PCC PAVEMENT - GRADE AND NEW
NHSX-003-9(25)--3H-31
LETTING DATE Sept. 17, 2024
DUBUQUE COUNTY

IOWA DOT

REVISIONS

TOTAL
..
PROJECT IDENTIFICATION NUMBER
10-31-052-020-01
PROJECT NUMBER
NHSX-003-9(25)--3H-31
R.O.W. PROJECT NUMBER
NHSN-003-9(28)--2R-31
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PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM
DUBUQUE COUNTY
PCC PAVEMENT - GRADE AND NEW

On IA 3 from Just S. of Co. Rd. CY9 in Sageville
N. To Approx. 0.7 Mile N. Of Boy Scout Rd.

-

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

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

INDEX OF SHEETS

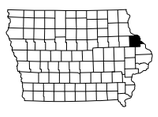
No.	DESCRIPTION
A Sheets	**Title Sheets**
A.1	Title Sheet
A.2	Location Map Sheet
B Sheets	**Typical Cross Sections and Details**
B.1 - 12	Typical Cross Sections and Details
C Sheets	**Quantities and General Information**
C.	Project Description
C.1 - 9	Estimated Project Quantities and Reference Notes
C.12	Standard Road Plans
C.12	Index of Tabulations
C.12	General Notes
C.13 - 24	Tabulations (beg. with tab. of incidentals if needed)
CD Sheets	**Drainage Tabulations**
CD.1 - 2	Drainage Tabulations
CS Sheets	**Soils Tabulations**
CS.1 - 9	Soils Tabulations
D Sheets	**Mainline Plan and Profile Sheets**
* D.1	Plan & Profile Legend & Symbol Information Sheet
* D.2 - 13	IA 3
E Sheets	**Side Road Plan and Profile Sheets**
* E.1 - 5	Side Roads
G Sheets	**Survey Sheets**
G.1	Reference Ties and Bench Marks
G.2 - 3	Horizontal Control Tab. & Super for all Alignments
H Sheets	**Right-of-Way Sheets**
* H.1 - 12	IA 3
J Sheets	**Traffic Control and Staging Sheets**
J.1	Traffic Control Plan
* J.2 - 3	IA 3 Detour
* J.4	Trail Detour
L Sheets	**Geometric, Staking and Jointing Sheets**
L.1 - 17	Superelevation Detail - IA 3
L.18 - 53	Side Road Geometric, Staking, Edge Profile, Jointing
M Sheets	**Storm Sewer Sheets**
* M.1	Storm Sewer Tabulations
* M.2	Storm Sewer Legend & Symbol Information Sheet
* M.3 - 5	Storm Sewer Plan and Profile Sheets
Q Sheets	**Soils Sheets**
Q.1	Soils Legend & Symbol Information Sheet
Q.2 - 47	Soils Sheets
R Sheets	**Erosion Control Sheets**
RC.1 - 18	Est. Quantities, PPP, General Notes and Tabulations
* RR.1	Erosion Control Legend and Symbol Information Sheet
* RR.2 - 47	Erosion Control Plan Sheets

INDEX OF SHEETS

No.	DESCRIPTION
T Sheets	**Earthwork Quantity Sheets**
* T.1A - 1D	Earthwork Cross Sections
T.2 - 24	Earthwork Quantity Sheets
U Sheets	**500 Series, Mod.Stds. and Detail Sheets**
U.1 - 12	Guardrail Details in Gillespie Hill Area
U.13 - 14	Pavement Markings near Sherill Rd
U.15	Jointing Correction at Existing Bridge
U.16 - 17	Existing Bridge Approaches
U.18	Transition Mat
U.19	Gate Assembly at Heritage Trial Detour
U.20 - 21	DEMO
U.22 - 25	Diamond Ground Centerline and Shoulder Rumble Strips
U.25 - 36	Modified Pavement Marking Widths
V Sheets	**Bridge and Culvert Situation Plans**
V.1 - 2	Revetment, Design 223, Sta 277+00
V.3 - 4	Abutment Repair, Design 724, Sta 315+00
W Sheets	**Mainline Cross Sections**
W.1	Cross Sections Legend & Symbol Information Sheet
W.2 - 384	Mainline Cross Sections
X Sheets	**Side Road Cross Sections**
X.1 - 14	Side Road Cross Sections
Y Sheets	**Pipe and Entrance Cross Sections**
Y.1 - 27	Roadway Pipe Cross Sections
Y.100 - 112	Entrance Cross Sections
	* Color Plan Sheets

For Project Location Map Refer to Sheet A.2

DM5 - Date: 3/13/24



DESIGN DATA RURAL

2022	AADT	2299	V.P.D.
2042	AADT	2501	V.P.D.
20 --	DHV	–	V.P.H.
TRUCKS		13	%
Total Design ESALs		2,102,400	

INDEX OF SEALS

SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Yanxiao Jia	Primary Signature Block	C.1 - C.11
CD.1	Jimmy Ellis	Hyraulic Engineer	
CS.1	Dave Heer	Geotechnical Engineer	
RC.1	Rachel Harris	Landscape Design	RC.2 - RC.7
V.1	Dave Muhollands	Hydraulic Engineer	V.1
V.3	Dave R. Evans	Structural Design	V.3

ROADWAY DESIGN

LICENSED PROFESSIONAL ENGINEER Yanxiao. Jia 14837 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.

Yanxiao Jia — 09-17-2024
Signature — Date
Yanxiao Jia
Printed or Typed Name

My license renewal date is December 31, 2024

Pages or sheets covered by this seal: X
X

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER A.1

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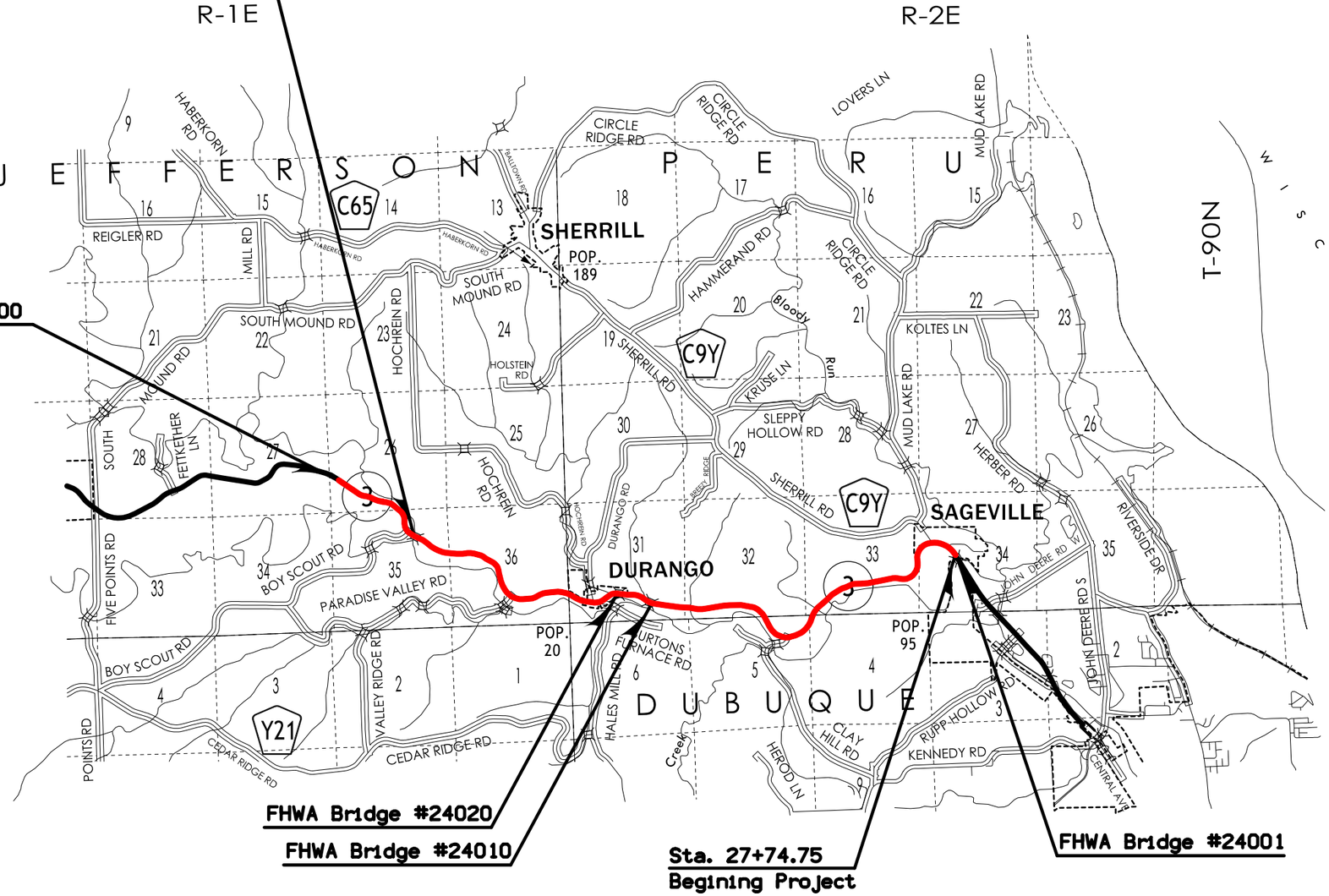
Bridge
Sta. 315+00
FHWA / ASSET ID #024030

Sta. 358+00.00
End Project



FHWA Bridge #24020
FHWA Bridge #24010
Sta. 27+74.75
Begining Project
FHWA Bridge #24001

LOCATION MAP SCALE
0 1 2 3
Miles



Location Map

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **A.2**

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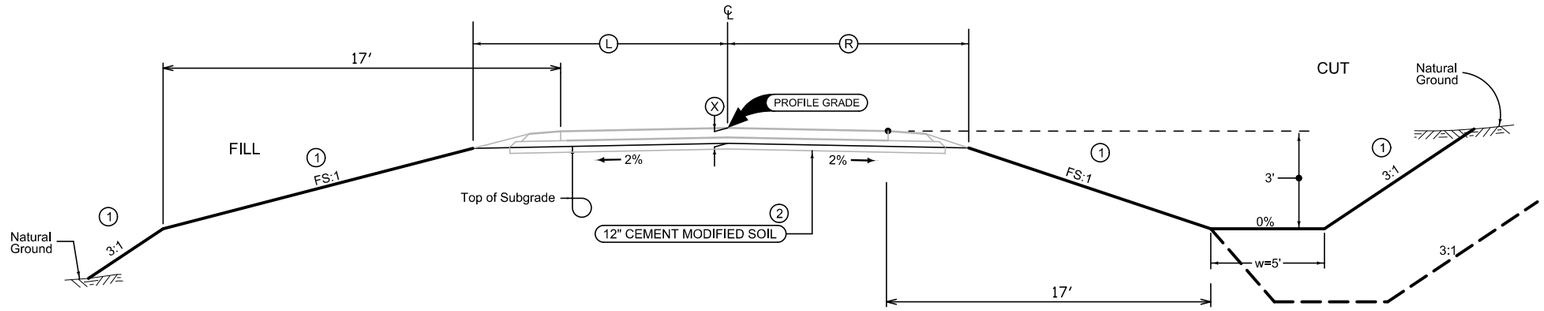
LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS
IA 3	27+74.75	314+41.63	24.53	24.53	21.5	4
Bridge Omission	314+41.63	315+95.47				
IA 3	315+95.47	358+00.00	24.53	24.53	21.5	4

G_2_Grade
MODIFIED



2 LANE GRADING

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 foreslopes, ditches, and backslopes.

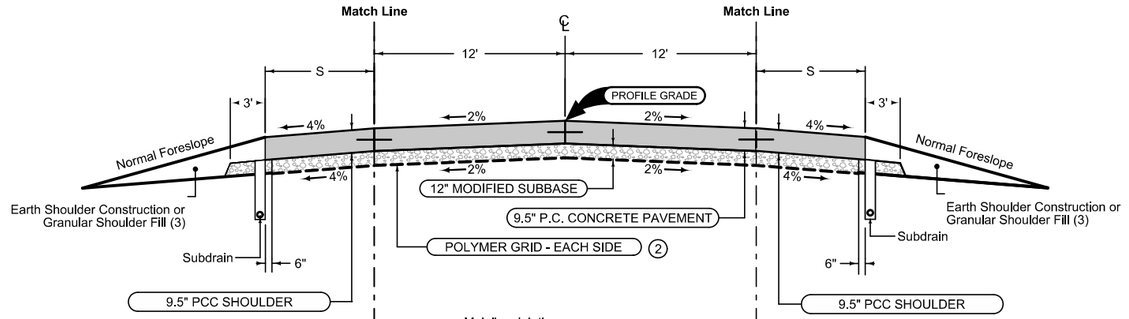
(1) Refer to other typicals and cross sections for details

(2) To be used when encountering wet soil conditions as directed by the engineer.

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: C at 17' spacing

STATION TO STATION		2_P_ Modified S Feet
28+44.75	31+50.00	4
31+50.00	35+45.00	10
35+45.00	219+33.81	4
225+65.00	313+67.66	4
316+68.96	357+80.00	4
357+80.00	358+00.00	4-6



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

STATION TO STATION		2P_ Modified
28+44.75	34+64.86	
49+39.51	313+67.66	
316+68.96	358+00.00	

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: C at 17' spacing

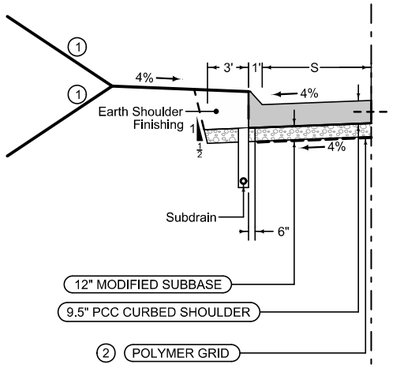
STATION TO STATION		2_P_ Modified S Feet
28+44.75	34+70.00	4
42+97.25	270+25.00	4
270+75.00	313+46.95	4
313+46.95	313+67.66	4-3.86
316+68.96	316+75.53	3.46-4
316+75.53	357+80.00	4
357+80.00	358+00.00	4-6

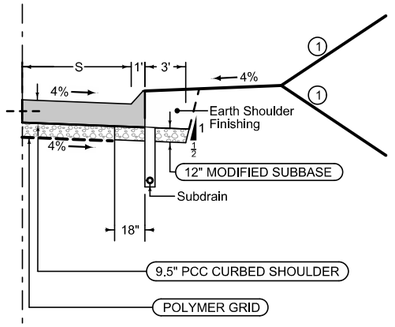
Curbed Shoulder

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, BT-2
Transverse: C at 17' spacing

STATION TO STATION		2_Curb_ 04-21-20 S Feet	Curb Type See PV-102
219+33.81	225+65.00	4	6" Sloped





Curbed Shoulder

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

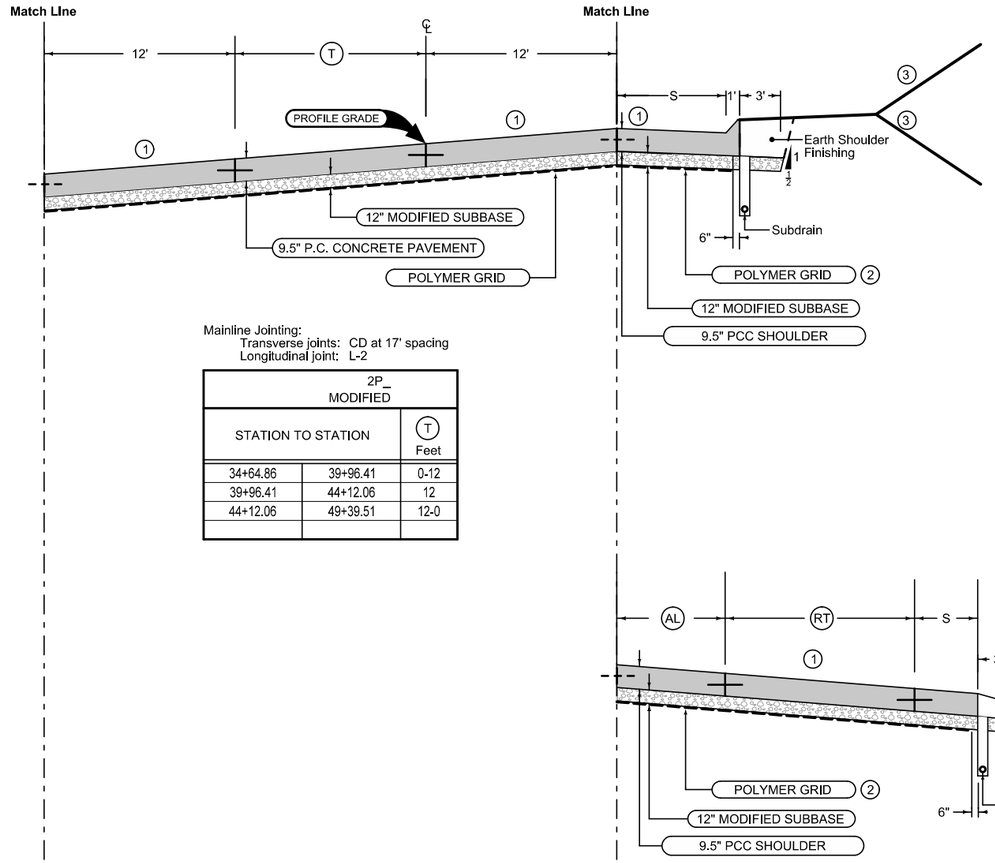
Single pour: L-2
Staged : KT-2, BT-2
Transverse: C at 17' spacing

STATION TO STATION		2_Curb_ 04-21-20 S Feet	Curb Type See PV-102
270+25.00	270+75.00	4	6" Sloped

(1) Refer to cross sections
(2) Stop Polymer Grid 6" from subdrains.
(3) Bid as Granular Shoulders, Type B

Notes:
- See Tab 100-24 for pavement quantities.
- See Tab 112-9 for shoulder quantities.
- Refer to CS sheets for subdrain locations at new guardrail installations.

IA 3 Paving



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

2P_ MODIFIED		
STATION TO STATION		(T) Feet
34+64.86	39+96.41	0-12
39+96.41	44+12.06	12
44+12.06	49+39.51	12-0

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, BT-2
Transverse: C at 17' spacing

			2_Curb_ 04-21-20
STATION TO STATION		S Feet	Curb Type See PV-102
42+20.60	42+97.25	4	6" Sloped

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

2P_ MODIFIED			
STATION TO STATION		(AL) Feet	(RT) Feet
34+70.00	36+50.00	0	0-12
36+50.00	39+34.89	0	12
39+34.89	40+59.51	0-7	12

Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joint: C at 17' spacing

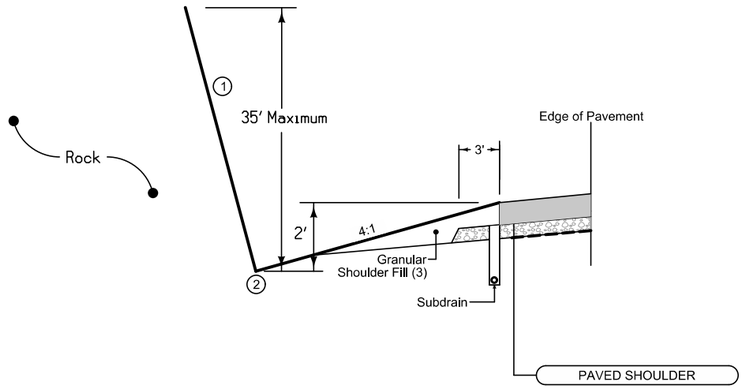
		2_P_ Modified
STATION TO STATION		S
34+70.00	41+25.00	4

(1) Refer to L Sheets for additional information.
(2) Stop Polymer Grid 6" from subdrains.
(3) Refer to cross sections

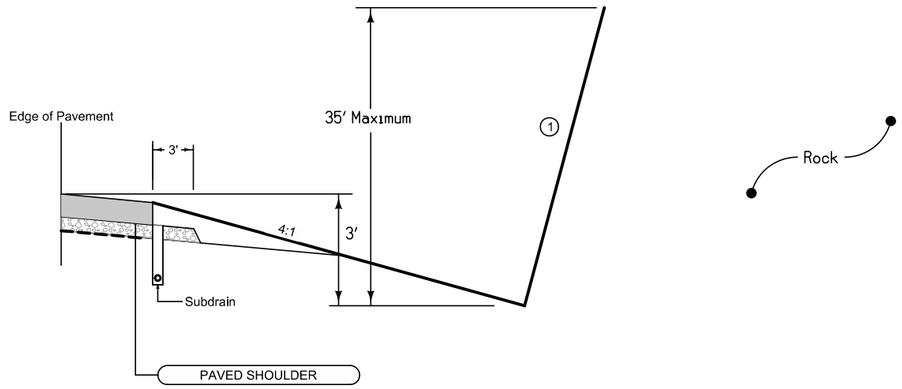
Notes:

- See Tab 100-24 for pavement quantities.
- See Tab 112-9 for shoulder quantities.
- Refer to CS sheets for subdrain locations at new guardrail installations.

IA 3 Turn Lane at Sherrill Rd



STATION TO STATION	
321+00.00	326+50.00
331+00.00	333+00.00
342+50.00	346+25.00



STATION TO STATION	
70+80.00	84+50.00
87+52.00	95+15.00
96+67.00	101+86.00
113+35.00	114+25.00
120+80.00	142+00.00
143+00.00	148+00.00
151+50.00	152+50.00
158+00.00	158+80.00
163+10.00	169+50.00
177+25.00	178+00.00
181+00.00	187+50.00
190+00.00	191+00.00
194+50.00	195+25.00
201+40.00	202+50.00
205+00.00	209+10.00
226+25.00	242+80.00
245+00.00	247+00.00
247+50.00	249+00.00
257+00.00	258+50.00
260+50.00	261+00.00
274+00.00	276+60.00
282+00.00	285+70.00
291+25.00	292+00.00
300+00.00	300+75.00
304+25.00	305+50.00

(1) Refer to cross sections

(2) Refer to typicals at intake locations for additional information.

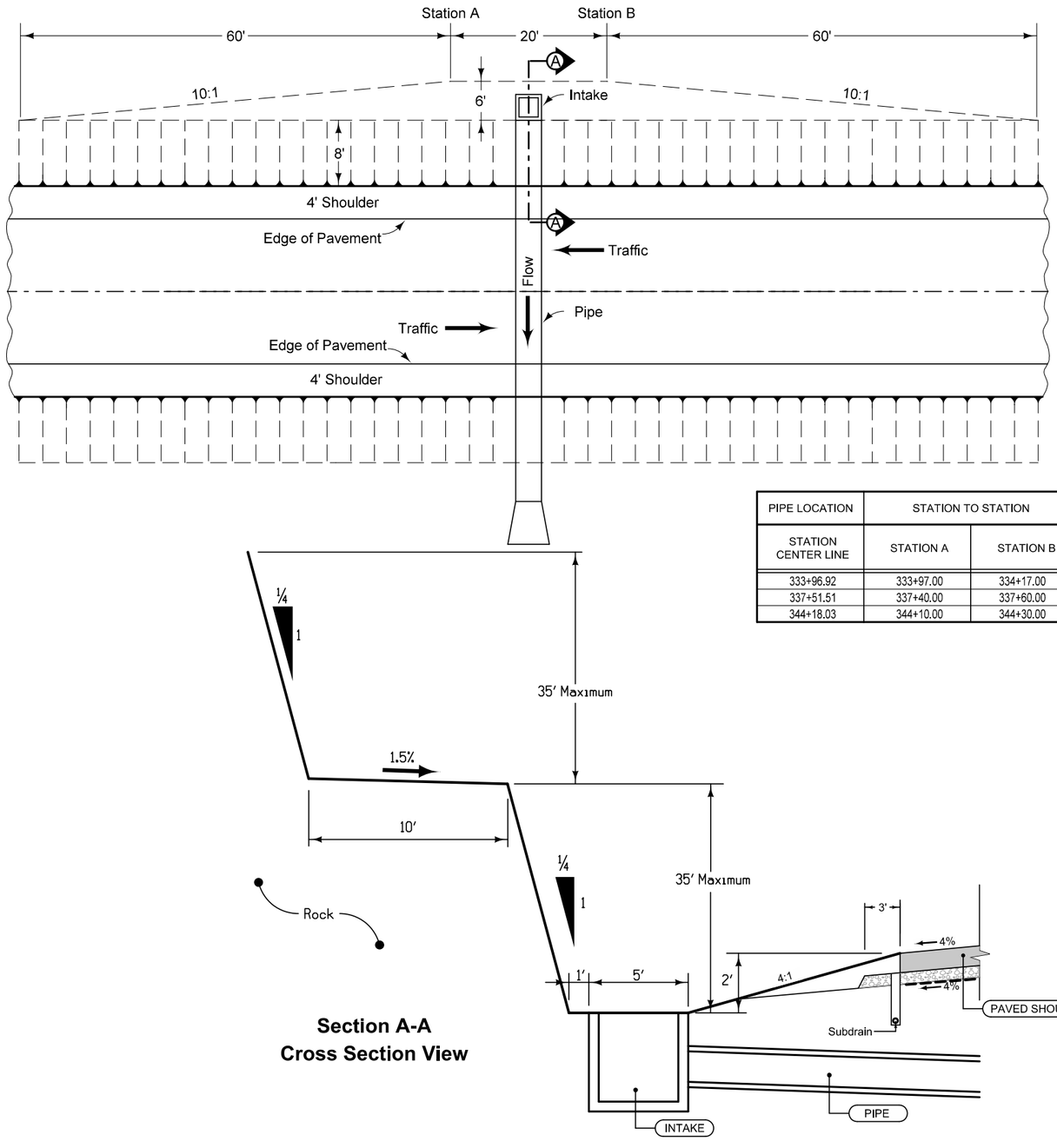
(3) Bid as Granular Shoulders, Type B

Notes:

- Refer to Q sheets for details in areas for rock pre-splitting.
- See cross sections for rock berm cut near station 149+00 and station 202+00
- See Tab 100-24 for pavement quantities.
- See Tab 112-9 for shoulder quantities.
- Refer to CS sheets for subdrain locations at new guardrail installations.

IA 3
Excavation in Rock

Plan View



PIPE LOCATION	STATION TO STATION	
STATION CENTER LINE	STATION A	STATION B
333+96.92	333+97.00	334+17.00
337+51.51	337+40.00	337+60.00
344+18.03	344+10.00	344+30.00

Section A-A
Cross Section View

(1) Refer to cross sections

Notes:

- See Tab 100-24 for pavement quantities.
- See Tab 112-9 for shoulder quantities.
- Refer to CS sheets for subdrain locations at new guardrail installations.

IA 3
Excavation in Rock
At Intake Locations

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **B.4**

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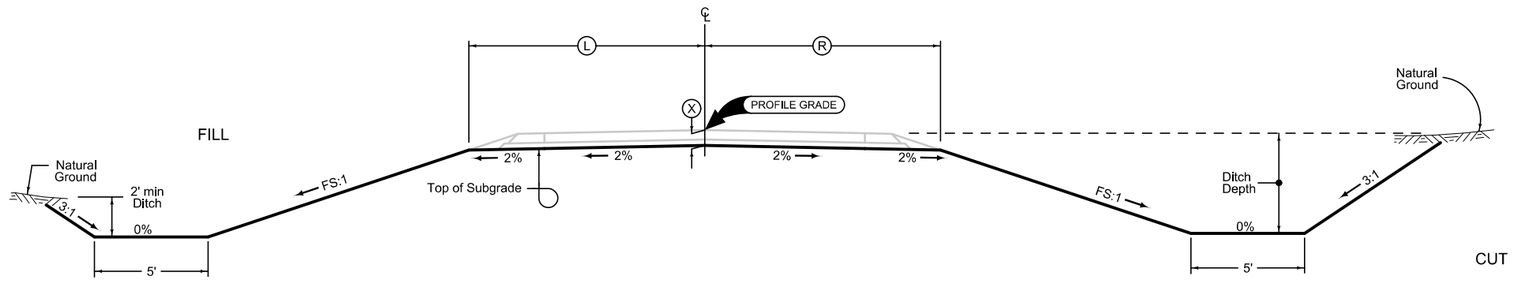
LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	FS
Christensen Ln	100+37.27	100+86.09	27.79	27.79	21.5	4
Leiser Ln	200+12.00	200+69.84	22.29	22.29	21.5	4
Sherrill Rd	300+12.00	301+02.58	21.79	21.79	21.5	4
Whispering Hills Dr	400+12.00	400+67.06	19.29	19.29	21.5	4
Clay Hill Rd	503+95.00	504+88.21	22.29	22.29	21.5	4
Raylyn Rd	600+12.00	600+62.00	23.29	23.29	21.5	4
Burtons Furnace Rd	701+52.94	702+96.72	20.29	20.29	21.5	4
Durango Rd	800+12.00	800+87.59	22.29	22.29	21.5	4
Paradise Valley Rd	900+65.00	901+19.00	20.29	20.29	21.5	4
Boy Scout Rd	1000+50.00	1001+38.87	22.29	22.29	21.5	4

G_2_Grade
Modified



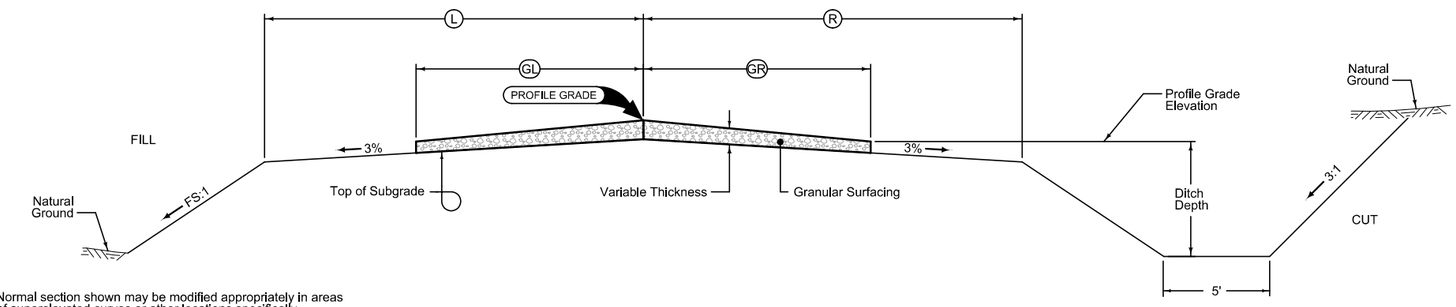
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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

2 LANE GRADING

LOCATION			DIMENSIONS					Quantities	
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(GL) Feet	(GR) Feet	FS	Length Miles	Granular Surfacing Tons
Paradise Valley Rd	900+54.21	900+65.00	20.29	20.29	12	12	4	0.002	5

2_GradeGran
Modified



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

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

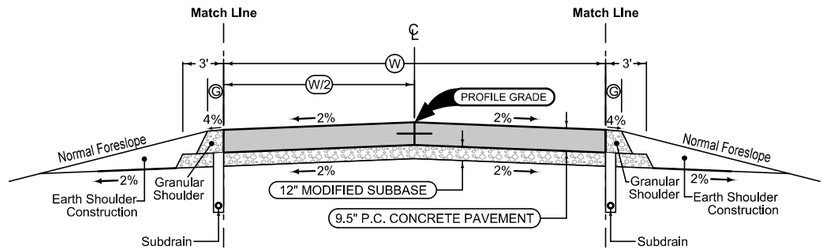
Place Granular Surfacing as follows:
Grade-Pave design application rate is 2330 tons per mile.

GRADING AND GRANULAR SURFACING

Side Roads

Granular Shoulder

ROAD IDENTIFICATION	STATION TO STATION		2_G_SR_ Modified (G) Feet
Christensen Ln	100+37.27	100+86.09	2
Leiser Ln	200+12.00	200+69.84	2
Whispering Hills Dr	400+12.00	400+67.06	2
Clay Hill Rd	503+95.00	504+88.21	2
Raylyn Rd	600+12.00	600+62.00	2
Burtons Furnace Rd	701+52.94	702+96.72	2
Durango Rd	800+12.00	800+47.94	2
Paradise Valley Rd	900+65.00	901+19.00	2



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

STATION TO STATION			(W) Feet
Christensen Ln	100+37.27	100+86.09	34
Leiser Ln	200+12.00	200+69.84	24
Sherrill Rd	300+12.00	301+02.58	23
Whispering Hills Dr	400+12.00	400+67.06	18
Clay Hill Rd	503+95.00	504+88.21	24
Raylyn Rd	600+12.00	600+62.00	26
Burtons Furnace Rd	701+52.94	702+96.72	20
Durango Rd	800+12.00	800+87.65	22
Paradise Valley Rd	900+65.00	901+19.00	24
Boy Scout Rd	1000+50.00	1001+38.87	24

Granular Shoulder

ROAD IDENTIFICATION	STATION TO STATION		2_G_SR_ Modified (G) Feet
Christensen Ln	100+37.27	100+86.09	2
Leiser Ln	200+12.00	200+69.84	2
Whispering Hills Dr	400+12.00	400+67.06	2
Clay Hill Rd	503+95.00	504+88.21	2
Raylyn Rd	600+12.00	600+62.00	2
Burtons Furnace Rd	701+52.94	702+96.72	2
Durango Rd	800+12.00	800+46.49	2
Paradise Valley Rd	900+65.00	901+19.00	2
Boy Scout Rd	1000+50.00	1001+38.87	2

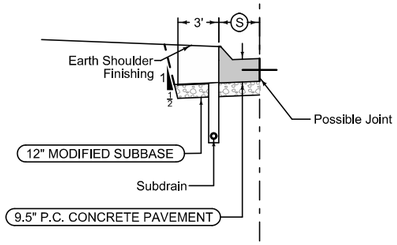
Curbed Shoulder

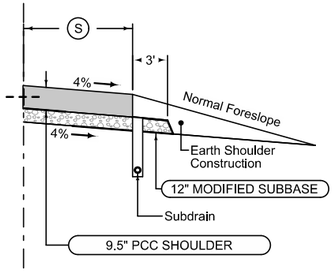
Shoulder Jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 15':

Single pour: L-2
Staged : KT-2, BT-2
Transverse: C at 17' spacing

ROAD IDENTIFICATION	STATION TO STATION		(S) Feet	2_Curb_ 04-21-20 Curb Type See PV-102
Sherrill Rd	300+12.00	301+13.59	5	6" Sloped
Boy Scout Rd - [1]	1000+29.87	1000+50.00	3	Drop
Boy Scout Rd	1000+50.00	1001+36.50	3	4" Sloped

[1] Curb and Gutter Only - Next to Existing Pavement





Full Depth PCC Shoulder

Shoulder Jointing:
Longitudinal joint: BT-2, L-2 or KT-2
Transverse joints: C at 17' spacing

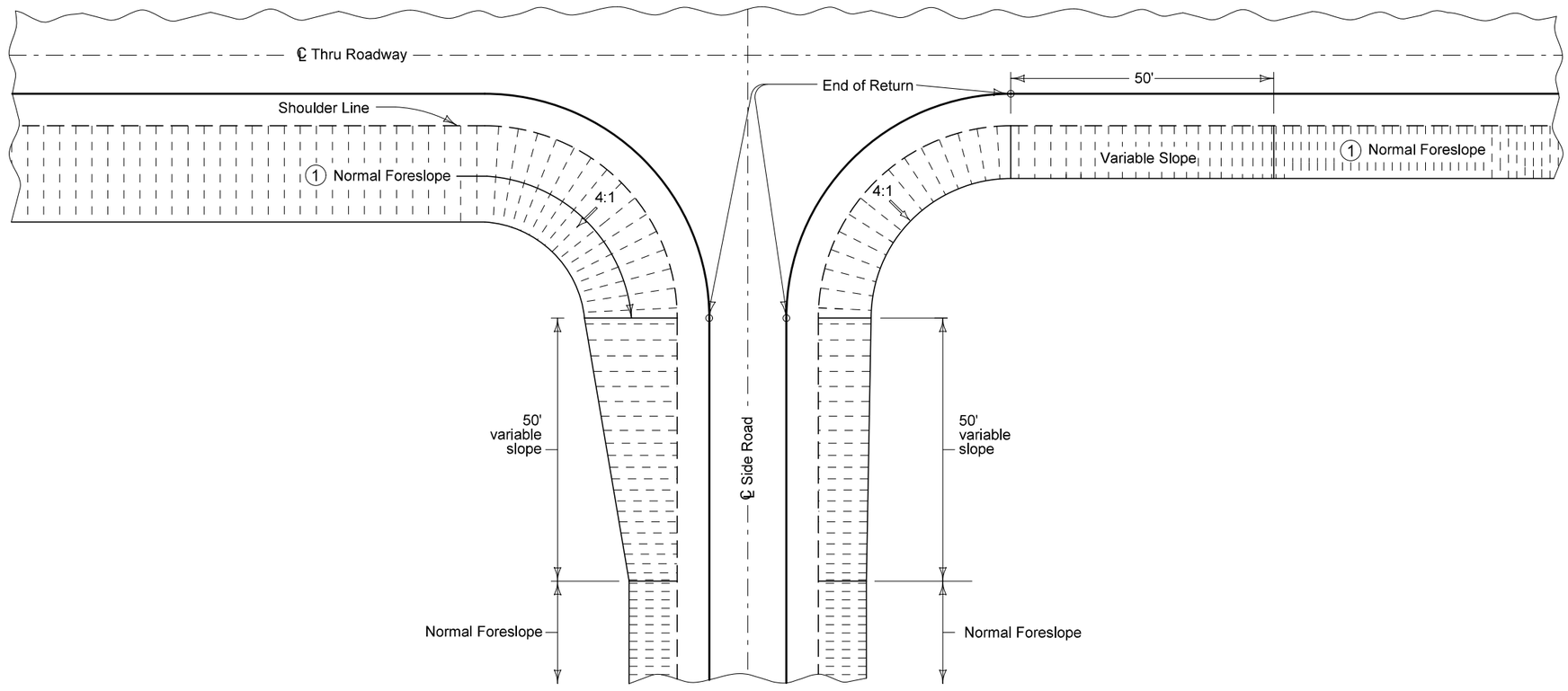
ROAD IDENTIFICATION	STATION TO STATION		(S) Feet	2_P_ Modified
Sherrill Rd	300+12.00	301+02.58	4	

Notes:

– Refer to CS sheets for subdrain locations at new guardrail installations.

Side Roads

① 4:1 foreslope.



NORMAL FORESLOPES

Side Road Grading

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **B.7**	

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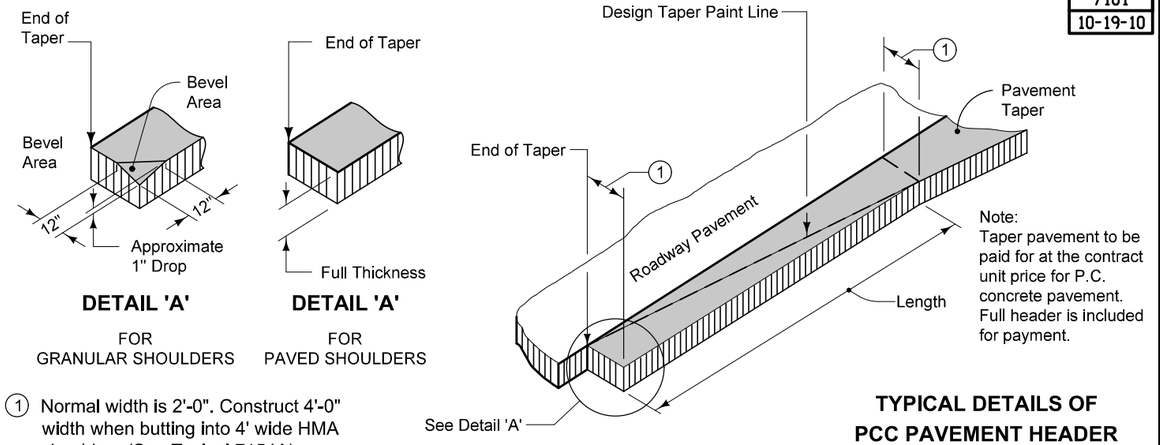
7101
10-19-10



DETAIL 'A'
FOR
GRANULAR SHOULDERS

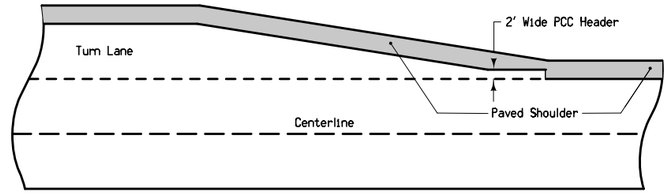
DETAIL 'A'
FOR
PAVED SHOULDERS

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).

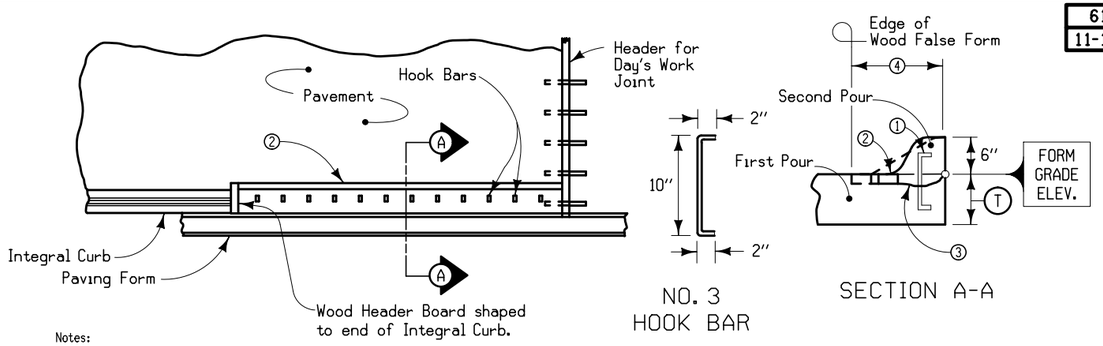
TYPICAL DETAILS OF PCC PAVEMENT HEADER

7155M
MODIFIED



PAVED SHOULDER DETAIL AT TURN LANES

6115
11-10-92



NO. 3
HOOK BAR

SECTION A-A

Notes:

(1) Install hook bar at 12" intervals with top projecting so as to clear the paving equipment and as near the false form board as possible to maintain 2" surface clearance.

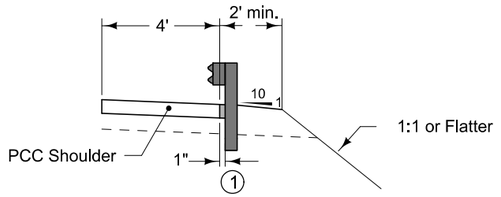
(2) 2" x 4" False Form.

(3) Excavate a slight cavity in concrete around each bar.

(4) 12" maximum for Standard 6" Curb.
16" maximum for Sloped 6" Curb.

CONSTRUCTION WHERE CURB IS OMITTED AT END OF DAY'S RUN

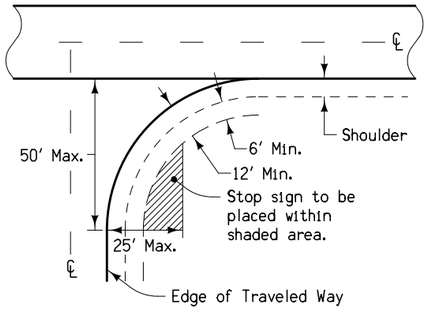
GI-SFS



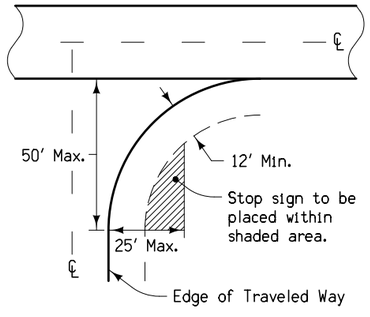
(1) Refer to BA-200 detail "POST INSTALLED IN BEDROCK" when rubble is encountered.

GUARDRAIL INSTALLATIONS AT STEEP FORESLOPES

9503
07-15-97



CASE 'A'
WITH SHOULDER



CASE 'B'
WITHOUT SHOULDER

NOTES:

Stop signs should be confined to the shaded areas, but as close to the approach roadway as possible to provide the motorist with the best visual impact.

If possible, stop signs should be placed at the point where vehicles are to stop or as near as practical.

In rural areas, the lateral clearance should not be closer than 6' from the edge of a usable shoulder, or if none, 12' from edge of the traveled way.

In urban areas, stop signs should be placed a minimum of 6' from the near edge of the intersected street or a minimum of 4' in advance of the near edge of a marked crosswalk. Lateral clearance may be reduced to a minimum of 2' from the face of a curb.

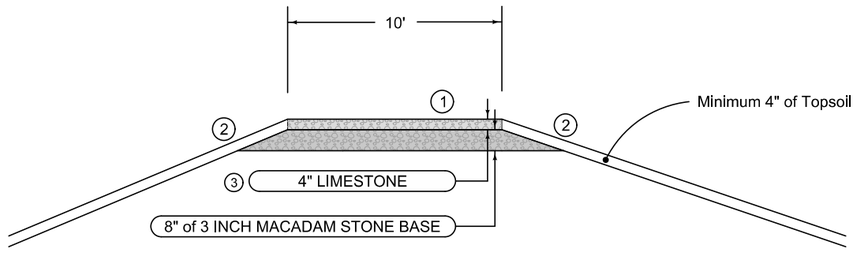
Where the approach roadway consists of two lanes of traffic, a second stop sign should be placed where it is visible to traffic in the inner lane.

At channelized intersections, the additional stop sign may be placed on a channelized island or median.

STOP SIGN PLACEMENT

Location of Replacements

STATION TO STATION		TRAIL LENGTH Feet	LIMESTONE Tons	MACADAM STONE BASE Tons	REMARKS
126+94.00	127+04.00	12	1.7	6.7	Clay Hill Rd
127+27.00	127+35.00	8	1.3	5.3	Clay Hill Rd
140+84.00	141+04.00	20	3.4	13.3	--
146+00.00	146+40.00	40	6.8	26.6	--
152+01.00	152+21.00	20	3.4	13.3	--
	TOTAL	100	16.6	65.2	



Notes:

1. Match existing cross slope
2. Match existing foreslope
3. Aggregate shall consist of uniform mixture of fine and coarse particles of crushed stone, crushed gravel, or a combination of these materials with sand. Meet the requirements for gradation No. 8 of the Aggregate Gradation Table, Article 4109.02. Aggregates must be from an Iowa DOT approved source. Material shall be placed using an asphalt mixture paving machine meeting the requirements of Iowa DOT Section 2001.19 with vibratory screed and screed extensions. Placed materials shall be compacted with 2 passes of a steel drum roller.

   Measurement and payment will be made for actual placed quantities and the contract unit price.
4. Estimated unit weight for quantities:

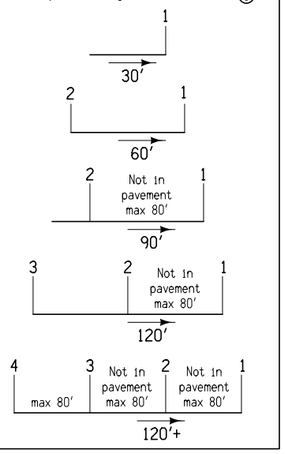
   Limestone: 145 pcf

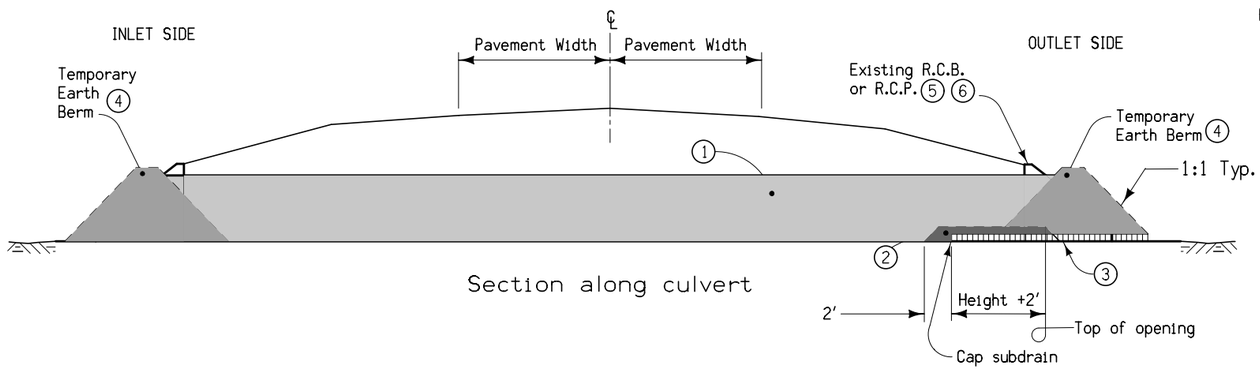
   Macadam Stone Base: 145 pcf

Heritage Trail

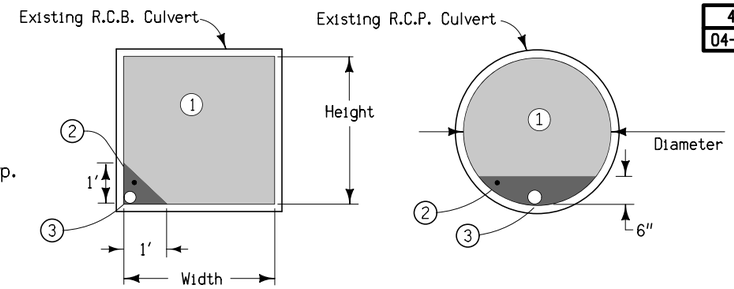
4315
04-15-08

Required Injection Points ⑥





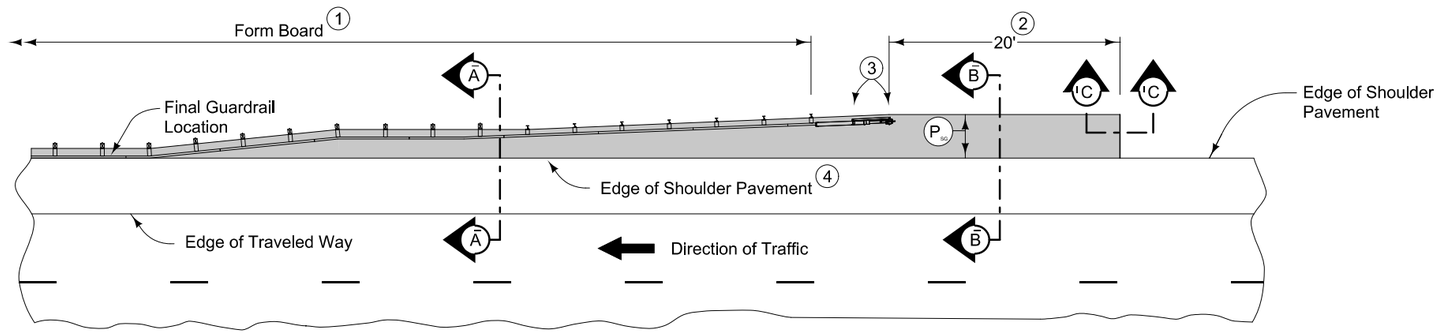
Section along culvert



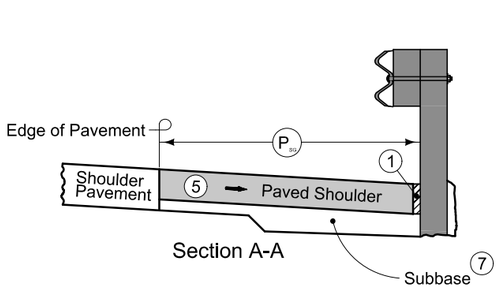
Section thru culvert

① Flowable Mortar.
② Granular Backfill.
③ 4″ subdrain at flowline elevation of culvert shall be extended into the culvert a distance of 2′ plus the height of the culvert. Granular Backfill covers subdrain and extends an additional 2′. Subdrain and granular backfill are incidental to flowable mortar.
④ Ends of culvert shall be plugged sufficiently to retain flowable mortar. Temporary earth berms are incidental to flowable mortar.
⑤ Removal of headwalls may be required.
⑥ Outlet shall be filled first. See injection point detail for additional information.

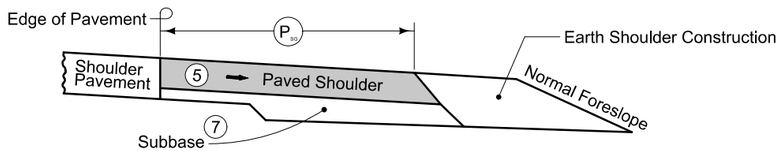
DETAILS OF CULVERT ABANDONMENT WITH FLOWABLE MORTAR
(Rectangular structures less than 8′ in either height or width. Circular structures less than 10′ Dia.)



PLAN VIEW

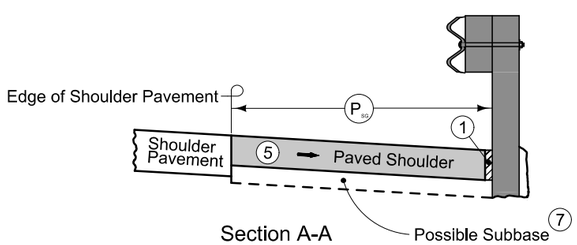


Section A-A

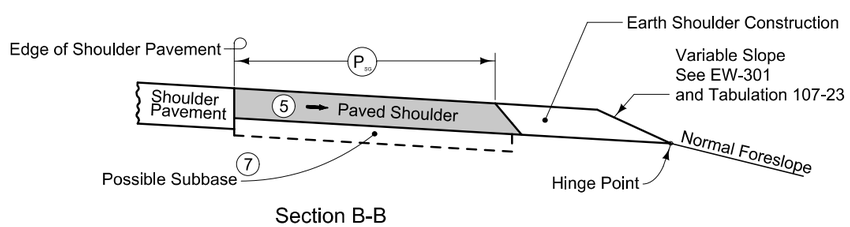


Section B-B

NEW CONSTRUCTION 6



Section A-A



Section B-B

EXISTING SHOULDER

DESIGNER INFO

7158 MODIFIED

6" HMA Paved Shoulder at guardrail. 6" PCC may be substituted with the following jointing layout:

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

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

Refer to Tabulation 112-9 for shoulder quantities.

(1) PCC option only: When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.

(2) Continue paved shoulder 20 feet beyond the center of the first post.

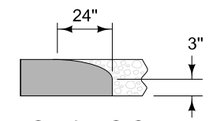
(3) Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.

(4) 'KT' (per PV-101) joint for PCC shoulder.
'B' (per PV-101) joint for HMA shoulder.

(5) Match shoulder slope.

(6) The Contractor has the option to pave the paved shoulder at guardrail and the full width paved shoulder as one operation.

(7) Refer to other details in the plan.

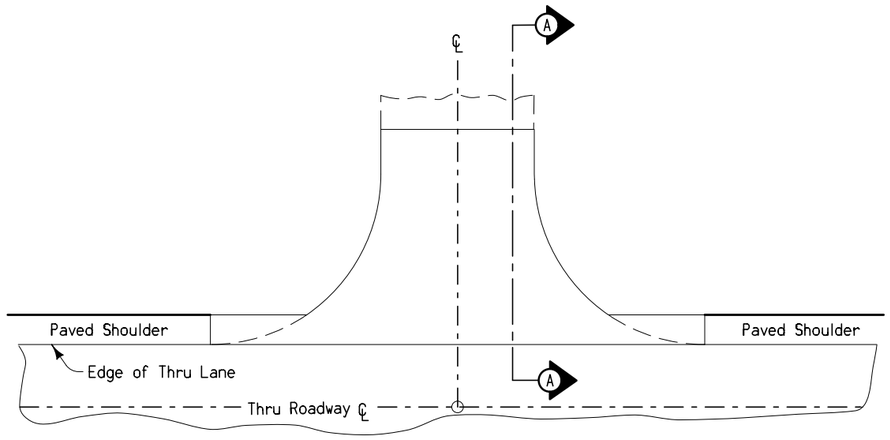


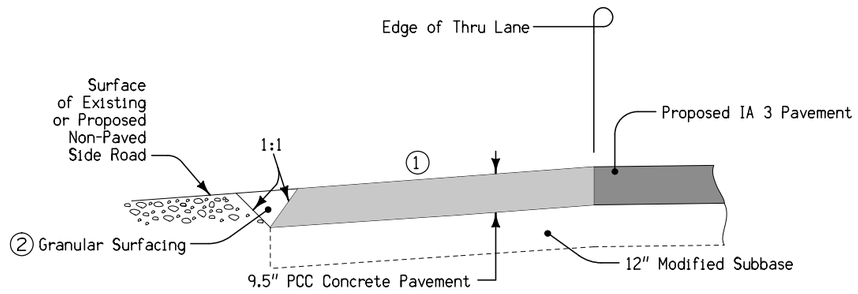
Section C-C
Roll down at granular shoulder or earth.

PAVED SHOULDER AT GUARDRAIL
(ADJACENT TO FULL WIDTH PAVED SHOULDER)

PAV-TIGSR

PLAN





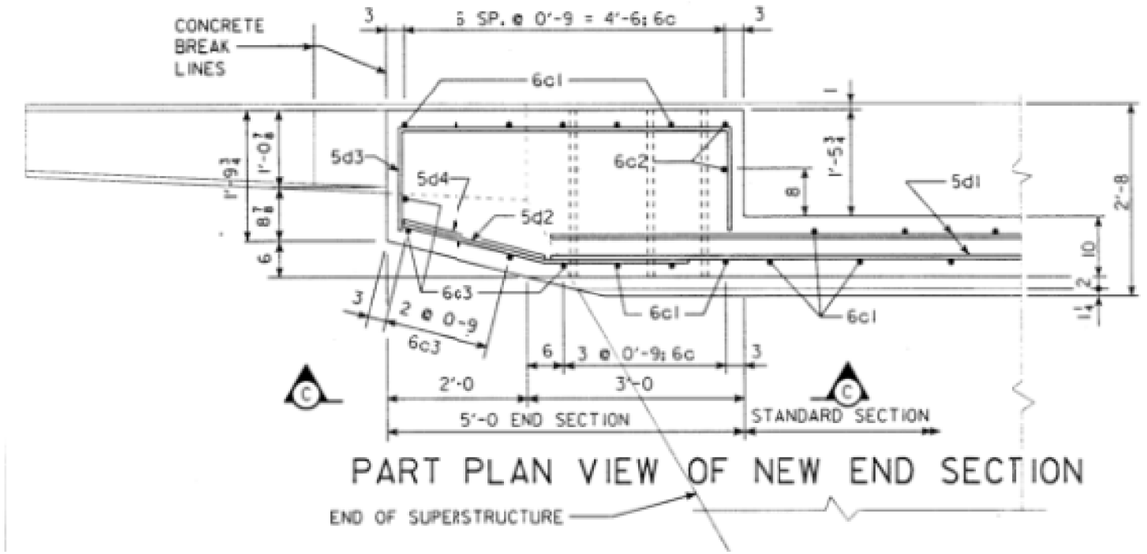
1 Refer to E and L sheets.

2 Excavation and backfill of existing granular surface is incidental to other work on this project.

SECTION A-A

PCC PAVEMENT TIE-INS
AT CHRISTENSEN LN AND PARADISE VALLEY RD
(NON-PAVED SIDE ROADS)

BRGEPT



PART PLAN VIEW OF NEW END SECTION

END OF SUPERSTRUCTURE

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **B.12**

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ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadway Items :
100% Dubuque County : For Pavement on Paradise Valley Road
Non-Participating : Existing Steel Beam Guardrail

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
1	2101-0850001	CLEARING AND GRUBBING	ACRE	32.86			32.86	Includes areas within needs lines shown on D and E sheets. Specification 2101.01.A will not apply to work on this project. Clearing may be performed at any time of the year. Refer to Special Note SN-2 in the C sheets for requirements in the restricted areas.
2	2102-0425071	SPECIAL BACKFILL	CY	18.94			18.94	Item is for backfilling guardrail post holes when rock is encountered during guardrail installations. Refer to Tab. RE in the C sheets for locations and details.
3	2102-2625000	EMBANKMENT-IN-PLACE	CY	20,346			20,346	Refer to Tab. 103_12 in the CS sheets for locations and details.
4	2102-2710070	EXCAVATION, CLASS 10, ROADWAY AND BORROW	CY	71,200			71,200	Refer to Tab. 107-28 in the T sheets for locations and details. Refer to Tab. 103_12 in the CS sheets for Slide Repair. Refer to Tab. 107_31 for locations of plowing and shaping in the CS sheets. Overhaul is incidental to roadway excavation on this project and will not be paid for separately.
5	2102-2710090	EXCAVATION, CLASS 10, WASTE	CY	19,252			19,252	Refer to Tab. 107-28 in the T sheets for locations and details. The intent is to waste all unsuitable type B material and excess Class 10 material. Overhaul is incidental to roadway excavation on this project and will not be paid for separately.
6	2102-2712015	EXCAVATION, CLASS 12, BOULDERS OR ROCK FRAGMENTS	CY	30			30	Refer to Tab. 103_7 in the CS sheets for locations and details. These are large unsuitable boulders on existing backslopes, to be marked by the Engineer for removal and measured for payment. Dispose of excess material according to Article 1106.07 of the current specifications.

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
7	2102-2712070	EXCAVATION, CLASS 12, ROADWAY AND BORROW	CY	68,479			68,479	Refer to Tab. 107-28 in the T sheets for locations and details. Item also includes: (1) 27.1 tons for rock excavation during guardrail installations. Refer to Tab. RE in the C sheets for locations and details. (2) 2446.9 tons for rock excavation during pipe installations. Refer to CD sheets for locations and details. Material can be incorporated into the project as long as it meets the proper specification. Overhaul is incidental to roadway excavation on this project and will not be paid for separately.
8	2102-2713090	EXCAVATION, CLASS 13, WASTE	CY	10,982			10,982	Excavation of combined broken concrete, native soil, and random rock fill, used to stabilize the existing slide from Sta. 230+50 to Sta. 235+50. Refer to Tab. 103_12 in the CS sheets for locations and details.
9	2102-4560000	LOCATING TILE LINES	STA	660			660	Estimated at twice the project length.
10	2103-0000100	PRESPLITTING OF ROCK CUT	SY	20,644			20,644	Refer to Tab. 107_25 in the CS sheets.
11	2105-8425015	TOPSOIL, STRIP, SALVAGE AND SPREAD	CY	16,792			16,792	Refer to Tab. 103-10 in the C sheets, Tab. 107-28 in the T sheets, Tab. 103_12 in the CS sheets, and the cross sections for locations and details. Topsoil is not to be placed over areas with exposed rocks and sites with newly placed erosion stones and revetments. Spread excess topsoil on foreslopes or place on earth shoulder.
12	2107-0425020	COMPACTING BACKFILL ADJACENT TO BRIDGES, CULVERTS OR STRUCTURES	CY	138.2			138.2	Refer to Tab.104-4 in the C sheets for locations and details.
13	2107-0875100	COMPACTION WITH MOISTURE CONTROL	CY	42,759.1			42,759.1	Refer to Tab. 104-4 in the C sheets, Tab. 103-6 in the CS sheets, and Tab. 107-28 in the T sheets for locations and details. Cubic yards shown on the contract documents as determined by the template fill volume. Shrinkage is not included in the moisture control quantity.

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
14	2113-0001100	SUBGRADE STABILIZATION MATERIAL, POLYMER GRID	SY	115,158			115,158	Refer to Tab. 100-24 in the C sheets for locations and details. Quantity includes areas under mainline pavement and shoulders. Refer to Typicals on B sheets. Extra material required for overlaps are not calculated in the quantity provided and will not be paid for separately.
15	2115-0100000	MODIFIED SUBBASE	CY	49,833.6	61.2		49,894.8	Refer to Typicals on B sheets and Tabs. 100-24 and 112-9 for locations and details.
16	2121-7425020	GRANULAR SHOULDERS, TYPE B	TON	6,211.62	13.84		6,225.46	Refer to Typicals on B sheets, Tab. 112-9 and Tab. ESC in the C sheets for locations and details.
17	2122-5190095	PAVED SHOULDER, P.C. CONCRETE, 9.5 IN.	SY	28,969			28,969	Refer to Typicals on B sheets and Tab. 112-9 in the C sheets for locations and details. Includes 757.8 linear feet of 6" sloped curb and 106.6 linear feet of 4" sloped curb.
18	2122-5500060	PAVED SHOULDER, HOT MIX ASPHALT MIXTURE, 6 IN.	SY	621.8			621.8	Refer to Tab. 112-9 and Typical 7158 on the B sheets. Paved shoulder width varies in the H-pile areas. The intent is to extend the paved shoulder to the face of the H-piles.
19	2123-7450000	SHOULDER CONSTRUCTION, EARTH	STA	365.3			365.3	Refer to Typicals on B sheets and Tab. ESC in the C sheets for locations and details. Requires a minimum of 4 inches of topsoil. Place according to Article 2105.03,B of the Standard Specification. Approximately 363 cy of topsoil is available on site.
20	2123-7450020	SHOULDER FINISHING, EARTH	STA	9.66			9.66	Item is for locations behind curb. Refer to Typicals on B sheets for locations and details.
21	2210-0475290	MACADAM STONE BASE	TON	65.2			65.2	Item is for placing macadam stone base under limestone on Heritage Trail. Refer to Typical HT in the B sheets for locations and details.

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
22	2213-7100400	RELOCATION OF MAIL BOXES	EACH	31			31	Refer to Tab. RLM for locations. The Contractor is responsible for coordinating the relocation schedule with property owners and the US Post Office. Price bid includes installation of temporary mailboxes until the permanent mailboxes can be reinstalled. METHOD OF MEASUREMENT: The quantity for Relocation of Mail Boxes will be measured by counting the number of mailboxes removed and reinstalled. BASIS OF PAYMENT: The Contractor will be paid the contract unit price per each mailbox removed and reinstalled.
23	2301-0690202	BRIDGE APPROACH, BR-202	SY	341.6			341.6	Refer to Tab. 112-6 in the C sheets for locations and details.
24	2301-0690203	BRIDGE APPROACH, BR-203	SY	489.8			489.8	
25	2301-1003095	STANDARD OR SLIP-FORM PORTLAND CEMENT CONCRETE PAVEMENT, QM-C, CLASS 3 DURABILITY, 9.5 IN.	SY	92,487	164.5		92,651.5	Refer to Typicals on B Sheets and Tab. 100-24 in the C sheets for locations and details. Item also includes 101.6 linear feet of 6" sloped curb at the return of Sherril Road intersection.
26	2301-7000110	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR PCC PAVEMENT THICKNESS (BY SCHEDULE)	EACH	108,210			108,210	Item is for pavement only.
27	2312-8260051	GRANULAR SURFACING ON ROAD, CLASS A CRUSHED STONE	TON	5			5	Refer to Typicals on B Sheets for details.
28	2315-8275025	SURFACING, DRIVEWAY, CLASS A CRUSHED STONE	TON	2,317.2			2,317.2	Refer to Tab. 102-3 in the C sheets for locations and details. Calculated at 6" thickness. Includes additional 800 tons to maintain temporary access during construction.
29	2317-7000110	PAYMENT ADJUSTMENT INCENTIVE/DISINCENTIVE FOR PCC PAVEMENT SMOOTHNESS (BY SCHEDULE)	EACH	69,365			69,365	Item is for pavement only.
30	2401-6745650	REMOVAL OF EXISTING STRUCTURES	LS	1			1	Refer to Tab. 110-2 in the C sheets for locations and details.
31	2402-0425040	FLOODED BACKFILL	CY	5,372			5,372	Refer to Tab. 104-3 in the CD sheets and Tab. 104-4 in the C sheets for locations and details.
32	2402-2720100	EXCAVATION, CLASS 20, FOR ROADWAY PIPE CULVERT	CY	19,331.3			19,331.3	Refer to Tab. 104-3 in the CD sheets for locations and details.
33	2416-0100018	APRONS, CONCRETE, 18 IN. DIA.	EACH	3			3	Refer to M sheets for locations and details.
34	2416-0100024	APRONS, CONCRETE, 24 IN. DIA.	EACH	27			27	Refer to Tab. 104-3 in the CD sheets, M sheets, and cross sections for locations and details.
35	2416-0100030	APRONS, CONCRETE, 30 IN. DIA.	EACH	5			5	Refer to Tab. 104-3 in the CD sheets and cross sections for locations and details.

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
36	2416-0100036	APRONS, CONCRETE, 36 IN. DIA.	EACH	7			7	
37	2416-0100042	APRONS, CONCRETE, 42 IN. DIA.	EACH	4			4	
38	2416-0100048	APRONS, CONCRETE, 48 IN. DIA.	EACH	5			5	
39	2416-0100054	APRONS, CONCRETE, 54 IN. DIA.	EACH	2			2	
40	2416-0100060	APRONS, CONCRETE, 60 IN. DIA.	EACH	4			4	
41	2416-0100084	APRONS, CONCRETE, 84 IN. DIA.	EACH	2			2	
42	2416-0102236	APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 36 IN.	EACH	2			2	
43	2416-0102248	APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 48 IN.	EACH	2			2	
44	2416-0102272	APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 72 IN.	EACH	2			2	
45	2416-0102284	APRON, LOW CLEARANCE CONCRETE, EQUIVALENT DIAMETER 84 IN.	EACH	2			2	
46	2416-1180024	CULVERT, CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	730			730	
47	2416-1180030	CULVERT, CONCRETE ROADWAY PIPE, 30 IN. DIA.	LF	222			222	
48	2416-1180036	CULVERT, CONCRETE ROADWAY PIPE, 36 IN. DIA.	LF	232			232	
49	2416-1180042	CULVERT, CONCRETE ROADWAY PIPE, 42 IN. DIA.	LF	186			186	
50	2416-1180048	CULVERT, CONCRETE ROADWAY PIPE, 48 IN. DIA.	LF	192			192	
51	2416-1180054	CULVERT, CONCRETE ROADWAY PIPE, 54 IN. DIA.	LF	50			50	
52	2416-1180060	CULVERT, CONCRETE ROADWAY PIPE, 60 IN. DIA.	LF	92			92	
53	2416-1180084	CULVERT, CONCRETE ROADWAY PIPE, 84 IN. DIA.	LF	92			92	
54	2416-1200236	CULVERT, LOW CLEARANCE CONCRETE ROADWAY PIPE, EQUIVALENT DIAMETER 36 IN.	LF	54			54	
55	2416-1200248	CULVERT, LOW CLEARANCE CONCRETE ROADWAY PIPE, EQUIVALENT DIAMETER 48 IN.	LF	54			54	
56	2416-1200272	CULVERT, LOW CLEARANCE CONCRETE ROADWAY PIPE, EQUIVALENT DIAMETER 72 IN.	LF	54			54	

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
57	2416-1200284	CULVERT, LOW CLEARANCE CONCRETE ROADWAY PIPE, EQUIVALENT DIAMETER 84 IN.	LF	56			56	
58	2416-1240024	CULVERT, 3000D CONCRETE ROADWAY PIPE, 24 IN. DIA.	LF	216			216	
59	2416-1240030	CULVERT, 3000D CONCRETE ROADWAY PIPE, 30 IN. DIA.	LF	142			142	
60	2416-1262024	CULVERT, CONCRETE PIPE, 2000D, TRENCHLESS, 24 IN. DIA.	LF	122			122	
61	2417-0225024	APRONS, METAL, 24 IN. DIA.	EACH	1			1	Refer to M sheets for locations and details.
62	2417-0225036	APRONS, METAL, 36 IN. DIA.	EACH	1			1	Refer to Tab. 104-3 in the CD sheets and cross sections for locations and details.
63	2417-0225048	APRONS, METAL, 48 IN. DIA.	EACH	1			1	
64	2417-0225060	APRONS, METAL, 60 IN. DIA.	EACH	2			2	
65	2417-1060024	CULVERT, CORRUGATED METAL ROADWAY PIPE, 24 IN. DIA.	LF	63			63	Refer to M sheets for locations and details.
66	2417-1060036	CULVERT, CORRUGATED METAL ROADWAY PIPE, 36 IN. DIA.	LF	20			20	Refer to Tab. 104-3 in the CD sheets and cross sections for locations and details.
67	2417-1060048	CULVERT, CORRUGATED METAL ROADWAY PIPE, 48 IN. DIA.	LF	25			25	
68	2417-1060060	CULVERT, CORRUGATED METAL ROADWAY PIPE, 60 IN. DIA.	LF	86			86	Refer to Tab. 104-3 in the CD sheets and cross sections for locations and details. Item also includes a 24" CMP riser with a Type 9 SW-604 grate at Sta. 146+22.03.
69	2422-0360018	APRONS, UNCLASSIFIED, 18 IN. DIA.	EACH	4			4	Refer to Tab. 102-3 in the C sheets for locations and details.
70	2422-0360024	APRONS, UNCLASSIFIED, 24 IN. DIA.	EACH	38			38	
71	2422-1722018	CULVERT, UNCLASSIFIED ENTRANCE PIPE, 18 IN. DIA.	LF	98			98	
72	2422-1722024	CULVERT, UNCLASSIFIED ENTRANCE PIPE, 24 IN. DIA.	LF	1,082			1,082	
73	2424-6772250	SHOTCRETE	SF	0			0	Refer to Q sheets for locations and details.
74	2435-0140160	MANHOLE, STORM SEWER, SW-401, 60 IN.	EACH	2			2	Refer to Tab. 104-3 in the CD sheets and cross sections for locations and details. Item also includes a SW-602 Type 4C grate at Sta. 141+05.79.
75	2435-0140200	MANHOLE, STORM SEWER, SW-402	EACH	1			1	Refer to Tab. 104-3 in the CD sheets and cross sections for locations and details. Inside well dimension: 5'x6'.
76	2435-0250700	INTAKE, SW-507	EACH	2			2	Refer to M sheets for locations and details.
77	2435-0250800	INTAKE, SW-508	EACH	1			1	
78	2435-0250900	INTAKE, SW-509	EACH	1			1	
79	2435-0251236	INTAKE, SW-512, 36 IN.	EACH	4			4	
80	2435-0256200	INTAKE, SW-562	EACH	5			5	Refer to Tab. 104-3 in the CD sheets and cross sections for locations and details. Inside well dimension: 4'x4'.

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
81	2499-4000136	SLIPLINING EXISTING CULVERTS, GREATER THAN 36 IN. DIA. OR HEIGHT	LF	110			110	Refer to Tab. 104-3 in the CD sheets and cross sections for locations and details.
82	2502-2301000	FIN DRAIN, AS PER PLAN	LF	74,384.2			74,384.2	Refer to Tab. 104_9A in the CS sheets for locations and details.
83	2502-8221303	SUBDRAIN OUTLET, DR-303	EACH	3			3	
84	2502-8221306	SUBDRAIN OUTLET, DR-306	EACH	295			295	
85	2503-0114224	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 2000D (CLASS III), 24 IN.	LF	429			429	Refer to M sheets for locations and details.
86	2503-0114418	STORM SEWER GRAVITY MAIN, TRENCHED, REINFORCED CONCRETE PIPE (RCP), 3000D (CLASS IV), 18 IN.	LF	499			499	
87	2505-4008120	REMOVAL OF STEEL BEAM GUARDRAIL	LF	3,250			3,250	Refer to Tabs. 110-7A and Tab. 110-13 in the C sheets for locations and details.
88	2505-4008130	REMOVAL OF CABLE GUARDRAIL	LF	12,246			12,246	Refer to Tab. 110-7B in the C sheets for locations and details.
89	2505-4008300	STEEL BEAM GUARDRAIL	LF	14,975			14,975	Item includes 14662.5 linear feet of w-beam guardrail. Refer to Tabs. 108-8A and 108-8B in the C sheets for locations and details. Item also includes 25 linear feet of w-beam guardrail and 287.5 linear feet of thrie-beam guardrail in the Gillespie Hill area. Refer to U sheets for locations and details.
90	2505-4008410	STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION, BA-201	EACH	8			8	Refer to Tab. 108-8A in the C sheets for locations and details. Item also includes two installations in the Gillespie Hill area. Refer to U sheets for locations and details.
91	2505-4021010	STEEL BEAM GUARDRAIL END ANCHOR, BOLTED	EACH	6			6	Refer to Tab. 108-8A in the C sheets for locations and details.
92	2505-4021711	STEEL BEAM GUARDRAIL FLARED END TERMINAL, LS-626	EACH	2			2	Item is to be placed in the Gillespie Hill area. Refer to U sheets for locations.
93	2505-4021720	STEEL BEAM GUARDRAIL TANGENT END TERMINAL, BA-205	EACH	22			22	Refer to Tabs. 108-8A and 108-8B in the C sheets for locations and details.
94	2506-4984000	FLOWABLE MORTAR	CY	229.4			229.4	Refer to Typical 4315 on B sheets and Tab. 110-9 in the C sheets. Silt inside existing culverts need not be removed prior to placing flowable mortar. Also refer to Tab. 104-3 in the CD sheets, Tab. CSS-1 in the C sheets, and M sheets for locations and details.

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
95	2507-3250005	ENGINEERING FABRIC	SY	81,852			81,852	Refer to Tab. 103_12 in the CS sheets. Fabric listed on sheet CS.8 is for Reinforced Steepened Slope (RSS) and Reinforced Revetment Slop (RRS). Fabric shall meet Article 4196.01, B, 6 of the Standard Specification.
96	2507-6800061	REVETMENT, CLASS E	TON	43,306			43,306	Refer to Tab. 103_12 in the CS sheets for Slide Repair.
97	2507-8029000	EROSION STONE	TON	257			257	
98	2510-6745850	REMOVAL OF PAVEMENT	SY	108,147.4			108,147.4	Refer to Tabs. 110-1 and 102-5 in the C sheets for locations and details.
99	2515-2475006	DRIVEWAY, P.C. CONCRETE, 6 IN.	SY	2,363.1			2,363.1	Refer to Tab. 102-3 in the C sheets for locations and details.
100	2515-2475008	DRIVEWAY, P.C. CONCRETE, 8 IN.	SY	100.3			100.3	
101	2515-6745600	REMOVAL OF PAVED DRIVEWAY	SY	1,818.6			1,818.6	Refer to Tab. 110-8 in the C sheets for locations and details.
102	2519-3300600	FENCE, SAFETY	LF	695.3			695.3	Refer to Tab. 100-7 and Special Note SN-2 for additional information. Fence shall be placed prior to construction. Item includes an additional 10% for maintenance during construction.
103	2519-4200190	REMOVAL OF FENCE, SAFETY	LF	695.3			695.3	Item is for removal of safety fence. Refer to Tab. 100-7 for locations and Special Note SN-2 for additional information.
104	2520-3350015	FIELD OFFICE	EACH	1			1	
105	2526-8285000	CONSTRUCTION SURVEY	LS	1			1	
106	2527-9263137	PAINTED SYMBOLS AND LEGENDS, WATERBORNE OR SOLVENT-BASED	EACH	5			5	Refer to Tab. 108-29 in the C sheet and U sheets for locations and details.
107	2527-9263209	PAINTED PAVEMENT MARKINGS, WATERBORNE OR SOLVENT-BASED	STA	1,379.82			1,379.82	Refer to Tab. 108-22 in the C sheet and U sheets for locations and details.
108	2527-9270112	GROOVES CUT FOR PAVEMENT MARKINGS	STA	745.1			745.1	
109	2527-9270120	GROOVES CUT FOR SYMBOLS AND LEGENDS	EACH	5			5	Refer to Tab. 108-29 in the C sheet and U sheets for locations and details.
110	2528-2518000	SAFETY CLOSURE	EACH	18			18	Refer to Tab. 108-13A in the C sheets for locations and details.
111	2528-8445110	TRAFFIC CONTROL	LS	1			1	Refer to Traffic Control Plan and detour signing layouts on J sheets. Item also includes furnishing, erecting, maintaining, and removing all road and trail detour signs as per J sheets.
112	2528-8445113	FLAGGERS	EACH	0			0	(Designer should enter a quantity of 0) See Proposal.

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
113	2528-8445115	PILOT CARS	EACH	0			0	
114	2528-9290050	PORTABLE DYNAMIC MESSAGE SIGN (PDMS)	CDAY	14			14	
115	2533-4980005	MOBILIZATION	LS	1			1	- -
116	2537-8900000	REMEDIATION OF PETROLEUM CONTAMINATED SOIL	CY	155.3			155.3	Refer to Contaminated Soil Sites Tab. CSS-1 in the C sheets for locations and details. The gas station located in the northwest quadrant of the intersection of IA 3/US 52 and Sherrill Rd/Co Rd C9Y is an identified leaking underground storage tank site designated as “High Risk” by the Iowa Department of Natural Resources. Any suspected contaminated soil encountered during excavation in this area shall be stockpiled and covered while awaiting analytical results. If testing indicates no contamination present, excavated material will not be paid for as item 2537-8900000. All petroleum contaminated soil shall be disposed at a permitted sanitary landfill. Copies of landfill receipts shall be submitted to the Engineer.
117	2537-8900100	SAMPLING AND TESTING FOR PETROLEUM CONTAMINATION (WATER AND SOIL SAMPLES FOR REMEDIATION OF PETROLEUM CONTAMINATED SOIL)	EACH	1			1	Refer to Contaminated Soil Sites Tab. CSS-1 in the C sheets for locations and details. The gas station located in the northwest quadrant of the intersection of IA 3/US 52 and Sherrill Rd/Co Rd C9Y is an identified leaking underground storage tank site designated as “High Risk” by the Iowa Department of Natural Resources. The contractor shall have an Iowa Groundwater Professional certified in accordance with 567 IAC Chapter 134 on site during any excavation activities deeper than two feet from mainline STA 41+50 to STA 44+00 and along Sherrill Rd/Co Rd C9Y from STA 300+12 to STA 301+15. The Groundwater Professional shall monitor excavated material through soil vapor analysis and sampling. Samples shall be submitted to a laboratory accredited in accordance with 567 IAC Chapter 83 and analyzed for petroleum compounds using Iowa OA-1 and OA-2 testing procedures. Any suspected contaminated soil shall be stockpiled and covered while awaiting analytical results. Compensation for oversight by the Groundwater Professional shall be negotiated and paid for in accordance with Article 1109.03, B, of the Standard Specifications.
118	2538-6970000	SALVAGE, REMOVAL, AND DISPOSAL OF OBSTRUCTIONS ON PARCEL NO. 41	LS	1			1	Item is for demolishing a wooden arbor and landscaping block foundation on parcel #41. Refer to U sheets for additional information.
119	2548-0000250	DIAMOND GROUND SHOULDER RUMBLE STRIPS, PCC SURFACE	STA	574.48			574.48	Refer to Tab. DGRS in the C sheets for locations and details. Refer to U sheets and Developmental Specifications for Dimond Grinding Rumble Strips for additional information.
120	2548-0000365	DIAMOND GROUND CENTERLINE SINUSOIDAL RUMBLE STRIPS, PCC SURFACE	STA	308.6			308.6	
121	2555-0000010	DELIVER AND STOCKPILE SALVAGED MATERIALS	LS			1	1	Refer to Tabs. 110-13 and 110-7A for additional information.

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
122	2599-9999005	('EACH' ITEM) Gate Assembly	EACH	2			2	Item is for assembling one gate at each of the two gate locations on the trail detour (along Burton Furnace Road). Refer to U sheets for locations and details. For each gate assembly, work includes: 1. Install one round wood post (8' long 6" diameter). Post material shall meet the requirements of Section 4164 of the Standard Specifications. Post construction shall follow Article 2519.03.2.b & c, of the Standard Specifications. Attach a new reflector to the new post. Type of reflector shall be approved by the Engineer. 2. Move one side of the gate from an existing post to the new post. 3. At the completion of the project or as directed by the Engineer, remove gate from new post and reattach to the existing post. 4. Remove new post and backfill post hole with limestone. Measurement and payment will be made for completion of each gate assembly at the contract unit price. All labor, material, and equipment necessary for performing work above is included in the price bid for the gate assembly and no separate payment will be made.
123	2599-9999005	('EACH' ITEM) Steel Beam Guardrail Barrier Transition Section, Modified BA-201	EACH	2			2	Item is to be used to transition from existing H-piles to the proposed thrie beam guardrail in the Gillespie Hill area. Refer to U sheets for additional information. Section 2505 of the Standard Specification applies.
124	2599-9999009	('LINEAR FEET' ITEM) Steel Beam Guardrail Tubular Thrie Beam	LF	2,400			2,400	Item is to be attached to the existing H piles in the Gillespie Hill area. Refer to U sheets for additional information and details. Measurement and payment will be per Standard Specification Section 2505.
125	2599-9999009	('LINEAR FEET' ITEM) STEEL PIPE, 36 INCH DIAMETER	LF	58			58	Item is for installing a smooth steel pipe at Sta. 141+05.79. Refer to Tab. 104-3 in the CD sheets and cross sections for location and details. Measurement and payment will be per Standard Specification Section 2416 for each size of pipe installed. Steel pipe shall meet requirements for casing pipe in Standard Specification Section 2553. Wall thickness shall be 0.5-inch.
126	2599-9999010	('LUMP SUM' ITEM) Vibration Monitoring	LS	1			1	Refer to Special Note SN-1 in the C sheets and Special Provision for Vibration Monitoring to Protect Historic Structures for additional information.
127	2599-9999018	('SQUARE YARDS' ITEM) ('SQUARE YARDS' ITEM) CONSTRUCTION OF CEMENT-TREATED SUBGRADE	SY	108,110			108,110	Refer to Special Provisions for Cement Treated Subgrade. Estimated bid quantity is based on 75% of the modified subbase area for IA 3.

Item no.	Item Code	Item	Unit	Quantities				Estimate Reference Notes
				Estimated				
				Roadway Items	100% Dubuque County	Non-Participating	Total	
128	2599-9999020	('TONS' ITEM) ('TONS' ITEM) CEMENT	TON	2,240			2,240	Refer to Special Provisions for Cement Treated Subgrade. Estimated bid quantity is based on a 12-inch depth at 4% cement application rate.
129	2599-9999020	('TONS' ITEM) Limestone	TON	797.6			797.6	Item is for placing surfacing material on the Heritage Trail and the trail detour (Burton Furnace Road). Refer to Typical HT in the B sheets and information in the U sheets for locations and details.
130	2601-2700020	TRANSITION MAT	SF	480			480	Refer to Tab. 100-09 and U sheets for locations and details.

105-4
10-18-11

STANDARD ROAD PLANS

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

Number	Date	Title
BA-200	04-20-21	Steel Beam Guardrail Components
BA-201	10-18-22	Steel Beam Guardrail Barrier Transition Section (MASH TL-3)
BA-202	10-20-15	Steel Beam Guardrail Bolted End Anchor
BA-205	10-17-23	Steel Beam Guardrail Tangent End Terminal (MASH TL-3)
BA-211	10-21-14	Steel Beam Guardrail Long - Span System for Post Conflicts
BA-250	04-20-21	Steel Beam Guardrail Installation at Concrete Barrier or Bridge End Post (MASH TL-3)
BA-251	04-20-21	Steel Beam Guardrail Installation at Side Object (Two-Way Protection)
BR-202	10-19-21	Double Reinforced 10" Approach with Variable Depth Paving Notch
BR-203	10-19-21	Double Reinforced 12" Approach
BR-211	10-18-22	Bridge Approach (Abutting PCC or Composite Pavement)
DR-101	04-18-17	Pipe Culvert (Bedding and Backfill)
DR-102	04-21-15	Pipe Culvert (Cover and Camber)
DR-103	04-21-15	Pipe Culvert (Installation Details)
DR-104	04-19-16	Depth of Cover Tables for Concrete and Corrugated Pipe
DR-111	04-17-18	Box Culvert (Backfill)
DR-121	04-18-23	Connected Pipe Joints
DR-122	10-18-16	Construction of Type "C" Concrete Adaptors for Pipe Culvert Connections
DR-141	04-18-17	Pipe Bends and Half Pipe
DR-142	10-19-21	Culvert Pipe Tee Sections
DR-201	10-17-23	Concrete Aprons
DR-202	10-17-23	Low Clearance Concrete Pipe Aprons
DR-203	04-21-20	Metal Pipe Aprons and Beveled Ends
DR-205	10-17-23	Concrete Apron with End Wall
DR-206	10-17-23	Low Clearance Concrete Pipe Apron With End Wall
DR-213	10-18-22	Pipe Apron Guard
DR-303	10-17-17	Subdrains (Longitudinal)
DR-306	10-17-23	Precast Concrete Headwall for Subdrain Outlets
DR-601	04-18-17	Reinforced Concrete Pipe Culvert
DR-611	04-18-17	Reinforced Concrete Pipe Culvert Letdown Structure
DR-613	04-17-18	Concrete Pipewith "D" Section
DR-641	04-21-20	Concrete/Corrugated Pipe Culvert Letdown Structure with Metal Apron
DR-651	04-18-17	Unclassified Pipe Culvert
EC-301	10-18-22	Rock Erosion Control (REC)
EW-101	10-17-17	Embankment and Rebuilding Embankments
EW-102	10-20-15	Allowable Placement of Unsuitable Soil in Embankments
EW-301	04-20-21	Guardrail Grading
EW-401	10-20-15	Temporary Stream Crossing, Causeway, or Equipment Pad
EW-501	10-17-23	Rural Entrance
LS-626	10-19-21	Steel Beam Guardrail Flared End Terminal (NCHRP 350 TL-3)
MI-210	10-20-15	PCC Driveways and Alleys
PM-110	04-21-20	Line Types
PM-111	04-21-20	Symbols and Legends
PV-101	04-19-22	Joints
PV-102	04-21-20	PCC Curb Details
PV-301	04-21-20	Superelevation Details Two Lane Roadway
SI-172	04-19-16	Delineators
SI-173	04-19-16	Object Markers
SI-211	10-18-22	Object Marker and Delineator Placement with Guardrail
SW-101	04-17-18	Trench Bedding and Backfill Zones
SW-102	04-20-21	Rigid Gravity Pipe Trench Bedding
SW-211	04-17-18	Storm Sewer Pipe Connections
SW-401	04-20-21	Circular Storm Sewer Manhole
SW-402	04-21-20	Rectangular Storm Sewer Manhole
SW-507	04-21-20	Single Open-Throat Intake, Small Box
SW-508	04-21-20	Single Open-Throat Intake, Large Box
SW-509	04-21-20	Double Open-Throat Curb Intake, Small Box
SW-512	04-21-20	Circular Area Intake
SW-562	04-17-18	Vertical Throat Area Intake
SW-602	04-21-20	Castings for Storm Sewer Manholes
SW-604	04-21-20	Castings for Area Intakes
TC-1	10-15-19	Work Not Affecting Traffic (Two-Lane or Multi-Lane)
TC-202	04-18-23	Work Within 15 ft of Traveled Way
TC-213	04-18-23	Lane Closure with Flaggers
TC-214	04-18-23	Lane Closure with Flaggers for use with Pilot Car
TC-252	04-21-20	Routes Closed to Traffic

SN-1
SPECIAL

VIBRATION NOTE

During construction the Contractor shall be aware that the residence located at 11777 US Highway 52/ IA 3 is eligible for listing on the National Register of Historic Places. When construction work is being completed in proximity to this structure, care shall be taken to limit unnecessary forces and vibrations. If vibration concerns arise during construction, the Contractor shall coordinate and seek approval from the Engineer.

111-25
10-18-11

INDEX OF TABULATIONS

Tabulation	Tabulation Title	Sheet No.
C Sheets		
100-1D	PROJECT DESCRIPTION	C.10
100-4A	ESTIMATE REFERENCE INFORMATION	C.1 - C.9
100-7	FENCING	C.19
CSS-1	Contaminated Soil Sites	C.21
100-9	TRANSITION MAT	C.22
100-24	PCC PAVEMENT	C.12
GEO-1	GEODETIC MARKERS	C.10
RLM-1	RELOCATION OF MAILBOXES	C.21
100-27	PROPOSED POSTED SPEED LIMIT	C.21
102-3	ACCESS POINTS AND SAFETY RAMPS	C.15
102-5	EXISTING PAVEMENT	C.11
103-10	TOPSOIL STRIPPING AND PLACEMENT	C.22
104-4	ROADWAY ITEMS FOR DRAINAGE STRUCTURES INSTALLED BY CULVERT CONTRACTOR	C.19
105-4	STANDARD ROAD PLANS	C.10
107-23	GRADING FOR GUARDRAIL INSTALLATIONS	C.17
108-8A	STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION	C.16
108-8B	STEEL BEAM GUARDRAIL FOR SIDE OBSTACLE (TWO-WAY PROTECTION)	C.16
SN-2	RESTRICTED AREA - NO ACCESS	C.10
108-13A	SAFETY CLOSURES	C.21
108-22	PAVEMENT MARKING LINE TYPES	C.18
108-29	PAVEMENT MARKING SYMBOLS AND LEGENDS	C.19
110-1	REMOVAL OF PAVEMENT	C.11
110-2	REMOVAL OF EXISTING STRUCTURES	C.20
110-7A	REMOVAL OF STEEL BEAM GUARDRAIL	C.20
110-7B	REMOVAL OF CABLE GUARDRAIL	C.20
110-8	REMOVAL OF CONCRETE DRIVES	C.21
110-9	CULVERT ABANDONMENT	C.20
110-13	DELIVERY AND STOCKPILING	C.20
111-25	INDEX OF TABULATIONS	C.10
112-6	BRIDGE APPROACH SECTION	C.16
112-9	SHOULDERS	C.13 - C.14
DGRS	DIAMOND GROUND RUMBLE STRIPS	C.22
RE	Rock Excavation	C.20

GEO-1

GEODETIC MARKERS

Location			Remarks
Station	Offset	Side	
68+16.46	43	Rt.	(1)
97+51.20	32	Rt.	(2)
148+61.77	25	Rt.	(2)
193+05.35	25	Rt.	(2)
211+43.85	25	Rt.	(2)
260+51.30	100	Lt.	(1)
261+16.98	36	Rt.	(1)
314+32.93	18	Lt.	(1)
340+91.19	19	Lt.	(2)
348+87.56	22	Lt.	(2)

(1) Do Not Disturb

(2) By others prior to construction. Contact the Resident Construction Engineer for new locations.

282-3
04-17-18

TEMPORARY STREAM CROSSING, CAUSEWAY, OR EQUIPMENT PAD

Standard Road Plan EW-401 is listed in Tabulation 105-4; however, it is included for information purposes only since it is an option. No quantities associated with constructing EW-401 are included in any bid items.

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.

SN-2
SPECIAL

RESTRICTED AREA - NO ACCESS

A. The Contractor will note the multiple “Restricted Area – No Access” locations across the project plans. See the appropriate C, D, and H Sheets. The Contractor shall furnish and install orange safety fence according to Article 4188.03 of the Standard Specifications around these Restricted Areas.
B. The Contractor shall discuss with the Engineer should the Contractor need select clearing within the Restricted Areas. No Grubbing, Rutting, or other Ground Disturbance is allowed within the Restricted Area.
C. Location and Environment Bureau (LEB) staff member Jeff Bacon (515-233-7819), or assigned designee shall attend the preconstruction meeting to answer any questions about the Restricted Areas. The Contractor shall provide Mr. Bacon 48-hours’ notice for the preconstruction meeting.

EXISTING PAVEMENT

No.	Location					Year	Type	Project Number	Surface		Base		Subbase		Removal		Coarse Aggregate			Reinforcement	Remarks
	County	Route	Dir. of Travel	Begin Ref. Loc. Sign	End Ref. Loc. Sign				Type	Depth IN	Type	Depth IN	Type	Depth IN	Type	Depth IN	Source	Type	Durability Class	Type	
	31	IA 3	Both	321.02	321.9	2011		HSIPX-052-2(99)--3L-31	HMA	2	HMA	2			SCR	2	BROWN	C.LIST.			
						2001		STP-52-2(87)--21-31	AAC	2.5											
						1976		FN-3-9(6)--21-31	PCC	8							ROSE SPUR	C.LIST.	I		
	31	IA 3	Both	317.92	321.02	2011		HSIPX-052-2(99)--3L-31	HMA	2	HMA	2			SCR	2	BROWN	C.LST.			
						2001		STP-52-2(87)--2C-31	AAC	2.5											
						1996		MP-52-6(701)52--76-31	BSC								BROWN QRY.	C.LST.			VL 51MM AC
						1984		FN-52-2(43)--21-31	AAC	3					SCR	1					
						1967		FN-3-9(2)--21-31	AAC	3											
						1927		FA-148ABD	PCC	7							ROSE SPUR	C.LST.	I		
	31	IA 3	Both	316.23	317.92	2011		HSIPX-052-2(99)--3L-31	HMA	2	HMA	2			SCR	1.5	BROWN	C.LST.			
						2001		STP-52-2(87)--2C-31	AAC	2.5											
						1996		MP-52-6(701)52--76-31	BSC								BROWN QRY.	C.LST.			VL 51MM AC
						1984		FN-52-2(43)--21-31	AAC	3					SCR	1					
						1967		FN-3-9(2)--21-31	AAC	3											
						1927		FA-148ABD	PCC	7							ROSE SPUR	C.LST.	I		
	31	IA 3	Both	315.51	316.23	2001		STP-52-2(87)--2C-31	AAC	2.5							BROWN	C.LST.			
						1997		MP-52-6(702)52--76-31	AAC	1.5					MIL	1.5	BROWN QRY.	C.LST.			
						1984		FN-52-2(43)--21-31	AAC	3					SCR	1					
						1967		FN-3-9(2)--21-31	AAC	3											
						1927		FA-148ABD	PCC	7							ROSE SPUR	C.LST.	I		
	31	IA 3	Both	315	315.51	2001		STP-52-2(87)--2C-31	AAC	2.5							BROWN	C.LST.			
						1997		MP-52-6(701)52--76-31	AAC	1.5					MIL	1.5	BROWN QRY.	C.LST.			
						1984		FN-52-2(43)--21-31	AAC	3					SCR	1					
						1967		FN-3-9(2)--21-31	AAC	3											
						1927		FA-148ABD	PCC	7							ROSE SPUR	C.LST.	I		
	31	IA 3	Both	311.3	315	2011	V	HSIPX-052-2(99)--3L-31	HMA	2	HMA	2			SCR	1.5	BROWN	C.LST.			
						2001		STP-52-2(87)--2C-31	AAC	2.5											
						1996		MP-52-6(701)52--76-31	BSC								BROWN QRY.	C.LST.			VL 51MM AC
						1984		FN-52-2(43)--21-31	AAC	3					SCR	1					
						1967		FN-3-9(2)--21-31	AAC	3											
						1927		FA-148ABD	PCC	7							ROSE SPUR	C.LST.	I		

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
IA 3						
27+74.75	28+44.75	Both	PCC/HMA	365.6	47.0	Bridge approach pavement.
28+44.75	31+50.00	Both	PCC/HMA	1085.3	32.0	Includes paved shoulder.
31+50.00	35+45.00	Both	PCC/HMA	1931.1	38.0	Includes paved shoulder.
35+45.00	40+72.18	Both	PCC/HMA	2811.6	45.0	Includes paved shoulder.
40+72.18	46+77.47	Both	PCC/HMA	2421.2	38.0	Includes paved shoulder.
46+77.47	313+68.00	Both	PCC/HMA	83037.2	28.0	Includes paved shoulder.
313+67.66	314+41.20	Both	PCC/HMA	272.9	35.0	Bridge approach pavement.
315+94.65	316+58.96	Both	PCC/HMA	268.5	35.0	Bridge approach pavement.
316+68.96	358+00.00	Both	PCC/HMA	12852.1	28.0	Includes paved shoulder.
Leiser Ln						
200+12.00	200+69.84	Both	PCC/HMA	179.9	28.0	
Sherrill Rd						
300+12.00	301+02.58	Both	PCC/HMA	301.9	495.0	
Clay Hill Rd						
503+95.00	504+88.21	Both	PCC/HMA	310.7	30.0	
Raylyn Rd						
600+12.00	600+62.00	Both	PCC/HMA	155.6	28.0	
Burtons Furnace						
701+53.00	702+96.00	Both	PCC/HMA	953.3	20.0	
large returns		Both	PCC/HMA	553.4	415.0	includes slip-ramp pavement
Durango Rd						
800+12.00	800+87.65	Both	PCC/HMA	235.4	22.0	

110-1
04-16-13

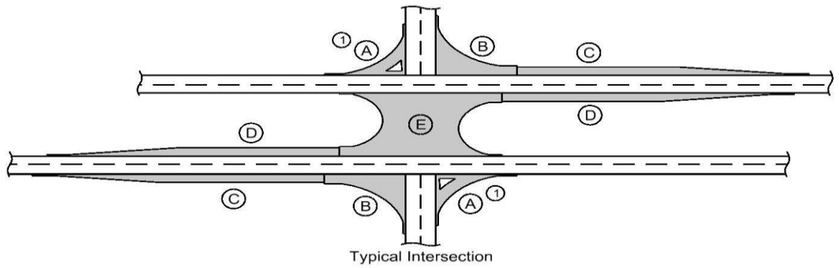
REMOVAL OF PAVEMENT

Refer to Tabulation 102-5

* Not a Bid Item

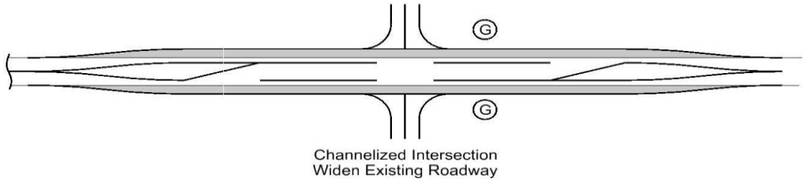
Begin Station	End Station	Side	Pavement Type	Area SY	Saw Cut* LF	Remarks
Boy Scout Rd						
1000+50.00	1001+38.87	Both	PCC/HMA	237.0	22.0	
NW corner				174.7	250.0	
			Totals:	108147.4	1636.0	

PCC PAVEMENT

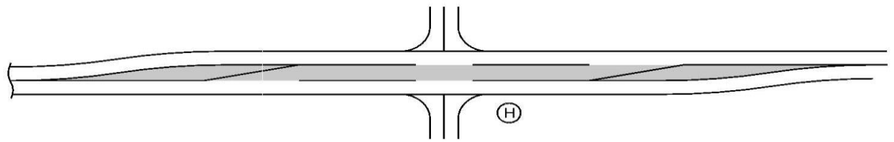


Typical Intersection

Ramp or Loop Taper (2)



Channelized Intersection
Widen Existing Roadway



Channelized Intersection
Reconstructed Roadway

(1) Does not include raised island area or curb. Refer to tabulation 112-4 for quantities.

(2) Refer to PV-410, PV-411, PV-412, and PV-414.

(3) Quantity includes Pavement Header.

Location				Mainline			Area (3)								Total Area By Pavement Thickness		Special Backfill	Modified Subbase	Polymer Grid	Remarks
Road Identification	Direction of Travel	Station to Station		Width	Length	Area	A (1)	B	C	D	E	F (2)	G	H	SY					
				FT	FT	SY	SY	SY	SY	SY	SY	SY	SY	SY	10 IN	9½ IN	TONS	CY	SY	
IA 3	both	28+44.75	313+67.66	24.0	28522.9	76061.1			708.9					1246.4		78016.4		42080.5	100925.0	
IA 3	both	316+68.96	358+00.00	24.0	4131.0	11016.1										11016.1		5968.5	14233.0	
Leiser Ln.	both	200+12.00	200+69.84	24.0	57.8	154.4		154.9								309.3		130.7		
Christensen Ln.	both	100+37.27	100+86.09	34.0	48.8	184.5		140.9								325.3		120.7		
Sherrill Rd.	both	300+12.00	301+02.58	23.0	90.6	233.1	81.2	354.9								669.2		262.5		Includes NW curbed shoulder
Whispering Hills Dr.	both	400+12.00	400+67.06	18.0	55.1	128.7		56.2								184.9		79.4		
Clay Hill Rd.	both	503+95.00	504+88.21	24.0	93.2	249.6		117.9								367.5		153.6		
Raylyn Rd.	both	600+12.00	600+62.00	26.0	50.0	144.6		123.8								268.4		109.6		
Burtons Furnace Rd.	both	701+52.94	702+96.72	20.0	143.8	342.6		169.0								511.6		215.7		
Durango Rd.	both	800+12.00	800+87.59	22.0	75.6	196.9		83.5								280.4		118.7		
Paradise Valley Rd.	both	900+65.00	901+09.00	24.0	44.0	144.1		119.8								164.5		61.2		100% Dubuque County
		901+09.00	901+19.00	24.0	10.0											99.3		47.8		100% State
Boy Scout Rd.	both	1000+50.00	1001+38.87	24.0	88.9	237.1		153.7								390.8		162.6		
																		[1]	[1]	
															State	Totals:	92504.4	49450.3	115158.0	100% State
															County	Totals:	164.5	61.2		100% Dubuque County

[1] Also Includes Quantities Under Shoulder

SHOULDERS

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

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

Location					Quantities																				
Road Identification	(1) Direction Of Traffic	Station to Station		Side	(P) Width	(P_{SG}) Width	(G) Width	(L) Length	Class 13 (4) Excavation	Hot Mix Asphalt		Binder	9.5" Paved Shoulder	6.0" Shoulder at Guardrail	Reinforced Paved Shoulder	Special Backfill				Modified Subbase	Granular Shoulder		Earth Shoulder Construction Alternates			Remarks
																HMA Alternate		PCC Alternate					STA (3)	HMA	PCC	
					FT	FT (2)	FT	FT	CY (3)	TON	TON/STA	TONS	SY (3)	SY (5)	SY (3)	TON (3)	TON/STA	TON (3)	TON/STA	CY (3)	TON (3)	TON/STA		CY (6)	CY (6)	
IA 3	WB	28+44.75	32+76.83	RT	4.0			432.1					192.0												
	WB	33+96.10	40+27.38	RT	4.0			631.3					280.6												
	WB	42+20.60	42+97.25	RT	5.0			76.6					42.6												Curb
	WB	42+97.25	95+73.97	RT	4.0			5276.7					2345.2												
	WB	96+54.27	200+56.01	RT	4.0			10401.7					4623.0												
	WB	201+77.75	221+09.98	RT	4.0			1932.2					858.8												
	WB	222+16.03	270+25.00	RT	4.0			4809.0					2137.3												
	WB	270+25.00	270+75.00	RT	5.0			50.0					27.8												Curb
	WB	270+75.00	313+46.95	RT	4.0			4272.0					1898.6												
	WB	313+46.95	313+52.73	RT	4 to 3.9			5.8					2.5												
	WB	313+52.73	313+67.66	RT	3.9																				
bridge																									
	WB	316+68.96	316+75.53	RT	3.5 to 4			6.6					2.7												
	WB	316+75.53	357+80.00	RT	4.0			4104.5					1824.2												
	WB	357+80.00	358+00.00	RT	4 to 6			20.0					11.1												
P shld g-rail	WB	319+31.10	319+90.37	RT		5.9 to 5.3		59.3						36.9						20.0					[1]
P shld g-rail	WB	319+90.73	320+29.25	RT		5.3 to 2		38.5						15.6						10.2					
P shld g-rail	WB	320+29.25	320+45.33	RT		2 to 1.44		16.1						3.1						3.1					
P shld g-rail	WB	320+45.33	320+71.50	RT		1.4 to 2.1		26.2						5.1						5.1					
P shld g-rail	WB	320+71.50	326+49.16	RT				577.7						50.1						25.5					[2]
P shld g-rail	WB	326+49.16	326+82.03	RT		3.5 to 3		32.9						11.9						8.3					
P shld g-rail	WB	326+82.03	327+66.45	RT		3.0		84.4						28.1						20.4					
P shld g-rail	WB	327+66.45	328+02.59	RT		3 to 3.5		36.1						13.1						9.1					
P shld g-rail	WB	328+02.59	328+38.69	RT		3.5 to 4.1		36.1						15.2						9.8					
P shld g-rail	WB	328+38.69	328+98.86	RT		4.1 to 4.2		60.2						27.7						17.1					
P shld g-rail	WB	328+98.86	329+47.04	RT		4.2 to 3		48.2						19.3						12.7					
P shld g-rail	WB	329+47.04	329+71.17	RT		3 to 2.4		24.1						7.2						6.4					
P shld g-rail	WB	329+71.17	329+98.91	RT		2.4 to 2.7		27.7						7.9						6.2					
P shld g-rail	WB	329+98.91	348+22.32	RT				1823.4						280.4						86.7					[2]
P shld g-rail	WB	348+22.32	348+63.99	RT		1.5 to 1.4		41.7						9.5						7.7					
P shld g-rail	WB	348+63.99	348+90.24	RT		1.4 to 2.5		26.3						8.3						5.3					
P shld g-rail	WB	348+90.24	349+23.88	RT		2.5 to 2.1		33.6						4.1						7.2					
IA 3	EB	28+44.75	31+50.00	LT	4.0			305.3					135.7												
	EB	31+50.00	32+76.83	LT	10.0			126.8					140.9												
	EB	33+96.10	35+45.00	LT	10.0			148.9					165.4												
	EB	35+45.00	126+54.14	LT	4.0			9109.1					4048.5												
	EB	127+70.24	218+11.96	LT	4.0			9041.7					4018.5												
	EB	219+33.81	225+65.00	LT	5.0			631.2					350.7												Curb
	EB	225+65.00	259+77.40	LT	4.0			3412.4					1516.6												
	EB	260+94.61	313+67.66	LT	4.0			5273.1					2343.6												
	EB	316+68.96	318+94.30	LT	4.0			225.3					100.2												
	EB	320+06.36	357+80.00	LT	4.0			3773.6					1677.2												
	EB	357+80.00	358+00.00	LT	4 to 6			20.0					11.1												
P shld g-rail	EB	226+79.25	227+08.71	LT		3.4		29.5						11.1						7.6					
P shld g-rail	EB	227+08.71	227+41.47	LT		3.4 to 0		32.8						6.2						6.3					
Christensen Ln	NB	100+37.27	100+75.55	LT			2.0	37.9													5.073	13.388			
	SB	100+37.27	100+75.55	RT			2.0	49.3													6.595	13.388			
Leiser Lane	NB	200+12.00	200+69.84	RT			2.0	72.7													9.729	13.388			
	SB	200+12.00	200+69.84	LT			2.0	72.8													9.741	13.388			
Sherrill Road	NB	300+12.00	301+02.58	RT	4.0			139.4					62.0												
Whispering Hills	NB	400+12.00	400+67.06	RT			2.0	66.0													8.832	13.388			
	SB	400+12.00	400+67.06	LT			2.0	50.4													6.753	13.388			
Clay Hill Rd	NB	503+95.00	504+88.21	RT			2.0	107.2													14.345	13.388			
	SB	503+95.00	504+88.21	LT			2.0	100.9													13.503	13.388			
Raylyn Rd	NB	600+12.00	600+62.00	RT			2.0	61.1													8.175	13.388			
	SB	600+12.00	600+62.00	LT			2.0	61.1													8.175	13.388			
Burtons Furnace	NB	701+52.94	702+96.72	RT			2.0	138.2													18.502	13.388			
	SB	701+52.94	702+10.80	LT			2.0	62.2													8.330	13.388			

SHOULDERS

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

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

Location					Quantities																			
Road Identification	(1) Direction Of Traffic	Station to Station		Side	(P) Width	(P_{SG}) Width	(G) Width	(L) Length	Class 13 (4) Excavation	Hot Mix Asphalt		Binder	9.5" Paved Shoulder	6.0" Shoulder at Guardrail	Reinforced Paved Shoulder	Special Backfill				Modified Subbase	Granular Shoulder		Earth Shoulder Construction Alternates			Remarks
																HMA Alternate		PCC Alternate					STA (3)	HMA	PCC	
					FT	FT (2)	FT	FT	CY (3)	TON	TON/STA	TONS	SY (3)	SY (5)	SY (3)	TON (3)	TON/STA	TON (3)	TON/STA	CY (3)	TON (3)	TON/STA		CY (6)	CY (6)	
	SB	702+46.40	702+96.72	LT			2.0	65.3													8.738	13.388				
Durango Rd	NB	800+12.00	800+87.65	RT			vari.	49.6													11.000					
	SB	800+12.00	800+87.65	LT			2.0	35.4													4.743	13.388				
Paradise Valley	both	900+65.00	901+19.00	RT			2.0	64.8													13.840	13.388				[5]
	both	900+65.00	901+19.00	LT			2.0	64.8													3.520	13.388				
Boy Scout Rd	NB	1000+50.00	1001+38.87	RT			2.0	99.5													13.321	13.388				
	SB	1000+29.87	1001+36.50	LT	3.0			122.4					42.3													Curb
Bridge: 26+42	WB	28+44.75	28+82.26	RT		7.8 - 9.5		37.5					36.1							17.0						
	WB	28+82.26	29+01.81	RT		9.5		19.5					20.6							9.0						
	EB	28+44.75	28+82.91	LT		8.1 - 9.8		38.2					37.9							18.5						
	EB	28+82.91	29+03.37	LT		9.8		20.5					22.4							10.1						
Bridge: 315+00	WB	312+84.36	313+04.36	RT		1.8		20.0						4.1						3.9						
	WB	313+04.36	313+52.73	RT		1.8 to 0		48.4						4.8						7.9						
	WB	316+75.53	317+11.86	RT		0 to 1.56		36.3						3.1						5.8						
	WB	317+11.86	317+31.86	RT		1.6		20.0						3.5						3.8						
	EB	313+04.49	313+24.49	LT		3.9		20.0						8.7						5.5						
	EB	313+24.49	313+67.66	LT		3.9 to 2.1		43.2						14.4						10.4						
	EB	316+68.96	317+19.60	LT		1.5 to 3.6		50.6						14.3						11.4						
	EB	317+19.60	317+39.60	LT		3.6		20.0						8.0						5.3						
								Totals:					28976.2	621.8						383.3	159.078	[4]				
																				[3]						
																					13.840	[5]				

[1] Pave through entrance.

[2] Verify width in the field. Intent is to pave to the face of existing H piles.

[3] Refer to Tab 100-24 for qty's of subbase under normal shoulder.

[4] 100% IDOT

[5] 100% Dubuque County

BRIDGE APPROACH SECTION

Refer to the Series.

* Not a bid item

Location				Approach Pavement					Standard Road Plans BR Series			Subdrain					*	*	*	Remarks
Bridge Station	End	Skew Ahead Degrees LEFT	Skew Ahead Degrees RIGHT	(T) Thickness	Pay Length	Non-Reinf. Pavement Area	Single-Reinf. Pavement Area	Double-Reinf. Pavement Area	Approach	Fixed or Movable Abutment	Abutting Pavement	* Perforated Subdrain 4"	* Subdrain Outlet		* Porous Backfill	* Class 'A' Crushed Stone Backfill	* Modified Subbase	* Polymer Grid	* Special Backfill	
				Inches	FT	SY	SY	SY				LF	STA	Side	CY	CY	TON	SY	TON	
26+42.00	West	0	0	10.0	70.0	146.7	97.8	97.1	BR-202	Fixed	BR-211	56.0	28+34.52	Left	1.6	0.2	348.400	387.8		
315+00.00	East		30	12.0	73.7	100.0	66.7	78.2	BR-203	Movable	BR-211	44.0	313+77.99	Left	1.2	0.3	261.400	288.7		
315+00.00	West		30	12.0	73.7	100.0	66.7	78.2	BR-203	Movable	BR-211	44.0	316+58.96	Left	1.2	0.3	261.400	288.7		
			BR-202	Totals =		146.7	97.8	97.1	= 341.6			56.0			1.6	0.2	348.400	387.8		
			BR-203	Totals =		200.0	133.4	156.4	= 489.8			88.0			2.4	0.6	522.800	577.4		

STEEL BEAM GUARDRAIL AT CONCRETE BARRIER OR BRIDGE RAIL END SECTION

Possible Standards: BA-200, BA-201, BA-202, BA-205, BA-206, BA-210, BA-211, BA-221, BA-225, BA-250, BA-260, LS-625, LS-626, LS-630, LS-635, SI-172, SI-173 and SI-211.

(1) Lane(s) to which the obstacle is adjacent.
(2) Not a bid item. Incidental to guardrail installation.

Location					Layout Lengths BA-250, BA-260, LS-630, or LS-635				Long-Span System		Delineators and Object Markers (2)					Bid Items										Remarks
		(1) Side																	BA-250 or LS-630					BA-260 or LS-635		
No.	Direction of Traffic	O = Outside M = Median	Station	Offset	(VT1)	(VF)	(VT2)	(ET)	BA-211		SI-211	Delineator SI-172	Object Marker SI-173			Bolted End Anchor		Post Adapter	Steel Beam Guardrail	Barrier Transition Section	End Terminal			Barrier Transition Section	End Terminal	
												Type 1	Type 2	Type 3							Tangent	Flared	Tangent	Flared		Tangent	
				FT	LF	LF	LF	LF	STATION	TYPE	TYPE	White	OM2-2	OM3-L	OM3-R	TYPE	EACH	EACH	LF	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
1	WB	O	27+81.52	22.5	53.125	12.50		47.7			3			1	1	B	1		25.0	1	1						
2	EB	O	27+81.52	23.1	53.125	12.50		47.7			3			1	1	B	1		25.0	1	1						
3	WB	O	314+42.96	15.0	53.125	37.50	12.50	47.7			3			1	1	(1)	1		62.5	1	1						
4	WB	O	316+10.80	14.6	53.125	12.50		47.7			3			1	1	(1)	1		25.0	1	1						
5	EB	O	314+25.62	16.9	53.125	12.50		47.7			3			1	1	(1)	1		25.0	1	1						
6	EB	O	315+93.61	16.7	53.125	25.00	12.50	47.7			3			1	1	(1)	1		50.0	1	1						
									Totals:					6	6		6		212.5	6	6						

(1) Refer to Typical BRGEPT in the B sheets for additional information.
Requires longer bolts to connect to bridge end posts.

STEEL BEAM GUARDRAIL FOR SIDE OBSTACLE (TWO-WAY PROTECTION)

Possible Standards: BA-200, BA-205, BA-206, BA-210, BA-211, BA-251, LS-625, LS-626, LS-631, SI-172, SI-173, and SI-211.

(1) Lane(s) to which the obstacle is adjacent.

Location						Layout Lengths BA-251 or LS-631								Long-Span System		Delineators and Object Markers					Bid Items					Remarks
		(1) Side				Approach Side (A)				Trailing Side (T)												End Terminal				
No.	Direction of Traffic	O= Outside M= Median	Station	(O_L)	(D_O)	(ET)	($VT2_A$)	(VF_A)	($VT1_A$)	($VT1_T$)	(VF_T)	($VT2_T$)	(ET)	BA-211		SI-211	Delineator SI-172	Object Marker SI-173			Steel Beam Guardrail	Standard	Count	Post Adapter	
																	Type 1	Type 2	Type 3						
				FT	FT	LF	LF	LF	LF	LF	LF	LF	LF	STATION	TYPE	TYPE	White	OM2-2	OM3-L	OM3-R	BA-200		EACH	BA-210	
	EB	O	57+90	943.75	2.97	47.7			943.75				9.4			4	3	6			937.5	BA-205	2		(1)
	EB	O	105+60	4306.25	2.97	47.7			4306.25				47.7	97+00	1	4	3	6			4300.0	BA-205	2		(1)
	EB	O	126+06	743.75	2.97	47.7			743.75				47.7			4	3	6			737.5	BA-205	2		(1)
	EB	O	162+44	3393.75	2.97	47.7			3393.75				47.7	141+05.79	1	4	3	6			3387.5	BA-205	2		(1)
														152+11.35	1										
	WB	O	195+42	443.75	2.97	47.7			425.00		18.75		47.7			4	3	6			437.5	BA-205	2		(1)
	EB	O	212+11	3444.00	2.97	47.7			3443.75				47.7			4	3	6			3437.5	BA-205	2		(1)
	EB	O	235+51	800.00	2.97	47.7			806.25				47.7	233+33.25	1	4	3	6			800.0	BA-205	2		(1)
	EB	O	295+51	418.75	2.97	47.7			418.75				9.4			4	3	6			412.5	BA-205	2		(1)
																				Totals:	14450.0		16		

(1) Location station is at the beginning of the guardrail on the approach end, (not including end terminal).

GRADING FOR GUARDRAIL INSTALLATIONS

(1) Lane(s) to which the installation is adjacent. Refer to EW-301

Location				Foreslope at Guardrail	Dimensions (Feet)									Earthwork		Remarks
No.	(1) Direction of Traffic	Station	Side		X1	Y1	X2	Y2	X3	Y3	X4	Y4	Z	Excavation Class 10 CY	Embankment In Place CY	
	EB	27+74.52	LT	UAC/flat	51.1	7.2					107.0	27.5		(1)		bridge
	WB	27+74.52	RT	UAC/UAC	51.1	2.0					107.0	6.9		(1)		bridge
	EB	314+32.66	LT	4%/UAC	49.5	9.5					107.3	7.0		(1)		bridge
	WB	314+49.94	RT	13%/13%	56.2	4.0					144.8	8.0		(1)		bridge
	EB	315+86.61	LT	2%/UAC	76.1	4.0					132.3	6.0		(1)		bridge
	WB	316+03.79	RT	2%/UAC	49.2	4.0					107.3	6.0		(1)		bridge
	EB	48+76.70	O									5.0		(1)		Trailing end is East end
	EB	62+49.80	O									5.0		(1)		Trailing end is East end
	EB	118+73.64	O									2.0		(1)		Trailing end is East end
	EB	128+49.69	O									9.6		(1)		Trailing end is East end
	EB	177+50.07	O									5.0		(1)		Trailing end is East end
	EB	227+48.74	O									6.0		(1)		Trailing end is East end
	EB	291+75.81	O									7.0		(1)		Trailing end is East end
	WB	195+51.28	O									4.0		(1)		Trailing end is West end
	WB	320+32.68	O									5.7		(1)		Trailing end is West end
		(1)		Included in EW - See T Sheets												

ACCESS POINTS AND SAFETY RAMPS

Refer to Cross-Sections

Length of Unclassified Pipe calculated is based on using Corrugated Metal Pipe.
(1) Refer to MI-210
(2) Refer to EW-501.
(3) Refer to EW-501 or EW-502.
*Predetermined for access point not constructed with this project. **Apron Guards are not a bid item.

Location		Type	(1) Length of Opening		(1) W	(2) PR	(2) SR	Pipe Culvert (3)					Aprons	Apron Guard**	Apron Guard**	Driveway Surface Area		Driveway Surfacing Material	Remarks
Station	Side	A, B, C, Safety Ramp, or Predetermined*	Case	1½" Dropped Curb				H	Size	Pipe Length	Lt.	Rt.				PCC 8"	PCC 6"		
			1 or 2	LF	FT	FT	FT	FT	IN	LF	LF	LF	No.	Inlet	Outlet	SY	SY	TON	
IA 3																			
30+87.60	Rt	B			24.0		35.0	5.0	24.0	66.0	35.0	36.0	2					71.100	
36+69.00	Rt	C			22.0	20.0											76.6		
37+66.00	Rt	B			24.0	35.0											233.5		
43+23.00	Rt	B			45.0											93.1			
46+43.00	Rt	C			24.0		15.0	1.0	24.0	36.0	23.0	18.0	2					32.200	
46+95.00	Lt	C			24.0		15.0											29.600	
58+66.00	Lt	C			24.0		15.0											25.300	
60+93.00	Lt	C			24.0	15.0											77.0		
68+65.00	Rt	C			24.0		15.0	1.0	24.0	40.0	23.0	23.0	2	1	1			59.680	
85+68.00	Rt	C			26.0		15.0	1.0	24.0	36.0	21.0	21.0	2	1	1			36.600	
87+32.00	Rt	C			24.0	15.0		1.0	18.0	46.0	24.0	28.0	2	1			183.9		
100+44.00	Rt	C			24.0	20.0		1.0	18.0	52.0	27.0	31.0	2	1			184.8		
106+33.00	Lt	C			24.0		15.0											61.150	
107+24.00	Lt	C			30.0		15.0											78.890	
107+30.00	Rt	C			24.0	20.0		7.0	24.0	107.0	57.0	56.0	2				289.3		
145+21.00	Rt	C			18.0		15.0	1.0	24.0	32.0	23.0	15.0	2	1	1			28.170	
160+12.00	Rt	C			24.0		20.0										380.6		
163+35.00	Lt	C			30.0		30.0	5.0	24.0	84.0	35.0	55.0	2					80.560	
175+35.00	Rt	C			24.0	15.0		2.0	24.0	46.0	29.0	23.0	2				163.0		
210+66.00	Rt	C			42.0	20.0		1.0	24.0	60.0	36.0	30.0	2				123.5		
214+06.00	Lt	B			26.0		20/35											76.320	
214+06.00	Rt	B			24.0		20.0	9.5	24.0	142.0	68.0	80.0	2					57.970	
217+35.00	Rt	B			30.0		15.0											41.580	
220+35.00	Lt	C	2	37.0	24.0												47.1		
220+85.00	Lt	C	2	37.0	24.0												56.1		
221+45.00	Lt	C	2	38.5	24.0												47.4		
222+66.00	Lt	B	2	54.5	45.0												62.8		
223+82.00	Rt	C			24.0		15.0	1.0	24.0	39.0	23.0	22.0	2					33.400	
225+05.00	Rt	C			15.0		15.0	1.0	24.0	41.0	17.0	30.0	2					19.180	
225+10.00	Lt	C	2	42.5	30.0													16.780	
238+75.00	Lt	B			30.0		30.0											83.520	
243+91.00	Rt	C			24.0		15.0	3.0	24.0	64.0	30.0	40.0	2					40.980	
245+50.00	Rt	C			28.0												79.2		
245+90.00	Lt	C			30.0		15.0											31.970	
251+13.00	Rt	C			30.0		15.0	2.0	24.0	66.0	33.0	39.0	2					74.280	
269+15.00	Rt	C			30.0													29.420	
277+52.00	Rt	C			30.0		15.0	1.0	24.0	48.0	29.0	25.0	2	1				34.390	
280+18.00	Lt	C			30.0		15.0											106.380	
280+18.00	Rt	C			24.0		15.0	1.0	24.0	37.0	22.0	21.0	2					19.840	
290+32.00	Rt	C			24.0		15.0	1.0	24.0	44.0	24.0	26.0	2	1	1			25.260	
290+85.00	Lt	C			20.0		15.0											26.470	
301+08.00	Rt	C			24.0		15.0	2.0	24.0	54.0	39.0	21.0	2	1				24.880	
302+72.00	Rt	Jt. C			35.0		15.0											48.170	
302+74.00	Lt	C			30.0		15.0											19.130	
312+12.00	Lt	C			30.0		15.0											30.840	
319+62.00	Rt	C			30.0		15.0											9.870	
320+35.00	Lt	C			30.0		15.0											28.020	
353+69.00	Lt	C			24.0	20.0											88.9		Carmen Oaks - Private
353+69.70	Rt	C			24.0	20.0		2.0	24.0	40.0	17.0	29.0	2				124.0		
SR																			
301+03.00	Lt.	B	2		N/A											7.2			Sherrill Rd.
701+20.00	Rt.	C			20.0		20.0											120.400	Burtons Furnace Rd.
702+28.50	Lt.	C			30.0	15.0											100.8		Burtons Furnace Rd.
800+55.00	Rt.				N/A				N/A				N/A				44.6		Durango Rd. Mailbox Paving
800+65.00	Lt.	C			12.0		10/20											14.930	Durango Rd.
									Size	Length			Aprons						
			TOTALS:						24" Uncl	1082.0		24"Uncl	38			100.3	2363.1	1517.230	
									18" Uncl	98.0		18" Uncl	4						

PAVEMENT MARKING LINE TYPES

See PM-110

*BCY4 - Place on the same side of the roadway to match existing markings near the project.
**NPY4 - For estimating purposes only. No Passing Zone Lines will be located in the field.
***MNY4 - Factor of 1.00 as value includes number of 4-inch passes to cover median nose area.

