW-401 (48")	848.36	836.75		Division 1
3700	43597+50.00, 27.79	SW-549 Modified	846.38	836.29		Division 1
MH-1443	1107+00.00 R 2, -64	SW-401 (48")	830.70	821.53		Division 3
I-3760	43598+84.00, -47	SW-512 (24" Type 5 Casting)	843.00	838.02		Division 1
3702	43598+35.00, 27.79	SW-549 Modified	848.86	840.78		Division 1
3665	41509+75.00, 33	SW-512 (24" Type 4B Casting)	834.28	823.39		Division 1
3705	43599+37.10, 27.79	SW-549 Modified	851.76	845.73		Division 1
3650	41510+02.20, -9.54	SW-510	835.23	823.73		Division 1
3740	41509+42.40, 24.33	SW-549 Modified	835.97	830.53		Division 1
1460	1110+50.00 R 2, 0	SW-547 (Box) Modified	836.62	827.25		Division 1
3640	41509+69.00, -11.75	SW-508	835.22	824.64		Division 1
3660	41510+33.60, -7.44	SW-508	835.31	824.15		Division 1
3630	41508+77.00, -17.87	SW-508	835.60	825.38		Division 1
3465	1111+57.00 R 2, -80.54	SW-508	836.05	824.91		Division 1
3620	41506+75.00, -20.67	SW-508	838.69	826.67		Division 1
3467	1112+50.00 R 2, -74.35	SW-508	836.82	825.54		Division 1
3610	41505+25.00, -24.48	SW-508	842.02	827.65		Division 1
3745	41506+75.00, 27.79	SW-549 Modified	839.57	830.09		Division 1
3470	1113+75.00 R 2, -66.01	SW-508	837.84	826.52		Division 1
3600	41503+22.80, -31.69	SW-508	846.47	833.61		Division 1
I-3605	41505+25.00, -68.33	SW-512 (24" Type 5 Casting)	833.34	828.29		Division 2
3475	1115+00.00 R 2, -57.68	SW-508	838.51	827.16		Division 1
1470	1113+75.00 R 2, 0	SW-547 (Box) Modified	838.64	829.95		Division 1
3595	41601+22.00, -7	SW-510	848.95	837.58		Division 1
3750	41502+75.00, 27.79	SW-549 Modified	847.44	837.59		Division 1
3480	1116+50.00 R 2, -53	SW-508	838.73	827.84		Division 1
I-3755	41501+30.00, -45	SW-512 (24" Type 5 Casting)	845.00	839.71		Division 1
MH-3751	41501+92.33, 24	SW-401 (48")	849.47	842.01		Division 1
3485	1117+50.00 R 2, -53	SW-508	839.35	829.28		Division 1
1480	1116+50.00 R 2, 0	SW-547 (Box) Modified	840.33	828.88		Division 1
3752	41501+12.24, 27.79	SW-549 Modified	851.45	845.39		Division 1
3490	1118+75.00 R 2, -53	SW-508	840.13	832.91		Division 1
3495	1120+00.00 R 2, -53	SW-508	840.89	835.78		Division 1
1490	1118+75.00 R 2, 0	SW-547 (Box) Modified	841.73	836.39		Division 1
2480	1116+50.00 R 2, 60	SW-508	841.19	829.41		Division 1
I-2475	1115+25.00 R 2, 88.6	SW-512 (24" Type 5 Casting)	835.29	830.46		Division 2
O-1410	1091+50.00, 65.58	RF-3 (15")				Division 1; Outlet FL=820.06
1410	1091+50.00, 0	SW-547 (Box)	824.83	819.93		Division 1
O-1420	1095+00.00, 65.58	RF-3 (15")				Division 1; Outlet FL=822.23
1420	1095+00.00, 0	SW-547 (Box)	827.00	822.11		Division 1
O-1440	1103+00.00, 65.58	RF-3 (15")				Division 1; Outlet FL=827.20
1440	1103+00.00, 0	SW-547 (Box)	831.97	827.20		Division 1

PIPES

Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. Bid length is measured from center of structure to center of structure.

Line Number	Intake/ Utility Access No. From	Intake/ Utility Access No. To	Class 'D'	Pipe Diameter IN	Bid* Length FT	Design Length FT	Slope %	Flow Lines Inlet Elevation	Flow Lines Outlet Elevation	Flow Lines Other Elevation	Pipe Profile Sheet No.	Notes
P-3800	I-3800	I-1415	2000	36	307	305	0.50	816.53	815.00		M.13/M.14	Division 3
P-3417	3417	3415	2000	18	75	71	2.00	819.22	817.80		M.15	Division 3
P-3420	I-3420	3417	2000	18	83	80	2.00	821.22	819.62		M.15	Division 3
P-2440	2440	MH-2435	2000	18	57	53	2.00	840.69	839.64		M.11	Division 3
P-2720	2720	MH-2435	2000	15	70	66	2.00	842.91	841.59		M.11	Division 1
P-1430	1430	I-3800	2000	36	180	177	0.50	817.51	816.63		M.14	Division 1
P-3430	3430	I-3420	2000	15	92	88	2.00	824.17	822.40		M.15	Division 1
P-3765	I-3765	2440	2000	15	84	81	2.20	842.73	840.94		M.11	Division 3
P-2725	2725	2720	2000	15	91	86	2.00	846.56	844.91		M.11	Division 1
P-1435	MH-1435	1430	2000	36	225	221	0.50	818.72	817.62		M.14	Division 3
P-3440	3440	3430	2000	15	251	247	2.00	829.61	824.67		M.15	Division 1
P-1439	I-1439	MH-1435	2000	24	76	72	2.00	821.24	819.79		M.14	Division 1
P-1441	I-1441	MH-1435	2000	36	94	91	0.50	819.27	818.82		M.14	Division 1
P-3450	3450	3440	2000	15	202	197	2.00	834.06	830.11		M.15/M.16	Division 1
P-1442	MH-1442	I-1441	2000	36	214	211	0.50	820.45	819.40		M.14	Division 3
P-3455	MH-3455	3450	2000	15	139	135	2.00	837.25	834.56		M.16	Division 1
P-3700	3700	3450	2000	15	78	73	1.00	836.79	836.06		M.15	Division 1
P-1443	MH-1443	MH-1442	2000	36	300	296	0.50	822.03	820.55		M.14	Division 3
P-3760	I-3760	MH-3455	2000	15	72	69	1.40	838.52	837.55		M.16	Division 1
P-3702	3702	3700	2000	15	78	73	3.00	841.28	839.09		M.15	Division 1
P-3665	3665	MH-1443	2000	30	275	270	0.50	823.89	822.53		M.14	Division 3
P-3705	3705	3702	2000	15	93	88	3.00	846.23	843.58		M.15	Division 1
P-3650	3650	3665	2000	30	53	48	0.50	824.23	823.99		M.14	Division 1
P-3740	3740	3665	2000	15	36	31	3.20	831.03	830.04		M.14	Division 1
P-1460	1460	3665	2000	15	96	90	2.00	828.11	826.30		M.14	Division 1
P-3640	3640	3650	2000	21	33	27	0.50	825.14	825.01		M.16	Division 3
P-3660	3660	3650	2000	30	31	25	0.50	824.65	824.52		M.16	Division 3
P-3630	3630	3640	2000	21	92	88	0.50	825.88	825.44		M.16	Division 3
P-3465	3465	3660	2000	30	123	119	0.50	825.41	824.82		M.17	Division 3
P-3620	3620	3630	2000	21	202	198	0.50	827.17	826.18		M.16	Division 3
P-3467	3467	3465	2000	30	93	89	0.40	826.04	825.68		M.17	Division 3
P-3610	3610	3620	2000	18	150	146	0.50	828.15	827.42		M.16	Division 3
P-3745	3745	3620	2000	15	50	46	2.00	830.59	829.67		M.16	Division 1
P-3470	3470	3467	2000	24	125	121	0.40	827.02	826.54		M.17	Division 3
P-3600	3600	3610	2000	15	202	198	2.00	834.11	830.15		M.16	Division 1
P-3605	I-3605	3610	2000	15	42	39	1.00	828.79	828.40		M.16	Division 2
P-3475	3475	3470	2000	24	125	121	0.40	827.66	827.17		M.17	Division 3
P-1470	1470	3470	2000	15	68	63	1.00	830.45	829.82		M.17	Division 1
P-3595	3595	3600	2000	15	203	197	1.00	838.08	836.11		M.16	Division 1
P-3750	3750	3600	2000	15	78	74	2.00	838.09	836.61		M.16	Division 1
P-3480	3480	3475	2000	24	149	145	0.40	828.34	827.76		M.17	Division 3
P-3755	I-3755	3595	2000	15	60	57	2.00	840.21	839.08		M.16	Division 1
P-3751	MH-3751	3750	2000	15	76	71	2.00	842.51	841.09		M.16	Division 1
P-3485	3485	3480	2000	18	98	94	1.00	829.78	828.84		M.17	Division 1
P-1480	1480	3480	2000	15	55	49	0.60	829.38	829.09		M.17	Division 1
P-3752	3752	MH-3751	2000	15	73	69	2.00	845.89	844.51		M.16	Division 1
P-3490	3490	3485	2000	15	123	119	2.00	833.41	831.03		M.17	Division 1
P-3495	3495	3490	2000	15	123	119	2.00	836.28	833.91		M.17	Division 1
P-1490	1490	3490	2000	15	55	49	3.00	836.89	835.41		M.17	Division 1
P-2480	2480	1480	2000	15	62	56	0.75	829.91	829.48		M.17	Division 1
P-2475	I-2475	2480	2000	15	129	126	0.75	830.96	830.01		M.17	Division 2
P-1410	1410	O-1410	2000	15	60	56	0.60	820.43	820.06		M.10	Division 1
P-1420	1420	O-1420	2000	15	60	56	0.6	822.61	822.23		M.10	Division 1
P-1440	1440	O-1440	2000	15	60	56	0.8	827.7	827.2		M.14	Division 1

STORM SEWER

* Bid Item
** For SW-545

For bedding and backfill purposes under Primary roads, use material complying with Article 4120.04 (Class A Crushed Stone) of the Standard Specifications for all bedding and backfill. Place and compact the material according to Article 2435.03, A and Article 2552.03, E (Class I materials).

INTAKES AND UTILITY ACCESSES

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade Elev.	Bottom Well Elev.	Extension Length** FT	Notes
O-1450	1107+00.00, 67.58	RF-3 (15")				Division 1; Outlet FL=829.04
1450	1107+00.00, 0	SW-547 (Box)	834.45	829.50		Division 1
O-6040	7517+61.75, -98.4	RF-3 (15")				Division 3; Outlet FL=847.00
6040	7517+77.80, -39	SW-509	855.53	846.85		Division 2
6160	7517+77.80, 45	SW-509	855.53	847.51		Division 2
2750	44501+15.00, -27.79	SW-549 Modified	852.98	848.23		Division 1
O-2626	44509+50.00, -60.73	RF-3 (21")				Division 3; Outlet FL=829.51
I-2625	44509+50.00, 18.4	SW-512 (24" Type 5 Casting)	835.92	829.30		Division 2
2620	44508+25.00, 18.42	SW-546	839.06	832.85		Division 1
2640	44511+39.00, 7	SW-508	836.08	830.54		Division 1
2610	44506+25.00, 26.42	SW-546	843.18	837.77		Division 1
2650	44511+80.00, 7	SW-510	836.04	830.88		Division 1
2600	44504+00.00, 35.42	SW-546	847.96	842.79		Division 1
2660	44512+20.00, 7	SW-508	836.08	831.22		Division 1
2470	1113+75.00, 79.45	SW-508	836.95	832.08		Division 1
O-3510	1127+23.16, -63.91	RF-3 (15")				Division 1; Outlet FL=833.06
3510	1127+00.00, -43	SW-508	837.07	832.90		Division 1
3500	1124+00.00, -43	SW-508	840.35	835.31		Division 1
1510	1127+00.00, 0	SW-547 (Box) Modified	838.25	833.37		Division 1
1500	1124+00.00, 0	SW-547 (Box) Modified	841.56	836.63		Division 1
2510	1127+00.00, 43	SW-508	839.29	834.46		Division 1
6007	7506+51.00, -77.6	SW-512 (24" Type 4B Casting)	843.60	838.14		Division 2; Connect to Ex. Pip
MH-6005	7506+50.00, -54	SW-402 (4' x 5')	851.46	838.95		Division 2
MH-6002	7506+00.00, -54	SW-402 (5' x 5')	851.55	839.79		Division 2
6010	7507+73.00, -51	SW-509	849.98	840.67		Division 2
6000	7505+00.00, -42.85	SW-509	851.54	843.95		Division 2
MH-6107	7506+00.00, 52	SW-402 (4' x 5')	852.05	841.31		Division 2
6020	7508+31.00, -51	SW-509	849.87	843.18		Division 2
6110	7507+73.00, 54.82	SW-509	850.04	841.82		Division 2
6100	7505+75.00, 45	SW-509	851.24	846.09		Division 2
I-6105	7506+00.00, 82.08	RF-3 (24")				Division 2; Inlet FL=844.52
6120	7508+31.00, 57	SW-509	849.87	842.32		Division 2
6130	7508+90.00, 57	SW-509	849.98	842.82		Division 2
I-6135	7509+50.00, 87	SW-512 (18" Type 4A Casting)	848.56	843.16		Division 2
MH-6025	7510+43.00, -63.7	SW-401 (48")	853.21	842.40		Division 2
6030	7510+78.60, -51	SW-509	851.87	843.25		Division 2
6140	7510+52.95, 57	SW-509	851.45	845.75		Division 2
6150	7514+03.66, 45	SW-508	855.82	850.45		Division 2
O-6080	7529+80.00, -85.60	RF-3 (24")				Division 2; Outlet FL=826.44
6080	7529+60.50, -39.87	SW-509	831.97	826.27		Division 2
6090	7530+11.20, -35.87	SW-509	831.90	827.19		Division 2
MH-6075	7528+75.00, -53	SW-401 (48")	833.37	827.16		Division 2
6095	7530+62.00, -36.25	SW-509	832.01	827.46		Division 2
6200	7529+58.00, 51	SW-509	831.80	827.49		Division 2
6070	7527+50.00, -56.33	SW-509	834.42	828.40		Division 2

PIPES

Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. Bid length is measured from center of structure to center of structure.

Line Number	Intake/ Utility Access No. From	Intake/ Utility Access No. To	Class 'D'	Pipe Diameter IN	Bid* Length FT	Design Length FT	Slope %	Flow Lines Inlet Elevation	Flow Lines Outlet Elevation	Flow Lines Other Elevation	Pipe Profile Sheet No.	Notes
P-1450	1450	O-1450	2000	15	62	58	1.5	830.00	829.04		M.14	Division 1
P-6040	6040	O-6040	2000	15	54	52	0.60	847.50	847.00		M.11	Division 3
P-6160	6160	6040	2000	15	88	84	0.55	848.01	847.55		M.11	Division 3
P-2750	2750	6160	2000	15	99	94	0.55	848.73	848.21		M.11	Division 1
P-2625	I-2625	O-2626	2000	21	73	72	0.40	829.80	829.51		M.11	Division 3
P-2620	2620	I-2625	2000	15	125	122	2.50	833.35	830.30		M.11	Division 1
P-2640	2640	I-2625	2000	15	189	186	0.40	831.04	830.30		M.11/M.12	Division 1
P-2610	2610	2620	2000	15	200	196	2.00	838.27	834.35		M.11	Division 1
P-2650	2650	2640	2000	15	41	35	0.40	831.38	831.24		M.12	Division 1
P-2600	2600	2610	2000	15	225	221	2.00	843.29	838.87		M.11	Division 1
P-2660	2660	2650	2000	15	40	34	0.40	831.72	831.58		M.12	Division 1
P-2470	2470	2660	2000	15	152	148	0.45	832.58	831.92		M.12	Division 1
P-3510	3510	O-3510	2000	15	24	22	1.20	833.40	833.06		M.18	Division 1
P-3500	3500	3510	2000	15	296	292	0.80	835.81	833.47		M.17/M.18	Division 1
P-1510	1510	3510	2000	15	45	40	1.00	833.87	833.47		M.18	Division 1
P-1500	1500	3500	2000	15	45	40	2.60	837.13	836.11		M.17/M.18	Division 1
P-2510	2510	1510	2000	15	45	40	2.00	834.96	834.17		M.18	Division 1
P-6005	MH-6005	6007	2000	24	24	20	4.00	839.45	838.64		M.20	Division 2
P-6002	MH-6002	MH-6005	2000	48	50	46	1.50	840.29	839.61		M.20	Division 2
P-6010	6010	MH-6005	2000	18	123	117	1.00	841.17	840.00		M.20	Division 2
P-6000	6000	MH-6002	2000	15	101	94	1.50	844.45	843.04		M.20	Division 2
P-6107	MH-6107	MH-6002	2000	48	106	102	1.00	841.81	840.79		M.20	Division 2
P-6020	6020	6010	2000	15	58	50	1.00	843.68	843.17		M.20	Division 2
P-6110	6110	6010	2000	18	109	106	0.8	842.32	841.47		M.20	Division 2
P-6100	6100	MH-6107	2000	15	26	19	2	846.59	846.20		M.20	Division 2
P-6105	I-6105	MH-6107	2000	24	24	22	2.00	844.52	843.96		M.20	Division 2
P-6120	6120	6110	2000	18	58	50	0.80	842.82	842.42		M.20	Division 2
P-6130	6130	6120	2000	18	58	50	0.80	843.32	842.92		M.20	Division 2
P-6135	I-6135	6130	2000	18	66	61	0.40	843.66	843.42		M.20	Division 2
P-6025	MH-6025	EX-MH7020	2000	18	45	41	2.00	842.90	842.09		M.20	Division 2; Connect to Existing Manhole
P-6030	6030	MH-6025	2000	18	38	32	2.00	843.75	843.11		M.20	Division 2
P-6140	6140	6030	2000	18	113	110	2.00	846.25	844.05		M.20	Division 2
P-6150	6150	6140	2000	18	345	339	1.30	850.95	846.55		M.20/M.22	Division 2
P-6080	6080	O-6080	2000	24	42	40	0.73	826.77	826.44		M.24	Division 2
P-6090	6090	6080	2000	15	50	42	0.40	827.69	827.52		M.24	Division 2
P-6075	MH-6075	6080	2000	21	86	80	0.80	827.66	827.02		M.24	Division 2
P-6095	6095	6090	2000	15	50	42	0.40	827.96	827.79		M.24	Division 2
P-6200	6200	6080	2000	15	94	91	0.40	827.89	827.52		M.24	Division 2
P-6070	6070	MH-6075	2000	21	124	118	0.80	828.90	827.96		M.24	Division 2
P-6190	6190	6200	2000	15	109	101	0.50	828.49	827.99		M.24	Division 2
P-6060	6060	6070	2000	21	384	376	2	836.72	829.20		M.22/M.24	Division 2

STORM SEWER

* Bid Item
** For SW-545

For bedding and backfill purposes under Primary roads, use material complying with Article 4120.04 (Class A Crushed Stone) of the Standard Specifications for all bedding and backfill. Place and compact the material according to Article 2435.03, A and Article 2552.03, E (Class I materials).

INTAKES AND UTILITY ACCESSES

No.	Location Station and Offset	*Type or Standard Road Plan	Form Grade Elev.	Bottom Well Elev.	Extension Length** FT	Notes
6190	7528+50.00, 51.98	SW-509	832.72	827.99		Division 2
6060	7523+62.93, -52.32	SW-509	843.99	836.22		Division 2
6050	7521+53.00, -39	SW-509	849.44	842.58		Division 2
6180	7524+13.60, 57	SW-509	842.73	837.91		Division 2
6170	7520+94.95, 45	SW-508	850.72	845.80		Division 2
6210	7530+10.00, 51	SW-509	831.69	825.75		Division 2
6220	7530+62.00, 51	SW-509	831.80	826.24		Division 2
O-7114	7530+94.68, -90.54	RF-3 (15")				Division 2; Outlet FL=821.96
MH-6305	7532+64.00, 3.0	SW-401 (48")	834.92	828.73		Division 2
6300	7532+64.90, 9.55	SW-507	834.13	829.10		Division 2
		Bid Total:				
		RF-3 (15")	7.00			
		RF-3 (21")	1.00			
		RF-3 (24")	2.00			
		SW-401 (48")	13.00			
		SW-401 (60")	1.00			
		SW-402 (4' x 5')	2.00			
		SW-402 (5' x 5')	1.00			
		SW-507	1.00			
		SW-508	33.00			
		SW-509	22.00			
		SW-510	3.00			
		SW-512 (18" Type 4A Casting)	1.00			
		SW-512 (24" Type 4B Casting)	4.00			
		SW-512 (24" Type 5 Casting)	10.00			
		SW-512 (36" Type 4D Casting)	2.00			
		SW-546	5.00			
		SW-547 (Box)	6.00			
		SW-547 (Box) Modified	6.00			
		SW-549	1.00			
		SW-549 Modified	12.00			

PIPES

Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. Bid length is measured from center of structure to center of structure.

Line Number	Intake/ Utility Access No. From	Intake/ Utility Access No. To	Class 'D'	Pipe Diameter IN	Bid* Length FT	Design Length FT	Slope %	Flow Lines Inlet Elevation	Flow Lines Outlet Elevation	Flow Lines Other Elevation	Pipe Profile Sheet No.	Notes
P-6050	6050	6060	2000	15	210	202	2.4	843.08	838.22		M.22	Division 2
P-6180	6180	6060	2000	15	122	119	1	838.41	837.22		M.22	Division 2
P-6170	6170	6050	2000	15	104	101	2.4	846.30	843.88		M.22	Division 2
P-6210	6210	EX-MH6205	2000	18	50	43	0.8	826.25	825.90		M.24	Division 2
P-6220	6220	6210	2000	18	53	45	0.8	826.74	826.39		M.24	Division 2
P-7110	EX-MH7110	6220	2000	18	84	80	0.55	827.28	826.85		M.24	Division 2; Connect to Existing Manhole
P-7113	EX-7113	O-7114	2000	15	90	88	2.72	824.52	821.96		M.24	Division 2
P-6300	6300	MH-6305	2000	15	5	2	2	829.6	829.57		M.24	Division 2
		Bid	Total:									
			2000	15	5841							
			2000	18	3355							
			2000	21	993							
			2000	24	817							
			2000	30	742							
			2000	36	2322							
			2000	48	156							

SURVEY SYMBOLS

- EW Edge of Water
- HDG Hedge Row
- INB Storm Sewer Beehive Intake
- BNK Stream Bank
- ENU Edge Unpaved Entrance & Parking
- SNP Unpaved Shoulder
- FCL Chain Link and Security Fence
- FWD Wood Fence
- GDL Guard Rail (Rail and Cable)
- RR Centerline of Railroad Tracks
- RET Retaining Walls
- RIP Rip-Rap
- TEV Evergeen Tree
- TDC Tree Deciduous
- LUM Luminaire
- PPA Power Pole Co. 1
- SIGN SI Sign
- TA TA Tower Anchor
- SWP Swamp or Marsh
- MIS Miscellaneous
- UB UB Utility Box
- MH Utility Access (Manhole)
- IN Storm Sewer Intake
- TV Satelite TV Dish
- GP GP Guard Post (Less Than 4 Posts)
- FHD Fire Hydrants
- Flg FLG Flag Poles
- TSG Traffic Signal

UTILITY LEGEND

------E3------ ------E4------	Alliant Energy Contact: Jason Hogan Phone: 608-458-4871
— — San. — — - — - W — - - — - St. S. — -	City of Cedar Rapids Contact: Ken Russell (Water) Phone: 319-286-5950 Contact: Dave Wallace (Sanitary Sewer) Phone: 319-286-5910
— —San.2 — -	City of Palo Contact: Glenn Lange Phone: 319-540-6746
— — —T1— — —	IMON Communication Contact: Lennox Marnor Phone: 319-261-4640
— — —FO— — —	Iowa Communications Network Contact: Larry Klawitter Phone: 515-725-4741
— — -FO2— — -	Iowa Network Services Contact: Jeff Klocko Phone: 515-240-2644
------E1------ ------E2------	Linn County REC Contact: Kim Colberg Phone: 319-377-1587
— — — G— — —	MidAmerican Energy - Gas Distribution Contact: Greg Wildebour Phone: 319-298-5162
— — - TV — — — — — -FO5— — -	Mediacom Broadband, LLC Contact: Joe Ernster Phone: 319-395-9699
— — - TV — — — — — -FO5— — -	Windstream/PAETEC Contact: Gregory Troeger Phone: 319-790-7678
— — - T2 — — - — — - T3 — — -	Centurylink (Formerly Qwest) Contact: Carroll Wheaton Phone: 515-554-9711
------E5------	ITC Midwest Contact: Chad Levi Phone: 319-297-6765
	Iowa Department of Transportation Contact: Dennis Perrin Phone: 319-364-8189
	City of Cedar Rapids - Joint Communications Network Contact: Keith Nuehring Phone: 319-286-5622
	City of Cedar Rapids - Traffic Engineering Contact: Tom Peterson Phone: 319-286-5847
	Atkins Telephone Contact: Todd Christerson Phone: 319-446-7331

UNIQUE SYMBOLS FOR THIS PROJECT

- GP Fence Gate Post
- MB Mailbox

PLAN VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design Color No.	
Gray, Dark	(112)	Existing Topographic Features, Utilities, and Labels
Black	(17)	Proposed Storm Sewer Details, Alignment, Stationing, Tic Marks, and Alignment Annotation
SHADING	**Design Color No.**	
Gray, Light	(48)	Proposed Pavement Shading

PROFILE VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design Color No.	
Gray, Dark	(112)	Existing Ground Line Profile and Existing Utilities Information
Black	(17)	Proposed Pipes and Intakes

PLAN VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

- Plug and Abandon Existing Pipe or Structure
- Removal of Existing Pipe or Structure
- Previously Constructed Pipe or Structure
- Direction of Pipe Flow

PROFILE VIEW LINE STYLE LEGEND OF STORM SEWER SHEETS

- Existing Ground
- Proposed Ground
- Previously Constructed Pipe or Structure
- Proposed Pipe or Structure

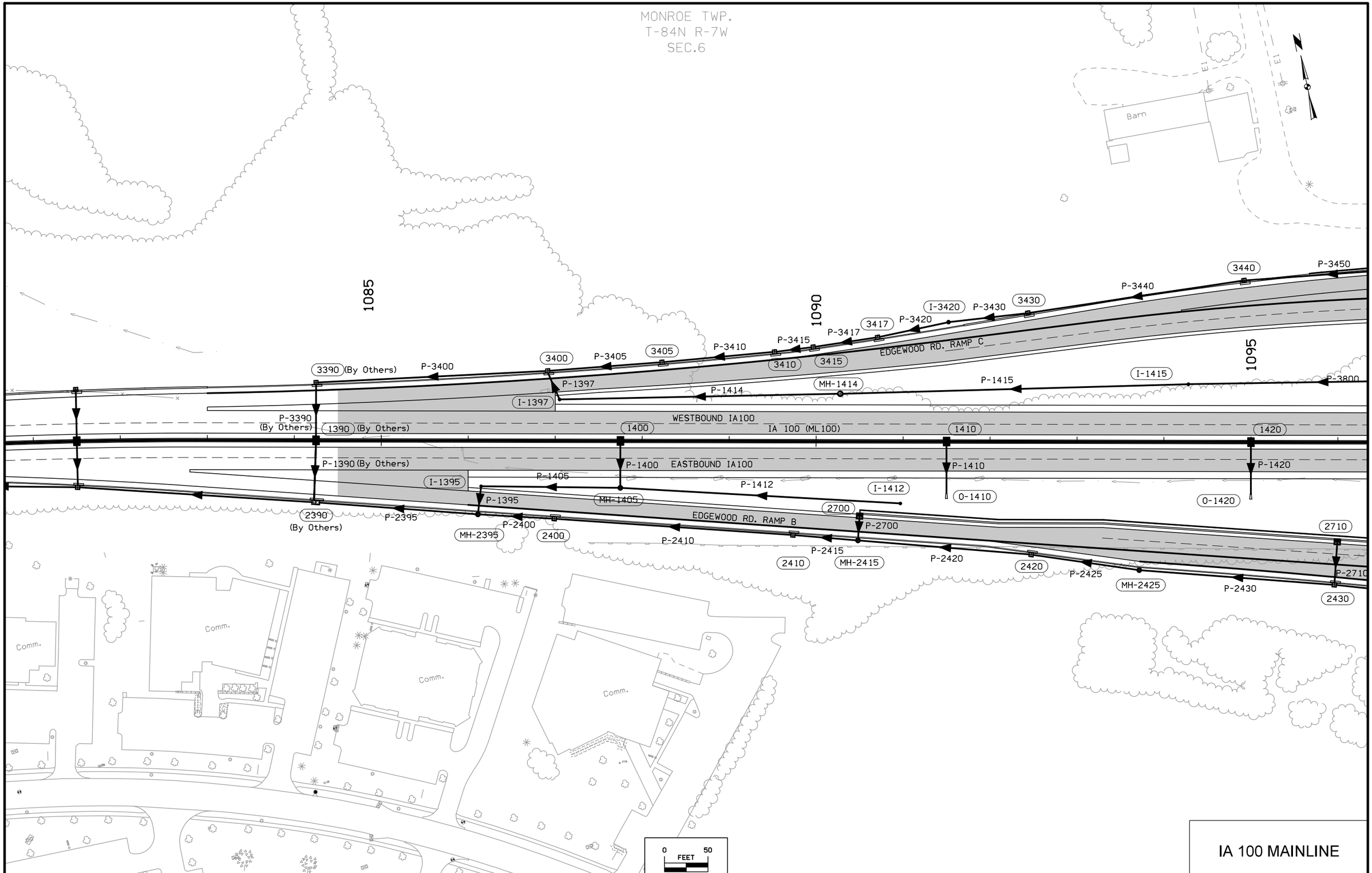
Reference Point
Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Clearing & Grubbing Area
- Pavement Removal

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- A/C Access Control

STORM SEWER LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES M)



IA 100 MAINLINE

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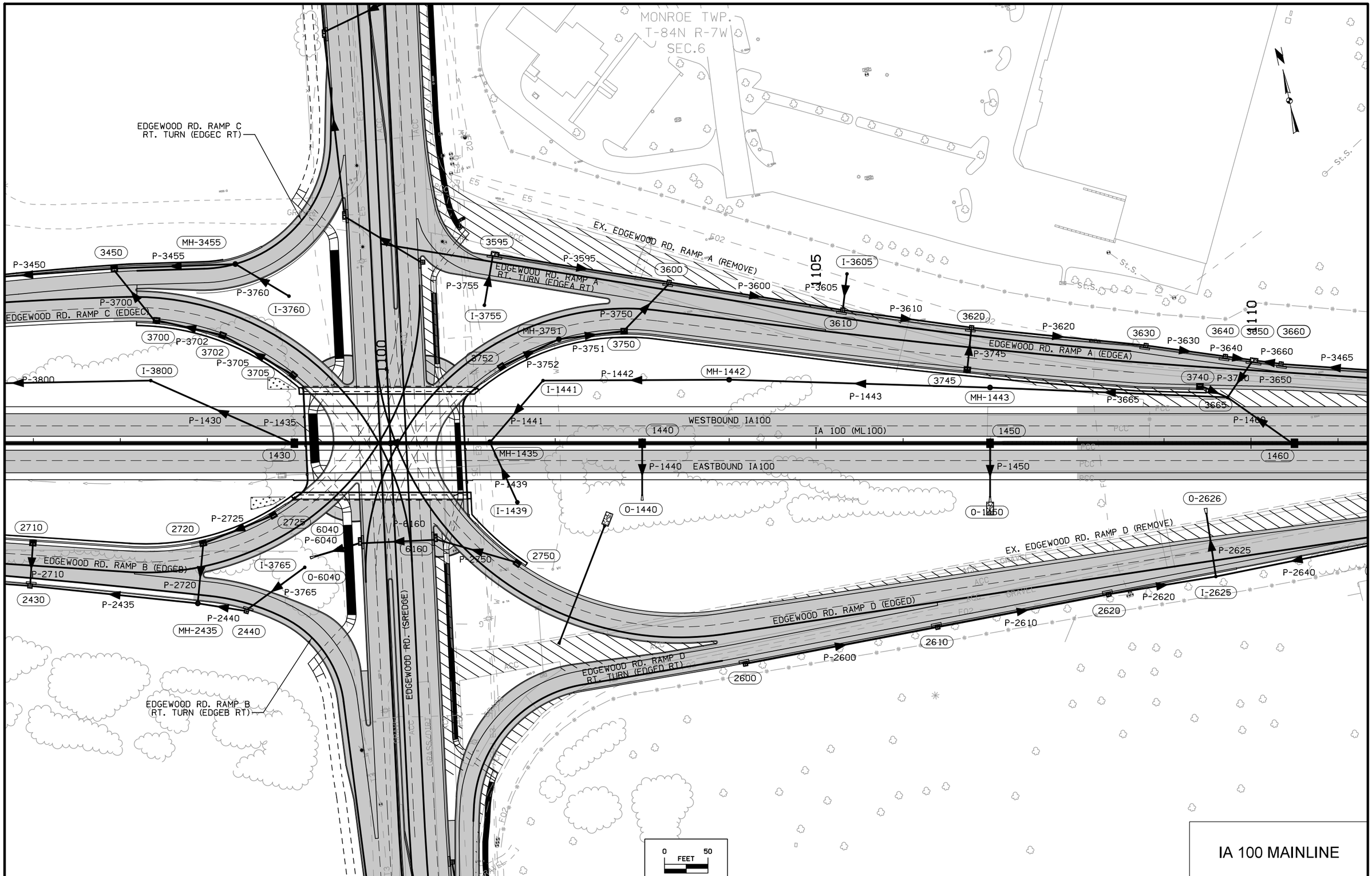

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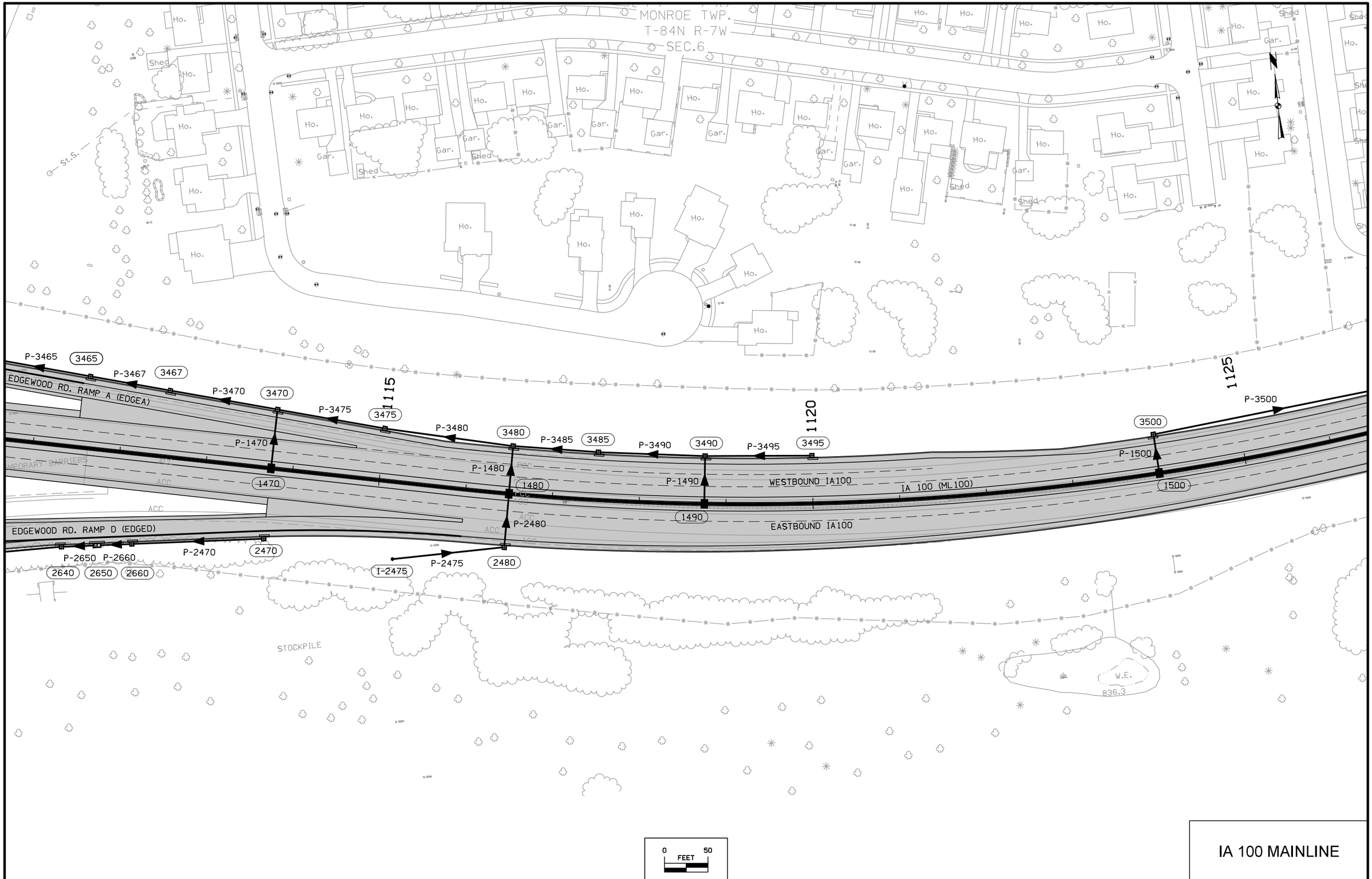

IA 100 MAINLINE

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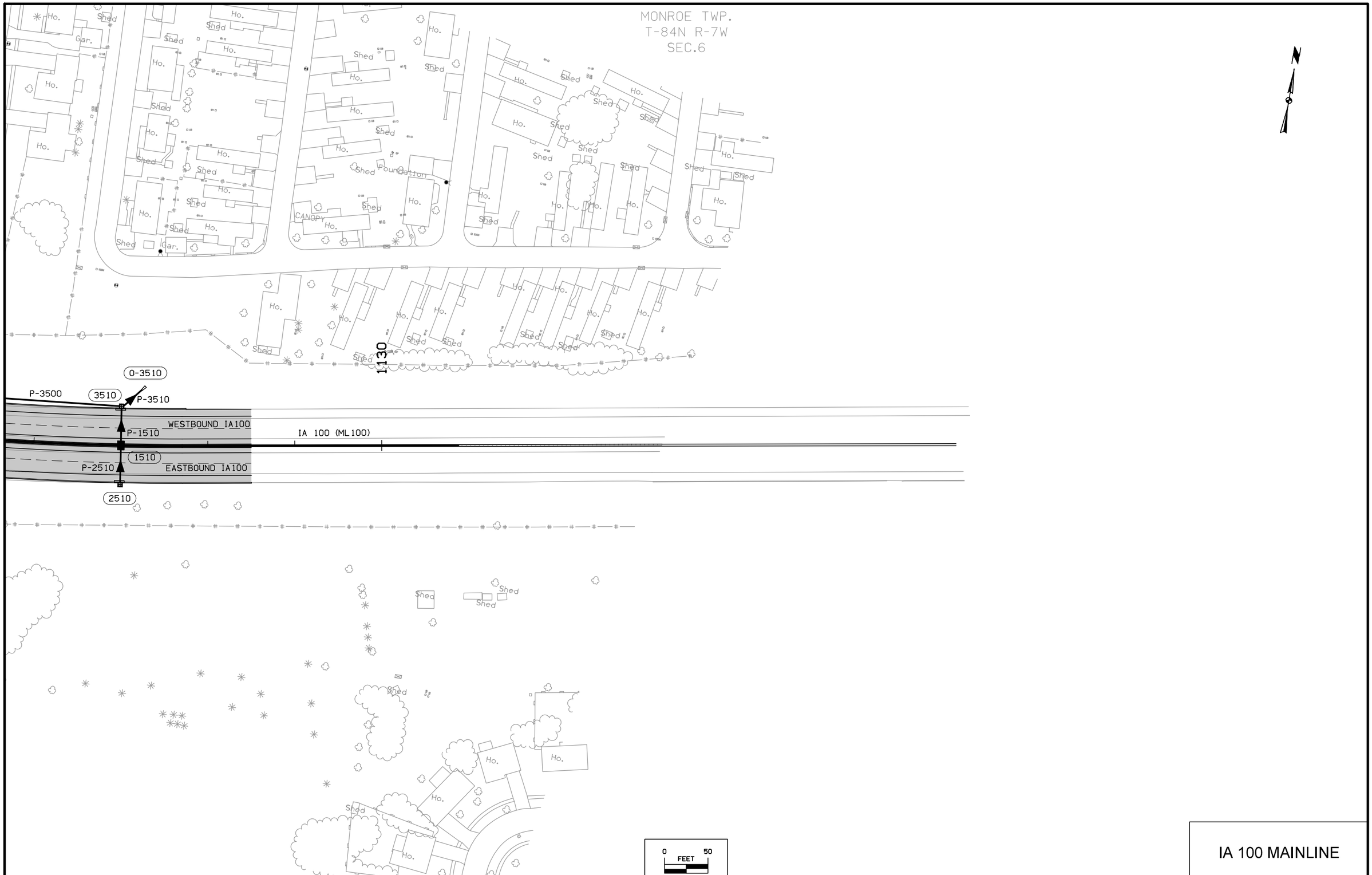

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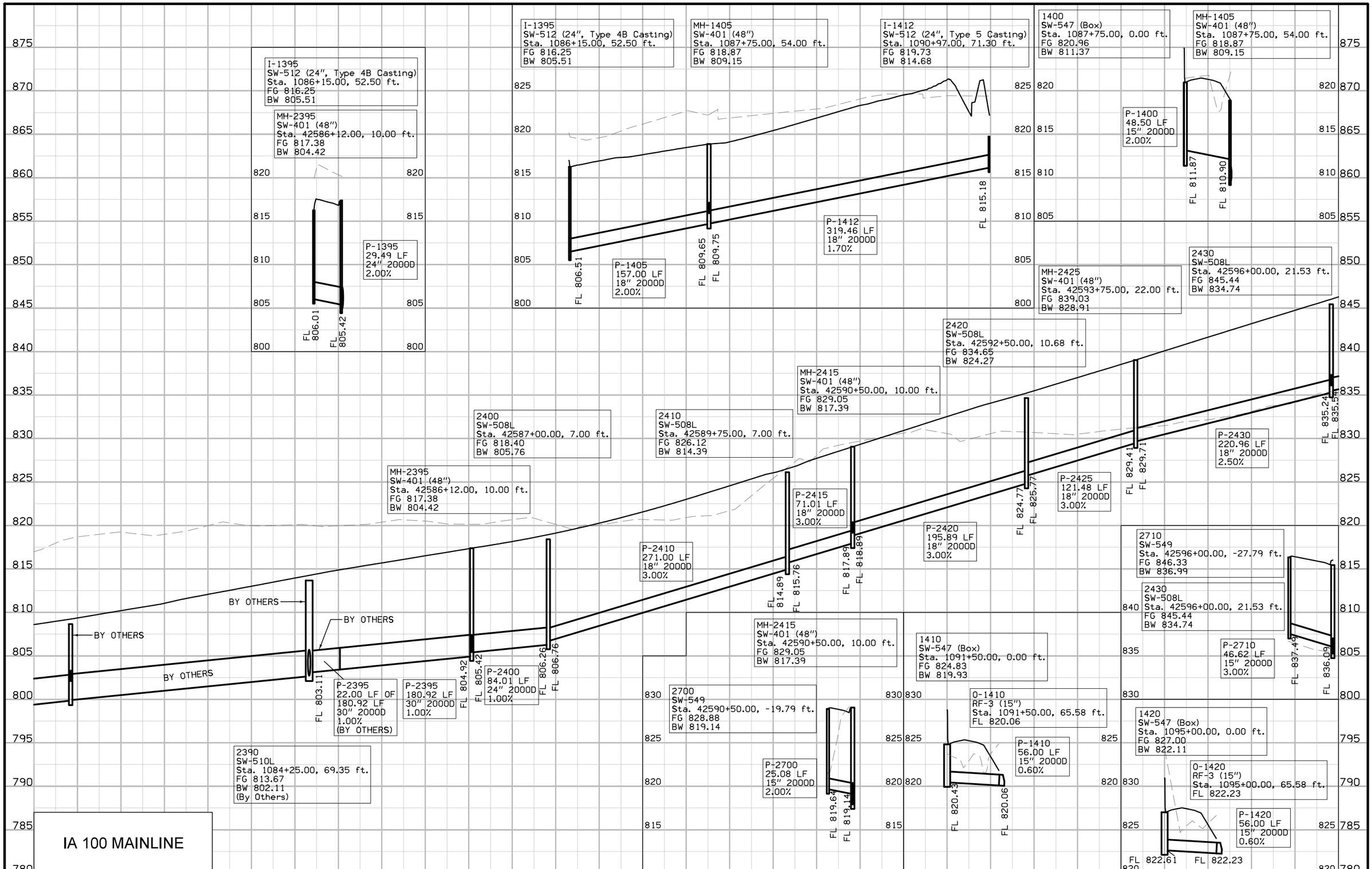

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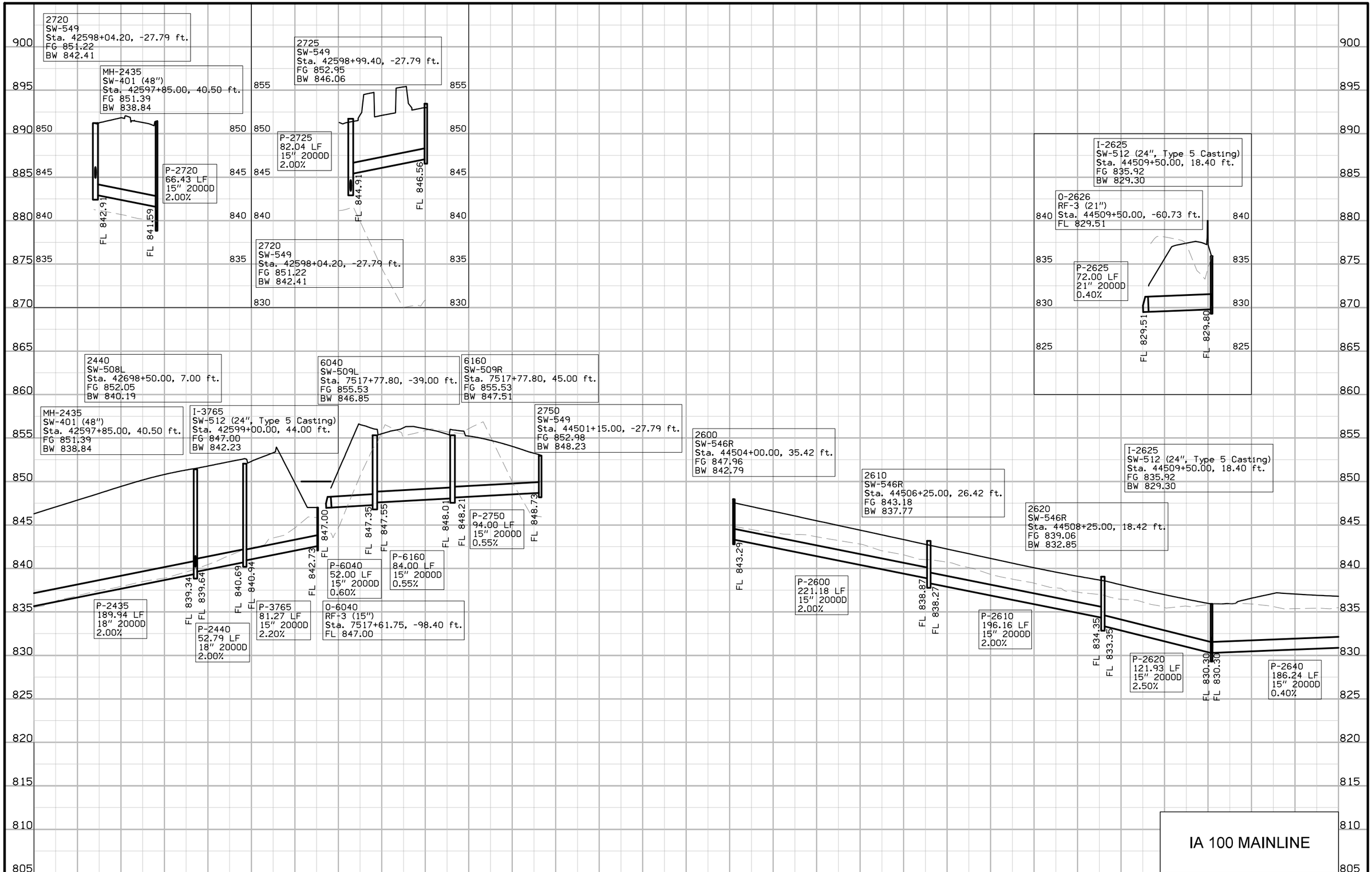

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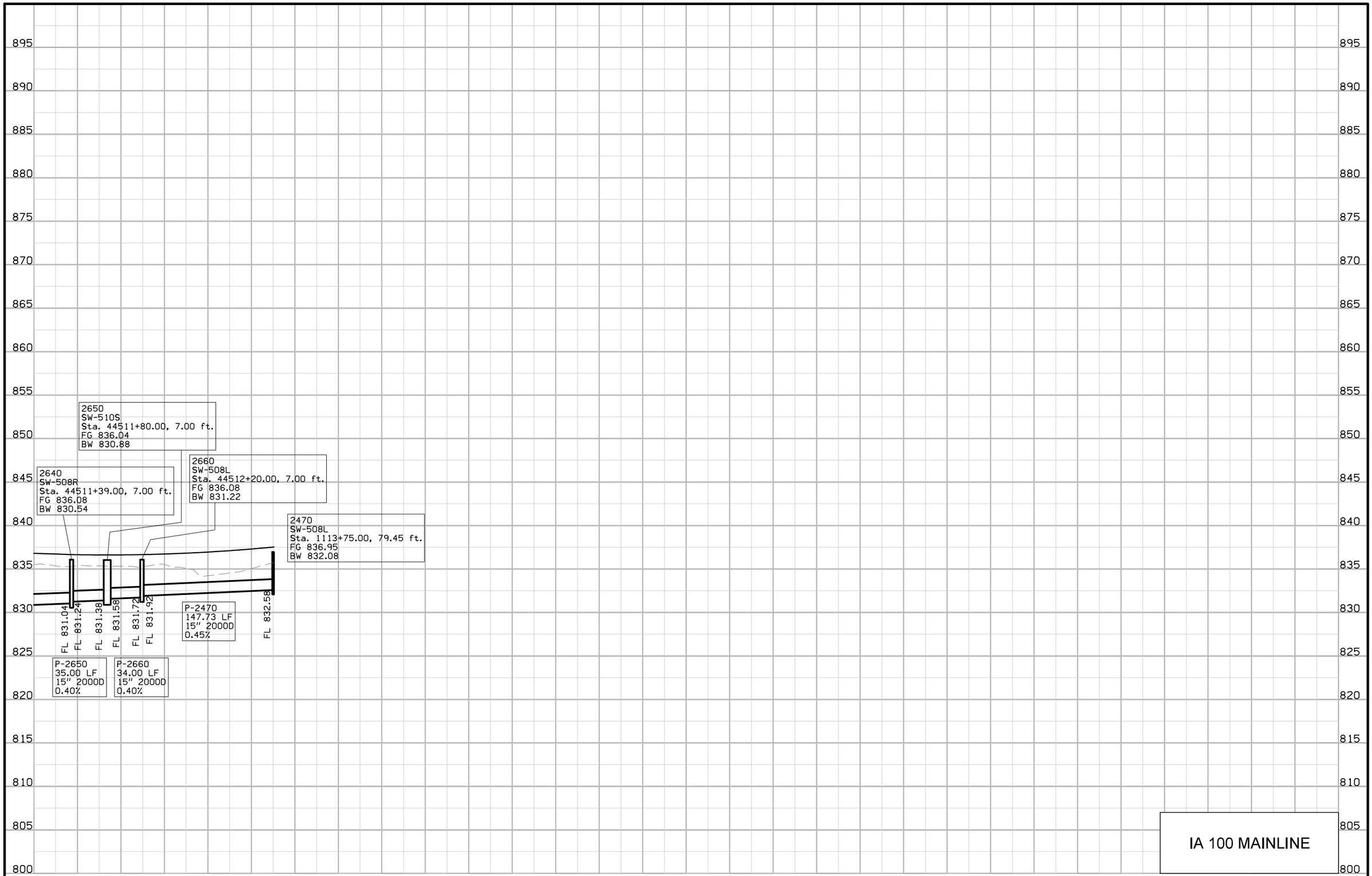

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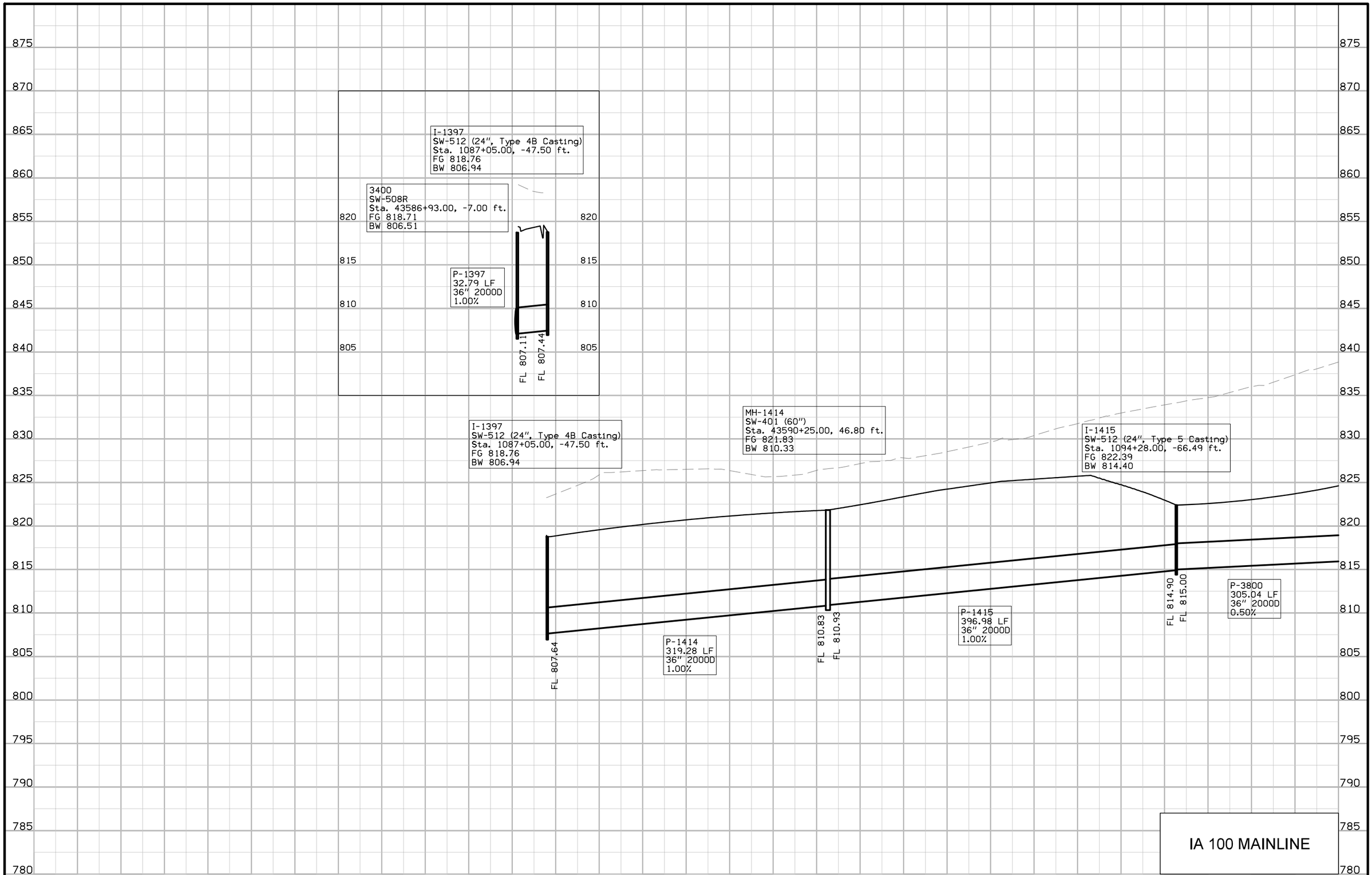

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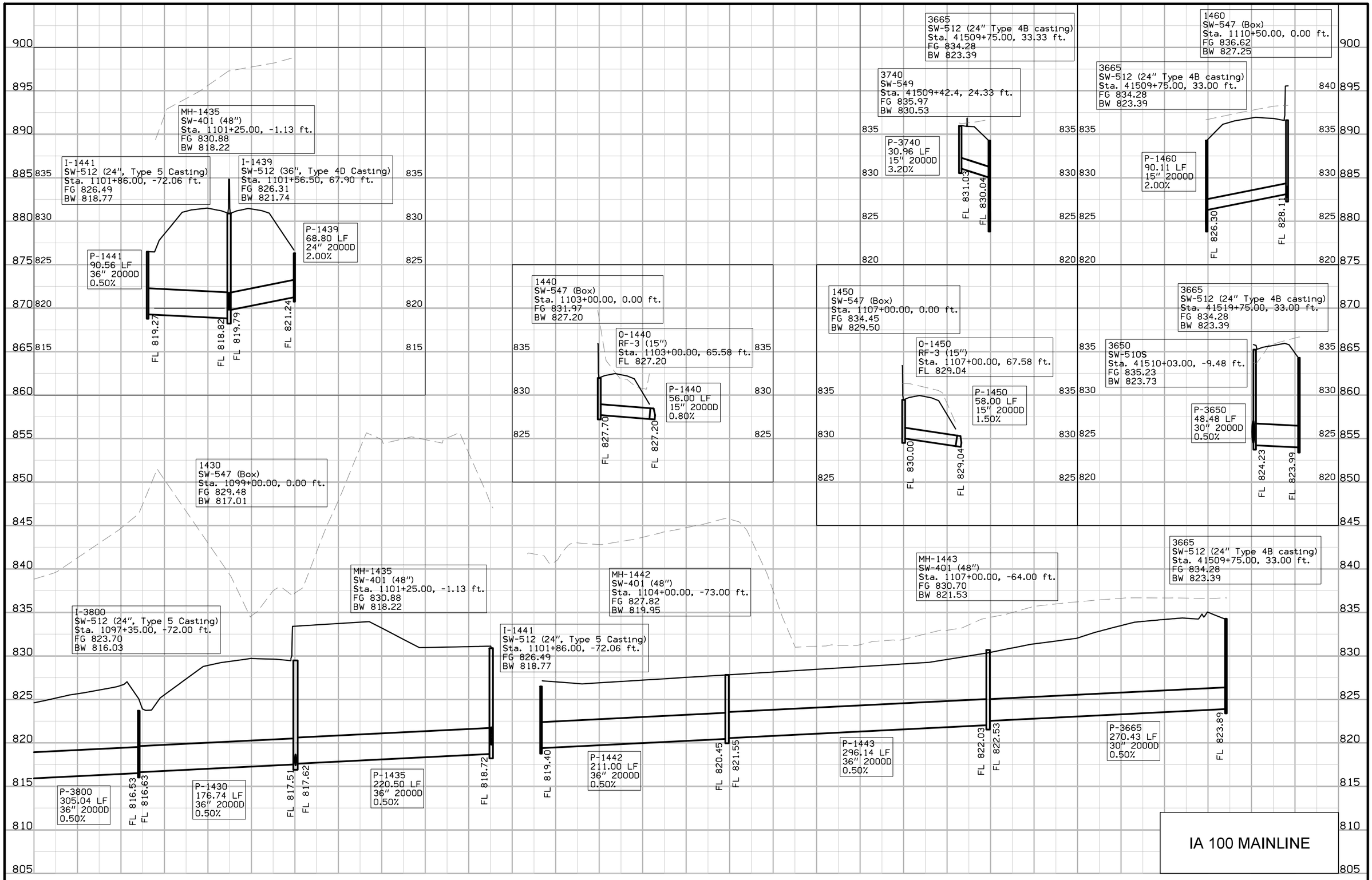

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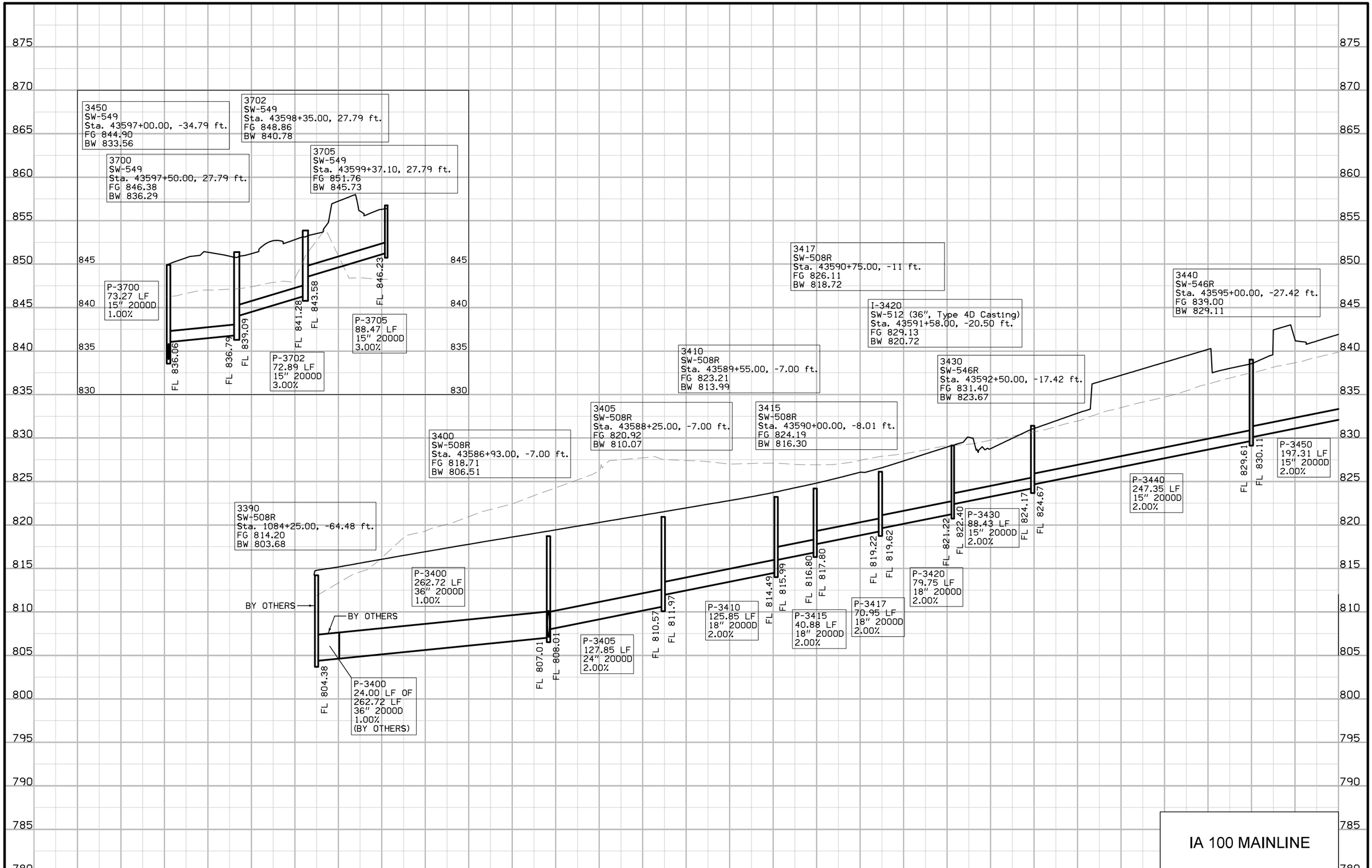

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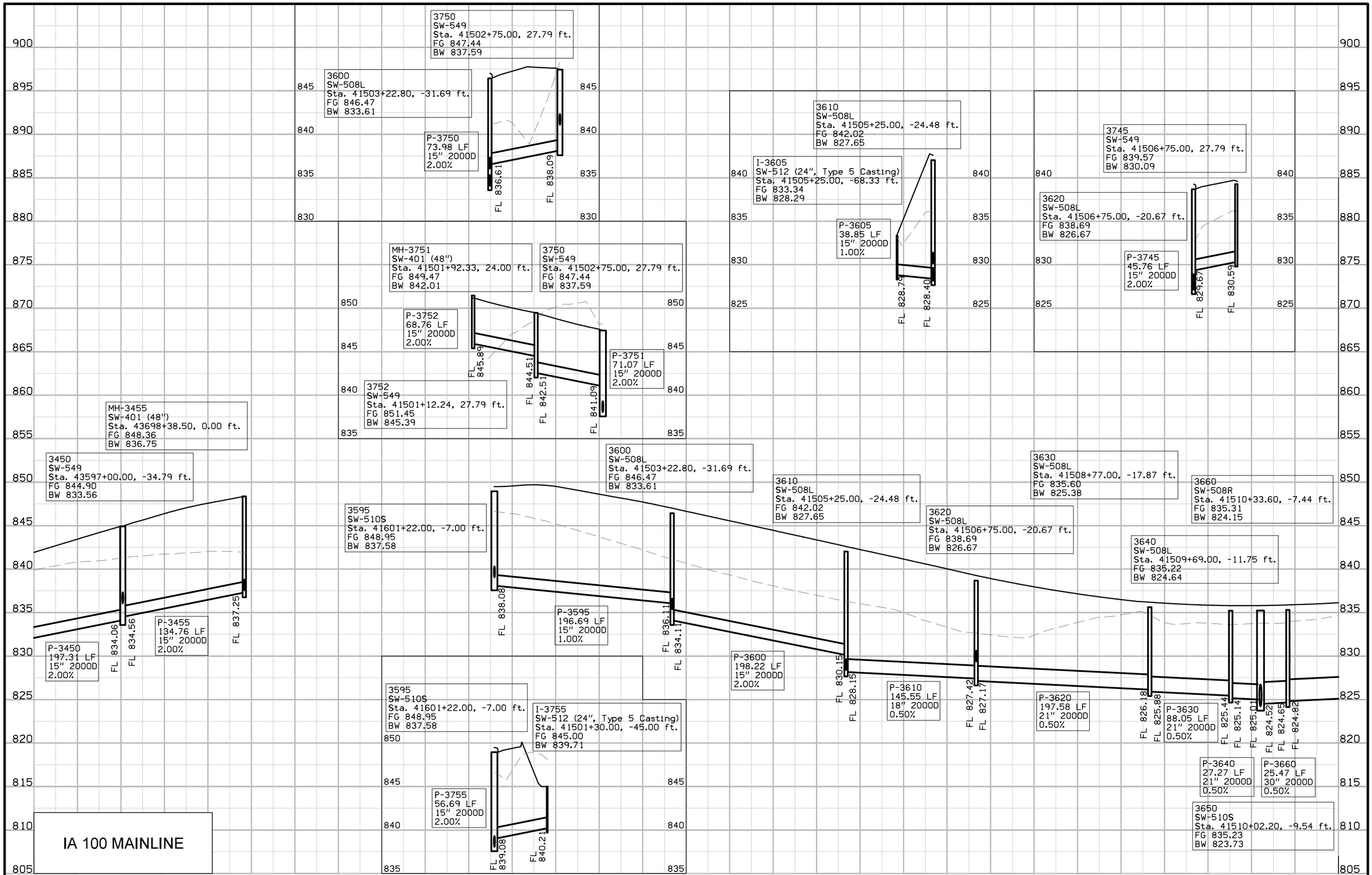

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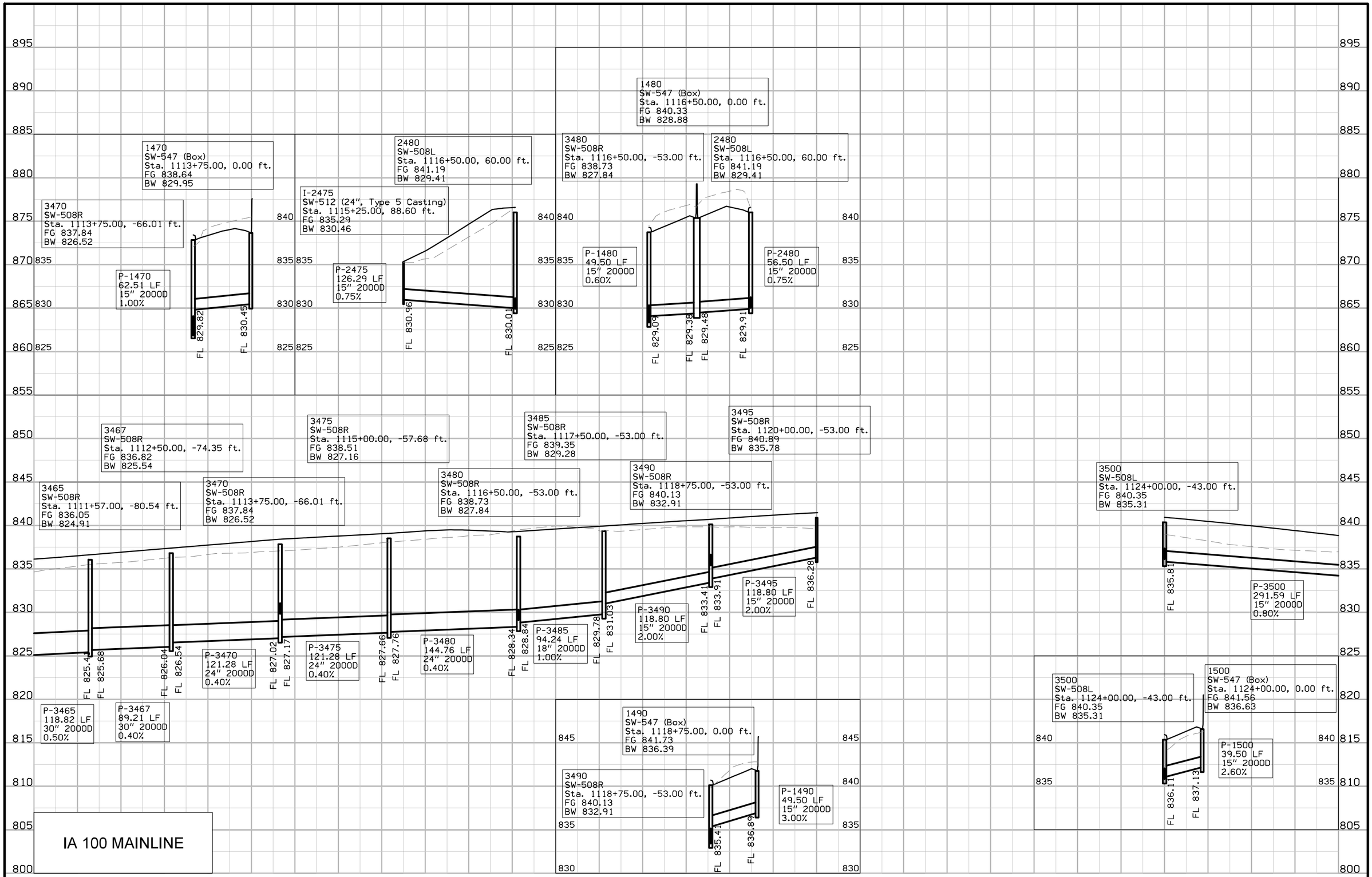

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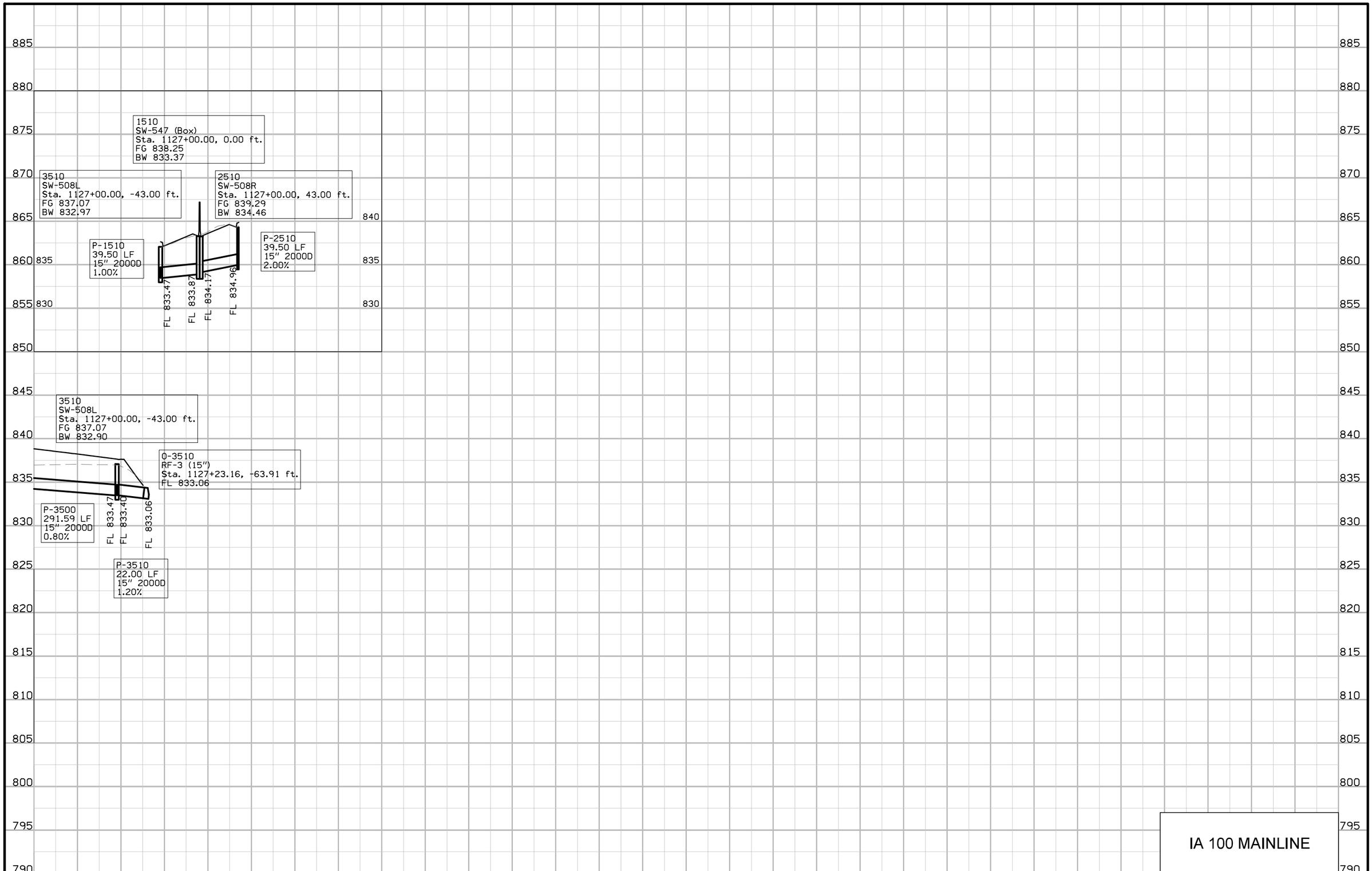

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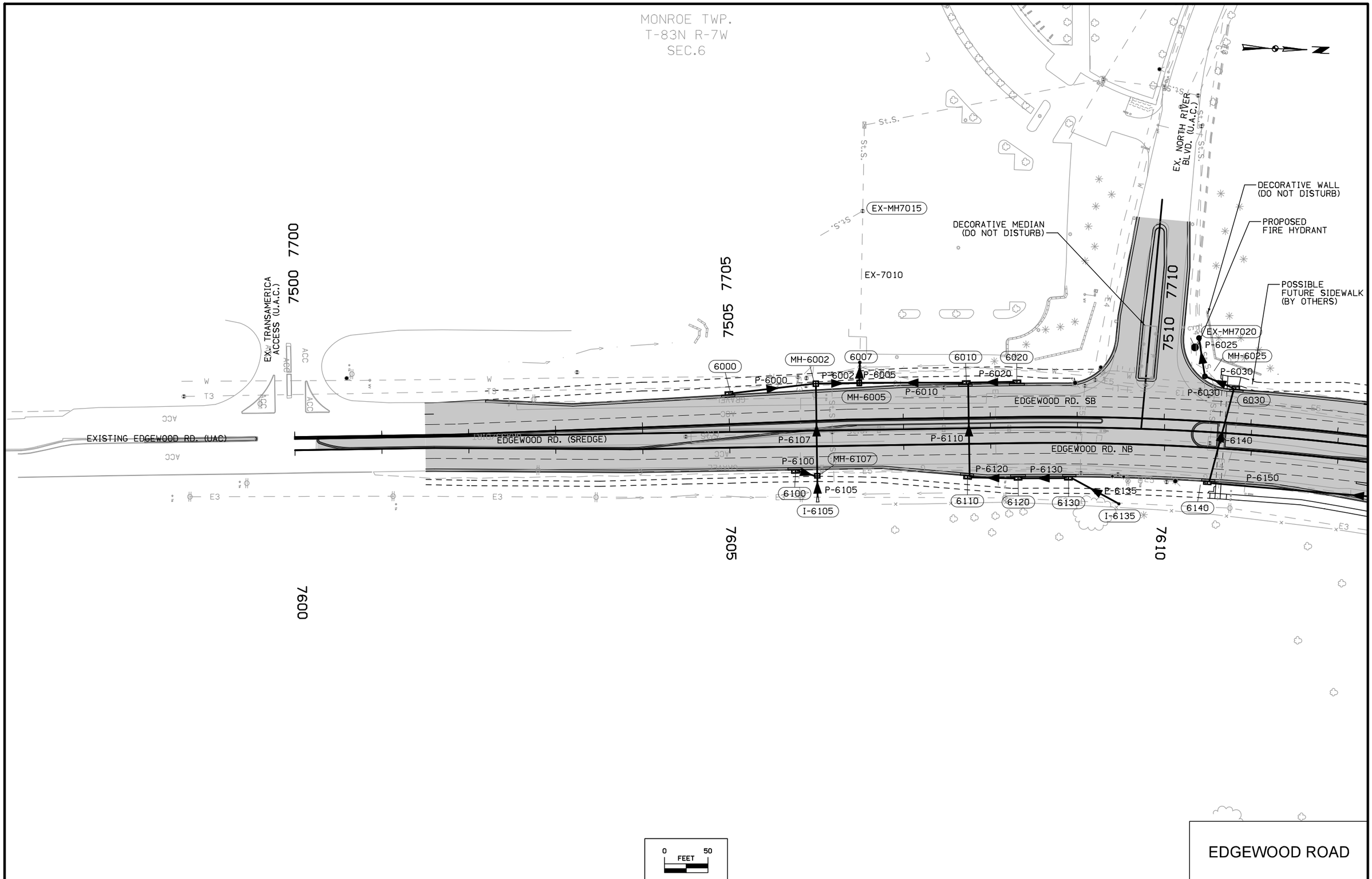

EDGEWOOD ROAD

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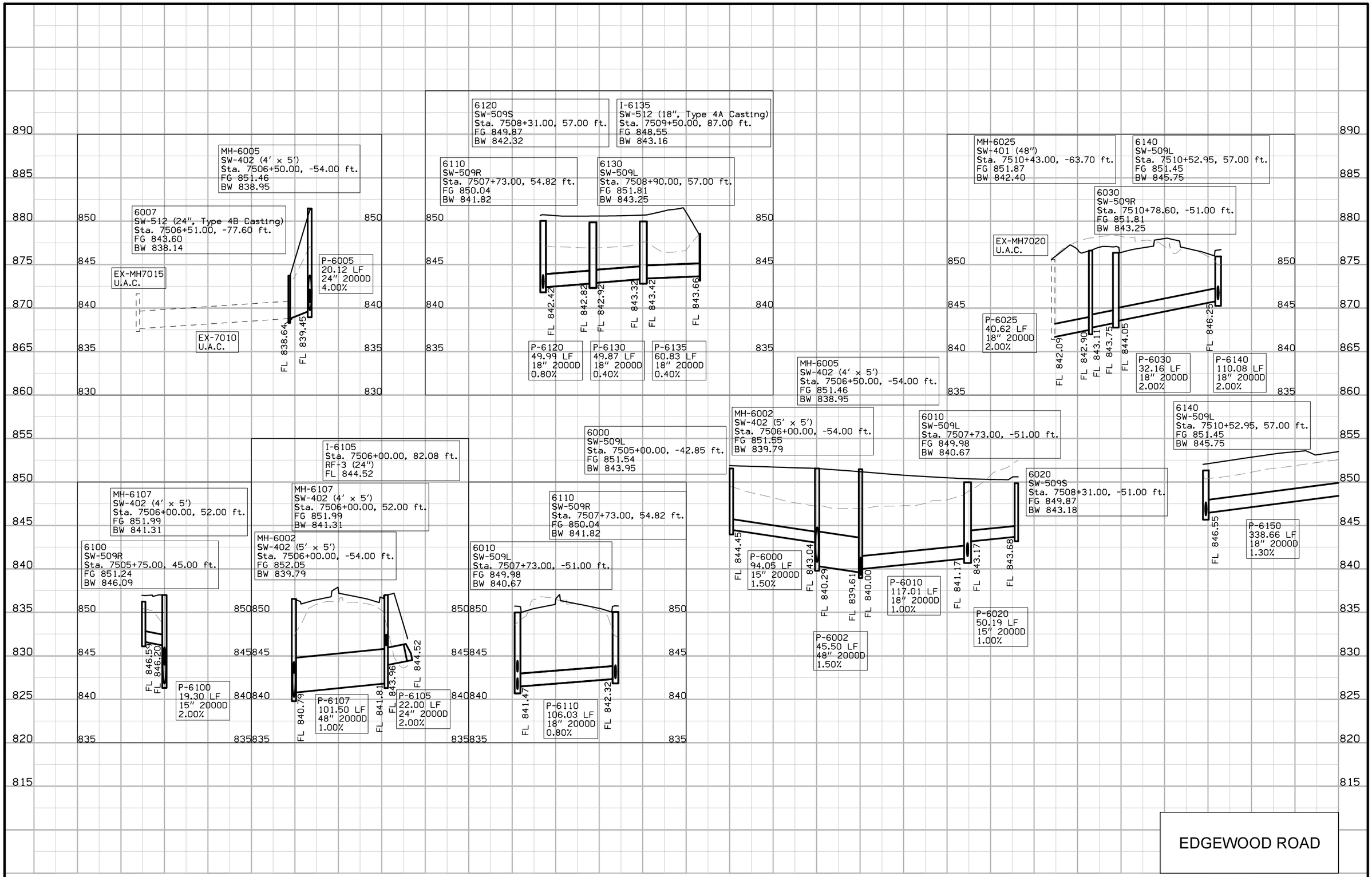

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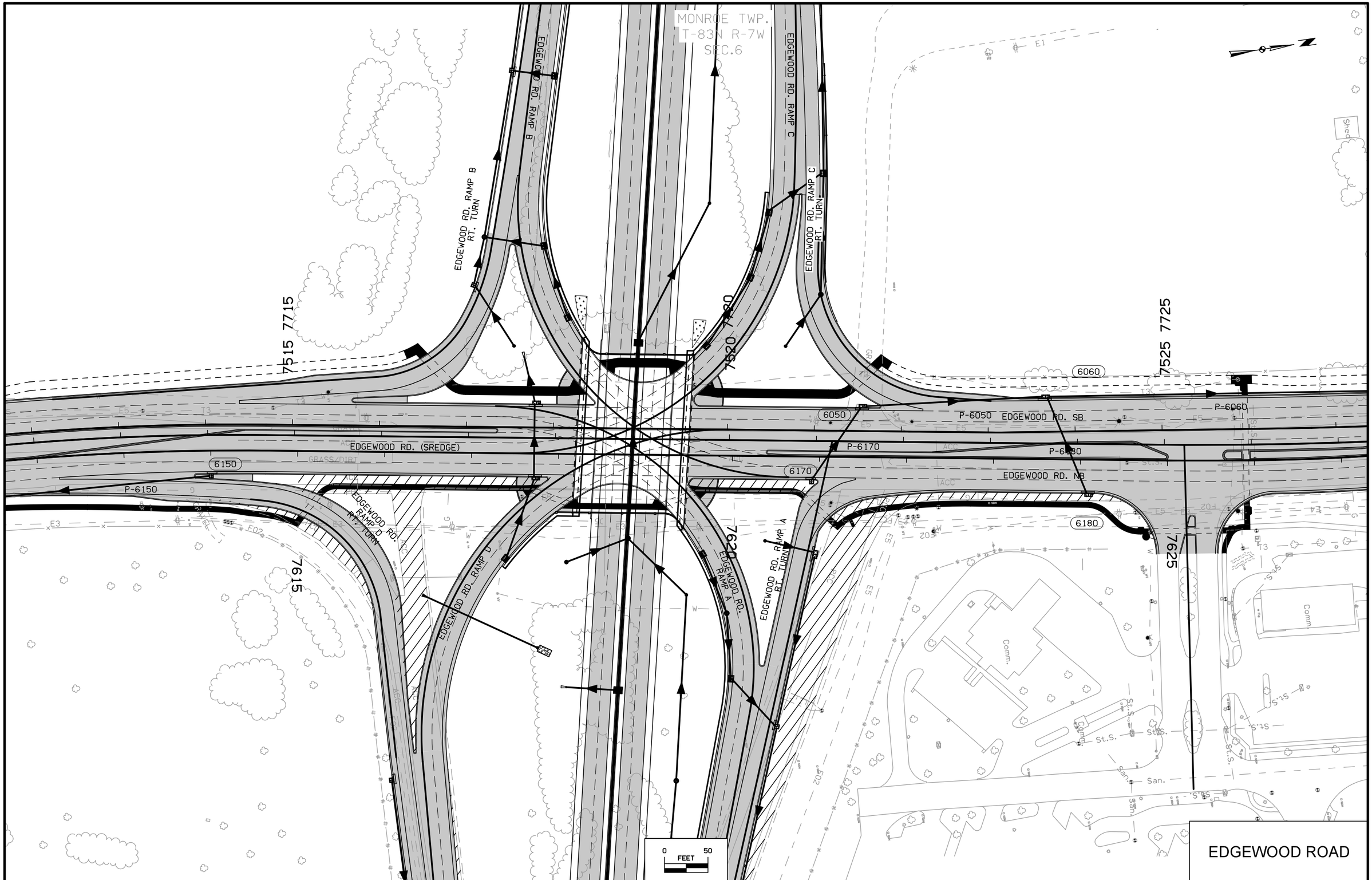

EDGEWOOD ROAD

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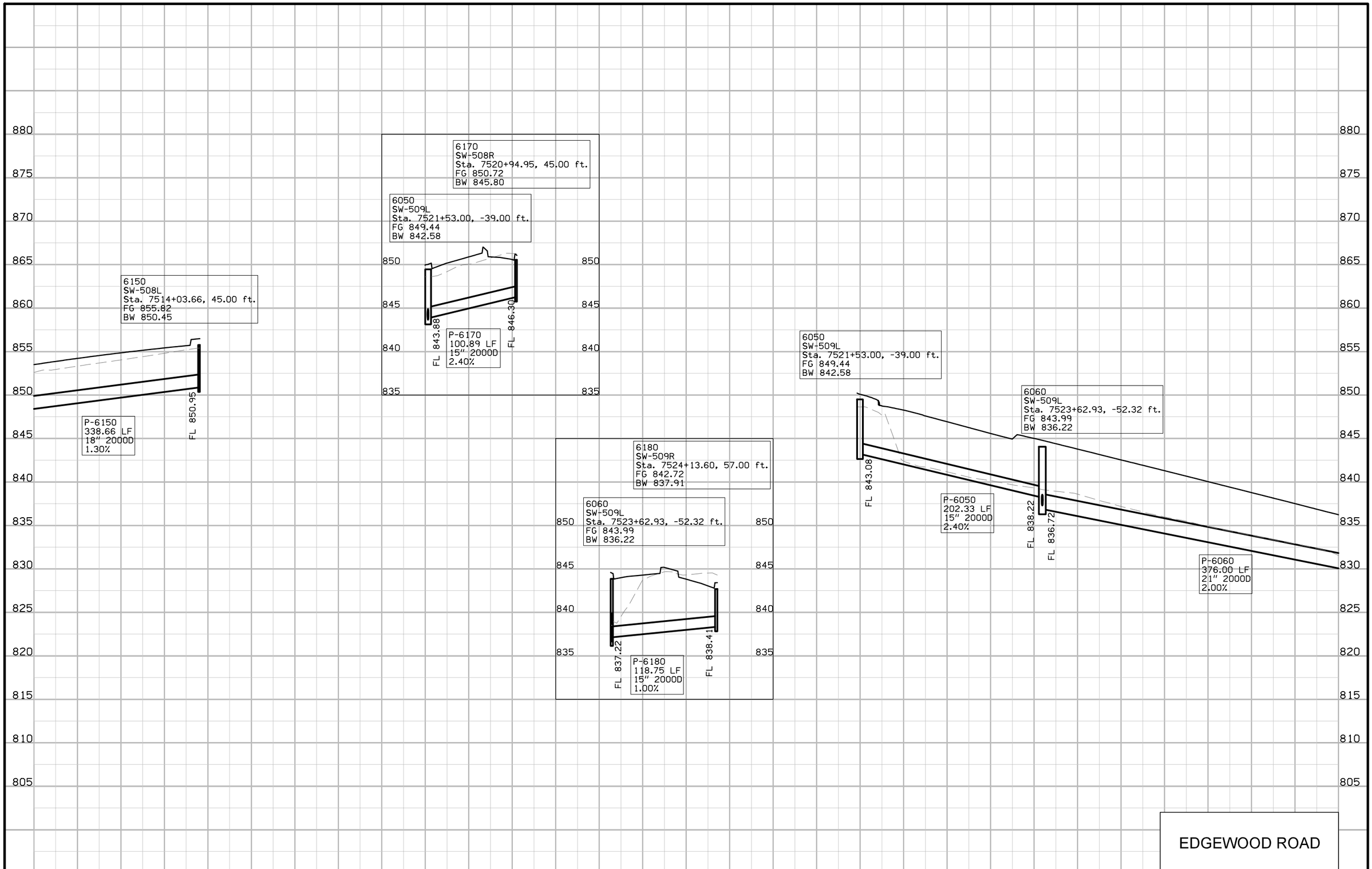

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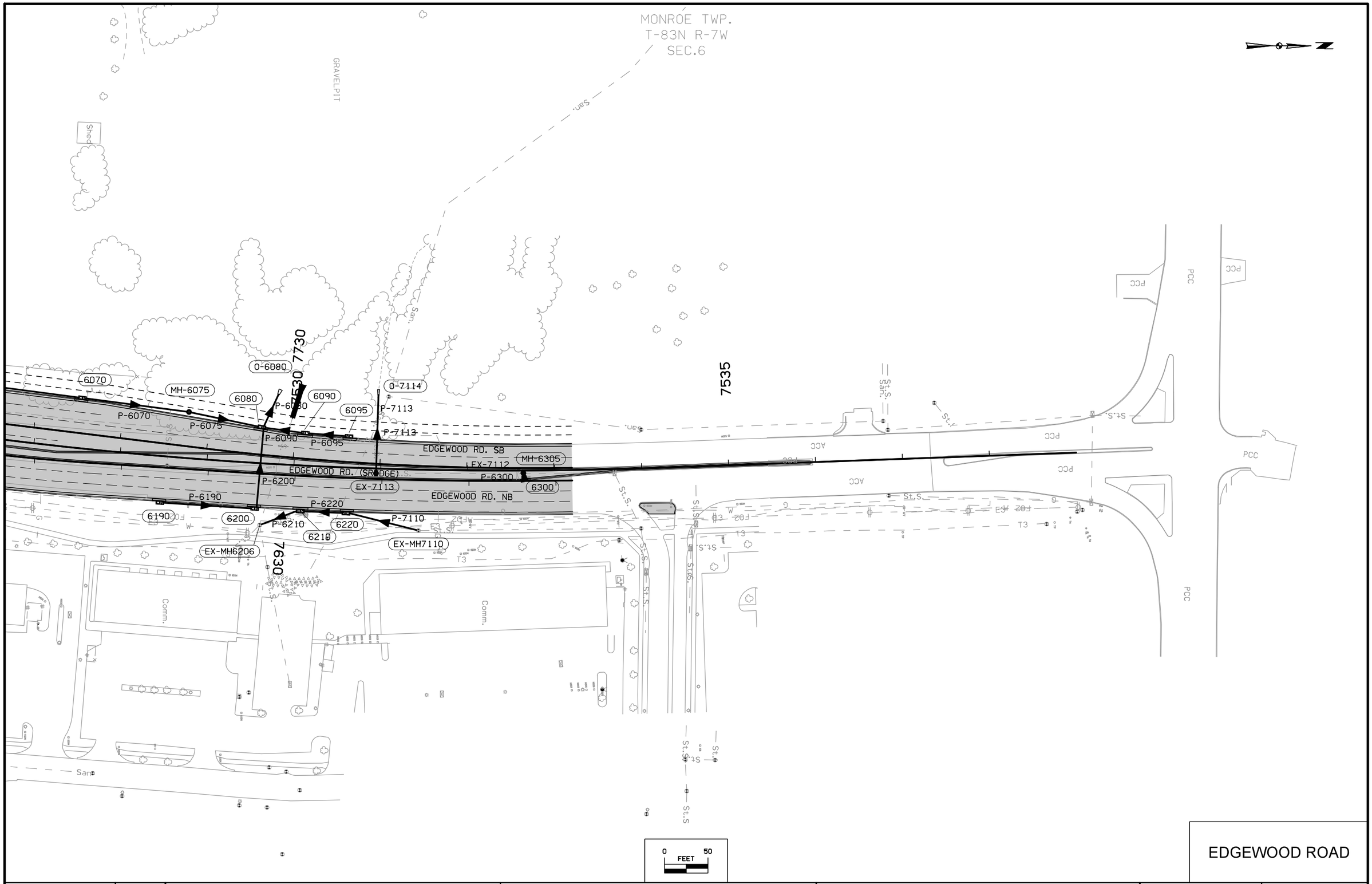

EDGEWOOD ROAD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER M.23

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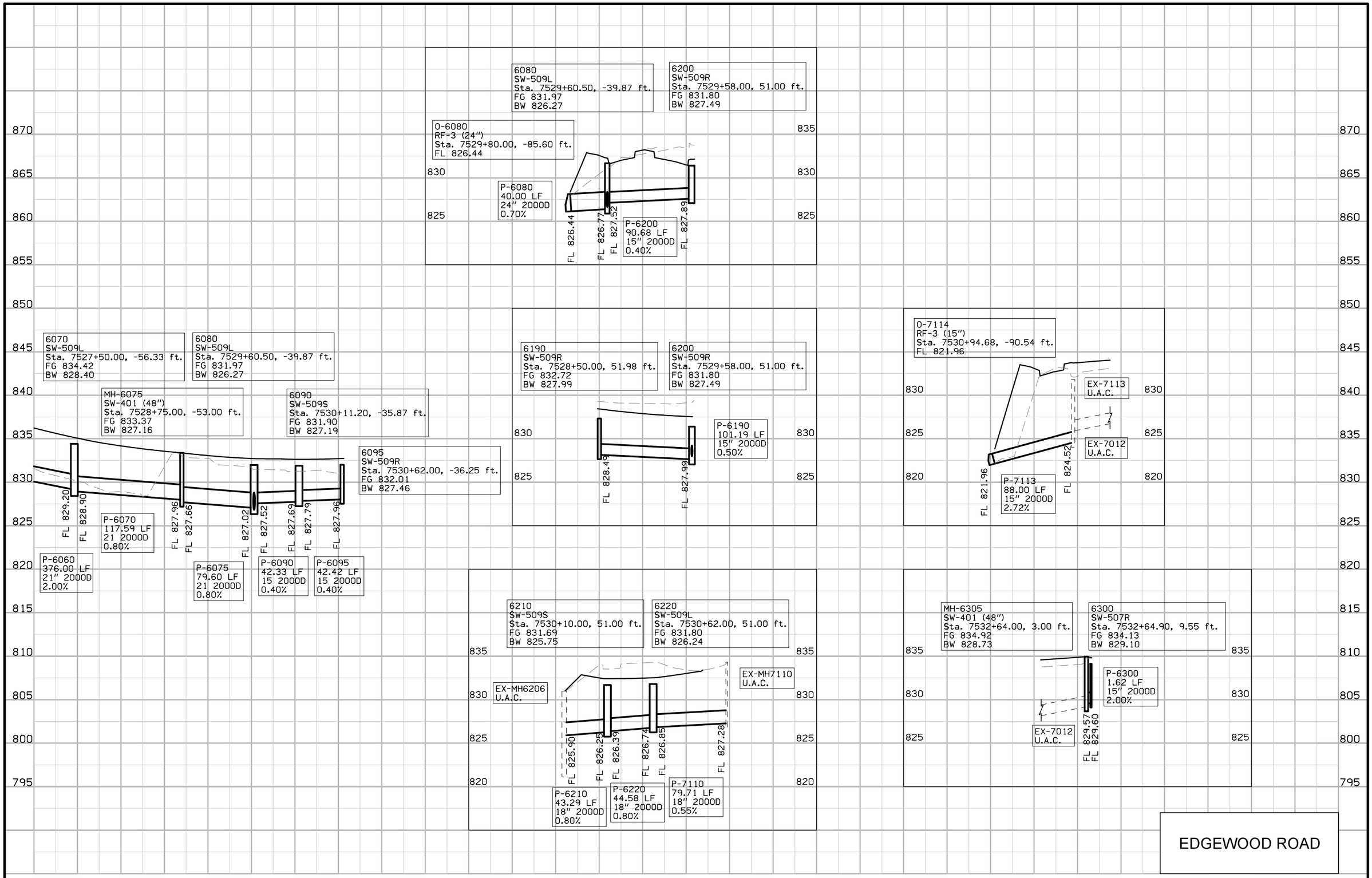

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER M.24

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TRAFFIC SIGNAL GENERAL NOTES (APPLY TO BOTH TEMPORARY AND PERMANENT SIGNALS)

1. ALL QUANTITIES SHOWN IN THE PLANS AND SPECIFICATIONS ARE FOR INFORMATIONAL AND ESTIMATING PURPOSES ONLY. THE CONTRACTOR'S LUMP SUM BID FOR THIS PROJECT SHALL INCLUDE ALL LABOR AND MATERIALS NECESSARY TO PROVIDE COMPLETE AND FUNCTIONAL TRAFFIC SIGNALS.
2. THE PLAN LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO EXCAVATION ON THE PROJECT. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLAN MAY BE PRESENT.
3. POWER SERVICE LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL COORDINATE TASKS INVOLVING POWER SERVICE CONNECTION WITH ALLIANT ENERGY.
4. SIGNAL CABLE RUN FROM EACH SIGNAL HEAD TO THE BASE OF THE POLE SHALL BE 5-CONDUCTOR CABLE WHEN USED FOR A 3-SECTION SIGNAL HEAD AND 7-CONDUCTOR CABLE WHEN USED FOR EITHER A 4 OR 5 SECTIONAL SIGNAL HEAD.
5. TRAFFIC SIGNAL TIMINGS WILL BE PROVIDED BY THE CITY OF CEDAR RAPIDS TRAFFIC ENGINEERING DEPARTMENT. CONTRACTOR TO COORDINATE OBTAINING TIMING PLANS FROM THE CITY PRIOR TO TURN-ON. THE CONTRACTOR WILL COMPLETE ALL PROGRAMMING OF THE DETECTION AND COMMUNICATIONS EQUIPMENT. THE CITY SIGNAL OPERATIONS STAFF WILL REVIEW THE PROGRAMMING.
6. ALL SIGNAL CABLE SHALL BE CONTINUOUS FROM CONNECTIONS MADE IN THE HANDHOLE COMPARTMENTS OF SIGNAL POLE BASES TO THE TERMINAL COMPARTMENT IN THE CONTROLLER CABINET. SPLICING WILL NOT BE ALLOWED UNLESS SPECIFICALLY APPROVED BY THE ENGINEER. IDENTIFY AND LABEL NEW WIRING IN POLE BASES AND HANDHOLES.
7. THE CONTRACTOR SHALL USE CARE WHEN WRAPPING SIGNAL CABLE SLACK ON HANDHOLE HOOKS SO AS TO NOT WRAP THE CABLE SO TIGHTLY THAT CITY PERSONNEL CAN NOT REMOVE THE CABLE FROM THE HOOKS WITHOUT UNWRAPPING THE CABLE.
8. QUANTITY ESTIMATES INCLUDE CABLE IN THE POLES AND SLACK IN THE HANDHOLES. PROVIDE SLACK AS OUTLINED WITHIN SPECIFICATIONS.
9. A NO. 6 A.W.G. BARE COPPER GROUND WIRE SHALL BE INSTALLED IN ALL PVC CONDUITS THAT CARRY 120/240 VOLT SIGNAL/LIGHTING CABLES. ALL POLES, PEDESTALS, AND CONTROLLER CABINETS SHALL BE BONDED TO FORM A CONTINUOUS SYSTEM AND BE EFFECTIVELY GROUNDED. BONDING JUMPERS SHALL BE NO. 6 A.W.G. BARE COPPER WIRE CONNECTED BY APPROVED CLAMPS.
10. ALL NEW TRAFFIC SIGNAL CONDUIT SHALL BE SCHEDULE 80 PVC AS SHOWN ON THE PLANS. THE CONTRACTOR MAY REQUEST TO SUBSTITUTE HDPE CONDUIT FOR SCHEDULE 80 PVC. WHEN HEATING PVC OR HDPE CONDUIT TO FORM A BEND, AN APPROVED CONDUIT HEATING DEVICE SHALL BE USED. DIRECT FLAME SHALL NOT BE APPLIED TO THE CONDUIT. TRACER WIRE SHALL BE INSTALLED IN ALL NEW SCHEDULE 80 PVC AND HDPE CONDUITS.
11. THE CONTRACTOR HAS THE OPTION TO TRENCH OR BORE CONDUIT. HOWEVER, PAVEMENT AND SIDEWALK SHALL NOT BE DISTURBED DURING CONSTRUCTION UNLESS OTHERWISE NOTED ON THE PLANS. AREAS DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. REFER TO SPECIFICATIONS.
12. THE STATIONS/OFFSETS LISTED ON THE SIGNAL PLANS ARE TO THE CENTER OF THE ITEM UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL FIELD VERIFY ALL EQUIPMENT LOCATIONS WITH THE ENGINEER, INCLUDING SIGNAL HEAD LOCATIONS.
13. THE LOCATIONS OF ALL FOOTINGS AND CONDUIT ARE TO BE COORDINATED WITH THE ENGINEER AND ARE SUBJECT TO ADJUSTMENT IN THE FIELD BY THE ENGINEER.
14. NO LANE CLOSURES WILL BE PERMITTED BETWEEN THE HOURS OF 7:00-9:00AM, OR BETWEEN THE HOURS OF 4:00-6:00PM.
15. THE CONTRACTORS SHALL NOTIFY THE ENGINEER WHEN READY TO SCHEDULE THE TURN-ON OF THE TRAFFIC SIGNALS. THE CONTRACTOR SHALL FOLLOW THE CITY'S STANDARD TRAFFIC SIGNAL TURN-ON PROCEDURE.
16. THE CONTRACTOR SHALL COORDINATE ACCESS TO CABINETS ON SITE WITH CITY TRAFFIC SIGNAL STAFF.
17. UNLESS OTHERWISE NOTED, ALL EXISTING FOOTINGS AND SIGNAL CABINET FOOTINGS ARE TO BE REMOVED TO A MINIMUM DEPTH OF 3 FEET BELOW FINAL GRADE OR ADDITIONAL AS NECESSARY FOR CONSTRUCTION. ALL SURROUNDING SURFACES SHALL BE PROPERLY RESTORED.
18. THE CONTRACTOR SHALL NOTIFY THE CITY AT LEAST 48 HOURS PRIOR TO SALVAGING ANY EXISTING TRAFFIC SIGNAL AND STREET LIGHTING EQUIPMENT (INCLUDING CONTROLLERS, CABINETS, TRAFFIC SIGNAL HEADS, POLES, MAST ARMS, STREET NAME SIGNS, CABLE, ETC.) TO COORDINATE THE EQUIPMENT TO BE SALVAGED AND THE DESIRED PICK UP TIME. THE CITY WILL THEN PICK UP THE SALVAGED EQUIPMENT. EQUIPMENT NOT WANTED BY THE CITY SHALL BE DISPOSED OF BY THE CONTRACTOR.
19. THE CONTRACTOR SHALL SUPPLY MATERIALS AND CONSTRUCT THE TRAFFIC SIGNALS TO MEET THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, STANDARD DETAILS, AND SPECIAL PROVISIONS.
20. THE CONTRACTOR SHALL HAVE AN EMPLOYEE WITH A LEVEL II IMSA TRAFFIC SIGNAL TECHNICIAN CERTIFICATE ON SITE OR ABLE TO RESPOND WITHIN 4 HOURS.
21. TRAFFIC SIGNAL DETECTION SHALL BE RADAR DETECTION. THE CONTRACTOR SHALL COORDINATE WITH THE CITY TRAFFIC ENGINEERING DIVISION TO FIELD VERIFY THE PLACEMENT OF ALL RADAR DETECTORS AND EQUIPMENT PRIOR TO INSTALLATION. INSTALLATION MATERIALS AND METHODS FOR DETECTION EQUIPMENT SHALL BE IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
22. TRAFFIC SIGNAL MAST ARM POLES SHALL HAVE ANCHOR BASES AND 15' SINGLE TAPERED STYLE LUMINAIRE ARMS WITH 38' MOUNTING HEIGHTS FOR THE LUMINARIES. IF SIGNAL MAST ARM IS PRESENT, ALL STREET LIGHT LUMINAIRE ARMS SHALL BE LOCATED AT 350 DEGREES MEASURED CLOCKWISE TO THE MAST ARM UNLESS OTHERWISE NOTED. THE LED LUMINARES WILL BE INSTALLED BY LIGHTING CONTRACTOR. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL WIRING FOR THE LIGHTING AS WELL AS COORDINATE WITH THE LIGHTING CONTRACTOR FOR INSTALLATION OF THE LED LUMINAIRES.
23. A HYBRID RADAR DETECTION CABLE SHALL BE INSTALLED FROM EACH TRAFFIC SIGNAL POLE (WHERE NECESSARY) TO THE TRAFFIC SIGNAL CABINET. EACH CABLE SHALL INCLUDE 25' OF COIL ATTACHED TO J-HOOK MOUNTED AT TOP OF SIGNAL POLE NEAR LUMINAIRE MAST ARM HANDHOLE. EACH CABLE SHALL INCLUDE 10' OF COIL WITHIN THE TRAFFIC SIGNAL CABINET.
24. THE TRAFFIC SIGNAL CONTROLLER CABINET SHALL BE ORIENTED WITH THE BACK OF THE CABINET TOWARD THE INTERSECTION SUCH THAT THE SIGNAL HEADS CAN BE VIEWED WHILE FACING THE CONTROLLER CABINET, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SERVICE PEDESTAL SHALL BE ORIENTED SO METER WINDOW FACES THE SAME DIRECTION AS THE BACK OF THE SIGNAL CABINET. SERVICE PEDESTAL SHALL BE INSTALLED TO THE RIGHT OF THE SIGNAL CABINET WHILE FACING THE DOOR OF THE SIGNAL CABINET. THE NEAREST EDGE OF THE TRAFFIC SIGNAL CABINET/SERVICE PEDESTAL SHALL BE OFFSET 2' FROM THE NEAREST EDGE OF THE SIDEWALK.
25. ALL SIGNING AND TRAFFIC CONTROLS USED WHILE CONSTRUCTION ACTIVITIES ARE IN PROGRESS SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
26. ALIGNMENT CENTER LINE HAS NOT BEEN SHOWN FOR SAKE OF VISUAL CLARITY. STATION TICK MARKS ARE SHOWN. SEE ALIGNMENT PLAN SHEETS FOR ALIGNMENT CENTER LINE DETAILS.
27. THE PROVIDED SIGNAL POLE FOOTING ELEVATIONS ARE BASED ON ADJACENT SIDEWALK/RAMP ELEVATIONS. THE ELEVATIONS OF THE SIGNAL POLE FOOTINGS ARE DEPENDENT UPON THE SIDEWALK/RAMP ELEVATIONS. THEREFORE, IF SIDEWALK/RAMP ELEVATIONS DEVIATE FROM THE PLAN ELEVATIONS, SIGNAL POLE FOUNDATION ELEVATIONS MUST BE REVISED ACCORDINGLY.
28. SEE PAVEMENT MARKING TABULATION OF QUANTITIES FOR STOP BAR LOCATIONS.

TRAFFIC SIGNAL GENERAL NOTES (SPECIFIC TO TEMPORARY SIGNALS)

1. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY FOR TEMPORARY POWER SERVICE CONNECTON.
2. THE OPERATION, MAINTENANCE AND REPAIR OF THE TEMPORARY SIGNAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. CONTRACTOR SHALL ADJUST THE VIDEO/RADAR DETECTION ZONES AND SIGNING/SIGNAL HEADS AS REQUIRED FOR STAGING OF THIS PROJECT. SEE INDIVIDUAL STAGE SHEETS FOR SIGNING/SIGNAL HEADS AND VIDEO/RADAR DETECTION ZONE LOCATIONS.
4. CONTRACTOR SHALL REMOVE OR COVER SIGNAL HEADS NOT USED DURING VARIOUS CONSTRUCTION STAGES.
5. VIDEO DETECTION CAMERAS TO BE MOUNTED ON A LUMINAIRE BRACKET ARM UNLESS OTHERWISE SHOWN ON PLANS FOR THE TEMPORARY TRAFFIC SIGNALS.
6. RADAR DETECTION DEVICES TO BE MOUNTED TO SIDE OF WOODEN POLE UNLESS OTHERWISE SHOWN ON PLANS FOR THE TEMPORARY TRAFFIC SIGNALS.
7. POLES FOR THE TEMPORARY TRAFFIC SIGNALS SHOULD BE PLACED SO THEY WILL NOT INTERFERE WITH CONSTRUCTION ACTIVITIES. THE SPAN WIRE IS INTENDED TO PROVIDE LOCATIONS FOR ALL TRAFFIC CONTROL CONDITIONS DURING THE PROJECT.
8. STATIONS AND OFFSETS ARE BASED ON EDGEWOOD ROAD ALIGNMENT. THESE LOCATIONS ARE APPROXIMATE AND SHOULD BE VERIFIED AND ADJUSTED AS NEEDED. 10' CLEARANCE TO BE PROVIDED BETWEEN EDGE OF POLES AND EDGE OF TRAVEL WAY DURING EACH STAGE.
9. TEMPORARY STOP BARS SHOULD BE PLACED A MINIMUM OF 40 FEET AND A MAXIMUM OF 180 FEET WHEN MEASURED FROM THE TRAFFIC SIGNAL HEADS.
10. ALL SIGNAL HEADS SHALL BE SPACED A MINIMUM OF 8 FEET APART.
11. AT THE SOUTH HY-VEE ACCESS INTERSECTION, THE EXISTING VIDEO DETECTION EQUIPMENT INCLUDING THE CAMERAS AND CONTROLLER CABINET EQUIPMENT SHALL BE REUSED FROM THE EXISTING TRAFFIC SIGNAL FOR THE TEMPORARY TRAFFIC SIGNAL LOCATED AT THE TRANSAMERICAN ENTRANCE INTERSECTION. NEW VIDEO DETECTION CABLE SHALL BE INSTALLED. SEE TEMPORARY TRAFFIC SIGNAL PLANS SHEETS FOR MORE INFORMATION.
12. AT THE INTERSECTIONS OF NORTH RIVER BOULEVARD, HIGHWAY 100 AND SOUTH HY-VEE ACCESS ALONG EDGEWOOD ROAD, THE RADAR DETECTION SYSTEM EQUIPMENT TO BE USED AS PART OF THE PERMANENT INSTALLATIONS, SHALL ALSO BE USED FOR VARIOUS TEMPORARY TRAFFIC SIGNAL STAGES. SEE INDIVIDUAL TEMPORARY TRAFFIC SIGNAL SHEETS AND SPECIAL PROVISIONS FOR MORE INFORMATION.

TRAFFIC SIGNAL INDEX OF SHEETS:

N.1	NOTES AND ABBREVIATIONS
N.2	LEGEND AND LIST OF BID ITEMS
N.3 – N.5	EXISTING TRAFFIC SIGNAL REMOVALS – NORTH RIVER BLVD – HIGHWAY 100 – SOUTH HY-VEE ACCESS
N.6 – N.14	PERMANENT TRAFFIC SIGNALS – NORTH RIVER BLVD – HIGHWAY 100 – SOUTH HY-VEE ACCESS
N.15	FIBER INTERCONNECT (COMMUNICATION)
N.16 – N.23	PERMANENT QUANTITIES – NORTH RIVER BLVD – HIGHWAY 100 – SOUTH HY-VEE ACCESS
N.24 – N.29	TRAFFIC SIGNAL GENERAL DETAILS
N.30 – N.70	TEMPORARY TRAFFIC SIGNALS – NORTH RIVER BLVD – HIGHWAY 100 – SOUTH HY-VEE ACCESS
N.71	TEMPORARY TRAFFIC SIGNAL SPECIFIC DETAILS

ABBREVIATIONS

SIG	SIGNAL HEAD CABLE
PED HD	PEDESTRIAN HEAD CABLE
PED PB	PEDESTRIAN PUSHBUTTON CABLE
CNTRL	CONTROLLER
LUM	LUMINAIRE STREET LIGHT POWER CABLE
N	NEUTRAL
LN1	POWER – LINE 1
LN2	POWER – LINE 2
GR	GROUND WIRE 1c #6
TR	TRACER WIRE 1c #10
PR	PULL ROPE
Y1	FUSED WYE CONNECTOR FOR STREET LIGHTING
Y2	NON-FUSED WYE CONNECTOR FOR STREET LIGHTING
Y3	NON-FUSED WYE CONNECTOR FOR STREET LIGHTING
L1	FUSED IN-LINE CONNECTOR FOR STREET LIGHTING
L2	NON-FUSED IN-LINE CONNECTOR FOR STREET LIGHTING
HH	HANDHOLE
FY	FLASHING YELLOW
SY	STEADY YELLOW
TM CABLE	TRAFFIC MONITOR UNIT CABLE
RADAR	RADAR DETECTION CABLE
CAT6	CCTV CAMERA CABLE
U.A.C.	USE AS CONSTRUCTED
GRS	GALVANIZED RIGID STEEL

LICENSED PROFESSIONAL ENGINEER
TYLER C. WILES
20906
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.

TYLER C. WILES, P.E. — 1/3/2014 DATE

License Number: 20906
My license renewal date is DECEMBER 31, 2015.
Pages or sheets covered by this seal:
SHEETS N.1 THRU N.71

NOTES AND ABBREVIATIONS

"TRAFFIC SIGNALIZATION" LUMP SUM BID ITEM

FINAL (PERMANENT) 'TRAFFIC SIGNAL' BILL OF MATERIALS
Edgewood Road Corridor - Cedar Rapids, IA

No.	Item Description	Units	N. River Blvd. Intersection	Hwy 100 Interchange	South Hy-Vee Access Intersection	TOTAL
1	Controller, Cabinet, and Accessories - Complete	EA	1	1	1	3
2	Power Service Pedestal with Uninterruptable Power Supply (Battery Back-Up System)	EA	1	1	1	3
3	Ethernet Communications System	LS	1	1	1	3
4	Dome Style Pan/Tilt/Zoom CCTV Camera	EA	1	1	0	2
5	Radar Detection - Cabinet Equipment	LS	1	1	1	3
6	Radar Detection - SmartSensor - Stop Bar	EA	3	4	3	10
7	Radar Detection - SmartSensor - Advance	EA	2	4	2	8
8	Ped Push Button with Sign R10-3E Left (SPECIAL)	EA	1	0	2	3
9	Ped Push Button with Sign R10-3 EL	EA	0	4	1	5
10	Ped Push Button with Sign R10-3E Right (SPECIAL)	EA	1	0	0	1
11	Ped Push Button with Sign R10-3 ER	EA	0	4	1	5
12	Ped Push Button with Sign R10-3 ERL	EA	1	0	1	2
13	Traffic Sign (R3-5L) 30"x36" w/ Mast Arm Mounting	EA	1	4	1	6
14	Traffic Sign (R3-5R) 30"x36" w/ Mast Arm Mounting	EA	1	0	1	2
15	Street Name Sign "North River Blvd NE" (120" x 21") (Install Only)	EA	2	0	0	2
16	Street Name Sign "Edgewood Rd NE" (108" x 21") (Install Only)	EA	1	0	1	2
17	Cable Mount Sign Bracket for Street Name Sign	EA	3	0	1	4
18	Pedestrian Signal Head - Single Unit, 16" Countdown Hand/Man Pedestrian Head, All LEDs	EA	4	8	6	18
19	Traffic Signal Head - 3-Section, 12" RYG Signal Head, w/ Back Plate	EA	9	0	10	19
20	Traffic Signal Head - 3-Section, 12" RYG with Thru G Arrow, w/ Back Plate	EA	0	6	0	6
21	Traffic Signal Head - 3-Section, 12" RYG with Angled Arrows, w/ Back Plate	EA	0	10	0	10
22	Traffic Signal Head - 4-Section, 12" R,SY,FY,G Left Arrow, w/ Back Plate	EA	1	0	1	2
23	Traffic Signal Head - 5-Section, 12" RYG with Right Turn Y+G Arrow, w/ Back Plate	EA	2	0	2	4
24	Concrete Base - Controller/Service Pedestal Pad	EA	1	1	1	3
25	Concrete Base - Push Button Pole 18" X 3' Deep Footing	EA	0	2	0	2
26	Concrete Base - Pedestal Pole 2' Dia. X 3' Deep Footing	EA	1	0	2	3
27	Concrete Base - Pole Footing - Various	EA	4	4	4	12
28	Pole (Steel) - Push Button Pole, 5' 6" Height - Powder Coated	EA	0	2	0	2
29	Pole (Steel) - Pedestal Pole, 10' Height - Powder Coated	EA	1	0	2	3
30	Pole (Steel) - No Signal Mast Arm - 1 Luminaire Mast Arm - Powder Coated	EA	1	2	1	4
31	Pole (Steel) - No Signal Mast Arm - 2 Luminaire Mast Arms - Powder Coated	EA	0	2	0	2
32	Pole (Steel) - Combination Signal Pole - 52' Arm - Powder Coated	EA	1	0	1	2
33	Pole (Steel) - Combination Signal Pole - 58' Arm - Powder Coated	EA	1	0	0	1
34	Pole (Steel) - Combination Signal Pole - 60' Arm - Powder Coated	EA	0	0	1	1
35	Pole (Steel) - Combination Signal Pole - 67' Arm - Powder Coated	EA	1	0	1	2
36	Traffic Signal Structure (Steel) - Powder Coated	EA	0	1	0	1
37	Handhole - Type 1, 24" Poured or Precast, Ring and Cover	EA	4	12	4	20
38	Handhole - Type 2, "Tub" 24" x 36" Quazite Stackable	EA	1	0	1	2
39	Handhole - Type 3, "Tub" 30" x 48" Quazite Stackable	EA	0	3	0	3
40	Junction Box - Underdeck Surface Mount, 18" x 12" x 8"	EA	0	10	0	10
41	Conduit - 2" PVC Trenched	LF	242	1,344	168	1,754
42	Conduit - 3" PVC Trenched	LF	79	384	63	526
43	Conduit - 4" PVC Trenched	LF	573	683	557	1,813
44	Conduit - 2" Galvanized Rigid Steel - Under Deck Mounted	LF	0	636	0	636
45	Conduit - 3" Galvanized Rigid Steel - Under Deck Mounted	LF	0	415	0	415
46	Conduit Expansion Fitting	EA	0	14	0	14
47	Cable - Signal 7c #14	LF	625	0	914	1,539
48	Cable - Signal 5c #14	LF	3,351	11,131	2,605	17,087
49	Cable - Signal 2c #14	LF	1,885	3,817	914	6,616
50	Cable - 1c#3 Power Supply Cable	LF	237	300	189	726
51	Cable - 1c#6 Power Supply Cable	LF	63	74	63	200
52	Cable - 1c#6 Power For Luminaire	LF	0	1,859	0	1,859
53	Cable - 1c#8 Power For Luminaire	LF	2,027	5,292	1,932	9,251
54	Cable - Ground 1c #6	LF	825	1,596	835	3,256
55	Cable - Ground 1c #8	LF	0	1,229	0	1,229
56	Cable - Tracer 1c #10	LF	1,061	2,384	930	4,375
57	Cable - Radar Detection (per manufacturer)	LF	1,392	3,990	1,423	6,805
58	Cable - Outdoor Rated Cat6 for CCTV Camera (per manufacturer)	LF	231	893	0	1,124
59	Pull Rope (Incidental to Cost of Conduit)	LF	1,061	2,384	930	4,375
60	Wye Connector - Type L1 (5A Fuse)	EA	4	10	4	18
61	Wye Connector - Type L2	EA	4	12	4	20
62	Wye Connector - Type Y3	EA	6	18	6	30
63	Remove and Salvage Existing Traffic Signal	LS	1	1	1	1
64	Traffic Control	LS	1	1	1	1
65	Mobilization	LS	1	1	1	1

1. FOR DETAILED QUANTITY BREAKOUT OF EACH INTERSECTION, SEE SHEETS N.16–N.23.

"TRAFFIC SIGNALIZATION – TRAFFIC SIGNAL LUMINAIRE POLES" LUMP SUM BID ITEM

FINAL (PERMANENT) 'TRAFFIC SIGNAL - TRAFFIC SIGNAL LUMINAIRE POLES' BILL OF MATERIALS
Edgewood Road Corridor - Cedar Rapids, IA

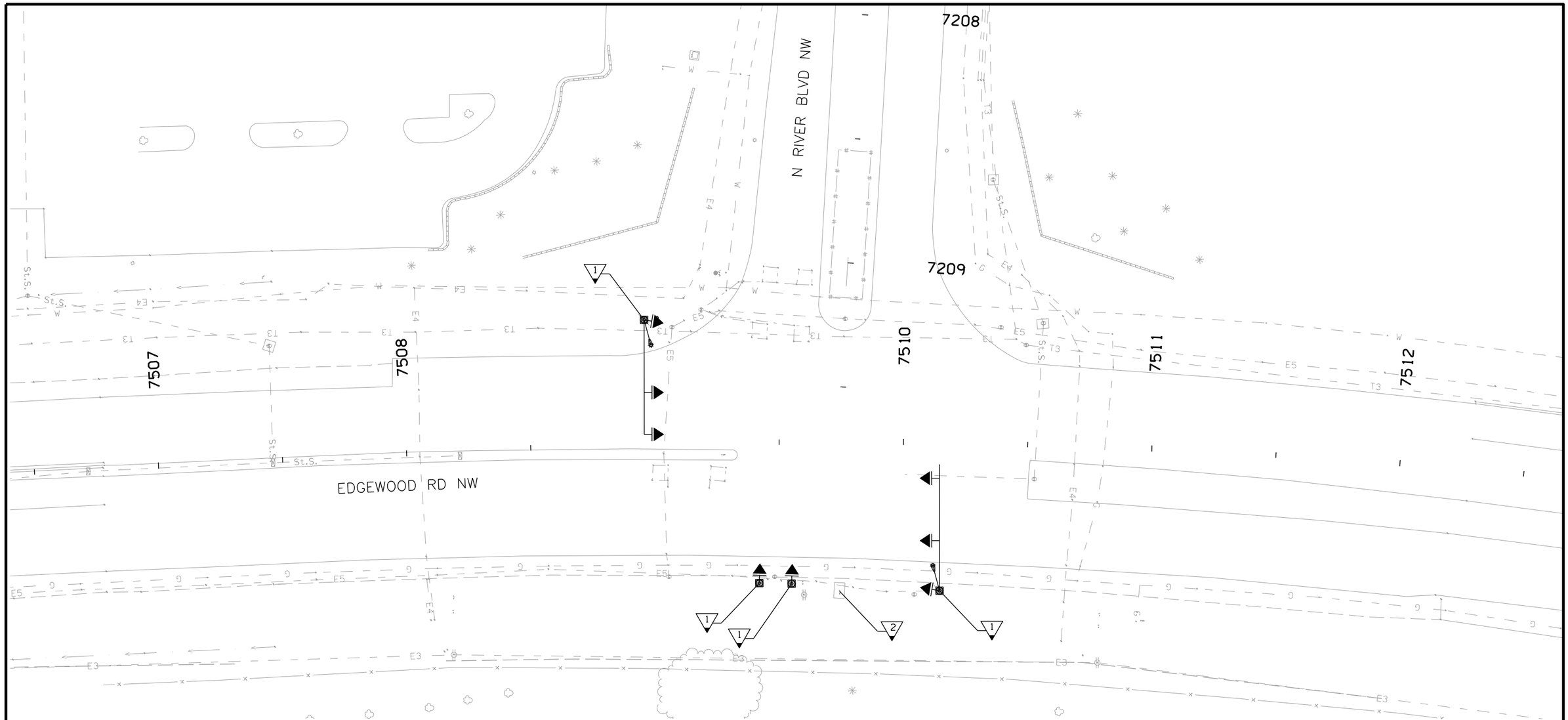
No.	Item Description	Units	Hwy 100 Interchange	TOTAL
1	Concrete Base - Pole Footing - Various	EA	4	4
2	Pole (Steel) - No Signal Mast Arm - 1 Luminaire Mast Arm - Powder Coated	EA	4	4

SIGNAL LEGEND

PROPOSED

- POWER SOURCE
- CABINET, CONTROLLER, SERVICE PEDESTAL W/BBS, AND CONCRETE PAD
- (1) TRAFFIC SIGNAL POLE, FOOTING SYMBOL, AND IDENTIFYING NUMBER
- (2E) EXISTING TRAFFIC SIGNAL POLE, FOOTING SYMBOL, AND IDENTIFYING NUMBER
- (3) PEDESTAL POLE, FOOTING SYMBOL, AND IDENTIFYING NUMBER
- (2E) EXISTING WOODEN OR STEEL SIGNAL POLE AND IDENTIFYING NUMBER
- (4) WOODEN OR STEEL SIGNAL POLE AND IDENTIFYING NUMBER
- 81 TRAFFIC SIGNAL HEAD WITH BACKPLATE SYMBOL AND IDENTIFYING NUMBER
- 82E EXISTING TRAFFIC SIGNAL HEAD WITH BACKPLATE SYMBOL AND IDENTIFYING NUMBER
- 25 PEDESTRIAN HEAD SYMBOL AND IDENTIFYING NUMBER
- (C) MAST ARM/SPAN WIRE MOUNTED SIGN SYMBOL AND IDENTIFYING NUMBER
- (2A) (2S) RADAR DETECTION DEVICE (A = ADVANCE DEVICE, S = STOP BAR DEVICE)
- VIDEO DETECTION CAMERA
- DOME STYLE PAN/TILT/ZOOM CCTV CAMERA
- LUMINAIRE BRACKET ARM – 15 FEET (NO LUMINAIRE)
- LUMINAIRE ARM – LENGTH AS SPECIFIED IN PLANS
- BRIDGE RAIL LUMINIAIRE FIXTURE (SEE LIGHTING SHEETS)
- 2A RADAR DETECTION AREA SYMBOL AND IDENTIFYING NUMBER
- 2 30"x48" "TUB" (TYPE 3) HANDHOLE SYMBOL AND IDENTIFYING NUMBER
- 1 24"x36" "TUB" (TYPE 2) HANDHOLE SYMBOL AND IDENTIFYING NUMBER
- 4 24" "ROUND" (TYPE 1) HANDHOLE SYMBOL AND IDENTIFYING NUMBER
- 6E EXISTING HANDHOLE SYMBOL AND IDENTIFYING NUMBER
- JUNCTION BOX SYMBOL
- 26 PUSHBUTTON SYMBOL AND IDENTIFYING NUMBER
- TRENCHED SIGNAL CONDUIT
- EXISTING TRENCHED SIGNAL CONDUIT
- CONDUIT EXPANSION FITTING

LEGEND AND LIST OF BID ITEMS



TRAFFIC SIGNAL REMOVAL NOTES

1. EXISTING TRAFFIC SIGNAL AND FOUNDATION SHALL BE REMOVED AS PER PLAN GENERAL NOTES AND SPECIAL PROVISIONS. SEE TEMPORARY TRAFFIC SIGNAL SHEETS FOR TIMING OF REMOVAL.

2. EXISTING TRAFFIC SIGNAL CONTROLLER CABINET AND FOUNDATION SHALL BE REMOVED AS PER PLAN GENERAL NOTES AND SPECIAL PROVISIONS. SEE TEMPORARY TRAFFIC SIGNAL SHEETS FOR TIMING OF REMOVAL.

0 FEET 20

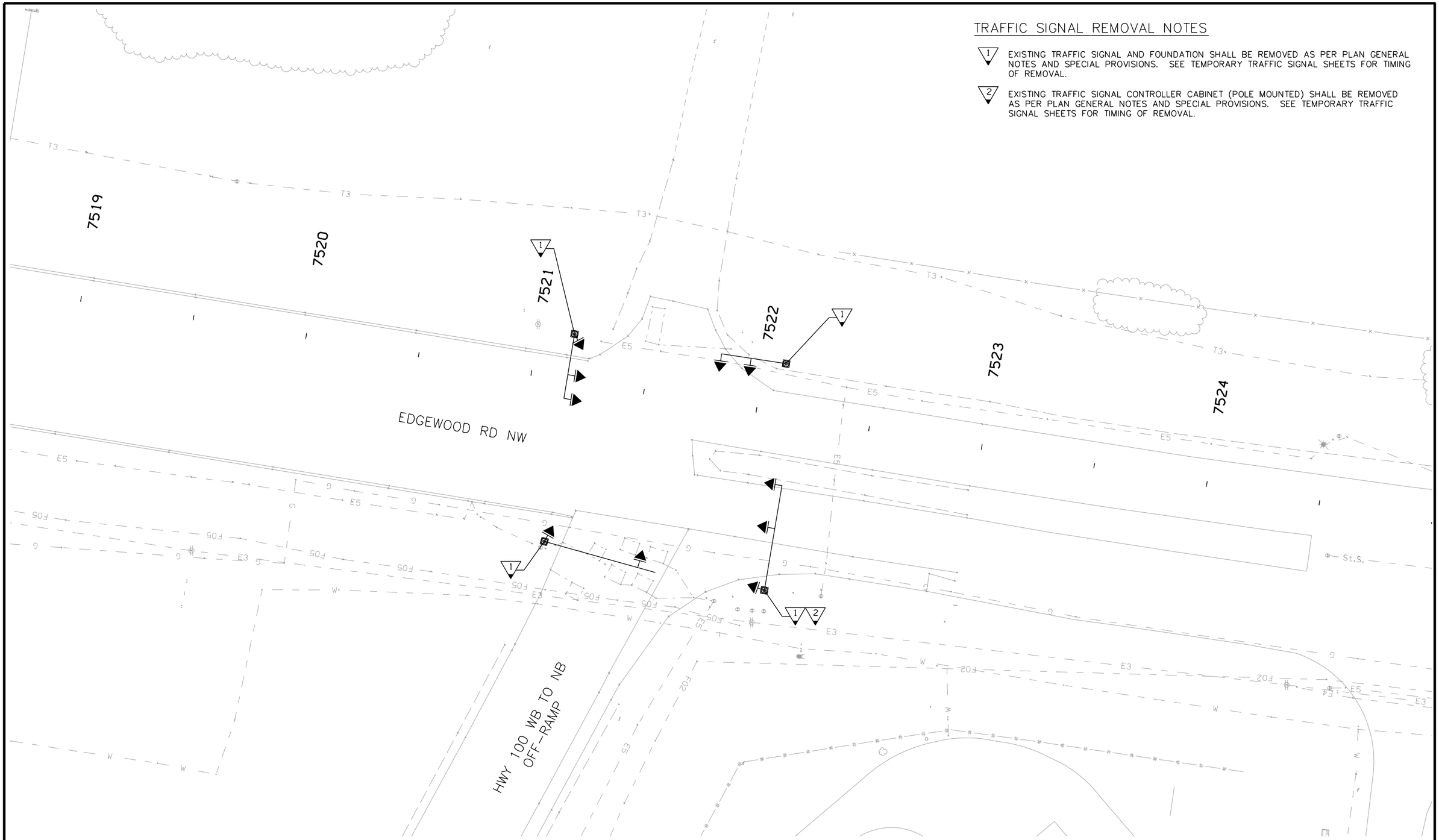
EXISTING TRAFFIC SIGNAL REMOVAL EDGEWOOD RD. AT N. RIVER BLVD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.3

TRAFFIC SIGNAL REMOVAL NOTES

1. EXISTING TRAFFIC SIGNAL AND FOUNDATION SHALL BE REMOVED AS PER PLAN GENERAL NOTES AND SPECIAL PROVISIONS. SEE TEMPORARY TRAFFIC SIGNAL SHEETS FOR TIMING OF REMOVAL.

2. EXISTING TRAFFIC SIGNAL CONTROLLER CABINET (POLE MOUNTED) SHALL BE REMOVED AS PER PLAN GENERAL NOTES AND SPECIAL PROVISIONS. SEE TEMPORARY TRAFFIC SIGNAL SHEETS FOR TIMING OF REMOVAL.



EXISTING TRAFFIC SIGNAL REMOVAL
IA 100 WB RAMP AT EDGEWOOD RD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.4

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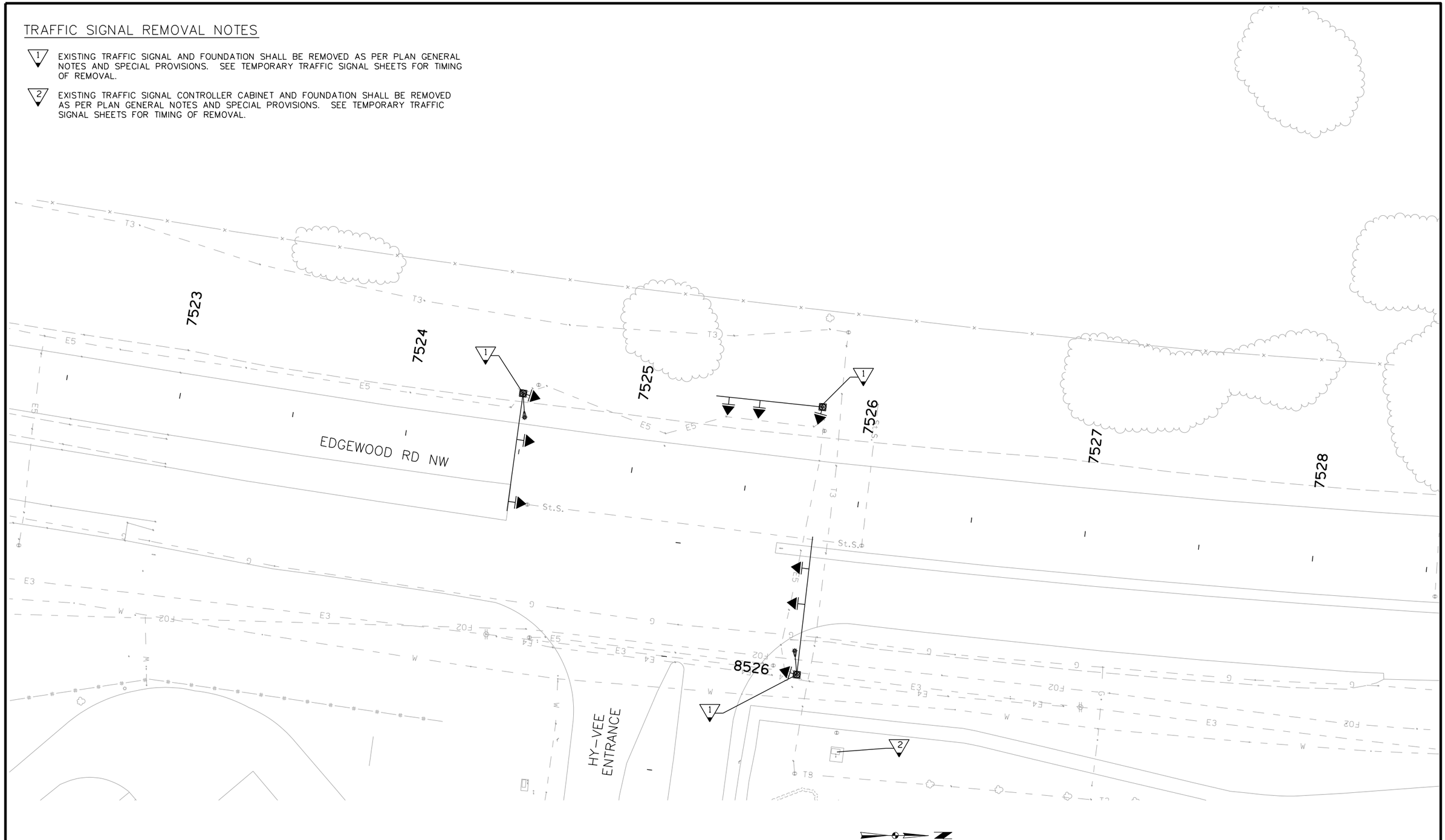
TRAFFIC SIGNAL REMOVAL NOTES

1. EXISTING TRAFFIC SIGNAL AND FOUNDATION SHALL BE REMOVED AS PER PLAN GENERAL NOTES AND SPECIAL PROVISIONS. SEE TEMPORARY TRAFFIC SIGNAL SHEETS FOR TIMING OF REMOVAL.

2. EXISTING TRAFFIC SIGNAL CONTROLLER CABINET AND FOUNDATION SHALL BE REMOVED AS PER PLAN GENERAL NOTES AND SPECIAL PROVISIONS. SEE TEMPORARY TRAFFIC SIGNAL SHEETS FOR TIMING OF REMOVAL.



0 FEET 20

EXISTING TRAFFIC SIGNAL REMOVAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.5

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PEDESTRIAN PUSHBUTTON AND SIGNAL FACE MOUNTING

PEDESTRIAN PUSHBUTTON SIGNS

R10-3E SPECIAL LEFT 9"x15" (1-REQ'D)

R10-3E SPECIAL RIGHT 9"x15" (1-REQ'D)

R10-3ERL 9"x15" (1-REQ'D)

STREET NAME SIGNS

(A) North River Blvd NE — 120"X21" (2-REQ'D)

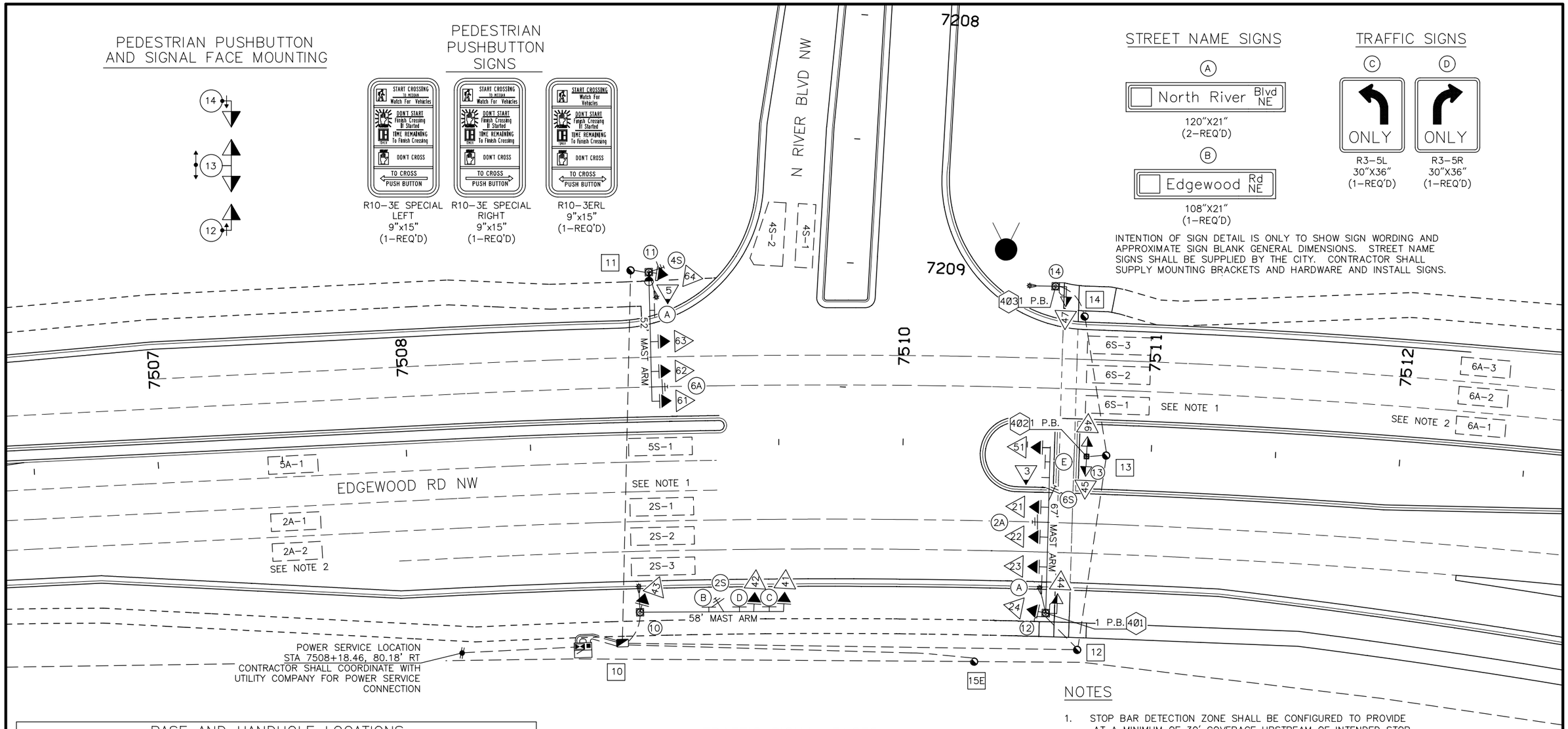
(B) Edgewood Rd NE — 108"X21" (1-REQ'D)

TRAFFIC SIGNS

(C) ONLY — R3-5L 30"X36" (1-REQ'D)

(D) ONLY — R3-5R 30"X36" (1-REQ'D)

INTENTION OF SIGN DETAIL IS ONLY TO SHOW SIGN WORDING AND APPROXIMATE SIGN BLANK GENERAL DIMENSIONS. STREET NAME SIGNS SHALL BE SUPPLIED BY THE CITY. CONTRACTOR SHALL SUPPLY MOUNTING BRACKETS AND HARDWARE AND INSTALL SIGNS.



NOTES

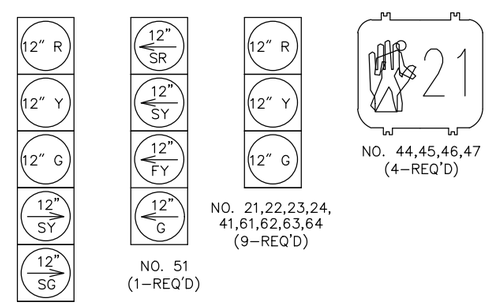
1. STOP BAR DETECTION ZONE SHALL BE CONFIGURED TO PROVIDE AT A MINIMUM OF 30' COVERAGE UPSTREAM OF INTENDED STOP BAR LOCATION.
2. ADVANCED DETECTION ZONES SHALL BE CONFIGURED 165' AND 260' UPSTREAM OF THE INTENDED STOP BAR LOCATION AND BE CONFIGURED TO PROVIDE CONTINUOUS DETECTION COVERAGE A MINIMUM OF 350' UPSTREAM OF THE INTENDED STOP BAR LOCATION.
3. SPARE 5-CONDUCTOR SIGNAL CABLE SHALL BE RAN TO LOCATION OF FUTURE SIGNAL HEAD CONNECTION POINT.
4. SEE ROADWAY SIDEWALK PLAN SHEETS FOR FURTHER INFORMATION REGARDING 2' OFFSET PAVING BETWEEN SIDEWALK AND SIGNAL POLE FOUNDATIONS AS WELL AS CURB RAMP DETAILS.
5. INSTALL DOME STYLE PAN/TILT/ZOOM CCTV CAMERA ONTO SIGNAL POLE #11 UPRIGHT NEAR LUMINAIRE MAST ARM.

0 FEET 20

BASE AND HANDHOLE LOCATIONS

SIGNAL POLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
10	7508+92.41	66.49	RT	851.2'	TRAFFIC SIGNAL POLE
11	7508+99.24	70.22	LT	850.6'	TRAFFIC SIGNAL POLE
12	7510+59.42	66.50	RT	852.5'	TRAFFIC SIGNAL POLE
13	7510+74.01	2.99	RT	853.4'	TRAFFIC SIGNAL PEDESTAL POLE
14	7510+59.57	65.03	LT	852.4'	TRAFFIC SIGNAL POLE
HANDHOLE NO.	**STATION**	**OFFSET**	**RT/LT**		**COMMENTS**
10	7508+84.83	78.69	RT	N/A	TYPE 2 HANDHOLE (TRAFFIC)
11	7508+92.09	71.10	LT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
12	7510+72.85	80.93	RT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
13	7510+81.88	2.37	RT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
14	7510+71.39	53.23	LT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
15E	7510+30.34	86.76	RT	N/A	EXISTING HANDHOLE (FIBER)
SIGNAL CABINET NO.	**STATION**	**OFFSET**	**RT/LT**		**COMMENTS**
1	7508+68.46	79.57	RT	N/A	

TRAFFIC SIGNAL FACES



NO. 42,43 (2-REQ'D)

NO. 51 (1-REQ'D)

NO. 21,22,23,24, 41,61,62,63,64 (9-REQ'D)

NO. 44,45,46,47 (4-REQ'D)

ALL SIGNAL FACES SHALL BE LED.

PERMANENT TRAFFIC SIGNAL DESIGN EDGEWOOD RD. AT N. RIVER BLVD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.6

DETECTOR SUMMARY

DETECTOR NUMBER	LOOP SIZE	PED. PUSH BUTTON	DELAY TIME (SEC.)	PHASE CALLED	NO. OF CHANNELS	PRESENCE MODE	IMPULSE MODE	WIRED IN SERIES	COMMENTS
2S-1, 2S-2, 2S-3	RADAR			2	1	X			STOP BAR
2A-1, 2A-2	RADAR			2	1		X		ADVANCE (165')
2A-3, 2A-4	RADAR			2	1		X		ADVANCE (260')
4S-1	RADAR			4	1	X			STOP BAR
4S-2	RADAR		5.0	4	1	X			STOP BAR
5S-1	RADAR			5	1	X			STOP BAR
5A-1	RADAR			5	1		X		ADVANCE (165')
6S-1, 6S-2, 6S-3	RADAR			6	1	X			STOP BAR
6A-1, 6A-2, 6A-3	RADAR			6	1		X		ADVANCE (165')
6A-4, 6A-5, 6A-6	RADAR			6	1		X		ADVANCE (260')
401, 402, 403		X		4					

PHASE SEQUENCE CHART

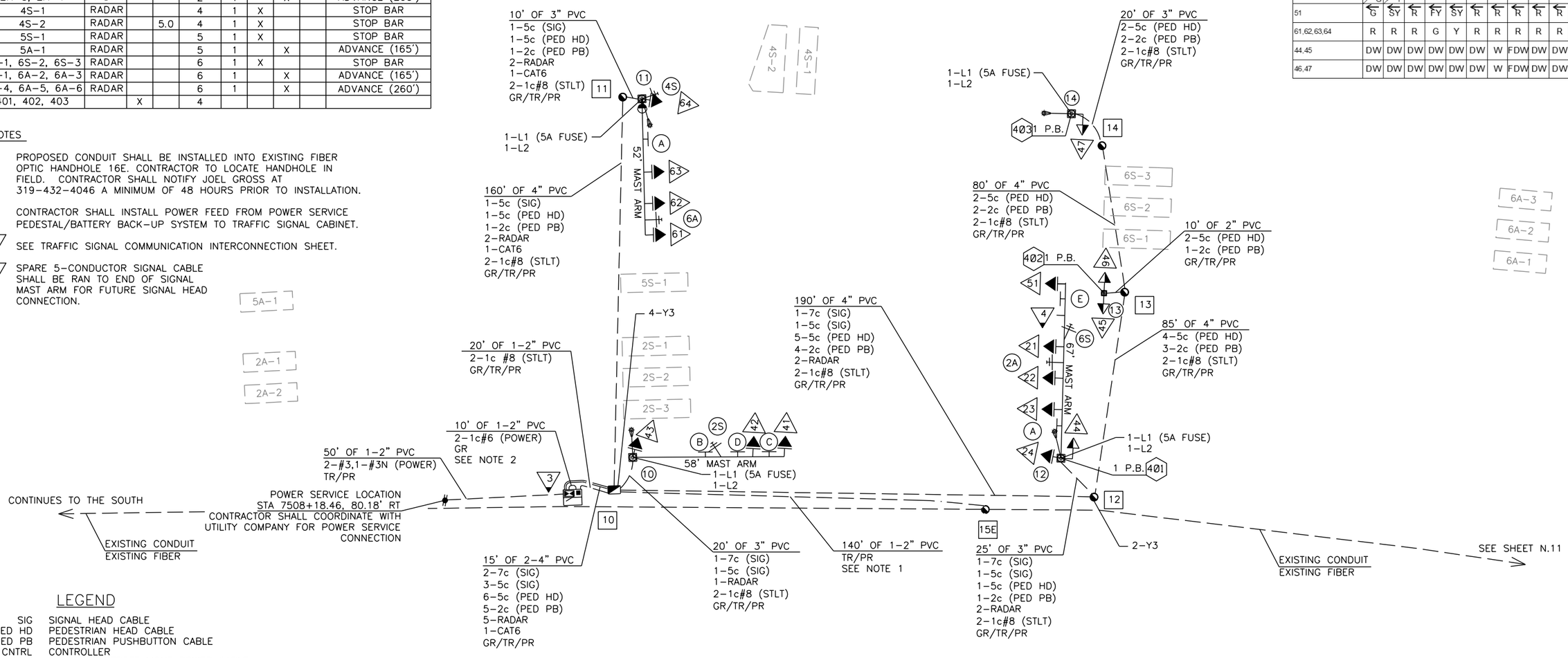
NUMBER \ PHASE	Φ4 OVERLAP, Φ5, Φ2			Φ6, Φ2			Φ4				FLASH MODE
	Φ2 + Φ5			Φ2 + Φ6			Φ4				
21,22,23,24	G	G	G	G	Y	R	R	R	R	R	R
41	R	R	R	R	R	R	G	G	Y	R	R
42,43	R G	R Y	R	R	R	R	G	G	Y	R	R
51	G	SY	R	FY	SY	R	R	R	R	R	R
61,62,63,64	R	R	R	G	Y	R	R	R	R	R	R
44,45	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	-
46,47	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	-

NOTES

1. PROPOSED CONDUIT SHALL BE INSTALLED INTO EXISTING FIBER OPTIC HANDHOLE 16E. CONTRACTOR TO LOCATE HANDHOLE IN FIELD. CONTRACTOR SHALL NOTIFY JOEL GROSS AT 319-432-4046 A MINIMUM OF 48 HOURS PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL INSTALL POWER FEED FROM POWER SERVICE PEDESTAL/BATTERY BACK-UP SYSTEM TO TRAFFIC SIGNAL CABINET.

3 SEE TRAFFIC SIGNAL COMMUNICATION INTERCONNECTION SHEET.

4 SPARE 5-CONDUCTOR SIGNAL CABLE SHALL BE RAN TO END OF SIGNAL MAST ARM FOR FUTURE SIGNAL HEAD CONNECTION.



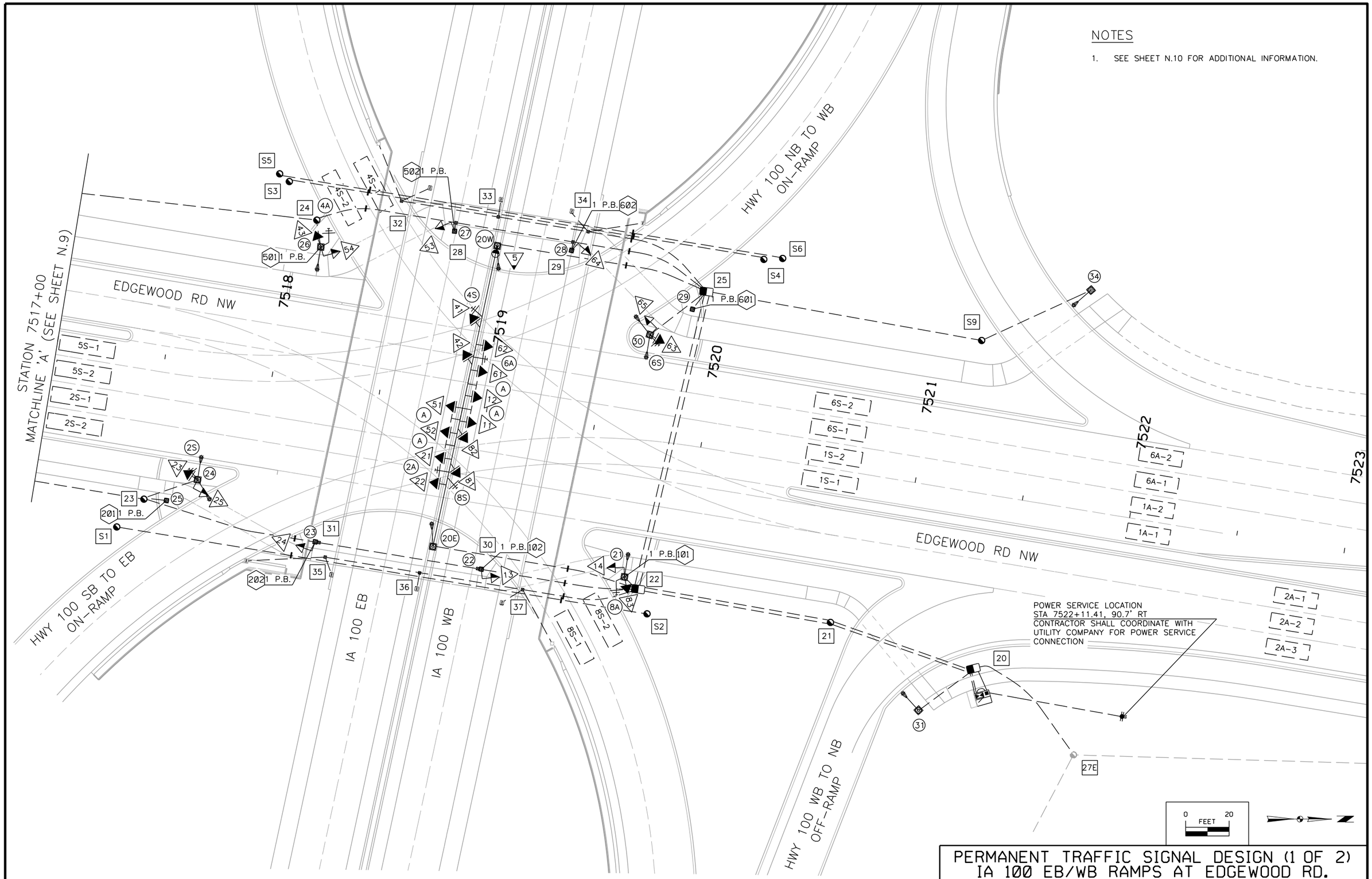
LEGEND

SIG	SIGNAL HEAD CABLE
PED HD	PEDESTRIAN HEAD CABLE
PED PB	PEDESTRIAN PUSHBUTTON CABLE
CNTRL	CONTROLLER
LUM	LUMINAIRE STREET LIGHT POWER CABLE
N	NEUTRAL
LN1	POWER - LINE 1
LN2	POWER - LINE 2
GR	GROUND WIRE 1c #6
TR	TRACER WIRE 1c #10
PR	PULL ROPE
Y1	FUSED WYE CONNECTOR FOR STREET LIGHTING
Y2	NON-FUSED WYE CONNECTOR FOR STREET LIGHTING
Y3	NON-FUSED WYE CONNECTOR FOR STREET LIGHTING
L1	FUSED IN-LINE CONNECTOR FOR STREET LIGHTING
L2	NON-FUSED IN-LINE CONNECTOR FOR STREET LIGHTING
HH	HANDHOLE
FY	FLASHING YELLOW
SY	STEADY YELLOW
RADAR	RADAR DETECTION CABLE
CAT6	CCTV CAMERA CABLE
U.A.C.	USE AS CONSTRUCTED
GRS	GALVANIZED RIGID STEEL

PERMANENT TRAFFIC SIGNAL WIRING EDGEWOOD RD. AT N. RIVER BLVD.

NOTES

1. SEE SHEET N.10 FOR ADDITIONAL INFORMATION.



PERMANENT TRAFFIC SIGNAL DESIGN (1 OF 2)
IA 100 EB/WB RAMPS AT EDGEWOOD RD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.8

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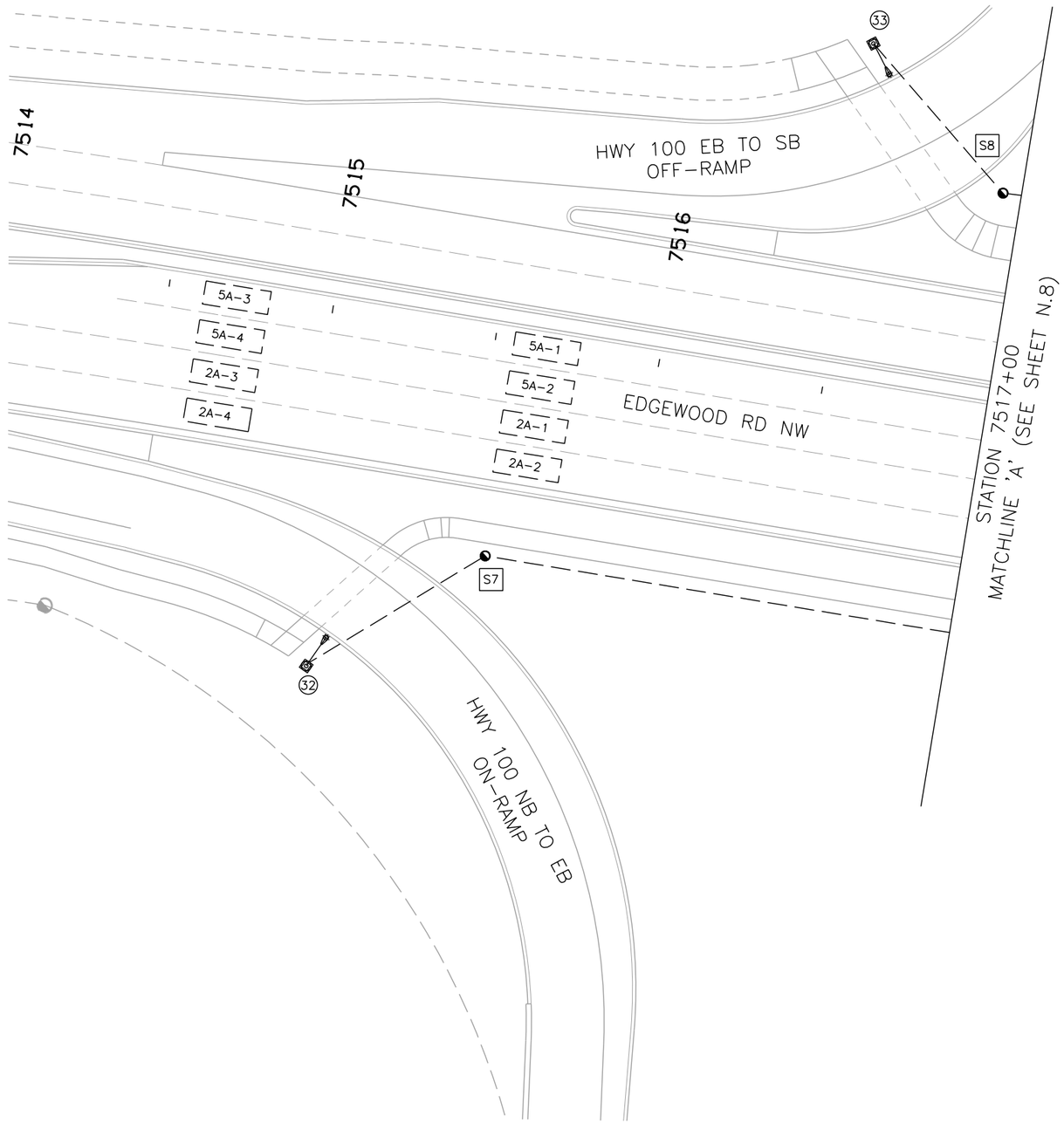
NOTES

1. SEE SHEET N.10 FOR ADDITIONAL INFORMATION.



0 FEET 20

PERMANENT TRAFFIC SIGNAL DESIGN (2 OF 2)
IA 100 EB/WB RAMPS AT EDGEWOOD RD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.9

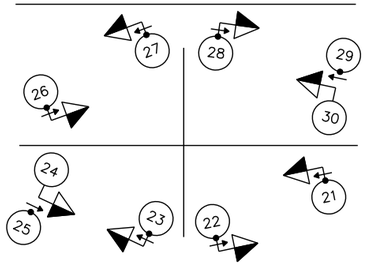
9:55:42 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01.sht

NOTES

1. STOP BAR DETECTION ZONE SHALL BE CONFIGURED TO PROVIDE AT A MINIMUM OF 30' COVERAGE UPSTREAM OF INTENDED STOP BAR LOCATION.
2. ADVANCED DETECTION ZONES SHALL BE CONFIGURED 165' AND 260' UPSTREAM OF THE INTENDED STOP BAR LOCATION AND BE CONFIGURED TO PROVIDE CONTINUOUS DETECTION COVERAGE A MINIMUM OF 350' UPSTREAM OF THE INTENDED STOP BAR LOCATION.
3. SEE SHEET N.24 FOR ELEVATION VIEW OF SIGNAL STRUCTURE. SEE BRIDGE STRUCTURAL PLANS FOR ANCHOR BOLT INFORMATION.
4. SEE ROADWAY SIDEWALK PLAN SHEETS FOR FURTHER INFORMATION REGARDING 3' SIDEWALK TO SIGNAL CABINET FOUNDATION AS WELL AS CURB RAMP DETAILS.

5 INSTALL DOME STYLE PAN/TILT/ZOOM CCTV CAMERA ONTO SIGNAL POLE #20W UPRIGHT NEAR LUMINAIRE MAST ARM.

PEDESTRIAN PUSHBUTTON AND SIGNAL FACE MOUNTING

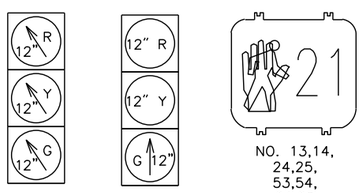


TRAFFIC SIGNS

A

R3-5L
30"X36"
(4-REQ'D)

TRAFFIC SIGNAL FACES



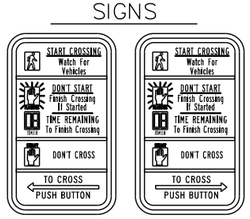
NO. 11,12, 41,42,43 51,52, 81,82,83 (10-REQ'D)

NO. 21,22,23, 61,62,63 (6-REQ'D)

NO. 13,14, 24,25, 53,54, 64,65 (8-REQ'D)

ALL SIGNAL FACES SHALL BE LED.

PEDESTRIAN PUSHBUTTON SIGNS



R10-3EL
9"x15"
(4-REQ'D)

R10-3ER
9"x15"
(4-REQ'D)

DETECTOR SUMMARY

DETECTOR NUMBER	LOOP SIZE	PED. PUSH BUTTON	DELAY TIME (SEC.)	PHASE CALLED	NO. OF CHANNELS	PRESENCE MODE	IMPULSE MODE	WIRED IN SERIES	COMMENTS
1S-1, 1S-2	RADAR			1	1	X			STOP BAR
1A-1, 1A-2	RADAR			1	1		X		ADVANCE (165')
1A-3	RADAR			1	1		X		ADVANCE (260')
2S-1, 2S-2	RADAR			2	1	X			STOP BAR
2A-1, 2A-2	RADAR			2	1		X		ADVANCE (165')
2A-3, 2A-4	RADAR			2	1		X		ADVANCE (260')
4S-1, 4S-2	RADAR			4	1	X			STOP BAR
4A-1, 4A-2	RADAR			4	1		X		ADVANCE (CONTINUOUS)
5S-1, 5S-2	RADAR			5	1	X			STOP BAR
5A-1, 5A-2	RADAR			5	1		X		ADVANCE (165')
5A-3, 5A-4	RADAR			5	1		X		ADVANCE (260')
6S-1, 6S-2	RADAR			6	1	X			STOP BAR
6A-1, 6A-2	RADAR			6	1		X		ADVANCE (165')
6A-3, 6A-4	RADAR			6	1		X		ADVANCE (260')
8S-1, 8S-2	RADAR			8	1	X			STOP BAR
8A-1, 8A-2	RADAR			8	1		X		ADVANCE (CONTINUOUS)
101, 102		X		1					
201, 202		X		2					
501, 502		X		5					
601, 602		X		6					

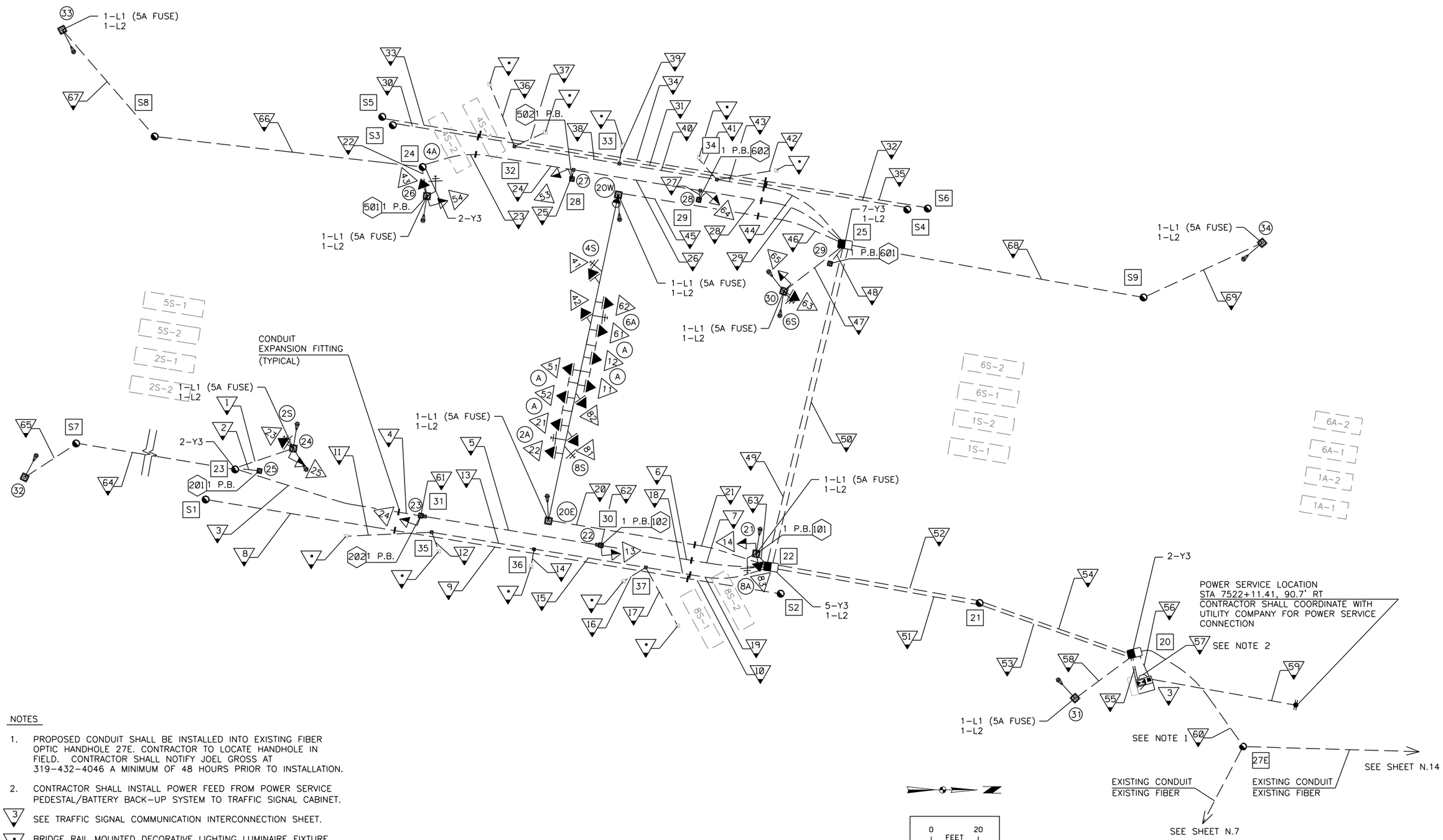
PHASE SEQUENCE CHART

PHASE / NUMBER	Φ4 + Φ8			Φ2 + Φ6				Φ1 + Φ5				FLASH MODE
11,12	R	R	R	R	R	R	R	G↖	G↖	SY↖	R	R
21,22,23	R	R	R	G↑	G↑	SY↑	R	R	R	R	R	R
41,42,43	G↖	SY↖	R	R	R	R	R	R	R	R	R	R
51,52	R	R	R	R	R	R	R	G↖	G↖	SY↖	R	R
61,62,63	R	R	R	G↑	G↑	SY↑	R	R	R	R	R	R
81,82,83	G↖	SY↖	R	R	R	R	R	R	R	R	R	R
13,14	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	-
24,25	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	-
53,54	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	-
64,65	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	-

BASE AND HANDHOLE LOCATIONS

SIGNAL POLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
20E	7518+85.74	65.04	RT	ON BRIDGE	TRAFFIC SIGNAL STRUCTURE
20W	7518+92.56	76.29	LT	ON BRIDGE	TRAFFIC SIGNAL STRUCTURE
21	7519+74.98	65.41	RT	854.1'	TRAFFIC SIGNAL POLE
22	7519+09.41	71.65	RT	ON BRIDGE	TRAFFIC SIGNAL PEDESTAL POLE
23	7518+31.92	71.65	RT	ON BRIDGE	TRAFFIC SIGNAL PEDESTAL POLE
24	7517+73.89	52.26	RT	856.05'	TRAFFIC SIGNAL POLE
25	7517+61.28	64.00	RT	856.0'	PEDESTRIAN PUSHBUTTON POLE
26	7518+12.50	62.60	LT	855.3'	TRAFFIC SIGNAL POLE
27	7518+72.08	79.74	LT	ON BRIDGE	TRAFFIC SIGNAL PEDESTAL POLE
28	7519+26.61	79.72	LT	ON BRIDGE	TRAFFIC SIGNAL PEDESTAL POLE
29	7519+85.93	62.08	LT	853.65'	PEDESTRIAN PUSHBUTTON POLE
30	7519+68.49	47.29	LT	853.81'	TRAFFIC SIGNAL POLE
31	7521+18.46	103.05	RT	849.85'	TRAFFIC SIGNAL POLE
32	7515+09.53	106.58	RT	855.60'	TRAFFIC SIGNAL POLE
33	7516+48.36	107.11	LT	855.3'	TRAFFIC SIGNAL POLE
34	7521+65.49	100.51	LT	848.8'	TRAFFIC SIGNAL POLE
HANDHOLE NO.	**STATION**	**OFFSET**	**RT/LT**		**COMMENTS**
20	7522+18.42	84.46	RT	N/A	TYPE 3 HANDHOLE (TRAFFIC)
21	7520+71.96	69.75	RT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
22	7519+81.46	68.69	RT	N/A	TYPE 3 HANDHOLE (TRAFFIC)
23	7517+50.95	65.07	RT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
24	7518+08.70	74.46	LT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
25	7519+90.92	71.10	LT	N/A	TYPE 3 HANDHOLE (TRAFFIC)
27E	7521+92.17	111.75	RT	N/A	EXISTING HANDHOLE (FIBER)
28	7518+72.08	83.68	LT	N/A	UNDERDECK SURFACE JB (TRAFFIC)
29	7519+26.62	83.70	LT	N/A	UNDERDECK SURFACE JB (TRAFFIC)
30	7519+07.67	71.71	RT	N/A	UNDERDECK SURFACE JB (TRAFFIC)
31	7518+33.75	71.69	RT	N/A	UNDERDECK SURFACE JB (TRAFFIC)
32	7518+45.72	89.46	LT	N/A	UNDERDECK SURFACE JB (LIGHTING)
33	7518+90.83	89.47	LT	N/A	UNDERDECK SURFACE JB (LIGHTING)
34	7519+32.76	89.48	LT	N/A	UNDERDECK SURFACE JB (LIGHTING)
35	7518+37.61	77.84	RT	N/A	UNDERDECK SURFACE JB (LIGHTING)
36	7518+81.66	77.95	RT	N/A	UNDERDECK SURFACE JB (LIGHTING)
37	7519+29.69	77.85	RT	N/A	UNDERDECK SURFACE JB (LIGHTING)
S1	7517+40.70	79.70	RT	N/A	TYPE 1 HANDHOLE (SPARE)
S2	7519+88.02	79.58	RT	N/A	TYPE 1 HANDHOLE (SPARE)
S3	7517+93.32	89.94	LT	N/A	TYPE 1 HANDHOLE (SPARE)
S4	7520+14.63	90.03	LT	N/A	TYPE 1 HANDHOLE (SPARE)
S5	7517+88.34	92.70	LT	N/A	TYPE 1 HANDHOLE (DOT LIGHTING)
S6	7520+23.10	91.87	LT	N/A	TYPE 1 HANDHOLE (DOT LIGHTING)
S7	7515+57.58	64.91	RT	N/A	TYPE 1 HANDHOLE (LIGHTING)
S8	7516+94.38	68.80	LT	N/A	TYPE 1 HANDHOLE (LIGHTING)
S9	7521+19.60	69.48	LT	N/A	TYPE 1 HANDHOLE (LIGHTING)
SIGNAL CABINET NO.	**STATION**	**OFFSET**	**RT/LT**		**COMMENTS**
2	7521+46.24	91.35	RT	N/A	

PERMANENT TRAFFIC SIGNAL DESIGN
SIGNAL INFORMATION SHEET
IA 100 EB/WB RAMPS AT EDGEWOOD RD.



NOTES

1. PROPOSED CONDUIT SHALL BE INSTALLED INTO EXISTING FIBER OPTIC HANDHOLE 27E. CONTRACTOR TO LOCATE HANDHOLE IN FIELD. CONTRACTOR SHALL NOTIFY JOEL GROSS AT 319-432-4046 A MINIMUM OF 48 HOURS PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL INSTALL POWER FEED FROM POWER SERVICE PEDESTAL/BATTERY BACK-UP SYSTEM TO TRAFFIC SIGNAL CABINET.

3 SEE TRAFFIC SIGNAL COMMUNICATION INTERCONNECTION SHEET.

BRIDGE RAIL MOUNTED DECORATIVE LIGHTING LUMINAIRE FIXTURE. SEE P SHEETS FOR ADDITIONAL INFORMATION.

PERMANENT TRAFFIC SIGNAL WIRING (1 OF 2)
IA 100 EB/WB RAMPS AT EDGEWOOD RD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.11

1 30' OF 3" PVC
1-5c (SIG)
1-5c (PED HD)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

2 15' OF 2" PVC
1-2c (PED PB)
GR/TR/PR

3 80' OF 3" PVC
1-5c (SIG)
1-5c (PED HD)
1-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

4 15' OF 3" GRS
(UNDER DECK)
(SEE NOTE 1)
1-5c (SIG)
1-5c (PED HD)
1-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

5 80' OF 3" GRS
(UNDER DECK)
(SEE NOTE 1)
1-5c (SIG)
2-5c (PED HD)
2-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

6 45' OF 3" GRS
(UNDER DECK)
(SEE NOTE 1)
1-5c (SIG)
3-5c (PED HD)
3-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

7 35' OF 3" PVC
1-5c (SIG)
3-5c (PED HD)
3-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

8 85' OF 2" PVC
SPARE
TR/PR

9 130' OF 2" GRS
(UNDER DECK)
(SEE NOTE 1)
SPARE
TR/PR

10 45' OF 2" PVC
SPARE
TR/PR

11 40' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

12 10' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

13 45' OF 2" GRS
(UNDER DECK)
(SEE NOTE 1)
1-#8,1-#8N,1-#8GR

14 10' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

15 50' OF 2" GRS
(UNDER DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

16 15' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

17 30' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

18 20' OF 2" GRS
(UNDER DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

19 35' OF 2" PVC
1-#8,1-#8N,1-#8GR

20 65' OF 3" GRS
(UNDER DECK)
(SEE NOTE 3)
3-5c (SIG)
2-5c (SIG SPARE)
2-RADAR
1-CAT6
1-#8,1-8N (STLT)
GR/TR/PR

21 35' OF 3" PVC
3-5c (SIG)
2-5c (SIG SPARE)
2-RADAR
1-CAT6
1-#8,1-8N (STLT)
GR/TR/PR

22 15' OF 3" PVC
1-5c (SIG)
1-5c (PED HD)
1-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

23 25' OF 3" PVC
1-5c (SIG)
1-5c (PED HD)
1-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

24 45' OF 3" GRS
(UNDER DECK)
(SEE NOTE 1)
1-5c (SIG)
1-5c (PED HD)
1-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

25 5' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 4)
1-5c (PED HD)
1-2c (PED PB)
GR/TR/PR

26 55' OF 3" GRS
(UNDER DECK)
(SEE NOTE 1)
1-5c (SIG)
2-5c (PED HD)
2-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

27 5' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 4)
1-5c (PED HD)
1-2c (PED PB)
GR/TR/PR

28 30' OF 3" GRS
(UNDER DECK)
(SEE NOTE 1)
1-5c (SIG)
3-5c (PED HD)
3-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

29 40' OF 3" PVC
1-5c (SIG)
3-5c (PED HD)
3-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

30 40' OF 2" PVC
SPARE
TR/PR

31 125' OF 2" GRS
(UNDER DECK)
(SEE NOTE 1)
SPARE
TR/PR

32 65' OF 2" PVC
SPARE
TR/PR

33 45' OF 2" PVC
RAMP LIGHTING
(SEE NOTE 5)

34 125' OF 2" GRS
(UNDER DECK)
(SEE NOTE 1)
RAMP LIGHTING
(SEE NOTE 5)

35 70' OF 2" PVC
RAMP LIGHTING
(SEE NOTE 5)

36 30' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

37 15' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

38 45' OF 2" GRS
(UNDER DECK)
(SEE NOTE 1)
1-#8,1-#8N,1-#8GR

39 10' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

40 45' OF 2" GRS
(UNDER DECK)
(SEE NOTE 1)
1-#8,1-#8N,1-#8GR

41 15' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

42 30' OF 1" GRS
(IN BRIDGE DECK)
(SEE NOTE 2)
1-#8,1-#8N,1-#8GR

43 20' OF 2" GRS
(UNDER DECK)
(SEE NOTE 1)
1-#8,1-#8N,1-#8GR

44 45' OF 2" PVC
1-#8,1-#8N,1-#8GR

45 60' OF 3" GRS
(UNDER DECK)
(SEE NOTE 3)
3-5c (SIG)
2-5c (SIG SPARE)
2-RADAR
1-CAT6
1-#8,1-8N (STLT)
GR/TR/PR

46 40' OF 3" PVC
3-5c (SIG)
2-5c (SIG SPARE)
2-RADAR
1-CAT6
1-#8,1-8N (STLT)
GR/TR/PR

47 35' OF 3" PVC
1-5c (SIG)
1-5c (PED HD)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

48 10' OF 2" PVC
1-2c (PED PB)
GR/TR/PR

49 140' OF 4" PVC
5-5c (SIG)
2-5c (SIG SPARE)
4-5c (PED HD)
4-2c (PED PB)
4-RADAR
1-CAT6
GR/TR/PR

50 140' OF 4" PVC
2-#6,1-#6N,1-#6GR

51 90' OF 4" PVC
10-5c (SIG)
4-5c (SIG SPARE)
8-RADAR
2-CAT6
TR/PR

52 90' OF 4" PVC
4-#6,2-#6N,1-#6GR
8-5c (PED HD)
8-2c (PED PB)

53 75' OF 4" PVC
10-5c (SIG)
4-5c (SIG SPARE)
8-RADAR
2-CAT6
TR/PR

54 75' OF 4" PVC
4-#6,2-#6N,1-#6G
8-5c (PED HD)
8-2c (PED PB)

55 20' OF 2-4" PVC
10-5c (SIG)
4-5c (SIG SPARE)
8-5c (PED HD)
8-2c (PED PB)
8-RADAR
2-CAT6
TR/PR

56 20' OF 3" PVC
4-#6,2-#6N,1-#6G

57 15' OF 2" PVC
2-1c#6 (POWER)
GR
SEE NOTE 6

58 35' OF 2" PVC
1-#8,1-#8N,1-#8GR
TR/PR

59 70' OF 2" PVC
2-#3,1-#3N (POWER)
TR/PR

60 70' OF 2" PVC
TR/PR
SEE NOTE 7

61 5' OF 2" GRS
(IN BRIDGE DECK)
(SEE NOTE 8)
1-5c (PED HD)
1-2c (PED PB)
GR/TR/PR

62 5' OF 2" GRS
(IN BRIDGE DECK)
(SEE NOTE 8)
1-5c (PED HD)
1-2c (PED PB)
GR/TR/PR

63 10' OF 3" PVC
1-5c (SIG)
1-5c (PED HD)
1-2c (PED PB)
1-RADAR
1-#8,1-8N (STLT)
GR/TR/PR

64 195' OF 2" PVC
1-#8,1-#8N,1-#8GR
TR/PR

65 65' OF 2" PVC
1-#8,1-#8N,1-#8GR
TR/PR

66 120' OF 2" PVC
1-#8,1-#8N,1-#8GR
TR/PR

67 65' OF 2" PVC
1-#8,1-#8N,1-#8GR
TR/PR

68 130' OF 2" PVC
1-#8,1-#8N,1-#8GR
TR/PR

69 60' OF 2" PVC
1-#8,1-#8N,1-#8GR
TR/PR

NOTES

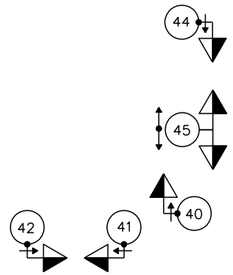
1. CONTRACTOR TO MOUNT CONDUIT UNDER BRIDGE STRUCTURE WITH HANGER STRUT SYSTEM UTILIZING PREVIOUSLY INSTALLED ⅜" DIAMETER CAST-IN THREADED INSERTS. SEE CONDUIT ROUTING/ ACCESS DETAIL SHEETS.
2. CONTRACTOR TO INSTALL WIRING FOR BRIDGE RAIL DECORATIVE LUMINAIRES WITHIN PREVIOUSLY INSTALLED 1" GALAVANIZED RIGID STEEL CONDUIT (GRS). SEE CONDUIT ROUTING/ACCESS DETAIL SHEETS.
3. CONTRACTOR TO MOUNT CONDUIT UNDER BRIDGE STRUCTURE WITH HANGER STRUT SYSTEM UTILIZING PREVIOUSLY INSTALLED ⅜" DIAMETER CAST-IN THREADED INSERTS. CONNECT CONDUIT TO PREVIOUSLY INSTALLED 3" GALVANIZED RIGID STEEL CONDUIT (GRS). SEE CONDUIT ROUTING/ACCESS DETAIL SHEETS.
4. CONTRACTOR TO INSTALL WIRING FOR PEDESTRIAN SIGNAL POLE WITHIN PREVIOUSLY INSTALLED 1" GALVANIZED RIGID STEEL CONDUIT (GRS). SEE CONDUIT ROUTING/ACCESS DETAIL SHEETS.
5. CONTRACTOR TO COORDINATE CONDUIT USE WITH RAMP LIGHTING CONTRACTOR.
6. CONTRACTOR SHALL INSTALL POWER FEED FROM POWER SERVICE PEDESTAL/BATTERY BACK-UP SYSTEM TO TRAFFIC SIGNAL CABINET.
7. PROPOSED CONDUIT SHALL BE INSTALLED INTO EXISTING FIBER OPTIC HANDHOLE 27E. CONTRACTOR TO LOCATE HANDHOLE IN FIELD. CONTRACTOR SHALL NOTIFY JOEL GROSS AT 319-432-4046 A MINIMUM OF 48 HOURS PRIOR TO INSTALLATION.
8. CONTRACTOR TO INSTALL WIRING FOR PEDESTRIAN SIGNAL POLE WITHIN PREVIOUSLY INSTALLED 2" GALVANIZED RIGID STEEL CONDUIT (GRS). SEE CONDUIT ROUTING/ACCESS DETAIL SHEETS.

LEGEND

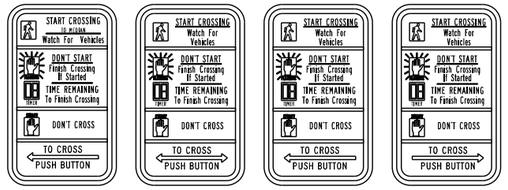
SIG	SIGNAL HEAD CABLE
PED HD	PEDESTRIAN HEAD CABLE
PED PB	PEDESTRIAN PUSHBUTTON CABLE
CNTRL	CONTROLLER
LUM	LUMINAIRE STREET LIGHT POWER CABLE
N	NEUTRAL
LN1	POWER - LINE 1
LN2	POWER - LINE 2
GR	GROUND WIRE 1c #6
TR	TRACER WIRE 1c #10
PR	PULL ROPE
Y1	FUSED WYE CONNECTOR FOR STREET LIGHTING
Y2	NON-FUSED WYE CONNECTOR FOR STREET LIGHTING
Y3	NON-FUSED WYE CONNECTOR FOR STREET LIGHTING
L1	FUSED IN-LINE CONNECTOR FOR STREET LIGHTING
L2	NON-FUSED IN-LINE CONNECTOR FOR STREET LIGHTING
HH	HANDHOLE
FY	FLASHING YELLOW
SY	STEADY YELLOW
RADAR	RADAR DETECTION CABLE
CAT6	CCTV CAMERA CABLE
U.A.C.	USE AS CONSTRUCTED
GRS	GALVANIZED RIGID STEEL

PERMANENT TRAFFIC SIGNAL WIRING (2 OF 2)
IA 100 EB/WB RAMPS AT EDGEWOOD RD.

PEDESTRIAN PUSHBUTTON AND SIGNAL FACE MOUNTING



PEDESTRIAN PUSHBUTTON SIGNS



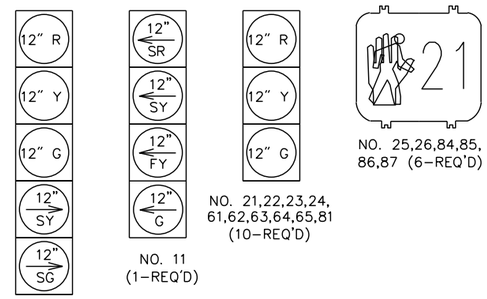
R10-3E SPECIAL LEFT 9"x15" (2-REQ'D)

R10-3ERL 9"x15" (1-REQ'D)

R10-3EL 9"x15" (1-REQ'D)

R10-3ER 9"x15" (1-REQ'D)

TRAFFIC SIGNAL FACES



NO. 82,83 (2-REQ'D)

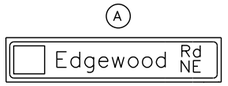
NO. 11 (1-REQ'D)

NO. 21,22,23,24, 61,62,63,64,65,81 (10-REQ'D)

NO. 25,26,84,85, 86,87 (6-REQ'D)

ALL SIGNAL FACES SHALL BE LED.

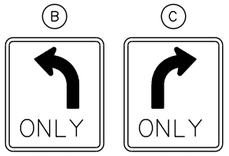
STREET NAME SIGNS



108"X21" (1-REQ'D)

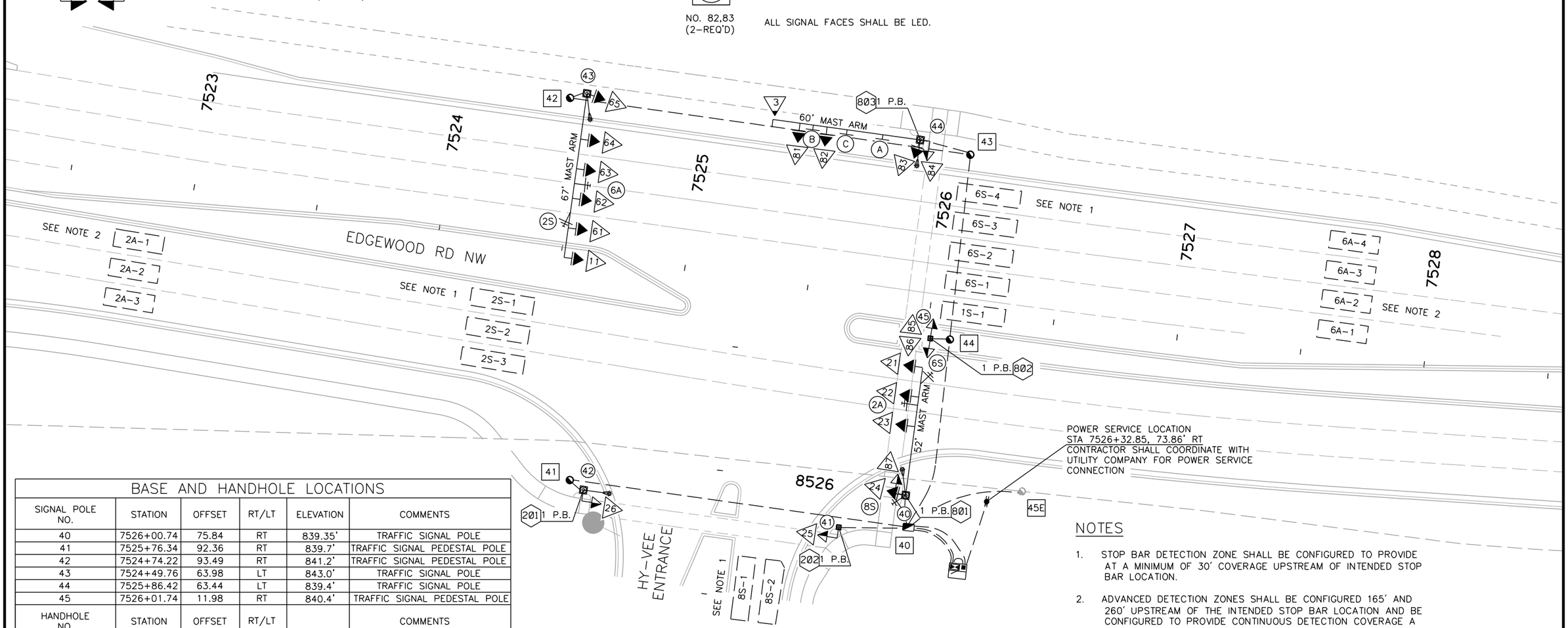
INTENTION OF SIGN DETAIL IS ONLY TO SHOW SIGN WORDING AND APPROXIMATE SIGN BLANK GENERAL DIMENSIONS. STREET NAME SIGNS SHALL BE SUPPLIED BY THE CITY. CONTRACTOR SHALL SUPPLY MOUNTING BRACKETS AND HARDWARE AND INSTALL SIGNS.

TRAFFIC SIGNS



R3-5L 30"X36" (1-REQ'D)

R3-5R 30"X36" (1-REQ'D)



BASE AND HANDHOLE LOCATIONS					
SIGNAL POLE NO.	STATION	OFFSET	RT/LT	ELEVATION	COMMENTS
40	7526+00.74	75.84	RT	839.35'	TRAFFIC SIGNAL POLE
41	7525+76.34	92.36	RT	839.7'	TRAFFIC SIGNAL PEDESTAL POLE
42	7524+74.22	93.49	RT	841.2'	TRAFFIC SIGNAL PEDESTAL POLE
43	7524+49.76	63.98	LT	843.0'	TRAFFIC SIGNAL POLE
44	7525+86.42	63.44	LT	839.4'	TRAFFIC SIGNAL POLE
45	7526+01.74	11.98	RT	840.4'	TRAFFIC SIGNAL PEDESTAL POLE
HANDHOLE NO.	STATION	OFFSET	RT/LT		COMMENTS
40	7526+03.59	88.39	RT	N/A	TYPE 2 HANDHOLE (TRAFFIC)
41	7524+68.14	90.44	RT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
42	7524+43.39	61.16	LT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
43	7526+07.46	63.38	LT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
44	7526+09.58	11.35	RT	N/A	TYPE 1 HANDHOLE (TRAFFIC)
45E	7526+46.11	67.96	RT	N/A	EXISTING HANDHOLE (FIBER)
SIGNAL CABINET NO.	STATION	OFFSET	RT/LT		COMMENTS
4	7526+25.07	101.63	RT	N/A	

NOTES

1. STOP BAR DETECTION ZONE SHALL BE CONFIGURED TO PROVIDE AT A MINIMUM OF 30' COVERAGE UPSTREAM OF INTENDED STOP BAR LOCATION.
2. ADVANCED DETECTION ZONES SHALL BE CONFIGURED 165' AND 260' UPSTREAM OF THE INTENDED STOP BAR LOCATION AND BE CONFIGURED TO PROVIDE CONTINUOUS DETECTION COVERAGE A MINIMUM OF 350' UPSTREAM OF THE INTENDED STOP BAR LOCATION.
3. SPARE 5-CONDUCTOR SIGNAL CABLE SHALL BE RAN TO END OF SIGNAL MAST ARM FOR FUTURE SIGNAL HEAD CONNECTION.
4. SEE ROADWAY SIDEWALK PLAN SHEETS FOR FURTHER INFORMATION REGARDING 2' OFFSET PAVING BETWEEN SIDEWALK AND SIGNAL POLE FOUNDATIONS AS WELL AS CURB RAMP DETAILS.

0 20 FEET

PERMANENT TRAFFIC SIGNAL DESIGN EDGEWOOD RD. AT HY-VEE S. ENTRANCE

PHASE SEQUENCE CHART

PHASE / NUMBER	Φ6 Φ1 Φ8 OVERLAP			Φ6 Φ2				Φ8				FLASH MODE
	Φ1 + Φ6			Φ2 + Φ6				Φ8				
11	G	SY	R	FY	FY	SY	R	R	R	R	R	R
21,22,23,24	R	R	R	G	G	Y	R	R	R	R	R	R
61,62,63,64,65	G	G	G	G	G	Y	R	R	R	R	R	R
81	R	R	R	R	R	R	R	G	G	Y	R	R
82,83	R G	R Y	R	R	R	R	R	G	G	Y	R	R
25,26	DW	DW	DW	W	FDW	DW	DW	DW	DW	DW	DW	-
44,45	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	-
46,47	DW	DW	DW	DW	DW	DW	DW	W	FDW	DW	DW	-

NOTES

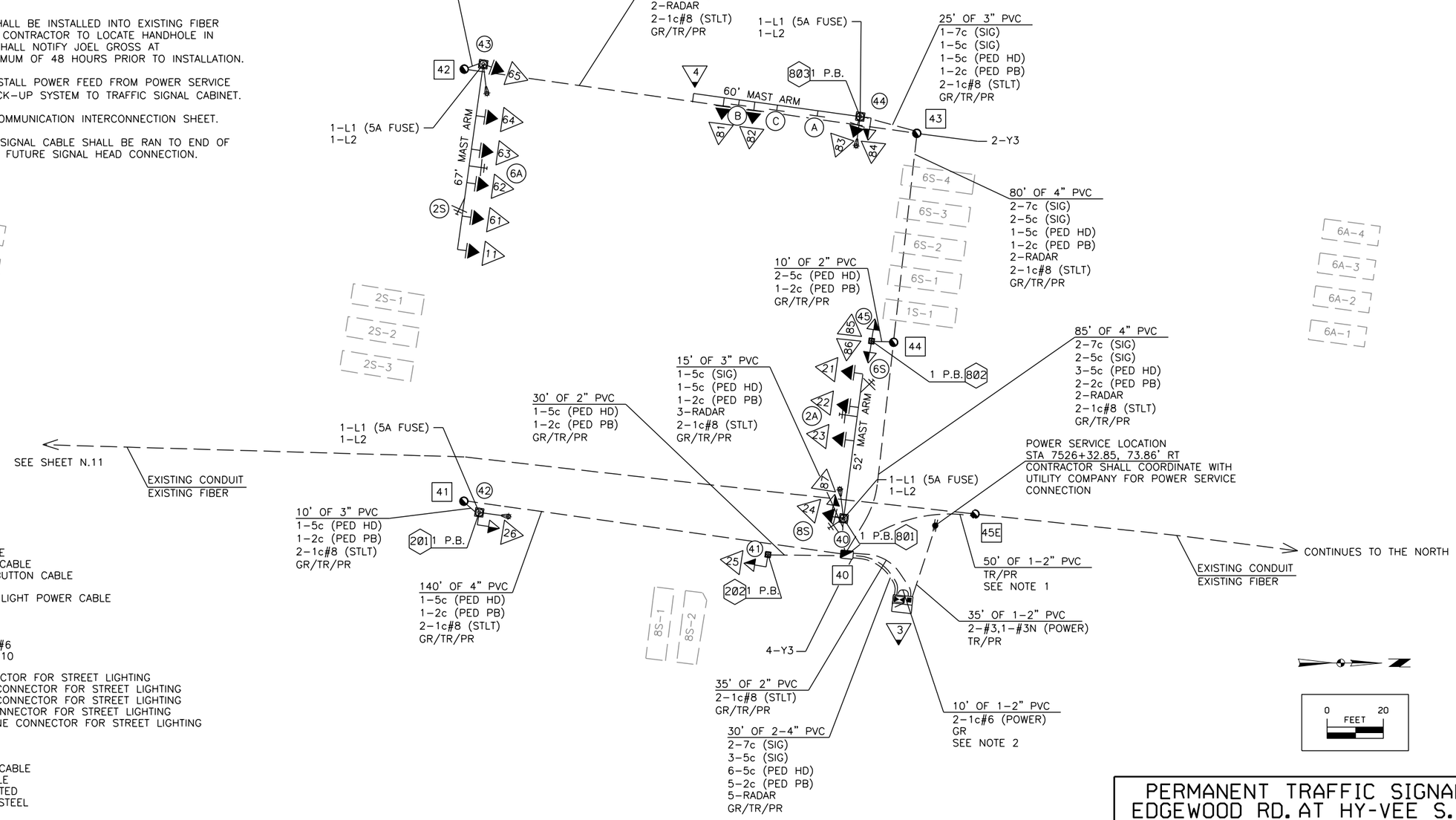
1. PROPOSED CONDUIT SHALL BE INSTALLED INTO EXISTING FIBER OPTIC HANDHOLE 45E. CONTRACTOR TO LOCATE HANDHOLE IN FIELD. CONTRACTOR SHALL NOTIFY JOEL GROSS AT 319-432-4046 A MINIMUM OF 48 HOURS PRIOR TO INSTALLATION.
2. CONTRACTOR SHALL INSTALL POWER FEED FROM POWER SERVICE PEDESTAL/BATTERY BACK-UP SYSTEM TO TRAFFIC SIGNAL CABINET.

3 SEE TRAFFIC SIGNAL COMMUNICATION INTERCONNECTION SHEET.

4 SPARE 5-CONDUCTOR SIGNAL CABLE SHALL BE RAN TO END OF SIGNAL MAST ARM FOR FUTURE SIGNAL HEAD CONNECTION.

DETECTOR SUMMARY

DETECTOR NUMBER	LOOP SIZE	PED. PUSH BUTTON	DELAY TIME (SEC.)	PHASE CALLED	NO. OF CHANNELS	PRESENCE MODE	IMPULSE MODE	WIRED IN SERIES	COMMENTS
1S-1	RADAR			1	1	X			STOP BAR
2S-1, 2S-2, 2S-3	RADAR			2	1	X			STOP BAR
2A-1, 2A-2, 2A-3	RADAR			2	1		X		ADVANCE (165')
2A-4, 2A-5, 2A-6	RADAR			2	1		X		ADVANCE (260')
6S-1, 6S-2, 6S-3, 6S-4	RADAR			6	1	X			STOP BAR
6A-1, 6A-2, 6A-3, 6A-4	RADAR			6	1		X		ADVANCE (165')
6A-5, 6A-6, 6A-7	RADAR			6	1		X		ADVANCE (260')
8S-1	RADAR			8	1	X			STOP BAR
8S-2	RADAR		5.0	8	1	X			STOP BAR
201, 202		X		2					
801, 802, 803		X		8					

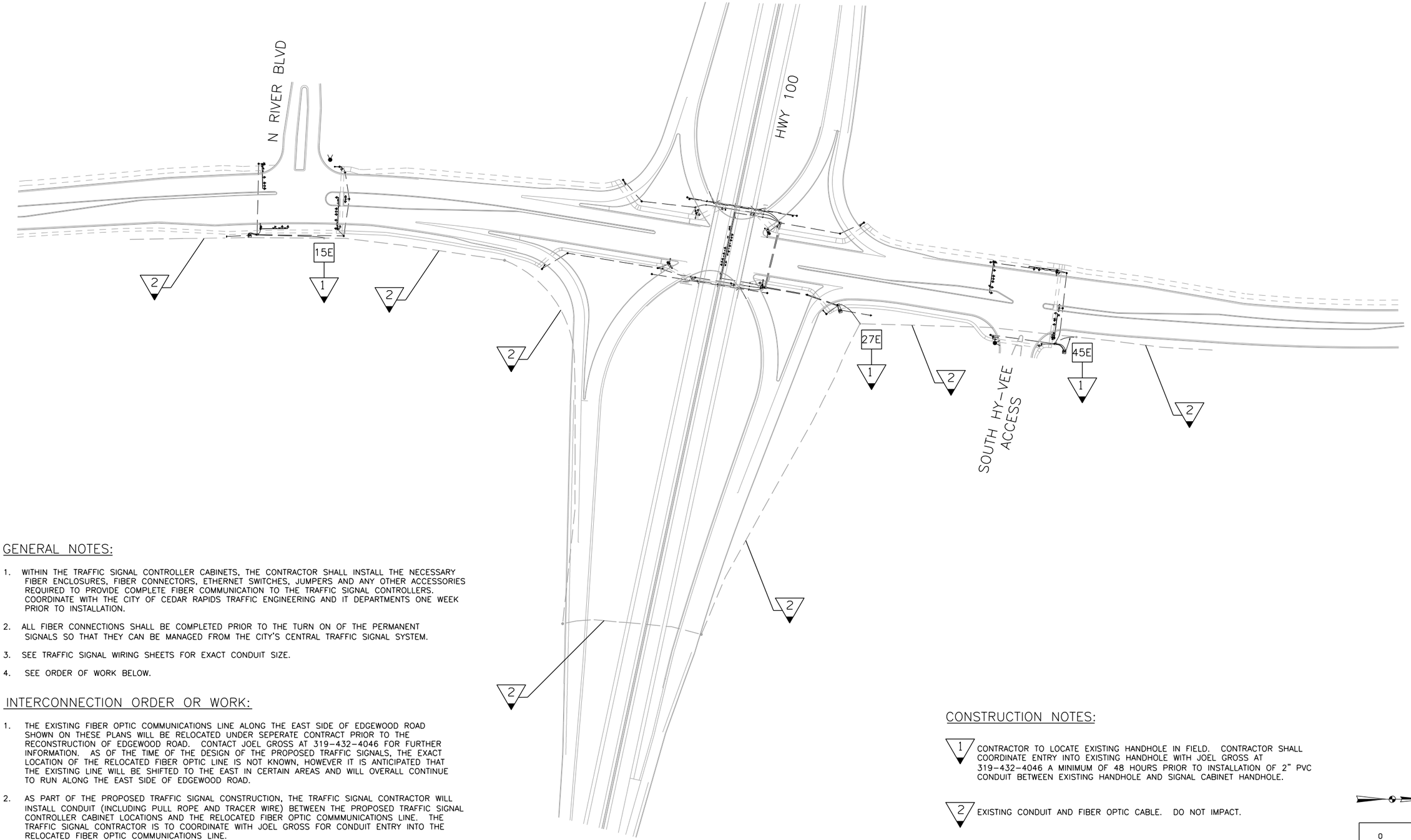


LEGEND

SIG	SIGNAL HEAD CABLE
PED HD	PEDESTRIAN HEAD CABLE
PED PB	PEDESTRIAN PUSHBUTTON CABLE
CNTRL	CONTROLLER
LUM	LUMINAIRE STREET LIGHT POWER CABLE
N	NEUTRAL
LN1	POWER - LINE 1
LN2	POWER - LINE 2
GR	GROUND WIRE 1c #6
TR	TRACER WIRE 1c #10
PR	PULL ROPE
Y1	FUSED WYE CONNECTOR FOR STREET LIGHTING
Y2	NON-FUSED WYE CONNECTOR FOR STREET LIGHTING
Y3	NON-FUSED WYE CONNECTOR FOR STREET LIGHTING
L1	FUSED IN-LINE CONNECTOR FOR STREET LIGHTING
L2	NON-FUSED IN-LINE CONNECTOR FOR STREET LIGHTING
HH	HANDHOLE
FY	FLASHING YELLOW
SY	STEADY YELLOW
RADAR	RADAR DETECTION CABLE
CAT6	CCTV CAMERA CABLE
U.A.C.	USE AS CONSTRUCTED
GRS	GALVANIZED RIGID STEEL

PERMANENT TRAFFIC SIGNAL WIRING EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.14



GENERAL NOTES:

1. WITHIN THE TRAFFIC SIGNAL CONTROLLER CABINETS, THE CONTRACTOR SHALL INSTALL THE NECESSARY FIBER ENCLOSURES, FIBER CONNECTORS, ETHERNET SWITCHES, JUMPERS AND ANY OTHER ACCESSORIES REQUIRED TO PROVIDE COMPLETE FIBER COMMUNICATION TO THE TRAFFIC SIGNAL CONTROLLERS. COORDINATE WITH THE CITY OF CEDAR RAPIDS TRAFFIC ENGINEERING AND IT DEPARTMENTS ONE WEEK PRIOR TO INSTALLATION.
2. ALL FIBER CONNECTIONS SHALL BE COMPLETED PRIOR TO THE TURN ON OF THE PERMANENT SIGNALS SO THAT THEY CAN BE MANAGED FROM THE CITY'S CENTRAL TRAFFIC SIGNAL SYSTEM.
3. SEE TRAFFIC SIGNAL WIRING SHEETS FOR EXACT CONDUIT SIZE.
4. SEE ORDER OF WORK BELOW.

INTERCONNECTION ORDER OR WORK:

1. THE EXISTING FIBER OPTIC COMMUNICATIONS LINE ALONG THE EAST SIDE OF EDGEWOOD ROAD SHOWN ON THESE PLANS WILL BE RELOCATED UNDER SEPERATE CONTRACT PRIOR TO THE RECONSTRUCTION OF EDGEWOOD ROAD. CONTACT JOEL GROSS AT 319-432-4046 FOR FURTHER INFORMATION. AS OF THE TIME OF THE DESIGN OF THE PROPOSED TRAFFIC SIGNALS, THE EXACT LOCATION OF THE RELOCATED FIBER OPTIC LINE IS NOT KNOWN, HOWEVER IT IS ANTICIPATED THAT THE EXISTING LINE WILL BE SHIFTED TO THE EAST IN CERTAIN AREAS AND WILL OVERALL CONTINUE TO RUN ALONG THE EAST SIDE OF EDGEWOOD ROAD.
2. AS PART OF THE PROPOSED TRAFFIC SIGNAL CONSTRUCTION, THE TRAFFIC SIGNAL CONTRACTOR WILL INSTALL CONDUIT (INCLUDING PULL ROPE AND TRACER WIRE) BETWEEN THE PROPOSED TRAFFIC SIGNAL CONTROLLER CABINET LOCATIONS AND THE RELOCATED FIBER OPTIC COMMMUNICATIONS LINE. THE TRAFFIC SIGNAL CONTRACTOR IS TO COORDINATE WITH JOEL GROSS FOR CONDUIT ENTRY INTO THE RELOCATED FIBER OPTIC COMMUNICATIONS LINE.
3. ONCE THE CONDUIT IS INSTALLED BETWEEN THE PROPOSED TRAFFIC SIGNAL CONTROLLER CABINET LOCATIONS AND THE RELOCATED FIBER OPTIC COMMMUNICATIONS LINE, THE CITY WILL CONTRACT WITH SEPERATE CONTRACTOR TO INSTALL FIBER OPTIC LINE INTO THE PROPOSED TRAFFIC SIGNAL CONTROLLER CABINET LOCATIONS.
4. ONCE THE FIBER LINE IS INSTALLED, THE TRAFFIC SIGNAL CONTRACTOR WILL COORDINATE WITH THE CITY OF CEDAR RAPIDS TRAFFIC ENGINEERING DEPARTMENT REGARDING INSTALLATION OF THE ETHERNET COMMUNICATIONS SYSTEM EQUIPMENT.

CONSTRUCTION NOTES:

1. CONTRACTOR TO LOCATE EXISTING HANDHOLE IN FIELD. CONTRACTOR SHALL COORDINATE ENTRY INTO EXISTING HANDHOLE WITH JOEL GROSS AT 319-432-4046 A MINIMUM OF 48 HOURS PRIOR TO INSTALLATION OF 2" PVC CONDUIT BETWEEN EXISTING HANDHOLE AND SIGNAL CABINET HANDHOLE.

2. EXISTING CONDUIT AND FIBER OPTIC CABLE. DO NOT IMPACT.

0 100
FEET

TRAFFIC SIGNAL COMMUNICATION INTERCONNECTION

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.15

WIRE QUANTITIES (IN FEET)
Edgewood Road and North River Blvd

From	To	Run Number	Pull Rope	1c #10 Tracer	1c #6 Bare Copper	1c #8 Bare Copper	1c #8 LUM Copper	1c #3 PWR Copper	1c #6 PWR Copper	CCTV Video CAT6 Cable	Radar Detection Mutli Cable	Ped PB 2c #14	Ped HD 5c #14	Signal 5c #14	Signal 7c #14
Power Source	Service Pedestal	-	75	75				225							
Service Pedestal	Cabinet	-	30	30	30				60						
Service Pedestal	Handhole 10	-	35	35	35		70								
Cabinet	Handhole 10	-	30	30	30					30	150	150	180	60	60
Handhole 10	Signal Pole 10	-	30	30	30		60				30			30	30
	At Signal Pole 10	-					130				60			85	95
Handhole 10	Handhole 11	-	170	170	170		340			170	340	170	170	170	
Handhole 11	Signal Pole 11	-	20	20	20		40			20	40	20	20	20	
	At Signal Pole 11	-					130				100	15	20	215	
Handhole 10	Handhole 12	-	200	200	200		400				400	800	1000	200	200
Handhole 12	Signal Pole 12	-	35	35	35		70				70	35	35	35	35
	Signal Pole 12	-					130				135	15	20	190	175
Handhole 12	Handhole 13	-	95	95	95		190					285	380		
Handhole 13	Pedestal Pole 13	-	20	20	20							20	40		
	At Pedestal Pole 13	-										15	40		
Handhole 13	Handhole 14	-	90	90	90		180					180	180		
Handhole 14	Signal Pole 14	-	30	30	30		60					60	60		
	At Signal Pole 14	-					130					30	40		
Handhole 15E	Handhole 10	-	150	150											
	Sub-Totals =	0	1010	1010	785	0	1930	225	60	220	1325	1795	2185	1005	595
	Extra =	0	51	51	40	0	97	12	3	11	67	90	110	51	30
	Grand Totals =	0	1061	1061	825	0	2027	237	63	231	1392	1885	2295	1056	625

SIGNAGE QUANTITIES
Edgewood Road and North River Blvd.

Legend Letter =>	"A"	"B"	"C"	"D"			
Sign Type =>	"NORTH RIVER BLVD NE"	"EDGEWOOD RD NE"	R3-5L	R3-5R	Ped PB Sign	Ped PB Sign	Ped PB Sign
Size =>	120" X 21"	108" X 21"	30" X 36"	30" X 36"	9" x 15" R10-3 Special (Left)	9" x 15" R10-3 Special (Right)	9" x 15" R10-3ERL
Mounting Location =>	MAST ARM	MAST ARM	MAST ARM	MAST ARM	Vertical Shaft	Vertical Shaft	Vertical Shaft
Signal Pole 10		1*	1	1			
Signal Pole 11	1*						
Signal Pole 12	1*					1	
Pedestal Pole 13							1
Signal Pole 14					1		
Totals =	-	-	1	1	1	1	1

Notes:
* Sign panel to be provided by the City.

Traffic Signal Pole Quantities
Edgewood Road and North River Blvd.

Pole No.	Signal Mast-Arm Length	Luminaire Mast-Arm Length	Signal Head Spacing				Remarks
	A (Feet)	B (Feet)	C (Feet)	D (Feet)	E (Feet)	F (Feet)	
10	58	15	58	45			Signal Pole (No Transformer Base) - Powder Coated - Dark Bronze
11	52	15	52	40	28		Signal Pole (No Transformer Base) - Powder Coated - Dark Bronze
12	67	15	67	43	31	19	Signal Pole (No Transformer Base) - Powder Coated - Dark Bronze
13							Pedestal Pole (With Transformer Base) - Powder Coated - Dark Bronze
14		15					Signal Pole (With Transformer Base) - Powder Coated - Dark Bronze

Notes:
1. Unless otherwise directed, traffic signal heads on mast arms are to be aligned over the center of intersection approach lanes. Approximate locations are shown in the Traffic Signal Pole Quantities table. Contractor shall field verify final signal head locations.
2. Distances are measured from center of pole measured out to the end of the arm or center of the signal/sign.

NORTH RIVER BLVD
PERMANENT QUANTITIES (1 OF 2)

CONDUIT QUANTITIES
Edgewood Road and North River Blvd.

		Trenched (Feet)			Pushed (Feet)				
From	To	2" Dia. PVC	3" Dia. PVC	4" Dia. PVC	2" Dia. PVC	3" Dia. PVC	4" Dia. PVC	3" Dia. RMC	4" Dia. RMC
Power Source	Service Pedestal	50							
Service Pedestal	Cabinet	10							
Service Pedestal	Handhole 10	20							
Cabinet	Handhole 10			30					
Handhole 10	Signal Pole 10		20						
Handhole 10	Handhole 11			160					
Handhole 11	Signal Pole 11		10						
Handhole 10	Handhole 12			190					
Handhole 12	Signal Pole 12		25						
Handhole 12	Handhole 13			85					
Handhole 13	Pedestal Pole 13	10							
Handhole 13	Handhole 14			80					
Handhole 14	Signal Pole 14		20						
Handhole 15E	Handhole 10	140							
	Sub-Totals =	230	75	545	0	0	0	0	0
	Extra =	12	4	28	0	0	0	0	0
	Grand Totals =	242	79	573	0	0	0	0	0

FOOTING AND HANDHOLE QUANTITIES
Edgewood Road and North River Blvd.

Number	Signal Pole Footing	Pedestal Pole Footing	Hand-Hole Type 1 24" Dia.	Hand-Hole Type 2 "Tub"	Comments
Signal Pole 10	1				
Signal Pole 11	1				
Signal Pole 12	1				
Pedestal Pole 13		1			
Signal Pole 14	1				
Handhole 10				1	See Details
Handhole 11			1		See Details
Handhole 12			1		See Details
Handhole 13			1		See Details
Handhole 14			1		See Details
Handhole 15E			EXIST		EXISTING HANDHOLE
Totals =	4	1	4	1	

TRAFFIC SIGNAL HEAD QUANTITIES
Edgewood Road and North River Blvd.

Pole No.	Signal Head Number(s)	3-Sect 12" RYG	5-Sect. 12" RYG with Right Turn Y+G Arrow	4-Sect. 12" with Left Turn SR+SY+ FY+SG Left Arrow	Hand/Man Countdown Ped Head	Back Plate	Mounting OH	Mounting Side
10	41,42,43	1	2			3	2	1
11	61,62,63,64	4				4	3	1
12	51,21,22,23,24,44	4		1	1	5	4	2
13	45,46				2			2
14	47,66				1			1
	Totals =	9	2	1	4	12	9	7

OTHER STREET LIGHT QUANTITIES
Edgewood Road and North River Blvd.

WYE CONNECTORS						
Location	L1 15A Fuse	L1 5A Fuse	L2	Y1 5A Fuse	Y2	Y3
Handhole 10						4
Signal Pole 10		1	1			
Signal Pole 11		1	1			
Signal Pole 12		1	1			
Handhole 12						2
Signal Pole 14		1	1			
Totals =	0	4	4	0	0	6

NORTH RIVER BLVD
PERMANENT QUANTITIES (2 OF 2)

WIRE QUANTITIES (IN FEET)
Edgewood Road and IA Hwy 100 SPUI Interchange

From	To	Run Number	Pull Rope	1c #10 Tracer	1c #6 Bare Copper	1c #8 Bare Copper	1c #6 LUM Copper	1c #8 LUM Copper	1c #3 PWR Copper	1c #6 PWR Copper	CCTV Video CAT6 Cable	Radar Detection Mutli Cable	Ped PB 2c #14	Ped HD 5c #14	Signal 5c #14	Signal 7c #14
Handhole 23	Signal Pole 24	1	40	40	40			80				40		40	40	
	At Signal Pole 24	--						255				25		20	20	
Handhole 23	Push Button Pole 25	2	25	25	25								25			
	At Push Button Pole 25	--											15			
Expansion Joint	Handhole 23	3	85	85	85			170				85	85	85	85	
Surface Mounted JB 31	Expansion Joint	4	20	20	20			40				20	20	20	20	
Surface Mounted JB 30	Surface Mounted JB 31	5	90	90	90			180				90	180	180	90	
Expansion Joint	Surface Mounted JB 30	6	50	50	50			100				50	150	150	50	
Handhole 22	Expansion Joint	7	40	40	40			80				40	120	120	40	
Expansion Joint	Handhole S1	8	90	90												
Expansion Joint	Expansion Joint	9	130	130												
Handhole S2	Expansion Joint	10	50	50												
Surface Mounted JB 35	Post-Top Light P205	11				50		100								
	At Post-Top Light P205	--				25		45								
Surface Mounted JB 35	Post-Top Light P204	12				20		40								
	At Post-Top Light P204	--				25		45								
Surface Mounted JB 36	Surface Mounted JB 35	13				55		110								
Surface Mounted JB 36	Post-Top Light P203	14				20		40								
	At Post-Top Light P203	--				25		45								
Surface Mounted JB 37	Surface Mounted JB 36	15				60		120								
Surface Mounted JB 37	Post-Top Light P202	16				25		50								
	At Post-Top Light P202	--				25		45								
Surface Mounted JB 37	Post-Top Light P201	17				40		80								
	At Post-Top Light P201	--				25		45								
Expansion Joint	Surface Mounted JB 37	18				25		50								
Handhole 22	Expansion Joint	19				40		80								
Expansion Joint	Signal Structure 20E	20	70	70	70			140			70	140			350	
	At Signal Structure 20E	--						130				120			435	
Handhole 22	Expansion Joint	21	40	40	40			80			40	80			200	
Handhole 24	Signal Pole 26	22	25	25	25			50				25	25	25	25	
	At Signal Pole 26	--						130				25	15	20	20	
Expansion Joint	Handhole 24	23	30	30	30			60				30	30	30	30	
Surface Mounted JB 28	Expansion Joint	24	50	50	50			100				50	50	50	50	
Surface Mounted JB 28	Pedestal Pole 27	25	15	15	15								15	15		
	At Pedestal Pole 27	--											15	20		
Surface Mounted JB 29	Surface Mounted JB 28	26	65	65	65			130				65	130	130	65	
Surface Mounted JB 29	Pedestal Pole 28	27	15	15	15								15	15		
	At Pedestal Pole 28	--											15	20		
Expansion Joint	Surface Mounted JB 29	28	35	35	35			70				35	105	105	35	
Handhole 25	Expansion Joint	29	45	45	45			90				45	135	135	45	
Expansion Joint	Handhole S3	30	45	45												
Expansion Joint	Expansion Joint	31	125	125												
Handhole S4	Expansion Joint	32	70	70												
Expansion Joint	Handhole S5	33	*	*		*		*								
Expansion Joint	Expansion Joint	34	*	*		*		*								
Handhole S6	Expansion Joint	35	*	*		*		*								
Surface Mounted JB 32	Post-Top Light P105	36				40		80								
	At Post-Top Light P105	--				25		45								

(CONTINUED ON FOLLOWING SHEET)

HIGHWAY 100
PERMANENT QUANTITIES (1 OF 4)

WIRE QUANTITIES (IN FEET) (CONTINUED)
Edgewood Road and IA Hwy 100 SPUI Interchange

From	To	Run Number	Pull Rope	1c #10 Tracer	1c #6 Bare Copper	1c #8 Bare Copper	1c #6 LUM Copper	1c #8 LUM Copper	1c #3 PWR Copper	1c #6 PWR Copper	CCTV Video CAT6 Cable	Radar Detection Mutli Cable	Ped PB 2c #14	Ped HD 5c #14	Signal 5c #14	Signal 7c #14
Surface Mounted JB 32	Post-Top Light P104	37				25		50								
	At Post-Top Light P104	--				25		45								
Surface Mounted JB 33	Surface Mounted JB 32	38				55		110								
Surface Mounted JB 33	Post-Top Light P103	39				20		40								
	At Post-Top Light P103	--				25		45								
Surface Mounted JB 34	Surface Mounted JB 33	40				55		110								
Surface Mounted JB 34	Post-Top Light P102	41				25		50								
	At Post-Top Light P102	--				25		45								
Surface Mounted JB 34	Post-Top Light P101	42				40		80								
	At Post-Top Light P101	--				25		45								
Expansion Joint	Surface Mounted JB 34	43				25		50								
Handhole 25	Expansion Joint	44				50		100								
Expansion Joint	Signal Structure 20W	45	65	65	65			130			65	130			325	
	At Signal Structure 20W	--						130			40	140			500	
Handhole 25	Expansion Joint	46	45	45	45			90			45	90			225	
Handhole 25	Signal Pole 30	47	45	45	45			90				45		45	45	
	At Signal Pole 30	--						255				25		20	20	
Handhole 25	Push Button Pole 29	48	20	20	20								20			
	At Push Button Pole 29	--											15			
Handhole 22	Handhole 25	49	150	150	150						150	600	600	600	1050	
Handhole 22	Handhole 25	50			150		450									
Handhole 21	Handhole 22	51	100	100							200	800			1400	
Handhole 21	Handhole 22	52			100		600						800	800		
Handhole 20	Handhole 21	53	85	85							170	680			1190	
Handhole 20	Handhole 21	54			85		510						680	680		
Cabinet	Handhole 20	55	35	35							70	280	280	280	490	
Service Pedestal	Handhole 20	56			35		210									
Service Pedestal	Cabinet	57			35					70						
Handhole 20	Signal Pole 31	58	45	45		45		90								
Power Source	Service Pedestal	59	95	95					285							
Handhole 27E	Handhole 20	60	80	80												
Surface Mounted JB 31	Pedestal Pole 23	61	15	15	15								15	15		
	At Pedestal Pole 23	--											15	20		
Surface Mounted JB 30	Pedestal Pole 22	62	15	15	15								15	15		
	At Signal Pole 22	--											15	20		
Handhole 22	Signal Pole 21	63	20	20	20			40				20	20	20	20	
	At Signal Pole 21	--						130				25	15	20	20	
Handhole 23	Handhole S7	64	205	205		205		410								
Handhole S7	Signal Pole 32	65	75	75		75		150								
Handhole 24	Handhole S8	66	130	130		130		260								
Handhole S8	Signal Pole 33	67	75	75		75		150								
Handhole 25	Handhole S9	68	140	140		140		280								
Handhole S9	Signal Pole 34	69	70	70		70		140								
	Sub-Totals =	--	2270	2270	1520	1170	1770	5040	285	70	850	3800	3635	3715	6885	0
	Extra =	--	114	114	76	59	89	252	15	4	43	190	182	186	345	0
	Grand Totals =	--	2384	2384	1596	1229	1859	5292	300	74	893	3990	3817	3901	7230	0

Notes

* Conductors to be installed by Lighting Contractor. Wire lengths quantified in Lighting Tab 108-12 (see C Sheets).

HIGHWAY 100
PERMANENT QUANTITIES (2 OF 4)

CONDUIT QUANTITIES
Edgewood Road and IA Hwy 100 SPUI Interchange

From	To	Run #	Trenched (Feet) 2" Dia. PVC	Trenched (Feet) 3" Dia. PVC	Trenched (Feet) 4" Dia. PVC	Under Deck (Feet)*** 2" Dia. GRS	Under Deck (Feet)*** 3" Dia. GRS	Conduit Expansion Fitting
Handhole 23	Signal Pole 24	1		30				
Handhole 23	Pedestal Pole 25	2	15					
Expansion Joint	Handhole 23	3		80				
Surface Mounted JB 31	Expansion Joint	4					15	
Surface Mounted JB 30	Surface Mounted JB 31	5					80	
Expansion Joint	Surface Mounted JB 30	6					45	
Handhole 22	Expansion Joint	7		35				
Expansion Joint	Handhole S1	8	85					
Expansion Joint	Expansion Joint	9				130		
Handhole S2	Expansion Joint	10	45					
Surface Mounted JB 35	Post-Top Light P205	11*						
Surface Mounted JB 35	Post-Top Light P204	12*						
Surface Mounted JB 36	Surface Mounted JB 35	13				45		
Surface Mounted JB 36	Post-Top Light P203	14*						
Surface Mounted JB 37	Surface Mounted JB 36	15				50		
Surface Mounted JB 37	Post-Top Light P202	16*						
Surface Mounted JB 37	Post-Top Light P201	17*						
Expansion Joint	Surface Mounted JB 37	18				20		
Handhole 22	Expansion Joint	19	35					
Expansion Joint	Signal Structure 20E	20					65	
Handhole 22	Expansion Joint	21		35				
Handhole 24	Signal Pole 26	22		15				
Expansion Joint	Handhole 24	23		25				
Surface Mounted JB 28	Expansion Joint	24					45	
Surface Mounted JB 28	Pedestal Pole 27	25*						
Surface Mounted JB 29	Surface Mounted JB 28	26					55	
Surface Mounted JB 29	Pedestal Pole 28	27*						
Expansion Joint	Surface Mounted JB 29	28					30	
Handhole 25	Expansion Joint	29		40				
Expansion Joint	Handhole S3	30	40					
Expansion Joint	Expansion Joint	31				125		
Handhole S4	Expansion Joint	32	65					
Expansion Joint	Handhole S5	33	45					
Expansion Joint	Expansion Joint	34				125		
Handhole S6	Expansion Joint	35	70					
Surface Mounted JB 32	Post-Top Light P105	36*						
Surface Mounted JB 32	Post-Top Light P104	37*						
Surface Mounted JB 33	Surface Mounted JB 32	38				45		

(CONTINUED ON FOLLOWING SHEET)

FOOTING AND HANDHOLE QUANTITIES
Edgewood Road and IA Hwy 100 SPUI Interchange

Number	Signal Pole Footing	Push Button Pole Footing	Hand-Hole Type 1 24" Dia.	Underdeck Surface Juction Box (Traffic)	Underdeck Surface Juction Box (Lighting)	Hand-Hole Type 3 "Tub"	Comments
Signal Structure 20							Signal Structure - Located on Bridge Deck
Signal Pole 21	1						
Pedestal Pole 22							Located on Bridge Deck
Pedestal Pole 23							Located on Bridge Deck
Signal Pole 24	1						
Push Button Pole 25		1					
Signal Pole 26	1						
Pedestal Pole 27							Located on Bridge Deck
Pedestal Pole 28							Located on Bridge Deck
Push Button Pole 29		1					
Signal Pole 30	1						
Signal Pole 31	1						SEPARATE LUMP SUM ITEM
Signal Pole 32	1						SEPARATE LUMP SUM ITEM
Signal Pole 33	1						SEPARATE LUMP SUM ITEM
Signal Pole 34	1						SEPARATE LUMP SUM ITEM
Handhole 20						1	See Details
Handhole 21			1				See Details
Handhole 22						1	See Details
Handhole 23			1				See Details
Handhole 24			1				See Details
Handhole 25						1	See Details
Handhole 27E			EXIST				EXISTING HANDHOLE
Surface Mounted JB 28				1			See Details
Surface Mounted JB 29				1			See Details
Surface Mounted JB 30				1			See Details
Surface Mounted JB 31				1			See Details
Surface Mounted JB 32					1		See Details
Surface Mounted JB 33					1		See Details
Surface Mounted JB 34					1		See Details
Surface Mounted JB 35					1		See Details
Surface Mounted JB 36					1		See Details
Surface Mounted JB 37					1		See Details
Handhole S1			1				See Details; Spare
Handhole S2			1				See Details; Spare
Handhole S3			1				See Details; Spare
Handhole S4			1				See Details; Spare
Handhole S5			1				See Details; DOT Lighting
Handhole S6			1				See Details; DOT Lighting
Handhole S7			1				See Details; Lighting
Handhole S8			1				See Details; Lighting
Handhole S9			1				See Details; Lighting
Totals =	8	2	12	4	6	3	

Notes

Underdeck surface mount junction boxes shall be NEMA 4X stainless steel 18" long x 12" wide x 8" deep.

HIGHWAY 100
PERMANENT QUANTITIES (3 OF 4)

CONDUIT QUANTITIES (CONTINUED)
Edgewood Road and IA Hwy 100 SPUI Interchange

From	To	Run #	Trenched (Feet) 2" Dia. PVC	Trenched (Feet) 3" Dia. PVC	Trenched (Feet) 4" Dia. PVC	Under Deck (Feet)*** 2" Dia. GRS	Under Deck (Feet)*** 3" Dia. GRS	Conduit Expansion Fitting
Surface Mounted JB 33	Post-Top Light P103	39*						
Surface Mounted JB 34	Surface Mounted JB 33	40				45		
Surface Mounted JB 34	Post-Top Light P102	41*						
Surface Mounted JB 34	Post-Top Light P101	42*						
Expansion Joint	Surface Mounted JB 34	43				20		
Handhole 25	Expansion Joint	44	45					
Expansion Joint	Signal Structure 20W	45					60	
Handhole 25	Expansion Joint	46		40				
Handhole 25	Signal Pole 30	47		35				
Handhole 25	Pedestal Pole 29	48	10					
Handhole 22	Handhole 25	49			140			
Handhole 22	Handhole 25	50			140			
Handhole 21	Handhole 22	51			90			
Handhole 21	Handhole 22	52			90			
Handhole 20	Handhole 21	53			75			
Handhole 20	Handhole 21	54			75			
Cabinet	Handhole 20	55			40			
Pedestal	Handhole 20	56		20				
Pedestal	Cabinet	57	15					
Handhole 20	Signal Pole 31	58	35					
Power Source	Pedestal	59	70					
Handhole 27E	Handhole 20	60	70					
Surface Mounted JB 31	Pedestal Pole 23	61**						
Surface Mounted JB 30	Pedestal Pole 22	62**						
Handhole 22	Signal Pole 21	63		10				
Handhole 23	Handhole S7	64	195					
Handhole S7	Signal Pole 32	65	65					
Handhole 24	Handhole S8	66	120					
Handhole S8	Signal Pole 33	67	65					
Handhole 25	Handhole S9	68	130					
Handhole S9	Signal Pole 34	69	60					
	Sub-Totals =		1280	365	650	605	395	14
	Extra =		64	19	33	31	20	0
	Grand Totals =		1344	384	683	636	415	14

Notes
* 1" Dia. Galvanized Rigid Steel Conduit installed by others. See N Sheet details and Bridge Plans for conduit routing.
** 2" Dia. Galvanized Rigid Steel Conduit installed by others. See N Sheet details and Bridge Plans for conduit routing.
*** Required hanger fastener materials are considered incidental to cost of underdeck conduit.

TRAFFIC SIGNAL HEAD QUANTITIES
Edgewood Road and IA Hwy 100 SPUI Interchange

Pole No.	Signal Head Number(s)	3-Sect. 12" with Angled Left Turn R + Y + G Arrow	3-Sect. 12" with Thru G Arrow	Hand/Man Countdown Ped Head	Back Plate	Mounting OH	Mounting Side
20	81,82,11,12,61,62,41,42,51,52,21,22	8	4		12	12	
21	14,83	1		1	1		2
22	13			1			1
23	24			1			1
24	23,25		1	1	1		2
25	–						
26	43,54	1		1	1		2
27	53			1			1
28	64			1			1
29	–						
30	63,65		1	1	1		2
	Totals =	10	6	8	16	12	12

Traffic Signal Pole Quantities
Edgewood Road and IA Hwy 100 SPUI Interchange

Pole No.	Signal Mast-Arm Length A (Feet)	Luminaire Mast-Arm Length B (Feet)	Signal Head Spacing C (Feet)	Signal Head Spacing D (Feet)	Signal Head Spacing E (Feet)	Signal Head Spacing F (Feet)	Remarks
20	–	–	–	–	–	–	Signal Structure - See Signal Structure Elevation Detail - Powder Coated - Dark Bronze
21		15					Signal Pole (With Transformer Base) - Powder Coated - Dark Bronze
22							Pedestal Pole (With Transformer Base) - Powder Coated - Dark Bronze
23							Pedestal Pole (With Transformer Base) - Powder Coated - Dark Bronze
24		2-10					Signal Pole (With Transformer Base) - Powder Coated - Dark Bronze
25							Push Button Pole (With Transformer Base) - Powder Coated - Dark Bronze
26		15					Signal Pole (With Transformer Base) - Powder Coated - Dark Bronze
27							Pedestal Pole (With Transformer Base) - Powder Coated - Dark Bronze
28							Pedestal Pole (With Transformer Base) - Powder Coated - Dark Bronze
29							Push Button Pole (With Transformer Base) - Powder Coated - Dark Bronze
30		2-10					Signal Pole (With Transformer Base) - Powder Coated - Dark Bronze
31		15					Signal Pole (With Transformer Base) - Powder Coated - Dark Bronze - SEPARATE LUMP SUM ITEM
32		15					Signal Pole (With Transformer Base) - Powder Coated - Dark Bronze - SEPARATE LUMP SUM ITEM
33		15					Signal Pole (With Transformer Base) - Powder Coated - Dark Bronze - SEPARATE LUMP SUM ITEM
34		15					Signal Pole (With Transformer Base) - Powder Coated - Dark Bronze - SEPARATE LUMP SUM ITEM

Notes:
1. Unless otherwise directed, traffic signal heads on mast arms are to be aligned over the center of intersection approach lanes.
   Approxima Approximate locations are shown in the Traffic Signal Pole Quantities table. Contractor shall field verify final signal head locations.
2. Distances are measured from center of pole measured out to the end of the arm or center of the signal/sign.
3. Signal Poles Number 24 and Number 30 are to have two luminaire mast arms mounted onto pole upright and should be positioned perpendicular to roadways.

SIGNAGE QUANTITIES
Edgewood Road and IA Hwy 100 SPUI Interchange

Legend Letter =>	"A"		
Sign Type =>	R3-5L	Ped PB Sign	Ped PB Sign
Size =>	30" X 36"	9" x 15" R10-3E (Left)	9" x 15" R10-3E (Right)
Mounting Location =>	Lower Chord	Vertical Shaft	Vertical Shaft
Signal Structure 20	4		
Signal Pole 21			1
Pedestal Pole 22			1
Pedestal Pole 23		1	
Push Button Pole 25		1	
Signal Pole 26			1
Pedestal Pole 27			1
Pedestal Pole 28		1	
Push Button Pole 29		1	
Totals =	4	4	4

OTHER STREET LIGHT QUANTITIES
Edgewood Road and IA Hwy 100 SPUI Interchange

WYE CONNECTORS						
Location	L1 15A Fuse	L1 5A Fuse	L2	Y1 5A Fuse	Y2	Y3
Handhole 20						2
Signal Pole 31		1	1			
Handhole 22			1			5
Signal Pole 21		1	1			
Signal Pole 20E		1	1			
Handhole 23						2
Signal Pole 24		1	1			
Signal Pole 32		1	1			
Handhole 25			1			7
Signal Pole 30		1	1			
Signal Pole 34		1	1			
Signal Pole 20W		1	1			
Handhole 24						2
Signal Pole 26		1	1			
Signal Pole 33		1	1			
Totals =	0	10	12	0	0	18

HIGHWAY 100
PERMANENT QUANTITIES (4 OF 4)

WIRE QUANTITIES (IN FEET)
Edgewood Road and Hy-Vee South Entrance

From	To	Run Number	Pull Rope	1c #10 Tracer	1c #6 Bare Copper	1c #8 Bare Copper	1c #8 LUM Copper	1c #3 PWR Copper	1c #6 PWR Copper	Radar Detection Mutli Cable	Ped PB 2c #14	Ped HD 5c #14	Signal 5c #14	Signal 7c #14
Power Source	Service Pedestal	-	60	60				180						
Service Pedestal	Cabinet	-			30				60					
Service Pedestal	Handhole 40	-	50	50	50		100							
Cabinet	Handhole 40	-	45	45	45					225	225	270	135	90
Handhole 40	Signal Pole 40		25	25	25		50			75	25	25	25	
	At Signal Pole 40	-					130			160	15	20	215	
Handhole 40	Pedestal Pole 41	-	40	40	40						40	40		
	At Pedestal Pole 41	-									15	20		
Handhole 40	Handhole 41	-	150	150	150		300				150	150		
Handhole 41	Signal Pole 42		20	20	20		40				20	20		
	At Signal Pole 42	-					130				15	20		
Handhole 40	Handhole 44	-	95	95	95		190			190	190	285	190	190
Handhole 44	Pedestal Pole 45	-	20	20	20						20	40		
	At Pedestal Pole 45	-									15	40		
Handhole 44	Handhole 43	-	90	90	90		180			180	90	90	180	180
Handhole 43	Signal Pole 44	-	35	35	35		70				35	35	35	35
	At Signal Pole 44	-					130				15	20	160	85
Handhole 43	Handhole 42	-	175	175	175		350			350			175	175
Handhole 42	Signal Pole 43	-	20	20	20		40			40			20	20
	At Signal Pole 43	-					130			135			270	95
Handhole 45E	Handhole 40	-	60	60										
	Sub-Totals =	0	885	885	795	0	1840	180	60	1355	870	1075	1405	870
	Extra =	0	45	45	40	0	92	9	3	68	44	54	71	44
	Grand Totals =	0	930	930	835	0	1932	189	63	1423	914	1129	1476	914

SIGNAGE QUANTITIES
Edgewood Road and Hy-Vee South Entrance

Legend Letter =>	"A"	"B"	"C"				
Sign Type =>	"EDGEWOOD RD NE"	R3-5L	R3-5R	Ped PB Sign	Ped PB Sign	Ped PB Sign	Ped PB Sign
Size =>	108" X 21"	30" X 36"	30" X 36"	9" x 15" R10-3 SPECIAL (Left)	9" x 15" R10-3ERL	9" x 15" R10-3E (Left)	9" x 15" R10-3E (Right)
Mounting Location =>	MAST ARM	MAST ARM	MAST ARM	Vertical Shaft	Vertical Shaft	Vertical Shaft	Vertical Shaft
Signal Pole 40				1			
Pedestal Pole 41						1	
Signal Pole 42							1
Signal Pole 43							
Signal Pole 44	1*	1	1	1			
Pedestal Pole 45					1		
Totals =	-	1	1	2	1	1	1

Notes:
* Sign panel to be provided by the City.

Traffic Signal Pole Quantities
Edgewood Road and Hy-Vee South Entrance

Pole No.	Signal Mast-Arm Length	Luminaire Mast-Arm Length	Signal Head Spacing					Remarks
	A (Feet)	B (Feet)	C (Feet)	D (Feet)	E (Feet)	F (Feet)	G (Feet)	
40	52	15	52	40	28			Signal Pole (No Transformer Base) - Powder Coated - Dark Bronze
41								Pedestal Pole (With Transformer Base) - Powder Coated - Dark Bronze
42		15						Signal Pole (With Transformer Base) - Powder Coated - Dark Bronze
43	67	15	67	55	43	31	19	Signal Pole (No Transformer Base) - Powder Coated - Dark Bronze
44	60	15	48	38				Signal Pole (No Transformer Base) - Powder Coated - Dark Bronze
45								Pedestal Pole (With Transformer Base) - Powder Coated - Dark Bronze

Notes:
1. Unless otherwise directed, traffic signal heads on mast arms are to be aligned over the center of intersection approach lanes. Approximate locations are shown in the Traffic Signal Pole Quantities table. Contractor shall field verify final signal head locations.
2. Distances are measured from center of pole measured out to the end of the arm or center of the signal/sign.

SOUTH HY-VEE ACCESS
PERMANENT QUANTITIES (1 OF 2)

CONDUIT QUANTITIES
Edgewood Road and Hy-Vee South Entrance

		Trenched (Feet)			Pushed (Feet)				
From	To	2" Dia. PVC	3" Dia. PVC	4" Dia. PVC	2" Dia. PVC	3" Dia. PVC	4" Dia. PVC	3" Dia. RMC	4" Dia. RMC
Power Source	Service Pedestal	35							
Service Pedestal	Cabinet	10							
Service Pedestal	Handhole 40	25							
Cabinet	Handhole 40			60					
Handhole 40	Signal Pole 40		15						
Handhole 40	Pedestal Pole 41	30							
Handhole 40	Handhole 41			140					
Handhole 41	Signal Pole 42		10						
Handhole 40	Handhole 44			85					
Handhole 44	Pedestal Pole 45	10							
Handhole 44	Handhole 43			80					
Handhole 43	Signal Pole 44		25						
Handhole 43	Handhole 42			165					
Handhole 42	Signal Pole 43		10						
Handhole 45E	Handhole 40	50							
	Sub-Totals =	160	60	530	0	0	0	0	0
	Extra =	8	3	27	0	0	0	0	0
	Grand Totals =	168	63	557	0	0	0	0	0

FOOTING AND HANDHOLE QUANTITIES
Edgewood Road and Hy-Vee South Entrance

Number	Signal Pole Footing	Pedestal Pole Footing	Hand-Hole Type 1 24" Dia.	Hand-Hole Type 2 "Tub"	Comments
Signal Pole 40	1				
Pedestal Pole 41		1			
Signal Pole 42	1				
Signal Pole 43	1				
Signal Pole 44	1				
Pedestal Pole 45		1			
Handhole 40				1	See Details
Handhole 41			1		See Details
Handhole 42			1		See Details
Handhole 43			1		See Details
Handhole 44			1		See Details
Handhole 45E			EXIST		EXISTING HANDHOLE
Totals =	4	2	4	1	

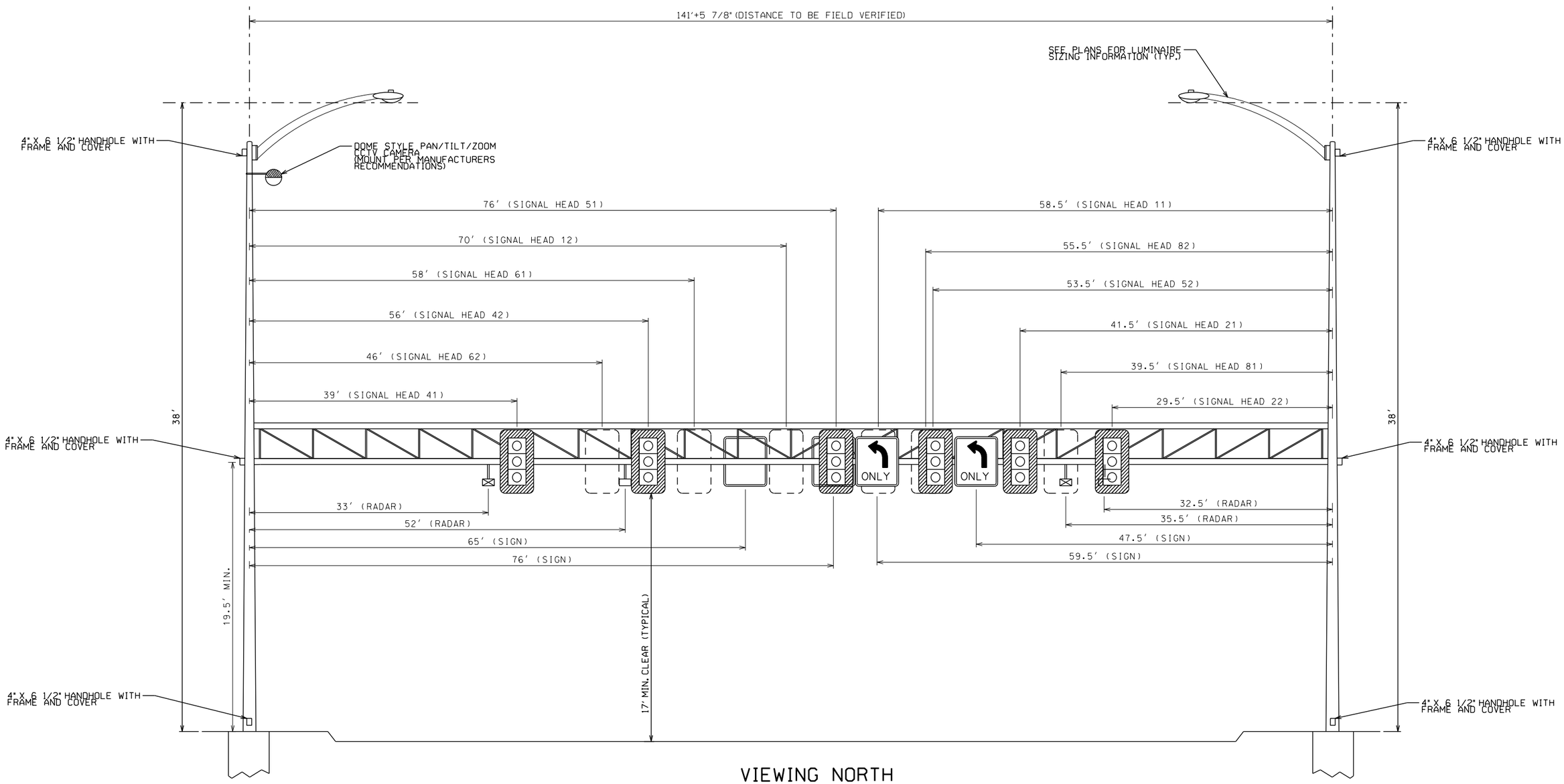
TRAFFIC SIGNAL HEAD QUANTITIES
Edgewood Road and Hy-Vee South Entrance

Pole No.	Signal Head Number(s)	3-Sect 12" RYG	5-Sect. 12" RYG with Right Turn Y+G Arrow	4-Sect. 12" with Left Turn SR+SY+FY+SG Left Arrow	Hand/Man Countdown Ped Head	Back Plate	Mounting OH	Mounting Side
40	21,22,23,24,87	4			1	4	3	2
41	25				1			1
42	26				1			1
43	11,61,62,63,64,65	5		1		6	5	1
44	81,82,83,84	1	2		1	3	2	2
45	85,86				2			2
	Totals =	10	2	1	6	13	10	9

OTHER STREET LIGHT QUANTITIES
Edgewood Road and Hy-Vee South Entrance

WYE CONNECTORS						
Location	L1 15A Fuse	L1 5A Fuse	L2	Y1 5A Fuse	Y2	Y3
Signal Pole 40		1	1			
Handhole 40						4
Signal Pole 42		1	1			
Signal Pole 43		1	1			
Signal Pole 44		1	1			
Handhole 43						2
Totals =	0	4	4	0	0	6

SOUTH HY-VEE ACCESS
PERMANENT QUANTITIES (2 OF 2)

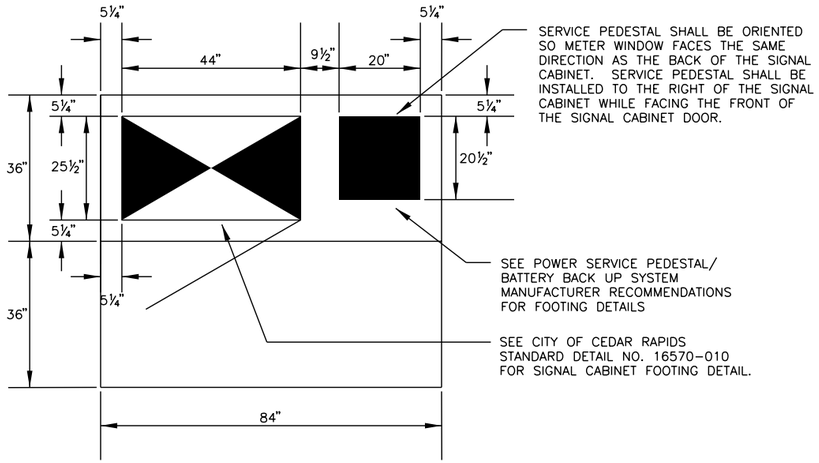


VIEWING NORTH
ALONG EDGEWOOD ROAD

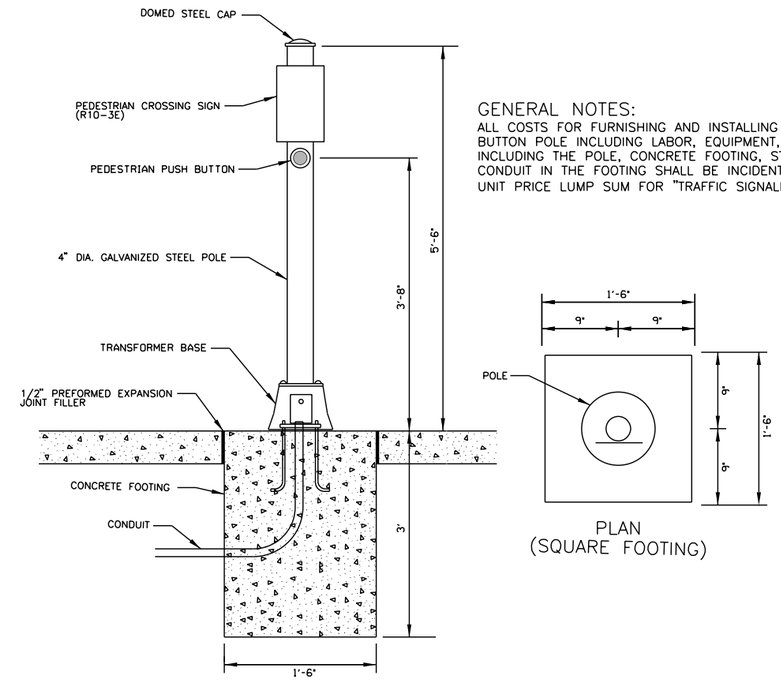
SIGNAL STRUCTURE DETAIL

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.24

1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01.sht



CONTROLLER CABINET/POWER SERVICE BATTERY-BACK UP SYSTEM CONCRETE PAD DETAIL



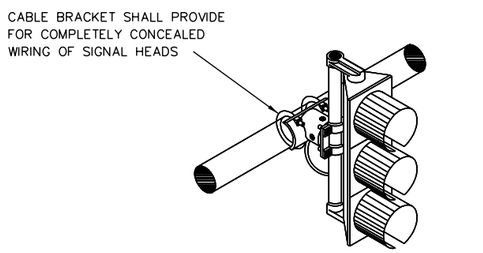
ELEVATION

PLAN (SQUARE FOOTING)

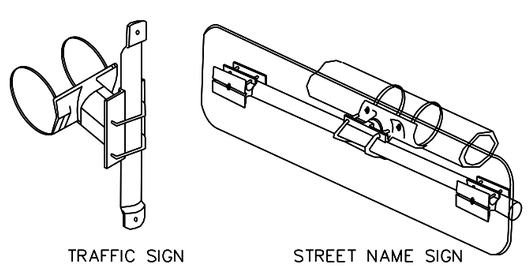
PEDESTRIAN PUSH BUTTON POLE

GENERAL NOTES:

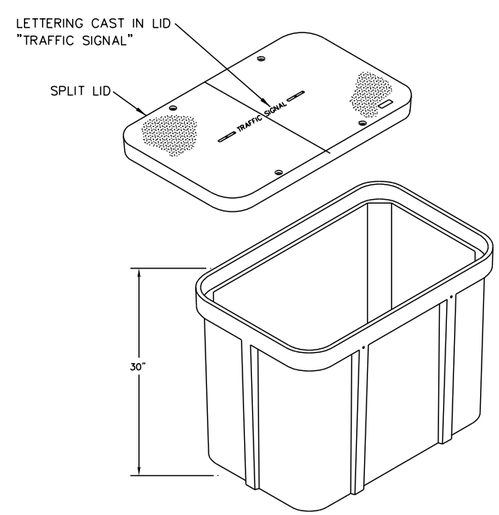
ALL COSTS FOR FURNISHING AND INSTALLING THE PEDESTRIAN PUSH BUTTON POLE INCLUDING LABOR, EQUIPMENT, AND MATERIALS INCLUDING THE POLE, CONCRETE FOOTING, STEEL CAP, AND THE CONDUIT IN THE FOOTING SHALL BE INCIDENTAL TO THE CONTRACT UNIT PRICE LUMP SUM FOR "TRAFFIC SIGNALIZATION".



MAST ARM SIGNAL MOUNTING CABLE BRACKET

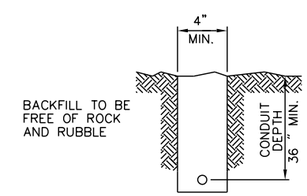


MAST ARM SIGN CABLE BRACKETS

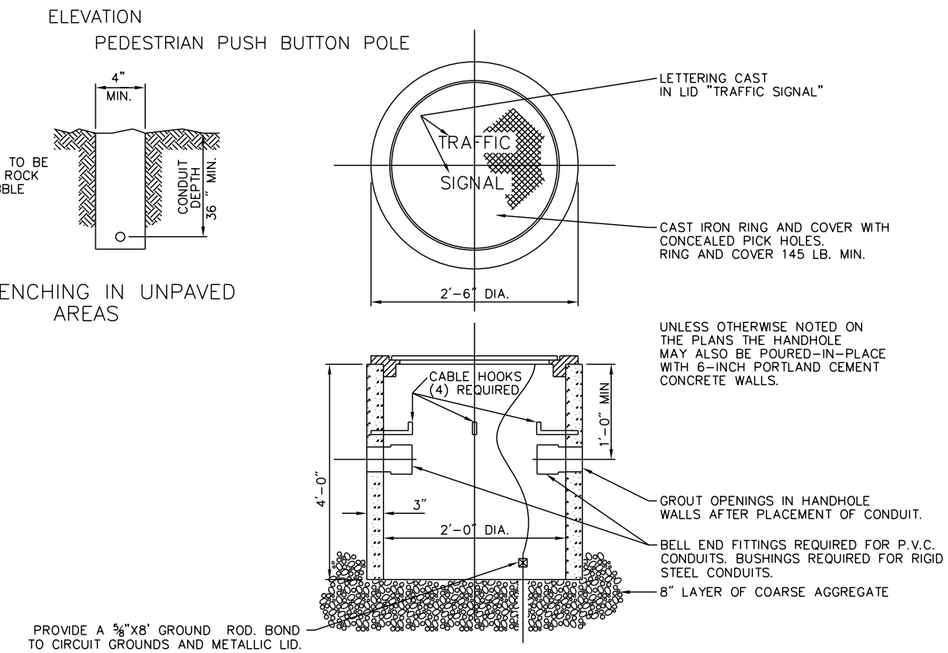


THE PRECAST-POLYMER CONCRETE HANDHOLE TYPE 3 30" X 48" AND TYPE 2 24" X 36" WITH THE LEGEND "TRAFFIC SIGNAL" ON THE LID. A MINIMUM OF FOUR (4) CABLE HOOKS WILL BE INSTALLED IN EACH HANDHOLE TO SUPPORT CABLES. EIGHT INCHES OF COARSE AGGREGATE WILL BE PLACED UNDER THE HANDHOLE. THE HANDHOLE SHALL INCLUDE A 5/8"x8' GROUND ROD. BOND GROUND ROD TO CIRCUIT GROUNDS.

PRECAST POLYMER-CONCRETE HANDHOLE TYPE 2 AND 3



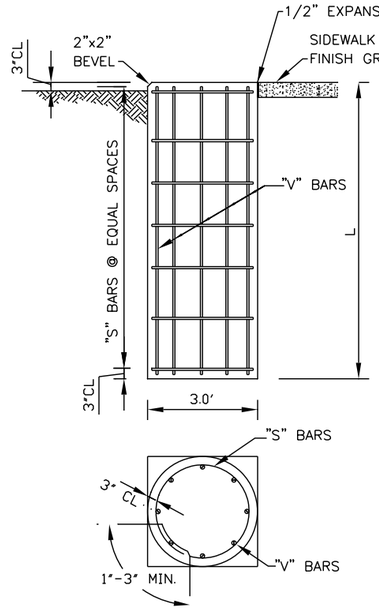
TRENCHING IN UNPAVED AREAS



PRE-CAST CONCRETE HANDHOLE TYPE 1

SIGNAL DETAILS

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.25



SIGNAL POLE BASE
REINFORCING STEEL

CONDUIT EXTENSIONS ABOVE BASE SHALL HAVE A PLASTIC OR METAL RIM BUSHING TO PREVENT THE CHAFING OF CABLES.

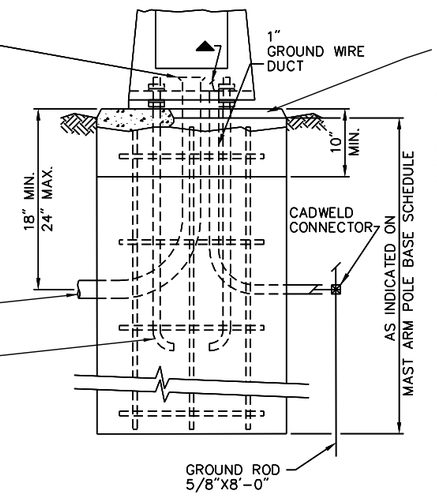
THE TOP 10" (MIN.) OF BASE SHALL BE FORMED SQUARE. 1/2" EXPANSION MATERIAL SHALL BE PLACED BETWEEN BASE AND OTHER PAVED AREAS.

▲ NO. 6 BARE COPPER GROUND CONDUCTOR FROM INTERNAL GROUNDING NUT TO CADWELD CONNECTOR ON GROUND ROD.

INSTALL CONDUITS AS INDICATED ON PLAN SHEETS AS WELL AS ADDITIONAL 2" SPARE CONDUIT

ANCHOR BOLTS AS SPECIFIED BY POLE MANUFACTURER

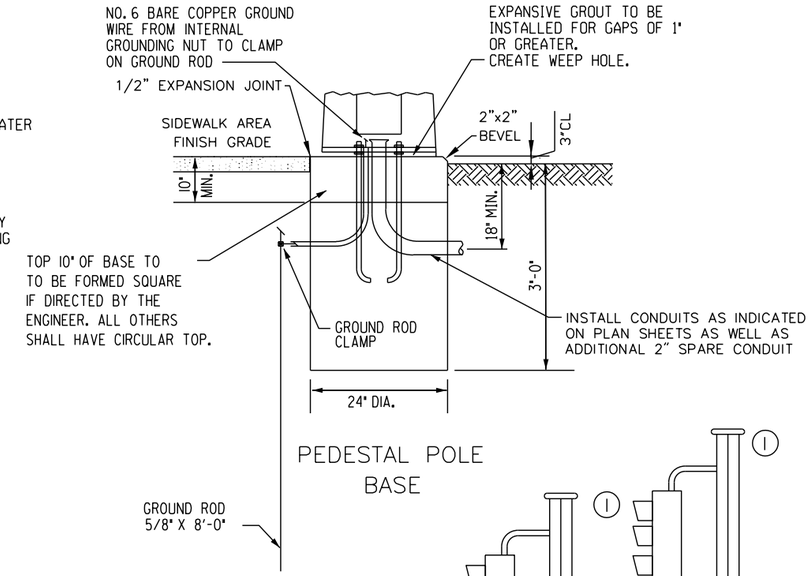
* IF A ½" OR GREATER GAP EXISTS BETWEEN THE BASE OF THE POLE AND FOOTING, THE CONTRACTOR SHALL INSTALL EXPANSIVE GROUT AND A WEEP HOLE.



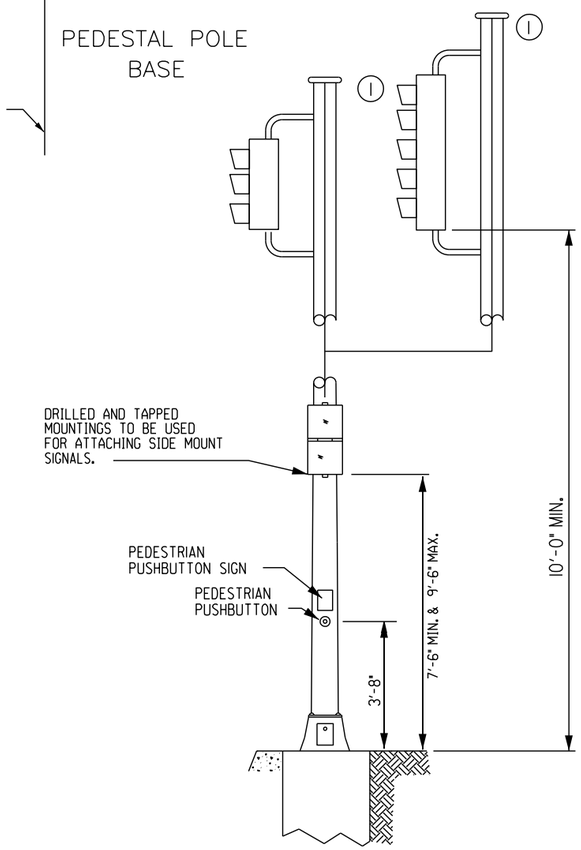
SIGNAL POLE
BASE

THE TOP OF FOOTING SHALL NOT BE GREATER THAN ONE FOOT ABOVE THE SURROUNDING GROUND SURFACE. SEE SPECIAL PROVISIONS.

IN AREAS WITH STEEP FORESLOPES, POLE LENGTHS SHALL BE VERIFIED IN FIELD BY SURVEYING MEANS PRIOR TO SHOP DRAWING SUBMITTAL.



PEDESTAL POLE
BASE



1 10' POLE FOR NO VEHICULAR HEADS,
14' POLE FOR 3 SECTION HEADS,
17' POLE FOR 5 SECTION HEADS

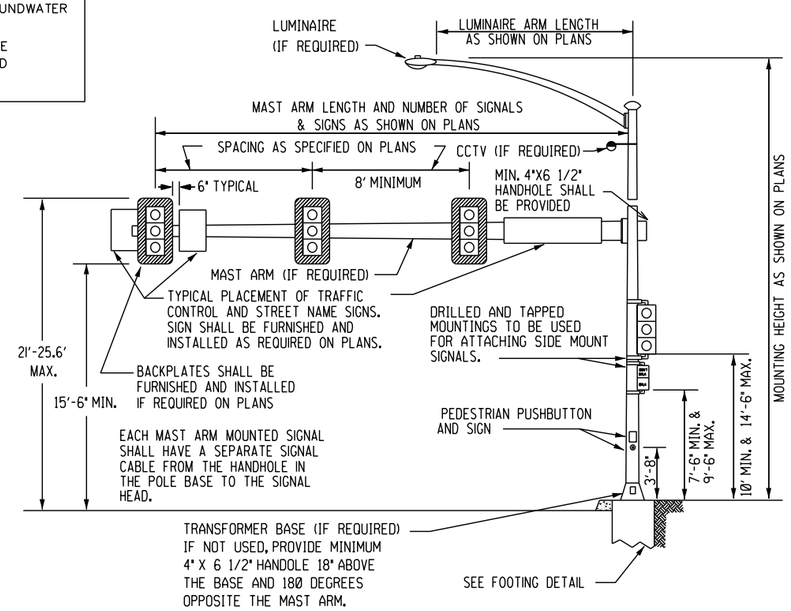
PEDESTAL POLE

SHAFT FOUNDATION NOTICE

1. IF GROUNDWATER SEEPAGE IS ENCOUNTERED DURING DRILLING OPERATIONS FOR THE SHAFT FOUNDATIONS, TEMPORARY CASINGS SHALL BE USED TO COMPLETE THE EXCAVATIONS REGARDLESS OF WHETHER BELOW OR ABOVE THE GROUNDWATER LEVEL. ALTERNATELY, SLURRY DRILLING TECHNIQUES MAY BE USED TO MAINTAIN THE EXCAVATION SIDEWALLS.
2. THE BASES OF ALL DRILLED SHAFT EXCAVATIONS SHALL BE CLEANED OF LOOSE MATERIAL PRIOR TO CONCRETE PLACEMENT. IF WATER OR DRILLING FLUID IS PRESENT IN THE SHAFT EXCAVATIONS, CONCRETE SHALL BE PLACED USING A TREMIE OR CONCRETE PUMP HOSE EXTENDED TO WITHIN SIX INCHES OF THE SHAFT BASE.

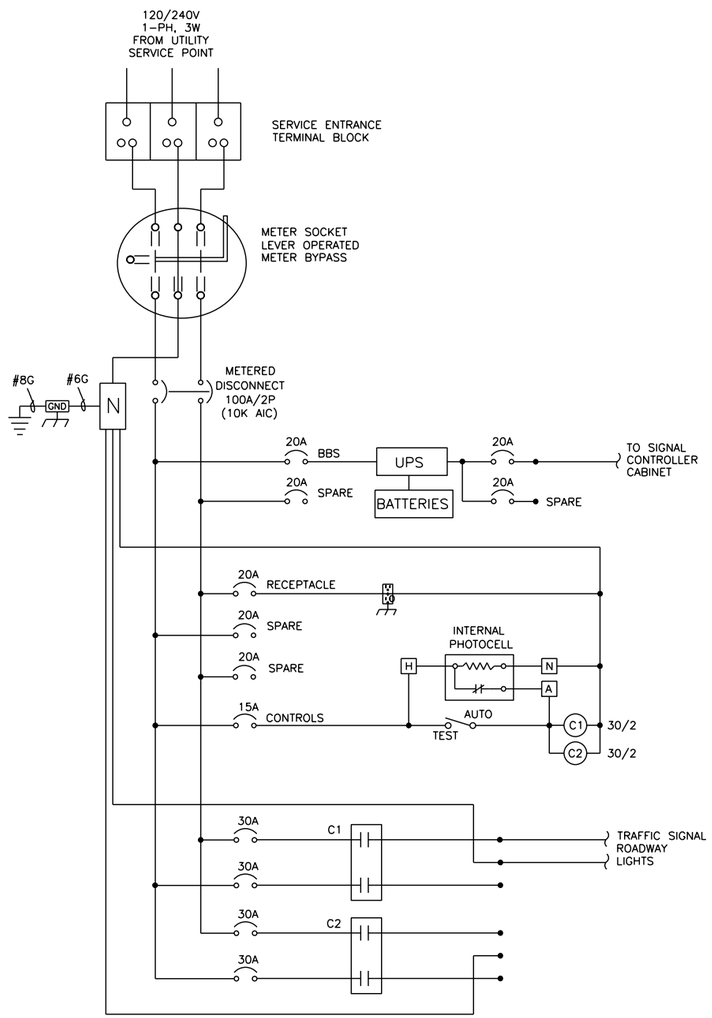
SIGNAL MAST ARM LENGTH	FOOTING DIAMETER	DEPTH (L)	"V" BARS	"S" BARS
NO MAST OR LESS THAN 40'	3'	10.0'	8-#7 BARS X 9'	10-#4 BARS @ 12" MAX.
41' - 49'	3'	12.0'	8-#7 BARS X 11'	12-#4 BARS @ 12" MAX.
50' - 55'	3'	14.0'	8-#7 BARS X 13'	14-#4 BARS @ 12" MAX.
56' - 60'	3'	16.0'	8-#10 BARS X 15'	16-#4 BARS @ 12" MAX.
61' - 70'	3.5'	21.0'	12-#10 BARS X 20'	21-#4 BARS @ 12" MAX.
71' - 80'	3.5'	23.0'	12-#10 BARS X 22'	23-#4 BARS @ 12" MAX.

SIGNAL POLE BASE SCHEDULE

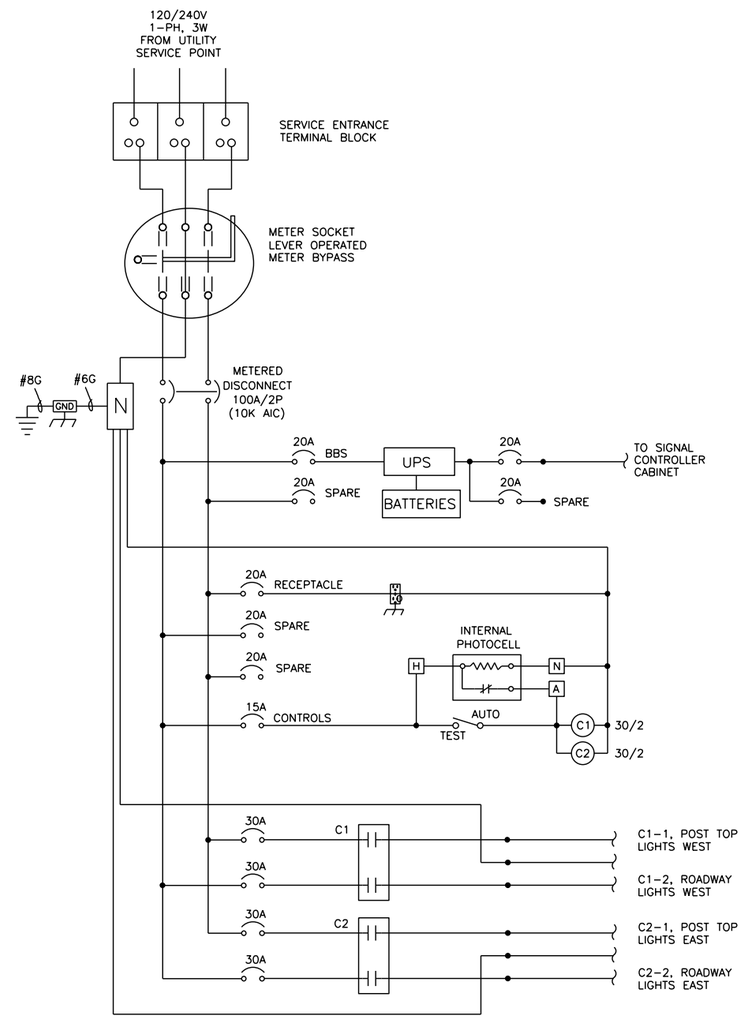


SIGNAL POLE DETAIL

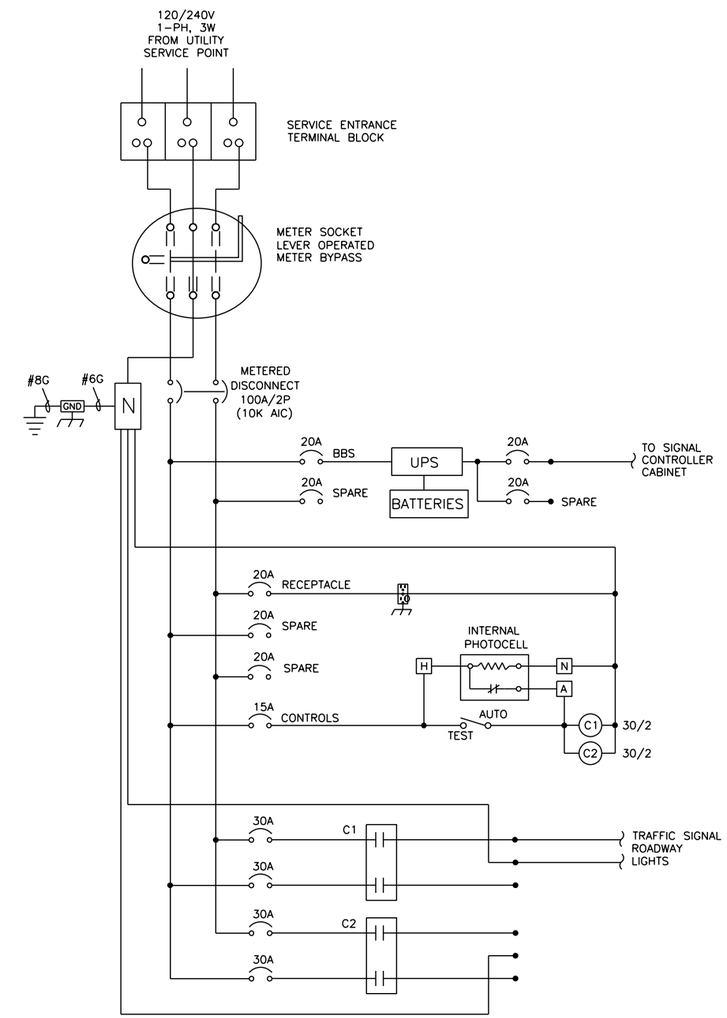
SIGNAL DETAILS



NORTH RIVER BLVD
POWER SERVICE EQUIPMENT
WIRING DIAGRAM

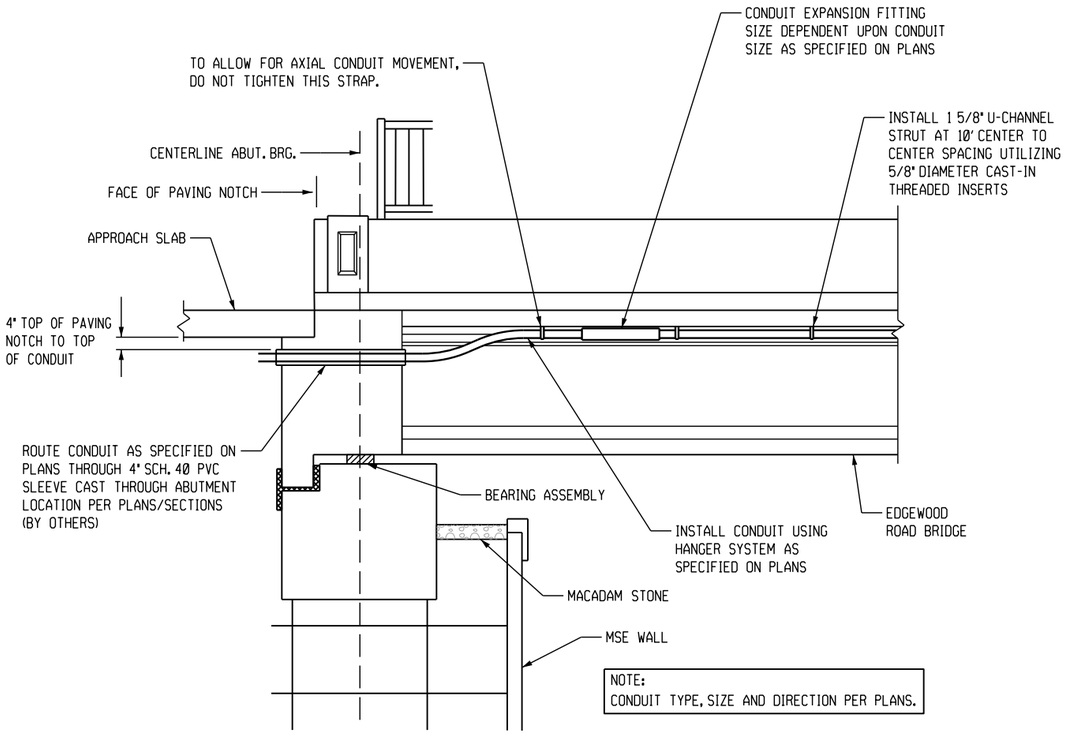


IA 100
POWER SERVICE EQUIPMENT
WIRING DIAGRAM

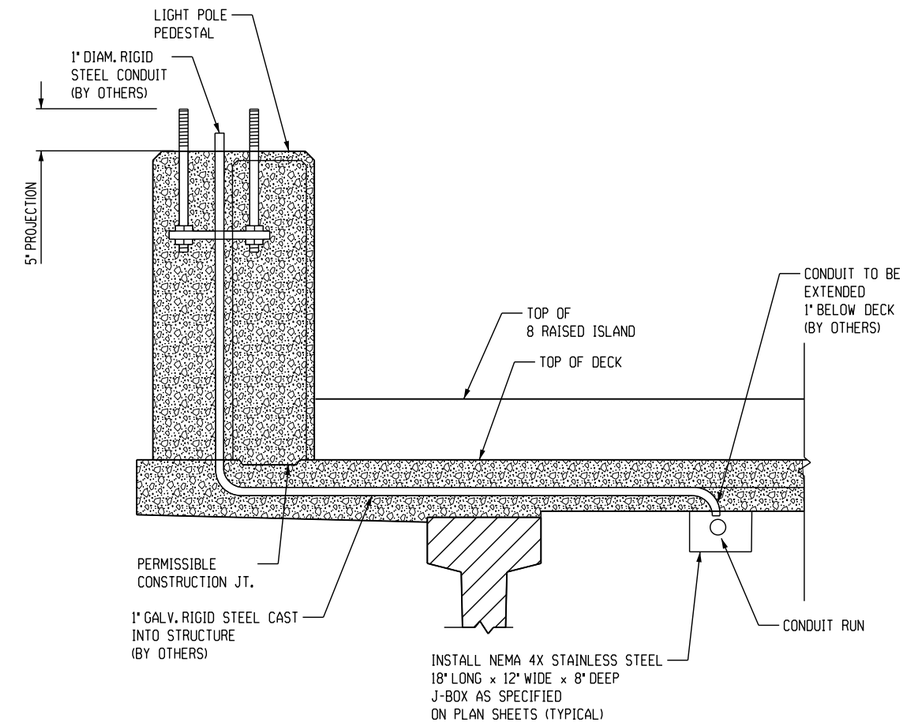


HY-VEE SOUTH ENTRANCE
POWER SERVICE EQUIPMENT
WIRING DIAGRAM

TRAFFIC SIGNAL
POWER SERVICE DETAILS



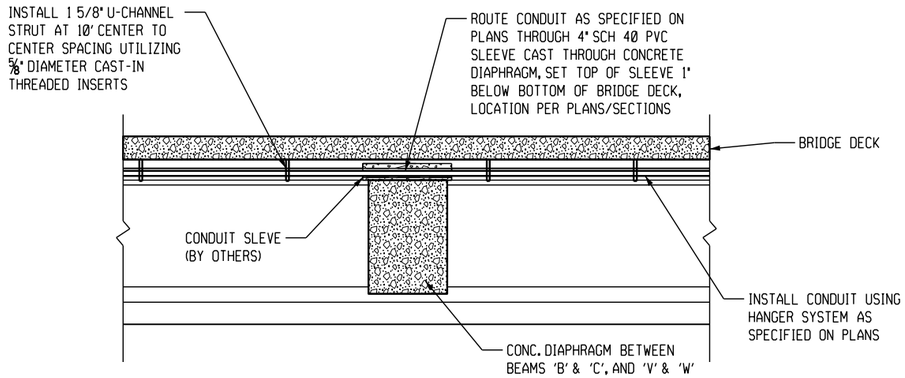
CONDUIT THROUGH ABUTMENTS DETAIL



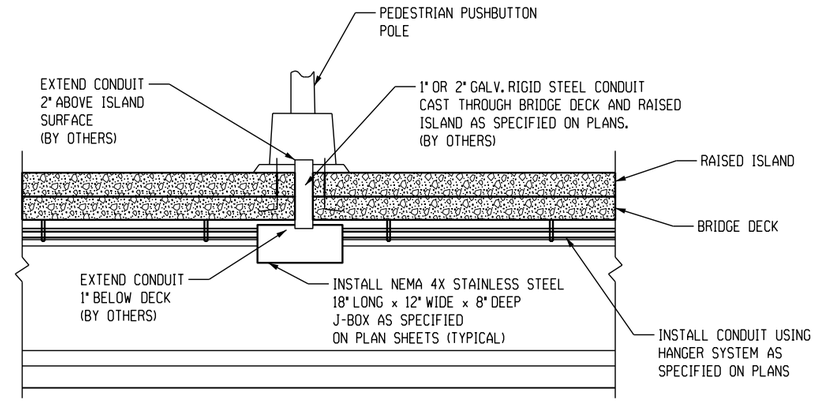
ACCESS CONDUIT FOR BRIDGE RAIL-MOUNTED LIGHT POLES DETAIL

NOTE:
SEE STRUCTURAL BRIDGE DECK PLAN SHEETS FOR FURTHER INFORMATION REGARDING WORK DONE BY OTHERS.

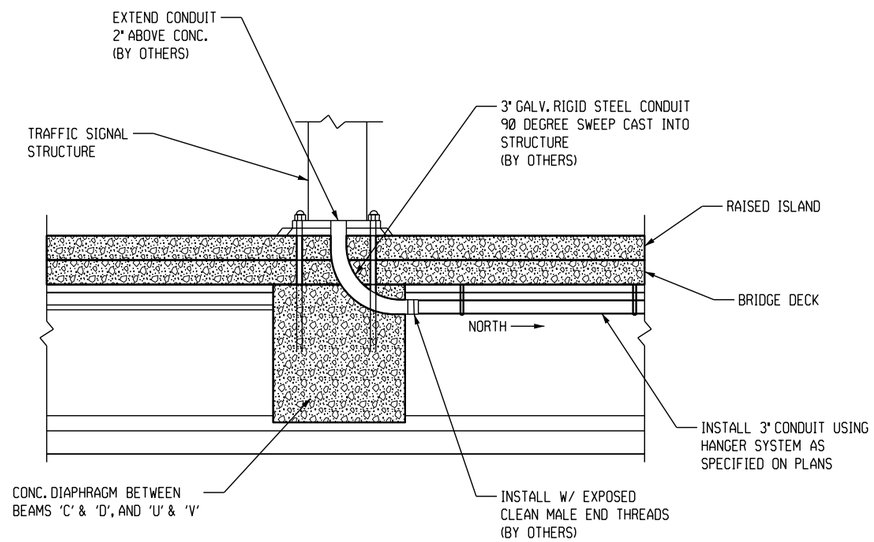
CONDUIT ROUTING/ACCESS DETAILS



CONDUIT THROUGH STRUCTURAL DIAPHRAGM DETAIL



ACCESS CONDUIT AT PEDESTRIAN PUSHBUTTON DETAIL



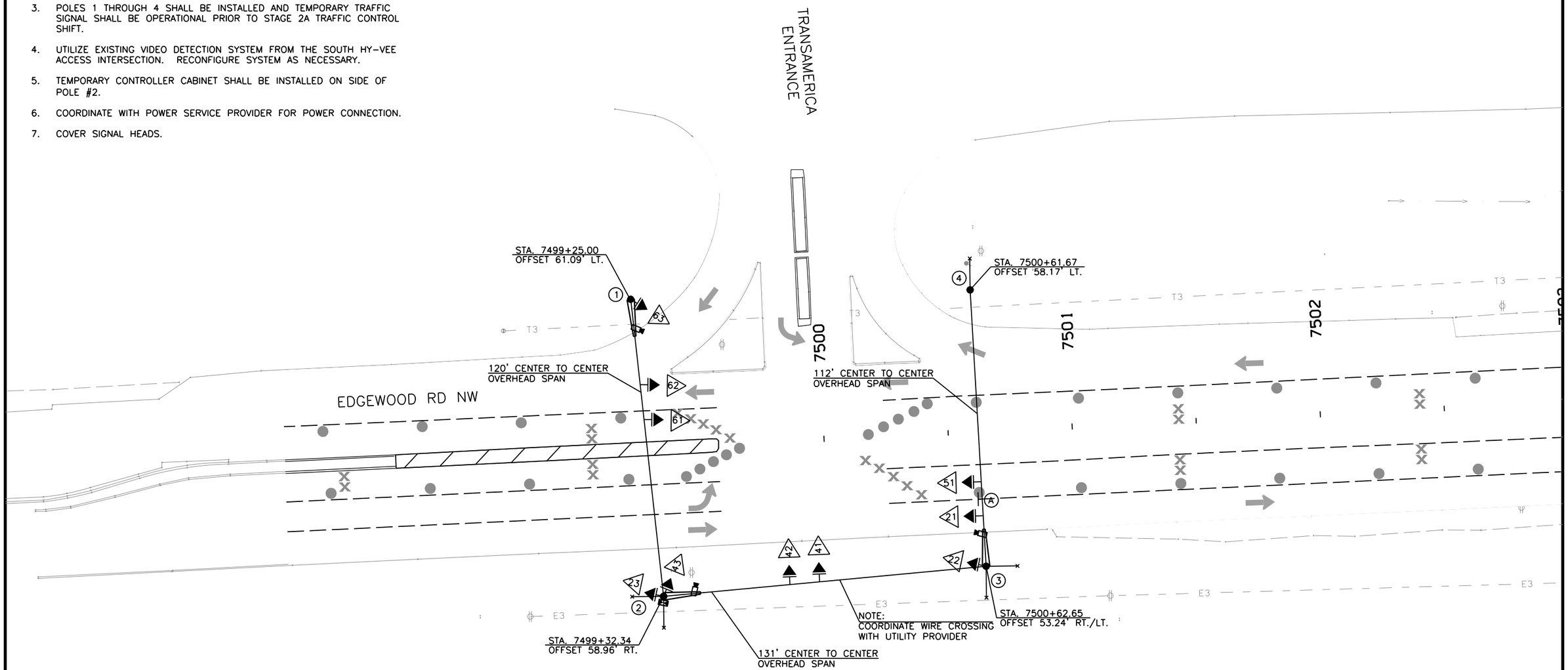
ACCESS CONDUIT AT BASE OF
TRAFFIC SIGNAL STRUCTURE DETAIL

NOTE:
SEE STRUCTURAL BRIDGE DECK PLAN SHEETS FOR FURTHER INFORMATION REGARDING WORK DONE BY OTHERS.

CONDUIT ROUTING/ACCESS DETAILS

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE EXISTING TRAFFIC CONTROL.
3. POLES 1 THROUGH 4 SHALL BE INSTALLED AND TEMPORARY TRAFFIC SIGNAL SHALL BE OPERATIONAL PRIOR TO STAGE 2A TRAFFIC CONTROL SHIFT.
4. UTILIZE EXISTING VIDEO DETECTION SYSTEM FROM THE SOUTH HY-VEE ACCESS INTERSECTION. RECONFIGURE SYSTEM AS NECESSARY.
5. TEMPORARY CONTROLLER CABINET SHALL BE INSTALLED ON SIDE OF POLE #2.
6. COORDINATE WITH POWER SERVICE PROVIDER FOR POWER CONNECTION.
7. COVER SIGNAL HEADS.



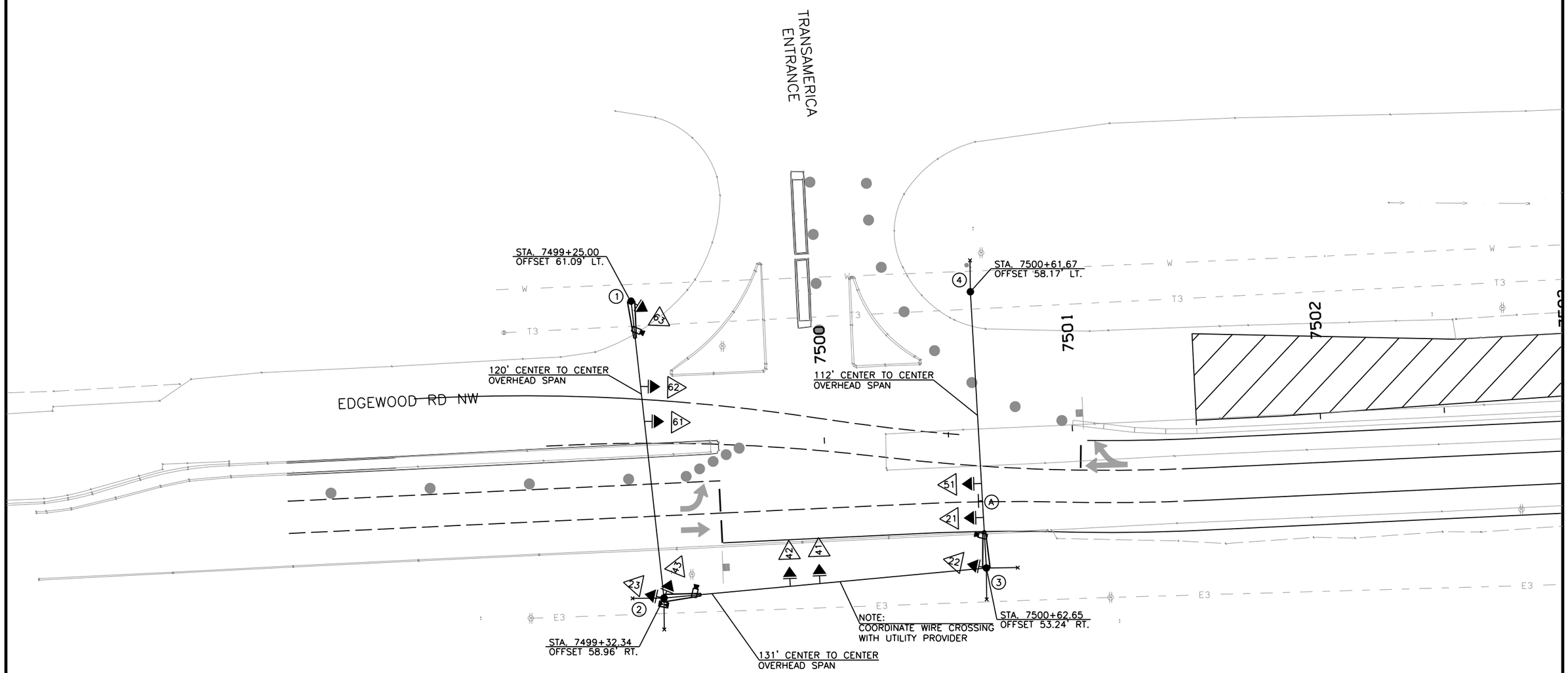
0 FEET 20

STAGE 1D TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT TRANSAMERICA ENT.

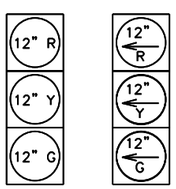
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.30

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY SIGNAL SYSTEM.



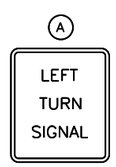
TRAFFIC SIGNAL FACES



NO. 21,22,23, 41,42,43, 61,62,63 (9-REQ'D)

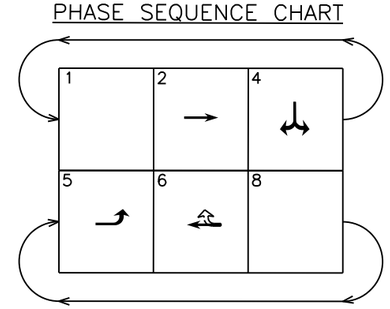
NO. 51 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



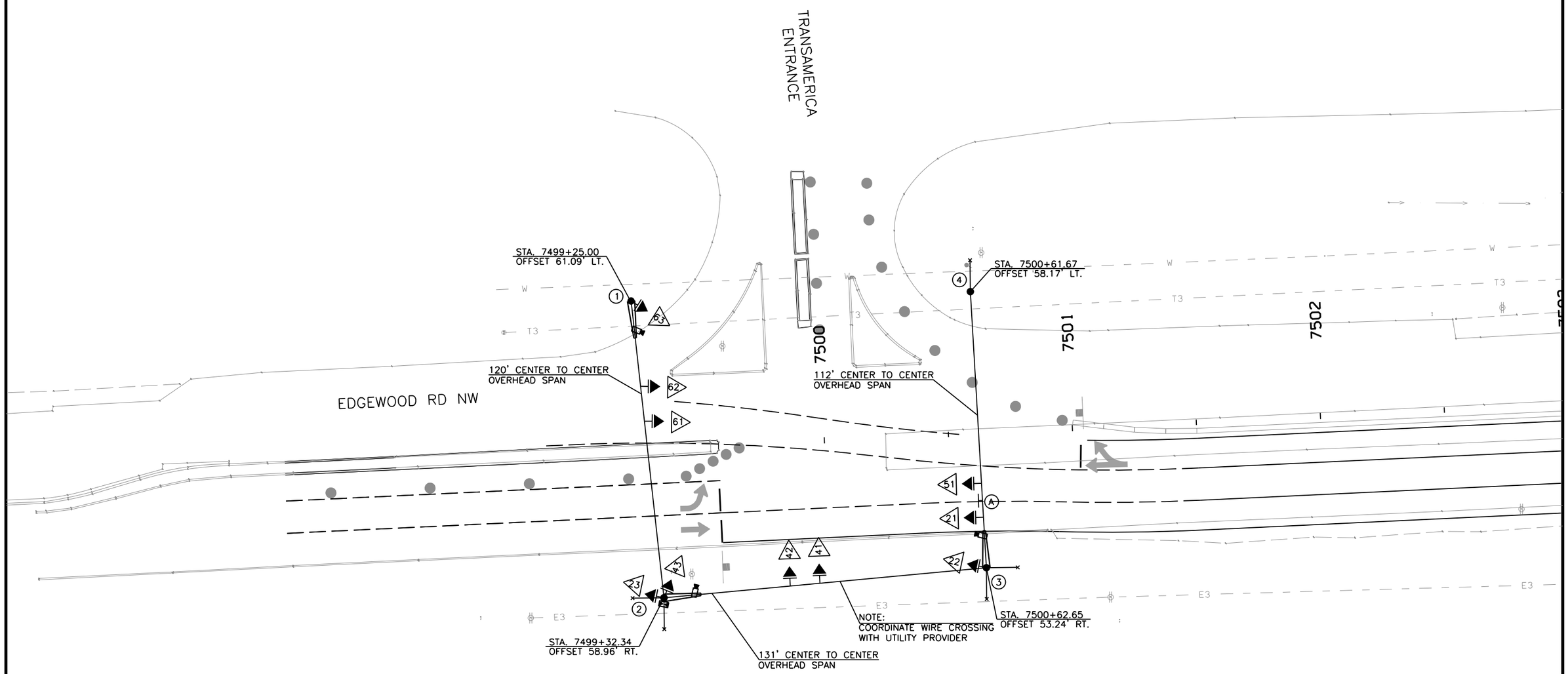
0 FEET 20

STAGE 2A TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT TRANSAMERICA ENT.

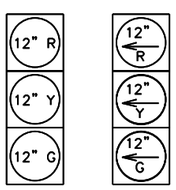
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.31

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY SIGNAL SYSTEM.



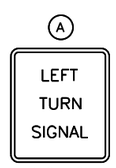
TRAFFIC SIGNAL FACES



NO. 21,22,23, 41,42,43, 61,62,63 (9-REQ'D)

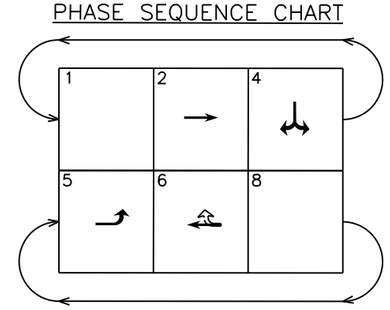
NO. 51 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



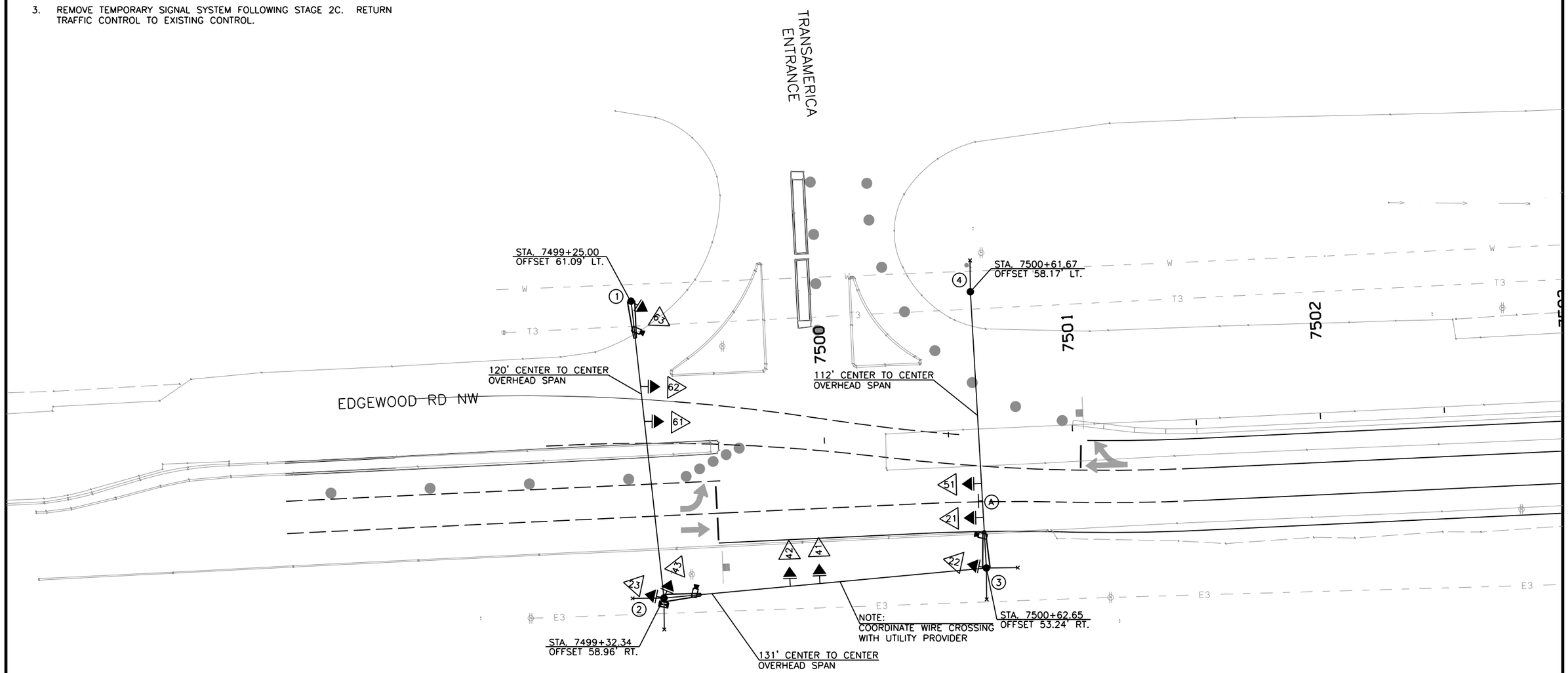
0 FEET 20

STAGE 2B TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT TRANSAMERICA ENT.

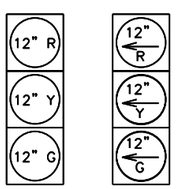
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.32

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY SIGNAL SYSTEM.
3. REMOVE TEMPORARY SIGNAL SYSTEM FOLLOWING STAGE 2C. RETURN TRAFFIC CONTROL TO EXISTING CONTROL.



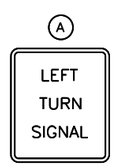
TRAFFIC SIGNAL FACES



NO. 21,22,23, 41,42,43, 61,62,63 (9-REQ'D)

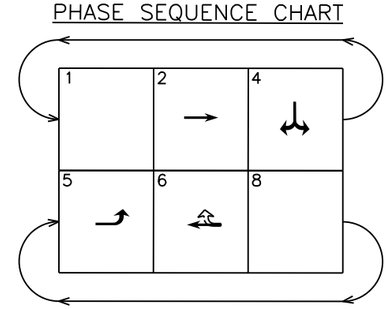
NO. 51 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



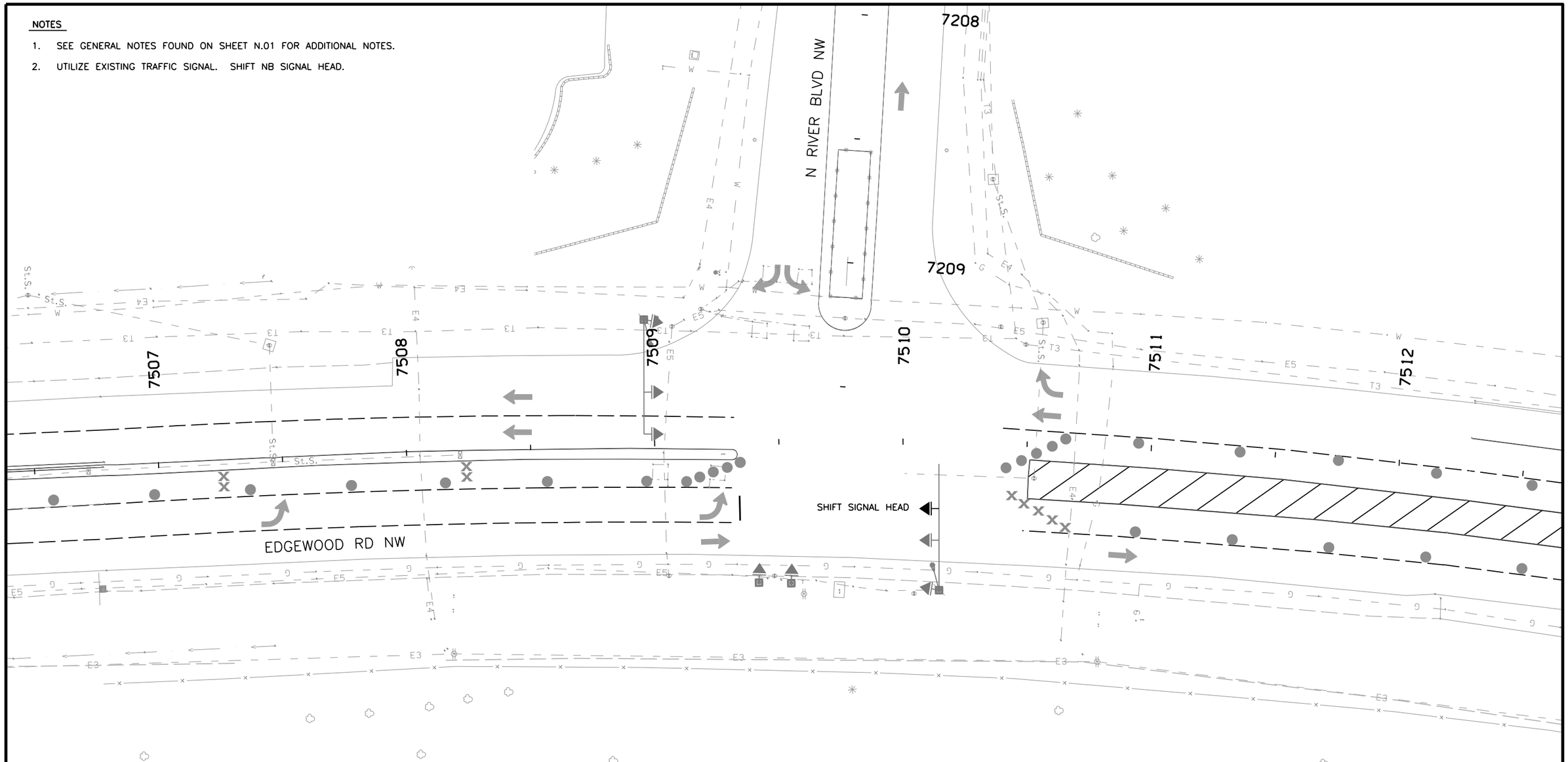
0 FEET 20

STAGE 2C TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT TRANSAMERICA ENT.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.33

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE EXISTING TRAFFIC SIGNAL. SHIFT NB SIGNAL HEAD.