BCY4: Broken Centerline (Yellow) @ 0.17
DCY6: Double Centerline (Yellow) @ 2.00
NPY6: No Passing Zone Line (Yellow) @ 1.25
BLW4: Broken Lane Line (White) @ 0.17
ELW6: Edge Line Right (White) @ 1.00
ELY4: Edge Line Left (Yellow) @ 0.67
CHY10: Channelizing Line (Yellow) @ 1.67
CHW10: Channelizing Line (White) @ 1.67
SLW2: Stop Line (White) @ 4.00
STW6: Standard Curb 6" (White) @ 2.02
SLW6: Solid Lane Line (White) @ 1.00

Location								Length by Line Type (Unfactored)													Remarks
Road ID	Station to Station		Dir. of Travel	Marking Type	Side			BCY4*	DCY6	NPY6**	BLW4	ELW6	ELY4	CHY10	CHW10	SLW2	STW6	SLW6					
					L	C	R	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	STA	
IA 3																							
	27+74.75	34+60.00	BOTH	Waterborne/Solvent Paint	X	X	X		6.85			13.70											
	27+74.75	34+60.00	BOTH	Grooves Cut for Pavement Markings	X	X	X		6.85			13.70											
	34+60.00	40+90.00	BOTH	Waterborne/Solvent Paint	X	X	X					12.60		15.62									Refer to U Sheets
	34+60.00	40+90.00	BOTH	Grooves Cut for Pavement Markings	X	X	X					12.60		15.62									Refer to U Sheets
	36+50.00	39+35.00	WB	Waterborne/Solvent Paint		X												2.85					
	36+50.00	39+35.00	WB	Grooves Cut for Pavement Markings		X												2.85					
	39+35.00	41+00.00	WB	Waterborne/Solvent Paint		X									3.98								
	39+35.00	41+00.00	WB	Grooves Cut for Pavement Markings		X									3.98								
	40+90.00	41+37.00	EB	Waterborne/Solvent Paint			X					0.47											
	40+90.00	41+37.00	EB	Grooves Cut for Pavement Markings			X					0.47											
	41+37.00	42+90.00	BOTH	Waterborne/Solvent Paint	X	X	X		1.53			3.06						1.53					
	41+37.00	42+90.00	BOTH	Grooves Cut for Pavement Markings	X	X	X		1.53			3.06						1.53					
	42+90.00	49+40.00	BOTH	Waterborne/Solvent Paint	X	X	X					13.00		18.76									Refer to U Sheets
	42+90.00	49+40.00	BOTH	Grooves Cut for Pavement Markings	X	X	X					13.00		18.76									Refer to U Sheets
	49+40.00	73+75.00	BOTH	Waterborne/Solvent Paint	X	X	X		24.35			48.70											
	49+40.00	73+75.00	BOTH	Grooves Cut for Pavement Markings	X		X					48.70											
	73+75.00	80+50.00	BOTH	Waterborne/Solvent Paint	X	X	X			6.75		13.50											No Passing Zone WB
	73+75.00	80+50.00	BOTH	Grooves Cut for Pavement Markings	X		X					13.50											No Passing Zone WB
	80+50.00	155+00.00	BOTH	Waterborne/Solvent Paint	X	X	X		74.50			149.00											
	80+50.00	155+00.00	BOTH	Grooves Cut for Pavement Markings	X		X					149.00											
	155+00.00	162+00.00	BOTH	Waterborne/Solvent Paint	X	X	X			7.00		14.00											No Passing Zone EB
	155+00.00	162+00.00	BOTH	Grooves Cut for Pavement Markings	X		X					14.00											No Passing Zone EB
	162+00.00	165+00.00	BOTH	Waterborne/Solvent Paint	X	X	X		3.00			6.00											
	162+00.00	165+00.00	BOTH	Grooves Cut for Pavement Markings	X		X					6.00											
	165+00.00	171+00.00	BOTH	Waterborne/Solvent Paint	X	X	X			6.00		12.00											No Passing Zone WB
	165+00.00	171+00.00	BOTH	Grooves Cut for Pavement Markings	X		X					12.00											No Passing Zone WB
	171+00.00	355+00.00	BOTH	Waterborne/Solvent Paint	X	X	X		184.00			368.00											
	171+00.00	355+00.00	BOTH	Grooves Cut for Pavement Markings	X		X					368.00											
	355+00.00	358+00.00	BOTH	Waterborne/Solvent Paint	X	X	X			3.00		6.00											No Passing Zone EB
	355+00.00	358+00.00	BOTH	Grooves Cut for Pavement Markings	X		X					6.00											No Passing Zone EB
Leiser Ln																							
	200+12.00		SB	Waterborne/Solvent Paint			X									0.31							
Christensen Ln																							
	100+76.09		NB	Waterborne/Solvent Paint			X									0.28							
Sherrill																							
	300+12.00	301+02.58	BOTH	Waterborne/Solvent Paint	X	X	X		0.91								1.82						
	300+22.00		SB	Waterborne/Solvent Paint			X									0.32							
Whispering H																							
	400+12.00	400+67.06	SB	Waterborne/Solvent Paint			X									0.18							
Clay Hill																							
	503+95.00	504+88.21	BOTH	Waterborne/Solvent Paint	X	X	X		0.93			1.86											
	504+78.21		NB	Waterborne/Solvent Paint			X									0.25							
Raylyn Rd																							
	600+22.00		SB	Waterborne/Solvent Paint			X									0.27							
Burtons Furn																							
	701+52.94	702+96.72	BOTH	Waterborne/Solvent Paint	X	X	X		1.44			2.88											
	702+86.72		NB	Waterborne/Solvent Paint			X									0.29							
Durango Rd																							
	800+12.00	800+87.65	BOTH	Waterborne/Solvent Paint	X	X	X		0.76			1.52											
	800+22.00		SB	Waterborne/Solvent Paint			X									0.23							
Paradise Val																							
	900+65.00	901+19.00	BOTH	Waterborne/Solvent Paint	X	X	X		0.54			1.08											
	901+09.00		NB	Waterborne/Solvent Paint			X									0.26							
Boy Scout Rd																							
	1000+50.00	1001+38.87	BOTH	Waterborne/Solvent Paint	X	X	X		0.89			1.78											
	1001+28.87		NB	Waterborne/Solvent Paint			X									0.32							
				Factored Total: Waterborne/Solvent Paint				-	599.40	28.44	-	669.15	-	57.30	6.63	10.84	3.68	4.38	-	-	-	-	
				Factored Total: Grooves Cut for Pavement Markings				-	16.76	-	-	660.03	-	57.30	6.63	-	-	4.38	-	-	-	-	
				Bid Quantity: Painted Pavement Markings, Waterborne or Solvent-Based							1379.82												
				Bid Quantity: Grooves Cut for Pavement Markings							745.10												

108-29
04-21-15

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	Groove Cuts EACH	Remarks
IA 3	38+34.00	WB		1																					1	
	39+00.00	WB		1																					1	
	41+63.00	EB			1																				1	
	42+00.00	EB																			1				1	
	42+40.00	EB			1																				1	
			Totals:	2	2																1				5	

100-7
10-16-12

FENCING

* Bid Item

Refer to MI-101, MI-102, MI-103, MI-104, 510-3, and 510-5

Location From Station	From Offset	To Station	To Offset	Side	Chain Link Fence Length* LF	Chain Link Fence Type	Chain Link Gate No.* EACH	Chain Link Gate Type	Deer Fence Length* LF	Deer Brace Panels* EACH	Deer Gate No.* EACH	Deer Gate Type	Field Fence Length* LF	Field Brace Panels* EACH	Field Gate No.* EACH	Field Gate Type	Channel Crossing Length* LF	Channel Crossing Type	Remarks
258+09.32	46.2	258+73.05	60.6	RT									62.2						Safety Fence
258+73.05	60.6	259+85.41	62.8	RT									105.8						Safety Fence
288+28.80	48.9	288+40.08	48.0	LT									10.8						Safety Fence
288+40.08	48.0	288+64.09	62.5	LT									27.1						Safety Fence
288+64.09	62.5	288+93.81	62.5	LT									28.1						Safety Fence
288+93.81	62.5	289+07.86	40.2	LT									26.0						Safety Fence
289+07.86	40.2	289+72.63	29.7	LT									63.7						Safety Fence
289+72.63	29.7	290+13.44	29.5	LT									39.8						Safety Fence
290+13.44	29.5	290+63.13	29.5	LT									48.4						Safety Fence
291+06.34	29.8	291+31.19	29.7	LT									24.2						Safety Fence
291+31.19	29.7	291+66.22	29.5	LT									34.2						Safety Fence
326+73.03	48.3	327+01.40	38.4	LT									27.7						Safety Fence
327+01.40	38.4	327+12.99	27.7	LT									15.3						Safety Fence
327+12.99	27.7	327+27.51	28.4	LT									13.7						Safety Fence
327+27.51	28.4	327+32.10	39.4	LT									11.8						Safety Fence
327+32.10	39.4	328+09.80	39.2	LT									71.4						Safety Fence
328+09.80	39.2	328+28.61	52.9	LT									21.9						Safety Fence
												Sub Total	632.1						
												Add 10%	63.2						
												Total	695.3						

104-4
10-17-17

ROADWAY ITEMS FOR DRAINAGE STRUCTURES INSTALLED BY CULVERT CONTRACTOR

* Not a Bid Item
(1) Backfill according to DR-111

Location	Design Number	Size	Kind	By Road Contractor: Dike Rt./Lt.	Dike Location Station	Dike Top. Elev.	Dike Type	Compacting Backfill Adjacent CY	Compaction w/Moisture Control CY	Compaction w/Moisture and Density CY	Floodable* Backfill (A) CY	Porous* Backfill (B) CY	Flooded Backfill (1) (A+B) CY	Excavation Type	Excavation Quantity CY	Revetment Type	Revetment Quantity TONS	Engineering Fabric SY	Remarks
106+70.38	0224	8'x6'x87'	RCB					17.8	286.6		45.5	2.9	48.4	Class 10, Roadway and Borrow					
175+65.48	0324	10'x8'x86'	RCB					30.8	658.2		46.0	2.3	48.3	Class 10, Roadway and Borrow					
195+66.42	0424	12'x8'x161'	RCB					37.0	2701.2		58.2	4.9	63.1	Class 10, Roadway and Borrow					
211+10.00	0524	12'x10'x145'	RCB					52.6	1450.1		56.6	4.7	61.3	Class 10, Roadway and Borrow					
						Total =		138.2	5096.1		206.3	14.8	221.1						

110-7B
10-19-10

REMOVAL OF CABLE GUARDRAIL

* Not a bid item
(1) Lane(s) to which the installation is adjacent

Location					Type	Cable	Post * Footings, Concrete	End Terminal*	Remarks
No.	(1) Direction of Traffic	Station to Station		Side	(High/Low Tension)	Remove	Remove	Remove	
						LF	Yes/No	No.	
		61+58.00	69+80.00	Lt	Low Tension	822.0	Yes	2	
		70+26.00	105+08.00	Lt	Low Tension	3482.0	Yes	2	
		118+64.00	126+50.00	Lt	Low Tension	786.0	Yes	2	
		127+60.00	148+50.00	Lt	Low Tension	2090.0	Yes	2	
		152+41.00	161+50.00	Lt	Low Tension	909.0	Yes	2	
		175+35.00	200+50.00	Lt	Low Tension	2515.0	Yes	2	
		195+10.00	200+50.00	Rt	Low Tension	540.0	Yes	2	
		203+81.00	206+85.00	Lt	Low Tension	304.0	Yes	2	
		226+80.00	234+78.00	Lt	Low Tension	798.0	Yes	2	
					TOTAL	12246.0		18	

110-13
04-20-10

DELIVERY AND STOCKPILING

Item Description	Quantity	Units	Delivery Location	Contact Name & Number	Remarks
Existing Steel Beam Guardrail	3250	FT	9762 O'Rourke Dr.	Kerry Burzlaff	
(Rail Only)			Dubuque, IA 52003	Supervisor	
				563-582-3036	

110-7A
04-17-12

REMOVAL OF STEEL BEAM GUARDRAIL

(1) Lane(s) to which the installation is adjacent.
(2) Includes length of End Terminals and End Anchors.

Location					Removal of Guardrail (2)
No.	(1) Direction of Traffic	Station to Station		Side	
					LF
	WB	27+74.75	28+30.77	O	56.3
	EB	27+74.75	28+30.77	O	56.3
	WB	313+92.96	314+49.21	O	56.3
	WB	316+03.96	316+60.21	O	56.3
	EB	313+76.74	314+32.99	O	56.3
	EB	315+86.53	316+42.78	O	56.3
	WB	320+04.00	320+71.50	O	75.0
[1]	WB	320+71.50	326+49.16	O	575.0
	WB	326+49.16	329+98.91	O	362.5
[1]	WB	329+98.91	348+22.32	O	1825.0
	WB	348+22.32	348+90.00	O	75.0
			Total:		3250.0

[1] Remove Tubular Thrie-beam Rail Only. The Contractor shall unbolt the steel beam guardrail rather than cut with a torch.

Note:
All rail and hardware shall be delivered to the Iowa DOT District 6 Dubuque Maintenance Garage. Refer to Tab. 110-13 for additional information.

110-2
04-16-13

REMOVAL OF EXISTING STRUCTURES

Location	Description	Remarks
50+83	6'x8'x63.6' RCB	
66+75	10'x10'x49.3' inlet w/ 4'x6'x72'outlet	
75+21	2'x2'x46.1' RCB	
96+53	4'x4'x59.5' RCB	
113+20	2'x2'x43.1' RCB	
129+26	2'x2'x59' RCB	
141+05	2'x3'x46.1 RCB w/flume w/30"x25' CIP	
152+11	3'x4'x53.2' RCB	
159+84	3'x3'x70.5' RCB	
164+53	2'x2'x56' RCB	
184+70	2'x2'x62.6' RCB	
189+95	3'x2'x48' RCB	
233+33	2'x2'x62' RCB w/20' flume outlet extension	
237+20	4'x4'x66.6' RCB	
243+93	4'x6'x59.4' cattle pass	
253+50	2'x2'x44.2' RCB	
259+44	6'x4'x39.9' RCB	
263+67	2'x2'x42.2' RCB	
271+25	3'x3'x54.9' RCB	
279+64	10'x6'x58' RCB	
288+79	4'x3'x42.1' RCB	
302+03	8'x6'x39.2' RCB	
325+72	3'x3'x46' RCB w/ 42" Ext	
331+45	3'x3'x79' RCB w/ 42" Ext	
333+97	2'x3'x61' RCB w/ 36" Ext	
337+52	3'x3'x76' RCB w/ 36" Ext	
344+18	2'x2'x105' RCB w/ 30" Ext	
346+74	3'x3'x101' RCB w/ 42" Ext	

RE

Rock Excavation at Guardrail

Station	Station	Lt./Rt.	# of Posts	Depth (ft)	Excavation per posts (cubic yards)	Total (cu. yds.)	Special Backfill per post (cubic yards)	Total (cu. Yds.)	Remarks
140+50.00	142+00.00	Lt.	24.00	1.63	0.05	1.1	0.03	0.81	
143+50.00	148+00.00	Lt.	72.00	1.63	0.05	3.4	0.03	2.43	
151+00.00	156+50.00	Lt.	88.00	1.63	0.05	4.2	0.03	2.97	
171+00.00	174+00.00	Lt.	48.00	1.11	0.03	1.5	0.02	0.87	
179+00.00	179+50.00	Lt.	8.00	1.63	0.05	0.4	0.03	0.27	
179+50.00	180+50.00	Lt.	16.00	1.63	0.05	0.8	0.03	0.54	
183+50.00	191+50.00	Lt.	128.00	1.63	0.05	6.1	0.03	4.31	
192+00.00	193+50.00	Lt.	24.00	1.63	0.05	1.1	0.03	0.81	
194+00.00	196+50.00	Lt.	40.00	1.63	0.05	1.9	0.03	1.35	
195+00.00	195+50.00	Rt.	8.00	1.63	0.05	0.4	0.03	0.27	
196+00.00	196+50.00	Rt.	8.00	1.63	0.05	0.4	0.03	0.27	
197+00.00	198+00.00	Lt.	16.00	1.42	0.04	0.7	0.02	0.38	
201+50.00	203+00.00	Lt.	24.00	1.63	0.05	1.1	0.03	0.81	
203+50.00	204+50.00	Lt.	16.00	1.63	0.05	0.8	0.03	0.54	
226+50.00	228+00.00	Lt.	24.00	0.40	0.01	0.3	0.01	0.16	
326+00.00	330+00.00	Lt.	64.00	1.63	0.05	3.0	0.03	2.16	
		Totals	**608.00**			**27.1**		**18.94**	

110-9
10-18-11

CULVERT ABANDONMENT

Refer to Details 4315 and 4316

* Not a bid item

Location Station	Description	Fill Material		4" Perforated Subdrain*	Remarks
		Flowable Mortar	Granular Backfill*		
		CY	TON	LF	
86+30	4'x4'x115.1' RCB	68.2	0.3	14.0	Remove existing headwall and plug and fill

100-27
04-17-18

PROPOSED POSTED SPEED LIMIT

Road Identification	Begin Station	End Station	Proposed Posted Speed Limit			Remarks
			35 or less	40 - 45	over 45	
IA 3	27+74.75	205+12.00			x	
IA 3	205+12.00	229+00.00		x		
IA 3	229+00.00	358+00.00			x	

110-08
04-17-18

REMOVAL OF CONCRETE DRIVES

* Not a Bid Item

Location		Area	Saw Cut*	Remarks
Station	Side	SY	LF	
36+69.00	Rt	65.8	12.0	
37+19.00	Rt	167.3	12.0	
43+23.00	Rt	167.2	71.0	
60+93.00	Lt	75.4	18.5	
87+32.00	Rt	191.8	12.5	
100+44.00	Rt	166.2	9.0	
107+30.00	Rt	157.0	10.2	
160+12.00	Rt	274.5	11.5	
175+35.00	Rt	134.8	12.0	
210+66.00	Rt	44.0	44.0	
220+35.00	Lt	47.0	24.0	
220+85.00	Lt	56.0	24.0	
221+45.00	Lt	48.8	100.0	
222+66.00	Lt	22.8	10.0	
245+50.00	Rt	75.8	28.0	
353+70.00	Lt	90.6	27.3	Carmen Oaks Dr.
353+70.00	Rt	33.6	10.0	
Total:		1818.6	436.0	

CSS-1

Contaminated Soil Sites

Location [1]	Excavation (CY)	Flowable Mortor (CY)	Remarks
P-1	18.6	1.1	[2]
P-2	69.5	1.2	[2]
P-3	67.2	1.2	[3]
Totals =	155.3	3.5	

[1] Refer to M Sheets for Locations.
[2] Place 10' long soils plug (flowable mortar) near intake I-3
[3] Place 10' long soils plug (flowabel mortar) near south end of pipe.

108-13A
10-18-22

SAFETY CLOSURES

Refer to Section 2528 of the Standard Specifications

Station	Closure Type		Remarks
	Road Qty.	Hazard Qty.	
IA3 Mainline			
27+50.00	1		Beginning of Project
358+20.00	1		End of Project
Side Road			
100+25.00	1		Christensen Ln.
201+00.00	1		Leiser Ln.
301+50.00	1		Sherrill Rd.
401+00.00	1		Whispering Hills Dr.
503+70.00	1		Clay Hill Rd.
600+90.00	1		Raylyn Rd.
700+50.00	1		Burtons Furnace Rd.
801+15.00	1		Durango Rd.
900+00.00	1		Paradise Valley Rd.
1000+00.00	1		Boy Scout Rd.
	6		Use for overnight
			unprotected hazards.
Total:	**18**		

RLM
Special

RELOCATION OF MAILBOXES

Location		Count	Remarks
Station	Side		
IA 3			
32+93	LT	1.0	
85+44	RT	1.0	
87+57	RT	2.0	
100+19	RT	1.0	
106+94	RT	1.0	
159+62	RT	1.0	
175+48	RT	1.0	
209+11	RT	1.0	
224+80	RT	2.0	
238+85	RT	1.0	
245+25	RT	1.0	
251+50	RT	1.0	
269+33	RT	1.0	
277+24	RT	1.0	
290+12	RT	1.0	
300+87	RT	3.0	
302+47	RT	2.0	
355+00	RT	1.0	
SR - Raylyn Rd			
601+00	RT	2.0	Cluster mailbox
SR - Burton Furnace Rd			
702+00	LT	2.0	
SR - Durango Rd			
800+55	RT	3.0	Cluster mailbox
SR - Boy Scout Rd			
1000+30	LT	1.0	
TOTAL:		**31.0**	

DGRS

DIAMOND GROUND RUMBLE STRIPS

See U-Sheets

* Calculated at 18" width for Shoulder.

Location						Installation Length		Fog Seal* (Milled Rumble Strip)	Effective Shoulder Width			Remarks
Road Identification	Station to Station		Shoulder Pavement Type	Rumble Strip Type (Centerline, Rt or Lt Shoulder)	(L)	PCC	HMA	Shoulder	PCC Paved	HMA Paved	Granular\ Earth	
					IN	STA	STA	GAL	FT	FT	FT	
IA 3	49+40.00	358+00.00	PCC	Centerline		308.60		0.0				
IA 3	49+40.00	210+14.00	PCC	Left Shoulder		160.74		0.0	4.0			
IA 3	231+50.00	358+00.00	PCC	Left Shoulder		126.50		0.0	4.0			
IA 3	49+40.00	210+14.00	PCC	Right Shoulder		160.74		0.0	4.0			
IA 3	231+50.00	358+00.00	PCC	Right Shoulder		126.50		0.0	4.0			[1]
										[1] 5' in curbed area		
				Total:	**PCC**							
				Centerline	**308.60**							
				PCC Shoulders	**574.48**							

100-09
04-17-18

TRANSITION MAT

Refer to EC-105

Location Station	Side	Length	Width	Area	Remarks
		LF	LF	SF	
IA 3					
270+29.00	RT	20	12	240	
Boy Scout RD					
1000+33.87	LT	20	12	240	
		Total:		480	

103-10
04-18-17

TOPSOIL STRIPPING AND PLACEMENT

Location				Topsoil Stripping Thickness	Topsoil Placement Thickness	Remarks
Road Identification	Dir. of Traffic	Begin Station	End Station	IN	IN	
IA 3 and sideroads				12.0	8.5	[1]

[1] Refer to W sheets for topsoil stripping and placement locations.

ESC

Earth Shoulder Construction

Calculations assume a Granular Shoulder unit weight (lbs/cf) of 140.

Location				L	Granular Shoulder Fill (1)		Earth Shoulder Construction Alternates			Remarks
Road Identification	Station to Station		Side	Length			STA	HMA	PCC	
				FT	TON	TON/STA		CY	CY	
MAINLINE										
IA 3	27+75.00	32+89.23	LT	514.2			5.1		90.2	
	34+06.29	49+00.00	LT	1493.7			14.9		262.1	
	56+00.00	65+80.00	LT	980.0			9.8		159.2	
	67+50.00	77+00.00	LT	950.0			9.5		193.5	
	77+00.00	86+00.00	LT	900.0			9.0		360.7	
	87+10.00	93+00.00	LT	590.0			5.9		174.1	
	93+00.00	95+50.00	LT	250.0			2.5		48.9	
	97+00.00	101+00.00	LT	400.0			4.0		75.0	
	101+00.00	101+50.00	LT	50.0			0.5		10.6	
	102+50.00	126+54.14	LT	2404.1			24.0		473.7	
	127+70.24	128+00.00	LT	29.8			0.3		5.9	
	141+50.00	144+00.00	LT	250.0	91.525	36.610				
	148+00.00	151+00.00	LT	300.0	90.300	30.100				
	154+00.00	158+00.00	LT	400.0	149.520	37.380				
	160+00.00	163+50.00	LT	350.0			3.5		52.6	
	163+50.00	167+00.00	LT	350.0			3.5		53.4	
	167+50.00	173+50.00	LT	600.0			6.0		97.3	
	173+50.00	178+00.00	LT	450.0			4.5		83.4	
	178+00.00	180+00.00	LT	200.0	83.440	41.720				
	189+50.00	191+00.00	LT	150.0	26.145	17.430				
	191+00.00	192+50.00	LT	150.0	39.375	26.250				
	192+50.00	194+50.00	LT	200.0	53.060	26.530				
	195+80.00	200+50.00	LT	470.0	162.197	34.510				
	200+50.00	204+00.00	LT	350.0	104.370	29.820				
	206+50.00	209+00.00	LT	250.0			2.5		46.6	
	211+50.00	217+00.00	LT	550.0			5.5		87.8	
	217+00.00	218+11.96	LT	112.0			1.1		17.2	
	225+65.00	226+00.00	LT	35.0			0.4		7.4	
	226+00.00	226+79.25	LT	79.3			0.8		17.8	
	226+79.25	227+00.00	LT	20.8			0.2	4.4		
	228+00.00	230+50.00	LT	250.0			2.5		58.8	
	235+50.00	259+77.40	LT	2427.4			24.3		365.0	
	260+94.61	269+50.00	LT	855.4			8.6		128.6	
	269+50.00	275+78.00	LT	628.0			6.3		86.3	
	275+78.00	277+70.00	LT	192.0			1.9		23.6	
	277+77.00	313+04.49	LT	3527.5			35.3		640.2	
	313+04.49	317+39.60	LT	435.1			4.4	88.6		
	317+39.60	318+94.30	LT	154.7			1.5		26.5	
	320+06.77	346+00.00	LT	2593.2	662.570	25.550				
	346+00.00	353+29.14	LT	729.1			7.3		101.3	
	354+02.80	358+50.00	LT	447.2			4.5		62.1	
IA 3	27+75.00	32+68.31	RT	493.3			4.9		104.1	
	34+03.75	38+00.00	RT	396.3			4.0		139.4	
	38+00.00	40+58.22	RT	258.2			2.6		47.5	
	43+02.20	43+50.00	RT	47.8			0.5		6.2	
	43+50.00	50+00.00	RT	650.0			6.5		84.3	
	50+00.00	50+50.00	RT	50.0			0.5		6.7	
	50+50.00	57+00.00	RT	650.0			6.5		103.5	
	57+00.00	57+50.00	RT	50.0			0.5		9.8	
	57+50.00	66+00.00	RT	850.0			8.5		144.8	
	66+00.00	69+00.00	RT	300.0			3.0		44.0	
	69+00.00	70+50.00	RT	150.0			1.5		22.2	
	70+50.00	84+50.00	RT	1400.0	421.400	30.100				
	84+50.00	87+50.00	RT	300.0			3.0		44.4	
	87+50.00	95+00.00	RT	750.0	210.000	28.000				
	95+00.00	95+73.97	RT	74.0			0.7		11.0	
	96+52.25	97+00.00	RT	47.8			0.5		7.1	
	97+00.00	101+50.00	RT	450.0	129.150	28.700				
	101+50.00	102+00.00	RT	50.0			0.5		7.6	
	102+00.00	113+50.00	RT	1150.0			11.5		168.2	
	113+50.00	114+00.00	RT	50.0	15.575	31.150				
	114+00.00	121+00.00	RT	700.0			7.0			
	121+00.00	131+50.00	RT	1050.0	352.800	33.600				
	131+50.00	158+50.00	RT	2700.0	774.900	28.700				
	158+50.00	163+50.00	RT	500.0			5.0		76.4	
	163+50.00	173+50.00	RT	1000.0	289.100	28.910				
	173+50.00	175+00.00	RT	150.0			1.5		23.3	

ESC

Earth Shoulder Construction

Calculations assume a Granular Shoulder unit weight (lbs/cf) of 140.

Location				L	Granular Shoulder Fill (1)		Earth Shoulder Construction Alternates			Remarks
Road Identification	Station to Station		Side	Length			STA	HMA	PCC	
				FT	TON	TON/STA		CY	CY	
IA 3	175+00.00	176+00.00	RT	100.0			1.0		15.3	
	176+00.00	177+50.00	RT	150.0			1.5		22.9	
	177+50.00	185+00.00	RT	750.0	216.563	28.875				
	185+00.00	189+50.00	RT	450.0	137.025	30.450				
	189+50.00	190+50.00	RT	100.0	21.700	21.700				
	190+50.00	195+00.00	RT	450.0	138.600	30.800				
	200+00.00	200+56.00	RT	56.0			0.6		14.3	
	201+77.75	209+00.00	RT	722.3	202.230	28.000				
	209+00.00	217+00.00	RT	800.0			8.0		114.4	
	217+00.00	221+09.98	RT	410.0			4.1		47.1	
	222+15.96	226+00.00	RT	384.0			3.8		38.4	
	226+00.00	243+00.00	RT	1700.0	476.000	28.000				
	243+00.00	246+00.00	RT	300.0			3.0		50.9	
	246+00.00	249+00.00	RT	300.0	86.100	28.700				
	249+00.00	257+00.00	RT	800.0			8.0		134.5	
	257+00.00	261+00.00	RT	400.0	128.800	32.200				
	261+00.00	271+00.00	RT	1000.0			10.0		164.8	
	271+00.00	276+50.00	RT	550.0	146.300	26.600				
	276+50.00	280+00.00	RT	350.0			3.5		46.9	
	280+00.00	285+50.00	RT	550.0	154.000	28.000				
	285+50.00	288+50.00	RT	300.0			3.0		44.4	
	288+50.00	291+50.00	RT	300.0			3.0		42.2	
	291+50.00	301+00.00	RT	950.0	287.945	30.310				
	301+00.00	304+00.00	RT	300.0			3.0		45.9	
	304+00.00	305+50.00	RT	150.0	45.465	30.310				
	305+50.00	310+00.00	RT	450.0			4.5		73.3	
	310+00.00	310+50.00	RT	50.0			0.5		8.8	
	310+50.00	312+84.36	RT	234.4	72.183	30.800				
	312+84.36	313+52.73	RT	68.4			0.7	10.6		
	313+52.73	316+75.53	RT	322.8			3.2		38.3	
	316+75.53	317+31.86	RT	56.3			0.6	11.7		
	317+31.86	320+00.00	RT	268.1			2.7		55.6	
	326+00.00	331+00.00	RT	500.0	284.200	56.840				
	348+50.00	349+23.88	RT	73.9			0.7	19.5		
	349+23.88	358+75.00	RT	951.1			9.5		186.0	
SIDEROADS										
Leiser Ln.	200+12.00	200+69.84	LT	57.8			0.6		11.1	
Leiser Ln.	200+12.00	200+69.84	RT	57.8			0.6		10.1	
Whispering Hills Dr.	400+12.00	400+67.06	LT	55.1			0.6		9.0	
Whispering Hills Dr.	400+12.00	400+67.06	RT	55.1			0.6		5.7	
Clay Hill Rd.	503+95.00	504+88.21	LT	93.2			0.9		8.8	
Clay Hill Rd.	503+95.00	504+88.21	RT	93.2			0.9		9.7	
Raylyn Rd.	600+12.00	600+62.00	LT	50.0			0.5		4.3	
Raylyn Rd.	600+12.00	600+62.00	RT	50.0			0.5		3.9	
Burtons Furnace Rd.	701+52.94	702+96.72	LT	143.8			1.4		12.2	
Burtons Furnace Rd.	701+52.94	702+96.72	RT	143.8			1.4		8.1	
Durango Rd.	800+12.00	800+87.65	LT	75.6			0.8		12.0	
Durango Rd.	800+12.00	800+87.65	RT	75.6			0.8		10.9	
Paradise Valley Rd.	900+54.21	901+19.00	LT	64.8			0.6		8.9	
Paradise Valley Rd.	900+54.21	901+19.00	RT	64.8			0.6		7.1	
Boy Scout Rd.	1000+50.00	1001+38.87	RT	88.9			0.9		42.1	

	Granular Shoulder Fill (1)		Earth Shoulder Construction		
	TON		STA	HMA (CY)	PCC (CY)
Totals:	6052.538		365.3	134.9	6168.2

(1) Refer to Typicals in the B sheets

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER C.25

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.
* Not a bid item
(1) Diameter or equivalent diameter
(2) UNCL = Unclassified Pipe CMP = Corrugated Metal Pipe RCP = Reinforced Concrete Pipe LCP = Arch or Elliptical Low Clearance Pipe SARC = Steel Arch Pipe *I.D. = Inside Dimension
(3) Backfill according to DR-101

Drainage Area	Location	Type	Size (1)	Pipe Classification	Kind Of Pipe (2)	Total Length New Const.	Length of total that is trenchless	Bedding Class	Design Cover (H)	Camber* (DR-102)	Apron No.		Apron Guard* (DR-213)	Elbow* (DR-141)	Diaphragm* (DR-501)	Tee Section* (DR-142)	"D" Section* (DR-141)	Reducer*	Type 'C' Connections* (DR-122)		Connected Pipe Joint* (DR-121)	DR-205 Inlet Apron Top Elev.	DR-206 Inlet Apron Top Elev.	Flow Line Elevations				Dimensions Lin. Ft. Total		Dimensions Lin. Ft. Extensions		Skew Ahead Degrees		Structure Type	Structure NO.	Structure *I.D.	Class 20	Rock Cut	Flowable Mortar	Floodable* Backfill (A)	Porous* Backfill (B)	Flooded Backfill (3) (A+B)	Remarks
ACRE			IN			LF			FT	FT	IN	OUT	No.	No.	No.	No.	No.	No.	Type	No.	Type			Lt.	Rt.	Other	Other	Lt.	Rt.	Lt.	Rt.	Lt.	Rt.				CY	CY	CY	CY	CY	CY	
8	39+34.00	DR-601	24	2000	RCP	122	122		7.1		1	1												639.67	643.00			78.03	56.16															(1)
22	50+83.00	DR-601	42	2000	RCP	88		B	13.0		1	1									Type 3	639.15		626.33	637.41			51.90	51.51								985.4			232.6	9.8	242.4	(2)
55	66+75.33	DR-601	60	3000D	RCP	132		B	20.6		1	1									Type 3			623.25	628.70			67.90	80								2853.1			346.1	16.8	362.9	(3)
5	75+21.36	DR-601	24	2000	RCP	52		B	3.0		1	1	1				1				Type 3	656.05		651.70	655.57			36.23	27.84								140.6	8.8	9.2	38.4	4.9	43.3	(4)
58	86+30.00	DR-601	60	2000	RCP	92		B	11.0		1	1									Type 3	642.33		635.08	640.32			51.97	57.14								1016.0	53.3		345.2	12.2	357.4	(5)
43	97+00.00	DR-601	54	2000	RCP	50		B	3.0		1	1	1								Type 3	649.24		644.33	647.50			34.31	32.50								189.7	100.6	16.4	117.2	7.0	124.2	(6)
36	113+20.07	DR-601	48	2000	RCP	48		B	2.0		1	1	1								Type 3	629.25		625.97	627.25			36.43	27.56								219.2		14.9	92.3	7.9	100.2	Inlet guard
2	125+30.00	DR-601	24	2000	RCP	60		B	5.0		1	1	1								Type 3	637.40		630.12	636.61			44.43	27.53								308.8	36.8		98.0	5.5	103.5	(7)
?	129+00.00	DR-601	24	2000	RCP	58		B	4.0		1	1	1								Type 3	640.32		637.11	639.55			43.44	26.77								156.7	40.9	9.2	39.5	5.3	44.8	Inlet guard
15	141+05.79	DR-601	36	2000	RCP	40		B	2.0		1		1				1		C3	1	Type 3	672.60			671.27	667.74		20.1	26.6								SW-401	1.00	60"	351.5		10.4	48.9	11.7	60.6	(8)
			36		Steel	58																				626.63	667.74	62.9		20.1												
			36		CMP	20						1												628.33		628.87		92.9		66.4												
56	146+22.03		60		CMP	30			32.0		1			1											633.93	628.87		101.48		71.9						586.4				11.5	11.5	(9)
			60	Slipline	CMP	110																				624.25			46.0												
			60		CMP	56						1												621.74		624.25		109.9		46.0												
26	152+11.35	DR-601	48	2000	RCP	46		B	4.3		1		1				1				Type 3	663.38			663.06	655.36	659.25		29.61	24.2	20.3						134.9	181.8		142.2	12.0	154.2	(10)
			48	2000	RCP	34								1												635.08	655.36			24.2					SW-402	1.00	5'x6'							
			48		CMP	25						1												633.03		633.03		87.7		54.7												
11	159+50.00	DR-601	36	2000	RCP	56		B	6.5		1	1	1								Type 3	653.01		641.64	651.78			43.75	27.54								281.2	43.9		125.9	6.3	132.2	(11)
5	164+53.78	DR-601	24	2000	RCP	62		B	4.9		1	1	1								Type 3	644.98		637.71	644.34			46.61	27.35								98.9	15.3	10.2	48.9	5.6	54.5	Inlet guard
2	184+70.71	DR-601	24	2000	RCP	68		B	8.7		1	1	1								Type 3	655.50		642.07	654.73			49.51	29.75									300.5		106.7	6.0	112.7	Inlet guard
7	189+95.53	DR-601	30	2000	RCP	72		B	9.2		1	1	1								Type 3			645.71	657.48			50.24	33.23									354.9		140.2	6.9	147.1	Inlet guard
13	233+33.25	DR-601	36	2000	RCP	56		B	4.4		1	1	1								Type 3	660.00		649.23	658.75	655.14	649.53	40.57	35.30								SW-401	1.00	60"	268.9	43.9		113.3	6.1	119.4	(12)
19	237+20.00	DR-601	42	2000	RCP	98		B	8.9		1	1									Type 3			650.42	657.32			62.45	51.33				15				581.0	87.2		234.7	10.8	245.5	(13)
28	244+25.00	DR-601	48	2000	RCP	64		B	4.5		1	1									Type 3			652.33	654.62			39.27	40.70								276.6			165.0	13.6	178.6	
5	253+50.00	DR-601	24	2000	RCP	66		B	5.3		1	1									Type 3			646.06	647.00			41.26	36.98								67.1			100.7	5.8	106.5	
80	259+44.00	DR-601	88x54	2000	LCP	54		B	3.7		1	1	1								Type 3		649.24	646.55	646.65			37.62	32.88								340.2		21.8	187.3	10.3	197.6	(14)
5	263+50.00	DR-601	24	2000	RCP	60		B	4.4		1	1	1								Type 3			646.00	648.50			42.14	30.08								75.0			75.2	5.5	80.7	(15)
11	271+25.00	DR-601	44x27	2000	LCP	54		B	3.3		1	1	1								Type 3			650.74	652.26			38.27	31.72								110.3	58.5	11.3	57.4	6.7	64.1	Inlet guard
186	279+64.00	DR-601	84	2000	RCP	92		B	8.3		1	1	1								Type 3			640.66	643.00			54.56	56.00				15				1152.3			542.4	15.2	557.6	(16)
26	288+79.00	DR-601	59x36	2000	LCP	54		B	3.0		1	1	1								Type 3		664.06	656.22	662.32			41.93	27.80								196.1		13.6	79.3	7.8	87.1	Inlet guard
195	302+03.00	DR-601	102x62	2000	LCP	56		B	3.4		1	1	1								Type 3			654.13	654.84			37.28	35.72								371.5		22.8	202.3	11.2	213.5	Inlet guard
4	306+20.00	DR-601	24	2000	RCP	52		B	2.7		1	1	1								Type 3	656.00		654.99	655.21			35.85	28.40								129.4			41.4	4.9	46.3	Inlet guard
	325+72.01	DR-601	30	2000	RCP	74		B	9.7			1									Type 3			687.15	680.11			27.30	52.54		14				SW-562	1.00	4'x4'	508.0	113.2		176.5	6.6	183.1	(17)
	331+44.93	DR-601	36	2000	RCP	80		B	12.0		1	1									Type 3			726.27	699.92			32.68	59.63								923.3			200.0	8.5	208.5	(18)
	333+96.92	DR-601	30	2000	RCP	76		B	15.0			1									Type 3			738.32	721.10			27.19	53.13		20				SW-562	1.00	4'x4'	883.9	193.9		182.1	7.0	189.1	(19)
	337+51.51	DR-601	24	3000	RCP	88		B	15.5			1									Type 3			759.44	730.93			25.79	63.92						SW-562	1.00	4'x4'	1364.4	166.0		147.6	7.2	154.8	(20)
	344+18.03	DR-601	24	3000	RCP	128		B	17.0			1									Type 3			799.43	751.86			25.67	99.74		5				SW-562	1.00	4'x4'	1705.0	534.2		147.6	10.4	158.0	(21)
	346+73.78	DR-601	30	3000	RCP	142		B	19.5			1									Type 3			813.61	768.32			37.15	103.91		24				SW-562	1.00	4'x4'	2529.4	113.2		190.7	15.0	205.7	(22)
	100+51.64	DR-601	24	2000	RCP	50		B	1.5		1	1									Type 3			639.00	636.99			29.09	33.12				15				59.9						(23)
	400+37.41	DR-601	24	2000	RCP	50		B	2.9		1	1									Type 3			649.30	650.86			32.88	29.35		15							98.6		6.8	28.2	4.7	32.9	(24)
	1001+13.01	DR-601	24	2000	RCP	152		B	3.8		1	1	1								Type 3			664.29	659.68			111.06	53.12		13							368.0		11.1	57.7	12.7	70.4	(25)
																																				Total:	19331.3	2446.9	157.7	4851.5	299.4	5150.9	

(1) JACK 122' OF 24" RCP + Aprons
(2) REMOVE EXISTING 6X8 RCB AND INSTALL 42" RCP
(3) USE 3000D
(4) INSTALL 52' OF 24" + APRONS. USE DR-205 END WALL AND ONE DR-141 7.5 DEG SINGLE BEVEL D SECTION. APRON GUARD ON INLET.
(5) REMOVE EXISTING HEADWALLS PLUG AND ABANDON EXISTING 4X4
(6) REMOVE EXISTING 4X4 RCB . DOES NOT MEET CLEAR ZONE ON RT SIDE. APRON GUARD ON INLET.
(7) REMOVE EXISTING 24". APRON GUARD ON INLET.
(8) REMOVE EXISTING. INSTALL 40' RCP UNDER ROAD AND 40 DEG CONC ELBOW. 58' SMOOTH 1/2" STEEL TO 5' ROUND SW-401 UTILITY ACCESS WITH SW-602 TYPE 4C GRATE, THEN 20' OF 36" CMP UNDER TRAIL + OUTLET APRON. SEE CROSS SECTION FOR DETAILS. APRON GUARD ON INLET.
(9) REMOVE EXISTING CMP EXT. LINE EXIST.6'X6' RCB WITH 110' OF 60" CMP. USE CONCRETE COLLAR ON RIGHT SIDE. LAY 86' OF CMP USE ONE 7.5 DEG ANGLE SECTION. INSTALL 24" RISER BETWEEN LT DITCH AND BIKE TRAIL. USE SW-604 TYPE 9 GRATE. SEE X-SECTIONS FOR DETAILS.
(10) Install 46', then 34' of 48" RCP with 34 deg. Elbow, outlet into 5'X6' SW-402. Install 25' of 48" CMP under bike trail. 1 RCP inlet apron, 1 CMP outlet apron. APRON GUARD ON INLET.
(11) PLACE 36" RCP PERPENDICULAR. REMOVE EXISTING 3X3 RCB. USE DR-205 INLET APRON. APRON GUARD ON INLET.
(12) Install 52' of 36" RCP with inlet apron into 60" SW-401. Then lay 4' 36" RCP + outlet apron. See cross sections for details. APRON GUARD ON INLET.
(13) Remove existing 4'x4' RCB
(14) DITCH OUTLET - APRON GUARD ON INLET.
(15) Remove Exist 2'x2' RCB. DITCH OUTLET. APRON GUARD ON INLET.
(16) REMOVE EXISTING 10 X 6 RCB INSTALL NEW
(17) Use 4'x4' SW-562 ON INLET END. SEE CROSS SECTIONS FOR DETAILS. ROCK FLUME ON OUTLET END.
(18) REMOVE EXISTING AND REPLACE WITH NEW 36" RCP
(19) REMOVE EXISTING AND INSTALL NEW. 4'x4' SW-562 ON INLET END. SEE CROSS SECTIONS FOR DETAILS
(20) REMOVE EXISTING AND INSTALL NEW. 4'x4' SW-562 ON INLET END. SEE CROSS SECTIONS FOR DETAILS. USE 3000D
(21) REMOVE EXISTING AND INSTALL NEW. 4'x4' SW-562 ON INLET END. SEE CROSS SECTIONS FOR DETAILS. USE 3000D
(22) REMOVE EXISTING AND INSTALL NEW. 4'x4' SW-562 ON INLET END. SEE CROSS SECTIONS FOR DETAILS. USE 3000D
(23) INSTALL 50' OF 24" RCP + APRONS UNDER CHRISTENSEN LANE
(24) Whispering Hill side raod
(25) Boy Scout Road - APRON GUARD ON INLET.

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

Signature Date

Printed or Typed Name

My license renewal date is December 31, 20___

Pages or sheets covered by this seal: _____

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER CD.1

DRAINAGE STRUCTURE BY ROAD CONTRACTOR

Length of unclassified pipe calculated is based on using Reinforced Concrete Pipe.
* Not a bid item
(1) Diameter or equivalent diameter
(2) UNCL = Unclassified Pipe CMP = Corrugated Metal Pipe RCP = Reinforced Concrete Pipe LCP = Arch or Elliptical Low Clearance Pipe SARC = Steel Arch Pipe
(3) Backfill according to DR-101

Drainage Area	Location	Type	Size (1)	Pipe Classification	Kind Of Pipe (2)	Total Length New Const.	Length of total that is trenchless	Bedding Class	Design Cover (H)	Camber* (DR-102)	Apron No.		Apron Guard* (DR-213)	Elbow* (DR-141)	Diaphragm* (DR-501)	Tee Section* (DR-142)	"D" Section* (DR-141)	Reducer*	Type 'C' Connections* (DR-122)		Connected Pipe Joint* (DR-121)	DR-205 Inlet Apron Top Elev.		Flow Line Elevations				Dimensions Lin. Ft.				Skew Ahead Degrees		Structure				Class 20	Rock Cut	Flowable Mortar	Floodable* Backfill	Porous* Backfill	Flooded Backfill (3)	Remarks
																												Total		Extensions					Type	NO.	Size							
ACRE			IN			LF			FT	FT	IN	OUT	No.	No.	No.	No.	No.	No.	Type	No.	Type			Lt.	Rt.	Other	Other	Lt.	Rt.	Lt.	Rt.	Lt.	Rt.					CY	CY	CY	(A) CY	(B) CY	(A+B) CY	
	2416-0100024		APRON, CONC, 24"										26	EA																														
	2416-0100030		APRON, CONC, 30"										5	EA																														
	2416-0100036		APRON, CONC, 36"										7	EA																														
	2416-0100042		APRON, CONC, 42"										4	EA																														
	2416-0100048		APRON, CONC, 48"										5	EA																														
	2416-0100054		APRON, CONC, 54"										2	EA																														
	2416-0100060		APRON, CONC, 60"										4	EA																														
	2416-0100084		APRON, CONC, 84"										2	EA																														
	2416-1180024		CULV, CONC RDWY PIPE, 24"										730	LF																														
	2416-1180030		CULV, CONC RDWY PIPE, 30"										222	LF																														
	2416-1180036		CULV, CONC RDWY PIPE, 36"										232	LF																														
	2416-1180042		CULV, CONC RDWY PIPE, 42"										186	LF																														
	2416-1180048		CULV, CONC RDWY PIPE, 48"										192	LF																														
	2416-1180054		CULV, CONC RDWY PIPE, 54"										50	LF																														
	2416-1180060		CULV, CONC RDWY PIPE, 60"										92	LF																														
	2416-1180084		CULV, CONC RDWY PIPE, 84"										92	LF																														
	2416-1240024		CULV, 3000D CONC RDWY PIPE, 24"										216	LF																														
	2416-1240030		CULV, 3000D CONC RDWY PIPE, 30"										142	LF																														
	2416-1262024		CULV, CONC PIPE, 2000D, TRENCHLESS, 24"										122	LF																														
	2416-0102236		APRON, LOW CLEARANCE CONC, EQUIV DIA 36"										2	EA																														
	2416-0102248		APRON, LOW CLEARANCE CONC, EQUIV DIA 48"										2	EA																														
	2416-0102272		APRON, LOW CLEARANCE CONC, EQUIV DIA 72"										2	EA																														
	2416-0102284		APRON, LOW CLEARANCE CONC, EQUIV DIA 84"										2	EA																														
	2416-1200236		CULV,LOW CLEAR CONC RDWY PIPE,EQ DIA 36"										54	LF																														
	2416-1200248		CULV,LOW CLEAR CONC RDWY PIPE,EQ DIA 48"										54	LF																														
	2416-1200272		CULV,LOW CLEAR CONC RDWY PIPE,EQ DIA 72"										54	LF																														
	2416-1200284		CULV,LOW CLEAR CONC RDWY PIPE,EQ DIA 84"										56	LF																														
	2417-0225036		APRON, METAL, 36"										1	EA																														
	2417-0225048		APRON, METAL, 48"										1	EA																														
	2417-0225060		APRON, METAL, 60"										2	EA																														
	2417-1060036		CULV, CMP RDWY, 36"										20	LF																														
	2417-1060048		CULV, CMP RDWY, 48"										25	LF																														
	2417-1060060		CULV, CMP RDWY, 60"										86	LF																														
	2435-0256200		INTAKE, SW-562										5	EA																														
	2435-0140160		MANHOLE, STORM SWR, SW-401, 60"										2	EA																														
	2435-0140200		MANHOLE, STORM SWR, SW-402										1	EA																														
	2499-4000136		SLIPLINE EXIST CULV, GT 36"										110	LF																														
	2599-9999009		('LINEAR FEET' ITEM) STEEL PIPE, 36 INCH DIAMETER										58	LF																														

103_06
8/15/22

EMBANKMENT WITH MOISTURE CONTROL

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.

103_07
8/15/22

SHRINKAGE DATA

Material	%	Remarks
Topsoil	40.0	
Entire Project	30.0	
Rock		10% Swell
Boulder Estimate		30 CY

107_31
8/15/22

PLOWING AND SHAPING

Refer to Standard Road Plan EW-101

Line No.	Station From	Station To	D (FT)	Remarks
1.0	250+00.00	256+50.00	3.0	
Total:			**3.0**	

107_25
8/15/22

TABULATION OF ROCK SPLITTING

No.	Station From	Station To	Side	Remarks
1.0	142+00.00	143+00.00	Right	403 SY
2.0	148+00.00	151+50.00	Right	2122 SY
3.0	152+50.00	158+00.00	Right	1522 SY
4.0	169+50.00	173+00.00	Right	1100 SY
5.0	178+00.00	181+00.00	Right	1585 SY
6.0	191+00.00	194+50.00	Right	2941 SY
7.0	202+50.00	205+00.00	Right	1717 SY
8.0	247+00.00	247+50.00	Right	155 SY
9.0	258+50.00	260+50.00	Right	513 SY
10.0	271+00.00	274+00.00	Right	1449 SY
11.0	280+50.00	282+00.00	Right	625 SY
12.0	292+00.00	300+00.00	Right	2031 SY
13.0	326+50.00	331+00.00	Right	1190 SY
14.0	333+00.00	342+50.00	Right	3291 SY
Total:				**Total: 20,644 SY**

GEOTECHNICAL DESIGN

LICENSED PROFESSIONAL ENGINEER
David J. Heer
12100
IOWA

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

Signature Date

David J. Heer
Printed or Typed Name

My license renewal date is December 31, 20 24

Pages or sheets covered by this seal: **CS.1-CS.9 & Q.1-Q.47**

3/6/2024 6:43:49 AM grace.sieggreen@iowadot.us

LONGITUDINAL SUBDRAIN SHOULDER

* Not a bid item.

Line No.	Road or Lane Identification	Station From	Station To	Side	Depth (IN) (D)	Subdrain Size (IN)	Length (FT)	Outlet Station	Outlet Type	Porous Backfill* (CY)	Remarks
1.0	IA 3	27+75.00	30+00.00	Right	18.0	12.0	285.0	27+75.00	DR-306	14.2	
2.0					18.0			30+00.00	DR-306	1.7	
3.0	IA 3	30+00.00	34+70.00	Right	18.0	12.0	530.0	30+00.00	DR-306	27.8	
4.0					18.0			34+70.00	DR-306	1.7	
5.0	IA 3	34+70.00	40+00.00	Right	18.0	12.0	590.0	34+70.00	DR-306	31.1	
6.0					18.0			40+00.00	DR-306	1.7	
7.0	IA 3	42+97.25	44+00.00	Right	18.0	12.0	162.8	42+97.25	DR-306	7.4	
8.0					18.0			44+00.00	DR-306	1.7	
9.0	IA 3	44+00.00	51+00.00	Right	18.0	12.0	760.0	44+00.00	DR-306	40.6	
10.0					18.0			51+00.00	DR-306	1.7	
11.0	IA 3	51+00.00	57+00.00	Right	18.0	12.0	660.0	51+00.00	DR-306	35.0	
12.0					18.0			57+00.00	DR-306	1.7	
13.0	IA 3	57+00.00	63+50.00	Right	18.0	12.0	710.0	57+00.00	DR-306	37.8	
14.0					18.0			63+50.00	DR-306	1.7	
15.0	IA 3	63+50.00	67+00.00	Right	18.0	12.0	410.0	63+50.00	DR-306	21.1	
16.0					18.0			67+00.00	DR-306	1.7	
17.0	IA 3	67+00.00	69+00.00	Right	18.0	12.0	260.0	67+00.00	DR-306	12.8	
18.0					18.0			69+00.00	DR-306	1.7	
19.0	IA 3	69+00.00	75+00.00	Right	18.0	12.0	660.0	69+00.00	DR-306	35.0	
20.0					18.0			75+00.00	DR-306	1.7	
21.0	IA 3	75+00.00	80+00.00	Right	18.0	12.0	560.0	75+00.00	DR-306	29.4	
22.0					18.0			80+00.00	DR-306	1.7	
23.0	IA 3	80+00.00	85+50.00	Right	18.0	12.0	610.0	80+00.00	DR-306	32.2	
24.0					18.0			85+50.00	DR-306	1.7	
25.0	IA 3	85+50.00	93+00.00	Right	18.0	12.0	810.0	85+50.00	DR-306	43.3	
26.0					18.0			93+00.00	DR-306	1.7	
27.0	IA 3	93+00.00	97+50.00	Right	18.0	12.0	510.0	93+00.00	DR-306	26.7	
28.0					18.0			97+50.00	DR-306	1.7	
29.0	IA 3	97+50.00	102+00.00	Right	18.0	12.0	510.0	97+50.00	DR-306	26.7	
30.0					18.0			102+00.00	DR-306	1.7	
31.0	IA 3	102+00.00	106+00.00	Right	18.0	12.0	460.0	102+00.00	DR-306	23.9	
32.0					18.0			106+00.00	DR-306	1.7	
33.0	IA 3	106+00.00	110+00.00	Right	18.0	12.0	460.0	106+00.00	DR-306	23.9	
34.0					18.0			110+00.00	DR-306	1.7	
35.0	IA 3	110+00.00	114+00.00	Right	18.0	12.0	460.0	110+00.00	DR-306	23.9	
36.0					18.0			114+00.00	DR-306	1.7	
37.0	IA 3	114+00.00	120+00.00	Right	18.0	12.0	660.0	114+00.00	DR-306	35.0	
38.0					18.0			120+00.00	DR-306	1.7	
39.0	IA 3	120+00.00	125+00.00	Right	18.0	12.0	560.0	120+00.00	DR-306	29.4	
40.0					18.0			125+00.00	DR-306	1.7	
41.0	IA 3	125+00.00	130+00.00	Right	18.0	12.0	560.0	125+00.00	DR-306	29.4	
42.0					18.0			130+00.00	DR-306	1.7	
43.0	IA 3	130+00.00	135+00.00	Right	18.0	12.0	560.0	130+00.00	DR-306	29.4	
44.0					18.0			135+00.00	DR-306	1.7	
45.0	IA 3	135+00.00	140+00.00	Right	18.0	12.0	560.0	135+00.00	DR-306	29.4	
46.0					18.0			140+00.00	DR-306	1.7	
47.0	IA 3	140+00.00	146+50.00	Right	18.0	12.0	710.0	140+00.00	DR-306	37.8	
48.0					18.0			146+50.00	DR-306	1.7	
49.0	IA 3	146+50.00	150+00.00	Right	18.0	12.0	410.0	146+50.00	DR-306	21.1	
50.0					18.0			150+00.00	DR-306	1.7	
51.0	IA 3	150+00.00	155+00.00	Right	18.0	12.0	560.0	150+00.00	DR-306	29.4	
52.0					18.0			155+00.00	DR-306	1.7	
53.0	IA 3	155+00.00	159+00.00	Right	18.0	12.0	460.0	155+00.00	DR-306	23.9	
54.0					18.0			159+00.00	DR-306	1.7	
55.0	IA 3	159+00.00	165+00.00	Right	18.0	12.0	660.0	159+00.00	DR-306	35.0	

LONGITUDINAL SUBDRAIN SHOULDER

* Not a bid item.

Line No.	Road or Lane Identification	Station From	Station To	Side	Depth (IN) (D)	Subdrain Size (IN)	Length (FT)	Outlet Station	Outlet Type	Porous Backfill* (CY)	Remarks
56.0					18.0			165+00.00	DR-306	1.7	
57.0	IA 3	165+00.00	169+00.00	Right	18.0	12.0	460.0	165+00.00	DR-306	23.9	
58.0					18.0			169+00.00	DR-306	1.7	
59.0	IA 3	169+00.00	173+00.00	Right	18.0	12.0	460.0	169+00.00	DR-306	23.9	
60.0					18.0			173+00.00	DR-306	1.7	
61.0	IA 3	173+00.00	175+50.00	Right	18.0	12.0	310.0	173+00.00	DR-306	15.6	
62.0					18.0			175+50.00	DR-306	1.7	
63.0	IA 3	175+50.00	178+00.00	Right	18.0	12.0	310.0	175+50.00	DR-306	15.6	
64.0					18.0			178+00.00	DR-306	1.7	
65.0	IA 3	178+00.00	181+00.00	Right	18.0	12.0	360.0	178+00.00	DR-306	18.3	
66.0					18.0			181+00.00	DR-306	1.7	
67.0	IA 3	181+00.00	184+50.00	Right	18.0	12.0	410.0	181+00.00	DR-306	21.1	
68.0					18.0			184+50.00	DR-306	1.7	
69.0	IA 3	184+50.00	190+00.00	Right	18.0	12.0	610.0	184+50.00	DR-306	32.2	
70.0					18.0			190+00.00	DR-306	1.7	
71.0	IA 3	190+00.00	195+00.00	Right	18.0	12.0	560.0	190+00.00	DR-306	29.4	
72.0					18.0			195+00.00	DR-306	1.7	
73.0	IA 3	195+00.00	197+50.00	Right	18.0	12.0	310.0	195+00.00	DR-306	15.6	
74.0					18.0			197+50.00	DR-306	1.7	
75.0	IA 3	197+50.00	200+00.00	Right	18.0	12.0	310.0	197+50.00	DR-306	15.6	
76.0					18.0			200+00.00	DR-306	1.7	
77.0	IA 3	200+00.00	205+00.00	Right	18.0	12.0	560.0	200+00.00	DR-306	29.4	
78.0					18.0			205+00.00	DR-306	1.7	
79.0	IA 3	205+00.00	212+00.00	Right	18.0	12.0	760.0	205+00.00	DR-306	40.6	
80.0					18.0			212+00.00	DR-306	1.7	
81.0	IA 3	212+00.00	217+00.00	Right	18.0	12.0	560.0	212+00.00	DR-306	29.4	
82.0					18.0			217+00.00	DR-306	1.7	
83.0	IA 3	217+00.00	220+00.00	Right	18.0	12.0	360.0	217+00.00	DR-306	18.3	
84.0					18.0			220+00.00	DR-306	1.7	
85.0	IA 3	220+00.00	224+50.00	Right	18.0	12.0	510.0	220+00.00	DR-306	26.7	
86.0					18.0			224+50.00	DR-306	1.7	
87.0	IA 3	224+50.00	232+00.00	Right	18.0	12.0	810.0	224+50.00	DR-306	43.3	
88.0					18.0			232+00.00	DR-306	1.7	
89.0	IA 3	232+00.00	237+00.00	Right	18.0	12.0	560.0	232+00.00	DR-306	29.4	
90.0					18.0			237+00.00	DR-306	1.7	
91.0	IA 3	237+00.00	240+00.00	Right	18.0	12.0	360.0	237+00.00	DR-306	18.3	
92.0					18.0			240+00.00	DR-306	1.7	
93.0	IA 3	240+00.00	246+00.00	Right	18.0	12.0	660.0	240+00.00	DR-306	35.0	
94.0					18.0			246+00.00	DR-306	1.7	
95.0	IA 3	246+00.00	252+00.00	Right	18.0	12.0	660.0	246+00.00	DR-306	35.0	
96.0					18.0			252+00.00	DR-306	1.7	
97.0	IA 3	252+00.00	255+00.00	Right	18.0	12.0	360.0	252+00.00	DR-306	18.3	
98.0					18.0			255+00.00	DR-306	1.7	
99.0	IA 3	255+00.00	260+00.00	Right	18.0	12.0	560.0	255+00.00	DR-306	29.4	
100.0					18.0			260+00.00	DR-306	1.7	
101.0	IA 3	260+00.00	265+00.00	Right	18.0	12.0	560.0	260+00.00	DR-306	29.4	
102.0					18.0			265+00.00	DR-306	1.7	
103.0	IA 3	265+00.00	268+00.00	Right	18.0	12.0	360.0	265+00.00	DR-306	18.3	
104.0					18.0			268+00.00	DR-306	1.7	
105.0	IA 3	268+00.00	270+25.00	Right	18.0	12.0	255.0	268+00.00	DR-306	12.5	
106.0	IA 3	272+00.00	277+00.00	Right	18.0	12.0	560.0	272+00.00	DR-306	29.4	
107.0					18.0			277+00.00	DR-306	1.7	
108.0	IA 3	277+00.00	282+00.00	Right	18.0	12.0	560.0	277+00.00	DR-306	29.4	
109.0					18.0			282+00.00	DR-306	1.7	
110.0	IA 3	282+00.00	288+00.00	Right	18.0	12.0	660.0	282+00.00	DR-306	35.0	

LONGITUDINAL SUBDRAIN SHOULDER

* Not a bid item.

Line No.	Road or Lane Identification	Station From	Station To	Side	Depth (IN) (D)	Subdrain Size (IN)	Length (FT)	Outlet Station	Outlet Type	Porous Backfill* (CY)	Remarks
111.0					18.0			288+00.00	DR-306	1.7	
112.0	IA 3	288+00.00	293+00.00	Right	18.0	12.0	560.0	288+00.00	DR-306	29.4	
113.0					18.0			293+00.00	DR-306	1.7	
114.0	IA 3	293+00.00	297+00.00	Right	18.0	12.0	460.0	293+00.00	DR-306	23.9	
115.0					18.0			297+00.00	DR-306	1.7	
116.0	IA 3	297+00.00	300+00.00	Right	18.0	12.0	360.0	297+00.00	DR-306	18.3	
117.0					18.0			300+00.00	DR-306	1.7	
118.0	IA 3	300+00.00	306+00.00	Right	18.0	12.0	660.0	300+00.00	DR-306	35.0	
119.0					18.0			306+00.00	DR-306	1.7	
120.0	IA 3	306+00.00	310+00.00	Right	18.0	12.0	460.0	306+00.00	DR-306	23.9	
121.0					18.0			310+00.00	DR-306	1.7	
122.0	IA 3	310+00.00	313+67.66	Right	18.0	12.0	427.7	310+00.00	DR-306	22.1	
123.0					18.0			313+67.66	DR-306	1.7	
124.0	IA 3	316+68.95	319+00.00	Right	18.0	12.0	291.1	316+68.95	DR-306	14.5	
125.0					18.0			319+00.00	DR-306	1.7	
126.0	IA 3	319+00.00	325+00.00	Right	18.0	12.0	660.0	319+00.00	DR-306	35.0	
127.0					18.0			325+00.00	DR-306	1.7	
128.0	IA 3	325+00.00	330+00.00	Right	18.0	12.0	560.0	325+00.00	DR-306	29.4	
129.0					18.0			330+00.00	DR-306	1.7	
130.0	IA 3	330+00.00	335+00.00	Right	18.0	12.0	560.0	330+00.00	DR-306	29.4	
131.0					18.0			335+00.00	DR-306	1.7	
132.0	IA 3	335+00.00	340+00.00	Right	18.0	12.0	560.0	335+00.00	DR-306	29.4	
133.0					18.0			340+00.00	DR-306	1.7	
134.0	IA 3	340+00.00	347+00.00	Right	18.0	12.0	760.0	340+00.00	DR-306	40.6	
135.0					18.0			347+00.00	DR-306	1.7	
136.0	IA 3	347+00.00	352+00.00	Right	18.0	12.0	560.0	347+00.00	DR-306	29.4	
137.0					18.0			352+00.00	DR-306	1.7	
138.0	IA 3	352+00.00	358+00.00	Right	18.0	12.0	660.0	352+00.00	DR-306	35.0	
139.0					18.0			358+00.00	DR-306	1.7	
140.0	IA 3	27+75.00	31+50.00	Left	18.0	12.0	435.0	27+75.00	DR-306	22.5	
141.0					18.0			31+50.00	DR-306	1.7	
142.0	IA 3	31+50.00	35+45.00	Left	18.0	12.0	455.0	31+50.00	DR-306	23.6	
143.0					18.0			35+45.00	DR-306	1.7	
144.0	IA 3	35+45.00	40+00.00	Left	18.0	12.0	515.0	35+45.00	DR-306	26.9	
145.0					18.0			40+00.00	DR-306	1.7	
146.0	IA 3	40+00.00	44+50.00	Left	18.0	12.0	510.0	40+00.00	DR-306	26.7	
147.0					18.0			44+50.00	DR-306	1.7	
148.0	IA 3	44+50.00	49+00.00	Left	18.0	12.0	510.0	44+50.00	DR-306	26.7	
149.0					18.0			49+00.00	DR-306	1.7	
150.0	IA 3	49+00.00	52+00.00	Left	18.0	12.0	360.0	49+00.00	DR-306	18.3	
151.0					18.0			52+00.00	DR-306	1.7	
152.0	IA 3	52+00.00	57+00.00	Left	18.0	12.0	560.0	52+00.00	DR-306	29.4	
153.0					18.0			57+00.00	DR-306	1.7	
154.0	IA 3	57+00.00	63+00.00	Left	18.0	12.0	660.0	57+00.00	DR-306	35.0	
155.0					18.0			63+00.00	DR-306	1.7	
156.0	IA 3	63+00.00	66+50.00	Left	18.0	12.0	410.0	63+00.00	DR-306	21.1	
157.0					18.0			66+50.00	DR-306	1.7	
158.0	IA 3	66+50.00	70+00.00	Left	18.0	12.0	410.0	66+50.00	DR-306	21.1	
159.0					18.0			70+00.00	DR-306	1.7	
160.0	IA 3	70+00.00	75+00.00	Left	18.0	12.0	560.0	70+00.00	DR-306	29.4	
161.0					18.0			75+00.00	DR-306	1.7	
162.0	IA 3	75+00.00	80+00.00	Left	18.0	12.0	560.0	75+00.00	DR-306	29.4	
163.0					18.0			80+00.00	DR-306	1.7	
164.0	IA 3	80+00.00	85+00.00	Left	18.0	12.0	560.0	80+00.00	DR-306	29.4	
165.0					18.0			85+00.00	DR-306	1.7	

LONGITUDINAL SUBDRAIN SHOULDER

* Not a bid item.

Line No.	Road or Lane Identification	Station From	Station To	Side	Depth (IN) (D)	Subdrain Size (IN)	Length (FT)	Outlet Station	Outlet Type	Porous Backfill* (CY)	Remarks
166.0	IA 3	85+00.00	88+00.00	Left	18.0	12.0	360.0	85+00.00	DR-306	18.3	
167.0					18.0			88+00.00	DR-306	1.7	
168.0	IA 3	88+00.00	93+00.00	Left	18.0	12.0	560.0	88+00.00	DR-306	29.4	
169.0					18.0			93+00.00	DR-306	1.7	
170.0	IA 3	93+00.00	96+00.00	Left	18.0	12.0	360.0	93+00.00	DR-306	18.3	
171.0					18.0			96+00.00	DR-306	1.7	
172.0	IA 3	96+00.00	102+00.00	Left	18.0	12.0	660.0	96+00.00	DR-306	35.0	
173.0					18.0			102+00.00	DR-306	1.7	
174.0	IA 3	102+00.00	108+00.00	Left	18.0	12.0	660.0	102+00.00	DR-306	35.0	
175.0					18.0			108+00.00	DR-306	1.7	
176.0	IA 3	108+00.00	113+00.00	Left	18.0	12.0	560.0	108+00.00	DR-306	29.4	
177.0					18.0			113+00.00	DR-306	1.7	
178.0	IA 3	113+00.00	119+00.00	Left	18.0	12.0	660.0	113+00.00	DR-306	35.0	
179.0					18.0			119+00.00	DR-306	1.7	
180.0	IA 3	119+00.00	125+00.00	Left	18.0	12.0	660.0	119+00.00	DR-306	35.0	
181.0					18.0			125+00.00	DR-306	1.7	
182.0	IA 3	125+00.00	130+00.00	Left	18.0	12.0	560.0	125+00.00	DR-306	29.4	
183.0					18.0			130+00.00	DR-306	1.7	
184.0	IA 3	130+00.00	135+00.00	Left	18.0	12.0	560.0	130+00.00	DR-306	29.4	
185.0					18.0			135+00.00	DR-306	1.7	
186.0	IA 3	135+00.00	138+00.00	Left	18.0	12.0	360.0	135+00.00	DR-306	18.3	
187.0					18.0			138+00.00	DR-306	1.7	
188.0	IA 3	138+00.00	146+50.00	Left	18.0	12.0	910.0	138+00.00	DR-306	48.9	
189.0					18.0			146+50.00	DR-306	1.7	
190.0	IA 3	146+50.00	151+00.00	Left	18.0	12.0	510.0	146+50.00	DR-306	26.7	
191.0					18.0			151+00.00	DR-306	1.7	
192.0	IA 3	151+00.00	156+00.00	Left	18.0	12.0	560.0	151+00.00	DR-306	29.4	
193.0					18.0			156+00.00	DR-306	1.7	
194.0	IA 3	156+00.00	160+00.00	Left	18.0	12.0	460.0	156+00.00	DR-306	23.9	
195.0					18.0			160+00.00	DR-306	1.7	
196.0	IA 3	160+00.00	164+00.00	Left	18.0	12.0	460.0	160+00.00	DR-306	23.9	
197.0					18.0			164+00.00	DR-306	1.7	
198.0	IA 3	164+00.00	167+00.00	Left	18.0	12.0	360.0	164+00.00	DR-306	18.3	
199.0					18.0			167+00.00	DR-306	1.7	
200.0	IA 3	167+00.00	173+00.00	Left	18.0	12.0	660.0	167+00.00	DR-306	35.0	
201.0					18.0			173+00.00	DR-306	1.7	
202.0	IA 3	173+00.00	175+25.00	Left	18.0	12.0	285.0	173+00.00	DR-306	14.2	
203.0					18.0			175+25.00	DR-306	1.7	
204.0	IA 3	175+25.00	181+00.00	Left	18.0	12.0	635.0	175+25.00	DR-306	33.6	
205.0					18.0			181+00.00	DR-306	1.7	
206.0	IA 3	181+00.00	184+50.00	Left	18.0	12.0	410.0	181+00.00	DR-306	21.1	
207.0					18.0			184+50.00	DR-306	1.7	
208.0	IA 3	184+50.00	190+00.00	Left	18.0	12.0	610.0	184+50.00	DR-306	32.2	
209.0					18.0			190+00.00	DR-306	1.7	
210.0	IA 3	190+00.00	195+00.00	Left	18.0	12.0	560.0	190+00.00	DR-306	29.4	
211.0					18.0			195+00.00	DR-306	1.7	
212.0	IA 3	195+00.00	197+50.00	Left	18.0	12.0	310.0	195+00.00	DR-306	15.6	
213.0					18.0			197+50.00	DR-306	1.7	
214.0	IA 3	197+50.00	201+00.00	Left	18.0	12.0	410.0	197+50.00	DR-306	21.1	
215.0					18.0			201+00.00	DR-306	1.7	
216.0	IA 3	201+00.00	205+00.00	Left	18.0	12.0	460.0	201+00.00	DR-306	23.9	
217.0					18.0			205+00.00	DR-306	1.7	
218.0	IA 3	205+00.00	212+00.00	Left	18.0	12.0	760.0	205+00.00	DR-306	40.6	
219.0					18.0			212+00.00	DR-306	1.7	
220.0	IA 3	212+00.00	215+00.00	Left	18.0	12.0	360.0	212+00.00	DR-306	18.3	

LONGITUDINAL SUBDRAIN SHOULDER

* Not a bid item.

Line No.	Road or Lane Identification	Station From	Station To	Side	Depth (IN) (D)	Subdrain Size (IN)	Length (FT)	Outlet Station	Outlet Type	Porous Backfill* (CY)	Remarks
221.0					18.0			215+00.00	DR-306	1.7	
222.0	IA 3	215+00.00	218+00.00	Left	18.0	12.0	360.0	215+00.00	DR-306	18.3	
223.0					18.0			218+00.00	DR-306	1.7	
224.0	IA 3	219+96.00	223+50.00	Left	18.0	12.0	414.0	219+96.00	DR-303	21.3	Outlet Into Intake I-20
225.0					18.0			223+50.00	DR-303	1.7	Outlet Into Intake I-27
226.0	IA 3	223+50.00	225+65.00	Left	18.0	12.0	245.0	223+50.00	DR-303	11.9	Outlet Into Intake I-27
227.0	IA 3	227+50.00	232+50.00	Left	18.0	12.0	560.0	227+50.00	DR-306	29.4	
228.0					18.0			232+50.00	DR-306	1.7	
229.0	IA 3	232+50.00	237+00.00	Left	18.0	12.0	510.0	232+50.00	DR-306	26.7	
230.0					18.0			237+00.00	DR-306	1.7	
231.0	IA 3	237+00.00	240+00.00	Left	18.0	12.0	360.0	237+00.00	DR-306	18.3	
232.0					18.0			240+00.00	DR-306	1.7	
233.0	IA 3	240+00.00	245+00.00	Left	18.0	12.0	560.0	240+00.00	DR-306	29.4	
234.0					18.0			245+00.00	DR-306	1.7	
235.0	IA 3	245+00.00	249+00.00	Left	18.0	12.0	460.0	245+00.00	DR-306	23.9	
236.0					18.0			249+00.00	DR-306	1.7	
237.0	IA 3	249+00.00	252+50.00	Left	18.0	12.0	410.0	249+00.00	DR-306	21.1	
238.0					18.0			252+50.00	DR-306	1.7	
239.0	IA 3	252+50.00	255+00.00	Left	18.0	12.0	310.0	252+50.00	DR-306	15.6	
240.0					18.0			255+00.00	DR-306	1.7	
241.0	IA 3	255+00.00	261+00.00	Left	18.0	12.0	660.0	255+00.00	DR-306	35.0	
242.0					18.0			261+00.00	DR-306	1.7	
243.0	IA 3	261+00.00	265+00.00	Left	18.0	12.0	460.0	261+00.00	DR-306	23.9	
244.0					18.0			265+00.00	DR-306	1.7	
245.0	IA 3	265+00.00	270+00.00	Left	18.0	12.0	560.0	265+00.00	DR-306	29.4	
246.0					18.0			270+00.00	DR-306	1.7	
247.0	IA 3	270+00.00	272+00.00	Left	18.0	12.0	260.0	270+00.00	DR-306	12.8	
248.0					18.0			272+00.00	DR-306	1.7	
249.0	IA 3	272+00.00	278+00.00	Left	18.0	12.0	660.0	272+00.00	DR-306	35.0	
250.0					18.0			278+00.00	DR-306	1.7	
251.0	IA 3	278+00.00	281+00.00	Left	18.0	12.0	360.0	278+00.00	DR-306	18.3	
252.0					18.0			281+00.00	DR-306	1.7	
253.0	IA 3	281+00.00	288+00.00	Left	18.0	12.0	760.0	281+00.00	DR-306	40.6	
254.0					18.0			288+00.00	DR-306	1.7	
255.0	IA 3	288+00.00	293+00.00	Left	18.0	12.0	560.0	288+00.00	DR-306	29.4	
256.0					18.0			293+00.00	DR-306	1.7	
257.0	IA 3	293+00.00	300+00.00	Left	18.0	12.0	760.0	293+00.00	DR-306	40.6	
258.0					18.0			300+00.00	DR-306	1.7	
259.0	IA 3	300+00.00	306+00.00	Left	18.0	12.0	660.0	300+00.00	DR-306	35.0	
260.0					18.0			306+00.00	DR-306	1.7	
261.0	IA 3	306+00.00	310+00.00	Left	18.0	12.0	460.0	306+00.00	DR-306	23.9	
262.0					18.0			310+00.00	DR-306	1.7	
263.0	IA 3	310+00.00	313+67.66	Left	18.0	12.0	427.7	310+00.00	DR-306	22.1	
264.0					18.0			313+67.66	DR-306	1.7	
265.0	IA 3	316+68.95	319+00.00	Left	18.0	12.0	291.1	316+68.95	DR-306	14.5	
266.0					18.0			319+00.00	DR-306	1.7	
267.0	IA 3	319+00.00	325+00.00	Left	18.0	12.0	660.0	319+00.00	DR-306	35.0	
268.0					18.0			325+00.00	DR-306	1.7	
269.0	IA 3	325+00.00	331+50.00	Left	18.0	12.0	710.0	325+00.00	DR-306	37.8	
270.0					18.0			331+50.00	DR-306	1.7	
271.0	IA 3	331+50.00	335+00.00	Left	18.0	12.0	410.0	331+50.00	DR-306	21.1	
272.0					18.0			335+00.00	DR-306	1.7	
273.0	IA 3	335+00.00	340+00.00	Left	18.0	12.0	560.0	335+00.00	DR-306	29.4	
274.0					18.0			340+00.00	DR-306	1.7	
275.0	IA 3	340+00.00	347+00.00	Left	18.0	12.0	760.0	340+00.00	DR-306	40.6	

LONGITUDINAL SUBDRAIN SHOULDER

* Not a bid item.

Line No.	Road or Lane Identification	Station From	Station To	Side	Depth (IN) (D)	Subdrain Size (IN)	Length (FT)	Outlet Station	Outlet Type	Porous Backfill* (CY)	Remarks
276.0					18.0			347+00.00	DR-306	1.7	
277.0	IA 3	347+00.00	352+00.00	Left	18.0	12.0	560.0	347+00.00	DR-306	29.4	
278.0					18.0			352+00.00	DR-306	1.7	
279.0	IA 3	352+00.00	355+00.00	Left	18.0	12.0	360.0	352+00.00	DR-306	18.3	
280.0					18.0			355+00.00	DR-306	1.7	
281.0	IA 3	355+00.00	358+00.00	Left	18.0	12.0	360.0	355+00.00	DR-306	18.3	
282.0					18.0			358+00.00	DR-306	1.7	
283.0	Clay Hill Rd	503+95.00	504+88.21	Right	18.0	12.0	153.2	503+95.00	DR-306	6.8	
284.0					18.0			504+88.21	DR-306	1.7	
285.0	Clay Hill Rd	503+95.00	504+88.21	Left	18.0	12.0	153.2	503+95.00	DR-306	6.8	
286.0					18.0			504+88.21	DR-306	1.7	
287.0	Burtons Furnace Rd	701+52.94	702+96.72	Right	18.0	12.0	203.8	701+52.94	DR-306	9.7	
288.0					18.0			702+96.72	DR-306	1.7	
289.0	Burtons Furnace Rd	701+52.94	702+96.72	Left	18.0	12.0	203.8	701+52.94	DR-306	9.7	
290.0					18.0			702+96.72	DR-306	1.7	
291.0	Paradise Valley Rd	900+20.00	901+19.00	Right	18.0	12.0	159.0	900+20.00	DR-306	7.2	
292.0					18.0			901+19.00	DR-306	1.7	
293.0	Paradise Valley Rd	900+20.00	901+19.00	Left	18.0	12.0	159.0	900+20.00	DR-306	7.2	
294.0					18.0			901+19.00	DR-306	1.7	
295.0	Boy Scout Rd	1000+50.00	1001+38.87	Right	18.0	12.0	148.9	1000+50.00	DR-306	6.6	
296.0					18.0			1001+38.87	DR-306	1.7	
297.0	Boy Scout Rd	1000+50.00	1001+38.87	Left	18.0	12.0	148.9	1000+50.00	DR-306	6.6	
298.0					18.0			1001+38.87	DR-306	1.7	
Total:							**74384.2**		**DR-306=295 DR-303=3**	**4132.8**	

ALL LONGITUDINAL FINDRAINS MAY BE ADJUSTED BOTH VERTICALLY AND HORIZONTALLY IN THE FIELD AS NECESSARY

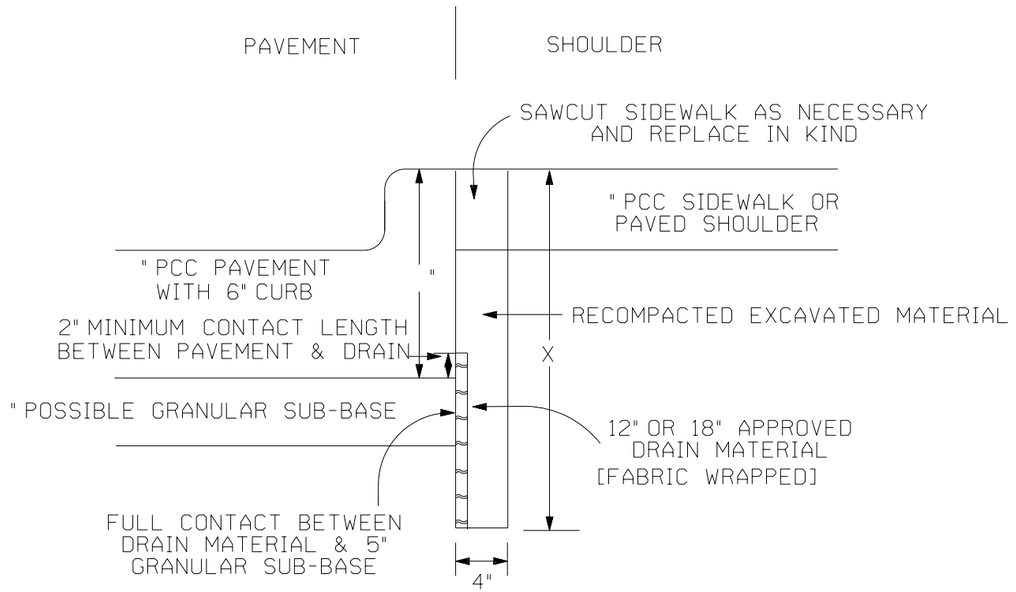
LONGITUDINAL FIN DRAINS SHALL MEET MATERIAL REQUIREMENTS OF IDOT STD. SPECS. ARTICLE 2502.02.E

SLIDE REPAIR

Line No.	Site No.	Station From	Station To	Side	Class 13 Excavation Waste (CY)	Embankment-in-Place (CY)	Excavation Class 10 Roadway and Borrow (CY)	Excavation Class 10 Waste (CY)	Class "E" Revetment (TON)	Engineering Fabric (SY)	Erosion Stone (TON)	Gra. Material Blankets and Subdrain (CY)	Macadam Stone Slope Protection (SY)	Topsoil Furnish and Spread (CY)	Topsoil Strip Salvage and Spread (CY)	Remarks
1.0	1	49+00.00	51+00.00	Left			3,149			1,113	189					SLIDE REPAIR
2.0	2	510+00.00	56+00.00	Left		15,329	13,526			3,2462					1,010	REINFORCED SOIL SLOPE (RSS)
3.0	3	65+80.00	67+50.00	Left		5,017	4,426			10,623					331	REINFORCED SOIL SLOPE (RSS)
4.0	4	86+00.00	87+10.00	Left			599			599	36					EROSION STONE SLIDE REPAIR
5.0	5	95+50.00	97+00.00	Left			533			533	32					EROSION STONE SLIDE REPAIR
6.0	6	128+00.00	137+00.00	Left					4,246							REVETMENT
7.0	7	139+50.00	141+50.00	Left					1,601	7,100						REINFORCED REVETMENT SLOPE
8.0	8	144+00.00	148+00.00	Left					4,227	16,070						REINFORCED REVETMENT SLOPE
9.0	9	151+00.00	154+00.00	Left					2,397	7,594						REINFORCED REVETMENT SLOPE
10.0	10	158+00.00	160+00.00	Left					125							REVETMENT
11.0	11	180+00.00	189+50.00	Left					4,298							REVETMENT
12.0	12	194+50.00	195+80.00	Left					2,156							REVETMENT
13.0	13	197+50.00	200+00.00	Right					1,066							REVETMENT
14.0	14	204+00.00	206+50.00	Left					1,471							REVETMENT
15.0	15	227+00.00	228+00.00	Left					205							REVETMENT
16.0	16	230+50.00	235+50.00	Left	8,282				1,1740	2,928						SLIDE REPAIR
17.0	17	275+78.00	277+77.00	Left												DSN# 223. SEE V.1-V.2 FOR DETAILS AND QUANTITIES
18.0	18	323+00.00	328+00.00	Right	2,700				7,656	1,933						SLIDE REPAIR
19.0	19	331+00.00	332+50.00	Right					687	291						SLIDE REPAIR
20.0	20	346+25.00	347+00.00	Right					1,431	606						EROSION STONE BUTTRESS AND CULVERT OUTLET
Total:					**10,982**	**20,346**	**22,233**		**43,306**	**81,852**	**257**				**1,341**	

HIGHWAY FIN DRAIN SYSTEM

MOD-1
8-22-17



X=

LONGITUDINAL SUBDRAINS - FIN SYSTEM

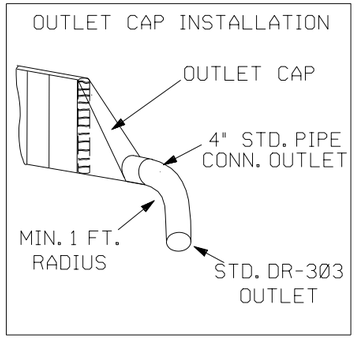
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A PAVEMENT EDGE DRAIN SYSTEM AS DESCRIBED BY SECTION 2502.05 THRU 2502.08 EXCEPT AS MODIFIED BELOW.

1. THE TRENCHES SHALL BE BACKFILLED WITH TRENCH EXCAVATION MATERIAL OBTAINED FROM THE GENERAL AREA IN WHICH THE DRAIN IS TO BE INSTALLED.

2. THE FIRST LAYER OF BACKFILL MATERIAL SHALL BE PLACED SIMULTANEOUSLY WITH THE TRENCHING OPERATION SO THAT THE DRAINAGE MAT IS FLUSH AGAINST THE PAVEMENT EDGE WALL.

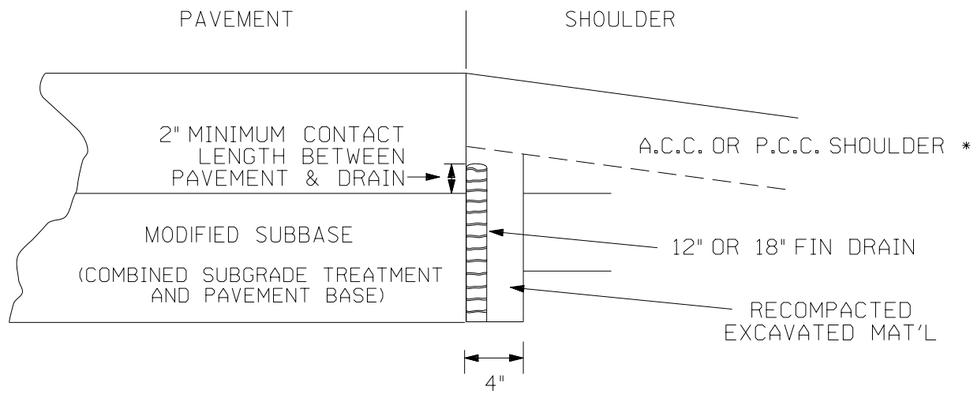
3. THE DRAINAGE MAT SHALL BE FITTED WITH AN OUTLET CAP INSTALLATION WHICH CONNECTS TIGHTLY TO THE STANDARD DR-303 DRAINAGE OUTLET.

4. A VIBRATING PLATE COMPACTOR WITH A RATED IMPACT FORCE OF APPROXIMATELY 6000 POUNDS THAT IS OPERATED AT 5000 CYCLES PER MINUTE ON A MODIFIED FOOT TO FIT



MOD-6A
8-22-17

HIGHWAY FIN DRAIN SYSTEM



NOT TO SCALE

* OR GRANULAR SHOULDER ON SIDEROADS

LONGITUDINAL SUBDRAINS - FIN SYSTEM

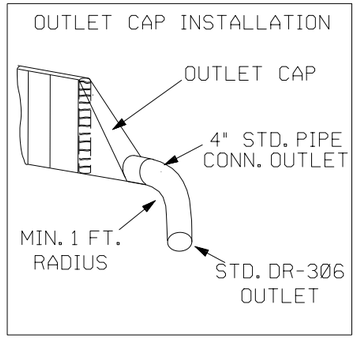
THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A PAVEMENT EDGE DRAIN SYSTEM AS DESCRIBED BY SECTION 2502.05 THRU 2502.08 EXCEPT AS MODIFIED BELOW.

1. THE TRENCHES SHALL BE BACKFILLED WITH TRENCH EXCAVATION MATERIAL OBTAINED FROM THE GENERAL AREA IN WHICH THE DRAIN IS TO BE INSTALLED.

2. THE FIRST LAYER OF BACKFILL MATERIAL SHALL BE PLACED SIMULTANEOUSLY WITH THE TRENCHING OPERATION SO THAT THE DRAINAGE MAT IS FLUSH AGAINST THE PAVEMENT EDGE WALL

3. THE DRAINAGE MAT SHALL BE FITTED WITH AN OUTLET CAP INSTALLATION WHICH CONNECTS TIGHTLY TO THE STANDARD DR-306 DRAINAGE OUTLET.

4. A VIBRATING PLATE COMPACTOR WITH A RATED IMPACT FORCE OF APPROXIMATELY 6000 POUNDS THAT IS OPERATED AT 5000 CYCLES PER MINUTE ON A MODIFIED FOOT TO FIT TRENCH IS REQUIRED.



SURVEY SYMBOLS

- SIGN SI Sign
- TDC Tree Deciduous
- PPB Power Pole Co. 2
- MH Utility Access (Manhole)
- TEV Evergeen Tree
- G GRV Grave
- WEL Well
- TP TPD Telephone Pedestal
- SHR Shrub
- Flg FLG Flag Poles
- PR Electic Riser Pole
- UB UB Utility Box
- GP GP Guard Post (Less Than 4 Posts)
- TFR Tree Fruit
- EB EB Electrical Box
- IN Storm Sewer Intake
- B BIN Grain Bin
- PPA Power Pole Co. 1
- OUT Tile Outlet
- STP Stump
- TR Telephone Riser Pole
- LUM Luminaire
- MM MM Mile Marker Post
- WH WHD Water Hydrant
- LP LP L.P. Tank
- ST SEP Septic Tank
- PLG Location of General Photo
- WV WV Water Valve
- INB Storm Sewer Beehive Intake
- BB BB Billboard
- TV Satelite TV Dish
- AST AST Above Ground Storage Tank
- WM Wind Mill
- Cell Phone Tower

UTILITY LEGEND

— E1 — — —

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Real Estate and Right of Way Representative II
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Nic Schulte
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— ST S — — —
— SAN — — —

Vicky Cleary
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daniel.hogan@windstream.com

— FO — — —

IOWA TELECOM (QLD)
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563-927-2623
dan.hogan@iowatelecom.com

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

RIGHT-OF-WAY LEGEND

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

GEODETIC MARKER

SUR - SURML052_107

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER D.1

3:20:27 PM 11/8/2021 mwarhan pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_LGD.dgn

Curve Data
Δ = 65° 52′ 53.42″ (LT)
T = 730.19
L = 1,295.82
R = 1,126.95
E = 215.88
e = 5.80%
x = 48′
L = 139′

PERU TWP.
T-90N R-2E
SEC. 34

Jacking Pit
Sta. 39+00
Jack 24″ x 122″ RCP

SHERRILL RD

SCS PI Sta 100+592.27
Δ = 65° 52′ 53.42″ (LT)
Theta = 50° 08′ 59.51″
Ls = 200.00
Ts = 827.25
Ls = 729.57
Lc = 216.10
P = 1.48
K = 99.97
Xc = 199.84
Yc = 5.93
LT = 133.39
ST = 66.72
LC = 199.93

Curve Data
Δ = 60° 46′ 53.91″ (LT)
T = 658.90
L = 1,191.83
R = 1,123.48
E = 178.96

PERU TWP T-90N R-2E SEC. 34

POT Sta 20+18.63

Sta. 27+74.75
Begin Project

Little Masquoketa River

PC Sta 28+68.50

CHRISTENSEN LN

(REMOVE)
24″ x 43′ CMP

+66 Prop. Type "B" Ent. = 24′

+05 Close

+69 Prop. Type "C" Ent. = 22′

Prop. 24″
Uncl Ent. Pipe

(U.A.C.)

+87 Prop. Type "B" Ent. = 24′

(REMOVE)
24″ x 41′ CPP

24″ x 85′ CMP

LEISER LN

PI Sta 35+98.69

0 100
FEET

IA 3

Begin Project
Sta. 27+74.75
Elev. 631.40

VPI +71.86
Elv 631.99
Len 345.46 ft
K = 128

+0.30%

+3.00%

VPI +62.94
Elv 649.72
Len 375.00 ft
K = 148

+87.60
-2.20%
-3.60%

+69
+66
+1.29%
-4.00%
-9.52%

+23.88
-2.98%

VPI +68.06
Elv 652.50
Len 100.00 ft
K = 261

+0.46%
+0.84%
+2.46%

+10 Rt. 647.80
-3.31% DGR
+4.65% DGR
+50 Rt. 649.00
+34 Rt. 643.70
0%
+36 Rt. 643.70
+50 Rt. 652.60
+65 Rt. 650.50

Christensen Rd.
Leiser Lane
Sherrill Rd.

Lt	UAC	Prop. ENT	UAC	UAC	UAC	UAC	Prop ENT	UAC	Prop ENT	Ditch Grade	Sherrill Rd.	UAC	DGR	Rt

631.40 631.48 631.58 631.73 631.93 632.17 632.47 632.82 633.21 633.65 634.14 634.69 635.27 635.91 636.60 637.34 638.09 638.84 639.59 640.34 641.09 641.84 642.59 643.34 644.09 644.82 645.50 646.15 646.75 647.31 647.83 648.30 648.74 649.13 649.48 649.78 650.04 650.27 650.45 650.58 650.70 650.81 650.93 651.04 651.16 651.27 651.38 651.50 651.61 651.73 651.84 651.96 652.07 652.19 652.30 652.44 652.59 652.78 652.98 653.19 653.40 653.61 653.82 654.03 654.24 654.45

25 30 35 40

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER D.2

1:17:13 PM 4/3/2024 1dot E:\4_3_2024\SHT_31052107_D02.dgn

PERU TWP.
T-90N R-2E
SEC. 34

PERU TWP.
T-90N R-2E
SEC. 33

Curve Data
Δ = 90° 25' 04.43" (LT)
T = 679.23
L = 1,064.10
R = 674.30
E = 282.80

Curve Data
Δ = 90° 25' 04.42" (LT)
T = 679.94
L = 1,065.21
R = 675.00
E = 283.09
e = 6%
x = 48'
L = 144'

(REMOVE)
Sta. 1012+02.10
18" X 110' CMP
D.A. = 8 AC - F

Install Guardrail

PT Sta 53+33.27

PC Sta 53+44.99

(UAC)
78" X 31.7' CIP
D.A. = 22 AC - VH

PT Sta 41+64.32

PC Sta 41+68.06

+95 Prop. "C" Ent. Type 24' W =

+23 Prop. "B" Ent. Type 45' W =
18" X 68' CPP

+43 Prop. "C" Ent. Type 24' W =

Prop. 24" Uncl. Ent. Pipe

(UAC)

(Remove)
Sta. 1020+77.29
0 Skew
6.0' X 8.0' X 63.6' RCB
D.A. = 22 AC - VH

Sta. 50+83.00
Install 42" X 88' RCP

+66 Prop. Type "C" Ent. W = 24'

+93 Prop. Type "C" Ent. W = 24'

Curve Data
Δ = 103° 01' 37.17" (RT)
T = 800.02
L = 1,143.73
R = 636.06
E = 386.00

Curve Data
Δ = 103° 01' 37.17" (RT)
T = 792.40
L = 1,132.84
R = 630.00
E = 382.32
e = 6%
x = 48'
L = 144'

PT Sta 64+77.83

(REMOVE)
Sta. 1036+64.93
Skew 5 RT AH
10.0' X 10.0' X 49.3' Inlet
W/ 4.0' X 6.0' X 72.0' Outlet Cattle Pass
D.A. = 55 AC - MTS

Sta. 66+75.00
Install 60" X 132' RCP

+65 Prop. "C" Ent. Type 24' W =

PT Sta 68+92.83

Curve Data
Δ = 16° 03' 38.64" (LT)
T = 281.80
L = 559.90
R = 1,997.42
E = 19.78

Curve Data
Δ = 15° 24' 59.41" (LT)
T = 270.35
L = 537.44
R = 1,997.42
E = 18.21
e = 4.4%
x = 48'
L = 106

PT Sta 66+22.48

PT Sta 71+59.92

Prop. 24" Uncl. Ent. Pipe

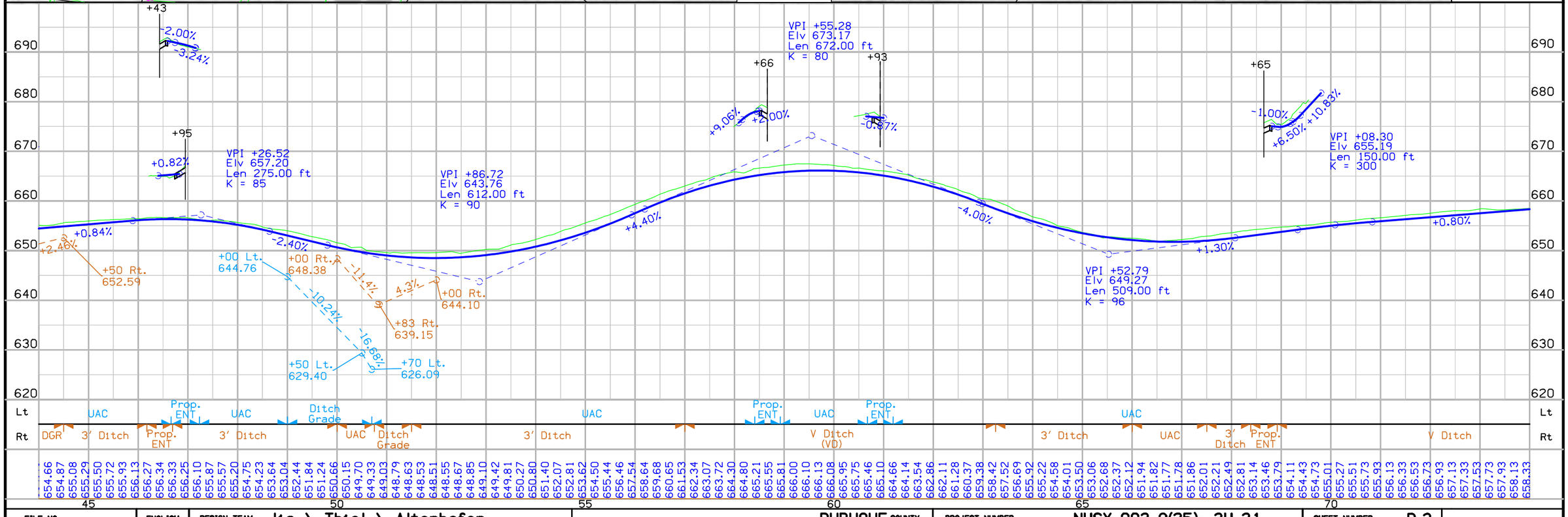
(REMOVE)
Sta. 1045+10.47
2.0' X 2.0' X 46.1' RCB
0 Skew
D.A. = 5 AC - MTS

Install Guardrail

Sta. 75+21.36
Install 24" X 52' RCP

0 100
FEET

IA 3



FILE NO.	ENGLISH	DESIGN TEAM	J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER	NHSX-003-9(25)--3H-31	SHEET NUMBER	D.3

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PERU TWP.
T-90N R-2E
SEC. 33

Curve Data
Δ = 8° 45′ 23.47″ (RT)
T = 156.96
L = 313.31
R = 2,050.05
E = 6.00

Curve Data
Δ = 6° 26′ 58.91″ (RT)
T = 71.27
L = 134.00
R = 1,265.00
E = 2.01
e = 5.6%
x = 48′
L = 134′

(REMOVE)
Sta. 1045+10.47
0 Skew
2.0′ X 2.0′ X 46.1′ RCB
D.A. = 5 AC - MTS

Install Guardrail

Sta. 75+21.36
Install 24″ X 52′ RCP

PC Sta 79+17.48

PT Sta 79+88.76

PT Sta 80+59.88

PC Sta 83+67.79

Curve Data
Δ = 15° 54′ 46.23″ (LT)
T = 267.17
L = 530.89
R = 1,911.54
E = 18.58

Curve Data
Δ = 14° 15′ 00.91″ (LT)
T = 238.94
L = 475.42
R = 1,911.50
E = 14.88
e = 4.6%
x = 48′
L = 110′

(Remove Existing Headwall)
(Plug and Abandon)
Sta. 1056+56.55
SKEW 13 LT AH
4.0′ X 4.0′ X 115.1′ RCB
D.A. = 58 AC - MTS

Sta. 86+30.00
Install 60″ X 92′ RCP

PT Sta 88+43.20

PC Sta 89+50.74

Install Guardrail

Prop. 24″ Uncl. Ent. Pipe

Prop. 18″ Uncl. Ent. Pipe

Sta 86+06.73

+68 Prop. "C" Ent. W = 24′

+32 Prop. "C" Ent. W = 24′

Curve Data
Δ = 24° 54′ 46.90″ (LT)
T = 462.95
L = 911.26
R = 2,095.74
E = 50.52

Curve Data
Δ = 24° 54′ 46.90″ (LT)
T = 462.95
L = 911.26
R = 2,095.75
E = 50.52
e = 4.4%
x = 48′
L = 106′

(Remove)
Sta. 1066+43.77
0 Skew
4.0′ X 4.0′ X 59.5′ RCB
D.A. = 43 AC - MTS

Sta. 97+00.00
Install 54″ X 50′ RCP

PT Sta 98+62.00

PI Sta 94+13.69

(Remove)
30″ X 47′ CMP

WHISPERING HILLS DR

Sta 105+68.05

Install Guardrail

144 Prop. Type "C" Ent. W = 24′

Prop. 18″ Uncl. Ent. Pipe

0 100 FEET

IA 3

VPI +75.50
Elv 661.33
Len 200.00 ft
K = 103

+0.80%

-1.15%

VPI +82.48
Elv 652.05
Len 398.19 ft
K = 117

+68
-3.40%
+5.22%

+32
-3.00%
+5.61%

VPI +99.70
Elv 661.44
Len 401.70 ft
K = 120

+2.25%

+35 Rt. 651.13
-0.69%
+00 Rt. 650.68
+05 Rt. 642.60
-1.14%
DGR
+11.81%
+10.64%
+30 Rt. 642.33
+3%
+00 Rt. 650.59
+25 Rt. 653.30
+35 Rt. 653.60
+70 Rt. 653.83

-1.10%

+00 Rt. 653.48
-5.3%
+50 Rt. 652.33
-4.1%
+90 Rt. 650.69
-2.43%
+50 Rt. 649.23
-3.46%
+00 Rt. 647.50
0.48%
-4.56%
+50 Rt. 649.78
+00 Rt. 650.02

VPI +34.01
Elv 651.18
Len 427.86 ft
K = 194

+44.12
+12.86%
+5.53%
+3.36%

-3.30%

UAC

Lt
Rt

V Ditch | Prop. ENT | DGR | Prop. ENT | DGR | V Ditch | DGR | Whispering Hills Dr. | DGR | V Ditch | Prop. ENT | V Ditch | UAC

658.53 658.73 658.93 659.13 659.33 659.53 659.73 659.93 660.13 660.33 660.53 660.70 660.81 660.86 660.84 660.77 660.64 660.44 660.19 659.90 659.61 659.32 659.04 658.75 658.46 658.17 657.89 657.60 657.31 657.02 656.74 656.45 656.16 655.87 655.59 655.30 655.01 654.72 654.44 654.16 653.94 653.76 653.65 653.58 653.57 653.61 653.70 653.85 654.05 654.31 654.62 654.98 655.39 655.86 656.38 656.94 657.48 657.96 658.39 658.77 659.09 659.37 659.59 659.76 659.88 659.94 659.95 659.92 659.83 659.68 659.49 659.24 658.97 658.69 658.42 658.14 657.87 657.59 657.32 657.04 656.77 656.50 656.22 655.95 655.67 655.40 655.12 654.85 654.58 654.30 654.03 653.75 653.48 653.18 652.85 652.49 652.10 651.67 651.21 650.72 650.20 649.65 649.06 648.44 647.79 647.11 646.39 645.65 644.87 644.06 643.23 642.41 641.58 640.77 640.00 639.28 638.62 638.01 637.45 636.94

75 80 85 90 95 100

FILE NO.	ENGLISH	DESIGN TEAM	DUBUQUE COUNTY	PROJECT NUMBER	SHEET NUMBER
		J1a \ Thiel \ Altenhofen		NHSX-003-9(25)--3H-31	D.4

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DUBUQUE TWP.
T-89N R-2E
SEC. 4

DUBUQUE TWP.
T-89N R-2E
SEC. 5

CLAY HILL RD

Install Guardrail

(REMOVE)
Sta. 1096+48.17
24" X 81' Conc Pipe
D.A. = 2 AC - MTS

PI Sta 131+62.86

PT Sta 120+79.86

PC Sta 123+37.84

Sta. 125+30.00
Install 24" X 60' RCP

(REMOVE)
Sta. 1083+10.25
0 Skew
2.0' X 2.0' X 43.1' RCB
D.A. = 36 AC - MTS
Sta. 113+20.00
Install 48" X 48' RCP

PT Sta 117+49.19

Curve Data
Δ = 28° 11' 19.13" (LT)
T = 288.95
L = 566.20
R = 1,150.84
E = 35.72

Curve Data
Δ = 26° 23' 06.28" (LT)
T = 269.57
L = 529.58
R = 1,150.00
E = 31.17
e = 5.8%
x = 48'
L = 139'
Sta. 106+70.38
Install 8' X 6' X 87' RCB
Design #0224

PT Sta 110+97.64

PC Sta 113+75.18

Curve Data
Δ = 50° 19' 55.97" (RT)
T = 452.80
L = 846.60
R = 963.73
E = 101.07

Curve Data
Δ = 47° 30' 00.00" (RT)
T = 374.01
L = 704.68
R = 850.00
E = 78.65
e = 6%
x = 48'
L = 144'

(REMOVE)
2.0' X 2.0' X 59.0' RCB
Outlet Buried
Based on As-Built Plans
Sta. 129+00.00
Install 24" X 58' RCP

Curve Data
Δ = 84° 37' 55.29" (RT)
T = 801.98
L = 1,301.15
R = 880.87
E = 310.39

Curve Data
Δ = 85° 39' 38.40" (RT)
T = 825.02
L = 1,330.60
R = 890.00
E = 323.58
e = 6%
x = 48'
L = 144'

PC Sta 105+68.05

+33' Prop. Type "C" Ent. W = 24'

+24' Prop. Type "C" Ent. W = 30'

Prop. 24" Unch. Ent. Pipe

+30' Prop. Type "G" Ent. W = 24'

PI Sta 108+37.63

(REMOVE BY OTHERS)
Sta. 1076+60.38
0 Skew
8.0' X 6.0' X 46.0' RCB
D.A. = 220 AC - MTS

Heritage Trail

105 110 115 120 125 130 135

3

0 100 FEET

IA 3

VPI +20.52
Elv 635.13
Len 370.00 ft
K = 119

VPI +75.28
Elv 632.82
Len 606.11 ft
K = 319

VPI +91.65
Elv 643.30
Len 230.40 ft
K = 96

VPI +94.60
Elv 641.18
Len 200.00 ft
K = 200

VPI +40.51
Elv 642.22
Len 162.00 ft
K = 60

VPI +87.74
Elv 655.63
Len 200.00 ft
K = 667

+00 Rt. 627.80
+70 Rt. 624.00
+50 Rt. 632.00
+20 Rt. 629.00
+50 Rt. 630.20
+50 Rt. 631.19
+75 Rt. 637.76
+30 Rt. 637.40
+85 Rt. 637.73

-1.41% DGR
+2.11% DGR
-1.11% DGR
+0.92% DGR
+0.50% DGR
-0.65% DGR
+0.60% DGR

-0.20%
+1.70%
-0.70%
+0.30%
+3.00%
+2.70%

+33 +24 +30
13.0% 8.00% 7.64%
+14.61% +8.00% +8.50%
-2.20% +1.08%

Lt UAC UAC Prop. ENT Prop. ENT UAC UAC Clay Hill Rd. UAC
Rt Ditch Grade Prop. ENT Ditch Grade V Ditch Ditch Grade V Ditch

636.49 636.08 635.73 635.44 635.19 635.00 634.86 634.77 634.72 634.67 634.62 634.57 634.52 634.47 634.42 634.37 634.32 634.27 634.22 634.17 634.12 634.07 634.02 633.97 633.92 633.87 633.82 633.77 633.72 633.67 633.62 633.57 633.52 633.47 633.42 633.38 633.36 633.37 633.39 633.43 633.49 633.57 633.66 633.78 633.92 634.08 634.26 634.45 634.67 634.91 635.16 635.44 635.73 636.05 636.38 636.74 637.11 637.50 637.92 638.34 638.77 639.19 639.62 640.04 640.47 640.89 641.32 641.71 642.04 642.31 642.51 642.65 642.72 642.72 642.66 642.54 642.36 642.19 642.01 641.84 641.69 641.57 641.48 641.42 641.39 641.39 641.43 641.49 641.57 641.64 641.72 641.79 641.87 641.94 642.04 642.23 642.53 642.93 643.43 644.04 644.75 645.50 646.25 647.00 647.75 648.50 649.25 650.00 650.75 651.50 652.25 653.00 653.74 654.47 655.19 655.91 656.61 657.30 657.99 658.66

FILE NO.	ENGLISH	DESIGN TEAM	DUBUQUE COUNTY	PROJECT NUMBER	SHEET NUMBER
		Jia \ Thiel \ Altenhofen		NHSX-003-9(25)--3H-31	D.5

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DUBUQUE TWP.
T-89N R-2E
SEC. 5

PERU TWP.
T-90N R-2E
SEC. 32

Curve Data
Δ = 53° 13′ 39.17″ (LT)
T = 529.98
L = 982.60
R = 1,057.70
E = 125.35
Curve Data
Δ = 55° 04′ 56.73″ (LT)
T = 547.56
L = 1,009.44
R = 1,050.00
E = 134.19
e = 5.8%
x = 48′
L = 139′

(REMOVE)
60″ X 61′ CMP
D.A. = 56 AC - MTS

Curve Data
Δ = 14° 57′ 08.58″ (LT)
T = 331.77
L = 659.77
R = 2,528.14
E = 21.68
Curve Data
Δ = 13° 05′ 51.03″ (LT)
T = 291.59
L = 580.63
R = 2,540.00
E = 16.68
e = 3.8%
x = 48′
L = 91′

(REMOVE)
Sta. 1122+74.12
0 Skew
3.0′ X 4.0′ X 53.2′ RCB
D.A. = 26 AC - MTS

Sta. 159+50.00
Install 36″ X 56′ RCP

(REMOVE)
Sta. 1130+47.20
SKEW 33 RT AH
3.0′ X 3.0′ X 70.5′ RCB
D.A. = 11 AC - MTS

Curve Data
Δ = 3° 20′ 12.00″ (LT)
T = 240.54
L = 480.95
R = 8,258.66
E = 3.50
Curve Data
Δ = 3° 20′ 12.00″ (LT)
T = 240.58
L = 481.03
R = 8,260.00
E = 3.50
e = 3.8%
x = 48′
L = 1279′

Sta. 141+05.79
Install 36″ X 40′ RCP W/
36″ X 58′ Steel Pipe and
36″ X 20′ CMP
See XS

Sta. 146+22.03
Install 60″ X 196′ CMP
Slipline 110′ Lay 86′
See XS

Sta. 152+11.35
Install 48″ X 80′ RCP
W/ 48″ X 25′ CMP
See XS

(REMOVE)
Sta. 1110+92.34
Skew 10 RT AH
2.0′ X 3.0′ X 46.1′ RCB W/ Flume
W/ 30″ X 25′ CIP Extension
D.A. = 15 AC - MTS

Prop. 24″
Uncl. Ent. Pipe

+21 Prop.
Type "C" Ent.
W = 24′

+12 Prop.
Type "C" Ent.
W = 24′

(U.A.C. RCB & REMOVE Ex. CMP Ext. Only)
Sta. 1116+07.39
0 Skew
6.0′ X 6.0′ X 118.8′ RCB
W/ 72″ X 16.0 CMP Extension
D.A. = 56 AC - MTS

PC Sta 136+68.44
PT Sta 140+62.25
PC Sta 150+71.68
PT Sta 153+63.27
PC Sta 156+52.31
PT Sta 157+92.14
PC Sta 160+32.72
PT Sta 162+73.17

① Refer to Q Sheets for Info on Existing Wall

0 100 FEET

IA 3

VPI +84.98
Elv 679.86
Len 593.72 ft
K = 84

VPI +80.99
Elv 662.56
Len 179.61 ft
K = 37

VPI +85.23
Elv 666.98
Len 612.50 ft
K = 250

+2.70%
-4.37%
+0.55%
-1.90%
+1.71%
+4.00%
+11.21%

+93 Lt. 634.53
+96 Lt. 634.62
+90 Lt. 634.54
-0.50% DGL
+2.90% DGL

+00 Lt. 633.23
+50 Lt. 634.06
+50 Lt. 634.70
-2.94% DGL
-0.20% DGL
+4.24%
+15 Lt. 633.00
+25 Lt. 633.00

+75 Rt. 663.10
+25 Rt. 663.13
+10 Rt. 663.00
+14 Rt. 663.00
-0.28%
+1.14%
0%

+08 Lt. 638.45
+80 Lt. 638.02
+14 Lt. 638.45
+50 Lt. 638.14
+00 Lt. 638.63
+85 Lt. 637.88
+25 Lt. 637.83
+95 Lt. 637.78
+00 Lt. 637.40
+20 Lt. 637.05
-0.47%
+1.07%
-2.32%
+13.14%
+1.91%

Lt: UAC | DGL | UAC | Ditch Grade | UAC | Ditch Grade | UAC
Rt: V Ditch | V Ditch W/ Bench | V Ditch | 3′ Ditch | Prop. ENT | 3′ Ditch | UAC | 3′ Ditch | V Ditch | V Ditch W/ Bench | V Ditch | Ditch Grade | V Ditch | Prop. ENT | V Ditch

FILE NO.	ENGLISH	DESIGN TEAM	J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER	NHSX-003-9(25)--3H-31	SHEET NUMBER	D.6

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PERU TWP.
T-90N R-2E
SEC. 32

PERU TWP.
T-90N R-2E
SEC. 31

Curve Data
Δ = 15° 01' 18.61" (RT)
T = 257.60
L = 512.24
R = 1,953.77
E = 16.91

Curve Data
Δ = 15° 01' 19.41" (RT)
T = 257.63
L = 512.31
R = 1,954.00
E = 16.91
e = 4.4%
x = 48'
L = 106'

(REMOVE)
Sta. 1135+16.41
0 Skew
2.0' X 2.0' X 56.0' RCB
D.A. = 5 AC - MTS

Sta. 164+53.78
Install 24" X 62' RCP

(U.A.C.)
15.6' X 20.0' Heritage
Trail Foot Bridge

(U.A.C.)
30" X 49' CIP
D.A. = 4 AC - H

(CLOSE)

Heritage Trail

Install
Guardrail

Prop. 24"
Uncl. Ent. Pipe

PI Sta 172+35.99

PI Sta 193+36.13

PC Sta 169+78.35

PI Sta 162+73.17

PC Sta 190+68.93

Prop. 24"
Uncl. Ent. Pipe

(REMOVE)
15" X 41' CMP

PI Sta 174+00.66

+35 Prop.
Type "C" Ent.
W = 24"

+35 Prop.
Type "C" Ent.
W = 30"

Sta. 175+65.48
Install 10' X 8' X 86' RCB
Skew = 20° Rt. Ahd.
Design #0324

(REMOVE BY OTHERS)
Sta. 1146+28.99
SKEW 20 RT AH
8.0' X 6.0' X 74.1' RCB
D.A. = 498 AC - MTS

(REMOVE)
Sta. 1155+33.32
0 Skew
2.0' X 2.0' X 62.6' RCB
D.A. = 4 AC - H

Sta. 184+70.71
Install 24" x 68' RCP

(REMOVE)
Sta. 1160+58.14
0 Skew
3.0' X 2.0' X 48.0' RCB
D.A. = 7 AC - MTS

Sta. 189+95.53
Install 30" x 72' RCP

Curve Data
Δ = 21° 36' 38.28" (RT)
T = 278.50
L = 550.38
R = 1,459.21
E = 26.34

Curve Data
Δ = 21° 36' 37.48" (RT)
T = 267.20
L = 528.04
R = 1,400.00
E = 25.27
e = 5.2%
x = 48'
L = 125'

0 100
FEET

IA 3

(163)+35

VPI +73.33
Elv 646.31
Len 361.20 ft
K = 84

VPI +79.78
Elv 660.86
Len 425.00 ft
K = 100

VPI +09.23
Elv 651.07
Len 318.44 ft
K = 49

+35

VPI +09.23
Elv 664.94
Len 281.56 ft
K = 49

VPI +58.20
Elv 658.91
Len 179.48 ft
K = 96

VPI +29.07
Elv 665.61
Len 238.48 ft
K = 50

+2.40%
-1.85%
+4.63%
-1.10%
+0.77%
2.9%
11.49%
11.53%
-3.94%
+4.38%

+00 Rt. 650.01
+40 Rt. 650.93
+15 Rt. 649.71
+60 Rt. 646.20
0%
+80 Rt. 637.10
+95 Rt. 637.10

+60 Rt. 656.08
+80 Rt. 656.07
+71 Rt. 655.50

+80 Rt. 659.40
+20 Rt. 659.99
+94 Rt. 657.48
+96 Rt. 657.48

Lt
Rt
UAC
Prop. ENT
UAC
ENT
V Ditch
DGR
Prop. ENT
Ditch Grade
V Ditch
V Ditch W/ Bench
V Ditch
Ditch Grade
V Ditch
UAC
DGR
V Ditch
V Ditch W/ Bench

FILE NO.	ENGLISH	DESIGN TEAM	J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER	NHSX-003-9(25)--3H-31	SHEET NUMBER	D.7

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PERU TWP.
T-90N R-2E
SEC. 31

Curve Data
Δ = 21° 37′ 04.87″ (LT)
T = 336.34
L = 664.69
R = 1,761.67
E = 31.82
Curve Data
Δ = 21° 37′ 04.87″ (LT)
T = 336.41
L = 664.81
R = 1,762.00
E = 31.83
e = 4.8%
x = 48′
L = 115′

Curve Data
Δ = 45° 48′ 29.11″ (LT)
T = 304.10
L = 575.45
R = 719.76
E = 61.60
Curve Data
Δ = 45° 48′ 29.11″ (LT)
T = 304.20
L = 575.64
R = 720.00
E = 61.62
e = 6%
x = 44′
L = 133′

(U.A.C.)
10.8′ X 13.6′ Heritage Trail Foot Bridge

PI Sta 193+36.13
PC Sta 197+27.50
PI Sta 195+96.98
PT Sta 203+92.31
PC Sta 208+41.92
PI Sta 200+32.90
PI Sta 214+17.58
PT Sta 214+29.12
PC Sta 215+22.51
PI Sta 216+20.26

Heritage Trail
Install Guardrail
Little Maquoketa River
BURTONS FURNACE RD
BURTONS FURNACE RD

(REMOVE BY OTHERS)
Sta. 1166+29.04
SKEW 46 RT AH
20.0′ X 14.0′ X 128.0′
ARCH CULVERT
D.A. = 944 AC - MTS
Sta. 195+66.42
Install 12′ X 8′ X 161′ RCB
Skew = 45° Rt. Ahd.
Design #0424

RAYLYN RD
12" X 20' CMP
Field Ent.

+66 Prop. Type "C" Ent. W = 42′
Prop. 24" Uncl. Ent. Pipe
(Close)
+06 Prop. Type "B" Ent. W = 26′
18" X 39' CMP
24" X 60' CMP
Prop. 24" Uncl. Ent. Pipe

(REMOVE BY OTHERS)
Sta. 1181+71.93
SKEW 56 RT AH
214.0′ X 14.0′ X 90.6′ TWIN RCB
D.A. = 2422 AC - MTS
Sta. 211+35.00
Install 14′ X 14′ X 169′-6 ⅛″ TWIN RCB
Skew = 57°30′ Rt. Ahd. Design #0524

+33.81 Begin Curb
+65.00 End Curb
+35 Prop. Type "C" Ent. W = 24′
+85 Prop. Type "C" Ent. W = 24′
+45 Prop. Type "C" Ent. W = 24′
+66 Prop. Type "B" Ent. W = 45′
+10 Prop. Type "C" Ent. W = 30′
+82 Prop. Type "C" Ent. W = 24′
Prop. 24" Uncl. Ent. Pipe
+85 Prop. Type "C" Ent. W = 15′
Prop. 24" Uncl. Ent. Pipe
(Close)
(REMOVE)
(MAC Walls)
DO NOT DISTURB ROCK WALL
18" X 64' CMP
24" X 52' CMP
(REMOVE)
(REMOVE)

Curve Data
Δ = 47° 22′ 26.72″ (RT)
T = 313.50
L = 590.87
R = 714.61
E = 65.74
Curve Data
Δ = 47° 22′ 26.72″ (RT)
T = 315.86
L = 595.32
R = 720.00
E = 66.24
e = 6%
x = 44′
L = 133′

Curve Data
Δ = 23° 41′ 51.69″ (RT)
T = 205.03
L = 404.09
R = 977.00
E = 21.27
Curve Data
Δ = 23° 41′ 51.69″ (RT)
T = 204.98
L = 404.09
R = 977.00
E = 21.27
e = 6%
x = 48′
L = 144′

0 100 FEET

3

IA 3

VPI +74.78
Elv 669.30
Len 360.82 ft
K = 50

VPI +57.93
Elv 648.45
Len 450.00 ft
K = 50

VPI +88.49
Elv 649.05
Len 200.00 ft
K = 110

VPI +00.46
Elv 647.68
Len 323.00 ft
K = 95

VPI +00.000
Elv 645.40
Len 220.00 ft
K = 266

VPI +70.000
Elv 646.55
Len 300.00 ft
K = 92

-4.00% +5.00% -1.39% DGR -2.22% -2.216% -2.91% DGR -0.400% +8.81% -9.69% -8.62% -0.46% -3.82% -0.13% -6.83% +5.37% +4.48% +3.75% +0.53% -0.47% DGR +2.5% +2.3% +1.1% +0.69% +3.66% +0.43% +0.50% DGR +10.8% DGR +25.83% +21.12% +21%

+75 Rt. 665.14
+50 Rt. 664.10
+25 Rt. 650.39
+65 Lt. 637.00
+20 Lt. 627.80
+00 Lt. 638.45
+05 Rt. 645.15
+84 Rt. 641.00
+33 Rt. 630.65
+92 Rt. 636.01
+65 Rt. 630.34
+50 Rt. 637.80
+15 Rt. 644.80
+50 Rt. 644.80
+20 Rt. 644.00
+40 Rt. 644.50
+00 Rt. 643.67
+65 Rt. 644.50
+00 Rt. 643.87
+50 Rt. 644.22
+66.88
+45.88
+35
+85
+82
+50 Rt. 645.70

Lt / Rt: V Ditch | UAC | Raylyn Rd. | DGR W/ Bench | V Ditch W/ Bench | VD W/ Bench | UAC | V Ditch | DGR | Prop. ENT | Ditch Grade | UAC | Prop. ENT | Ditch Grade | UAC | Prop. ENT | DGR | Burtons Furnace Rd. | VD | Prop. ENT | DGR | Prop. ENT | Durango Rd. | UAC | VD | Prop. ENT | UAC

FILE NO.	ENGLISH	DESIGN TEAM	J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER	NHSX-003-9(25)--3H-31	SHEET NUMBER	D.8

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PERU TWP.
T-90N R-2E
SEC. 31

JEFFERSON TWP.
T-90N R-1E
SEC. 36

+65.00
End Curb

Curve Data
Δ = 0° 37′ 22.52″ (LT)
T = 161.00
L = 321.25
R = 1,912.72
E = 6.76

Curve Data
Δ = 5° 57′ 39.95″ (LT)
T = 150.06
L = 299.51
R = 1,915.00
E = 5.87
e = 4.4%
x = 48′
L = 106′

Curve Data
Δ = 26° 37′ 58.25″ (LT)
T = 227.37
L = 446.53
R = 960.63
E = 26.54

Curve Data
Δ = 27° 56′ 20.23″ (LT)
T = 223.89
L = 438.86
R = 900.00
E = 27.43
e = 6%
x = 48′
L = 144′

Curve Data
Δ = 21° 41′ 28.88″ (LT)
T = 196.94
L = 389.17
R = 1,027.95
E = 18.70

Curve Data
Δ = 21° 02′ 49.47″ (LT)
T = 196.91
L = 389.38
R = 1,060.00
E = 18.13
e = 5.8%
x = 48′
L = 139′

Curve Data
Δ = 23° 03′ 24.82″ (RT)
T = 305.80
L = 603.32
R = 1,499.24
E = 30.87

Curve Data
Δ = 23° 41′ 51.69″ (RT)
T = 204.98
L = 404.09
R = 977.00
E = 21.27
e = 6%
x = 48′

PI Sta 227+23.85
PC Sta 229+18.88
PT Sta 229+22.97
PI Sta 231+21.50
PC Sta 232+71.56
PT Sta 234+21.01
PI Sta 236+44.90
PI Sta 238+59.88
PC Sta 242+26.06
PT Sta 244+22.97
PI Sta 246+15.45
PC Sta 247+97.51
PT Sta 249+56.04

+10 Prop. 24″ Type "C" Ent. W = 30′
+82 Prop. 24″ Type "C" Ent.
+65 Prop. 24″ Type "C" Ent. W = 15′
Prop. 24″ Uncl. Ent. Pipe
(REMOVE) (CMP Walls) DO NOT DISTURB ROCK WALL
(REMOVE) (UAC Walls)
+75 Prop. 24″ Type "C" Ent. W = 30′
+50 Prop. 24″ Type "C" Ent. W = 28′
+91 Prop. 24″ Type "C" Ent. W = 24′
+13 Prop. 24″ Type "C" Ent. W = 30′
Prop. 24″ Uncl. Ent. Pipe
Prop. 24″ Uncl. Ent. Pipe

Sta. 233+33.25
Install 36″ X 56′ RCP
See Cross Section

(REMOVE)
Sta. 1203+95.59
SKEW 4 RT AH
2.0′ X 2.0′ X 62.0′ RCB
W/ 20′ Flume Outlet Extension
D.A. = 13 AC - MTS

Sta. 237+20.00
Install 42″ X 98′ RCP
Skew = 15° Rt. Ahd.

(REMOVE)
Sta. 1208+22.53
SKEW 2 LT AH
4.0′ X 4.0′ X 66.6′ RCB
D.A. = 19 AC - MTS

Prop. 24″
Uncl. Ent. Pipe

(Remove)
Sta. 1214+76.28
SKEW 30 RT AH
4.0′ X 6.0′ X 59.4′ Cattle Pass
D.A. = 28 AC - MTS

Sta. 244+25.00
Install 48″ x 64′ RCP

(Remove)
Sta. 1224+25.98
0 Skew
2.0′ X 2.0′ X 44.2′ RCB
D.A. = 5 AC - H

Sta. 253+50.00
Install 24″ x 66′ RCP

0 100 FEET

IA 3

VPI +02.57
Elv 666.26
Len 378.00 ft
K = 84

VPI +51.70
Elv 662.67
Len 250.00 ft
K = 89

VPI +28.72
Elv 668.21
Len 200.00 ft
K = 75

VPI +21.76
Elv 660.45
Len 300.00 ft
K = 438

VPI +35.42
Elv 653.59
Len 200.00 ft
K = 106

+05 -4.00%
+10 +6.85%
-4.00%
-0.80%
+3.70%
-0.57% DGR
+2.00%
+4.86% DGR
+14.05% +8.01%
+75
+90.85 -1.00%
+2.55%
-1.38%
+15.92%
+50.50
+2.77%
-0.65%
-4.78%
-0.21%
+3.61%
+3.70%
+13.33 -6.07%
-1.34%
-3.86% DGR
-0.88%
+0.21%

+00 Rt. 663.16
+00 Rt. 664.81
+70 Rt. 664.35
+50 Rt. 661.04
+31 Rt. 660.00
+35 Rt. 660.00
+33 Rt. 657.10
+40 Lt. 654.10
+30 Lt. 652.00
+00 Lt. 649.80
+10 Lt. 650.00
+50 Rt. 661.12
+60 Rt. 656.42
+17 Rt. 656.30
+20 Rt. 654.60
+50 Rt. 660.80
+40 Rt. 657.20
+27 Rt. 654.60
+00 Rt. 654.83
+50 Rt. 652.90
+00 Rt. 652.50
+50 Rt. 652.00
+30 Rt. 650.50
+00 Rt. 649.00
+28 Rt. 647.05
+50 Rt. 647.00

690 680 670 660 650 640 630 620

Lt: UAC | Prop. ENT | UAC | V Ditch | Ditch Grade | V Ditch | DGL | UAC | Prop. ENT | V Ditch | UAC | Ditch Grade | Prop. ENT | DGR | UAC | Prop. ENT | V Ditch | Ditch Grade | Prop. ENT | Ditch Grade
Rt: UAC | Prop. ENT | 3′ Ditch | DGR

652.29 653.21 654.14 655.06 655.99 656.91 657.84 658.76 659.68 660.54 661.31 662.02 662.65 663.21 663.69 664.10 664.43 664.69 664.87 664.98 665.02 664.98 664.86 664.68 664.48 664.28 664.08 663.88 663.68 663.51 663.41 663.38 663.42 663.53 663.71 663.96 664.28 664.67 665.13 665.63 666.13 666.60 666.99 667.30 667.52 667.66 667.71 667.69 667.58 667.42 667.26 667.09 666.93 666.77 666.61 666.44 666.28 666.12 665.96 665.79 665.63 665.47 665.31 665.14 664.98 664.82 664.66 664.49 664.33 664.17 664.01 663.84 663.68 663.52 663.36 663.19 663.03 662.87 662.71 662.54 662.38 662.22 662.06 661.89 661.73 661.57 661.41 661.23 661.05 660.85 660.63 660.41 660.16 659.91 659.63 659.35 659.05 658.73 658.41 658.07 657.74 657.41 657.07 656.74 656.40 656.07 655.74 655.40 655.07 654.75 654.48 654.26 654.11 654.02 653.98 654.01 654.09 654.22 654.36 654.50

225 230 235 240 245 250

FILE NO.	ENGLISH	DESIGN TEAM	J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER	NHSX-003-9(25)--3H-31	SHEET NUMBER	D.9

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PI Sta 262+31.13

PARADISE VALLEY RD

Sta. 259+44.00
Install 88" x 54" X 54' LCP

RESTRICTED AREA
NO ACCESS

(REMOVE)
Sta. 1230+12.09
0 Skew
6.0' X 4.0' X 39.9' RCB
D.A. = 80 AC - MTS

Curve Data
Δ = 100° 31' 32.44" (RT)
T = 1,275.09
L = 1,859.77
R = 1,060.00
E = 598.15
e = 5.8%
x = 48'
L = 139'

Curve Data
Δ = 64° 40' 41.70" (RT)
T = 603.45
L = 1,075.93
R = 953.12
E = 174.97

Curve Data
Δ = 12° 47' 25.92" (RT)
T = 173.20
L = 344.96
R = 1,545.27
E = 9.68

(REMOVE)
Sta. 1234+34.04
0 Skew
2.0' X 2.0' X 42.2' RCB
D.A. = 5 AC - MTS

Sta. 263+50.00
Install 24" X 60' RCP

POT Sta 269+10.02

PT Sta 268+15.81

+15 Prop. Type "C" Ent. W = 30"

+25.00
Begin Curb

+75.00
End Curb

(REMOVE)
Sta. 1241+94.23
SKEW 11 LT AH
3.0' X 3.0' X 54.9' RCB
D.A. = 15 AC - MTS

PC Sta 272+42.16

Sta. 271+25.00
Install 27" X 44" X 54' LCP

JEFFERSON TWP.
T-90N R-1E
SEC. 36

Curve Data
Δ = 53° 50' 13.94" (LT)
T = 448.70
L = 830.38
R = 883.72
E = 107.39

Curve Data
Δ = 53° 50' 13.94" (LT)
T = 448.33
L = 829.70
R = 883.00
E = 107.30
e = 6%
x = 48'
L = 144'

+18 Prop. Type "C" Ent. W = 30"

PT Sta 280+14.98

+18 Prop. Type "C" Ent. W = 24" Prop. Ent. Pipe

Close

(REMOVE)
Sta. 1250+28.90
SKEW 16 RT AH
10.0' X 6.0' X 58.0' RCB
21.7' CONC ARCH EXTENSION
D.A. = 186 AC - MTS

+52 Prop. Type "C" Ent. W = 30" Prop. 24" Uncl. Ent. Pipe

PI Sta 276+90.50

Sta. 279+64.00
Install 84" X 92" RCP
Skew = 15° Rt. Ahd.

PC Sta 285+68.51

24" Pipe

0 FEET 100

IA 3

VPI +47.95
Elv 656.41
Len 200.00 ft
K = 190

VPI +78.36
Elv 654.26
Len 200.00 ft
K = 522

VPI +41.67
Elv 653.49
Len 240.59 ft
K = 157

VPI +19.35
Elv 660.22
Len 279.41 ft
K = 96

VPI +41.70
Elv 652.39
Len 550.00 ft
K = 110

VPI +37.17
Elv 669.73
Len 432.00 ft
K = 96

+0.55% +2.60% DGR +11 Rt. 647.13 +50 Rt. 652.46 +17 Rt. 652.50 -1.72% DGR +40 Rt. 649.20 +0.89% DGR +25 Rt. 650.85 -0.50% -1.04% DGR +00 Lt. 648.00 +50 Rt. 648.50 -4.00% -0.50% Lt. Ditch Grade +50 Lt. 646.00 -0.12% +0.39% Rt. Ditch Grade +75 Lt. 644.38 0% +2.97% DGL +80 Lt. 644.38 +50 Lt. 652.40 +1.41% +18 Rt. 650.74 +4.59% DGR +25 Rt. 655.69 +3.32% +10.36% +50 Rt. 654.87 +75 Rt. 656.44 +25 Rt. 652.28 -1.50% +20 Rt. 653.00 -2.24% DGR +25 Rt. 651.43 +00 Rt. 649.00 -9.48% -0.2% +65 Rt. 642.84 0.42% +85 Rt. 642.80 +45 Lt. 640.68 +49 Lt. 640.68 +50 Lt. 640.70 +3.50% +15 -4.01% +6.35% -4.00% +52 +1.44% +18 +17.10% +9.82% -1.62%

690 680 670 660 650 640 630 620

Lt
Rt

UAC | Paradise Valley Rd. | UAC | Ditch Grade | UAC Ditch Grade | UAC | Prop. DGL | Prop. ENT | UAC

Ditch Grade | V Ditch | Ditch Grade | V Ditch | Prop. ENT | Ditch Grade | Prop. ENT | DGR | V Ditch

654.64 654.77 654.91 655.05 655.19 655.32 655.46 655.60 655.74 655.87 655.99 656.08 656.13 656.15 656.14 656.09 656.01 655.90 655.78 655.65 655.53 655.40 655.28 655.15 655.03 654.90 654.78 654.66 654.55 654.45 654.37 654.30 654.23 654.19 654.15 654.12 654.09 654.06 654.03 654.00 653.97 653.94 653.91 653.89 653.86 653.83 653.80 653.77 653.74 653.71 653.68 653.65 653.62 653.62 653.66 653.73 653.85 654.00 654.20 654.43 654.71 655.02 655.37 655.72 656.07 656.43 656.78 657.13 657.48 657.84 658.19 658.52 658.79 658.99 659.13 659.20 659.15 659.02 658.83 658.58 658.26 657.89 657.51 657.14 656.76 656.39 656.07 655.79 655.58 655.42 655.32 655.28 655.29 655.36 655.49 655.67 655.91 656.21 656.56 656.98 657.44 657.97 658.55 659.19 659.88 660.63 661.44 662.30 663.14 663.90 664.61 665.24 665.82 666.32 666.76 667.14 667.45 667.70 667.88

255 260 265 270 275 280

FILE NO.	ENGLISH	DESIGN TEAM	PROJECT NUMBER	SHEET NUMBER
		J1a \ Thiel \ Altenhofen — DUBUQUE COUNTY	NHSX-003-9(25)--3H-31	D.10

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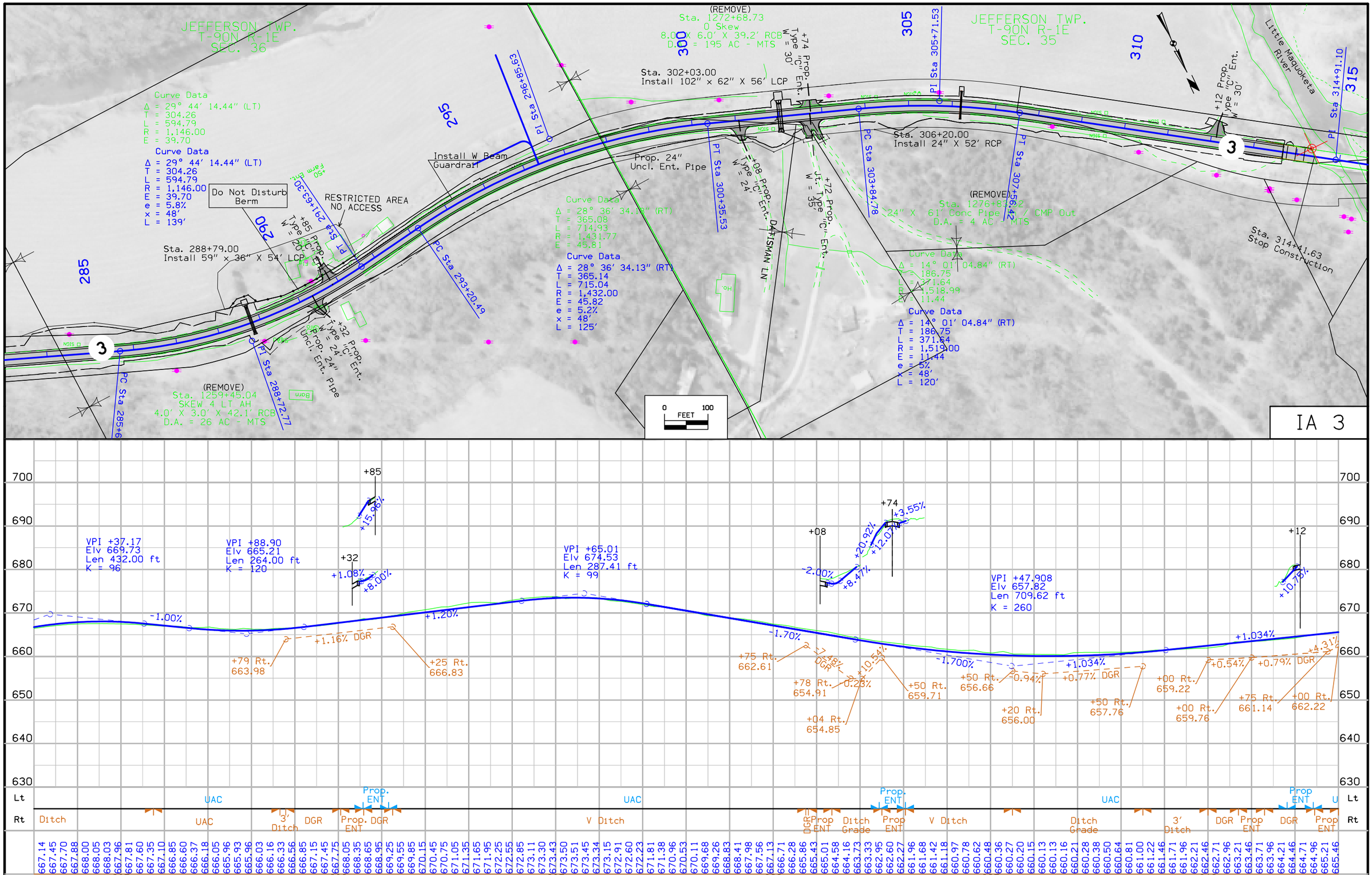

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER D.11

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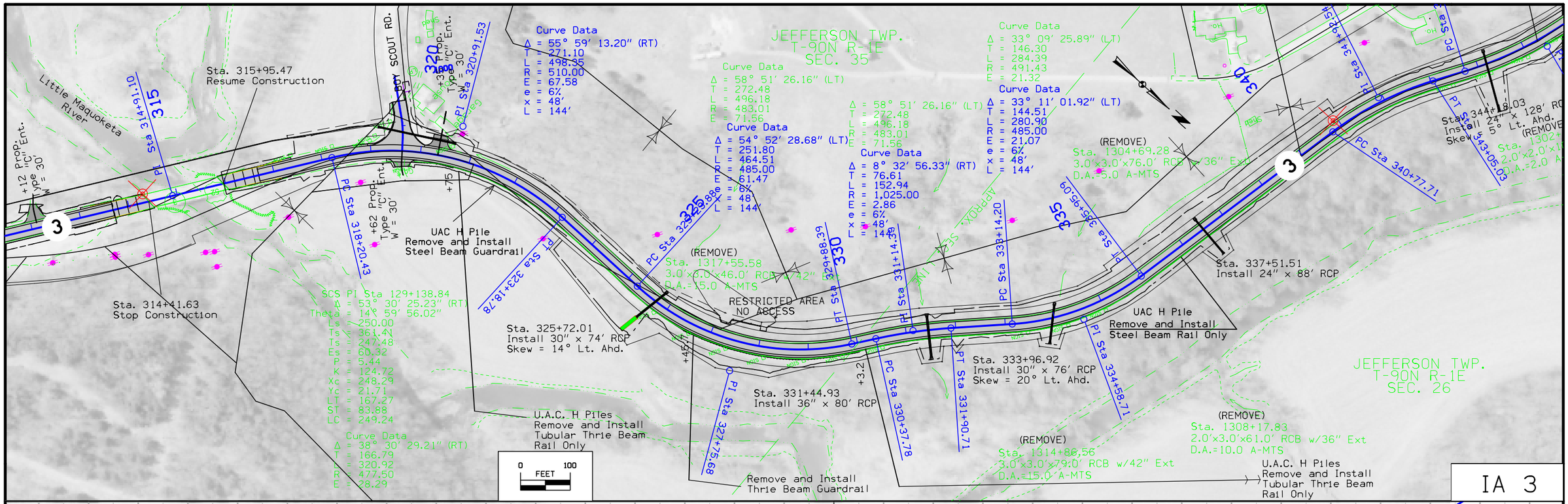

FILE NO.	ENGLISH	DESIGN TEAM	DUBUQUE COUNTY	PROJECT NUMBER	SHEET NUMBER
		J1a \ Thiel \ Altenhofen		NHSX-003-9(25)--3H-31	D.12

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JEFFERSON TWP.
T-90N R-1E
SEC. 35

JEFFERSON TWP.
T-90N R-1E
SEC. 26

APPROX. SEC. LINE

Curve Data
Δ = 20° 02′ 16.32″ (RT)
T = 114.83
L = 227.32
R = 650.00
E = 10.07
e = 6%
x = 48′
L = 144′

Curve Data
Δ = 20° 14′ 46.13″ (RT)
T = 117.61
L = 232.77
R = 658.73
E = 10.42

Curve Data
Δ = 26° 44′ 03.94″ (LT)
T = 173.20
L = 340.09
R = 728.87
E = 20.30

Curve Data
Δ = 26° 27′ 09.53″ (LT)
T = 172.75
L = 339.34
R = 735.00
E = 20.03
e = 6%
x = 48′
L = 144′

Curve Data
Δ = 30° 51′ 31.62″ (RT)
T = 155.10
L = 302.67
R = 561.97
E = 21.01

Curve Data
Δ = 30° 27′ 51.84″ (RT)
T = 145.68
L = 284.46
R = 535.00
E = 19.48
e = 6%
x = 48′
L = 144′

CARMEN OAKS DR

PC Sta 340+77.11
PI Sta 341+92.54
PC Sta 343+72.37
PT Sta 343+05.03
PI Sta 345+45.11
PI Sta 347+11.70
PT Sta 348+96.91
PC Sta 347+54.24
PT Sta 350+38.70

Sta. 344+18.03
Install 24″ x 128′ RCP
Skew = 5° Lt. Ahd.
(REMOVE)
Sta. 1302+10.82
2.0′x2.0′x105′ RCB w/30″ Ext
D.A.=2.0 A-MTS

UAC H Pile
Remove and
Install Tubular
Thrie Beam
Rail Only

Sta. 346+73.78
Install 30″ x 136′ RCP
Skew = 24° Lt. Ahd.
(REMOVE)
Sta. 1296+41.09
3.0′x3.0′x101′ RCB w/42″ Ext
D.A.=12 A-MTS

+69 Prop. Type "C" Ent. W = 24′

+69 Prop. Type "C" Ent. W = 24″ Prop. Uncl. Ent. Pipe

Sta. 358+00.00
End Project

PDT Sta 363+43.91

0 100 FEET

IA 3

VPI +11.49
Elv 826.71
Len 600.00 ft
K = 1428

+6.00%
+6.08%
+7.98% LDG
+5.58%
+5.20% DGR
+50 Lt. 820.00
+75 Lt. 821.50
+93 Lt. 820.75
+50 Lt. 825.30
+35 Rt. 830.00

VPI +91.61
Elv 864.66
Len 200.00 ft
K = 52

+5.58%
+5.20% DGR
+6.50% DGR
+2.29% DGR
+1.71%
+00 Rt. 854.20
+70 Rt. 858.75
+75 Rt. 870.33
End Project
Sta. 358+00.00
Elev. 871.24
+69.65
-2.00%
+10.26%

Lt
Rt
2′ V Ditch
Ditch Grade
UAC
Carmen Oaks Dr.
Prop. ENT

779.52 781.02 782.52 784.02 785.52 787.02 788.52 790.02 791.52 793.02 794.52 796.02 797.52 799.02 800.52 802.02 803.52 805.02 806.52 808.02 809.52 811.02 812.51 814.00 815.48 816.96 818.43 819.90 821.36 822.83 824.28 825.73 827.18 828.62 830.06 831.50 832.93 834.35 835.77 837.19 838.60 840.01 841.41 842.81 844.21 845.60 847.00 848.39 849.79 851.18 852.58 853.97 855.37 856.76 858.16 859.54 860.84 862.01 863.06 864.00 864.81 865.50 866.07 866.52 866.95 867.38 867.81 868.23 868.66 869.09 869.52 869.95 870.38 870.80 871.23 871.66 872.09 872.52

340 345 350 355 370

FILE NO.	ENGLISH	DESIGN TEAM	J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER	NHSX-003-9(25)--3H-31	SHEET NUMBER	D.13

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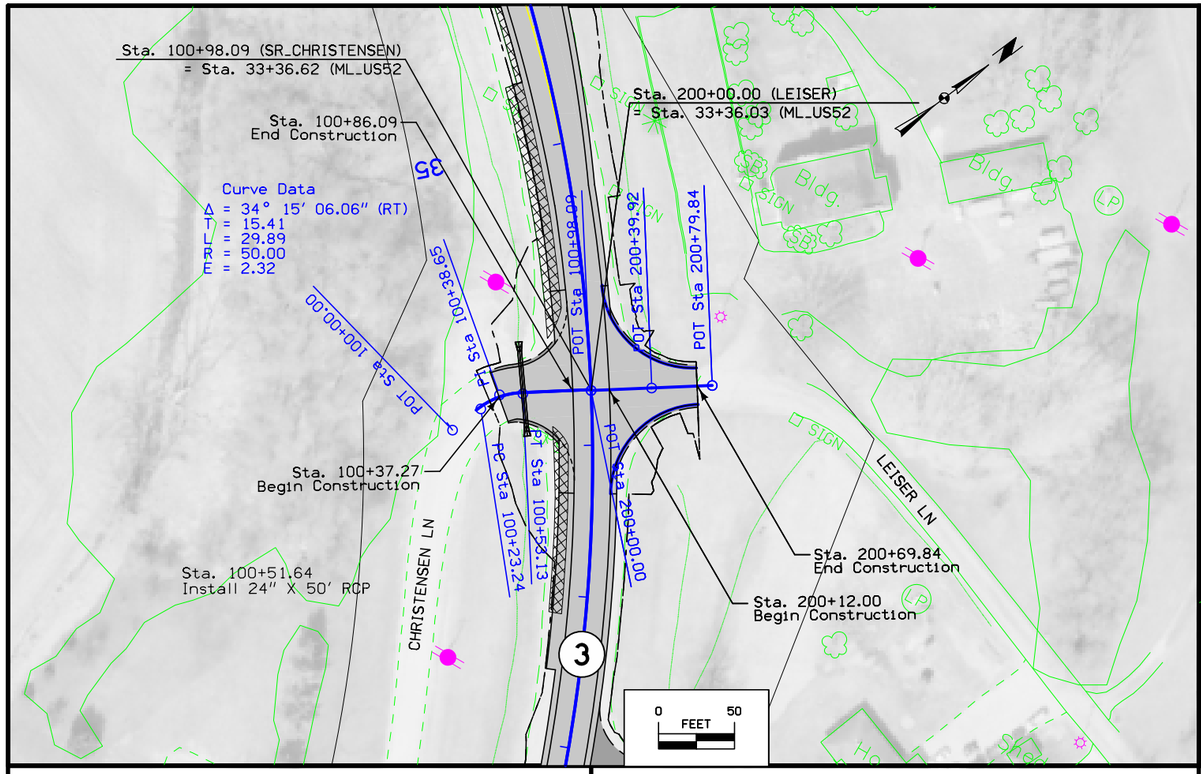
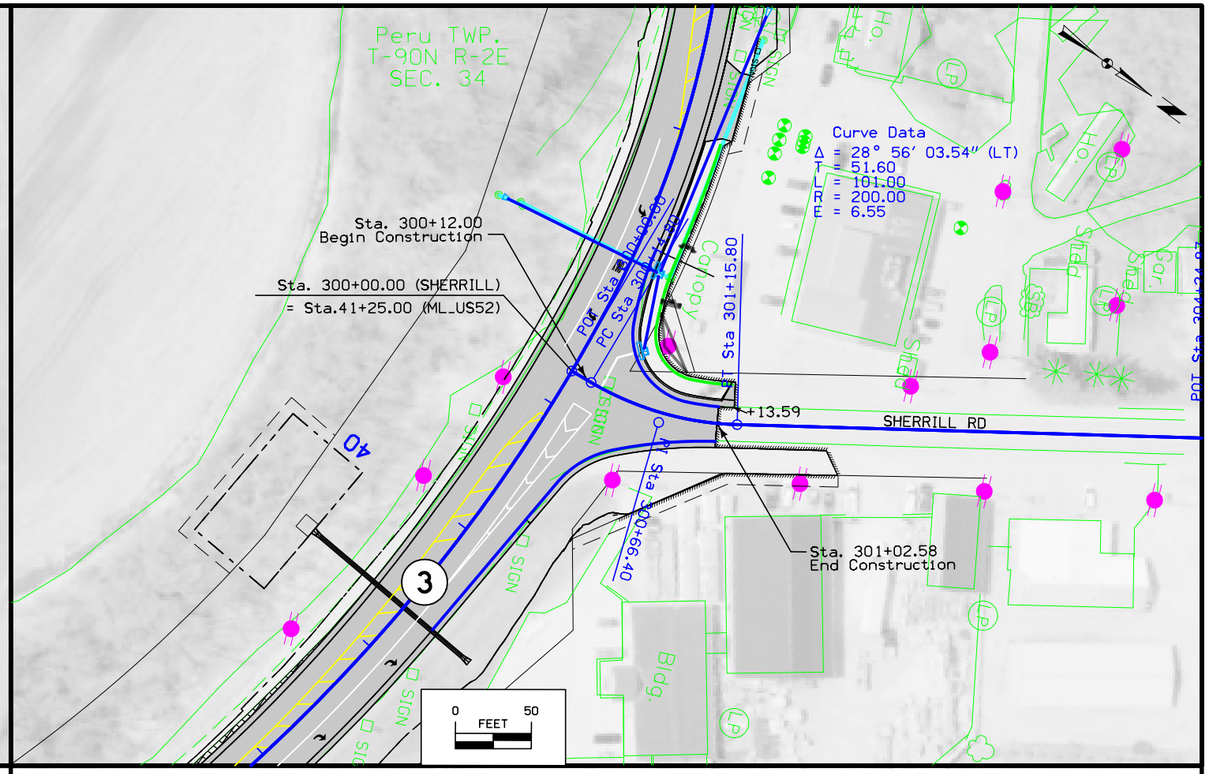
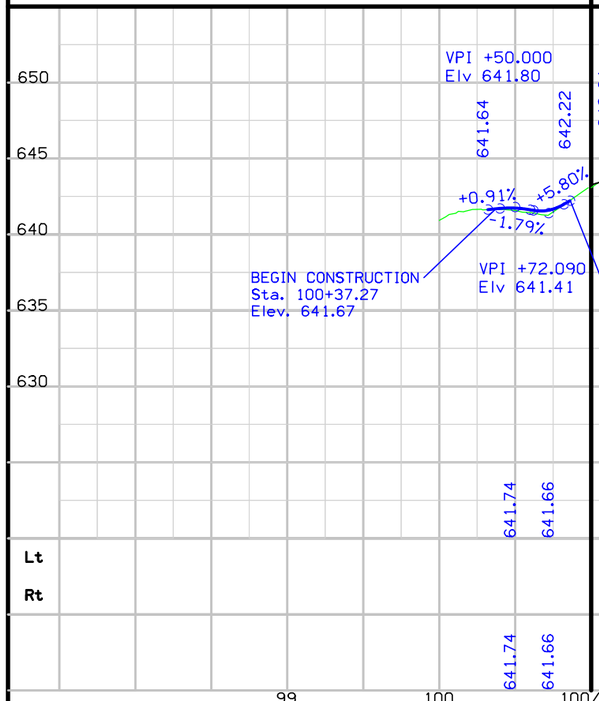


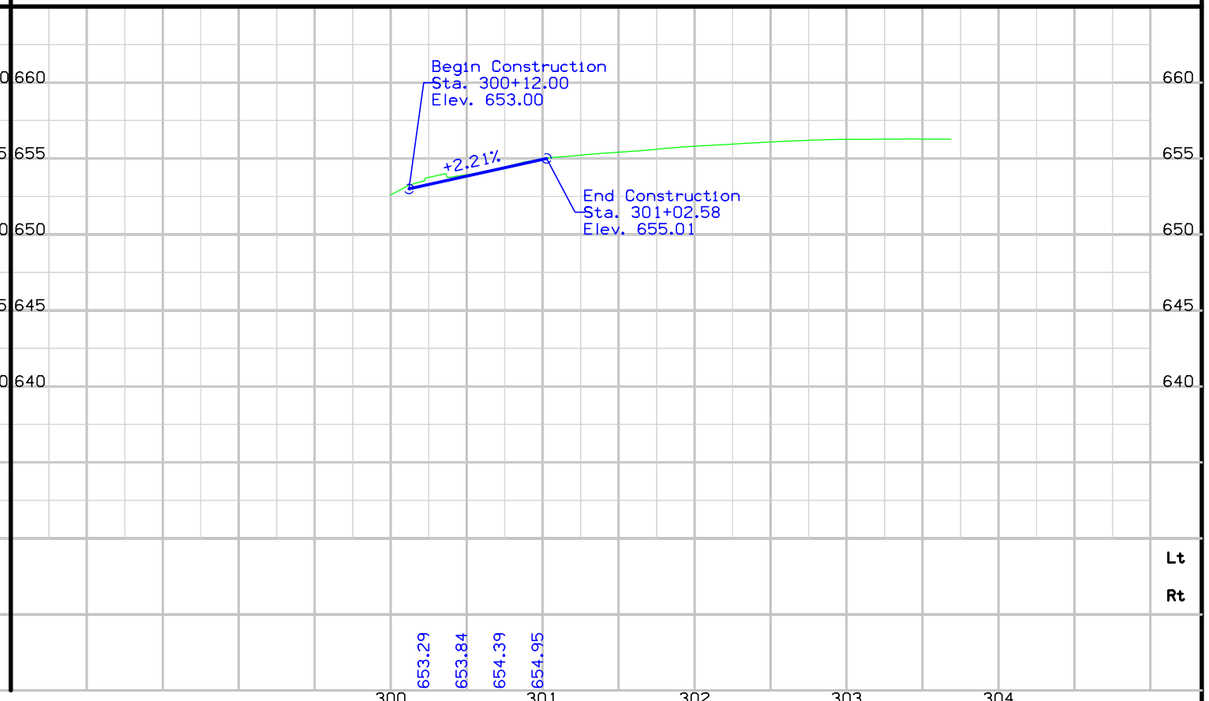


Christensen Ln.



Leiser Ln.

Sherrill Rd. (C9Y)



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER E.1

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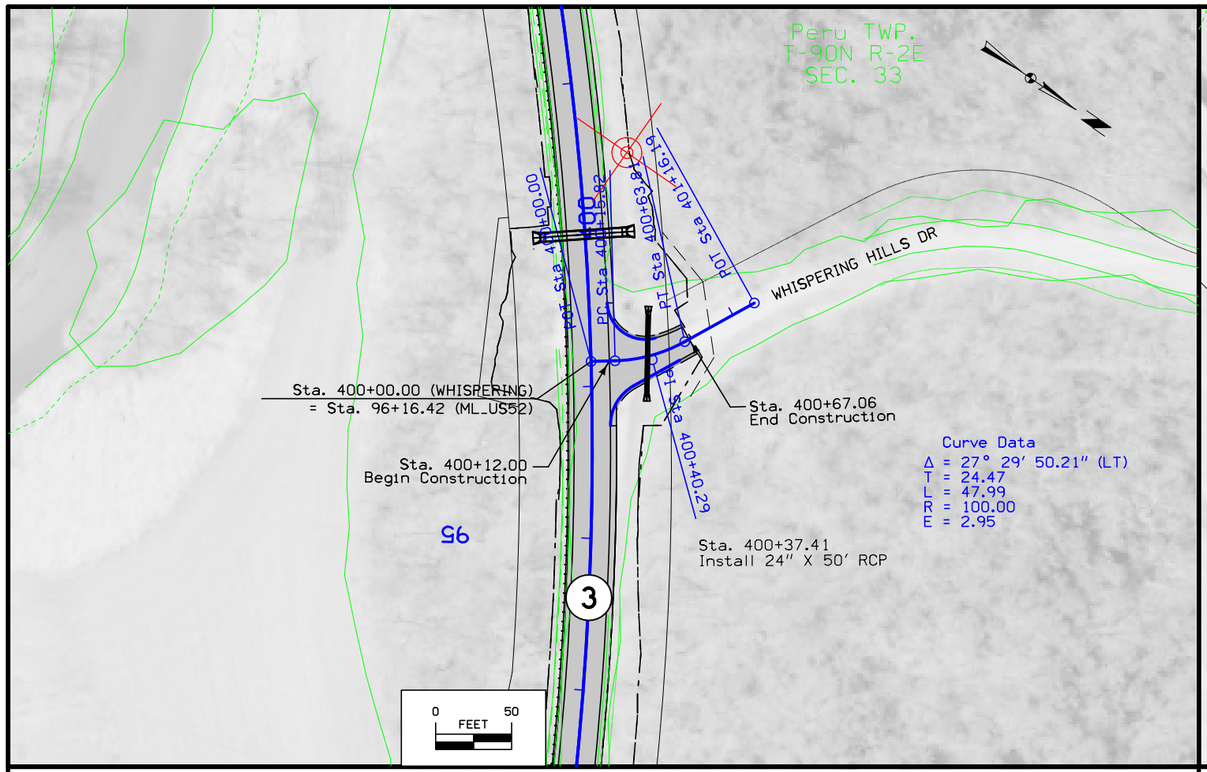
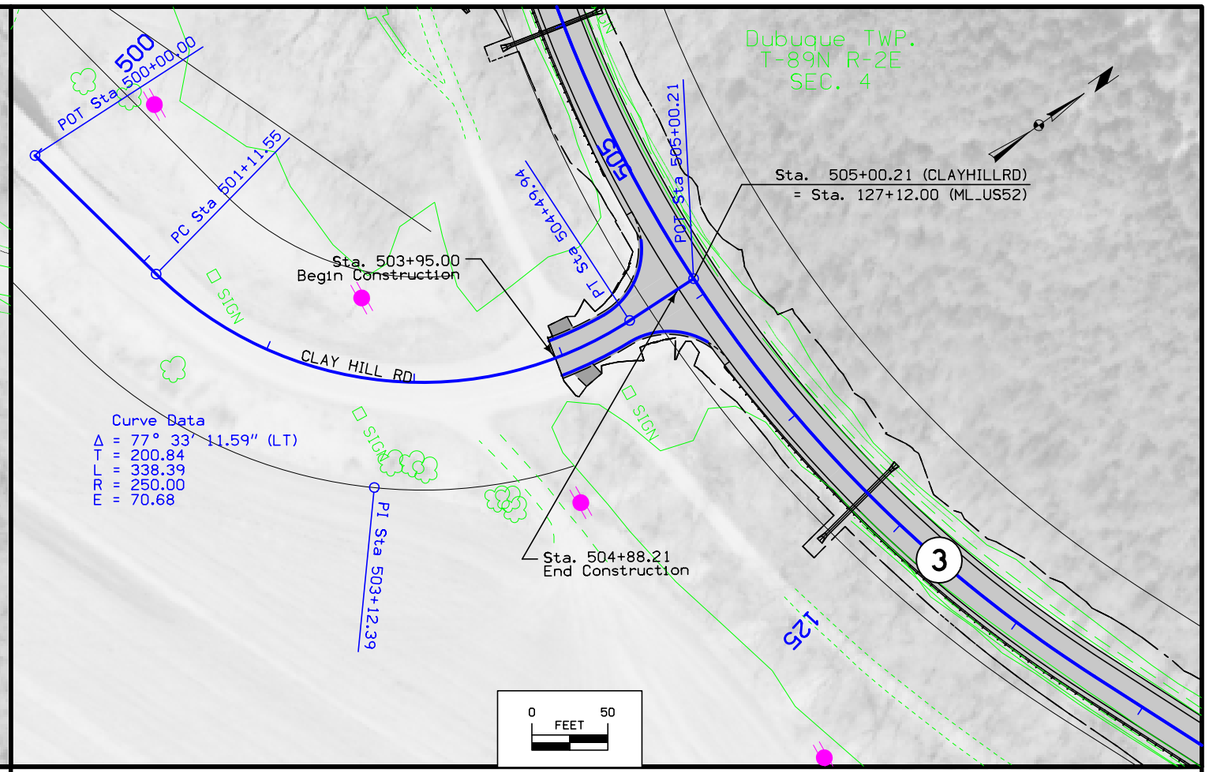
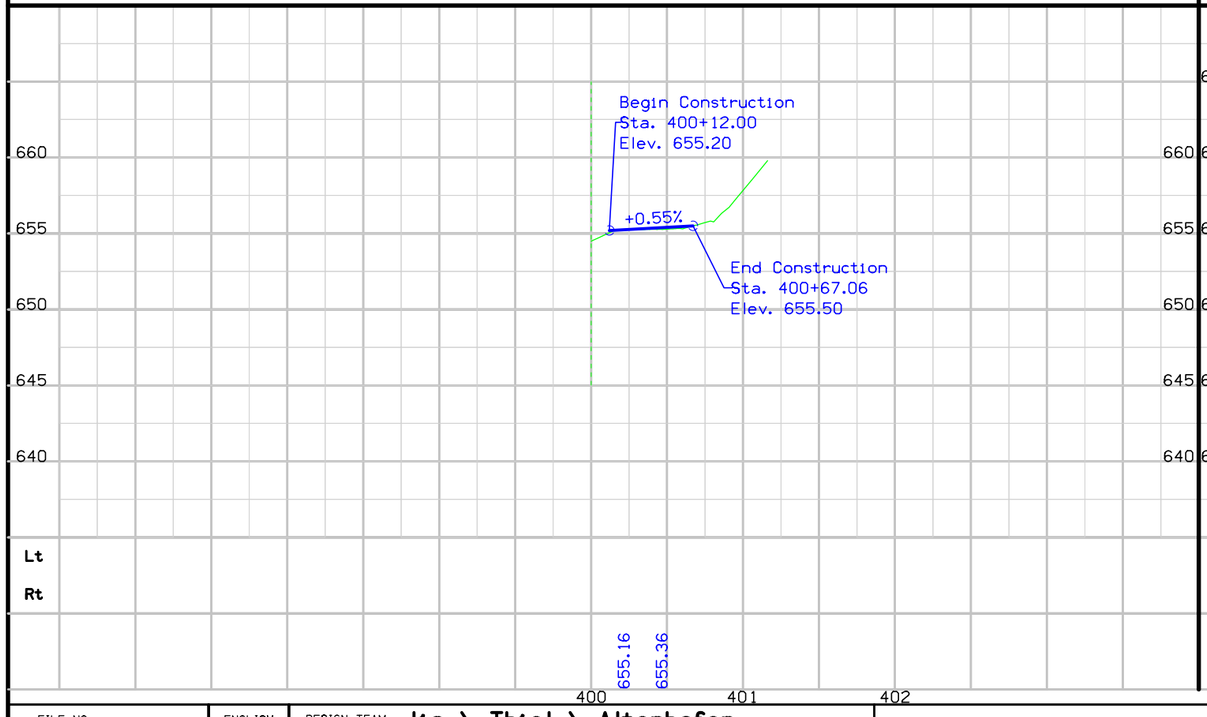
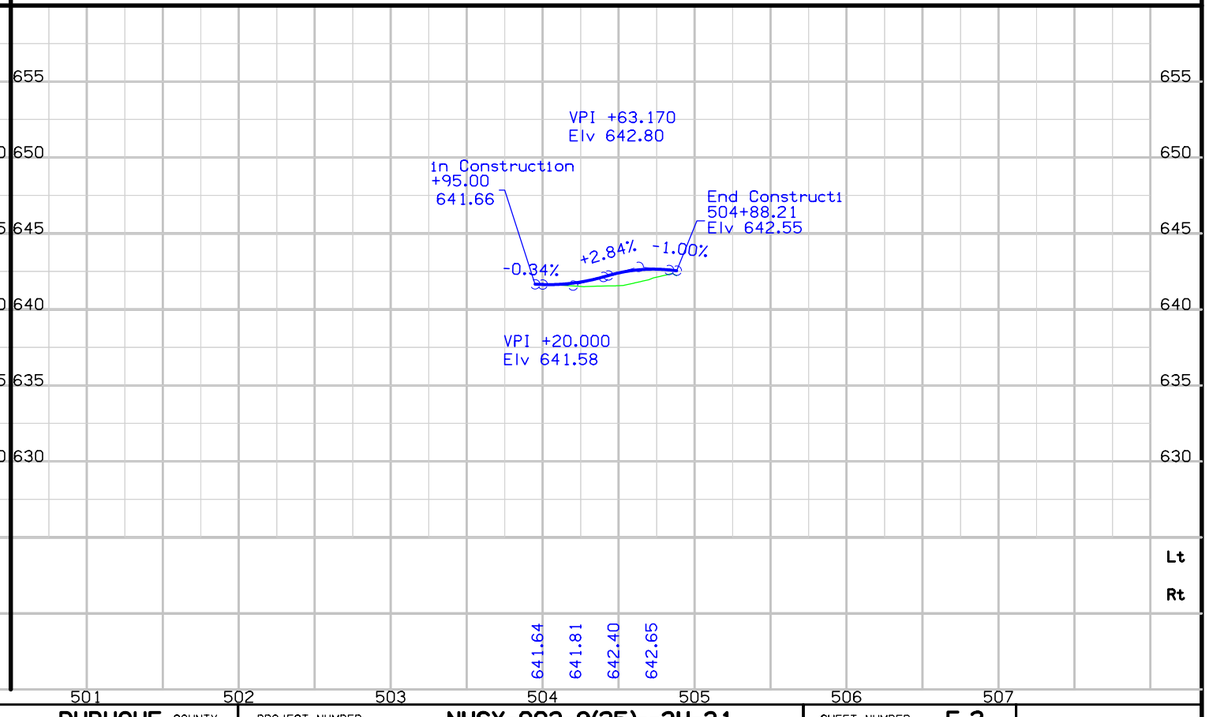




Whispering Hills Dr.



Clay Hill Rd.



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER E.2

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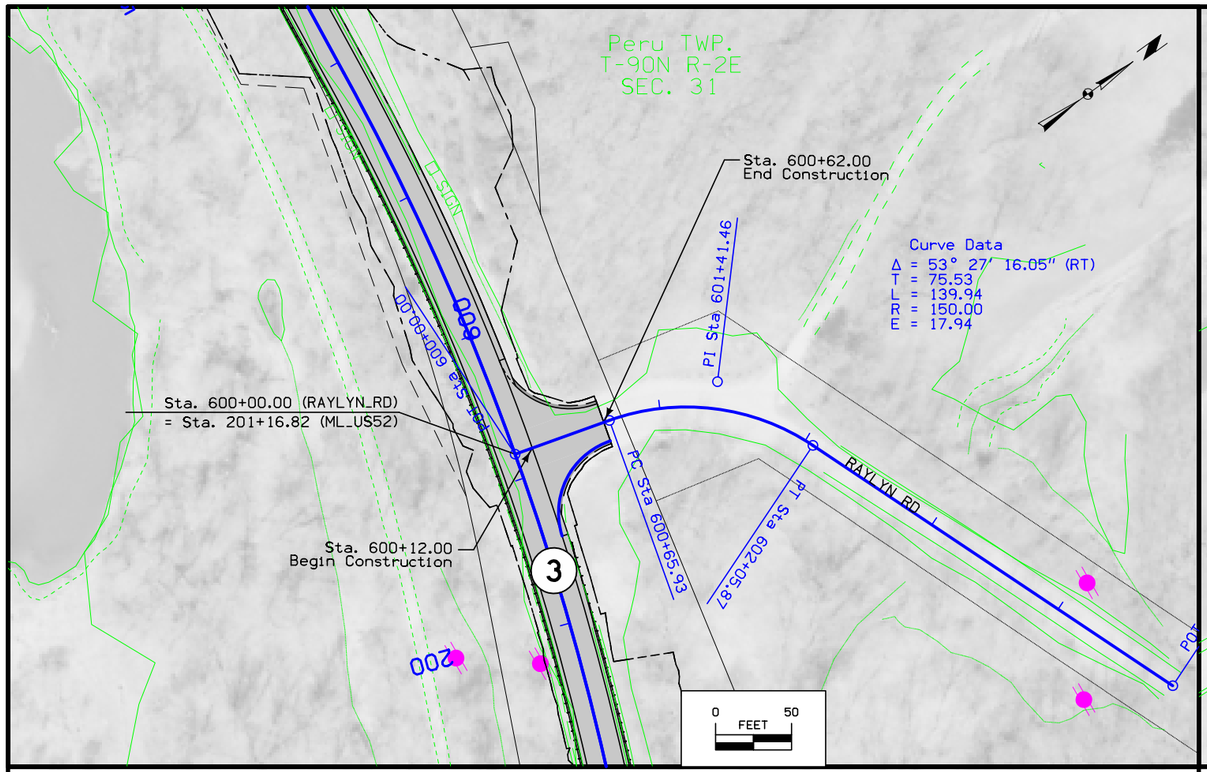
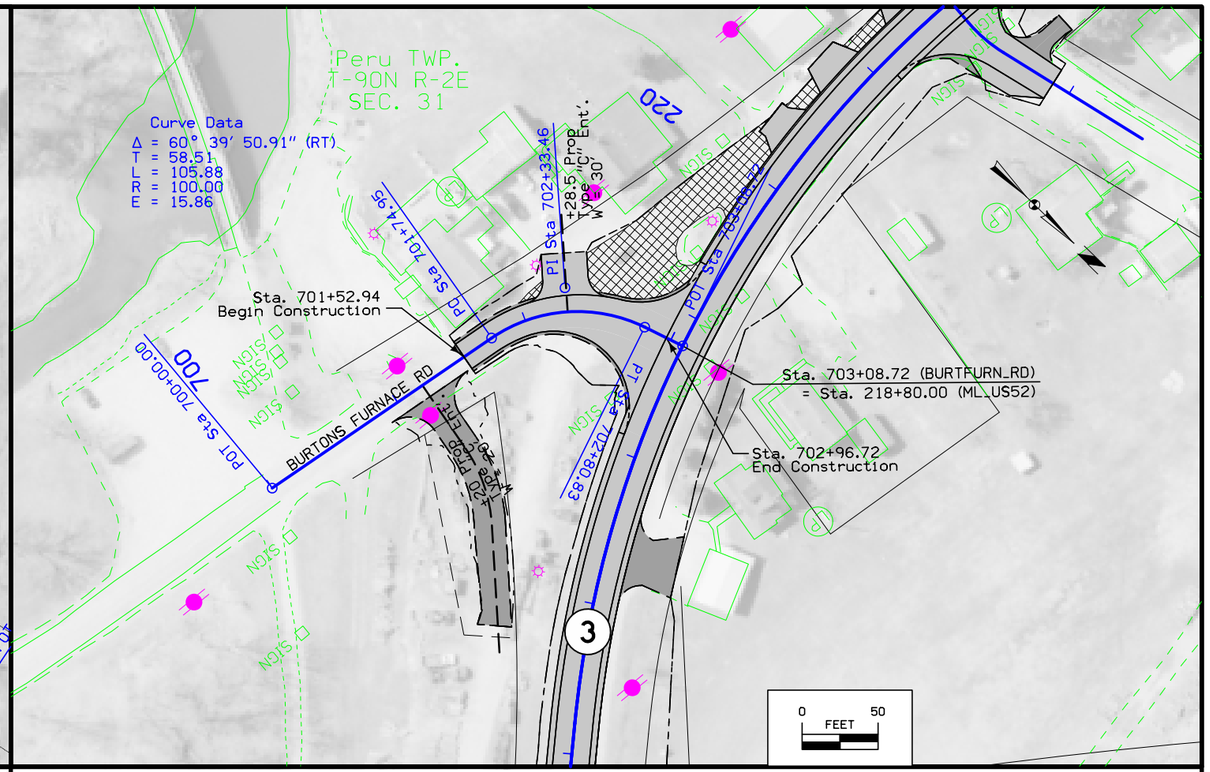
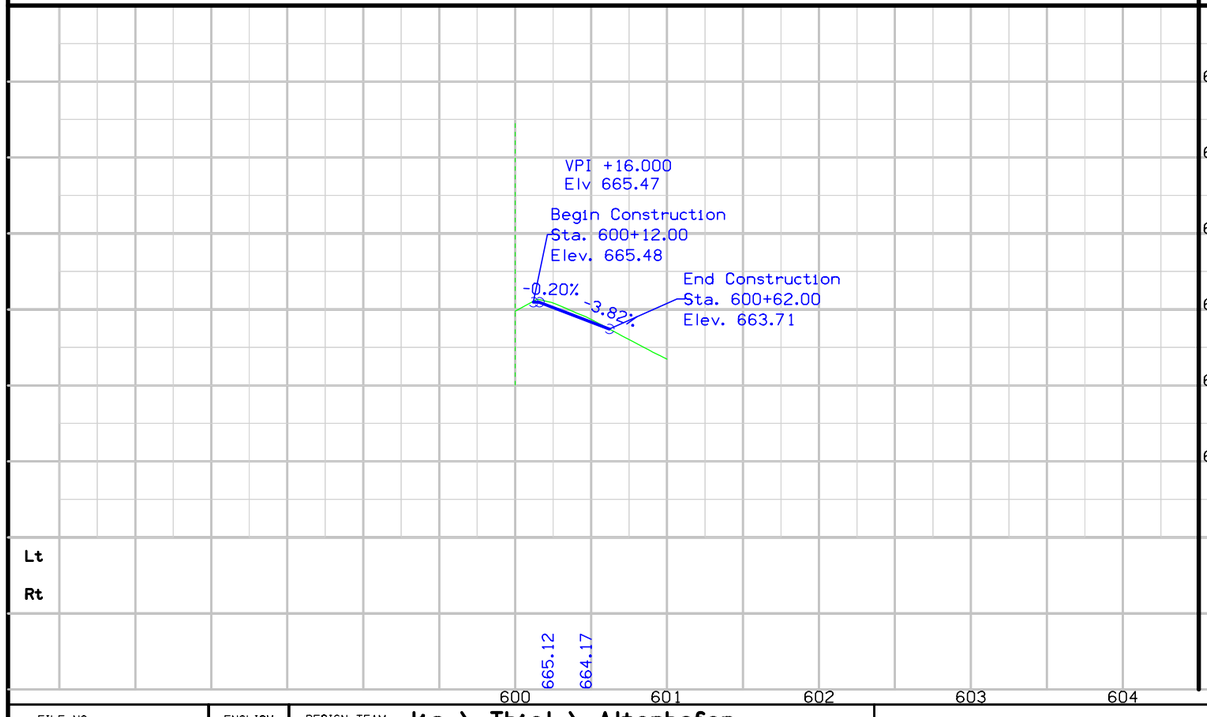
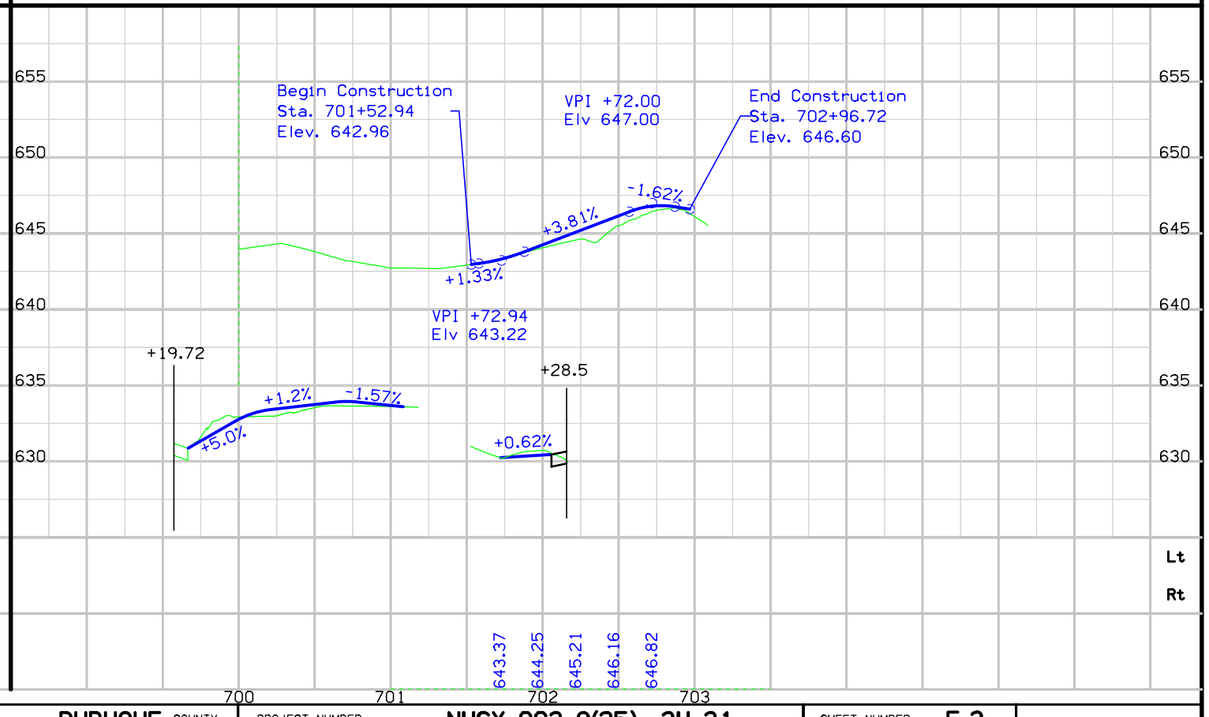




Raylyn Rd.



Burtons Furnace Rd.



FILE NO.	ENGLISH	DESIGN TEAM	Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER	NHSX-003-9(25)--3H-31	SHEET NUMBER	E.3

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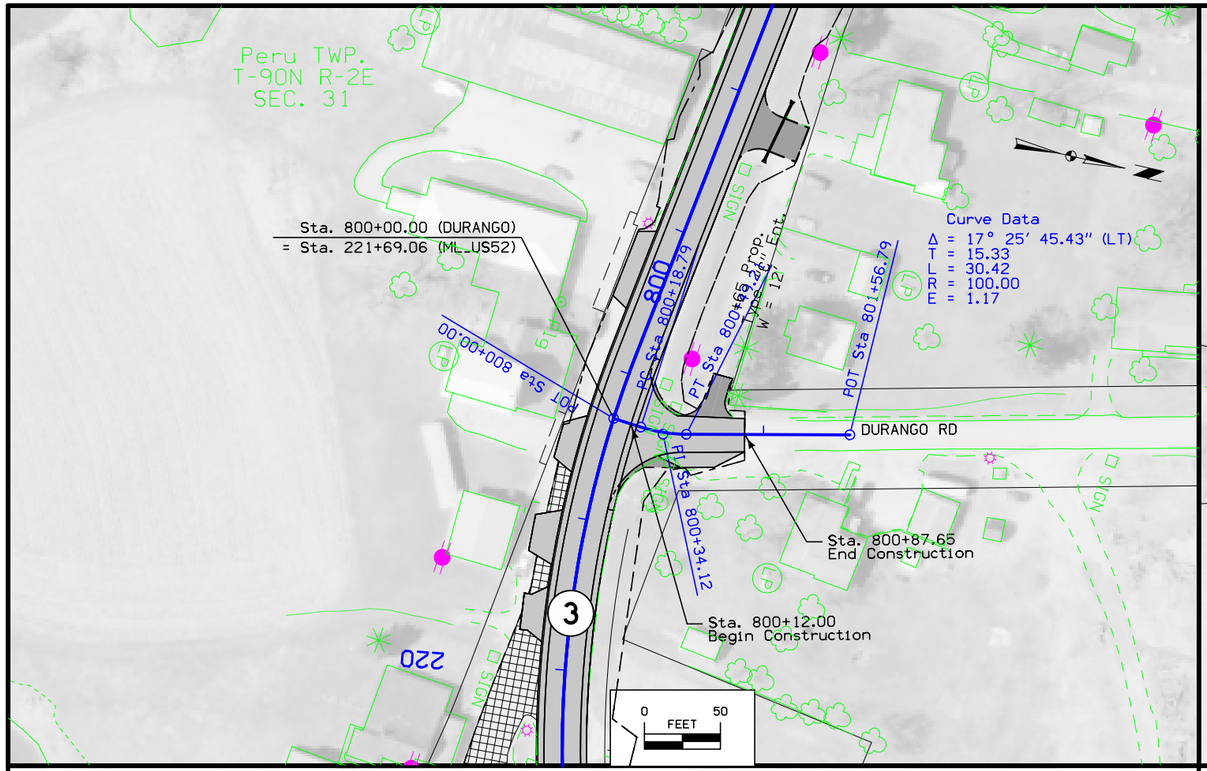
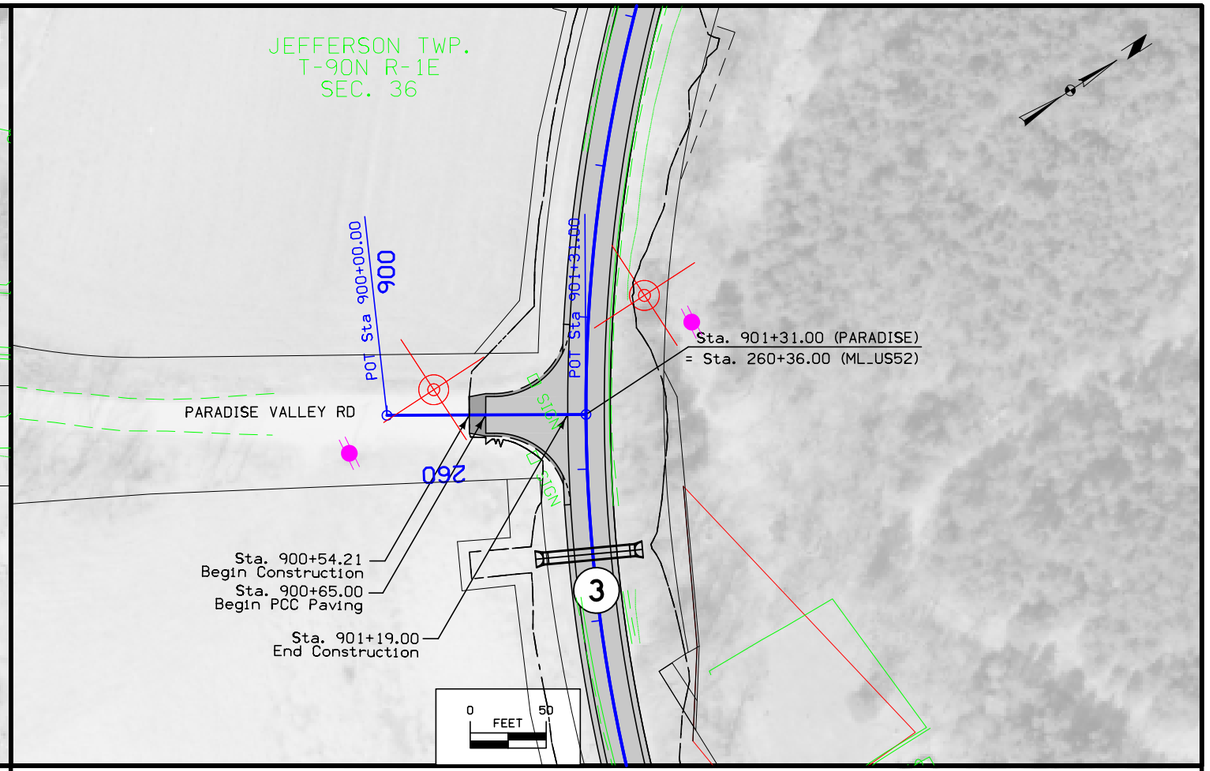
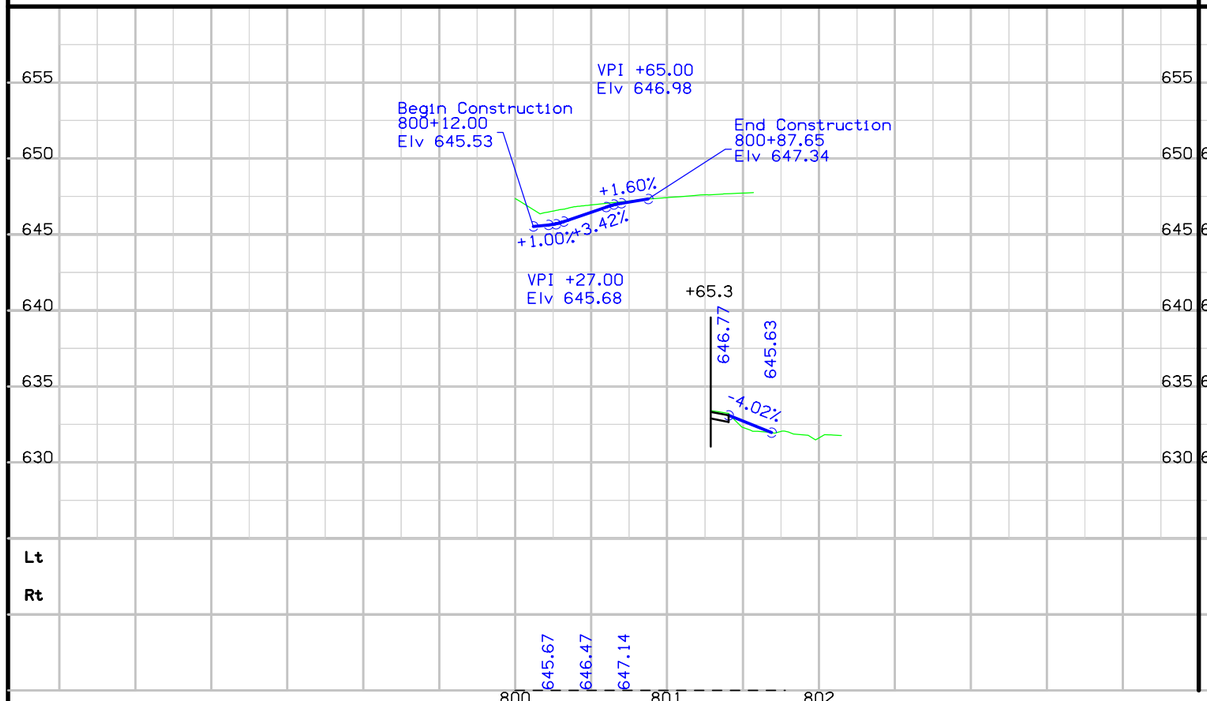
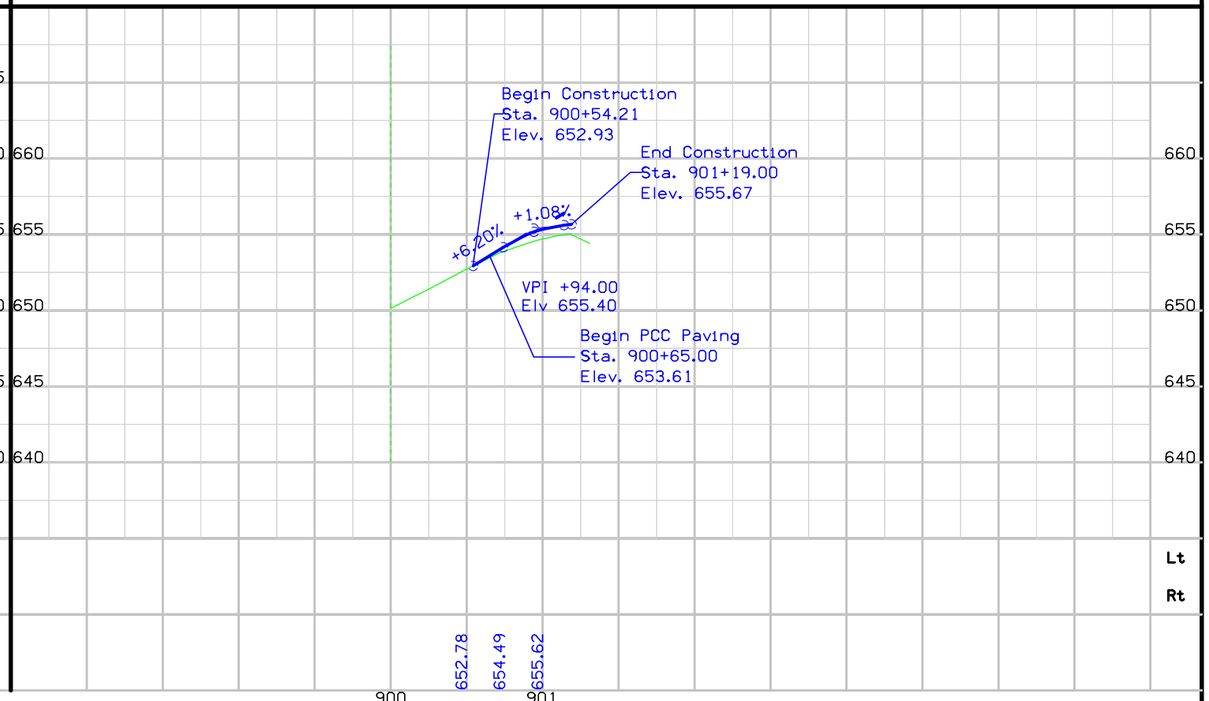




Durango Rd.



Paradise Valley Rd.



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER E.4

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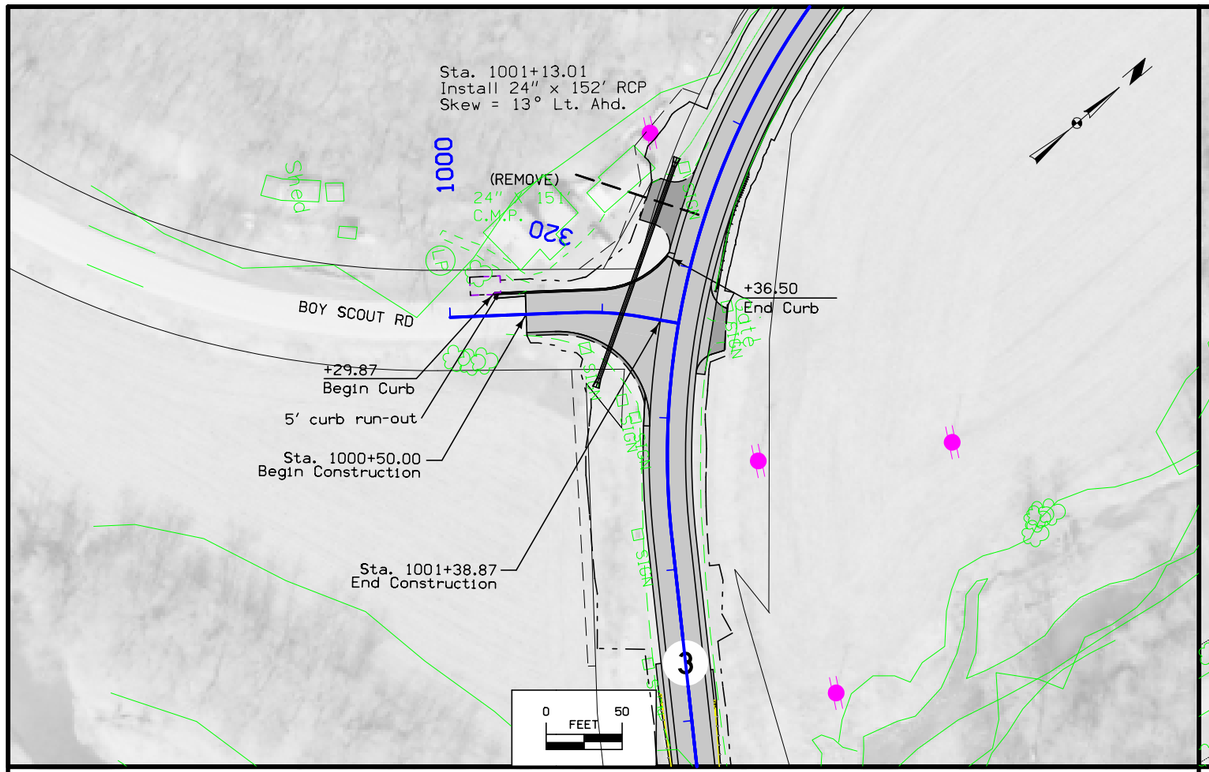
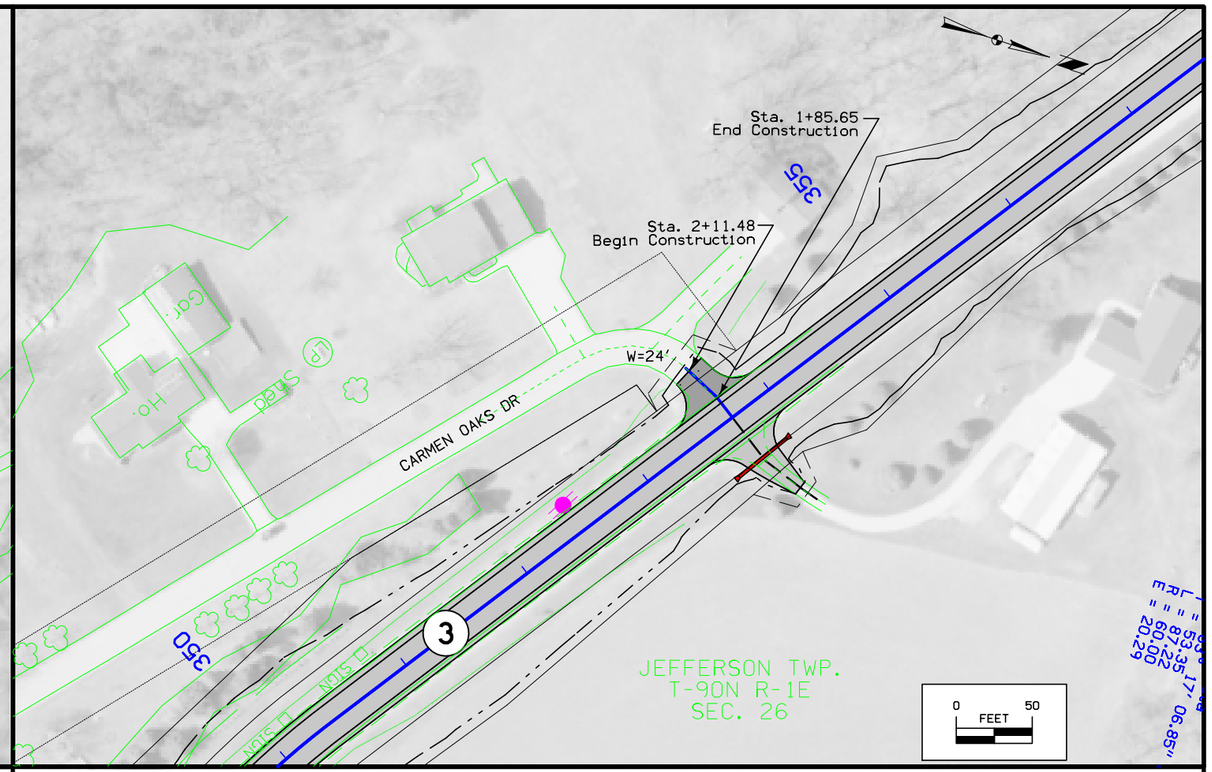
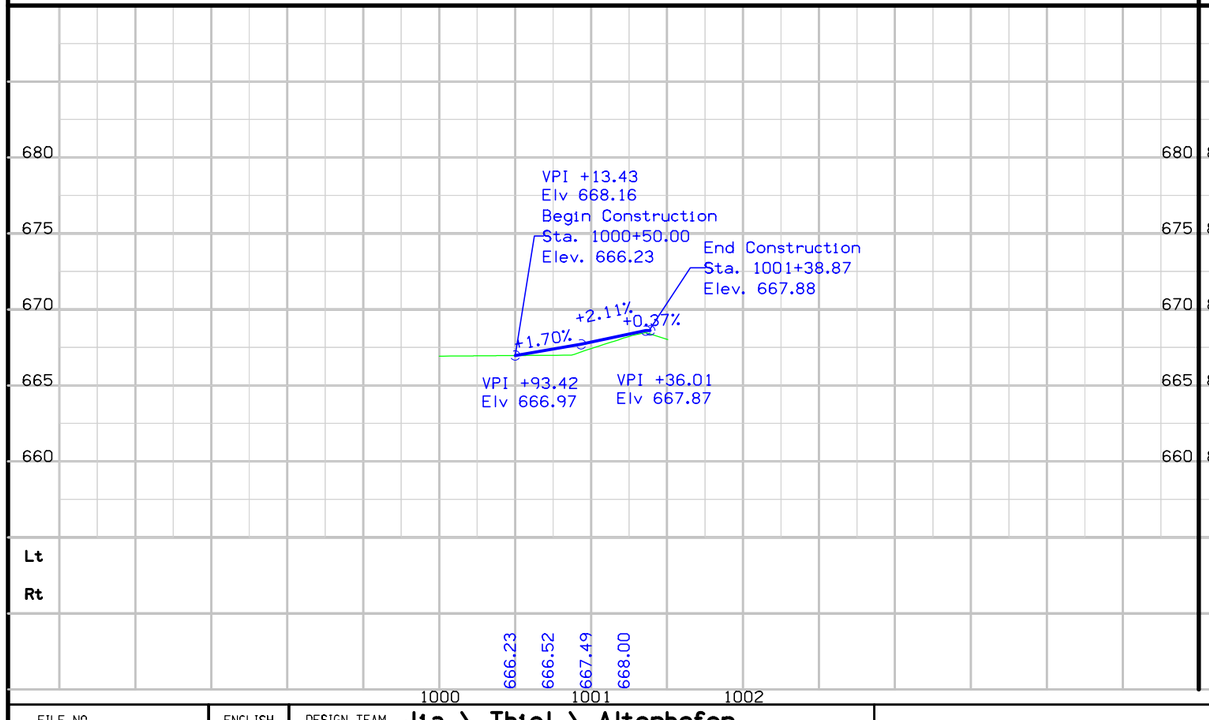
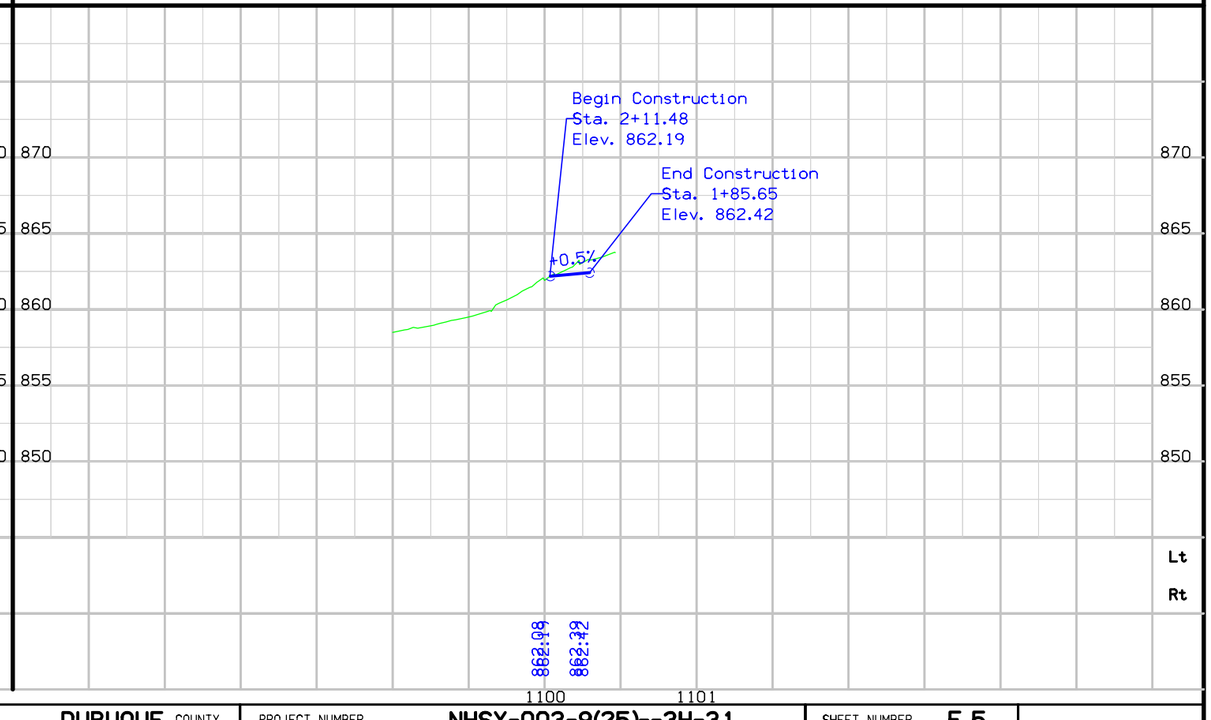




Boy Scout Rd.



Carmen Oaks Dr. (Private ent.)



FILE NO.	ENGLISH	DESIGN TEAM	DUBUQUE COUNTY	PROJECT NUMBER	SHEET NUMBER
		Jia \ Thiel \ Altenhofen		NHSX-003-9(25)--3H-31	E.5

3:22:29 PM 4/1/2024 1dot E:\D5_revision\3_22_2024\SHT_31052107_E01.dgn

Survey Information

General Information

Measurement units for this survey are US survey feet. This survey used IDOT Project control found in previous surveys.

Vertical Control

Vertical datum for this survey is NAVD 88 relative to National Geodetic Survey marks located throughout the project.

NGS 1st. Order Class I mark designated A178 has a published
Elev. Of 1121.97
Survey Elev. = 1121.97

NGS 1st. Order Class I mark designated F178 has a published
Elev. Of 1101.50
Survey Elev. = 1101.50

NGS 1st. Order Class I mark designated H178 has a published
Elev. Of 1133.84
Survey Elev. = 1133.84

Horizontal Control

A National Geodetic Survey marker was used to transfer NAD 83 (2011) Iowa State Plane North Zone (US Survey Feet) coordinates to Project Control. Redundant RTK observations were used to verify the published values. The project coordinates are scaled around NGS Pt. A178 at 3687343.14 N, 5619919.96 E, 1121.97 EL. Additional control points were placed throughout the project using a GNSS Base-Rover setup relative to Pt. A178. A minimum of three observations with appropriate time spans between were averaged. The horizontal standard deviation of these observations was less than 0.03 ft. at 95% confidence level (2 sigma).

Alignment Information

The horizontal alignment for this survey is a retrace of the FN-3-9(21)—21-31 1966 As-built Plan. Stationing was backed up and carried forward from PI Sta 50+38.1 without equation to EOP at Sta 255+49.877. A number of Reference Ties to Conc. Monuments were found in the IDOT Reference recovery notes, these points as well as others were located and used to create an assortment of PC, PT and PI points along the corridor.
Of the Ref Ties that were found, a number of these ties have been damaged, damage included extreme leaning and or the tops were broken off.
Every attempt was made to duplicate and match the AB plan curve deltas, tangents and radius lengths as closely as possible. When no other option was available, we had to rely upon roadway splits to generate the tangents. The final alignment differs from AB Plan stationing in a range of zero and six feet along this 4-½ mile alignment. This alignment has nineteen curves.

The highway appears to be a little different than the AB Plan and the AB Plan equations found between Sta 32+41.08 to Sta 35+80.

Station Equations are as follows:

CP Sta 32+41.080 This Survey =
CP Sta 32+36.3 FN-3-9(21)—21-31 1966 As-built Plan

PI Sta 50+38.1 this survey =
PI Sta 50+38.1 FN-3-9(21)—21-31 1966 As-built Plan.

PC Sta 255+49.877 Back =
PC Sta 255+59.5 FN-3-9(21)—21-31 1966 As-built Plan. Ahead

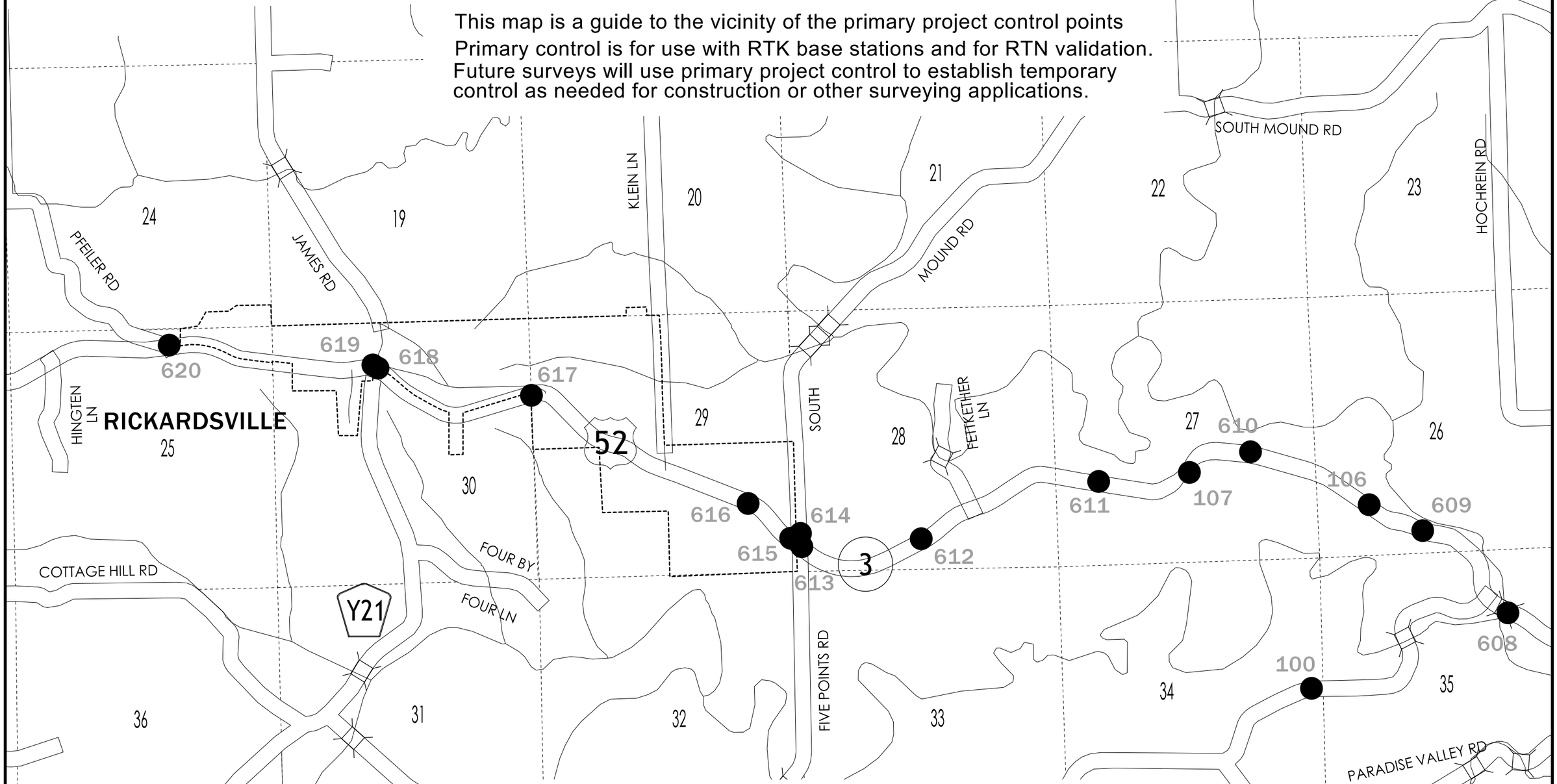
VERTICAL CONTROL

BENCHMARKS				ELEVATION
No. 610 Sta.	64+76.806	32.114 Rt.	Y:3685182.029 X:5641832.351 Fd NGS Monument Stamped T177 EL=869.267	869.267
No. 611 Sta.	99+05.491	33.089 Rt.	Y:3684579.903 X:5638755.711 Fd NGS Monument Stamped U177 EL=847.761	847.761
No. 612 Sta.	138+72.295	52.738 Rt.	Y:3683420.011 X:5635160.658 Fd NGS Monument Data sheet removed from NGS database Monu has been moved Stamped V177 Observed ZC891.420 Published 893.09	891.420
No. 613 Sta.	165+58.752	29.197 Rt.	Y:3683259.875 X:5632741.460 Fd Conc Monument with unnamed USGS Disk	899.065
No. 614 Sta.	167+36.614	230.834 Rt.	Y:3683527.385 X:5632714.431 Fd Conc Monu Exposed by 1 Foot Stamped TT31T Published NGVD29 Datum Elevation 884.715 Obstructions No GPS	884.776
No. 615 Sta.	168+44.434	35.825 Rt.	Y:3683431.748 X:5632513.167 Fd NGS Monument Stamped 31 118 EL=907.003	907.003
No. 616 Sta.	179+79.523	30.721 Lt.	Y:3684135.842 X:5631651.490 Fd NGS Monument Stamped W177 Published EL=909.660 (unstable do not use) observed was 909.647	909.660
No. 617 Sta.	230+21.985	29.309 Lt.	Y:3686325.824 X:5627261.498 Fd NGS Monument Stamped X177 EL=905.894	905.894
No. 619 Sta.	265+97.31	84.079 Rt.	Y:3686941.205 X:5624047.811 Fd Conc Monument Stamped 31 422 EL=1109.387	1109.387
No. 620 Sta.	307+75.26	44.167 Rt.	Y:3687343.140 X:5619919.960 Fd NGS Monument Stamped A178 EL=1121.973	1121.973

MISCELLANEOUS LOCATIONS				ELEVATION
No. 600 Sta.	--------	----------	Y:3677455.242 X:5672479.783 Fd NGS Monument Stamped H177 Observed with total station Published EL=660.412 Obstructions No GPS	660.412
No. 601 Sta.	--------	----------	Y:3680192.691 X:5668399.994 Fd NGS Monument Stamped K 177 EL=652.328 Obstructions No GPS	652.328
No. 602 Sta.	--------	----------	Y:3679453.606 X:5665582.614 Fd NGS Monument Set in the top of ledge at rock outcrop Stamped L177 EL=654.133 Obstructions No GPS	654.133
No. 603 Sta.	--------	----------	Y:3678916.369 X:5662020.845 Fd Brass Disk in Face Cliff Stamped M177 EL=669.129 CP404 near this point Obstructions No GPS	669.129
No. 604 Sta.	--------	----------	Y:3679073.204 X:5657613.734 Fd NGS Monu Set in Top of Ledge at Foot of Cliff Stamped N177 EL=667.167 Obstructions No GPS	667.167
No. 605 Sta.	--------	----------	Y:3678827.997 X:5655379.224 Fd NGS Monument Stamped Q72 EL=643.775	643.775
No. 606 Sta.	--------	----------	Y:3679483.801 X:5655842.955 Fd NGS Monument Stamped P177 EL=646.787 Obstructions No GPS	646.787
No. 607 Sta.	--------	----------	Y:3679427.579 X:5651233.742 Fd NGS Monu Set Vertically in Rock Outcropping Stamped Q 177 EL=655.163 Obstructions No GPS	655.163
No. 608 Sta.	--------	----------	Y:3681918.874 X:5647049.006 Fd NGS Monument SE Corner Brg on Top Conc Barrier Rail Stamped R 177 Reset	669.813
No. 609 Sta.	--------	----------	Y:3683584.840 X:5645322.220 Fd NGS Monu Set Vertically in Rock Wall Stamped S177 EL=792.587 Obstructions No GPS	792.587
No. 618 Sta.	--------	----------	Y:3686878.307 X:5624153.013 Fd top of CM Severly Damaged Disk (Y177) missing central pin is bent easterly Published EL=1101.277	1100.799

CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points
Primary control is for use with RTK base stations and for RTN validation.
Future surveys will use primary project control to establish temporary control as needed for construction or other surveying applications.



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00
VERT. DATUM: NAVD88
Modified State Plane North

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

FILE NO. DUBUQUE 6	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER G.2

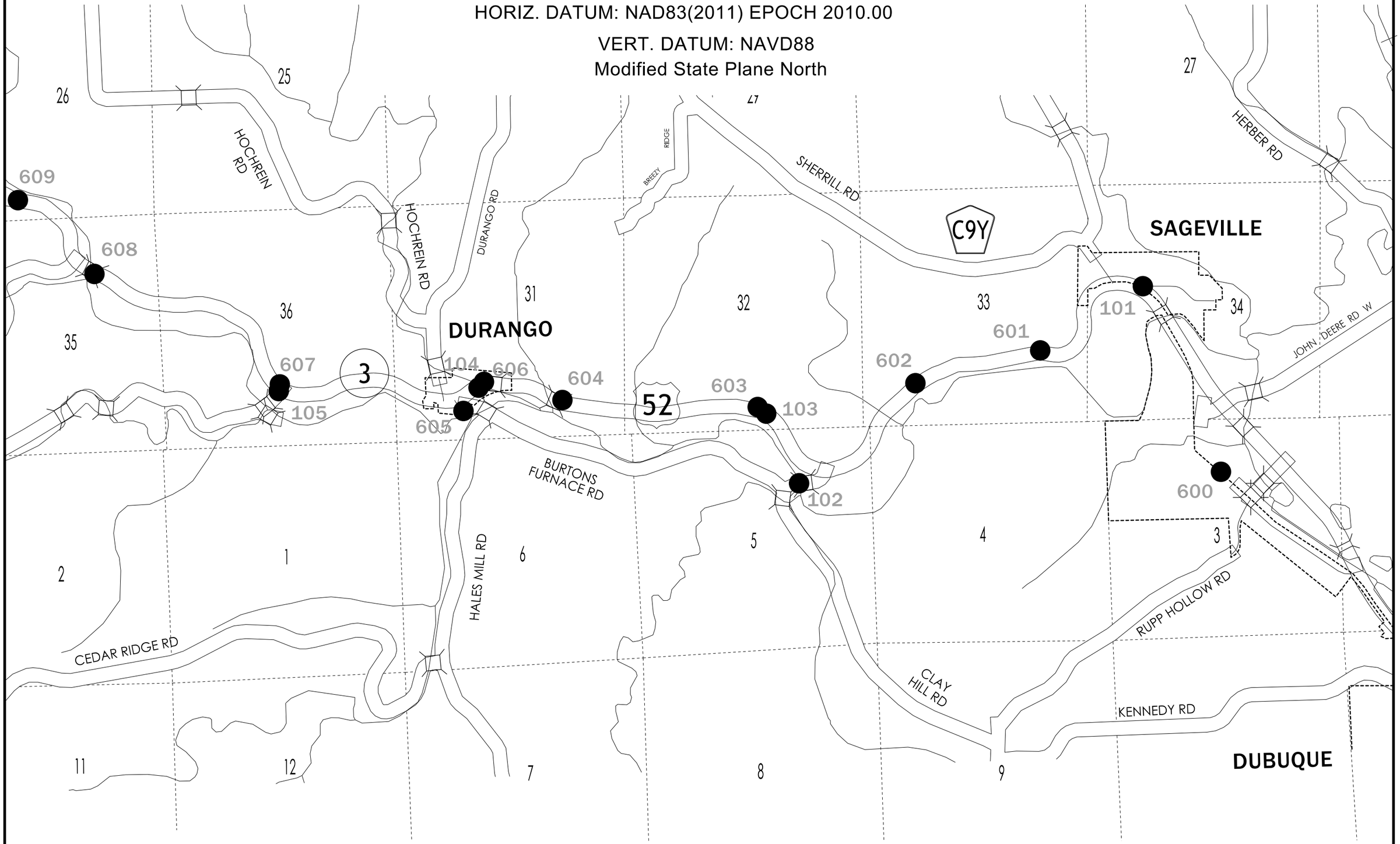
8:20:29 AM 10/26/2021 bkrug pw:\\ntPwInt1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_G01.dgn

HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

Modified State Plane North



FILE NO. DUBUQUE 60 ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER G.3

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ALIGNMENT COORDINATES

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)
IA 3																			
1		+00.00	3680471.80	5671538.89															
2								8+49.87	3681194.78	5671092.15	15+80.06	3681815.96	5670708.32	21+45.69	3681719.46	5669984.53			
4								21+49.43	3681718.97	5669980.82	28+29.38	3681629.11	5669306.84	32+14.65	3680955.81	5669401.61			
6								33+26.36	3680845.18	5669417.18	41+18.76	3680060.51	5669527.63	44+59.20	3680129.78	5668738.26			
8								46+03.85	3680142.43	5668594.16	48+74.20	3680166.06	5668324.84	51+41.29	3680117.25	5668058.93			
10								58+98.85	3679980.48	5667313.82	59+70.13	3679967.61	5667243.72	60+41.25	3679962.70	5667172.61			
12								63+49.16	3679941.48	5666865.44	65+88.10	3679925.02	5666627.07	68+24.57	3679850.38	5666400.08			
14								69+32.11	3679816.79	5666297.92	73+95.06	3679672.18	5665858.14	78+43.37	3679355.77	5665520.20			
16								85+49.43	3678873.21	5665004.79	88+19.00	3678688.97	5664808.01	90+79.01	3678436.47	5664713.60			
18								93+56.55	3678176.50	5664616.40	97+30.56	3677826.18	5664485.42	100+61.23	3677686.07	5664138.65			
20								103+19.21	3677589.43	5663899.45	111+44.23	3677280.37	5663134.50	116+49.81	3678019.74	5662768.45			
22								120+43.62	3678372.66	5662593.72	125+91.17	3678863.37	5662350.78	130+53.05	3678945.05	5661809.35			
23								130+53.05	3678945.05	5661809.35	133+44.64	3678988.54	5661521.03	136+33.69	3678965.56	5661230.35			
25								137+73.51	3678954.55	5661090.95	140+14.09	3678935.59	5660851.12	142+54.54	3678902.71	5660612.79			
27								149+59.73	3678806.32	5659914.23	152+17.36	3678771.11	5659659.01	154+72.03	3678803.24	5659403.40			
29								170+50.30	3679000.13	5657837.45	173+17.50	3679033.46	5657572.34	175+78.35	3679162.09	5657338.15			
31								177+08.87	3679224.92	5657223.74	180+45.27	3679386.86	5656928.88	183+73.68	3679428.78	5656595.10			
33								188+23.29	3679484.81	5656148.99	191+27.49	3679522.72	5655847.17	193+98.93	3679332.73	5655609.59			
35								196+01.63	3679206.13	5655451.29	199+17.49	3679008.86	5655204.60	201+96.95	3679056.77	5654892.39			
37								205+00.25	3679102.77	5654592.61	207+05.22	3679133.87	5654390.00	209+04.34	3679243.76	5654216.98			
39								211+02.88	3679350.21	5654049.39	212+52.93	3679430.67	5653922.72	214+02.38	3679490.41	5653785.07			
40								214+02.38	3679490.41	5653785.07	216+26.27	3679579.54	5653579.69	218+41.25	3679562.06	5653356.49			
42								222+07.44	3679533.47	5652991.42	224+04.34	3679518.10	5652795.11	225+96.82	3679433.25	5652617.42			
44		227+78.88	3679354.80	5652453.12															
45								229+37.41	3679286.49	5652310.07	242+12.50	3678737.05	5651159.43	247+97.18	3679968.70	5650829.42			
47		248+91.39	3680059.70	5650805.04															
48								252+23.53	3680380.52	5650719.08	256+71.87	3680813.58	5650603.05	260+53.23	3680975.44	5650184.96			
50								265+49.88	3681154.75	5649721.80	268+54.14	3681264.60	5649438.07	271+44.68	3681219.24	5649137.21			
52								273+01.86	3681195.80	5648981.79	276+67.00	3681141.37	5648620.73	280+16.90	3681266.47	5648277.69			
54								283+66.15	3681386.12	5647949.57	285+52.90	3681450.10	5647774.12	287+37.79	3681554.68	5647619.40			
56		294+72.47	3681966.08	5647010.70															
57								298+01.80	3682150.49	5646737.85	300+72.90	3682302.30	5646513.24	303+00.15	3682573.40	5646513.43			
59								305+05.25	3682778.50	5646513.58	307+57.05	3683030.30	5646513.76	309+69.76	3683175.32	5646307.91			
61								310+19.15	3683203.77	5646267.54	310+95.76	3683247.89	5646204.91	311+72.08	3683300.84	5646149.54			
63								312+95.57	3683386.17	5646060.28	314+40.08	3683486.04	5645955.83	315+76.46	3683512.45	5645813.76			
65								320+59.08	3683600.66	5645339.28	321+73.91	3683621.65	5645226.38	322+86.40	3683680.05	5645127.50			
67								323+53.74	3683714.30	5645069.52	325+26.49	3683802.15	5644920.78	326+93.08	3683814.55	5644748.48			
69								327+35.61	3683817.61	5644706.06	328+81.29	3683828.06	5644560.76	330+20.07	3683910.75	5644440.81			
70		343+25.28	3684651.54	5643366.20															
Christensen																			
1								+00.00	3681462.83	5670736.99	+16.91	3681479.71	5670736.14	+32.60	3681493.64	5670745.72			
3		+78.26	3681531.28	5670771.57															
4								1+23.93	3681493.64	5670745.72	1+40.83	3681479.71	5670736.14	1+56.53	3681462.83	5670736.99			
Leiser Ln.																			
1		+00.00	3681530.95	5670772.06															
2		+39.92	3681563.84	5670794.68															
2		+79.84	3681596.73	5670817.30															
Sherrill Rd																			
1		+00.00	3681723.98	5670023.59															
2								+14.80	3681738.71	5670022.14	+66.40	3681790.06	5670017.11	1+15.80	3681832.57	5669987.86			
3		4+24.87	3682087.19	5669812.68															
Whispering H																			
1		+00.00	3679512.74	5665708.88															
2								+15.82	3679525.47	5665699.49	+40.29	3679545.17	5665684.97	+63.82	3679555.93	5665663.00			
3		1+16.19	3679578.98	5665615.96															
Clay Hill																			
1		+00.00	3677218.10	5663217.18															
2								1+11.55	3677238.16	5663326.91	3+12.39	3677274.27	5663524.48	4+49.94	3677474.98	5663531.79			
3		5+00.21	3677525.21	5663533.63															
Raylyn Rd.																			
1		+00.00	3679373.27	5656864.65															
2								+65.93	3679436.61	5656882.96	1+41.46	3679509.17	5656903.92	2+05.88	3679535.53	5656974.70			
3		4+90.67	3679634.94	5657241.59															
Burtons Furn																			
1		+00.00	3678955.45	5655479.42															
2								1+74.95	3678989.90	5655307.89	2+33.46	3679001.42	5655250.53	2+80.83	3679057.07	5655232.47			
3		3+08.72	3679083.60	5655223.86															
Durango Rd.																			
1		+00.00	3679051.20	5654938.58															
2								+18.79	3679069.92	5654940.22	+34.12	3679085.19	5654941.56	+49.21	3679100.16	5654938.27			

ALIGNMENT COORDINATES

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)
3		1+56.79	3679205.23	5654915.16															
Paradise Val																			
1		+00.00	3679242.48	5651207.26															
2		+65.00	3679297.09	5651242.52															
2		1+31.00	3679352.53	5651278.32															
Boy Scout Rd																			
1		+00.00	3682133.36	5646532.41															
2								+83.42	3682199.04	5646583.83	1+04.39	3682215.55	5646596.76	1+25.21	3682229.02	5646612.84			
3		1+50.87	3682245.51	5646632.50															
Carmen Oaks																			
1		+00.00	3684098.59	5644168.33															
2		+16.93	3684084.60	5644158.80															
2		+44.65	3684059.42	5644147.19															

SPIRAL OR CIRCULAR CURVE DATA

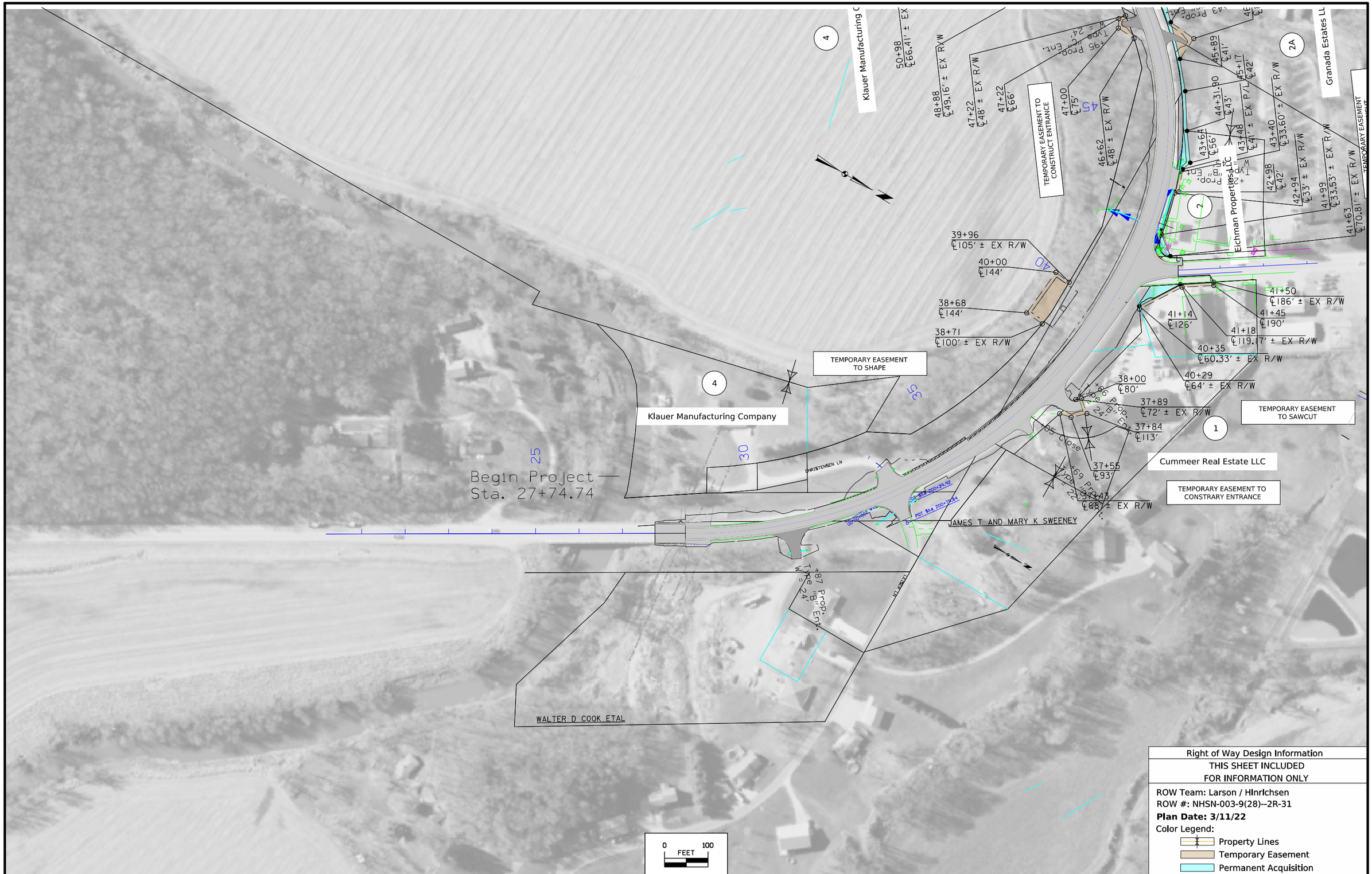
Name	Location	ΔSCS	Horizontal Alignment Data													Remarks
			Spiral Data								Curve Data					
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R	E	
IA 3																
C1											65.882°	T1901xt	T1903xt	T1903xt	T1900xt	
C2	Unnamed										90.418°	T1901xt	T1902xt	T1901xt	T1900xt	
C3	Unnamed										103.027°	T1902xt	T1903xt	T1901xt	T1901xt	
C4	Unnamed										15.417°	T1900xt	T1901xt	T1905xt	T1900xt	
C5	Unnamed										6.450°	T1900xt	T1900xt	T1903xt	T1900xt	
C6	Unnamed										14.250°	T1900xt	T1901xt	T1905xt	T1900xt	
C7	Unnamed										24.913°	T1901xt	T1902xt	T1905xt	T1900xt	
C8	Unnamed										26.385°	T1900xt	T1901xt	T1903xt	T1900xt	
C9	Unnamed										47.500°	T1901xt	T1901xt	T1902xt	T1900xt	
C10	Unnamed										85.661°	T1902xt	T1903xt	T1902xt	T1900xt	
C11	Unnamed										55.082°	T1901xt	T1902xt	T1902xt	T1900xt	
C34	Unnamed										13.098°	T1900xt	T1901xt	T1906xt	T1900xt	
C12	Unnamed										3.337°	T1900xt	T1901xt	T1922xt	T1900xt	
C13	Unnamed										15.022°	T1900xt	T1901xt	T1905xt	T1900xt	
C14	Unnamed										21.610°	T1900xt	T1901xt	T1903xt	T1900xt	
C15	Unnamed										21.618°	T1900xt	T1901xt	T1904xt	T1900xt	
C16	Unnamed										45.808°	T1900xt	T1901xt	T1901xt	T1900xt	
C17	Unnamed										47.374°	T1900xt	T1901xt	T1901xt	T1900xt	
C18	Unnamed										23.698°	T1900xt	T1901xt	T1902xt	T1900xt	
C19	Unnamed										8.961°	T1900xt	T1900xt	T1905xt	T1900xt	
C34	Unnamed										27.939°	T1900xt	T1901xt	T1902xt	T1900xt	
C20	Unnamed										21.047°	T1900xt	T1901xt	T1902xt	T1900xt	
C21	Unnamed										100.526°	T1903xt	T1905xt	T1902xt	T1901xt	
C22	Unnamed										53.837°	T1901xt	T1902xt	T1902xt	T1900xt	
C23	Unnamed										29.737°	T1900xt	T1901xt	T1903xt	T1900xt	
C24	Unnamed										28.609°	T1900xt	T1901xt	T1903xt	T1900xt	
C25	Unnamed										14.018°	T1900xt	T1901xt	T1904xt	T1900xt	
C26	Unnamed										55.987°	T1900xt	T1901xt	T1901xt	T1900xt	
C27	Unnamed										54.875°	T1900xt	T1901xt	T1901xt	T1900xt	
C28	Unnamed										8.549°	T1900xt	T1900xt	T1902xt	T1900xt	
C29	Unnamed										33.184°	T1900xt	T1900xt	T1901xt	T1900xt	
C30	Unnamed										20.038°	T1900xt	T1900xt	T1901xt	T1900xt	
C31	Unnamed										26.453°	T1900xt	T1900xt	T1902xt	T1900xt	
											30.464°	T1900xt	T1900xt	T1901xt	T1900xt	
Christensen																
C1	Unnamed										37.360°	T1900xt	T1900xt	T1900xt	T1900xt	
C2	Unnamed										37.360°	T1900xt	T1900xt	T1900xt	T1900xt	
Leiser Ln	N/A															
Sherrill Rd																
C1	Unnamed										28.934°	T1900xt	T1900xt	T1900xt	T1900xt	
Whispering H																
C1	Unnamed										27.497°	T1900xt	T1900xt	T1900xt	T1900xt	
Clay Hill																
C1	Unnamed										77.553°	T1900xt	T1900xt	T1900xt	T1900xt	
Raylyn Rd																
C1	Unnamed										53.454°	T1900xt	T1900xt	T1900xt	T1900xt	
Burton's F																
C1	Unnamed										60.664°	T1900xt	T1900xt	T1900xt	T1900xt	
Durango																
C1	Unnamed										17.429°	T1900xt	T1900xt	T1900xt	T1900xt	
Paradise V	N/A															
Boy Scout																
C1	Unnamed										11.972°	T1900xt	T1900xt	T1900xt	T1900xt	
Carmen	N/A															

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data e	Superelevation Data L	Superelevation Data x	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
		FT	%	FT	FT														
IA 3	2868.5	1126.95	5.8	139	48	Special			28+19.13	29+10.20						28+67.00	28+67.00		
																			Refer to sheet L.23
IA 3	4168.06	675	6.0	144	48	Special													Refer to sheet L.23
										51+45.13									Refer to sheet L.1
IA 3	6622.48	1997.42	4.4	106	48	PV-301													Refer to sheet L.2
							72+82.12	72+34.12	71+86.12	71+28.12			71+59.92			71+37.76	71+37.76		
IA 3	7917.48	1265	5.6	134	48	PV-301	77+75.68	78+23.68	78+71.68	79+57.68			79+17.48			79+19.39	79+19.39		
							82+01.68	81+53.68	81+05.68	80+19.68			80+59.88			80+57.97	80+57.97		
IA 3	8367.79	1911.5	4.6	110	48	PV-301	82+42.79	82+90.79	83+38.79	84+00.79			83+67.79			83+86.44	83+86.44		
																			Refer to sheet L.3
IA 3	8950.74	2095.75	4.4	106	48	PV-301													Refer to sheet L.3
							99+84.20	99+36.20	98+88.20	98+30.20			98+62.00			98+39.84	98+39.84		
IA 3	10568.05	1150	5.8	139	48	PV-301	104+22.75	104+70.75	105+18.75	106+09.75			105+68.05			105+66.61	105+66.61		
																			Refer to sheet L.4
IA 3	12337.84	995	6.0	144	48	PV-301													Refer to sheet L.5
							138+17.24	137+69.24	137+21.24	136+25.24			136+68.44			136+73.24	136+73.24		
IA 3	14062.25	1050	5.8	139	48	PV-301	139+16.95	139+64.95	140+12.95	141+03.95			140+62.25			140+60.81	140+60.81		
																			Refer to sheet L.6
IA 3	15071.88	2540	3.8	91	48	PV-301													Refer to sheet L.6
							157+64.01	157+16.01	156+68.01	156+25.01			156+52.31						
IA 3	16978.35	1954	4.4	106	48	PV-301	168+56.15	169+04.15	169+52.15	170+10.15			169+78.35			170+00.51	170+00.51		
																			Refer to sheet L.7
IA 3	19068.93	1400	5.2	125	48	PV-301	189+33.43	189+81.43	190+29.43	191+06.43			190+68.93			190+77.58	190+77.58		
																			Refer to sheet L.8
IA 3	19727.5	1762	4.8	115	48	PV-301													Refer to sheet L.8
							205+20.81	204+72.81	204+24.81	203+57.81			203+92.31			203+76.98	203+76.98		
IA 3	20841.92	720	6.0	133	44	PV-301	207+04.82	207+48.82	207+92.82	208+81.82			208+41.92			208+37.49	208+37.49		
																			Refer to sheet L.9
IA 3	21620.26	720	6.0	133	44	PV-301													Refer to sheet L.9
							223+52.68	223+08.68	222+64.68	221+75.68			222+15.58			222+20.01	222+20.01		
IA 3	22518.88	977	6.0	144	48	PV-301	223+70.08	224+18.08	224+66.08	225+62.08			225+18.88			225+14.08	225+14.08		Refer to sheet L.10
IA 3	24226.06	1060	5.8	139	48	PV-301													Refer to sheet L.11
							247+60.75	247+12.75	246+64.75	245+73.75			246+15.45			246+16.89	246+16.89		
IA 3	24956.04	1060	5.8	139	48	PV-301	248+10.74	248+58.74	249+06.74	249+97.74			249+56.04			249+54.60	249+54.60		
							269+61.11	269+13.11	268+65.11	267+74.11			268+15.81			268+17.25	268+17.25		
IA 3	27242.16	883	6.0	144	48	PV-301	270+93.36	271+41.36	271+89.36	272+85.36			272+42.16			272+37.36	272+37.36		
							282+20.66	281+72.66	281+24.66	280+28.66			280+71.86			280+76.66	280+76.66		
IA 3	29320.49	1432	5.2	125	48	PV-301													Refer to sheet L.13
							301+71.03	301+23.03	300+75.03	299+98.03			300+35.53			300+26.88	300+26.88		
IA 3	30384.78	1519	5.0	120	48	PV-301	302+52.78	303+00.78	303+48.78	304+20.78			303+84.78			303+96.78	303+96.78		
							308+88.42	308+40.42	307+92.42	307+20.42			307+56.42			307+44.42	307+44.42		
IA 3	31820.43	510	6.0	144	48	PV-301	316+71.63	317+19.63	317+67.63	318+63.63			318+20.43			318+15.63	318+15.63		
																			Rere to sheet L.14
IA 3	33414.2	485	6.0	144	48	PV-301													Refer to sheet L.15
							337+43.89	336+95.89	336+47.89	335+51.89			335+95.09			335+99.89	335+99.89		
IA 3	34077.71	650	6.0	144	48	PV-301	339+28.91	339+76.91	340+24.91	341+20.91			340+77.71			340+72.91	340+72.91		
																			Refer to sheet L.16
IA 3	34754.24	535	6.0	144	48	PV-301													Refer to sheet L.17
							351+87.50	351+39.50	350+91.50	349+95.50			350+38.70			350+43.50	350+43.50		

Note: Refer to K sheets for additional information on non-standard superelevation details.



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ROW Team: Larson / HInrichsen
ROW #: NHSN-003-9(28)--2R-31
Plan Date: 3/11/22
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thie\Altenhofen**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **H1**	REVISED

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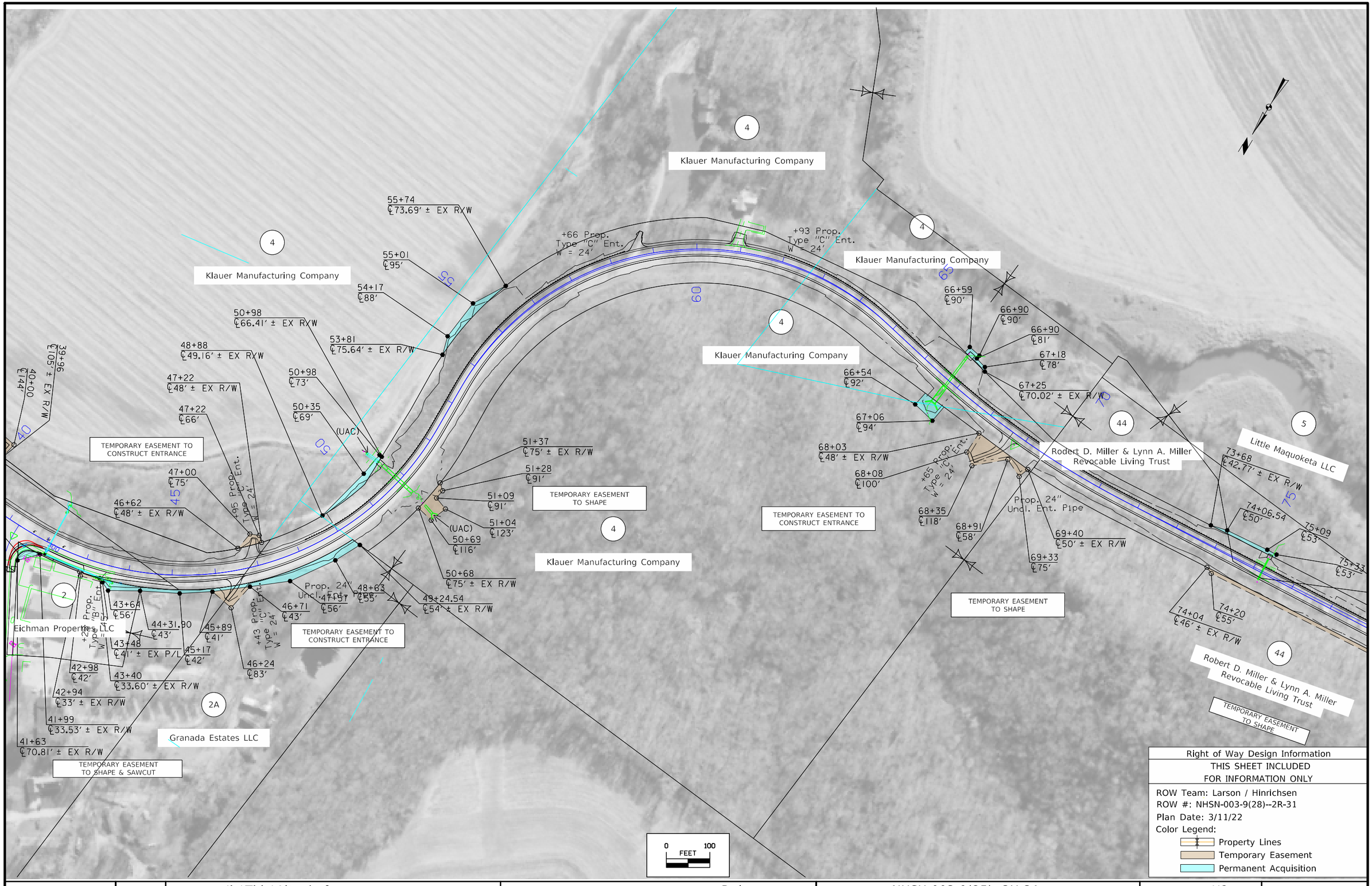

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7:09:18 AM 1/24/2024 thinric pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\ROW\Segment 1\ROW_31052028.dgn

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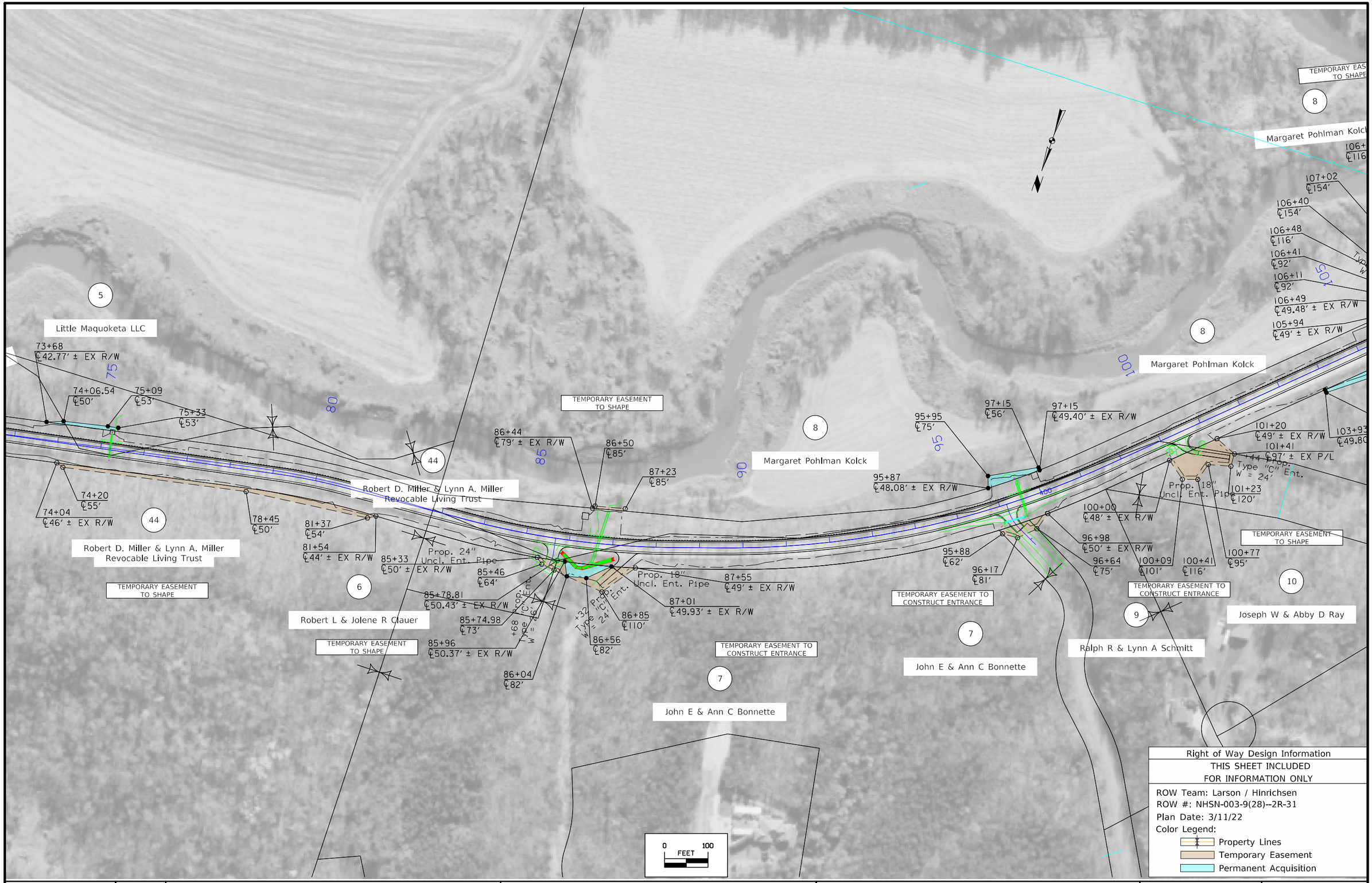

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER H3	REVISED

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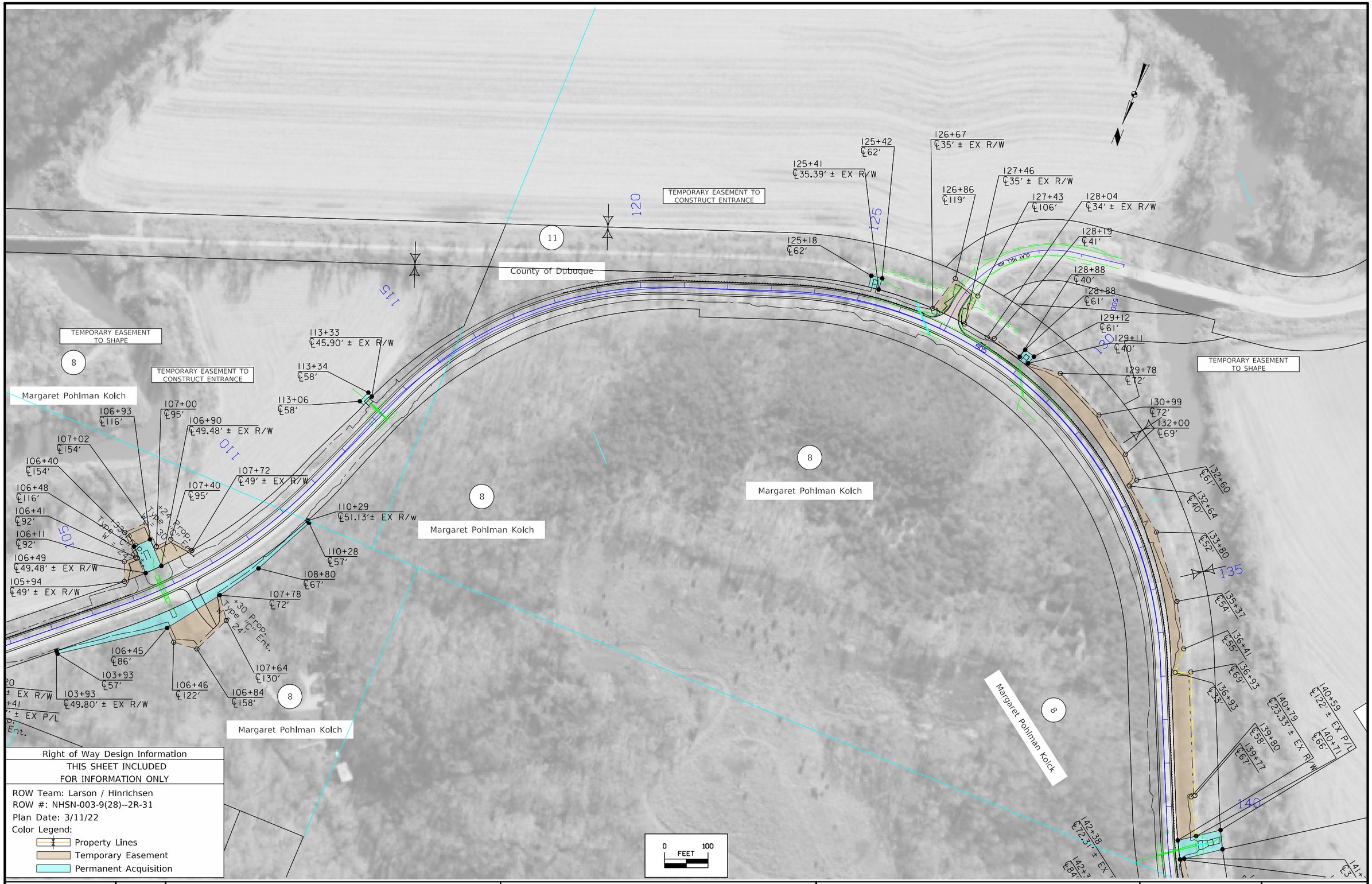

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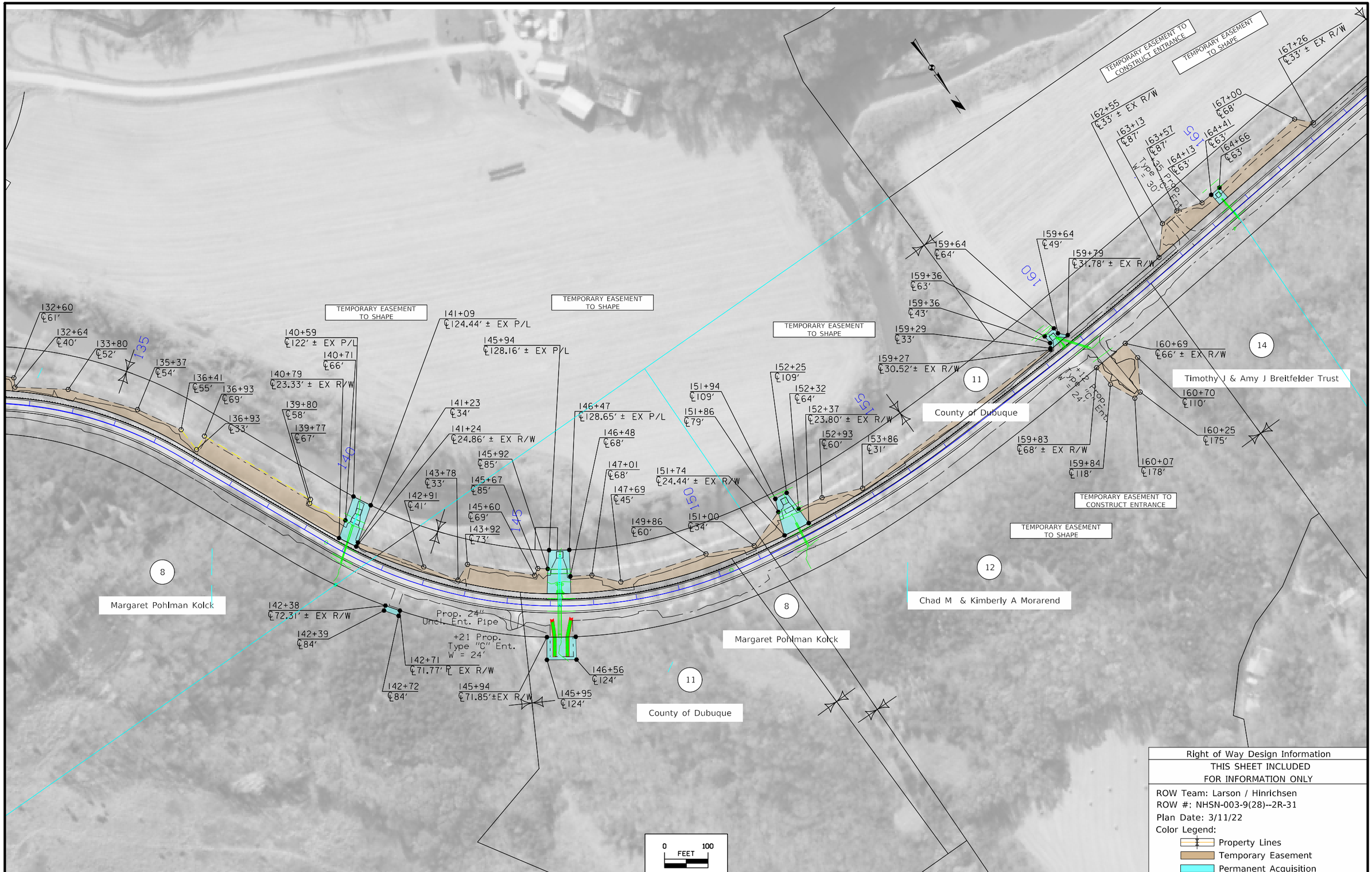

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ROW #: NHSN-003-9(28)--2R-31
Plan Date: 3/11/22
Color Legend:
Property Lines
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FILE NO.	ENGLISH	DESIGN TEAM Jai\THiel\Altenhofen	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER H5

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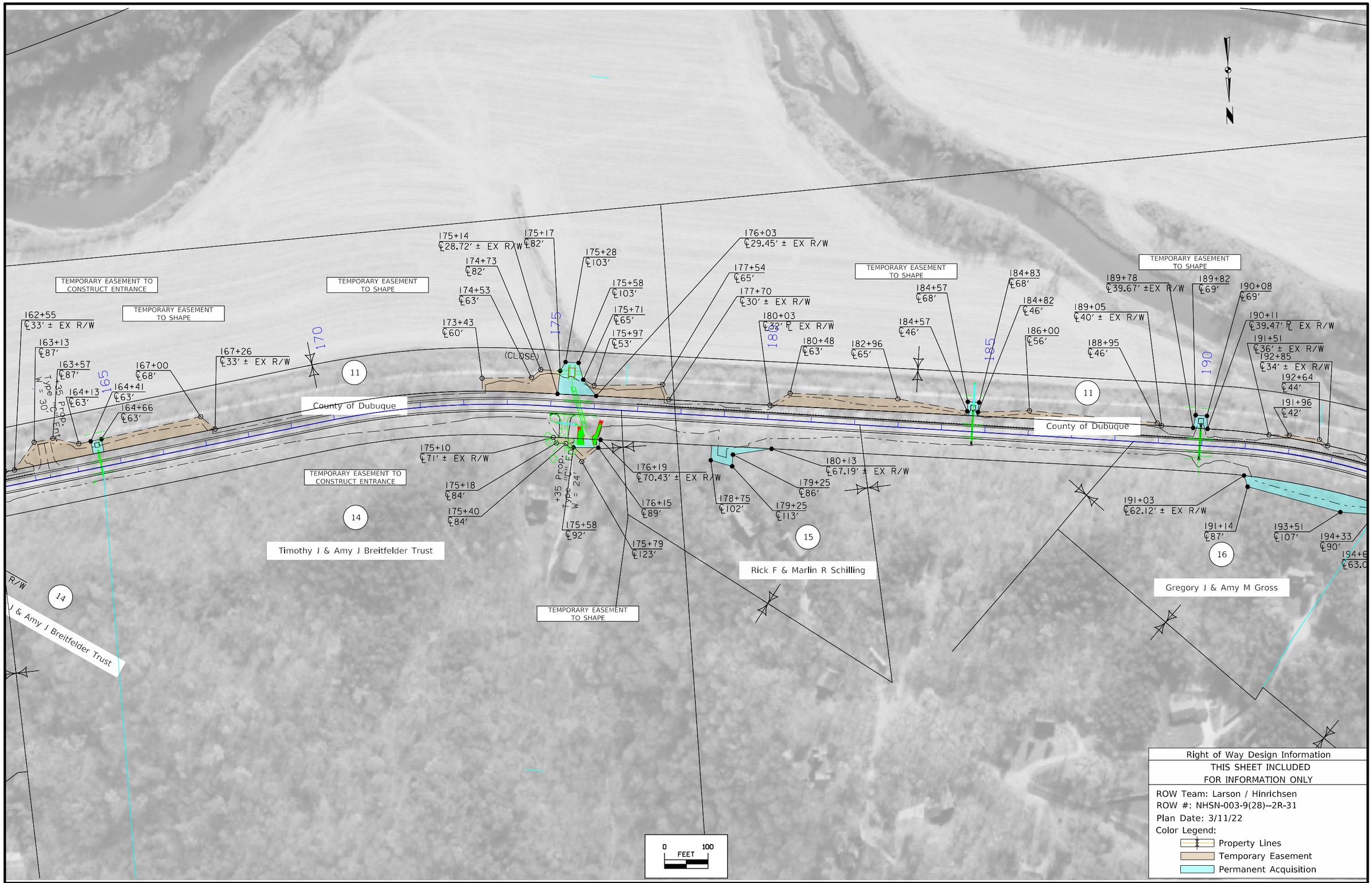

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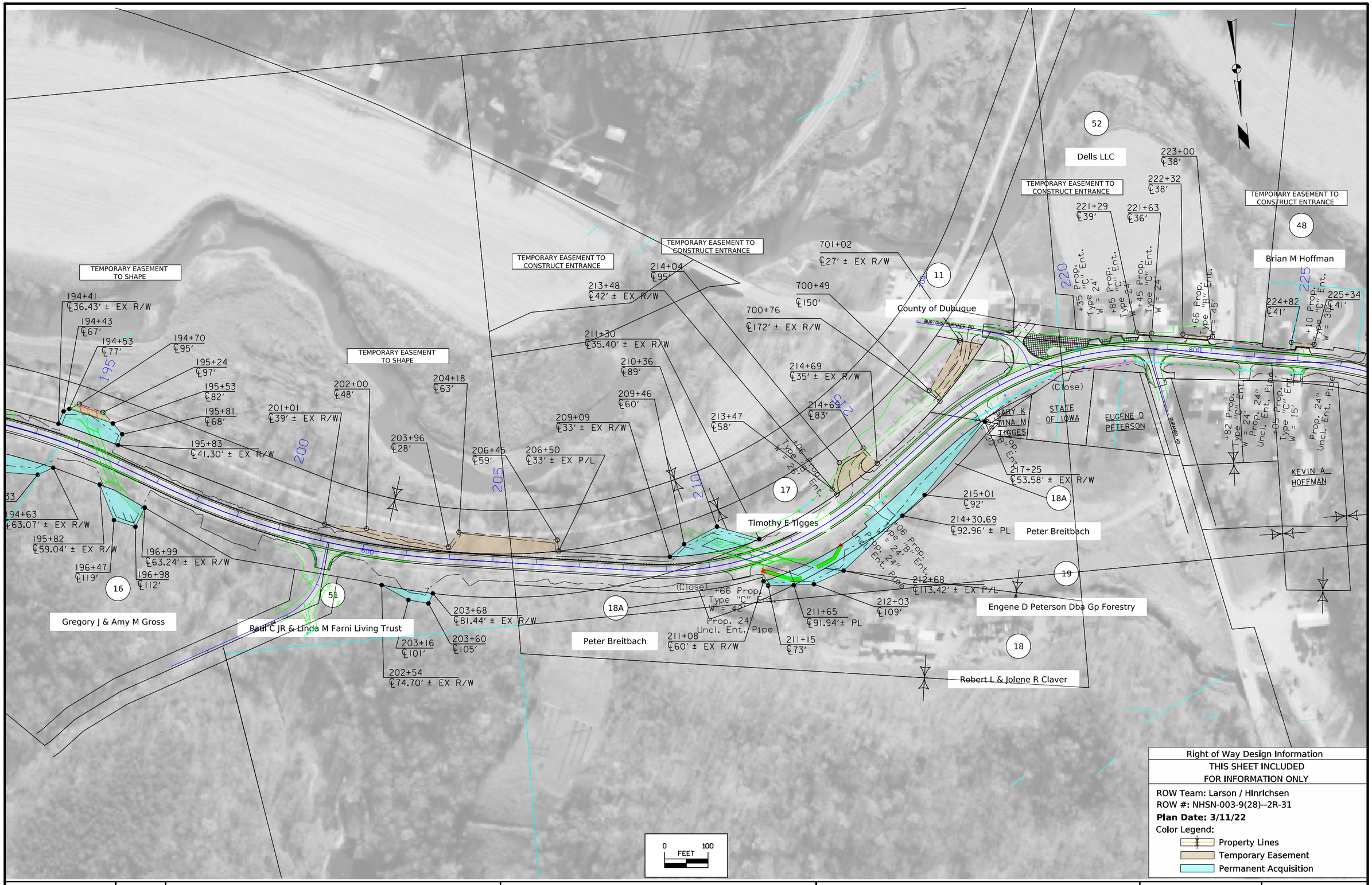

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ROW Team: Larson / Hinrichsen
ROW #: NHSN-003-9(28)--2R-31
Plan Date: 3/11/22
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER H7	REVISED

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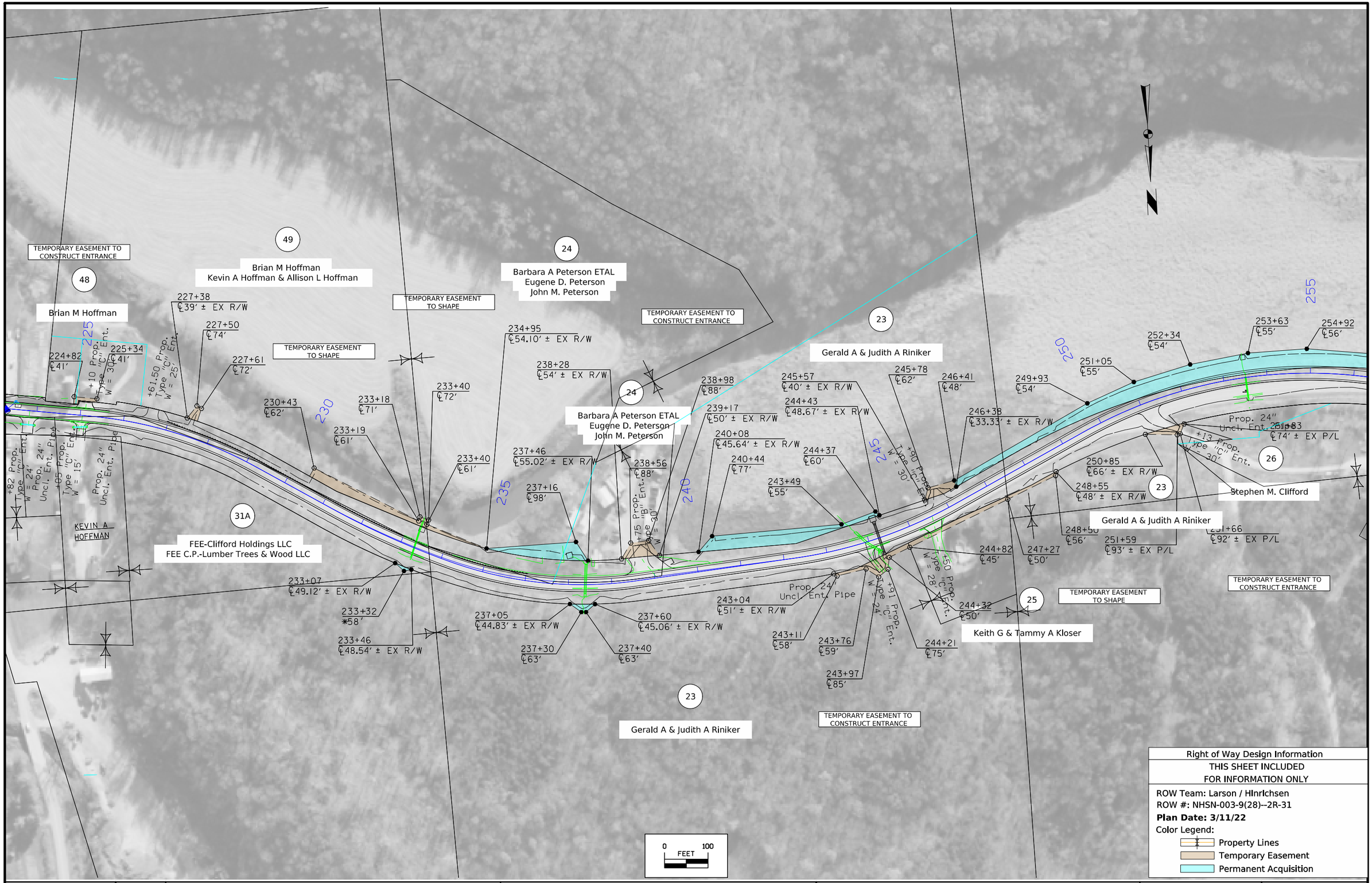

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **H8**	REVISED

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Jacob D & Jamie E Lucas

Jacob D & Jamie E Lucas

Gary D & Sharon Childers

Gerald A & Judith A Riniker

Gary J & Kathleen A Hirtz

Stephen M. Clifford

Kenneth Matthew Fonck

Clifford Holdings LLC

County of Dubuque

TEMPORARY EASEMENT TO SHAPE

TEMPORARY EASEMENT TO REMOVE CONCRETE SLAB

TEMPORARY EASEMENT TO CONSTRUCT ENTRANCE

RESTRICTED AREA NO ACCESS

Do Not Disturb Berm

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Larson / Hinrichsen

ROW #: NHSN-003-9(28)--2R-31

Plan Date: 3/11/22

Color Legend:

Property Lines

Temporary Easement

Permanent Acquisition

0 100 FEET

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **H9**	REVISED

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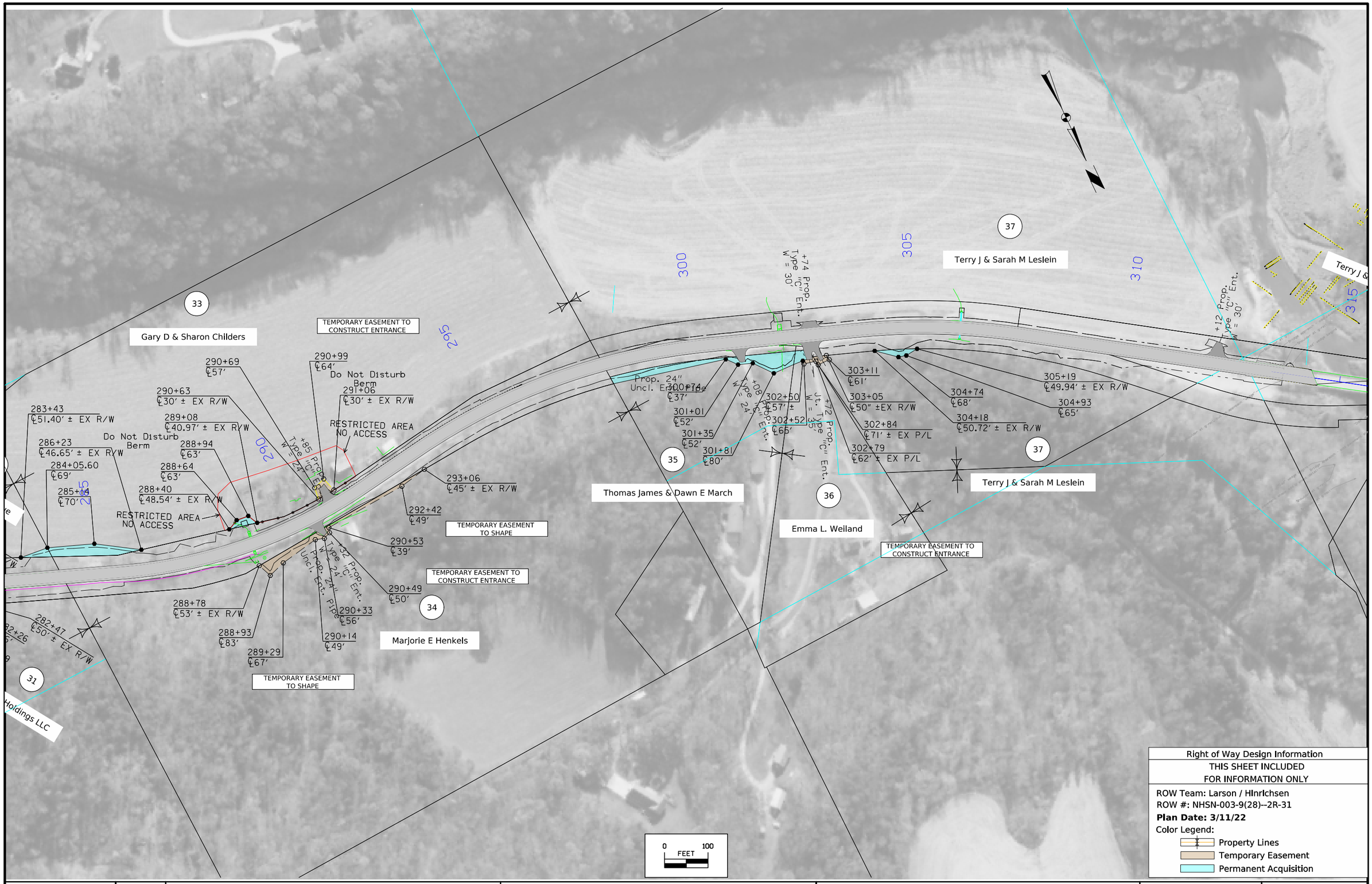

Right of Way Design Information
THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: Larson / Hinrichsen
ROW #: NHSN-003-9(28)--2R-31
Plan Date: 3/11/22
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER H10	REVISED

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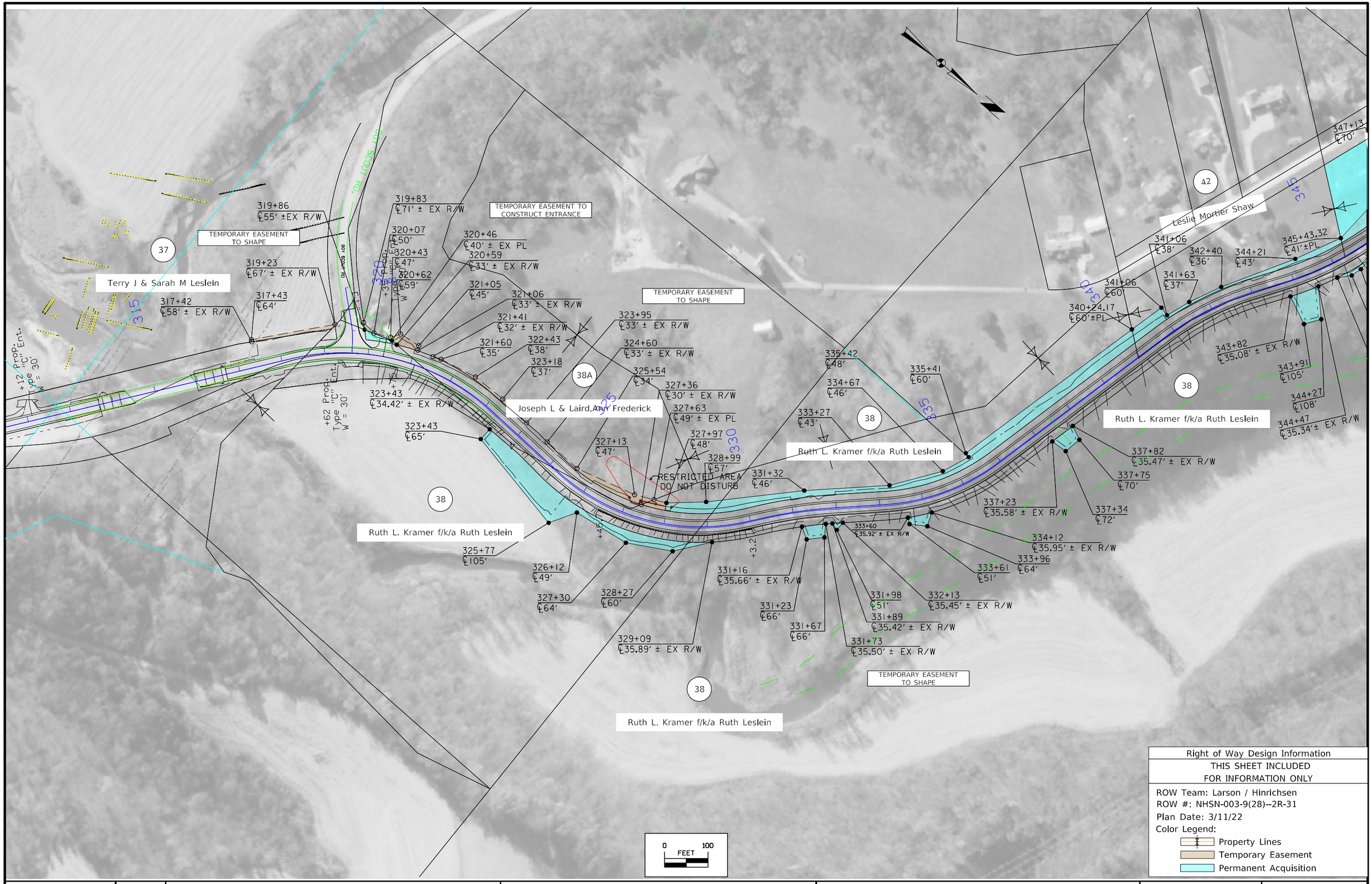

Right of Way Design Information

THIS SHEET INCLUDED
FOR INFORMATION ONLY

ROW Team: Larson / Hinrichsen
ROW #: NHSN-003-9(28)--2R-31
Plan Date: 3/11/22
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

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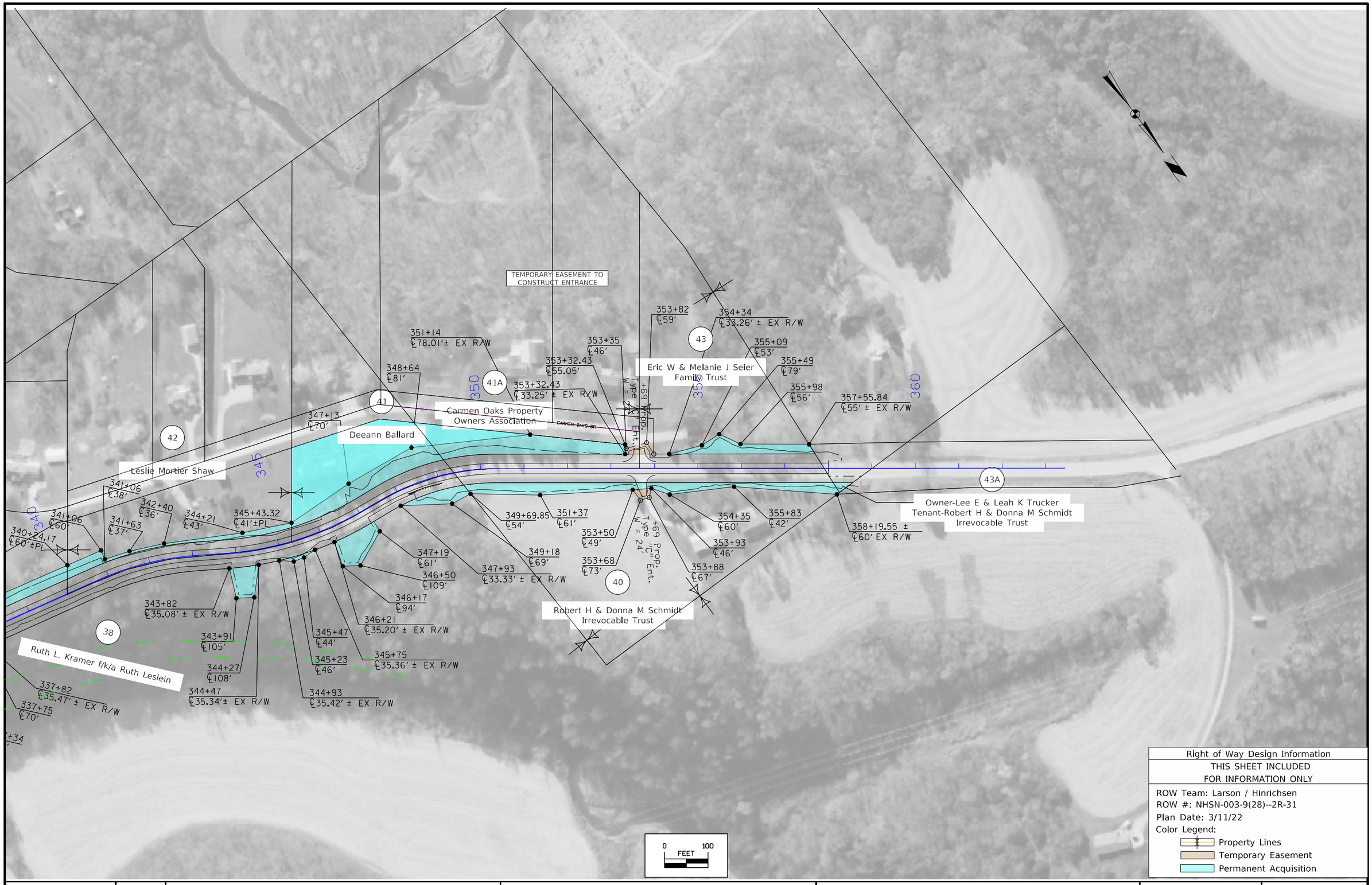

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: Larson / Hinrichsen
ROW #: NHSN-003-9(28)--2R-31
Plan Date: 3/11/22
Color Legend:

- Property Lines
- Temporary Easement
- Permanent Acquisition

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER H12	REVISED

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108-23A
08-01-08

TRAFFIC CONTROL PLAN

1) IA 3 will be closed during construction. Through traffic on IA 3 will be detoured to IA 32, U.S. 20 and IA 136. Refer to Sheets J.2 and J.3 for the proposed detour. Detour signing will be provided, installed, maintained, and removed by the Contractor.