TRAFFIC SIGNAL FACES

UTILIZE EXISTING SIGNAL HEADS

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

PHASE SEQUENCE CHART

UTILIZE EXISTING PHASING

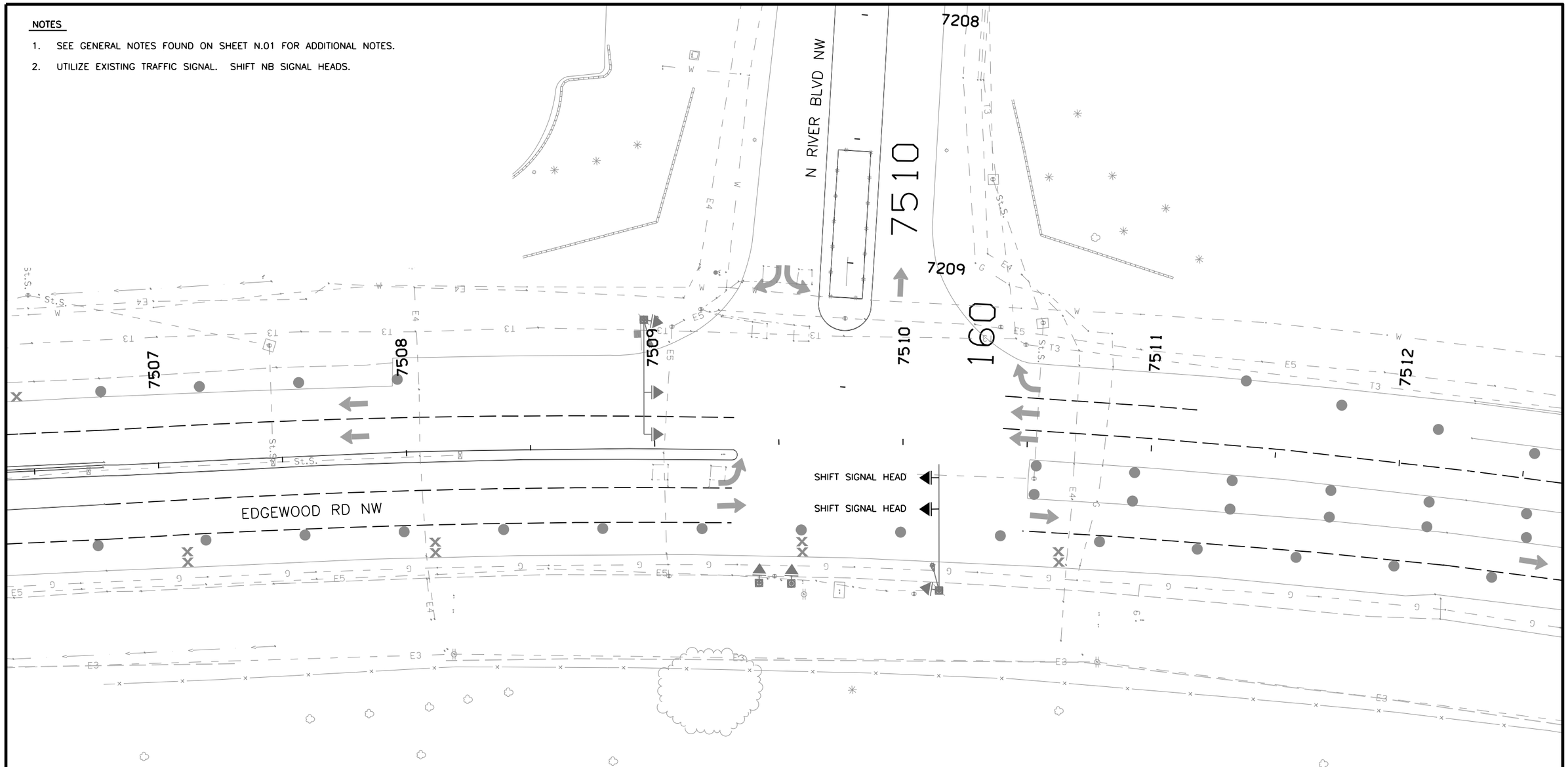
0 20 FEET

STAGE 1A TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.34

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE EXISTING TRAFFIC SIGNAL. SHIFT NB SIGNAL HEADS.



TRAFFIC SIGNAL FACES

UTILIZE EXISTING SIGNAL HEADS

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

PHASE SEQUENCE CHART

UTILIZE EXISTING PHASING

0 FEET 20

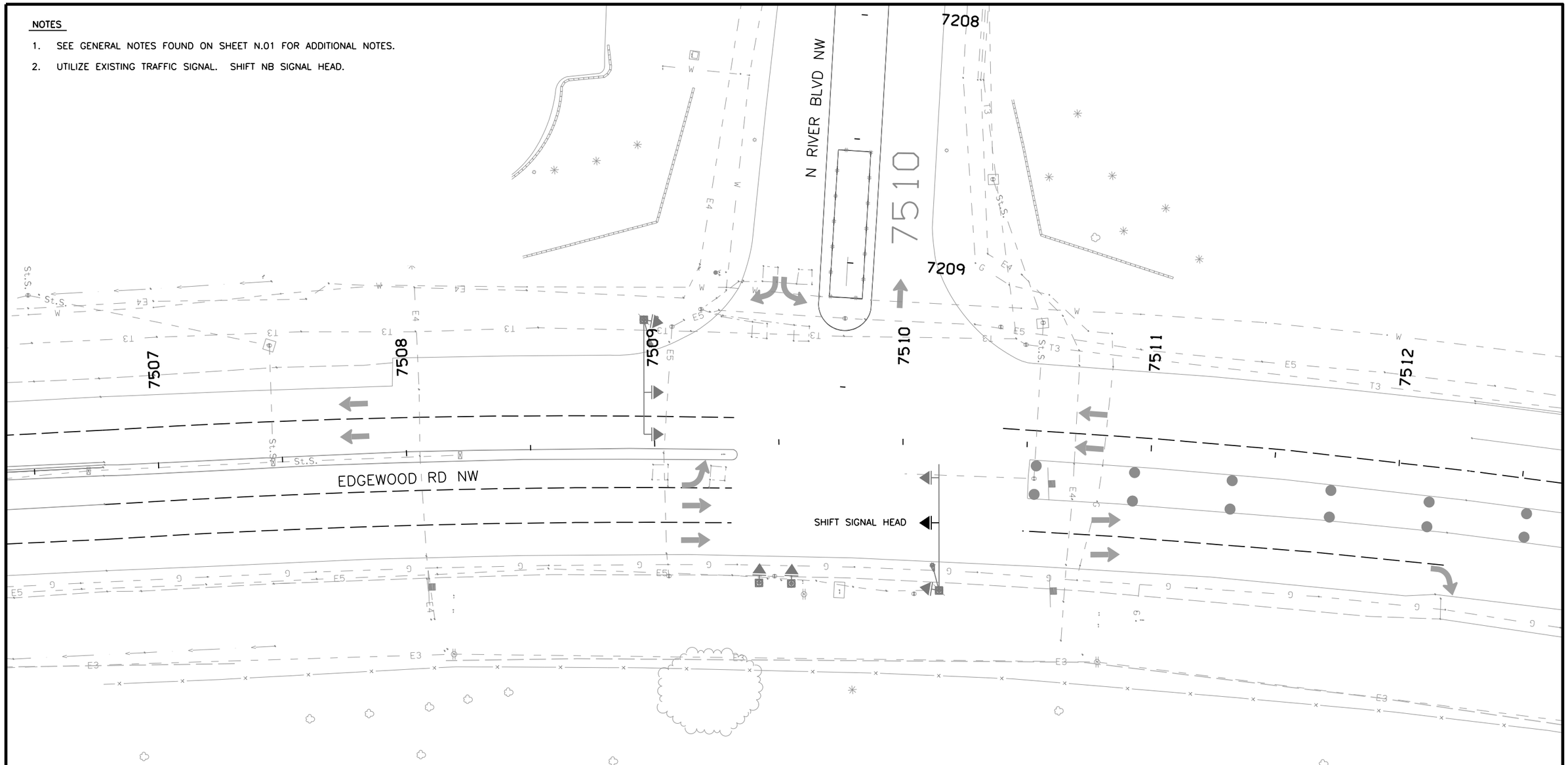
STAGE 1B TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.35

10:07:02 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE EXISTING TRAFFIC SIGNAL. SHIFT NB SIGNAL HEAD.



TRAFFIC SIGNAL FACES

UTILIZE EXISTING SIGNAL HEADS

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

PHASE SEQUENCE CHART

UTILIZE EXISTING PHASING

0 20 FEET

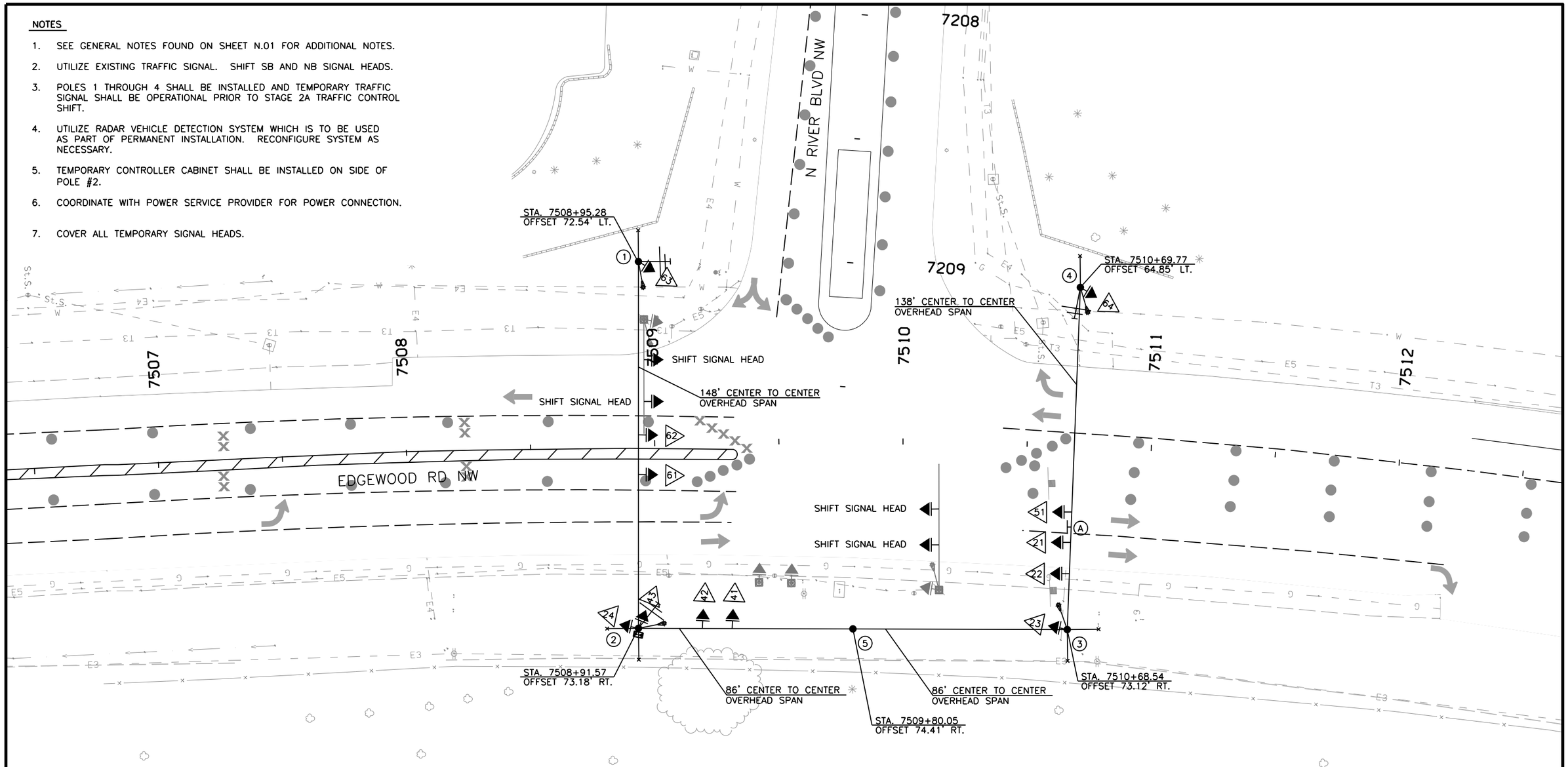
STAGE 1C TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.36

10:07:05 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE EXISTING TRAFFIC SIGNAL. SHIFT SB AND NB SIGNAL HEADS.
3. POLES 1 THROUGH 4 SHALL BE INSTALLED AND TEMPORARY TRAFFIC SIGNAL SHALL BE OPERATIONAL PRIOR TO STAGE 2A TRAFFIC CONTROL SHIFT.
4. UTILIZE RADAR VEHICLE DETECTION SYSTEM WHICH IS TO BE USED AS PART OF PERMANENT INSTALLATION. RECONFIGURE SYSTEM AS NECESSARY.
5. TEMPORARY CONTROLLER CABINET SHALL BE INSTALLED ON SIDE OF POLE #2.
6. COORDINATE WITH POWER SERVICE PROVIDER FOR POWER CONNECTION.
7. COVER ALL TEMPORARY SIGNAL HEADS.



TRAFFIC SIGNAL FACES

UTILIZE EXISTING SIGNAL HEADS

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

PHASE SEQUENCE CHART

UTILIZE EXISTING PHASING

0 FEET 20

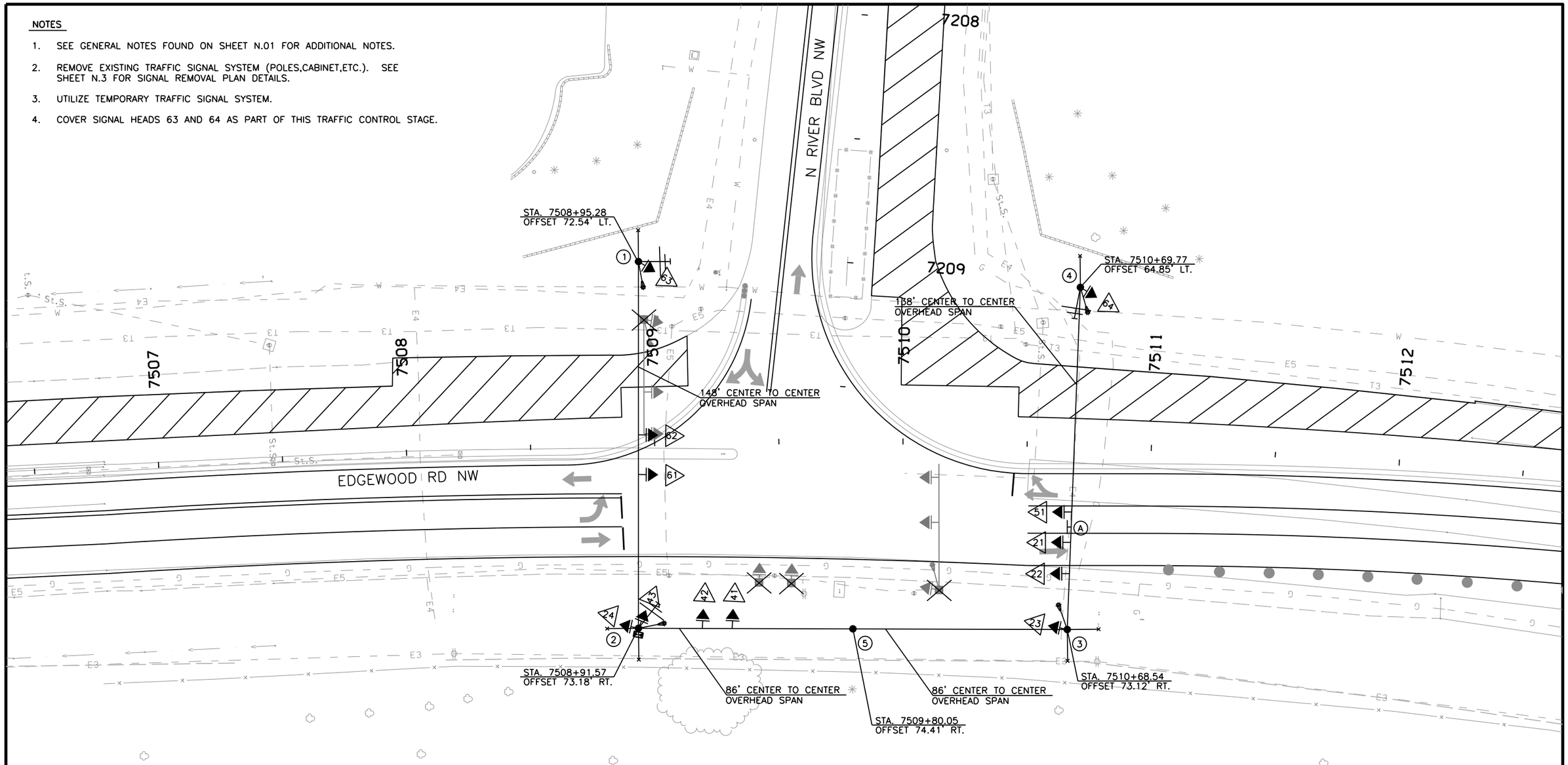
STAGE 1D TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.37

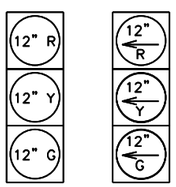
10:07:07 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. REMOVE EXISTING TRAFFIC SIGNAL SYSTEM (POLES,CABINET,ETC.). SEE SHEET N.3 FOR SIGNAL REMOVAL PLAN DETAILS.
3. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
4. COVER SIGNAL HEADS 63 AND 64 AS PART OF THIS TRAFFIC CONTROL STAGE.



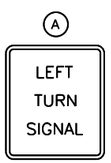
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,41,42,43, 61,62,63,64 (11-REQ'D)

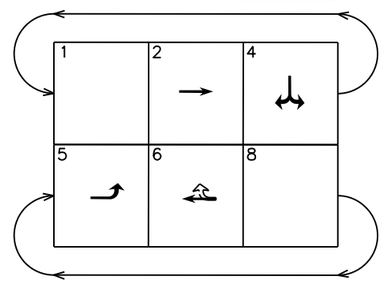
NO. 51 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



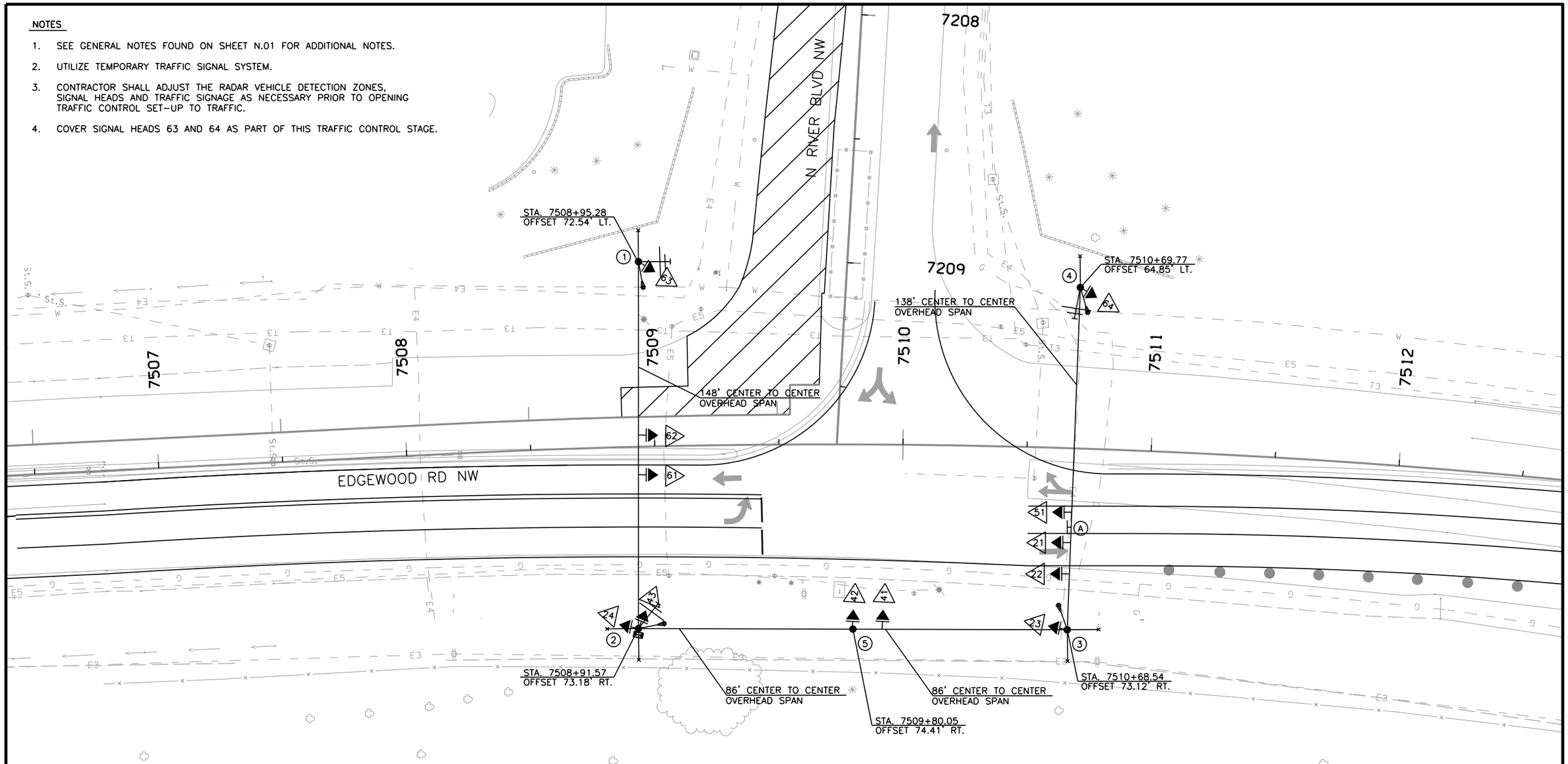
0 FEET 20

STAGE 2A TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

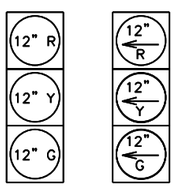
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.38

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 63 AND 64 AS PART OF THIS TRAFFIC CONTROL STAGE.



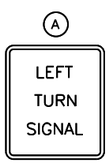
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,41,42,43, 61,62,63,64 (11-REQ'D)

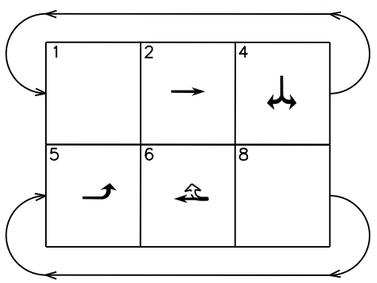
NO. 51 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



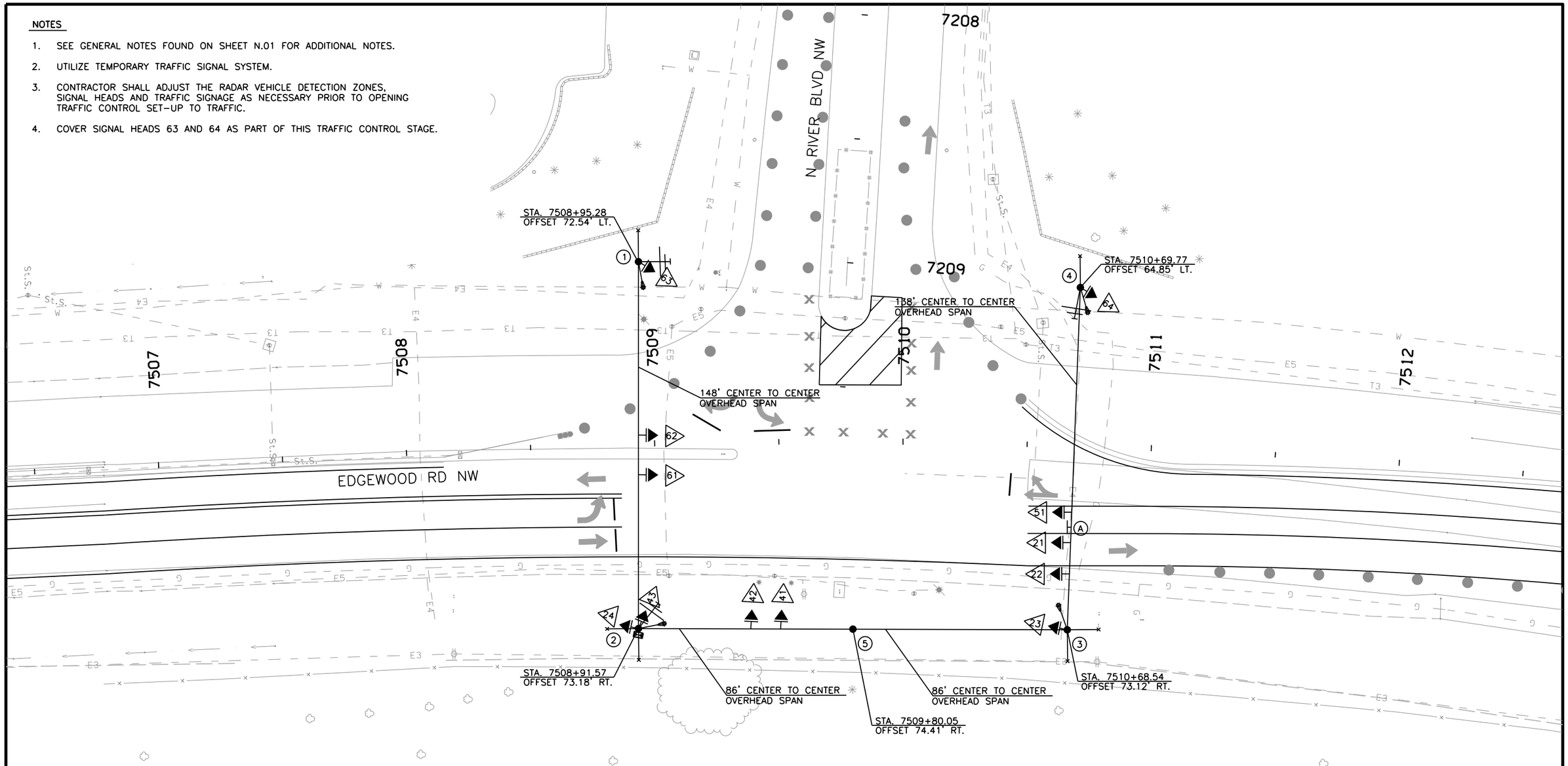
0 FEET 20

STAGE 2B TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

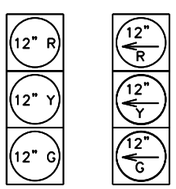
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.39

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 63 AND 64 AS PART OF THIS TRAFFIC CONTROL STAGE.



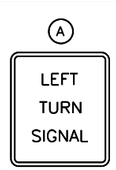
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,41,42,43, 61,62,63,64 (11-REQ'D)

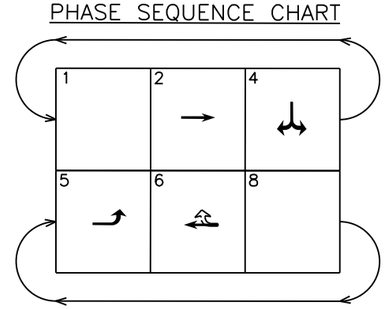
NO. 51 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



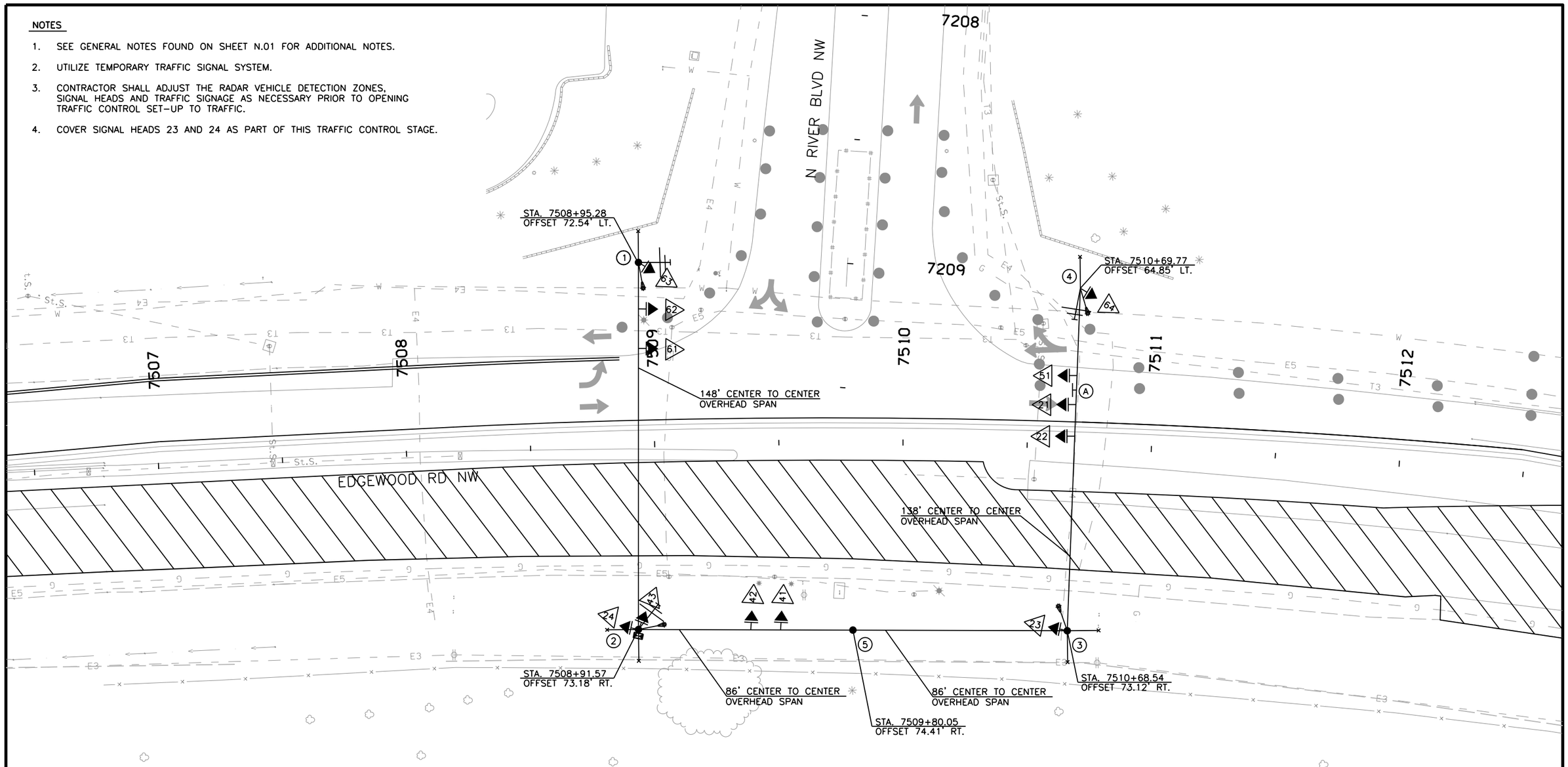
0 FEET 20

STAGE 2C TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

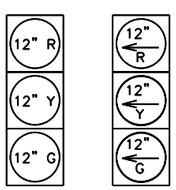
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.40

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 23 AND 24 AS PART OF THIS TRAFFIC CONTROL STAGE.



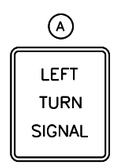
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,41,42,43, 61,62,63,64 (11-REQ'D)

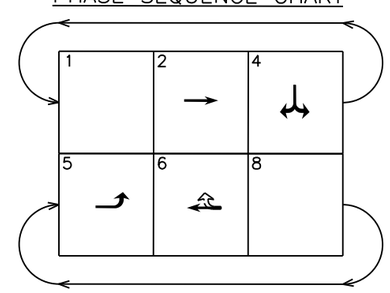
NO. 51 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



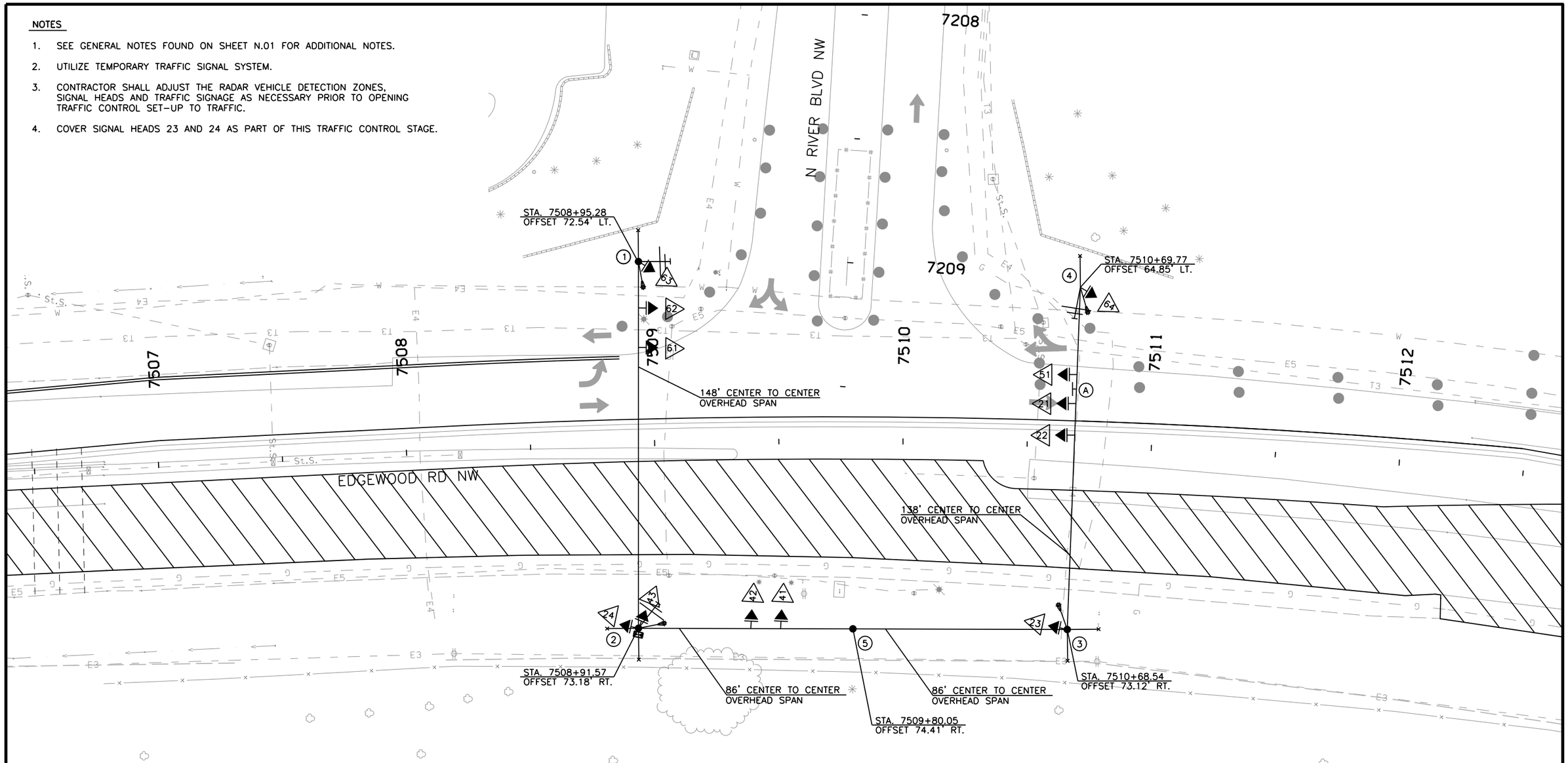
0 FEET 20

STAGE 3A TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

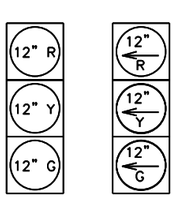
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.41

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 23 AND 24 AS PART OF THIS TRAFFIC CONTROL STAGE.



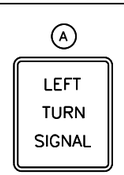
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,41,42,43, 61,62,63,64 (11-REQ'D)

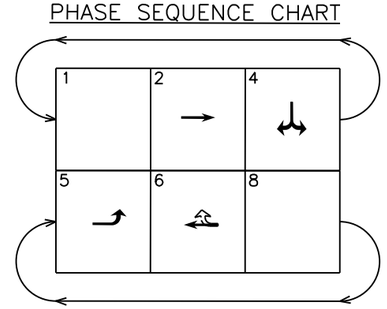
NO. 51 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



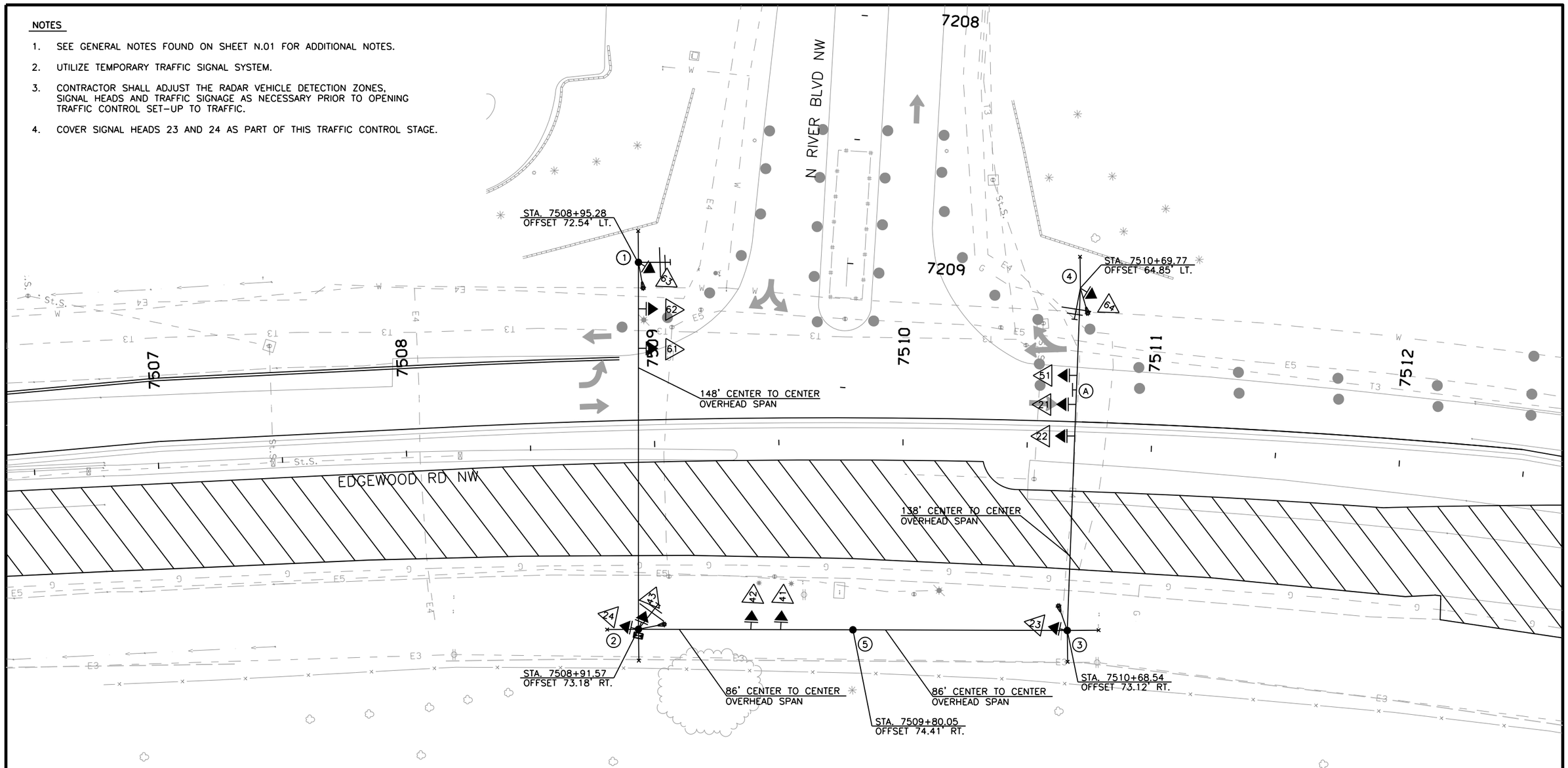
0 20
FEET

STAGE 3B TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

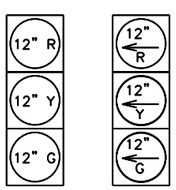
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.42

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 23 AND 24 AS PART OF THIS TRAFFIC CONTROL STAGE.



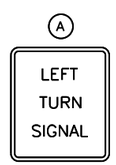
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,41,42,43, 61,62,63,64 (11-REQ'D)

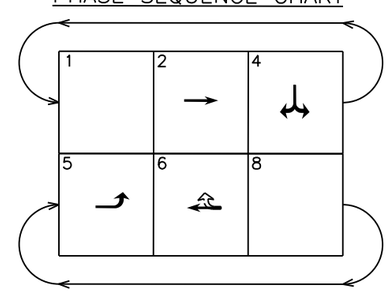
NO. 51 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



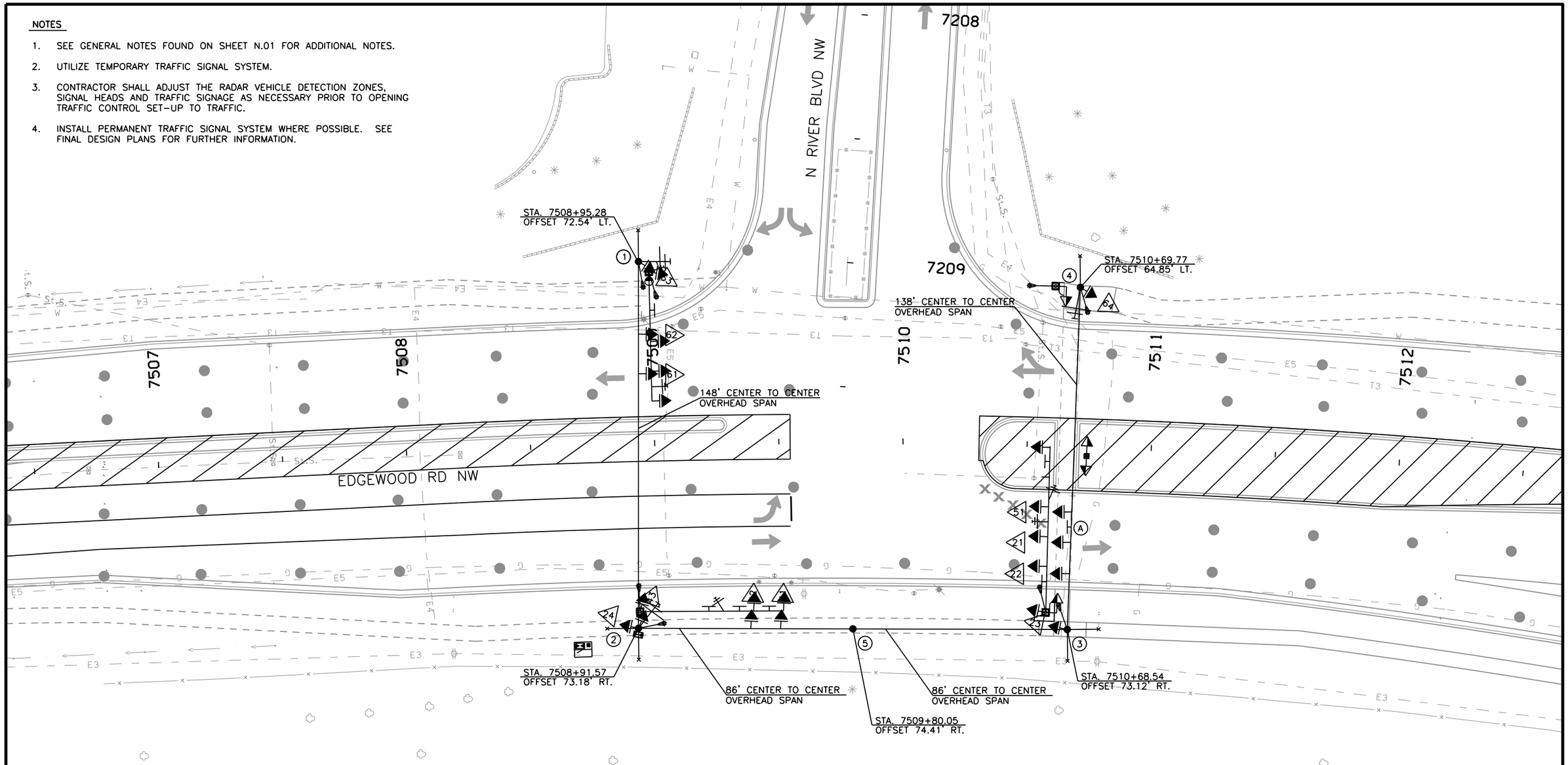
0 FEET 20

STAGE 3C TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

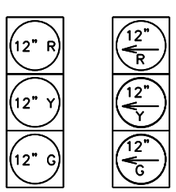
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.43

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. INSTALL PERMANENT TRAFFIC SIGNAL SYSTEM WHERE POSSIBLE. SEE FINAL DESIGN PLANS FOR FURTHER INFORMATION.



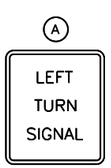
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,41,42,43, 61,62,63,64 (11-REQ'D)

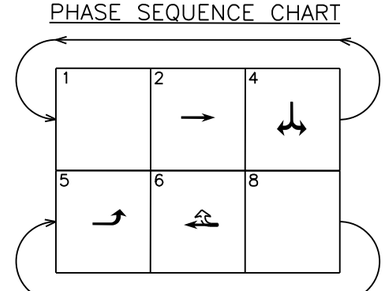
NO. 51 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



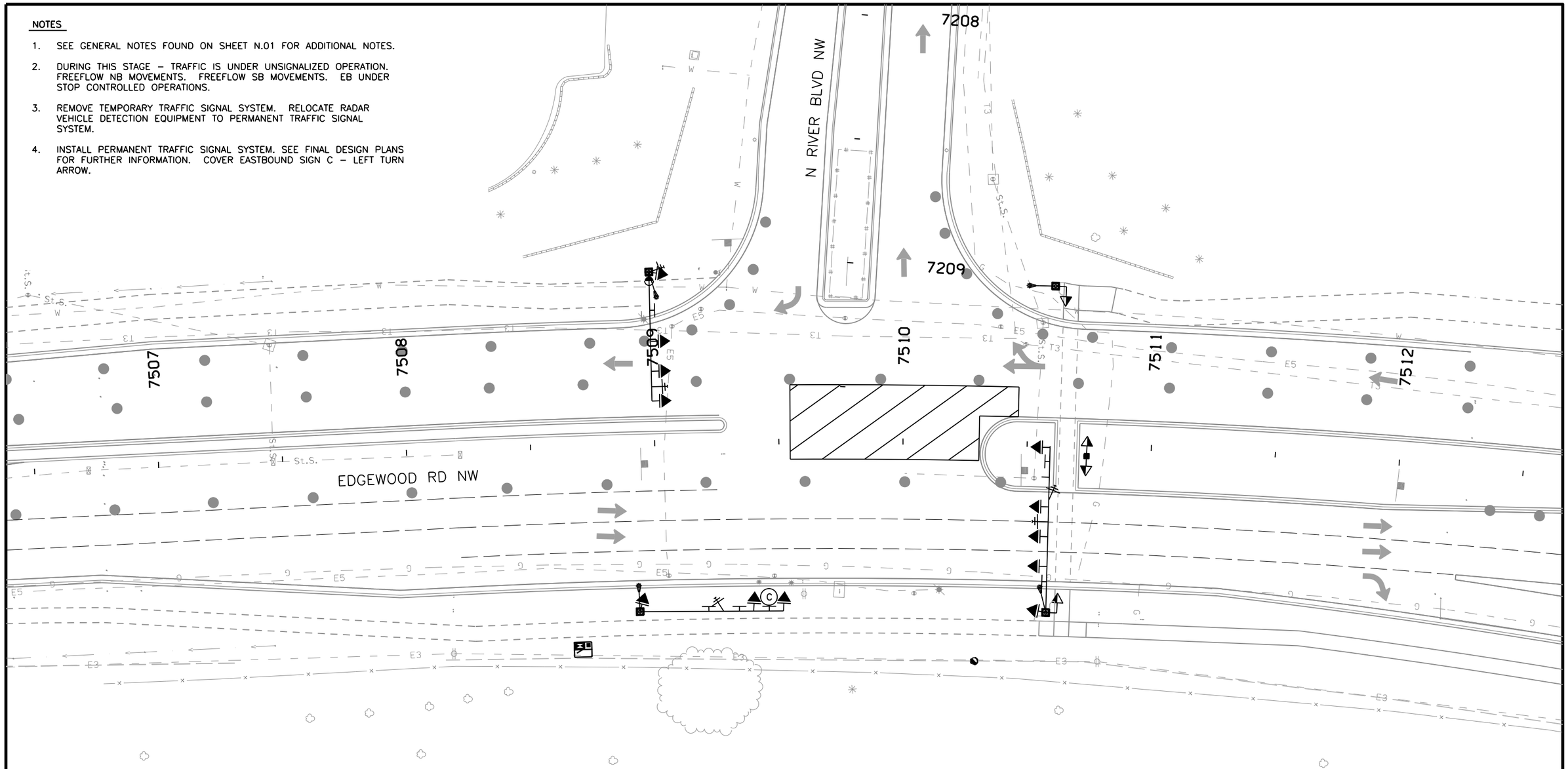
0 20 FEET

STAGE 4 TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.44

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. DURING THIS STAGE – TRAFFIC IS UNDER UNSIGNALIZED OPERATION. FREEFLOW NB MOVEMENTS. FREEFLOW SB MOVEMENTS. EB UNDER STOP CONTROLLED OPERATIONS.
3. REMOVE TEMPORARY TRAFFIC SIGNAL SYSTEM. RELOCATE RADAR VEHICLE DETECTION EQUIPMENT TO PERMANENT TRAFFIC SIGNAL SYSTEM.
4. INSTALL PERMANENT TRAFFIC SIGNAL SYSTEM. SEE FINAL DESIGN PLANS FOR FURTHER INFORMATION. COVER EASTBOUND SIGN C – LEFT TURN ARROW.



0 20 FEET

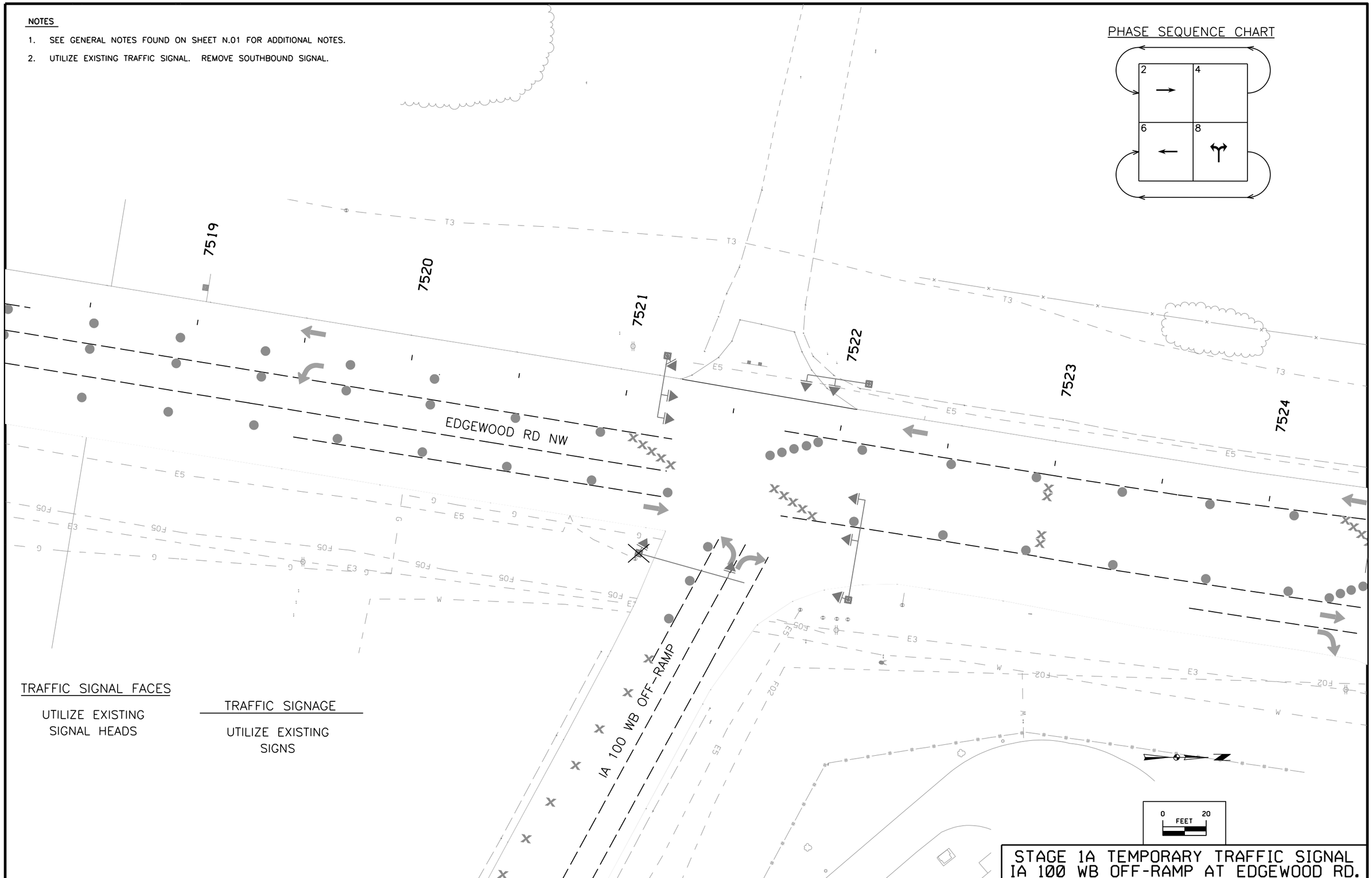
STAGE 5 TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT N. RIVER BLVD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.45

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE EXISTING TRAFFIC SIGNAL. REMOVE SOUTHBOUND SIGNAL.

PHASE SEQUENCE CHART



TRAFFIC SIGNAL FACES

UTILIZE EXISTING SIGNAL HEADS

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

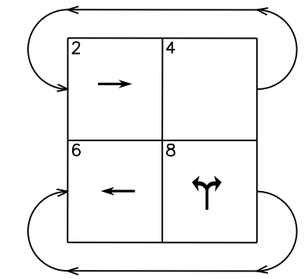
STAGE 1A TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

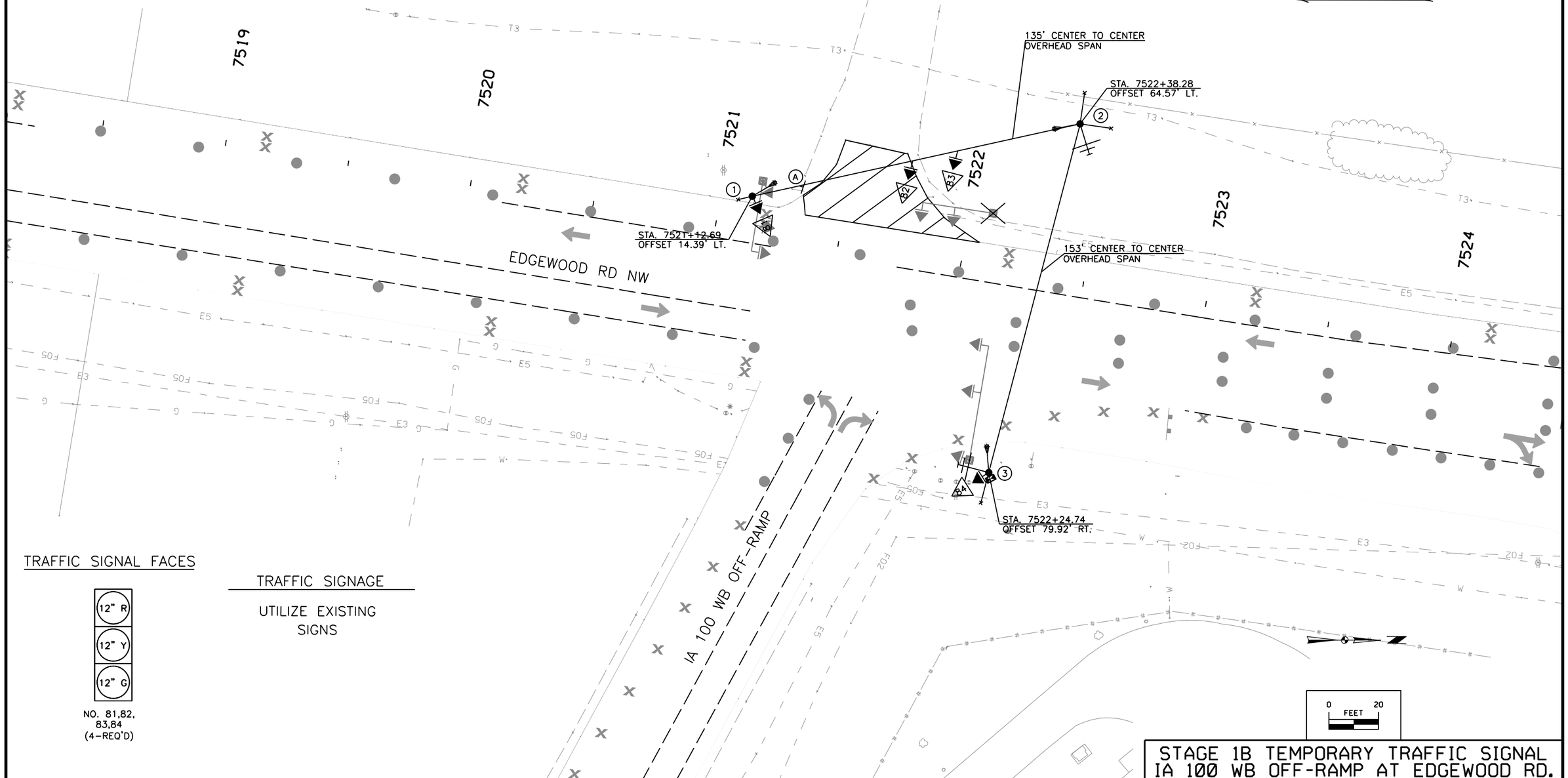
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.46

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. INSTALL TEMPORARY SIGNAL SYSTEM INCLUDING POLES 1 THROUGH 3, PREPARE AND UTILIZE FOR NB APPROACH OPERATION.
3. UTILIZE EXISTING TRAFFIC SIGNAL; OTHER THAN THE NB APPROACH SIGNAL POLE/HEADS. REMOVE EXISTING NB SIGNAL POLE/HEADS; UTILIZE TEMPORARY SIGNAL SYSTEM.
4. FOR NORTHBOUND APPROACH, UTILIZE RADAR VEHICLE DETECTION SYSTEM WHICH IS TO BE USED AS PART OF PERMANENT INSTALLATION. RECONFIGURE SYSTEM AS NECESSARY.
5. USE EXISTING DETECTION FOR OTHER APPROACHES.
6. TEMPORARY CONTROLLER CABINET SHALL BE INSTALLED ON SIDE OF POLE #3.

PHASE SEQUENCE CHART





TRAFFIC SIGNAL FACES

NO. 81,82, 83,84 (4-REQ'D)

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

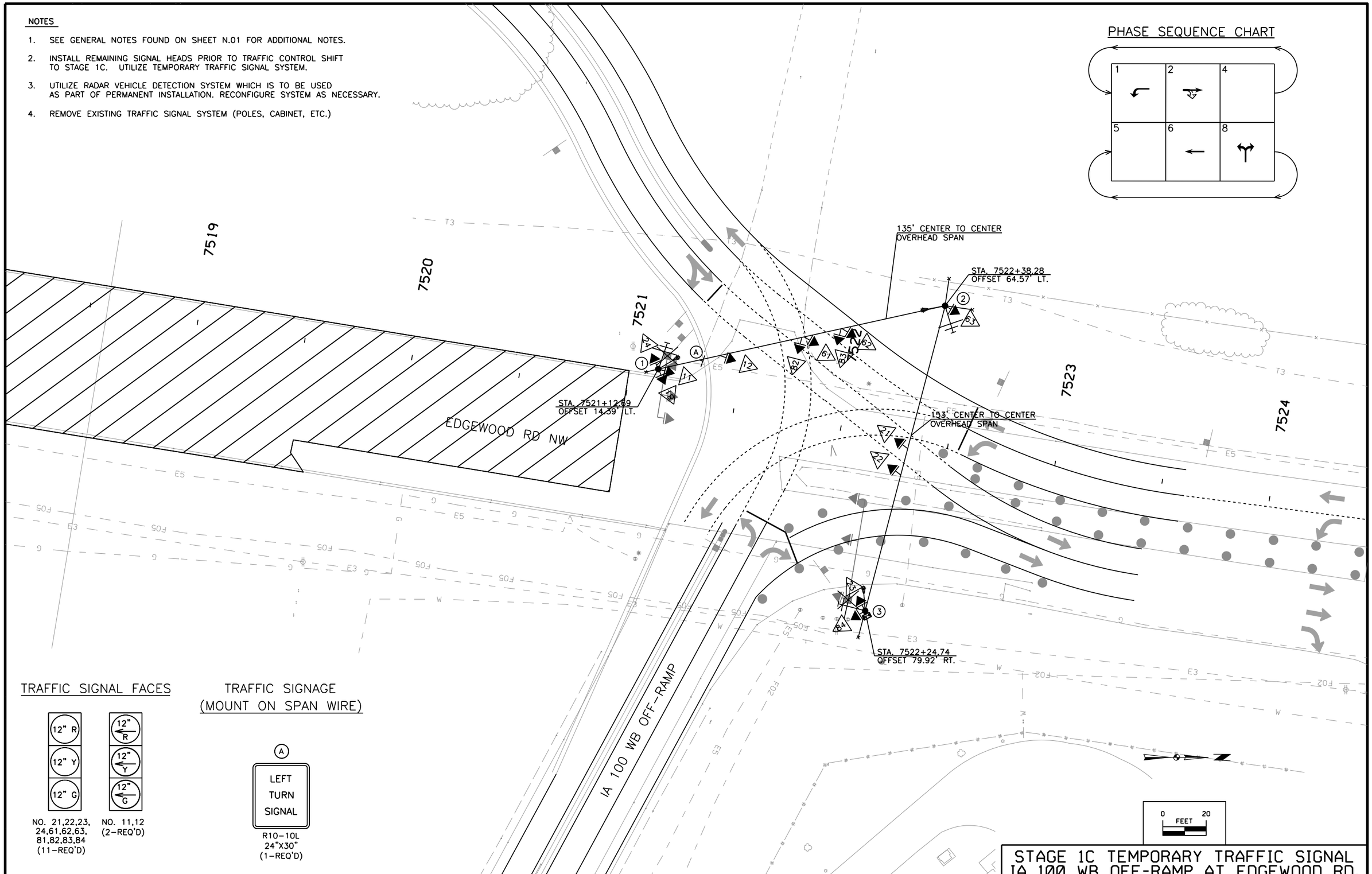
STAGE 1B TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.47

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. INSTALL REMAINING SIGNAL HEADS PRIOR TO TRAFFIC CONTROL SHIFT TO STAGE 1C. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. UTILIZE RADAR VEHICLE DETECTION SYSTEM WHICH IS TO BE USED AS PART OF PERMANENT INSTALLATION. RECONFIGURE SYSTEM AS NECESSARY.
4. REMOVE EXISTING TRAFFIC SIGNAL SYSTEM (POLES, CABINET, ETC.)

PHASE SEQUENCE CHART



TRAFFIC SIGNAL FACES

NO. 21,22,23, 24,61,62,63, 81,82,83,84 (11-REQ'D)

NO. 11,12 (2-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)

R10-10L 24"X30" (1-REQ'D)

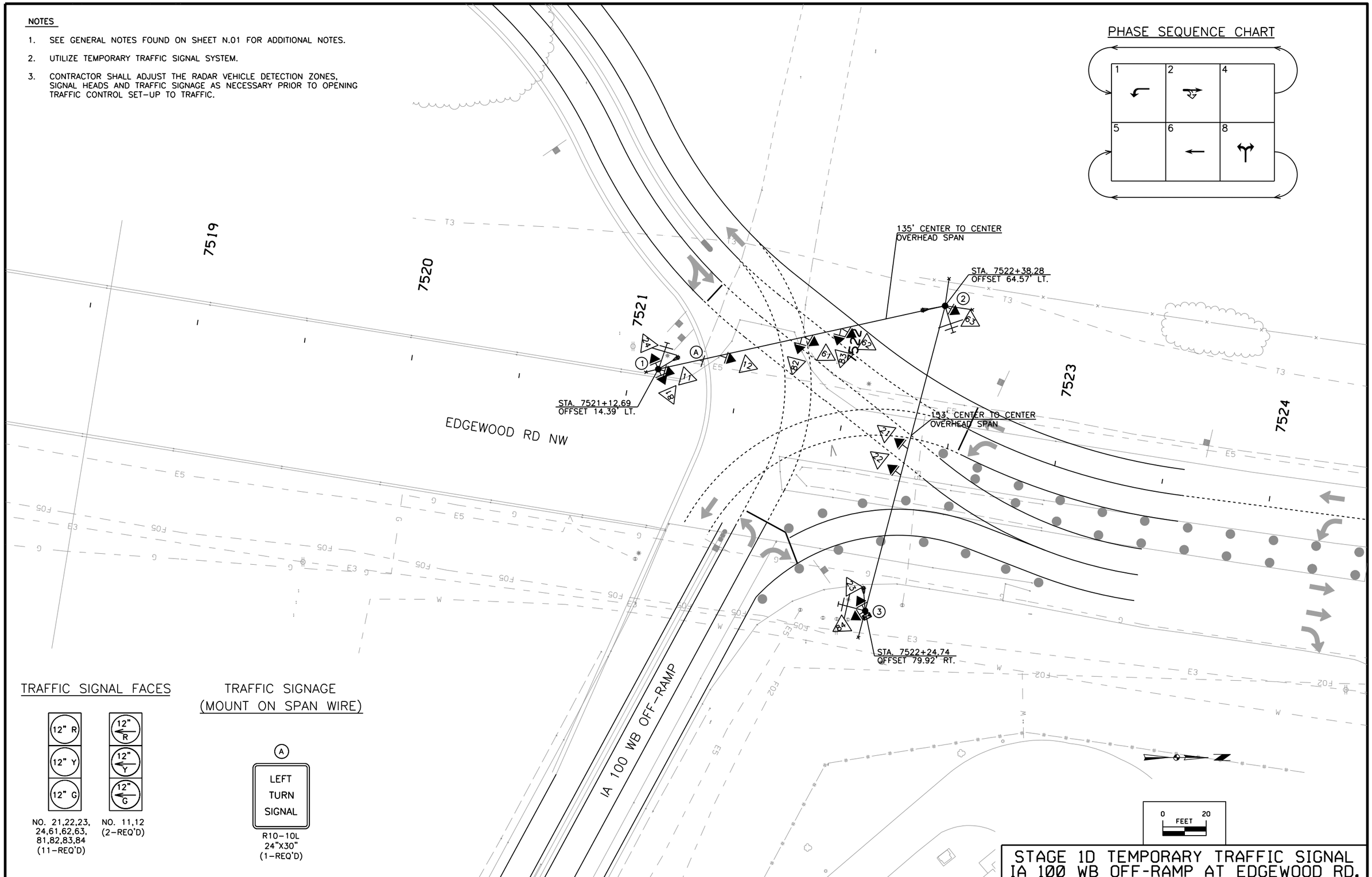
STAGE 1C TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.48

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.

PHASE SEQUENCE CHART



TRAFFIC SIGNAL FACES

NO. 21,22,23, 24,61,62,63, 81,82,83,84 (11-REQ'D)

NO. 11,12 (2-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)

R10-10L
24"X30"
(1-REQ'D)

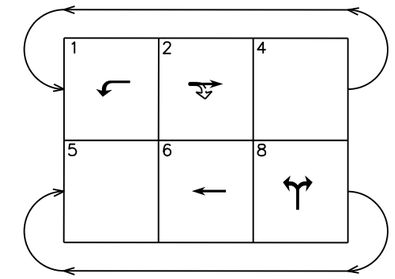
STAGE 1D TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

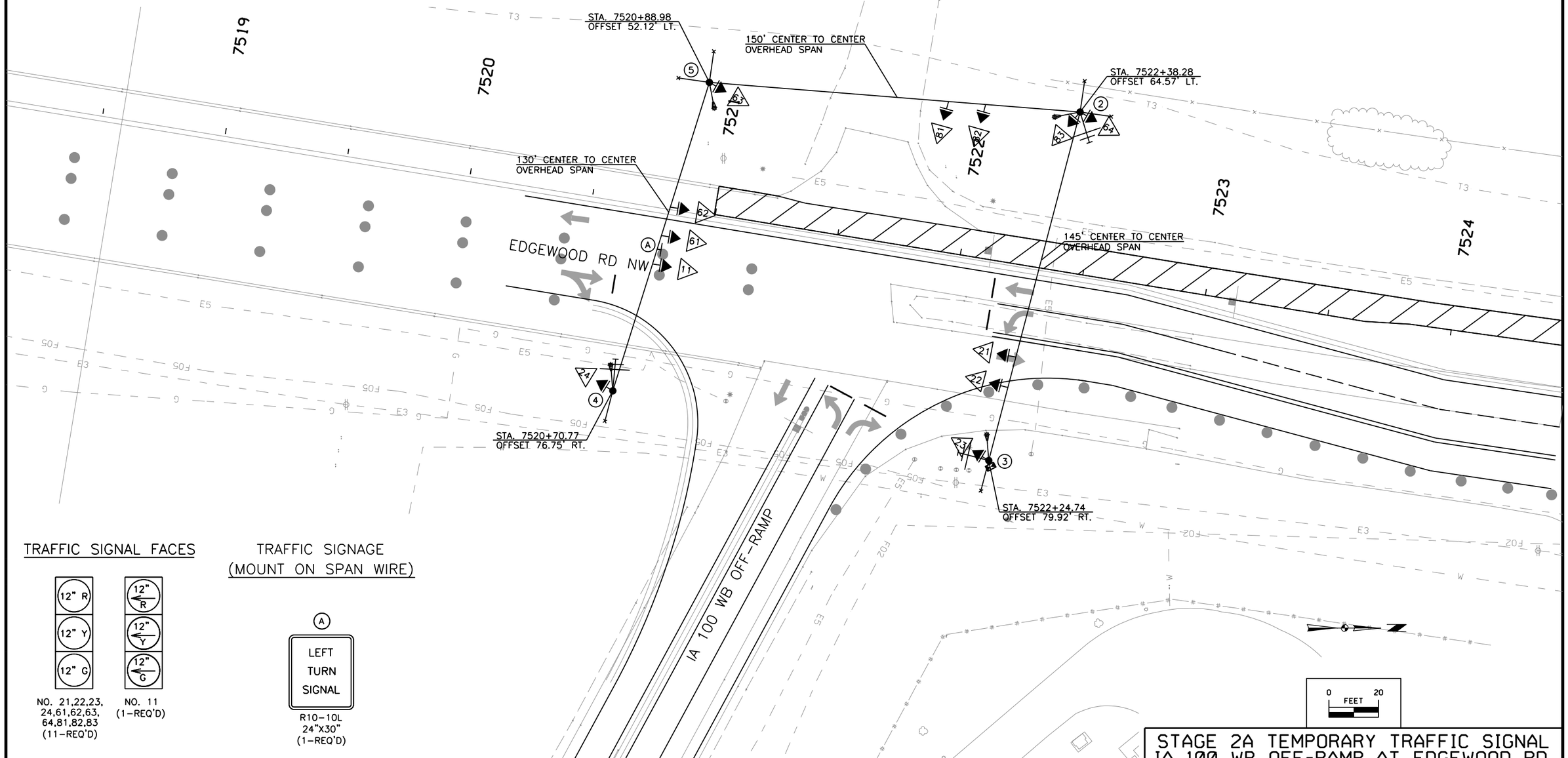
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.49

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. MODIFY TEMPORARY TRAFFIC SIGNAL SYSTEM. TEMPORARY TRAFFIC SIGNAL SYSTEM SHALL BE MODIFIED AND OPERATIONAL PRIOR TO OPENING OF STAGE 2A TRAFFIC CONTROL.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 63 AND 64 AS PART OF THIS TRAFFIC CONTROL STAGE.

PHASE SEQUENCE CHART





TRAFFIC SIGNAL FACES

NO. 21,22,23, 24,61,62,63, 64,81,82,83 (11-REQ'D)

NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)

R10-10L 24"X30" (1-REQ'D)

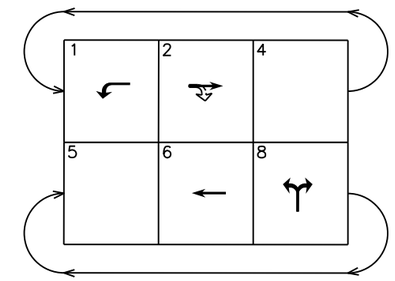
STAGE 2A TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

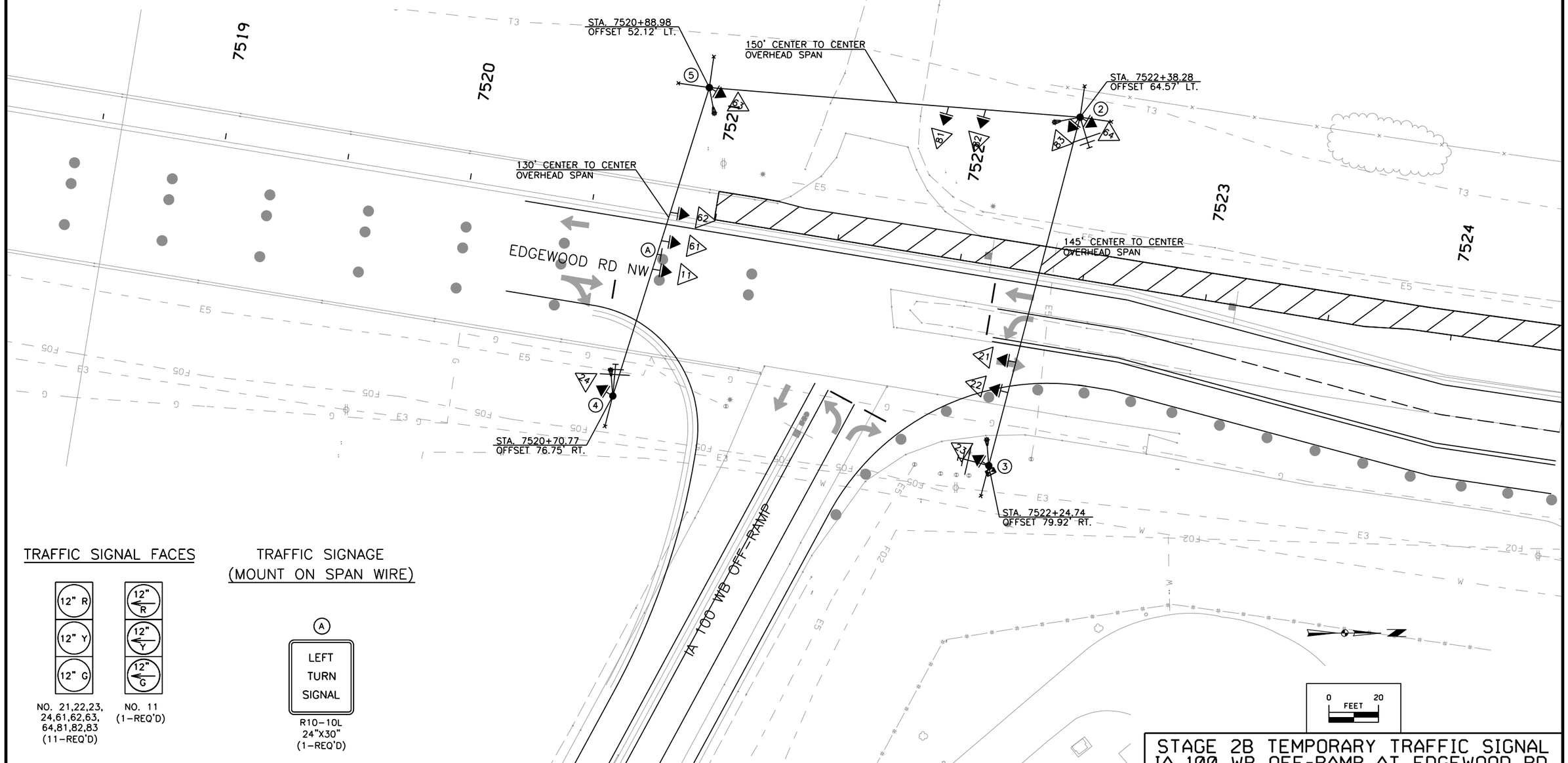
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.50

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 63 AND 64 AS PART OF THIS TRAFFIC CONTROL STAGE.

PHASE SEQUENCE CHART





TRAFFIC SIGNAL FACES

NO. 21,22,23, 24,61,62,63, 64,81,82,83 (11-REQ'D)

NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)

R10-10L
24"X30"
(1-REQ'D)

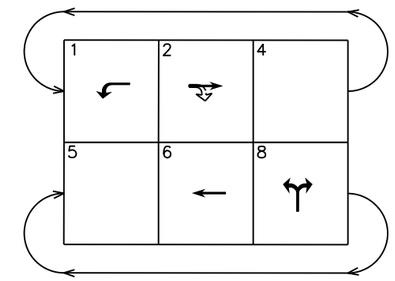
STAGE 2B TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

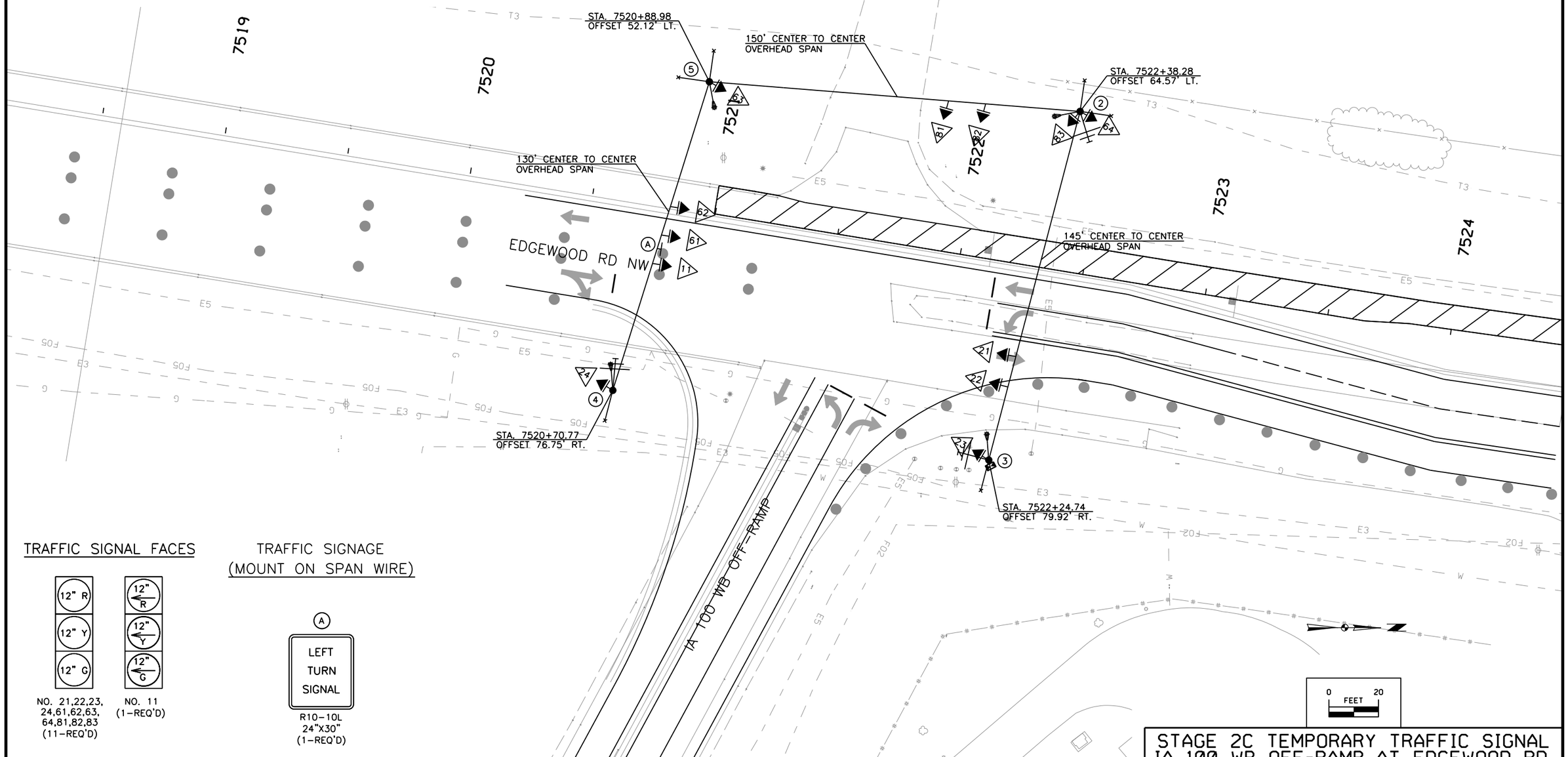
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.51

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 63 AND 64 AS PART OF THIS TRAFFIC CONTROL STAGE.

PHASE SEQUENCE CHART





TRAFFIC SIGNAL FACES

NO. 21,22,23, 24,61,62,63, 64,81,82,83 (11-REQ'D)

NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)

R10-10L
24"X30"
(1-REQ'D)

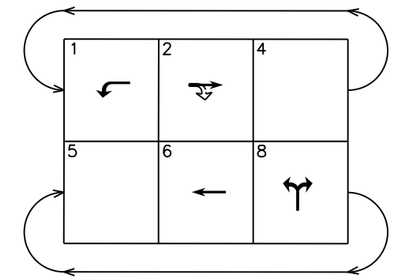
STAGE 2C TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

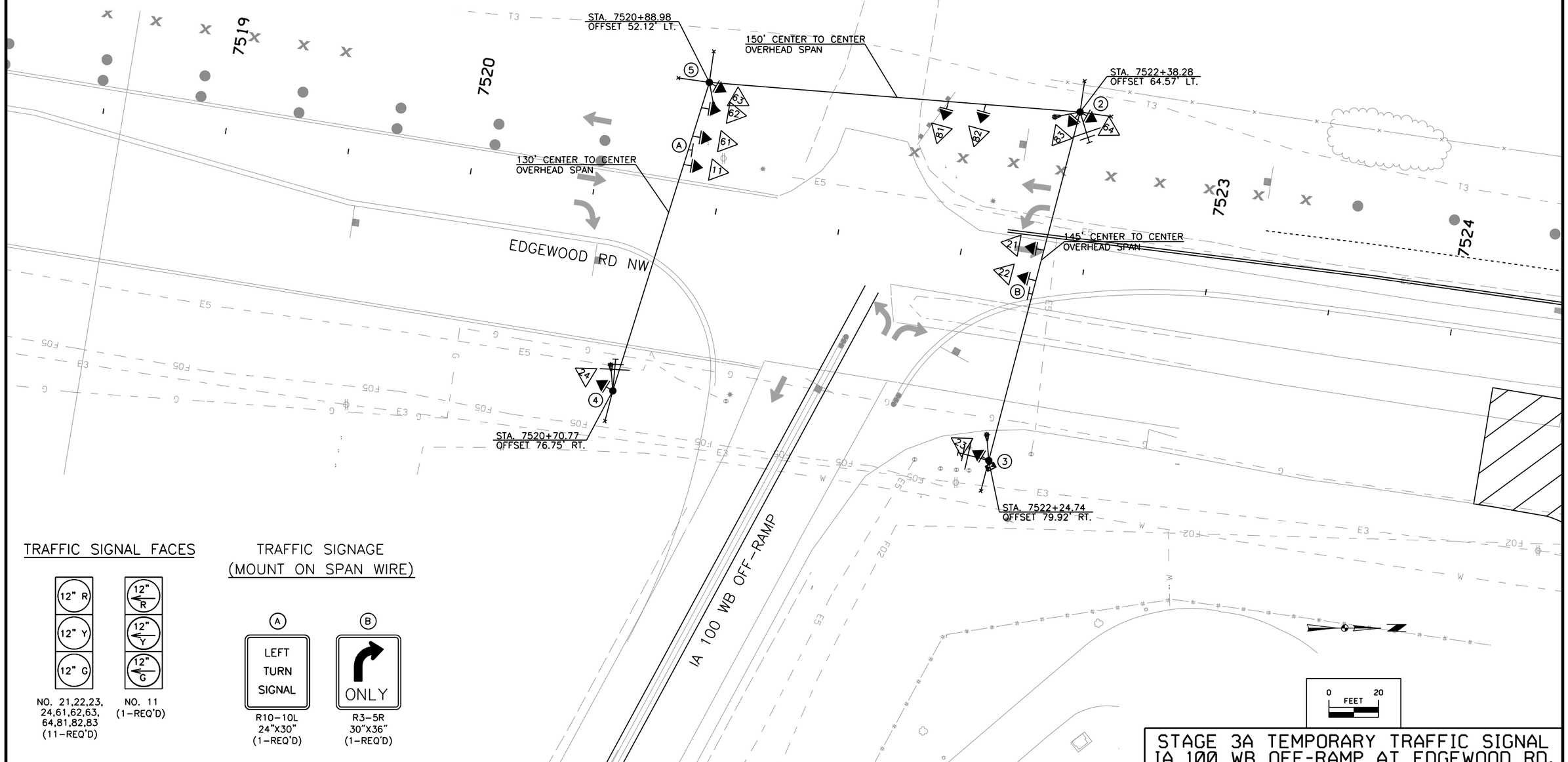
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.52

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 23 AND 24 AS PART OF THIS TRAFFIC CONTROL STAGE.

PHASE SEQUENCE CHART





TRAFFIC SIGNAL FACES

NO. 21,22,23, 24,61,62,63, 64,81,82,83 (11-REQ'D)

NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)

R10-10L 24"X30" (1-REQ'D)

R3-5R 30"X36" (1-REQ'D)

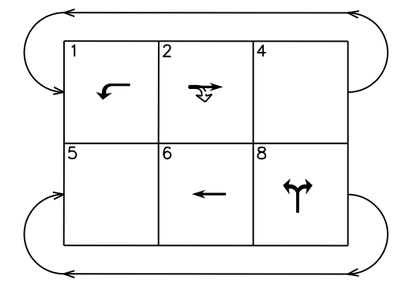
STAGE 3A TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

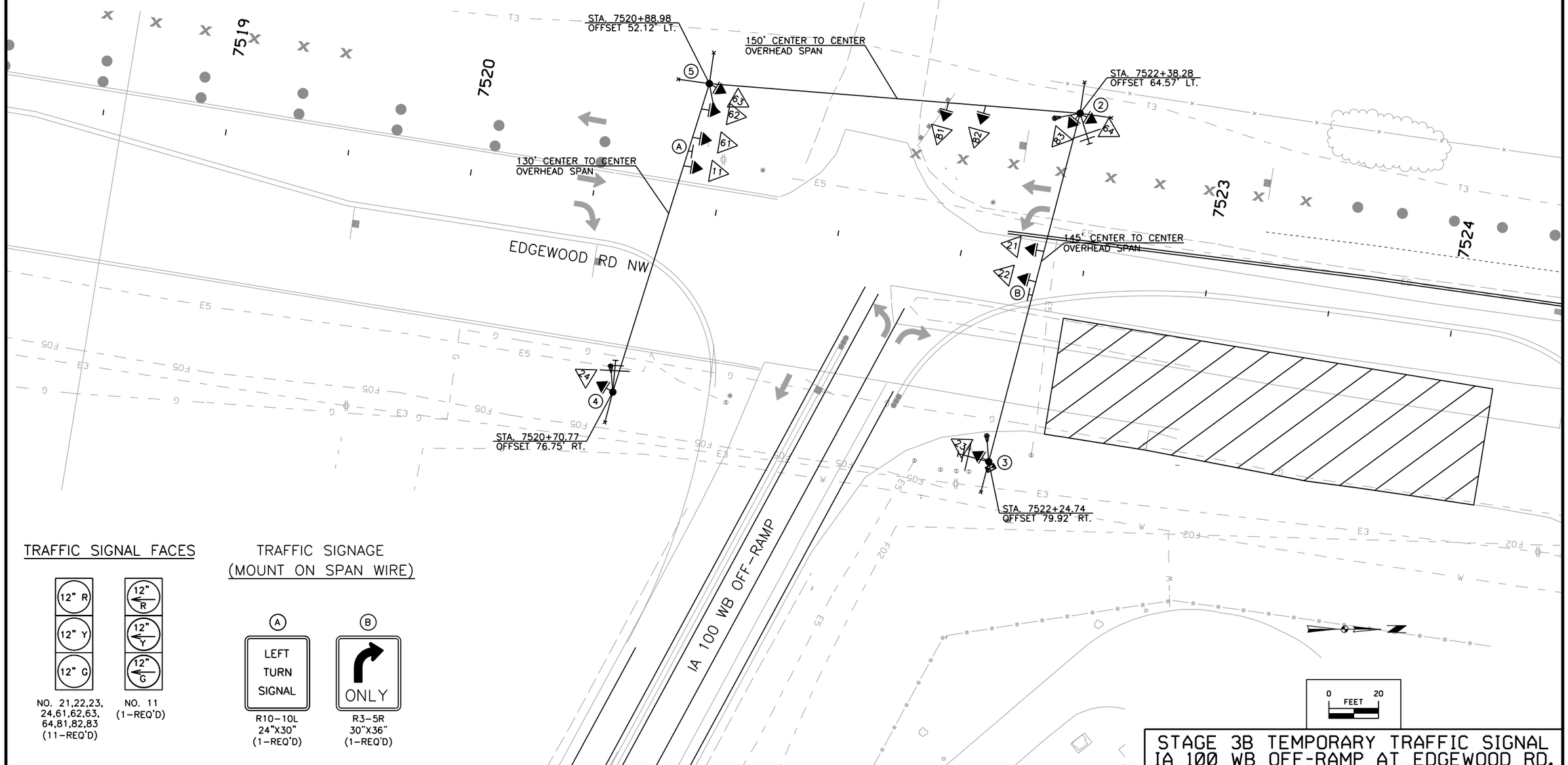
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.53

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 23 AND 24 AS PART OF THIS TRAFFIC CONTROL STAGE.

PHASE SEQUENCE CHART





TRAFFIC SIGNAL FACES

NO. 21,22,23, 24,61,62,63, 64,81,82,83 (11-REQ'D)

NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)

R10-10L 24"X30" (1-REQ'D)

R3-5R 30"X36" (1-REQ'D)

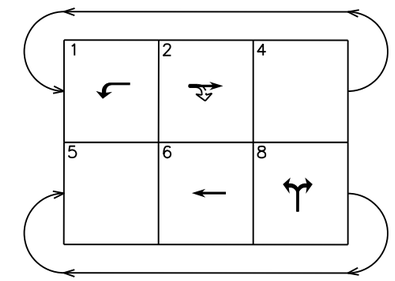
STAGE 3B TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

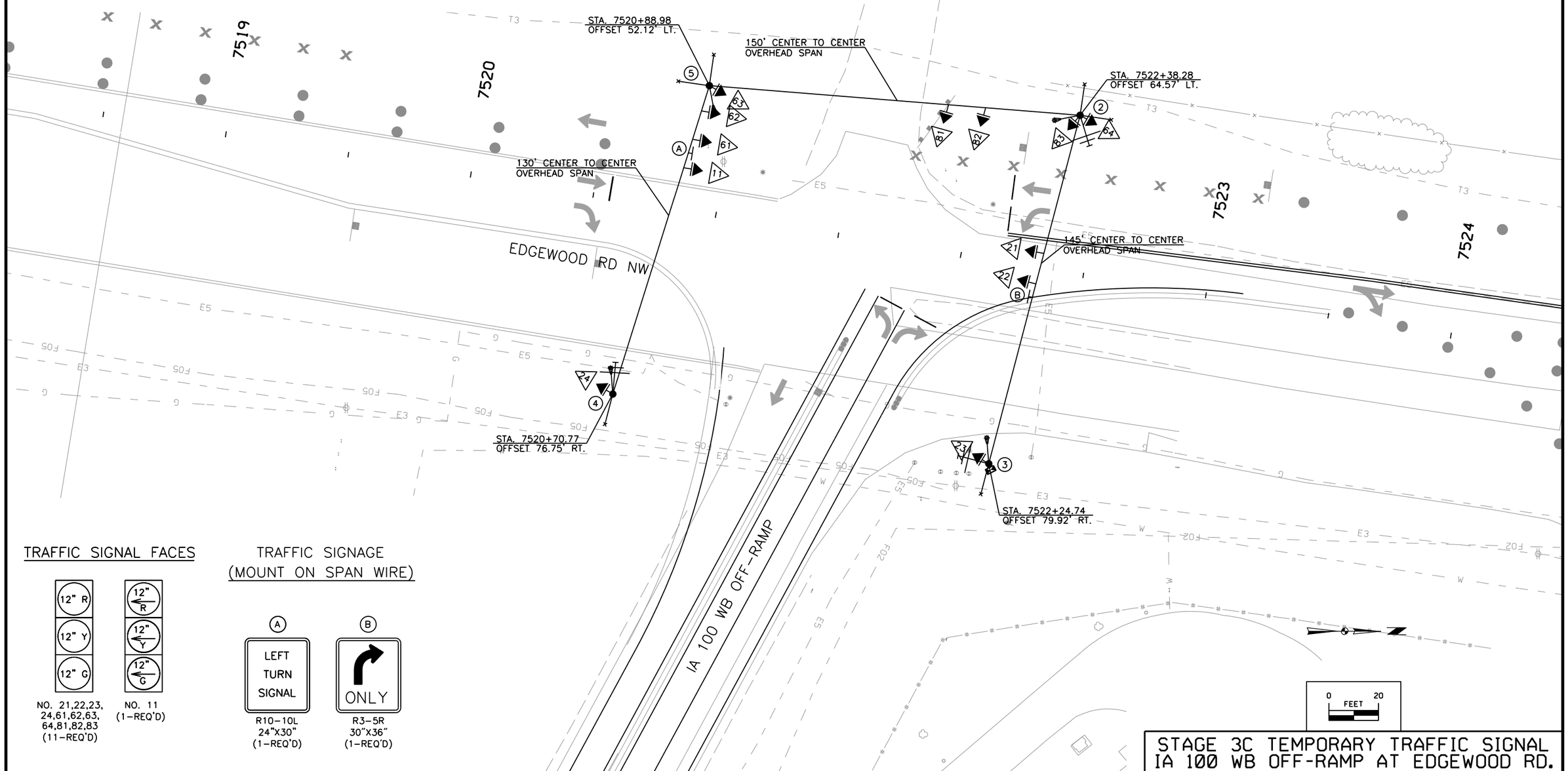
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.54

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM. REMOVE TEMPORARY TRAFFIC SIGNAL SYSTEM AT THE WB OFF-RAMP FOLLOWING STAGE 3C.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 23 AND 24 AS PART OF THIS TRAFFIC CONTROL STAGE.
5. INSTALL PERMANENT TRAFFIC SIGNAL SYSTEM WHERE POSSIBLE.

PHASE SEQUENCE CHART





TRAFFIC SIGNAL FACES

NO. 21,22,23, 24,61,62,63, 64,81,82,83 (11-REQ'D)

NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)

R10-10L 24"X30" (1-REQ'D)

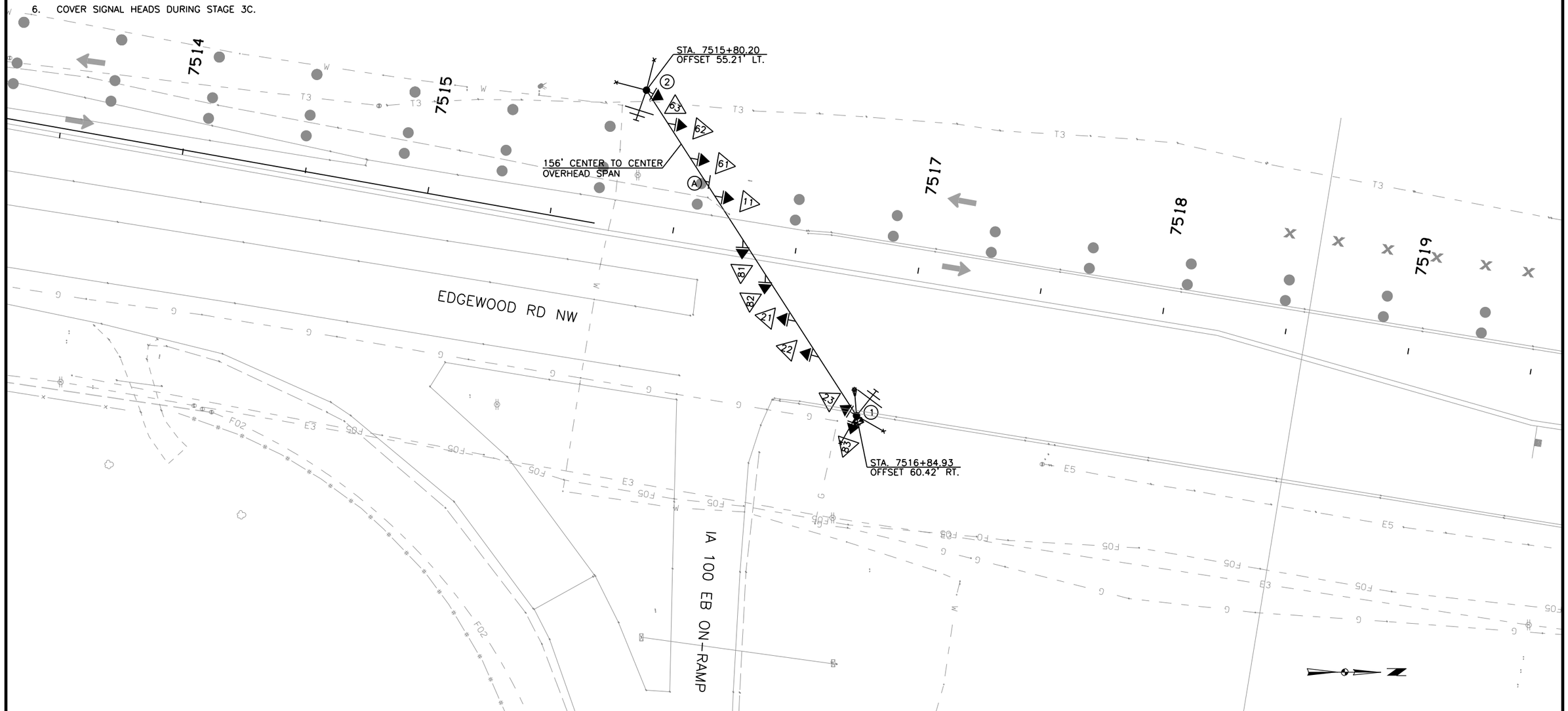
R3-5R 30"X36" (1-REQ'D)

STAGE 3C TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.55

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. POLES 1 AND 2 SHALL BE INSTALLED AND TEMPORARY TRAFFIC SIGNAL SHALL BE OPERATIONAL PRIOR TO STAGE 4 TRAFFIC CONTROL SHIFT.
3. UTILIZE RADAR VEHICLE DETECTION SYSTEM FROM WB OFF-RAMP INSTALLATION AND WHICH IS TO BE USED AS PART OF PERMANENT INSTALLATION. RECONFIGURE SYSTEM AS NECESSARY.
4. TEMPORARY CONTROLLER CABINET SHALL BE INSTALLED ON SIDE OF POLE #1.
5. COORDINATE WITH POWER SERVICE PROVIDER FOR POWER CONNECTION.
6. COVER SIGNAL HEADS DURING STAGE 3C.



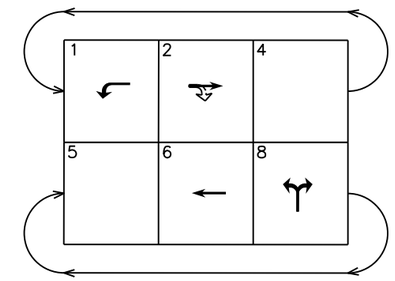
STAGE 3C TEMPORARY TRAFFIC SIGNAL
IA 100 EB ON-RAMP AT EDGEWOOD RD.

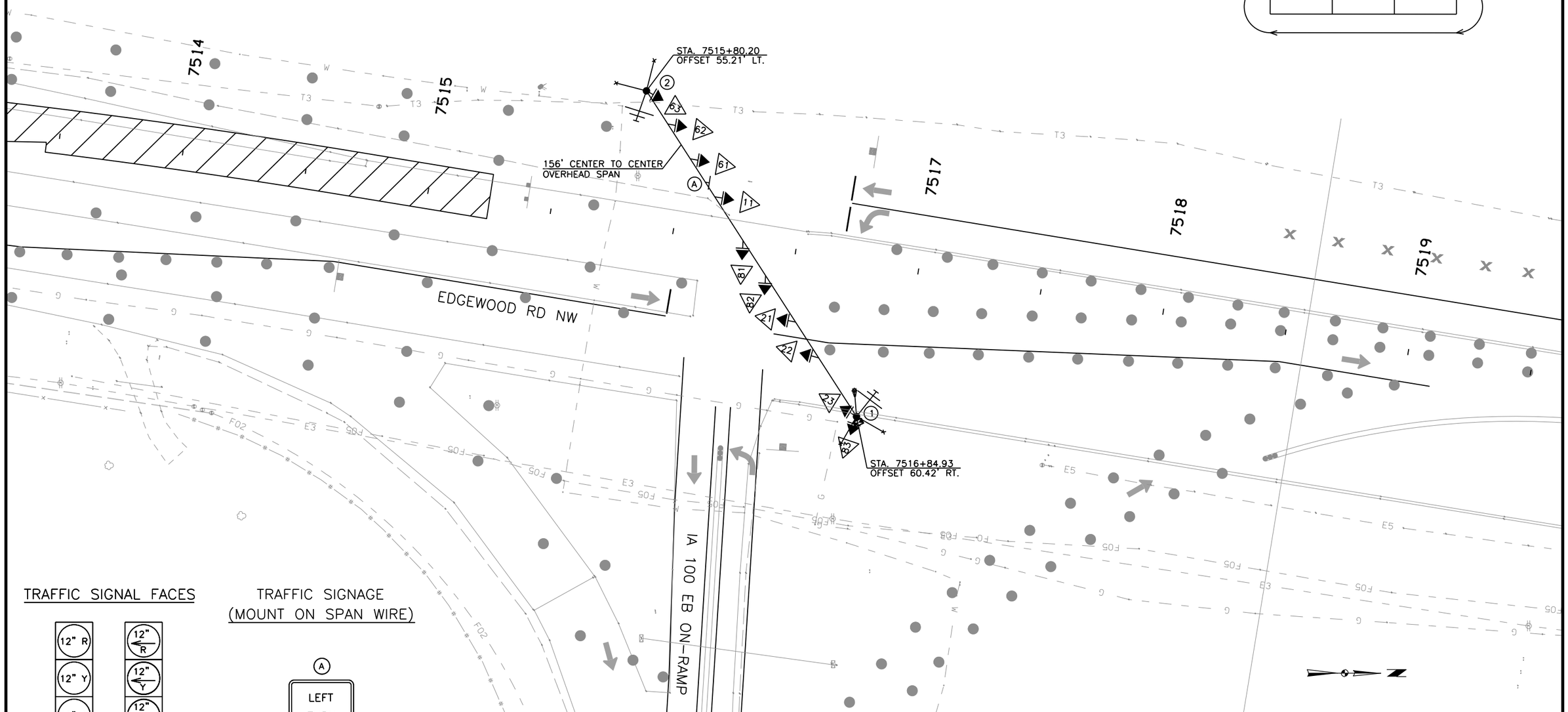
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.56

NOTES

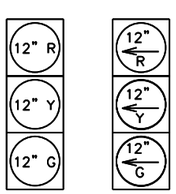
1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY SIGNAL SYSTEM.
3. CONTRACTOR ASSURE THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE IS CONFIGURED CORRECTLY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. REMOVE TEMPORARY SIGNAL SYSTEM AT EB ON-RAMP TERMINAL INTERSECTION FOLLOWING STAGE 4.
5. INSTALL PERMANENT TRAFFIC SIGNAL SYSTEM.

PHASE SEQUENCE CHART





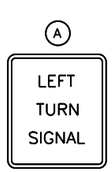
TRAFFIC SIGNAL FACES



NO. 21,22,23, 61,62,63, 81,82,83 (9-REQ'D)

NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



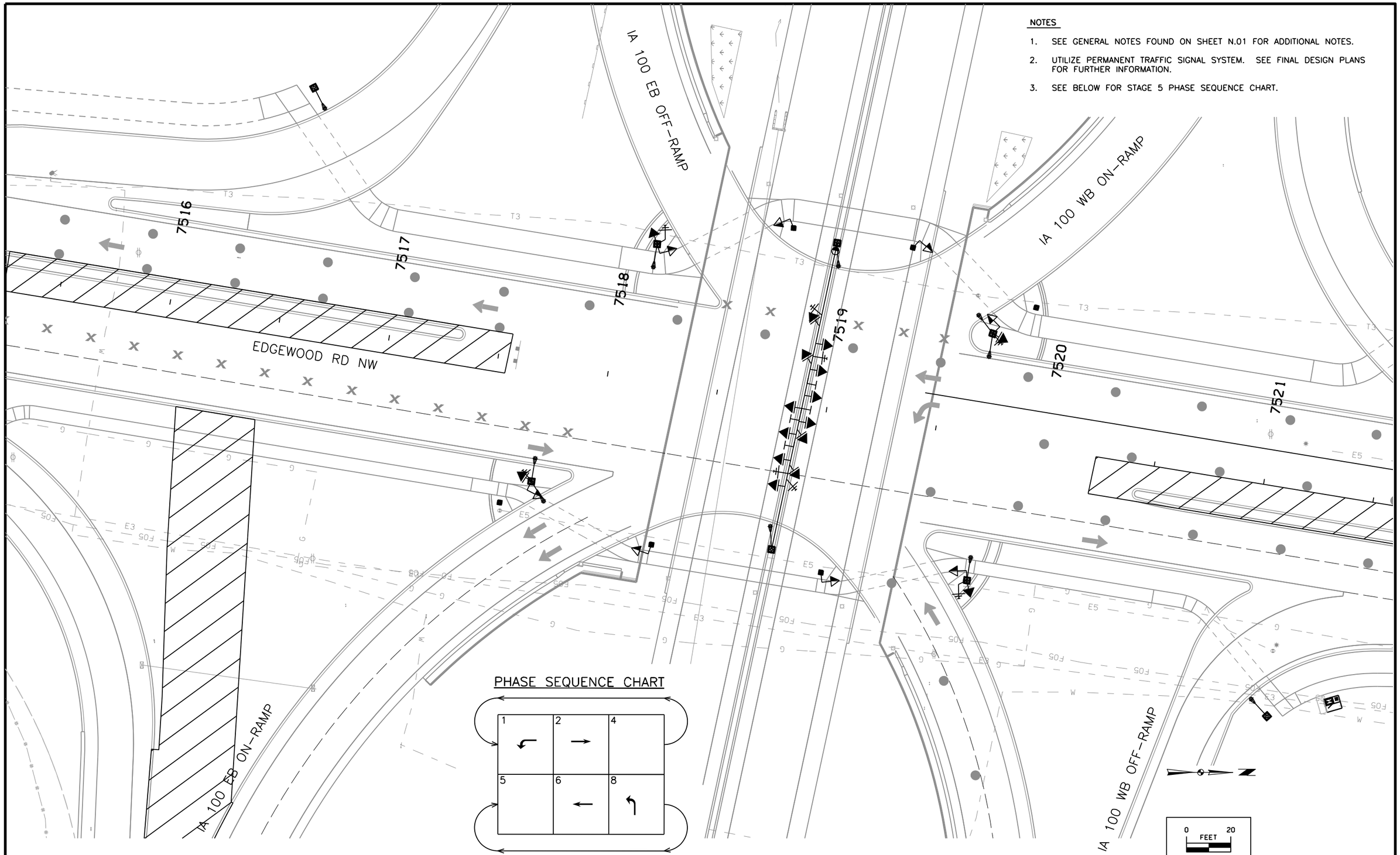
R10-10L
24"X30"
(1-REQ'D)

STAGE 4 TEMPORARY TRAFFIC SIGNAL
IA 100 EB ON-RAMP AT EDGEWOOD RD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.57

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE PERMANENT TRAFFIC SIGNAL SYSTEM. SEE FINAL DESIGN PLANS FOR FURTHER INFORMATION.
3. SEE BELOW FOR STAGE 5 PHASE SEQUENCE CHART.



STAGE 5 TEMPORARY TRAFFIC SIGNAL
IA 100 WB OFF-RAMP AT EDGEWOOD RD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.58

10:08:01 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE EXISTING TRAFFIC SIGNAL. SHIFT SB SIGNAL HEAD.

TRAFFIC SIGNAL FACES

UTILIZE EXISTING SIGNAL HEADS

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

PHASE SEQUENCE CHART

UTILIZE EXISTING PHASING

STAGE 1A TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.59

10:08:03 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE EXISTING TRAFFIC SIGNAL. SHIFT SB SIGNAL HEADS.

TRAFFIC SIGNAL FACES

UTILIZE EXISTING SIGNAL HEADS

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

PHASE SEQUENCE CHART

UTILIZE EXISTING PHASING

STAGE 1B TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.60

10:08:06 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE EXISTING TRAFFIC SIGNAL. SHIFT SB SIGNAL HEAD.

TRAFFIC SIGNAL FACES

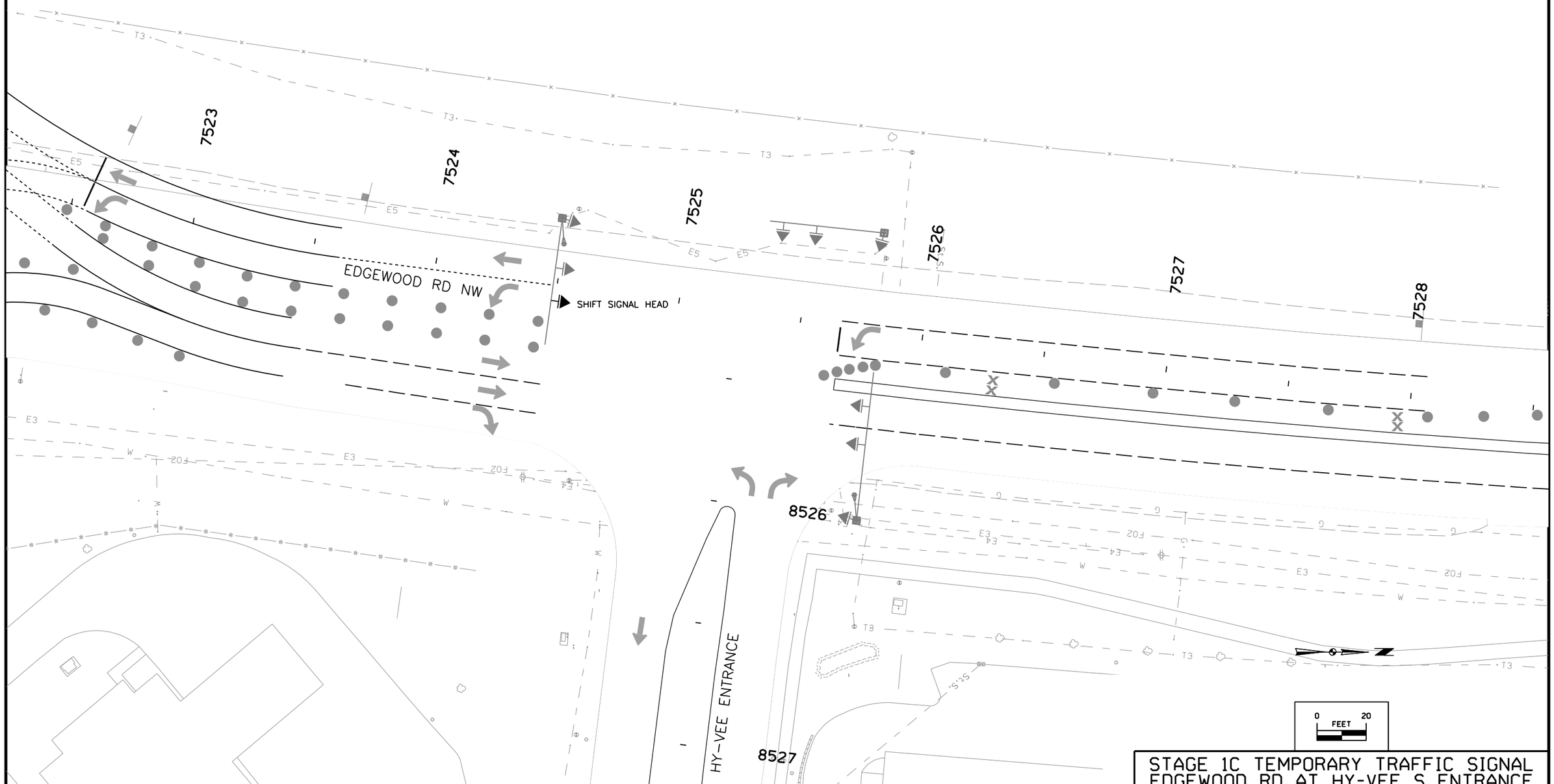
UTILIZE EXISTING SIGNAL HEADS

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

PHASE SEQUENCE CHART

UTILIZE EXISTING PHASING



STAGE 1C TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.61

10:08:08 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE EXISTING TRAFFIC SIGNAL.
3. POLES 1 THROUGH 4 SHALL BE INSTALLED AND TEMPORARY TRAFFIC SIGNAL SHALL BE OPERATIONAL PRIOR TO STAGE 2A TRAFFIC CONTROL SHIFT.
4. UTILIZE RADAR VEHICLE DETECTION SYSTEM WHICH IS TO BE USED AS PART OF PERMANENT INSTALLATION. RECONFIGURE SYSTEM AS NECESSARY.
5. TEMPORARY CONTROLLER CABINET SHALL BE INSTALLED ON SIDE OF POLE #4.
6. COORDINATE WITH POWER SERVICE PROVIDER FOR POWER CONNECTION.
7. COVER ALL TEMPORARY SIGNAL HEADS.

TRAFFIC SIGNAL FACES

UTILIZE EXISTING SIGNAL HEADS

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

PHASE SEQUENCE CHART

UTILIZE EXISTING PHASING

STAGE 1D TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.62

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. REMOVE EXISTING TRAFFIC SIGNAL SYSTEM (POLES,CABINET,ETC.). SEE SHEET N.5 FOR EXISTING TRAFFIC SIGNAL REMOVAL PLAN.
3. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
4. COVER SIGNAL HEADS 63 AND 64 AS PART OF THIS TRAFFIC CONTROL STAGE.

TRAFFIC SIGNAL FACES

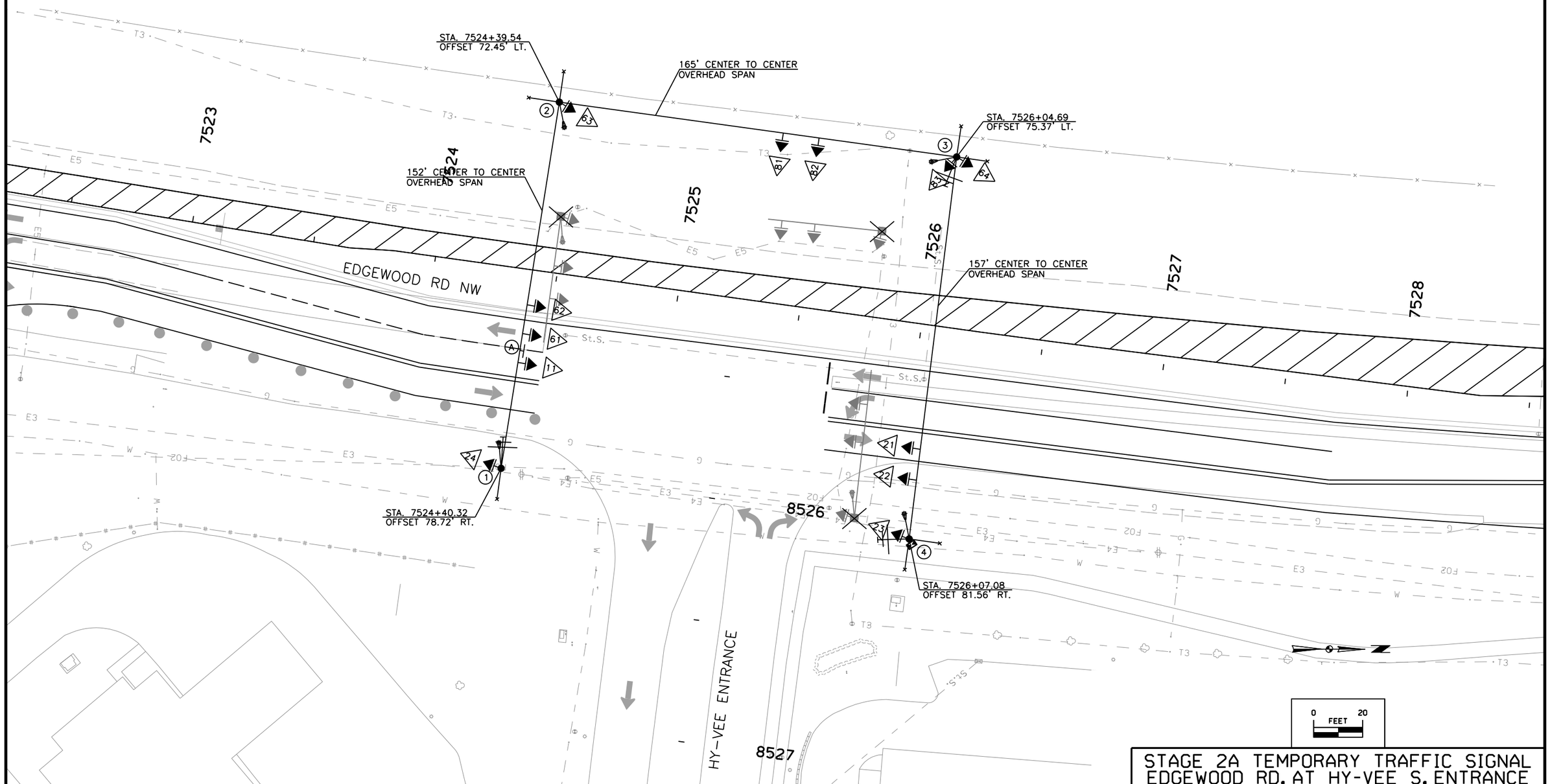
UTILIZE EXISTING SIGNAL HEADS

TRAFFIC SIGNAGE

UTILIZE EXISTING SIGNS

PHASE SEQUENCE CHART

UTILIZE EXISTING PHASING



STAGE 2A TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

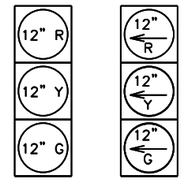
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.63

10:08:13 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 63 AND 64 AS PART OF THIS TRAFFIC CONTROL STAGE.

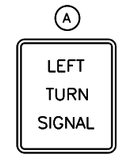
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,61,62,63, 64,81,82,83 (11-REQ'D)

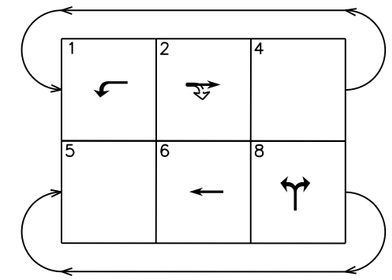
NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L 24"X30" (1-REQ'D)

PHASE SEQUENCE CHART



STA. 7524+39.54
OFFSET 72.45' LT.

165' CENTER TO CENTER
OVERHEAD SPAN

STA. 7526+04.69
OFFSET 75.37' LT.

152' CENTER TO CENTER
OVERHEAD SPAN

157' CENTER TO CENTER
OVERHEAD SPAN

STA. 7524+40.32
OFFSET 78.72' RT.

STA. 7526+07.08
OFFSET 81.56' RT.

7523 7524 7525 7526 7527 7528 8526 8527

EDGEWOOD RD NW

HY-VEE ENTRANCE

0 20 FEET

STAGE 2B TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

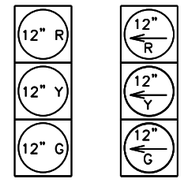
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.64

10:08:15 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 63 AND 64 AS PART OF THIS TRAFFIC CONTROL STAGE.

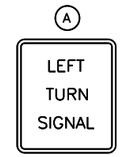
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,61,62,63, 64,81,82,83 (11-REQ'D)

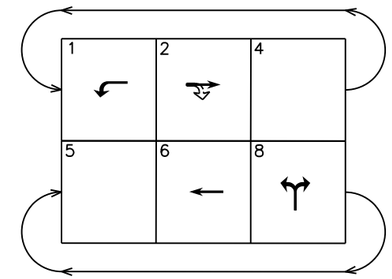
NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



STA. 7524+39.54
OFFSET 72.45' LT.

165' CENTER TO CENTER
OVERHEAD SPAN

STA. 7526+04.69
OFFSET 75.37' LT.

152' CENTER TO CENTER
OVERHEAD SPAN

157' CENTER TO CENTER
OVERHEAD SPAN

STA. 7524+40.32
OFFSET 78.72' RT.

STA. 7526+07.08
OFFSET 81.56' RT.

7523 7524 7525 7526 7527 7528 8526 8527

EDGEWOOD RD NW

HY-VEE ENTRANCE

0 20 FEET

STAGE 2C TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

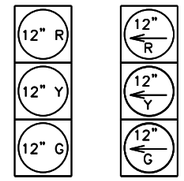
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.65

10:08:17 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 23 AND 24 AS PART OF THIS TRAFFIC CONTROL STAGE.

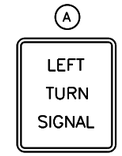
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,61,62,63, 64,81,82,83 (11-REQ'D)

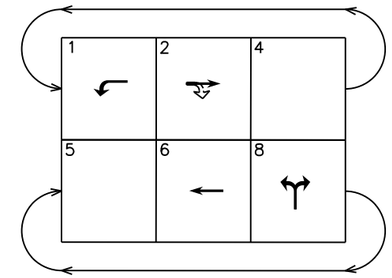
NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



STA. 7524+39.54
OFFSET 72.45' LT.

165' CENTER TO CENTER
OVERHEAD SPAN

STA. 7526+04.69
OFFSET 75.37' LT.

152' CENTER TO CENTER
OVERHEAD SPAN

157' CENTER TO CENTER
OVERHEAD SPAN

STA. 7524+40.32
OFFSET 78.72' RT.

STA. 7526+07.08
OFFSET 81.56' RT.

EDGEWOOD RD NW

HY-VEE ENTRANCE

7523 7524 7525 7526 7527 7528 8526 8527

0 20 FEET

STAGE 3A TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

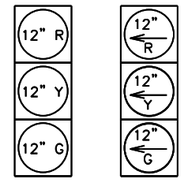
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.66

10:08:19 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE TEMPORARY TRAFFIC SIGNAL SYSTEM.
3. CONTRACTOR SHALL ADJUST THE RADAR VEHICLE DETECTION ZONES, SIGNAL HEADS AND TRAFFIC SIGNAGE AS NECESSARY PRIOR TO OPENING TRAFFIC CONTROL SET-UP TO TRAFFIC.
4. COVER SIGNAL HEADS 23 AND 24 AS PART OF THIS TRAFFIC CONTROL STAGE.

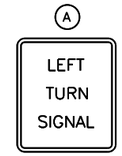
TRAFFIC SIGNAL FACES



NO. 21,22,23, 24,61,62,63, 64,81,82,83 (11-REQ'D)

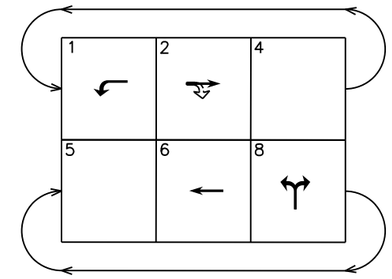
NO. 11 (1-REQ'D)

TRAFFIC SIGNAGE (MOUNT ON SPAN WIRE)



R10-10L
24"X30"
(1-REQ'D)

PHASE SEQUENCE CHART



STA. 7524+39.54
OFFSET 72.45' LT.

165' CENTER TO CENTER
OVERHEAD SPAN

STA. 7526+04.69
OFFSET 75.37' LT.

7523
7524
7525
7526
7527
7528

EDGEWOOD RD NW

152' CENTER TO CENTER
OVERHEAD SPAN

157' CENTER TO CENTER
OVERHEAD SPAN

STA. 7524+40.32
OFFSET 78.72' RT.

8526

STA. 7526+07.08
OFFSET 81.56' RT.

HY-VEE ENTRANCE

8527

0 20
FEET

STAGE 3B TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.67

10:08:21 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. DURING THIS STAGE – TRAFFIC IS UNDER UNSIGNALIZED OPERATION. FREEFLOW NB MOVEMENTS. FREEFLOW SB MOVEMENTS. WB UNDER STOP CONTROLLED OPERATIONS.
3. REMOVE TEMPORARY TRAFFIC SIGNAL SYSTEM. RELOCATE RADAR VEHICLE DETECTION EQUIPMENT TO PERMANENT TRAFFIC SIGNAL SYSTEM.
4. INSTALL PERMANENT TRAFFIC SIGNAL SYSTEM WHERE POSSIBLE. SEE FINAL DESIGN PLANS FOR FURTHER INFORMATION.

STAGE 3C TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.68

NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. DURING THIS STAGE – TRAFFIC IS UNDER UNSIGNALIZED OPERATION. FREEFLOW NB MOVEMENTS. FREEFLOW SB MOVEMENTS. WB UNDER STOP CONTROLLED OPERATIONS.
3. INSTALL PERMANENT TRAFFIC SIGNAL SYSTEM. SEE FINAL DESIGN PLANS FOR FURTHER INFORMATION.

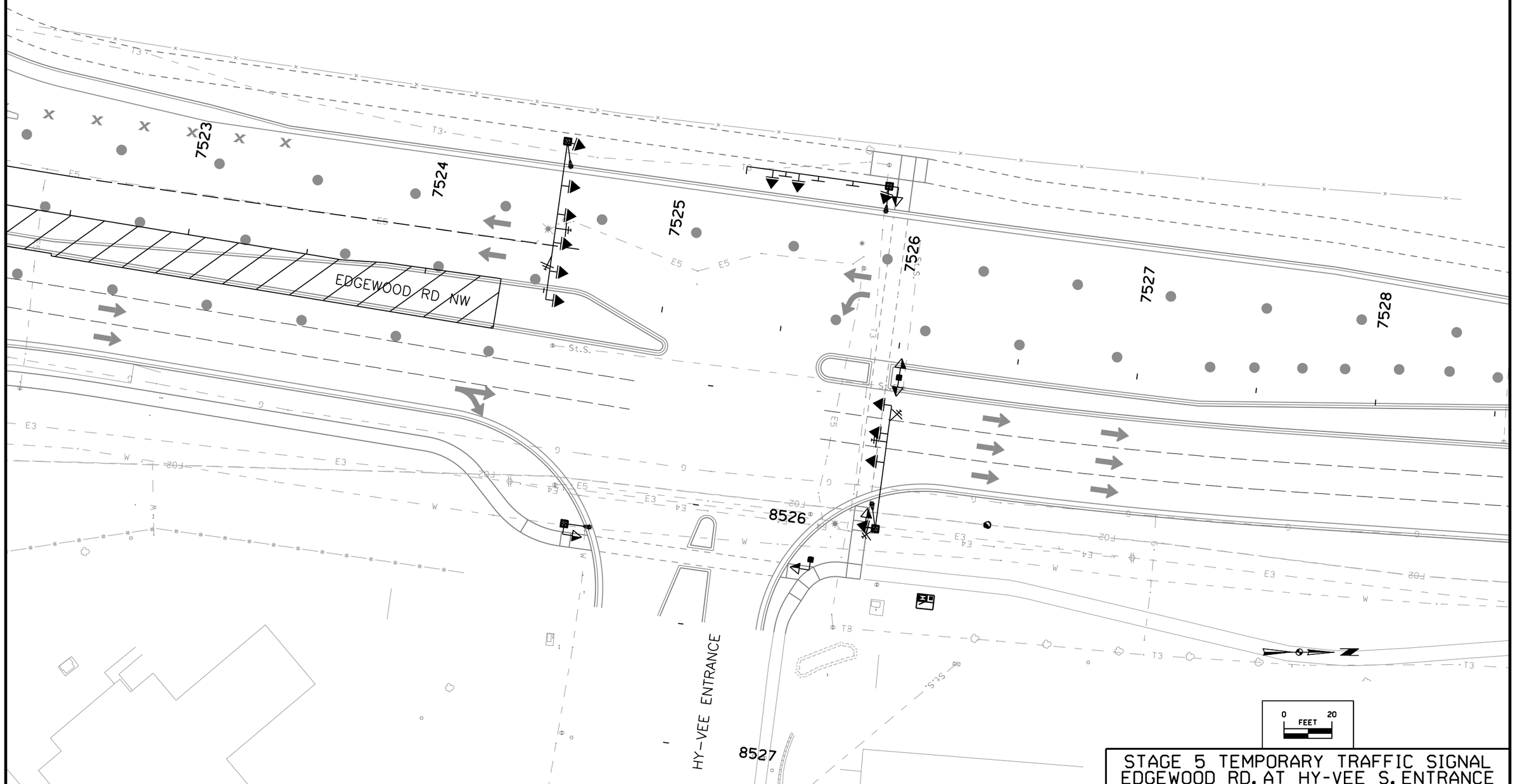
STAGE 4 TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.69

10:08:26 AM 1/3/2014 twiles \\hrgcrnas\data\10100125\CAD\Design\10100125N01_TEMPORARY SIGNAL SHEETS.sht

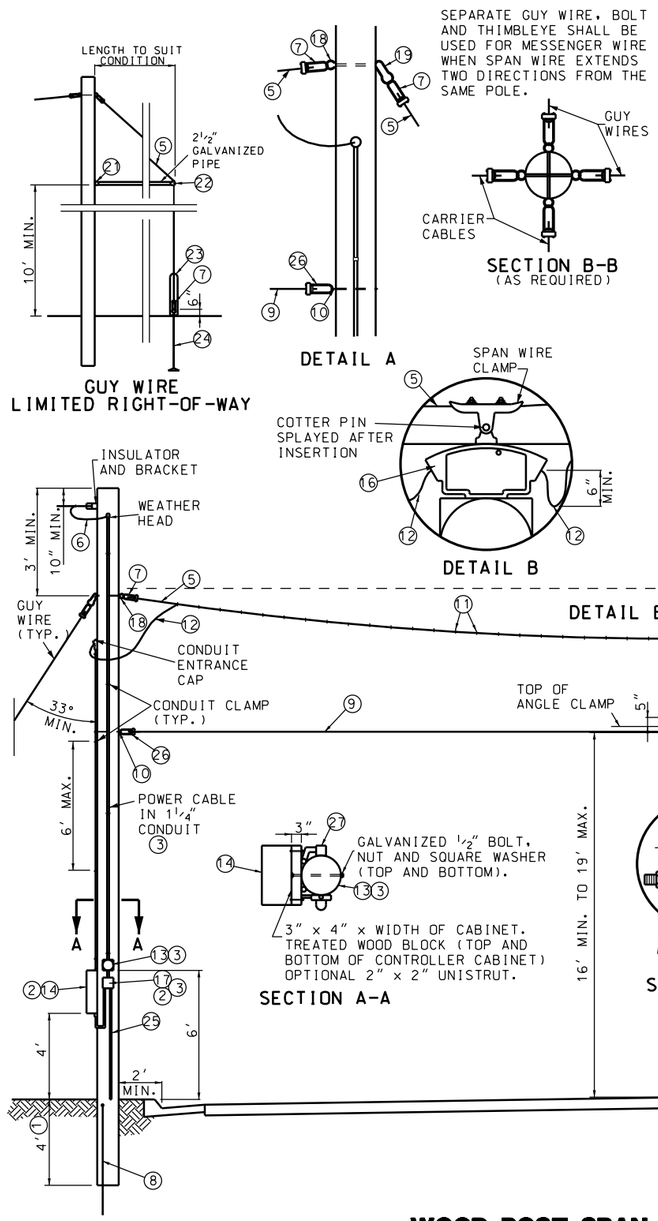
NOTES

1. SEE GENERAL NOTES FOUND ON SHEET N.01 FOR ADDITIONAL NOTES.
2. UTILIZE PERMANENT TRAFFIC SIGNAL SYSTEM. SEE FINAL DESIGN PLANS FOR FURTHER INFORMATION.



STAGE 5 TEMPORARY TRAFFIC SIGNAL
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER N.70



WOOD POST SPAN ASSEMBLY
TEMPORARY TRAFFIC SIGNAL

NOT TO SCALE

(1) INCREASE EMBEDMENT 1' FOR EACH 5' INCREMENT IN POLE LENGTH OVER 20'.

(2) ITEMS ARE INSTALLED AS REQUIRED (SEE PLANS).

(3) ITEMS ARE INSTALLED IF THE POLE IS USED AS A POWER SUPPLY (SEE GENERAL NOTES).

(4) THREE OR MORE ENTERING CONDUITS WILL REQUIRE A PULL BOX OR OTHER APPROVED FITTING.

(5) DOUBLE GALVANIZED 3/8" (MIN.) STEEL MESSENGER WIRE - 7 STRAND HIGH STRENGTH GRADE. DOUBLE GALVANIZED 1/2" STEEL GUY WIRE - 7 STRAND HIGH STRENGTH GRADE.

(6) SERVICE WIRE AND SPLIT-BOLT OR SLEEVE CONNECTION BY UTILITY COMPANY. WIRE SPACING AS REQUIRED BY THE UTILITY COMPANY.

(7) 3/8" AUTOMATIC JAW-TYPE CABLE FITTING WITH SHORT BAIL. 13,860 LBS. MINIMUM HOLDING STRENGTH.

(8) 3/4" X 8' MIN. COPPER GROUND ROD. IF SUBSURFACE CONDITIONS EXIST WHICH PROHIBIT THE PLACEMENT OF THE GROUND ROD IN A VERTICAL POSITION, THE ROD MAY BE DRIVEN AT AN OBLIQUE ANGLE NOT TO EXCEED 45 DEGREES FROM VERTICAL OR BURIED IN A TRENCH AT LEAST 30" DEEP. CONNECTION TO GROUND ROD SHALL BE CADWELDED.

(9) DOUBLE GALVANIZED 1/4" STEEL TETHER WIRE - 7 STRAND HIGH STRENGTH GRADE. INSTALL HORIZONTAL OR BELOW HORIZONTAL.

(10) 1/2" GALVANIZED OVAL EYE BOLT.

(11) NON-CORROSIVE METAL CABLE HANGERS AT 12" CENTERS.

(12) MULTI-CONDUCTOR CABLE (SEE PLANS).

(13) METER SOCKET AND CABINET.

(14) CONTROLLER CABINET. ALL CONDUITS SHALL ENTER THE BOTTOM OF THE CABINET. NO HOLES SHALL BE MADE IN THE TOP, BACK OR SIDES OF THE CABINET.

(15) JUNCTION BOX (NEMA 4).

(16) DISCONNECT HANGER (NOT REQUIRED IF TEMPORARY)

(17) CIRCUIT BREAKER. SEE STANDARD 902.15 FOR DETAILS.

(18) 5/8" GALVANIZED STRAIGHT THIMBLEYE BOLT WITH GALVANIZED NUT AND 2 1/2" GALVANIZED CURVE WASHER.

(19) 5/8" GALVANIZED ANGLE THIMBLEYE.

(20) TETHER WIRE AND CLAMP WITH QUICK RELEASE PROVISIONS. SEE DETAIL FOR MOUNTING TO POLE AND SIGNAL. OPTIONAL ATTACHMENT PERMITTED WITH APPROVAL OF ENGINEER.

(21) 2 1/2" GALVANIZED POST PLATE FASTENED TO POLE WITH ONE 5/8" GALVANIZED MACHINE BOLT & TWO 3/8" x 4" GALVANIZED LAG SCREWS.

(22) 2 1/2" GALVANIZED CONNECTOR END FITTING.

(23) ALL LOCATIONS REQUIRE GUY WIRE PROTECTOR. (7' MIN.)

(24) 3/4" x 8' GALVANIZED THIMBLEYE ANCHOR ROD. (30" MIN. LENGTH IN ROCK).

(25) #6 AWG BARE COPPER WIRE IN 1/2" CONDUIT.

(26) 1/4" AUTOMATIC JAW TYPE CABLE FITTING WITH SHORT BAIL. 5990 LBS. MINIMUM HOLDING STRENGTH.

(27) LIGHTING CIRCUIT BREAKER CABINET (IF LUMINARIES ARE SPECIFIED SEE STANDARD 902.15 FOR DETAILS.

QUANTITY NOTES

DESIGN OF STRUCTURAL SUPPORTS SHALL COMPLY WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS 2001 AND CURRENT INTERIMS.

DETAILS SHOWN ON THIS SHEET ARE FOR A MAXIMUM SPAN LENGTH OF 100' FOR ONE OR TWO SPANS OFF POST, WITH ONE 5-SECTION HEAD SIGNAL, TWO 3-SECTION HEAD SIGNALS AND TWO SIGNS PER SPAN. LONGER SPAN LENGTHS WILL REQUIRE ADDITIONAL STRUCTURAL SUPPORTS SUCH AS LONGER POLES AND AN ADDITIONAL MESSENGER WIRE.

ALL APPURTENANCES TO BE MOUNTED ON POLE SHALL BE FASTENED TO POLE AS RECOMMENDED BY THE MANUFACTURER.

SCHEDULE 40 POLYETHYLENE OR POLYVINYL CHLORIDE CONDUIT AND WEATHER HEAD SHALL BE USED ON UTILITY COMPANY POLES IN LIEU OF RIGID STEEL CONDUIT.

NO DIRECT PAYMENT WILL BE MADE FOR GUYS, CONDUIT AND JUNCTION BOXES ON POLES, HARDWARE, LIGHTING BRACKET ARMS OR ANY OTHER ITEMS FOR WHICH SEPARATE PAYMENT IS NOT PROVIDED.

ALL GUY WIRES SHALL BE GROUNDED.

FINAL POSITIONING OF THE TRAFFIC SIGNAL POLES AND SIGNAL FACES TO BE DETERMINED IN THE FIELD AND ARE SUBJECT TO THE APPROVAL OF THE PROJECT ENGINEER. POSITIONING OF SIGNAL FACES AND LOCATION OF VIDEO DETECTION ZONES SHALL BE ADJUSTED AS NECESSARY FOR STAGING.

ALL WIRING SHALL CONFORM TO THE NATIONAL ELECTRIC CODE AND LOCAL ORDINANCES AND REQUIREMENTS. ALL CABLE FOR THE INTERSECTION SIGNAL CIRCUITS SHALL BE MULTICONDUCTOR CABLE MEETING THE REQUIREMENTS OF I.M.S.A. SPECIFICATION 19.

TEMPORARY SIGNAL DETAILS

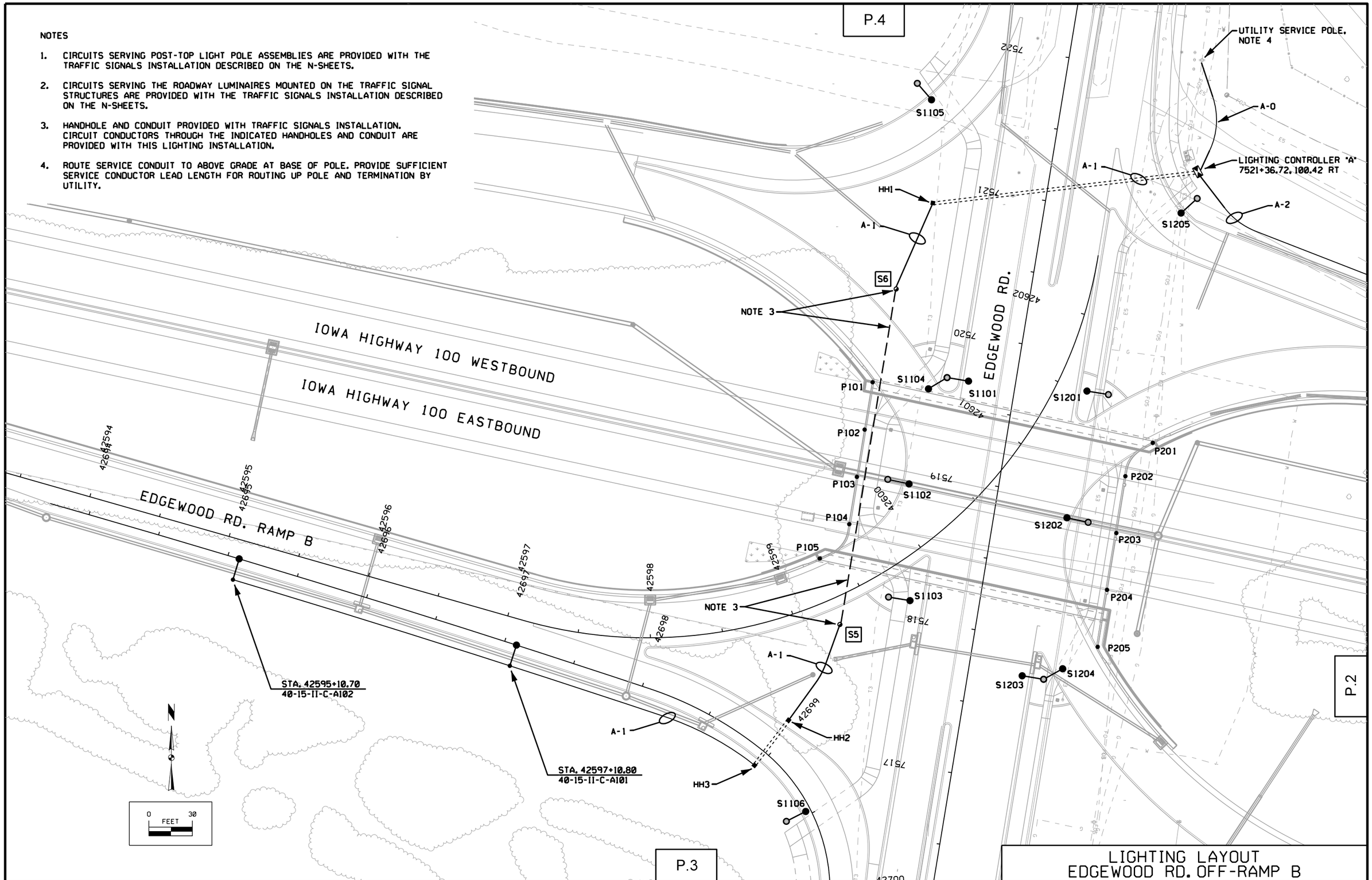
NOTES

1. CIRCUITS SERVING POST-TOP LIGHT POLE ASSEMBLIES ARE PROVIDED WITH THE TRAFFIC SIGNALS INSTALLATION DESCRIBED ON THE N-SHEETS.

2. CIRCUITS SERVING THE ROADWAY LUMINAIRES MOUNTED ON THE TRAFFIC SIGNAL STRUCTURES ARE PROVIDED WITH THE TRAFFIC SIGNALS INSTALLATION DESCRIBED ON THE N-SHEETS.

3. HANDHOLE AND CONDUIT PROVIDED WITH TRAFFIC SIGNALS INSTALLATION. CIRCUIT CONDUCTORS THROUGH THE INDICATED HANDHOLES AND CONDUIT ARE PROVIDED WITH THIS LIGHTING INSTALLATION.

4. ROUTE SERVICE CONDUIT TO ABOVE GRADE AT BASE OF POLE. PROVIDE SUFFICIENT SERVICE CONDUCTOR LEAD LENGTH FOR ROUTING UP POLE AND TERMINATION BY UTILITY.



LIGHTING LAYOUT
EDGEWOOD RD. OFF-RAMP B

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER P.1

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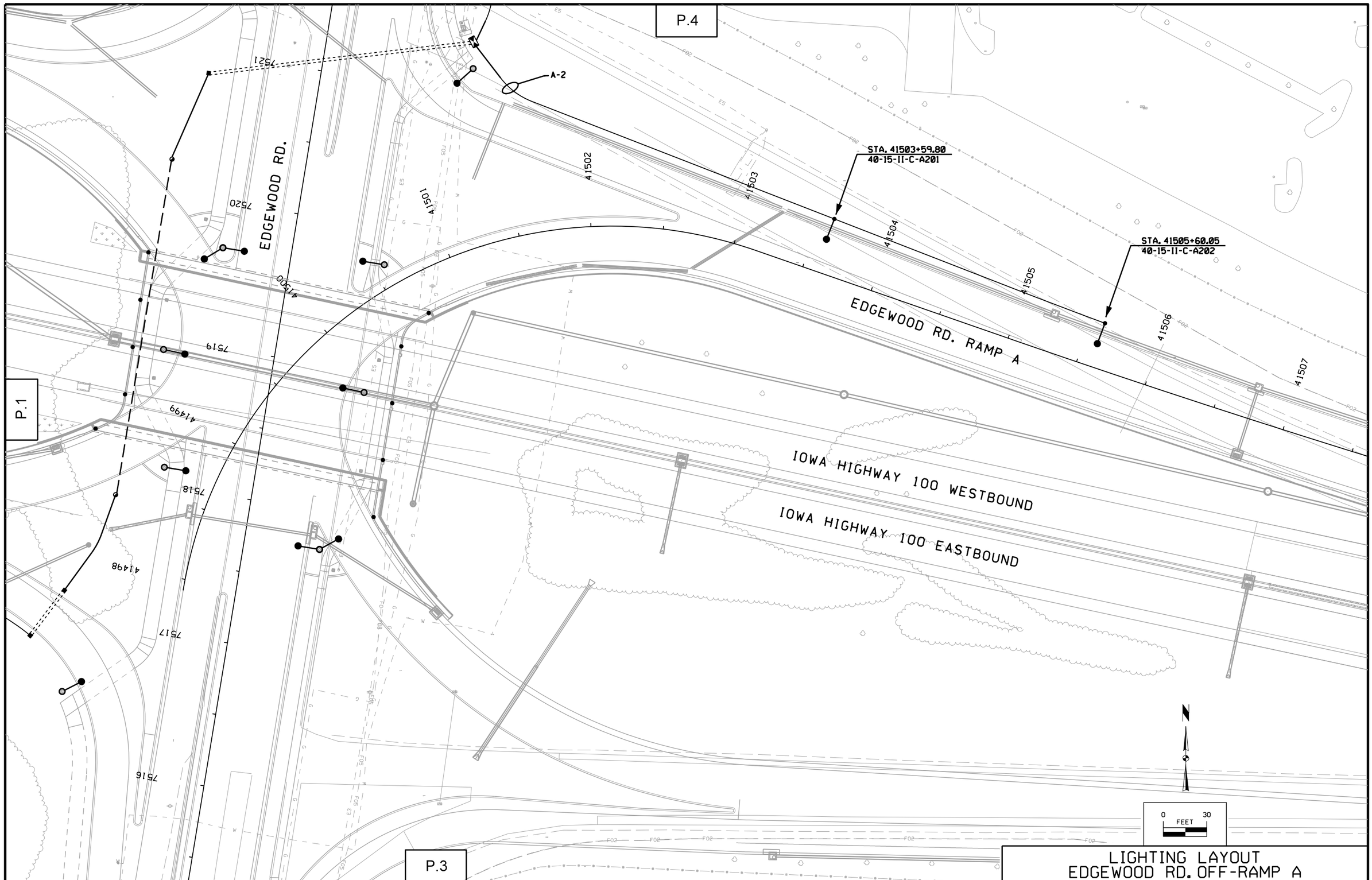

LIGHTING LAYOUT
EDGEWOOD RD. OFF-RAMP A

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER P.2

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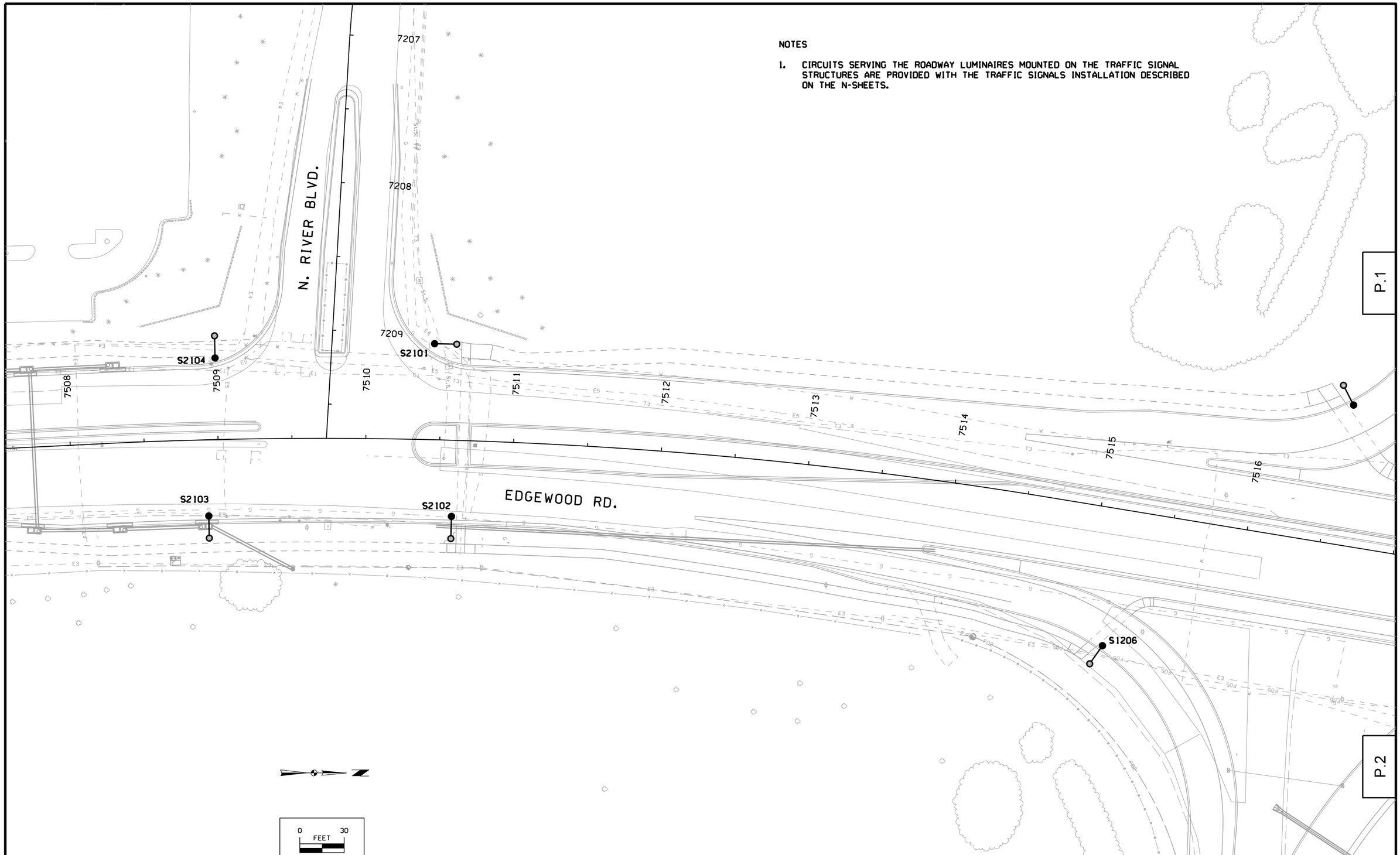
NOTES

1. CIRCUITS SERVING THE ROADWAY LUMINAIRES MOUNTED ON THE TRAFFIC SIGNAL STRUCTURES ARE PROVIDED WITH THE TRAFFIC SIGNALS INSTALLATION DESCRIBED ON THE N-SHEETS.



LIGHTING LAYOUT
EDGEWOOD RD. AT N. RIVER BLVD.

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER P.3

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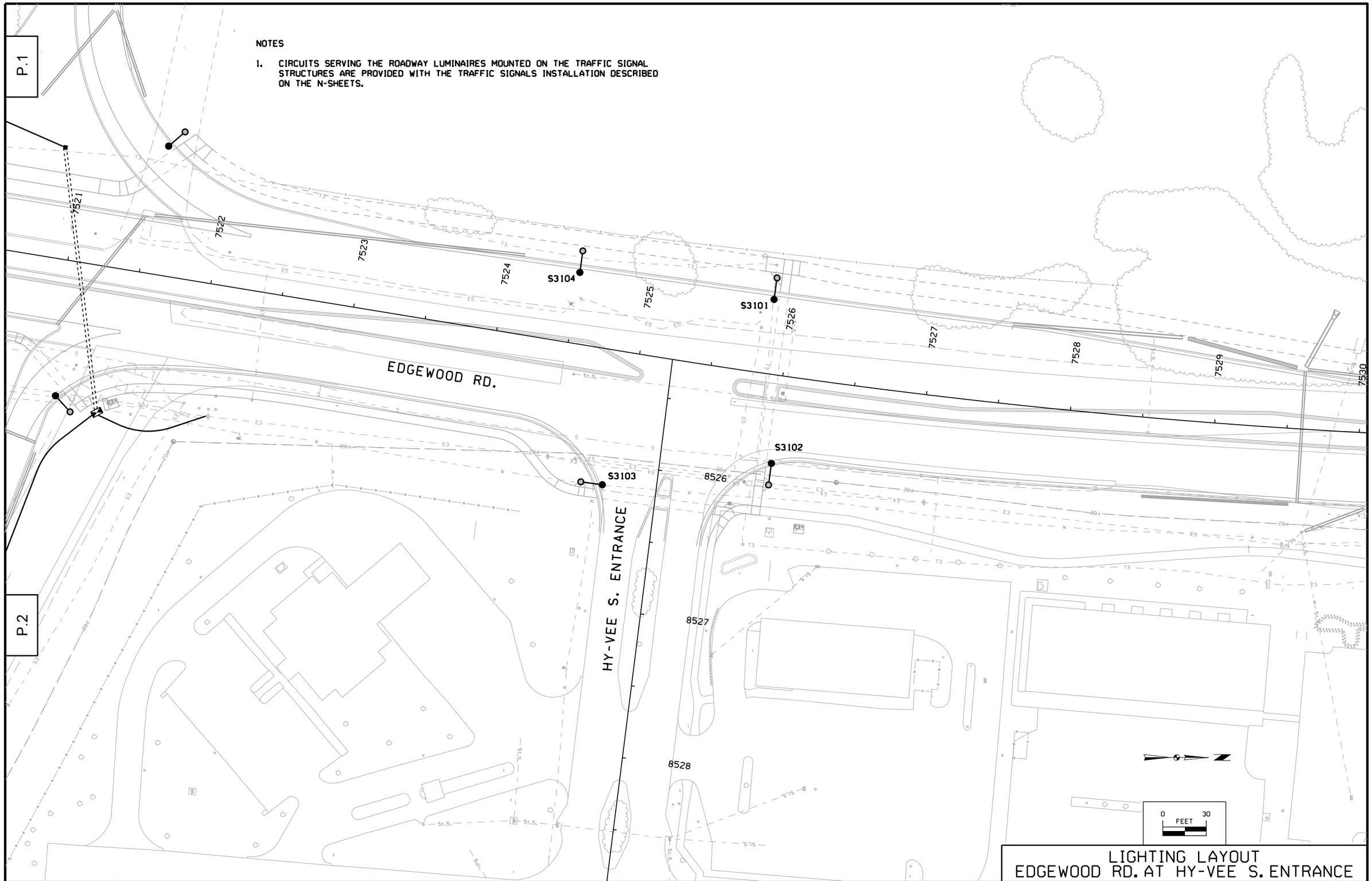
NOTES

1. CIRCUITS SERVING THE ROADWAY LUMINAIRES MOUNTED ON THE TRAFFIC SIGNAL STRUCTURES ARE PROVIDED WITH THE TRAFFIC SIGNALS INSTALLATION DESCRIBED ON THE N-SHEETS.



LIGHTING LAYOUT
EDGEWOOD RD. AT HY-VEE S. ENTRANCE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\HR Green, Inc.\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER P.4

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SPECFICATION - LED ROADWAY LUMINAIRE

Arm-mounted luminaire with solid state LED array light source.
Slip-fit mounting on a 2 in. diameter arm.
Solid state electronic driver capable of operating on 120 to 277 VAC power source.
Wattage: 80 Watt or 135 Watt as indicated in Tab 108-1.
Light Distribution: Medium, Full Cutoff, Type II or Type III lateral as indicated in Tab 108-1.
Provide luminaire with NEMA style photoelectric cell socket with shorting cap.
Luminaire assembly shall be vibration rated per ANSI C.136.31-2010 for mounting on a light pole on a roadway bridge structure.
Luminaire Finish: Natural aluminum, smooth.
Provide this luminaire on roadway light poles and on traffic signal luminaire arms where indicated on the drawings.
Submit Shop Drawings of luminaires to Engineer for review and approval prior to order/fabrication.

Manufacturer (No Substitutions):
Philips RoadView RVS-135W-80LED4K or RVS-80W-48LED4K

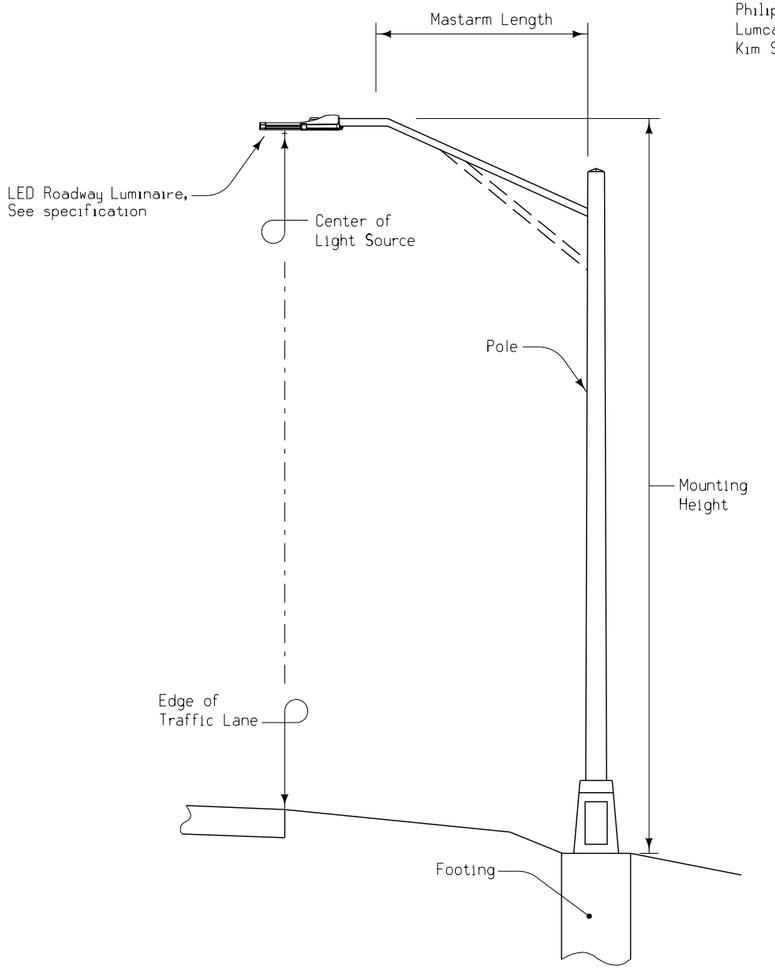
SPECIFICATION - POST-TOP LIGHT POLE ASSEMBLY

Luminaire:
Yoke-mounted post-top luminaire with solid state LED array light source positioned in top of luminaire in a down-light configuration.
Slip-fit mounting over 4 in. diameter pole.
Correlated Color Temperature: 3900K to 4500K.
Color Rendering Index: 66 minimum.
Minimum L-70 rated life of light source: 70,000 hrs.
Solid state electronic driver capable of operating on 120 VAC power source.
Luminaire assembly shall be vibration rated per ANSI C.136.31-2010 for post-top mounting on a roadway bridge rail structure.
Finish: Manufacturer's standard coating process. Finished color shall be a dark bronze substantially matching the traffic signals color which is Valmont Dark Bronze #333. Manufacturer shall be required to submit paint color samples for approval prior to order/fabrication.

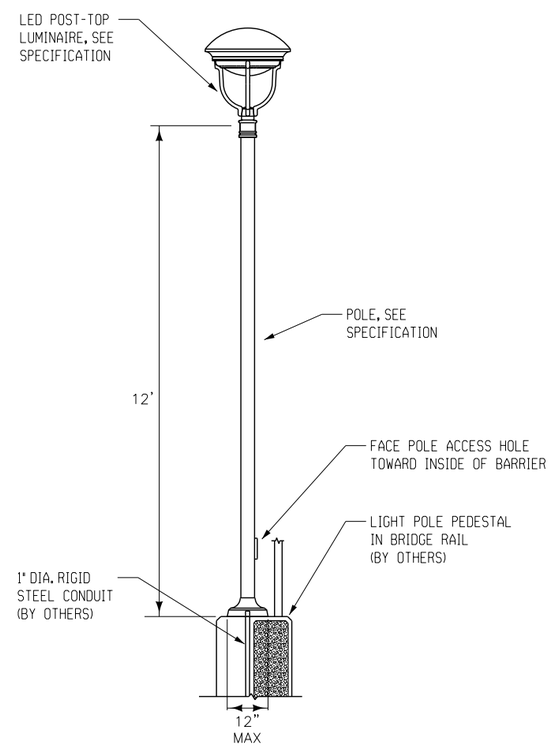
Submit Shop Drawings of luminaires to Engineer for review and approval prior to order/fabrication.

Manufacturers (No Substitutions):
Philips Lumec Optima OT10-35W-32LED4K-R-LE3S
Lumca Concept 60 CP6101-36N-LED-48-L3-AC
Kim Solitaire FM-SRS1-H3-E35-48L4K

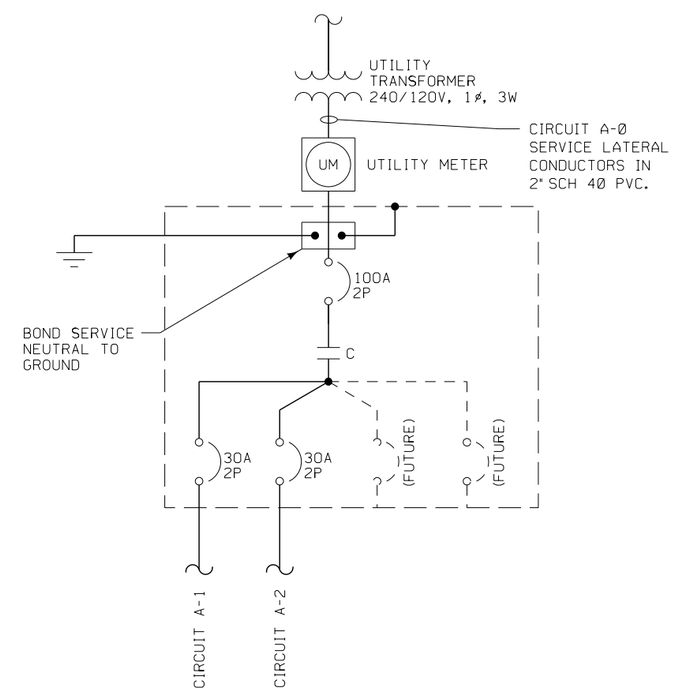
Pole:
4 in. diameter round, straight, aluminum pole with base flange welded to pole.
Pole Height: 12 ft.
Separate round split base cover or one-piece spun cover to completely cover base flange and anchor bolts/nuts.
Maximum outside diameter of base cover - 12 in.
Wind Load Rating: 90 mph with 1.3 gust factor.
Pole shall be vibration rated per ANSI C.136.31-2010 for mounting on a roadway bridge barrier rail structure and supporting the attached luminaire.
Pole Finish: Matching the luminaire finish.
Provide anchor bolt circle template and deliver to roadway bridge contractor in advance of luminaire/pole. Also coordinate size and type of anchor bolts with the bridge construction contractor.
Submit Shop Drawings of poles to Engineer for review and approval prior to order/fabrication.



ROADWAY LIGHT POLE ASSEMBLY



POST-TOP LIGHT POLE ASSEMBLY



LIGHTING CONTROL STATION "A" ONE-LINE DIAGRAM

LIGHTING DETAILS

SURVEY SYMBOLS

- EW Edge of Water
- HDG Hedge Row
- INB Storm Sewer Beehive Intake
- BNK Stream Bank
- ENU Edge Unpaved Entrance & Parking
- SNP Unpaved Shoulder
- FCL Chain Link and Security Fence
- FWD Wood Fence
- GDL Guard Rail (Rail and Cable)
- RR Centerline of Railroad Tracks
- RET Retaining Walls
- RIP Rip-Rap
- TEV Evergeen Tree
- TDC Tree Deciduous
- LUM Luminaire
- PPA Power Pole Co. 1
- SIGN SI Sign
- TA TA Tower Anchor
- SWP Swamp or Marsh
- MIS Miscellaneous
- UB UB Utility Box
- MH Utility Access (Manhole)
- IN Storm Sewer Intake
- TV Satelite TV Dish
- GP GP Guard Post (Less Than 4 Posts)
- FHD Fire Hydrants
- Flg FLG Flag Poles
- TSG Traffic Signal

UTILITY LEGEND

------E3------
------E4------
Alliant Energy
Contact: Jason Hogan
Phone: 608-458-4871

— — San.— — -
— - - W— - -
— - St. S.— - -
City of Cedar Rapids
Contact: Ken Russell/Haley Roe
Phone: 319-286-5956
Fax: 319-286-5911

— —San.2 — -
City of Palo
Contact: Stacy Dix/Tom Watson
Phone: 319-851-2731
Fax: 319-851-2734

— — — T1 — — —
IMON Communication
Contact: Lennox Marner
Phone: 319-261-4640
Fax: 319-261-4636

— — —FO— — —
Iowa Communications Network
Contact: Kent Freise
Phone: 515-725-4725

— — -FO2— — —
Iowa Network Services
Contact: Jeff Klocko
Phone: 515-830-0445

------E1------
------E2------
Linn County REC
Contact: Johnna Nunemaker/Rob Hursh
Phone: 319-377-5754 (Ext: 216)

— — — G— — —
MidAmerican Energy Co.
Contact: Greg Wildebour/Kerri Temple
Phone: 319-298-5162
Fax: 319-298-5164

— — - TV — — —
— — -FO5— — —
Mediacom Broadband, LLC
Contact: John Kuba
Phone: 319-395-9699

— — - TV — — —
— — -FO5— — —
PAETEC
Contact: Steven Gritman
Phone: 319-790-7560

— — - T2 — — —
— — - T3 — — —
Qwest Communication
Contact: Vaughn Doughrty
Phone: 319-399-7487

------E5------
ITC Midwest
Contact: Chad Levi
Phone: 319-297-6765

UNIQUE SYMBOLS FOR THIS PROJECT

- BORING
- GRANULAR BLANKET
- LIMITS OF OVER EXCAVATION
- LIMITS OF UNSUITABLE WASTE
- LIMITS OF OVER EXCAVATION FOR MSE WALL DESIGN REQUIREMENTS

PLAN VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Purple (Halo)	(15)	Backslope Drains
Blue	(1)	Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
SHADING	**Design Color No.**	
Brown, Light	(236)	Core Out

PROFILE VIEW COLOR LEGEND OF SOILS SHEETS

LINEWORK	Design Color No.	
Blue	(1)	Proposed Alignment, Stationing, and Alignment Annotation
Green	(2)	Existing Ground Line Profile
Green, Med	(227)	Class 10 Topsoil
Green, M.Light	(226)	Unsuitable A Topsoil
Green, Light	(225)	Unsuitable B Topsoil
Green, V.Light	(224)	Unsuitable C Topsoil
Orange	(6)	Loam
Brown, Dark	(238)	Class 10
Brown, Med	(237)	Sand
Red	(3)	Unsuitable A
Pink, Dark	(13)	Unsuitable B
Pink	(11)	Unsuitable C
Red	(3)	Shale
Red	(3)	Waste
Gray, Light	(48)	Broken and Weathered Rock
Gray, Med	(80)	Rock
Gray, V.Dark	(128)	Boulders

PATTERN AND SYMBOL LEGEND OF SOILS SHEETS

Soils Book No._____
Date(s) Drilled_____

- $-H_2O-$ Water
- DRY Dry
- S Sample
- Plugged
- M Moisture
- Shelby
- Blow Count
- Dens. Core
- Treatment
- Sand Blanket
- Soil Remediation Area
- Select Soil
- Select Sand
- Shale
- Broken and Weathered Rock
- Rock
- Sandstone
- Unsuitable A Topsoil
- Unsuitable B Topsoil
- Unsuitable C Topsoil
- Unsuitable A
- Unsuitable B
- Unsuitable C
- Sandy Soil
- Boulders

Reference Point
Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Clearing & Grubbing Area
- Pavement Removal

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- A/C Access Control

SOILS LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES Q & R)

MONROE TWP.
T-84N R-7W
SEC.6

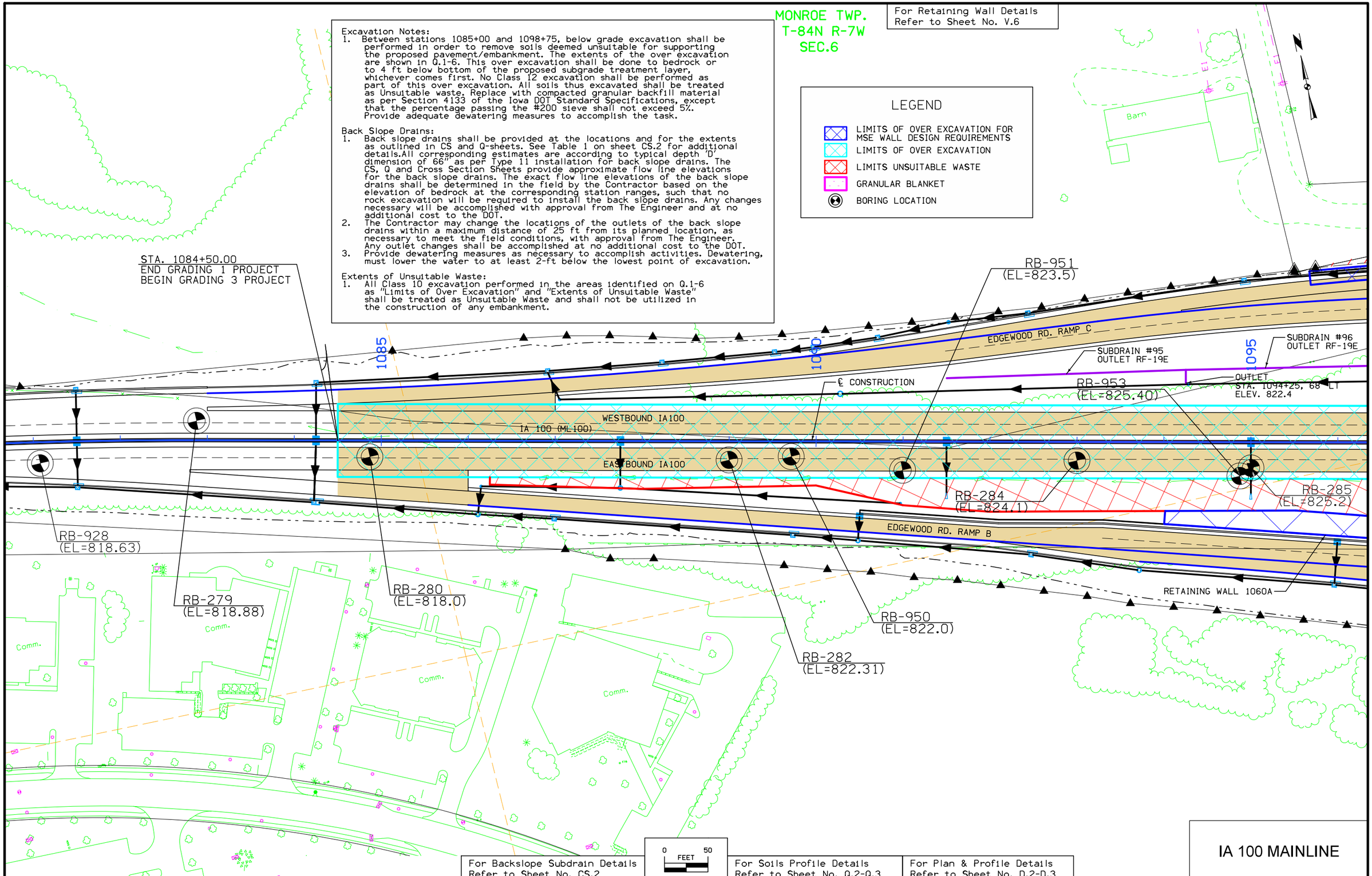
For Retaining Wall Details
Refer to Sheet No. V.6

Excavation Notes:
1. Between stations 1085+00 and 1098+75, below grade excavation shall be performed in order to remove soils deemed unsuitable for supporting the proposed pavement/embankment. The extents of the over excavation are shown in Q.1-6. This over excavation shall be done to bedrock or to 4 ft below bottom of the proposed subgrade treatment layer, whichever comes first. No Class 12 excavation shall be performed as part of this over excavation. All soils thus excavated shall be treated as Unsuitable waste. Replace with compacted granular backfill material as per Section 4133 of the Iowa DOT Standard Specifications, except that the percentage passing the #200 sieve shall not exceed 5%. Provide adequate dewatering measures to accomplish the task.

Back Slope Drains:
1. Back slope drains shall be provided at the locations and for the extents as outlined in CS and Q-sheets. See Table 1 on sheet CS.2 for additional details.All corresponding estimates are according to typical depth 'D' dimension of 66" as per Type 11 installation for back slope drains. The CS, Q and Cross Section Sheets provide approximate flow line elevations for the back slope drains. The exact flow line elevations of the back slope drains shall be determined in the field by the Contractor based on the elevation of bedrock at the corresponding station ranges, such that no rock excavation will be required to install the back slope drains. Any changes necessary will be accomplished with approval from The Engineer and at no additional cost to the DOT.
2. The Contractor may change the locations of the outlets of the back slope drains within a maximum distance of 25 ft from its planned location, as necessary to meet the field conditions, with approval from The Engineer. Any outlet changes shall be accomplished at no additional cost to the DOT.
3. Provide dewatering measures as necessary to accomplish activities. Dewatering, must lower the water to at least 2-ft below the lowest point of excavation.

Extents of Unsuitable Waste:
1. All Class 10 excavation performed in the areas identified on Q.1-6 as "Limits of Over Excavation" and "Extents of Unsuitable Waste" shall be treated as Unsuitable Waste and shall not be utilized in the construction of any embankment.

LEGEND
- LIMITS OF OVER EXCAVATION FOR MSE WALL DESIGN REQUIREMENTS
- LIMITS OF OVER EXCAVATION
- LIMITS UNSUITABLE WASTE
- GRANULAR BLANKET
- BORING LOCATION



For Backslope Subdrain Details
Refer to Sheet No. CS.2

For Soils Profile Details
Refer to Sheet No. Q.2-Q.3

For Plan & Profile Details
Refer to Sheet No. D.2-D.3

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER Q.1

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MONROE TWP.
T-84N R-7W
SEC.6

For Retaining Wall Details
Refer to Sheet No. V.6

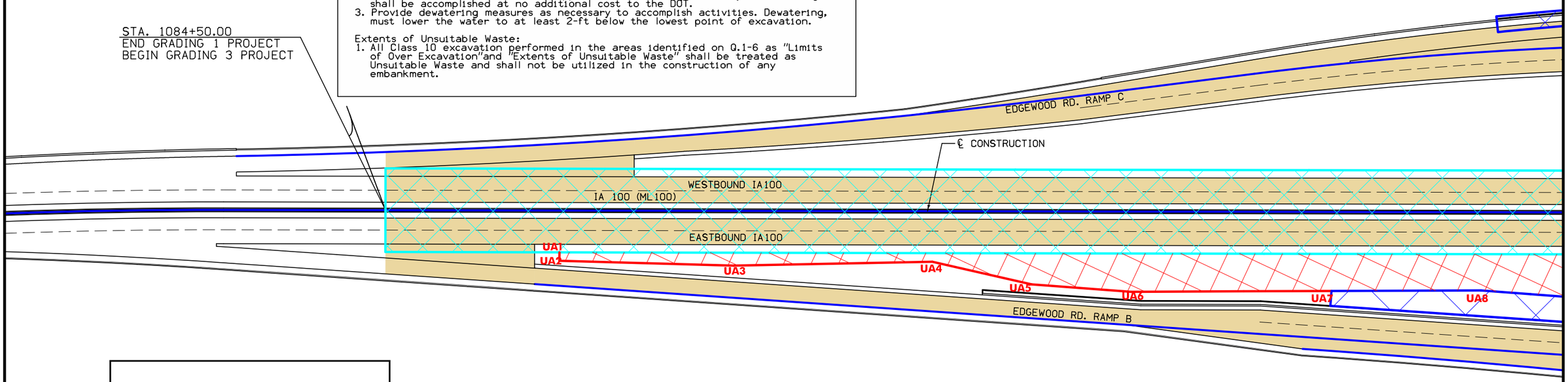
Excavation Notes:
1. Between stations 1085+00 and 1098+75, over excavation below proposed grade shall be performed in order to remove soils deemed unsuitable for supporting the proposed pavement/embankment. The extents of the over excavation are shown in Q.1-6. This over excavation shall be done to bedrock or to 4 ft below bottom of the proposed subgrade treatment layer, whichever comes first. No Class 12 excavation shall be performed as part of this over excavation. All soils thus excavated shall be treated as Unsuitable waste. Replace with compacted granular backfill material as per Section 4133 of the Iowa DOT Standard Specifications, except that the percentage passing the #200 sieve shall not exceed 5%. Provide adequate dewatering measures to accomplish the task.

Back Slope Drains:
1. Back slope drains shall be provided at the locations and for the extents as outlined in CS, and Q. sheets. All corresponding estimates are according to typical depth 'D' dimension of 66" as per Type 11 installation for back slope drains. The CS, Q and Cross Section Sheets provide approximate flow line elevations for the back slope drains. The exact flow line elevations of the back slope drains shall be determined in the field by the Contractor based on the actual elevation of bedrock at the corresponding station ranges, such that any rock excavation that may be required to install the back slope drains is minimized. The contractor shall ensure that all backslope drains will maintain positive drainage to carry the water away from the slopes and to the outlets. Any changes necessary will be accomplished with approval from The Engineer and at no additional cost to the DOT.
2. The Contractor may change the locations of the outlets of the back slope drains within a maximum distance of 25 ft from its planned location, as necessary to meet the field conditions, with approval from The Engineer. Any outlet changes shall be accomplished at no additional cost to the DOT.
3. Provide dewatering measures as necessary to accomplish activities. Dewatering, must lower the water to at least 2-ft below the lowest point of excavation.

Extents of Unsuitable Waste:
1. All Class 10 excavation performed in the areas identified on Q.1-6 as "Limits of Over Excavation" and "Extents of Unsuitable Waste" shall be treated as Unsuitable Waste and shall not be utilized in the construction of any embankment.

LEGEND

- LIMITS OF OVER EXCAVATION FOR MSE WALL DESIGN REQUIREMENTS
- LIMITS OF OVER EXCAVATION
- LIMITS UNSUITABLE WASTE
- GRANULAR BLANKET
- BORING LOCATION



IMPROVEMENT AREAS COORDINATES

POINT	STATION	OFFSET	SIDE
UA1	1086+25	42.0	RT
UA2	1086+25	50.5	RT
UA3	1088+00	55.0	RT
UA4	1090+00	50.7	RT
UA5	1091+00	73.3	RT
UA6	1092+00	80.5	RT
UA7	1094+01	79.3	RT
UA8	1095+52	78.4	RT
UA9	1097+26	90.9	RT
UA10	1097+46	90.4	RT
UA11	1098+71	73.6	RT
UA12	1098+75	42.0	RT

THIS SHEET SHOWN FOR CLARITY,
AND IS FOR INFORMATION ONLY

For Plan & Profile Details
Refer to Sheet No. D.1-D.2

For Backslope Subdrain Details
Refer to Sheet No. CS.2

0 50
FEET

For Soils Profile Details
Refer to Sheet No. Q.2-Q.3

For Plan & Profile Details
Refer to Sheet No. D.2-D.3

IA 100 MAINLINE
OVER EXCAVATION

MONROE TWP.
T-84N R-7W
SEC.6

For Retaining Wall Details
Refer to Sheet No. V.6

Excavation Notes:
1. Between stations 1085+00 and 1098+75, over excavation below proposed grade shall be performed in order to remove soils deemed unsuitable for supporting the proposed pavement/embankment. The extents of the over excavation are shown in Q.1-6. This over excavation shall be done to bedrock or to 4 ft below bottom of the proposed subgrade treatment layer, whichever comes first. No Class 12 excavation shall be performed as part of this over excavation. All soils thus excavated shall be treated as Unsuitable waste. Replace with compacted granular backfill material as per Section 4133 of the Iowa DOT Standard Specifications, except that the percentage passing the #200 sieve shall not exceed 5%. Provide adequate dewatering measures to accomplish the task.

Back Slope Drains:
1. Back slope drains shall be provided at the locations and for the extents as outlined in CS, and Q. sheets. All corresponding estimates are according to typical depth 'D' dimension of 66" as per Type 11 installation for back slope drains. The CS, Q and Cross Section Sheets provide approximate flow line elevations for the back slope drains. The exact flow line elevations of the back slope drains shall be determined in the field by the Contractor based on the actual elevation of bedrock at the corresponding station ranges, such that any rock excavation that may be required to install the back slope drains is minimized. The contractor shall ensure that all backslope drains will maintain positive drainage to carry the water away from the slopes and to the outlets. Any changes necessary will be accomplished with approval from The Engineer and at no additional cost to the DOT.
2. The Contractor may change the locations of the outlets of the back slope drains within a maximum distance of 25 ft from its planned location, as necessary to meet the field conditions, with approval from The Engineer. Any outlet changes shall be accomplished at no additional cost to the DOT.
3. Provide dewatering measures as necessary to accomplish activities. Dewatering, must lower the water to at least 2-ft below the lowest point of excavation.

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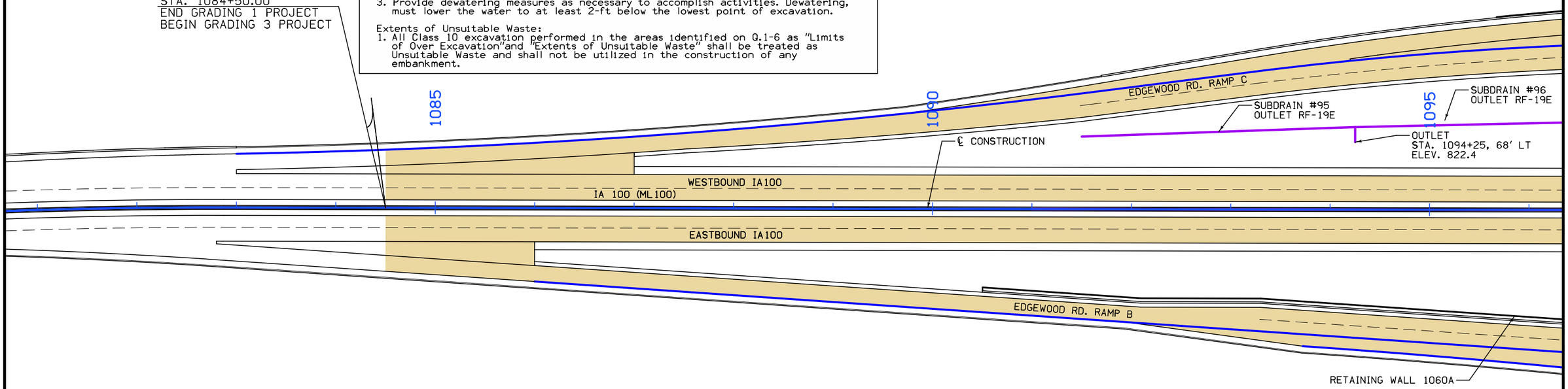
1. All Class 10 excavation performed in the areas identified on Q.1-6 as "Limits of Over Excavation"and "Extents of Unsuitable Waste" shall be treated as Unsuitable Waste and shall not be utilized in the construction of any embankment.

LEGEND

- LIMITS OF OVER EXCAVATION FOR MSE WALL DESIGN REQUIREMENTS
- LIMITS OF OVER EXCAVATION
- LIMITS UNSUITABLE WASTE
- GRANULAR BLANKET
- BORING LOCATION



THIS SHEET SHOWN FOR CLARITY,
AND IS FOR INFORMATION ONLY

For Plan & Profile Details
Refer to Sheet No. D.1-D.2

For Backslope Subdrain Details
Refer to Sheet No. CS.2

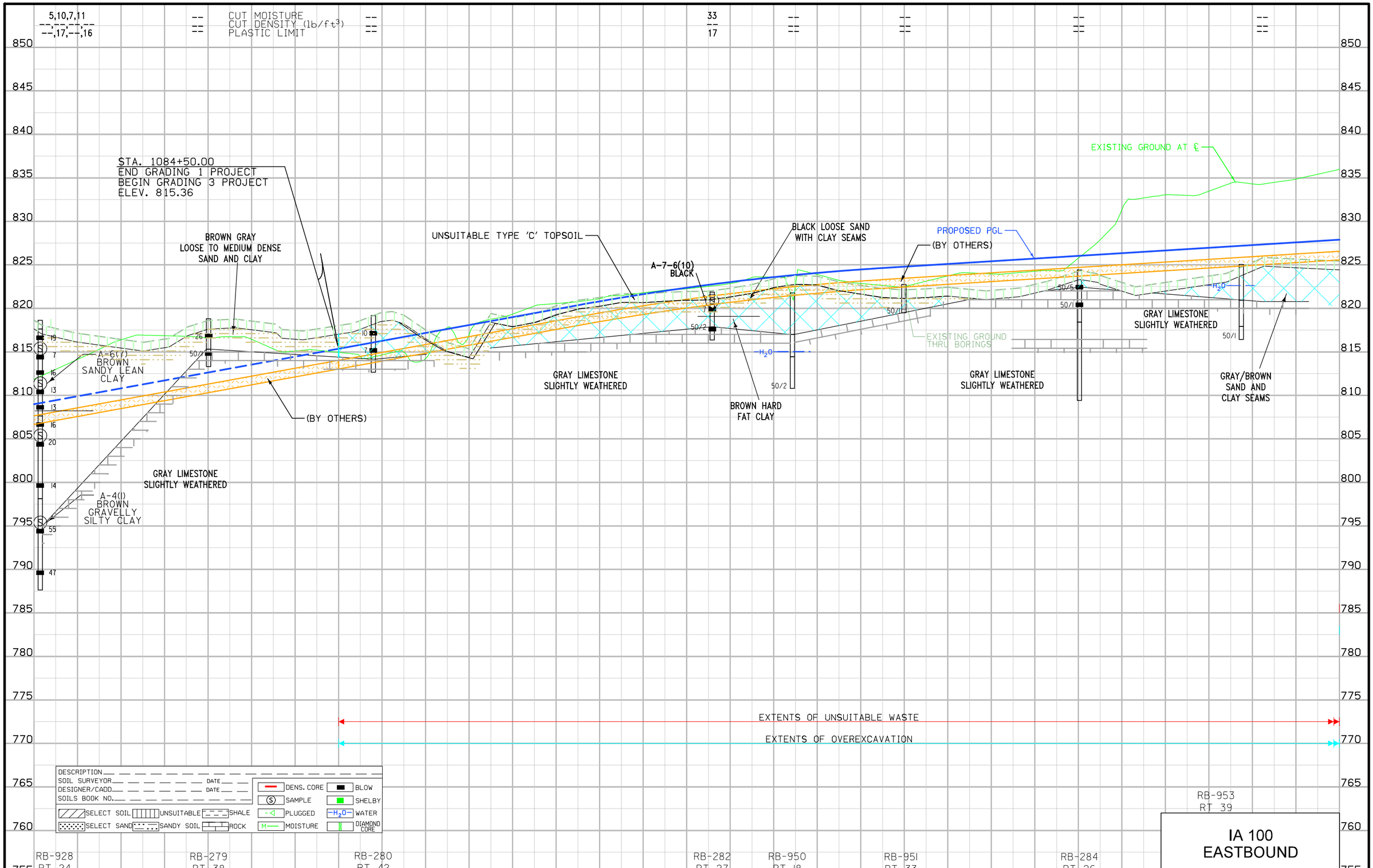
0 FEET 50

For Soils Profile Details
Refer to Sheet No. Q.2-Q.3

For Plan & Profile Details
Refer to Sheet No. D.2-D.3

IA 100 MAINLINE
BACKSLOPE
SUBDRAINS

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER	Q.1B



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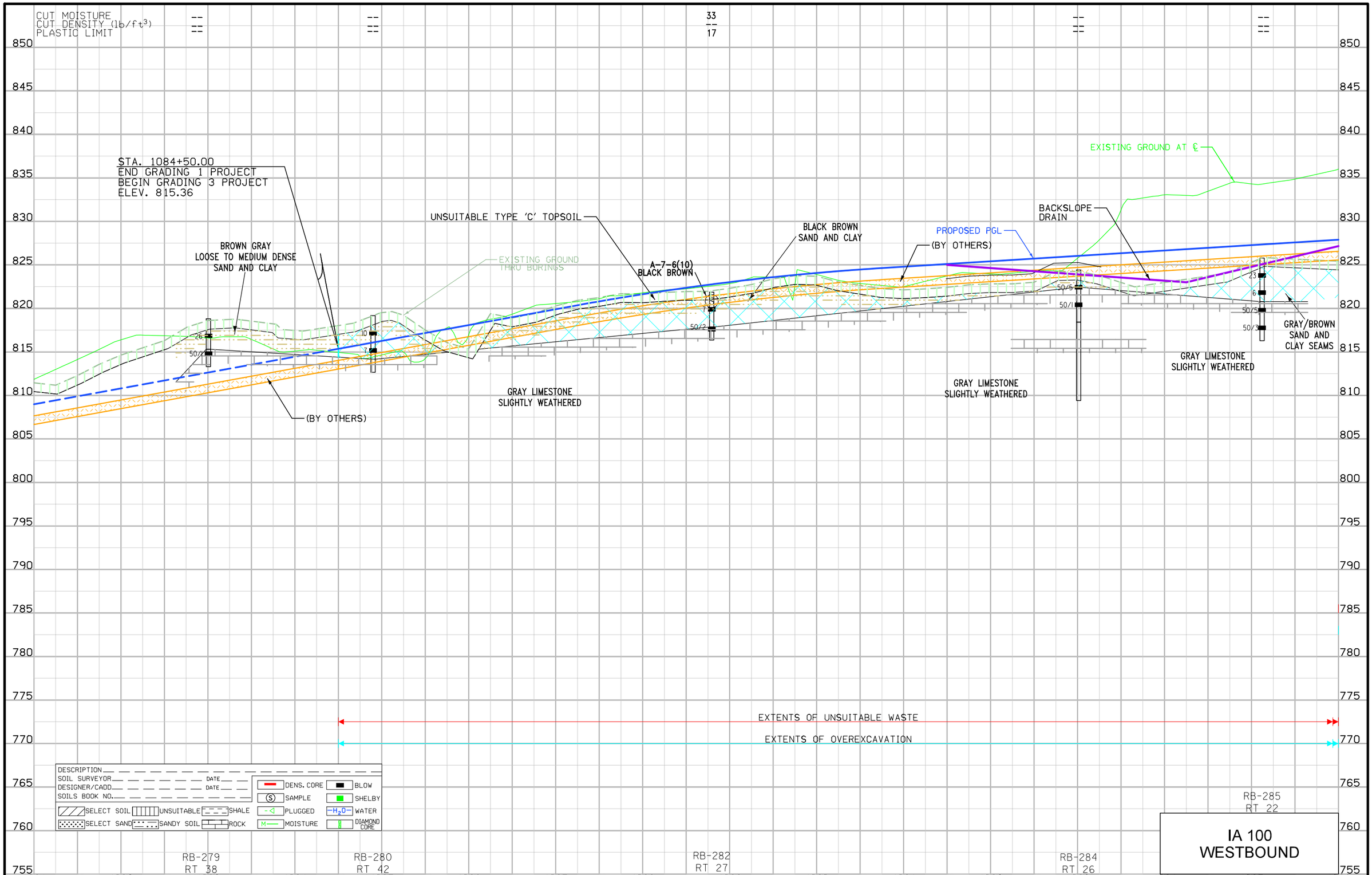

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.3	

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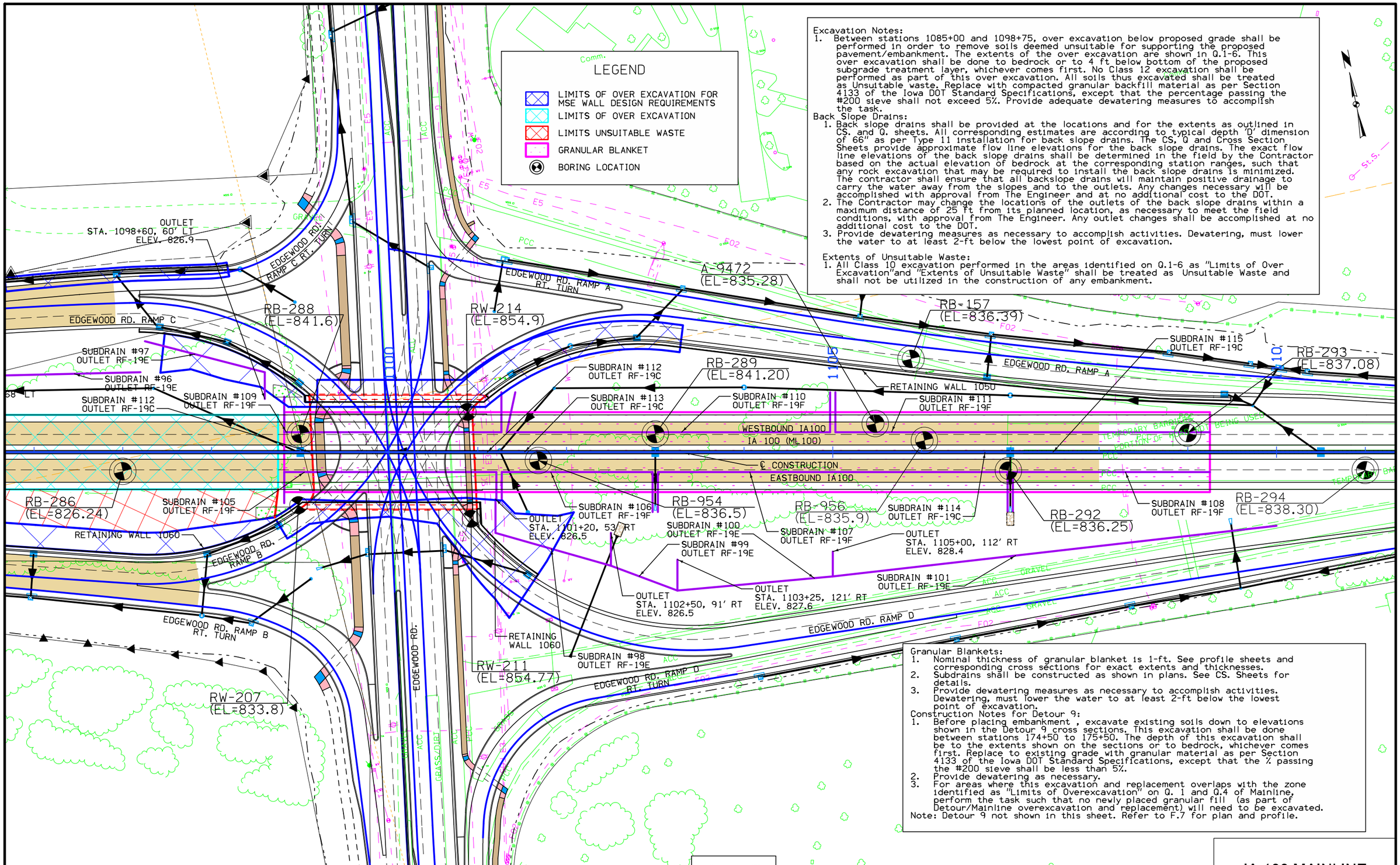

Excavation Notes:

1. Between stations 1085+00 and 1098+75, over excavation below proposed grade shall be performed in order to remove soils deemed unsuitable for supporting the proposed pavement/embankment. The extents of the over excavation are shown in Q.1-6. This over excavation shall be done to bedrock or to 4 ft below bottom of the proposed subgrade treatment layer, whichever comes first. No Class 12 excavation shall be performed as part of this over excavation. All soils thus excavated shall be treated as Unsuitable waste. Replace with compacted granular backfill material as per Section 4133 of the Iowa DOT Standard Specifications, except that the percentage passing the #200 sieve shall not exceed 5%. Provide adequate dewatering measures to accomplish the task.

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1. Back slope drains shall be provided at the locations and for the extents as outlined in CS. and Q. sheets. All corresponding estimates are according to typical depth 'D' dimension of 66" as per Type 11 installation for back slope drains. The CS, Q and Cross Section Sheets provide approximate flow line elevations for the back slope drains. The exact flow line elevations of the back slope drains shall be determined in the field by the Contractor based on the actual elevation of bedrock at the corresponding station ranges, such that any rock excavation that may be required to install the back slope drains is minimized. The contractor shall ensure that all backslope drains will maintain positive drainage to carry the water away from the slopes and to the outlets. Any changes necessary will be accomplished with approval from The Engineer and at no additional cost to the DOT.
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Extents of Unsuitable Waste:

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Granular Blankets:

1. Nominal thickness of granular blanket is 1-ft. See profile sheets and corresponding cross sections for exact extents and thicknesses.
2. Subdrains shall be constructed as shown in plans. See CS. Sheets for details.
3. Provide dewatering measures as necessary to accomplish activities. Dewatering, must lower the water to at least 2-ft below the lowest point of excavation.

Construction Notes for Detour 9:

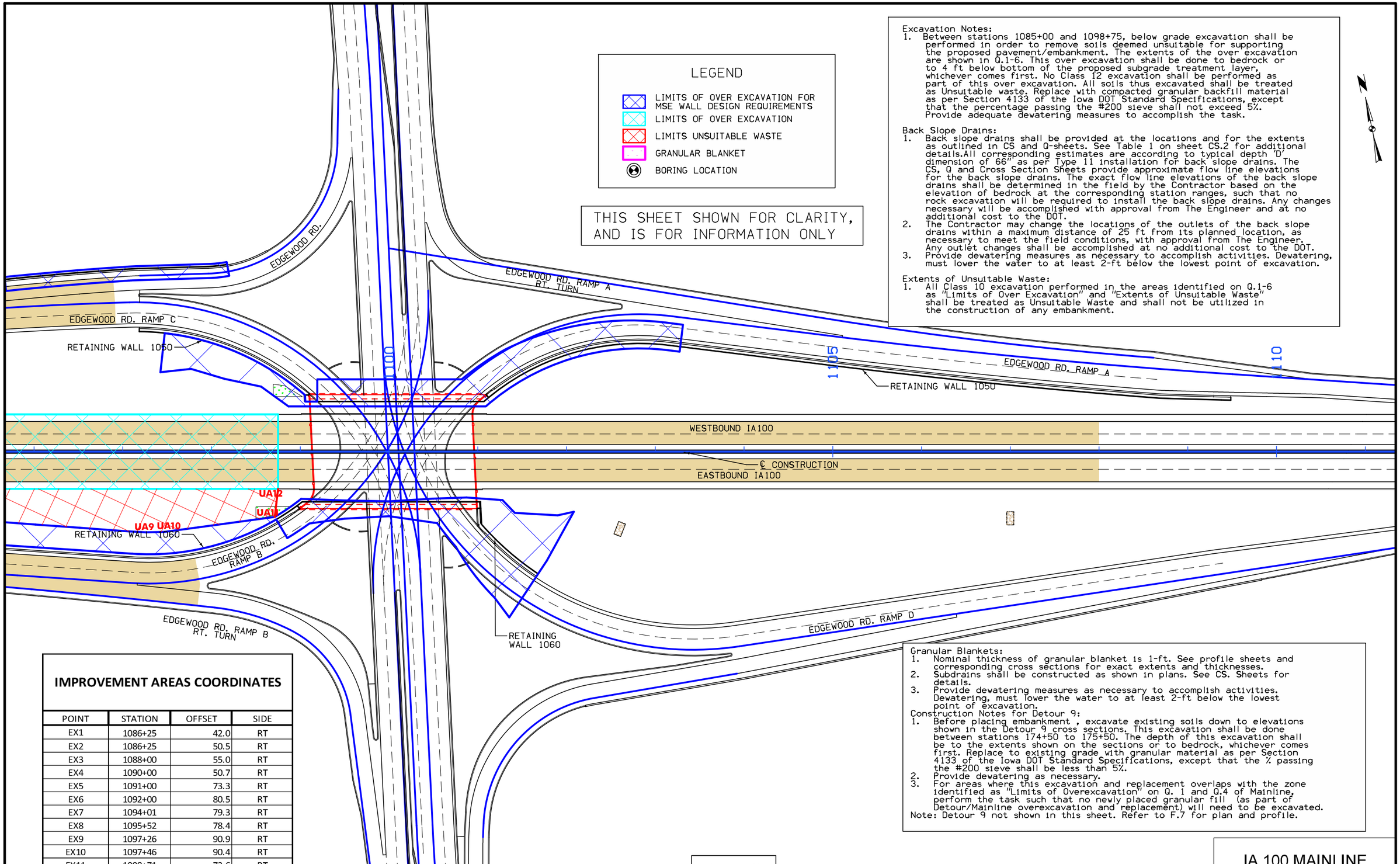
1. Before placing embankment , excavate existing soils down to elevations shown in the Detour 9 cross sections. This excavation shall be done between stations 174+50 to 175+50. The depth of this excavation shall be to the extents shown on the sections or to bedrock, whichever comes first. Replace to existing grade with granular material as per Section 4133 of the Iowa DOT Standard Specifications, except that the % passing the #200 sieve shall be less than 5%.
2. Provide dewatering as necessary.
3. For areas where this excavation and replacement overlaps with the zone identified as "Limits of Overexcavation" on Q. 1 and Q.4 of Mainline, perform the task such that no newly placed granular fill (as part of Detour/Mainline overexcavation and replacement) will need to be excavated.

Note: Detour 9 not shown in this sheet. Refer to F.7 for plan and profile.

For Backslope Subdrain Details Refer to Sheet No. CS.2	For Retaining Wall Details Refer to Sheet No. V.3-V.9	For Plan & Profile Details Refer to Sheet No. D.4-D.5	For Soils Profile Details Refer to Sheet No. Q.5-Q.6

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.4



LEGEND

- LIMITS OF OVER EXCAVATION FOR MSE WALL DESIGN REQUIREMENTS
- LIMITS OF OVER EXCAVATION
- LIMITS UNSUITABLE WASTE
- GRANULAR BLANKET
- BORING LOCATION

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IMPROVEMENT AREAS COORDINATES

POINT	STATION	OFFSET	SIDE
EX1	1086+25	42.0	RT
EX2	1086+25	50.5	RT
EX3	1088+00	55.0	RT
EX4	1090+00	50.7	RT
EX5	1091+00	73.3	RT
EX6	1092+00	80.5	RT
EX7	1094+01	79.3	RT
EX8	1095+52	78.4	RT
EX9	1097+26	90.9	RT
EX10	1097+46	90.4	RT
EX11	1098+71	73.6	RT
EX12	1098+75	42.0	RT

For Backslope Subdrain Details Refer to Sheet No. CS.2

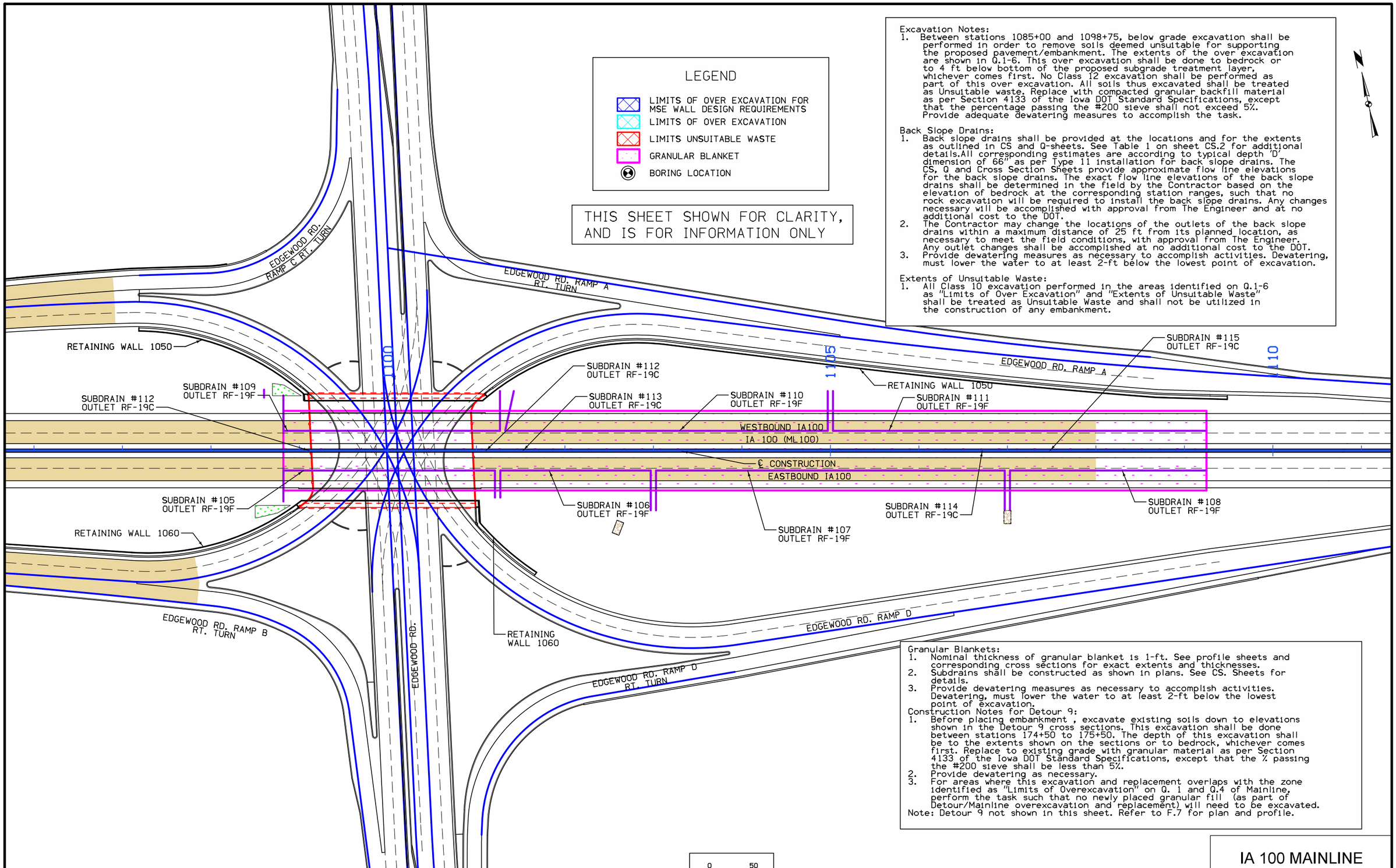
For Retaining Wall Details Refer to Sheet No. V.3-V.9

0 50 FEET

For Plan & Profile Details Refer to Sheet No. D.4-D.5

For Soils Profile Details Refer to Sheet No. Q.5-Q.6

IA 100 MAINLINE OVER EXCAVATION



LEGEND

- LIMITS OF OVER EXCAVATION FOR MSE WALL DESIGN REQUIREMENTS
- LIMITS OF OVER EXCAVATION
- LIMITS UNSUITABLE WASTE
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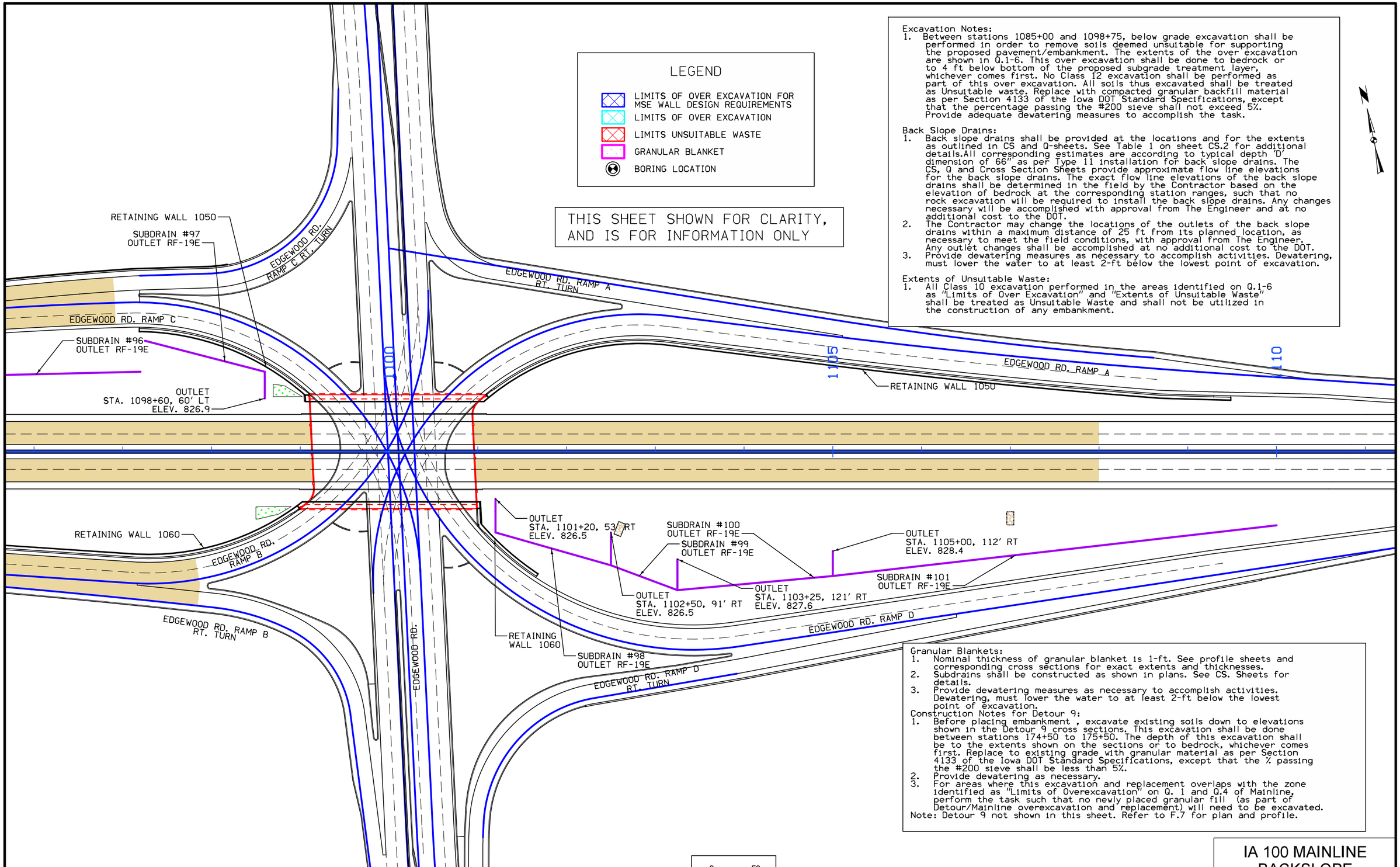
For Backslope Subdrain Details Refer to Sheet No. CS.2
For Retaining Wall Details Refer to Sheet No. V.3-V.9
For Plan & Profile Details Refer to Sheet No. D.4-D.5
For Soils Profile Details Refer to Sheet No. Q.5-Q.6

IA 100 MAINLINE GRANULAR BLANKET



LEGEND

- LIMITS OF OVER EXCAVATION FOR MSE WALL DESIGN REQUIREMENTS
- LIMITS OF OVER EXCAVATION
- LIMITS UNSUITABLE WASTE
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0 50 FEET

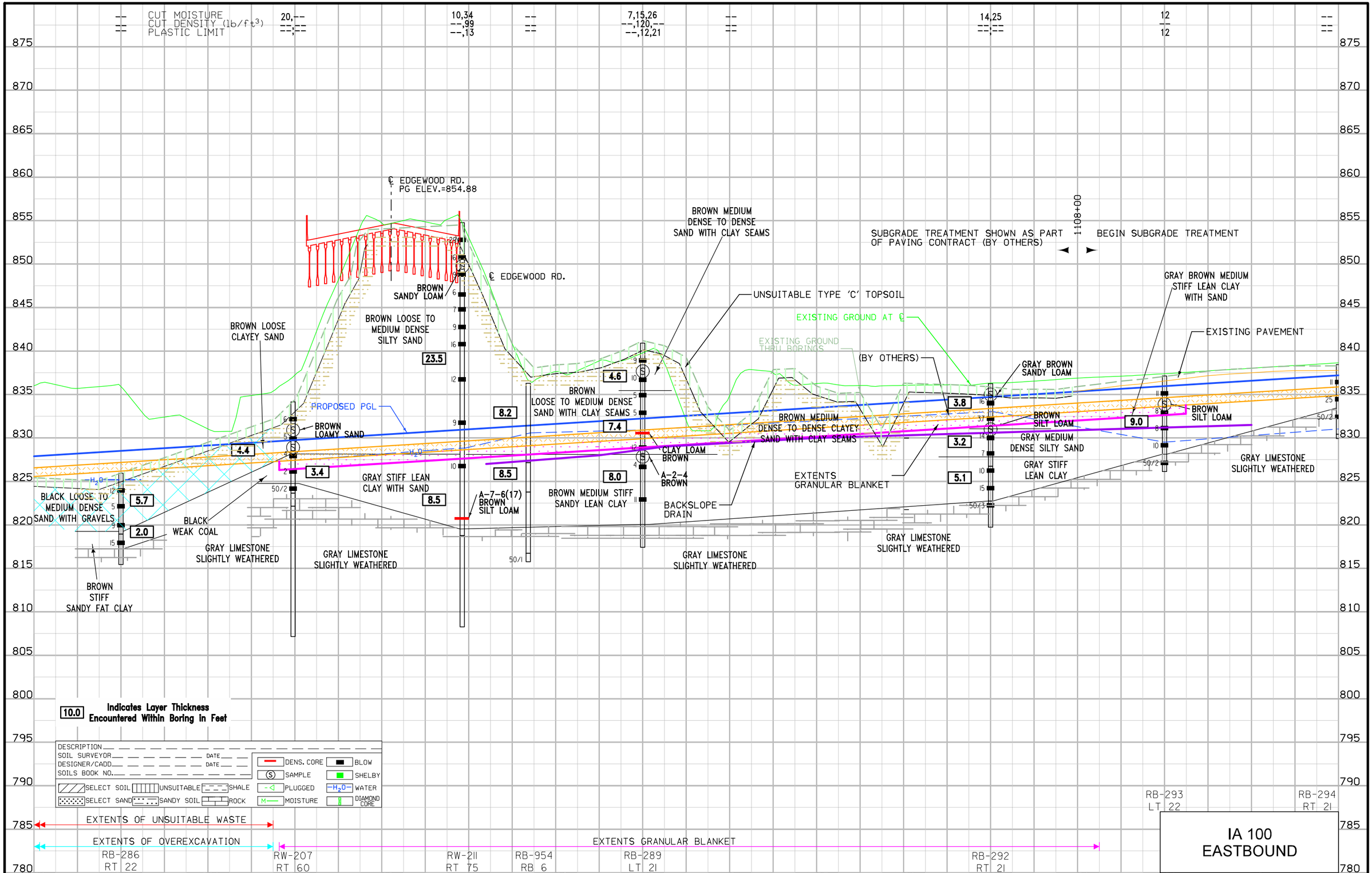
For Backslope Subdrain Details Refer to Sheet No. CS.2

For Retaining Wall Details Refer to Sheet No. V.3-V.9

For Plan & Profile Details Refer to Sheet No. D.4-D.5

For Soils Profile Details Refer to Sheet No. Q.5-Q.6

IA 100 MAINLINE BACKSLOPE SUBDRAINS



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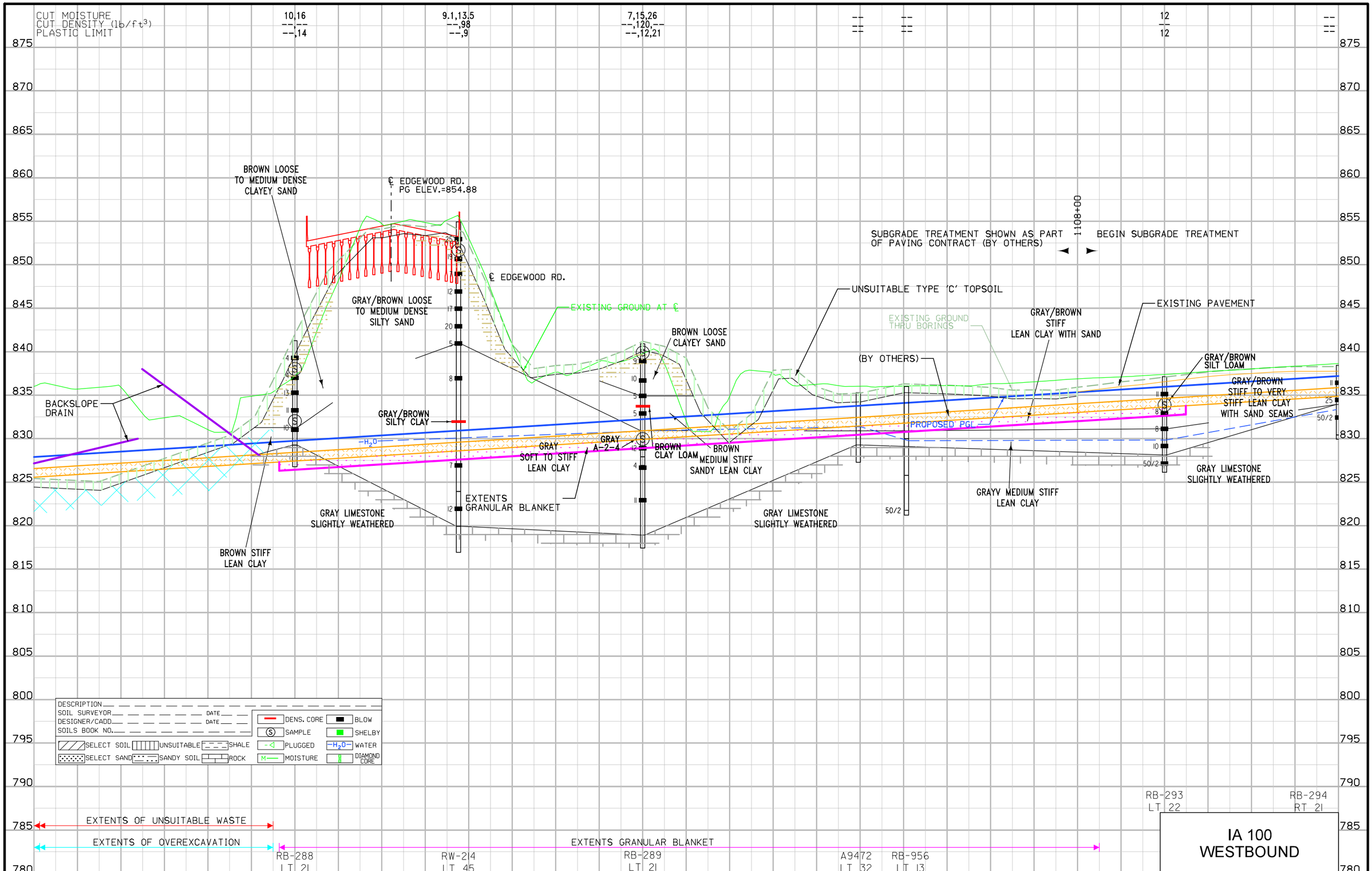

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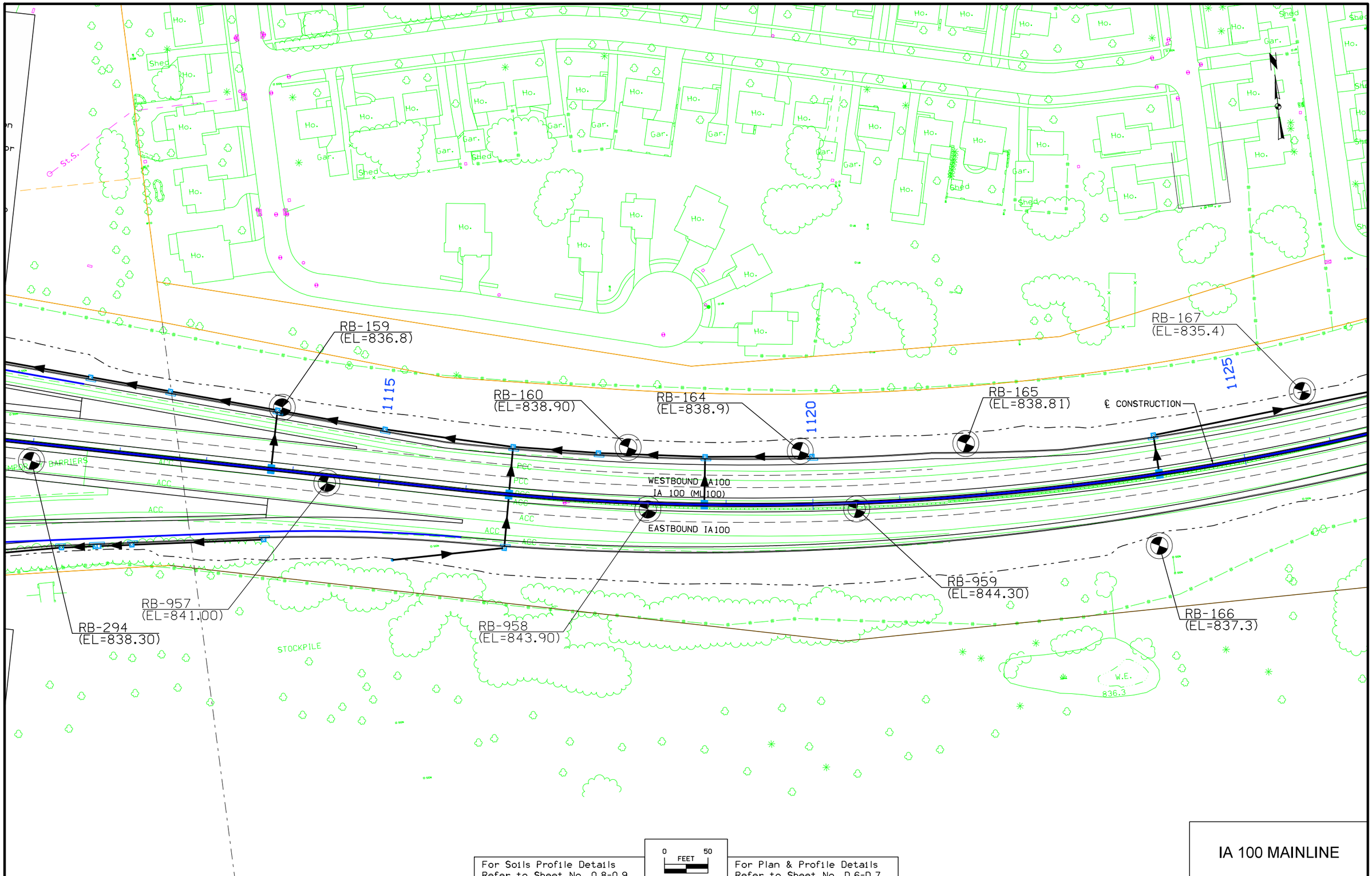

For Soils Profile Details
Refer to Sheet No. Q.8-Q.9

0 FEET 50

For Plan & Profile Details
Refer to Sheet No. D.6-D.7

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER	Q.7

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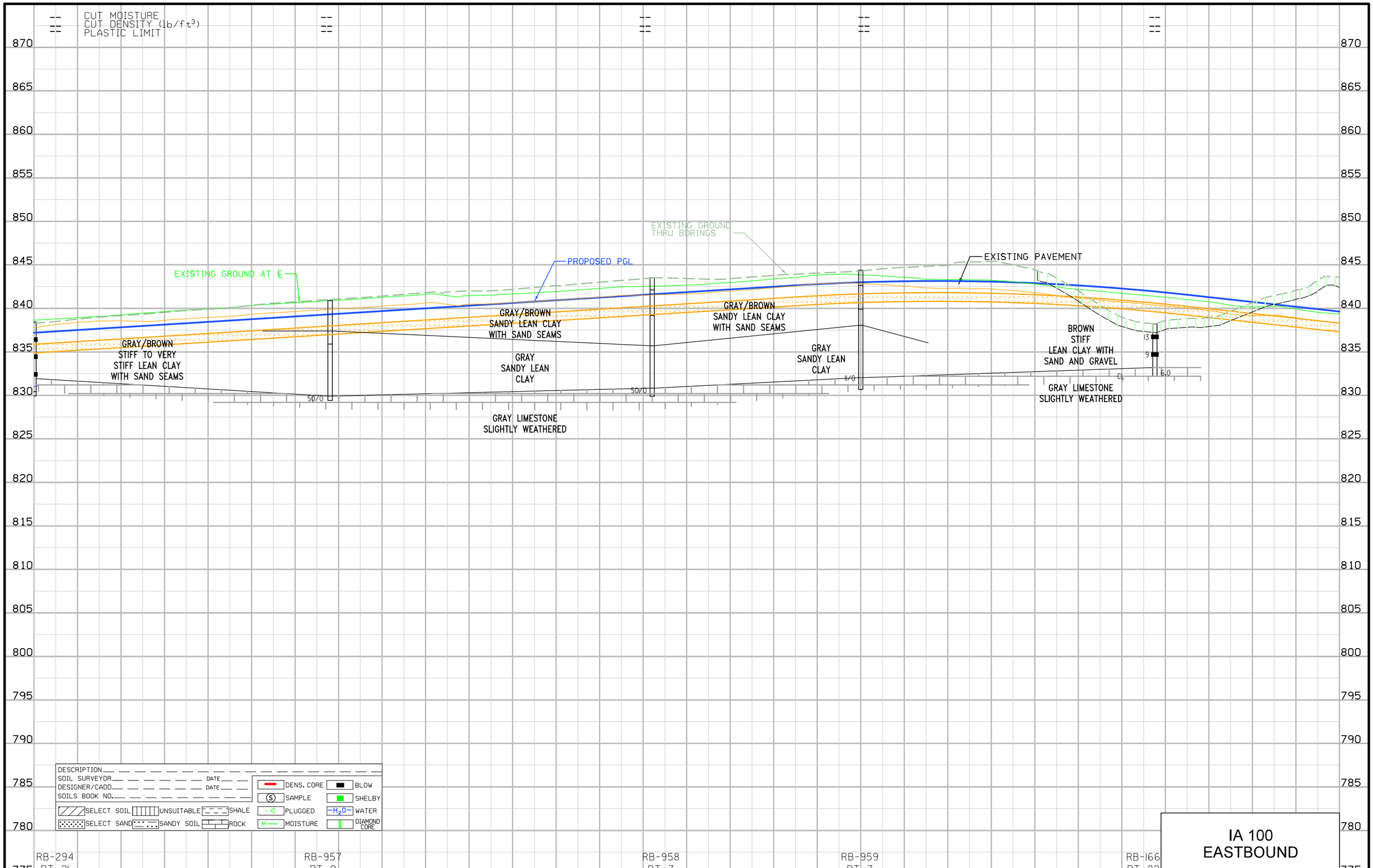

IA 100
EASTBOUND

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER Q.8

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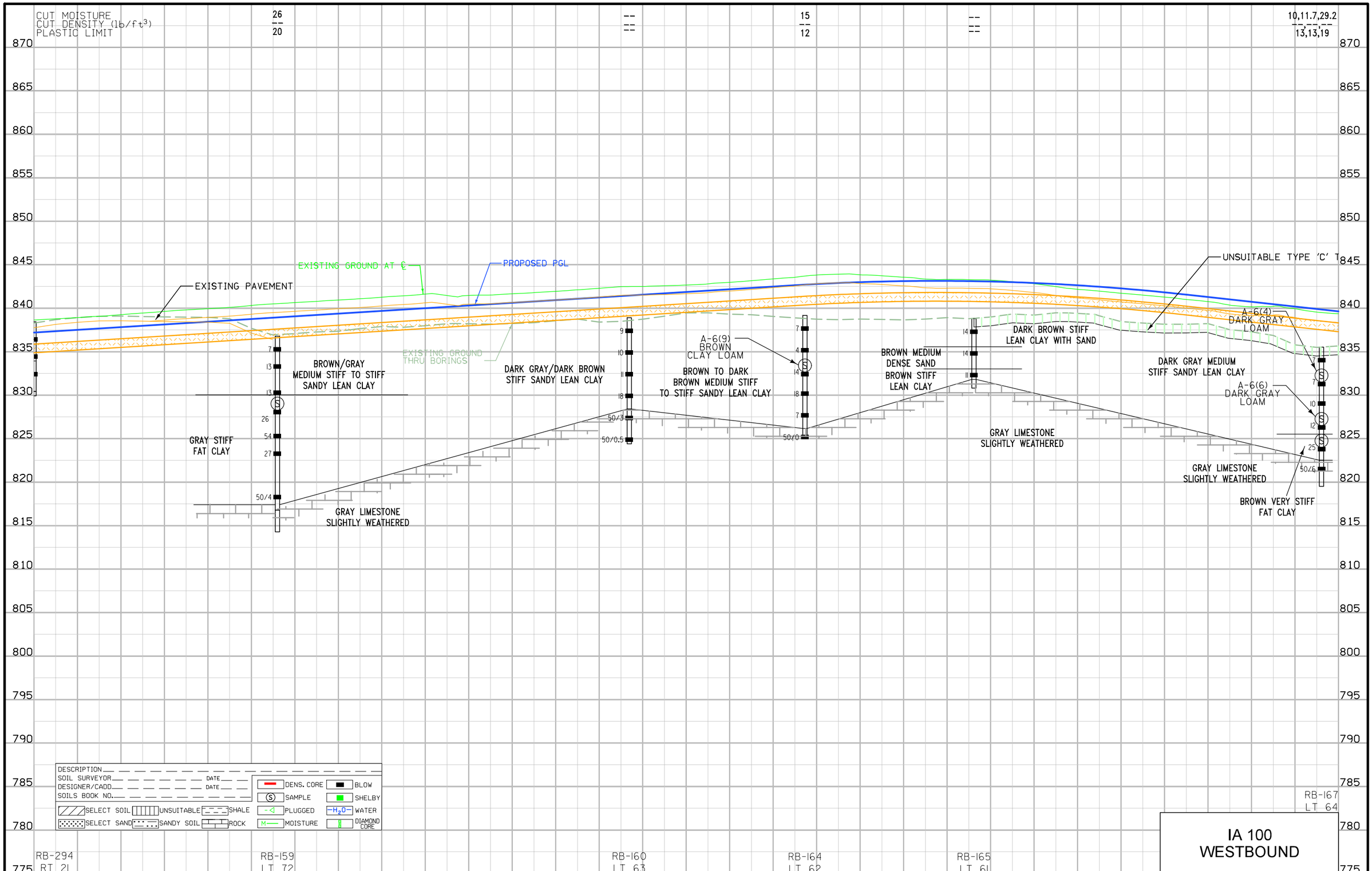

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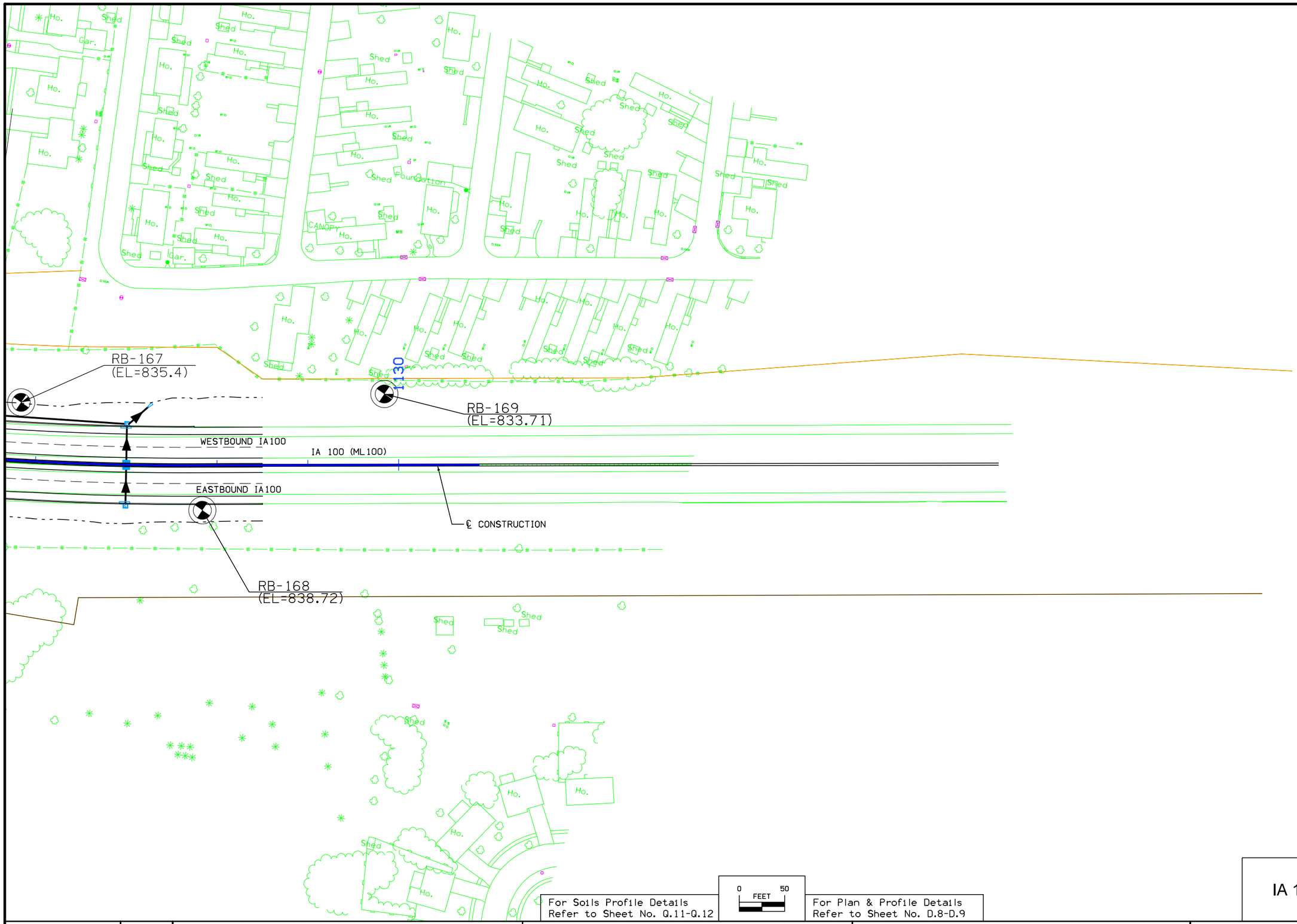

For Soils Profile Details
Refer to Sheet No. Q.11-Q.12

0 FEET 50

For Plan & Profile Details
Refer to Sheet No. D.8-D.9

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.10

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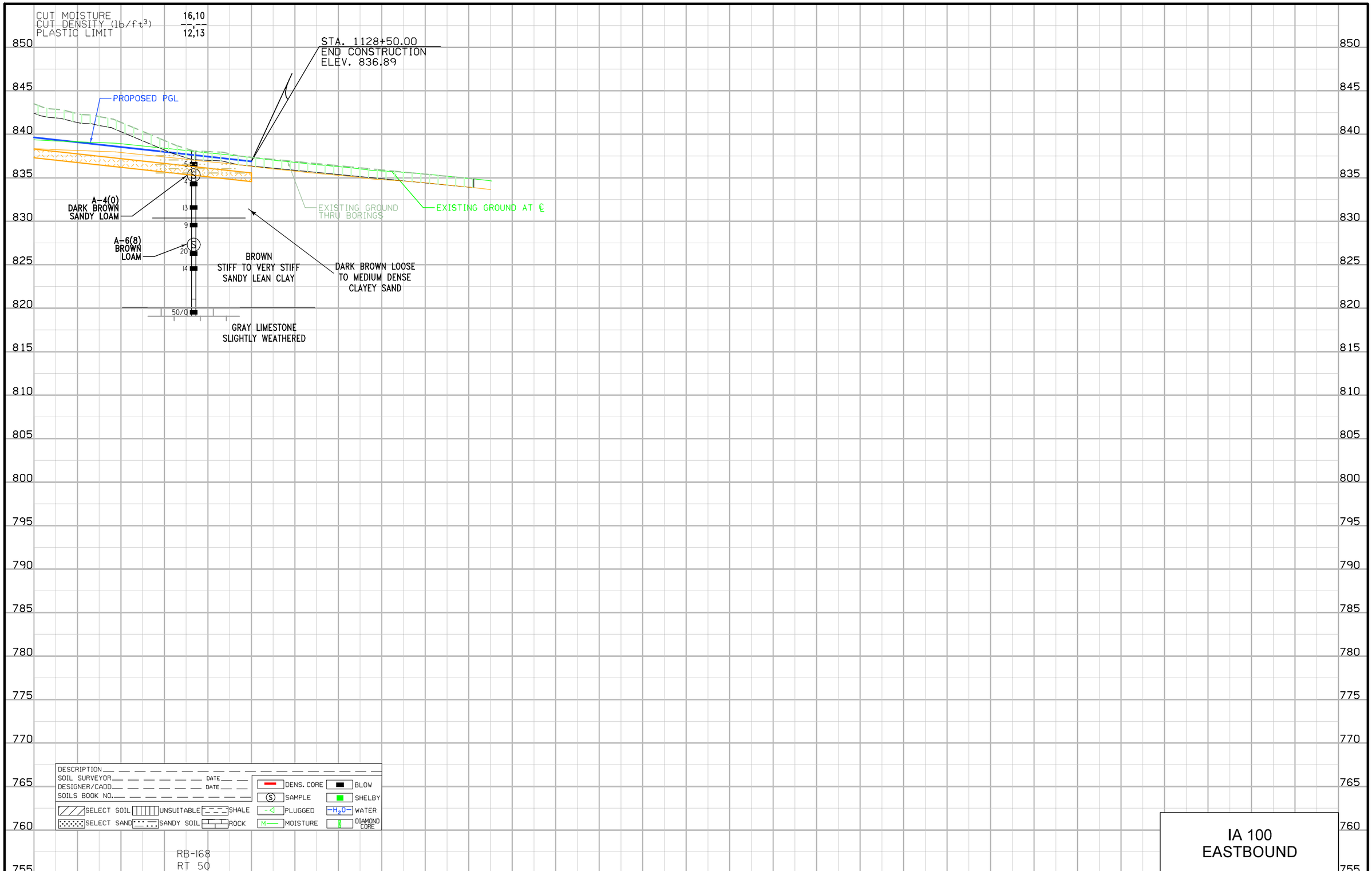

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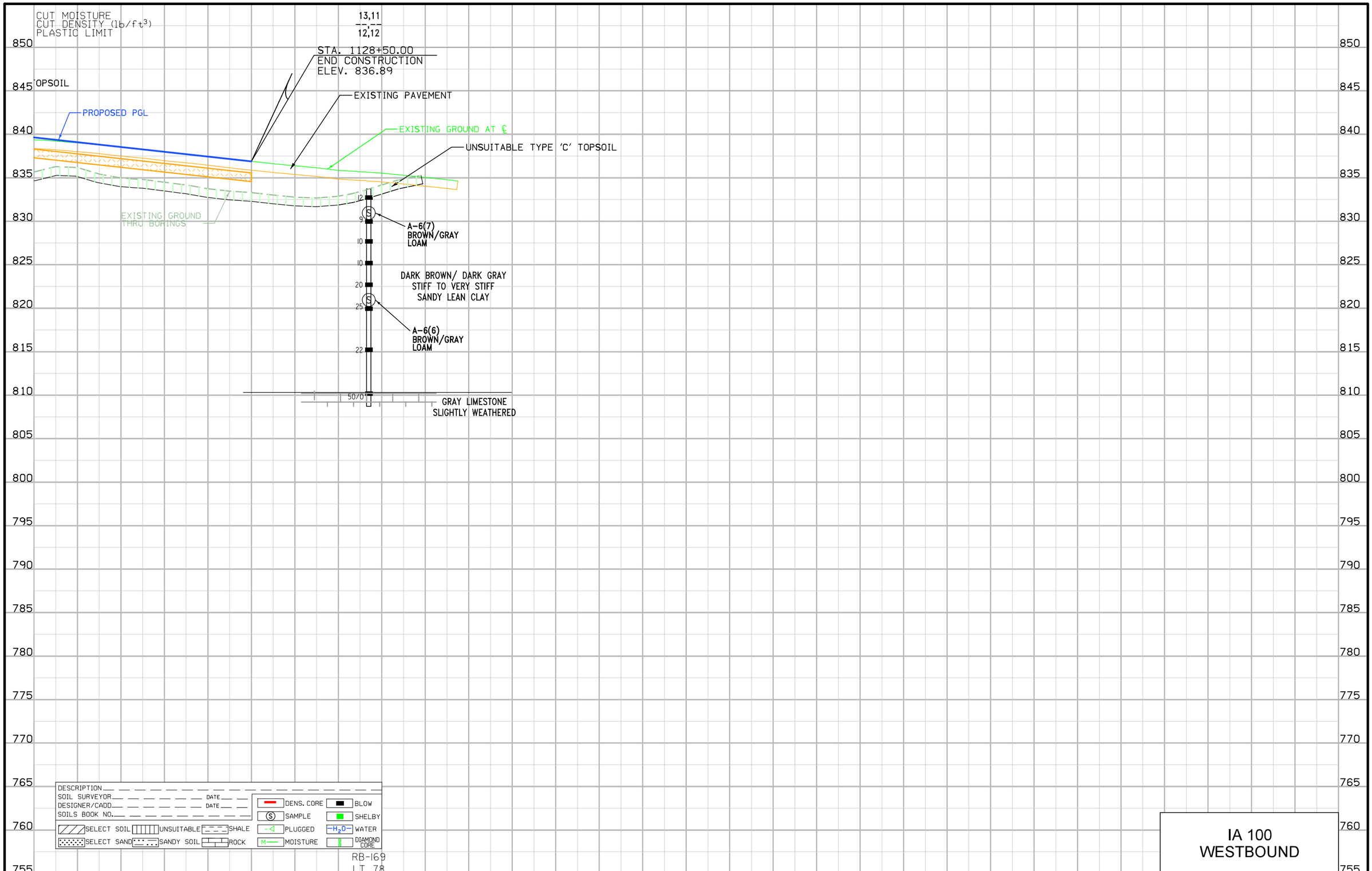

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.12

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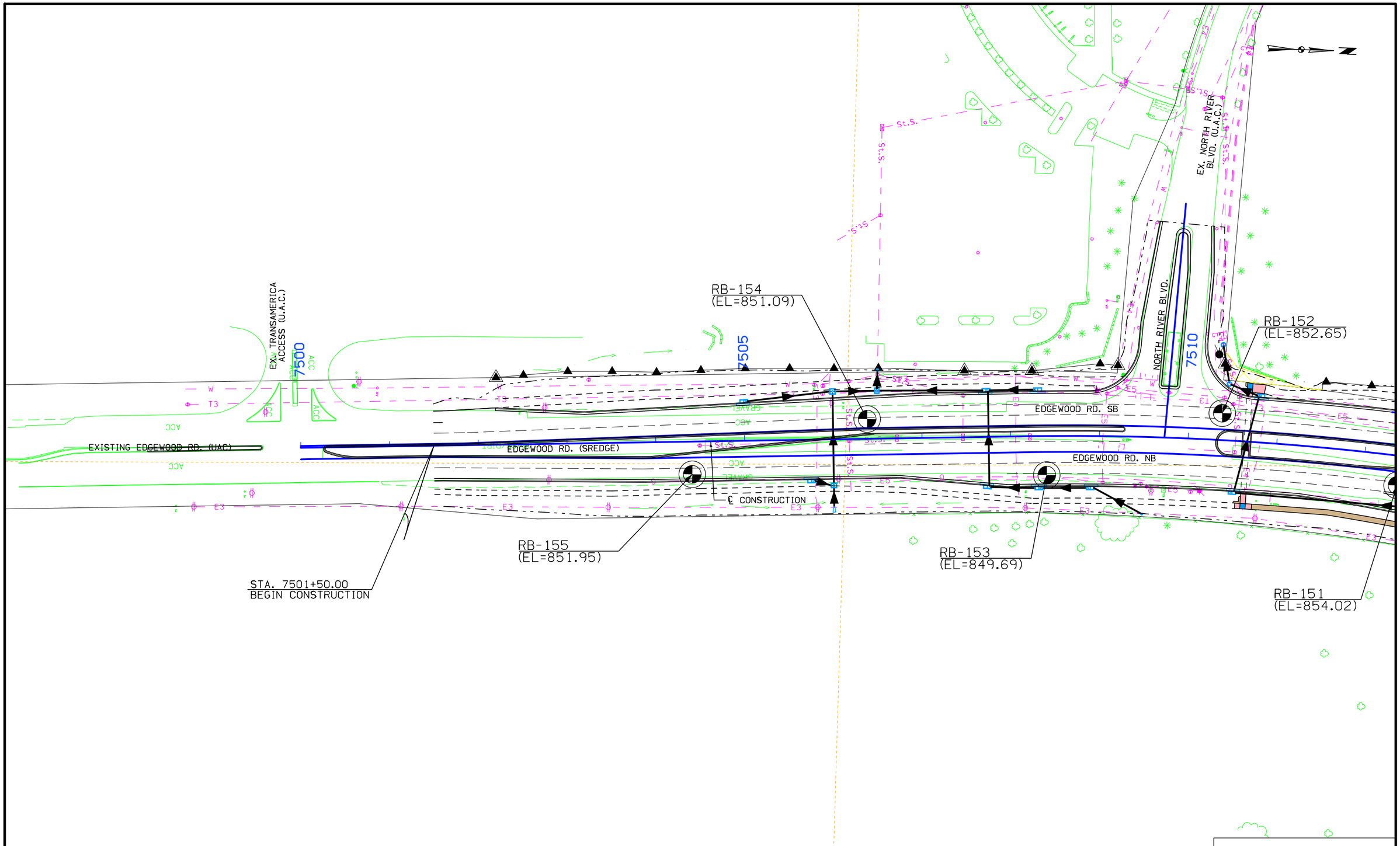

For Soils Profile Details Refer to Sheet No. Q.14

For Plan & Profile Details Refer to Sheet No. E.1-E.2

EDGEWOOD ROAD

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.13	

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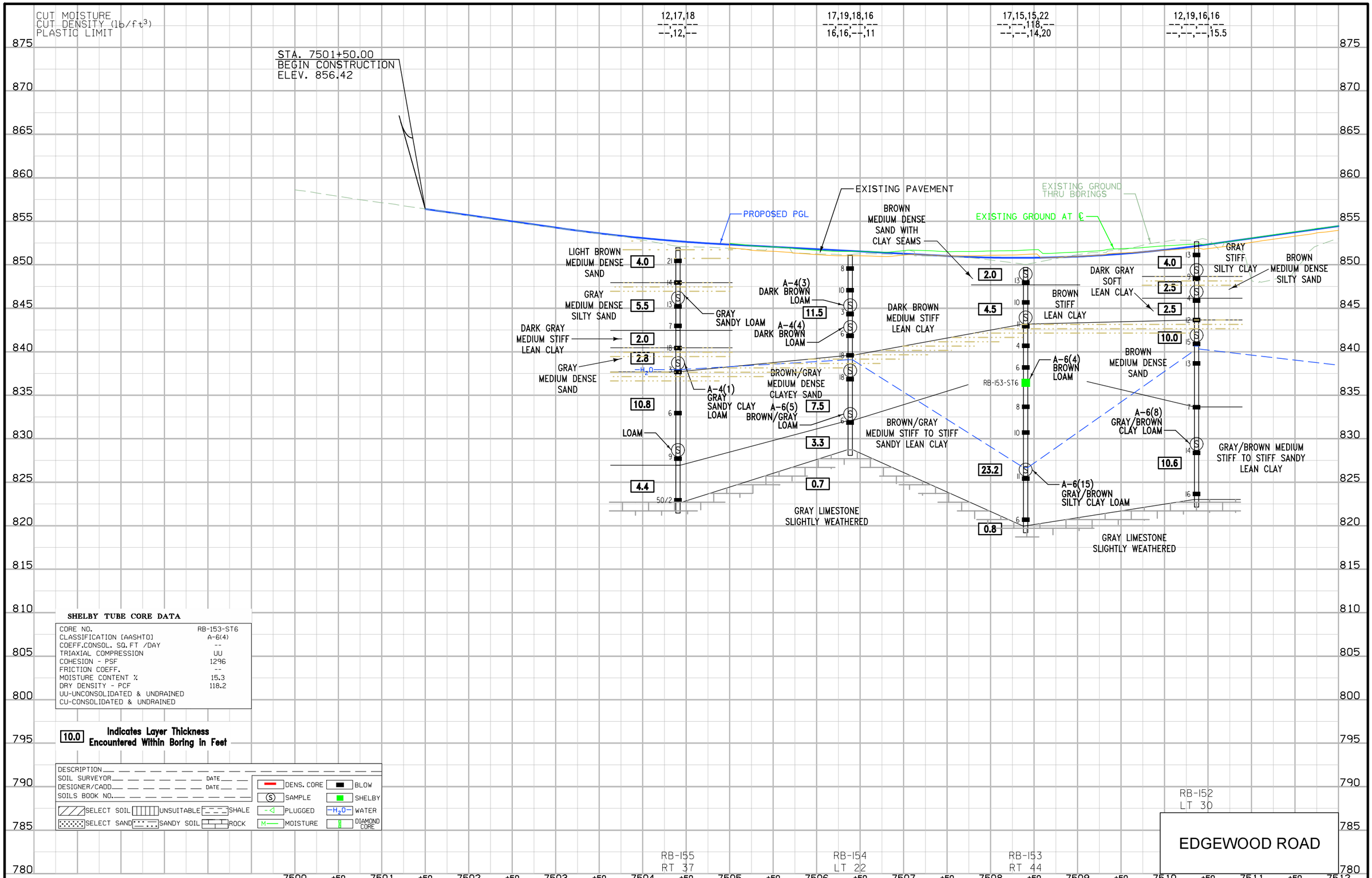

SHELBY TUBE CORE DATA

CORE NO.	RB-153-ST6
CLASSIFICATION [AASHTO]	A-6(4)
COEFF.CONSOL. SQ.FT /DAY	--
TRIAXIAL COMPRESSION	UU
COHESION - PSF	1296
FRICTION COEFF.	--
MOISTURE CONTENT %	15.3
DRY DENSITY - PCF	118.2
UU-UNCONSOLIDATED & UNDRAINED	
CU-CONSOLIDATED & UNDRAINED	

10.0 Indicates Layer Thickness Encountered Within Boring in Feet

DESCRIPTION
SOIL SURVEYOR DATE
DESIGNER/CADD DATE
SOILS BOOK NO.

SELECT SOIL, UNSUITABLE, SHALE, SELECT SAND, SANDY SOIL, ROCK

DENS. CORE, BLOW, SAMPLE, SHELBY, PLUGGED, WATER, MOISTURE, DIAMOND CORE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER	Q.14

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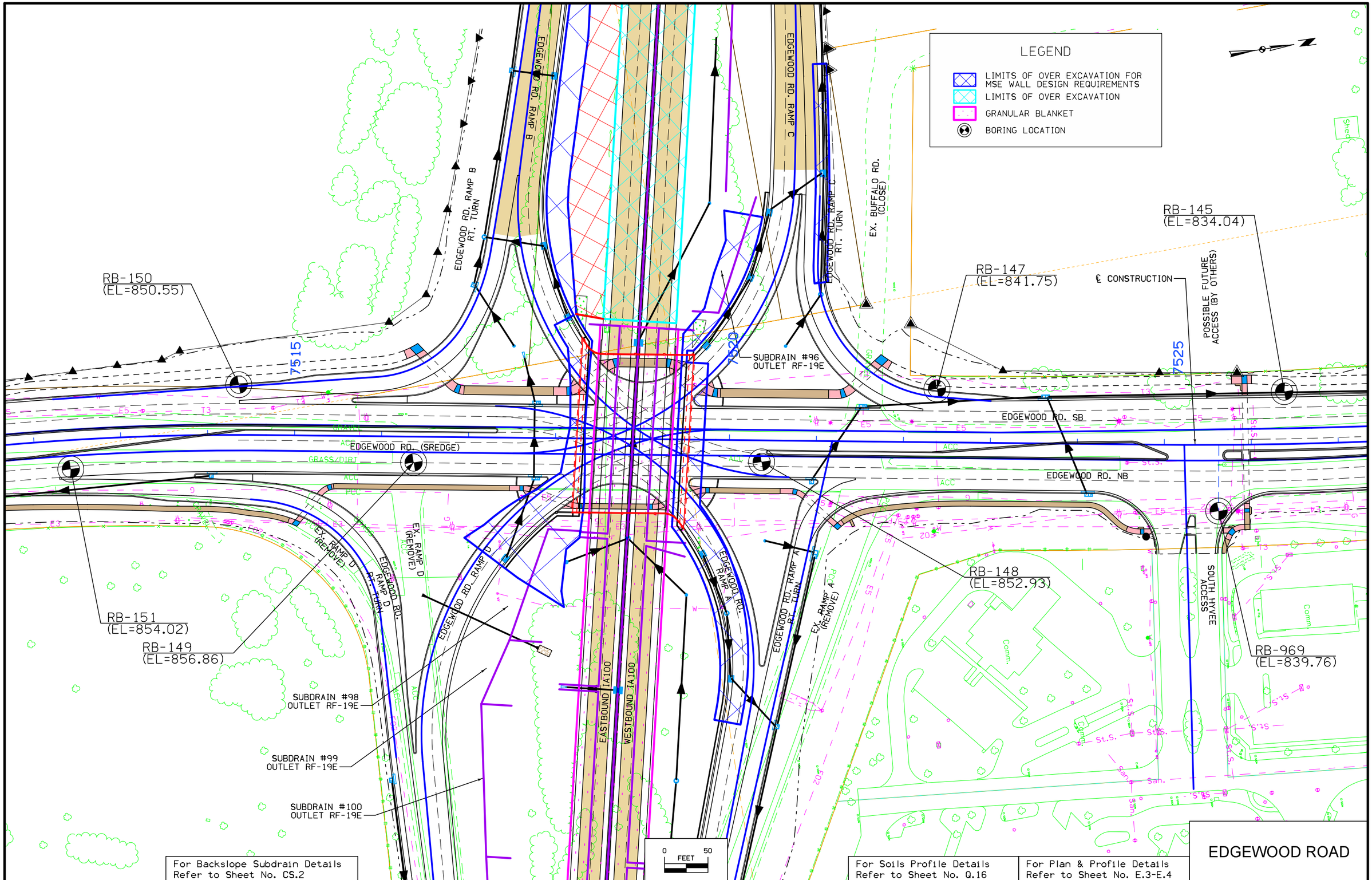

For Backslope Subdrain Details Refer to Sheet No. CS.2

For Soils Profile Details Refer to Sheet No. Q.16

For Plan & Profile Details Refer to Sheet No. E.3-E.4

EDGEWOOD ROAD

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.15

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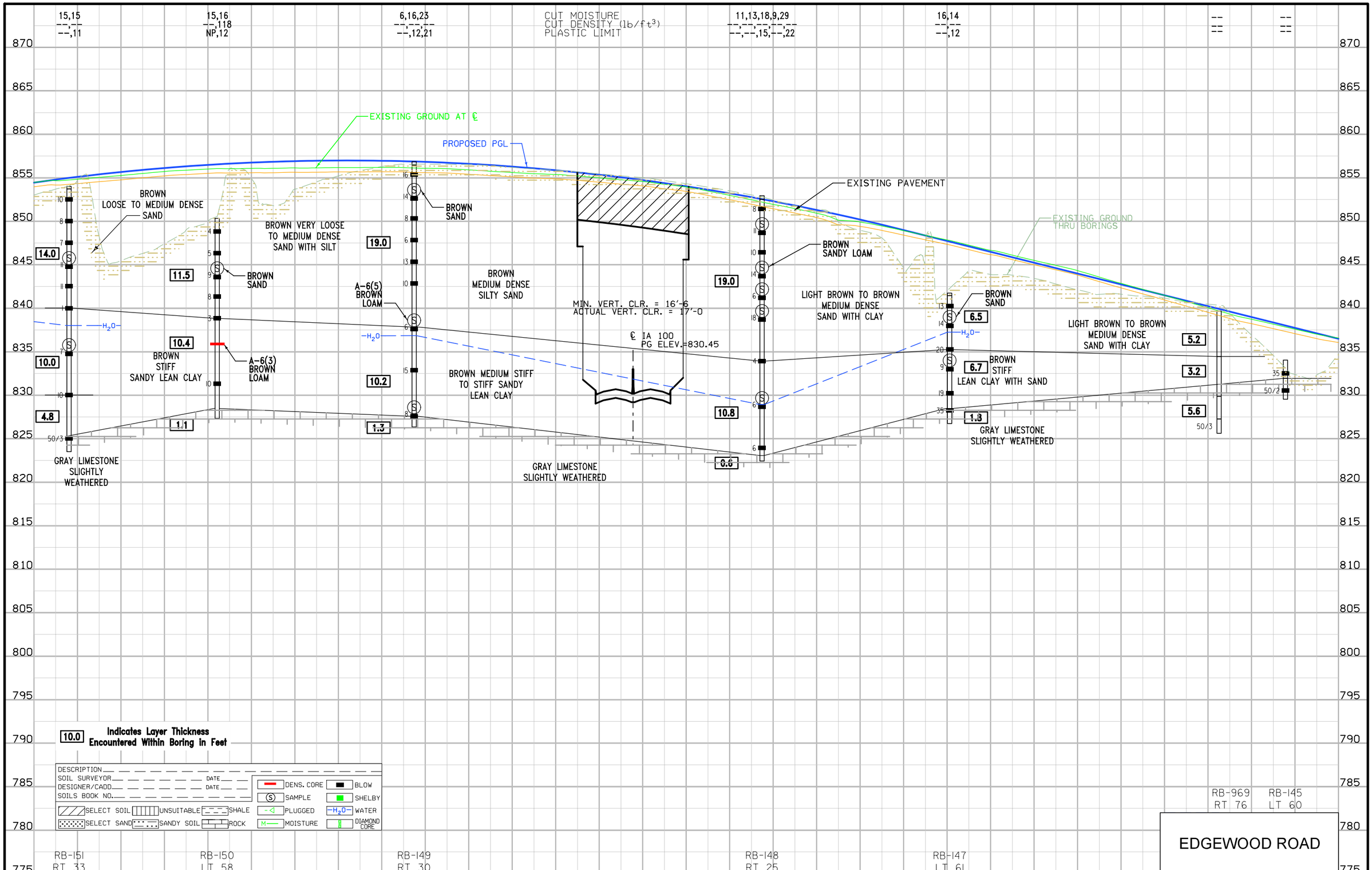

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.16

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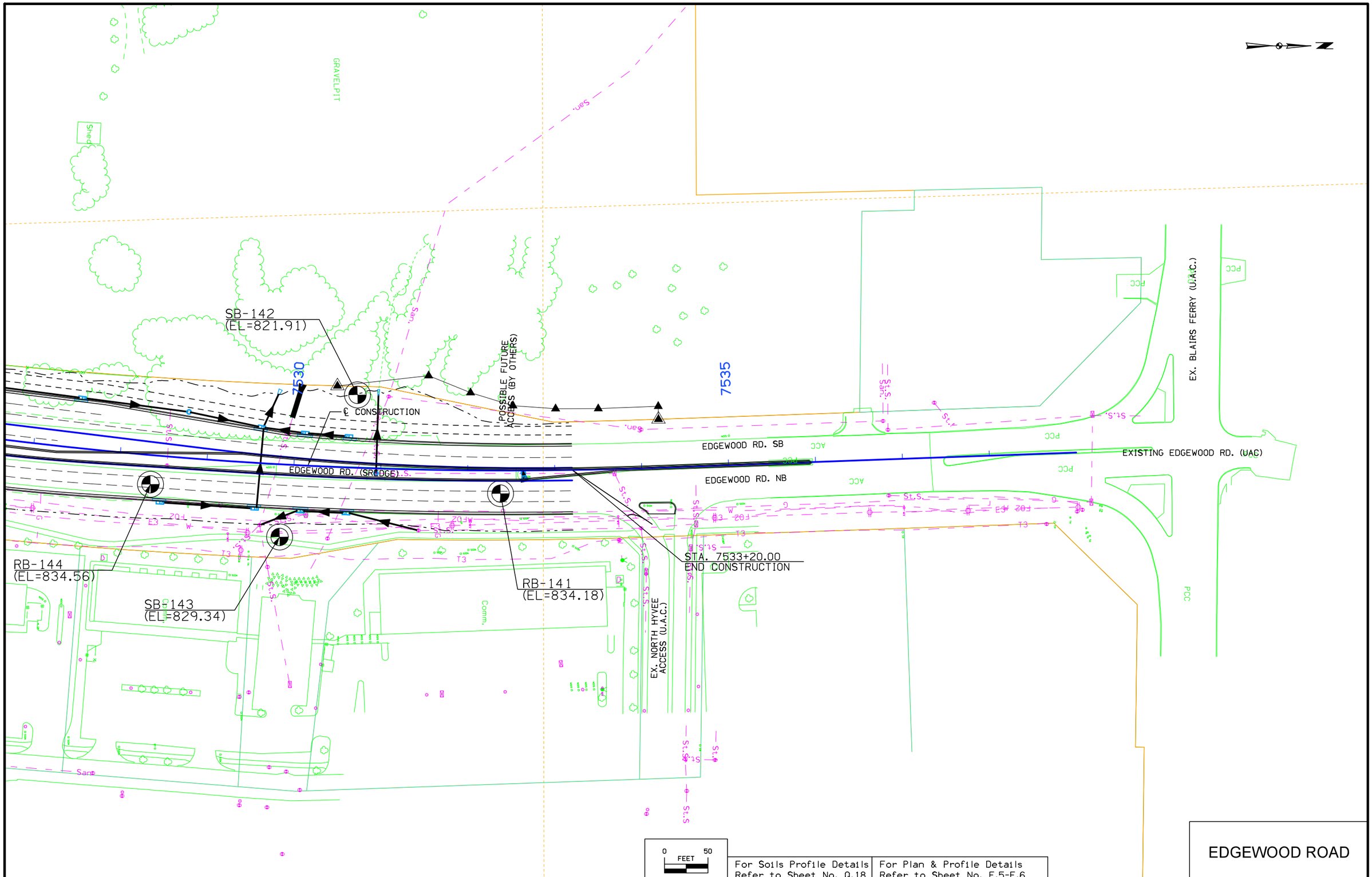

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.17

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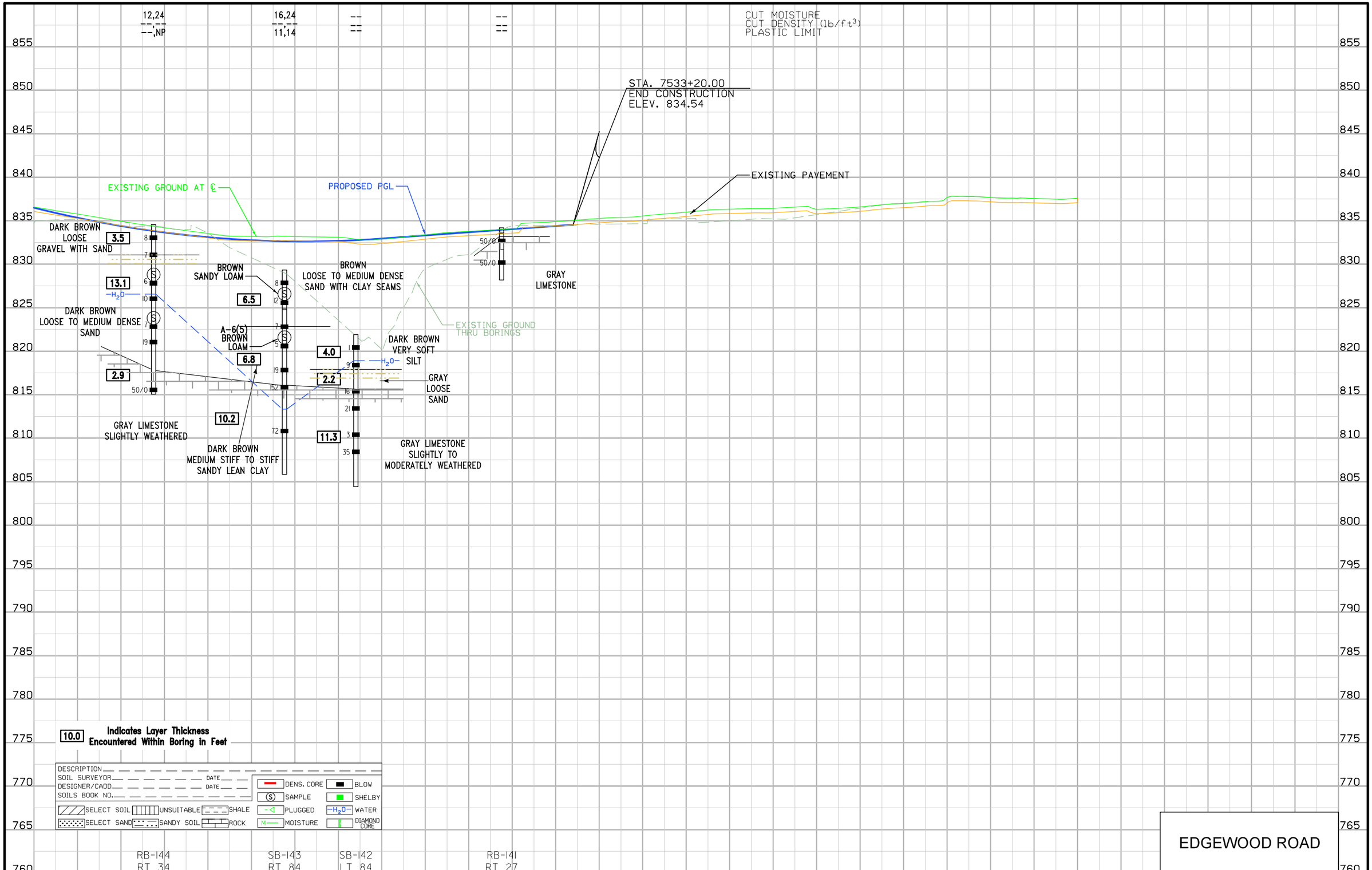

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.18

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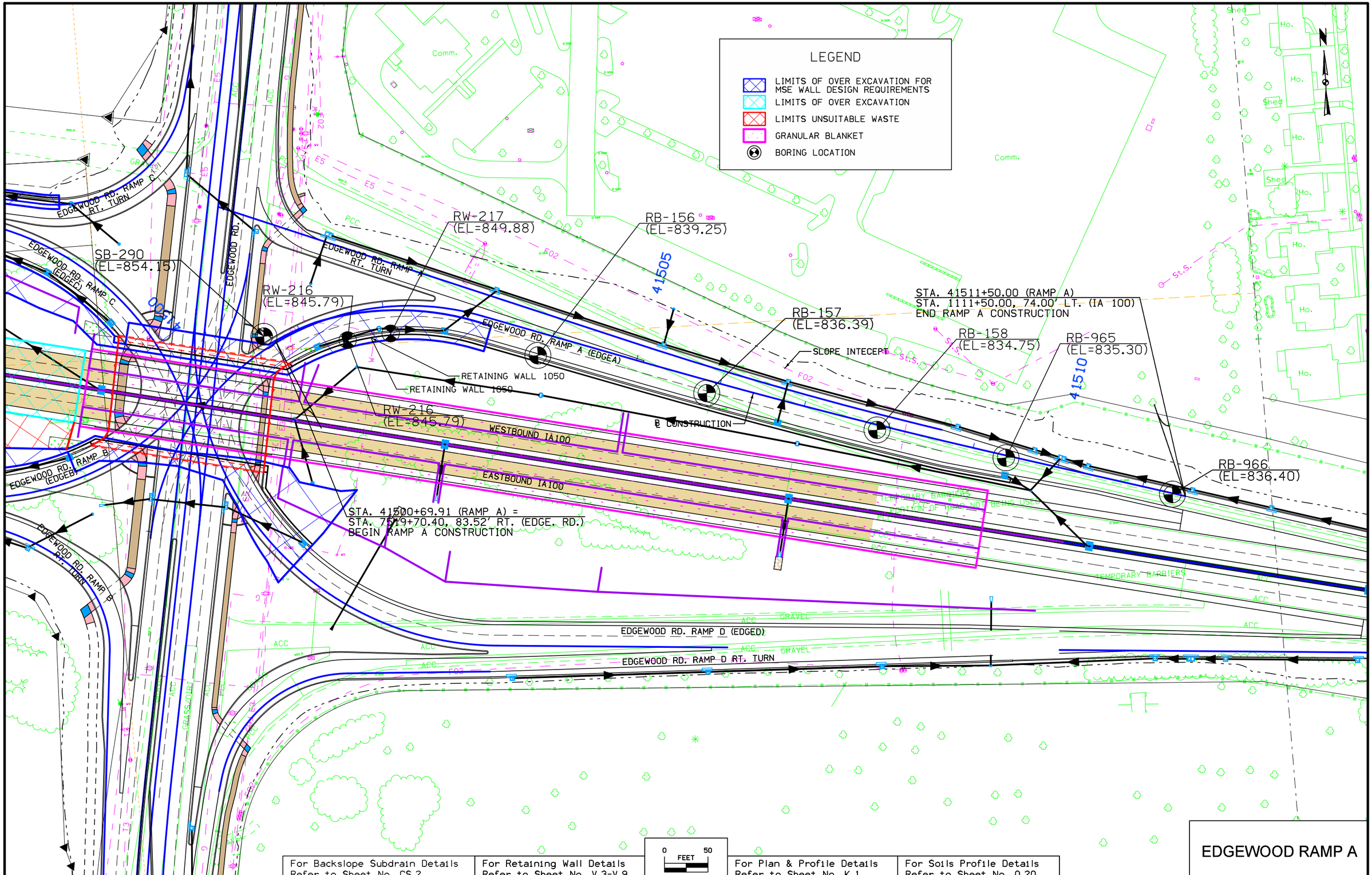

For Backslope Subdrain Details
Refer to Sheet No. CS.2

For Retaining Wall Details
Refer to Sheet No. V.3-V.9

For Plan & Profile Details
Refer to Sheet No. K.1

For Soils Profile Details
Refer to Sheet No. Q.20

EDGEWOOD RAMP A

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER Q.19

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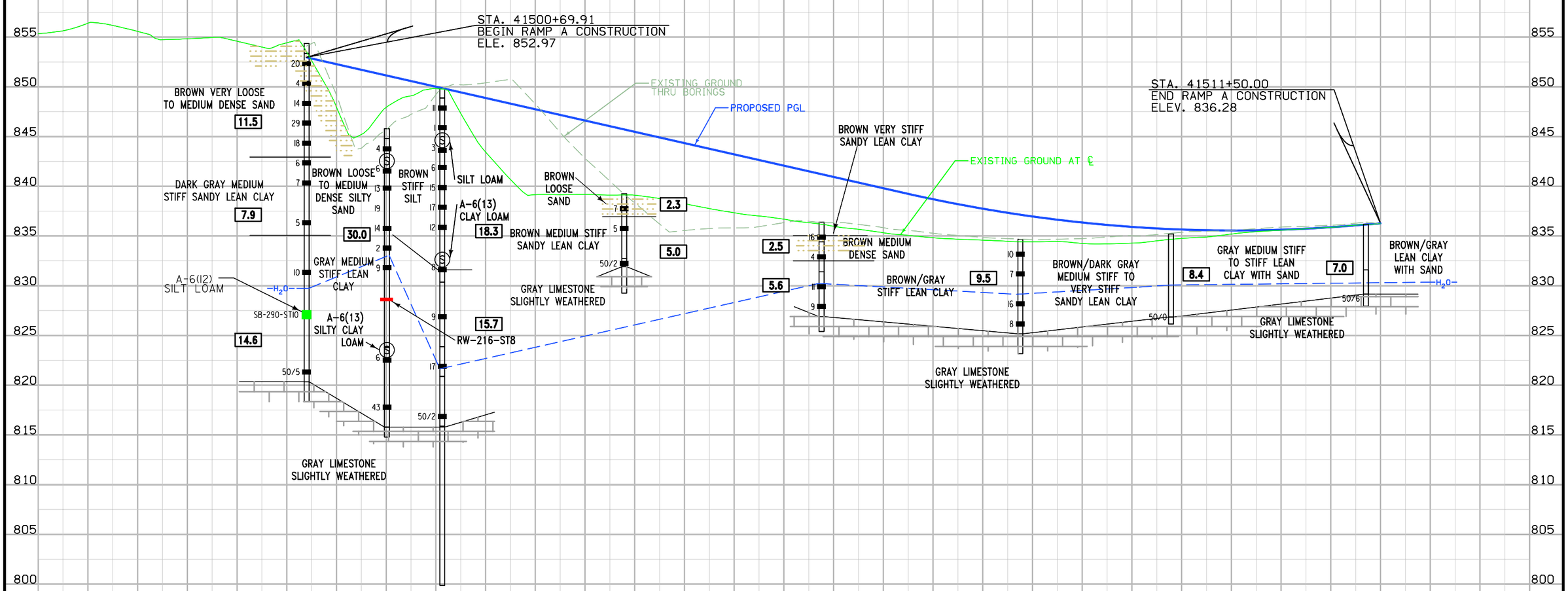
CUT MOISTURE	27	9,27,32	25,17	--	--	--	--	--
CUT DENSITY (lb/ft³)	97	--,94,--	--,--	--	--	--	--	--
PLASTIC LIMIT	19	--,19,18	--,19	--	--	--	--	--



SHELBY TUBE CORE DATA

CORE NO.	SB-290-ST10
CLASSIFICATION [AASHTO]	A-6(12)
COEFF.CONSOL. SQ.FT /DAY	864
TRIAXIAL COMPRESSION	UU
COHESION - PSF	-
FRICTION COEFF.	-
MOISTURE CONTENT %	27
DRY DENSITY - PCF	97

UU-UNCONSOLIDATED & UNDRAINED
CU-CONSOLIDATED & UNDRAINED
UC-UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)

10.0 Indicates Layer Thickness Encountered Within Boring in Feet

DESCRIPTION
SOIL SURVEYOR DATE
DESIGNER/CADD DATE
SOILS BOOK NO.

SELECT SOIL, UNSUITABLE, SHALE, SELECT SAND, SANDY SOIL, ROCK

DENS. CORE, BLOW, SAMPLE, SHELBY, PLUGGED, WATER, MOISTURE, DIAMOND CORE

RB-966
RT 1

EDGEWOOD RAMP A

SB-290 LT 13 | RW-216 RT 30 | RW-217 RT 31 | RB-156 RT 26 | RB-157 RT 15 | RB-158 RT 6 | RB-965 RT 3

41498 +50 41499 +50 41500 +50 41501 +50 41502 +50 41503 +50 41504 +50 41505 +50 41506 +50 41507 +50 41508 +50 41509 +50 41510 +50 41511 +50

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.20	

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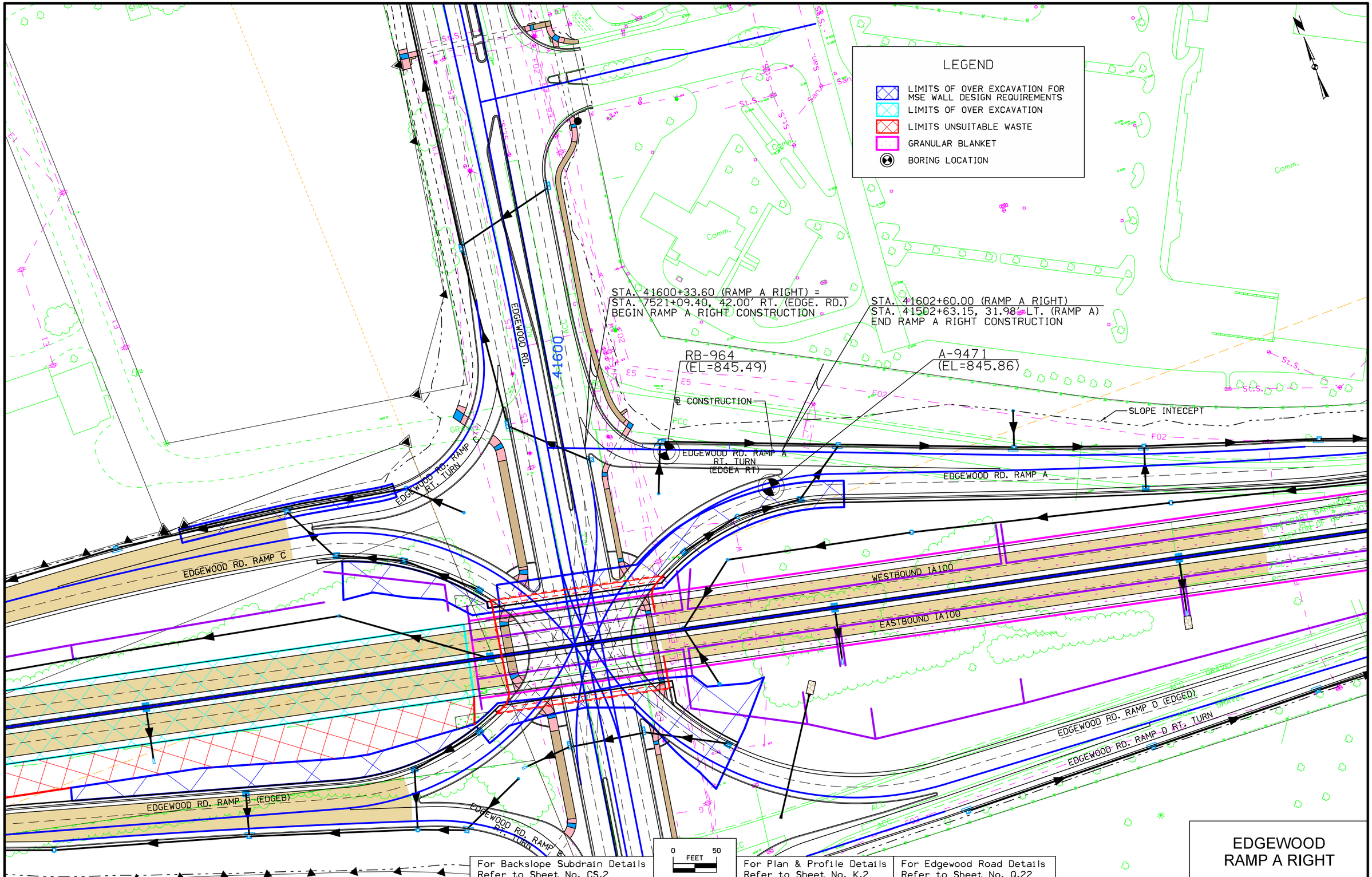

For Backslope Subdrain Details
Refer to Sheet No. CS.2

For Plan & Profile Details
Refer to Sheet No. K.2

For Edgewood Road Details
Refer to Sheet No. Q.22

EDGEWOOD
RAMP A RIGHT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER Q.21

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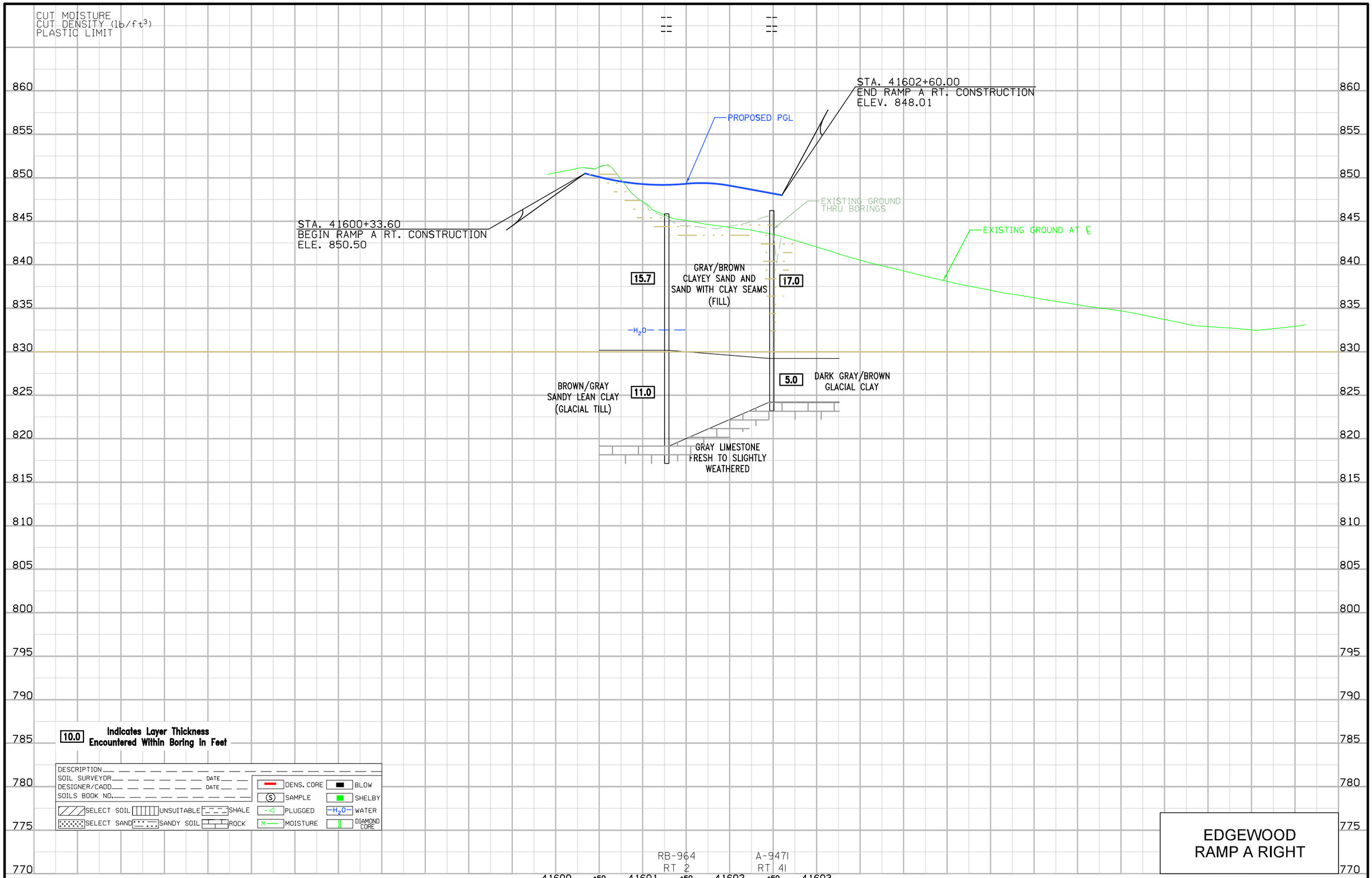

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.22	

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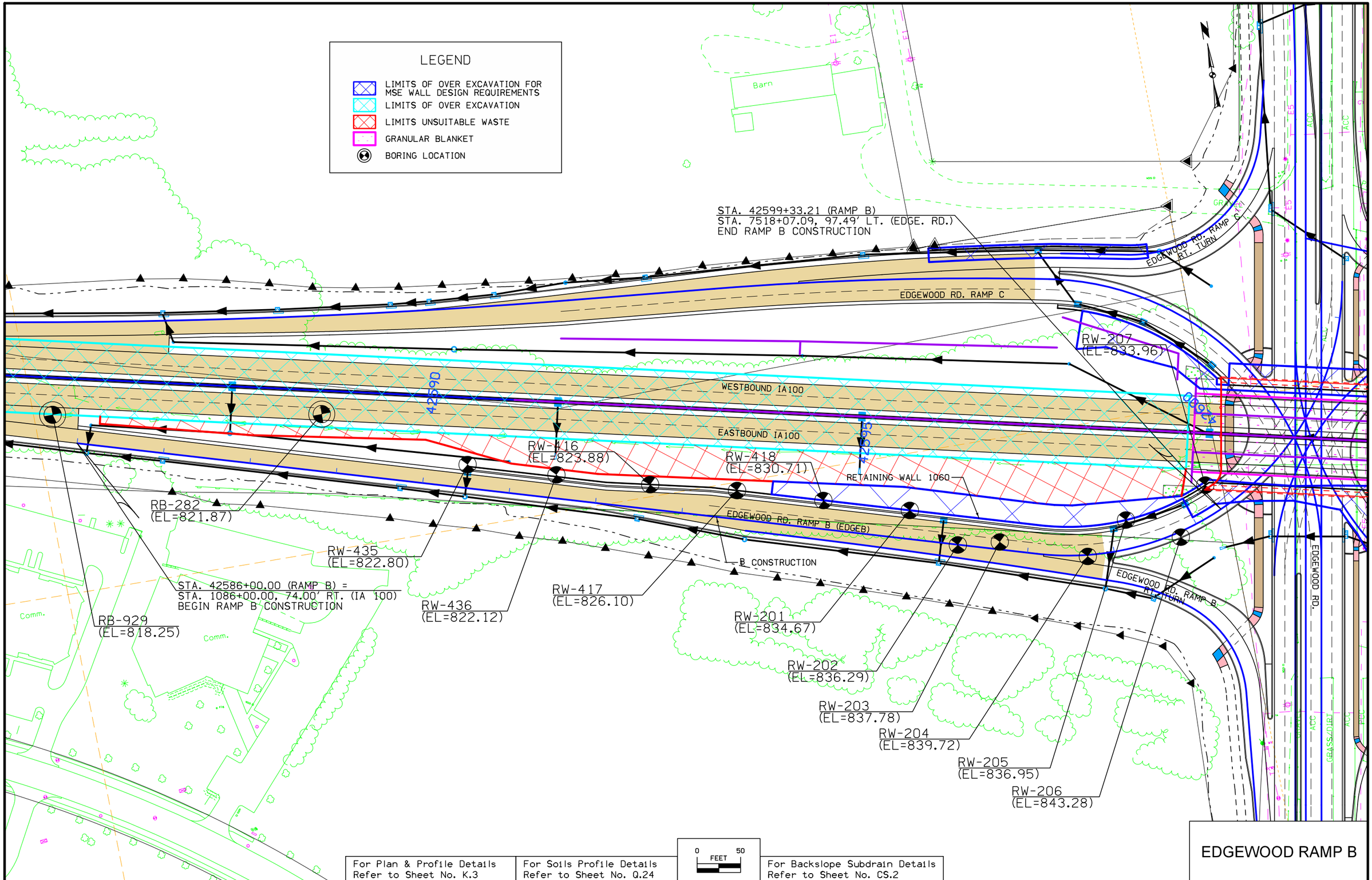

For Plan & Profile Details Refer to Sheet No. K.3

For Soils Profile Details Refer to Sheet No. Q.24

For Backslope Subdrain Details Refer to Sheet No. CS.2

EDGEWOOD RAMP B

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.23

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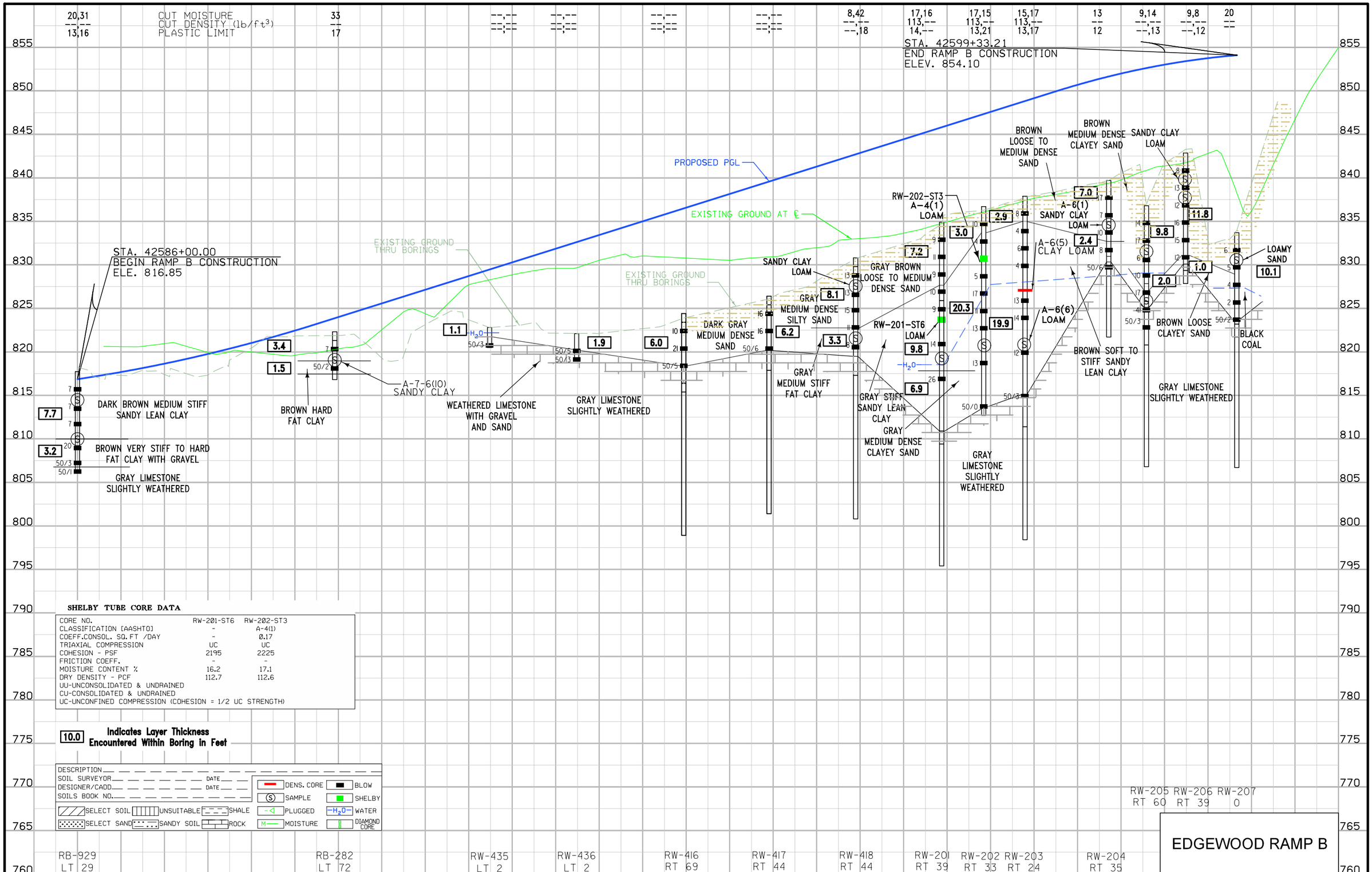

SHELBY TUBE CORE DATA

CORE NO.	RW-201-ST6	RW-202-ST3
CLASSIFICATION [AASHTO]	-	A-4(1)
COEFF.CONSOL. SQ.FT /DAY	-	0.17
TRIAXIAL COMPRESSION	UC	UC
COHESION - PSF	2195	2225
FRICTION COEFF.	-	-
MOISTURE CONTENT %	16.2	17.1
DRY DENSITY - PCF	112.7	112.6

UU-UNCONSOLIDATED & UNDRAINED
CU-CONSOLIDATED & UNDRAINED
UC-UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)

10.0 Indicates Layer Thickness Encountered Within Boring in Feet

DESCRIPTION
SOIL SURVEYOR DATE
DESIGNER/CADD DATE
SOILS BOOK NO.
SELECT SOIL, UNSUITABLE, SHALE, SELECT SAND, SANDY SOIL, ROCK
DENS. CORE, BLOW, SAMPLE, SHELBY, PLUGGED, WATER, MOISTURE, DIAMOND CORE

EDGEWOOD RAMP B

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.24

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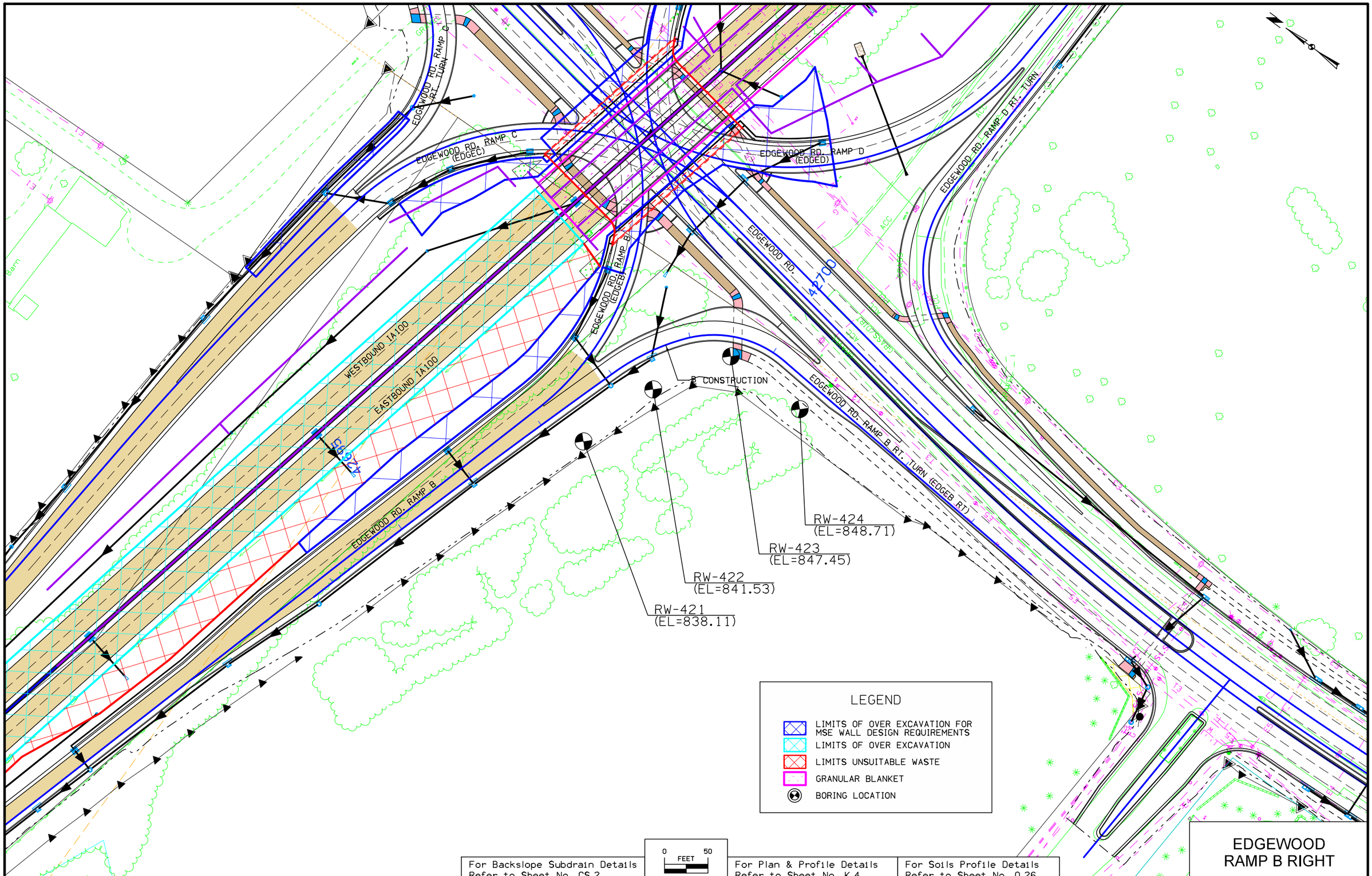

For Backslope Subdrain Details Refer to Sheet No. CS.2

For Plan & Profile Details Refer to Sheet No. K.4

For Soils Profile Details Refer to Sheet No. Q.26

EDGEWOOD RAMP B RIGHT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.25

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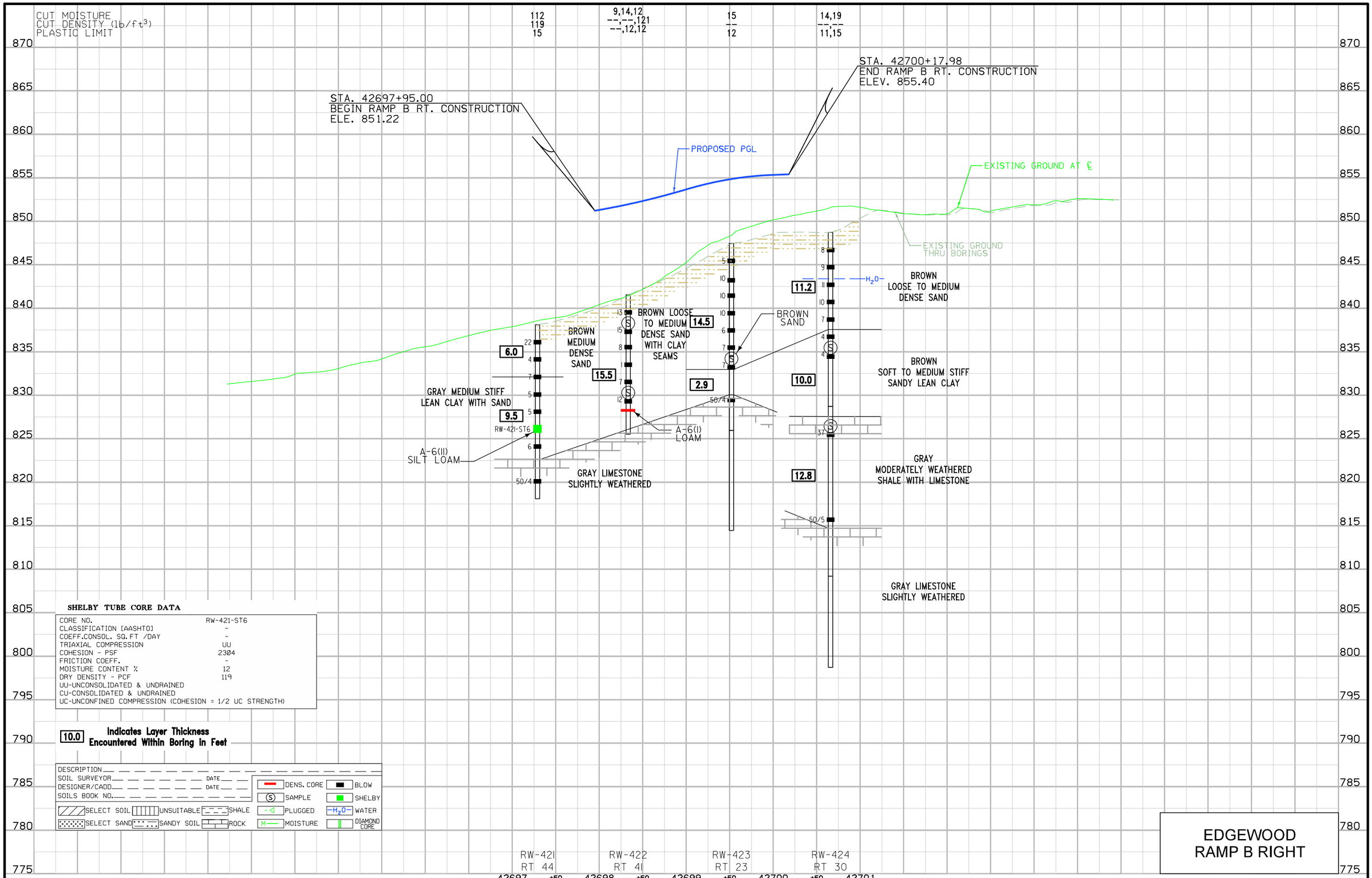

SHELBY TUBE CORE DATA

CORE NO.	RW-421-ST6
CLASSIFICATION [AASHTO]	-
COEFF.CONSOL. SQ.FT /DAY	-
TRIAXIAL COMPRESSION	UU
COHESION - PSF	2304
FRICTION COEFF.	-
MOISTURE CONTENT %	12
DRY DENSITY - PCF	119

UU-UNCONSOLIDATED & UNDRAINED
CU-CONSOLIDATED & UNDRAINED
UC-UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)

10.0 Indicates Layer Thickness Encountered Within Boring in Feet

DESCRIPTION
SOIL SURVEYOR DATE
DESIGNER/CADD DATE
SOILS BOOK NO.