2) All side roads will be closed. Local access shall be maintained.

3) Contractor shall allow adjacent property owners to use any temporary stream crossings constructed to access their fields when the roadway is closed.

4) Winter Traffic: Maintain normal traffic on IA 3 and all sideroads.

5) Heritage Trail from Clay Hill Road to Burton Furnace Road:
   A) Full trail closure is allowed during culvert construction at Sta. 141+06, Sta. 146+22, and Sta. 152+11. Trail detour follows Burton Furnace Road and Clay Hill Road. Refer to Sheet J.4 for the proposed detour. The Contractor shall place a Type III barricade at each end of the trail shown on Sheet J.4 prior to each road closure and remove them after each closure. Detour signing will be provided, installed, maintained, and removed by the Contractor.
   B) Short closure up to 30 minutes each time is allowed during other construction activities that impact this trail. Examples of these activities include, but not limited to, placement of revetment, rock blasting, other culvert installations, and trail connections at Clay Hill Road.
   C) Notify Dubuque County Conservation Board 48 hours prior to each trail closure.
      Brian Preston, Director
      Dubuque County Conservation Board
      13606 Swiss Valley Road
      Peosta, IA 52068
      563-556-6745

108-25
10-21-14

511 TRAVEL RESTRICTIONS

Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
IA 3	Both	Dubuque	On IA 3 from just S. of Co. Rd. CY9 in Sageville N. to Approx. 0.7 Mile N. of Boy Scout Rd.	No travel restrictions; closed.								

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
NHSX-003-9(26)--3H-31	Traffic Signs
NHSX-003-9(35)--3H-31	RCB Culvert Replacement
NHSN-003-9(24)--2R-31	Erosion Control
BRFN-003-9(33)--39-31	Bridge Removal

IOWA DOT

ROAD DETOUR

IA 3 Detour Route for Pavement Reconstruction project

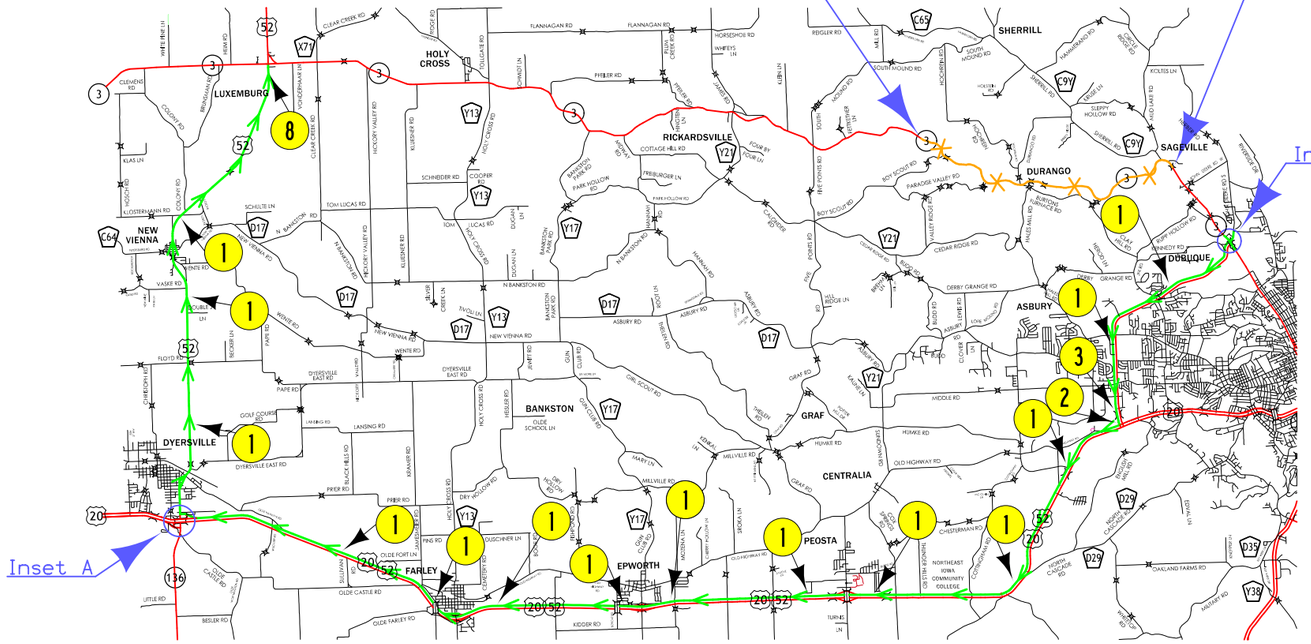
NHSX-003-9(25)--3H-31

Dubuque County

Westbound IA 3

= Location of reconstruction project

= Detour Route



1 DETOUR WEST 3

2 DETOUR WEST 3

3 DETOUR WEST 3

4 DETOUR WEST 3

5 DETOUR WEST 3

6 DETOUR WEST 3

7 DETOUR WEST 3

8 END DETOUR WEST 3

9 DETOUR AHEAD

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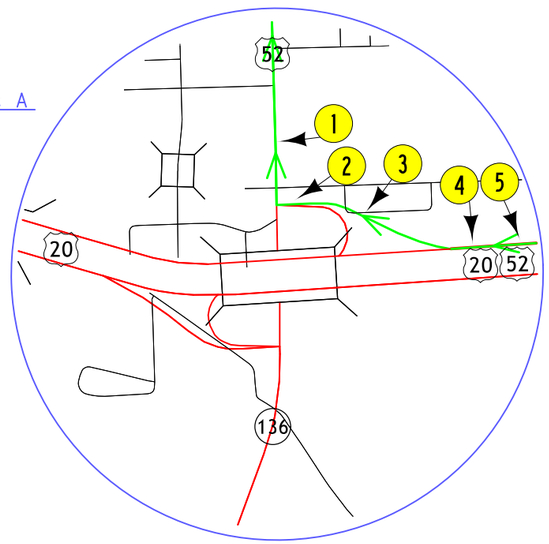

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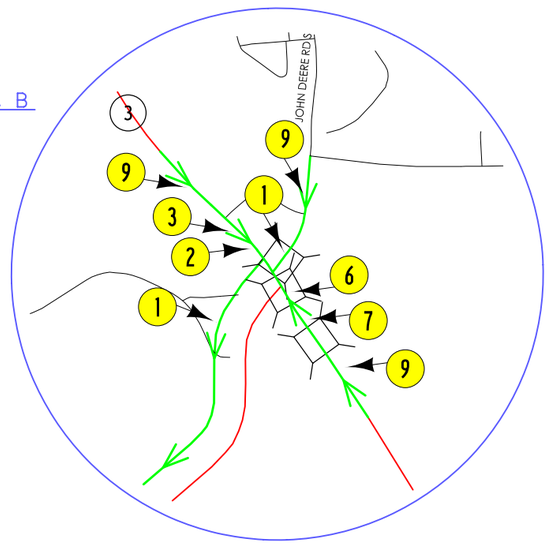


TABULATION OF DETOUR SIGNS				TABULATION OF DETOUR SIGNS			
SIGN TYPE	MUTCD #	STOCK #	SIZE	SIGN TYPE	MUTCD #	STOCK #	SIZE
EAST	M3-2	812 513840	24X12		M6-1	812 514140	24X12
WEST	M3-4	812 513870	24X12		M5-1	812 514100	24X24
END	M4-8B	812 514016	24X12		M5-1B	812 514110	24X24
DETOUR	M4-8	812 514012	24X12		M6-2	812 514150	24X24
3	M1-6	813 513680	24X24		M5-2	812 514120	24X24
ROAD CLOSED XXMILES AHEAD LOCAL TRAFFIC ONLY	R11-3	813 601250	60X30	DETOUR AHEAD	W20-2	812 702116	48X48

FILE NO.	ENGLISH	DESIGN TEAM C.Lohrer	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER J.100

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

IOWA DOT

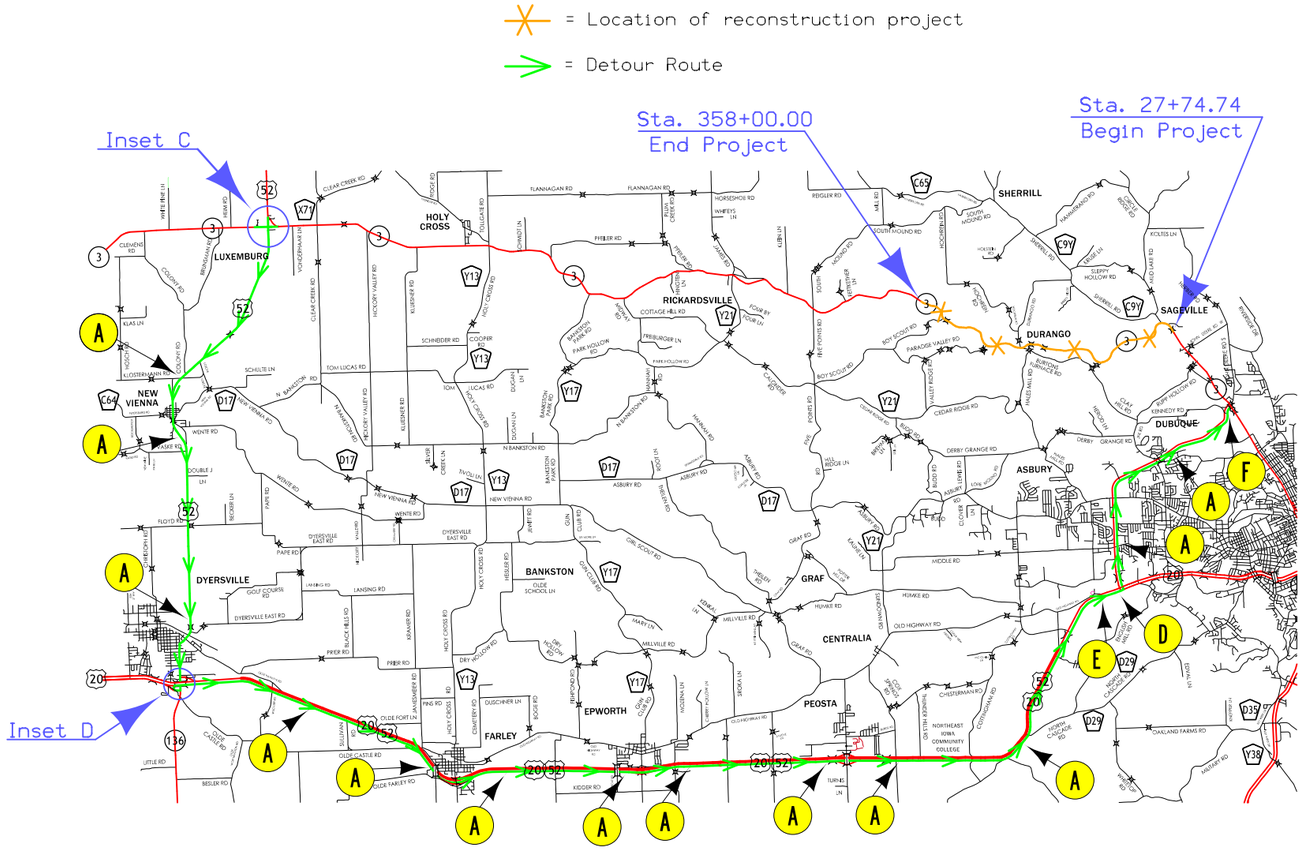
ROAD DETOUR

IA 3 Detour Route for Pavement Reconstruction project

NHSX-003-9(25)--3H-31

Dubuque County

Eastbound IA 3



A DETOUR EAST 3

B DETOUR EAST 3

C DETOUR EAST 3

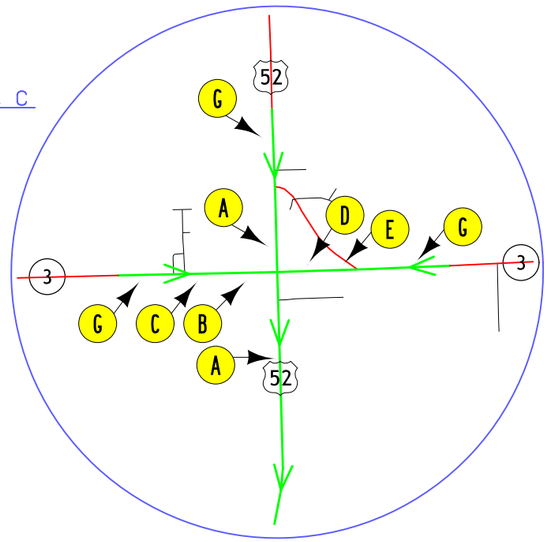
D DETOUR EAST 3

E DETOUR EAST 3

F END DETOUR EAST 3

G DETOUR AHEAD

Inset C



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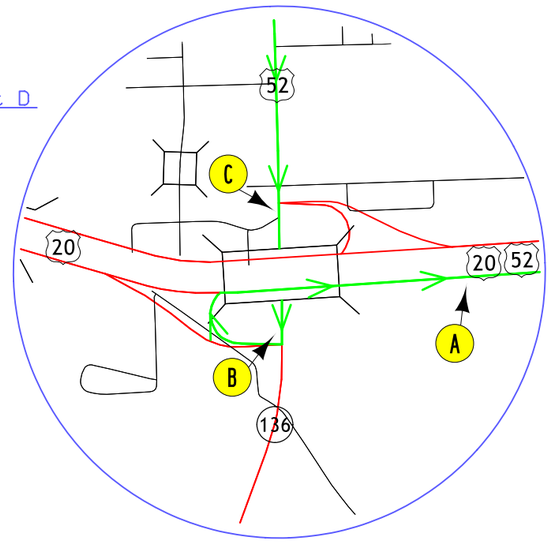


TABULATION OF DETOUR SIGNS				TABULATION OF DETOUR SIGNS			
SIGN TYPE	MUTCD #	STOCK #	SIZE	SIGN TYPE	MUTCD #	STOCK #	SIZE
EAST	M3-2	812 513840	24X12		M6-1	812 514140	24X12
WEST	M3-4	812 513870	24X12		M5-1	812 514100	24X24
END	M4-8B	812 514016	24X12		M5-1B	812 514110	24X24
DETOUR	M4-8	812 514012	24X12		M6-2	812 514150	24X24
3	M1-6	813 513680	24X24		M5-2	812 514120	24X24
ROAD CLOSED XXMILES AHEAD LOCAL TRAFFIC ONLY	R11-3	813 601250	60X30	DETOUR AHEAD	W20-2	812 702116	48X48

FILE NO.	ENGLISH	DESIGN TEAM C.Lohrer	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER J.101

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

N

Durango

1 Type III Barricade with Detour Sign

IA 3

Heritage Trail

Heritage Trail

Burton Furnace Rd

Hales Mill Rd

Clay Hill Rd

2 Type III Barricade with Detour Sign

Clay Hill Rd

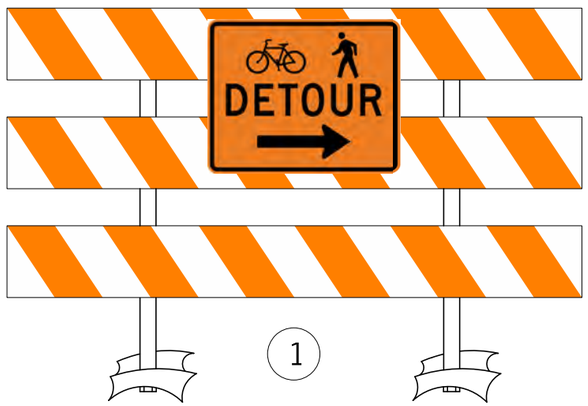
Legend

Closed Trail

Detour Route



MUTCD # M4-9A



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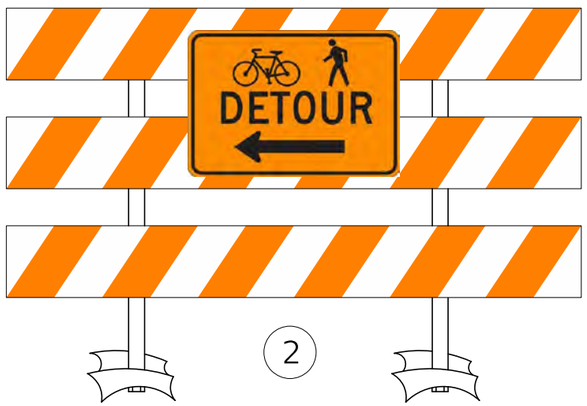

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Heritage Trail Detour from Clay Hill Rd to Burton Furnace Rd

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER J.4

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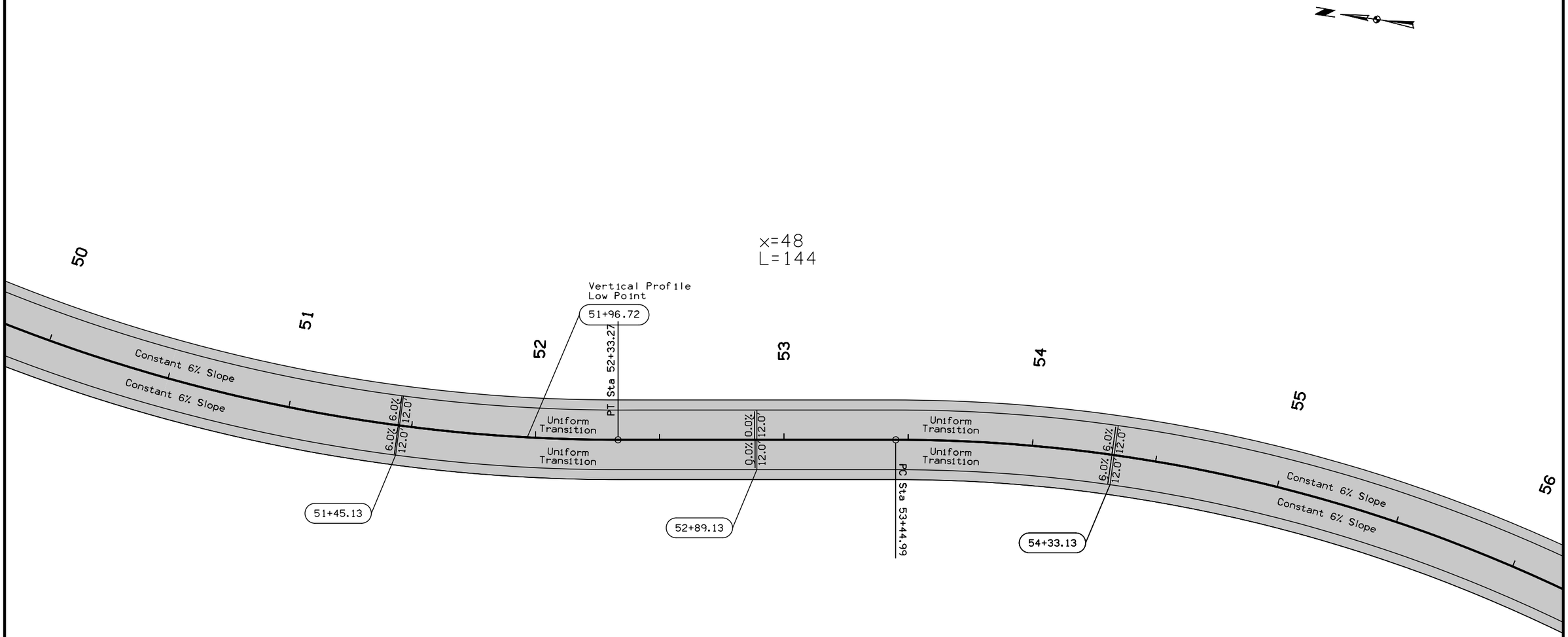

NON-STANDARD SUPERELEVATION DETAILS - IA 3

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FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.1

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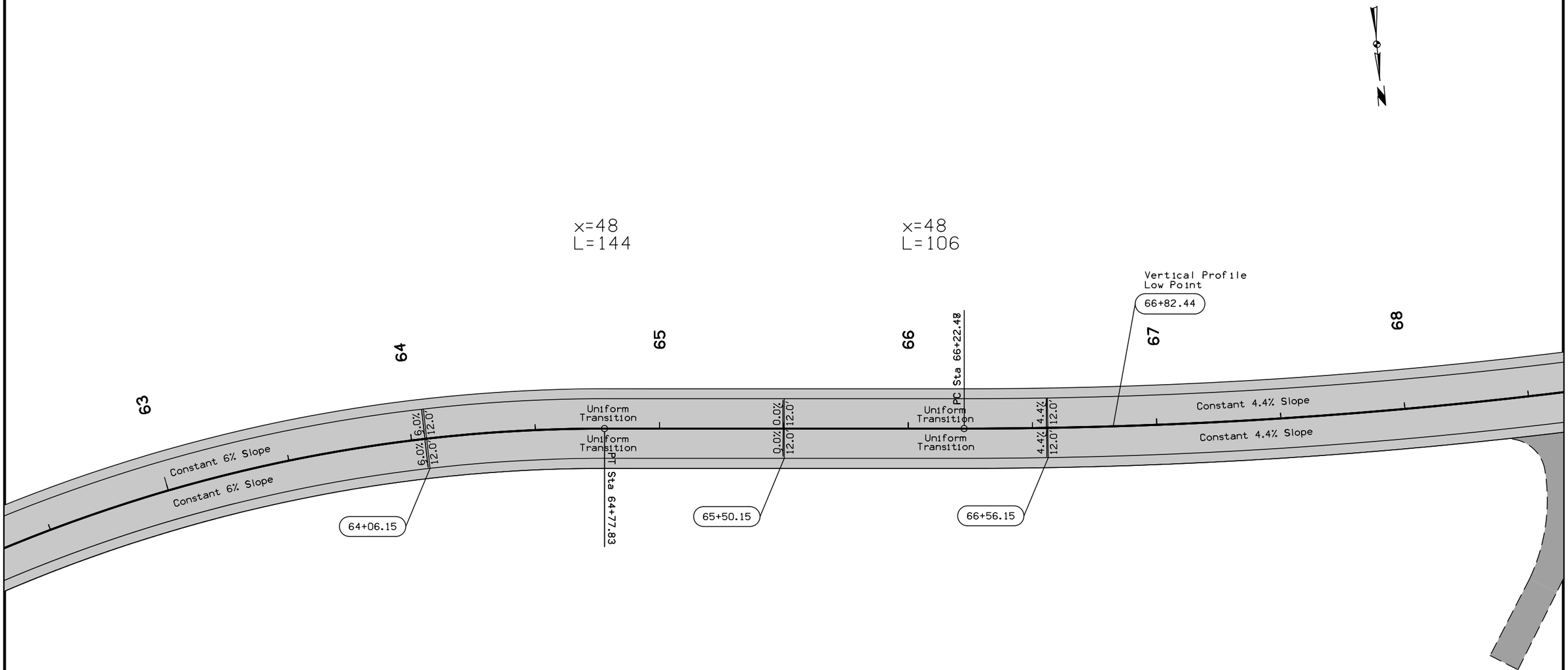

NON-STANDARD SUPERELEVATION DETAILS - IA 3

0 20
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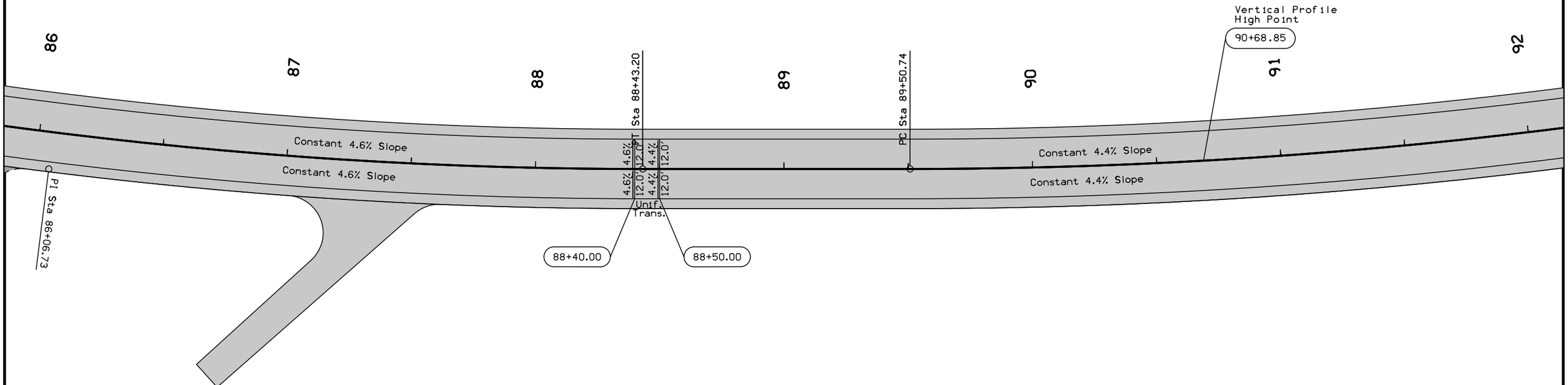

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NON-STANDARD SUPERELEVATION DETAILS - IA 3

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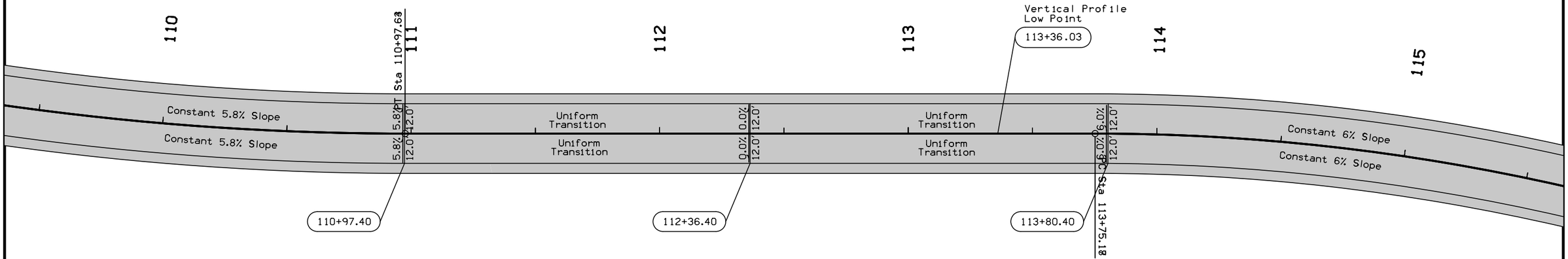

NON-STANDARD SUPERELEVATION DETAILS - IA 3

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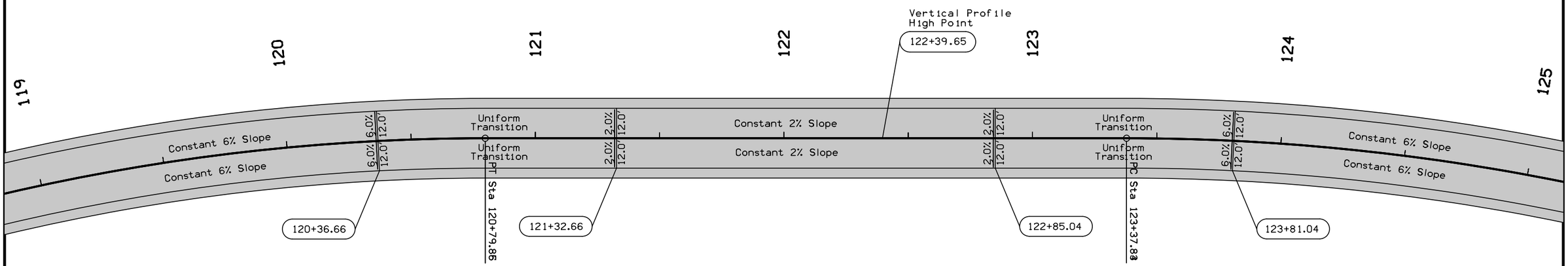

NON-STANDARD SUPERELEVATION DETAILS - IA 3

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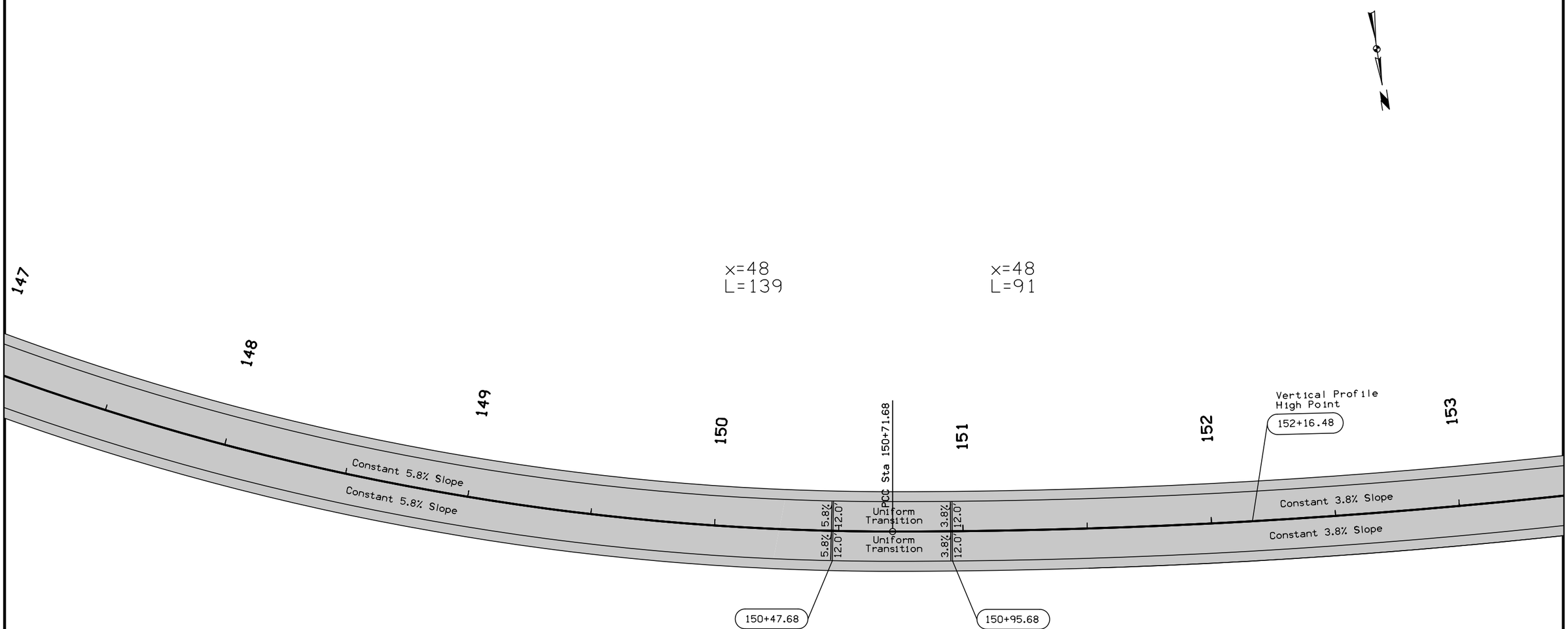

NON-STANDARD SUPERELEVATION DETAILS - IA 3

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175
175+37.00
Vertical Profile
Low Point
175+40.98
176
175+85.00
176+33.00
177
178

Constant 4.4% Slope
Constant 4.4% Slope
4.4% 4.4%
12.0' 12.0'
Uniform Transition
Uniform Transition
2.0% 2.0%
12.0' 12.0'
Const 2% Slope
2.0% 2.0%
12.0' 12.0'
Uniform Transition
0.0%
12.0'
Uniform Transition
2.0%
12.0'
Constant 2% Slope
Constant 2% Slope

174+58.86
PT Sta 175+90.66
175+26.86

0 20
FEET

NON-STANDARD SUPERELEVATION DETAILS - IA 3

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.7

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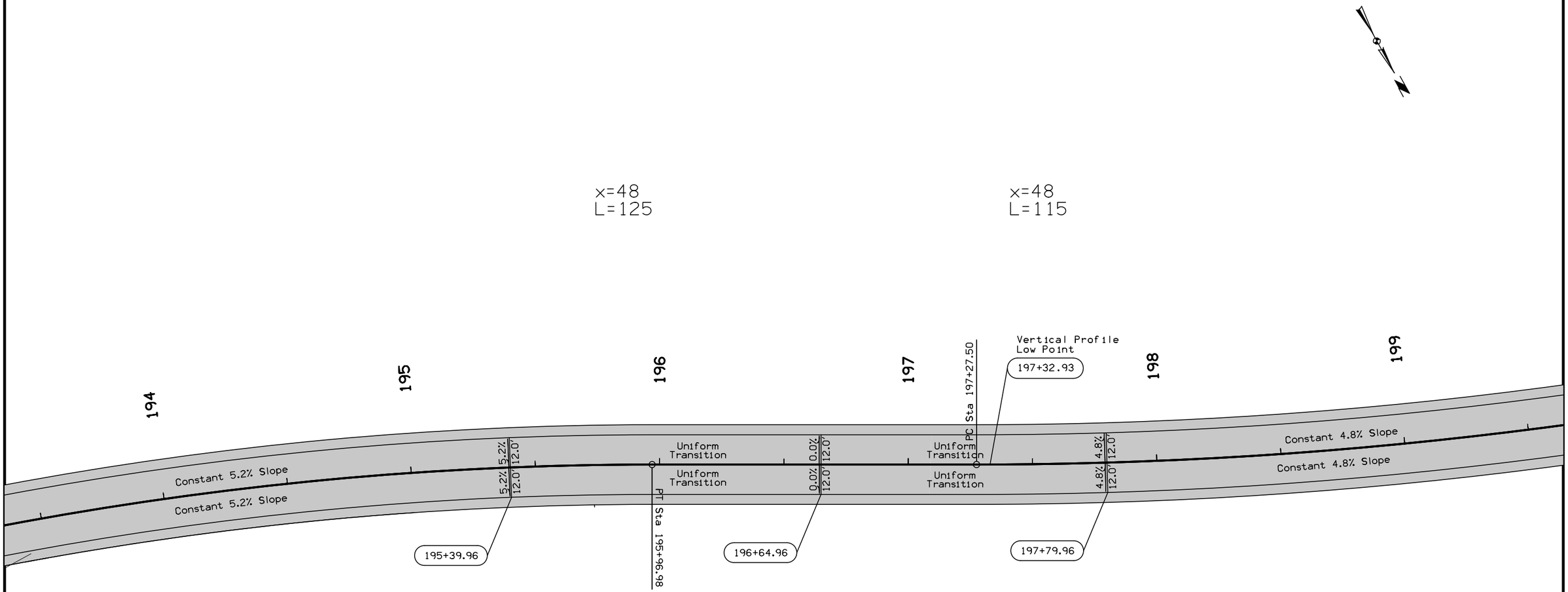

NON-STANDARD SUPERELEVATION DETAILS - IA 3

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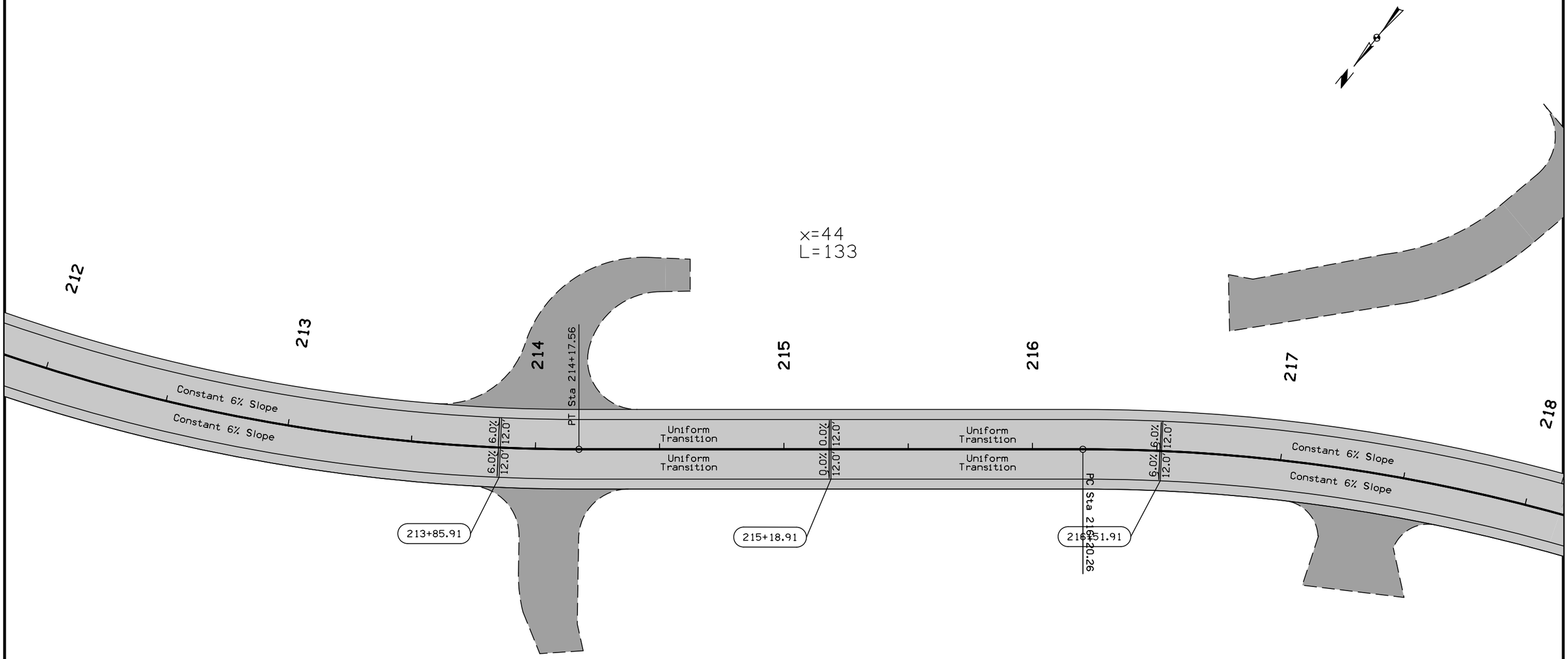

NON-STANDARD SUPERELEVATION DETAILS - IA 3

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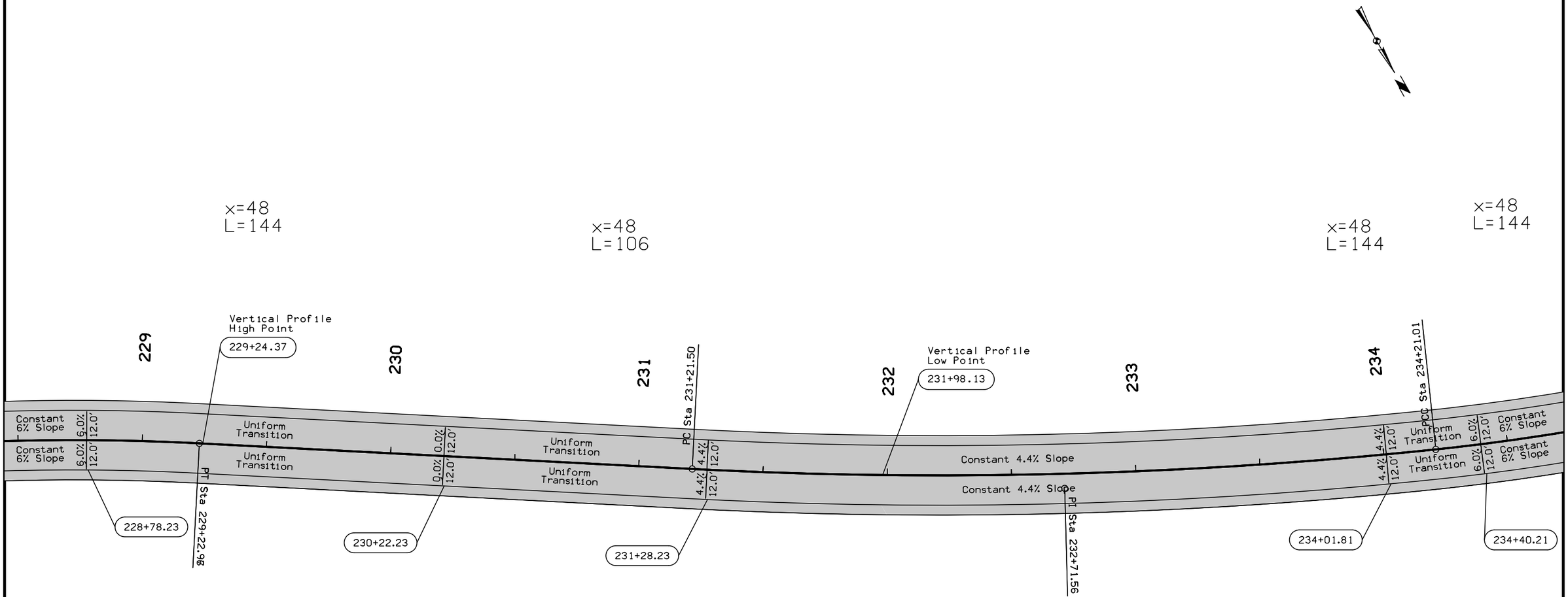

NON-STANDARD SUPERELEVATION DETAILS - IA 3

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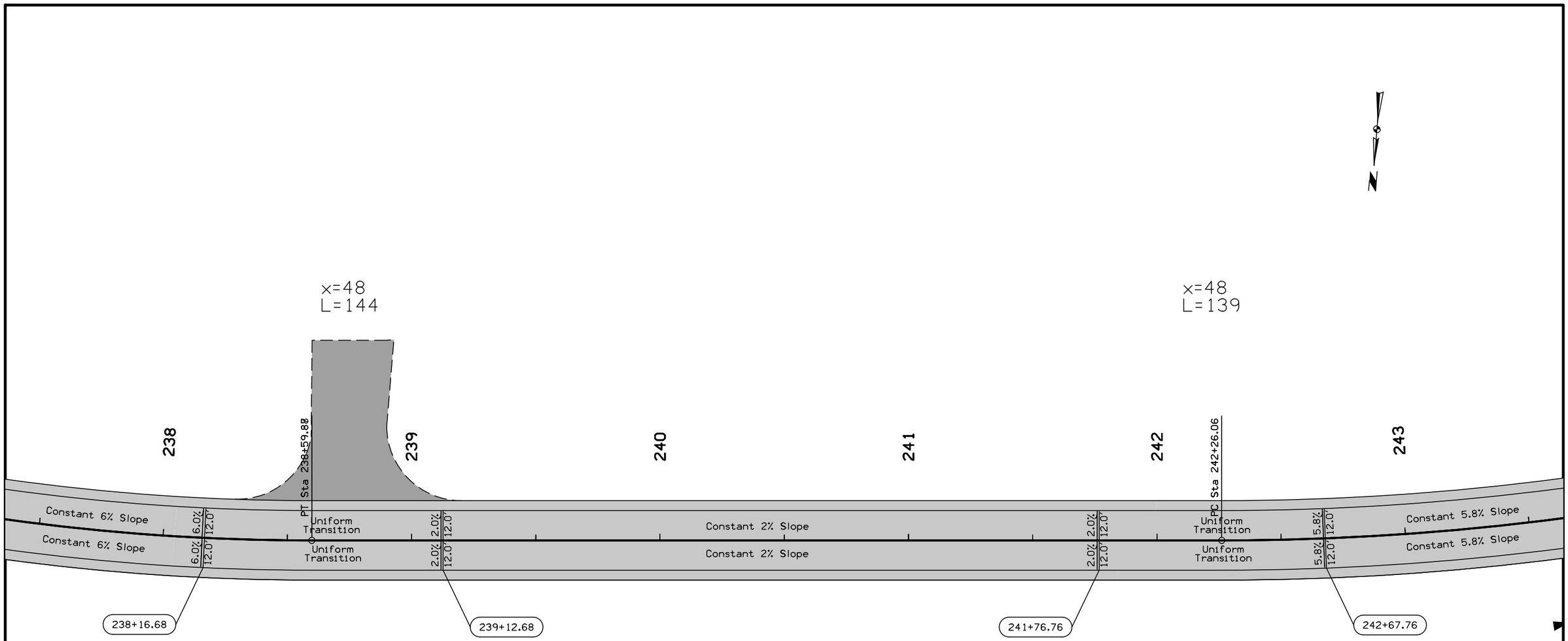

NON-STANDARD SUPERELEVATION DETAILS - IA 3

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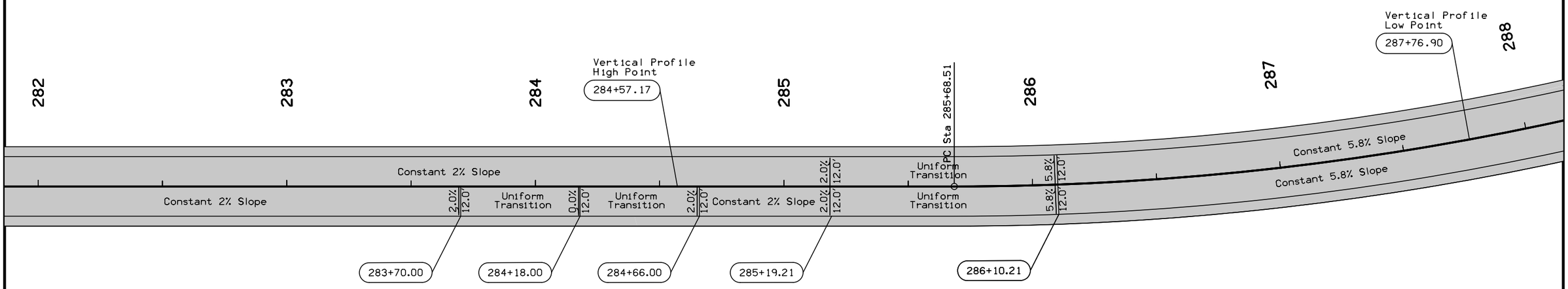

NON-STANDARD SUPERELEVATION DETAILS - IA 3

0 FEET 20

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.12

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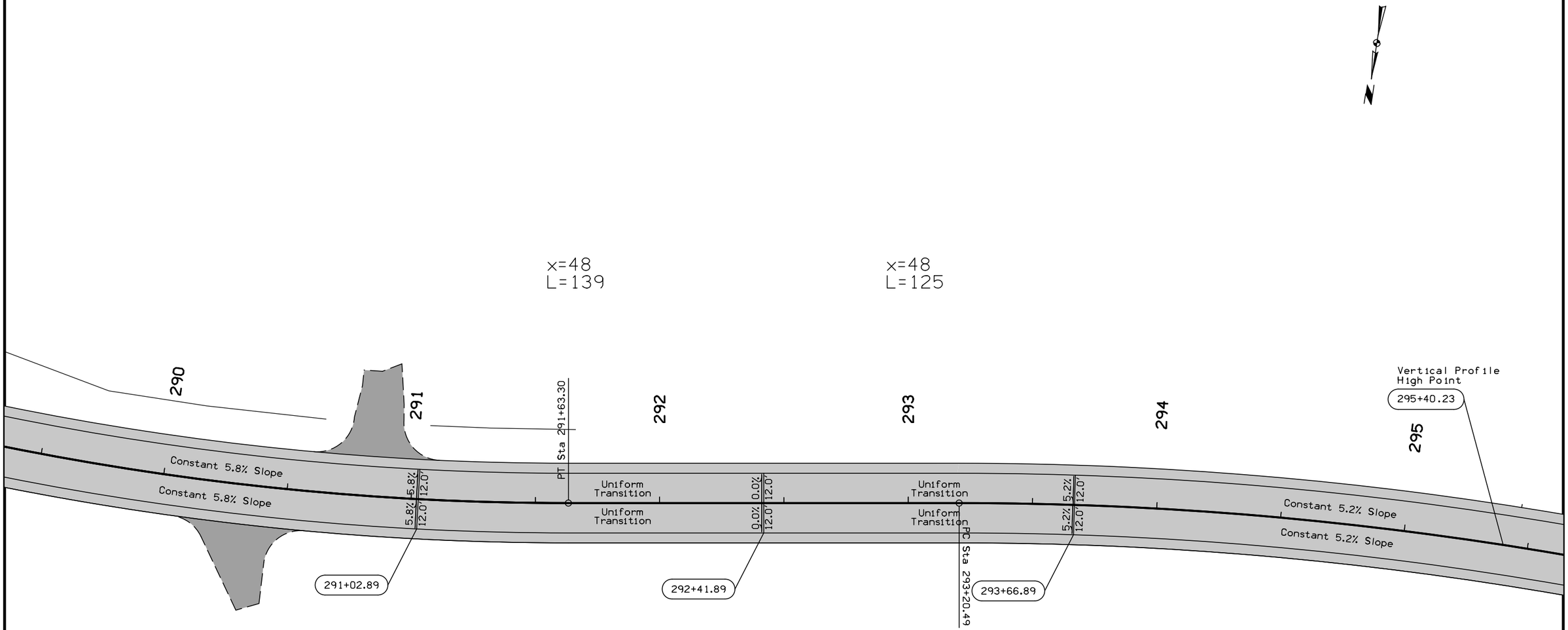

NON-STANDARD SUPERELEVATION DETAILS - IA 3

0 20 FEET

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.13

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x=48
L=144

321
322
323
324
325
326
327

PC Sta 325+23.88

Constant 6% Slope
Constant 6% Slope
Constant 6% Slope
Constant 6% Slope

6.0%
12.0'
Uniform Transition
0.0%
12.0'
Uniform Transition
6.0%
12.0'

322+77.33
PT Sta 323+18.78
324+21.33
325+65.33

0 20
FEET

NON-STANDARD SUPERELEVATION DETAILS - IA 3

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.14

3:06:16 PM 3/22/2024 idot E:\D5_revision\COR_4\3_21_2024\L_Sheets\SHT_31052107_L01.dgn

x=48
L=144

x=48
L=144

x=48
L=144

x=48
L=144

329

330

331

332

333

334

PT Sta 329+88.39

PI Sta 331+14.39

PC Sta 333+14.20

Constant
6%
Slope

Uniform
Transition

Const.
6%
Slope

6.0%
12.0'

0.0%
12.0'

328+53.00

329+97.00

PC Sta 330+37.78

331+41.00

PT Sta 331+90.71

333+05.00

334+49.00

NON-STANDARD SUPERELEVATION DETAILS - IA 3

0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.15

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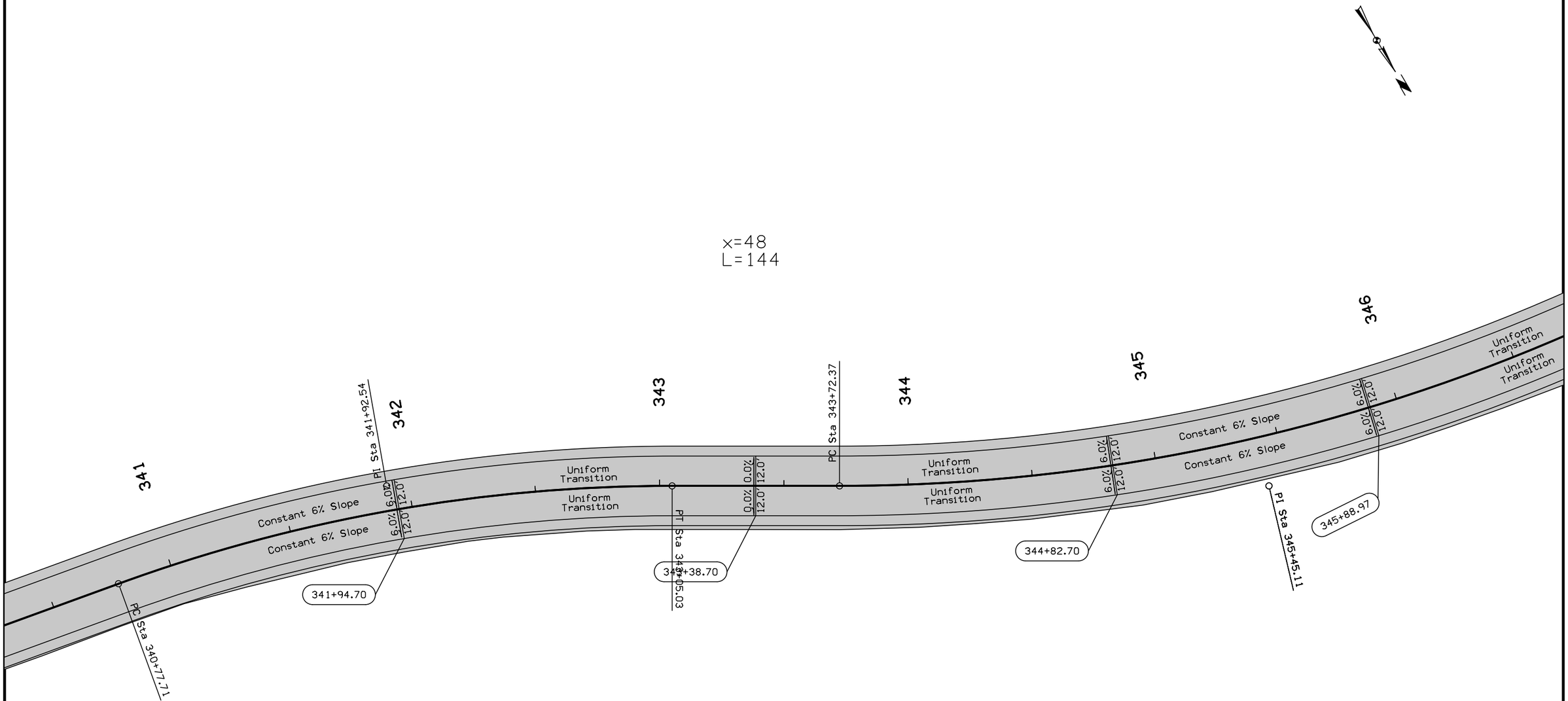

NON-STANDARD SUPERELEVATION DETAILS - IA 3

0 20 FEET

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.16

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x=48
L=144

345

346

347

348

349

350

PI Sta 345+45.11

345+88.97

344+82.70

PT Sta 347+11.70

347+32.97

PC Sta 347+54.24

348+76.97

PI Sta 348+99.91

PT Sta 350+38.70

Constant 6% Slope

Uniform Transition

6.0% 12.0

0.0% 12.0

0 20 FEET

NON-STANDARD SUPERELEVATION DETAILS - IA 3

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.17

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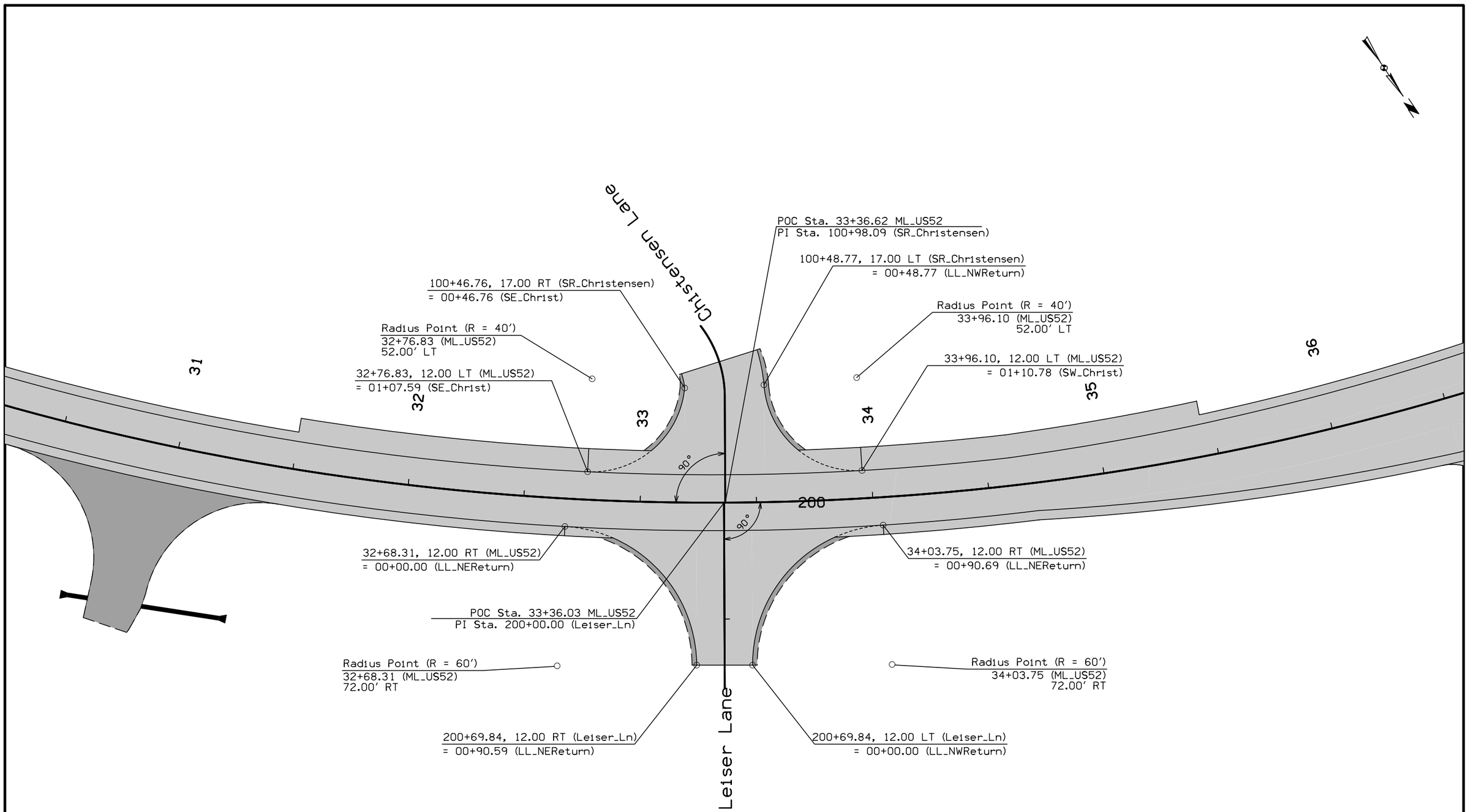

GEOMETRIC DETAILS
LEISER LANE / CHRISTENSEN LANE

FILE NO.	ENGLISH	DESIGN TEAM **J1a \ Thiel \ Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **L.18**

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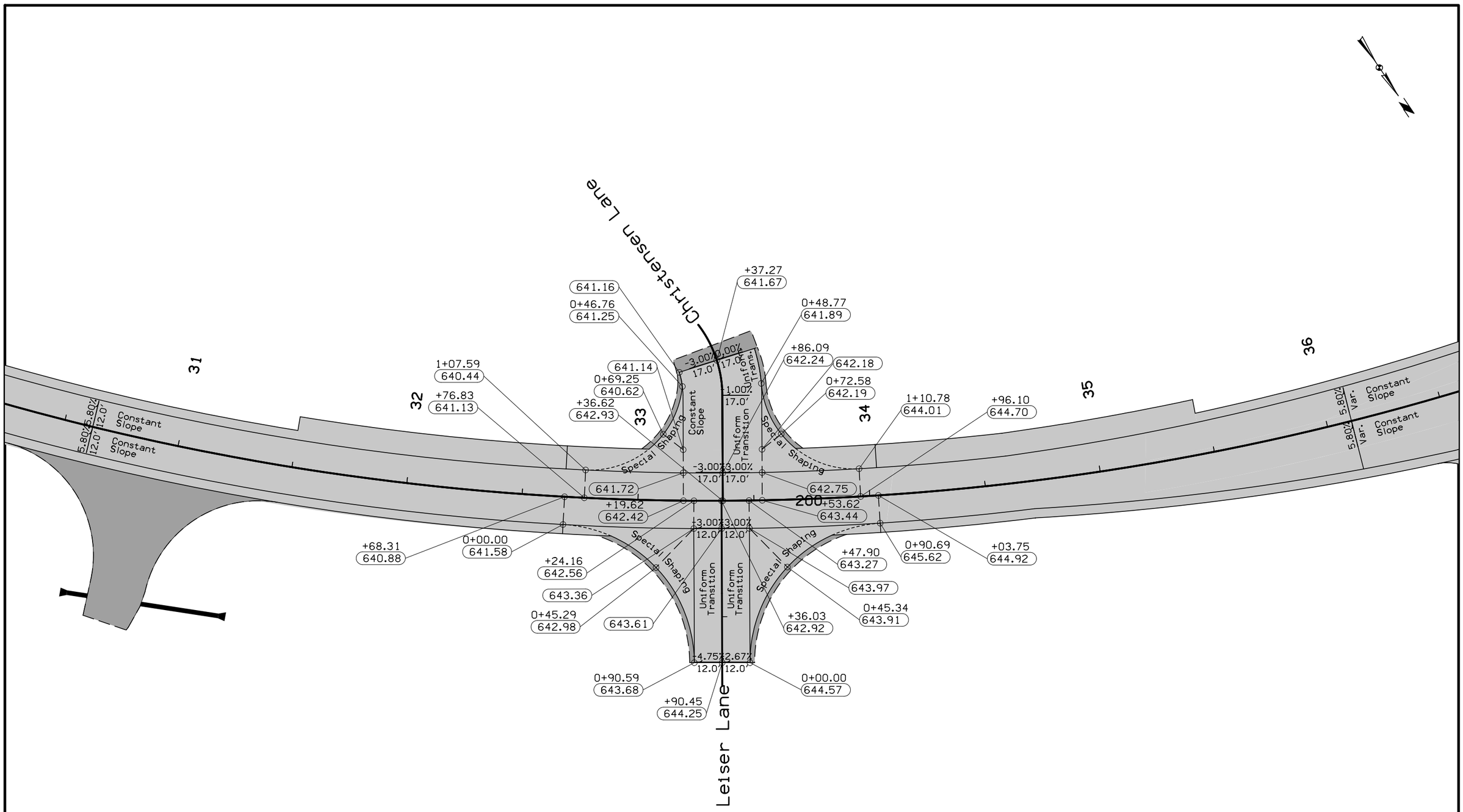

STAKING DETAILS
LEISER LANE / CHRISTENSEN LANE

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.19

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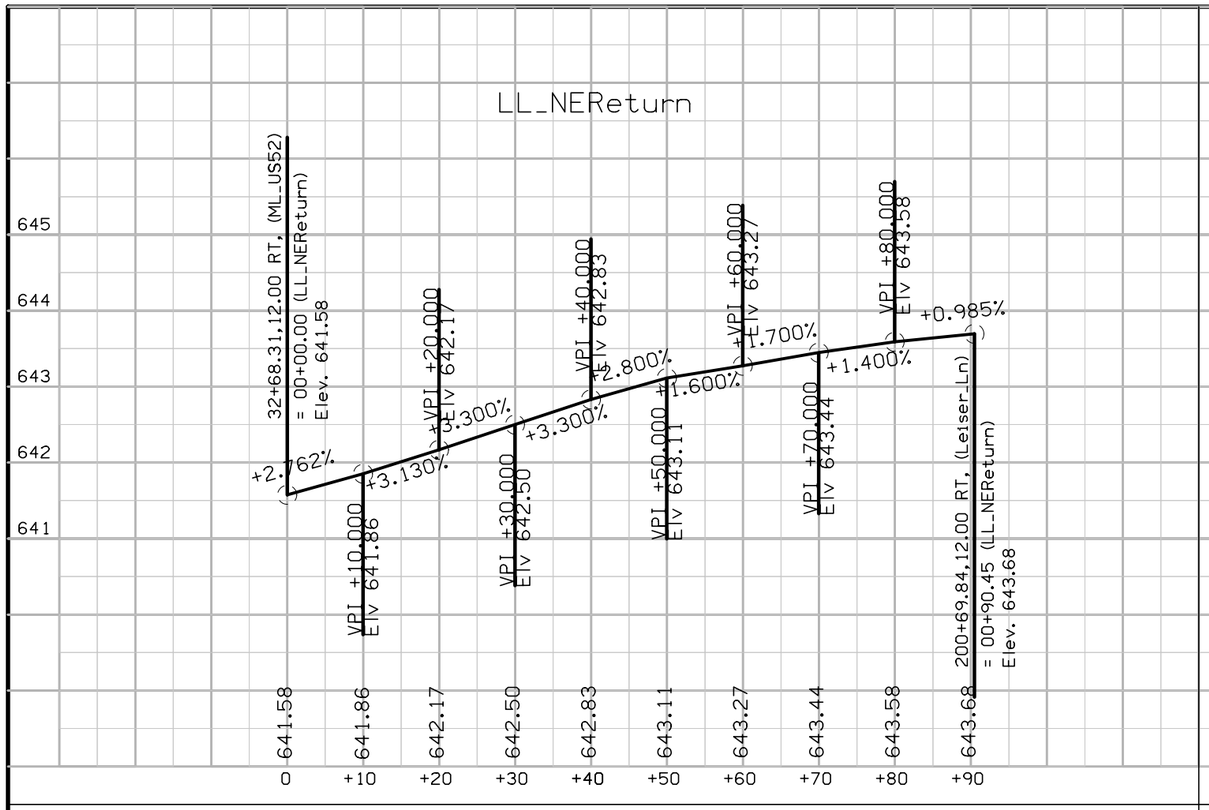

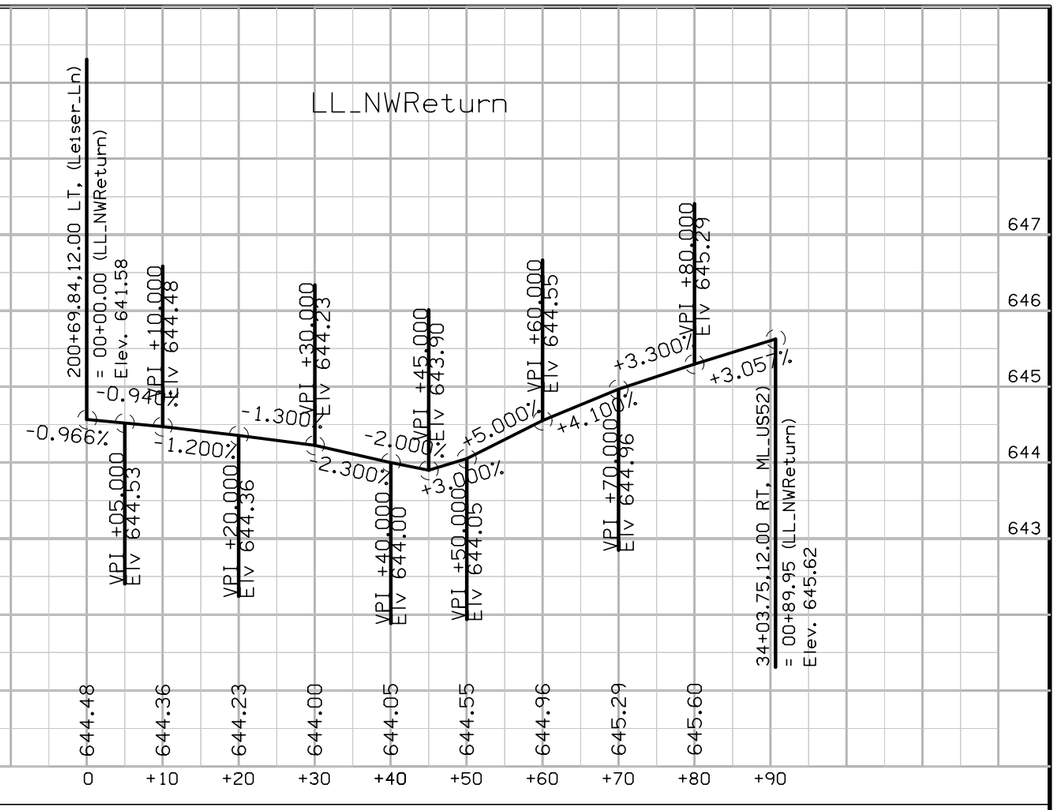

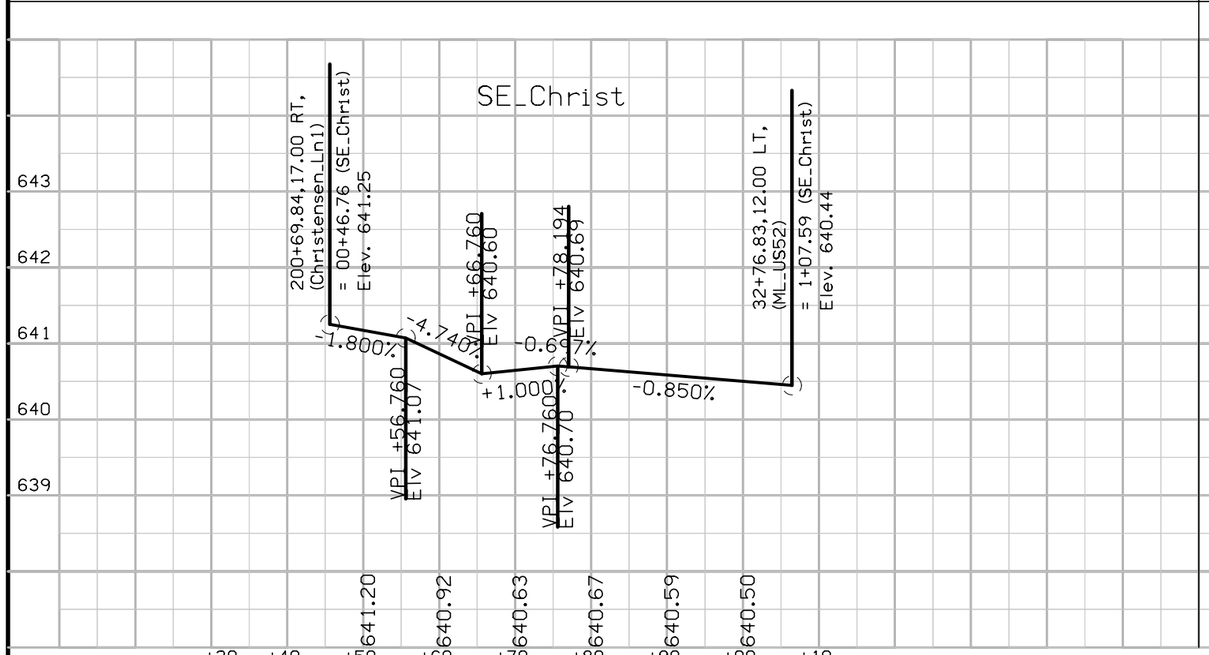

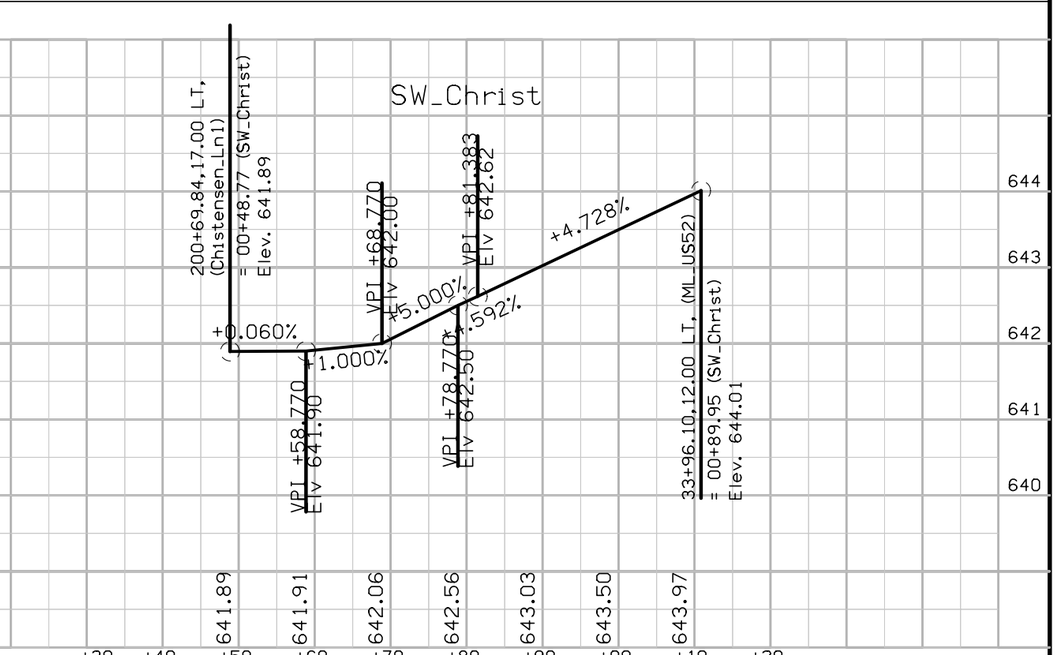

EDGE PROFILES LEISER LANE / CHRISTENSEN LANE

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.20

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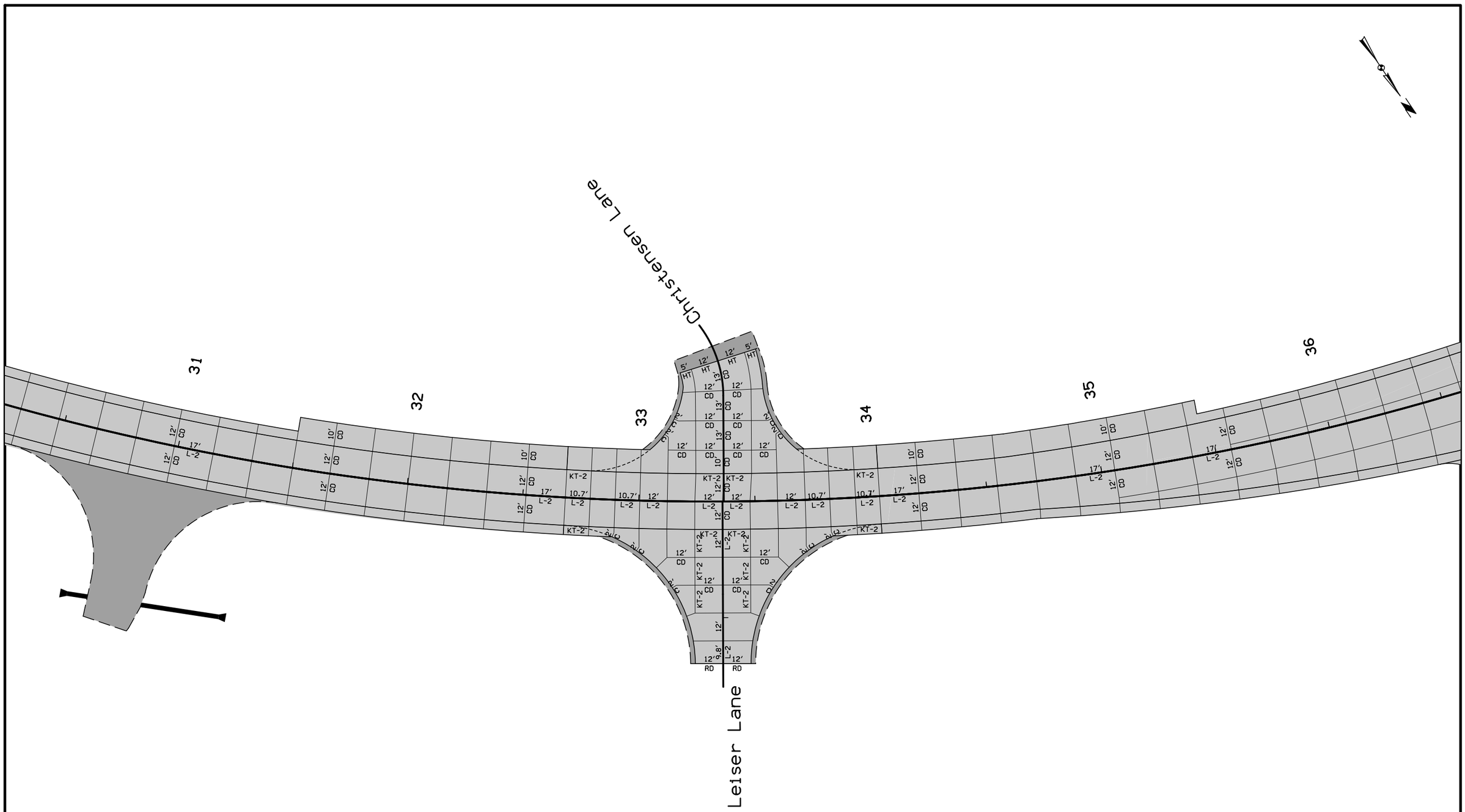

JOINTING DETAILS
LEISER LANE / CHRISTENSEN LANE

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.21

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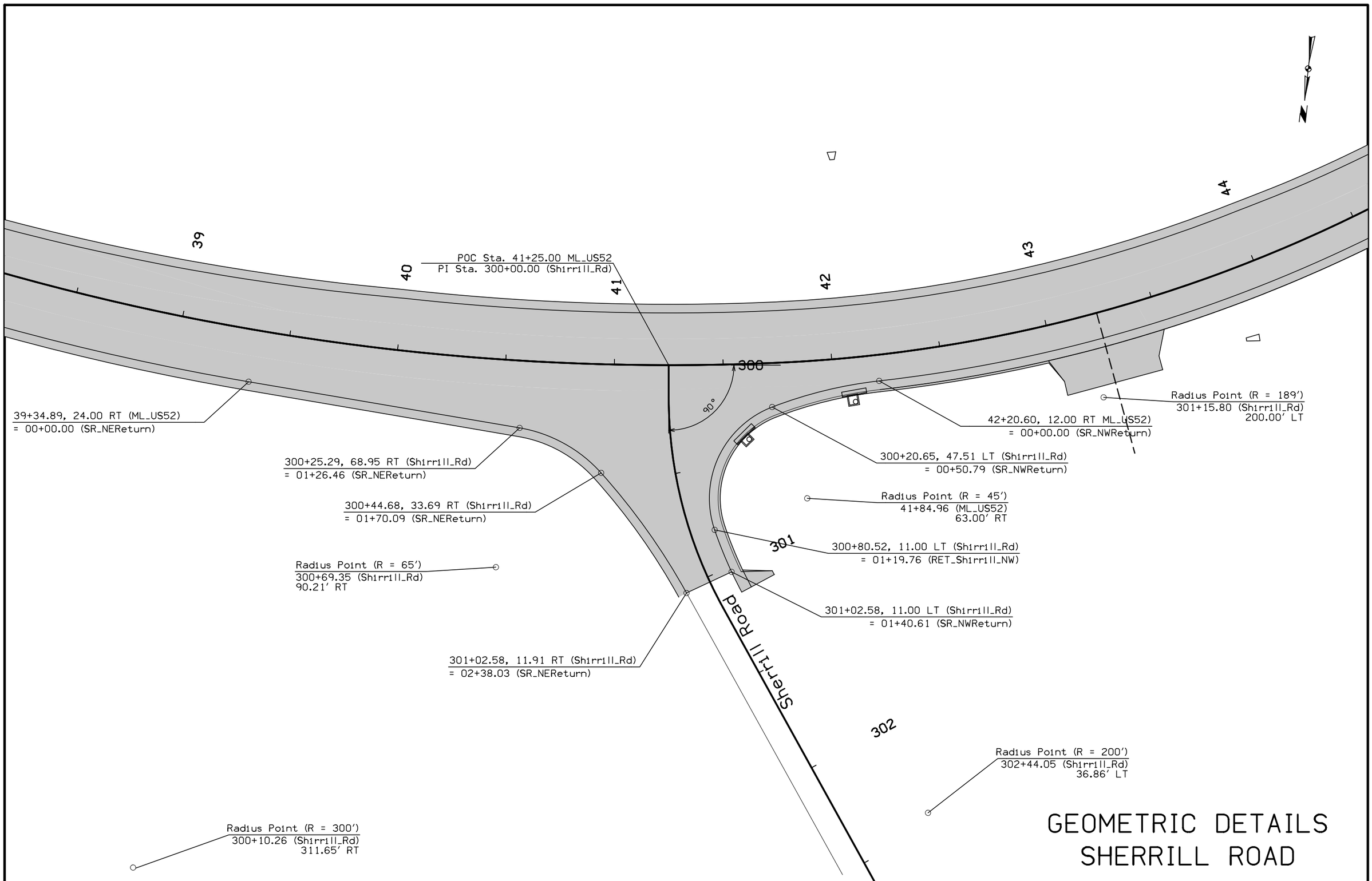
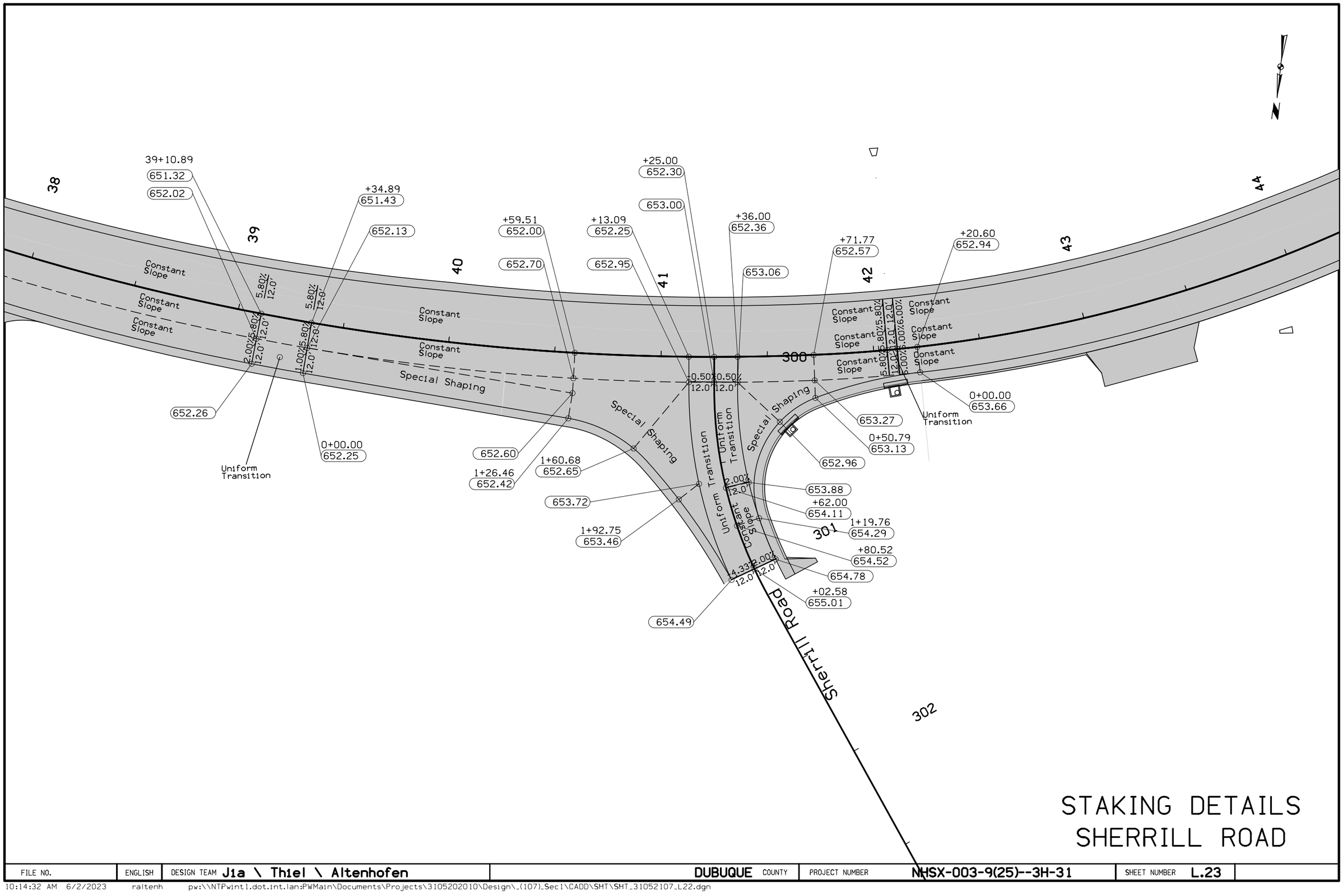


GEOMETRIC DETAILS
SHERRILL ROAD

FILE NO.	ENGLISH	DESIGN TEAM **J1a \ Thiel \ Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **L.22**

8:02:20 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn



STAKING DETAILS
SHERRILL ROAD

FILE NO.	ENGLISH	DESIGN TEAM **J1a \ Thiel \ Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **L.23**

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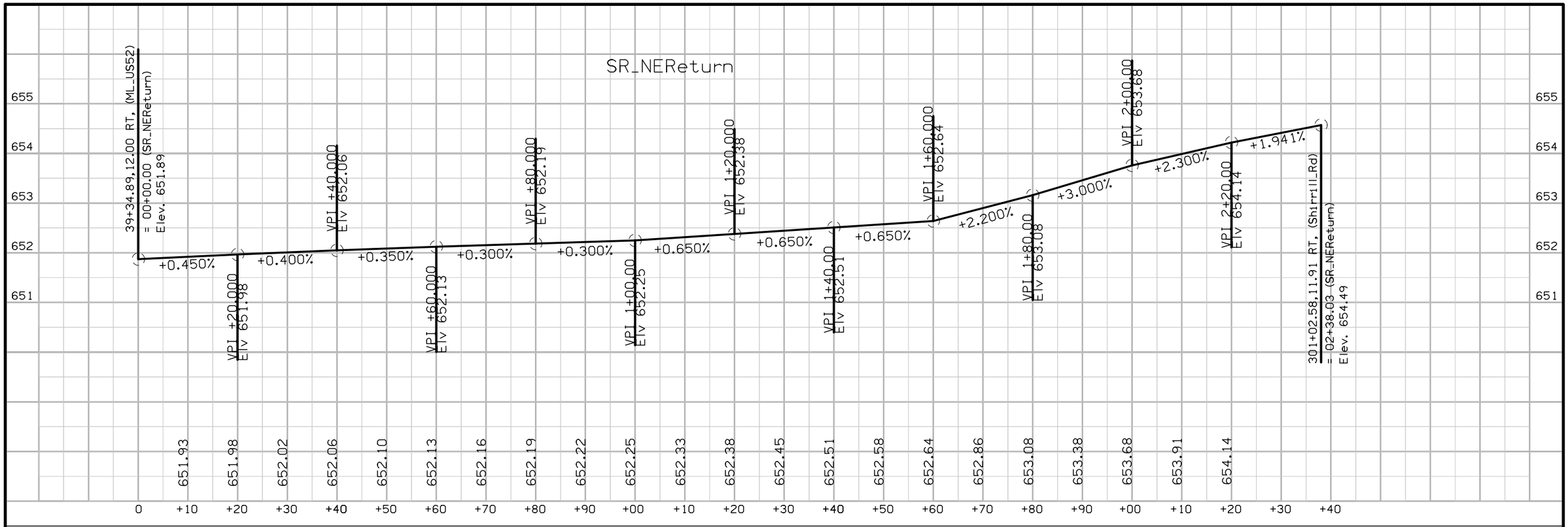

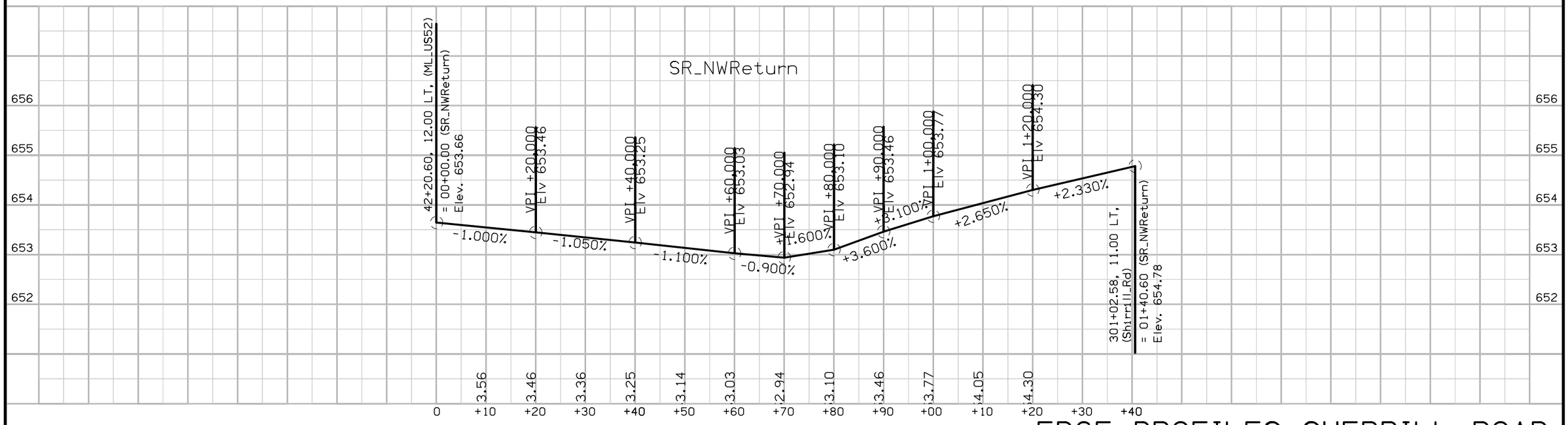

EDGE PROFILES SHERRILL ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.24

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JOINTING DETAILS
SHERRILL ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.25

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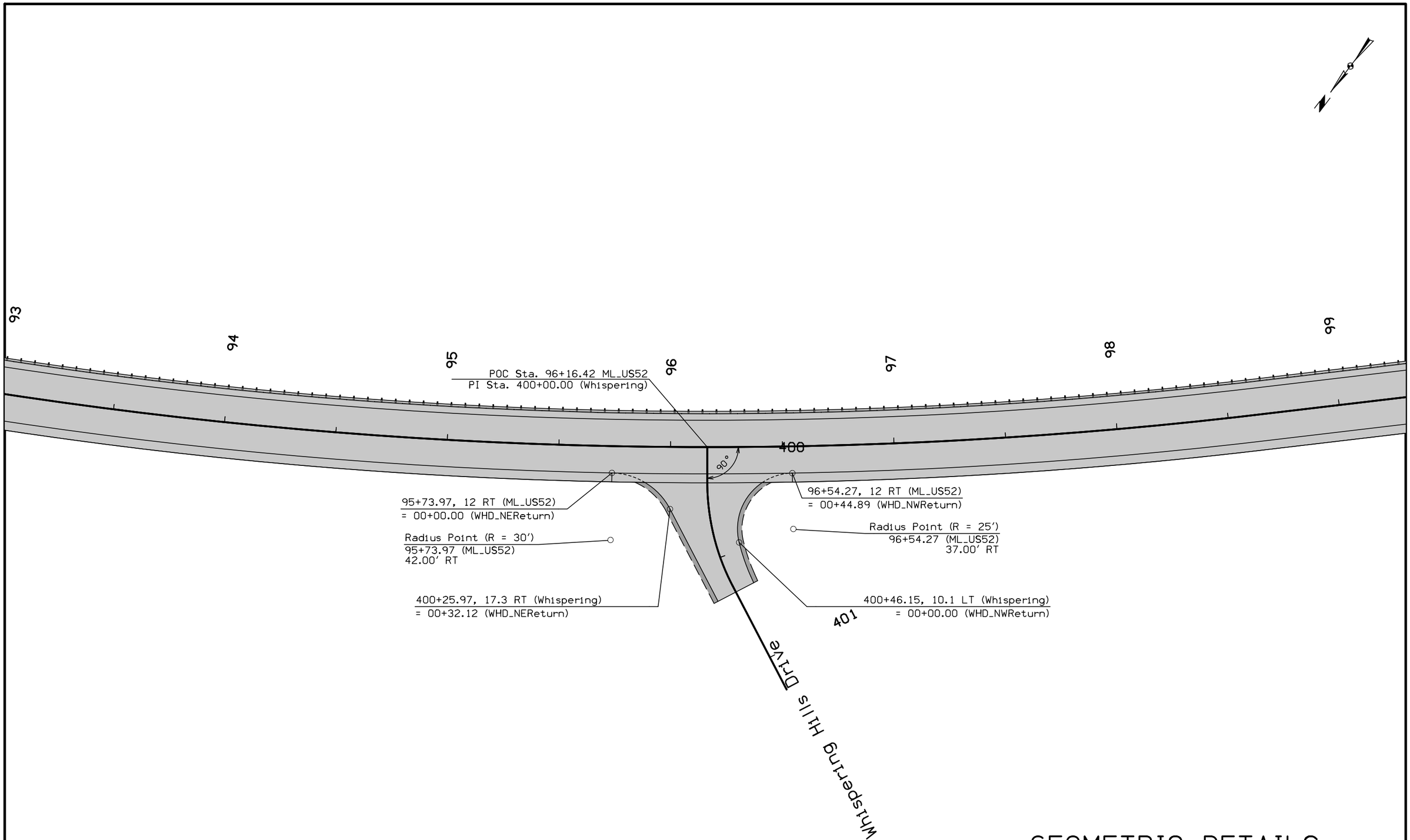

GEOMETRIC DETAILS
WHISPERING HILLS DRIVE

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.26

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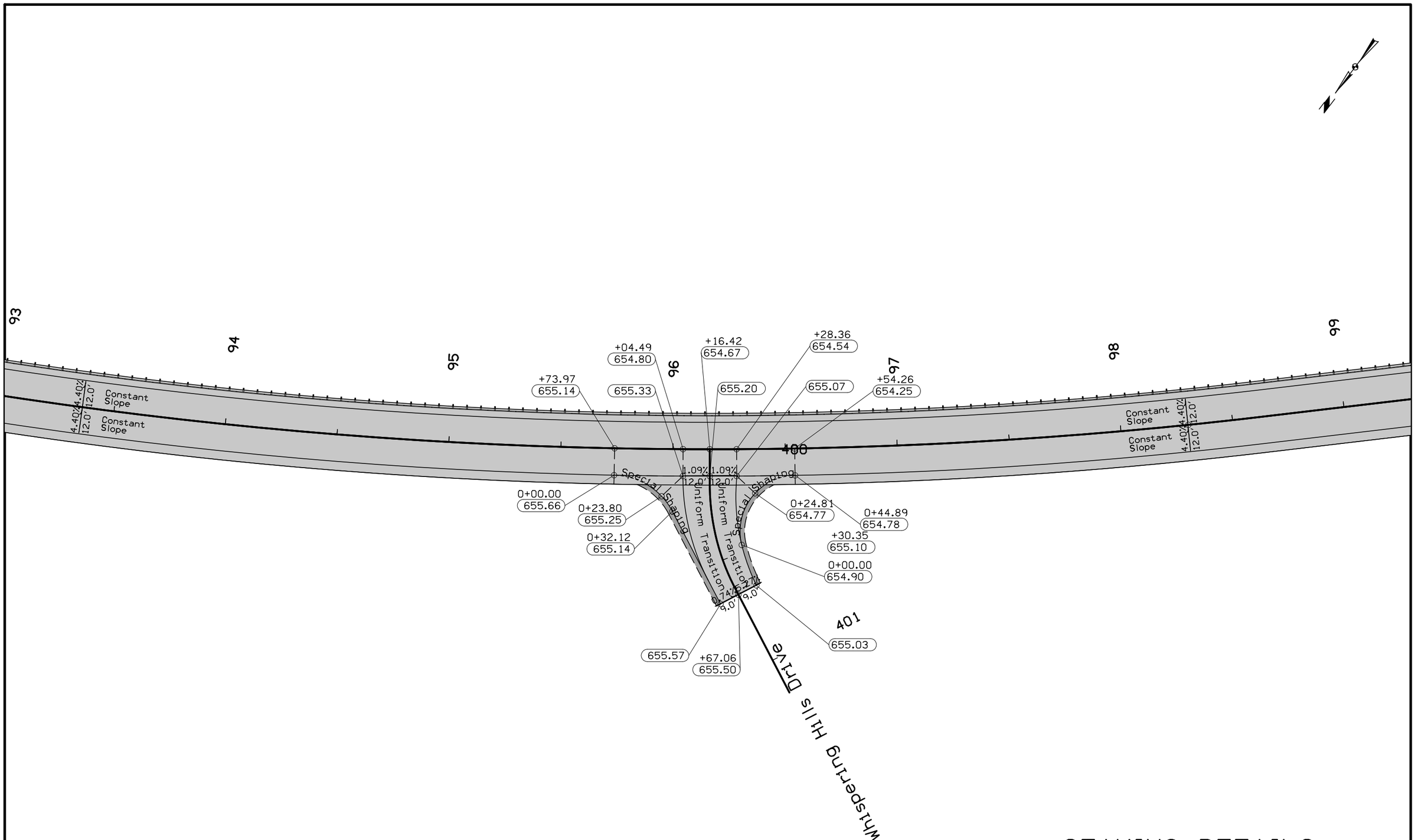

STAKING DETAILS
WHISPERING HILLS DRIVE

FILE NO.	ENGLISH	DESIGN TEAM **J1a \ Thiel \ Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **L.27**

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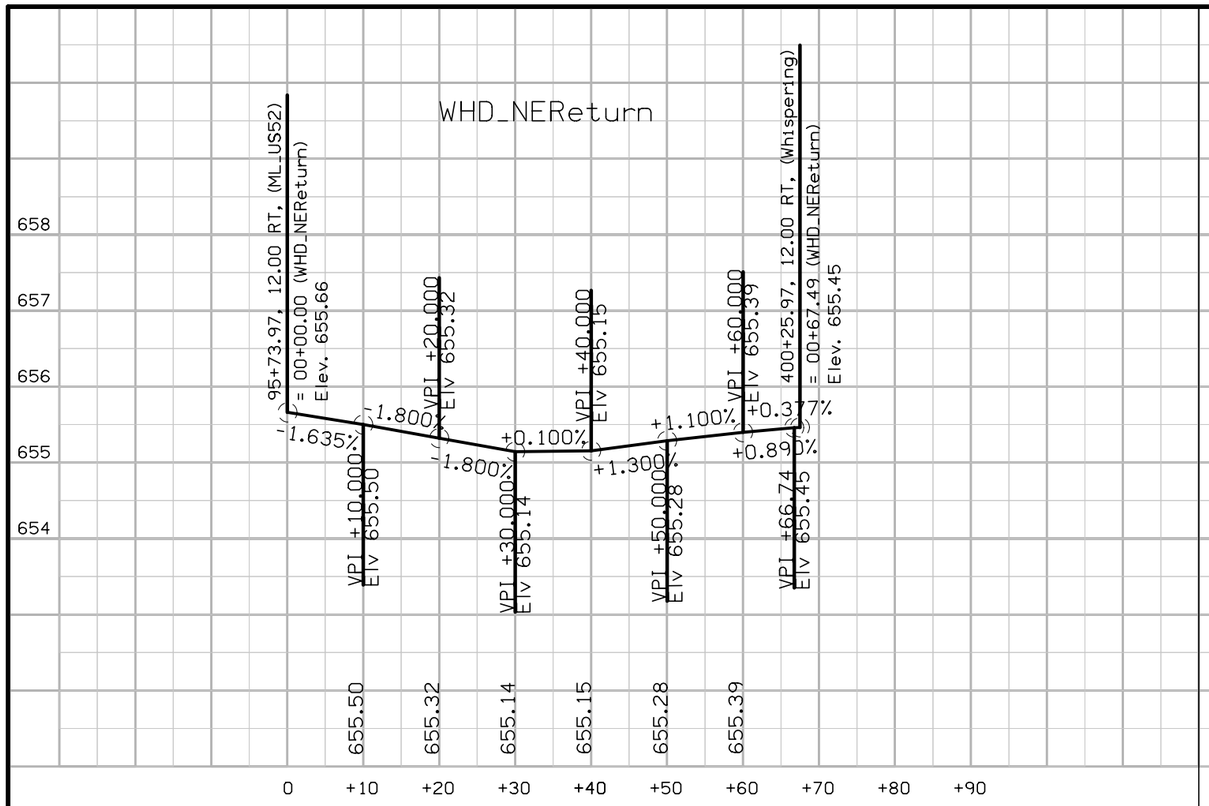

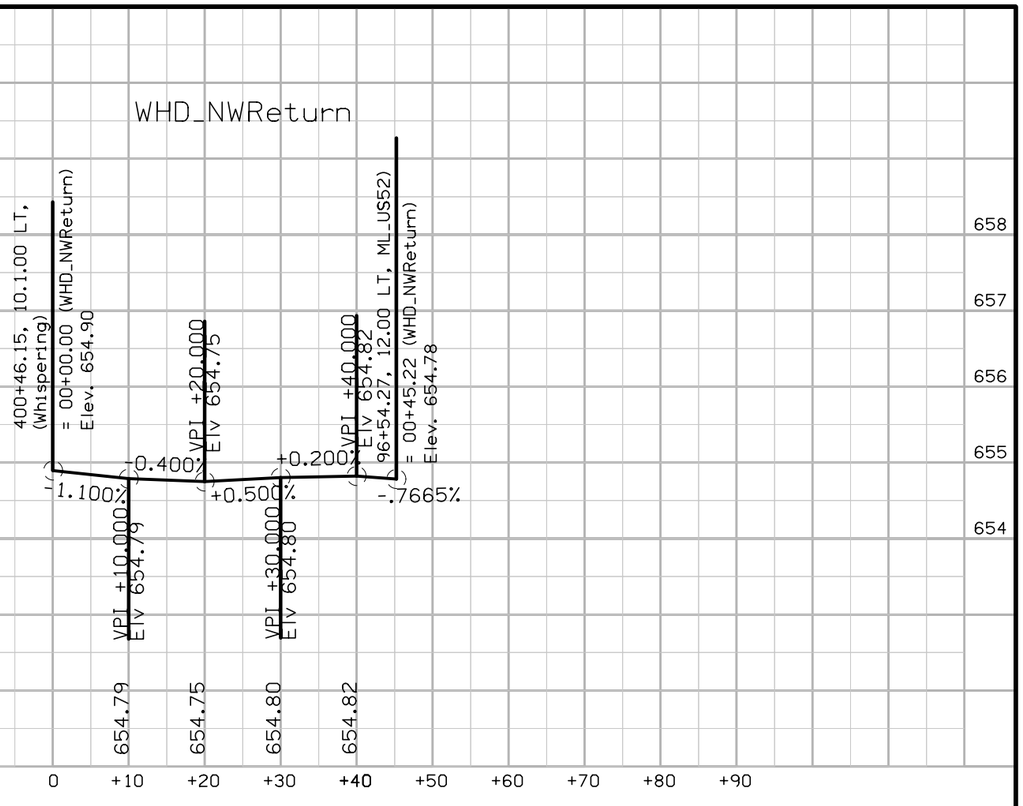

EDGE PROFILES
WHISPERING HILLS DRIVE

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.28

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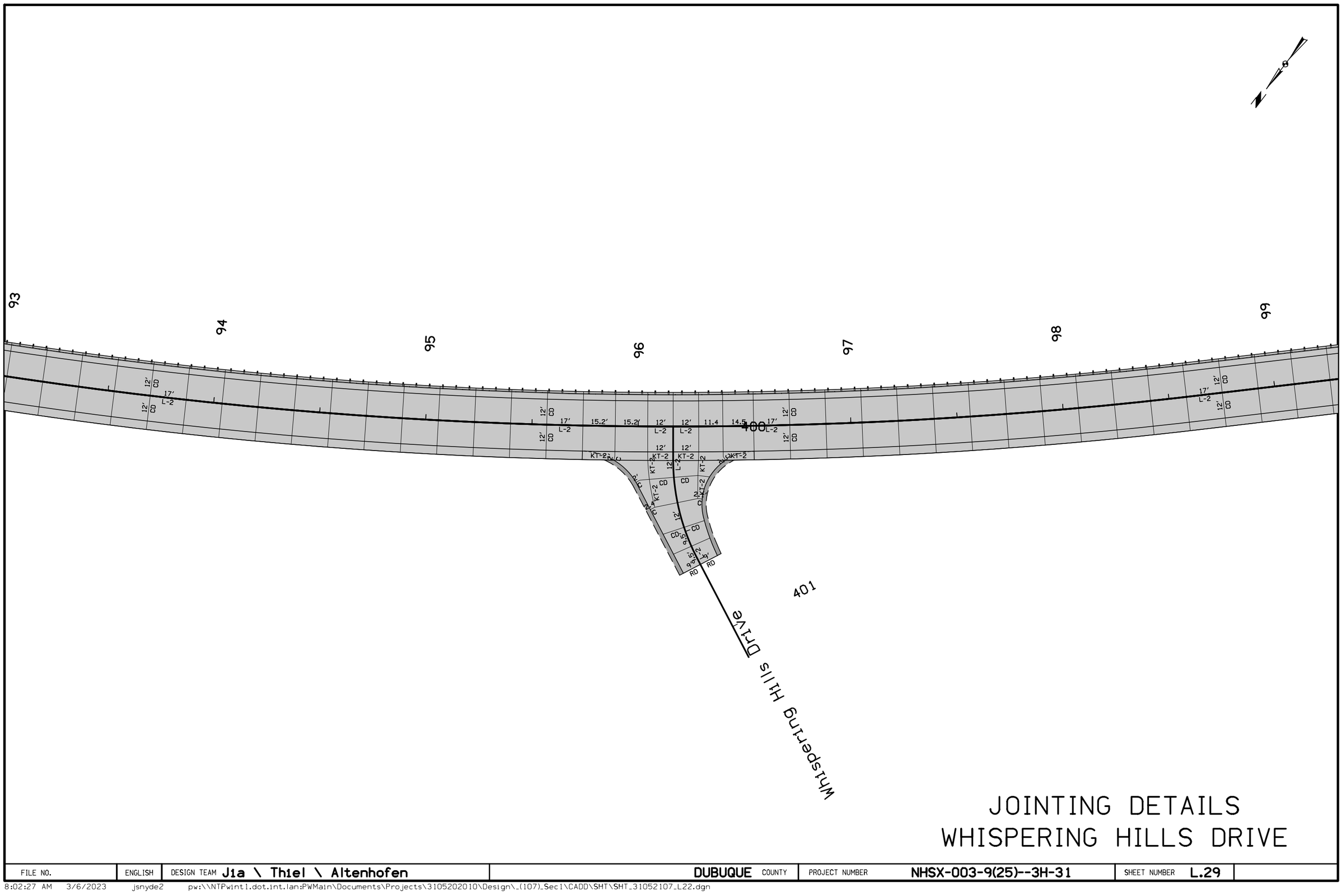

JOINTING DETAILS
WHISPERING HILLS DRIVE

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.29

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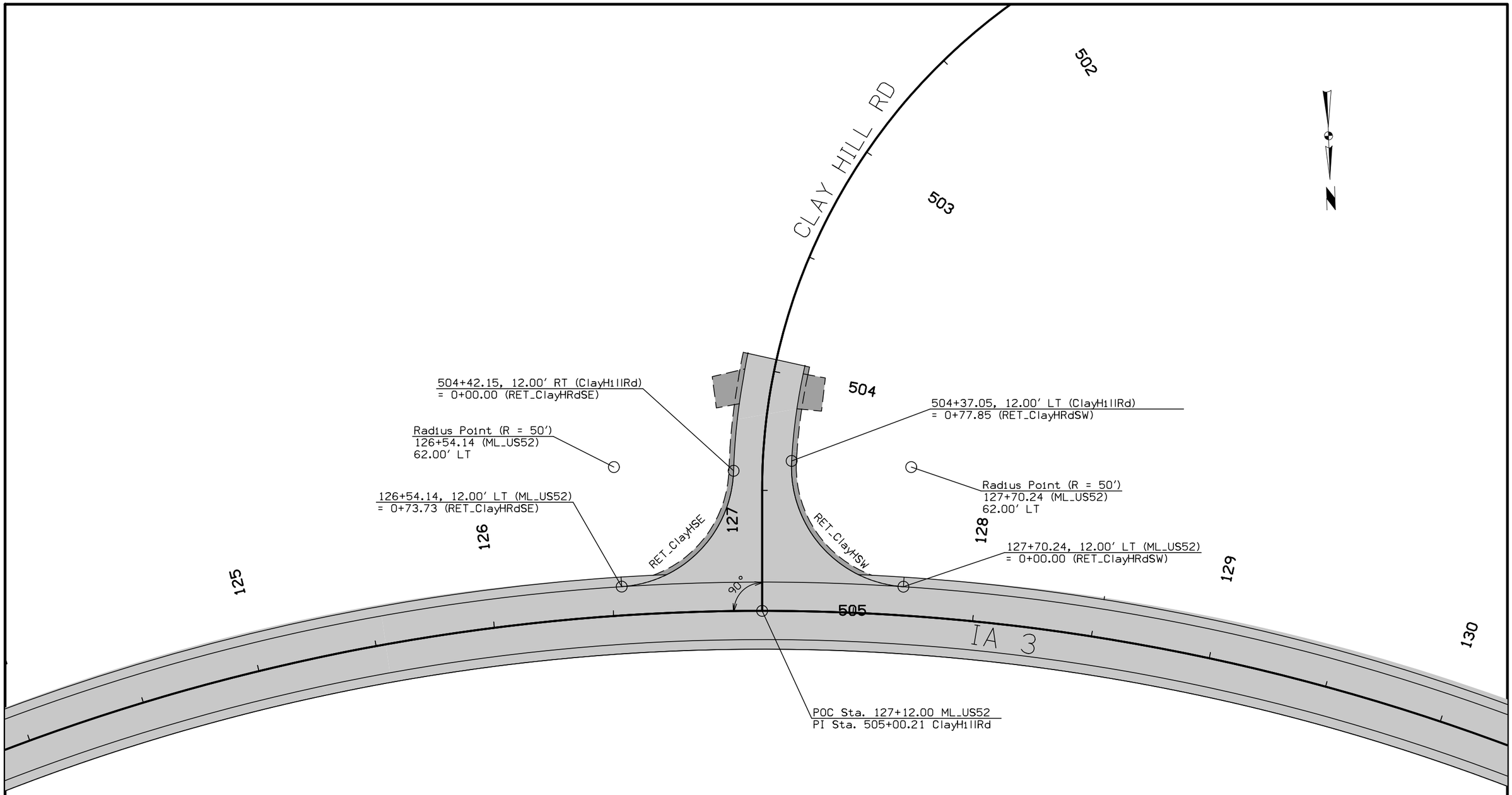

GEOMETRIC DETAILS
CLAY HILL ROAD

FILE NO.	ENGLISH	DESIGN TEAM **J1a \ Th1el \ Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **L.30**

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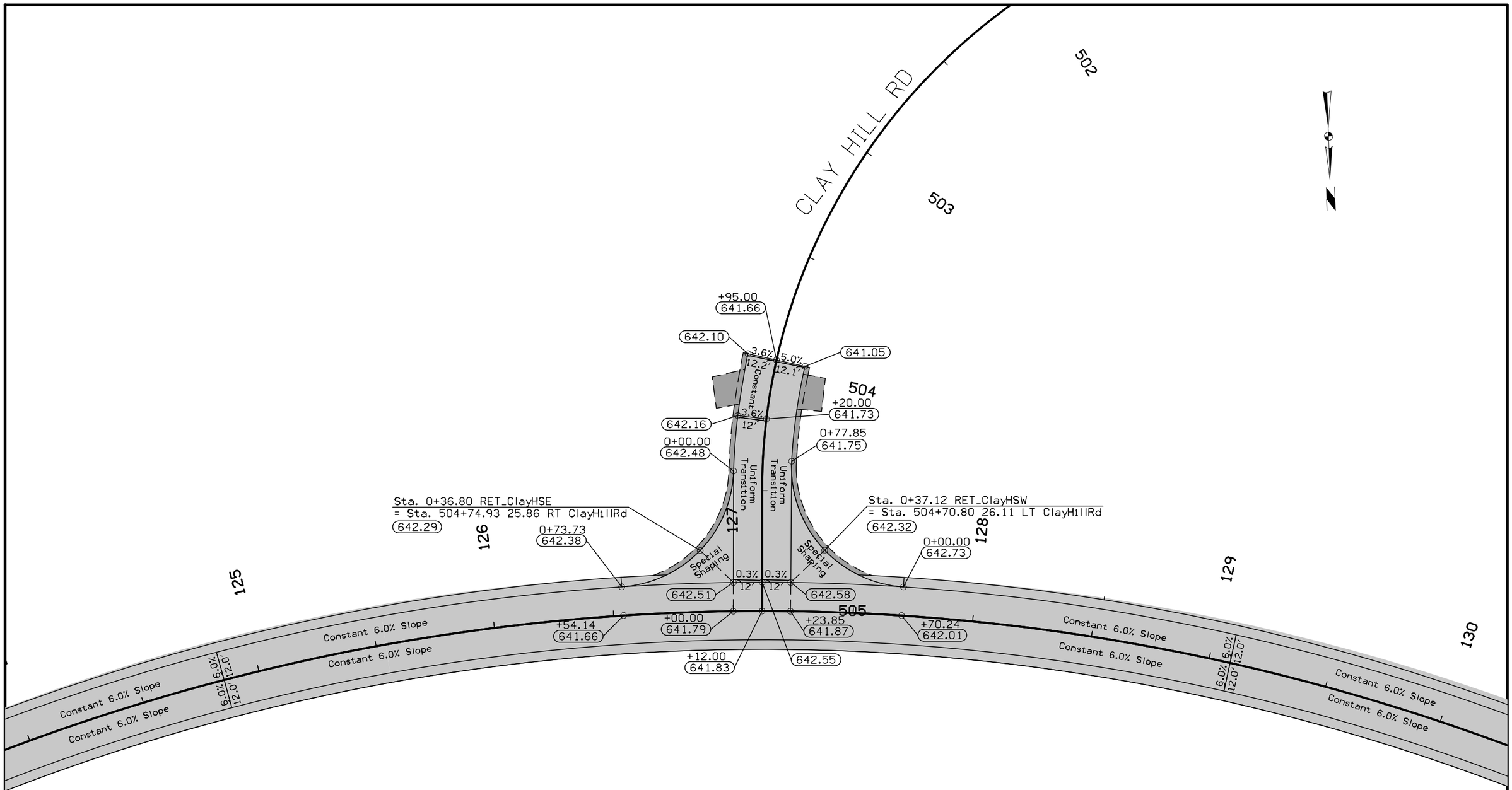

STAKING DETAILS
CLAY HILL ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.31