SELECT SOIL, UNSUITABLE, SHALE, SELECT SAND, SANDY SOIL, ROCK

DENS. CORE, BLOW, SAMPLE, SHELBY, PLUGGED, WATER, MOISTURE, DIAMOND CORE

EDGEWOOD
RAMP B RIGHT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.26	

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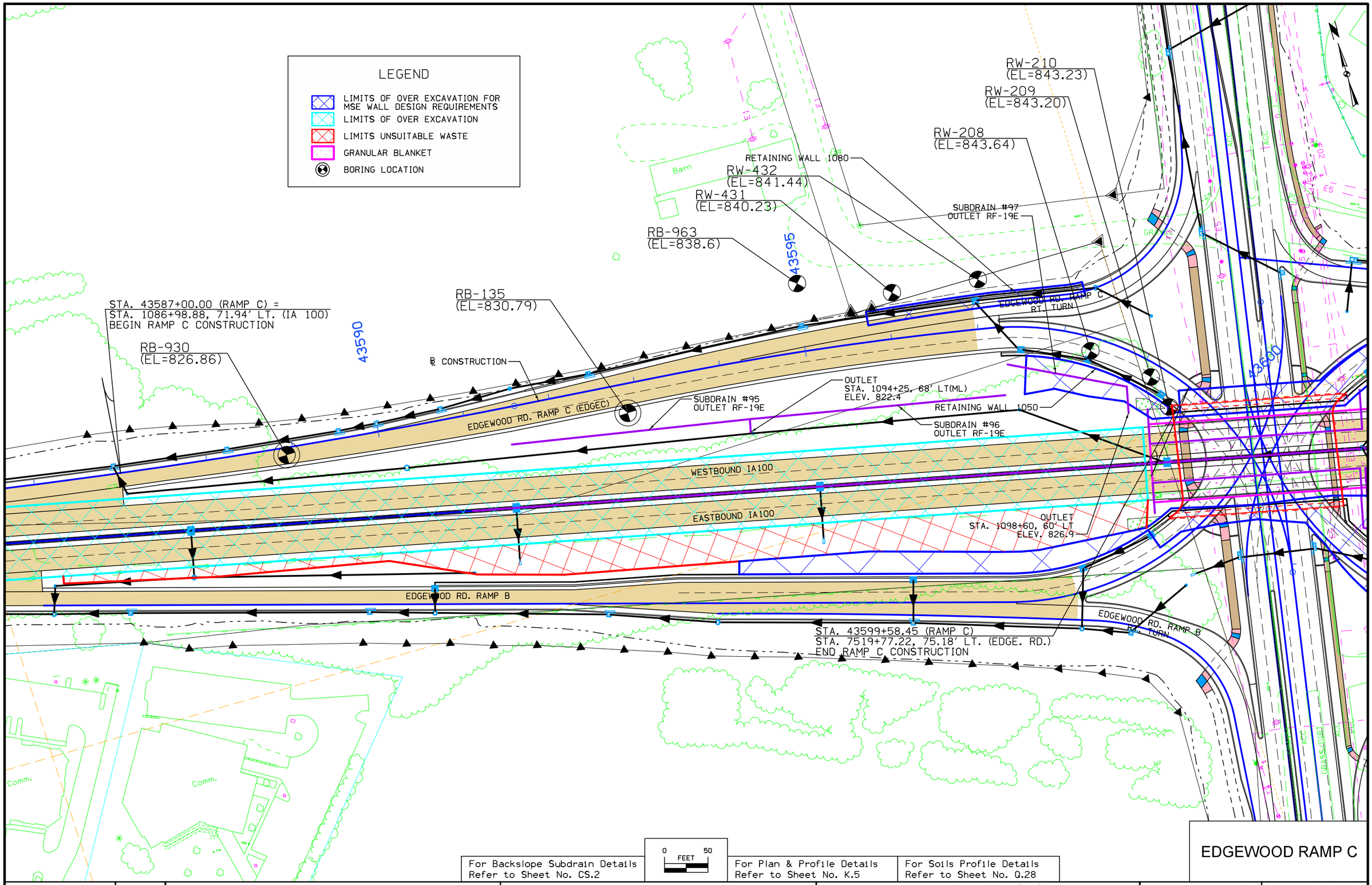

For Backslope Subdrain Details Refer to Sheet No. CS.2

For Plan & Profile Details Refer to Sheet No. K.5

For Soils Profile Details Refer to Sheet No. Q.28

EDGEWOOD RAMP C

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.27

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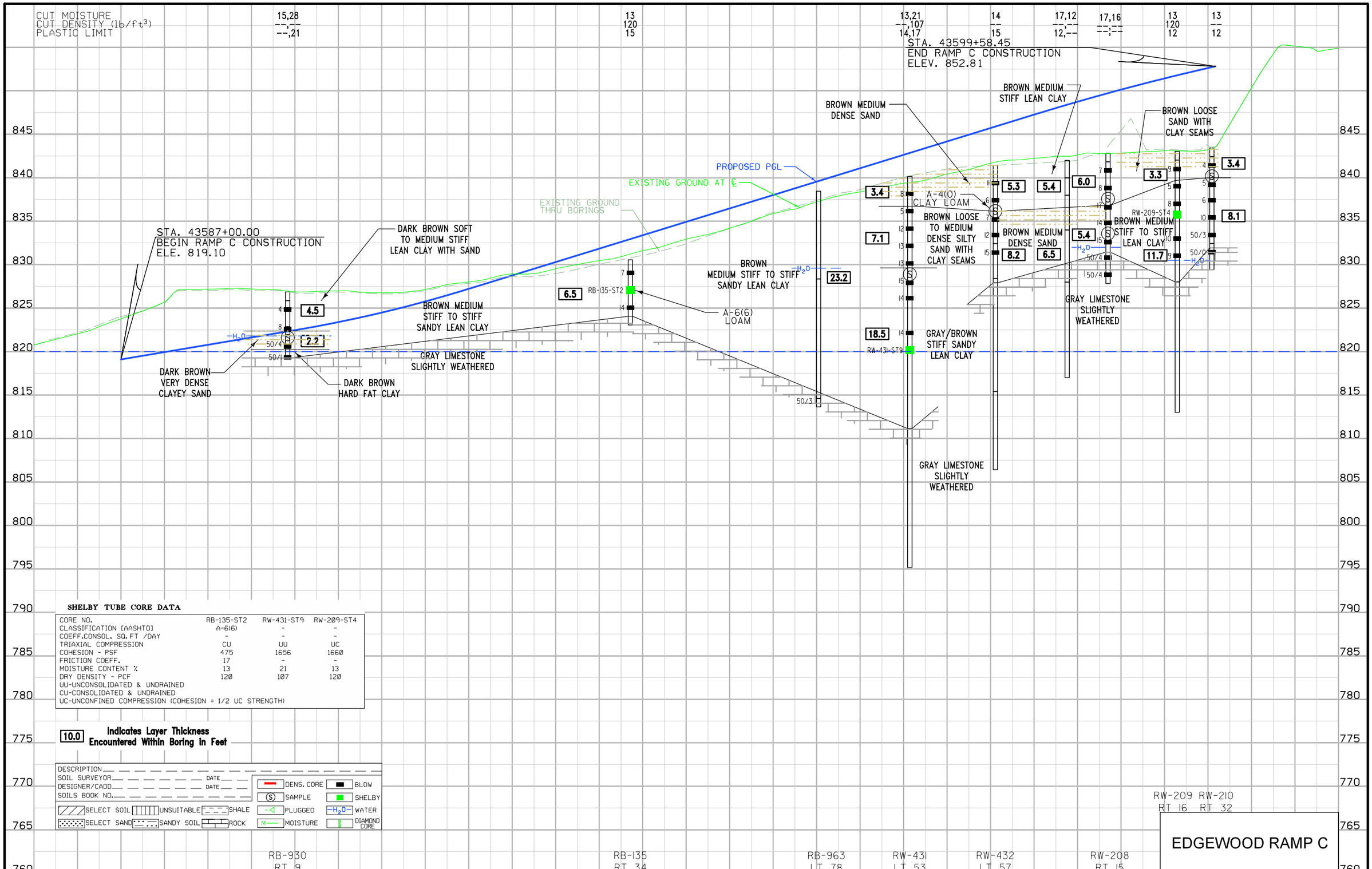

SHELBY TUBE CORE DATA

CORE NO.	RB-135-ST2	RW-431-ST9	RW-209-ST4
CLASSIFICATION [AASHTO]	A-6(6)	-	-
COEFF.CONSOL. SQ.FT /DAY	-	-	-
TRIAXIAL COMPRESSION	CU	UU	UC
COHESION - PSF	475	1656	1660
FRICTION COEFF.	17	-	-
MOISTURE CONTENT %	13	21	13
DRY DENSITY - PCF	120	107	120

UU-UNCONSOLIDATED & UNDRAINED
CU-CONSOLIDATED & UNDRAINED
UC-UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)

10.0 Indicates Layer Thickness Encountered Within Boring in Feet

DESCRIPTION
SOIL SURVEYOR DATE
DESIGNER/CADD DATE
SOILS BOOK NO.

SELECT SOIL, UNSUITABLE, SHALE, SELECT SAND, SANDY SOIL, ROCK

DENS. CORE, BLOW, SAMPLE, SHELBY, PLUGGED, WATER, MOISTURE, DIAMOND CORE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.28

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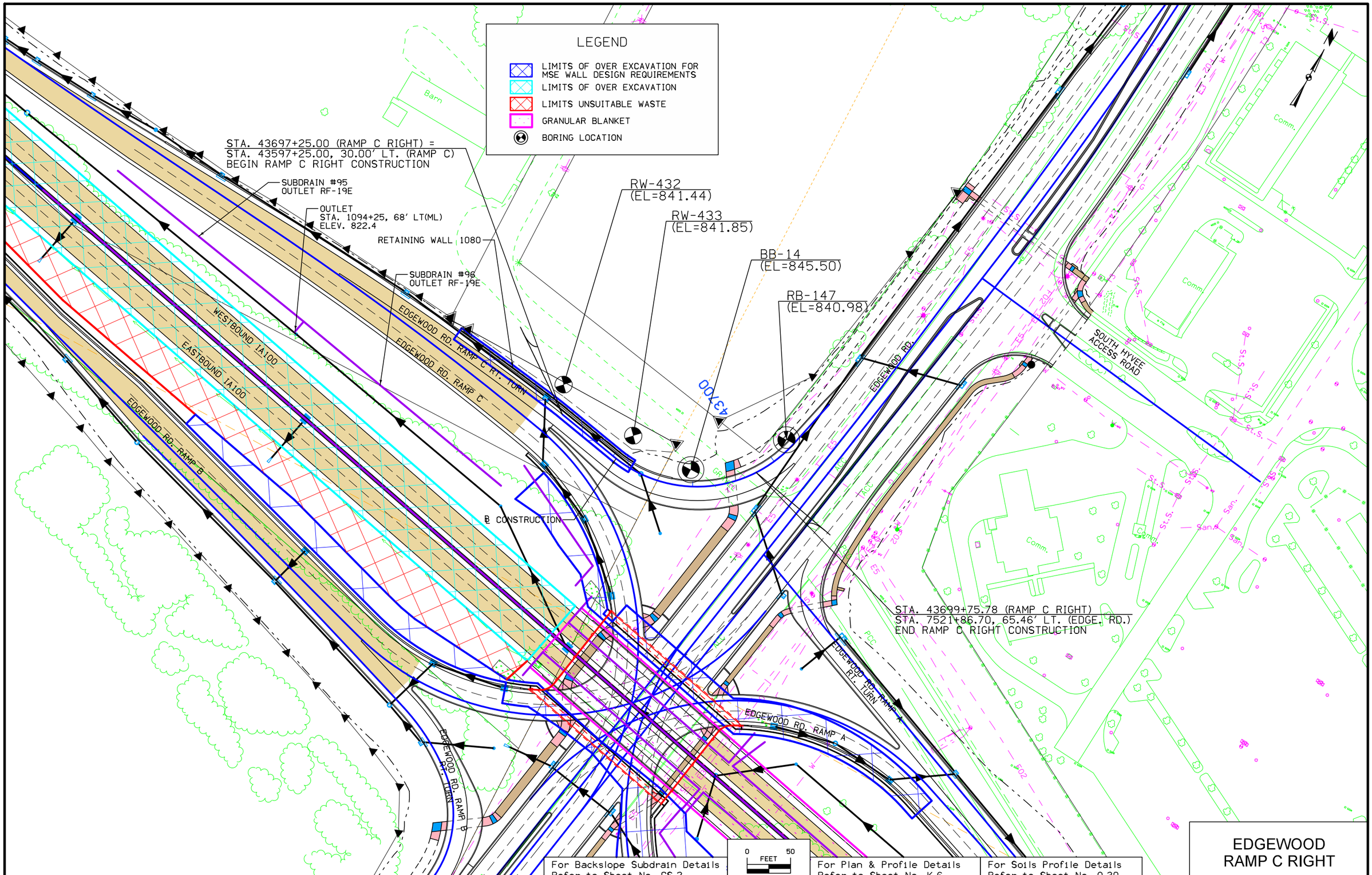

For Backslope Subdrain Details
Refer to Sheet No. CS.2

For Plan & Profile Details
Refer to Sheet No. K.6

For Soils Profile Details
Refer to Sheet No. Q.30

EDGEWOOD
RAMP C RIGHT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.29	

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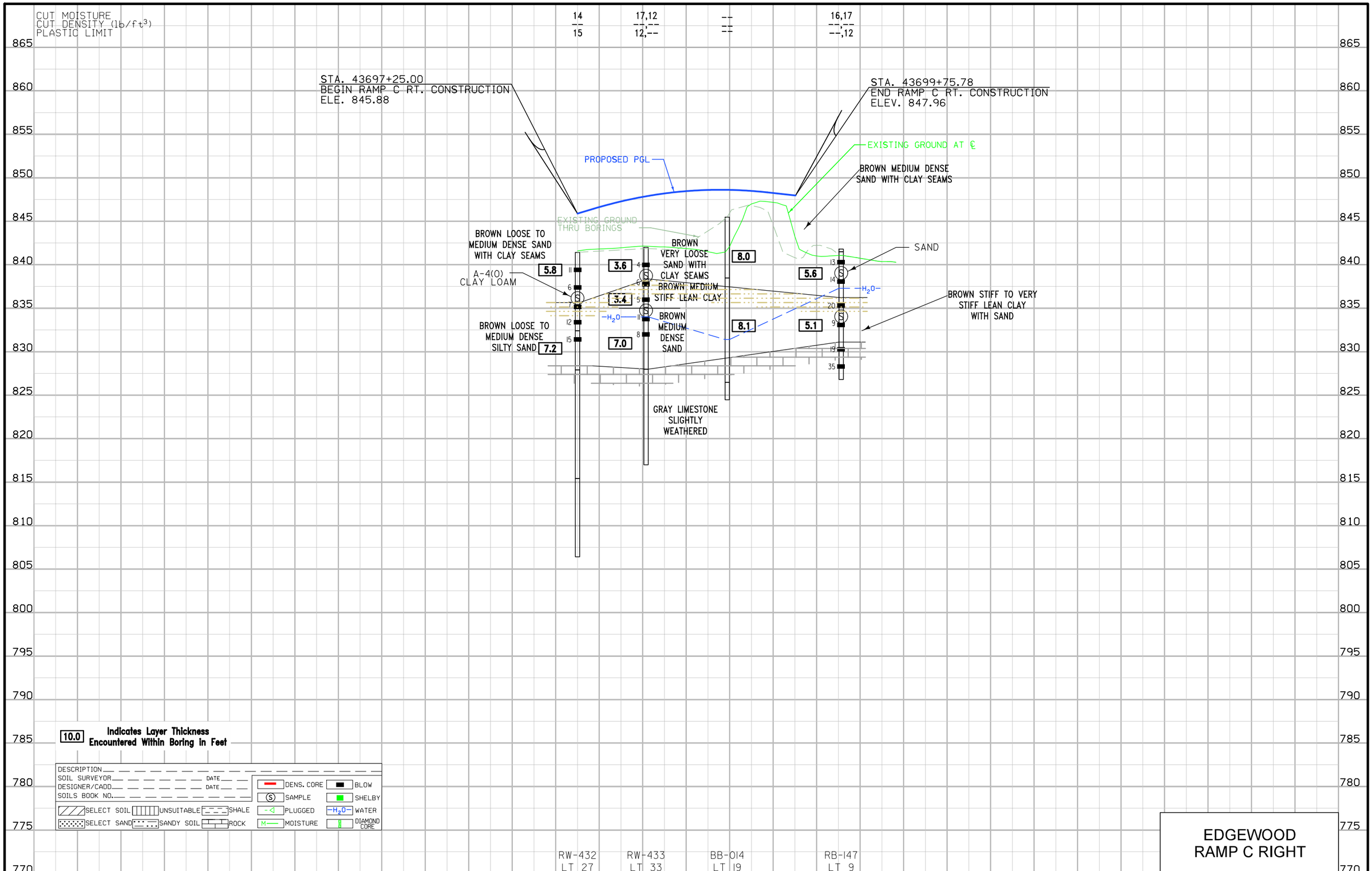

EDGEWOOD
RAMP C RIGHT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER Q.30

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STA. 44500+01.79 (RAMP D) =
STA. 7518+06.04, 46.36' RT. (EDGE. RD.)
BEGIN RAMP D CONSTRUCTION

EDGEWOOD RD. RAMP A
RT. TURN

EDGEWOOD RD. RAMP A

RW-211
(EL=856.34)

WESTBOUND IA100

EASTBOUND IA100

TEMPORARY BARRIERS
PORTION OF ROAD NOT BEING USED

TEMPORARY BARRIERS

STA. 44513+75.00 (RAMP D)
STA. 1113+77.19, 72.09' RT. (IA 100)
END RAMP D CONSTRUCTION

OUTLET
STA. 1101+20, 53' RT(ML)
ELEV. 826.5

RETAINING WALL 1060

SUBDRAIN #99
OUTLET RF-19E

SUBDRAIN #100
OUTLET RF-19E

OUTLET
STA. 1105+00, 112' RT(ML)
ELEV. 828.4

EDGEWOOD RD. RAMP D (EDGED)

SUBDRAIN #101
OUTLET RF-19E

RB-294
(EL=838.30)

RB-968
(EL=837.00)

RB-162
(EL=837.71)

STOCKPILE

EDGEWOOD RD.

EDGEWOOD RD.
RAMP D
RT. TURN

℄ CONSTRUCTION

RB-967
(EL=841.30)

SB-291
(EL=845.18)

RB-161
(EL=842.04)

OUTLET
STA. 1103+25, 121' RT(ML)
ELEV. 827.6

OUTLET
STA. 1102+50, 91' RT(ML)
ELEV. 826.5

SUBDRAIN #98
OUTLET RF-19E

LEGEND

- LIMITS OF OVER EXCAVATION FOR MSE WALL DESIGN REQUIREMENTS
- LIMITS OF OVER EXCAVATION
- LIMITS UNSUITABLE WASTE
- GRANULAR BLANKET
- BORING LOCATION

0 FEET 50

For Backslope Subdrain Details
Refer to Sheet No. CS.2

For Plan & Profile Details
Refer to Sheet No. K.7

For Soils Profile Details
Refer to Sheet No. Q.32

EDGEWOOD RAMP D

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER Q.31

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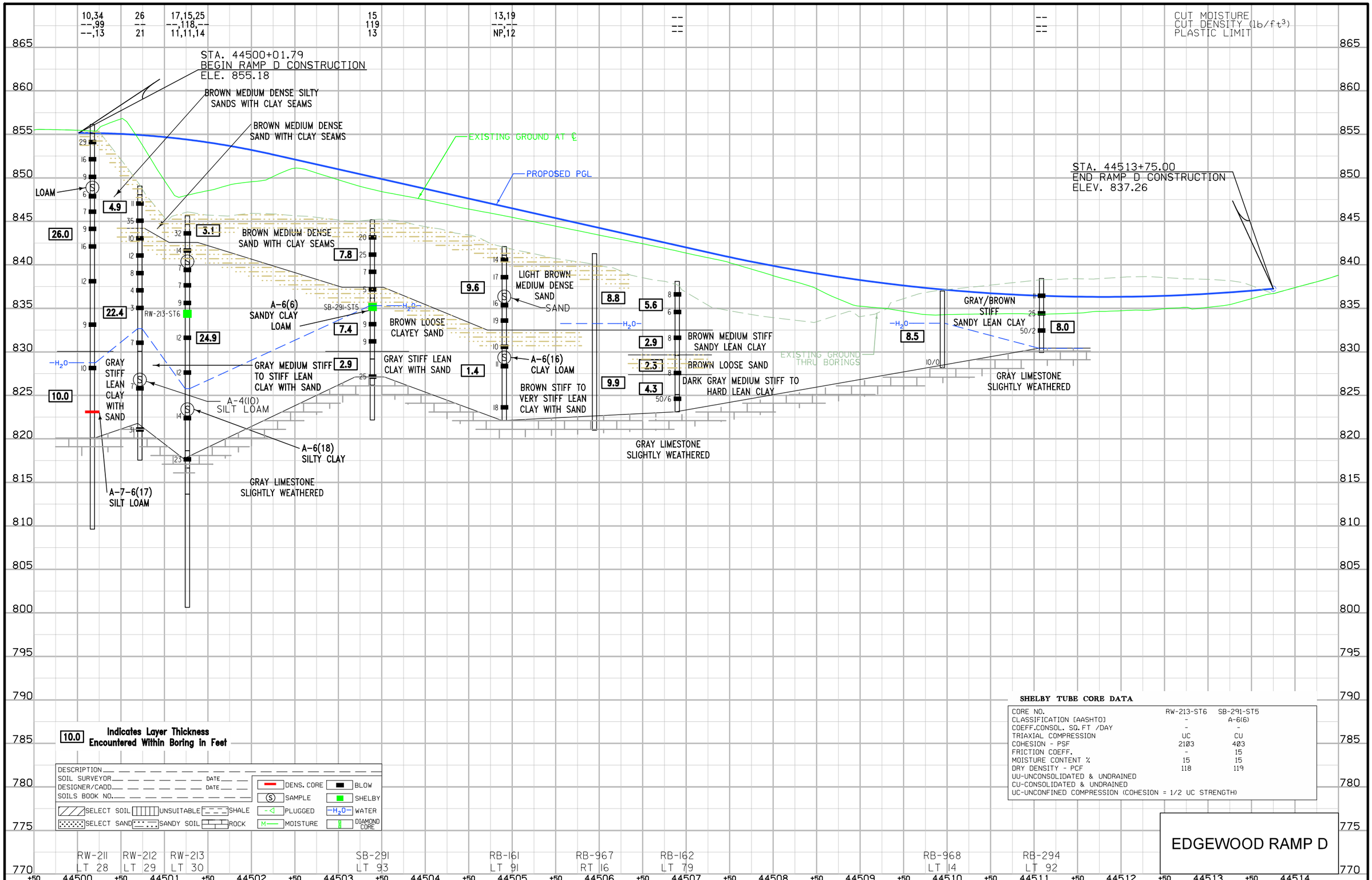

SHELBY TUBE CORE DATA

CORE NO.	RW-213-ST6	SB-291-ST5
CLASSIFICATION [AASHTO]	-	A-6(6)
COEFF.CONSOL. SQ.FT /DAY	-	-
TRIAXIAL COMPRESSION	UC	CU
COHESION - PSF	2103	403
FRICTION COEFF.	-	15
MOISTURE CONTENT %	15	15
DRY DENSITY - PCF	118	119

UU-UNCONSOLIDATED & UNDRAINED
CU-CONSOLIDATED & UNDRAINED
UC-UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)

EDGEWOOD RAMP D

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.32

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EDGEWOOD RD. RAMP B

EDGEWOOD RD. RAMP B RT. TURN

EDGEWOOD RD.

EDGEWOOD RD. RAMP A RT. TURN

EDGEWOOD RD. RAMP A

OUTLET
STA. 1101+20, 53' RT(ML)
ELEV. 826.5

SUBDRAIN #98
OUTLET RF-19E

OUTLET
STA. 1102+50, 91' RT(ML)
ELEV. 826.5

℄ CONSTRUCTION

SUBDRAIN #99
OUTLET RF-19E

WESTBOUND IA100

EASTBOUND IA100

OUTLET
STA. 1103+25, 121' RT(ML)
ELEV. 827.6

STA. 44599+92.45 (RAMP D RIGHT) =
STA. 7514+50.00, 74.00' RT. (EDGE. RD.)
BEGIN RAMP D RIGHT CONSTRUCTION

EDGEWOOD RD. RAMP D RIGHT

BB-16
(EL=852.71)

SUBDRAIN #101
OUTLET RF-19E

EDGEWOOD RD. RAMP D

BB-17
(EL=851.93)

STA. 44603+75.00 (RAMP D RIGHT)
STA. 44503+75.00, 30.00' RT. (RAMP D)
END RAMP D RIGHT CONSTRUCTION

SUBDRAIN #100
OUTLET RF-19E

OUTLET
STA. 1105+00, 112' RT(ML)
ELEV. 828.4

TEMPORARY BARRIERS
AND MITIGATION OF TRAFFIC INTO MSE WALL

LEGEND

- LIMITS OF OVER EXCAVATION FOR MSE WALL DESIGN REQUIREMENTS
- LIMITS OF OVER EXCAVATION
- LIMITS UNSUITABLE WASTE
- GRANULAR BLANKET
- BORING LOCATION

0 FEET 50

For Backslope Subdrain Details
Refer to Sheet No. CS.2

For Plan & Profile Details
Refer to Sheet No. K.8

For Soils Profile Details
Refer to Sheet No. Q.34

EDGEWOOD RAMP D RIGHT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Q.33	

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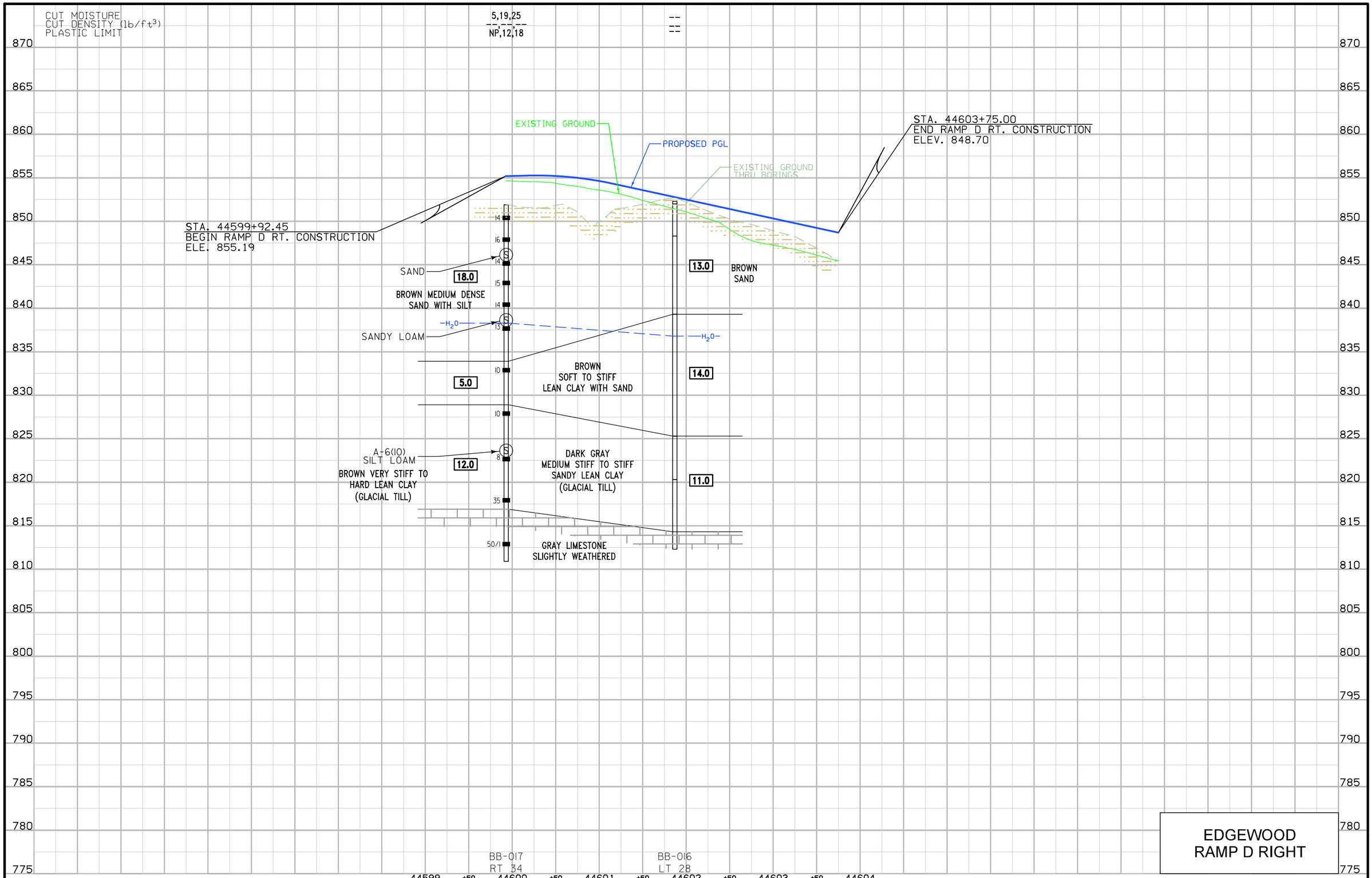

EDGEWOOD
RAMP D RIGHT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER Q.34

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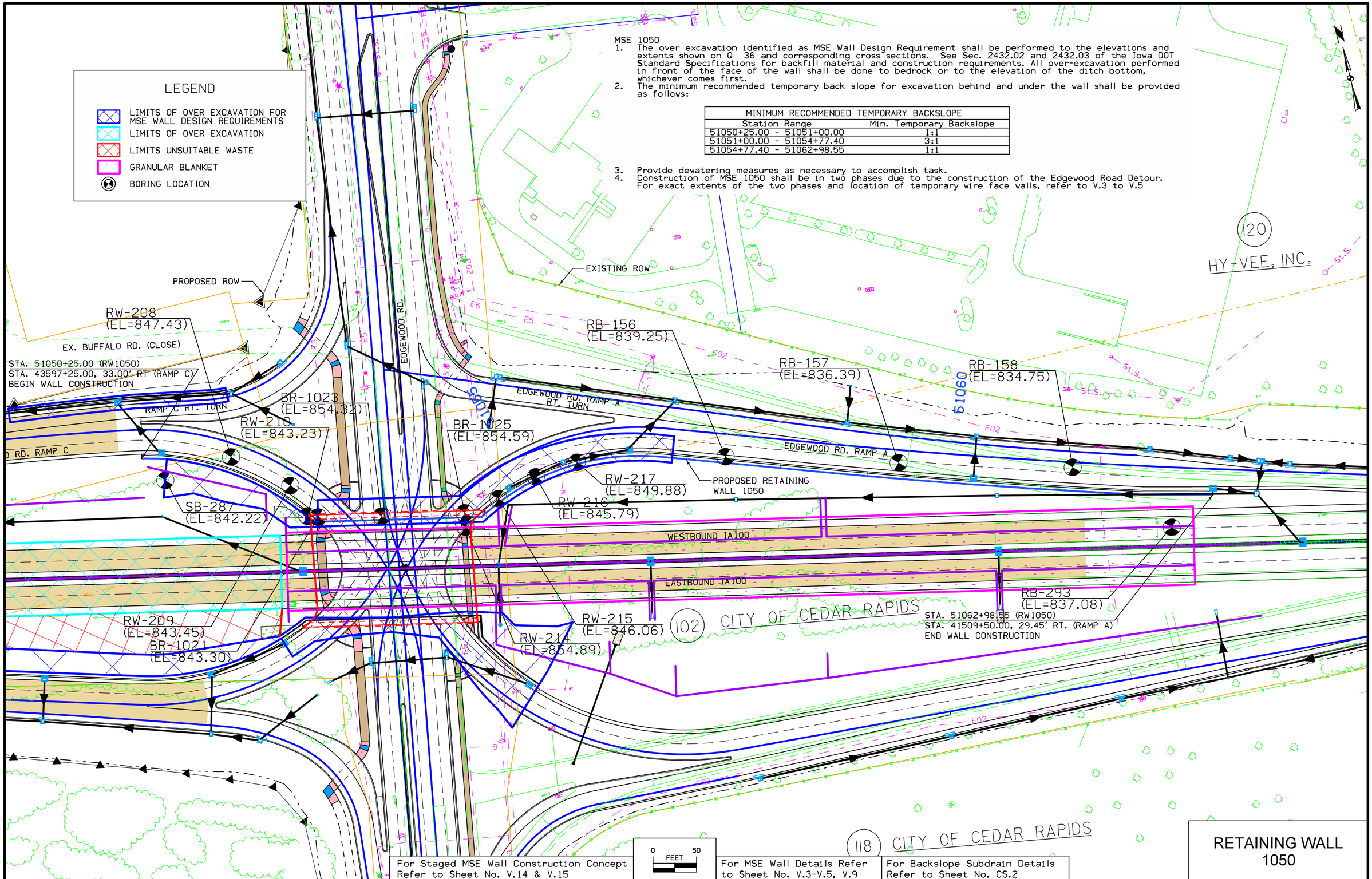
MSE 1050

1. The over excavation identified as MSE Wall Design Requirement shall be performed to the elevations and extents shown on Q 36 and corresponding cross sections. See Sec. 2432.02 and 2432.03 of the Iowa DOT Standard Specifications for backfill material and construction requirements. All over-excavation performed in front of the face of the wall shall be done to bedrock or to the elevation of the ditch bottom, whichever comes first.
2. The minimum recommended temporary back slope for excavation behind and under the wall shall be provided as follows:

MINIMUM RECOMMENDED TEMPORARY BACKSLOPE	
Station Range	Min. Temporary Backslope
51050+25.00 - 51051+00.00	1:1
51051+00.00 - 51054+77.40	3:1
51054+77.40 - 51062+98.55	1:1

3. Provide dewatering measures as necessary to accomplish task.
4. Construction of MSE 1050 shall be in two phases due to the construction of the Edgewood Road Detour. For exact extents of the two phases and location of temporary wire face walls, refer to V.3 to V.5



For Staged MSE Wall Construction Concept Refer to Sheet No. V.14 & V.15

For MSE Wall Details Refer to Sheet No. V.3-V.5, V.9

For Backslope Subdrain Details Refer to Sheet No. CS.2

RETAINING WALL 1050

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(77)--3H-57	SHEET NUMBER Q.35

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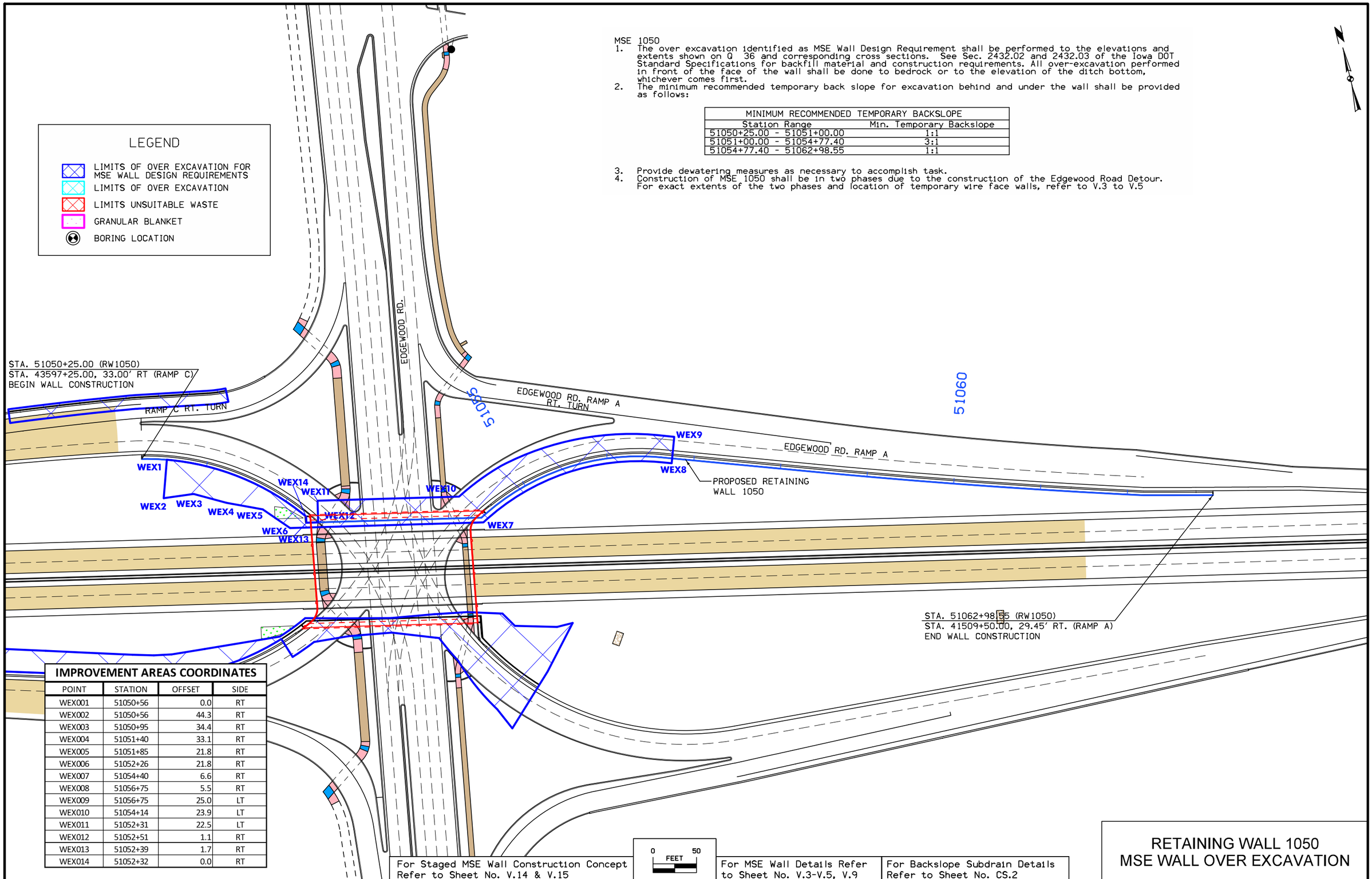
MSE 1050

1. The over excavation identified as MSE Wall Design Requirement shall be performed to the elevations and extents shown on Q 36 and corresponding cross sections. See Sec. 2432.02 and 2432.03 of the Iowa DOT Standard Specifications for backfill material and construction requirements. All over-excavation performed in front of the face of the wall shall be done to bedrock or to the elevation of the ditch bottom, whichever comes first.
2. The minimum recommended temporary back slope for excavation behind and under the wall shall be provided as follows:

MINIMUM RECOMMENDED TEMPORARY BACKSLOPE	
Station Range	Min. Temporary Backslope
51050+25.00 - 51051+00.00	1:1
51051+00.00 - 51054+77.40	3:1
51054+77.40 - 51062+98.55	1:1

3. Provide dewatering measures as necessary to accomplish task.
4. Construction of MSE 1050 shall be in two phases due to the construction of the Edgewood Road Detour. For exact extents of the two phases and location of temporary wire face walls, refer to V.3 to V.5



IMPROVEMENT AREAS COORDINATES

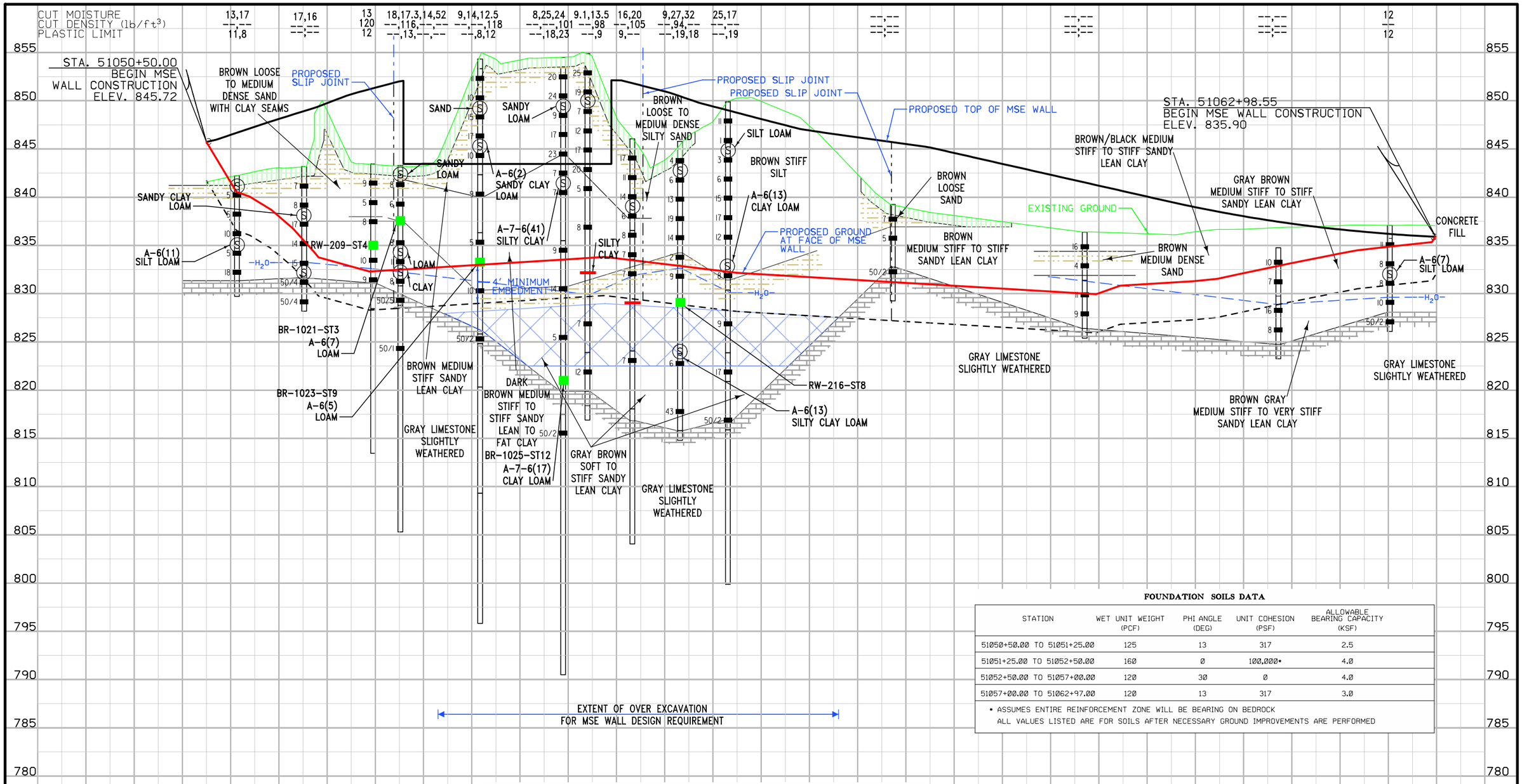
POINT	STATION	OFFSET	SIDE
WEX001	51050+56	0.0	RT
WEX002	51050+56	44.3	RT
WEX003	51050+95	34.4	RT
WEX004	51051+40	33.1	RT
WEX005	51051+85	21.8	RT
WEX006	51052+26	21.8	RT
WEX007	51054+40	6.6	RT
WEX008	51056+75	5.5	RT
WEX009	51056+75	25.0	LT
WEX010	51054+14	23.9	LT
WEX011	51052+31	22.5	LT
WEX012	51052+51	1.1	RT
WEX013	51052+39	1.7	RT
WEX014	51052+32	0.0	RT

For Staged MSE Wall Construction Concept Refer to Sheet No. V.14 & V.15

For MSE Wall Details Refer to Sheet No. V.3-V.5, V.9

For Backslope Subdrain Details Refer to Sheet No. CS.2

RETAINING WALL 1050
MSE WALL OVER EXCAVATION



FOUNDATION SOILS DATA

STATION	WET UNIT WEIGHT (PCF)	PHI ANGLE (DEG)	UNIT COHESION (PSF)	ALLOWABLE BEARING CAPACITY (KSF)
51050+50.00 TO 51051+25.00	125	13	317	2.5
51051+25.00 TO 51052+50.00	160	0	100,000*	4.0
51052+50.00 TO 51057+00.00	120	30	0	4.0
51057+00.00 TO 51062+97.00	120	13	317	3.0

* ASSUMES ENTIRE REINFORCEMENT ZONE WILL BE BEARING ON BEDROCK
ALL VALUES LISTED ARE FOR SOILS AFTER NECESSARY GROUND IMPROVEMENTS ARE PERFORMED

SHELBY TUBE CORE DATA

CORE NO.	RW-209-ST4	BR-1021-ST3	BR-1023-ST9	BR-1025-ST12	RW-216-ST8
CLASSIFICATION [AASHTO]	-	A-6(7)	A-6(5)	A-7-6(17)	-
COEFF.CONSOL. SQ.FT /DAY	-	0.03	0.15	-	-
TRIAXIAL COMPRESSION	UC	CU	CU	CU	UC
COHESION - PSF	1660	317	43.2	245	965
FRICTION COEFF.	-	13	19	13	-
MOISTURE CONTENT %	12.8	17.3	12.5	24	27
DRY DENSITY - PCF	120.3	116	118	101	94

UU-UNCONSOLIDATED & UNDRAINED
CU-CONSOLIDATED & UNDRAINED
UC-UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)

DESCRIPTION
SOIL SURVEYOR DATE
DESIGNER/CADD DATE
SOILS BOOK NO.
SELECT SOIL, UNSUITABLE, SHALE, SELECT SAND, SANDY SOIL, ROCK
DENS. CORE, BLOW, SAMPLE, SHELBY, PLUGGED, WATER, MOISTURE, DIAMOND CORE

RETAINING WALL 1050

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(77)--3H-57	SHEET NUMBER Q.36

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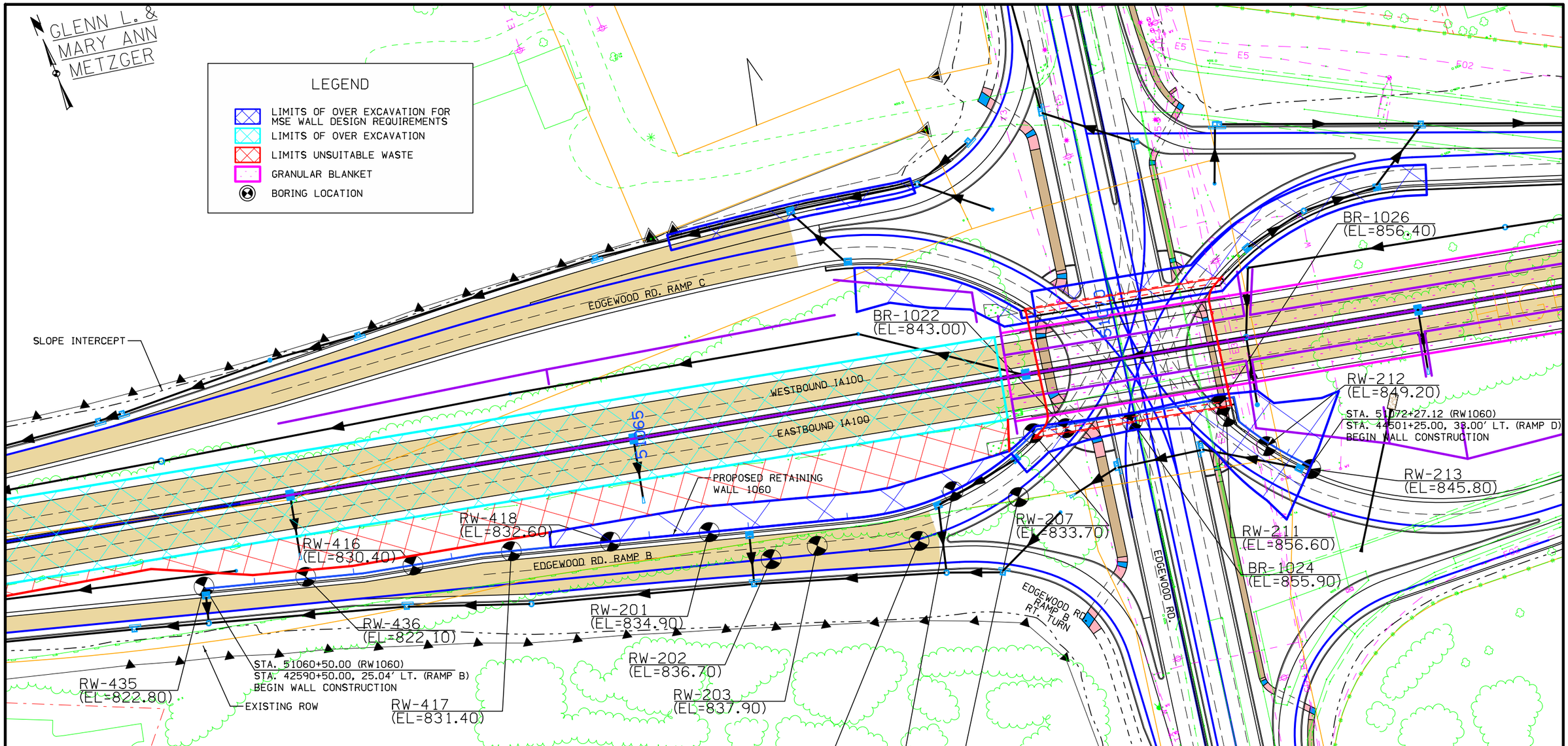

MSE RETAINING WALL 1060:

1. The over excavation identified as MSE Wall Design Requirement shall be performed to the elevations and extents shown on Q.38 and corresponding cross sections. See Sec. 2432.02 and 2432.03 of the Iowa DOT Standard Specifications for backfill material and construction requirements. All over excavation performed in front of the face of the wall shall be done to bedrock or to the elevation of the ditch bottom, whichever comes first.
2. The minimum recommended temporary back slope for excavation behind and under the wall shall be provided as follows:

MINIMUM RECOMMENDED TEMPORARY BACKSLOPE	
Station Range	Min. Temporary Backslope
51060+50.00 - 51068+75.00	1:1
51068+75.00 - 51072+27.12	3:1

3. Provide dewatering measures as necessary to accomplish task.
4. Construction of MSE 1060 shall be in two phases due to the construction of the Edgewood Road Detour.

For Backslope Subdrain Details Refer to Sheet No. CS.2

For Staged MSE Wall Construction Concept Refer to Sheet No. V.14 & V.15

0 FEET 50

For MSE Wall Details Refer to Sheet No. V.6-V.7, V.9

RETAINING WALL 1060

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(77)--3H-57	SHEET NUMBER Q.37

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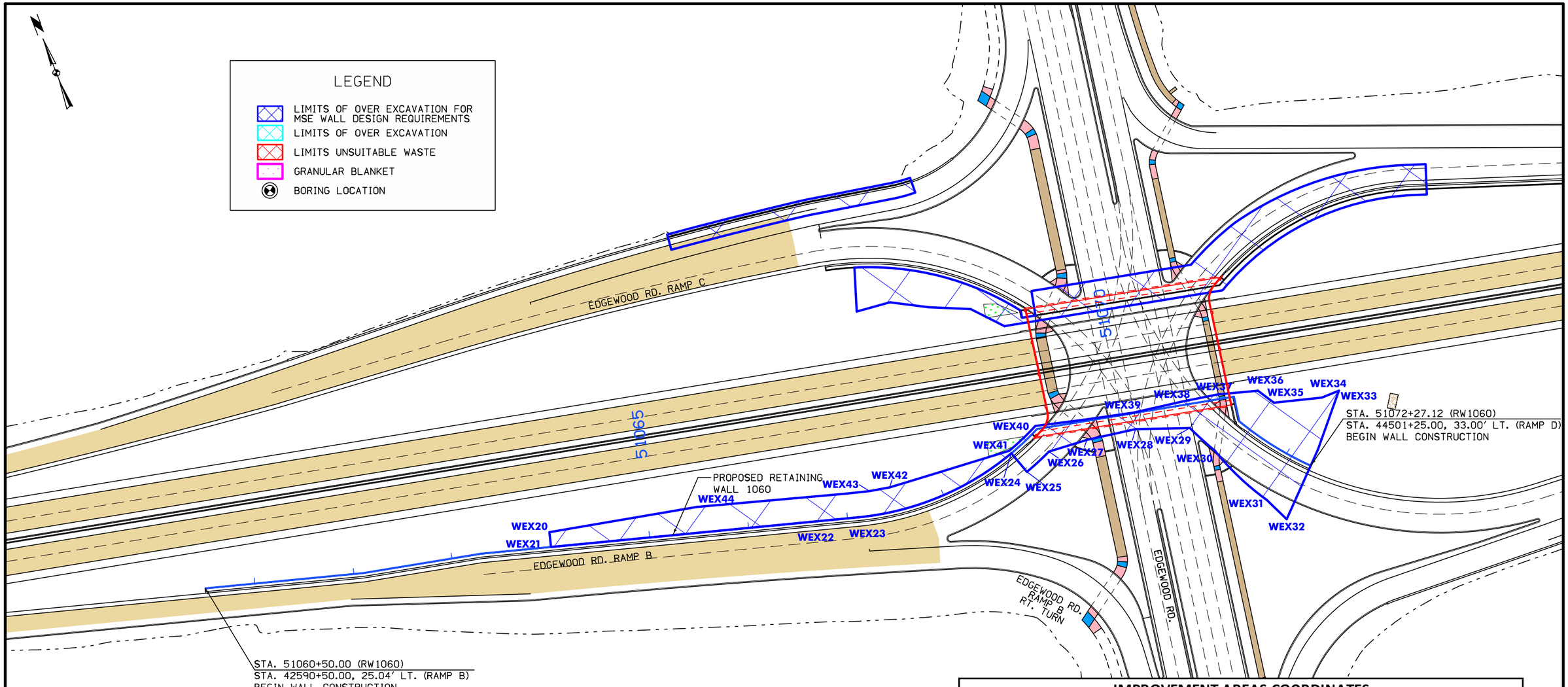


MSE RETAINING WALL 1060:

1. The over excavation identified as MSE Wall Design Requirement shall be performed to the elevations and extents shown on Q.38 and corresponding cross sections. See Sec. 2432.02 and 2432.03 of the Iowa DOT Standard Specifications for backfill material and construction requirements. All over excavation performed in front of the face of the wall shall be done to bedrock or to the elevation of the ditch bottom, whichever comes first.
2. The minimum recommended temporary back slope for excavation behind and under the wall shall be provided as follows:

MINIMUM RECOMMENDED TEMPORARY BACKSLOPE	
Station Range	Min. Temporary Backslope
51060+50.00 - 51068+75.00	1:1
51068+75.00 - 51072+27.12	3:1

3. Provide dewatering measures as necessary to accomplish task.
4. Construction of MSE 1060 shall be in two phases due to the construction of the Edgewood Road Detour.

IMPROVEMENT AREAS COORDINATES

POINT	STATION	OFFSET	SIDE	POINT	STATION	OFFSET	SIDE
WEX020	51064+00	15.0	LT	WEX033	51072+13	80.3	LT
WEX021	51064+00	0.0	RT	WEX034	51071+97	66.4	LT
WEX022	51066+80	0.0	RT	WEX035	51071+52	36.2	LT
WEX023	51067+11	0.0	RT	WEX036	51071+30	35.6	LT
WEX024	51068+80	0.0	RT	WEX037	51071+01	5.9	LT
WEX025	51068+80	24.4	RT	WEX038	51070+63	4.6	LT
WEX026	51069+24	23.3	RT	WEX039	51070+13	1.6	LT
WEX027	51069+63	17.9	RT	WEX040	51069+14	4.3	LT
WEX028	51070+13	15.2	RT	WEX041	51068+80	3.3	LT
WEX029	51070+63	22.4	RT	WEX042	51067+49	24.6	LT
WEX030	51071+35	38.5	RT	WEX043	51067+26	24.7	LT
WEX031	51071+97	50.5	RT	WEX044	51065+50	25.9	LT
WEX032	51072+16	59.0	RT				

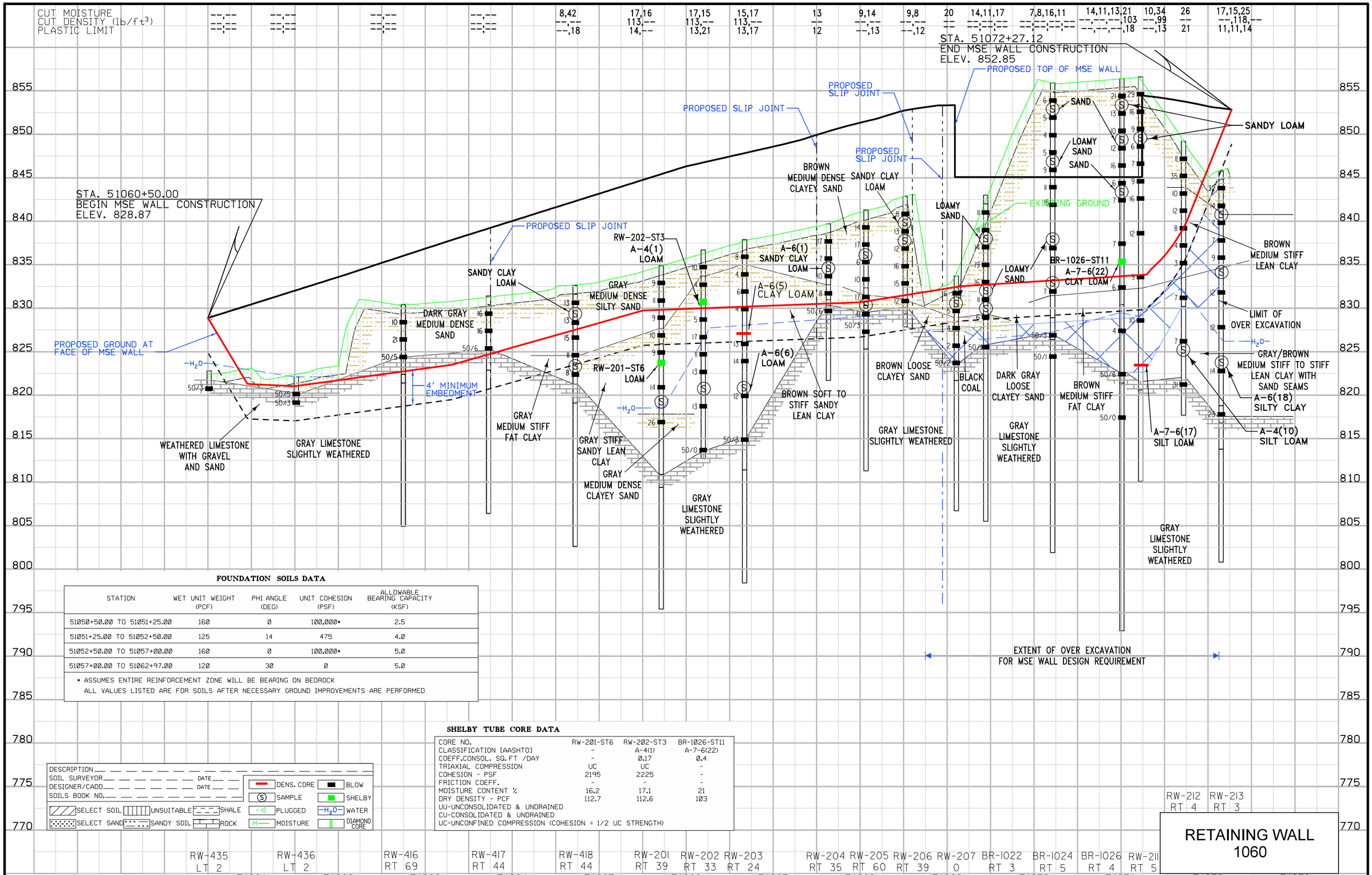
For Backslope Subdrain Details Refer to Sheet No. CS.2

For Staged MSE Wall Construction Concept Refer to Sheet No. V.14 & V.15

0 50 FEET

For MSE Wall Details Refer to Sheet No. V.6-V.7, V.9

RETAINING WALL 1060
MSE WALL OVER EXCAVATION



FOUNDATION SOILS DATA

STATION	WET UNIT WEIGHT (PCF)	PHI ANGLE (DEG)	UNIT COHESION (PSF)	ALLOWABLE BEARING CAPACITY (KSF)
51050+50.00 TO 51051+25.00	160	0	100.000*	2.5
51051+25.00 TO 51052+50.00	125	14	475	4.0
51052+50.00 TO 51057+00.00	160	0	100.000*	5.0
51057+00.00 TO 51062+97.00	120	30	0	5.0

* ASSUMES ENTIRE REINFORCEMENT ZONE WILL BE BEARING ON BEDROCK
ALL VALUES LISTED ARE FOR SOILS AFTER NECESSARY GROUND IMPROVEMENTS ARE PERFORMED

SHELBY TUBE CORE DATA

CORE NO.	RW-201-ST6	RW-202-ST3	BR-1026-ST11
CLASSIFICATION [AASHTO]	-	A-4(1)	A-7-6(22)
COEFF.CONSOL. SQ.FT /DAY	-	0.17	0.4
TRIAXIAL COMPRESSION	UC	UC	-
COHESION - PSF	2195	2225	-
FRICTION COEFF.	-	-	-
MOISTURE CONTENT %	16.2	17.1	21
DRY DENSITY - PCF	112.7	112.6	103

UU-UNCONSOLIDATED & UNDRAINED
CU-CONSOLIDATED & UNDRAINED
UC-UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(77)--3H-57	SHEET NUMBER Q.38

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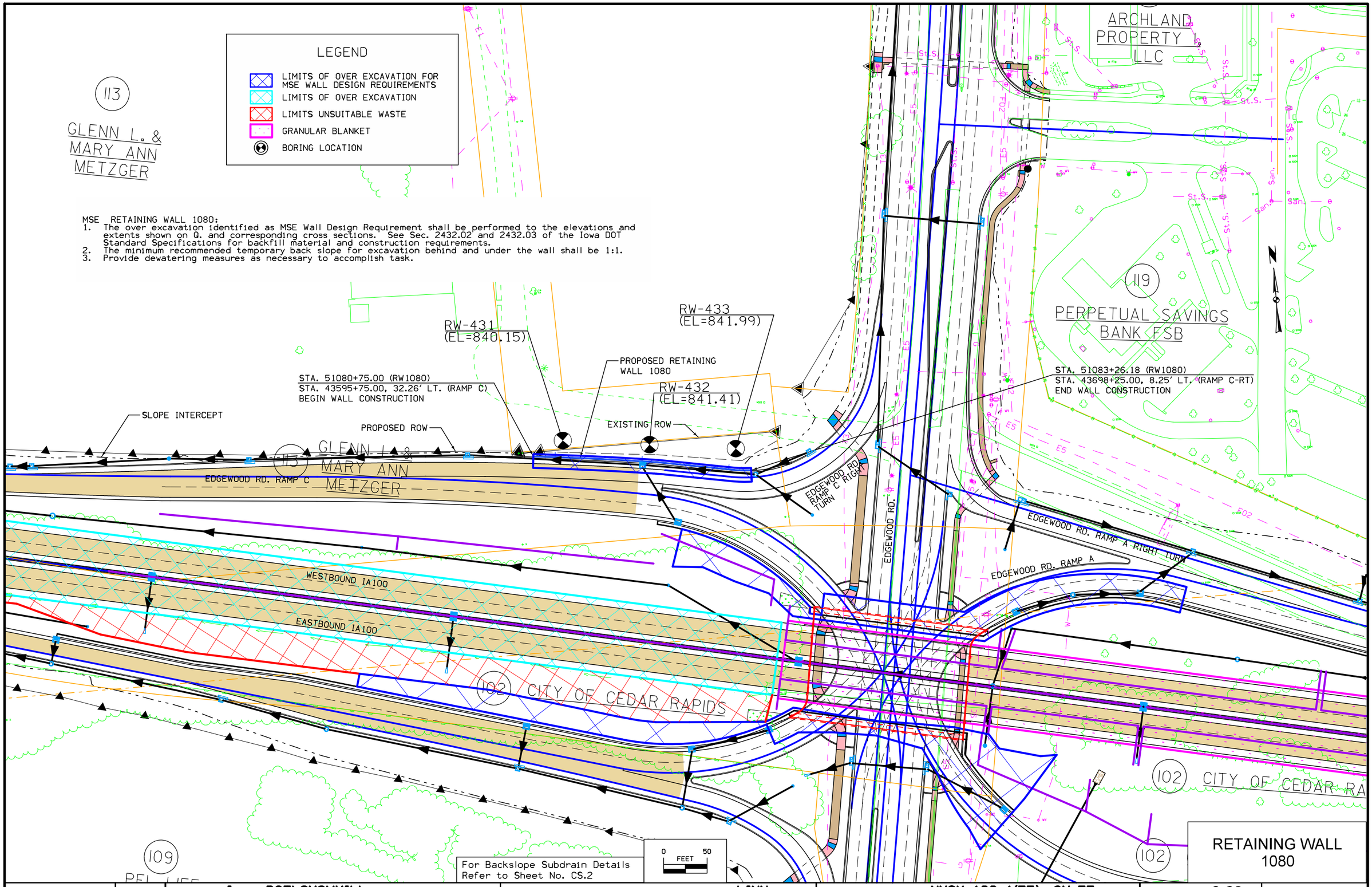

MSE RETAINING WALL 1080:

1. The over excavation identified as MSE Wall Design Requirement shall be performed to the elevations and extents shown on Q. and corresponding cross sections. See Sec. 2432.02 and 2432.03 of the Iowa DOT Standard Specifications for backfill material and construction requirements.
2. The minimum recommended temporary back slope for excavation behind and under the wall shall be 1:1.
3. Provide dewatering measures as necessary to accomplish task.

For Backslope Subdrain Details Refer to Sheet No. CS.2

RETAINING WALL 1080

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(77)--3H-57	SHEET NUMBER Q.39

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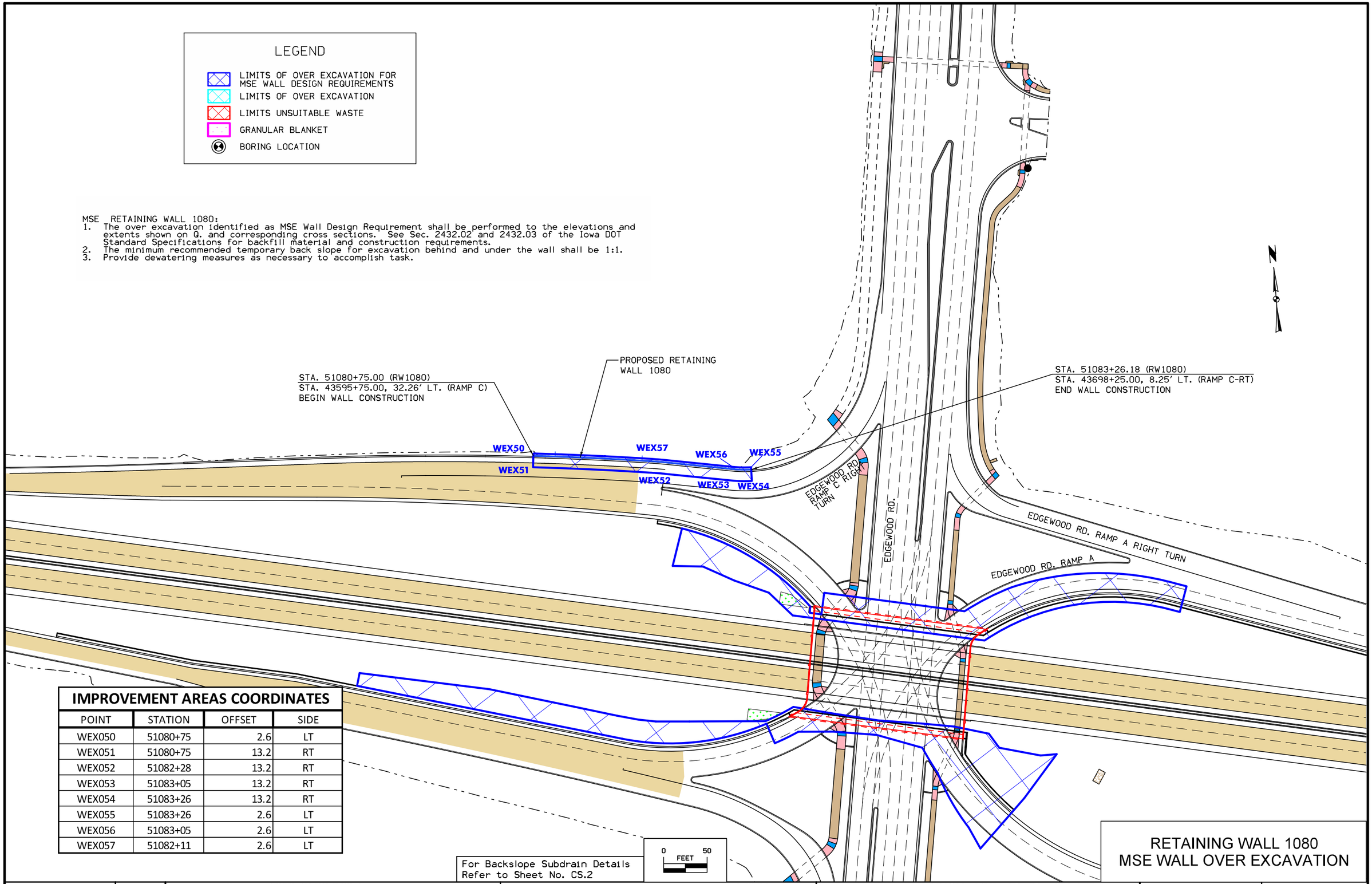
LEGEND

- LIMITS OF OVER EXCAVATION FOR MSE WALL DESIGN REQUIREMENTS
- LIMITS OF OVER EXCAVATION
- LIMITS UNSUITABLE WASTE
- GRANULAR BLANKET
- BORING LOCATION

MSE RETAINING WALL 1080:

1. The over excavation identified as MSE Wall Design Requirement shall be performed to the elevations and extents shown on Q. and corresponding cross sections. See Sec. 2432.02 and 2432.03 of the Iowa DOT Standard Specifications for backfill material and construction requirements.
2. The minimum recommended temporary back slope for excavation behind and under the wall shall be 1:1.
3. Provide dewatering measures as necessary to accomplish task.

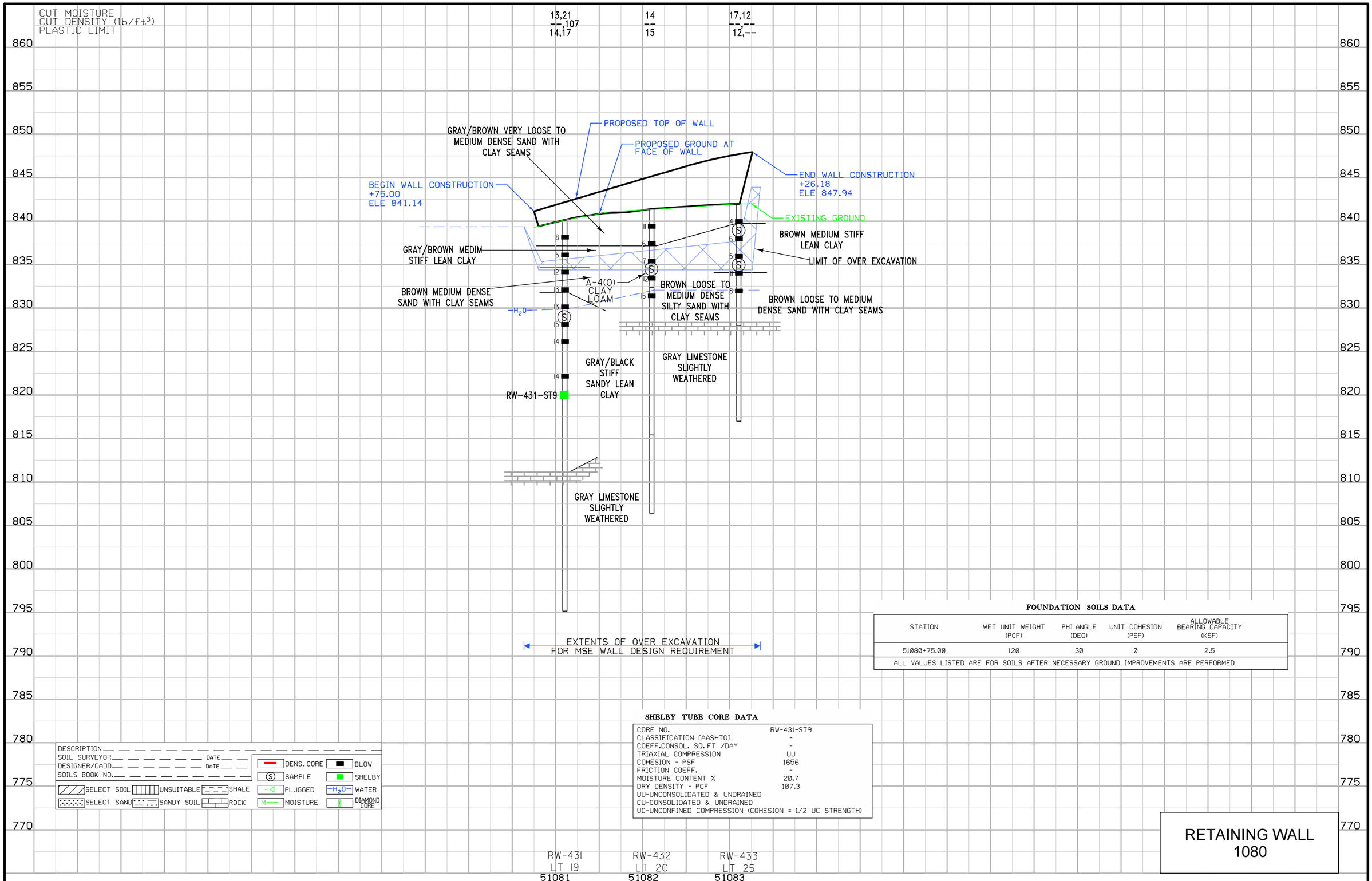


IMPROVEMENT AREAS COORDINATES

POINT	STATION	OFFSET	SIDE
WEX050	51080+75	2.6	LT
WEX051	51080+75	13.2	RT
WEX052	51082+28	13.2	RT
WEX053	51083+05	13.2	RT
WEX054	51083+26	13.2	RT
WEX055	51083+26	2.6	LT
WEX056	51083+05	2.6	LT
WEX057	51082+11	2.6	LT

For Backslope Subdrain Details
Refer to Sheet No. CS.2

RETAINING WALL 1080
MSE WALL OVER EXCAVATION



FOUNDATION SOILS DATA

STATION	WET UNIT WEIGHT (PCF)	PHI ANGLE (DEG)	UNIT COHESION (PSF)	ALLOWABLE BEARING CAPACITY (KSF)
51080+75.00	120	30	0	2.5
ALL VALUES LISTED ARE FOR SOILS AFTER NECESSARY GROUND IMPROVEMENTS ARE PERFORMED				

SHELBY TUBE CORE DATA

CORE NO.	RW-431-ST9
CLASSIFICATION [AASHTO]	-
COEFF.CONSOL. SQ.FT /DAY	-
TRIAXIAL COMPRESSION	UU
COHESION - PSF	1656
FRICTION COEFF.	-
MOISTURE CONTENT %	20.7
DRY DENSITY - PCF	107.3

UU-UNCONSOLIDATED & UNDRAINED
CU-CONSOLIDATED & UNDRAINED
UC-UNCONFINED COMPRESSION (COHESION = 1/2 UC STRENGTH)

RETAINING WALL
1080

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
(1) Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.

Point to Point		Sidewalk Designation	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant? (1)	Measured Slope	Initials	Remarks		FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
			FT	FT	%	Pos. or Neg.		%				Point	Station	Offset	Elevation
W1101	W1102	Ramp Running Slope	13.00	0.81	6.3%	0.5% to 8.3%						W1101	7510+63.00	57.00	851.63
W1101	W1110	Crosswalk Cross Slope - No Yield Condition	6.00	0.09	1.4%	0.0% to 5.0%						W1102	7510+63.00	70.00	852.44
W1102	W1103	Ramp Running Slope	6.01	0.25	4.1%	0.5% to 8.3%						W1103	7510+56.85	70.00	852.69
W1102	W1105	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W1104	7510+56.85	76.00	852.78
W1102	W1109	Landing/Turning Space	6.00	0.09	1.4%	0.1% to 2.0%						W1105	7510+63.00	76.00	852.53
W1103	W1104	Ramp Cross Slope	6.00	0.09	1.5%	0.1% to 2.0%						W1106	7510+69.15	76.00	852.62
W1104	W1105	Ramp Running Slope	6.00	-0.25	-4.1%	0.5% to 8.3%						W1107	7510+76.33	76.00	853.05
W1105	W1106	Landing/Turning Space	6.00	0.09	1.4%	0.1% to 2.0%						W1108	7510+76.33	70.00	852.96
W1106	W1107	Ramp Running Slope	7.00	0.43	6.2%	0.5% to 8.3%						W1109	7510+69.14	70.00	852.53
W1106	W1109	Landing/Turning Space	6.00	-0.09	-1.5%	0.1% to 2.0%						W1110	7510+69.11	57.00	851.72
W1107	W1108	Ramp Cross Slope	6.00	-0.09	-1.5%	0.1% to 2.0%									
W1108	W1109	Ramp Running Slope	7.03	-0.43	-6.2%	0.5% to 8.3%									
W1109	W1110	Ramp Running Slope	13.00	-0.81	-6.3%	0.5% to 8.3%									
W1201	W1202	Crosswalk Cross Slope - No Yield Condition	6.04	0.11	1.8%	0.0% to 5.0%						W1201	7510+63.00	-51.76	851.93
W1201	W1208	Ramp Running Slope	4.57	0.29	6.2%	0.5% to 8.3%						W1202	7510+68.90	-51.09	852.04
W1202	W1203	Ramp Running Slope	4.51	0.28	6.2%	0.5% to 8.3%						W1203	7510+68.89	-55.60	852.32
W1203	W1204	Ramp Running Slope	13.39	0.72	5.4%	0.5% to 8.3%						W1204	7510+82.02	-55.27	853.04
W1203	W1206	Landing/Turning Space	10.03	0.15	1.5%	0.1% to 2.0%						W1205	7510+83.53	-65.15	853.19
W1203	W1208	Landing/Turning Space	6.04	-0.11	-1.7%	0.1% to 2.0%	Yes					W1206	7510+68.87	-65.63	852.47
W1204	W1205	Ramp Cross Slope	10.00	0.15	1.5%	0.1% to 2.0%						W1207	7510+63.00	-66.53	852.37
W1205	W1206	Ramp Running Slope	15.00	-0.72	-4.8%	0.5% to 8.3%						W1208	7510+63.00	-56.33	852.21
W1206	W1207	Landing/Turning Space	6.07	-0.10	-1.7%	0.1% to 2.0%	Yes								
W1207	W1208	Landing/Turning Space	10.20	-0.15	-1.5%	0.1% to 2.0%									
W1501	W1502	Crosswalk Cross Slope - No Yield Condition	6.00	0.08	1.4%	0.0% to 5.0%						W1501	7510+63.00	16.00	852.60
W1501	W1506	Sidewalk Running Slope	13.00	0.20	1.5%	0.5% to 5.0%						W1502	7510+69.03	16.00	852.69
W1502	W1503	Sidewalk Running Slope	13.00	0.20	1.5%	0.5% to 5.0%						W1503	7510+69.01	3.00	852.88
W1503	W1504	Sidewalk Running Slope	13.00	-0.20	-1.5%	0.5% to 5.0%						W1504	7510+68.98	-10.00	852.69
W1503	W1506	Sidewalk Cross Slope	6.00	-0.08	-1.4%	0.5% to 2.0%						W1505	7510+63.00	-10.00	852.60
W1504	W1505	Crosswalk Cross Slope - No Yield Condition	6.00	-0.08	-1.4%	0.0% to 5.0%						W1506	7510+63.00	3.00	852.80
W1505	W1506	Sidewalk Running Slope	13.00	0.20	1.5%	0.5% to 5.0%									
W2101	W2102	Crosswalk Cross Slope - No Yield Condition	6.26	-0.03	-0.5%	0.0% to 5.0%						W2101	44600+60.18	-24.85	855.92
W2101	W2108	Ramp Running Slope	14.54	0.68	4.7%	0.5% to 8.3%						W2102	44600+65.53	-25.26	855.89
W2102	W2103	Ramp Running Slope	10.00	0.63	6.3%	0.5% to 8.3%						W2103	7515+40.05	62.83	856.52
W2103	W2104	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%						W2104	7515+43.83	61.53	856.58
W2103	W2108	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W2105	7515+45.79	61.17	856.64
W2104	W2105	Ramp Running Slope	2.00	0.07	3.3%	0.5% to 8.3%						W2106	7515+45.01	55.22	856.75
W2104	W2107	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W2107	7515+42.45	55.69	856.67
W2105	W2106	Ramp Cross Slope	6.00	0.11	1.8%	0.1% to 2.0%	Yes					W2108	7515+37.54	57.38	856.61
W2106	W2107	Ramp Running Slope	2.60	-0.09	-3.3%	0.5% to 8.3%									
W2107	W2108	Landing/Turning Space	5.20	-0.06	-1.2%	0.1% to 2.0%									
W2201	W2202	Crosswalk Cross Slope - No Yield Condition	10.10	-0.14	-1.4%	0.0% to 5.0%						W2201	42699+53.82	33.85	855.94
W2201	W2208	Ramp Running Slope	12.70	0.51	4.0%	0.5% to 8.3%						W2202	42699+45.86	33.68	855.81
W2202	W2203	Ramp Running Slope	8.00	0.50	6.3%	0.5% to 8.3%						W2203	7516+86.89	-61.16	856.31
W2203	W2204	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%						W2204	7516+90.61	-59.72	856.37
W2203	W2208	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W2205	7516+94.55	-59.05	856.56
W2204	W2205	Ramp Running Slope	4.00	0.19	4.9%	0.5% to 8.3%						W2206	7516+93.86	-49.07	856.58
W2204	W2207	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W2207	7516+87.95	-50.08	856.52
W2205	W2206	Ramp Cross Slope	10.00	0.02	0.2%	0.1% to 2.0%						W2208	7516+82.37	-52.24	856.46
W2206	W2207	Ramp Running Slope	6.00	-0.06	-1.1%	0.5% to 8.3%									
W2207	W2208	Landing/Turning Space	6.00	-0.06	-1.0%	0.1% to 2.0%									
W2301	W2302	Crosswalk Cross Slope - No Yield Condition	10.25	0.16	1.6%	0.0% to 5.0%						W2301	42699+51.52	7.00	854.61
W2301	W2308	Ramp Running Slope	6.10	0.38	6.3%	0.5% to 8.3%						W2302	42699+62.37	7.00	854.77
W2302	W2303	Ramp Running Slope	6.20	0.39	6.3%	0.5% to 8.3%						W2303	42699+64.17	13.00	855.16
W2303	W2304	Ramp Running Slope	11.50	0.48	4.2%	0.5% to 8.3%						W2304	42699+77.00	13.00	855.64
W2303	W2306	Landing/Turning Space	10.40	0.16	1.5%	0.1% to 2.0%						W2305	42699+77.00	23.00	855.82
W2303	W2308	Landing/Turning Space	10.30	-0.17	-1.6%	0.1% to 2.0%	Yes					W2306	42699+67.67	23.00	855.32
W2304	W2305	Ramp Cross Slope	10.00	0.18	1.8%	0.1% to 2.0%	Yes					W2307	42699+55.00	23.00	855.15
W2305	W2306	Ramp Running Slope	7.60	-0.50	-6.6%	0.5% to 8.3%						W2308	42699+52.70	13.00	854.99
W2306	W2307	Landing/Turning Space	10.30	-0.17	-1.7%	0.1% to 2.0%	Yes								
W2307	W2308	Landing/Turning Space	10.20	-0.15	-1.5%	0.1% to 2.0%									
W2401	W2402	Ramp Running Slope	6.28	0.39	6.3%	0.5% to 8.3%						W2401	44600+51.99	7.00	854.96
W2401	W2408	Crosswalk Cross Slope - No Yield Condition	6.20	-0.04	-0.7%	0.0% to 5.0%						W2402	44600+50.00	13.00	855.35
W2402	W2403	Ramp Running Slope	7.30	0.35	4.8%	0.5% to 8.3%						W2403	44600+42.00	13.00	855.70
W2402	W2405	Landing/Turning Space	6.30	0.09	1.5%	0.1% to 2.0%						W2404	44600+42.00	19.00	855.79
W2402	W2407	Landing/Turning Space	6.25	-0.05	-0.8%	0.1% to 2.0%						W2405	44600+47.81	19.00	855.44

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
(1) Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.

Point to Point		Sidewalk Designation	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant? (1)	Measured Slope	Initials	Remarks		FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
			FT	FT	%	Pos. or Neg.		%				Point	Station	Offset	Elevation
W2403	W2404	Ramp Cross Slope	6.00	0.09	1.5%	0.1% to 2.0%						W2406	44600+55.00	19.00	855.39
W2404	W2405	Ramp Running Slope	5.10	-0.35	-6.8%	0.5% to 8.3%						W2407	44600+56.84	13.00	855.30
W2405	W2406	Landing/Turning Space	6.30	-0.05	-0.8%	0.1% to 2.0%						W2408	44600+58.52	7.00	854.91
W2406	W2407	Landing/Turning Space	6.20	-0.09	-1.5%	0.1% to 2.0%									
W2407	W2408	Ramp Running Slope	6.20	-0.39	-6.2%	0.5% to 8.3%									
W3101	W3102	Crosswalk Cross Slope - No Yield Condition	7.30	-0.10	-1.4%	0.0% to 5.0%						W3101	7518+18.45	72.96	854.59
W3101	W3106	Ramp Running Slope	9.00	0.55	6.1%	0.5% to 8.3%						W3102	7518+12.44	77.17	854.48
W3102	W3103	Ramp Running Slope	15.00	0.53	3.6%	0.5% to 8.3%						W3103	7518+27.22	80.65	855.02
W3103	W3104	Landing/Turning Space	4.00	-0.05	-1.2%	0.1% to 2.0%						W3104	7518+31.22	80.65	854.97
W3103	W3106	Landing/Turning Space	6.00	0.12	1.9%	0.1% to 2.0%	Yes					W3105	7518+31.22	74.65	855.09
W3104	W3105	Landing/Turning Space	6.00	0.12	2.0%	0.1% to 2.0%	Yes					W3106	7518+27.22	74.65	855.13
W3105	W3106	Landing/Turning Space	4.00	0.04	1.1%	0.1% to 2.0%				Max. allowable wing cross slope 10%. Data at back top of curb.		W3107	7518+24.27	69.08	855.28
										Max. allowable wing cross slope 10%. Data at back top of curb.		W3108	7518+08.00	80.42	855.03
W3201	W3202	Crosswalk Cross Slope - No Yield Condition	10.20	0.05	0.5%	0.0% to 5.0%						W3201	7518+53.15	-85.20	853.89
W3201	W3206	Ramp Running Slope	13.00	0.37	2.8%	0.5% to 8.3%						W3202	7518+60.81	-78.44	853.94
W3202	W3203	Ramp Running Slope	7.50	0.48	6.4%	0.5% to 8.3%						W3203	7518+67.41	-81.91	854.42
W3203	W3204	Landing/Turning Space	4.00	-0.06	-1.6%	0.1% to 2.0%	Yes					W3204	7518+71.32	-82.70	854.35
W3203	W3206	Landing/Turning Space	10.00	-0.16	-1.6%	0.1% to 2.0%	Yes					W3205	7518+70.34	-92.65	854.17
W3204	W3205	Landing/Turning Space	10.00	-0.19	-1.9%	0.1% to 2.0%	Yes					W3206	7518+64.47	-91.47	854.26
W3205	W3206	Landing/Turning Space	6.00	0.09	1.6%	0.1% to 2.0%	Yes			Max. allowable wing cross slope 10%. Data at back top of curb.		W3207	7518+49.18	-89.70	854.47
										Max. allowable wing cross slope 10%. Data at back top of curb.		W3208	7518+66.63	-74.55	854.58
W3301	W3302	Crosswalk Cross Slope - No Yield Condition	10.00	-0.08	-0.8%	0.0% to 5.0%						W3301	7518+30.72	-56.05	854.72
W3301	W3308	Ramp Running Slope	13.83	0.63	4.6%	0.5% to 8.3%						W3302	7518+24.08	-63.57	854.64
W3302	W3303	Ramp Running Slope	9.00	0.56	6.3%	0.5% to 8.3%						W3303	7518+16.09	-59.58	855.20
W3303	W3304	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%						W3304	7518+12.13	-59.02	855.26
W3303	W3308	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W3305	7517+97.13	-59.00	856.27
W3304	W3305	Ramp Running Slope	15.00	1.01	6.7%	0.5% to 8.3%						W3306	7517+97.13	-49.00	856.42
W3304	W3307	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W3307	7518+12.54	-49.03	855.41
W3305	W3306	Ramp Cross Slope	10.00	0.15	1.5%	0.1% to 2.0%						W3308	7518+18.47	-49.87	855.35
W3306	W3307	Ramp Running Slope	15.41	-1.01	-6.5%	0.5% to 8.3%				Max. allowable wing cross slope 10%. Data at back top of curb.		W3309	7518+35.49	-50.93	855.39
W3307	W3308	Landing/Turning Space	6.00	-0.06	-1.0%	0.1% to 2.0%				Max. allowable wing cross slope 10%. Data at back top of curb.		W3310	7518+20.22	-68.16	855.21
W3401	W3402	Crosswalk Cross Slope - No Yield Condition	7.00	-0.04	-0.6%	0.0% to 5.0%						W3401	7517+77.76	58.25	855.39
W3401	W3408	Ramp Running Slope	14.70	0.61	4.2%	0.5% to 8.3%						W3402	7517+72.31	62.66	855.35
W3402	W3403	Ramp Running Slope	9.00	0.56	6.2%	0.5% to 8.3%						W3403	7517+63.53	61.00	855.91
W3403	W3404	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%						W3404	7517+59.53	61.00	855.97
W3403	W3408	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W3405	7517+47.53	61.00	856.74
W3404	W3405	Ramp Running Slope	12.00	0.77	6.4%	0.5% to 8.3%						W3406	7517+47.53	55.00	856.83
W3404	W3407	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W3407	7517+59.53	55.00	856.06
W3405	W3406	Ramp Cross Slope	6.00	0.09	1.5%	0.1% to 2.0%						W3408	7517+63.53	55.00	856.00
W3406	W3407	Ramp Running Slope	12.00	-0.77	-6.4%	0.5% to 8.3%				Max. allowable wing cross slope 10%. Data at back top of curb.		W3409	7517+83.29	53.96	856.05
W3407	W3408	Landing/Turning Space	4.00	-0.06	-1.5%	0.1% to 2.0%				Max. allowable wing cross slope 10%. Data at back top of curb.		W3410	7517+67.52	66.68	855.95
W4101	W4102	Crosswalk Cross Slope - No Yield Condition	6.38	-0.05	-0.7%	0.0% to 5.0%						W4101	7519+58.78	58.43	853.34
W4101	W4106	Ramp Running Slope	15.00	0.85	5.6%	0.5% to 8.3%						W4102	7519+63.00	63.21	853.29
W4102	W4103	Ramp Running Slope	10.74	0.80	7.4%	0.5% to 8.3%	Yes					W4103	7519+73.46	61.01	854.09
W4103	W4104	Landing/Turning Space	4.00	-0.06	-1.6%	0.1% to 2.0%	Yes					W4104	7519+77.46	61.00	854.03
W4103	W4106	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W4105	7519+77.46	55.00	854.12
W4104	W4105	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W4106	7519+73.29	55.01	854.18
W4105	W4106	Landing/Turning Space	4.20	0.07	1.6%	0.1% to 2.0%	Yes			Max. allowable wing cross slope 10%. Data at back top of curb.		W4107	7519+54.45	52.99	854.01
										Max. allowable wing cross slope 10%. Data at back top of curb.		W4108	7519+66.88	67.79	853.87
W4201	W4202	Crosswalk Cross Slope - No Yield Condition	10.18	-0.09	-0.9%	0.0% to 5.0%						W4201	7519+67.37	-56.39	853.17
W4201	W4208	Ramp Running Slope	13.70	0.56	4.1%	0.5% to 8.3%						W4202	7519+74.92	-63.23	853.08
W4202	W4203	Ramp Running Slope	8.00	0.50	6.3%	0.5% to 8.3%						W4203	7519+82.03	-59.68	853.58
W4203	W4204	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%						W4204	7519+85.97	-59.04	853.64
W4203	W4208	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W4205	7519+88.97	-59.00	853.78
W4204	W4205	Ramp Running Slope	3.00	0.14	4.5%	0.5% to 8.3%						W4206	7519+88.97	-49.00	853.93
W4204	W4207	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W4207	7519+85.35	-49.06	853.79
W4205	W4206	Ramp Cross Slope	10.00	0.15	1.5%	0.1% to 2.0%						W4208	7519+79.44	-50.03	853.73
W4206	W4207	Ramp Running Slope	3.62	-0.14	-3.8%	0.5% to 8.3%				Max. allowable wing cross slope 10%. Data at back top of curb.		W4209	7519+62.07	-51.82	853.86
W4207	W4208	Landing/Turning Space	6.00	-0.06	-1.0%	0.1% to 2.0%				Max. allowable wing cross slope 10%. Data at back top of curb.		W4210	7519+79.26	-67.37	853.65
												W4301	7519+37.82	-78.59	852.90
W4301	W4302	Crosswalk Cross Slope - No Yield Condition	10.25	-0.25	-2.5%	0.0% to 5.0%						W4302	7519+45.64	-85.23	852.65
W4301	W4306	Ramp Running Slope	8.60	0.67	7.8%	0.5% to 8.3%	Yes					W4303	7519+32.40	-92.00	853.38
W4302	W4303	Ramp Running Slope	15.00	0.73	4.8%	0.5% to 8.3%						W4304	7519+26.46	-92.78	853.42
W4303	W4304	Landing/Turning Space	6.00	0.04	0.7%	0.1% to 2.0%						W4305	7519+26.16	-82.79	853.62
W4303	W4306	Landing/Turning Space	10.00	0.19	1.9%	0.1% to 2.0%	Yes					W4306	7519+30.12	-82.27	853.57
W4304	W4305	Landing/Turning Space	10.00	0.20	2.0%	0.1% to 2.0%	Yes			Max. allowable wing cross slope 10%. Data at back top of curb.		W4307	7519+30.94	-74.05	853.72
W4305	W4306	Landing/Turning Space	4.00	-0.05	-1.2%	0.1% to 2.0%				Max. allowable wing cross slope 10%. Data at back top of curb.		W4308	7519+49.70	-88.93	853.14

SIDEWALK COMPLIANCE

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Point to Point		Sidewalk Designation	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant? (1)	Measured Slope	Initials	Remarks		FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
			FT	FT	%	Pos. or Neg.		%				Point	Station	Offset	Elevation
W4401	W4402	Crosswalk Cross Slope - No Yield Condition	6.65	0.16	2.4%	0.0% to 5.0%						W4401	7519+26.93	77.51	853.20
W4401	W4406	Ramp Running Slope	15.00	0.78	5.2%	0.5% to 8.3%						W4402	7519+22.06	72.98	853.36
W4402	W4403	Ramp Running Slope	9.88	0.73	7.4%	0.5% to 8.3%	Yes					W4403	7519+12.41	74.65	854.09
W4403	W4404	Landing/Turning Space	4.00	0.06	1.4%	0.1% to 2.0%						W4404	7519+08.41	74.65	854.15
W4403	W4406	Landing/Turning Space	6.00	-0.12	-1.9%	0.1% to 2.0%	Yes					W4405	7519+08.41	80.65	854.03
W4404	W4405	Landing/Turning Space	6.00	-0.12	-1.9%	0.1% to 2.0%	Yes					W4406	7519+12.41	80.65	853.98
W4405	W4406	Landing/Turning Space	4.00	-0.06	-1.4%	0.1% to 2.0%				Max. allowable wing cross slope 10%. Data at back top of curb.		W4407	7519+30.80	81.41	853.69
										Max. allowable wing cross slope 10%. Data at back top of curb.		W4408	7519+15.75	67.68	854.18
W5101	W5102	Crosswalk Cross Slope - No Yield Condition	6.00	0.02	0.4%	0.0% to 5.0%						W5101	41600+76.10	-17.30	848.93
W5101	W5108	Ramp Running Slope	10.10	0.63	6.3%	0.5% to 8.3%						W5102	41600+81.13	-14.00	848.96
W5102	W5103	Ramp Running Slope	10.00	0.63	6.3%	0.5% to 8.3%						W5103	41600+85.98	-22.75	849.58
W5103	W5104	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W5104	41600+88.89	-28.00	849.67
W5103	W5108	Landing/Turning Space	6.00	-0.02	-0.3%	0.1% to 2.0%						W5105	41600+83.92	-31.41	849.66
W5104	W5105	Landing/Turning Space	6.00	-0.01	-0.2%	0.1% to 2.0%						W5106	41600+80.81	-33.93	849.86
W5105	W5108	Landing/Turning Space	6.10	-0.09	-1.5%	0.1% to 2.0%						W5107	41600+76.88	-29.39	849.77
W5105	W5106	Ramp Running Slope	4.00	0.20	5.0%	0.5% to 8.3%						W5108	41600+80.98	-26.11	849.57
W5106	W5107	Ramp Cross Slope	6.00	-0.09	-1.5%	0.1% to 2.0%									
W5107	W5108	Ramp Running Slope	5.25	-0.20	-3.8%	0.5% to 8.3%									
W5201	W5202	Crosswalk Cross Slope - No Yield Condition	10.20	0.12	1.2%	0.0% to 5.0%						W5201	43699+51.90	-7.00	847.99
W5201	W5208	Ramp Running Slope	6.15	0.38	6.2%	0.5% to 8.3%						W5202	43699+41.24	-7.00	848.10
W5202	W5203	Ramp Running Slope	6.10	0.42	6.9%	0.5% to 8.3%						W5203	43699+42.20	-13.00	848.52
W5203	W5204	Landing/Turning Space	10.10	0.15	1.5%	0.1% to 2.0%						W5204	43699+44.00	-23.00	848.67
W5203	W5208	Landing/Turning Space	10.20	-0.15	-1.5%	0.1% to 2.0%						W5205	43699+56.06	-23.00	848.52
W5204	W5205	Landing/Turning Space	10.20	-0.15	-1.5%	0.1% to 2.0%						W5206	43699+62.00	-23.00	848.72
W5205	W5208	Landing/Turning Space	10.30	-0.15	-1.5%	0.1% to 2.0%						W5207	43699+62.00	-13.00	848.57
W5205	W5206	Ramp Running Slope	5.00	0.20	3.9%	0.5% to 8.3%						W5208	43699+53.35	-13.00	848.37
W5206	W5207	Ramp Cross Slope	10.00	-0.15	-1.5%	0.1% to 2.0%									
W5207	W5208	Ramp Running Slope	7.90	-0.20	-2.6%	0.5% to 8.3%									
W5301	W5302	Crosswalk Cross Slope - No Yield Condition	10.10	0.09	0.9%	0.0% to 5.0%						W5301	43699+45.57	27.26	849.15
W5301	W5308	Ramp Running Slope	13.00	0.74	5.7%	0.5% to 8.3%						W5302	43699+37.02	27.14	849.24
W5302	W5303	Ramp Running Slope	8.00	0.50	6.3%	0.5% to 8.3%						W5303	7521+30.14	-60.60	849.74
W5303	W5304	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%						W5304	7521+26.33	-59.41	849.80
W5303	W5308	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W5305	7521+13.38	-59.00	850.86
W5304	W5305	Ramp Running Slope	13.00	1.06	8.1%	0.5% to 8.3%	Yes					W5306	7521+13.38	-49.00	850.92
W5304	W5307	Landing/Turning Space	10.00	0.15	1.5%	0.1% to 2.0%						W5307	7521+28.34	-49.61	849.95
W5305	W5306	Ramp Cross Slope	10.00	0.07	0.7%	0.1% to 2.0%						W5308	7521+34.06	-51.40	849.89
W5306	W5307	Ramp Running Slope	15.00	-0.97	-6.5%	0.5% to 8.3%									
W5307	W5308	Landing/Turning Space	6.00	-0.06	-1.0%	0.1% to 2.0%									
W5401	W5402	Crosswalk Cross Slope - No Yield Condition	6.10	-0.08	-1.4%	0.0% to 5.0%						W5401	41600+57.06	17.07	850.31
W5401	W5408	Ramp Running Slope	10.30	0.57	5.5%	0.5% to 8.3%						W5402	41600+62.80	19.09	850.22
W5402	W5403	Ramp Running Slope	9.00	0.56	6.3%	0.5% to 8.3%						W5403	7520+77.06	62.03	850.79
W5403	W5404	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%						W5404	7520+73.16	61.15	850.85
W5403	W5408	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W5405	7520+58.90	61.00	851.74
W5404	W5405	Ramp Running Slope	14.30	0.89	6.3%	0.5% to 8.3%						W5406	7520+58.90	55.00	851.65
W5404	W5407	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W5407	7520+73.89	55.19	850.94
W5405	W5406	Ramp Cross Slope	6.00	-0.09	-1.5%	0.1% to 2.0%						W5408	7520+78.95	56.33	850.88
W5406	W5407	Ramp Running Slope	15.00	-0.71	-4.8%	0.5% to 8.3%									
W5407	W5408	Landing/Turning Space	5.20	-0.06	-1.2%	0.1% to 2.0%									
W6101	W6102	Crosswalk Cross Slope - No Yield Condition	6.50	-0.07	-1.0%	0.0% to 5.0%						W6101	7525+67.47	95.42	839.16
W6101	W6103	Ramp Running Slope	10.70	0.50	4.7%	0.5% to 8.3%						W6102	7525+65.07	101.43	839.09
W6102	W6104	Ramp Running Slope	7.50	0.46	6.2%	0.5% to 8.3%						W6103	7525+77.94	95.35	839.66
W6103	W6104	Landing/Turning Space	8.30	-0.11	-1.3%	0.1% to 2.0%						W6104	7525+72.47	101.38	839.56
W6103	W6110	Landing/Turning Space	6.00	0.04	0.7%	0.1% to 2.0%						W6105	7525+69.64	107.41	839.92
W6103	W6120	Ramp Running Slope	14.60	-0.92	-6.3%	0.5% to 8.3%						W6106	7525+65.83	124.60	839.70
W6104	W6105	Ramp Running Slope	6.70	0.37	5.5%	0.5% to 8.3%						W6107	7525+70.57	124.57	839.40
W6104	W6109	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W6108	7525+74.97	109.90	840.01
W6105	W6106	Sidewalk Running Slope	17.80	-0.23	-1.3%	0.5% to 5.0%						W6109	7525+77.50	104.49	839.65
W6105	W6108	Ramp Cross Slope	6.00	0.09	1.5%	0.1% to 2.0%						W6110	7525+81.34	100.29	839.71
W6106	W6107	Match Existing Cross Slope	4.86	-0.29	-6.0%	Match Existing				Cross slope of existing sidewalk is greater than 2%. Warp last		W6111	7525+91.60	97.69	838.82
										section of sidewalk into existing sidewalk.		W6112	7525+97.48	97.55	838.71
W6107	W6108	Sidewalk Running Slope	15.50	0.61	3.9%	0.5% to 5.0%						W6113	7525+97.43	91.55	838.62
W6108	W6109	Ramp Running Slope	6.00	-0.37	-6.1%	0.5% to 8.3%						W6114	7525+97.31	77.50	839.30
W6109	W6110	Landing/Turning Space	5.80	0.06	1.0%	0.1% to 2.0%						W6115	7525+97.27	73.50	839.24
W6110	W6111	Ramp Running Slope	11.00	-0.88	-8.0%	0.5% to 8.3%	Yes					W6116	7525+97.20	64.13	838.83
W6111	W6120	Sidewalk Cross Slope	6.10	-0.08	-1.4%	0.5% to 2.0%						W6117	7525+91.31	67.55	838.96
W6111	W6112	Sidewalk Running Slope	5.90	-0.11	-1.9%	0.5% to 5.0%						W6118	7525+91.37	73.55	839.33
W6112	W6113	Match Existing Cross Slope	6.14	-0.08	-1.3%	Match Existing						W6119	7525+91.41	77.55	839.39
W6113	W6114	Sidewalk Running Slope	14.00	0.68	4.8%	0.5% to 5.0%	Yes					W6120	7525+91.54	91.61	838.74

SIDEWALK COMPLIANCE

See S Sheets

* Does not include curb
(1) Staking required by Contracting Authority per Article 2511.03 of the Standard Specifications.

Point to Point		Sidewalk Designation	Distance*	Δ Elevation	Slope	Acceptable Constructed Range	Staking Required on this Quadrant? (1)	Measured Slope	Initials	Remarks		FOR INFORMATION ONLY: VALUES USED TO DETERMINE DESIGNED SLOPES			
			FT	FT	%	Pos. or Neg.		%				Point	Station	Offset	Elevation
W6113	W6120	Sidewalk Cross Slope	6.00	0.11	1.9%	0.5% to 2.0%	Yes								
W6114	W6115	Landing/Turning Space	4.00	-0.06	-1.5%	0.1% to 2.0%									
W6114	W6119	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%									
W6115	W6116	Ramp Running Slope	9.40	-0.41	-4.4%	0.5% to 8.3%									
W6115	W6118	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%									
W6116	W6117	Ramp Cross Slope	6.90	0.13	1.9%	0.1% to 2.0%	Yes								
W6117	W6118	Ramp Running Slope	6.00	0.38	6.3%	0.5% to 8.3%									
W6118	W6119	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%									
W6119	W6120	Sidewalk Running Slope	14.00	-0.65	-4.7%	0.5% to 5.0%	Yes								
W6201	W6202	Crosswalk Cross Slope - No Yield Condition	6.00	-0.15	-2.5%	0.0% to 5.0%						W6201	7525+90.08	-56.96	838.35
W6201	W6210	Ramp Running Slope	13.00	1.01	7.8%	0.5% to 8.3%	Yes					W6202	7525+96.15	-56.98	838.20
W6202	W6203	Ramp Running Slope	13.00	1.05	8.1%	0.5% to 8.3%	Yes					W6203	7525+96.04	-69.98	839.26
W6203	W6204	Ramp Running Slope	5.00	0.20	3.9%	0.5% to 8.3%						W6204	7526+01.11	-69.99	839.45
W6203	W6206	Landing/Turning Space	10.00	0.19	1.9%	0.1% to 2.0%	Yes					W6205	7526+01.03	-79.99	839.60
W6203	W6210	Landing/Turning Space	6.00	0.11	1.9%	0.1% to 2.0%	Yes					W6206	7525+95.95	-79.98	839.45
W6204	W6205	Ramp Cross Slope	10.00	0.15	1.5%	0.1% to 2.0%						W6207	7525+89.84	-79.96	839.52
W6205	W6206	Ramp Running Slope	5.00	-0.15	-3.1%	0.5% to 8.3%						W6208	7525+77.64	-79.89	839.96
W6206	W6207	Landing/Turning Space	6.00	0.07	1.2%	0.1% to 2.0%						W6209	7525+77.76	-69.89	839.81
W6207	W6208	Ramp Running Slope	12.00	0.44	3.7%	0.5% to 8.3%						W6210	7525+89.95	-69.96	839.37
W6207	W6210	Landing/Turning Space	10.00	-0.15	-1.5%	0.1% to 2.0%									
W6208	W6209	Ramp Cross Slope	10.00	-0.15	-1.5%	0.1% to 2.0%									
W6209	W6210	Ramp Running Slope	12.00	-0.44	-3.7%	0.5% to 8.3%									
W6401	W6402	Crosswalk Cross Slope - No Yield Condition	6.50	-0.12	-1.8%	0.0% to 5.0%						W6401	7524+84.67	96.75	840.70
W6401	W6403	Ramp Running Slope	7.00	0.39	5.5%	0.5% to 8.3%						W6402	7524+87.31	102.69	840.59
W6402	W6404	Ramp Running Slope	9.50	0.59	6.3%	0.5% to 8.3%						W6403	7524+77.67	96.91	841.09
W6403	W6404	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W6404	7524+77.81	102.91	841.18
W6403	W6405	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%						W6405	7524+73.67	97.00	841.15
W6404	W6406	Landing/Turning Space	4.00	0.06	1.5%	0.1% to 2.0%						W6406	7524+73.81	103.00	841.24
W6405	W6406	Landing/Turning Space	6.00	0.09	1.5%	0.1% to 2.0%						W6407	7524+59.02	94.38	842.09
W6405	W6407	Ramp Running Slope	15.00	0.94	6.3%	0.5% to 8.3%						W6408	7524+56.73	99.93	842.18
W6406	W6408	Ramp Running Slope	15.00	0.94	6.3%	0.5% to 8.3%									
W6407	W6408	Ramp Cross Slope	6.00	0.09	1.5%	0.1% to 2.0%									

SURVEY SYMBOLS

- EW Edge of Water
- HDG Hedge Row
- INB Storm Sewer Beehive Intake
- BNK Stream Bank
- ENU Edge Unpaved Entrance & Parking
- SNP Unpaved Shoulder
- FCL Chain Link and Security Fence
- FWD Wood Fence
- GDL Guard Rail (Rail and Cable)
- RR Centerline of Railroad Tracks
- RET Retaining Walls
- RIP Rip-Rap
- TEV Evergeen Tree
- TDC Tree Deciduous
- LUM Luminaire
- PPA Power Pole Co. 1
- SIGN SI Sign
- TA TA Tower Anchor
- SWP Swamp or Marsh
- MIS Miscellaneous
- UB UB Utility Box
- MH Utility Access (Manhole)
- IN Storm Sewer Intake
- TV Satelite TV Dish
- GP GP Guard Post (Less Than 4 Posts)
- FHD Fire Hydrants
- Flg FLG Flag Poles
- TSG Traffic Signal

UTILITY LEGEND

------E3------
------E4------

Alliant Energy
Contact: Jason Hogan
Phone: 608-458-4871

— — San. — —
— - - W — - -
— - St. S. — -

City of Cedar Rapids
Contact: Ken Russell (Water)
Phone: 319-286-5950
Contact: Dave Wallace (Sanitary Sewer)
Phone: 319-286-5910

— —San.2 — -

City of Palo
Contact: Glenn Lange
Phone: 319-540-6746

— — —T1— — —

IMON Communication
Contact: Lennox Marnor
Phone: 319-261-4640

— — —FO— — —

Iowa Communications Network
Contact: Larry Klawitter
Phone: 515-725-4741

— — -FO2— — -

Iowa Network Services
Contact: Jeff Klocko
Phone: 515-240-2644

------E1------
------E2------

Linn County REC
Contact: Kim Colberg
Phone: 319-377-1587

— — — G— — —

MidAmerican Energy - Gas Distribution
Contact: Greg Wildebour
Phone: 319-298-5162

— — - TV — — —
— — -FO5— — —

Mediacom Broadband, LLC
Contact: Joe Ernster
Phone: 319-395-9699

— — - TV — — —
— — -FO5— — —

Windstream/PAETEC
Contact: Gregory Troeger
Phone: 319-790-7678

— — - T2 — — -
— — - T3 — — -

Centurylink (Formerly Qwest)
Contact: Carroll Wheaton
Phone: 515-554-9711

------E5------

ITC Midwest
Contact: Chad Levi
Phone: 319-297-6765

Iowa Department of Transportation
Contact: Dennis Perrin
Phone: 319-364-8189

City of Cedar Rapids - Joint Communications Network
Contact: Keith Nuehring
Phone: 319-286-5622

City of Cedar Rapids - Traffic Engineering
Contact: Tom Peterson
Phone: 319-286-5847

Atkins Telephone
Contact: Todd Christerson
Phone: 319-446-7331

UNIQUE SYMBOLS FOR THIS PROJECT

- — — -G-HP— — - Proposed 10" High Pressure Gas
- GP Fence Gate Post
- MB Mailbox
- SW-401
- SW-402
- SW-508
- SW-509
- SW-510
- SW-512
- SW-546
- SW-547
- SW-549

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.**	
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading
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
Brown, Light	(236)	Grading Shading

- Reference Point — Station — Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Clearing & Grubbing Area
- Pavement Removal
- Detectable Warnings

RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Borrow
- Easement (Temporary)
- Easement
- Excess
- A/C Access Control

SIDEWALK LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES S)

MONROE TWP.
T-83N R-7W
SEC.6

DECORATIVE WALL
(DO NOT DISTURB)

EXISTING ROW

PROPOSED ROW

FUTURE TRAIL
(BY OTHERS)

NORTH RIVER BLVD.

DECORATIVE MEDIAN
(DO NOT DISTURB)

7209

TEMPORARY EASEMENT

DECORATIVE WALL
(DO NOT DISTURB)

PROPOSED ROW

W1207 W1206 W1205

BEGIN
TRAIL PAVING

W1208

END
TRAIL PAVING

FUTURE TRAIL
(BY OTHERS)

W1201 W1203 W1204 W1202

7509

EDGEWOOD ROAD

7510

7511

W1505 W1504

W1506 W1503

W1501 W1502

W1101 W1110

W1102

W1103 W1109 W1108

FUTURE SIDEWALK
(BY OTHERS)

BEGIN
SIDEWALK PAVING

W1104 W1107

W1105 W1106

EXISTING ROW

0 10
FEET

EDGEWOOD ROAD SIDEWALK LAYOUT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER S.6	

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MONROE TWP.
T-83N R-7W
SEC.6

EDGEWOOD ROAD

EDGEWOOD RD.
RAMP D RIGHT

W2101
W2102
W2103
W2104
W2105
W2106
W2107
W2108
W2401
W2402
W2403
W2404
W2405
W2406
W2407
W2408

EXISTING ROW

0 FEET 10

EDGEWOOD ROAD
SIDEWALK LAYOUT

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER S.7	

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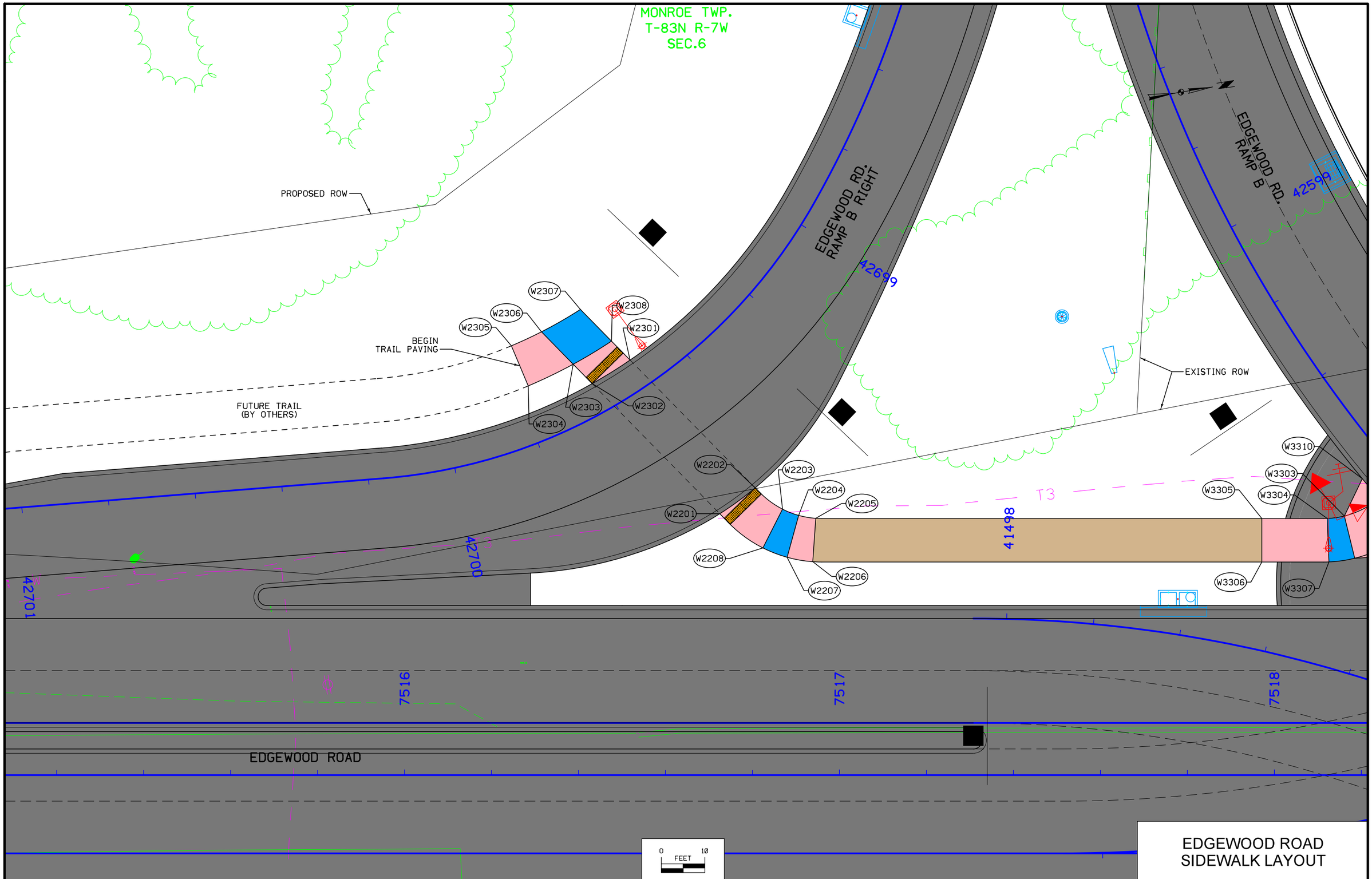

EDGEWOOD ROAD
SIDEWALK LAYOUT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER S.8	

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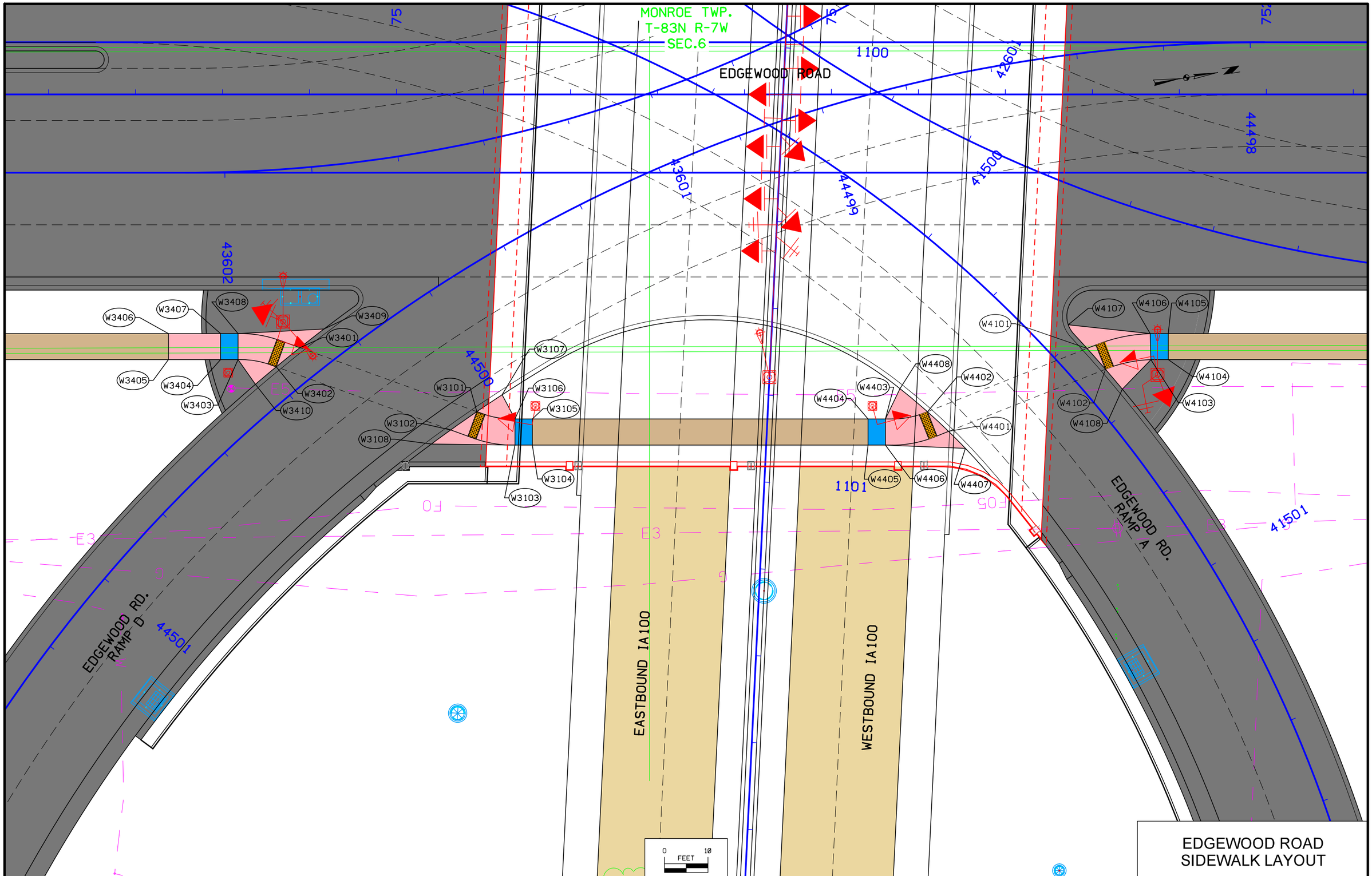

EDGEWOOD ROAD
SIDEWALK LAYOUT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER S.9	

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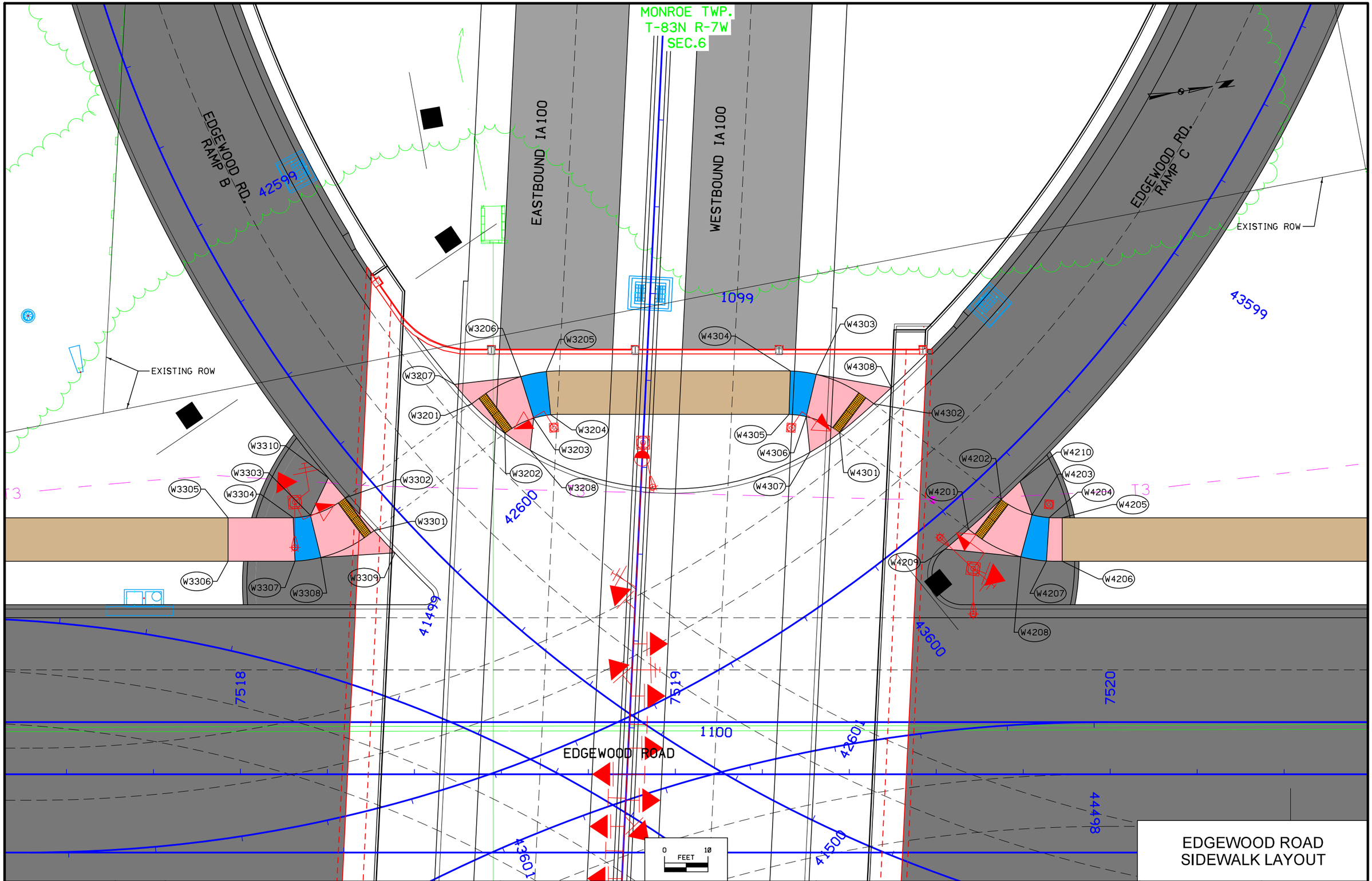

EDGEWOOD ROAD
SIDEWALK LAYOUT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER S.10

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MONROE TWP.
T-83N R-7W
SEC.6

EDGEWOOD ROAD

EDGEWOOD RD. RAMP A

EDGEWOOD RD. RAMP A RIGHT

W4107 W4106 W4105 W4104 W4103 W4108

W5406 W5407 W5408 W5401 W5405 W5404 W5403 W5402

W5101 W5107 W5108 W5102 W5106 W5103 W5104 W5105

44498 42602 41600 41501 41601

EXISTING ROW

0 10
FEET

EDGEWOOD ROAD
SIDEWALK LAYOUT

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER S.11	

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MONROE TWP.
T-83N R-7W
SEC.6

FUTURE ROW

EDGEWOOD RD.
RAMP C

EDGEWOOD RD.
RAMP C RIGHT

EXISTING BUFFALO RD.
(CLOSE)

EXISTING ROW

PROPOSED ROW

EXISTING ROW

EXISTING ROW

43599

43699

43700

W5201
W5202
W5203
W5204
W5205
W5206
W5207
W5208

END
TRAIL PAVING

W5301
W5302
W5303
W5304
W5305
W5306
W5307
W5308

T3

FUTURE TRAIL
(BY OTHERS)

E5

7520
7521
7522
7523
7723
7623

EDGEWOOD ROAD

41600

42602

0 10
FEET

EDGEWOOD ROAD
SIDEWALK LAYOUT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER S.12	

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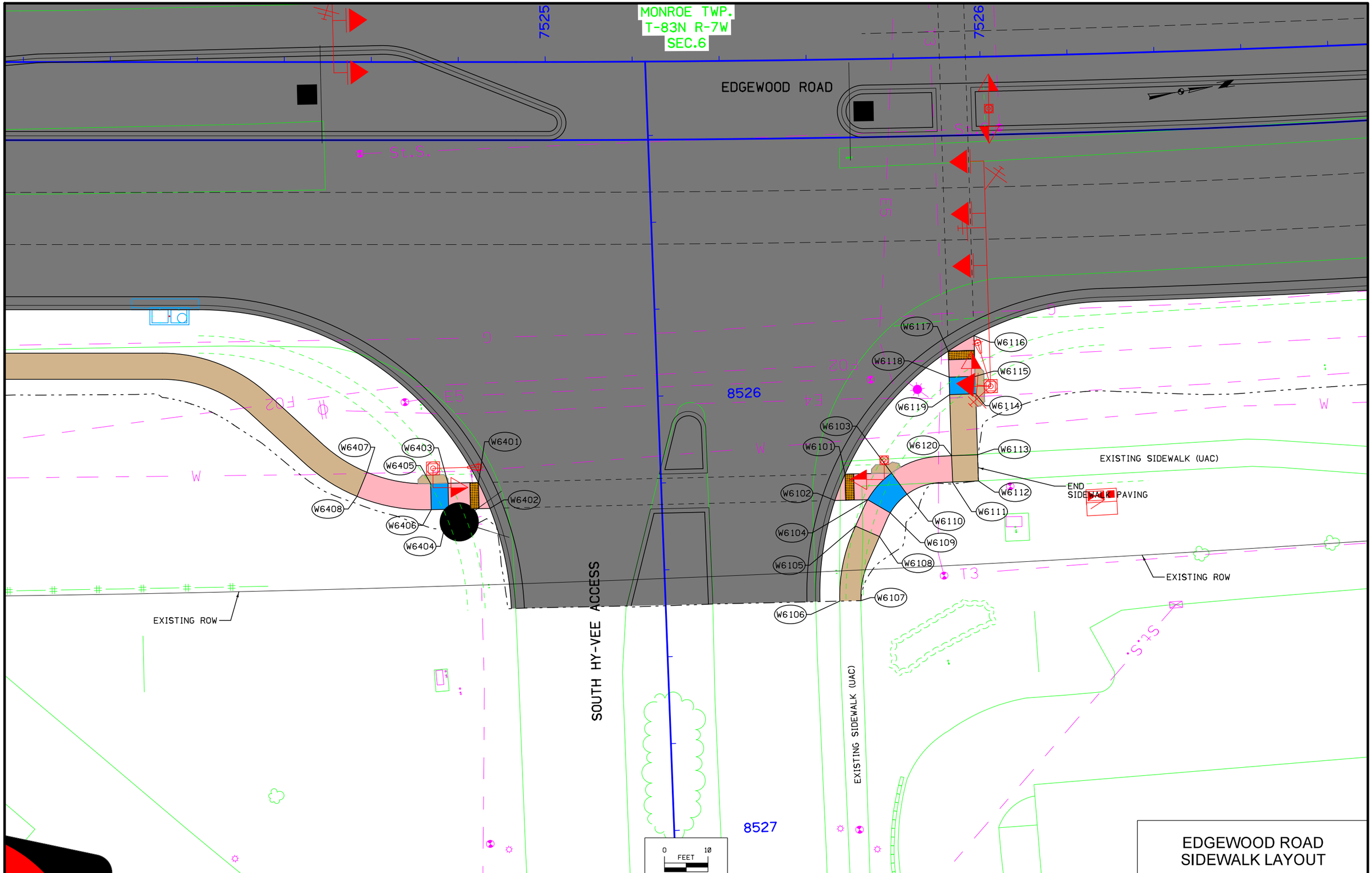

EDGEWOOD ROAD
SIDEWALK LAYOUT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER S.13	

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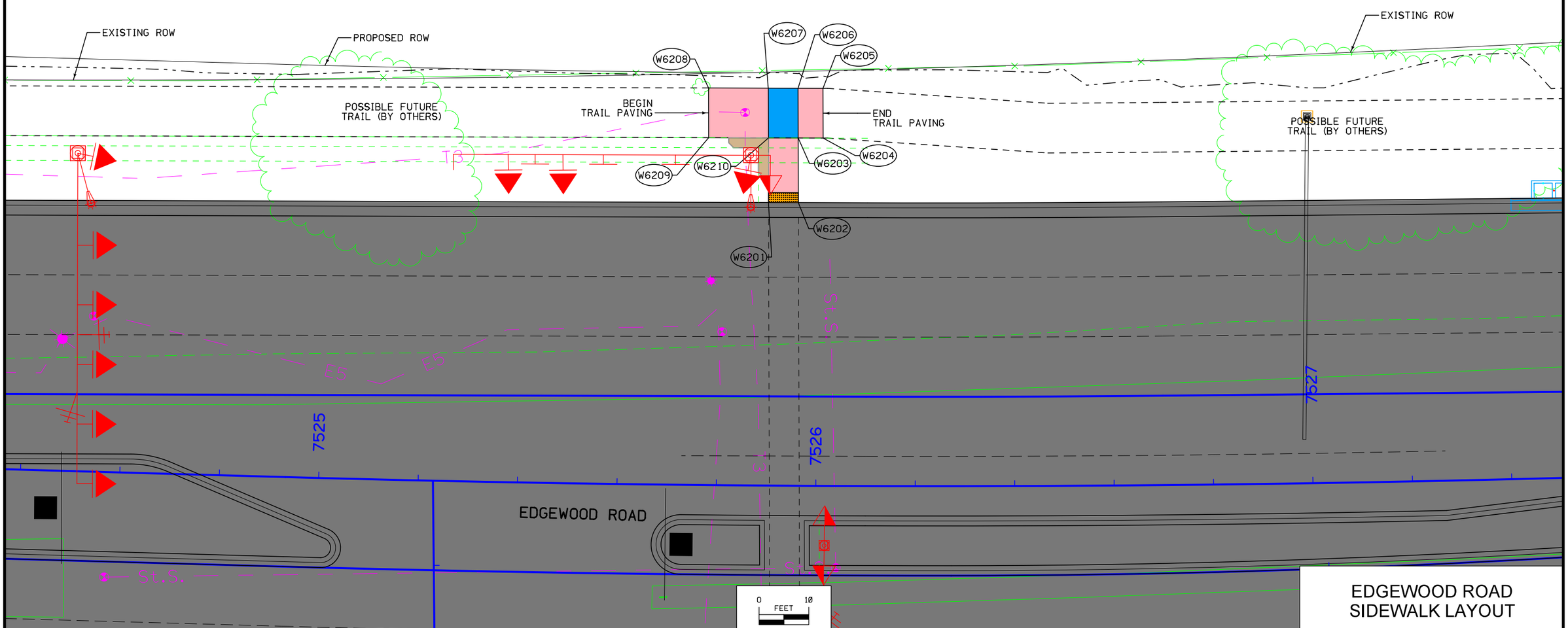
MONROE TWP.
T-83N R-7W
SEC.6



EDGEWOOD ROAD
SIDEWALK LAYOUT

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER	S.14

6:29:51 PM jwahl c:\pw_workdir\ch2mhill_tbg\jwahl\d0179917\57100079S03.sht.dgn

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and EW-102.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
1084+50.00	604	74	76	11		443	454	100		100		0	0
1084+75.00	601	76	56	11		219	469	51		51		0	0
1085+00.00	683	79	35	11	239		569	16		16		0	0
1085+25.00	919	79	10	11	558	1	830	18		18		0	0
1085+50.00	1295	79		11	818		1216	19		19		0	0
1085+75.00	1296	80		11	1205		1216	20		20		0	0
1086+00.00	835	73		10	1205		763	17		17		0	0
1086+25.00	614	65		9	753		549	18		18		0	0
1086+50.00	696	66		9	540		630	22		22		0	0
1086+75.00	799	66		10	621		733	15		15		0	0
1087+00.00	717	54		8	723	1	663	3		3		0	0
1087+25.00	611	43		6	654		568					0	0
1087+50.00	664	44		6	562		621					0	0
1087+75.00	631	45		6	615		586	1		1		0	0
1088+00.00	519	35		5	580		484	3		3		0	0
1088+25.00	468	26		4	479		442	4		4		0	0
1088+50.00	483	35		5	438		448	4		4		0	0
1088+75.00	464	45	39	6	443		380	6		6		0	0
1089+00.00	438	45	57	6	374		337	8		8		0	0
1089+25.00	411	45	32	6	331		335	12		12		0	0
1089+50.00	353	45	30	6	329		278	13		13		0	0
1089+75.00	298	44	28	6	272		226	7		7		0	0
1090+00.00	255	43	19	6	220	1	193	16		16		0	0
1090+25.00	259	42	10	6	186	0	207	14		14		0	0
1090+50.00	288	45	11	6	201	0	232	3		3		0	0
1090+75.00	340	50	25	7	226	1	265	2		2		0	0
1091+00.00	395	52	36	8	257	0	307	1		1		0	0
1091+25.00	400	53	61	8	299	1	286	11		11		0	0
1091+50.00	391	54	80	8	277	0	258	22		22		0	0
1091+75.00	403	54	69	8	250	0	280	12		12		0	0
1092+00.00	447	54	62	8	272	0	331	4		4		0	0
1092+25.00	563	74	58	11	323	97	431	13		13		0	0
1092+50.00	560	74	52	11	323	161	434	13		13		0	0
1092+75.00	498	54	46	8	262	137	398	3		3		0	0
1093+00.00	554	43	40	6	253	177	471	1		1		0	0
1093+25.00	673	44	35	6	288	248	594	4		4		0	0
1093+50.00	792	56	32	8	340	302	704	8		8		0	0
1093+75.00	856	58	30	8	394	324	768	11		11		0	0
1094+00.00	975	59	19	8	436	343	897	30		30		0	0
1094+25.00	1087	59	5	9	546	366	1023	51		51		0	0
1094+50.00	1134	60	3	9	648	394	1071	57		57		0	0
1094+75.00	1167	60	5	9	668	423	1102	46		46		0	0
1095+00.00	1235	60	2	9	670	466	1173	16		16		0	0
1095+25.00	1326	44		6	698	539	1282					0	0
1095+50.00	1427	45		6	737	619	1382					0	0
1095+75.00	1426	62	2	9	757	689	1362	5		5		0	0
1096+00.00	1570	63	2	9	664	748	1505	5		5		0	0
1096+25.00	1982	63		9	748	781	1919					0	0
1096+50.00	1972	64		9	1129	800	1908	1		1		0	0
1096+75.00	1669	64	68	9	1099	812	1537					0	0
1097+00.00	1547	65	289	9	716	805	1193	95		95		0	0
1097+25.00	1703	68	603	10	379	803	1032	257		257		0	0
1097+50.00	1921	70	765	10	219	871	1086	359		359		0	0
1097+75.00	1868	68	383	10	205	914	1417	197		197		0	0
1098+00.00	1712	66	351	9	493	764	1295	143		143		0	0
1098+25.00	1451	59	351	9	522	633	1041	143		143		0	0
1098+50.00	445	22	46	3	399	245	377	1		1		0	0
1098+60.00	555	31	84	4	129	340	440	8		8		0	0
1098+75.00	262	14	37	2	96	175	211	4		4		0	0
1098+82.00	943	45	244	7	34	647	654	6		6		0	0
1098+99.20	57	3	12			42	42	1		1		0	0
1099+00.00	90	4	20	1		65	66	1		1		0	0
1099+01.27	2150	39	600	6		1505	1511	3		3		0	0
1099+25.00	3528		825			2703	2703	2		2		0	0
1099+50.00	5008		541			4467	4467	7		7		0	0
1099+75.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
1099+75.00	5588		155			5433	5433	18		18		0	0
1100+00.00	5654		127			5527	5527	32		32		0	0
1100+25.00	5893		150			5743	5743	37		37		0	0
1100+50.00	6202		175			6027	6027	30		30		0	0
1100+75.00	4767		73			4694	4694	9		9		0	0
1100+93.58	1582	22		3		1557	1560					0	0
1101+00.00	740	25		4		711	715					0	0
1101+05.11	368	7		1		360	361					0	0
1101+10.02	971	13		2		956	958					0	0
1101+20.00	454	13		2		439	441					0	0
1101+25.00	878	28		4		846	850					0	0
1101+35.00	1172	45		6		1121	1127					0	0
1101+50.00	1429	75		11		1343	1354					0	0
1101+75.00	1221	70		10		1141	1151					0	0
1102+00.00	1362	67		10		1285	1295					0	0
1102+25.00	1589	74		11		1504	1515					0	0
1102+50.00	1840	81		12		1747	1759					0	0
1102+75.00	2067	86		13		1968	1981					0	0
1103+00.00	2167	90		13		2064	2077					0	0
1103+25.00	2075	90	0	13		1972	1985					0	0
1103+50.00	1894	90	161	13		1630	1643	7		7		0	0
1103+75.00	1733	89	263	13		1368	1381	7		7		0	0
1104+00.00	757	44	79	6		628	634					0	0
1104+25.00	1402	86	139	12		1165	1177					0	0
1104+50.00	1190	84	83	12		1011	1023	1		1		0	0
1104+75.00	1027	81	46	12		888	900					0	0
1105+00.00	944	80	42	11		811	822					0	0
1105+25.00	907	78		11		799	810					0	0
1105+50.00	871	76		11		784	795					0	0
1105+75.00	826	74		11		741	752					0	0
1106+00.00	777	73		10		694	704					0	0
1106+25.00	733	69		10		654	664					0	0
1106+50.00	690	67		10		613	623					0	0
1106+75.00	627	44		6		577	583					0	0
1107+00.00	572	21		3		548	551					0	0
1107+25.00	548	20		3		525	528					0	0
1107+50.00	528	19		3		506	509					0	0
1107+75.00	505	18		3		484	487					0	0
1108+00.00	482	17		3		462	465					0	0
1108+25.00	463	17		2		444	446					0	0
1108+50.00	450	16		2		432	434					0	0
1108+75.00	427	15		2		410	412					0	0
1109+00.00	351	14		2		335	337					0	0
1109+25.00	296	13		2		281	283					0	0
1109+50.00	300	12		2		286	288					0	0
1109+75.00	300	12		2		286	288					0	0
1110+00.00	298	11		2		285	287					0	0
1110+25.00	296	11		2		283	285					0	0
1110+50.00	291	10		2		279	281					0	0
1110+75.00	283	10		1		272	273					0	0
1111+00.00	277	8		1		268	269					0	0
1111+25.00	308	6		1		301	302	11		11		0	0
1111+50.00	336	4		1		331	332	18		18		0	0
1111+75.00	326	8		1		317	318	14		14		0	0
1112+00.00	318	12		2		304	306	15		15		0	0
1112+25.00	310	12		2		296	298	15		15		0	0
1112+50.00	302	12		2		288	290	15		15		0	0
1112+75.00	297	12		2		283	285	17		17		0	0
1113+00.00	290	13		2		275	277	19		19		0	0
1113+25.00	286	13		2		271	273	21		21		0	0
1113+50.00	276	13		2		261	263	23		23		0	0
1113+74.36	8	1				7	7	1		1		0	0
1113+75.00	361	32		5		324	329	71		71		0	0
1114+00.00	53	4		1		48	49	11		11		0	0
1114+03.72	298	26		4		268	272	60		60		0	0
1114+25.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
1114+25.00	346	30		4		312	316	67		67		0	0
1114+50.00	127	11		2		114	116	24		24		0	0
1114+59.36	142	12		2		128	130	26		26		0	0
1114+70.00	67	6		1		60	61	12		12		0	0
1114+75.00	335	29		4		302	306	58		58		0	0
1115+00.00	338	28		4		306	310	55		55		0	0
1115+25.00	265	22		3		240	243	43		43		0	0
1115+44.36	77			1		70	71	12		12		0	0
1115+49.91	1	0				1	1					0	0
1115+50.00	315	23		3		289	292	45		45		0	0
1115+70.00	69	6		1		62	63	11		11		0	0
1115+75.00	125	10		2		113	115	21		21		0	0
1115+83.96	225	18		3		204	207	39		39		0	0
1116+00.00	355	30		4		321	325	64		64		0	0
1116+25.00	56	4		1		51	52	10		10		0	0
1116+28.86	123	10		2		111	113	23		23		0	0
1116+37.36	208	16		2		190	192	33		33		0	0
1116+50.00	414	31		5		378	383	63		63		0	0
1116+75.00	368	31		5		332	337	53		53		0	0
1117+00.00	364	31		4		329	333	45		45		0	0
1117+25.00	354	30		4		320	324	43		43		0	0
1117+50.00	342	30		4		308	312	43		43		0	0
1117+75.00	334	30		4		300	304	42		42		0	0
1118+00.00	329	30		4		295	299	42		42		0	0
1118+25.00	297	27		4		266	270	37		37		0	0
1118+47.80	28	3				25	25	3		3		0	0
1118+50.00	319	31		4		284	288	39		39		0	0
1118+75.00	314	30		4		280	284	39		39		0	0
1119+00.00	309	31		4		274	278	43		43		0	0
1119+25.00	304	31		5		268	273	50		50		0	0
1119+50.00	297	32		5		260	265	56		56		0	0
1119+75.00	287	33		5		249	254	61		61		0	0
1120+00.00	277	34		5		238	243	67		67		0	0
1120+25.00	265	34		5		226	231	69		69		0	0
1120+50.00	253	34		5		214	219	69		69		0	0
1120+75.00	240	33		5		202	207	68		68		0	0
1121+00.00	226	33		5		188	193	65		65		0	0
1121+25.00	107	16		2		89	91	31		31		0	0
1121+37.34	106	17		2		87	89	32		32		0	0
1121+50.00	205	32		5		168	173	69		69		0	0
1121+75.00	198	32		5		161	166	78		78		0	0
1122+00.00	189	32		5		152	157	83		83		0	0
1122+25.00	182	32		5		145	150	88		88		0	0
1122+50.00	172	31		5		136	141	82		82		0	0
1122+75.00	97	18		3		76	79	44		44		0	0
1122+90.20	60	11		2		47	49	28		28		0	0
1123+00.00	117	23		3		91	94	51		51		0	0
1123+20.00	28	5		1		22	23	11		11		0	0
1123+25.00	134	24		4		106	110	51		51		0	0
1123+50.00	126	22		3		101	104	48		48		0	0
1123+75.00	122	20		3		99	102	46		46		0	0
1124+00.00	120	19		3		98	101	47		47		0	0
1124+25.00	116	19		3		94	97	48		48		0	0
1124+50.00	111	18		3		90	93	47		47		0	0
1124+75.00	108	17		3		88	91	43		43		0	0
1125+00.00	112	17		2		93	95	38		38		0	0
1125+25.00	118	16		2		100	102	33		33		0	0
1125+50.00	125	16		2		107	109	30		30		0	0
1125+75.00	132	17		2		113	115	27		27		0	0
1126+00.00	134	16		2		116	118	23		23		0	0
1126+25.00	137	17		2		118	120	22		22		0	0
1126+50.00	140	18		3		119	122	23		23		0	0
1126+75.00	139	20		3		116	119	22		22		0	0
1127+00.00	98	14		2		82	84	13		13		0	0
1127+17.08	48	7		1		40	41	5		5		0	0
1127+25.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
1127+25.00	4	1				3	3					0	0
1127+25.58	155	21		3		131	134	14		14		0	0
1127+50.00	133	18		3		112	115	10		10		0	0
1127+70.48	30	4		1		25	26	2		2		0	0
1127+75.00	166	23		3		140	143	8		8		0	0
1128+00.00	65	10		1		54	55	3		3		0	0
1128+10.08	92	14		2		76	78	5		5		0	0
1128+25.00	149	23		3		123	126	10		10		0	0
1128+50.00	89	17		3		69	72	5		5		0	0
1128+75.00	23	10		1		12	13					0	0
1128+95.08	5	2				3	3					0	0
1129+00.00												0	0
Subtotals:	148603	7126	7779	1031	28102	104545	133678	5145	0	5145		0	0
Shrink Fac.			0.6	1.4	1	1.3							
Adjusted			12446.4	736	28102	80419							
EDGEA													
41500+69.91	298	4	26	1		267	268	2		2		0	0
41500+75.00	1331	26	56	4		1245	1249	8		8		2	0
41500+97.41	153	3		1		149	150					8	0
41501+00.00	1186	36		5		1145	1150	8		8		0	0
41501+25.00	987	37		5		945	950	10		10		8	0
41501+50.00	1097	35		5		1057	1062	5		5		10	0
41501+75.00	1157	31		5		1121	1126	5		5		5	0
41502+00.00	1178	29		4		1145	1149	7		7		5	0
41502+25.00	1120	27		4		1089	1093	7		7		7	0
41502+50.00	423	11		2		410	412	64		64		7	0
41502+60.00	603	19		3		581	584	192		192		64	0
41502+75.00	578	18		3		557	560	203		203		192	0
41502+90.46	142	10		2		130	132	57		57		203	0
41502+97.97	37	3				34	34	16		16		57	0
41503+00.00	502	17		2		483	485	203		203		16	0
41503+15.06	301	10		2		289	291	136		136		203	0
41503+25.00	635	25	80	4		526	530	345		345		136	0
41503+50.00	477	23	143	3		308	311	311		311		345	0
41503+72.46	50	3	16			31	31	35		35		311	0
41503+75.00	463	26	151	4		282	286	343		343		35	0
41504+00.00	405	27	150	4		224	228	341		341		343	0
41504+25.00	37	3	15			19	19	34		34		341	0
41504+27.46	310	24	134	4		148	152	310		310		34	0
41504+50.00	289	27	132	4		126	130	351		351		310	0
41504+75.00	168	17	69	3		79	82	238		238		351	0
41504+91.77	78	9	30	1		38	39	116		116		238	0
41505+00.00	228	26	88	4		110	114	348		348		116	0
41505+25.00	220	25	89	4		102	106	339		339		348	0
41505+50.00	214	24	61	4		125	129	326		326		339	0
41505+75.00	211	24	16	3		168	171	311		311		326	0
41506+00.00	208	23		3		182	185	295		295		311	0
41506+25.00	202	22		3		177	180	271		271		295	0
41506+50.00	198	20		3		175	178	239		239		271	0
41506+75.00	193	20		3		170	173	210		210		239	0
41507+00.00	186	20		3		163	166	180		180		210	0
41507+25.00	175	18		3		154	157	149		149		180	0
41507+50.00	162	18		3		141	144	121		121		149	0
41507+75.00	151	18		3		130	133	100		100		121	0
41508+00.00	142	19		3		120	123	76		76		100	0
41508+25.00	135	19		3		113	116	51		51		76	0
41508+50.00	54	8		1		45	46	15		15		51	0
41508+60.00	55	9		1		45	46	13		13		15	0
41508+70.00	27	4		1		22	23	7		7		13	0
41508+75.00	133	22		3		108	111	31		31		7	0
41509+00.00	130	22		3		105	108	27		27		31	0
41509+25.00	120	22		3		95	98	23		23		27	0
41509+50.00	114	24		3		87	90	23		23		23	0
41509+75.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
41509+75.00	92	21		3		68	71	28		28		23	0
41510+00.00	69	17		2		50	52	36		36		28	0
41510+25.00	43	10		2		31	33	26		26		36	0
41510+40.00	29	7		1		21	22	18		18		26	0
41510+50.00	74	17		2		55	57	44		44		18	0
41510+75.00	74	17		2		55	57	39		39		44	0
41511+00.00	72	17		2		53	55	36		36		39	0
41511+25.00	70	16		2		52	54	34		34		36	0
41511+50.00												34	0
Subtotals:	17786	1029	1256	151		15350	15501	6763	0	6763		6763	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			2010	108		11808							
EDGEA_RT												0	0
41600+50.00	137	20		3		114	117	67		67		0	0
41600+75.00	6	1				5	5	4		4		67	0
41600+76.50	50	7		1		42	43	53		53		4	0
41600+96.29	4	3				1	1	11		11		53	0
41601+00.00	10	8		1		1	2	30		30		11	0
41601+19.77	6	3				3	3	10		10		30	0
41601+25.00	58	23		3		32	35	123		123		10	0
41601+50.00	45	21		3		21	24	175		175		123	0
41601+75.00	25	17		3		5	8	220		220		175	0
41602+00.00	17	15		2			2	241		241		220	0
41602+25.00	13	11		2			2	240		240		241	0
41602+50.00	4	3		1			1	93		93		240	0
41602+60.00												93	0
Subtotals:	375	132	0	19		224	243	1267	0	1267		1267	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			0	14		172							
EDGEB												0	0
42586+00.00	198	19	1	3		175	178	5		5		0	0
42586+25.00	46	4		1		41	42	1		1		5	0
42586+31.00	144	15		2		127	129	4		4		1	0
42586+50.00	186	19		3		164	167	5		5		4	0
42586+75.00	172	19		3		150	153	5		5		5	0
42587+00.00	150	20		3		127	130	5		5		5	0
42587+25.00	137	22		3		112	115	5		5		5	0
42587+50.00	123	22		3		98	101	5		5		5	0
42587+75.00	105	22		3		80	83	6		6		5	0
42588+00.00	87	22		3		62	65	10		10		6	0
42588+25.00	69	22		3		44	47	20		20		10	0
42588+50.00	55	23		3		29	32	38		38		20	0
42588+75.00	65	24		4		37	41	76		76		38	0
42589+00.00	62	26	1	4		31	35	86		86		76	0
42589+25.00	46	27	1	4		14	18	67		67		86	0
42589+50.00	51	27	1	4		19	23	77		77		67	0
42589+75.00	53	29		4		20	24	89		89		77	0
42590+00.00	60	30		4		26	30	104		104		89	0
42590+25.00	64	31		5		28	33	122		122		104	0
42590+50.00	83	28	12	4		39	43	70		70		122	0
42590+75.00	151	24	61	4		62	66	8		8		70	0
42591+00.00	206	24	103	4		75	79	9		9		8	0
42591+25.00	220	24	54	4		138	142	18		18		9	0
42591+50.00	231	25	59	4		143	147	30		30		18	0
42591+75.00	192	21	92	3		76	79	33		33		30	0
42591+95.00	49	5	23	1		20	21	9		9		33	0
42592+00.00	100	10	45	2		43	45	19		19		9	0
42592+10.00	151	17	66	2		66	68	39		39		19	0
42592+25.00	253	29	103	4		117	121	100		100		39	0
42592+50.00	256	31	88	5		132	137	146		146		100	0
42592+75.00	258	34	89	5		130	135	198		198		146	0
42593+00.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
42593+00.00	260	36	96	5		123	128	251		251		198	0
42593+25.00	52	8	18	1		25	26	56		56		251	0
42593+30.00	214	31	68	4		111	115	239		239		56	0
42593+50.00	272	40	69	6		157	163	336		336		239	0
42593+75.00	284	42	62	6		174	180	370		370		336	0
42594+00.00	300	44	57	6		193	199	393		393		370	0
42594+25.00	315	45	37	6		227	233	412		412		393	0
42594+50.00	327	46	16	7		258	265	441		441		412	0
42594+75.00	334	47	9	7		271	278	477		477		441	0
42595+00.00	340	49	4	7		280	287	502		502		477	0
42595+25.00	357	50		7		300	307	523		523		502	0
42595+50.00	393	51		7		335	342	537		537		523	0
42595+75.00	404	48		7		349	356	511		511		537	0
42595+98.48	27	3		1		23	24	33		33		511	0
42596+00.00	464	52		7		405	412	556		556		33	0
42596+25.00	499	52		8		439	447	568		568		556	0
42596+50.00	72	7		1		64	65	80		80		568	0
42596+53.48	463	45		7		411	418	502		502		80	0
42596+75.00	570	53		8		509	517	604		604		502	0
42597+00.00	250	24	1	3		222	225	271		271		604	0
42597+10.88	324	31	3	4		286	290	358		358		271	0
42597+25.00	240	23	35	3		179	182	272		272		358	0
42597+35.48	330	32	93	5		200	205	390		390		272	0
42597+50.00	586	57	91	8		430	438	706		706		390	0
42597+75.00	481	35	10	5		431	436	293		293		706	0
42597+95.00	20	1				19	19					293	0
42597+96.64	40	2				38	38					0	0
42598+00.00	557	30	9	4		514	518	8		8		0	0
42598+25.00	473	32	75	5		361	366	152		152		8	0
42598+50.00	382	36	117	5		224	229	305		305		152	0
42598+75.00	304	38	52	5		209	214	313		313		305	0
42599+00.00	62	9		1		52	53	78		78		313	0
42599+05.71	312	26		4		282	286	144		144		78	0
42599+25.00	190	10		1		179	180	1		1		144	0
42599+33.21												1	0
Subtotals:	14521	1830	1721	265		10705	10970	12091	0	12091		12091	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			2754	189		8235							
EDGEB_RT													
42697+95.00								104		104		0	0
42698+00.00								66		66		104	0
42698+03.18								40		40		66	0
42698+05.08								365		365		40	0
42698+22.18								62		62		365	0
42698+25.00	1	1						551		551		62	0
42698+50.00								138		138		551	0
42698+56.18								418		418		138	0
42698+75.00	1	1						518		518		418	0
42699+00.00	35	31		4			4	485		485		518	0
42699+25.00	35	31		4			4	435		435		485	0
42699+50.00								94		94		435	0
42699+56.16								58		58		94	0
42699+60.00								210		210		58	0
42699+75.00								183		183		210	0
42699+89.98								110		110		183	0
42700+00.00	1	1						180		180		110	0
42700+17.98												180	0
Subtotals:	73	65	0	8		0	8	4017	0	4017		4017	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			0	6		0							
EDGEC													
43587+00.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
43587+00.00	284	25		4		255	259	7		7		0	0
43587+25.00	328	26		4		298	302	6		6		7	0
43587+50.00	378	25		4		349	353	5		5		6	0
43587+75.00	391	25		4		362	366	5		5		5	0
43588+00.00	370	25	11	4		330	334	5		5		5	0
43588+25.00	351	24	75	4		248	252	5		5		5	0
43588+50.00	333	24	122	4		183	187	5		5		5	0
43588+75.00	312	24	107	4		177	181	5		5		5	0
43589+00.00	291	24	91	4		172	176	5		5		5	0
43589+25.00	273	25	74	4		170	174	5		5		5	0
43589+50.00	251	25	42	4		180	184	5		5		5	0
43589+75.00	231	25	11	4		191	195	5		5		5	0
43590+00.00	216	26	2	4		184	188	5		5		5	0
43590+25.00	121	16	1	2		102	104	3		3		5	0
43590+39.51	87	12		2		73	75	2		2		3	0
43590+50.00	79	11		2		66	68	2		2		2	0
43590+59.51	131	18		3		110	113	3		3		2	0
43590+75.00	205	31		4		170	174	5		5		3	0
43591+00.00	85	14		2		69	71	2		2		5	0
43591+10.88	108	18		3		87	90	3		3		2	0
43591+25.00	186	33	1	5		147	152	5		5		3	0
43591+50.00	65	13		2		50	52	2		2		5	0
43591+59.21	4	1				3	3					2	0
43591+59.85	101	22		3		76	79	2		2		0	0
43591+75.00	162	38		5		119	124	3		3		2	0
43592+00.00	148	34		5		109	114	7		7		3	0
43592+22.25	19	4		1		14	15	1		1		7	0
43592+25.00	171	39		6		126	132	13		13		1	0
43592+50.00	182	41		6		135	141	18		18		13	0
43592+75.00	204	43		6		155	161	23		23		18	0
43593+00.00	228	44		6		178	184	27		27		23	0
43593+25.00	32	6		1		25	26	4		4		27	0
43593+28.28	184	33		5		146	151	21		21		4	0
43593+46.88	31	5		1		25	26	4		4		21	0
43593+50.00	255	45		6		204	210	32		32		4	0
43593+75.00	260	45	1	7		207	214	37		37		32	0
43594+00.00	264	45	2	7		210	217	38		38		37	0
43594+25.00	274	46	2	7		219	226	38		38		38	0
43594+50.00	287	47	1	7		232	239	43		43		38	0
43594+75.00	301	49		7		245	252	50		50		43	0
43595+00.00	316	50		7		259	266	55		55		50	0
43595+25.00	330	52	2	7		269	276	68		68		55	0
43595+50.00	376	53	3	8		312	320	79		79		68	0
43595+75.00	424	54	3	8		359	367	91		91		79	0
43596+00.00	453	56	8	8		381	389	112		112		91	0
43596+25.00	486	57	23	8		398	406	129		129		112	0
43596+50.00	145	17	9	2		117	119	39		39		129	0
43596+57.17	377	42	22	6		307	313	102		102		39	0
43596+75.00	567	59	27	9		472	481	157		157		102	0
43597+00.00	324	32	13	5		274	279	94		94		157	0
43597+13.47	286	28	10	4		244	248	91		91		94	0
43597+25.00	757	52	27	7		671	678	152		152		91	0
43597+50.00	395	18	15	3		359	362	23		23		152	0
43597+61.17	499	22	21	3		453	456	5		5		23	0
43597+75.00	945	38	42	6		859	865	8		8		5	0
43598+00.00	1047	38	28	6		975	981	7		7		8	0
43598+25.00	1250	38	9	6		1197	1203	6		6		7	0
43598+50.00	248	7		1		240	241	1		1		6	0
43598+54.45	1082	34	10	5		1033	1038	6		6		1	0
43598+75.00	1122	42	69	6		1005	1011	9		9		6	0
43599+00.00	961	36	180	5		740	745	5		5		9	0
43599+25.00	858	28	244	4		582	586	3		3		5	0
43599+50.00	266	8	78	1		179	180	1		1		3	0
43599+58.45												1	0
Subtotals:													

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2M HILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)- - 3H-77	SHEET NUMBER T.7

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
Subtotals:	21697	1937	1386	288		18086	18374	1699	0	1699		1699	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			2218	206		13912							
EDGEC_RT													
43697+25.00	63	8		1		54	55	29		29		0	0
43697+38.30	57	7		1		49	50	28		28		29	0
43697+50.00	124	17		2		105	107	74		74		28	0
43697+75.00	129	17		3		109	112	94		94		74	0
43698+00.00	100	15		2		83	85	92		92		94	0
43698+18.97	19	5		1		13	14	45		45		92	0
43698+25.00	7	6		1			1	64		64		45	0
43698+38.50	8	7		1			1	69		69		64	0
43698+50.00	35	31		4			4	329		329		69	0
43698+75.00	35	30		4		1	5	338		338		329	0
43699+00.00	26	19		3		4	7	210		210		338	0
43699+25.00	17	7		1		9	10	50		50		210	0
43699+40.65	11	3		1		7	8	23		23		50	0
43699+48.00	3	1				2	2	9		9		23	0
43699+50.00	44	24		3		17	20	201		201		9	0
43699+75.00	1	1						9		9		201	0
43699+75.78												9	0
Subtotals:	679	198	0	28		453	481	1664	0	1664		1664	0
Shrink Fac.			1	1.4		1.3							
Adjusted			0	20		348							
EDGED													
44500+25.00	1824	19		3		1802	1805	5		5		0	0
44500+50.00	1663	32		5		1626	1631	3		3		5	0
44500+75.00	1679	47		7		1625	1632	3		3		3	0
44501+00.00	1314	47		7		1260	1267	2		2		3	0
44501+20.00	195	14		2		179	181	38		38		2	0
44501+25.00	452	73		10		369	379	336		336		38	0
44501+50.00	603	71		10		522	532	254		254		336	0
44501+75.00	563	62		9		492	501	176		176		254	0
44502+00.00	548	54		8		486	494	109		109		176	0
44502+25.00	538	48		7		483	490	55		55		109	0
44502+50.00	538	43		6		489	495	24		24		55	0
44502+75.00	545	38		6		501	507	14		14		24	0
44503+00.00	551	35		5		511	516	11		11		14	0
44503+25.00	241	14		2		225	227	4		4		11	0
44503+35.86	312	18		3		291	294	5		5		4	0
44503+50.00	544	36		5		503	508	23		23		5	0
44503+75.00	145	11		2		132	134	10		10		23	0
44503+81.76	376	30		4		342	346	26		26		10	0
44504+00.00	479	39		6		434	440	34		34		26	0
44504+25.00	160	14		2		144	146	12		12		34	0
44504+33.86	280	25	5	4		246	250	20		20		12	0
44504+50.00	407	38	14	5		350	355	26		26		20	0
44504+75.00	374	37	13	5		319	324	22		22		26	0
44505+00.00	348	36	12	5		295	300	20		20		22	0
44505+25.00	324	34	10	5		275	280	20		20		20	0
44505+50.00	305	33	5	5		262	267	23		23		20	0
44505+75.00	290	32		5		253	258	26		26		23	0
44506+00.00	277	31		5		241	246	26		26		26	0
44506+25.00	265	31		4		230	234	23		23		26	0
44506+50.00	253	30		4		219	223	23		23		23	0
44506+75.00	236	29		4		203	207	27		27		23	0
44507+00.00	214	29		4		181	185	29		29		27	0
44507+25.00	202	28		4		170	174	28		28		29	0
44507+50.00	198	27		4		167	171	27		27		28	0
44507+75.00	196	26		4		166	170	27		27		27	0
44508+00.00	192	25		4		163	167	28		28		27	0
44508+25.00	188	24		4		160	164	30		30		28	0
44508+50.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
44508+50.00	183	24		3		156	159	37		37		30	0
44508+75.00	178	24		3		151	154	46		46		37	0
44509+00.00	173	23		3		147	150	47		47		46	0
44509+25.00	175	23		3		149	152	41		41		47	0
44509+50.00	172	21		3		148	151	35		35		41	0
44509+75.00	159	19		3		137	140	31		31		35	0
44510+00.00	148	19		3		126	129	30		30		31	0
44510+25.00	135	18		3		114	117	28		28		30	0
44510+50.00	123	17		2		104	106	23		23		28	0
44510+75.00	113	16		2		95	97	19		19		23	0
44511+00.00	103	16		2		85	87	16		16		19	0
44511+25.00	92	15		2		75	77	13		13		16	0
44511+50.00	71	13		2		56	58	9		9		13	0
44511+71.76	10	2				8	8	1		1		9	0
44511+75.00	72	15		2		55	57	9		9		1	0
44512+00.00	65	15		2		48	50	9		9		9	0
44512+25.00	62	17		2		43	45	9		9		9	0
44512+50.00	61	18		3		40	43	11		11		9	0
44512+75.00	49	17		2		30	32	16		16		11	0
44512+95.76	10	3		1		6	7	5		5		16	0
44513+00.00	59	20		3		36	39	32		32		5	0
44513+25.00	61	20		3		38	41	38		38		32	0
44513+50.00	3	1				2	2	2		2		38	0
44513+51.36	63	18		3		42	45	42		42		2	0
44513+75.00												42	0
Subtotals:	20159	1654	59	239		18207	18446	2118	0	2118		2118	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			94	171		14005							
EDGED_RT												0	0
44599+92.45	14	2				12	12	14		14		0	0
44600+00.00	15	2				13	13	15		15		14	0
44600+08.34	30	3		1		26	27	31		31		15	0
44600+25.00	43	4		1		38	39	48		48		31	0
44600+50.00	18	2				16	16	20		20		48	0
44600+61.00	4					4	4	4		4		20	0
44600+63.35	18	2				16	16	21		21		4	0
44600+75.00	41	3				38	38	41		41		21	0
44601+00.00	65	2				63	63	31		31		41	0
44601+25.00	82	1				81	81	25		25		31	0
44601+50.00	67	2				65	65	30		30		25	0
44601+75.00	43	2				41	41	29		29		30	0
44601+94.55	9	1				8	8	7		7		29	0
44602+00.00	15	1				14	14	15		15		7	0
44602+11.65	2					2	2	3		3		15	0
44602+13.55	10	1				9	9	17		17		3	0
44602+25.00	13	3				10	10	42		42		17	0
44602+50.00	6	3		1		2	3	46		46		42	0
44602+75.00	4	3		1			1	43		43		46	0
44603+00.00	2	2						14		14		43	0
44603+09.13	3	3						23		23		14	0
44603+25.00	5	4		1			1	32		32		23	0
44603+50.00	6	4		1		1	2	30		30		32	32
44603+75.00												30	30
Subtotals:	515	50	0	6		459	465	581	0	581		581	62
Shrink Fac.			1	1.4		1.3							
Adjusted			0	4		353							
SREDGE													
7501+50.00	19	7		1		11	12	18		18		0	0
7501+60.00	30	10		2		18	20	29		29		0	0
7501+75.00	52	19		3		30	33	56		56		0	0
7502+00.00	54	23		3		28	31	78		78		0	0
7502+25.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
7502+25.00	56	27		4		25	29	115		115		0	0
7502+50.00	60	31		4		25	29	143		143		0	0
7502+75.00	66	34		5		27	32	162		162		0	0
7503+00.00	69	35		5		29	34	173		173		0	0
7503+25.00	70	36		5		29	34	179		179		0	0
7503+50.00	69	37		5		27	32	185		185		0	0
7503+75.00	27	15		2		10	12	75		75		0	0
7503+85.00	27	15		2		10	12	77		77		0	0
7503+95.00	13	8		1		4	5	39		39		0	0
7504+00.00	63	38		5		20	25	196		196		0	0
7504+25.00	58	38		6		14	20	200		200		0	0
7504+50.00	60	38		6		16	22	209		209		0	0
7504+75.00	63	38		6		19	25	227		227		0	0
7505+00.00	59	38		6		15	21	244		244		0	0
7505+25.00	55	38		6		11	17	254		254		0	0
7505+50.00	51	38		6		7	13	258		258		0	0
7505+75.00	49	38		6		5	11	263		263		0	0
7506+00.00	49	38		6		5	11	263		263		0	0
7506+25.00	20	16		2		2	4	102		102		0	0
7506+35.00	31	23		3		5	8	142		142		0	0
7506+50.00	57	38		5		14	19	226		226		0	0
7506+75.00	66	38		5		23	28	215		215		0	0
7507+00.00	77	38		5		34	39	195		195		0	0
7507+25.00	86	37		5		44	49	181		181		0	0
7507+50.00	96	36		5		55	60	162		162		0	0
7507+75.00	93	29		4		60	64	111		111		0	0
7507+95.00	26	7		1		18	19	25		25		0	0
7508+00.00	115	26		4		85	89	95		95		0	0
7508+19.93												0	0
7508+20.00	33	6		1		26	27	23		23		0	0
7508+25.00	185	33		5		147	152	112		112		0	0
7508+50.00	206	34		5		167	172	110		110		0	0
7508+75.00	106	17		3		86	89	55		55		0	0
7508+87.76	98	17		2		79	81	52		52		0	0
7509+00.00	151	25		4		122	126	102		102		0	0
7509+25.00	13	2				11	11	12		12		0	0
7509+28.07	93	16		2		75	77	84		84		0	0
7509+50.00	98	17		2		79	81	87		87		0	0
7509+73.30	7	1		0		6	6	6		6		0	0
7509+75.00	98	18		3		77	80	98		98		0	0
7510+00.00	86	17		3		66	69	104		104		0	0
7510+25.00	34	8		1		25	26	31		31		0	0
7510+32.13	106	25		4		77	81	81		81		0	0
7510+50.00	47	11		2		34	36	37		37		0	0
7510+66.60	11	3				8	8	10		10		0	0
7510+70.60	25	6		1		18	19	21		21		0	0
7510+75.00	28	7		1		20	21	24		24		0	0
7510+80.00	112	26		4		82	86	97		97		0	0
7511+00.00	132	32		5		95	100	122		122		0	0
7511+25.00	115	33		5		77	82	125		125		0	0
7511+50.00	97	35		5		57	62	133		133		0	0
7511+75.00	69	28		4		37	41	115		115		0	0
7511+95.00	17	7		1		9	10	30		30		0	0
7512+00.00	78	35		5		38	43	152		152		0	0
7512+25.00	4	2				2	2	9		9		0	0
7512+26.48	66	32		5		29	34	153		153		0	0
7512+50.00	65	35		5		25	30	182		182		0	0
7512+75.00	60	37		5		18	23	202		202		0	0
7513+00.00	25	17		2		6	8	96		96		0	0
7513+10.92	32	22		3		7	10	128		128		0	0
7513+25.00	58	40		6		12	18	235		235		0	0
7513+50.00	60	43		6		11	17	265		265		0	0
7513+75.00	24	17		3		4	7	110		110		0	0
7513+84.71	38	28		4		6	10	173		173		0	0
7514+00.00	64	47		7		10	17	320		320		0	0
7514+25.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
7514+25.00	26	19		3		4	7	144		144		0	0
7514+35.00	20	15		2		3	5	107		107		0	0
7514+42.36	21	15		2		4	6	113		113		0	0
7514+50.00	43	31		4		8	12	244		244		0	0
7514+67.00	19	13		2		4	6	111		111		0	0
7514+75.00	17	11		2		4	6	97		97		0	0
7514+81.95	43	31		4		8	12	253		253		0	0
7515+00.00	52	37		5		10	15	304		304		0	0
7515+21.50	9	6		1		2	3	50		50		0	0
7515+25.00	12	9		1		2	3	72		72		0	0
7515+30.00	52	36		5		11	16	298		298		0	0
7515+50.00	48	31		5		12	17	258		258		0	0
7515+66.30	29	17		3		9	12	142		142		0	0
7515+75.00	81	42		6		33	39	325		325		0	0
7515+95.00	24	11		2		11	13	81		81		0	0
7516+00.00	132	54		8		70	78	439		439		0	0
7516+25.00	139	41		6		92	98	276		276		0	0
7516+50.00	113	23		3		87	90	73		73		0	0
7516+70.00	29	6		1		22	23	23		23		0	0
7516+75.00	164	38		6		120	126	163		163		0	0
7517+00.00	154	42		6		106	112	245		245		0	0
7517+25.00	30	10		2		18	20	70		70		0	0
7517+30.77	84	33		5		46	51	251		251		0	0
7517+50.00												0	0
7517+65.00												0	0
7517+75.00												0	0
7517+83.00												0	0
7517+84.51												0	0
7518+00.00												0	0
7518+03.00												0	0
7518+05.00												0	0
7518+21.21												0	0
7518+25.00												0	0
Subtotals:	5668	2277	0	332		3059	3391	12732	0	12732		0	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			0	237		2353							
BRIDGE													
7519+55.00												0	0
7519+57.58												0	0
7519+60.00												0	0
7519+70.00												0	0
7519+72.00												0	0
7519+75.00												0	0
7519+77.00												0	0
7519+82.00												0	0
7520+00.00												0	0
7520+25.00	154	39		6		109	115	239		239		0	0
7520+44.54	43	12		2		29	31	71		71		0	0
7520+50.00	167	54		8		105	113	320		320		0	0
7520+75.00	41	14		2		25	27	78		78		0	0
7520+87.31	27	10		1		16	17	61		61		0	0
7521+00.00	4	2				2	2	8		8		0	0
7521+00.75	84	31		5		48	53	144		144		0	0
7521+24.89				0								0	0
7521+25.00	45	11		2		32	34	87		87		0	0
7521+40.00	21	4		1		16	17	32		32		0	0
7521+50.00	61	17		2		42	44	87		87		0	0
7521+72.86	8	3				5	5	11		11		0	0
7521+75.00	20	7		1		12	13	32		32		0	0
7521+80.00	92	35		5		52	57	266		266		0	0
7522+00.00	110	45		6		59	65	369		369		0	0
7522+21.91	16	6		1		9	10	45		45		0	0
7522+25.00	96	39		6		51	57	263		263		0	0
7522+44.96													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
7522+44.96	24	10		1		13	14	59		59		0	0
7522+50.00	126	45		6		75	81	254		254		0	0
7522+75.00	15	5		1		9	10	26		26		0	0
7522+77.95	109	35		5		69	74	178		178		0	0
7523+00.00	122	36		5		81	86	177		177		0	0
7523+25.00	122	32		5		85	90	160		160		0	0
7523+50.00	126	32		5		89	94	148		148		0	0
7523+75.00	39	10		2		27	29	46		46		0	0
7523+83.15	9	3				6	6	12		12		0	0
7523+87.25	31	9		1		21	22	34		34		0	0
7524+00.00	92	26		4		62	66	108		108		0	0
7524+19.80	23	7		1		15	16	28		28		0	0
7524+25.00	115	35		5		75	80	136		136		0	0
7524+50.00	22	7		1		14	15	26		26		0	0
7524+54.75	28	10		1		17	18	39		39		0	0
7524+62.10	39	14		2		23	25	68		68		0	0
7524+75.00	56	20		3		33	36	97		97		0	0
7524+93.31	19	7		1		11	12	36		36		0	0
7525+00.00	10	4		1		5	6	20		20		0	0
7525+03.70	52	21		3		28	31	105		105		0	0
7525+22.98	5	3				2	2	11		11		0	0
7525+25.00	62	27		4		31	35	137		137		0	0
7525+50.00	45	19		3		23	26	99		99		0	0
7525+68.04	18	8		1		9	10	38		38		0	0
7525+75.00	75	33		5		37	42	149		149		0	0
7526+00.00	84	38		6		40	46	159		159		0	0
7526+25.00	7	3		1		3	4	13		13		0	0
7526+27.17	78	35		5		38	43	141		141		0	0
7526+50.00	91	38		5		48	53	148		148		0	0
7526+75.00	97	37		5		55	60	138		138		0	0
7527+00.00	108	37		5		66	71	130		130		0	0
7527+25.00	120	37		5		78	83	125		125		0	0
7527+50.00	126	35		5		86	91	129		129		0	0
7527+75.00	12	3		1		8	9	13		13		0	0
7527+77.36	119	31		5		83	88	126		126		0	0
7528+00.00	136	35		5		96	101	154		154		0	0
7528+25.00	147	35		5		107	112	119		119		0	0
7528+50.00	140	28		4		108	112	38		38		0	0
7528+70.00	38	7		1		30	31	4		4		0	0
7528+75.00	184	34		5		145	150	25		25		0	0
7529+00.00	170	31		5		134	139	42		42		0	0
7529+25.00	95	17		3		75	78	34		34		0	0
7529+40.00	20	3		1		16	17	7		7		0	0
7529+46.46	11	2				9	9	4		4		0	0
7529+50.00	36	7		1		28	29	13		13		0	0
7529+61.55	43	8		1		34	35	22		22		0	0
7529+75.00	46	9		1		36	37	27		27		0	0
7529+82.05	52	10		2		40	42	32		32		0	0
7529+90.00	62	12		2		48	50	40		40		0	0
7530+00.00	156	31		5		120	125	110		110		0	0
7530+25.00	153	30		4		119	123	116		116		0	0
7530+50.00	146	29		4		113	117	141		141		0	0
7530+75.00	110	24		3		83	86	160		160		0	0
7530+94.68	29	6		1		22	23	48		48		0	0
7531+00.00	137	31		5		101	106	192		192		0	0
7531+25.00	138	31		5		102	107	146		146		0	0
7531+50.00	106	23		3		80	83	76		76		0	0
7531+69.25	32	6	9	1		16	17	19		19		0	0
7531+75.00	131	25	77	4		25	29	55		55		0	0
7532+00.00	120	20	70	3		27	30	23		23		0	0
7532+25.00	51	8	29	1		13	14	6		6		0	0
7532+36.25	60	10	34	1		15	16	7		7		0	0
7532+50.00	42	7	24	1		10	11	5		5		0	0
7532+60.00	7	2	4			2	1	1		1		0	0
7532+63.39	24	3	14	1		6	7	3		3		0	0
7532+75.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

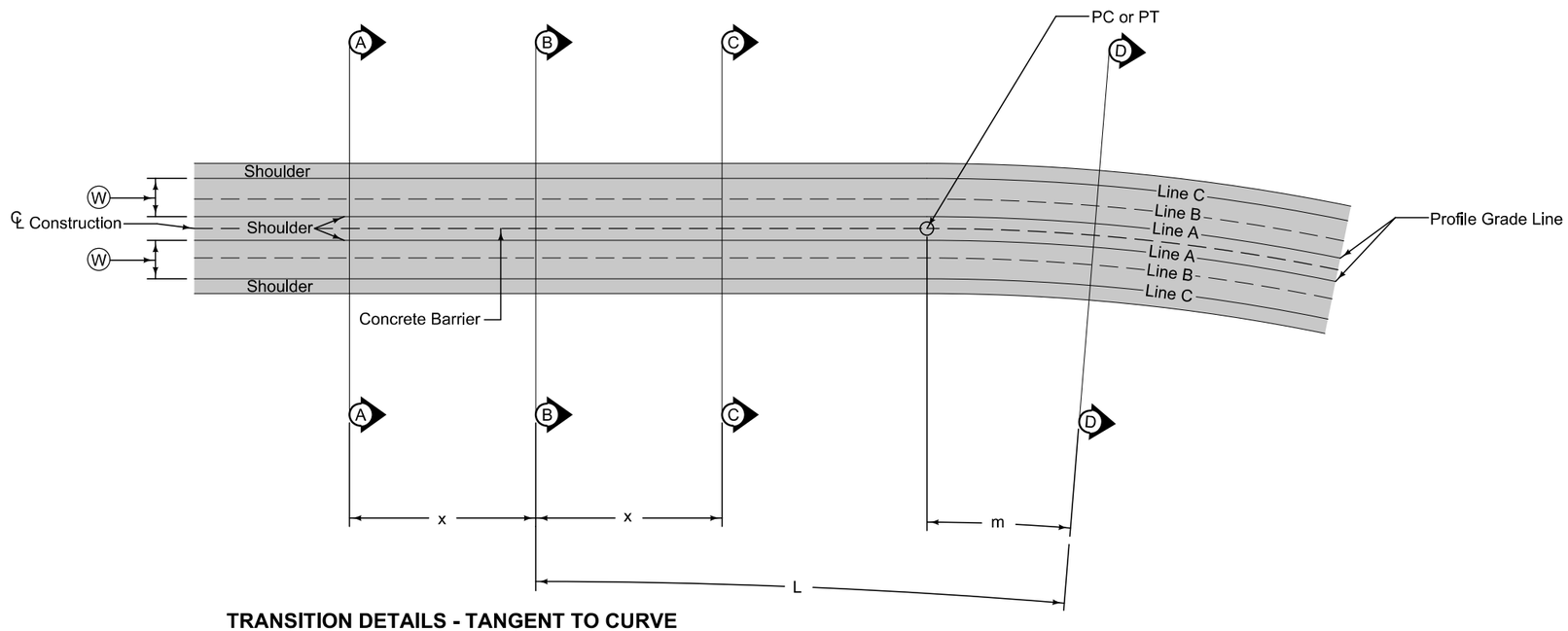
STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
7532+75.00	46	8	27	1		10	11	5		5		0	0
7532+86.50	50	9	29	1		11	12	6		6		0	0
7533+00.00	66	13	38	2		13	15	9		9		0	0
7533+20.00												0	0
Subtotals:	5999	1635	355	239		3771	4009	7115	0	7115		0	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			568	171		2901							
SRNRBLVD													
7207+31.01	17					17	17	2		2		0	0
7207+35.00	24					24	24	2		2		0	0
7207+40.67	35					35	35	3		3		0	0
7207+48.75	5					5	5					0	0
7207+50.00	110					110	110	10		10		0	0
7207+75.00	37					37	37	3		3		0	0
7207+82.91	83					83	83	7		7		0	0
7208+00.00	83					83	83	6		6		0	0
7208+16.26	46					46	46	3		3		0	0
7208+25.00	116					116	116	8		8		0	0
7208+46.01	23					23	23	2		2		0	0
7208+50.00	36					36	36	2		2		0	0
7208+56.30	29					29	29	2		2		0	0
7208+61.33	31					31	31	2		2		0	0
7208+66.77	29					29	29	2		2		0	0
7208+71.77	19					19	19	1		1		0	0
7208+75.00	202					202	202	13		13		0	0
7209+00.00												0	0
Subtotals:	925	0	0	0		925	925	68		68		0	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			0	0		712							
SRHYVEE													
8526+00.00	177					177	177	15		15		0	0
8526+19.57	37					37	37	3		3		0	0
8526+25.00	114					114	114	4		4		0	0
8526+47.59	2					2	2					0	0
8526+48.12												0	0
Subtotals:	330	0	0	0		330	330	22	0	22		0	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			0	0		254							
DETOUR9													
170+25.00	18					18	18					0	0
170+50.00	16					16	16					0	0
170+75.00	16					16	16	2		2		0	0
171+00.00	13					13	13	8		8		0	0
171+25.00	11					11	11	28		28		0	0
171+50.00	10					10	10	61		61		0	0
171+75.00	14					14	14	97		97		0	0
172+00.00	12					12	12	144		144		0	0
172+25.00	3					3	3	228		228		0	0
172+50.00								341		341		0	0
172+75.00								459		459		0	0
173+00.00								325		325		0	0
173+14.23								278		278		0	0
173+25.00								99		99		0	0
173+28.67								624		624		0	0
173+50.00								836		836		0	0
173+75.00								998		998		0	0
174+00.00								1273		1273		0	0
174+25.00								1703		1703		0	0
174+50.00	385					385	385	2290		2290		0	0
174+75.00													

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Refer to Standard Plan EW-101 and RL-1B.

STATION	TOTAL CUT	TOPSOIL TYPE C SAVED -C	HARD ROCK -C	UNSUIT TYPE C CUT	UNSUIT MUCK CUT	CLASS 10 SUITABLE CUT	ADJUSTED CLASS 10 TOTAL	TEMPLATE FILL	ADD QUANTITY +F	TOTAL TEMPLATE FILL		APPROX. FILL VOLUME BELOW 3 FT	APPROX. FILL VOLUME BELOW 5 FT
174+75.00	619					619	619	2754		2754		0	0
175+00.00	684					684	684	2905		2905		0	0
175+25.00	714					714	714	2458		2458		0	0
175+50.00								1571		1571		0	0
175+75.00								713		713		0	0
176+00.00	17					17	17	179		179		0	0
176+25.00	44					44	44	142		142		0	0
176+50.00	27					27	27	254		254		0	0
176+75.00								391		391		0	0
177+00.00								495		495		0	0
177+25.00								512		512		0	0
177+50.00								317		317		0	0
177+65.07								212		212		0	0
177+75.00								506		506		0	0
178+00.00								378		378		0	0
178+25.00	2					2	2	149		149		0	0
178+50.00	12					12	12	13		13		0	0
178+70.71	5					5	5	3		3		0	0
178+75.00	26					26	26	103		103		0	0
179+00.00	15					15	15	133		133		0	0
179+18.54	5					5	5	44		44		0	0
179+25.00	13					13	13	135		135		0	0
179+50.00	9					9	9	82		82		0	0
179+75.00	8					8	8	40		40		0	0
180+00.00	8					8	8	14		14		0	0
180+25.00	8					8	8	4		4		0	0
180+50.00	8					8	8					0	0
180+75.00												0	0
Subtotals	2722	0	0	0		2722	2722	24301	0	24301		0	0
Shrink Fac.			0.6	1.4		1.3							
Adjusted			0	0		2094							
Grand Total:	240052	17933	12556	2606	28102	178836	209543	79583	0	79583		30200	62
Shrink Fac.			0.6	1.4	1	1.3							
Adjusted			20090	1861	28102	137566							

Fill	Need	79583
Uns	C	-1861
CL	10	-137566
Borrow	Need	-59845



TRANSITION DETAILS - TANGENT TO CURVE

Refer to specific curve data contained in project plans for tangent runout length (x), runoff length (L) and full superelevation (e).

When spiral curve transitions are not required:
Place 70% of full superelevation at the PC and PT
Place 30% of the runoff length within the curve.

Unless otherwise specified, all lengths are measured along the centerline of construction.

Superelevations on this standard are shown for curves to the right. Curves to the left are a mirror image of what is shown.

Smooth curves should be established at the time of construction at sections A-D along the profile edges of lines A-C.

Axis of rotation coincides with profile grade location.

m = 30% of Runoff Length (L)

L = Distance to Change Cross Slope from 0% to e

e = Supereleavtion Rate

x = Distance to Change Cross Slope from 0% to 2%

s = Normal Shoulder Slope

W = Pavement Width 26'

Refer to Tabulation:
101-18

Iowa Department of Transportation

MODIFIED STANDARD ROAD PLAN

REVISION	
2	04-17-12

PV-302

SHEET 1 of 3

MODIFICATIONS: Changed to closed median instead of depressed.

SUPERELEVATION DETAILS
FOUR LANE ROADWAY
CLOSED MEDIAN

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER U.1

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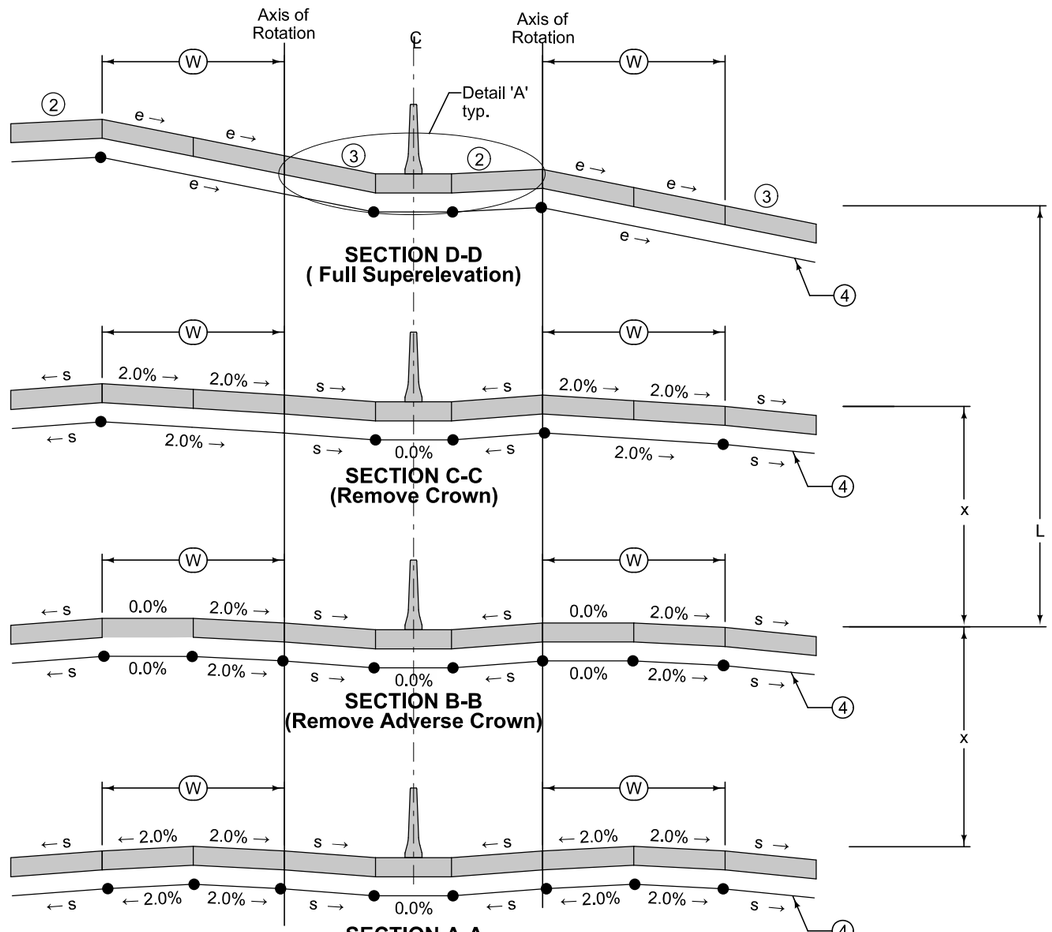
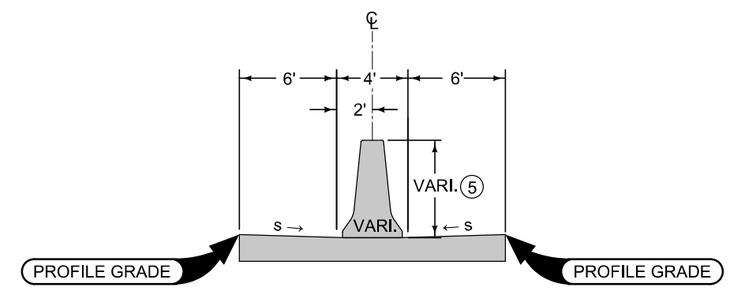


② High Side Shoulder: Maintain normal shoulder cross slope (s) until the cross slope break with the adjacent pavement reaches 8.0%, then slope the shoulder at the same rate as the adjacent pavement maintaining an 8% cross slope breakover.

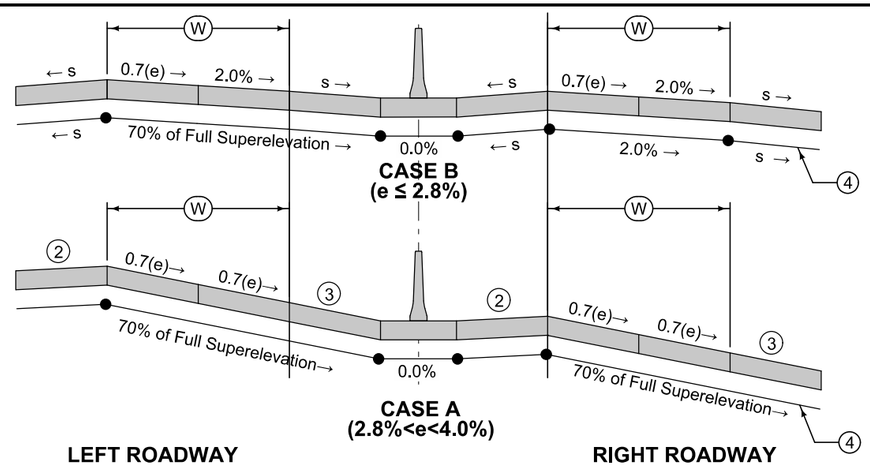
③ Low Side Shoulder: Maintain normal shoulder cross slope (s) until the adjacent pavement slope equals s, then slope the shoulder at the same cross slope as the adjacent pavement.

④ Subgrade Surface: Subgrade surface cross slope parallel to pavement surface cross slope.



DETAIL A

⑤ Barrier height will vary through superelevated curves when e>4.0% Refer to superelevated barrier detail on sheet U.x for details.



SECTION AT THE PC OR PT

MODIFIED STANDARD ROAD PLAN

REVISION	
2	04-17-12

PV-302

SHEET 2 of 3

MODIFICATIONS: Changed to closed median instead of depressed.

SUPERELEVATION DETAILS
FOUR LANE ROADWAY
CLOSED MEDIAN

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER U.2

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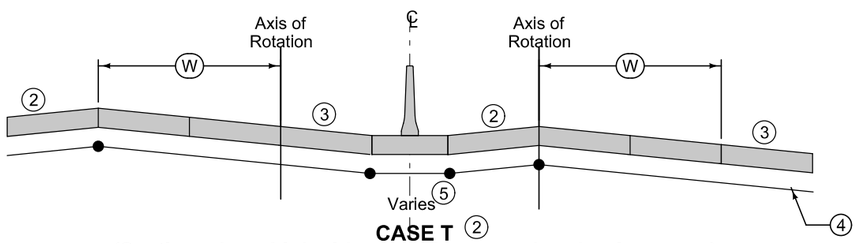
② High Side Shoulder: Maintain normal shoulder cross slope (s) until the cross slope break with the adjacent pavement reaches 8.0%, then slope the shoulder at the same rate as the adjacent pavement maintaining an 8% cross slope breakover.

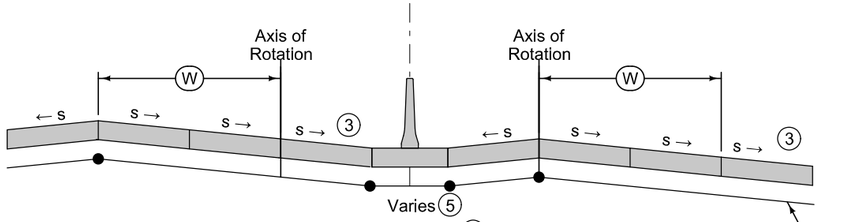
③ Low Side Shoulder: Maintain normal shoulder cross slope (s) until the adjacent pavement slope equals s, then slope the shoulder at the same cross slope as the adjacent pavement.

④ Subgrade Surface: Subgrade surface cross slope parallel to pavement surface cross slope for locations being paved as part of this project for locations being paved as part of this project.

⑤ Median slope and barrier height vary when e > 4.0%. Refer to detail A on Sheet U.2.

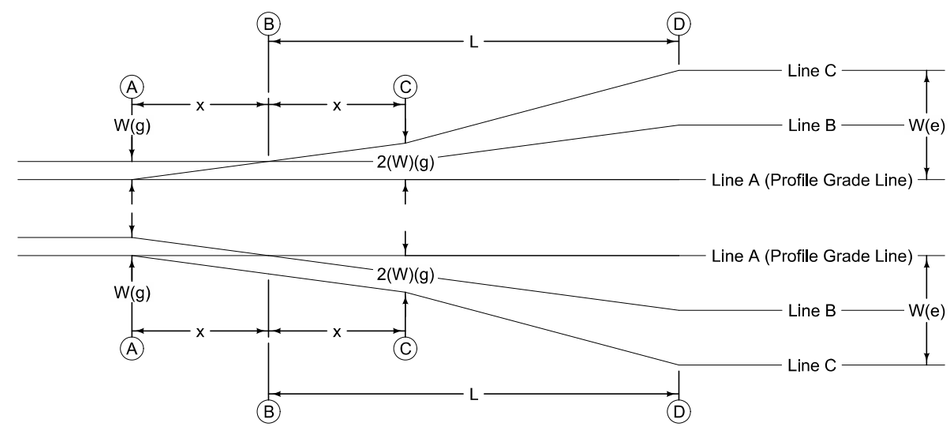


CASE T ②
(Section where high side shoulder crown break rule occurs)



CASE S ③
(Section where low side shoulder crown break rule occurs)

LEFT ROADWAY **SECTION WHERE SHOULDER SLOPE TRANSITION BEGINS** **RIGHT ROADWAY**



DIAGRAMMATIC PROFILES OF THE PAVEMENT EDGE LINES

MODIFIED STANDARD ROAD PLAN

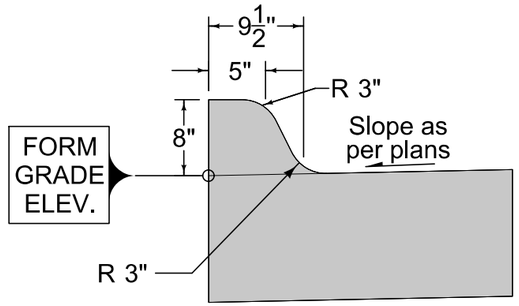
REVISION	
2	04-17-12

PV-302

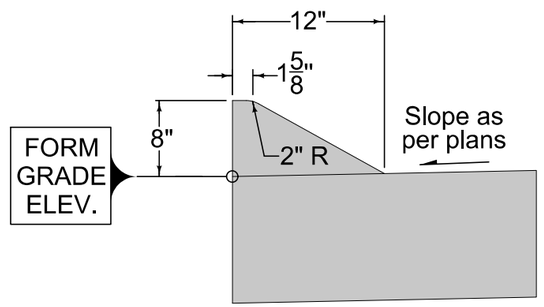
SHEET 3 of 3

MODIFICATIONS: Changed to closed median instead of depressed.

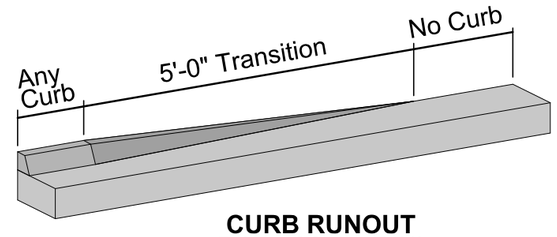
SUPERELEVATION DETAILS
FOUR LANE ROADWAY
CLOSED MEDIAN



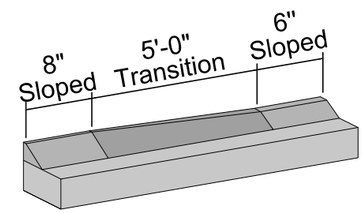
8" STANDARD CURB



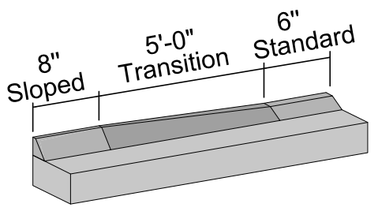
8" SLOPED CURB



CURB RUNOUT FOR ALL CURBS



CURB TRANSITION FROM 8" SLOPED TO 6" SLOPED



CURB TRANSITION FROM 8" SLOPED TO 6" STANDARD

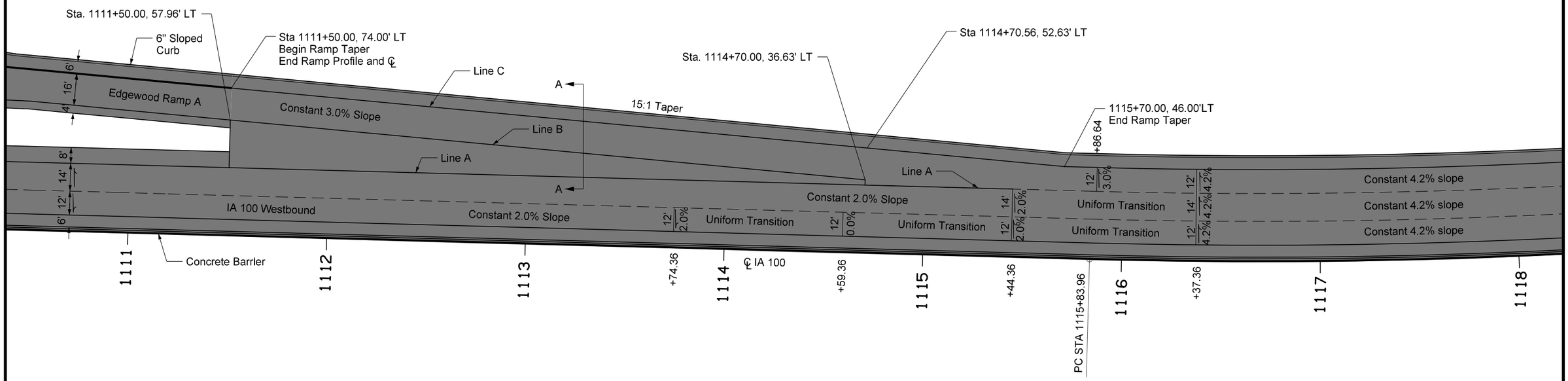
FIGURE 7010.102

SHEET 1 OF 1

SUDAS	Iowa Department of Transportation	REVISION 2	04-16-13
FIGURE 7010.102	MODIFIED STANDARD ROAD PLAN	PV-102	SHEET 1 of 1

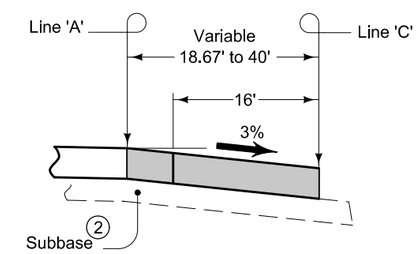
MODIFICATIONS: Changed 6" sloped to 4" sloped curb transition to 8" sloped to 6" sloped curb transition and 6" standard to 4" curb transtion to 8" sloped to 6" standard curb transition.

PCC CURB DETAILS



IA 100 STATIONING		1114+75	1115+00	1115+25	1115+44.36	1115+50	1115+70
From Line 'A' To Line 'C'	OFFSET (Ft.)	18.33'	16.67'	15.00'	13.71'	13.33'	12.00'
	SLOPE (%)	-3.0%	Constant -3.0%				-3.0%
	ELEVATION	838.66	838.80	838.93	839.03	839.05	839.09

IA 100 STATIONING		1111+50	1111+75	1112+00	1112+25	1112+50	1112+75	1113+00	1113+25	1113+50	1113+75	1114+00	1114+25	1114+50	1114+70
From Line 'A' To Line 'B'	OFFSET (FT.)	23.96'	22.30'	20.63'	18.96'	17.30'	15.63'	13.96'	12.30'	10.63'	8.96'	7.30'	5.63'	3.96'	2.63'
	SLOPE (%)	-3.0%	Constant -3.0%												-3.0%
	ELEVATION 'B'	836.76	836.96	837.17	837.38	837.58	837.79	837.99	838.20	838.40	838.60	838.74	838.87	839.01	839.12
From Line 'A' To Line 'C'	OFFSET (FT.)	40.00'	38.33'	36.67'	35.00'	33.33'	31.67'	30.00'	28.33'	26.67'	25.00'	23.33'	21.67'	20.00'	18.67'
	SLOPE (%)	-3.0%	Constant -3.0%												-3.0%
	ELEVATION 'C'	836.28	836.48	836.69	836.89	837.10	837.30	837.51	837.71	837.92	838.12	838.26	838.39	838.53	838.64



SECTION A-A

Construct ramp exit pavement the same thickness as mainline pavement.

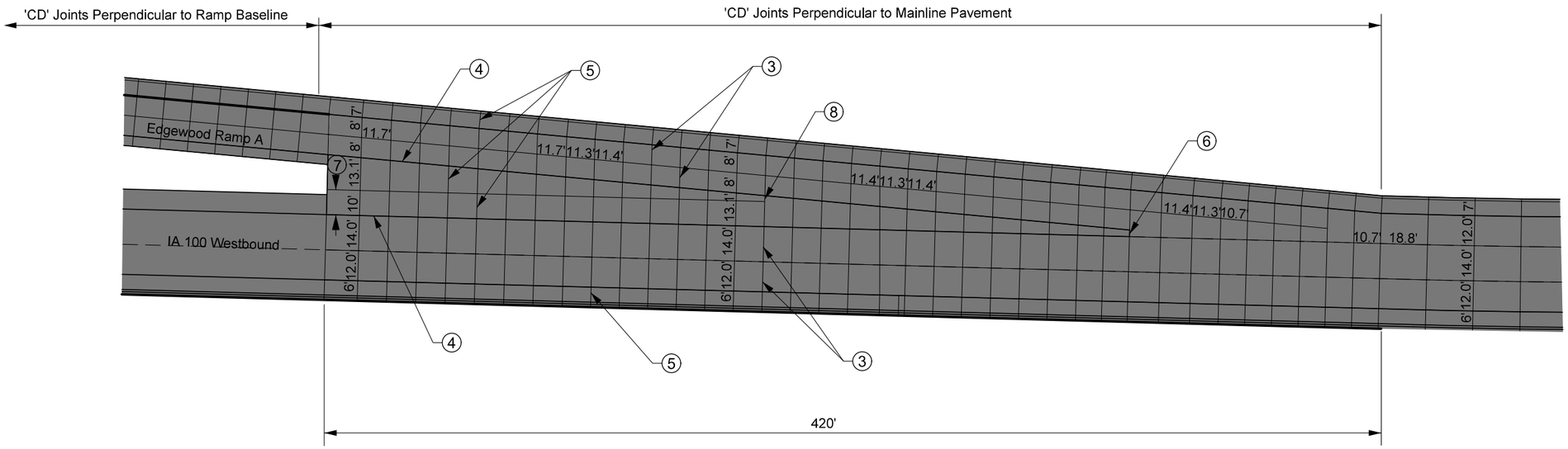
For joint details, see U.6.

1 For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

2 Construct subbase for ramp exit pavement the same thickness as mainline subbase.

0 FEET 25

Geometric and Staking Detail
IA 100 / Edgewood Road
Interchange
Westbound Exit Taper
(Ramp A)



③ 'CD' Joints.

④ 'L2' or 'KT-2' Joints.

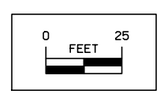
⑤ 'C' Joints.

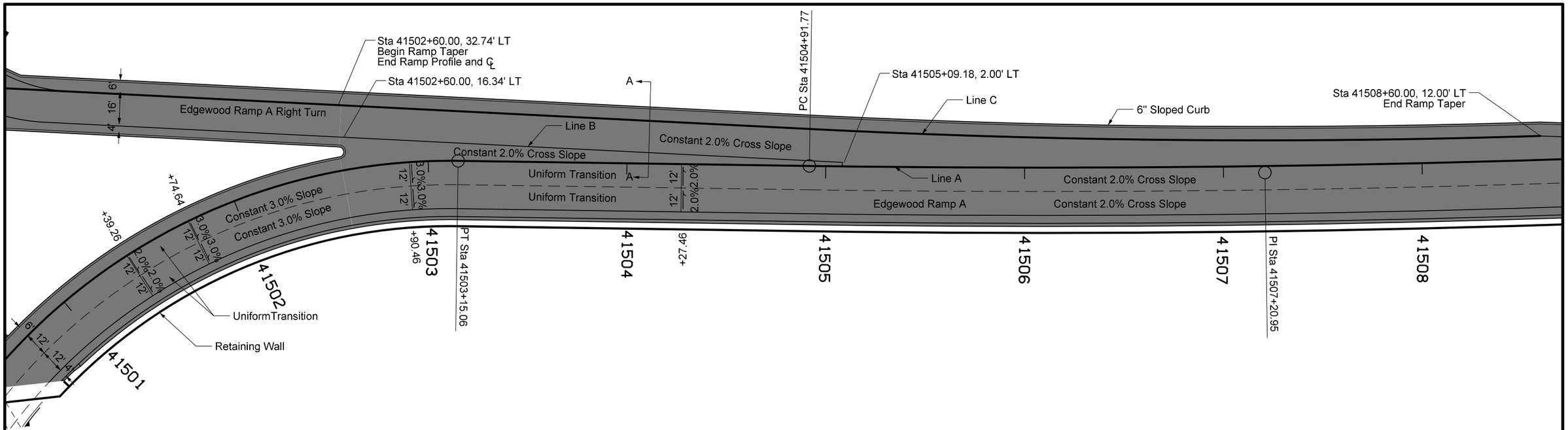
⑥ 'B' Joints. 2' minimum, 4' maximum.

⑦ 10' minimum or equal to mainline shoulder width.

⑧ 'B' or 'C' Joints. 2' minimum, 4' maximum.

Jointing Detail
IA 100 / Edgewood Road
Interchange
Westbound Exit Taper
(Ramp A)





RAMP A STATIONING		41505+25	41505+50	41505+75	41506+00	41506+25	41506+50	41506+75	41507+00	41507+25	41507+50	41507+75	41508+00	41508+25	41508+50	41508+60
From Line 'A' To Line 'C'	OFFSET (Ft.)	17.48'	16.69'	15.97'	15.30'	14.70'	14.15'	13.67'	13.25'	12.89'	12.59'	12.35'	12.18'	12.06'	12.01'	12.00'
	SLOPE (%)	-2.0%	Constant -2.0%													-2.0%
	ELEVATION	842.29	841.74	841.19	840.63	840.08	839.52	838.97	838.43	837.94	837.50	837.09	836.72	836.40	836.12	836.02

RAMP A STATIONING		41502+60	41502+75	41503+00	41503+25	41503+50	41503+75	41504+00	41504+25	41504+50	41504+75	41505+00	41505+09.18
From Line 'A' To Line 'B'	OFFSET (FT.)	16.34'	13.24'	9.91'	8.60'	7.70'	6.80'	5.91'	5.01'	4.11'	3.21'	2.32'	2.00'
	SLOPE (%)	-2.0%	Constant -2.0%										-2.0%
	ELEVATION 'B'	848.33'	848.05	847.55	847.01	846.46	845.91	845.36	844.81	844.26	843.71	843.16'	842.96
From Line 'A' To Line 'C'	OFFSET (FT.)	32.74'	29.47'	25.97'	24.61'	23.71	22.81	21.92	21.02	20.12	19.22	18.33'	18.00'
	SLOPE (%)	-2.0%	Constant -2.0%										-2.0%
	ELEVATION 'C'	848.01	847.73	847.23	846.69	846.14	845.59	845.04	844.49	843.94	843.39	842.84	842.64

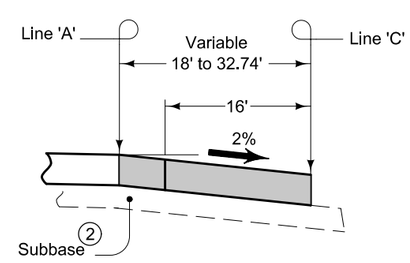
Construct ramp exit pavement the same thickness as Ramp pavement.

For joint details, see Sheet L.4.

① For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

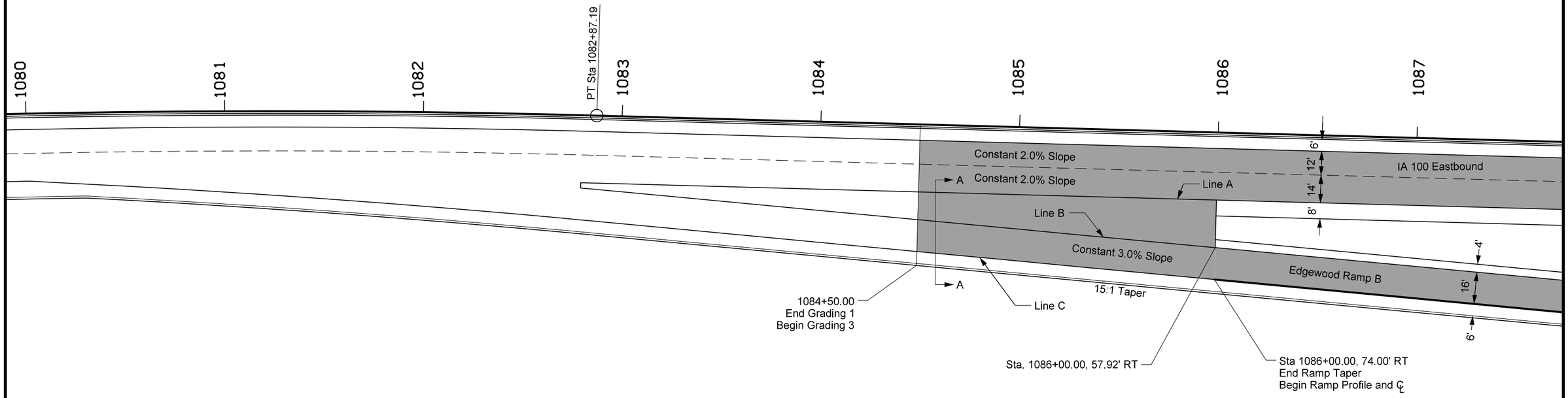
② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

0 FEET 25

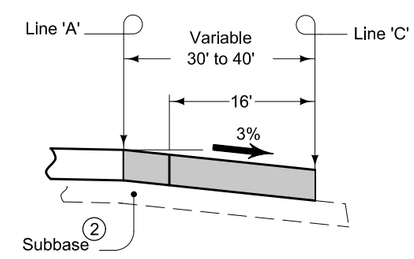


SECTION A-A

Geometric and Staking Detail
IA 100 / Edgewood Road
Interchange
Westbound Exit Taper
(Ramp A Right Turn Lane)



IA 100 STATIONING		1084+50	1084+75	1085+00	1085+25	1085+50	1085+75	1086+00
From Line 'A' To Line 'B'	OFFSET (FT.)	13.96'	15.63'	17.30'	18.96'	20.63'	22.30'	23.96'
	SLOPE (%)	-3.0%	Constant -3.0%					-3.0%
	ELEVATION 'B'	814.90	815.31	815.71	816.12	816.52	816.93	817.33
From Line 'A' To Line 'C'	OFFSET (FT.)	30.00'	31.67'	33.33'	35.00'	36.67'	38.33'	40.00'
	SLOPE (%)	-3.0%	Constant -3.0%					-3.0%
	ELEVATION 'C'	814.42	814.83	815.23	815.64	816.04	816.45	816.85



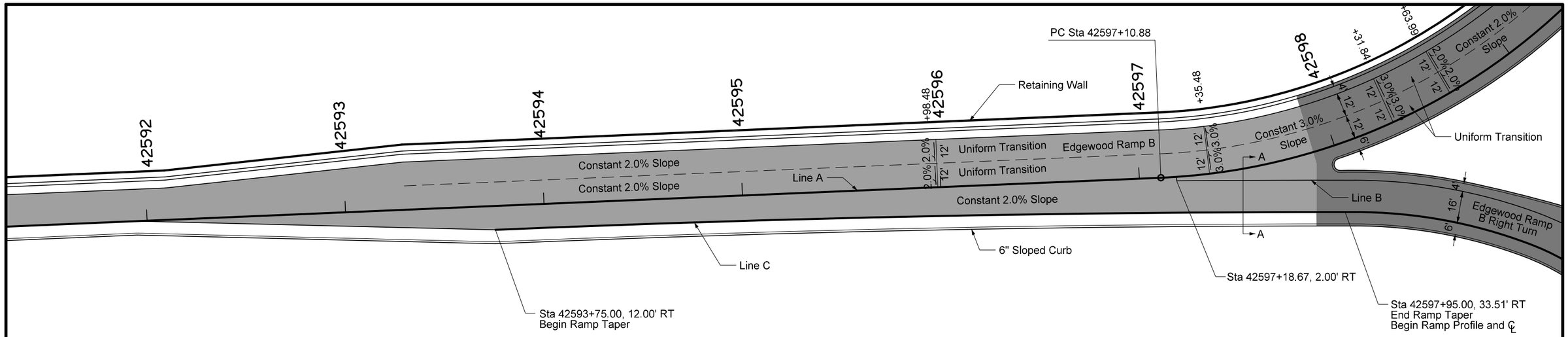
SECTION A-A

Construct ramp exit pavement the same thickness as mainline pavement.

Geometric and Staking Detail
IA 100 / Edgewood Road
Interchange
Eastbound Exit Taper
(Ramp B)

1. For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.
2. Construct subbase for ramp exit pavement the same thickness as mainline subbase.

0 FEET 25



RAMP B STATIONING		42593+75	42594+00	42594+25	42594+50	42594+75	42595+00	42595+25	42595+50	42595+75	42596+00	42596+25	42596+50	42596+75
From Line 'A' To Line 'C'	OFFSET (Ft.)	12.00'	12.03'	12.13'	12.28'	12.50'	12.78'	13.13'	13.53'	14.00'	14.53'	15.13'	15.78'	16.50'
	SLOPE (%)	-2.0%	Constant -2.0%											-2.0%
	ELEVATION	838.70	839.48	840.27	841.05	841.83	842.61	843.39	844.17	844.94	845.72	846.49	847.27	848.04

RAMP B STATIONING		42596+91.44	42597+00	42597+25	42597+50	42597+75	42597+95
From Line 'A' To Line 'B'	OFFSET (FT.)	1.00'	1.27'	2.44'	5.51'	10.79'	16.71'
	SLOPE (%)	-2.0%	Constant -2.0%				-2.0%
	ELEVATION 'B'	848.87	849.13	849.89	850.58	851.16	851.54
From Line 'A' To Line 'C'	OFFSET (FT.)	17.0'	17.28'	18.49'	21.72'	27.27'	33.51'
	SLOPE (%)	-2.0%	Constant -2.0%				-2.0%
	ELEVATION 'C'	848.55	848.81	849.57	850.26	850.84	851.22

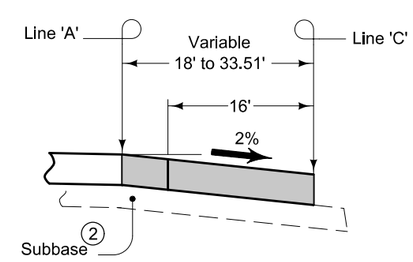
Construct ramp exit pavement the same thickness as Ramp pavement.

For joint details, see Sheet L.8.

① For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

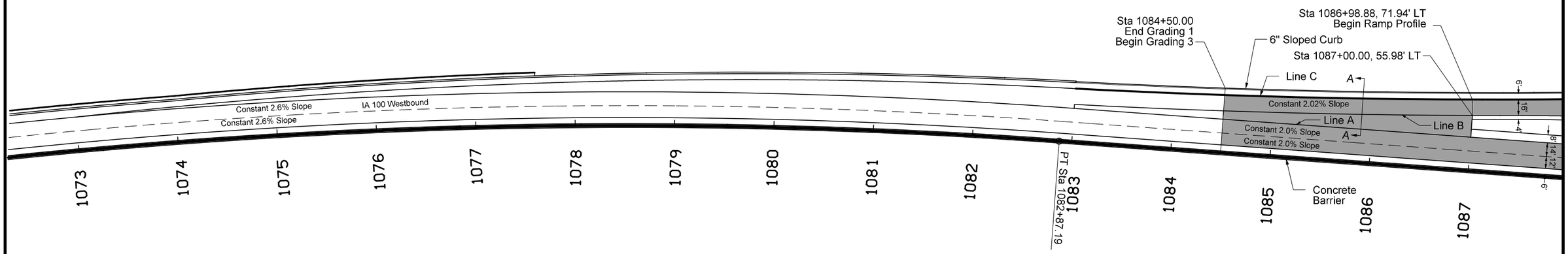
② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

0 25
FEET



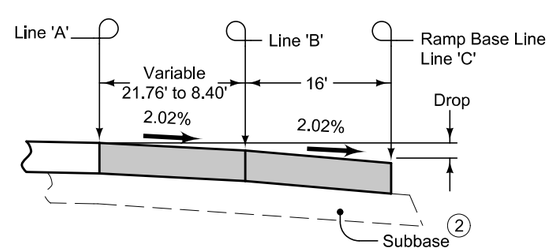
SECTION A-A

Geometric and Staking Detail
IA 100 / Edgewood Road
Interchange
Ramp B Right Turn Lane



Curve
△ = 6° 09' 00.74"
T = 429.78'
L = 399.33'
E = 11.52
R = 8,000

IA 100 STATIONING		1084+50	1084+75	1085+00	1085+25	1085+50	1085+75	1086+00	1086+25	1086+50	1086+75	1087+00
From Line 'A' To Line 'B'	OFFSET (FT.)	8.40'	9.40	10.49'	11.65'	12.89'	14.21'	15.61'	17.08'	18.64'	20.27'	21.98'
	SLOPE (%)	Constant -2.02%										-2.02%
	ELEVATION 'B'	815.15	815.59	816.02	816.45	816.88	817.31	817.74	818.16	818.58	819.01	819.43
From Line 'B' To Line 'C'	OFFSET (FT.)	Constant 16.0' Width										16.0'
	SLOPE (%)	Constant -2.02%										-2.02%
	ELEVATION 'C'	814.83	815.26	815.70	816.13	816.56	816.99	817.41	817.84	818.26	818.68	819.10



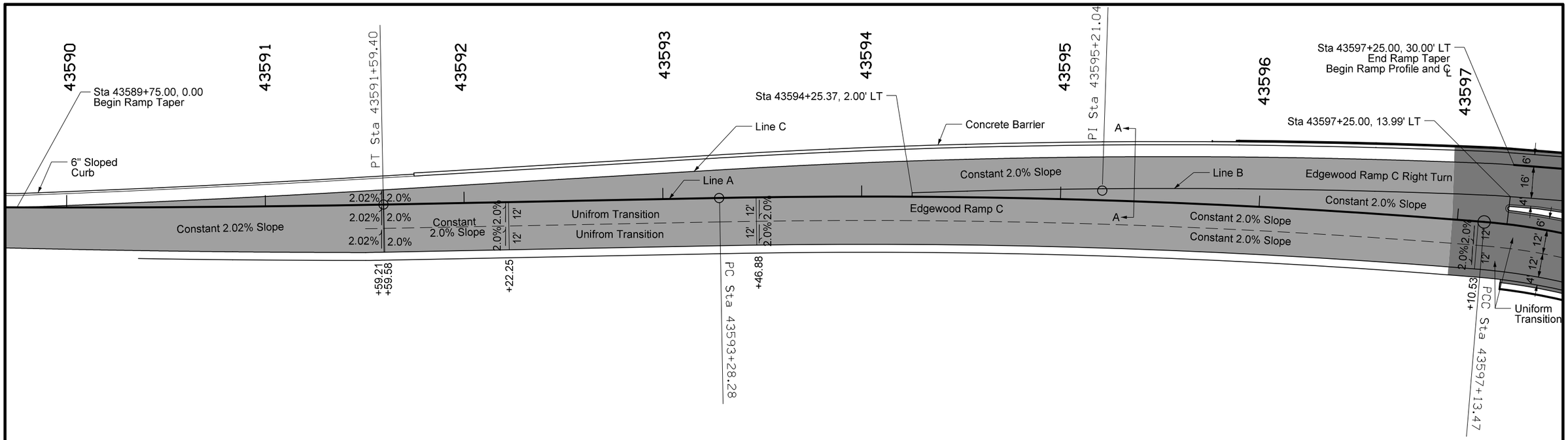
SECTION A-A

Construct ramp entrance pavement the same thickness as mainline pavement.

1. For header construction details at the end of taper, see Typical 7101 or Typical 7102.
2. Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

0 50
FEET

Geometric and Staking Detail
IA 100 / Edgewood
Interchange
Westbound Entrance Taper
(Ramp C)



RAMP C STATIONING		43589+75	43590+00	43590+25	43590+50	43590+75	43591+00	43591+25	43591+50	43591+59.21	43591+59.58	43591+75	43592+00	43592+22.25	43592+25	43592+50	43592+75	43593+00	43593+25	43593+46.88	43593+50	43593+75	43594+00	43594+25
From Line 'A' To Line 'C'	OFFSET (Ft.)	0.00'	1.00'	2.00'	3.00'	4.00'	5.00'	6.00'	7.00'	7.37'	7.38'	8.00'	9.00'	9.89'	10.00'	11.00'	12.00'	13.00'	14.00'	14.88'	15.00'	16.00'	17.00'	18.00'
	SLOPE (%)	-2.02%	Constant -2.02%							-2.02%	-2.0%	Constant -2.0%												-2.0%
	ELEVATION	823.92	824.47	825.07	825.71	826.39	827.12	827.87	828.62	828.90	828.91	829.37	830.12	830.79	830.87	831.63	832.38	833.13	833.88	834.53	834.63	835.38	836.13	836.88

RAMP C STATIONING		43594+25.37	43594+50	43594+75	43595+00	43595+25	43595+50	43595+75	43596+00	43596+25	43596+50	43596+75	43597+00	43597+25
From Line 'A' To Line 'B'	OFFSET (FT.)	2.00'	2.99'	3.99'	4.99'	5.99'	6.99'	7.99'	8.99'	9.99	10.99'	11.99'	12.99'	13.99'
	SLOPE (%)	-2.0%	Constant -2.0%											-2.0%
	ELEVATION 'B'	837.21	837.95	838.70	839.45	840.20	840.95	841.70	842.45	843.20	843.95	844.70	845.45	846.20
From Line 'A' To Line 'C'	OFFSET (FT.)	18.01'	19.00'	20.00'	21.00'	22.00'	23.00'	24.00'	25.00'	26.00'	27.00'	28.00'	29.00'	30.00'
	SLOPE (%)	-2.0%	Constant -2.0%											-2.0%
	ELEVATION 'C'	836.89	837.63	838.38	839.13	839.88	840.63	841.38	842.13	842.88	843.63	844.38	845.13	845.88

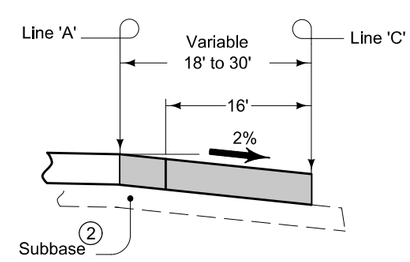
Construct ramp exit pavement the same thickness as Ramp pavement.

For joint details, see Sheet L.11.

① For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

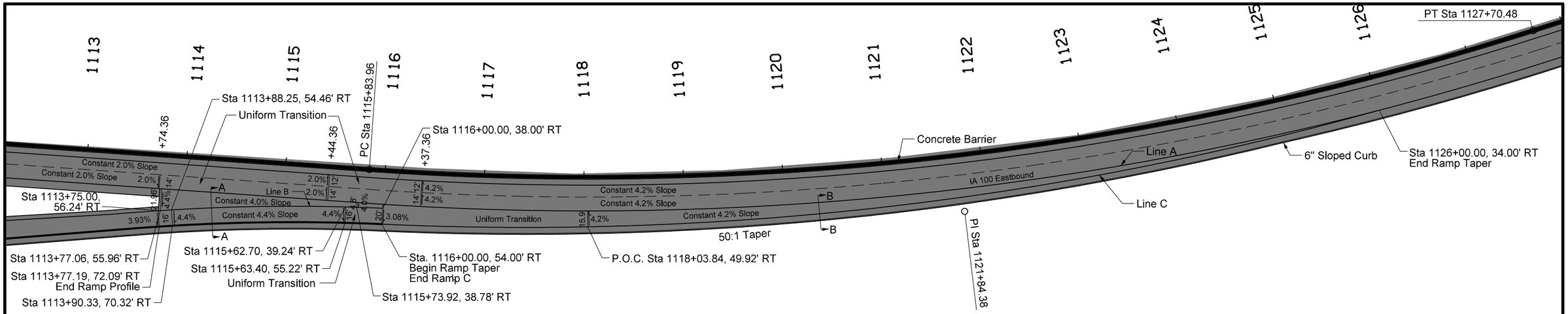
② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

0 FEET 25



SECTION A-A

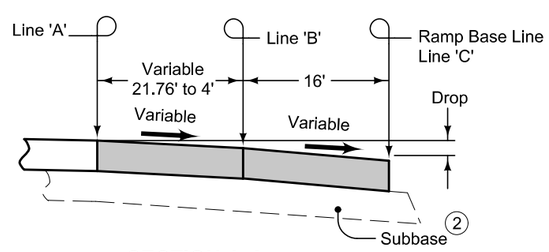
Geometric and Staking Detail
IA 100 / Edgewood Road
Interchange
Ramp C Right Turn Lane



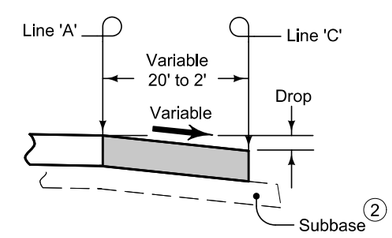
Curve
△ = 7° 05' 33.80"
T = 123.95'
L = 247.58'
E = 3.84
R = 2,000

IA 100 STATIONING		1118+00	1118+03.84	1118+50	1119+00	1119+50	1120+00	1120+50	1121+00	1121+50	1122+00	1122+50	1123+00	1123+50	1124+00	1124+50	1125+00	1125+50	1126+00
From Line 'A' To Line 'C'	OFFSET (Ft.)	16.00'	15.92	15.00'	14.00'	13.00'	12.00'	11.00'	10.00'	9.00'	8.00'	7.00'	6.00'	5.00'	4.00'	3.00'	2.00'	1.00'	0.00'
	SLOPE (%)	4.06%	4.2%	Constant 4.2%															4.2%
	ELEVATION	843.30	843.34	843.59	843.85	844.12	844.38	844.55	844.63	844.61	844.50	844.29	843.98	843.58	843.08	842.50	841.91	841.32	840.73

IA 100 STATIONING		1113+75	1113+77.06	1113+90.33	1114+00	1114+25	1114+50	1114+75	1115+00	1115+25	1115+50	1115+73.92	1115+75	1116+00	1116+25	1116+50	1116+75	1117+00	1117+25	1117+50	1117+75
From Line 'A' To Line 'B'	OFFSET (FT.)	22.24'	21.96	20.18'	18.95'	15.98'	13.32'	10.98'	8.95'	7.24'	5.83'	4.78'	4.74'	4.00'							
	SLOPE (%)	-3.93%	-4.0%	Constant -4.0%								-4.0%	-3.96%	-3.08%							
	ELEVATION 'B'	838.00	838.02	838.22	838.36	838.71	839.06	839.39	839.71	840.01	840.32	840.66	840.68	841.05							
From Line 'B' To Line 'C'	OFFSET (FT.)	16.0'	16.0'	Constant 16.0' Width										16.0'							
	SLOPE (%)	-3.93%	-4.00%	4.4%	Constant -4.4%							-4.0%	-3.96%	-3.08%							
	ELEVATION 'C'	837.37	837.38	837.51	837.65	838.01	838.35	838.68	839.00	839.31	839.62	840.02	840.04'	840.56							
From Line 'A' To Line 'C'	OFFSET (FT.)														19.50'	19.00'	18.50'	18.00'	17.50'	17.00'	16.50'
	SLOPE (%)														-2.19%	-1.29%	-0.40%	0.49%	1.38%	2.28%	3.17%
	ELEVATION 'C'														841.06	841.47	841.80	842.11	842.42	842.72	843.01



SECTION A-A



SECTION B-B

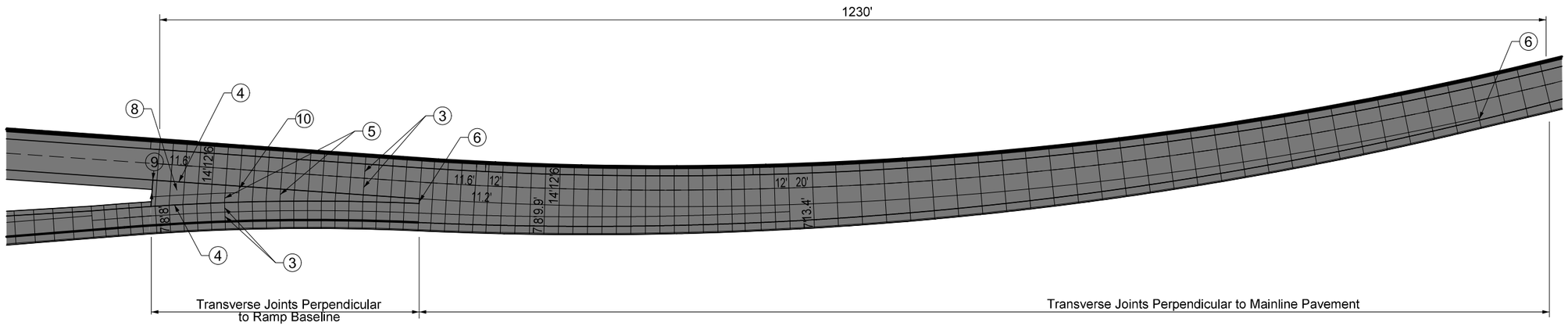
Construct ramp entrance pavement the same thickness as mainline pavement.

For joint details, see Sheet U.13

1. For header construction details at the end of taper, see Typical 7101 or Typical 7102.
2. For header construction details at the end of taper, see Typical 7101 or Typical 7102.

0 50
FEET

Geometric and Staking Detail
IA 100 / Edgewood Road
Interchange
Eastbound Entrance Taper
(Ramp D)



(3) 'CD' Joints.

(4) 'L2' or 'KT-2' Joints.

(5) 'C' Joints.

(6) 'B' Joints. 2' minimum, 4' maximum.

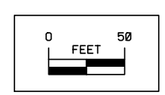
(7) Construct tranverse joints on the exit ramp taper perpendicular to the tapered edge where the gore area is greater than 4 feet.

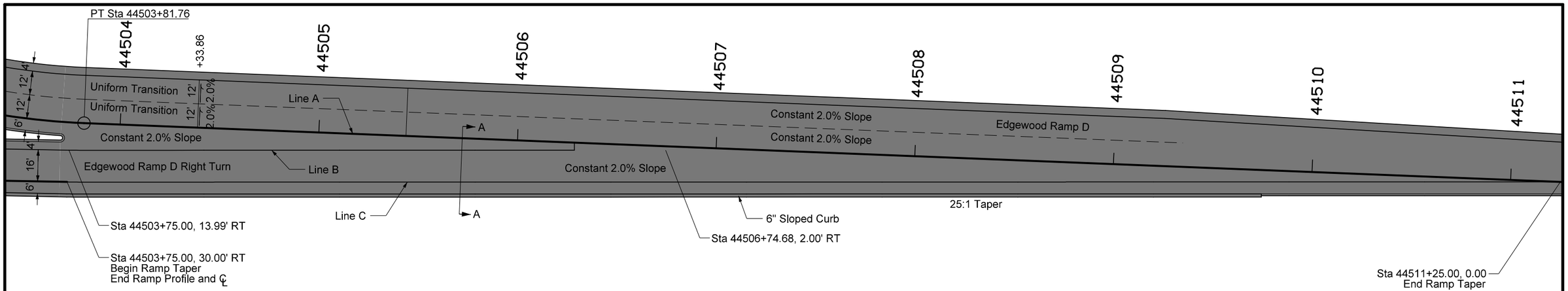
(8) 'C' Joint parallel to ramp baseline.

(9) 10' minimum, or equal to mainline shoulder width.

(10) 'B' or 'C' Joint. 2' minimum, 4' maximum.

Jointing Detail
IA 100 / Edgewood Road
Interchange
Eastbound Entrance Taper
(Ramp D)





RAMP D STATIONING		44506+75	44507+00	44507+25	44507+50	44507+75	44508+00	44508+25	44508+50	44508+75	44509+00	44509+25	44509+50	44509+75	44510+00	44510+25	44510+50	44510+75	44511+00	44511+25
From Line 'A' To Line 'C'	OFFSET (Ft.)	18.00'	17.00'	16.00'	15.00'	14.00'	13.00'	12.00'	11.00'	10.00'	9.00'	8.00'	7.00'	6.00'	5.00'	4.00'	3.00'	2.00'	1.00'	0.00'
	SLOPE (%)	-2.0%	Constant -2.0%																	-2.0%
	ELEVATION	842.20	841.65	841.11	840.59	840.09	839.63	839.19	838.79	838.42	838.07	837.76	837.48	837.24	837.02	836.83	836.68	836.55	836.46	836.39

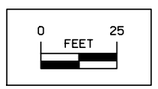
RAMP D STATIONING		44503+75	44504+00	44504+25	44504+50	44504+75	44505+00	44505+25	44505+50	44505+75	44506+00	44506+25	44506+50	44506+74.68
From Line 'A' To Line 'B'	OFFSET (FT.)	13.99'	12.99'	11.99'	10.99'	9.99'	8.99'	7.99'	6.99'	5.99'	4.99'	3.99'	2.99'	2.00'
	SLOPE (%)	-2.0%	Constant -2.0%											-2.0%
	ELEVATION 'B'	849.02	848.48	847.94	847.40	846.86	846.31	845.77	845.23	844.69	844.14	843.60	843.06	842.53
From Line 'A' To Line 'C'	OFFSET (FT.)	30.00'	29.00'	28.00'	27.00'	26.00'	25.00'	24.00'	23.00'	22.00'	21.00'	20.00'	19.00'	18.10'
	SLOPE (%)	-2.0%	Constant -2.0%											-2.0%
	ELEVATION 'C'	848.70	848.16	847.62	847.08	846.53	845.99	845.45	844.91	844.37	843.82	843.28	842.74	842.20

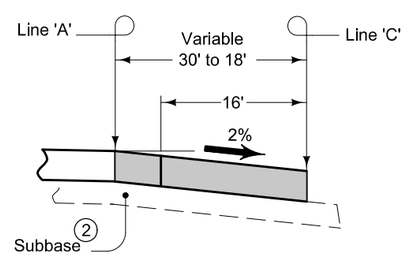
Construct ramp exit pavement the same thickness as Ramp pavement.

For joint details, see Sheet L.14.

(1) For header construction details at the beginning of taper, see Typical **7101** or Typical **7102**.

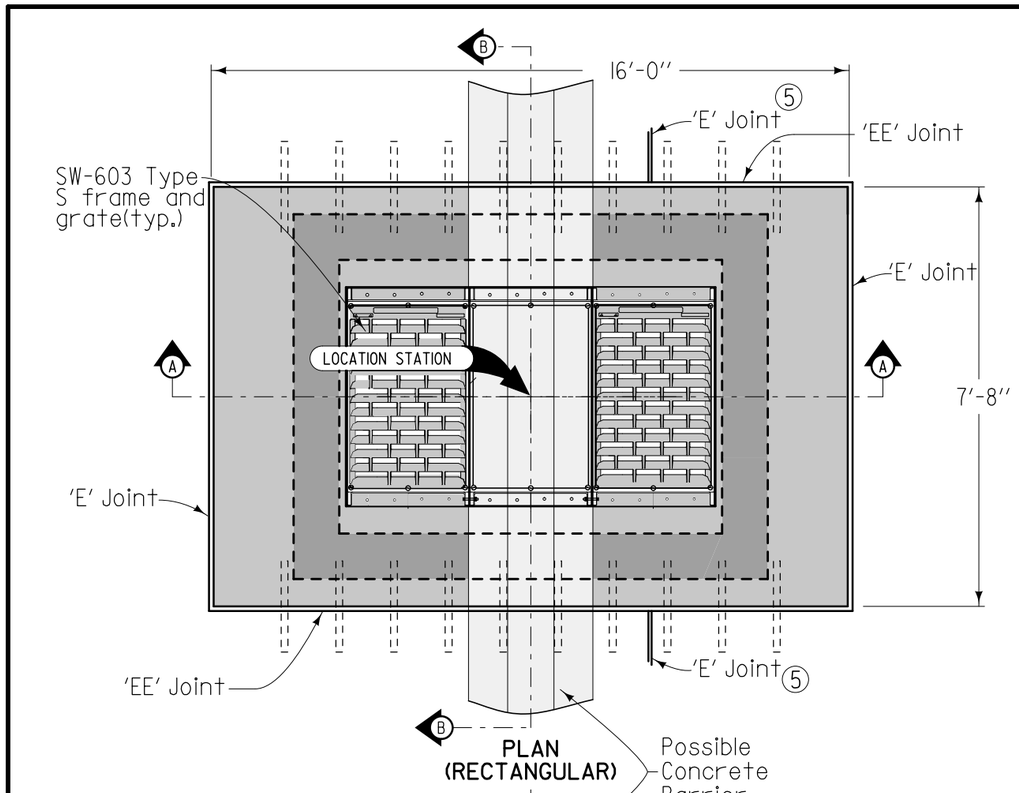
(2) Construct subbase for ramp exit pavement the same thickness as mainline subbase.

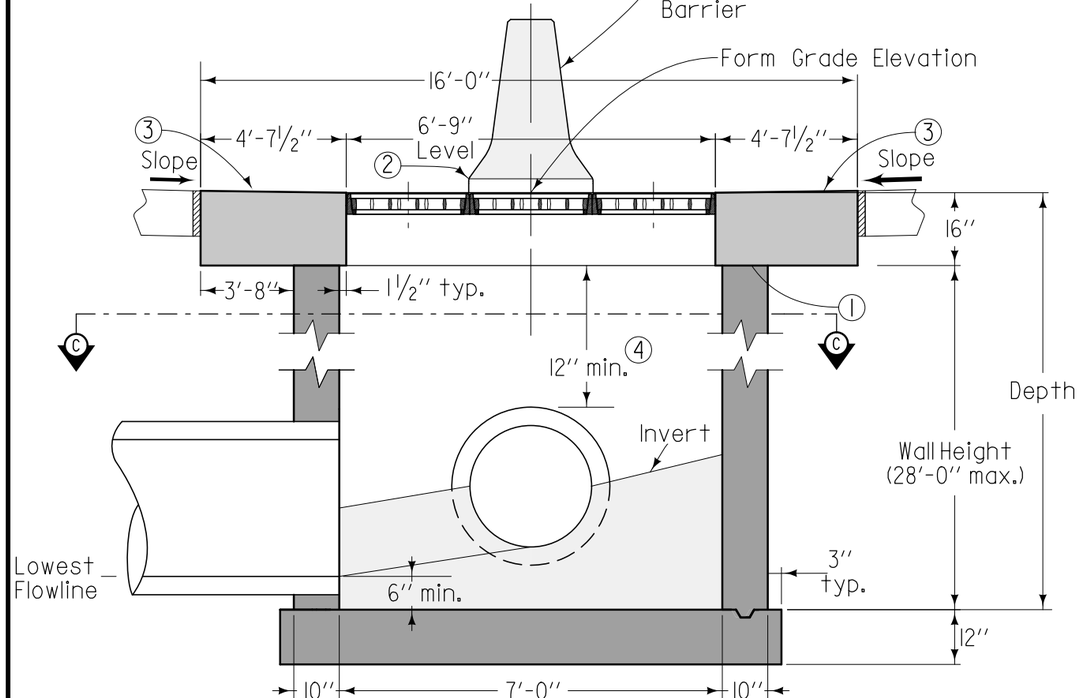




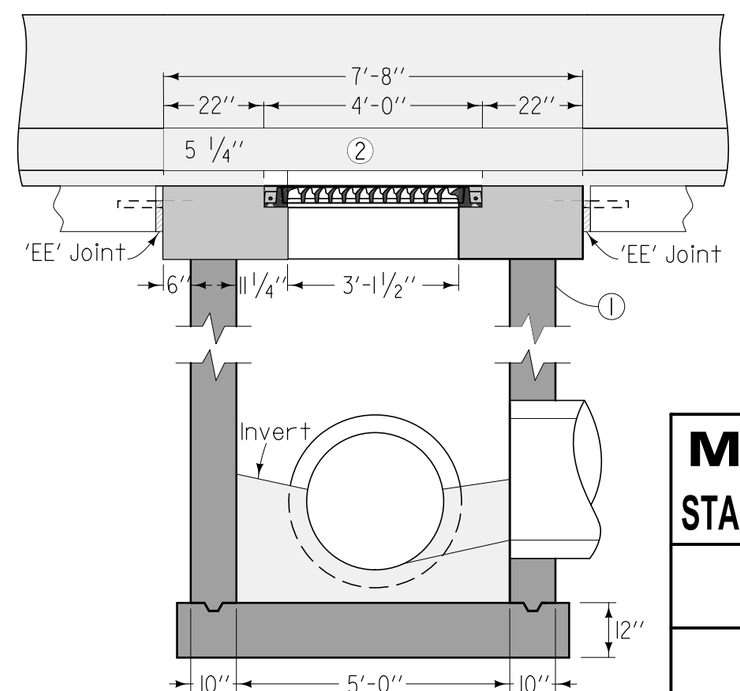
SECTION A-A

Geometric and Staking Detail
IA 100 / Edgewood Road
Interchange
Ramp D Right Turn Lane





SECTION A-A
(RECTANGULAR OPTION)



SECTION B-B
(RECTANGULAR OPTION)

① Trowel smooth and place two layers of 30-pound roofing felt to prevent bond.

② Leave 3-inch opening through barrier over the intake.

③ Vary slope of top to match elevation of adjacent pavement.

④ 12-inch minimum wall height above all pipes.

⑤ Longitudinal E Joint in median section located 4" from face of concrete barrier in the Eastbound direction. This E Joint will end at tranverse EE Joint along edge of intake lid.

MODIFIED STANDARD ROAD PLAN

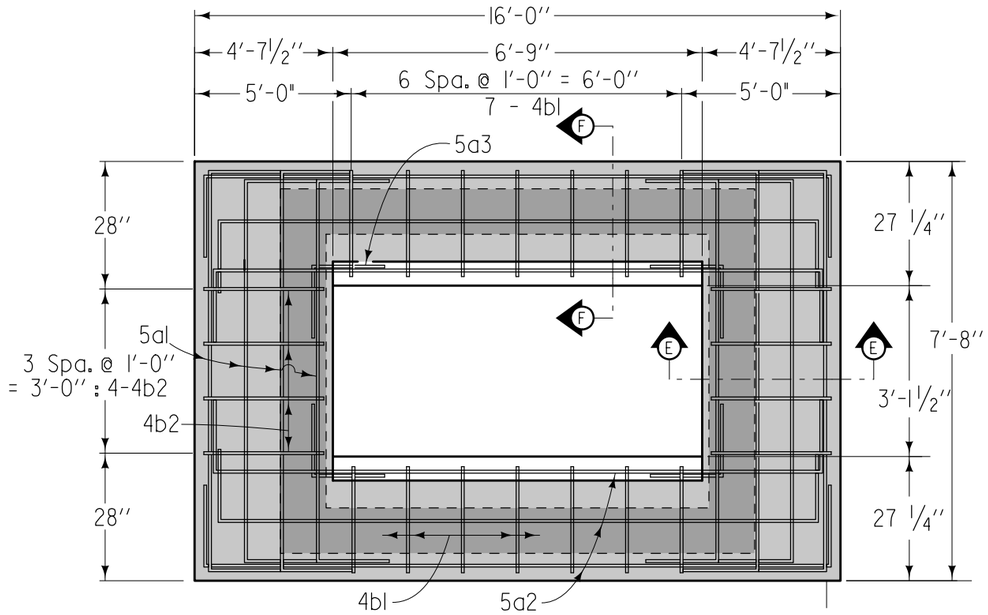
REVISION	
3	10-16-12

SW-547

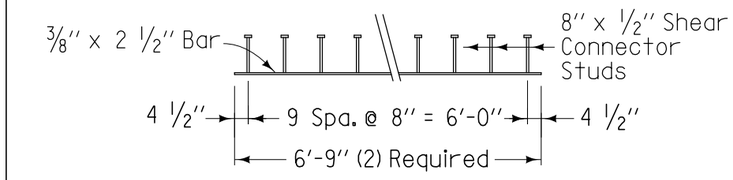
SHEET 1 of 4

TRIPLE-GRATE BARRIER INTAKE

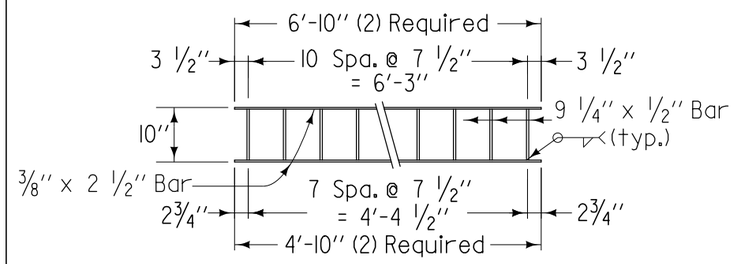
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER U.15



LID PLAN
(RECTANGULAR OPTION)



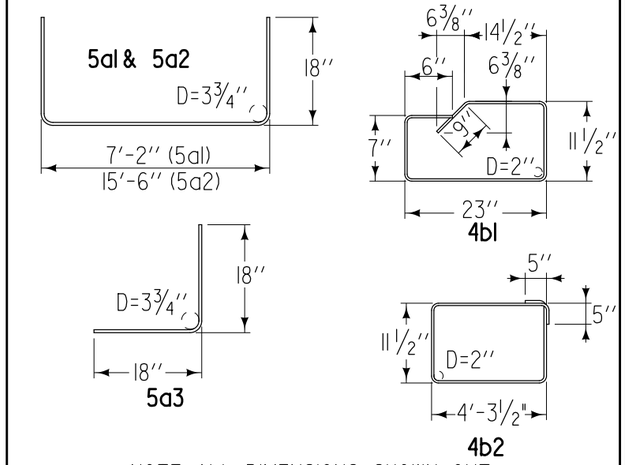
FRAME RING EDGE ARMOR



WALL EDGE ARMOR

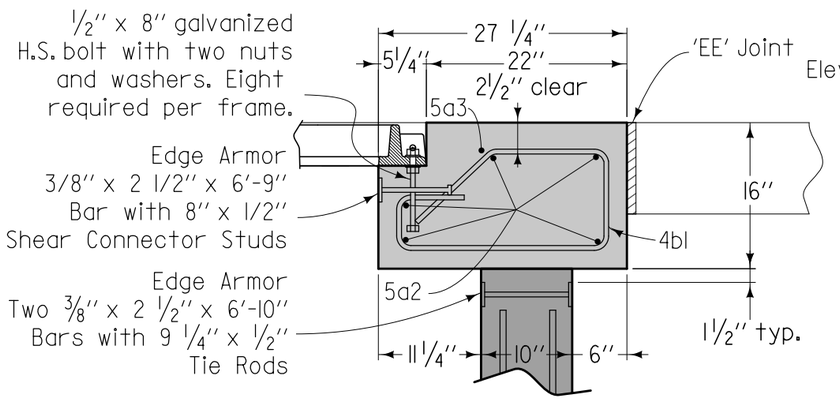
LID REINFORCING BAR LIST - EPOXY-COATED (RECTANGULAR OPTION)					
BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT
5a1	Lid, Longitudinal		12	10'-2	127
5a2	Lid, Transverse		10	18'-6	193
5a3	Lid, Interior, Corners		4	3'-0	13
4b1	Lid Hoop		14	5'-11	55
4b2	Lid Hoop		8	11'-4	61
	EPOXY COATED REINFORCING STEEL - TOTAL				449

LID BENT BAR DETAILS (RECTANGULAR OPTION)

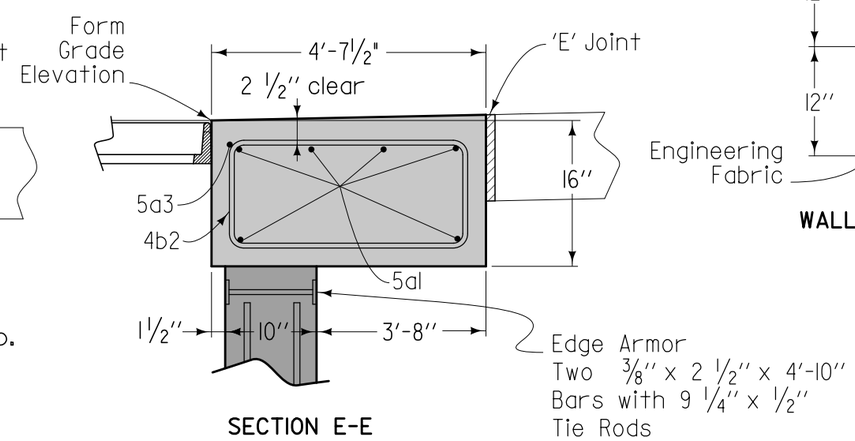


NOTE: ALL DIMENSIONS SHOWN OUT TO OUT. D = PIN DIAMETER

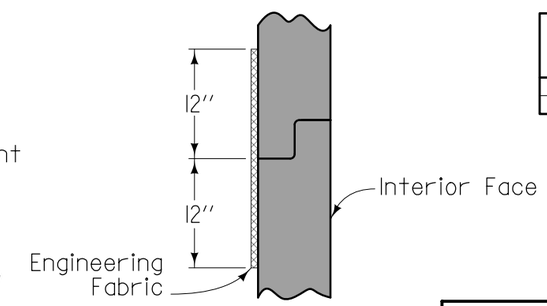
LID QUANTITY SUMMARY (RECTANGULAR OPTION)	
Concrete	5.0 CY
Epoxy Coated Reinforcing Steel	449 LB



SECTION F-F



SECTION E-E



WALL JOINT DETAIL

LID (RECTANGULAR OPTION)

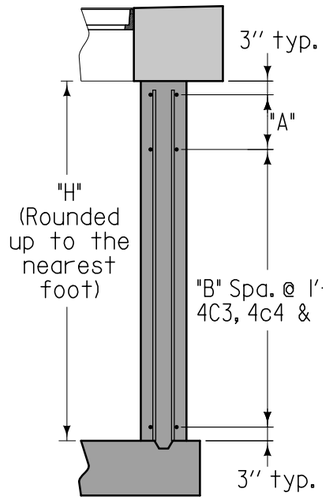
MODIFIED STANDARD ROAD PLAN

REVISION	
3	10-16-12

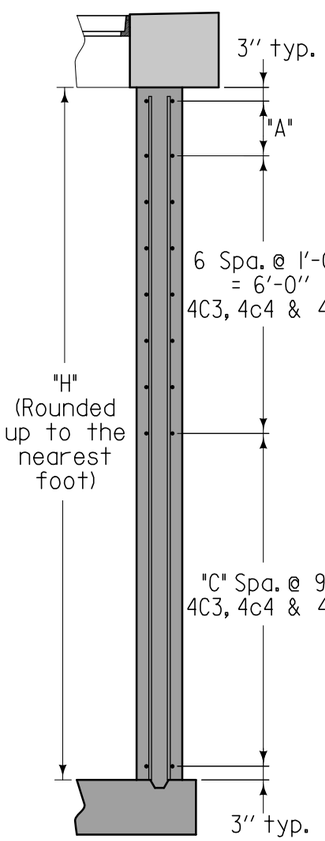
SW-547

SHEET 2 of 4

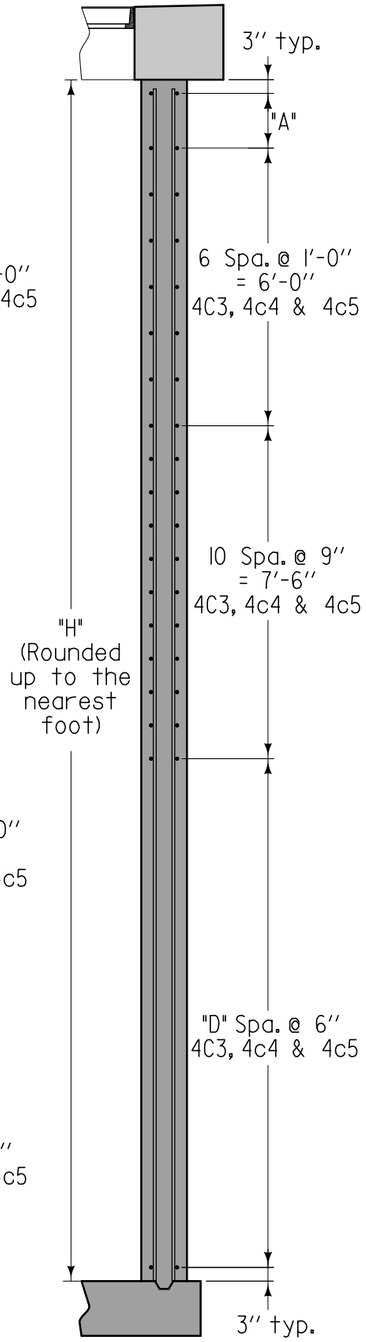
TRIPLE-GRATE BARRIER INTAKE



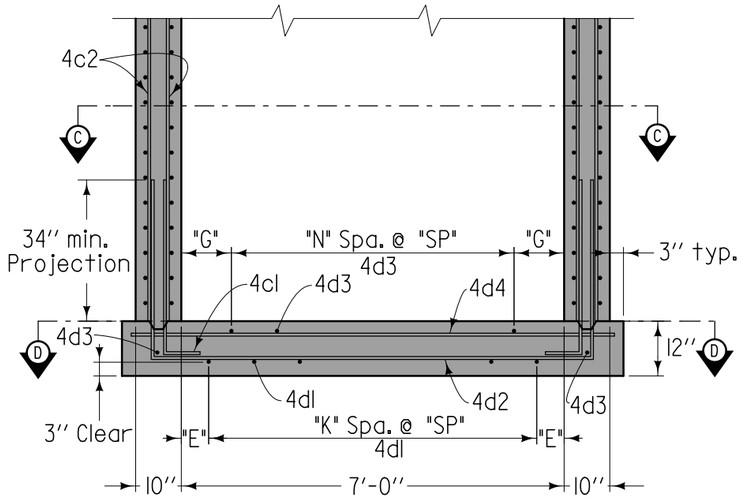
PART SECTION A-A
(Where H = 3' to 7')



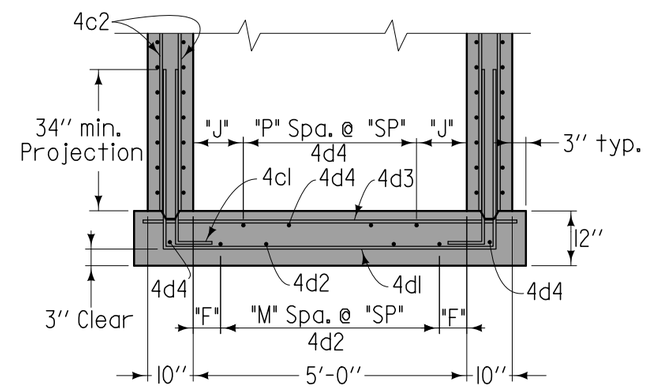
PART SECTION A-A
(Where H = 8' to 15')



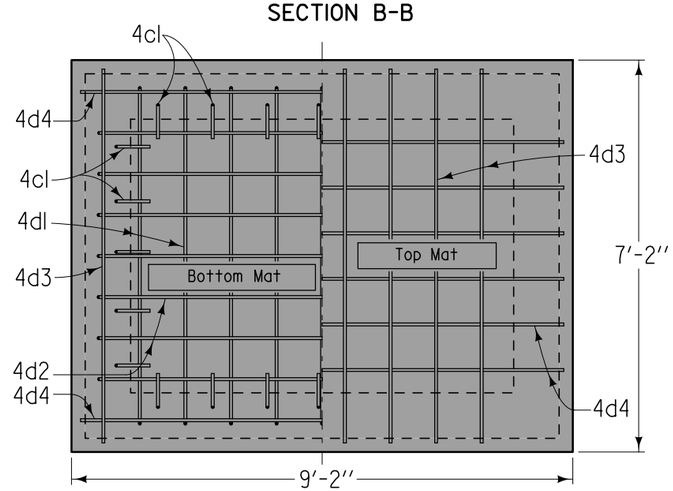
PART SECTION A-A
(Where H = 16' to 28')



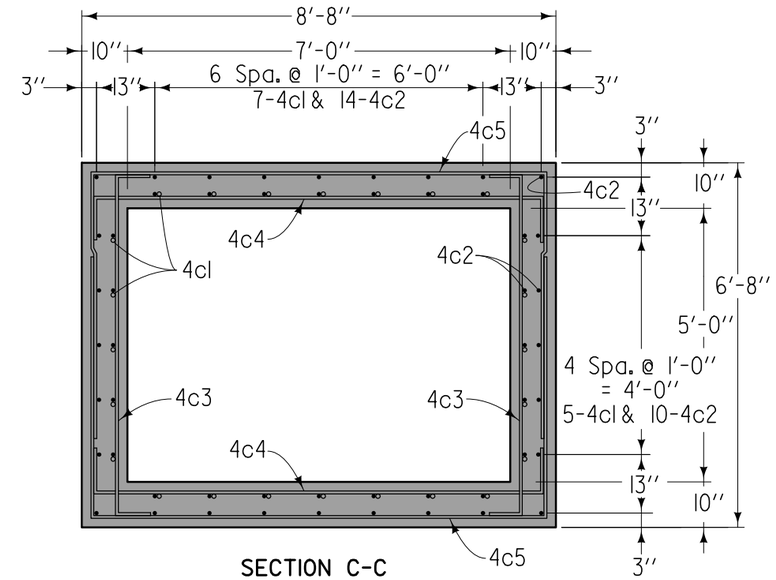
SECTION A-A



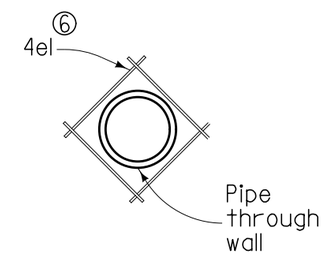
SECTION B-B



SECTION D-D
BASE REINFORCING



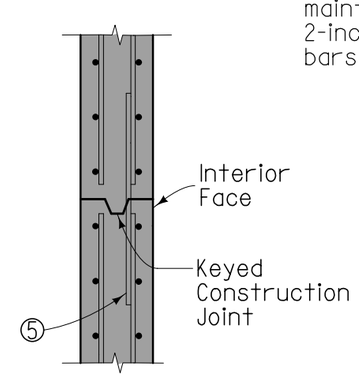
SECTION C-C



PIPE REINFORCING

⑤ Install one set of 4rl x 3'-0'' dowel bars @ 12-inch spacing at any wall joints. Twenty-eight 4rl bars required per joint, total weight = 56 lbs.

⑥ 4el bar length to be pipe diameter plus 12 inches. Place 4el bar inside of vertical reinforcing. Shift main reinforcing bars as required for pipe entrance. Field cut bars to maintain 3-inch clearance from bottom and 2-inch clearance from face of walls. Eight 4el bars required per pipe entrance.



C.I.P. Wall
CONSTRUCTION JOINT

WALLS (RECTANGULAR OPTION)

MODIFIED
STANDARD ROAD PLAN

REVISION	
3	10-16-12

SW-547

SHEET 3 of 4

TRIPLE-GRATE BARRIER INTAKE

VARIABLE DIMENSIONS AND QUANTITIES FOR RECTANGULAR OPTION

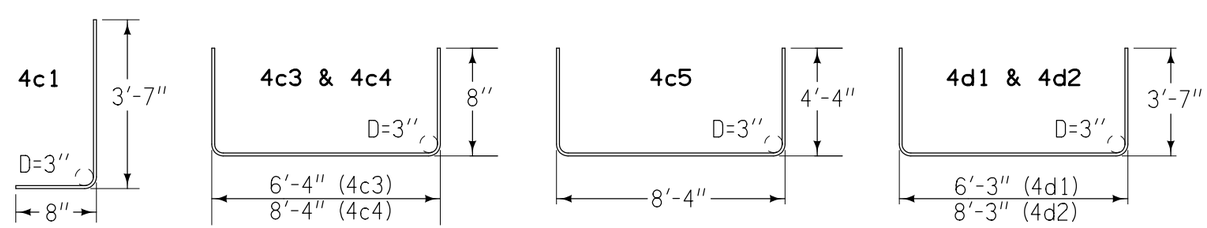
Dimensions						Bar List																														Quantities				
	⑦					4c1		4c2		4c3 ⑧					4c4 ⑧					4c5 ⑧					4d1				4d2				4d3				4d4				Concrete - Cu. Yds.				Steel
"H" (Ft.)	"A" (In.)	"E" (In.)	"F" (In.)	"G" (In.)	"J" (In.)	No.	L	No.	L	No. of Spaces "B"	"C"	"D"	NO.	L	No. of Spaces "B"	"C"	"D"	No.	L	No. of Spaces "B"	"C"	"D"	NO.	L	SP	"K"	No.	L	SP	"M"	No.	L	SP	"N"	No.	L	SP	"P"	No.	L	Base	Lid	Walls	Total	⑨ Total lbs.
3	6	2"	0"	7"	5"	24	4'-3"	--	--	2	--	--	8	7'-8"	2	--	--	8	9'-8"	2	--	--	8	17'-0"	10"	8	9	13'-5"	10"	6	7	15'-5"	10"	7	10	6'-10"	10"	5	8	8'-10"	2.4	5.0	2.5	10.0	947
4	6	2"	0"	7"	5"	24	4'-3"	52	3'-10"	3	--	--	10	7'-8"	3	--	--	10	9'-8"	3	--	--	10	17'-0"	10"	8	9	13'-5"	10"	6	7	15'-5"	10"	7	10	6'-10"	10"	5	8	8'-10"	2.4	5.0	3.4	10.8	1,126
5	6	2"	0"	7"	5"	24	4'-3"	52	4'-10"	4	--	--	12	7'-8"	4	--	--	12	9'-8"	4	--	--	12	17'-0"	10"	8	9	13'-5"	10"	6	7	15'-5"	10"	7	10	6'-10"	10"	5	8	8'-10"	2.4	5.0	4.2	11.7	1,205
6	6	2"	0"	7"	5"	24	4'-3"	52	5'-10"	5	--	--	14	7'-8"	5	--	--	14	9'-8"	5	--	--	14	17'-0"	10"	8	9	13'-5"	10"	6	7	15'-5"	10"	7	10	6'-10"	10"	5	8	8'-10"	2.4	5.0	5.1	12.5	1,287
7	6	2"	2"	6"	6"	24	4'-3"	52	6'-10"	6	--	--	16	7'-8"	6	--	--	16	9'-8"	6	--	--	16	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	5.0	5.9	13.3	1,410
8	9	2"	2"	6"	6"	24	4'-3"	52	7'-10"	6	1	--	18	7'-8"	6	1	--	18	9'-8"	6	1	--	18	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	5.0	6.8	14.2	1,490
9	12	2"	2"	6"	6"	24	4'-3"	52	8'-10"	6	2	--	20	7'-8"	6	2	--	20	9'-8"	6	2	--	20	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	5.0	7.6	15.0	1,571
10	6	2"	2"	6"	6"	24	4'-3"	52	9'-10"	6	4	--	24	7'-8"	6	4	--	24	9'-8"	6	4	--	24	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	5.0	8.4	15.9	1,699
11	9	2"	2"	6"	6"	24	4'-3"	52	10'-10"	6	5	--	26	7'-8"	6	5	--	26	9'-8"	6	5	--	26	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	5.0	9.3	16.7	1,778
12	12	2"	2"	6"	6"	24	4'-3"	52	11'-10"	6	6	--	28	7'-8"	6	6	--	28	9'-8"	6	6	--	28	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	5.0	10.1	17.6	1,859
13	6	2"	2"	6"	6"	24	4'-3"	52	12'-10"	6	8	--	32	7'-8"	6	8	--	32	9'-8"	6	8	--	32	17'-0"	8"	10	11	13'-5"	8"	7	8	15'-5"	8"	9	12	6'-10"	8"	6	9	8'-10"	2.4	5.0	11.0	18.4	1,986
14	9	0"	0"	3"	3"	24	4'-3"	52	13'-10"	6	9	--	34	7'-8"	6	9	--	34	9'-8"	6	9	--	34	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	11.8	19.3	2,187
15	12	0"	0"	3"	3"	24	4'-3"	52	14'-10"	6	10	--	36	7'-8"	6	10	--	36	9'-8"	6	10	--	36	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	12.7	20.1	2,266
16	12	0"	0"	3"	3"	24	4'-3"	52	15'-10"	6	10	2	40	7'-8"	6	10	2	40	9'-8"	6	10	2	40	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	13.5	20.9	2,393
17	12	0"	0"	3"	3"	24	4'-3"	52	16'-10"	6	10	4	44	7'-8"	6	10	4	44	9'-8"	6	10	4	44	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	14.4	21.8	2,520
18	12	0"	0"	3"	3"	24	4'-3"	52	17'-10"	6	10	6	48	7'-8"	6	10	6	48	9'-8"	6	10	6	48	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	15.2	22.6	2,646
19	12	0"	0"	3"	3"	24	4'-3"	52	18'-10"	6	10	8	52	7'-8"	6	10	8	52	9'-8"	6	10	8	52	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	16.0	23.5	2,773
20	12	0"	0"	3"	3"	24	4'-3"	52	19'-10"	6	10	10	56	7'-8"	6	10	10	56	9'-8"	6	10	10	56	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	16.9	24.3	2,900
21	12	0"	0"	3"	3"	24	4'-3"	52	20'-10"	6	10	12	60	7'-8"	6	10	12	60	9'-8"	6	10	12	60	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	17.7	25.2	3,025
22	12	0"	0"	3"	3"	24	4'-3"	52	21'-10"	6	10	14	64	7'-8"	6	10	14	64	9'-8"	6	10	14	64	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	18.6	26.0	3,152
23	12	0"	0"	3"	3"	24	4'-3"	52	22'-10"	6	10	16	68	7'-8"	6	10	16	68	9'-8"	6	10	16	68	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	19.4	26.9	3,278
24	12	0"	0"	3"	3"	24	4'-3"	52	23'-10"	6	10	18	72	7'-8"	6	10	18	72	9'-8"	6	10	18	72	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	20.3	27.7	3,406
25	12	0"	0"	3"	3"	24	4'-3"	52	24'-10"	6	10	20	76	7'-8"	6	10	20	76	9'-8"	6	10	20	76	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	21.1	28.6	3,532
26	12	0"	0"	3"	3"	24	4'-3"	52	25'-10"	6	10	22	80	7'-8"	6	10	22	80	9'-8"	6	10	22	80	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	22.0	29.4	3,658
27	12	0"	0"	3"	3"	24	4'-3"	52	26'-10"	6	10	24	84	7'-8"	6	10	24	84	9'-8"	6	10	24	84	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	22.8	30.2	3,784
28	12	0"	0"	3"	3"	24	4'-3"	52	27'-10"	6	10	26	88	7'-8"	6	10	26	88	9'-8"	6	10	26	88	17'-0"	6"	14	15	13'-5"	6"	10	11	15'-5"	6"	13	16	6'-10"	6"	12	15	8'-10"	2.4	5.0	23.7	31.1	3,911

⑦ A = First bar spacing at top of wall. Minimum spacing is 3 inches. Maximum spacing is 12 inches. Adjust as necessary.

⑧ See Section A-A on sheet 2 for spacing.

⑨ Quantity includes 449 lbs. for lid.

BENT BAR DETAILS (RECTANGULAR OPTION)



NOTE: ALL DIMENSIONS SHOWN OUT TO OUT. D = PIN DIAMETER

MODIFIED STANDARD ROAD PLAN

REVISION	
3	10-16-12

SW-547

SHEET 4 of 4

TRIPLE-GRATE BARRIER INTAKE

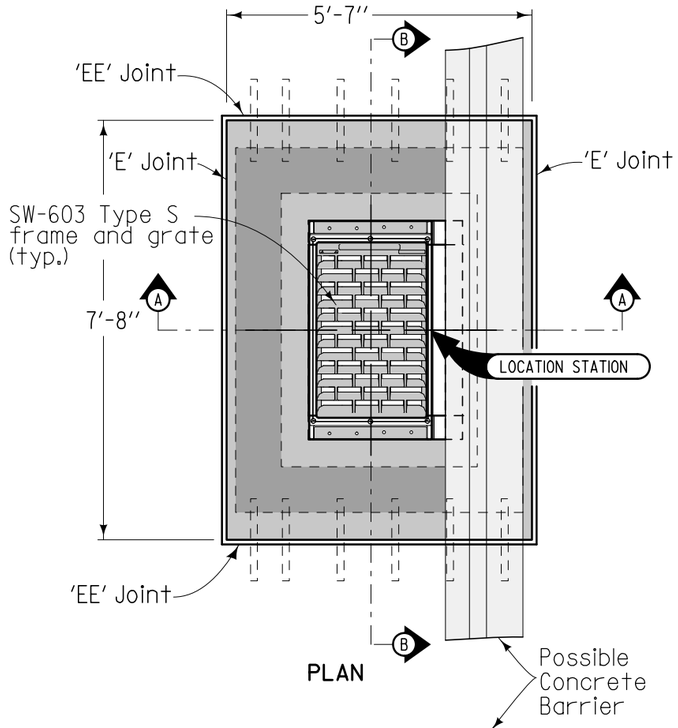
REINFORCEMENT (RECTANGULAR OPTION)

All plate and edge armor steel to be ASTM A 36, galvanized after fabrication.

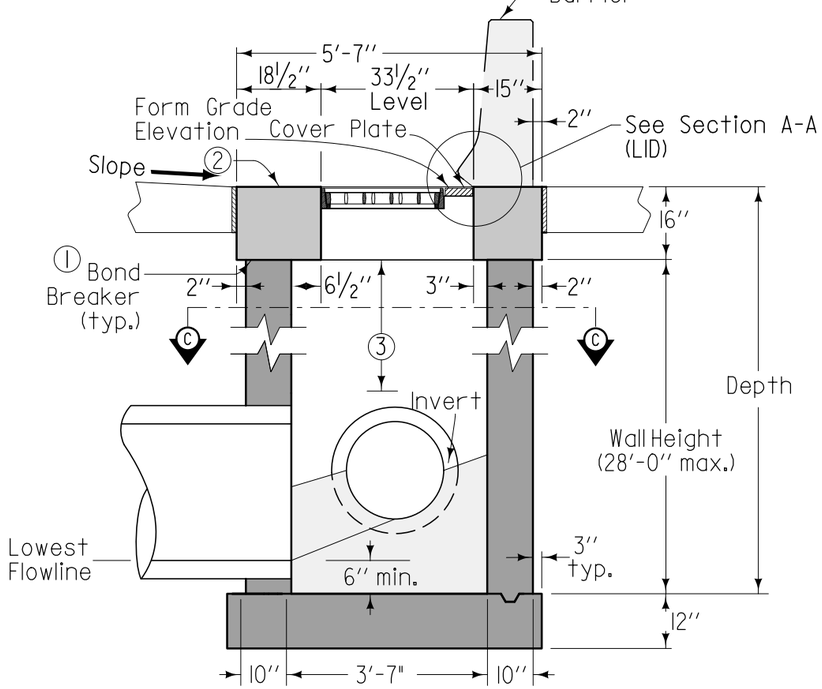
Remove cover plate before constructing concrete barrier.

Cast frames into intake top so tops of grates are 1/4" below Form Grade Elevation. Bolt intake frames together on both sides with four 1/2" x 4" bolts.

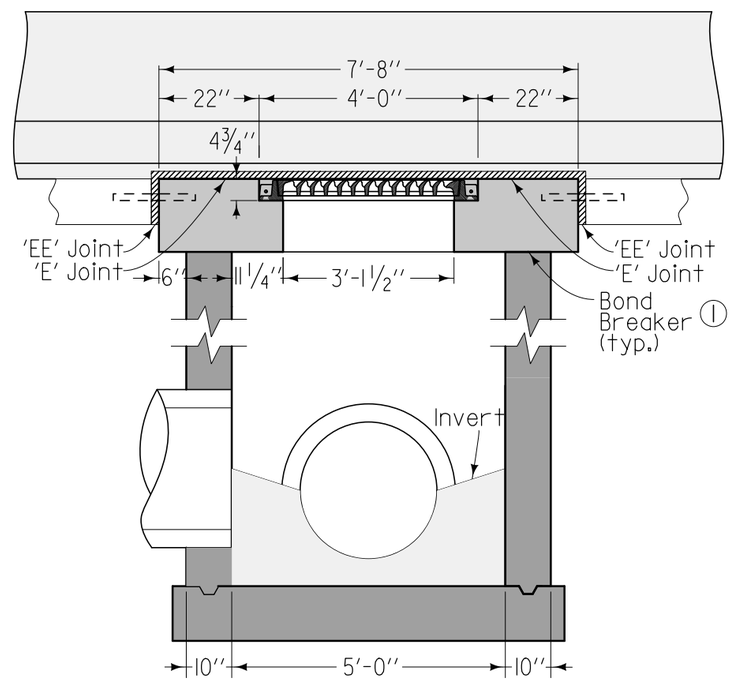
For joint details, refer to PV-101.



PLAN



SECTION A-A



SECTION B-B

1. Trowel smooth and place two layers of 30-pound roofing felt to prevent bond.
2. Vary slope of top to match elevation of adjacent pavement.
3. 12-inch minimum wall height above all pipes.

Possible Contract Item:

Barrier Intake, SW-549 Modified

Possible Tabulation:

104-5B

MODIFIED STANDARD ROAD PLAN

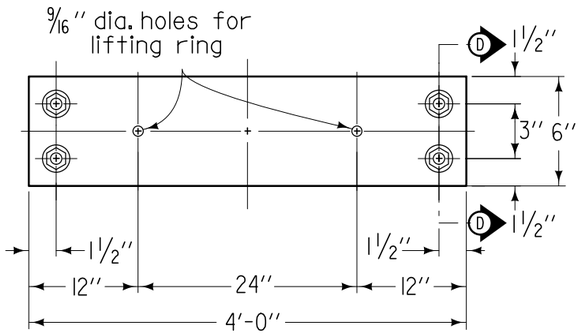
REVISION	
3	04-19-11

SW-549

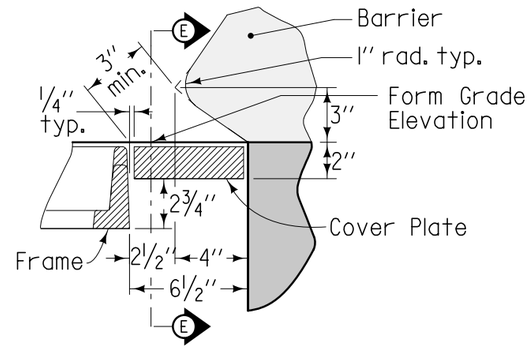
SHEET 1 of 5

MODIFICATIONS: Reduced width of box and lid.

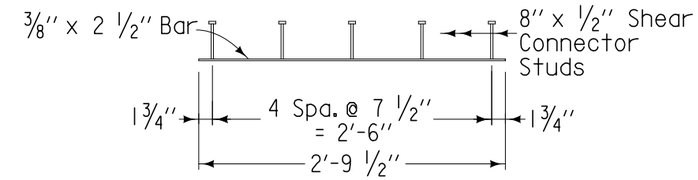
SINGLE-GRATE BARRIER INTAKE, RECTANGULAR



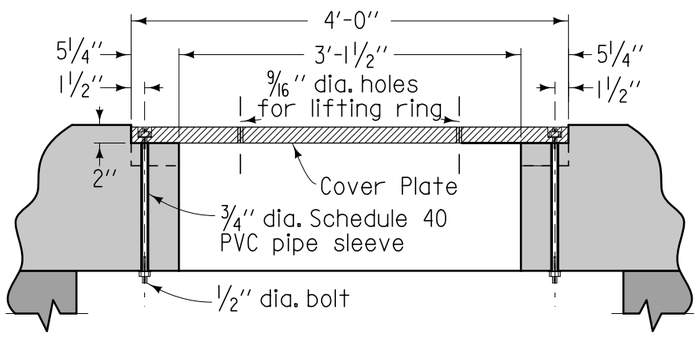
PLAN



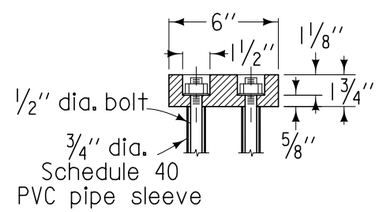
SECTION A-A
(LID)



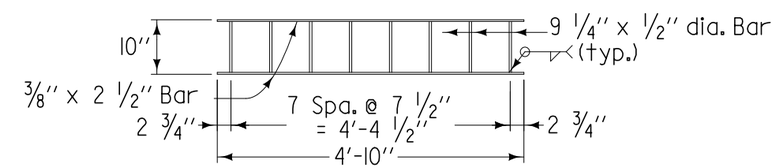
FRAME RING
(2 required)



SECTION E-E



SECTION D-D



WALL
(4 required)

EDGE ARMOR

COVER PLATE

MODIFIED STANDARD ROAD PLAN

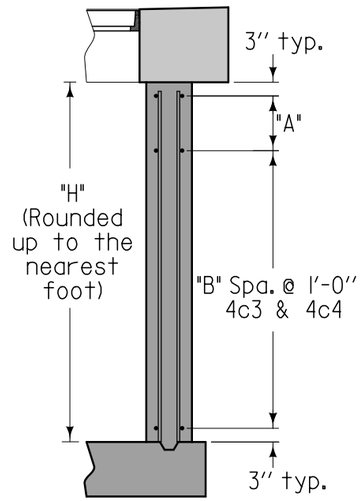
REVISION	
3	04-19-11

SW-549

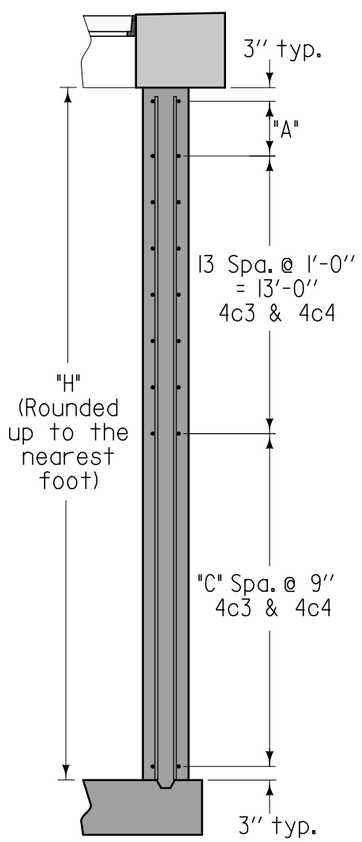
SHEET 2 of 5

MODIFICATIONS: Reduced width of box and lid.

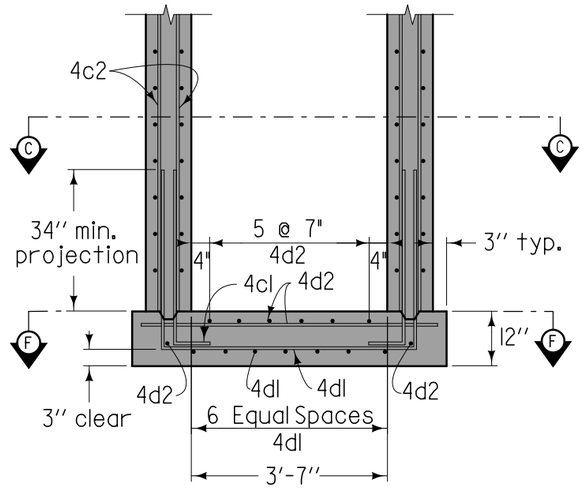
SINGLE-GRATE BARRIER INTAKE, RECTANGULAR



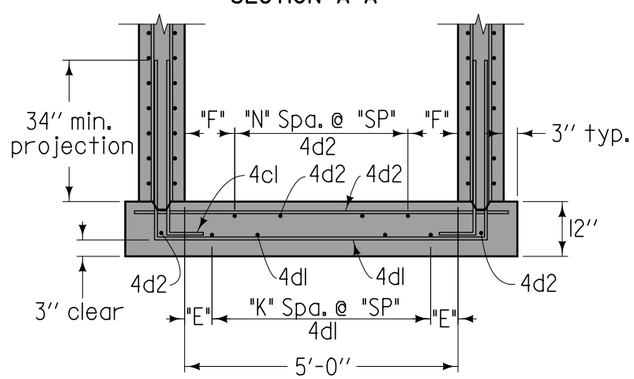
PART SECTION A-A
(Where H = 3' to 14')



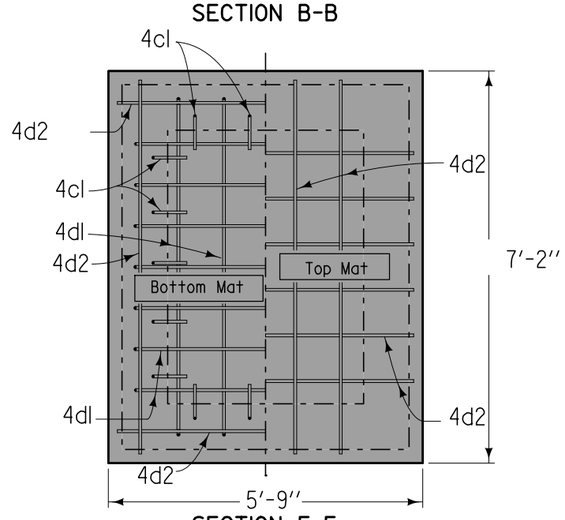
PART SECTION A-A
(Where H = 15' to 28')



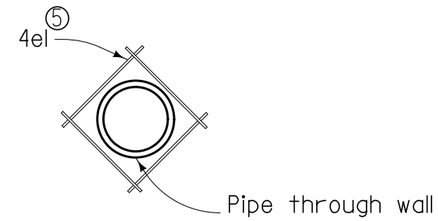
SECTION A-A



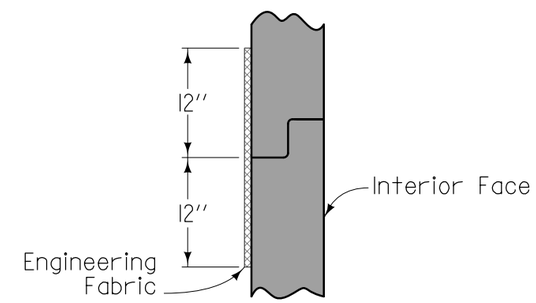
SECTION B-B



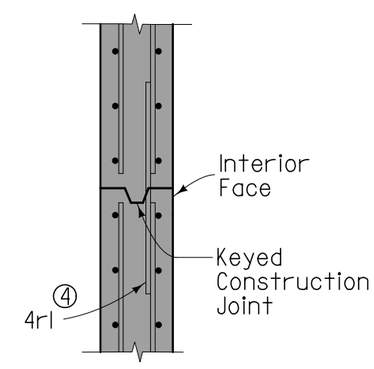
SECTION F-F
BASE REINFORCING



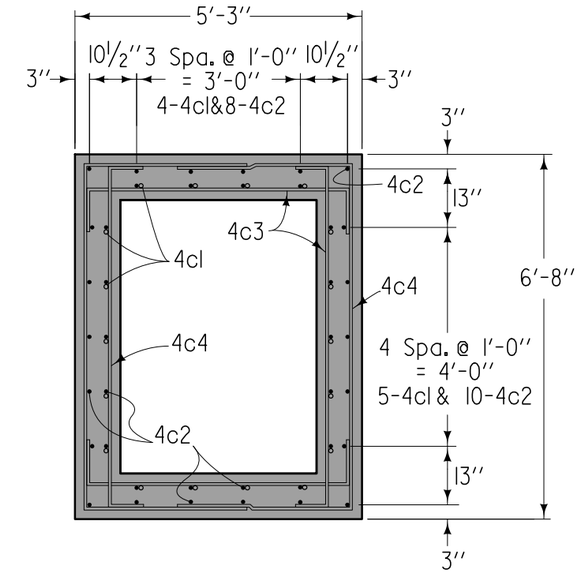
PIPE OPENINGS



WALL JOINT DETAIL



C.I.P. WALL
CONSTRUCTION JOINT



SECTION C-C

④ Install 4rl x 3'-0'' dowel bars at 12-inch spacing at all wall joints. Twenty-four 4rl bars required per joint, total weight = 48 lbs.

⑤ 4el bar length to be pipe diameter plus 12 inches. Place 4el bar inside of vertical reinforcing. Shift main reinforcing bars as required for pipe entrance. Field cut bars to maintain 3-inch clearance from bottom and 2-inch clearance from face of walls. Four 4el bars required per pipe entrance.

MODIFIED STANDARD ROAD PLAN

REVISION	
3	04-19-11

SW-549

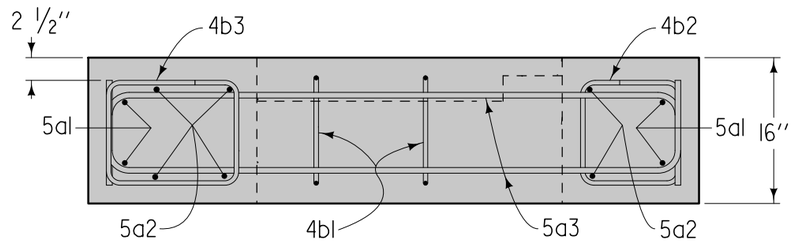
SHEET 3 of 5

MODIFICATIONS: Reduced width of box and lid.

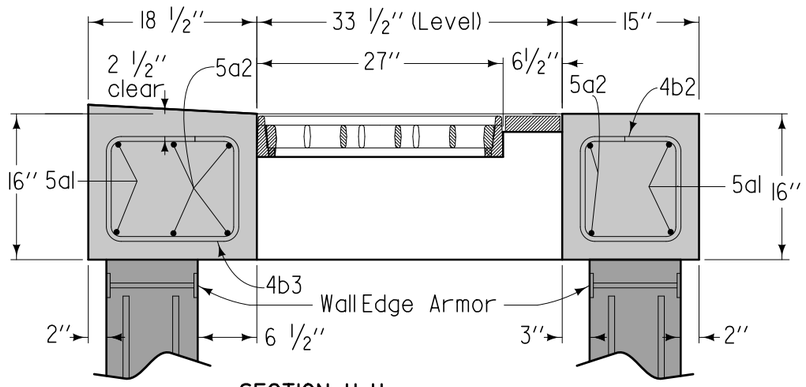
SINGLE-GRATE BARRIER INTAKE, RECTANGULAR

WALLS

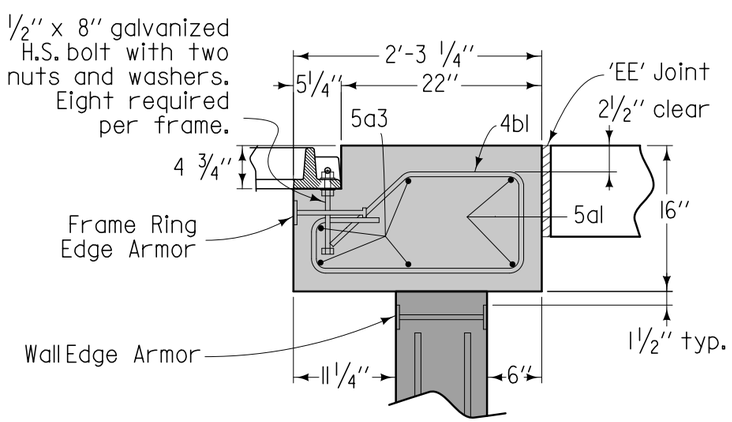
ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER U.21



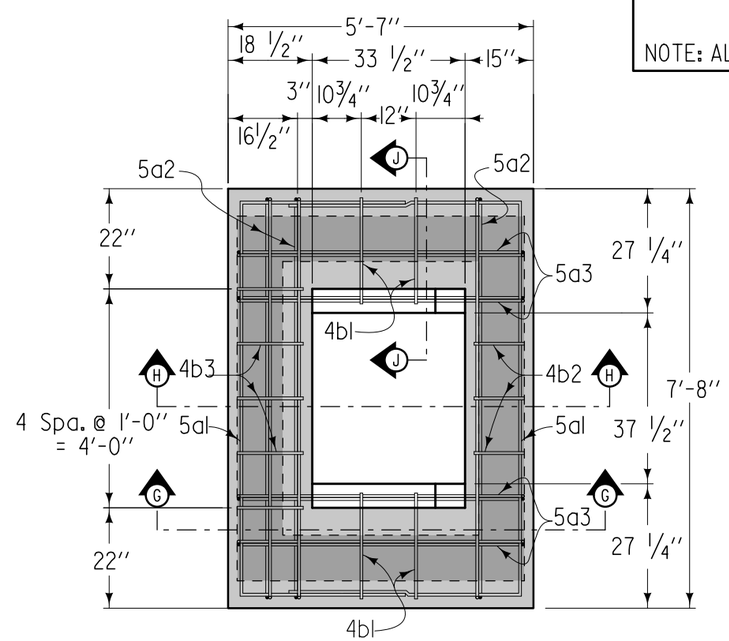
SECTION G-G



SECTION H-H



SECTION J-J



LID PLAN

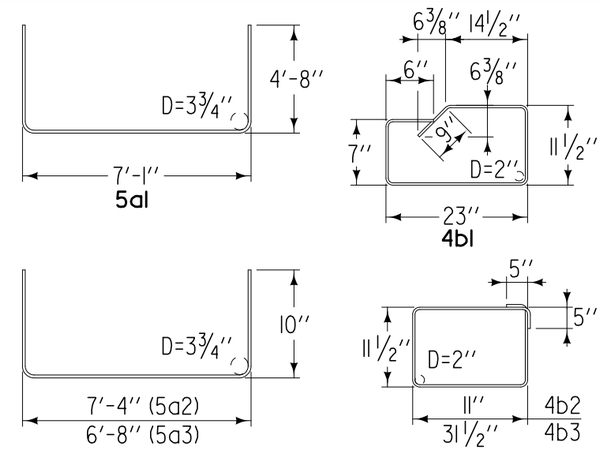
LID

LID REINFORCING BAR LIST

EPOXY-COATED

BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT (lb.)
5a1	Lid, Exterior, Edge		4	16'-5	68
5a2	Lid, Interior, Longitudinal		8	9'-0	75
5a3	Lid, Interior, Transverse		8	8'-4	70
4b1	Lid Hoop		4	5'-11	16
4b2	Lid Hoop		3	4'-7	9
4b3	Lid Hoop		5	8'-0	27
	EPOXY COATED REINFORCING STEEL - TOTAL				265

LID BENT BAR DETAILS



NOTE: ALL DIMENSIONS SHOWN OUT TO OUT. D = PIN DIAMETER

MODIFIED STANDARD ROAD PLAN

REVISION	
3	04-19-11

SW-549

SHEET 4 of 5

MODIFICATIONS: Reduced width of box and lid.

SINGLE-GRATE BARRIER INTAKE, RECTANGULAR

VARIABLE DIMENSIONS AND QUANTITIES

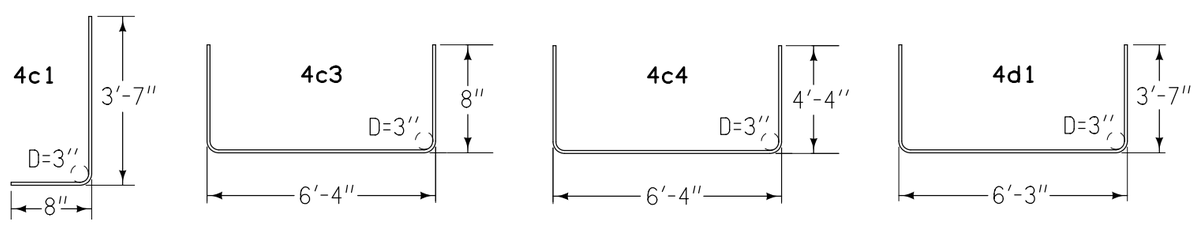
Dimensions				Bar List																				Quantities				
⑥	⑦			4c1		4c2		4c3 ⑧				4c4 ⑧				4d1				4d2				Concrete - Cu. Yds.				Steel
								No. of Spaces				No. of Spaces																
"H" (Ft.)	"A" (In.)	"E" (In.)	"F" (In.)	NO.	L	NO.	L	"B"	"C"	NO.	L	"B"	"C"	NO.	L	SP	"K"	NO.	L	SP	"N"	NO.	L	BASE	LID	WALLS	TOTAL	TOTAL LBS.
3	6	3"	7½"	20	4'-3"	--	--	2	--	16	7'-8"	2	--	8	15'-0"	9"	6	14	13'-5"	9"	5	16	6'-10"	1.5	1.6	1.9	5.0	682
4	6	3"	7½"	20	4'-3"	44	3'-10"	3	--	20	7'-8"	3	--	10	15'-0"	9"	6	14	13'-5"	9"	5	16	6'-10"	1.5	1.6	2.5	5.6	835
5	6	3"	7½"	20	4'-3"	44	4'-10"	4	--	24	7'-8"	4	--	12	15'-0"	9"	6	14	13'-5"	9"	5	16	6'-10"	1.5	1.6	3.2	6.3	905
6	6	3"	7½"	20	4'-3"	44	5'-10"	5	--	28	7'-8"	5	--	14	15'-0"	9"	6	14	13'-5"	9"	5	16	6'-10"	1.5	1.6	3.8	6.9	974
7	6	3"	7½"	20	4'-3"	44	6'-10"	6	--	32	7'-8"	6	--	16	15'-0"	9"	6	14	13'-5"	9"	5	16	6'-10"	1.5	1.6	4.4	7.5	1,045
8	6	3"	7½"	20	4'-3"	44	7'-10"	7	--	36	7'-8"	7	--	18	15'-0"	9"	6	14	13'-5"	9"	5	16	6'-10"	1.5	1.6	5.0	8.1	1,114
9	6	3"	7½"	20	4'-3"	44	8'-10"	8	--	40	7'-8"	8	--	20	15'-0"	9"	6	14	13'-5"	9"	5	16	6'-10"	1.5	1.6	5.7	8.8	1,185
10	6	3"	7½"	20	4'-3"	44	9'-10"	9	--	44	7'-8"	9	--	22	15'-0"	9"	6	14	13'-5"	9"	5	16	6'-10"	1.5	1.6	6.3	9.4	1,254
11	6	2"	6"	20	4'-3"	44	10'-10"	10	--	48	7'-8"	10	--	24	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	6.9	10.0	1,351
12	6	2"	6"	20	4'-3"	44	11'-10"	11	--	52	7'-8"	11	--	26	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	7.6	10.7	1,422
13	6	2"	6"	20	4'-3"	44	12'-10"	12	--	56	7'-8"	12	--	28	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	8.2	11.3	1,492
14	6	2"	6"	20	4'-3"	44	13'-10"	13	--	60	7'-8"	13	--	30	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	8.8	11.9	1,562
15	9	2"	6"	20	4'-3"	44	14'-10"	13	1	64	7'-8"	13	1	32	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	9.5	12.6	1,632
16	12	2"	6"	20	4'-3"	44	15'-10"	13	2	68	7'-8"	13	2	34	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	10.1	13.2	1,701
17	6	2"	6"	20	4'-3"	44	16'-10"	13	4	76	7'-8"	13	4	38	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	10.7	13.8	1,812
18	9	2"	6"	20	4'-3"	44	17'-10"	13	5	80	7'-8"	13	5	40	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	11.3	14.4	1,882
19	12	2"	6"	20	4'-3"	44	18'-10"	13	6	84	7'-8"	13	6	42	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	12.0	15.1	1,952
20	6	2"	6"	20	4'-3"	44	19'-10"	13	8	92	7'-8"	13	8	46	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	12.6	15.7	2,062
21	9	2"	6"	20	4'-3"	44	20'-10"	13	9	96	7'-8"	13	9	48	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	13.2	16.3	2,132
22	12	2"	6"	20	4'-3"	44	21'-10"	13	10	100	7'-8"	13	10	50	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	13.9	17.0	2,202
23	6	2"	6"	20	4'-3"	44	22'-10"	13	12	108	7'-8"	13	12	54	15'-0"	8"	7	16	13'-5"	8"	6	18	6'-10"	1.5	1.6	14.5	17.6	2,312
24	9	2"	5½"	20	4'-3"	44	23'-10"	13	13	112	7'-8"	13	13	56	15'-0"	7"	8	18	13'-5"	7"	7	20	6'-10"	1.5	1.6	15.1	18.2	2,410
25	12	2"	5½"	20	4'-3"	44	24'-10"	13	14	116	7'-8"	13	14	58	15'-0"	7"	8	18	13'-5"	7"	7	20	6'-10"	1.5	1.6	15.8	18.9	2,479
26	6	2"	5½"	20	4'-3"	44	25'-10"	13	16	124	7'-8"	13	16	62	15'-0"	7"	8	18	13'-5"	7"	7	20	6'-10"	1.5	1.6	16.4	19.5	2,589
27	9	2"	5½"	20	4'-3"	44	26'-10"	13	17	128	7'-8"	13	17	64	15'-0"	7"	8	18	13'-5"	7"	7	20	6'-10"	1.5	1.6	17.0	20.1	2,660
28	12	2"	5½"	20	4'-3"	44	27'-10"	13	18	132	7'-8"	13	18	66	15'-0"	7"	8	18	13'-5"	7"	7	20	6'-10"	1.5	1.6	17.6	20.7	2,729

⑥ A = First bar spacing at top of wall. Minimum spacing is 3 inches. Maximum spacing is 12 inches. Adjust as necessary.

⑦ See Section A-A on sheet 2 for spacing.

⑧ Quantity includes 265 lbs. for lid.

BENT BAR DETAILS



NOTE: ALL DIMENSIONS SHOWN OUT TO OUT. D = PIN DIAMETER

REINFORCEMENT

MODIFIED STANDARD ROAD PLAN

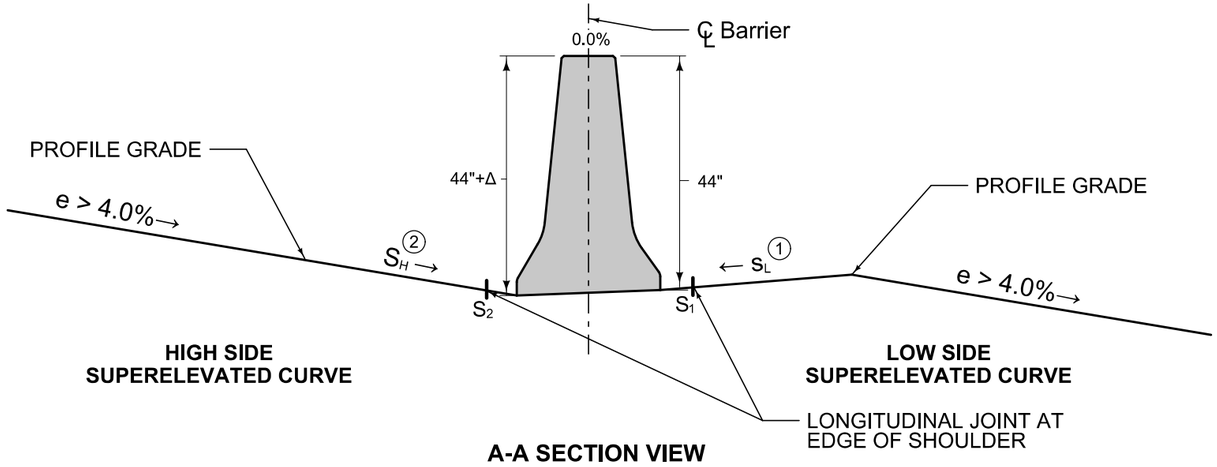
REVISION	
3	04-19-11

SW-549

SHEET 5 of 5

MODIFICATIONS: Reduced width of box and lid.

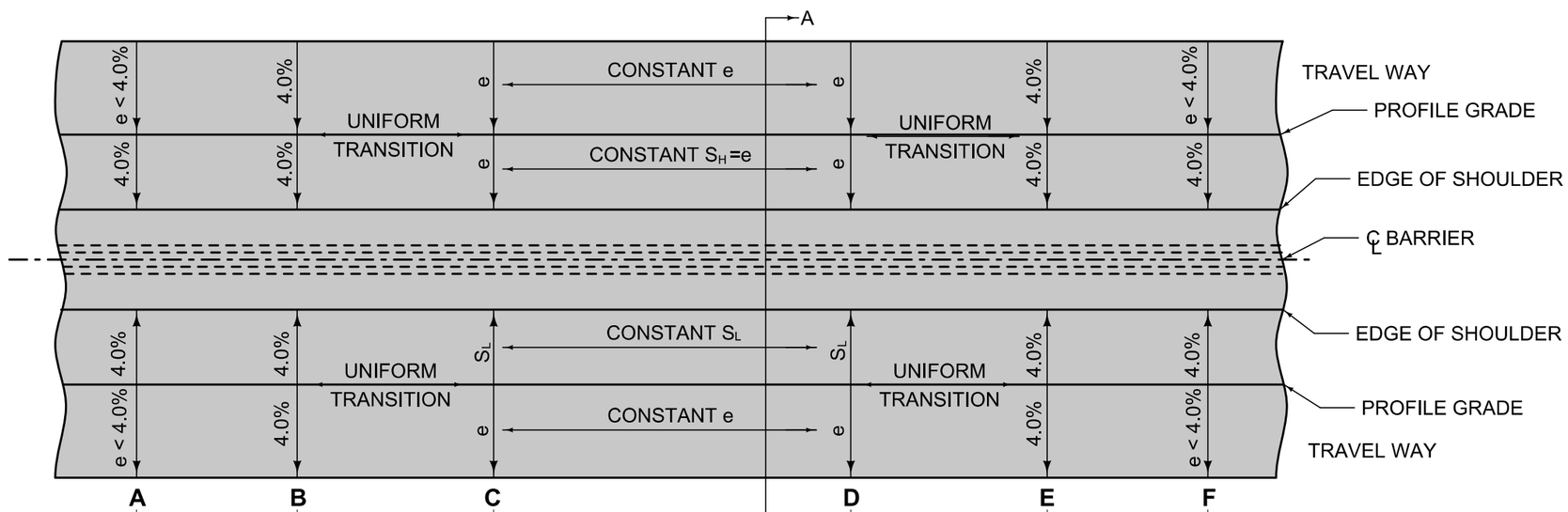
SINGLE-GRATE BARRIER INTAKE, RECTANGULAR



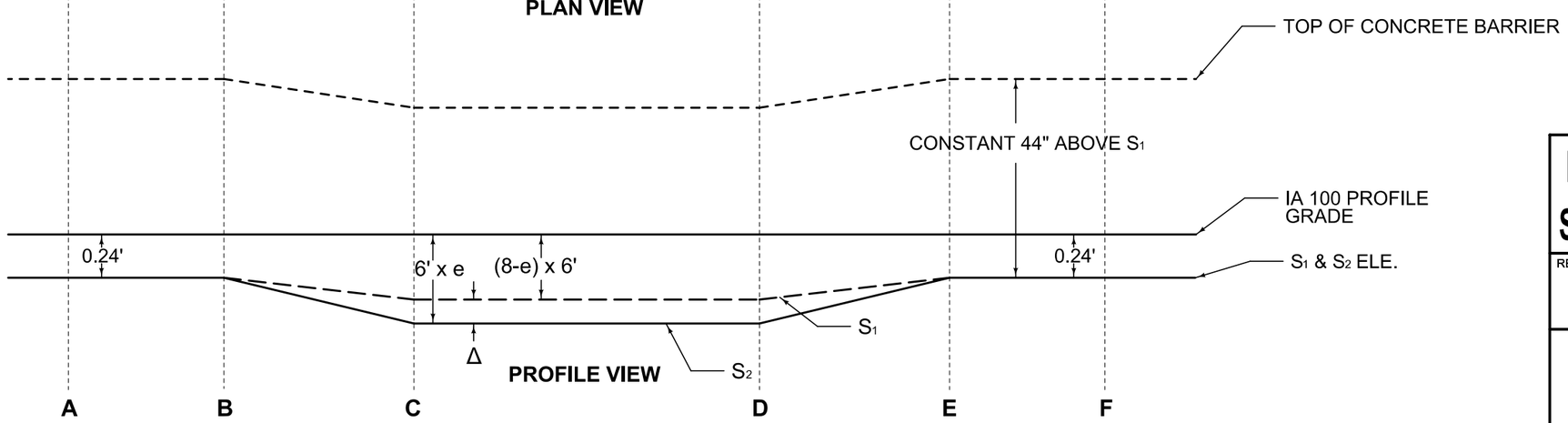
A-A SECTION VIEW

① Shoulder slope changes at rate of mainline transtion to maintain maximum 8.0% cross slope break. S_L <4.0%

② Shoulder slope matches adjacent pavement slope when adjacent pavement slope ≥ 4.0%.