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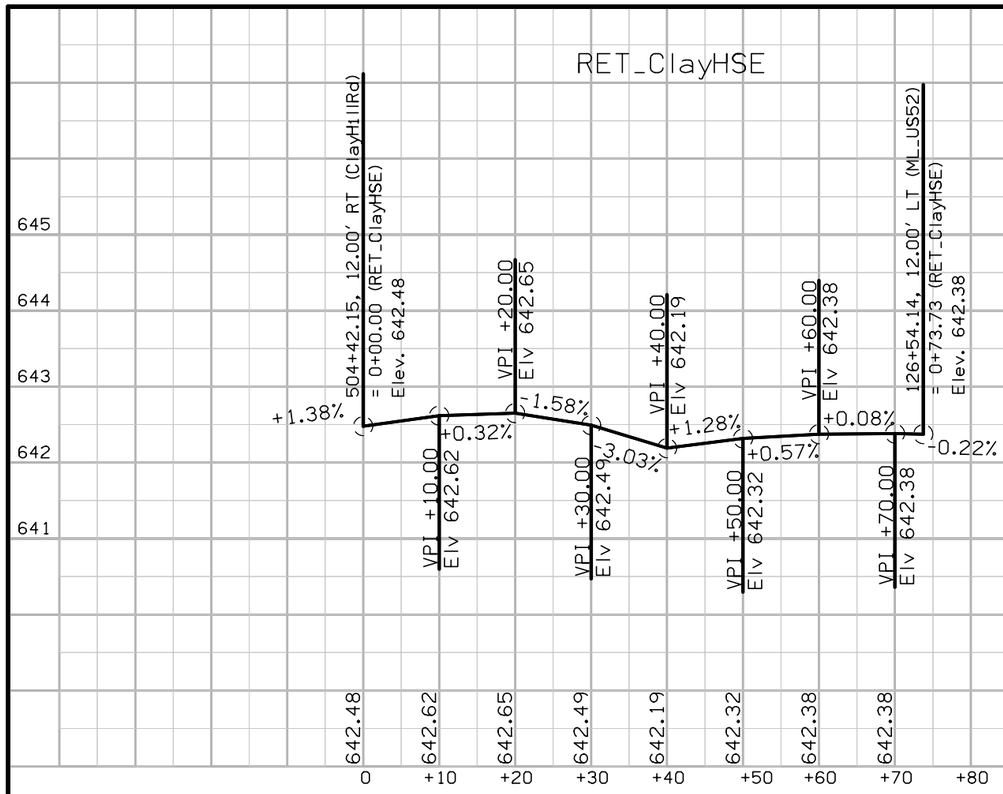

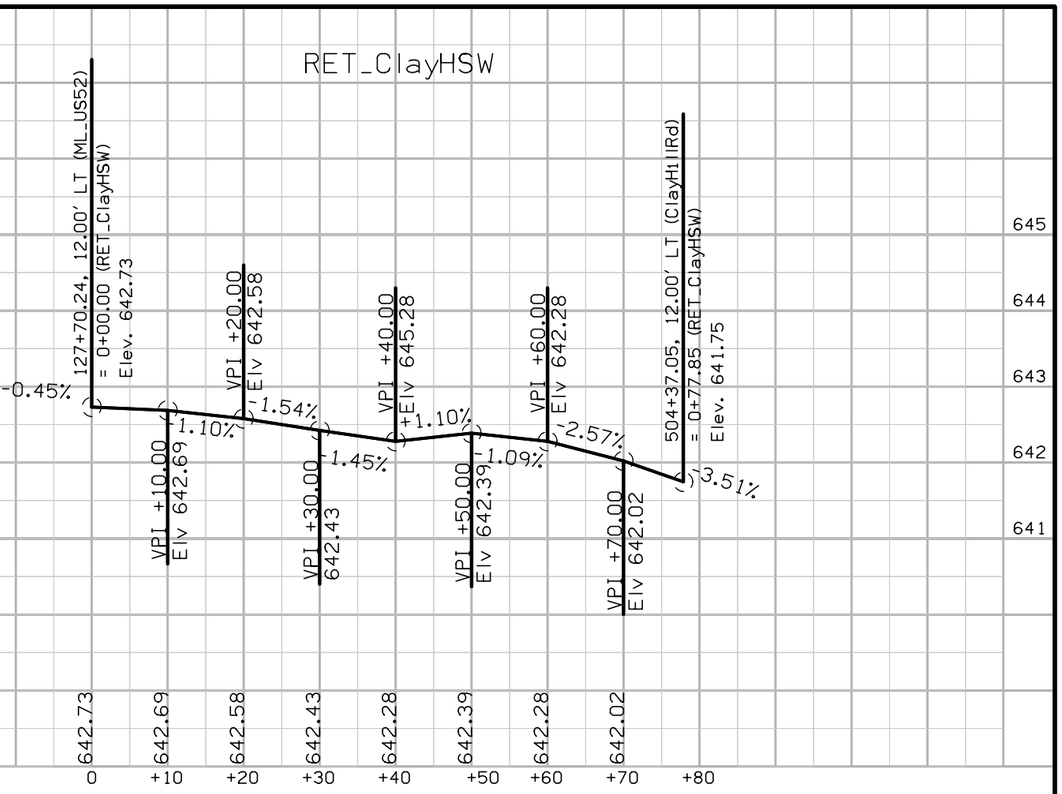

EDGE PROFILES
CLAY HILL ROAD

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.32

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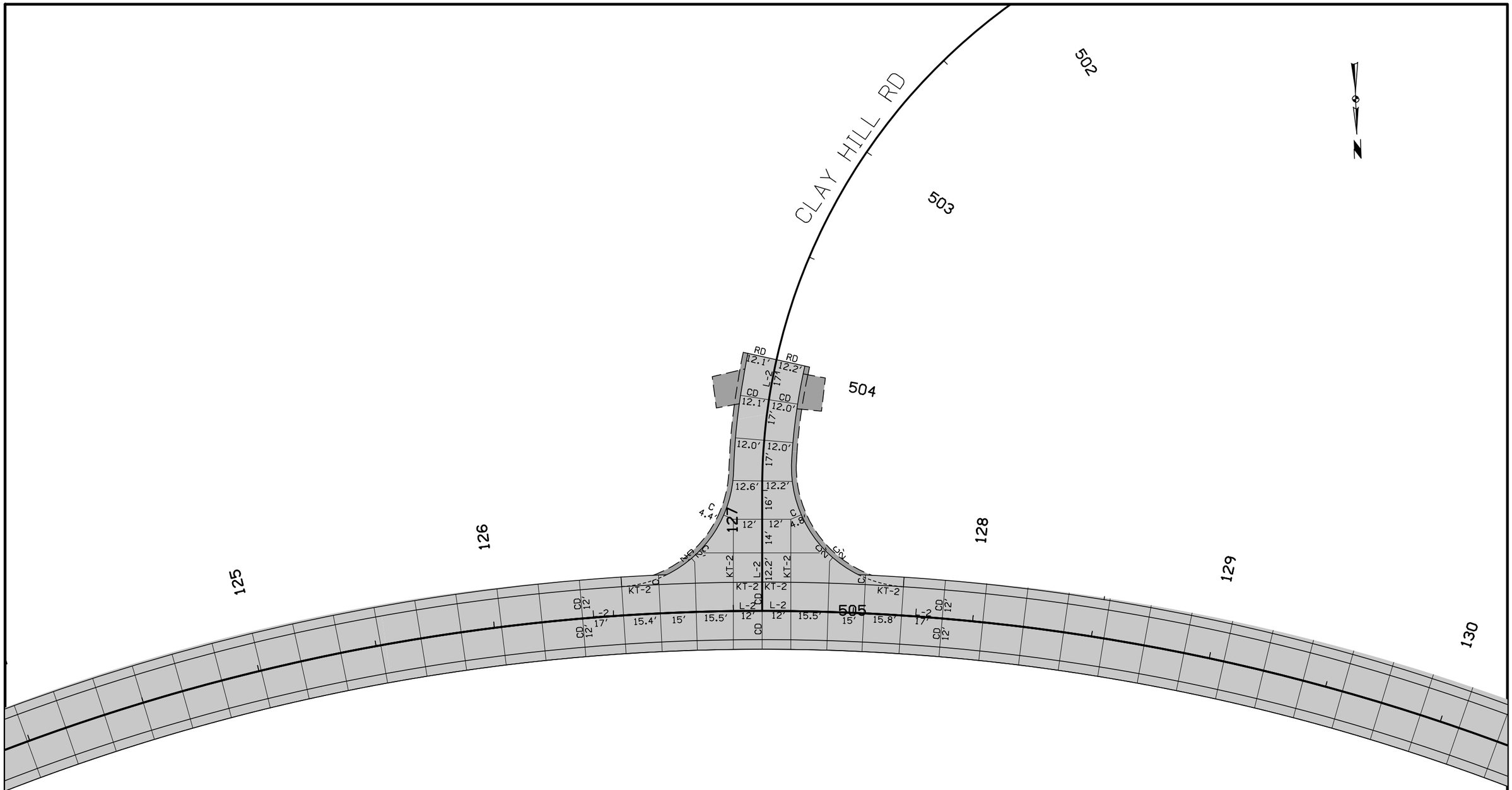
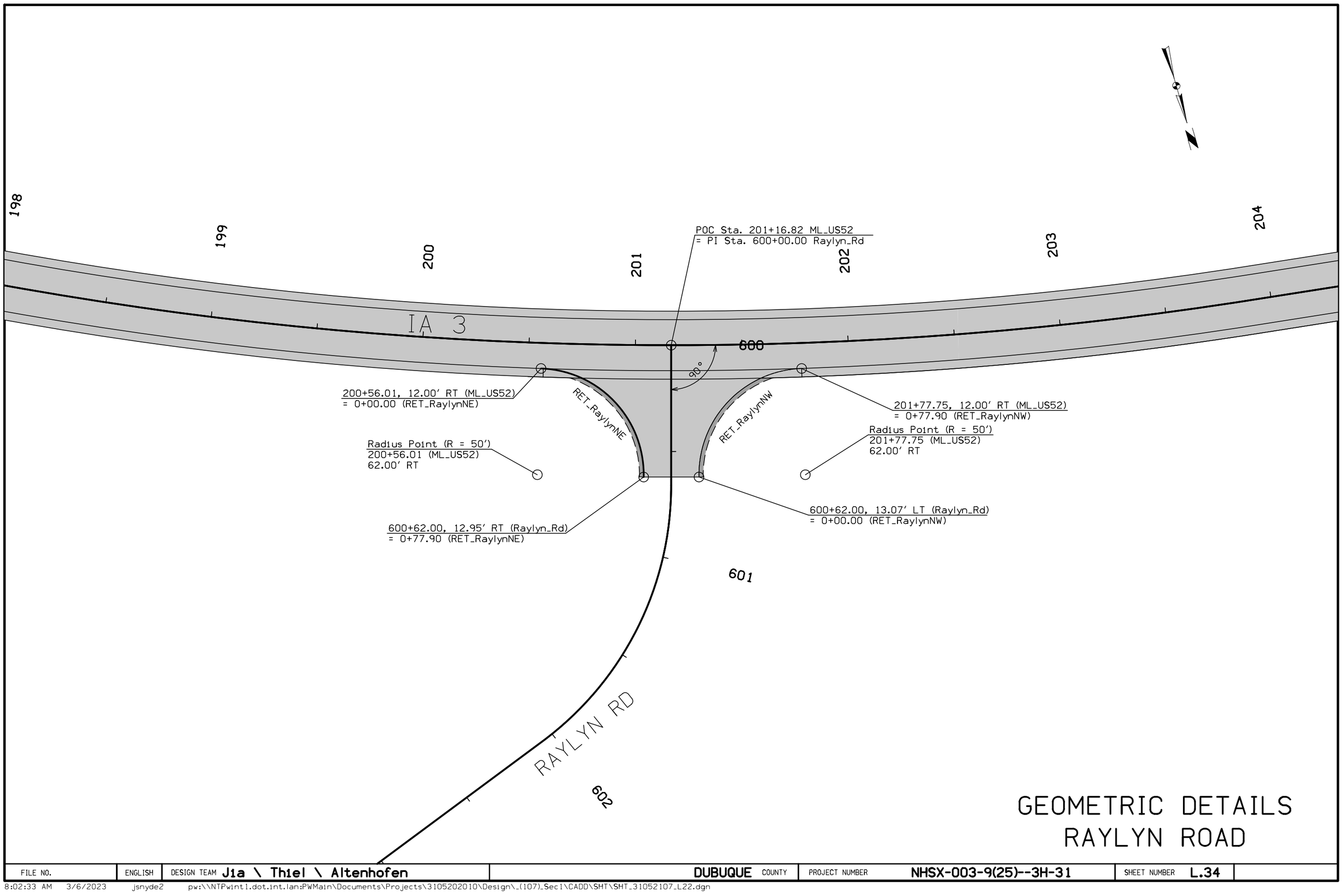


JOINTING DETAILS
CLAY HILL ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.33

8:02:32 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn



GEOMETRIC DETAILS
RAYLYN ROAD

FILE NO.	ENGLISH	DESIGN TEAM **J1a \ Thiel \ Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **L.34**

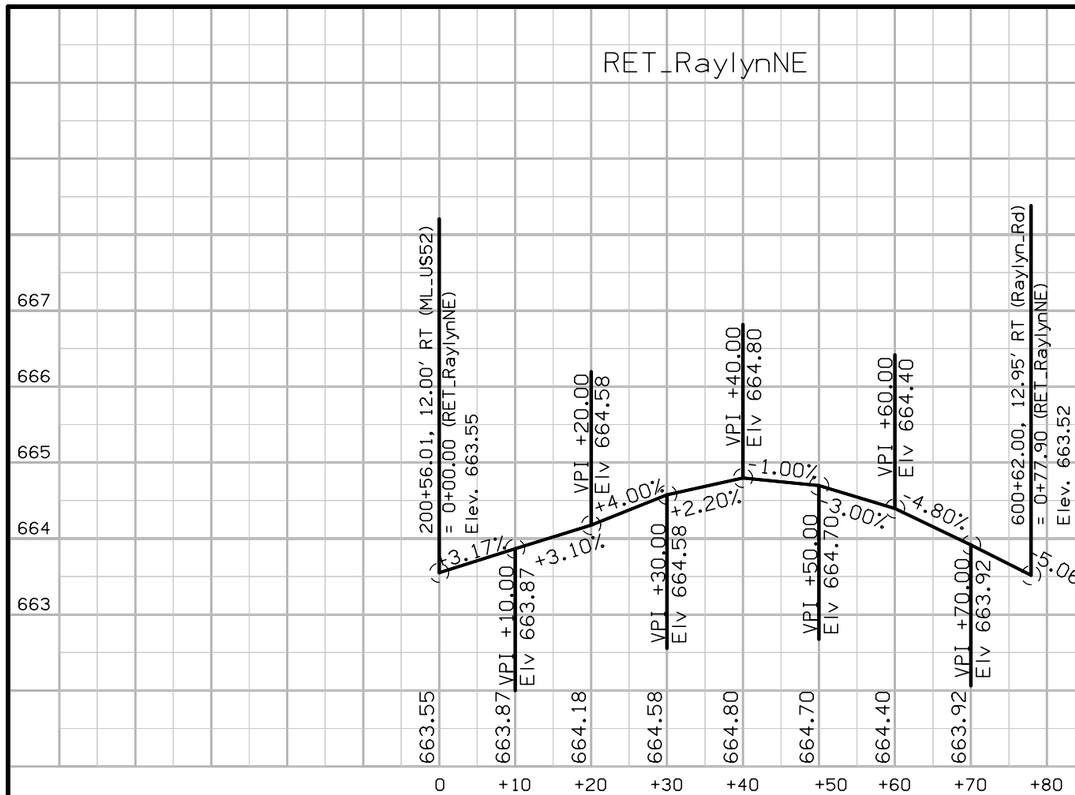
8:02:33 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn

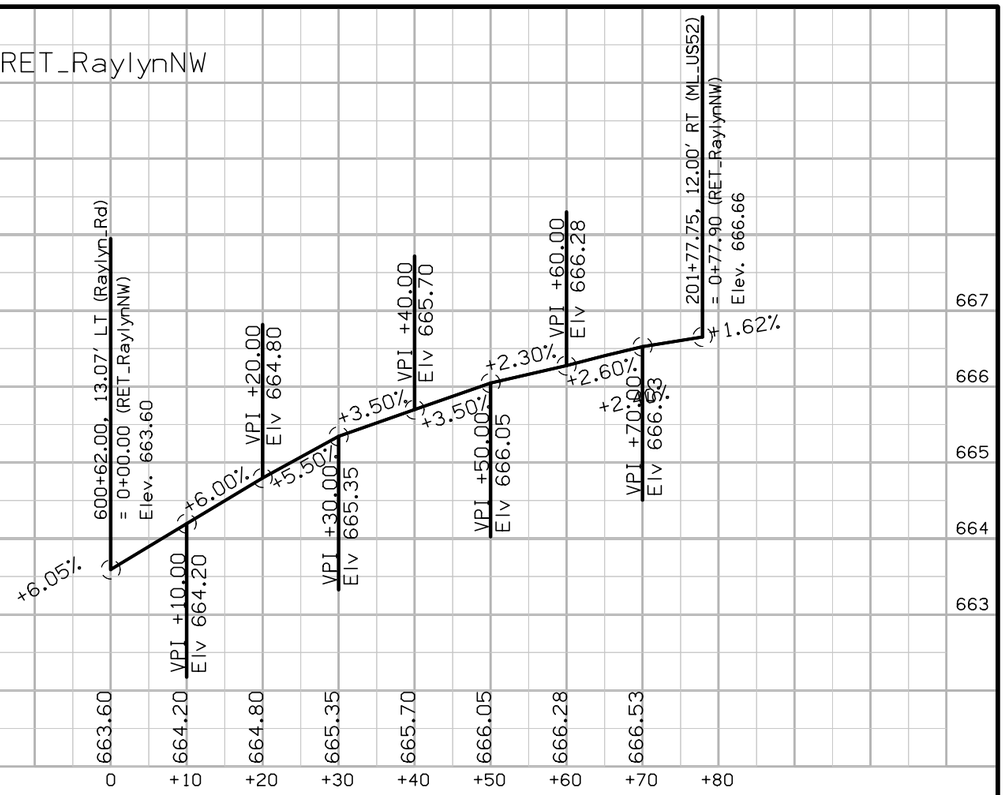
198
199
200
201
202
203
204
600
601
602
RAYLYN RD
Constant 4.8% Slope
4.8%
12.0'
665.47
+56.01
662.98
+03.82
664.55
+16.82
664.90
+29.82
665.21
+77.75
666.08
665.16
665.77
0+77.90
666.66
0+00.00
663.55
2.7%
2.4%
13'
13'
Special Shaping
Uniform Transition
Sta. 0+38.04 RET_RaylynNE
= Sta. 600+25.91 27.24 RT Raylyn_Rd
664.76
Sta. 0+39.80 RET_RaylynNW
= Sta. 600+25.95 27.31 LT Raylyn_Rd
665.69
1.4%
0.9%
13.0'
13.1'
0+77.90
663.52
0+00.00
663.60
+62.00
663.71

STAKING DETAILS
RAYLYN ROAD

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.35

8:02:34 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn

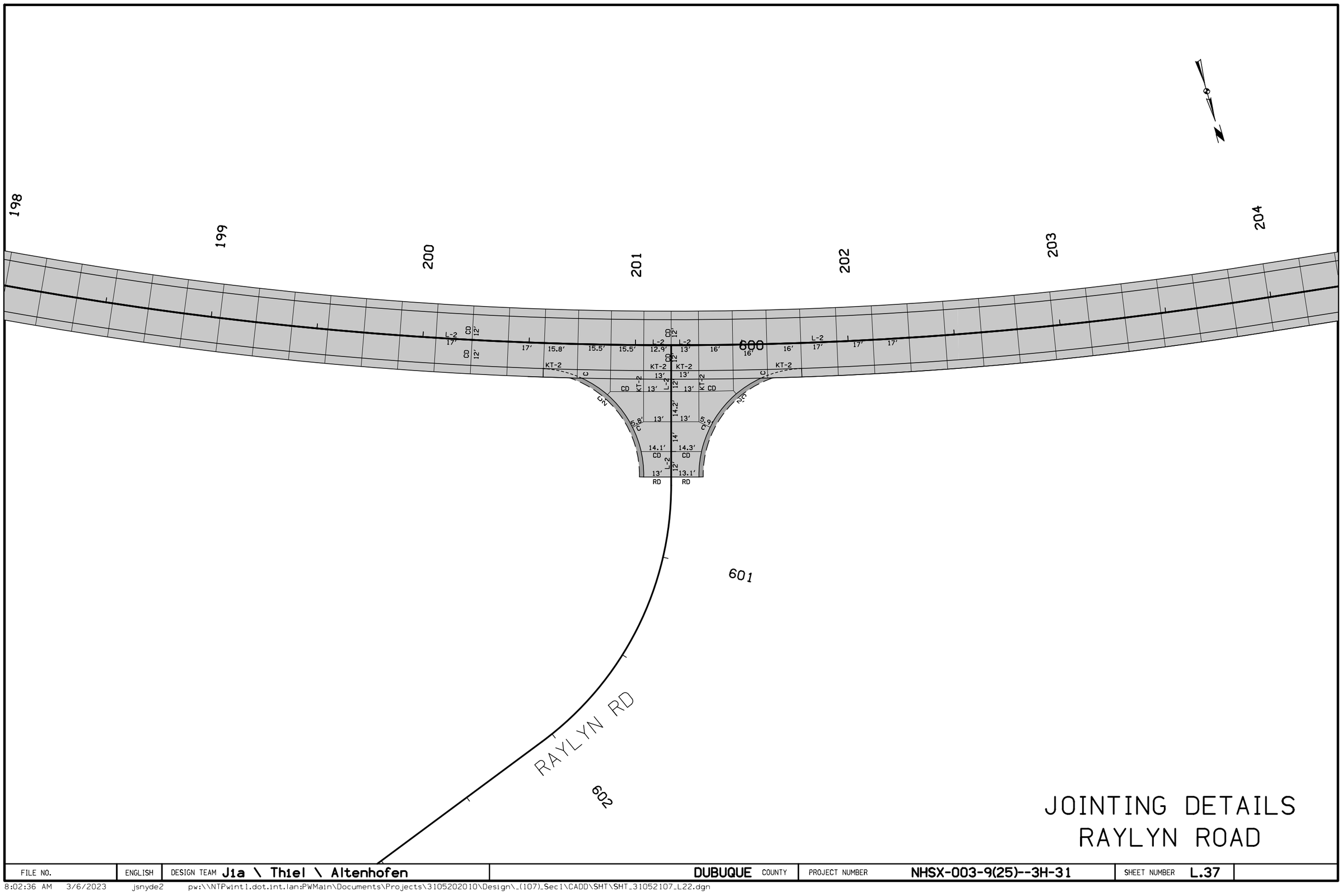




EDGE PROFILES
RAYLYN ROAD

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.36

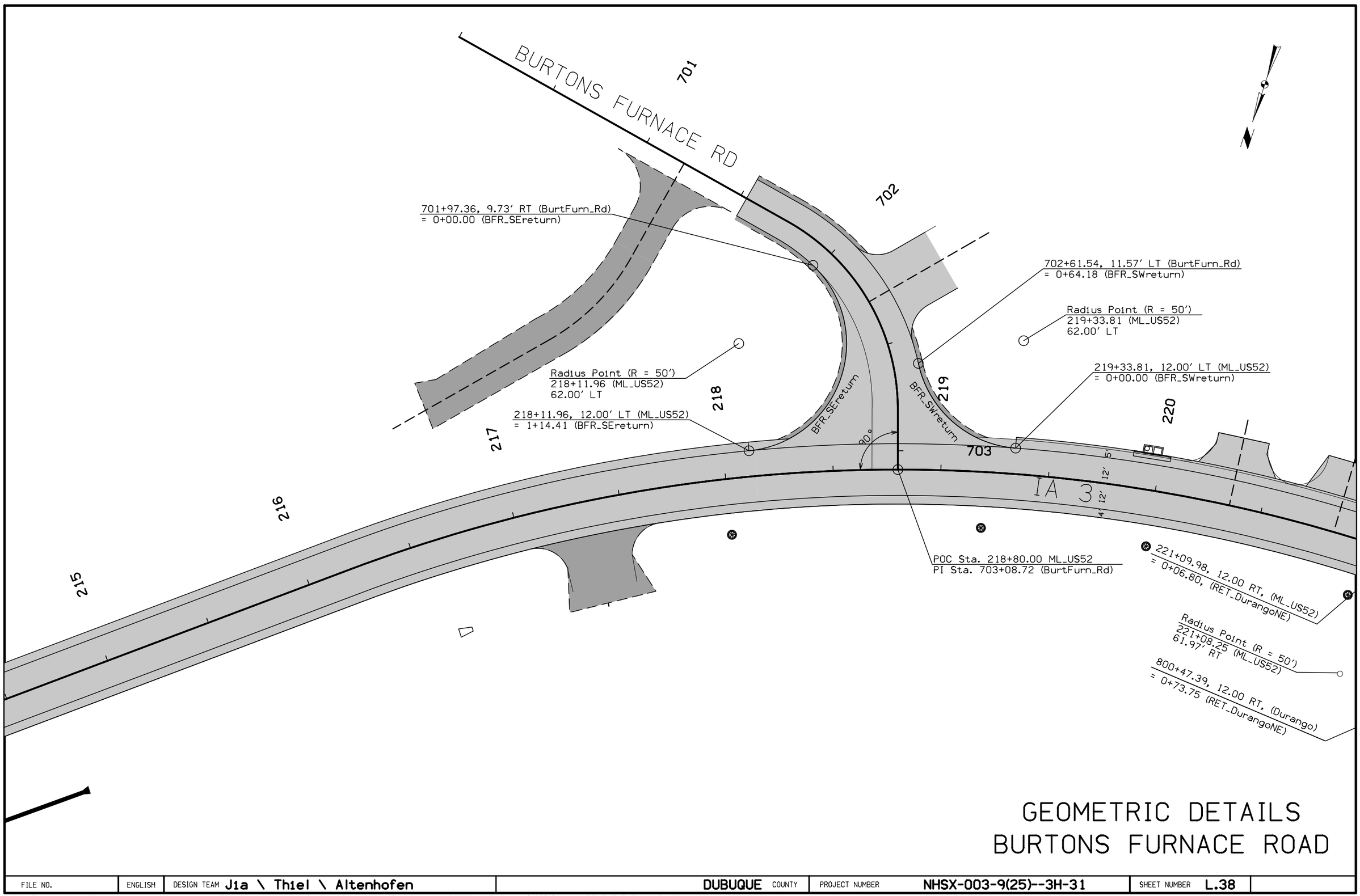
8:02:35 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn



JOINTING DETAILS
RAYLYN ROAD

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.37

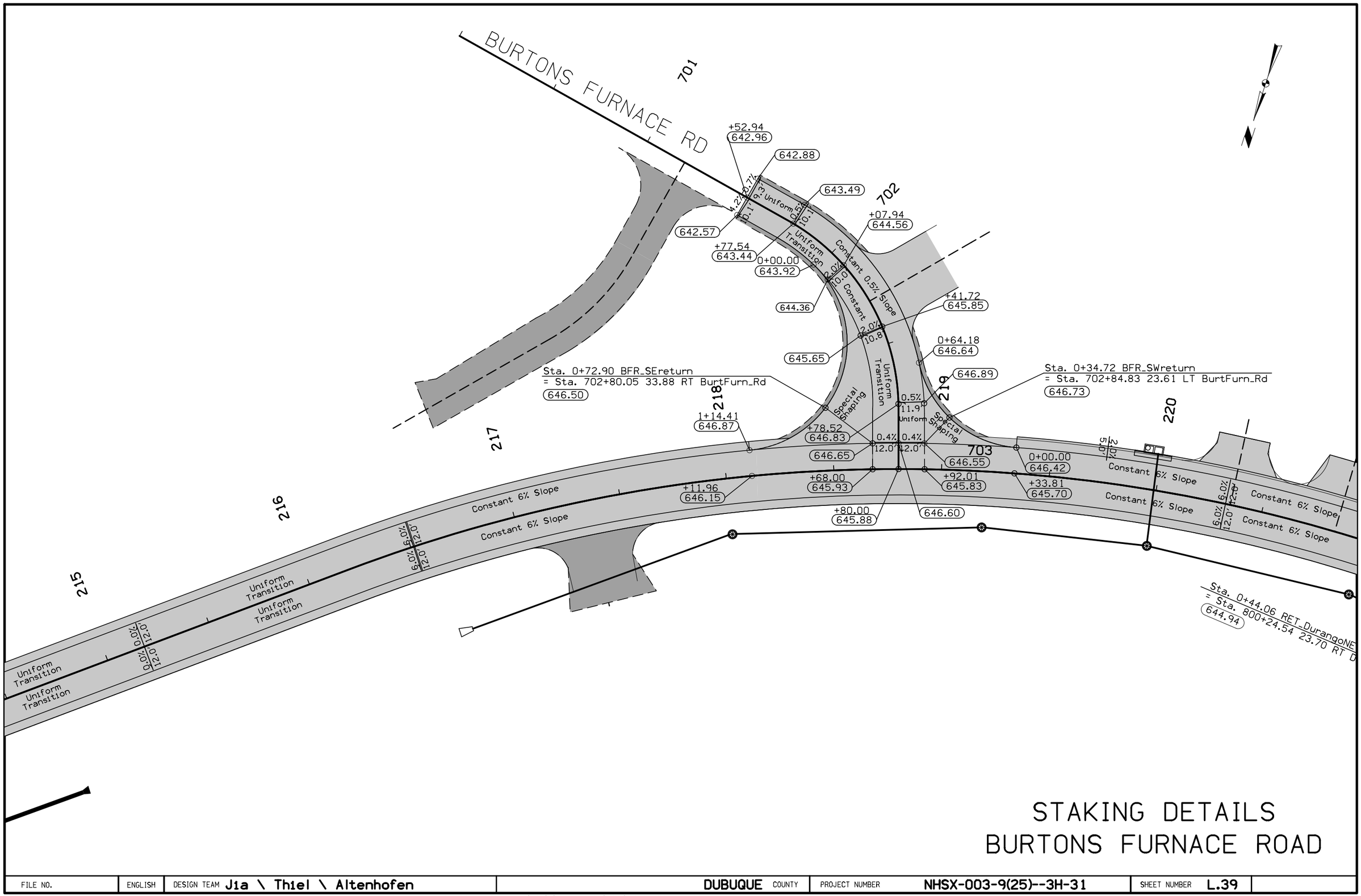
8:02:36 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn



GEOMETRIC DETAILS
BURTONS FURNACE ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.38

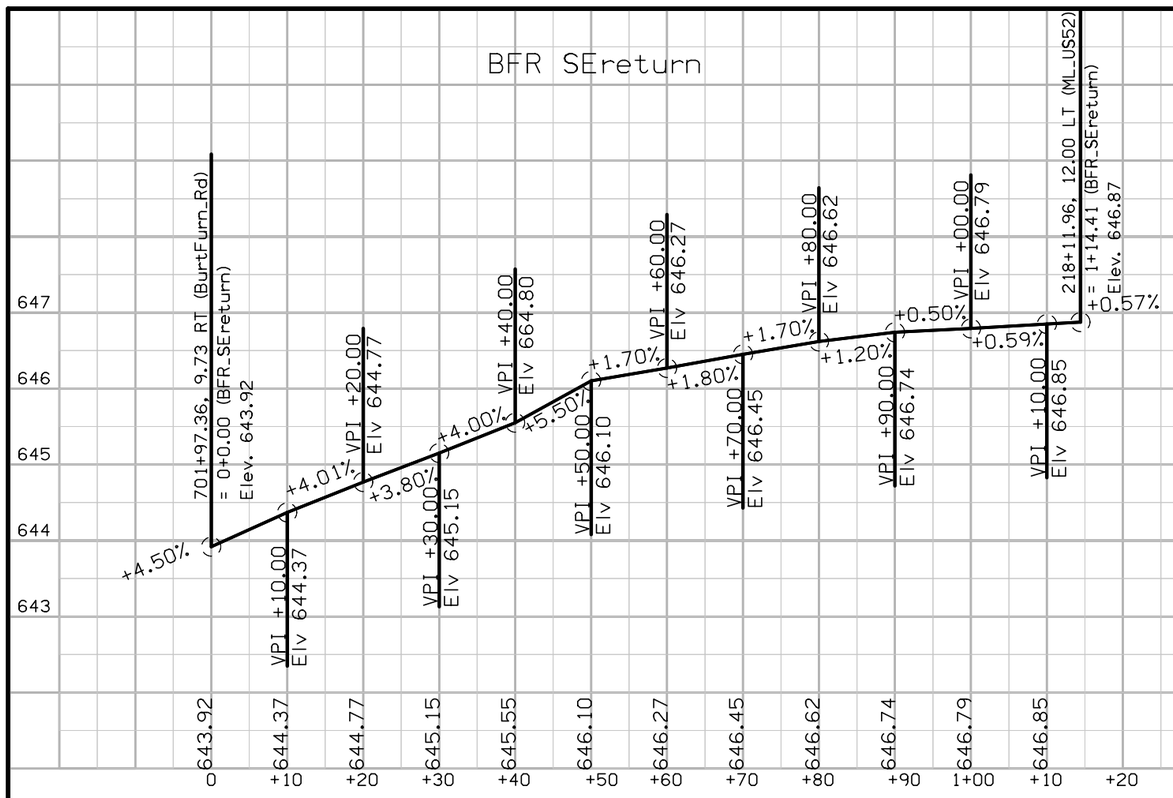
8:02:37 AM 3/6/2023 jsnyde2 pw:\\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn

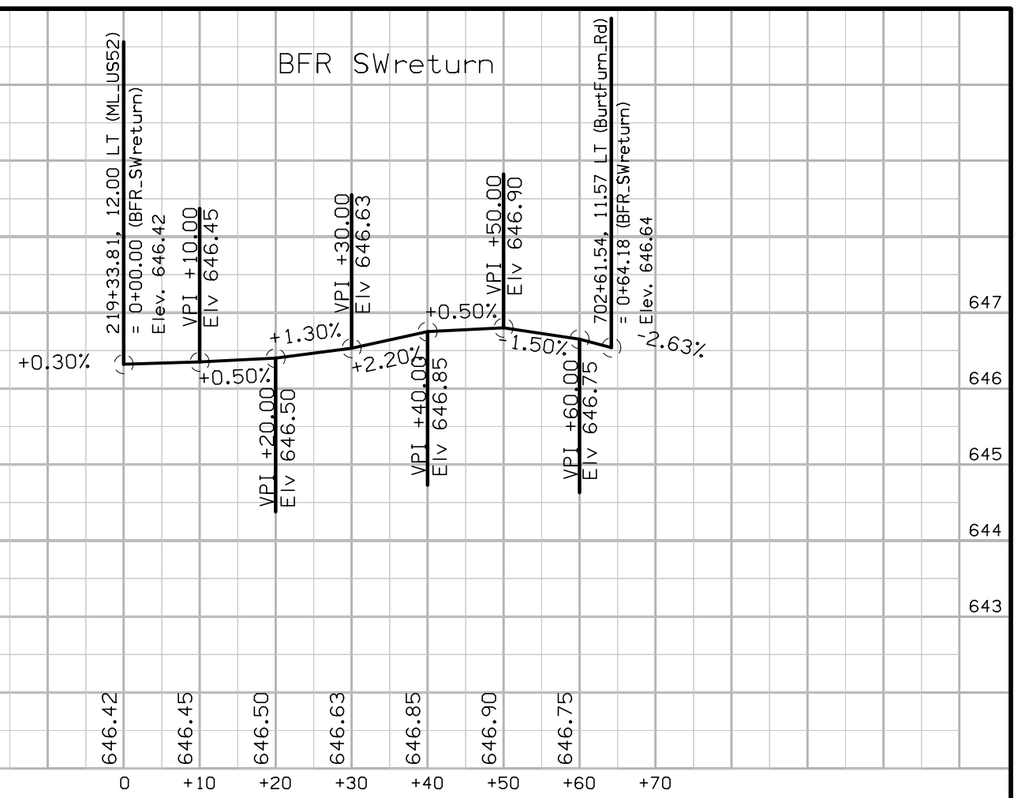


STAKING DETAILS
BURTONS FURNACE ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.39

8:02:38 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn

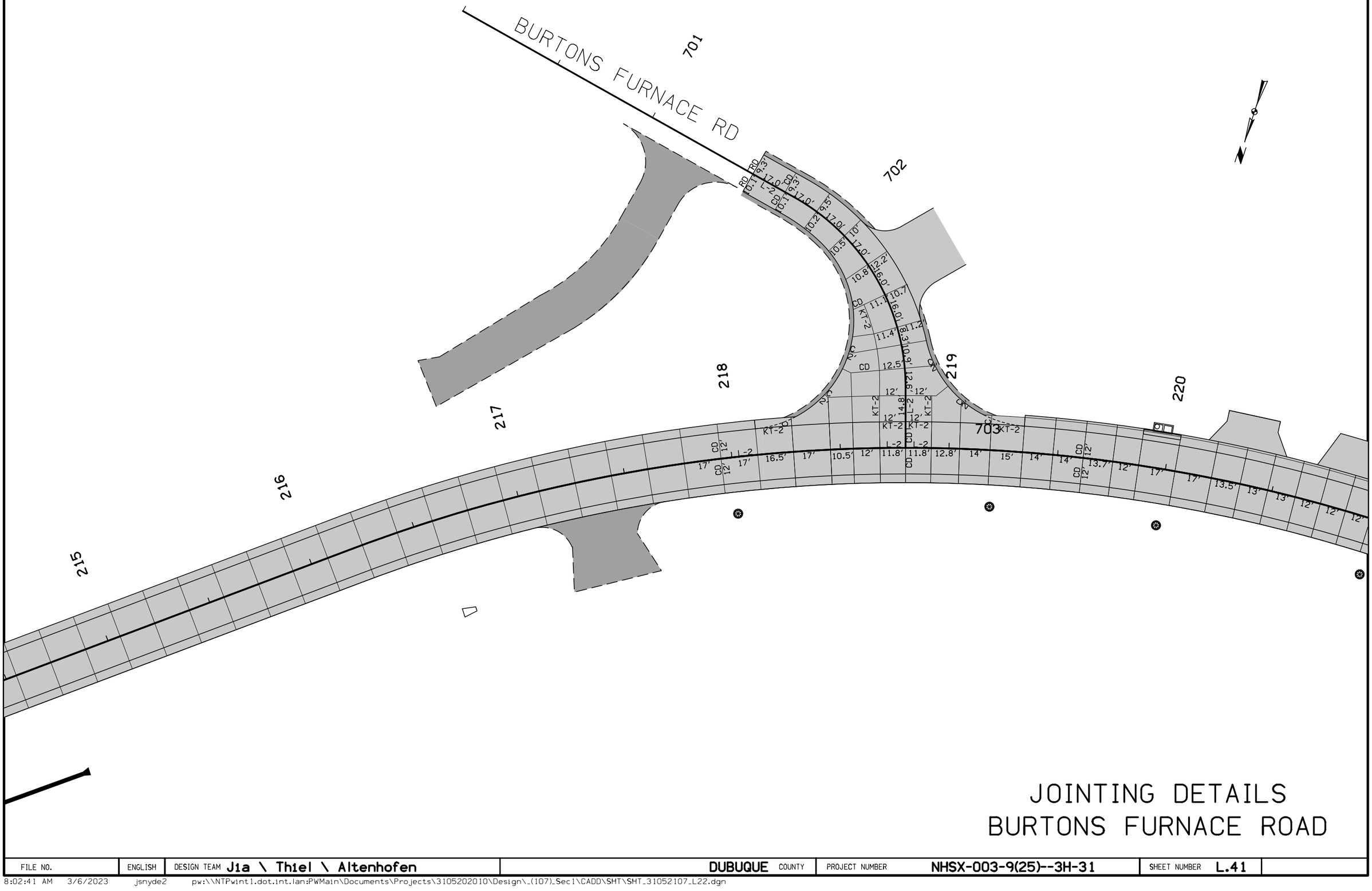




EDGE PROFILES
BURTONS FURNACE ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.40

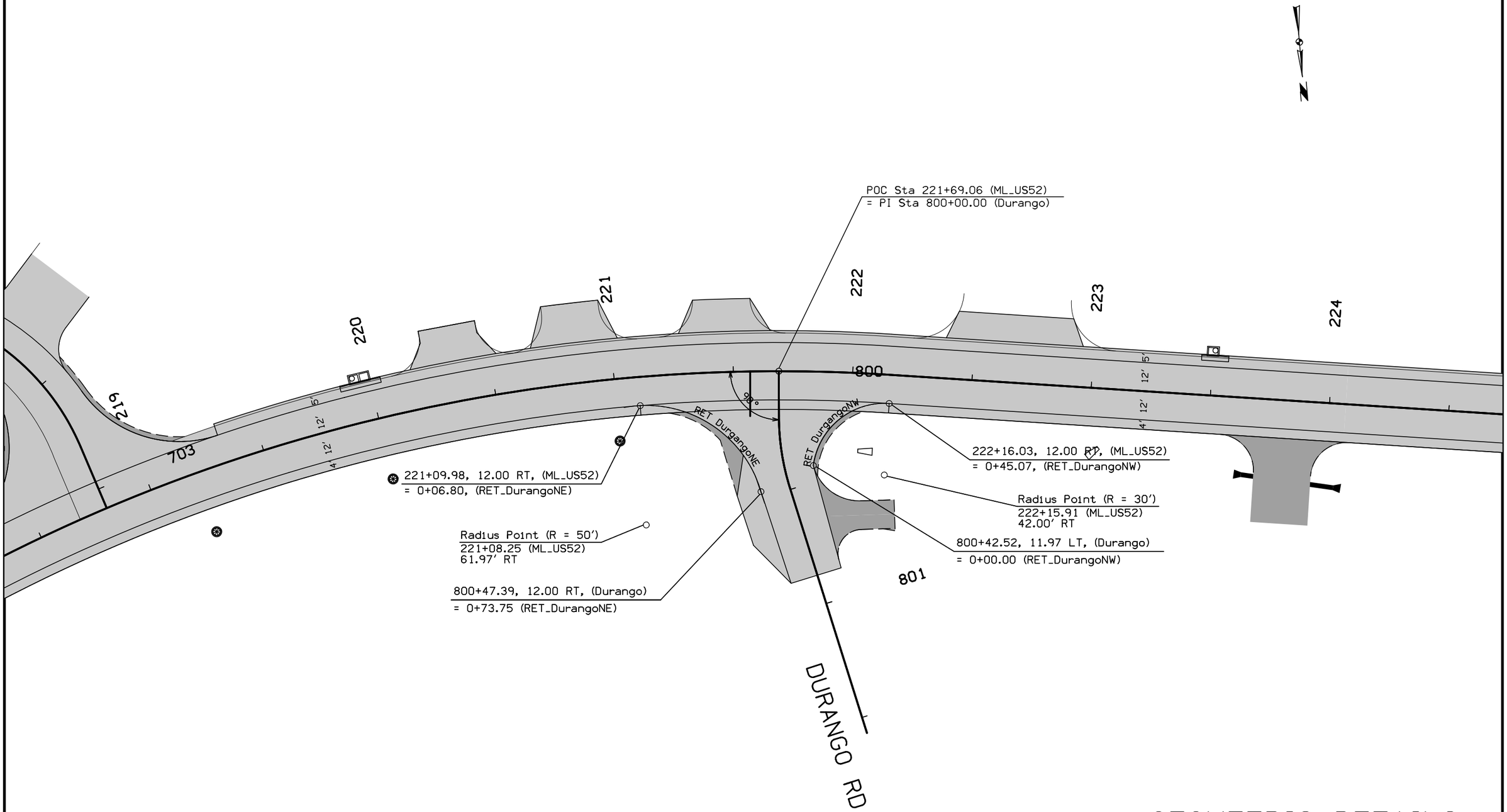
8:02:40 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn



JOINTING DETAILS
BURTONS FURNACE ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.41

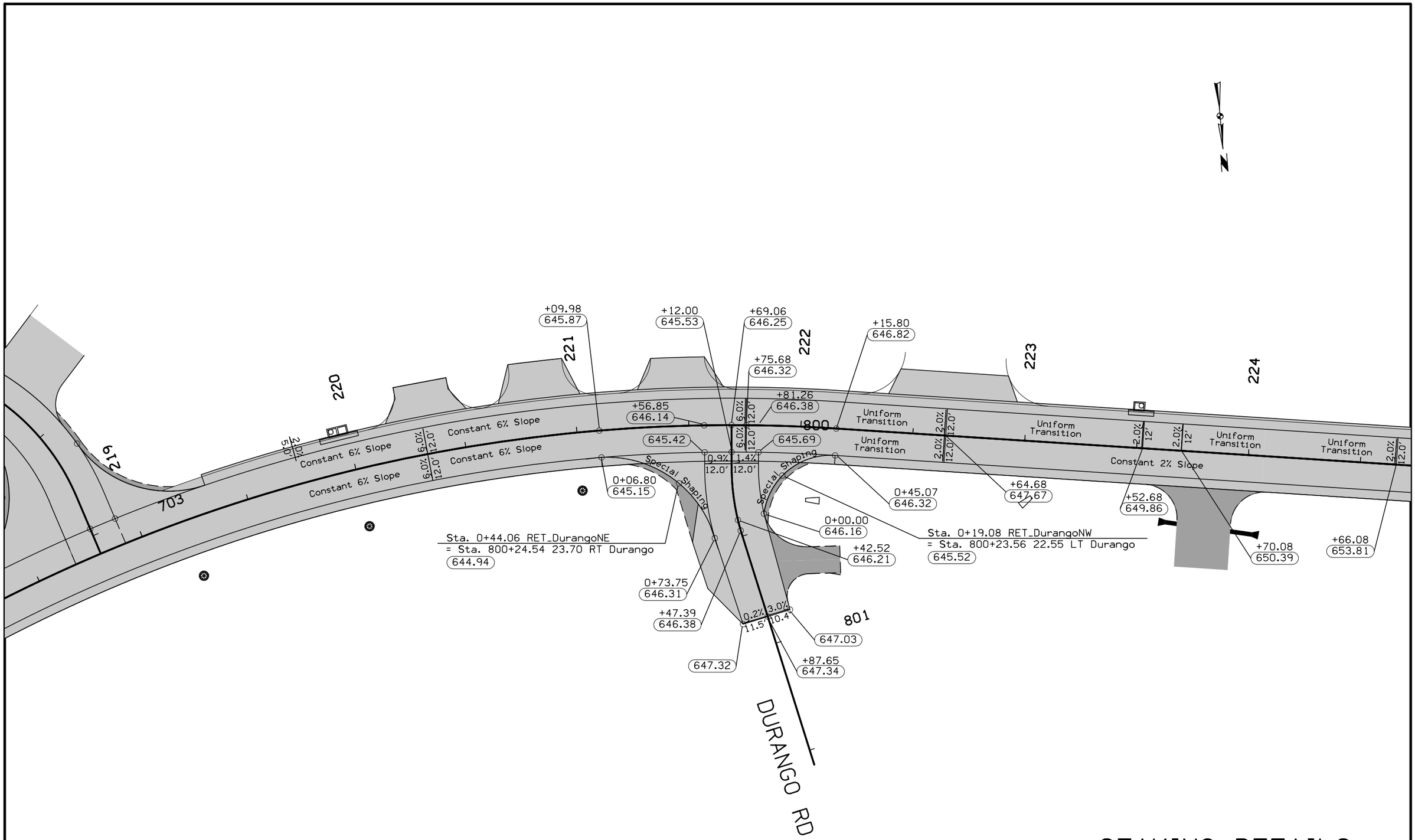
8:02:41 AM 3/6/2023 jsnyde2 pw:\\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn



GEOMETRIC DETAILS
DURANGO ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.42

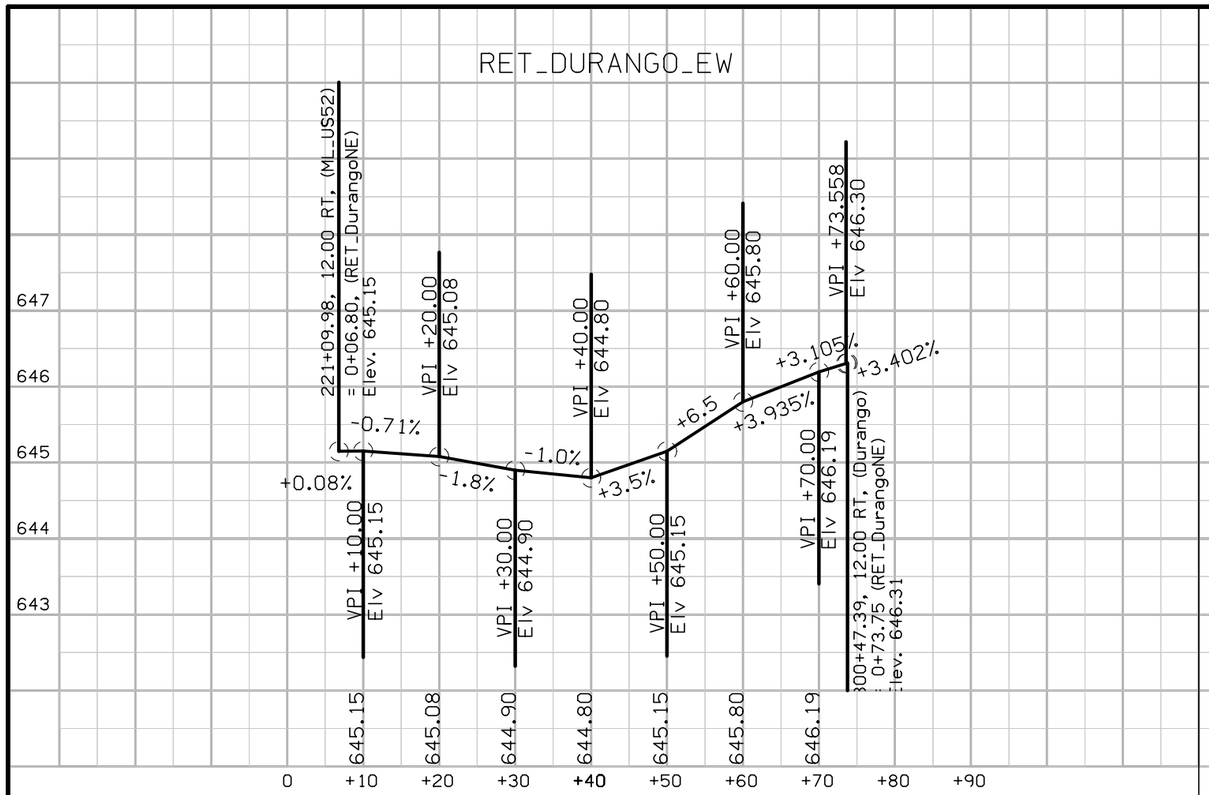
8:02:42 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn

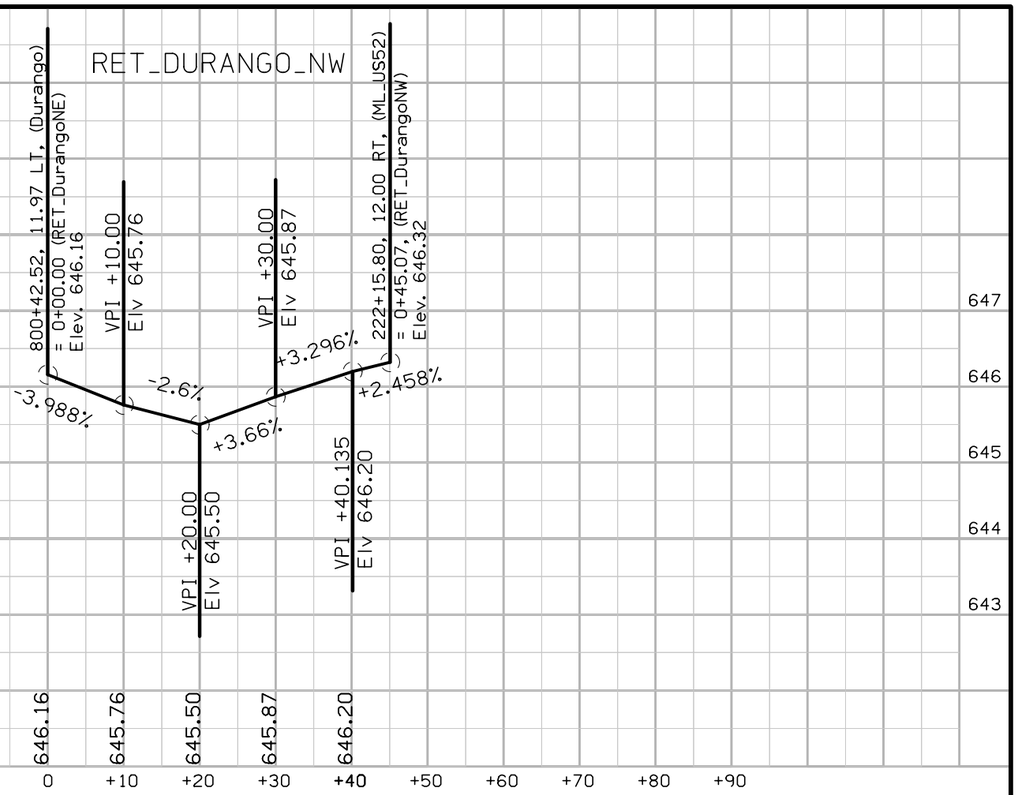


STAKING DETAILS
DURANGO ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.43

8:02:43 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn

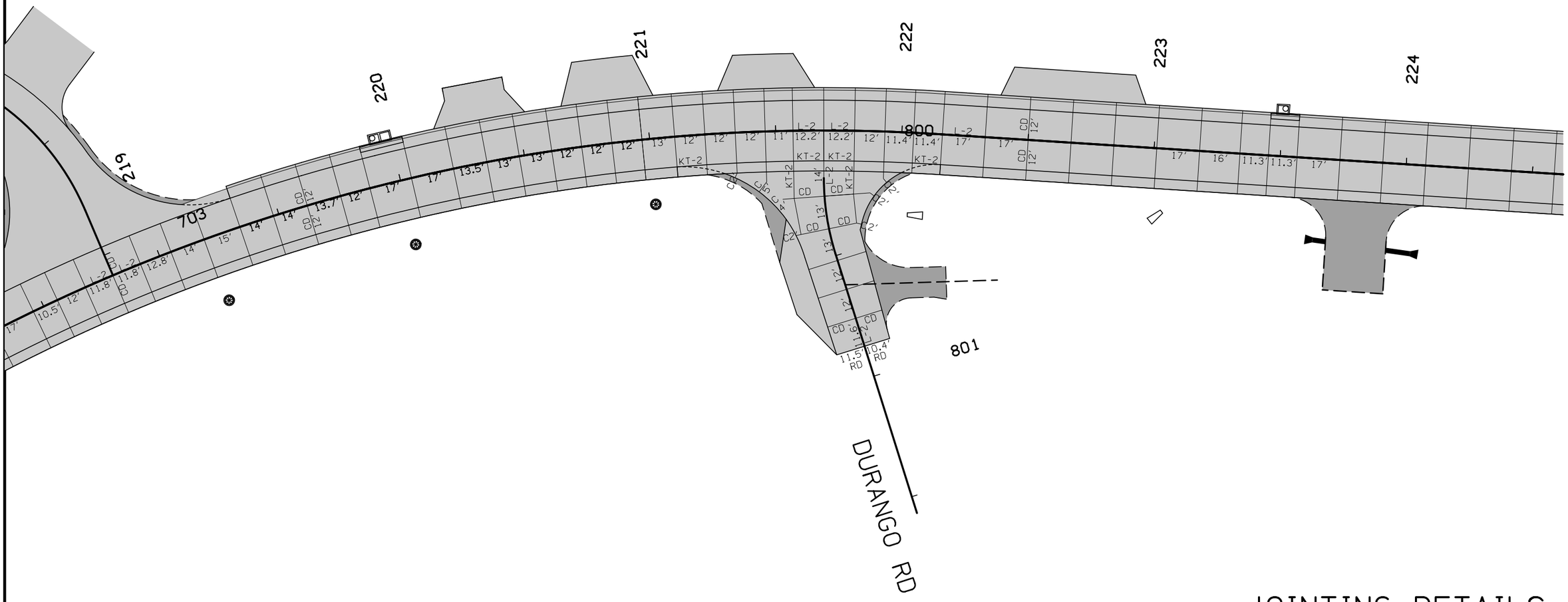




EDGE PROFILES
DURANGO ROAD

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.44

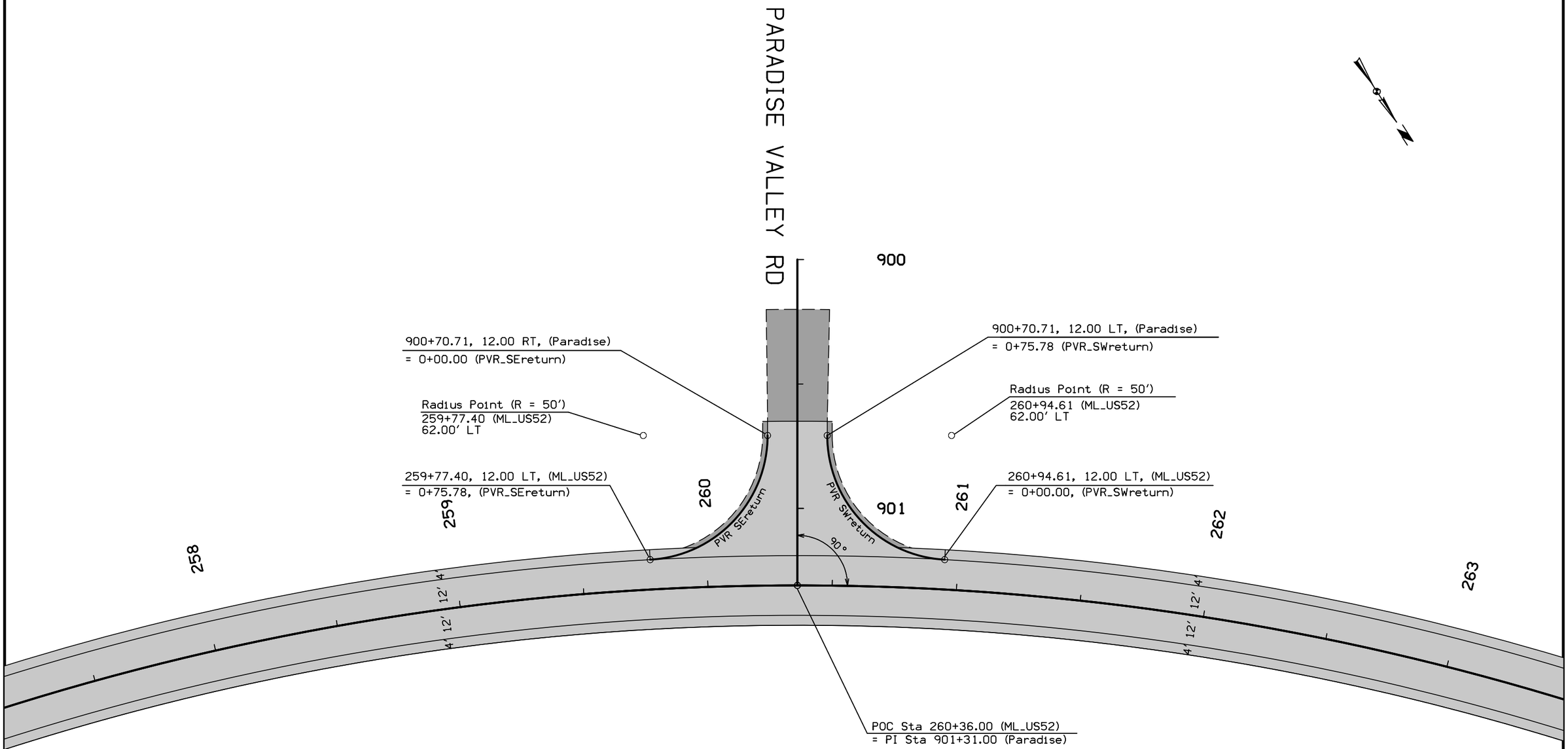
8:02:44 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn



JOINTING DETAILS
DURANGO ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.45

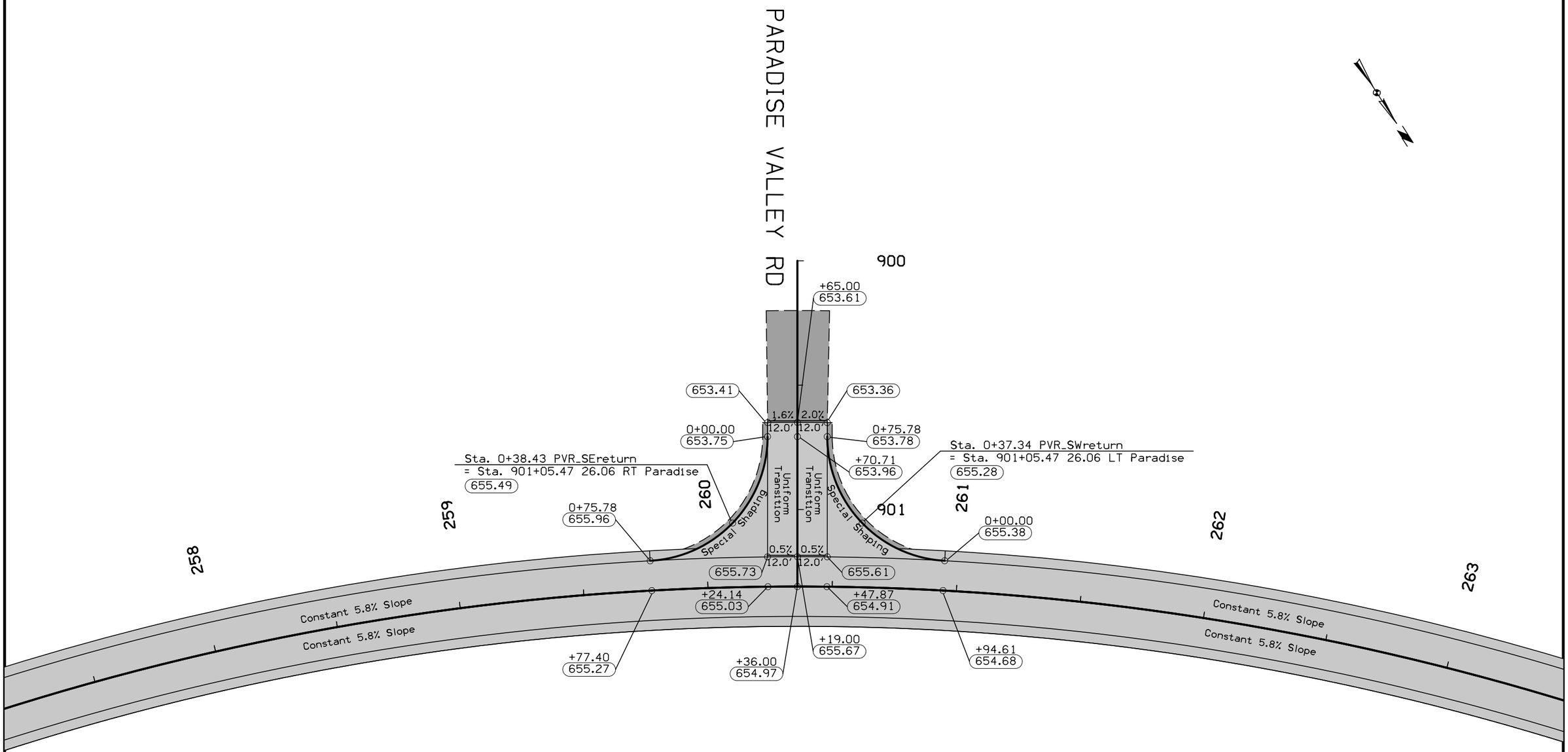
8:02:45 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn



GEOMETRIC DETAILS
PARADISE VALLEY ROAD

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.46

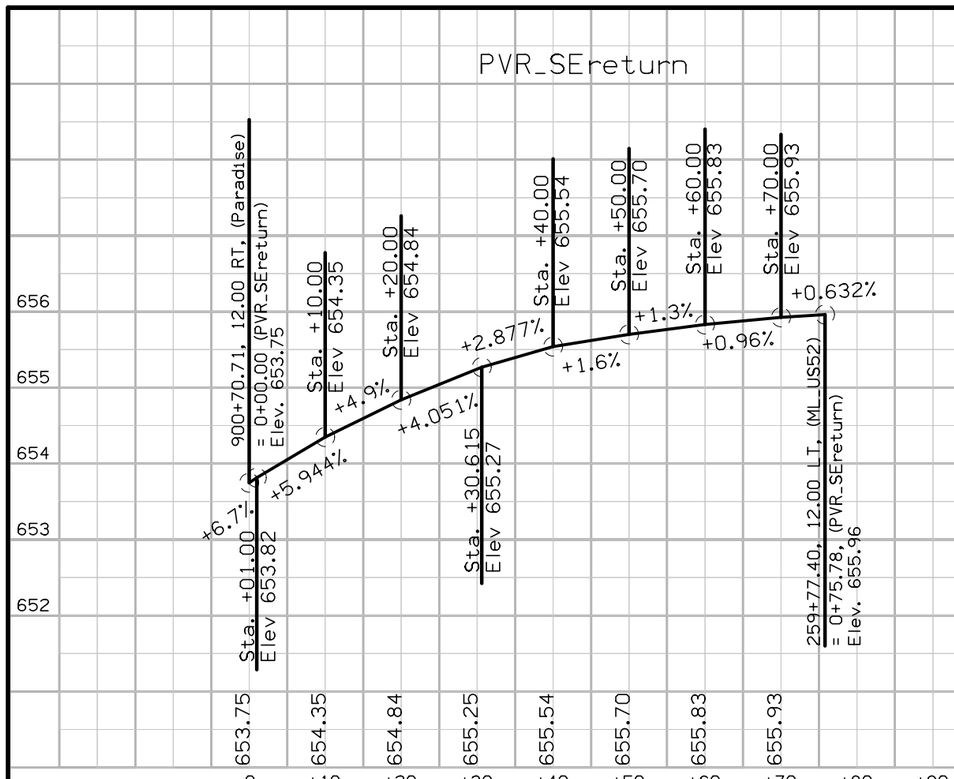
8:02:47 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn

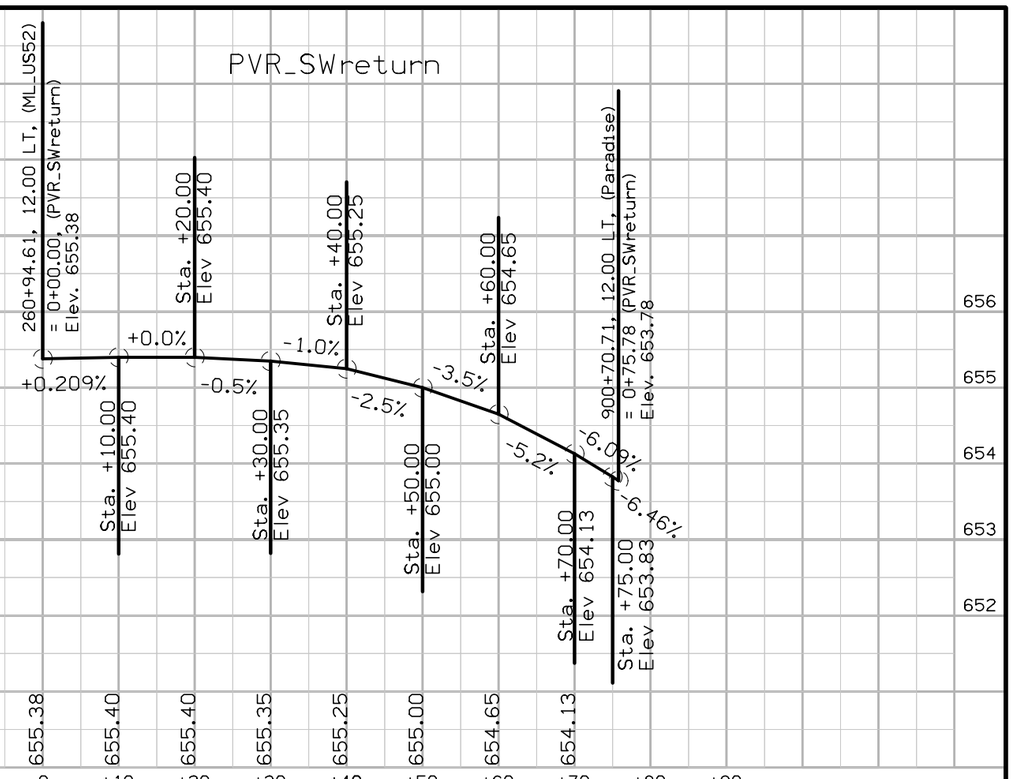


STAKING DETAILS
PARADISE VALLEY ROAD

FILE NO.	ENGLISH	DESIGN TEAM **J1a \ Thiel \ Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **L.47**

8:02:48 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn

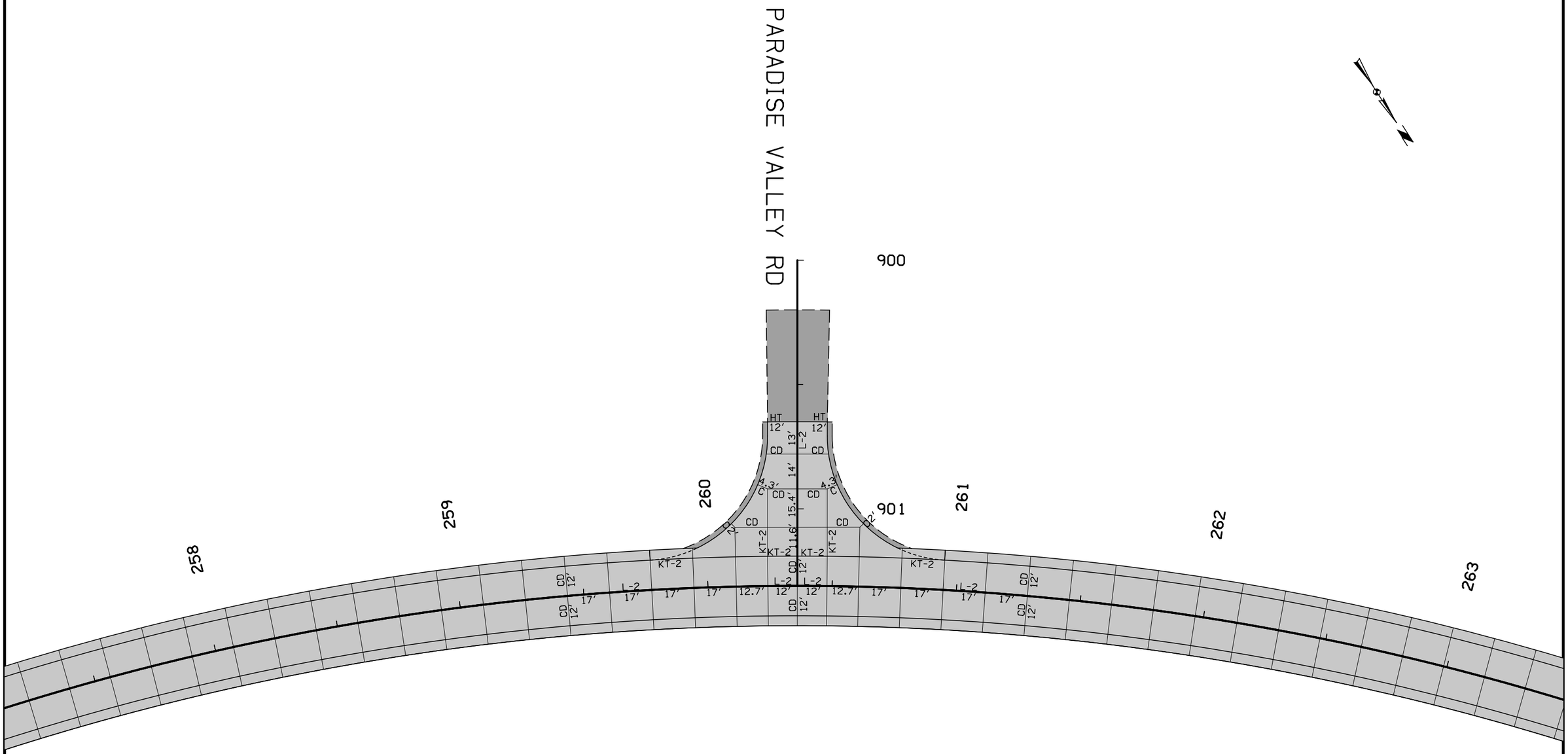




EDGE PROFILES
PARADISE VALLEY ROAD

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.48

8:02:49 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn



JOINTING DETAILS
PARADISE VALLEY ROAD

FILE NO.	ENGLISH	DESIGN TEAM **J1a \ Th1el \ Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **L.49**

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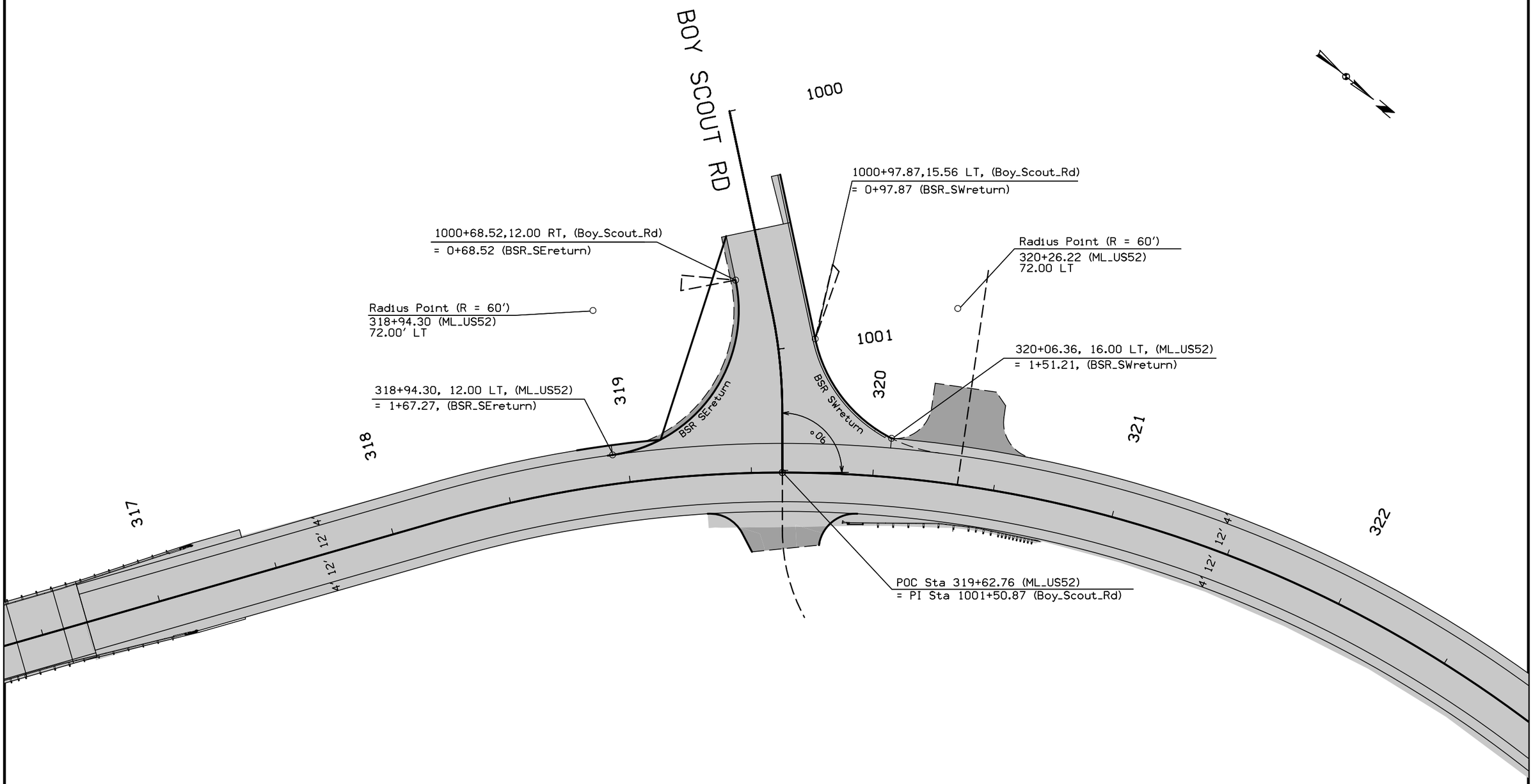
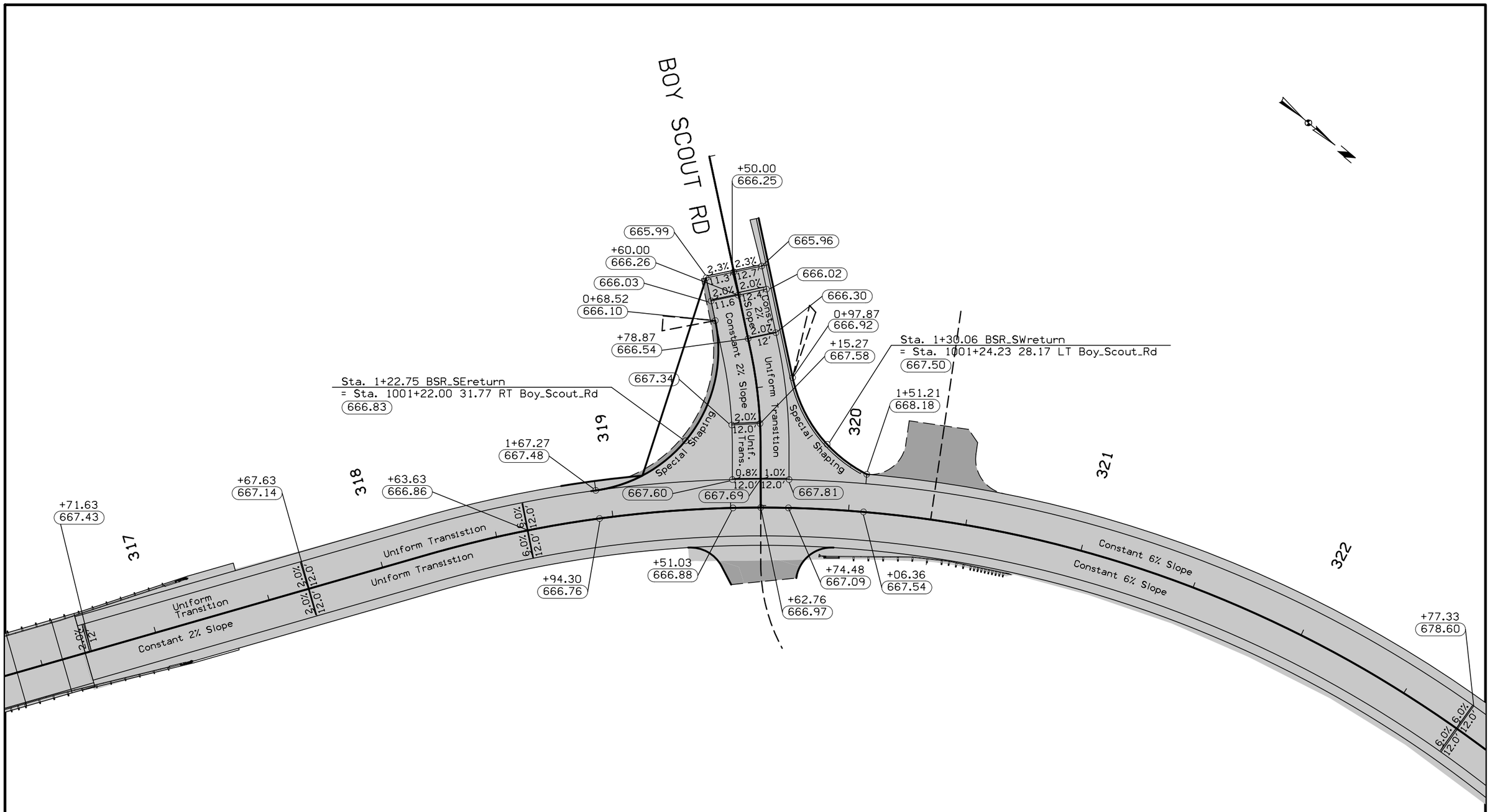


GEOMETRIC DETAILS
BOY SCOUT ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.50

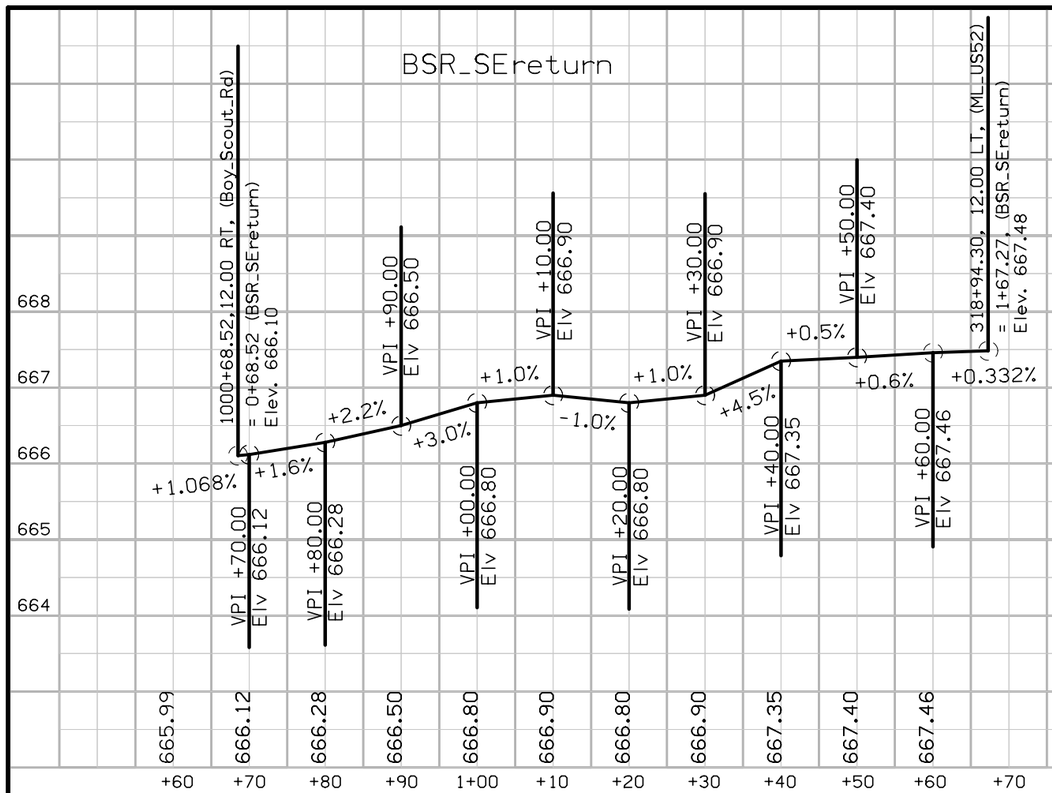
8:02:51 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn

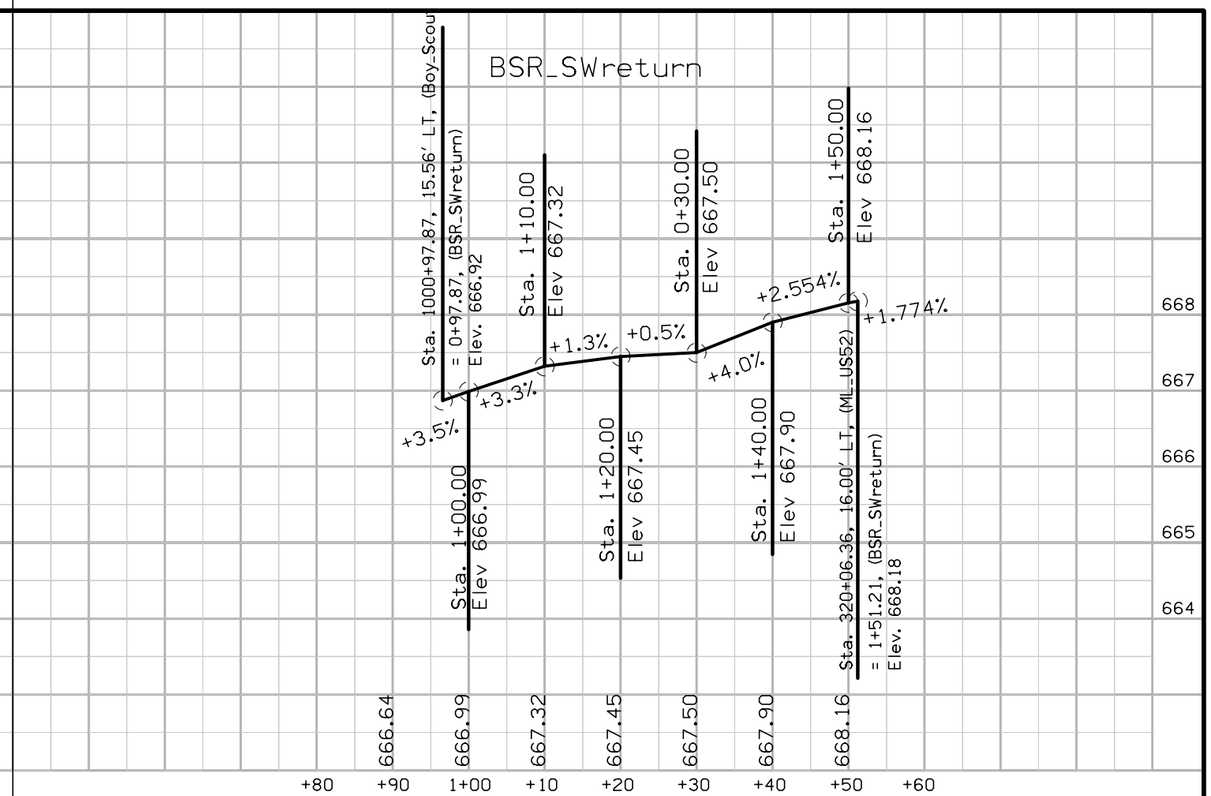


STAKING DETAILS
BOY SCOUT ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.51

8:02:53 AM 3/6/2023 jsnyde2 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_L22.dgn





EDGE PROFILES
BOY SCOUT ROAD

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.52

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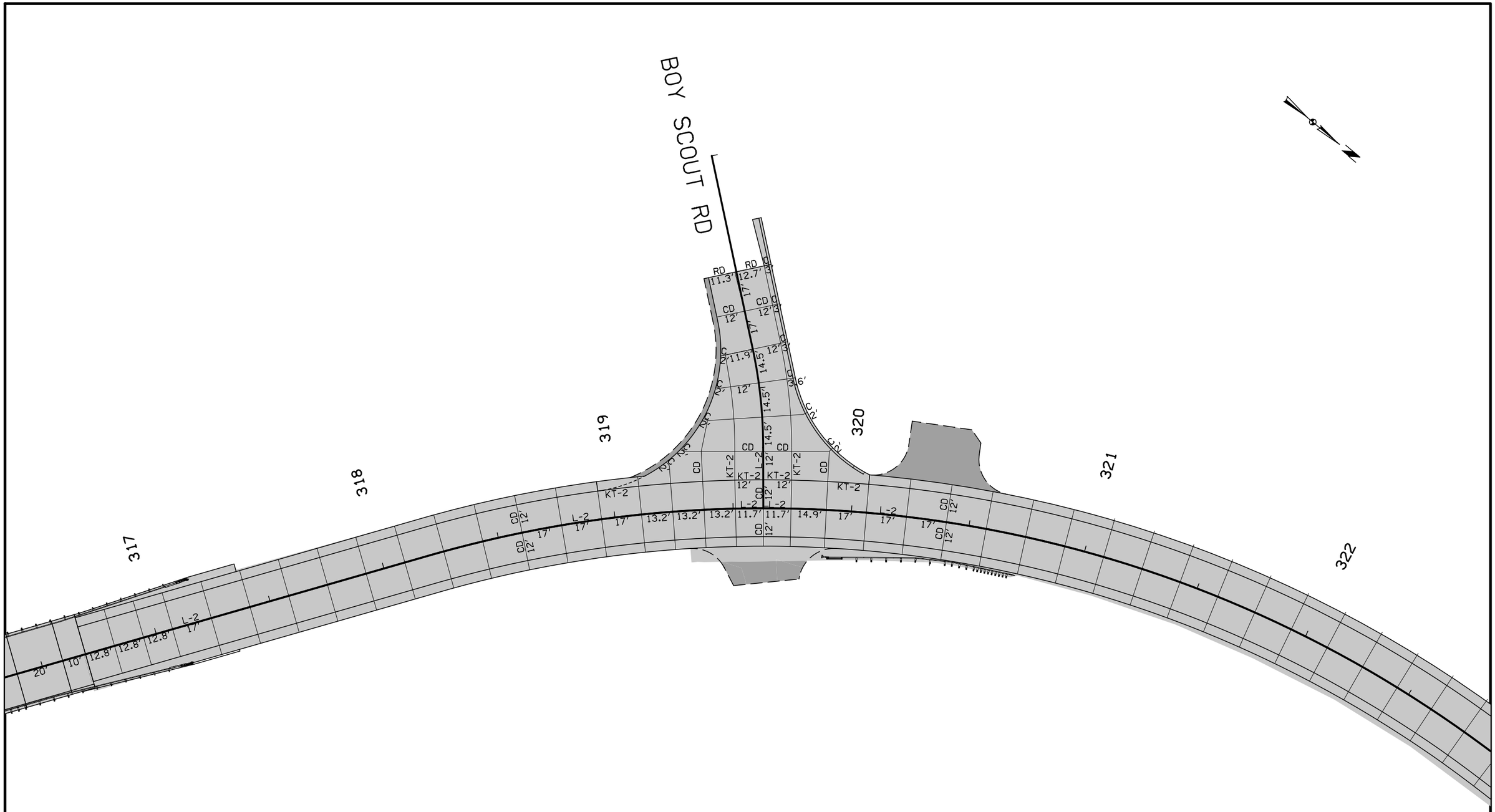

JOINTING DETAILS
BOY SCOUT ROAD

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER L.53

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STORM SEWER

(1) Diameter or equivalent diameter
* Bid Item
** For SW-545

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-1	41+59.00, 33.9	SW-507	652.78	648.28		
I-2	43+90.00, 34	DR-201 (18")				
I-3	42+08.00, 17.55	SW-508	653.33	646.5		
I-4	42+08.40, -35.9	DR-122				Type C-3
I-5	42+08.80, -81	CMP Elbow	631.8	629.8		
I-6	42+09.00, -95	DR-203 (24")				
I-20	219+96.00, -17	SW-509	646.25	641.75		
I-21	220+00.00, 26	SW-512 (36" Type 4D Casting)	643.67	639		
I-22	222+10.00, 32.6	DR-201 (18")				
I-23	221+00.00, 26	SW-512 (36" Type 4D Casting)	643.87	639.87		
I-24	219+20.00, 26	SW-512 (36" Type 4D Casting)	644	638.6		
I-25	216+60.00, 44.6	DR-201 (24")				
I-26	218+00.00, 26	SW-512 (36" Type 4D Casting)	644.56	638		
I-27	223+50.00, -17	SW-507	649.35	644.85		
I-28	223+00.00, 29	DR-201 (18")				

Total:	
CMP Elbow	1
DR-122	1
DR-201 (18")	3
DR-201 (24")	1
DR-203 (24")	1
SW-507	2
SW-508	1
SW-509	1
SW-512 (36" Type 4D Casting)	4

PIPES

Design Length, Slope, and Flowlines are calculated from inside wall to inside wall along CL of pipe. An additional 2 ft length is added to each side of the Design Length to account for estimated length to center of structures.

Line Number	Intake/ Utility Access No. From	To	Class 'D'	(1) Pipe Size IN	Bid* Length FT	Design Length FT	Slope %	Connected Pipe Joint (DR-121) Type	Flow Lines: Inlet Elevation	Outlet Elevation	Other Elevation	Pipe Profile Sheet No.	Notes
P-1	I-1	I-3	3000	18	53	48.4	2.65		648.78	647.5			(1)
P-2	I-2	I-3	3000	18	183	180.9	1.38		651	648.5			(1)
P-3	I-3	I-4	2000	24	58	53.5	2.99	3	647	645.4			(1)
P-4	I-4	I-5	CMP	24	50	45.1	34.6		645.4	629.8			
P-5	I-5	I-6	CMP	24	13	10.5	2.86		629.8	629.5			
P-20	I-20	I-21	2000	24	46	41.6	6.37		642.25	639.6			
P-21	I-21	I-24	2000	24	79	74.1	0.4		639.5	639.2			
P-22	I-22	I-23	3000	18	101	98.3	2.54		643	640.5			
P-23	I-23	I-21	3000	18	98	93.3	0.4		640.37	640			
P-24	I-24	I-26	2000	24	117	112.5	0.44		639.1	638.6			
P-26	I-26	I-25	2000	24	129	126.6	0.4	3	638.5	638			
P-27	I-27	I-28	3000	18	64	61.9	0.89	3	645.35	644.8			

Total:		
2000	24	429
3000	18	499
CMP	24	63

(1) Refer to Tab. CSS-1 in C sheets for additional information.

SURVEY SYMBOLS

- SIGN SI Sign
- TDC Tree Deciduous
- PPB Power Pole Co. 2
- MH Utility Access (Manhole)
- TEV Evergeen Tree
- GRV Grave
- WEL Well
- TP TPD Telephone Pedestal
- SHR Shrub
- Flg FLG Flag Poles
- PR Electic Riser Pole
- UB UB Utility Box
- GP GP Guard Post (Less Than 4 Posts)
- TFR Tree Fruit
- EB EB Electrical Box
- IN Storm Sewer Intake
- B BIN Grain Bin
- PPA Power Pole Co. 1
- OUT Tile Outlet
- STP Stump
- TR Telephone Riser Pole
- LUM Luminaire
- MM MM Mile Marker Post
- WH WHD Water Hydrant
- LP LP L.P. Tank
- ST SEP Septic Tank
- PLG Location of General Photo
- WV WV Water Valve
- INB Storm Sewer Beehive Intake
- BB BB Billboard
- TV Satelite TV Dish
- AST AST Above Ground Storage Tank
- WM Wind Mill
- Cell Phone Tower

UTILITY LEGEND

— E1 —

Shawn Losch
Alliant Energy
(319) 786-2016
shawnlosch@alliantenergy.com

— E2 —

Matt Kurt
Maquoketa Valley Electric Cooperative
(319) 820-0368
MKurt@mvec.com

— T1 —

Matt Porter
Lumen/Centurylink
(319) 290-9399
matt.porter@Lumen.com

PLAN VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Topographic Features and Labels
Magenta	(5)	Existing Utilities
Blue, Dark	(1)	Proposed Storm Sewer Pipes, Alignment, Stationing, and Tic Marks
Blue, Light	(230)	Proposed Storm Sewer Intakes or Structures
SHADING	**Design Color No.**	
Lavender	(9)	Temporary Pavement Shading
Gray, Light	(48)	Proposed Pavement Shading
Gray, Med	(80)	Proposed Granular Shading
Tan	(8)	Proposed Sidewalk Shading

PROFILE VIEW COLOR LEGEND OF STORM SEWER SHEETS

LINEWORK	Design Color No.	
Green	(2)	Existing Ground Line Profile
Magenta	(5)	Existing Utilities Information
Blue, Dark	(1)	Proposed Pipe
Blue, Light	(230)	Proposed Intakes or Structures

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 (at Pipe Centerline)
- Proposed Ground (at Pipe Centerline)
- Previously Constructed Pipe or Structure
- Proposed Pipe
- Proposed 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)

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER M.2

2:40:20 PM 1/19/2023 rmille3 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_LGD.dgn

NOTES:
1. Construct 10' long flowable mortar, anti-seep collar from the bottom of of pipe trench to the top of pipe for the width of the pipe trench.

ANIT-SEEP COLLAR
FLOWABLE MORTAR
SEE NOTE 1

REMOVE 18"
STORM SEWER

UAC 18"
STORM SEWER

PLUG AND ABANDON
EXISTING STORM SEWER

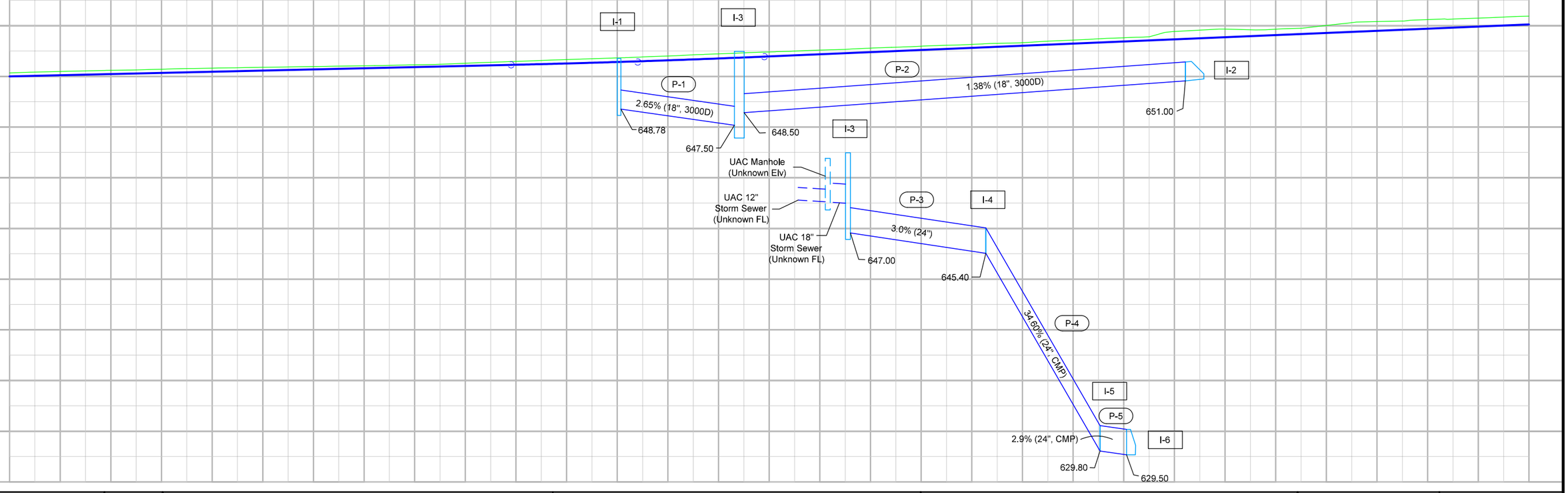
UAC MANHOLE

UAC 12"
STORM SEWER

SHERRILL
ROAD

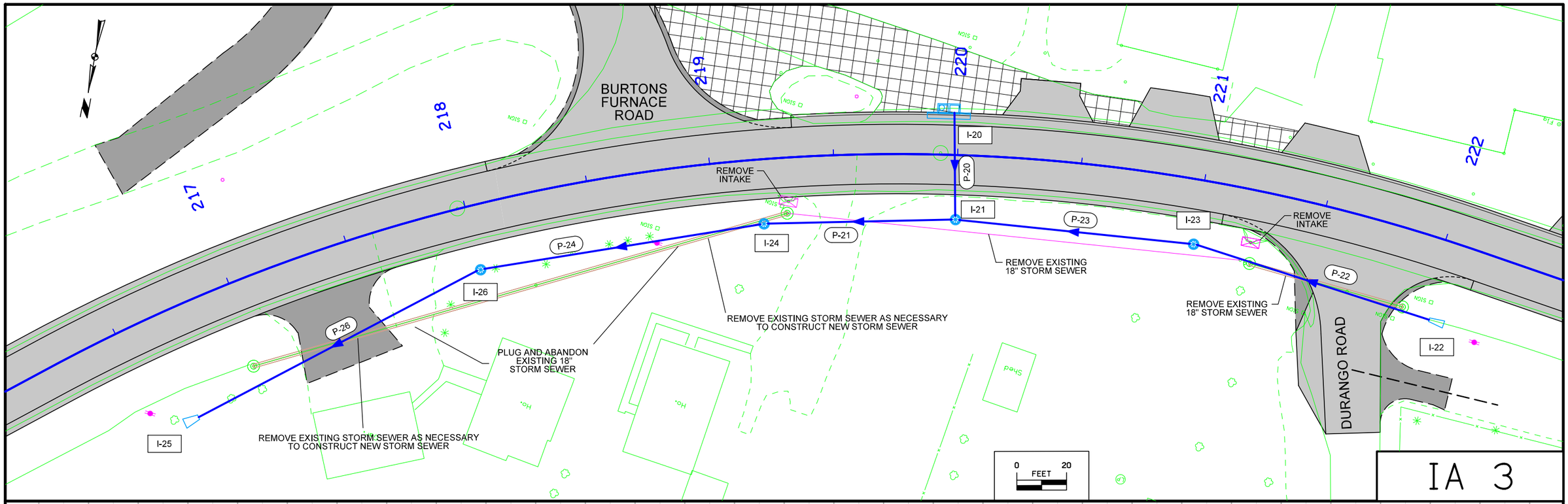
0 FEET 20

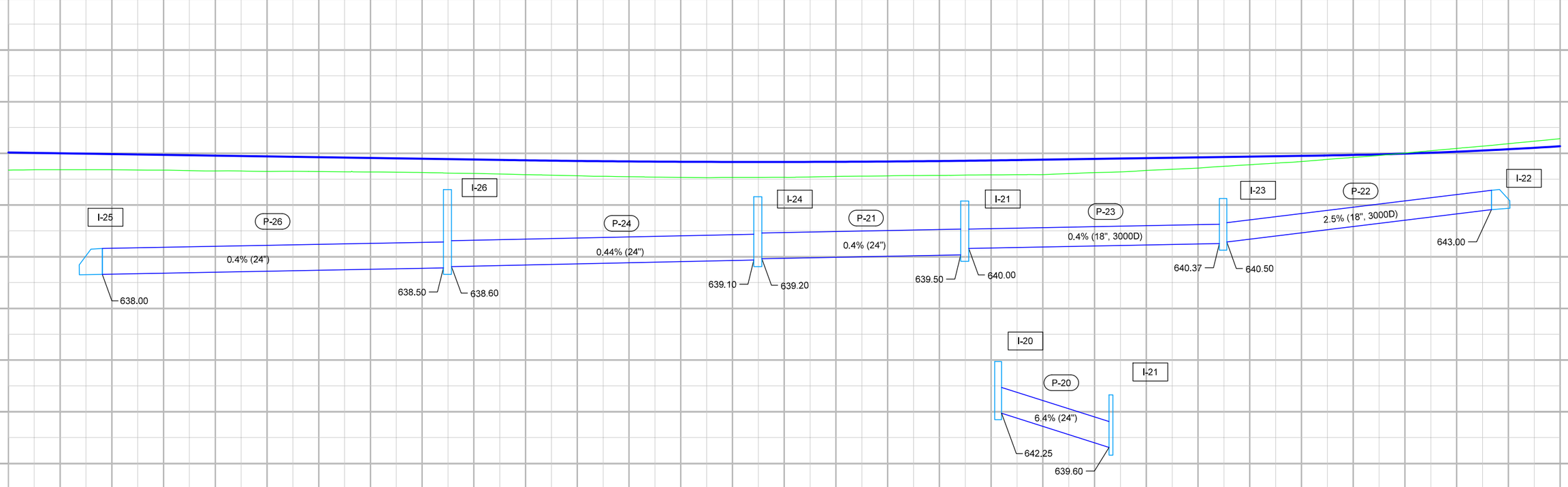
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER M.3

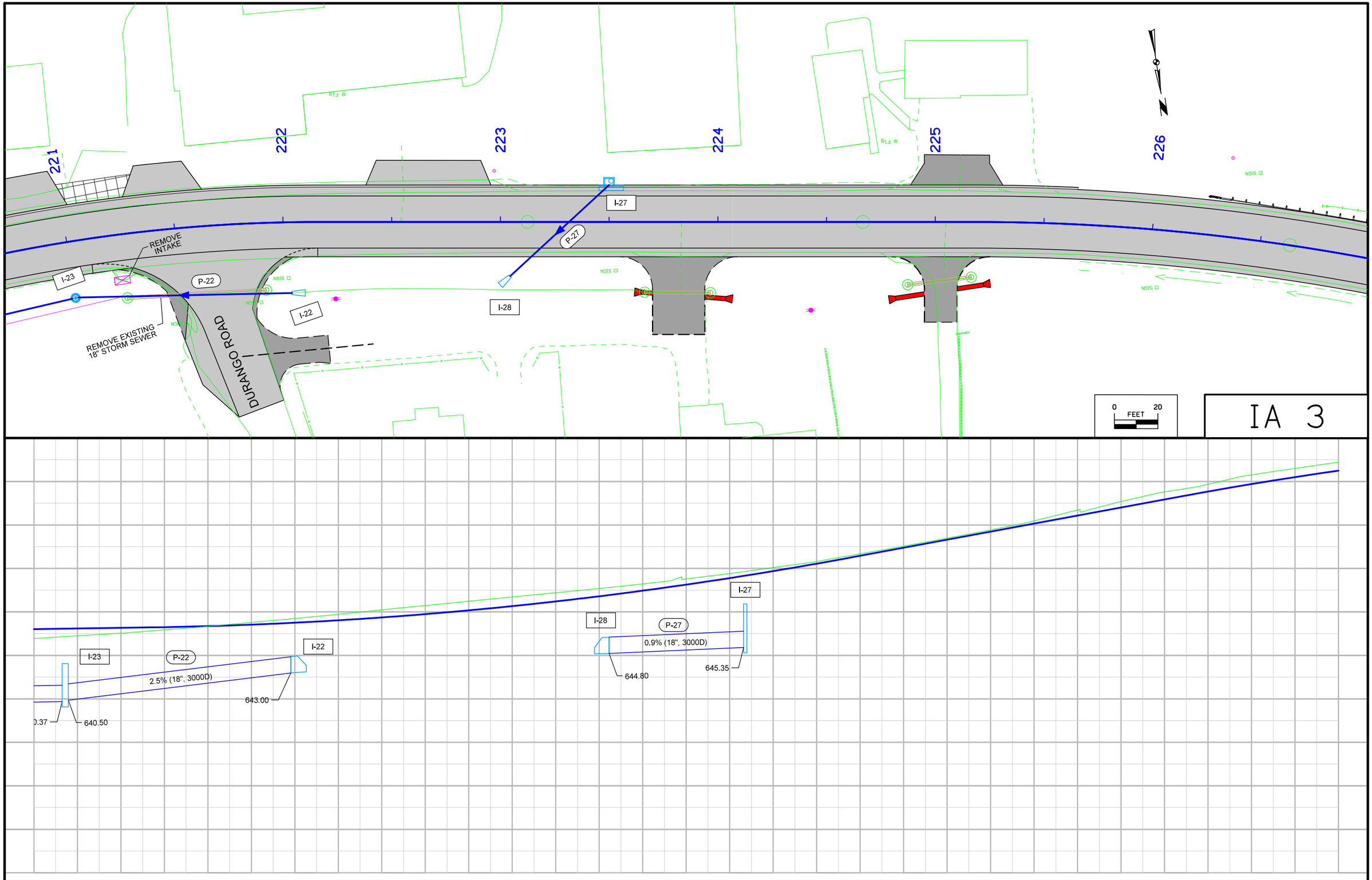
10:36:57 AM 1/24/2024 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_M03.dgn





FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER M.4

9:51:51 AM 1/20/2023 rmille3 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_M03.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER M.5

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SURVEY SYMBOLS

- SIGN SI Sign
- TDC Tree Deciduous
- PPB Power Pole Co. 2
- MH Utility Access (Manhole)
- TEV Evergeen Tree
- GRV Grave
- WEL Well
- TP TPD Telephone Pedestal
- SHR Shrub
- Flg FLG Flag Poles
- PR Electic Riser Pole
- UB UB Utility Box
- GP GP Guard Post (Less Than 4 Posts)
- TFR Tree Fruit
- EB EB Electrical Box
- IN Storm Sewer Intake
- BIN Grain Bin
- PPA Power Pole Co. 1
- OUT Tile Outlet
- STP Stump
- TR Telephone Riser Pole
- LUM Luminaire
- MM MM Mile Marker Post
- WH WHD Water Hydrant
- LP LP L.P. Tank
- SEP SEP Septic Tank
- PLG Location of General Photo
- WV WV Water Valve
- INB Storm Sewer Beehive Intake
- BB BB Billboard
- TV Satelite TV Dish
- AST AST Above Ground Storage Tank
- WM Wind Mill
- Cell Phone Tower

UTILITY LEGEND

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Manchester, IA 52057
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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)		Topsoil
Green, Med	(227)		Slope Dressing Only
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

- Drill
- Dig/Core
- Date(s) Drilled_____
- $-H_2O-$ Water
- Treatment
- Sandstone
- DRY Dry
- Sand Blanket
- Unsuitable A
- S Sample
- Soil Remediation Area
- Unsuitable B
- Plugged
- Select Soil
- Unsuitable C
- M Moisture
- Select Sand
- Sandy Soil
- Shelby
- Slope Dressing Only
- Boulders
- Blow Count
- Broken and Weathered Rock
- Shale
- Dens. Core
- Rock
- Waste

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

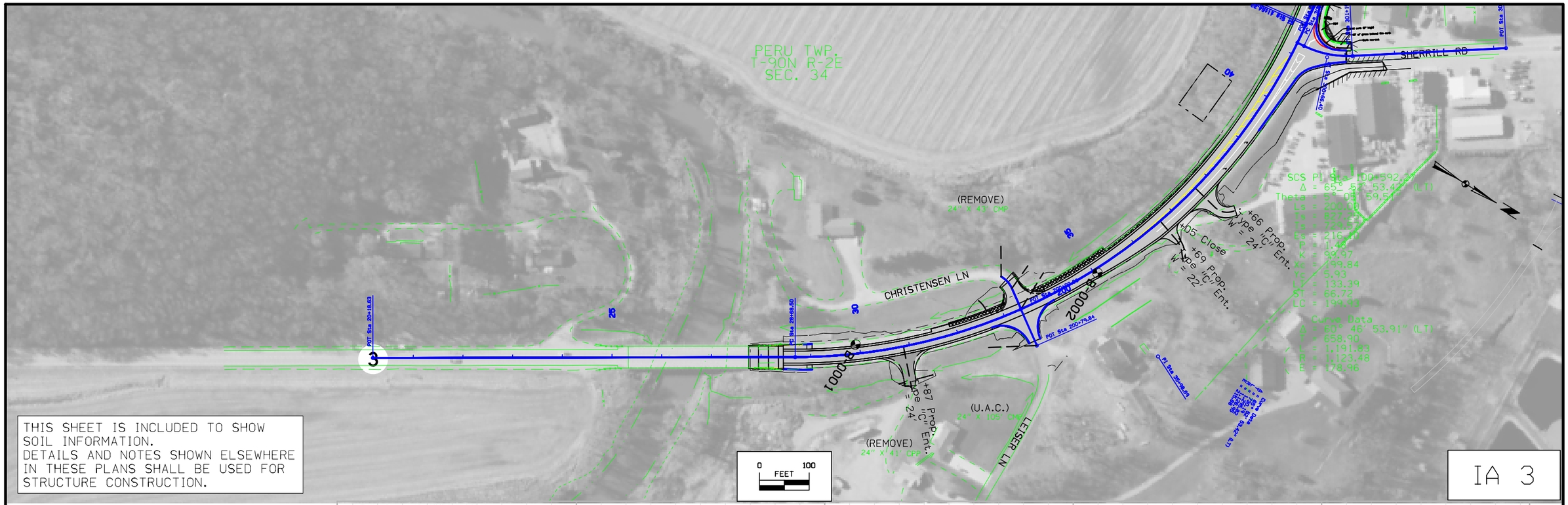
NOTE: Sounding and test boring data shown in the plans were accumulated for designing and estimating purposes. Their appearance on the plans does not constitute a guarantee that conditions other than those indicated will be encountered. Details and notes shown elsewhere shall be used for roadway and structure construction.

SOILS LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES Q)

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.1	

12:28:54 PM 1/12/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\31052107Q_LGD.sht

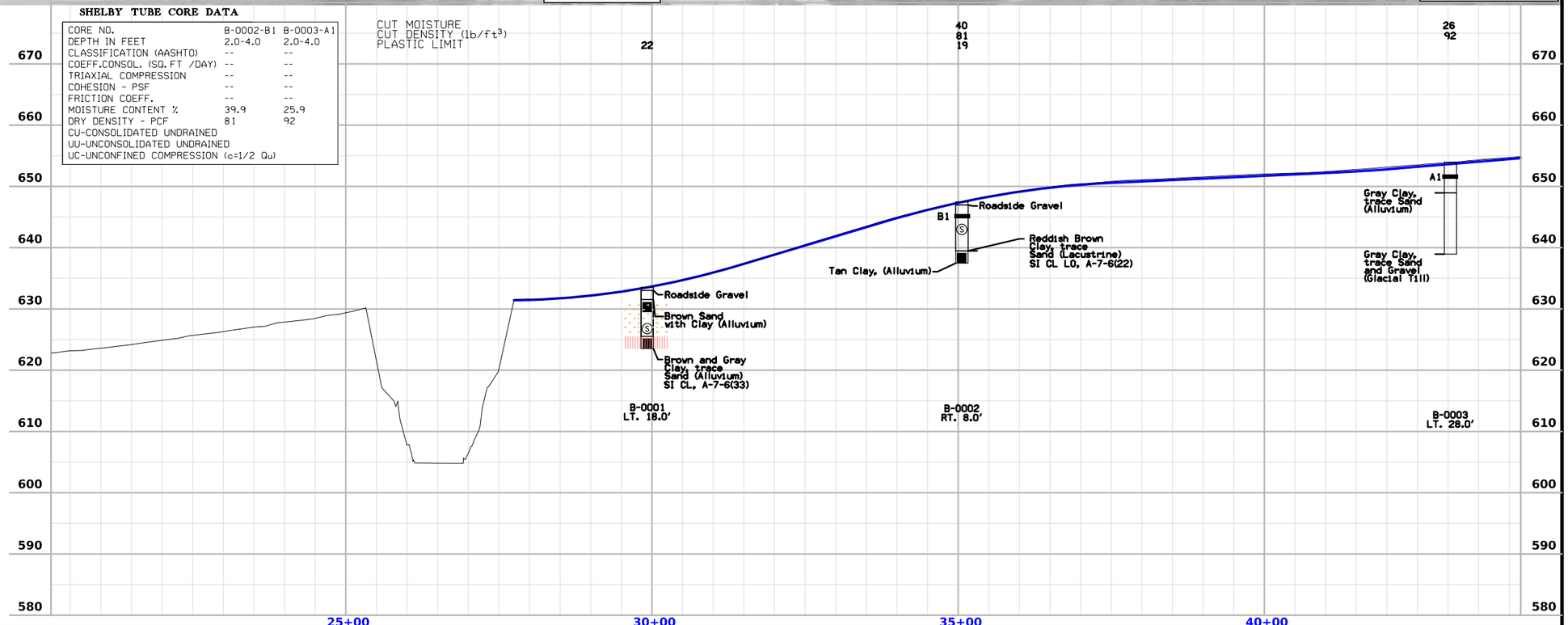


THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

SHELBY TUBE CORE DATA

CORE NO.	B-0002-B1	B-0003-A1
DEPTH IN FEET	2.0-4.0	2.0-4.0
CLASSIFICATION (AASHTO)	--	--
COEFF.CONSOL. (SQ.FT /DAY)	--	--
TRIAXIAL COMPRESSION	--	--
COHESION - PSF	--	--
FRICTION COEFF.	--	--
MOISTURE CONTENT %	39.9	25.9
DRY DENSITY - PCF	81	92

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)



FILE NO.	ENGLISH	DESIGN TEAM Heer \ Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.2

1:45:47 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\31052107Q_test.dgn

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PERU TWP.
T-90N R-2E
SEC. 34

PERU TWP.
T-90N R-2E
SEC. 33

Curve Data
Δ = 90° 25' 04.43" (LT)
T = 679.23
L = 1,064.10
R = 674.30
E = 282.80

Curve Data
Δ = 103° 01' 37.17" (RT)
T = 800.02
L = 1,143.73
R = 636.06
E = 386.00

Curve Data
Δ = 16° 03' 38.64" (LT)
T = 281.80
L = 559.90
R = 1997.42
E = 19.78

(REMOVE)
Sta. 1012+02.10
18" X 110' CMP
D.A. = 8 AC - F

(Remove)
Sta. 1020+77.29
0 Skew
6.0' X 8.0' X 63.6' RCB
D.A. = 22 AC - VH

(REMOVE)
Sta. 1036+64.93
Skew 5 RT AH
10.0' X 10.0' X 49.3' Inlet
W/ 4.0' X 6.0 X 72.0' Outlet Cattle Pass
D.A. = 55 AC - MTS

(REMOVE)
Sta. 1045+10.47
2.0' X 2.0' X 46.1' RCB
D.A. = 5 AC - MTS

Prop. 24"
Uncl. Ent. Pipe

Prop. 24"
Uncl. Ent. Pipe

18" X 168' CMP

+66 Prop.
Type "C" Ent.
W = 24'

+93 Prop.
Type "C" Ent.
W = 24'

+95 Prop.
Type "C" Ent.
W = 24'

+65 Prop.
Type "C" Ent.
W = 24'

+43 Prop.
Type "C" Ent.
W = 24'

Slide Repair

Sta. 75+21.36
Install 24" X 52'

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

0 100 FEET

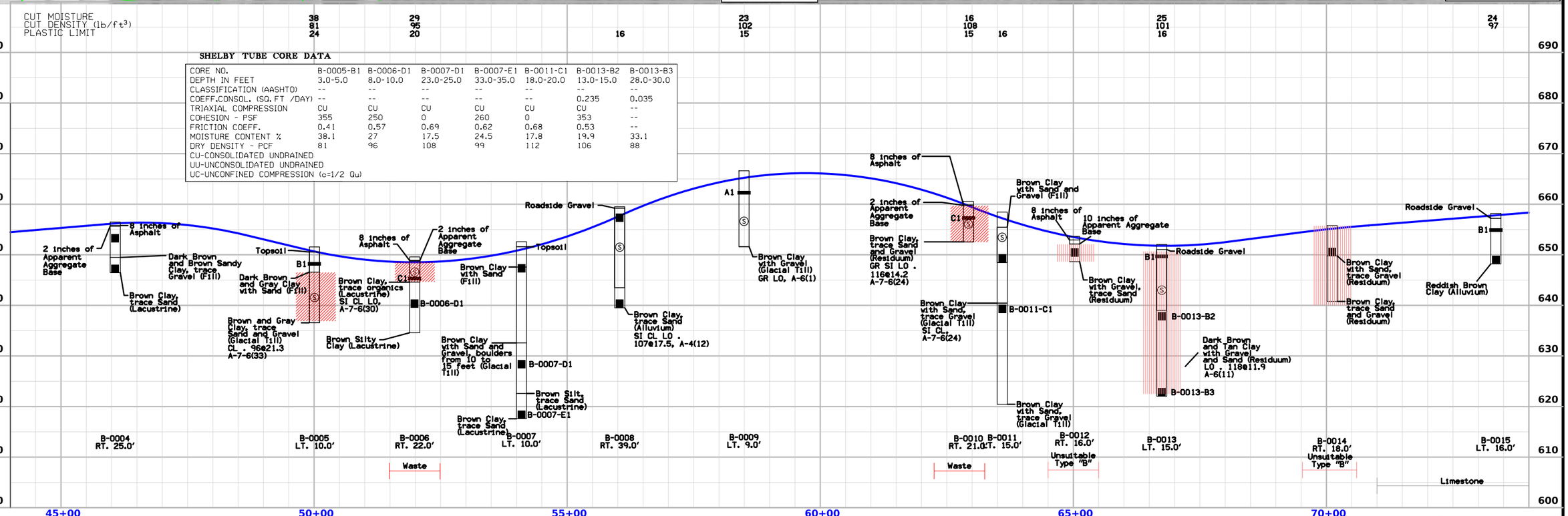
IA 3

CUT MOISTURE
CUT DENSITY (lb/ft³)
PLASTIC LIMIT

SHELBY TUBE CORE DATA

CORE NO.	B-0005-B1	B-0006-D1	B-0007-D1	B-0007-E1	B-0011-C1	B-0013-B2	B-0013-B3
DEPTH IN FEET	3.0-5.0	8.0-10.0	23.0-25.0	33.0-35.0	18.0-20.0	13.0-15.0	28.0-30.0
CLASSIFICATION (AASHTO)	--	--	--	--	--	--	--
COEFF.CONSOL. (SQ.FT /DAY)	--	--	--	--	--	0.235	0.035
TRIAXIAL COMPRESSION	CU	CU	CU	CU	CU	CU	--
COHESION - PSF	355	250	0	260	0	353	--
FRICTION COEFF.	0.41	0.57	0.69	0.62	0.68	0.53	--
MOISTURE CONTENT %	38.1	27	17.5	24.5	17.8	19.9	33.1
DRY DENSITY - PCF	81	96	108	99	112	106	88

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)



FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.3

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Curve Data
Δ = 8° 45' 23.47" (RT)
T = 156.96
L = 313.31
R = 2,050.05
E = 6.00

Curve Data
Δ = 15° 54' 46.23" (LT)
T = 267.17
L = 530.89
R = 1,911.54
E = 18.58

PERU TWP.
T-90N R-2E
SEC. 33

Curve Data
Δ = 24° 54' 46.90" (LT)
T = 462.95
L = 911.26
R = 2,095.74
E = 50.52

(REMOVE)
Sta. 1045+10.47
0 Skew
2.0' X 2.0' X 46.1' RCB
D.A. = 5 AC - MTS

(Remove Existing Headwall)
(Plug and Abandon)
Sta. 1056+56.55
SKEW
4.0' X 4.0' Stone.1' RCB
D.A. = 58 AC - MTS
Erosion
Slide
Repair

(Remove)
Sta. 1066+43.77
0 Skew
4.0' X 4.0' X 59.5' RCB
D.A. = 43 AC - MTS
Erosion
Stone
Slide
Repair

Sta. 75+21.36
Install 24" X 52' RCP

Prop. 24"
Uncl. Ent. Pipe

Prop. 18"
Uncl. Ent. Pipe

+32 Prop.
Type "C" Ent.
W = 24'

+44 Prop.
Type "C" Ent.
W = 24'

(Remove)

WHISPERING HILLS DR

B-0016 B-0017 B-0125 B-0018 B-0019 B-0020 B-0021 B-0022 B-0023 B-0024 B-0025 B-0026 B-0027

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DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

0 100 FEET

IA 3

CUT MOISTURE
CUT DENSITY (lb/ft³)
PLASTIC LIMIT

	B-0016	B-0017	B-0125	B-0018	B-0019	B-0020	B-0021	B-0022	B-0023	B-0024	B-0025	B-0026
	LT. 17.0'	LT. 14.0'	RT. 10.0'	RT. 25.0'	LT. 15.0'	LT. 15.0'	LT. 18.0'	LT. 19.0'	LT. 13.0'	RT. 22.0'	RT. 20.0'	LT. 13.0'
	26 92	14 -- 17		29 91	17		14		25 101 15			

SHELBY TUBE CORE DATA

CORE NO.	B-0025-A2
DEPTH IN FEET	8.0-10.0
CLASSIFICATION (AASHTO)	--
COEFF.CONSOL. (SQ.FT /DAY)	--
TRIAXIAL COMPRESSION	UC
COHESION - PSF	360
FRICTION COEFF.	--
MOISTURE CONTENT %	11.5
DRY DENSITY - PCF	125

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

Roadside Gravel
Dark Brown Clay, trace Sand (Alluvium)
B1
Dark Gray Clay (Alluvium)
Brown Clay, trace Sand and Gravel (Residuum)
A1
Brown Sandy Clay with Gravel (Residuum)
GR LO . 121e11.6
A-6(6)
Topsoil
C1
Brown Sandy Clay (Fill)
Reddish Brown Clay (Alluvium)
Brown Clay, trace Sand and Gravel (Residuum)
Highly Weathered Limestone
Roadside Gravel
Brown Clay, trace Sand and Gravel (Residuum)
SI LO . 116e12.2
A-6(13)
Roadside Gravel
Brown Clay, trace Sand and Gravel (Residuum)
Roadside Gravel
Brown Clay, trace Sand and Gravel (Residuum)
GR LO, A-6(4)
Roadside Gravel
Light Gray Clay (Loess)
Brown Clay, trace Sand and Gravel (Residuum)
A1 8
B1 11
B2 13
C1 21
Dark Brown and Tan Clay with Sand, trace Gravel (Alluvium)
Brown Clay with Sand and Gravel (Residuum)
Highly Weathered Limestone
Brown Clay with Sand and Gravel (Residuum)
A1
Brown Clay, trace Gravel (Residuum)
GR LO . 120e12.6
A-6(2)
B-0025-A2
Topsoil
Brown Clay with Sand and Gravel (Fill)
Light Brown Clay, trace Sand and Gravel (Residuum)
Dark Brown Clay, trace Sand and Gravel (Residuum)

Unsuitable Type "B"
Limestone
Unsuitable Type "B"
Limestone
Unsuitable Type "B"
Limestone

680 670 660 650 640 630 620 610 600 590

75+00 80+00 85+00 90+00 95+00 100+00

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.4

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DUBUQUE TWP.
T-89N R-2E
SEC. 4

DUBUQUE TWP.
T-89N R-2E
SEC. 5

CLAY HILL RD

Heritage Trail

(REMOVE)
Sta. 1083+10.25
0 Skew
2.0' X 2.0' X 43.1' RCB
D.A. = 36 AC - MTS

Curve Data
Δ = 28° 11' 19.13" (LT)
T = 288.95
L = 566.20
R = 1,150.84
E = 35.72

Curve Data
Δ = 50° 19' 55.97" (RT)
T = 452.80
L = 846.60
R = 963.73
E = 101.07

(REMOVE)
Sta. 1096+48.17
24" X 31' Conc Pipe
D.A. = 2 AC - MTS

(REMOVE)
2.0' X 2.0' X 59.0' RCB
Outlet Buried
Based on As-Built Plans

Curve Data
Δ = 84° 37' 55.29" (RT)
T = 801.98
L = 1,301.15
R = 880.87
E = 310.39

(REMOVE)
Sta. 0+60.38
0 Skew
8.0' X 6.0' X 46.0' RCB
D.A. = 220 AC - MTS

+24 Prop. Type "C" Ent. w = 30'

+33 Prop. Type "C" Ent. w = 24'

+30 Prop. Type "C" Ent. w = 24'

THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

0 100
FEET

IA 3

CUT MOISTURE
CUT DENSITY (lb/ft³)
PLASTIC LIMIT

17 | 23 | 23 / 106 / 16 | 15 / 109

670 660 650 640 630 620 610 600 590

B-0027 RT. 20.0'
Brown Clay, trace Sand (Alluvium)
Brown Clay with Sand, trace Gravel (Alluvium)

B-0028 RT. 20.0'
B1 3
B2 4
C2 5
C3 2
C4 2
C5 5
Topsoil
Brown Sandy Clay, trace gravel (Fill)
Brown Clay (Alluvium)

B-0029 LT. 23.0'
B1/C1 10
4 inches of Asphalt
14 inches of Concrete
Brown Clay with Sand and Gravel (Residuum)
Highly Weathered Limestone

B-0030 RT. 15.0'
B1 5
B2 5
B3 3
B4 48
B5 6
C1 18
C2 30
Brown Clay with Sand, trace Gravel and Organics (Fill)
Brown Clay, cobbles from 9.5 to 11 feet (Alluvium)
Brown Gravel with Clay and Sand (Residuum)

B-0031 RT. 22.0'
Brown Silt, A-7-6(18) cobbles from 3 to 7 feet (Alluvium) SI LO . 117@13.2 A-4(10)
Light Brown Clay with Silt seams (Glacial Till)

B-0032 LT. 8.0'
Dark Gray Clay, trace Organics (Alluvium) SI CL LO
Roadside Gravel
Brown Clay (Alluvium)

B-0033 LT. 13.0'
A1 5
Brown Clay with Gravel, trace Sand (Residuum) LO, A-6(10)

B-0034 LT. 11.0'
Dark Brown Sandy Clay with Gravel (Fill)
Brown Sand with Clayey Sand, boulders from 11 to 15 feet (Alluvium)
Reddish Brown Sandy Lean Clay with Gravel (Residuum)

B-0035 LT. 15.0'
B1
Roadside Gravel
Brown Clay with Sand and Gravel (Residuum)

B-0036 LT. 16.0'
Brown Clay with Sand and Gravel (Fill)
Brown Clay, trace Sand (Alluvium)

B-0037 LT. 18.0'
B1 20
B2 8
B3 5
B4 9
C1 13
D1 17
Brown Sandy Clay, trace Gravel (Fill)
Brown Sandy Clay, trace Gravel (Alluvium)
Brown Clay, trace Sand (Alluvium)
Gray Sandy Clay (Alluvium)

Unsuitable Type "B"
Limestone
Unsuitable Type "B"
Limestone
Limestone
Unsuitable Type "B"
Limestone

105+00 110+00 115+00 120+00 125+00 130+00

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.5

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DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.

DUBUQUE TWP.
T-89N R-2E
SEC. 5

PERU TWP.
T-90N R-2E
SEC. 32

Curve Data
Δ = 14° 57' 08.58" (LT)
T = 331.77
L = 659.77
R = 2,528.14
E = 21.68

Curve Data
Δ = 53° 13' 39.17" (LT)
T = 529.98
L = 982.60
R = 1,057.70
E = 125.35

Curve Data
Δ = 3° 20' 12.00" (LT)
T = 240.54
L = 480.95
R = 8,258.66
E = 3.50

Sta. 1122+74.12
0 Skew
3.0' X 4.0' X 53.2' RCB
D.A. = 26 AC. - MTS

Sta. 1130+47.20
SKEW 33 RT AH
3.0' X 3.0' X 70.5' RCB
D.A. = 11 AC - MTS

Sta. 1110+92.34
Skew 10 RT AH
2.0' X 3.0' X 46.1' RCB W/ Flume
W/ 30" X 25' CIP Extension
D.A. = 15 AC - MTS

Sta. 1116+07.39
0 Skew
6.0' X 6.0' X 118.8' RCB
W/ 72" X 16.0' CMP Extension
D.A. = 56 AC - MTS

60" X 61' CMP
D.A. = 56 AC - MTS

Prop. 34"
Uncl. Ent. Pipe
+21 Prop.
Type "C" Ent.
W = 24'

Type "C" Ent.
W = 24'

Class 12
Rock Cut

Revetment

Existing Retaining Wall

B-0038 B-0039 B-0040A B-0041 B-0042 B-0043 B-0044 B-0045 B-0046 B-0047

0 100 FEET

IA 3

SHELBY TUBE CORE DATA

CORE NO.	B-0038-A1/B1	B-0046-B1
DEPTH IN FEET	3.0-5.0	8.0-10.0
CLASSIFICATION (AASHTO)	--	--
COEFF.CONSOL. (SQ.FT /DAY)	--	--
TRIAXIAL COMPRESSION	CU	UC
COHESION - PSF	0	670
FRICTION COEFF.	0.72	--
MOISTURE CONTENT %	25.5	17.4
DRY DENSITY - PCF	93	109

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

26 CUT MOISTURE
93 CUT DENSITY (lb/ft³)
18 PLASTIC LIMIT

B-0040 Shown Here for Clarity

B-0038-A1/B1
Brown Sandy Clay, trace Gravel and Cobbles (Fill)
Brown Sandy Clay, trace Gravel and Cobbles (Residuum)
GR LO . 120@12.4
A-6(4)

Highly Weathered Tan Limestone

Brown Sandy Clay, trace Gravel, boulders from 2 to 5 feet (Alluvium)
GR SA LO . 130@9
A-1-b

5 inches of Asphalt
13 inches of Concrete
2 inches of Apparent Aggregate Base
Brown Sandy Clay with Gravel (Residuum)
Tan Gravel (Residuum)
A1/B1 10
C1 17
C2 12
C3 11
C4 REF

Roadside Gravel
B1
Brown Sandy Clay with Gravel (Residuum)
GR SA LO, A-1-b
Highly Weathered Limestone

2 inches of Asphalt
7 inches of Concrete
Highly Weathered Limestone

Brown Sandy Clay with Gravel (Residuum)
GR LO, A-6(1)

Highly Weathered Tan Limestone

Highly Weathered Tan Limestone

Roadside Gravel
B-0046-B1
Light Brown Clay, trace Sand and Gravel (Alluvium)
SI LO, A-6(11)
Highly Weathered Light Brown Limestone

Brown Sandy Clay, trace Gravel (Fill)
Brown Clay, trace Gravel (Alluvium)

Unsuitable Type "B"
Limestone
Unsuitable Type "B"
Lime-stone

B-0038 LT. 19.0'
B-0040 LT. 19.0'
B-0039 LT. 18.0'
B-0040A LT. 19.0'
B-0041 RT. 13.0'
B-0042 LT. 16.0'
B-0043 LT. 21.0'
B-0044 LT. 19.0'
B-0045 LT. 15.0'
B-0046 RT. 15.0'
B-0047 LT. 14.0'

690 680 670 660 650 640 630 620 610

135+00 140+00 145+00 150+00 155+00 160+00

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.6

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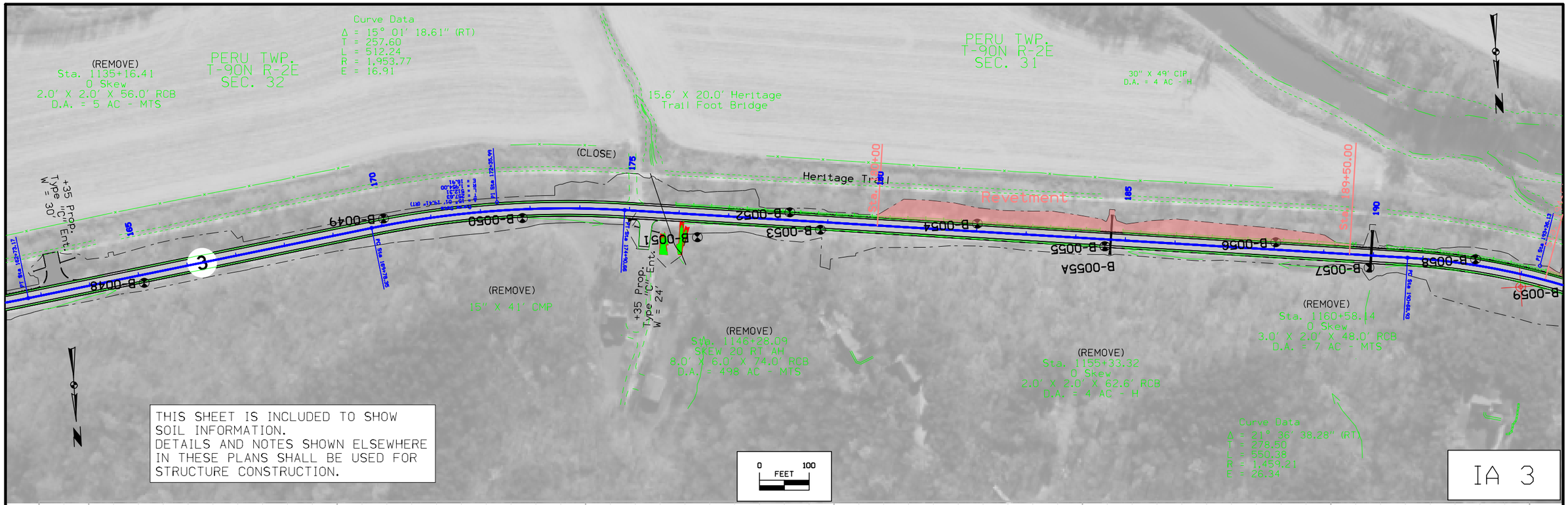

SHELBY TUBE CORE DATA

CORE NO.	B-0055A-D1
DEPTH IN FEET	6.0-8.0
CLASSIFICATION (AASHTO)	--
COEFF.CONSOL. (SQ.FT /DAY)	--
TRIAXIAL COMPRESSION	UC
COHESION - PSF	970
FRICTION COEFF.	--
MOISTURE CONTENT %	17.1
DRY DENSITY - PCF	111
CU-CONSOLIDATED UNDRAINED	
UU-UNCONSOLIDATED UNDRAINED	
UC-UNCONFINED COMPRESSION (c=1/2 Qu)	

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.7

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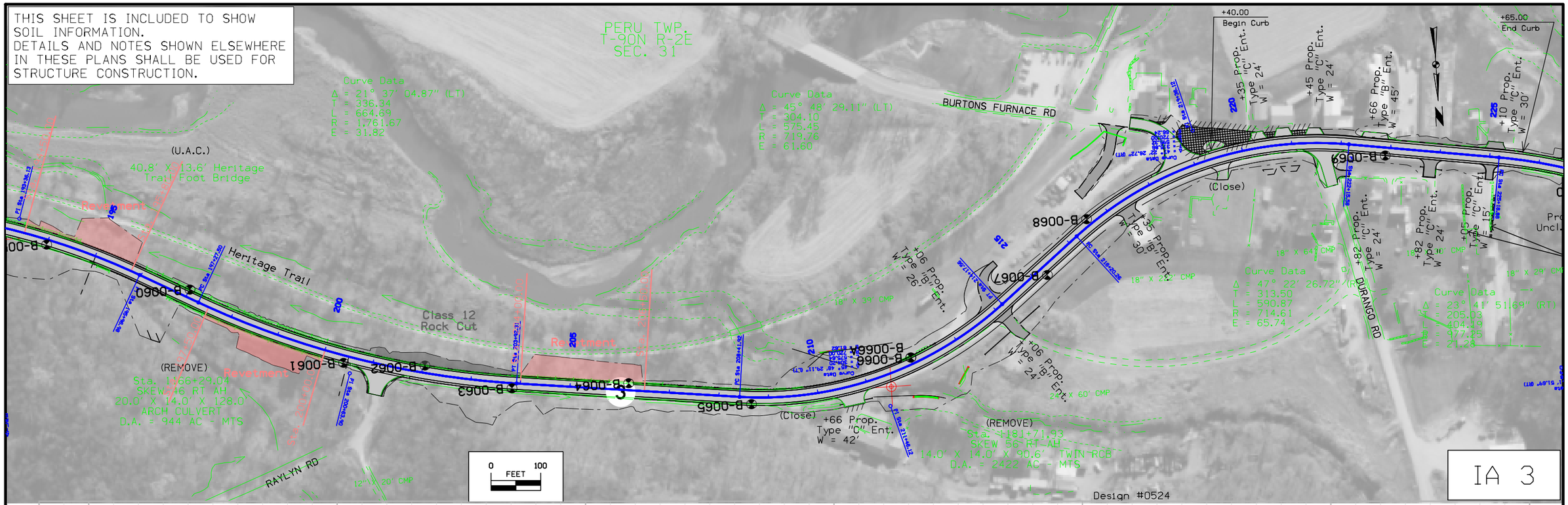
THIS SHEET IS INCLUDED TO SHOW SOIL INFORMATION.
DETAILS AND NOTES SHOWN ELSEWHERE IN THESE PLANS SHALL BE USED FOR STRUCTURE CONSTRUCTION.



FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.8

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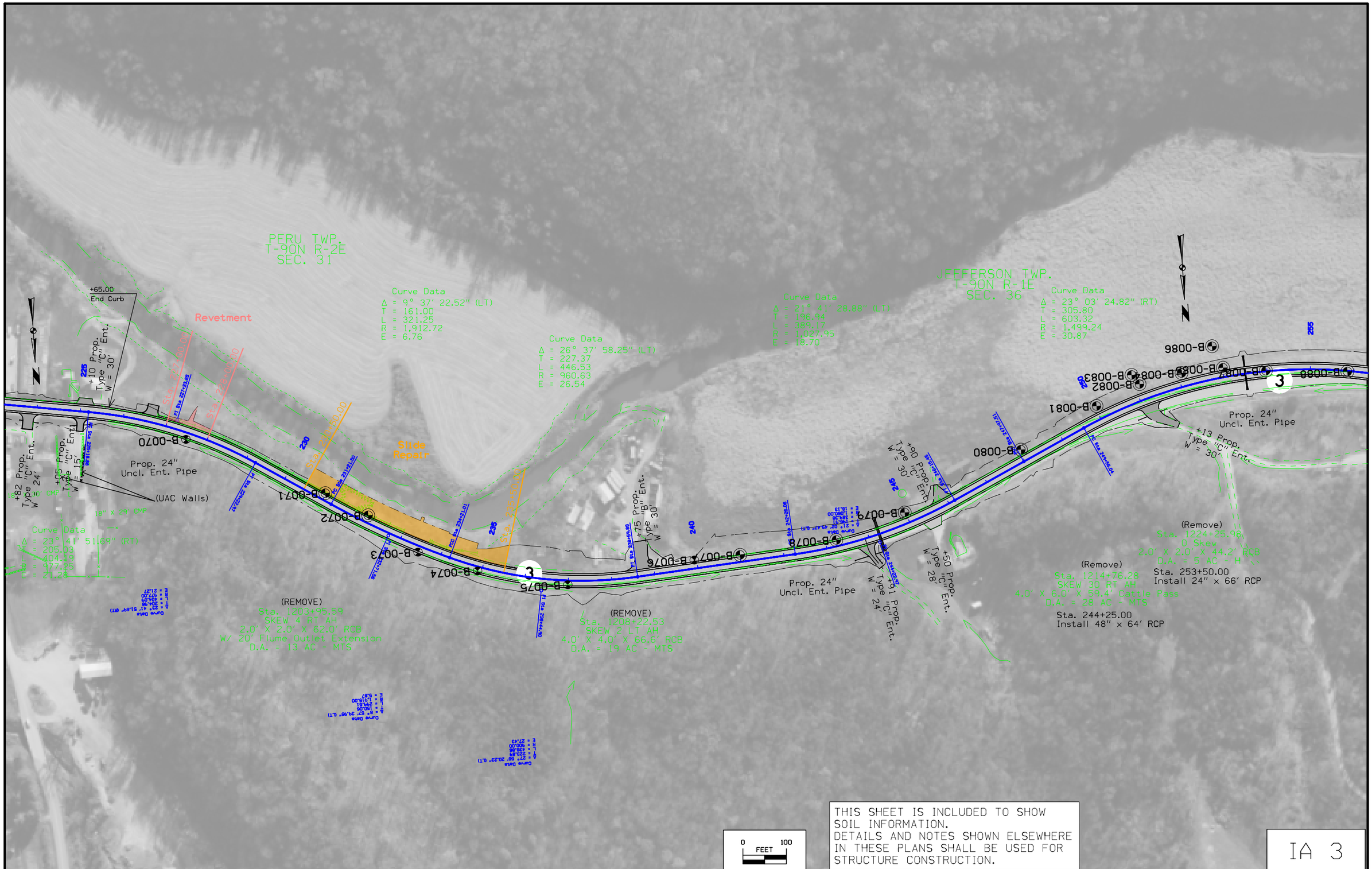

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.9**

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CUT MOISTURE
CUT DENSITY (lb/ft^3)
PLASTIC LIMIT

34 | 18 | 18 | 23 / 16 | 30 / 85

690 680 670 660 650 640 630 620 610 600

4 inches of Asphalt
2 inches of Apparent Aggregate Base
12 inches of Concrete
Brown Clay with Sand and Gravel (Residuum)
Brown Sand with Clay and Gravel (Fill)
Brown Clay, trace Gravel (Residuum)
Brown Clay with Sand, trace Gravel (Fill)
Brown Gravel with Clay (Residuum)
Brown Clay with Sand and Gravel (Residuum)
Light Brown Clay, trace Gravel (Residuum)
Brown Clay with Sand, trace Gravel (Residuum)
Brown Clay, trace Sand and Gravel (Residuum)
B-0073-B1
Brown Clay (Residuum)
Brown Clay with Sand, trace Gravel (Residuum)
GR LO . 118@12
A-4(4)
Roadside Gravel
Brown Clay with Sand and Gravel (Fill)
Brown Clay with Sand and Gravel (Residuum)
Brown Clay (Alluvium)
Roadside Gravel
Brown Clay with Sand (Alluvium)
SI LO, A-6(10)
Brown Clay with Sand, trace Gravel (Alluvium)
GR LO, A-4(3)
Brown Sand (Fill)
Brown Clay with Sand, trace Gravel (Fill)
Brown Clay (Alluvium)
Brown Clay, trace Sand and Organics (Alluvium)
Tan and Brown Clay with Sand and Gravel (Glacial Till)
4 inches of Asphalt
11 inches of Concrete
6 inches of Apparent Aggregate Base
B-0078-E2
Brown Clay with Sand and Gravel (Fill)
Brown Sand (Fill)
Brown Clay (Alluvium)
Brown Clay, trace Sand and Gravel (Alluvium)
Brown Clay (Alluvium)
Brown Gravel with Clay and Sand (Residuum)
Topsoil
Brown Clay (Alluvium)
Gray Silt (Alluvium)
B-0081 Through B-0087 Shown Below for Clarity

B-0070 RT. 15.0′
B-0071 LT. 16.0′
B-0072 LT. 17.0′
B-0073 RT. 14.0′
B-0074 RT. 10.0′
B-0075 RT. 10.0′
B-0076 LT. 20.0′
B-0077 LT. 16.0′
B-0078 LT. 14.0′
B-0079 LT. 25.0′
B-0080 LT. 28.0′
B-0081 LT. 31.0′
B-0082 LT. 64.0′
B-0083 LT. 38.0′
B-0084 LT. 31.0′
B-0085 LT. 75.0′
B-0086 LT. 22.0′
B-0087 LT. 2.0′

Unsuitable Type "B"
Limestone
Limestone

SHELBY TUBE CORE DATA

CORE NO.	B-0073-B1	B-0078-E1
DEPTH IN FEET	8.0-10.0	13.0-15.0
CLASSIFICATION (AASHTO)	--	--
COEFF.CONSOL. (SQ.FT /DAY)	--	0.429
TRIAXIAL COMPRESSION	CU	CU
COHESION - PSF	431	299
FRICTION COEFF.	0.43	0.49
MOISTURE CONTENT %	19.7	30.2
DRY DENSITY - PCF	100	84

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

B-0081 Through B-0087 Shown Here for Clarity

B-0081: Topsoil; Brown Clay with Sand, trace Organics (Alluvium); Brown Clay, trace Organics (Alluvium); Reddish Brown Clay, trace Sand, Gravel and Organics (Alluvium); Brown Clay, trace Gravel (Alluvium); Brown Clay (Lacustrine); Brown Clay (Alluvium)

B-0082: Topsoil; Brown Clay, trace Sand and Organics (Alluvium); Brown and Gray Clay, trace Sand (Lacustrine)

B-0083: Topsoil; Brown Clay (Alluvium); Brown Clay with Sand (Alluvium); Brown Clay, trace Sand and Gravel (Alluvium); Gray Clay, trace Sand (Lacustrine); Brown Clay (Alluvium)

B-0084: Topsoil; Brown Clay, trace Sand (Alluvium); Dark Brown Clay, trace Sand (Alluvium); Brown Gravel with Clay and Sand (Residuum); Brown Clay, trace Gravel (Residuum); Brown Clay (Residuum); Brown Clay with Sand and Gravel (Residuum)

B-0085: Topsoil; Brown Clay (Alluvium); Gray Clay (Alluvium); Brown Clay (Alluvium)

B-0086: Topsoil; Brown Clay, trace Sand and Gravel (Alluvium); Brown Clay, trace Sand (Alluvium)

B-0087: Topsoil; Brown Clay, trace Organics (Alluvium); Brown Sand with Clay and Gravel (Alluvium); Brown and Gray Clay, trace Sand (Alluvium)

225+00 230+00 235+00 240+00 245+00 250+00

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.10**

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PARADISE VALLEY RD

(REMOVE)
Sta. 1234+34.04
0 Skew
2.0' X 2.0' X 42.2' RCB
D.A. = 5 AC - HYD

JEFFERSON TWP.
T-90N R-1E
SEC. 36

Curve Data
Δ = 53° 50' 13.94" (LT)
T = 448.70
L = 830.38
R = 883.72
E = 107.39

Revetment/
Bridge Design
No. 223

B-0090 B-0091 B-0092 B-0093 B-0094 B-0095 B-0096 B-0097 B-0098

+15 Prop. 30" Ent.

+25.00
Begin Curb

+75.00
End Curb

(REMOVE)
Sta. 1230+12.09
0 Skew
6.0' X 4.0' X 39.9' RCB
D.A. = 80 AC - MTS

(REMOVE)
Sta. 1241+94.23
SKEW 11 LT AH
3.0' X 3.0' X 54.9' RCB
D.A. = 15 AC - MTS

Prop. 24" UNcl. Ent. Pipe

+52 Prop. Type "C" Ent. W = 30"

+18 Prop. Type "C" Ent. W = 24"

(REMOVE)
Sta. 1250+20.90
SKEW 16 RT AH
10.0' X 6.0' X 58.0' RCB
21.7' CONC ARCH EXTENSION
D.A. = 186 AC - MTS

Curve Data
Δ = 64° 40' 41.70" (RT)
T = 603.45
L = 1,075.93
R = 953.12
E = 174.97

Curve Data
Δ = 12° 47' 25.92" (RT)
T = 173.20
L = 344.96
R = 1,545.27
E = 9.68

0 100
FEET

IA 3

CUT MOISTURE
CUT DENSITY (lb/ft³)
PLASTIC LIMIT

31 89 | 13 18 | 26 | 20 20 | 24 99 | 21

SHELBY TUBE CORE DATA

CORE NO.	B-0088-C1	B-0097-B2
DEPTH IN FEET	8.0-10.0	18.0-20.0
CLASSIFICATION (AASHTO)	--	--
COEFF.CONSOL. (SQ.FT /DAY)	--	--
TRIAXIAL COMPRESSION	CU	UC
COHESION - PSF	0	544
FRICTION COEFF.	0.79	--
MOISTURE CONTENT %	30.8	24.0
DRY DENSITY - PCF	89	104

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

690 680 670 660 650 640 630 620 610 600

B1 10 Brown Gravel with Sand (Fill)
B2 2
B3 2
B-0088-C1
Brown Clay, trace Sand and Gravel (Alluvium)
C2 10
C3 10
Brown Clay (Alluvium)
D1 19
Brown Sand with Silty Clay (Alluvium)
Roadside Gravel
Brown Clay, trace Sand and Gravel (Residuum)
Highly Weathered Limestone
B-0088 RT. 1.0'
B-0089 RT. 22.0'
Limestone

A1 S
Brown Sandy Clay with Gravel (Glacial Till) GR SI LO . 125@10.5, A-2-4
B-0090 LT. 16.0'

A1 6
A2 14
B1 0
B2 2
Brown Sandy Clay, trace Gravel (Fill)
Brown Clay, trace Sand and Gravel (Alluvium)
C1 13
C2 18
Brown Sand with Silt, trace Gravel (Alluvium)
B-0091 LT. 16.0'

A1
Dark Gray Clay (Alluvium)
Brown Clay, trace Sand and Gravel (Residuum)
B-0092 RT. 22.0'

A1 S
Brown Sandy Clay with Gravel (Glacial Till) SI LO . 112@13.7 A-6(7)
B-0093 LT. 12.0'

A1
Brown Clay, trace Sand and Gravel (Residuum)
B-0094 RT. 13.0'

Topsoil
Brown Clay, trace Sand and Gravel (Residuum)
Highly Weathered Limestone
B-0095 RT. 13.0
Unsuitable Type "B"
Limestone

Brown and Tan Clay trace Sand and Gravel (Residuum)
Dark Brown Sandy Clay with Gravel, trace Organics, cobbles at 13 feet (Alluvium) SI CL LO, A-6(17)
B-0096 LT. 19.0

Topsoil
B-0097-B1 S
B-0097-B2
B3 REF
B-0097 RT. 14.0'

Brown Clay, trace Sand and Gravel (Residuum)
B-0098 LT. 19.0'
Unsuitable Type "B"
Limestone

255+00 260+00 265+00 270+00 275+00 280+00

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.11**

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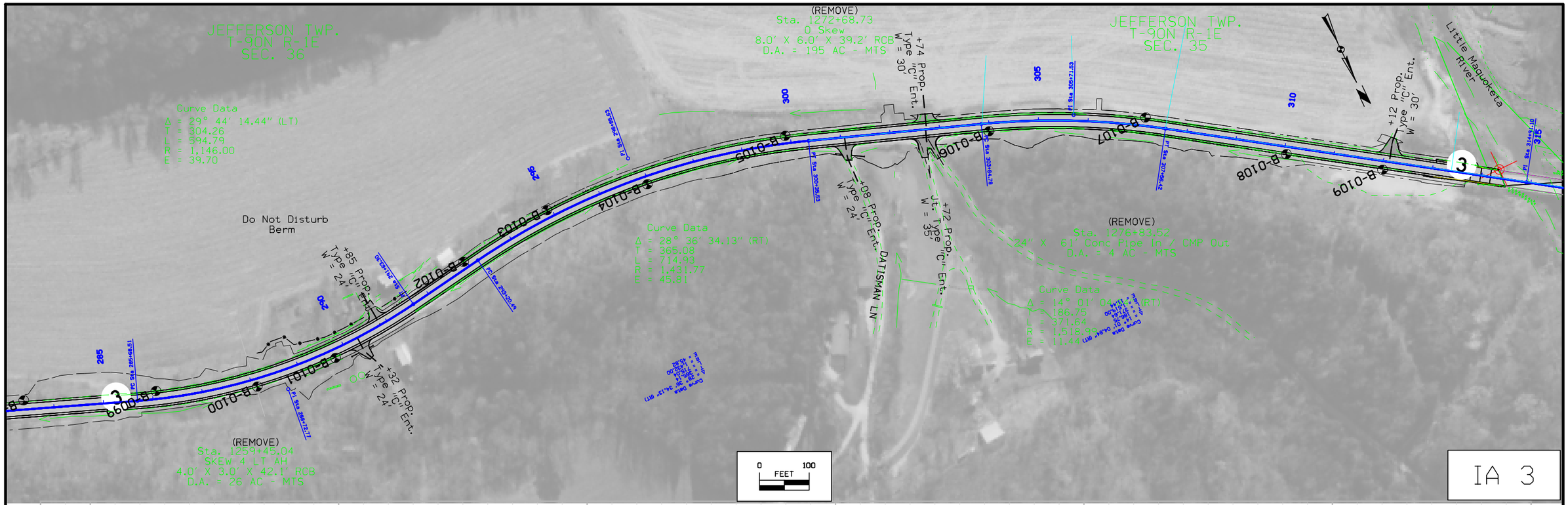

SHELBY TUBE CORE DATA

CORE NO.	B-0102-A1	B-0102-B1
DEPTH IN FEET	3.0-5.0	13.0-15.0
CLASSIFICATION (AASHTO)	--	--
COEFF.CONSOL. (SQ.FT /DAY)	--	--
TRIAXIAL COMPRESSION	UC	UC
COHESION - PSF	830	320
FRICTION COEFF.	--	--
MOISTURE CONTENT %	22.9	23.7
DRY DENSITY - PCF	99	105

CU-CONSOLIDATED UNDRAINED
UU-UNCONSOLIDATED UNDRAINED
UC-UNCONFINED COMPRESSION (c=1/2 Qu)

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.12

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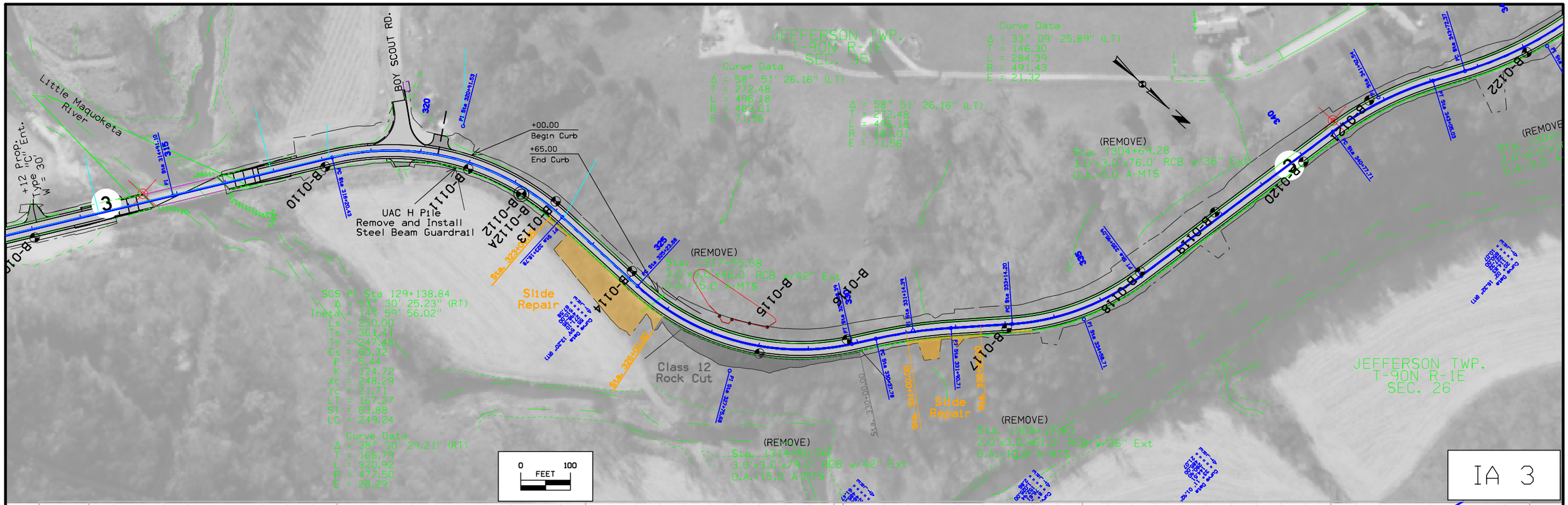

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.13

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JEFFERSON TWP.
T-90N R-1E
SEC. 35

Curve Data
Δ = 30° 51' 31.62" (RT)
T = 155.10
L = 302.67
R = 561.97
E = 21.01

JEFFERSON TWP.
T-90N R-1E
SEC. 26

Curve Data
Δ = 26° 44' 03.94" (LT)
T = 173.20
L = 340.09
R = 728.87
E = 20.30

Curve Data
Δ = 20° 14' 46.13" (RT)
T = 117.61
L = 232.77
R = 658.73
E = 10.42

CARMEN OAKS DR

Sta. 358+00.00
End Project

PRT Sta. 363+43.91

Prop. 24"
Uncl. ENt. Pipe

B-0120
B-0121
B-0122
B-0123
B-0124

Erosion Stone
Buttress @ Culvert
Outlet

(REMOVE)
Sta. 1302+10.82
2.0'x2.0'x105' RCB w/30" Ext
D.A.=2.0 A-MTS

(REMOVE)
Sta. 1296+41.09
3.0'x3.0'x101' RCB w/42" Ext
D.A.=12 A-MTS

0 100
FEET

IA 3

B-0124 Shown
Here for Clarity

Topsoil
Brown Clayey Sand with Gravel (Residuum)

Topsoil
Brown Clay with Sand, trace Gravel (Fill)

Brown Clay, trace Sand (Alluvium)

Highly Weathered Limestone

5 inches of Asphalt
5 inches of Apparent Aggregate Base
Highly Weathered Tan Limestone

Brown Clay, trace Sand and Gravel (Residuum)
GR SA LO .
125@10.8
A-7-6(4)

B-0121
LT. 13.0'

B-0122
RT. 12.0'

B-0123
LT. 16.0'

B-0124
RT. 19.0'

Unsuitable Type "B"

Limestone

Unsuitable Type "B"

Limestone

Unsuitable Type "B"

CUT MOISTURE
CUT DENSITY (lb/ft³)
PLASTIC LIMIT 18

340+00 345+00 350+00 355+00 360+00

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.14

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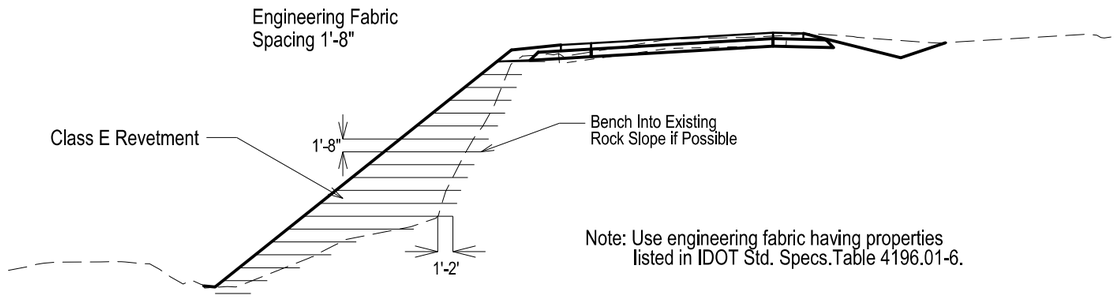
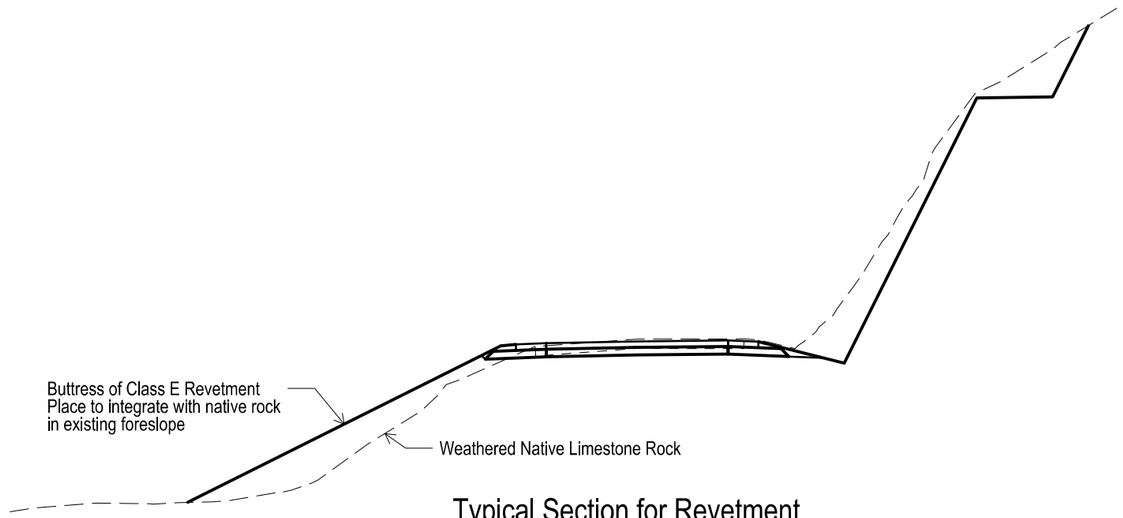
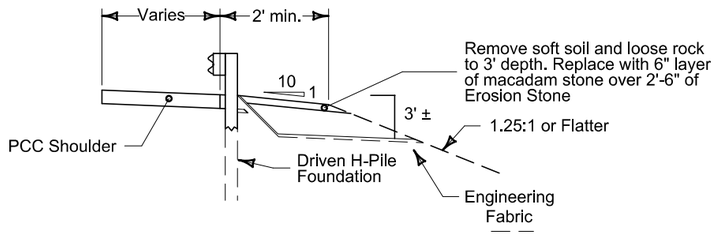


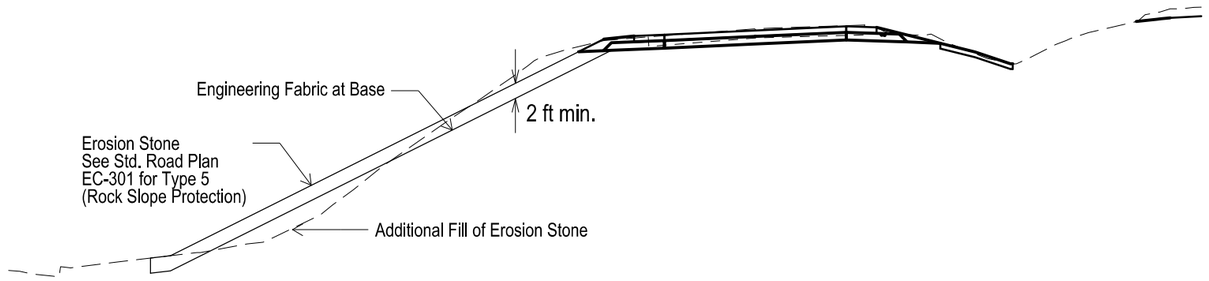
TYP. for Reinforced Revetment Slope (RRS)



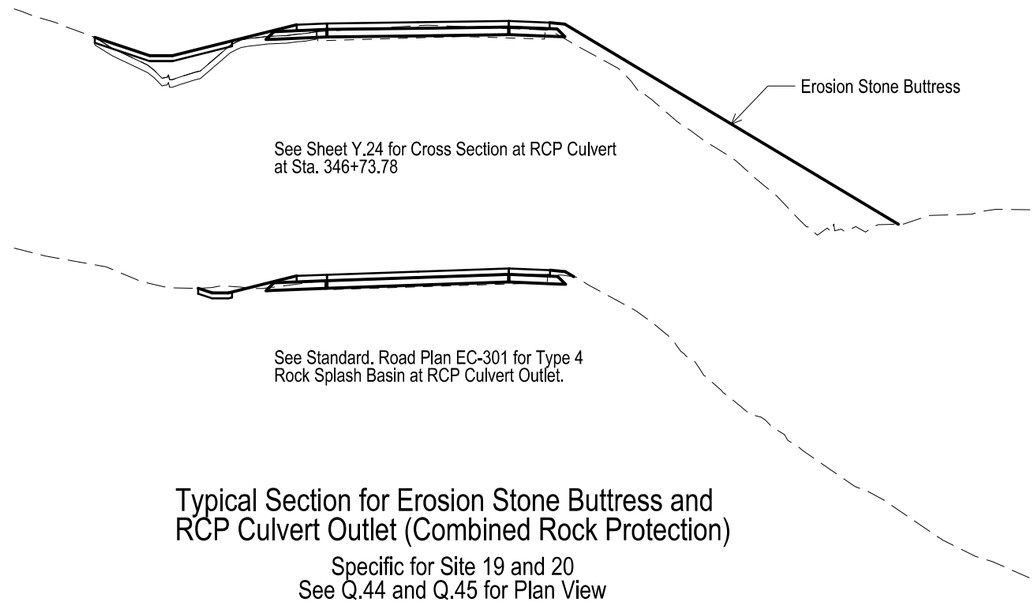
Typical Section for Revetment
Buttress (non-reinforced)



EROSION STONE FILLET,
GUARDRAIL INSTALLATIONS
AT STEEP FORESLOPES

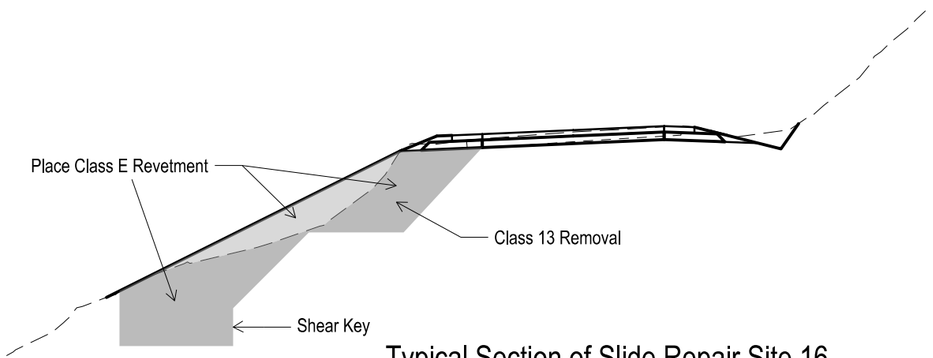


Typical Section Erosion Stone Slope Repair

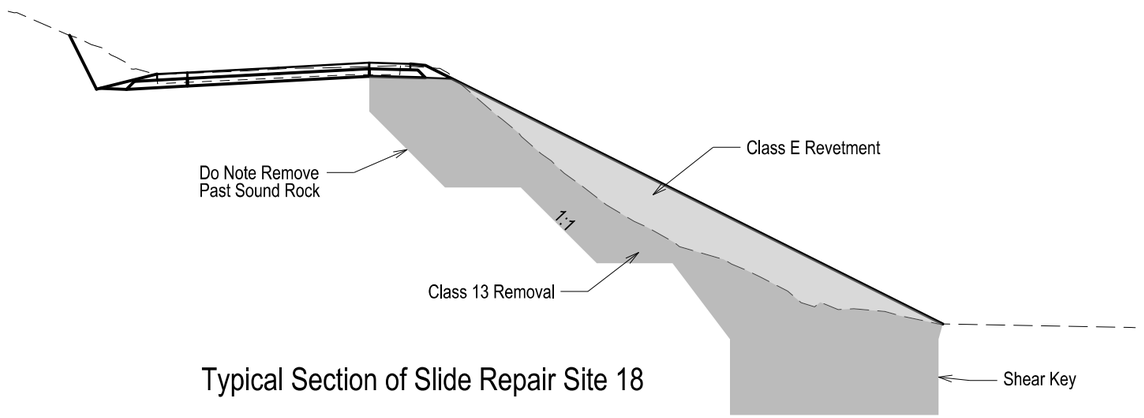


Typical Section for Erosion Stone Buttress and
RCP Culvert Outlet (Combined Rock Protection)

Specific for Site 19 and 20
See Q.44 and Q.45 for Plan View



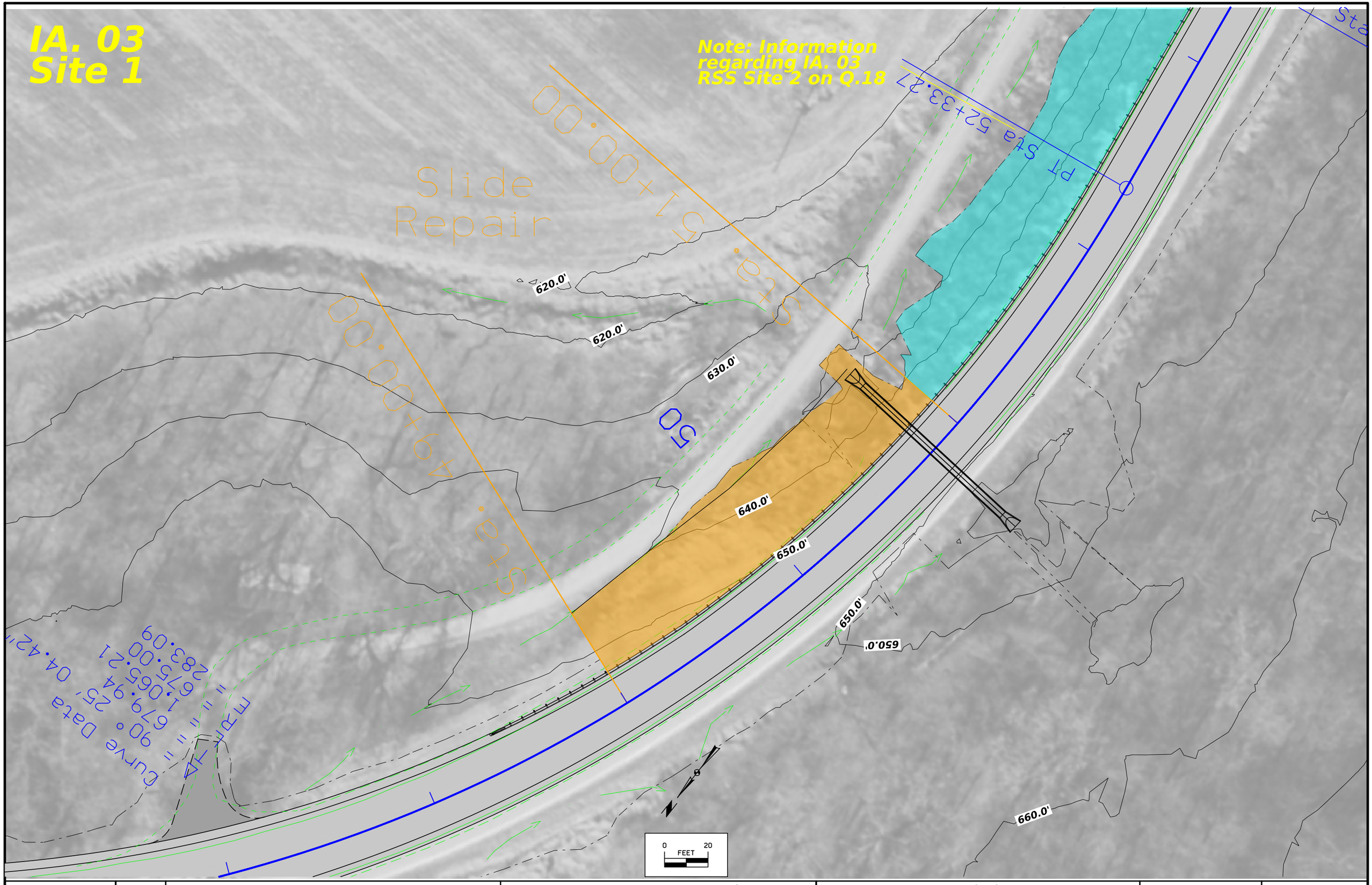
Typical Section of Slide Repair Site 16



Typical Section of Slide Repair Site 18

IA. 03
Site 1

Note: Information regarding IA. 03 RSS Site 2 on Q.18



FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.17	

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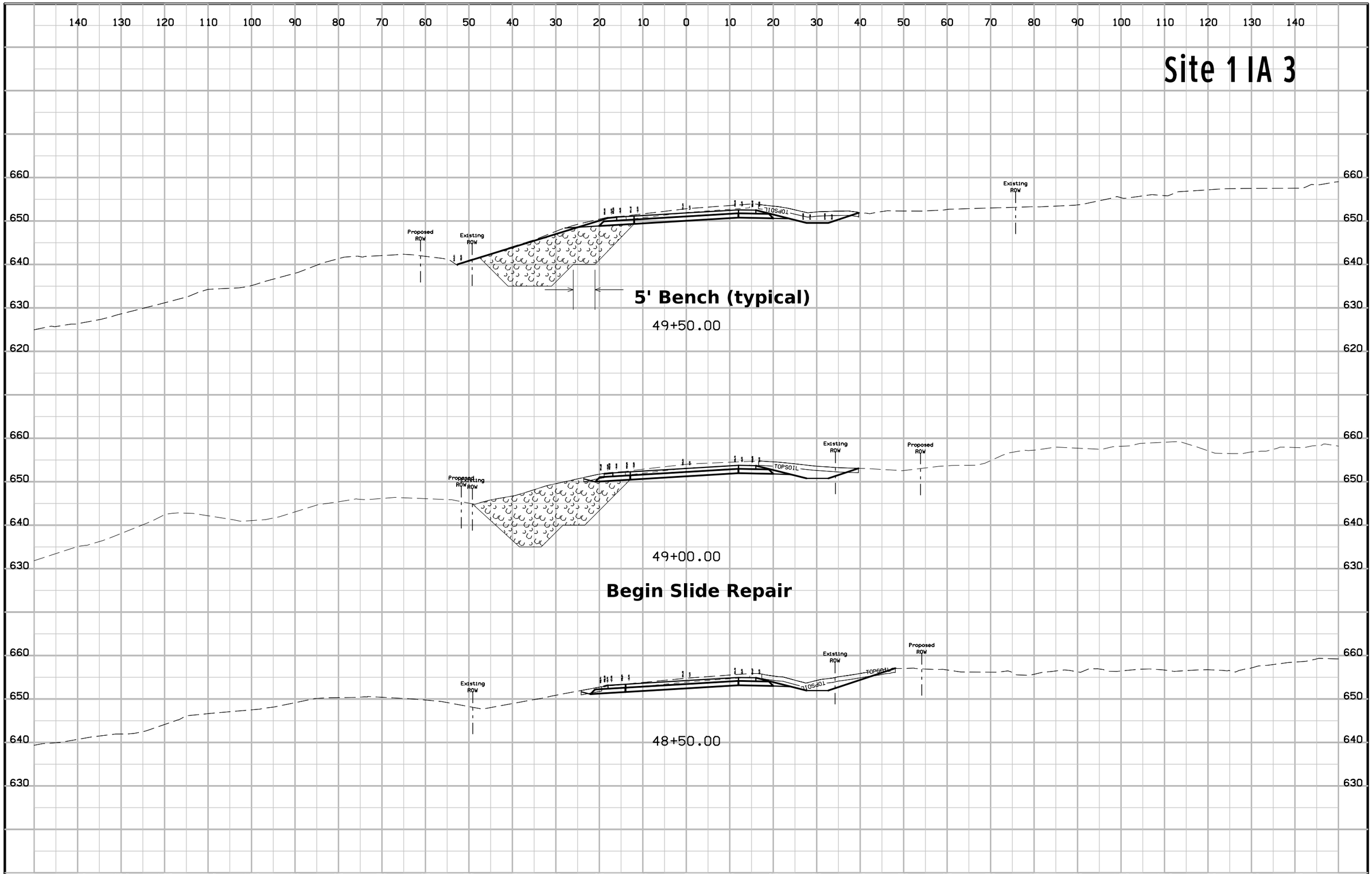
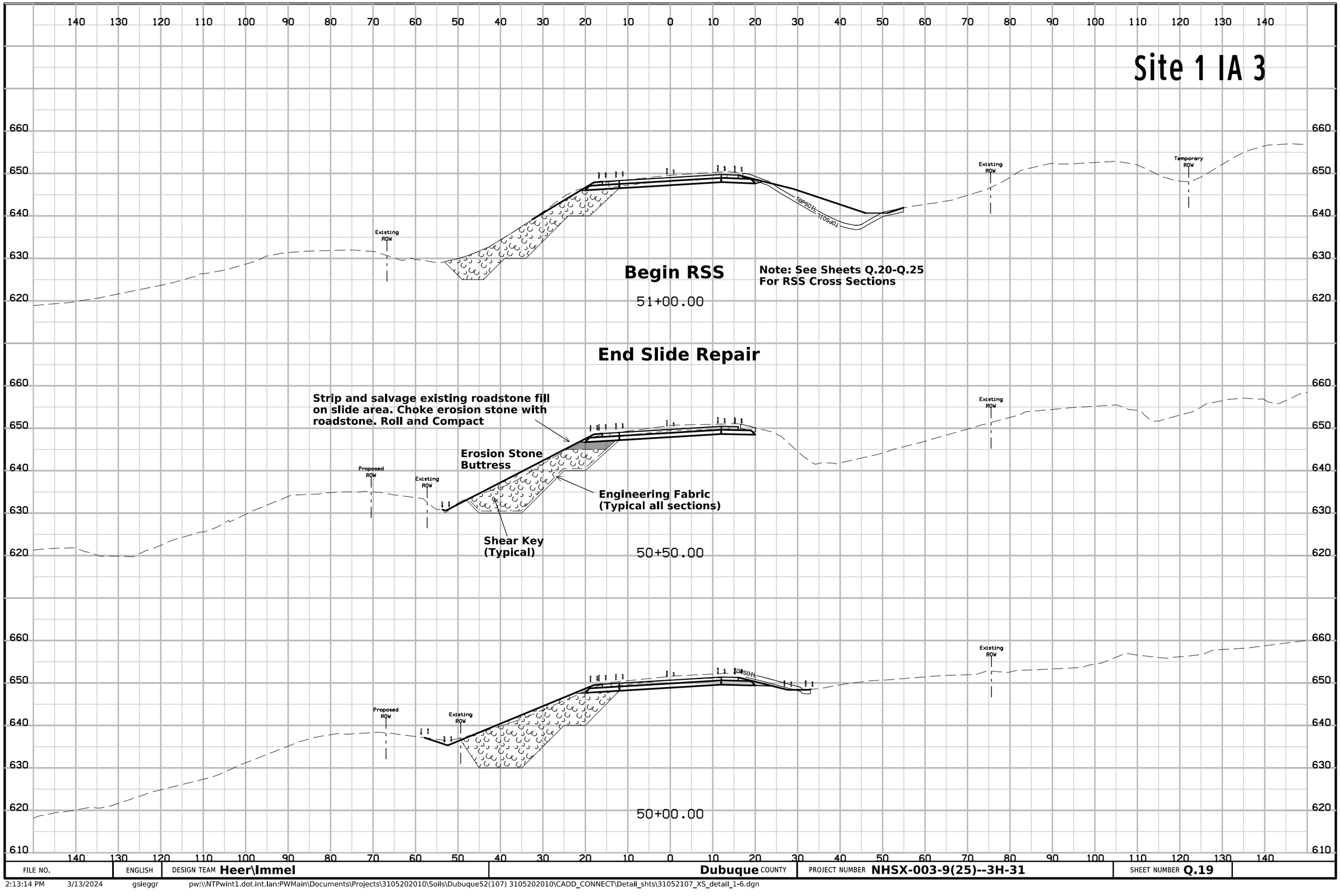


FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.18

2:13:13 PM 3/13/2024 gsiegg pw:\\NTPwint1.dot.lan:PWMain\Documents\Projects\3105202010\5052010\Dubuque\52107\3105202010\CADD_CONNECT\Detail_Dts\3105202107_XS_detail_1-6.dgn

Site 1 IA 3



FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.19**

2:13:14 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107_XS_detail_1-6.dgn

IA. 03
Site 2

Note: Information regarding IA. 03 Slide Repair Site 1 on Q.14

RSS

Slide Repair

PT Sta 52+33.27

PC Sta 53+44.99

620.0'
630.0'
640.0'
650.0'
660.0'
670.0'
680.0'
690.0'
700.0'
710.0'
720.0'
730.0'
740.0'
750.0'
760.0'
770.0'

0 FEET 40

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.20**

2:14:41 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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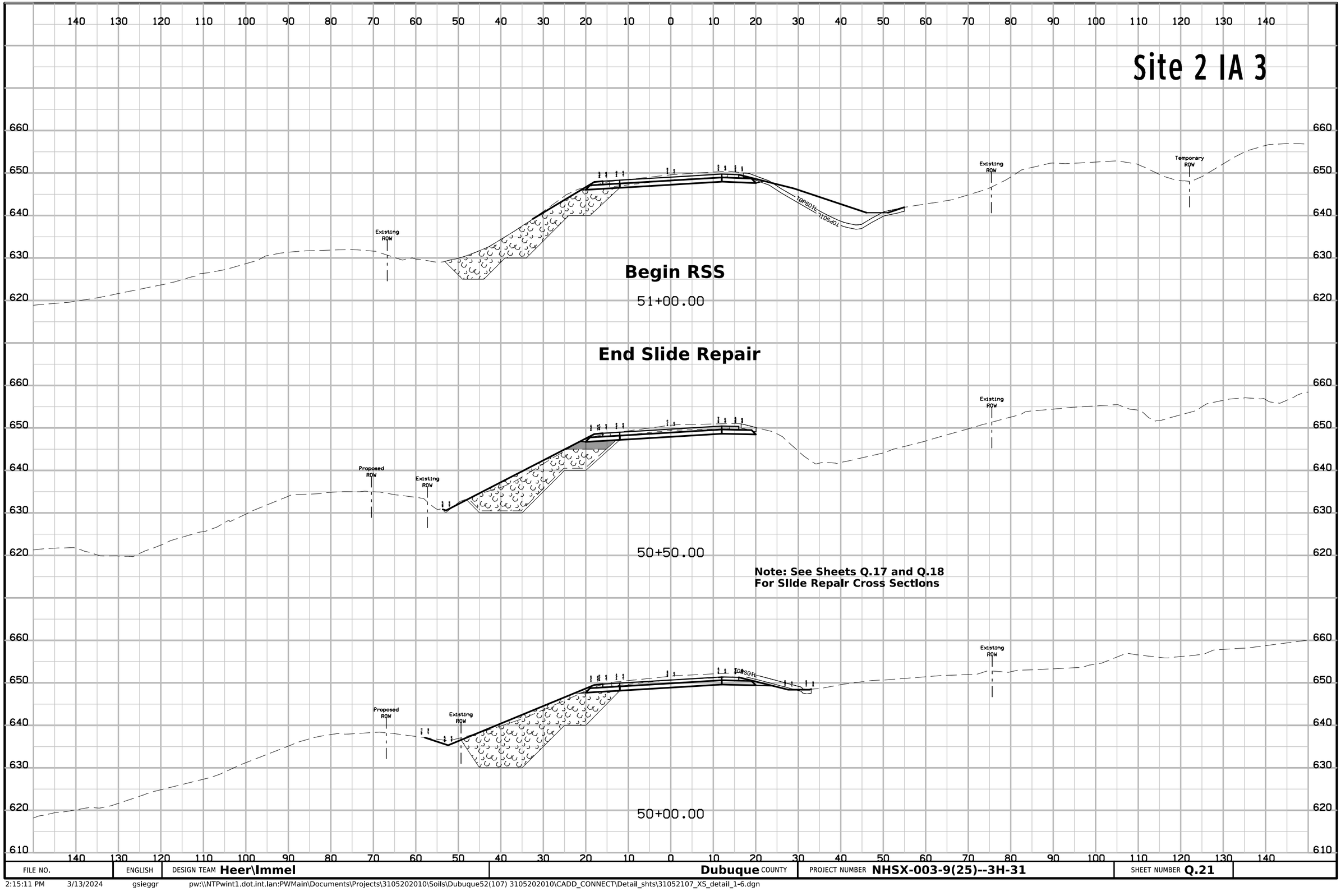
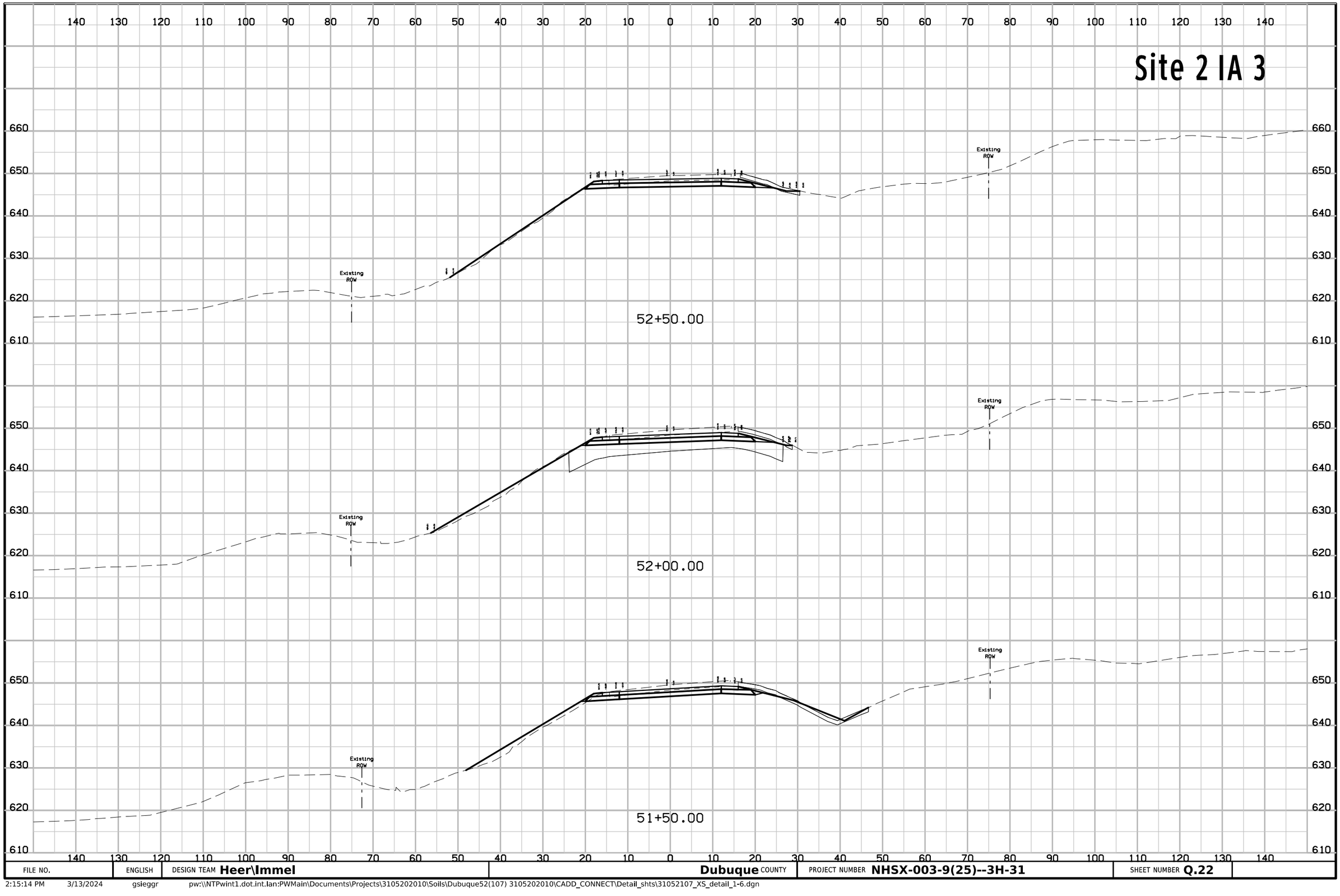
Site 2 IA 3



FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.21**

2:15:11 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107_XS_detail_1-6.dgn

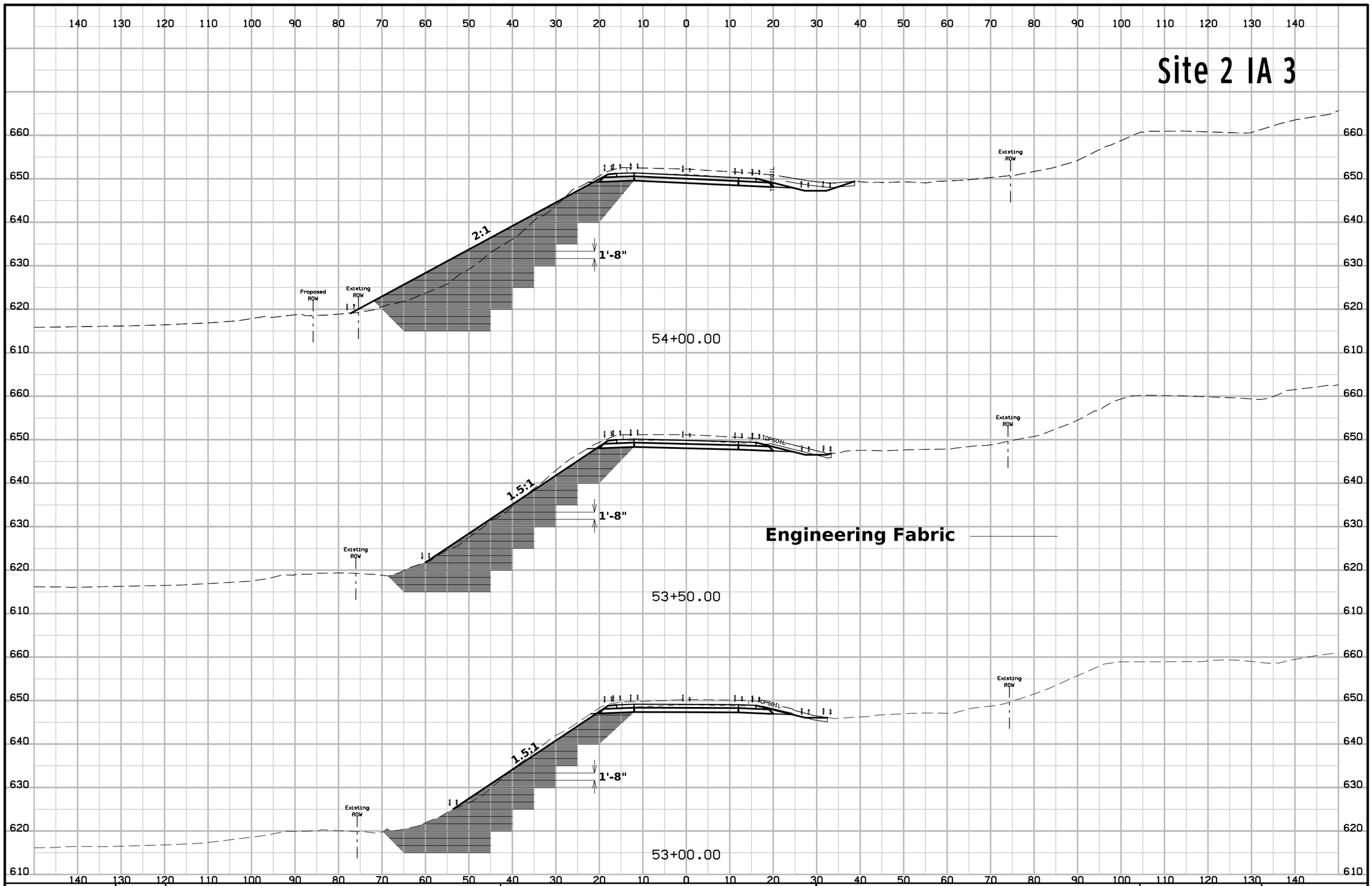
Site 2 IA 3



FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.22**

2:15:14 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107_XS_detail_1-6.dgn

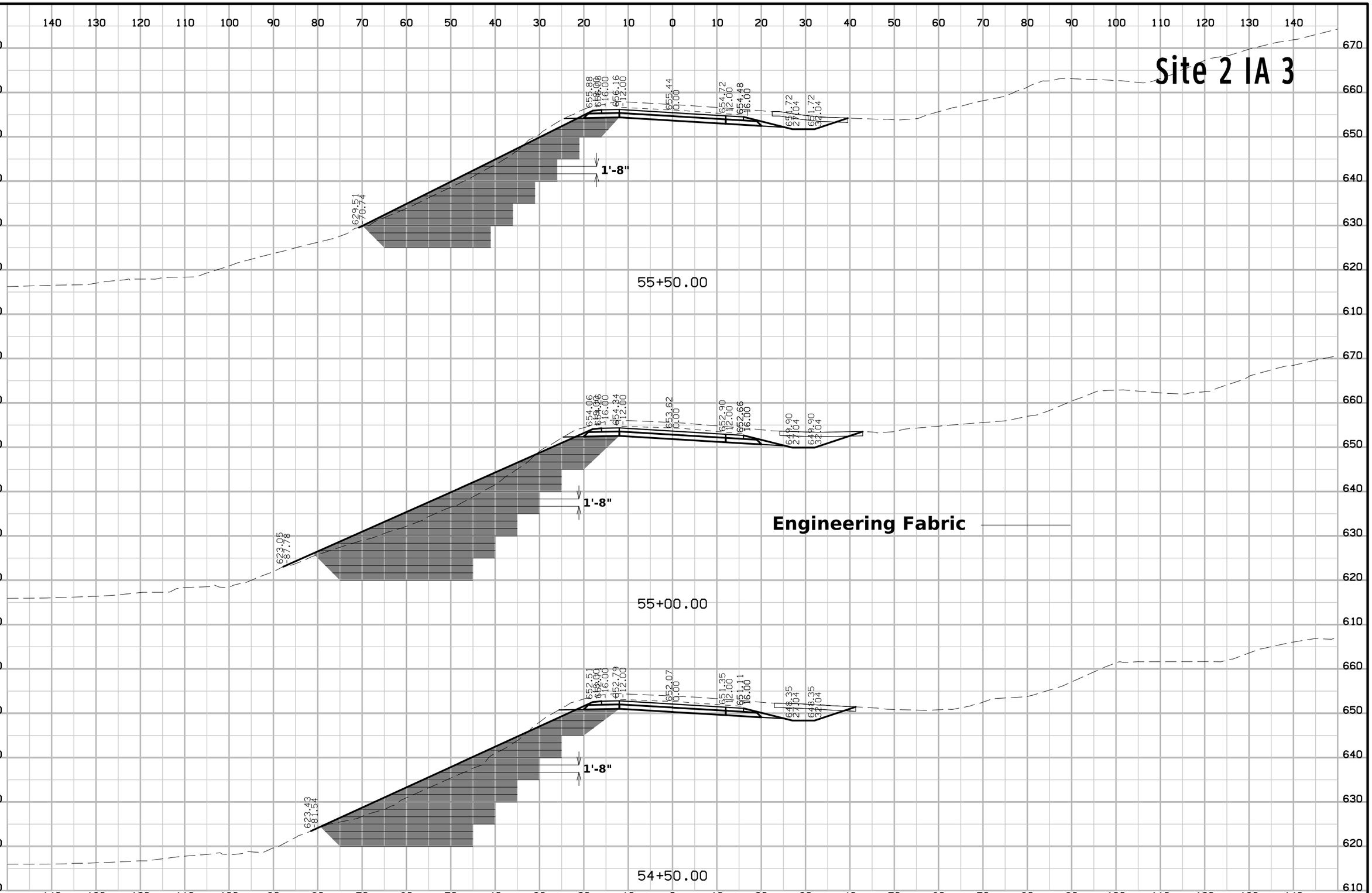
Site 2 IA 3



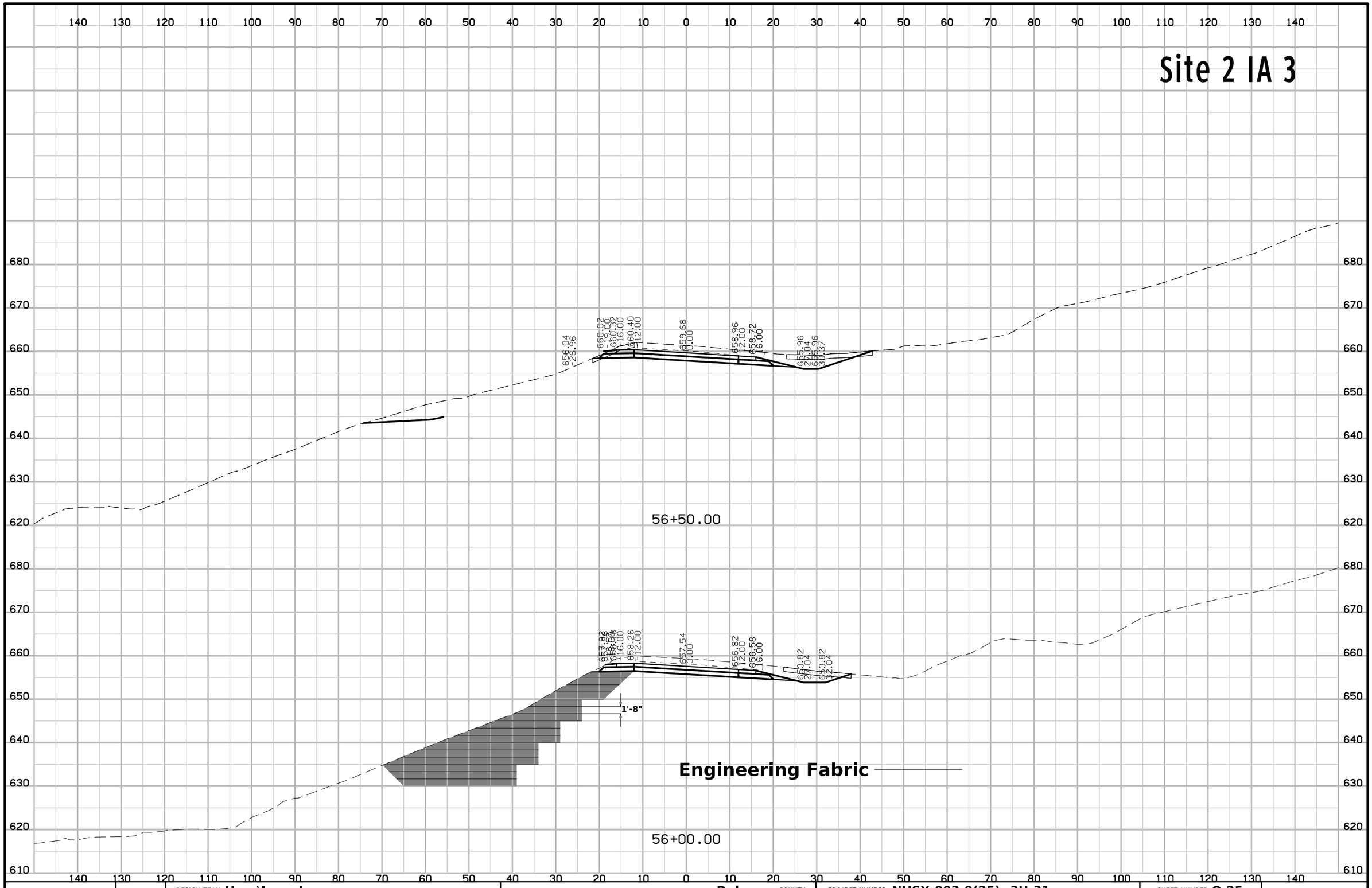
FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.23**

2:15:16 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107_XS_detail_1-6.dgn

Site 2 IA 3


140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140
670 660 650 640 630 620 610
655.88
655.88
655.88

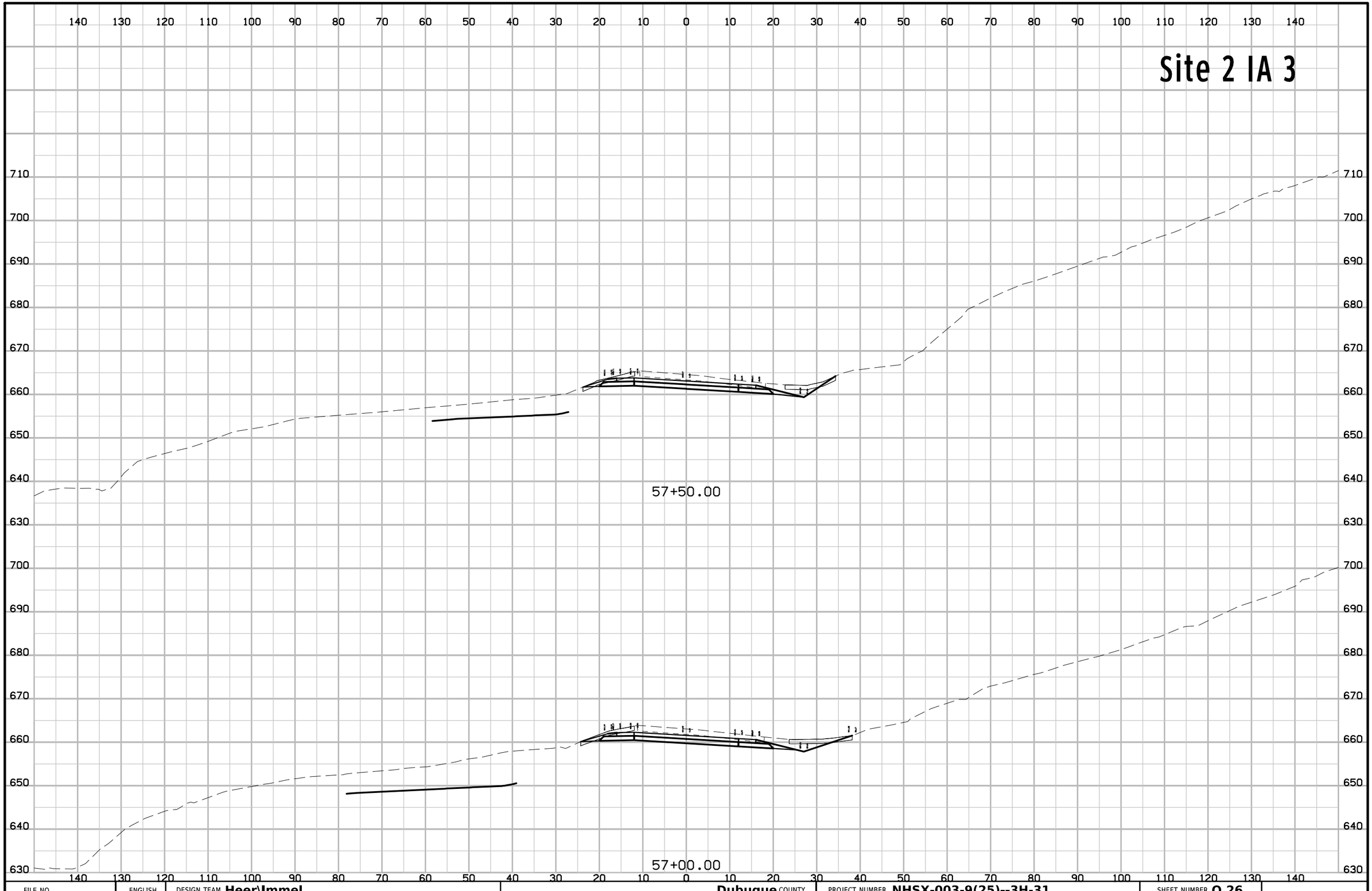
Site 2 IA 3



FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.25**

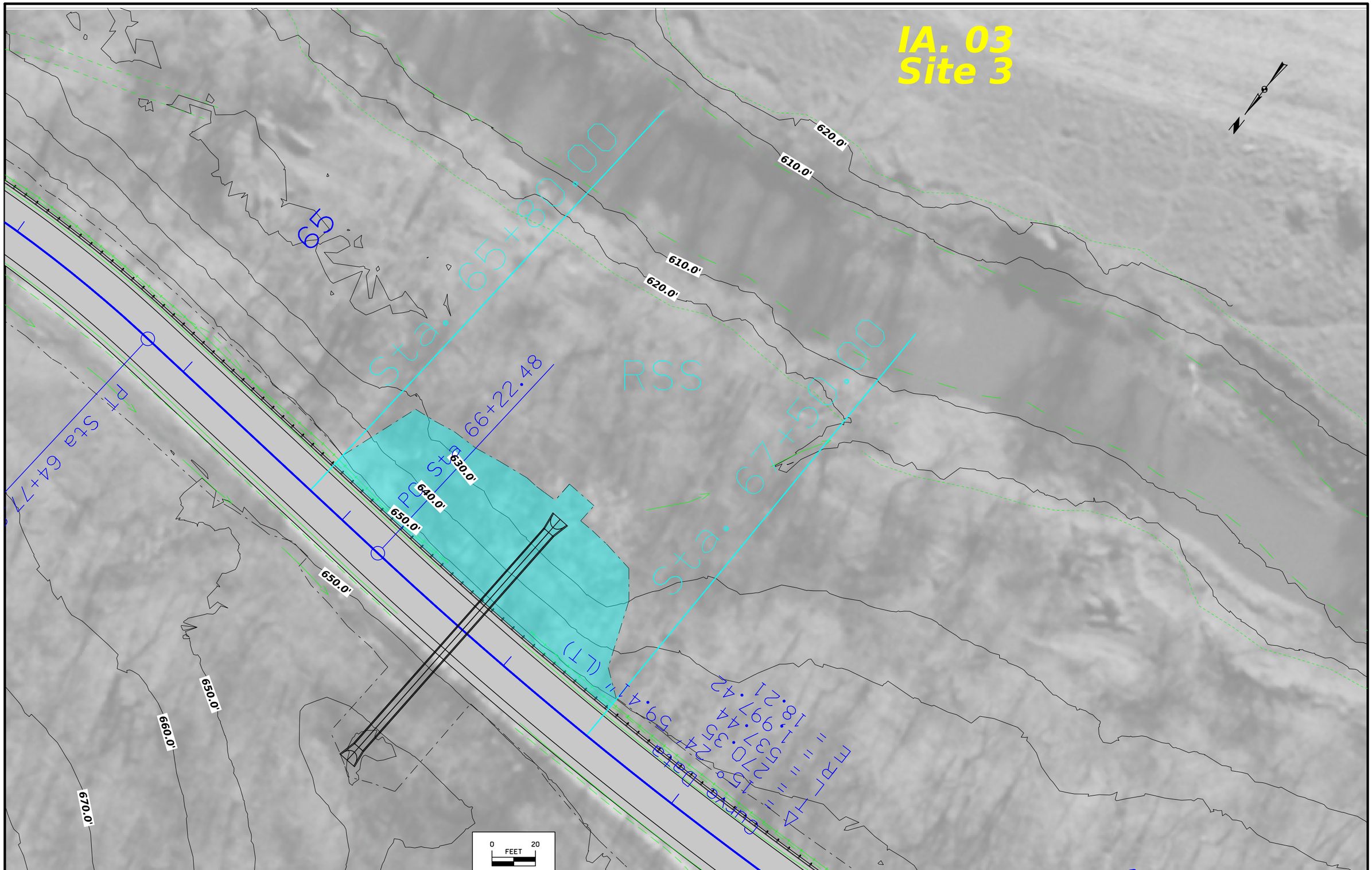
2:15:20 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107_XS_detail_1-6.dgn

Site 2 IA 3



FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.26**

2:15:22 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107_XS_detail_1-6.dgn



FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.27

2:16:08 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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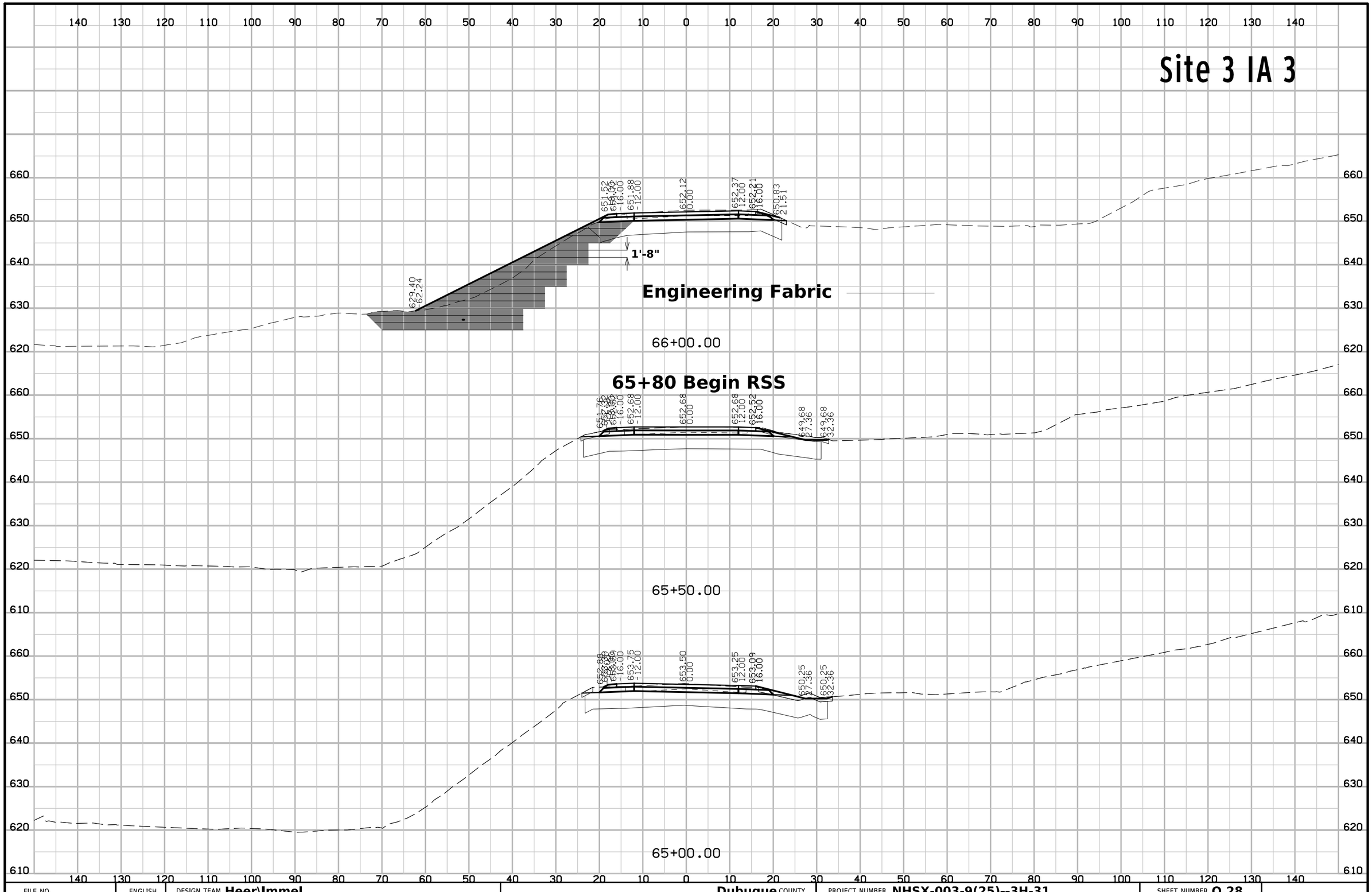
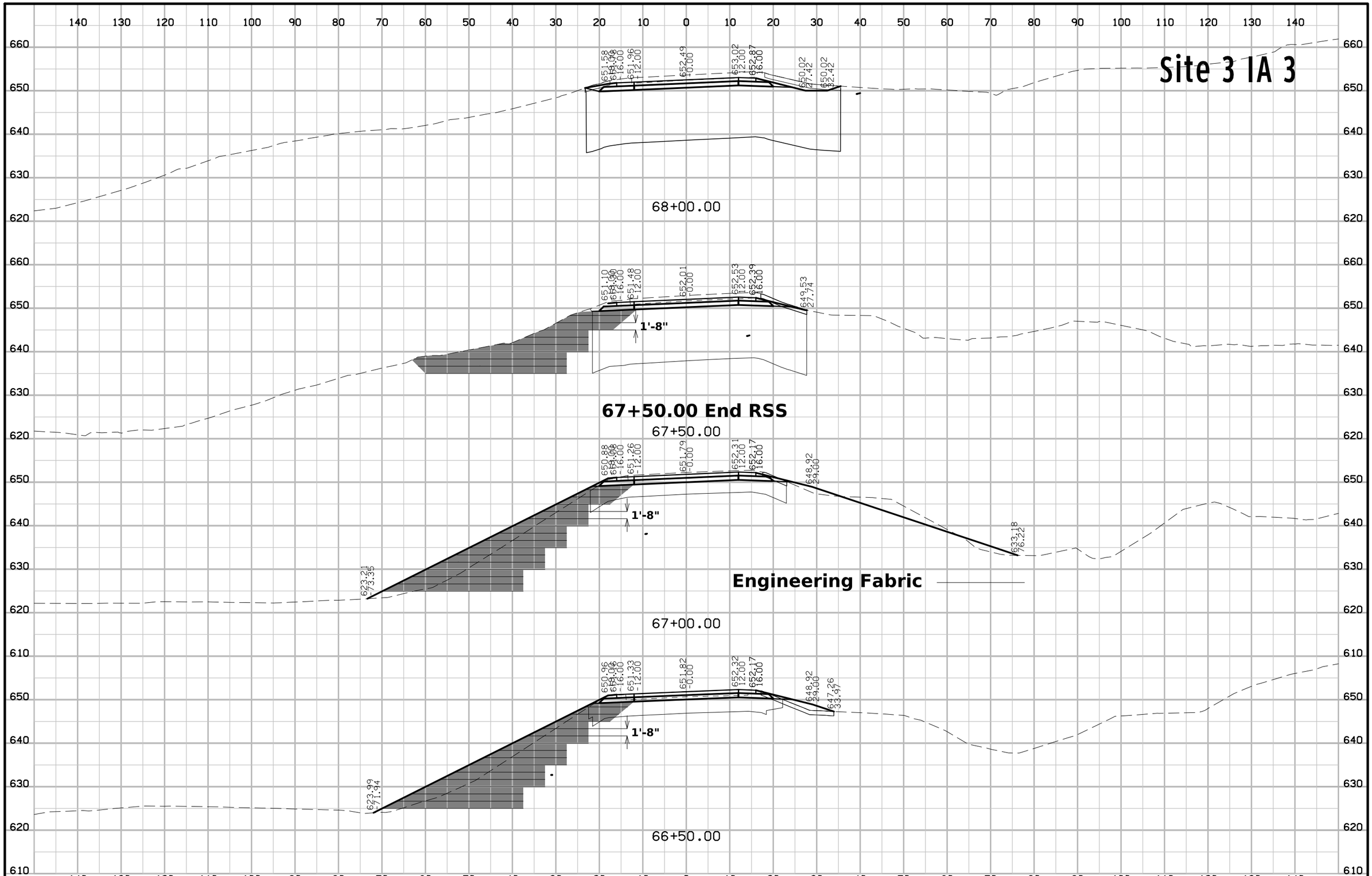
Site 3 IA 3



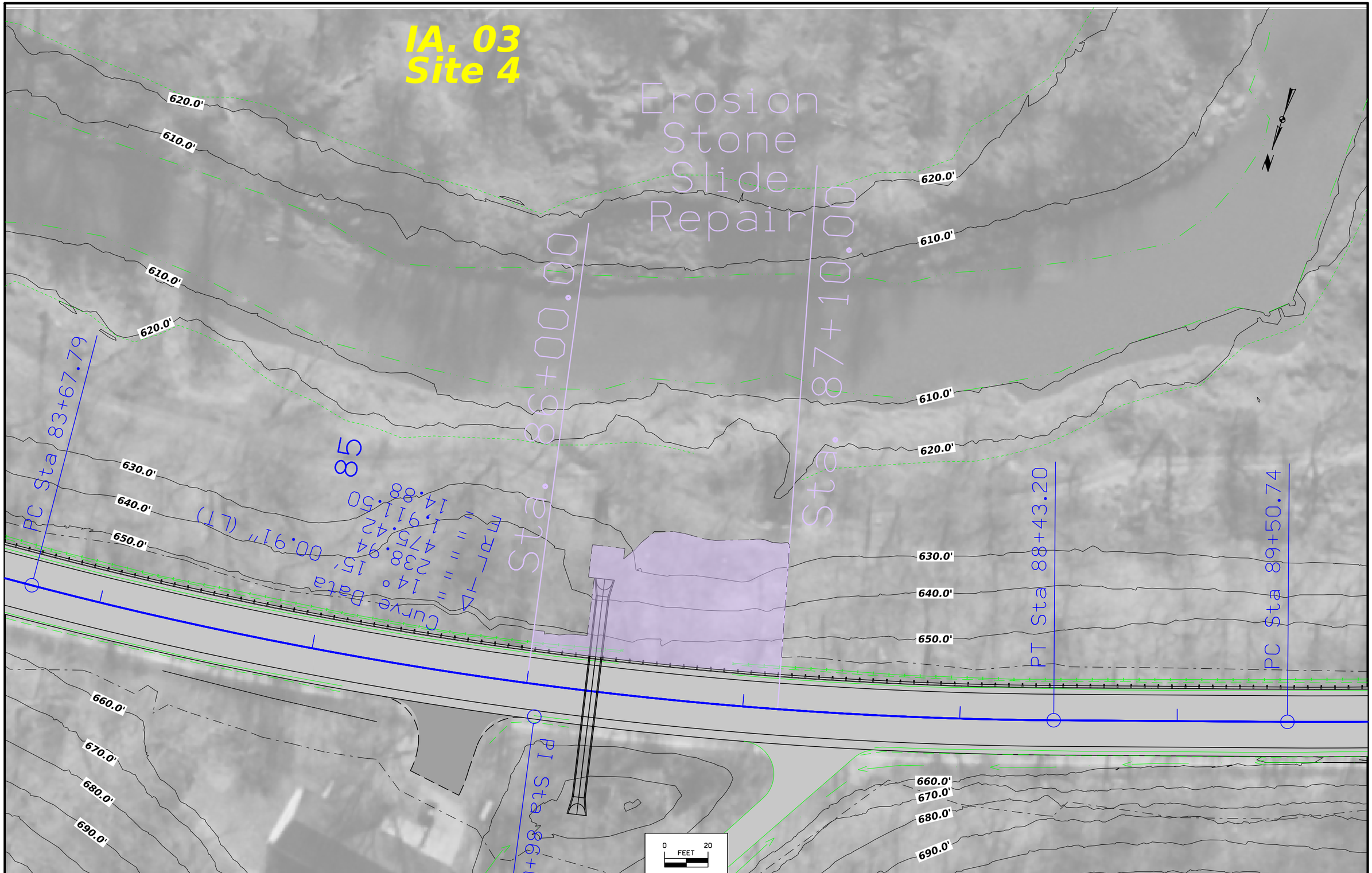
FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.28**

2:16:39 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107_XS_detail_1-6.dgn



FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.29**

2:16:42 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107_XS_detail_1-6.dgn



FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.30

1:56:57 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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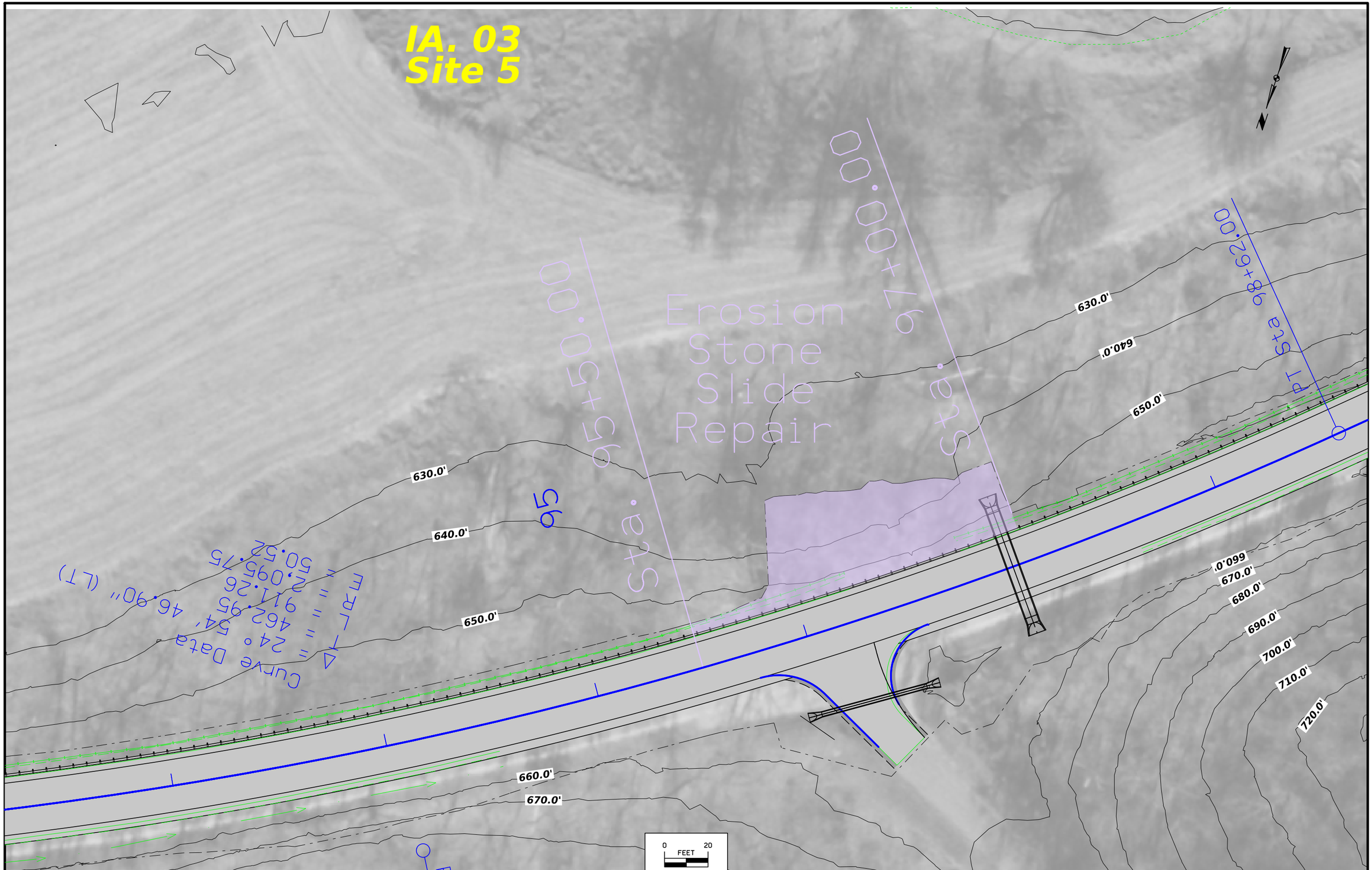

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.31**

1:57:17 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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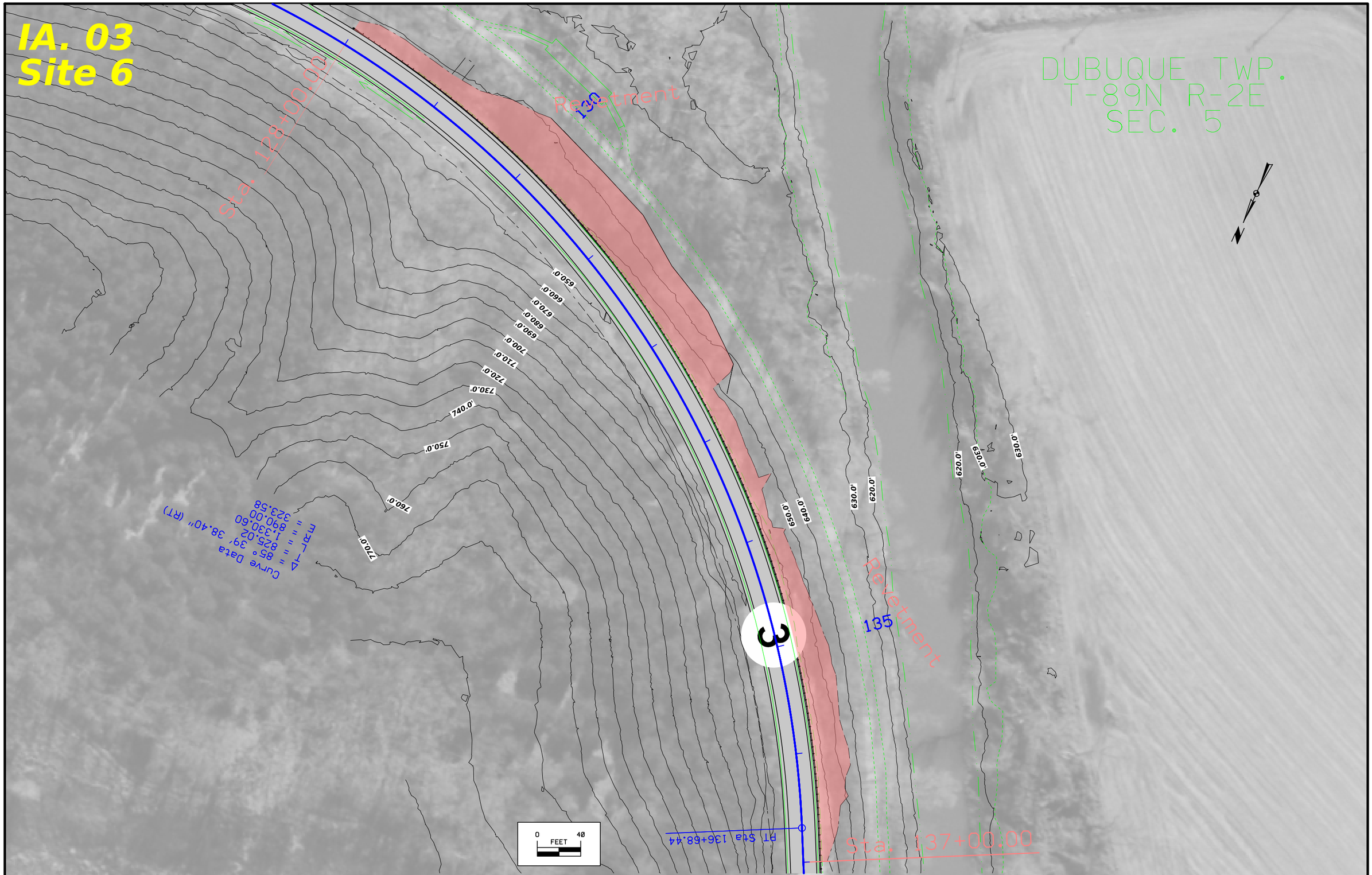

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.32

1:57:36 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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IA. 03
Site 7

Revetment

Existing
Retaining
Wall

620.0'
630.0'
640.0'
650.0'
660.0'

Sta 137+00

Sta 139+50.00

Sta 140+47.00

PC Sta 140+62.25

140

Sta 141+50.00

Sta 142+82.00

0 FEET 20

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.33**

1:57:57 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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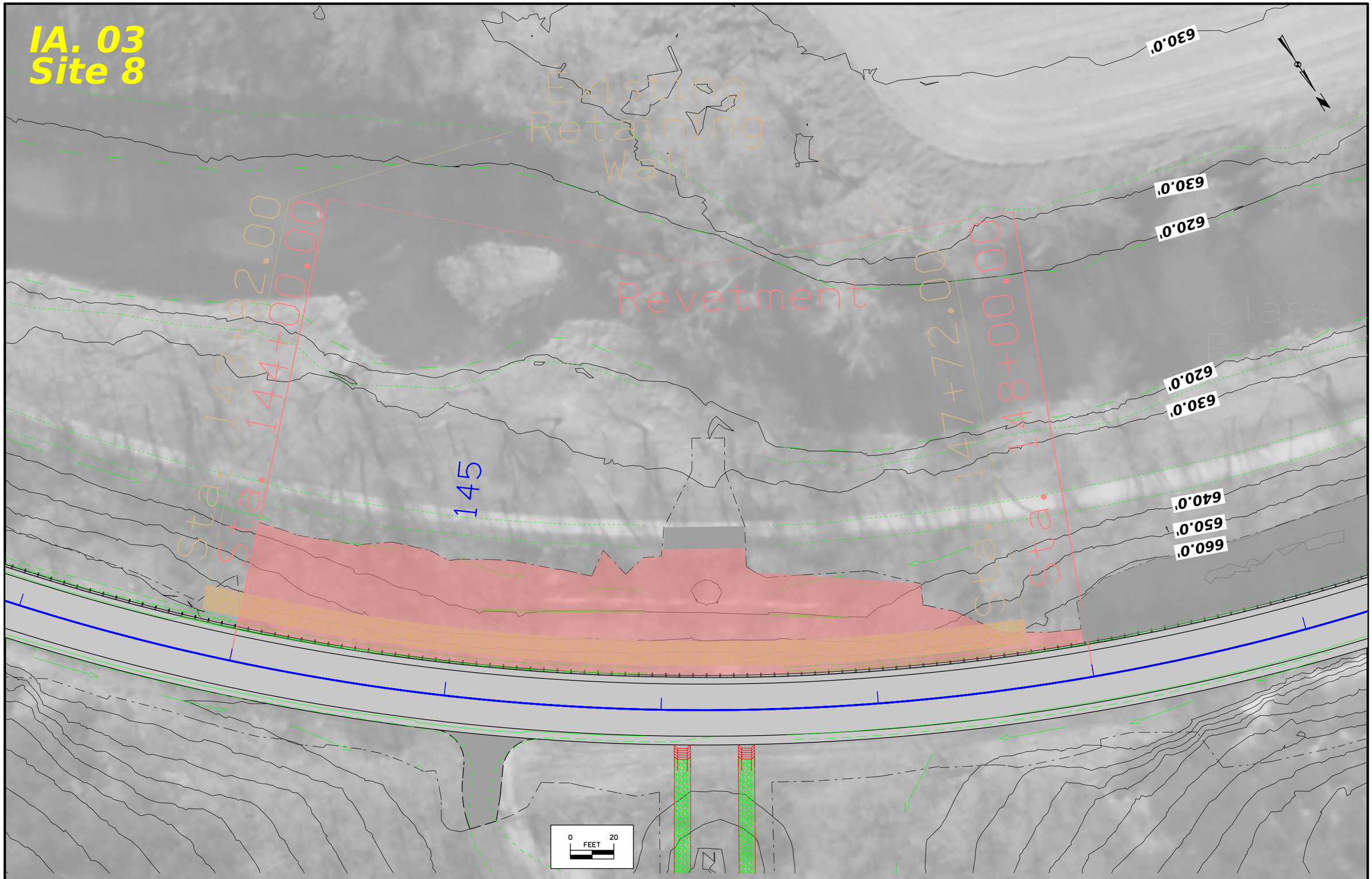

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.34

1:58:16 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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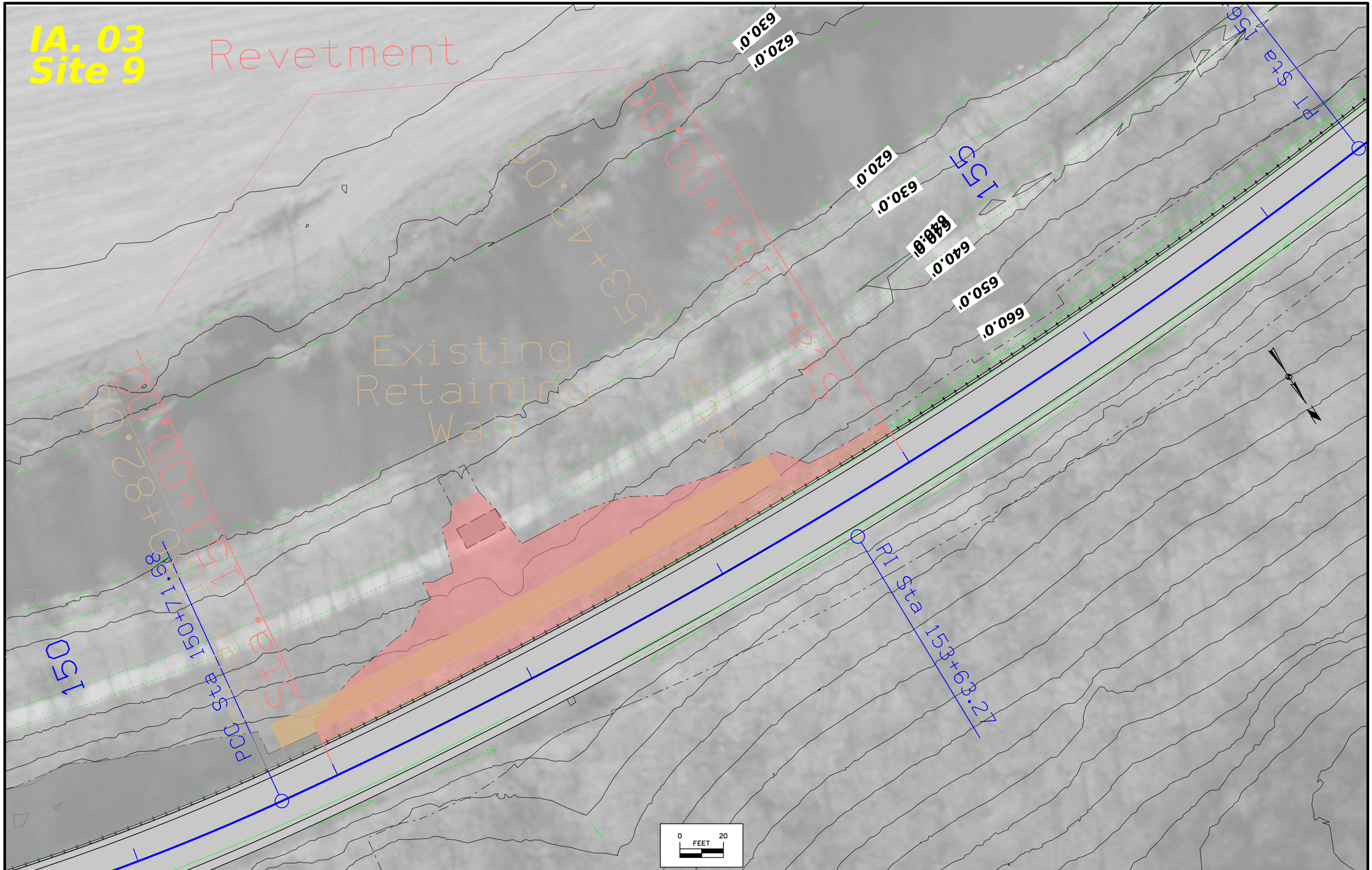

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.35

1:58:32 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.36

1:58:47 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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IA. 03
Site 11

PERU TWP.
T-90N R-2E
SEC. 31

N

Sta. 180+00

180

185

Revetment

Sta. 189+50.00

190

PC Sta 190+68.93

640.0'
650.0'
660.0'
670.0'
680.0'
690.0'
700.0'
710.0'
720.0'
730.0'
740.0'
750.0'
760.0'
770.0'

0 FEET 40

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.37**

1:59:04 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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IA. 03
Site 12

N

Pt Sta 193+36.13

Sta. 194+50.00

Revetment

195

Sta. 196+95+80.00

640.0'

640.0'

640.0'

650.0'

660.0'

670.0'

680.0'

690.0'

700.0'

710.0'

720.0'

0 FEET 20

Pt Sta

PC Sta 197+27.50

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.38**

1:59:48 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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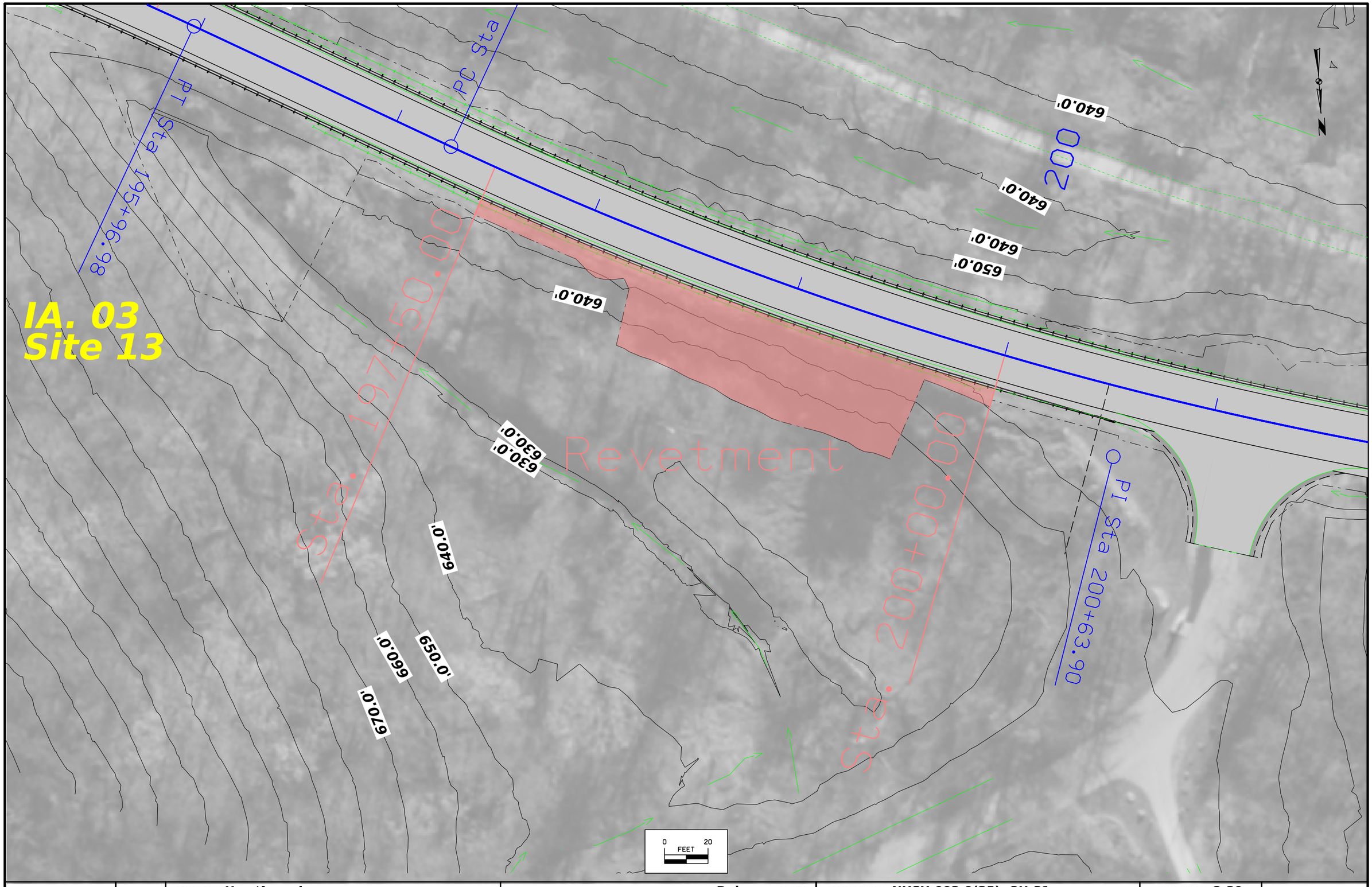

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.39**	

2:00:36 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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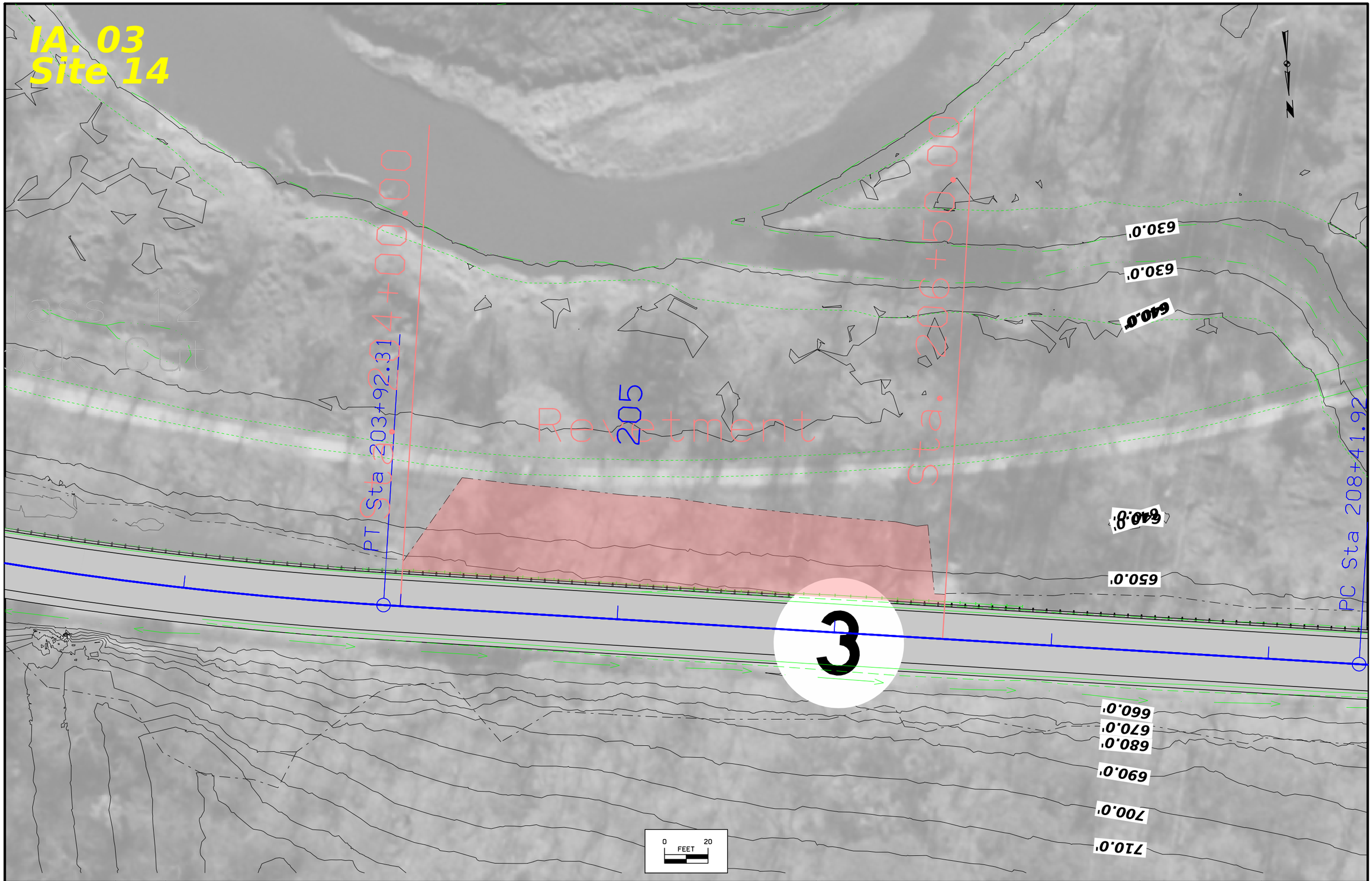

FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.40

2:01:24 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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IA. 03
Site 15

N

Revetment

225

Sta. 227+00.00

PI Sta 227+23.85

Sta. 228+00.00

640.0'

630.0'

630.0'

640.0'

650.0'

660.0'

230

PC Sta 225+18.88

0 20
FEET

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.41**

2:02:13 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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IA. 03
Site 16

Revetment

Note: Information regarding IA. 03 Revetment Site 15 on Q.46

Sta. 227+00.00

Sta. 228+00.00

PI Sta 227+23.85

Sta. 230+50.00

PC Sta 231+21.50

Slide Repair

PI Sta 232+71.56

PCC Sta 234+21.01

Sta. 235+50.00

PI Sta 236+44.90

PI Sta 238+59.88

230

235

3

640.0'
630.0'
650.0'
660.0'
670.0'
680.0'
690.0'
700.0'
710.0'
720.0'
730.0'
740.0'
750.0'
760.0'

Curve Data
Δ = 23° 41' 3
T = 204.98
L = 404.09
R = 977.00
E = 21.27

0 FEET 20

0 FEET 40

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.42**

2:03:08 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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FILE NO.	ENGLISH	DESIGN TEAM Heer\Immel	Dubuque COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Q.43

2:03:44 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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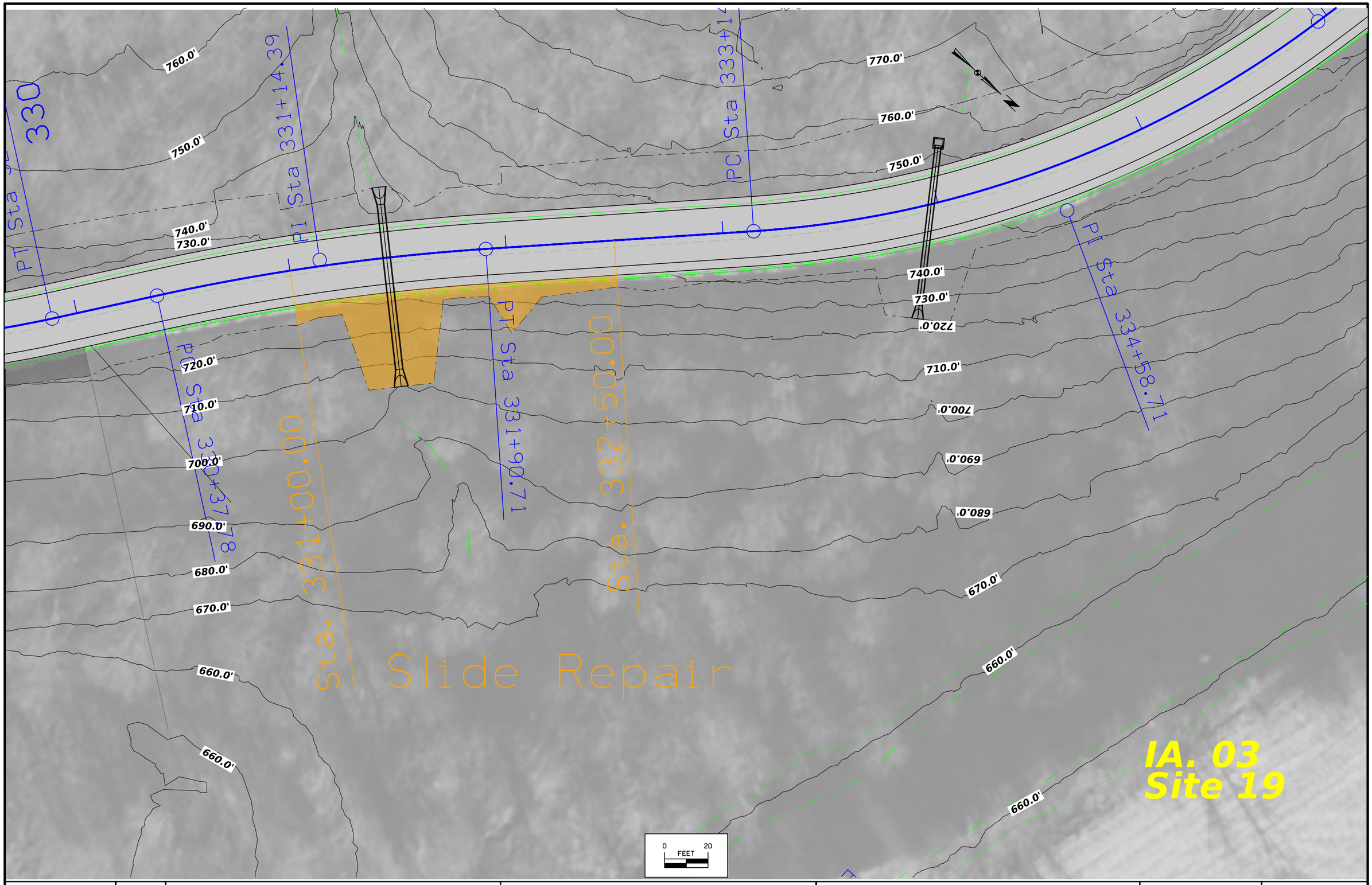

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.44**	

2:04:02 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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IA. 03
Site 20

PI Sta 347+71.70

PI Sta 345+45.11

PC Sta 347+54.24

PT Sta 350+38.70

PI Sta 346+23.00

PI Sta 347+00.00

Erosion Stone
Buttress @ Culvert
Outlet

345

840.0'
830.0'
820.0'
810.0'
800.0'
790.0'
780.0'
770.0'
760.0'
750.0'
740.0'
730.0'
720.0'
850.0'

0 20
FEET

N

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.45**

2:04:21 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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IA. 03
Archeological Site

Note: Information regarding IA. 03 Slide Repair Site 19 on Q.61

325
PC Sta 325+23.88

750.0'
740.0'
730.0'
720.0'
710.0'
700.0'
700.0'
690.0'
680.0'
670.0'

Note: Abandoned Lead Mine, see next page for details

330
PT Sta 329+88.39

760.0'
750.0'
740.0'
730.0'
720.0'
710.0'
700.0'

Sta. 326+00.00

Class 12
Rock Cut

PI

0 FEET 20

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.46**	

2:04:40 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

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IA. 03
Archeological Site - Notes

Reserve for shot crete wall for Archeological Site

FILE NO.	ENGLISH	DESIGN TEAM **Heer\Immel**	**Dubuque** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **Q.47**	

2:04:44 PM 3/13/2024 gsieggr pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Soils\Dubuque52(107) 3105202010\CADD_CONNECT\Detail_shts\31052107Q_detail_sht.dgn

LANDSCAPE DESIGN



I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly licensed professional landscape architect under the laws of the state of Iowa.

Signature — Date: 01-31-2024

Rachel A. Harris
Printed or Typed Name

My license renewal date is June 30, 2024

Pages or sheets covered by this seal: RC.1 - RC.18; RR.1 - RR.47

FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RC.1	

ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES

Roadside : Roadside Items

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
1	2507-3250005	ENGINEERING FABRIC	SY	7,313.9	Refer to Tab. 100-23. Refer to Standard Road Plan EC-301. Use material specified for embankment erosion control according to Article 4196.01, B, 3. of the Standard Specifications. Material will be measured in sq. yds. of actual area covered. Refer to details. The tabulation includes estimated locations for placement of "Engineering Fabric" to address erosion at culvert outlets. The bid quantity includes an additional 30% for other locations as needed. Verify the additional locations with the Engineer prior to placement.
2	2507-6800061	REVETMENT, CLASS E	TON	914.3	Refer to Tab. 100-23. Refer to Standard Road Plan EC-301. The tabulation includes estimated locations for placement of "Revetment, Class E" to address erosion to be encountered at culvert outlets. The bid quantity includes an additional 30% for other locations as needed. Verify the additional locations with the Engineer prior to placement. Estimated at 1.4 ton/cu yd. Class E revetment shall meet requirements of Article 4130 of the Standard Specifications.
3	2507-8029000	EROSION STONE	TON	5,133.6	Refer to Tab. 100-23. Refer to Standard Road Plan EC-301. The tabulation includes estimated locations for placement of "Erosion Stone" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 30% additional quantity for other locations of erosion. Estimated at 1.6 ton/cu yd. Erosion Stone shall meet requirements of Article 4130 of the Standard Specifications.
4	2601-2634100	MULCHING	ACRE	119.6	Perform mulching according to Article 2601.03, E, 2, of the Standard Specifications. Anchor mulch into the soil using mulch anchoring equipment with a minimum of two passes. Item is included for areas requiring reshaping and seedbed preparation except where slope protection has been applied. Use mulch that is Certified Noxious Weed Seed Free Mulch as certified by the Iowa Crop Improvement Association or adjacent states Crop Improvement Associations. Mulch Rate: 1 1/2 tons of dry cereal straw or native grass straw per acre.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
5	2601-2636015	NATIVE GRASS SEEDING	ACRE	48.8	Seed all areas outside eight feet adjacent to outside shoulder along mainline, side roads, and infield areas at interchanges with "Native Grass Seeding". Supply all seed for "Native Grass Seeding". Apply all forb seed through the native grass drill wildflower or small seed box. Do not mix and apply Forb seed with the native grass seed. Apply cover crop through the cool season or through cover crop seed box. Do not mix and apply cover crop seed with the native grass seed. Remove seed remaining in the drill at the end of each day. At the completion of all seeding, remove remaining seed from the drill by vacuum or other means. Hand broadcast remaining seed on the project. The Engineer will review the limits with the Contractor prior to seeding.Seeding and seed bed preparation shall be as described in the Standard Specifications Section 2601 and as shown on the plans. See sheet X.X for details. Only source identified seeds from Minnesota, Wisconsin, South Dakota, Nebraska, Missouri, Illinois or Iowa growers and previous year harvest shall be used on this project. Seed mixtures for this mitigation plan are subject to the availability of seeds. Any seed substitutions will need the approval of the Engineer. Apply all forb seed through the native grass drill wildflower or small seed box. Do not mix and apply Forb seed with the native grass seed. Apply cover crop through the cool season or through cover crop seed box. Do not mix and apply cover crop seed with the native grass seed. Remove seed remaining in the drill at the end of each day. At the completion of all seeding, remove remaining seed from the drill by vacuum or other means. Hand broadcast remaining seed on the project. The Contractor shall flag the seeding limits and obtain the Engineers review of the limits prior to seeding. No fertilizer shall be required for any of the seed mixtures associated with this Mitigation Plan. All seed weights are shown as Pure Live Seed(PLS).
6	2601-2636043	SEEDING AND FERTILIZING (RURAL)	ACRE	11.1	Seed and fertilize all areas 8 foot adjacent to the shoulder mainline, medians, and side according to Article 2601.03, C, 3, of the Standard Specifications. Use ground driven equipment.
7	2601-2636044	SEEDING AND FERTILIZING (URBAN)	ACRE	6.4	For all areas designated by the Engineer. Prepare seedbed, fertilize, and seed according to Article 2601.03, C, 4, of the Standard Specifications. Use ground driven equipment.
8	2601-2636070	HYDRAULIC SEEDING	ACRE	0	

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
9	2601-2638352	SLOPE PROTECTION, WOOD EXCELSIOR MAT	SQ	1,502	Refer to Tab. 100-22 for locations. Refer to Standard Road Plan EC-103 Prepare seedbed according to Article 2601.03, B, 4, of the Standard Specifications prior to seeding and fertilizing under the slope protection.
10	2601-2640350	SPECIAL DITCH CONTROL, WOOD EXCELSIOR MAT	SQ	441	Refer to Tab. 100-22 for locations. Refer to Standard Road Plan EC-101. Prepare seedbed according to Article 2601.03, B, 4 of the Standard Specifications. Install Wood Excelsior Mat according to Article 2601.03, H, 2, of the Standard Specifications. Seed according to Article 2601.03, H, 2, of the Standard Specifications.
11	2601-2642100	STABILIZING CROP - SEEDING AND FERTILIZING	ACRE	59.9	Item is included for disturbed areas. Seed and fertilize all disturbed areas according to Article 2601.03, C, 1, of the Standard Specifications. If permanent seeding cannot be placed due to the restrictive planting dates, stabilizing crop will need to be placed on all disturbed areas as temporary erosion control. Preparation and seeding shall be performed in accordance with Section 2601. Stabilizing crop will not be used when the application dates in Section 2601 allows permanent seeding. If stabilizing crop must be used, place immediately following completions of finished grading. Reseeding of these areas will be required at contractors expense if damage occurs due to contractors negligence during the contract period. It is not necessary to place stabilizing crop in locations that have be covered by Wood Excelsior Mat.
12	2601-2642120	STABILIZING CROP - SEEDING AND FERTILIZING (URBAN)	ACRE	6.4	Item is included for disturbed areas as directed by the Engineer. Seed and fertilize all urban disturbed areas according to Article 2601.03, C, 2, of the Standard Specifications.
13	2601-2643110	WATERING FOR SOD, SPECIAL DITCH CONTROL, OR SLOPE PROTECTION	MGAL	599.4	Estimate for watering Special Ditch Control, Slope Protection Areas, Turf Reinforcement Mat, or Transition Mat is based on a total of four waterings at a rate of 50 gallons per square per watering.
14	2601-2643300	MOBILIZATION FOR WATERING	EACH	3	
15	2601-2643413	TURF REINFORCEMENT MAT, TYPE 3	SQ	1,054	Refer to Tab. 100-19. Refer to Standard Road Plan EC-104.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
16	2602-0000020	SILT FENCE	LF	4,279	Refer to Tab. 100-17. Refer to Standard Road Plan EC-201 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.
17	2602-0000030	SILT FENCE FOR DITCH CHECKS	LF	1,169	Refer to Tab 100-18 for locations. Refer to Standard Road Plan EC-201. 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.
18	2602-0000050	SILT BASINS	EACH	18	Refer to Tab. 100-14. Refer to Standard Road Plan EW-403 The tabulation includes estimated locations for placement of "Silt Basins" to address erosion to be encountered during construction. Verify the specific locations with the Engineer prior to beginning placement. Bid item includes 100% additional quantity for field adjustment and maintenance.
19	2602-0000071	REMOVAL OF SILT FENCE OR SILT FENCE FOR DITCH CHECKS	LF	5,448	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. This item is included for silt fence and silt fence for ditch check removal. Remove silt fence and posts after mulching or vegetation is established and approved by the engineer.
20	2602-0000101	MAINTENANCE OF SILT FENCE OR SILT FENCE FOR DITCH CHECK	LF	545	This item is included for clean-out and repair of the silt fence and silt fence for ditch checks during the project.
21	2602-0000150	STABILIZED CONSTRUCTION ENTRANCE, EC-303	LF	2,100	Refer to Standard Road Plan EC-303.