PLAN VIEW



PROFILE VIEW

MODIFIED STANDARD ROAD PLAN

REVISION	
New	04-20-10

BA-100

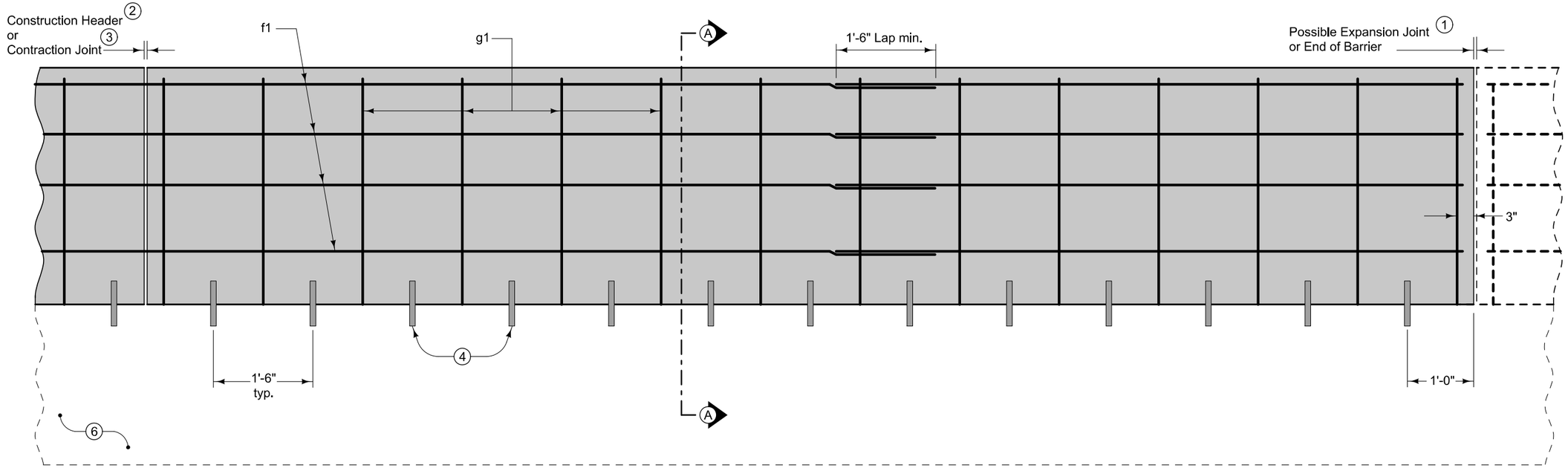
SHEET 1 of 2

REVISIONS: Barrier in superelevated curves (e > 4.0%)

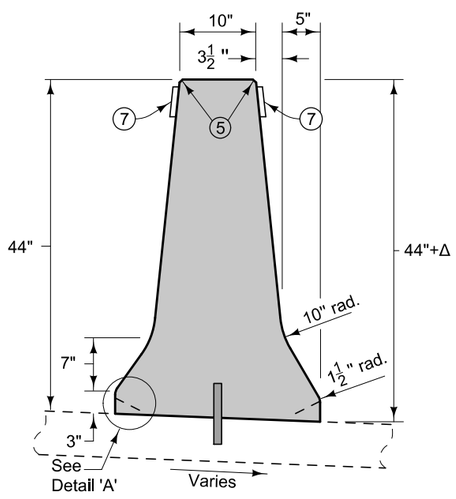
44" CONCRETE MEDIAN BARRIER (FULL SECTION)

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER U.24

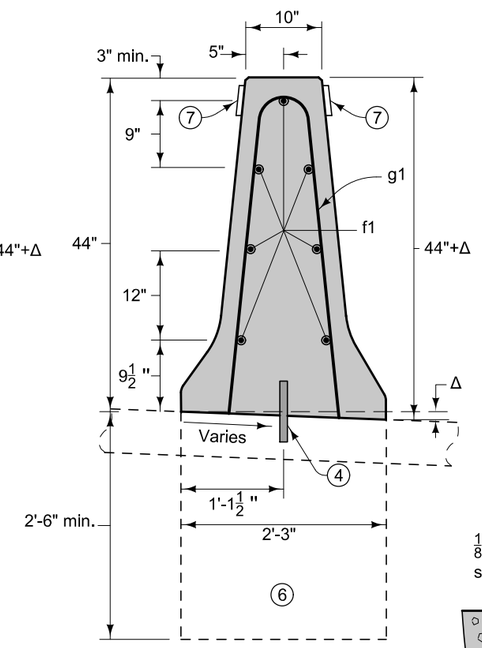
1:37:31 PM 2014\01\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0179917\57100079U01.sht



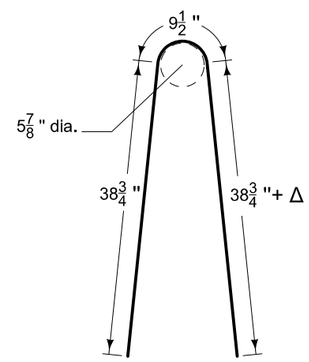
ELEVATION



F-SHAPE BARRIER FACE



SECTION A-A



G1
BENT BAR

Use epoxy-coated Grade 60 reinforcing bars. Provide 2 inches minimum cover. Anchor barrier reinforcement to prevent movement. Secure each section at the front, back, and at 3'-6" minimum intervals using a method approved by the Engineer.

① Expansion joints are necessary only where specifically required by project plans. Conform expansion material to the shape of the barrier. No sealer is required.

② Saw contraction joints as indicated. Where abutting sections are placed as separate pours, a butt joint may be used. Extend longitudinal reinforcement into the abutting section a minimum of 1'-6".

③ For barrier dowelled to pavement, match pavement joints. For free-standing barrier with integral footings, use 20 foot maximum, 15 foot minimum joint spacing.

④ Use 1 inch diameter deformed dowel bars of sufficient length to ensure 6 inch minimum embedment in barrier and supporting surface. Install dowels either in supporting surface when placed, or in drilled holes using polymer grout complying with Materials I.M. 491.11 or hydraulic cement grout complying with Materials I.M. 491.13.

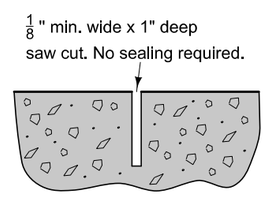
⑤ Fillet all exposed corners with a ¾ inch dressed and beveled strip.

⑥ Construct concrete footing when barrier is not placed on concrete slab. Apply Section 2403.03, but the use of forms is optional. If forms are used, place backfill around the completed footing.

⑦ Place barrier markers at 100 foot increments in areas with non-continuous lighting, or 250 foot increments in areas with continuous lighting. Marker color to be the same as adjacent edge line.

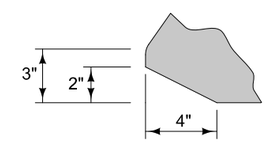
Possible Contract Item:
Concrete Barrier, BA-100 or
Concrete Barrier, BA-100 and Footing

Possible Tabulation:
108-18



SAWED CONTRACTION JOINT

Saw cut top and front face



DETAIL 'A'

Special Shaping for Barrier over Intake

REINFORCING BAR LIST
Per Section (Approx. 20 feet)

Mark	Size	Number of Bars	Length	WT. (lbs.)	Max. Spacing
g1	5	14	7'-4"	107	1'-6"
f1	5	7	19'-6"	141	

MODIFIED STANDARD ROAD PLAN

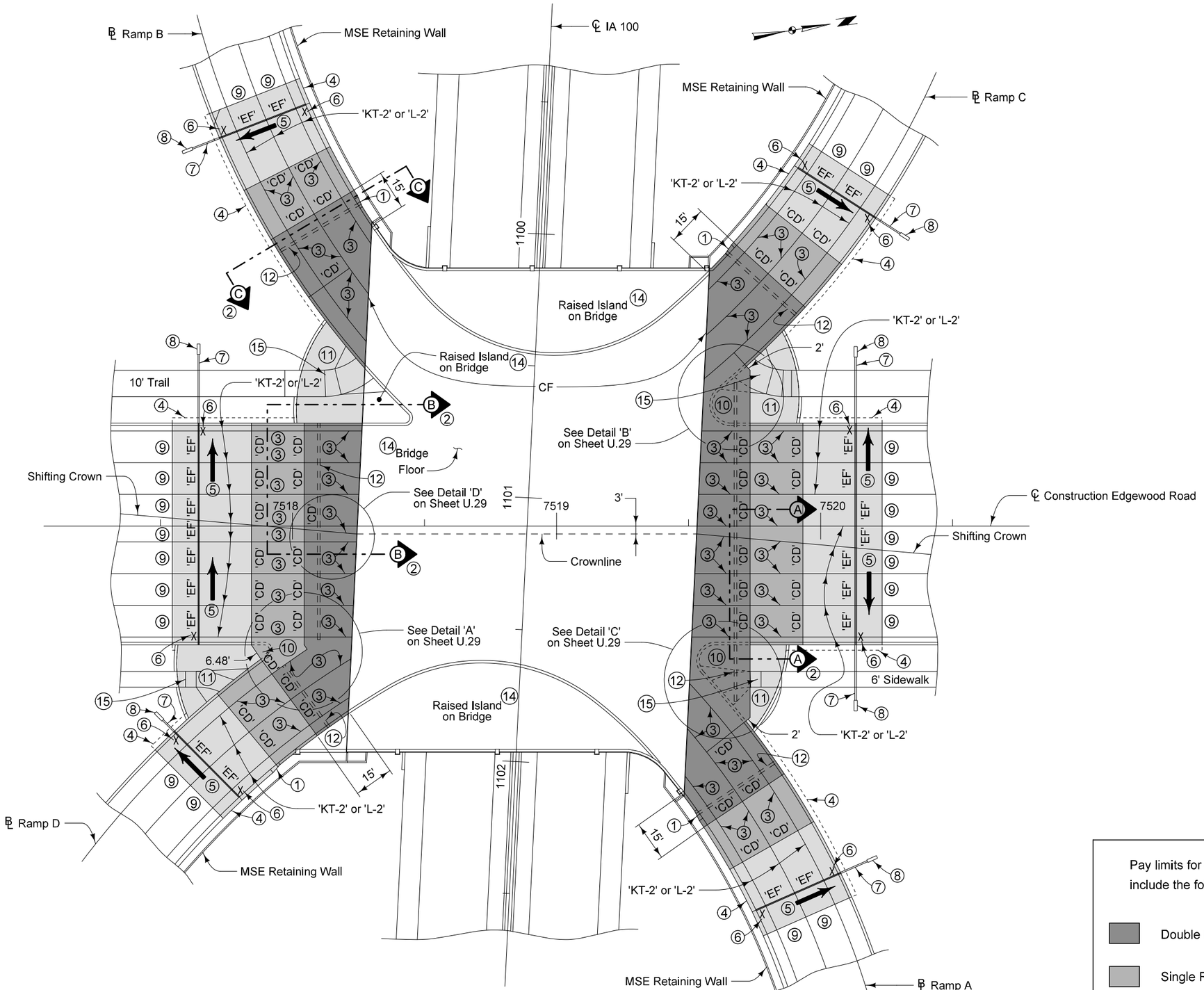
REVISION	
New	04-20-10

BA-100

SHEET 2 of 2

REVISIONS: Barrier in superelevated curves (e > 4.0%)

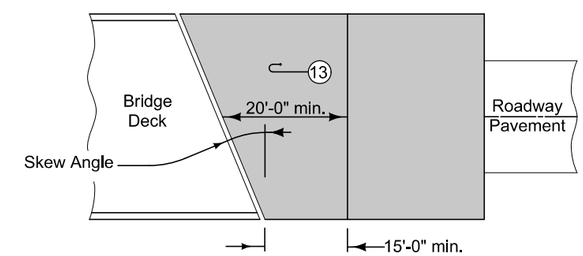
44" CONCRETE MEDIAN BARRIER (FULL SECTION)



BRIDGE APPROACH LAYOUT PLAN

For joint details, see PV-101. When required, all dowels to be placed perpendicular to joint lines.

1. See sheets U.33-U.37 for barrier transition details.
2. See Sheet U.28 for section cuts.
3. Longitudinal joint: (PV-101)
   Single Pour - Saw cut joint per PV-101 detail B.
   Two Pours - Use 'KS-2' Joint (Double Reinforced Section).
   Use 'KS-1' Joint (Single Reinforced Section).
4. Polymer grid and excavation limits of Modified Subbase 2' outside of pavement edge. See sheet U.28 for details.
5. Slope subdrain to drain.
6. Place an "X" in the plastic concrete near the 'EF' joint at the outside edge of pavement.
7. 4 inch perforated subdrain (polyethylene, corrugated tubing).
8. See RF-19C or RF-19E for outlet details.
9. 'DW' or 'RT' Joint.
10. Raised island with pavers to be constructed after bridge approach. See sheet U.31 for placement of raised island with pavers on top of bridge approach pavement details.
11. 8" concrete slab under raised island with pavers. Slab constructed and bid as part of bridge approach pavement. See sheet U.30 for details.
12. Pavement lug.
13. Double reinforced bridge approach section.
14. By others, Refer to NHSX-100-1(66)-3H-57.
15. Refer to S sheets for sidewalk and pedestrian accommodation details.



APPROACH PAVEMENT LAYOUT AT A SKEW

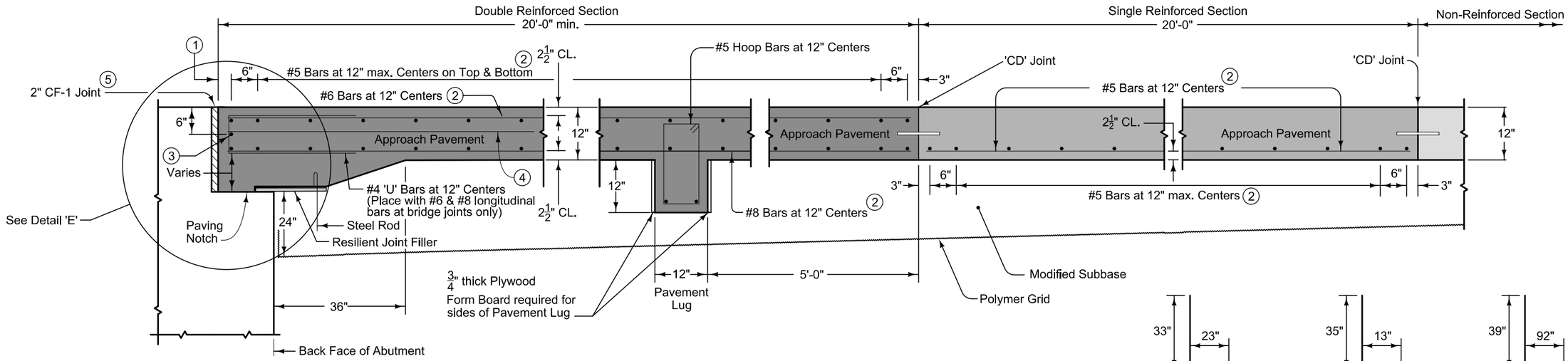
Pay limits for contract item include the following areas:

- Double Reinforced Section
- Single Reinforced Section
- Non-Reinforced Section

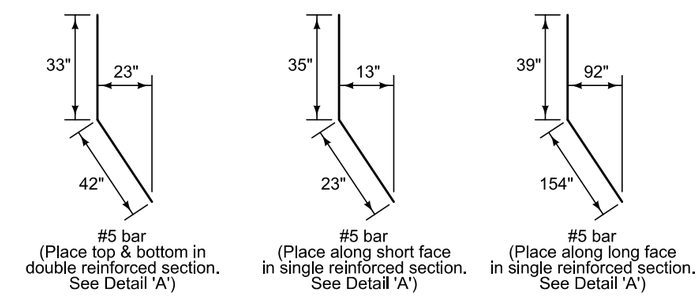
Possible Contract Item:
Bridge Approach, RK-27

Possible Tabulation:
112-6

EDGEWOOD ROAD
12" BRIDGE APPROACH PLAN
SHEET 1 OF 5



LONGITUDINAL SECTION A
(Typical along ℄ Roadways)



#5 bar (Place top & bottom in double reinforced section. See Detail 'A')

#5 bar (Place along short face in single reinforced section. See Detail 'A')

#5 bar (Place along long face in single reinforced section. See Detail 'A')

For joint details, see PV-101. When required, all dowels to be placed perpendicular to joint lines.

All Transverse Bars are #5.

See Sheet U.26 for Plan Details

(1) 2" to $2\frac{1}{2}$" clear to bent bar.

(2) Minimum lap length: #5 bars - 18 inches
#6 bars - 27 inches
#8 bars - 48 inches

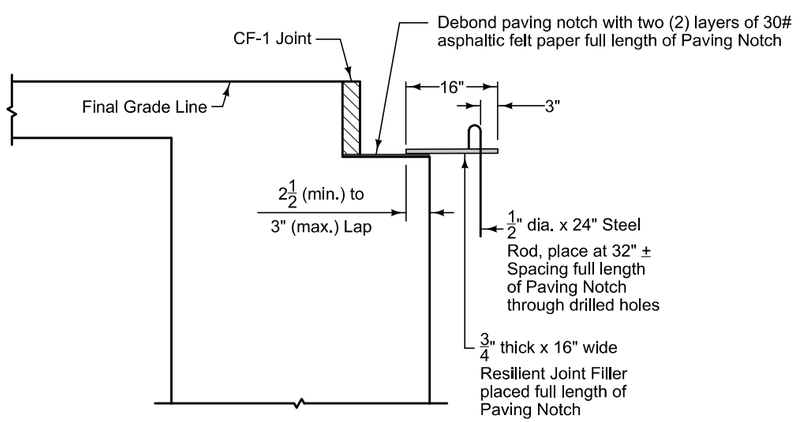
(3) Place additional #5 bar parallel to skewed face of bridge.

(4) Splay #5 bars at all acute angles < 80° within the double reinforced section.

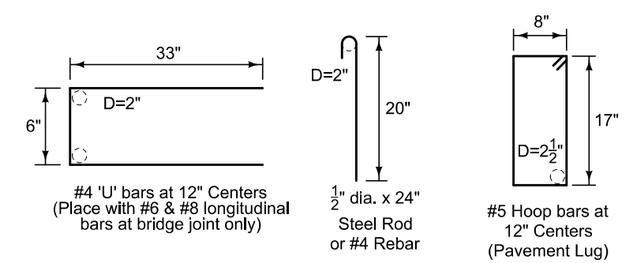
12' wide panels - 10' Length
6' wide panels - 8' Length
4' wide panels - 6' Length

(5) Expansion joint at end of bridge: In areas with barrier, place joint filler the full depth of the bridge approach pavement. In areas with curb, place joint filler full depth of bridge approach pavement plus curb and shape material to fit the shape of the curb per Section B-B of PV-101. Seal joint per Detail F of PV-101.

Moveable Abutment Bridges: Flexible Foam Expansion Joint Filler in accordance with Specification Section 4136. Minimum filler width is the abutment 'CF' joint width. Joint length as required to completely fill from edge of deck to edge of deck. See barrier transition details (sheets U.33-U.37) and MSE retaining wall details (V Sheets) for more information.



DETAIL 'E'



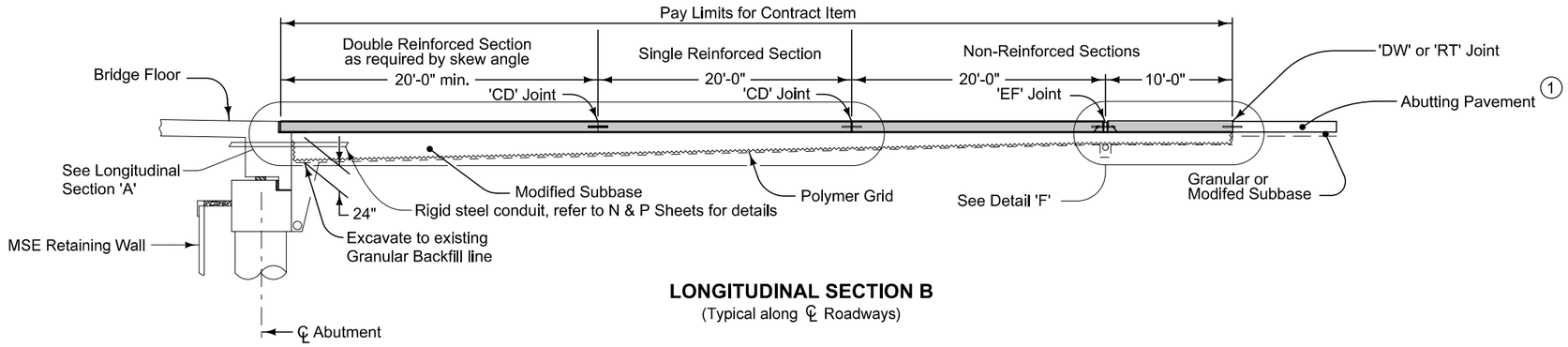
#4 'U' bars at 12" Centers (Place with #6 & #8 longitudinal bars at bridge joint only)

1/2" dia. x 24" Steel Rod or #4 Rebar

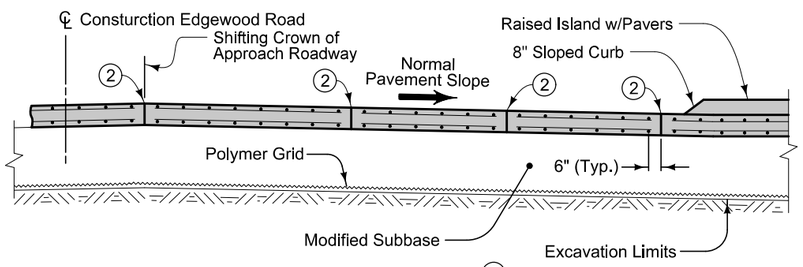
#5 Hoop bars at 12" Centers (Pavement Lug)

BENT BAR SHAPES

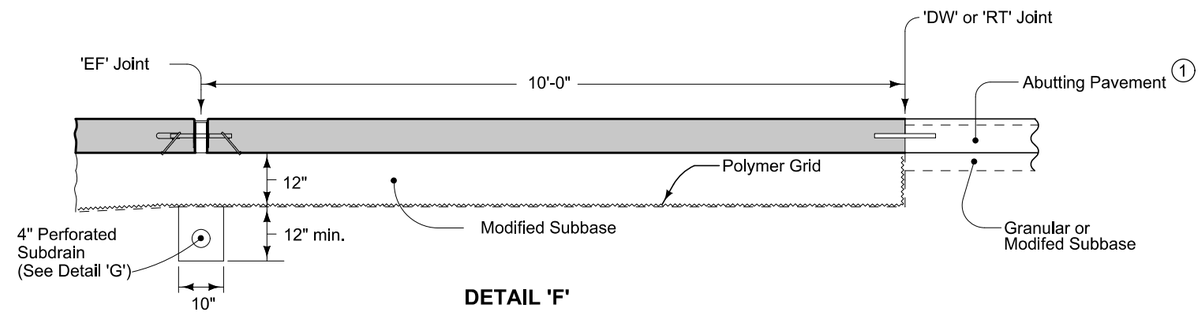
EDGEWOOD ROAD
12" BRIDGE APPROACH DETAILS
SHEET 2 OF 5



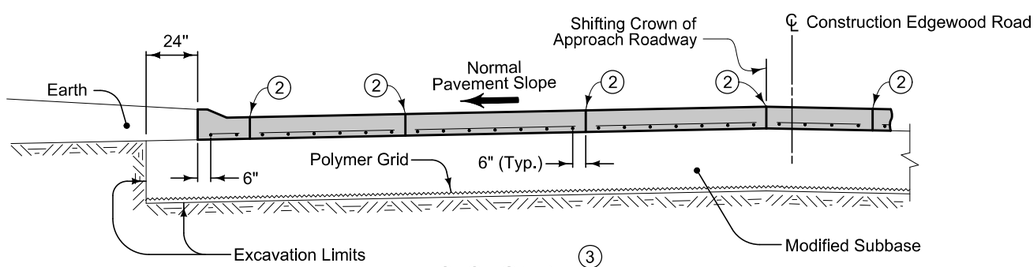
LONGITUDINAL SECTION B
(Typical along ℄ Roadways)



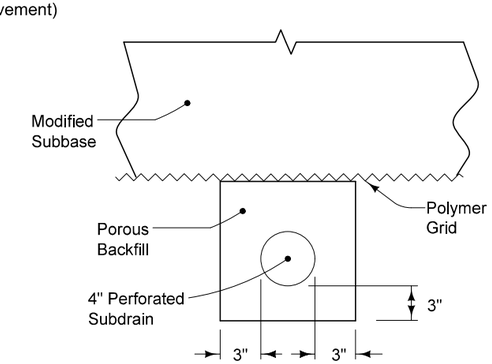
SECTION A-A 3



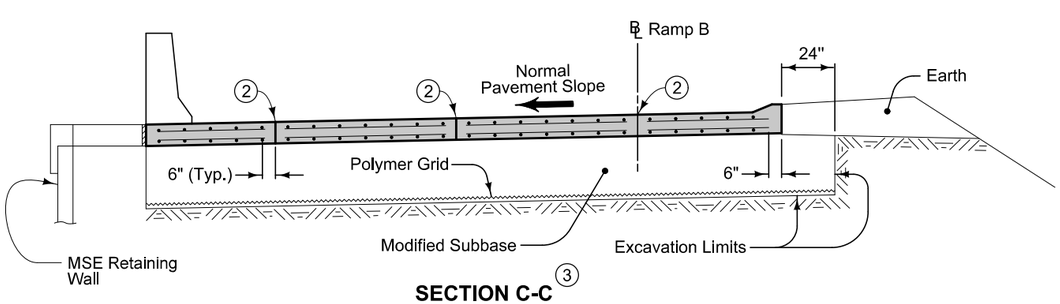
DETAIL 'F'
(Doweled PCC Pavement)



SECTION B-B 3



DETAIL 'G'
(4" Subdrain Location)

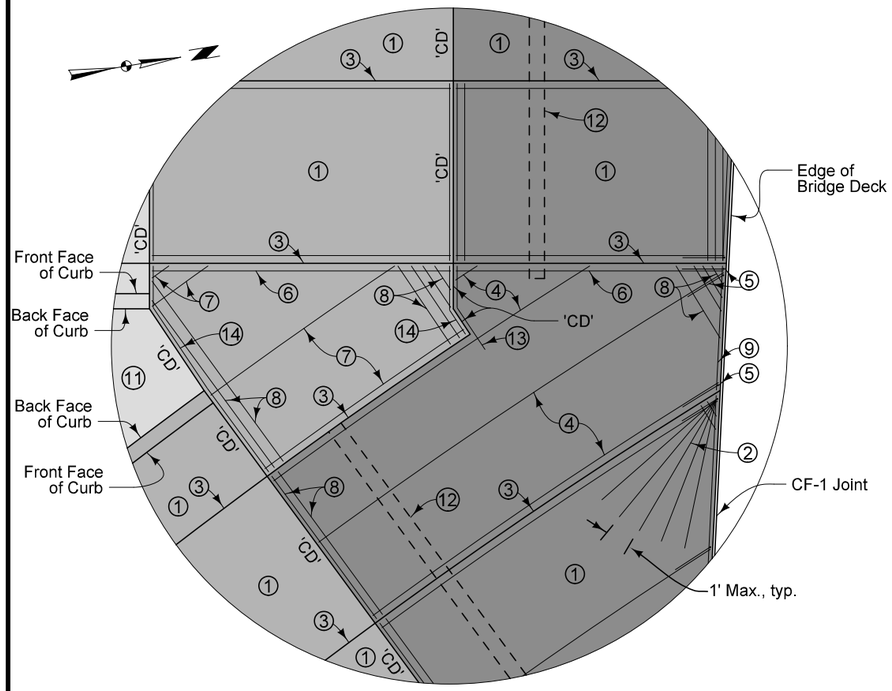


SECTION C-C 3

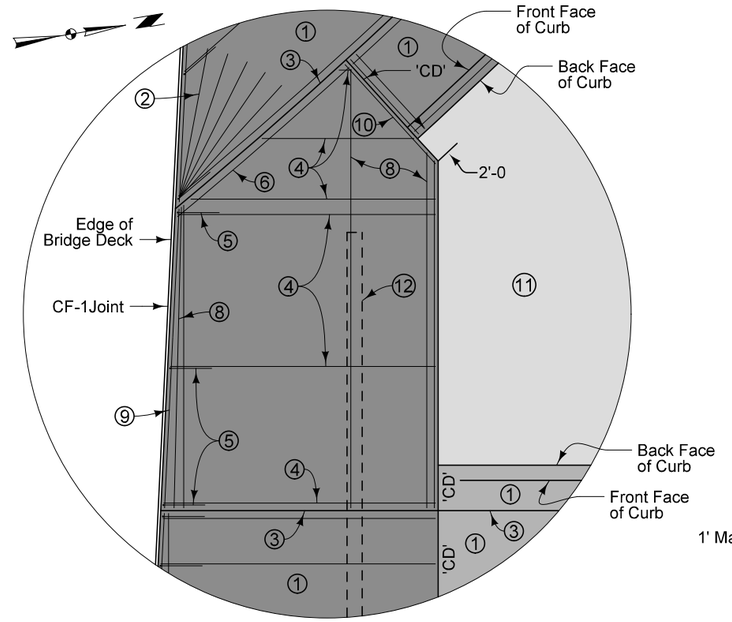
For joint details, see PV-101. When required, all dowels to be placed perpendicular to joint lines.

1. If abutting pavement (PCC or HMA) is not in place, see RK-30 for construction procedure.
2. Longitudinal Joint: (PV-101)
   Single pour - Saw cut joint per PV-101 Detail B
   Two pours - use 'KS-2' Joint
3. See Sheet U.26 for plan details.

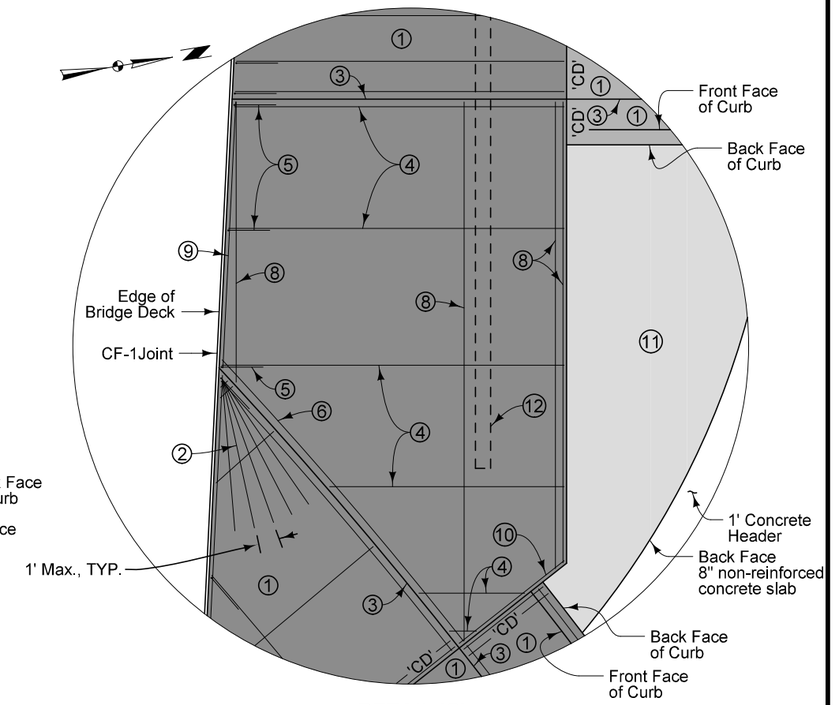
EDGEWOOD ROAD
12" BRIDGE APPROACH DETAILS
SHEET 3 OF 5



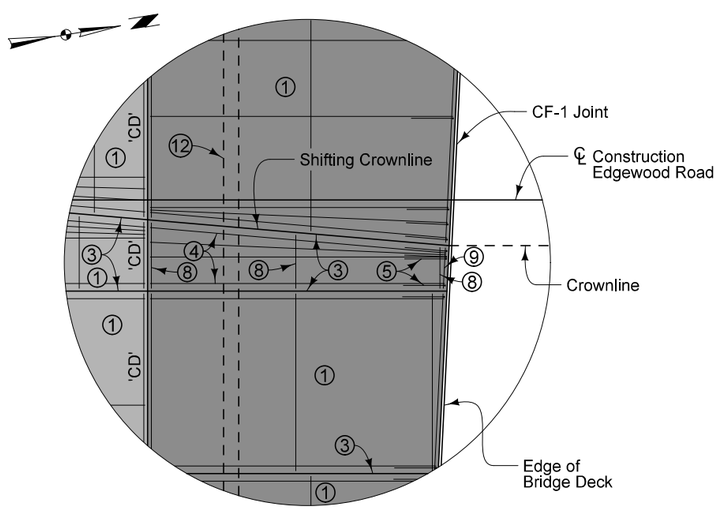
DETAIL 'A'
(Raised Islands on top of bridge approach not shown for clarity)



DETAIL 'B'
(Raised Islands on top of bridge approach not shown for clarity)



DETAIL 'C'
(Raised Islands on top of bridge approach not shown for clarity)



DETAIL 'D'

For joint details, see PV-101. When required, all dowels to be placed perpendicular to joint lines.

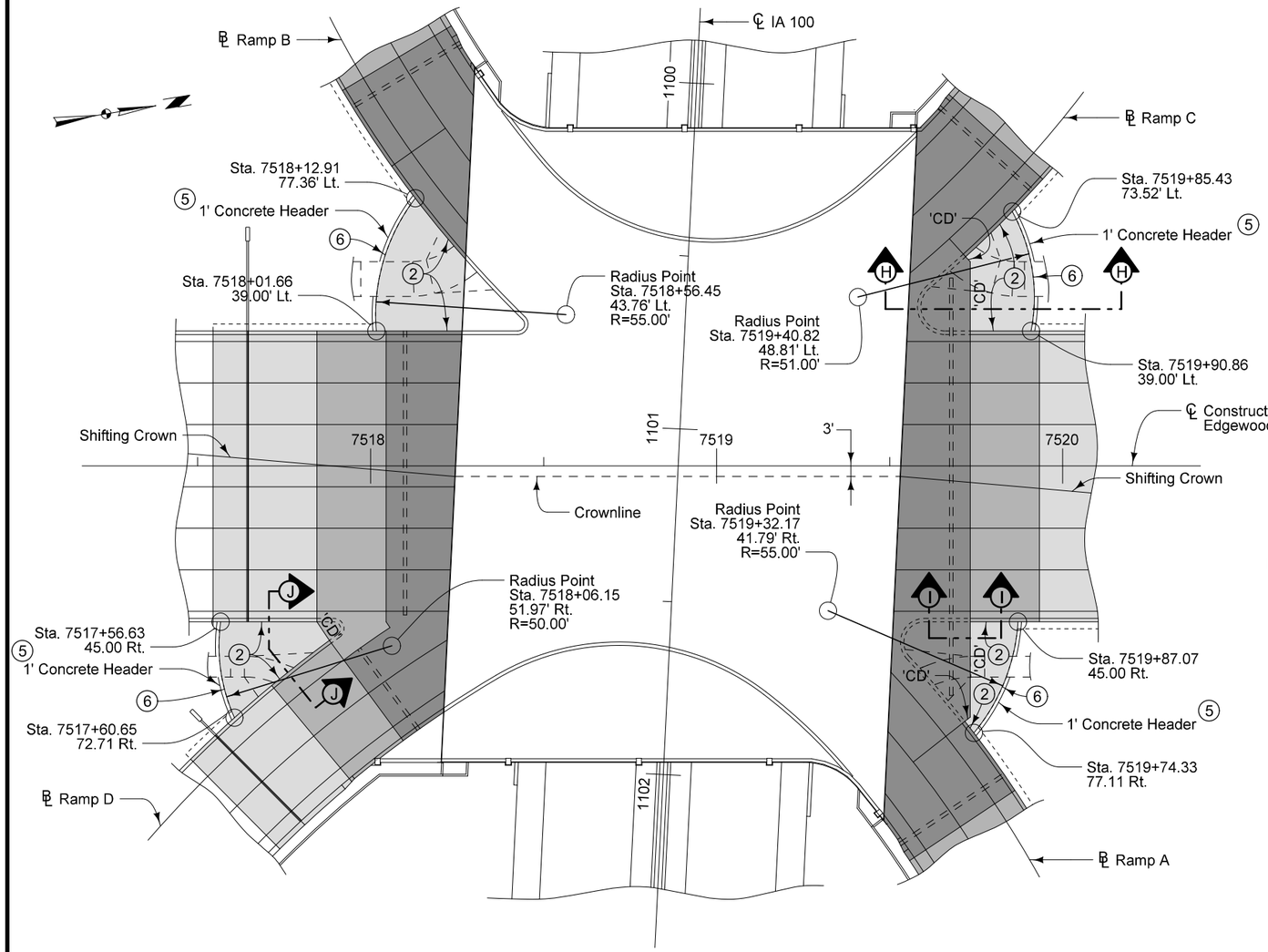
1. Typical reinforcing within bridge approach panel. See sheets U.27-U.28 for typical reinforcing placement.
2. Splay #5 bars at all acute angles < 80° within the double reinforced section.

   12' wide panels - 10' Length
   6' wide panels - 8' Length
   4' wide panels - 6' Length
3. Longitudinal joint: (PV-101)
   Single Pour - Saw cut joint per detail B.
   Two Pours - Use 'KS-2' Joint (Double Reinforced Section).
   Use 'KS-1' Joint (Single Reinforced Section).
4. Top mat in double reinforced section is #6 bars at 12" centers. Bottom mat in double reinforced section is #8 bars @ 12" centers. Field cut bars to fit. See sheet U.28 for placement details.
5. Place #4 'U' bars with #6 & #8 longitudinal bars at bridge joint only.
6. Place one #6 bar parallel to longitudinal joint line.
7. #5 bars @ 12" centers. Field cut bars to fit. See sheet U.28 for placement details.
8. Place #5 bars at 12" max. centers. See sheet U.27 for spacing details.
9. Place additional #5 bar parallel to skewed face of bridge.
10. Place one #5 bar parallel to transverse joint line.
11. 8" non-reinforced concrete slab under raised island. See Sheet U.27 for details.
12. Pavement lug. See sheet U.27 for details.
13. Place #5 bent bar top and bottom 3" from joint line. See sheet U.27 for bent bar details.
14. Place #5 bent bar 3" from joint line. See sheet U.27 for bent bar details along short face and long face.

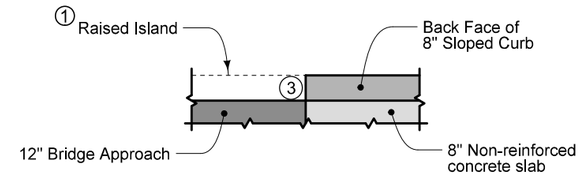
Pay limits for contract item include the following areas:

- Double Reinforced Section
- Single Reinforced Section
- Non-Reinforced Section

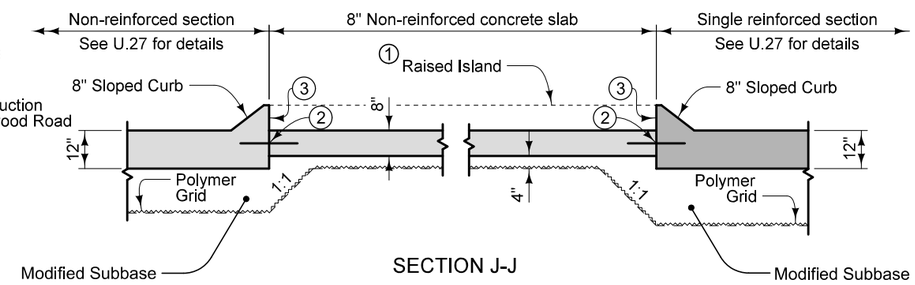
EDGEWOOD ROAD
12" BRIDGE APPROACH DETAILS
SHEET 4 OF 5



NON-REINFORCED 8" CONCRETE SLAB LAYOUT PLAN



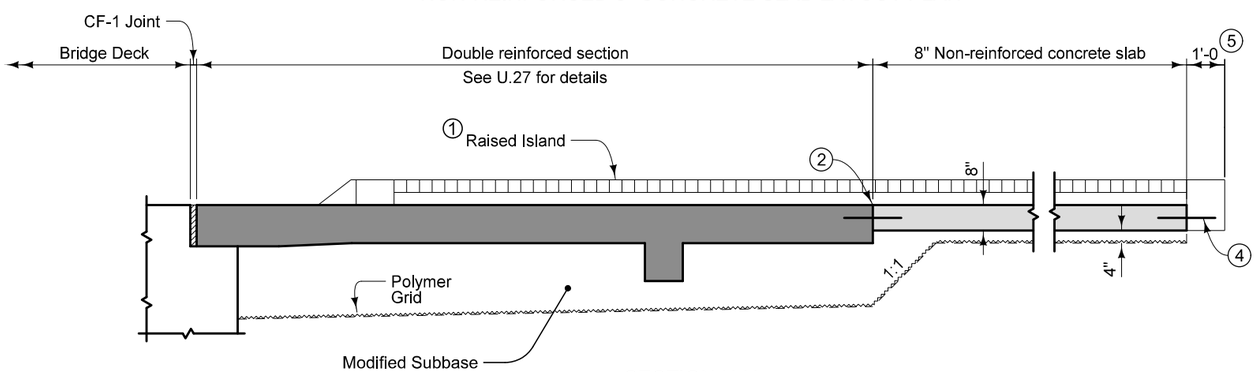
SECTION I-I



SECTION J-J

For joint details, see PV-101. When required, all dowels to be placed perpendicular to joint lines.

1. Raised island with pavers to be constructed after completion of bridge approach pavement and 8" non-reinforced concrete slab. See Sheet U.31 for paved and raised island details
2. 'KT' joint.
3. Vertical face of curb to be exposed after bridge approach construction and until completion of curb and raised island with pavers.
4. Place #5 bars at 30" centers along back face of 8" non-reinforced concrete slab.
5. See sheet U.31 for 1' concrete header details.
6. Polymer grid and excavation limits of modified subbase.

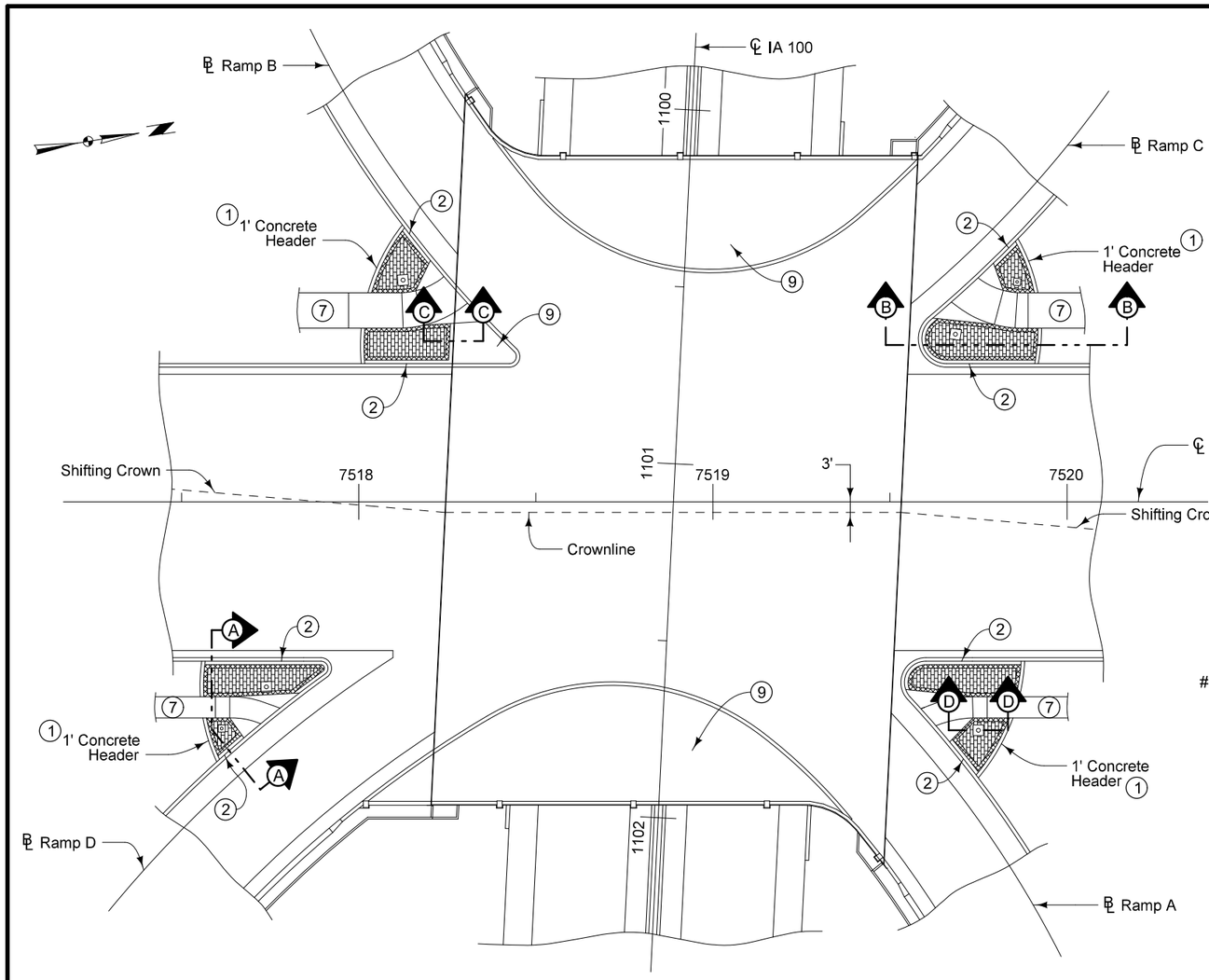


SECTION H-H

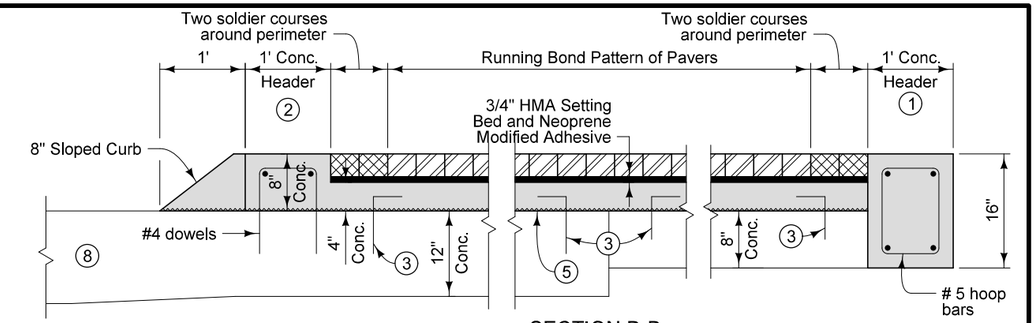
Pay limits for contract item include the following areas:

- Double Reinforced Section
- Single Reinforced Section
- Non-Reinforced Section

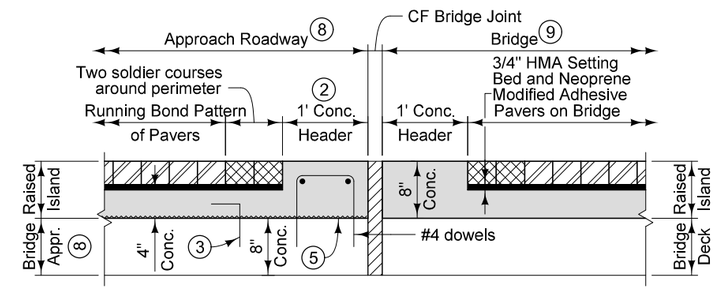
EDGEWOOD ROAD
BRIDGE APPROACH DETAILS
SHEET 5 OF 5



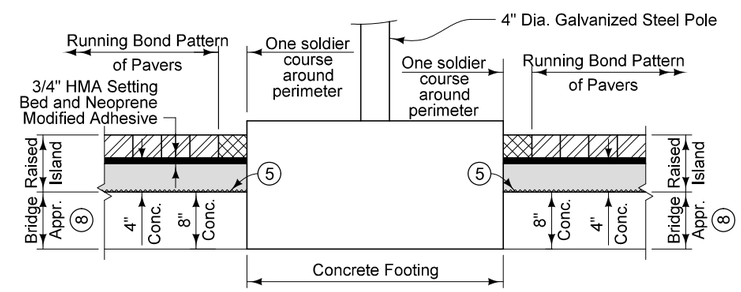
NON-REINFORCED 8" CONCRETE SLAB AND RAISED ISLAND LAYOUT PLAN



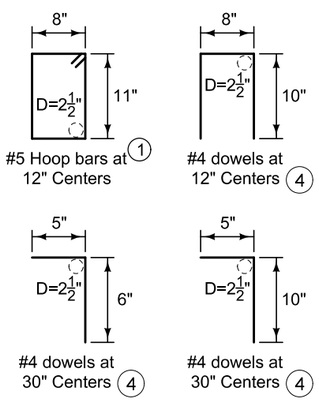
SECTION B-B



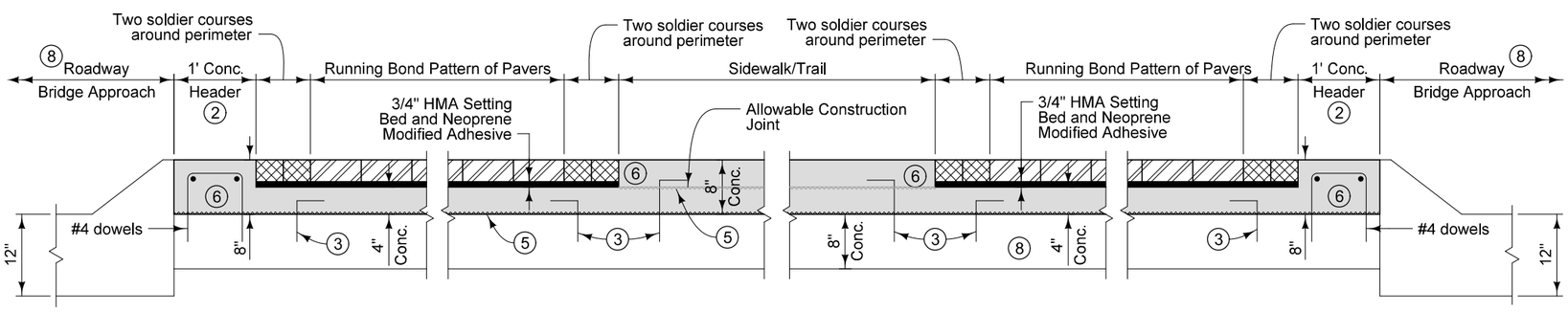
SECTION C-C



SECTION D-D



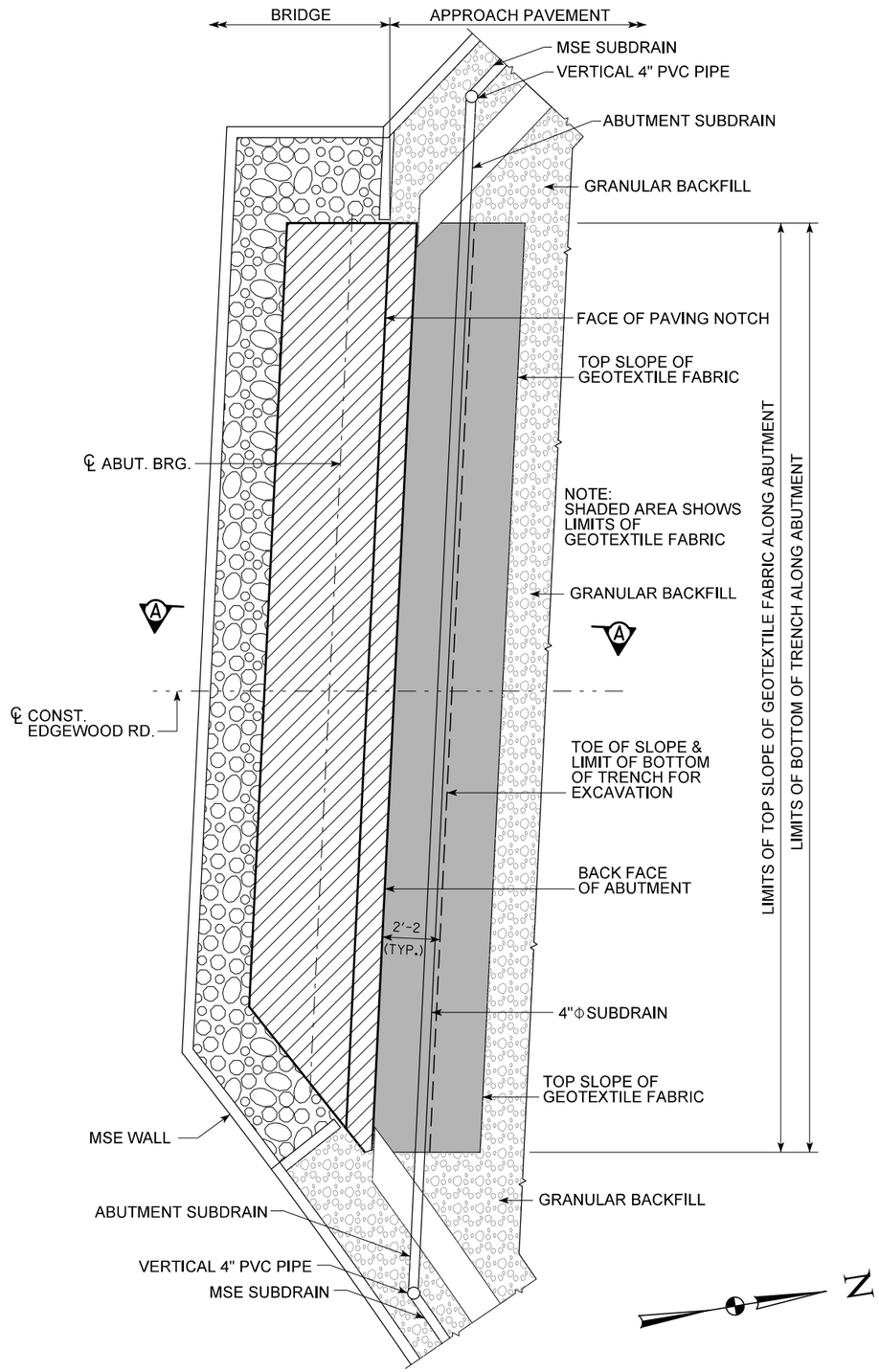
BENT BAR SHAPES



SECTION A-A

1. 1' concrete header at back of raised islands shall be 16" thick. #5 hoop bars shall be placed at 12" centers and tied with #4 bars.
2. 1' concrete header shall be 8" and poured monolithic with 8" sidewalk and 4" concrete slabs under pavers. #4 dowels shall be placed at 12" centers and tied with #4 bars. Field bend #4 tie bars to fit.
3. #4 dowels to be placed at 30" centers in 4" concrete slab and under 8" sidewalk.
4. #4 dowel bars shall be set in 4" drilled holes and bonded with an approved polymer grout system. Drilled holes are to be 1/8" larger in diameter than the nominal size of the dowel. Drilling operations shall not damage bridge approach reinforcement and much be approved by the Engineer.
5. Roughen interface to 1/2" amplitude, clean and place grout prior to placing raised island concrete.
6. 8" sidewalk, 8" header, and 4" concrete slab under pavers to be poured monolithic. Allowable construction joints between 4" slab and sidewalk pavement with Engineer approval. Refer to (5) if joint is used.
7. Refer to S sheets for additional sidewalk details.
8. Refer to U sheets for additional bridge approach details.
9. Refer to NHSX-100-1(66)--3H-57 for concrete header and paver details constructed as part of the Edgwood Road Bridge.

EDGEWOOD ROAD
RAISED ISLAND DETAILS
SHEET 1 OF 1



NORTH ABUTMENT PLAN
(SOUTH ABUTMENT SIMILAR)

TECHNICAL DATA INFORMATION - GEOTEXTILE FABRIC				
MECHANICAL PROPERTIES	TEST METHOD	UNIT	MINIMUM AVERAGE ROLL VALUE	
			MD	CD
TENSILE STRENGTH (`AT 5% STRAIN`)	ASTM D`4595	kN/m (`LBS/FT`)	19.8 (`1356`)	19.8 (`1356`)
APPARENT OPENING SIZE (AOS)	ASTM D`4751	mm (U.S. SIEVE)	0.43 MAX (#40)	
FLOW RATE	ASTM D`4491	L/MIN/m² (GAL/MIN/FT²)	733 (`18`)	
UV RESISTANCE (`AT 500 HOURS`)	ASTM D`4355	% STRENGTH RETAINED	70	

ABUTMENT BACKFILL PROCESS:

THE BASE OF THE EXCAVATION BEHIND THE ABUTMENT IS TO BE GRADED WITH A 4% SLOPE AWAY FROM THE ABUTMENT FOOTING AND A 2% CROSS SLOPE TO TIE INTO THE DIRECTION OF THE MSE WALL SUBDRAIN. THIS EXCAVATION SHAPING IS TO BE DONE PRIOR TO BEGINNING INSTALLATION OF THE GEOTEXTILE AND BACKFILL MATERIAL.

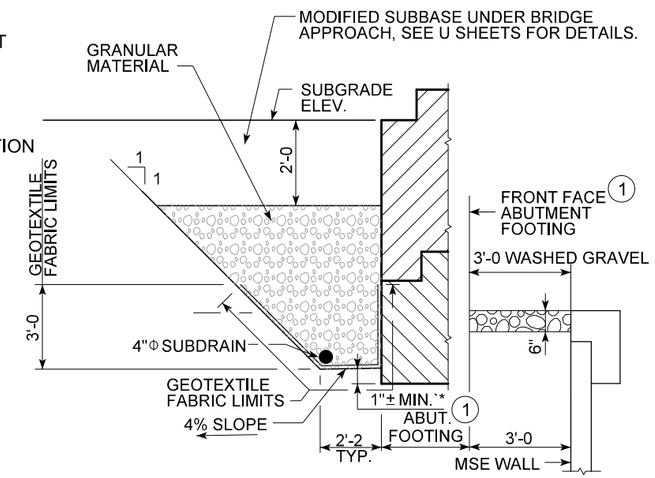
AFTER THE BASE OF EXCAVATION HAS BEEN SHAPED, THE GEOTEXTILE FABRIC SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN. THE FABRIC IS INTENDED TO BE INSTALLED IN THE BASE OF THE EXCAVATION AND EXTENDED VERTICALLY UP THE ABUTMENT FOOTING AND EXCAVATION FACE TO A HEIGHT SHOWN IN THE "BACKFILL DETAILS" ON THIS SHEET. THE STRIPS OF THE FABRIC PLACED SHALL OVERLAP APPROXIMATELY 1 FOOT AND SHALL BE PINNED IN PLACE. THE FABRIC SHALL BE ATTACHED TO THE ABUTMENT BY USING LATH FOLDED IN THE FABRIC AND SECURED TO THE CONCRETE WITH SHALLOW CONCRETE NAILS. THE FABRIC PLACED AGAINST THE EXCAVATION FACE SHALL BE PINNED.

THE SUBDRAIN WILL BE TIED INTO THE MSE WALL DRAINAGE SYSTEM AND COORDINATED WITH THE INSTALLATION OF THE BACKFILL DETAILS SHOWN ON THIS SHEET. A VERTICAL 4" PVC PIPE SHALL BE USED FOR THE CONNECTION BETWEEN THE SUBDRAIN BEHIND THE ABUTMENT AND THE MSE WALL SUBDRAIN. CONNECTION DETAILS SHALL BE COORDINATED WITH THE MSE WALL SUPPLIER AND INCLUDED IN SHOP DRAWINGS TO BE APPROVED BY THE ENGINEER.

GRANULAR MATERIAL IS THEN PLACED ALONG THE ENTIRE LENGTH OF ABUTMENT AND IS TO TIE INTO GRANULAR MATERIAL FILL BEHIND THE MSE WALL. GRANULAR BACKFILL BEHIND THE ABUTMENT SHALL BE PLACED IN CONJUCTION WITH AND THE SAME MANNER AS THE BACKFILL BEHIND THE MSE WALL. REFER TO STANDARD SPECIFICATION 2432 FOR DETAILS.

SUBDRAIN, SOLID PVC PIPE, AND GEOTEXTILE FABRIC ARE CONSIDERED INCIDENTIAL TO THE MSE WALL CONSTRUCTION.

GRANULAR BACKFILL WILL BE PAID FOR SEPERATELY.



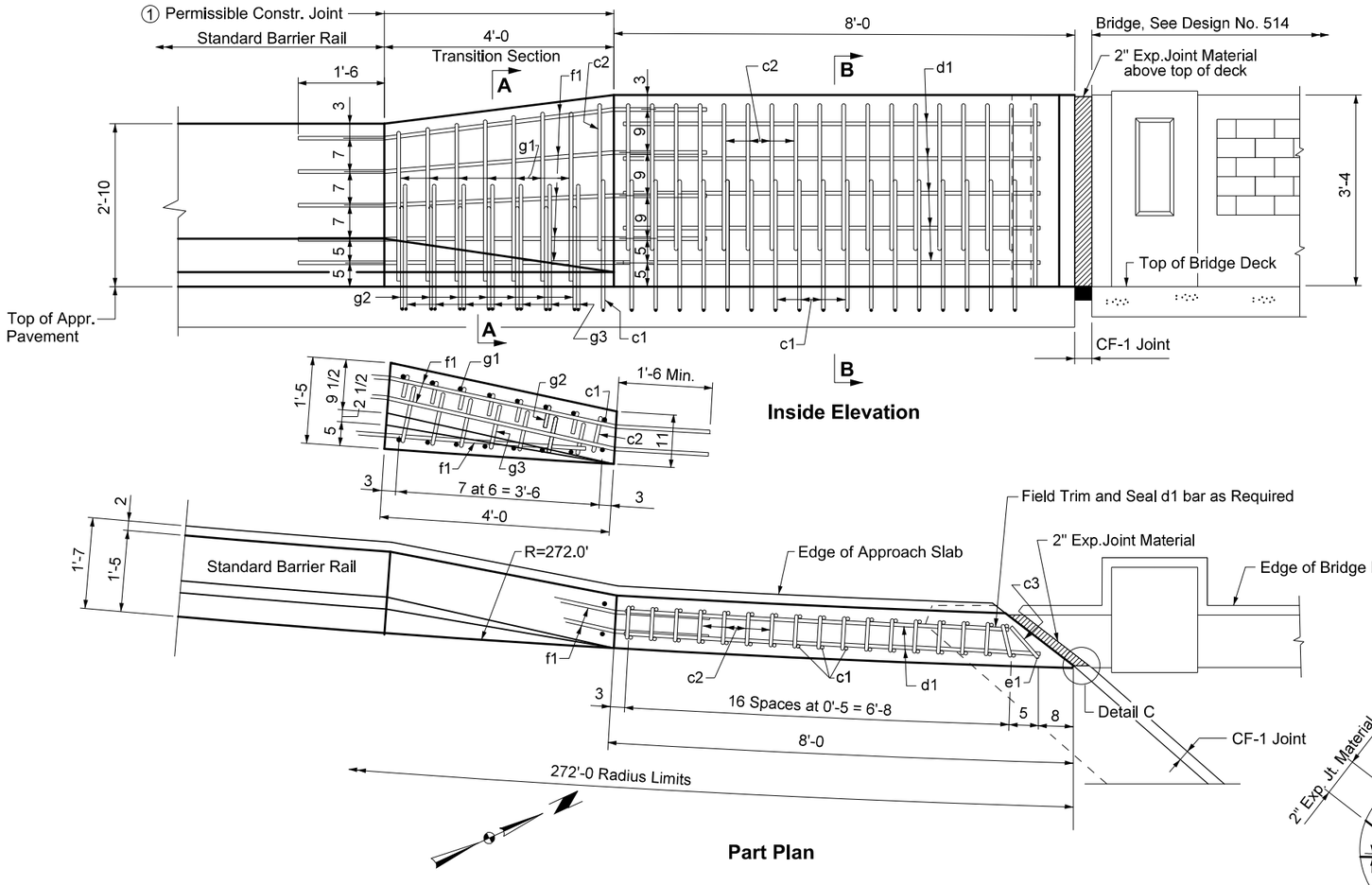
SECTION A-A
BACKFILL DETAILS

NOTE: GEOTEXTILE FABRIC WILL BE ATTACHED TO FACE OF ABUTMENT FOOTING.

*DIMENSION VARIES DUE TO 2% SUBDRAIN SLOPE.

(1) FOR BRIDGE ABUTMENT DETAILS REFER TO NHSX-100-1(66)--3H-57.

EDGEWOOD ROAD
ABUTMENT BACKFILL DETAILS
SHEET 1 OF 1



Use Grade 60 epoxy-coated reinforcing bars. Provide 2 inches clear cover, except as noted or shown. Anchor all reinforcing to prevent movement. Secure each section at the front, back, and at 3'-6 intervals using a method approved by the Engineer.

① Where abutting sections are placed as separate pours, a butt joint may be used. Extend longitudinal reinforcing into the abutting section a minimum of 1'-6

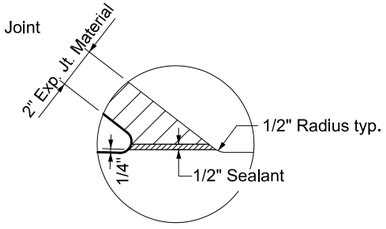
② Chamfer all exposed corners with a 3/4 inch dressed and beveled strip.

Joint Sealent shall be light gray nonsag latex caulking sealant marketed for outdoor use. No texting or certification is required. Cost of CF-1 joint, sealant and expansion joint material is incidental.

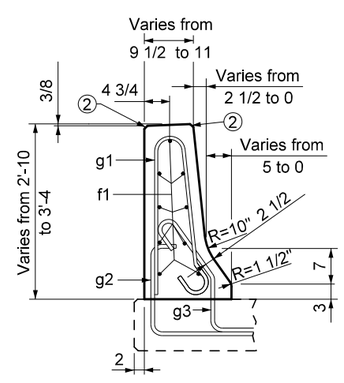
Concrete Quantities
8'-0 Section = 0.90 CY 4'-0 Transition = 0.50 CY
Total = 1.40 CY

Reinforcing Bar List
Southwest Corner

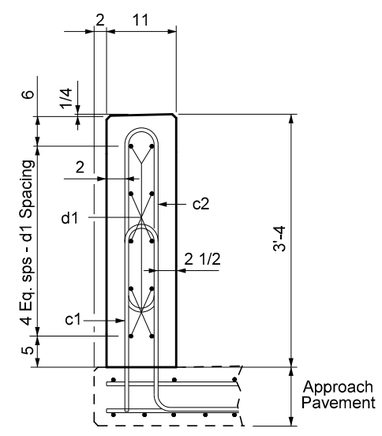
Bar	Size	No. of Bars	Length	Weight
c1	6	18	8'-7	232
c2	5	18	6'-9	127
c3	5	1	7'-0	7
d1	8	10	7'-3	194
e1	6	1	6'-0	9
g1	5	7	varies	45
g2	5	7	5'-2	38
g3	5	7	3'-8	27
f1	5	9	7'-0	66
			Total (lb)	745



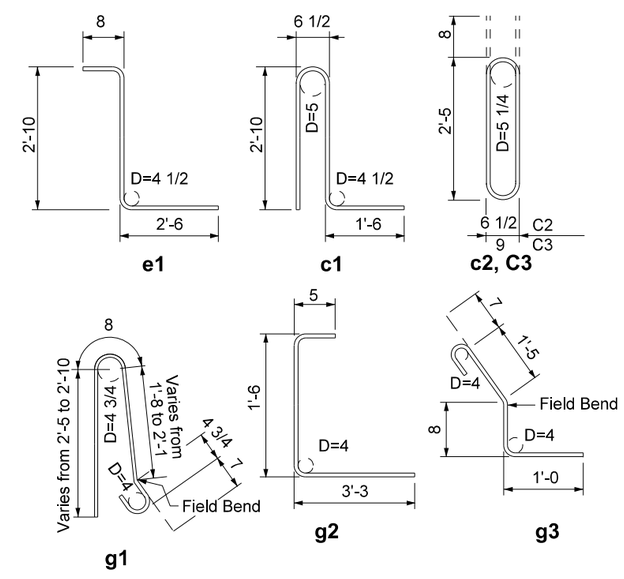
Detail C
Typical Sides and Top



Section A-A



Section B-B



Bent Bars

Concrete Barrier Rail Southwest Corner

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER U.33

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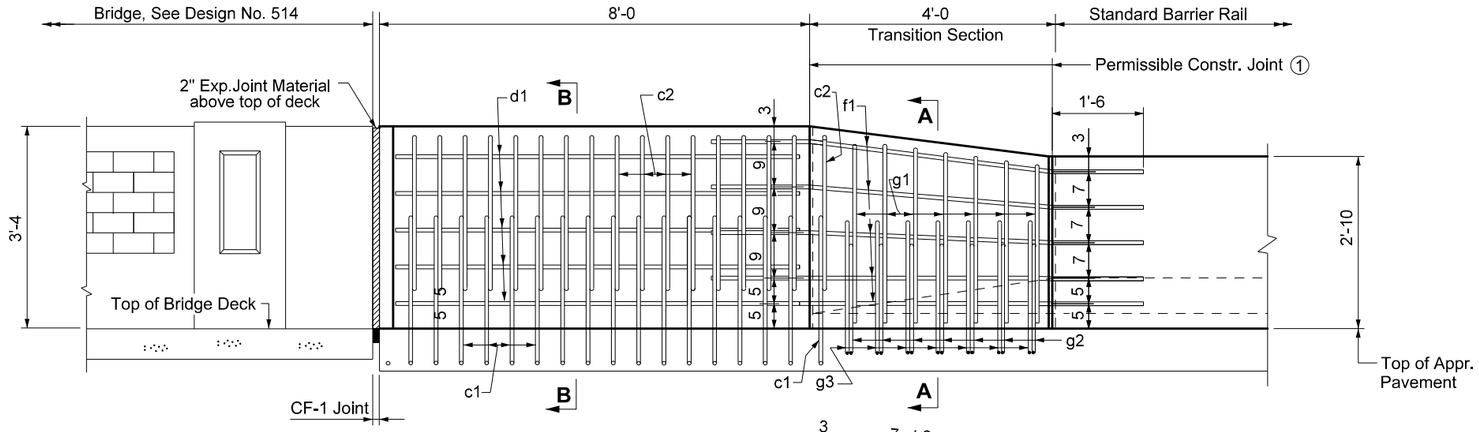


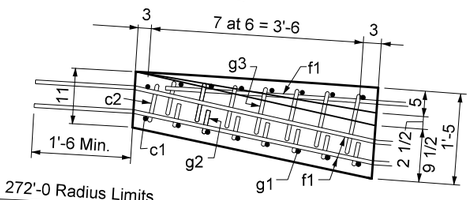
Outside Elevation

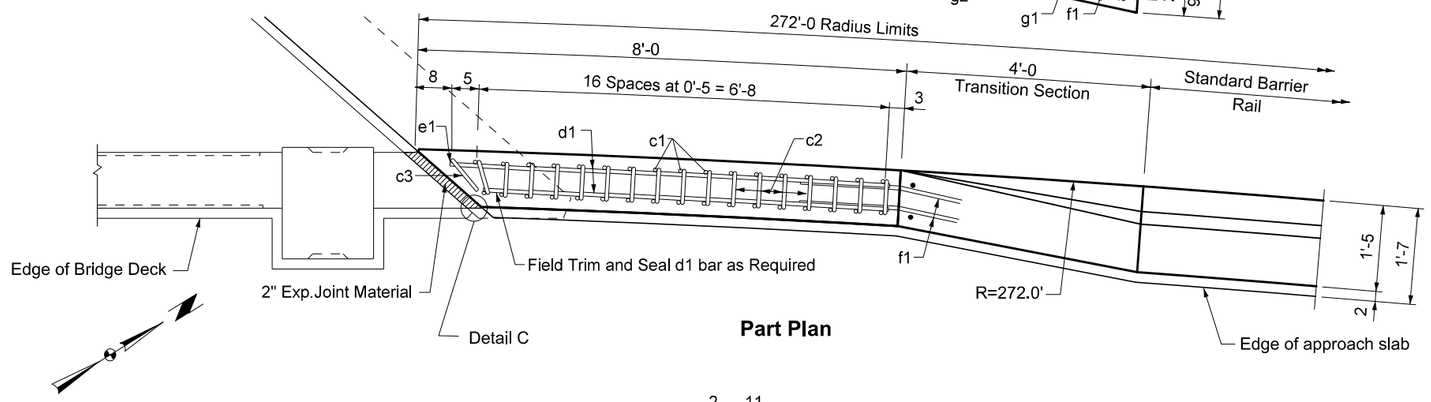
Use Grade 60 epoxy-coated reinforcing bars. Provide 2 inches clear cover, except as noted or shown. Anchor all reinforcing to prevent movement. Secure each section at the front, back, and at 3'-6 intervals using a method approved by the Engineer.

① Where abutting sections are placed as separate pours, a butt joint may be used. Extend longitudinal reinforcing into the abutting section a minimum of 1'-6

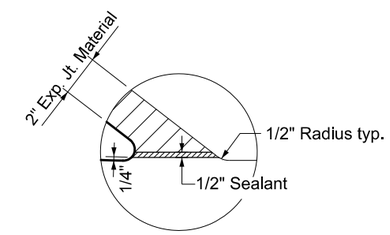
② Chamfer all exposed corners with a 3/4 inch dressed and beveled strip.

Joint Sealent shall be light gray nonsag latex caulking sealant marketed for outdoor use. No texting or certification is required. Cost of CF-1 joint, sealant and expansion joint material is incidental.



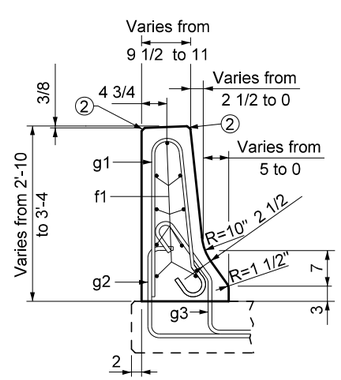


Part Plan

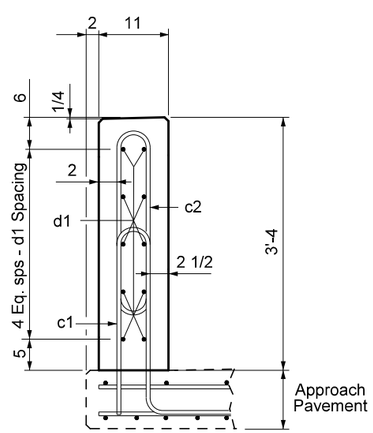


Detail C
Typical Sides and Top

Reinforcing Bar List Northeast Corner				
Bar	Size	No. of Bars	Length	Weight
c1	6	18	8'-7	232
c2	5	18	6'-9	127
c3	5	1	7'-0	7
d1	8	10	7'-3	194
e1	6	1	6'-0	9
g1	5	7	varies	45
g2	5	7	5'-2	38
g3	5	7	3'-8	27
f1	5	9	7'-0	66
			Total (lb)	745



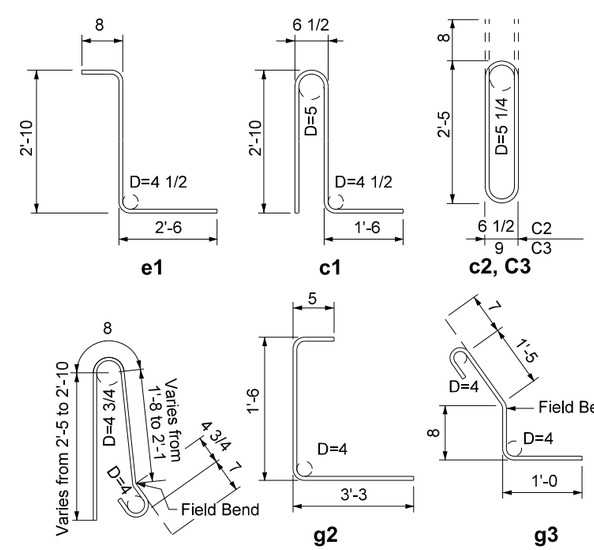
Section A-A



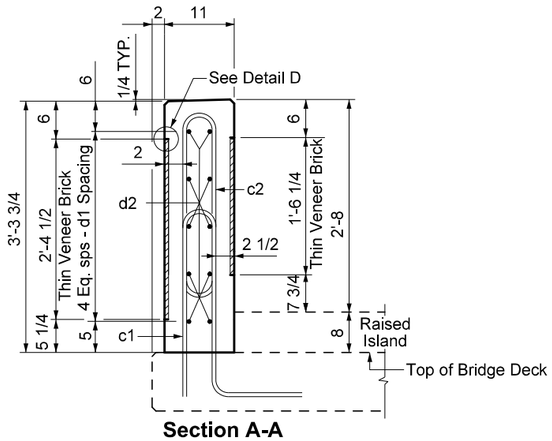
Section B-B

Concrete Quantities
8'-0 Section = 0.90 CY 4'-0 Transition = 0.50 CY
Total = 1.40 CY

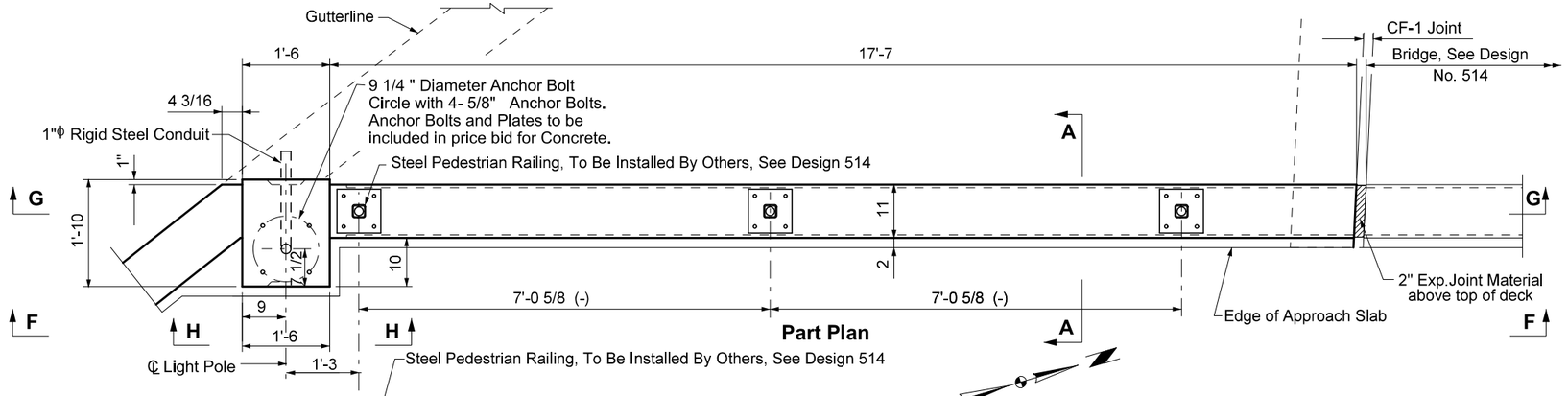
1/2" Radius typ.



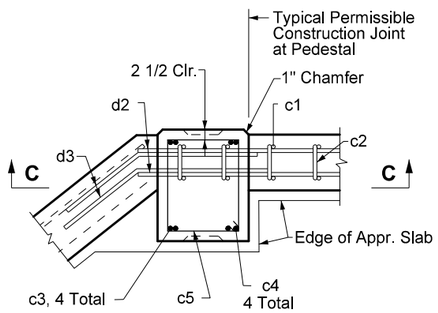
Concrete Barrier Rail Northeast Corner



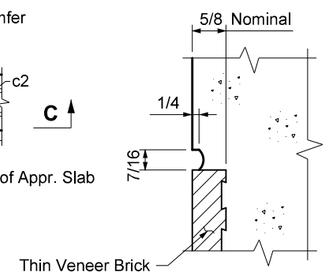
Section A-A



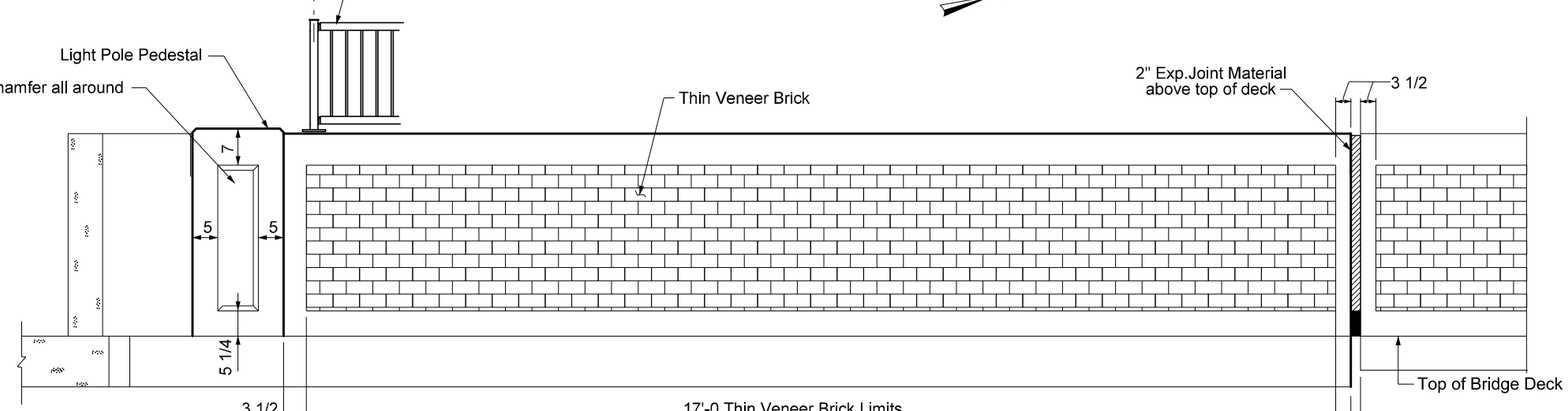
Part Plan



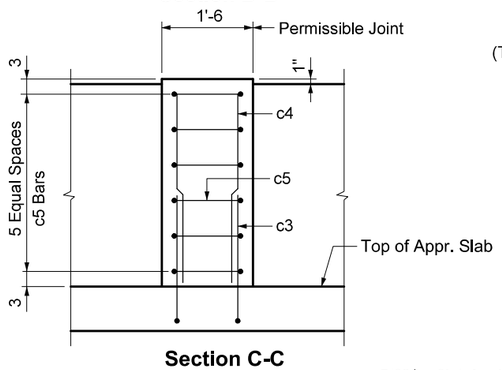
Section B-B



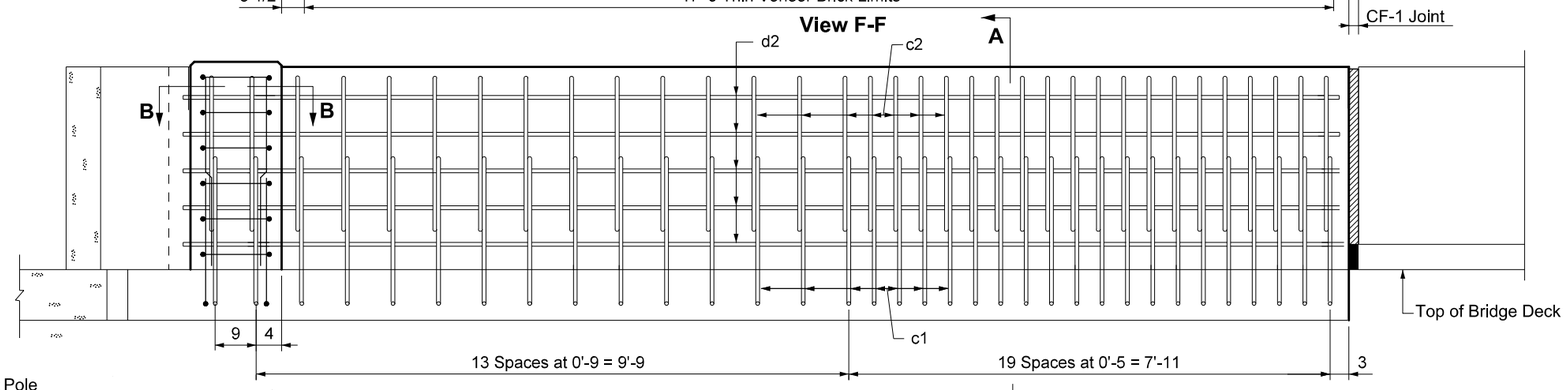
Detail D
(Typical Around Perimeter of Thin Veneer Brick)



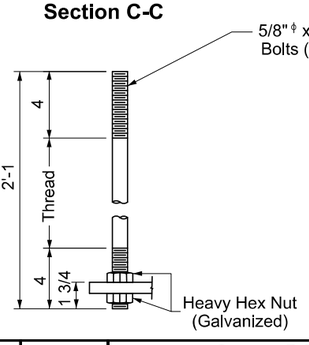
View F-F

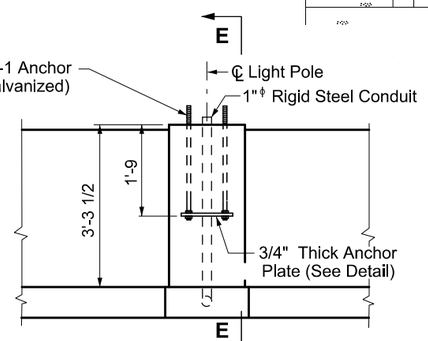


Section C-C

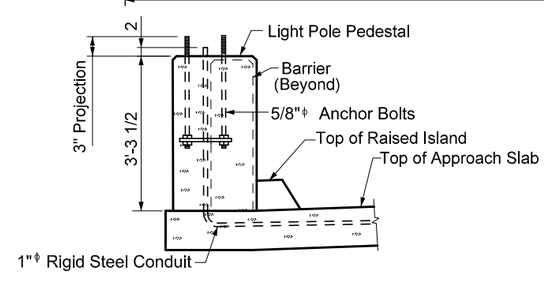


Section G-G

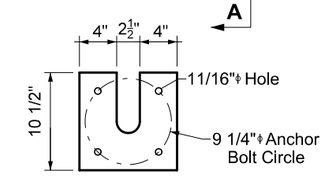




View H-H



Section E-E



Anchor Plate (Galvanized)

Concrete Barrier Rail
Southeast Corner Sheet 1 of 2

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER U.35

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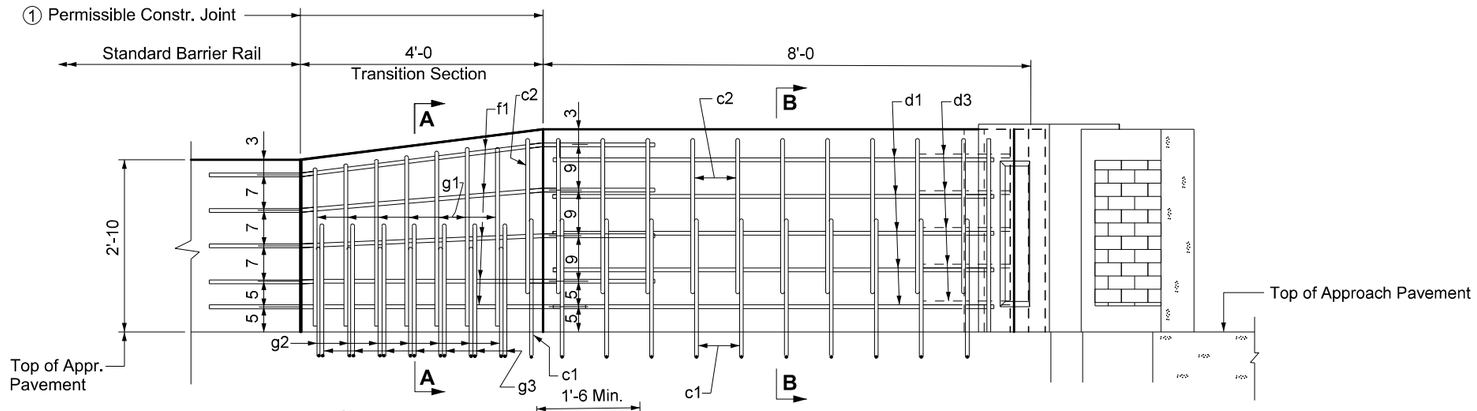
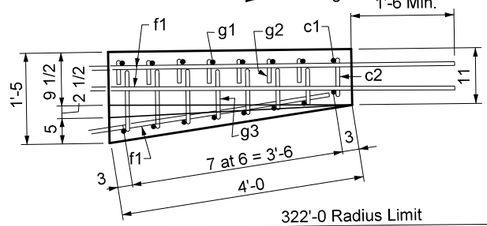
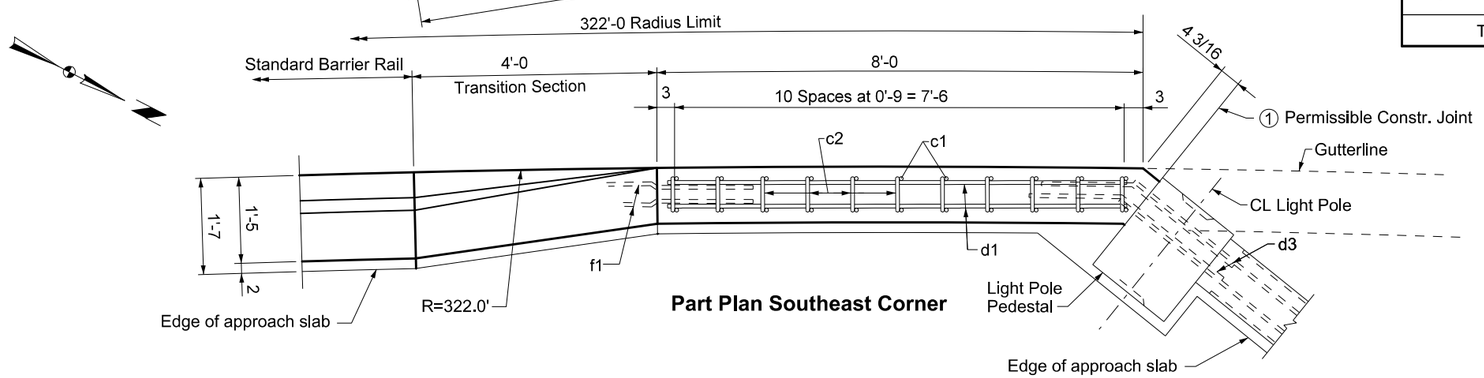


Outside Elevation





Part Plan Southeast Corner

Use Grade 60 epoxy-coated reinforcing bars. Provide 2 inches clear cover, except as noted or shown. Anchor all reinforcing to prevent movement. Secure each section at the front, back, and at 3'-6 intervals using a method approved by the Engineer.

① Where abutting sections are placed as separate pours, a butt joint may be used. Extend longitudinal reinforcing into the abutting section a minimum of 1'-6

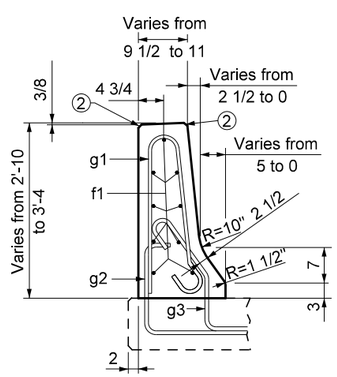
② Chamfer all exposed corners with a 3/4 inch dressed and beveled strip.

Joint Sealent shall be light gray nonsag latex caulking sealant marketed for outdoor use. No texting or certification is required. Cost of CF-1 joint, sealant and expansion joint material is incidental.

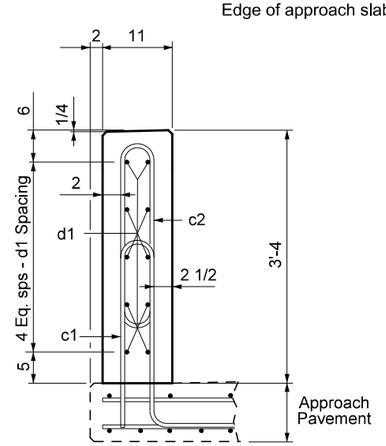
Concrete Quantities
8'-0 Section = 0.90 CY
4'-0 Transition = 0.50 CY
17'-7 Section = 2.00 CY
Light Pole Pedestal = 0.30 CY
Total = 3.70 CY

Reinforcing Bar List
Southeast Corner

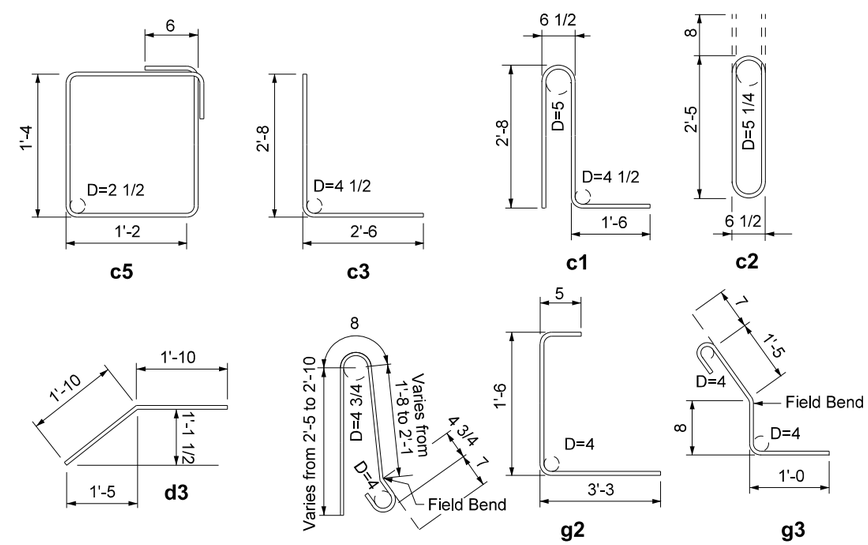
Bar	Size	No. of Bars	Length	Weight
c1	6	46	8'-5	582
c2	5	46	6'-9	324
c3	6	4	5'-2	31
c4	5	4	2'-10	12
c5	5	6	6'-0	38
d1	6	10	7'-8	115
d2	6	10	19'-0	285
d3	6	10	3'-8	55
g1	5	7	varies	45
g2	5	7	5'-2	38
g3	5	7	3'-8	27
f1	5	9	7'-0	66
			Total (lb)	1,618



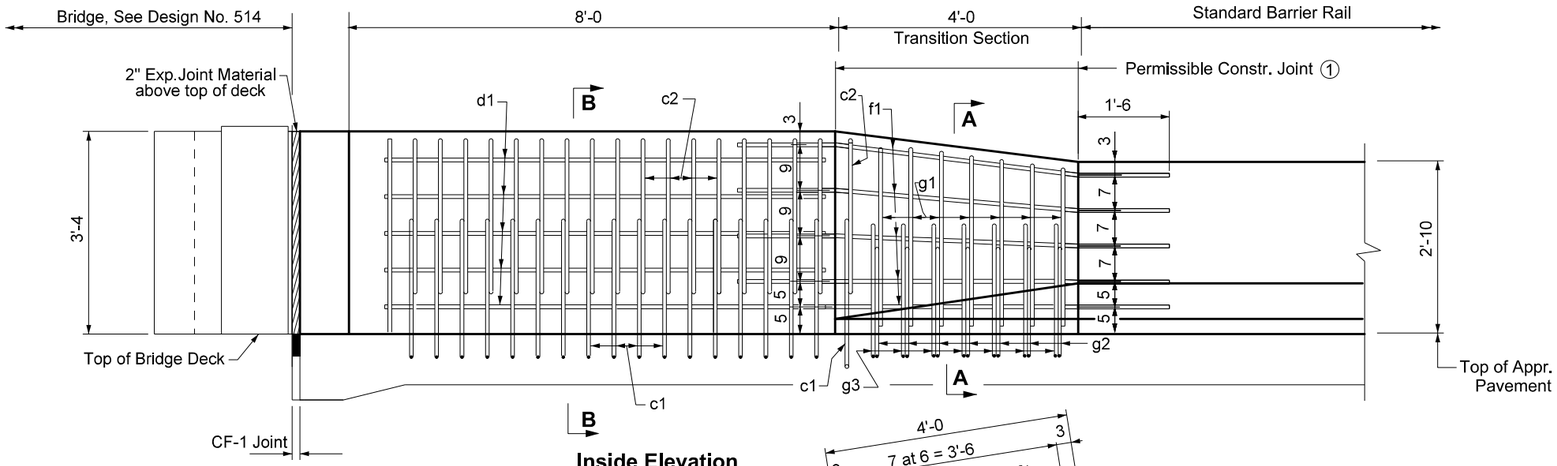
Section A-A



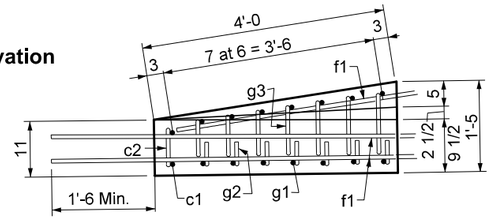
Section B-B

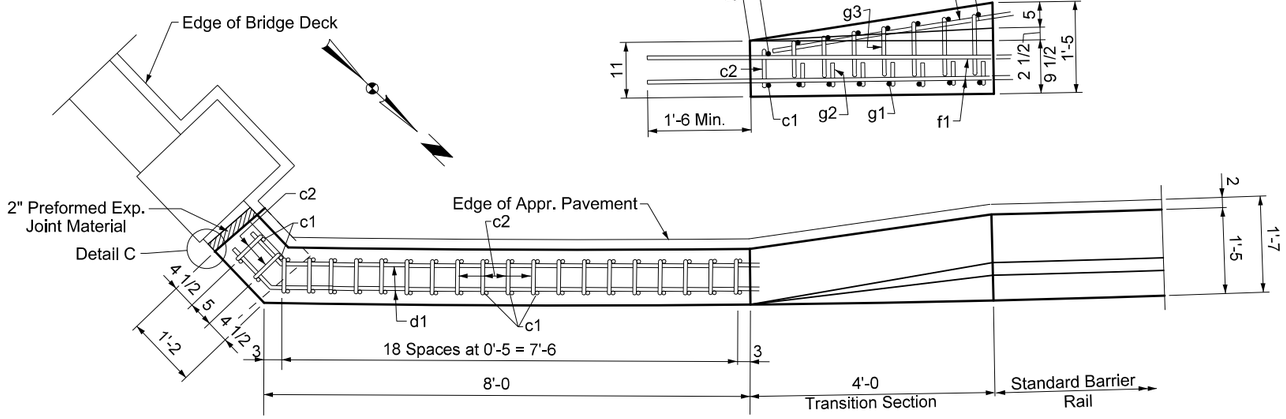


Concrete Barrier Rail
Southeast Corner Sheet 2 of 2



Inside Elevation





Part Plan

Use Grade 60 epoxy-coated reinforcing bars. Provide 2 inches clear cover, except as noted or shown. Anchor all reinforcing to prevent movement. Secure each section at the front, back, and at 3'-6 intervals using a method approved by the Engineer.

① Where abutting sections are placed as separate pours, a butt joint may be used. Extend longitudinal reinforcing into the abutting section a minimum of 1'-6

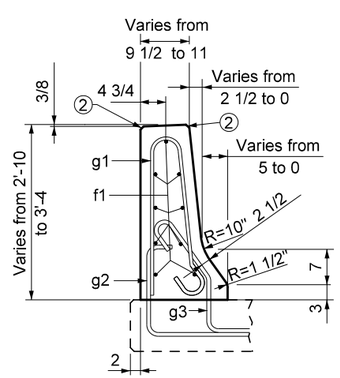
② Chamfer all exposed corners with a 3/4 inch dressed and beveled strip.

Joint Sealent shall be light gray nonsag latex caulking sealant marketed for outdoor use. No texting or certification is required. Cost of CF-1 joint, sealant and expansion joint material is incidental.

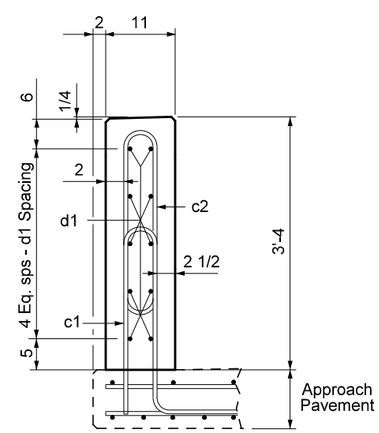
Concrete Quantities
9'-2 Section = 1.00 CY 4'-0 Transition = 0.50 CY
Total = 1.50 CY

Reinforcing Bar List
Northwest Corner

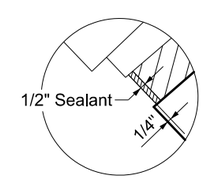
Bar	Size	No. of Bars	Length	Weight
c1	6	22	8'-7	284
c2	5	22	6'-9	155
d1	8	10	8'-8	231
g1	5	7	varies	45
g2	5	7	5'-2	38
g3	5	7	3'-8	27
f1	5	9	7'-0	66
			Total (lb)	846



Section A-A

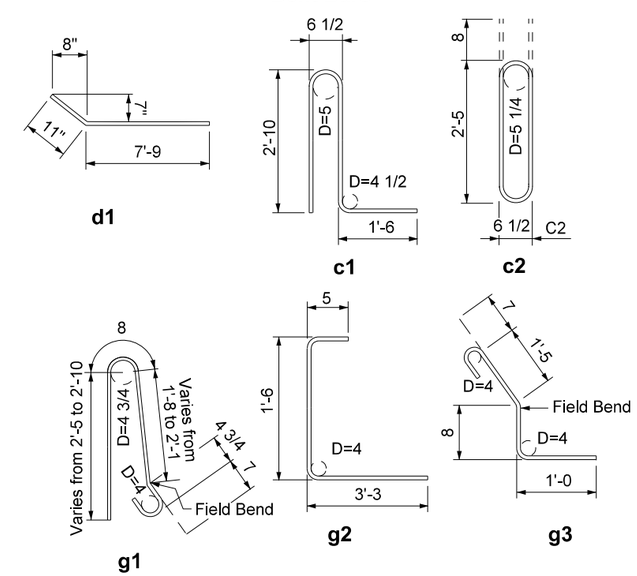


Section B-B

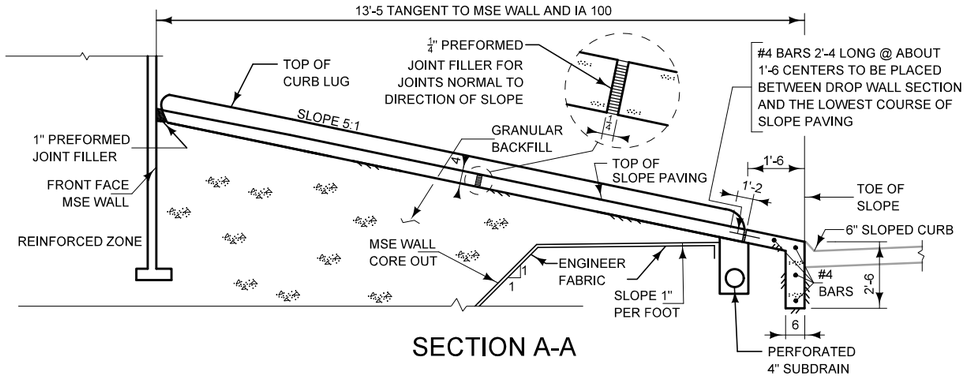


Detail C
Typical Sides and Top

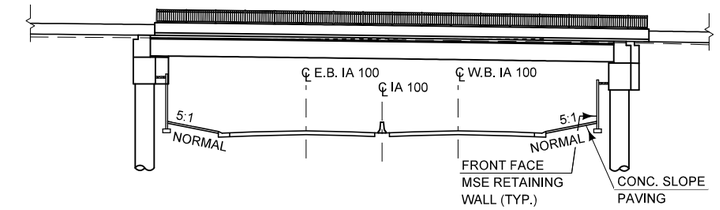
Bent Bars



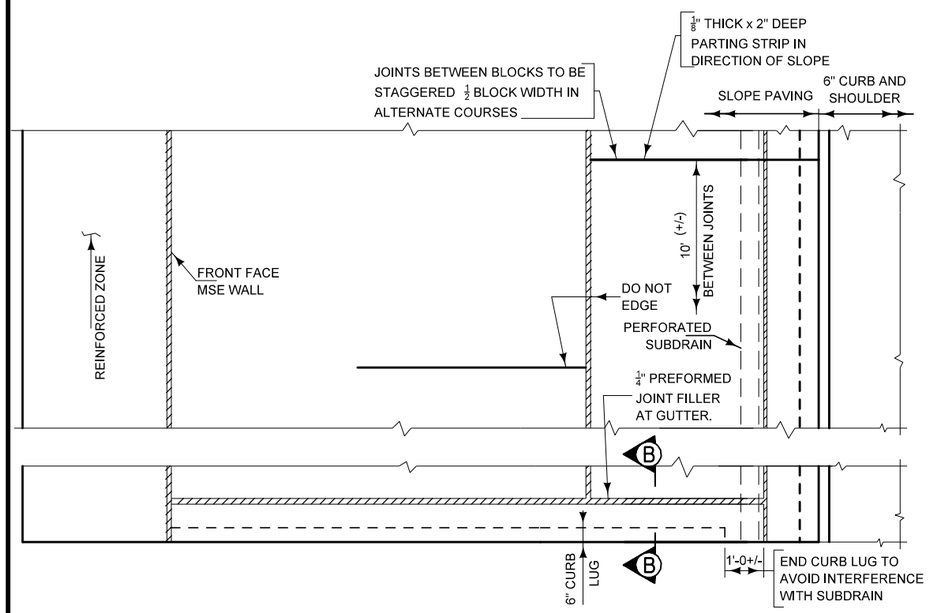
Concrete Barrier Rail Northwest Corner



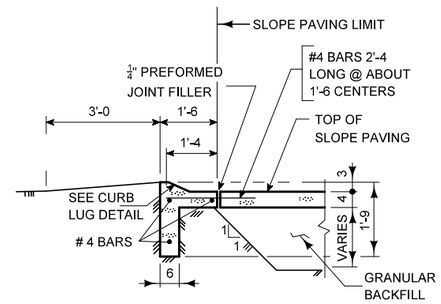
SECTION A-A



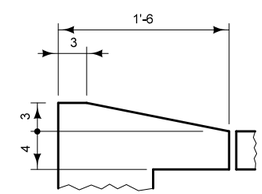
LONGITUDINAL SECTION ALONG ℄ CONSTRUCTION EDGEWOOD ROAD



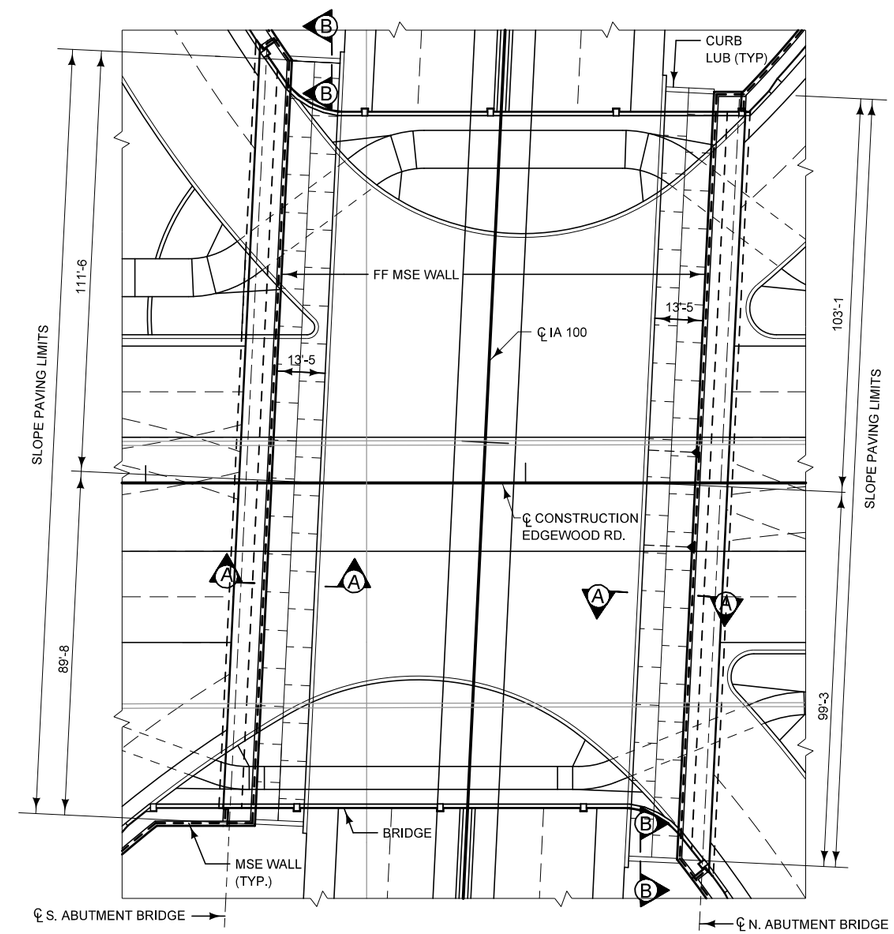
PART SLOPE PAVING PLAN



SECTION B-B



CURB LUG DETAIL



SLOPE PAVING PLAN LAYOUT

GENERAL NOTES:

THIS PLAN SHEET SHOWS DETAILS FOR PLACING PORTLAND CEMENT CONCRETE SLOPE PAVING UNDER THE EDGEWOOD RD. BRIDGE.

THE CURRENT SPECIFICATIONS OF THE IOWA DEPARTMENT OF TRANSPORTATION SHALL APPLY WITH MODIFICATIONS OR ADDITIONS LISTED BELOW:

FINISH - CLASS 1, FLOATED SURFACE FINISH.

CURE - CURE AS PER CURRENT SPECIFICATIONS.

GRANULAR SUBBASE - THIS PREWETTED MATERIAL SHALL BE DEPOSITED BY A METHOD APPROVED BY THE ENGINEER AND BE THOROUGHLY TAMPED OR VIBRATED TO INSURE COMPACTION. FINISHED SHAPE SHALL BE AS SHOWN IN SECTION A-A.

FORESLOPE PREPARATION - THE BRIDGE BERM FORESLOPE SHALL BE COMPACTED AND SHAPED AS SHOWN IN SECTION A-A ON THIS SHEET. THE BERM FORESLOPE SHALL BE FIRM WHEN THE ENGINEERING FABRIC AND GRANULAR SUBBASE ARE PLACED.

ENGINEERING FABRIC SHALL BE IN ACCORDANCE WITH ARTICLE 4196.01, B, 2, OF THE STANDARD SPECIFICATIONS.

IF THE ENGINEERING FABRIC IS LAPPED, THE LAPS SHALL BE A MINIMUM OF ONE FOOT IN LENGTH, SHINGLE FASHION WITH UP SLOPE LAP PIECE ON TOP AND STAPLED FOR CONTINUITY.

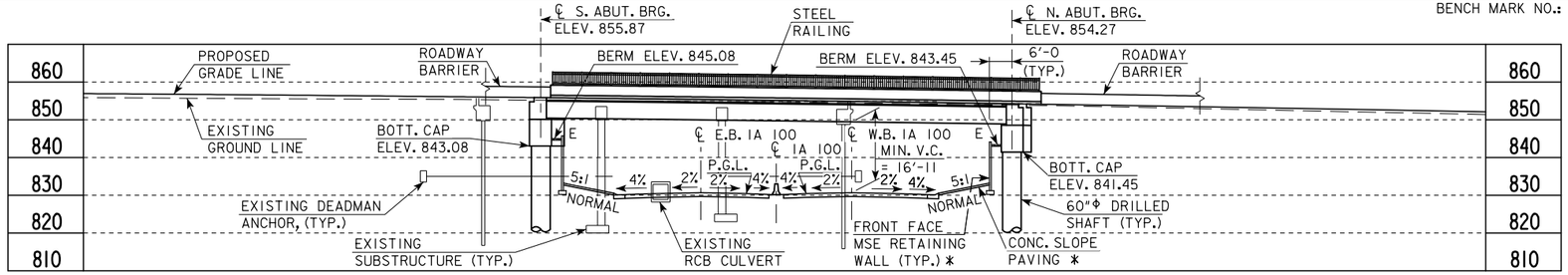
THE CAST IN PLACE CONCRETE IS TO BE POURED IN TWO APPROXIMATELY 7' WIDE COURSES, BUT BOTH COURSES ON ONE SLOPE SHOULD HAVE APPROXIMATELY EQUAL WIDTHS. ADJACENT COURSES SHALL NOT BE POURED WITHIN 15 HOURS OF ONE ANOTHER. THE JOINTS IN THE DIRECTION OF THE SLOPE ARE TO BE STAGGERED ABOUT ½ BLOCK WIDTH.

PAYMENT FOR "CONCRETE SLOPE PAVING WILL BE MADE ON A SQUARE YARD BASIS FOR SLOPE PAVING CONSTRUCTED. THE UNIT PRICE BID PER SQUARE YARD IS TO INCLUDE COSTS OF ALL MATERIALS AND LABOR REQUIRED TO CONSTRUCT THE SLOPE PROTECTION AS SHOWN ON THESE PLANS. THE DISPOSAL OF EXCESS SOIL FROM SHAPING OR TRENCHING, AS DIRECTED BY THE ENGINEER, SHALL BE CONSIDERED INCIDENTAL TO PLACING THE CONCRETE SLOPE PAVING. SHAPING SHOULD INCLUDE EXCAVATON FROM THE GRADING SURFACE SHOWN.

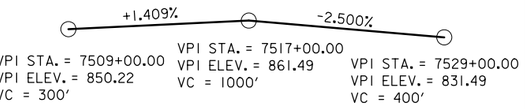
WHERE EROSION CONTROL WORK IS COMPLETED THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY PLANT MATERIALS DESTROYED ADJACENT TO SLOPE PROTECTION AREA. THE CONTRACTOR SHALL REPLANT, RESEED AND REMULCH ALL AREAS IN ACCORDANCE WITH SECTION 2601, OF THE STANDARD SPECIFICATIONS, AT THE CONTRACTOR'S EXPENSE.

CONCRETE SLOPE PAVING DETAILS
SHEET 1 OF 1

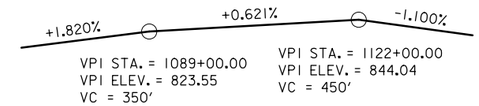
BENCH MARK NO.: #564, N.E. FLANGE BOLT HYD. @ S.W. COR. N. RIVER BLVD. N.E. & EDGEWOOD ROAD, IA 100 STA 1100+37.11, 973.11' RT., ELEV. 853.55, N.3477804, E.5409554



LONGITUDINAL SECTION ALONG ℄ EDGEWOOD ROAD

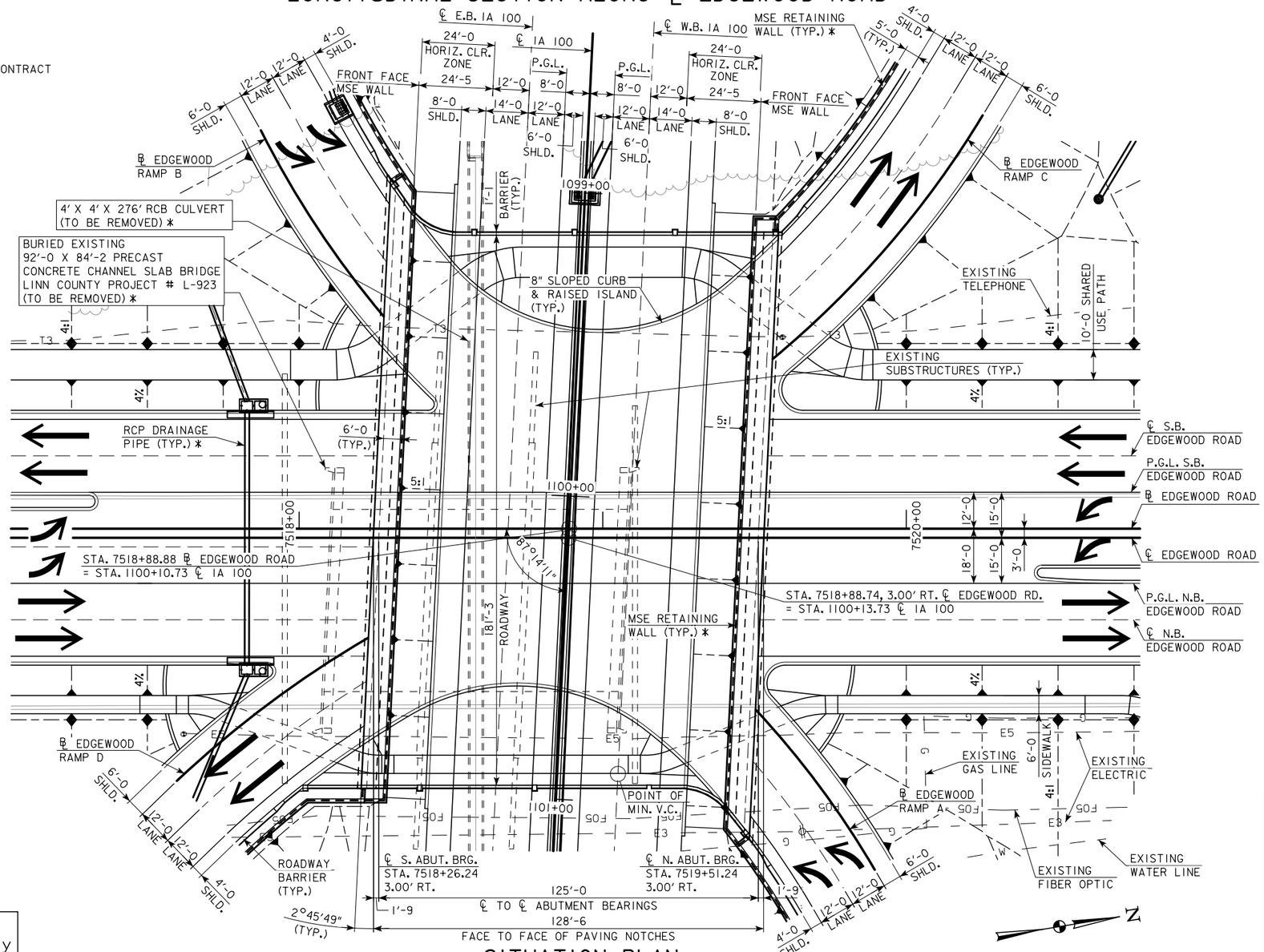


EDGEWOOD ROAD PROPOSED GRADE

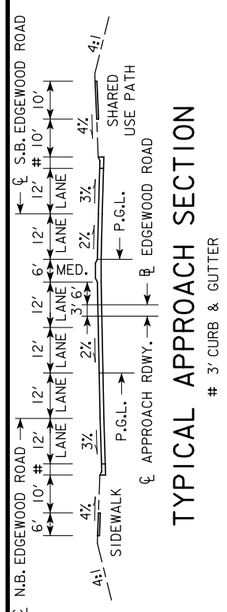


IA 100 PROPOSED GRADE

* NOT PART OF THIS CONTRACT



SITUATION PLAN



TYPICAL APPROACH SECTION

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 7519+05.00, 80.8' RT.
OVERHEAD ELEVATION = 853.39
DEPTH OF SUPERSTRUCTURE = 5'-3
UNDERPASS STATION = 1100+90.66, 20.0' LT.
UNDERPASS ELEVATION = 831.18
REQUIRED MIN. VERT. CLEARANCE = 16'-6
PROVIDED MIN. VERT. CLEARANCE = 16'-11

NOTES:
ALL UNITS ARE IN FEET UNLESS NOTED OTHERWISE.
SEE DESIGN SHEETS 28 AND 29 FOR BRIDGE CROSS SECTION.
SEE DESIGN SHEET 4 FOR OVERALL SITE PLAN.

UTILITIES LEGEND:

G - GAS - MIDAMERICAN ENERGY
E3 - ELECTRIC - ALLIANT ENERGY
E5 - ELECTRIC - ITC MIDWEST
F05 - FIBER OPTIC - MEDIACOM
T3 - TELEPHONE - CENTURYLINK
W - WATER - CITY OF CEDAR RAPIDS

LOCATION

EDGEWOOD ROAD OVER IA 100
T-83N R-7W
SECTION 6
MONROE TOWNSHIP
LINN COUNTY
CITY OF CEDAR RAPIDS
LAT: 42.028868°
LONG: -91.701972°
FHWA NO._____

DESIGN FOR 2°45'49" SKEW L.A.

125'-0 X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

125' SPAN

SITUATION PLAN

STA. 7518+88.74, 3.00' RIGHT — OCTOBER, 2013

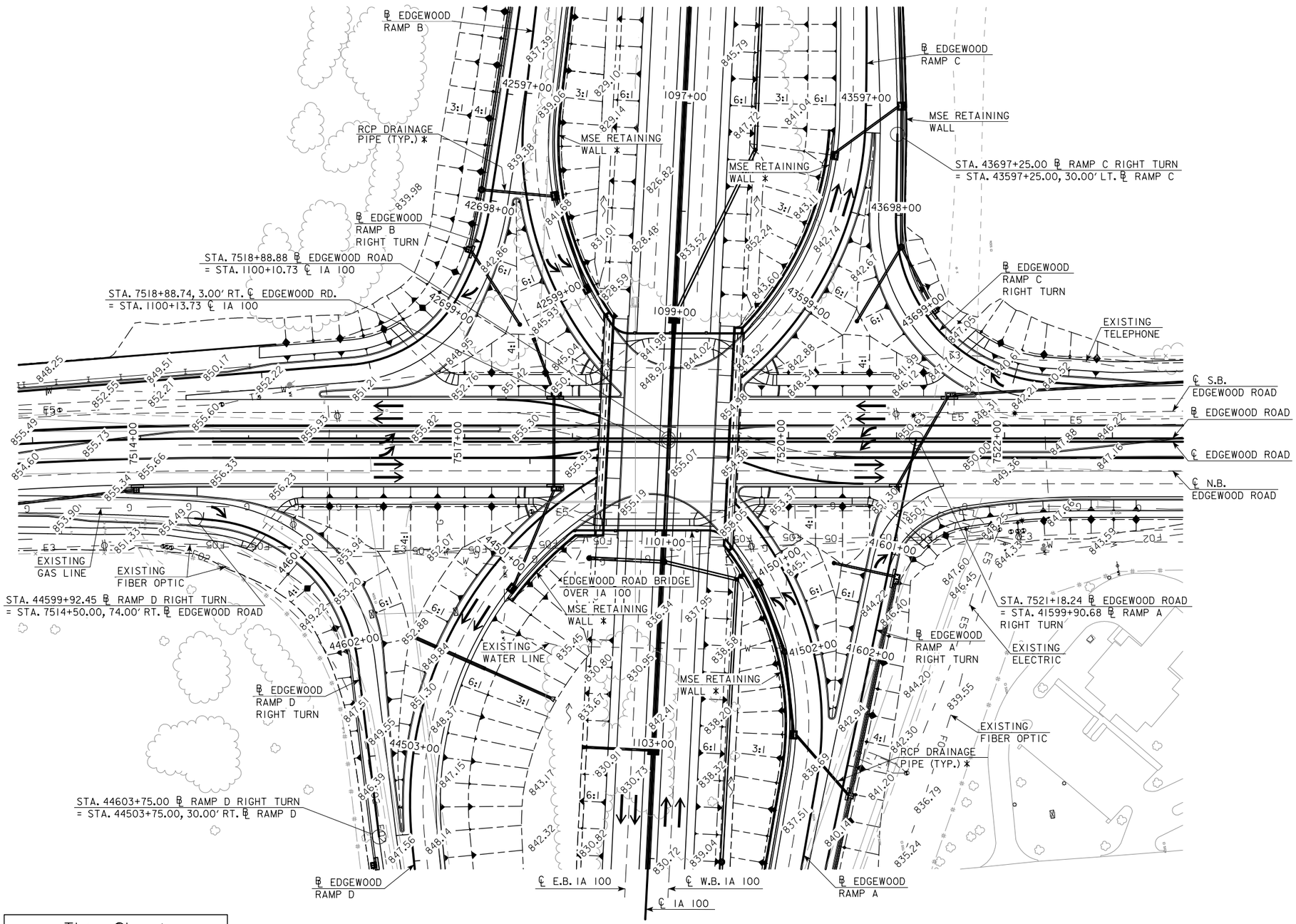
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 3 OF 53 FILE NO. 29912 DESIGN NO. 514

This Sheet For Information Only

BENCH MARK NO.: #564, N.E. FLANGE BOLT HYD. @ S.W. COR. N. RIVER BLVD. N.E. & EDGEWOOD ROAD, IA 100 STA 1100+37.11, 973.11' RT., ELEV. 853.55, N.3477804, E.5409554



UTILITIES LEGEND:

G - GAS - MIDAMERICAN ENERGY
E3 - ELECTRIC - ALLIANT ENERGY
E5 - ELECTRIC - ITC MIDWEST
FO2 - FIBER OPTIC - IOWA NETWORK SERVICES
FO5 - FIBER OPTIC - MEDIACOM
T3 - TELEPHONE - CENTURYLINK
W - WATER - CITY OF CEDAR RAPIDS

NOTES:
ALL UNITS ARE IN FEET UNLESS NOTED OTHERWISE.
SEE DESIGN SHEET 3 FOR DETAILED PLAN.

This Sheet For Information Only

* NOT PART OF THIS CONTRACT

SITE PLAN

DESIGN FOR 2°45'49" SKEW L.A.

125'-0 X VARIES PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

125' SPAN

SITUATION PLAN - SITE

STA. 7518+88.74, 3.00' RIGHT — OCTOBER, 2013

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 4 OF 53 FILE NO. 29912 DESIGN NO. 514

For Main Line Details
Refer to Sheet No. D.4

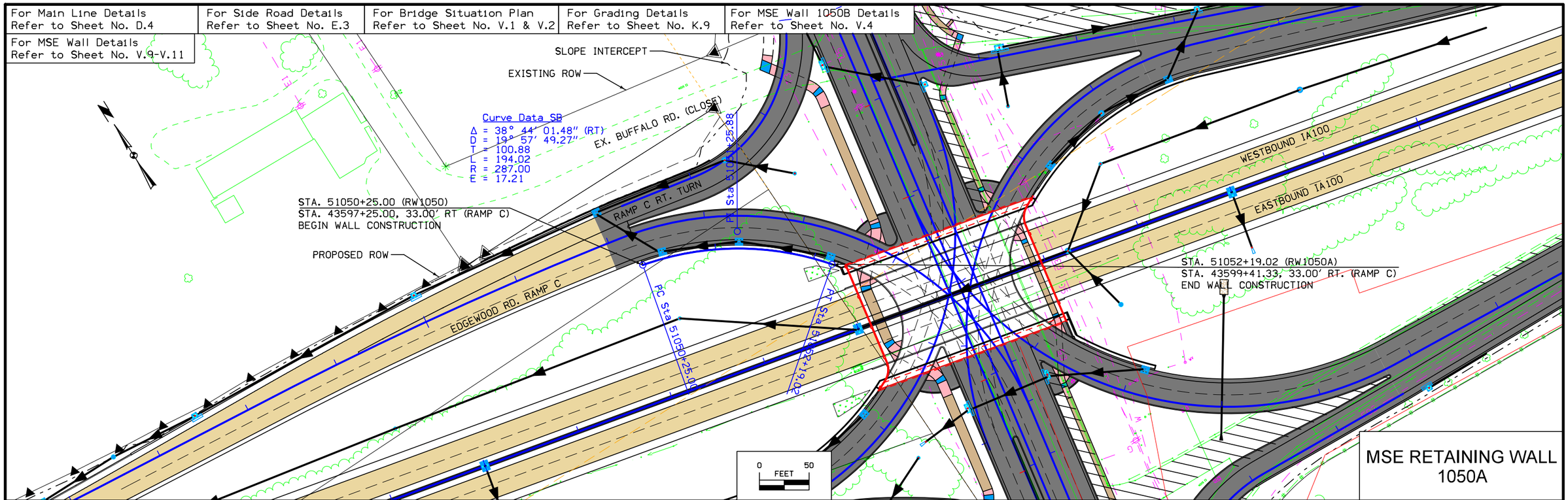
For Side Road Details
Refer to Sheet No. E.3

For Bridge Situation Plan
Refer to Sheet No. V.1 & V.2

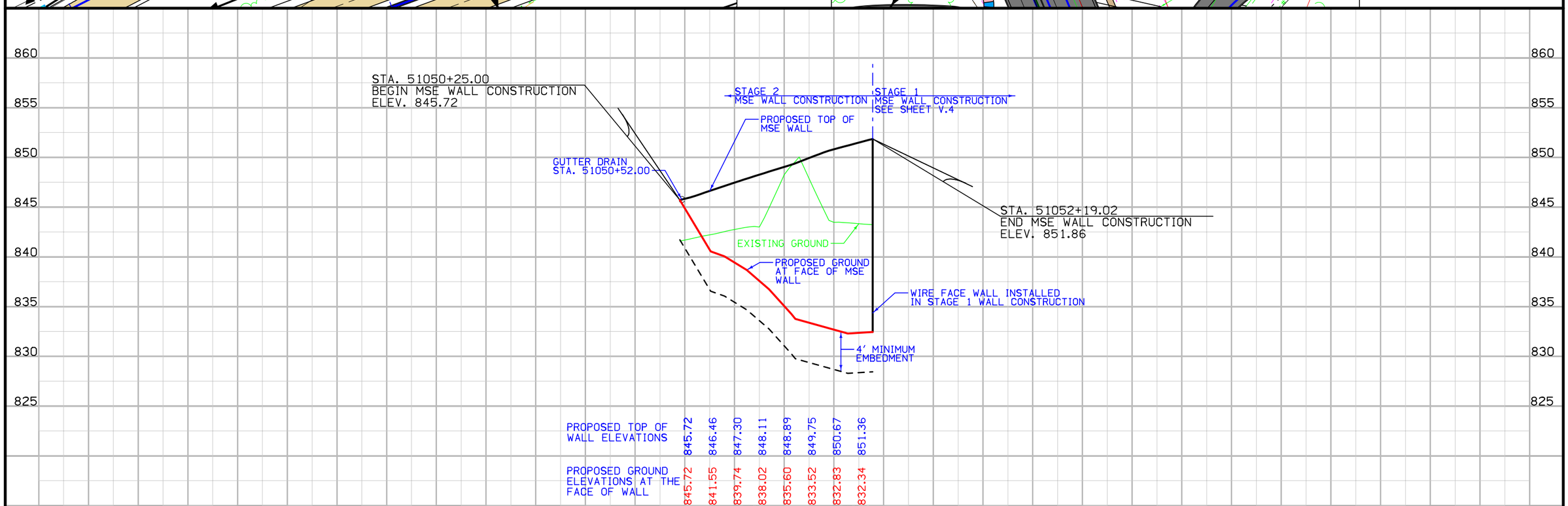
For Grading Details
Refer to Sheet No. K.9

For MSE Wall 1050B Details
Refer to Sheet No. V.4

For MSE Wall Details
Refer to Sheet No. V.9-V.11



MSE RETAINING WALL
1050A



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER V.3

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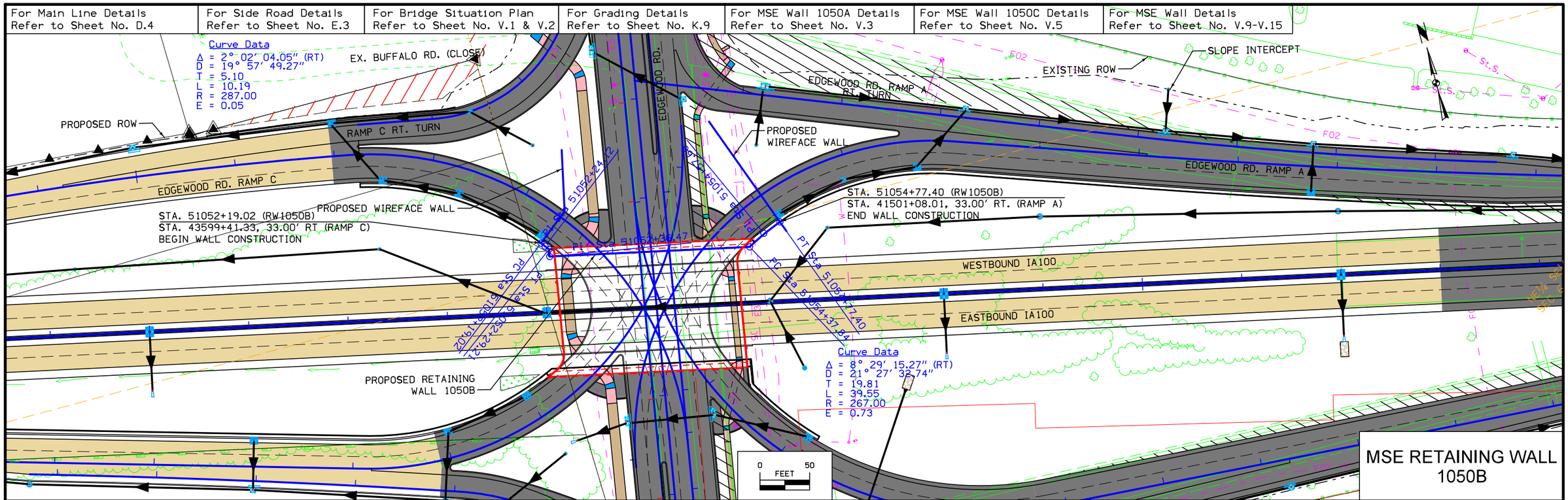
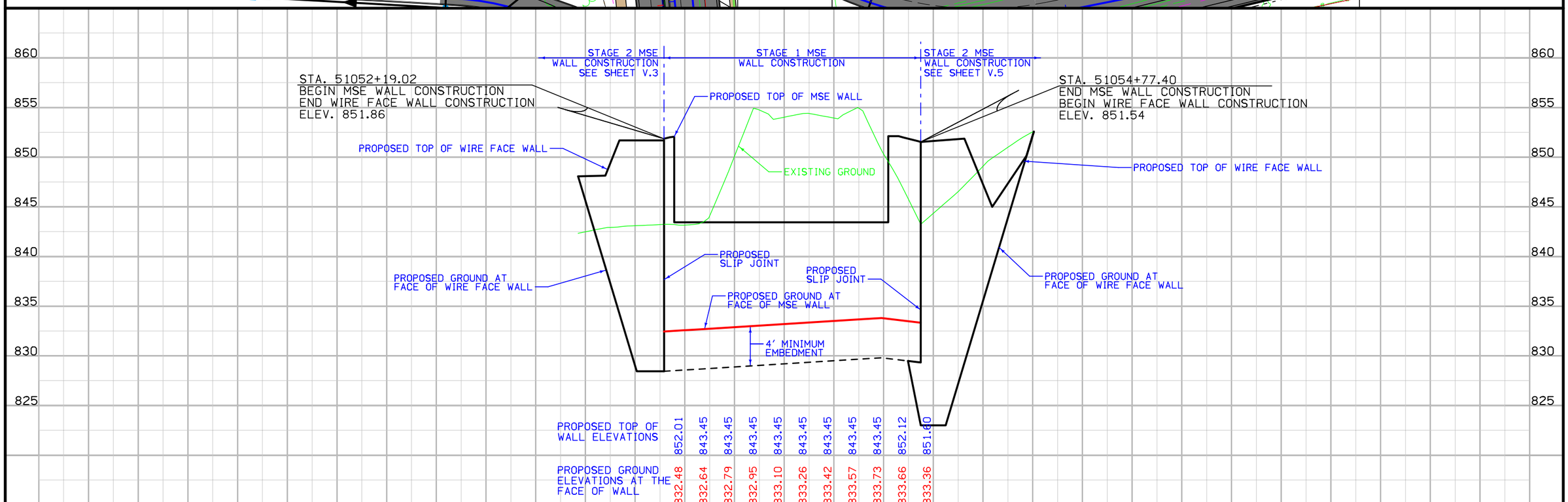
For Main Line Details Refer to Sheet No. D.4	For Side Road Details Refer to Sheet No. E.3	For Bridge Situation Plan Refer to Sheet No. V.1 & V.2	For Grading Details Refer to Sheet No. K.9	For MSE Wall 1050A Details Refer to Sheet No. V.3	For MSE Wall 1050C Details Refer to Sheet No. V.5	For MSE Wall Details Refer to Sheet No. V.9-V.15





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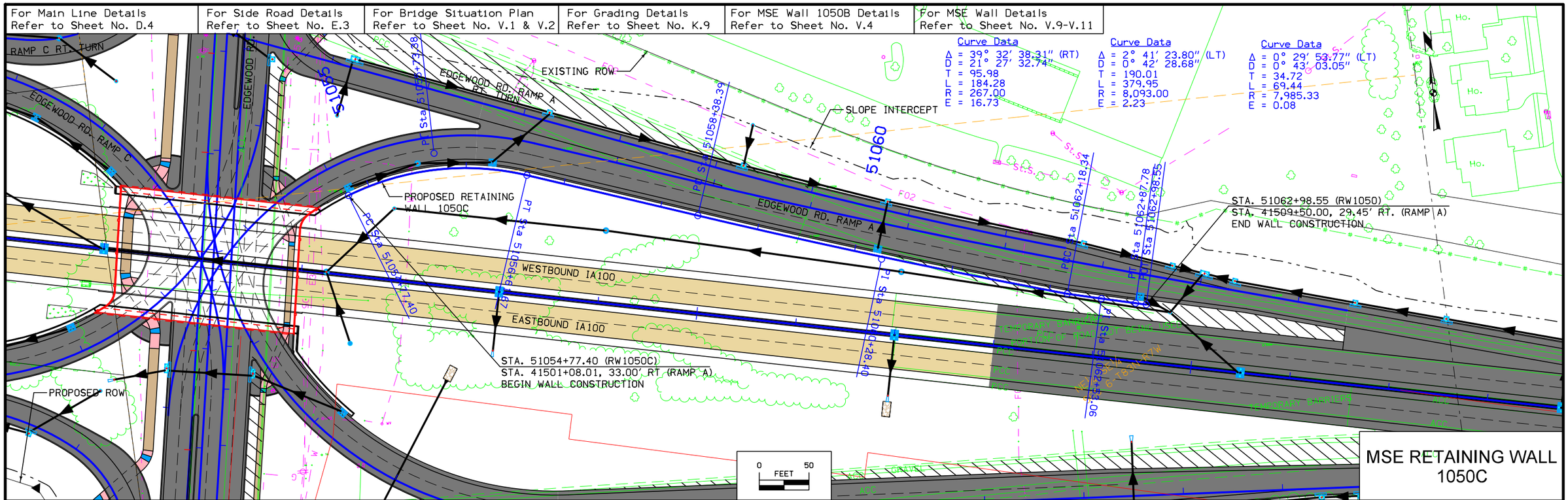
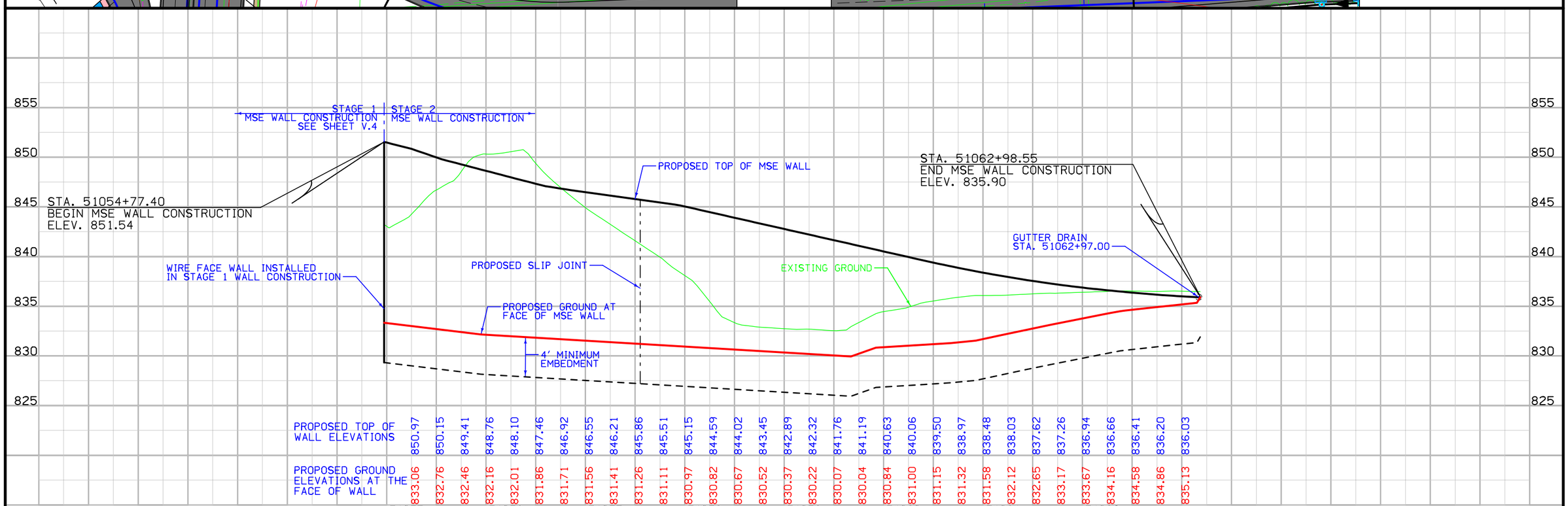
For Main Line Details Refer to Sheet No. D.4	For Side Road Details Refer to Sheet No. E.3	For Bridge Situation Plan Refer to Sheet No. V.1 & V.2	For Grading Details Refer to Sheet No. K.9	For MSE Wall 1050B Details Refer to Sheet No. V.4	For MSE Wall Details Refer to Sheet No. V.9-V.11

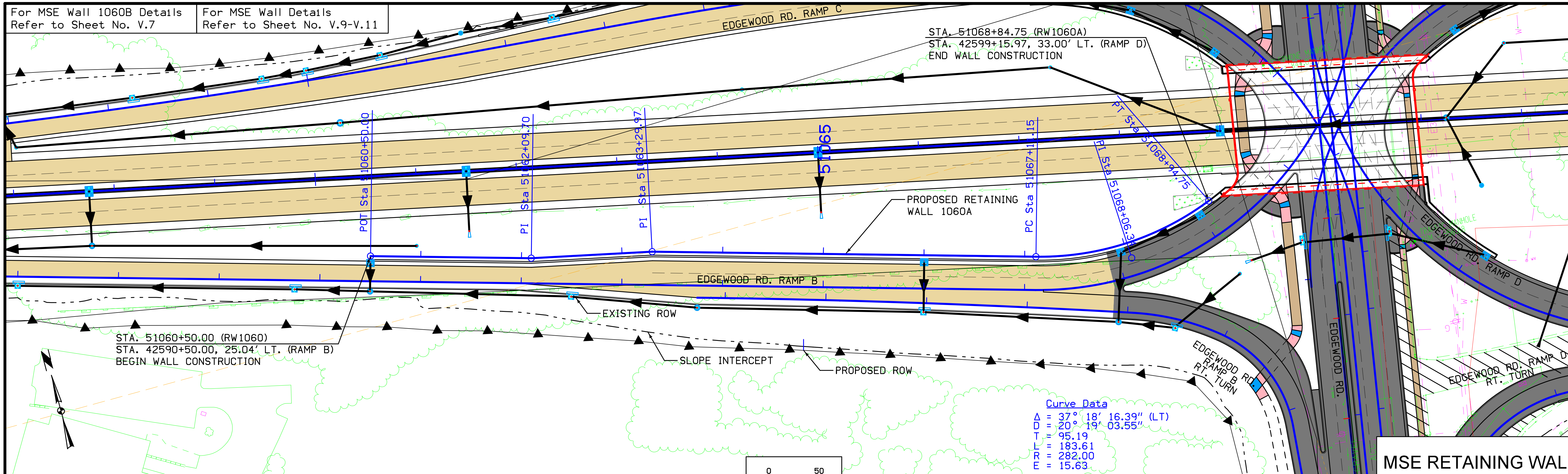




C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER V.5

For MSE Wall 1060B Details
Refer to Sheet No. V.7

For MSE Wall Details
Refer to Sheet No. V.9-V.11



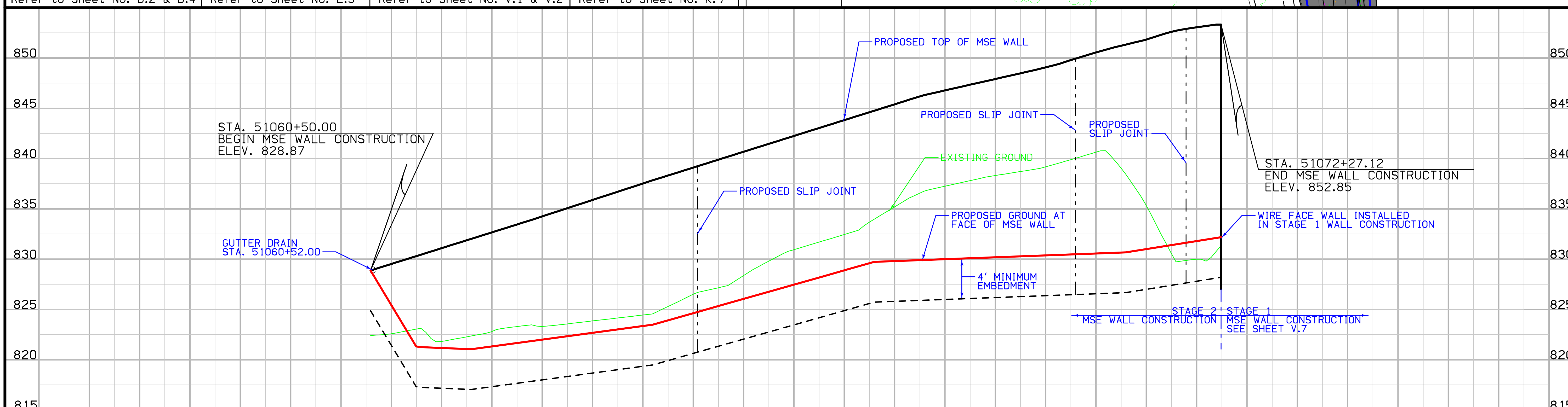
MSE RETAINING WALL 1060A

For Main Line Details
Refer to Sheet No. D.2 & D.4

For Side Road Details
Refer to Sheet No. E.3

For Bridge Situation Plan
Refer to Sheet No. V.1 & V.2

For Grading Details
Refer to Sheet No. K.9



PROPOSED TOP OF WALL ELEVATIONS	PROPOSED GROUND ELEVATIONS AT THE FACE OF WALL
828.87	828.87
829.66	824.71
830.45	821.26
831.23	821.15
832.02	821.04
832.81	821.38
833.59	821.72
834.40	822.06
835.22	822.40
836.03	822.74
836.85	823.08
837.67	823.42
838.46	824.05
839.25	824.76
840.03	825.47
840.82	826.18
841.60	826.89
842.39	827.60
843.18	828.31
843.96	829.02
844.75	829.72
845.54	829.83
846.31	829.92
846.88	830.02
847.45	830.11
848.01	830.21
848.58	830.30
849.18	830.39
849.93	830.49
850.68	830.58
851.33	830.68
851.97	831.08
852.72	831.48
853.12	831.88

51061 51062 51063 51064 51065 51066 51067 51068

For MSE Wall 1060A Details
Refer to Sheet No. V.6

EDGEWOOD RD. RAMP C

Curve Data
Δ = 4° 18' 21.00" (LT)
D = 20° 19' 03.55"
T = 10.60
L = 21.19
R = 282.00
E = 0.29

PROPOSED RETAINING WALL 1060B

WESTBOUND IA100

EASTBOUND IA100

STA. 51068+94.75 (RW1060B)
STA. 42599+15.97, 33.00' LT. (RAMP B)
BEGIN WALL CONSTRUCTION

STA. 51072+27.12 (RW1060B)
STA. 44501+25.00, 33.00' LT. (RAMP D)
END WALL CONSTRUCTION

Curve Data
Δ = 15° 20' 21.12" (LT)
D = 18° 04' 27.76"
T = 42.69
L = 84.87
R = 317.00
E = 2.86

EDGEWOOD RD. RAMP B

EDGEWOOD RD. RAMP D

EDGEWOOD RD. RAMP D RT. TURN

EDGEWOOD RD. RAMP B RT. TURN

EDGEWOOD RD.

PROPOSED ROW

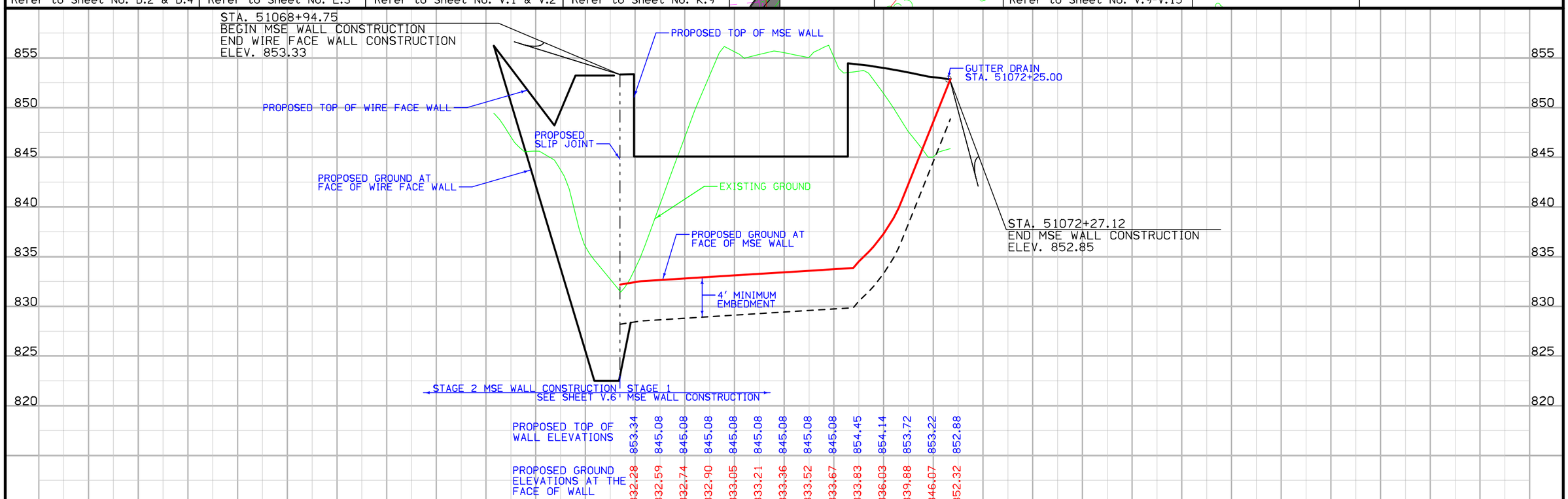
SLOPE INTERCEPT

EXISTING ROW

0 FEET 50

MSE RETAINING WALL
1060B

For Main Line Details Refer to Sheet No. D.2 & D.4	For Side Road Details Refer to Sheet No. E.3	For Bridge Situation Plan Refer to Sheet No. V.1 & V.2	For Grading Details Refer to Sheet No. K.9	For MSE Wall Details Refer to Sheet No. V.9-V.15



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER V.7

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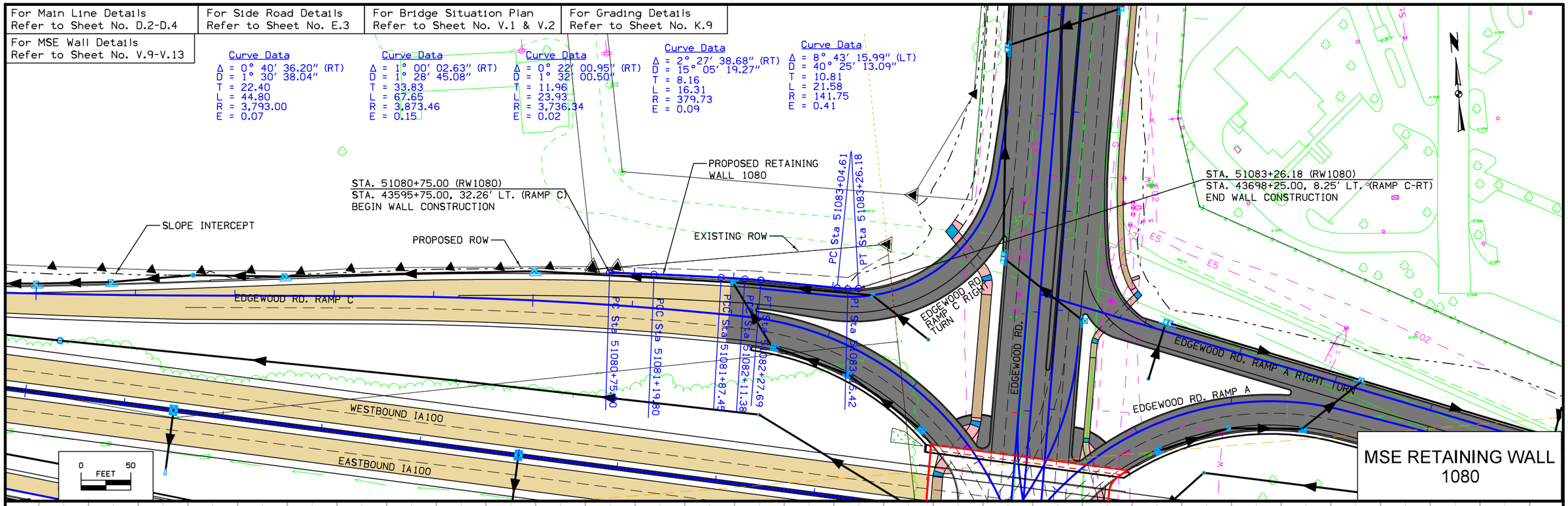
For Main Line Details
Refer to Sheet No. D.2-D.4

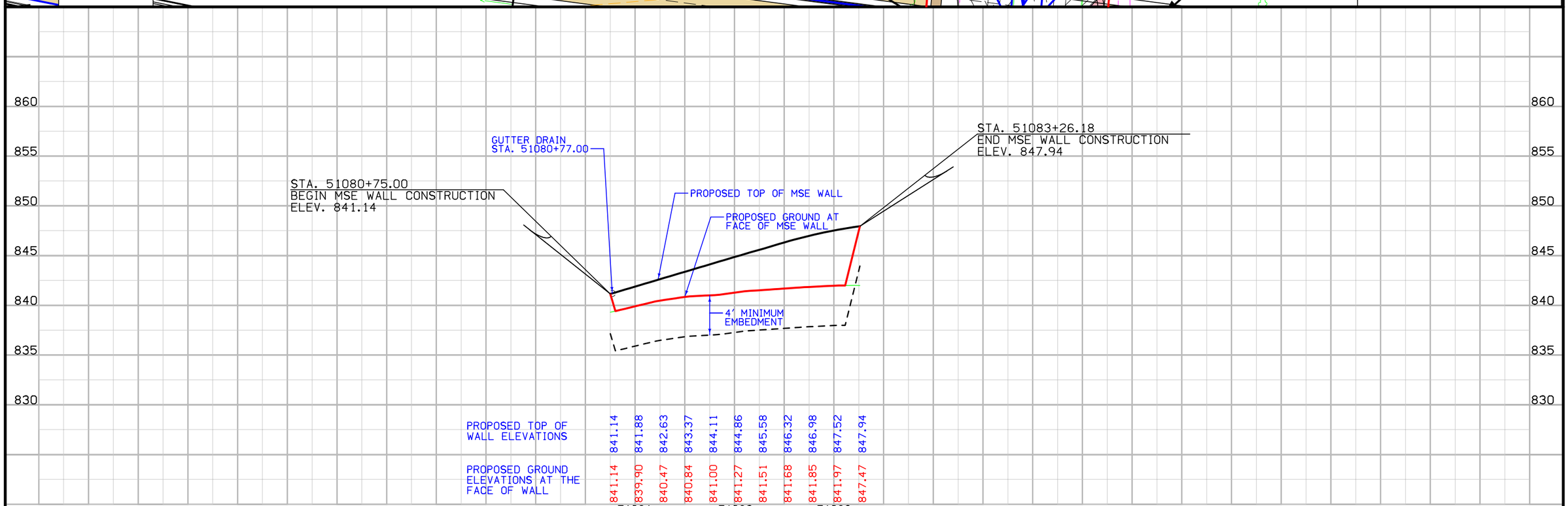
For Side Road Details
Refer to Sheet No. E.3

For Bridge Situation Plan
Refer to Sheet No. V.1 & V.2

For Grading Details
Refer to Sheet No. K.9

For MSE Wall Details
Refer to Sheet No. V.9-V.13





C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER V.8

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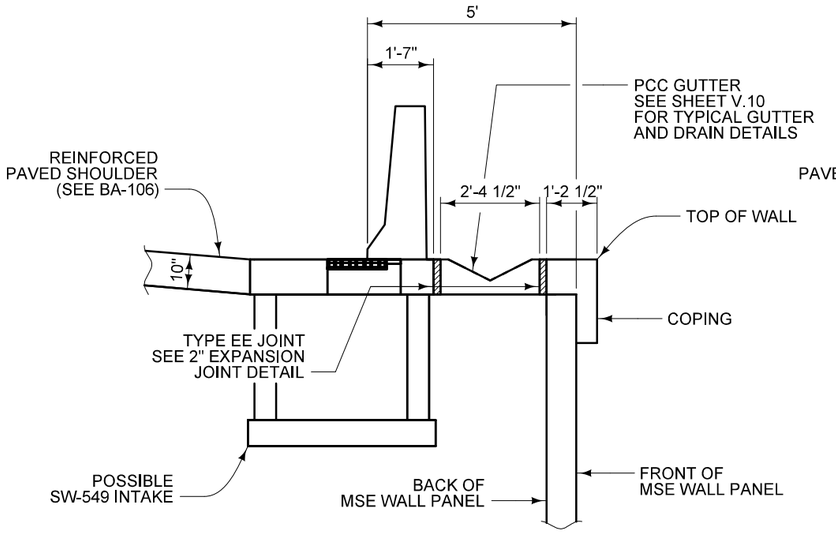
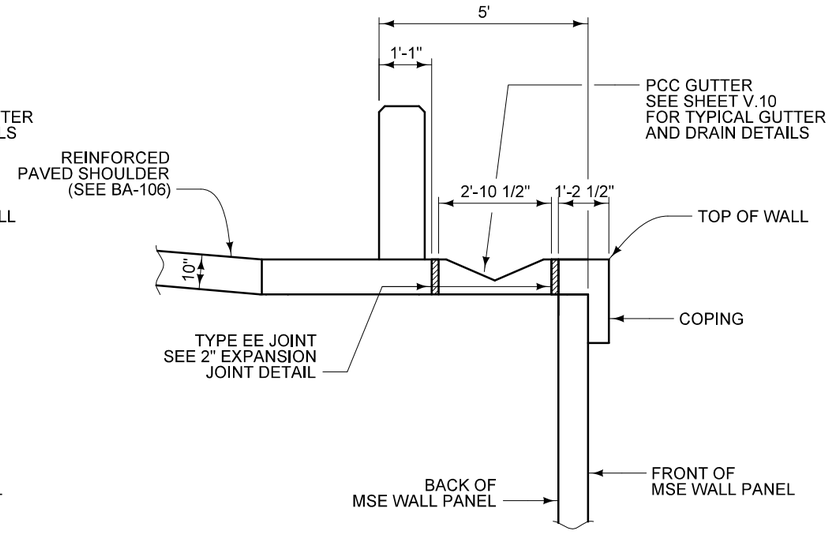
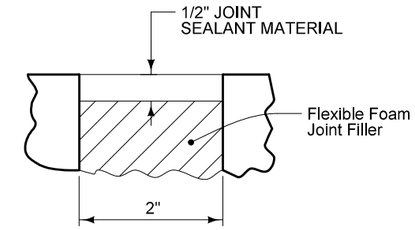


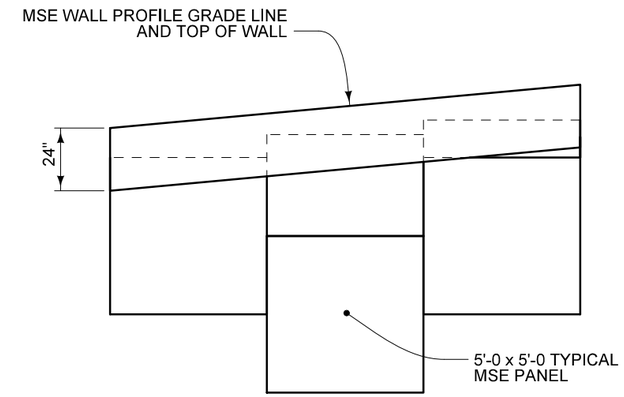
MSE RETAINING WALL
SECTION DETAIL WITH
STANDARD BARRIER



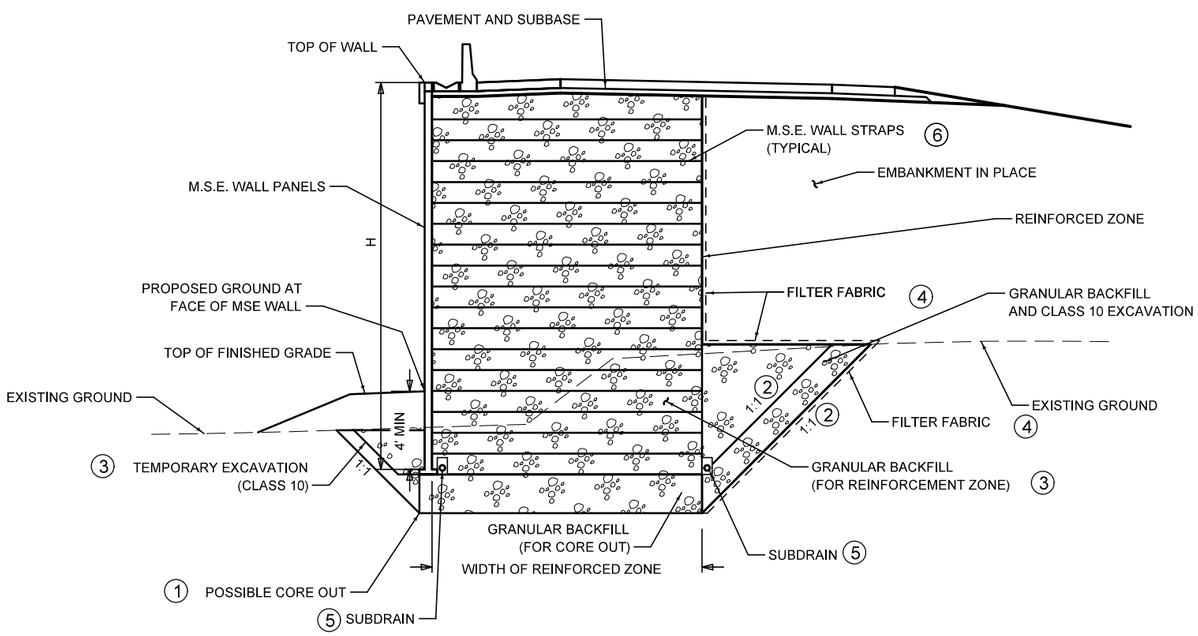
MSE RETAINING WALL
SECTION DETAIL WITH MODIFIED
BARRIER NEAR BRIDGE



2" EXPANSION
JOINT DETAIL



MSE WALL COPING ELEVATION DETAIL



TYPICAL MSE WALL CROSS-SECTION

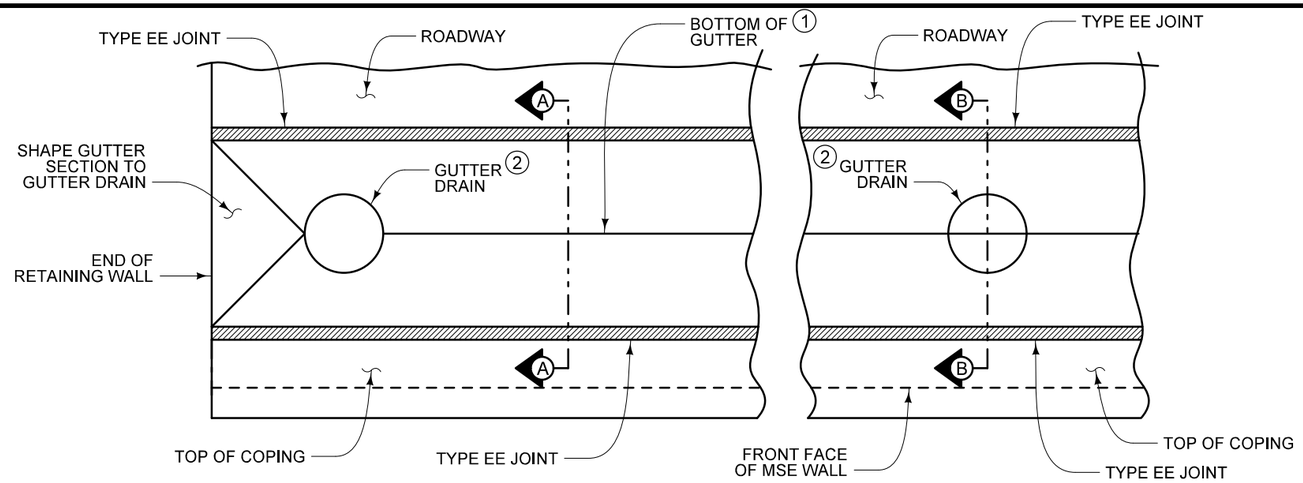
1. REFER TO Q SHEETS AND CROSS-SECTIONS FOR POSSIBLE CORE OUT LOCATIONS.
2. REFER TO CROSS-SECTIONS AND Q SHEETS FOR VARIATIONS TO 1:1 TEMPORARY EXCAVATION SLOPES.
3. BACKFILL POSSIBLE CORE OUT LOCATIONS AND TEMPORARY EXCAVATION LIMITS WITH GRANULAR MATERIAL. AT A MINIMUM BACKFILL TO APPROXIMATELY EXISTING GRADE AND COMPACT PER STANDARD SPECIFICATION 2432.03.G.
4. FILTER FABRIC PLACED AT ALL INTERFACES BETWEEN GRANULAR BACKFILL AND CLASS 10 EMBANKMENT OR EXISTING SOIL.
5. FOR SUBDRAIN REFER TO STANDARD SPECIFICATION 2432.03.F
6. MSE WALL SUPPLIER TO COORDINATE WITH BRIDGE CONTRACTOR FOR STRAPPING DETAILS AT BRIDGE ABUTMENTS AND DRILLED SHAFTS.

WALL	STATION TO STATION		MINIMUM WIDTH OF REINFORCEMENT ZONE		
1050A	51051+25.88	51022+19.02	0.8*H	OR	10'
1050B	51052+19.02	51054+77.40	0.8*H	OR	10'
1050C	51054+77.40	51062+98.55	0.8*H	OR	10'
1060A	51060+50.00	51068+94.75	0.8*H	OR	10'
1060B	51068+94.75	51071+25.00	0.8*H	OR	10'
1060B	51071+25.00	51072+27.12	1.1*H	OR	10'
1080	43595+75.00	43595+09.35	0.8*H	OR	10'

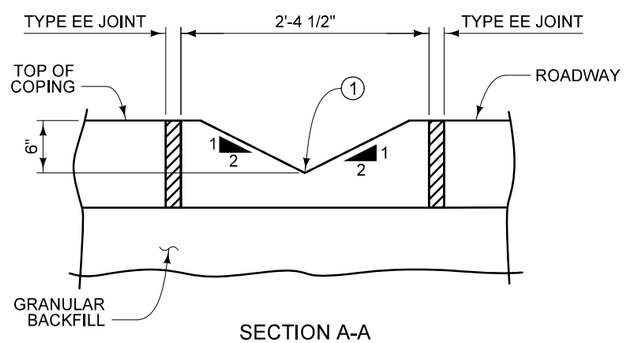
"H" IS TOTAL WALL HEIGHT FROM TOP OF WALL TO LEVELING PAD
USE THE LARGER OF THE TWO VALUES FOR MINIMUM WIDTH OF REINFORCEMENT ZONE

DRAWINGS NOT TO SCALE

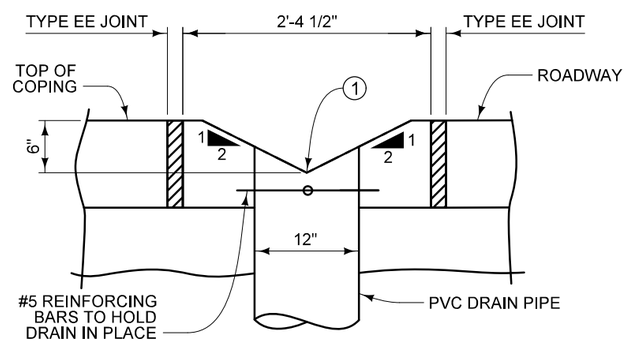
MSE RETAINING WALL
TYPICAL DETAILS



PLAN VIEW

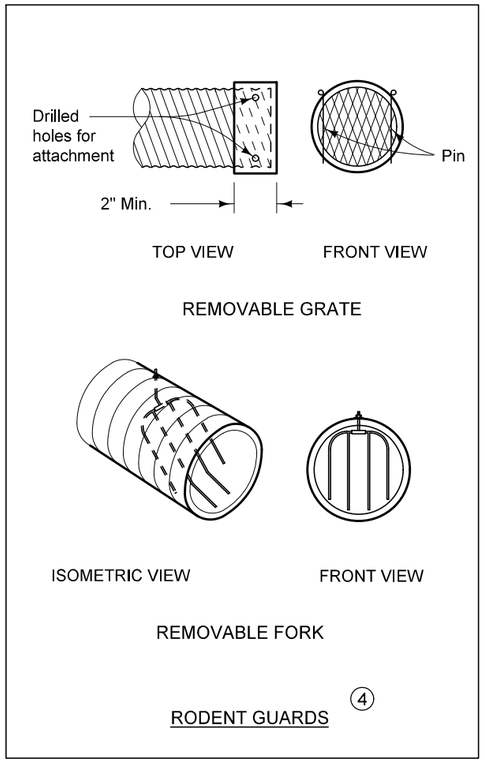


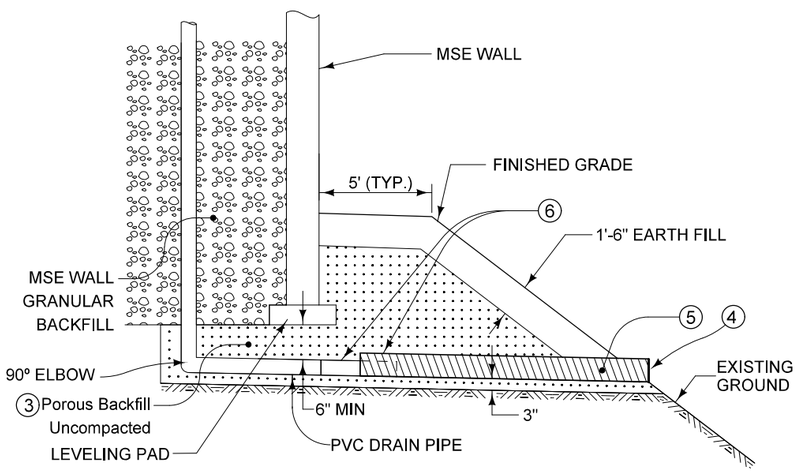
SECTION A-A
(BARRIER NOT SHOWN FOR CLARITY)



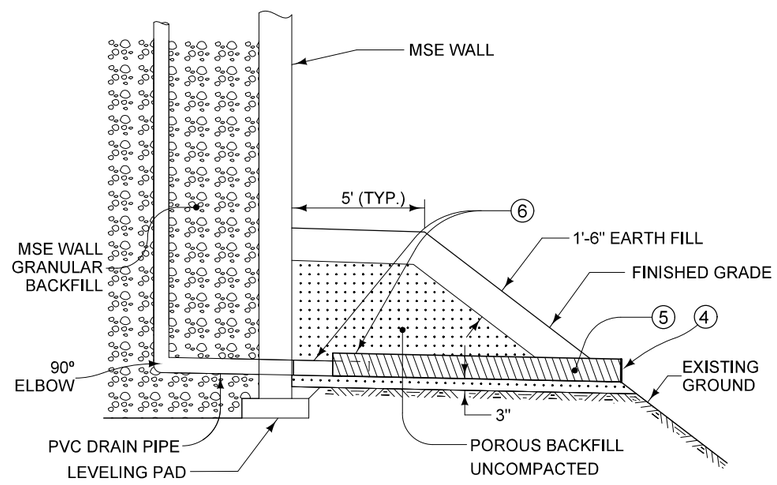
SECTION B-B
(BARRIER NOT SHOWN FOR CLARITY)

TYPICAL GUTTER AND DRAIN DETAILS





GUTTER DRAIN OUTLET
UNDER WALL TYPICAL SECTION

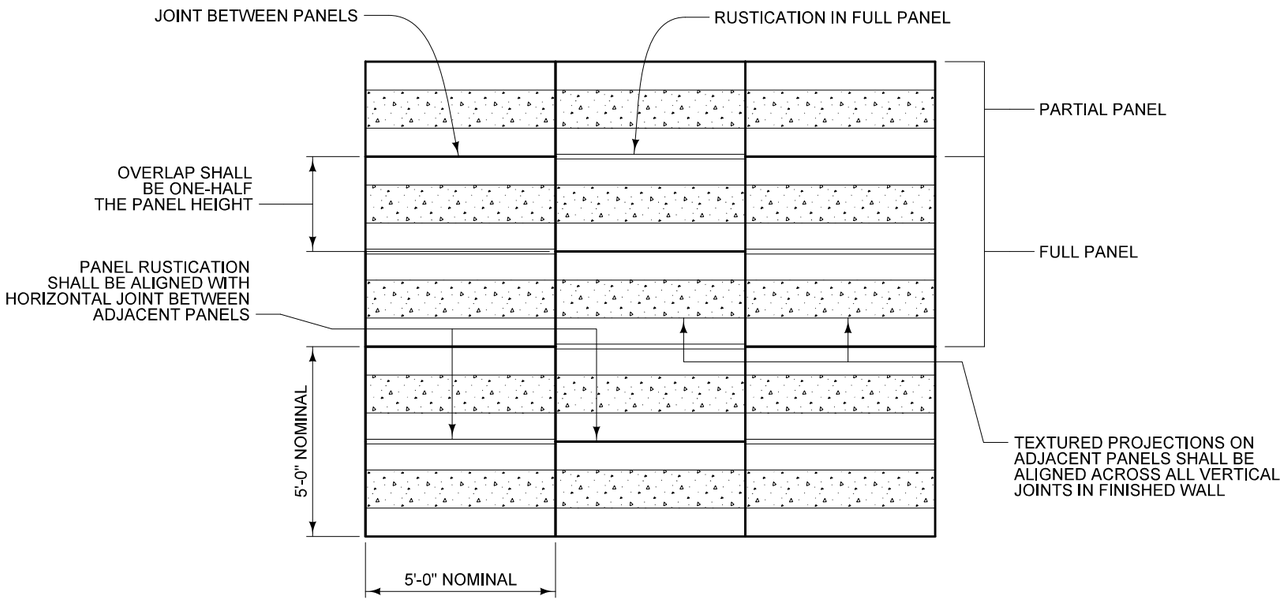


GUTTER DRAIN OUTLET
THROUGH WALL TYPICAL SECTION

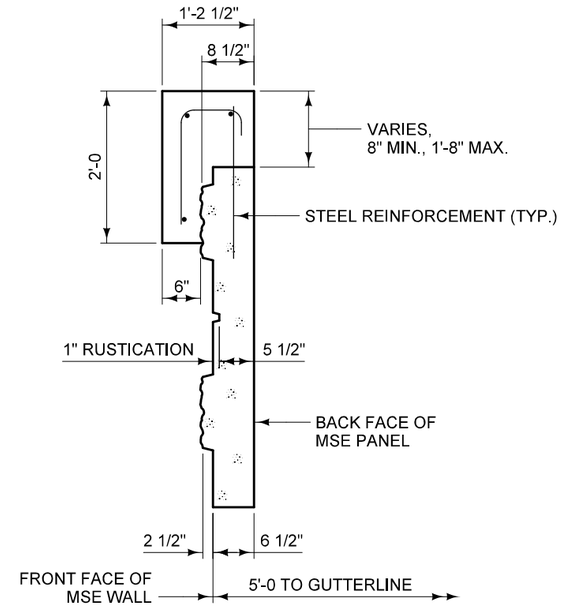
1. BOTTOM OF GUTTER WILL TYPICALLY BE 6" LOWER THAN TOP OF WALL PROFILE. ADJUST GUTTER PROFILE TO MATCH GUTTER DRAIN LOCATIONS.
2. SEE RETAINING WALL PLAN AND PROFILE SHEETS FOR POSSIBLE GUTTER DRAIN LOCATIONS. LOCATIONS MAY BE ADJUSTED BY THE MSE SUPPLIER TO ACCOMMODATE OTHER WALL DESIGN DETAILS.
3. IF A COREOUT IS PRESENT, UNCOMPACTED POROUS BACKFILL IS NOT REQUIRED BEHIND AND BENEATH THE RETAINING WALL. REFER TO Q SHEETS AND CROSS-SECTIONS FOR COREOUT LOCATIONS.
4. INSTALL A REMOVABLE GRATE RODENT GUARD. SEE MATERIALS I.M. 443.01.
5. CORRUGATED METAL PIPE OUTLET 2" LARGER THAN EXISTING SUBDRAIN PIPE, OR CORRUGATED DOUBLE-WALLED PE OR PVC PIPE OF THE SAME DIAMETER AS THE EXISTING SUBDRAIN PIPE.
6. IF CORRUGATED METAL PIPE IS USED, THE PIPES SHOULD BE COUPLED IN ONE OF THE FOLLOWING WAYS: (1) USE AN INSIDE FILE REDUCER COUPLER (COUPLER MUST BE INSERTED A MINIMUM OF 12" INTO CMP): OR (2) INSERT 12" OF THE 4" SUBDRAIN INTO THE 6" METAL OUTLET PIPE, THEN FULLY SEAL THE ENTIRE OPENING WITH GROUT.

DRAWINGS NOT TO SCALE

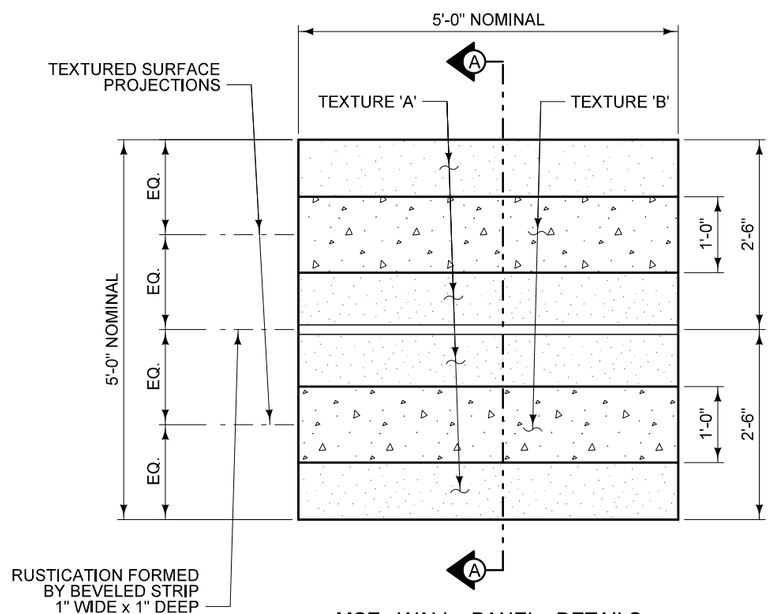
MSE RETAINING WALL GUTTER DRAIN AND OUTLET DETAILS



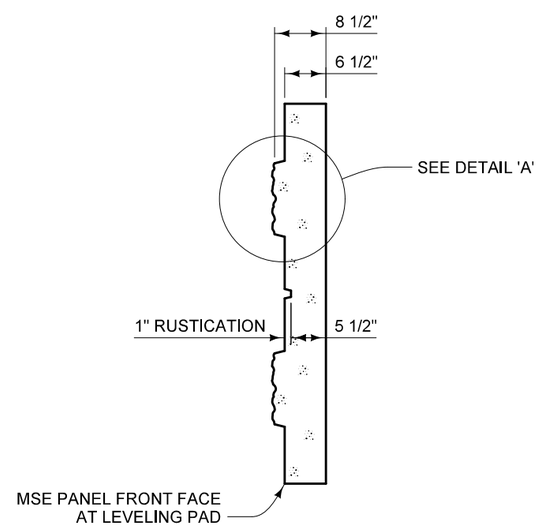
PARTIAL MSE WALL ELEVATION
AND LAPPING DETAIL



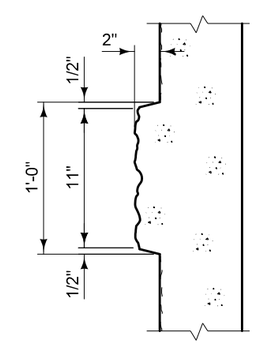
MSE WALL
COPING CONCEPT



MSE WALL PANEL DETAILS
TYPICAL FULL 5'x5' PANEL SHOWN. FOR PARTIAL PANELS, MATCH THE 2" TEXTURED PROJECTIONS ON ADJACENT PANELS SO THAT THESE FEATURES APPEAR CONTINUOUS ACROSS ALL VERTICAL JOINTS IN FINISHED WALL.



SECTION A-A



DETAIL 'A'

DRAWINGS NOT TO SCALE

MSE RETAINING WALLS
DETAILS

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER V.11

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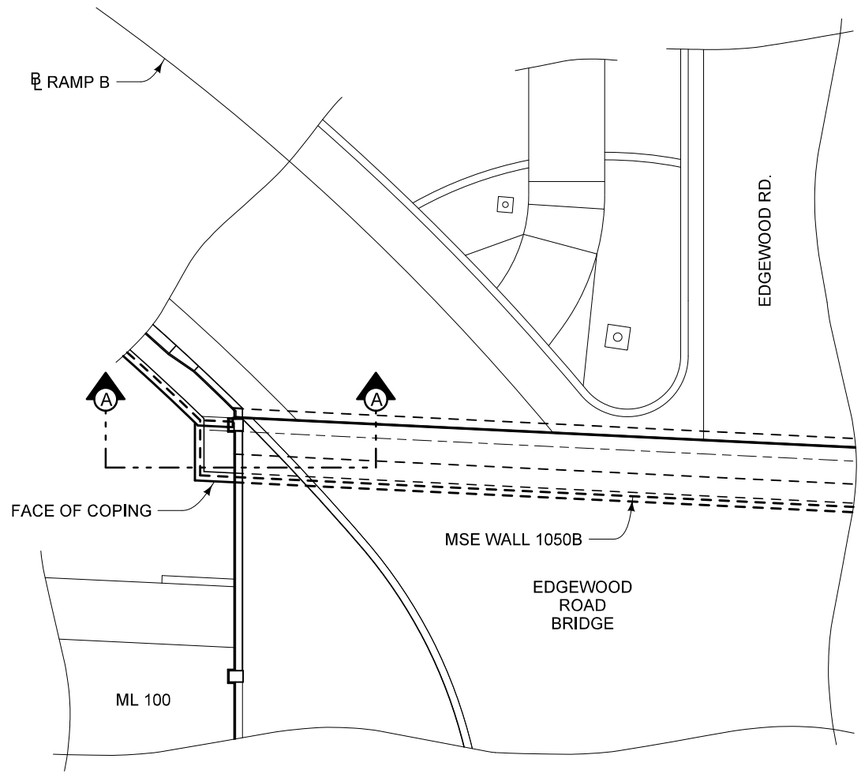
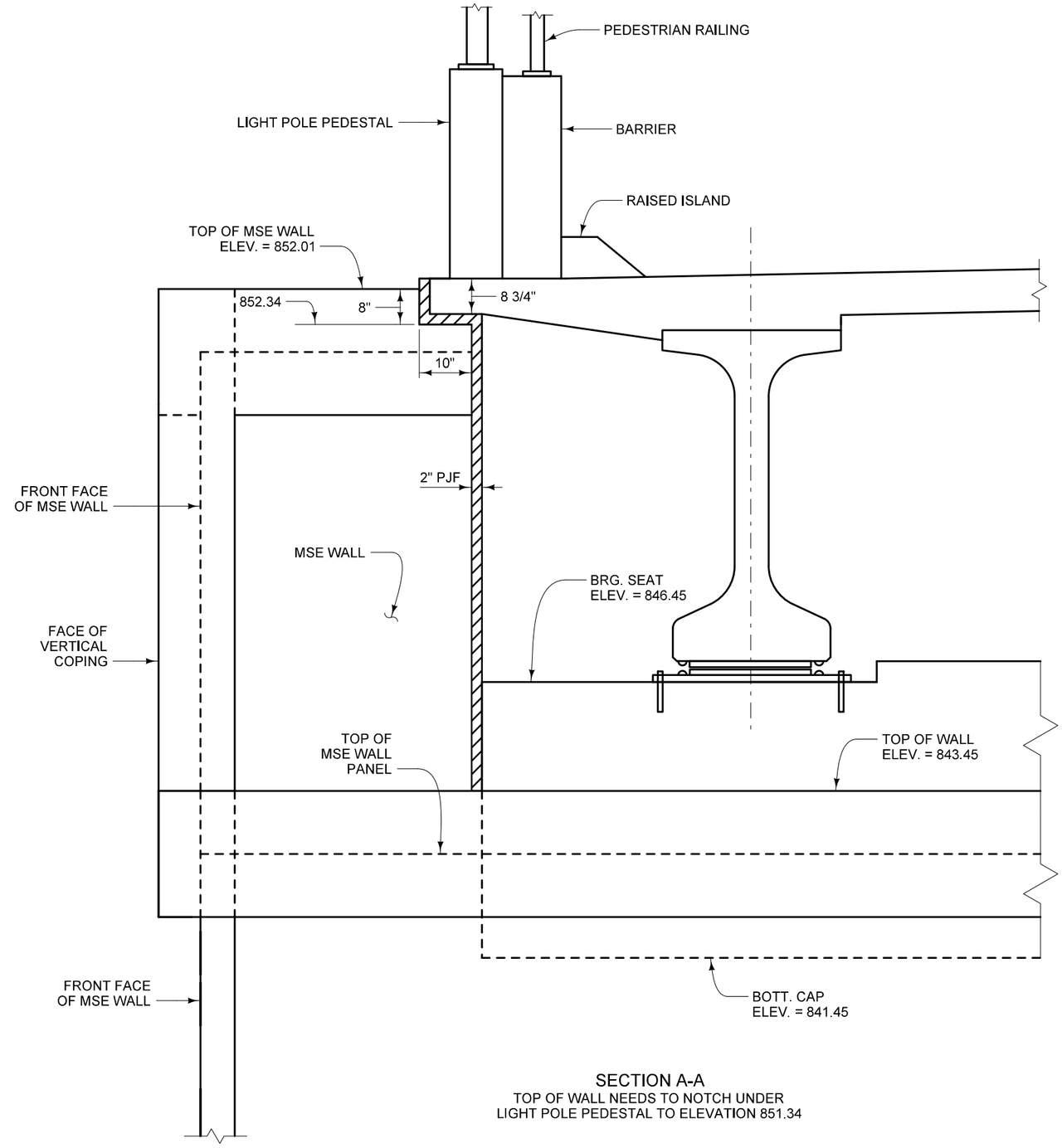


PLAN VIEW MSE WALL 1050B
AT NORTHWEST CORNER OF BRIDGE



SECTION A-A
TOP OF WALL NEEDS TO NOTCH UNDER
LIGHT POLE PEDESTAL TO ELEVATION 851.34

MSE RETAINING WALLS
DETAILS

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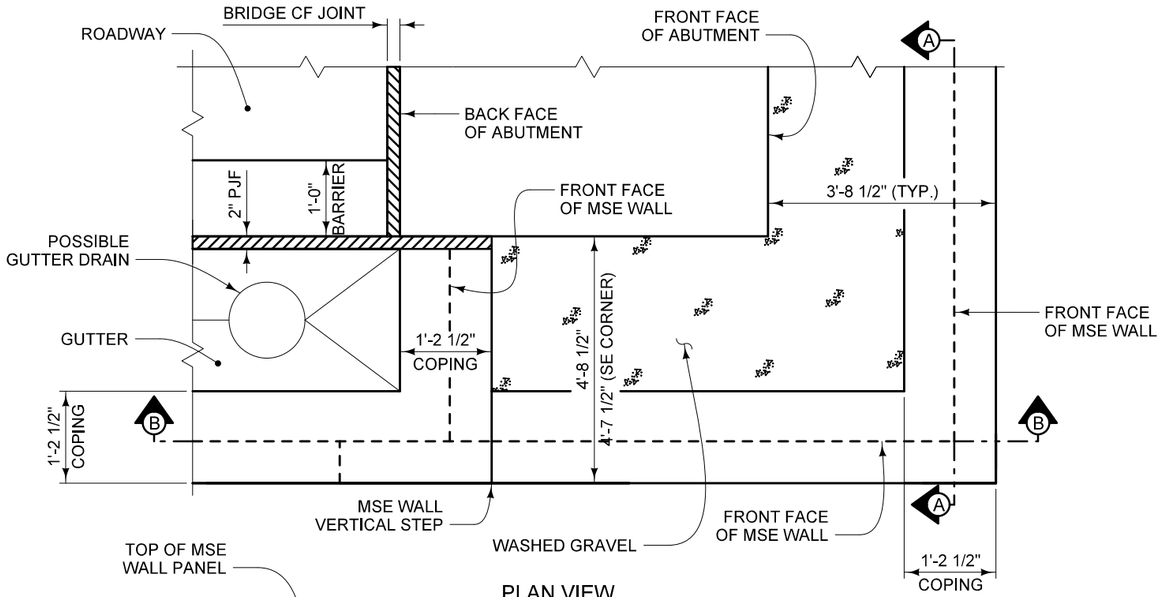
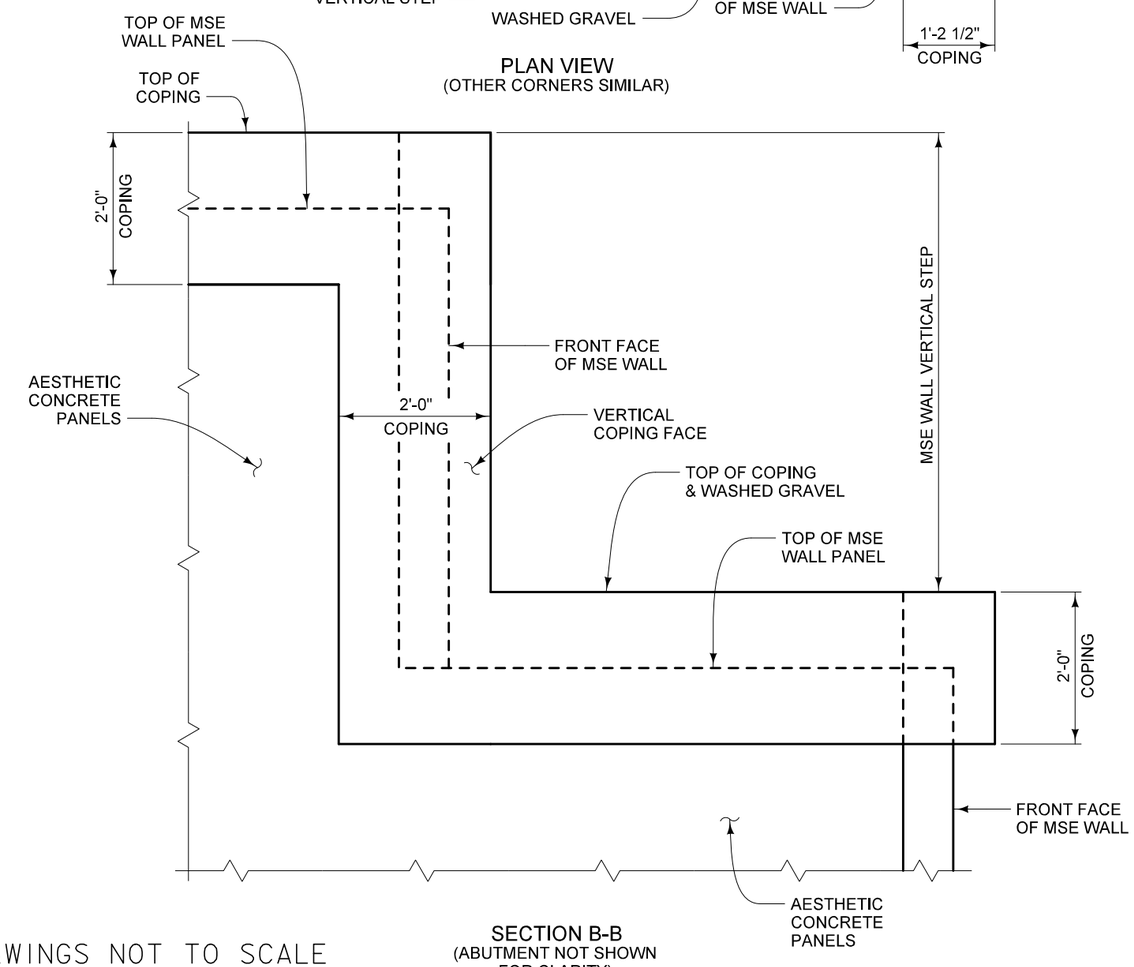
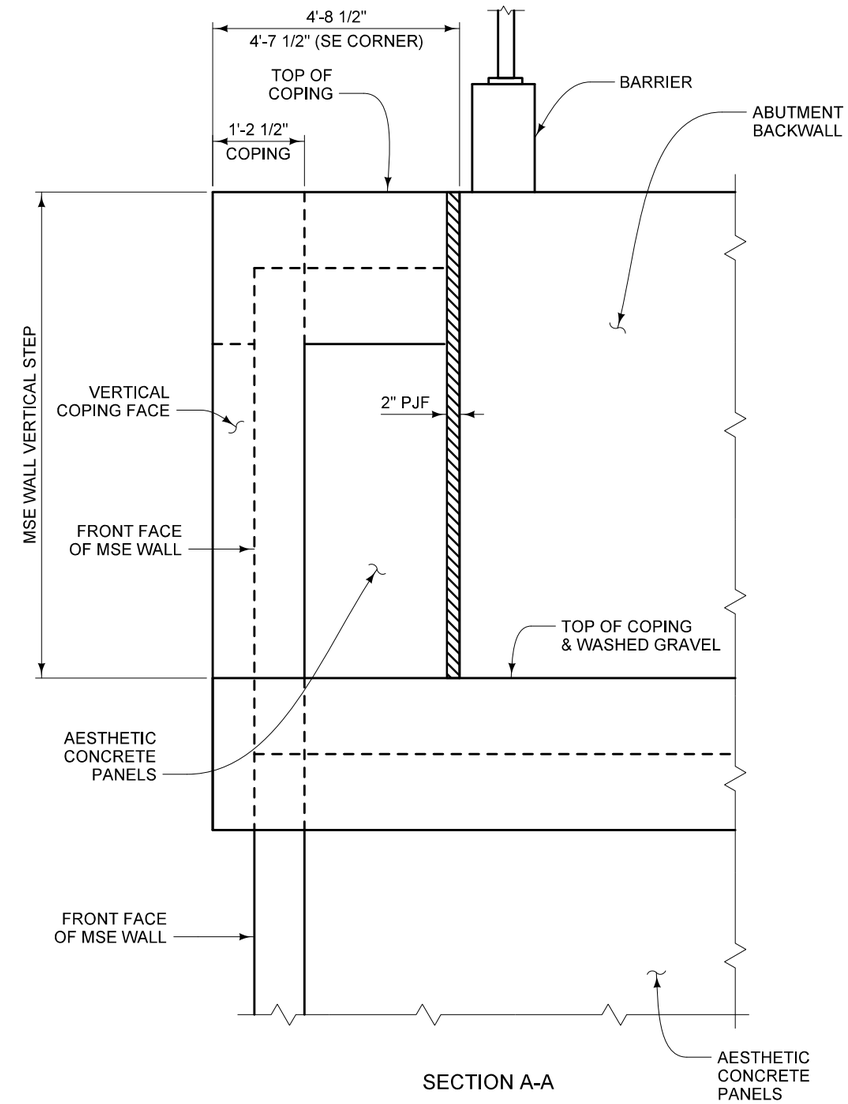


PLAN VIEW
(OTHER CORNERS SIMILAR)



SECTION B-B
(ABUTMENT NOT SHOWN FOR CLARITY)



SECTION A-A

DRAWINGS NOT TO SCALE

MSE WALL AND COPING DETAILS AT VERTICAL STEP

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER V.13

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STAGE 2 MSE WALLS RW1060A

STAGE 2 MSE WALLS RW 1050A

FUTURE ROW

PROPOSED ROW

EXISTING ROW

DETOUR GRADING SLOPE INTERCEPT WITH EX. GROUND

DETOUR 9

℄ IA 100

APPROXIMATE TEMPORARY SHORING

EST. 132 FT ±

EST. 62 FT ±

3:1

1098

1099

1100

1101

1102

7516

7517

7518

7519

7520

7521

7522

WIRE FACE WALL

FACE OF MSE WALL

MSE WALL REINFORCED ZONE

℄ CONSTRUCTION EDGEWOOD RD.

EXISTING EDGEWOOD RD.

STAGE 1 GRANULAR BACKFILL

APPROX STAGE 1 TEMPORARY 3:1 EXCAVATION LIMITS

RW1060B

RW1050B

APPROX. BOTTOM OF STAGE 1 EXCAVATION

GRADE AS NEEDED TO STABILIZE END OF WALL

EDGEWOOD BRIDGE CONSTRUCTED IN TANDUM WITH STAGE 1 MSE WALL CONSTRUCTION

STAGE 2 MSE WALLS RW 1050C

0 25 FEET

NOTES:

1. PLACE TEMPORARY SHORING AS NEEDED TO RETAIN DETOUR ROADWAY EMBANKMENT ADJACENT TO STAGE 1 MSE WALL EXCAVATION LIMITS.
2. REFER TO CROSS SECTIONS AND Q SHEETS FOR MINIMUM CORE OUT AND OVER EXCAVATION LIMITS.
3. INSTALL WIRE FACE WALLS AT ENDS OF STAGE 1 MSE WALL CONSTRUCTION LIMITS TO RETAIN GRANULAR BACKFILLS IN THE INTERIM. WIRE FACE CAN BE LEFT IN PLACE AND BURIED DURING STAGE 2 MSE WALL AND ROADWAY GRADING CONSTRUCTION.
4. TEMPORARY SHORING AND WIRE FACE WALLS ARE CONSIDERED INCIDENTAL TO MSE WALL CONSTRUCTION
5. FOR BRIDGE SEQUENCE OF CONSTRUCTION REFER TO BRIDGE PLANS: NHSX-100-1(66)--3H-57 EDGEWOOD RD. BRIDGE OVER IA 100
6. FOR MSE WALL PLAN AND PROFILE INFORMATION REFER TO SHEETS V.04 AND V.07

LEGEND

- STAGE 1 MSE WALLS AND REINFORCED ZONE
- WIRE FACE WALLS
- STAGE 2 MSE WALLS

STAGED MSE WALL CONSTRUCTION CONCEPT SHEET 1 OF 2

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(79)--3H-57	SHEET NUMBER V.14

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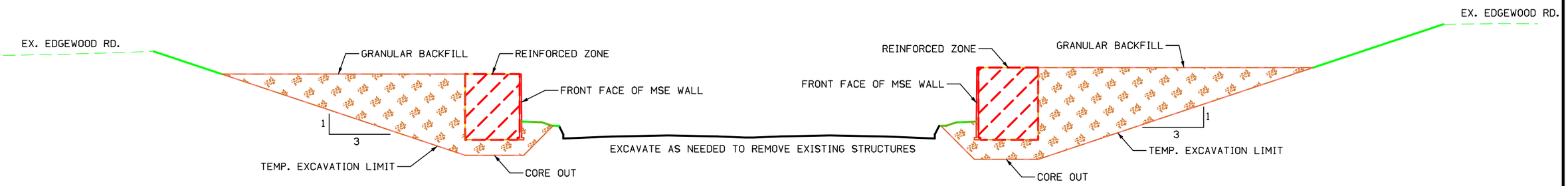
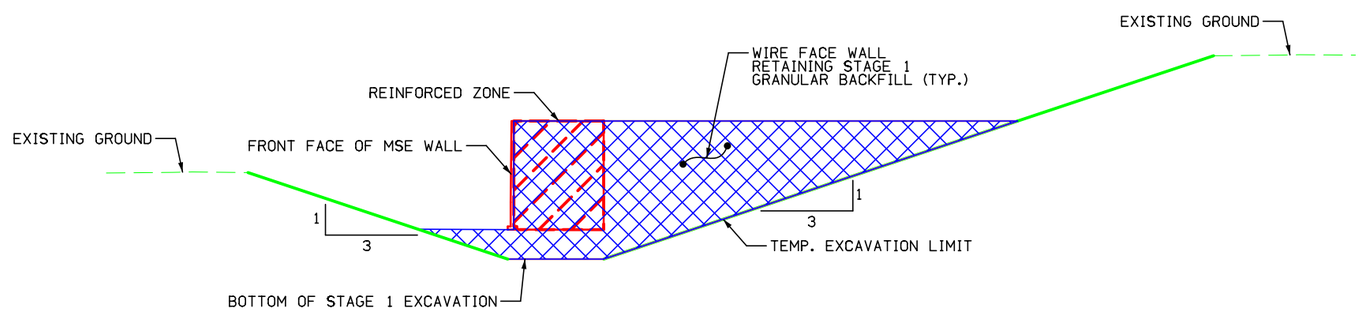


SECTION A-A



SECTION B-B

DRAWINGS NOT TO SCALE

STAGED MSE WALL
CONSTRUCTION
CONCEPT
SHEET 2 OF 2

LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

- Existing Ground Line
- Proposed Template
- Proposed Topsoil Placement
- Additional Topsoil Removal
- Subrade Treatment
- Granular Shoulder
- Pavement
- Existing Pipe\RCB
- Proposed Pipe\RCB
- Proposed Dike
- All Elements Associated with Proposed Entrances

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TS — Topsoil (Class 10)
- TS A — Topsoil (Type A Disposal)
- TS B — Topsoil (Type B Disposal)
- TS C — Topsoil (Type C Disposal)
- CL 10 — Class 10 Materials
- SEL LO — Select Loams And Clay-Loams
- SEL SA — Select Sand
- UNS A — Unsuitable Type A Disposal
- UNS B — Unsuitable Type B Disposal
- UNS C — Unsuitable Type C Disposal
- SHALE — Shale
- WASTE — Waste
- B&W LS — Broken and Weathered Rock
- ROCK — Solid Rock
- BLDRS — 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

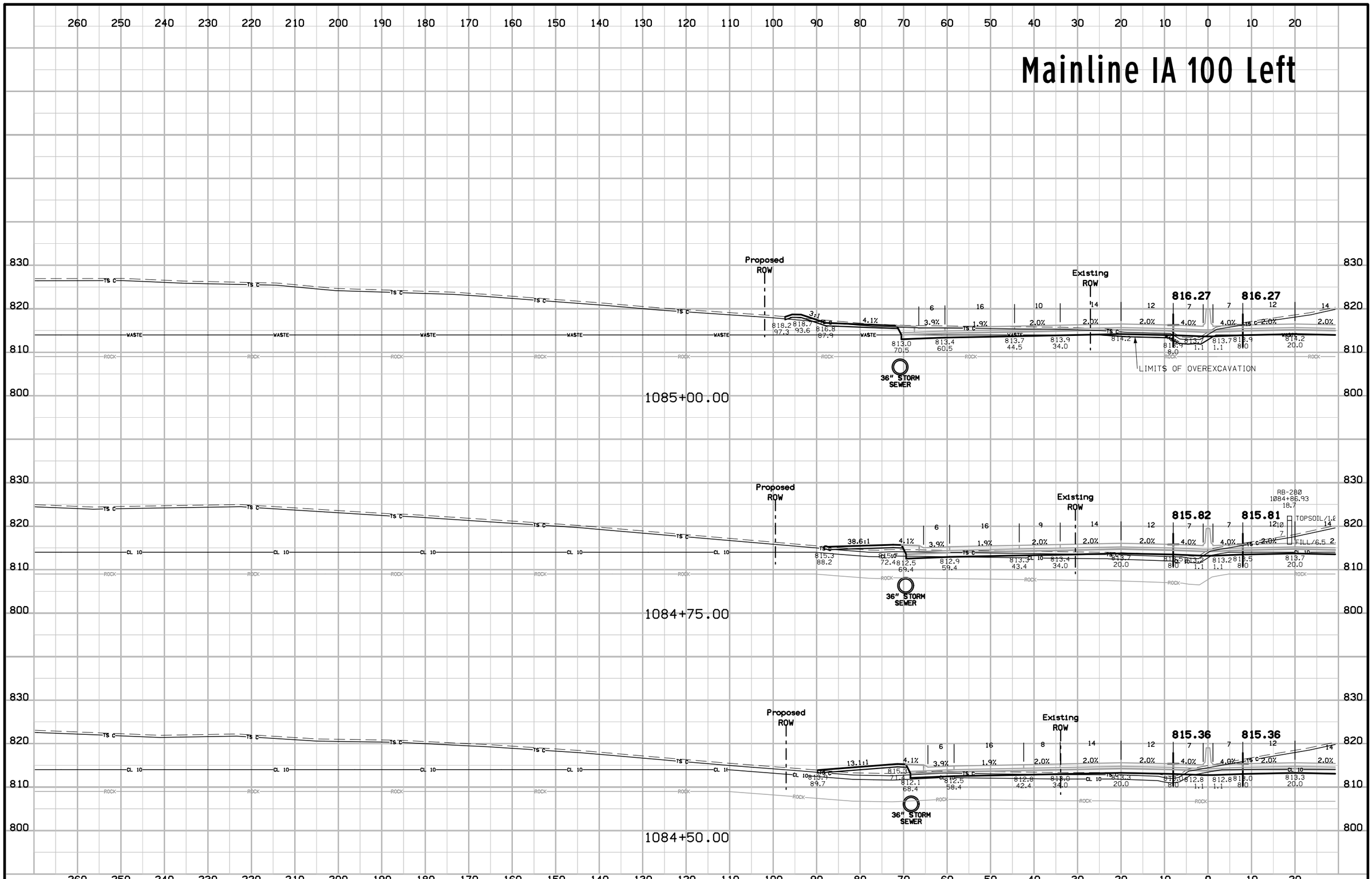
Proposed ROW — Proposed Right-of-Way Limit

Temporary ROW — Temporary Right-of-Way Limit

CROSS SECTION LEGEND AND SYMBOL INFORMATION SHEET

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

Mainline IA 100 Left



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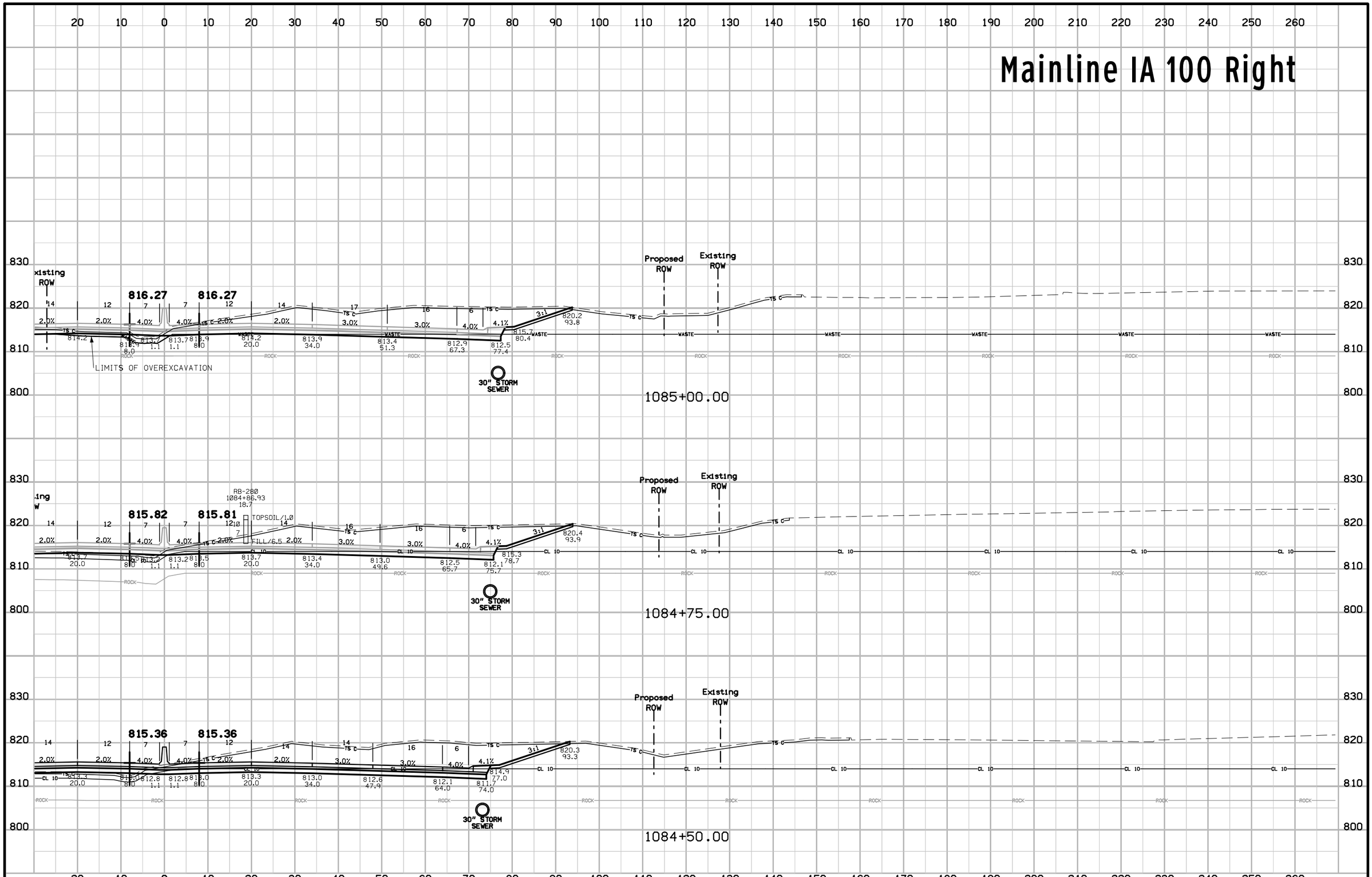

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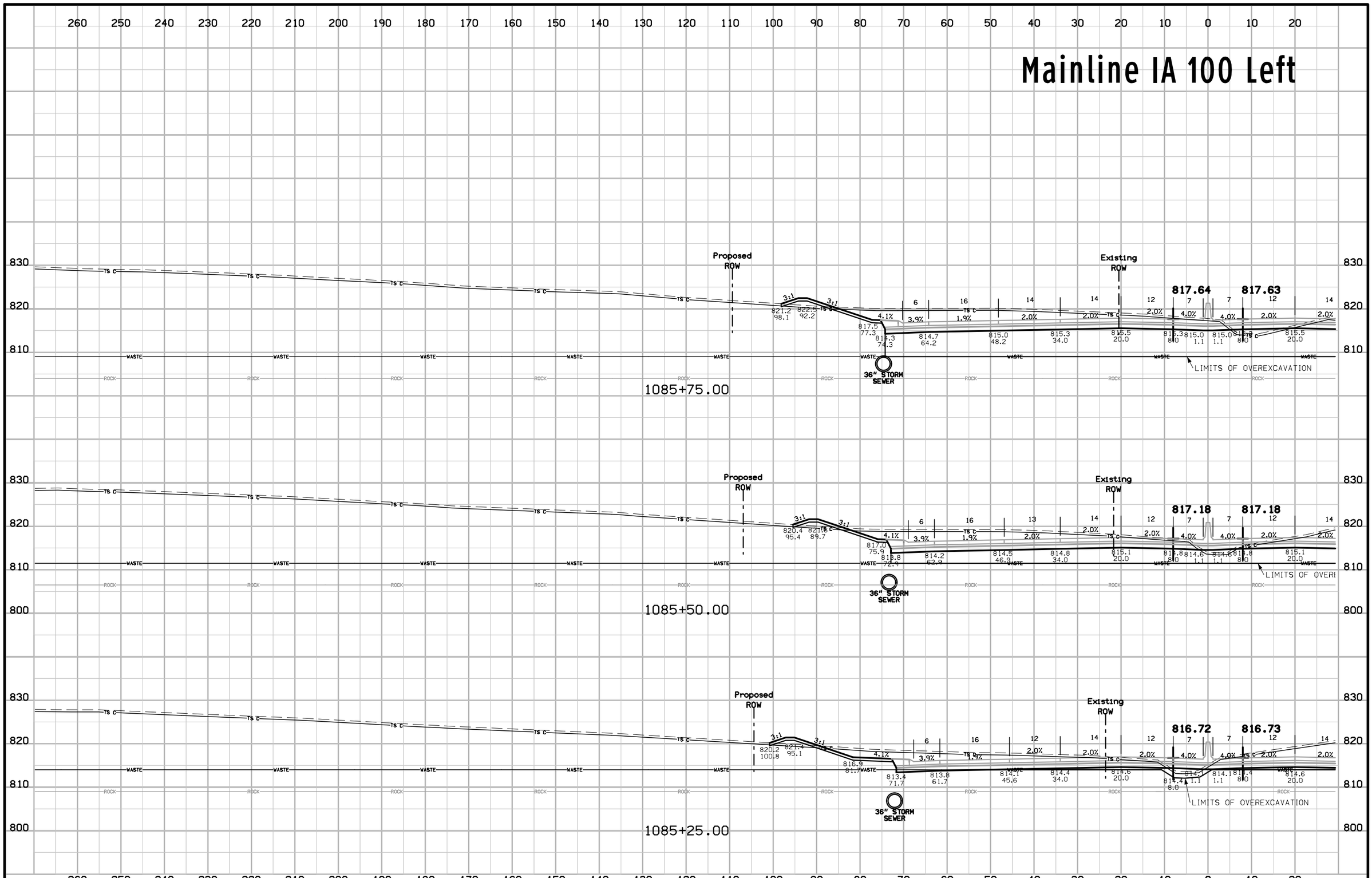

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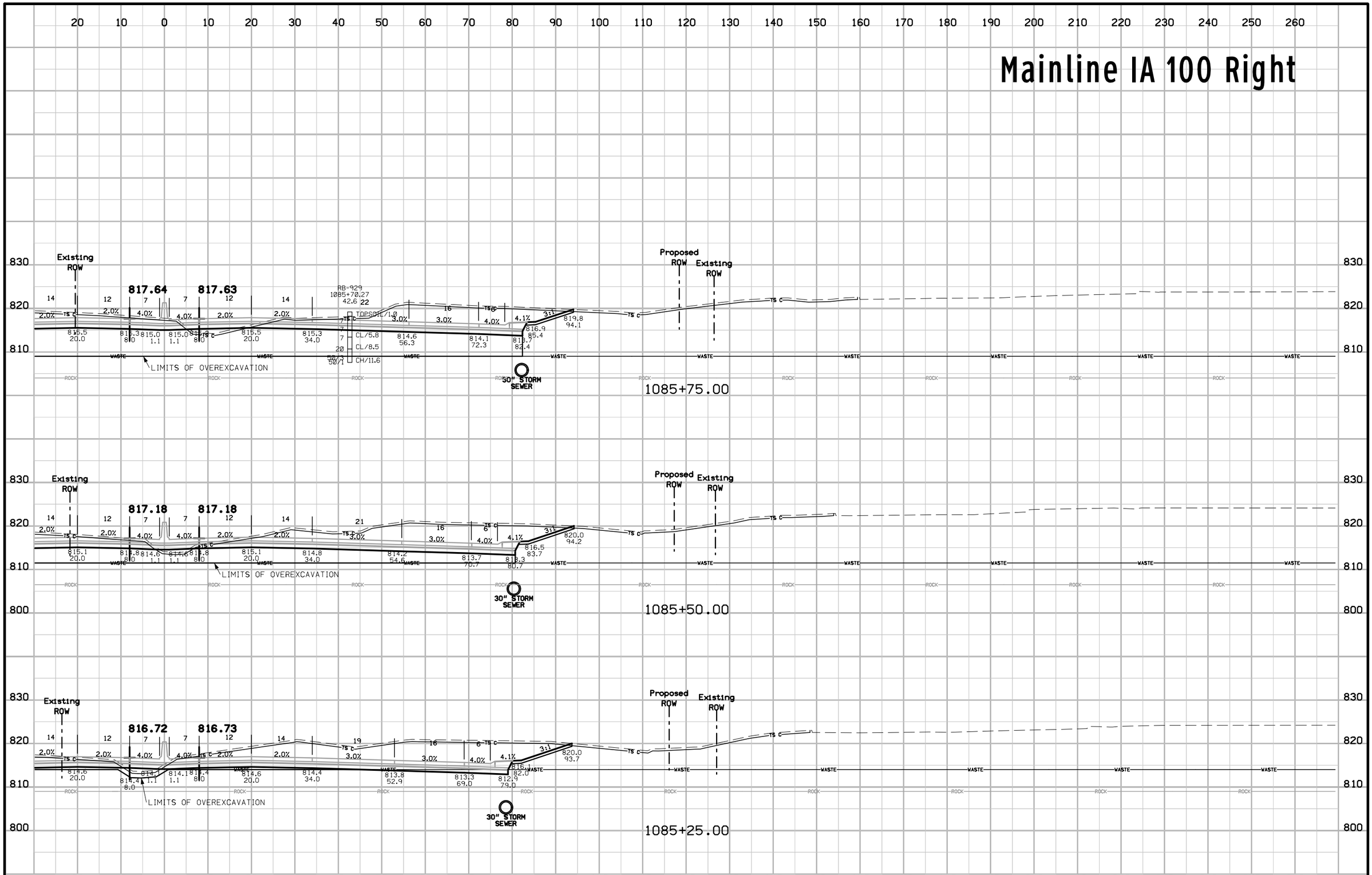

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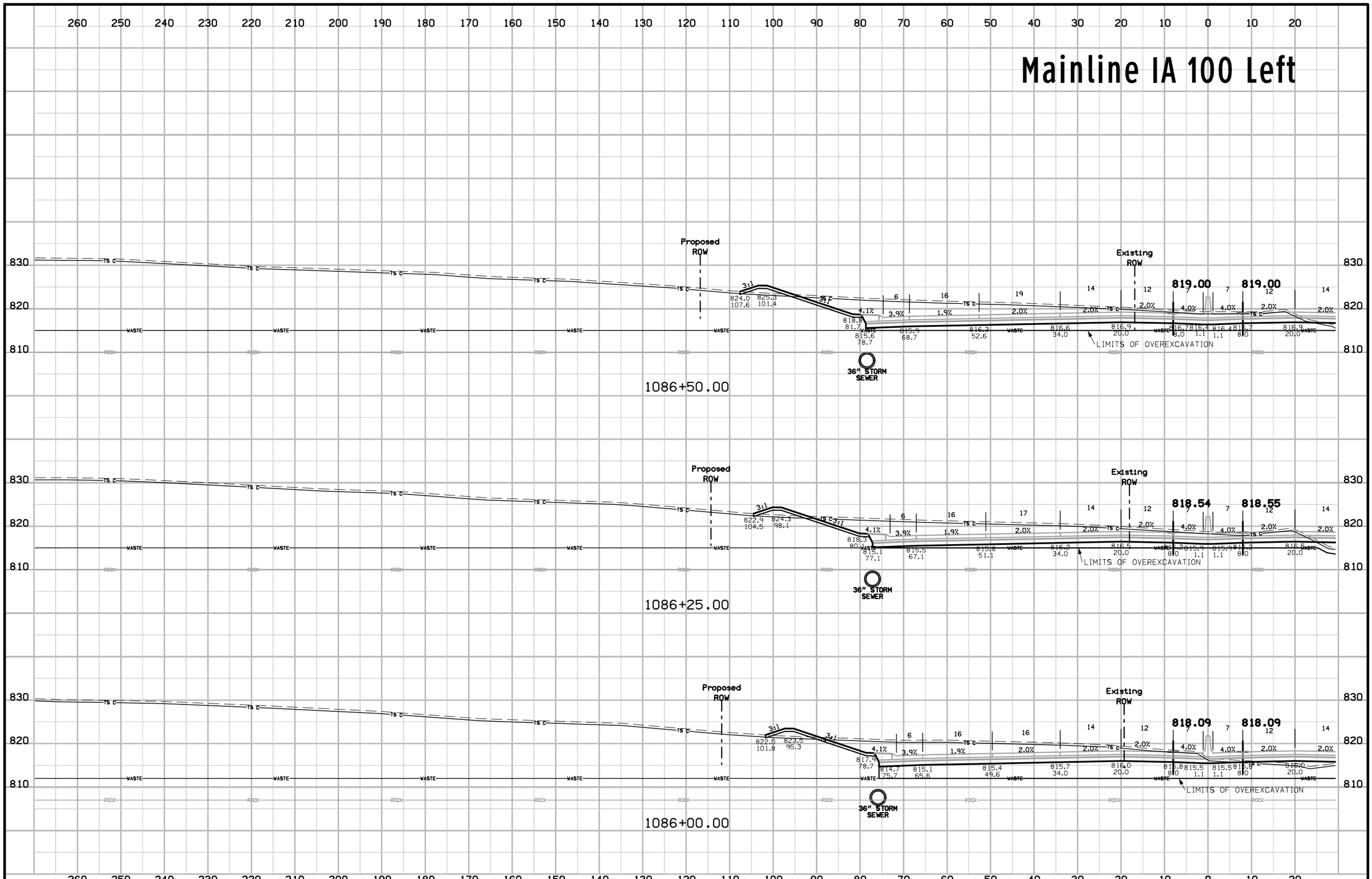

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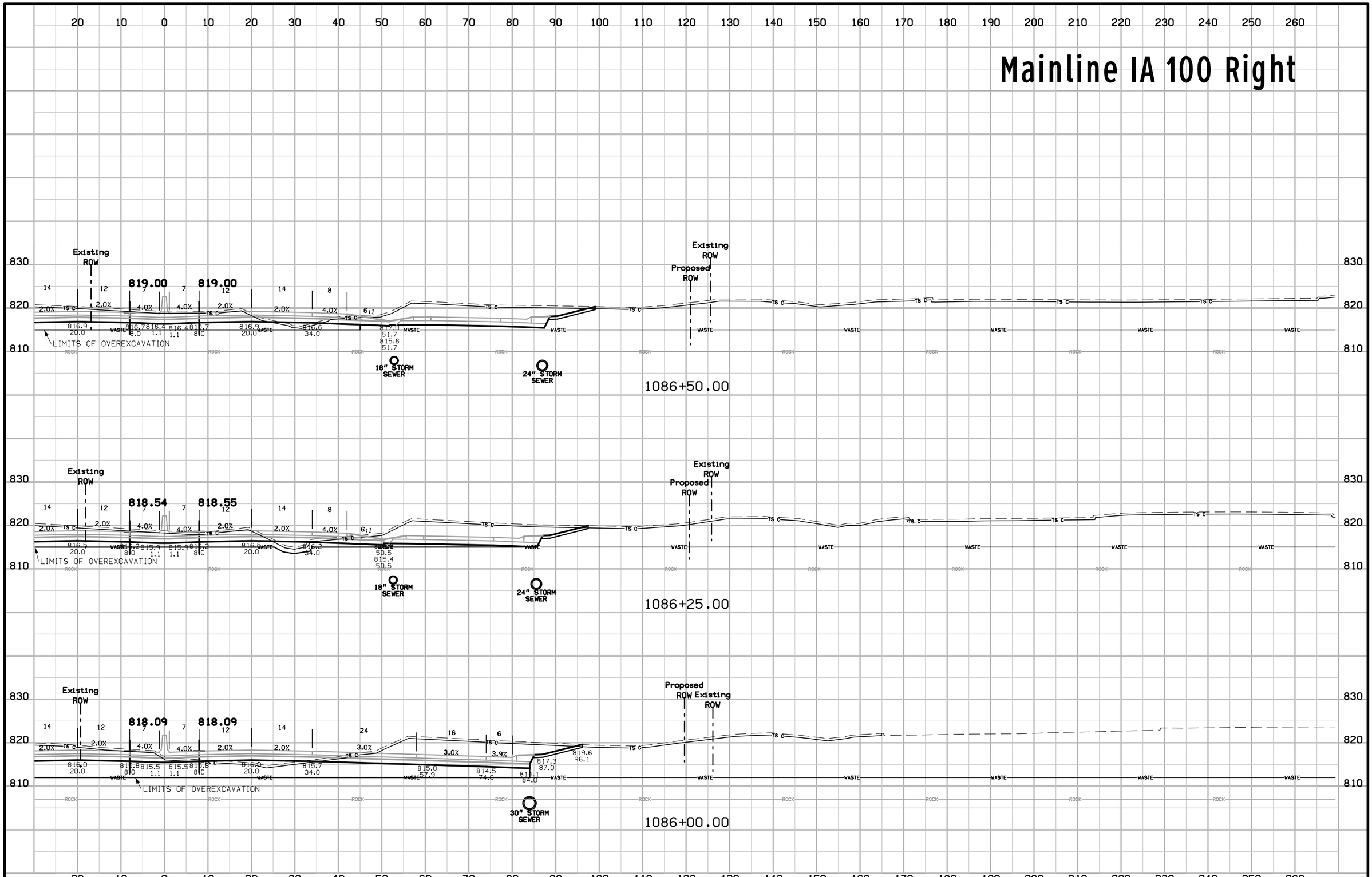

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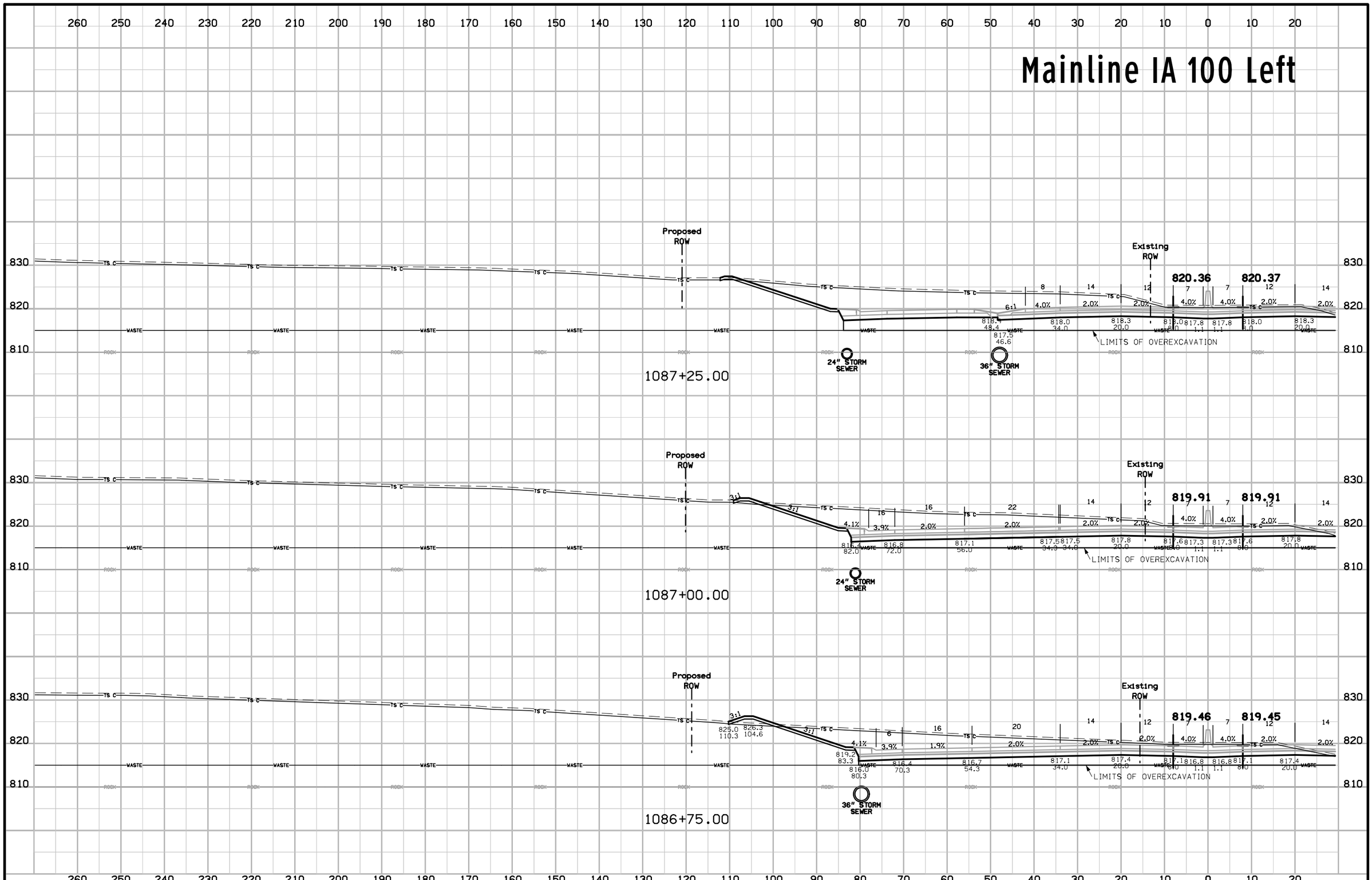

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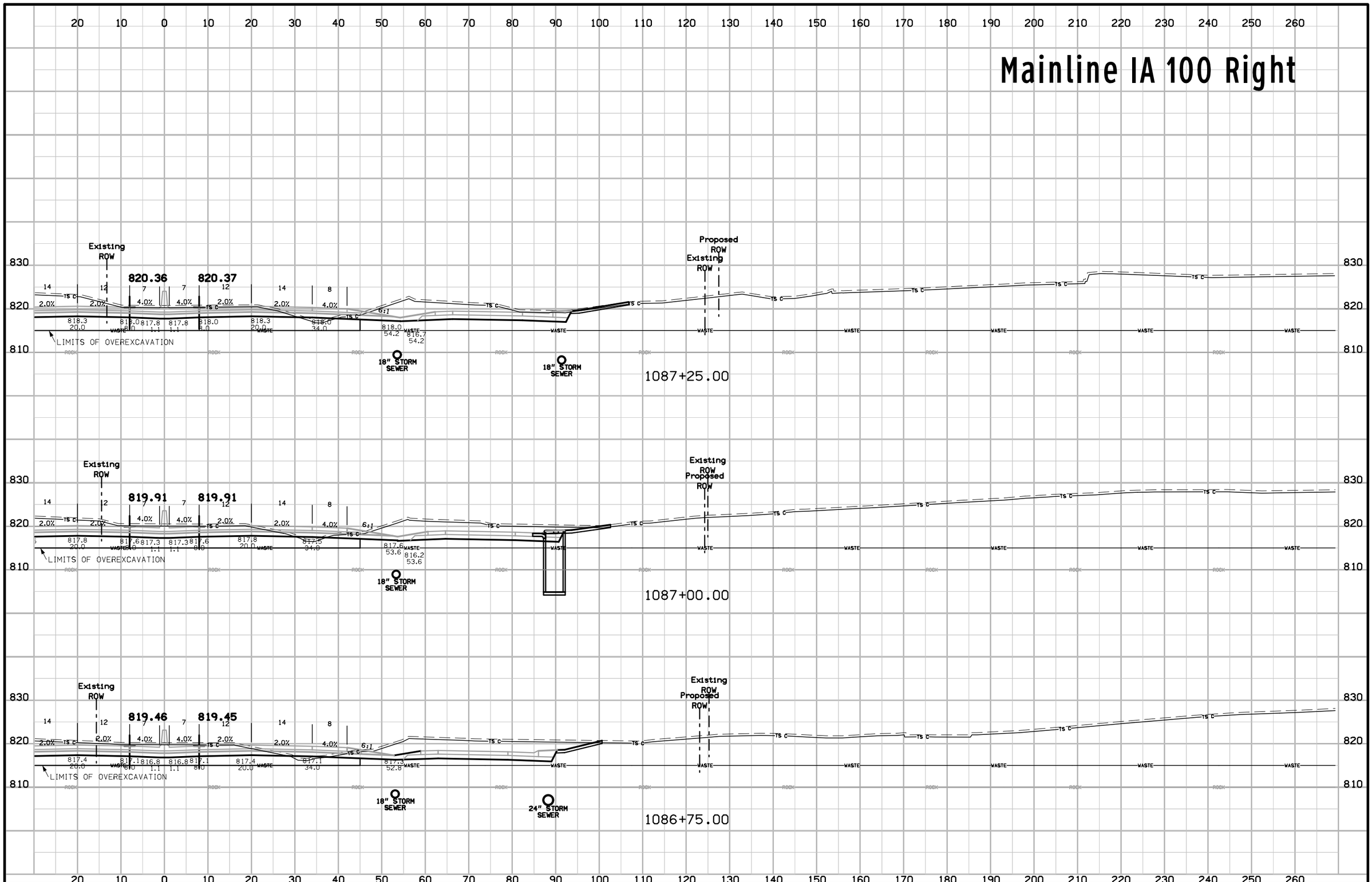

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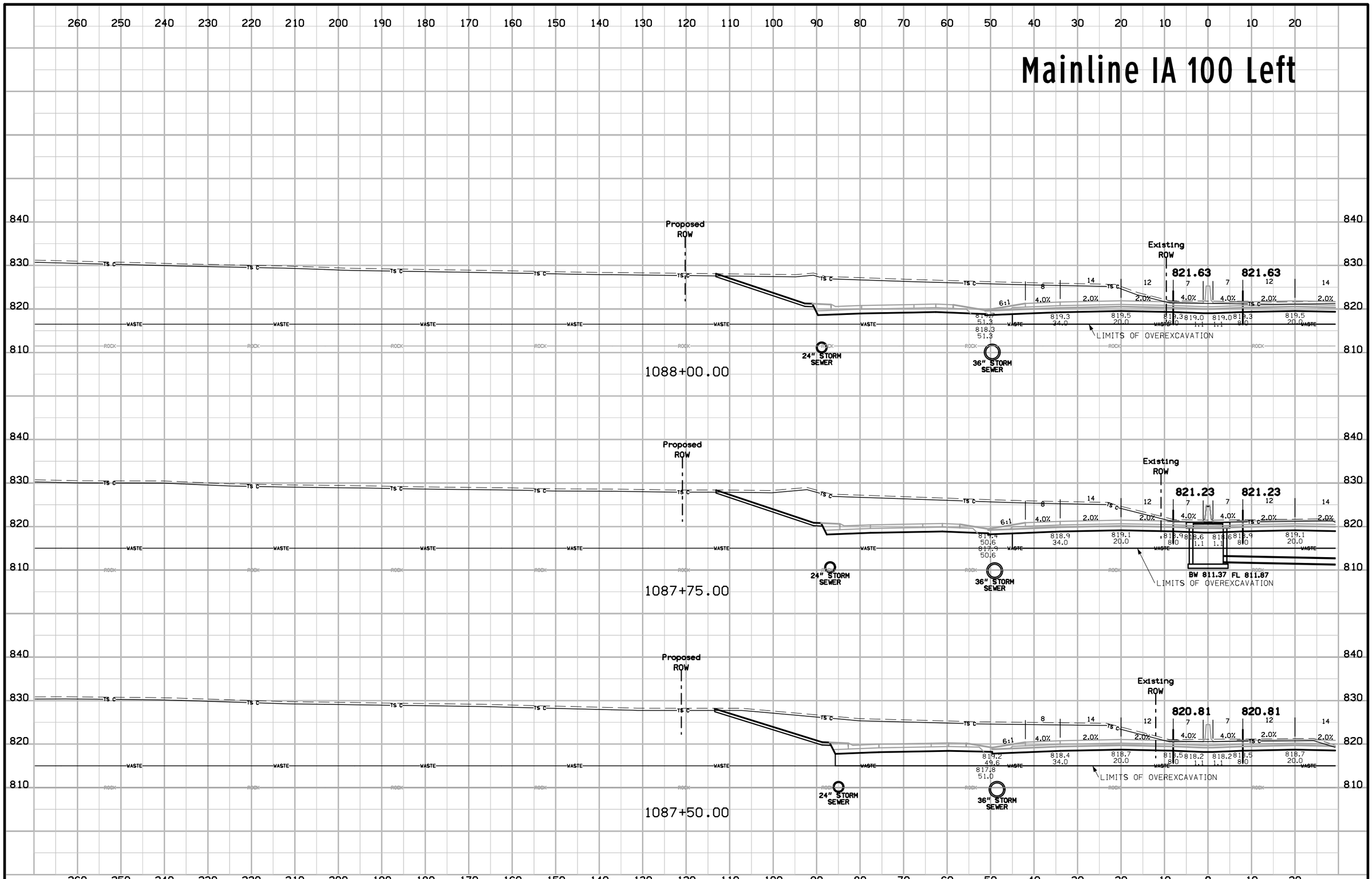

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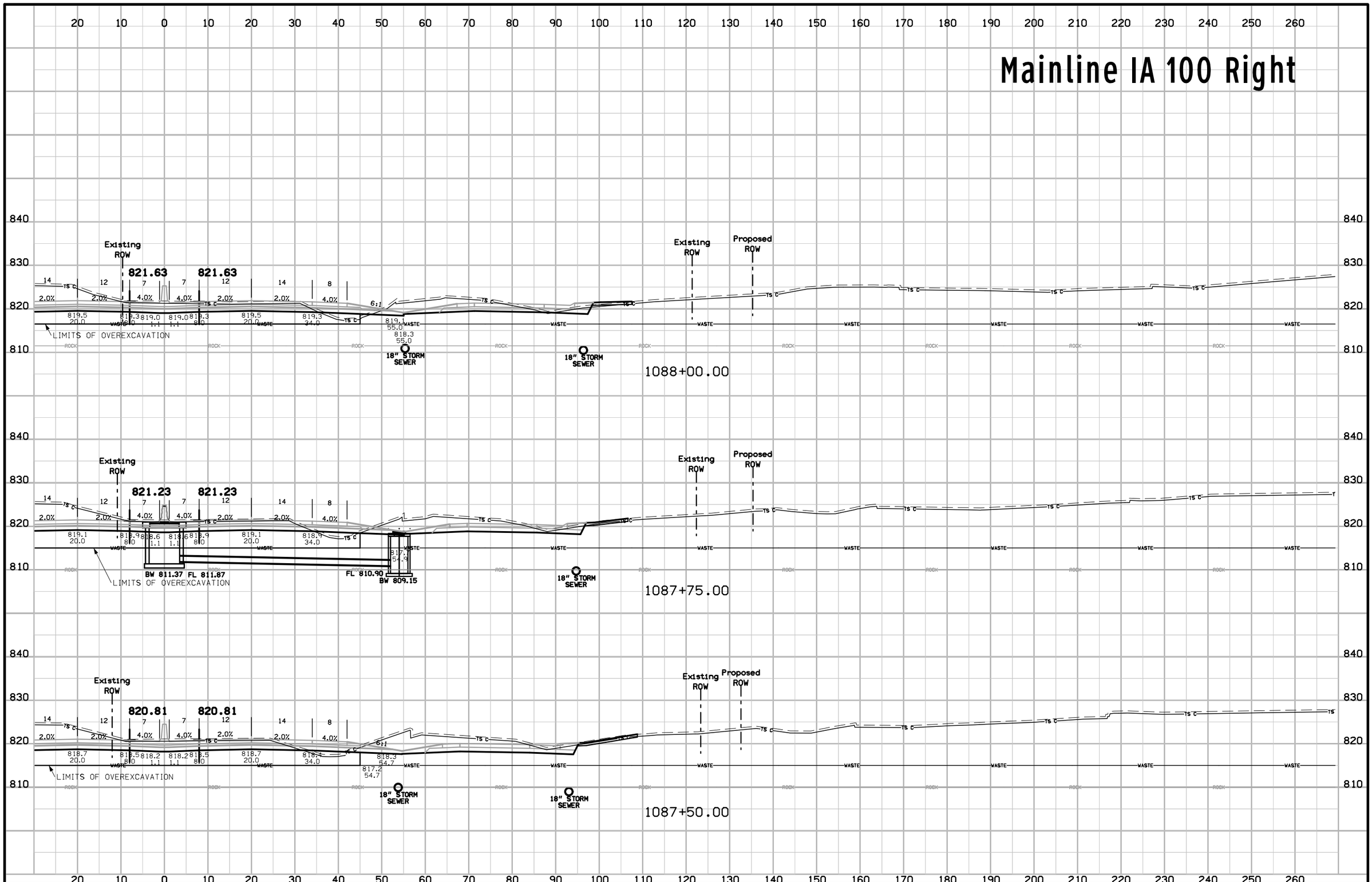

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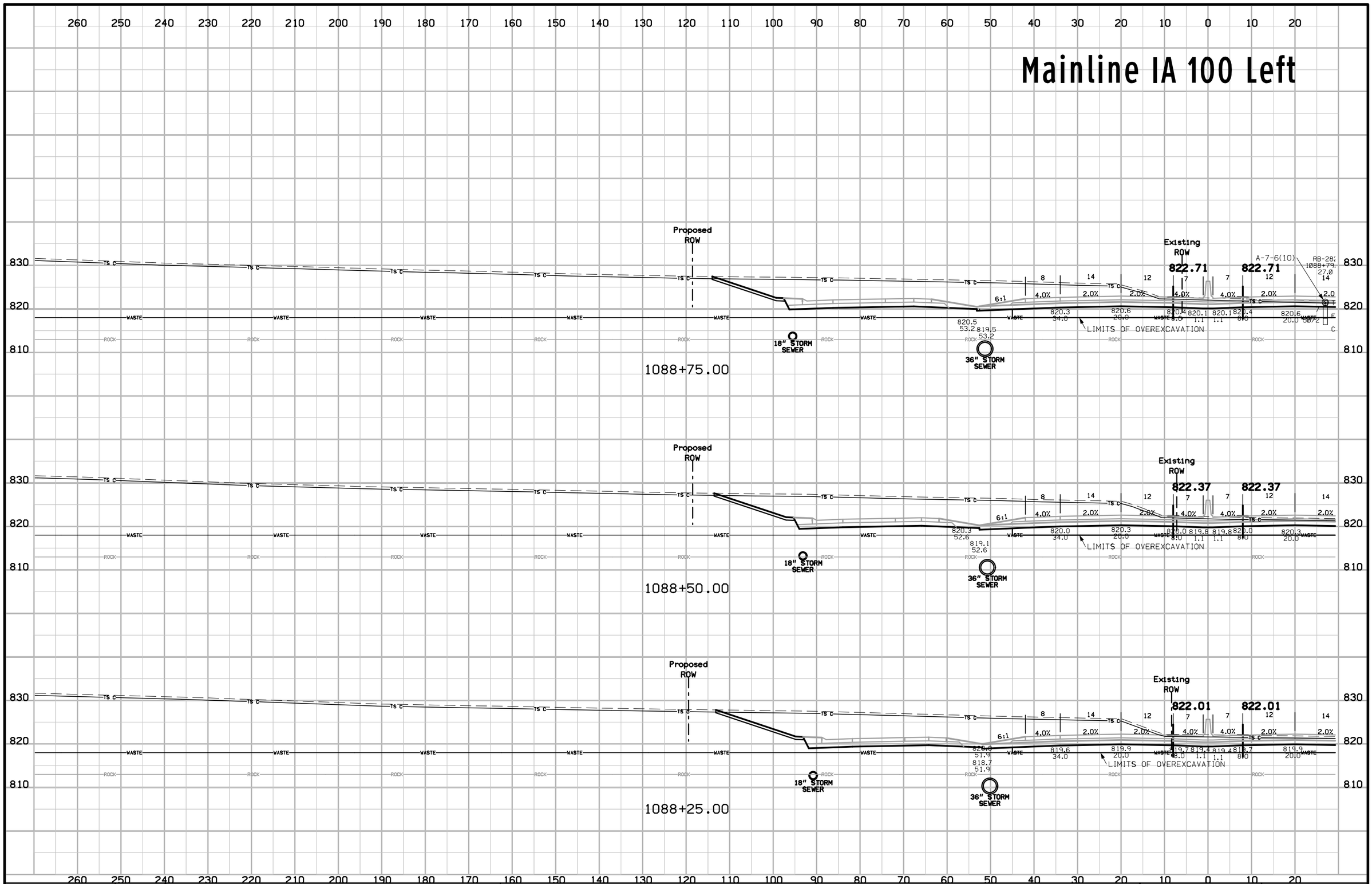

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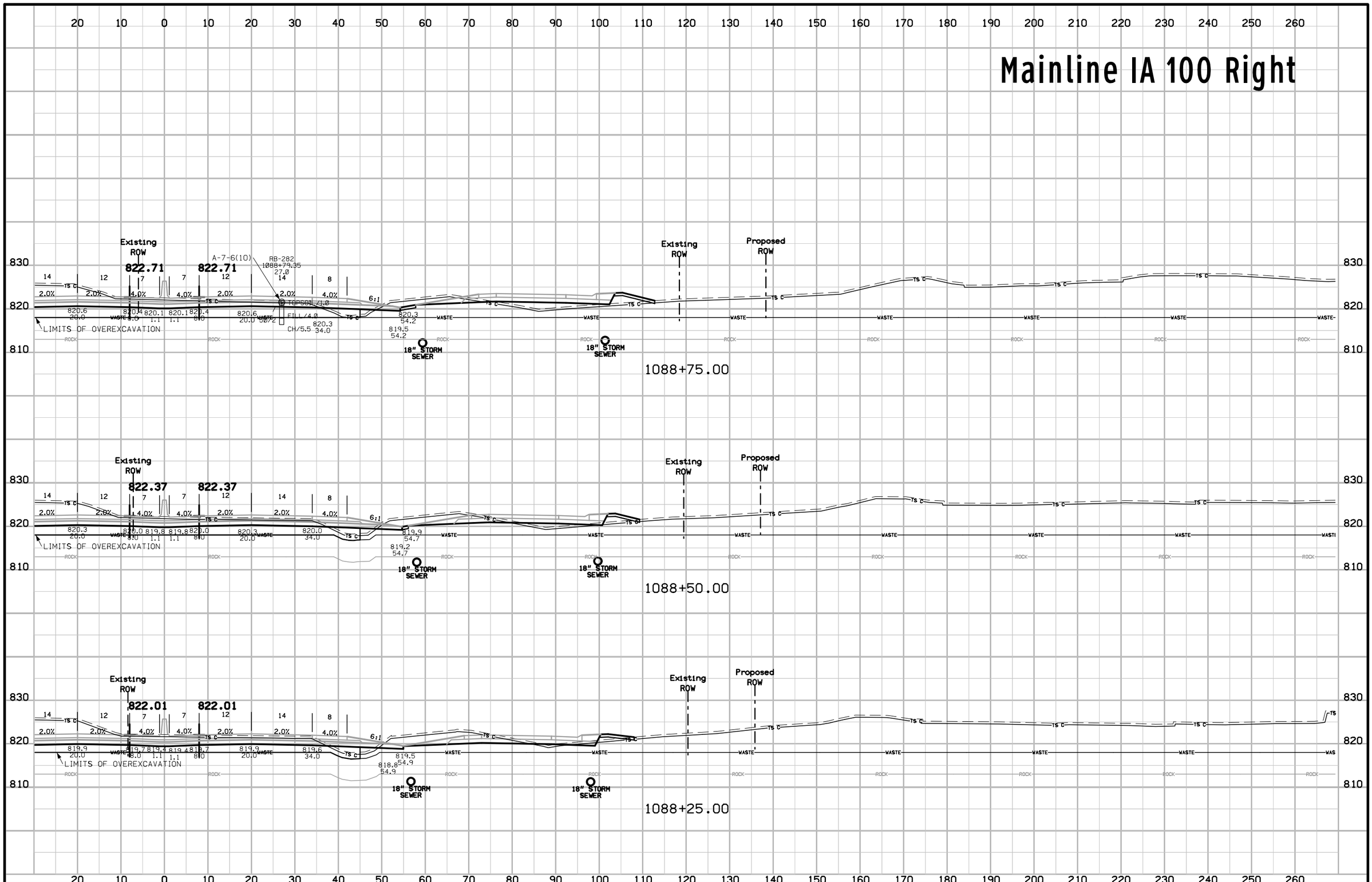

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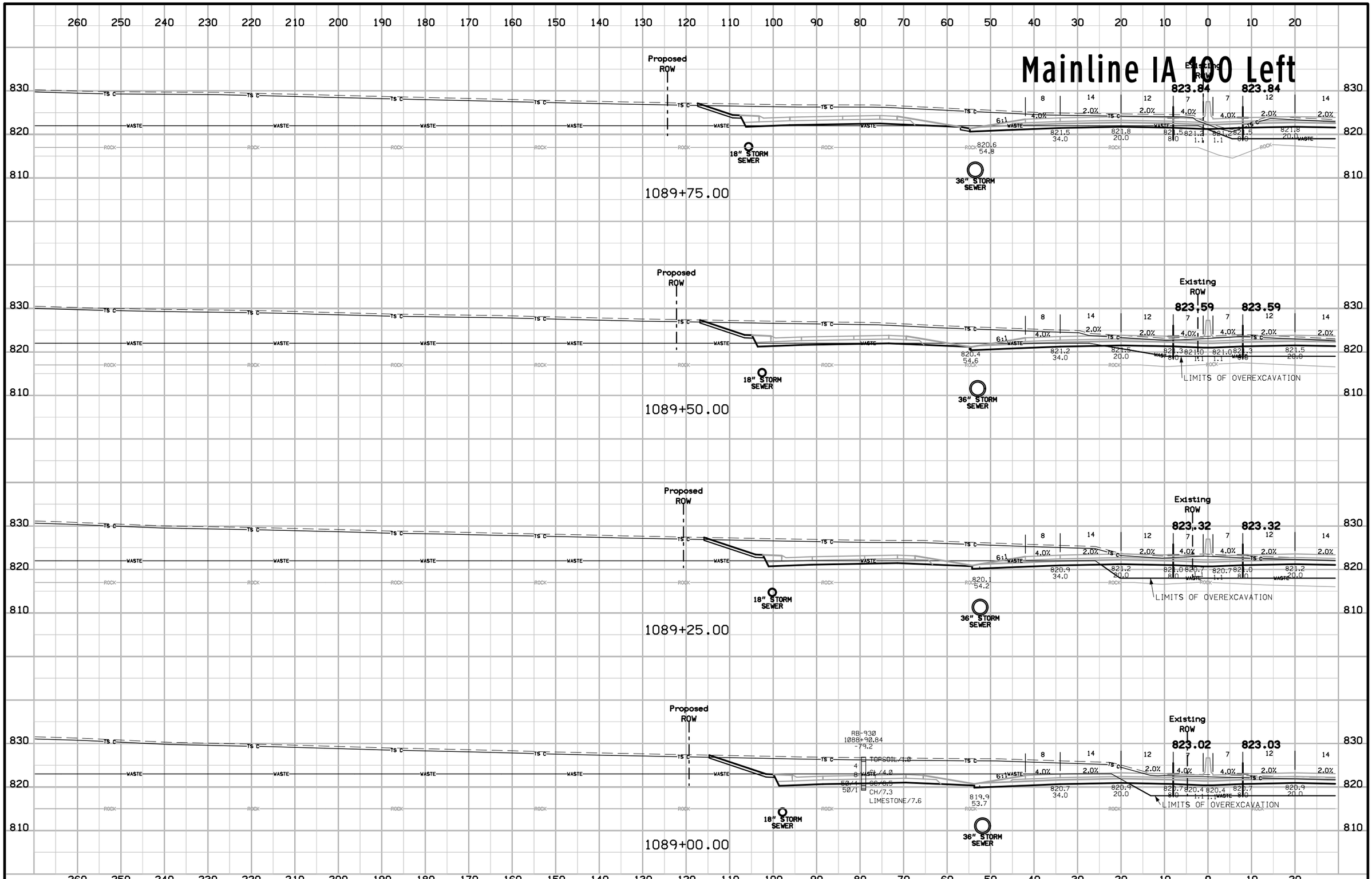

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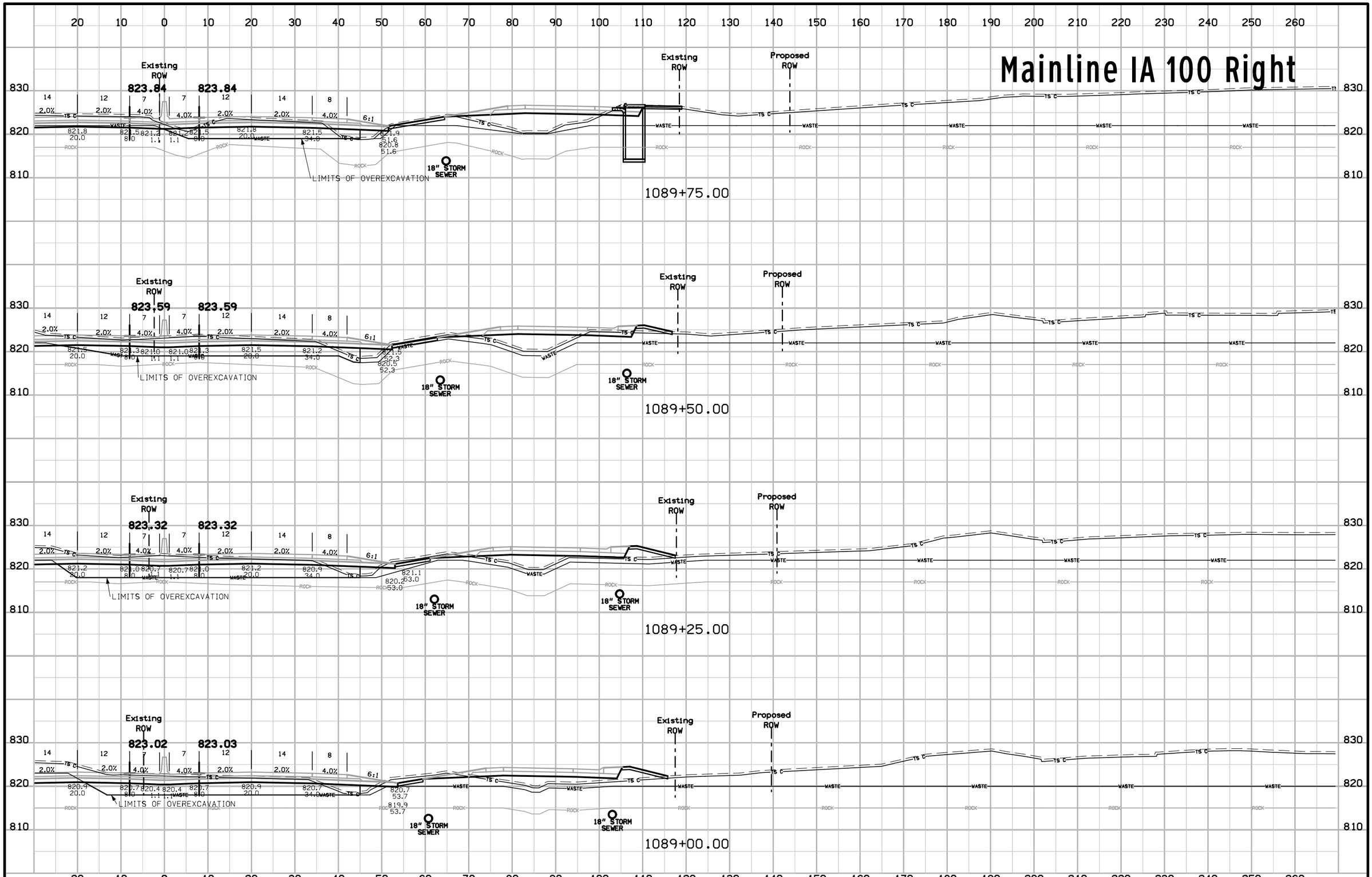

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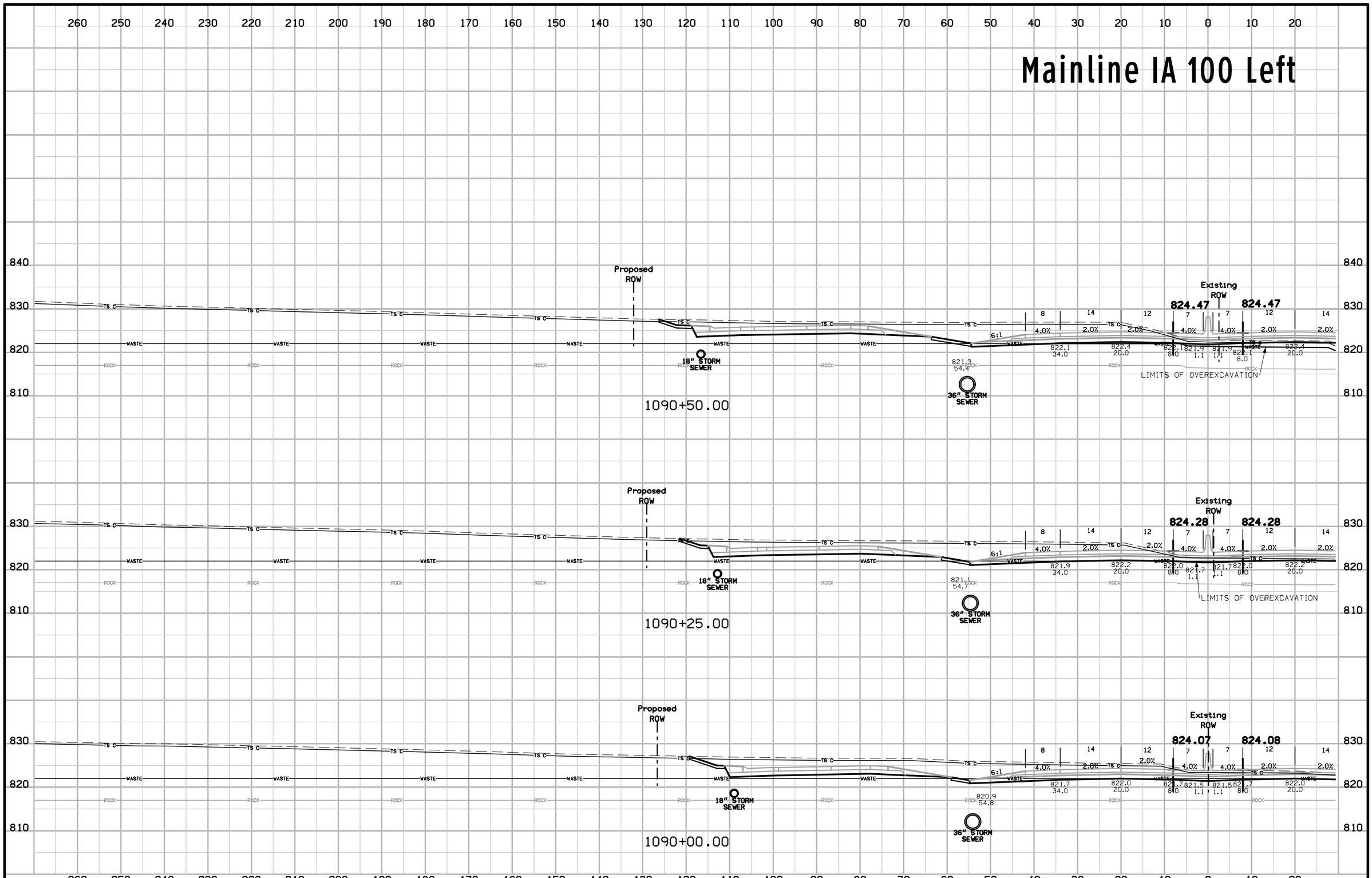

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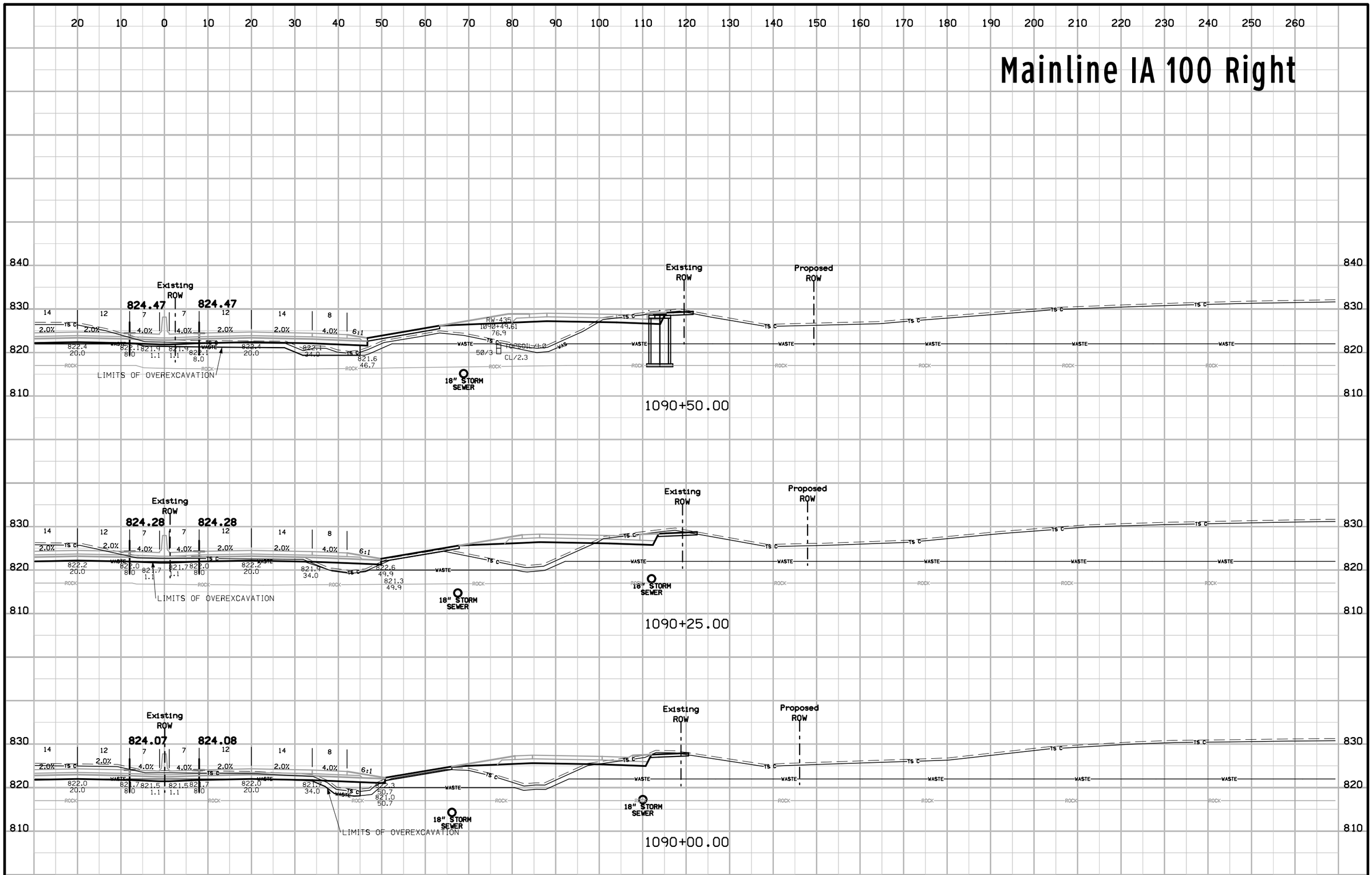

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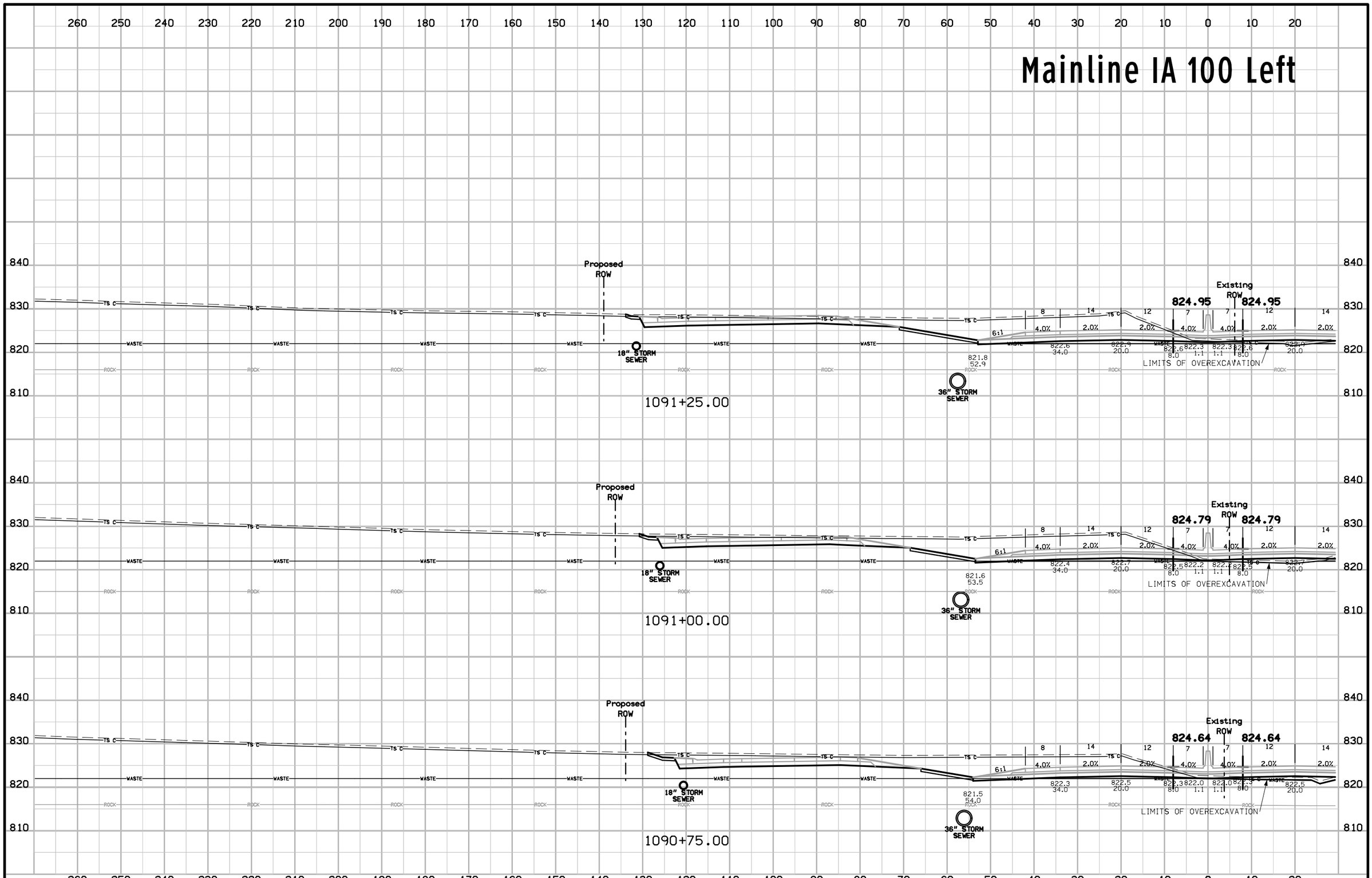

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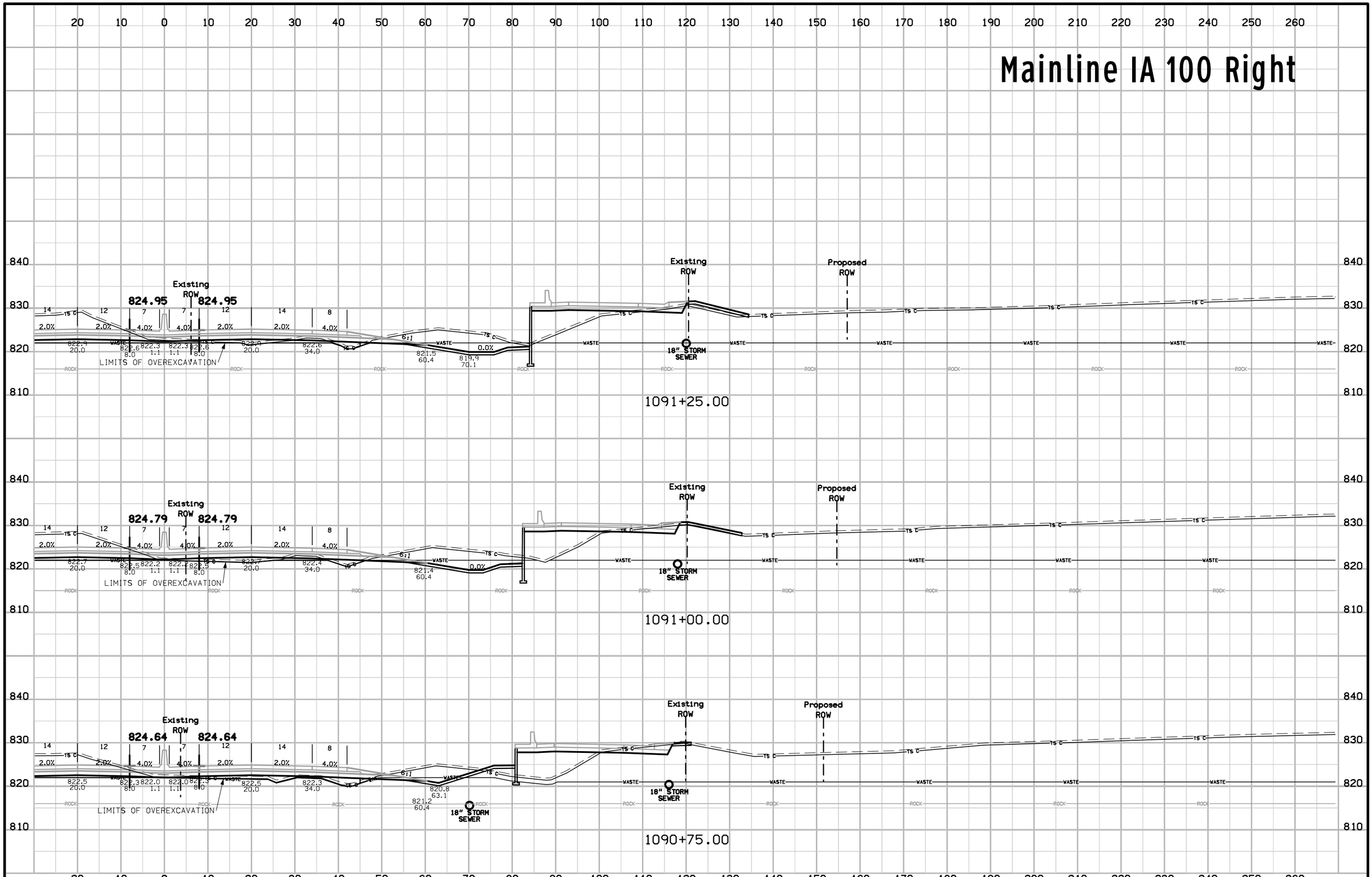

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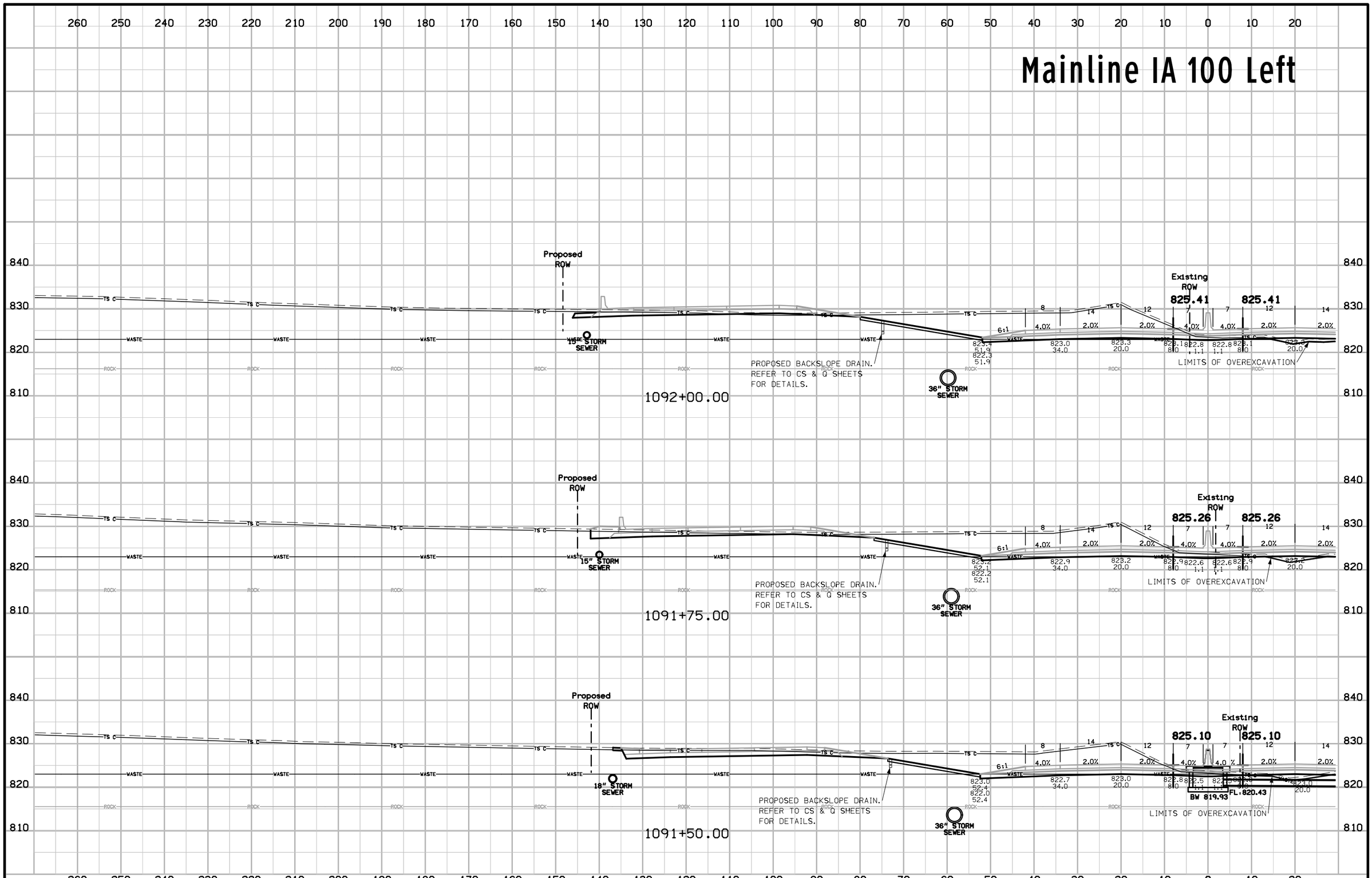

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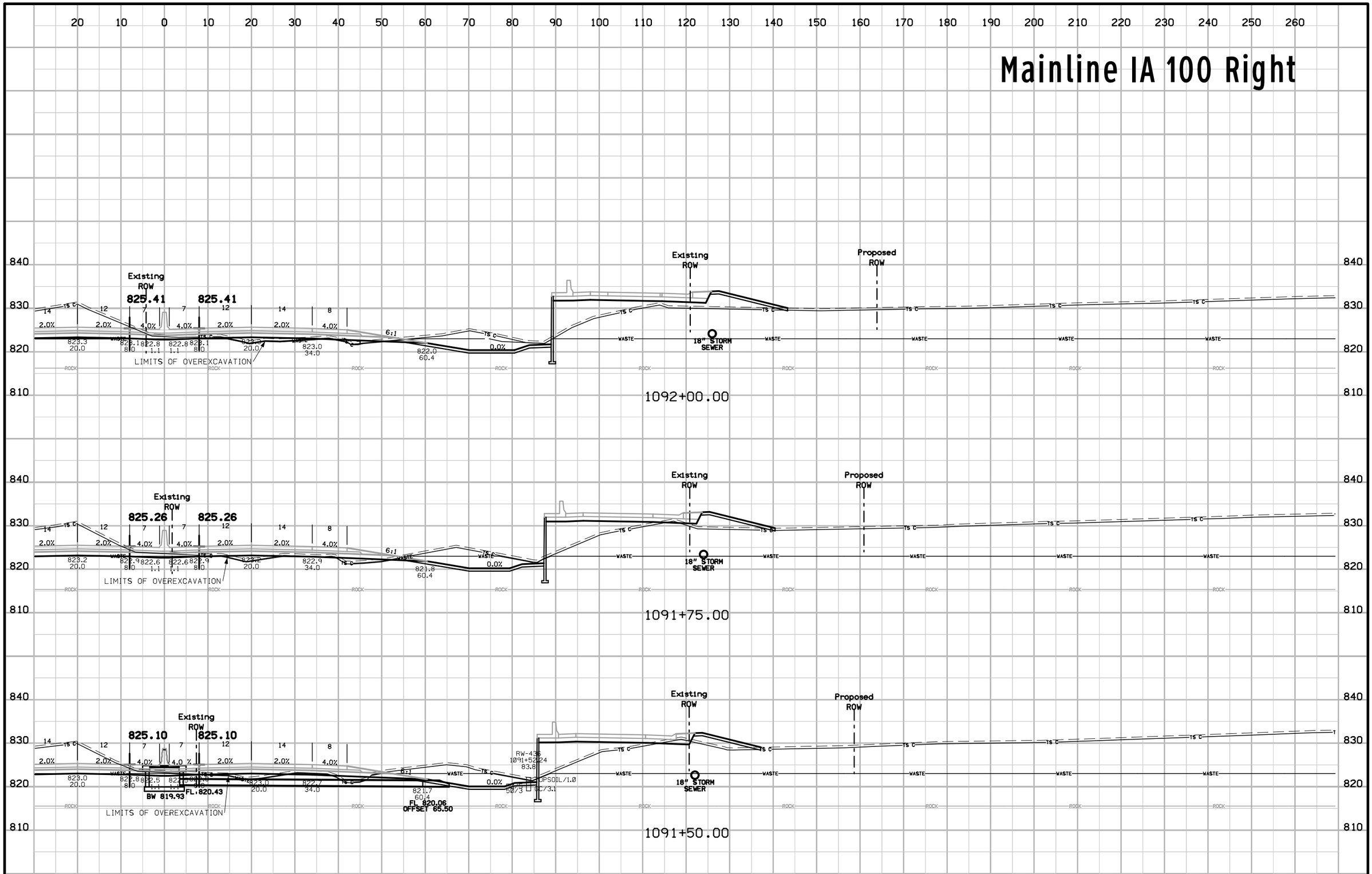

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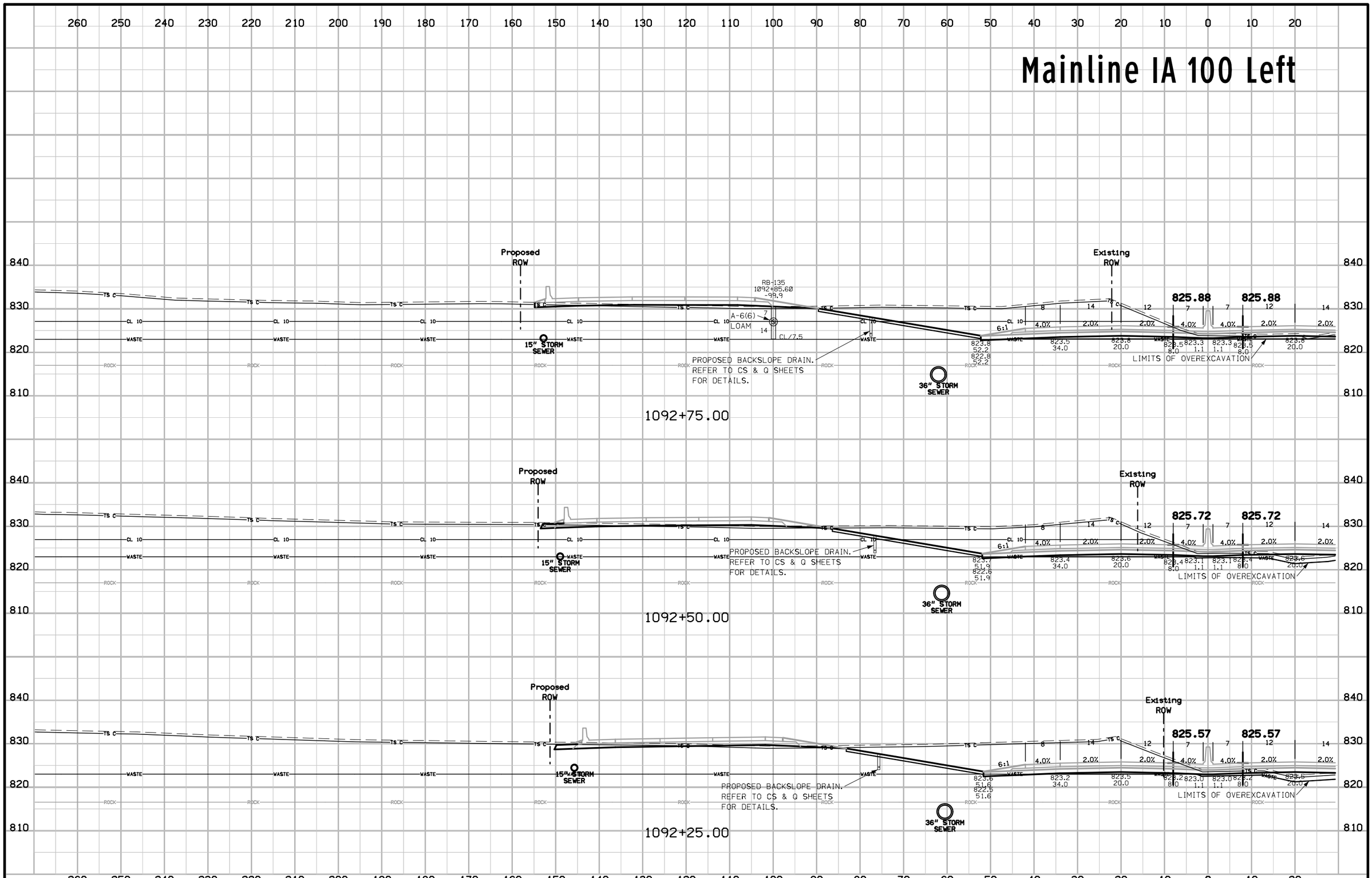

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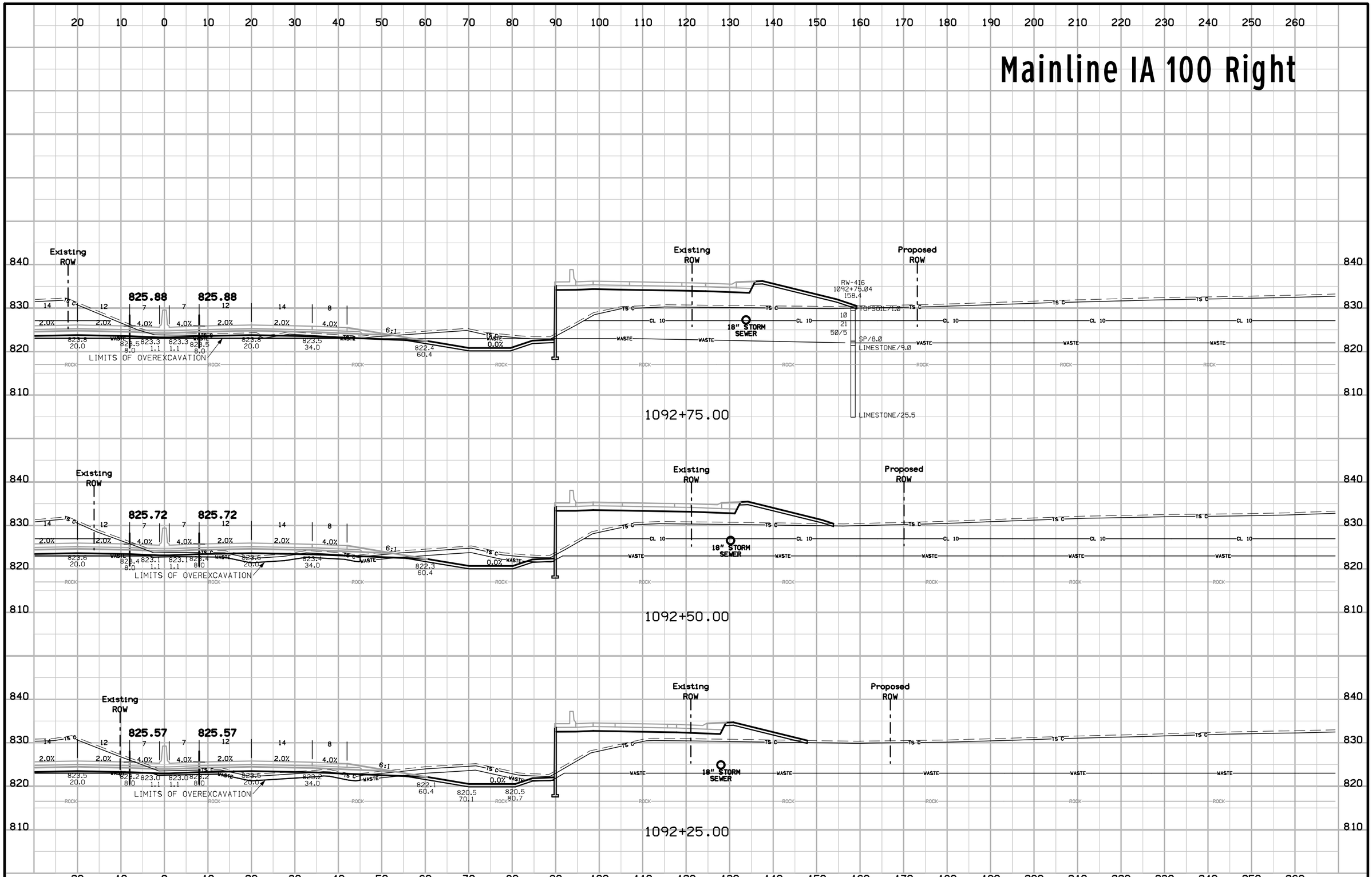

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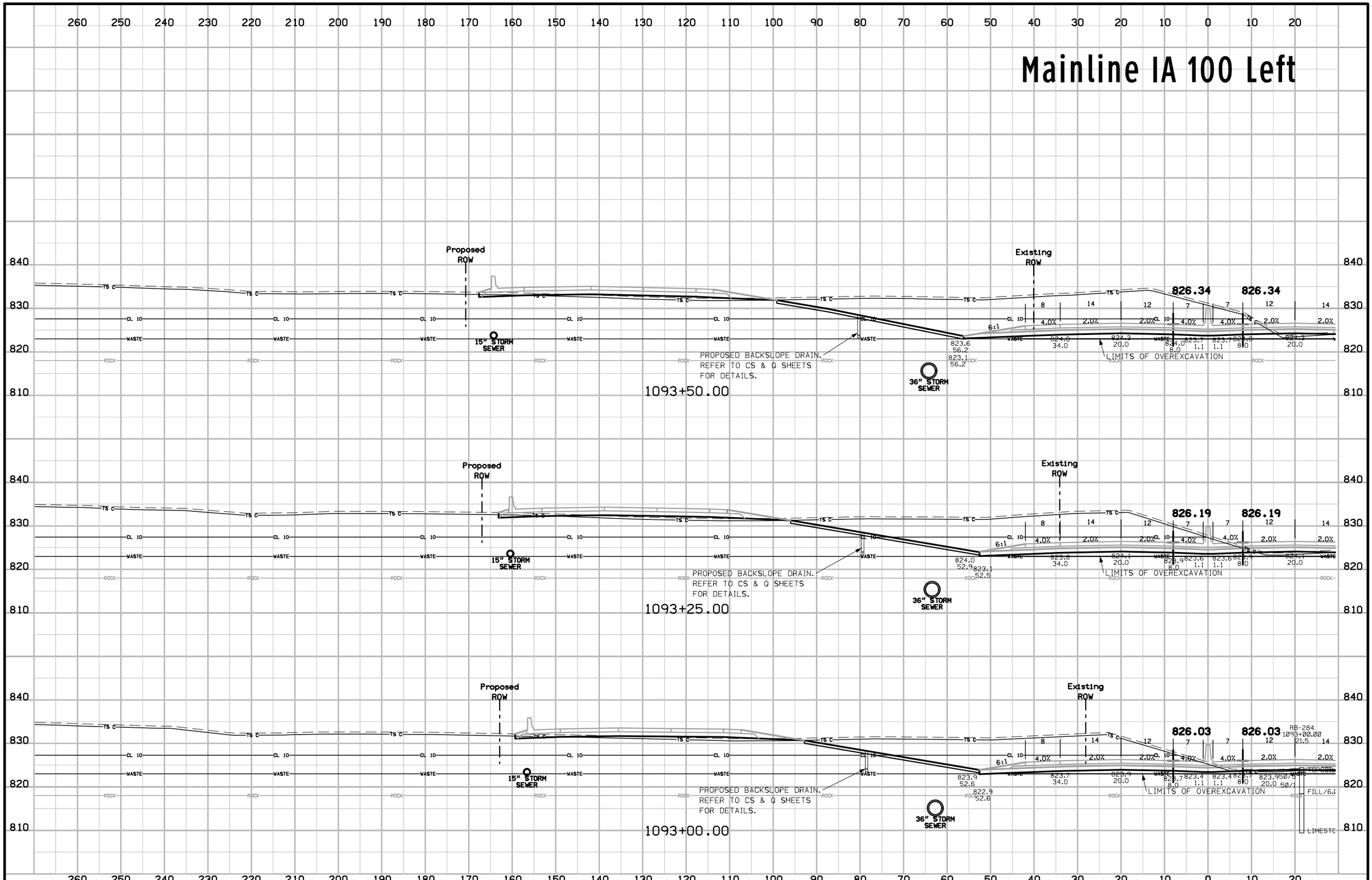

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.24

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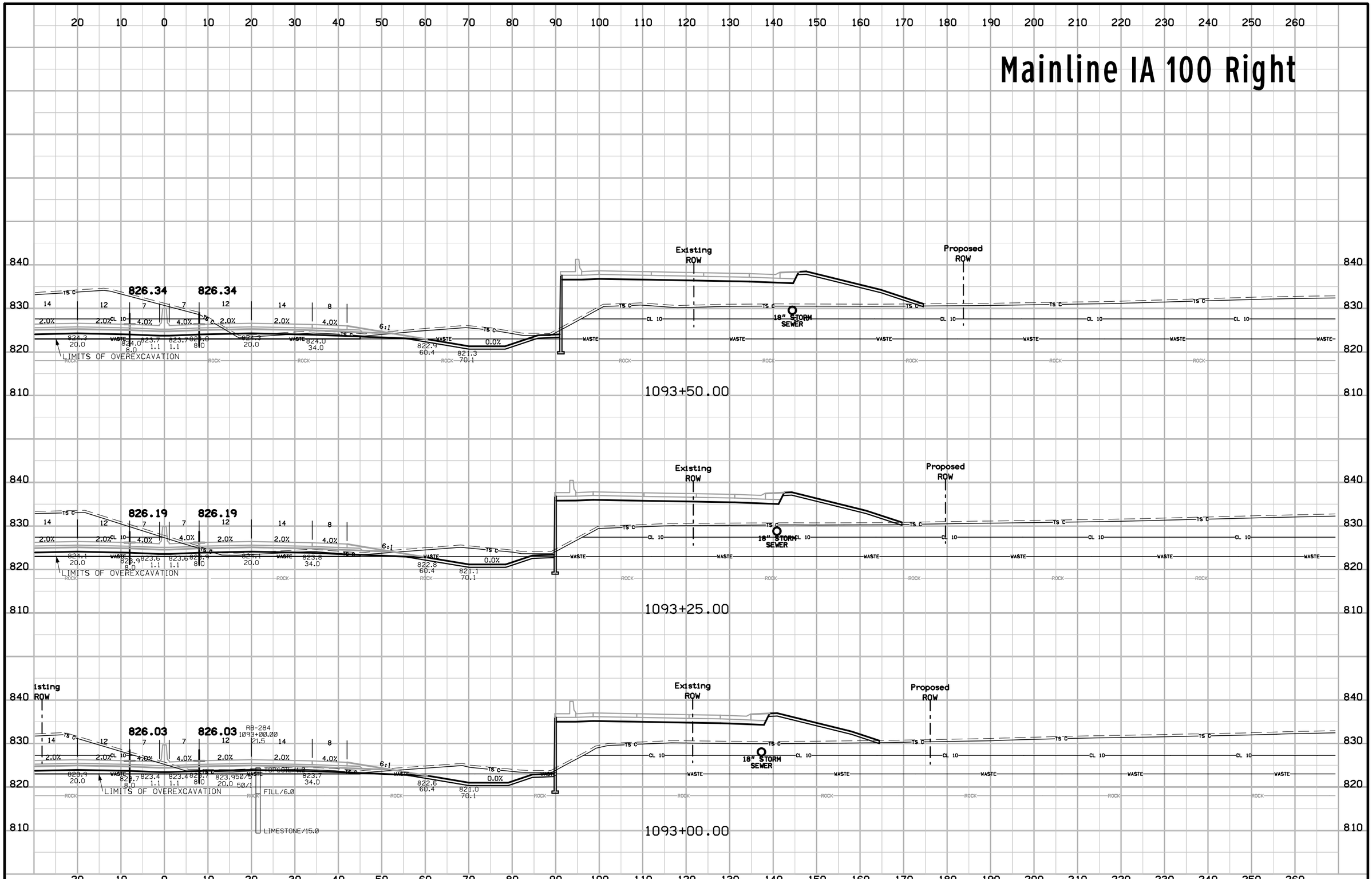

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.25

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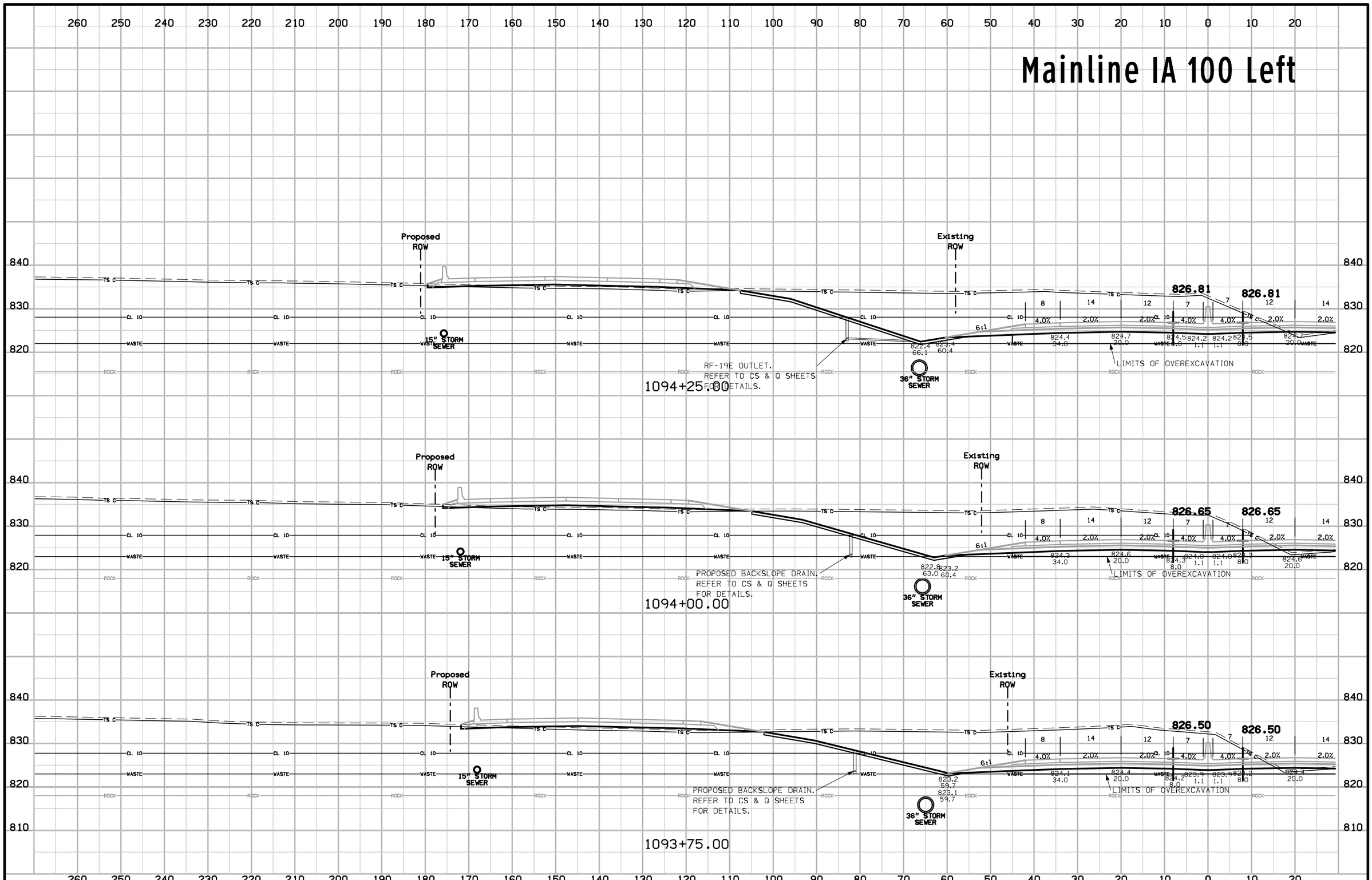

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.26

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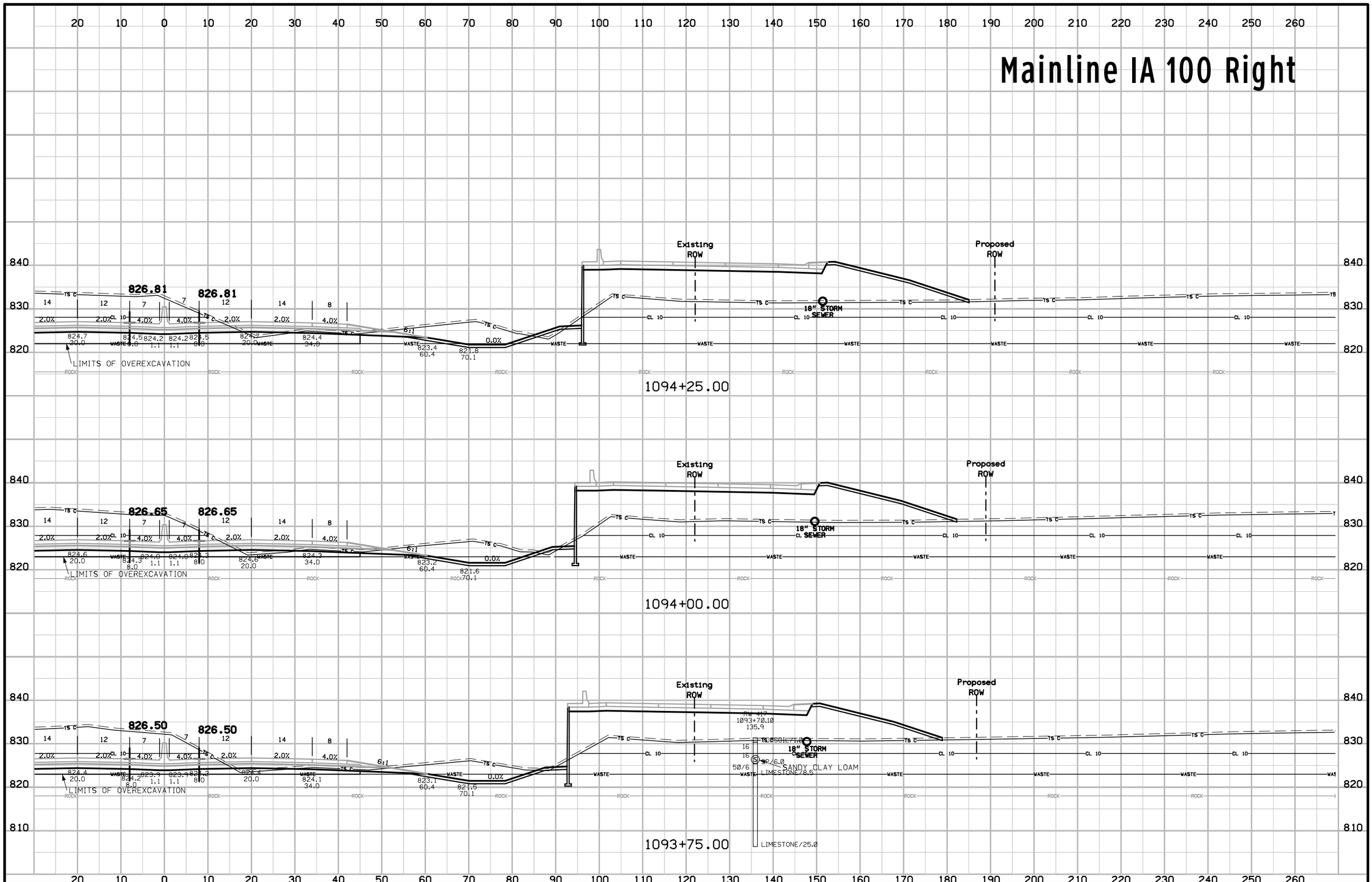

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.27

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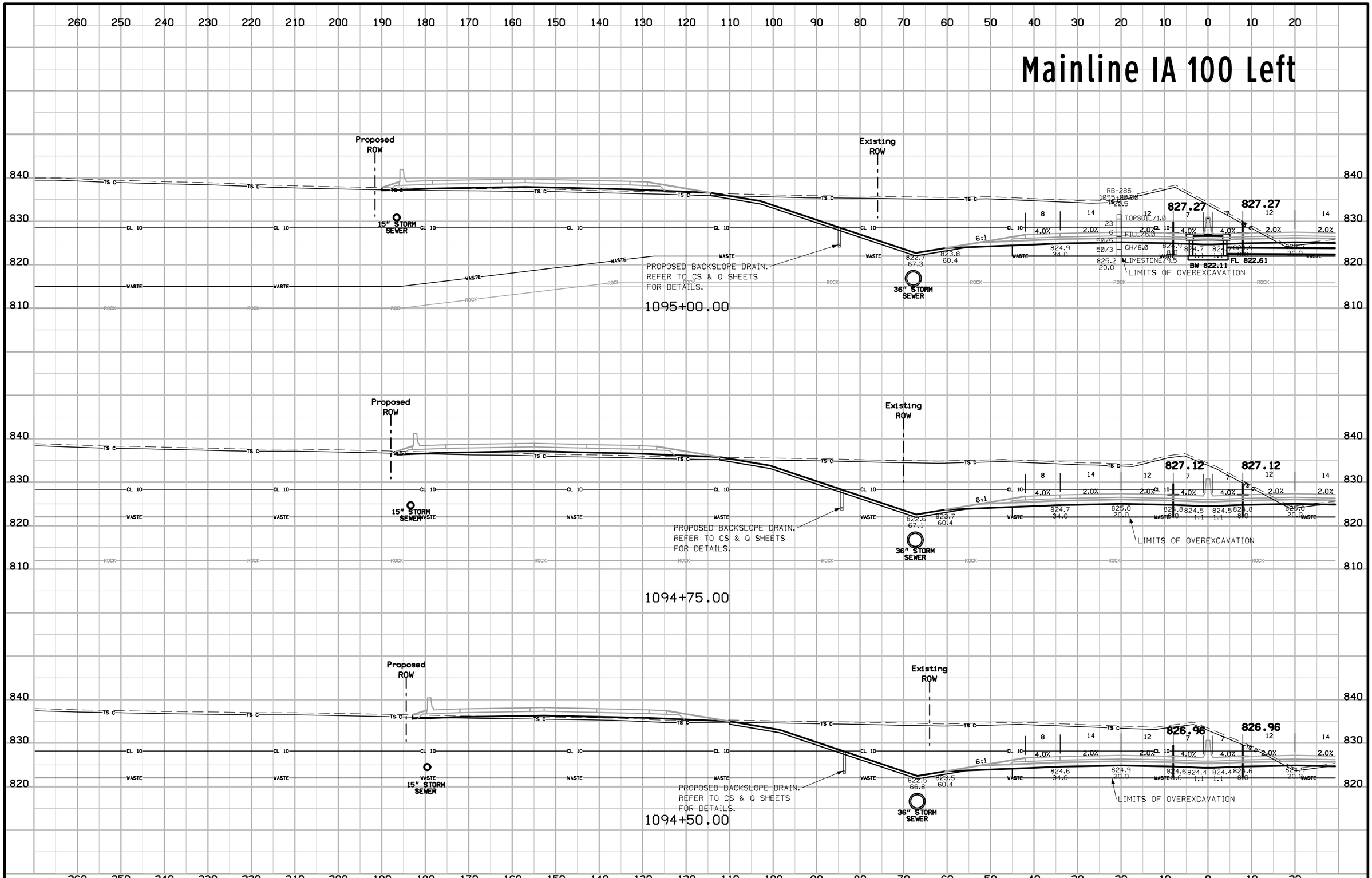