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
22	2602-0000312	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	14,660	Refer to Tab. 100-19. Refer to Standard Road Plan EC-204. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control Device, 12 in. dia." 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.
23	2602-0000320	PERIMETER AND SLOPE SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	14,660	Refer to Standard Road Plan EC-204. Item is included for temporary perimeter sediment control, inlet protection, and water velocity reduction on slopes or ditches at locations to be determined during construction. Verify specific locations with the Engineer prior to beginning placement. Item may be used in addition to, or as a direct replacement for "Perimeter and Slope Sediment Control Device, 12 in. dia." upon Engineer approval.
24	2602-0000351	REMOVAL OF PERIMETER AND SLOPE OR DITCH CHECK SEDIMENT CONTROL DEVICE	LF	37,720	
25	2602-0000362	DITCH CHECK SEDIMENT CONTROL DEVICE, 12 IN. DIA.	LF	4,200	Refer to Tab 100-19 for locations. Refer to Standard Road Plan EC-204. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control 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 25% additional quantity for field adjustments and replacements.
26	2602-0000370	DITCH CHECK SEDIMENT CONTROL DEVICE, 20 IN. DIA.	LF	4,200	Refer to Tab 100-19 for locations. Refer to Standard Road Plan EC-204. The tabulation includes estimated locations for placement of "Perimeter and Slope Sediment Control 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 25% additional quantity for field adjustments and replacements. Item may be used in addition to, or as a direct replacement for "Perimeter and Slope Sediment Control Device for Ditch Checks, 12 in. dia." upon Engineer approval.
27	2602-0000400	TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	EACH	3	
28	2602-0000410	MAINTENANCE OF TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	EACH	3	

Item no.	Item Code	Item	Unit	Quantities	Estimate Reference Notes
				Estimated	
				Roadside	
29	2602-0000420	REMOVAL OF TEMPORARY INTAKE OR MANHOLE COVER ASSEMBLY	EACH	3	
30	2602-0000500	OPEN-THROAT CURB INTAKE SEDIMENT FILTER, EC-602	LF	55	
31	2602-0000510	MAINTENANCE OF OPEN-THROAT CURB INTAKE SEDIMENT FILTER	EACH	4	
32	2602-0000520	REMOVAL OF OPEN-THROAT CURB INTAKE SEDIMENT FILTER	EACH	4	
33	2602-0000530	GRATE INTAKE SEDIMENT FILTER BAG	EACH	9	
34	2602-0000540	MAINTENANCE OF GRATE INTAKE SEDIMENT FILTER BAG	EACH	9	
35	2602-0000550	REMOVAL OF GRATE INTAKE SEDIMENT FILTER BAG	EACH	9	
36	2602-0010010	MOBILIZATIONS, EROSION CONTROL	EACH	1	
37	2602-0010020	MOBILIZATIONS, EMERGENCY EROSION CONTROL	EACH	1	

111-25
10-18-11

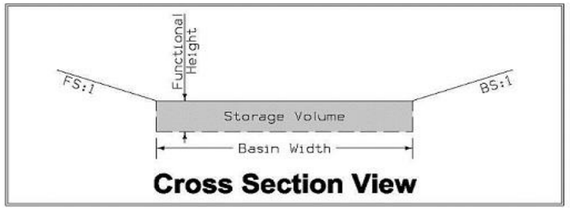
INDEX OF TABULATIONS

Tabulation	Tabulation Title	Sheet No.
RC Sheets		
	SIGNATURE SHEET	RC.1
	ESTIMATED PROJECT QUANTITIES AND REFERENCE NOTES	RC.2 - RC.7
100-11	EROSION CONTROL FOR INTAKE OR MANHOLE WELL	RC.8
100-14	SILT BASINS	RC.8
100-17	TABULATION OF SILT FENCES	RC.8
100-18	SILT FENCES FOR DITCH CHECKS	RC.15
100-19	PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES	RC.11 - RC.14
100-22	ROLLED EROSION CONTROL	RC.9
100-23	ROCK EROSION CONTROL	RC.10
100-34	STORMWATER DRAINAGE BASIN AND STORAGE	RC.16
100-36	OPEN-THROAT CURB INTAKE SEDIMENT FILTER	RC.8
100-37	GRATE INTAKE SEDIMENT FILTER BAG	RC.8
105-4	STANDARD ROAD PLANS	RC.8
110-12	POLLUTION PREVENTION PLAN	RC.17 - RC.18
111-25	INDEX OF TABULATIONS	RC.8
281-1	SECTION 404 PERMIT AND CONDITIONS	RC.8
281-3	STORM WATER BEST MANAGEMENT PRACTICES	RC.8

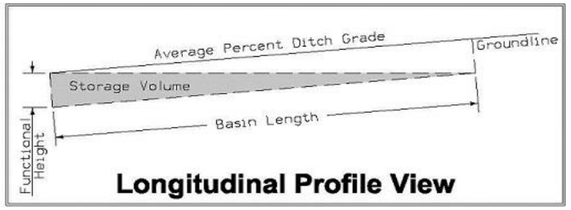
100-14
10-17-17

SILT BASINS

Possible Standard: EW-403



Cross Section View



Longitudinal Profile View

* The functional height used in the volume equation is 95% of effective height. Effective height is 3 feet as shown in EW-403.
* Volume equation: (0.5*Length*(Width*Height+Width*(Height-Length*Avg%Slope))

Basin No.	Location Station	Side	Bid Items Installation EACH	Bid Items Removal EACH	Stormwater Storage Volume Summary Basin Width FT	Basin Length FT	Height FT	Avg. % Slope	Volume* CF	Remarks
2	39+00.00	Rt	1		10.0	50.0	2.85	3.3%	1012.5	
4	51+07.00	Rt	1		10.0	50.0	2.85	4.3%	887.5	
6	85+14.00	Rt	1		10.0	50.0	2.85	0.7%	1337.5	
7	106+24.00	Rt	1		10.0	50.0	2.85	1.4%	1250.0	
	108+20.00	Rt	1		10.0	50.0	2.85	2.1%	1162.5	
14	210+04.00	Rt	1		10.0	50.0	2.85	2.9%	1062.5	
	215+08.00	Rt	1		10.0	50.0	2.85	0.5%	1362.5	
	SB Tab Totals:		7							
	SB Bid Totals:		17.5							

105-4
10-18-11

STANDARD ROAD PLANS

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

Number	Date	Title
EC-101	04-19-16	Wood Excelsior Mat for Ditch Protection
EC-103	04-21-15	Wood Excelsior Mat for Slope Protection
EC-104	04-17-18	Turf Reinforced Mat (TRM)
EC-201	04-20-21	Silt Fence
EC-204	10-19-21	Perimeter, Slope and Ditch Check Sediment Control Devices
EC-301	10-18-22	Rock Erosion Control (REC)
EC-303	10-19-21	Stabilized Construction Entrance
EC-502	04-21-15	Seeding in Rural Areas
EC-602	04-21-20	Open-Throat Curb Intake Sediment Filter
EW-403	04-18-17	Temporary Erosion Control Measures

281-1
10-18-16

SECTION 404 PERMIT AND CONDITIONS

Construct this project according to the requirements of U.S. Army Corps of Engineers _____, Permit No. _____. A copy of this permit is available from the Iowa DOT website (http://www.envpermits.iowadot.gov/). The U.S. Army Corps of Engineers reserves the right to visit the site without prior notice.

281-3
10-17-17

STORM WATER BEST MANAGEMENT PRACTICES

When the following best management practices are used, they are intended to account for disturbed areas where storage volume cannot be provided: Silt Basins, Silt Fences, Silt Fence For Ditch Checks, Perimeter and Slope Sediment Control Devices, Perimeter and Slope Sediment Control Devices For Ditch Checks, Erosion Control For Intake Or Manhole Well, Turf Reinforcement Mat, Slope Protection, Special Ditch Control, Rock Ditch, Rock Flume, Rock Splash Basin, Rock Slope Protection, Open-Throat Curb Intake Sediment Filter, Grate Intake Sediment Filter Bag and seeding.

100-11
04-18-17

EROSION CONTROL FOR INTAKE OR MANHOLE WELL

Possible Detail: 570-5

Location Station	Side	Cover Assembly Installation EACH	Cover Assembly Maintenance EACH	Cover Assembly Removal EACH	Remarks
140+95.67	Lt	1	1	1	
152+11.36	Lt	1	1	1	
233+33.71	Lt	1	1	1	
Total		3	3	3	

100-37
04-18-17

GRATE INTAKE SEDIMENT FILTER BAG

Possible Detail: 570-7

Location Station	Side	Installation EACH	Maintenance EACH	Removal EACH	Remarks
218+00.00	Rt	1	1	1	
219+20.00	Rt	1	1	1	
220+00.00	Rt	1	1	1	
221+00.00	Rt	1	1	1	
325+79.31	Lt	1	1	1	
334+07.29	Lt	1	1	1	
337+50.07	Lt	1	1	1	
344+20.64	Lt	1	1	1	
346+90.17	Lt	1	1	1	
GISFB Bid Totals:		9			
GISFB maintenance Totals:			9		
GISFB Removal Totals:				9	

100-36
10-16-18

OPEN-THROAT CURB INTAKE SEDIMENT FILTER

Possible Standard: EC-602

Location Station	Side	Installation LF	Maintenance EACH	Removal EACH	Remarks
41+59.00	Rt	13.0	1	1	
42+08.00	Rt	12.0	1	1	
219+96.00	Lt	18.0	1	1	
223+50.00	Lt	12.0	1	1	
ISF Bid Totals:		55.0			
ISF maintenance Totals:			4		
ISF Removal Totals:				4	

100-17
04-20-10

TABULATION OF SILT FENCES

Refer to EC-201

Location Begin Station	Location End Station	Side	Length LF	Remarks
38+00.00	39+32.00	Rt	141.0	
39+32.00	40+82.00	Rt	154.0	
50+03.00	50+83.00	Rt	83.0	
50+83.00	52+78.00	Rt	200.0	
52+72.00	54+35.00	Rt	161.0	
102+86.00	104+84.00	Rt	200.0	
104+77.00	106+71.00	Rt	200.0	
104+65.00	106+58.00	Rt	200.0	Rt side of Rt Ditch
106+70.00	108+66.00	Rt	200.0	
108+60.00	110+53.00	Rt	200.0	
106+89.00	108+76.00	Rt	200.0	Rt side of Rt Ditch
108+68.00	110+56.00	Rt	200.0	Rt side of Rt Ditch
210+91.00	211+36.00	Rt	49.0	
214+22.00	216+20.00	Rt	200.0	
216+11.00	217+07.00	Rt	94.0	
288+96.00	289+96.00	Rt	106.0	
104+97.00	106+14.00	Lt	119.0	
107+42.00	108+63.00	Lt	119.0	
108+54.00	110+58.00	Lt	200.0	
110+49.00	112+49.00	Lt	200.0	
317+39.00	319+17.00	Lt	197.0	
SF Tab Totals:			3423.0	
SF Bid Totals:			4278.8	125% of Tab Total
SF maintenance Totals:			427.9	10% of Bid Total
SF Removal Totals:			4278.8	100% of Bid Total

ROLLED EROSION CONTROL

Refer to EC-101, EC-103 and EC-104

Location				L	W	Turf Reinforcement Mat (TRM) (EC-104)				Slope Protection (EC-103)	Special Ditch Control (EC-101)	Remarks
Road Identification	Begin Station	End Station	Side			Type 1	Type 2	Type 3	Type 4			
				FT	FT	Squares	Squares	Squares	Squares	Squares	Squares	
IA 3	38+14.00	38+74.00	Rt	61	8						5	
IA 3	39+43.00	10+41.00	Rt	103	8						8	
IA 3	51+88.00	52+00.00	Rt	63	8						5	
IA 3	57+00.00	63+25.00	Rt	594	8						48	
IA 3	69+00.00	70+50.00	Rt	155	8						12	
IA 3	101+40.00	102+00.00	Rt	61	8						5	
IA 3	116+50.00	121+00.00	Rt	438	8						35	
IA 3	158+00.00	159+41.00	Rt	142	8						11	
IA 3	159+59.00	159+96.00	Rt	37	8						3	
IA 3	160+30.00	163+50.00	Rt	320	8						26	
IA 3	173+50.00	175+00.00	Rt	143	8						11	
IA 3	176+21.00	177+50.00	Rt	129	8						10	
IA 3	200+00.00	200+78.00	Rt	81	8						6	
IA 3	209+00.00	209+73.00	Rt	71	8						6	
IA 3	222+00.00	223+46.00	Rt	155	8						12	
IA 3	224+14.00	224+68.00	Rt	48	8						4	
IA 3	243+00.00	243+44.00	Rt	42	8						3	
IA 3	244+68.00	245+30.00	Rt	100	8						8	
IA 3	245+72.00	246+00.00	Rt	31	8						2	
IA 3	249+00.00	250+66.00	Rt	159	8						13	
IA 3	251+68.00	253+36.00	Rt	165	8						13	
IA 3	253+63.00	257+00.00	Rt	323	8						26	
IA 3	269+47.00	271+00.00	Rt	160	8						13	
IA 3	275+50.00	277+17.00	Rt	177	8						14	
IA 3	278+00.00	279+00.00	Rt	105	8						8	
IA 3	279+72.00	279+83.00	Rt	30	8						2	
IA 3	288+54.00	288+72.00	Rt	18	8						1	
IA 3	288+88.00	289+94.00	Rt	109	8						9	
IA 3	290+61.00	291+50.00	Rt	85	8						7	
IA 3	301+56.00	301+90.00	Rt	34	8						3	
IA 3	302+10.00	302+51.00	Rt	42	8						3	
IA 3	302+93.00	303+00.00	Rt	104	8						8	
IA 3	348+50.00	353+53.00	Rt	497	8						40	
IA 3												
IA 3	50+50.00	52+00.00	Rt	145	15					22		
IA 3	66+61.00	67+00.00	Rt	39	60					23		
IA 3	68+75.00	69+39.00	Rt	59	20					12		
IA 3	175+66.00	176+10.00	Rt	37	34					13		
IA 3	198+27.00	199+69.00	Rt	145	40					58		
IA 3	211+43.00	213+95.00	Rt	254	29					74		
IA 3	212+53.00	214+00.00	Rt	166	20					33		
IA 3	323+50.00	325+75.00	Rt	235	40			94				
IA 3												
IA 3	263+00.00	263+44.00	Lt	47	8						4	
IA 3	288+79.00		Lt	14	14			2				
IA 3	346+52.00	346+85.00	Lt	34	8						3	
IA 3	346+95.00	353+50.00	Lt	671	8						54	
IA 3												
IA 3	49+00.00	56+00.00	Lt	694	45			312				
IA 3	66+85.00	67+50.00	Lt	150	51			77				
IA 3	73+60.00	75+51.00	Lt	190	23					44		
IA 3	163+51.00	167+20.00	Lt	368	38					140		
IA 3	173+50.00	175+47.00	Lt	198	31					68		
IA 3	175+62.00	177+59.00	Lt	200	33					66		
IA 3	209+00.00	211+00.00	Lt	208	25			52				
IA 3	211+00.00	214+63.00	Lt	335	20					67		
IA 3	235+50.00	238+57.00	Lt	295	45			133				
IA 3	240+00.00	245+89.00	Lt	548	35			192				
IA 3	246+00.00	260+21.00	Lt	1255	30					377		
IA 3	260+51.00	269+73.00	Lt	945	21					198		
IA 3	266+42.00	266+70.00	Lt	210	14					29		
IA 3	266+83.00	268+46.00	Lt	315	15					47		
IA 3	280+35.00	281+50.00	Lt	115	45					52		
IA 3	283+00.00	289+22.00	Lt	575	30					173		
IA 3	301+85.00	302+30.00	Lt	45	13					6		
IA 3	346+89.00	352+85.00	Lt	390	21			82				
IA 3	354+00.00	358+30.00	Lt	440	25			110				
	Rolled Erosion Control Tab Totals:							1054		1502	441	

ROCK EROSION CONTROL

Refer to EC-301 and Detail 570-8

Location				L	W	Rock Erosion Control (REC)					Material Bid Quantities			Remarks
Road Identification	Begin Station	End Station	Side			Type 1 Rock Ditch Check	Type 2 Rock Ditch	Type 3 Rock Flume	Type 4 Rock Splash Basin	Type 5 Rock Slope Protection	Eng. Fabric	Class E Revetment	Erosion Stone	
			Lt./Rt.	FT	FT						SY	TON	TON	
IA 3	30+58.00		Rt	10	10				X		20.0	10.4		
Christensen Ln	100+53.00		Lt	10.5	10.5				X		21.6	11.4		
IA 3	39+34.00		Lt	10.5	10.5				X		21.6	11.4		
IA 3	46+18.00		Rt	10	10				X		20.0	10.4		
IA 3	50+00.00		Rt	78	12		X				144.0		110.9	
IA 3	50+86.00		Lt	13	13				X		30.3	17.5		
IA 3	66+73.00		Lt	15	15				X		38.3	23.3		
IA 3	68+40.00		Rt	10	10				X		20.0	10.4		
IA 3	75+21.00		Lt	10.5	10.5				X		21.6	11.4		
IA 3	85+86.00	87+00.00	Rt	72	7.5			X			95.3		64.0	
IA 3	86+00.00	87+10.00	Lt	89	46					X	514.9		485.1	
IA 3	86+30.00		Lt	15	15				X		38.3	23.3		
IA 3	95+50.00	97+00.00	Lt	124	45					X	695.1		661.3	
IA 3	96+57.00		Rt	10.5	10.5				X		21.6	11.4		
IA 3	97+00.00		Lt	14.5	14.5				X		36.3	21.8		
IA 3	100+14.00		Rt	10	10				X		20.0	10.4		
IA 3	113+21.00		Lt	14	14				X		34.2	20.3		
IA 3	125+30.00		Lt	10.5	10.5				X		21.6	11.4		
IA 3	129+00.00		Lt	10.5	10.5				X		21.6	11.4		
IA 3	140+92.00		Lt	12.5	12.5				X		28.5	16.2		
IA 3	145+46.00		Rt	10	10				X		20.0	10.4		
IA 3	146+04.00		Rt	45.5	7.5			X			61.5		40.4	
IA 3	146+22.00		Lt	15	15				X		38.3	23.3		
IA 3	146+46.00		Rt	40.5	7.5			X			55.1		36.0	
IA 3	152+11.00		Lt	14	14				X		34.2	20.3		
IA 3	159+50.00		Lt	12.5	12.5				X		28.5	16.2		
IA 3	163+70.00		Lt	10	10				X		20.0	10.4		
IA 3	164+54.00		Lt	10.5	10.5				X		21.6	11.4		
IA 3	175+64.00	175+84.00	Rt	44	14					X	94.2		73.0	
IA 3	176+00.00	176+21.00	Rt	52	9.5			X			82.2		58.6	
IA 3	184+70.00		Lt	11	11				X		23.2	12.6		
IA 3	189+95.00		Lt	12	12				X		26.7	14.9		
IA 3	210+72.00	211+05.00	Lt	30	10		X				51.1		35.6	
IA 3	211+14.00	211+85.00	Rt	92.5	7.5		X				121.5		82.2	
IA 3	212+22.00	212+89.00	Rt	33	7.5			X			45.5		29.3	
IA 3	213+18.00		Rt	10	10				X		20.0	10.4		
IA 3	223+56.00		Rt	10	10				X		20.0	10.4		
IA 3	224+75.00		Rt	10	10				X		20.0	10.4		
IA 3	227+00.00	228+00.00	Lt	109	50					X	676.2		645.9	
IA 3	233+34.00		Lt	13	13				X		30.3	17.5		
IA 3	230+50.00	235+50.00	Lt	242	40					X	1200.9		1147.3	
IA 3	237+00.00		Lt	13	13				X		30.3	17.5		
IA 3	244+25.00		Lt	14	14				X		34.2	20.3		
IA 3	244+27.00		Rt	10	10				X		20.0	10.4		
IA 3	251+58.00		Rt	10	10				X		20.0	10.4		
IA 3	253+50.00		Lt	11	11				X		23.2	12.6		
IA 3	259+45.00		Lt	17	17				X		47.2	30.0		
IA 3	263+52.00		Lt	10.5	10.5				X		21.6	11.4		
IA 3	271+26.00		Lt	13	13				X		30.3	17.5		
IA 3	277+83.00		Rt	10	10				X		20.0	10.4		
IA 3	279+00.00	279+51.00	Rt	64	10		X				104.0		75.9	
IA 3	279+93.00		Rt	10	10				X		20.0	10.4		
IA 3	290+00.00		Rt	10	10				X		20.0	10.4		
IA 3	301+50.00		Rt	10	10				X		20.0	10.4		
IA 3	302+00.00		Lt	19.5	19.5				X		59.6	39.4		
IA 3	306+19.00		Lt	10.5	10.5				X		21.6	11.4		
IA 3	319+09.00		Lt	10.5	10.5				X		21.6	11.4		
IA 3	331+45.00		Rt	12.5	12.5				X		28.5	16.2		
IA 3	333+80.00		Rt	12	12				X		26.7	14.9		
IA 3	337+52.00		Rt	10.5	10.5				X		21.6	11.4		
IA 3	344+18.00		Rt	10.5	10.5				X		21.6	11.4		
	346+25.00	347+00.00	Rt	74	46					X	431.6		403.4	
IA 3	346+38.00		Rt	12	12				X		26.7	14.9		
	Rock Erosion Control Tab Totals:										5626.1	703.3	3948.9	
	Engineering Fabric Bid Totals:										7313.9			130% of Tab Total
	Class E Revetment Bid Totals:											914.3		130% of Tab Total
	Erosion Stone Bid Totals:												5133.6	130% of Tab Total

PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES

Possible Standards: EC-204

Location			Perimeter and Slope			Ditch Check		Remarks
			Length of Installation			Length of Installation		
Begin Station	End Station	Side	9 inch Dia	12 inch Dia	20 inch Dia	12 inch Dia	20 inch Dia	
			LF	LF	LF	LF	LF	
31+34.00		Rt		32				Inlet Protection
33+75.00		Lt		32				Inlet Protection
38+15.00		Rt				19.0		
38+46.00		Rt				19.0		
39+33.00		Lt		32				Inlet Protection
39+48.00		Rt				19.0		
39+66.00		Rt				19.0		
39+84.00		Rt				19.0		
40+02.00		Rt				19.0		
40+20.00		Rt				19.0		
40+38.00		Rt				19.0		
46+67.00		Rt		32				Inlet Protection
49+00.00	50+02.00	Lt		100				
50+00.00	53+86.00	Lt		380				
53+81.00	54+52.00	Lt		73				
54+49.00	55+16.00	Lt		69				
55+13.00	55+67.00	Lt		57				
55+66.00	55+91.00	Lt		25				
49+49.00	50+06.00	Lt		51				30' Offset
50+02.00	50+76.00	Lt		69				30' Offset
51+14.00	53+84.00	Lt		262				30' Offset
53+79.00	54+50.00	Lt		76				30' Offset
54+47.00	55+13.00	Lt		69				30' Offset
55+12.00	55+63.00	Lt		57				30' Offset
55+60.00	55+86.00	Lt		29				30' Offset
54+04.00	54+45.00	Lt		47				60' Offset
54+43.00	54+69.00	Lt		29				60' Offset
54+89.00	55+08.00	Lt		22				60' Offset
50+85.00		Lt		38				Inlet Protection
50+95.00	51+84.00	Rt		103				
51+05.00	51+74.00	Rt		75				15' Offset
51+50.00		Rt				16.0		
51+64.00		Rt				14.0		
51+91.00		Rt				19.0		
57+06.00		Rt				19.0		
57+98.00		Rt				19.0		
58+90.00		Rt				19.0		
59+82.00		Rt				19.0		
60+74.00		Rt				19.0		
61+66.00		Rt				19.0		
62+58.00		Rt				19.0		
65+82.00	67+50.00	Lt		169				
65+86.00	67+29.00	Lt		139				30' Offset
66+60.00	67+00.00	Rt		40				
66+60.00	67+00.00	Rt		40				30' Offset
66+74.00		Lt		47				Inlet Protection
68+89.00	69+31.00	Rt		47				
68+90.00		Rt		32				Inlet Protection
69+03.00		Rt				19.0		
69+95.00		Rt				19.0		
73+60.00	75+51.00	Lt		190				
75+21.00		Rt		32				Inlet Protection
85+48.00		Rt		32				Inlet Protection
87+55.00		Rt		32				Inlet Protection
95+90.00		Rt		32				Inlet Protection
97+00.00		Rt		47				Inlet Protection
100+75.00		Rt		32				Inlet Protection
101+67.00		Rt				19.0		
107+84.00		Rt		32				Inlet Protection
113+20.00		Rt		38				Inlet Protection
116+53.00		Rt				19.0		
117+74.00		Rt				19.0		
118+95.00		Rt				19.0		
120+16.00		Rt				19.0		
121+37.00		Rt				19.0		
125+30.00		Rt		32				Inlet Protection
129+00.00		Rt		32				Inlet Protection
140+95.67		Lt		25				Manhole Protection
141+10.00		Rt		38				Inlet Protection
145+06.00		Rt		32				Inlet Protection
146+21.00		Rt		47				Inlet Protection
152+11.00		Lt		28				Manhole Protection
152+11.00		Rt		47				Inlet Protection
158+02.00		Rt				19.0		
158+94.00		Rt				19.0		
159+50.00		Rt		38				Inlet Protection
159+85.00		Rt				19.0		
160+77.00		Rt				19.0		
161+69.00		Rt				19.0		
162+61.00		Rt				19.0		

PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES

Possible Standards: EC-204

Location			Perimeter and Slope			Ditch Check		Remarks
			Length of Installation			Length of Installation		
Begin Station	End Station	Side	9 inch Dia	12 inch Dia	20 inch Dia	12 inch Dia	20 inch Dia	
			LF	LF	LF	LF	LF	
163+05.00		Lt		32				Inlet Protection
163+61.00	166+11.00	Lt		251				
163+50.00	166+06.00	Lt		258				30' Offset
164+54.00		Rt		32				Inlet Protection
166+03.00	167+23.00	Lt		121				
166+00.00	166+70.00	Lt		71				30' Offset
173+50.00	176+20.00	Lt		273				
173+60.00	175+36.00	Lt		82				30' Offset
173+55.00		Rt				19.0		
173+85.00		Rt				19.0		
174+15.00		Rt				19.0		
174+45.00		Rt				19.0		
174+75.00		Rt				19.0		
175+12.00		Rt		32				Inlet Protection
175+64.00	176+17.00	Rt		49				
175+78.00	175+97.00	Rt		17				
175+58.00	175+76.00	Lt		20				30' Offset
176+15.00	176+78.00	Lt		64				
176+71.00	177+18.00	Lt		48				
177+14.00	177+60.00	Lt		47				
177+07.00	177+50.00	Lt		44				30' Offset
176+36.00		Rt				19.0		
175+67.00		Rt				19.0		
174+98.00		Rt				19.0		
174+29.00		Rt				19.0		
184+71.00		Rt		32				Inlet Protection
189+95.00		Rt		32				Inlet Protection
198+22.00	199+23.00	Rt		101				
199+13.00	199+67.00	Rt		56				
198+31.00	199+21.00	Rt		91				30' Offset
199+13.00	199+65.00	Rt		54				30' Offset
200+30.00		Rt				19.0		
209+00.00	209+62.00	Lt		62				
209+56.00	210+07.00	Lt		48				
210+04.00	210+63.00	Lt		56				
209+42.00	209+60.00	Lt		18				30' Offset
209+06.00		Rt				19.0		
209+37.00		Rt				19.0		
209+68.00		Rt				19.0		
210+37.00		Rt		32				Inlet Protection
210+57.00	211+35.00	Lt		75				
211+31.00	213+61.00	Lt		226				
210+61.00	210+95.00	Lt		33				30' Offset
211+46.00	213+91.00	Rt		252				
212+10.00	212+88.00	Rt		79				30' Offset
212+66.00	213+19.00	Rt		73				Rt Back Slope
213+13.00	213+47.00	Rt		32				Rt Back Slope
213+43.00	213+96.00	Rt		65				Rt Back Slope
214+71.00		Rt		32				Inlet Protection
221+94.00		Rt				19.0		
222+89.00		Rt				19.0		
224+09.00		Rt		32				Inlet Protection
224+53.00		Rt				19.0		
225+26.00		Rt		32				Inlet Protection
233+33.00		Rt		38				Inlet Protection
233+33.00		Lt		25				Manhole Protection
235+48.00	238+42.00	Lt		284				
235+48.00	237+61.00	Lt		203				
237+29.00		Rt		38				Inlet Protection
240+00.00	241+70.00	Lt		171				
241+64.00	242+51.00	Lt		87				
242+45.00	243+80.00	Lt		130				
243+73.00	245+63.00	Lt		185				
240+28.00	241+70.00	Lt		142				30' Offset
241+65.00	242+53.00	Lt		85				30' Offset
242+47.00	243+23.00	Lt		75				30' Offset
243+06.00		Rt				19.0		
243+29.00		Rt				19.0		
243+54.00		Rt		32				Inlet Protection
244+25.00		Rt		47				Inlet Protection
244+37.00		Rt				19.0		
245+22.00		Rt				19.0		
245+79.00		Rt				19.0		
246+10.00	247+49.00	Lt		139				
247+44.00	248+44.00	Lt		99				
248+42.00	249+55.00	Lt		115				
249+52.00	251+51.00	Lt		54				
250+48.00	251+22.00	Lt		75				
251+18.00	253+11.00	Lt		196				
253+08.00	253+31.00	Lt		24				
253+27.00	254+81.00	Lt		156				

PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES

Possible Standards: EC-204

Location			Perimeter and Slope			Ditch Check		Remarks
			Length of Installation			Length of Installation		
Begin Station	End Station	Side	9 inch Dia	12 inch Dia	20 inch Dia	12 inch Dia	20 inch Dia	
			LF	LF	LF	LF	LF	
254+76.00	257+09.00	Lt		238				
257+03.00	258+21.00	Lt		119				
258+14.00	259+93.00	Lt		184				
249+08.00		Rt				19.0		
249+31.00		Rt				19.0		
249+54.00		Rt				19.0		
249+77.00		Rt				19.0		
250+00.00		Rt				19.0		
250+44.00		Rt				19.0		
250+78.00		Rt		32				Inlet Protection
251+77.00		Rt				19.0		
252+69.00		Rt				19.0		
253+51.00		Rt		32				Inlet Protection
253+78.00		Rt				19.0		
254+24.00		Rt				19.0		
254+70.00		Rt				19.0		
255+16.00		Rt				19.0		
255+62.00		Rt				19.0		
256+08.00		Rt				19.0		
256+54.00		Rt				20.0		
259+45.00		Rt		47				Inlet Protection
260+73.00		Lt		254				
263+00.00		Rt				19.0		
263+15.00	268+10.00	Lt		506				
263+23.00		Rt				19.0		
263+46.00		Rt				19.0		
263+51.00		Rt		32				Inlet Protection
266+52.00	266+72.00	Lt		194				Drainage Ditch
266+82.00	267+00.00	Lt		190				Drainage Ditch
267+06.00	268+50.00	Lt		155				Lt Back Slope
268+11.00	268+85.00	Lt		76				
269+49.00		Rt				19.0		
269+67.00		Rt				19.0		
269+85.00		Rt				19.0		
270+03.00		Rt				19.0		
270+21.00		Rt				19.0		
270+39.00		Rt				19.0		
270+57.00		Rt				19.0		
270+75.00		Rt				19.0		
270+93.00		Rt				19.0		
271+25.00		Rt		38				Inlet Protection
275+49.00		Rt				19.0		
275+95.00		Rt				19.0		
276+41.00		Rt				19.0		
276+87.00		Rt				19.0		
277+27.00		Rt		32				Inlet Protection
277+95.00		Rt				19.0		
278+26.00		Rt				19.0		
278+57.00		Rt				19.0		
278+88.00		Rt				19.0		
279+72.00		Rt				19.0		
279+78.00		Rt				19.0		
279+83.00		Rt				19.0		
280+38.00		Rt		32				Inlet Protection
283+00.00	283+53.00	Lt		52				
283+47.00	285+52.00	Lt		205				
285+48.00	285+83.00	Lt		35				
285+78.00	286+76.00	Lt		98				
286+70.00	289+15.00	Lt		236				
283+67.00	285+53.00	Lt		187				30' Offset
285+50.00	285+83.00	Lt		33				30' Offset
288+58.00		Rt				19.0		
288+78.00		Rt		38				Inlet Protection
288+94.00		Rt				19.0		
289+86.00		Rt				19.0		
290+54.00		Rt		32				Inlet Protection
290+62.00		Rt				19.0		
300+85.00		Rt		32				Inlet Protection
301+59.00		Rt				19.0		
301+70.00		Rt				19.0		
301+81.00		Rt				19.0		
301+84.00	302+30.00	Lt		46				
302+03.00		Rt		53				Inlet Protection
302+18.00		Rt				19.0		
302+27.00		Rt				19.0		
302+36.00		Rt				19.0		
302+45.00		Rt				19.0		
302+54.00		Rt				19.0		
302+97.00		Rt				19.0		
303+89.00		Rt				19.0		
306+20.00		Rt		32				Inlet Protection

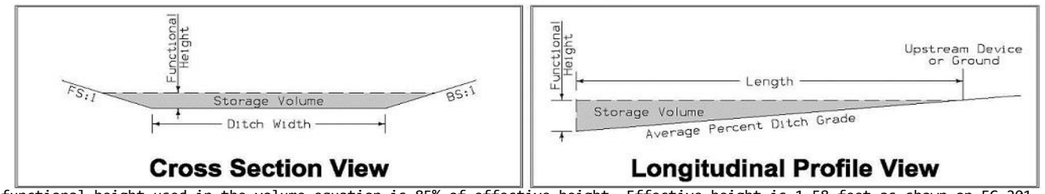
PERIMETER, SLOPE AND DITCH CHECK SEDIMENT CONTROL DEVICES

Possible Standards: EC-204

Location			Perimeter and Slope			Ditch Check		Remarks
			Length of Installation			Length of Installation		
Begin Station	End Station	Side	9 inch Dia	12 inch Dia	20 inch Dia	12 inch Dia	20 inch Dia	
			LF	LF	LF	LF	LF	
320+65.00		Lt		32				Inlet Protection
331+44.00		Lt		38				Inlet Protection
346+52.00		Lt				19.0		
346+67.00		Lt				19.0		
346+82.00		Lt				19.0		
347+00.00		Lt				19.0		
347+15.00		Lt				19.0		
347+30.00		Lt				19.0		
347+45.00		Lt				19.0		
347+60.00		Lt				19.0		
347+75.00		Lt				19.0		
347+90.00		Lt				19.0		
348+05.00		Lt				19.0		
348+20.00		Lt				19.0		
348+35.00		Lt				19.0		
348+50.00		Lt				19.0		
348+65.00		Lt				19.0		
348+80.00		Lt				19.0		
348+95.00		Lt				19.0		
349+10.00		Lt				19.0		
349+25.00		Lt				19.0		
349+40.00		Lt				19.0		
349+55.00		Lt				19.0		
349+70.00		Lt				19.0		
349+85.00		Lt				19.0		
350+00.00		Lt				19.0		
350+15.00		Lt				19.0		
350+30.00		Lt				19.0		
350+45.00		Lt				19.0		
350+60.00		Lt				19.0		
350+75.00		Lt				19.0		
350+90.00		Lt				19.0		
351+05.00		Lt				19.0		
351+20.00		Lt				19.0		
351+35.00		Lt				19.0		
351+50.00		Lt				19.0		
351+65.00		Lt				19.0		
351+80.00		Lt				19.0		
351+95.00		Lt				19.0		
352+10.00		Lt				19.0		
352+25.00		Lt				19.0		
352+40.00		Lt				19.0		
352+55.00		Lt				19.0		
352+70.00		Lt				19.0		
352+85.00		Lt				19.0		
353+00.00		Lt				19.0		
353+15.00		Lt				19.0		
348+65.00		Rt				19.0		
348+83.00		Rt				19.0		
349+01.00		Rt				19.0		
349+19.00		Rt				19.0		
349+37.00		Rt				19.0		
349+55.00		Rt				19.0		
349+73.00		Rt				19.0		
349+91.00		Rt				19.0		
350+09.00		Rt				19.0		
350+27.00		Rt				19.0		
350+45.00		Rt				19.0		
350+63.00		Rt				19.0		
350+81.00		Rt				19.0		
350+99.00		Rt				19.0		
351+17.00		Rt				19.0		
351+35.00		Rt				19.0		
351+53.00		Rt				19.0		
351+71.00		Rt				19.0		
351+89.00		Rt				19.0		
352+07.00		Rt				19.0		
352+25.00		Rt				19.0		
352+43.00		Rt				19.0		
352+61.00		Rt				19.0		
352+79.00		Rt				19.0		
352+97.00		Rt				19.0		
353+15.00		Rt				19.0		
353+33.00		Rt				19.0		
PSSCD Tab Totals:				11723		3356.0		
12 inch PSSCD Bid Totals:				14653.75				125% of Tab Total
12 inch PSSCD Ditch Checks Bid Totals:						4195.0		125% of Tab Total
PSSCD Removal Totals:				14653.75		4195.0		100% of Bid Total

SILT FENCES FOR DITCH CHECKS

Possible Standard: EC-201



* The functional height used in the volume equation is 85% of effective height. Effective height is 1.58 feet as shown on EC-201.

* Volume equation: $[0.5*Spacing*(0.5*H^2*FS+DW*H+0.5*H^2*BS)]$

Basin No.	Type	Location		Bid Items			Stormwater Storage Volume Summary					Remarks
		Station	Side	Installation	Maintenance	Removal	Foreslope	Backslope	Ditch Width	Avg.% Slope Ditch Grade	Volume*	
				LF	LF	LF	FS:1	BS:1	FT		CF	
4	1	47+00.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.7%	325.7	
4	1	47+50.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.7%	325.7	
4	1	48+00.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.7%	325.7	
4	1	48+50.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.7%	325.7	
4	1	49+00.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.7%	325.7	
4	1	49+50.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.7%	325.7	
4	1	50+00.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.7%	325.7	
4	1	54+53.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.4%	228.0	
4	1	54+88.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.4%	228.0	
4	1	55+23.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.4%	228.0	
4	1	55+58.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.4%	228.0	
4	1	55+93.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.4%	228.0	
4	1	56+28.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.4%	228.0	
4	1	56+63.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.4%	228.0	
5	1	64+00.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.0%	260.6	
5	1	64+40.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.0%	260.6	
5	1	64+80.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.0%	260.6	
5	1	65+20.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	4.0%	260.6	
5	1	67+00.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	1.3%	651.4	
6	1	84+65.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	0.7%	1009.7	
7	1	104+61.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	1.4%	651.4	
7	1	105+61.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	1.4%	651.4	
7	1	107+28.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.1%	390.8	
7	1	107+88.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.1%	390.8	
7	1	108+61.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.1%	390.8	
7	1	109+21.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.1%	390.8	
7	1	109+81.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.1%	390.8	
14	1	215+40.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	0.5%	2051.9	
17	1	264+50.00	Lt	19.0	1.9	19.0	3.0	4.0	5.0	0.5%	2051.9	
17	1	267+50.00	Lt	19.0	1.9	19.0	3.0	4.0	5.0	3.0%	325.7	
17	1	268+00.00	Lt	19.0	1.9	19.0	3.0	4.0	5.0	3.0%	325.7	
17	1	268+50.00	Lt	19.0	1.9	19.0	3.0	4.0	5.0	3.0%	325.7	
17	1	269+00.00	Lt	19.0	1.9	19.0	3.0	4.0	5.0	3.0%	325.7	
22	1	354+18.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.3%	390.8	
22	1	354+78.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.3%	390.8	
22	1	355+38.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.3%	390.8	
22	1	355+98.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.3%	390.8	
22	1	356+58.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.3%	390.8	
22	1	357+18.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.3%	390.8	
22	1	357+78.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.3%	390.8	
22	1	358+38.00	Rt	19.0	1.9	19.0	3.0	4.0	5.0	2.3%	390.8	
		SFDC Tab Totals:		779.0	77.9	779.0						
		SFDC Bid Totals:		1168.5			150% of Tab Total					
		SFDC maintenance Totals:			116.9		10% of Bid Total					
		SFDC Removal Totals:				1168.5	100% of Bid Total					

STORMWATER DRAINAGE BASIN AND STORAGE

Refer to EC Standards and 570s Details.

Drainage Basin Location						Summary of Stormwater Storage							Remarks
Basin No.	Station to Station		Side	Discharge Point		Total Disturbed Area	Disturbed Area with Storage Provided	Disturbed Area without Storage Provided	Best Management Practice	Total Storage Volume Provided	Total Storage Volume Required	Storage Volume Met?	
				Station	Side	Acres	Acres	Acres		CF	CF	Yes/No	
1	27+75.00	37+16.00	Rt	27+75.00	East	0.8	0.8	0.0			2880.0	No	
2	27+75.00	46+39.00	Lt	27+75.00	East	2.4	2.4	0.0	Silt Basin (EW-403)	1012.5	8640.0	No	
3	41+24.00	46+39.00	Rt	45+63.00	North	0.5	0.5	0.0			1800.0	No	
4	46+39.00	59+51.00	Rt-Lt	50+83.00	East	2.6	2.6	0.0	Silt Basin (EW-403)	887.5	9360.0	No	
									Silt Fence for Ditch Check (EC-201)	3875.8			
									Total	4763.3			
5	59+51.00	77+53.00	Rt-Lt	66+76.00	South	2.8	2.8	0.0	Silt Fence for Ditch Check (EC-201)	1693.6	10080.0	No	
6	77+53.00	91+05.00	Rt-Lt	86+25.00	South	2.3	2.3	0.0	Silt Basin (EW-403)	1337.5	8280.0	No	
									Silt Fence for Ditch Check (EC-201)	1009.7			
									Total	2347.2			
7	90+04.00	121+99.00	Rt-Lt	113+20.00	East	2.3	2.3	0.0	Silt Basin (EW-403)	2412.5	8280.0	No	
									Silt Fence for Ditch Check (EC-201)	3256.9			
									Total	5669.4			
8	121+99.00	141+89.00	Rt-Lt	125+30.00	South	3.6	3.6	0.0			12960.0	No	
9	141+89.00	150+98.00	Rt-Lt	146+28.00	South	2.0	2.0	0.0			7200.0	No	
10	150+98.00	171+00.00	Rt-Lt	164+55.00	South	3.3	3.3	0.0			11880.0	No	
11	171+00.00	180+00.00	Rt-Lt	175+53.00	South	1.7	1.7	0.0			6120.0	No	
12	180+00.00	192+39.00	Rt-Lt	184+72.00	South	2.2	2.2	0.0			7920.0	No	
13	192+39.00	202+49.00	Rt-Lt	194+09.00	South	1.9	1.9	0.0			6840.0	No	
14	202+49.00	228+97.00	Rt-Lt	219+77.00	South	5.4	5.4	0.0	Silt Basin (EW-403)	2425.0	19440.0	No	
									Silt Fence for Ditch Check (EC-201)	2051.9			
									Total	4476.9			
15	228+97.00	235+50.00	Rt-Lt	233+35.00	South	1.3	1.3	0.0			4680.0	No	
16	235+50.00	257+55.00	Rt-Lt	253+50.00	South	4.3	4.3	0.0			15480.0	No	
17	257+55.00	271+94.00	Rt-Lt	268+11.00	West	3.1	3.1	0.0	Silt Fence for Ditch Check (EC-201)	3354.7	11160.0	No	
18	271+94.00	284+40.00	Rt-Lt	279+59.00	South	2.8	2.8	0.0			10080.0	No	
19	284+40.00	295+53.00	Rt-Lt	288+76.00	South	1.7	1.7	0.0			6120.0	No	
20	295+53.00	313+69.00	Rt-Lt	306+21.00	South	2.5	2.5	0.0			9000.0	No	
21	315+97.00	358+29.00	Lt	319+17.00	South	3.9	3.9	0.0			14040.0	No	
22	315+97.00	358+78.00	Rt	315+97.00	East	3.5	3.5	0.0	Silt Fence for Ditch Check (EC-201)	3126.7	12600.0	No	

POLLUTION PREVENTION PLAN

This project is regulated by the requirements of the Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) General Permit No. 2 OR an Iowa Department of Natural Resources (DNR) National Pollutant Discharge Elimination System (NPDES) individual storm water permit. The Contractor shall carry out the terms and conditions of this permit and the Pollution Prevention Plan (PPP).

This Base 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 during construction, 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 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. Is signature authority on the Base PPP. If consultant designed, signature from Contracting Authority is also required.

B. Contractor:
1. Signs a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP. 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. Designates a Water Pollution Control Manager (WPCM), who has the duties and responsibilities as defined in Section 2602 of the Standard Specifications.
3. Submits an Erosion Control Implementation Plan (ECIP) and ECIP updates according to Section 2602 of the Standard Specifications.
4. Installs and maintains appropriate controls. This work may be subcontracted as documented through Subcontractor Request Forms (Form 830231).
5. Supervises and implements good housekeeping practices according to Paragraph III, C, 2.
6. Conducts joint required inspections of the site with inspection staff. When Contractor is not mobilized on site, Contractor may delegate this responsibility to a trained or certified subcontractor. Contracting Authority also may waive joint inspection requirement during winter shutdown. In both circumstances, WPCM (or trained or certified delegate from the Contractor) is still responsible to review and sign inspection reports.
7. Complies with training and certification requirements of Section 2602 of the Standard Specifications.
8. Submits amended PPP site map according to Section 2602 of the Standard Specifications.

C. Subcontractors:
1. Sign a co-permittee certification statement adhering to the requirements of the NPDES permit and this PPP if: responsible for sediment or erosion controls; involved in land disturbing activities; or perorming work that is a source of potential pollution as defined in this PPP. Subcontracted work items are identified in Subcontractor Request Forms (Form 830231). 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. Implement good housekeeping practices according to Paragraph III, C, 2.

D. RCE/Project Engineer:
1. Is Project Storm Water Manager.
2. On projects where DOT is the Contracting Authority, is current with erosion control training or certification.
3. Takes actions necessary to ensure compliance with storm water requirements including, where appropriate, issuing stop work orders, and directing additional inspections at construction project sites that are experiencing problems with achieving permit compliance.
4. Orders the taking of measures to cease, correct, prevent, or minimize the consequences of non-compliance with the storm water requirements of the Applicable Permit.
5. Supervises all work necessary to meet storm water requirements at the Project, including work performed by contractors and subcontractors.
6. Requires employees, contractors, and subcontractors to take appropriate responsive action to comply with storm water requirements, including requiring any such person to cease or correct a violation of storm water requirements, and to order or recommend such other actions as necessary to meet storm water requirements.
7. Is familiar with the Project PPP and storm water site map.
8. On projects where DOT is Contracting Authority, is responsible for periodically monitoring inspection reports to determine whether deficiencies identified in inspection reports were adequately and timely addressed, and if not, has the authority and responsibility to direct immediate actions to correct the deficiencies.
9. Is the point of contact for the Project for regulatory officials, Inspector, contractors, and subcontractors regarding storm water requirements.
10. Is signature authority on Notice of Discontinuation.
11. Maintains an up-to-date record of contractors, subcontractors, and subcontracted work items through Subcontractor Request Forms (Form 830231).
12. Makes information to determine permit compliance available to the DNR upon their request.

E. Inspector:
1. Updates PPP through fieldbook entries and storm water site inspection reports if there is a change in design, construction, operation, or maintenance which has a significant effect on the discharge of pollutants from the project.
2. Makes information to determine permit compliance available to the DNR upon their request.
3. Conducts joint required inspections of the site with the contractor/subcontractor.
4. Completes an inspection report after each inspection.
5. Is signature authority on storm water inspection reports.

II. PROJECT SITE DESCRIPTION

A. This Pollution Prevention Plan (PPP) is for the construction of a PCC Pavement - Grade and Replace in Dubuque County.

B. This PPP covers approximately 86.0 acres with an estimated 60.0 acres being disturbed. The portion of the PPP covered by this contract has 60 acres disturbed.

C. The PPP is located in an area of Downs – Fayette – Nordness soil association.
The estimated weighted average runoff coefficient number for this PPP after completion will be 0.40.

D. Storm Water Site Map is located in the R sheets. Proposed slopes are shown in cross sections, details, or standard road plans. Supplemental information is located in the Tabulations in the C or CE sheets.

E. The base storm water site map is amended by contract modifications and progress payments (fieldbook entries) of completed erosion control work. Also, due to project phasing, erosion and sediment controls shown on project plans may not be installed until needed, based on site conditions. For example, silt fence ditch checks will typically not be installed until the ditch has been installed. Installed locations may also be modified from tabulation locations by field staff. Installed locations will be documented by fieldbook entries and amended PPP site map.

F. Runoff from this work will flow into Little Maquoketa River and The Mississippi River.

III. CONTROLS

A. The Contractor’s ECIP specified in Article 2602.03 of the Standard Specifications 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. Sections 2601 and 2602 of the Standard Specifications define requirements to implement erosion and sediment control measures. Actual quantities used and installed locations may vary from the Base PPP and amendment of the plan will be documented via fieldbook entries, amended PPP site map, or by contract modification. Additional erosion and sediment control items may be required as determined by the inspector and/or contractor during storm water site 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 of the Standard Specifications.

1. EROSION AND SEDIMENT CONTROLS

a. Stabilization Practices
1) Site plans will ensure that existing vegetation or natural buffers are preserved where attainable and disturbed portions of the site will be stabilized.
2) Initialize stabilization of disturbed areas immediately after clearing, grading, excavating, or other earth disturbing activities have:
a) Permanently ceased on any portion of the site, or
b) Temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days.
3) Staged permanent and/or temporary stabilizing seeding and mulching shall be completed as the disturbed areas are completed. Incomplete areas shall be stabilized according to paragraph III, C, 1, a, 2, b above.
4) Permanent and Temporary Stabilization practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation (105-4) in the C or R sheets.
5) Preservation of existing vegetation within right-of-way or easements will act as vegetative buffer strips.
6) Preservation of topsoil: Bid items to be used for this project are located in the Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets. Additional information may be found in the Tabulations in the C or T Tabulation sheets, or is referenced in Section 2105 of the Standard Specifications.

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. Additionally, structural practices may include: silt basins that provide 3600 cubic feet of storage per acre drained or equivalent sediment controls, outlet structures that withdraw water from surface when discharging basins, and controls to direct storm water to vegetated areas.
2) Structural practices to be used for this project are located in the storm water site map, Estimated Project Quantities (100-0A, 100-1A, or 100-1C), and Estimate Reference Information (100-4A) located in the C or R sheets, 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 or R sheets or are referenced in the Standard Road Plans Tabulation (105-4) located in the C or R sheets.

c. Storm Water Management
Measures shall be installed during the construction process to control pollutants in storm water discharges that will occur after construction operations have been completed. This may include velocity dissipation devices at discharge locations and along length of outfall channel as necessary to provide a non-erosion velocity flow from structure to water course. If included with this project, these items are located in the storm water site map and Estimated Project Quantities (100-0A, 100-1A, or 100-1C) and Estimate Reference Information (100-4A) located in the C or R sheets, as well as all other item specific Tabulations. Typical drawings detailing construction of the practices to be used on this project are referenced in the Standard Road Plans Tabulation. The installation of these devices may be subject to Section 404 of the Clean Water Act.

2. OTHER CONTROLS
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.
a. Vehicle Entrances and Exits - Construct and maintain entrances and exits to prevent tracking of sediments onto roadways.
b. Material Delivery, Storage and Use - Implement practices to prevent discharge of construction materials during delivery, storage, and use.
c. Stockpile Management - Install controls to reduce or eliminate pollution of storm water from stockpiles of soil and paving.
d. Waste Disposal - Do not discharge any materials, including building materials, into waters of the state, except as authorized by a Section 404 permit.
e. Spill Prevention and Control - Implement chemical spill and leak prevention and response procedures to contain and clean up spills and prevent material discharges to the storm drain system and waters of the state.
f. Concrete Residuals and Washout Wastes - Waste shall not be discharged to a surface water and is not allowed to adversely affect a water of the state. Designate temporary concrete washout facilities for rinsing out concrete trucks. Provide directions to truck drivers where designated washout facilities are located. Designated washout areas should be located at least 50 feet away from storm drains, streams or other water bodies. Care should be taken to ensure these facilities do not overflow during storm events.
g. Concrete Grooving/Grinding Slurry – Do not discharge slurry to a waterbody or storm drain. Slurry may be applied on foreslopes or removed from the project.
h. Vehicle and Equipment Storage and Maintenance Areas - Perform on site fueling and maintenance in accordance with all environment laws such as proper storage of onsite fuels and proper disposal of used engine oil or other fluids on site. Employ washing practices that prevent contamination of surface and ground water from wash water. Wash waters must be treated in a sediment basin or alternative control that provides equivalent or better treatment prior to discharge.
i. Litter Management - Ensure employees properly dispose of litter. Minimize exposure of trash if exposure to precipitation or storm water would result in a discharge of pollutants.
j. Dewatering – Properly treat water to remove suspended sediment before it re-enters a waterbody or discharges off-site. Measures are also to be taken to prevent scour erosion at dewatering discharge point.

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

POLLUTION PREVENTION PLAN

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's inspector at least once every seven calendar days. Storm water site 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.
   5. Review of 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. Identification of corrective actions required to maintain or modify erosion and sediment control measures.

B. Include storm water site 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 within 3 calendar days of the inspection and complete within 7 calendar days following the inspection. If it is determined that making the corrections less than 72 hours after the inspection is impracticable, it should be documented why it is impracticable and indicate an estimated date by which the corrections will be made.

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 headwalls or blocks, Class A stone, erosion stone or other appropriate materials. This also includes uncontaminated groundwater from dewatering operations, which will be controlled as discussed in Section III of the PPP.

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 - Base PPP amended during construction. May include Plan Revisions or Contract Modifications for new items, storm water site inspection reports, fieldbook entries made by the inspector, amended PPP site map by the Contractor, ECIP, NOI, co-permittee certifications, and Subcontractor Request Forms. Items amending the PPP are stored electronically and are readily available upon request.
C. Fieldbook Entries – This contains the inspector’s daily diary and bid 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. Also called Best Management Practices (BMPs).
E. Signature Authority - Representative authorized to sign various storm water documents.

CERTIFICATION STATEMENT

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

LINE STYLE LEGEND OF LANDSCAPE SHEETS

LINESTYLE	Design Element
- - - - - - - - - - - - -	Living Snow Fence Single Row
:::::::::::::::::::	Living Snow Fence Double Row
———	Mechanical Edge

CELL LEGEND OF LANDSCAPE SHEETS

CELL	Design Element	Plant Diameter
	Clearing	
	Proposed Shrub	6 FT
	Proposed Understory Tree	12 FT
	Proposed Conifer Tree	18 FT
	Proposed Overstory Tree	30 FT

PATTERN LEGEND OF LANDSCAPE SHEETS

- Brush Clearing
- Spray Area
- Clearing & Grubbing

LINE STYLE LEGEND OF EROSION CONTROL SHEETS

LINESTYLE	Design Element
	Silt Fence
9	Perimeter and Slope Sediment Control Device (9")
12	Perimeter and Slope Sediment Control Device (12")
20	Perimeter and Slope Sediment Control Device (20")
	Open-Throat Curb Intake Sediment Filter
	Concentrated Flow
	Rock Check and Rock Check Dam
	Sheet Flow

CELL LEGEND OF EROSION CONTROL SHEETS

CELL	Design Element
	Temporary Sediment Control basin
	Erosion Control for Circular Intake or Manhole Well
	Erosion Control for Rectangular Intake or Manhole Well
	Grate Intake Sediment Filter Bag
	Silt Basin
	Silt Fence Tail
	Stormwater Drainage Basin Discharge Point

PLAN VIEW COLOR LEGEND OF EROSION CONTROL 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
Black	(0)	Permanent Erosion Control Features
Blaze Orange	(222)	Temporary Erosion Control Features

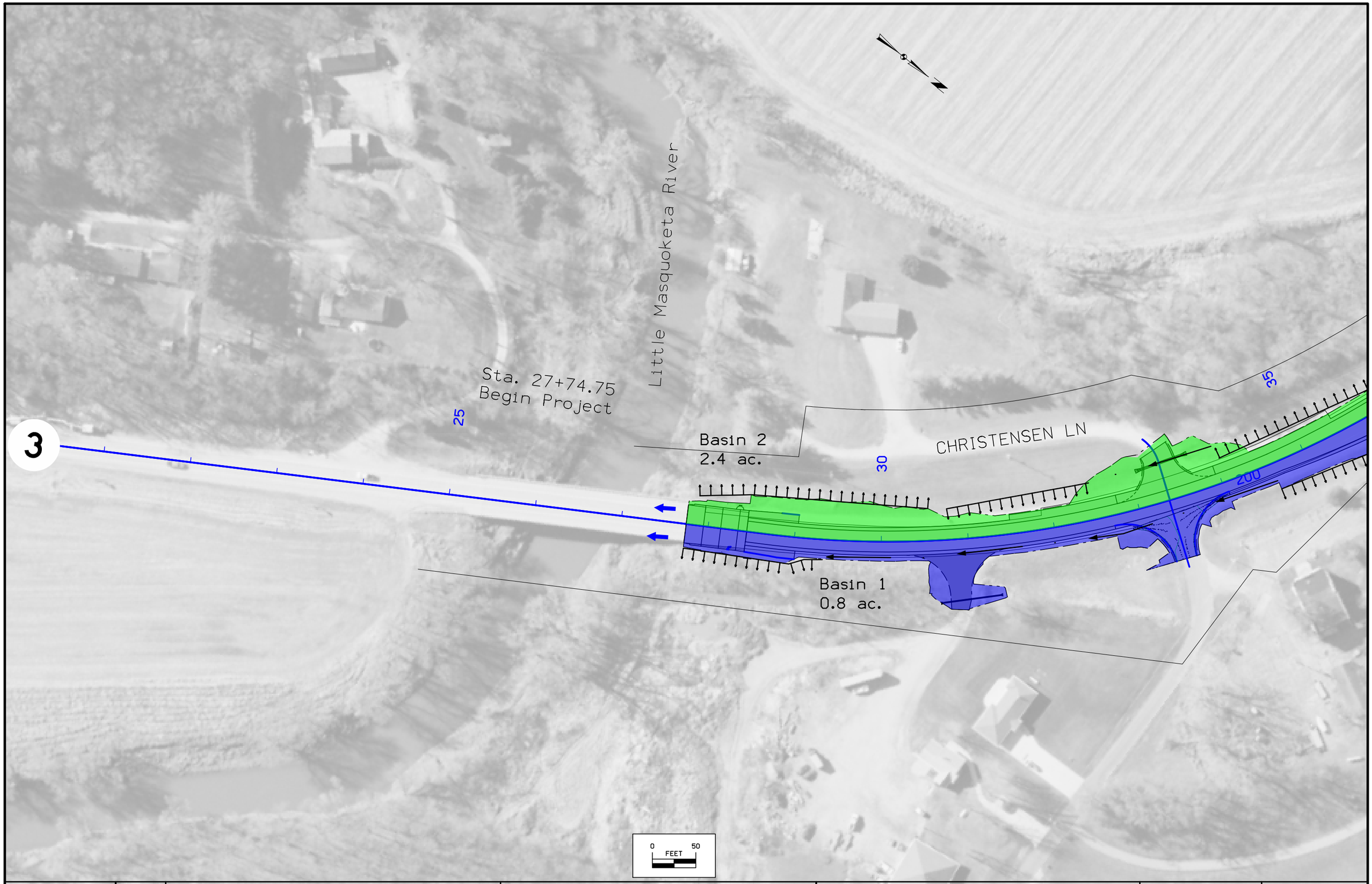
SHADING	Design Color No.		Transparency
Citron	(234)	Mulching, All Types	50%
Light Brown	(238)	Special Ditch Control, Wood Excelsior Mat	0%
Grass Green	(233)	8FT Mow Strip	50%
Red	(3)	Delineates Restricted Areas	0%

PATTERN LEGEND OF EROSION CONTROL SHEETS

Seeding and Fertilizing	Turf Reinforcement Mat Type 1
R Seeding and Fertilizing (Rural)	Turf Reinforcement Mat Type 2
U Seeding and Fertilizing (Urban)	Turf Reinforcement Mat Type 3
N Native Grass Seeding	Turf Reinforcement Mat Type 4
ST Salt Tolerant Seeding	Slope Protection, Wood Excelsior Mat
WL Wetland Grass Seeding	Transition Mat
WF Wildflower Seeding	Rock Features, Permanent
SOD Sodding	Rock Features, Temporary

EROSION CONTROL LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES R)



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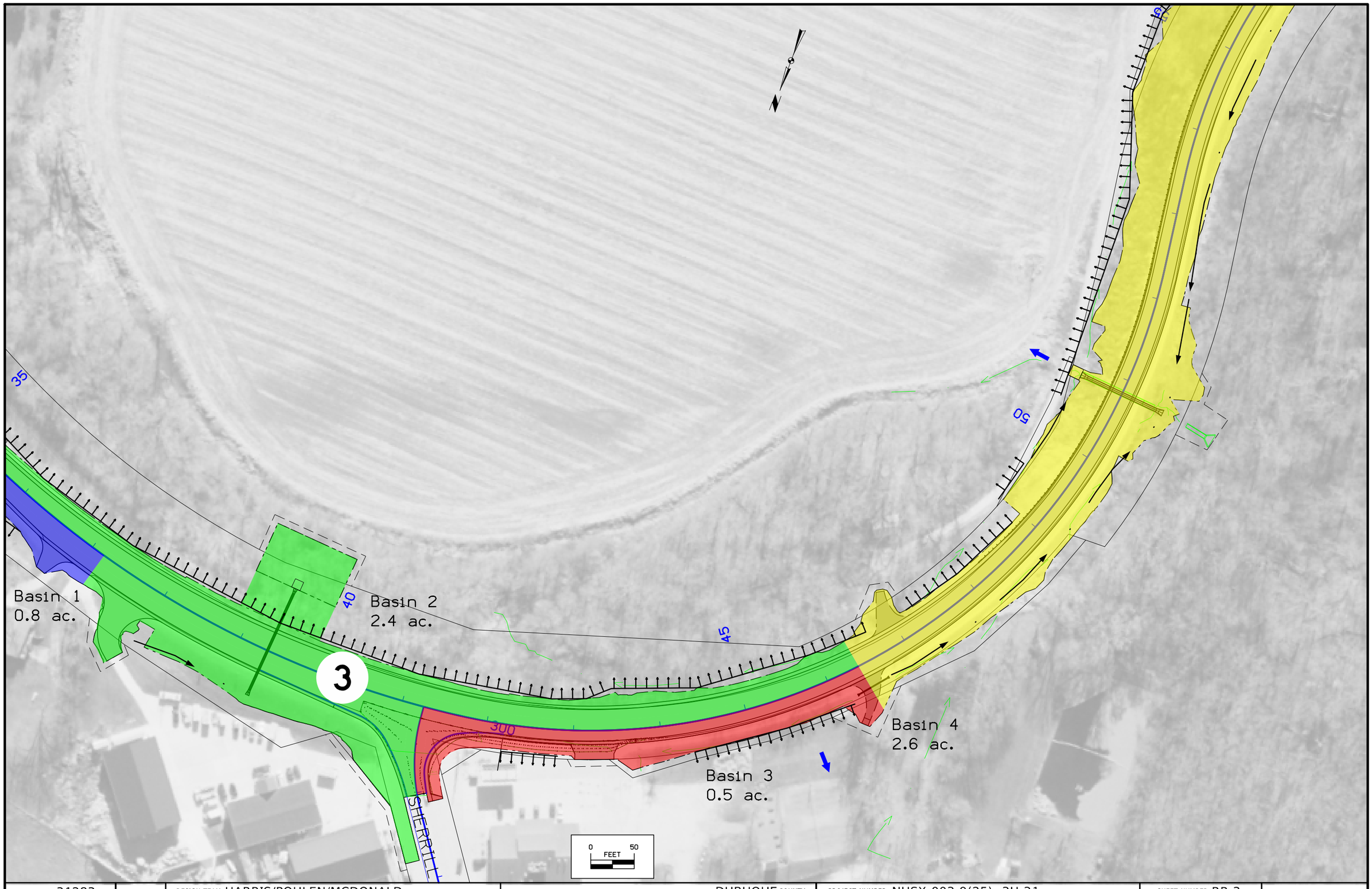

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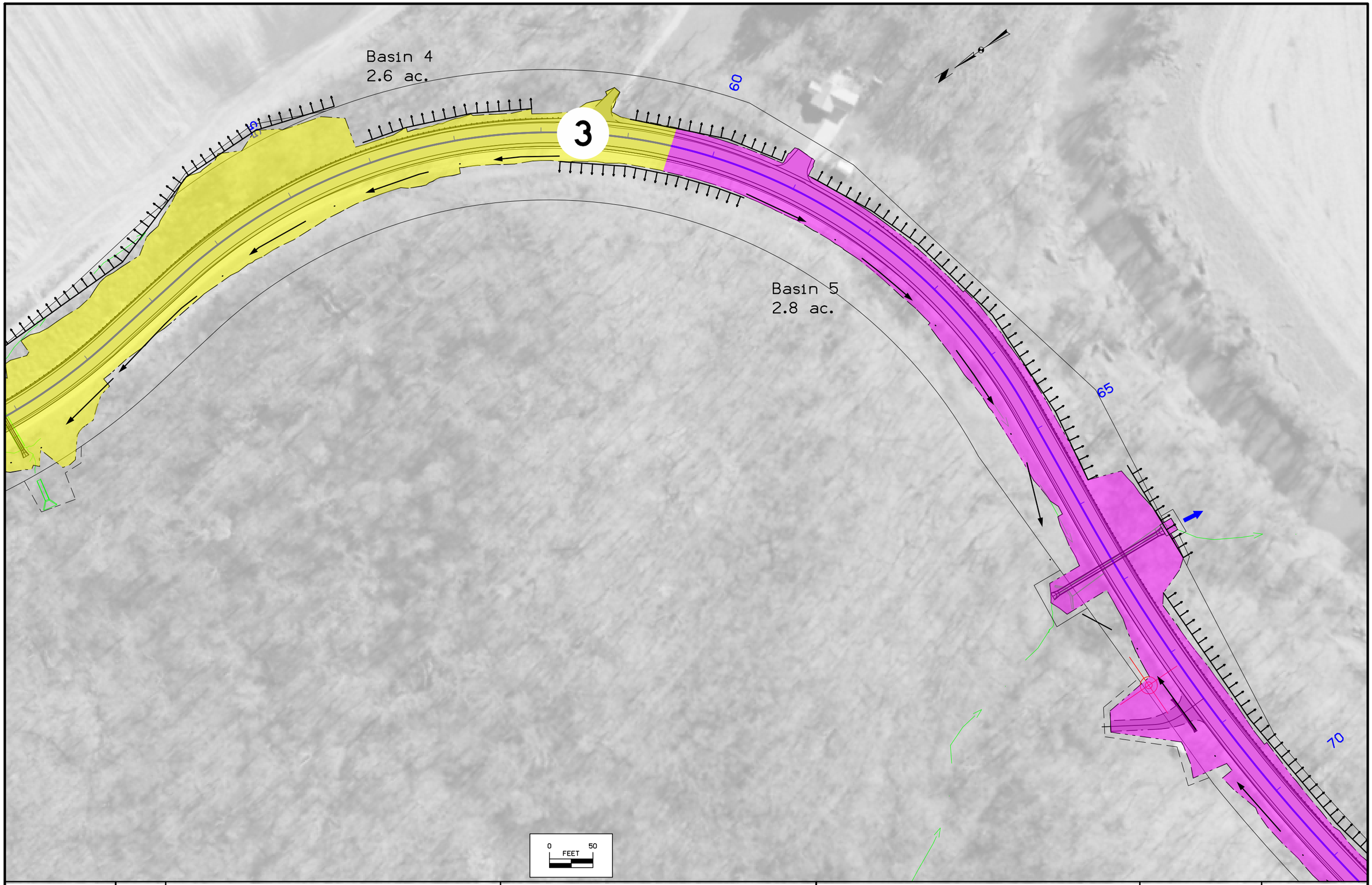

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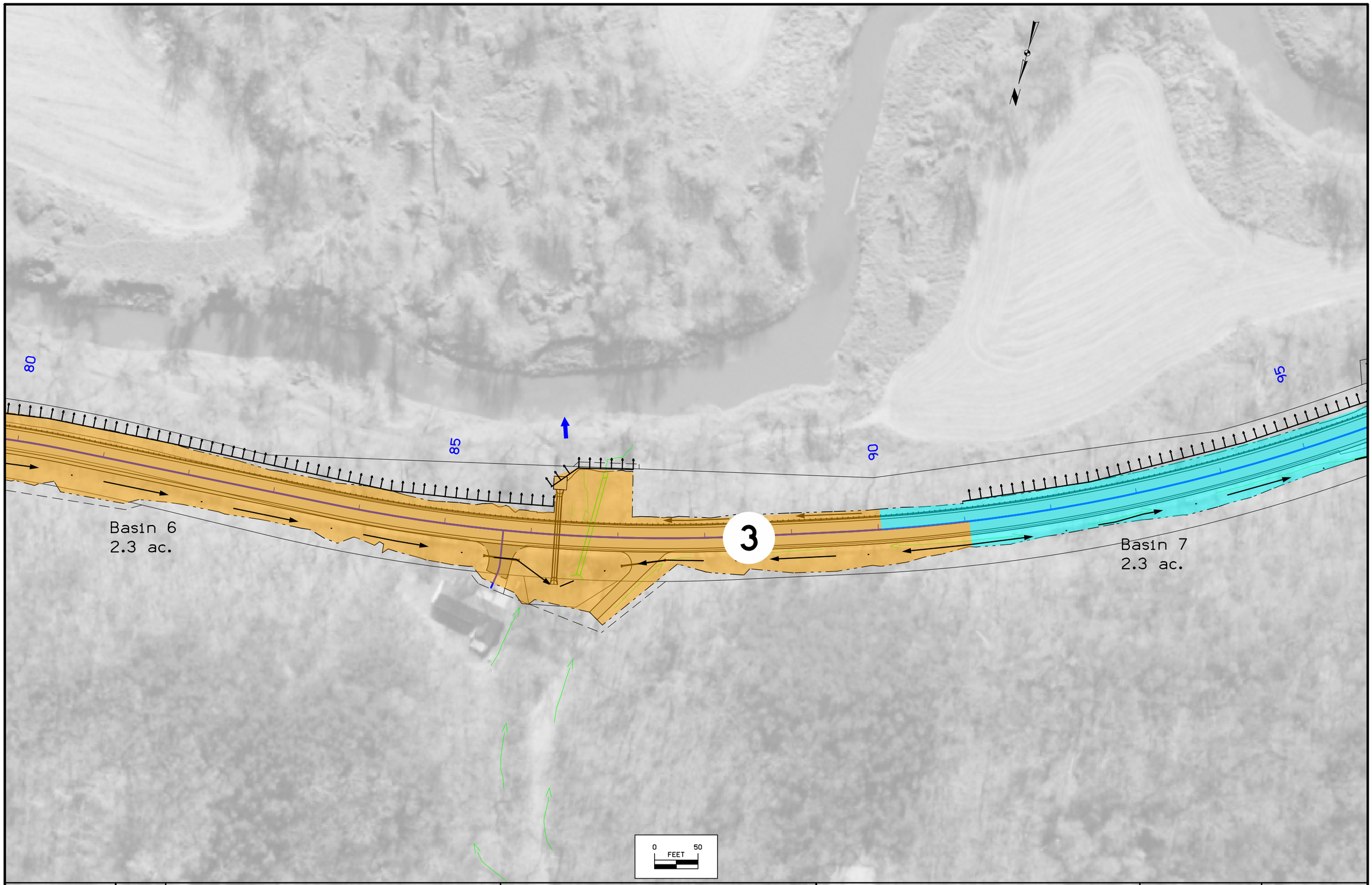

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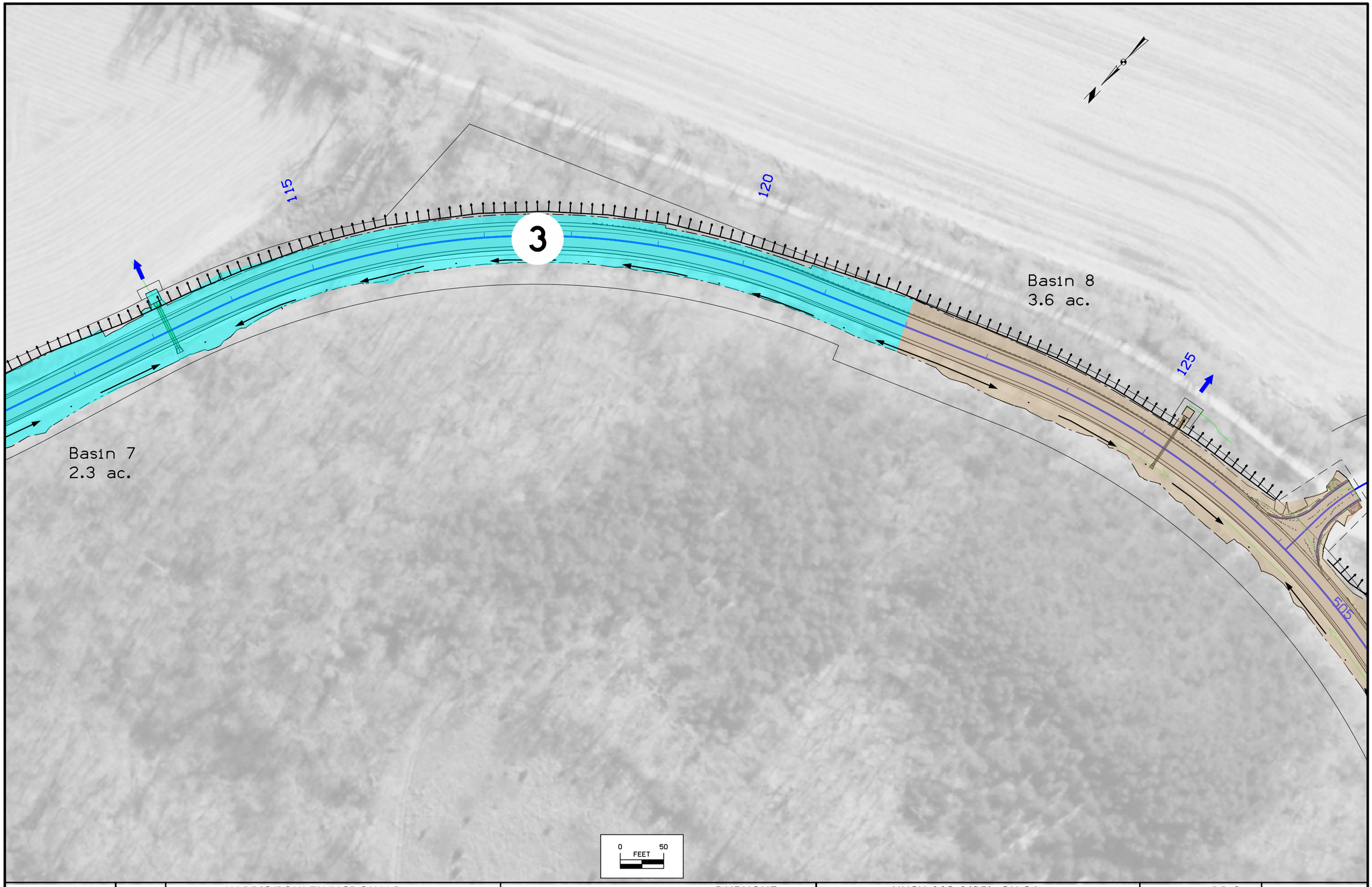

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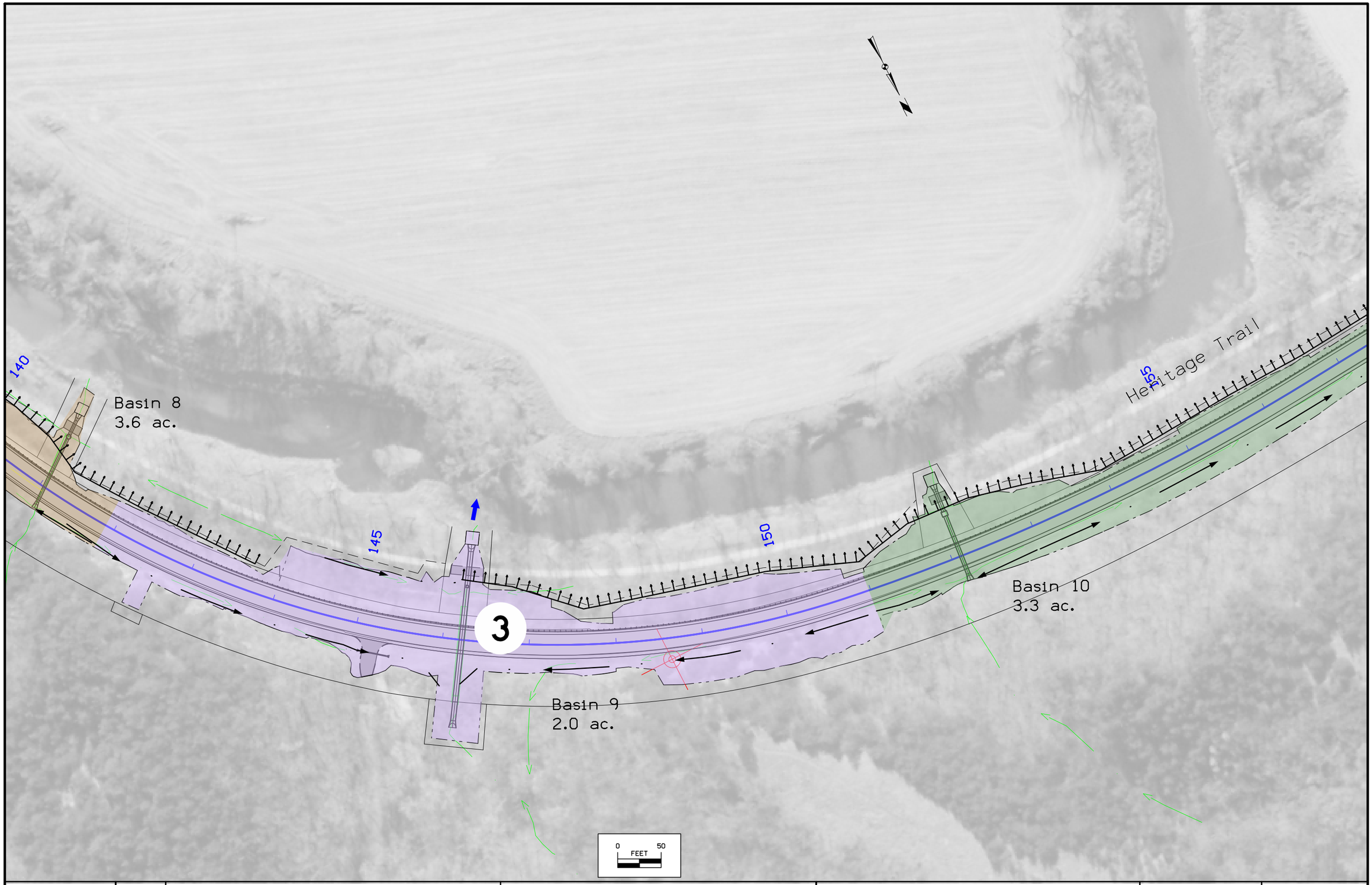

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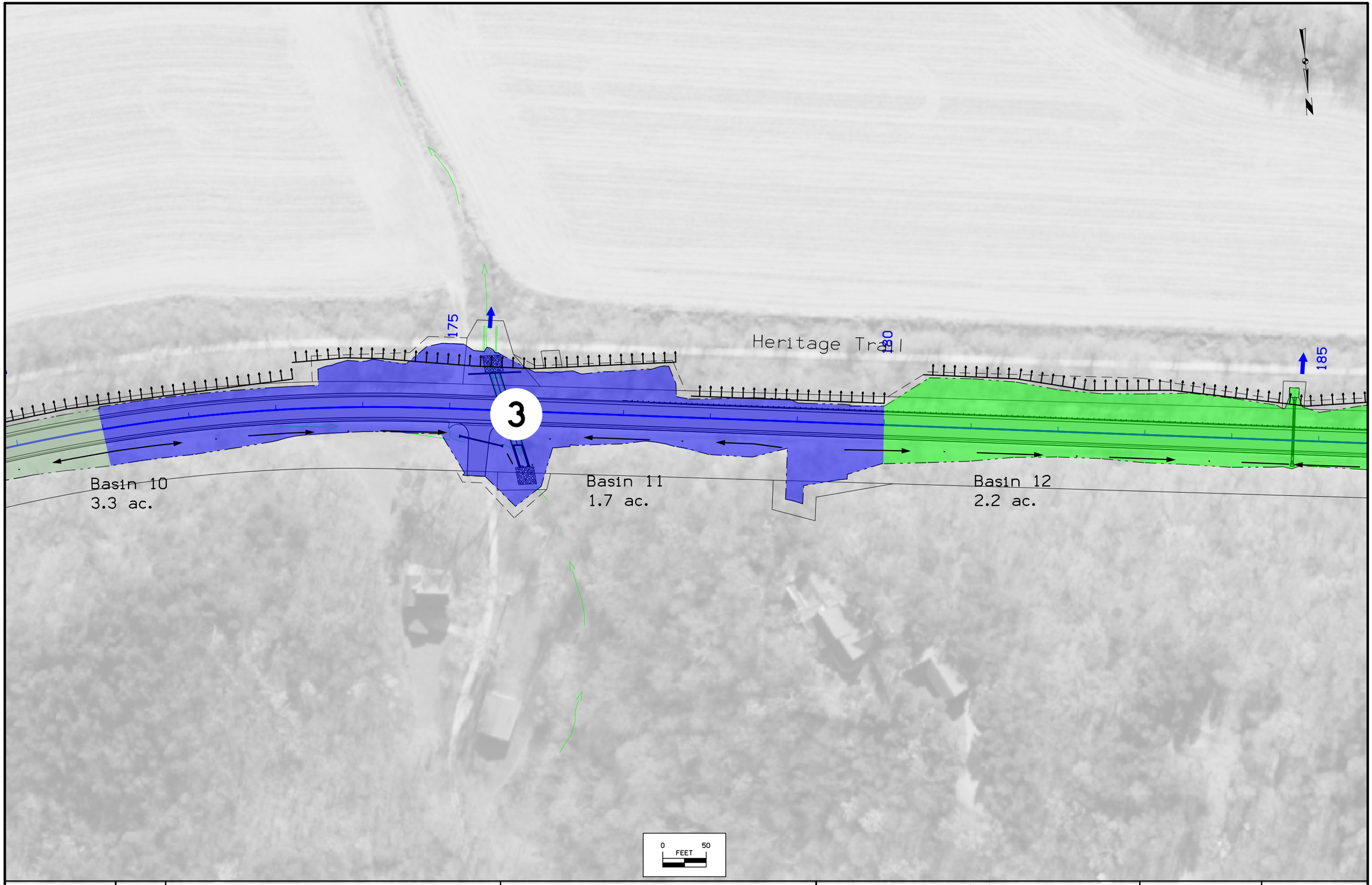

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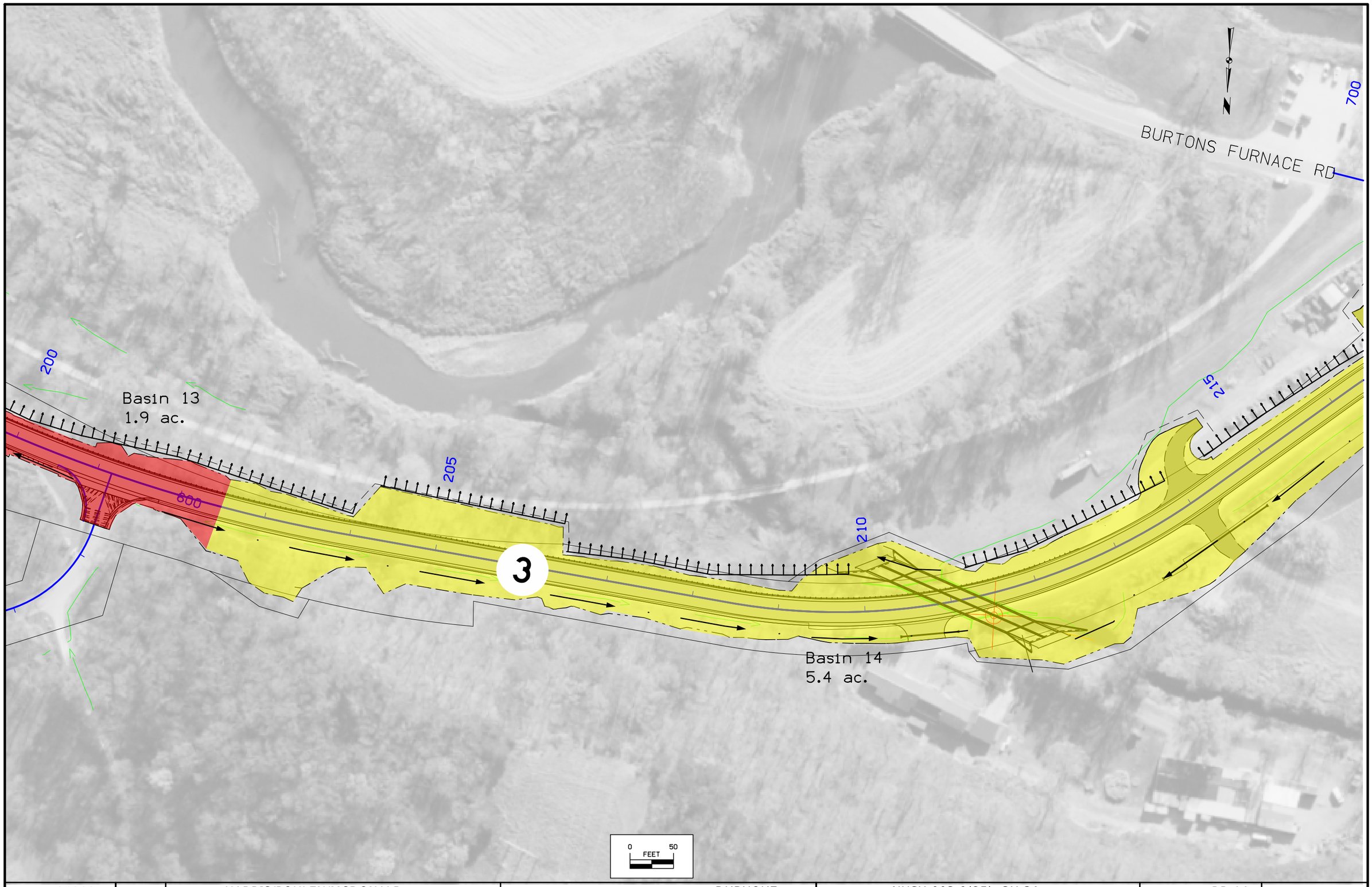

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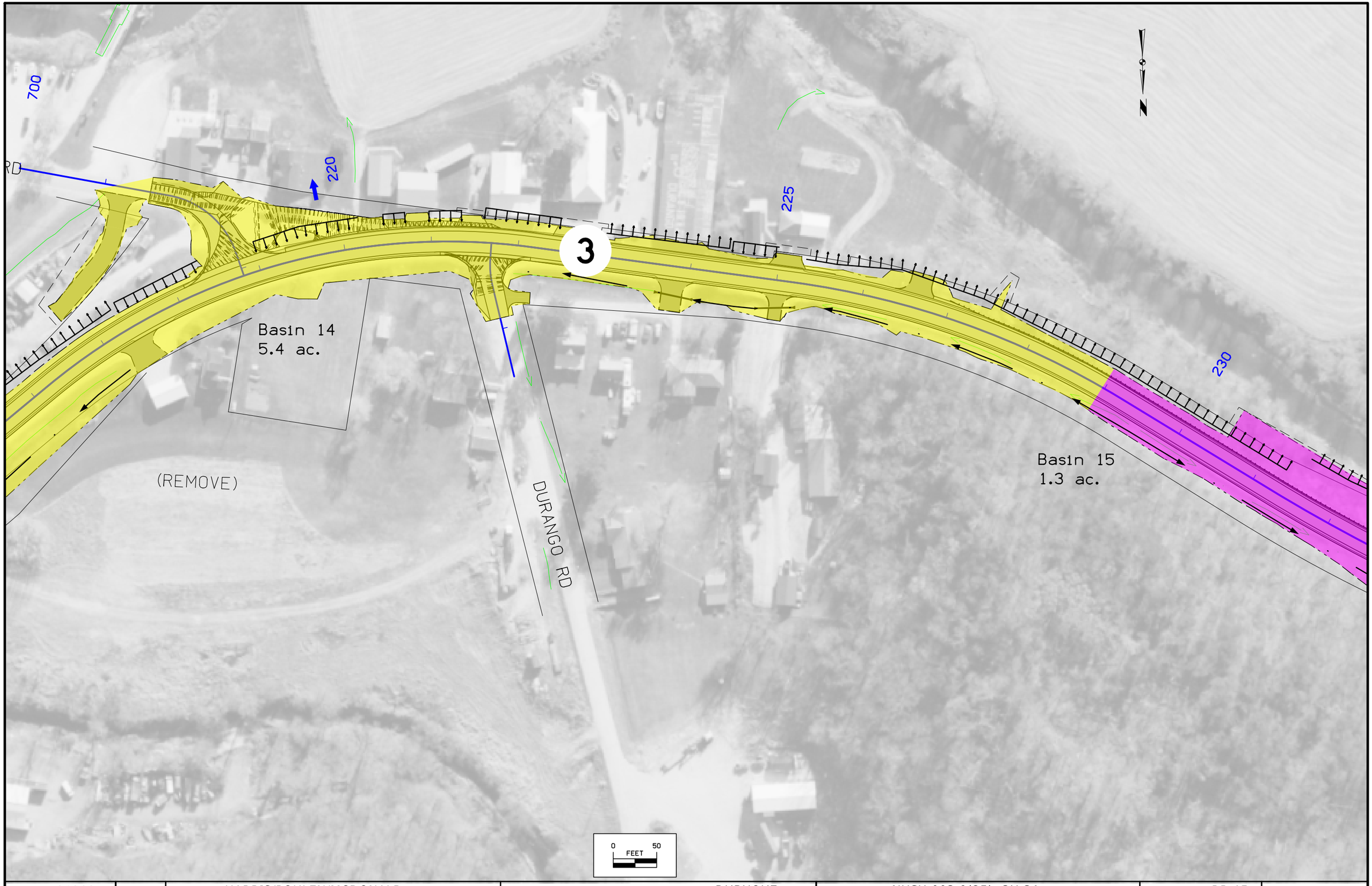

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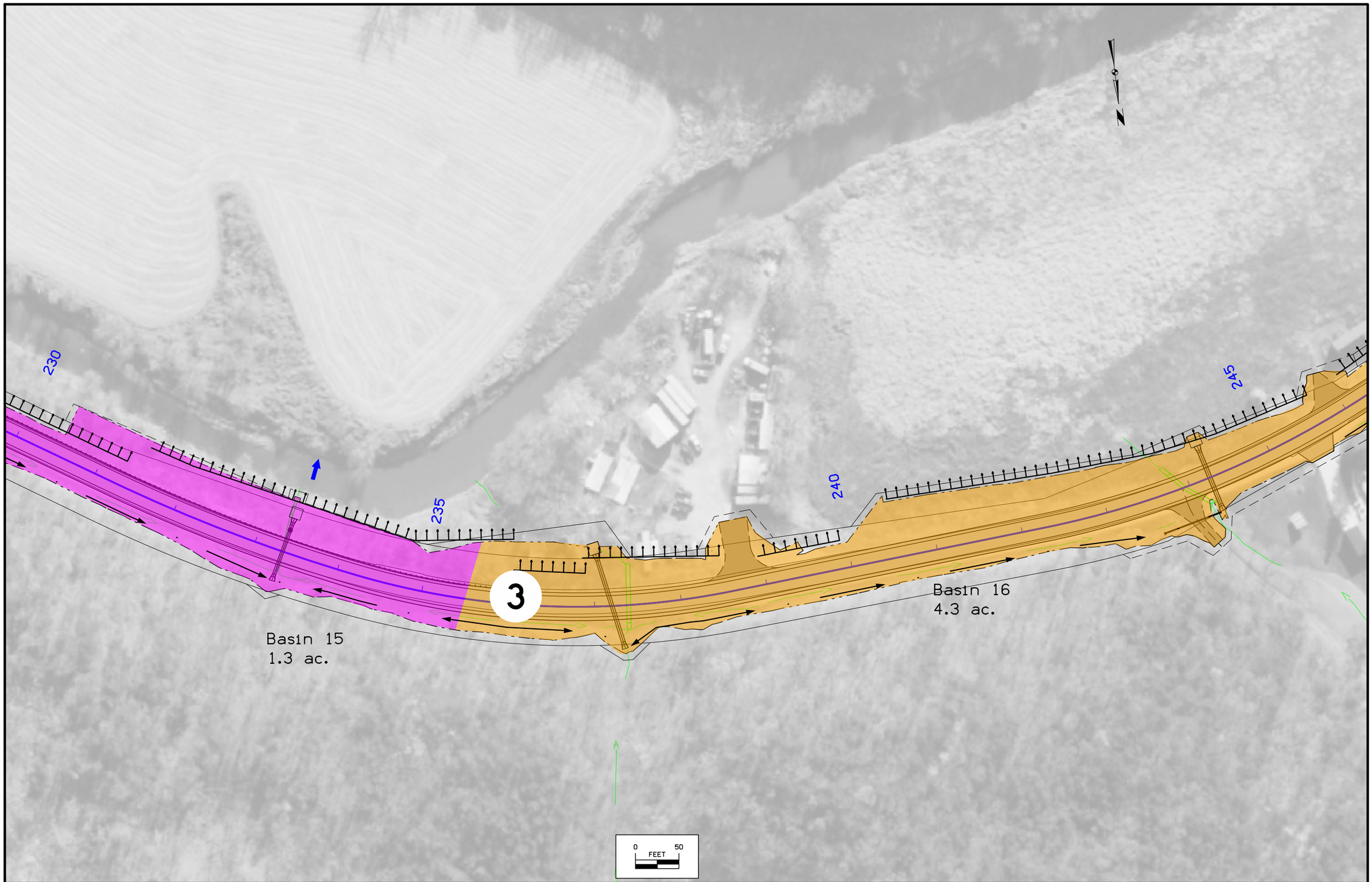

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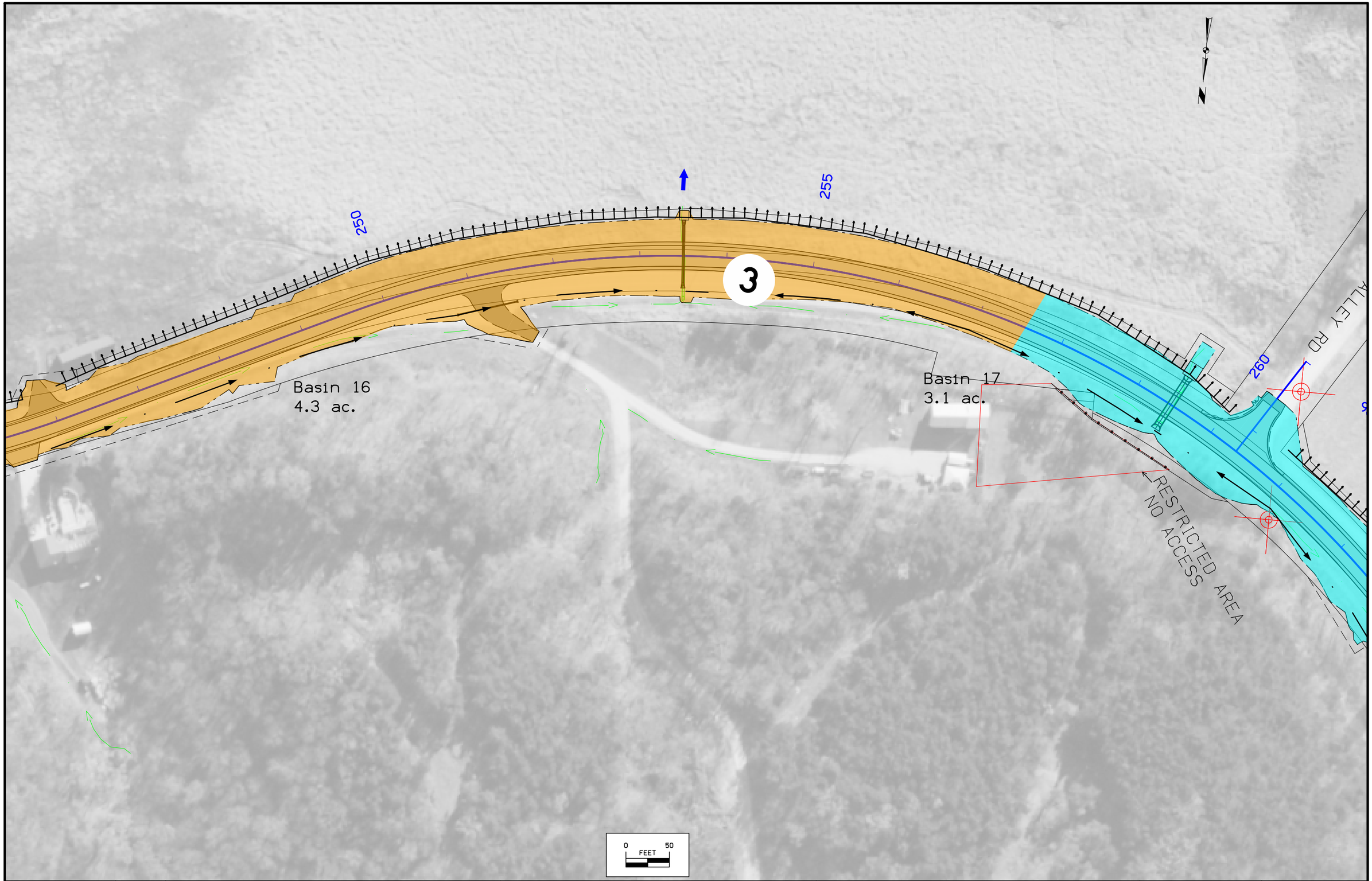

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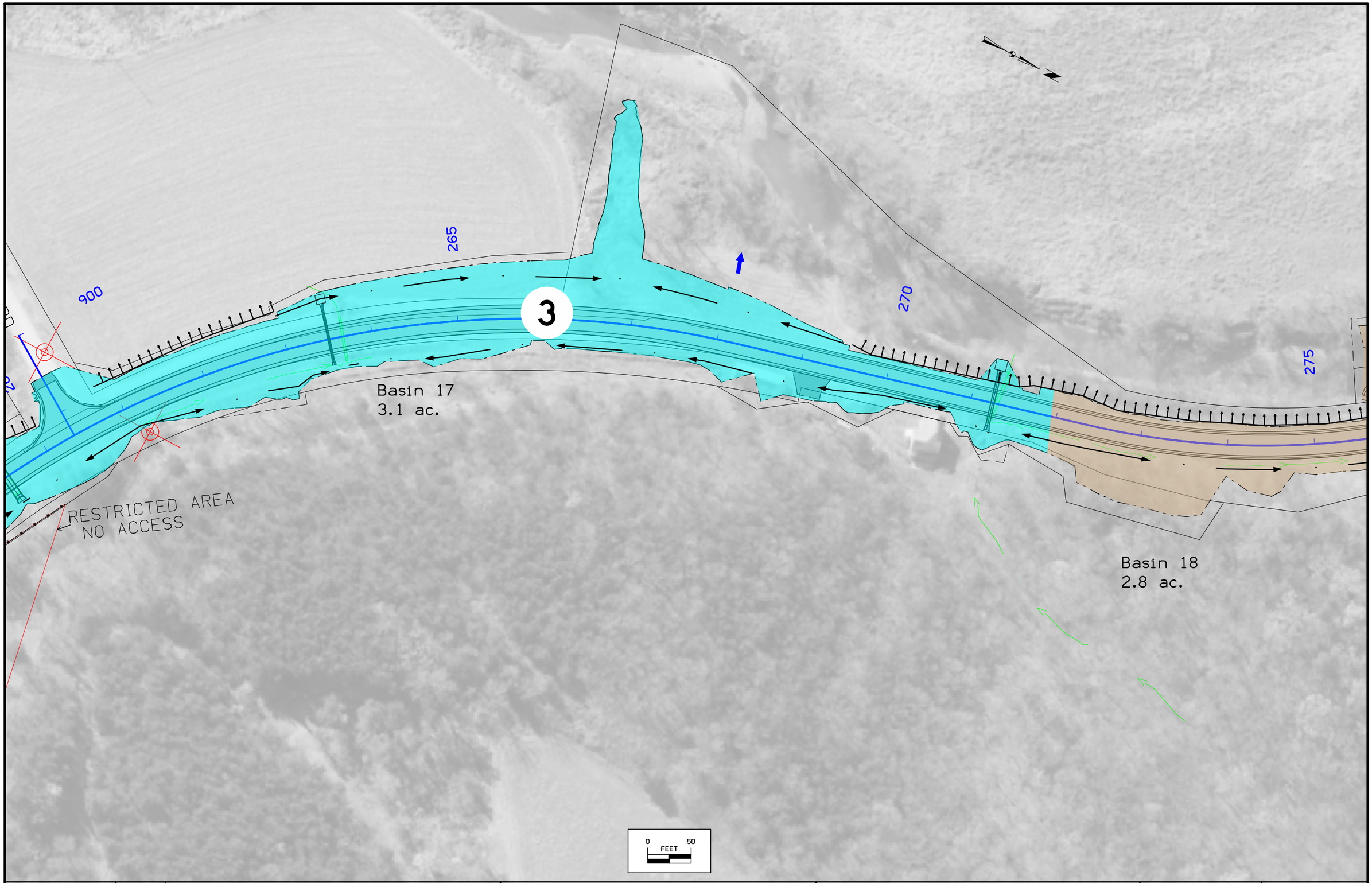

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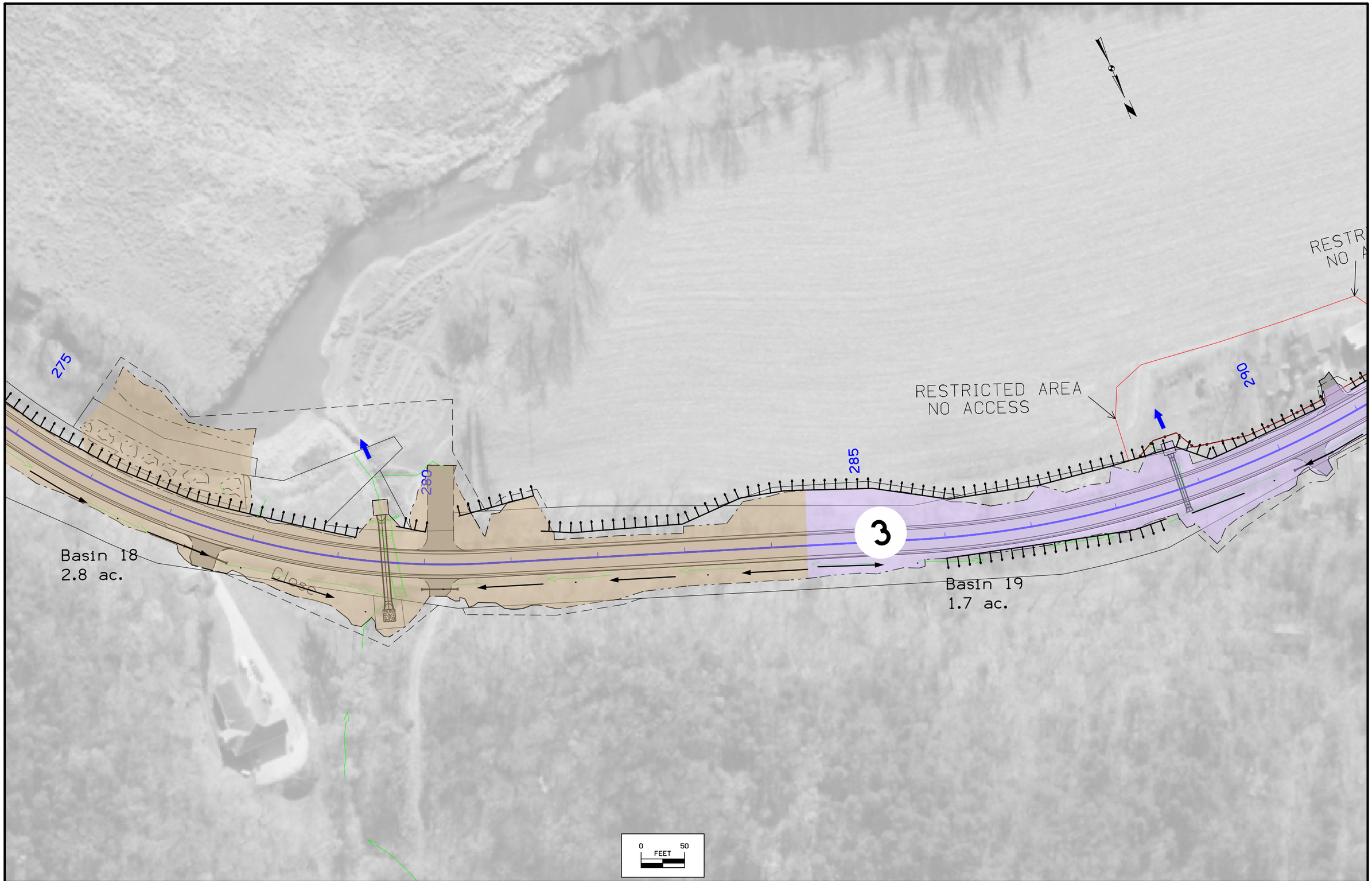

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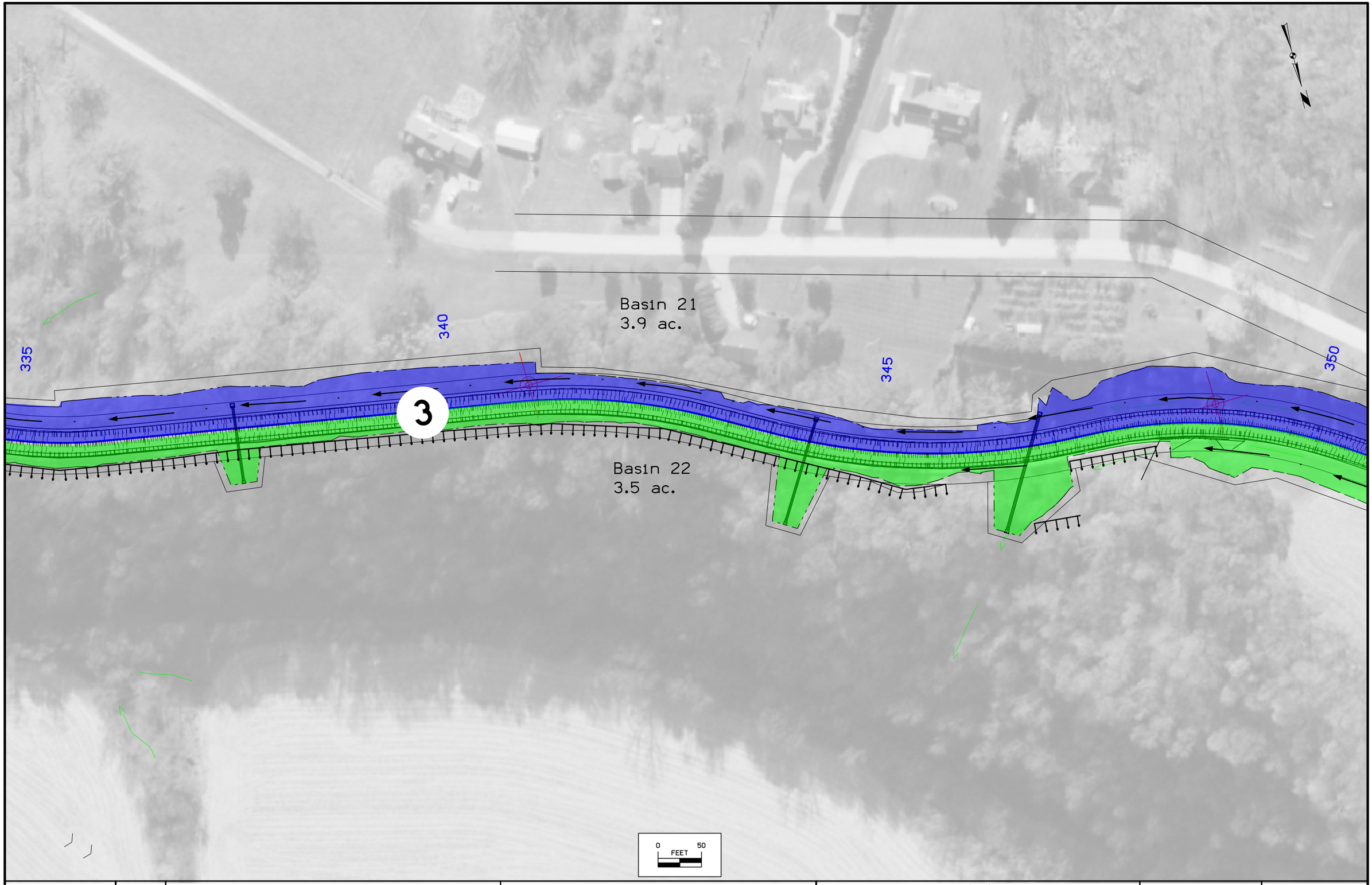

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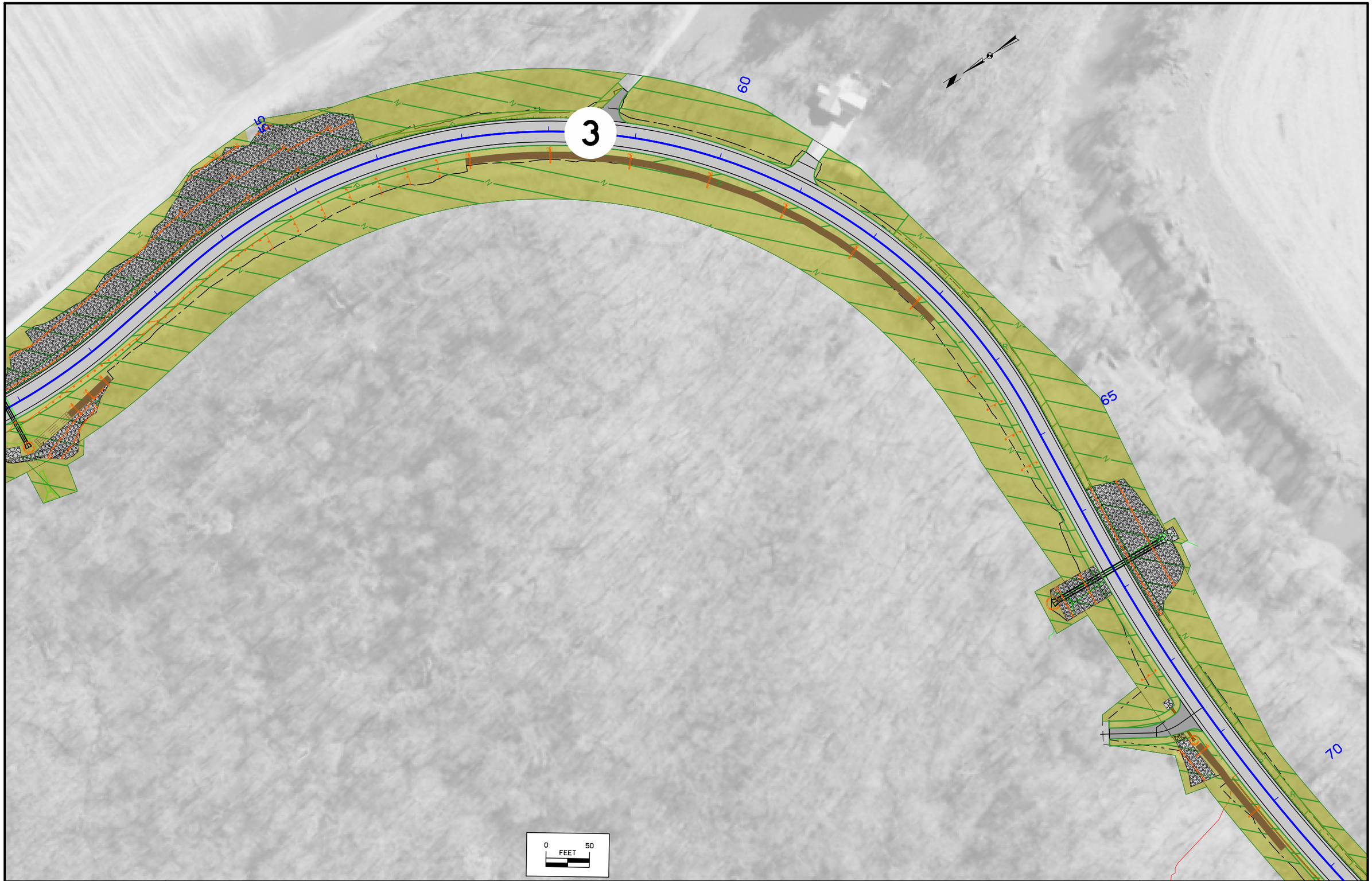

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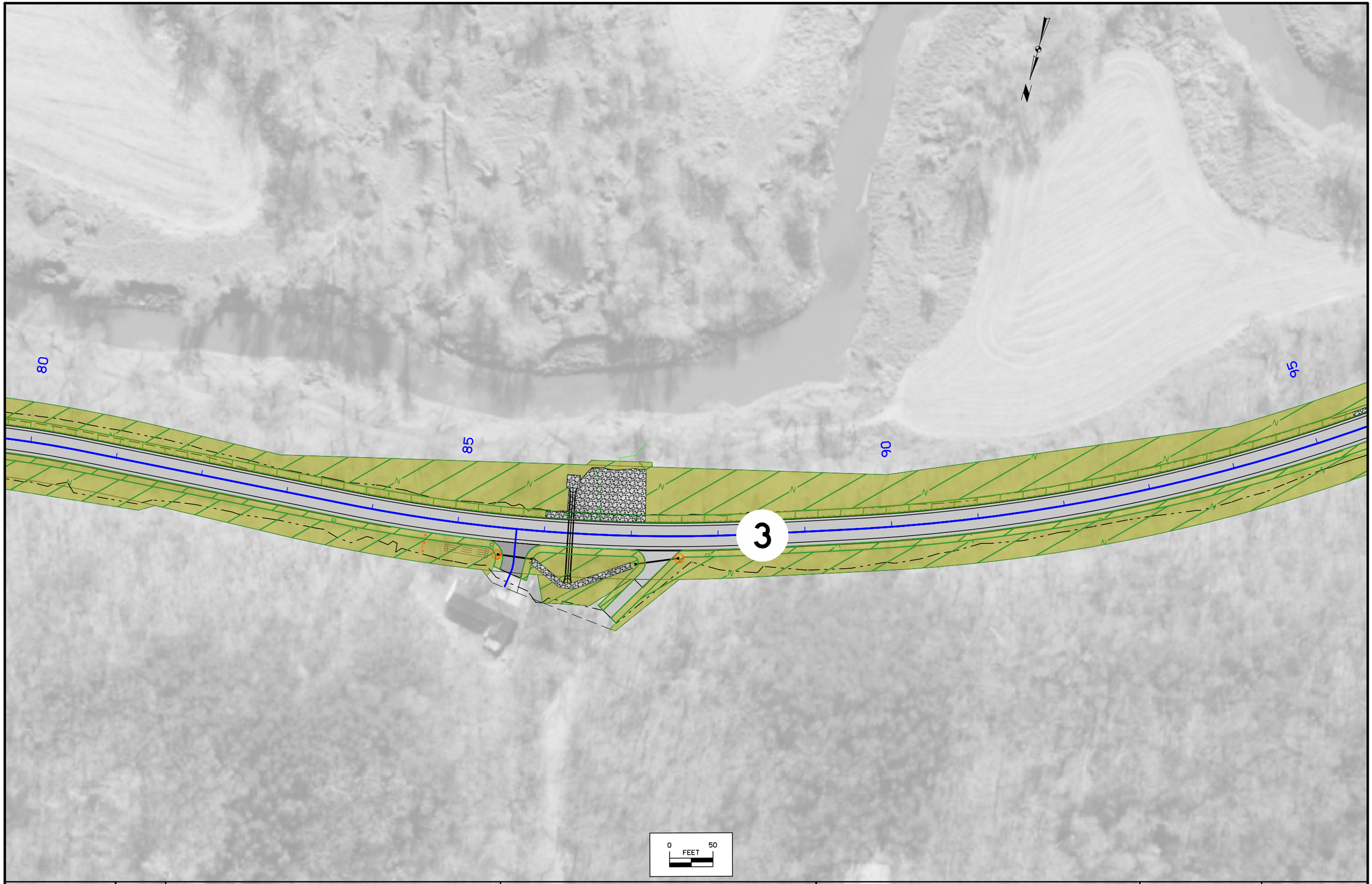

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WHISPERING HILLS DR

0 FEET 50

FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.30	

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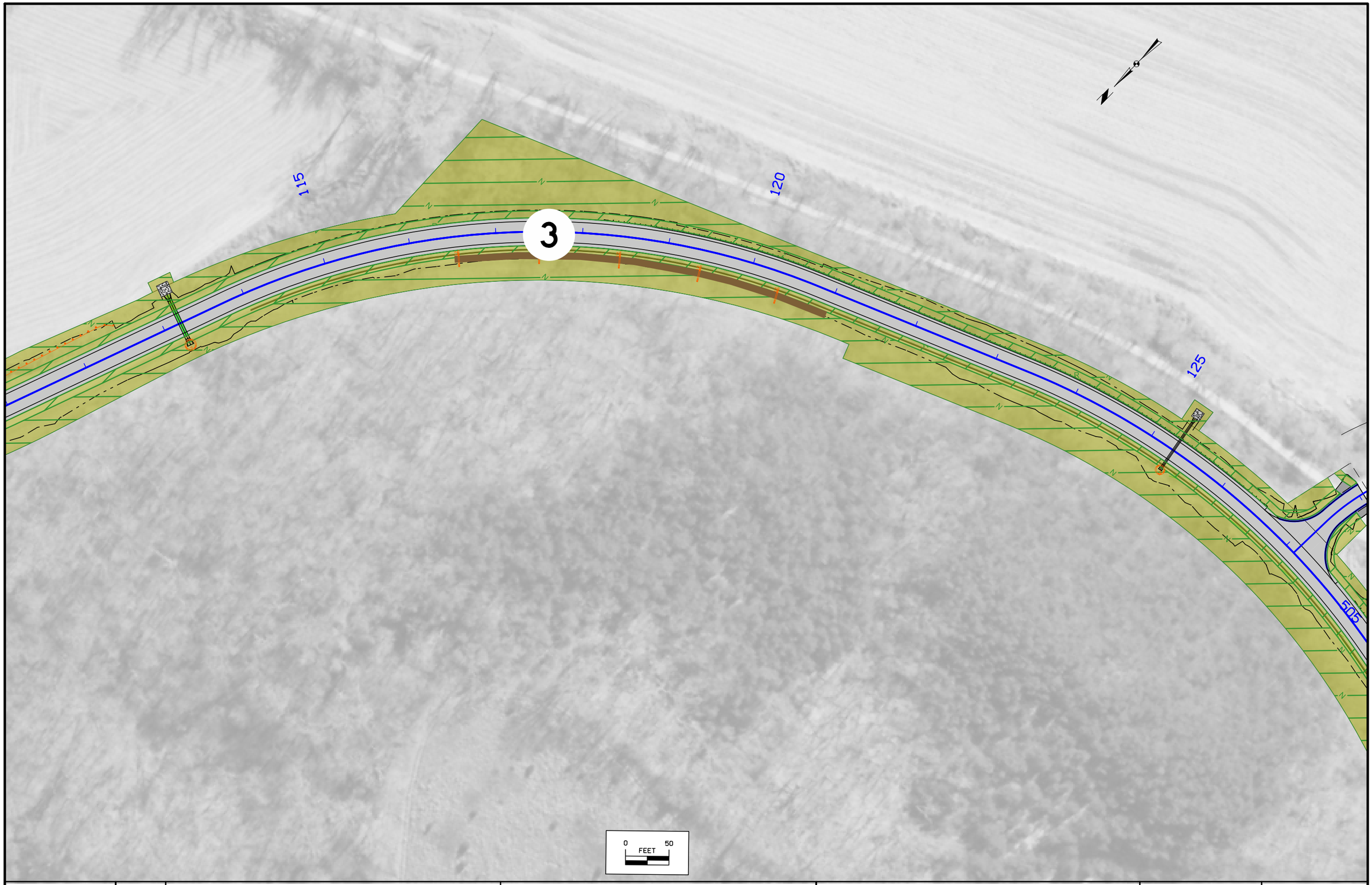

FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.31	

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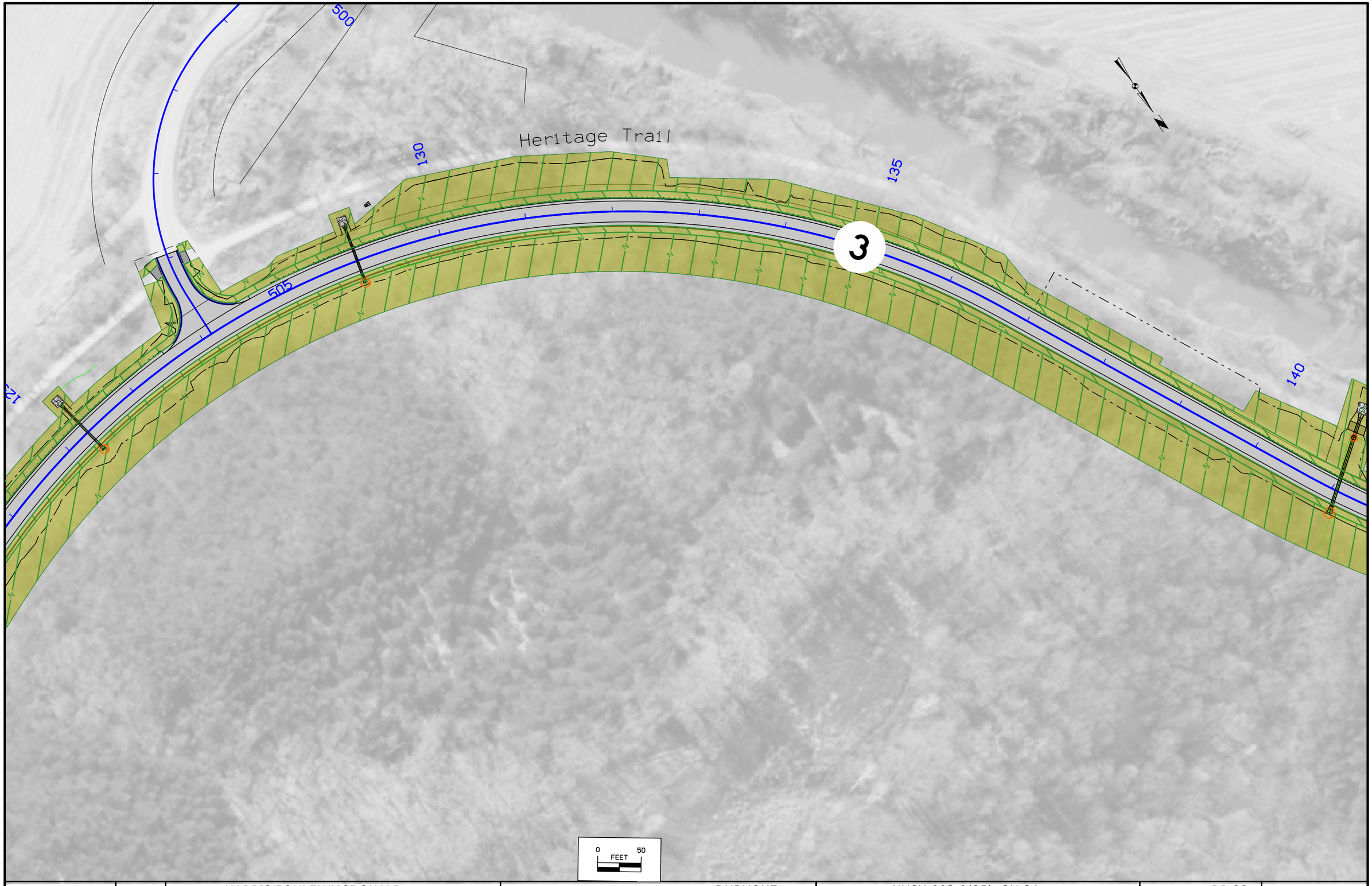

FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.32	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.33	

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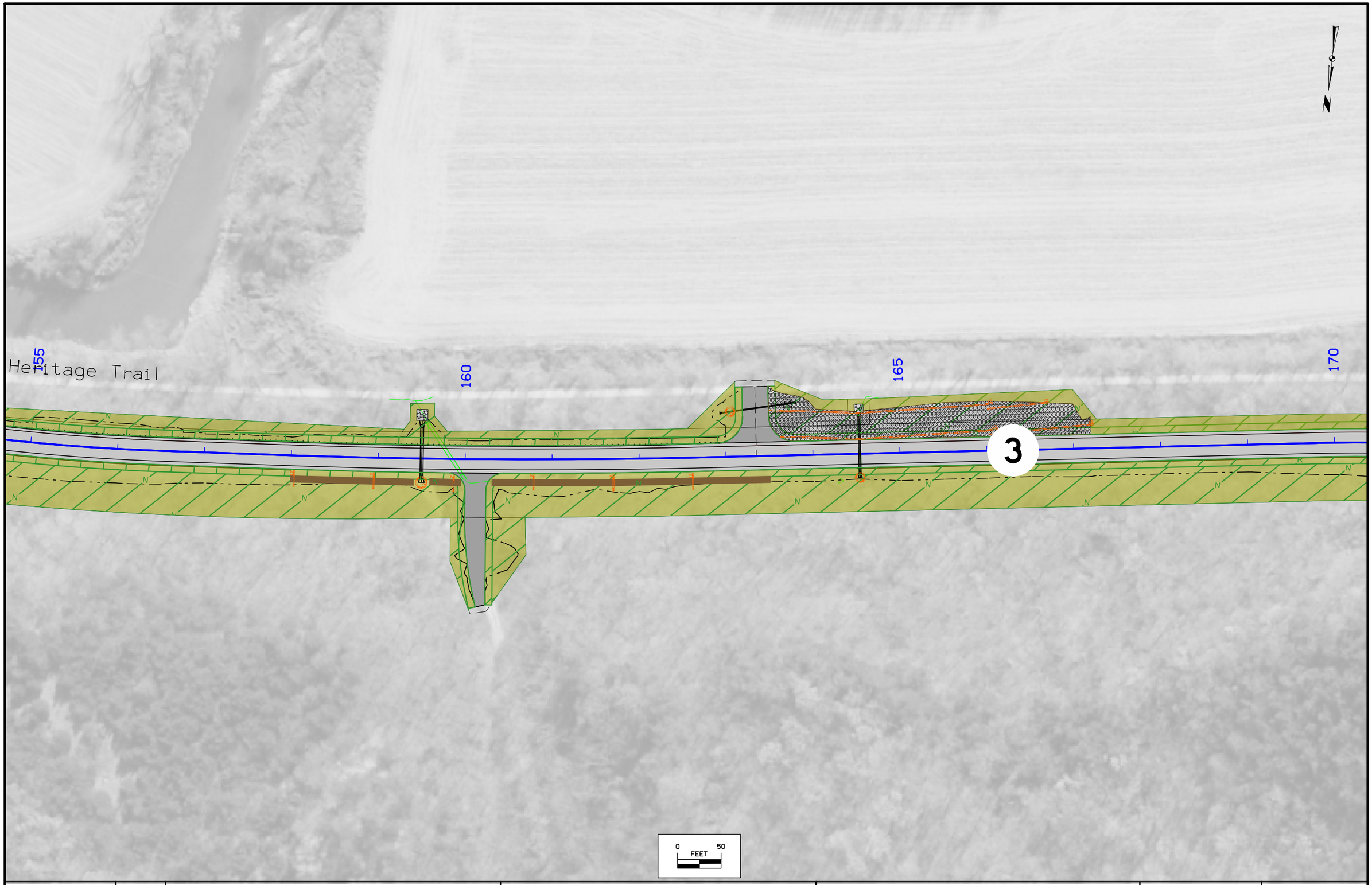

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.35	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.36	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.37	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.38	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.39	

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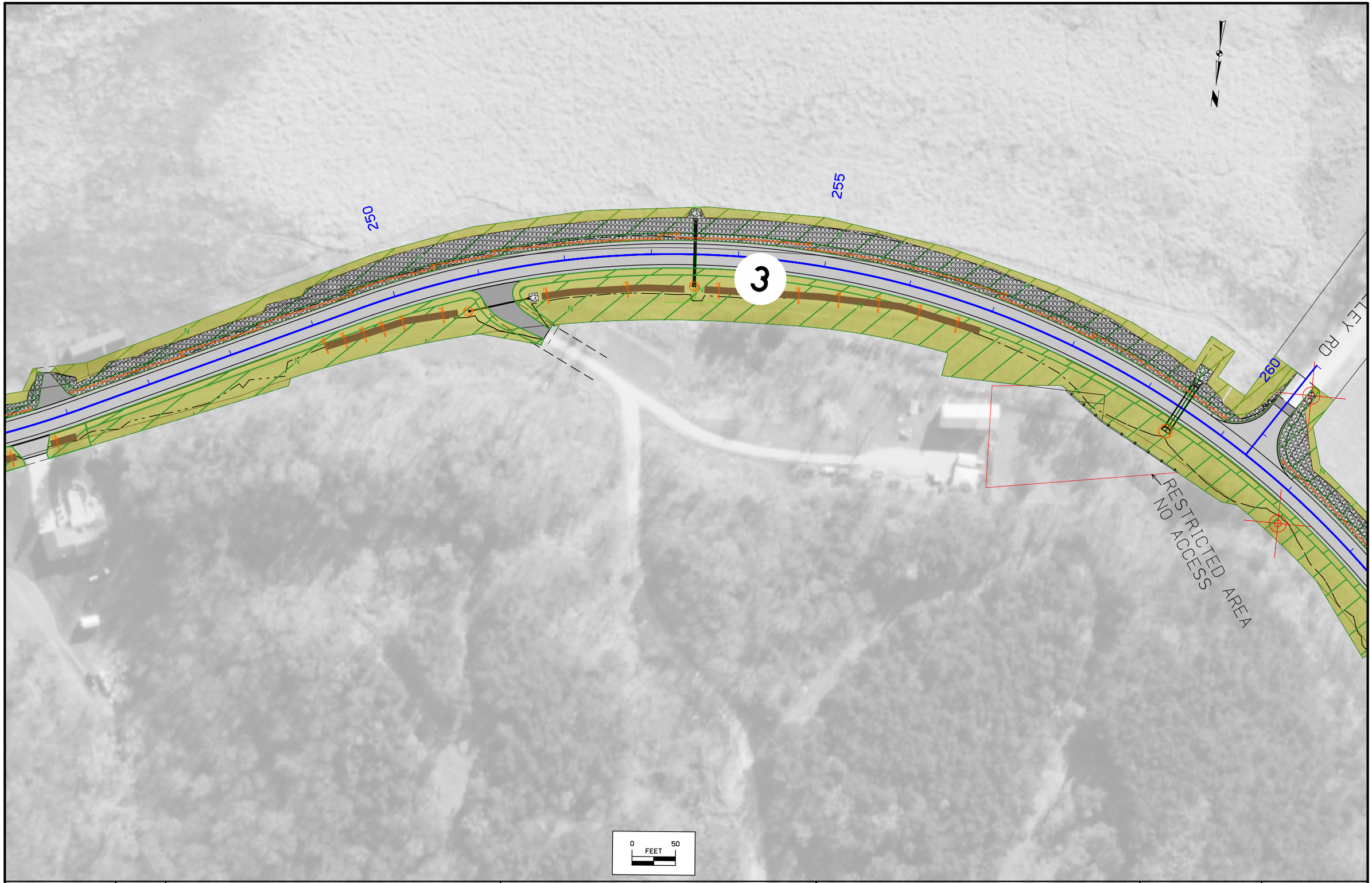

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.41	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.42	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.43	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.44	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.45	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.46	

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FILE NO. 31283	ENGLISH	DESIGN TEAM HARRIS/POHLEN/MCDONALD	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER RR.47	

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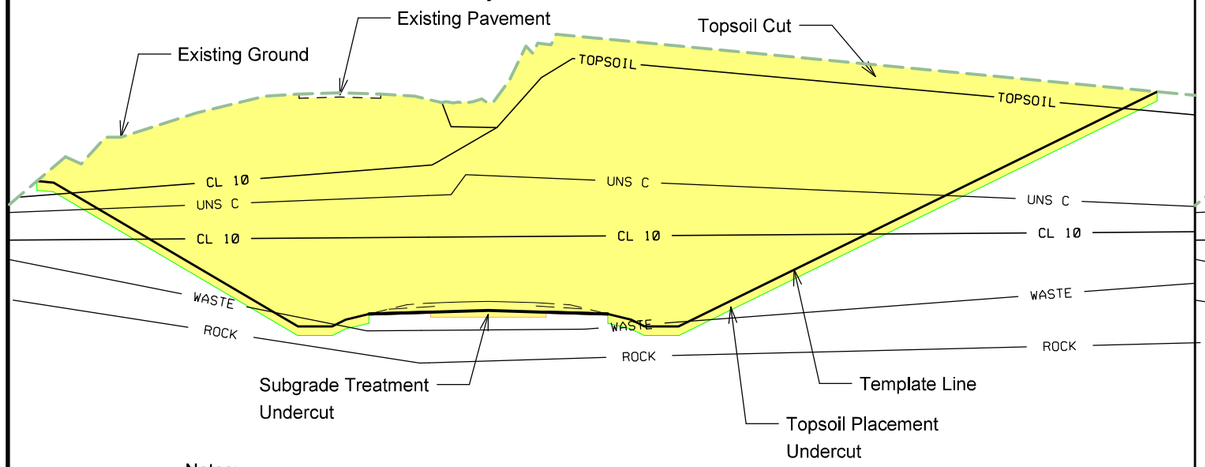
CUT SIDE Total Cut Unadjusted

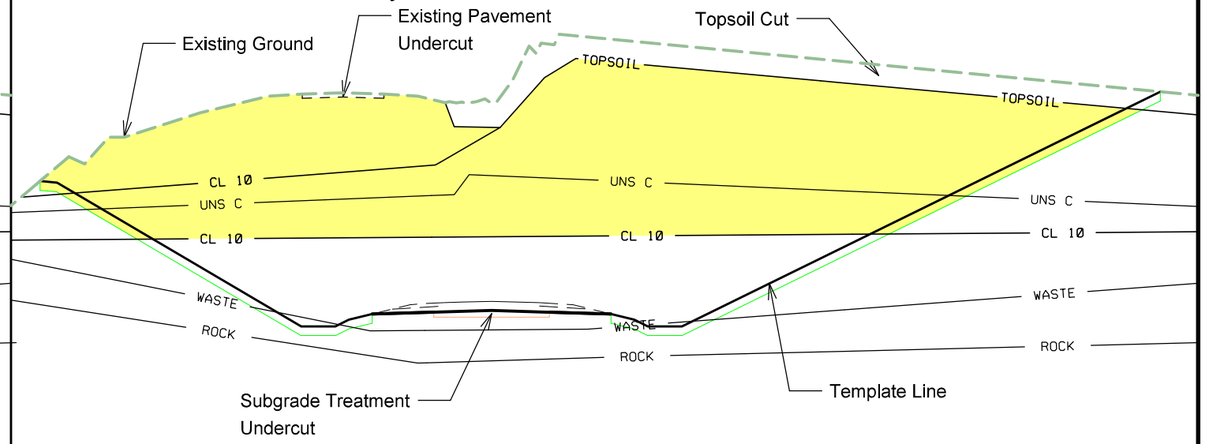
RURAL



Notes:

1. "Total Cut Unadjusted" Column includes all cut values in the Station Range based on Typical, Topsoil and Subgrade Treatment needs.
2. "Total Cut Unadjusted" does not include and Existing Pavement values inside or outside the cut template as shown on cross sections.
3. Tabulated Plowing and Shaping operations are included in the "Total Cut Unadjusted" values.