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.28

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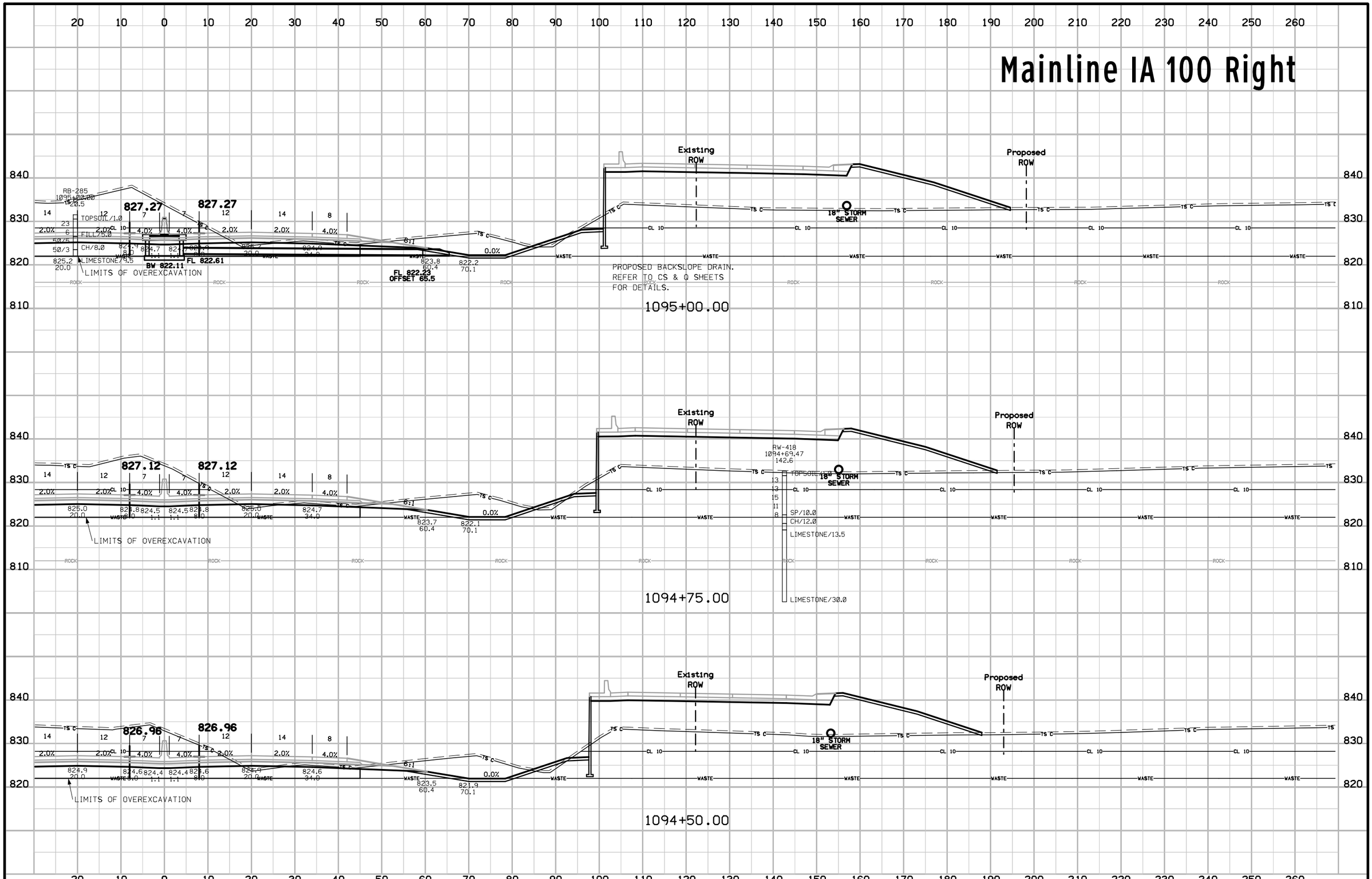

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.29

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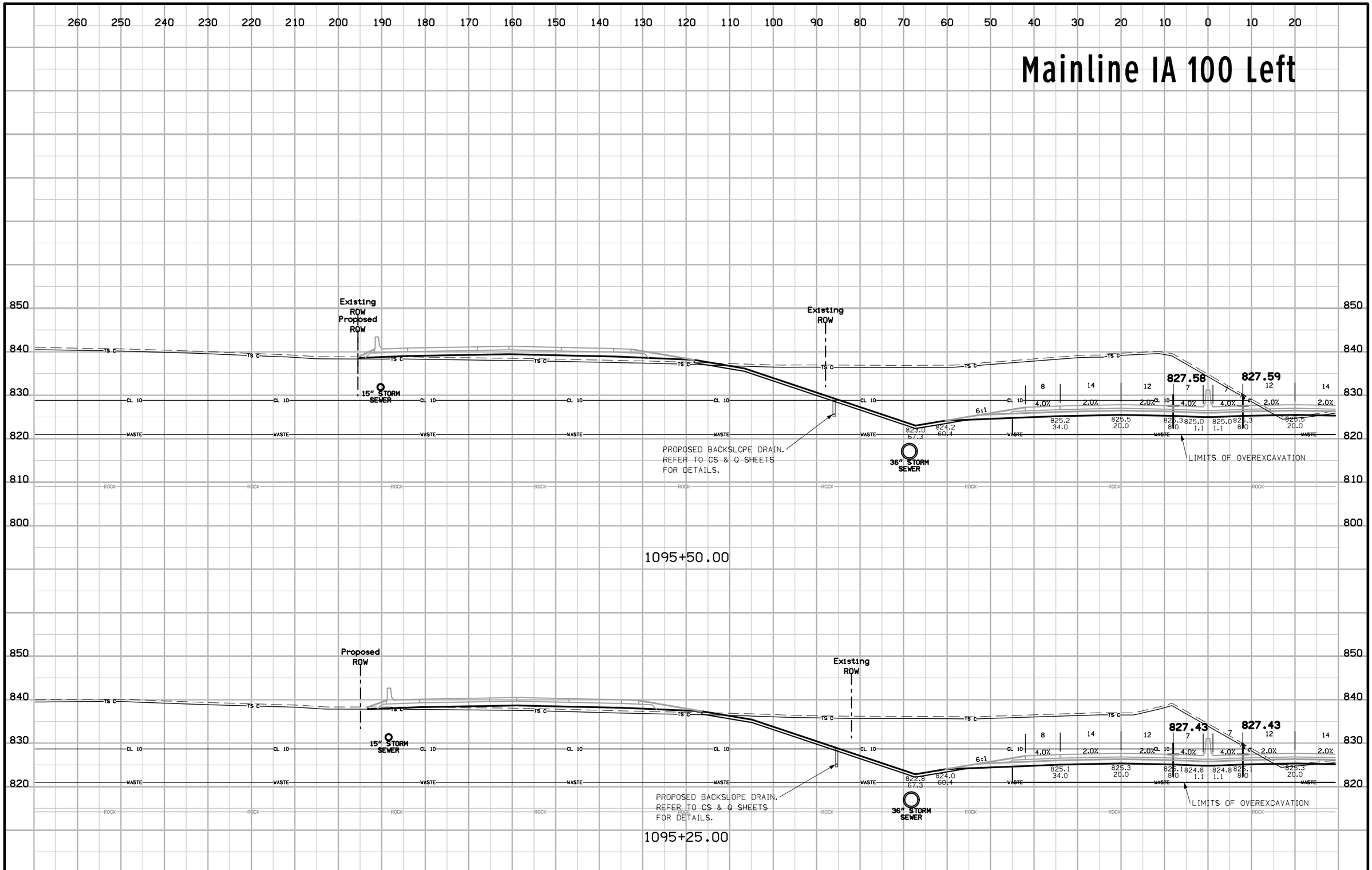

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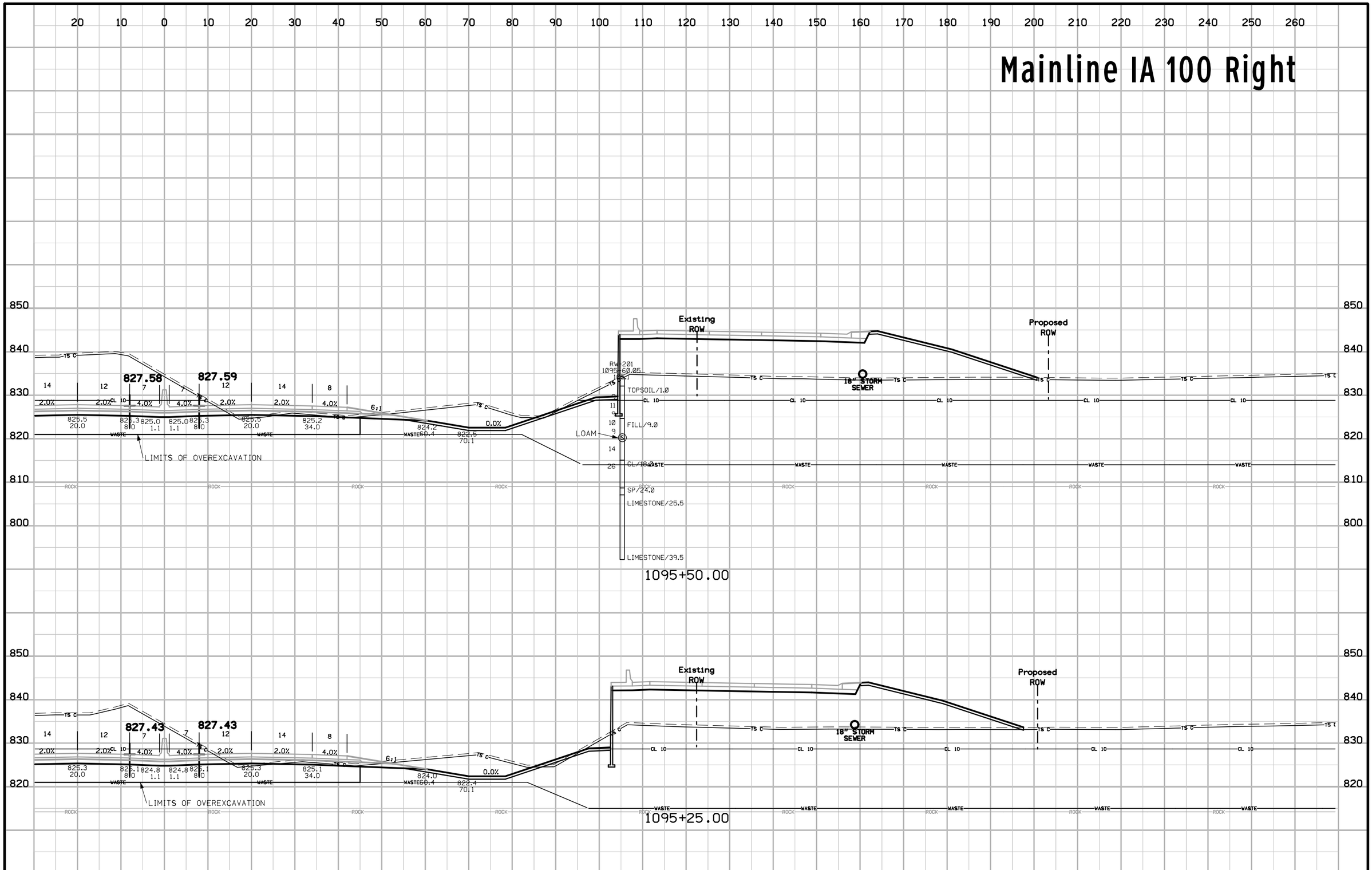

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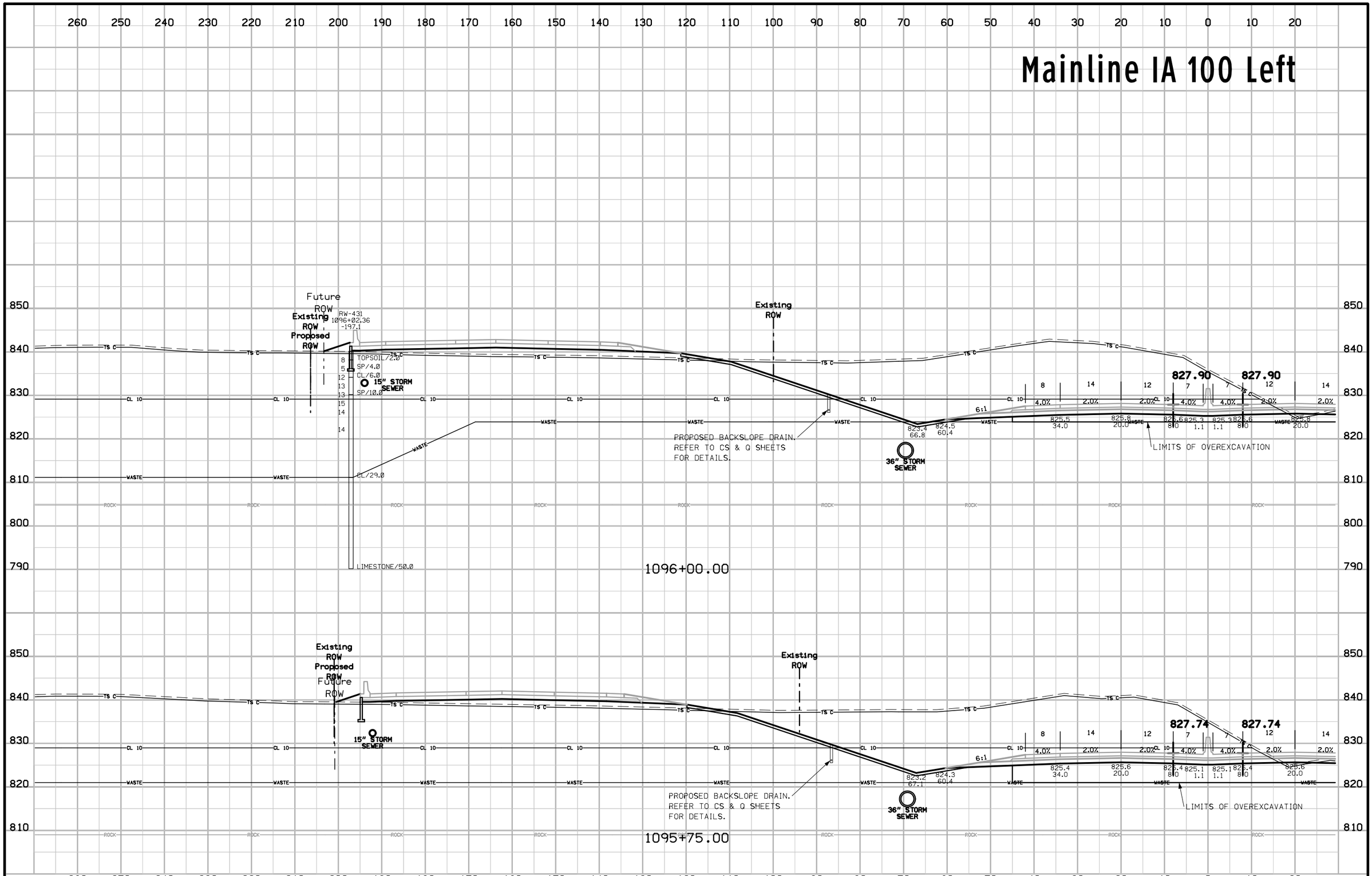

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.32

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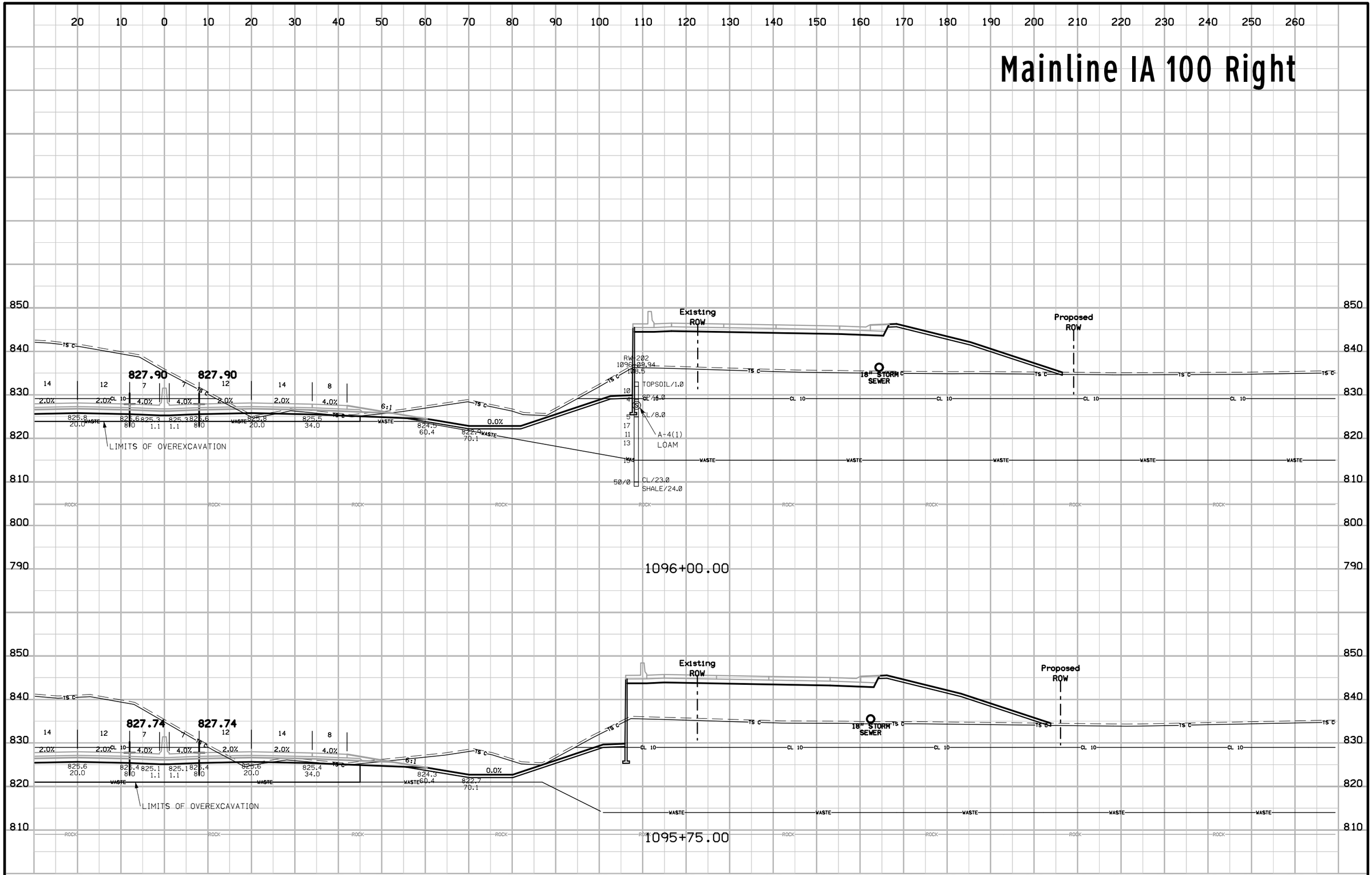

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.33

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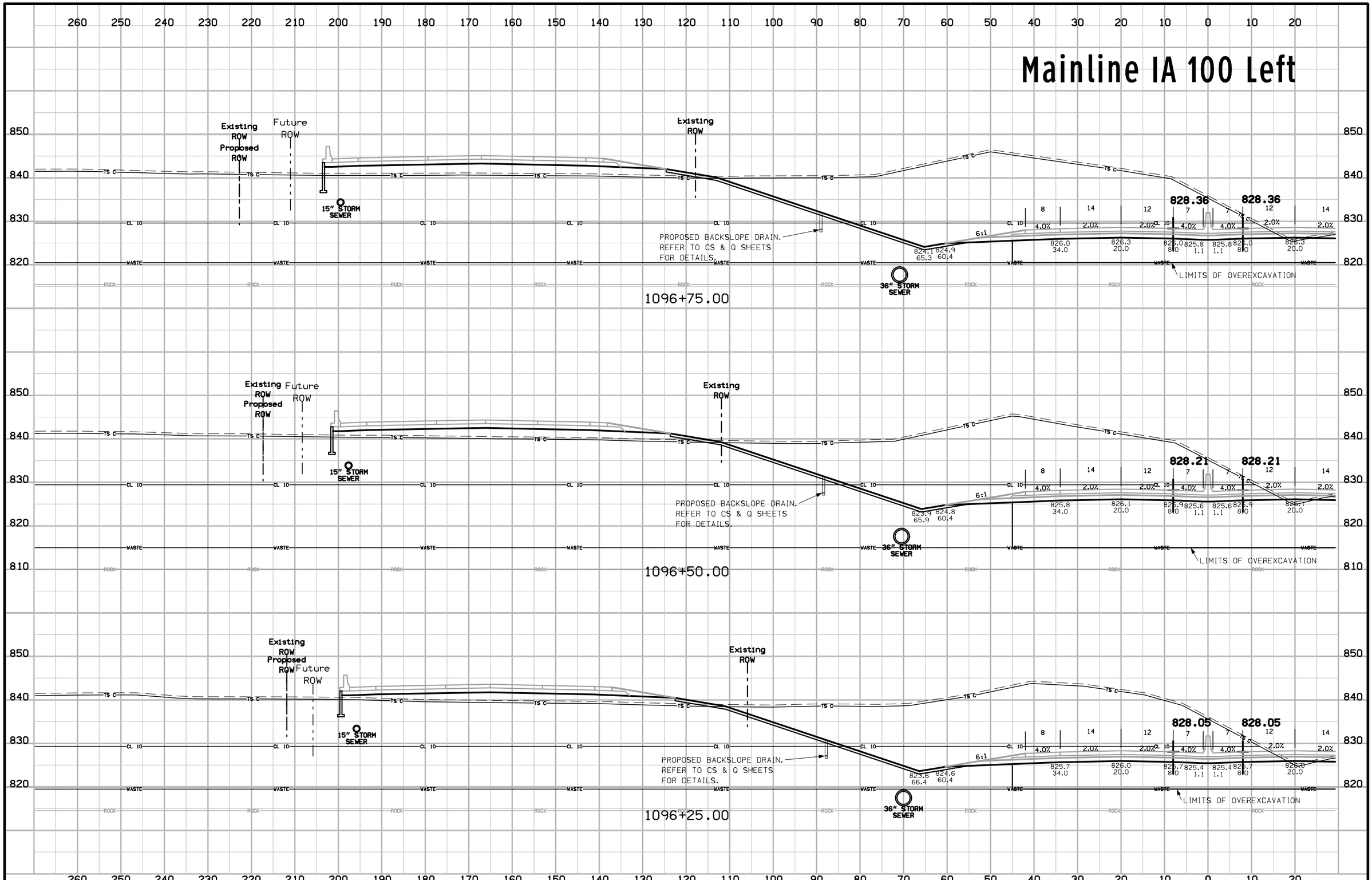

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.34

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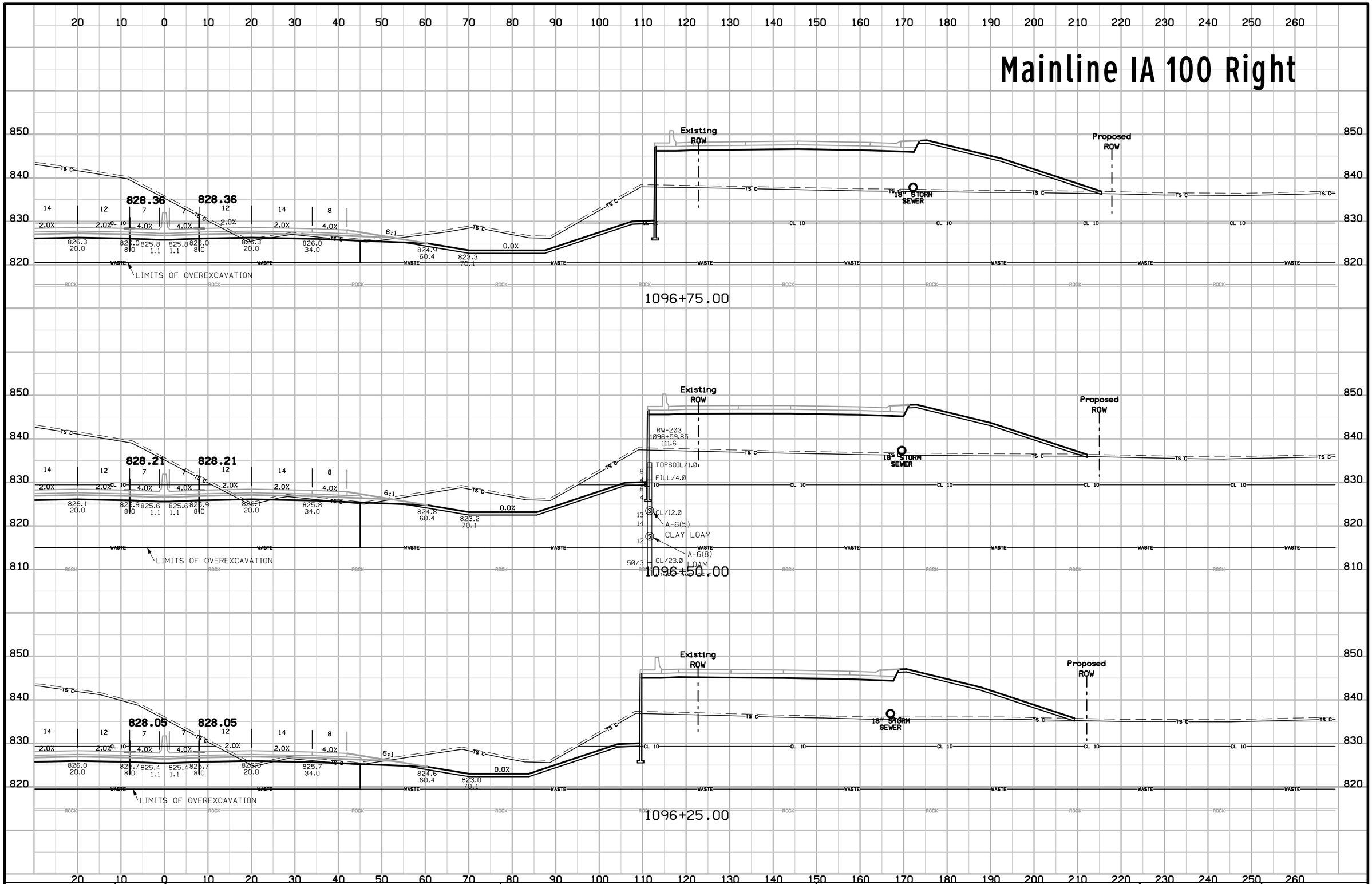

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.35

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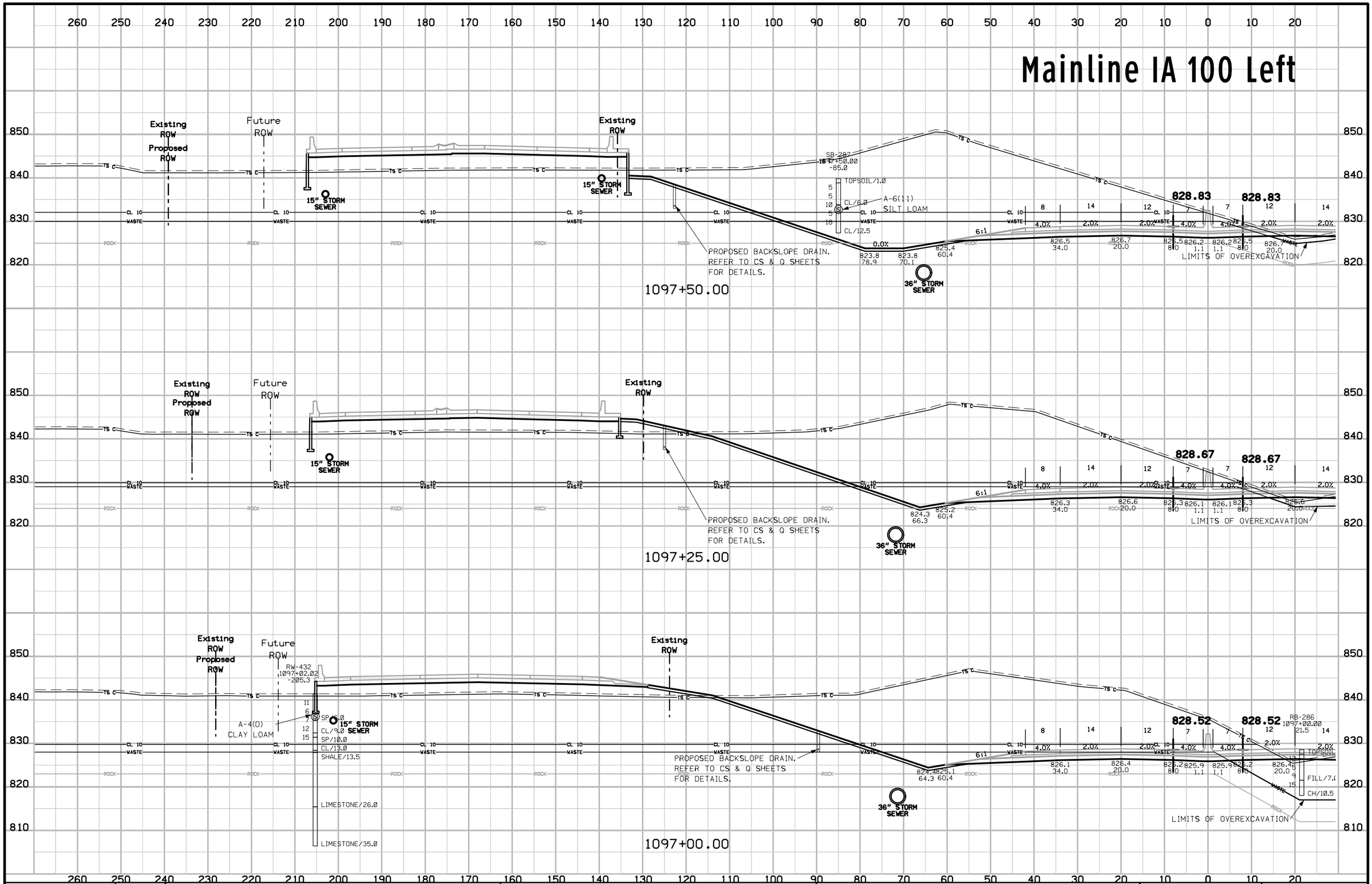

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.36

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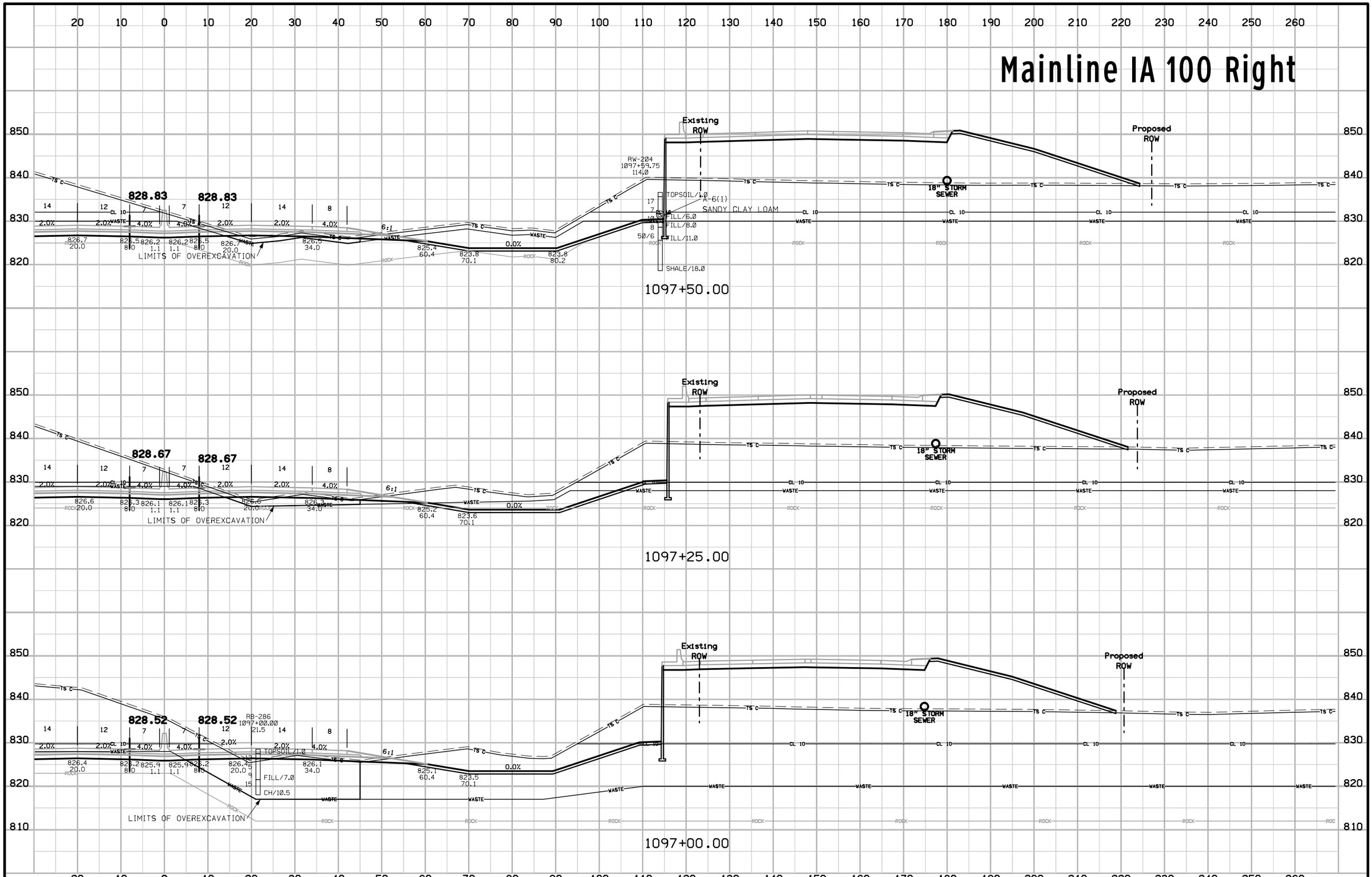

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.37

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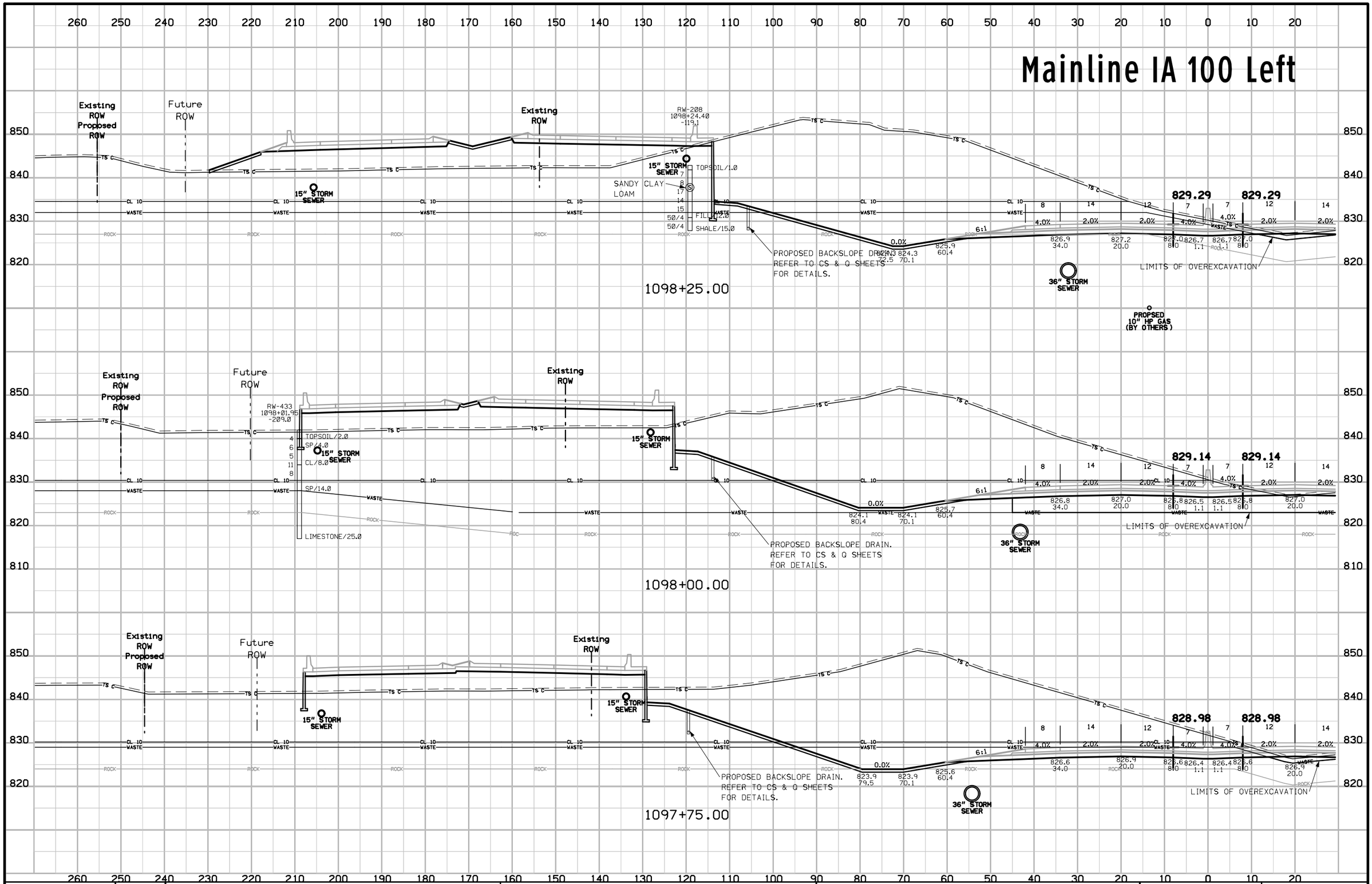

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.38

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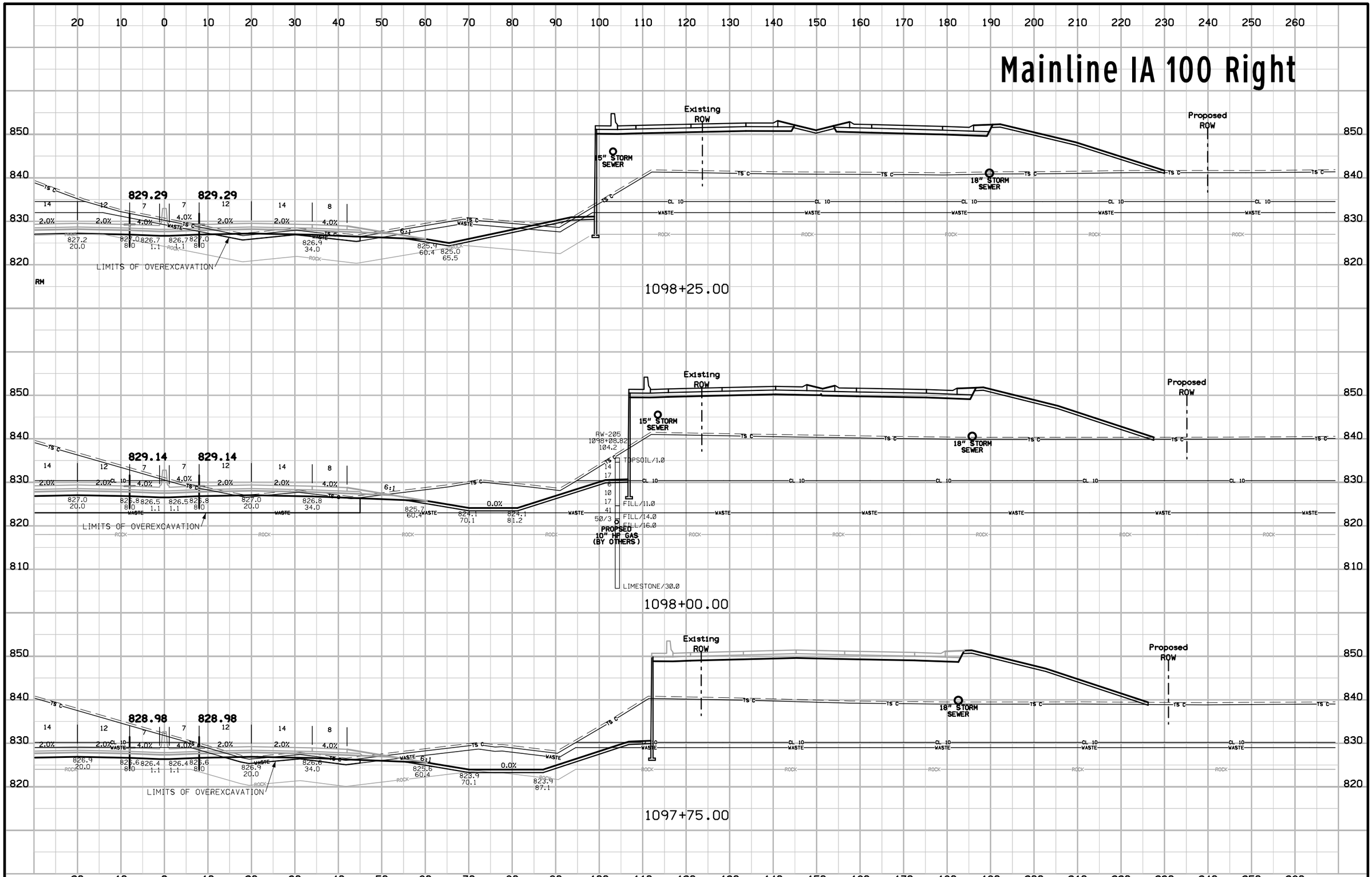

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.39

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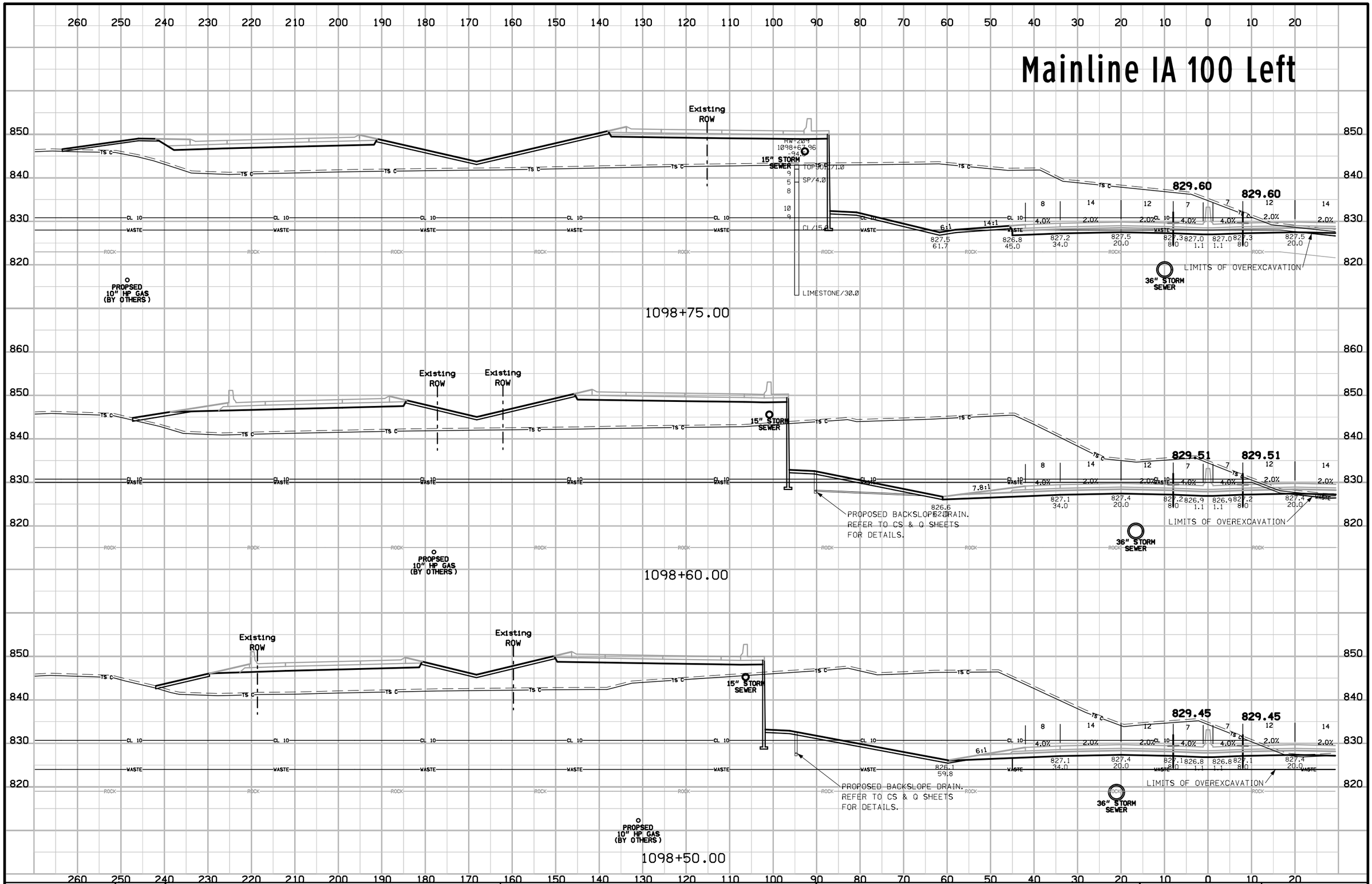

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.40

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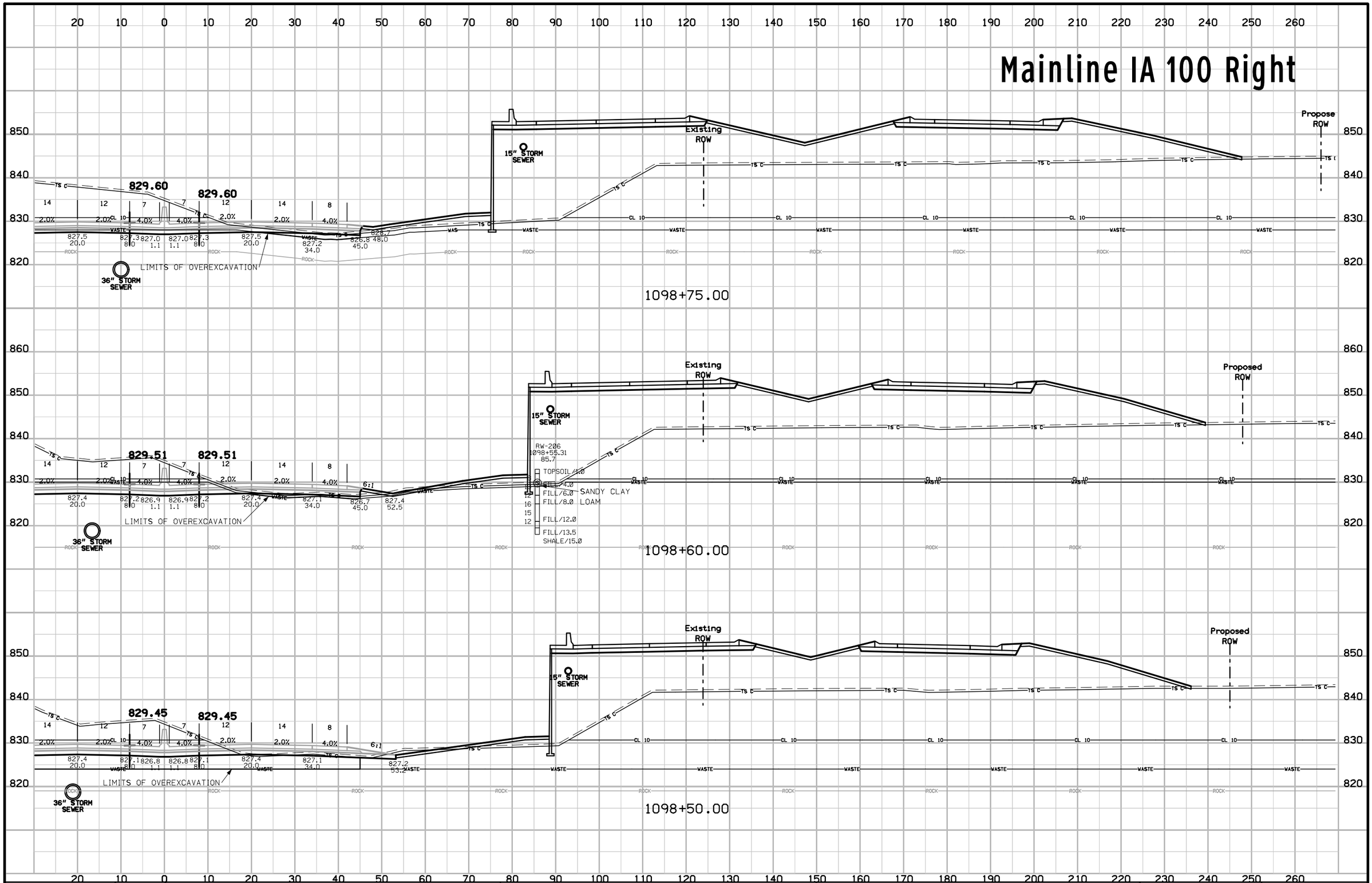

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.41

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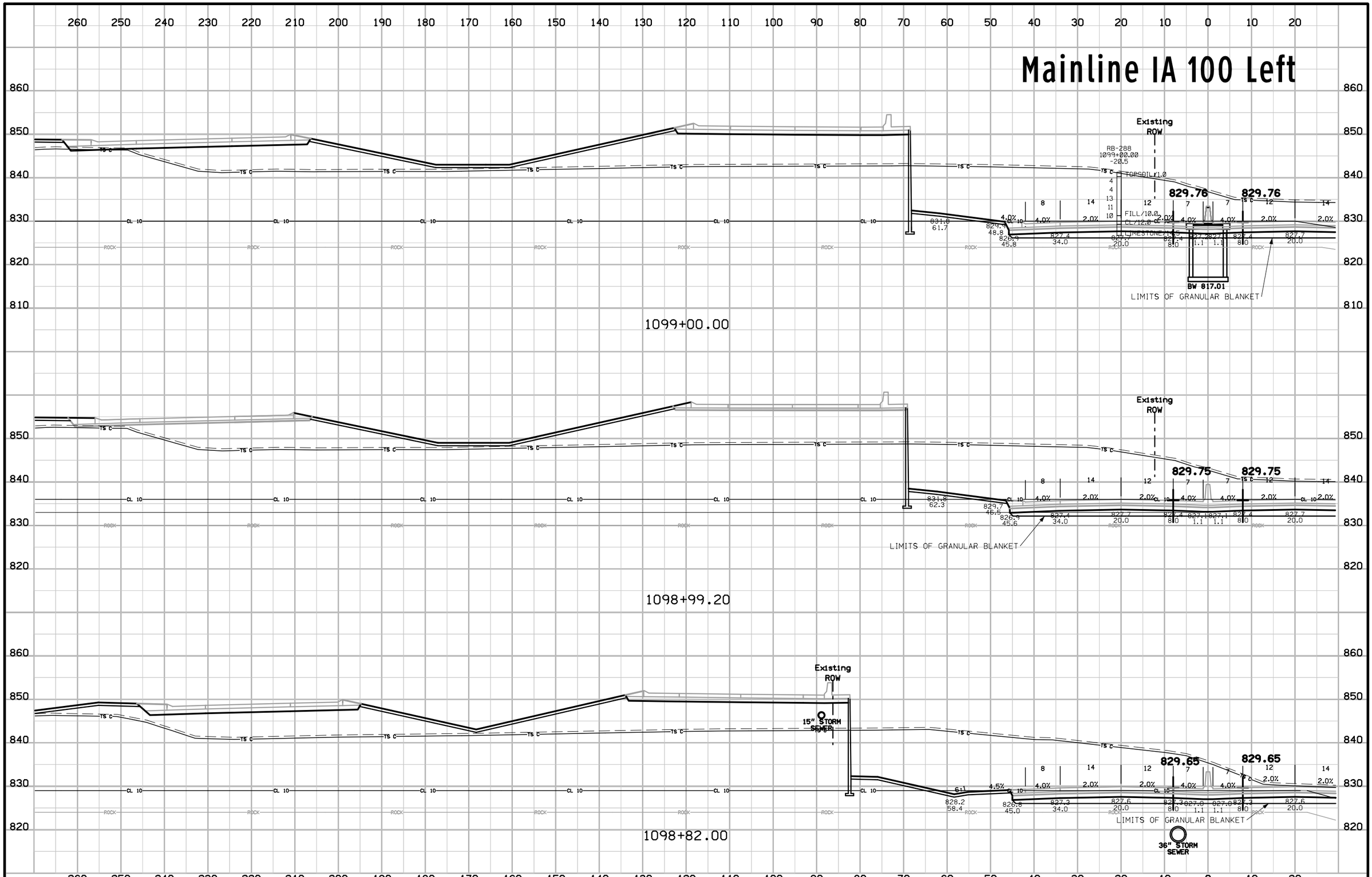

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.42

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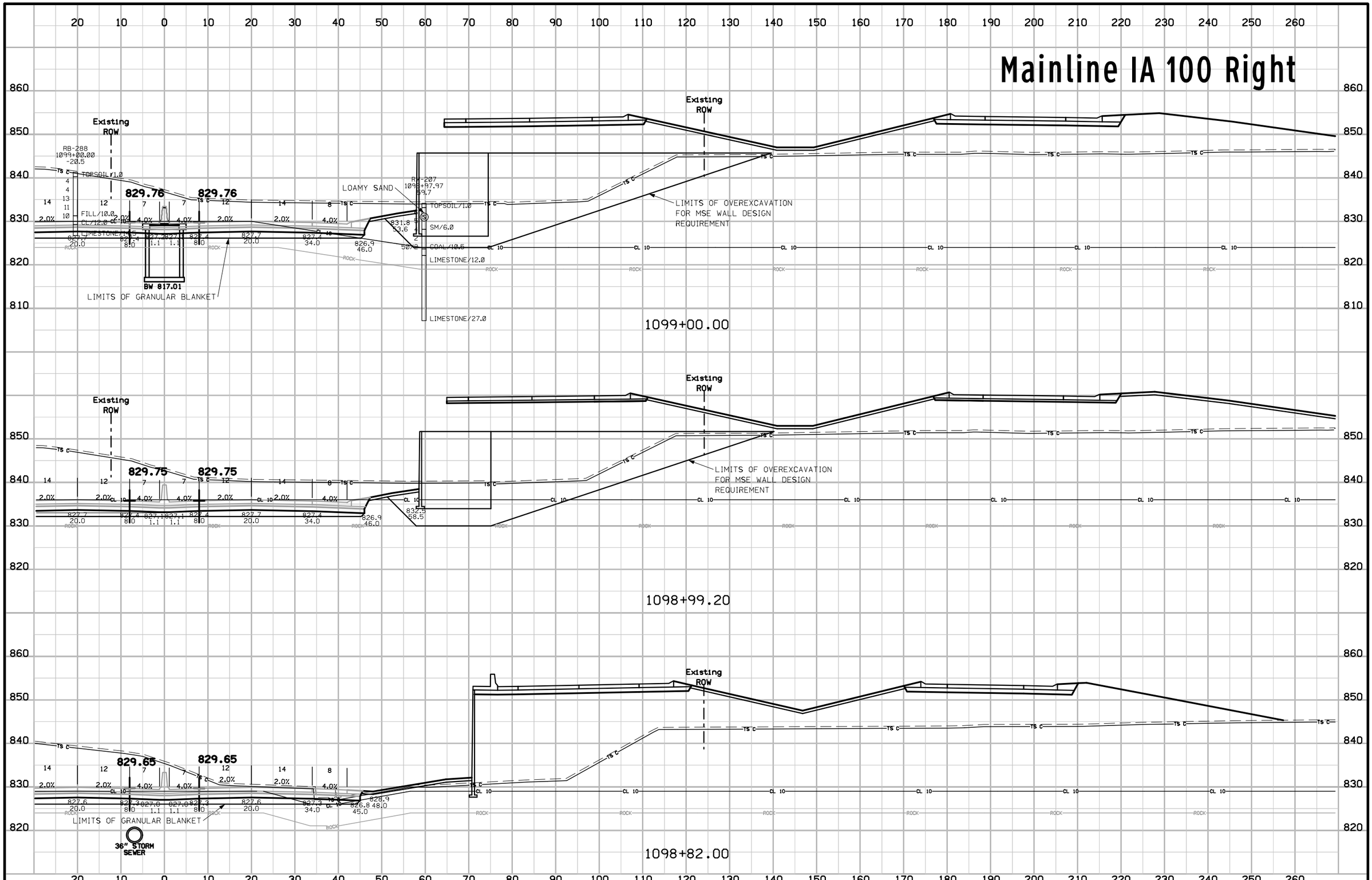

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.43

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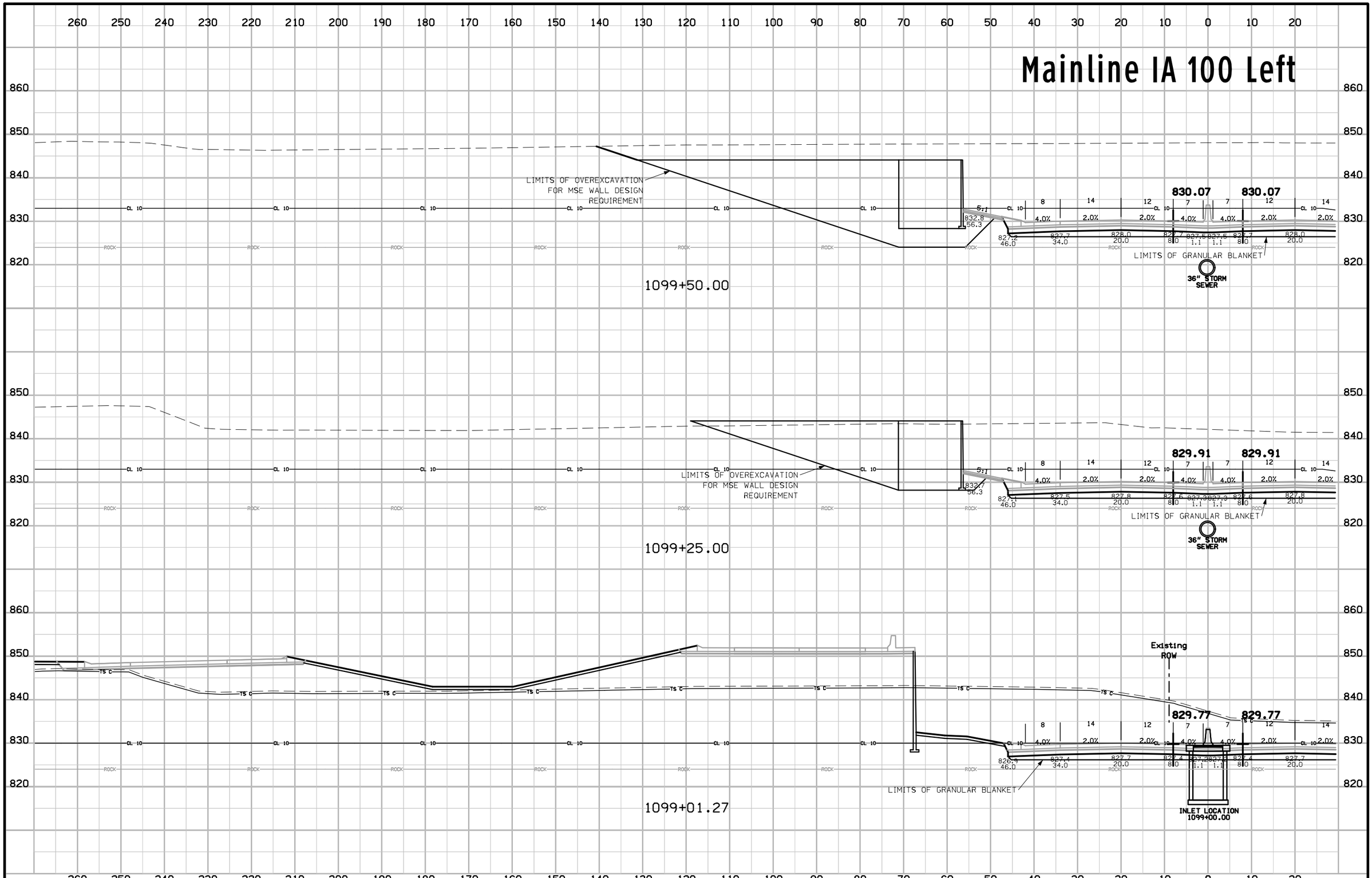

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.44

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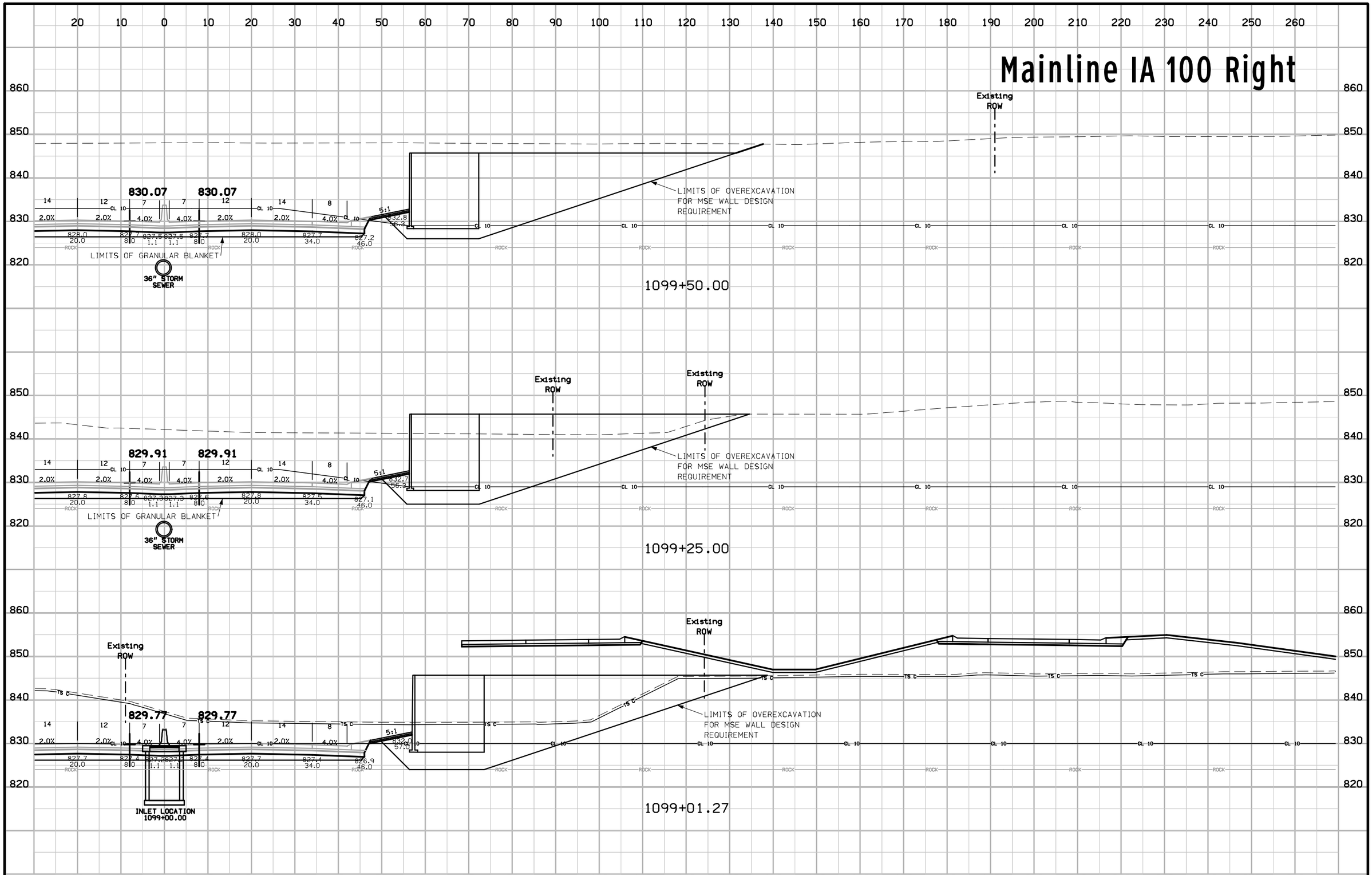

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.45

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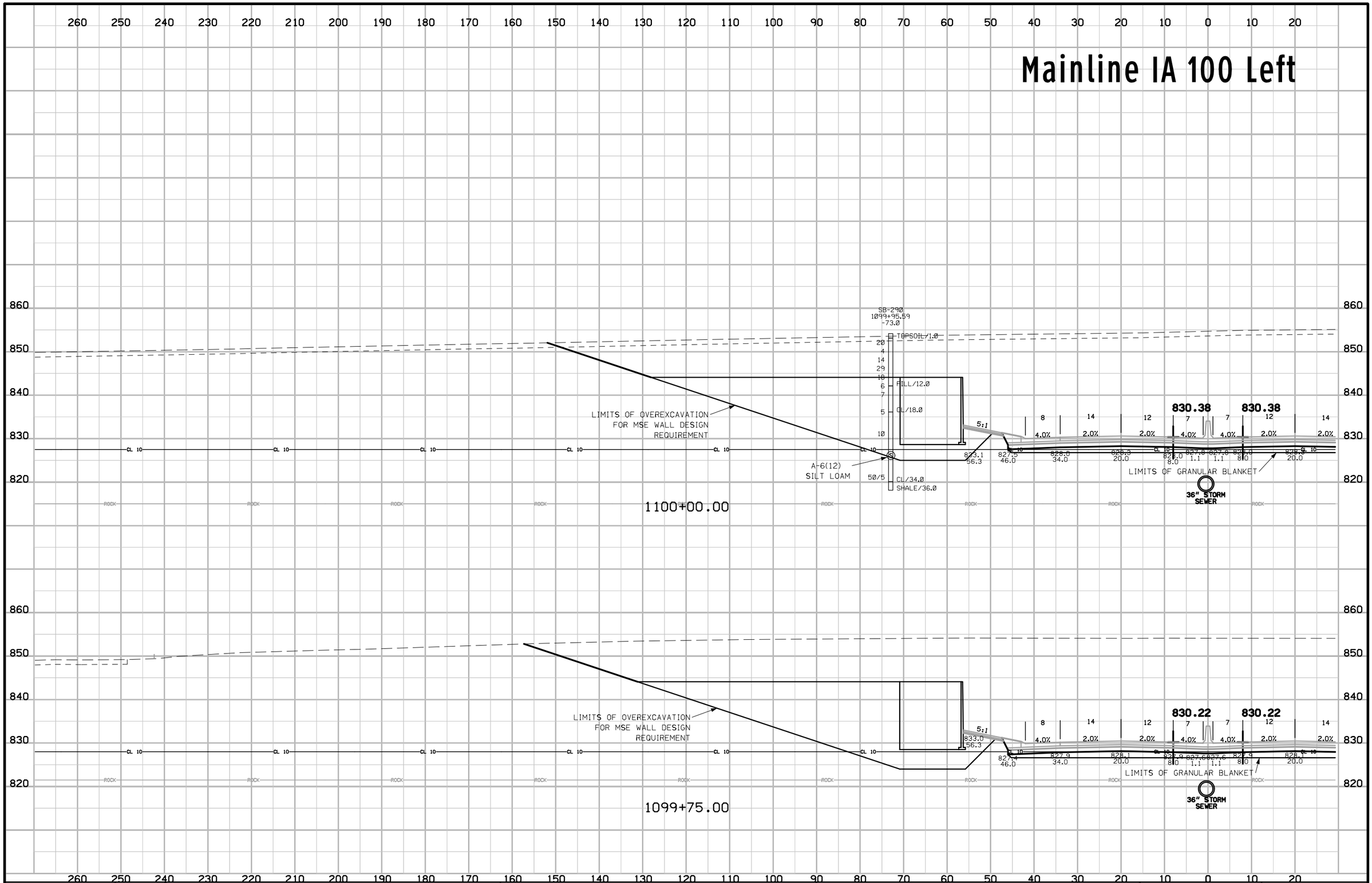

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.46

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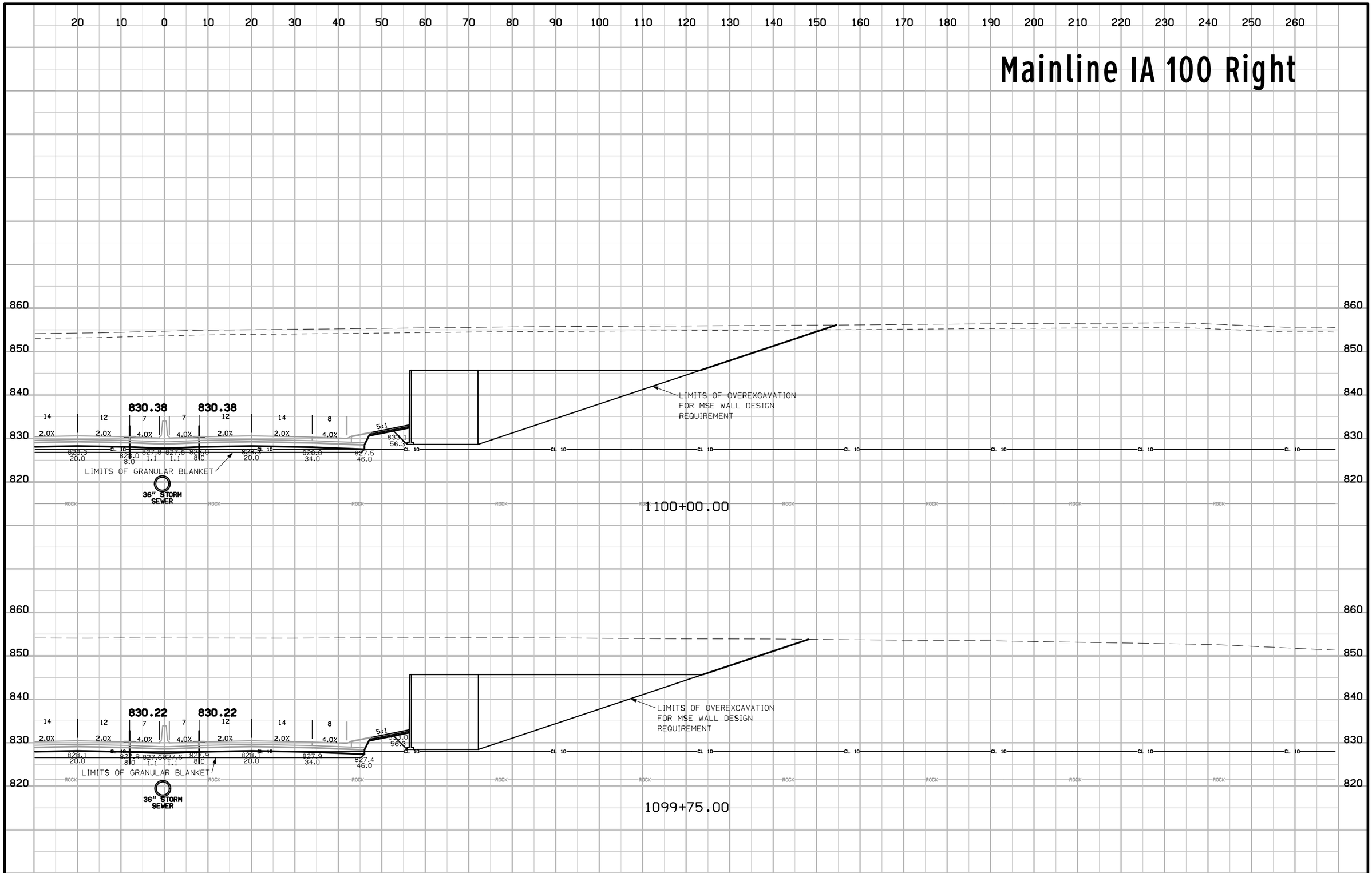

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.47

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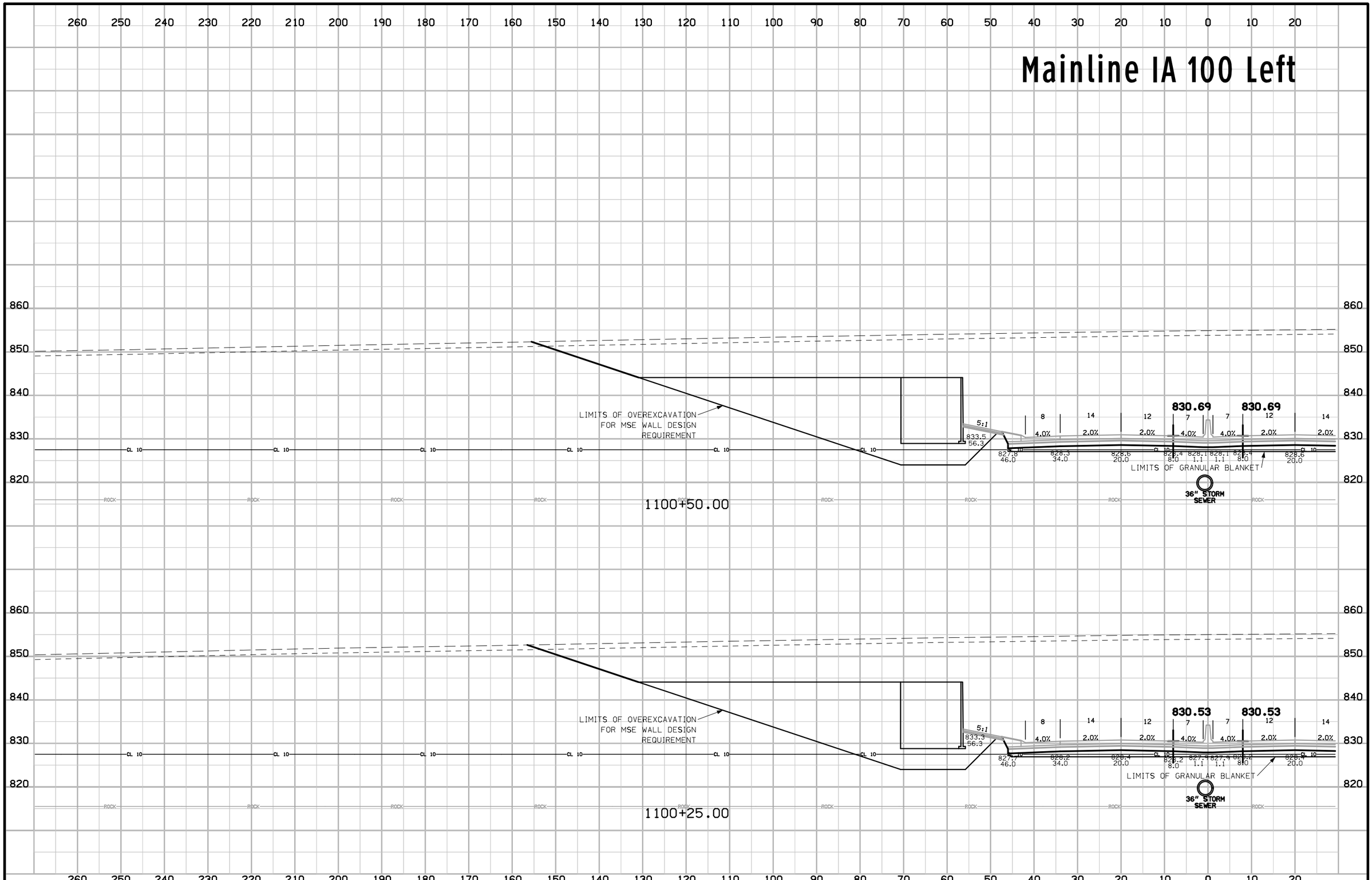

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.48

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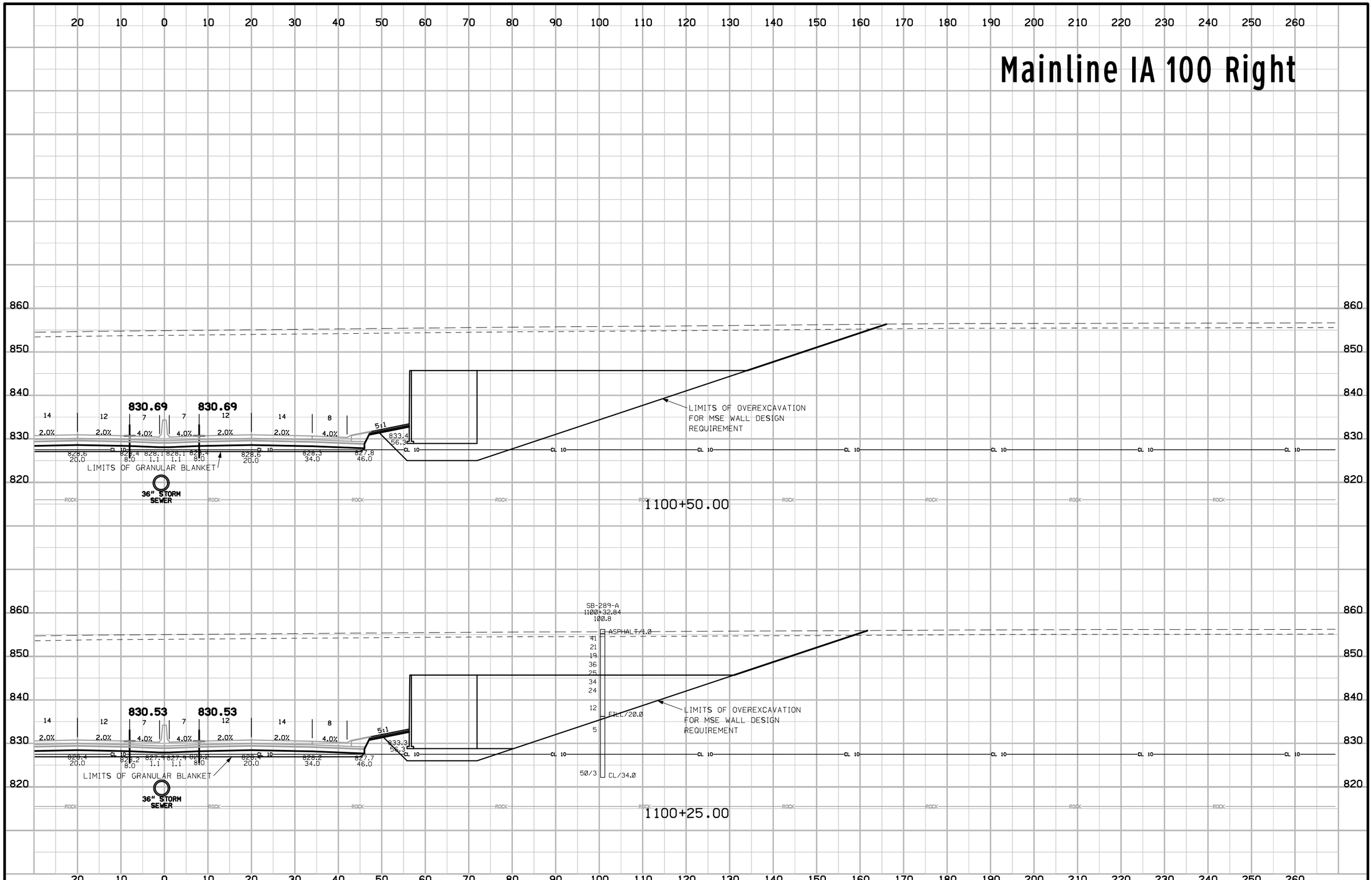

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.49

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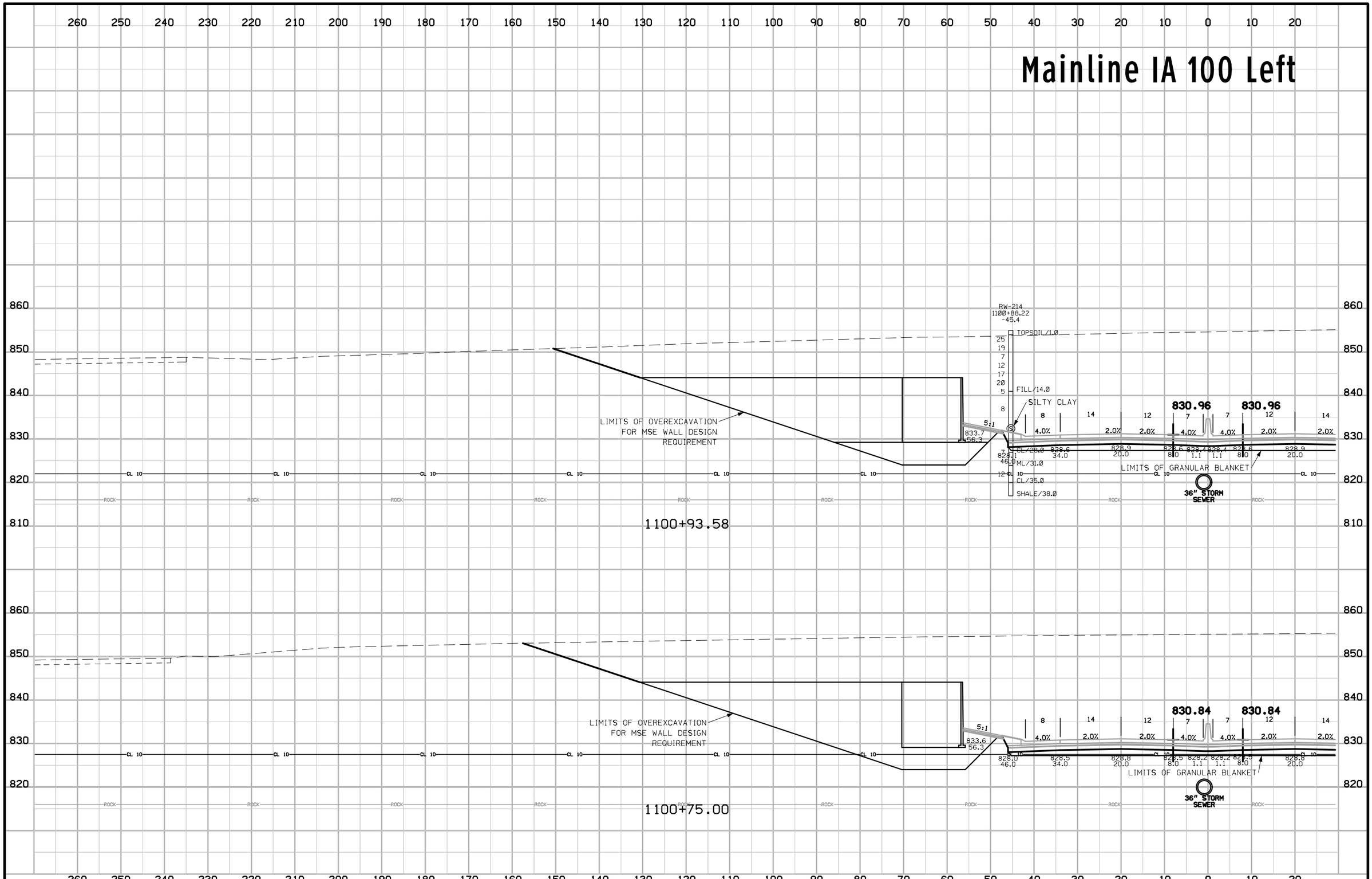

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.50

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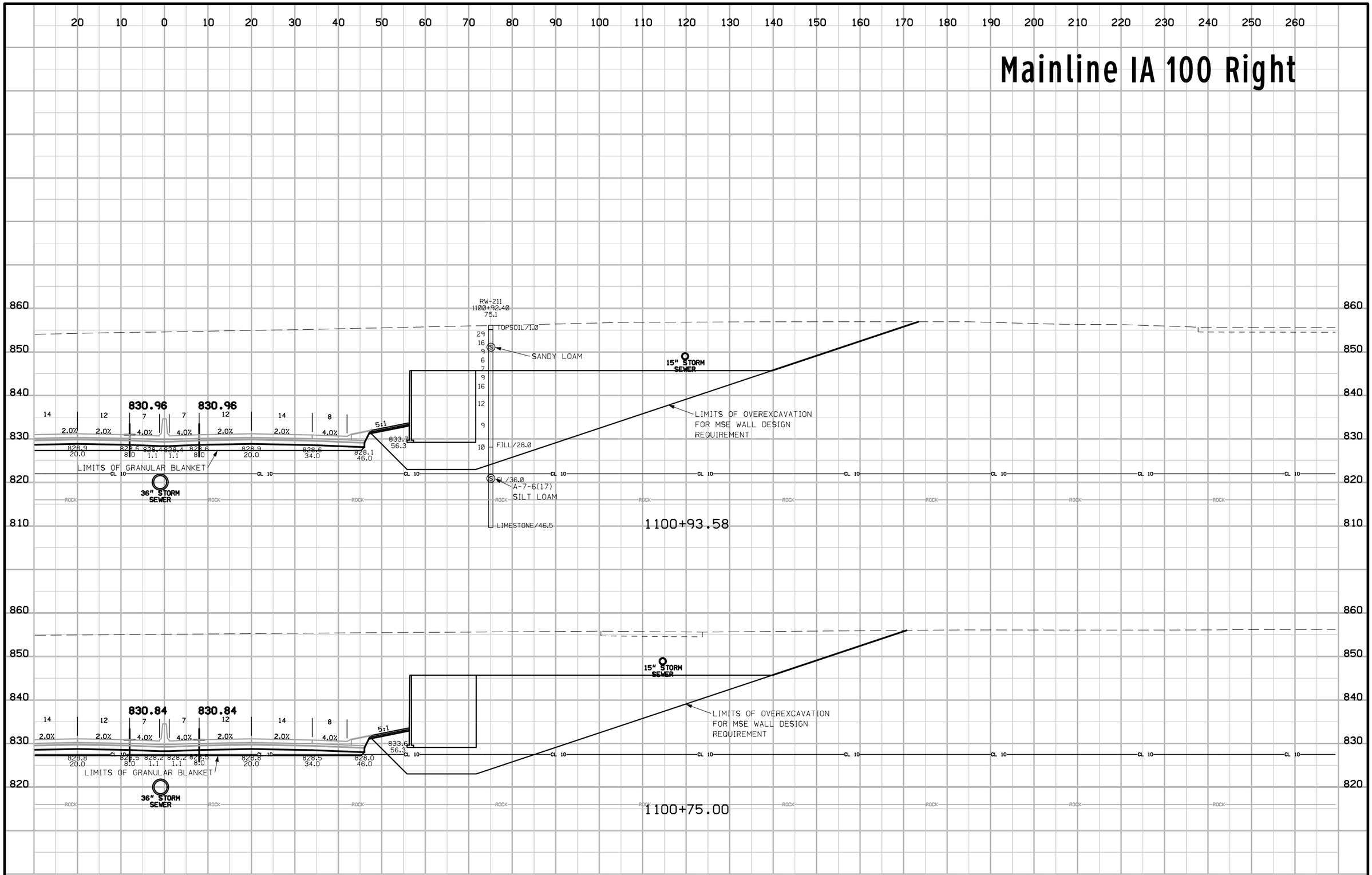

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.51

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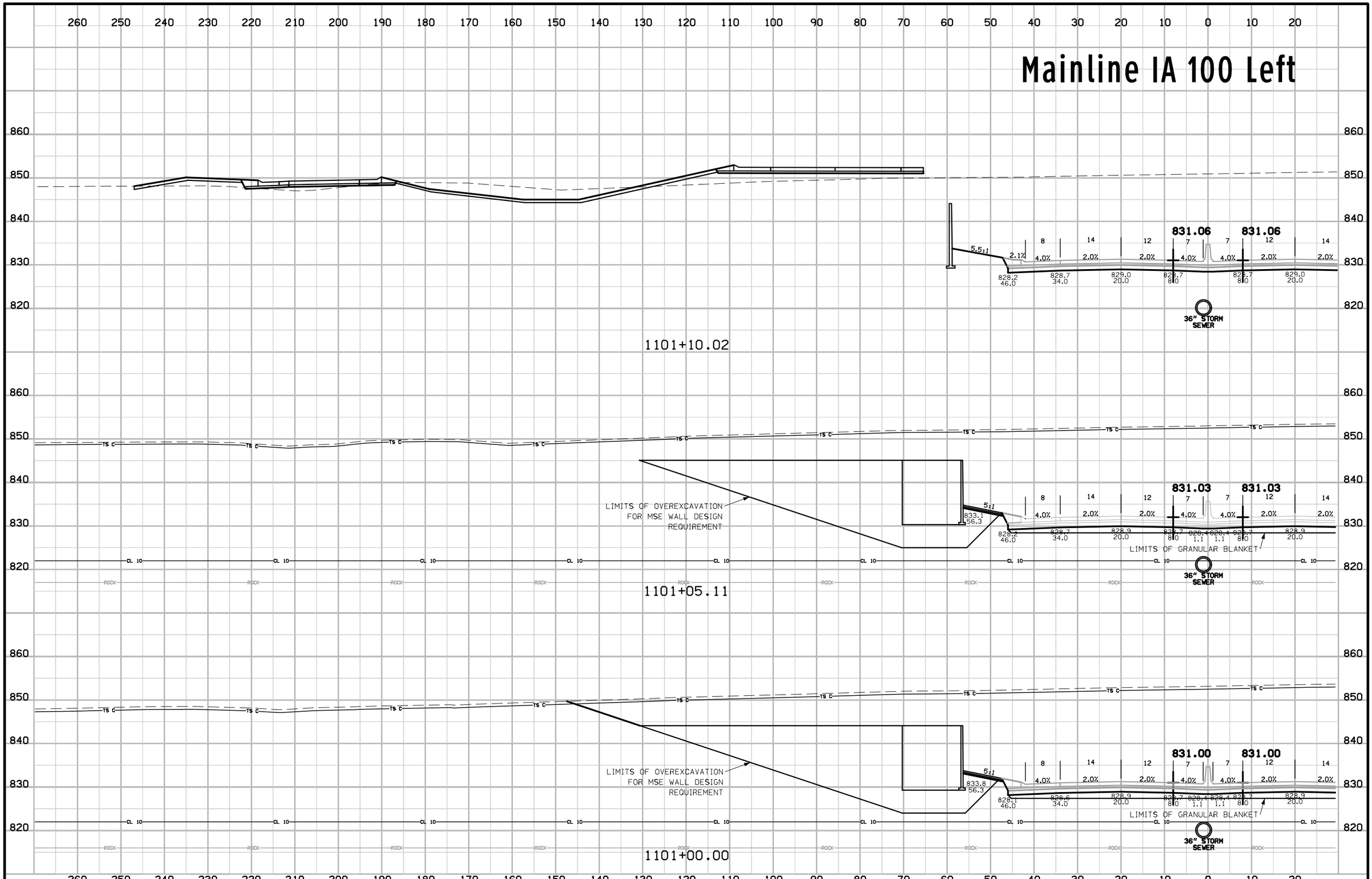

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.52

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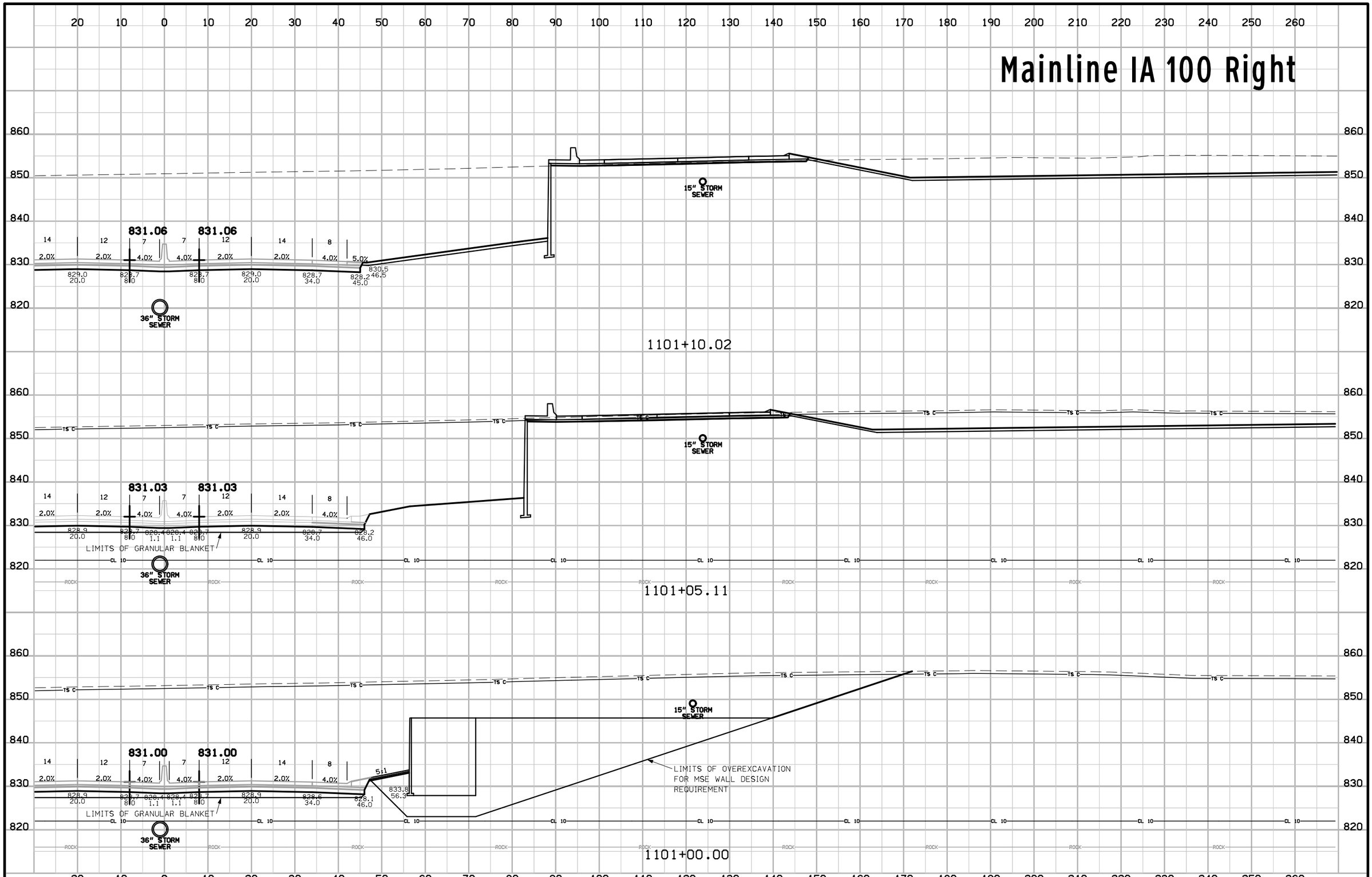

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.53

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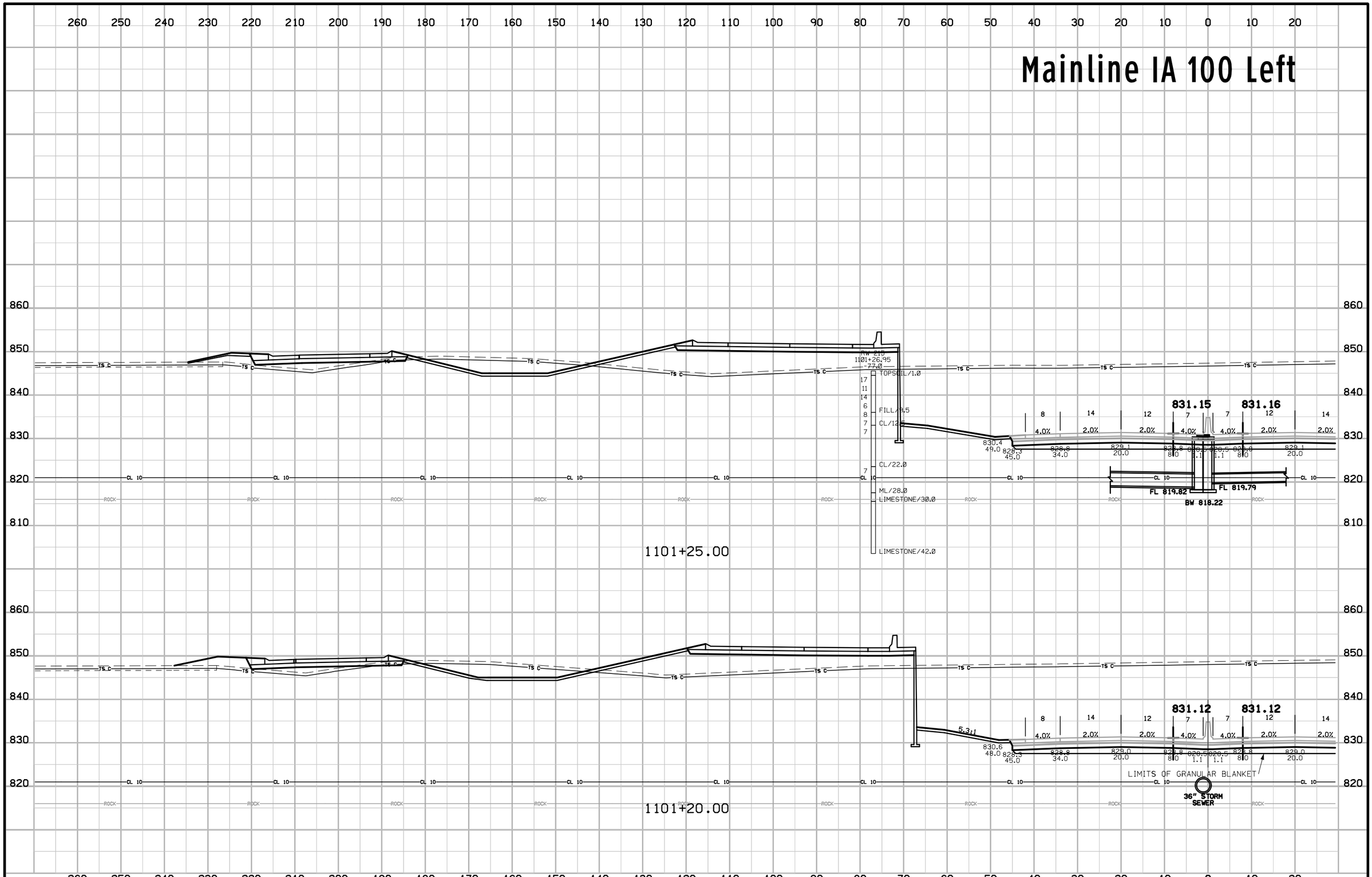

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.54

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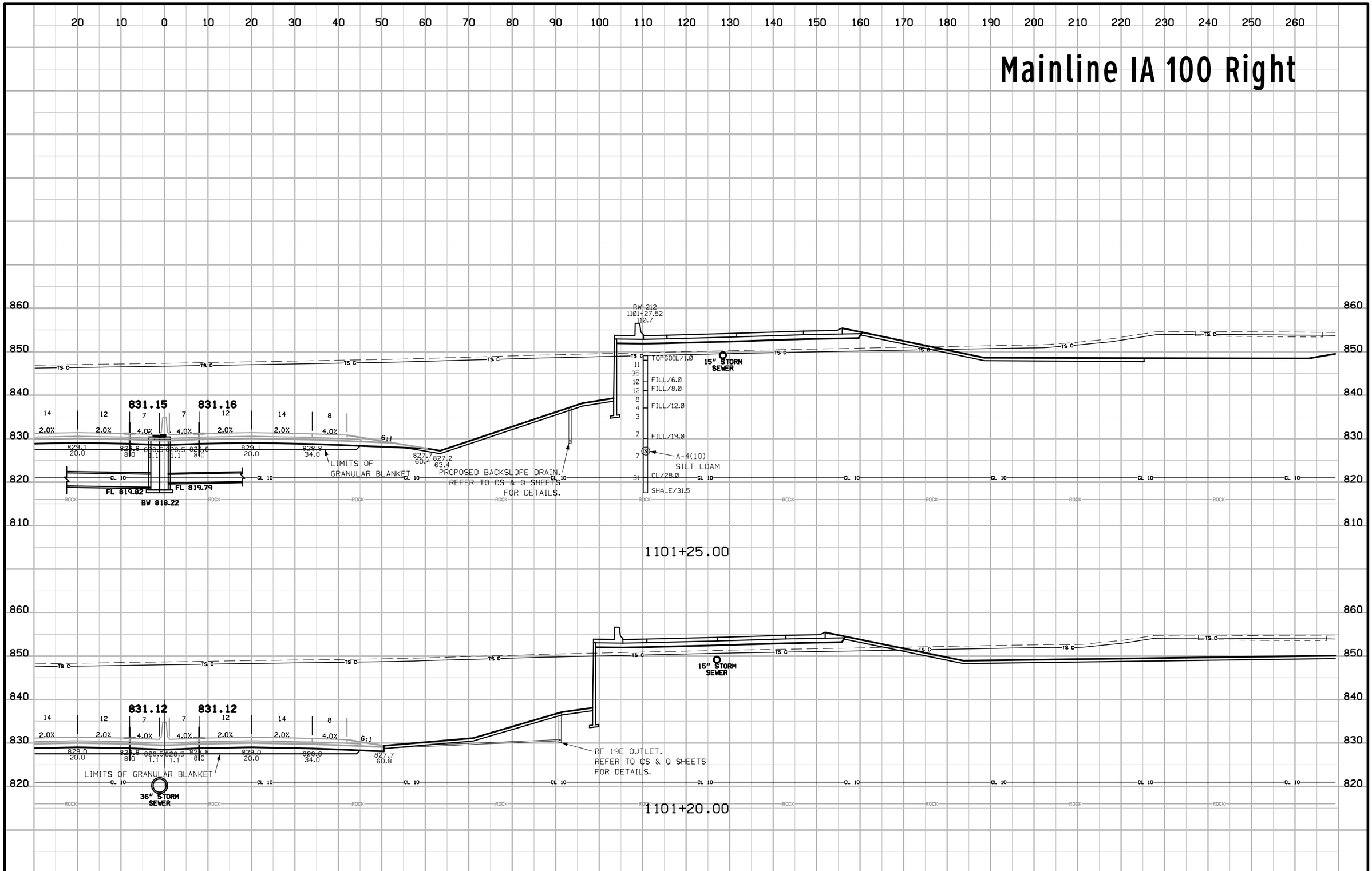

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.55

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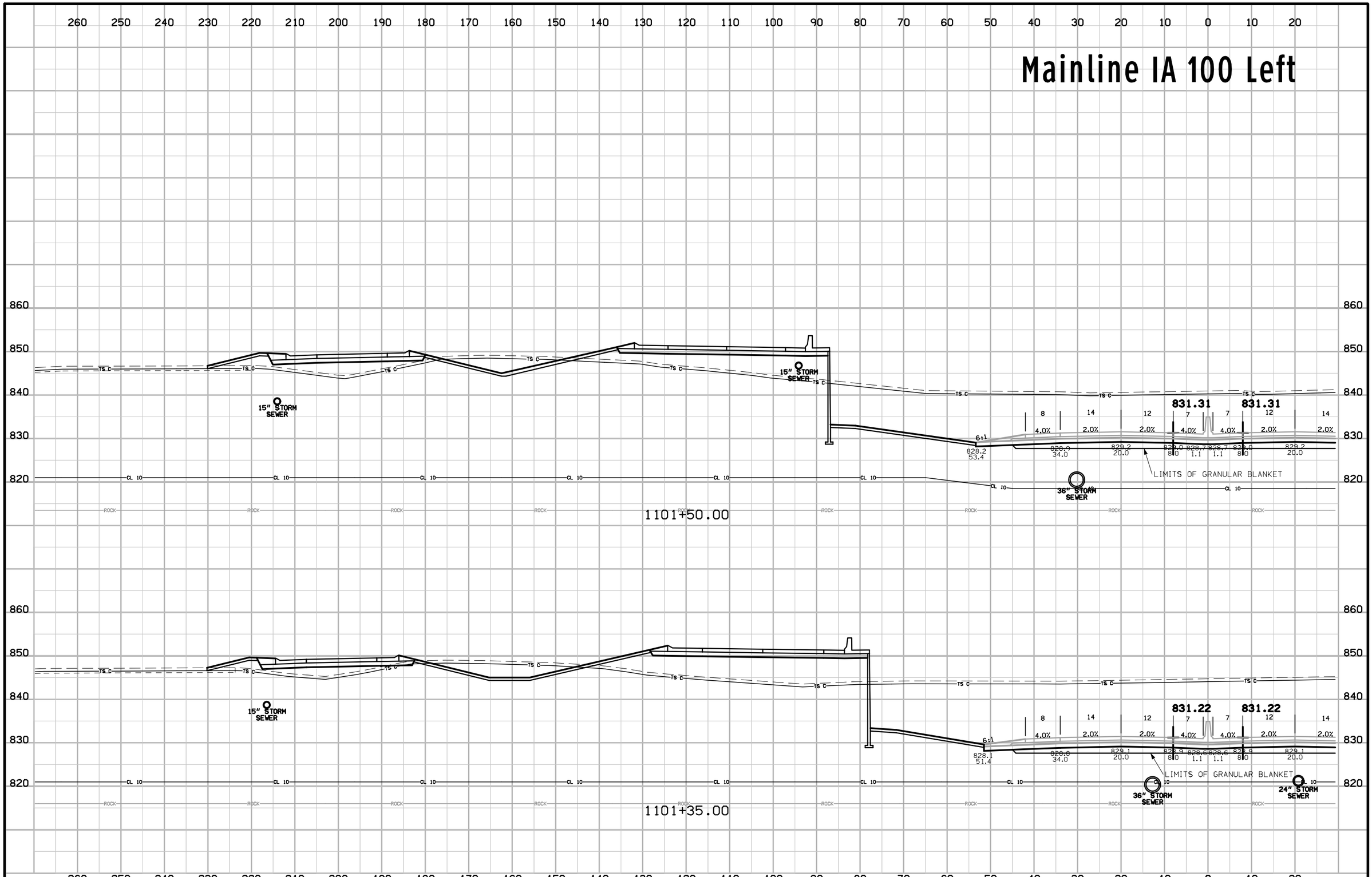

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.56

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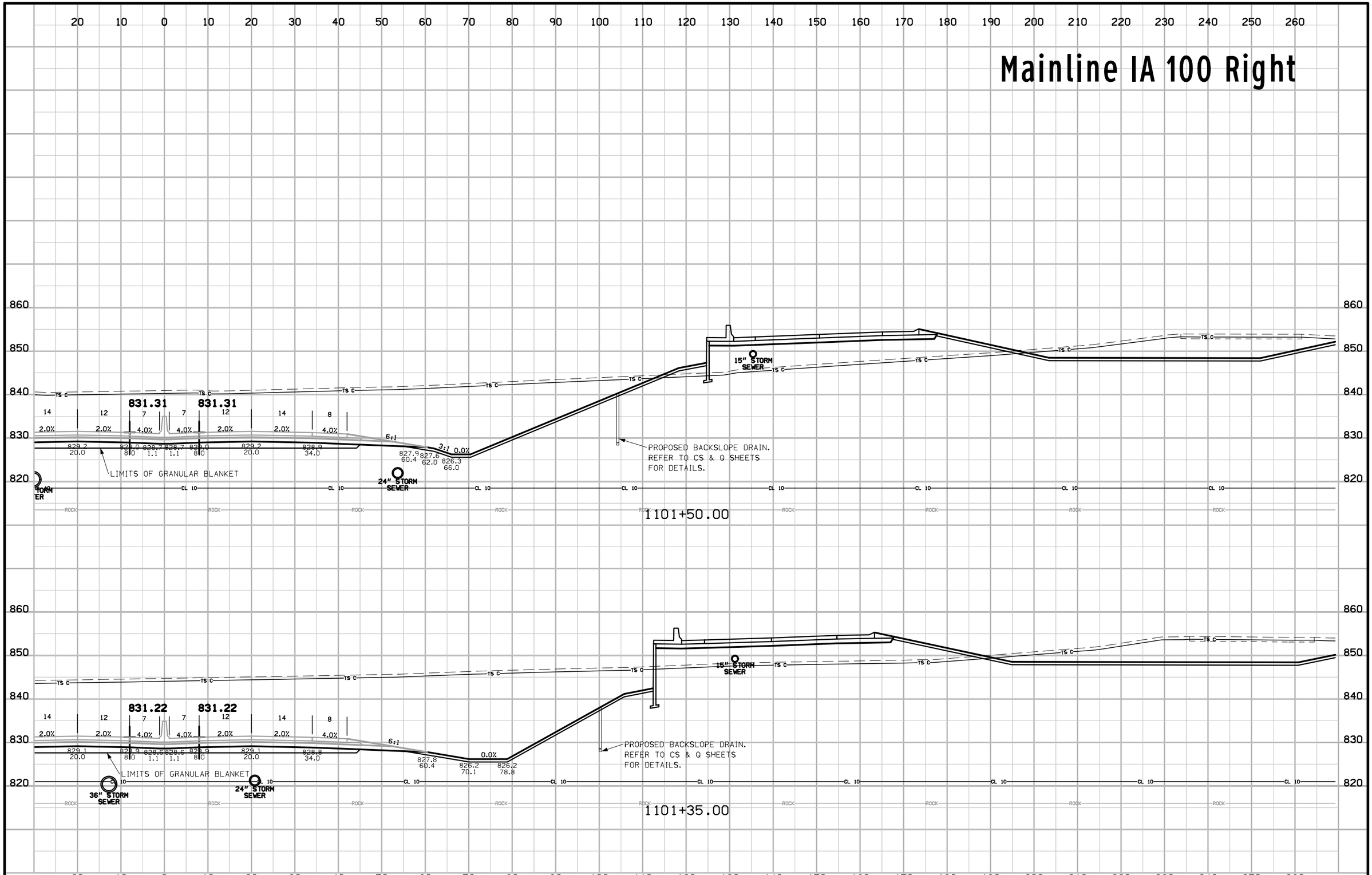

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.57

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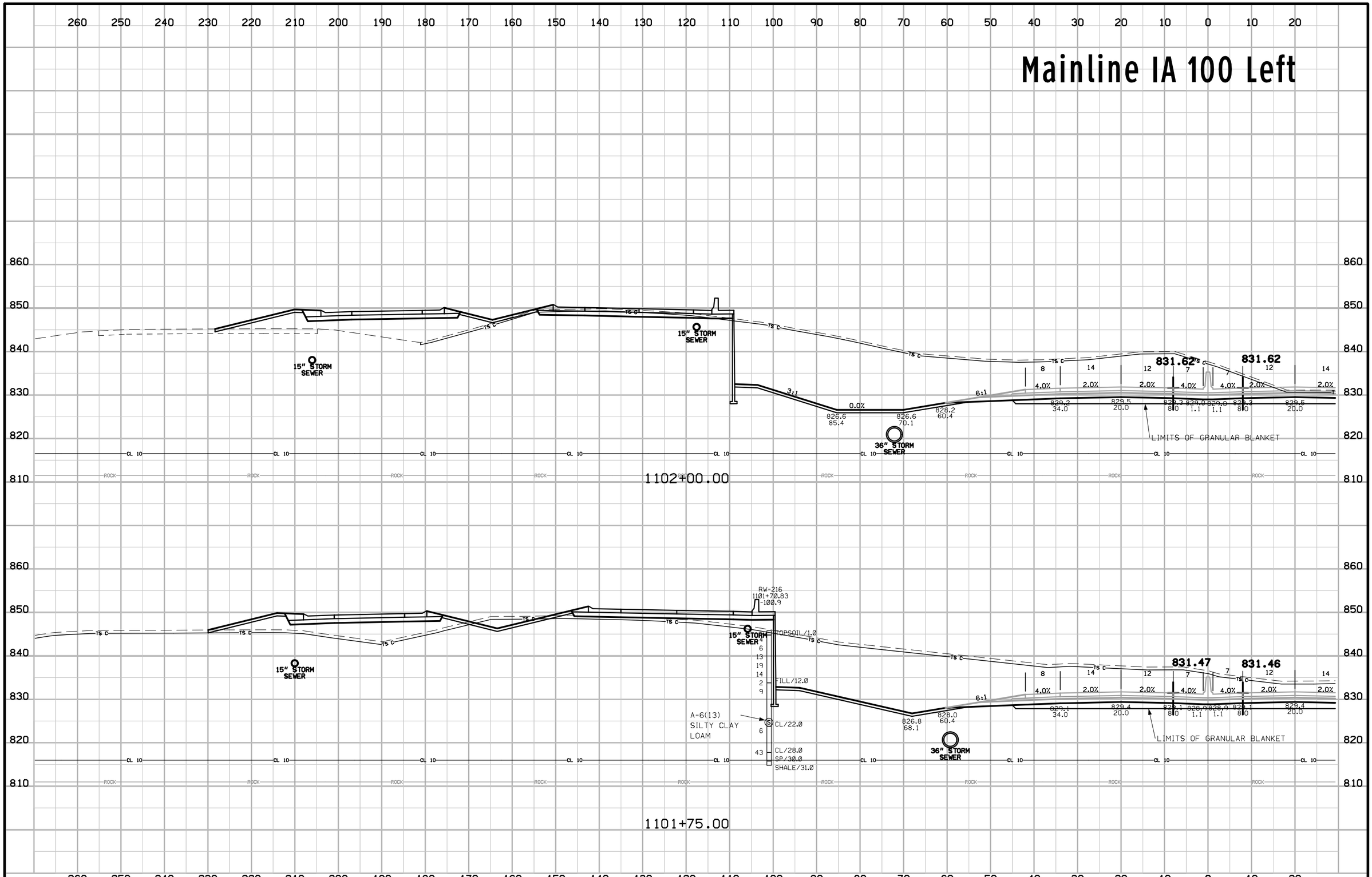

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.58

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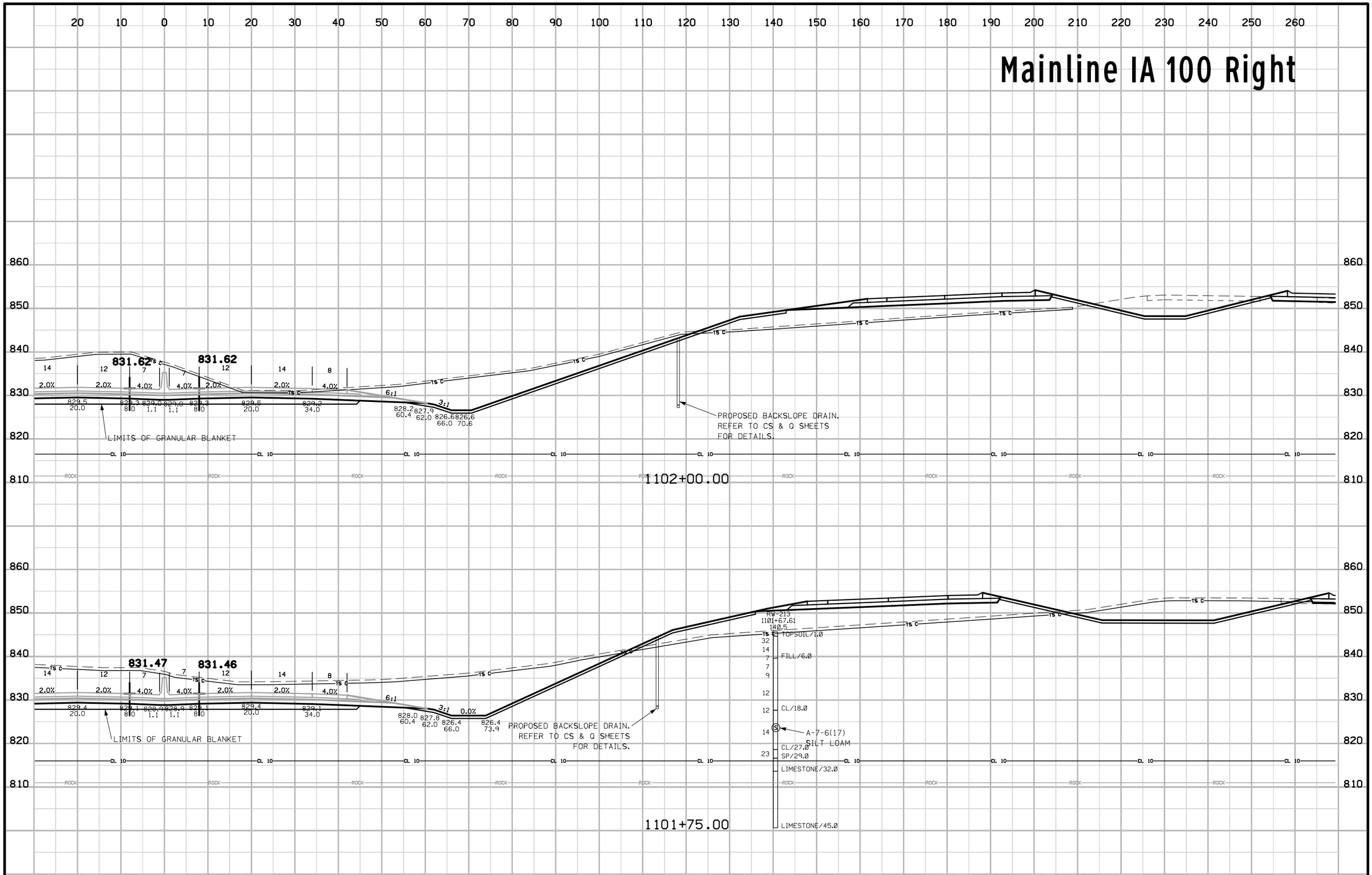

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.59

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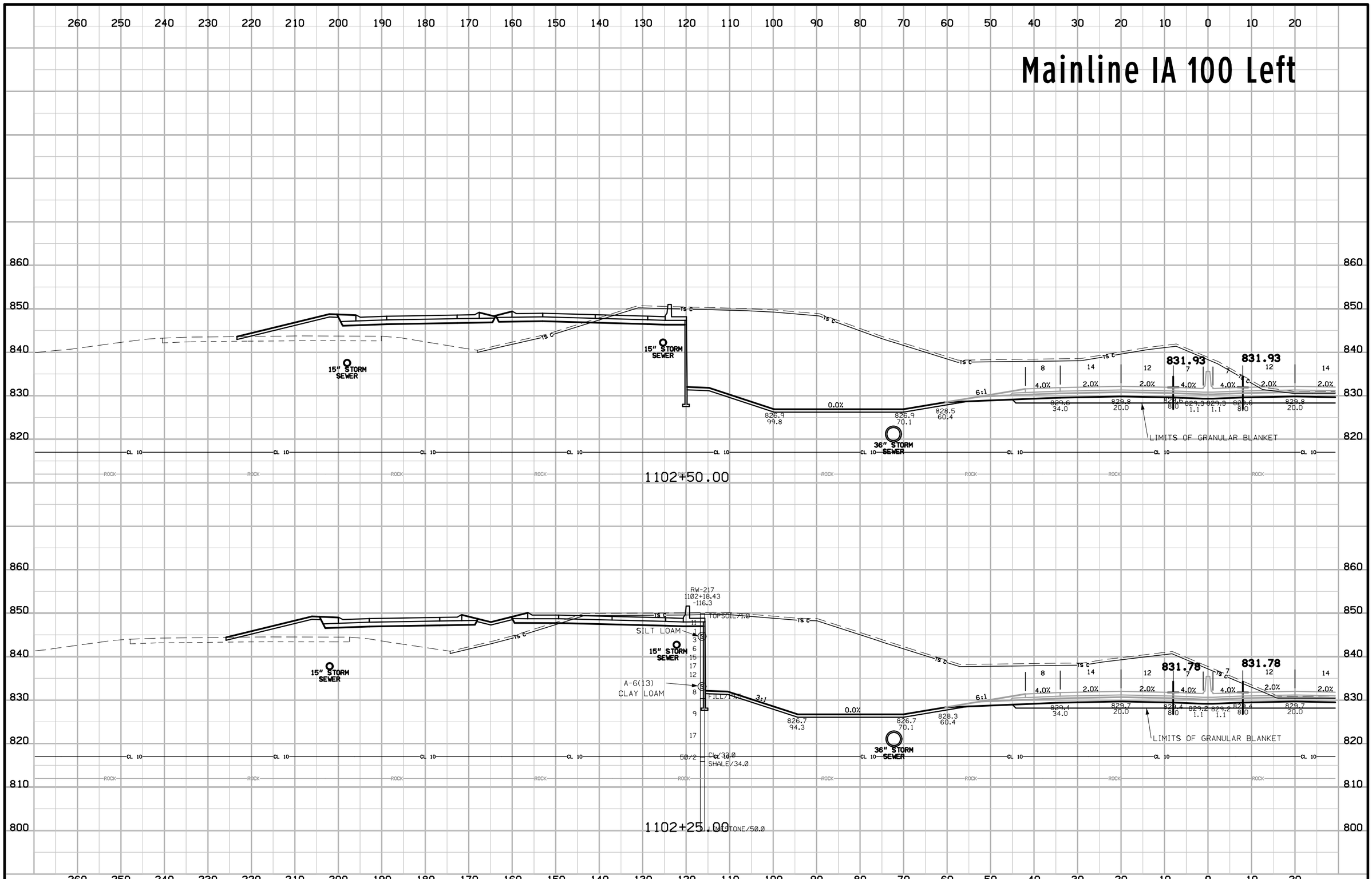

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.60

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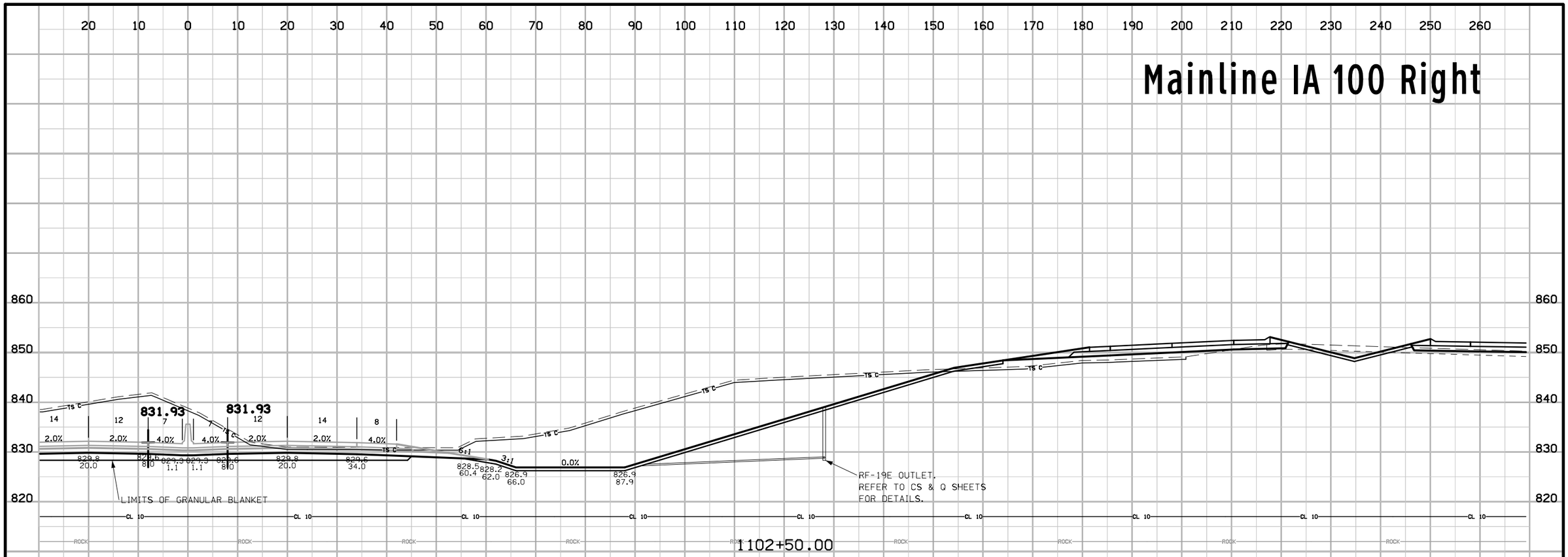

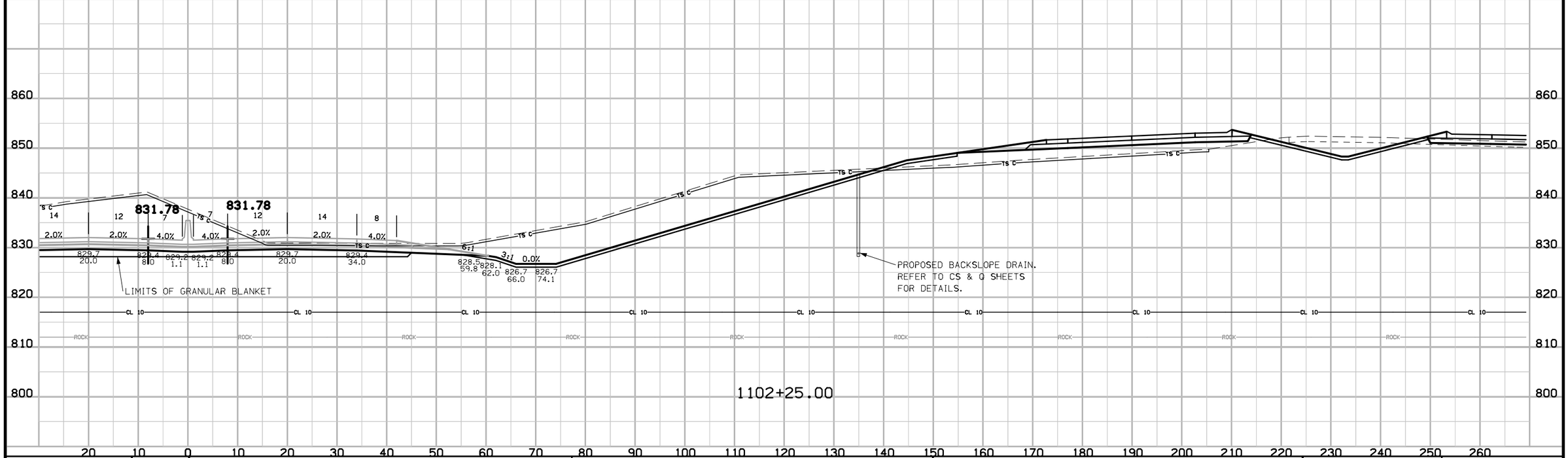

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.61

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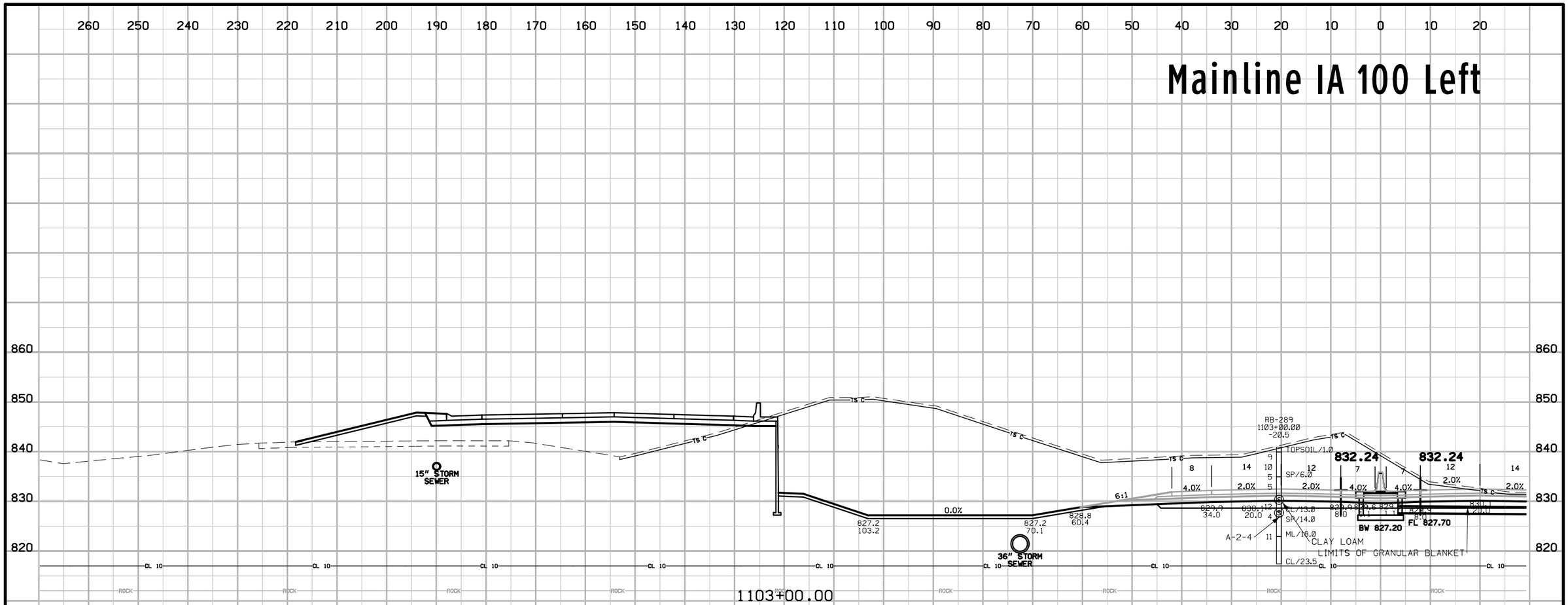

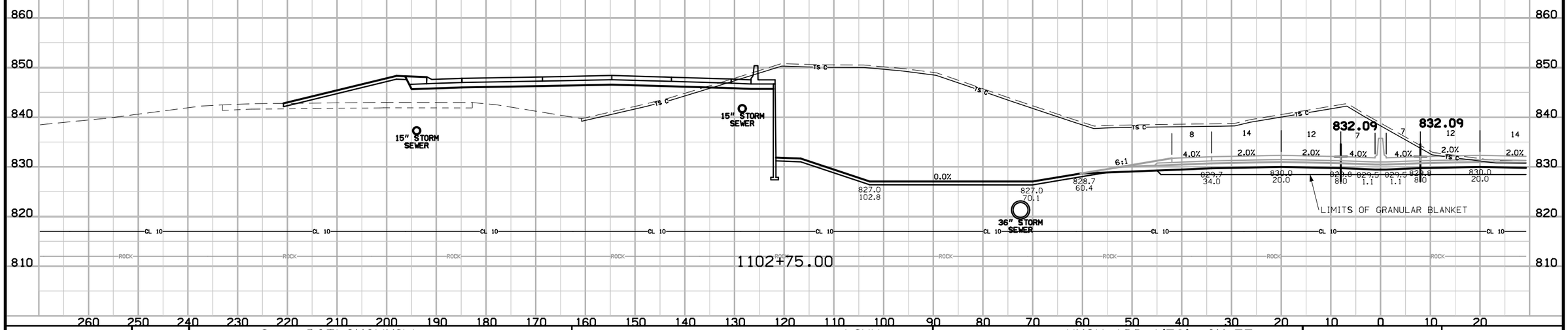

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.62

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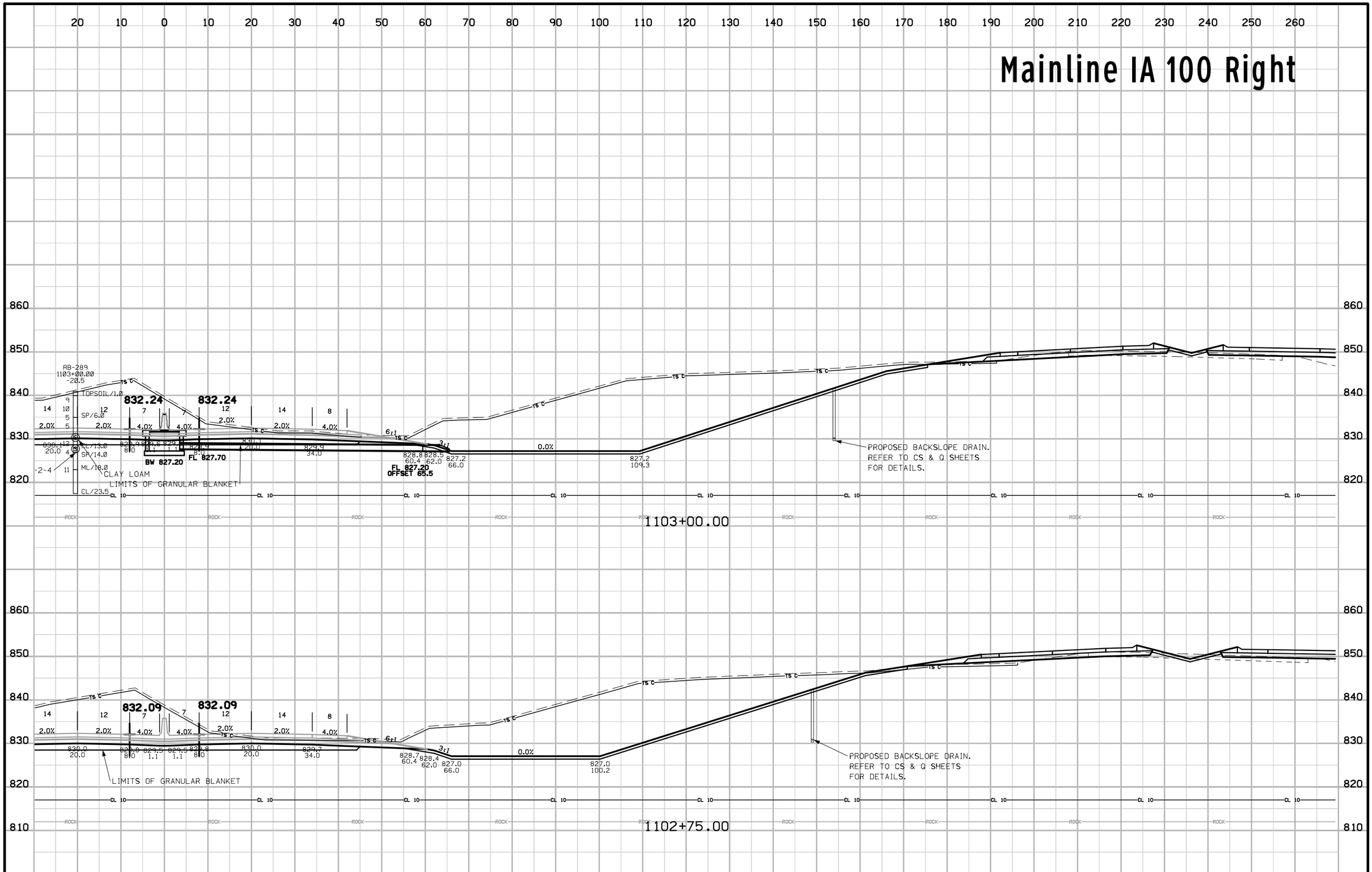

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.63

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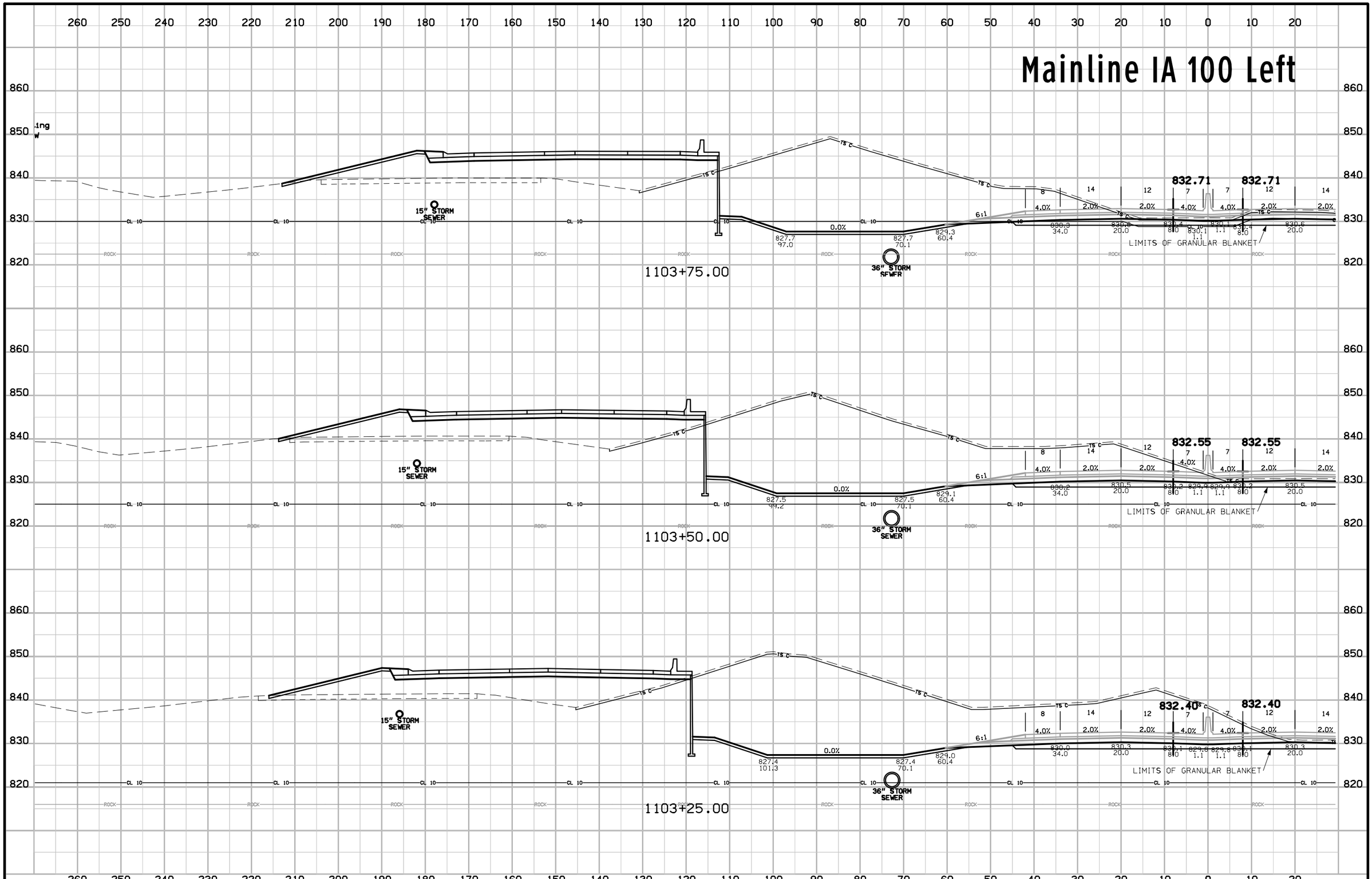

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.64

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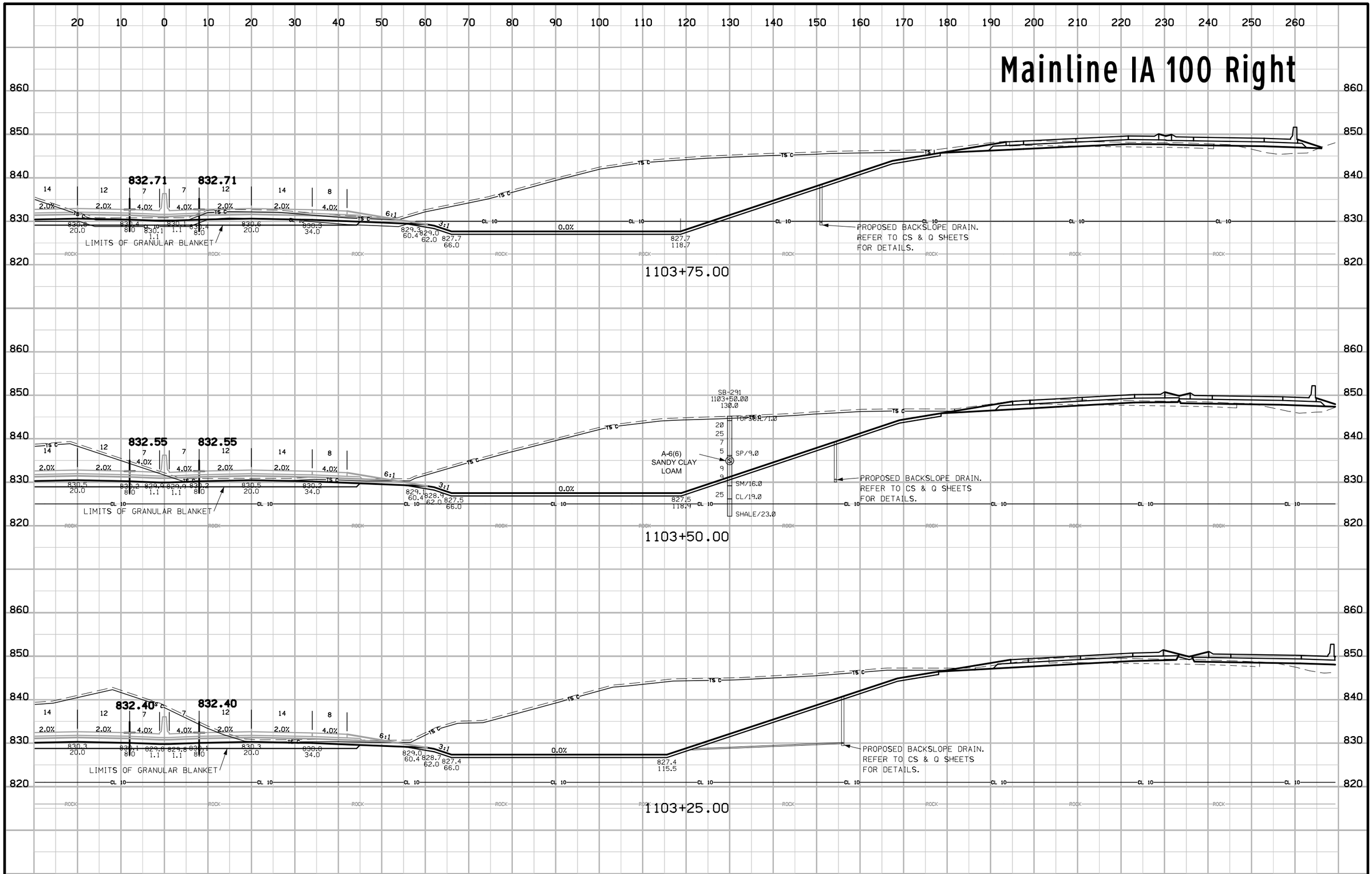

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.65

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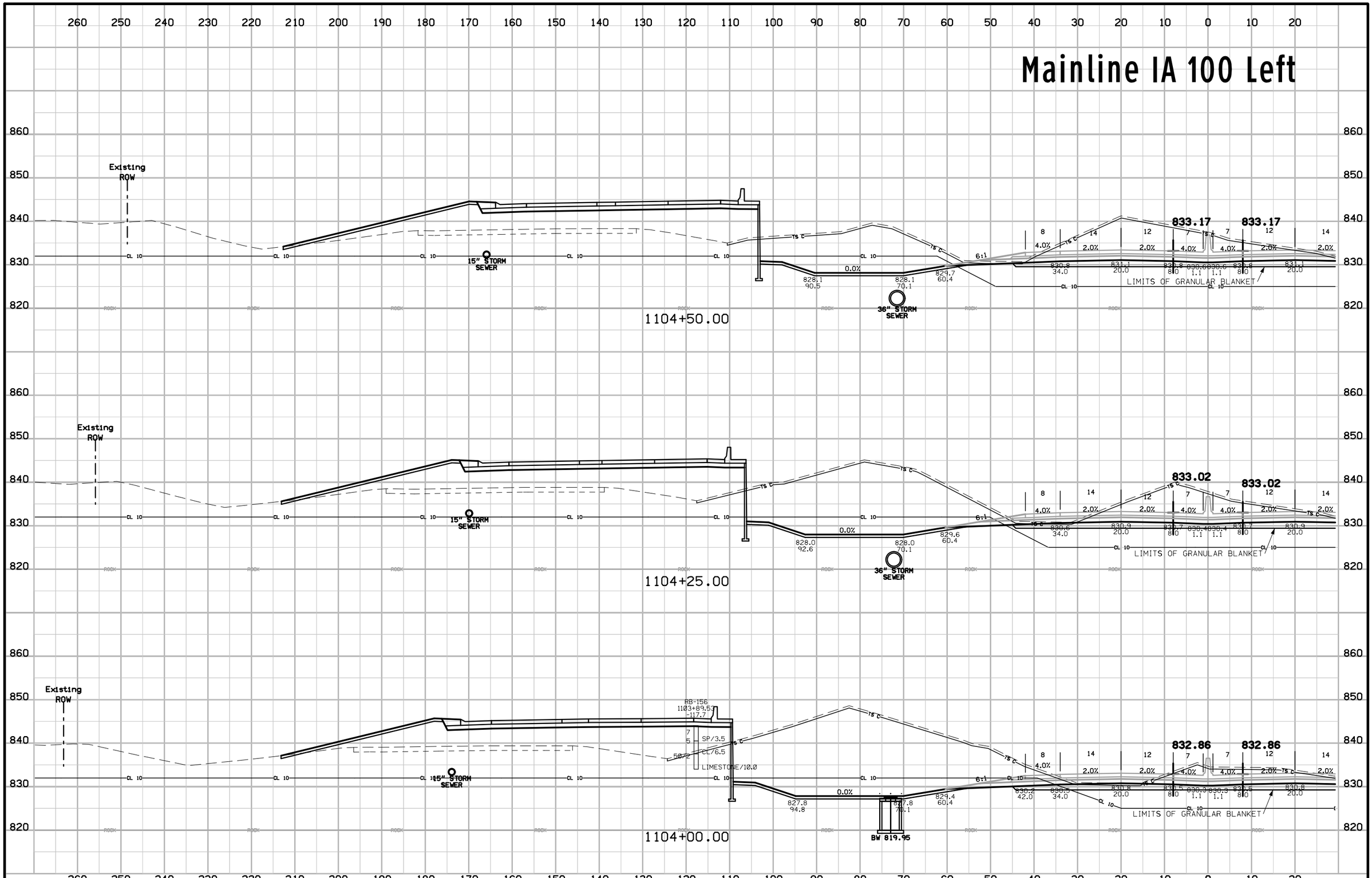

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.66

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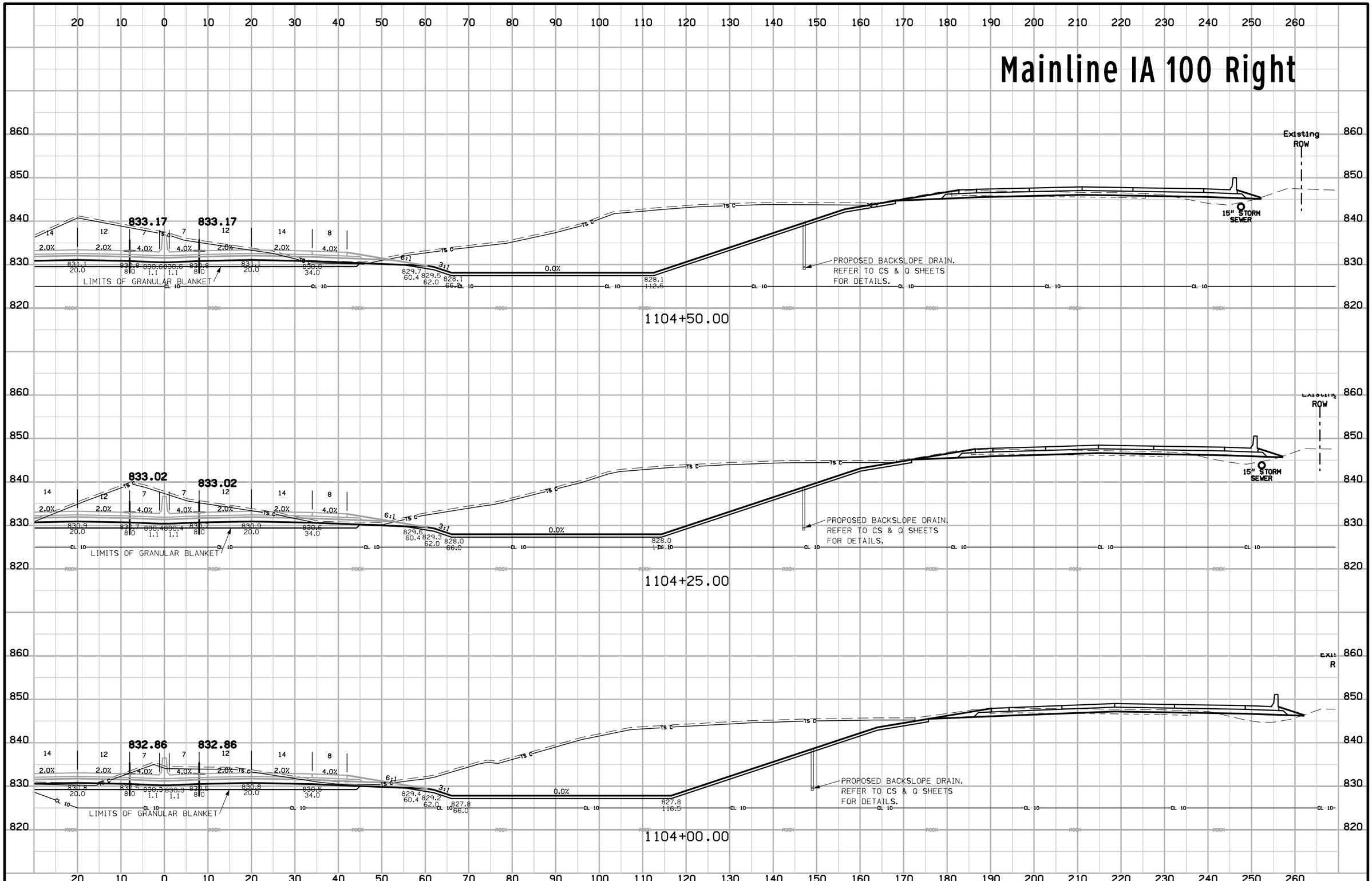

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.67

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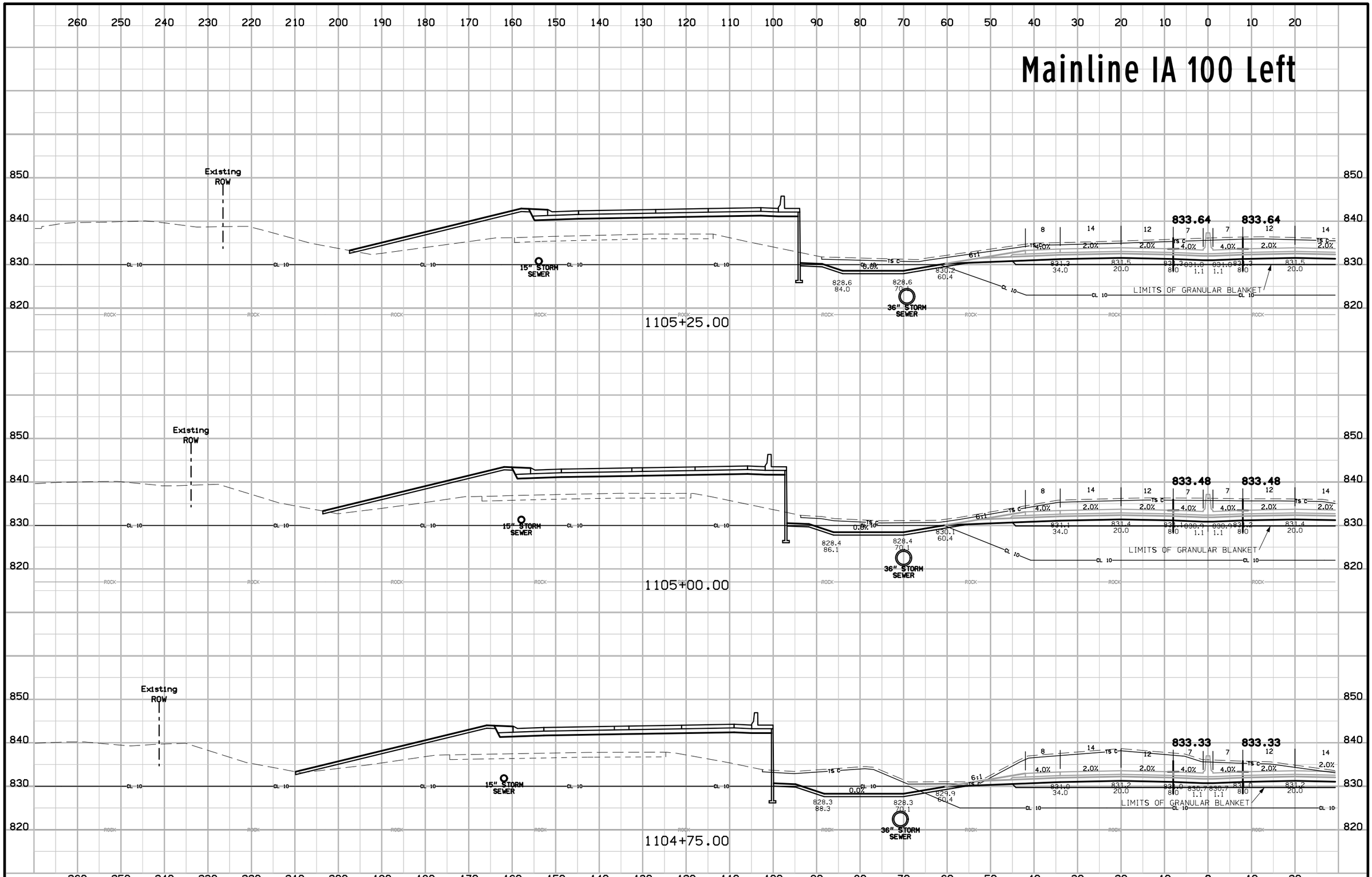

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.68

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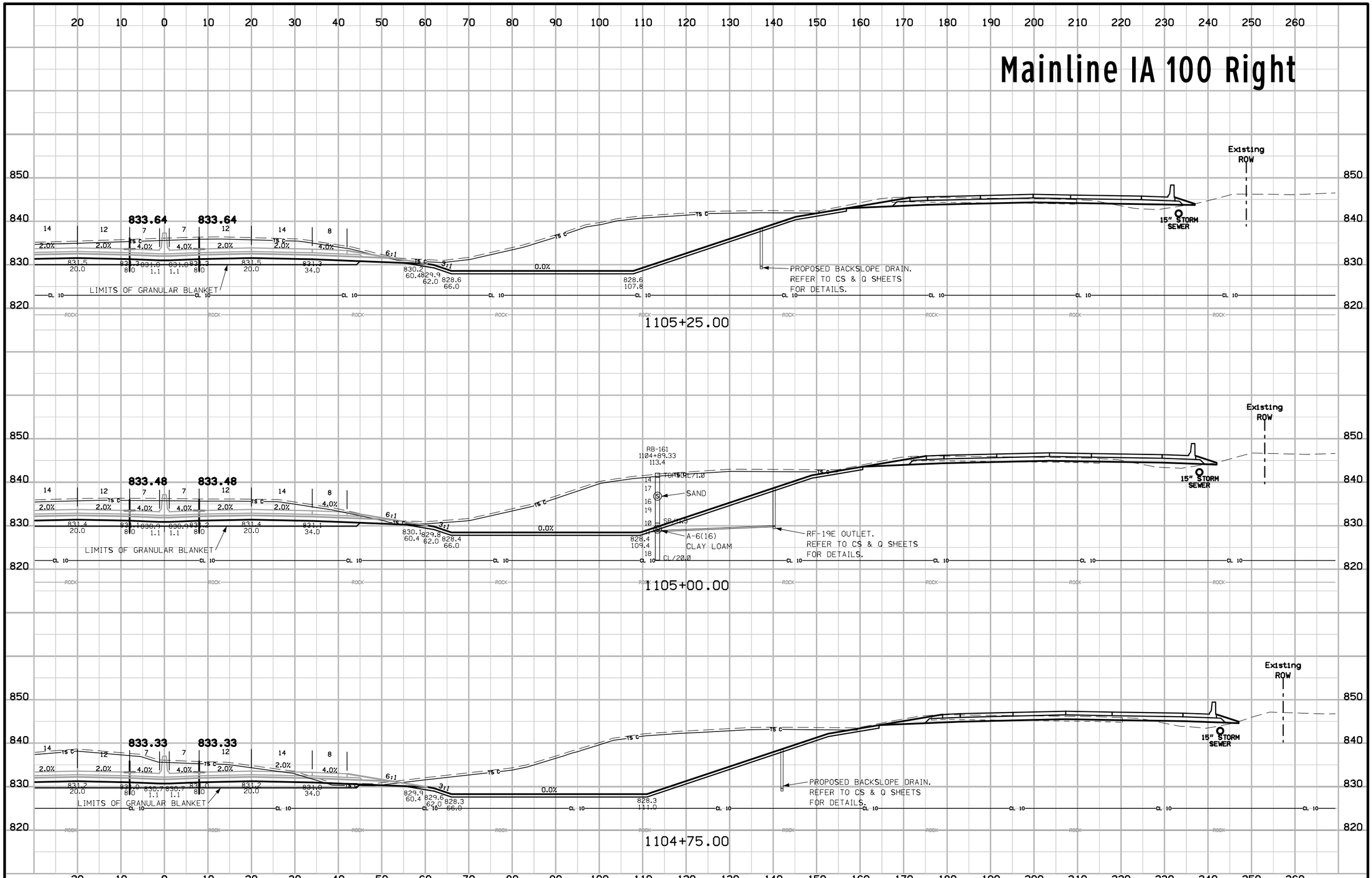

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.69

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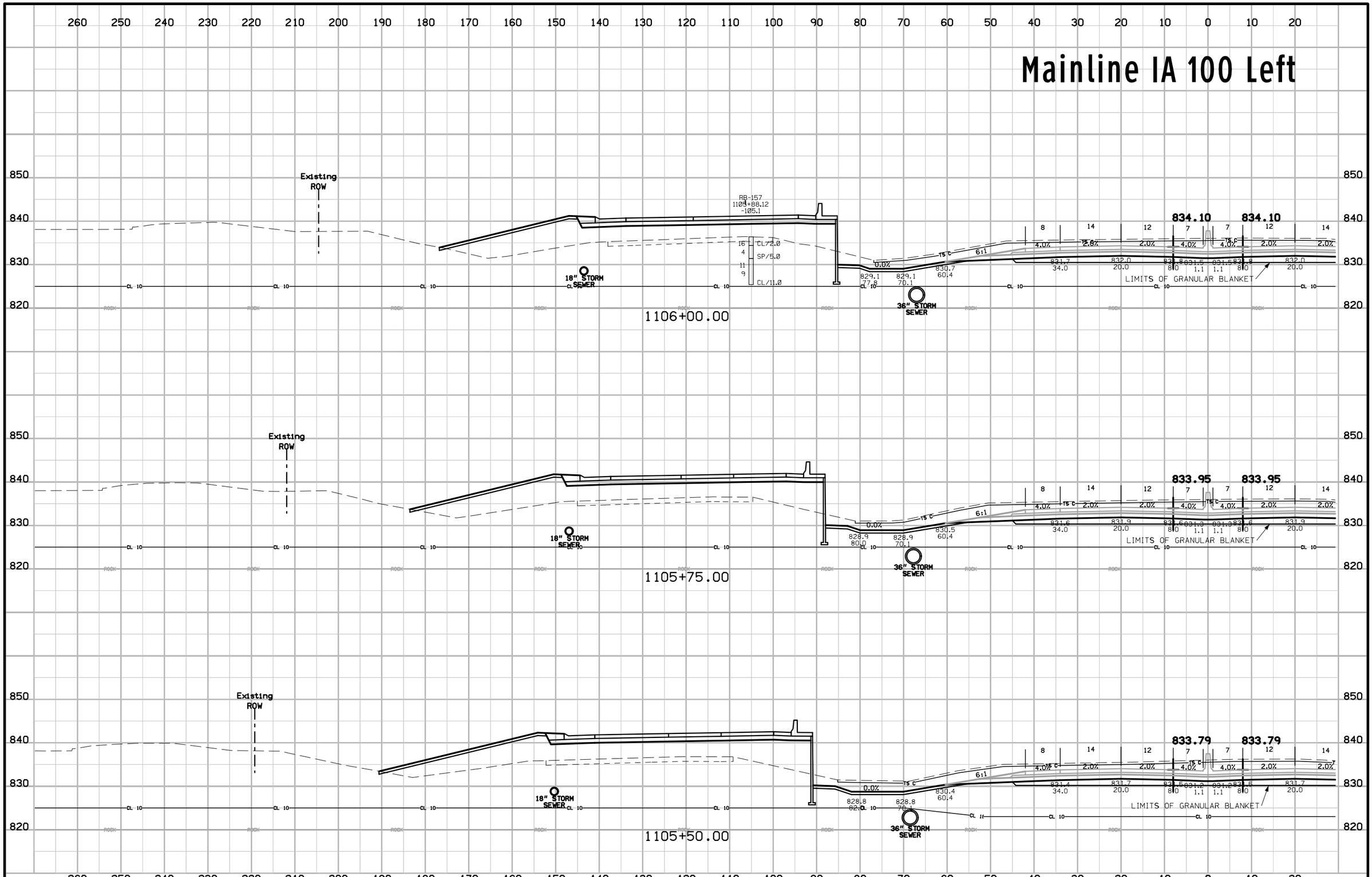

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.70

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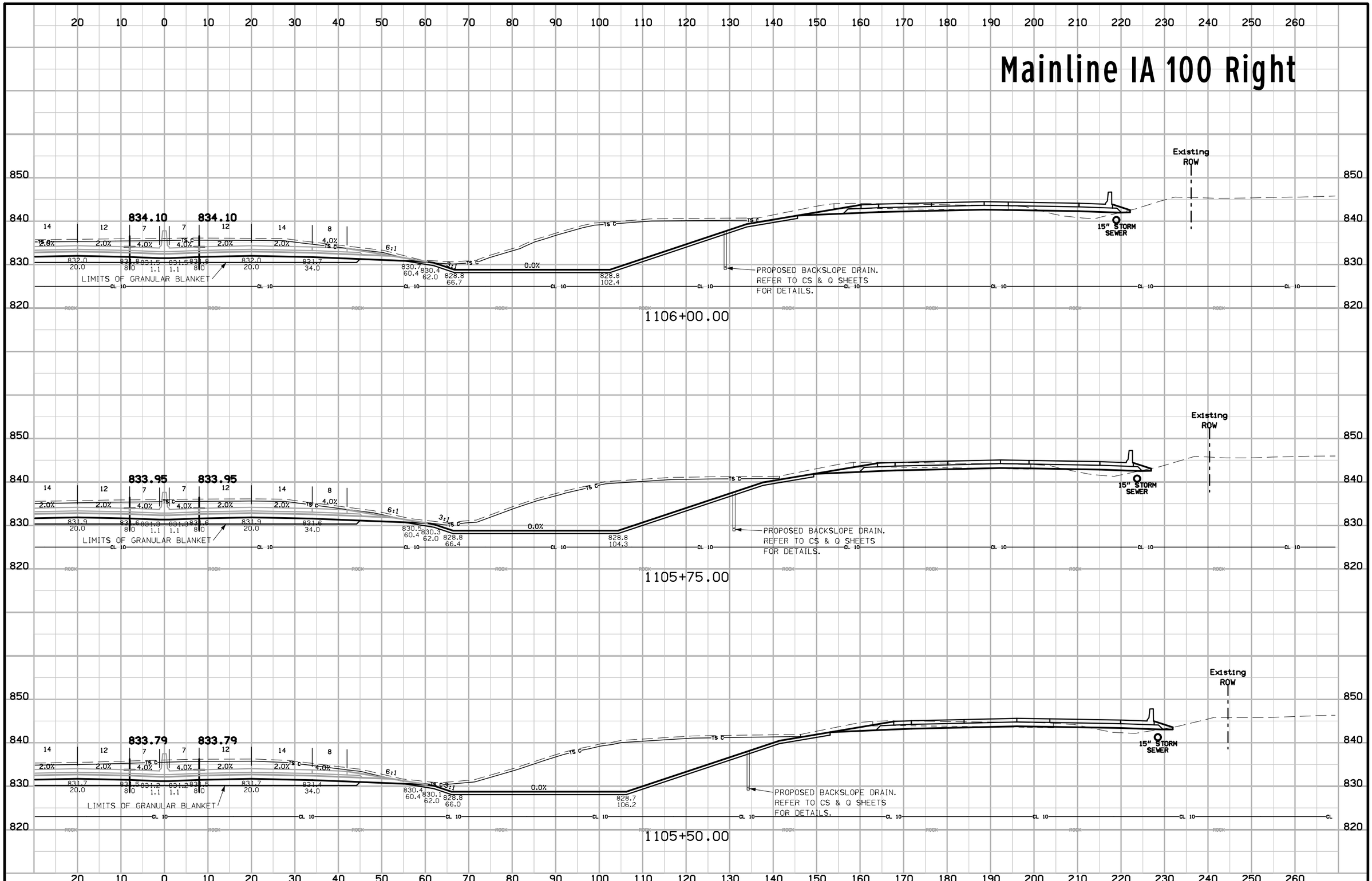

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.71

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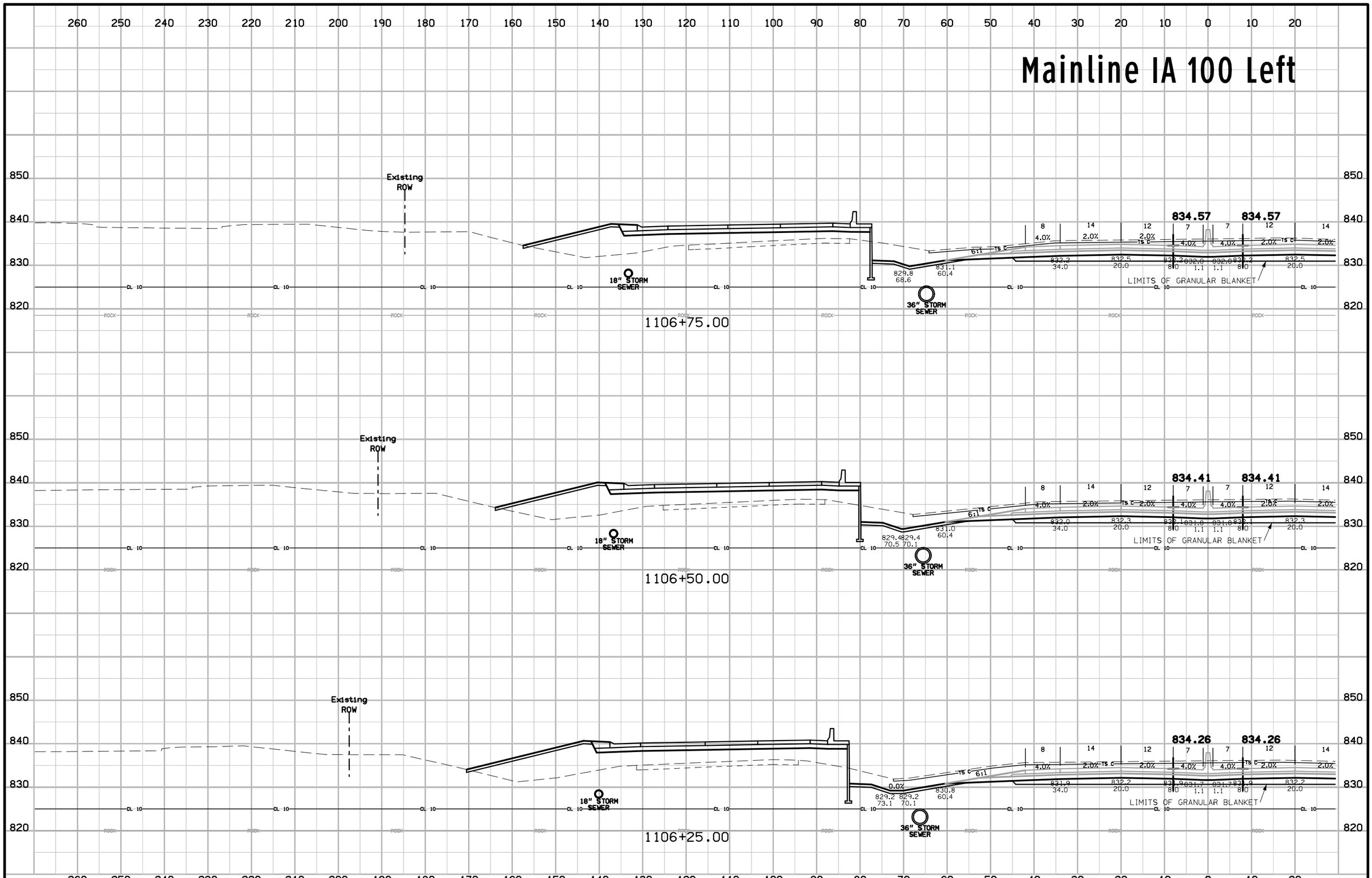

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.72

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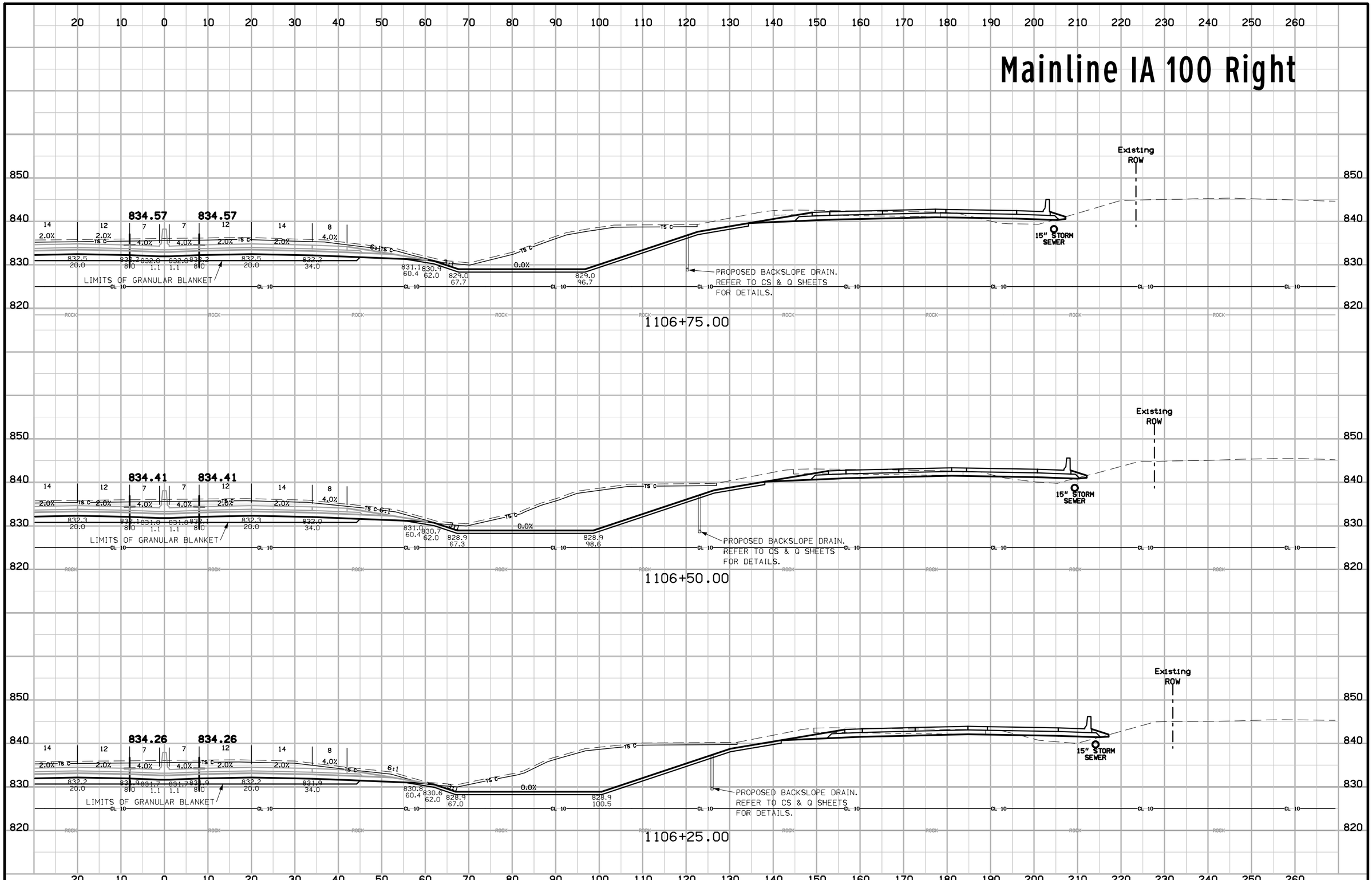

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.73

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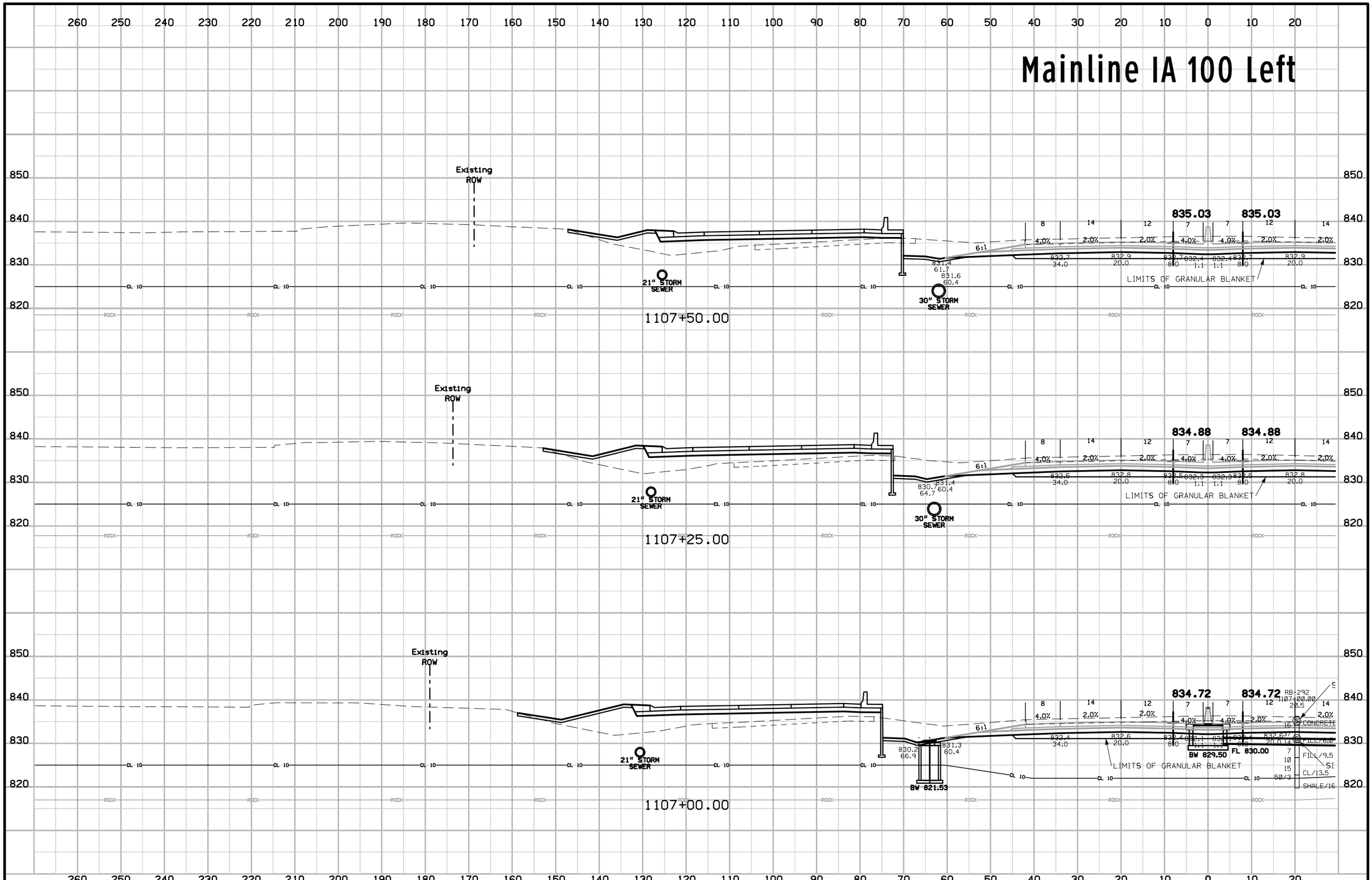

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.74

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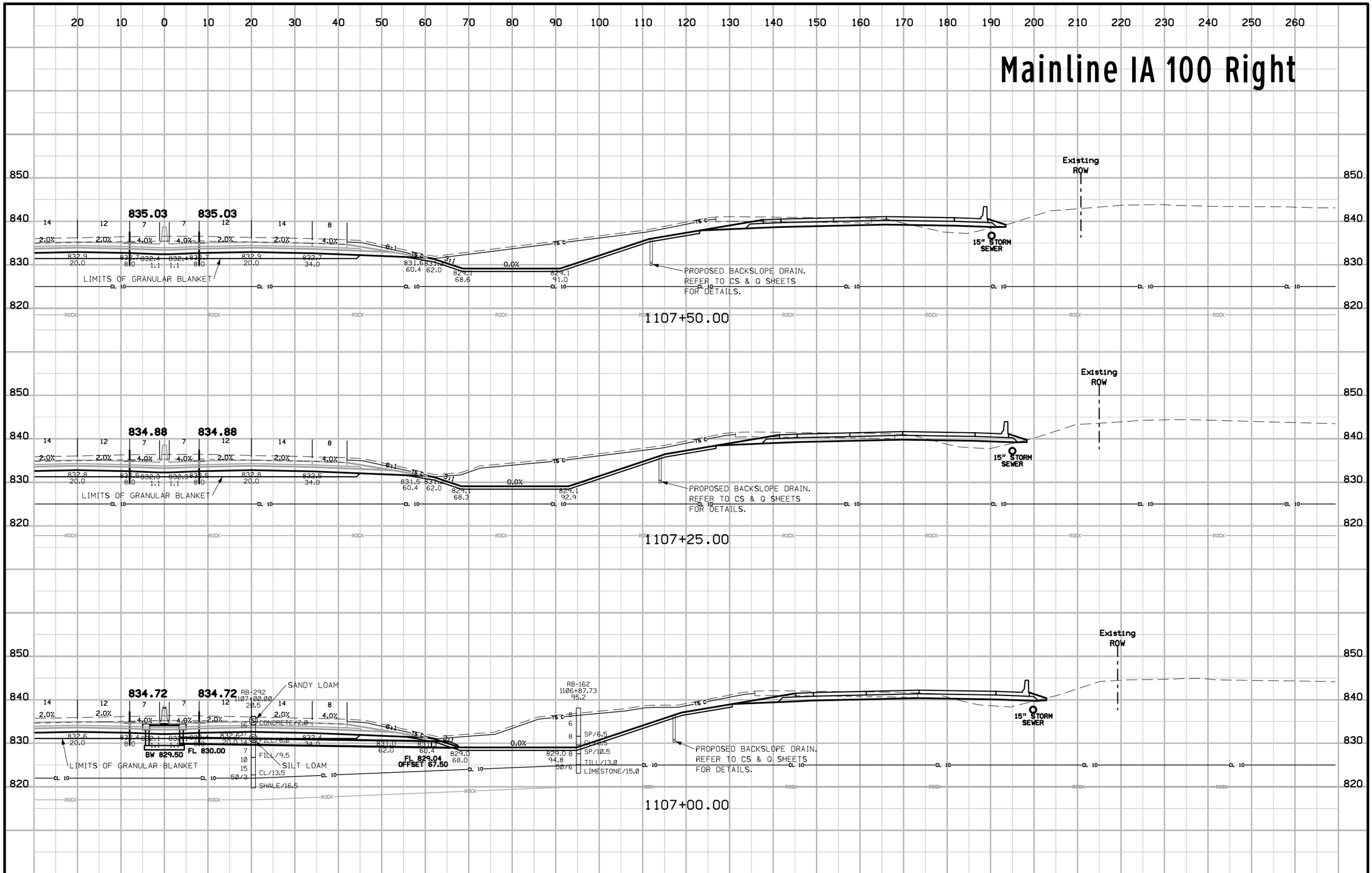

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.75

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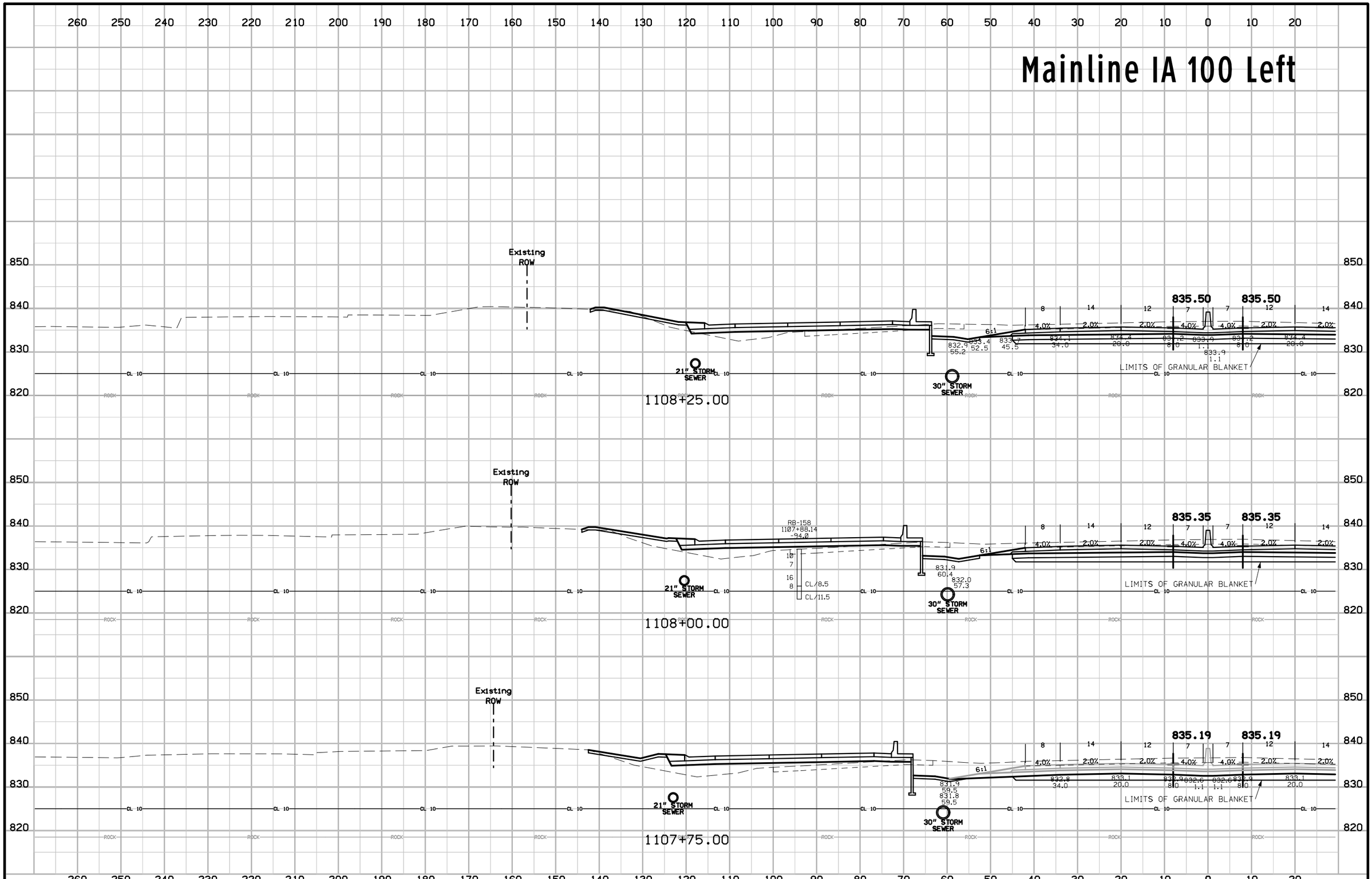

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.76

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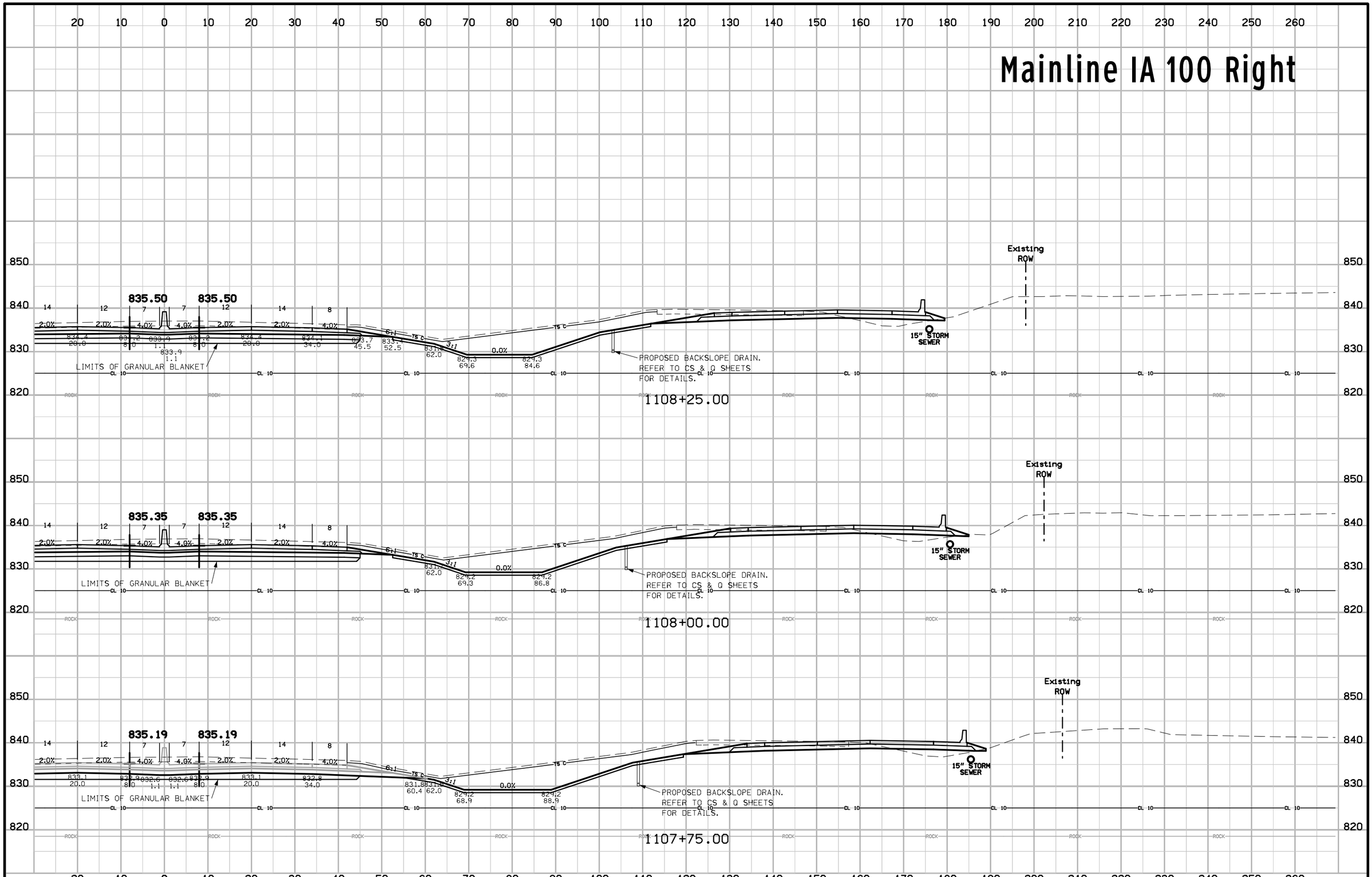

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.77

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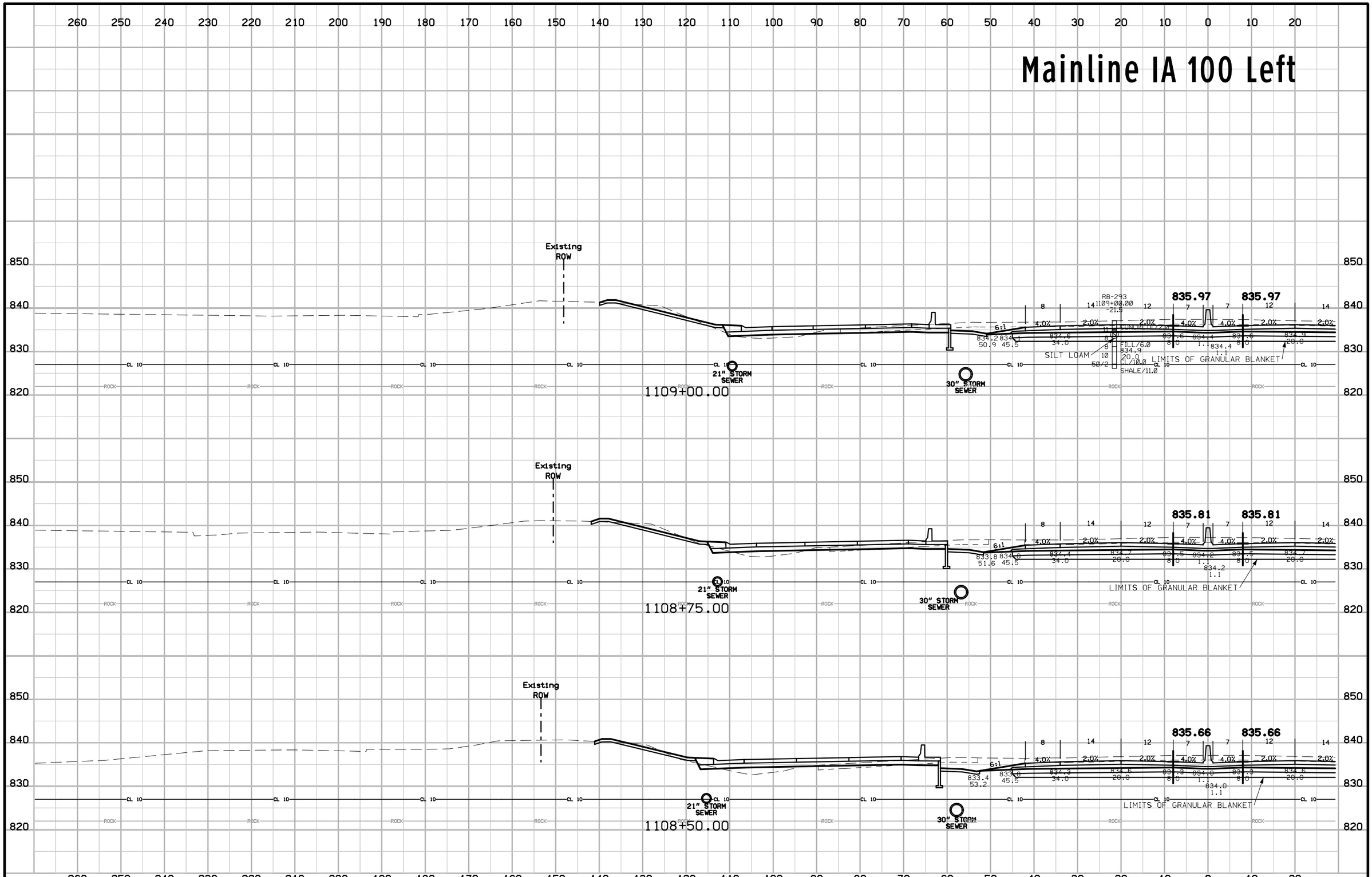

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.78

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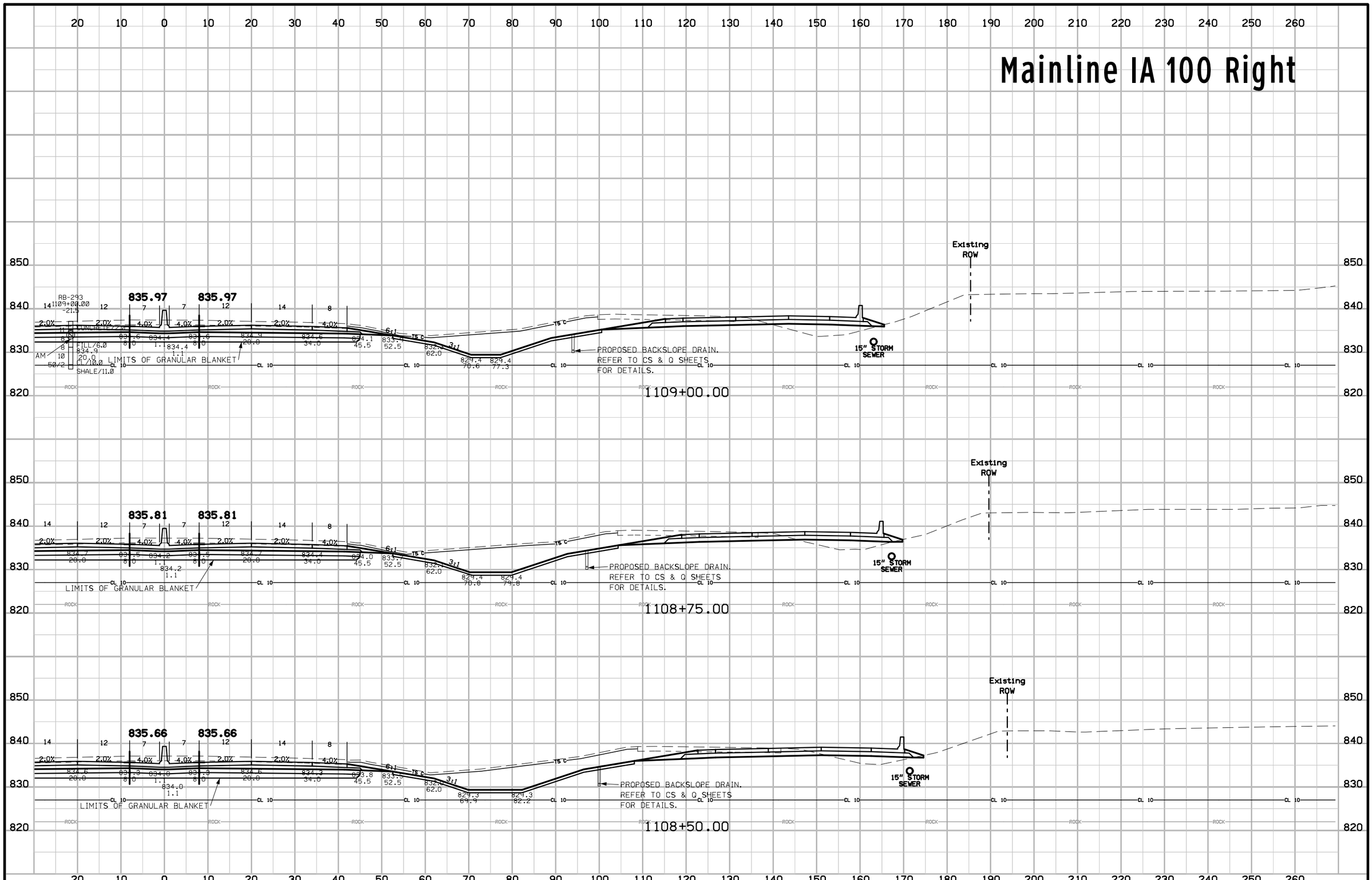

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.79

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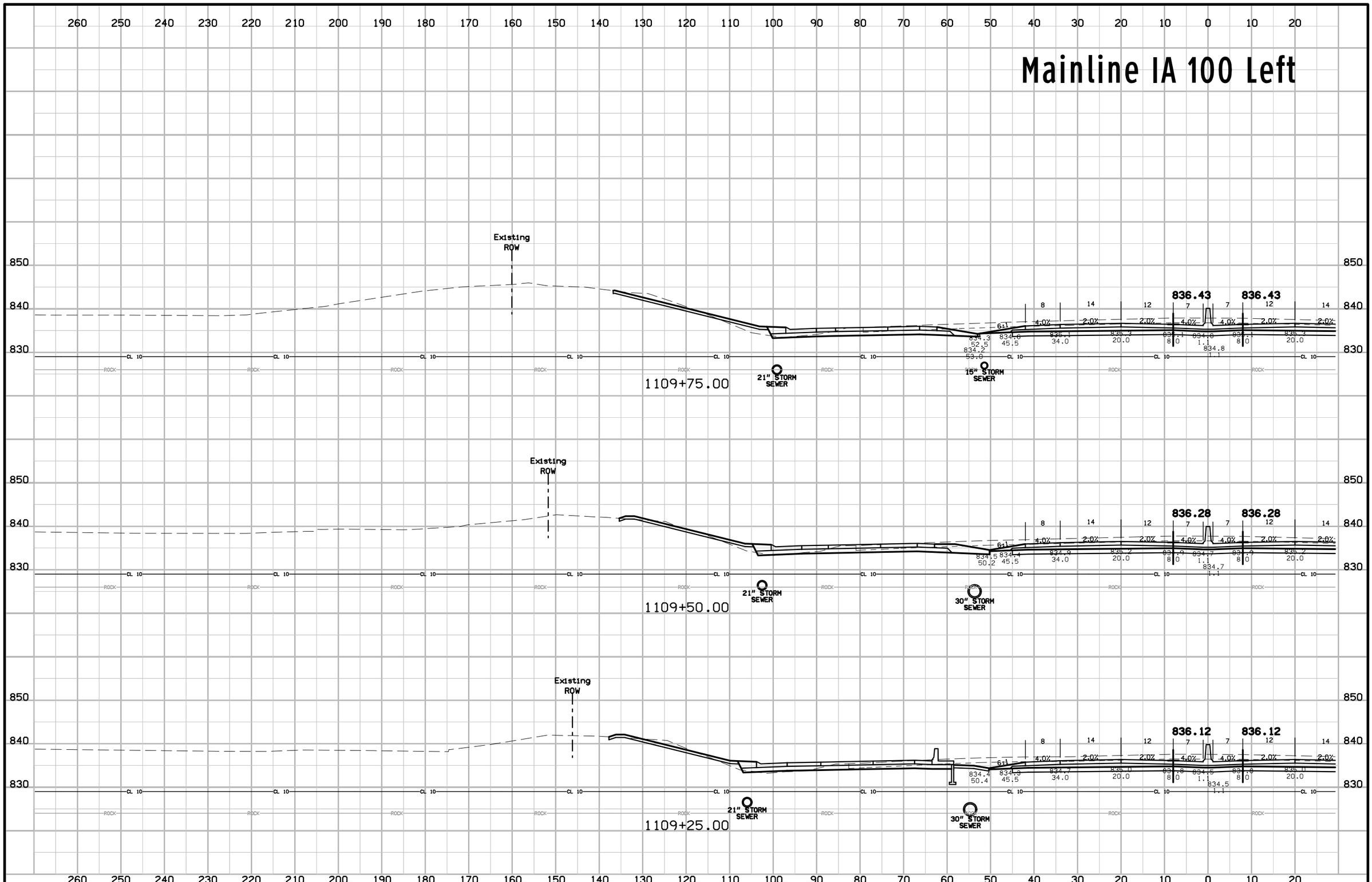

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.80

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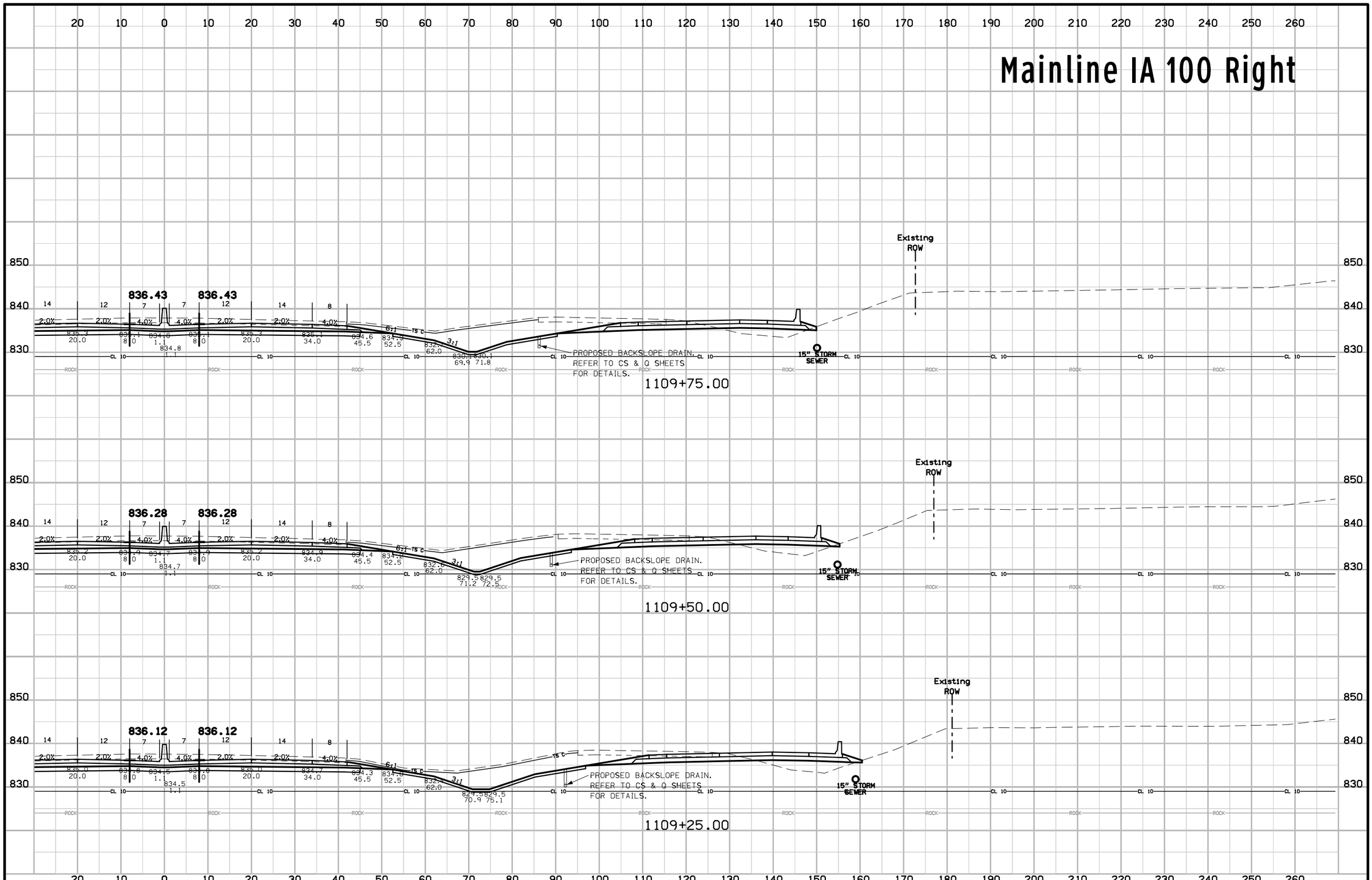

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.81

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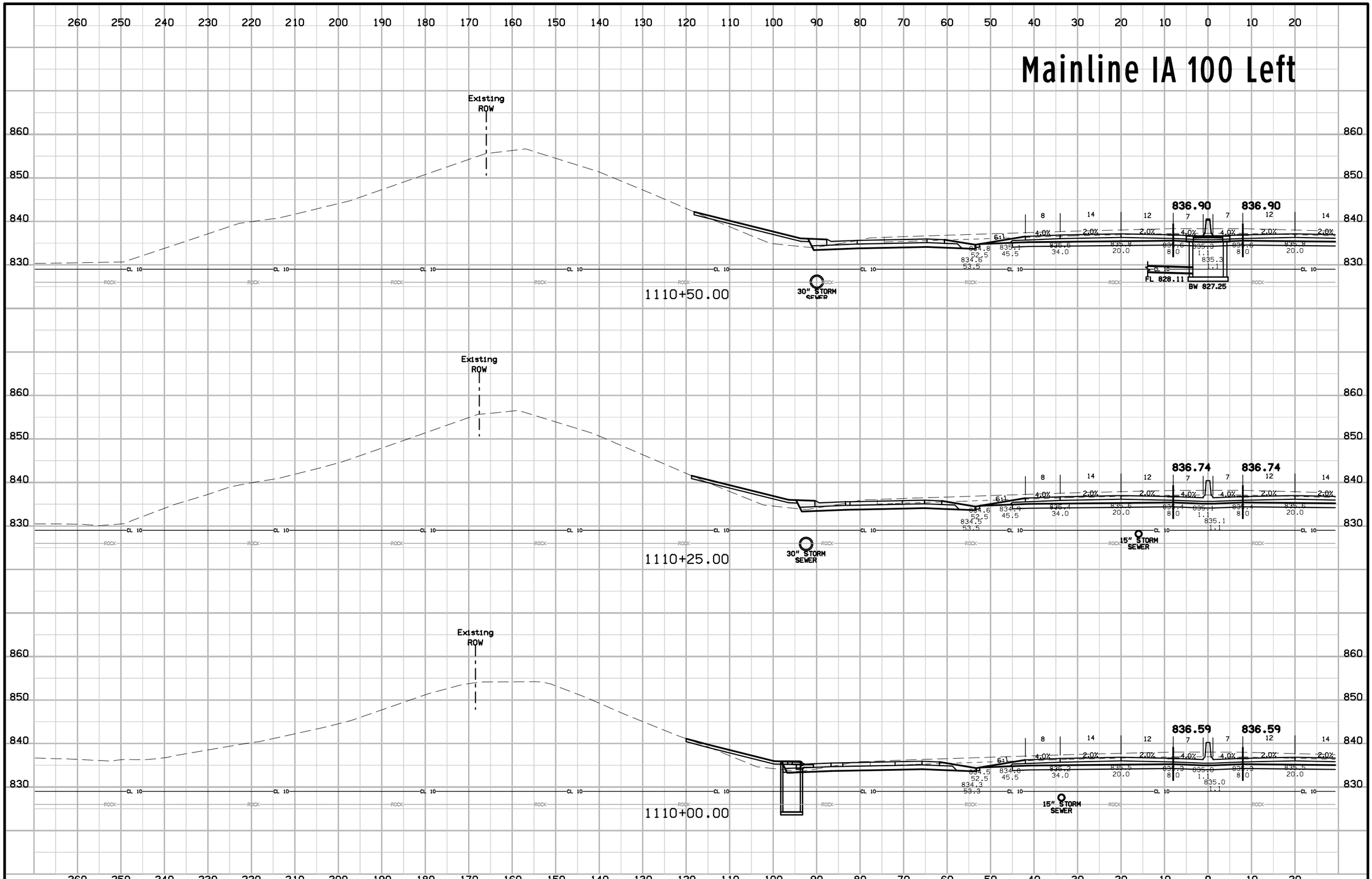

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.82

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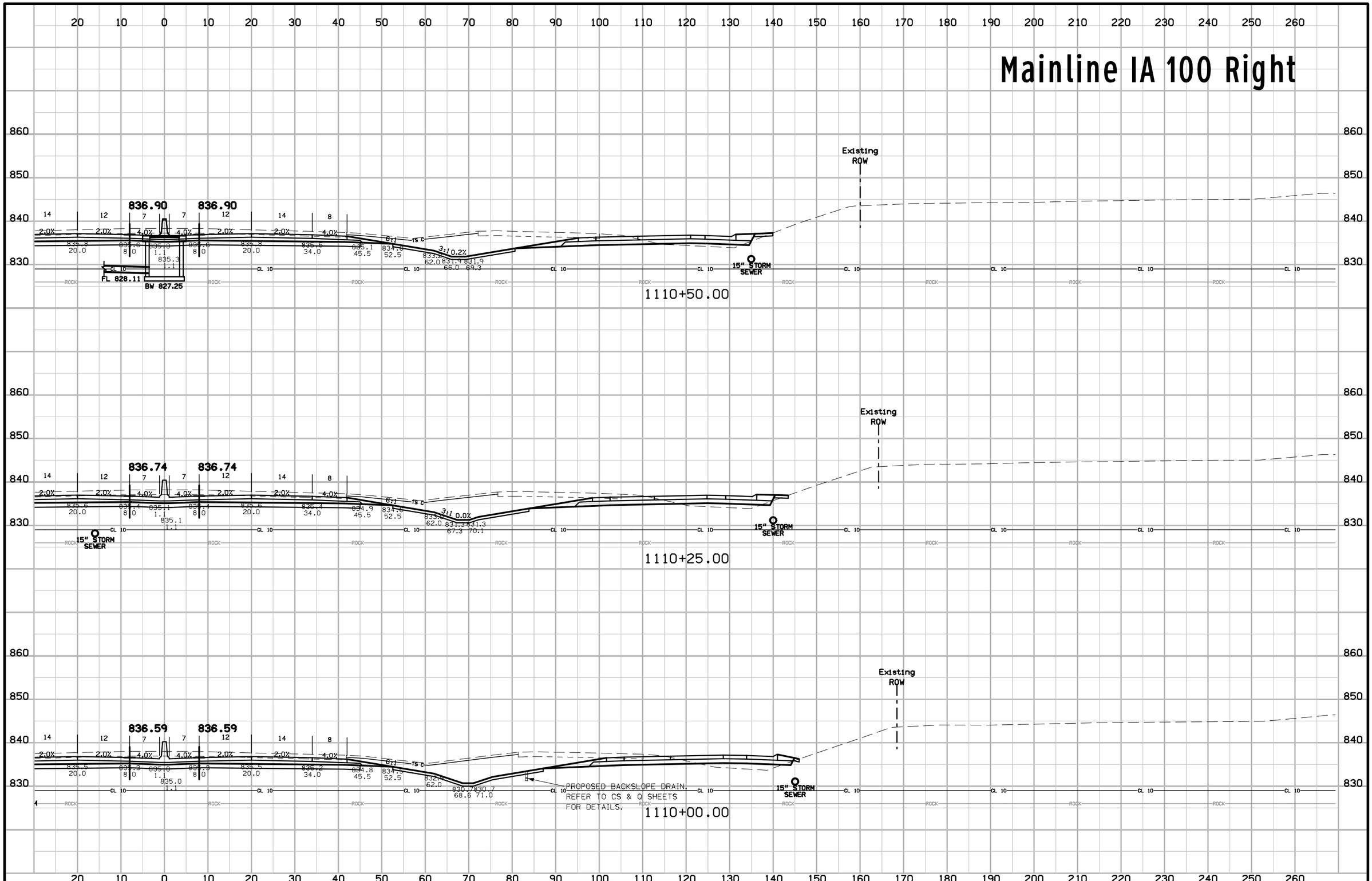

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.83

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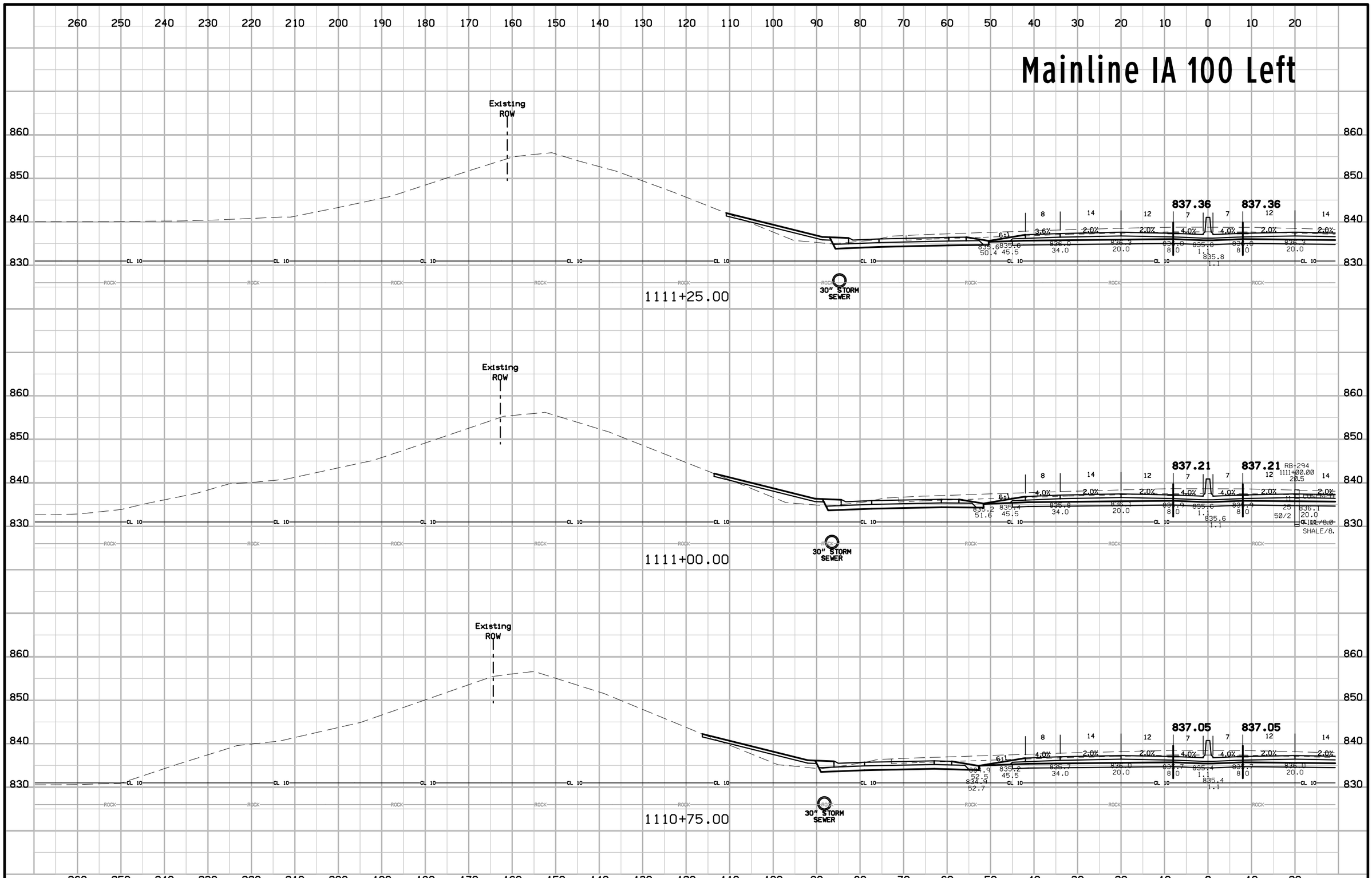

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.84

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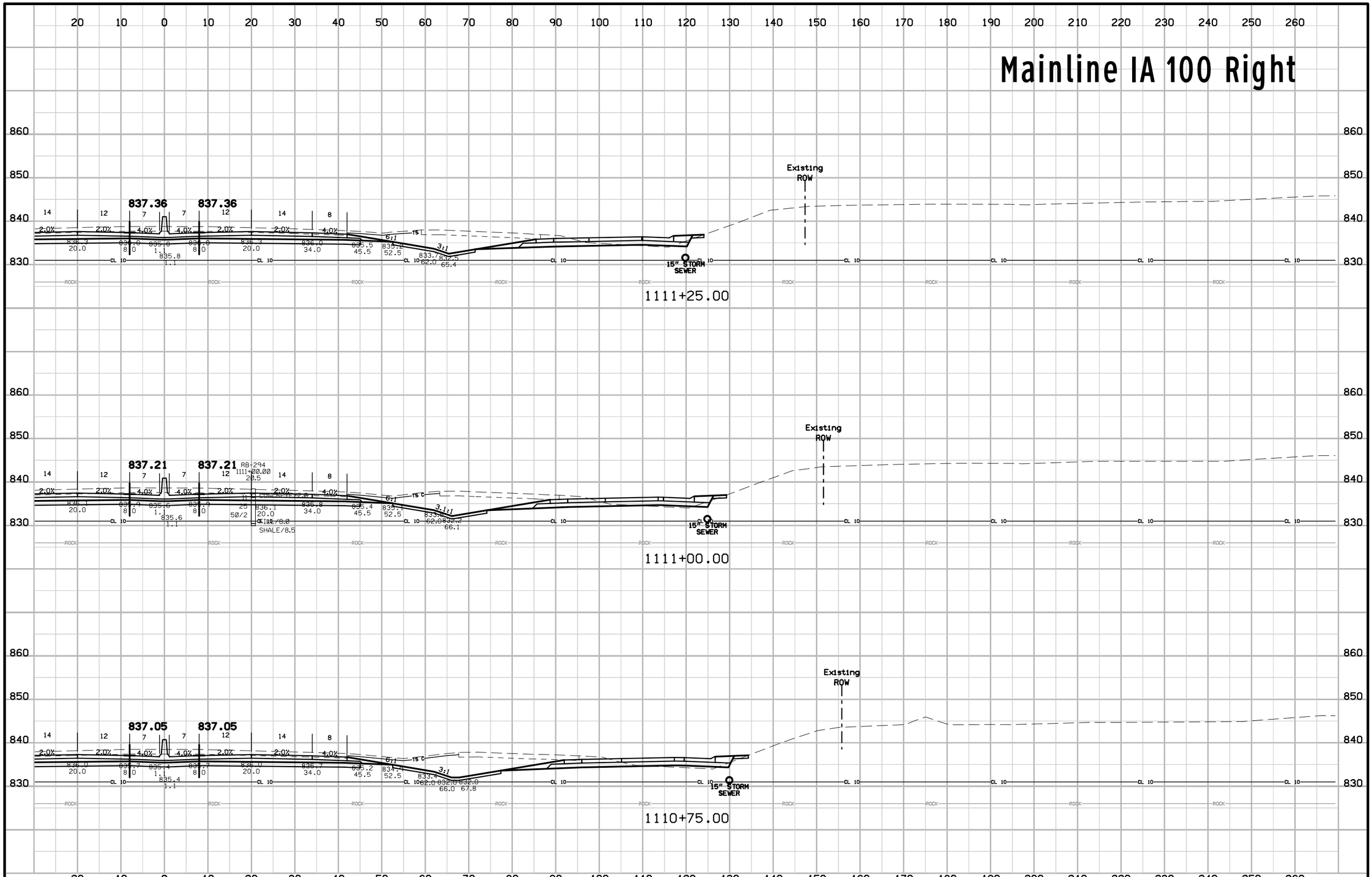

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.85

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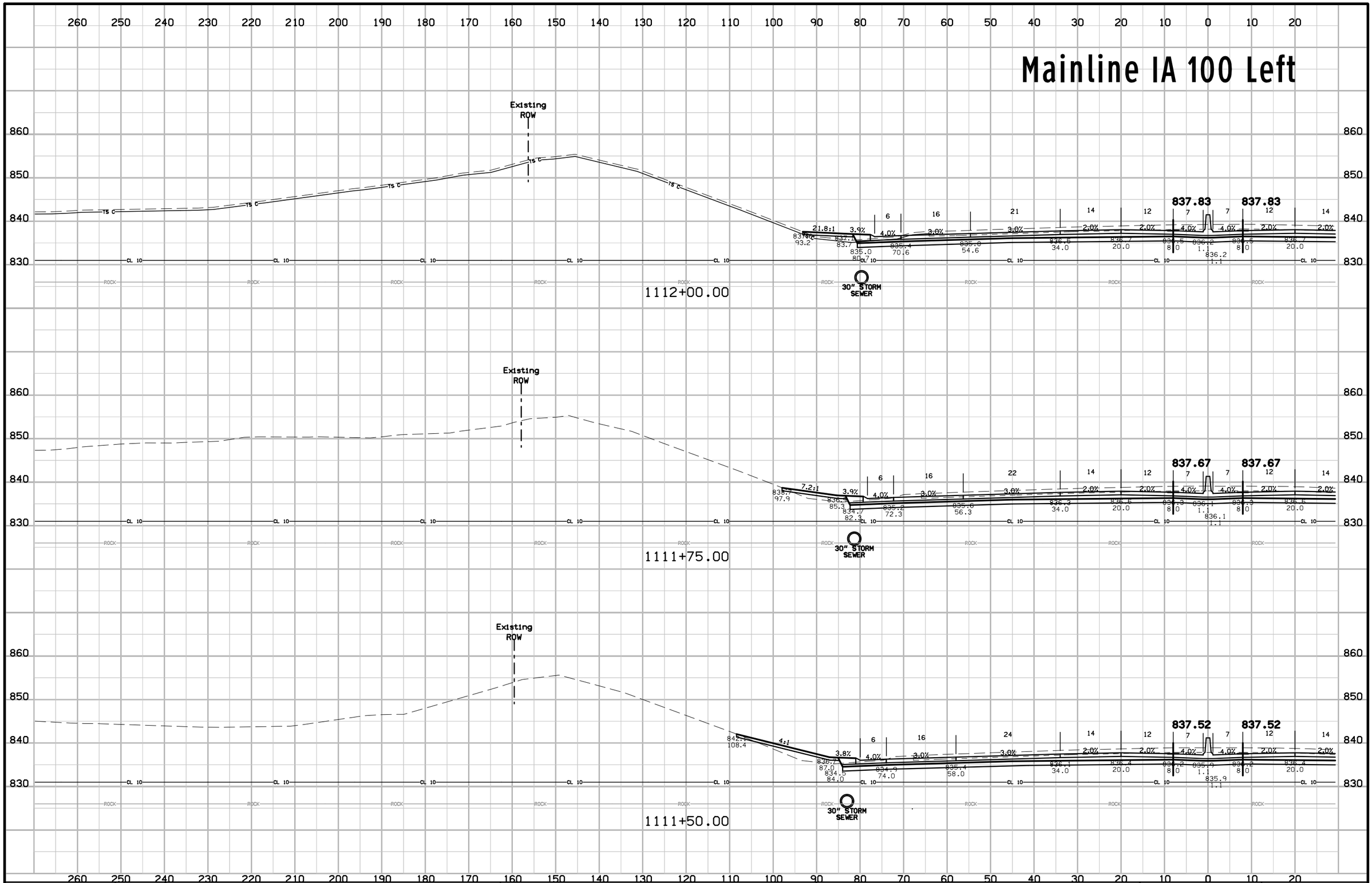

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.86

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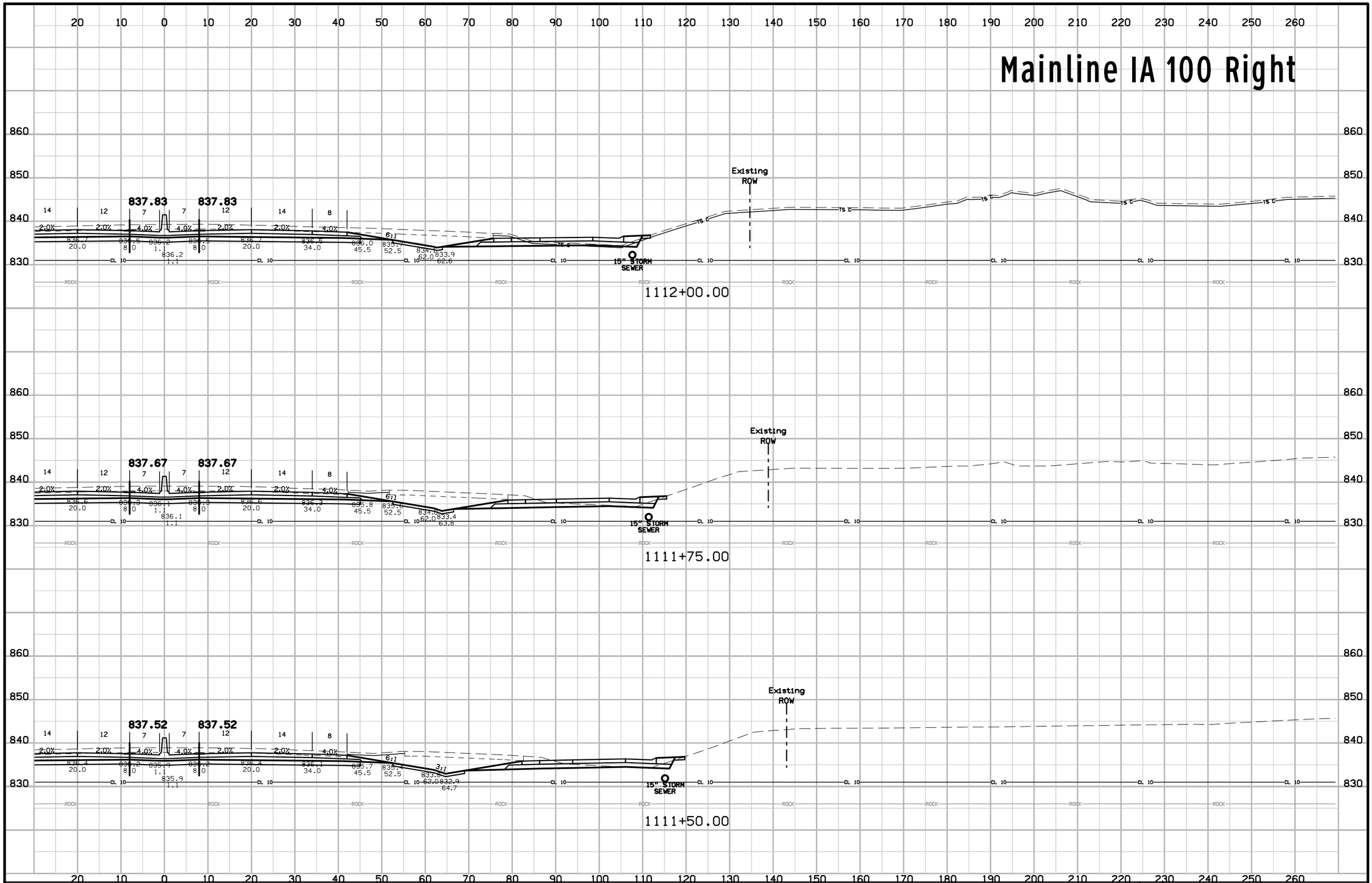

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.87

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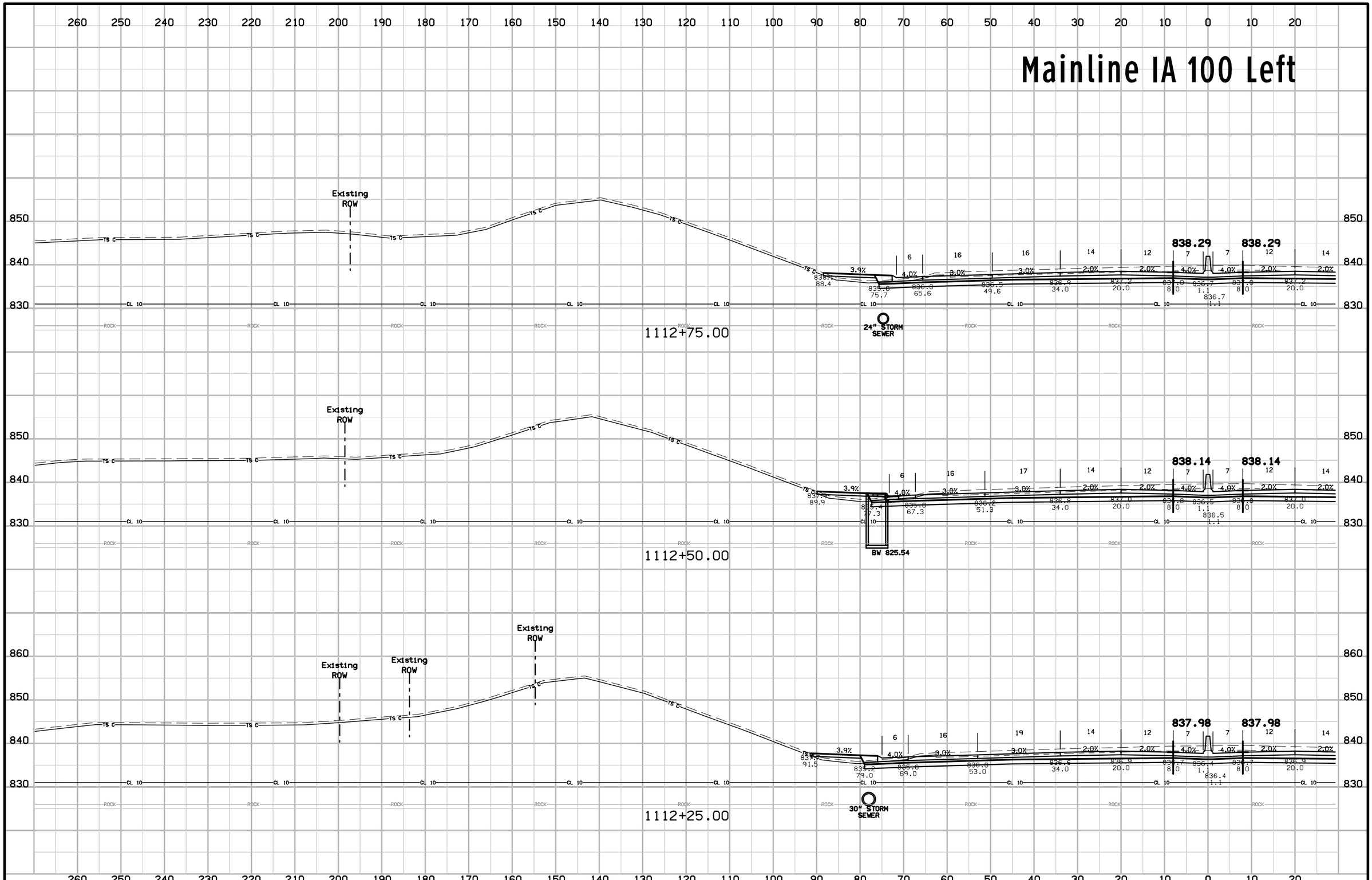

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.88

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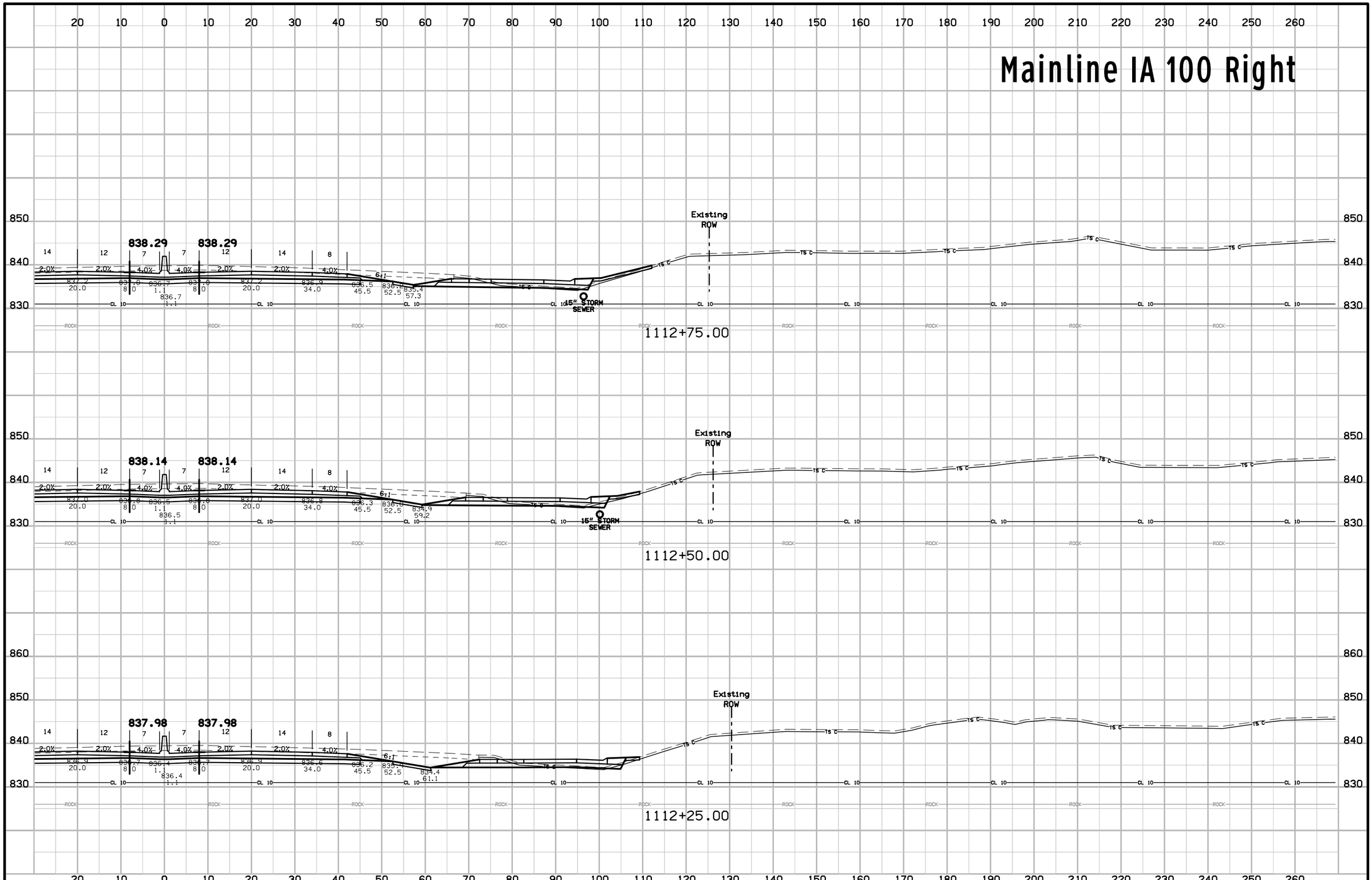

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.89

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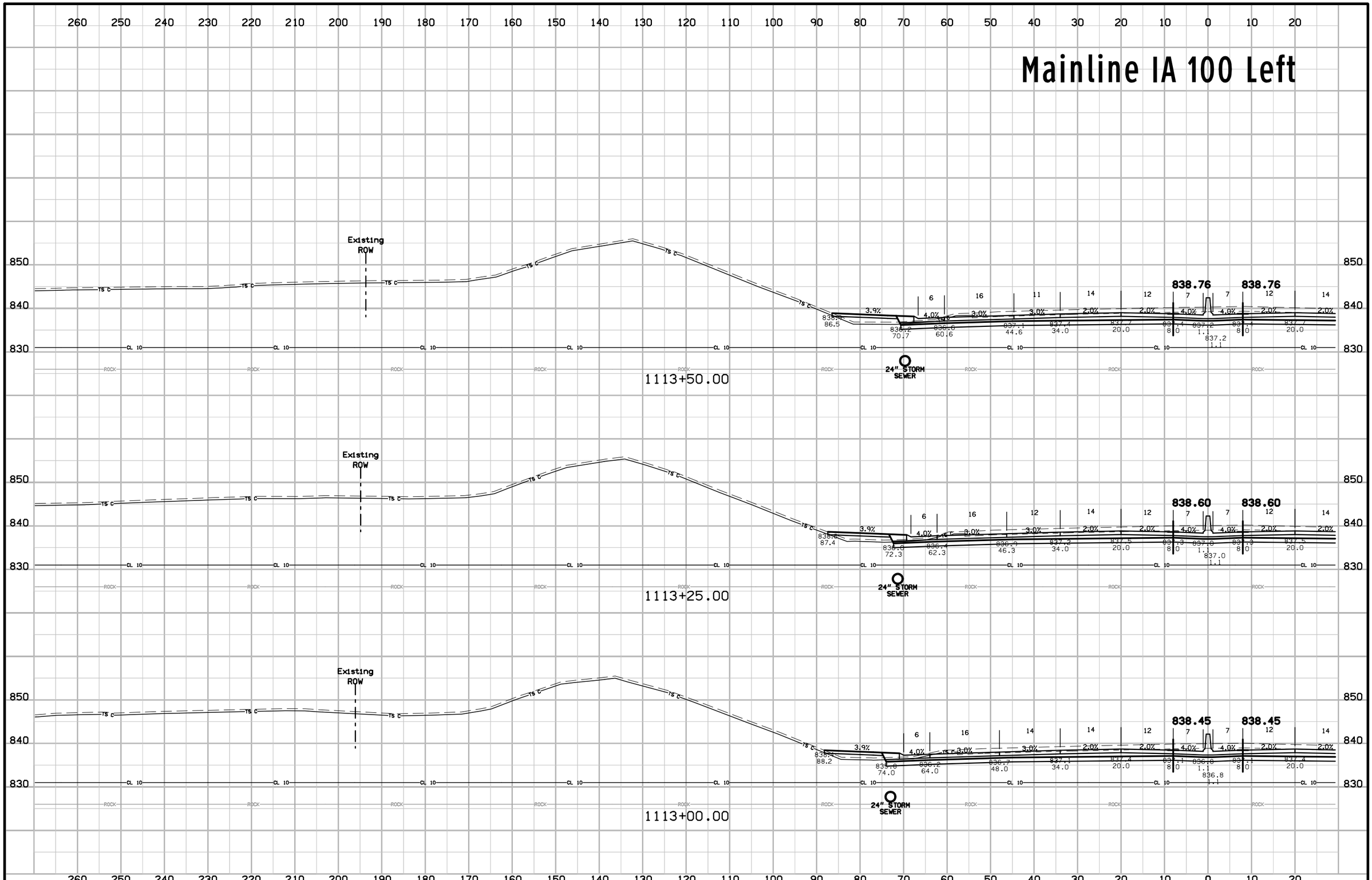

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.90

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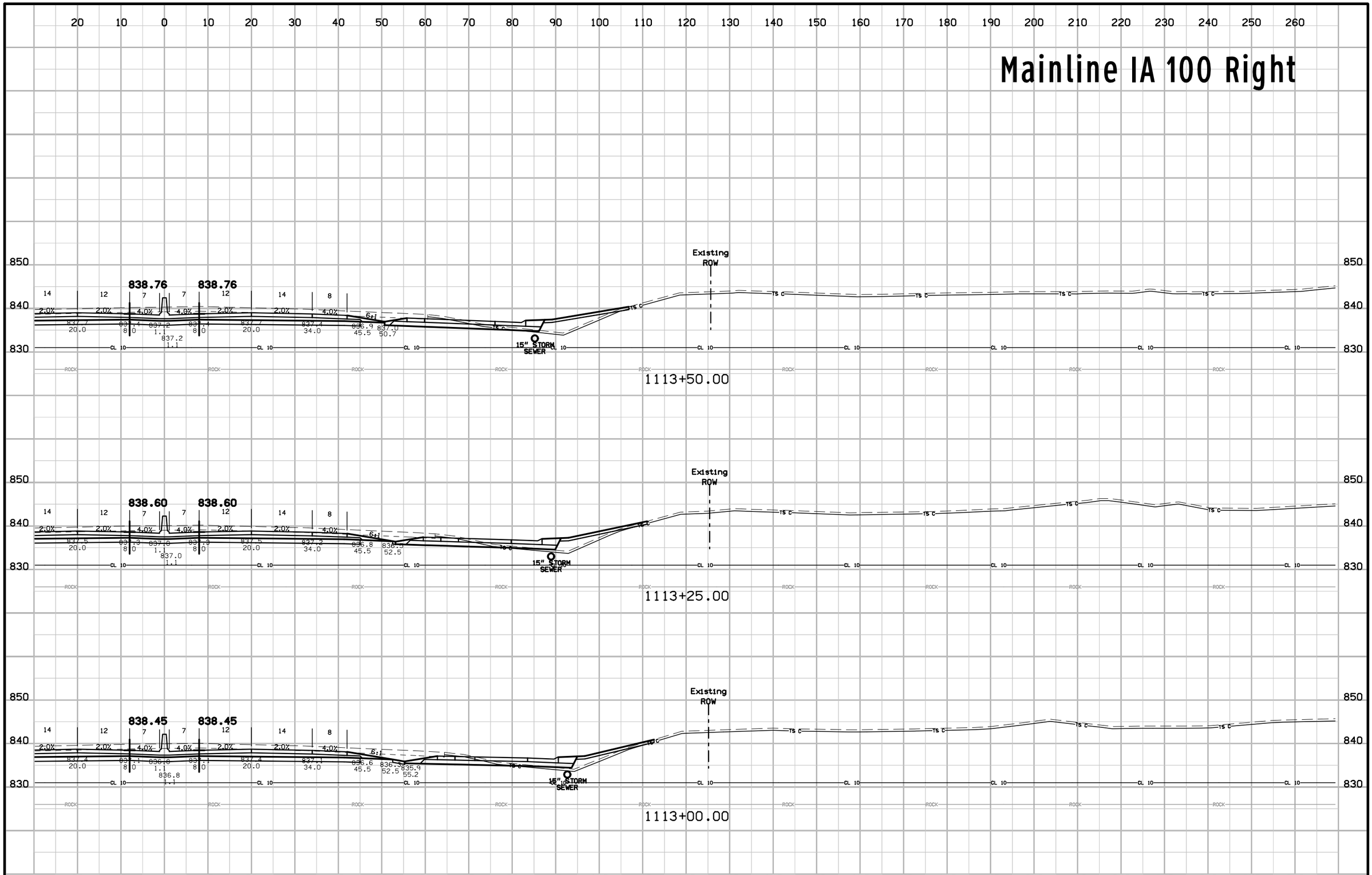

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.91

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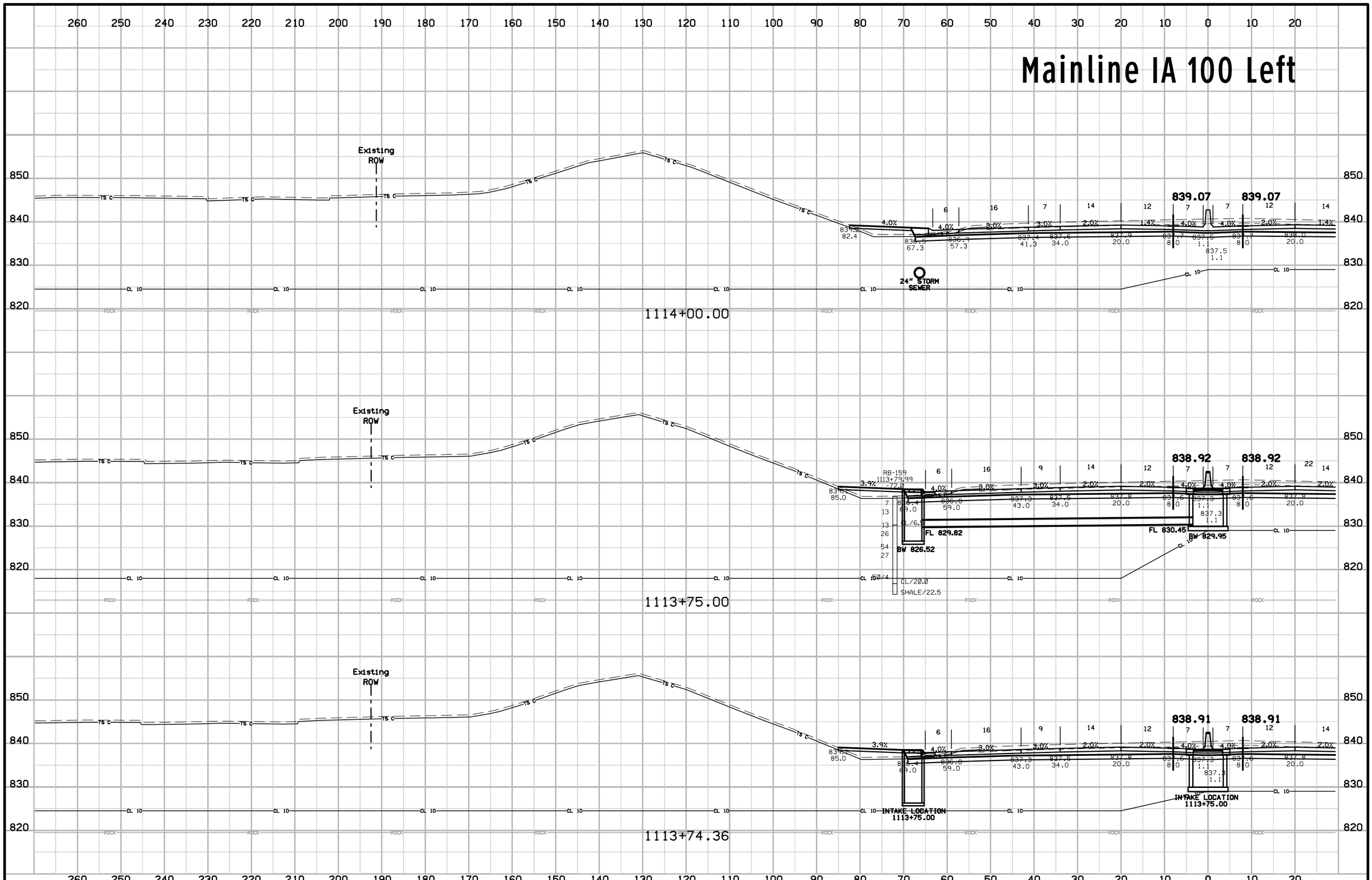

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.92

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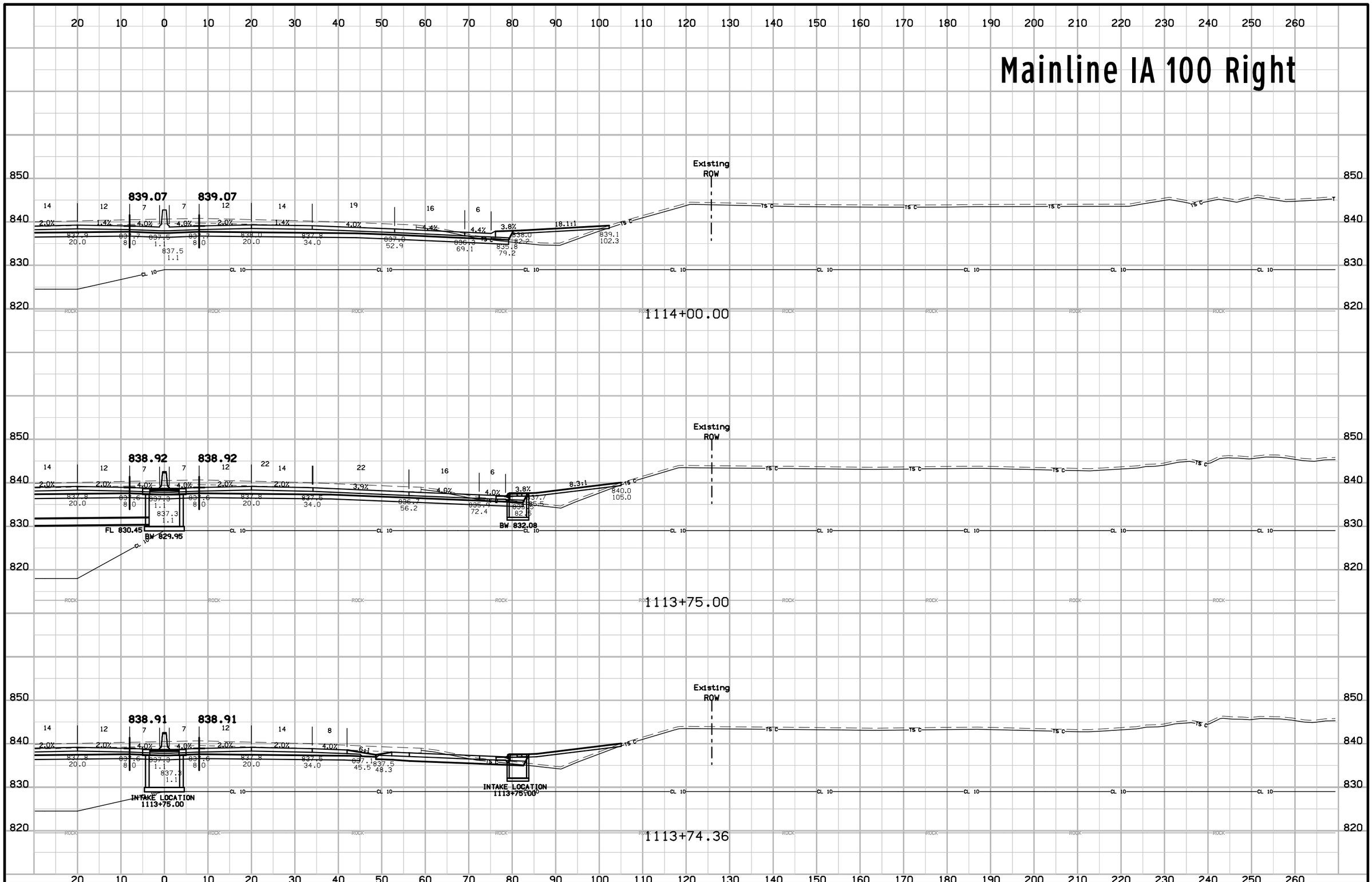

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.93

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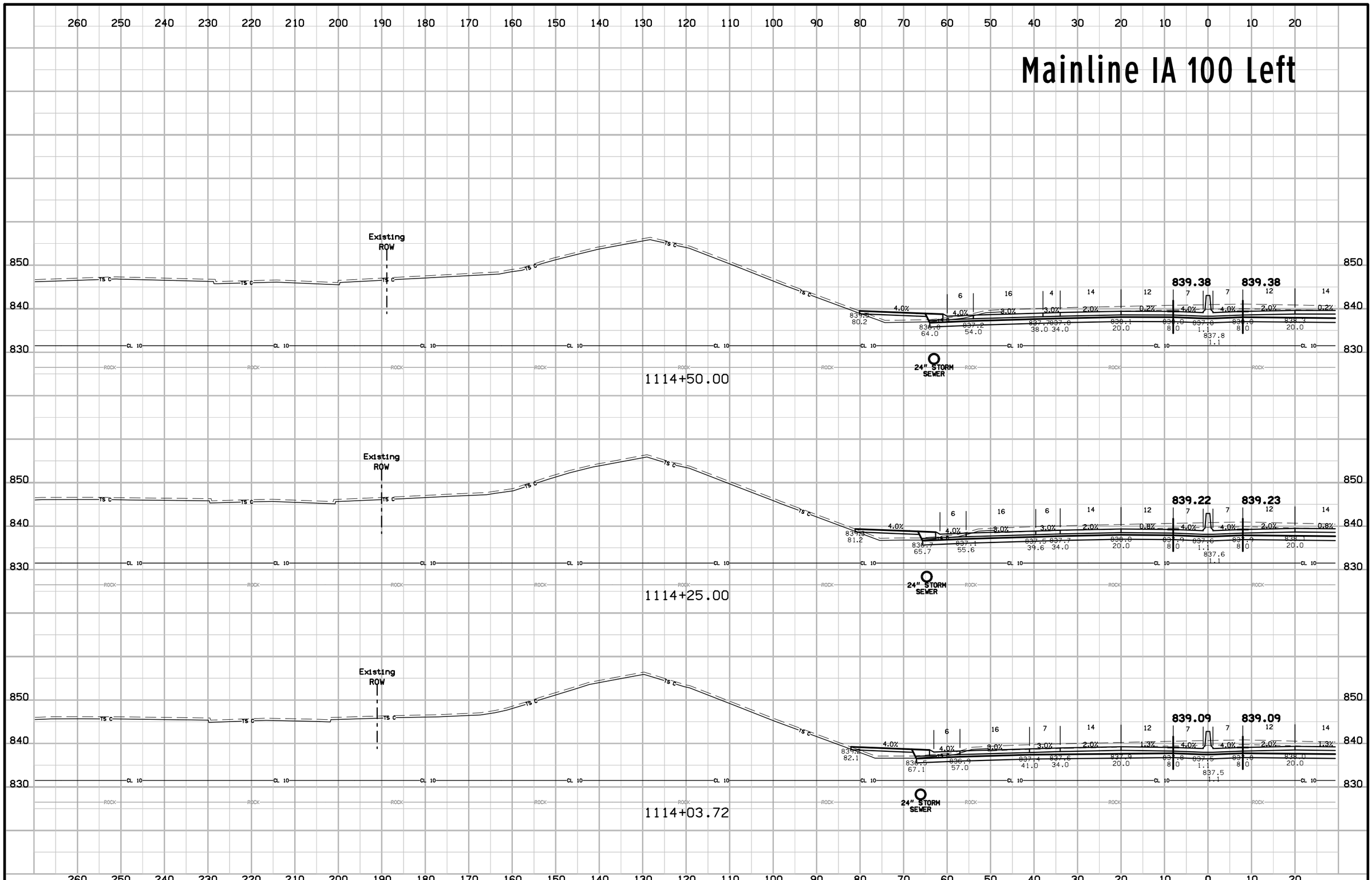

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.94

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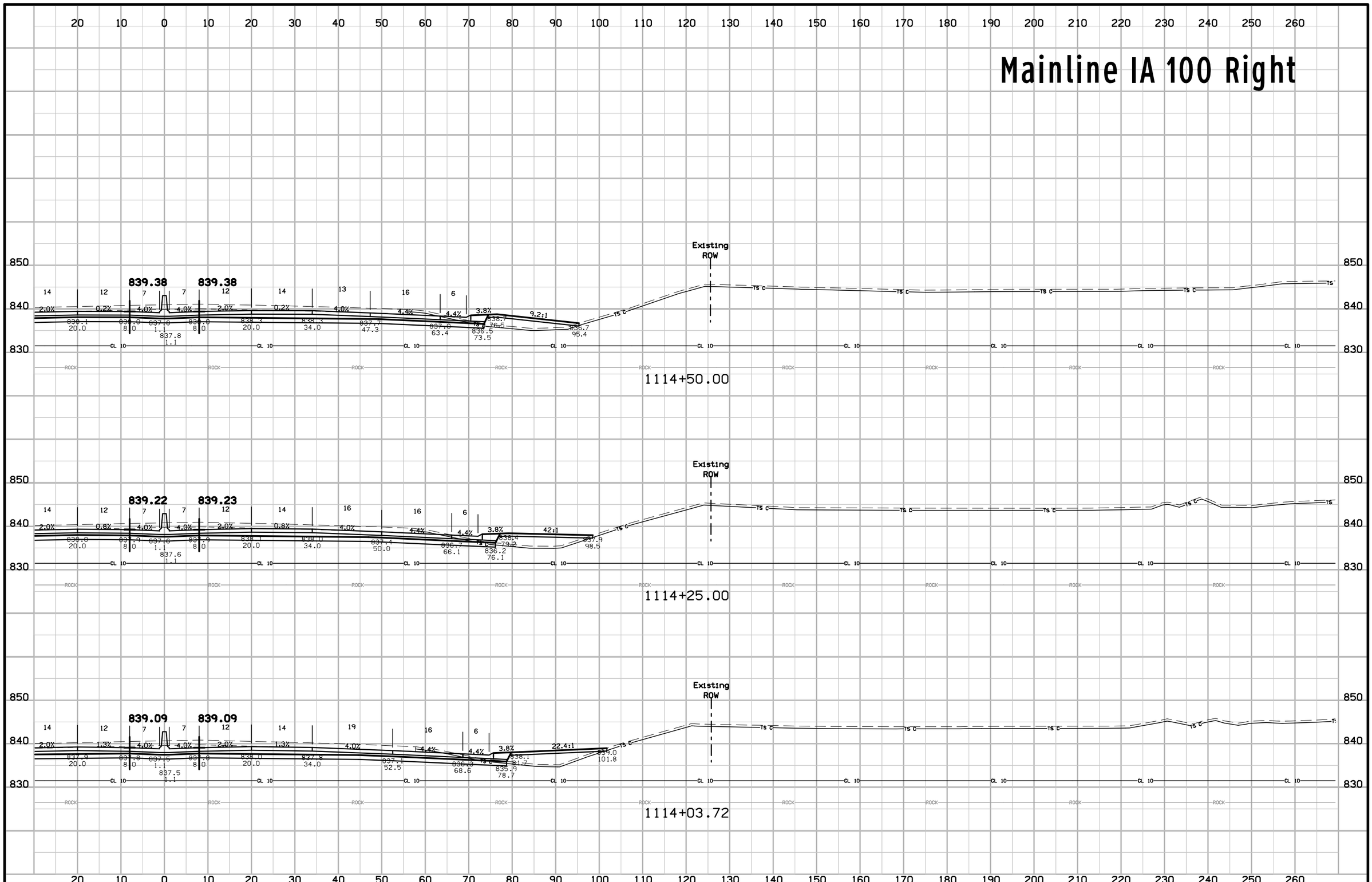

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.95

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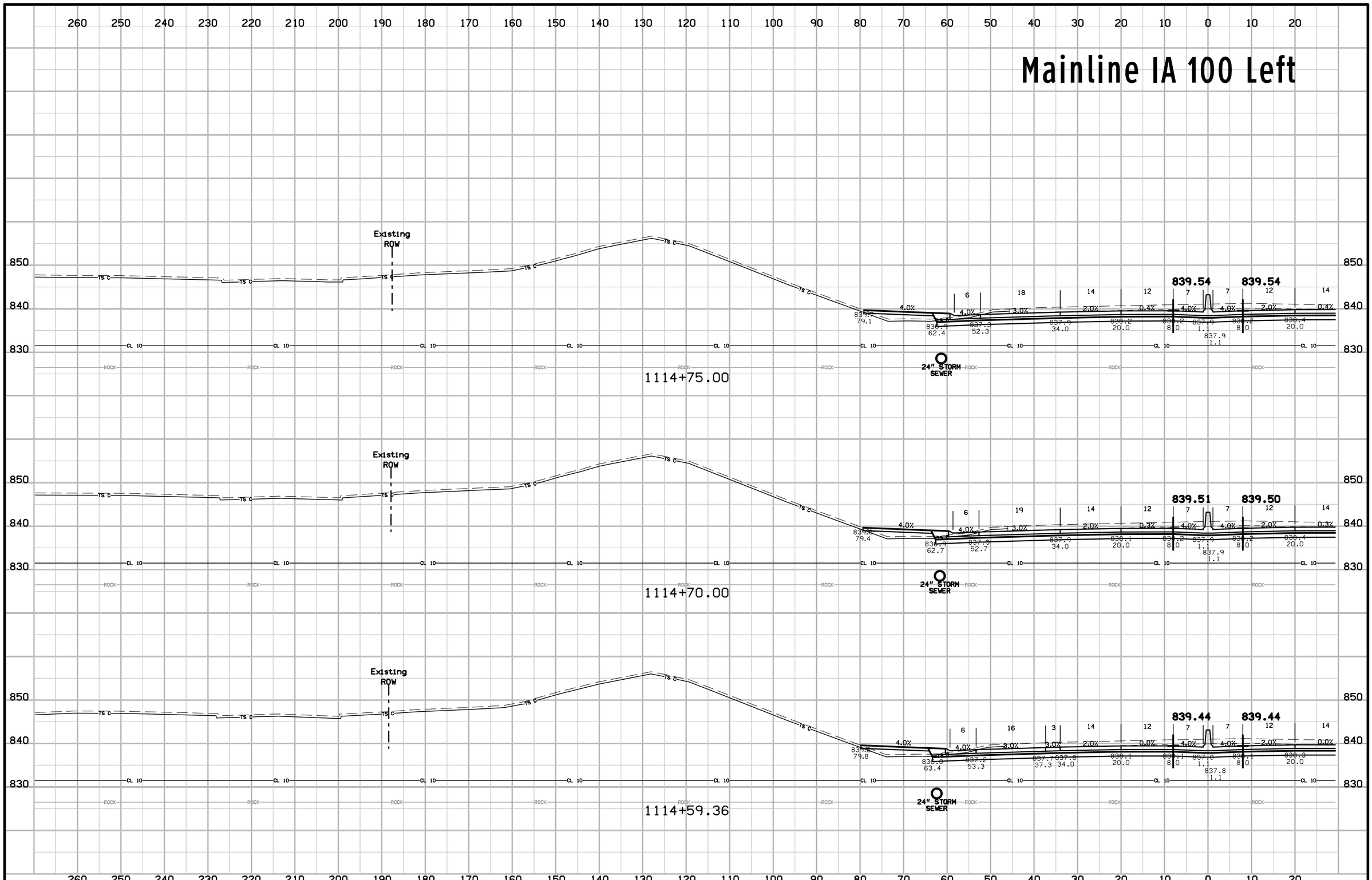

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.96

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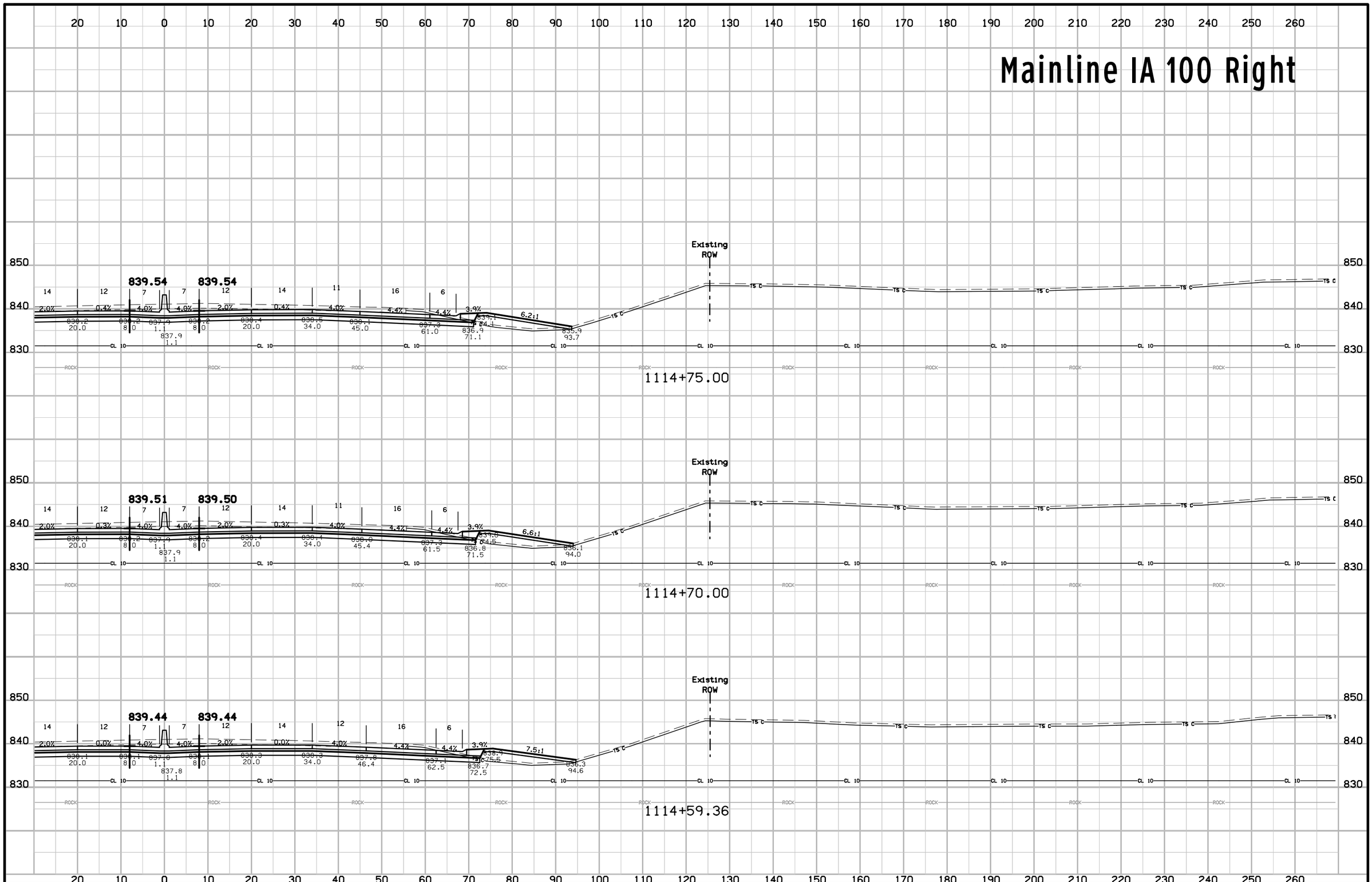

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.97

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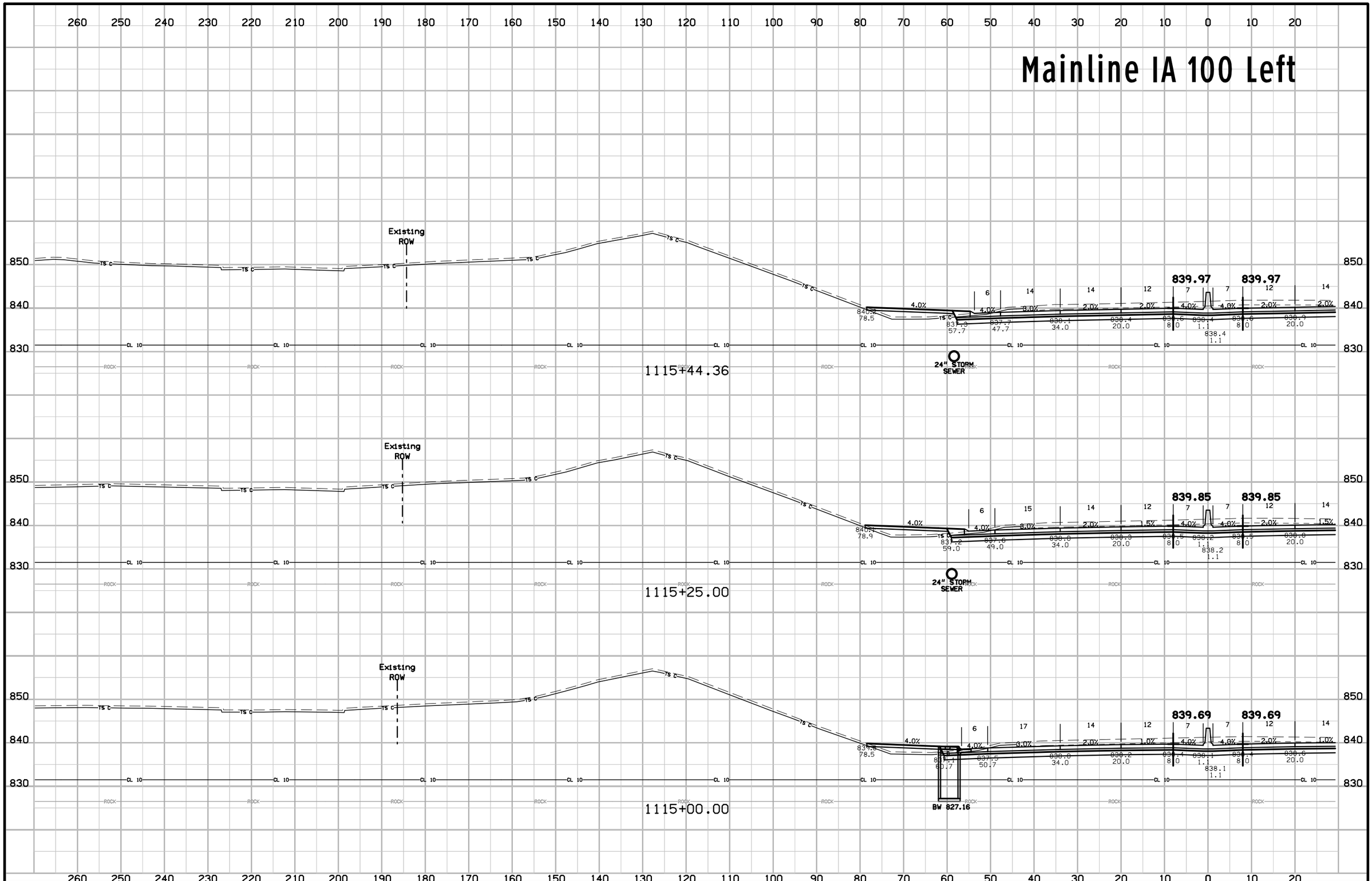

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.98

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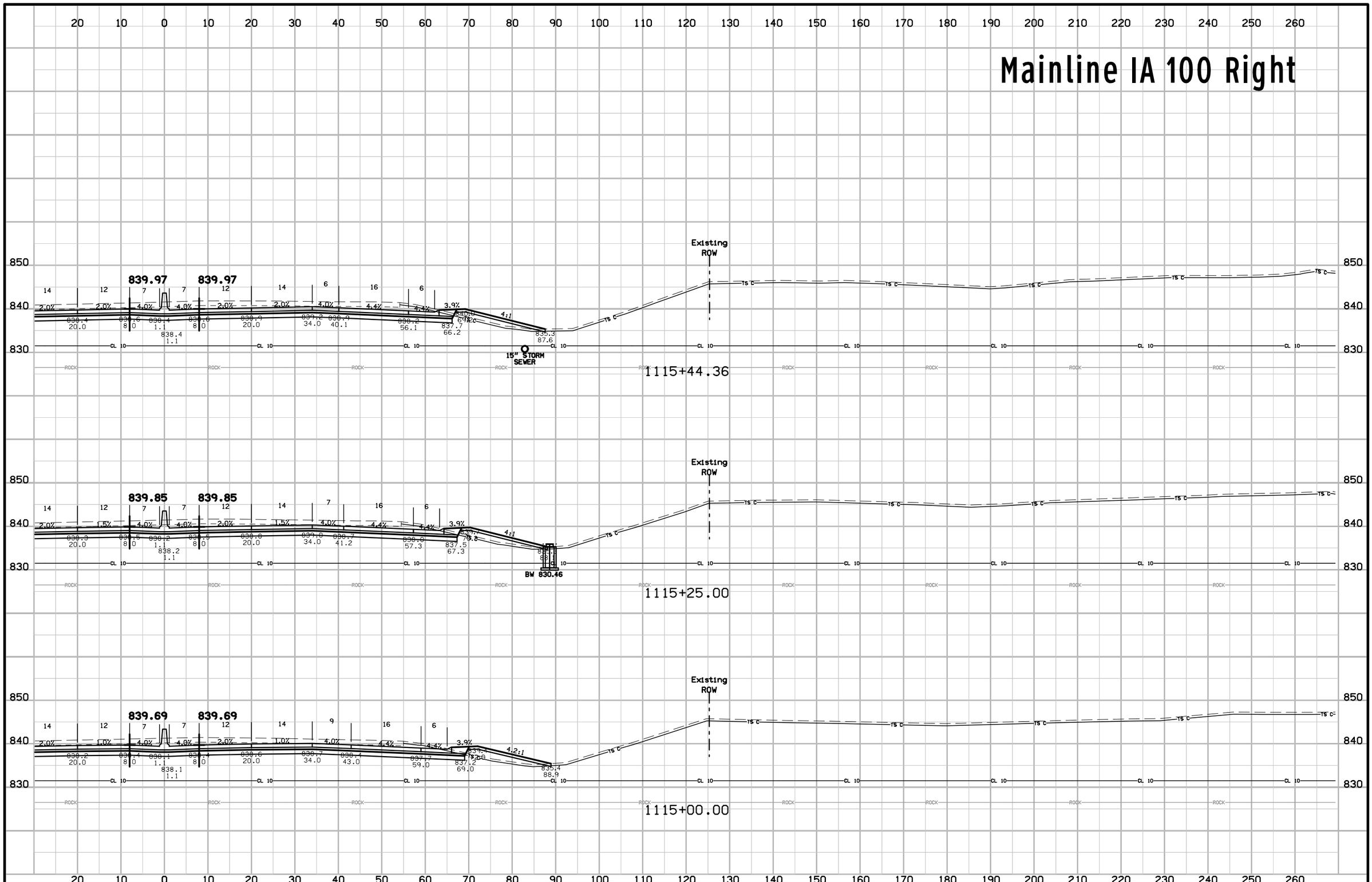

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.99

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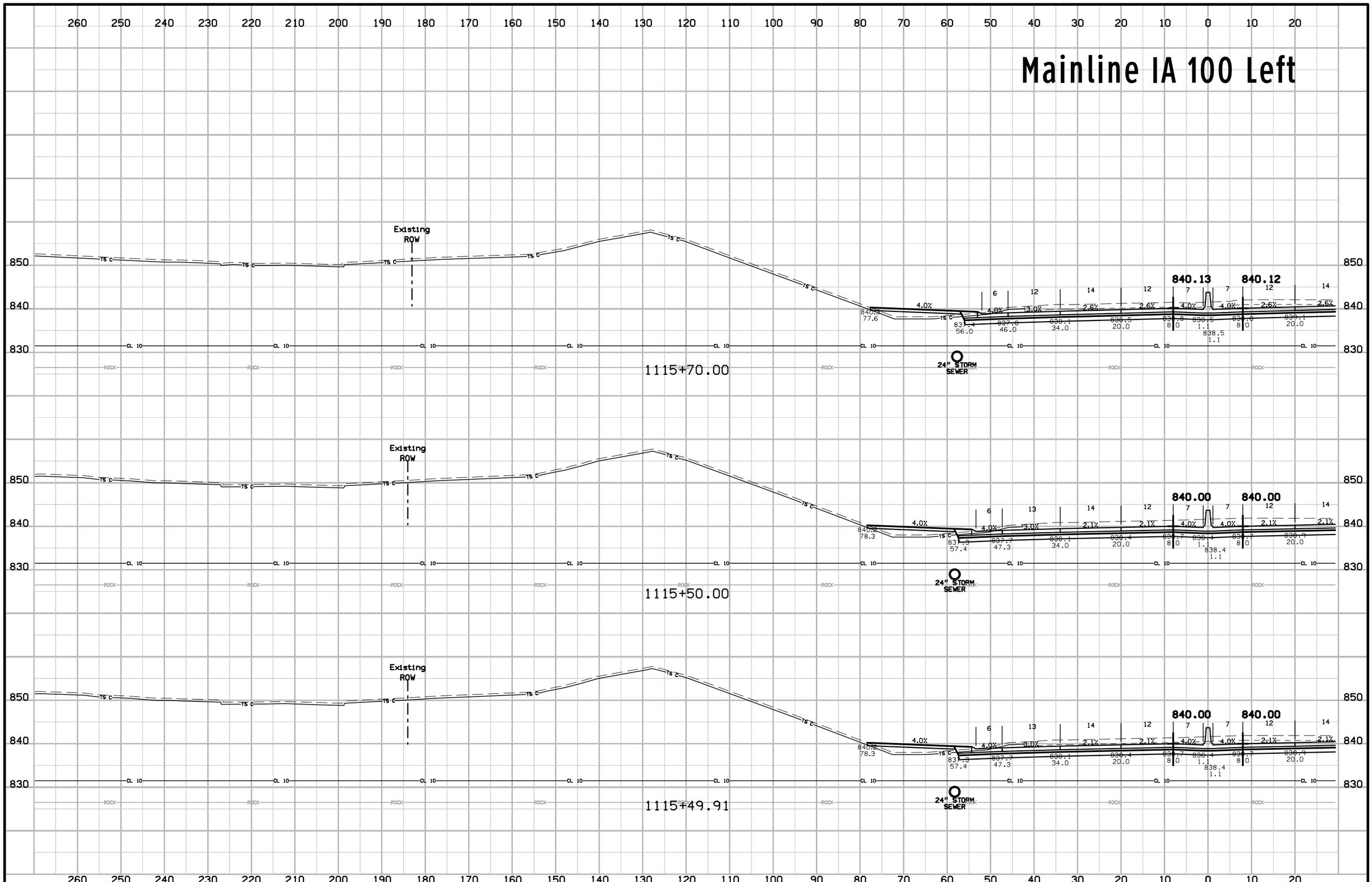

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.100

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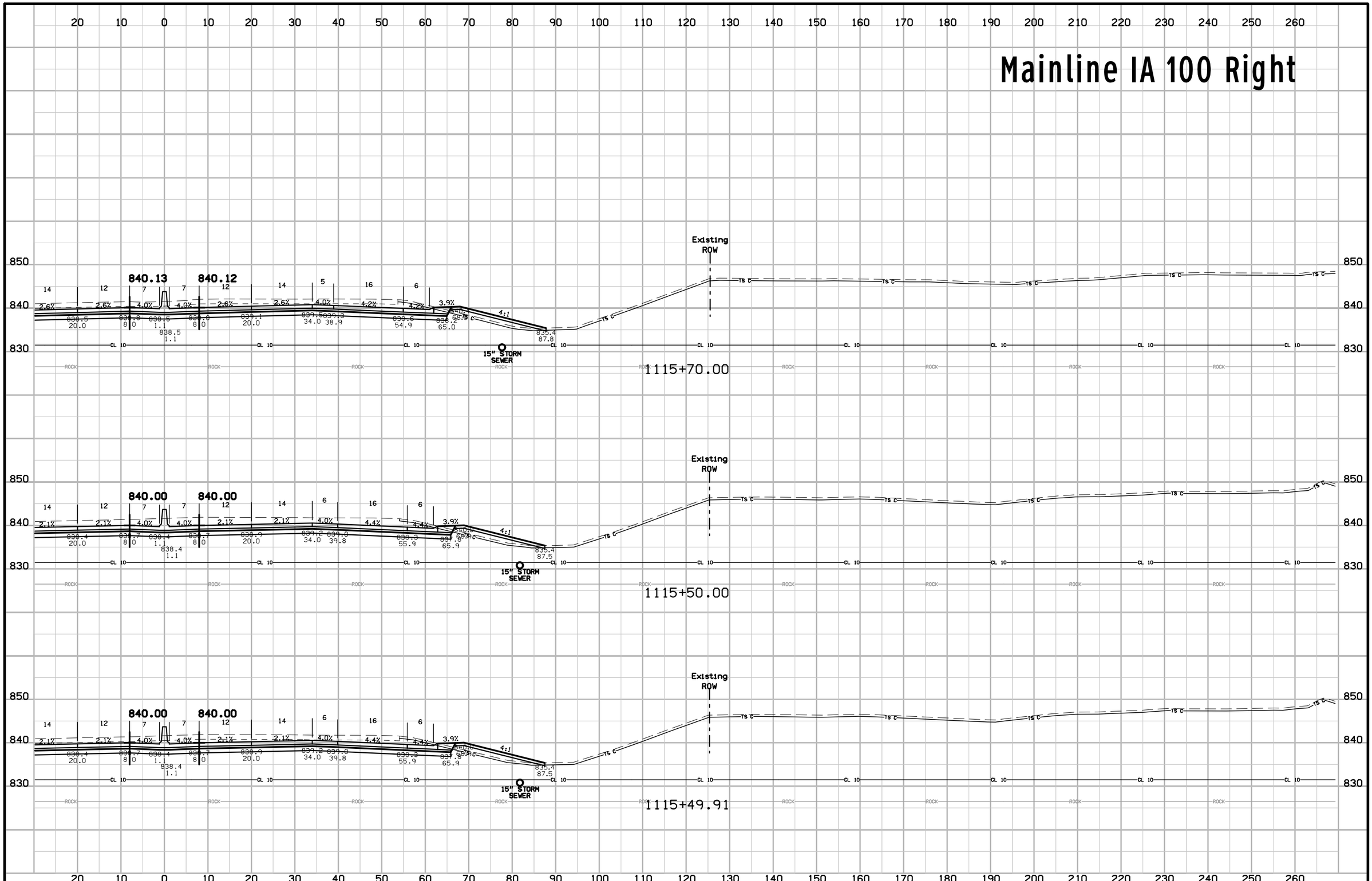

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.101

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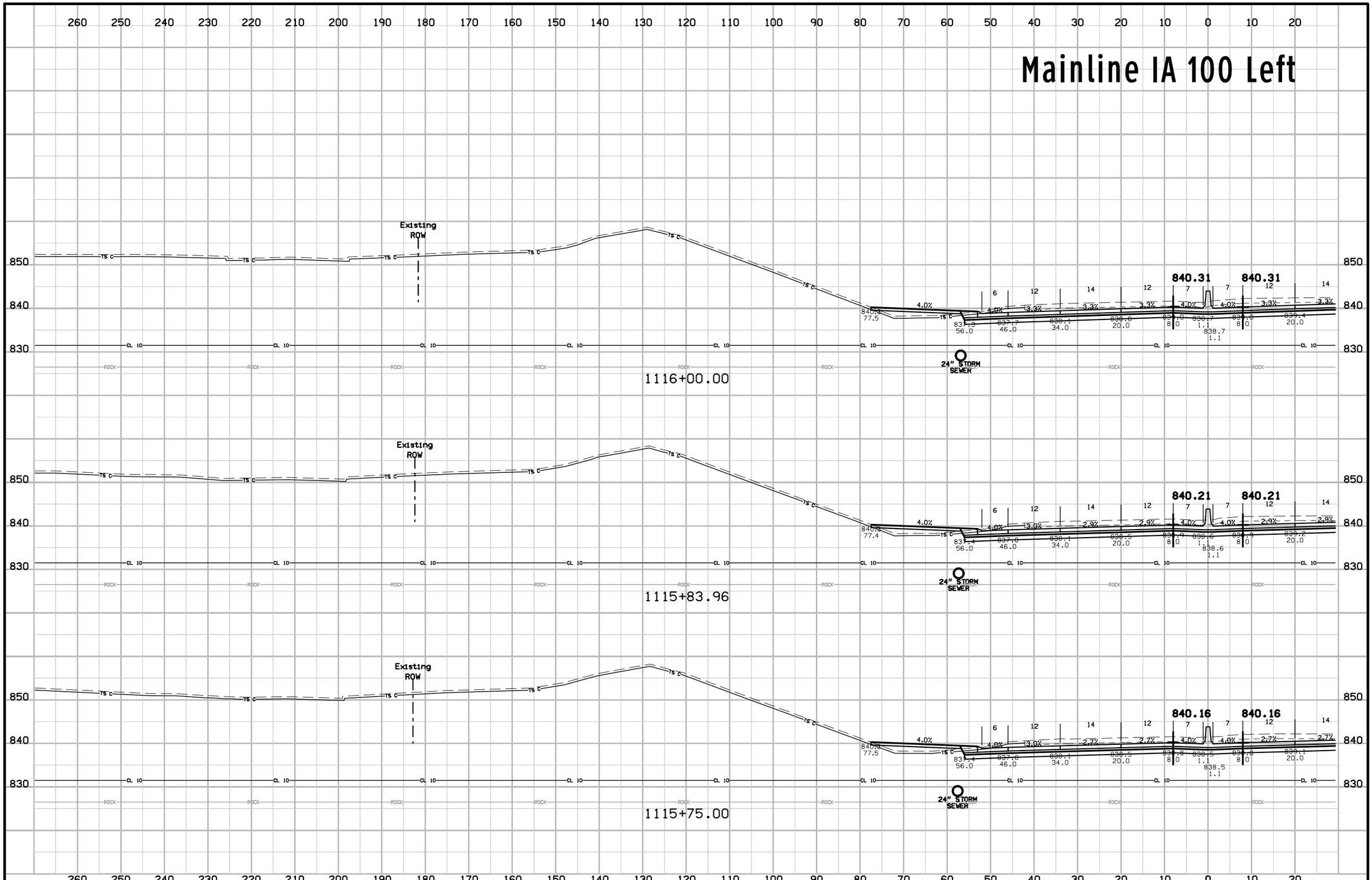

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.102

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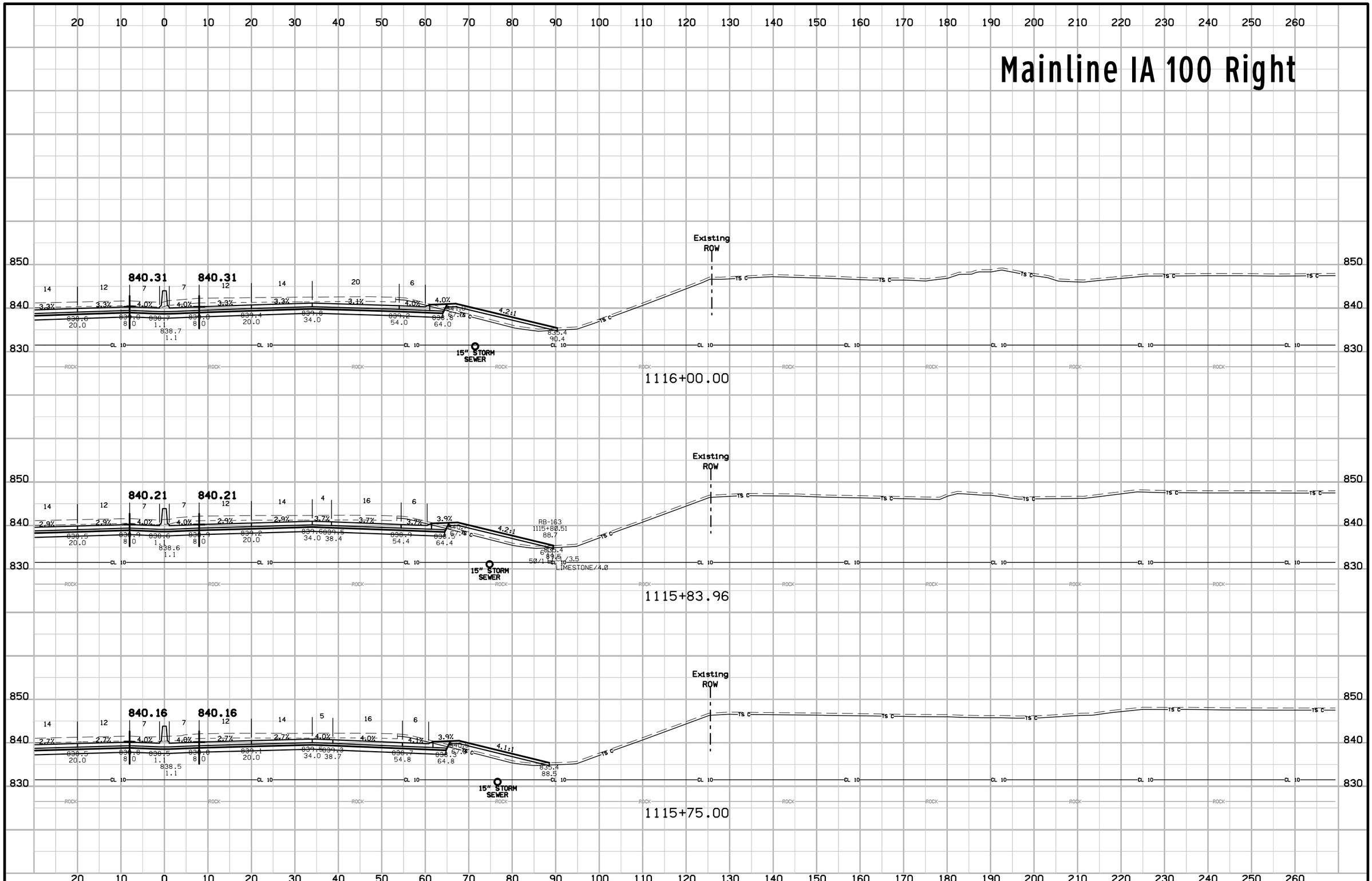

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.103

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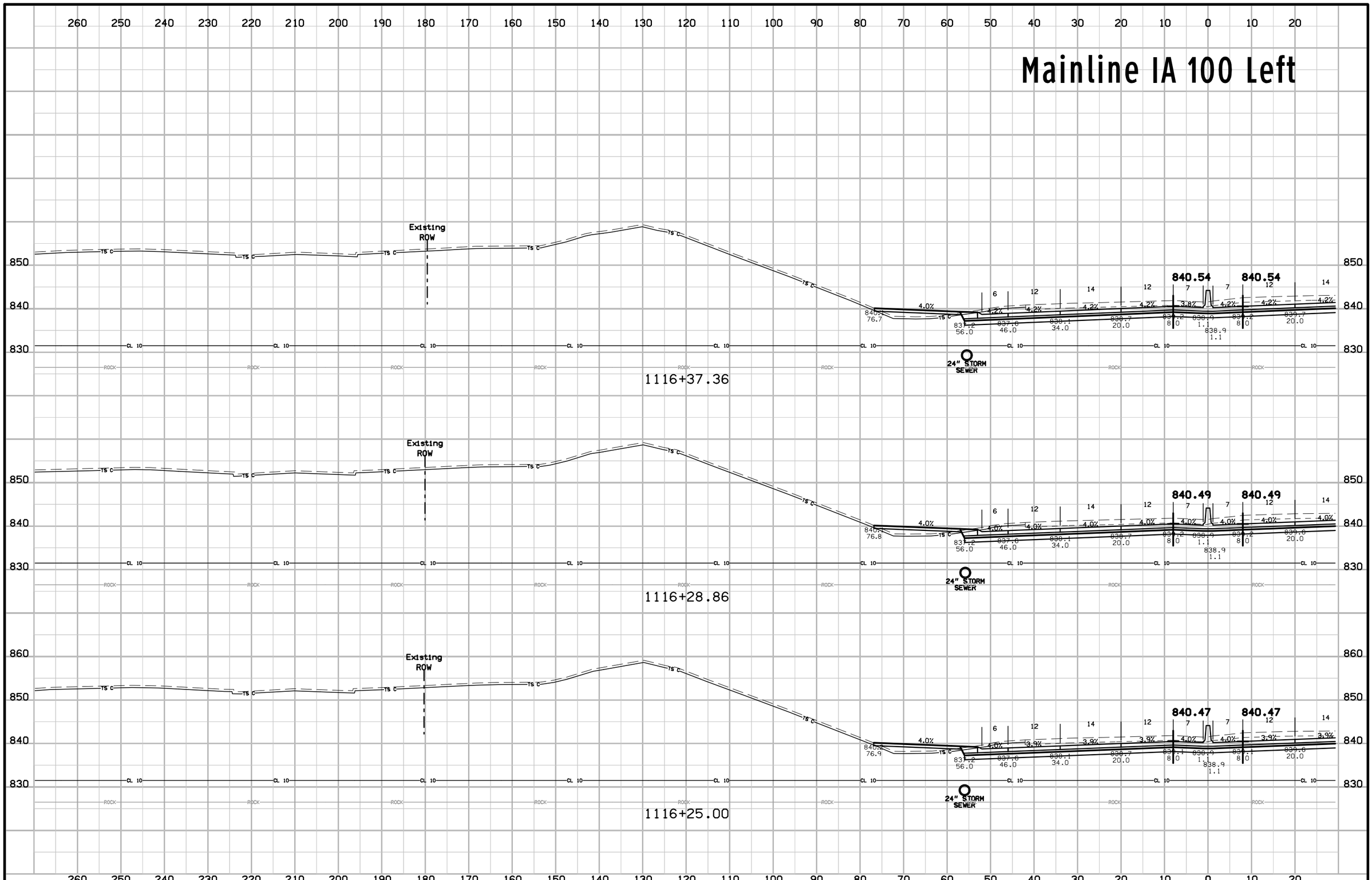

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.104

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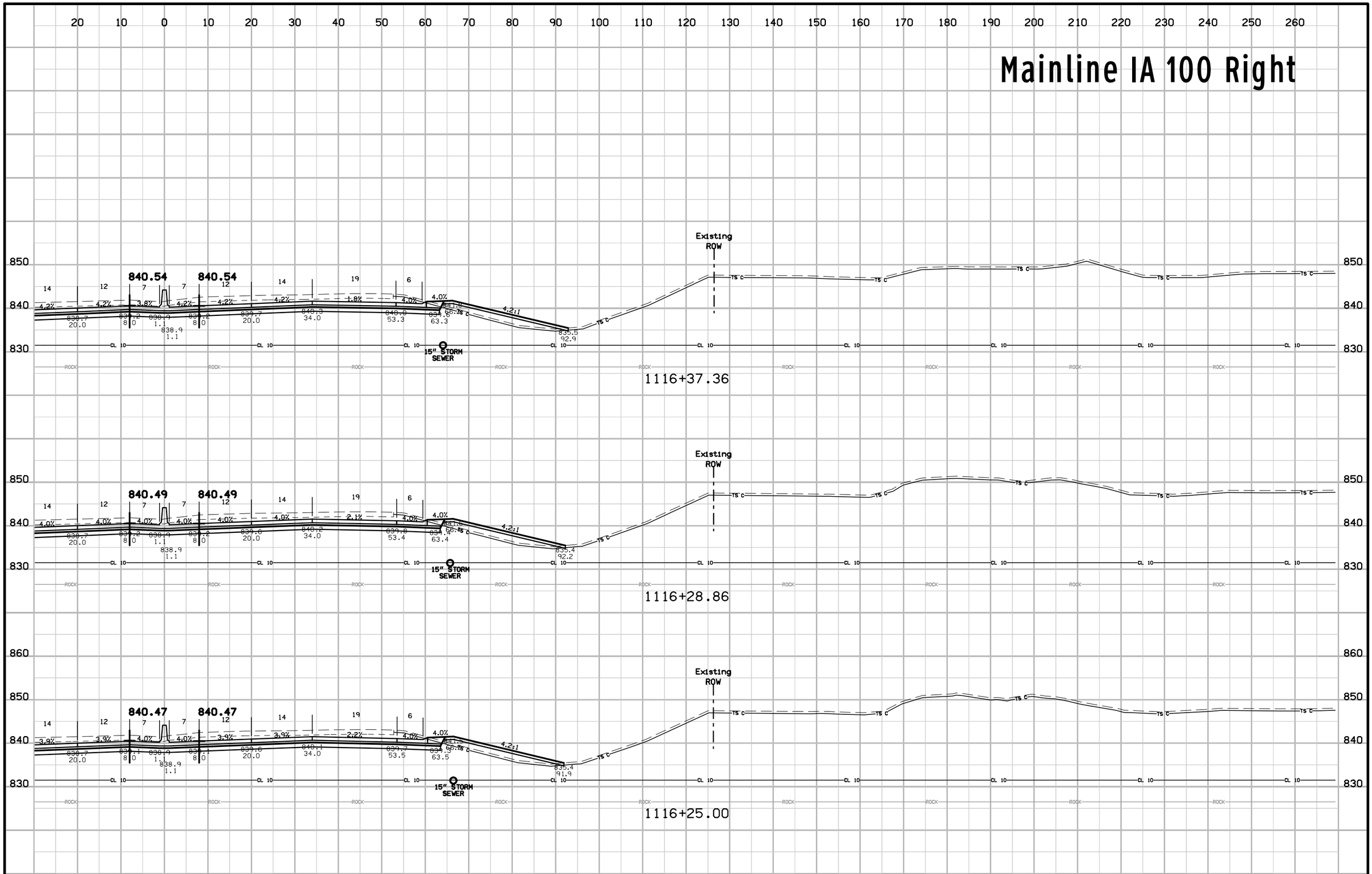

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.105

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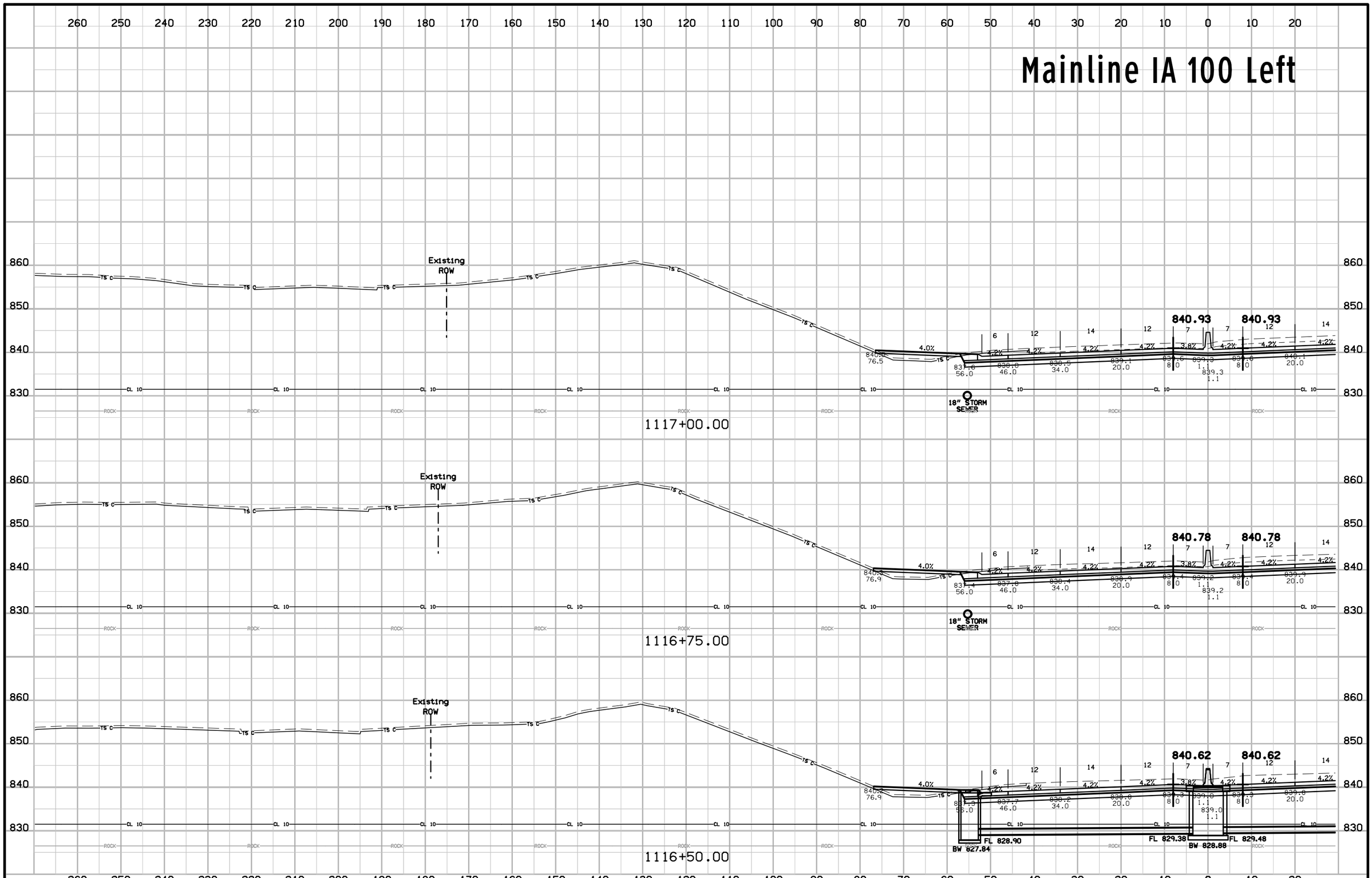

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.106

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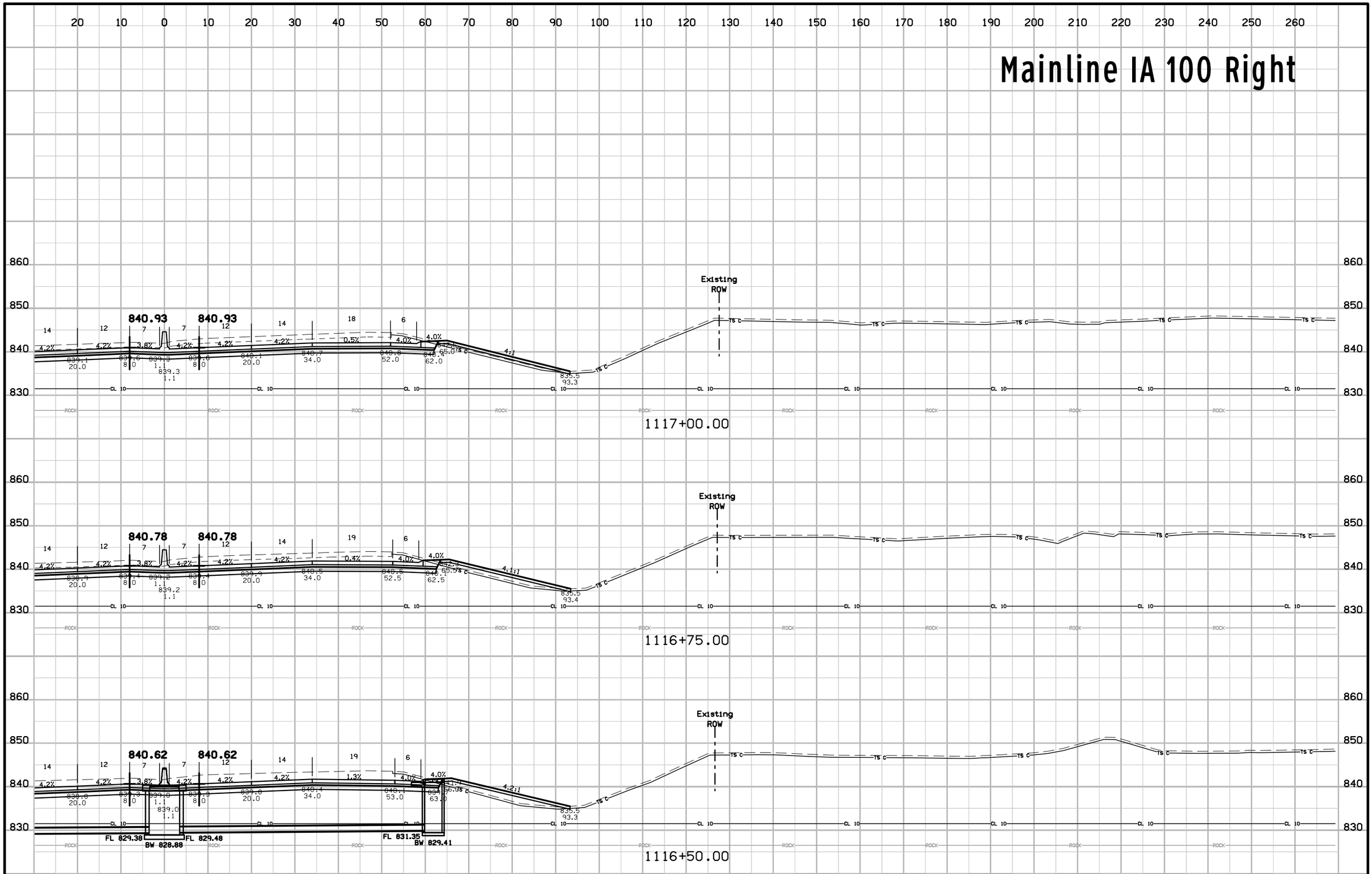

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.107

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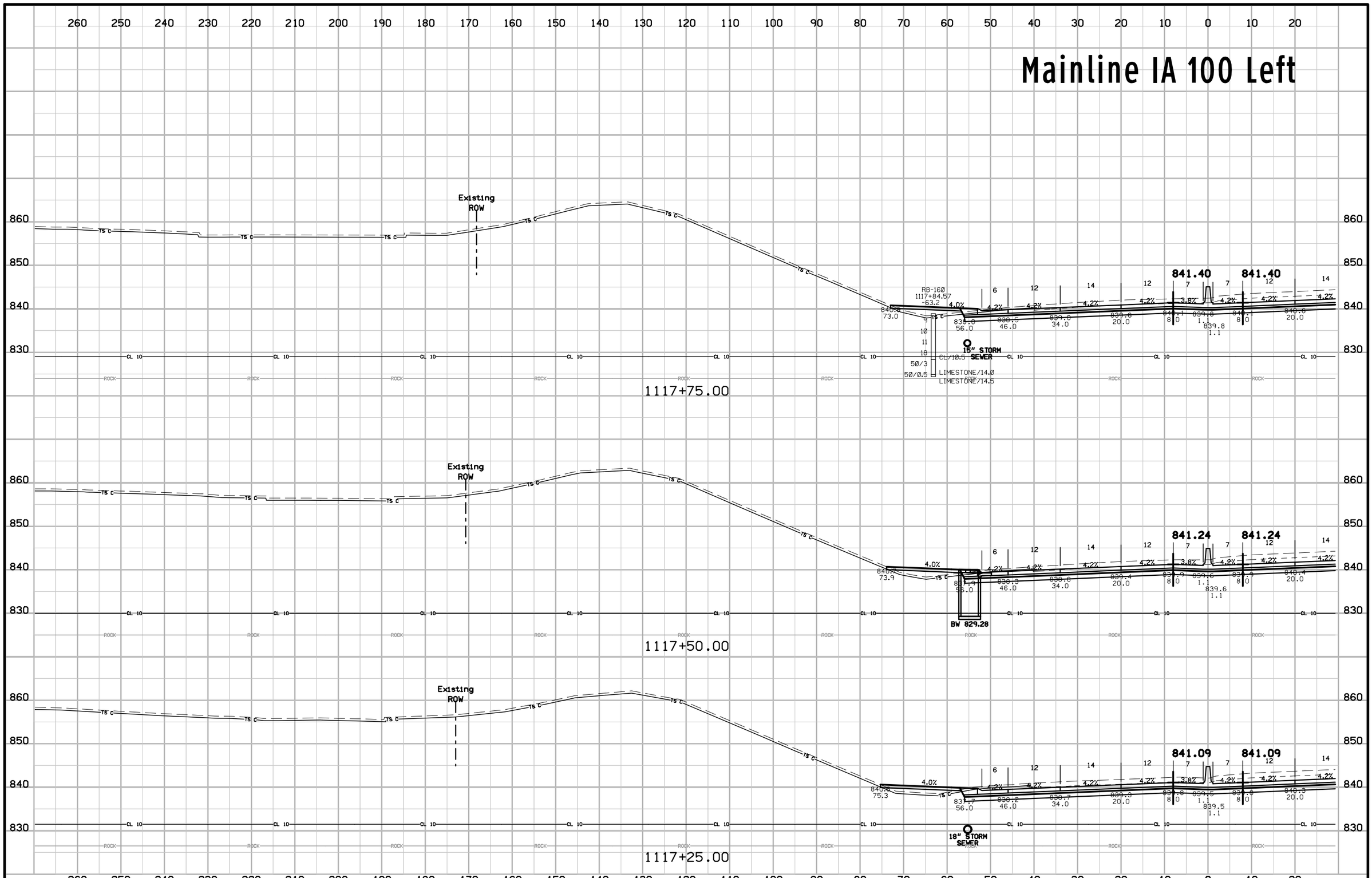

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.108

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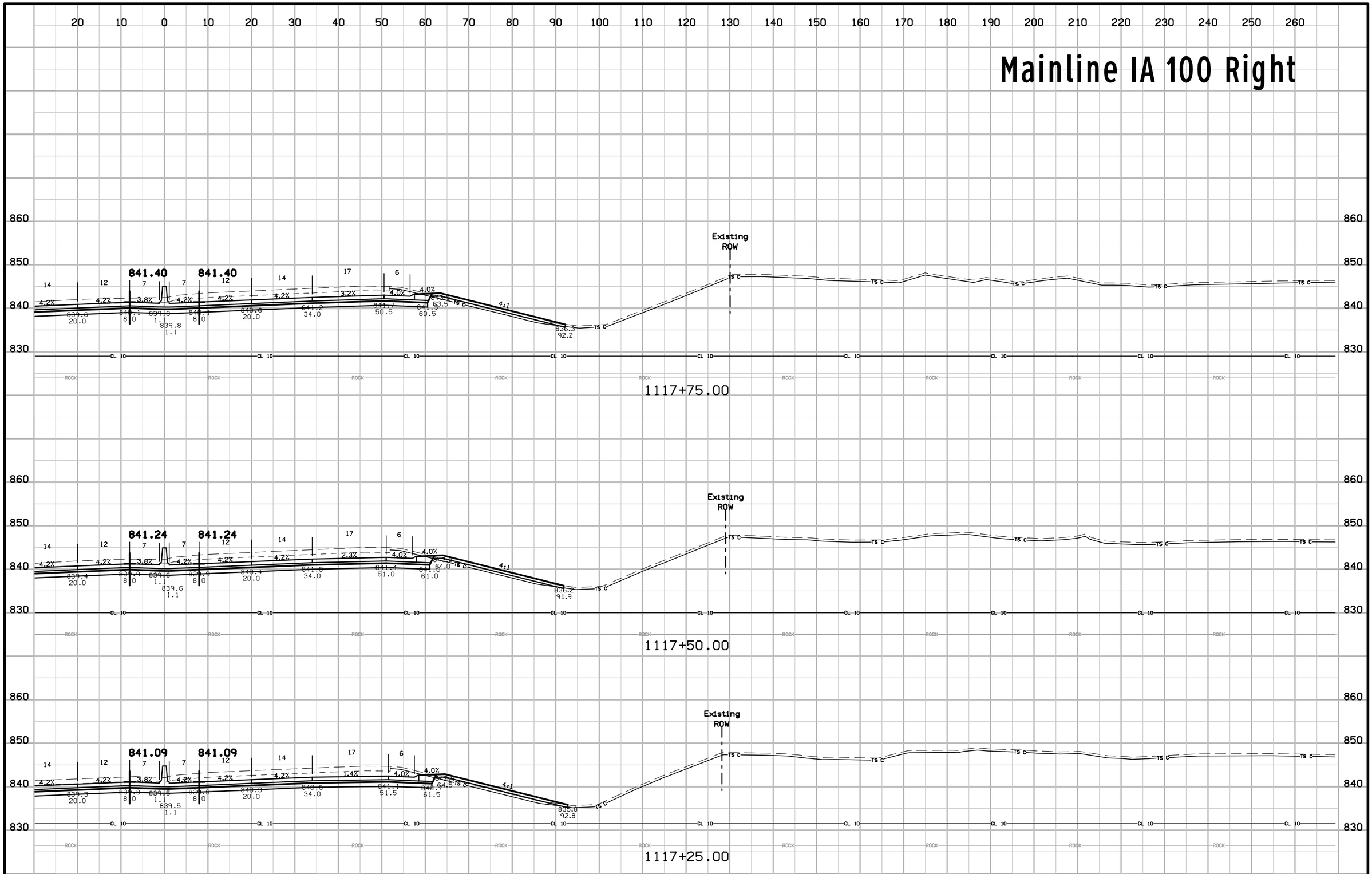

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.109

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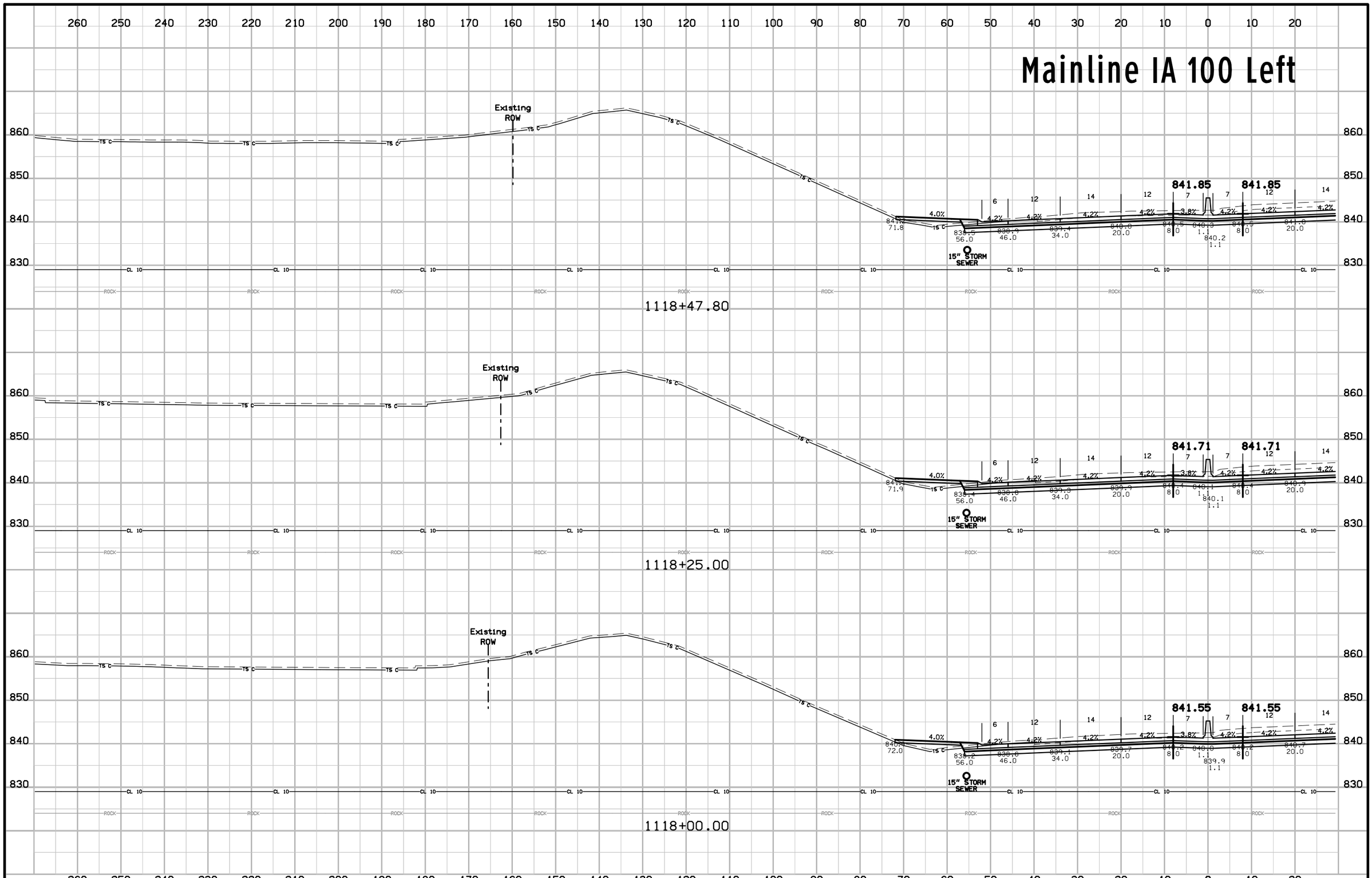

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.110

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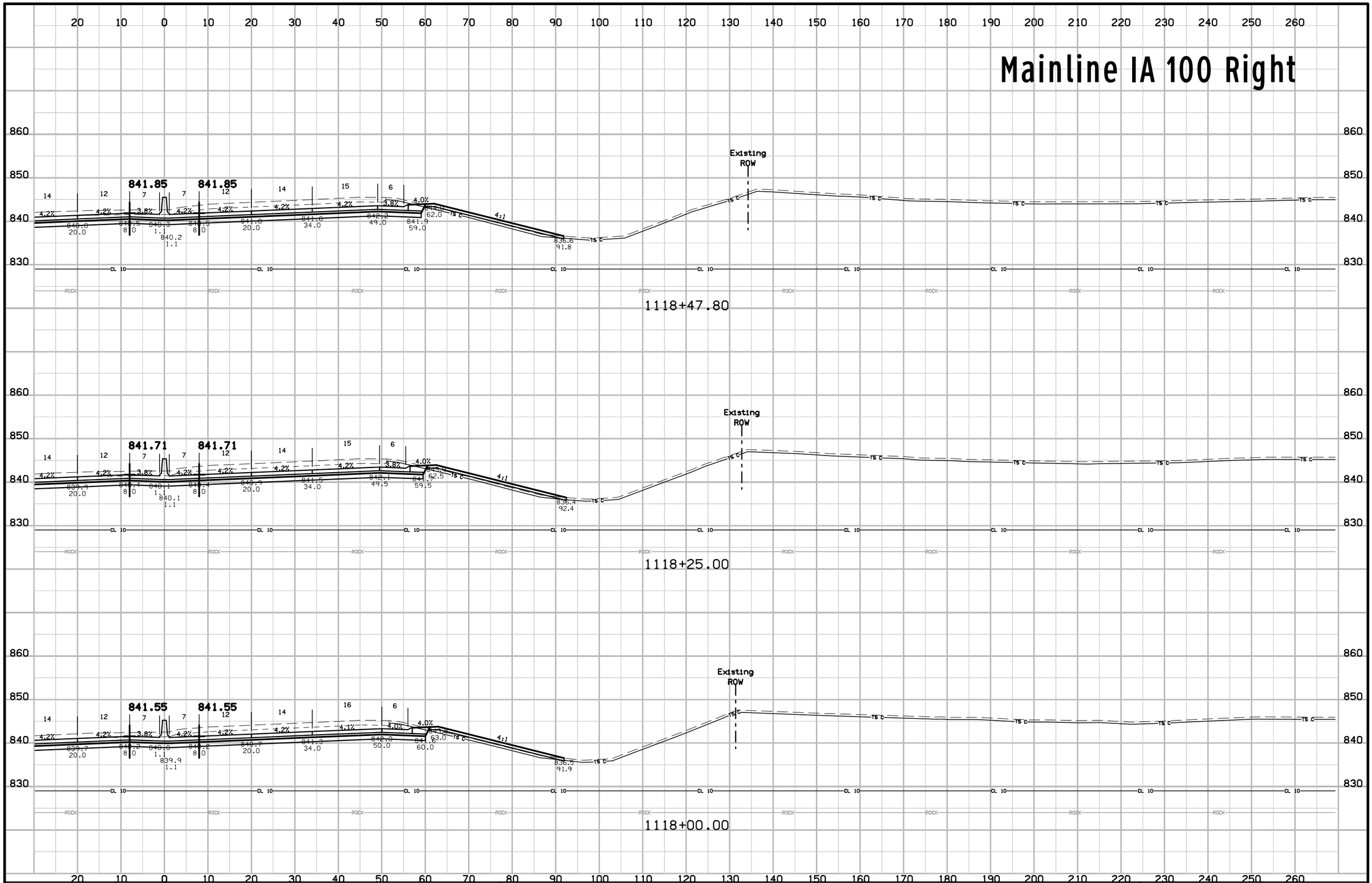

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.111

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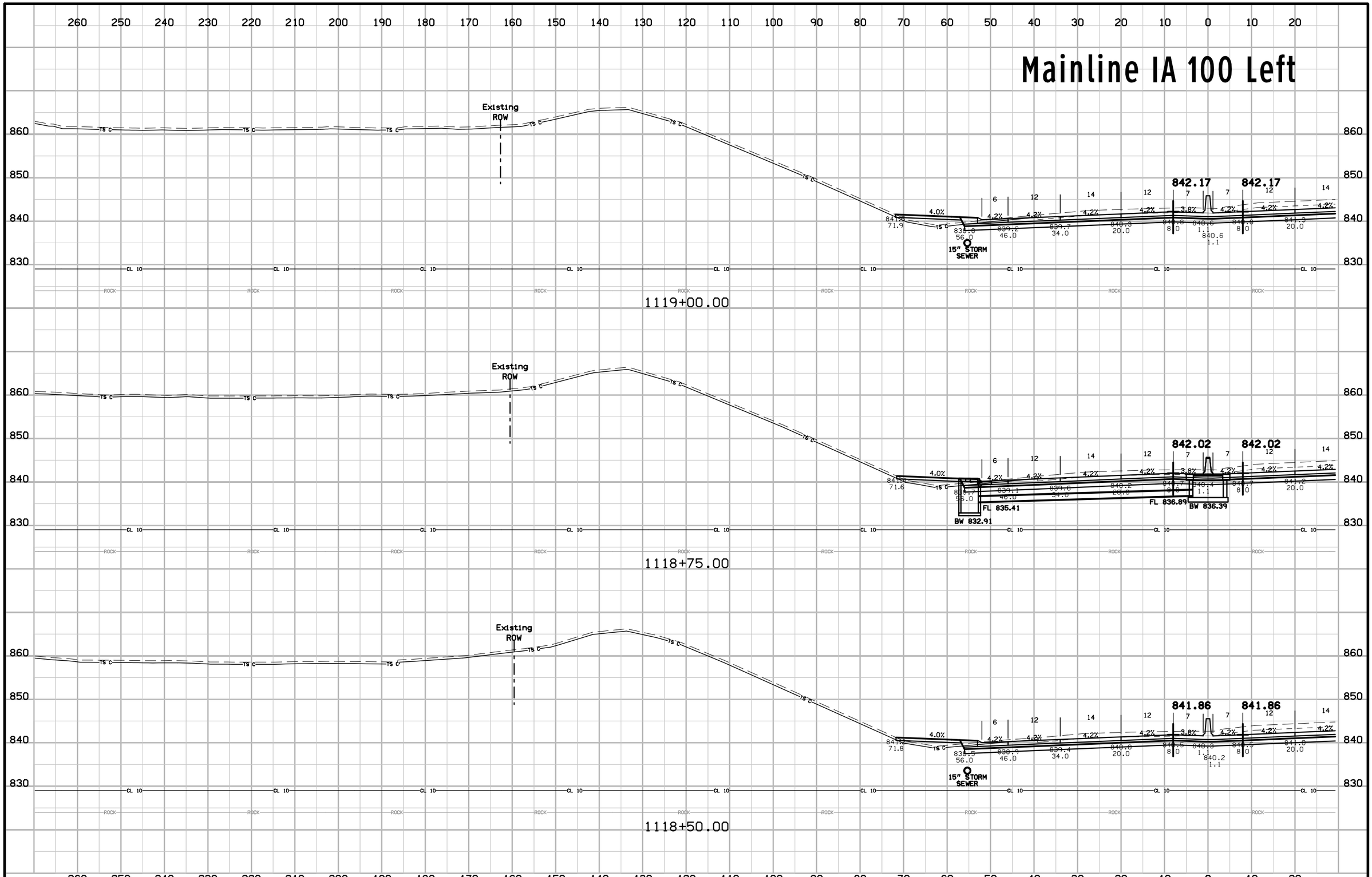

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.112

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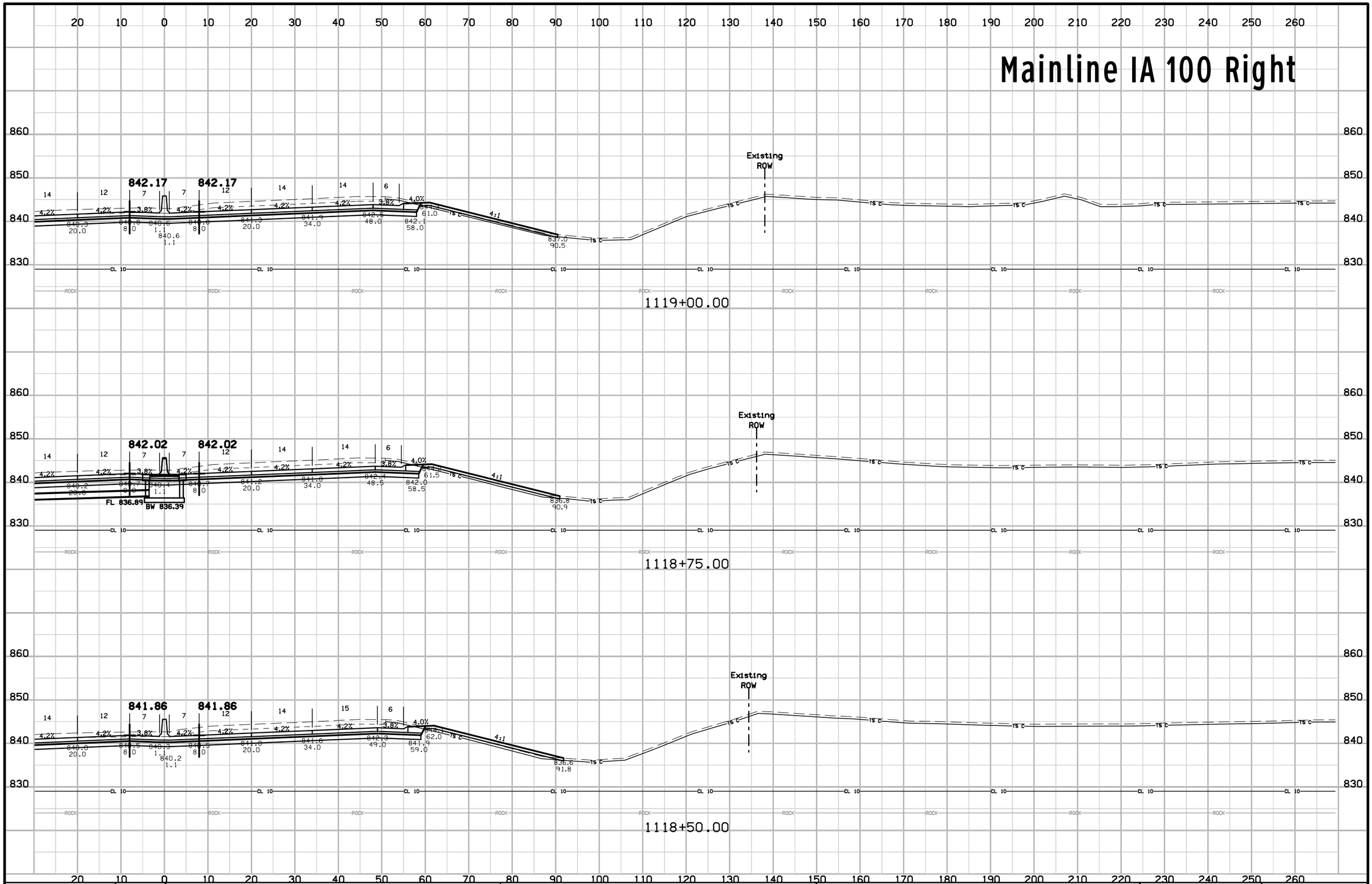

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.113

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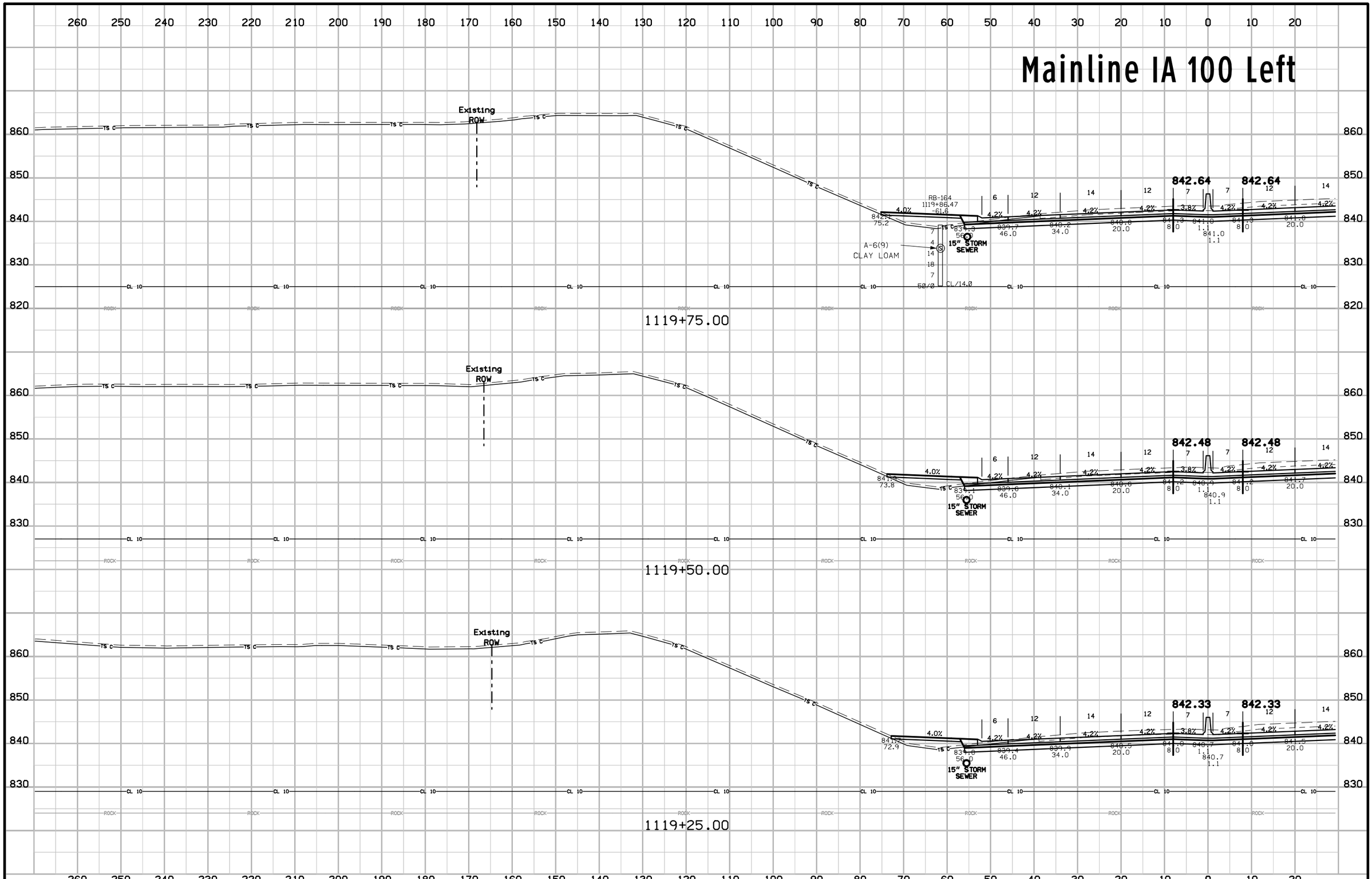

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.114

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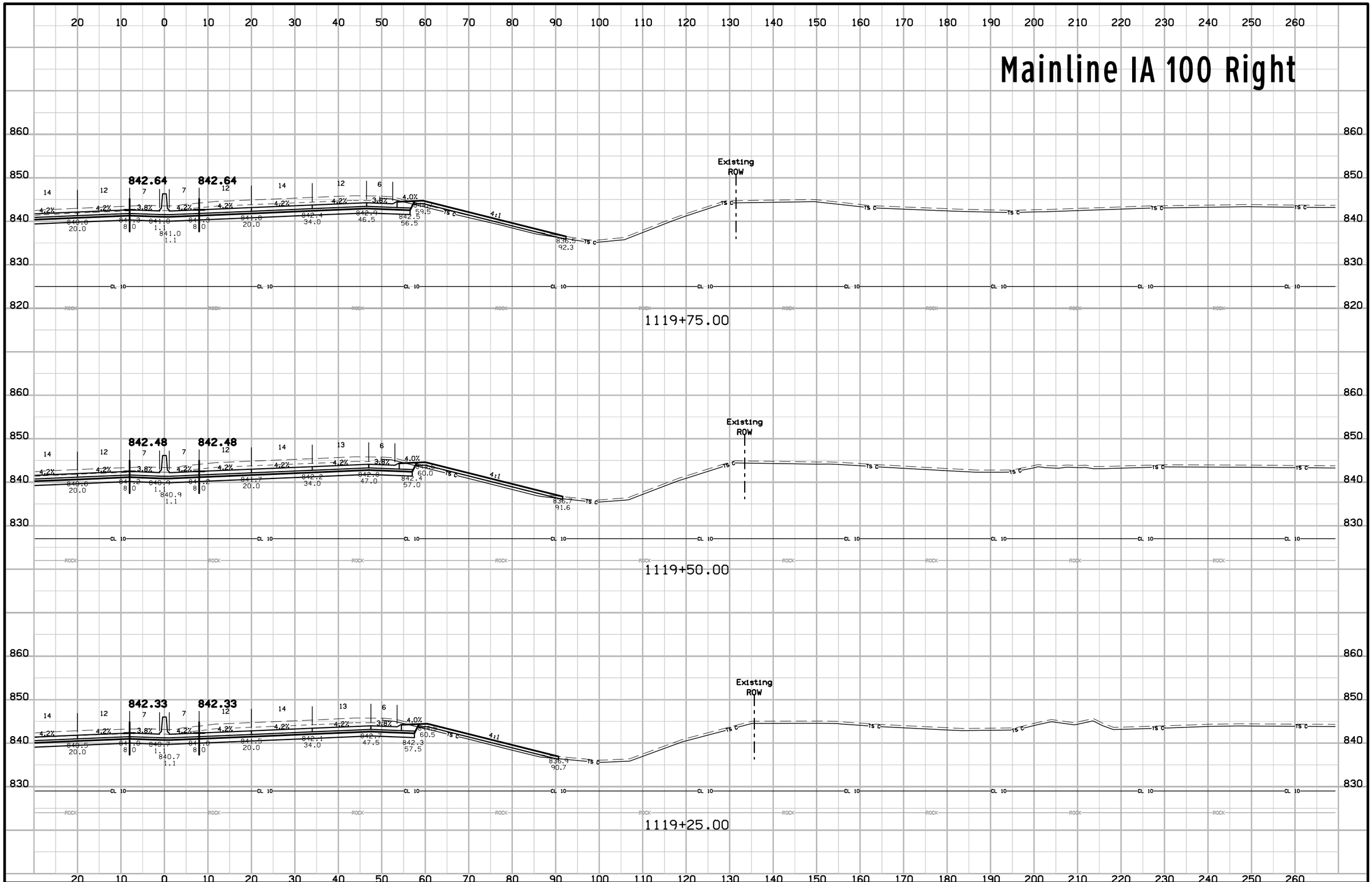

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.115

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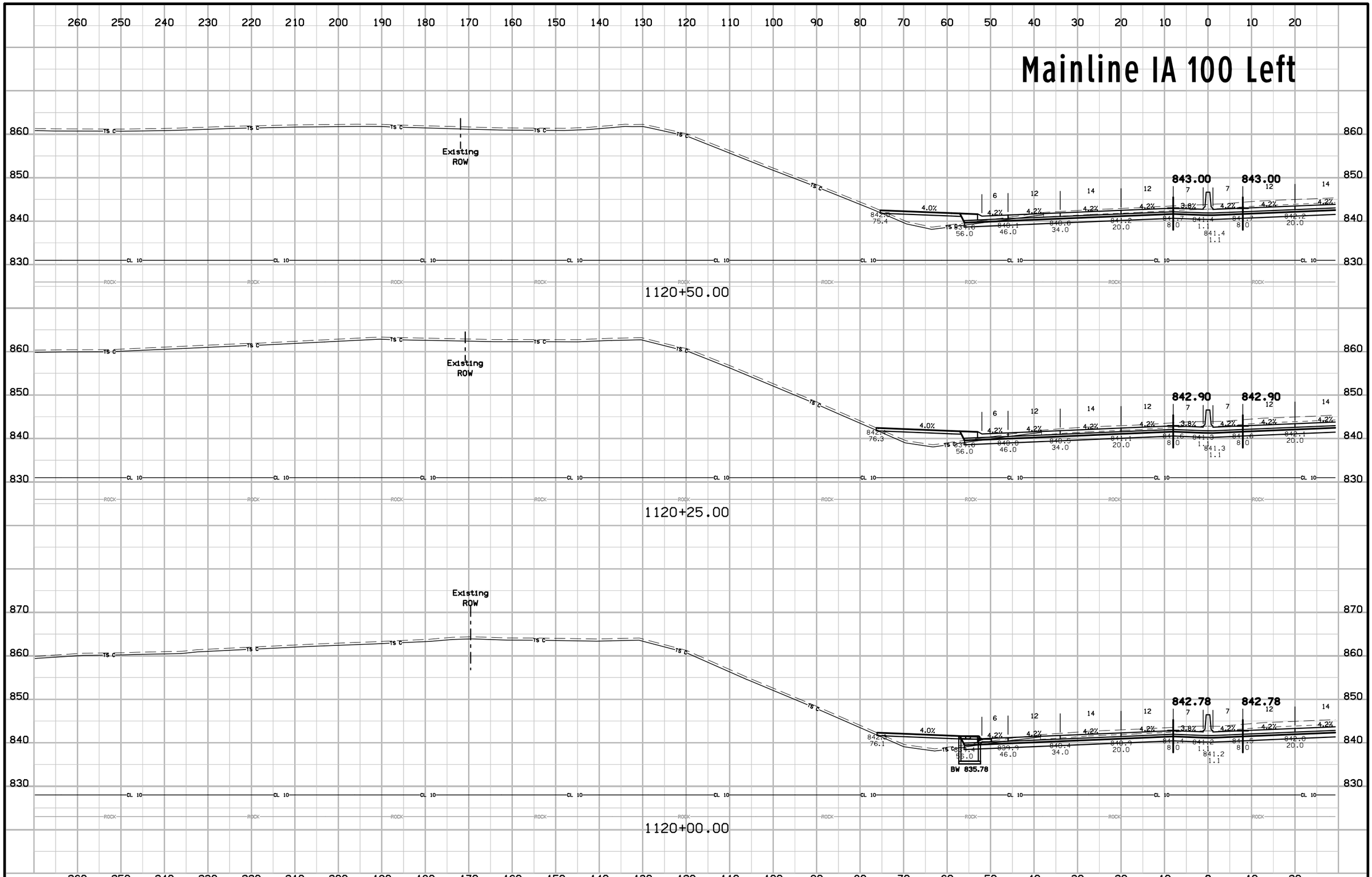

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.116

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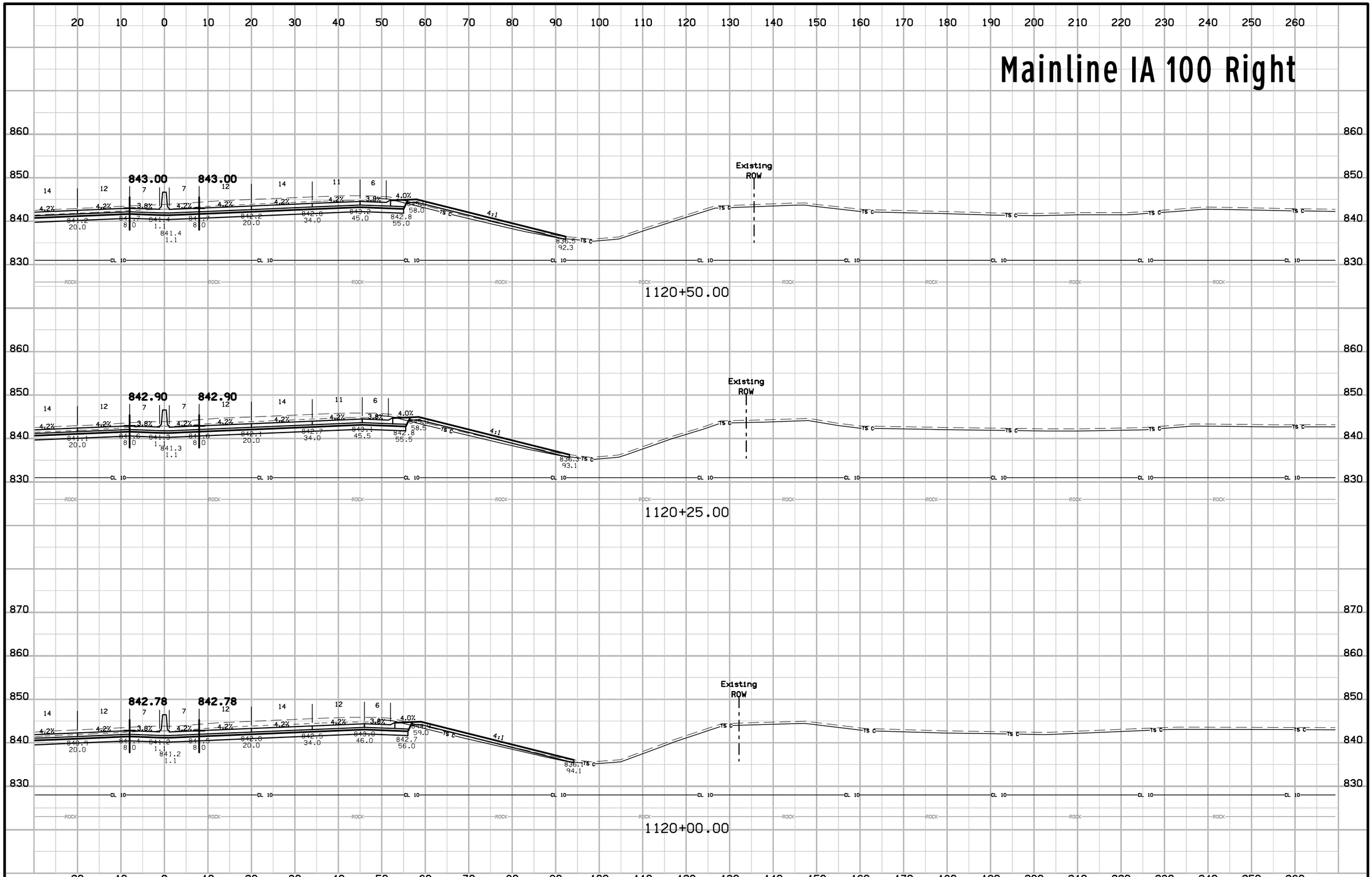

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.117

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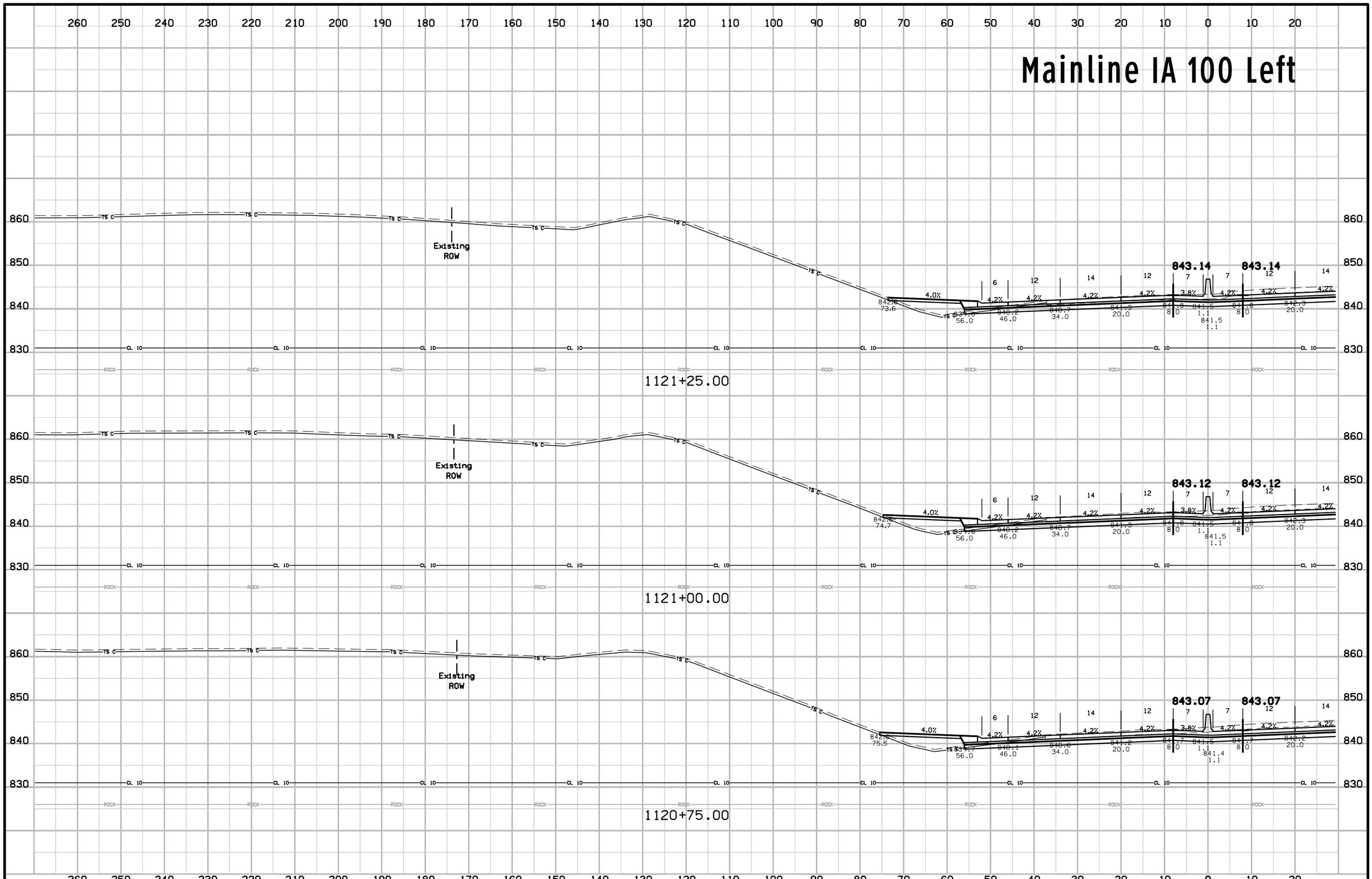

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.118

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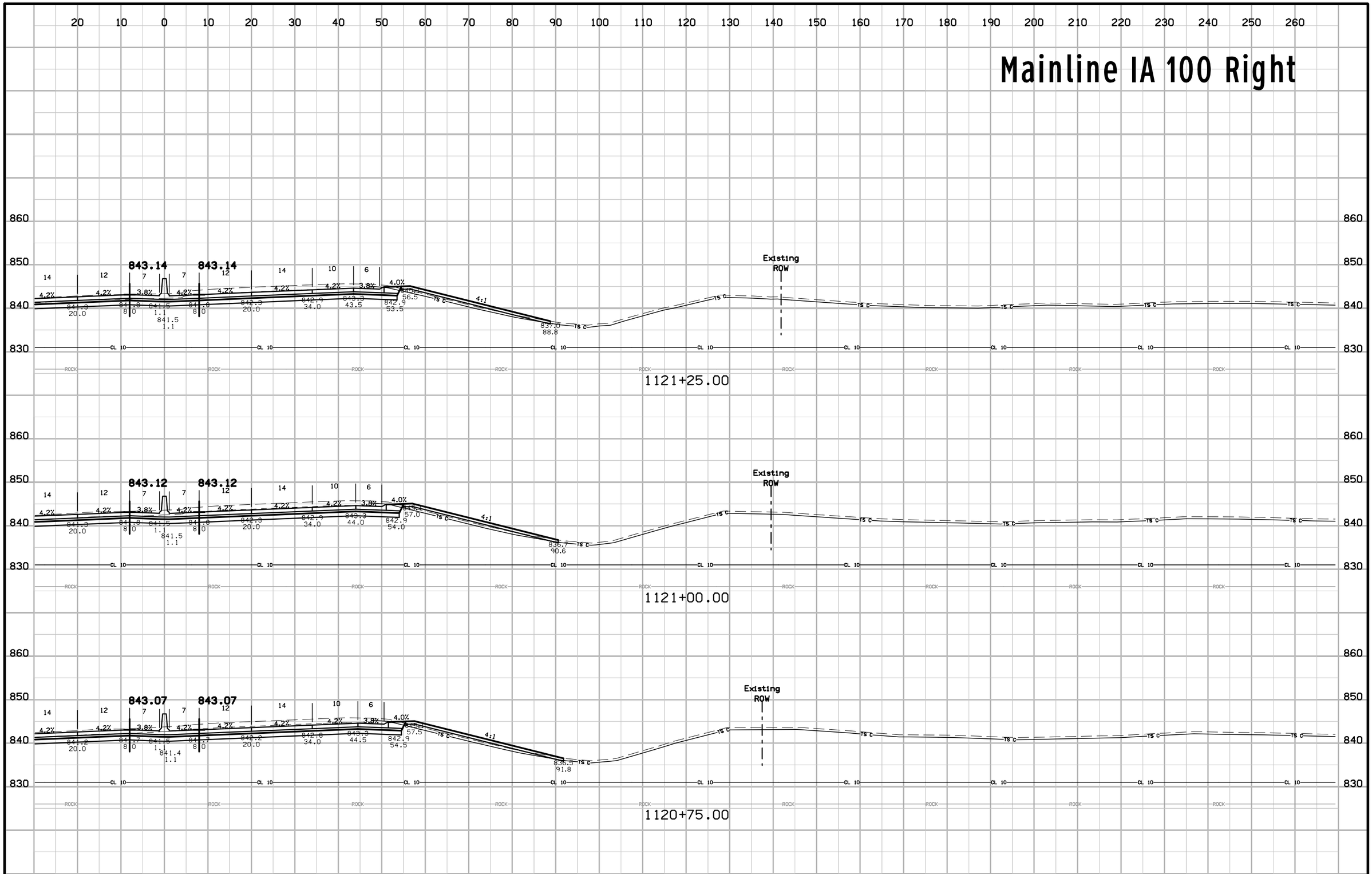

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.119

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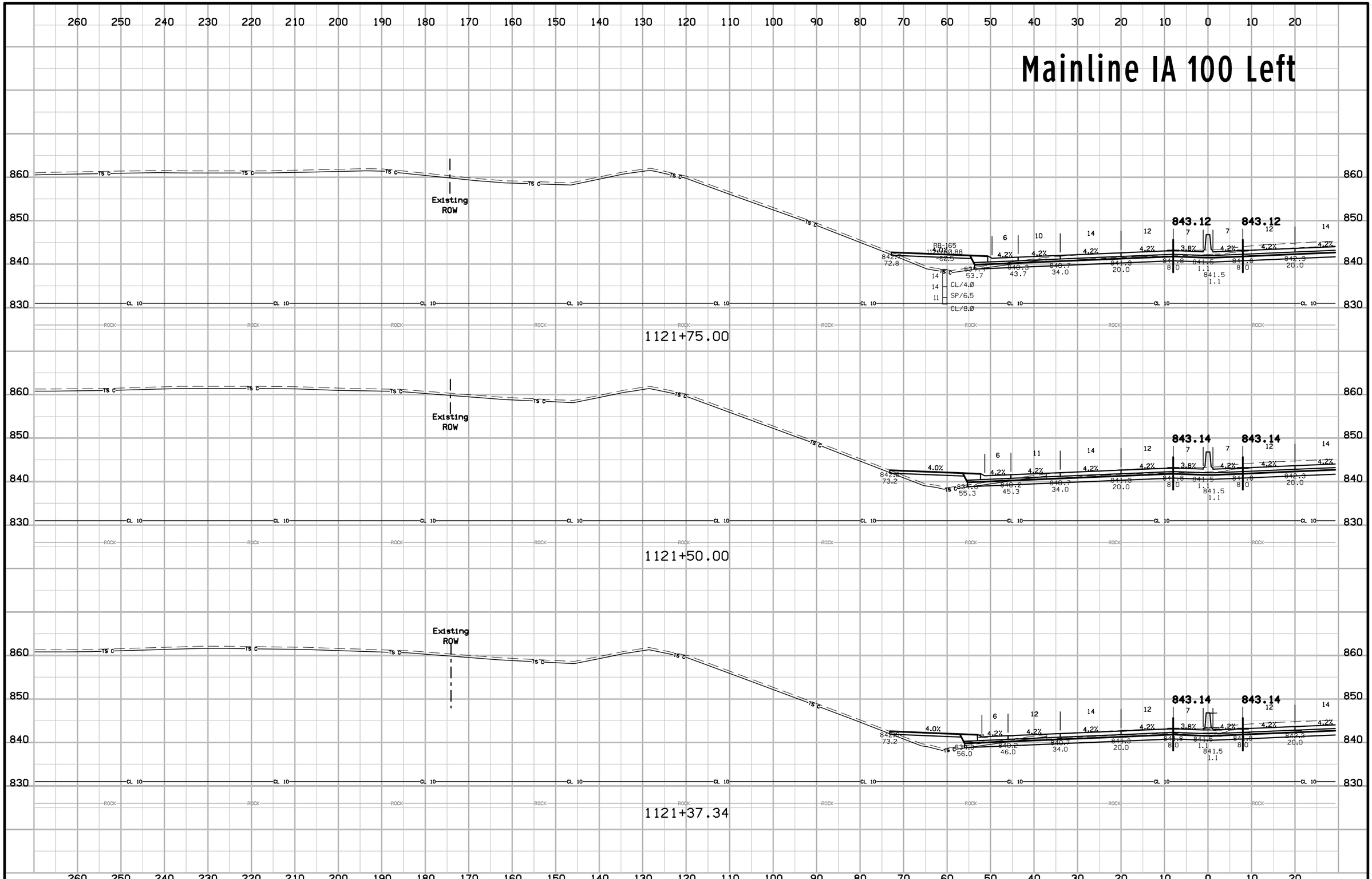

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.120

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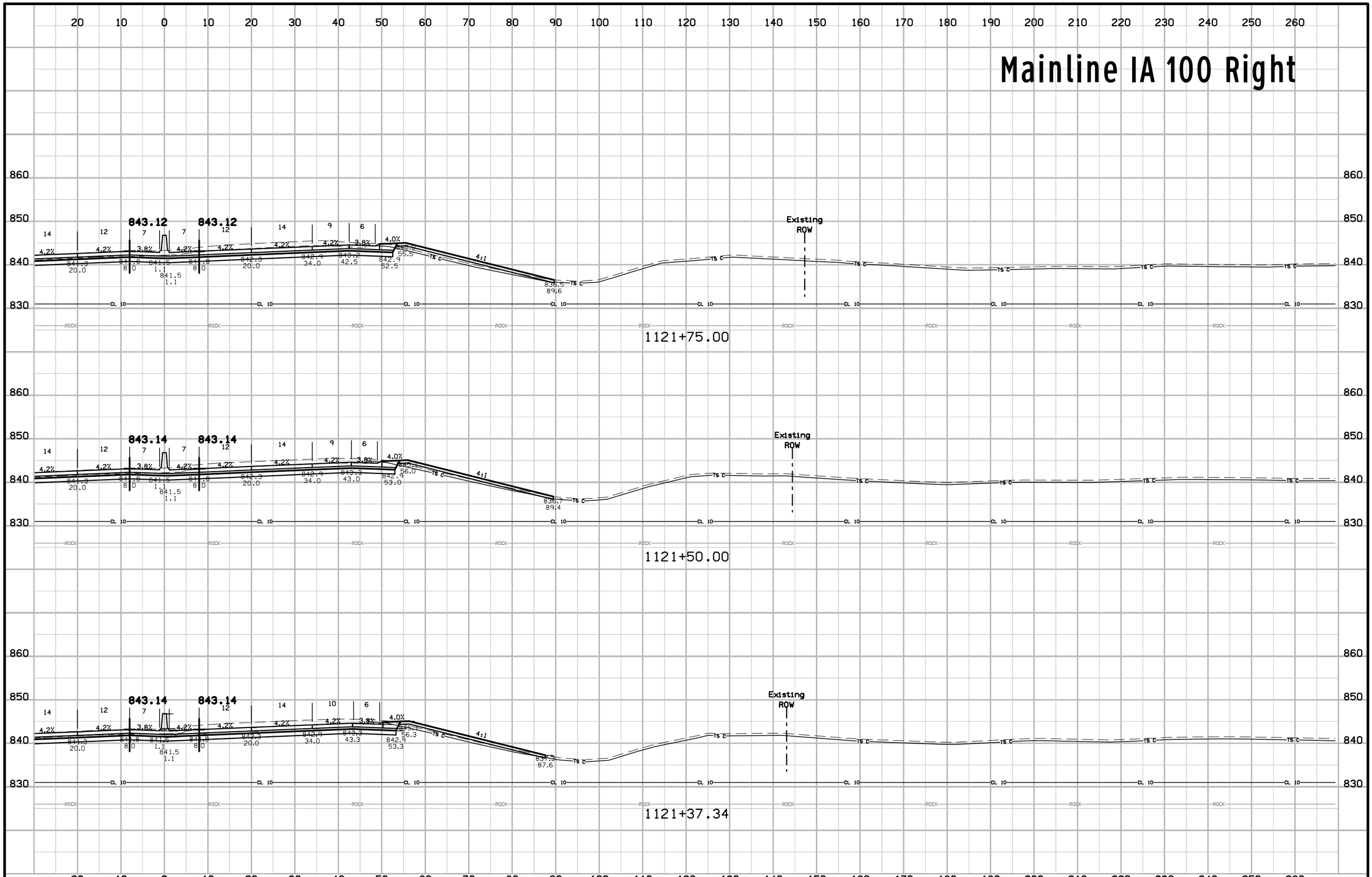

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.121

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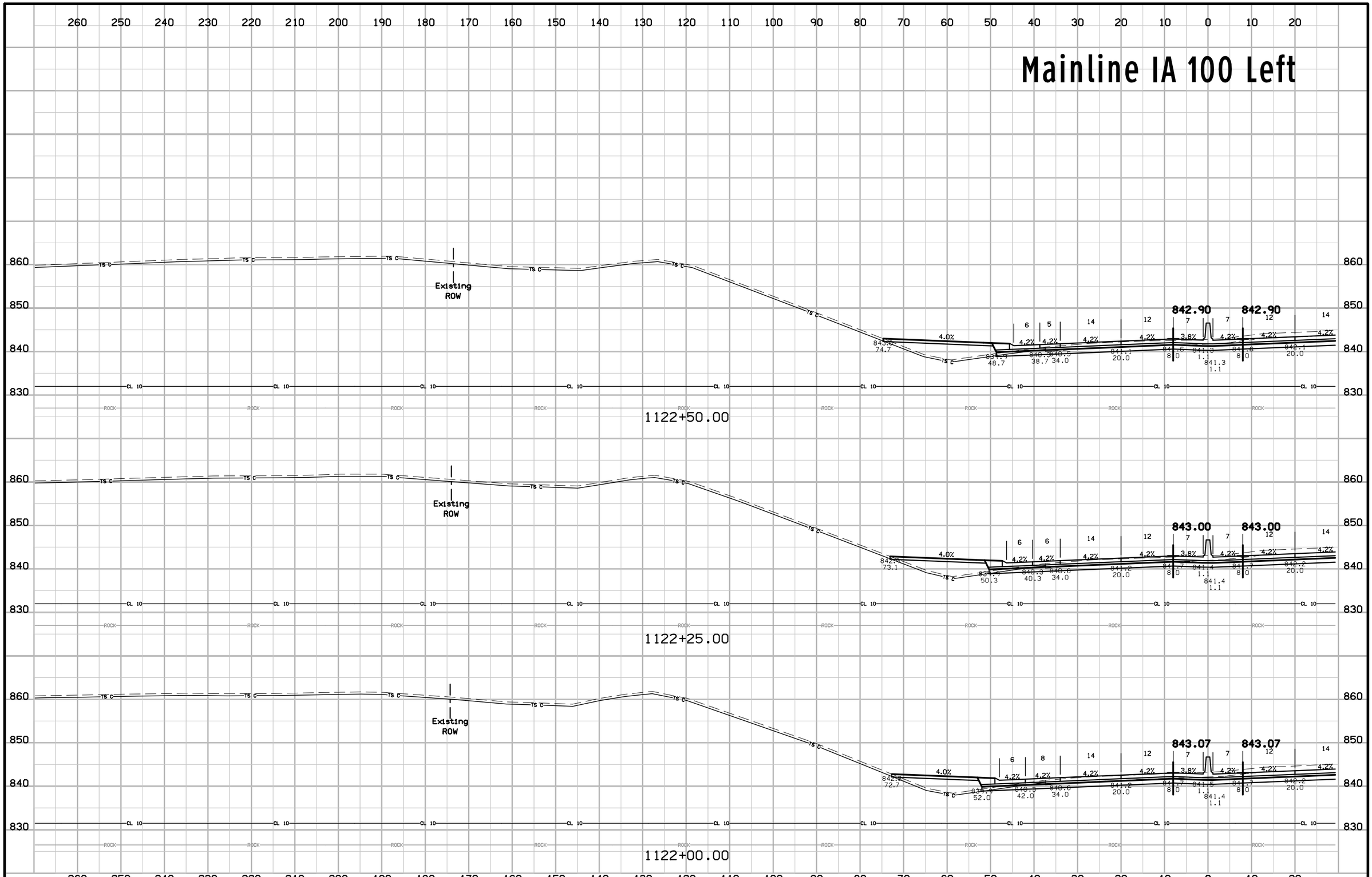

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.122

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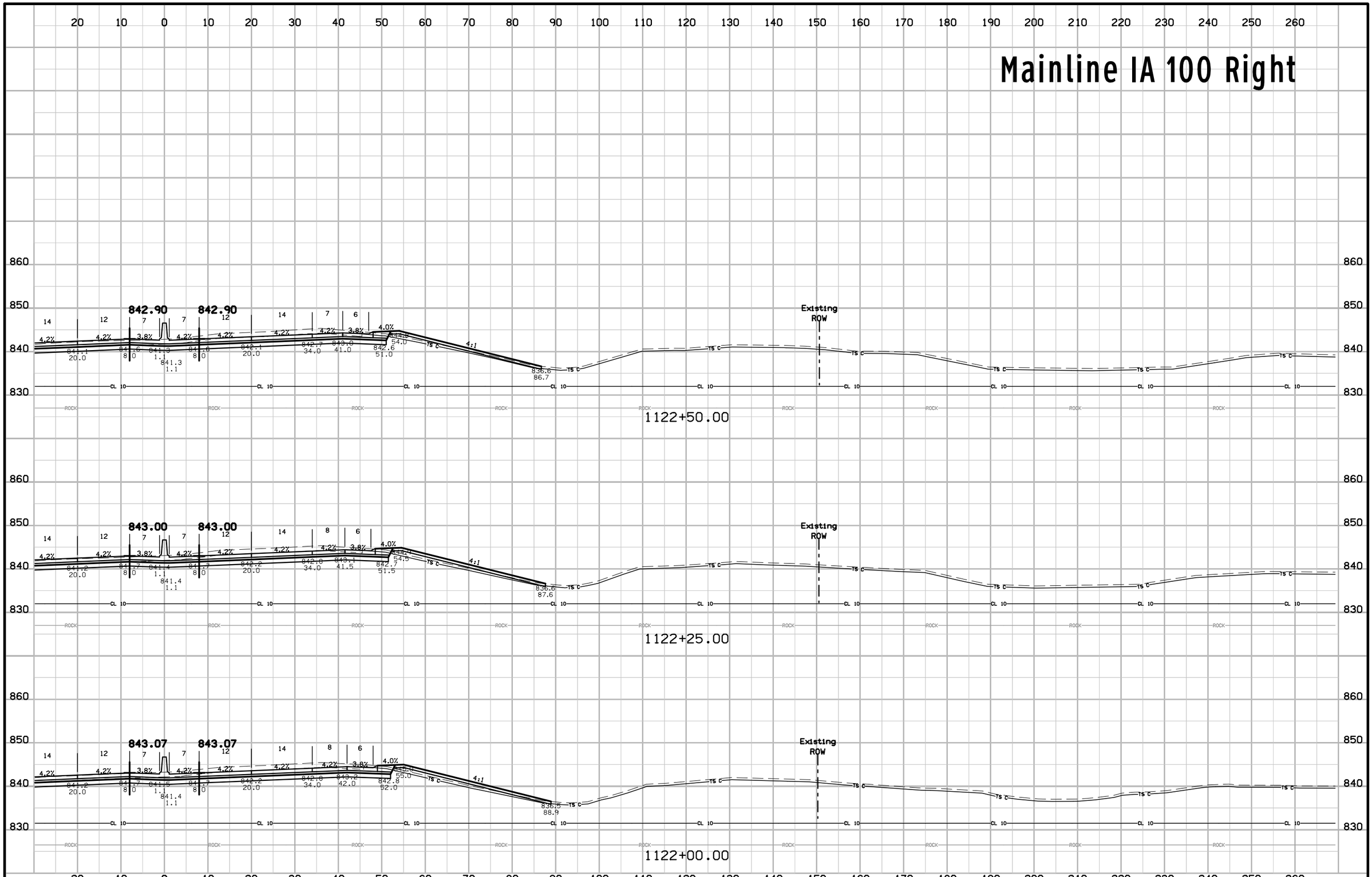

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.123

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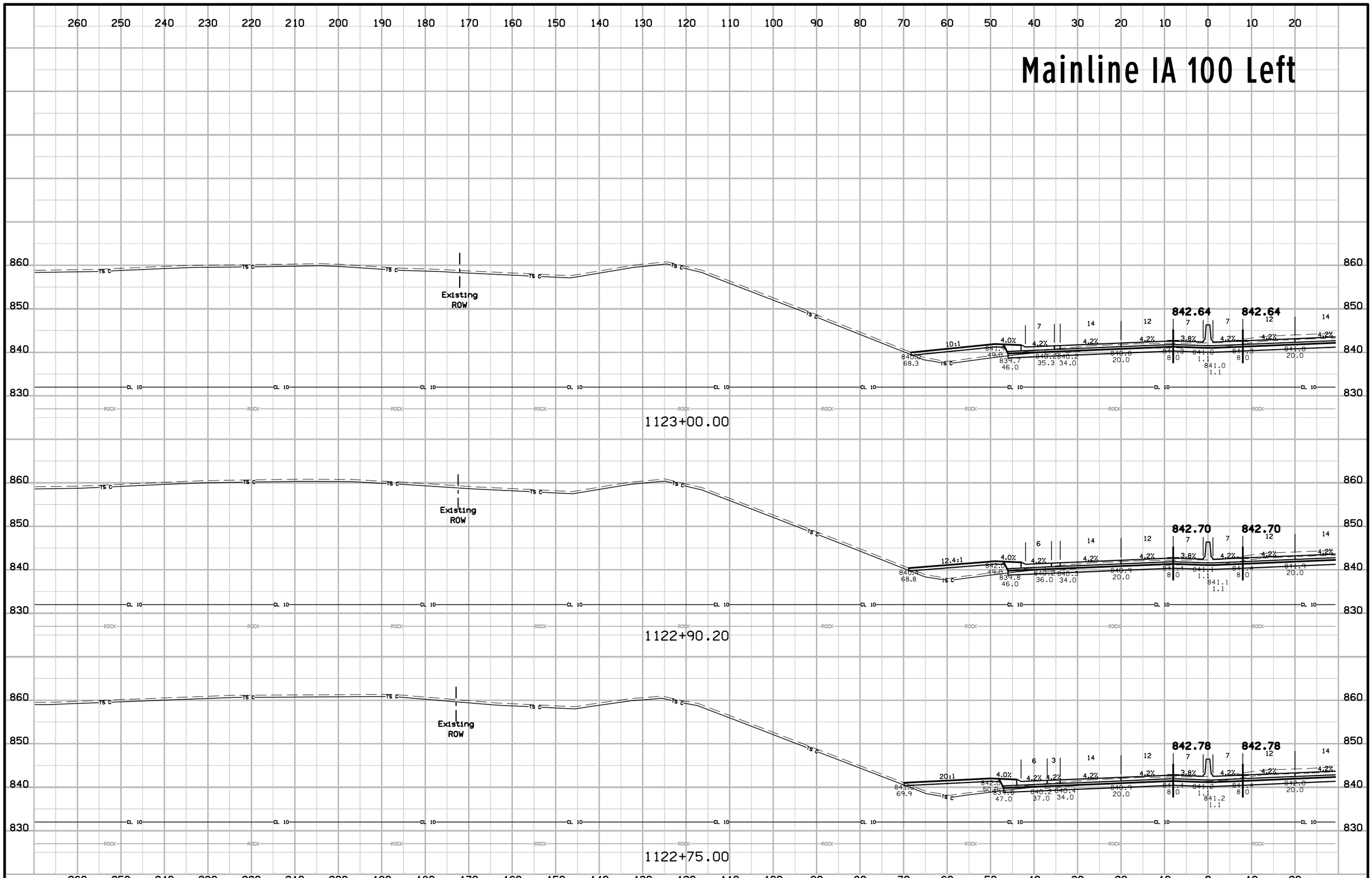

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.124

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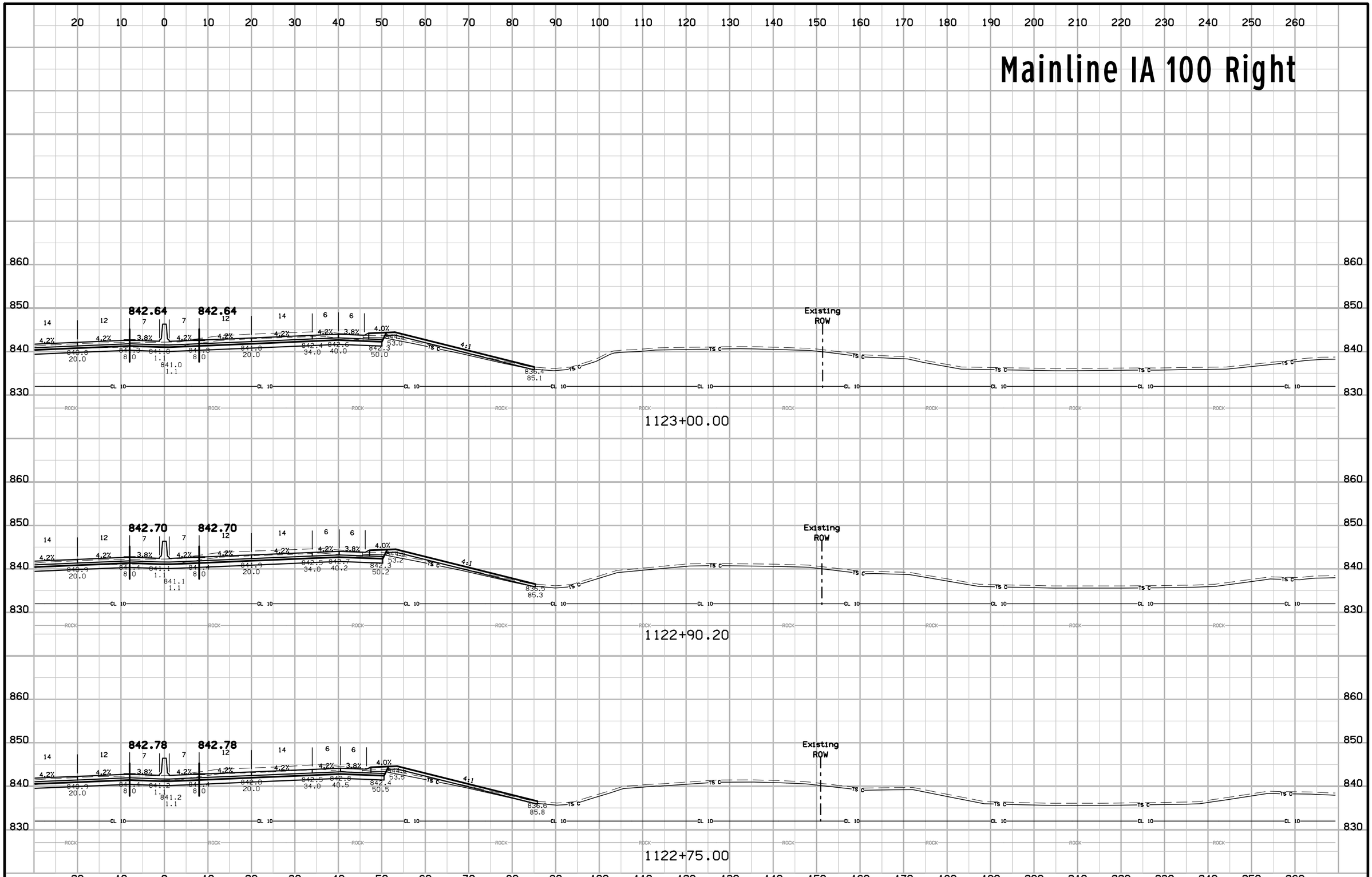

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.125

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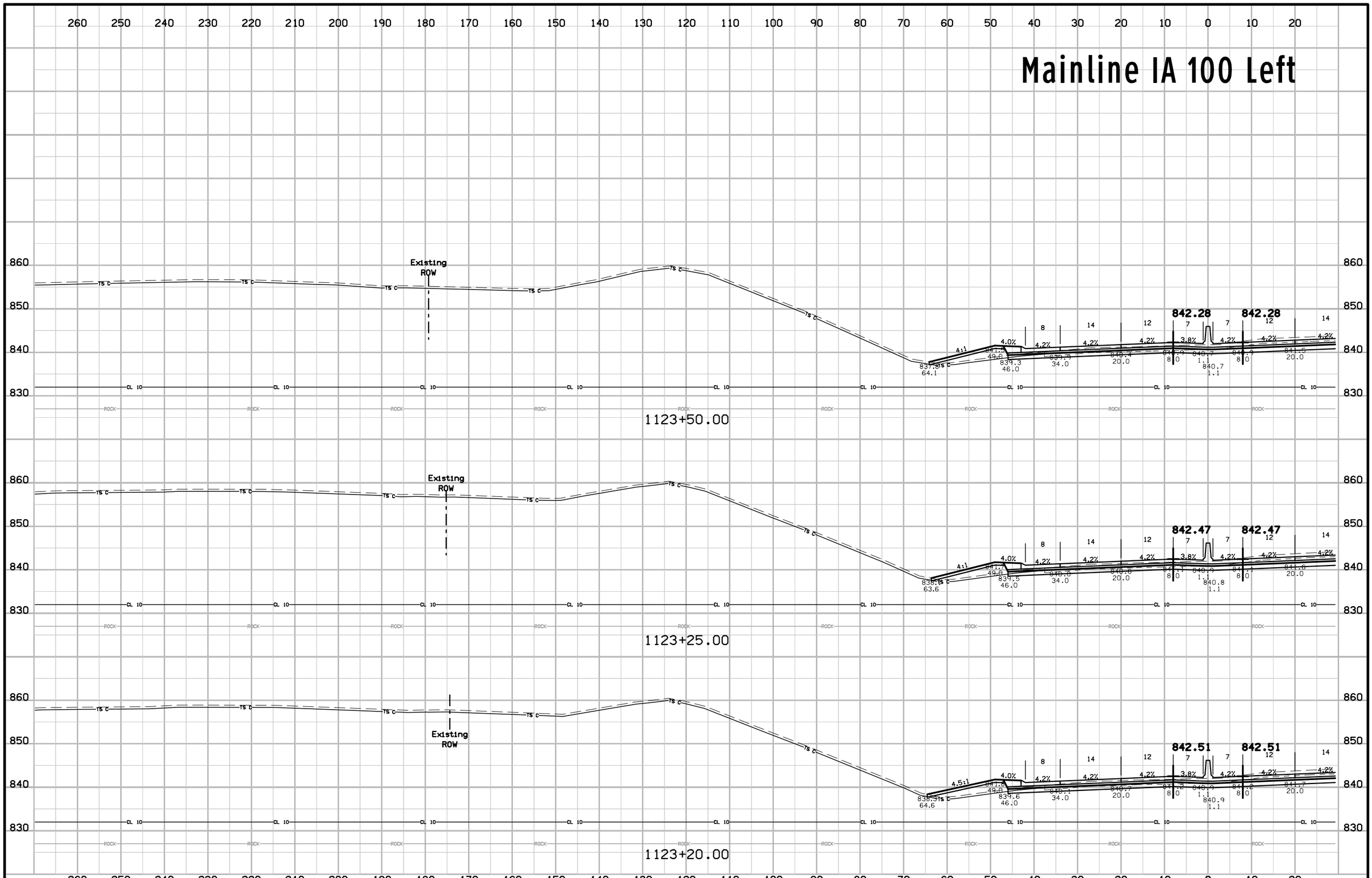

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.126

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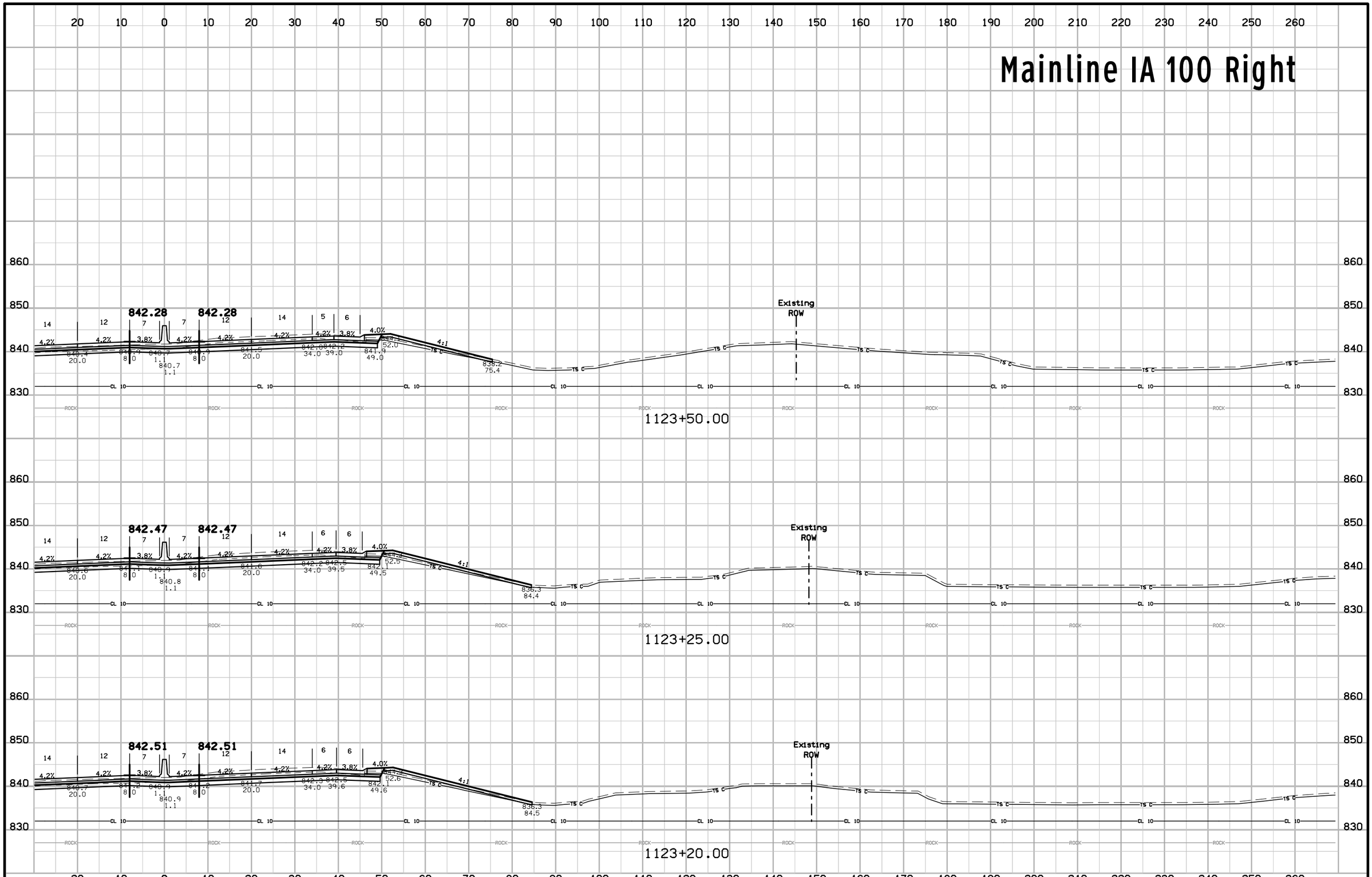

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.127

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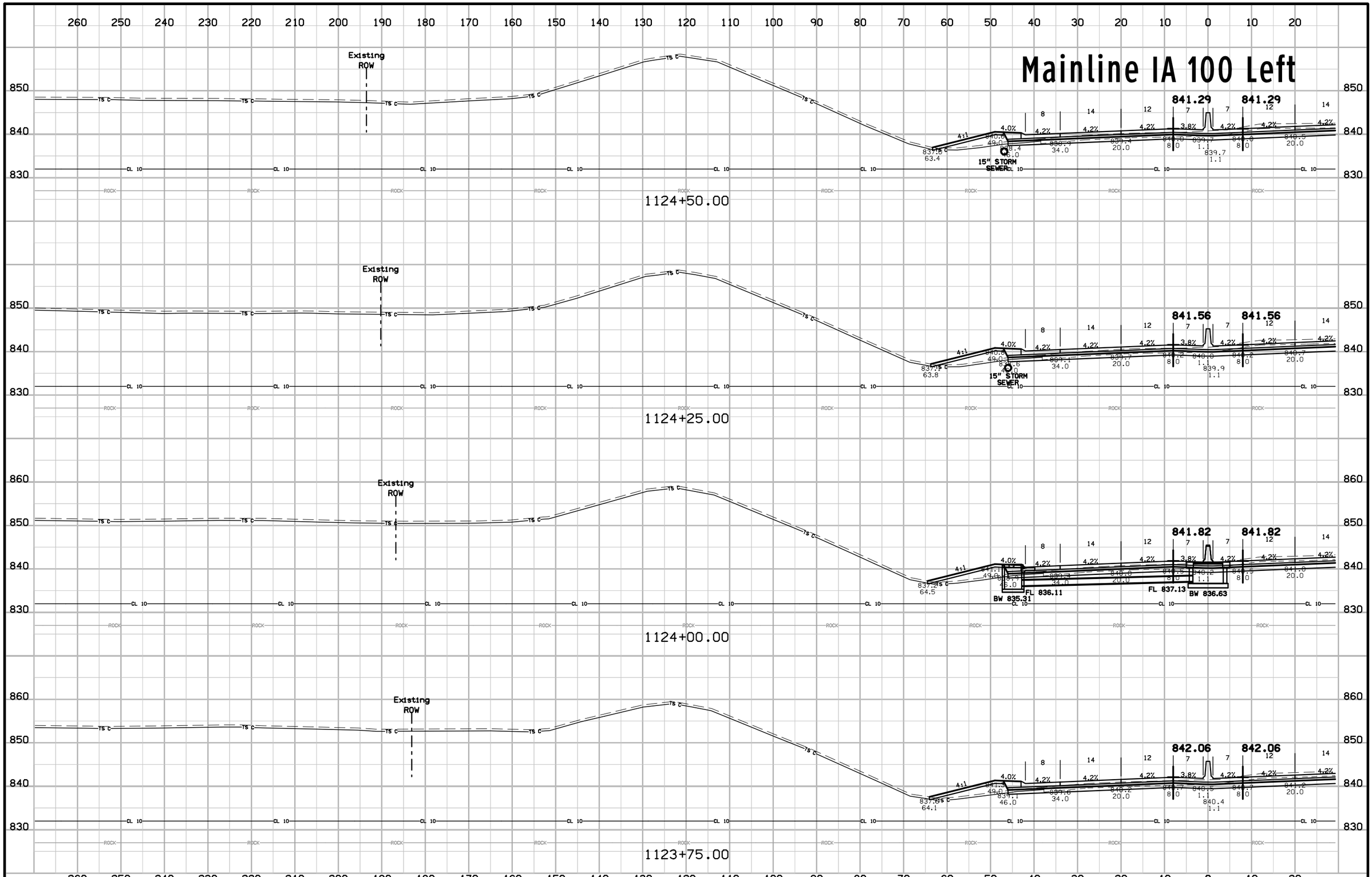

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.128

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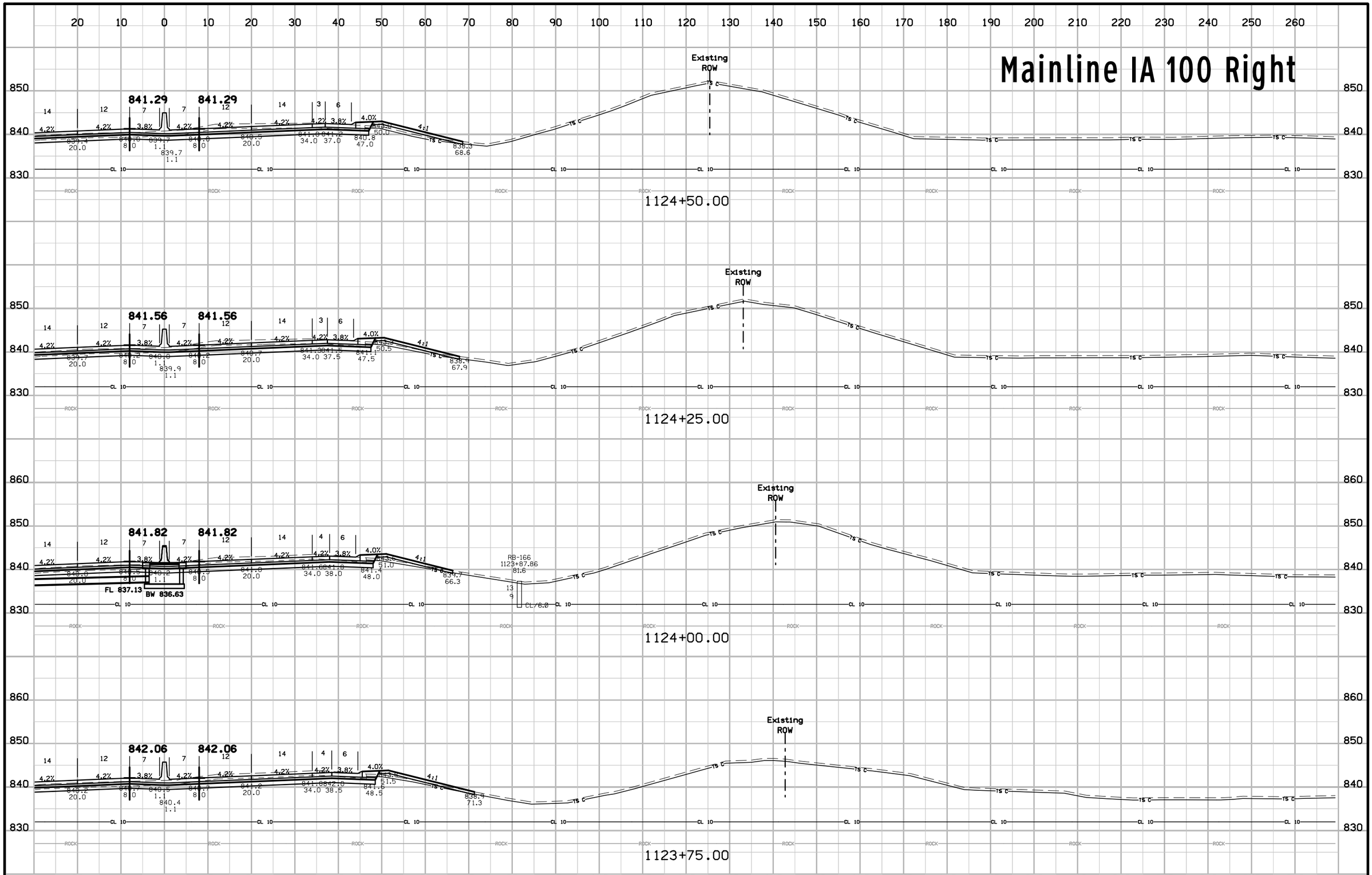

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.129

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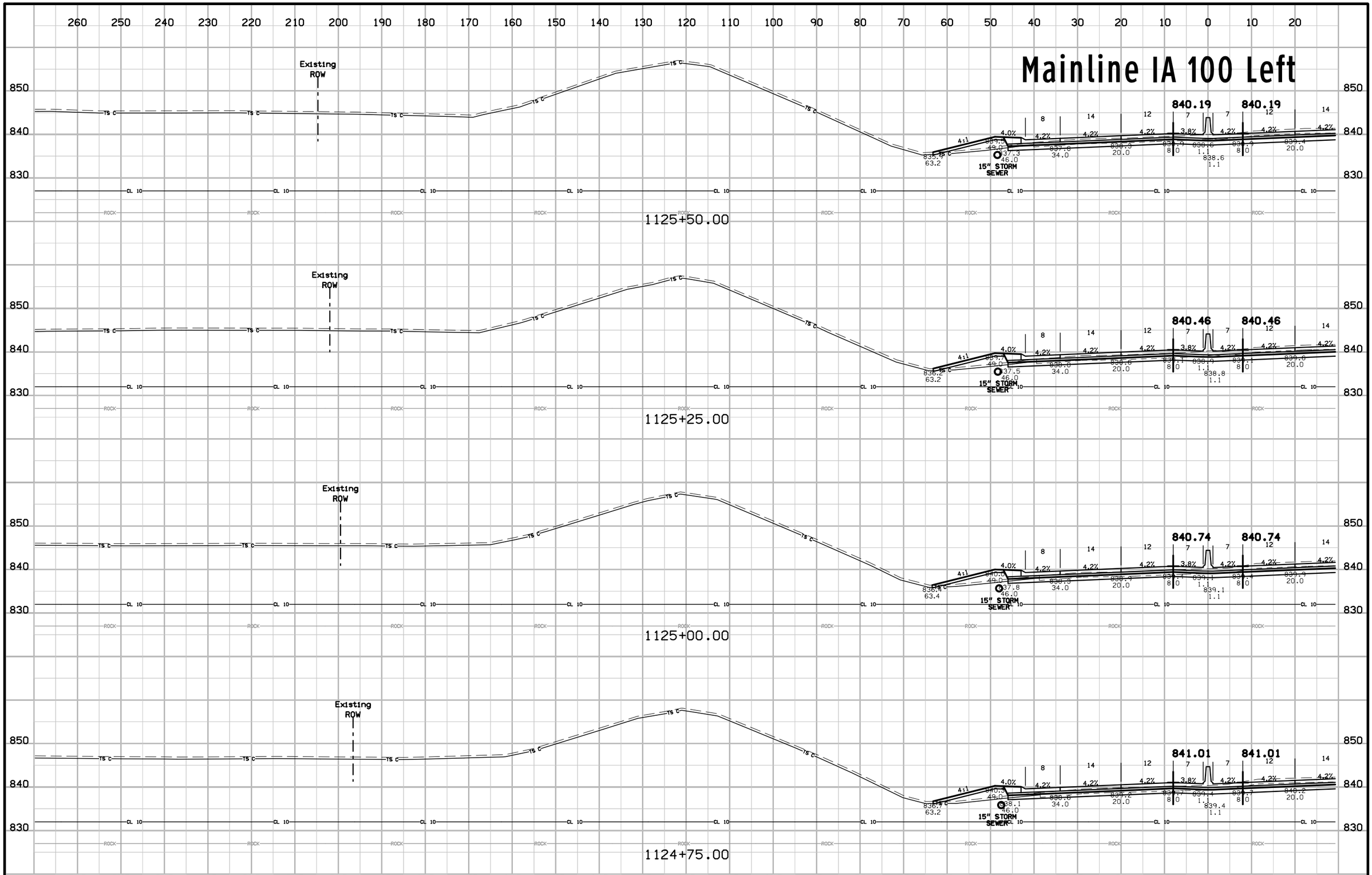

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.130

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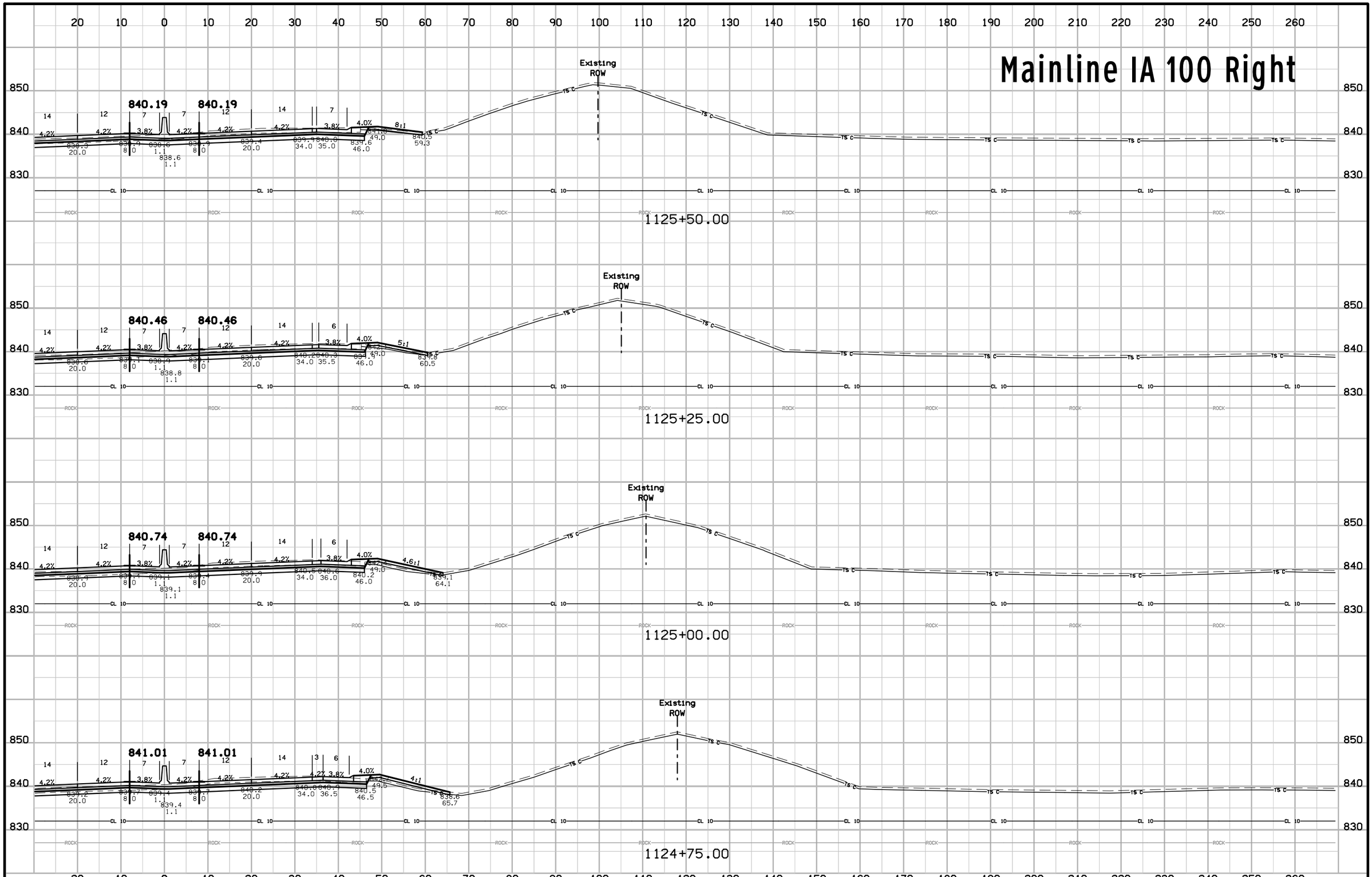

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.131

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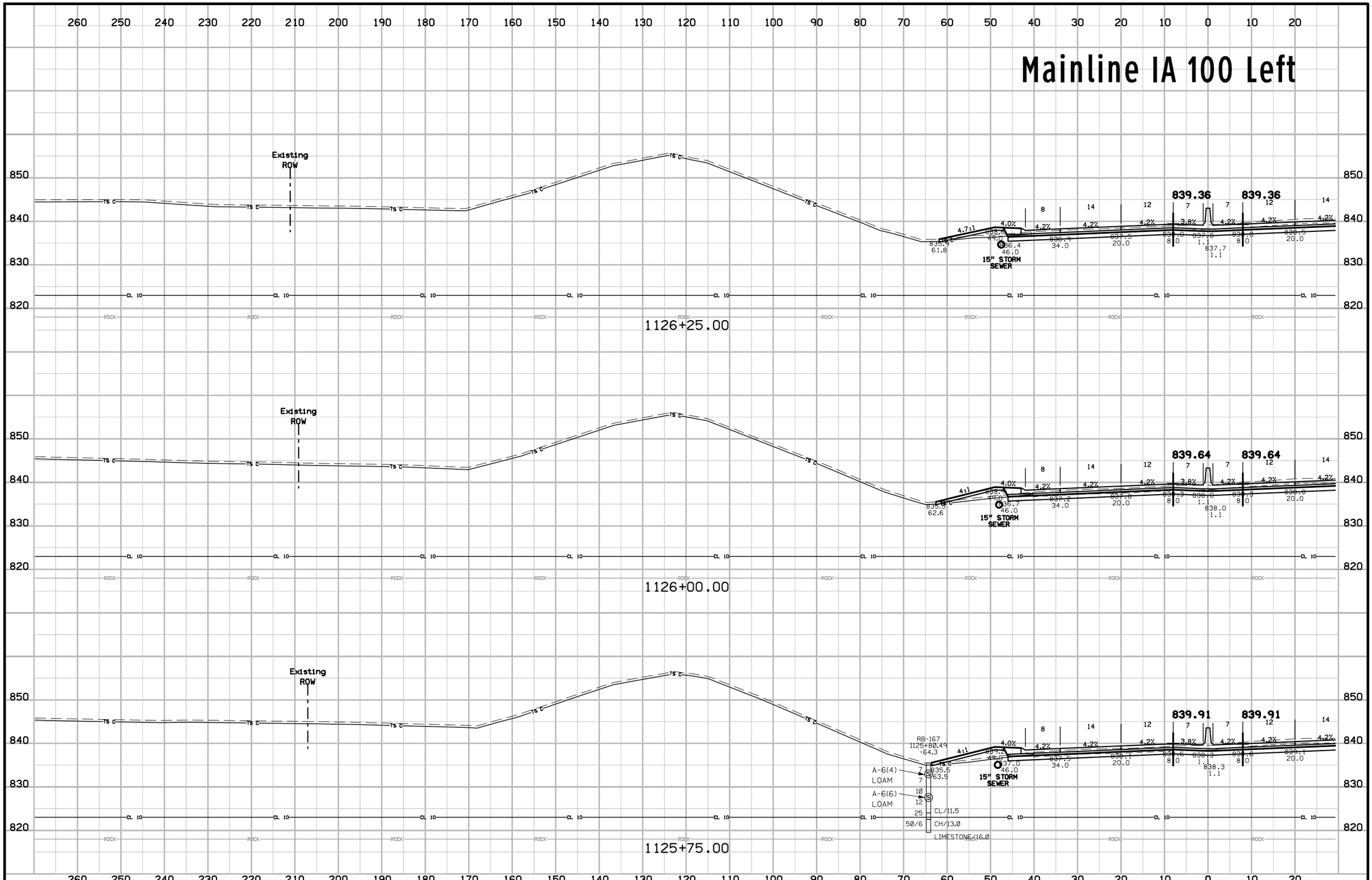

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.132

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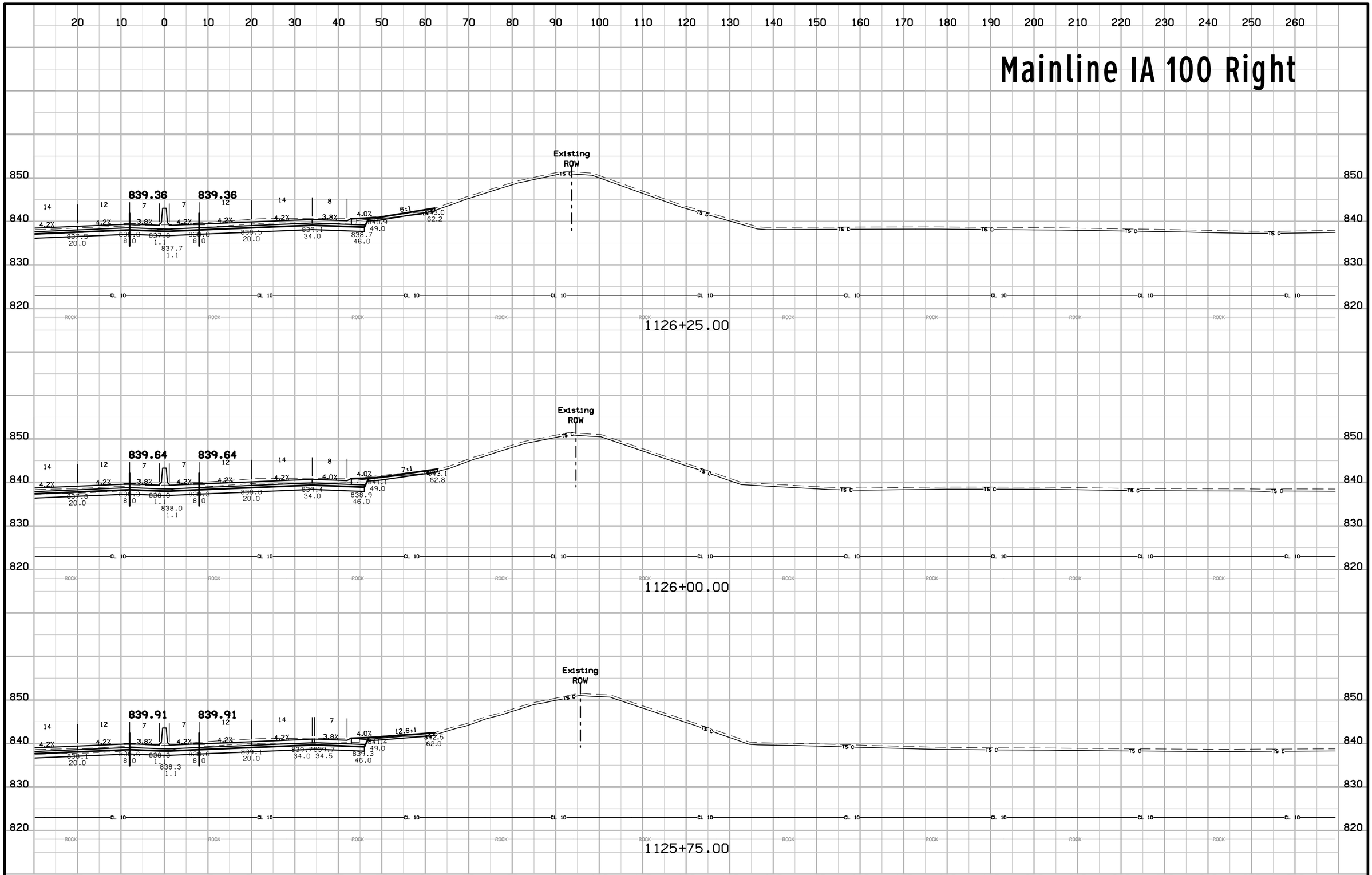

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.133

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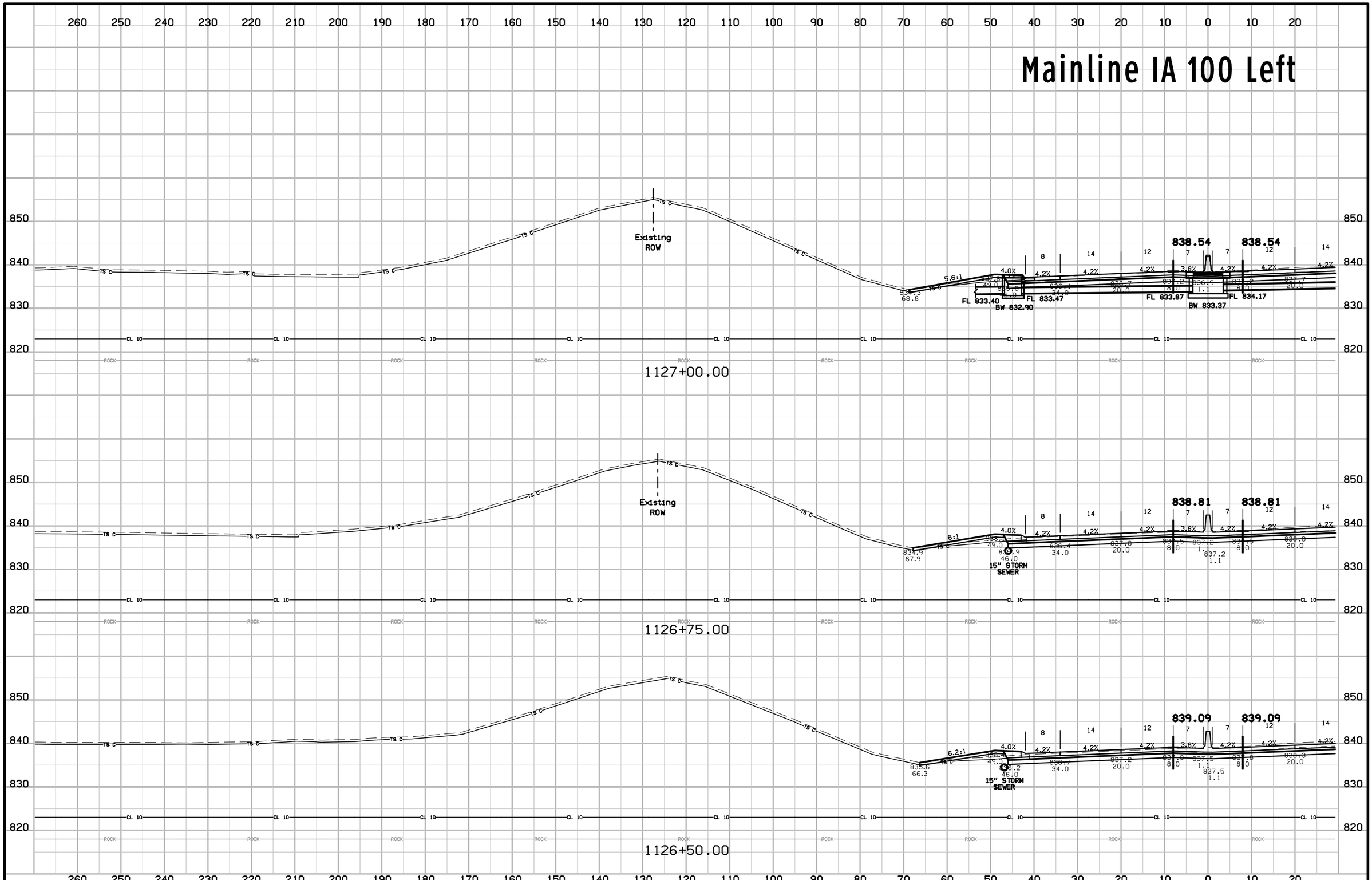

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.134

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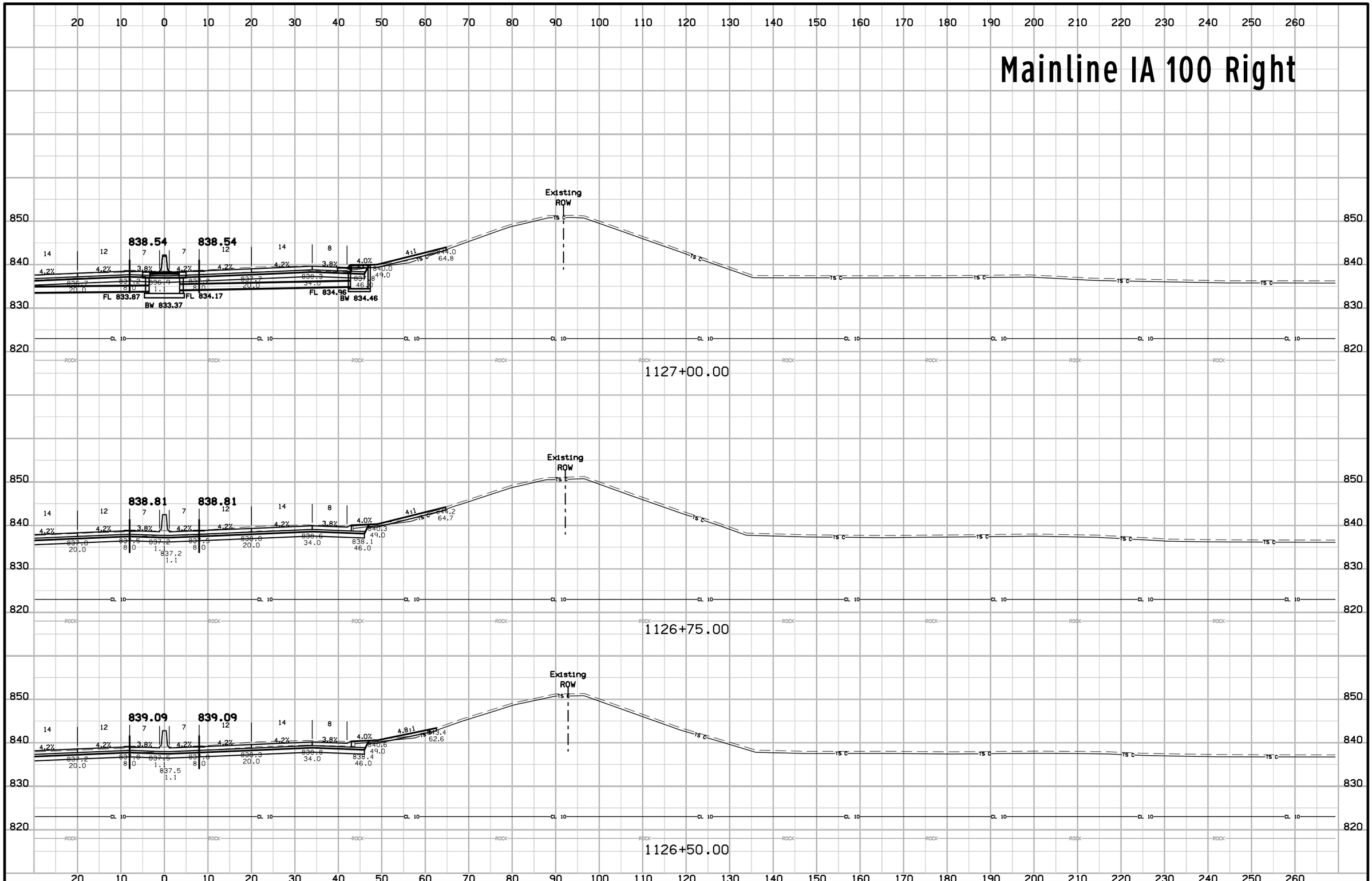

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.135

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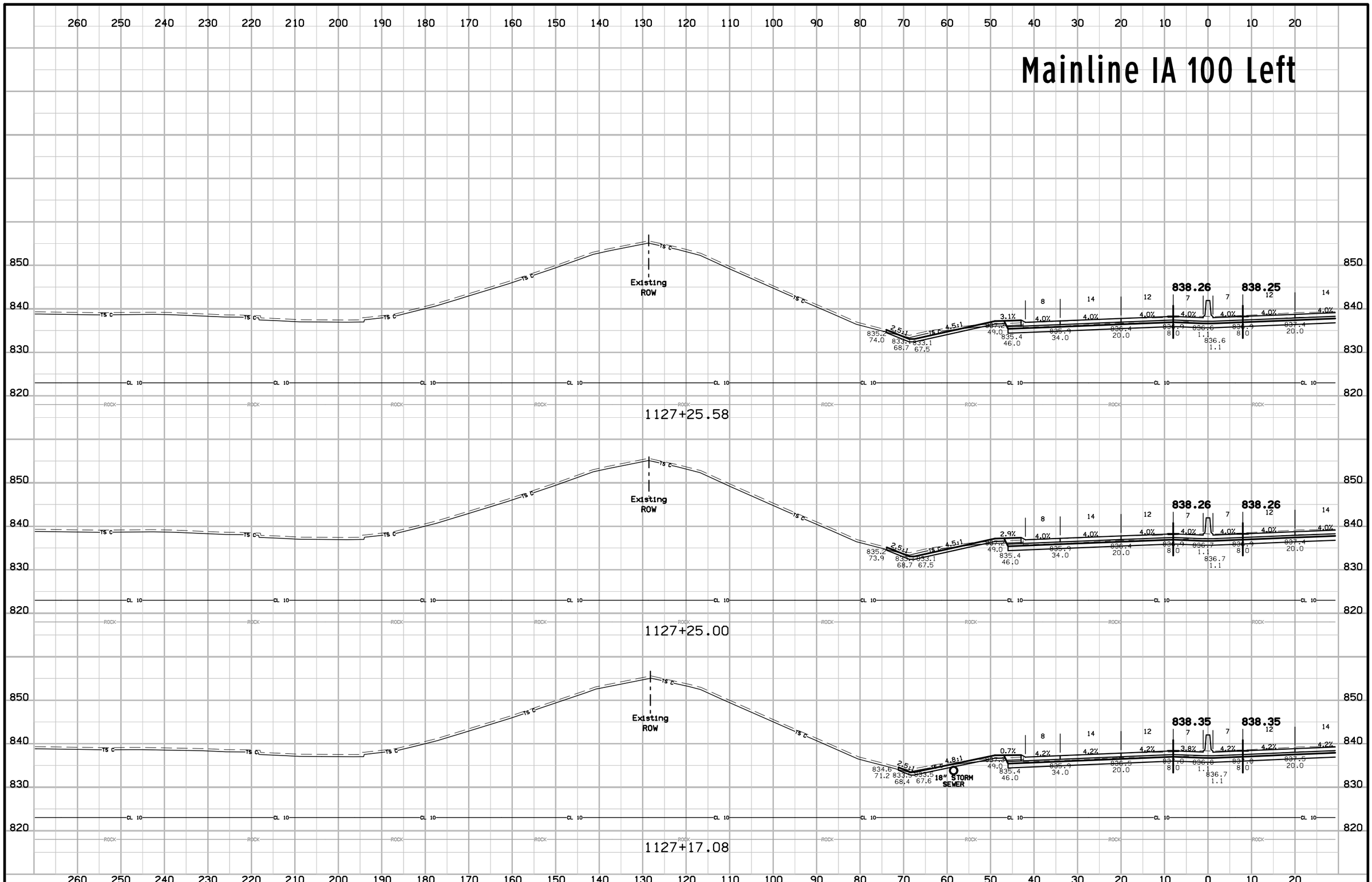

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.136

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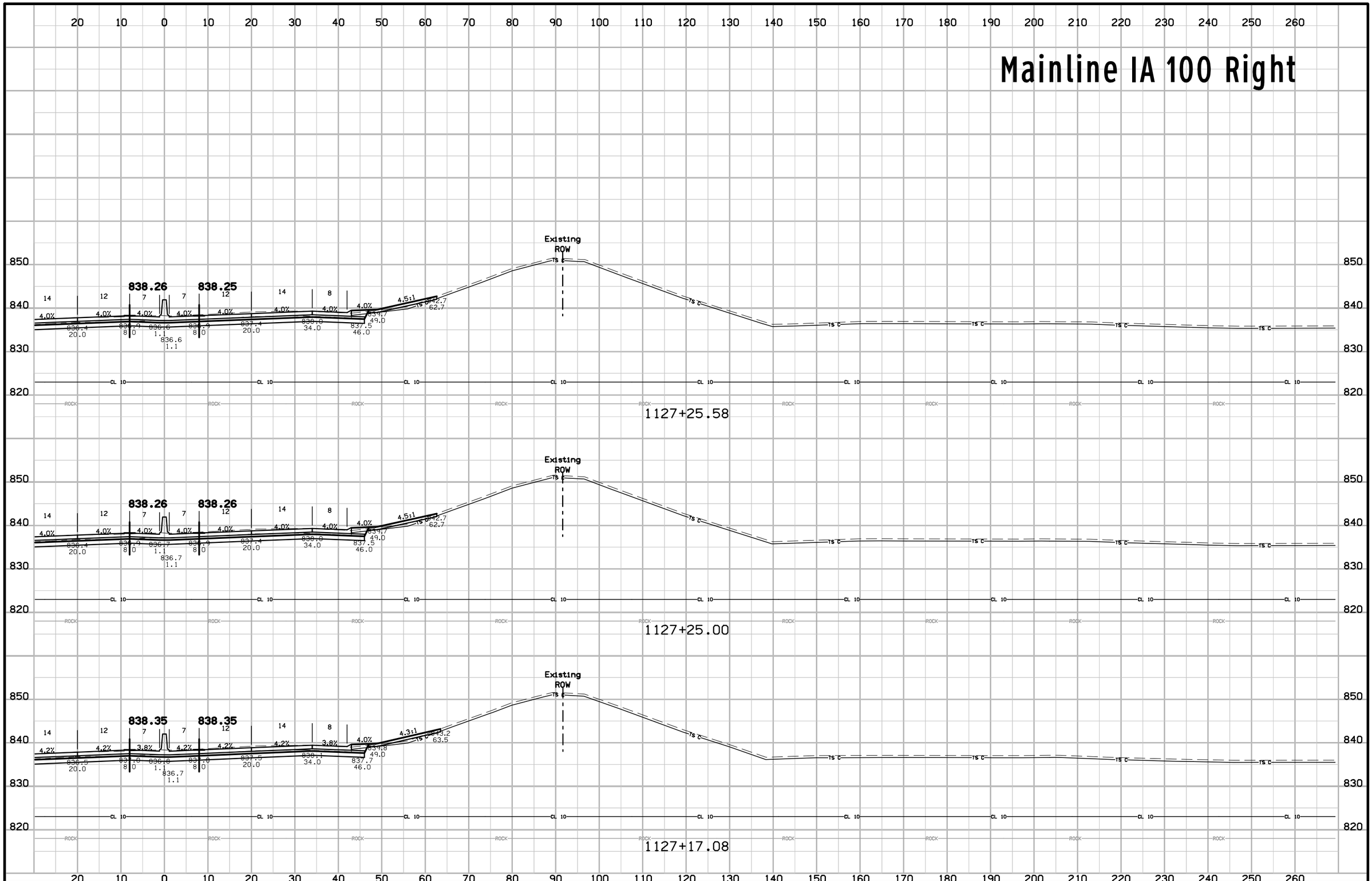
Mainline IA 100 Right



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.137

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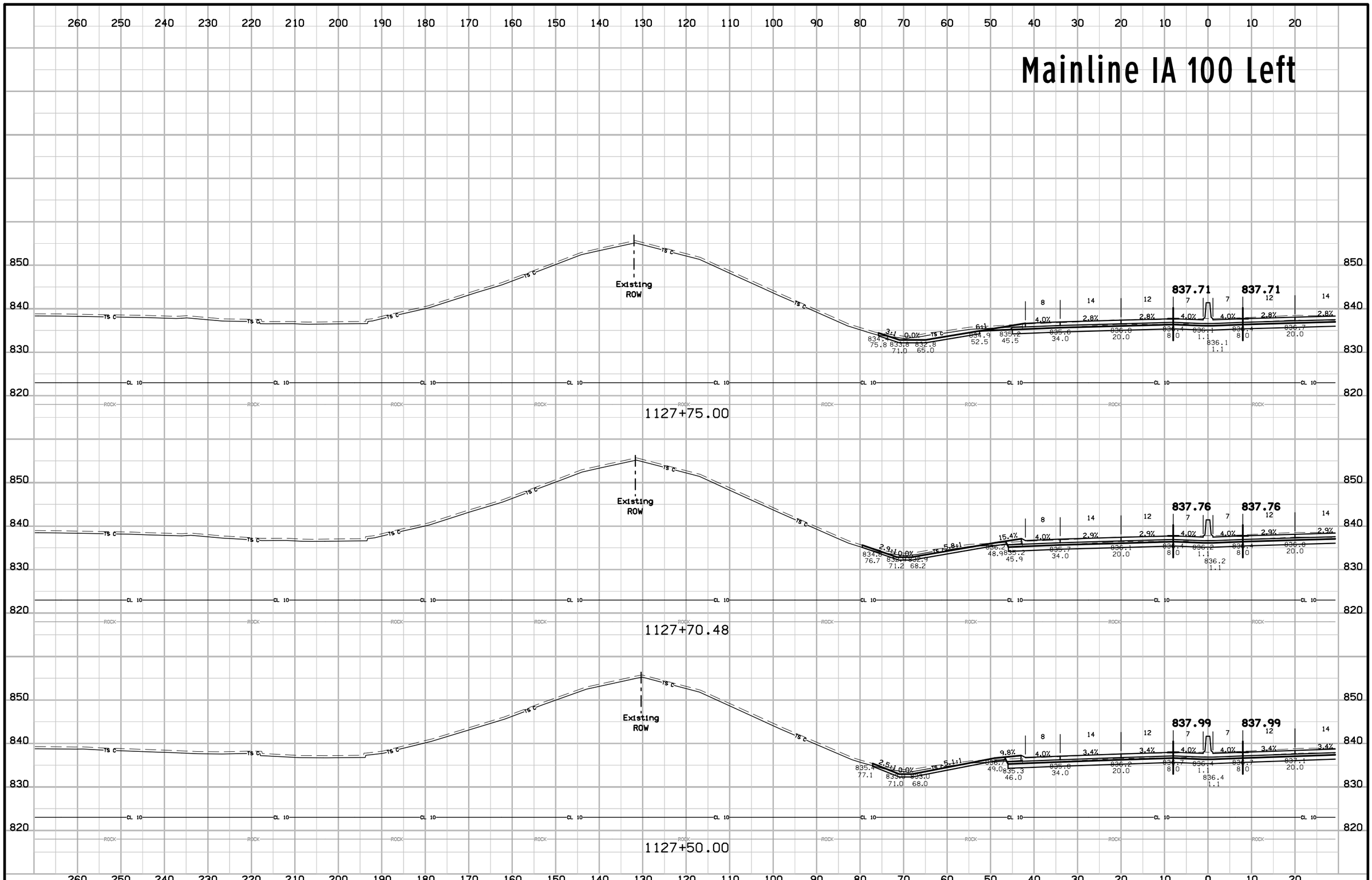

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.138

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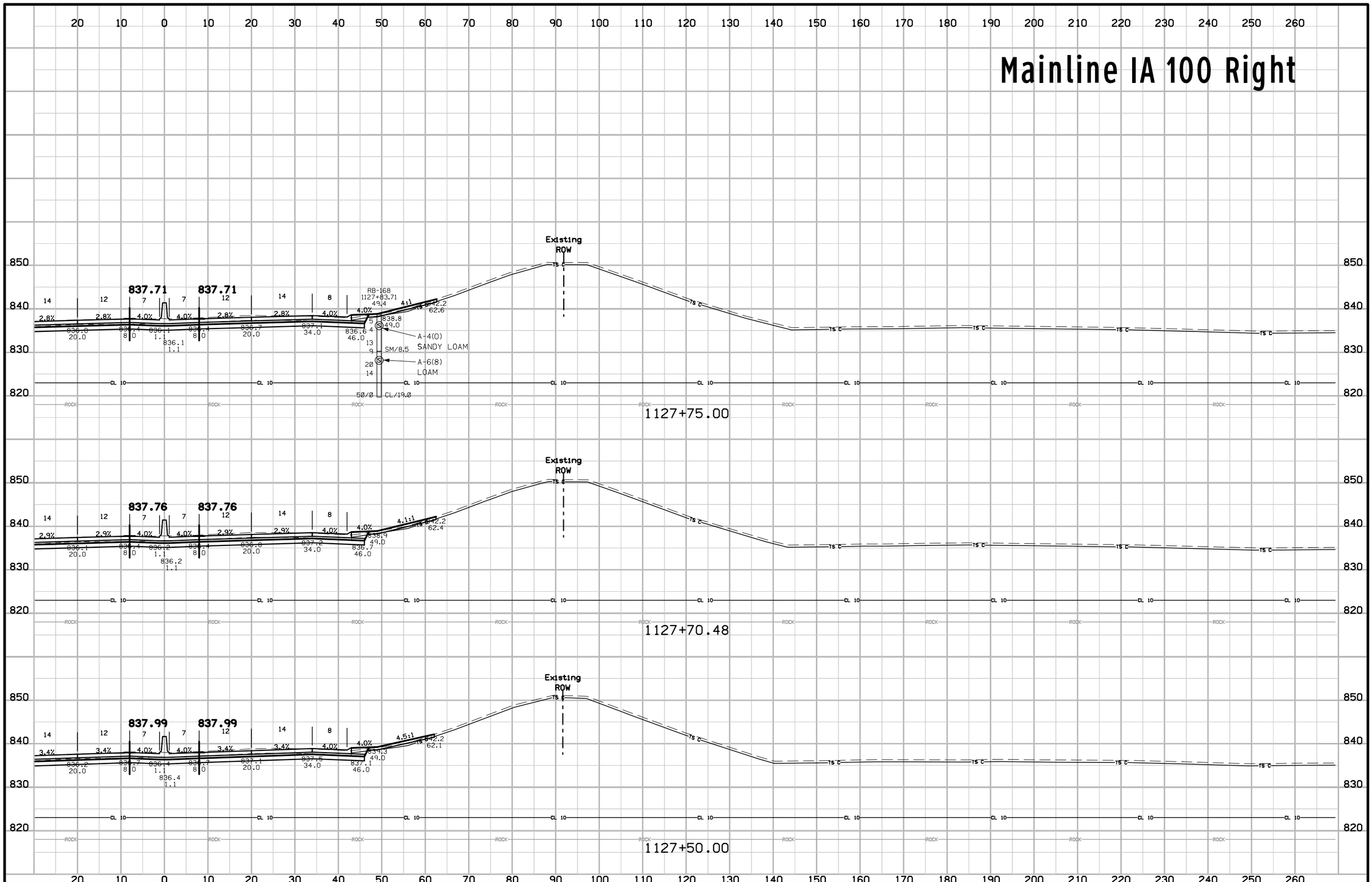
Mainline IA 100 Right



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.139

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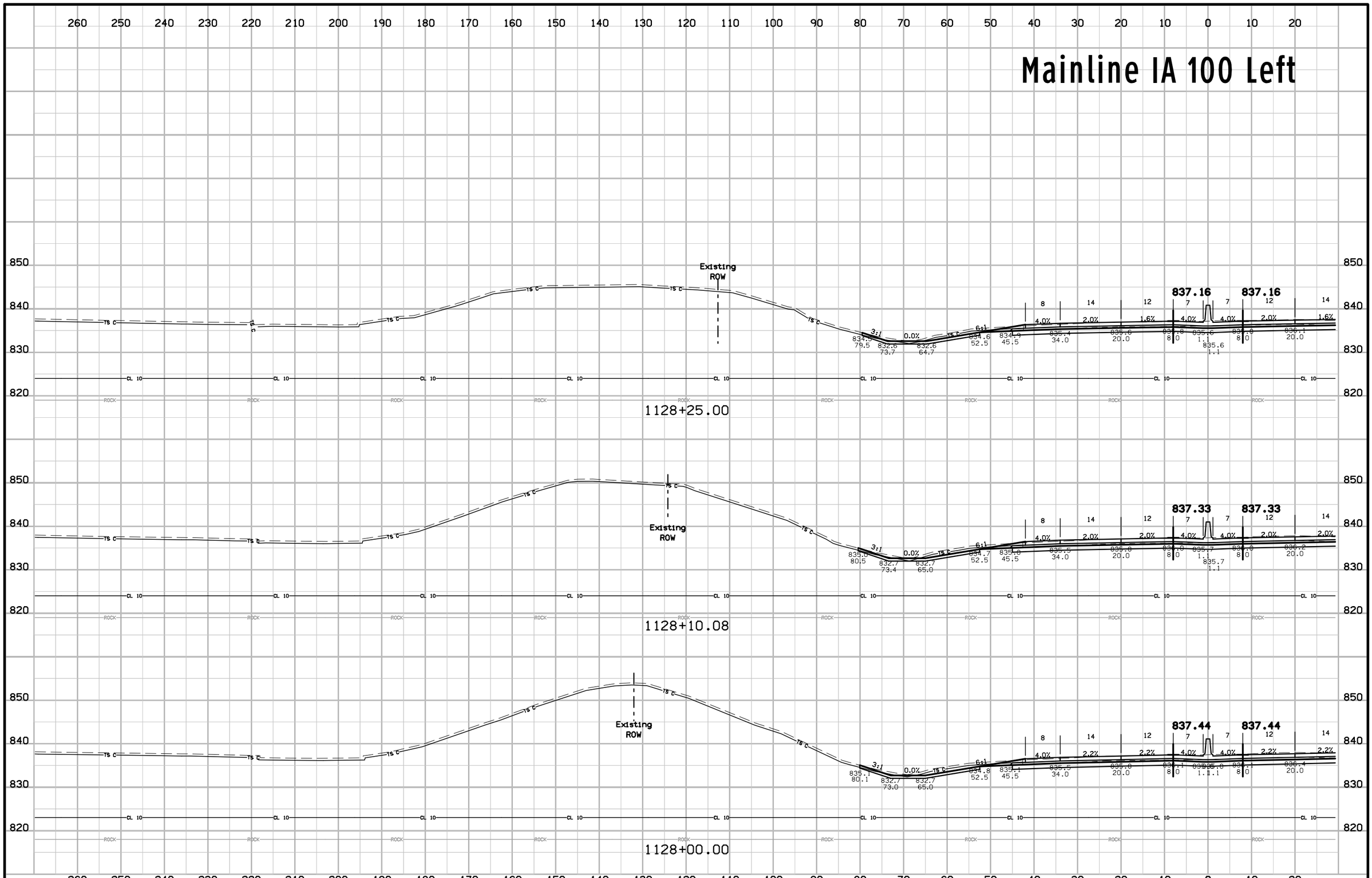

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.140

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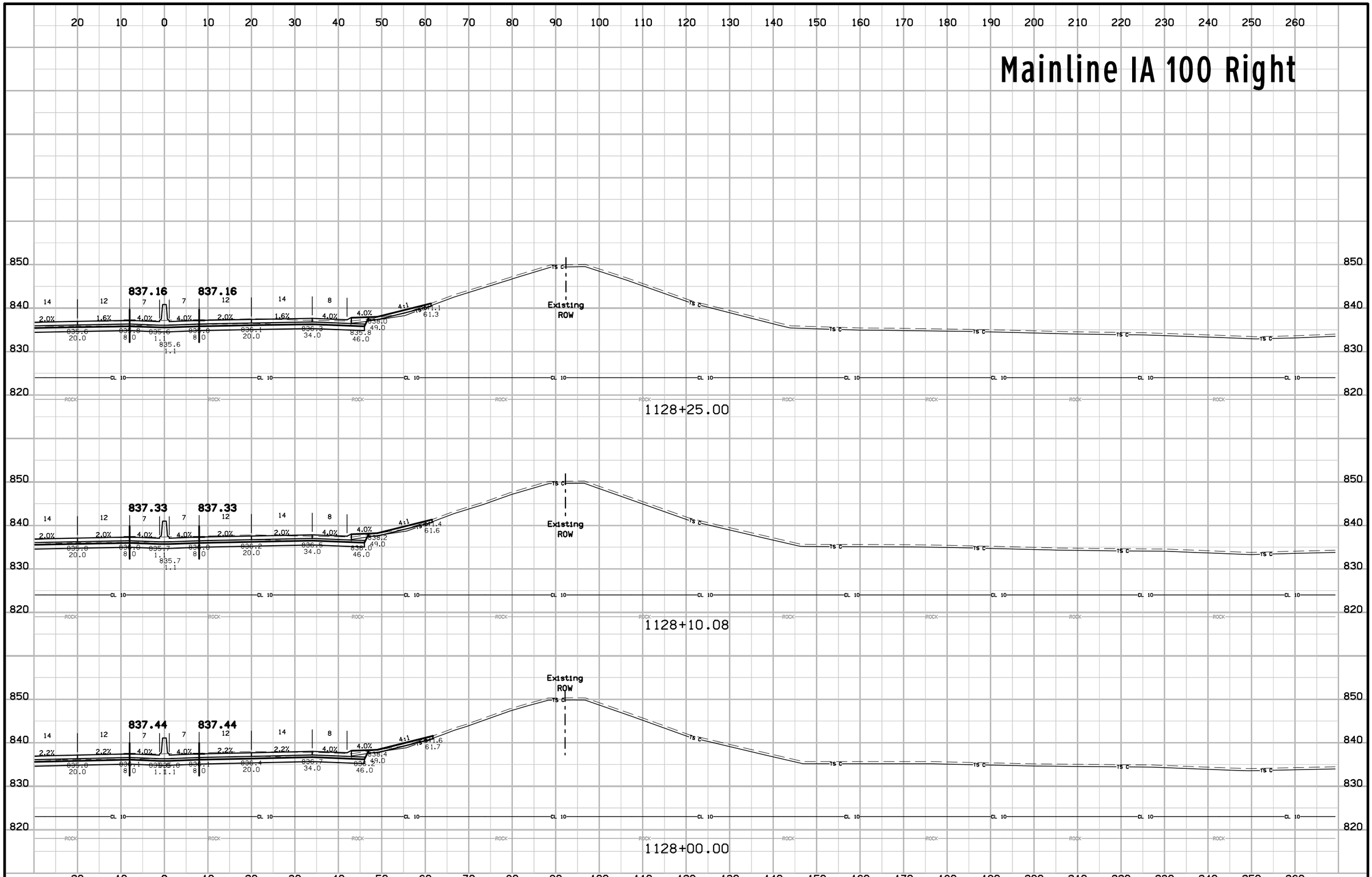

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.141

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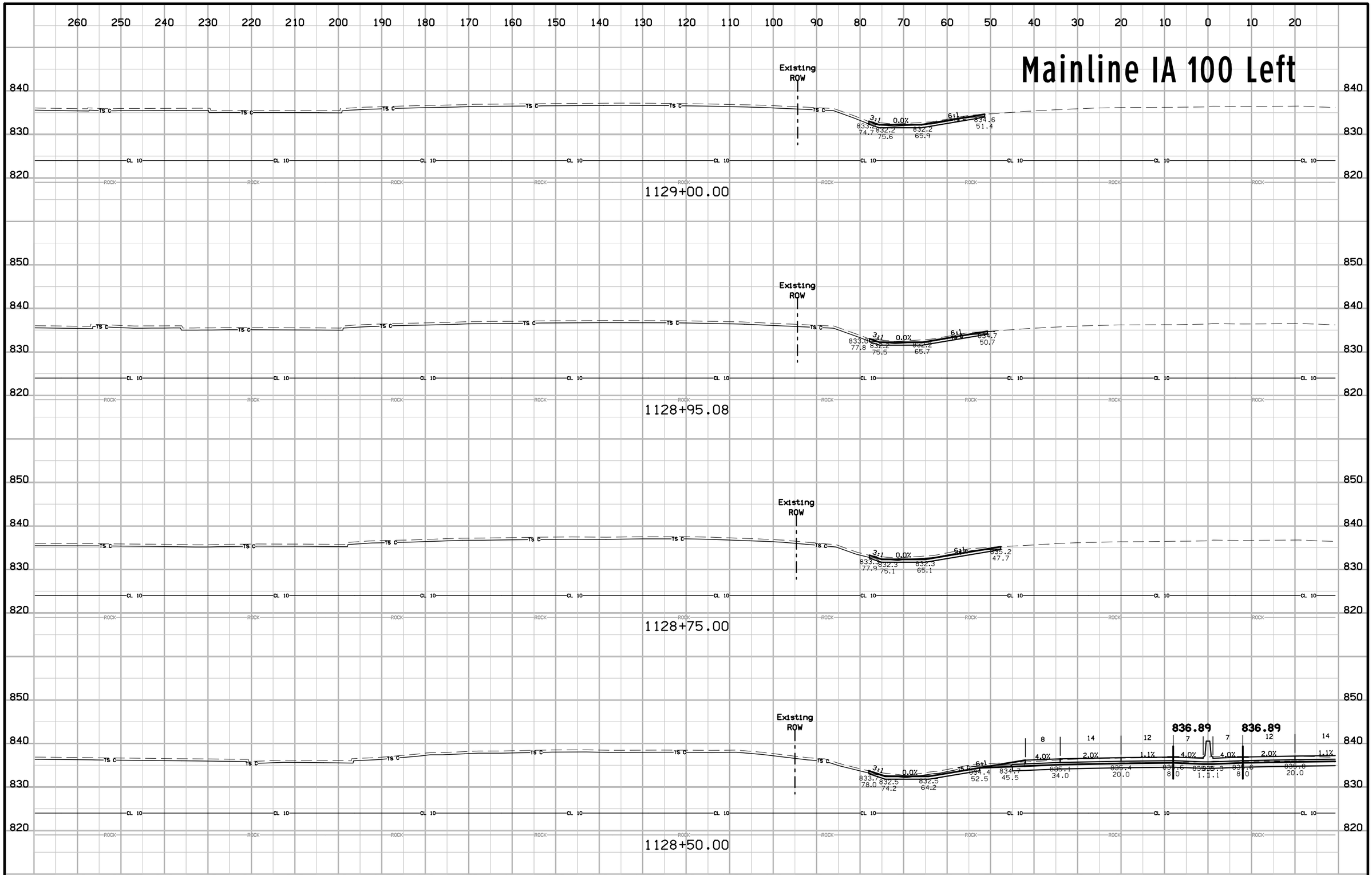
Mainline IA 100 Left



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.142

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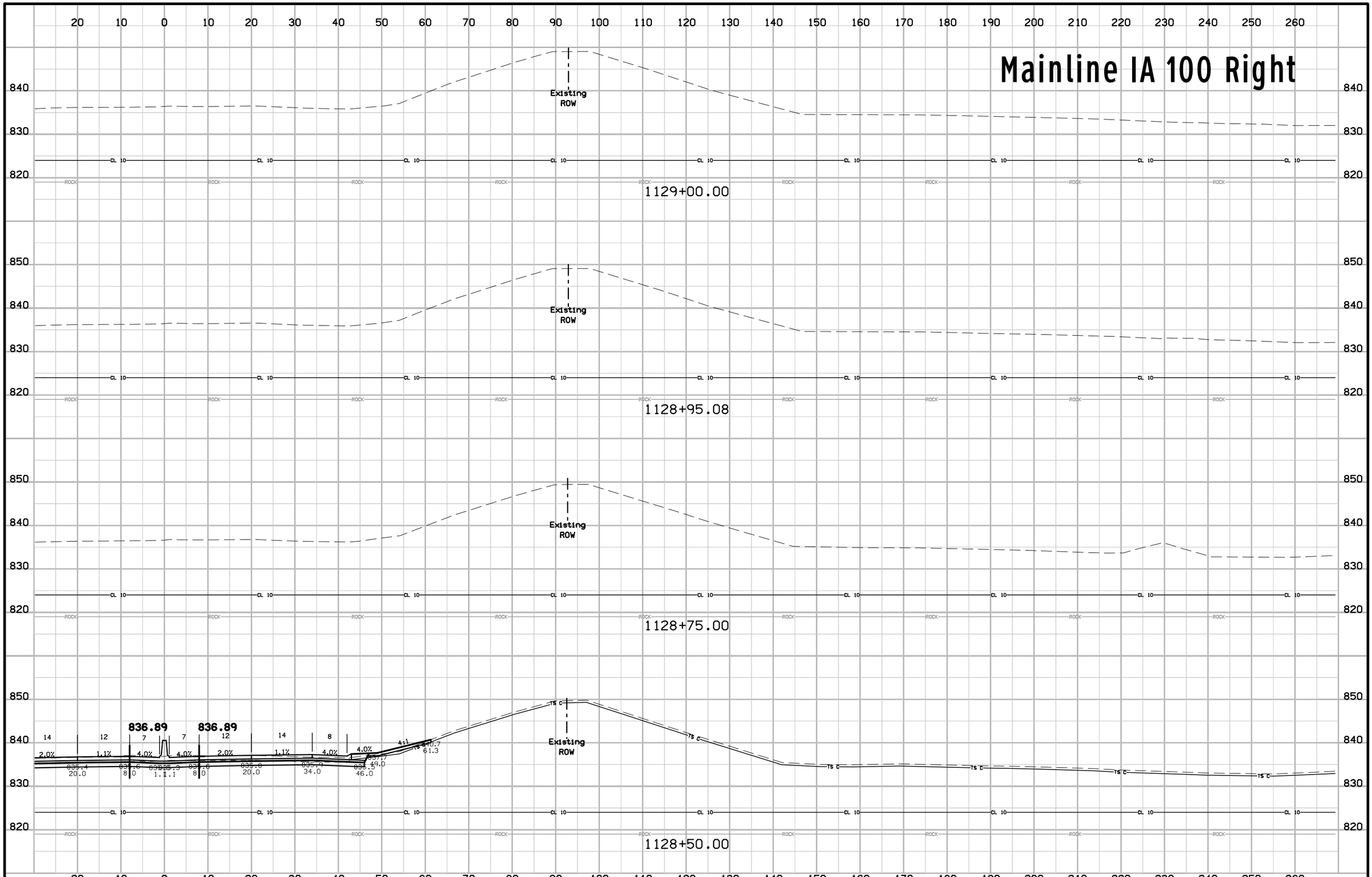
Mainline IA 100 Right



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.143

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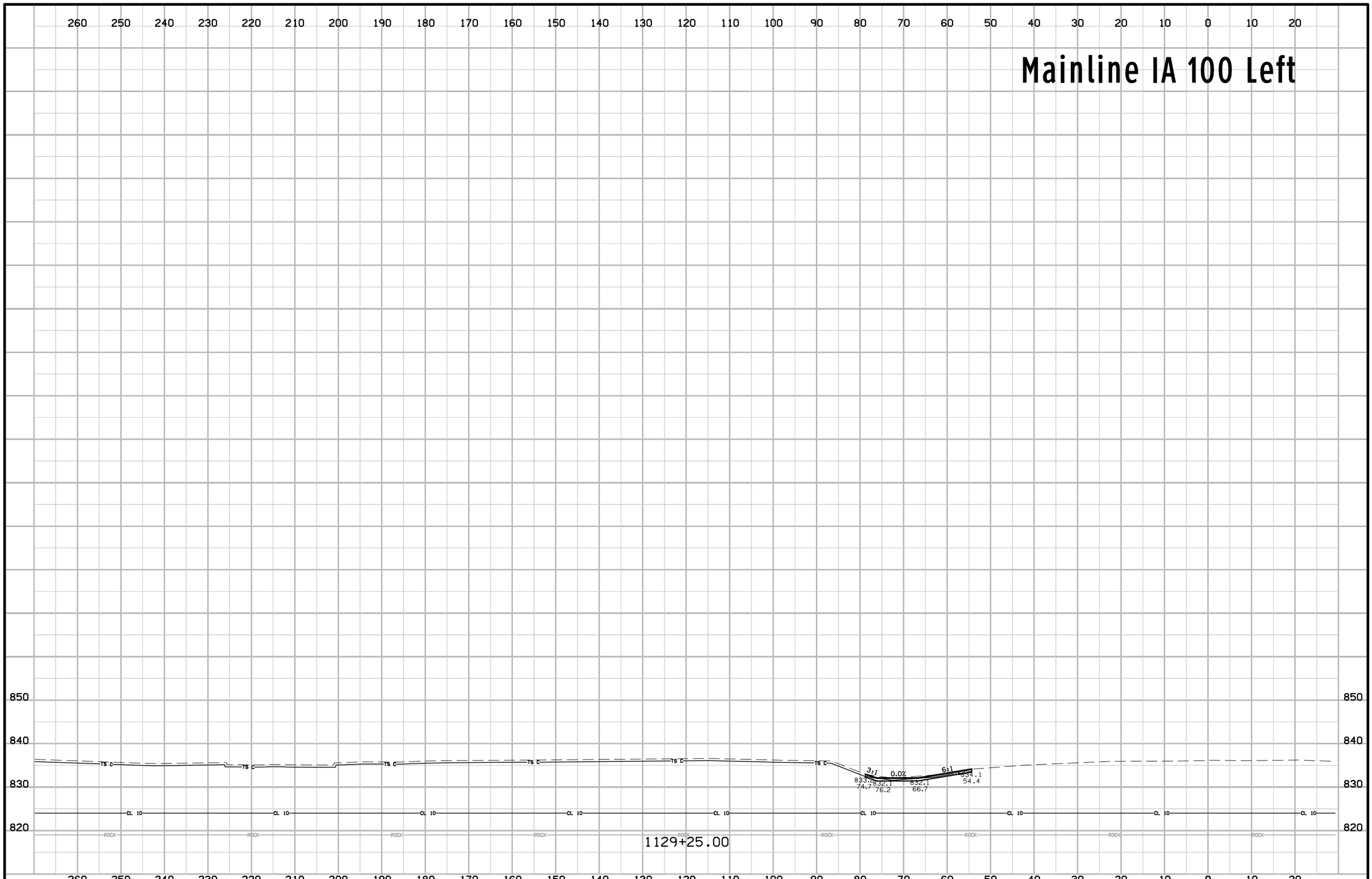

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.144

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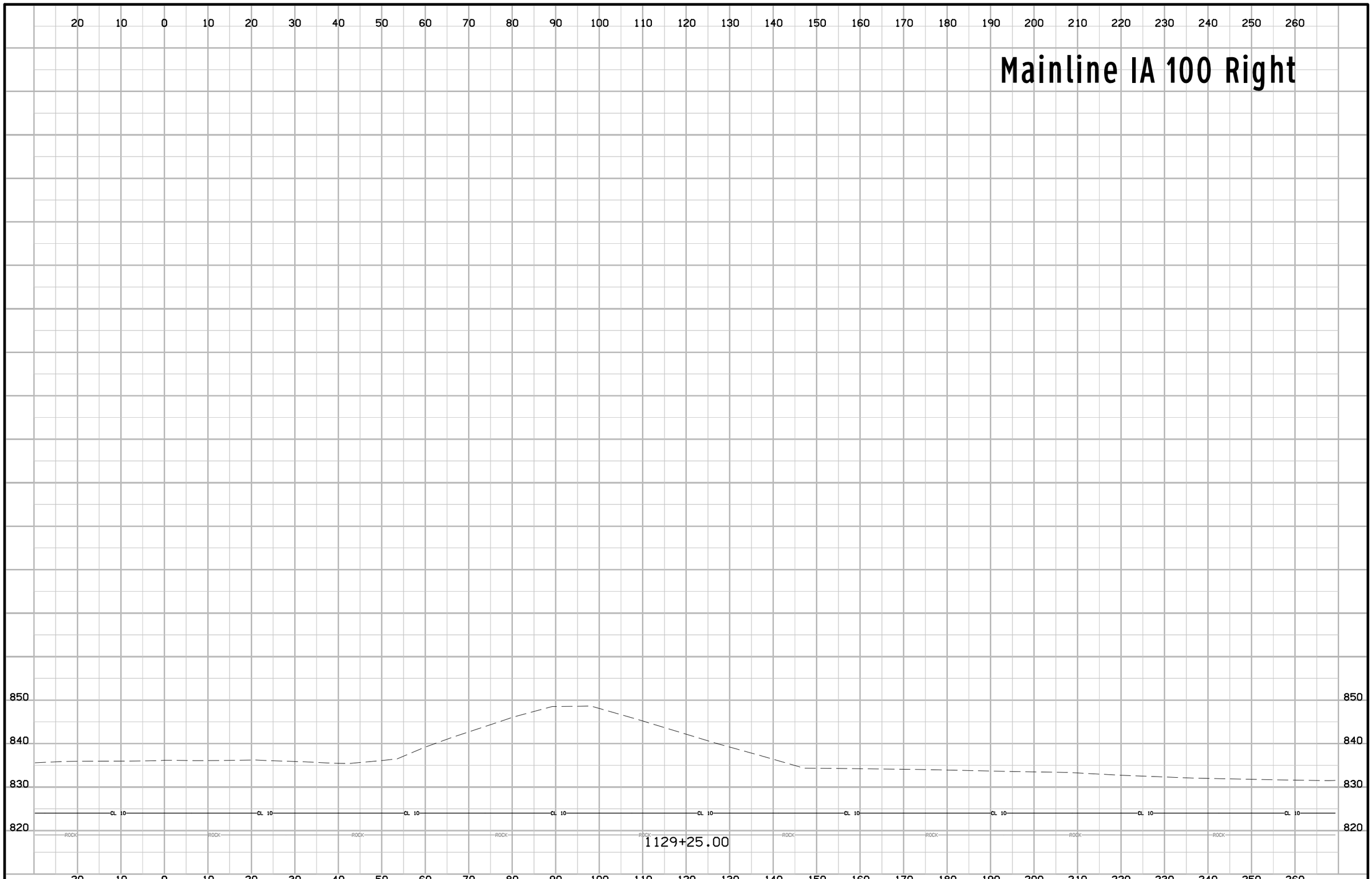
Mainline IA 100 Right



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER W.145

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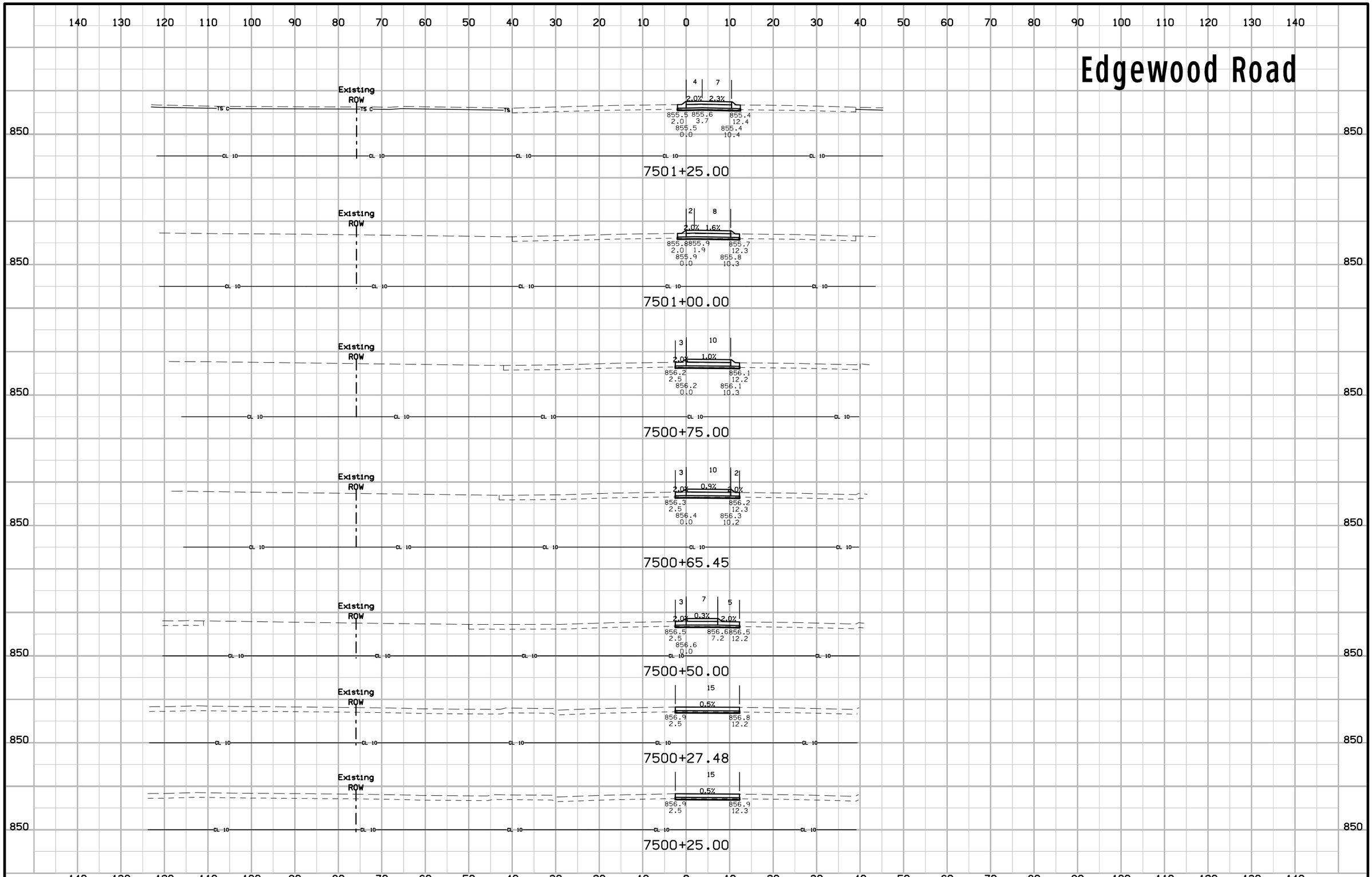
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.1

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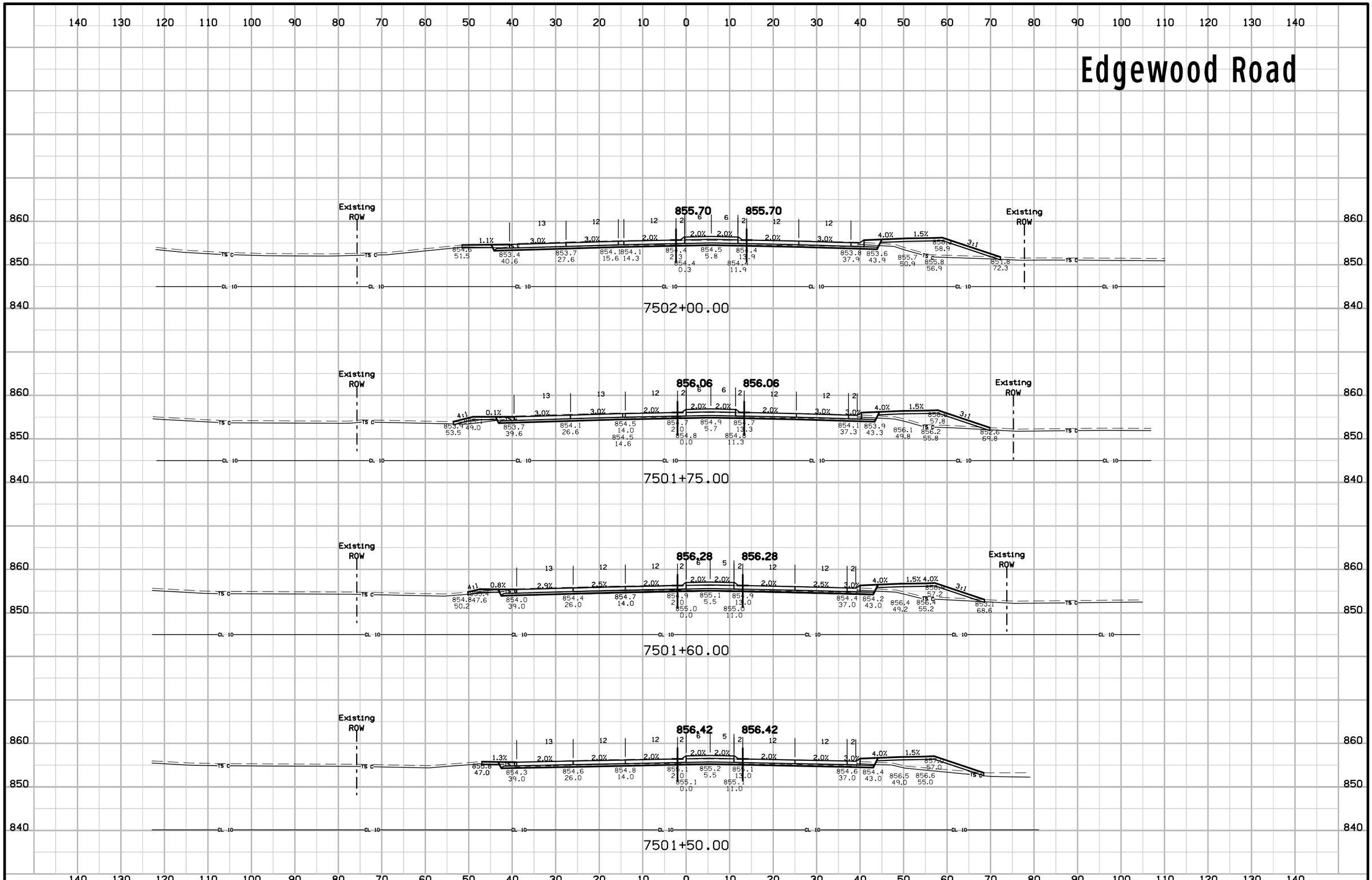
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.2

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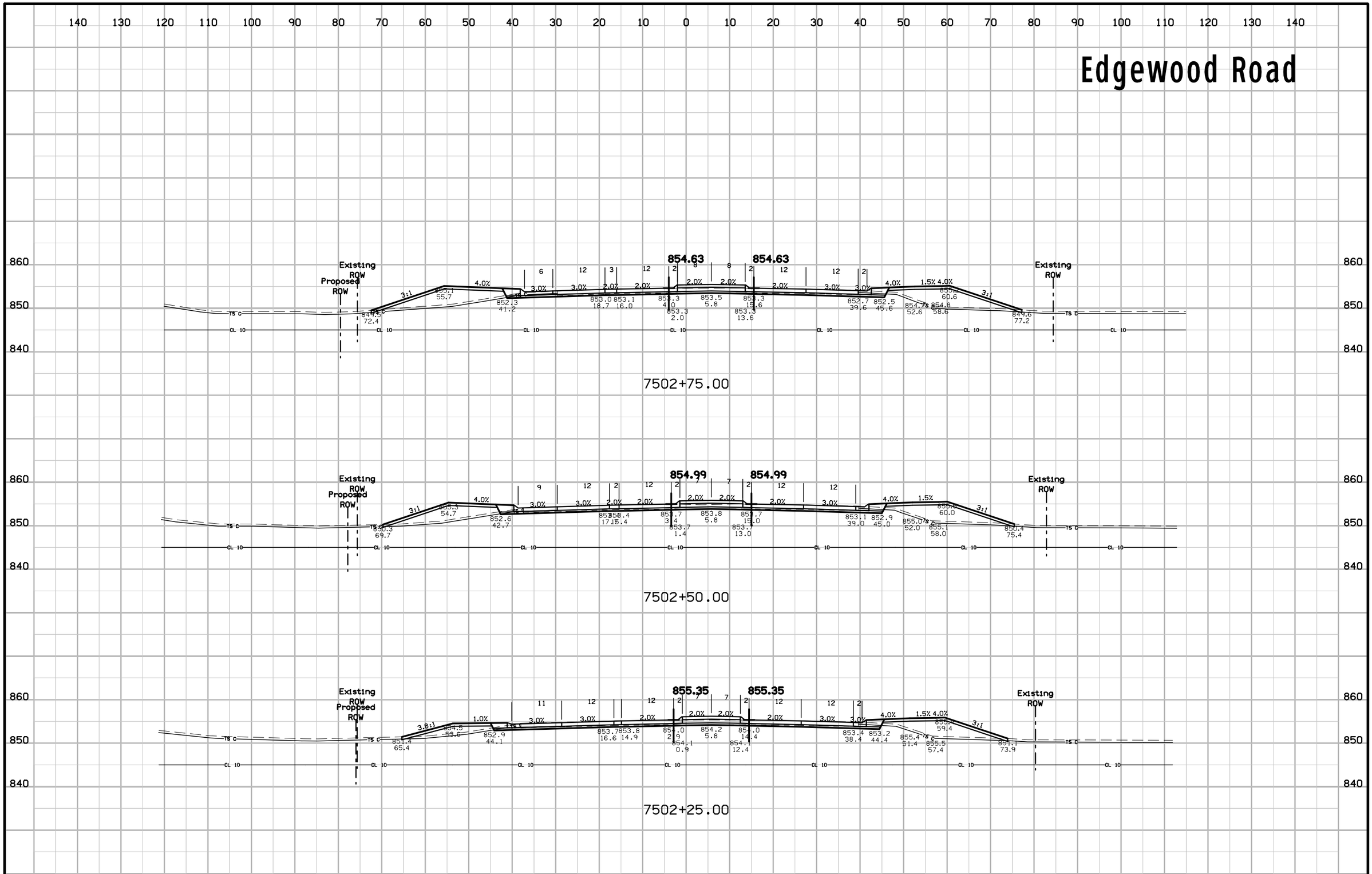
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.3

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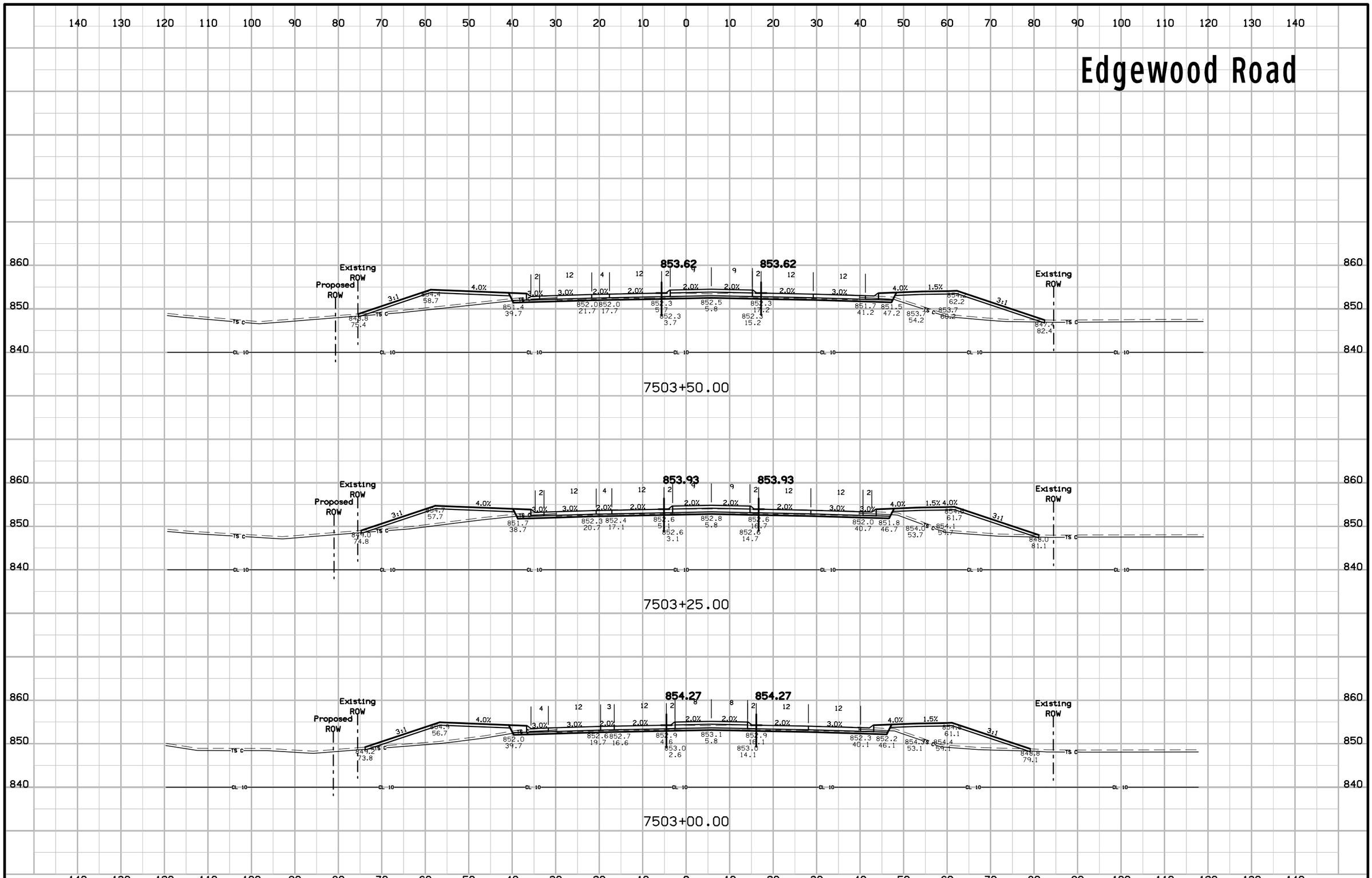
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.4

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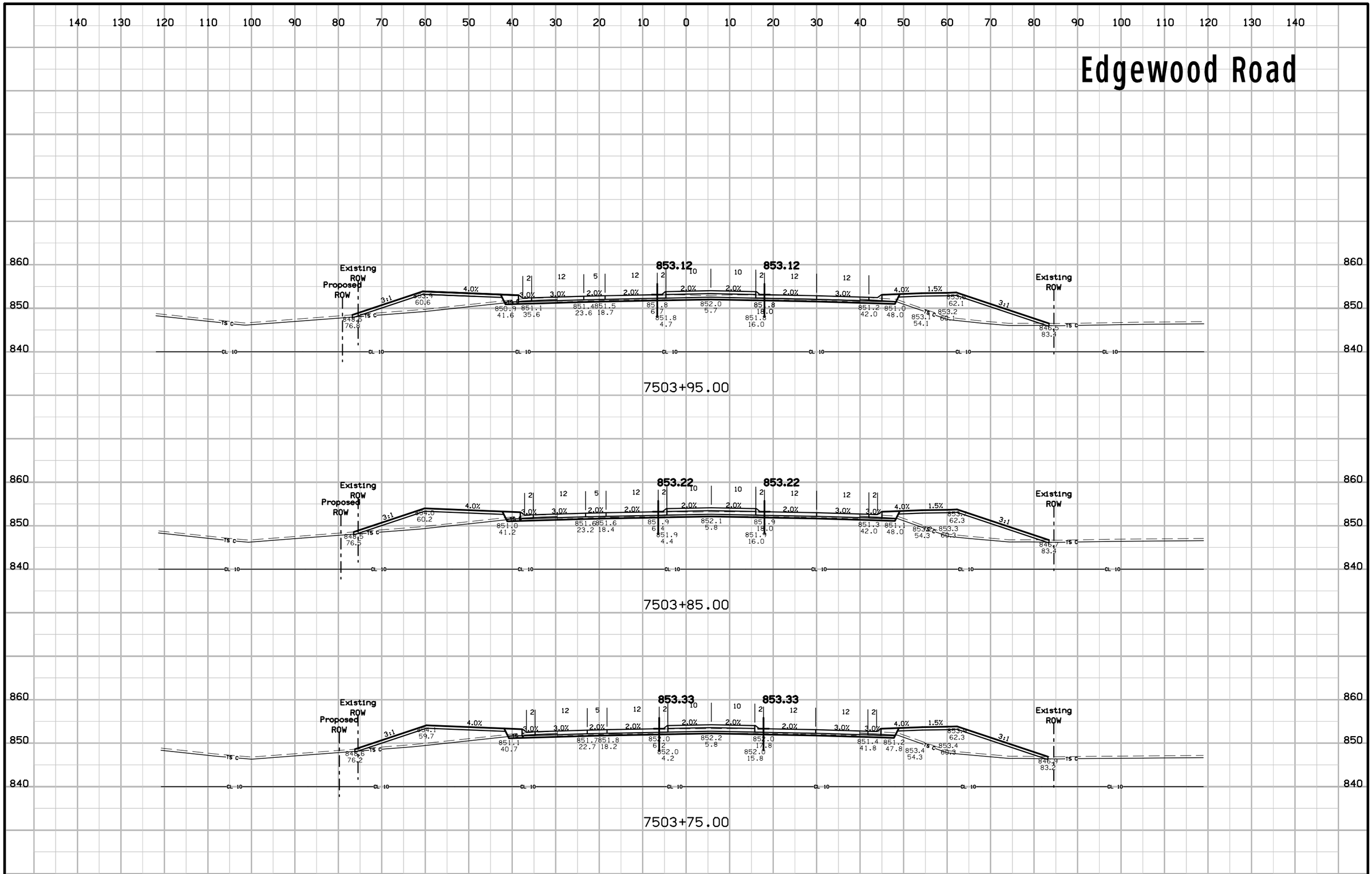
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.5

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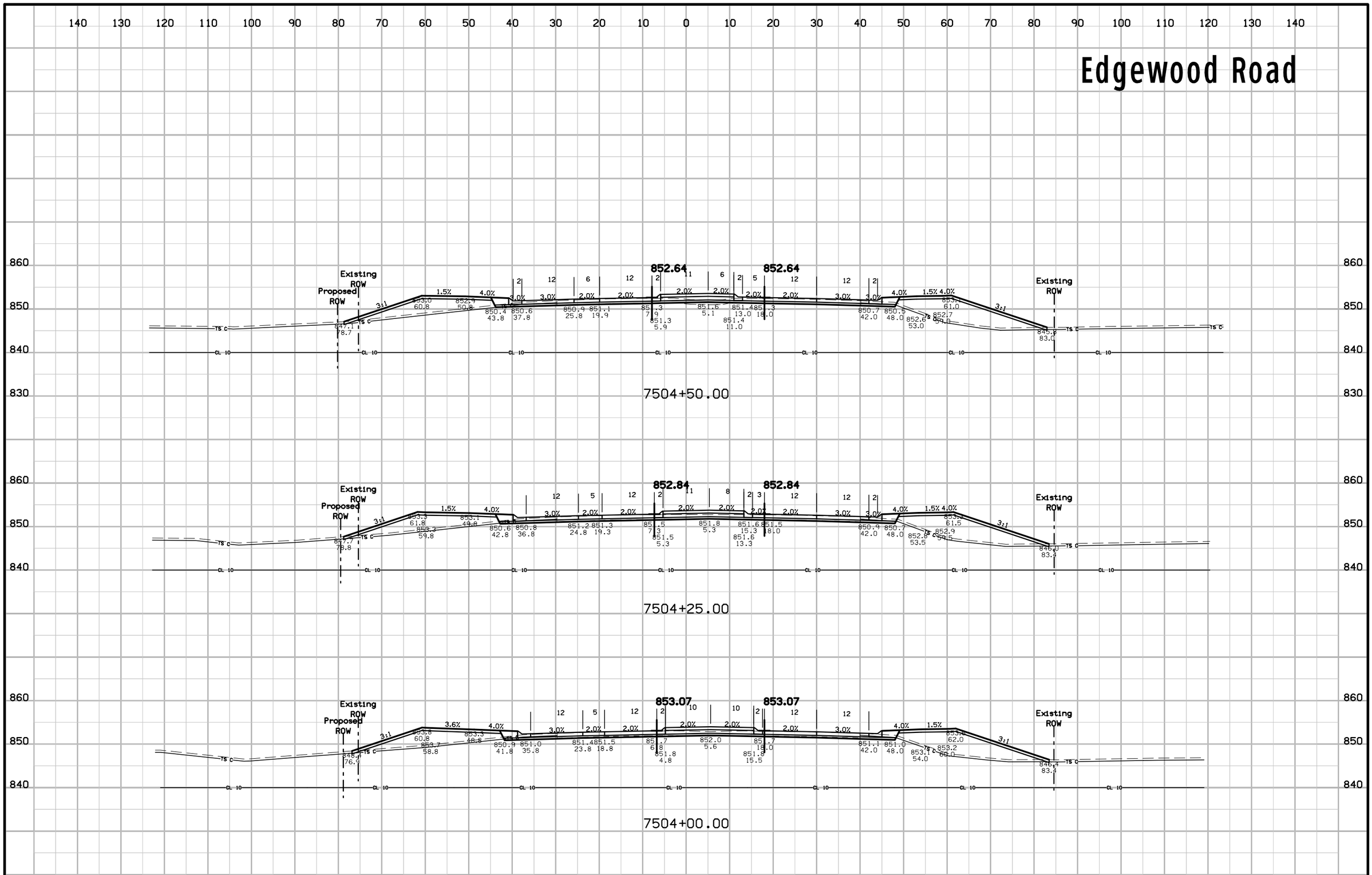
Edgewood Road



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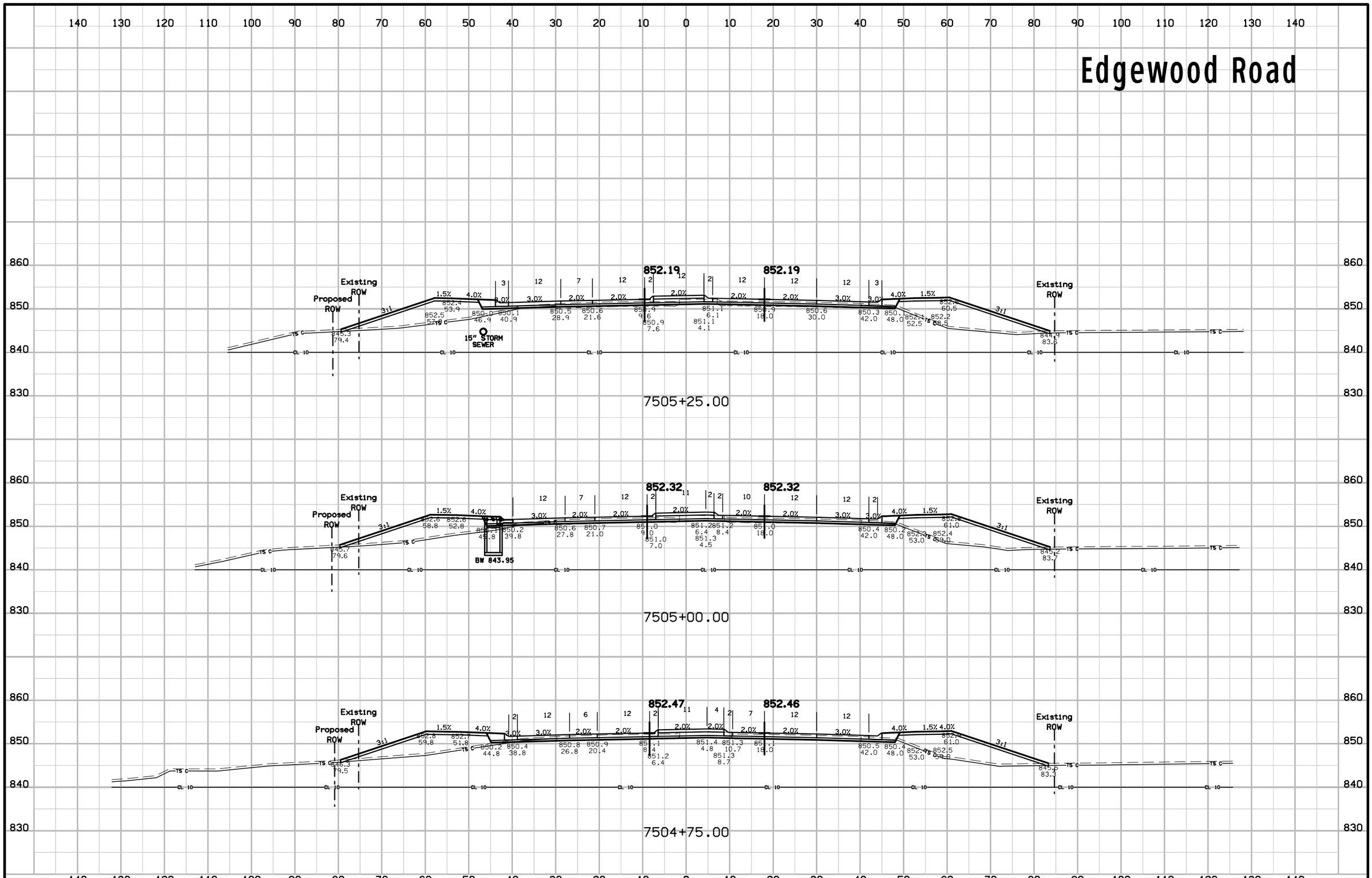
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.7

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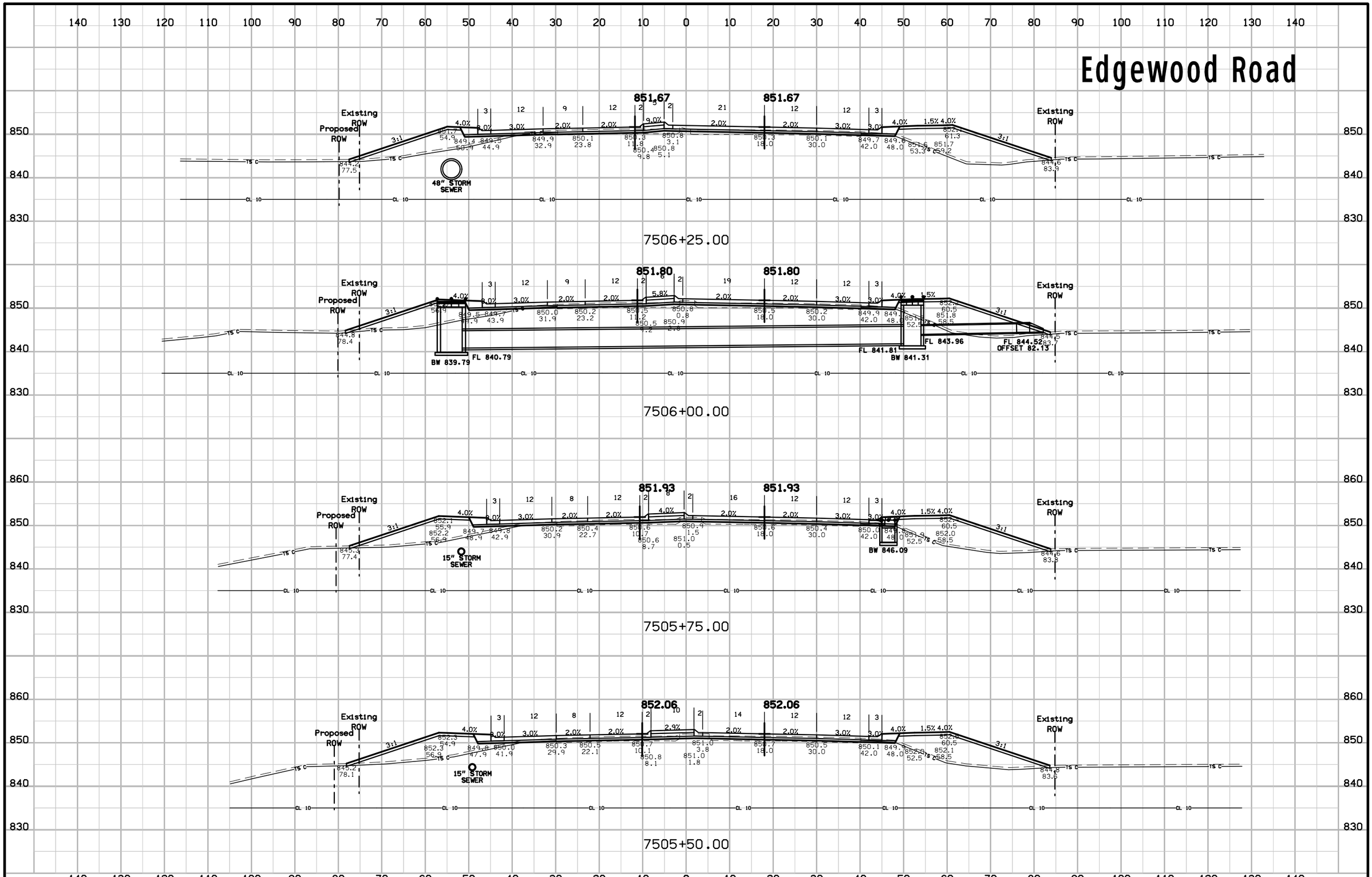

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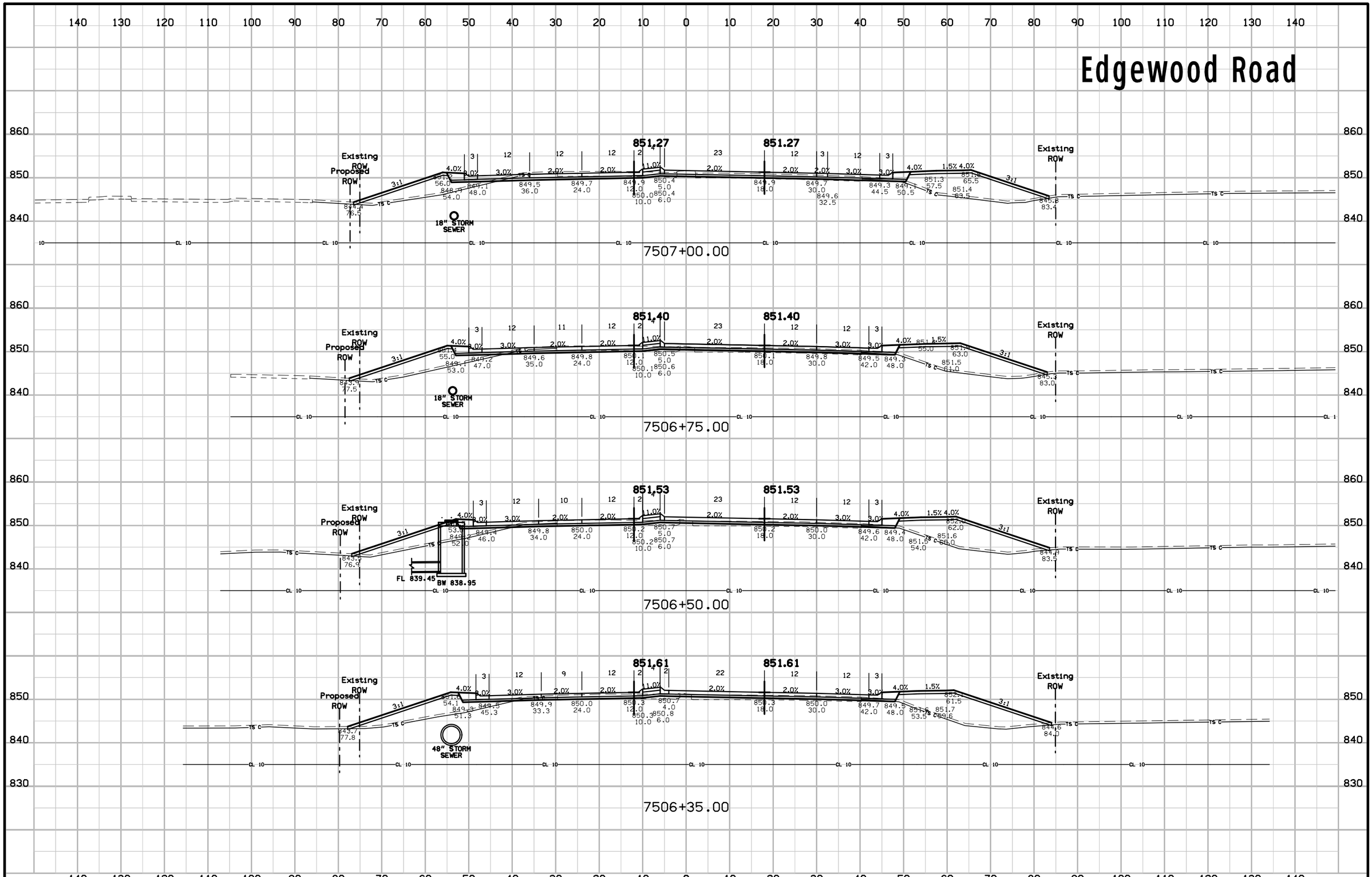

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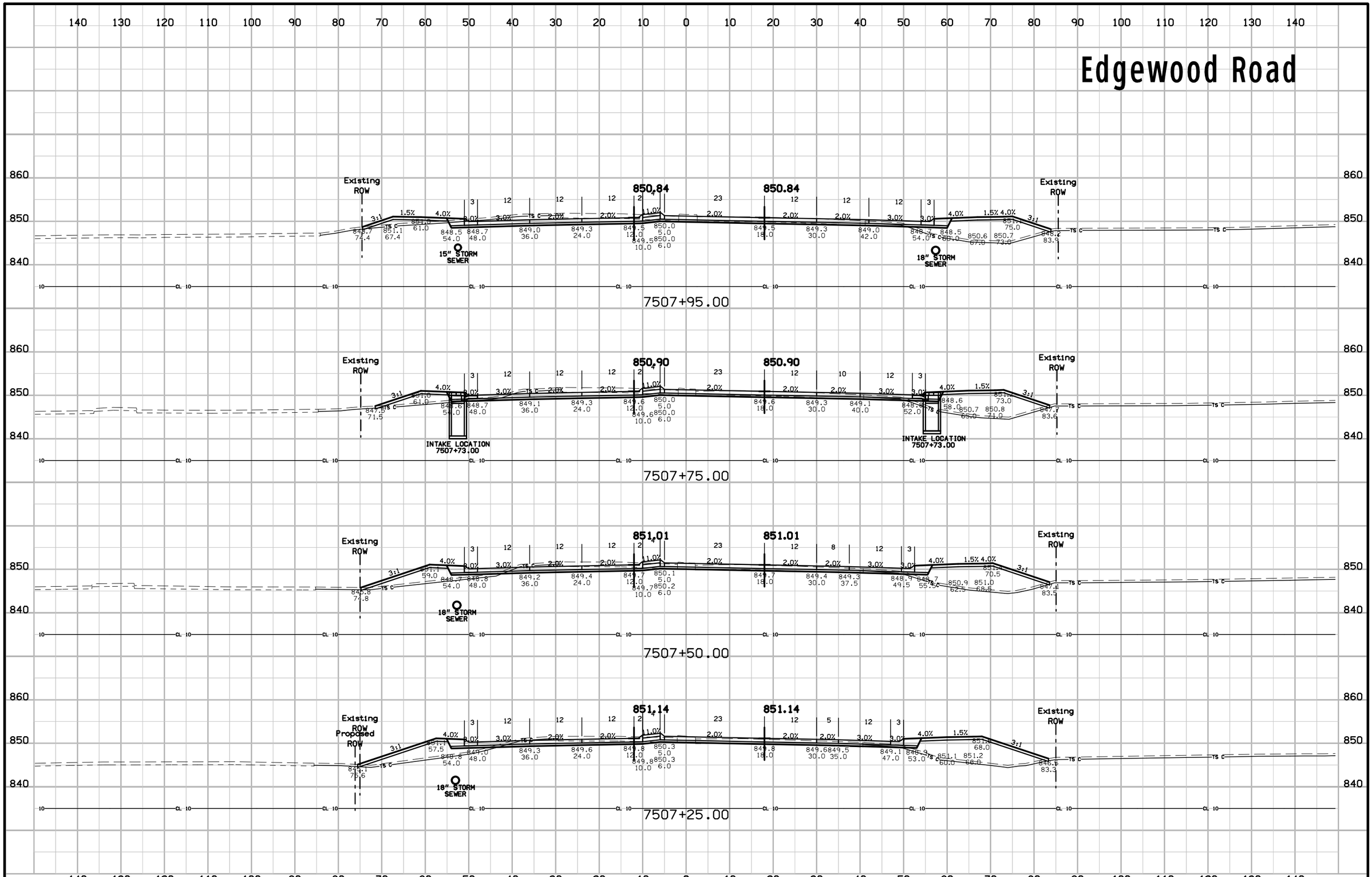

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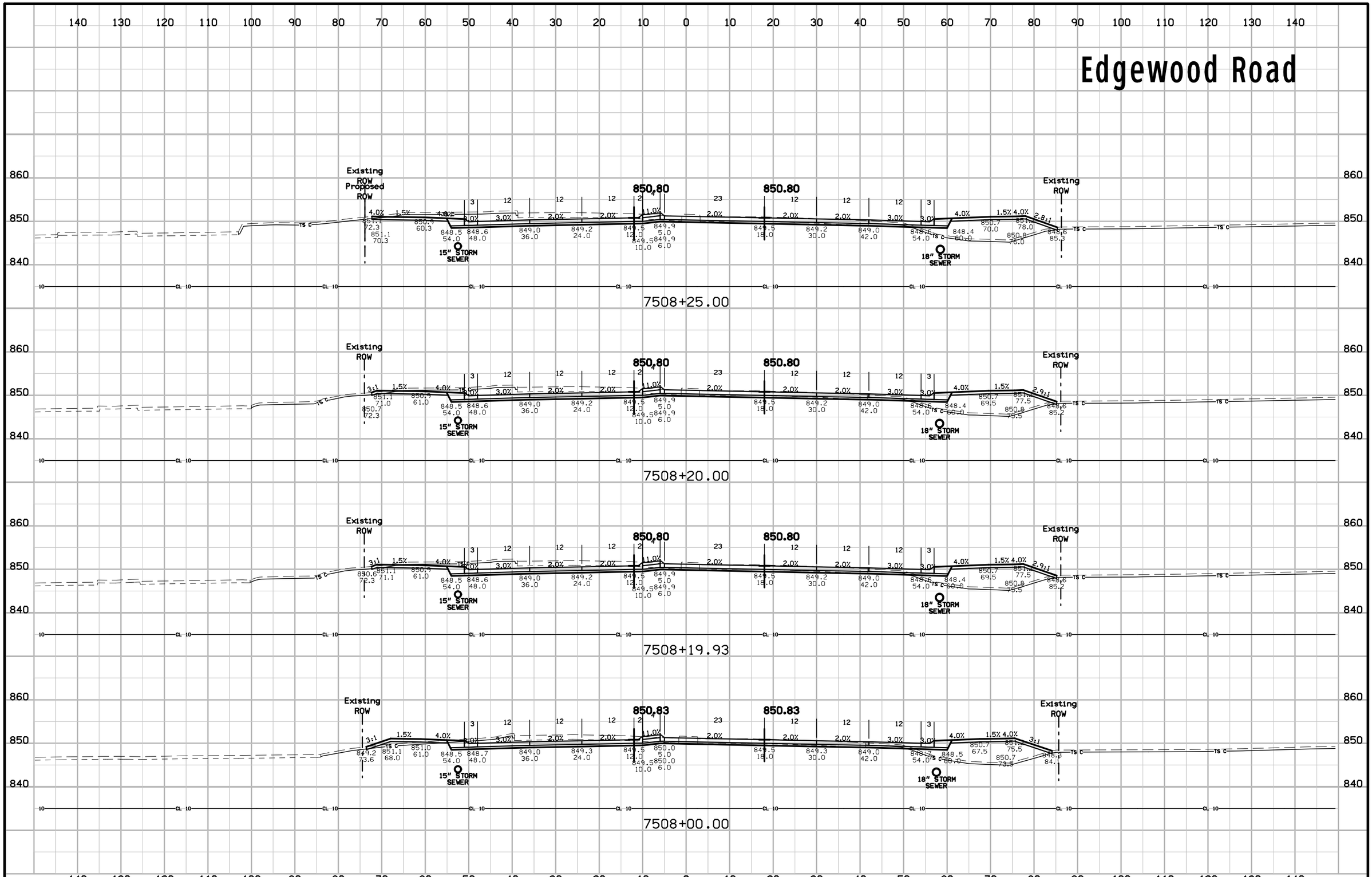

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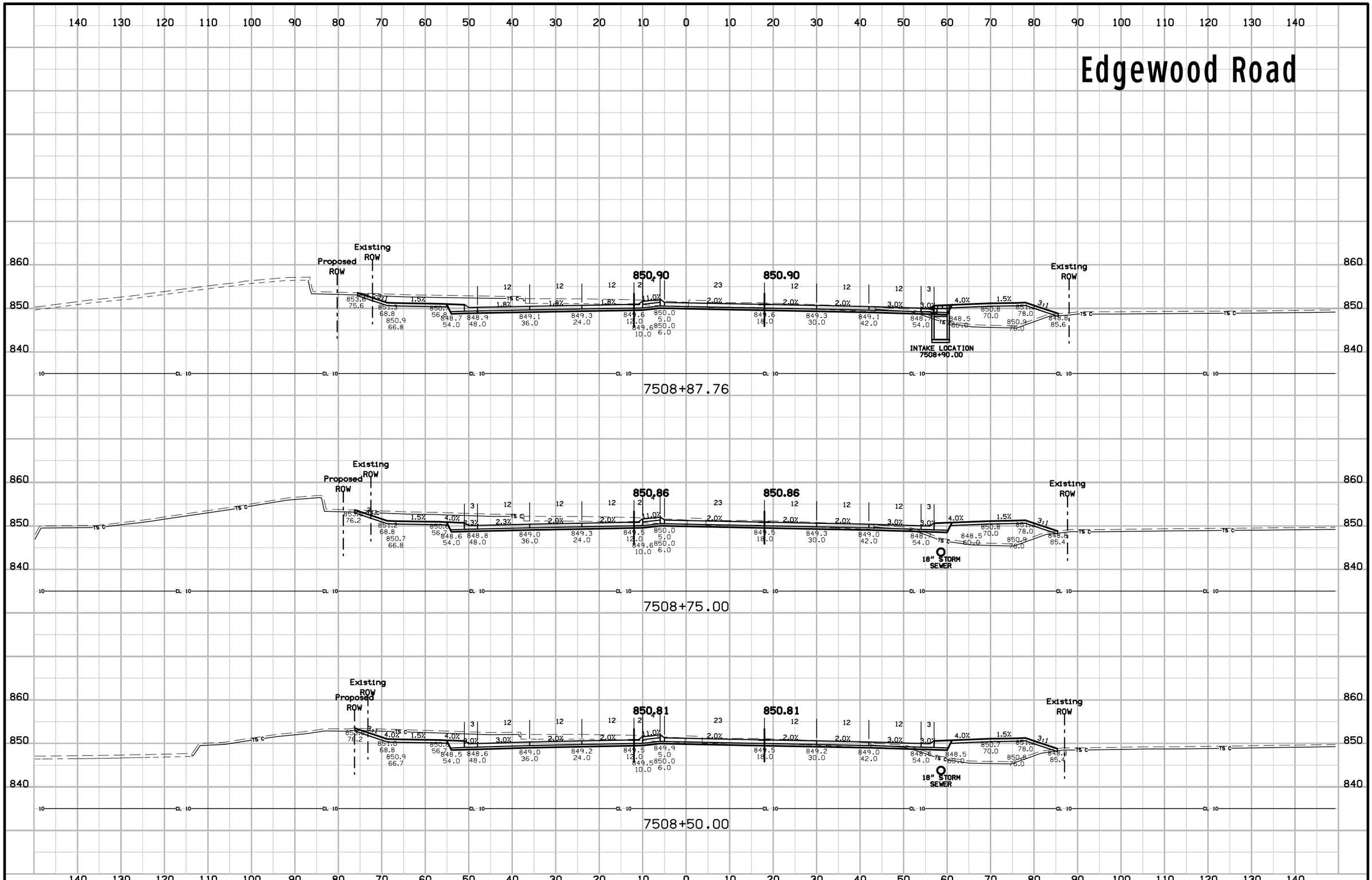

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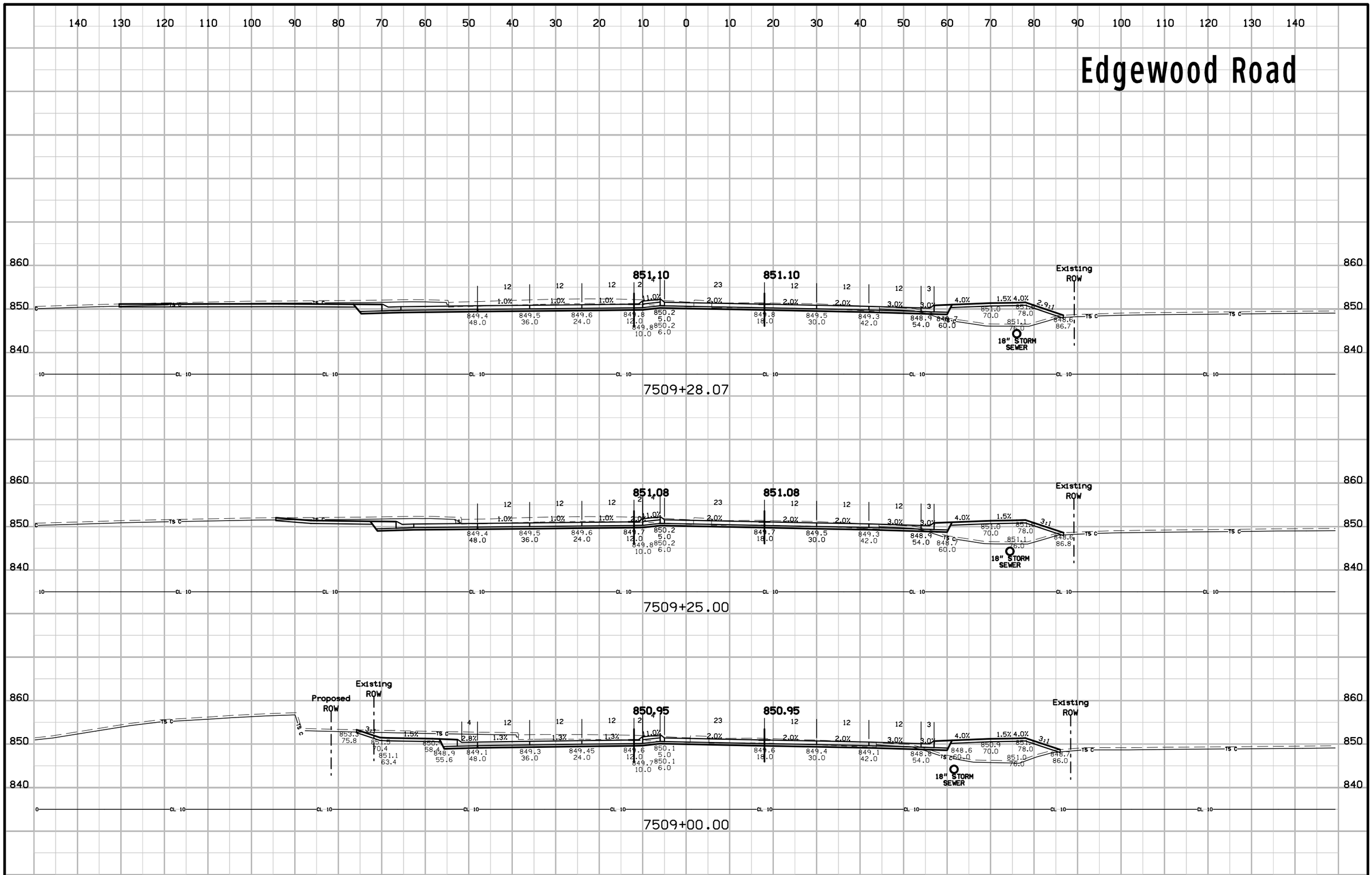

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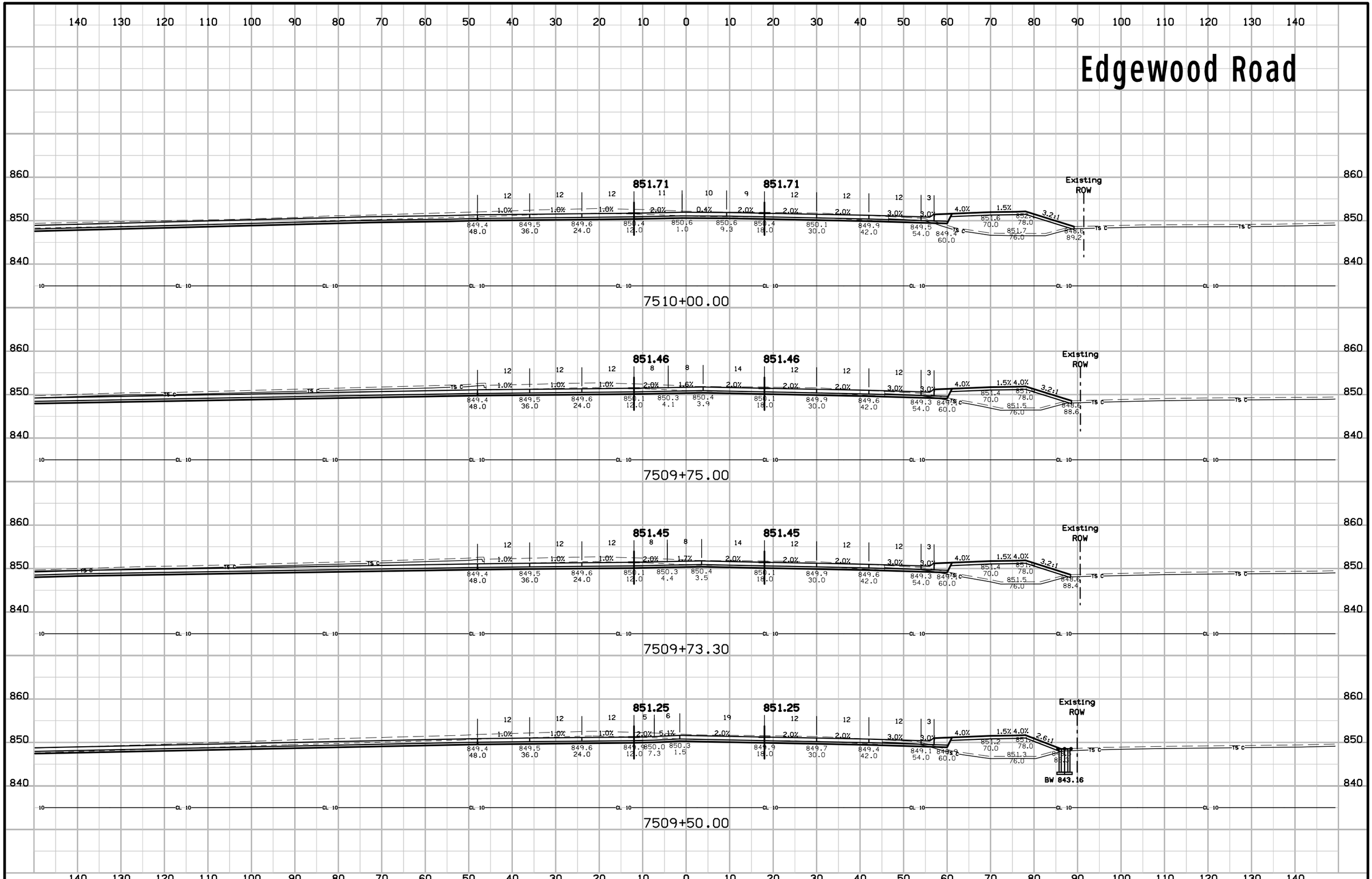

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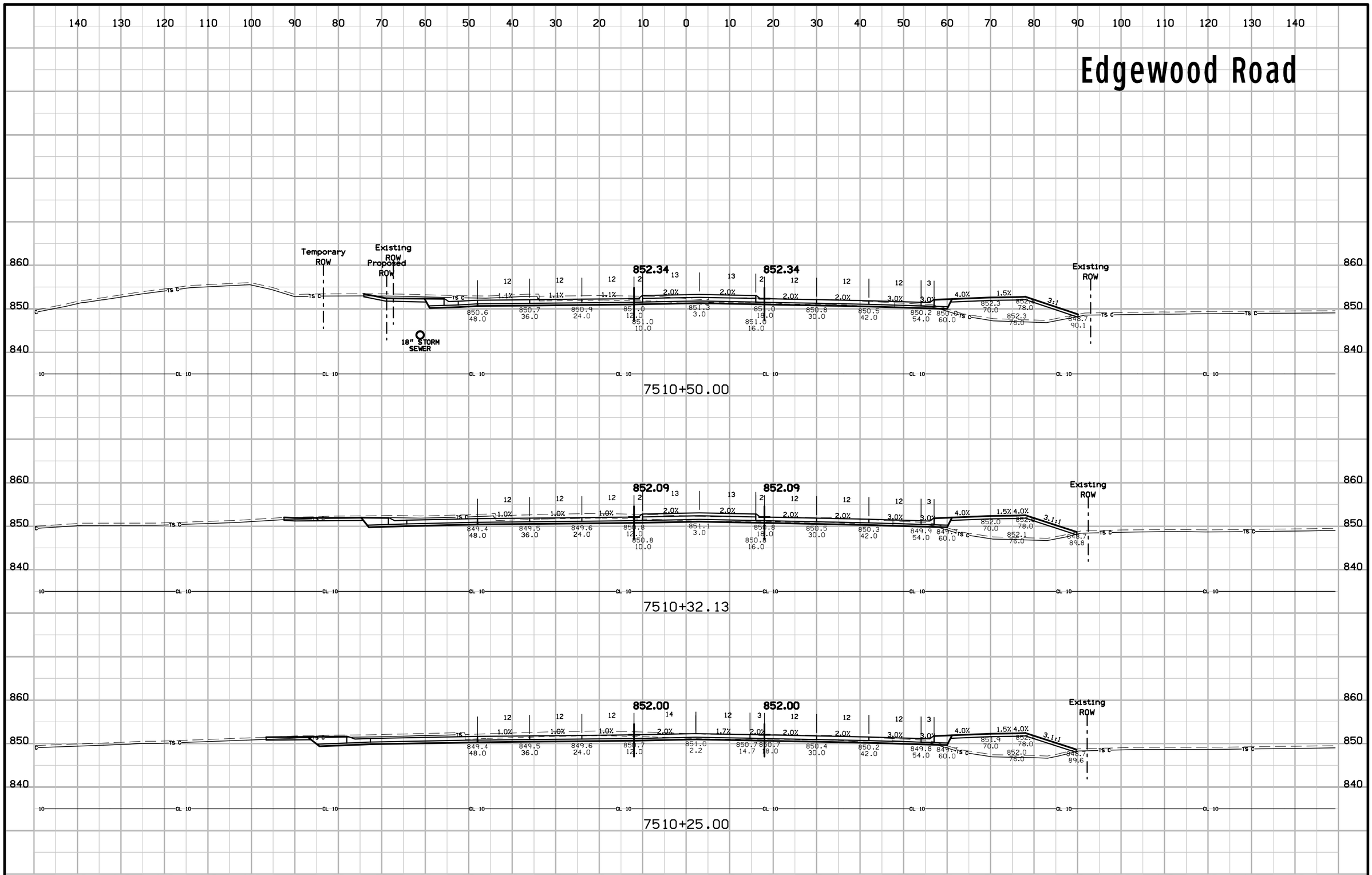

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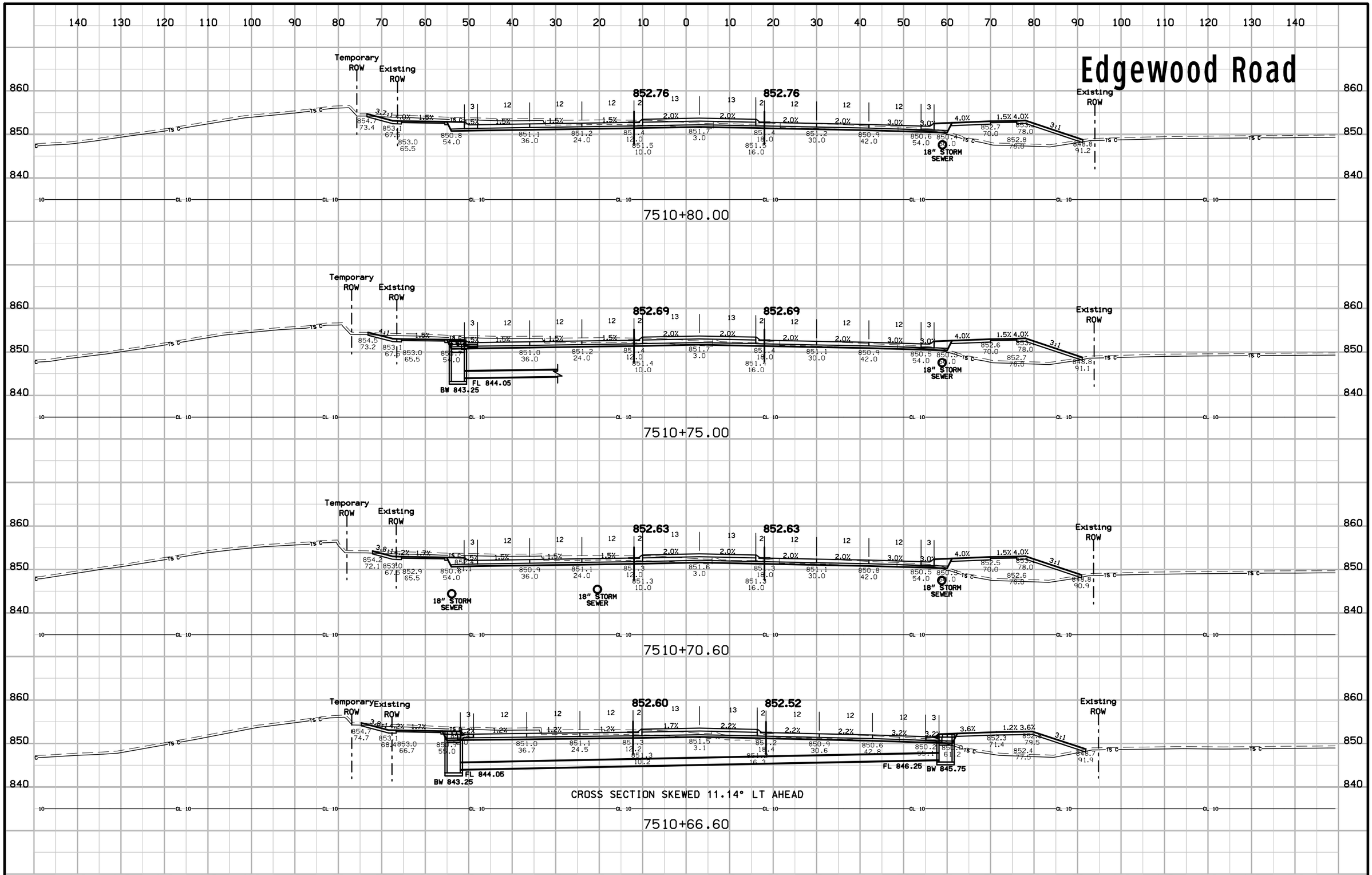

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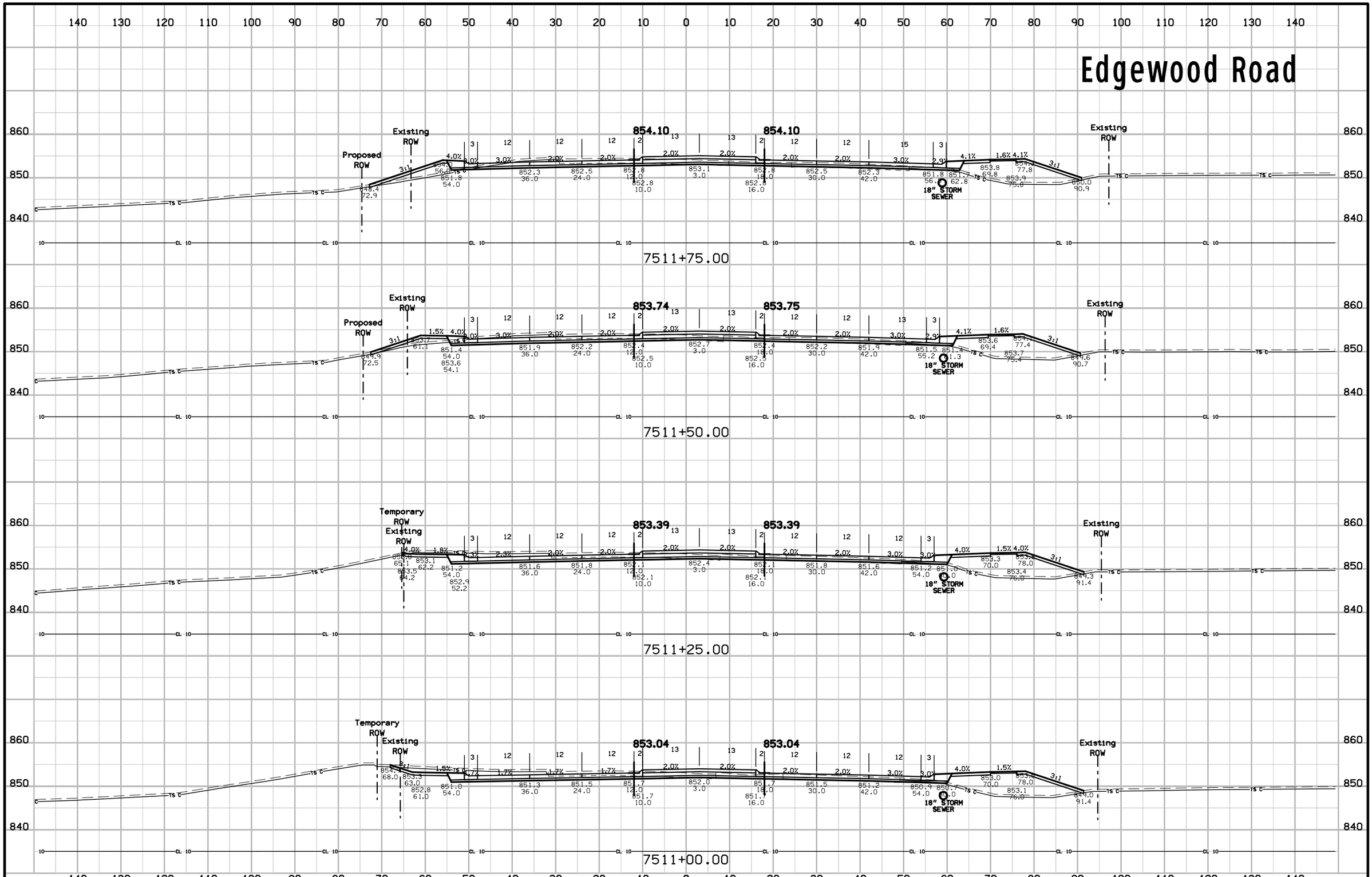

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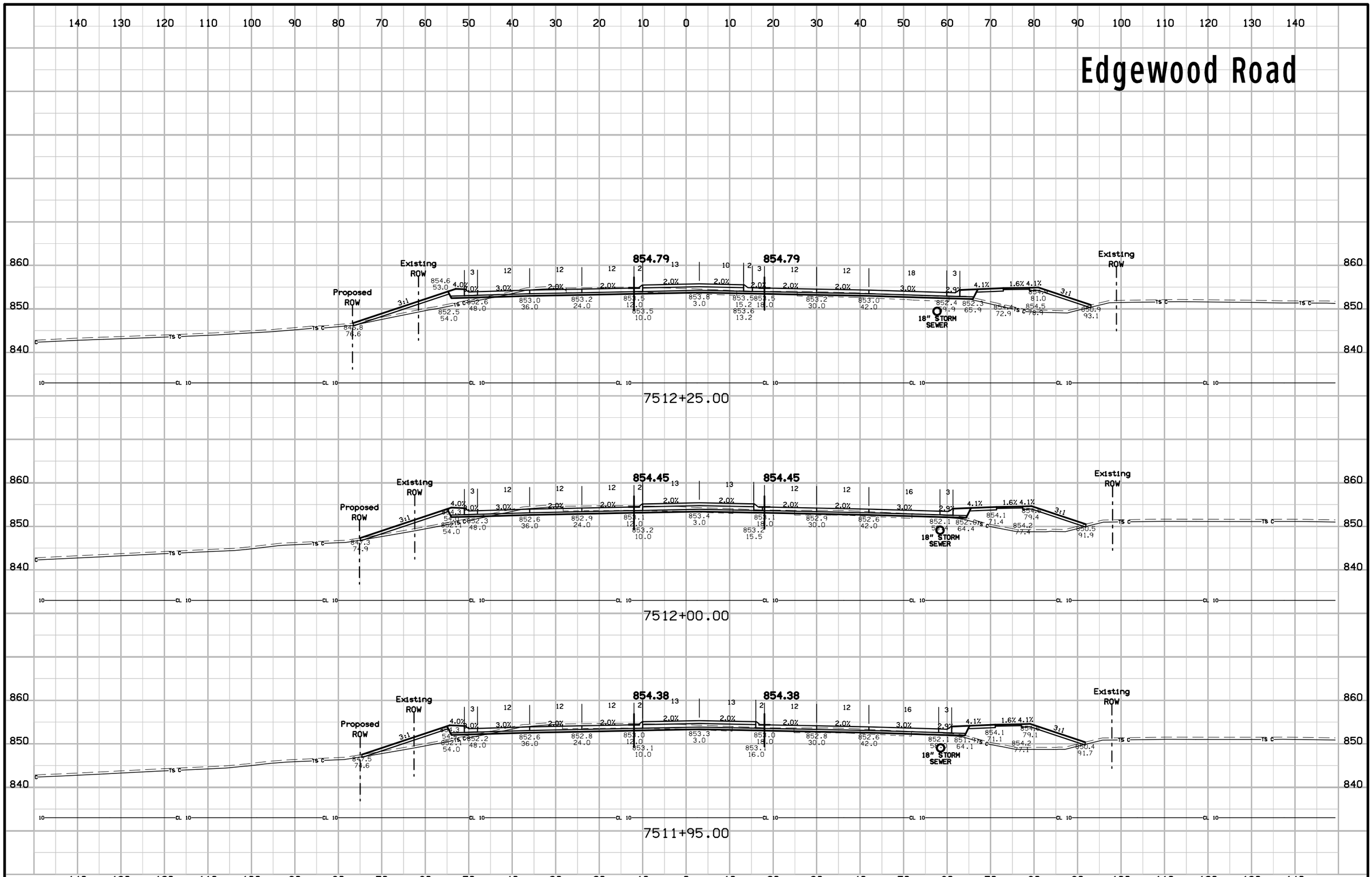

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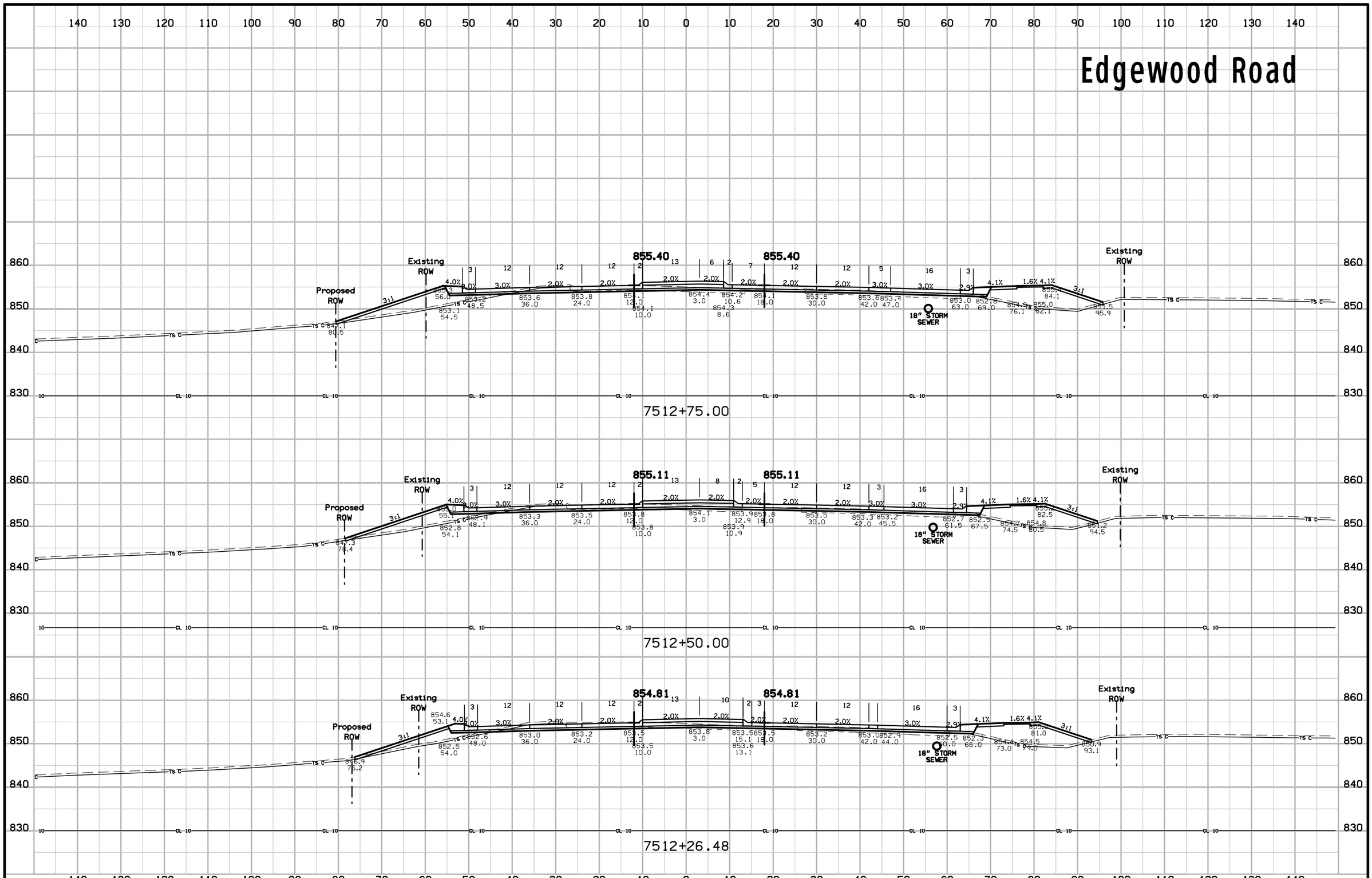

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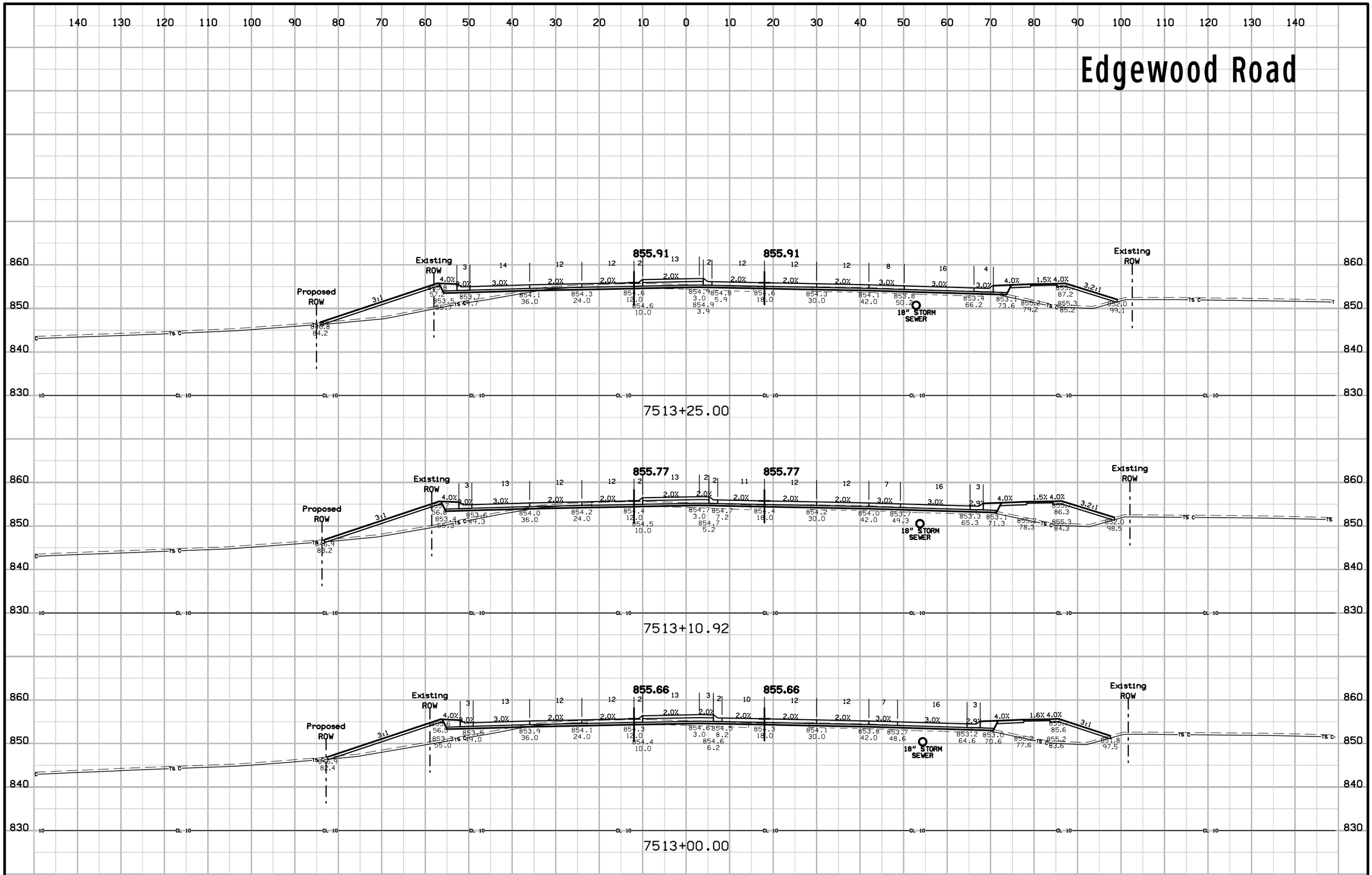

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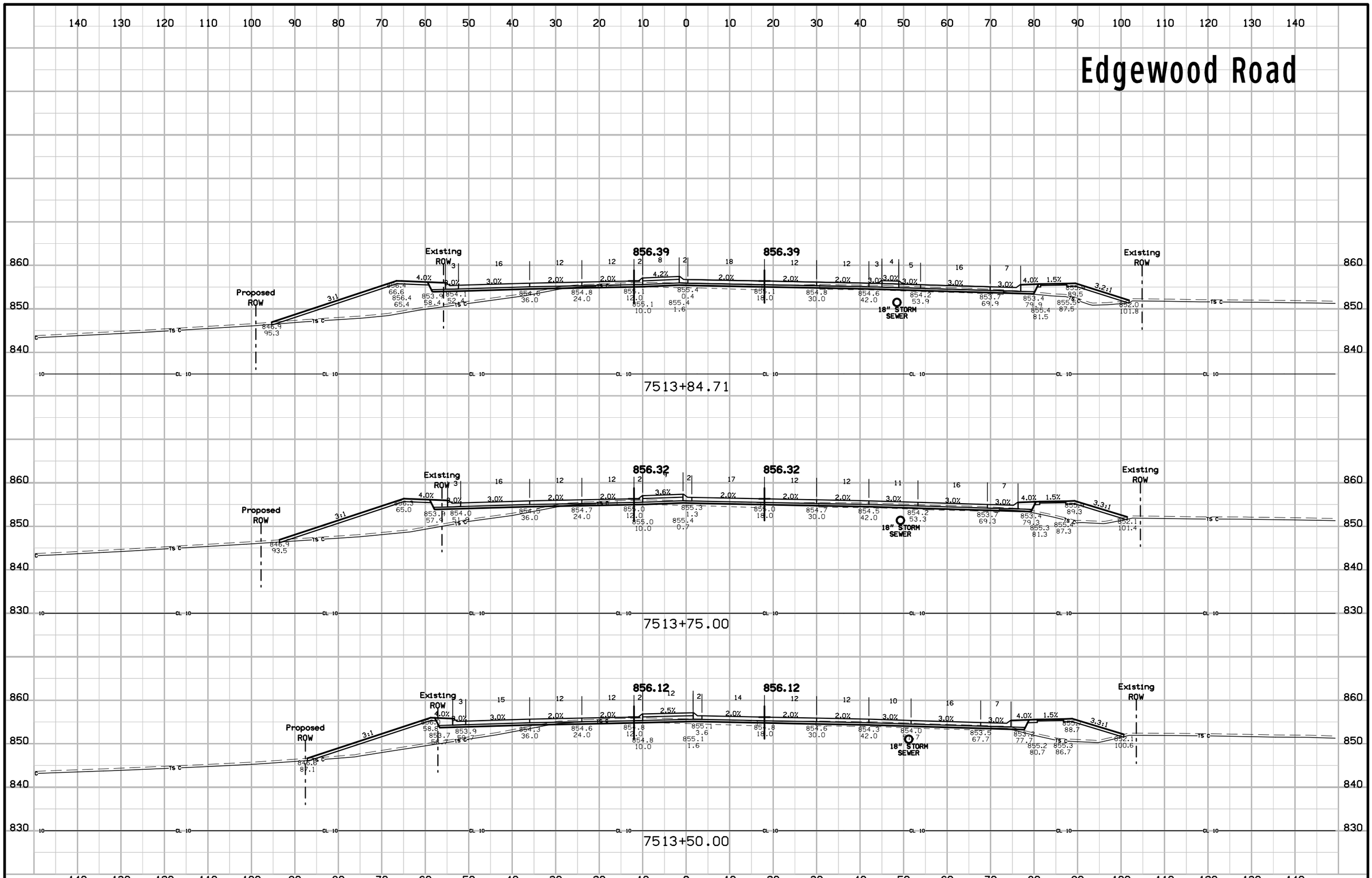

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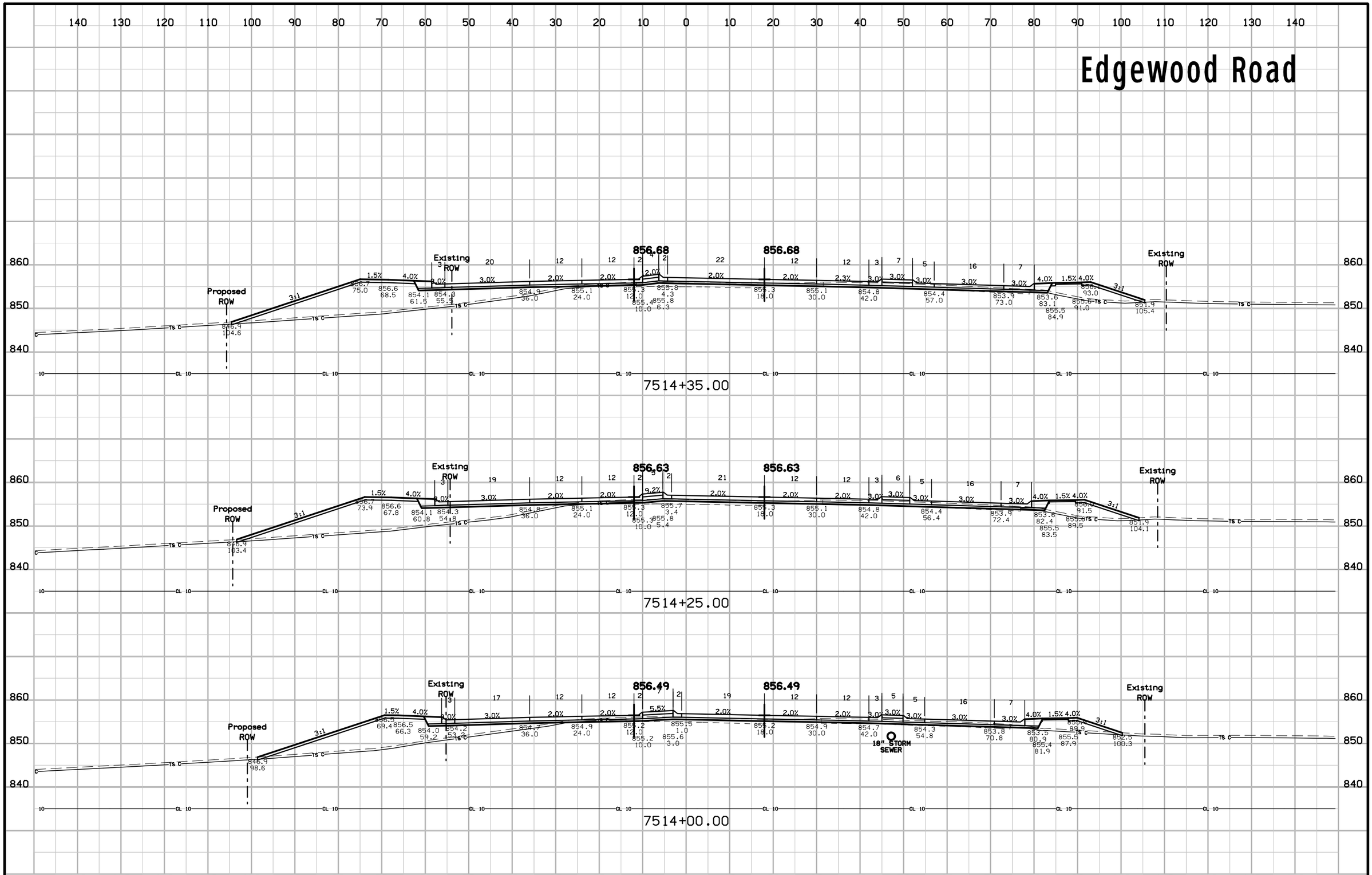

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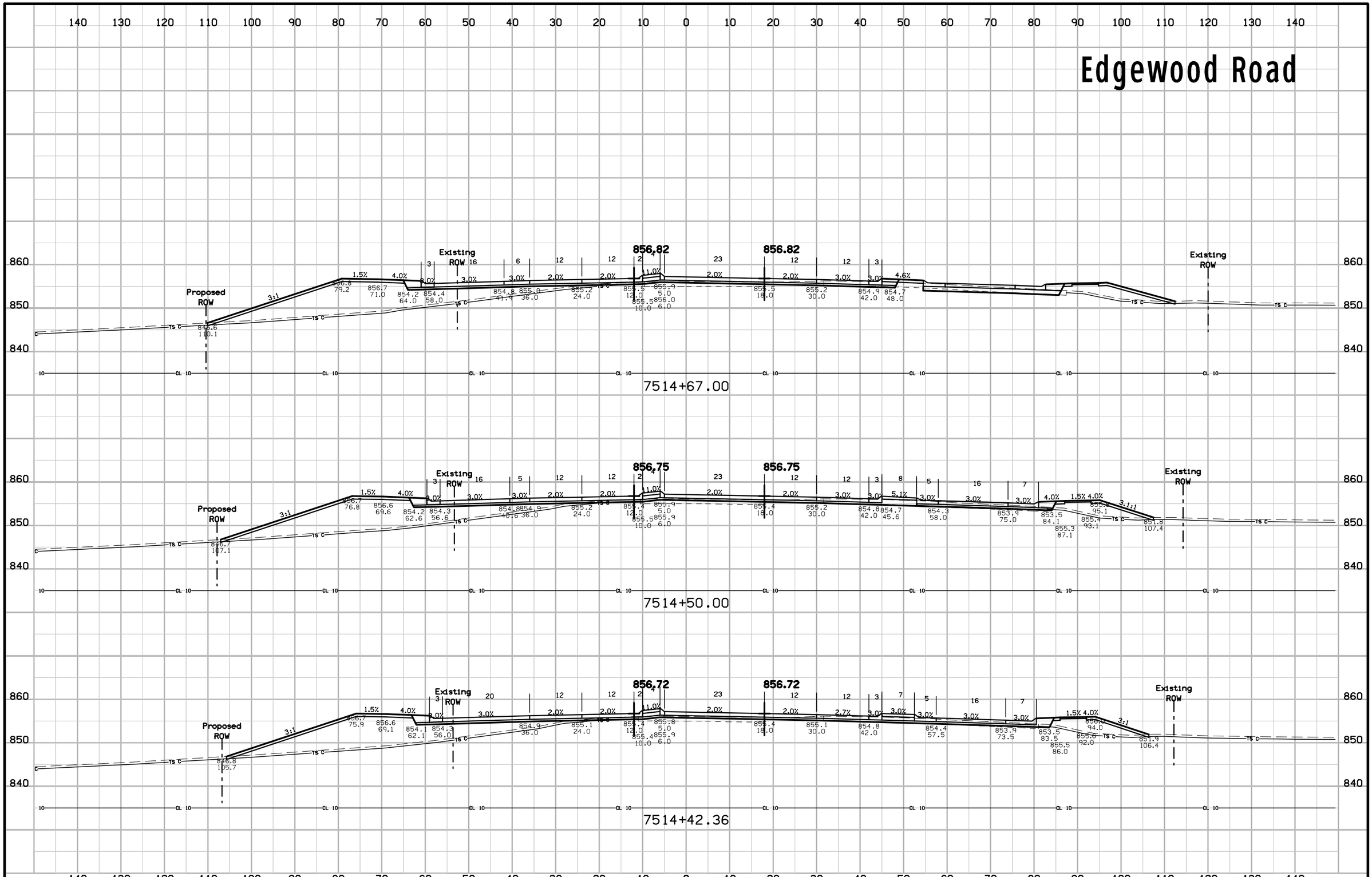

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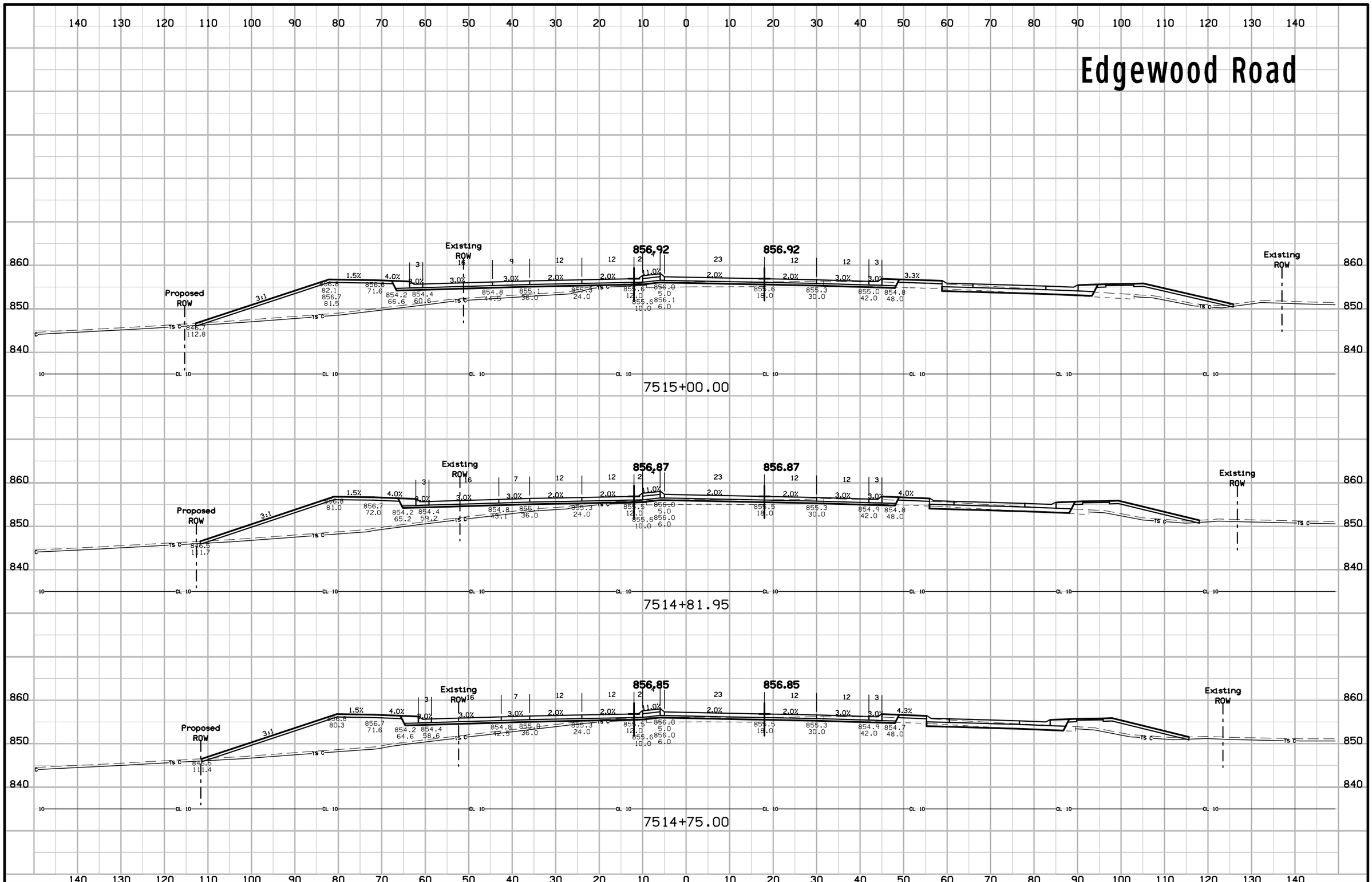

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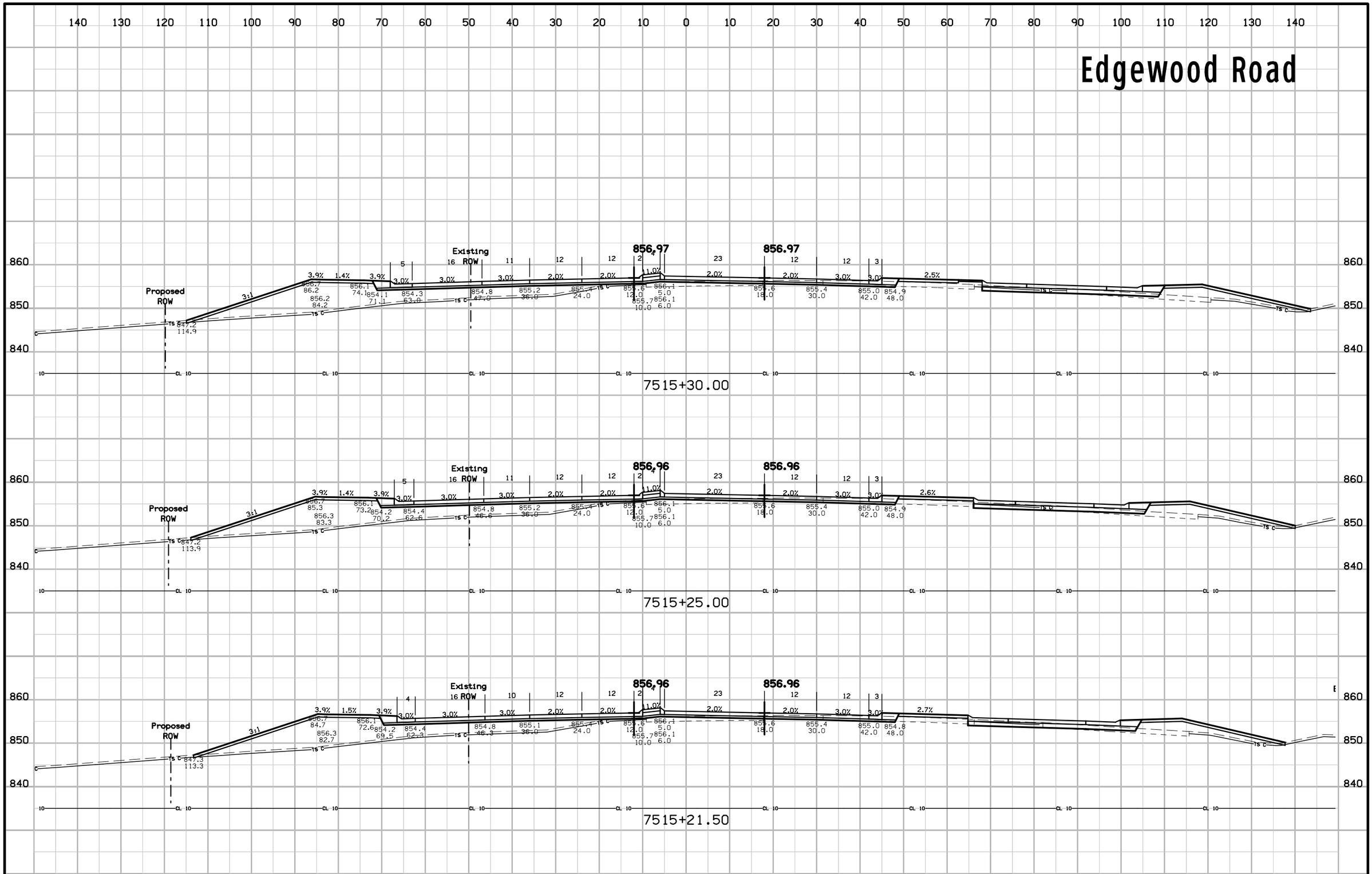

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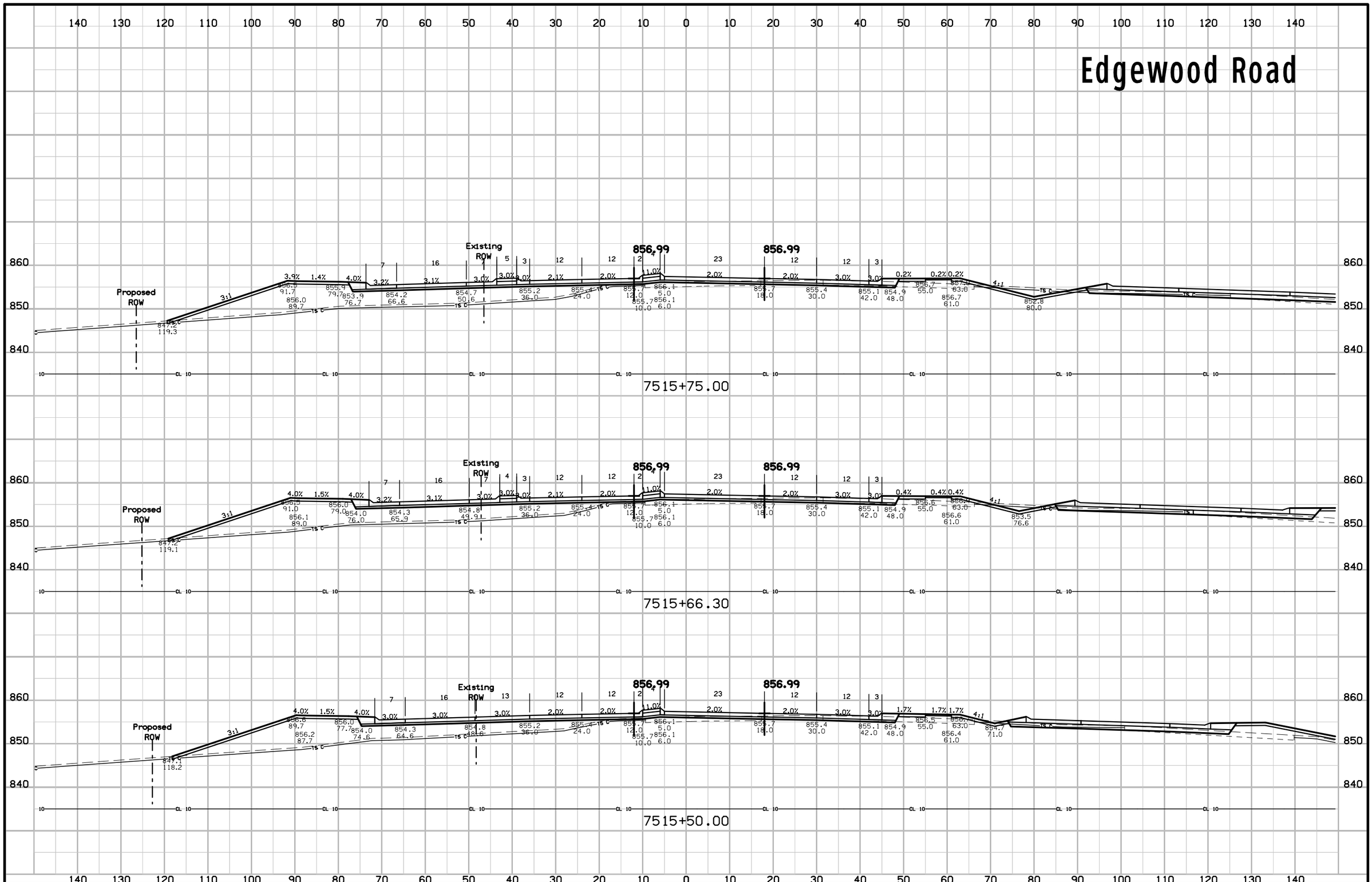

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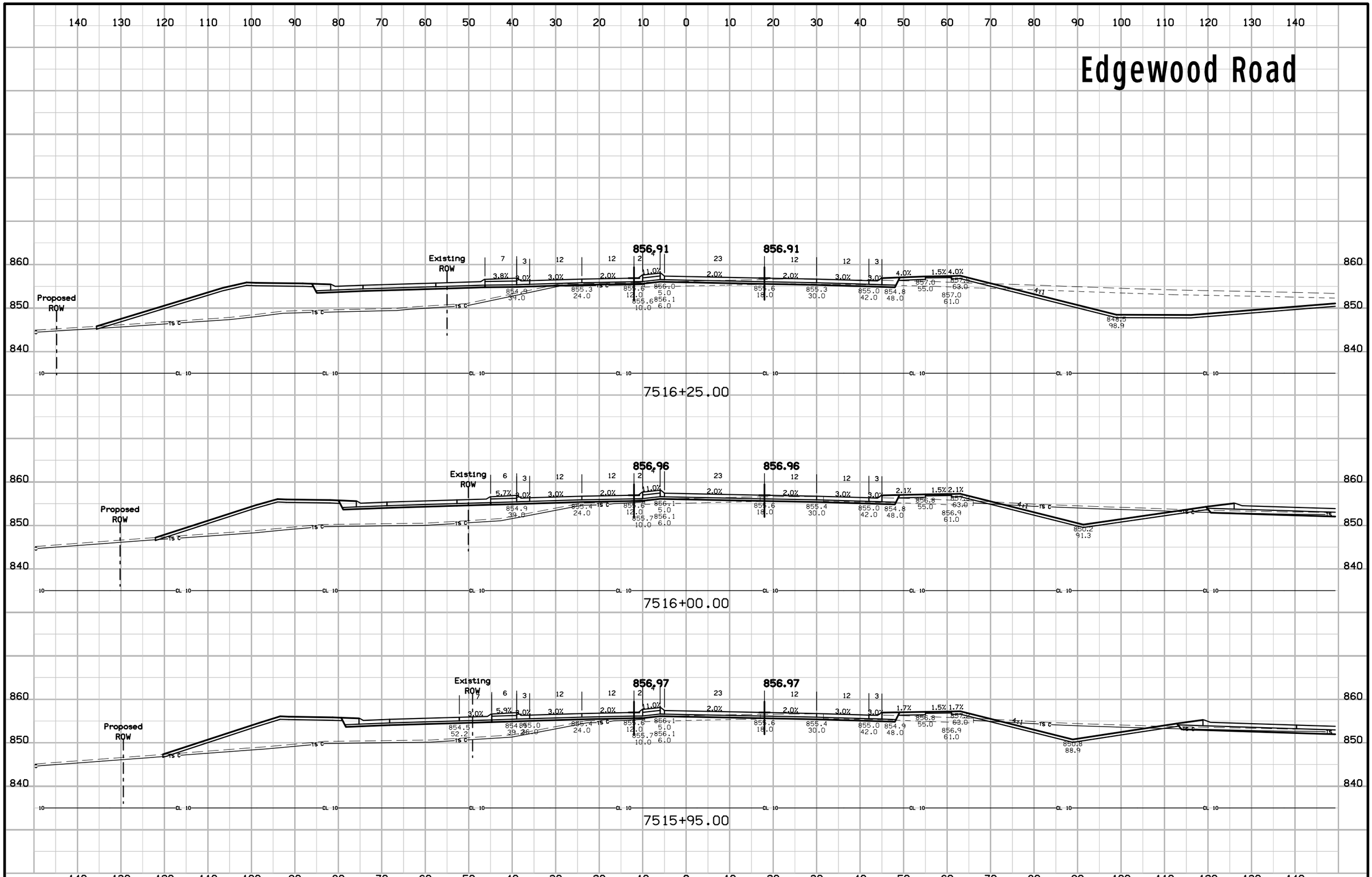

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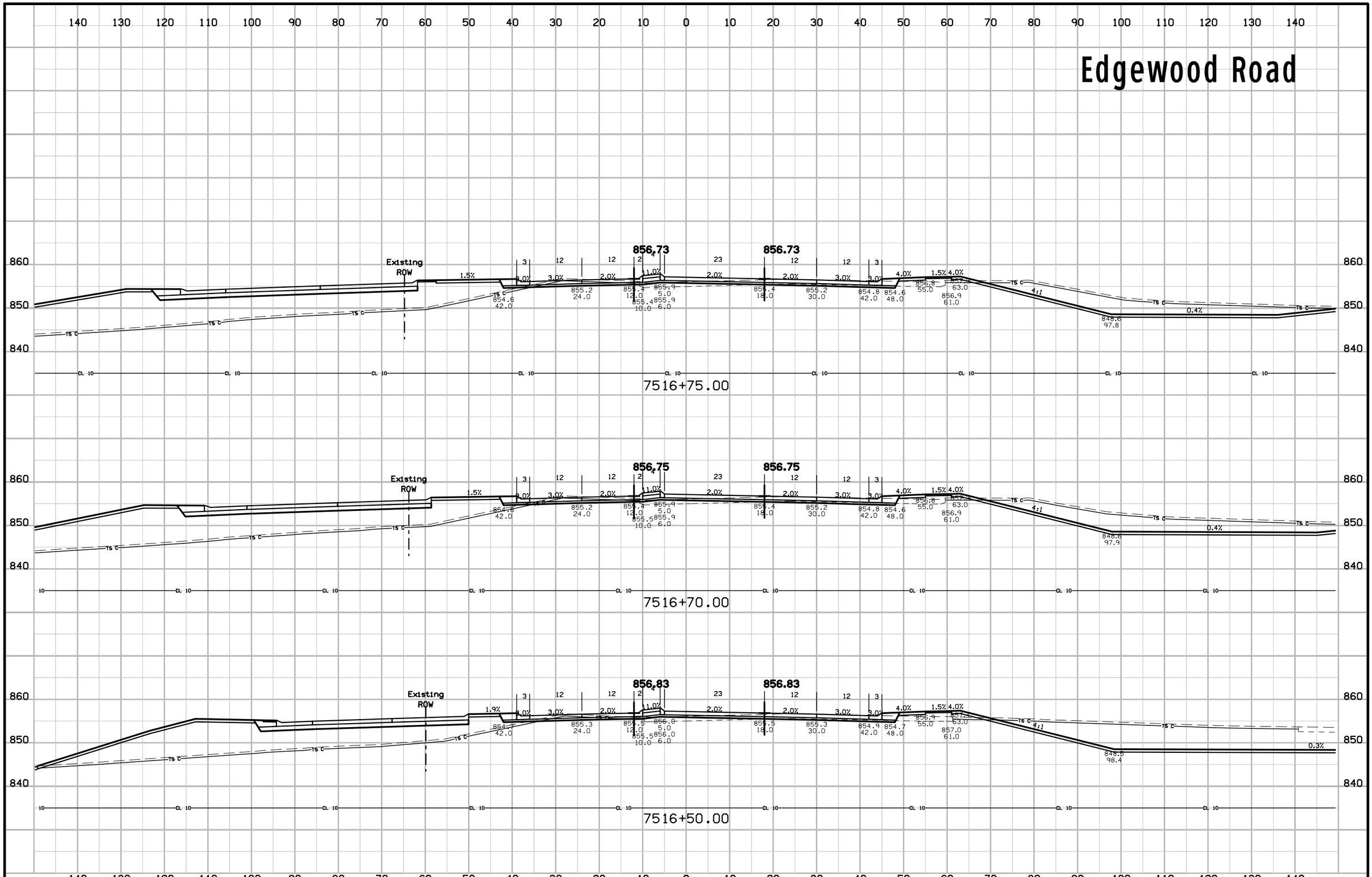

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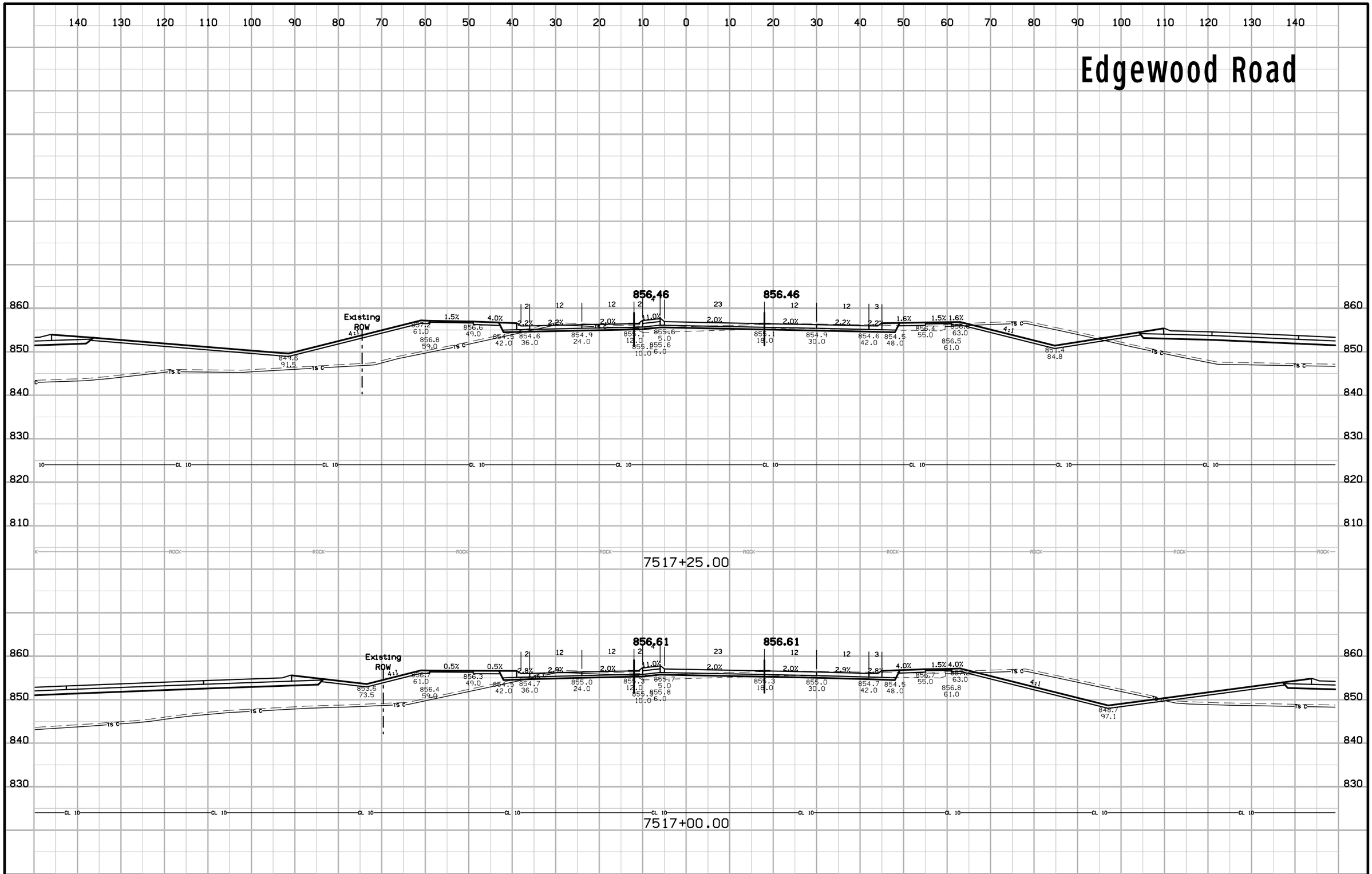

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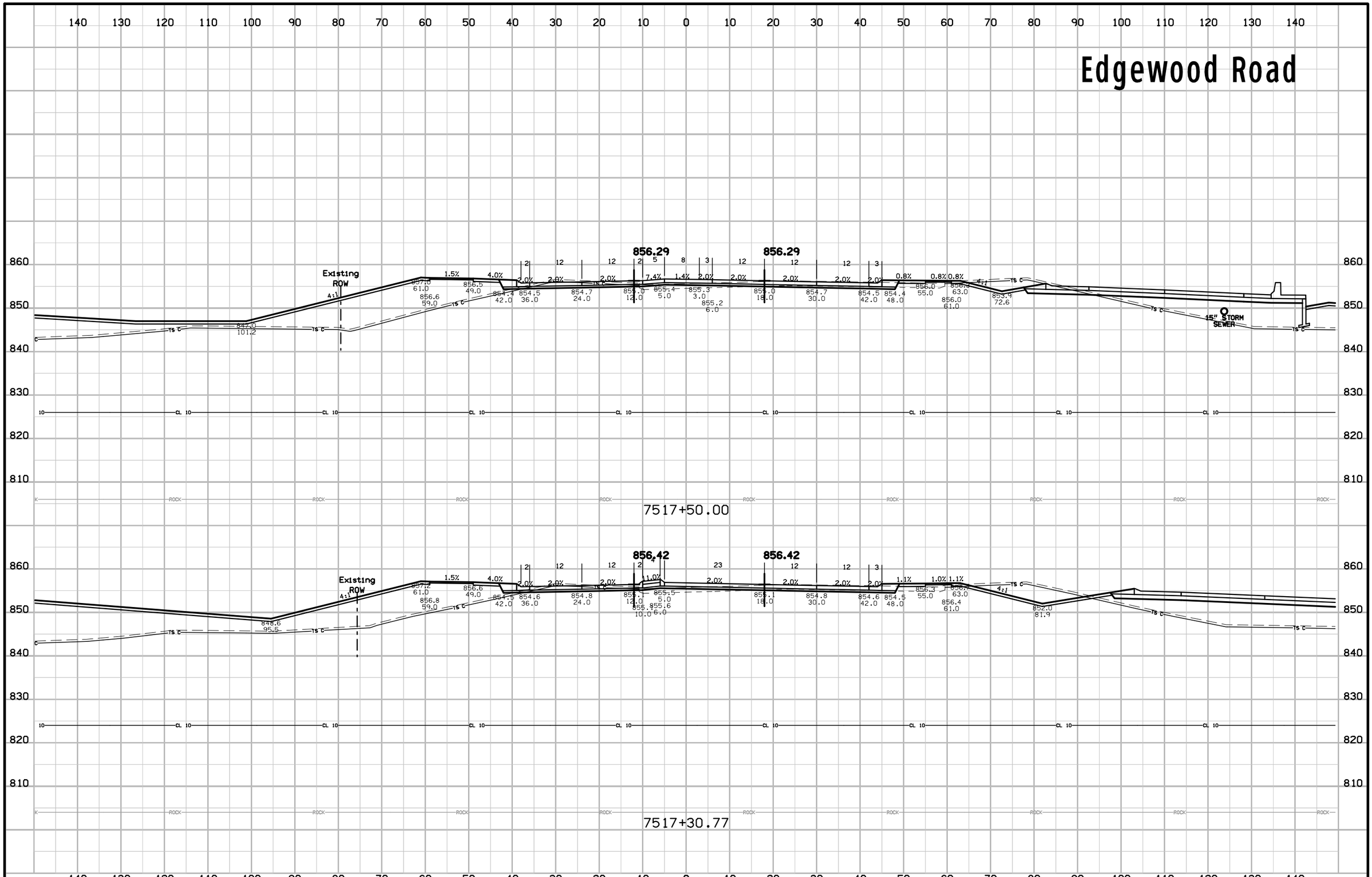

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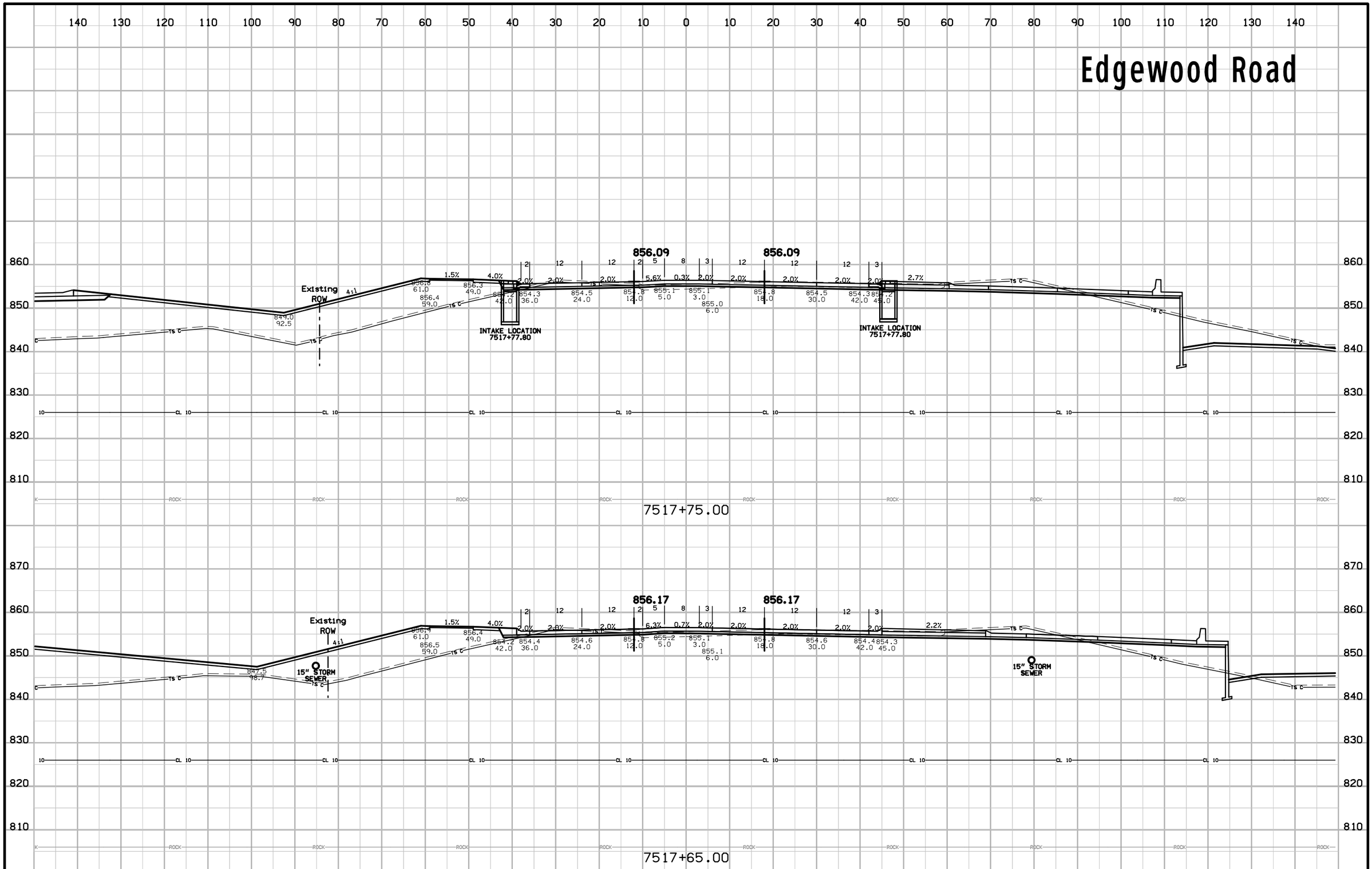

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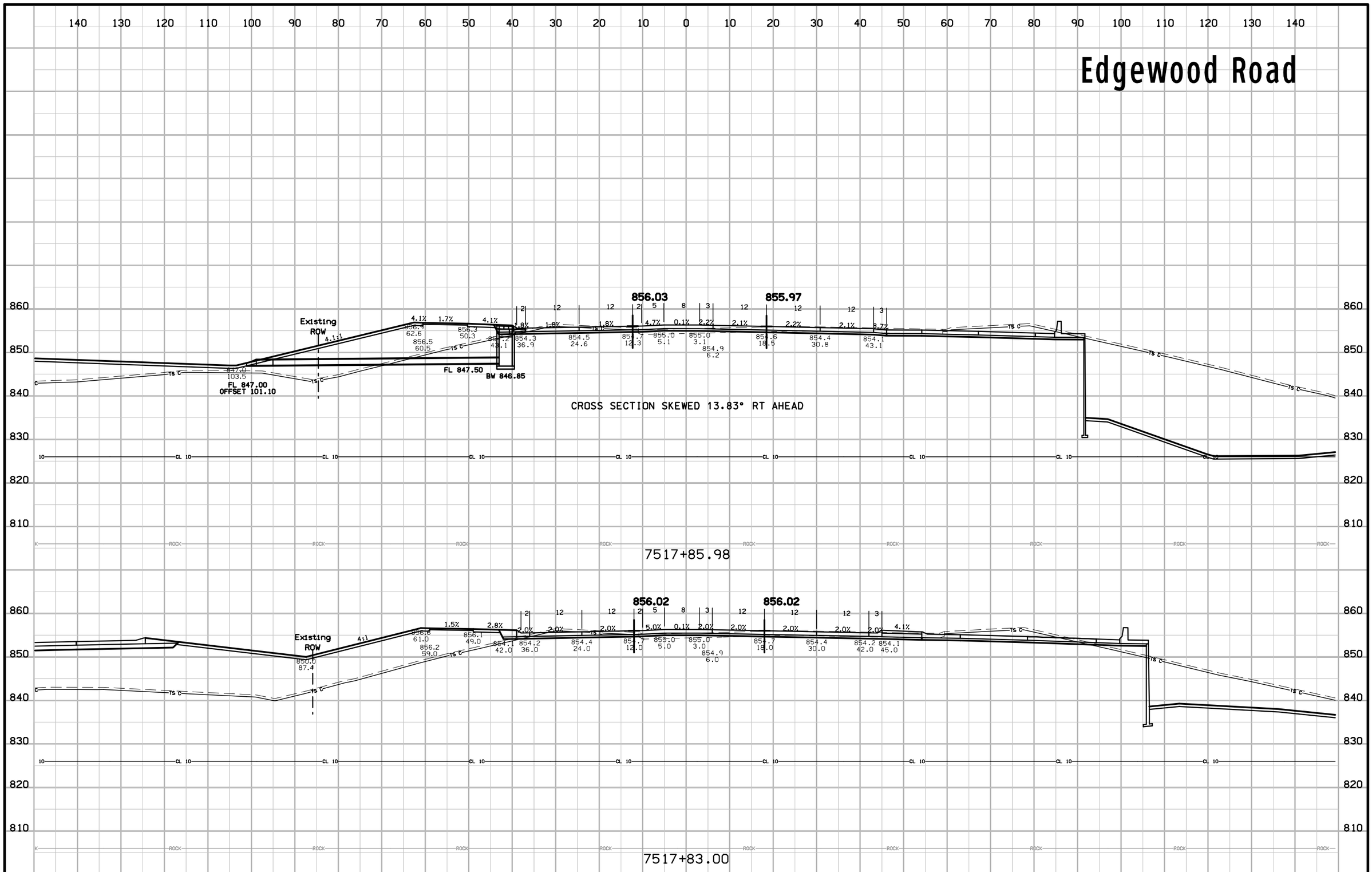

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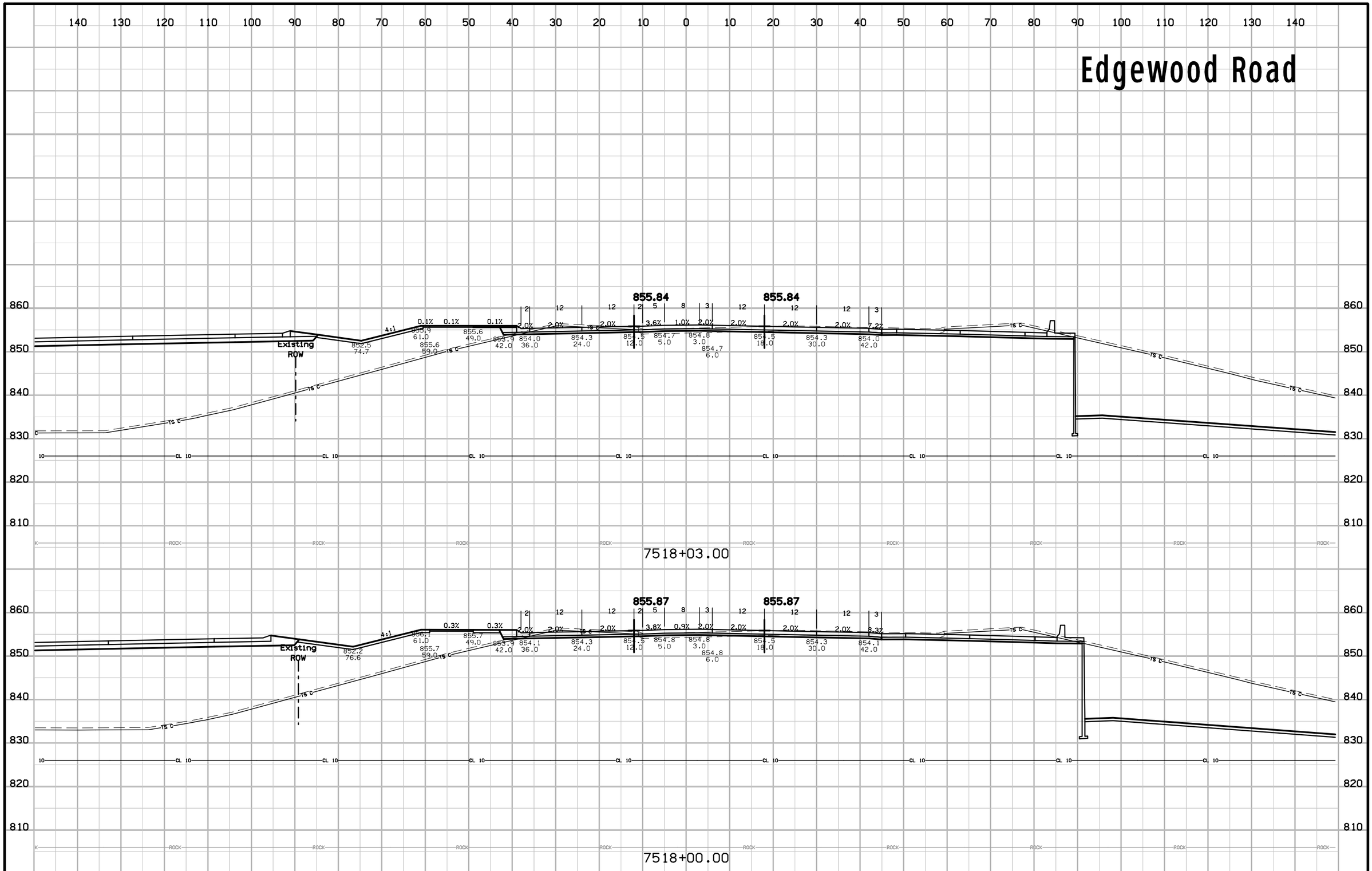

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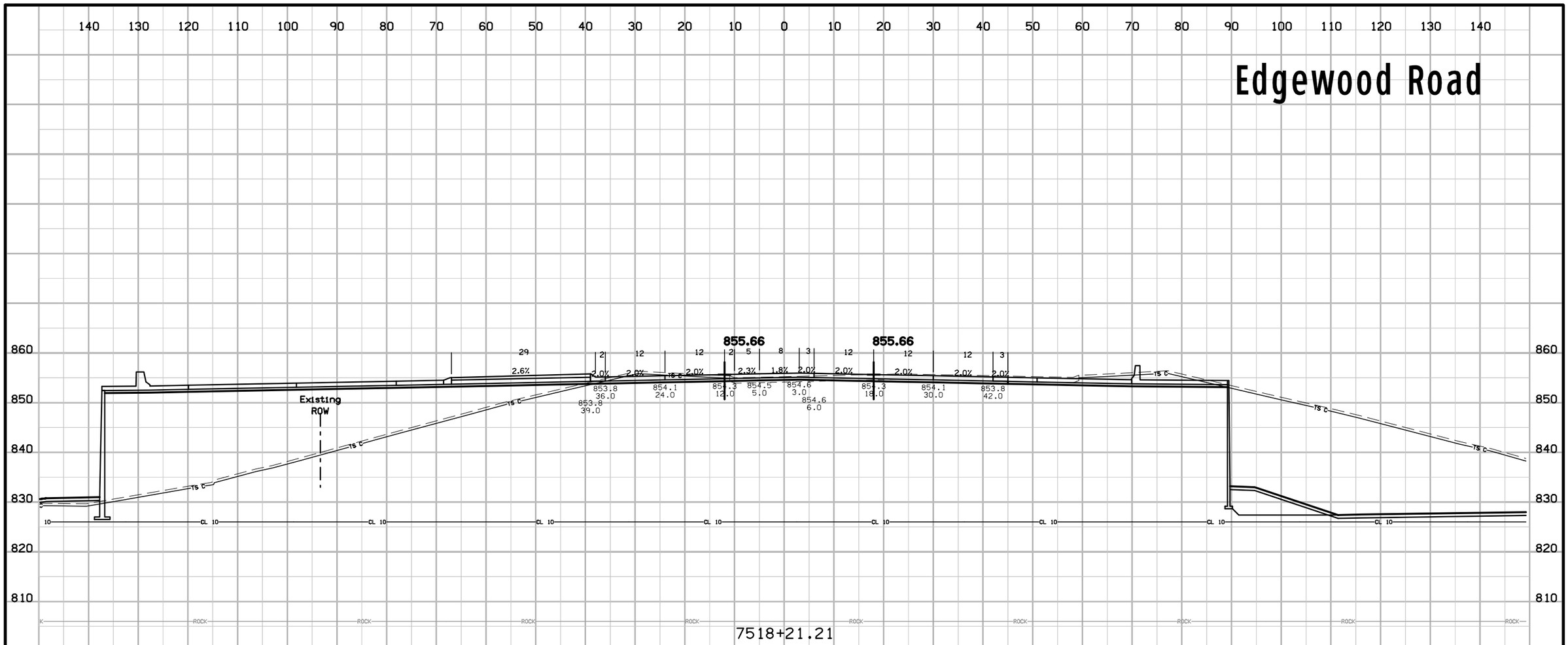

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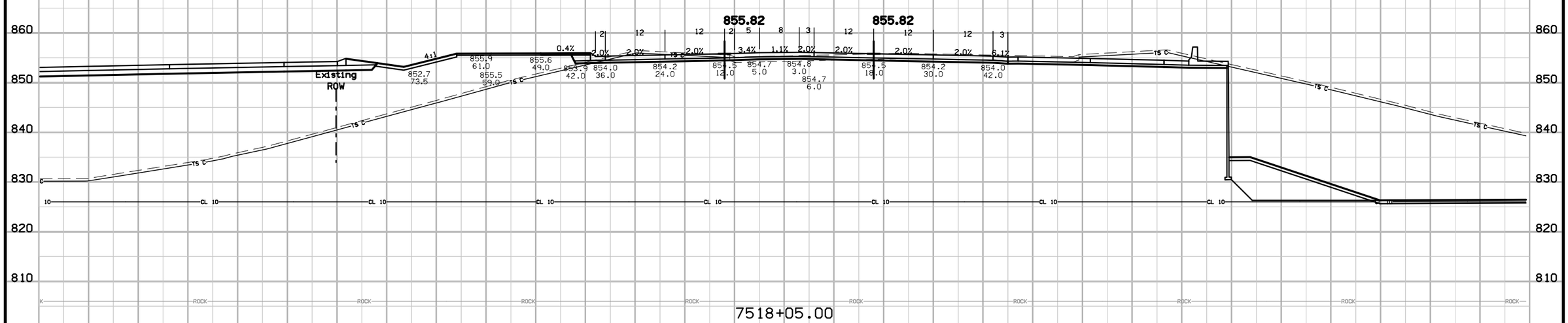

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ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.34

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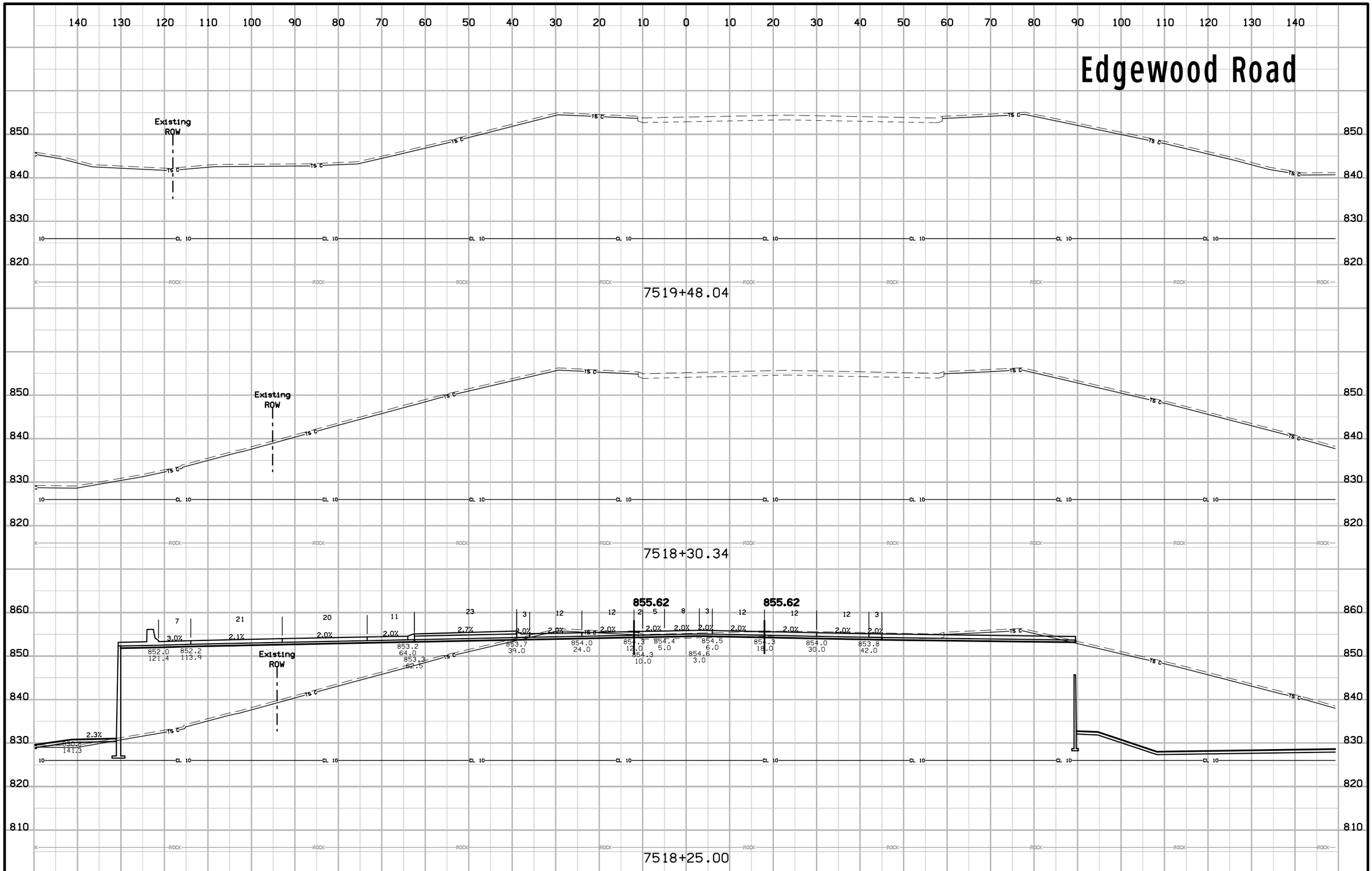
Edgewood Road



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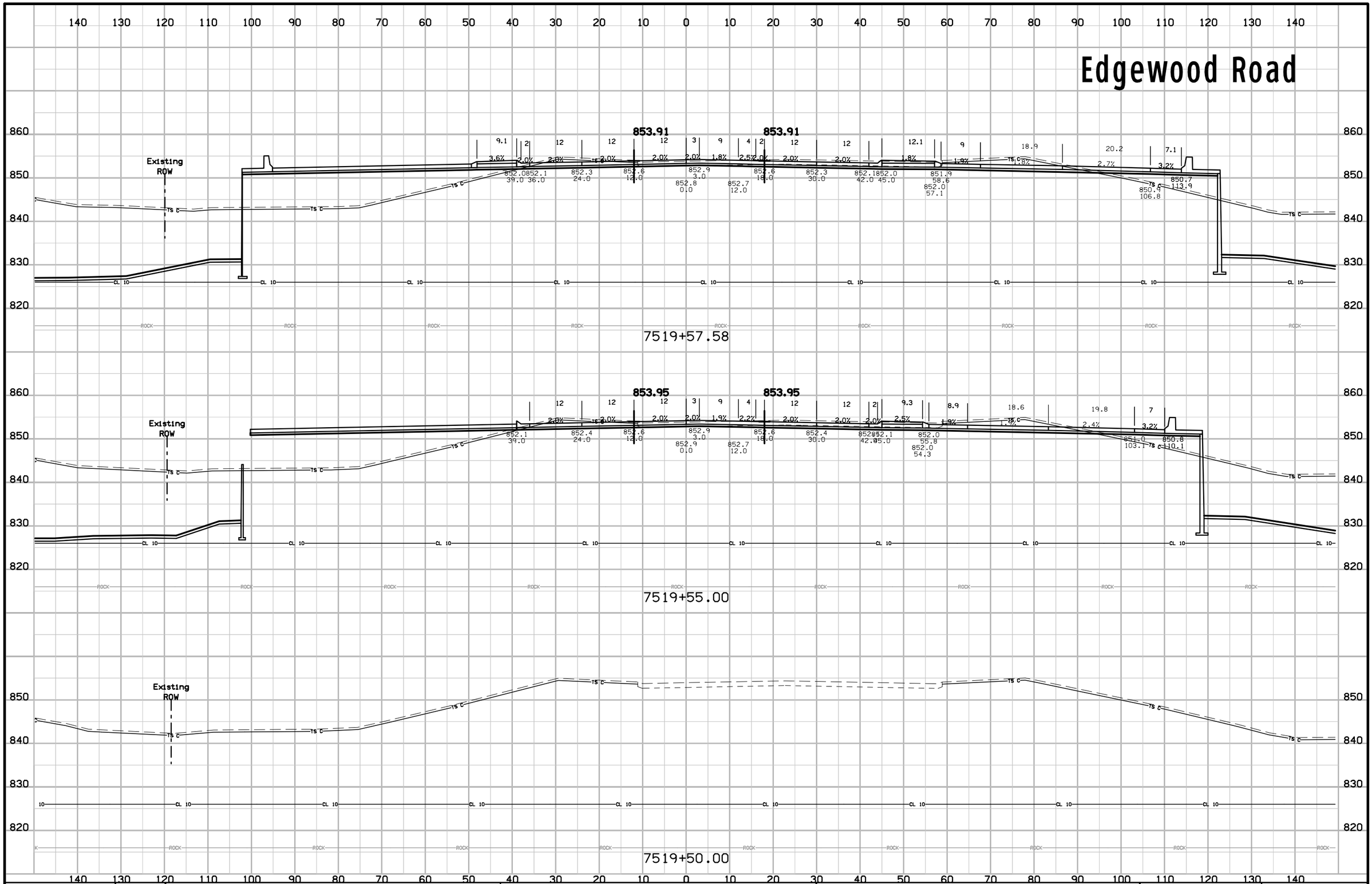

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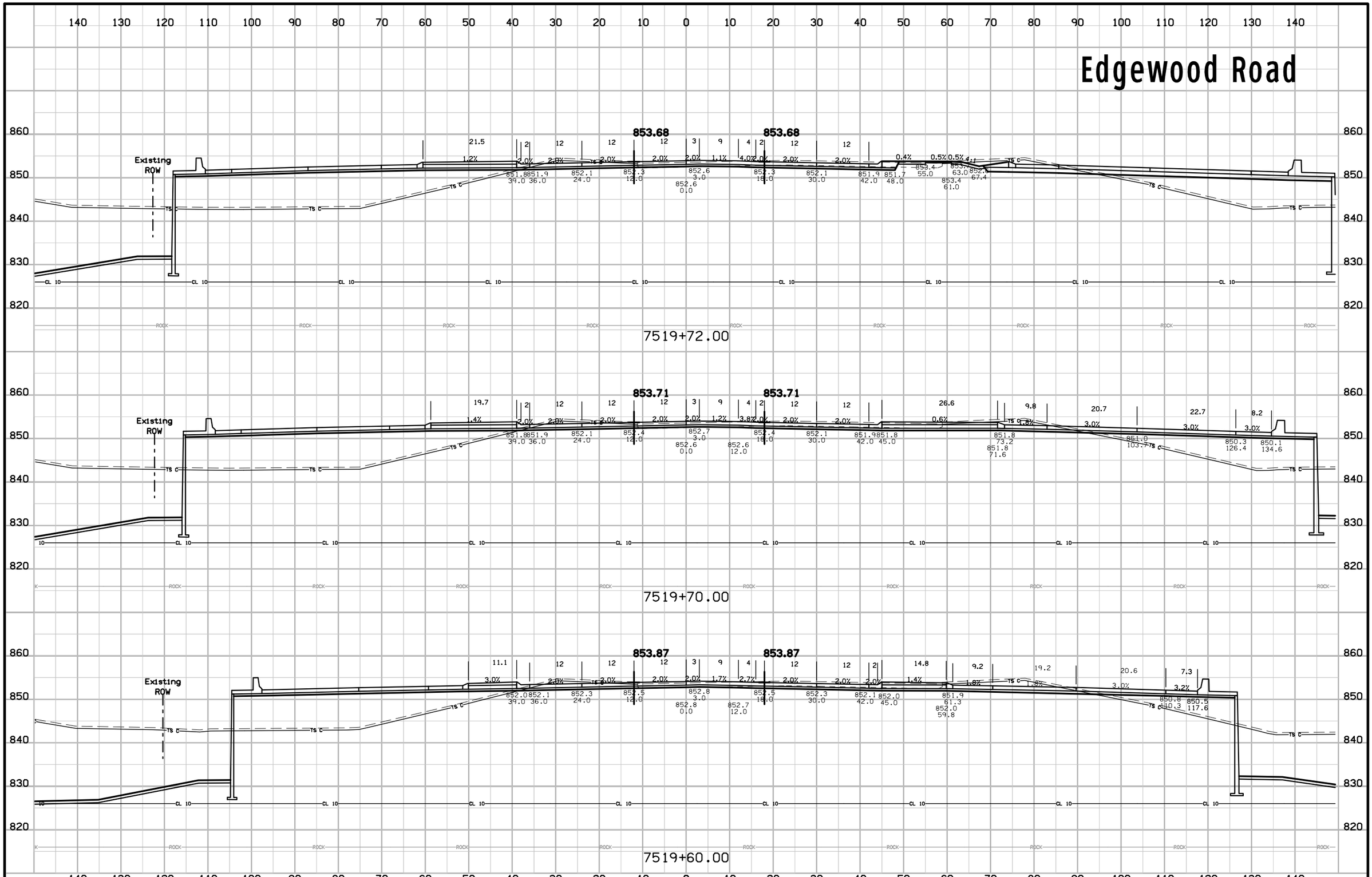
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.37

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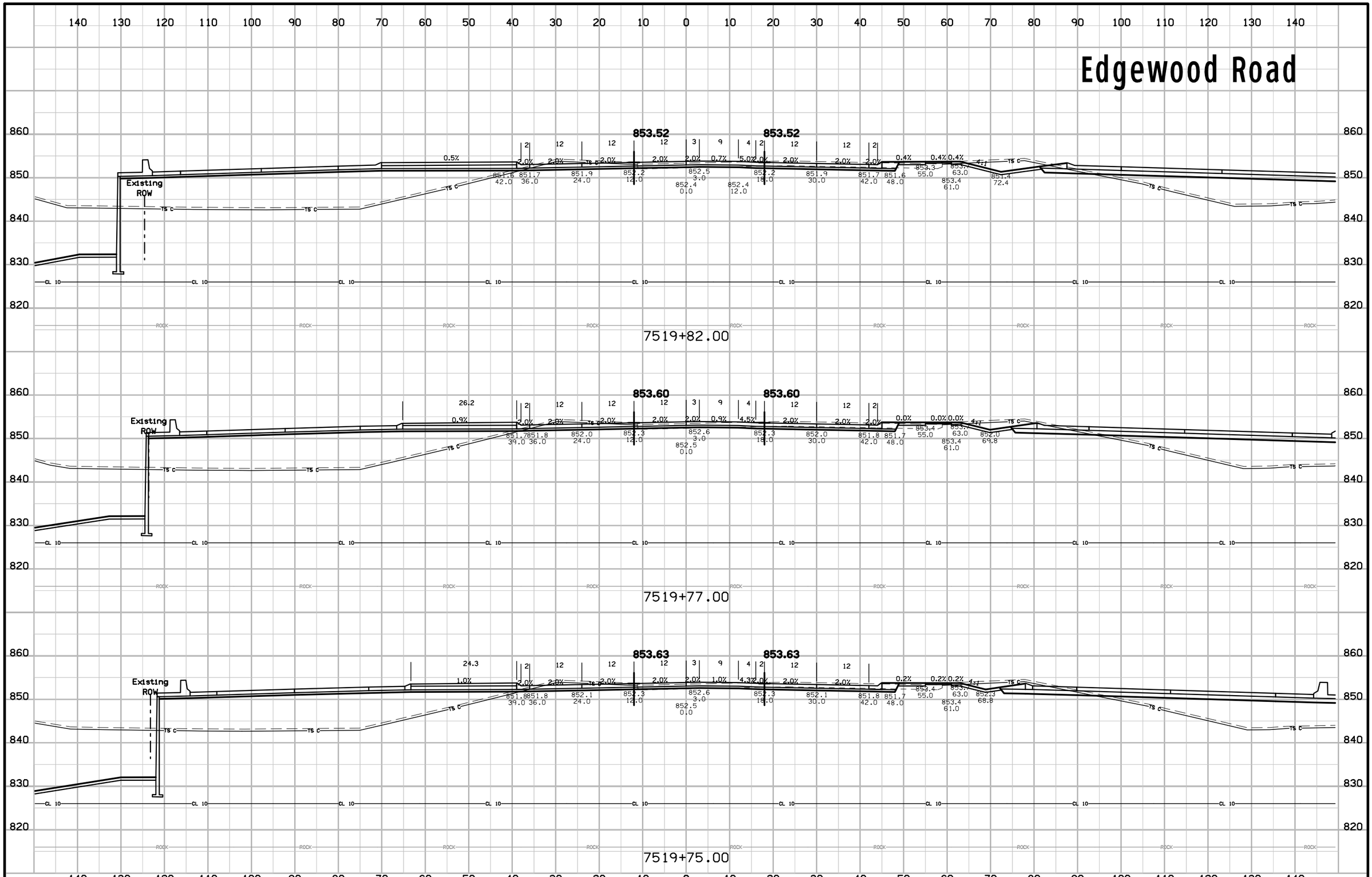
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.38

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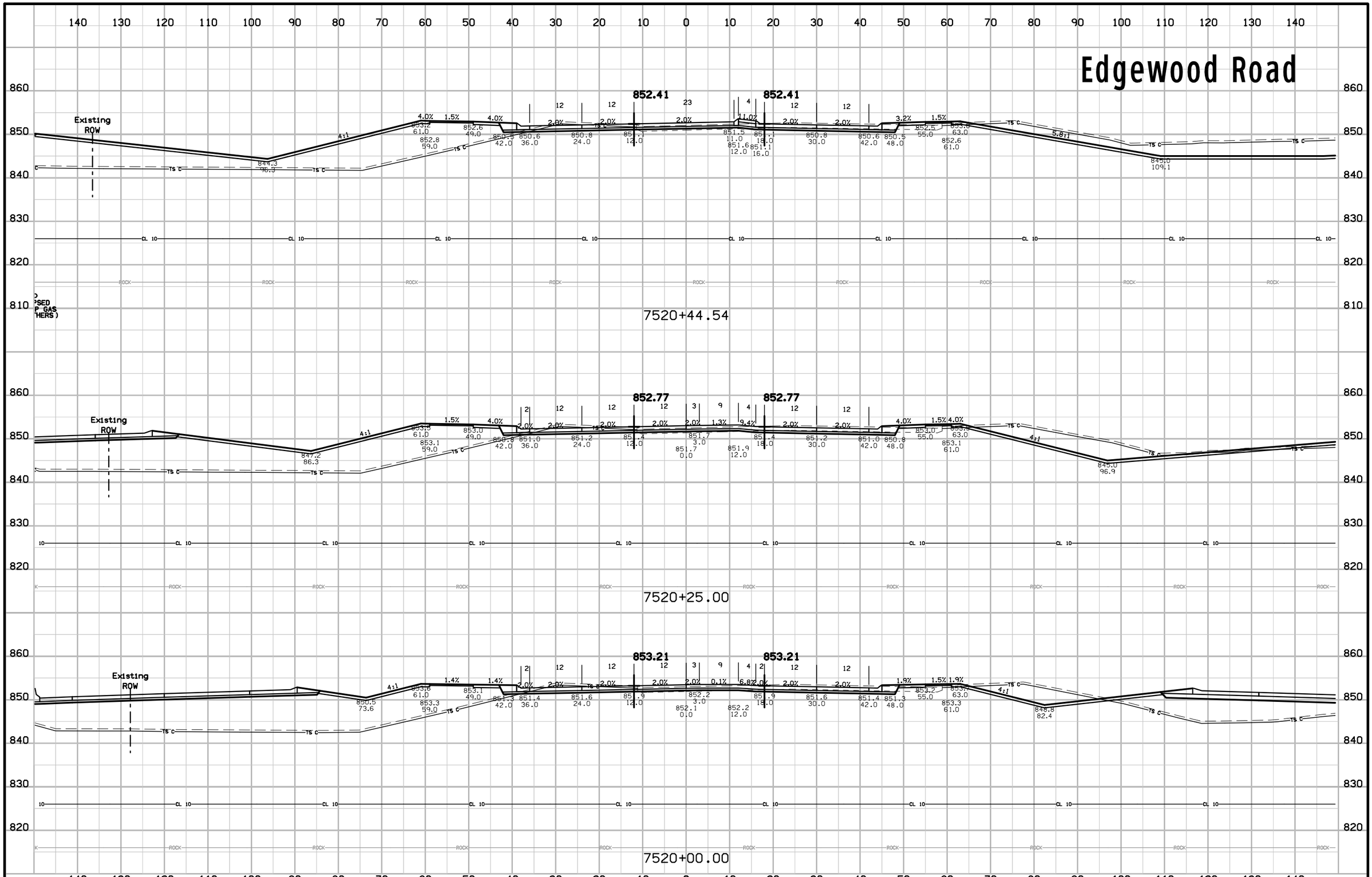
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.39

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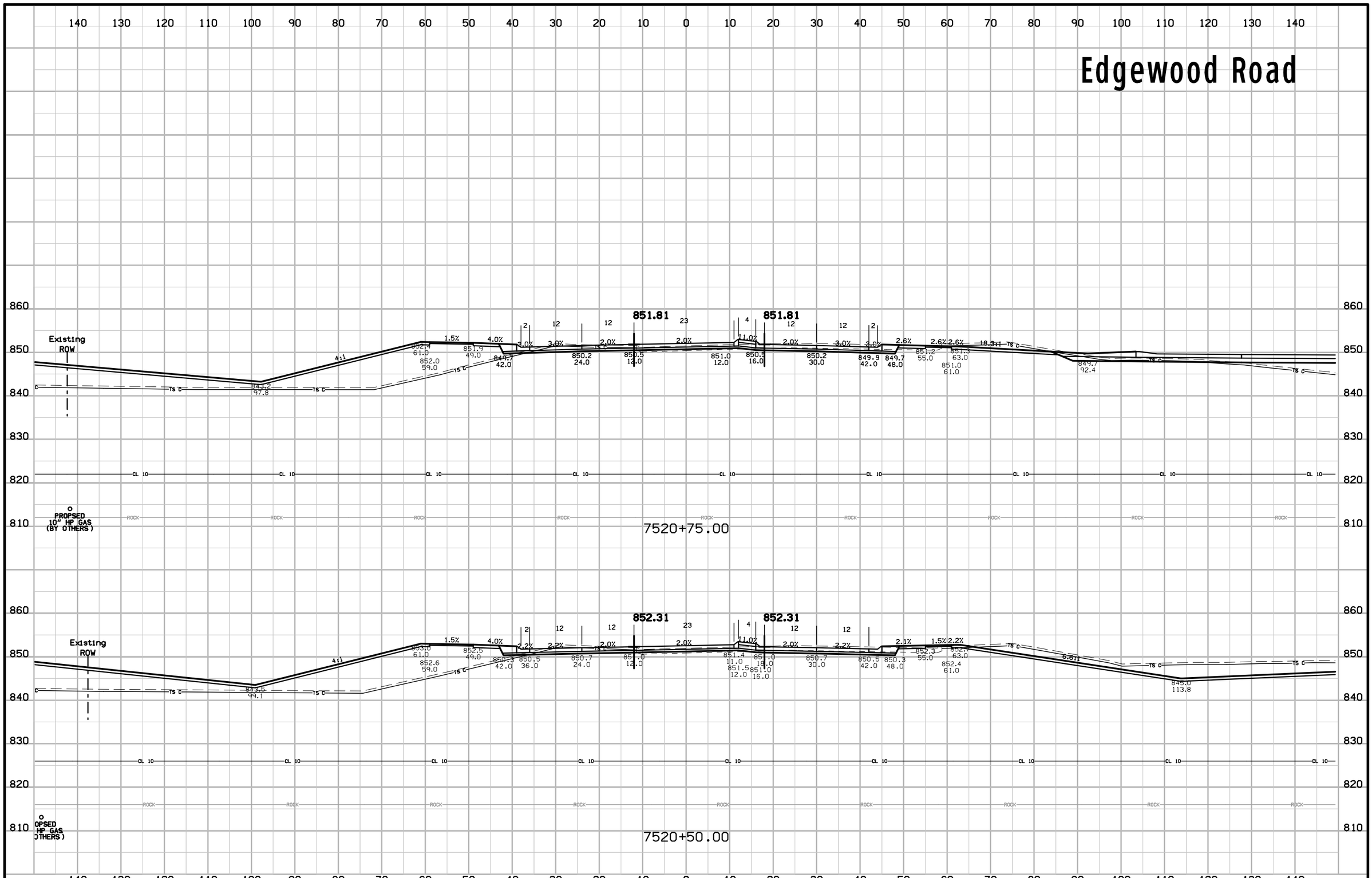
Edgewood Road



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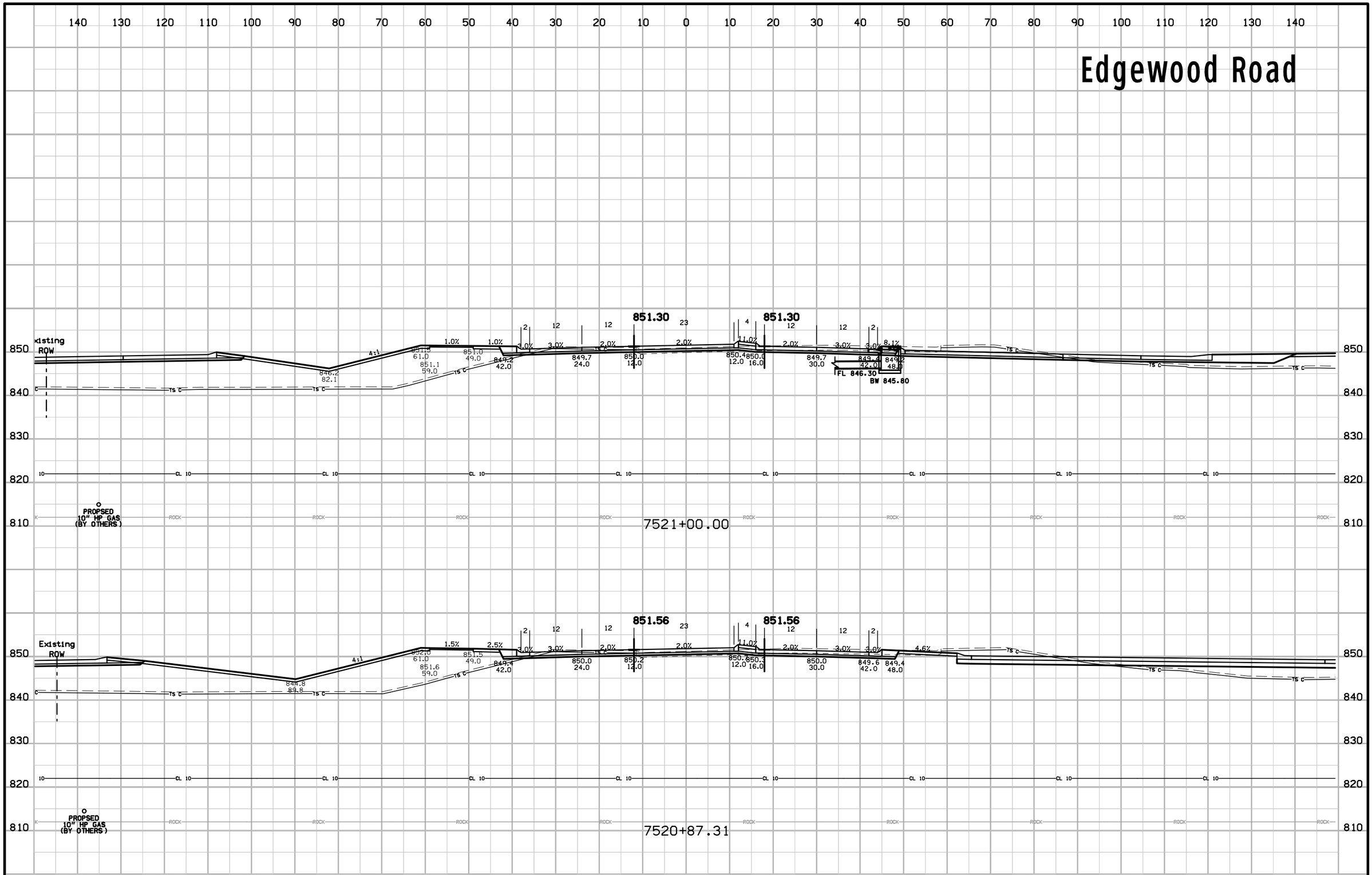
Edgewood Road



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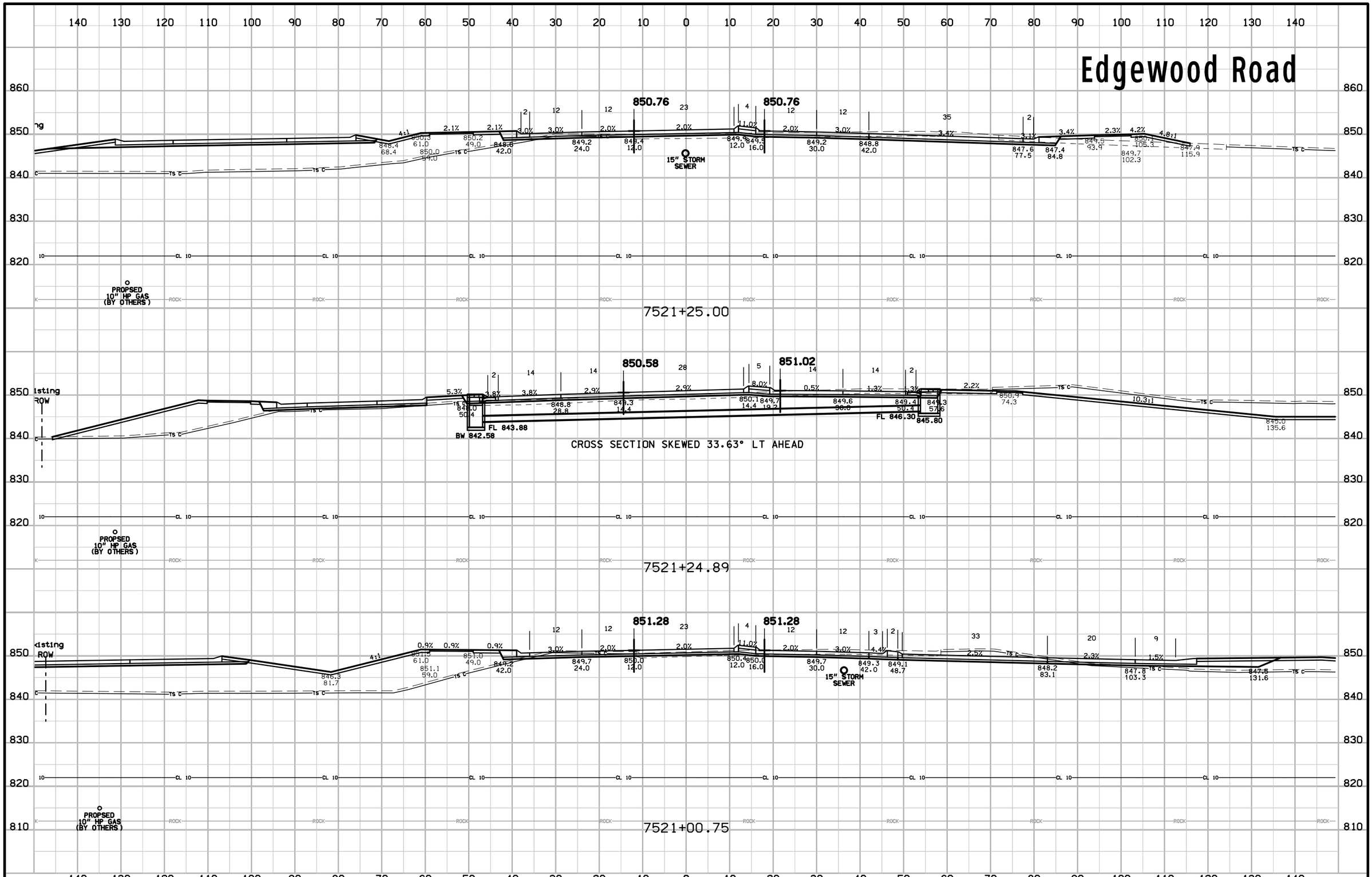
Edgewood Road



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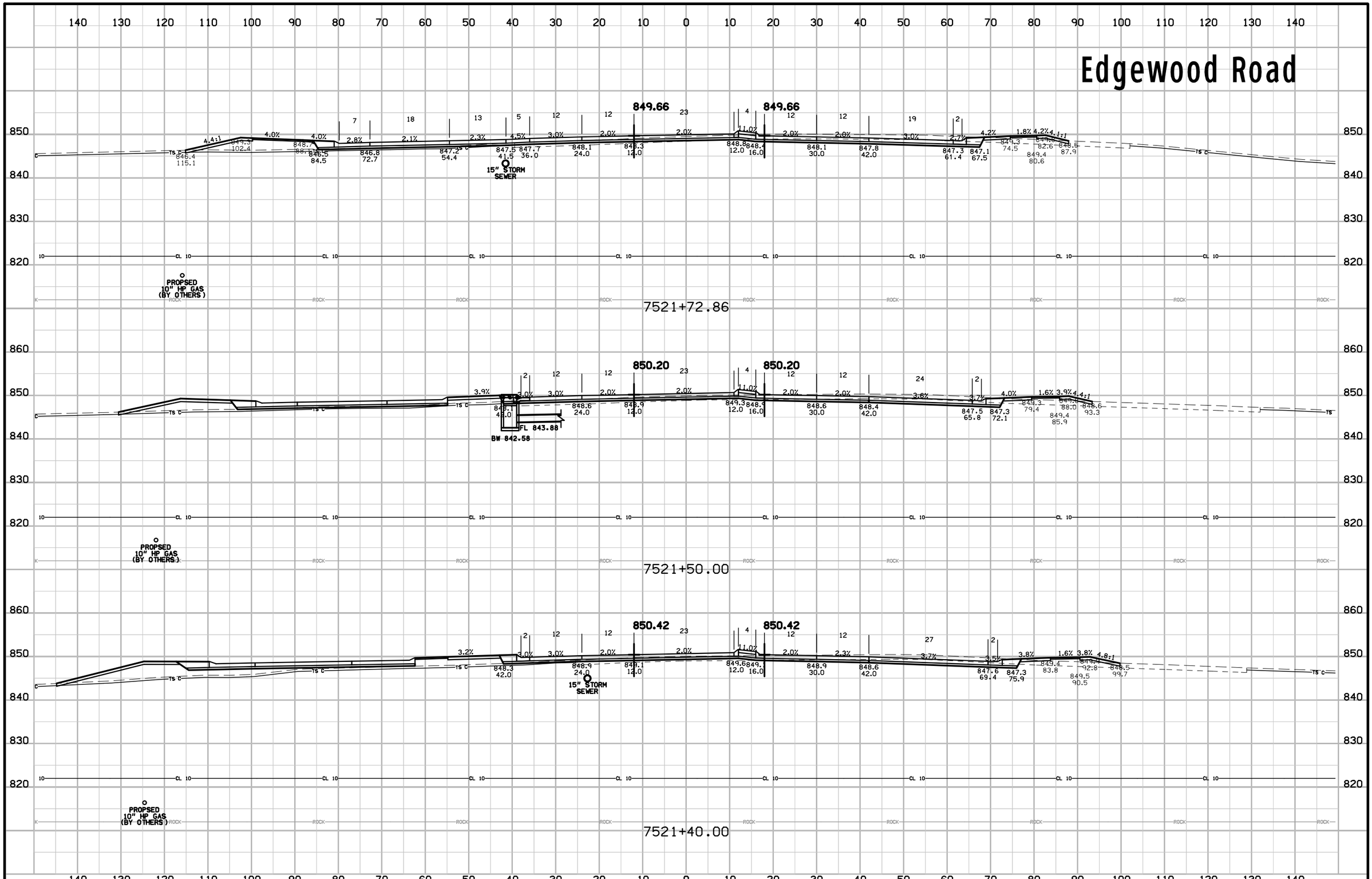
Edgewood Road



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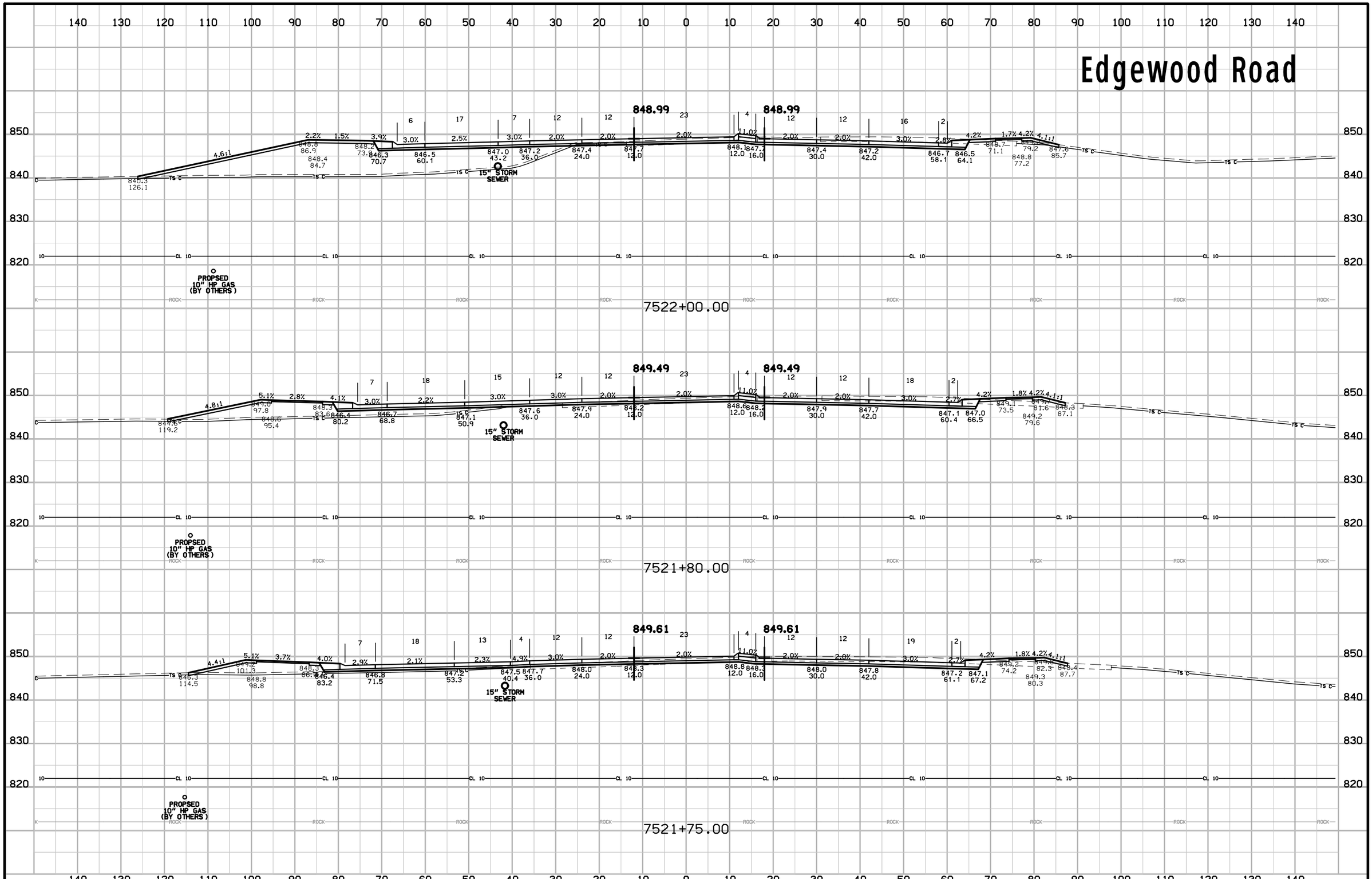
Edgewood Road



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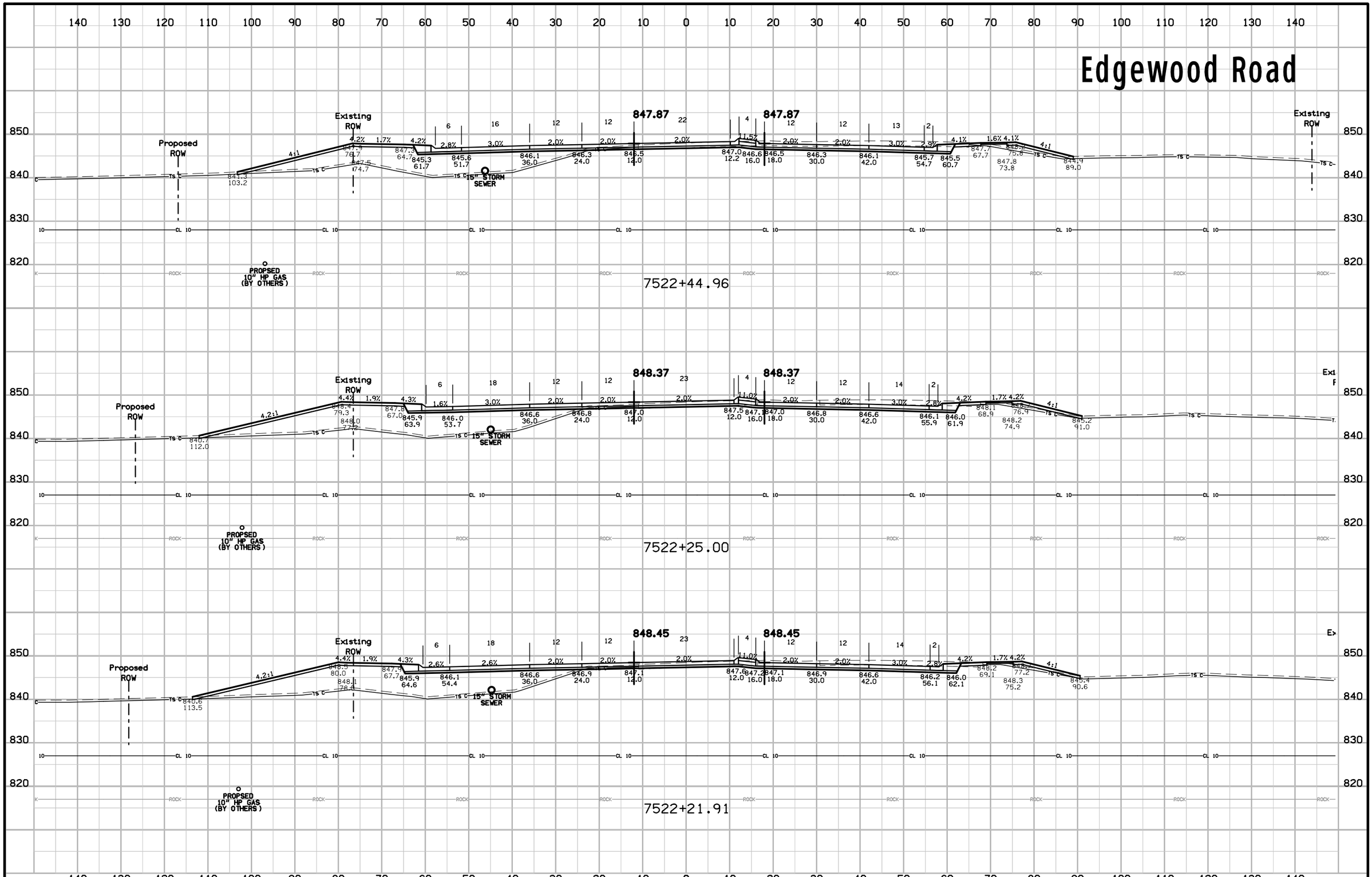
Edgewood Road



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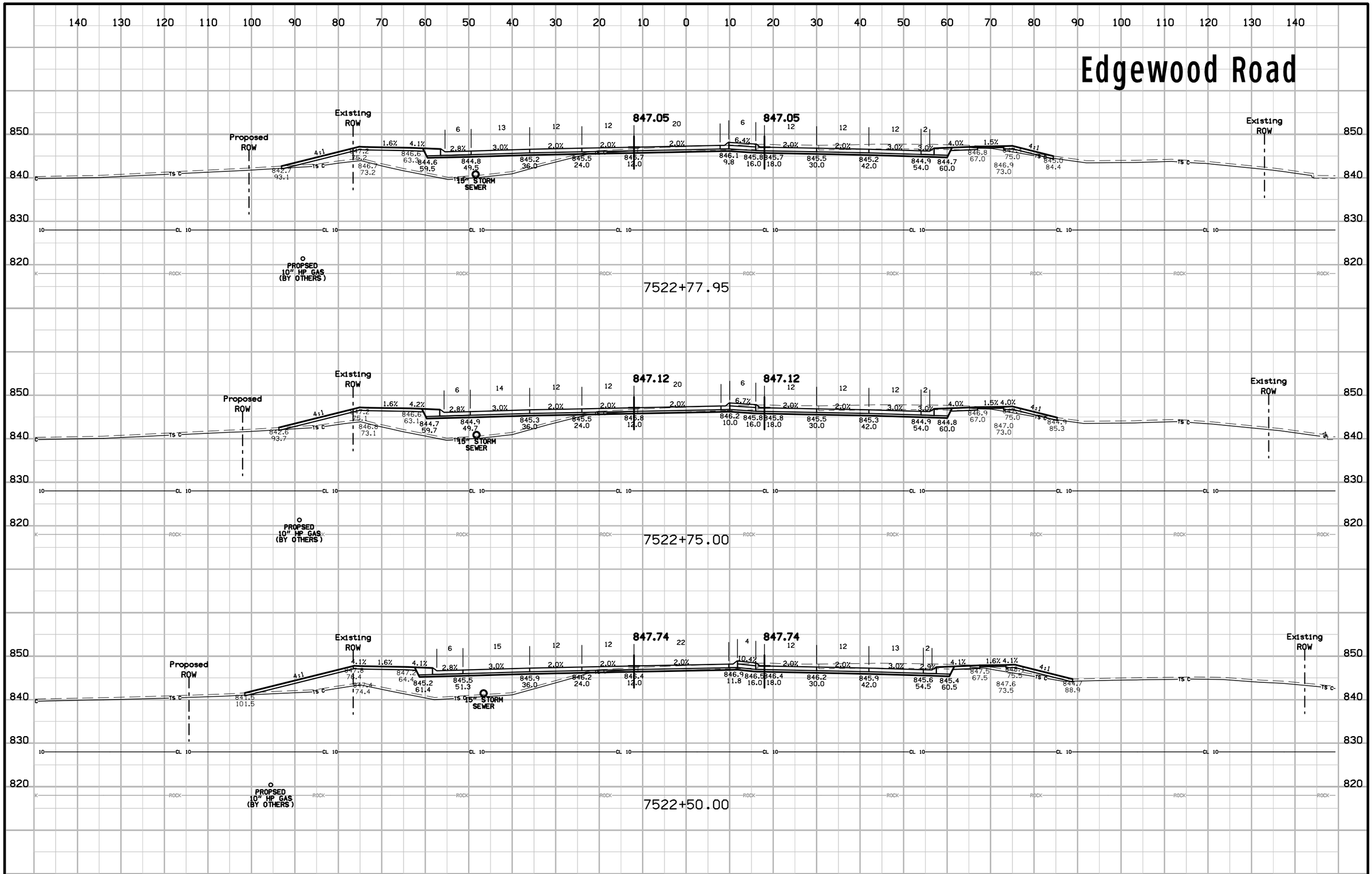
Edgewood Road



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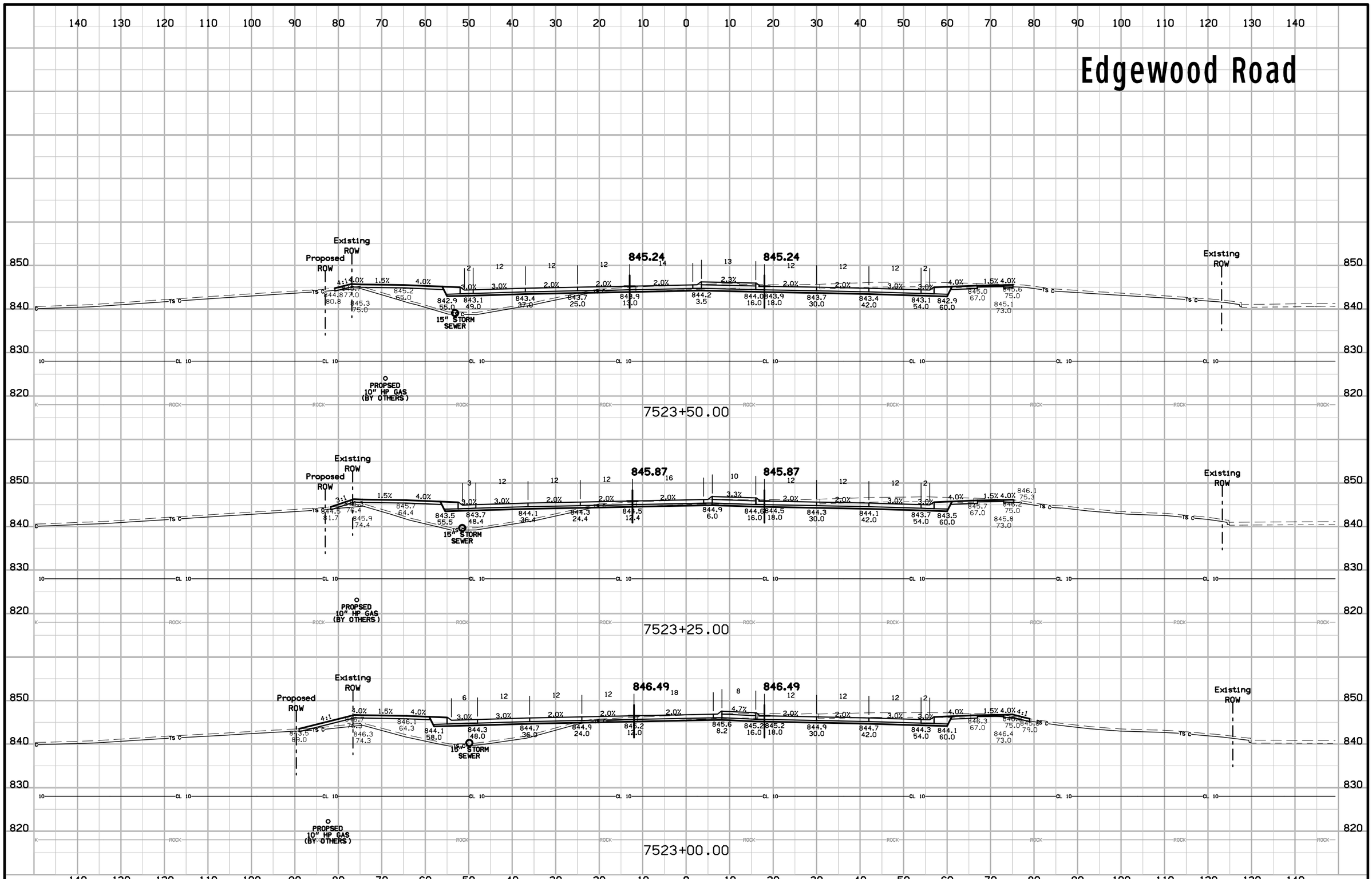
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.47

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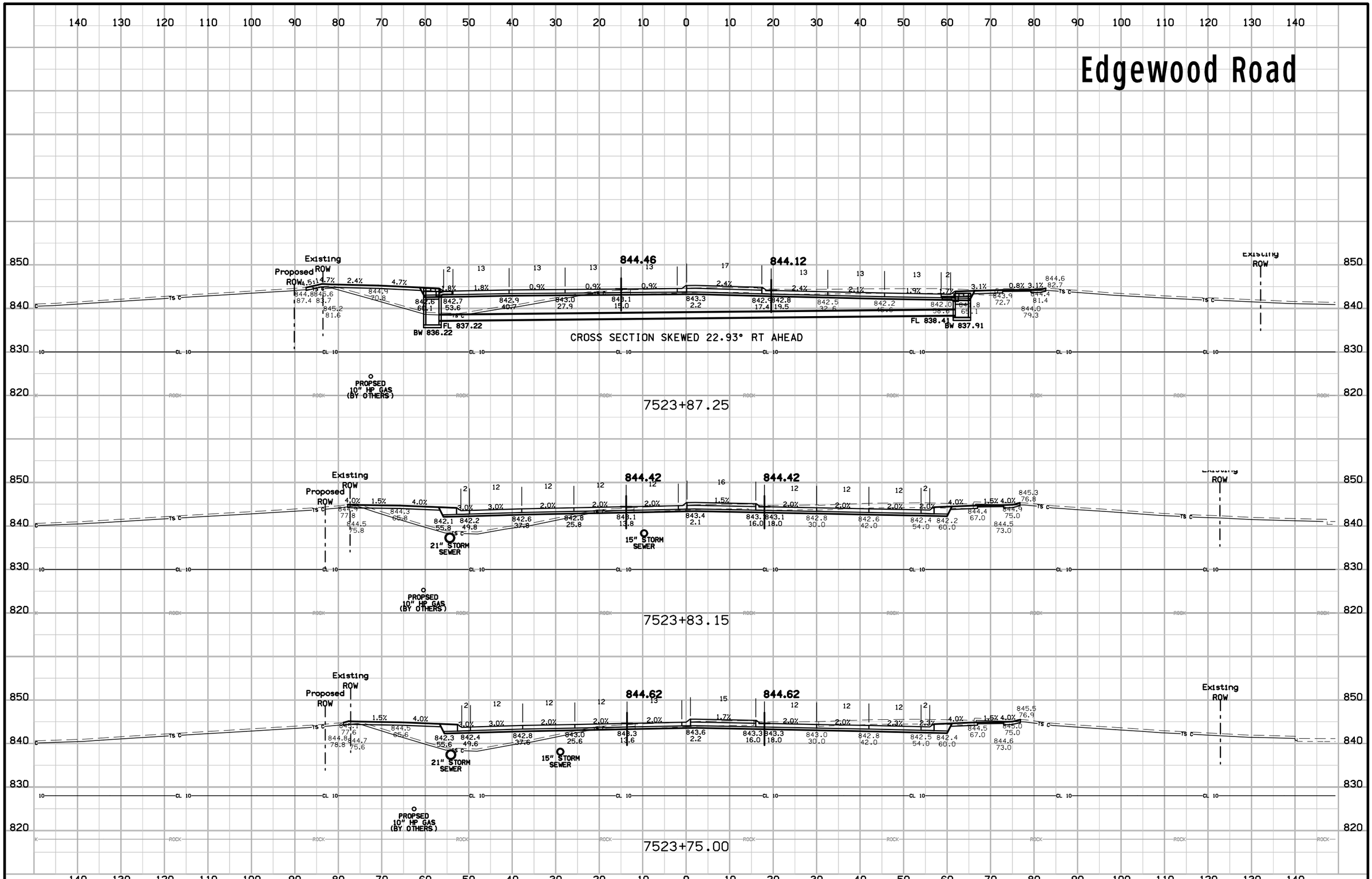
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.48

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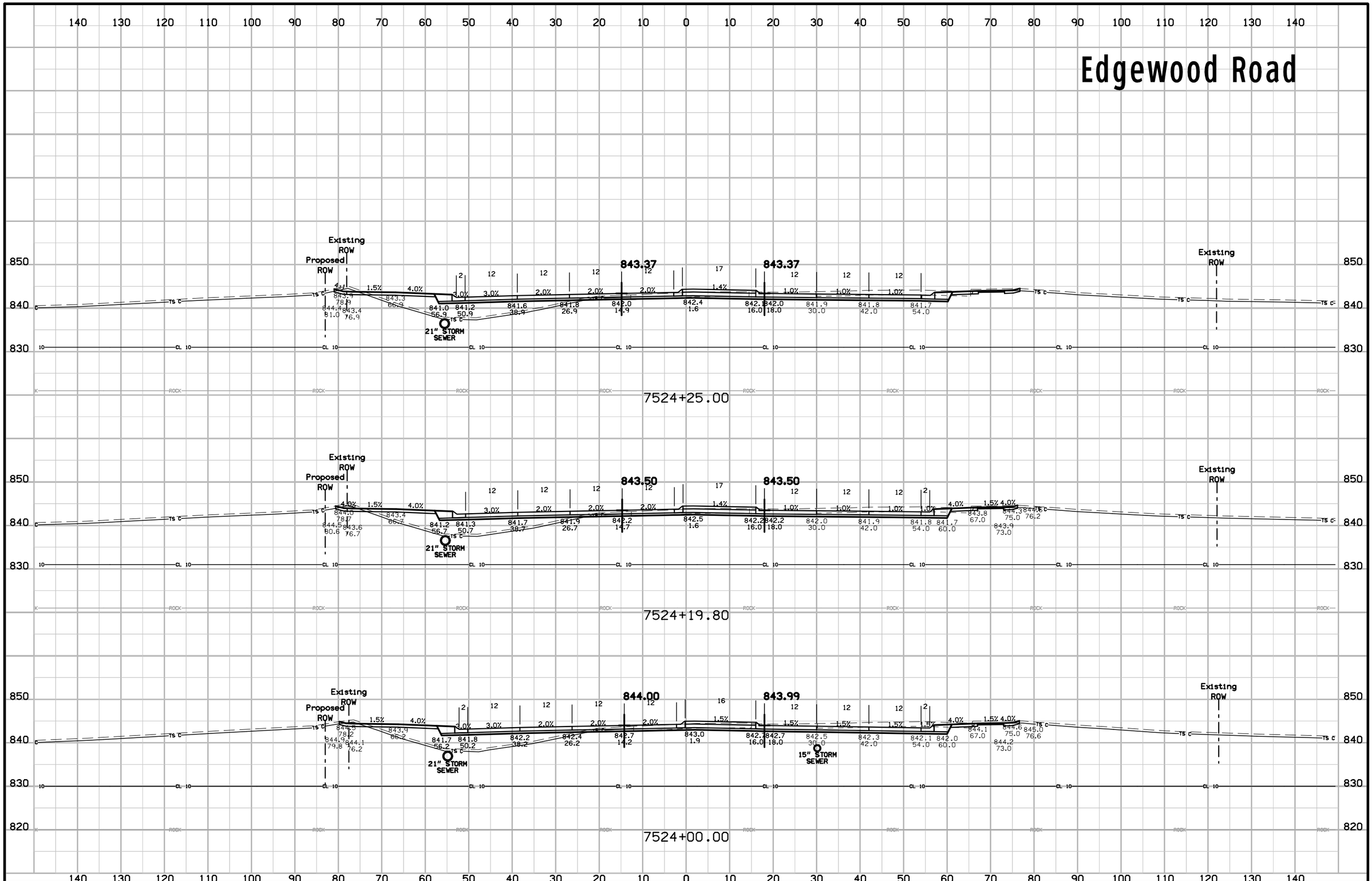
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.49

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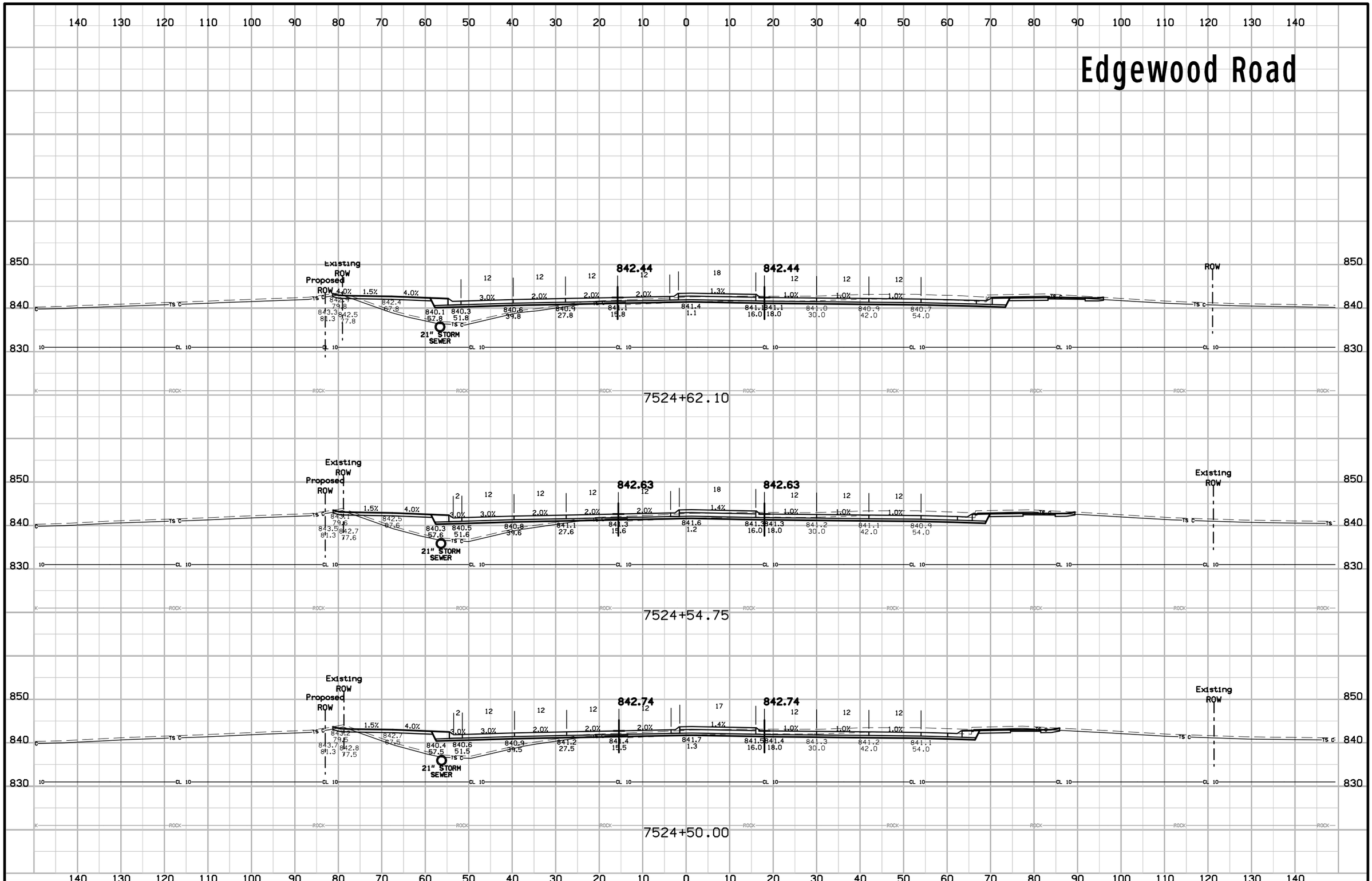
Edgewood Road



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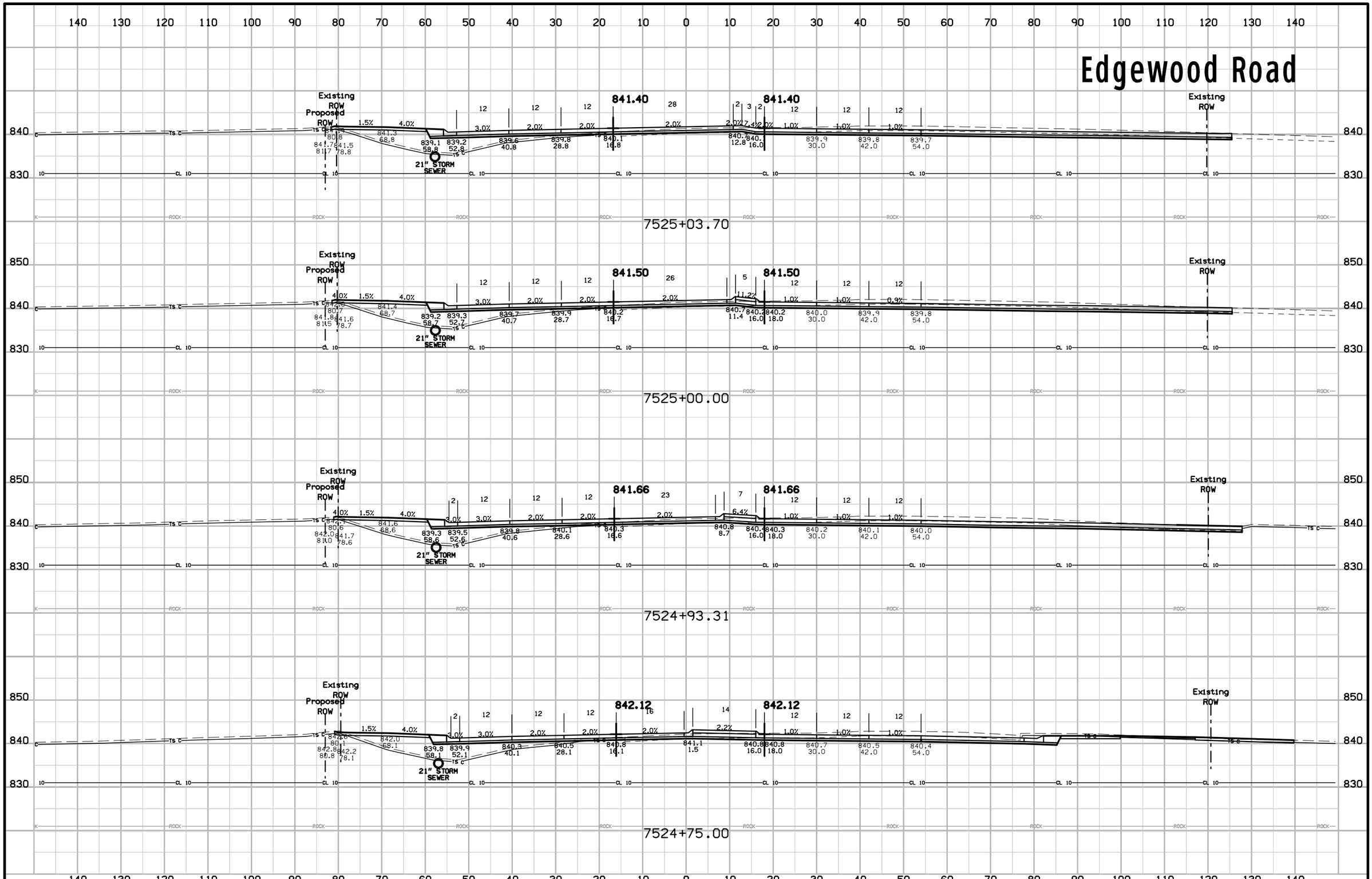
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.51

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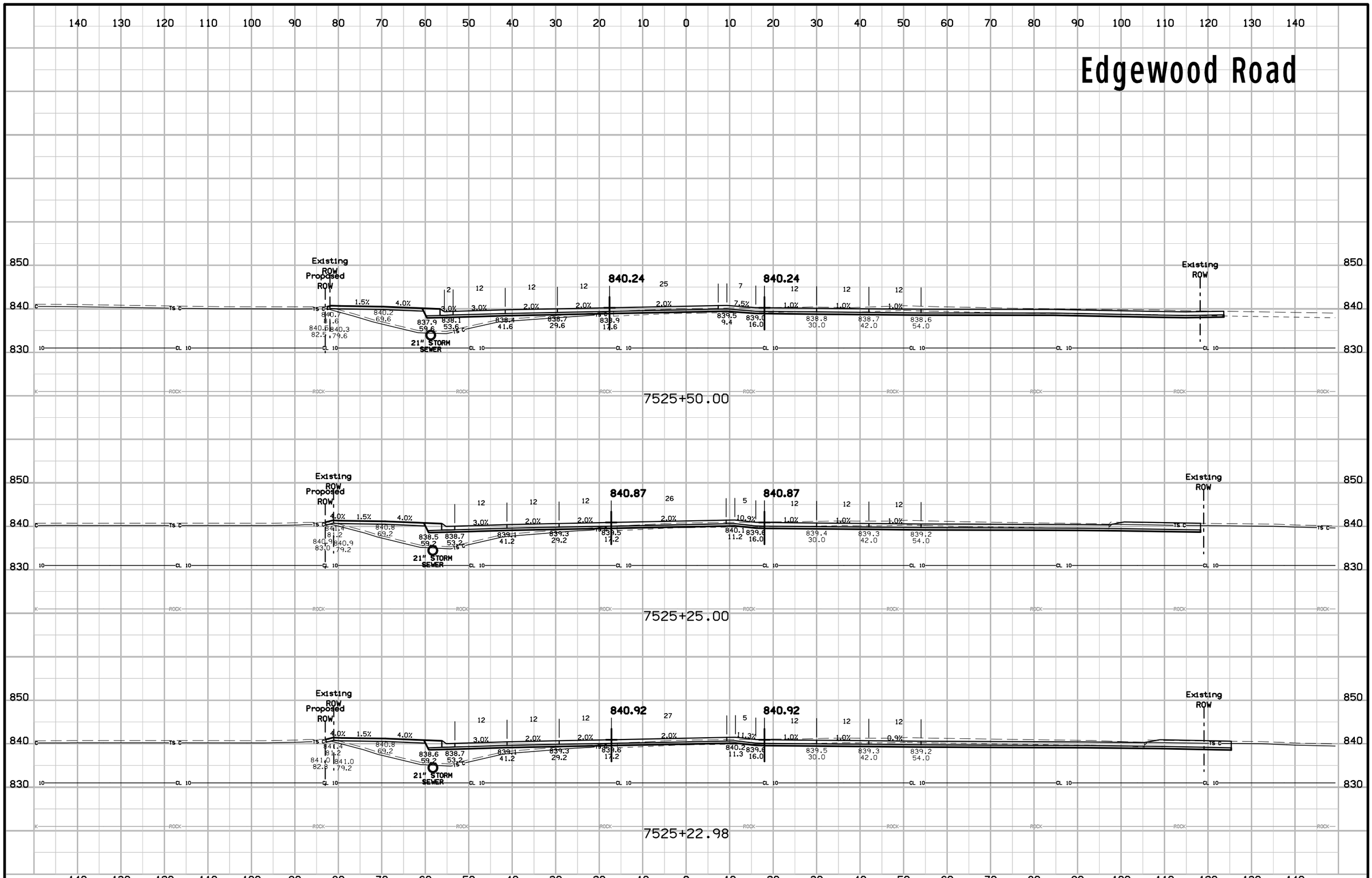
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.52

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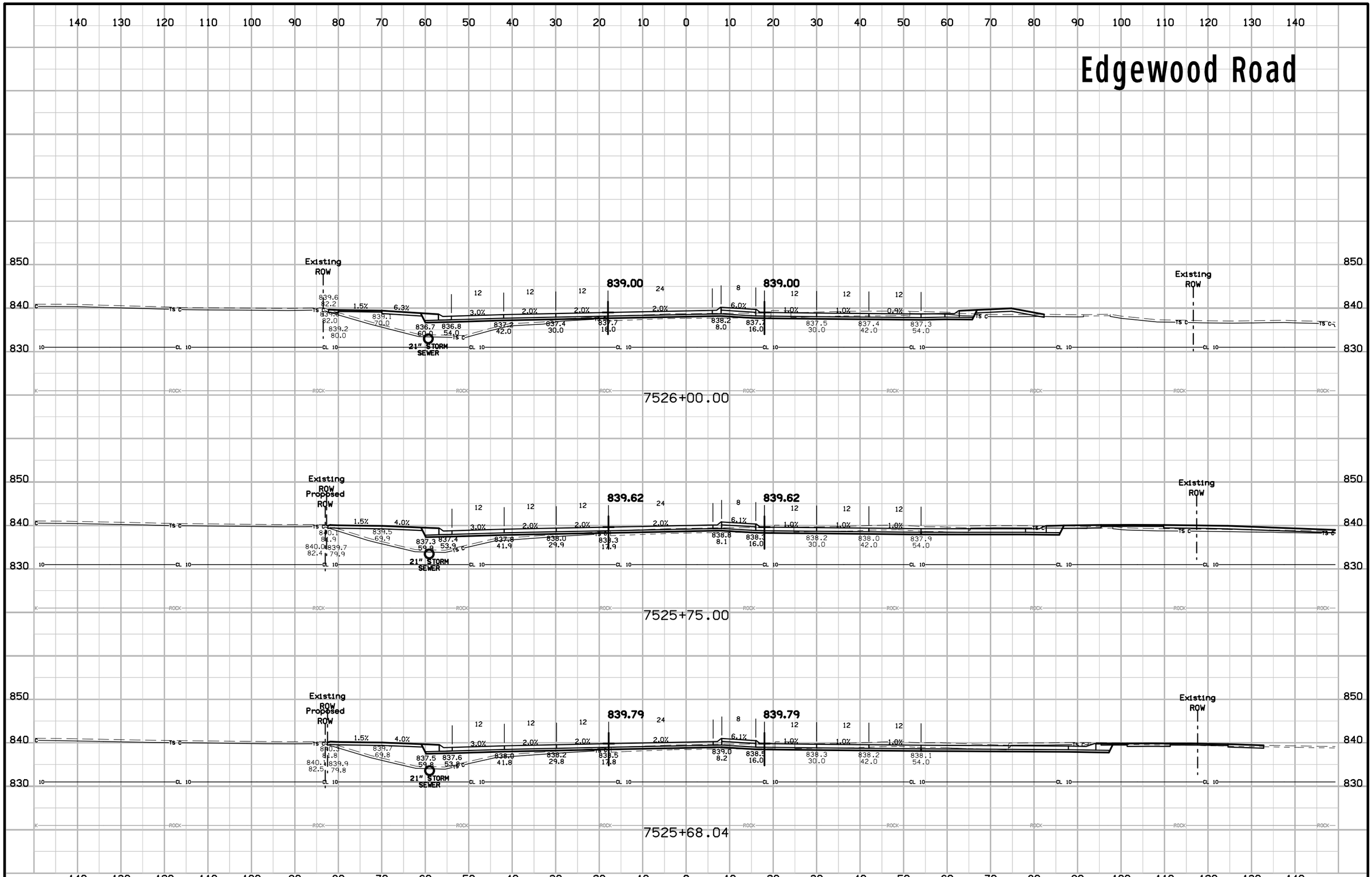
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.53

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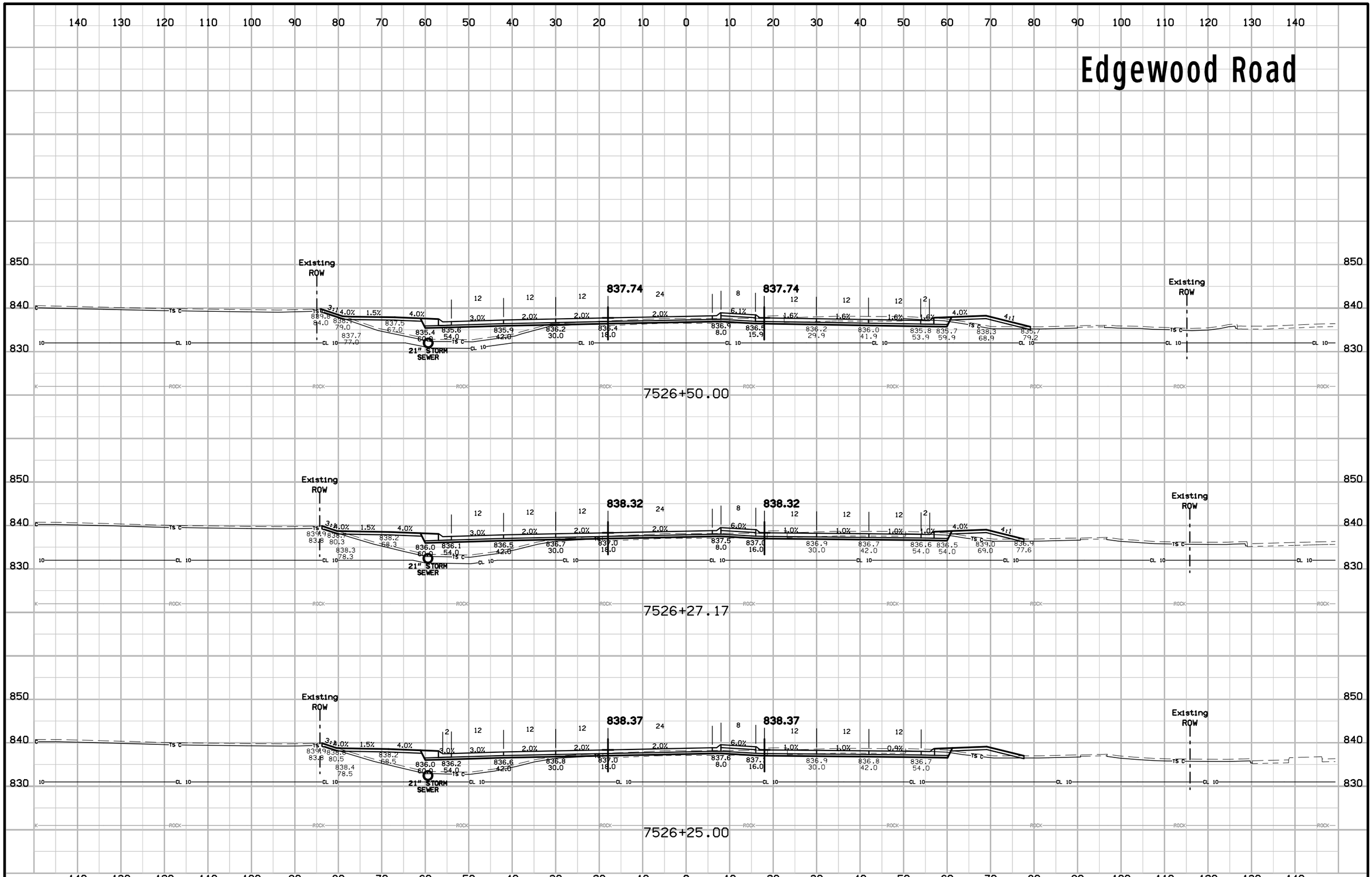
Edgewood Road



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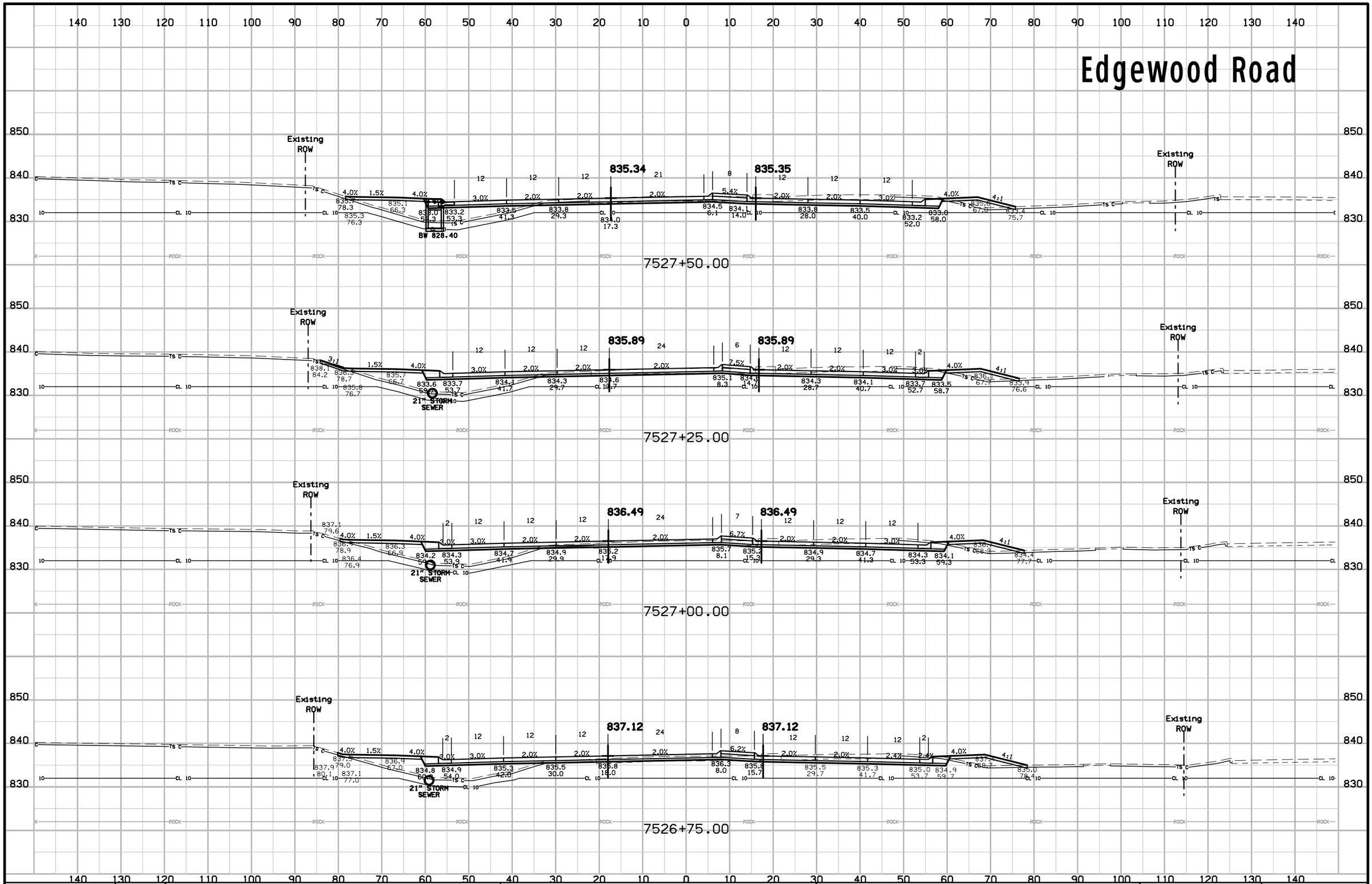
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.55

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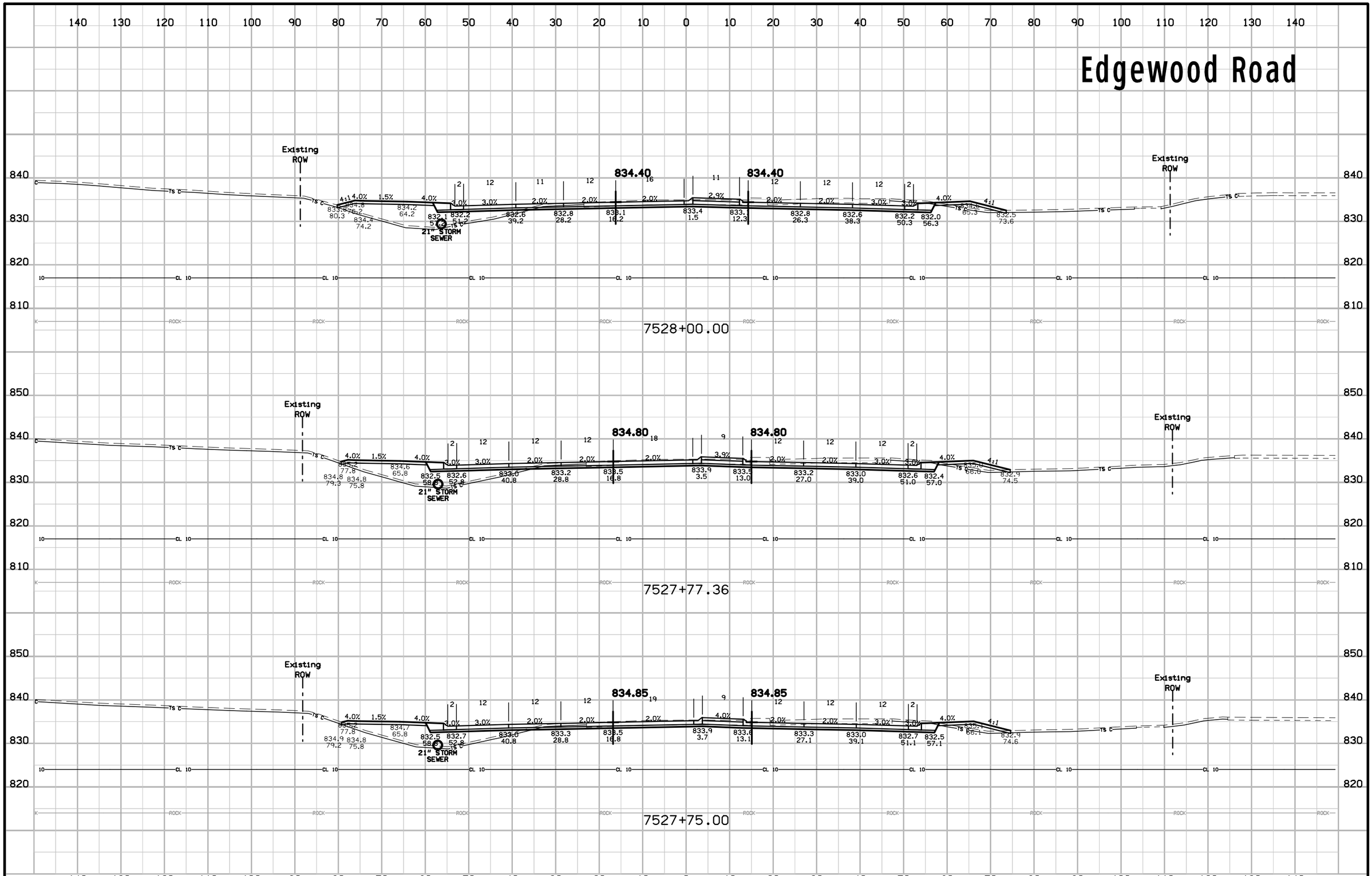
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.56

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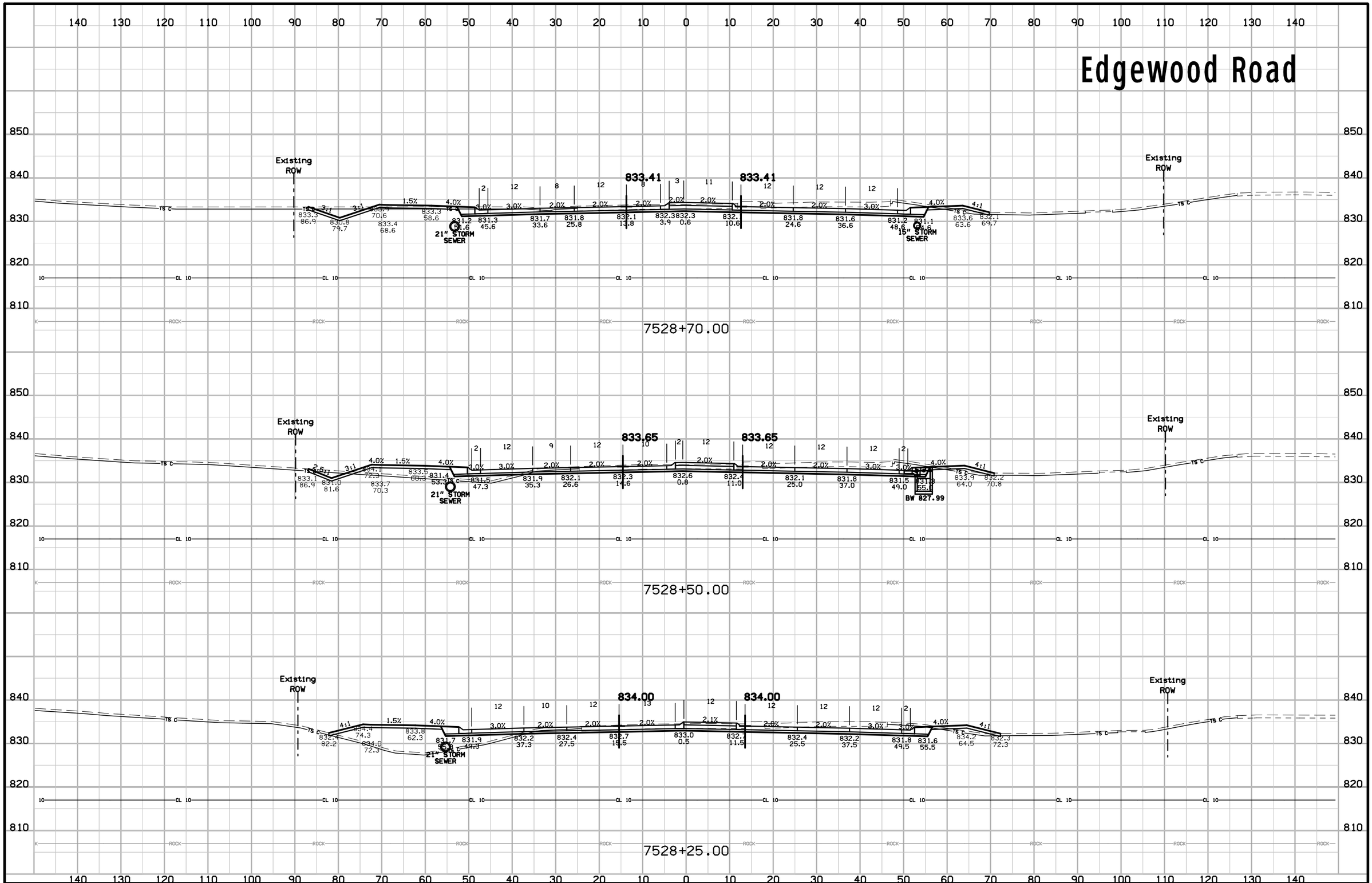
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.57

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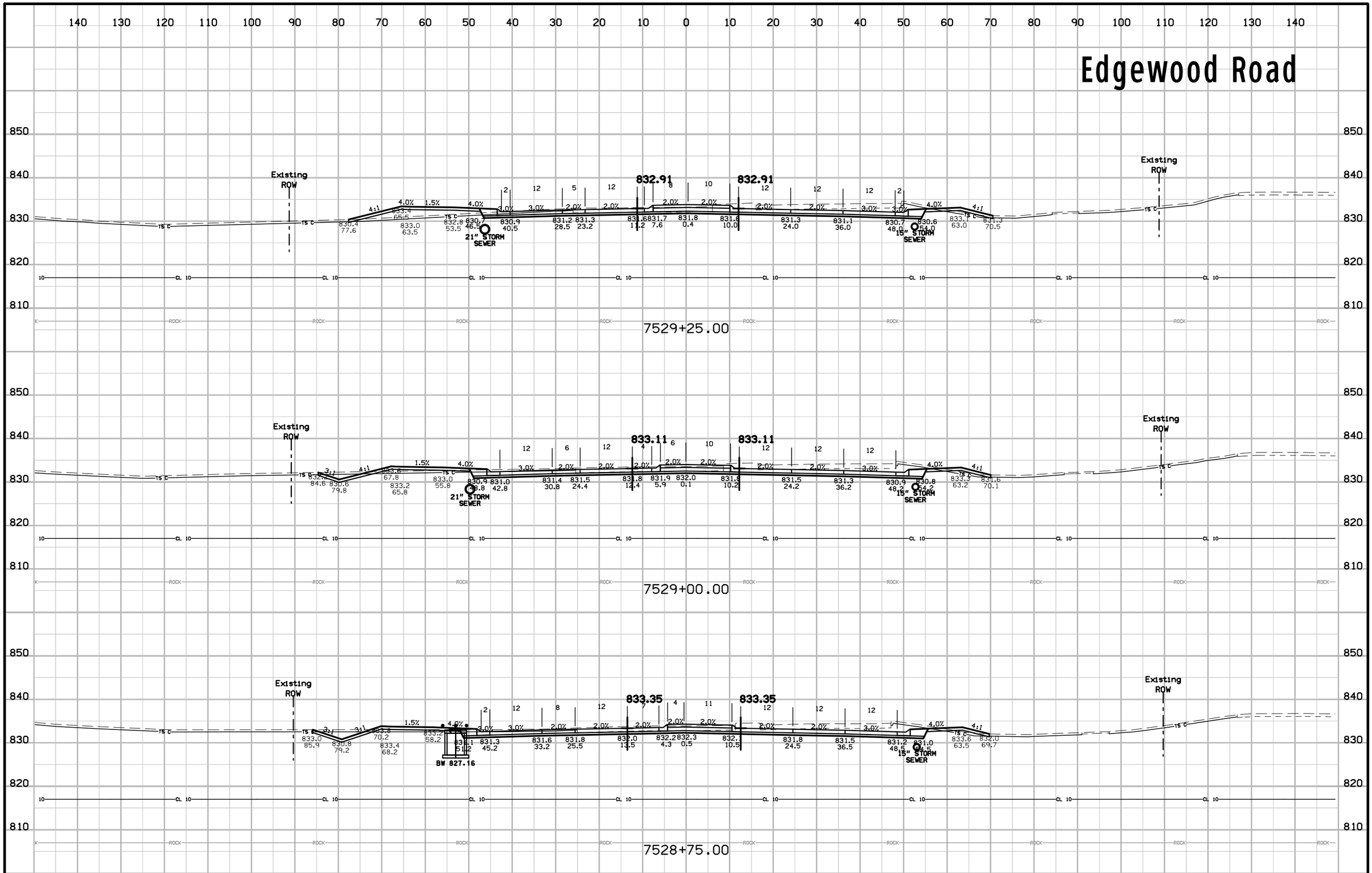
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.58

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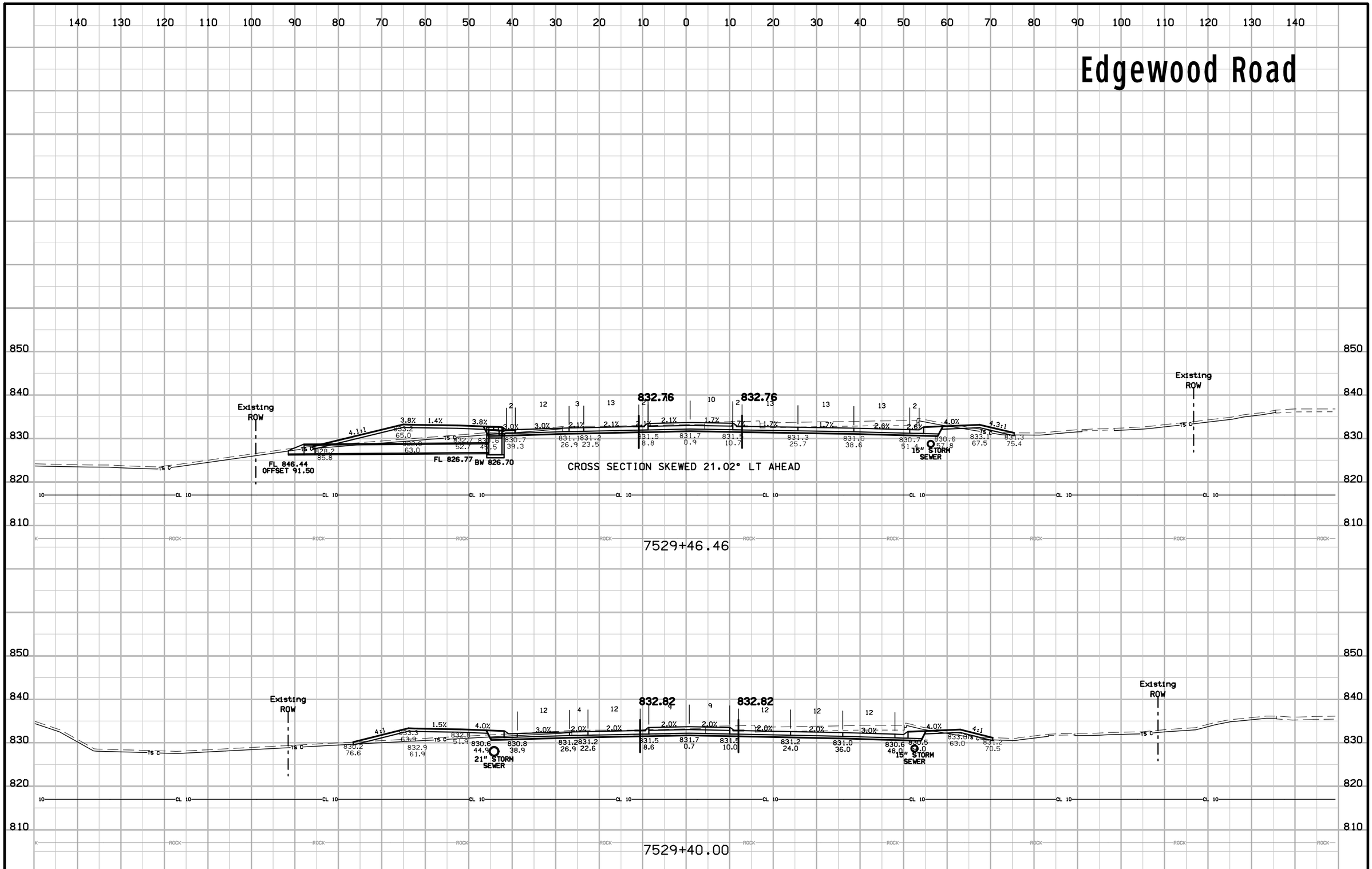
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.59

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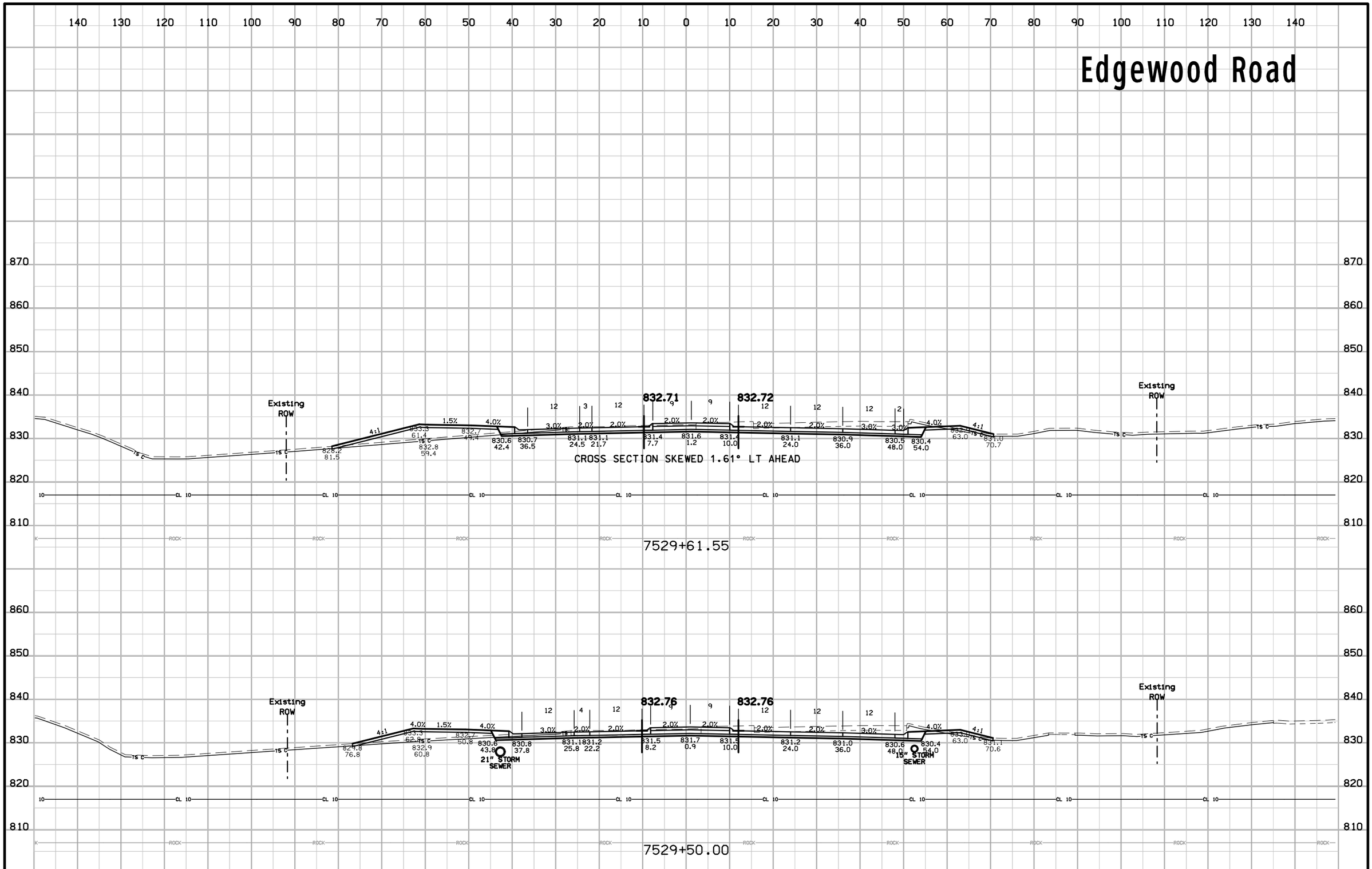
Edgewood Road



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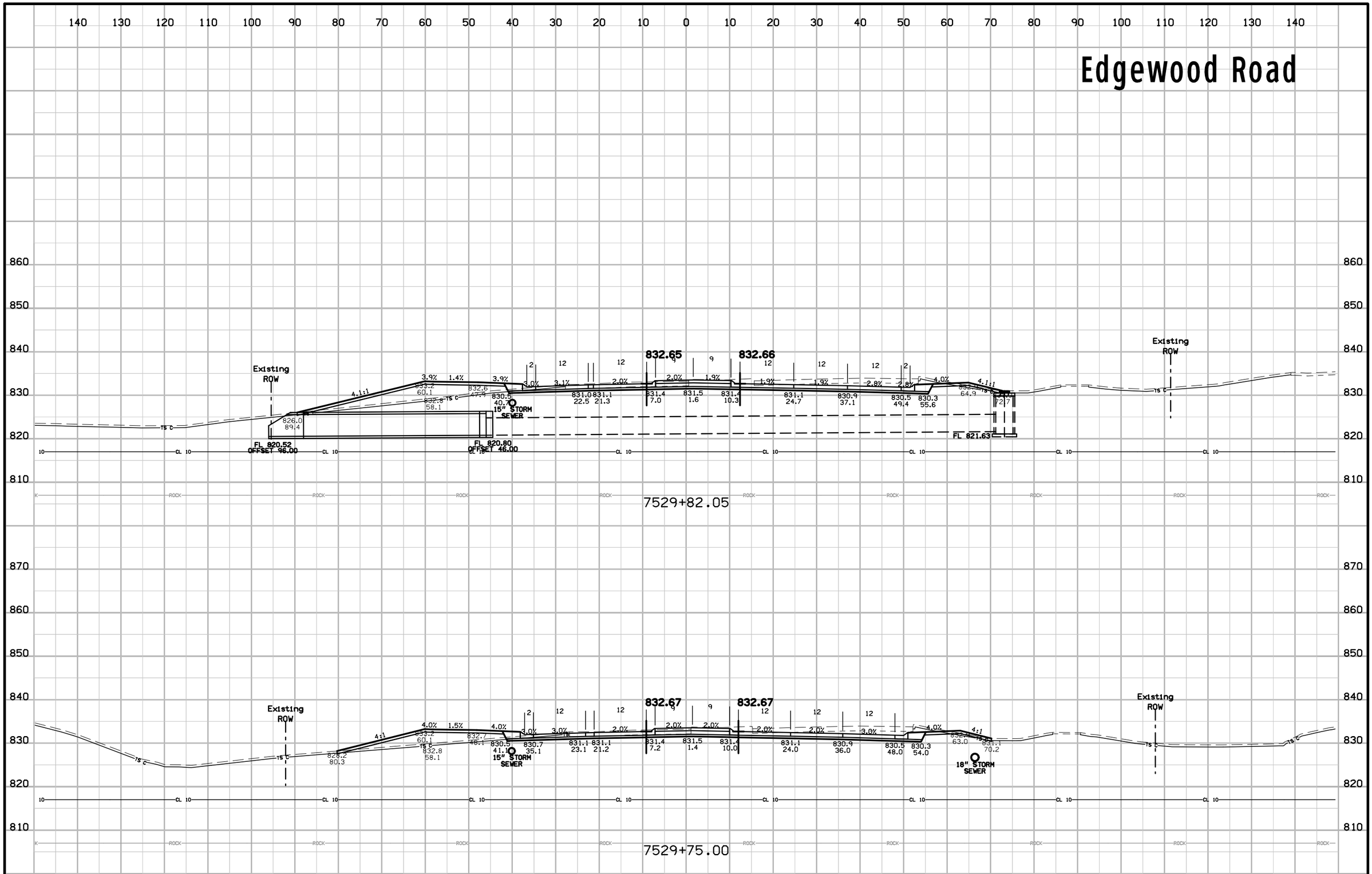
Edgewood Road



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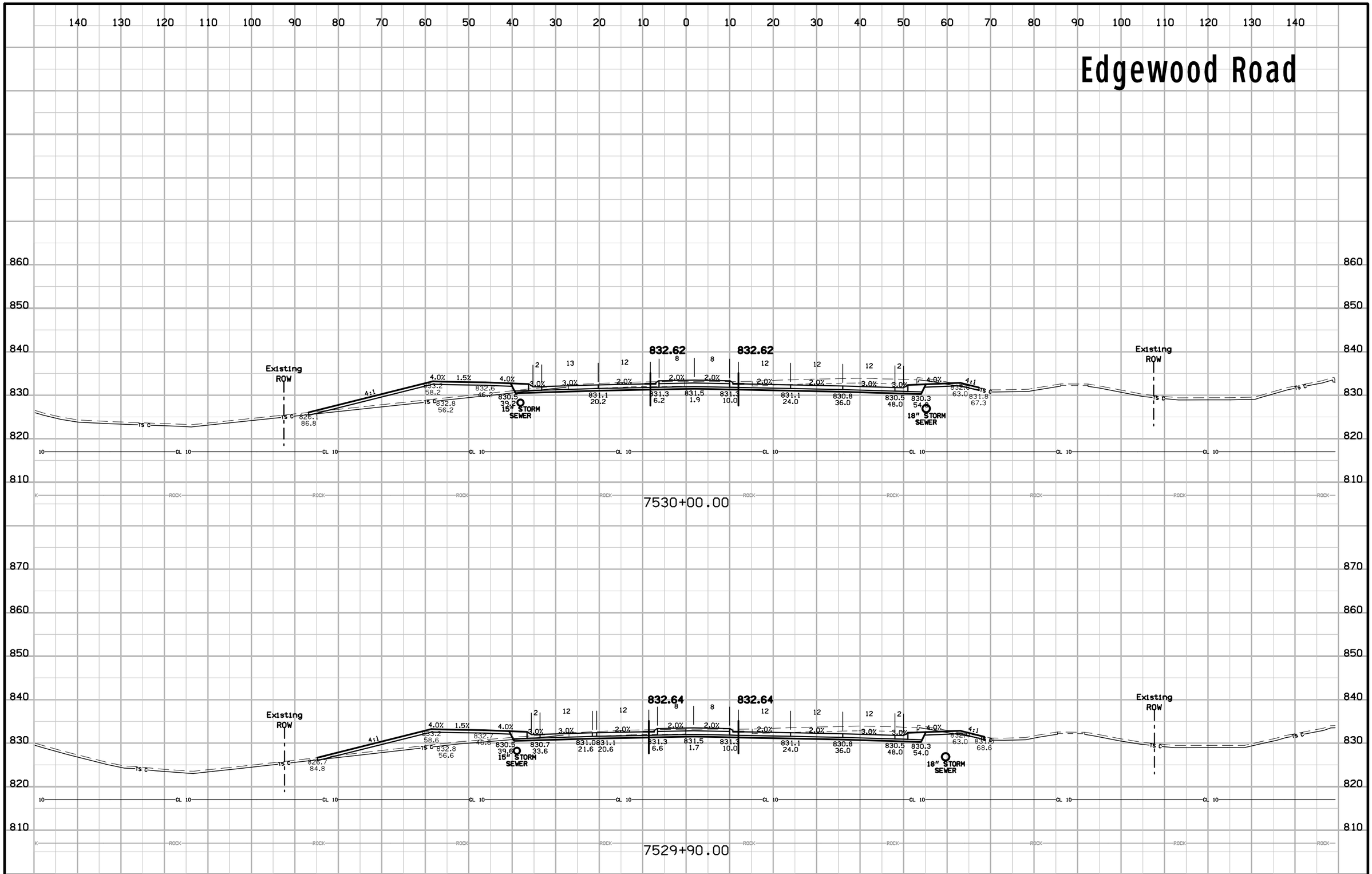
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.62

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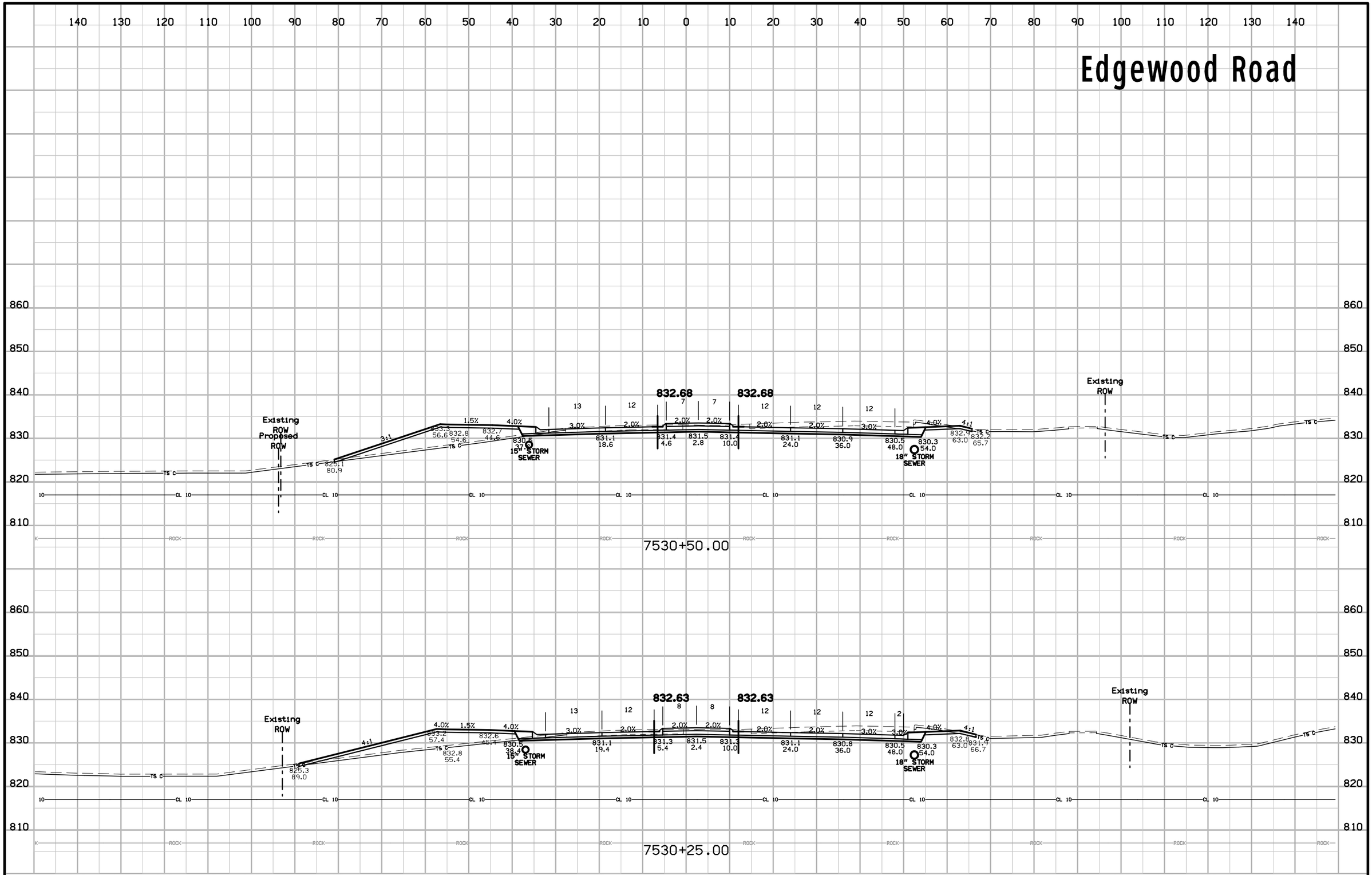
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.63

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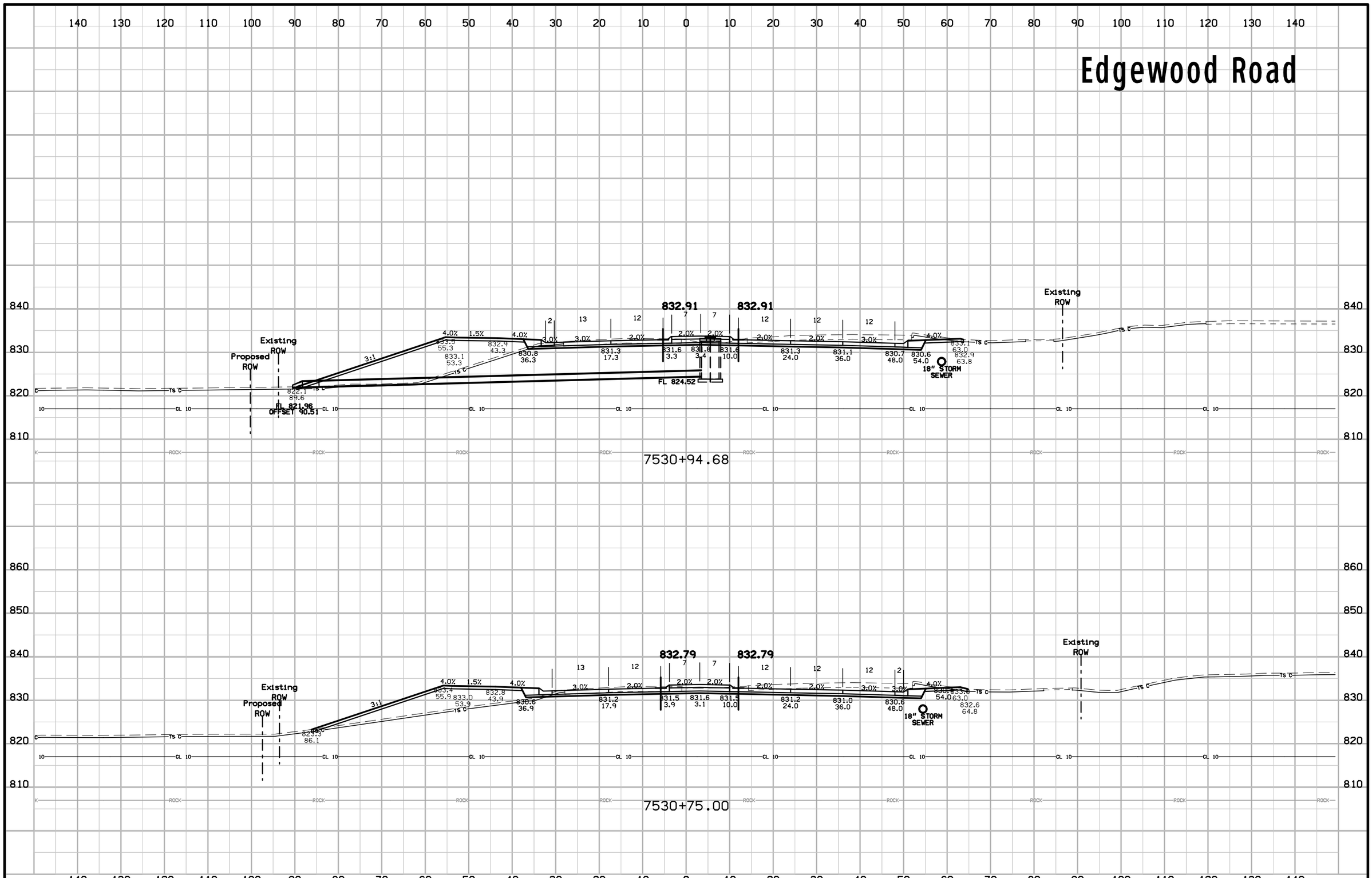
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.64

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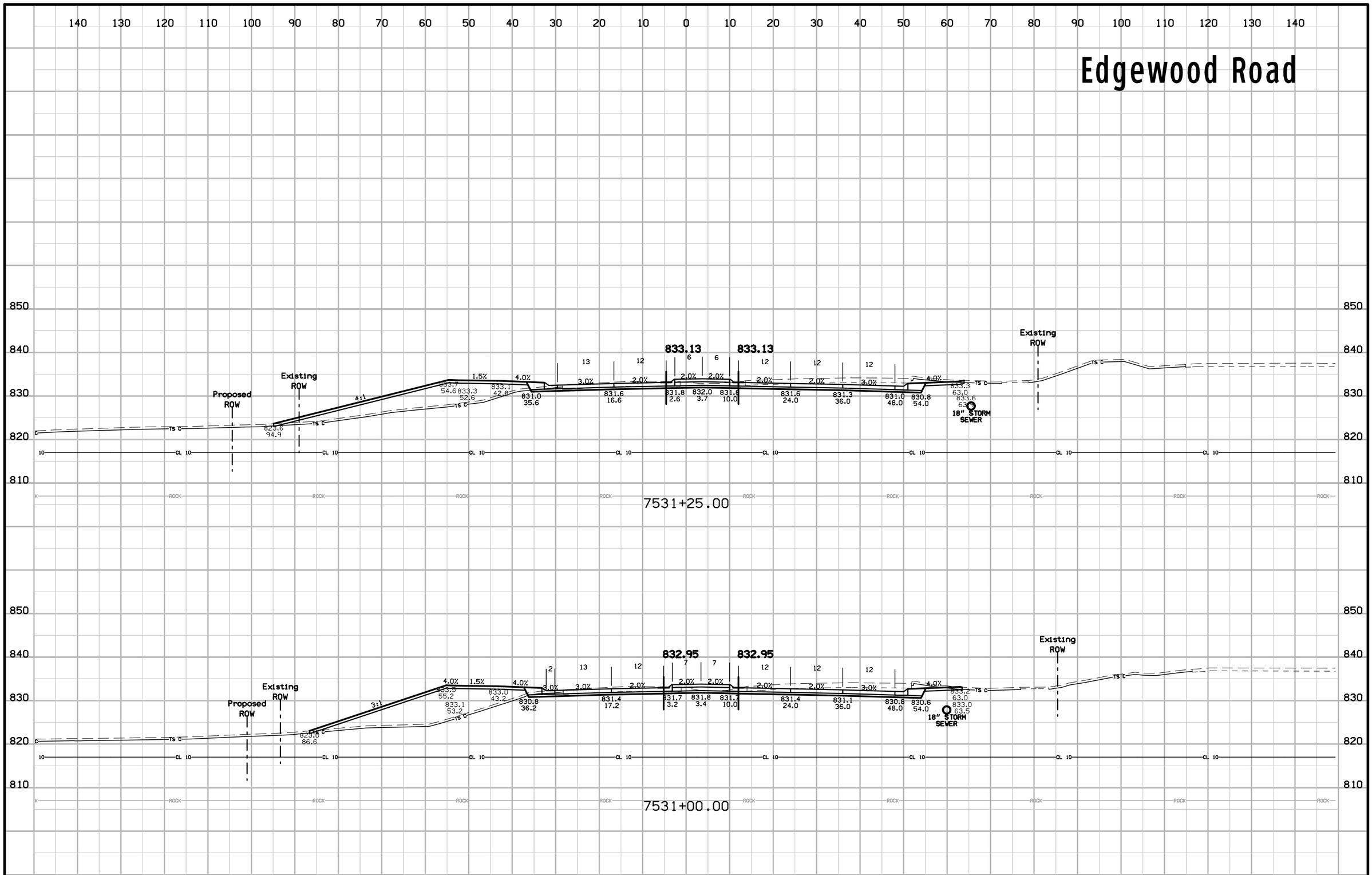
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.65

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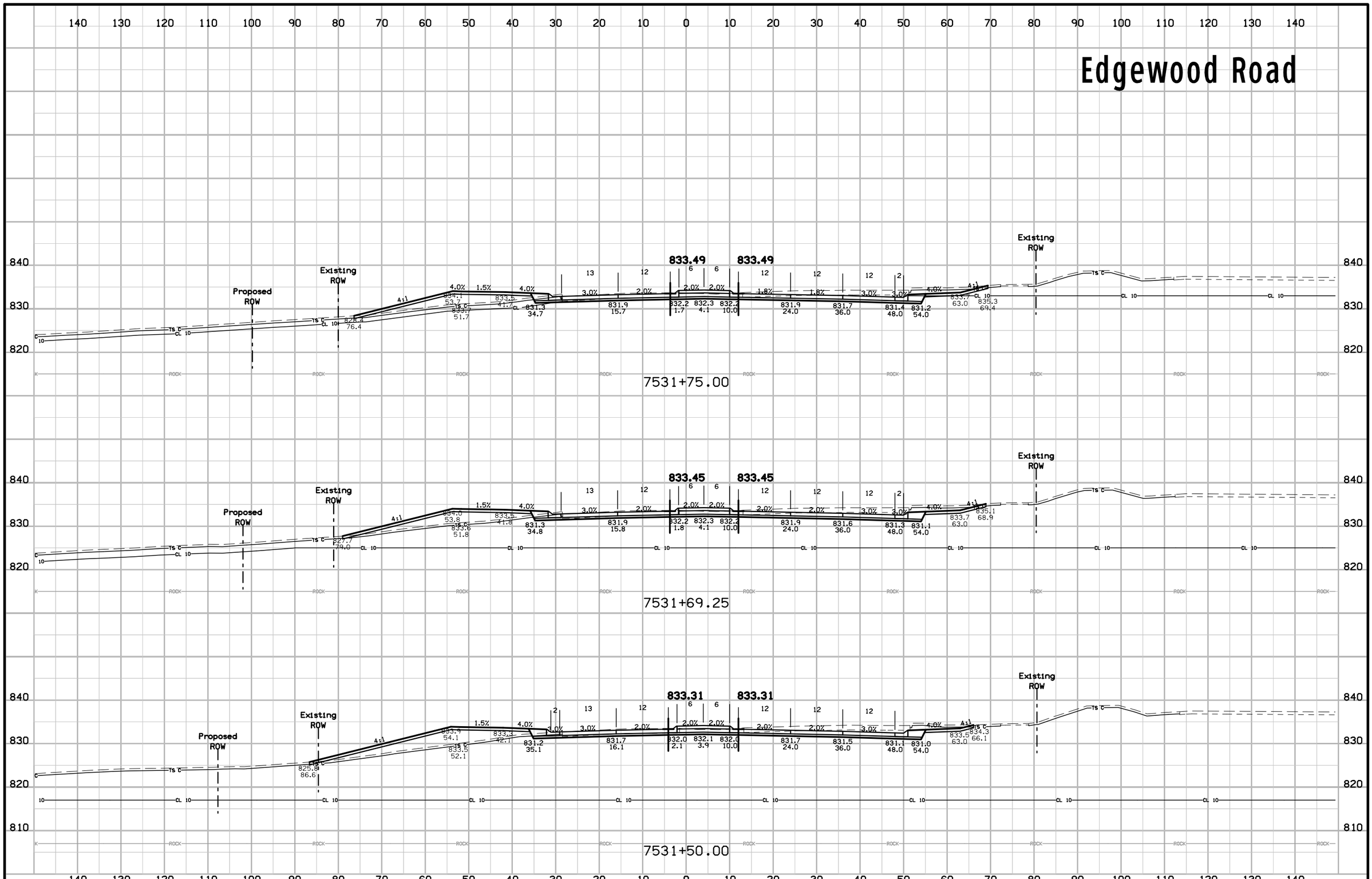
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.66

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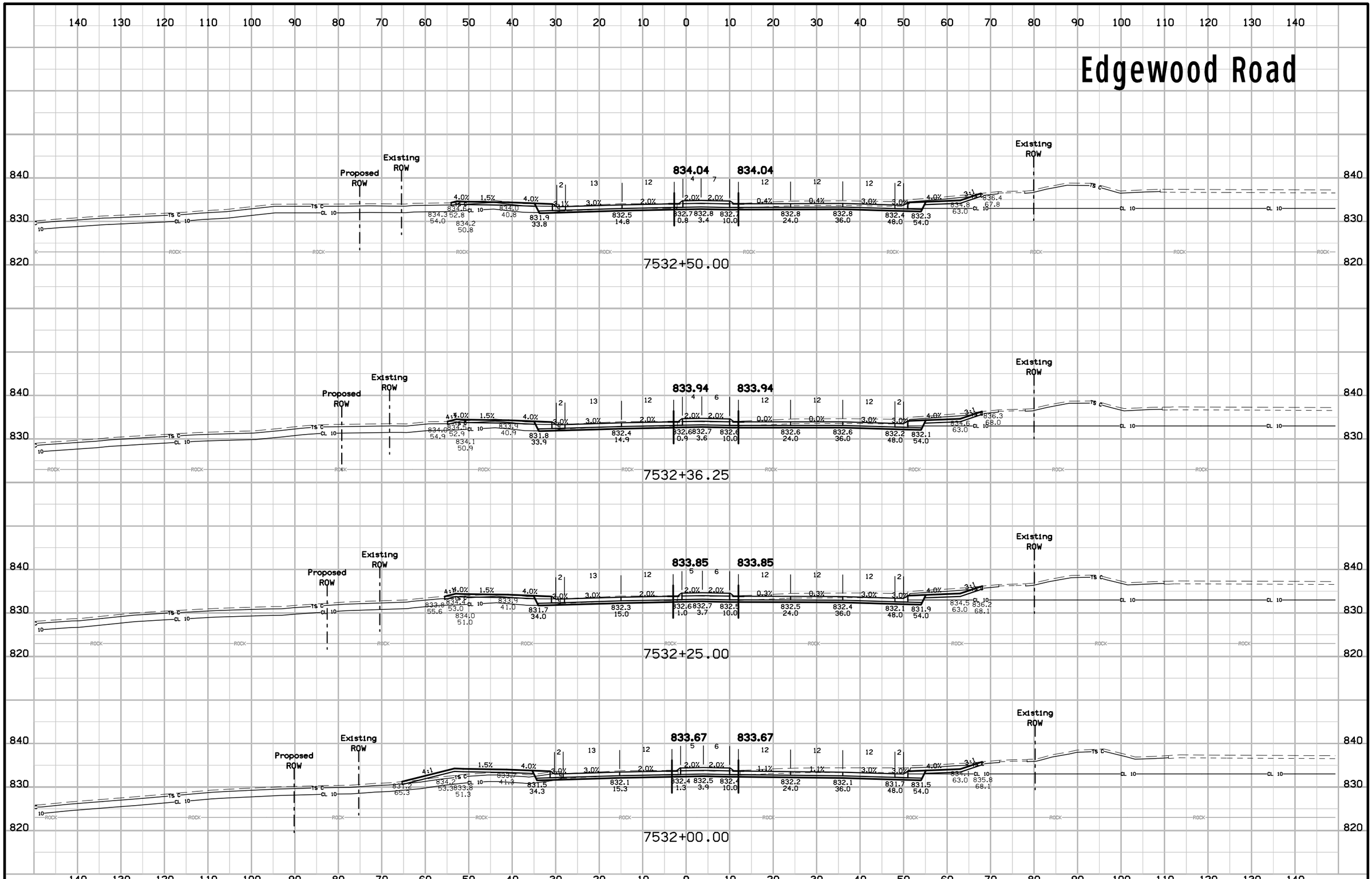
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.67

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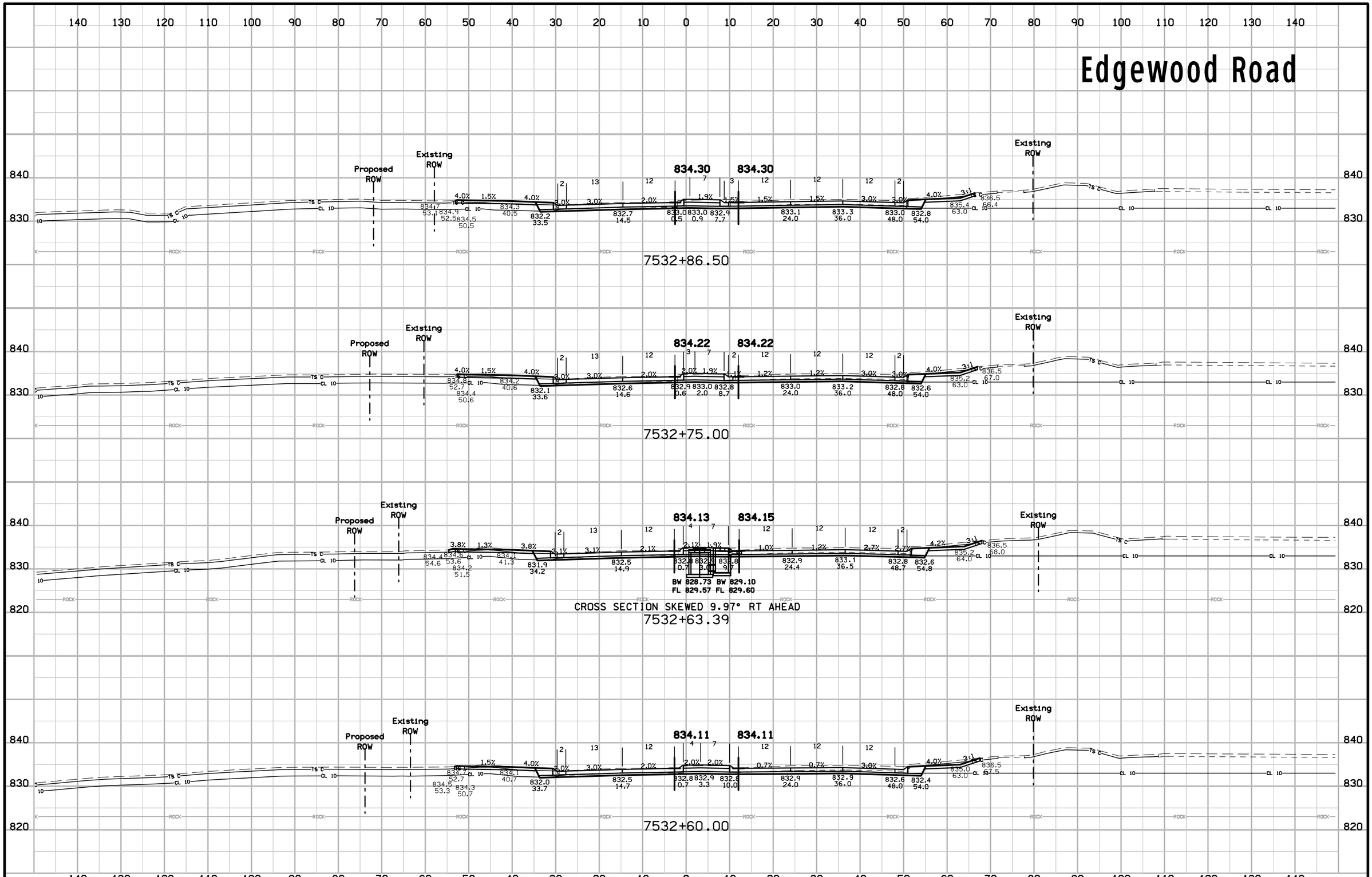
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.68

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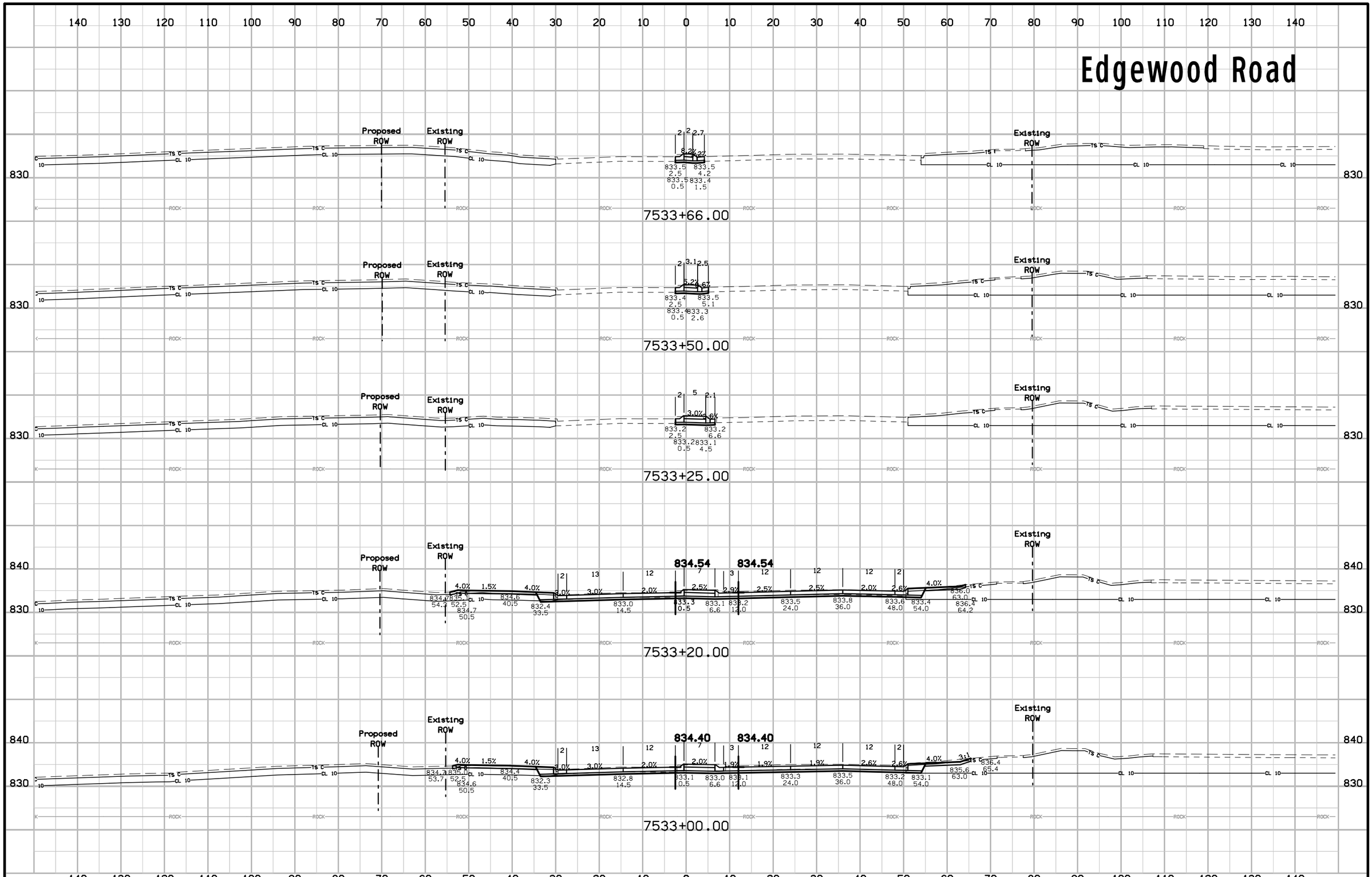
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.69

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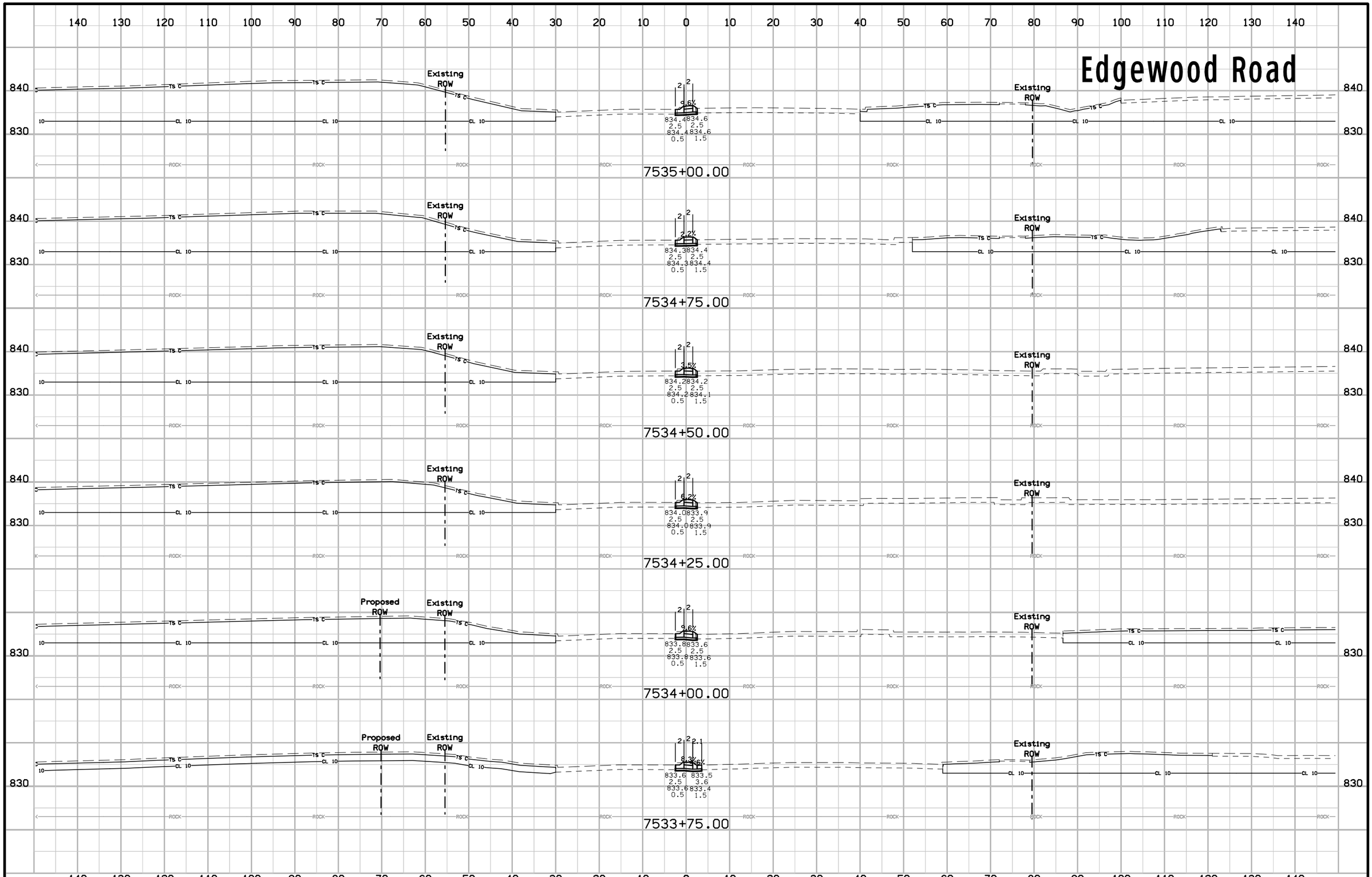
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.70

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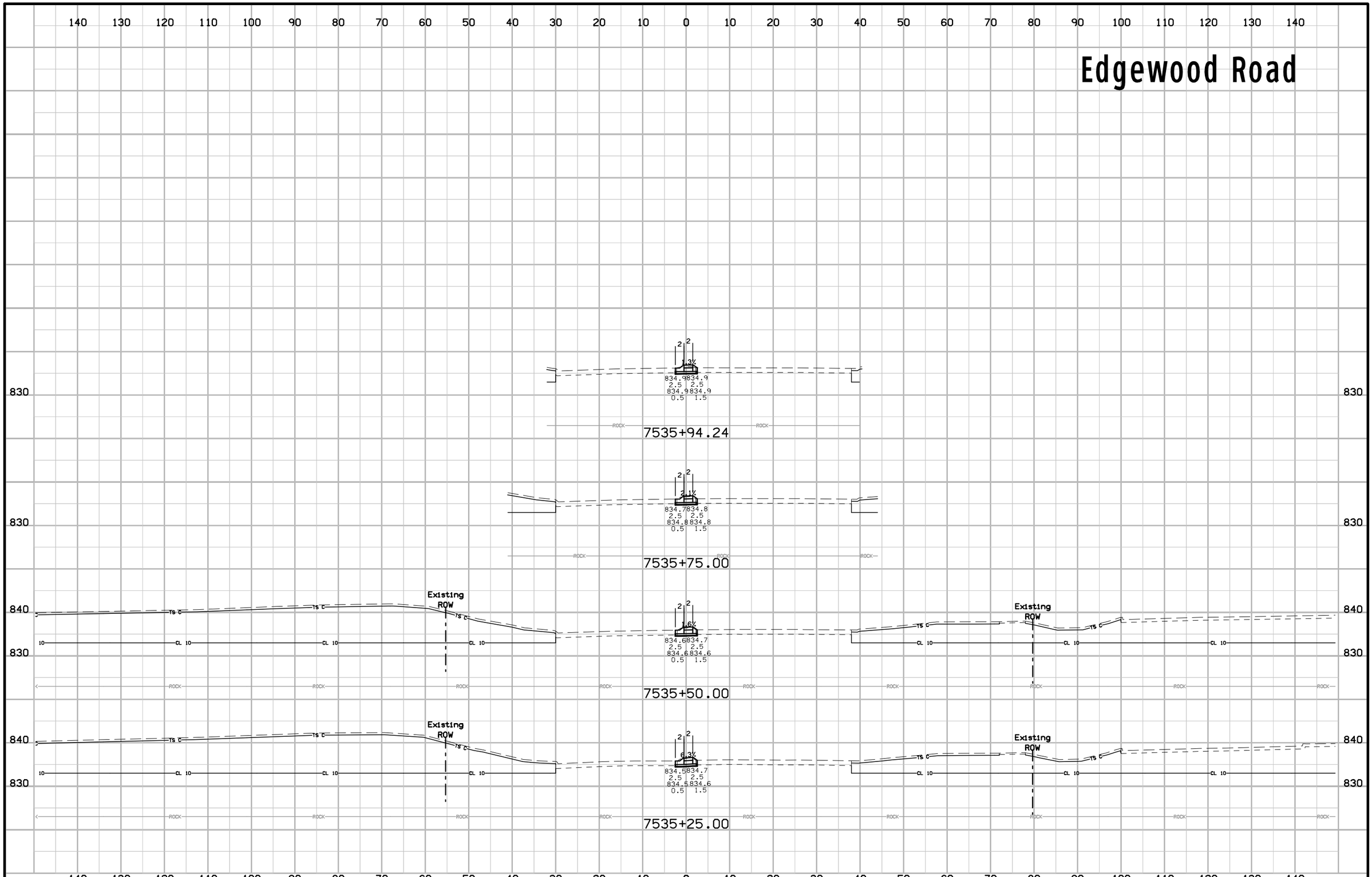
Edgewood Road



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.71

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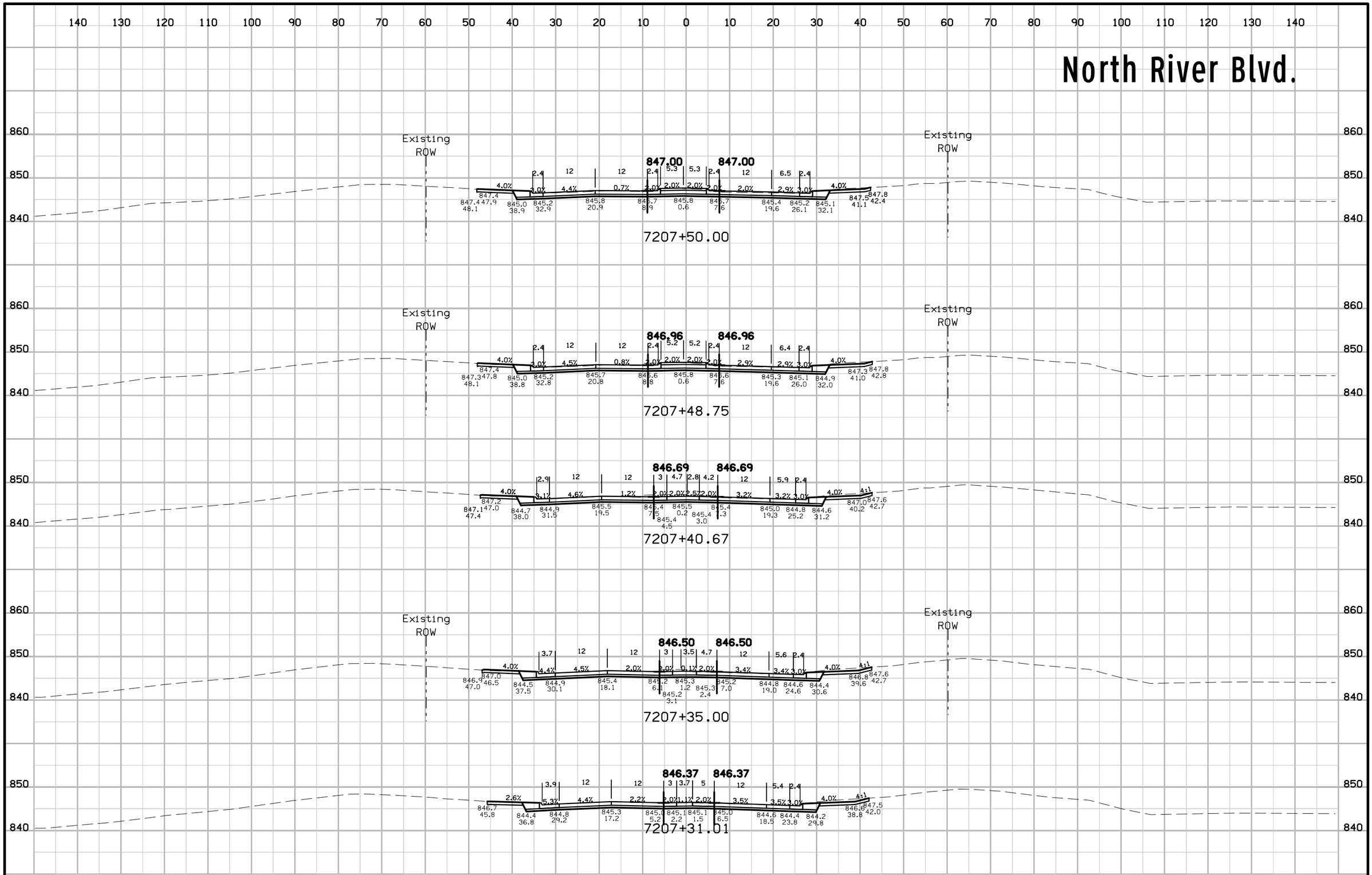
North River Blvd.



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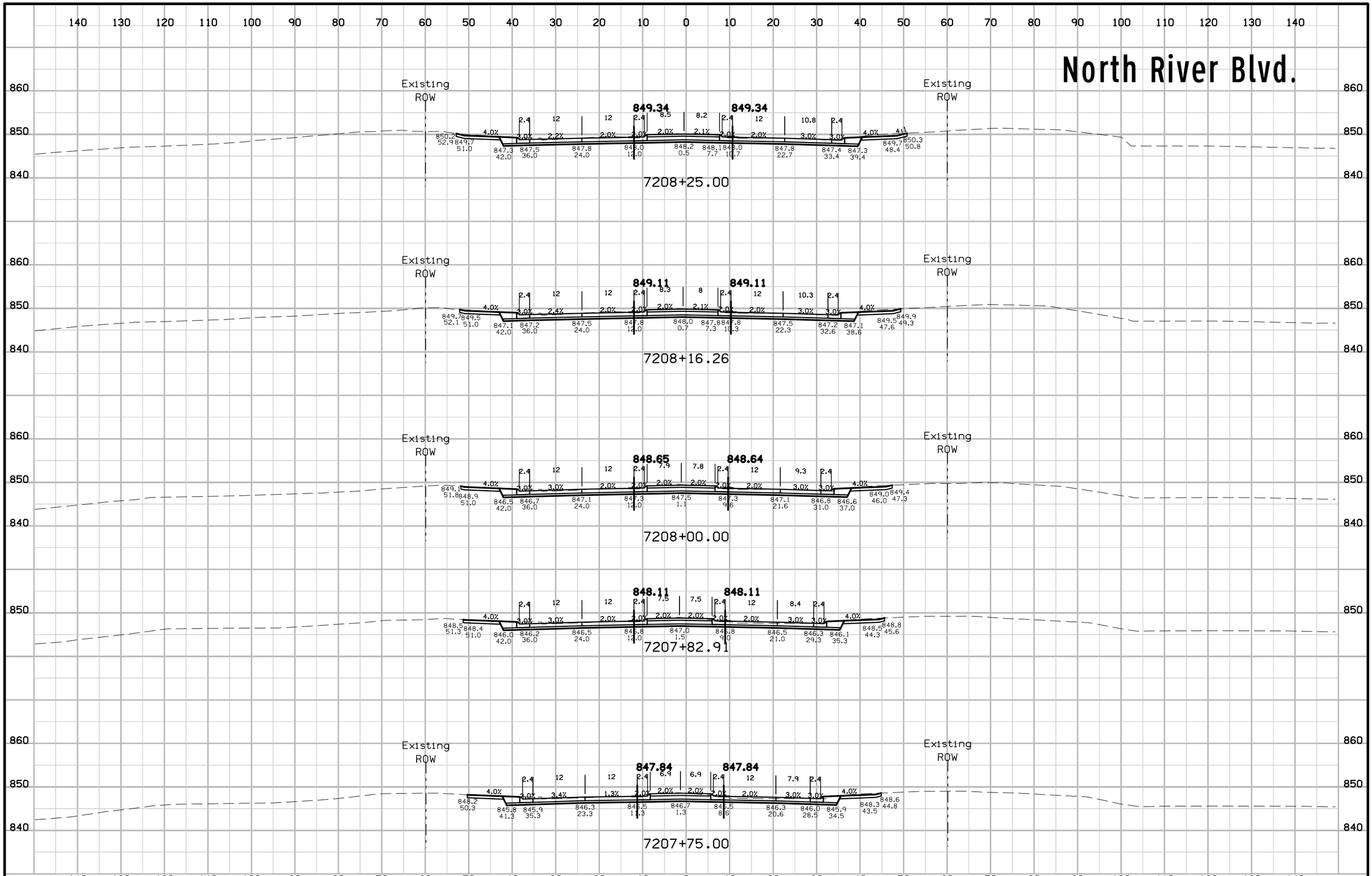

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.73

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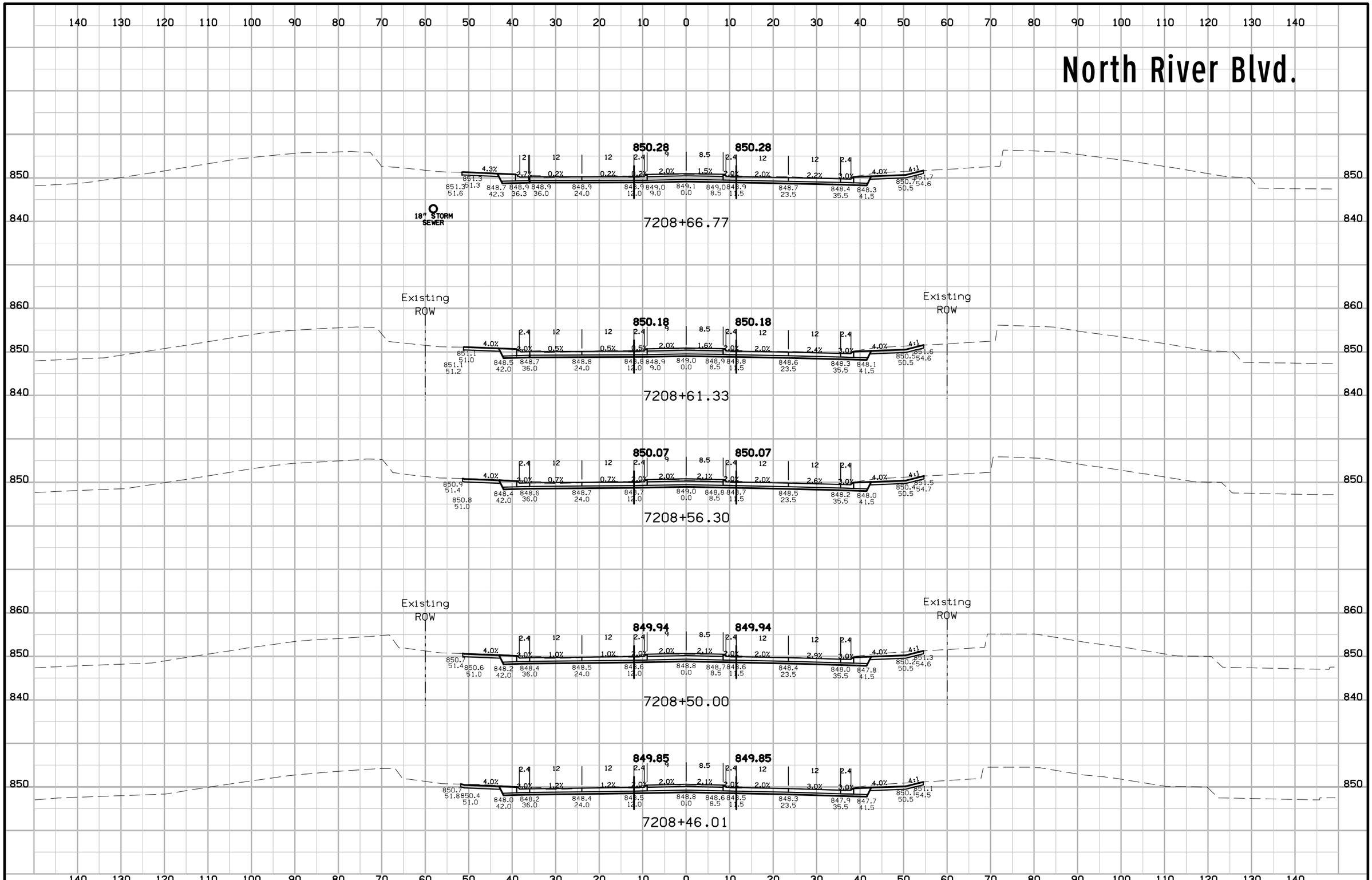

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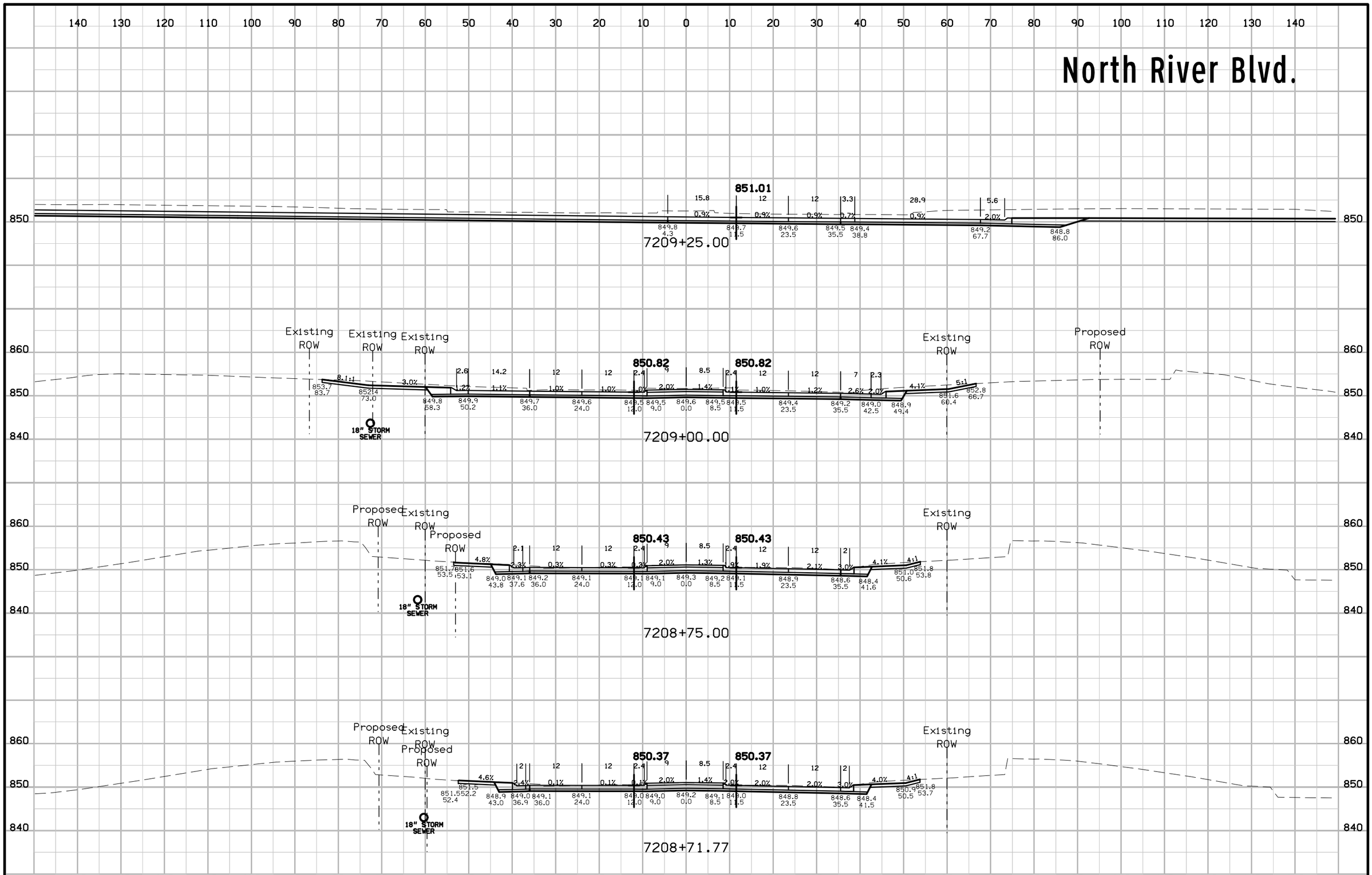

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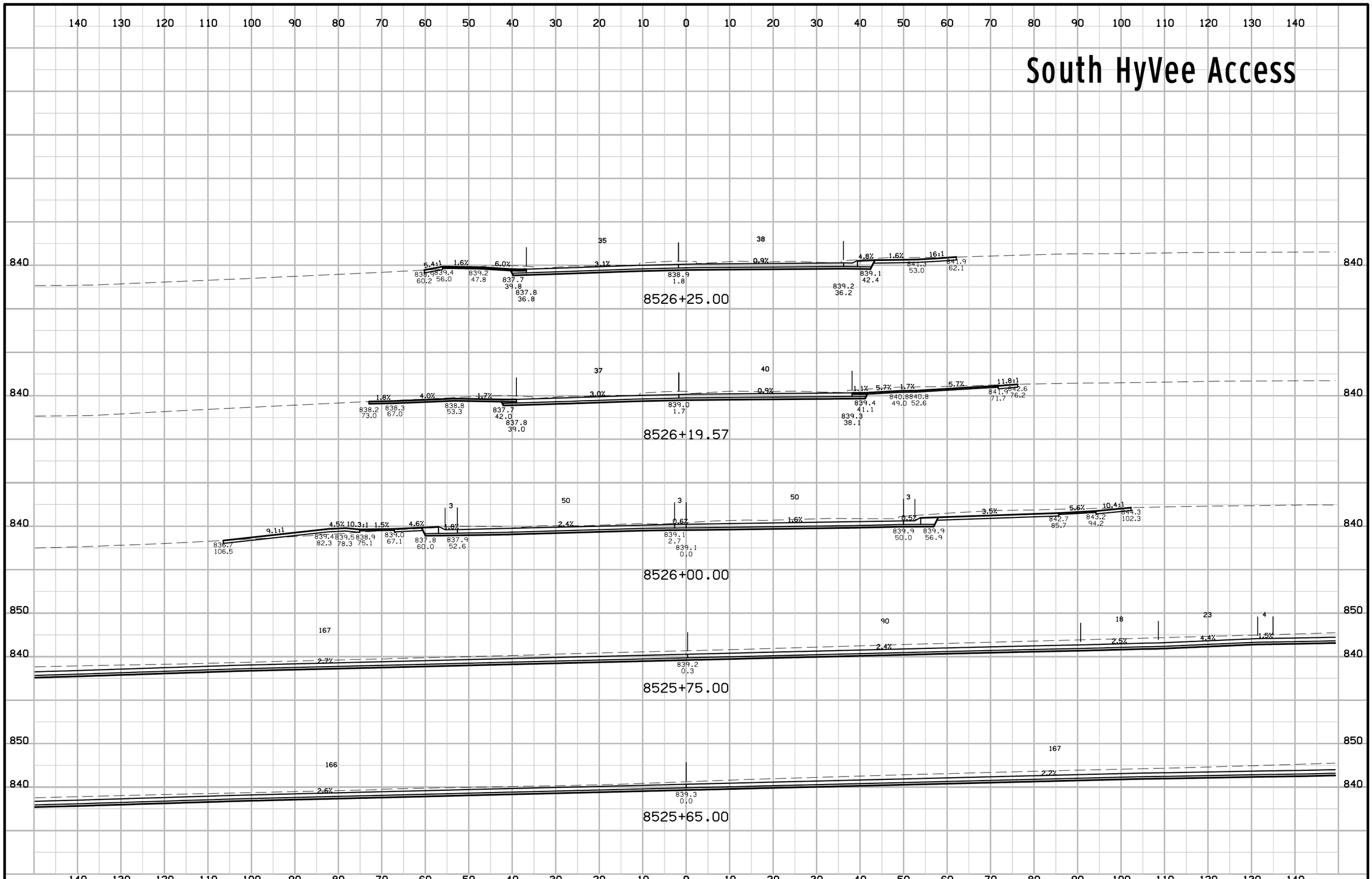
South HyVee Access



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.76

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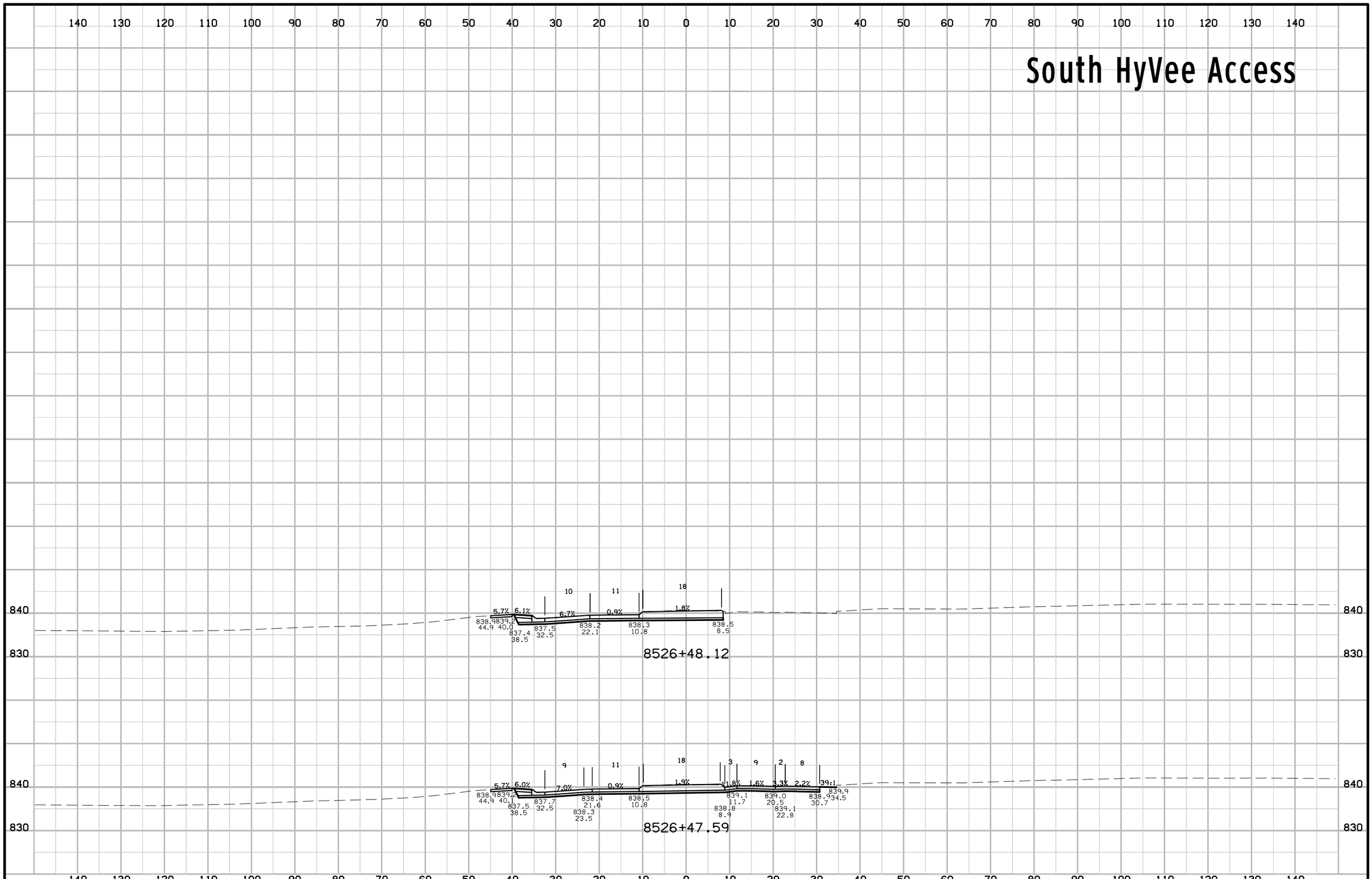
South HyVee Access



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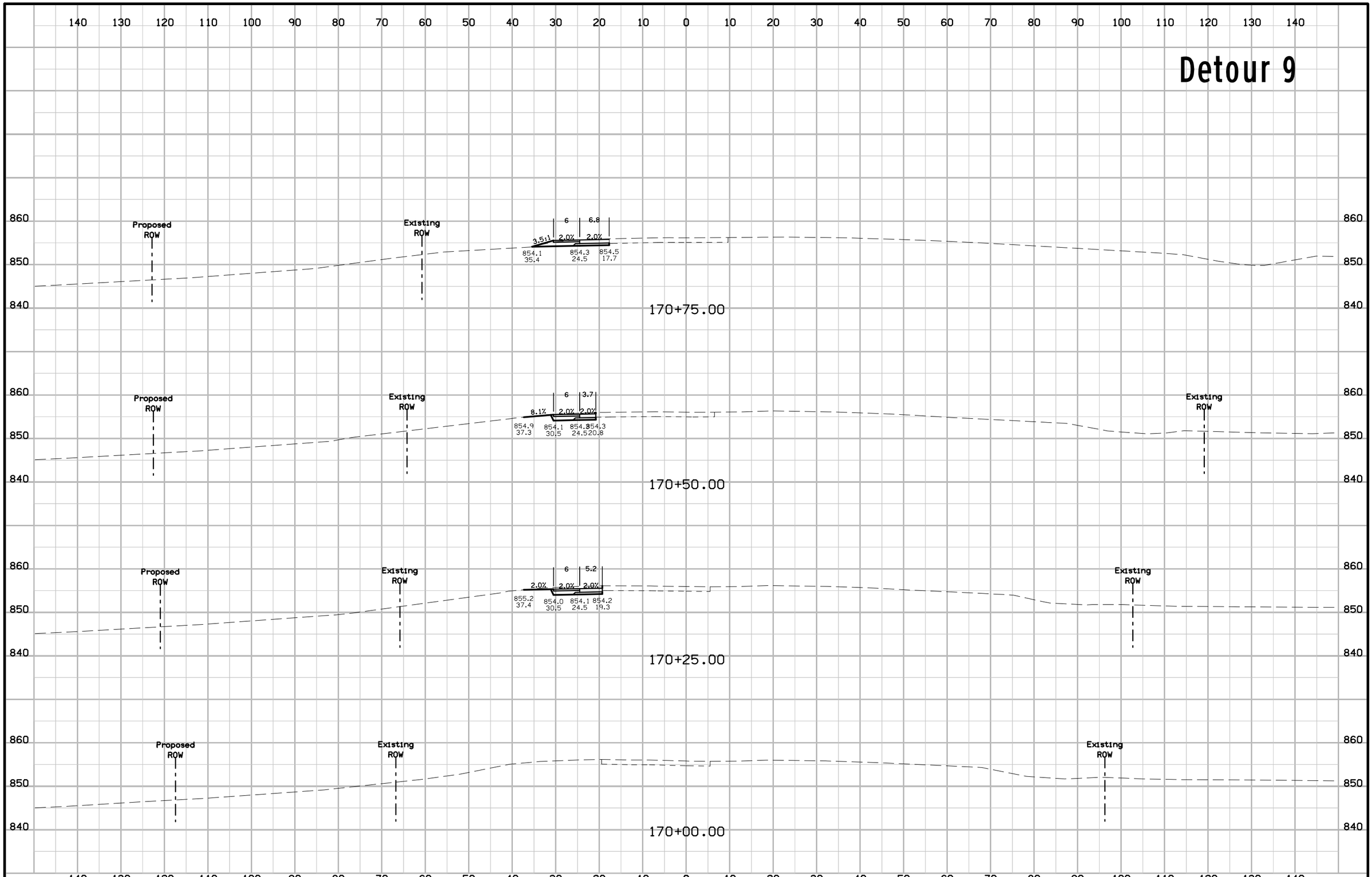
Detour 9



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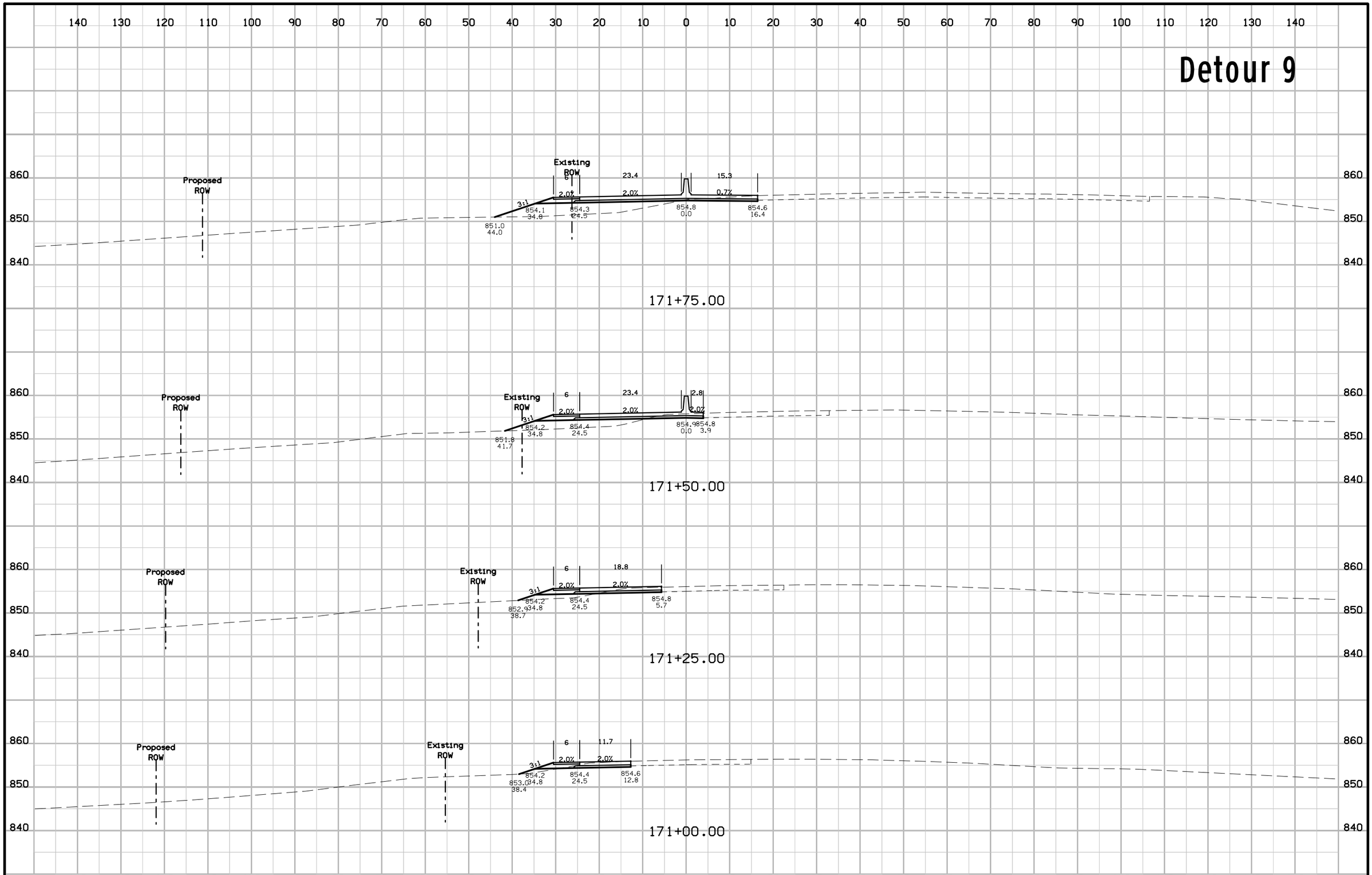

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.79

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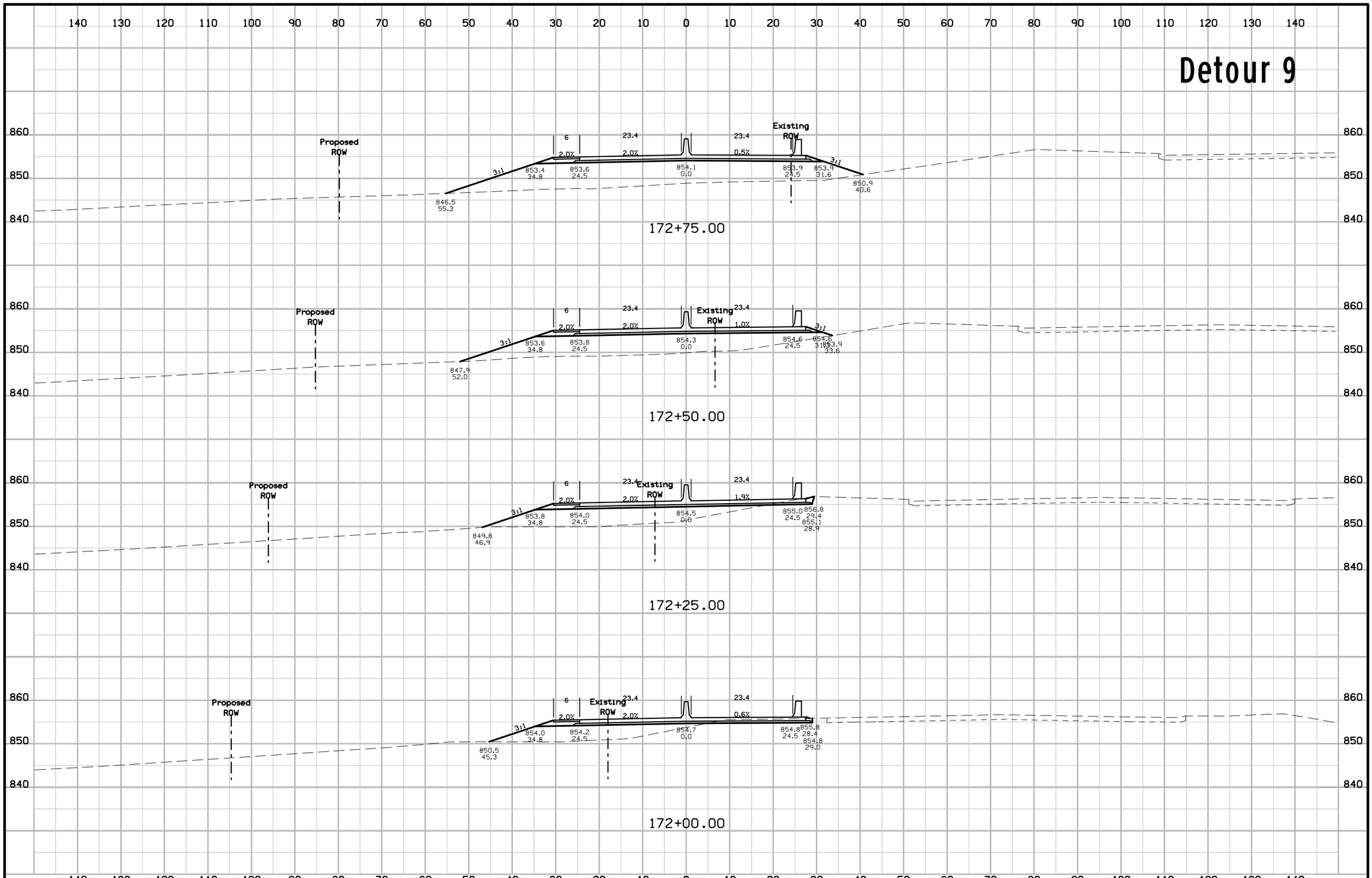

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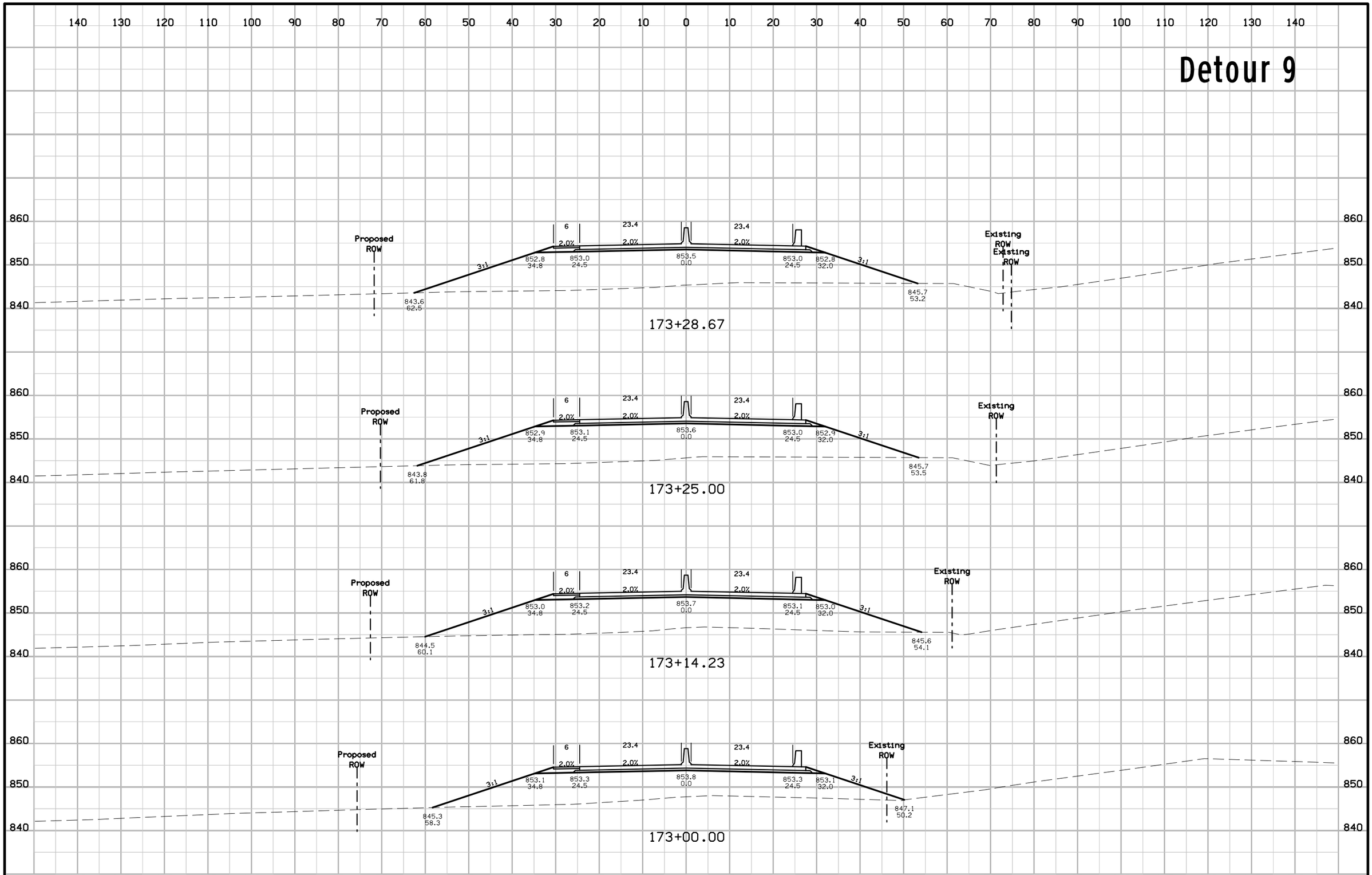

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.81

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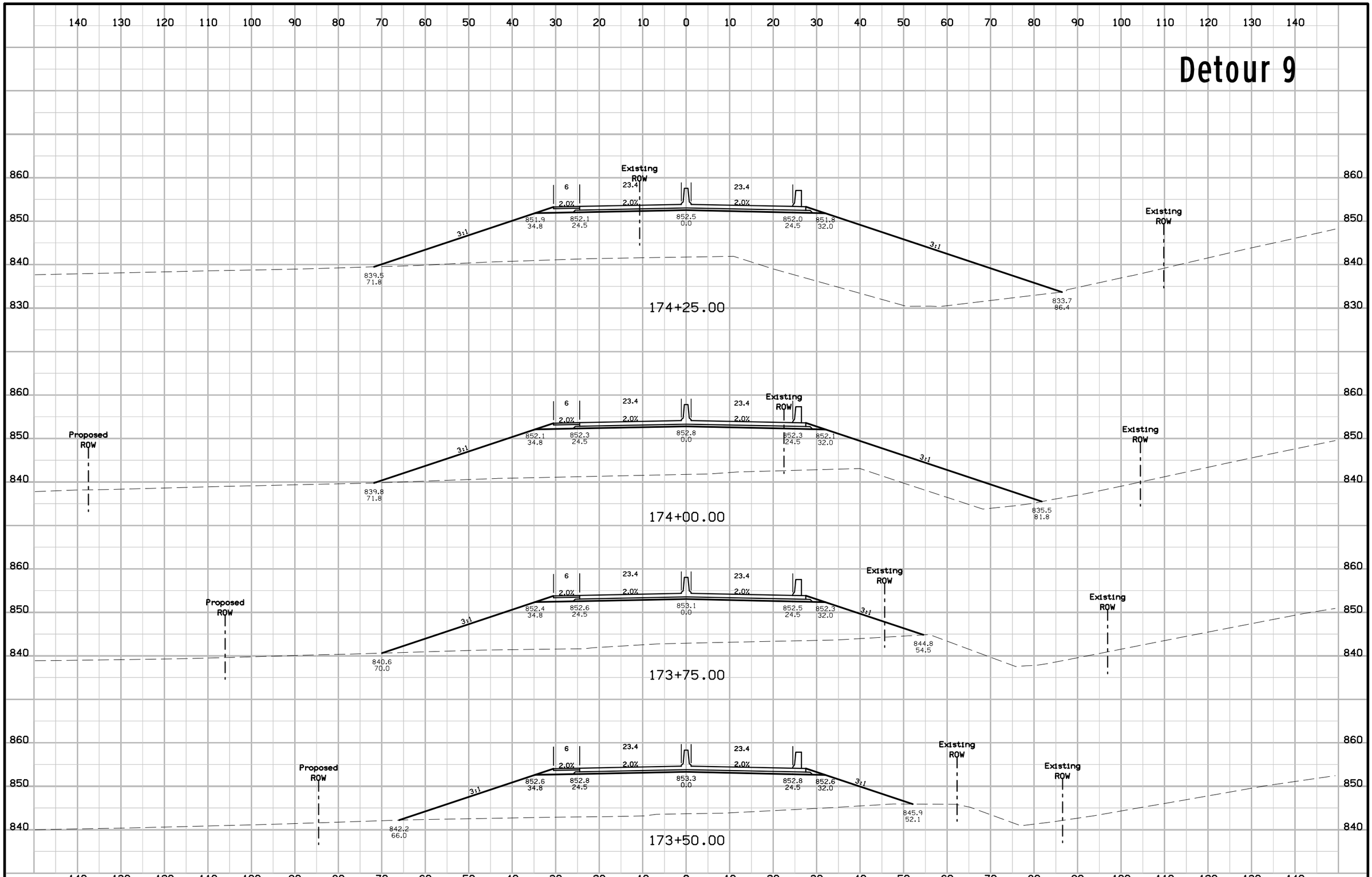

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.82

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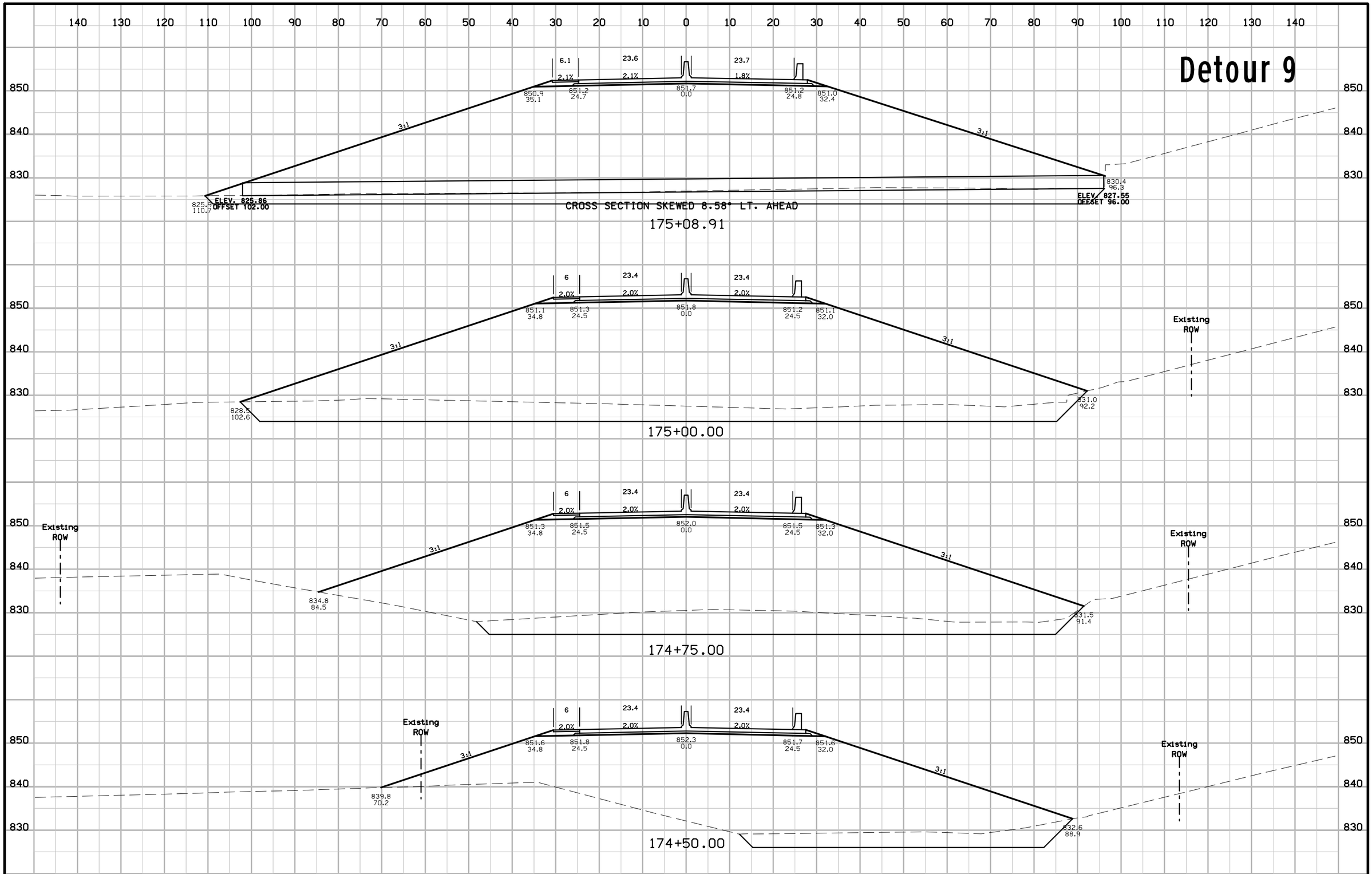

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.83

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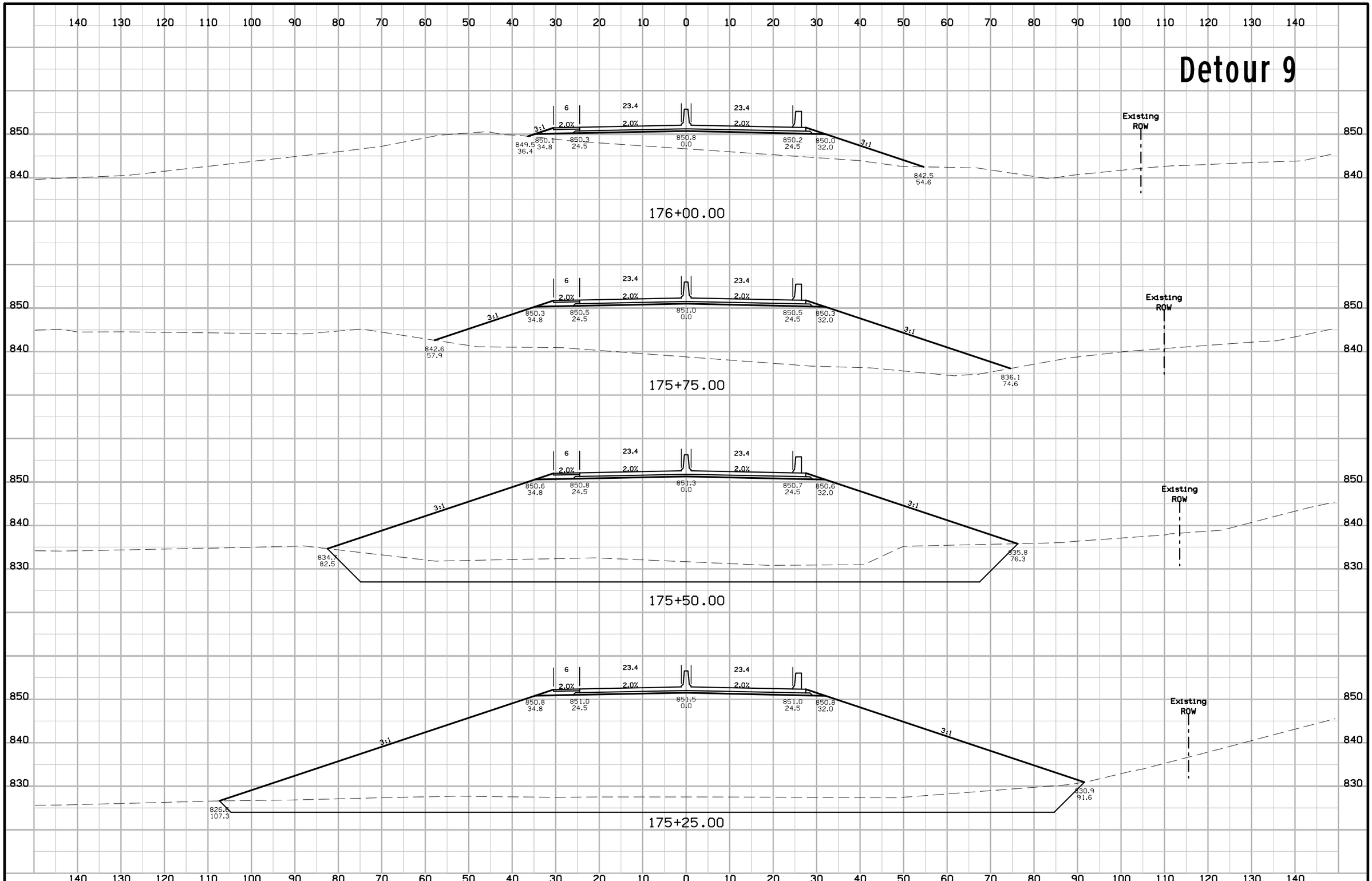

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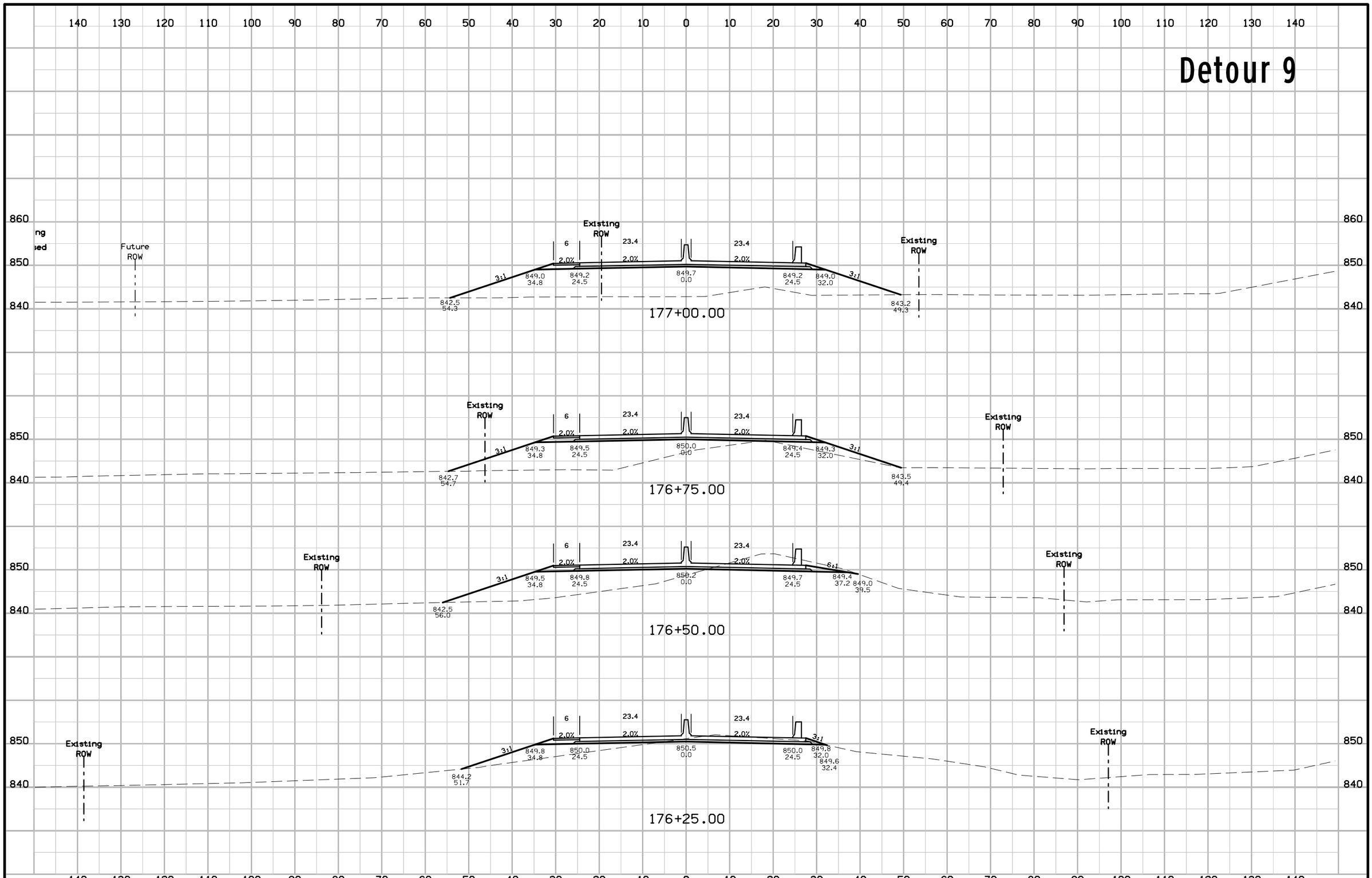

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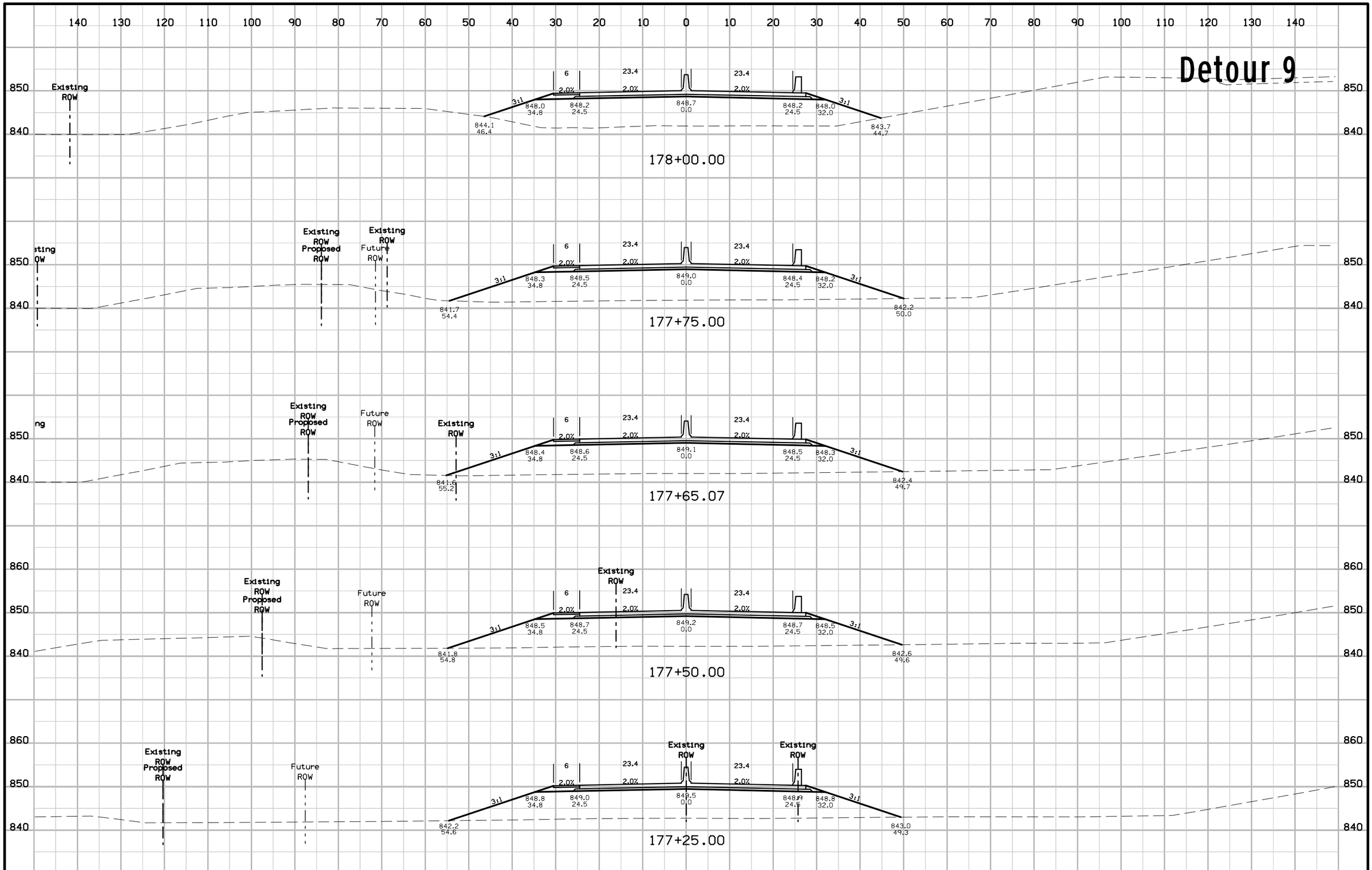

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.86

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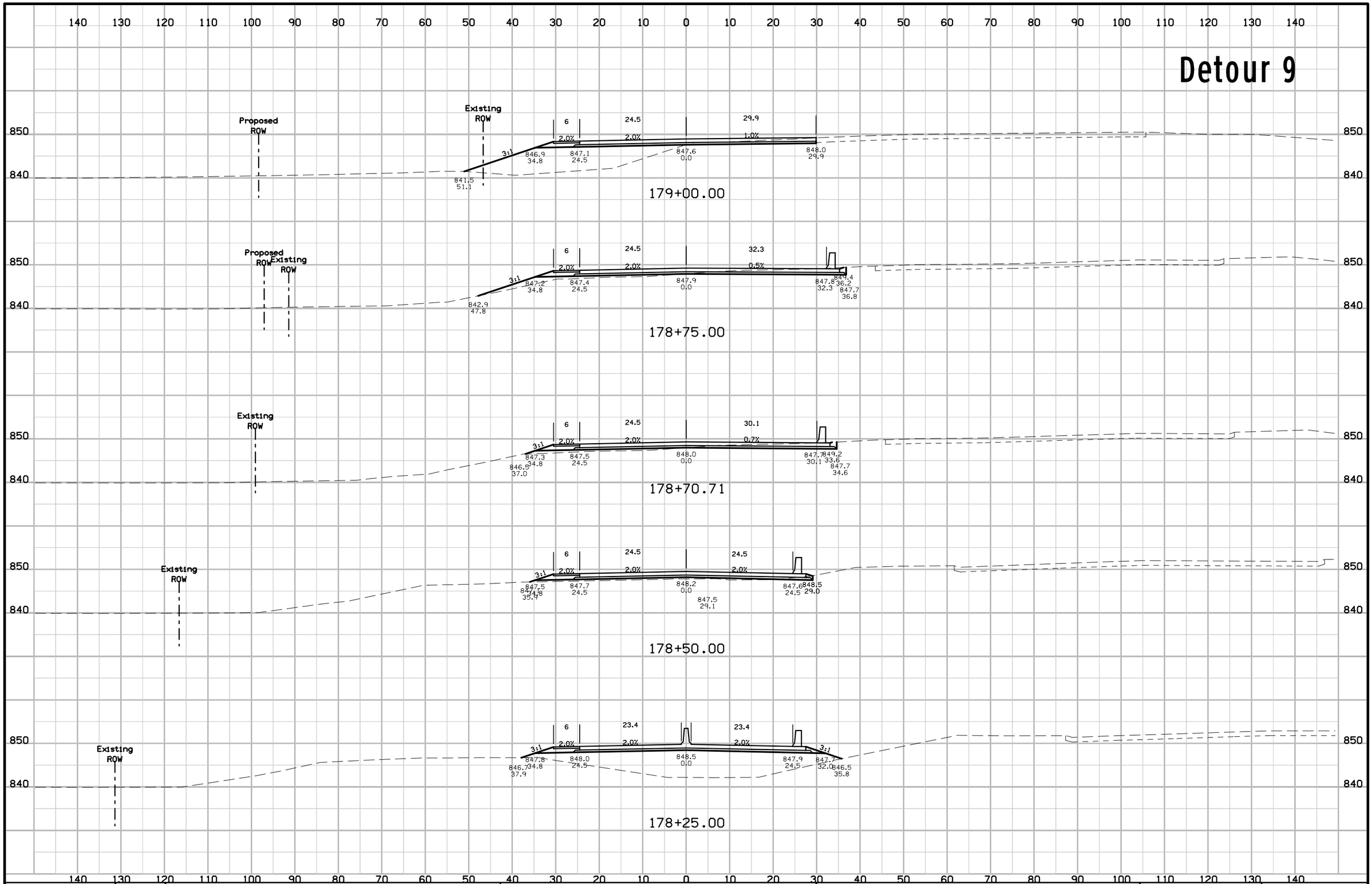

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.87

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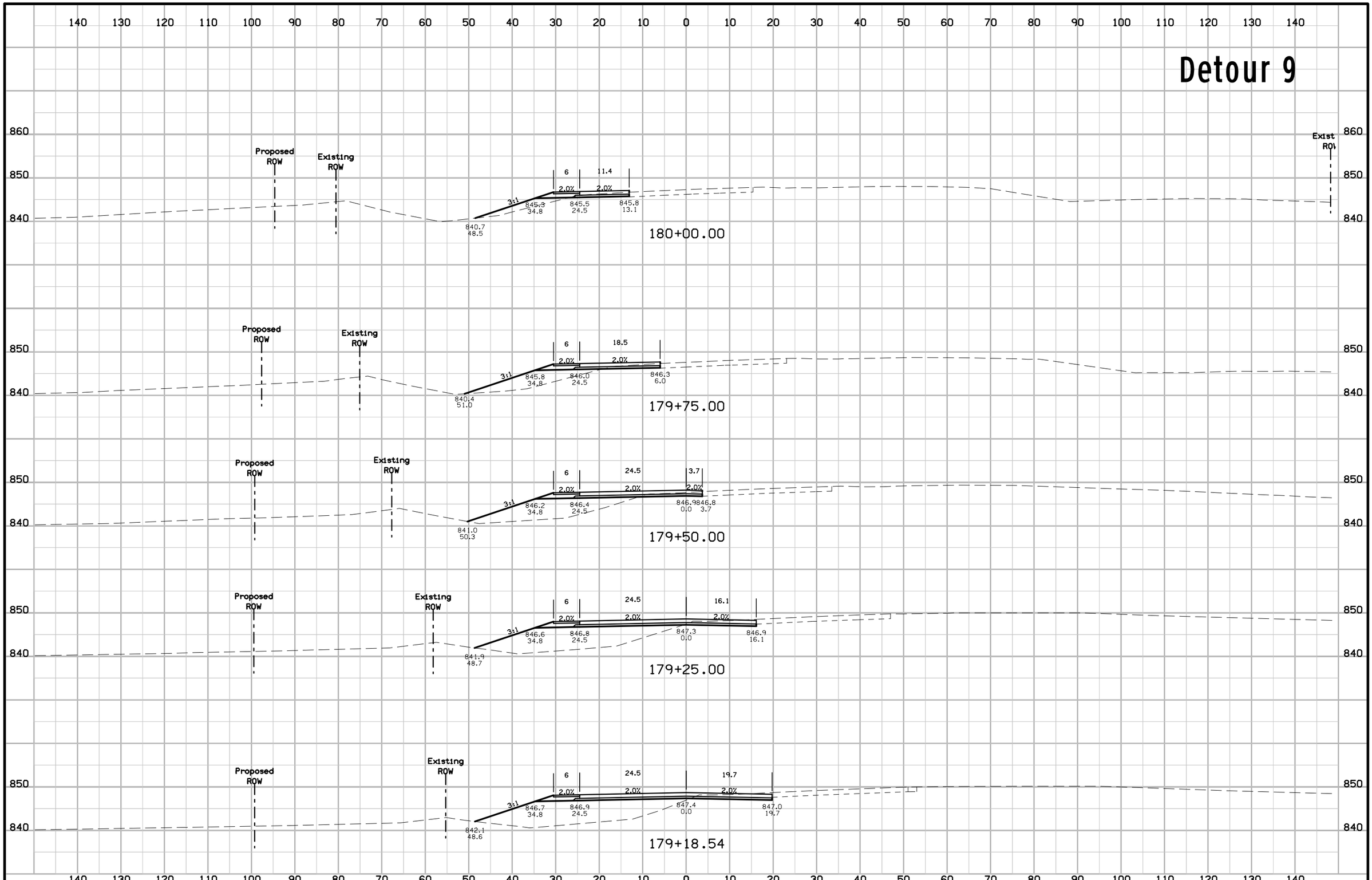
Detour 9



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.88

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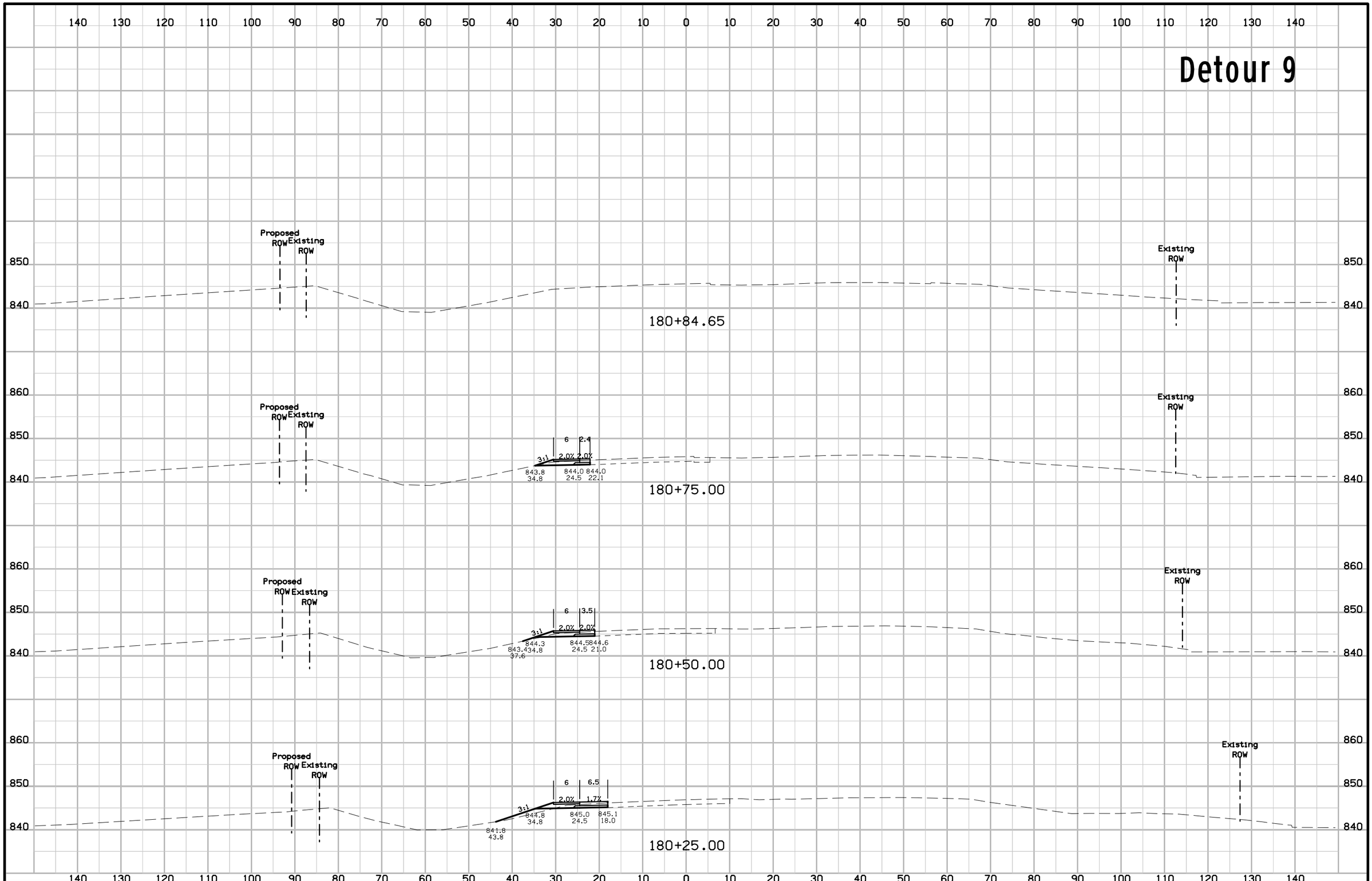
Detour 9



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER X.89

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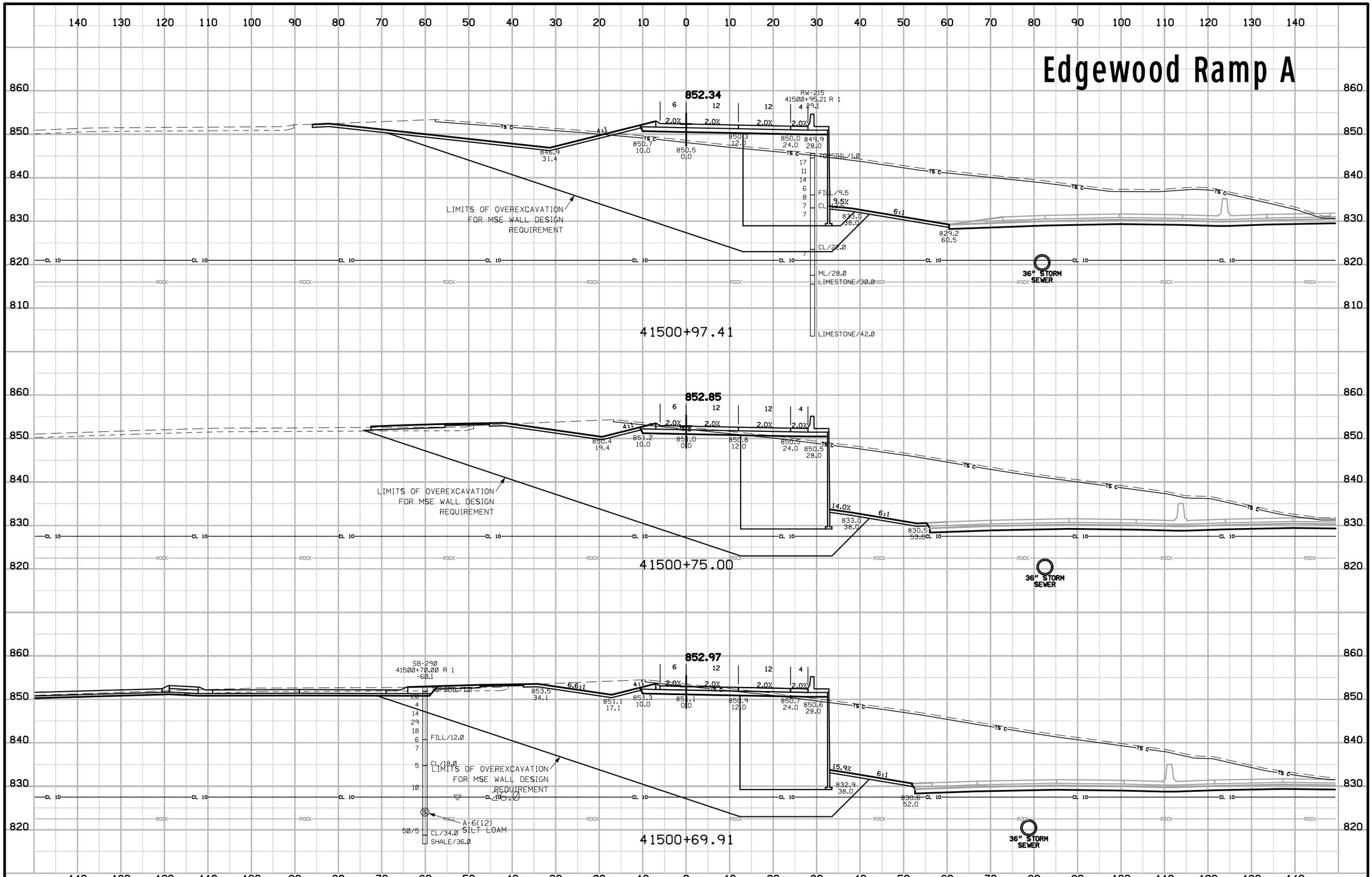
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.1

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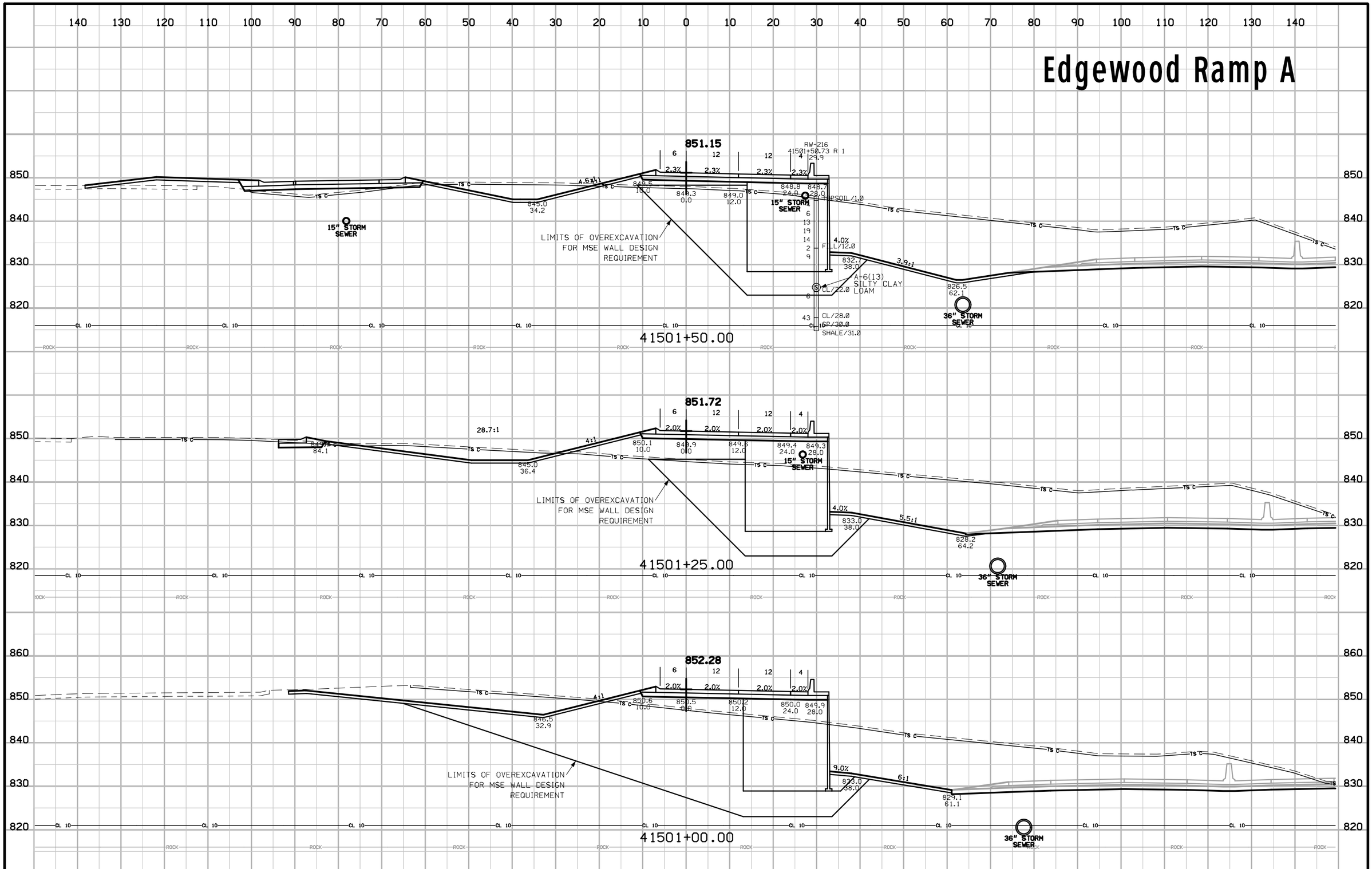
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.2

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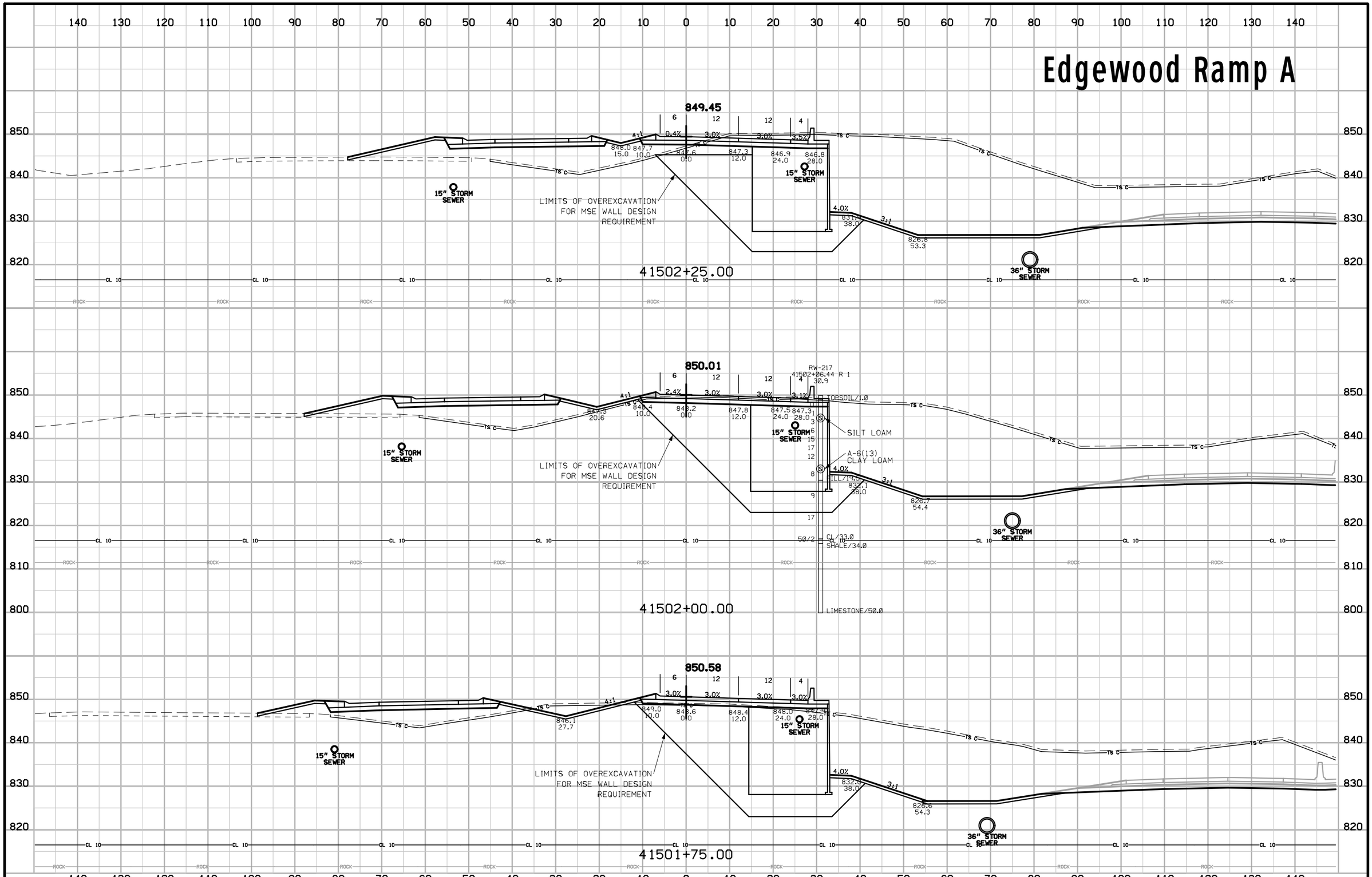
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.3

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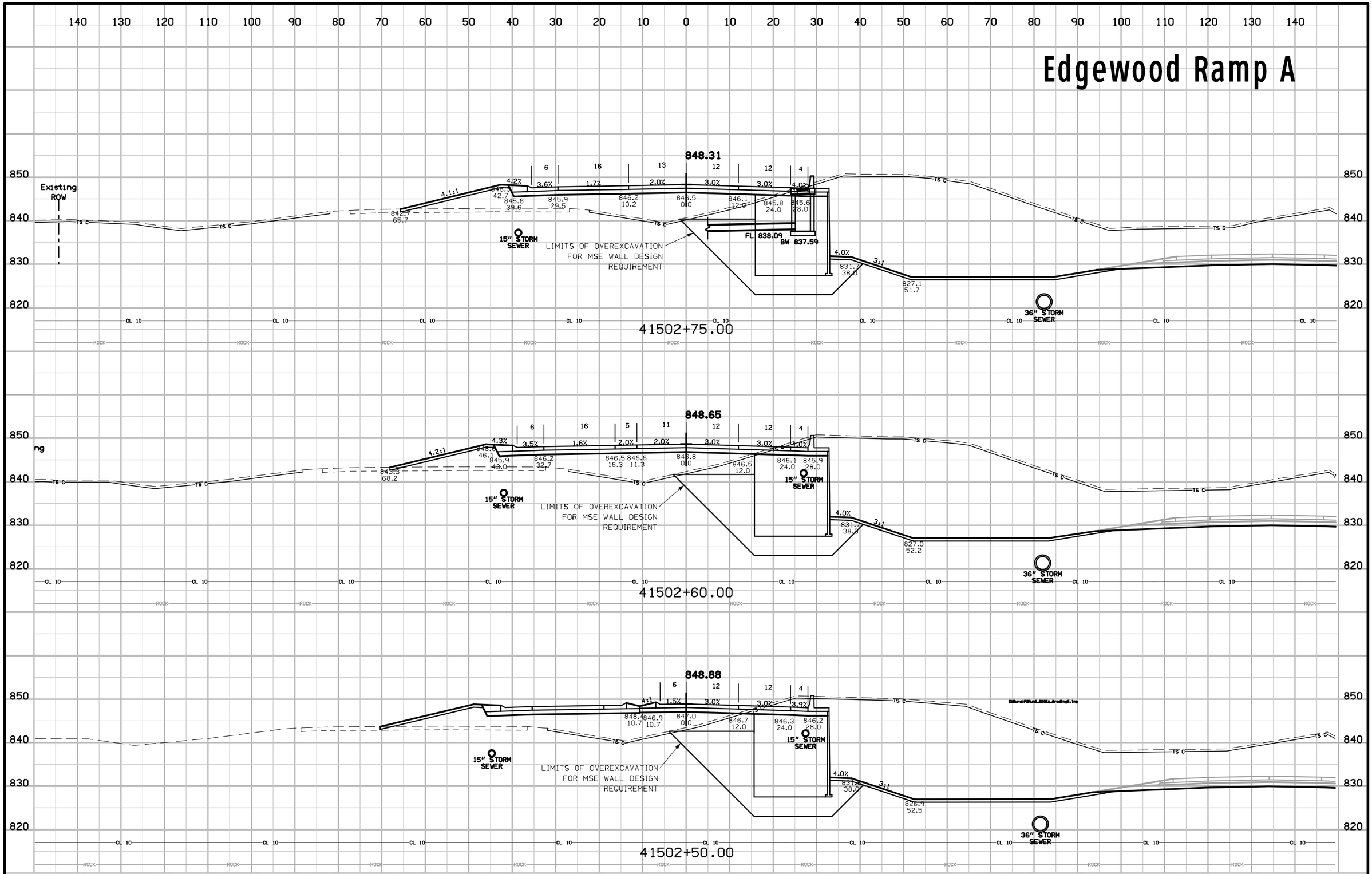
Edgewood Ramp A



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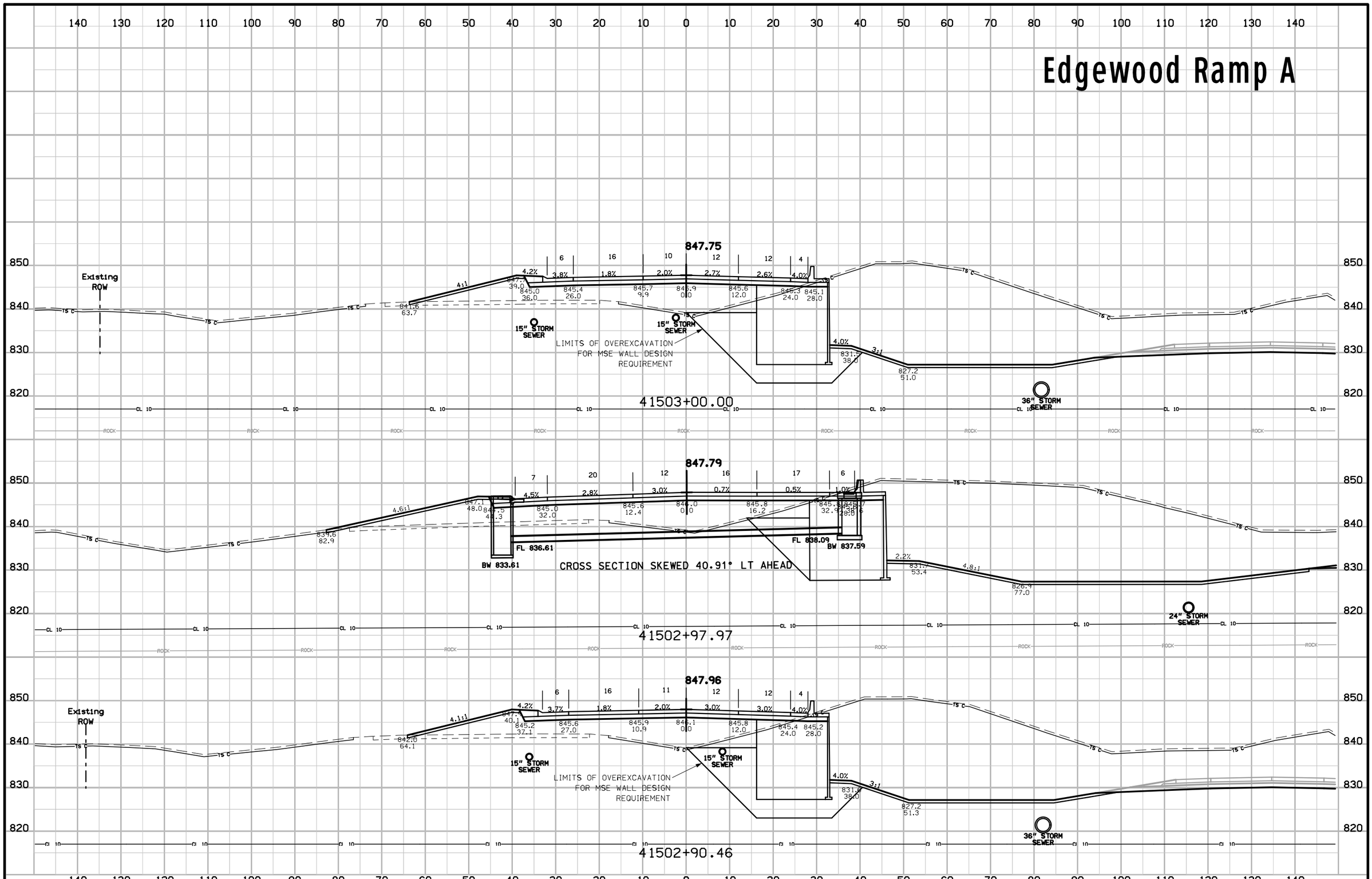
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.5

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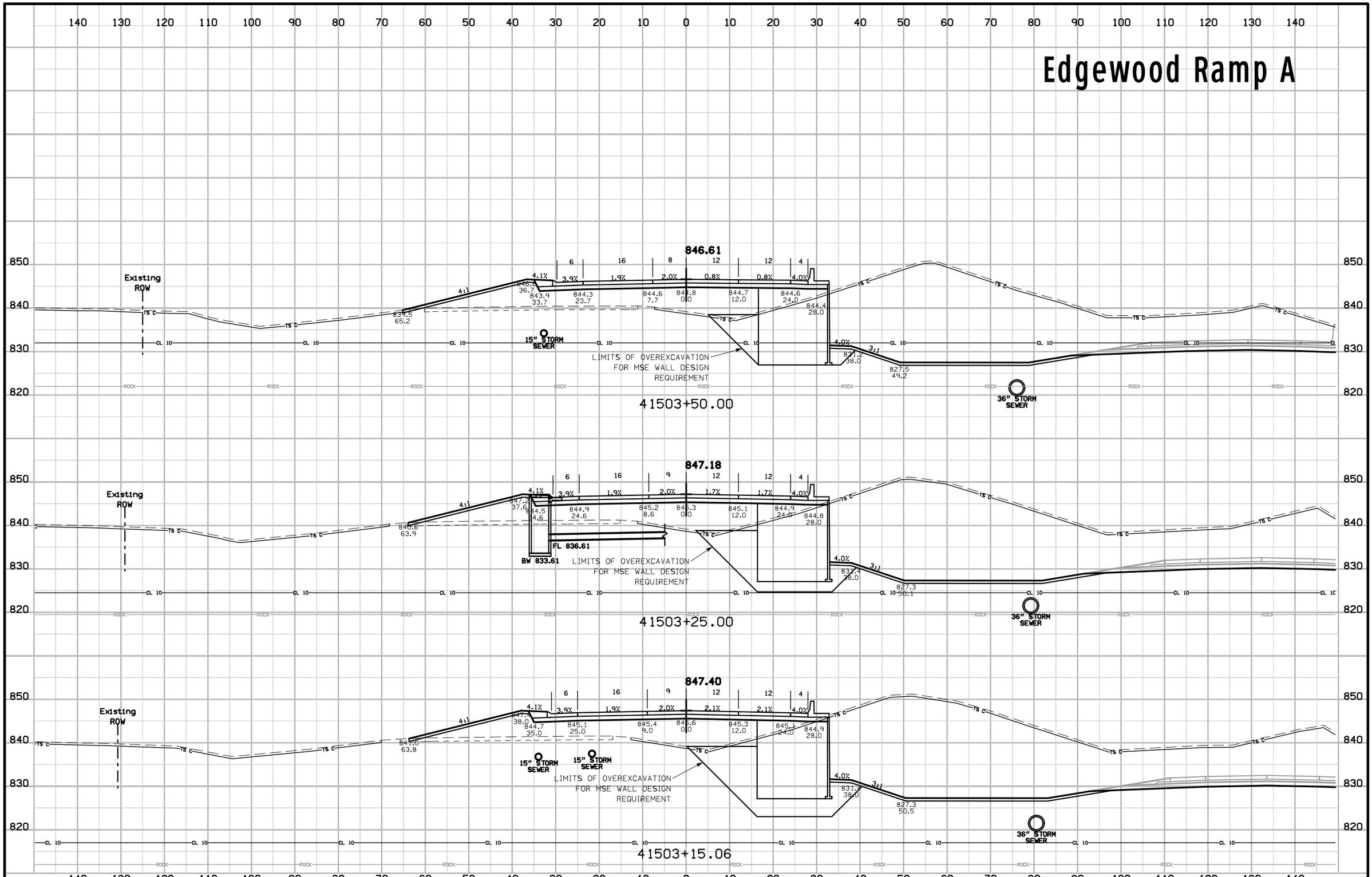
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.6

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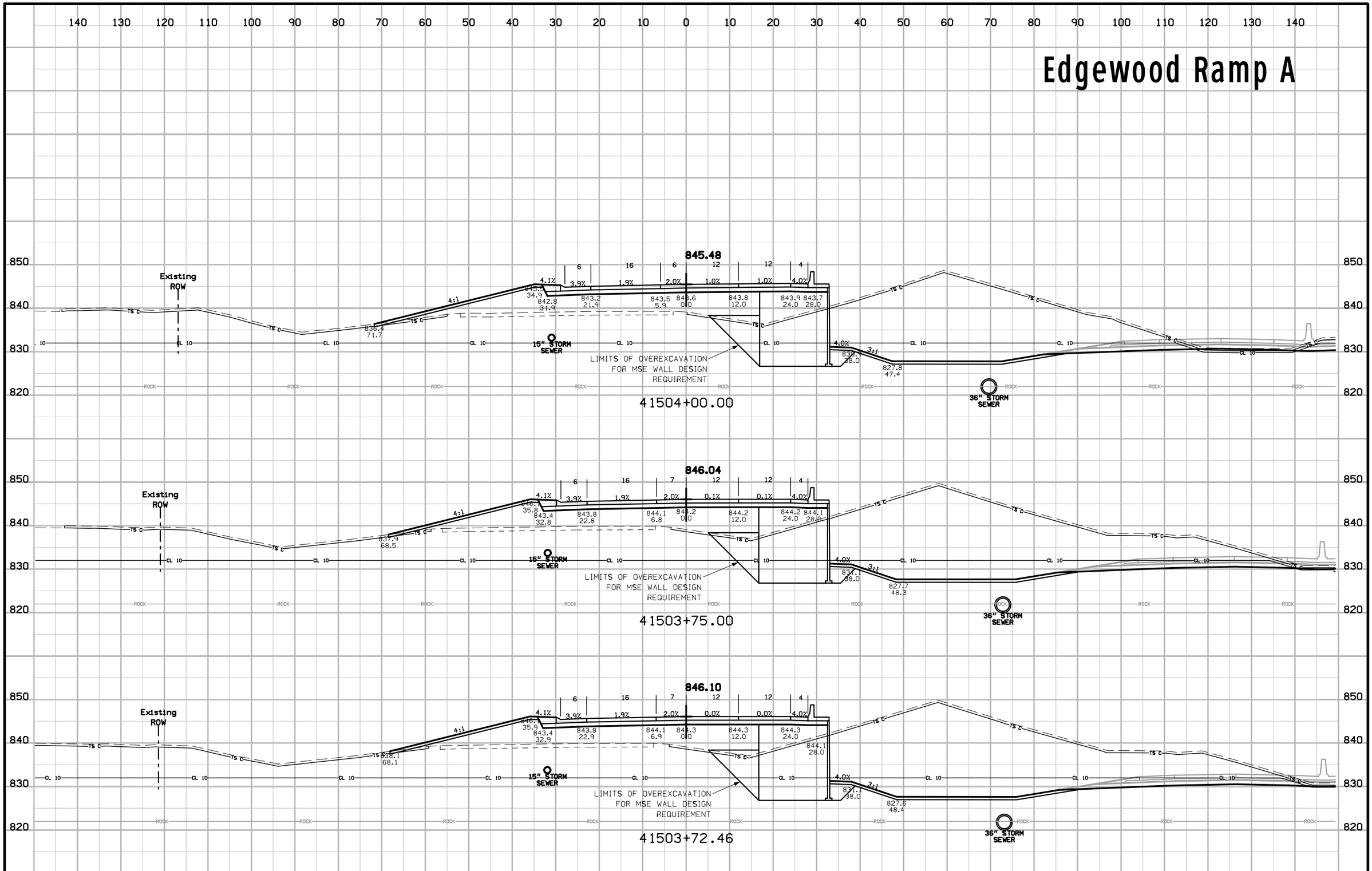
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.7

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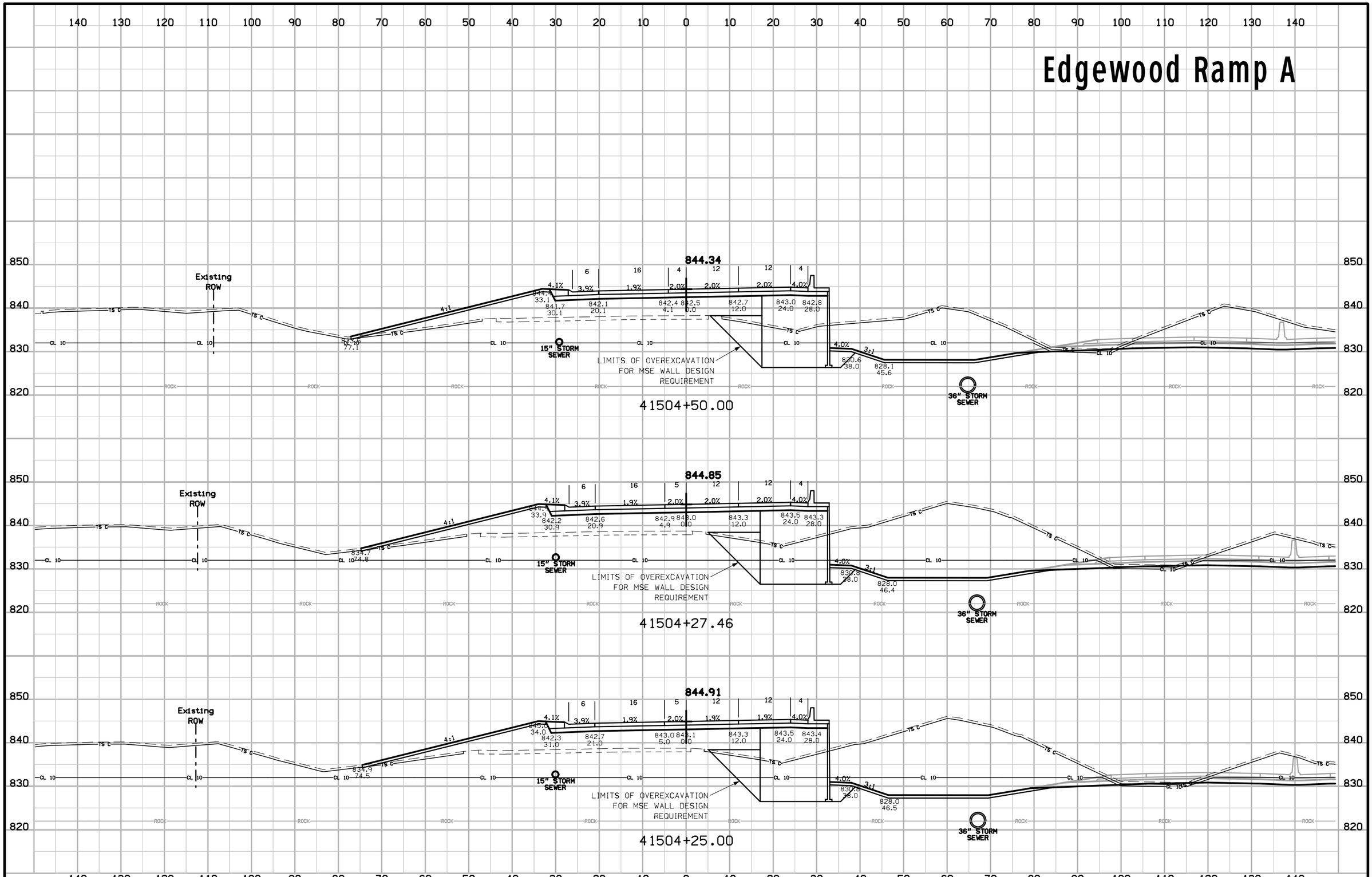
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.8

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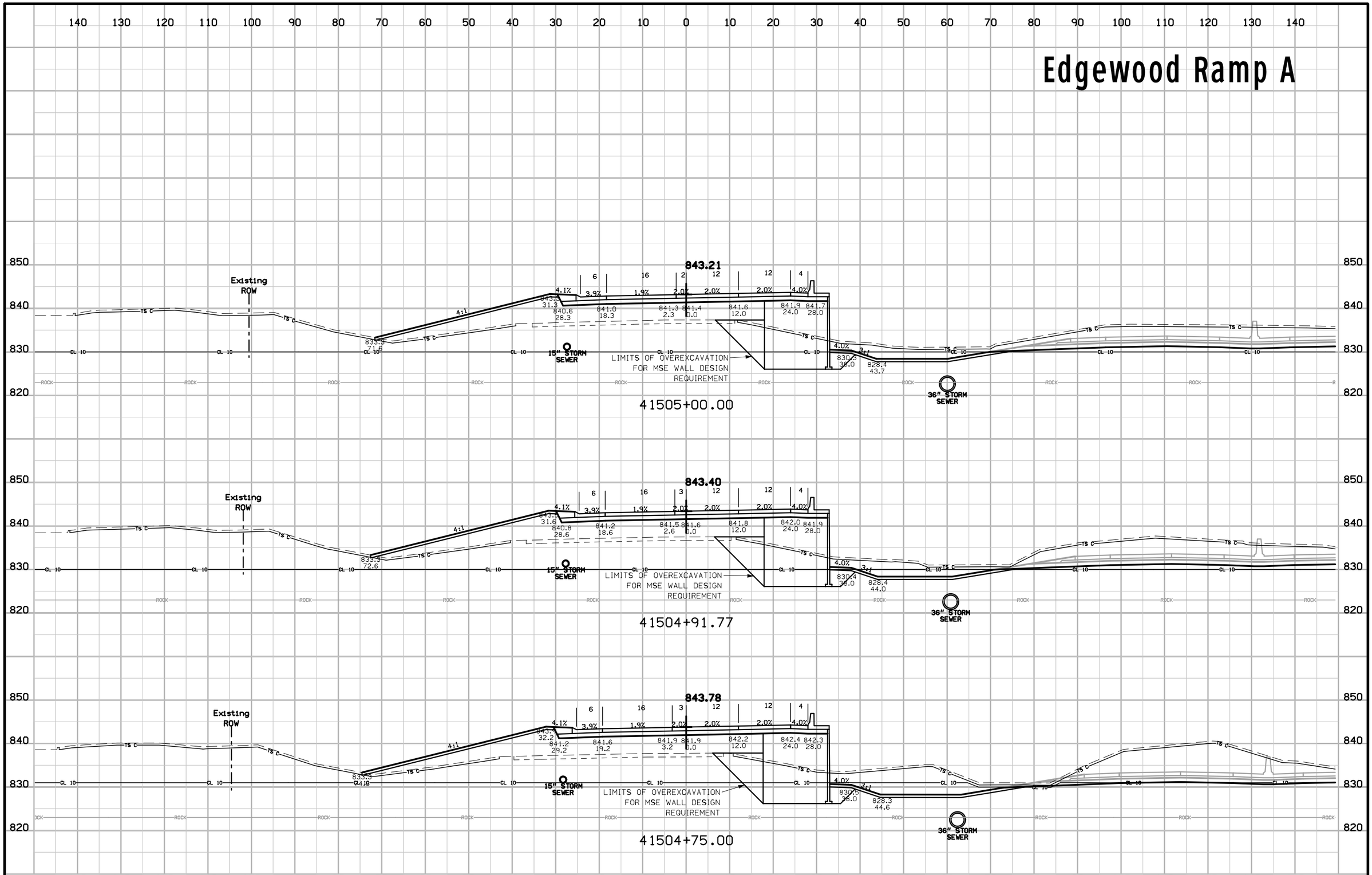
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.9

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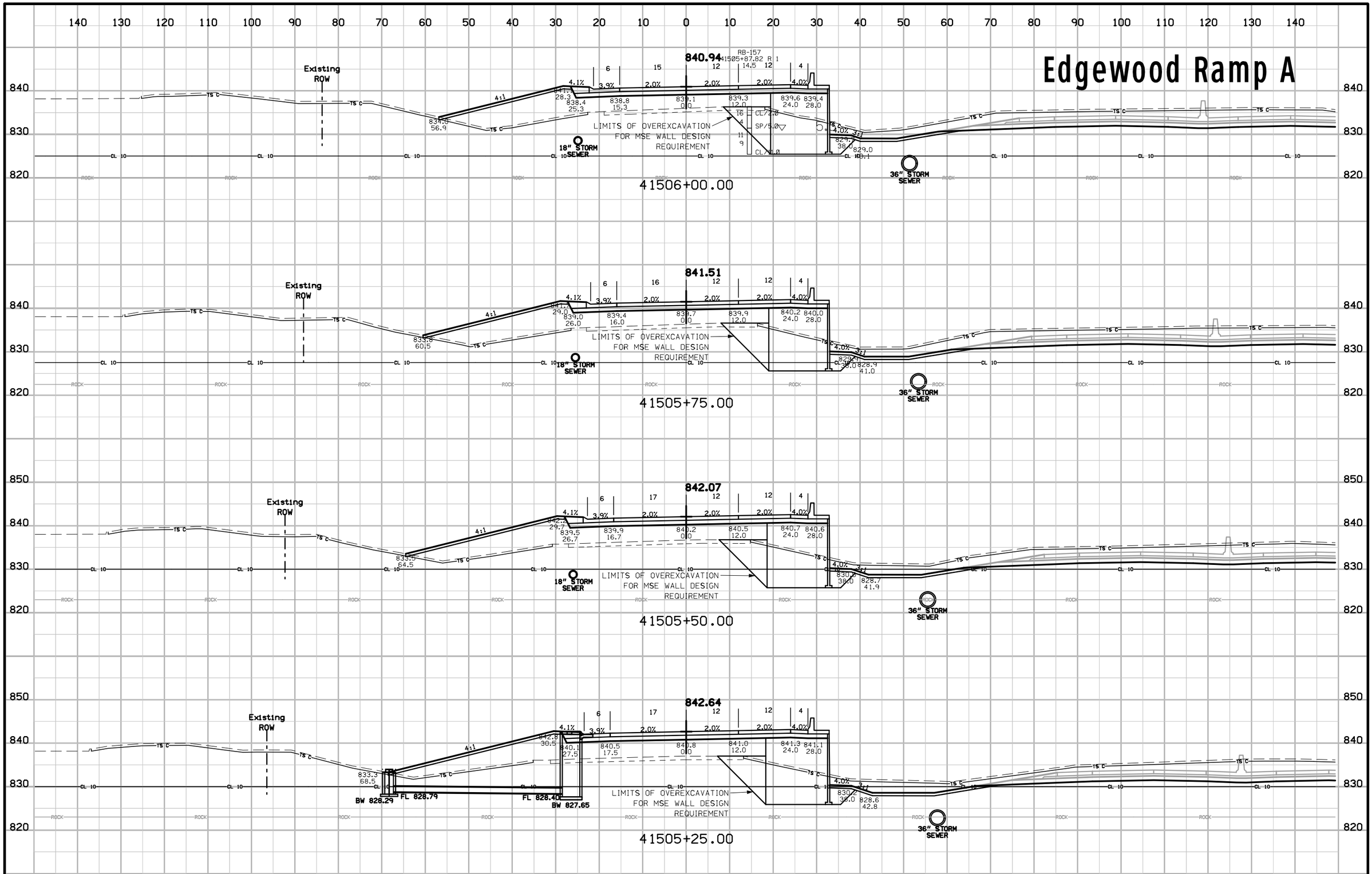
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.10

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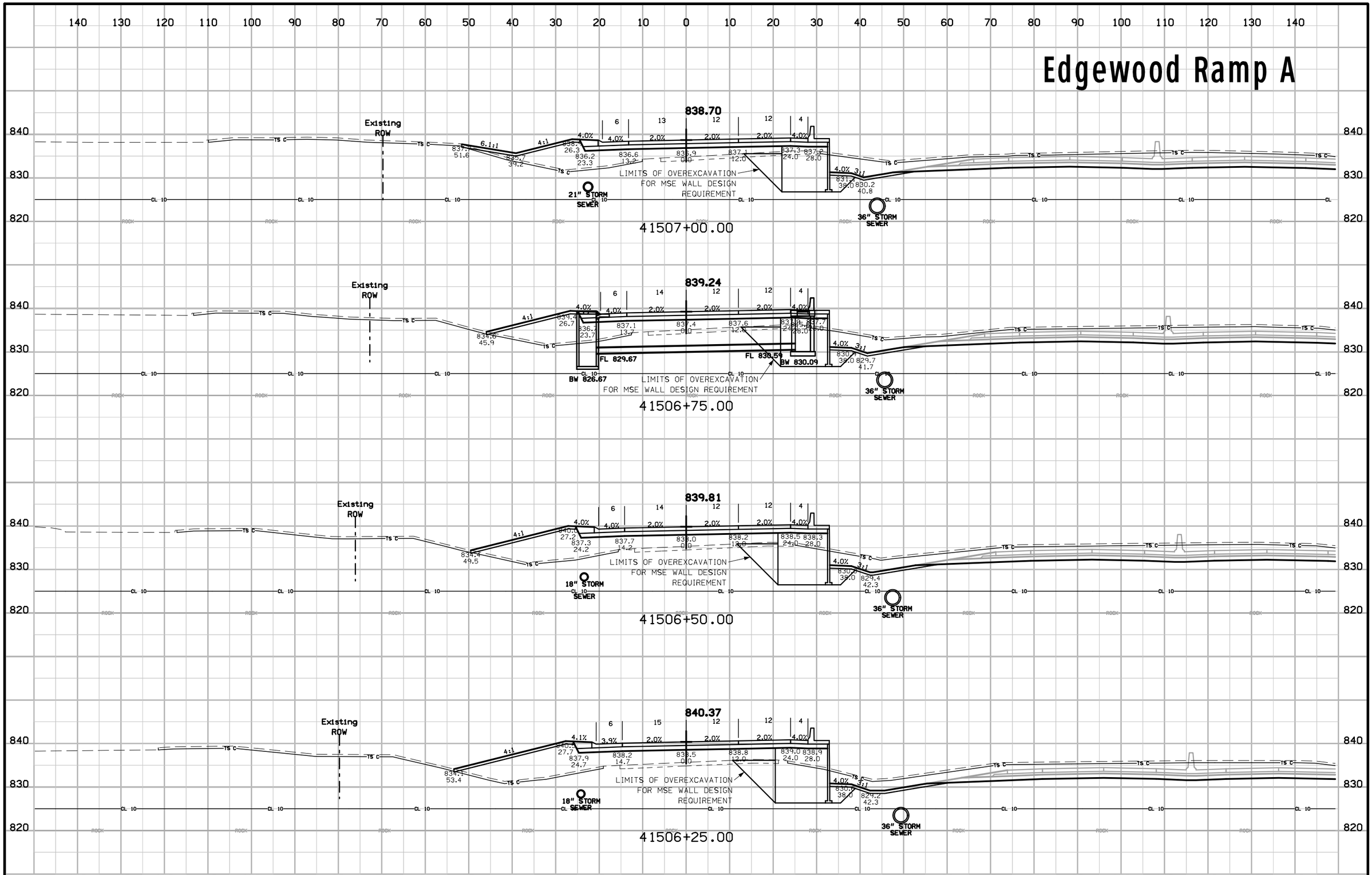
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.11

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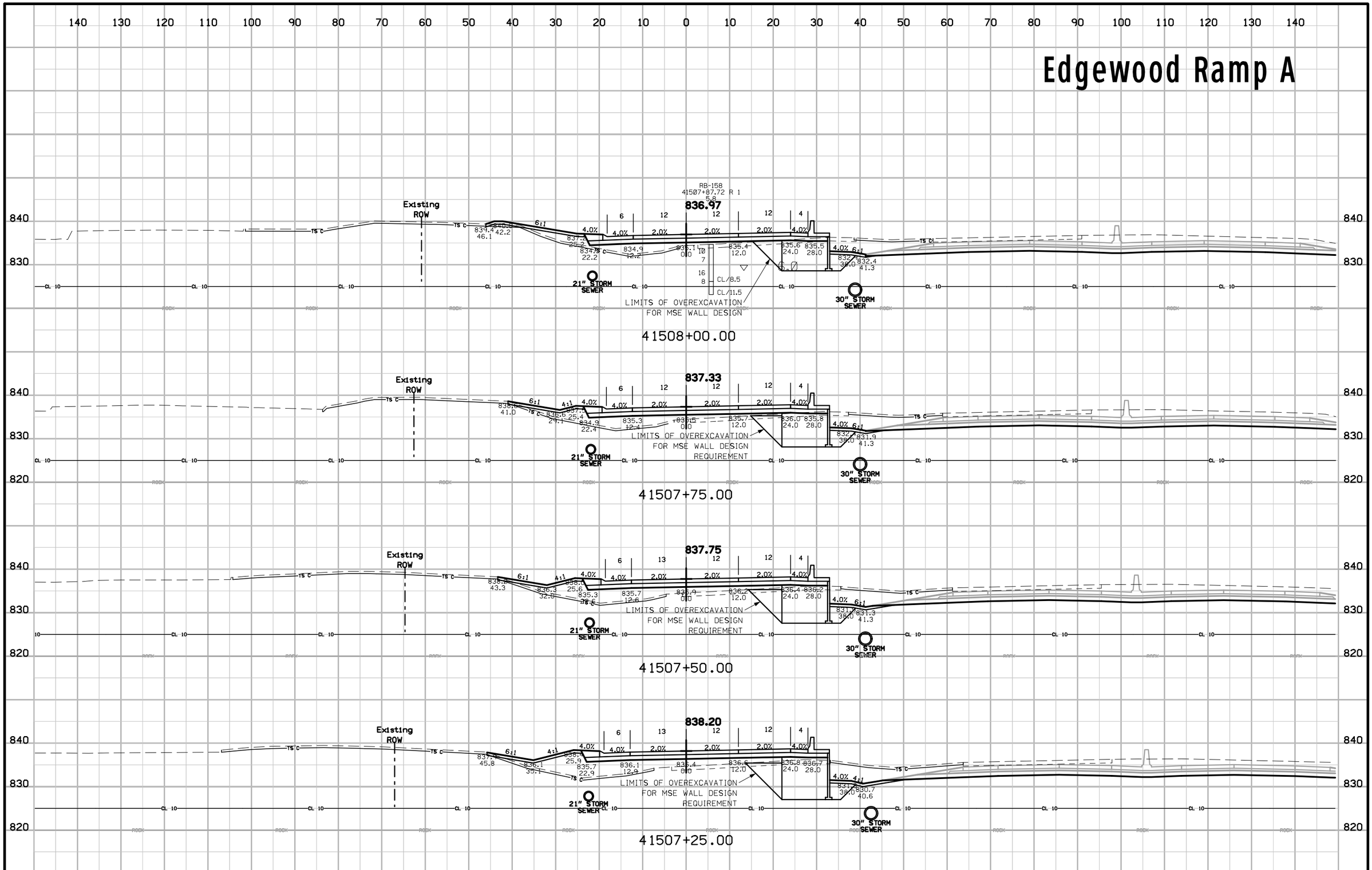
Edgewood Ramp A



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.12

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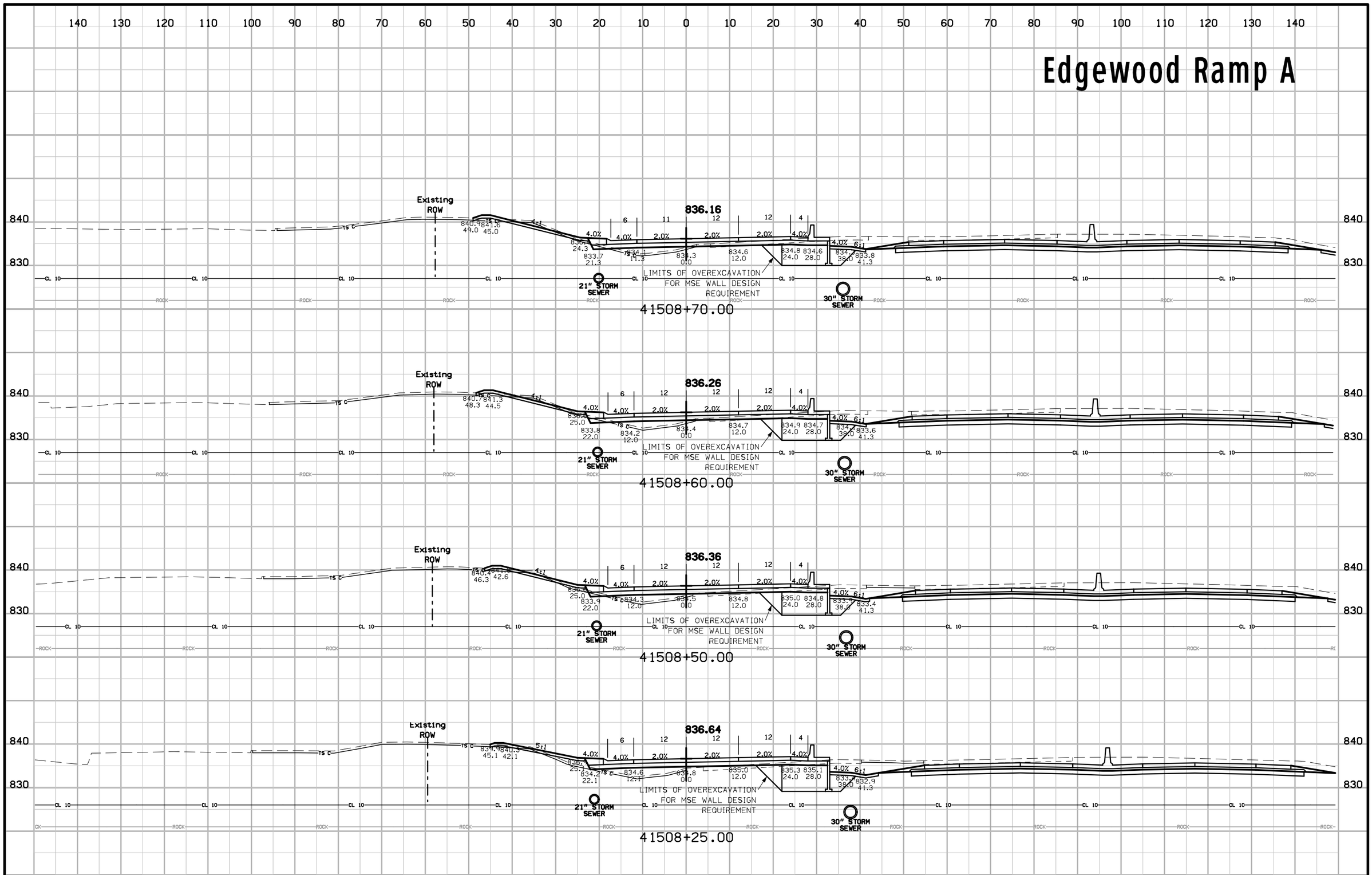
Edgewood Ramp A



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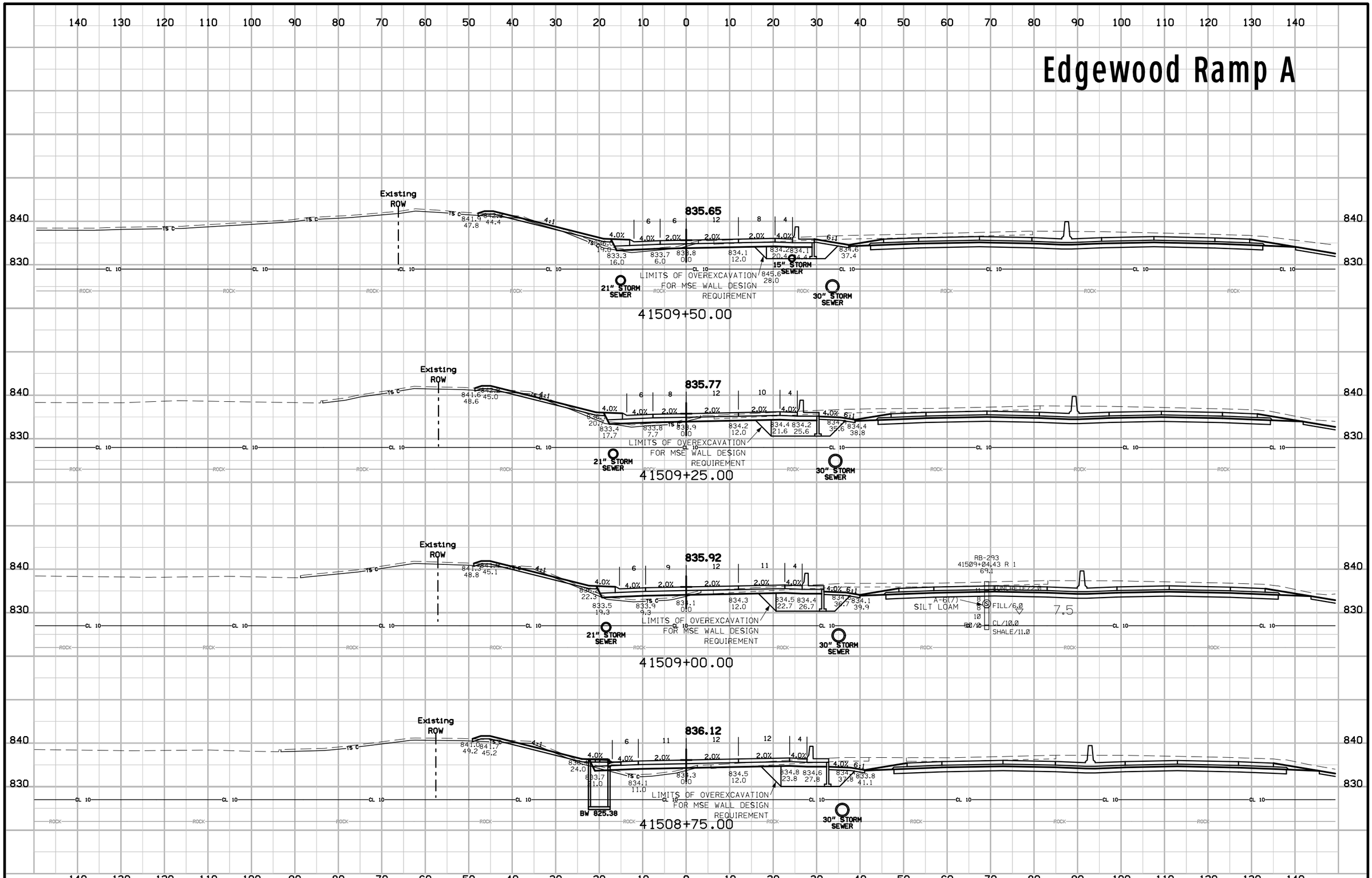
Edgewood Ramp A



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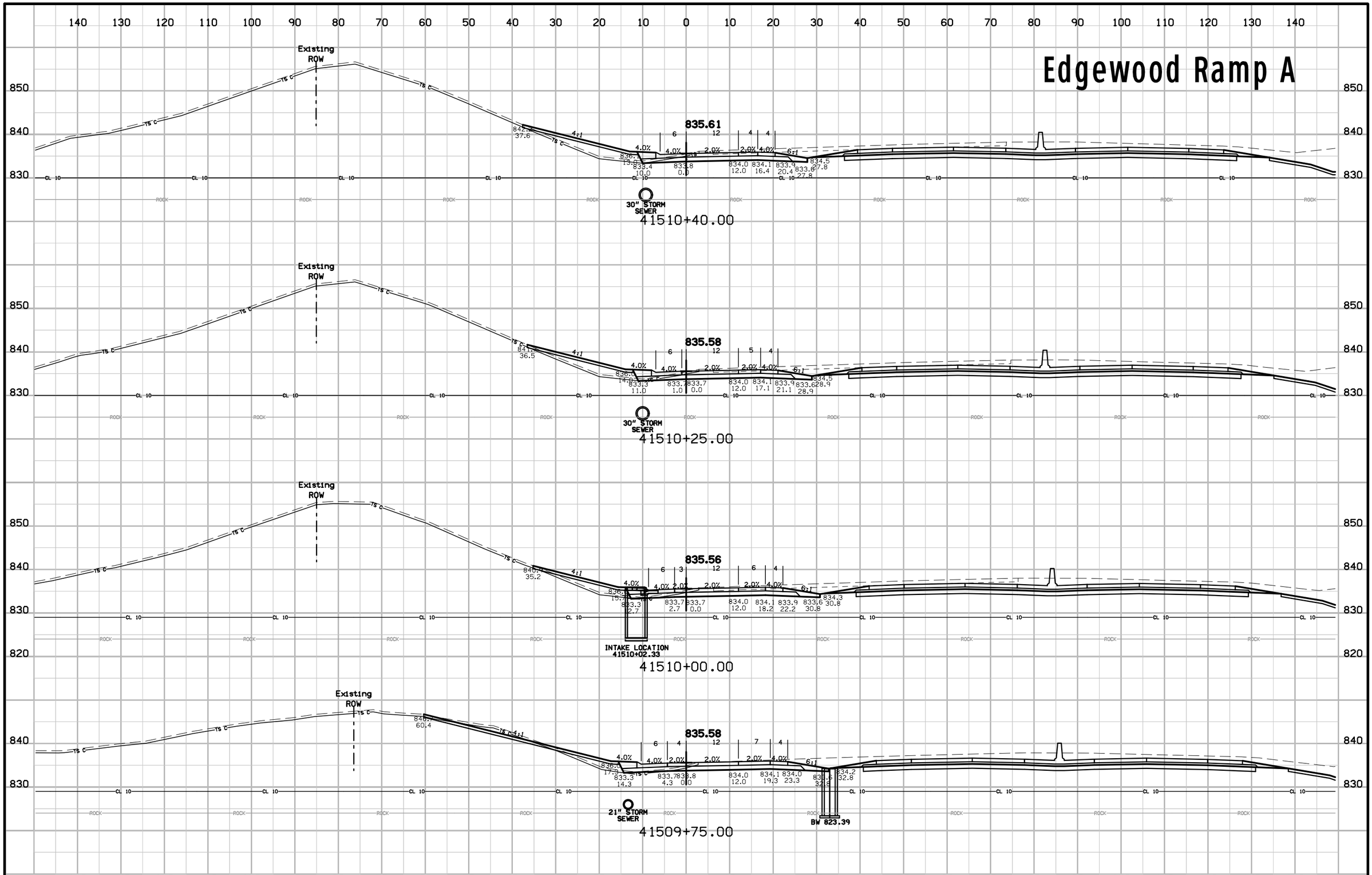
Edgewood Ramp A



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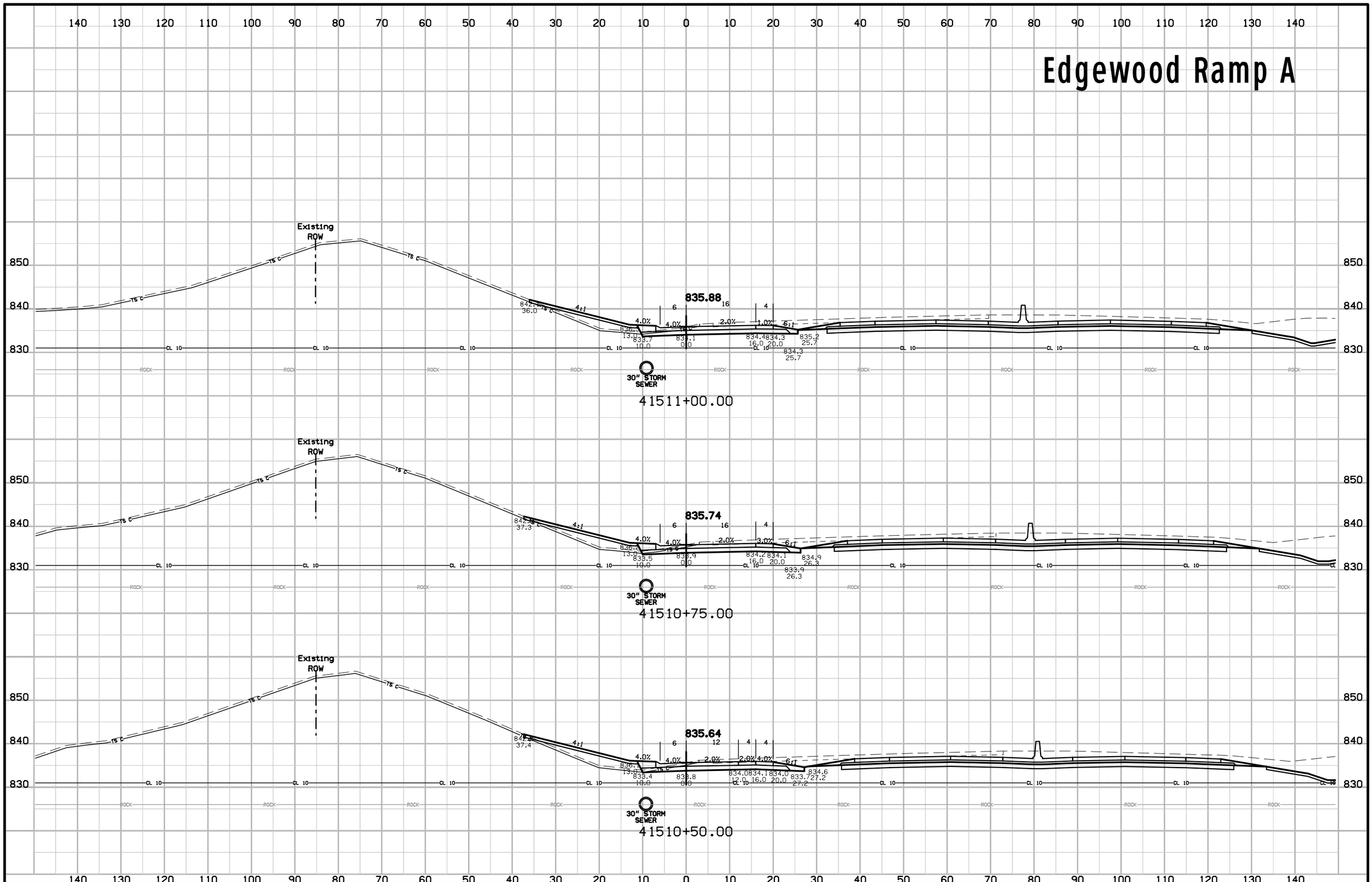
Edgewood Ramp A



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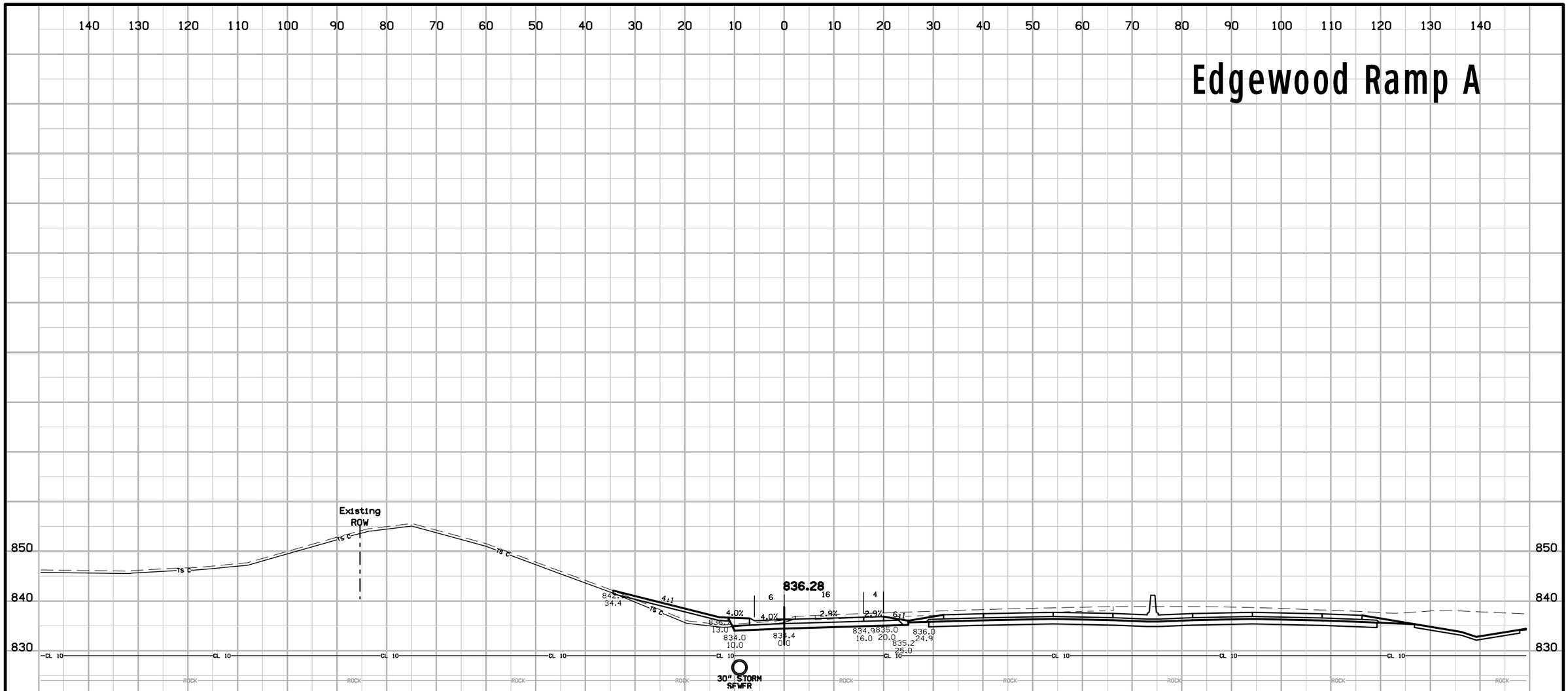
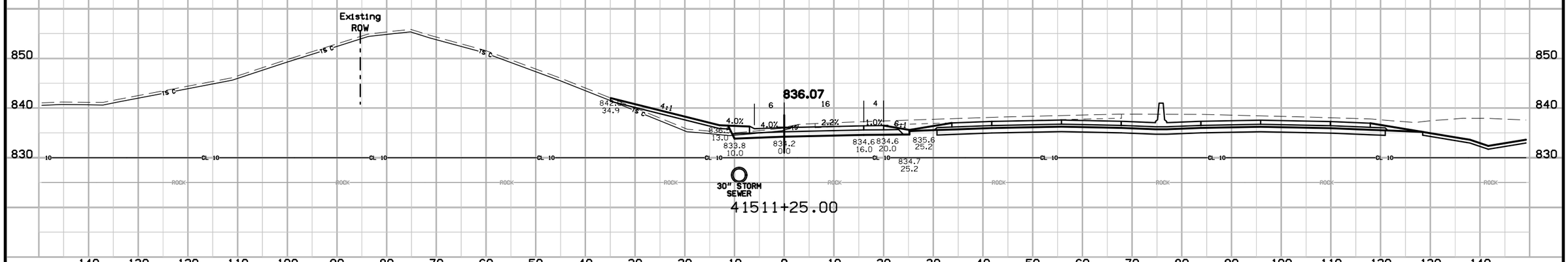
Edgewood Ramp A





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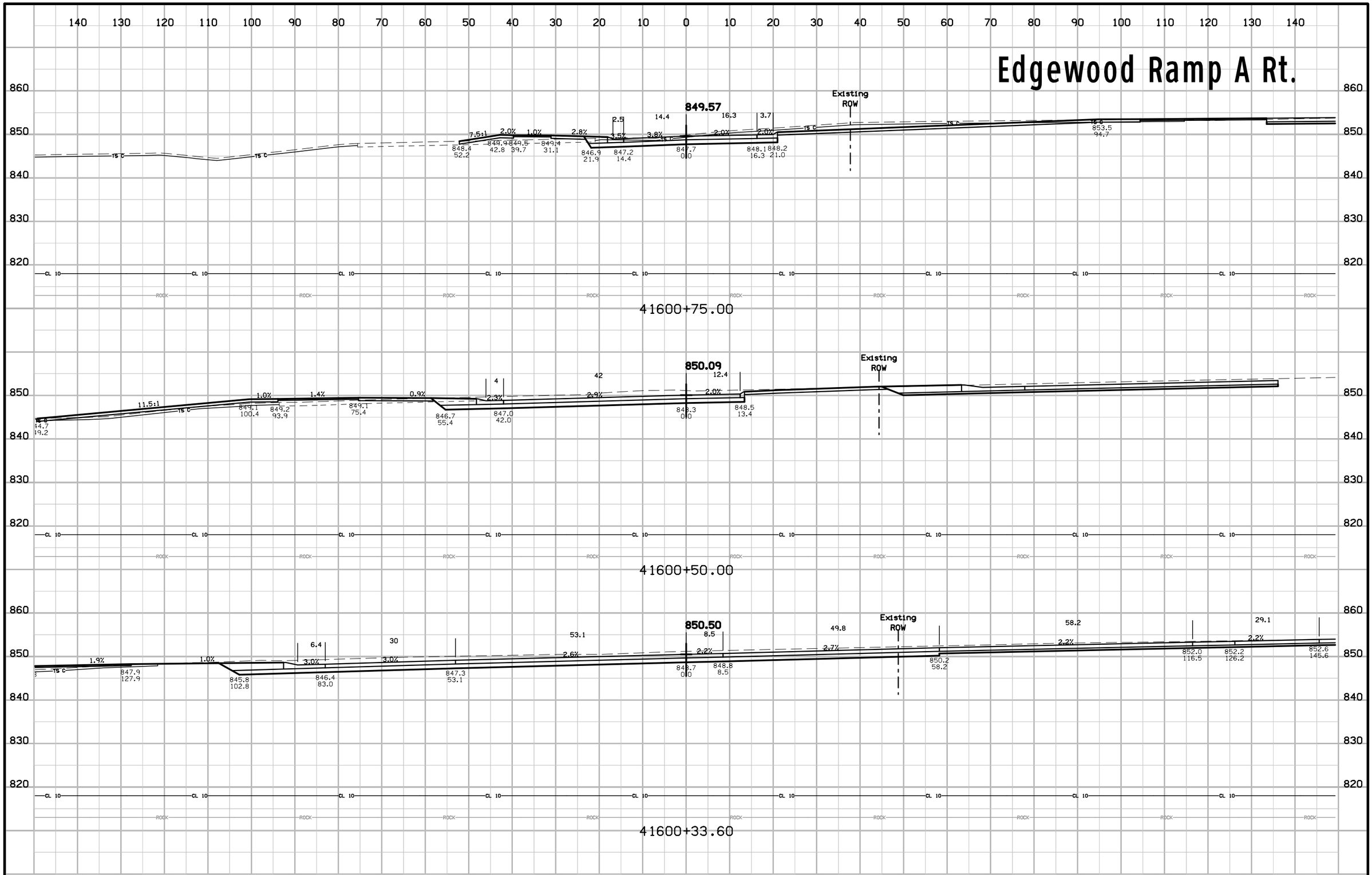

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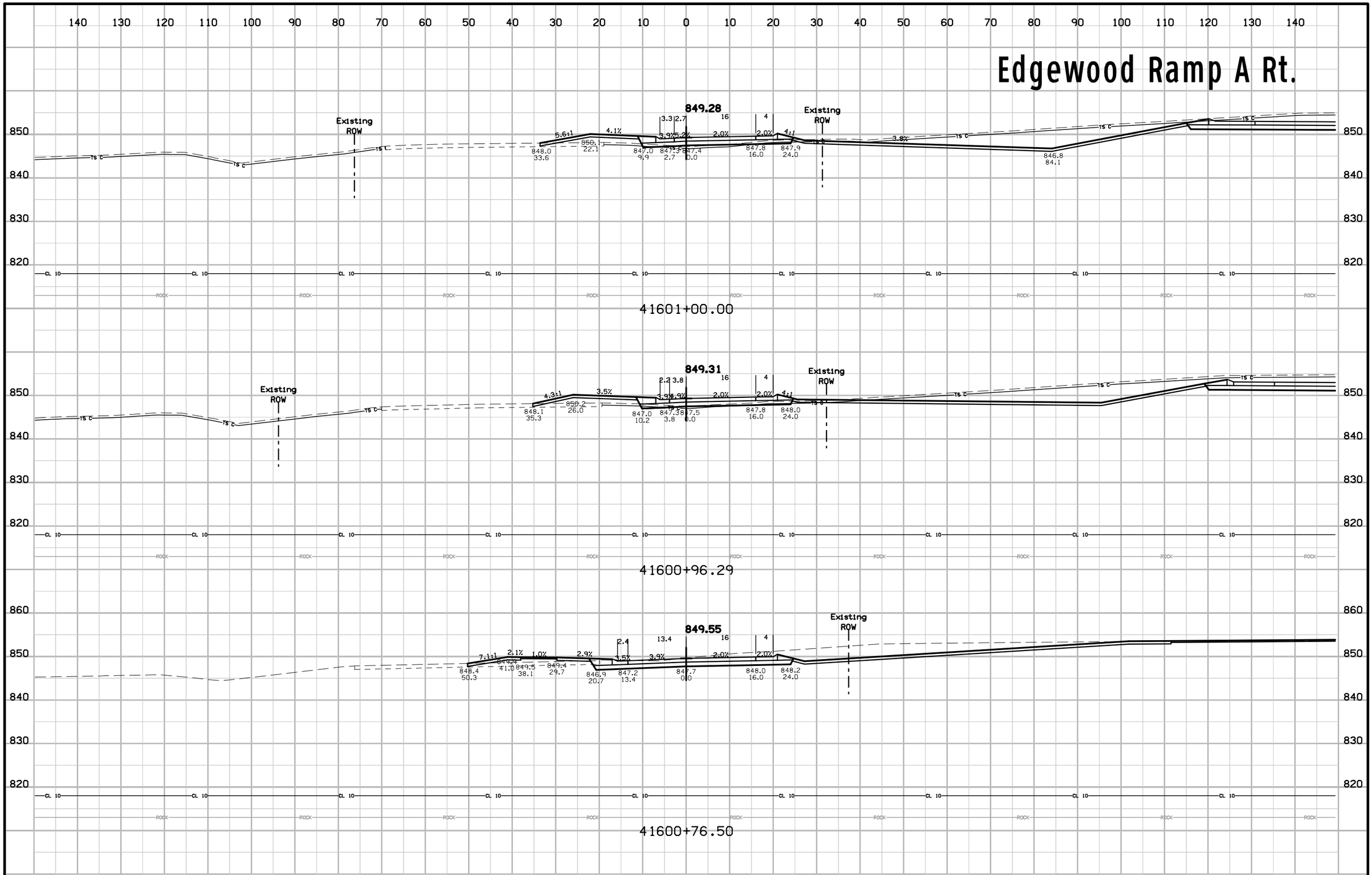

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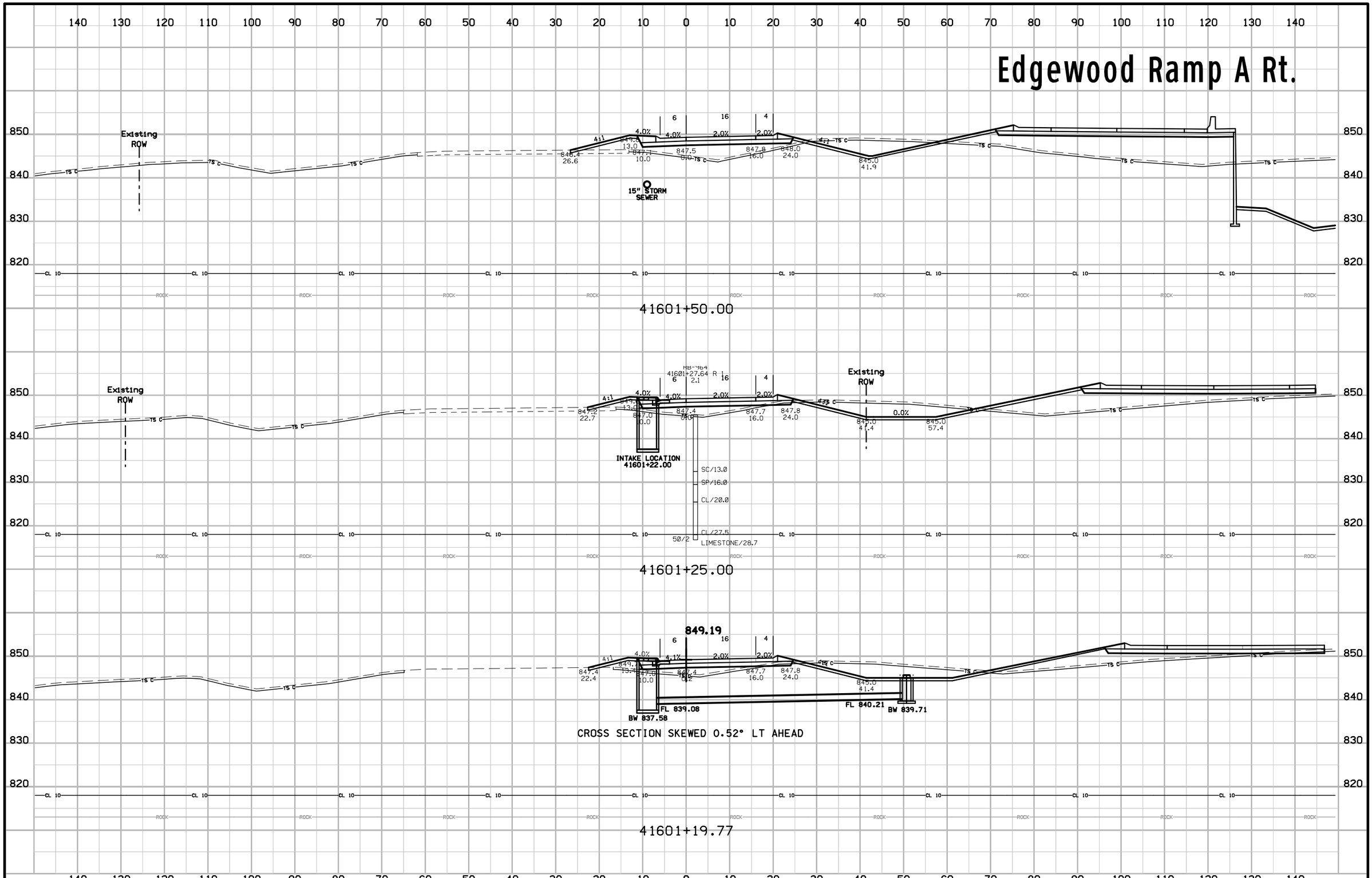

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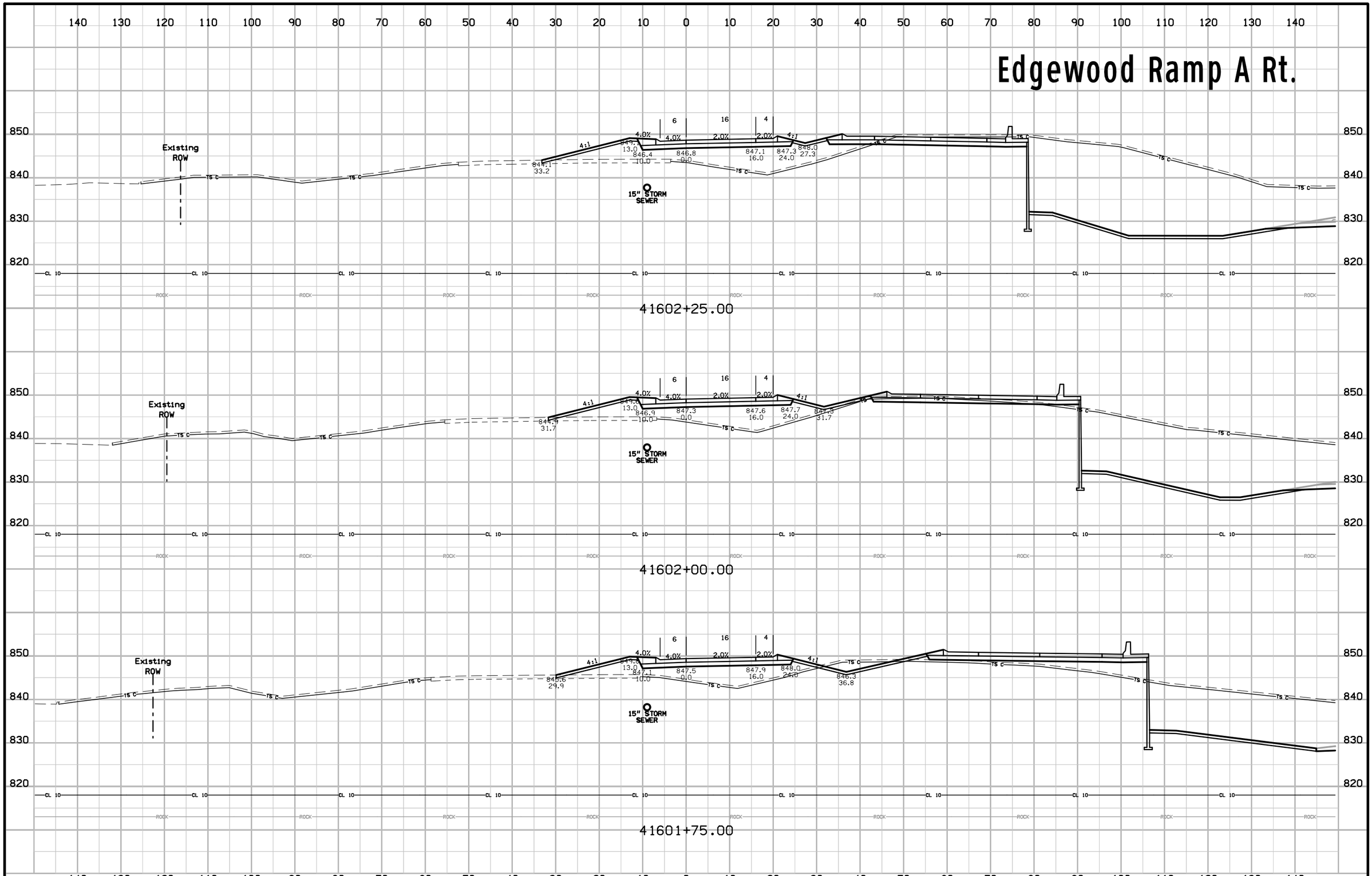

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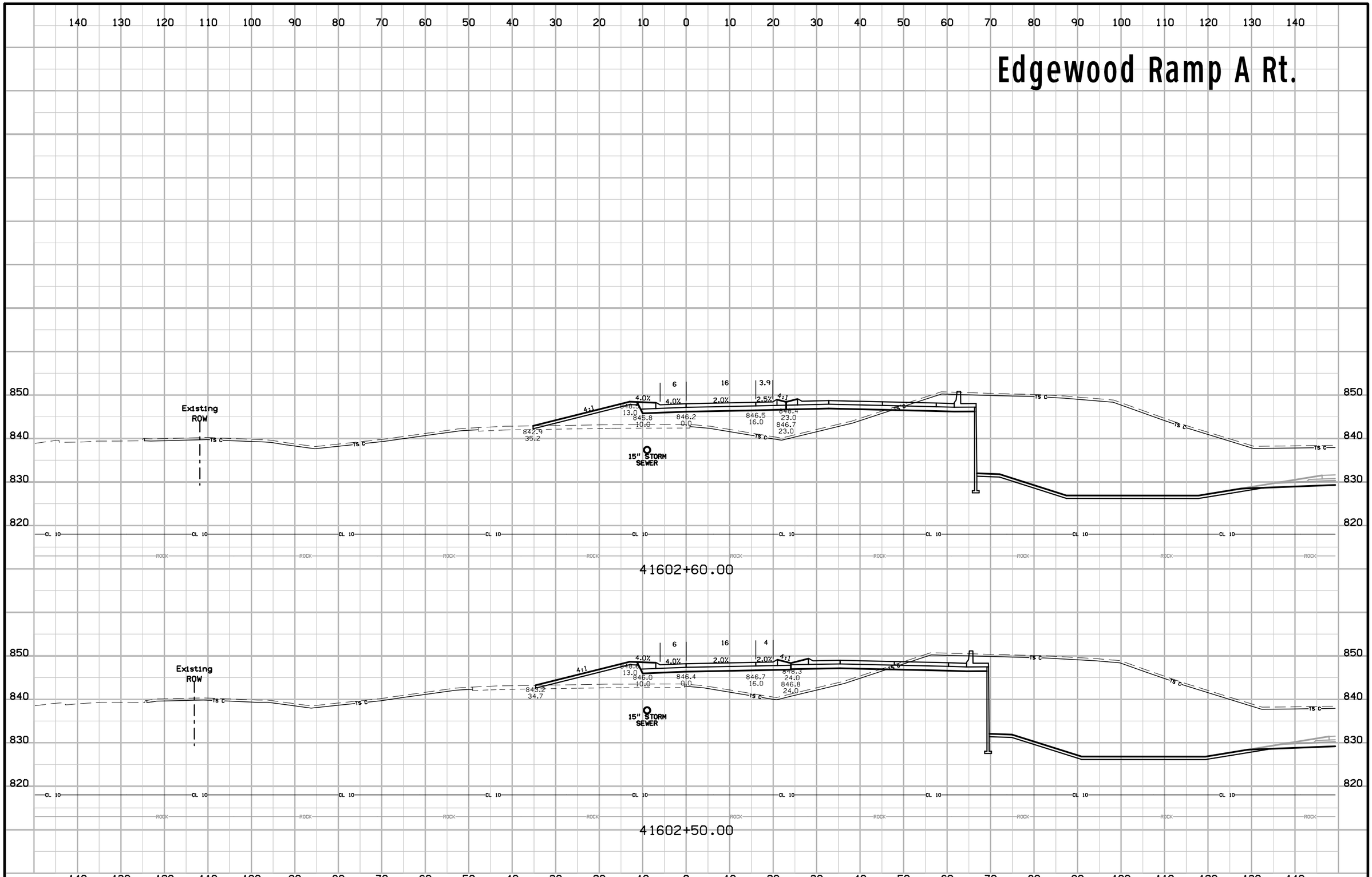
Edgewood Ramp A Rt.



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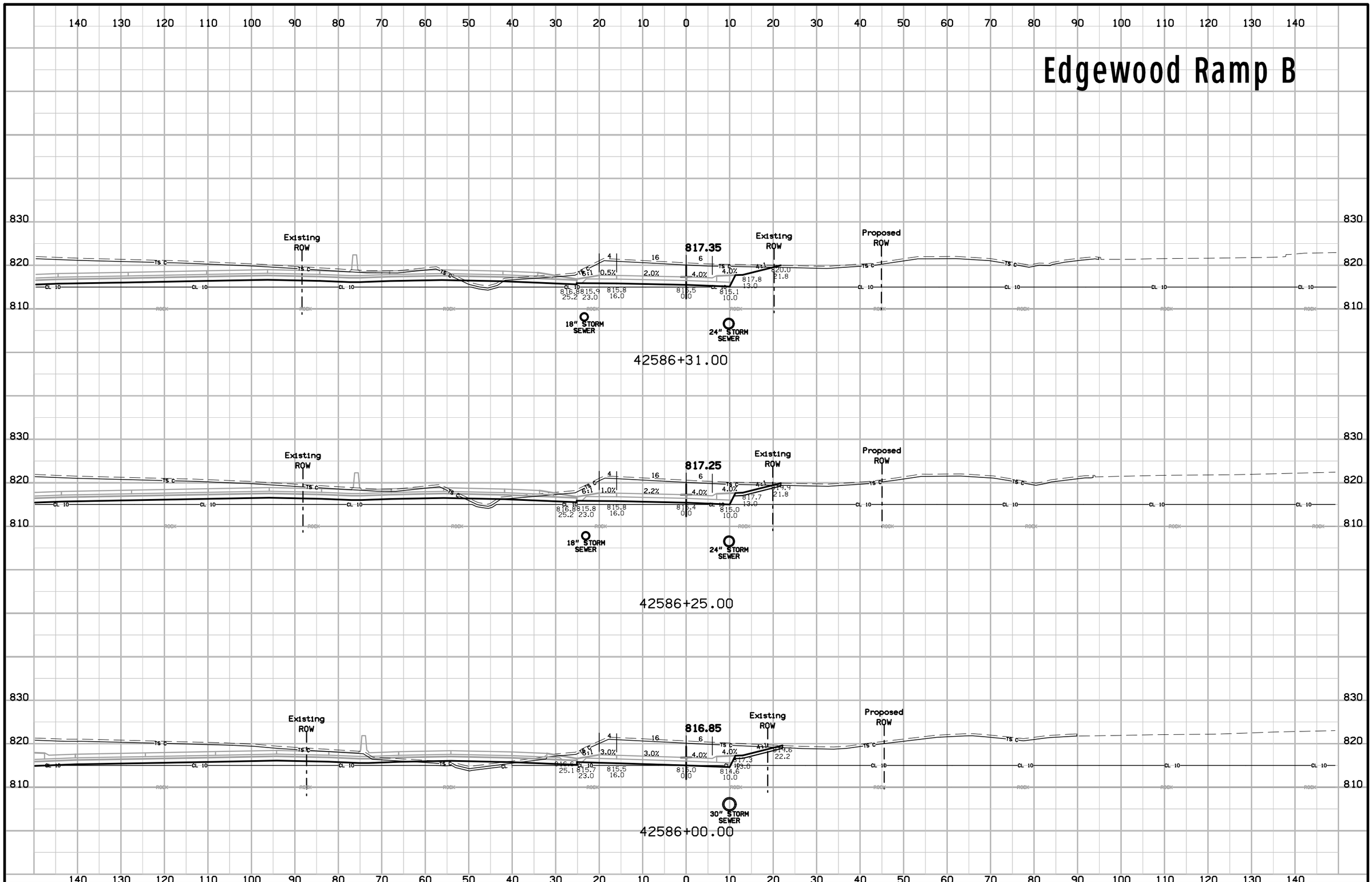
Edgewood Ramp B



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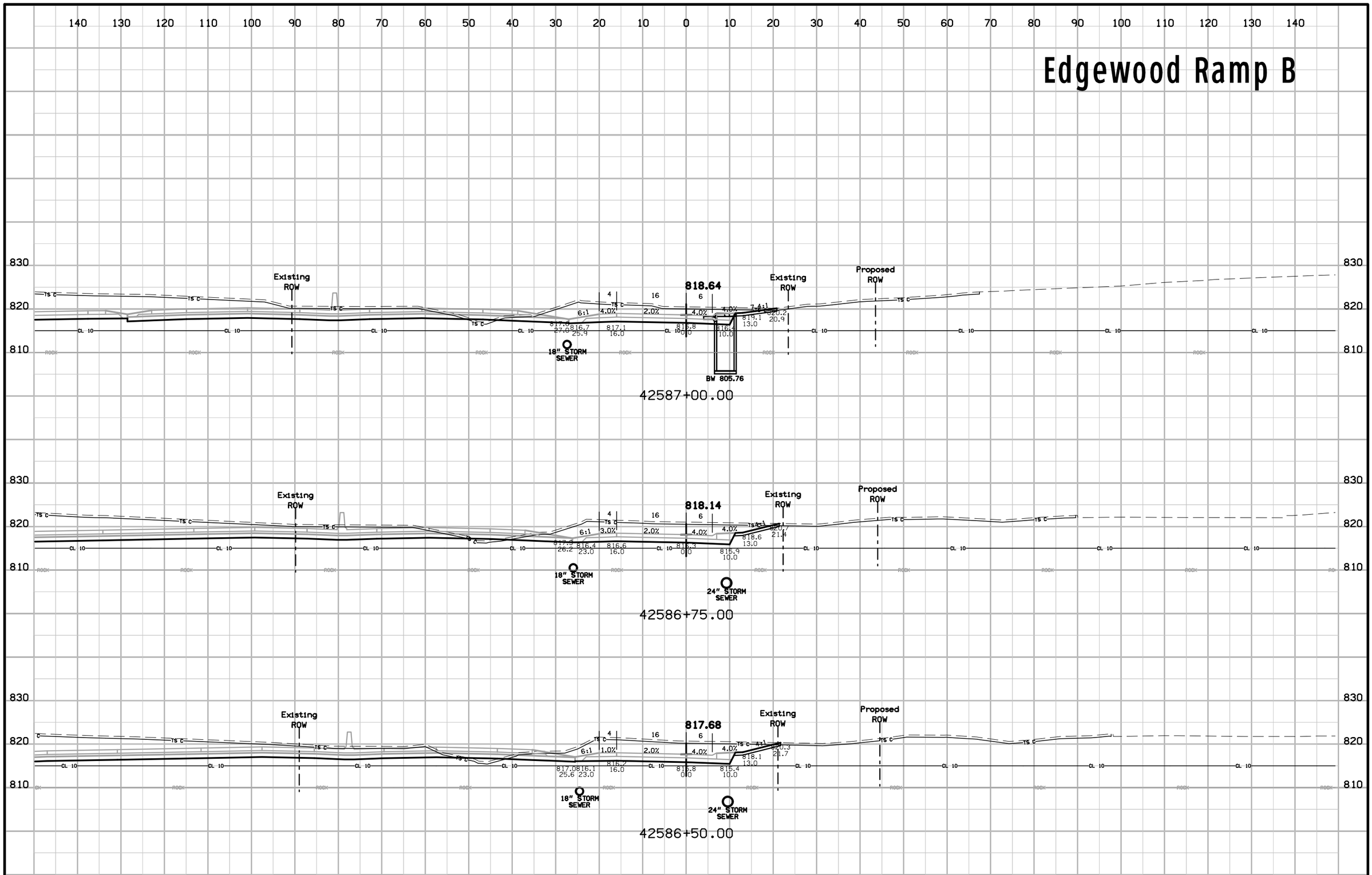
Edgewood Ramp B



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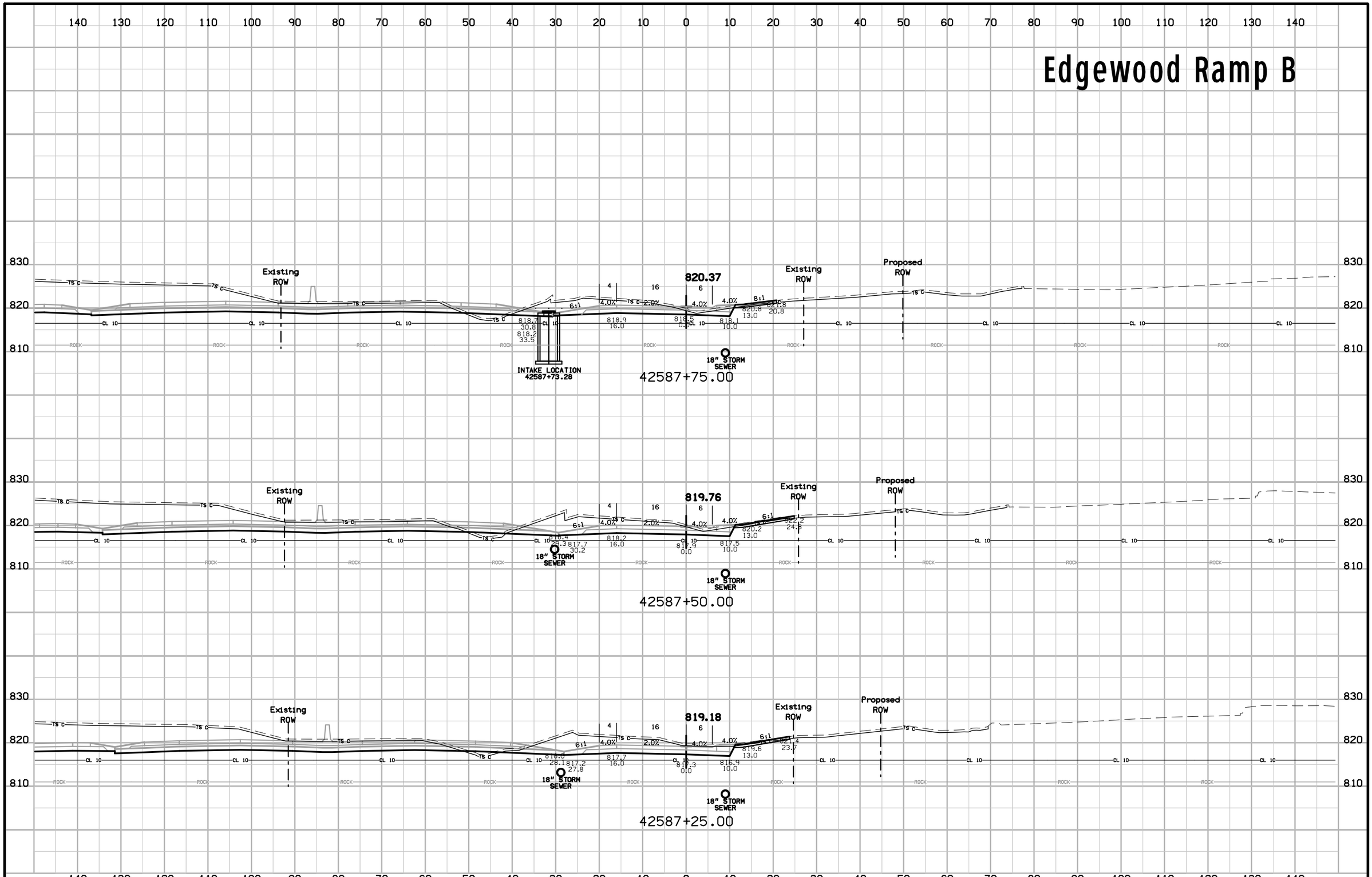
Edgewood Ramp B



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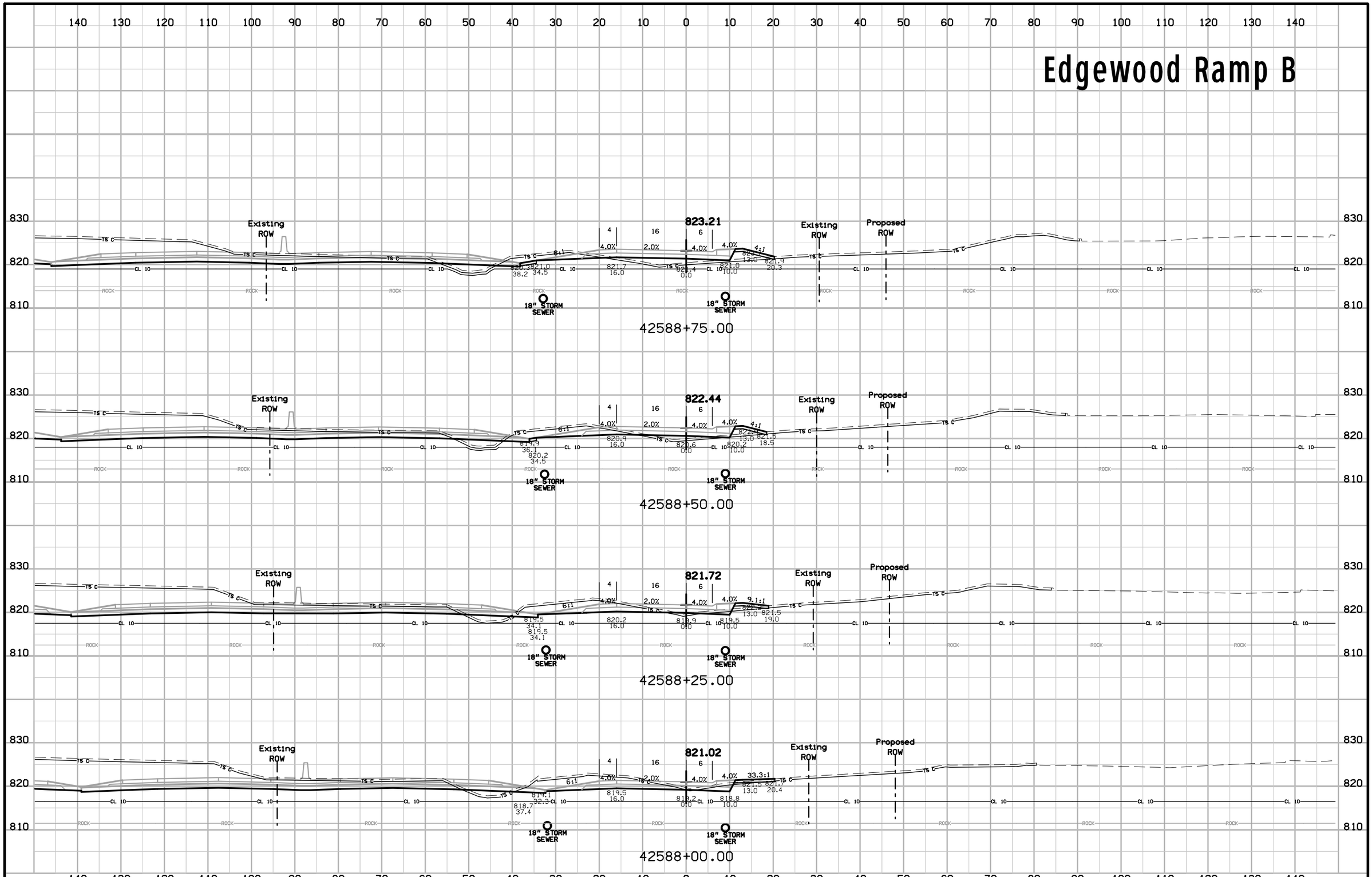
Edgewood Ramp B



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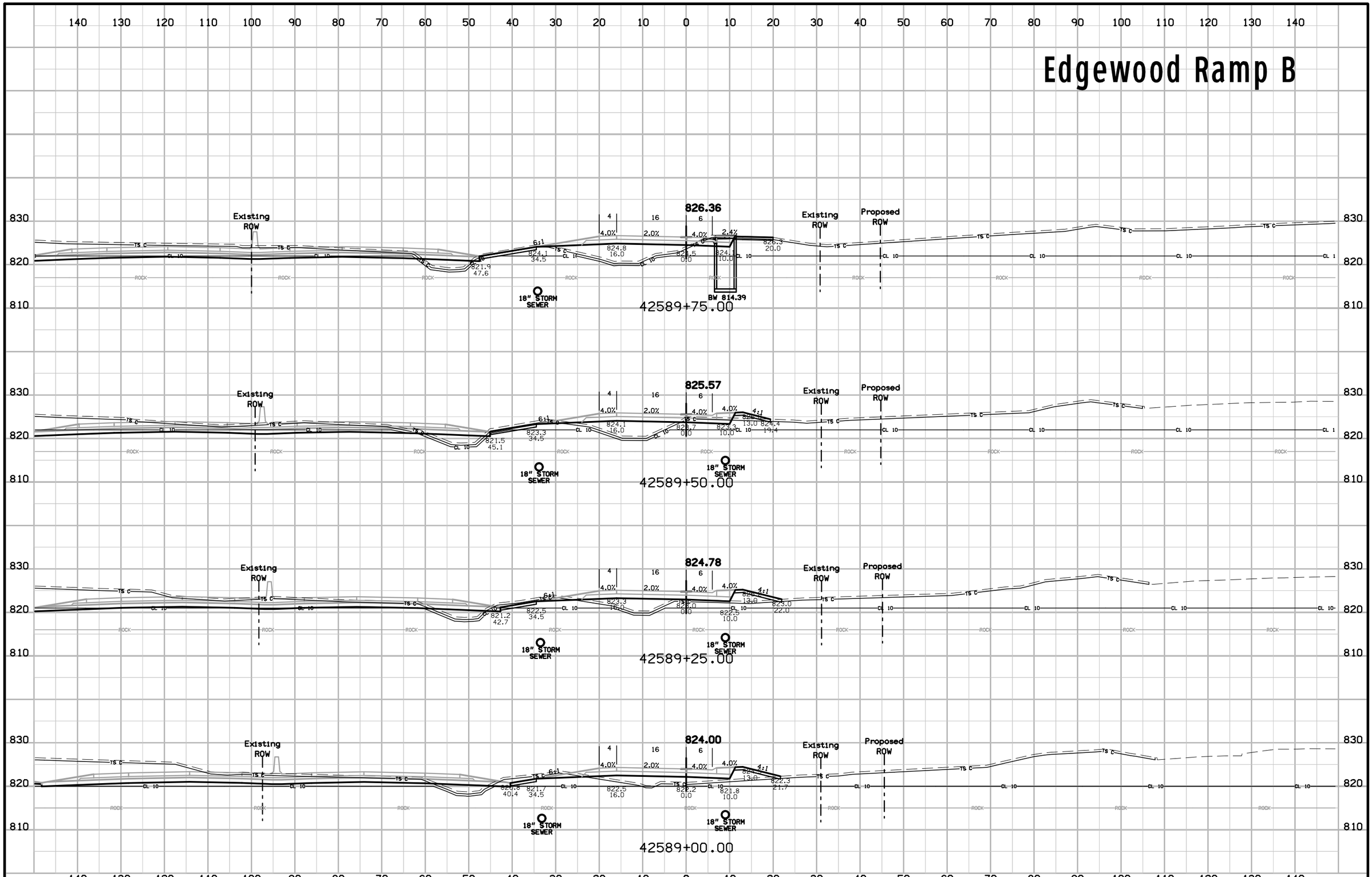
Edgewood Ramp B



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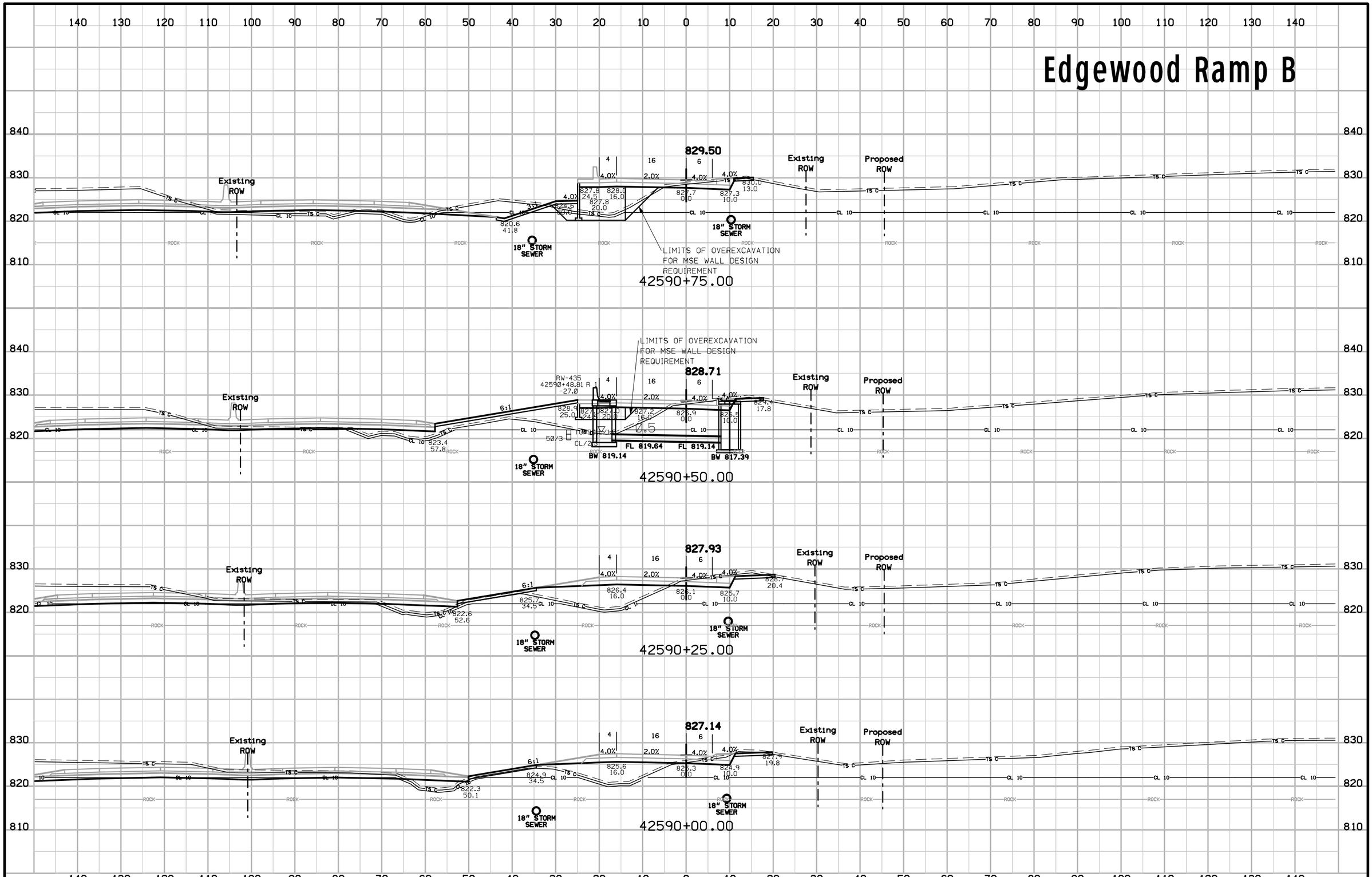
Edgewood Ramp B



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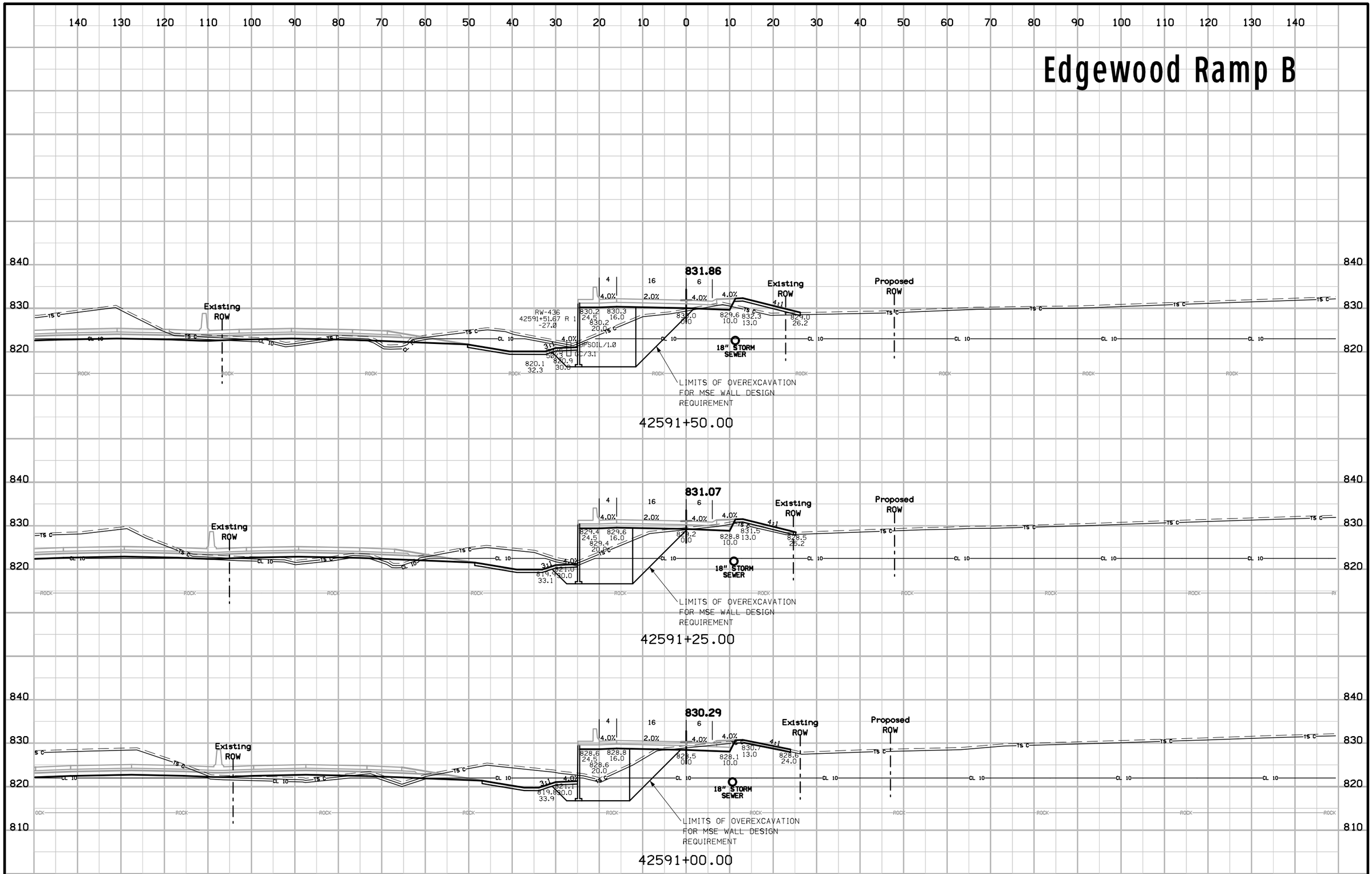
Edgewood Ramp B



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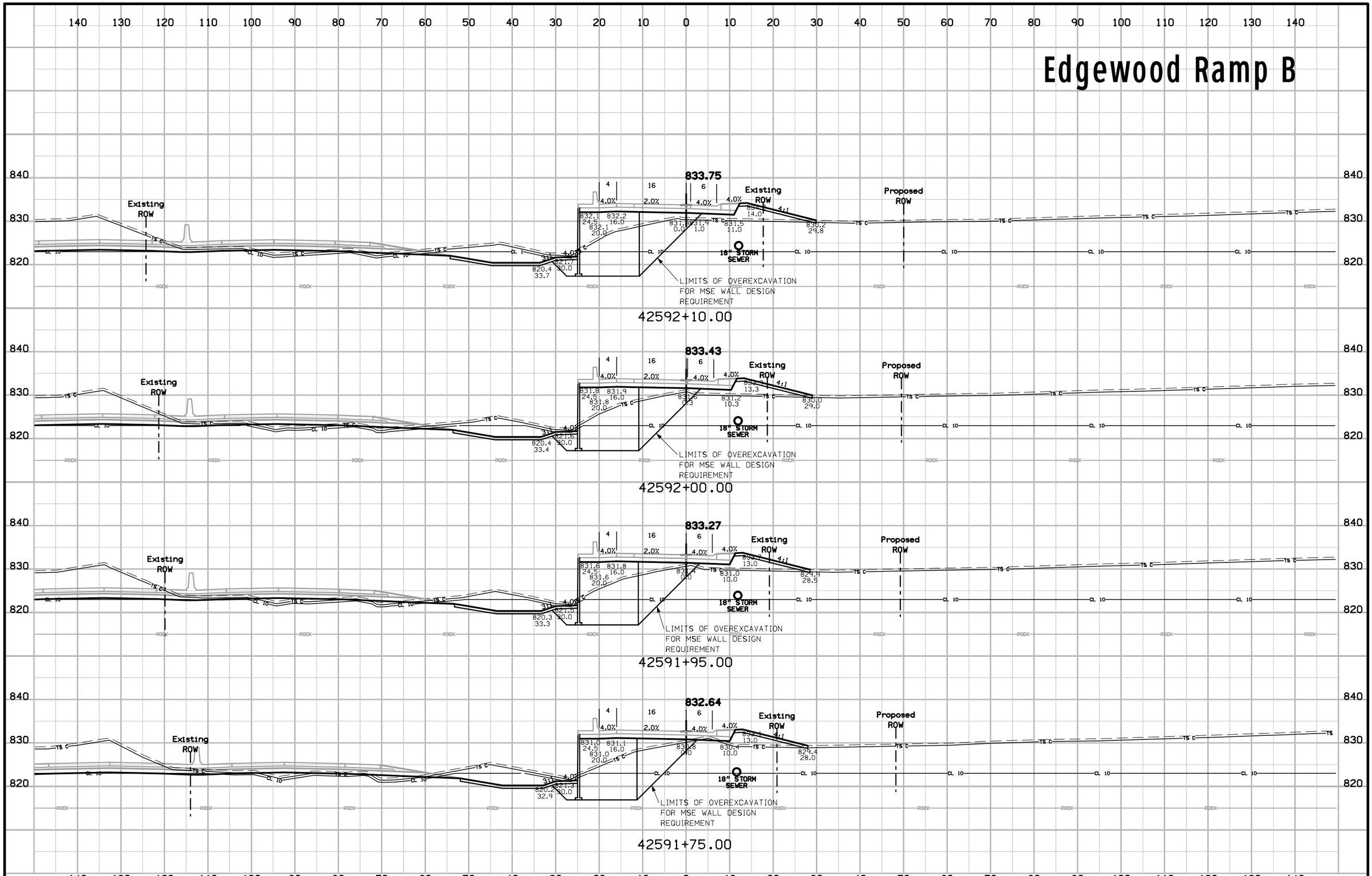
Edgewood Ramp B



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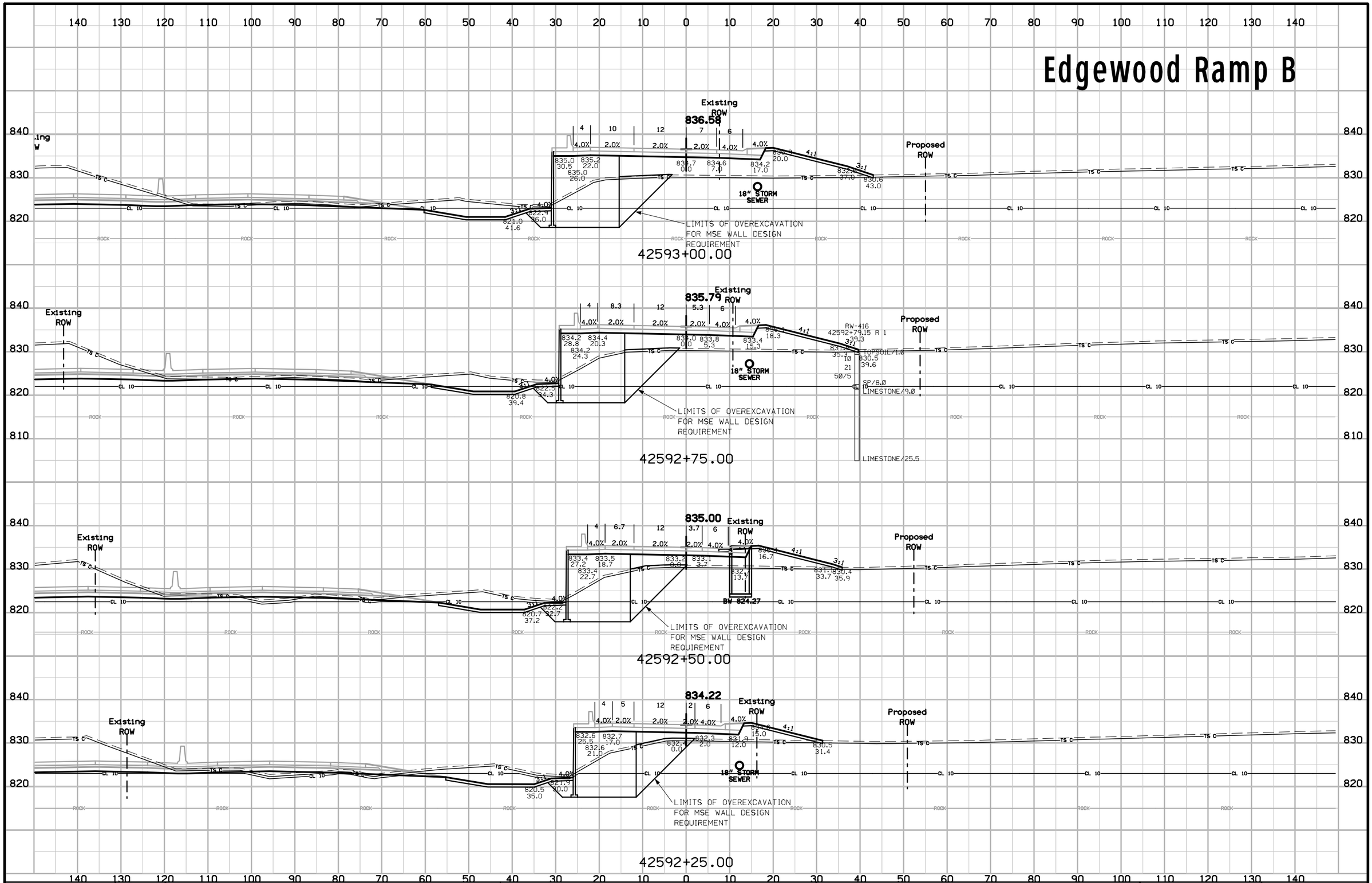
Edgewood Ramp B



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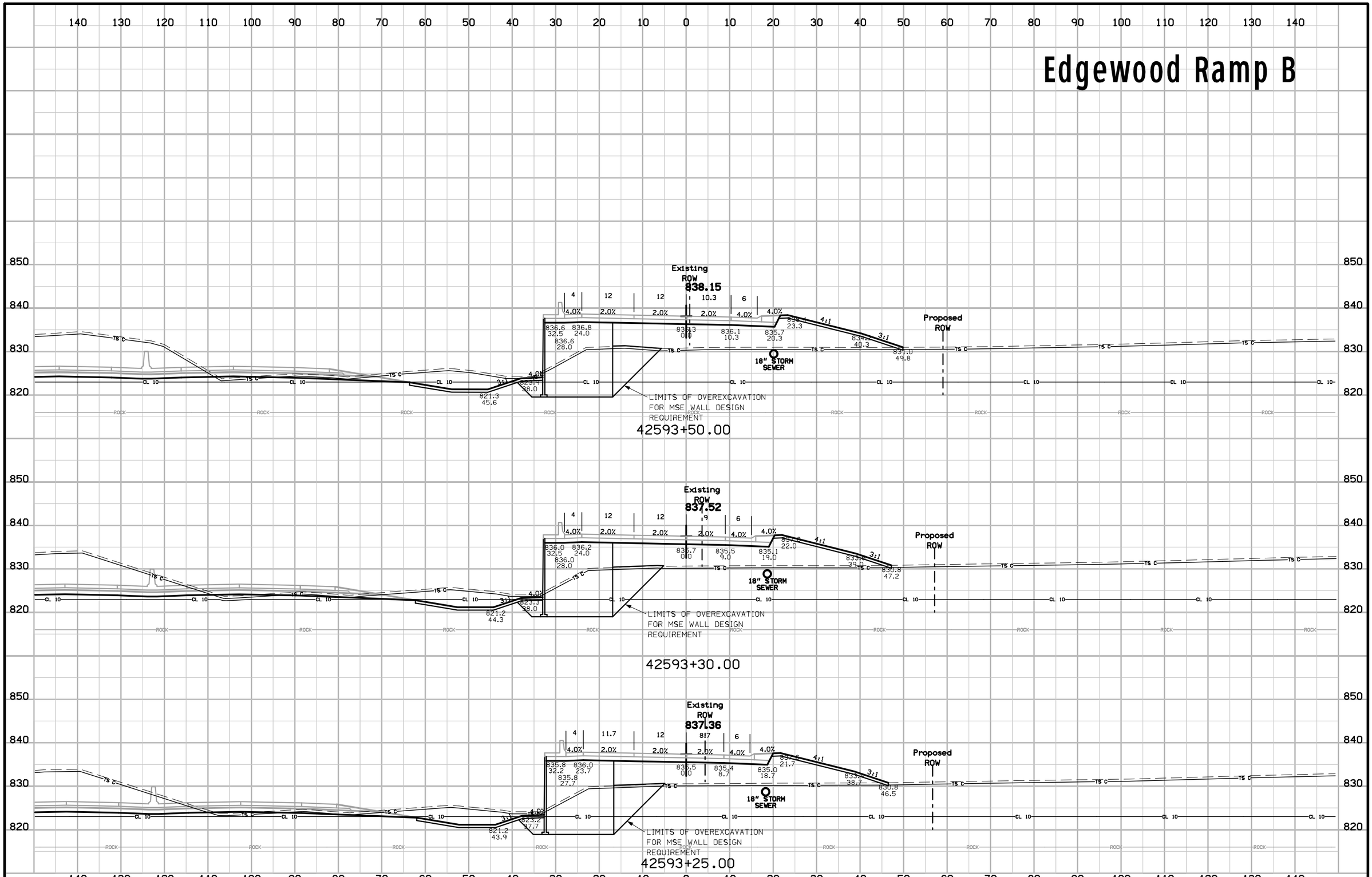
Edgewood Ramp B



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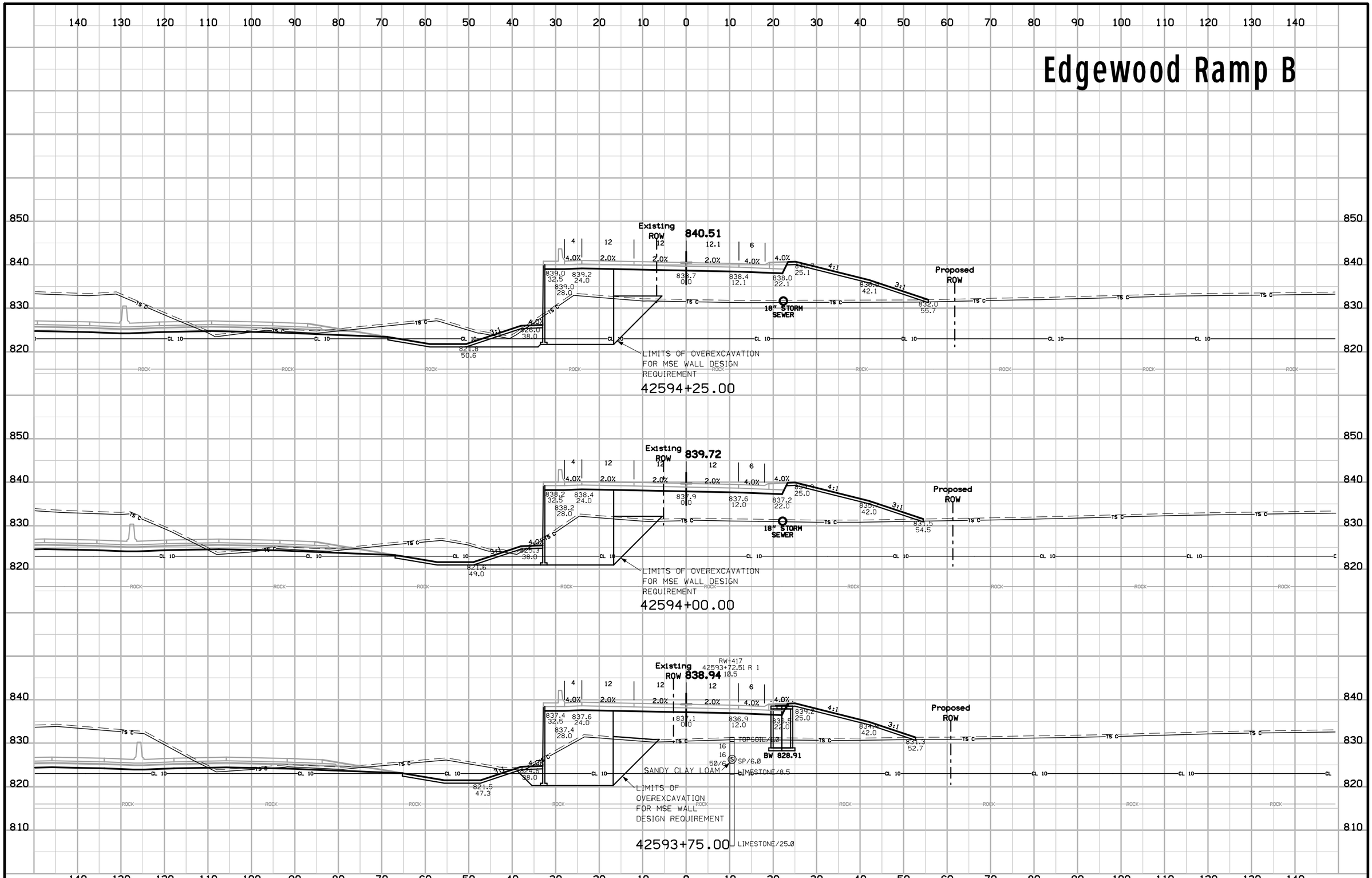
Edgewood Ramp B



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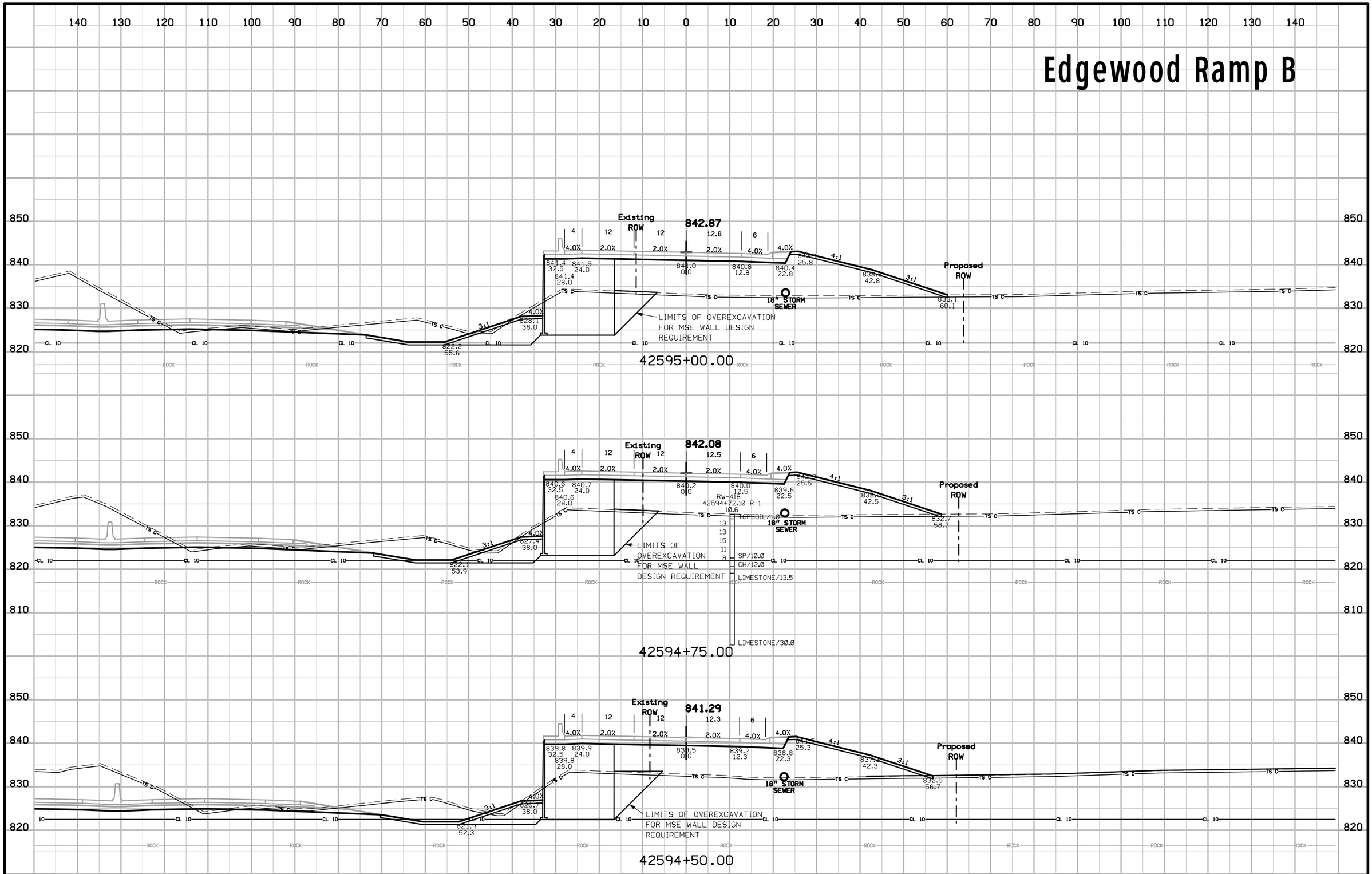
Edgewood Ramp B



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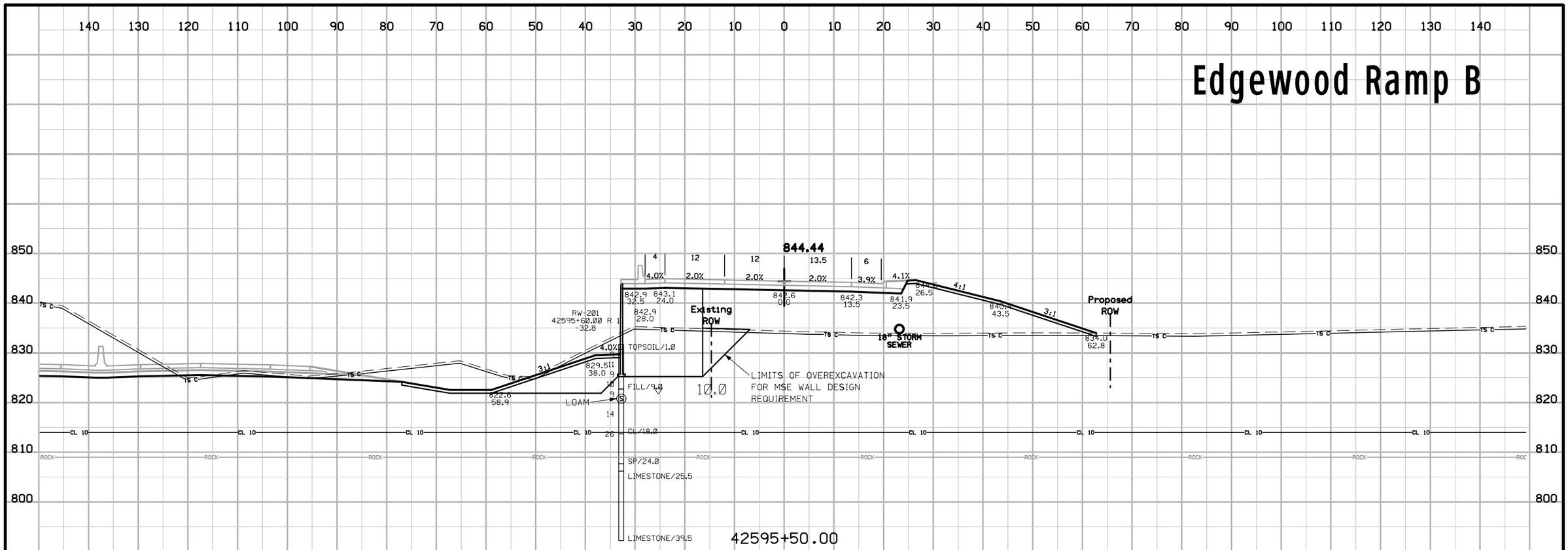
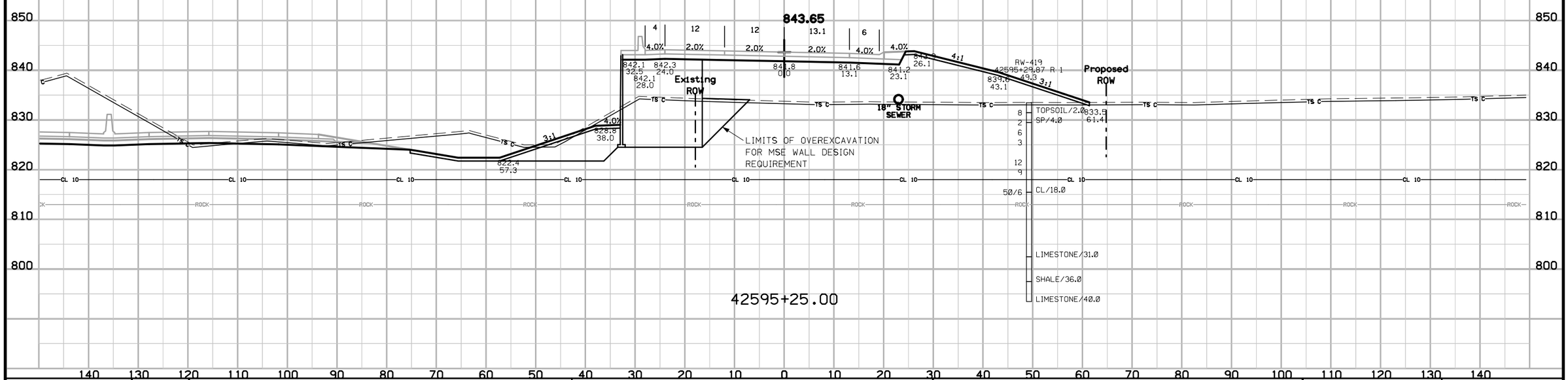
Edgewood Ramp B





ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.35

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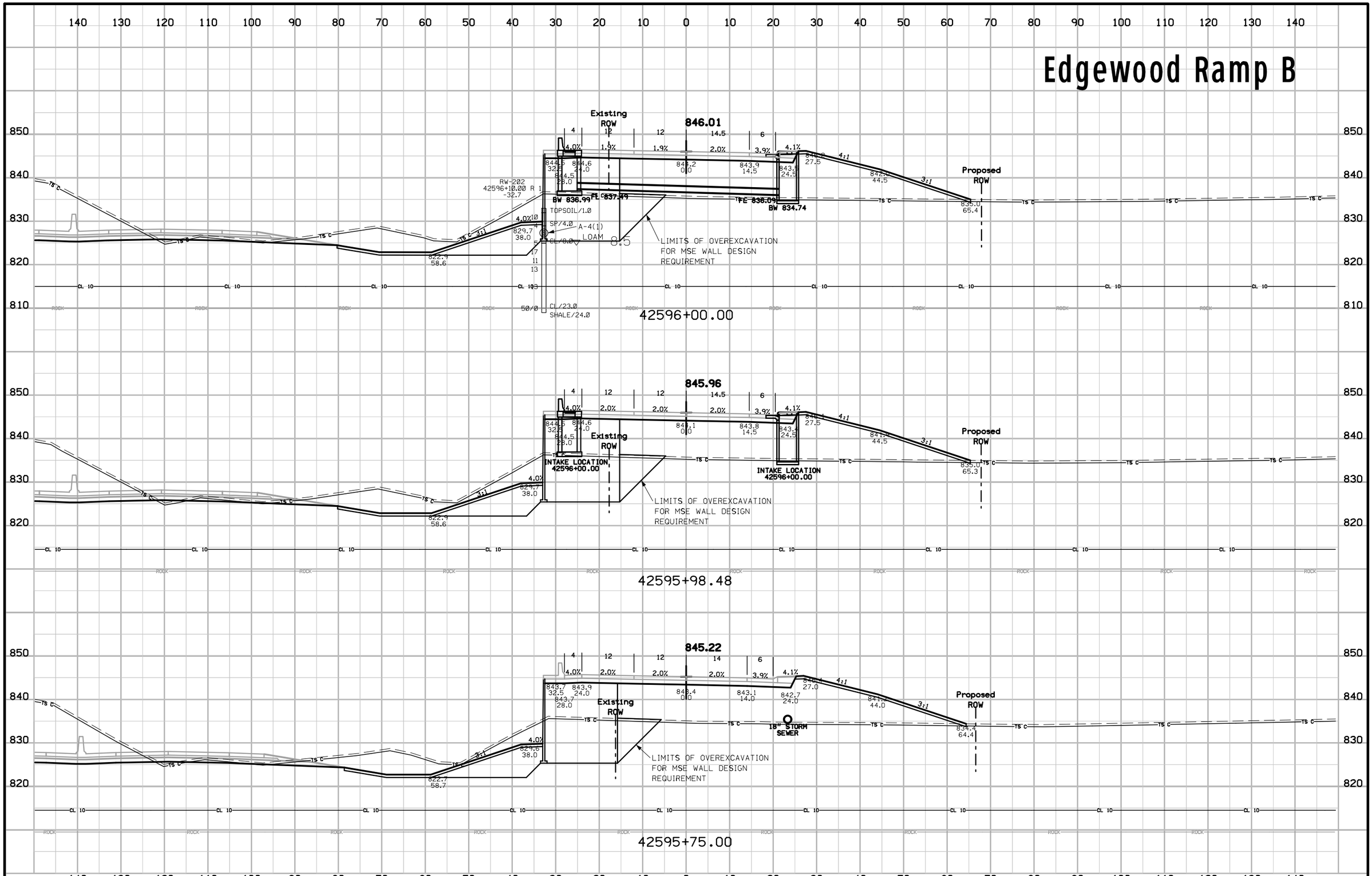
Edgewood Ramp B



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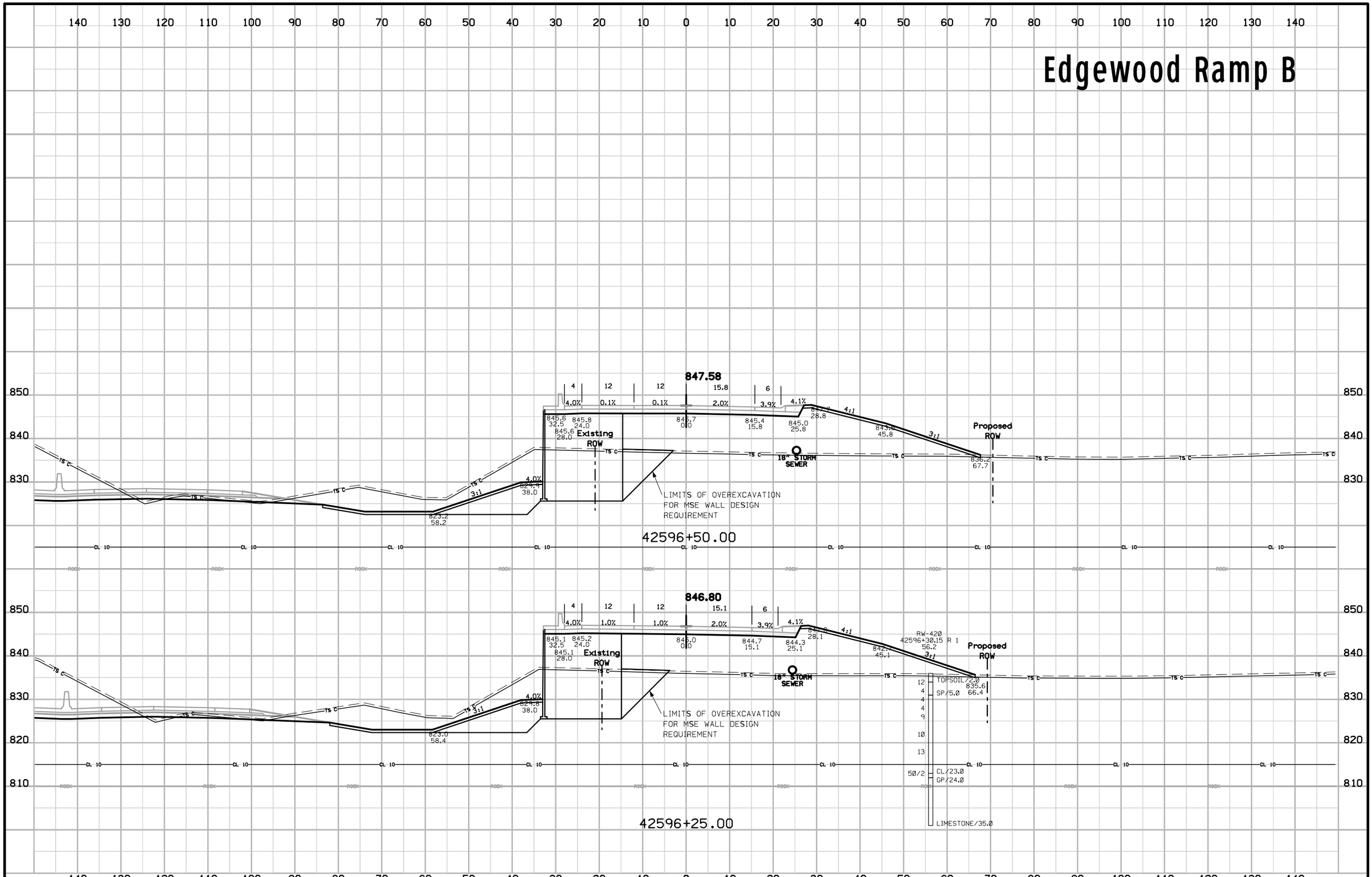
Edgewood Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.37

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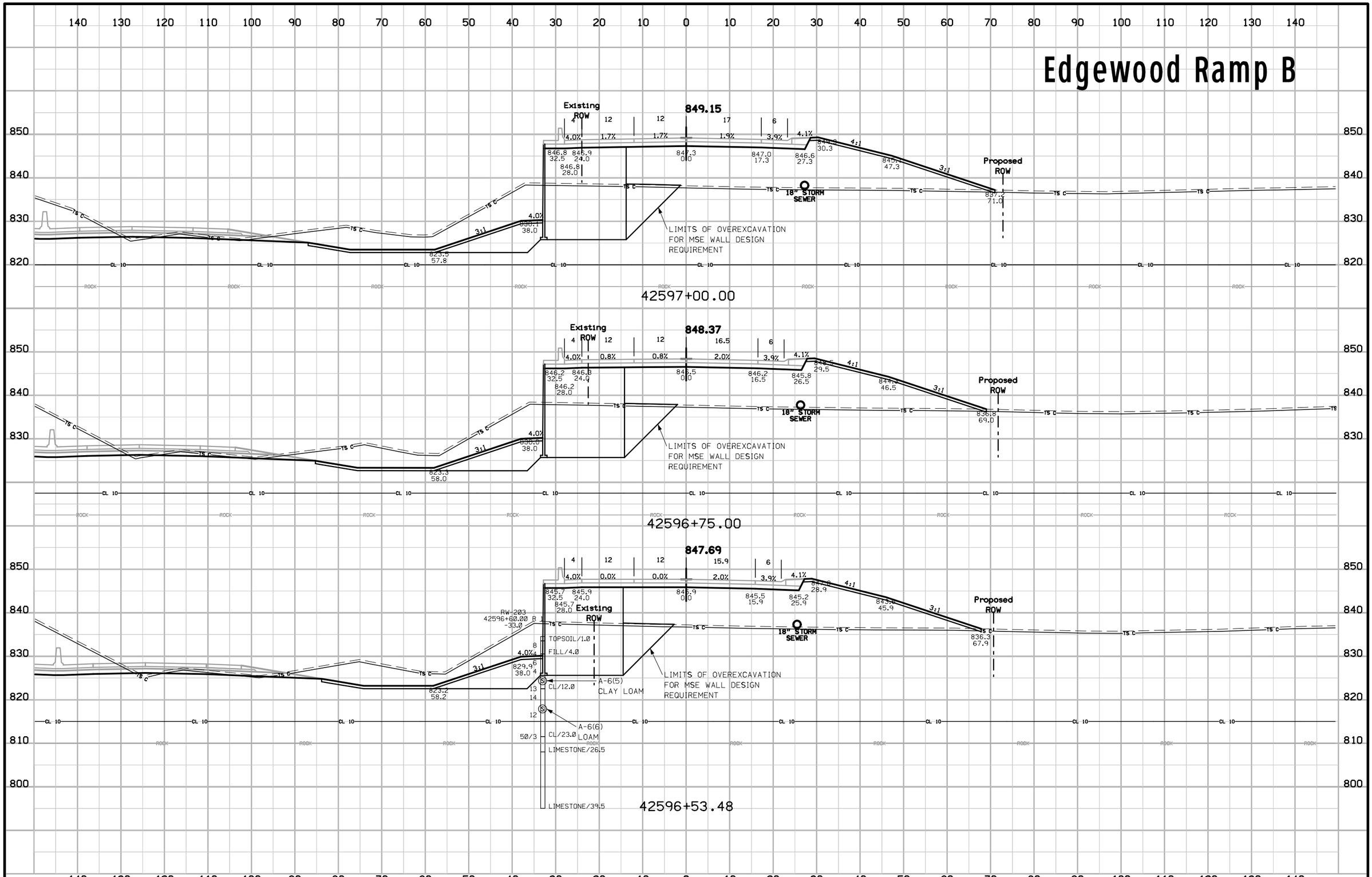
Edgewood Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.38

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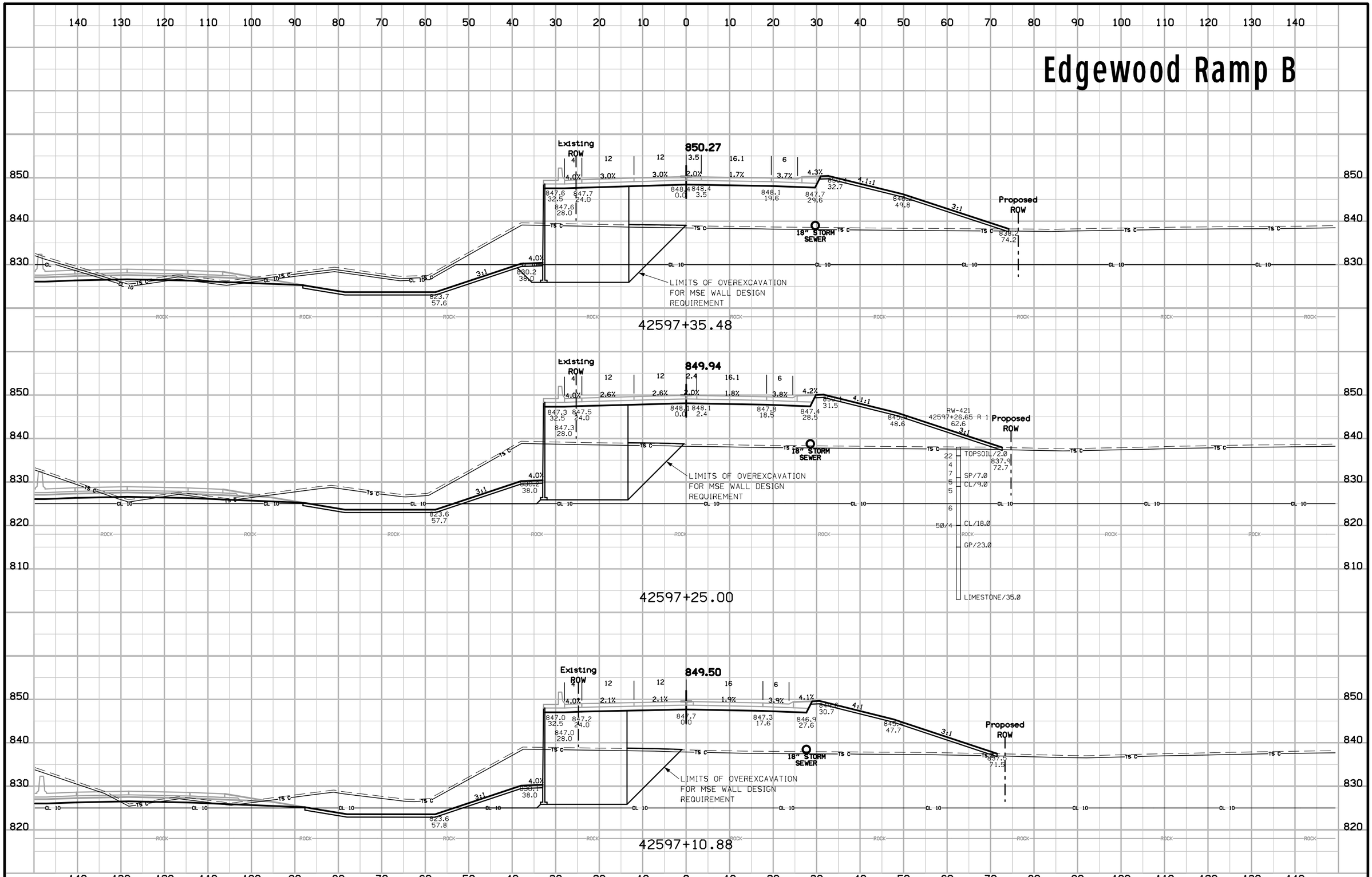
Edgewood Ramp B



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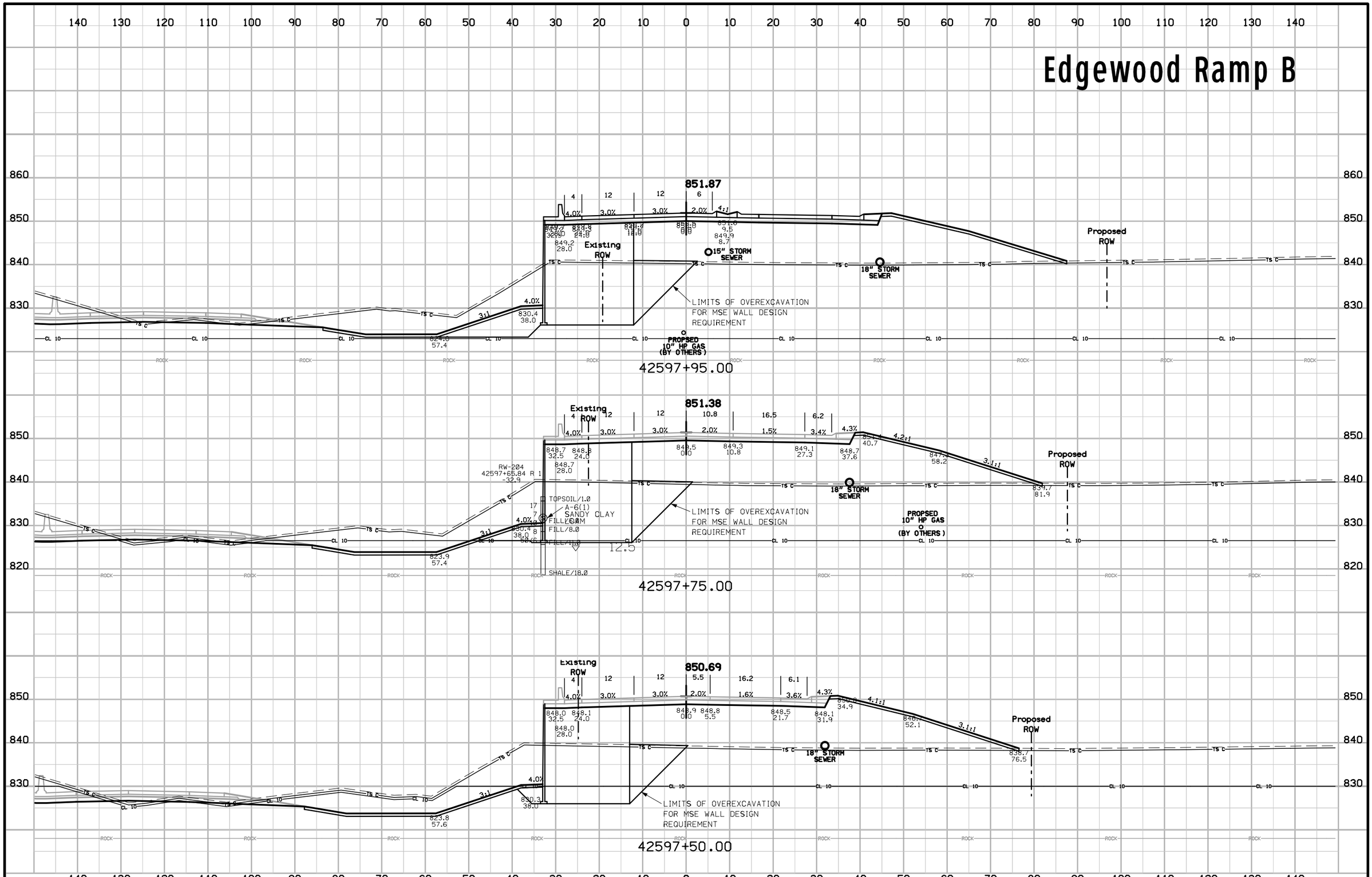
Edgewood Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.40

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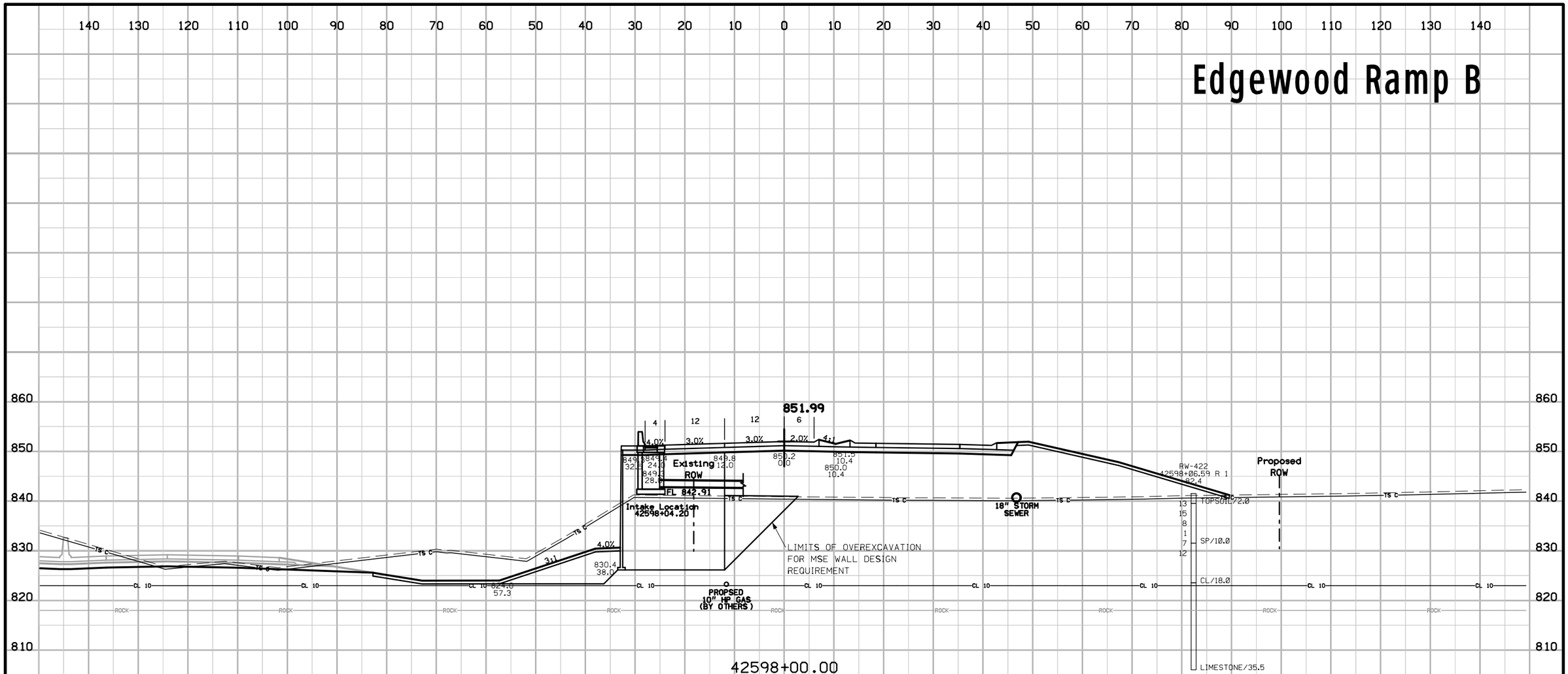
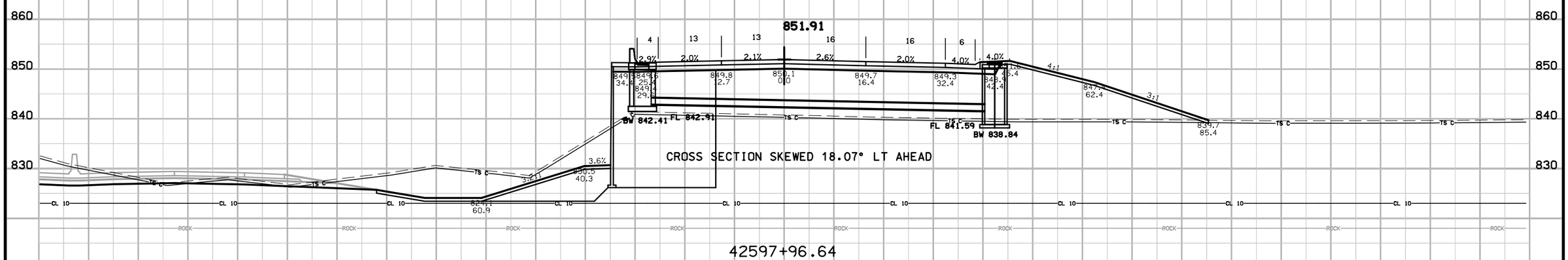
Edgewood Ramp B





ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.41

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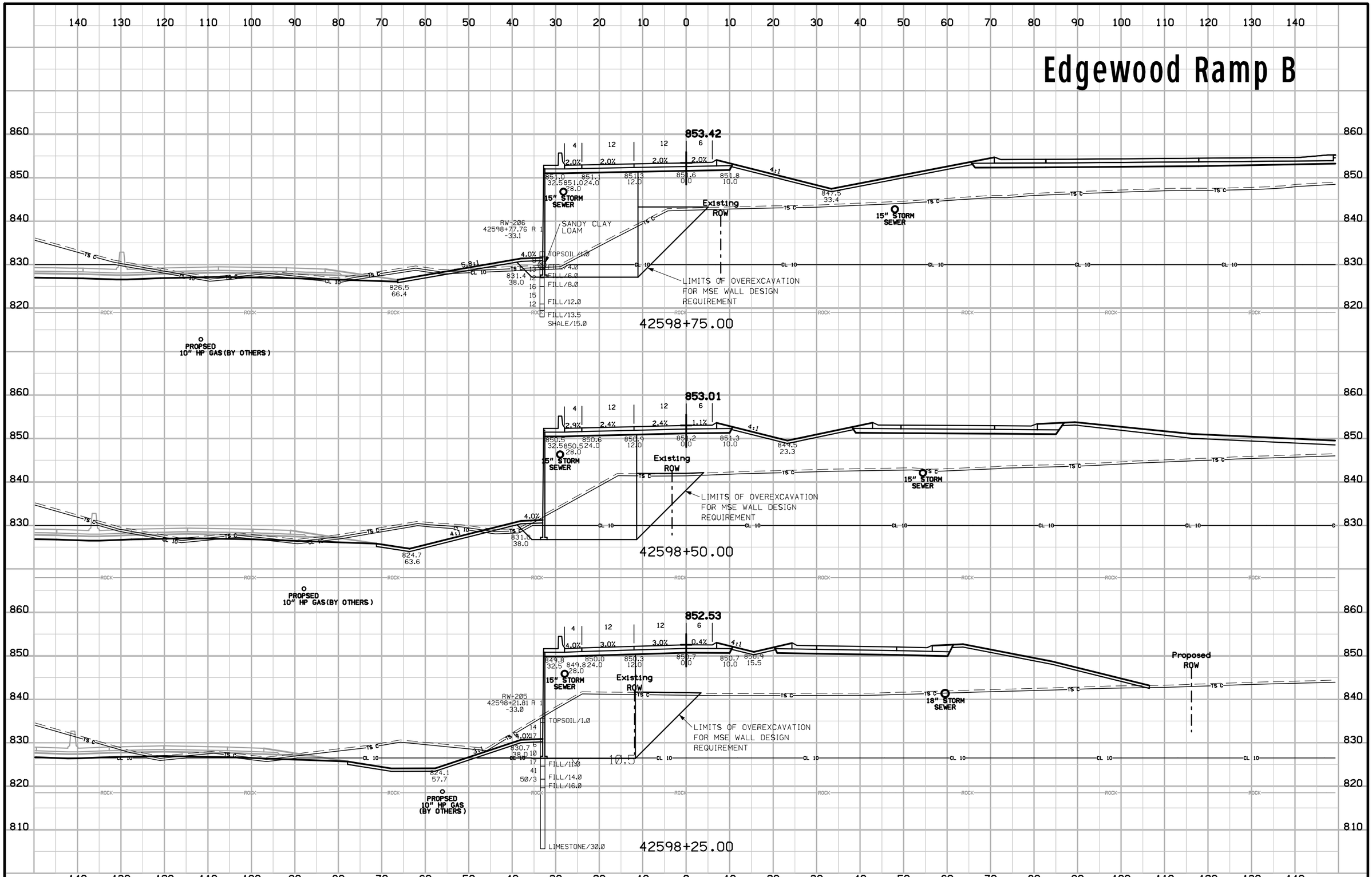
Edgewood Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.42

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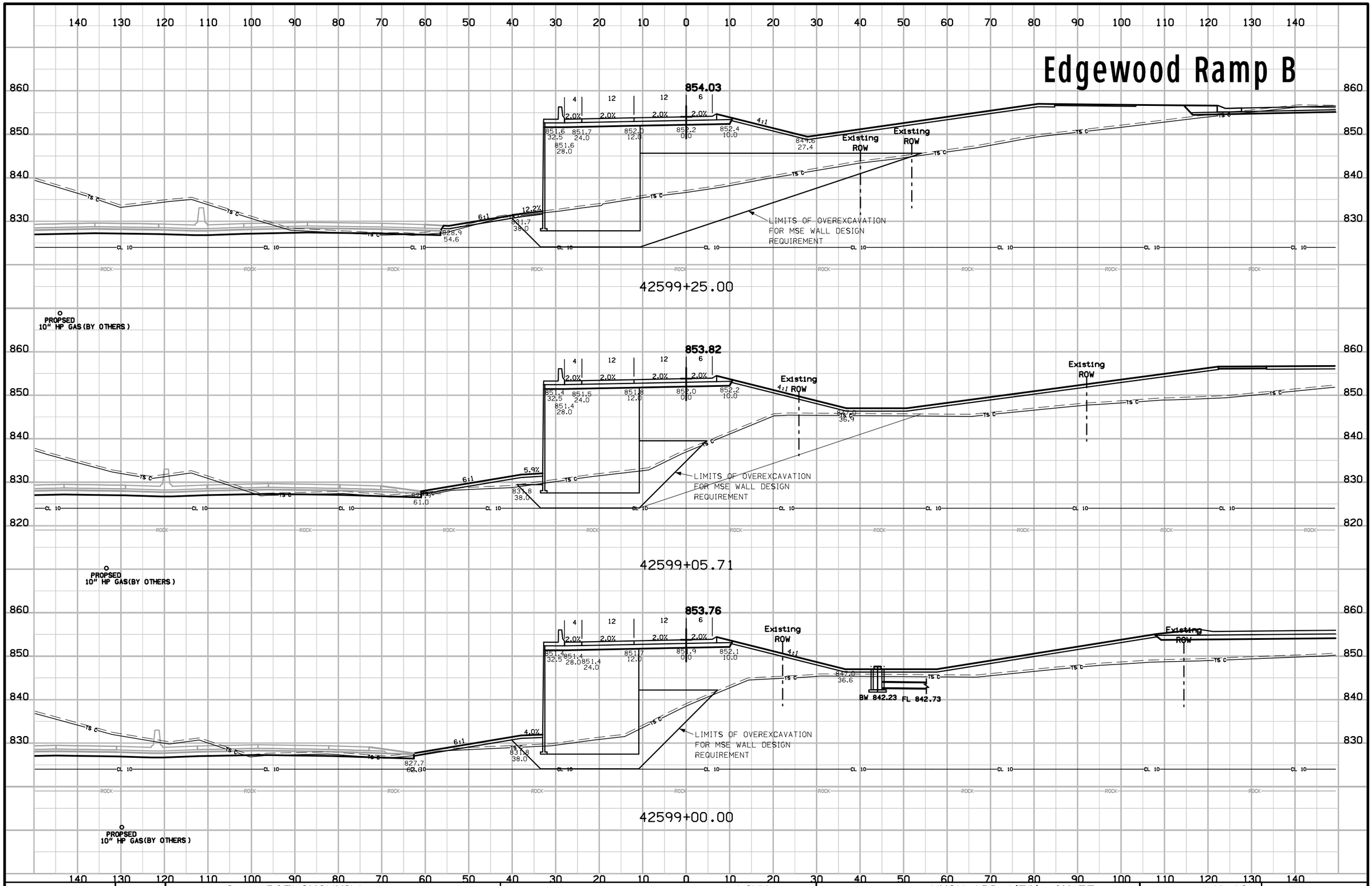
Edgewood Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.43

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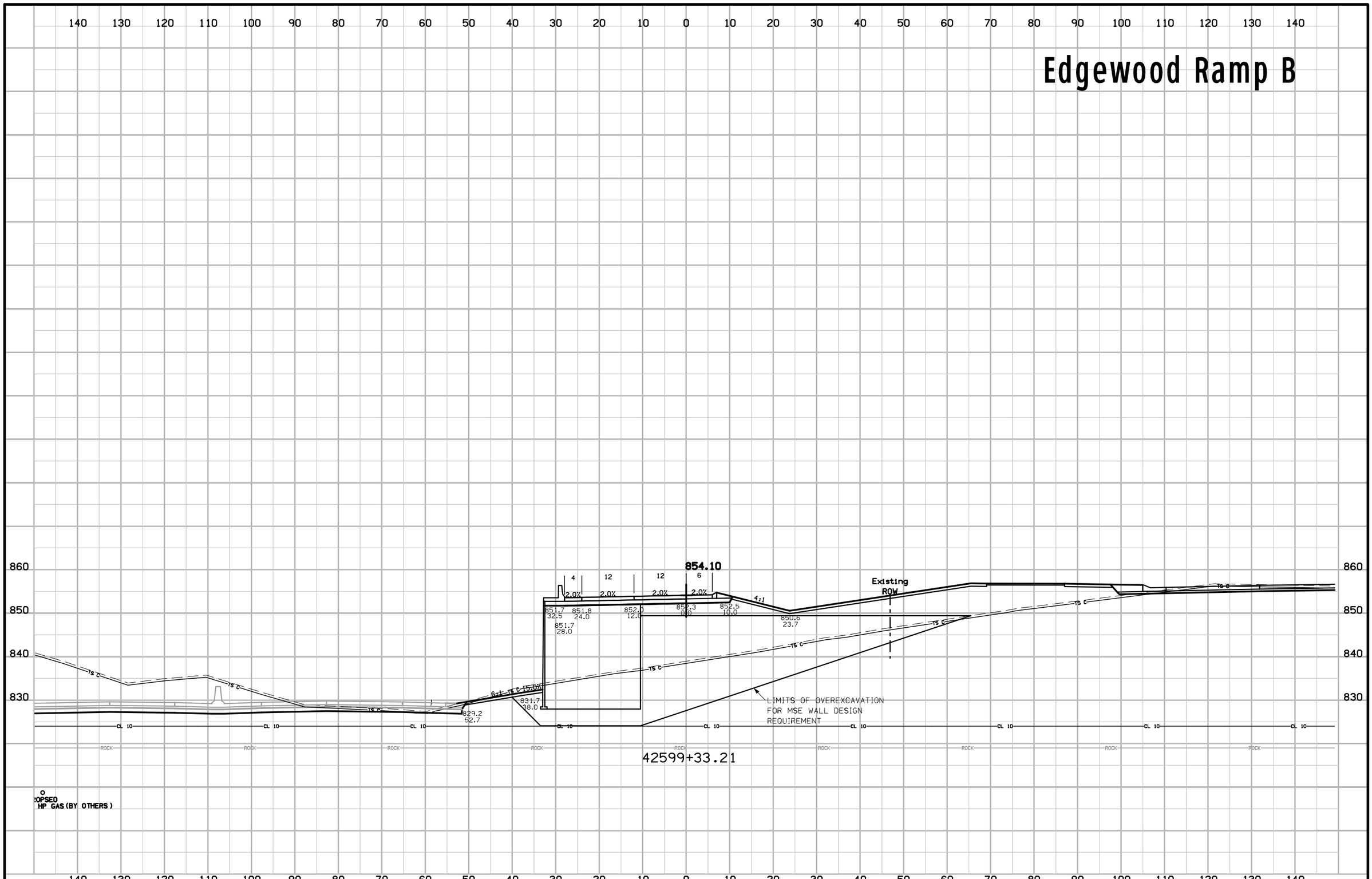
Edgewood Ramp B



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.44

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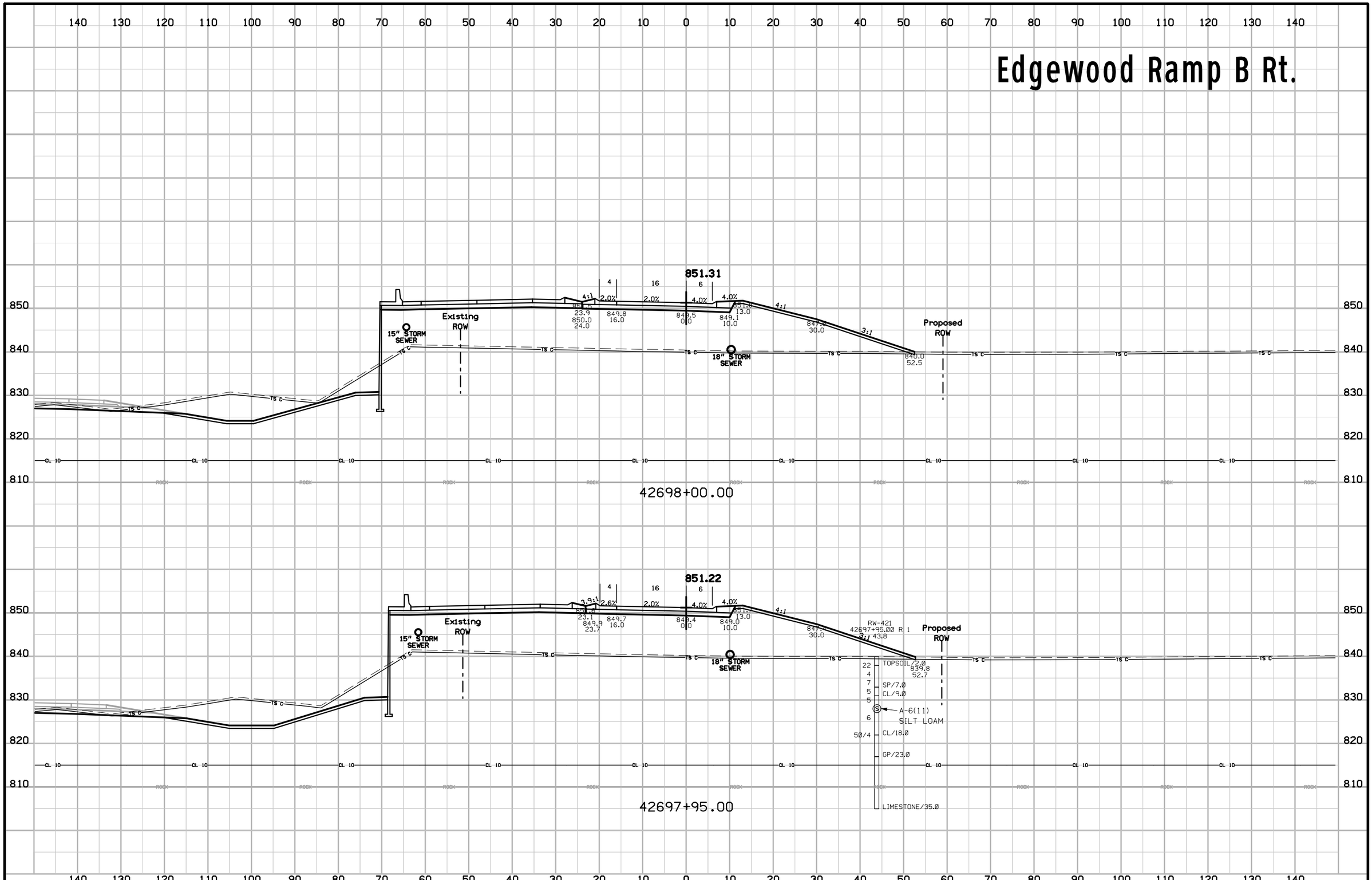

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.45

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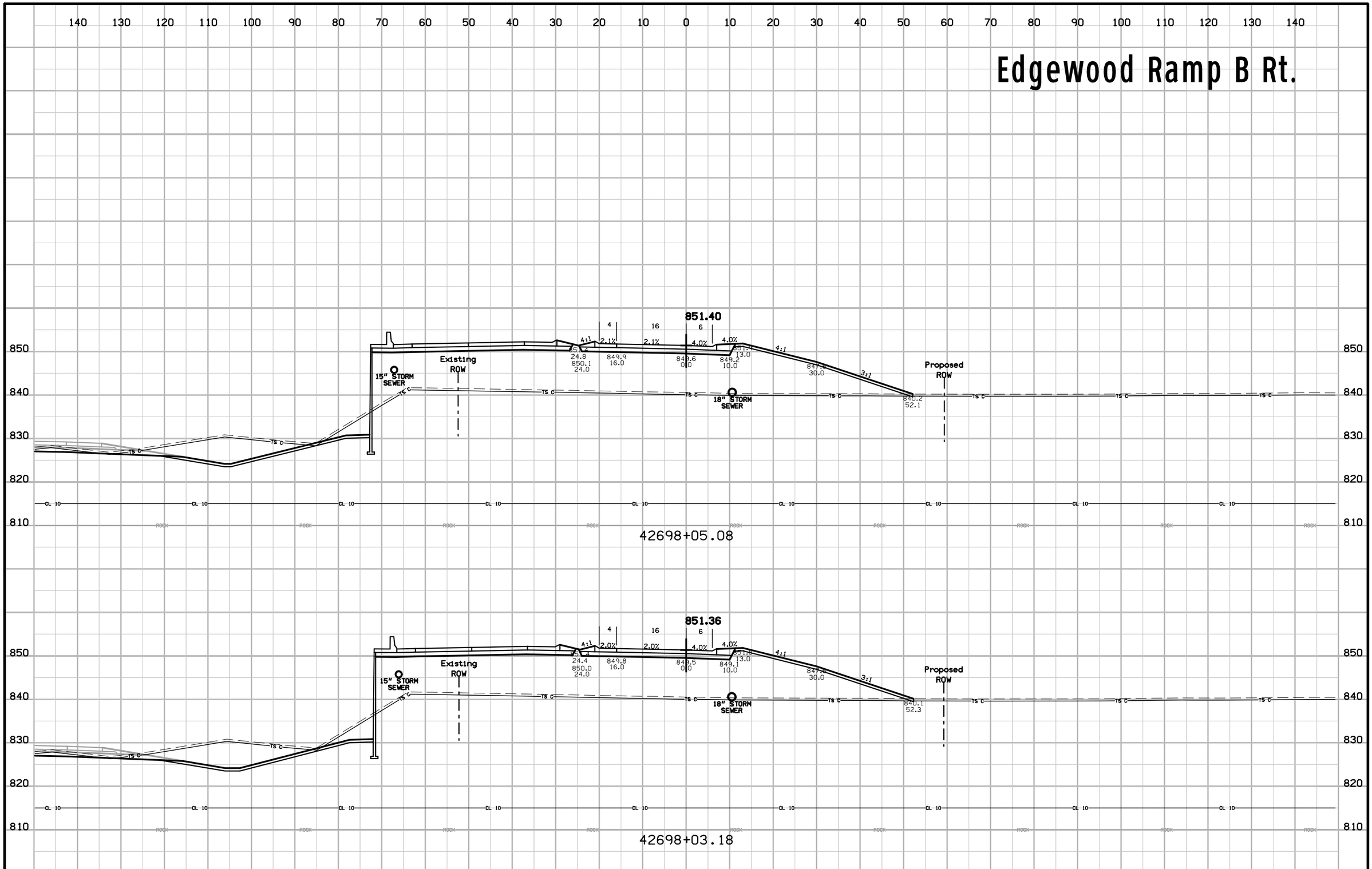

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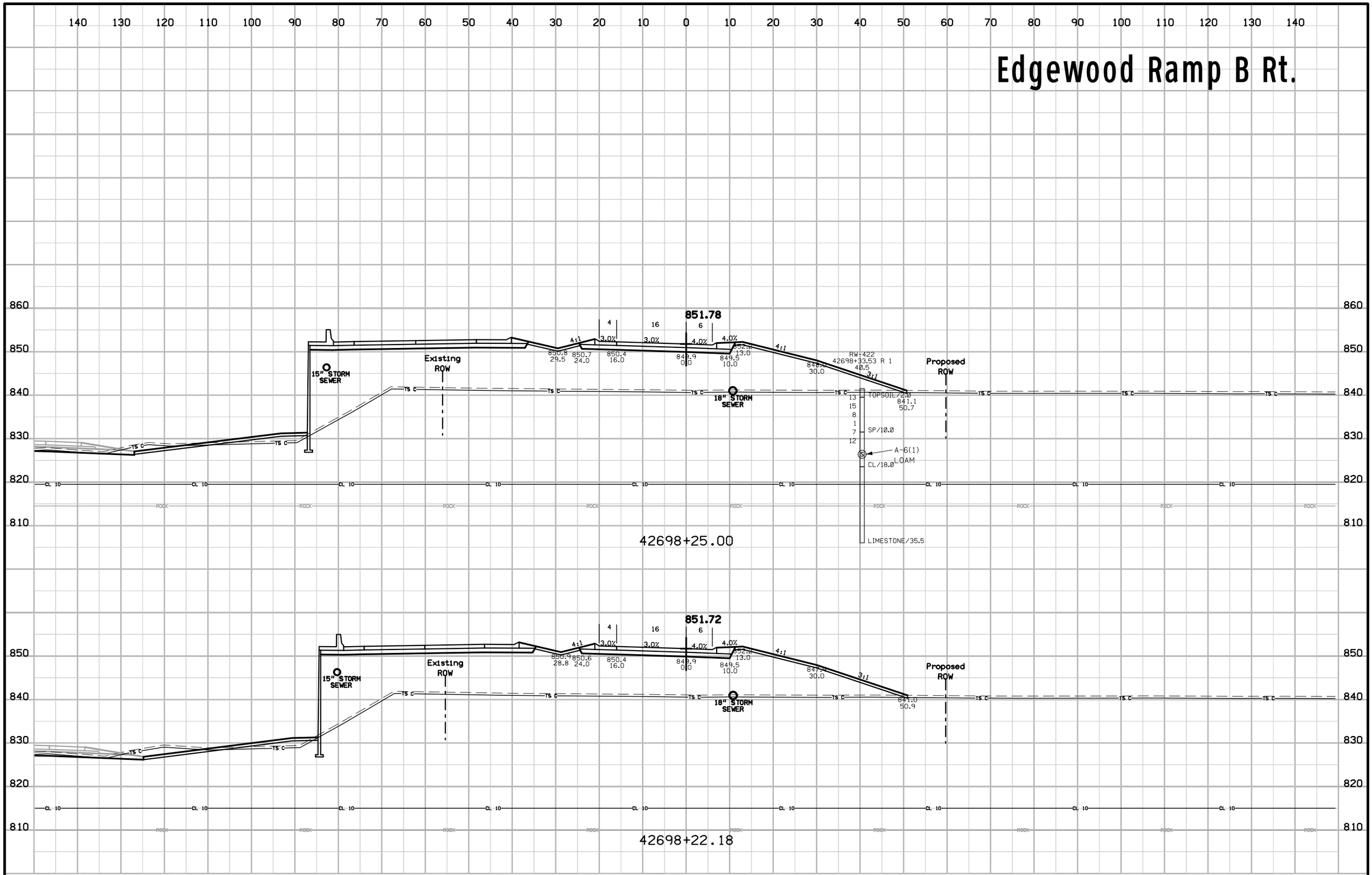

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.47

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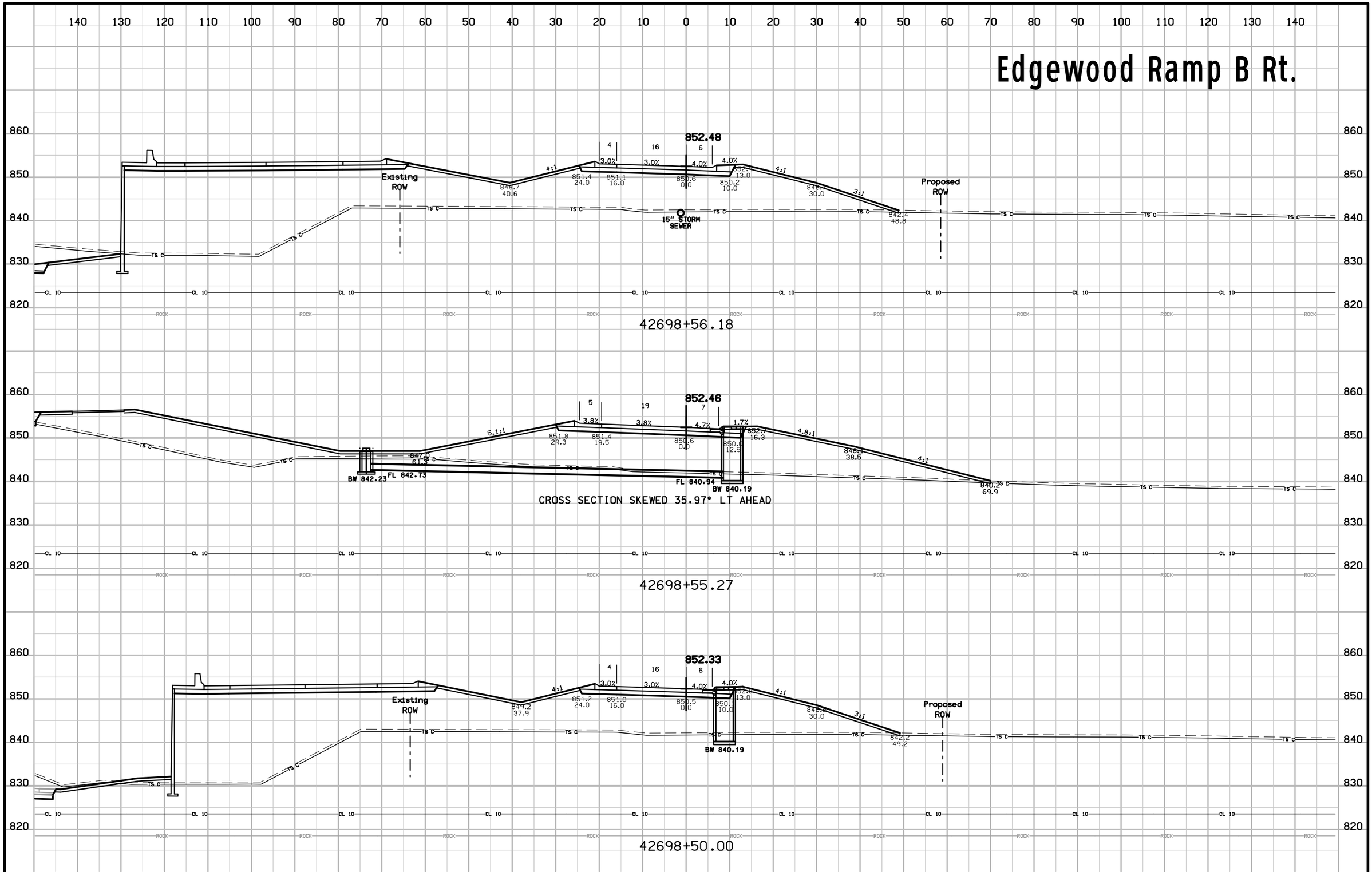

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.48

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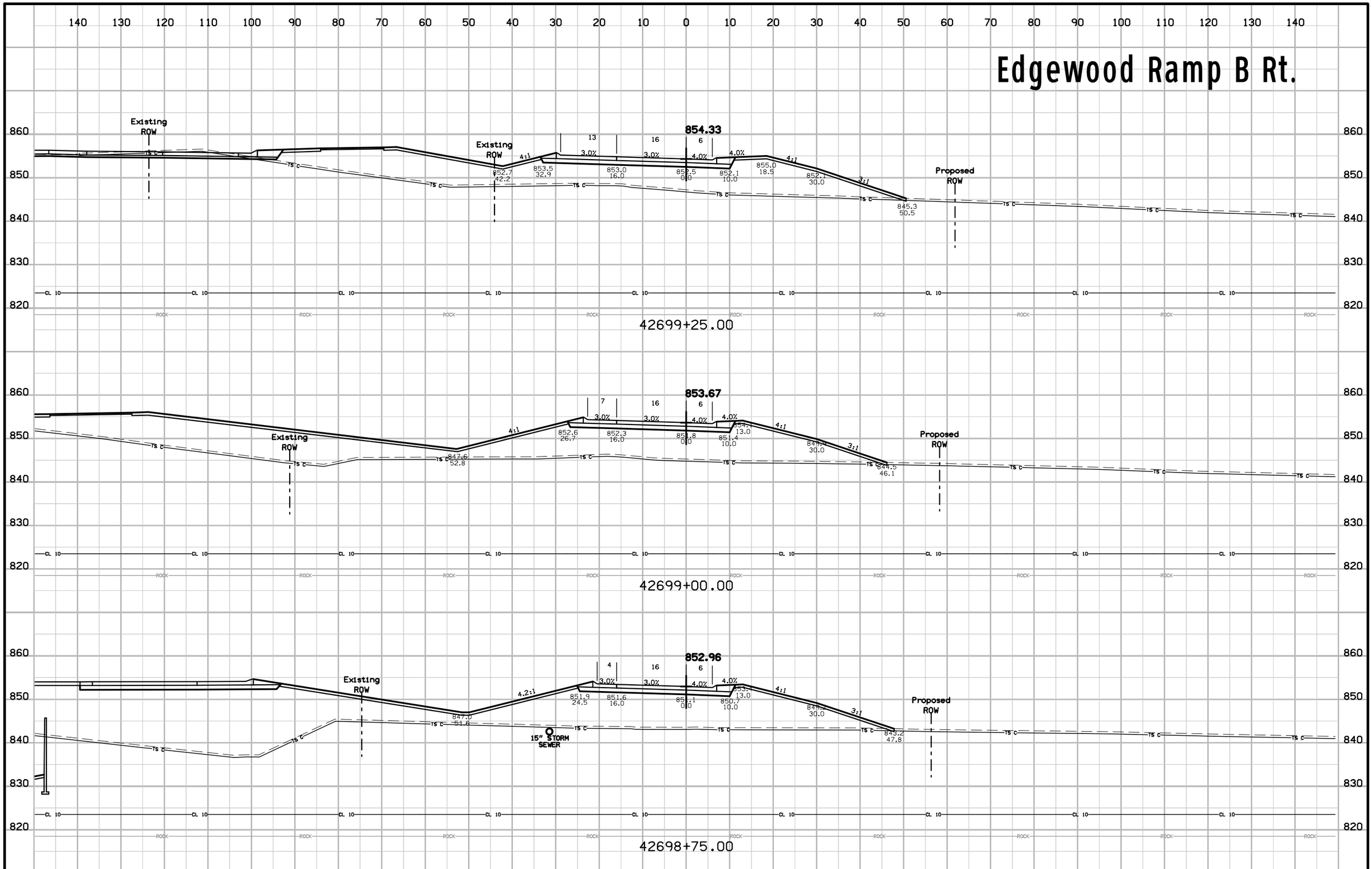

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.49

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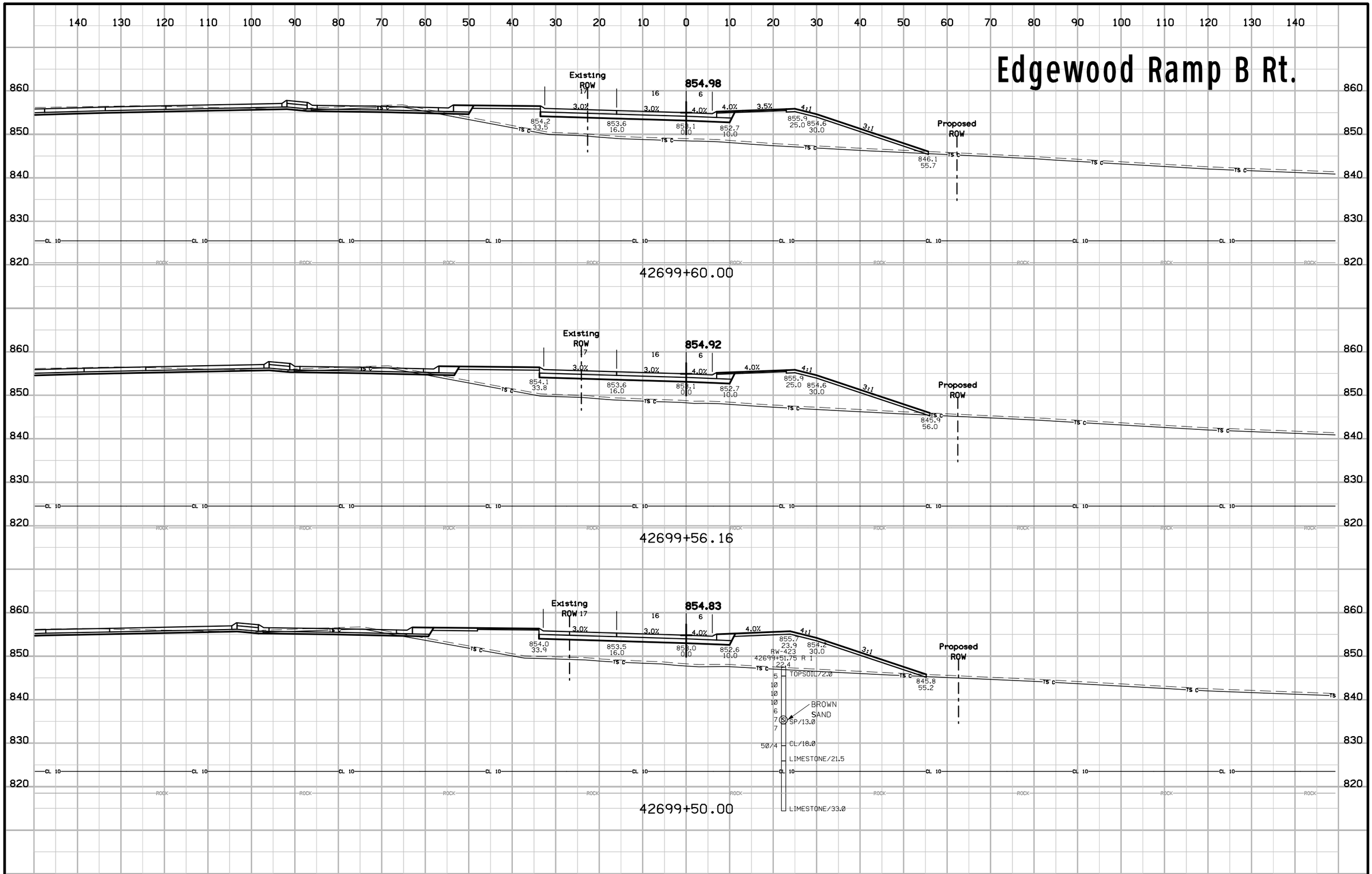

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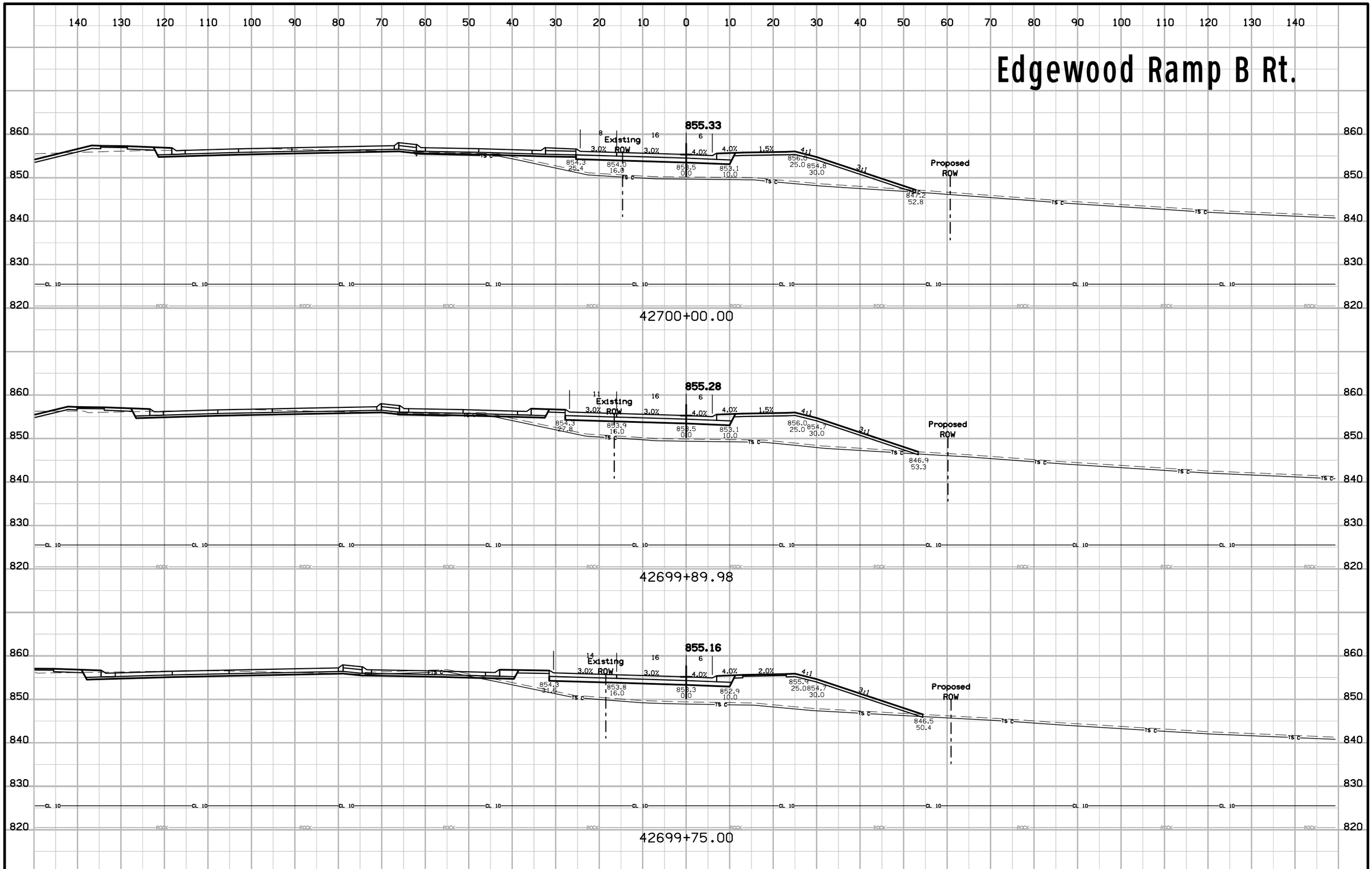

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.51

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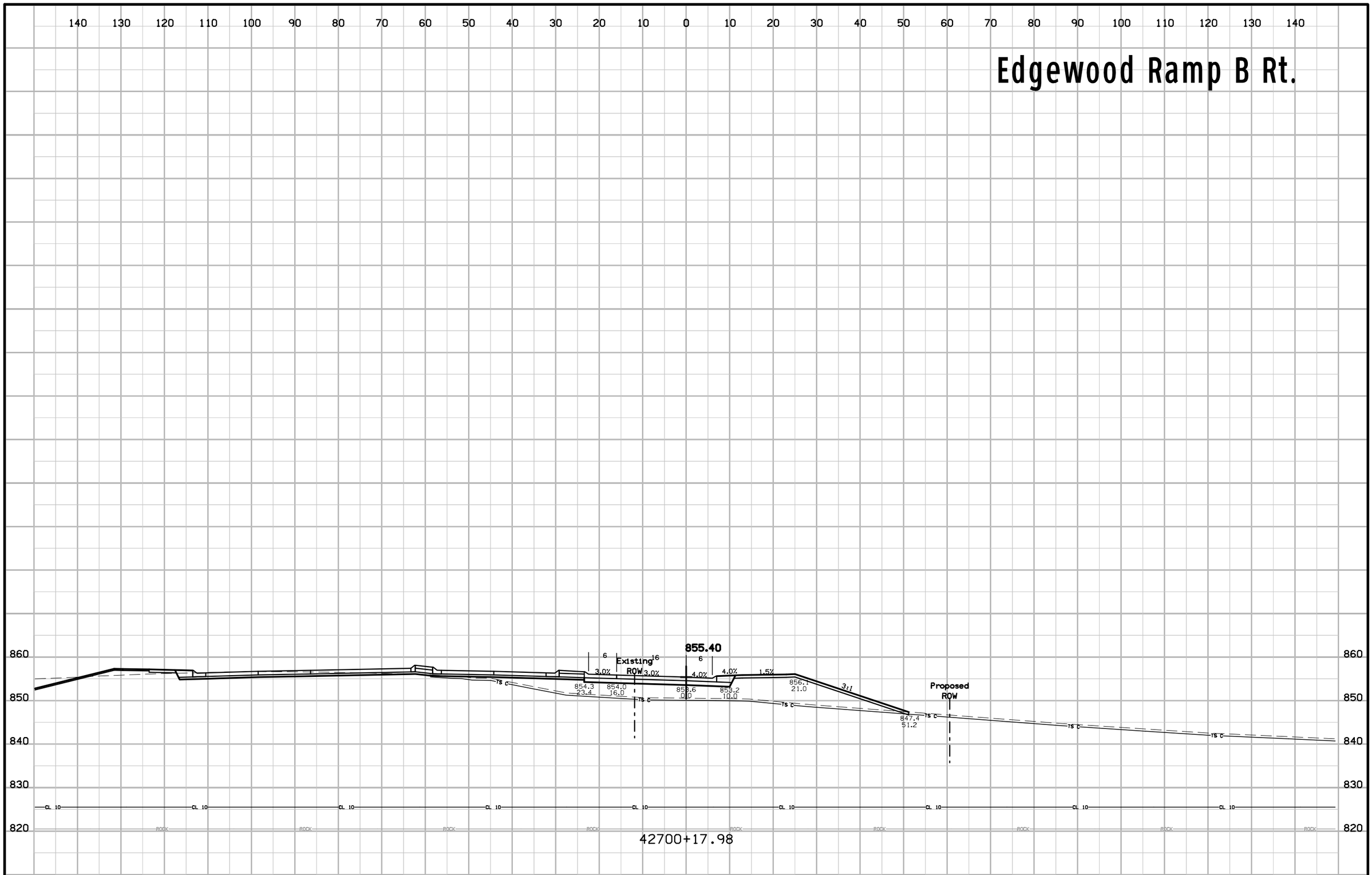

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.52

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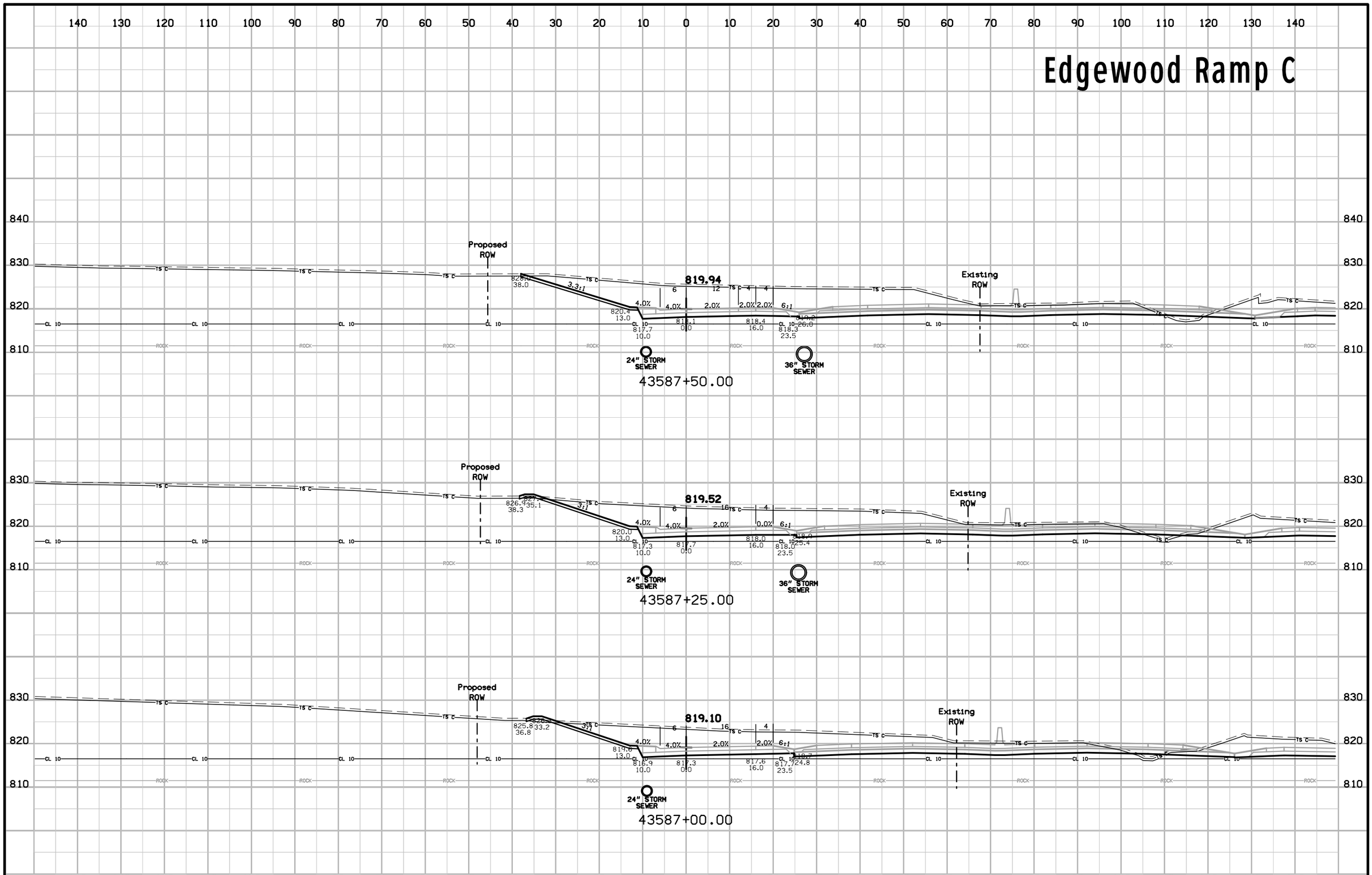
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.53

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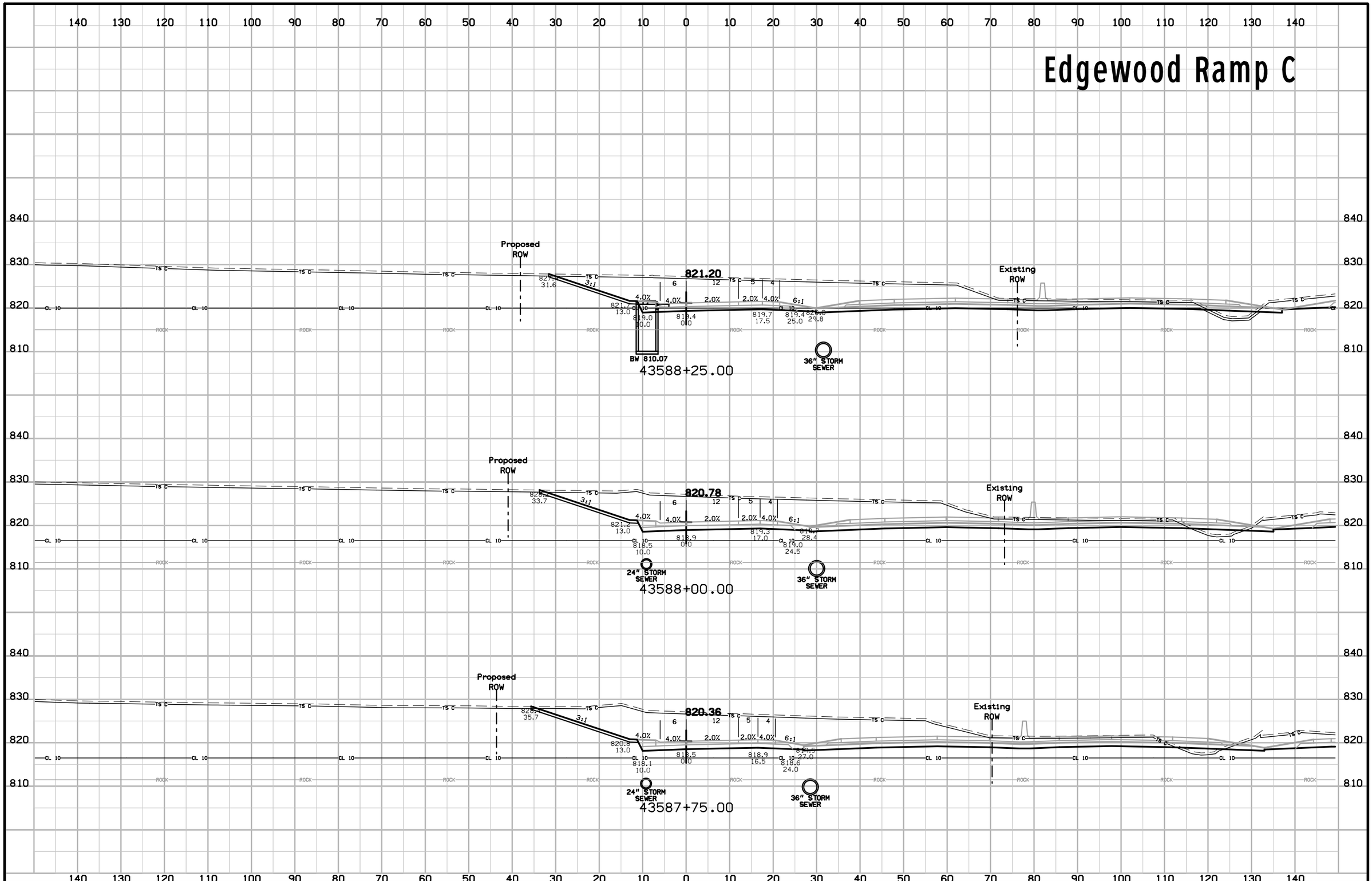
Edgewood Ramp C



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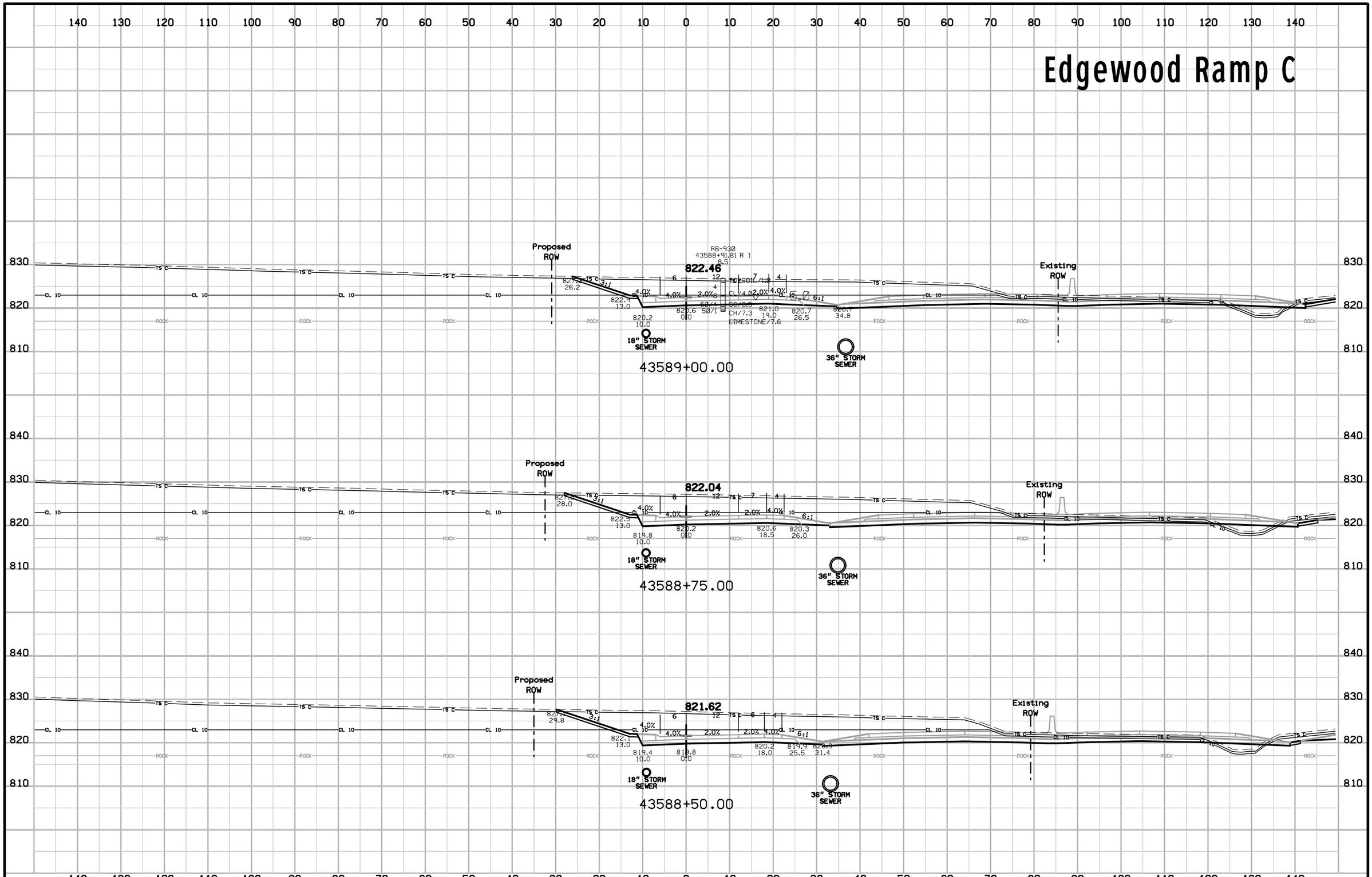
Edgewood Ramp C



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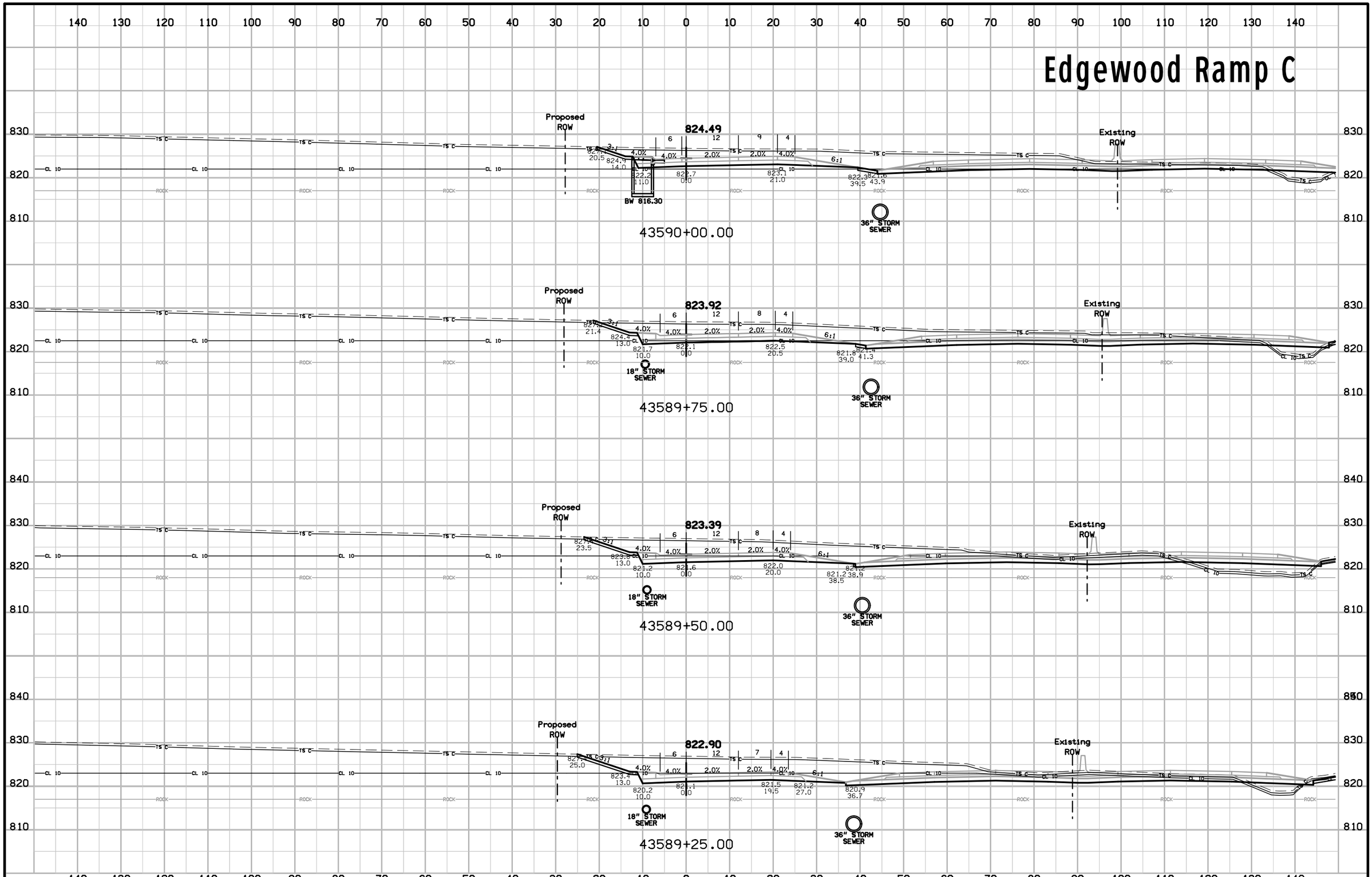
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.56

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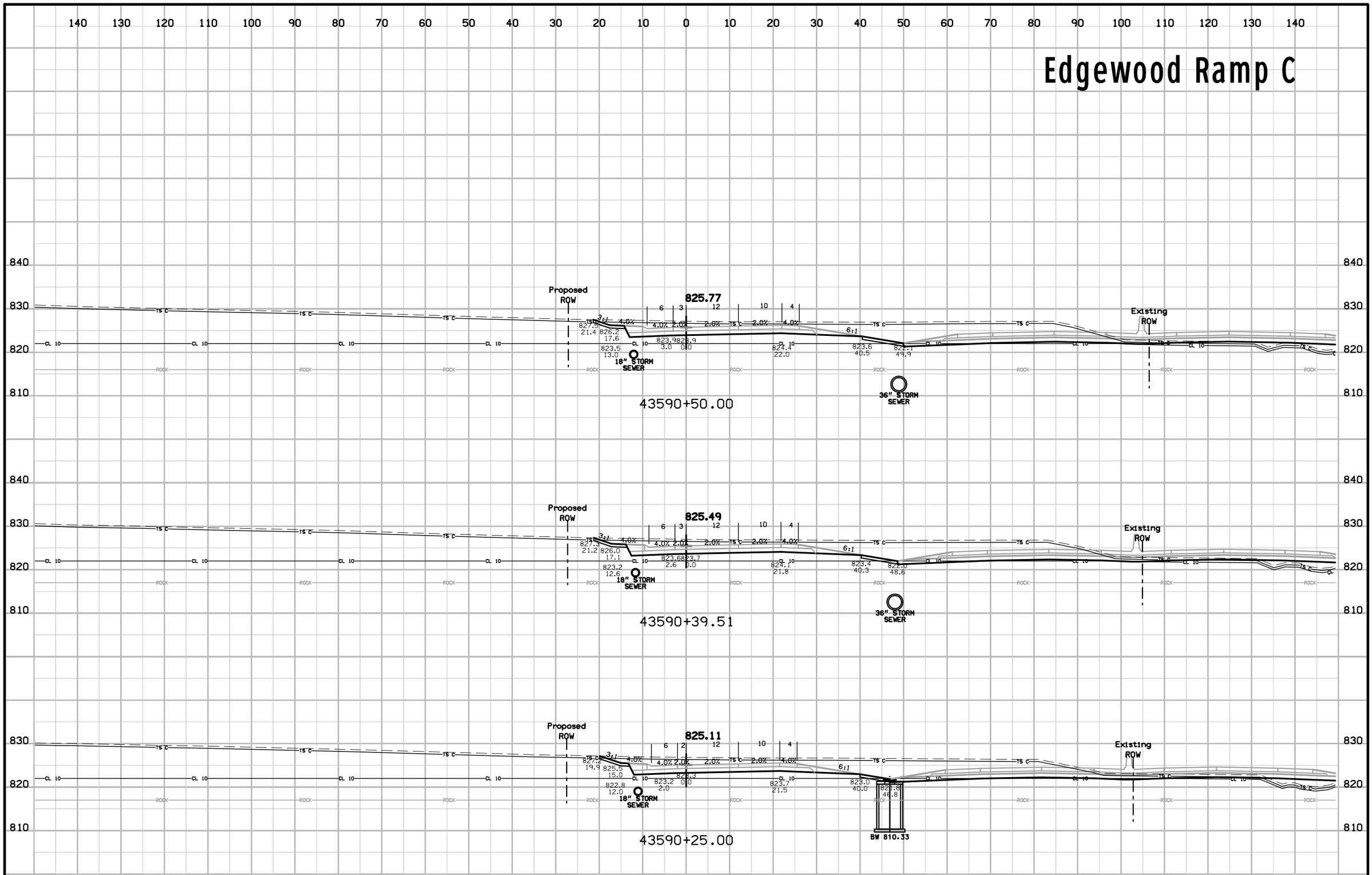

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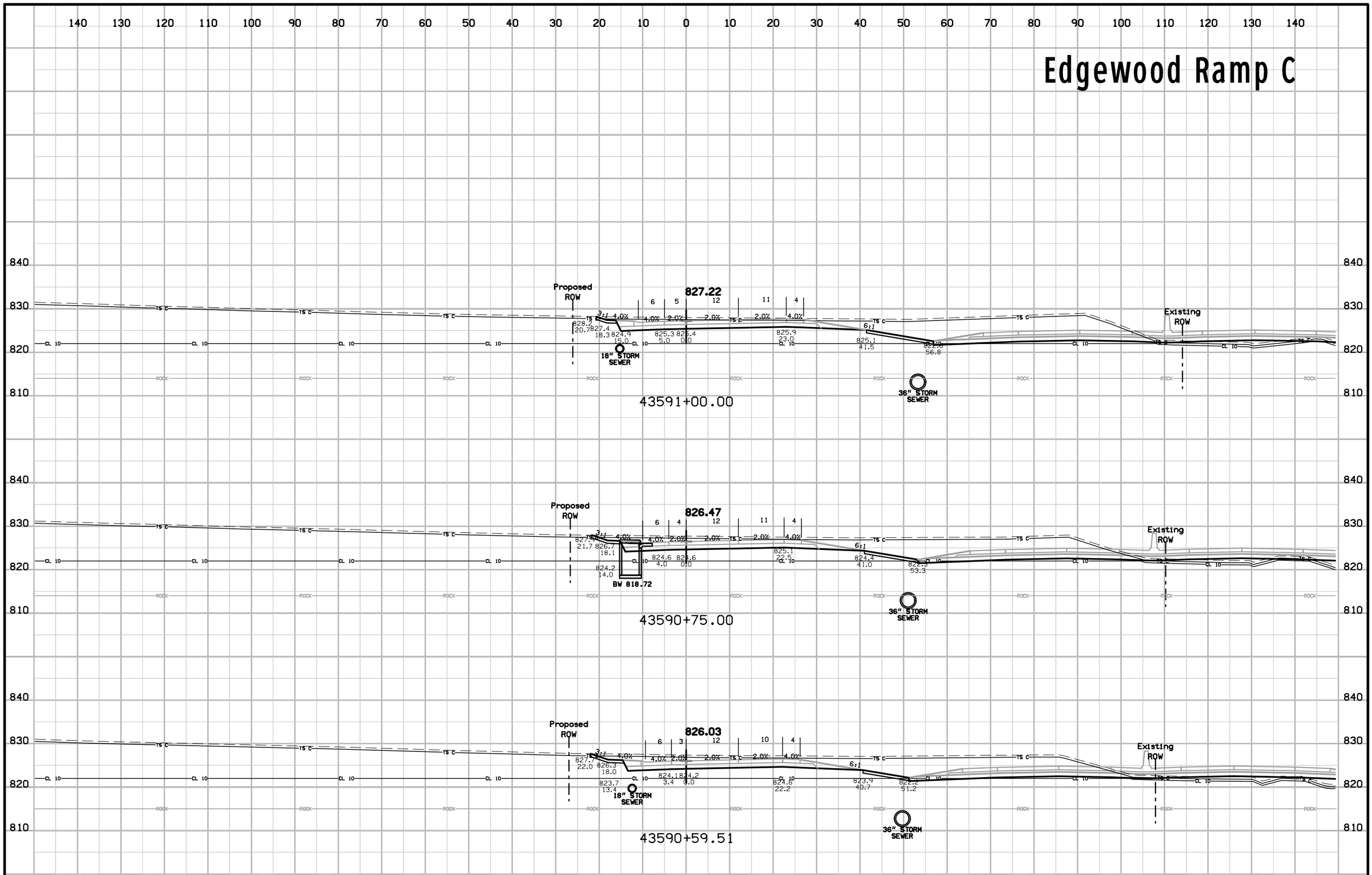
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.58

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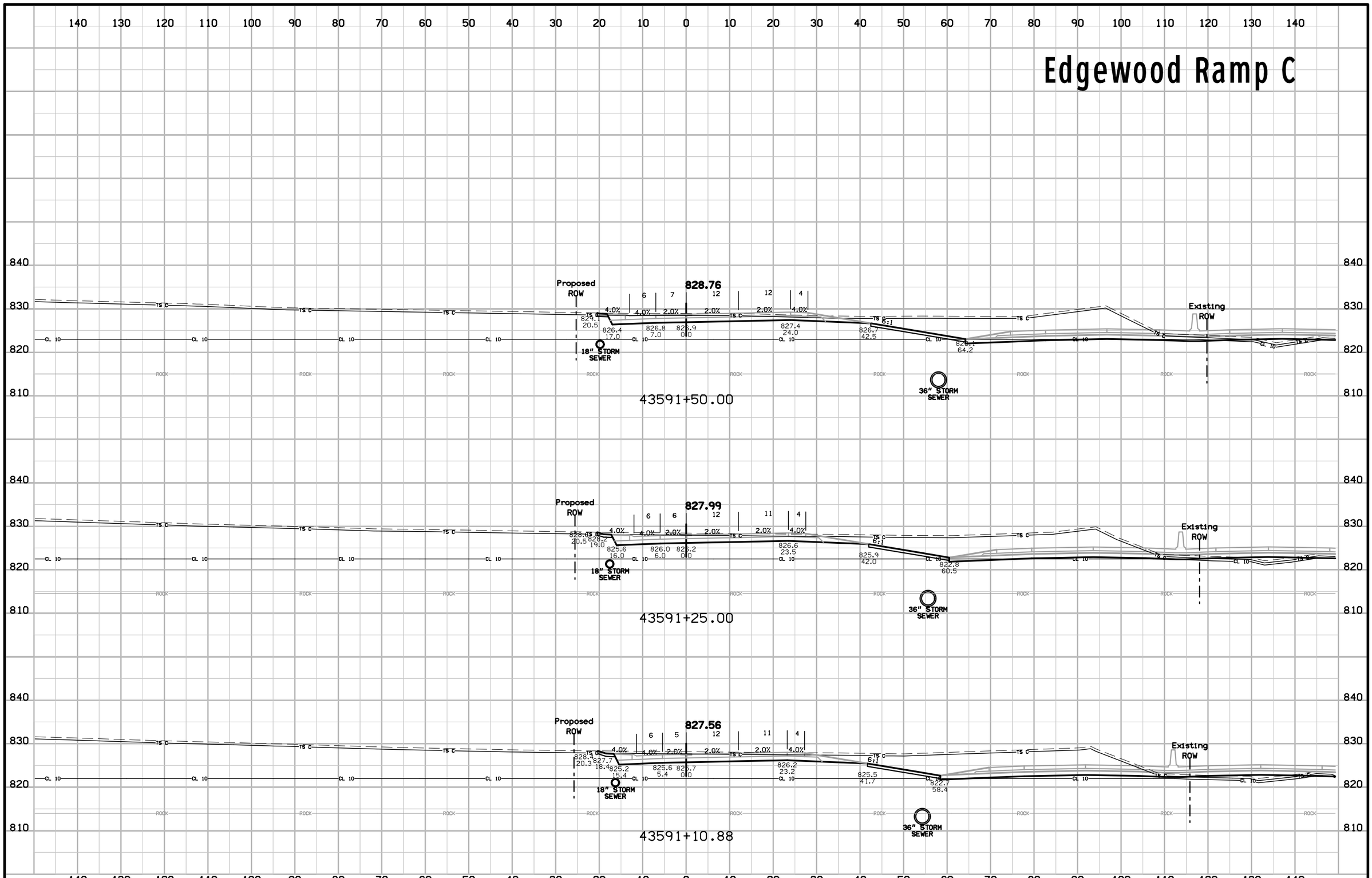
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.59

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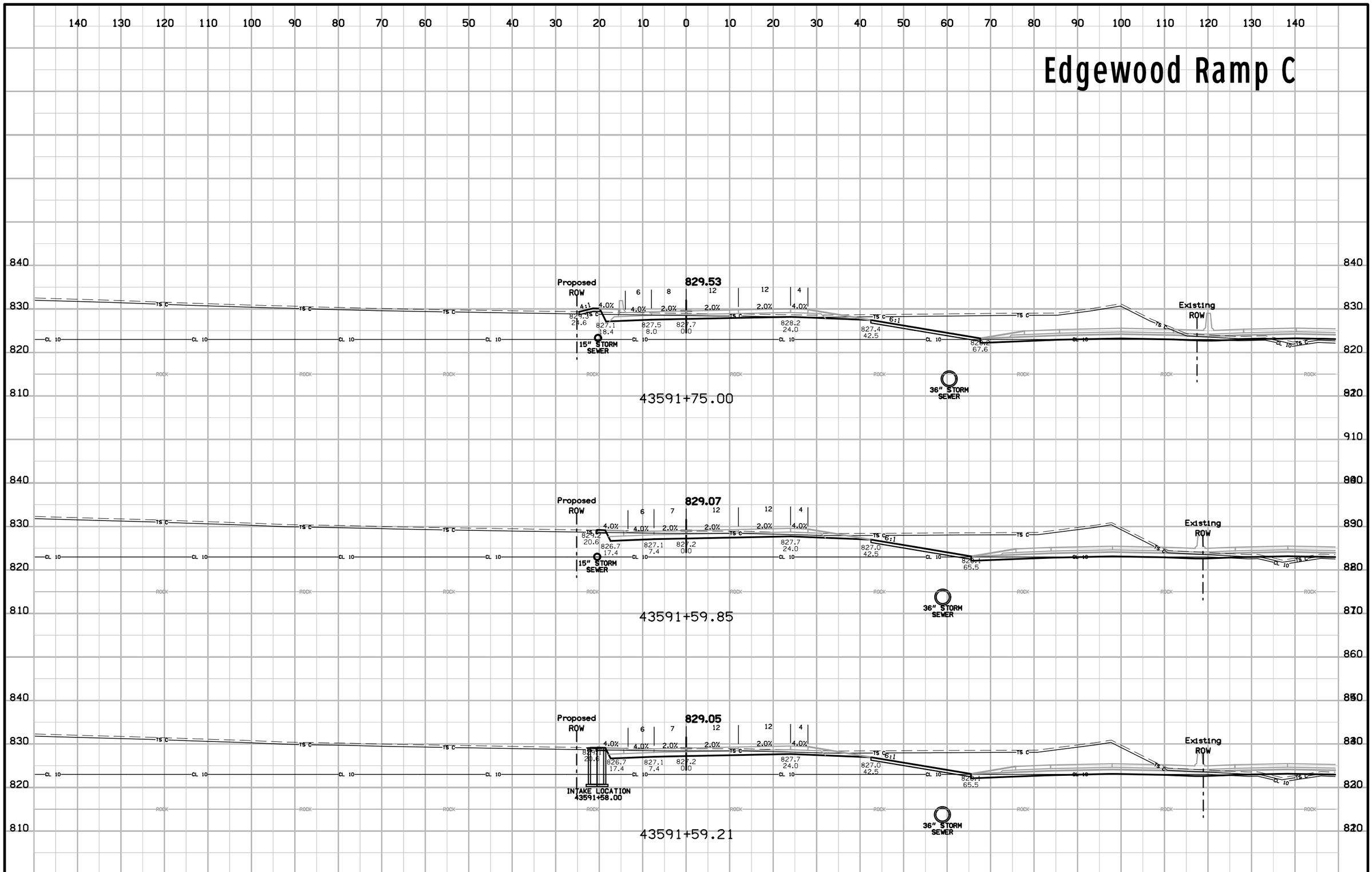
Edgewood Ramp C



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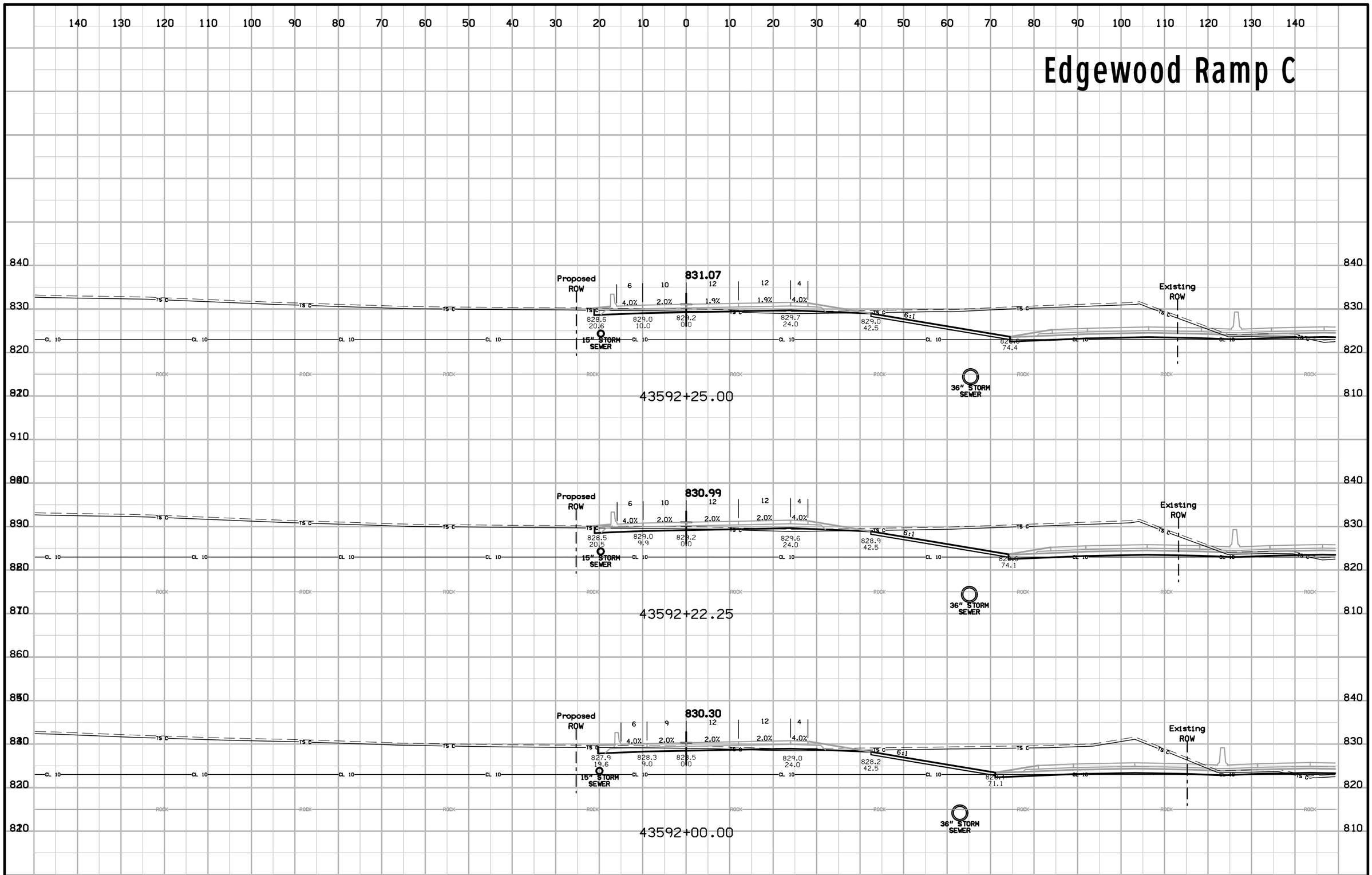

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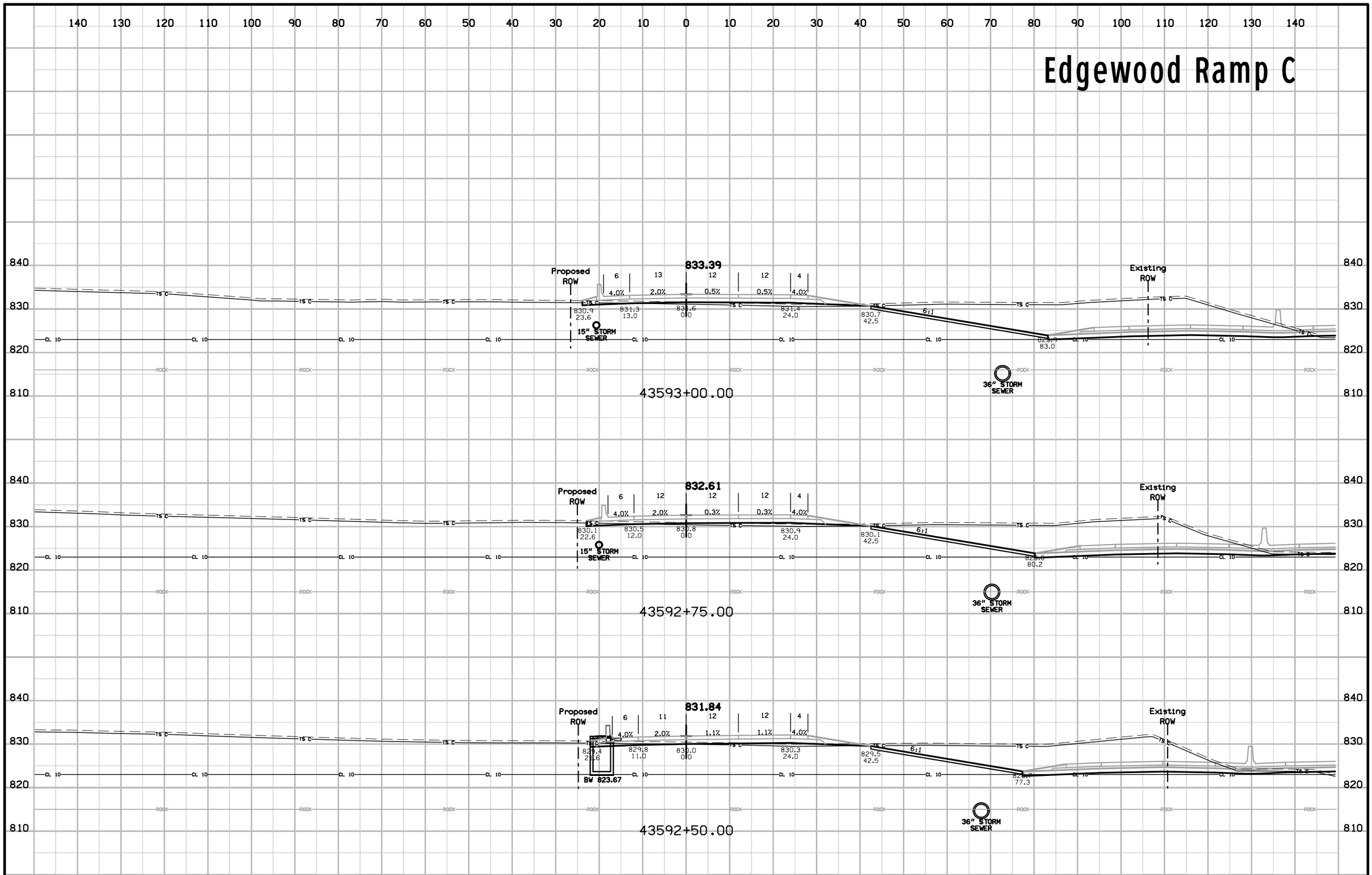
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.62

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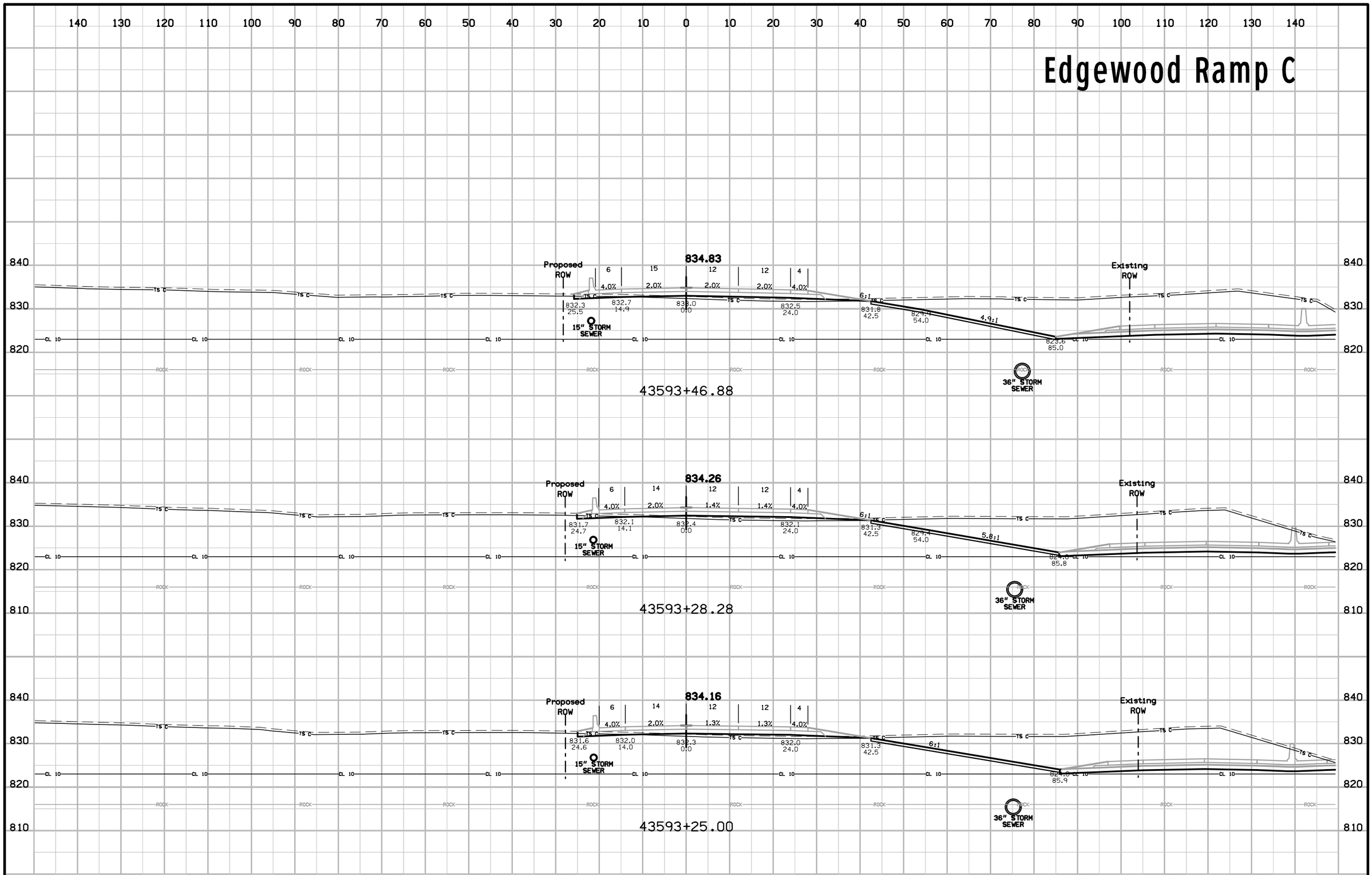
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.63

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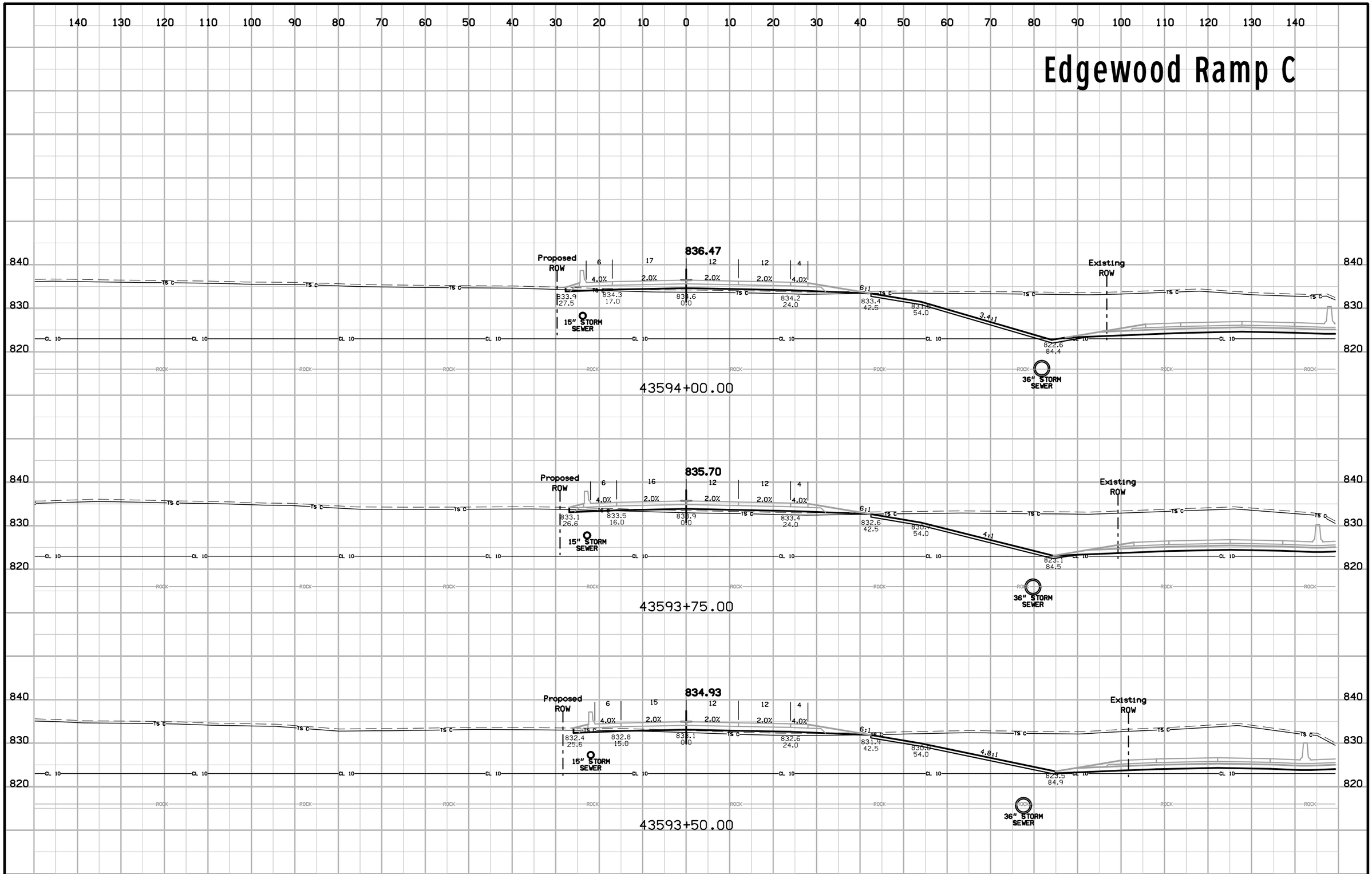
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.64

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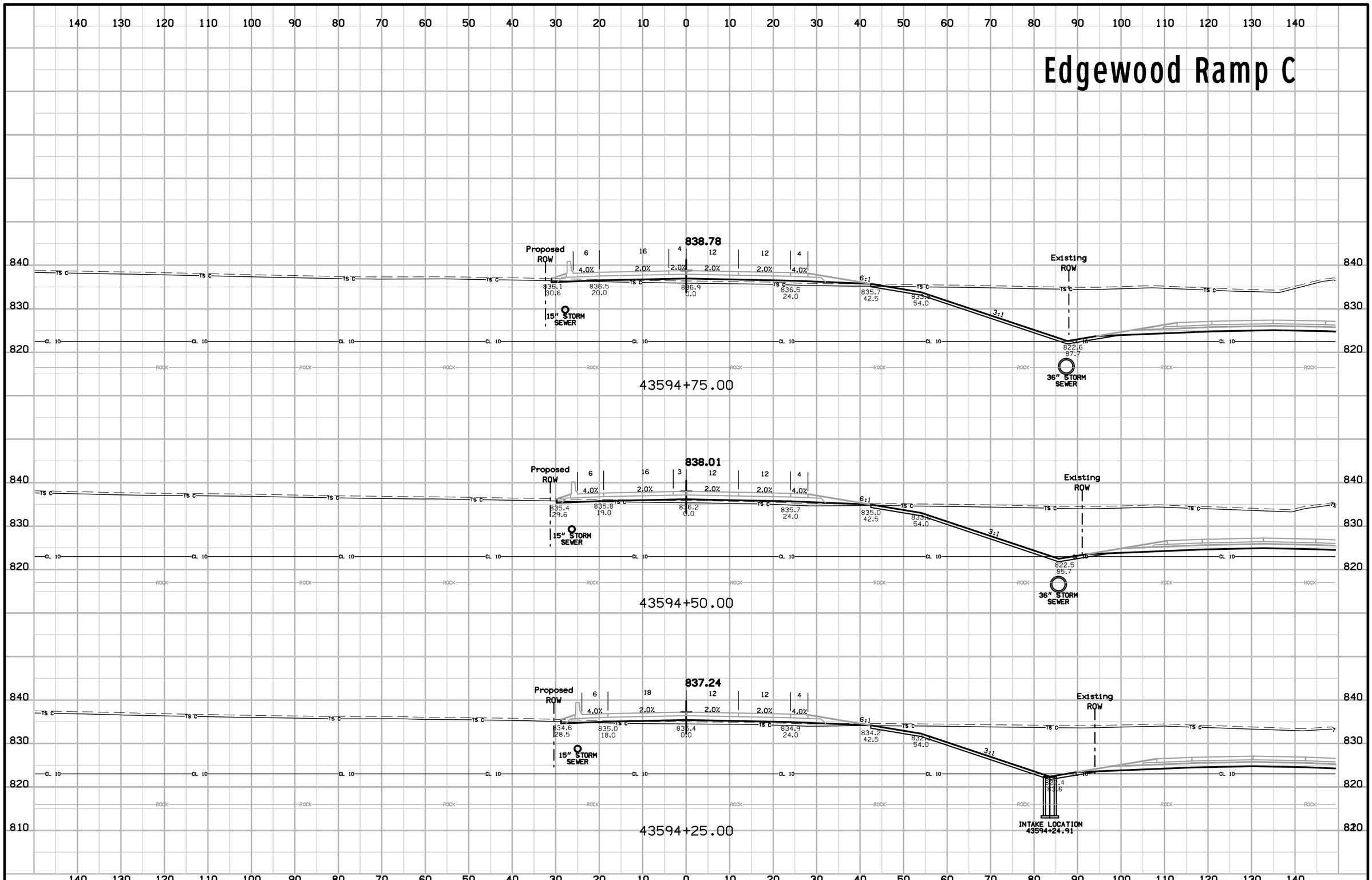

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.65

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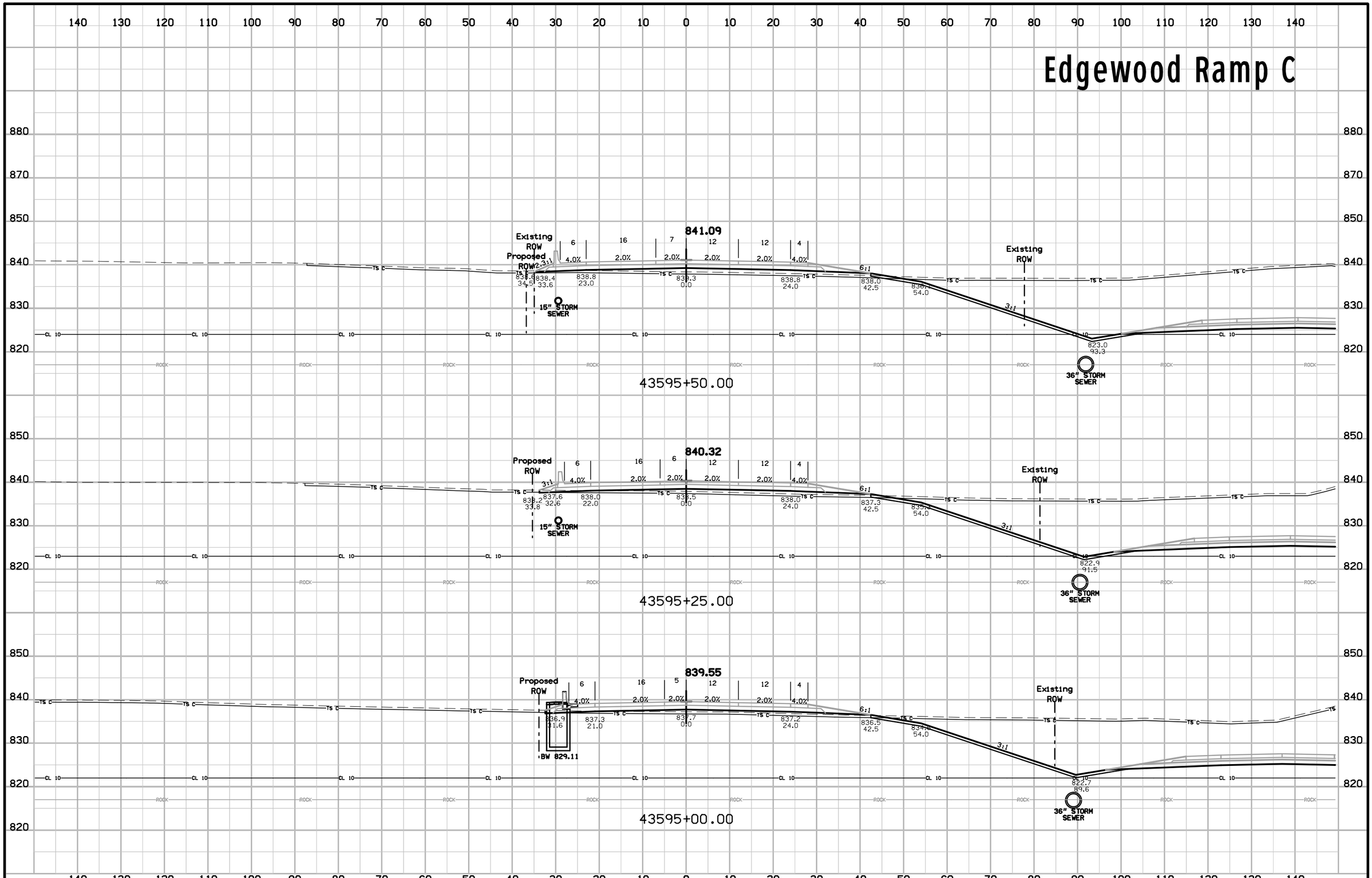
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.66

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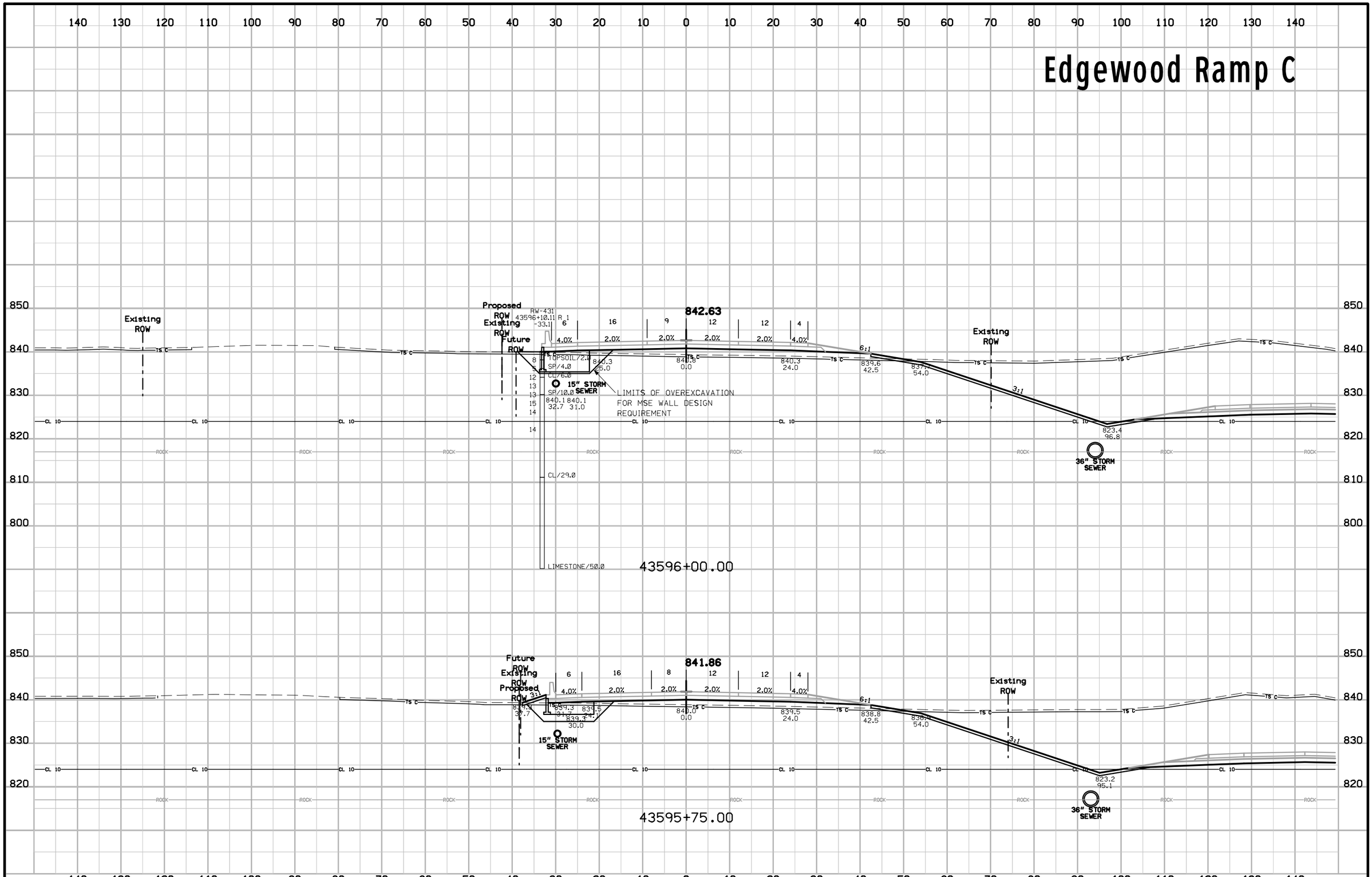
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.67

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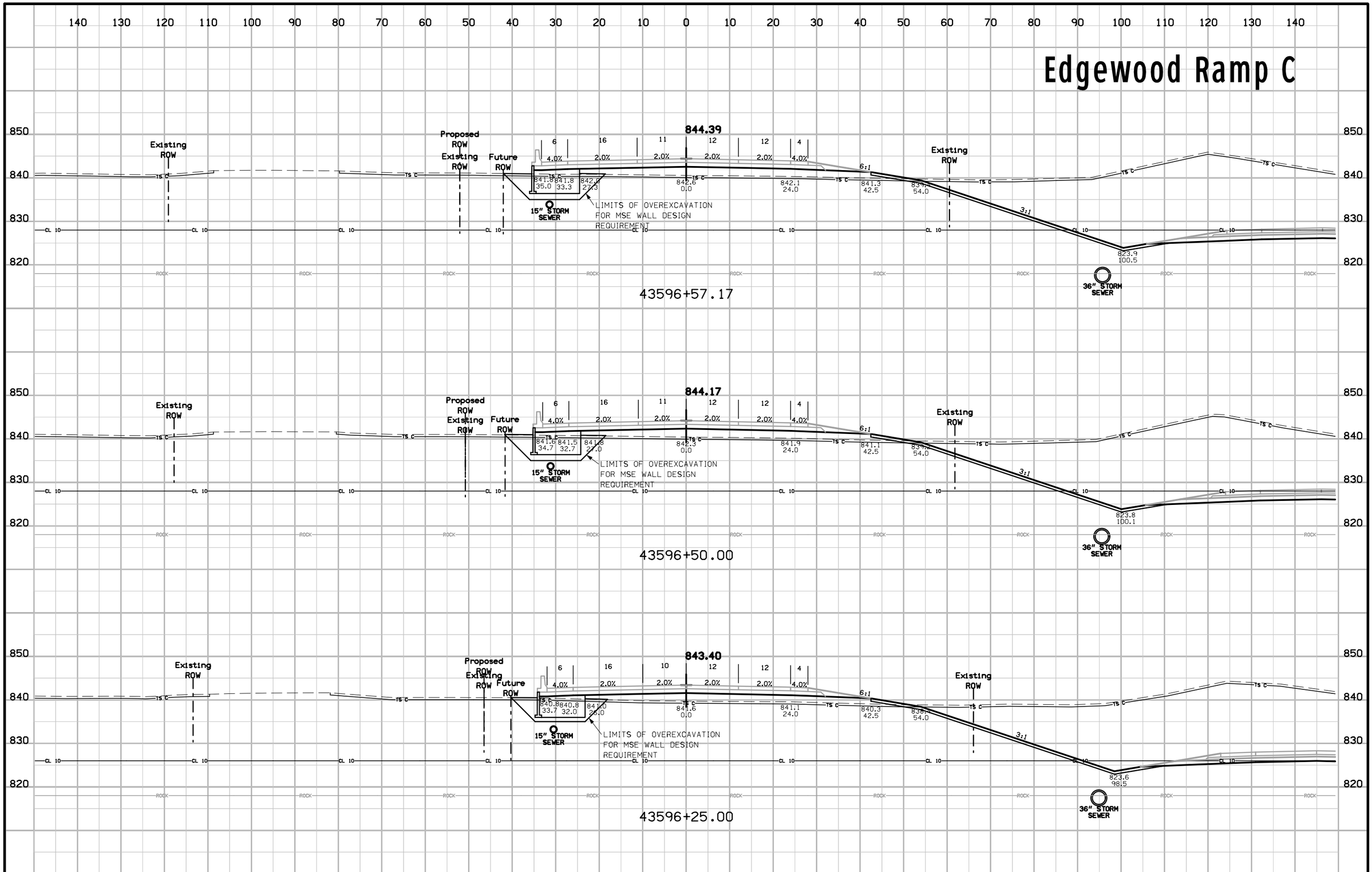
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.68

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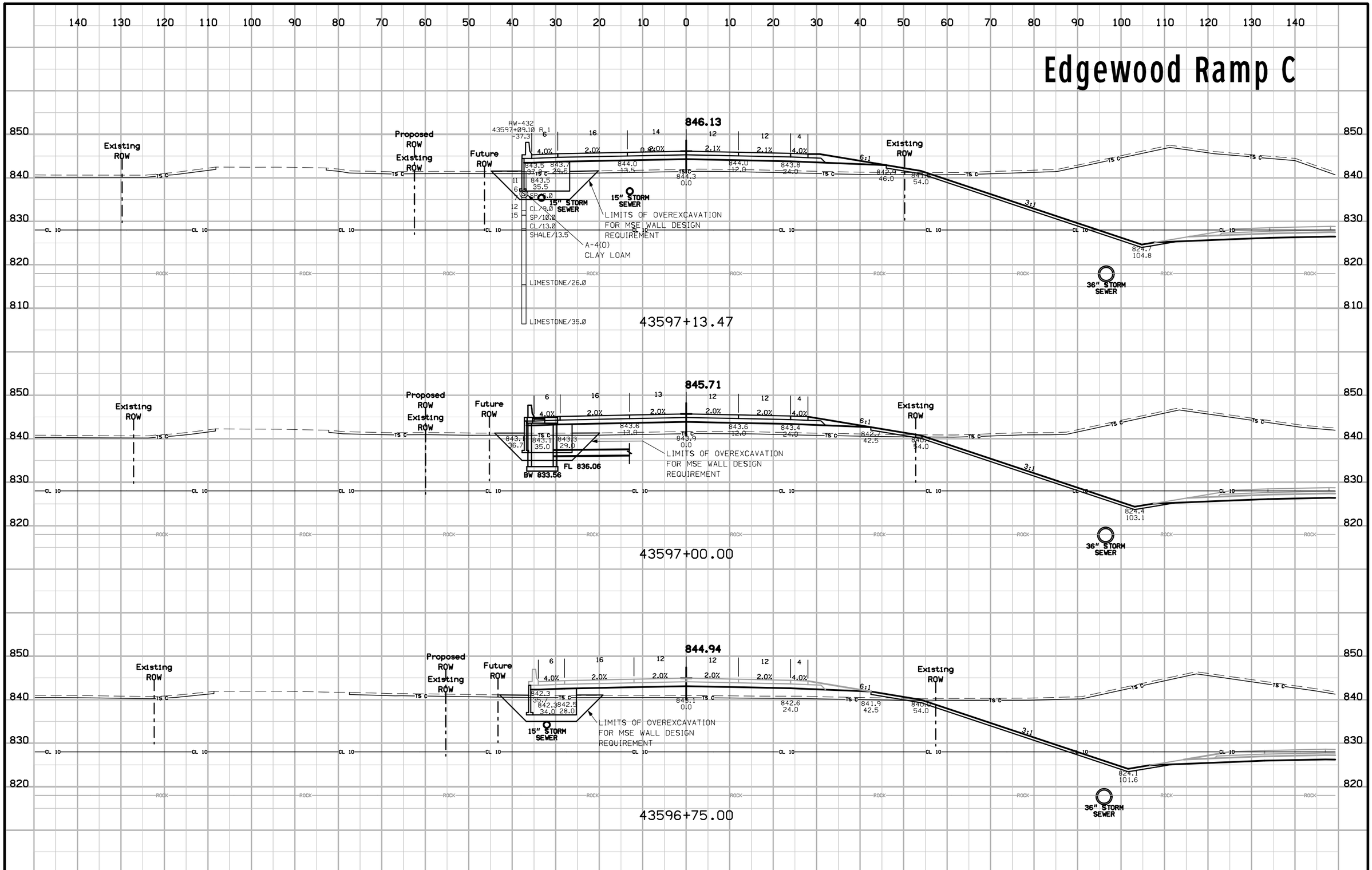
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.69

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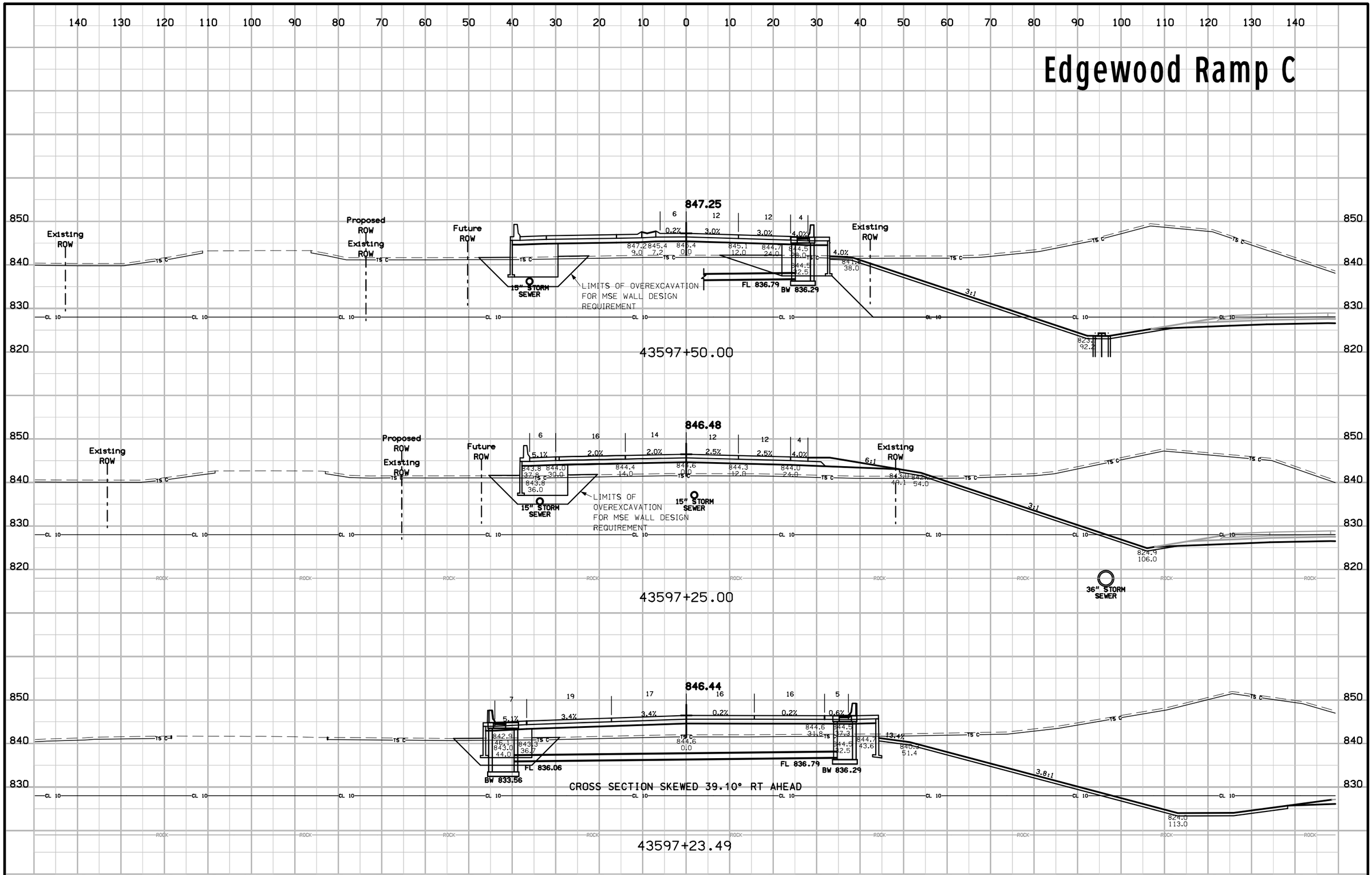
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.70

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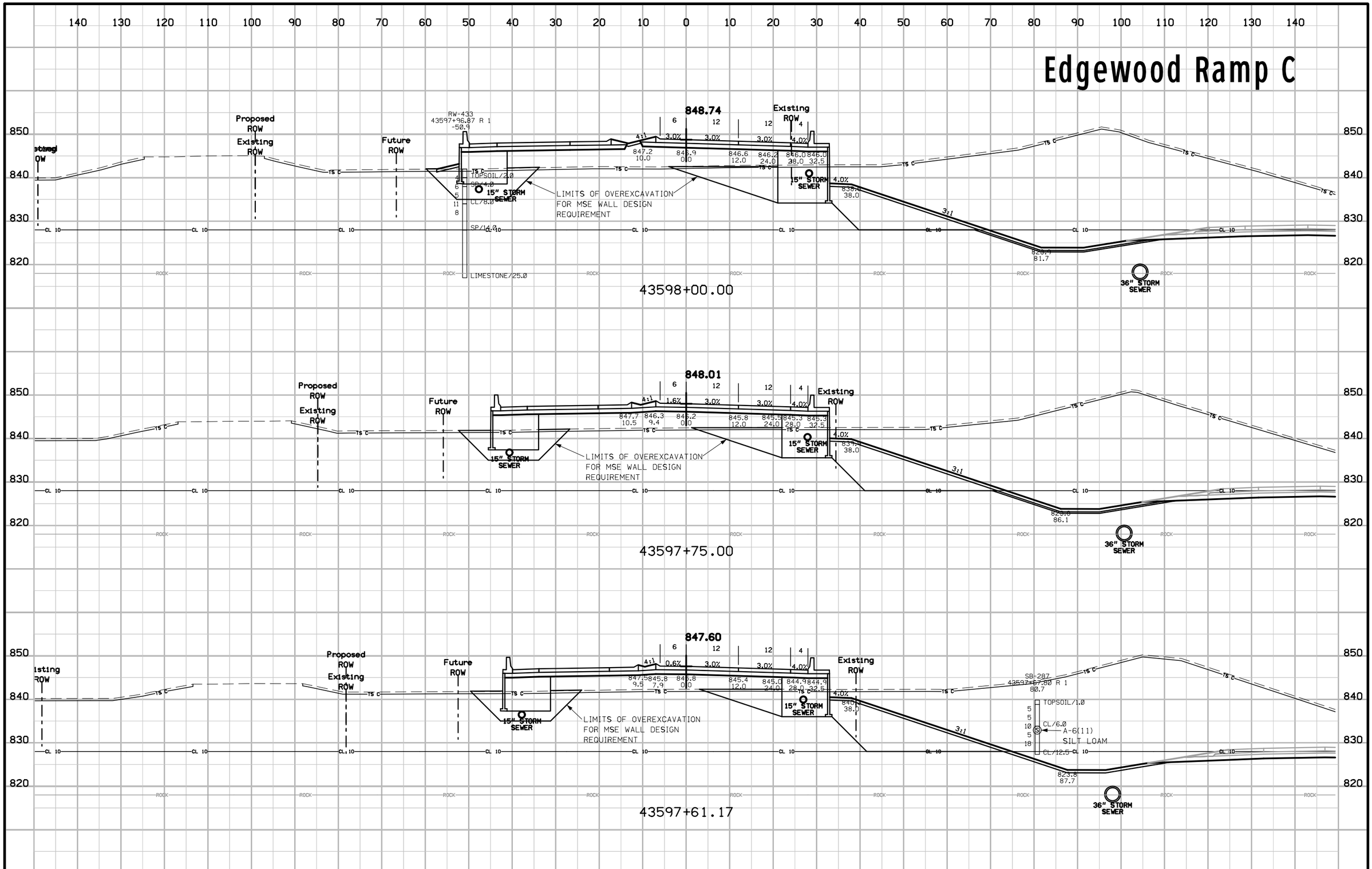
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.71

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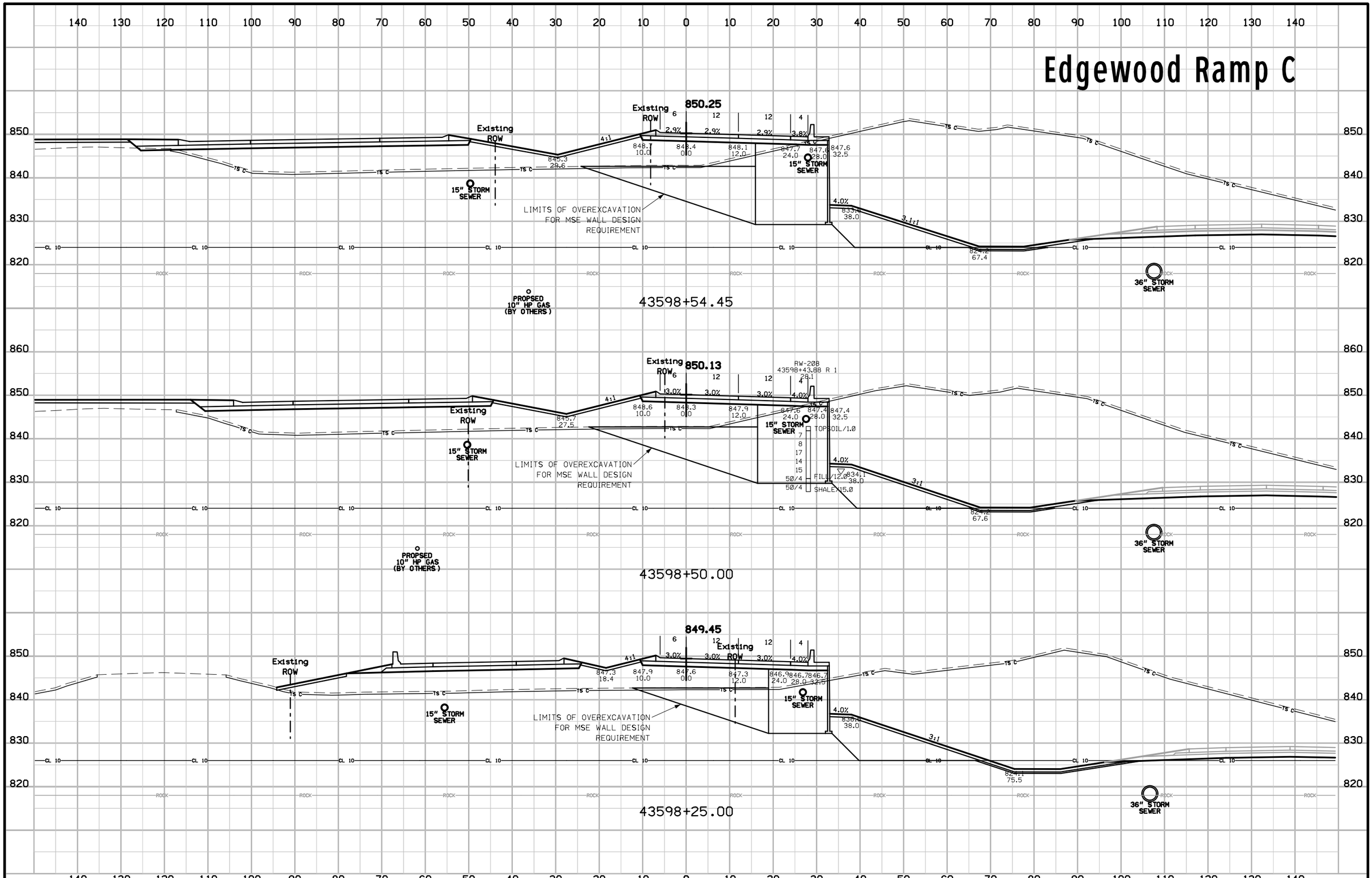
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.72

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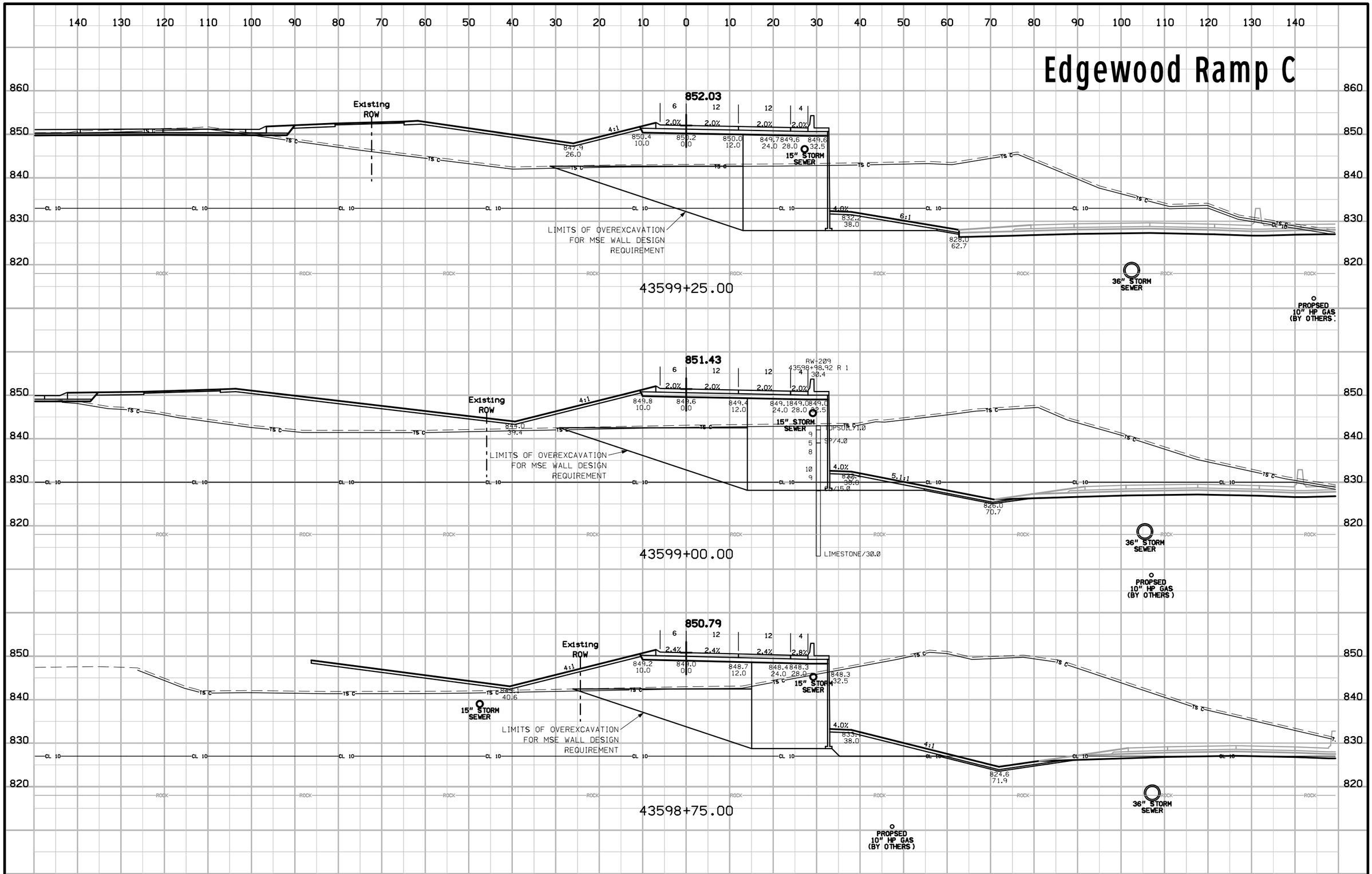
Edgewood Ramp C



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.73

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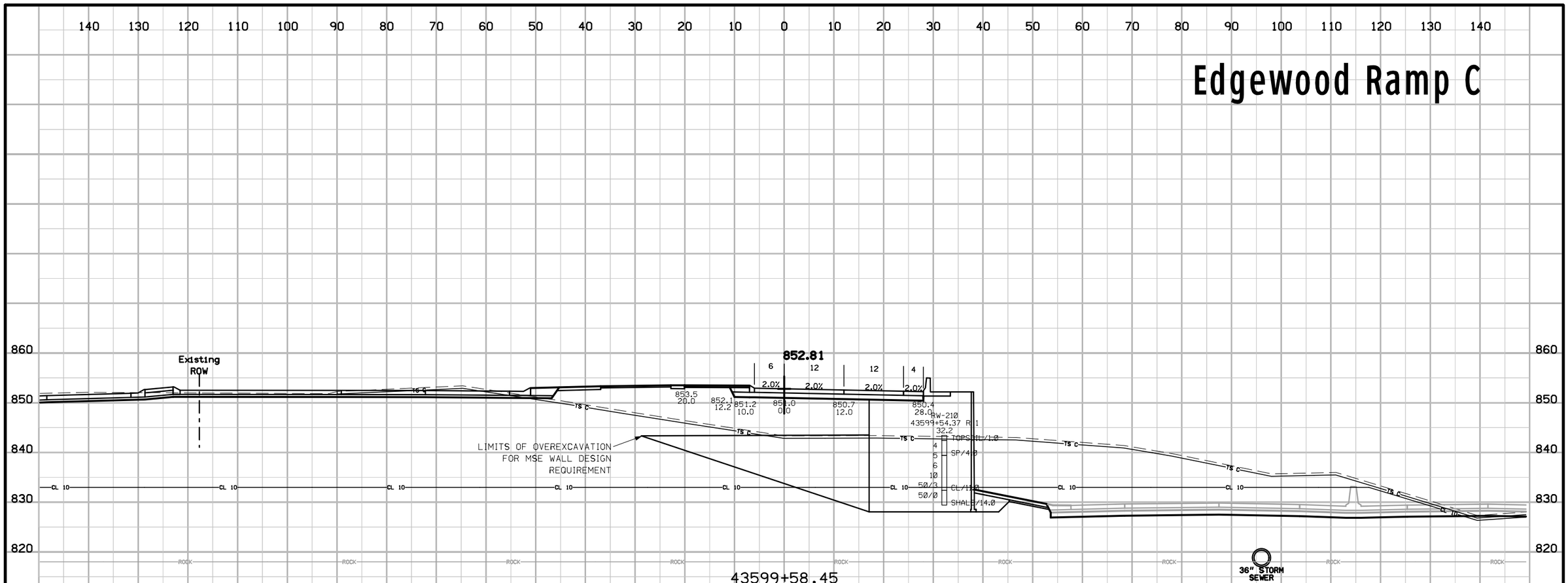
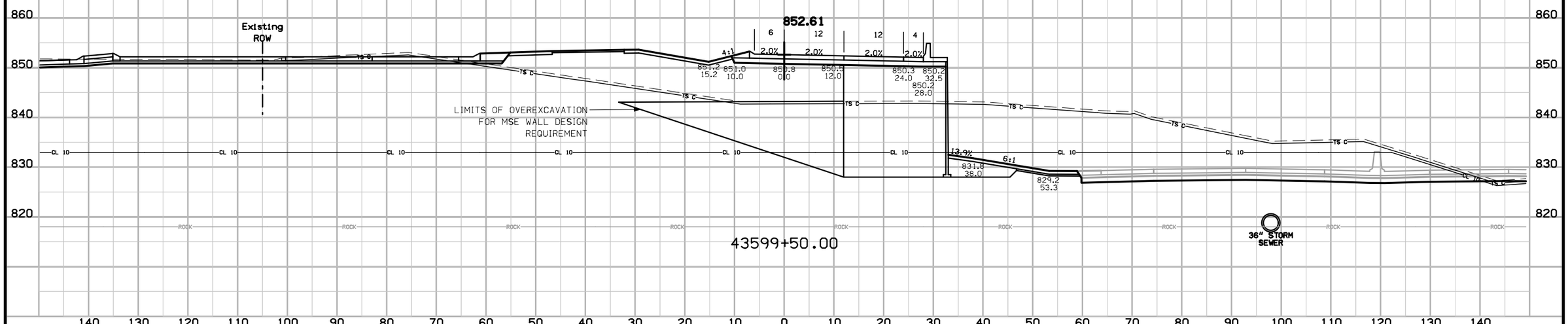
Edgewood Ramp C





ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.74

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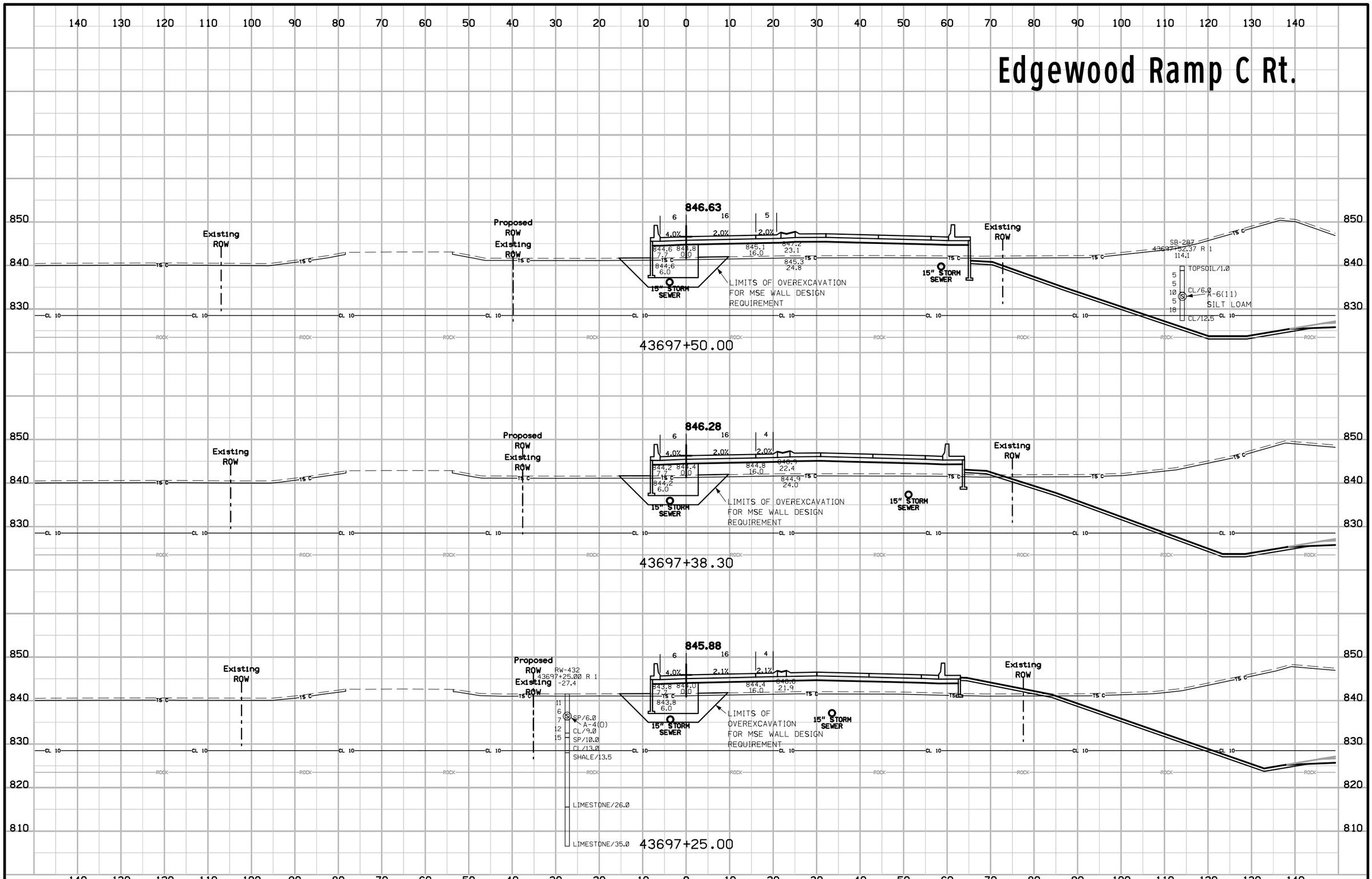

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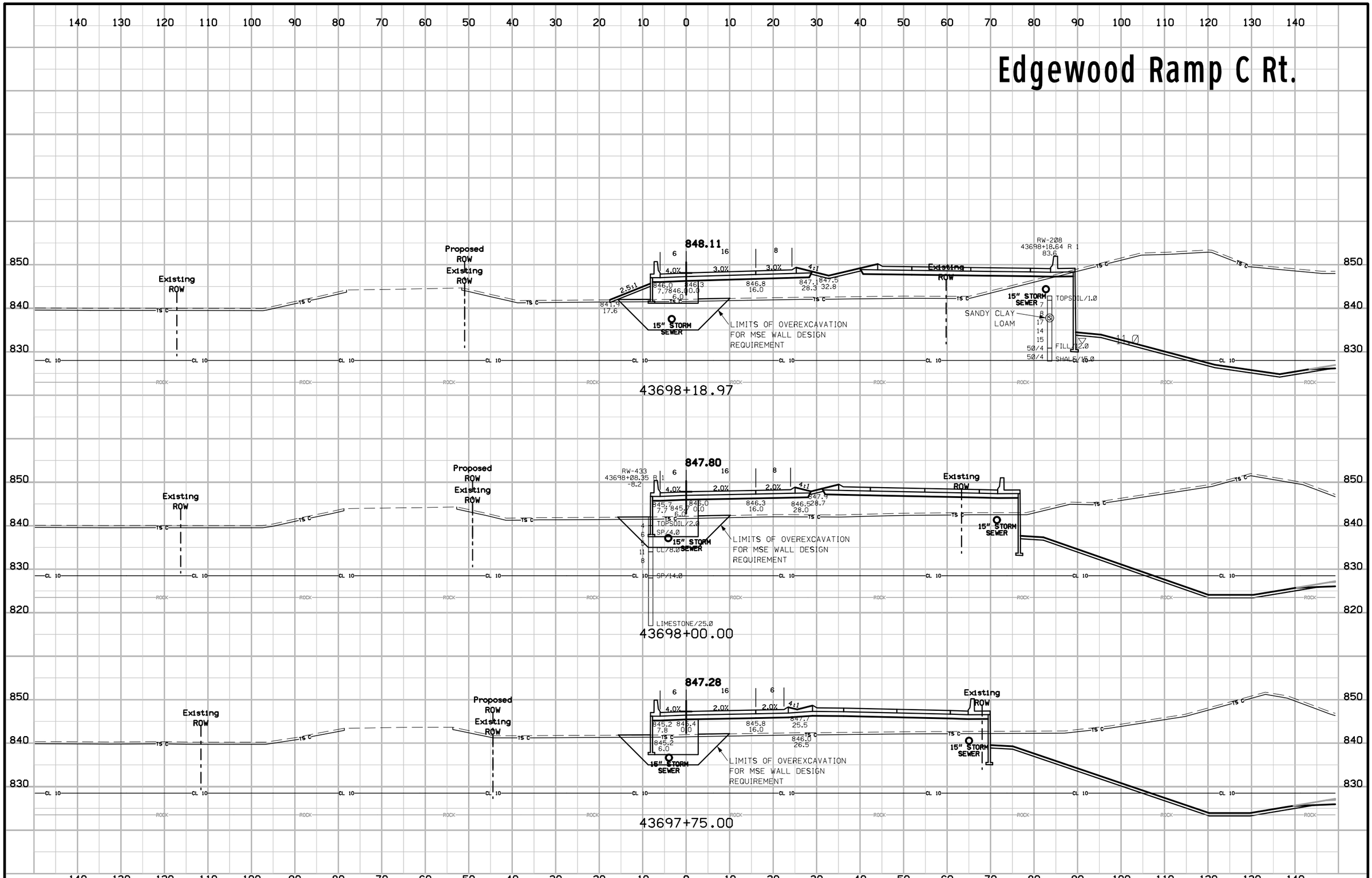

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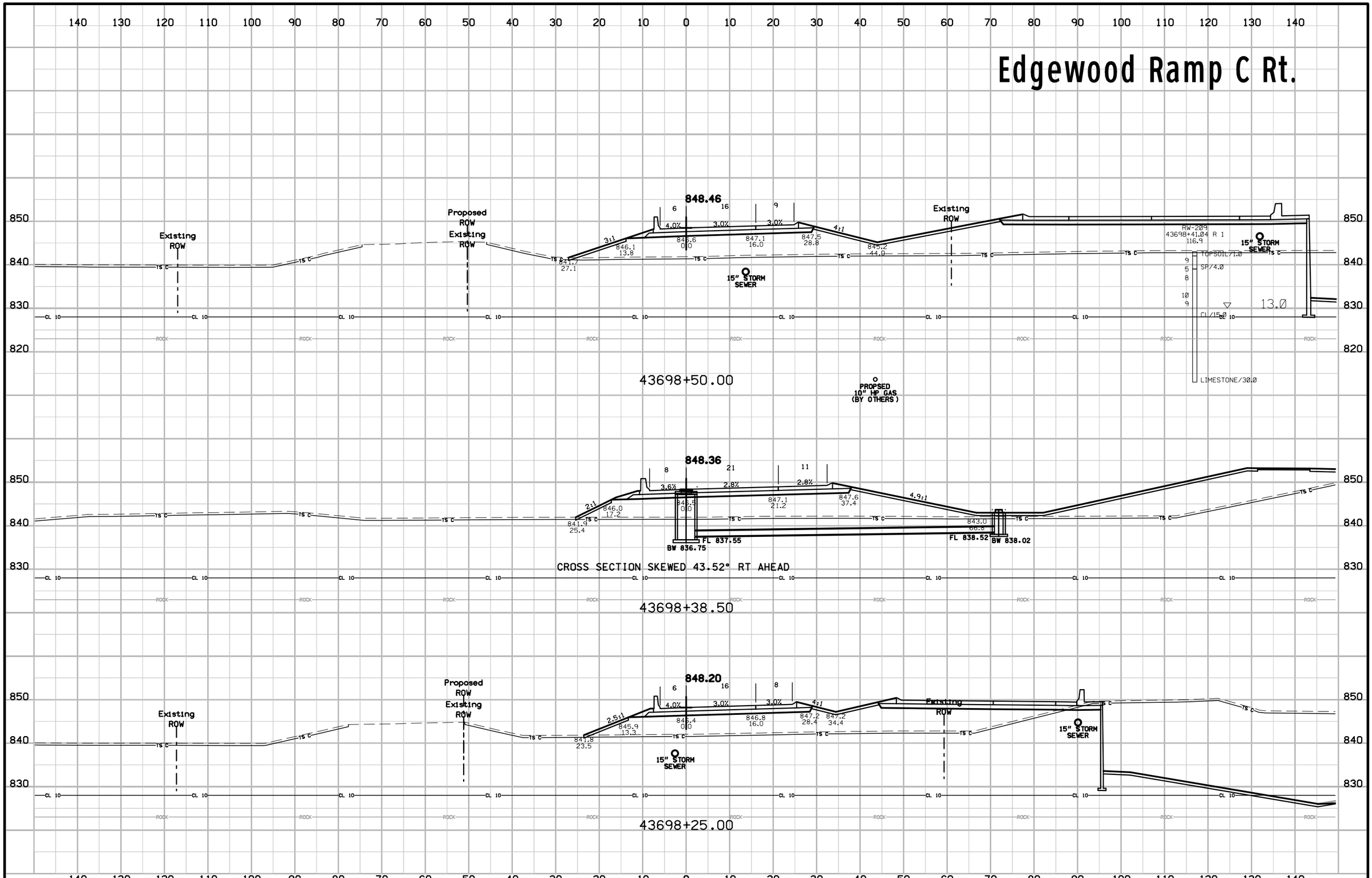

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.77

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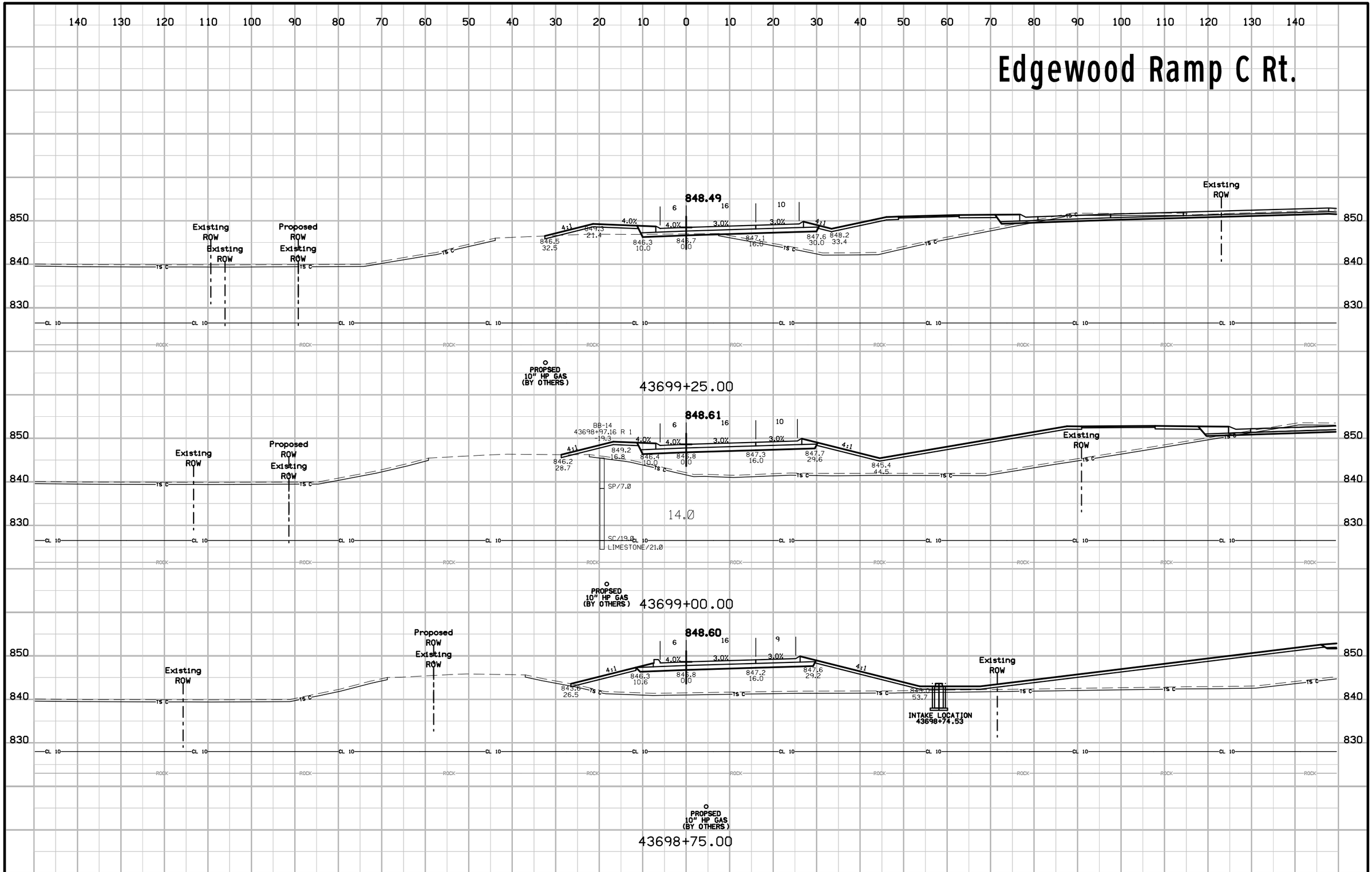

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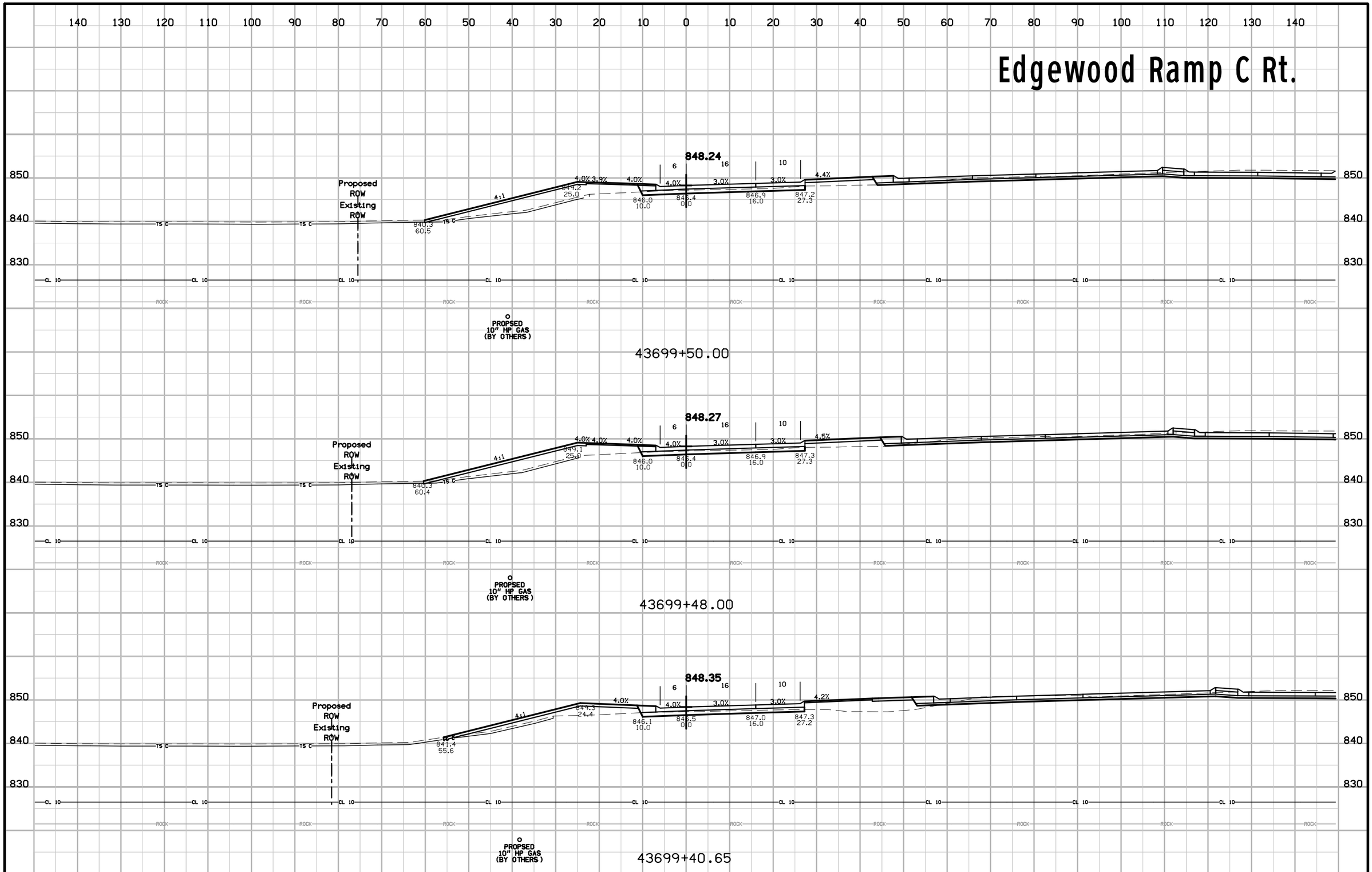

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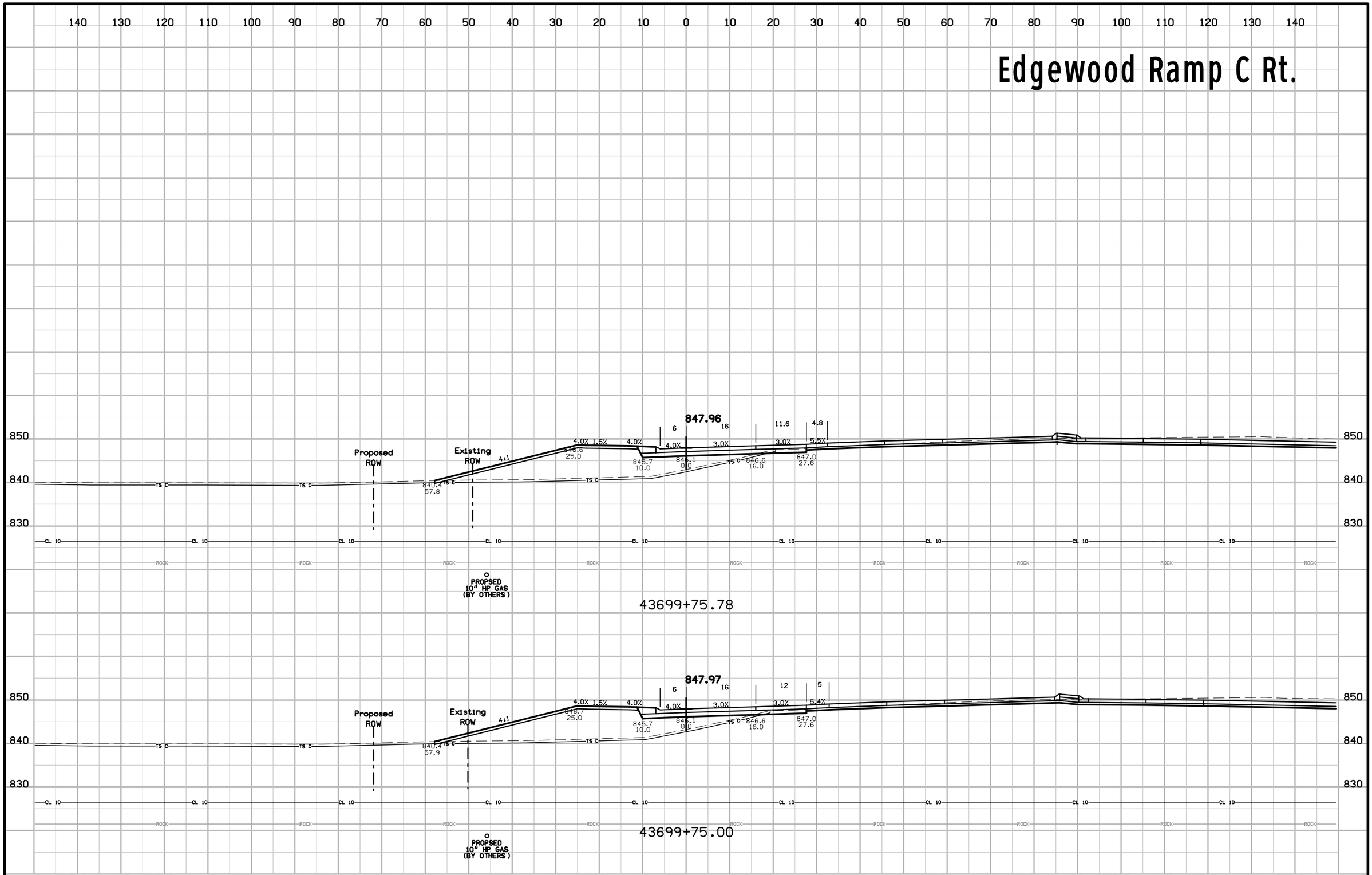

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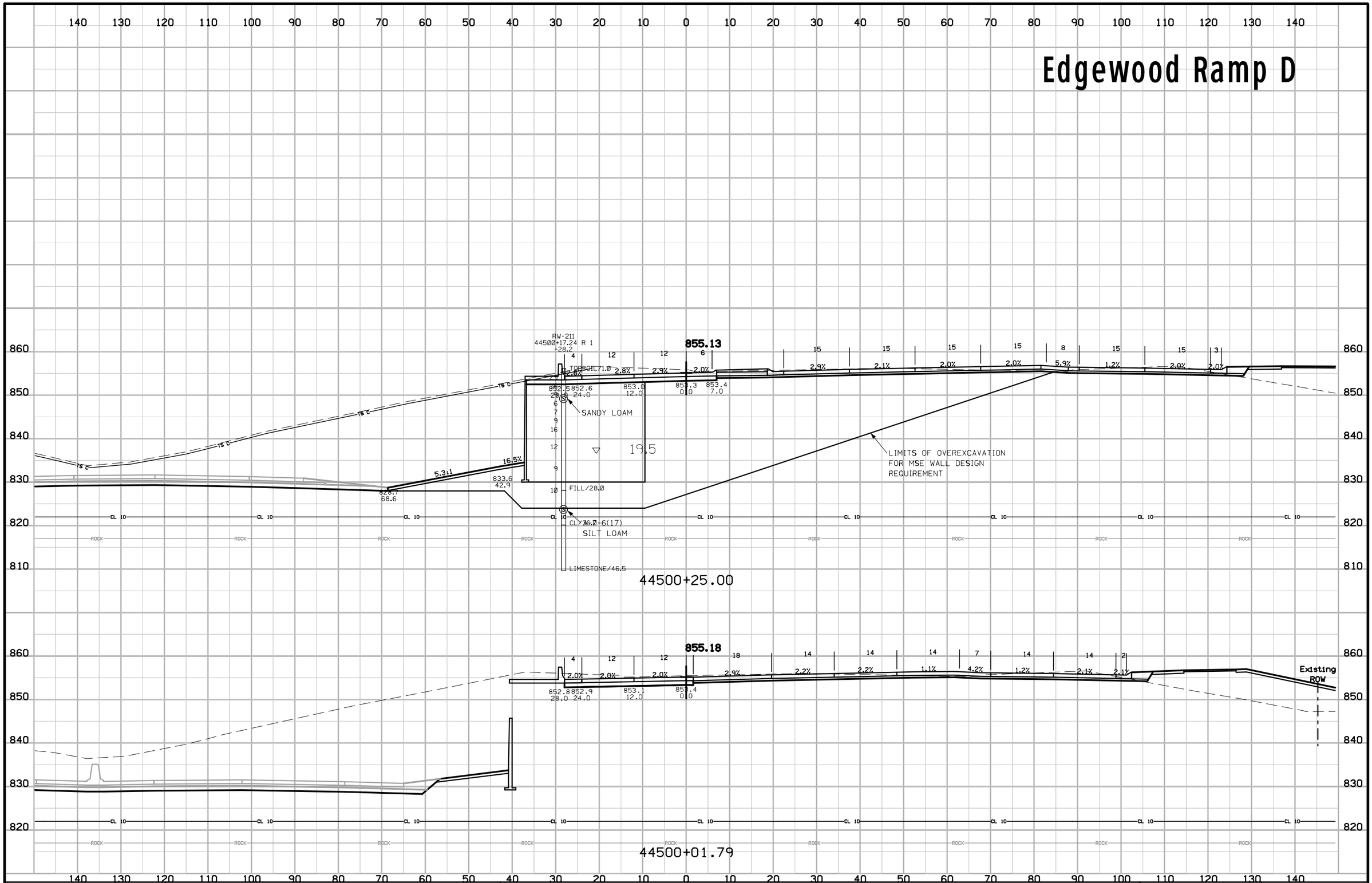

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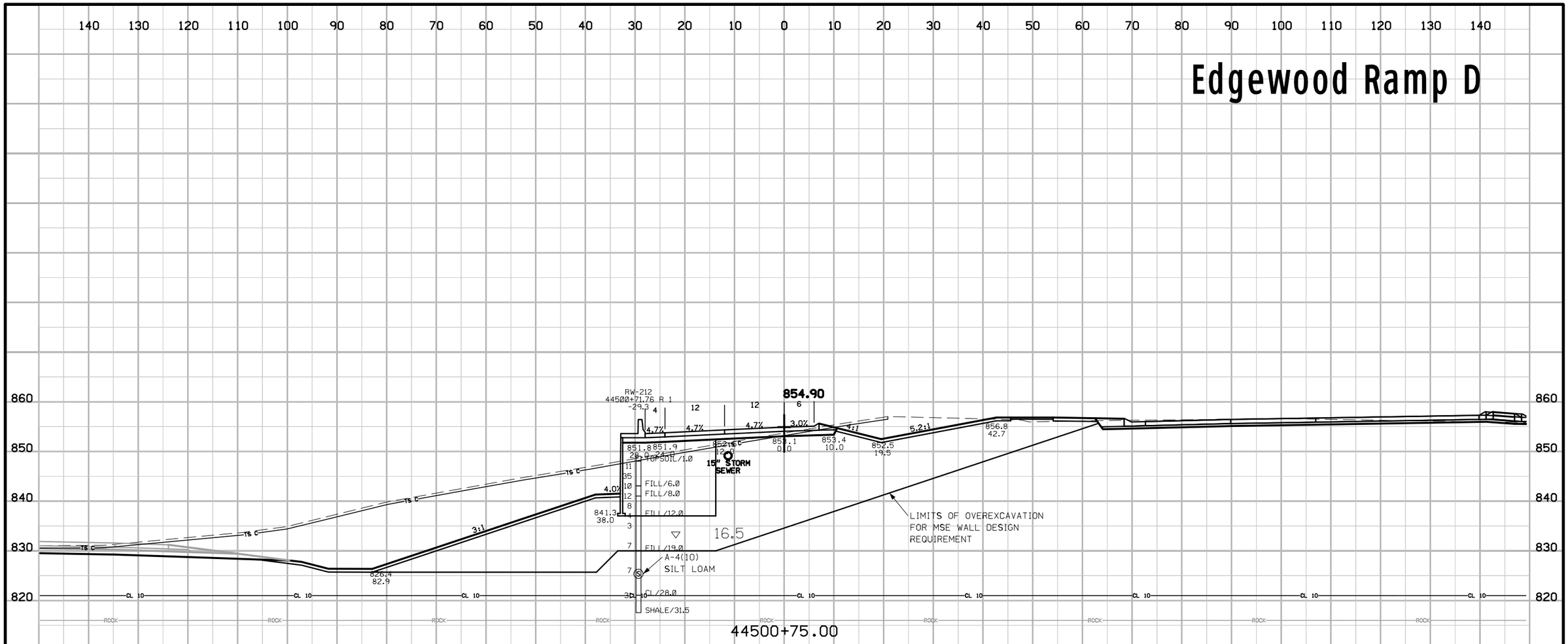

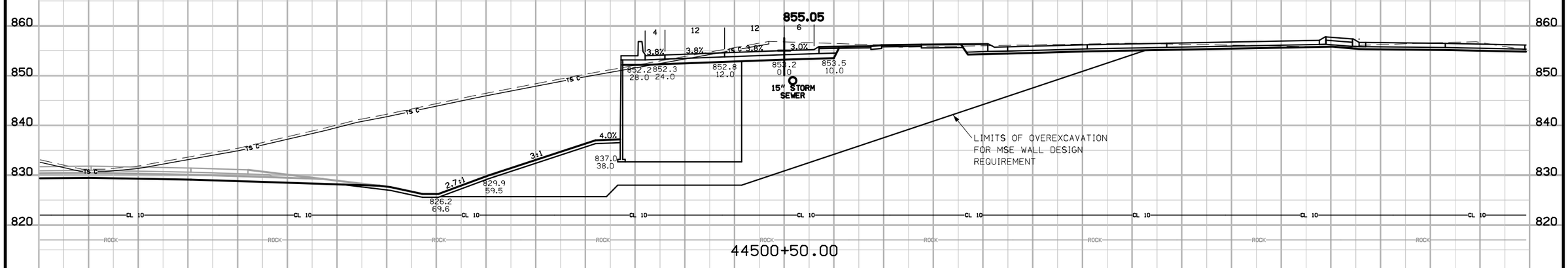

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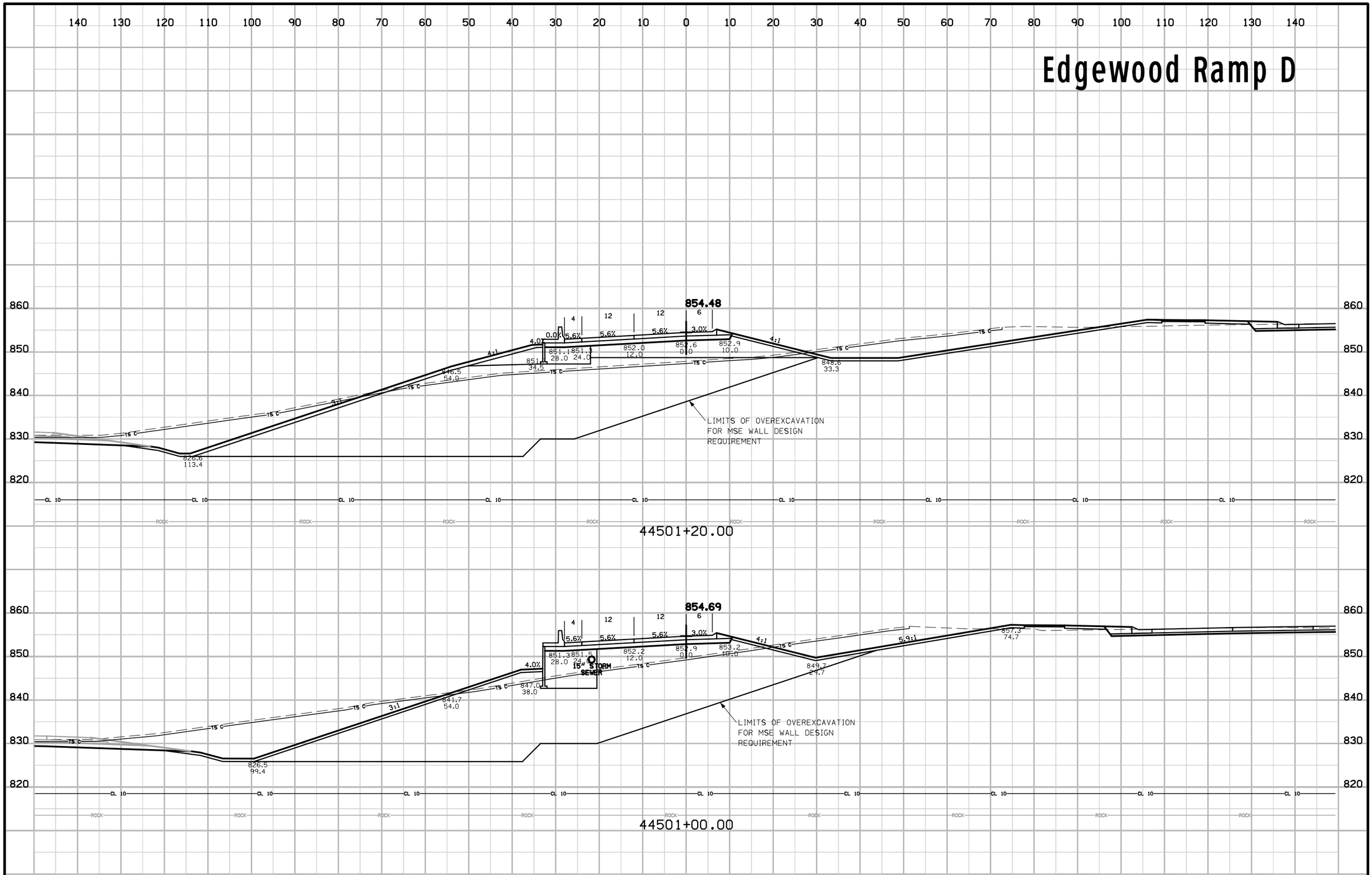

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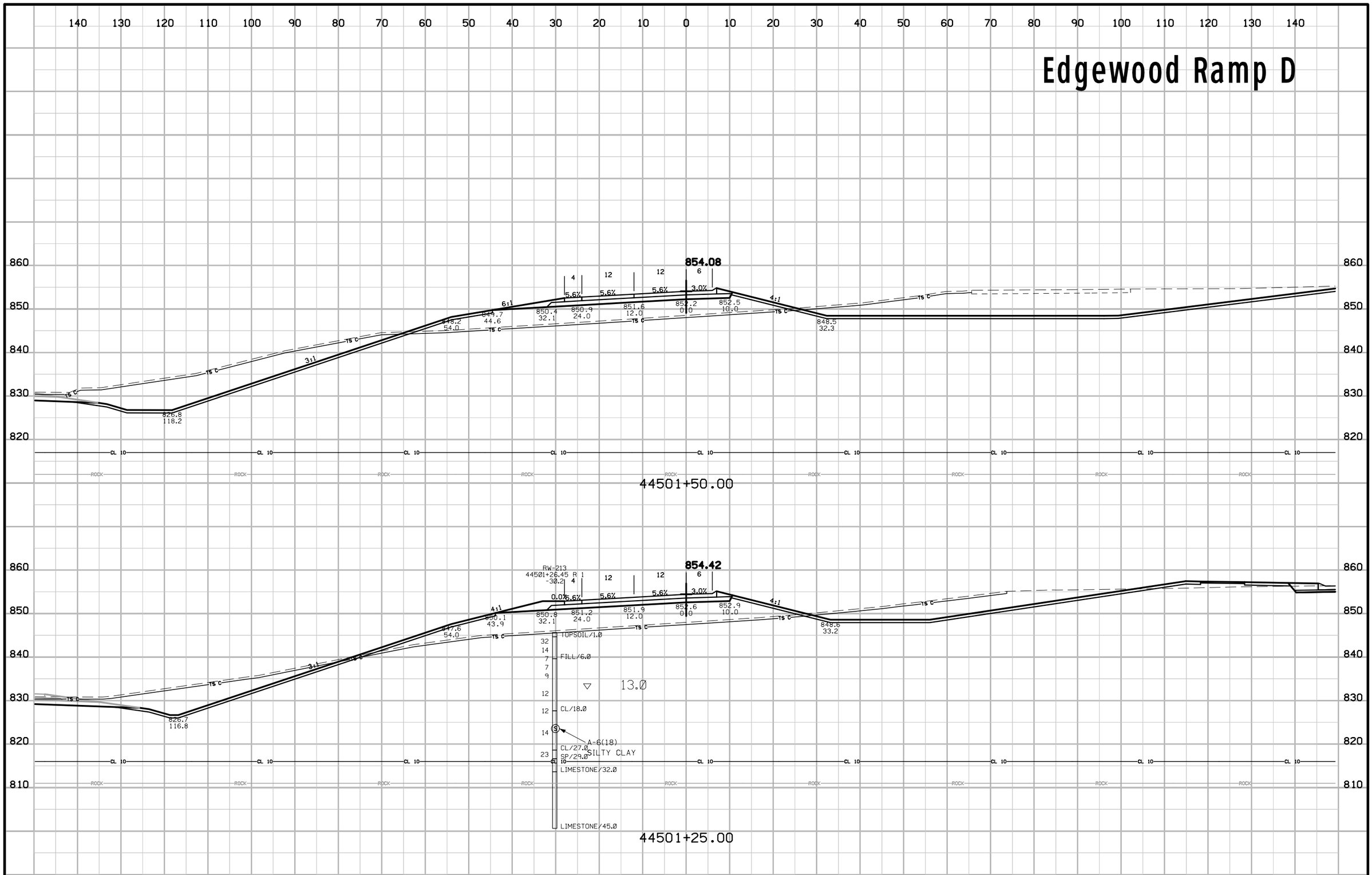

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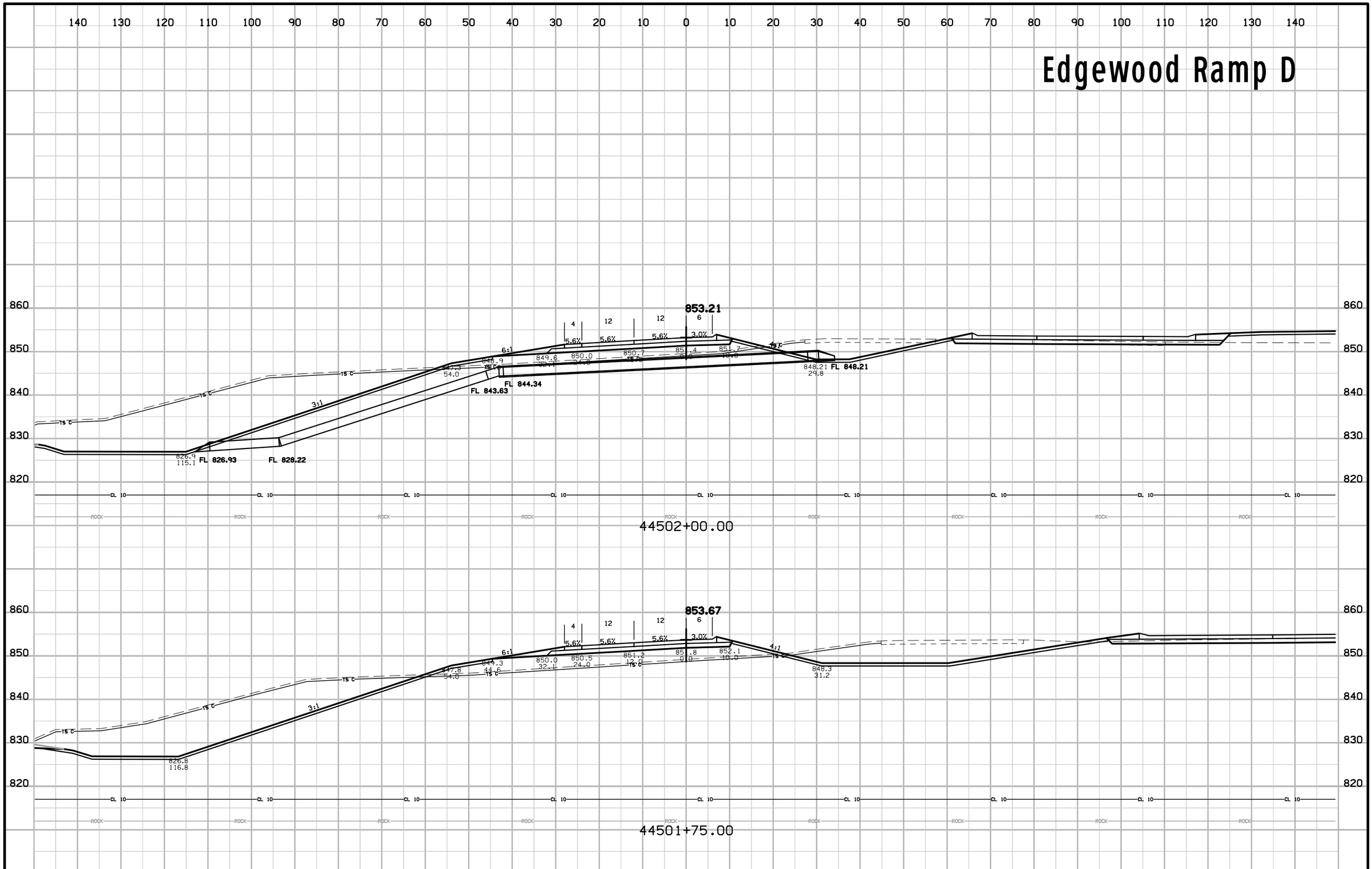

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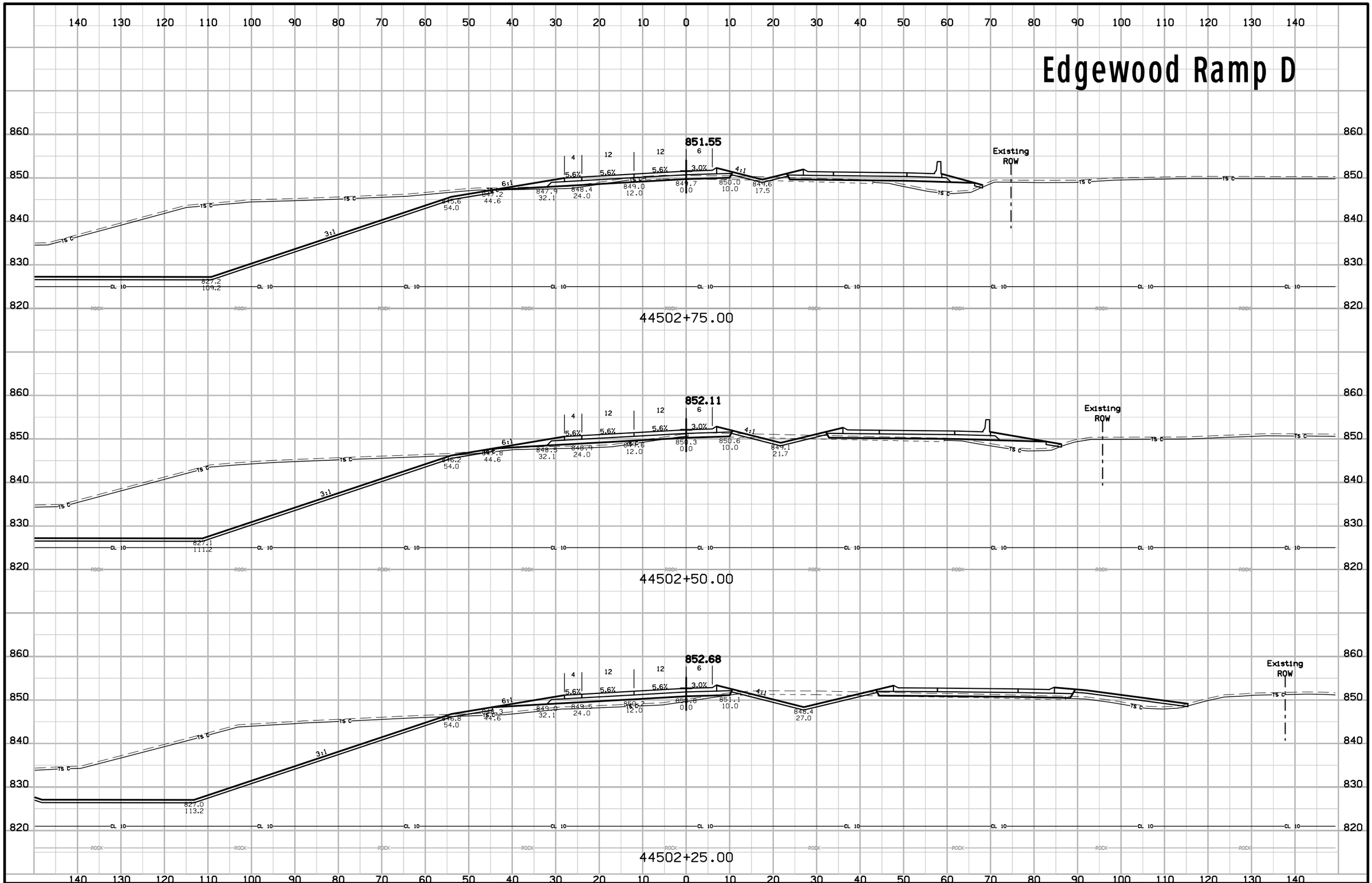

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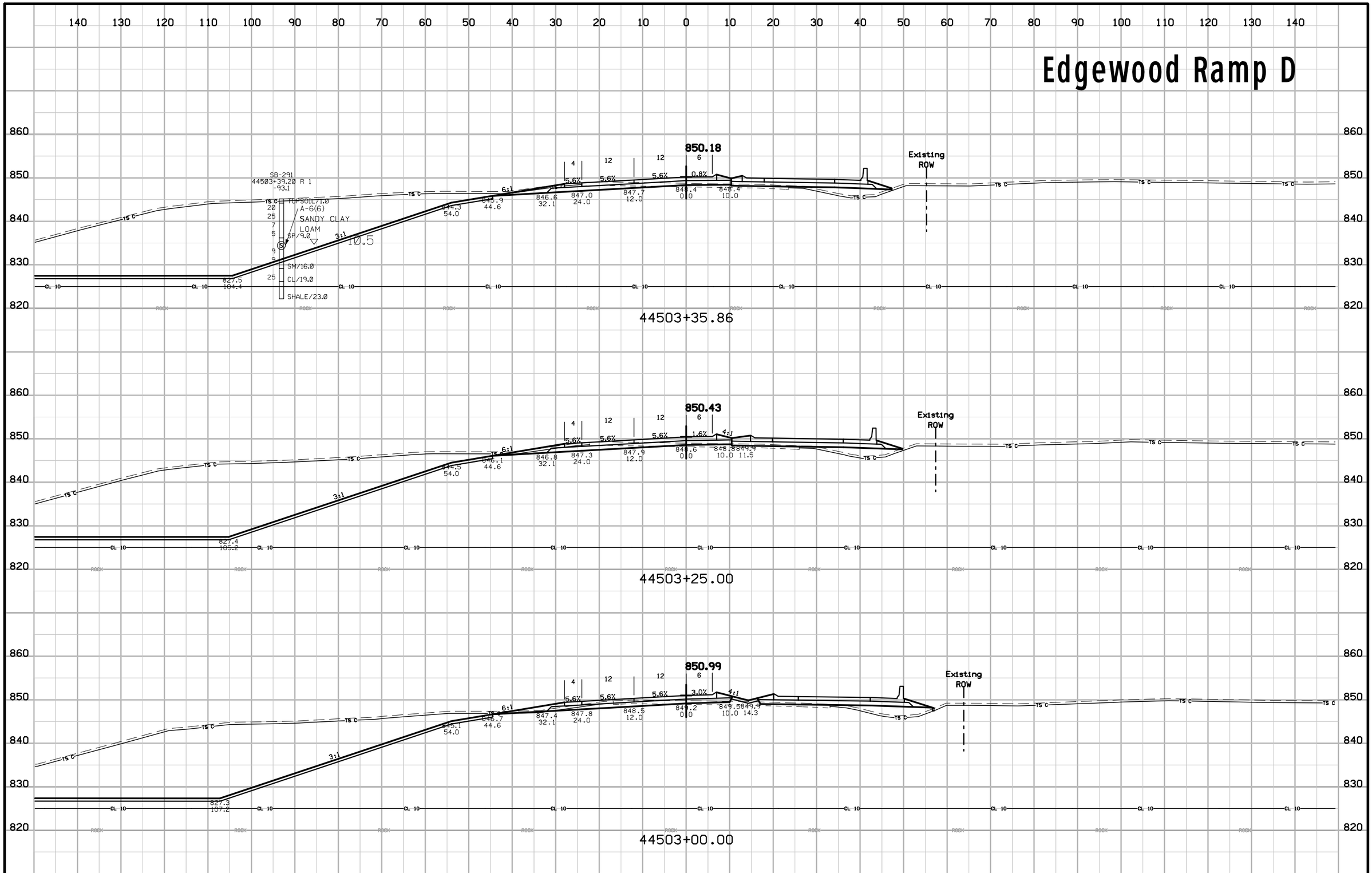

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.87

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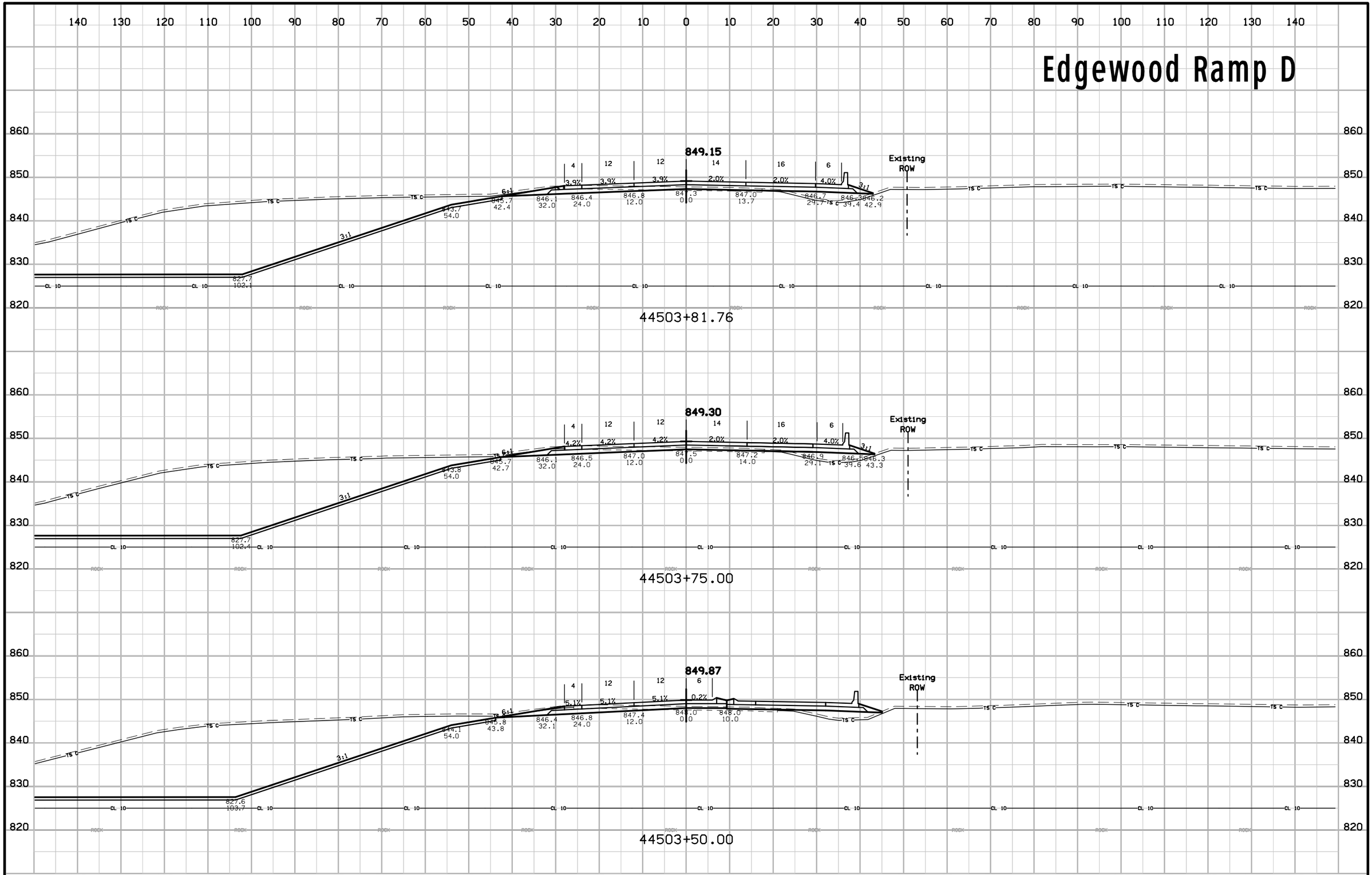
Edgewood Ramp D



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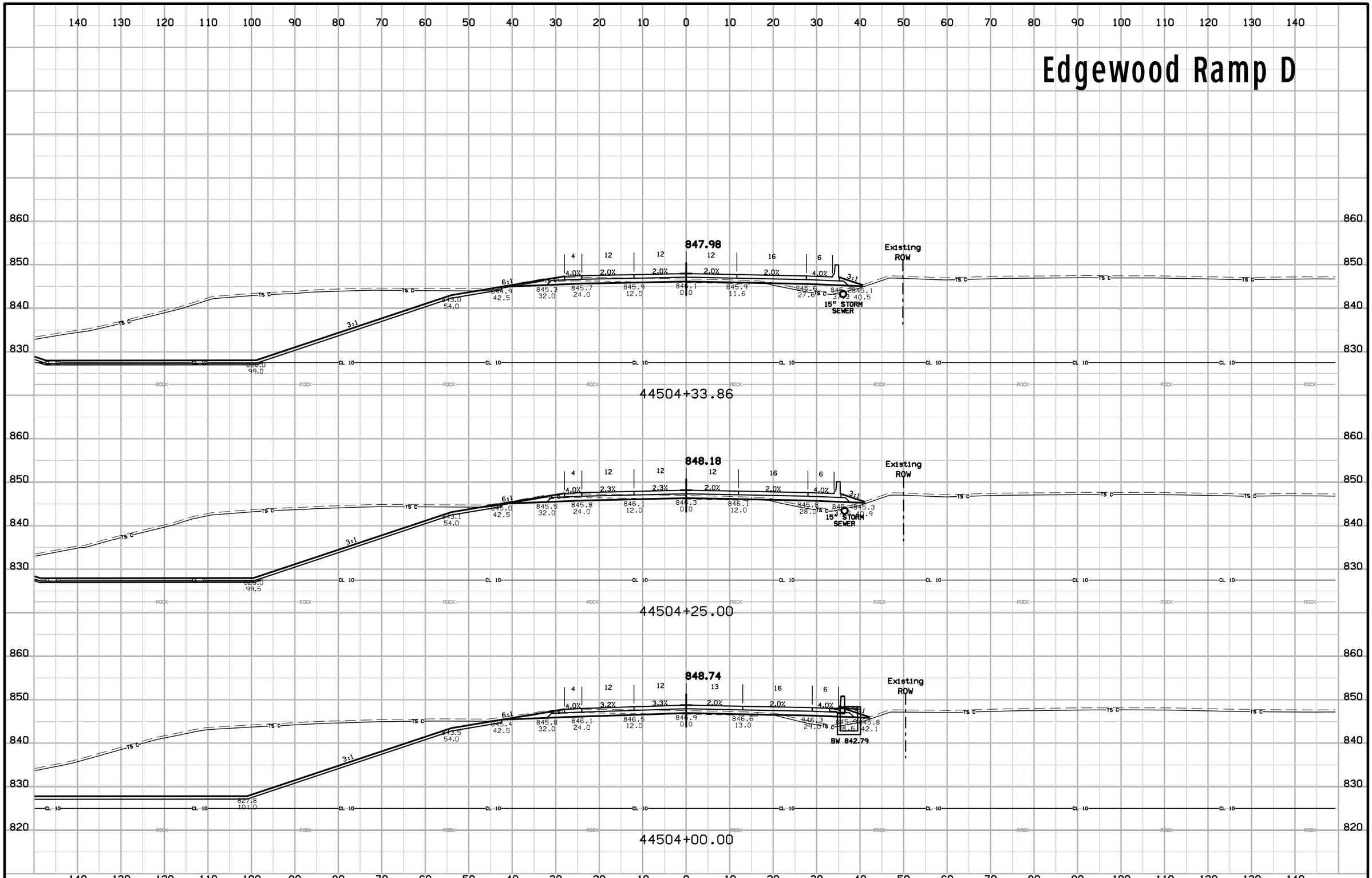

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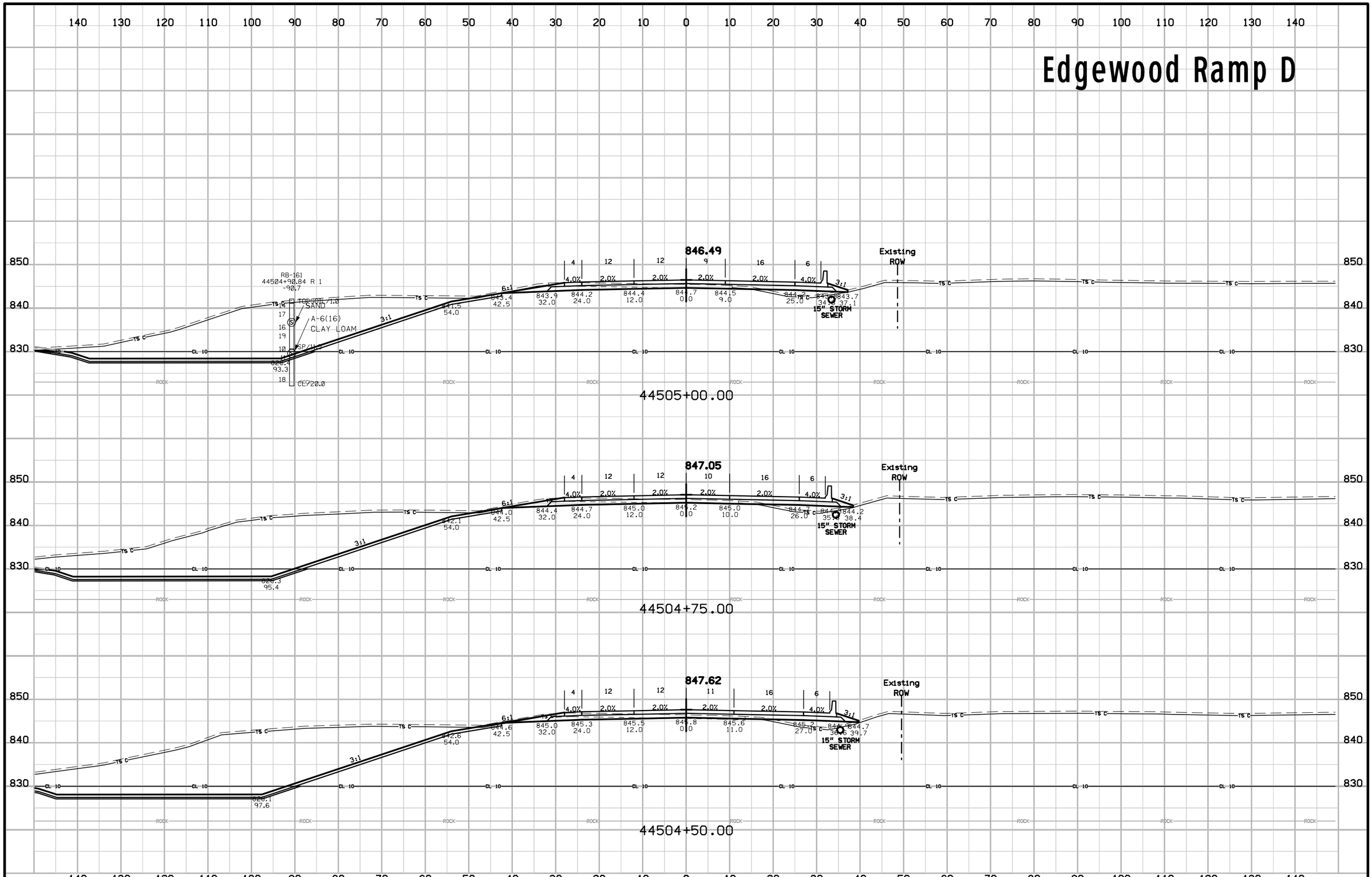

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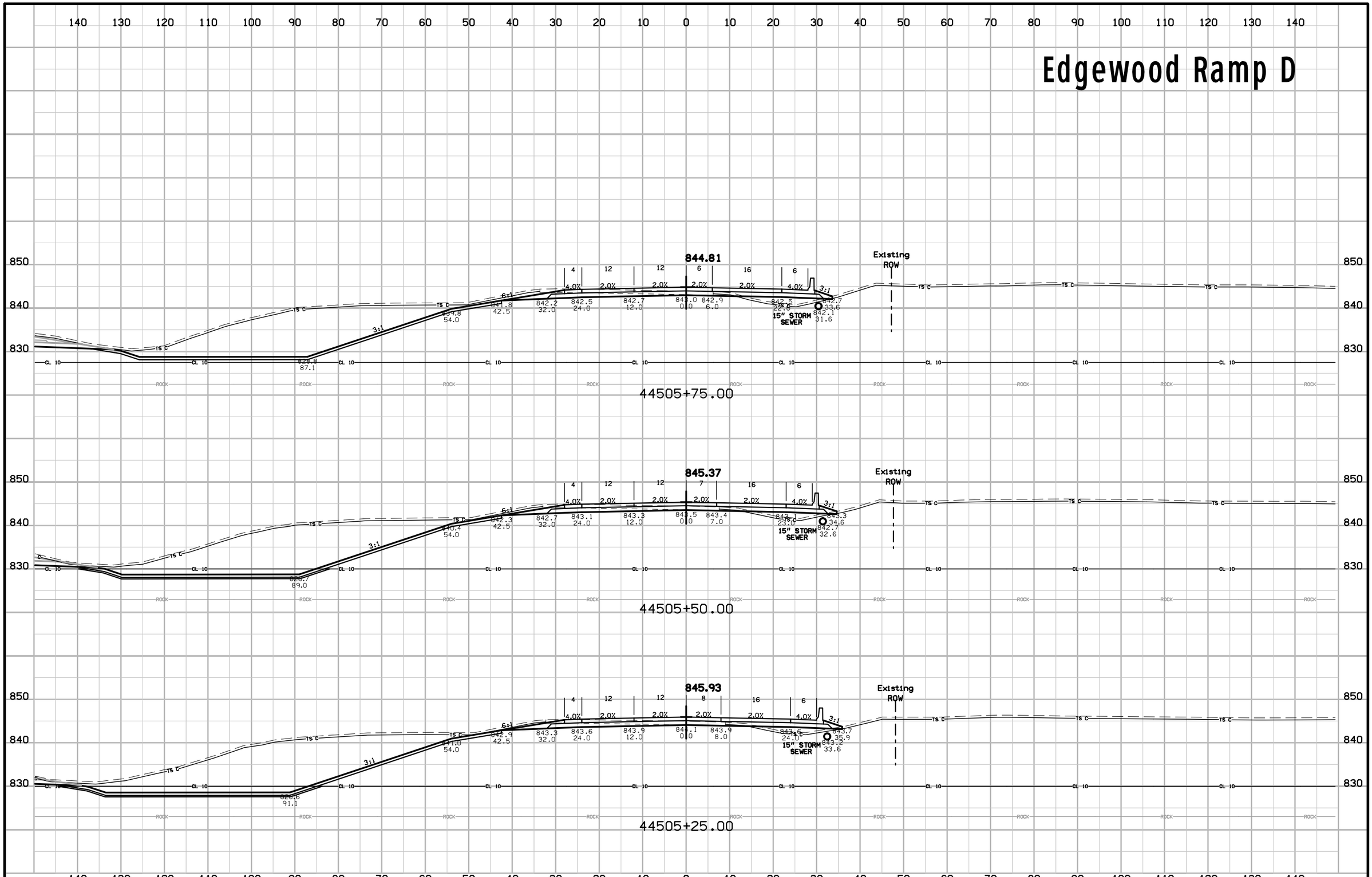

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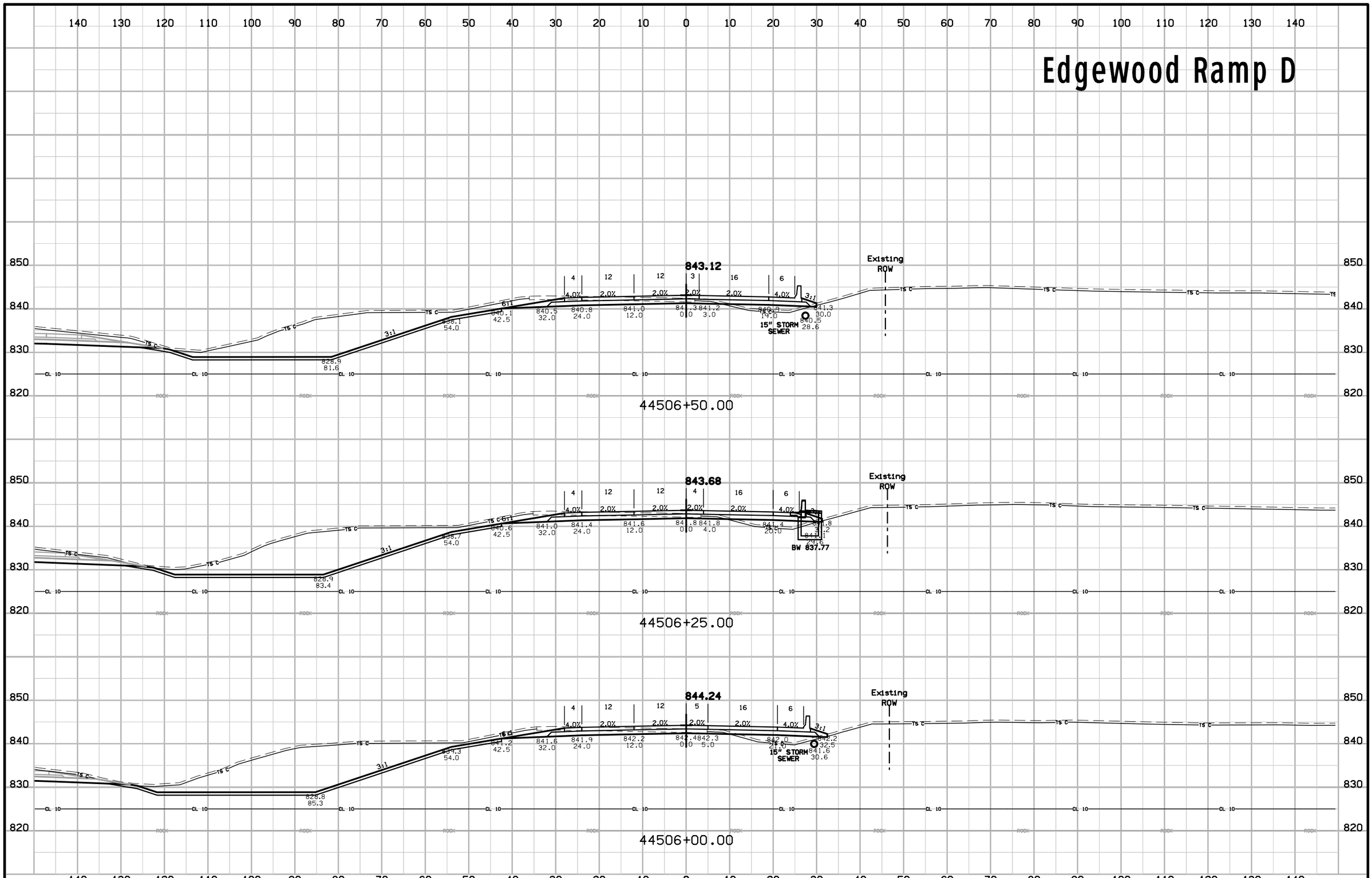

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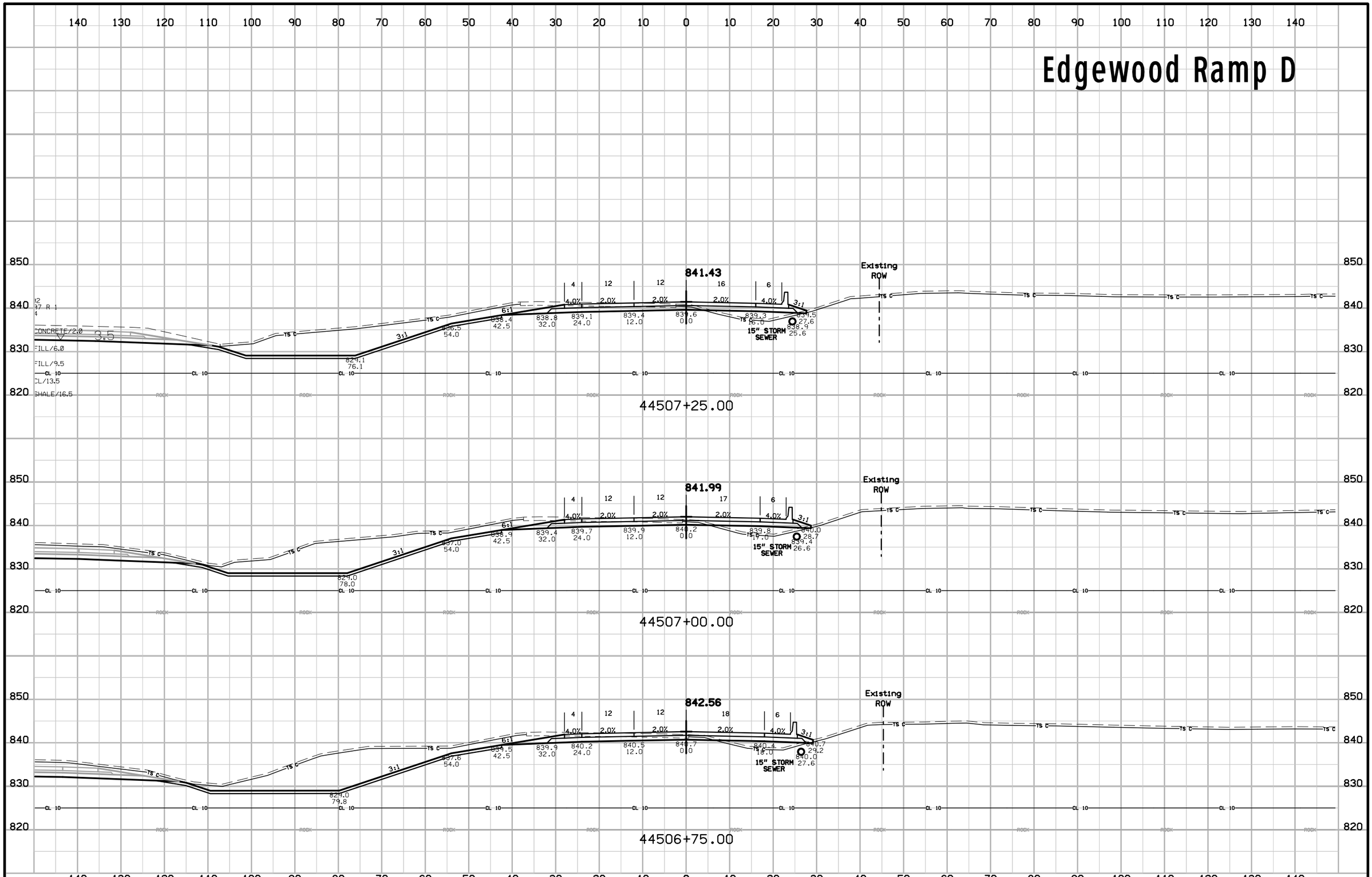

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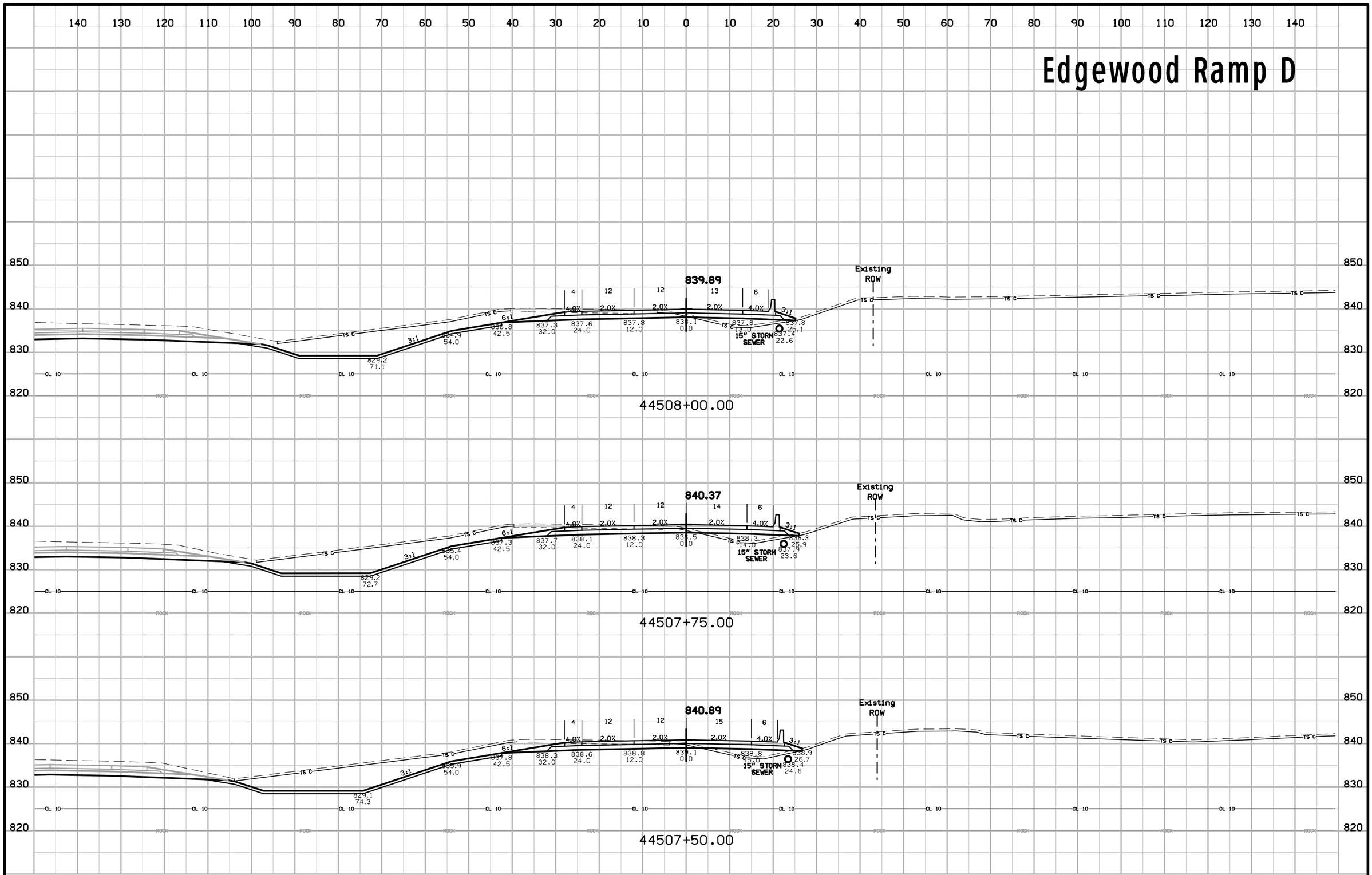
Edgewood Ramp D



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.94

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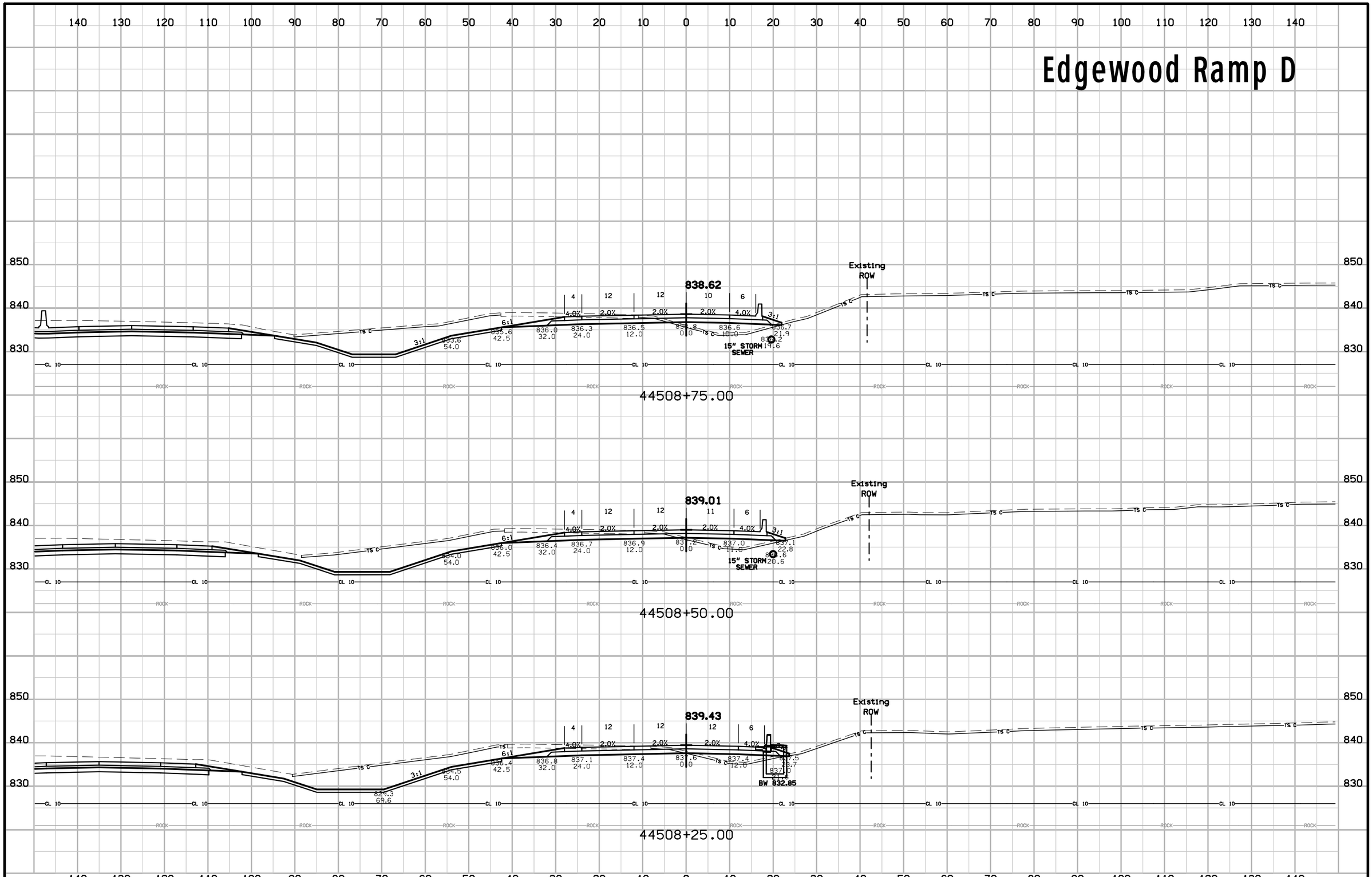

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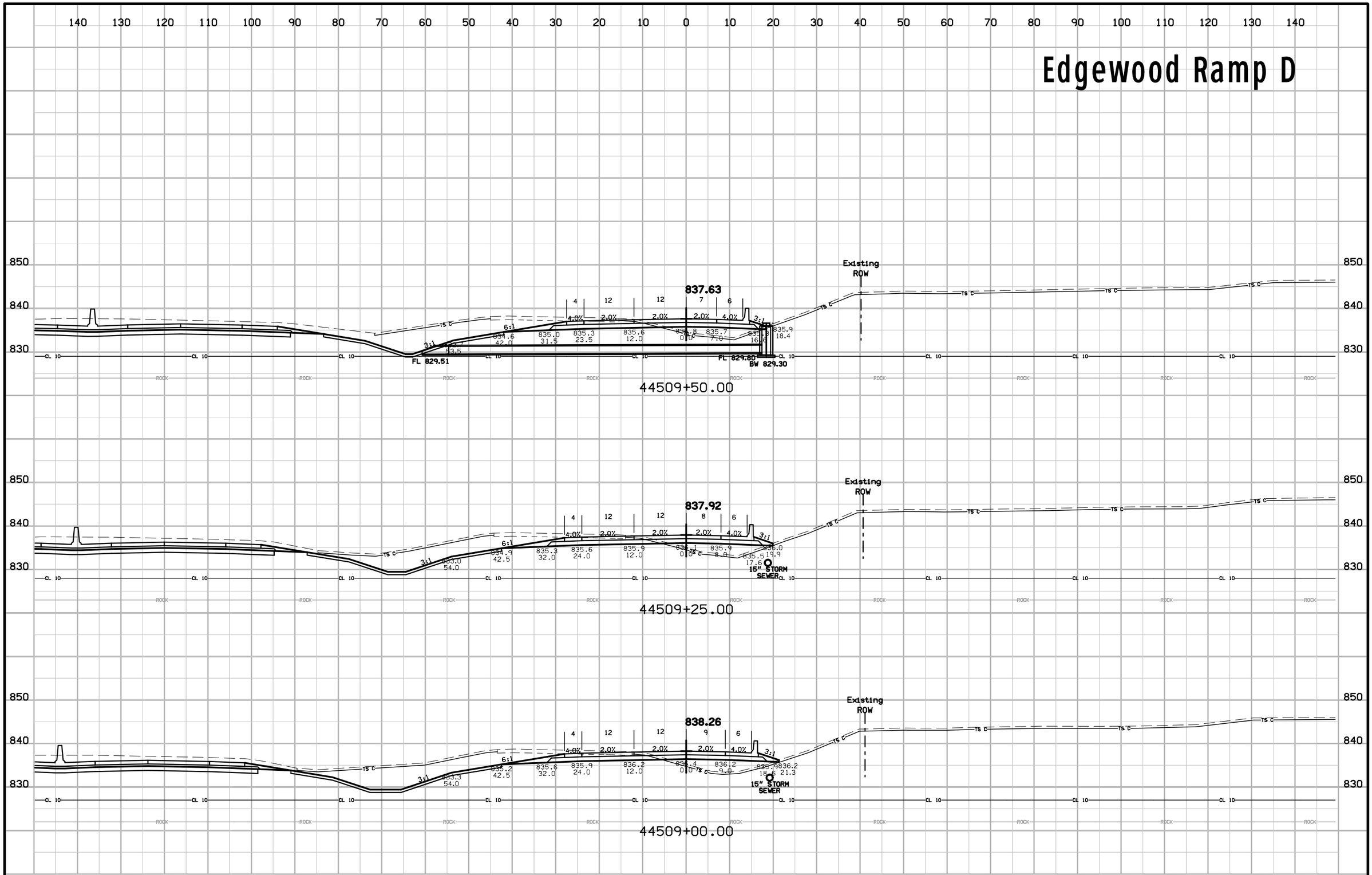

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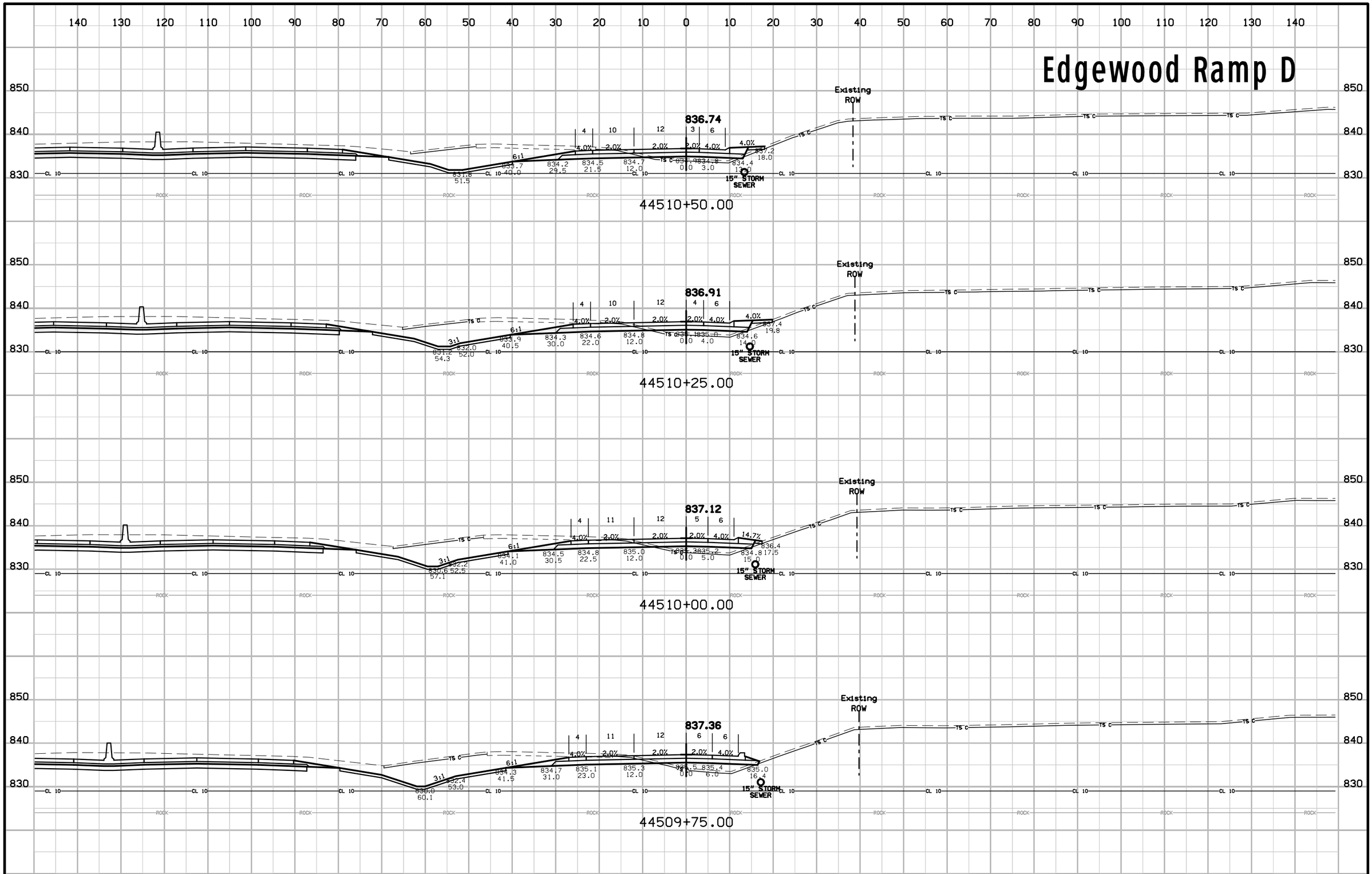

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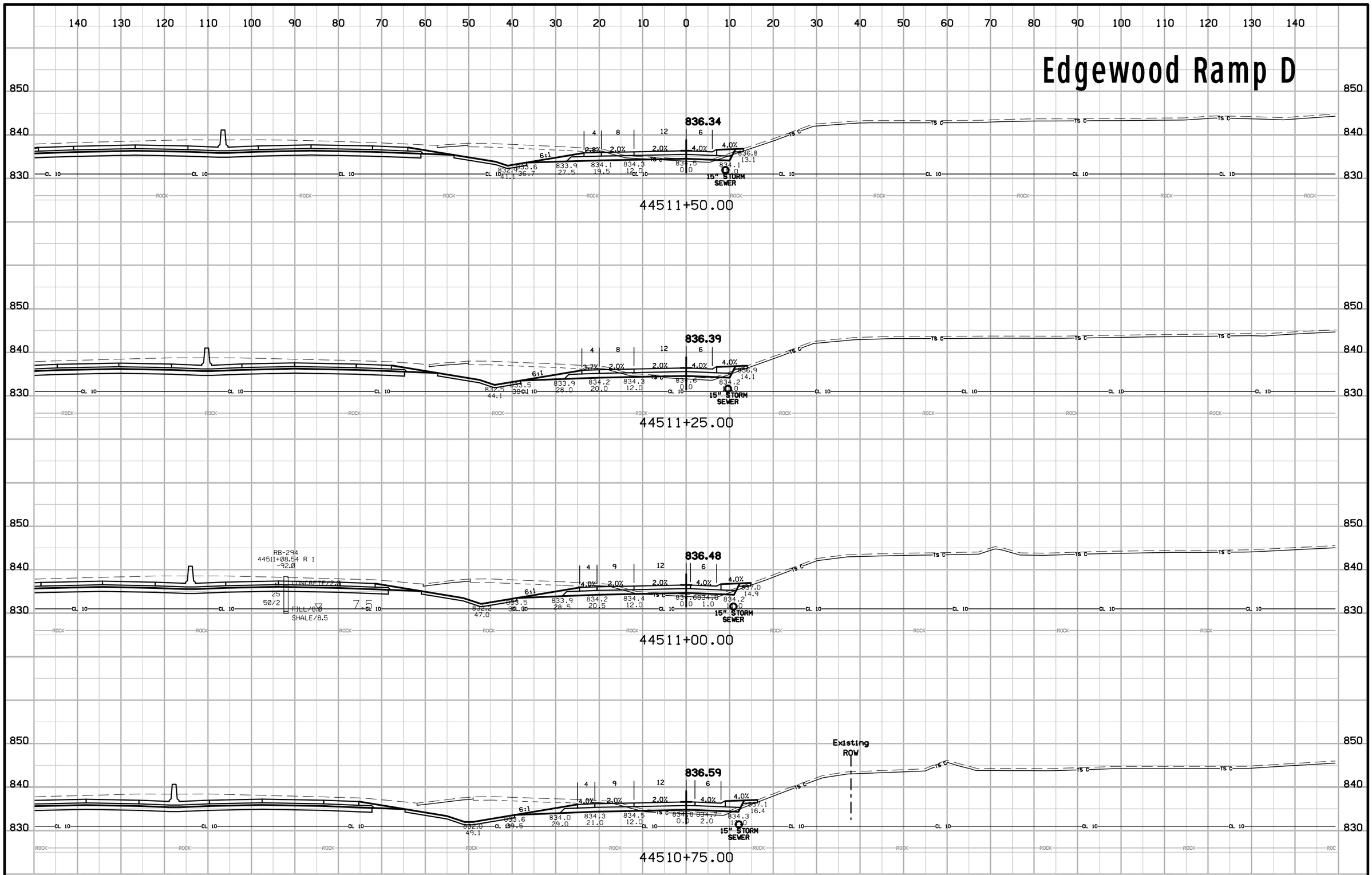

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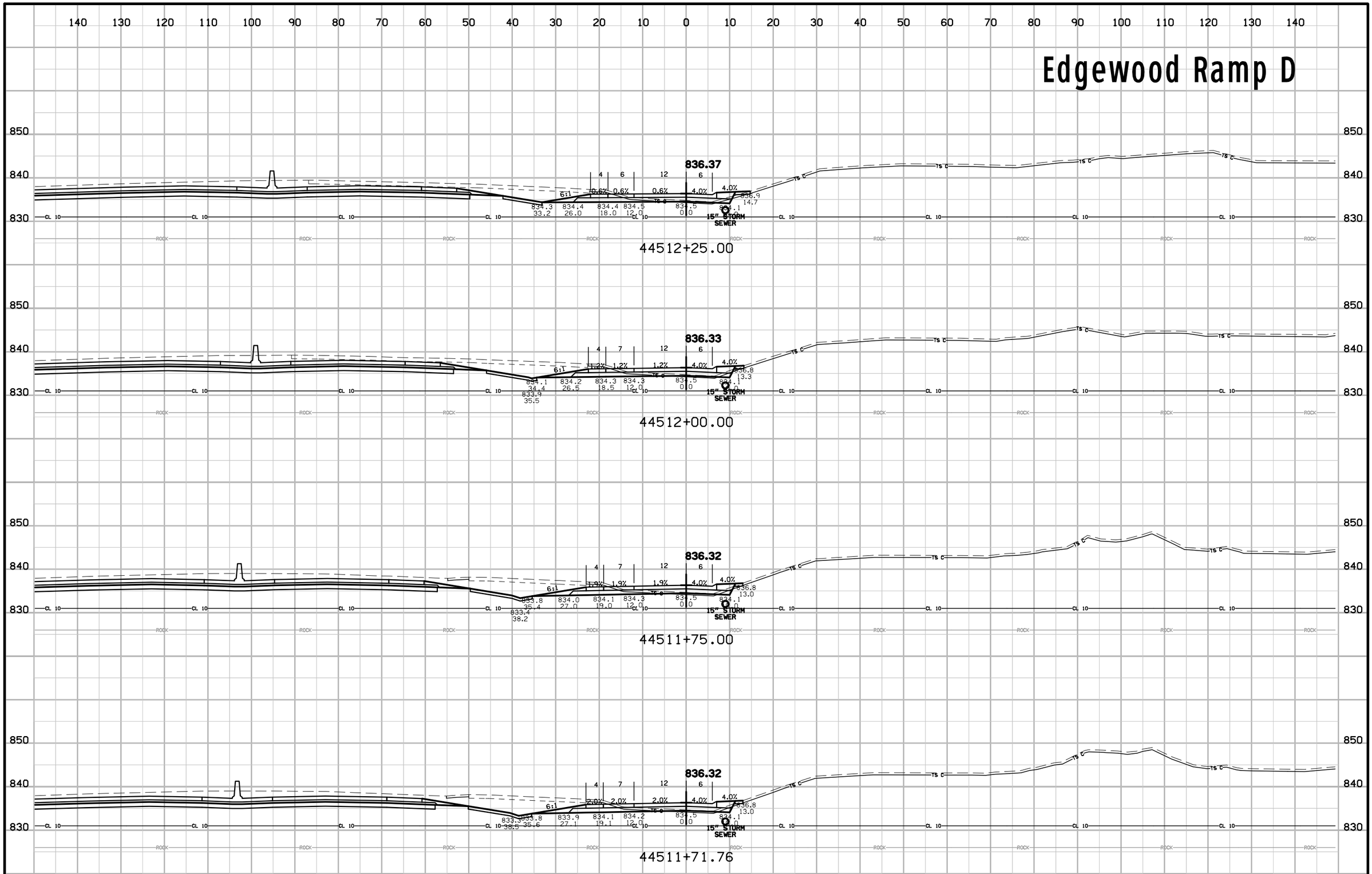

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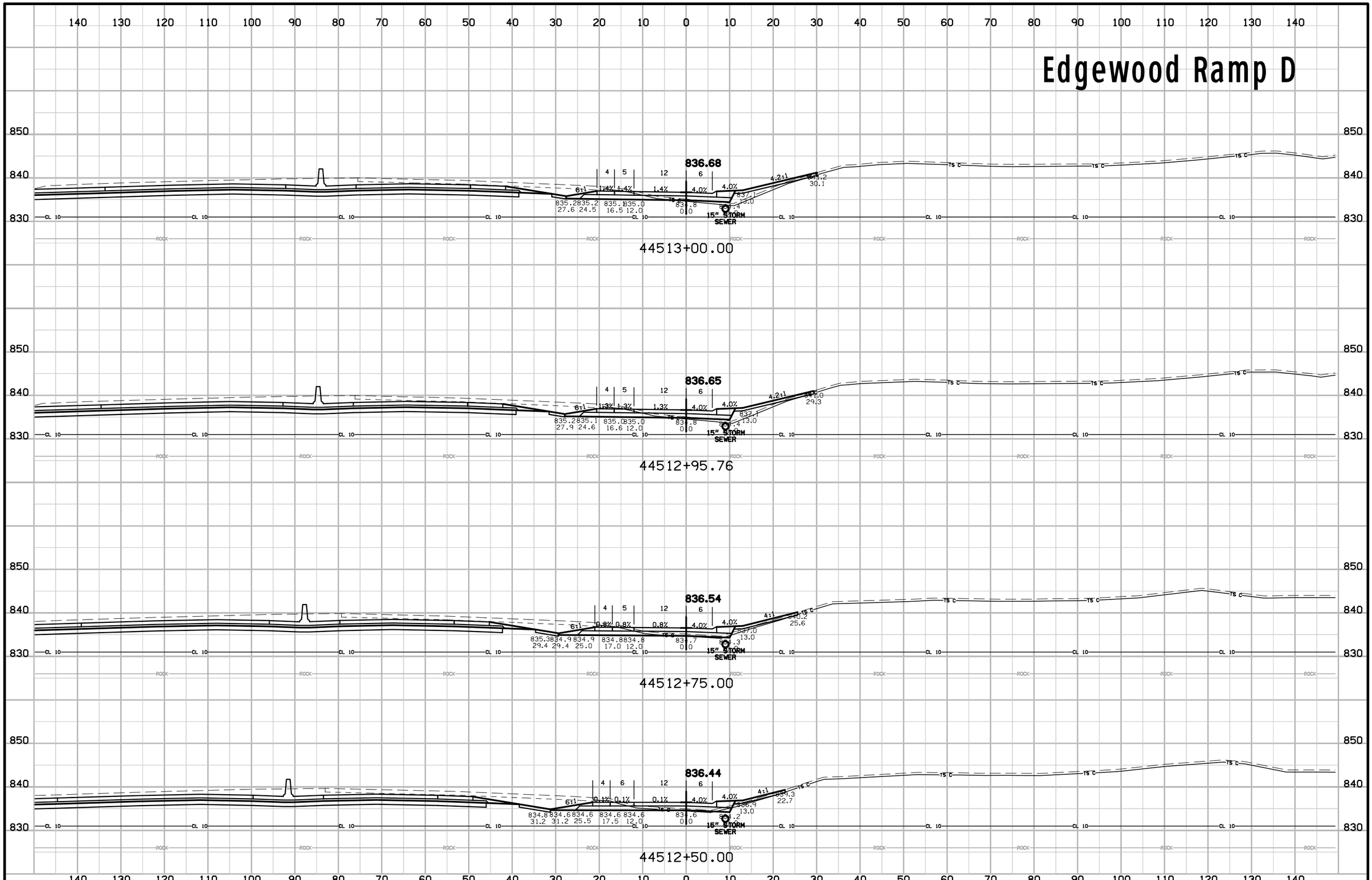
Edgewood Ramp D



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.100

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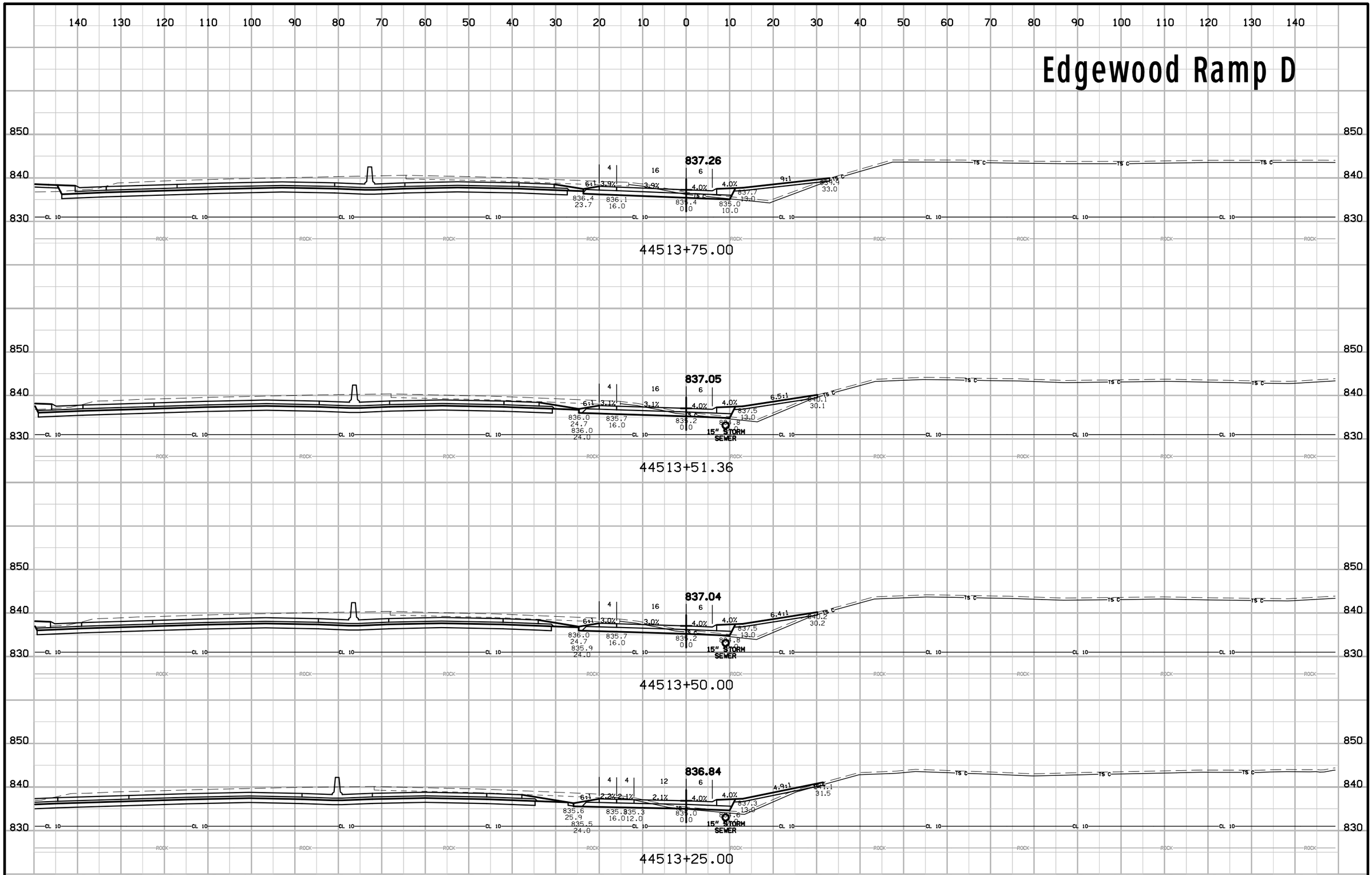
Edgewood Ramp D



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.101

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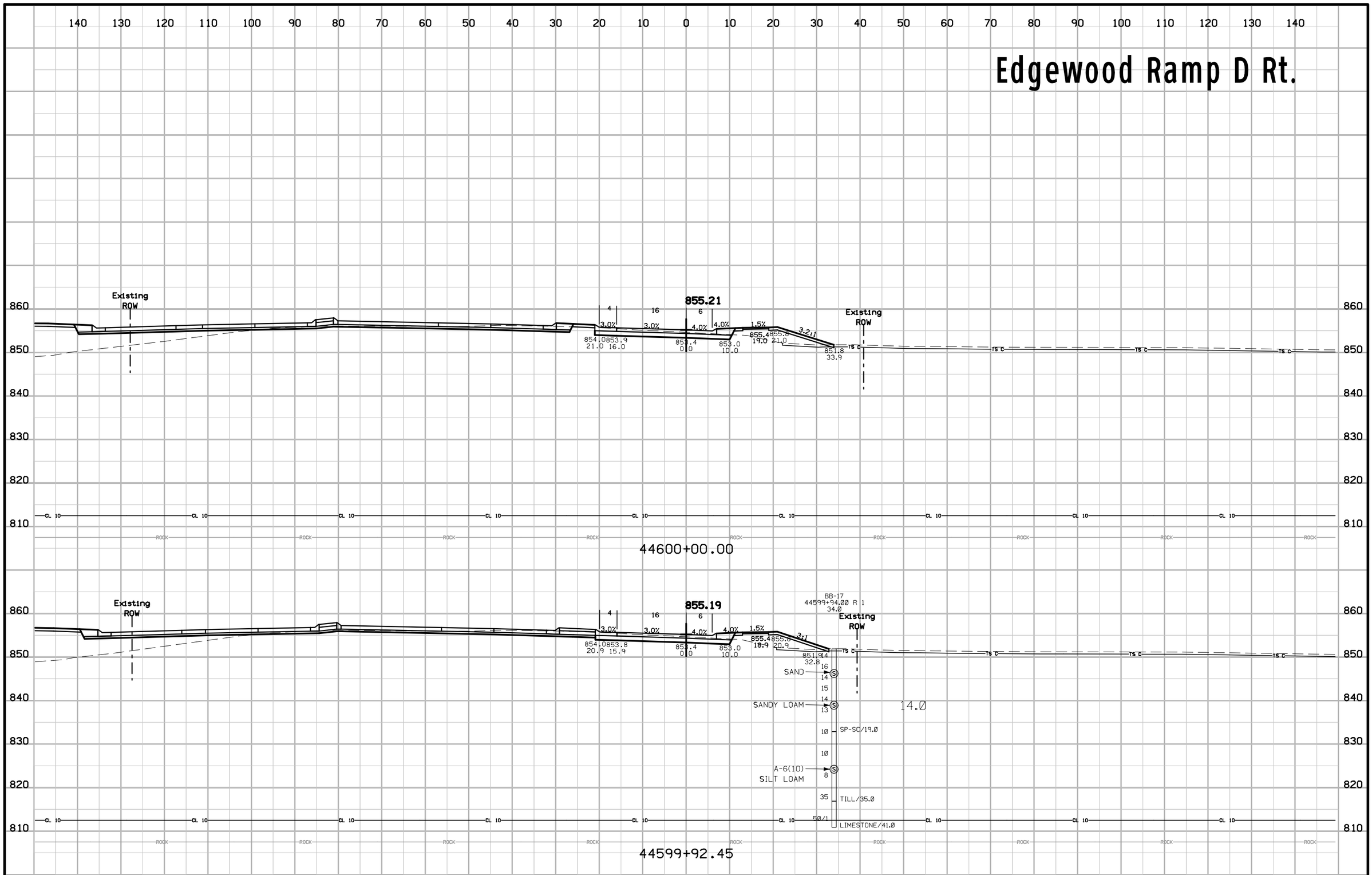

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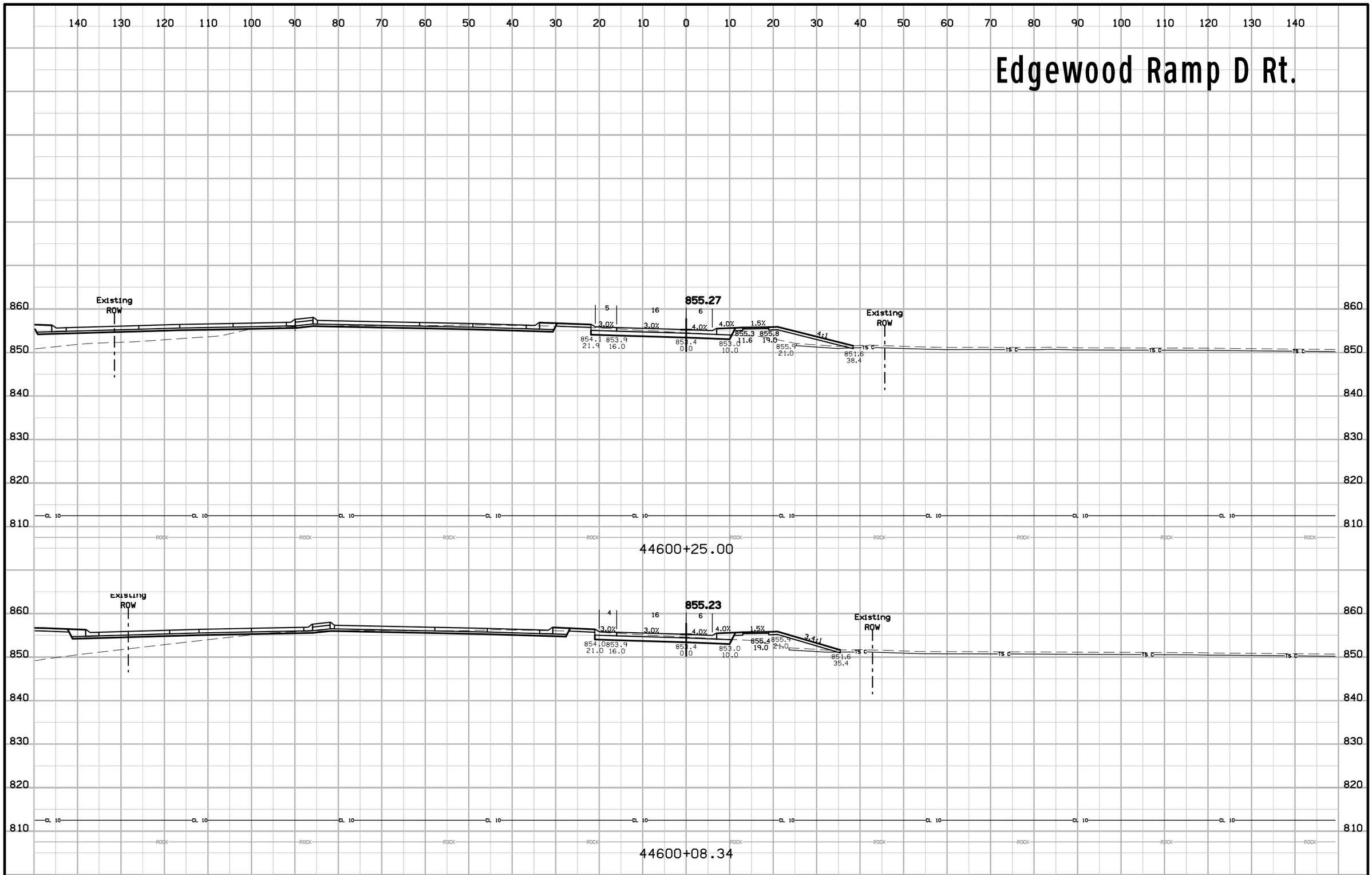

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.103

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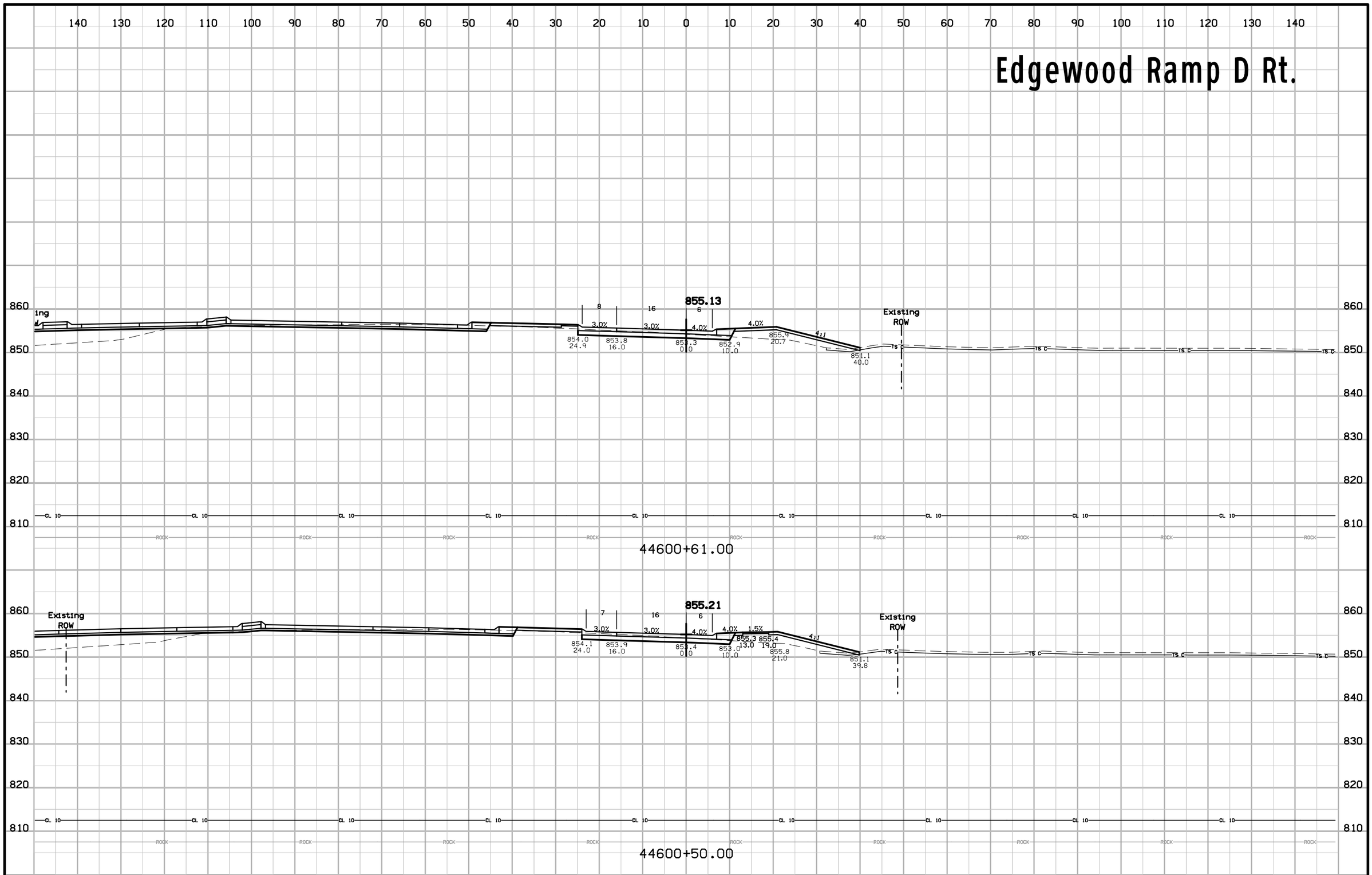

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.104

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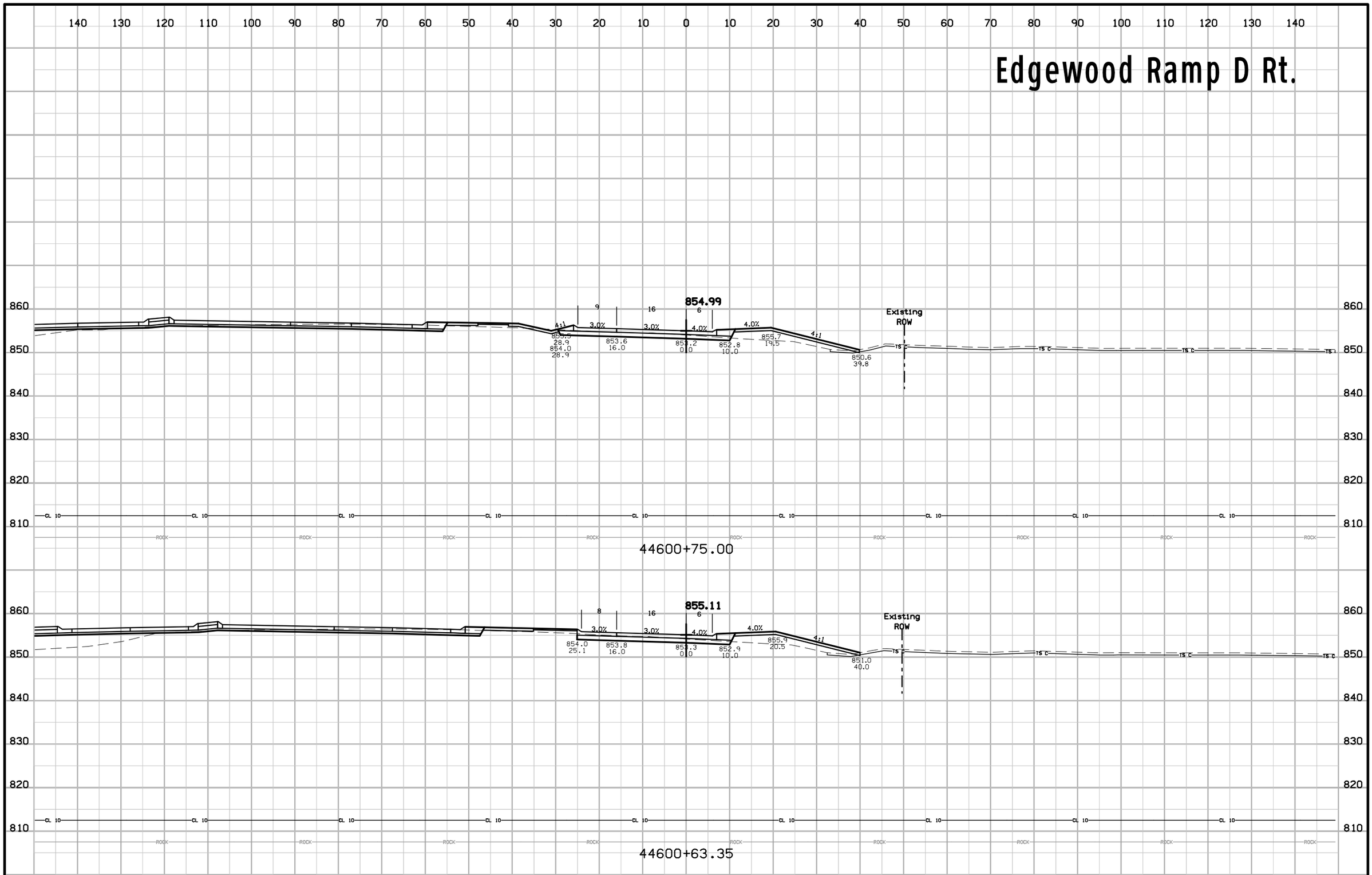

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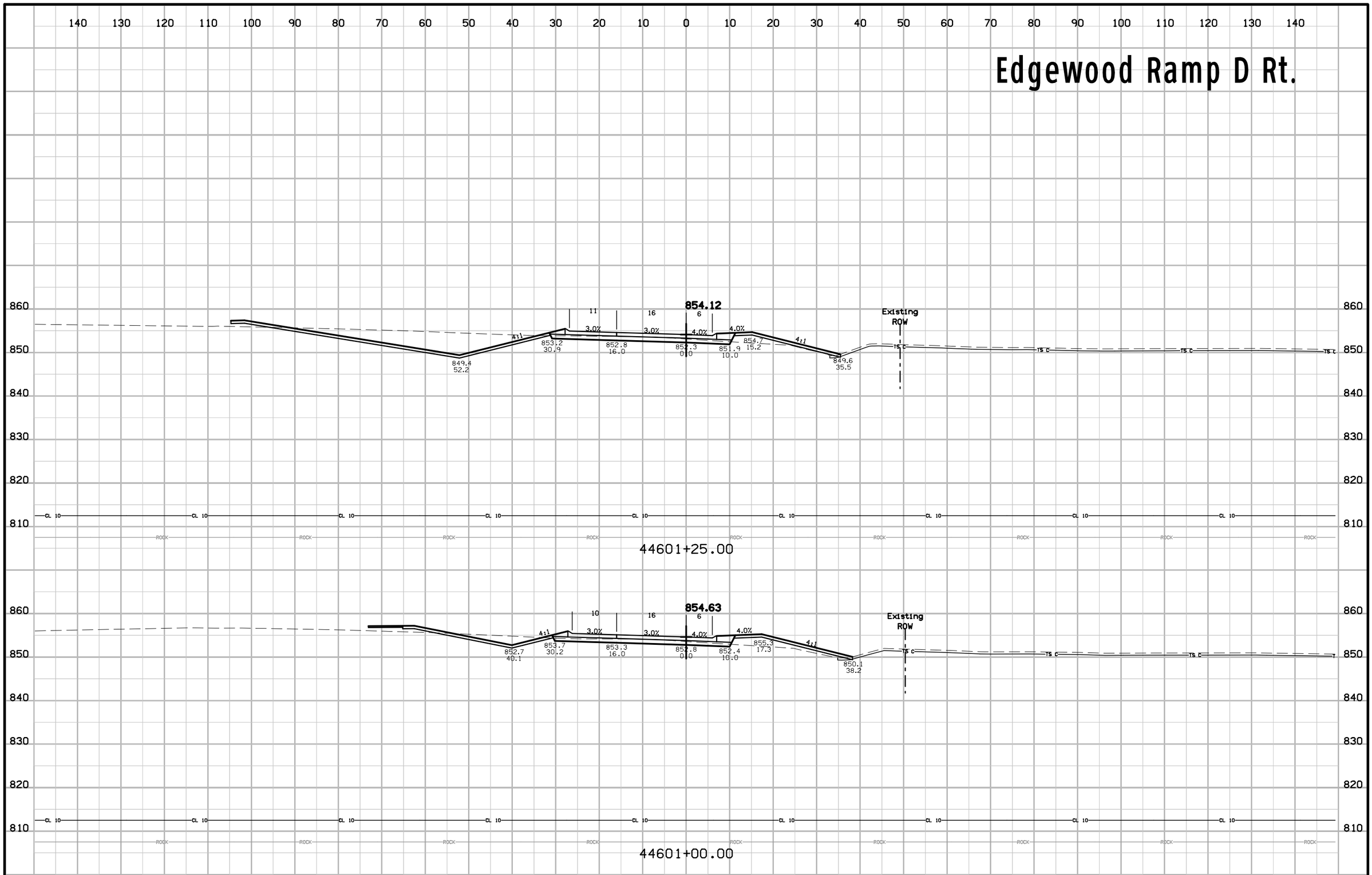
Edgewood Ramp D Rt.



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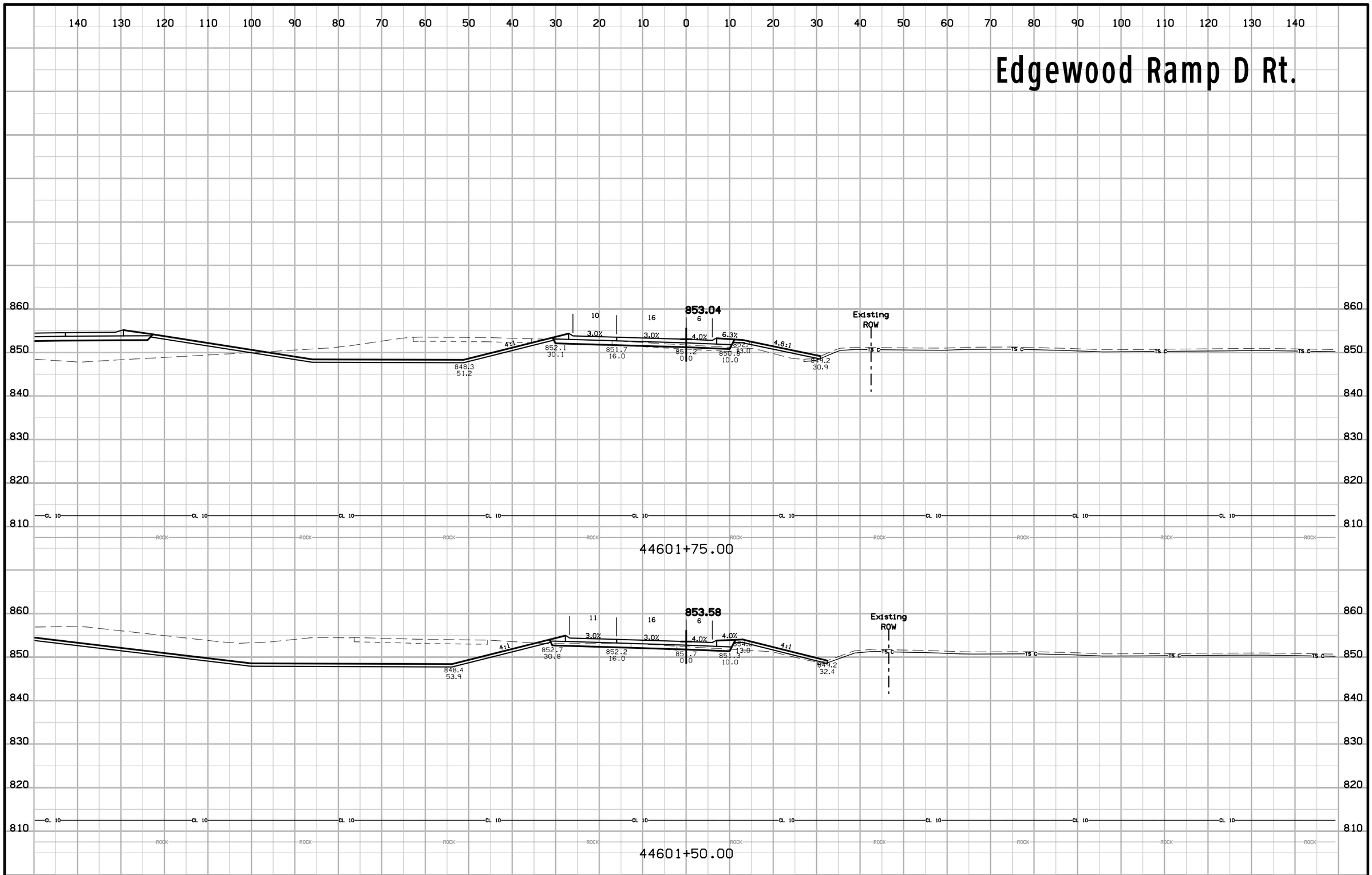

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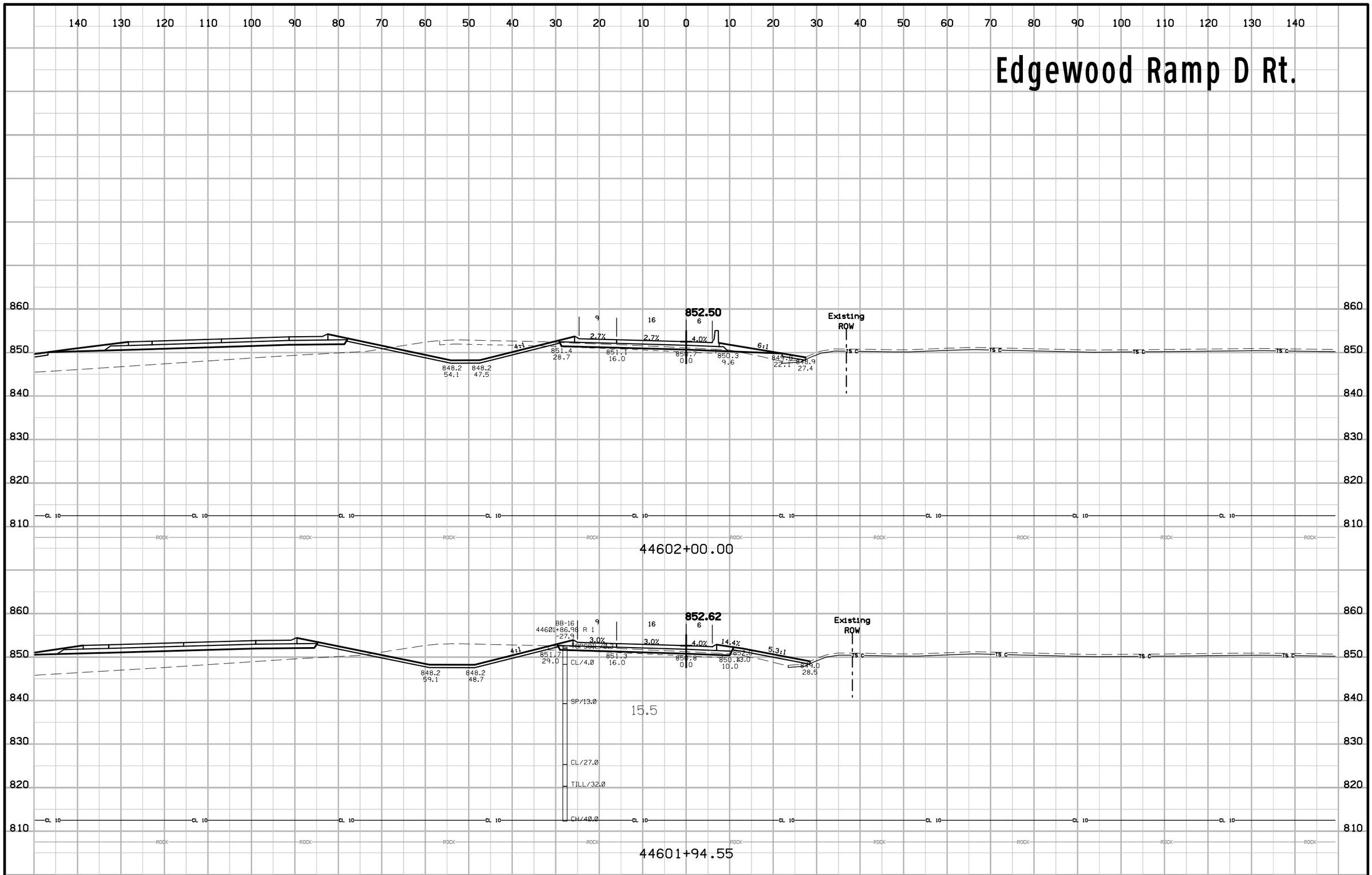

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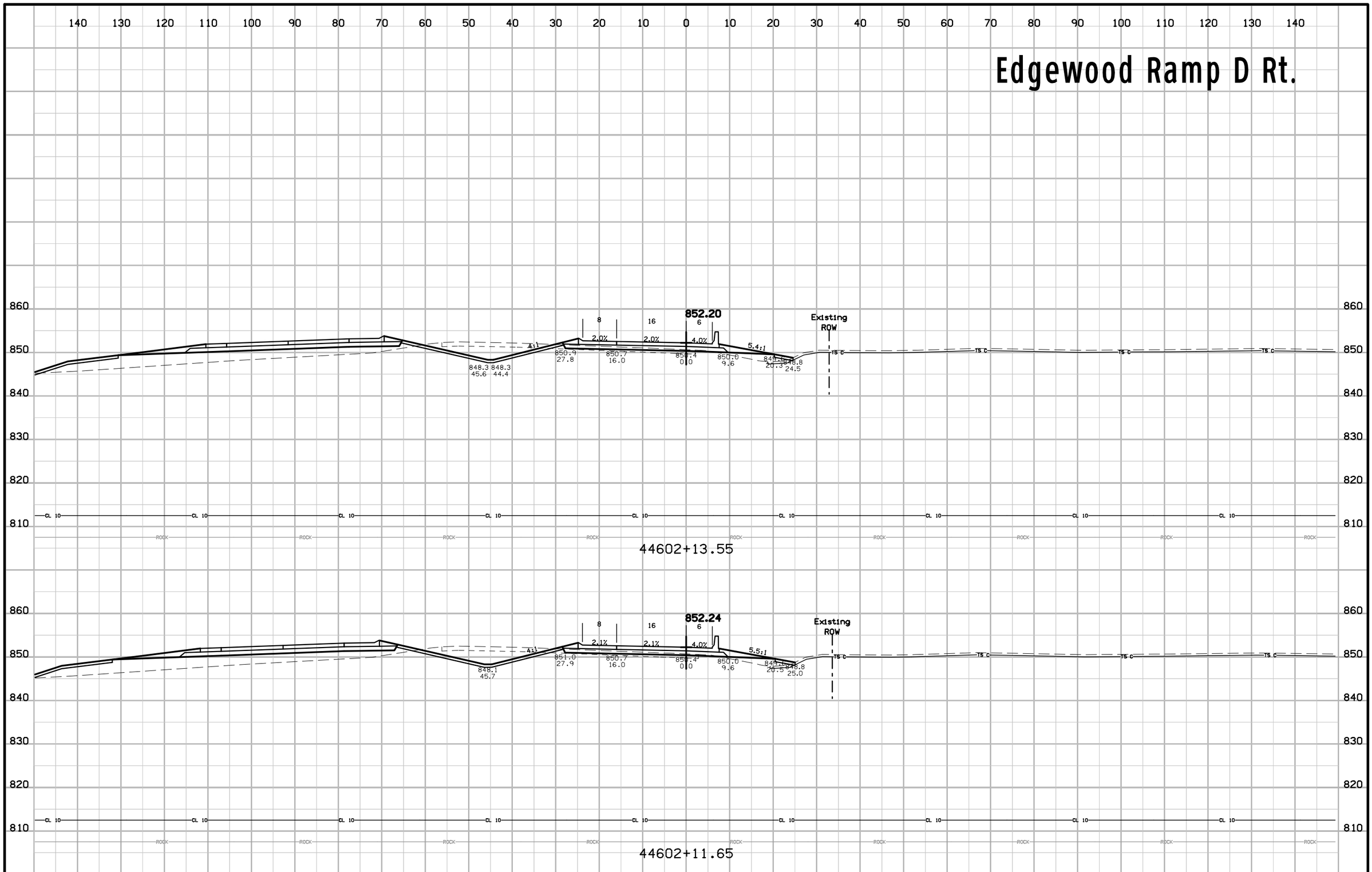

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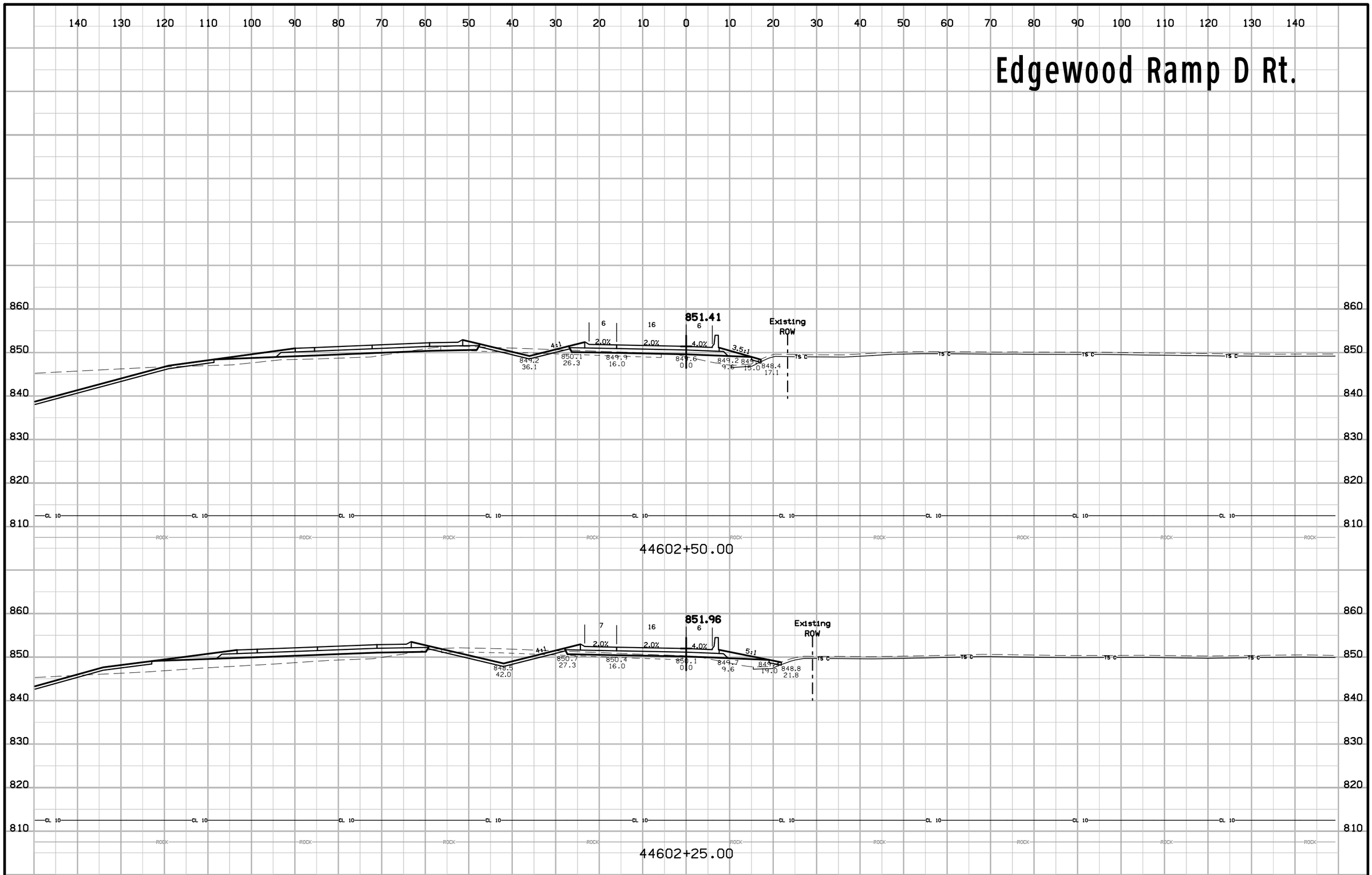

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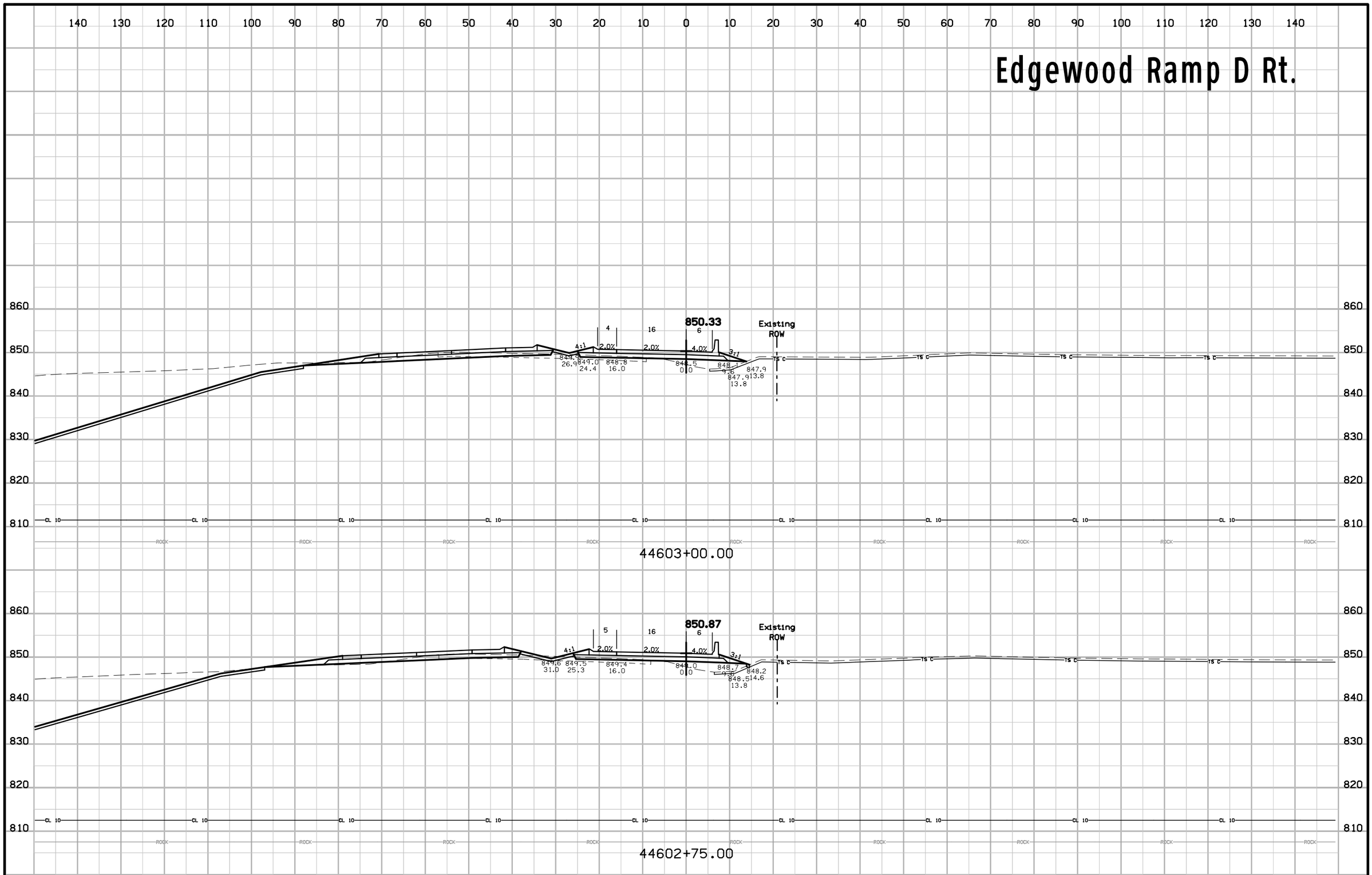

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.111

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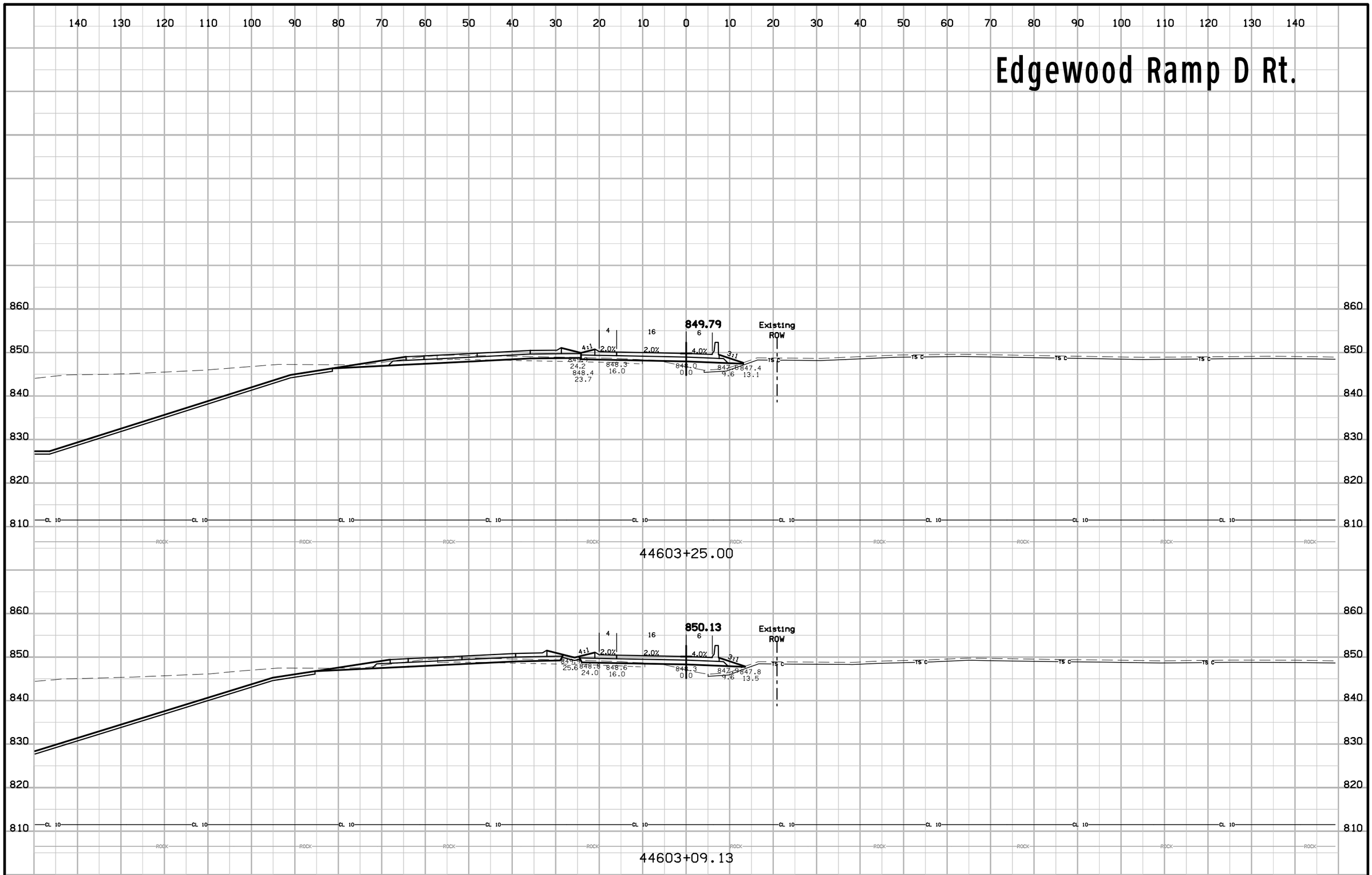

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.112

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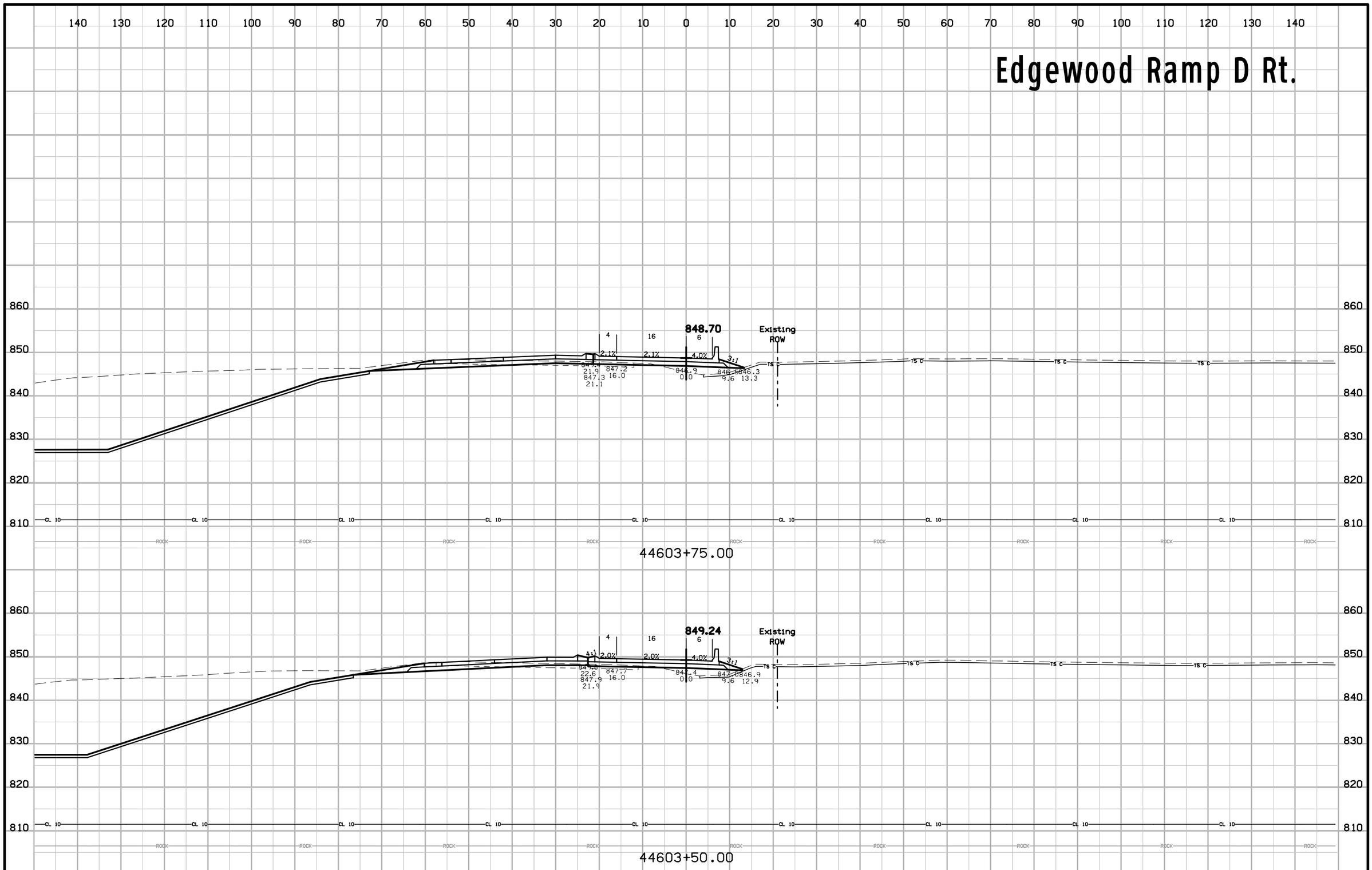
Edgewood Ramp D Rt.



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(79)--3H-57	SHEET NUMBER Y.113

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