CUT SIDE Total Cut Adjusted

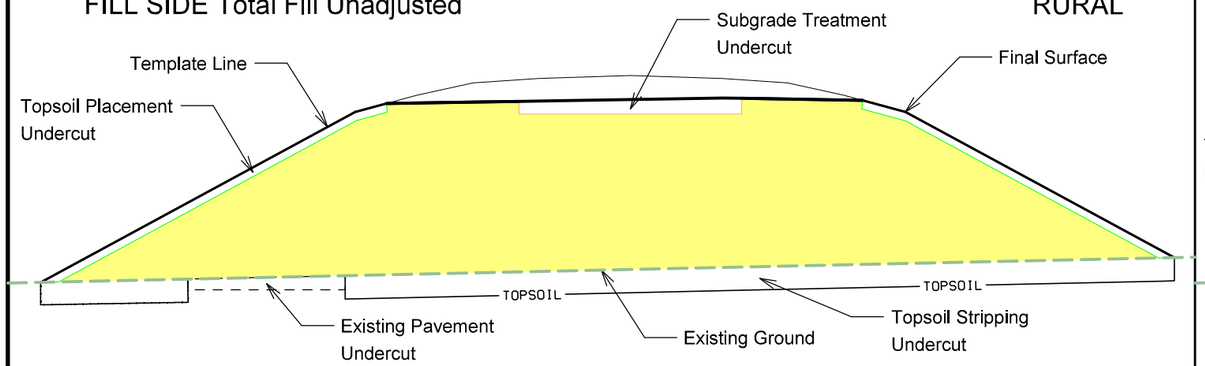


Notes:

1. "Total Cut Adjusted" Column includes all cut values usable as Class 10 material.
2. "Total Cut Adjusted" does not include and Existing Pavement , Existing Topsoil, or material to be wasted.

FILL SIDE Total Fill Unadjusted

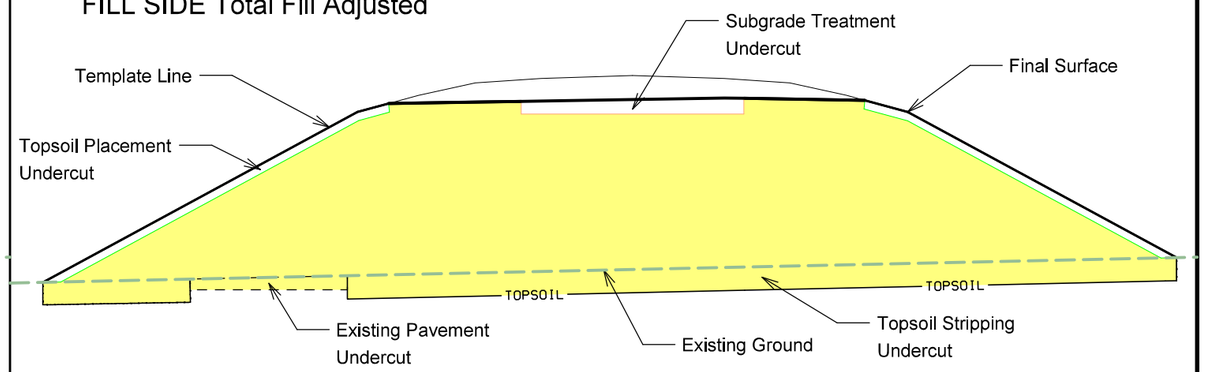
RURAL



Notes:

1. "Total Fill Unadjusted" Column includes all Class 10, 12, and 13 fill. This excludes the topsoil, subgrade treatment, subbase, new pavement, and shoulder fill needs in that station range.
2. "Total Fill Unadjusted" Column does not include adjustments for additional fill from cuts such as existing pavement removed, plowing and shaping operations, entrances, dikes, or topsoil stripping.

FILL SIDE Total Fill Adjusted

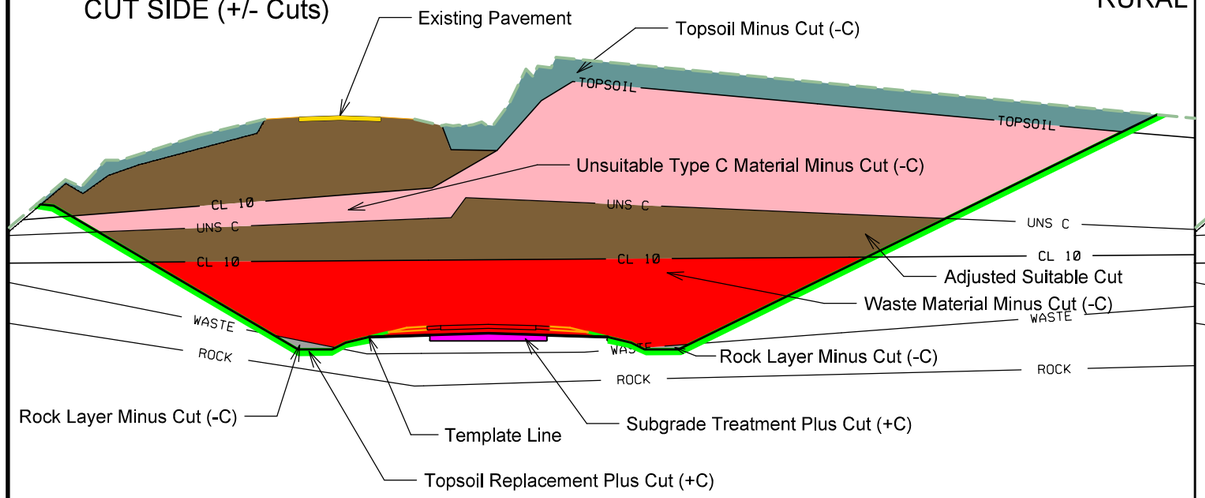


Notes:

1. "Total Fill Adjusted" Column includes all Class 10, 12, and 13 fill and adjustments for additional fill from cuts such as existing pavement, plowing and shaping operations, entrances, dikes, and topsoil stripping.
2. The available area to place unsuitable materials in the T Sheet tabulation does not include the undercut values from the topsoil stripping, existing pavement, or plowing and shaping

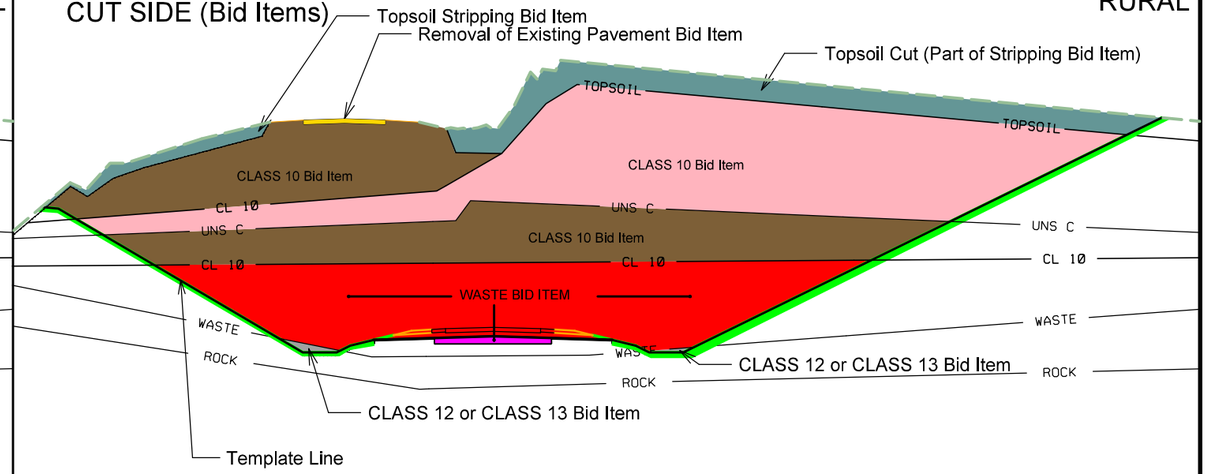
CUT SIDE (+/- Cuts)

RURAL



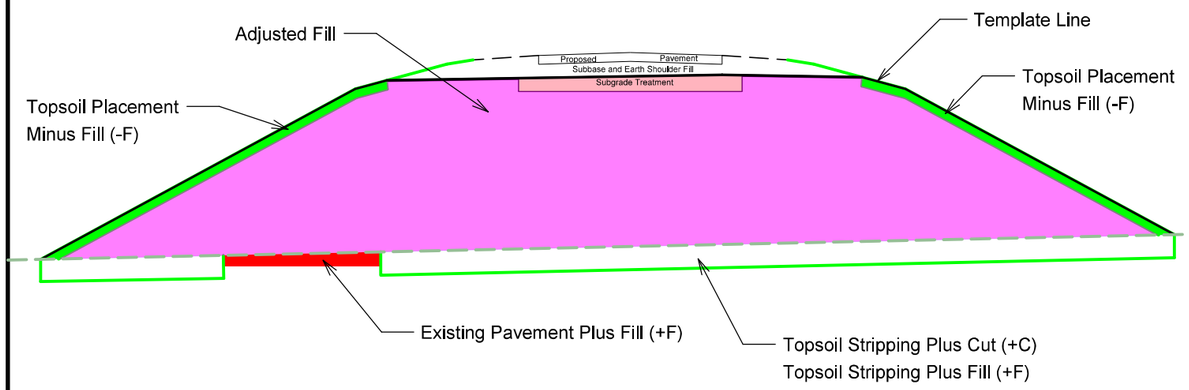
CUT SIDE (Bid Items)

RURAL



FILL SIDE (+/- Fills)

RURAL

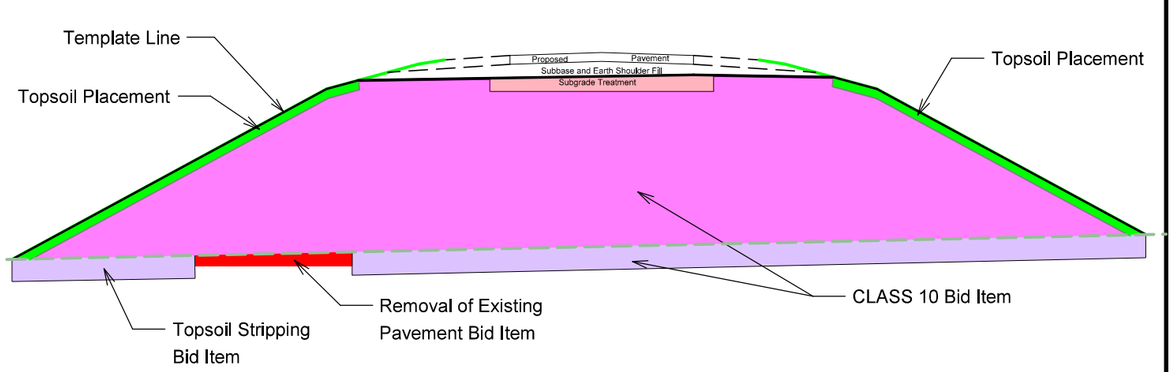


Notes:

1. "Add Quantity +C" columns are additional cut encountered that is not Typical, Topsoil, or Subgrade Treatment Based. (Entrance, Dike, Etc.)
2. "-C" columns are either soil types or Class 10, 12, or 13 designated material that is encountered in the cut station range that is paid for by other bid items.
3. The "(SoilType) Cut" columns are soil types encountered in the cut that are paid by either Class 10, 12 or 13.
4. The "Adjusted Clas (10,12 or 13)" columns are the sum of all various soil types encountered in that station range, that are paid by Class 10, 12, or 13 bid items.
5. Refer to Standard Road Plan EW-102 for placement of unsuitable soil types.

FILL SIDE (Bid Items)

RURAL



Notes:

1. Refer to Standard Road Plan EW-102 for placement of unsuitable soil types.

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.1B

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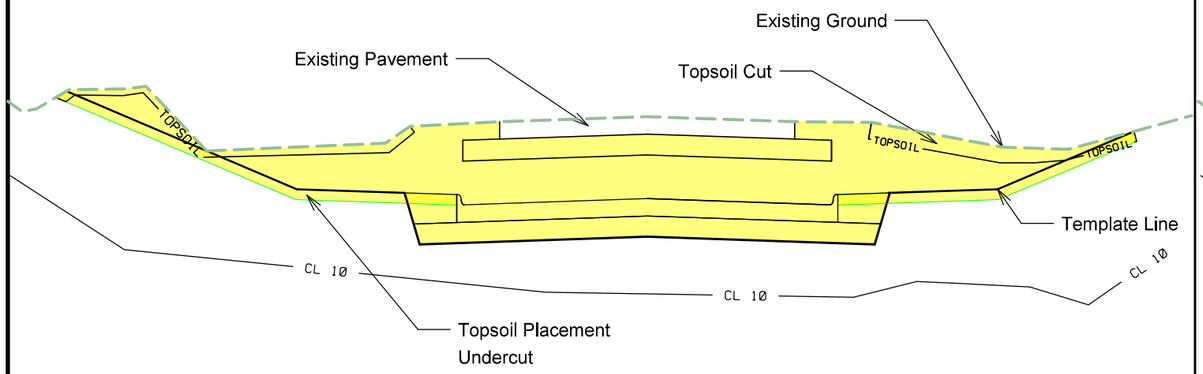
CUT SIDE Total Cut Unadjusted

URBAN

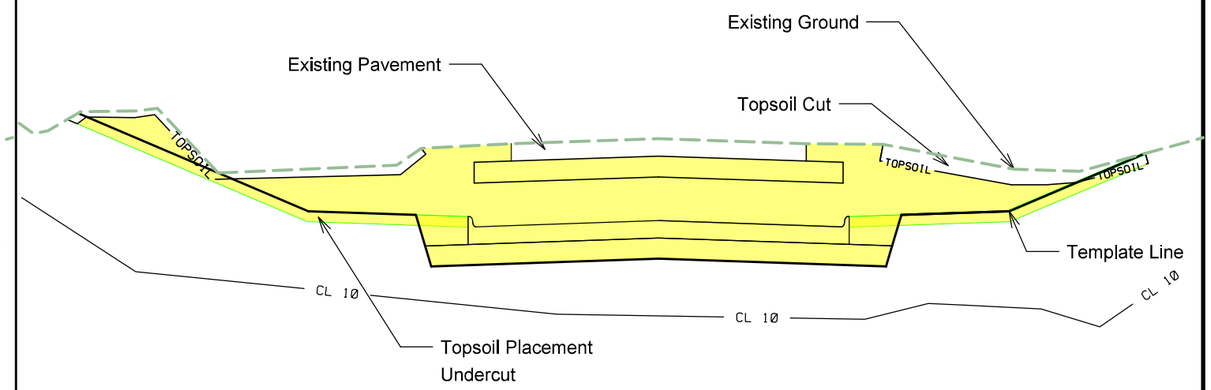


Notes:

1. "Total Cut Unadjusted" Column includes all cut values in the Station Range based on Typical, Topsoil and Subgrade Treatment needs.
2. "Total Cut Unadjusted" does not include and Existing Pavement values inside or outside the cut template as shown on cross sections.
3. Tabulated Plowing and Shaping operations are included in the "Total Cut Unadjusted" values.

CUT SIDE Total Cut Adjusted

URBAN

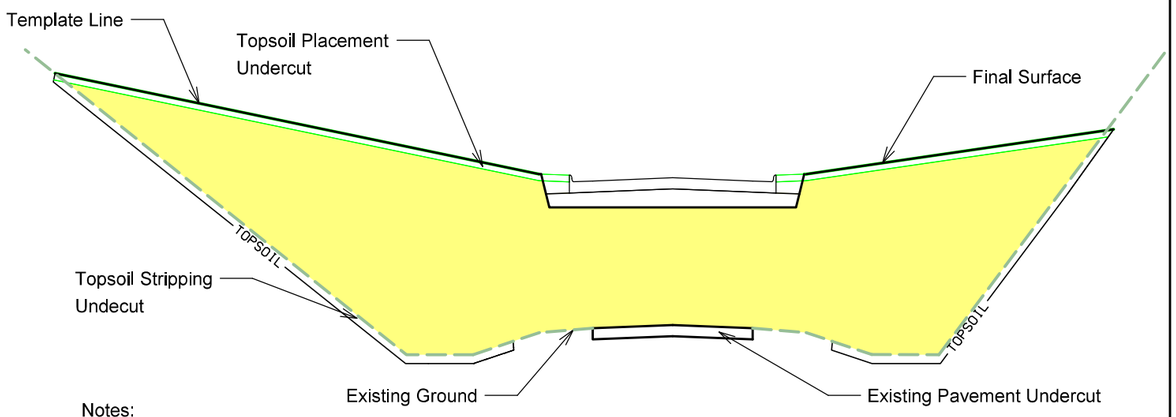


Notes:

1. "Total Cut Adjusted" Column includes all cut values usable as Class 10 material.
2. "Total Cut Adjusted" does not include and Existing Pavement , Existing Topsoil, or material to be wasted.

FILL SIDE Total Fill Unadjusted

URBAN

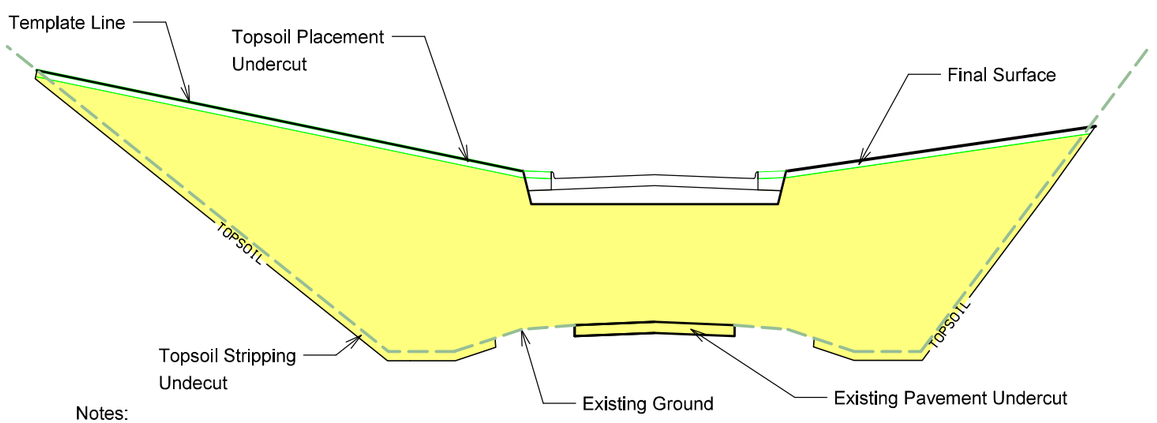


Notes:

1. "Total Fill Unadjusted" Column includes all Class 10, 12, and 13 fill. This excludes the topsoil, subgrade treatment, subbase, new pavement, and shoulder fill needs in that station range.
2. "Total Fill Unadjusted" Column does not include adjustments for additional fill from cuts such as existing pavement removed, plowing and shaping operations, entrances, dikes, or topsoil stripping.

FILL SIDE Total Fill Adjusted

URBAN



Notes:

1. "Total Fill Adjusted" Column includes all Class 10, 12, and 13 fill and adjustments for additional fill from cuts such as existing pavement, plowing and shaping operations, entrances, dikes, and topsoil stripping.
2. The available area to place unsuitable materials in the T Sheet tabulation does not include the undercut values from the topsoil stripping, existing pavement, or plowing and shaping

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.1C

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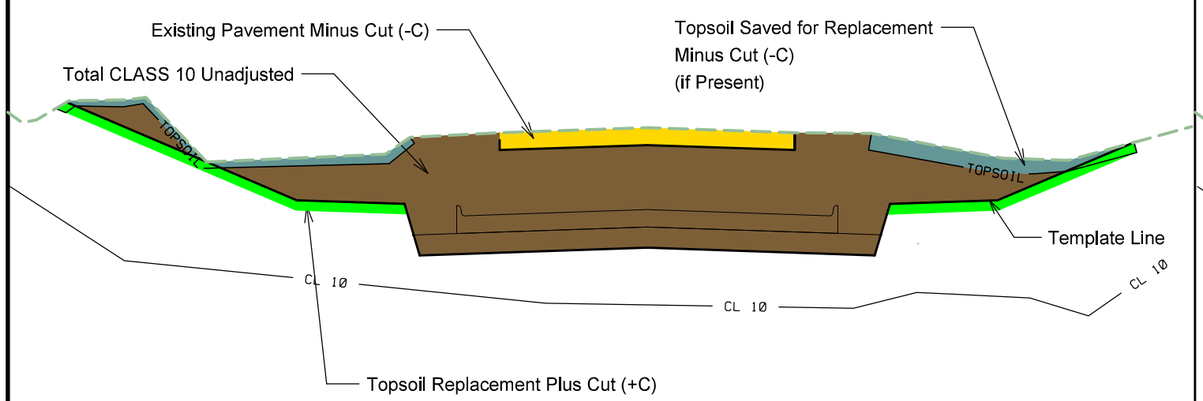
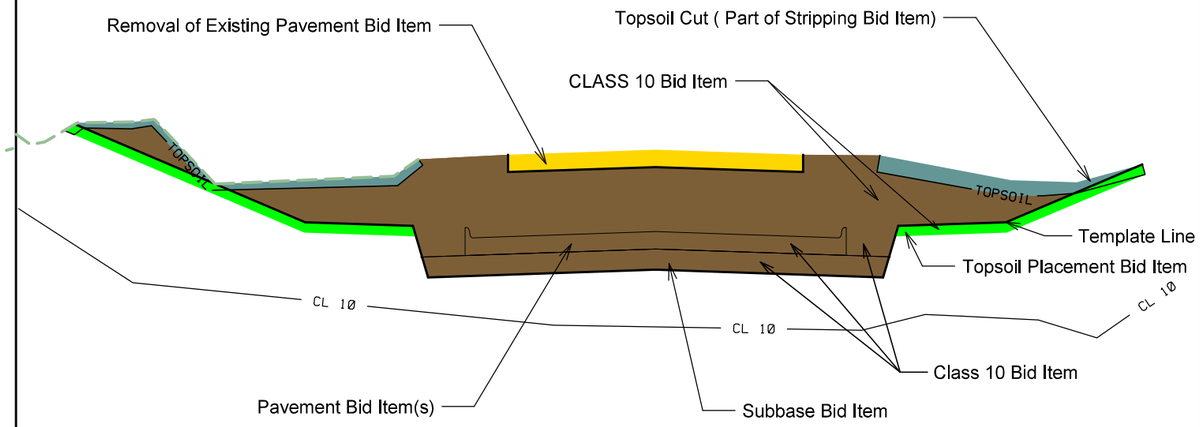
CUT SIDE (+/- Cuts)

URBAN



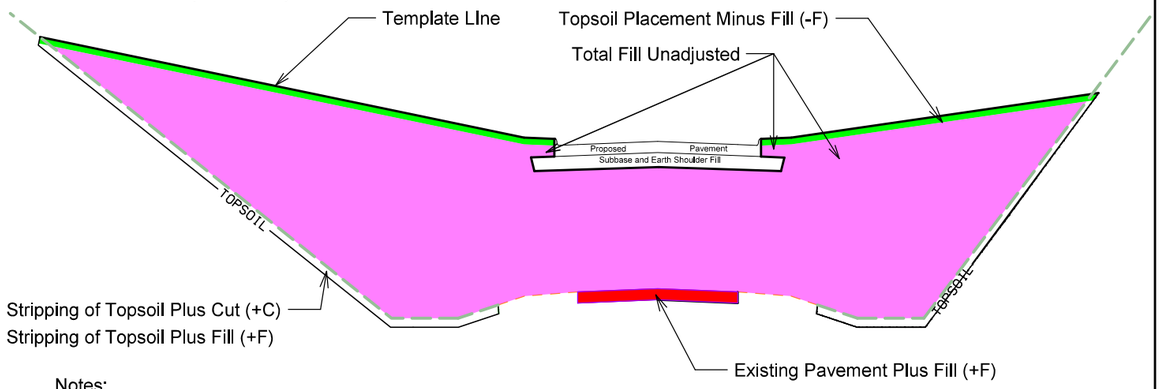
CUT SIDE (Bid Items)

URBAN



FILL SIDE (+/- Fills)

URBAN

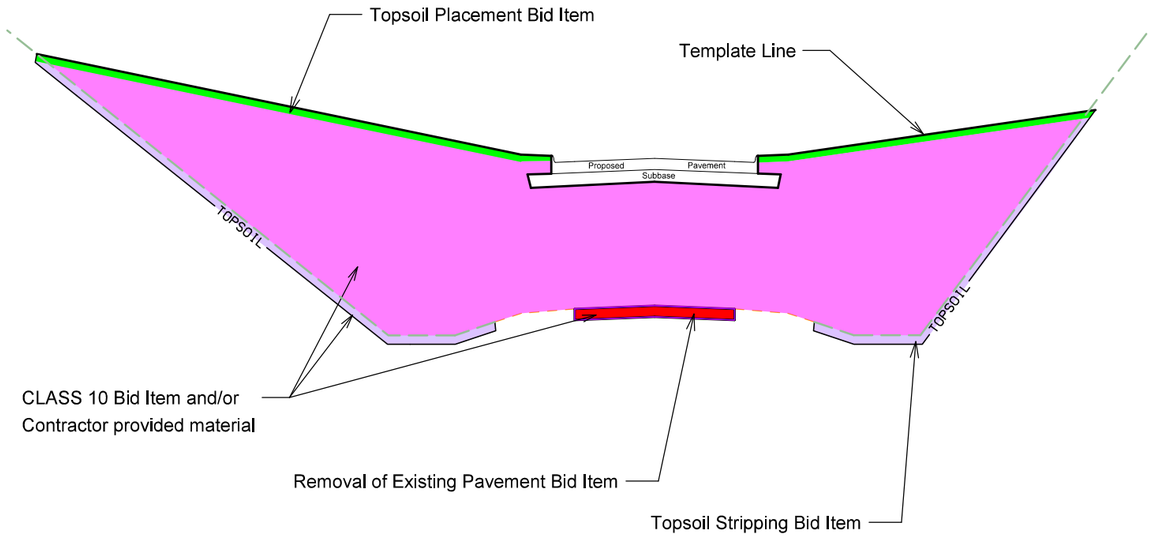


Notes:

1. "Manually Calculated Cut Adjustments +C" columns are additional cut encountered that is not Typical, Topsoil, or Subgrade Treatment Based. (Entrance, Dike, Etc.)
2. "-C" columns are either soil types or Class 10, 12, or 13 designated material that is encountered in the cut station range that is paid for by other bid items.
3. The "(SoilType) Cut" columns are soil types encountered in the cut that are paid by either Class 10, 12 or 13.
4. The "Adjusted Clas (10,12 or 13)" columns are the sum of all various soil types encountered in that station range, that are paid by Class 10, 12, or 13 bid items.

FILL SIDE (Bid Items)

URBAN



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.1D

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Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
BoyScoutRd																						
1000+29.87																						
1000+50.00	12	12	0	0	8	0	12	0	0			0	0	12	0	0	0	0	0	0		
1000+75.00	29	29	0	0	23	0	29	0	0			0	0	29	0	0	0	0	0	0		
1001+00.00	50	37	13	0	32	0	37	0	0	13	2	15	20	18	0	0	13	14	20	-7		
1001+25.00	67	51	13	0	58	3	54	0	0	13	3	16	21	33	0	0	13	25	35	-22		
1001+38.87	57	47	0	0	24	9	56	0	0			0	0	56	0	0	0	6	8	-8		
BoyScoutRd																						
Totals:	215	176	26	0	145	12	188	0	0	26	5	31	41	148	0	0	26	45	63	-37		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.2

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
BurtonsFurnaceRd																						
701+53.00	28	28	0	0	14	0	28	0	0			0	0	28	0	0	0	0	0	0		
701+75.00	28	28	0	0	16	0	28	0	0			0	0	28	0	0	0	0	0	0		
702+00.00	22	22	0	0	15	0	22	0	0		5	5	7	16	0	0	0	0	0	0		
702+25.00	22	22	0	0	15	0	22	0	0		5	5	7	16	0	0	0	0	0	0		
702+50.00	30	30	0	0	28	0	30	0	0			0	0	30	0	0	0	0	0	0		
702+75.00	24	24	0	0	71	0	24	0	0			0	0	24	0	0	0	0	0	0		
702+96.50																						
BurtonsFurnaceRd																						
Totals:	154	154	0	0	159	0	154	0	0	0	10	10	13	141	0	0	0	0	0	0		

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
CarmenOaksDr																						
1100+99.01																						
1101+00.00	1	0	0	1	1	0	1	0	0			0	0	1	0	0	0	0	0	0		
1101+25.00	73	1	15	33	27	24	58	0	0	15		15	20	39	0	0	15	13	18	-3		
1101+34.45	52	5	5	22	10	21	48	0	0	5		5	7	42	0	0	5	3	4	1		
CarmenOaksDr																						
Totals:	126	6	20	56	38	45	107	0	0	20	0	20	26	81	0	0	20	16	23	-3		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.4

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Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
ChristensenLn																						
100+32.10	29	8	21	0	0	0	8	7	0	21		28	36	-28	0	0	21	13	18	3		
100+50.00	66	38	28	0	11	0	38	9	0	28		37	48	-10	0	0	28	15	21	7		
100+75.00	3	3	0	0	3	0	3	0	0		1	1	1	2	0	0	0	0	0	0		
100+76.00																						
ChristensenLn																						
Totals:	98	49	49	0	14	0	49	16	0	49	1	66	86	-37	0	0	49	28	40	10		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.5

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Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
ClayHillRd																						
503+95.00	8	8	0	0	4	0	8	0	0			0	0	8	0	0	0	1	1	-1		
504+00.00	36	36	0	0	20	0	36	0	0		3	3	4	32	0	0	0	6	8	-8		
504+25.00	15	15	0	0	24	0	15	0	0		2	2	3	12	0	0	0	3	4	-4		
504+50.00	16	12	0	4	37	0	16	0	0		2	2	3	13	0	0	0	2	3	-3		
504+75.00	14	9	0	4	42	0	13	0	0		7	7	9	4	0	0	0	0	0	0		
504+88.15																						
ClayHillRd																						
Totals:	89	80	0	8	127	0	88	0	0	0	14	14	19	70	0	0	0	12	17	-17		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.6	

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Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
DurangoRd																						
800+12.00	49	42	7	0	17	0	42	0	0	7		7	9	33	0	0	7	3	4	3		
800+25.00	105	92	13	0	30	0	92	0	0	13		13	17	75	0	0	13	8	11	2		
800+50.00	40	40	0	0	21	0	40	3	0			3	4	36	0	0	0	2	3	-3		
800+75.00	15	15	0	0	9	0	15	2	0			2	3	12	0	0	0	0	0	0		
800+87.60																						
DurangoRd																						
Totals:	209	189	20	0	77	0	189	5	0	20	0	25	33	157	0	0	20	13	19	2		

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
LeiserLn																						
200+12.00	90	76	14	0	41	0	76	0	0	14		14	18	58	0	0	14	10	14	0		
200+25.00	146	116	30	0	40	0	116	0	0	30		30	39	77	0	0	30	18	25	5		
200+50.00	34	30	4	0	17	0	30	0	0	4		4	5	25	0	0	4	0	0	4		
200+69.84																						
LeiserLn																						
Totals:	270	222	48	0	98	0	222	0	0	48	0	48	63	160	0	0	48	28	40	9		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.8

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
IA 3																						
27+74.75																						
28+00.00	69	69	0	0	35	0	69	4	0			4	5	64	0	0	0	21	29	-29		
28+50.00	150	138	12	0	61	0	138	0	0			0	0	138	0	0	12	4	6	6		
29+00.00	164	136	29	0	63	0	136	0	0	17		17	22	114	0	0	29	18	25	4		
29+50.00	171	138	33	0	64	0	138	0	0	33		33	43	95	0	0	33	28	39	-6		
30+00.00	156	126	30	0	63	0	126	0	0	30		30	39	87	0	0	30	27	38	-8		
30+50.00	136	113	23	0	62	0	113	0	0	23		23	30	83	0	0	23	21	29	-6		
31+00.00	105	95	10	0	61	0	95	0	0	10		10	13	82	0	0	10	12	17	-7		
31+50.00	77	77	0	0	62	0	77	0	0			0	0	77	0	0	0	4	6	-6		
32+00.00	77	77	0	0	70	0	77	0	0			0	0	77	0	0	0	0	0	0		
32+50.00	89	89	0	0	76	0	89	0	0			0	0	89	0	0	0	0	0	0		
33+00.00	152	127	25	0	76	0	127	0	0	25		25	33	95	0	0	25	19	27	-2		
33+50.00	136	111	25	0	66	0	111	0	0	25	7	32	42	69	0	0	25	19	27	-2		
34+00.00	86	82	4	0	63	0	82	0	0	4	7	11	14	68	0	0	4	0	0	4		
34+50.00	97	93	4	0	71	0	93	0	0	4		4	5	88	0	0	4	0	0	4		
35+00.00	104	95	9	0	73	0	95	0	0	9		9	12	83	0	0	9	4	6	3		
35+50.00	143	121	22	0	68	0	121	0	0	22		22	29	92	0	0	22	9	13	9		
36+00.00	170	144	26	0	65	0	144	0	0	26		26	34	110	0	0	26	10	14	12		
36+50.00	175	152	23	0	76	0	152	0	0	23		23	30	122	0	0	23	13	18	5		
37+00.00	163	153	10	0	88	0	153	0	0	10		10	13	140	0	0	10	13	18	-8		
37+50.00	165	155	10	0	87	0	155	0	0	10		10	13	142	0	0	10	10	14	-4		
38+00.00	174	154	20	0	85	0	154	0	0	20		20	26	128	0	0	20	8	11	9		
38+50.00	242	205	37	0	88	0	205	0	0	37		37	48	157	0	0	37	18	25	12		
39+00.00	357	300	57	0	88	0	300	0	0	57		57	74	226	0	0	57	33	46	11		
39+50.00	436	372	64	0	89	0	372	0	0	64		64	83	289	0	0	64	36	50	14		
40+00.00	443	378	65	0	90	0	378	0	0	65		65	85	294	0	0	65	34	48	17		
40+50.00	409	349	60	0	88	0	349	0	0	60		60	78	271	0	0	60	28	39	21		
41+00.00	245	215	30	0	75	0	215	0	0	30	1	31	40	175	0	0	30	13	18	12		
41+50.00	90	90	0	0	63	0	90	0	0		3	3	4	86	0	0	0	0	0	0		
42+00.00	106	106	0	0	73	0	106	0	0		1	1	1	105	0	0	0	8	11	-11		
42+50.00	119	119	0	0	79	0	119	0	0			0	0	119	0	0	0	16	22	-22		
43+00.00	109	108	1	0	76	0	108	0	0	1	1	2	3	105	0	0	1	8	11	-10		
43+50.00	117	107	10	0	72	0	107	1	0	10	1	12	16	91	0	0	10	7	10	0		
44+00.00	192	151	41	0	65	0	151	1	0	41		42	55	96	0	0	41	21	29	12		
44+50.00	238	181	57	0	61	0	181	0	0	57		57	74	107	0	0	57	24	34	23		
45+00.00	228	181	47	0	58	0	181	0	0	47		47	61	120	0	0	47	15	21	26		
45+50.00	225	178	47	0	56	0	178	0	0	47		47	61	117	0	0	47	13	18	29		
46+00.00	210	156	54	0	53	0	156	0	0	54		54	70	86	0	0	54	17	24	30		
46+50.00	221	170	51	0	52	0	170	1	0	51		52	68	102	0	0	51	25	35	16		
47+00.00	227	187	40	0	51	0	187	8	0	40		48	62	125	0	0	40	21	29	11		
47+50.00	224	183	41	0	46	0	183	7	0	41		48	62	121	0	0	41	16	22	19		
48+00.00	247	199	48	0	45	0	199	0	0	48		48	62	137	0	0	48	19	27	21		
48+50.00	285	227	58	0	46	0	227	0	0	58		58	75	152	0	0	58	26	36	22		
49+00.00	304	246	58	0	47	0	246	0	0	58		58	75	171	0	0	58	26	36	22		
49+50.00	296	249	47	0	47	0	249	0	0	47		47	61	188	0	0	47	21	29	18		
50+00.00	250	213	37	0	47	0	213	1	0	37		38	49	164	0	0	37	16	22	15		
50+50.00	171	153	18	0	54	0	153	23	0	18		41	53	100	0	0	18	23	32	-14		
51+00.00	158	120	38	0	62	0	120	65	0	38		103	134	-14	0	0	38	39	55	-17		
51+50.00	197	133	64	0	65	0	133	43	0	64		107	139	-6	0	0	64	38	53	11		
52+00.00	199	159	40	0	66	0	159	0	0	40		40	52	107	0	0	40	19	27	13		
52+50.00	172	147	25	0	67	0	147	0	0	25		25	33	115	0	0	25	7	10	15		
53+00.00	176	149	27	0	67	0	149	0	0	27		27	35	114	0	0	27	9	13	14		
53+50.00	203	175	28	0	68	0	175	0	0	28		28	36	139	0	0	28	11	15	13		
54+00.00	244	212	32	0	68	0	212	0	0	32		32	42	170	0	0	32	15	21	11		
54+50.00	316	281	35	0	68	0	281	0	0	35		35	46	236	0	0	35	20	28	7		
55+00.00	361	327	34	0	68	0	327	0	0	34		34	44	283	0	0	34	22	31	3		
55+50.00	349	316	33	0	68	0	316	0	0	33		33	43	273	0	0	33	21	29	4		
56+00.00	315	285	30	0	68	0	285	0	0	30		30	39	246	0	0	30	17	24	6		
56+50.00	315	273	42	0	68	0	273	0	0	42		42	55	218	0	0	42	20	28	14		
57+00.00	307	255	52	0	68	0	255	0	0	52		52	68	187	0	0	52	20	28	24		
57+50.00	267	220	47	0	67	0	220	0	0	47		47	61	159	0	0	47	13	18	29		
58+00.00	248	208	40	0	68	0	208	0	0	40		40	52	156	0	0	40	10	14	26		
58+50.00	265	223	42	0	70	0	223	0	0	42		42	55	168	0	0	42	18	25	17		
59+00.00	246	208	38	0	68	0	208	0	0	38		38	49	159	0	0	38	17	24	14		
59+50.00	204	175	29	0	67	0	175	0	0	29		29	38	137	0	0	29	7	10	19		
60+00.00	189	162	27	0	66	0	162	0	0	27		27	35	127	0	0	27	7	10	17		
60+50.00	179	152	27	0	66	0	152	0	0	27		27	35	117	0	0	27	6	8	19		
61+00.00	249	227	22	0	68	0	227	0	0	22		22	29	198	0	0	22	7	10	12		
Subtotals:																						
	13,909	11,875	2,035	0	4,455	0	11,875	154	0	2,011	21	2,186	2,842	9,033	0	0	2,035	1,067	1,494	541		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.9

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Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
61+00.00	261	238	23	0	68	0	238	0	0	23		23	30	208	0	0	23	7	10	13		
61+50.00	201	170	31	0	66	0	170	0	0	31		31	40	130	0	0	31	7	10	21		
62+00.00	199	167	32	0	65	0	167	0	0	32		32	42	125	0	0	32	8	11	21		
62+50.00	209	176	33	0	66	0	176	0	0	33		33	43	133	0	0	33	8	11	22		
63+00.00	235	195	40	0	67	0	195	0	0	40		40	52	143	0	0	40	10	14	26		
63+50.00	237	195	42	0	67	0	195	0	0	42		42	55	140	0	0	42	15	21	21		
64+00.00	189	149	40	0	66	0	149	0	0	40		40	52	97	0	0	40	16	22	18		
64+50.00	137	57	41	39	65	0	96	0	0	41		41	53	43	0	0	41	14	20	21		
65+00.00	120	0	38	82	65	0	82	0	0	38	1	39	51	31	0	0	38	11	15	23		
65+50.00	107	0	26	81	66	0	81	1	0	26		27	35	46	0	0	26	8	11	15		
66+00.00	93	0	22	71	65	0	71	6	0	22		28	36	35	0	0	22	9	13	9		
66+50.00	158	61	20	77	65	0	138	11	0	20		31	40	98	0	0	20	40	56	-36		
67+00.00	181	61	15	105	66	0	166	7	0	6		13	17	149	0	0	15	36	50	-35		
67+50.00	197	0	31	166	66	0	166	0	0	22		22	29	137	0	0	31	9	13	18		
68+00.00	296	0	45	251	66	0	251	0	0	45		45	59	193	0	0	45	20	28	17		
68+50.00	361	161	54	145	66	0	306	0	0	54		54	70	236	0	0	54	31	43	11		
69+00.00	302	161	36	104	66	0	265	0	0	36		36	47	218	0	0	36	28	39	-3		
69+50.00	179	0	6	173	66	0	173	0	0	6		6	8	165	0	0	6	14	20	-14		
70+00.00	143	0	0	143	66	0	143	0	0			0	0	143	0	0	0	11	15	-15		
70+50.00	131	47	0	74	66	10	131	0	0			0	0	131	0	0	0	7	10	-10		
71+00.00	118	101	0	0	67	17	118	0	0			0	0	118	0	0	0	0	0	0		
71+50.00	133	109	0	0	67	24	133	0	0			0	0	133	0	0	0	0	0	0		
72+00.00	158	118	0	0	66	39	157	0	0			0	0	157	0	0	0	0	0	0		
72+50.00	188	129	0	0	67	59	188	0	0			0	0	188	0	0	0	0	0	0		
73+00.00	173	120	0	0	67	54	174	0	0			0	0	174	0	0	0	4	6	-6		
73+50.00	145	99	0	0	67	46	145	2	0			2	3	142	0	0	0	14	20	-20		
74+00.00	165	83	0	0	66	82	165	10	0			10	13	152	0	0	0	23	32	-32		
74+50.00	196	82	0	0	66	113	195	12	0			12	16	179	0	0	0	26	36	-36		
75+00.00	188	78	0	0	66	109	187	3	0			3	4	183	0	0	0	15	21	-21		
75+50.00	144	54	0	0	67	90	144	0	0			0	0	144	0	0	0	1	1	-1		
76+00.00	119	41	0	0	66	78	119	0	0			0	0	119	0	0	0	0	0	0		
76+50.00	112	38	0	0	65	73	111	0	0			0	0	111	0	0	0	0	0	0		
77+00.00	127	50	0	0	65	78	128	0	0		1	1	1	127	0	0	0	0	0	0		
77+50.00	176	66	0	0	64	110	176	0	0		2	2	3	173	0	0	0	0	0	0		
78+00.00	227	76	0	0	65	151	227	0	0		1	1	1	226	0	0	0	0	0	0		
78+50.00	269	97	0	0	67	171	268	0	0			0	0	268	0	0	0	0	0	0		
79+00.00	295	123	0	0	67	173	296	0	0			0	0	296	0	0	0	0	0	0		
79+50.00	295	149	0	0	68	146	295	0	0			0	0	295	0	0	0	0	0	0		
80+00.00	284	178	0	0	68	106	284	0	0			0	0	284	0	0	0	0	0	0		
80+50.00	298	96	0	104	67	98	298	0	0			0	0	298	0	0	0	0	0	0		
81+00.00	303	0	0	212	67	92	304	0	0			0	0	304	0	0	0	0	0	0		
81+50.00	276	0	0	212	66	65	277	0	0			0	0	277	0	0	0	0	0	0		
82+00.00	253	0	0	198	66	55	253	0	0			0	0	253	0	0	0	0	0	0		
82+50.00	230	0	0	178	66	52	230	0	0			0	0	230	0	0	0	0	0	0		
83+00.00	211	77	0	84	66	49	210	0	0			0	0	210	0	0	0	0	0	0		
83+50.00	191	150	0	0	66	41	191	0	0			0	0	191	0	0	0	0	0	0		
84+00.00	186	170	0	0	65	16	186	0	0			0	0	186	0	0	0	10	14	-14		
84+50.00	200	200	0	0	65	0	200	0	0			0	0	200	0	0	0	24	34	-34		
85+00.00	196	196	0	0	67	0	196	0	0			0	0	196	0	0	0	26	36	-36		
85+50.00	134	93	0	41	67	0	134	0	0			0	0	134	0	0	0	21	29	-29		
86+00.00	59	0	0	58	65	0	58	306	0		1	307	399	-341	0	0	0	40	56	-56		
86+50.00	63	0	0	63	66	0	63	306	0			306	398	-335	0	0	0	38	53	-53		
87+00.00	123	0	0	123	67	0	123	0	0			0	0	123	0	0	0	10	14	-14		
87+50.00	177	0	0	123	67	54	177	0	0			0	0	177	0	0	0	4	6	-6		
88+00.00	209	0	0	96	66	113	209	0	0			0	0	209	0	0	0	0	0	0		
88+50.00	256	0	0	93	65	163	256	0	0			0	0	256	0	0	0	0	0	0		
89+00.00	302	0	0	90	65	212	302	0	0			0	0	302	0	0	0	0	0	0		
89+50.00	283	0	0	72	65	211	283	0	0			0	0	283	0	0	0	0	0	0		
90+00.00	181	0	0	35	62	146	181	0	0		3	3	4	177	0	0	0	0	0	0		
90+50.00	82	0	0	15	60	67	82	0	0		5	5	7	76	0	0	0	0	0	0		
91+00.00	55	0	0	9	56	46	55	0	0		10	10	13	42	0	0	0	0	0	0		
91+50.00	49	0	0	9	51	40	49	0	0		15	15	20	30	0	0	0	0	0	0		
92+00.00	47	0	0	12	56	35	47	0	0		11	11	14	33	0	0	0	0	0	0		
92+50.00	57	6	0	8	57	44	58	0	0		10	10	13	45	0	0	0	0	0	0		
93+00.00	98	14	0	0	59	83	97	0	0		7	7	9	88	0	0	0	0	0	0		
93+50.00	124	19	0	0	65	105	124	0	0		1	1	1	123	0	0	0	0	0	0		
94+00.00	116	31	0	0	66	85	116	0	0			0	0	116	0	0	0	0	0	0		
94+50.00	118	48	0	0	66	70	118	0	0			0	0	118	0	0	0	0	0	0		
95+00.00																						
Subtotals:	12,325	4,729	575	3,346	4,432	3,671	11,746	664	0	557	68	1,289	1,676	10,070	0	0	575	565	791	-216		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.10

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
95+00.00	113	81	0	0	77	33	114	0	0			0	0	114	0	0	0	7	10	-10		
95+50.00	65	65	0	0	76	0	65	0	0		15	15	20	46	0	0	0	7	10	-10		
96+00.00	27	27	0	0	69	0	27	17	0		17	34	44	-17	0	0	0	14	20	-20		
96+50.00	83	37	0	0	70	46	83	19	0		2	21	27	56	0	0	0	14	20	-20		
97+00.00	94	22	0	20	66	52	94	2	0			2	3	91	0	0	0	0	0	0		
97+50.00	53	0	0	33	65	21	54	1	0		1	2	3	51	0	0	0	0	0	0		
98+00.00	70	0	0	30	64	39	69	0	0		2	2	3	66	0	0	0	0	0	0		
98+50.00	77	0	0	36	64	41	77	0	0		2	2	3	74	0	0	0	0	0	0		
99+00.00	73	0	0	47	65	26	73	0	0		2	2	3	70	0	0	0	0	0	0		
99+50.00	108	0	0	77	67	31	108	0	0			0	0	108	0	0	0	0	0	0		
100+00.00	164	0	0	116	66	49	165	0	0			0	0	165	0	0	0	0	0	0		
100+50.00	164	0	0	118	66	46	164	0	0			0	0	164	0	0	0	0	0	0		
101+00.00	118	0	0	90	65	28	118	0	0			0	0	118	0	0	0	0	0	0		
101+50.00	90	40	0	40	65	9	89	0	0			0	0	89	0	0	0	2	3	-3		
102+00.00	81	81	0	0	65	0	81	0	0			0	0	81	0	0	0	6	8	-8		
102+50.00	78	78	0	0	65	0	78	20	0			20	26	52	0	0	0	16	22	-22		
103+00.00	76	76	0	0	65	0	76	39	0			39	51	25	0	0	0	26	36	-36		
103+50.00	77	77	0	0	65	0	77	27	0			27	35	42	0	0	0	27	38	-38		
104+00.00	81	81	0	0	65	0	81	20	0			20	26	55	0	0	0	32	45	-45		
104+50.00	104	104	0	0	65	0	104	14	0			14	18	86	0	0	0	41	57	-57		
105+00.00	157	157	0	0	65	0	157	3	0		1	4	5	152	0	0	0	58	81	-81		
105+50.00	220	220	0	0	64	0	220	3	0		1	4	5	215	0	0	0	75	105	-105		
106+00.00	276	276	0	0	64	0	276	14	0		1	15	20	257	0	0	0	71	99	-99		
106+50.00	451	451	0	0	66	0	451	11	0			11	14	437	0	0	0	68	95	-95		
107+00.00	489	438	51	0	68	0	438	4	0	51		55	72	367	0	0	51	64	90	-39		
107+50.00	378	266	112	0	67	0	266	5	0	112		117	152	114	0	0	112	61	85	27		
108+00.00	387	272	115	0	66	0	272	1	0	115		116	151	121	0	0	115	62	87	28		
108+50.00	366	146	106	99	66	14	259	2	0	106		108	140	119	0	0	106	56	78	28		
109+00.00	304	3	102	179	66	20	202	4	0	102		106	138	64	0	0	102	53	74	28		
109+50.00	271	2	93	162	66	14	178	8	0	93		101	131	47	0	0	93	47	66	27		
110+00.00	237	66	81	82	65	8	156	10	0	81		91	118	38	0	0	81	38	53	28		
110+50.00	212	135	77	0	65	0	135	11	0	77		88	114	21	0	0	77	34	48	29		
111+00.00	223	144	79	0	65	0	144	11	0	79		90	117	27	0	0	79	35	49	30		
111+50.00	212	155	57	0	65	0	155	4	0	57		61	79	76	0	0	57	33	46	11		
112+00.00	187	160	27	0	66	0	160	1	0	27		28	36	124	0	0	27	29	41	-14		
112+50.00	148	131	17	0	66	0	131	2	0	17		19	25	106	0	0	17	20	28	-11		
113+00.00	110	74	13	0	64	23	97	8	0	13		21	27	70	0	0	13	7	10	3		
113+50.00	111	51	21	0	63	39	90	6	0	21	1	28	36	54	0	0	21	0	0	21		
114+00.00	93	54	23	0	62	16	70	0	0	23	3	26	34	36	0	0	23	2	3	20		
114+50.00	83	65	18	0	62	0	65	0	0	18	3	21	27	38	0	0	18	4	6	12		
115+00.00	94	72	22	0	64	0	72	0	0	22	1	23	30	42	0	0	22	5	7	15		
115+50.00	99	74	25	0	63	0	74	0	0	25	1	26	34	40	0	0	25	6	8	17		
116+00.00	122	95	27	0	64	0	95	0	0	27		27	35	60	0	0	27	8	11	16		
116+50.00	137	108	29	0	64	0	108	0	0	29	1	30	39	69	0	0	29	8	11	18		
117+00.00	136	107	29	0	64	0	107	0	0	29		29	38	69	0	0	29	7	10	19		
117+50.00	141	112	29	0	64	0	112	0	0	29		29	38	74	0	0	29	7	10	19		
118+00.00	153	127	26	0	65	0	127	0	0	26		26	34	93	0	0	26	7	10	16		
118+50.00	160	137	23	0	65	0	137	0	0	23		23	30	107	0	0	23	7	10	13		
119+00.00	140	122	18	0	65	0	122	0	0	18		18	23	99	0	0	18	5	7	11		
119+50.00	109	52	13	44	65	0	96	0	0	13		13	17	79	0	0	13	4	6	7		
120+00.00	90	0	10	80	65	0	80	0	0	10		10	13	67	0	0	10	5	7	3		
120+50.00	71	0	10	58	65	3	61	0	0	10	1	11	14	47	0	0	10	2	3	7		
121+00.00	78	0	15	52	59	11	63	0	0	15	7	22	29	34	0	0	15	2	3	12		
121+50.00	114	45	22	30	57	16	91	0	0	22	8	30	39	52	0	0	22	7	10	12		
122+00.00	134	89	24	0	61	21	110	0	0	24	4	28	36	74	0	0	24	8	11	13		
122+50.00	150	87	24	0	62	39	126	0	0	24	4	28	36	90	0	0	24	7	10	14		
123+00.00	167	85	25	0	64	58	143	0	0	25	2	27	35	108	0	0	25	7	10	15		
123+50.00	169	89	24	0	66	55	144	0	0	24	1	25	33	112	0	0	24	6	8	16		
124+00.00	153	91	20	0	66	42	133	0	0	20	1	21	27	106	0	0	20	4	6	14		
124+50.00	139	90	17	0	66	32	122	0	0	17		17	22	100	0	0	17	3	4	13		
125+00.00	144	47	8	48	66	41	136	0	0	8		8	10	126	0	0	8	3	4	4		
125+50.00	140	0	0	83	65	57	140	0	0			0	0	140	0	0	0	1	1	-1		
126+00.00	138	0	0	71	70	67	138	0	0			0	0	138	0	0	0	3	4	-4		
126+50.00	91	9	0	36	68	46	91	0	0		3	3	4	87	0	0	0	3	4	-4		
127+00.00	36	24	0	0	65	12	36	0	0		5	5	7	30	0	0	0	0	0	0		
127+50.00	61	44	0	0	66	17	61	0	0		2	2	3	58	0	0	0	0	0	0		
128+00.00	97	71	0	0	64	26	97	0	0		1	1	1	96	0	0	0	0	0	0		
128+50.00	105	87	0	0	65	18	105	0	0			0	0	105	0	0	0	0	0	0		
129+00.00																						
Subtotals:	10,079	5,899	1,432	1,631	4,439	1,116	8,646	267	0	1,432	93	1,792	2,330	6,316	0	0	1,432	1,134	1,588	-156		

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
129+00.00	107	94	0	0	64	13	107	0	0			0	0	107	0	0	0	0	0	0		
129+50.00	99	83	0	0	65	17	100	0	0			0	0	100	0	0	0	0	0	0		
130+00.00	82	65	0	0	65	18	83	0	0		1	1	1	82	0	0	0	0	0	0		
130+50.00	74	52	0	0	65	22	74	0	0		1	1	1	73	0	0	0	0	0	0		
131+00.00	91	49	0	0	65	42	91	0	0			0	0	91	0	0	0	0	0	0		
131+50.00	124	64	0	0	64	60	124	0	0			0	0	124	0	0	0	0	0	0		
132+00.00	163	88	0	0	65	75	163	0	0			0	0	163	0	0	0	0	0	0		
132+50.00	210	109	0	0	65	102	211	0	0			0	0	211	0	0	0	0	0	0		
133+00.00	278	122	0	0	64	155	277	0	0			0	0	277	0	0	0	0	0	0		
133+50.00	282	134	0	0	65	148	282	0	0			0	0	282	0	0	0	0	0	0		
134+00.00	277	149	0	0	66	128	277	0	0			0	0	277	0	0	0	0	0	0		
134+50.00	279	144	0	0	66	135	279	0	0			0	0	279	0	0	0	0	0	0		
135+00.00	235	125	0	0	65	110	235	0	0			0	0	235	0	0	0	0	0	0		
135+50.00	215	114	0	0	65	101	215	0	0			0	0	215	0	0	0	0	0	0		
136+00.00	226	107	0	0	66	119	226	0	0			0	0	226	0	0	0	0	0	0		
136+50.00	210	113	0	0	65	97	210	0	0			0	0	210	0	0	0	0	0	0		
137+00.00	165	115	0	0	65	50	165	0	0			0	0	165	0	0	0	0	0	0		
137+50.00	289	111	0	0	65	178	289	0	0			0	0	289	0	0	0	0	0	0		
138+00.00	379	103	6	0	66	271	374	0	0	6		6	8	366	0	0	6	0	0	6		
138+50.00	328	91	10	0	67	227	318	0	0	10		10	13	305	0	0	10	0	0	10		
139+00.00	324	88	8	0	67	229	317	0	0	8		8	10	307	0	0	8	0	0	8		
139+50.00	262	91	3	0	68	168	259	0	0	3		3	4	255	0	0	3	0	0	3		
140+00.00	175	46	0	0	67	130	176	0	0			0	0	176	0	0	0	0	0	0		
140+50.00	175	0	0	0	66	175	175	0	0			0	0	175	0	0	0	0	0	0		
141+00.00	206	0	0	0	64	206	206	0	0			0	0	206	0	0	0	0	0	0		
141+50.00	231	0	0	0	62	231	231	0	0			0	0	231	0	0	0	0	0	0		
142+00.00	607	0	0	104	63	503	607	0	0			0	0	607	0	0	0	0	0	0		
142+50.00	634	0	0	187	64	447	634	0	0			0	0	634	0	0	0	0	0	0		
143+00.00	227	0	0	83	64	144	227	0	0			0	0	227	0	0	0	0	0	0		
143+50.00	129	0	0	0	64	129	129	0	0			0	0	129	0	0	0	0	0	0		
144+00.00	81	0	0	0	62	81	81	0	0		1	1	1	80	0	0	0	0	0	0		
144+50.00	66	0	0	0	59	66	66	0	0		4	4	5	61	0	0	0	0	0	0		
145+00.00	75	0	0	0	56	75	75	0	0		7	7	9	66	0	0	0	0	0	0		
145+50.00	89	0	0	0	55	89	89	0	0		9	9	12	77	0	0	0	0	0	0		
146+00.00	99	0	0	0	61	99	99	0	0		5	5	7	93	0	0	0	0	0	0		
146+50.00	112	0	0	0	64	112	112	0	0		1	1	1	111	0	0	0	0	0	0		
147+00.00	150	0	0	0	64	150	150	0	0			0	0	150	0	0	0	0	0	0		
147+50.00	161	0	0	0	63	161	161	0	0			0	0	161	0	0	0	0	0	0		
148+00.00	545	0	0	56	63	489	545	1	0			1	1	544	0	0	0	0	0	0		
148+50.00	1,386	0	0	114	63	1,273	1,387	1	0			1	1	1,386	0	0	0	0	0	0		
149+00.00	1,629	0	0	119	65	1,510	1,629	0	0			0	0	1,629	0	0	0	0	0	0		
149+50.00	1,288	0	0	122	65	1,166	1,288	1	0			1	1	1,287	0	0	0	0	0	0		
150+00.00	908	0	0	108	64	800	908	1	0			1	1	907	0	0	0	0	0	0		
150+50.00	545	0	0	47	64	498	545	0	0			0	0	545	0	0	0	0	0	0		
151+00.00	298	0	0	0	64	298	298	0	0			0	0	298	0	0	0	0	0	0		
151+50.00	104	6	0	0	61	98	104	6	0		3	9	12	92	0	0	0	0	0	0		
152+00.00	71	6	0	0	56	65	71	6	0		7	13	17	54	0	0	0	0	0	0		
152+50.00	170	0	0	0	58	170	170	0	0		5	5	7	164	0	0	0	0	0	0		
153+00.00	262	0	0	0	63	262	262	0	0			0	0	262	0	0	0	0	0	0		
153+50.00	279	0	0	0	64	279	279	0	0			0	0	279	0	0	0	0	0	0		
154+00.00	255	0	0	0	65	255	255	0	0			0	0	255	0	0	0	0	0	0		
154+50.00	301	0	0	0	65	301	301	0	0			0	0	301	0	0	0	0	0	0		
155+00.00	353	0	0	0	65	353	353	0	0			0	0	353	0	0	0	0	0	0		
155+50.00	365	0	0	0	65	365	365	0	0			0	0	365	0	0	0	0	0	0		
156+00.00	340	0	0	0	65	340	340	0	0			0	0	340	0	0	0	0	0	0		
156+50.00	261	25	0	0	65	236	261	0	0			0	0	261	0	0	0	0	0	0		
157+00.00	224	53	0	0	66	171	224	0	0			0	0	224	0	0	0	0	0	0		
157+50.00	202	54	0	0	66	148	202	0	0			0	0	202	0	0	0	0	0	0		
158+00.00	139	52	0	0	65	86	138	0	0			0	0	138	0	0	0	0	0	0		
158+50.00	78	55	0	0	63	23	78	0	0		2	2	3	75	0	0	0	2	3	-3		
159+00.00	104	104	0	0	65	0	104	0	0		2	2	3	101	0	0	0	11	15	-15		
159+50.00	101	101	0	0	66	0	101	11	0		1	12	16	85	0	0	0	11	15	-15		
160+00.00	79	79	0	0	64	0	79	11	0		1	12	16	63	0	0	0	12	17	-17		
160+50.00	129	129	0	0	63	0	129	0	0		3	3	4	125	0	0	0	21	29	-29		
161+00.00	126	126	0	0	61	0	126	0	0		5	5	7	120	0	0	0	19	27	-27		
161+50.00	101	101	0	0	59	0	101	0	0		7	7	9	92	0	0	0	15	21	-21		
162+00.00	81	81	0	0	50	0	81	0	0		16	16	21	60	0	0	0	13	18	-18		
162+50.00	56	56	0	0	51	0	56	0	0		14	14	18	38	0	0	0	7	10	-10		
163+00.00																						
Subtotals:	18,696	3,285	27	940	4,315	14,449	18,674	38	0	27	95	160	208	18,466	0	0	27	111	155	-128		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.12

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
163+00.00	60	41	0	0	58	19	60	15	0		8	23	30	30	0	0	0	31	43	-43		
163+50.00	73	33	0	0	57	40	73	39	0		9	48	62	11	35	0	0	47	66	-66		
164+00.00	58	32	0	0	61	26	58	64	0		4	68	88	-30	72	0	0	35	49	-49		
164+50.00	87	37	0	0	65	50	87	66	0		1	67	87	0	72	0	0	34	48	-48		
165+00.00	129	47	0	0	66	82	129	72	0			72	94	35	72	0	0	39	55	-55		
165+50.00	139	60	0	0	66	79	139	94	0			94	122	17	72	0	0	42	59	-59		
166+00.00	151	69	0	0	66	82	151	71	0			71	92	59	72	0	0	41	57	-57		
166+50.00	173	76	0	0	66	97	173	27	0			27	35	138	72	0	0	38	53	-53		
167+00.00	179	76	0	0	65	103	179	4	0			4	5	174	35	0	0	20	28	-28		
167+50.00	151	63	0	0	64	88	151	0	0			0	0	151	0	0	0	3	4	-4		
168+00.00	152	70	0	0	65	82	152	0	0			0	0	152	0	0	0	3	4	-4		
168+50.00	149	72	0	0	65	76	148	0	0			0	0	148	0	0	0	3	4	-4		
169+00.00	179	74	0	0	64	105	179	0	0			0	0	179	0	0	0	3	4	-4		
169+50.00	264	93	0	0	65	171	264	0	0			0	0	264	0	0	0	3	4	-4		
170+00.00	340	108	0	0	64	232	340	0	0			0	0	340	0	0	0	3	4	-4		
170+50.00	460	57	0	69	63	335	461	0	0			0	0	461	0	0	0	3	4	-4		
171+00.00	495	0	0	143	64	352	495	0	0			0	0	495	0	0	0	5	7	-7		
171+50.00	427	0	0	143	65	284	427	0	0			0	0	427	0	0	0	6	8	-8		
172+00.00	444	0	0	141	66	303	444	0	0			0	0	444	0	0	0	6	8	-8		
172+50.00	392	0	0	142	65	250	392	0	0			0	0	392	0	0	0	6	8	-8		
173+00.00	246	1	9	148	64	88	237	4	0	9		13	17	220	0	0	9	22	31	-22		
173+50.00	154	2	18	128	63	6	136	50	0	18		68	88	48	0	0	18	40	56	-38		
174+00.00	108	2	17	89	63	0	91	98	0	17		115	150	-59	0	0	17	40	56	-39		
174+50.00	92	1	17	75	69	0	76	52	0	17		69	90	-14	0	0	17	25	35	-18		
175+00.00	187	1	35	152	75	0	153	179	0	35		214	278	-125	0	0	35	50	70	-35		
175+50.00	307	2	37	268	71	0	270	202	0	37		239	311	-41	12	0	37	82	115	-78		
176+00.00	255	2	27	226	66	0	228	46	0	27		73	95	133	23	0	27	59	83	-56		
176+50.00	177	72	31	74	66	0	146	87	0	31		118	153	-8	23	0	31	44	62	-31		
177+00.00	183	122	15	0	66	46	168	150	0	15		165	215	-47	23	0	15	43	60	-45		
177+50.00	292	103	0	0	66	190	293	87	0			87	113	180	23	0	0	21	29	-29		
178+00.00	369	93	0	0	66	276	369	0	0			0	0	369	0	0	0	0	0	0		
178+50.00	755	41	0	0	66	714	755	0	0			0	0	755	0	0	0	0	0	0		
179+00.00	865	0	0	0	66	865	865	0	0			0	0	865	0	0	0	0	0	0		
179+50.00	480	0	0	0	66	480	480	0	0			0	0	480	0	0	0	0	0	0		
180+00.00	380	0	0	0	66	380	380	0	0			0	0	380	0	0	0	0	0	0		
180+50.00	293	0	0	14	66	279	293	0	0			0	0	293	0	0	0	0	0	0		
181+00.00	155	0	0	20	66	135	155	0	0			0	0	155	0	0	0	0	0	0		
181+50.00	79	0	0	16	66	64	80	0	0			0	0	80	0	0	0	0	0	0		
182+00.00	72	0	0	19	66	53	72	0	0			0	0	72	0	0	0	0	0	0		
182+50.00	100	0	0	21	66	79	100	0	0			0	0	100	0	0	0	0	0	0		
183+00.00	135	0	0	11	67	124	135	0	0			0	0	135	0	0	0	0	0	0		
183+50.00	171	0	0	0	67	171	171	0	0			0	0	171	0	0	0	0	0	0		
184+00.00	160	0	0	0	66	160	160	0	0			0	0	160	0	0	0	0	0	0		
184+50.00	93	0	0	0	66	93	93	0	0			0	0	93	0	0	0	0	0	0		
185+00.00	52	0	0	0	63	52	52	0	0		3	3	4	48	0	0	0	0	0	0		
185+50.00	33	0	0	0	52	33	33	0	0		14	14	18	15	0	0	0	0	0	0		
186+00.00	24	0	0	0	39	24	24	0	0		27	27	35	-11	0	0	0	0	0	0		
186+50.00	22	0	0	0	34	22	22	0	0		32	32	42	-20	0	0	0	0	0	0		
187+00.00	15	0	0	0	34	15	15	0	0		32	32	42	-27	0	0	0	0	0	0		
187+50.00	13	0	0	0	35	13	13	1	0		31	32	42	-29	0	0	0	0	0	0		
188+00.00	14	0	0	0	40	14	14	1	0		27	28	36	-22	0	0	0	0	0	0		
188+50.00	17	0	0	0	51	17	17	2	0		16	18	23	-6	0	0	0	0	0	0		
189+00.00	27	0	0	0	60	27	27	2	0		5	7	9	18	0	0	0	0	0	0		
189+50.00	52	0	0	0	65	52	52	13	0			13	17	35	0	0	0	0	0	0		
190+00.00	87	0	0	0	65	87	87	13	0			13	17	70	0	0	0	0	0	0		
190+50.00	189	0	0	0	65	189	189	0	0			0	0	189	0	0	0	0	0	0		
191+00.00	486	0	0	0	65	486	486	0	0			0	0	486	0	0	0	0	0	0		
191+50.00	957	0	0	0	65	957	957	0	0			0	0	957	0	0	0	0	0	0		
192+00.00	1,449	0	0	0	65	1,449	1,449	0	0			0	0	1,449	0	0	0	0	0	0		
192+50.00	1,738	0	0	0	65	1,738	1,738	0	0			0	0	1,738	0	0	0	0	0	0		
193+00.00	1,840	0	0	0	65	1,840	1,840	0	0			0	0	1,840	0	0	0	0	0	0		
193+50.00	1,552	0	0	0	65	1,552	1,552	0	0			0	0	1,552	0	0	0	0	0	0		
194+00.00	763	0	0	0	66	763	763	0	0			0	0	763	0	0	0	0	0	0		
194+50.00	200	0	0	0	65	200	200	0	0			0	0	200	0	0	0	0	0	0		
195+00.00	57	0	0	10	62	46	56	0	0		3	3	4	52	0	0	0	0	0	0		
195+50.00	20	0	0	20	58	0	20	0	0		9	9	12	8	0	0	0	0	0	0		
196+00.00	20	0	0	20	57	0	20	0	0		9	9	12	8	0	0	0	0	0	0		
196+50.00	26	0	0	26	61	0	26	0	0		5	5	7	20	0	0	0	0	0	0		
197+00.00																						
Subtotals:	20,263	1,450	206	1,975	4,237	16,635	20,060	1,439	0	206	235	1,880	2,444	17,616	605	0	206	797	1,116	-910		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.13

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
197+00.00	33	0	0	33	64	0	33	0	0		2	2	3	30	0	0	0	0	0	0		
197+50.00	40	0	0	39	66	2	41	0	0			0	0	41	0	0	0	0	0	0		
198+00.00	53	0	0	52	67	2	54	0	0			0	0	54	0	0	0	0	0	0		
198+50.00	63	0	0	63	66	0	63	0	0			0	0	63	0	0	0	0	0	0		
199+00.00	77	0	0	77	65	0	77	0	0			0	0	77	0	0	0	0	0	0		
199+50.00	84	0	0	84	65	0	84	0	0			0	0	84	0	0	0	0	0	0		
200+00.00	77	0	0	77	65	0	77	0	0			0	0	77	0	0	0	0	0	0		
200+50.00	60	0	0	37	81	23	60	0	0			0	0	60	0	0	0	0	0	0		
201+00.00	39	0	0	0	80	39	39	0	0		15	15	20	20	0	0	0	0	0	0		
201+50.00	127	0	0	0	63	127	127	0	0		16	16	21	106	0	0	0	0	0	0		
202+00.00	700	0	0	0	63	700	700	0	0		2	2	3	697	0	0	0	0	0	0		
202+50.00	1,152	0	0	15	64	1,137	1,152	0	0			0	0	1,152	0	0	0	0	0	0		
203+00.00	1,052	0	0	36	63	1,016	1,052	0	0		1	1	1	1,051	0	0	0	0	0	0		
203+50.00	589	0	0	48	64	541	589	0	0			0	0	589	0	0	0	0	0	0		
204+00.00	276	0	0	53	64	223	276	0	0			0	0	276	0	0	0	0	0	0		
204+50.00	319	50	0	26	64	243	319	0	0			0	0	319	0	0	0	0	0	0		
205+00.00	268	104	0	0	65	164	268	0	0			0	0	268	0	0	0	0	0	0		
205+50.00	245	109	0	0	65	136	245	0	0			0	0	245	0	0	0	0	0	0		
206+00.00	236	113	0	0	66	122	235	0	0			0	0	235	0	0	0	0	0	0		
206+50.00	248	119	0	0	65	129	248	0	0			0	0	248	0	0	0	0	0	0		
207+00.00	235	60	0	62	66	112	234	0	0			0	0	234	0	0	0	0	0	0		
207+50.00	204	0	0	111	65	93	204	0	0			0	0	204	0	0	0	0	0	0		
208+00.00	230	0	0	94	62	136	230	0	0		1	1	1	229	0	0	0	0	0	0		
208+50.00	213	0	0	75	59	138	213	0	0		5	5	7	207	0	0	0	0	0	0		
209+00.00	115	29	0	30	67	55	114	0	0		12	12	16	98	0	0	0	6	8	-8		
209+50.00	67	58	9	0	79	0	58	0	0	9	10	19	25	33	0	0	9	14	20	-11		
210+00.00	91	82	9	0	79	0	82	0	0	9	4	13	17	65	0	0	9	18	25	-16		
210+50.00	137	137	0	0	76	0	137	0	0		5	5	7	131	0	0	0	26	36	-36		
211+00.00	118	94	24	0	50	0	94	224	0	24	23	271	352	-258	0	0	24	39	55	-31		
211+50.00	64	12	52	0	14	0	12	386	0	52	50	488	634	-622	0	0	52	58	81	-29		
212+00.00	347	242	105	0	0	0	242	229	0	105	64	398	517	-275	0	0	105	86	120	-15		
212+50.00	453	322	131	0	0	0	322	138	0	131	57	326	424	-102	0	0	131	93	130	1		
213+00.00	335	204	131	0	0	0	204	165	0	131	57	353	459	-255	0	0	131	86	120	11		
213+50.00	473	374	99	0	0	0	374	152	0	99	66	317	412	-38	0	0	99	90	126	-27		
214+00.00	471	379	92	0	0	0	379	112	0	92	66	270	351	28	0	0	92	83	116	-24		
214+50.00	334	202	132	0	0	0	202	80	0	132	66	278	361	-159	0	0	132	72	101	31		
215+00.00	263	145	118	0	9	0	145	46	0	118	57	221	287	-142	0	0	118	63	88	30		
215+50.00	251	145	106	0	28	0	145	34	0	106	38	178	231	-86	0	0	106	56	78	28		
216+00.00	236	142	94	0	44	0	142	20	0	94	22	136	177	-35	0	0	94	49	69	25		
216+50.00	152	98	54	0	54	0	98	8	0	54	11	73	95	3	0	0	54	35	49	5		
217+00.00	60	46	14	0	62	0	46	0	0	14	5	19	25	21	0	0	14	12	17	-3		
217+50.00	88	54	34	0	65	0	54	0	0	34	3	37	48	6	0	0	34	15	21	13		
218+00.00	116	63	53	0	62	0	63	0	0	53	11	64	83	-20	0	0	53	28	39	14		
218+50.00	103	63	40	0	132	0	63	0	0	40	10	50	65	-2	0	0	40	71	99	-59		
219+00.00	133	109	24	0	121	0	109	3	0	24	33	60	78	31	0	0	24	84	118	-94		
219+50.00	145	120	25	0	81	0	120	4	0	25	32	61	79	41	0	0	25	57	80	-55		
220+00.00	103	82	21	0	109	0	82	2	0	21		23	30	52	0	0	21	41	57	-36		
220+50.00	83	76	7	0	92	0	76	2	0	7		9	12	64	0	0	7	14	20	-13		
221+00.00	90	86	4	0	85	0	86	4	0	4	5	13	17	69	0	0	4	10	14	-10		
221+50.00	102	102	0	0	82	0	102	4	0		5	9	12	90	0	0	0	11	15	-15		
222+00.00	153	146	7	0	83	0	146	5	0	7		12	16	130	0	0	7	10	14	-7		
222+50.00	191	173	18	0	80	0	173	6	0	18		24	31	142	0	0	18	7	10	8		
223+00.00	207	173	34	0	71	0	173	5	0	34		39	51	122	0	0	34	16	22	12		
223+50.00	214	165	49	0	68	0	165	4	0	49		53	69	96	0	0	49	31	43	6		
224+00.00	171	117	54	0	68	0	117	11	0	54		65	85	33	0	0	54	35	49	5		
224+50.00	150	123	27	0	74	0	123	12	0	27		39	51	72	0	0	27	34	48	-21		
225+00.00	134	83	6	45	73	0	128	5	0	6		11	14	114	0	0	6	24	34	-28		
225+50.00	118	0	12	106	65	0	106	2	0	12		14	18	88	0	0	12	11	15	-3		
226+00.00	182	0	25	138	66	20	158	0	0	25		25	33	126	0	0	25	13	18	7		
226+50.00	203	0	25	142	68	36	178	0	0	25		25	33	146	0	0	25	9	13	12		
227+00.00	179	0	7	138	67	34	172	0	0	7		7	9	163	0	0	7	1	1	6		
227+50.00	163	0	0	138	66	25	163	0	0			0	0	163	0	0	0	0	0	0		
228+00.00	129	51	0	65	65	14	130	0	0			0	0	130	0	0	0	0	0	0		
228+50.00	113	98	0	0	65	16	114	0	0			0	0	114	0	0	0	0	0	0		
229+00.00	106	74	0	0	65	32	106	0	0		1	1	1	105	0	0	0	0	0	0		
229+50.00	86	41	0	0	63	45	86	0	0		3	3	4	82	0	0	0	0	0	0		
230+00.00	55	26	0	0	59	29	55	0	0		7	7	9	46	0	0	0	0	0	0		
230+50.00	43	26	0	0	57	17	43	0	0		8	8	10	33	0	0	0	0	0	0		
231+00.00																						
Subtotals:	14,147	5,317	1,642	1,784	4,191	5,406	12,507	1,663	0	1,642	773	4,078	5,301	7,206	0	0	1,642	1,408	1,971	-329		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.14

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
231+00.00	57	36	0	0	61	21	57	0	0		4	4	5	52	0	0	0	0	0	0		
231+50.00	79	49	0	0	65	30	79	0	0		1	1	1	78	0	0	0	0	0	0		
232+00.00	112	56	0	0	66	56	112	0	0			0	0	112	0	0	0	0	0	0		
232+50.00	166	57	0	0	66	109	166	0	0			0	0	166	0	0	0	0	0	0		
233+00.00	149	54	0	0	66	95	149	3	0			3	4	145	0	0	0	0	0	0		
233+50.00	80	42	0	0	64	38	80	3	0		2	5	7	74	0	0	0	0	0	0		
234+00.00	57	33	0	0	65	25	58	1	0		2	3	4	54	0	0	0	0	0	0		
234+50.00	69	34	0	0	67	35	69	1	0		1	2	3	66	0	0	0	0	0	0		
235+00.00	96	42	0	0	65	54	96	82	0		1	83	108	-12	0	0	0	26	36	-36		
235+50.00	118	59	0	0	65	59	118	191	0			191	248	-130	174	0	0	57	80	-80		
236+00.00	141	72	0	0	65	69	141	245	0			245	319	-178	348	0	0	63	88	-88		
236+50.00	118	74	0	0	65	45	119	216	0		1	217	282	-163	348	0	0	59	83	-83		
237+00.00	111	52	0	0	62	59	111	122	0		4	126	164	-53	348	0	0	43	60	-60		
237+50.00	88	24	0	0	55	65	89	61	0		10	71	92	-3	348	0	0	31	43	-43		
238+00.00	35	12	0	0	42	23	35	26	0		24	50	65	-30	174	0	0	19	27	-27		
238+50.00	29	6	0	0	22	22	28	9	0		46	55	72	-44	0	0	0	6	8	-8		
239+00.00	22	3	0	0	11	19	22	14	0		58	72	94	-72	0	0	0	3	4	-4		
239+50.00	18	4	0	0	10	15	19	26	0		59	85	111	-92	0	0	0	4	6	-6		
240+00.00	63	3	50	0	5	10	13	229	0	50	62	341	443	-430	0	0	50	35	49	1		
240+50.00	104	1	93	0	5	9	10	390	0	93	61	544	707	-697	137	0	93	58	81	12		
241+00.00	108	1	84	0	5	23	24	315	0	84	60	459	597	-573	274	0	84	50	70	14		
241+50.00	100	2	78	0	3	20	22	290	0	78	62	430	559	-537	274	0	78	46	64	14		
242+00.00	83	4	74	0	6	5	9	306	0	74	59	439	571	-562	274	0	74	42	59	15		
242+50.00	101	28	71	0	7	2	30	307	0	71	58	436	567	-537	274	0	71	48	67	4		
243+00.00	108	43	65	0	7	0	43	276	0	65	57	398	517	-474	274	0	65	57	80	-15		
243+50.00	153	97	56	0	16	0	97	182	0	56	48	286	372	-275	274	0	56	58	81	-25		
244+00.00	151	91	60	0	35	0	91	94	0	60	30	184	239	-148	274	0	60	43	60	0		
244+50.00	93	29	64	0	51	0	29	56	0	64	15	135	176	-147	274	0	64	28	39	25		
245+00.00	111	71	40	0	66	0	71	20	0	40	4	64	83	-12	137	0	40	15	21	19		
245+50.00	146	101	20	0	71	25	126	0	0	20		20	26	100	0	0	20	6	8	12		
246+00.00	190	110	24	0	67	56	166	0	0	24		24	31	135	0	0	24	9	13	11		
246+50.00	273	128	31	0	66	114	242	0	0	31		31	40	202	0	0	31	12	17	14		
247+00.00	371	126	36	0	66	209	335	2	0	36		38	49	286	0	0	36	14	20	16		
247+50.00	306	103	34	0	64	169	272	2	0	34	1	37	48	224	0	0	34	14	20	14		
248+00.00	150	65	31	0	55	54	119	4	0	31	11	46	60	59	0	0	31	12	17	14		
248+50.00	74	28	34	0	34	12	40	18	0	34	32	84	109	-69	0	0	34	13	18	16		
249+00.00	59	8	50	0	15	1	9	79	0	50	52	181	235	-226	0	0	50	25	35	15		
249+50.00	77	9	68	0	5	0	9	205	0	68	62	335	436	-427	48	0	68	36	50	18		
250+00.00	105	27	78	0	4	0	27	318	0	78	63	459	597	-570	96	0	78	42	59	19		
250+50.00	252	167	85	0	10	0	167	371	120	85	56	632	822	-655	96	0	85	51	71	14		
251+00.00	223	136	87	0	17	0	136	377	88	87	50	602	783	-647	96	0	87	52	73	14		
251+50.00	203	114	89	0	24	0	114	358	74	89	42	563	732	-618	96	0	89	49	69	20		
252+00.00	200	108	92	0	29	0	108	352	72	92	37	553	719	-611	96	0	92	47	66	26		
252+50.00	204	109	95	0	32	0	109	365	70	95	35	565	735	-626	96	0	95	48	67	28		
253+00.00	208	111	97	0	34	0	111	421	60	97	32	610	793	-682	96	0	97	56	78	19		
253+50.00	209	111	98	0	33	0	111	443	57	98	35	633	823	-712	96	0	98	58	81	17		
254+00.00	187	89	98	0	28	0	89	420	53	98	41	612	796	-707	96	0	98	53	74	24		
254+50.00	167	72	95	0	33	0	72	402	54	95	34	585	761	-689	96	0	95	47	66	29		
255+00.00	176	84	92	0	34	0	84	378	78	92	32	580	754	-670	96	0	92	41	57	35		
255+50.00	195	107	88	0	32	0	107	345	105	88	34	572	744	-637	96	0	88	35	49	39		
256+00.00	220	138	82	0	43	0	138	293	132	82	22	529	688	-550	96	0	82	33	46	36		
256+50.00	265	179	75	0	57	11	190	247	172	75	8	502	653	-463	96	0	75	30	42	33		
257+00.00	102	4	70	0	65	28	32	196	0	70	1	267	347	-315	96	0	70	27	38	32		
257+50.00	128	6	66	0	65	56	62	151	0	66	1	218	283	-221	96	0	66	27	38	28		
258+00.00	261	10	62	0	65	189	199	106	0	62		168	218	-19	96	0	62	26	36	26		
258+50.00	375	26	59	0	65	290	316	80	0	59		139	181	135	96	0	59	26	36	23		
259+00.00	259	42	51	0	65	166	208	73	0	51		124	161	47	96	0	51	24	34	17		
259+50.00	299	30	23	0	71	246	276	31	0	23	7	61	79	197	48	0	23	11	15	8		
260+00.00	448	16	0	0	61	432	448	0	0		28	28	36	412	0	0	0	0	0	0		
260+50.00	252	11	18	0	30	224	235	11	0	18	46	75	98	138	0	0	18	7	10	8		
261+00.00	66	4	51	0	9	11	15	48	0	51	57	156	203	-188	0	0	51	23	32	19		
261+50.00	78	3	75	0	2	0	3	102	0	75	65	242	315	-312	0	0	75	37	52	23		
262+00.00	94	6	88	0	0	0	6	157	0	88	67	312	406	-400	0	0	88	46	64	24		
262+50.00	115	13	102	0	0	0	13	200	0	102	66	368	478	-465	0	0	102	55	77	25		
263+00.00	150	39	111	0	0	0	39	225	0	111	65	401	521	-482	0	0	111	59	83	28		
263+50.00	191	76	115	0	0	0	76	230	0	115	66	411	534	-458	0	0	115	61	85	30		
264+00.00	220	99	121	0	0	0	99	212	0	121	66	399	519	-420	0	0	121	66	92	29		
264+50.00	257	131	126	0	0	0	131	193	0	126	66	385	501	-370	0	0	126	70	98	28		
265+00.00																						
Subtotals:	10,475	3,825	3,452	0	2,539	3,201	7,026	10,880	1,135	3,452	2,009	17,476	22,719	-15,693	6,133	0	3,452	2,139	2,995	457		

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
265+00.00	307	175	132	0	0	0	175	173	0	132	66	371	482	-307	0	0	132	73	102	30		
265+50.00	338	217	121	0	0	0	217	124	0	121	66	311	404	-187	0	0	121	67	94	27		
266+00.00	359	253	106	0	2	0	253	61	0	106	64	231	300	-47	0	0	106	56	78	28		
266+50.00	356	258	98	0	13	0	258	22	0	98	53	173	225	33	0	0	98	48	67	31		
267+00.00	384	279	105	0	38	0	279	7	0	64	33	104	135	144	0	0	105	57	80	25		
267+50.00	432	317	115	0	59	0	317	0	0	74	11	85	111	207	0	0	115	64	90	25		
268+00.00	439	210	99	131	66	0	341	0	0	99		99	129	212	0	0	99	65	91	8		
268+50.00	375	47	64	265	66	0	312	0	0	64		64	83	229	0	0	64	57	80	-16		
269+00.00	283	0	38	245	66	0	245	0	0	38		38	49	196	0	0	38	33	46	-8		
269+50.00	230	79	40	111	65	0	190	0	0	40		40	52	138	0	0	40	22	31	9		
270+00.00	167	133	34	0	65	0	133	0	0	34		34	44	89	0	0	34	11	15	19		
270+50.00	168	53	14	41	65	60	154	0	0	14		14	18	136	0	0	14	0	0	14		
271+00.00	223	0	9	71	65	144	215	0	0	9		9	12	203	0	0	9	0	0	9		
271+50.00	265	0	16	52	65	197	249	0	0	16		16	21	228	0	0	16	6	8	8		
272+00.00	364	0	22	39	65	303	342	0	0	22		22	29	313	0	0	22	10	14	8		
272+50.00	618	0	14	33	64	572	605	0	0	14	1	15	20	586	0	0	14	6	8	6		
273+00.00	819	2	8	33	64	776	811	0	0	8	2	10	13	798	0	0	8	2	3	5		
273+50.00	463	2	11	35	64	415	452	0	0	11	2	13	17	435	0	0	11	4	6	5		
274+00.00	136	0	10	41	65	85	126	0	0	10	1	11	14	112	0	0	10	4	6	4		
274+50.00	153	0	3	52	66	98	150	0	0	3		3	4	146	0	0	3	1	1	2		
275+00.00	117	0	0	58	66	59	117	0	0			0	0	117	0	0	0	0	0	0		
275+50.00	92	0	0	54	66	39	93	0	0			0	0	93	0	0	0	0	0	0		
276+00.00	74	0	0	42	65	32	74	0	0		1	1	1	73	0	0	0	0	0	0		
276+50.00	55	20	0	17	54	18	55	0	0		12	12	16	39	0	0	0	4	6	-6		
277+00.00	67	67	0	0	35	0	67	2	0		33	35	46	22	0	0	0	14	20	-20		
277+50.00	64	64	0	0	16	0	64	13	0		53	66	86	-22	0	0	0	27	38	-38		
278+00.00	86	86	0	0	5	0	86	19	0		62	81	105	-19	0	0	0	38	53	-53		
278+50.00	108	108	0	0	4	0	108	27	0		62	89	116	-8	0	0	0	43	60	-60		
279+00.00	163	163	0	0	11	0	163	30	0		55	85	111	53	0	0	0	70	98	-98		
279+50.00	153	146	7	0	36	0	146	10	0	7	30	47	61	85	0	0	7	53	74	-67		
280+00.00	166	60	40	0	59	66	126	11	0	40	5	56	73	53	0	0	40	22	31	9		
280+50.00	404	95	80	0	63	229	324	47	0	80		127	165	159	0	0	80	44	62	18		
281+00.00	469	110	59	0	63	300	410	35	0	59		94	122	288	0	0	59	32	45	14		
281+50.00	377	88	19	0	63	270	358	0	0	19		19	25	333	0	0	19	4	6	13		
282+00.00	273	66	13	0	64	193	259	0	0	13		13	17	242	0	0	13	0	0	13		
282+50.00	178	31	12	26	64	109	166	0	0	12		12	16	150	0	0	12	0	0	12		
283+00.00	176	14	19	47	64	97	158	0	0	19		19	25	133	0	0	19	4	6	13		
283+50.00	206	39	53	21	64	93	153	18	0	53		71	92	61	0	0	53	26	36	17		
284+00.00	207	42	83	0	63	82	124	62	0	83	1	146	190	-66	96	0	83	48	67	16		
284+50.00	176	31	85	0	61	60	91	144	0	85	3	232	302	-211	192	0	85	51	71	14		
285+00.00	157	38	77	0	60	42	80	151	0	77	4	232	302	-222	192	0	77	46	64	13		
285+50.00	141	61	60	0	62	20	81	54	0	60	1	115	150	-69	96	0	60	34	48	12		
286+00.00	132	94	38	0	63	0	94	3	0	38		41	53	41	0	0	38	18	25	13		
286+50.00	149	124	25	0	63	0	124	0	0	25		25	33	92	0	0	25	10	14	11		
287+00.00	150	126	24	0	63	0	126	0	0	24		24	31	95	0	0	24	8	11	13		
287+50.00	139	116	23	0	63	0	116	0	0	23		23	30	86	0	0	23	8	11	12		
288+00.00	147	109	38	0	63	0	109	9	0	38		47	61	48	0	0	38	19	27	11		
288+50.00	279	179	100	0	63	0	179	10	0	100		110	143	36	0	0	100	57	80	20		
289+00.00	311	207	104	0	63	0	207	1	0	104		105	137	71	0	0	104	59	83	21		
289+50.00	222	165	57	0	63	0	165	0	0	57		57	74	91	0	0	57	30	42	15		
290+00.00	187	147	40	0	64	0	147	0	0	40		40	52	95	0	0	40	19	27	13		
290+50.00	132	105	27	0	69	0	105	0	0	27		27	35	70	0	0	27	9	13	14		
291+00.00	133	84	18	0	68	30	114	0	0	18		18	23	91	0	0	18	4	6	12		
291+50.00	238	89	11	0	63	137	226	0	0	11		11	14	212	0	0	11	0	0	11		
292+00.00	344	109	15	0	63	221	330	0	0	15		15	20	311	0	0	15	0	0	15		
292+50.00	351	126	16	0	62	209	335	0	0	16		16	21	314	0	0	16	0	0	16		
293+00.00	370	125	18	0	62	227	352	0	0	18		18	23	329	0	0	18	0	0	18		
293+50.00	359	112	20	0	62	228	340	0	0	20		20	26	314	0	0	20	0	0	20		
294+00.00	318	102	20	0	62	197	299	0	0	20		20	26	273	0	0	20	0	0	20		
294+50.00	288	94	20	0	62	175	269	0	0	20		20	26	243	0	0	20	0	0	20		
295+00.00	236	73	16	0	62	147	220	0	0	16		16	21	199	0	0	16	0	0	16		
295+50.00	191	58	11	0	63	122	180	0	0	11		11	14	166	0	0	11	0	0	11		
296+00.00	191	30	12	23	63	127	180	0	0	12		12	16	164	0	0	12	0	0	12		
296+50.00	214	0	11	42	62	161	203	0	0	11		11	14	189	0	0	11	0	0	11		
297+00.00	247	0	11	48	62	188	236	0	0	11		11	14	222	0	0	11	0	0	11		
297+50.00	262	33	12	29	62	188	250	0	0	12		12	16	234	0	0	12	0	0	12		
298+00.00	339	64	13	0	60	261	325	0	0	13		13	17	308	0	0	13	0	0	13		
298+50.00	379	68	14	0	61	297	365	0	0	14		14	18	347	0	0	14	0	0	14		
299+00.00																						
Subtotals:	17,096	5,893	2,380	1,556	3,767	7,274	14,723	1,033	0	2,298	621	3,952	5,138	9,585	577	0	2,380	1,387	1,942	438		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.16

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
299+00.00	294	82	14	0	62	198	280	0	0	14		14	18	262	0	0	14	0	0	14		
299+50.00	251	96	12	0	62	143	239	0	0	12		12	16	223	0	0	12	0	0	12		
300+00.00	201	102	11	0	62	88	190	0	0	11		11	14	176	0	0	11	0	0	11		
300+50.00	200	51	11	113	67	25	189	0	0	11		11	14	175	0	0	11	8	11	0		
301+00.00	284	0	43	241	68	0	241	0	0	43		43	56	185	0	0	43	28	39	4		
301+50.00	385	0	108	277	63	0	277	117	0	108		225	293	-16	0	0	108	61	85	23		
302+00.00	319	0	76	243	71	0	243	117	0	76		193	251	-8	0	0	76	48	67	9		
302+50.00	206	0	21	185	72	0	185	0	0	21		21	27	158	0	0	21	12	17	4		
303+00.00	196	0	34	162	64	0	162	0	0	34		34	44	118	0	0	34	12	17	17		
303+50.00	166	0	37	129	63	0	129	0	0	21		21	27	102	0	0	37	10	14	23		
304+00.00	227	0	24	115	62	87	202	0	0	8		8	10	192	0	0	24	4	6	18		
304+50.00	294	1	13	113	61	167	281	0	0	13		13	17	264	0	0	13	0	0	13		
305+00.00	196	1	13	101	61	81	183	0	0	13		13	17	166	0	0	13	0	0	13		
305+50.00	135	58	29	46	61	2	106	1	0	29		30	39	67	0	0	29	6	8	21		
306+00.00	166	120	46	0	62	0	120	1	0	46		47	61	59	0	0	46	12	17	29		
306+50.00	165	121	44	0	61	0	121	0	0	44		44	57	64	0	0	44	11	15	29		
307+00.00	162	118	44	0	62	0	118	1	0	44		45	59	60	0	0	44	12	17	27		
307+50.00	170	120	50	0	62	0	120	1	0	50		51	66	54	0	0	50	17	24	26		
308+00.00	164	118	46	0	63	0	118	0	0	46		46	60	58	0	0	46	15	21	25		
308+50.00	163	122	41	0	63	0	122	0	0	41		41	53	69	0	0	41	13	18	23		
309+00.00	160	119	41	0	63	0	119	0	0	41		41	53	66	0	0	41	14	20	21		
309+50.00	137	115	22	0	63	0	115	0	0	22		22	29	86	0	0	22	19	27	-5		
310+00.00	113	109	4	0	62	0	109	0	0	4		4	5	104	0	0	4	18	25	-21		
310+50.00	83	48	2	34	63	0	82	2	0	2		4	5	77	0	0	2	6	8	-6		
311+00.00	70	0	0	70	64	0	70	3	0			3	4	66	0	0	0	0	0	0		
311+50.00	74	0	0	74	64	0	74	2	0			2	3	71	0	0	0	0	0	0		
312+00.00	89	0	0	89	64	0	89	1	0			1	1	88	0	0	0	0	0	0		
312+50.00	103	52	0	51	64	0	103	2	0			2	3	100	0	0	0	0	0	0		
313+00.00	106	106	0	0	65	0	106	2	0			2	3	103	0	0	0	0	0	0		
313+50.00	0	0	0	0	0	0	0	0	0		66	66	86	-86	0	0	0	0	0	0		
314+00.00	440	440	0	0	244	0	440	0	0			0	0	440	0	0	0	0	0	0		
316+00.00	75	75	0	0	50	0	75	0	0			0	0	75	0	0	0	0	0	0		
316+50.00	81	81	0	0	67	0	81	0	0			0	0	81	0	0	0	0	0	0		
317+00.00	147	115	32	0	34	0	115	0	0	19	33	52	68	47	0	0	32	18	25	7		
317+50.00	204	139	65	0	34	0	139	4	0	52	33	89	116	23	0	0	65	37	52	13		
318+00.00	196	126	70	0	67	0	126	12	0	70		82	107	19	0	0	70	39	55	15		
318+50.00	210	140	70	0	60	0	140	8	0	70		78	101	39	0	0	70	40	56	14		
319+00.00	159	118	41	0	63	0	118	0	0	41	3	44	57	61	0	0	41	26	36	5		
319+50.00	77	41	7	0	66	29	70	0	0	7	6	13	17	53	0	0	7	6	8	-1		
320+00.00	61	0	0	0	60	61	61	2	0		4	6	8	53	0	0	0	0	0	0		
320+50.00	64	0	0	0	64	64	64	2	0			2	3	61	0	0	0	0	0	0		
321+00.00	78	0	0	0	64	78	78	0	0			0	0	78	0	0	0	0	0	0		
321+50.00	107	0	0	0	69	107	107	0	0			0	0	107	0	0	0	0	0	0		
322+00.00	145	0	0	0	78	145	145	0	0			0	0	145	0	0	0	0	0	0		
322+50.00	166	0	0	0	78	166	166	0	0			0	0	166	0	0	0	0	0	0		
323+00.00	127	0	0	0	81	127	127	0	0			0	0	127	0	0	0	0	0	0		
323+50.00	81	0	0	0	78	81	81	0	0		4	4	5	76	0	0	0	0	0	0		
324+00.00	73	0	0	0	71	73	73	0	0		6	6	8	65	0	0	0	0	0	0		
324+50.00	76	0	0	0	76	76	76	0	0		2	2	3	73	0	0	0	0	0	0		
325+00.00	94	0	0	0	75	94	94	0	0			0	0	94	0	0	0	0	0	0		
325+50.00	107	0	0	0	69	107	107	0	0			0	0	107	0	0	0	0	0	0		
326+00.00	196	0	0	0	64	196	196	0	0			0	0	196	0	0	0	0	0	0		
326+50.00	391	0	0	0	65	391	391	0	0			0	0	391	0	0	0	0	0	0		
327+00.00	575	0	0	0	68	575	575	0	0			0	0	575	0	0	0	0	0	0		
327+50.00	610	0	0	0	61	610	610	0	0			0	0	610	0	0	0	0	0	0		
328+00.00	438	0	0	0	67	438	438	0	0			0	0	438	0	0	0	0	0	0		
328+50.00	296	0	0	0	73	296	296	0	0			0	0	296	0	0	0	0	0	0		
329+00.00	259	0	0	0	70	259	259	0	0		1	1	1	258	0	0	0	0	0	0		
329+50.00	268	0	0	0	84	268	268	0	0		1	1	1	267	0	0	0	0	0	0		
330+00.00	257	0	0	0	80	257	257	0	0			0	0	257	0	0	0	0	0	0		
330+50.00	176	0	0	0	69	176	176	0	0			0	0	176	0	0	0	0	0	0		
331+00.00	74	0	0	0	77	74	74	30	0		2	32	42	32	0	0	0	0	0	0		
331+50.00	45	0	0	0	76	45	45	30	0		2	32	42	3	0	0	0	0	0	0		
332+00.00	91	0	0	0	70	91	91	0	0		1	1	1	90	0	0	0	0	0	0		
332+50.00	129	0	0	0	69	129	129	0	0		1	1	1	128	0	0	0	0	0	0		
333+00.00	170	0	0	0	65	170	170	0	0		1	1	1	169	0	0	0	0	0	0		
333+50.00	188	0	0	0	69	188	188	0	0			0	0	188	0	0	0	0	0	0		
334+00.00	244	0	0	0	72	244	244	0	0		1	1	1	243	0	0	0	0	0	0		
334+50.00																						
Subtotals:	12,454	2,934	1,071	2,043	4,591	6,406	11,383	338	0	1,013	167	1,518	1,973	9,410	0	0	1,071	492	689	382		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.17

3/18/2024 2:54:34 PM raltenh c:\pw_work\pwmain\raltenh\d0183741\31052107_T02.xlsm

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
334+50.00	377	0	0	0	64	377	377	0	0			0	0	377	0	0	0	0	0	0		
335+00.00	547	0	0	0	63	547	547	0	0			0	0	547	0	0	0	0	0	0		
335+50.00	651	0	0	0	68	651	651	0	0			0	0	651	0	0	0	0	0	0		
336+00.00	614	0	0	0	65	614	614	0	0			0	0	614	0	0	0	0	0	0		
336+50.00	461	0	0	0	65	461	461	0	0			0	0	461	0	0	0	0	0	0		
337+00.00	379	0	0	6	73	373	379	0	0			0	0	379	0	0	0	0	0	0		
337+50.00	259	0	0	7	62	252	259	3	0		16	19	25	234	0	0	0	0	0	0		
338+00.00	247	0	0	1	52	246	247	7	0		27	34	44	203	0	0	0	0	0	0		
338+50.00	521	0	0	0	64	521	521	4	0		12	16	21	500	0	0	0	0	0	0		
339+00.00	568	0	0	0	67	568	568	0	0		2	2	3	565	0	0	0	0	0	0		
339+50.00	462	0	0	0	65	462	462	0	0			0	0	462	0	0	0	0	0	0		
340+00.00	450	0	0	0	69	450	450	0	0			0	0	450	0	0	0	0	0	0		
340+50.00	435	0	0	0	68	435	435	0	0			0	0	435	0	0	0	0	0	0		
341+00.00	287	0	0	22	69	265	287	0	0			0	0	287	0	0	0	0	0	0		
341+50.00	151	0	0	44	71	107	151	0	0			0	0	151	0	0	0	0	0	0		
342+00.00	157	0	0	23	72	134	157	0	0		2	2	3	154	0	0	0	0	0	0		
342+50.00	180	0	0	0	69	180	180	0	0		2	2	3	177	0	0	0	0	0	0		
343+00.00	155	0	0	0	65	155	155	0	0			0	0	155	0	0	0	0	0	0		
343+50.00	210	0	0	0	71	210	210	0	0			0	0	210	0	0	0	0	0	0		
344+00.00	267	0	0	0	78	267	267	0	0			0	0	267	0	0	0	0	0	0		
344+50.00	179	0	0	0	78	179	179	0	0			0	0	179	0	0	0	0	0	0		
345+00.00	164	0	0	0	71	164	164	0	0			0	0	164	0	0	0	0	0	0		
345+50.00	145	20	0	0	68	126	146	0	0			0	0	146	0	0	0	0	0	0		
346+00.00	64	37	0	0	62	27	64	0	0		5	5	7	58	0	0	0	3	4	-4		
346+50.00	50	23	27	0	57	1	24	18	0	27	15	60	78	-54	0	0	27	15	21	6		
347+00.00	124	68	55	0	64	1	69	18	0	55	10	83	108	-39	0	0	55	25	35	20		
347+50.00	279	206	73	0	73	0	206	0	0	73		73	95	111	0	0	73	39	55	18		
348+00.00	433	343	90	0	72	0	343	0	0	90		90	117	226	0	0	90	61	85	5		
348+50.00	546	200	79	268	70	0	468	0	0	79		79	103	365	0	0	79	74	104	-25		
349+00.00	584	0	93	491	69	0	491	0	0	93		93	121	370	0	0	93	70	98	-5		
349+50.00	585	0	118	467	69	0	467	0	0	118		118	153	314	0	0	118	65	91	27		
350+00.00	626	0	122	504	68	0	504	0	0	122		122	159	345	0	0	122	69	97	25		
350+50.00	625	0	120	505	66	0	505	0	0	120		120	156	349	0	0	120	68	95	25		
351+00.00	581	0	112	469	67	0	469	0	0	112		112	146	323	0	0	112	62	87	25		
351+50.00	523	0	103	420	67	0	420	0	0	103		103	134	286	0	0	103	56	78	25		
352+00.00	441	0	93	348	66	0	348	0	0	93		93	121	227	0	0	93	49	69	24		
352+50.00	352	0	80	272	66	0	272	0	0	80		80	104	168	0	0	80	39	55	25		
353+00.00	261	0	60	201	72	0	201	0	0	60	1	61	79	122	0	0	60	25	35	25		
353+50.00	220	78	60	82	72	0	160	0	0	40	1	41	53	107	0	0	60	23	32	28		
354+00.00	289	206	83	0	66	0	206	0	0	63		63	82	124	0	0	83	38	53	30		
354+50.00	324	225	99	0	65	0	225	20	0	99		119	155	70	0	0	99	50	70	29		
355+00.00	277	153	124	0	65	0	153	135	0	124		259	337	-184	16	0	124	66	92	32		
355+50.00	230	111	119	0	65	0	111	153	0	119		272	354	-243	33	0	119	61	85	34		
356+00.00	220	128	92	0	65	0	128	61	0	92		153	199	-71	33	0	92	44	62	30		
356+50.00	282	195	87	0	33	0	195	39	0	87	32	158	205	-10	33	0	87	45	63	24		
357+00.00	259	179	80	0	32	0	179	24	0	58	33	115	150	30	16	0	80	41	57	23		
357+50.00	205	133	73	0	66	0	133	19	0	51		70	91	42	0	0	73	37	52	21		
358+00.00	162	110	52	0	33	0	110	11	0	52		63	82	28	0	0	52	32	45	7		
358+50.00	52	33	19	0	0	0	33	0	0	8		8	10	23	0	0	19	15	21	-2		
358+75.00																						
IA 3																						
Totals:	145,904	47,655	14,933	17,405	40,093	65,931	130,991	16,988	1,135	14,656	4,240	37,019	48,125	82,867	7,444	0	14,933	10,272	14,381	553		

Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
Outlet266																						
+02.67																						
+25.00	281	235	46	0	0	0	235	0	0	46		46	60	175	0	0	46	32	45	1		
+50.00	337	285	52	0	0	0	285	0	0	52		52	68	217	0	0	52	37	52	0		
+75.00	287	241	46	0	0	0	241	0	0	46		46	60	181	0	0	46	33	46	0		
1+00.00	193	156	37	0	0	0	156	0	0	37		37	48	108	0	0	37	26	36	1		
1+25.00	146	114	32	0	0	0	114	0	0	32		32	42	72	0	0	32	23	32	0		
1+50.00	139	108	31	0	0	0	108	0	0	31		31	40	68	0	0	31	22	31	0		
1+75.00	128	99	29	0	0	0	99	0	0	29		29	38	61	0	0	29	21	29	0		
2+00.00	73	54	19	0	0	0	54	0	0	19		19	25	29	0	0	19	13	18	1		
2+08.00	6	3	3	0	0	0	3	0	0	3		3	4	-1	0	0	3	2	3	0		
Outlet266																						
Totals:	1,590	1,295	295	0	0	0	1,295	0	0	295	0	295	384	912	0	0	295	209	293	3		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.19

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Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
ParadiseValleyRd																						
900+20.00	2	2	0	0	0	0	2	0	0			0	0	2	0	0	0	0	0	0		
900+25.00	13	13	0	0	0	0	13	0	0			0	0	13	0	0	0	0	0	0		
900+50.00	30	30	0	0	0	0	30	0	0			0	0	30	0	0	0	1	1	-1		
900+75.00	67	48	19	0	0	0	48	12	0	19		31	40	8	0	0	19	9	13	6		
901+00.00	40	25	15	0	40	0	25	9	0	15		24	31	-6	0	0	15	7	10	5		
901+19.00																						
ParadiseValleyRd																						
Totals:	152	118	34	0	40	0	118	21	0	34	0	55	72	47	0	0	34	17	24	11		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.20

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Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
RaylynRd																						
600+12.00	26	17	0	3	51	7	27	0	0		1	1	1	26	0	0	0	0	0	0		
600+25.00	65	47	7	0	34	10	57	0	0	7		7	9	48	0	0	7	5	7	0		
600+50.00	20	17	3	0	11	0	17	0	0	3		3	4	13	0	0	3	2	3	0		
600+62.00																						
RaylynRd																						
Totals:	111	81	10	3	96	17	101	0	0	10	1	11	15	87	0	0	10	7	10	1		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.21

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Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
SherrillRd																						
300+12.00																						
300+25.00	104	104	0	0	61	0	104	2	0		3	5	7	98	0	0	0	4	6	-6		
300+50.00	227	219	8	0	84	0	219	6	0	8	4	18	23	196	0	0	8	20	28	-20		
300+75.00	161	153	8	0	57	0	153	2	0	8		10	13	140	0	0	8	23	32	-24		
301+00.00	75	75	0	0	55	0	75	2	0			2	3	72	0	0	0	19	27	-27		
301+25.00	35	35	0	0	30	0	35	1	0			1	1	34	0	0	0	13	18	-18		
301+50.00	11	11	0	0	12	0	11	0	0			0	0	11	0	0	0	11	15	-15		
301+75.00	7	7	0	0	12	0	7	0	0			0	0	7	0	0	0	11	15	-15		
301+76.25	0	0	0	0	1	0	0	0	0			0	0	0	0	0	0	1	1	-1		
SherrillRd																						
Totals:	620	604	16	0	312	0	604	13	0	16	7	36	47	558	0	0	16	102	143	-127		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.22

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Refer to Standard Road Plans EW-101 and EW-102.

TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
WhisperingHillsDr																						
400+12.00	25	25	0	0	33	0	25	0	0			0	0	25	0	0	0	3	4	-4		
400+25.00	65	65	0	0	16	0	65	11	0		8	19	25	40	0	0	0	16	22	-22		
400+50.00	28	28	0	0	5	0	28	8	0		6	14	18	10	0	0	0	11	15	-15		
400+67.00																						
WhisperingHillsDr																						
Totals:	118	118	0	0	54	0	118	19	0	0	14	33	43	76	0	0	0	30	42	-42		

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel \Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER T.23	

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Refer to Standard Road Plans EW-101 and EW-102.

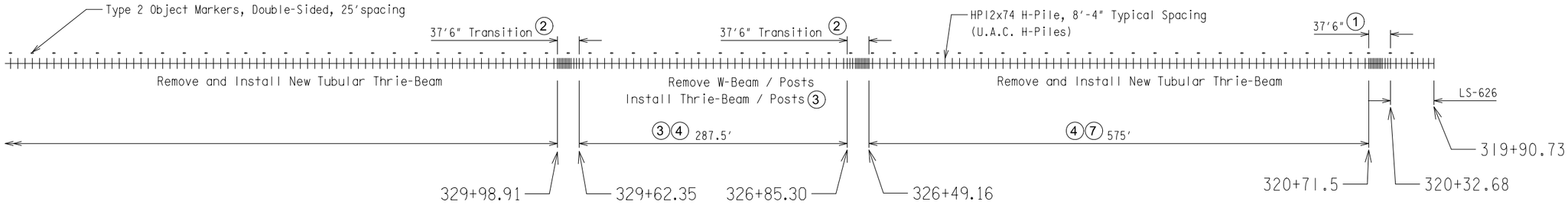
TABULATION OF TEMPLATE QUANTITIES AND ADJUSTMENTS

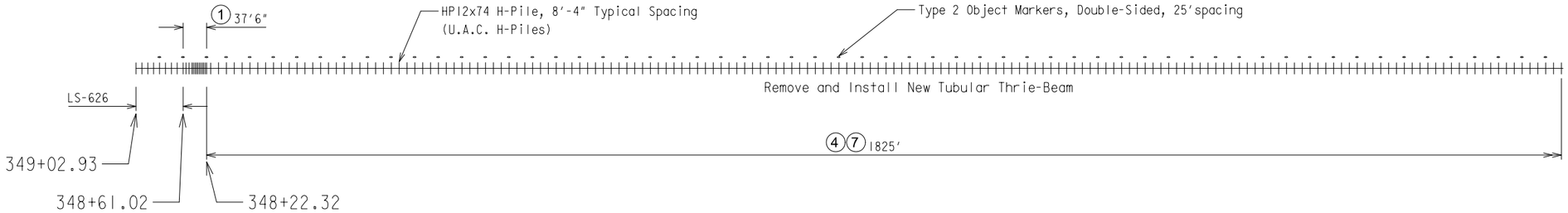
107-28
04-21-15

Station	Cut							Fill							Checks (EW-102)		Topsoil					
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]
							[2]+[4]+[6]						[11] X 1.3	[7]-[12]						[16]-[19]		
	Total Cut Unadjusted Volume	Total Class 10 Unadjusted Volume	Topsoil Cut Volume	Template Unsuitable Type B Volume	Template Pavement Removal Volume	Template Rock Volume	Total Cut Adjusted	Total Fill Unadjusted Volume	Plowing & Shaping Undercut (+ Fill)	Existing Topsoil Stripping Undercut (+ Fill)	Existing Pavement Undercut (+Fill)	Total Fill Adjusted	Total Fill Adjusted w/ Weighted Average 1.3 Shrink Factor	Total Cut Adjusted Minus Fill w/ Shrink	Approx. Fill Vol. Below 5' & Above 20' w/ Shrink	Approx. Fill Volume Below 3' w/ Shrink	Topsoil Stripping Undercut Volume	Topsoil Placement Undercut Volume	Topsoil Placement With 1.4 Shrink Factor	Topsoil Stripping Minus Topsoil Placement w/Shrink		
Summary:																						
BoyScoutRd	215	176	26	0	145	12	188	0	0	26	5	31	41	148	0	0	26	45	63	-37		
BurtonsFurnaceRd	154	154	0	0	159	0	154	0	0	0	10	10	13	141	0	0	0	0	0	0		
CarmenOaksDr	126	6	20	56	38	45	107	0	0	20	0	20	26	81	0	0	20	16	23	-3		
ChristensenLn	98	49	49	0	14	0	49	16	0	49	1	66	86	-37	0	0	49	28	40	10		
ClayHillRd	89	80	0	8	127	0	88	0	0	0	14	14	19	70	0	0	0	12	17	-17		
DurangoRd	209	189	20	0	77	0	189	5	0	20	0	25	33	157	0	0	20	13	19	2		
LeiserLn	270	222	48	0	98	0	222	0	0	48	0	48	63	160	0	0	48	28	40	9		
IA 3	145,904	47,655	14,933	17,405	40,093	65,931	130,991	16,988	1,135	14,656	4,240	37,019	48,125	82,867	7,444	0	14,933	10,272	14,381	553		
Outlet266	1,590	1,295	295	0	0	0	1,295	0	0	295	0	295	384	912	0	0	295	209	293	3		
ParadiseValleyRd	152	118	34	0	40	0	118	21	0	34	0	55	72	47	0	0	34	17	24	11		
RaylynRd	111	81	10	3	96	17	101	0	0	10	1	11	15	87	0	0	10	7	10	1		
SherrillRd	620	604	16	0	312	0	604	13	0	16	7	36	47	558	0	0	16	102	143	-127		
WhisperingHillsDr	118	118	0	0	54	0	118	19	0	0	14	33	43	76	0	0	0	30	42	-42		
Project Totals:	149,656	50,747	15,451	17,472	41,253	66,005	134,224	17,062	1,135	15,174	4,292	37,663	48,967	85,267	7,444	0	15,451	10,779	15,095	363		

2102-2710070 Excavation, CL 10, RDWY+BORROW = [13] = 48,967
2102-2710090 Excavation, CL 10, WASTE = [4]+[2]-[13] = 17,472 + 50,747 - 48,967 = 19,252
2102-2712070 Excavation, CL 12, RDWY + BORROW = [6] = 66,005
2107-0875100 Compaction W/Moisture Control = [12] = 37,663
2105-8425015 Topsoil, Strip, Salvage + Spread = [17] = 15,451

NOT TO SCALE





Notes:

(1) Includes (1) Standard Road Plan BA-201 and 12.5' W-Beam Guardrail.
(2) Modified BA-201. Refer to U Sheets.
(3) Refer to U Sheets for block out details.
(4) Approximate length along curves.
(5) U.A.C. existing guardrail installation line.
(6) Includes areas outside H-piles.
(7) Tubular thrie-beam.
(8) Removal quantities are included in Tab. 110-7A.

QUANTITIES					
REMOVALS (8)			NEW INSTALLMENTS		
ITEMS	TOTALS	REMARKS	ITEMS	TOTALS	REMARKS
Tubular Thrie-Beam	2400 (LF)	(7)	BA-201	2 (EA)	(1)
Existing Guardrail	512.5 (LF)	(6)	Modified BA-201	2 (EA)	(2)
			Thrie-Beam	287.5 (LF)	(3)
			Tubular Thrie-Beam	2400 (LF)	(7)
			W-Beam	25 (LF)	(1)
			LS-626	2 (EA)	

GUARDRAIL LAYOUT DETAILS

(Sta. 319+90.73 to Sta. 349+02.93)

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.1

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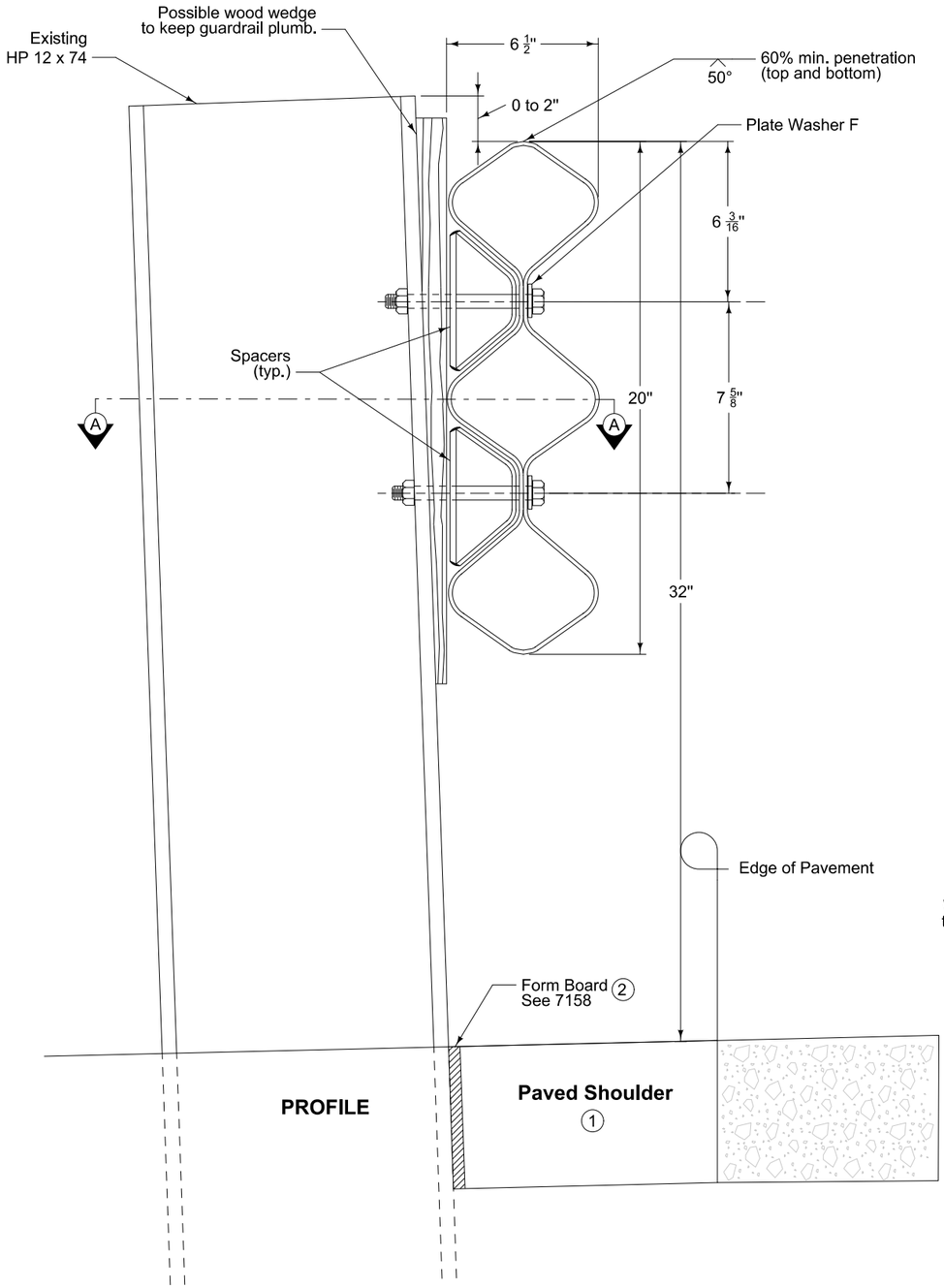
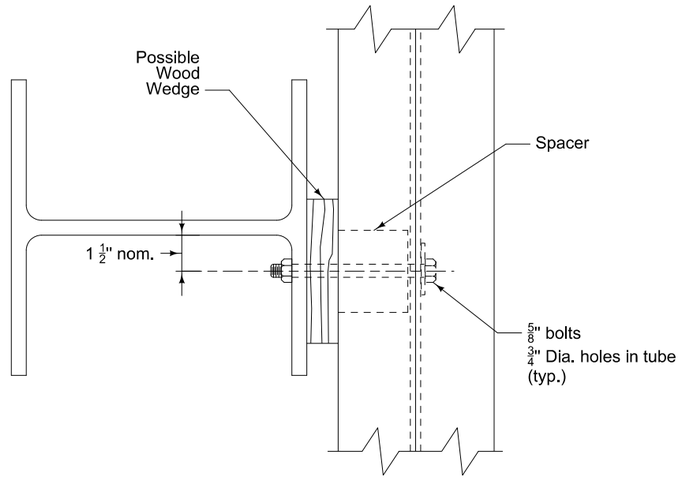
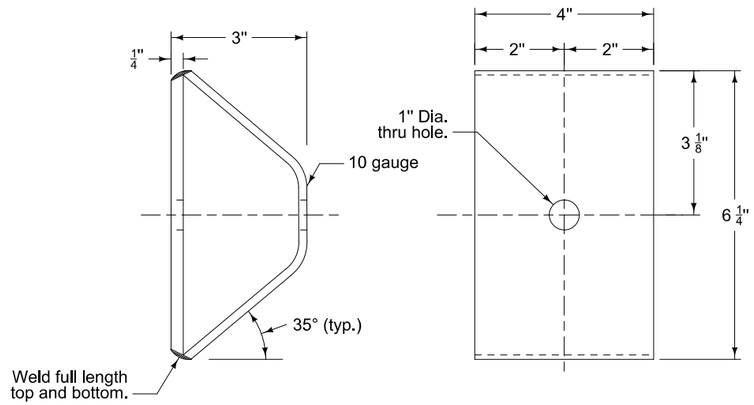




SECTION A-A



SPACER

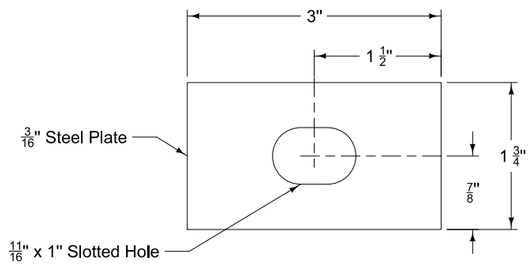


PLATE WASHER F

The standard length for a Tubular Thrie-Beam section is 25'-0".

Fabricate Tubular Thrie-Beam rail sections by welding two Thrie-Beam rail elements as shown. Use rail meeting the requirements of AASHTO M 180, Type 1, Class B.

All structural steel shapes and plates are ASTM A 36, galvanized after fabrication.

For wood wedges, use 6 inch nominal width material meeting the requirements of Section 4164 of the Standard Specifications.

The quantity of Tubular Thrie-Beam Guardrail will be measured in feet, to the nearest 0.1 foot. The Contractor will be paid the contract unit price for Tubular Thrie Beam Guardrail per foot installed, measured as provided above.

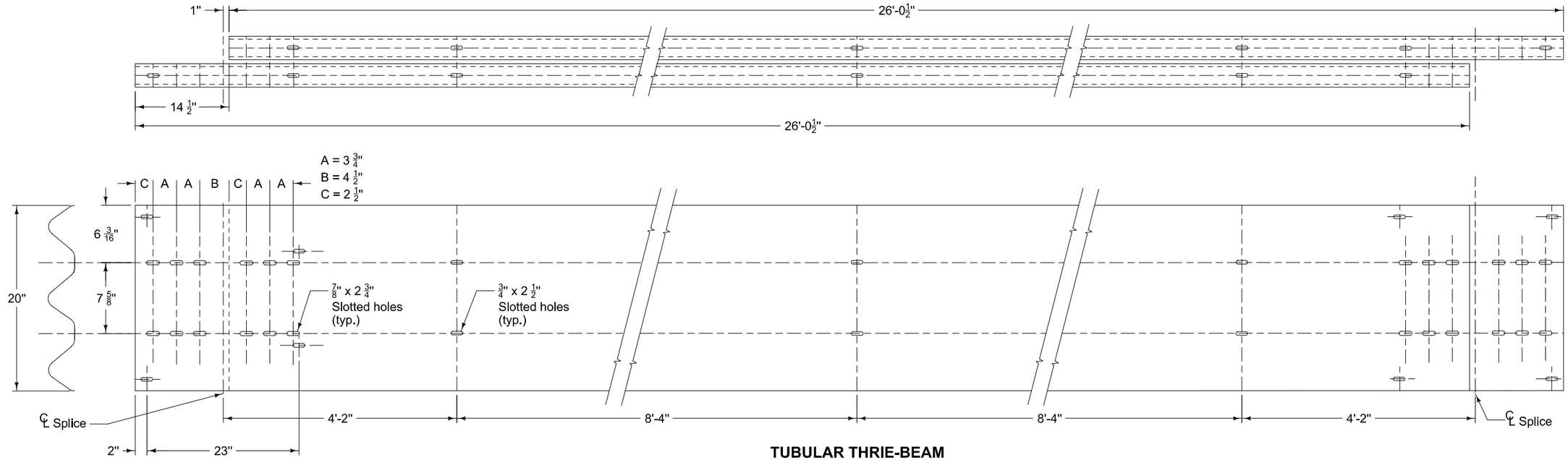
Notes:

(1) Varies, average 5'.

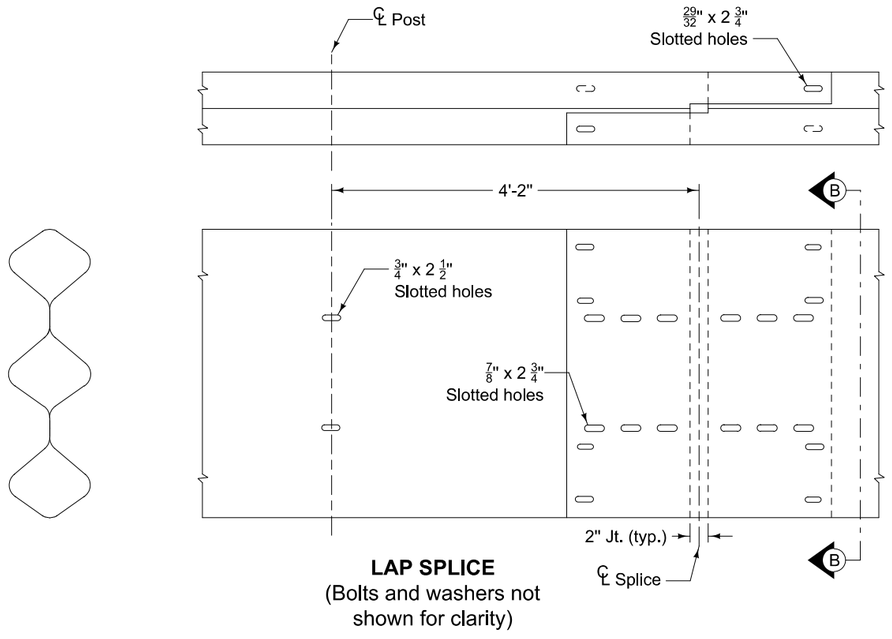
(2) Fasten form board to the face of the H-piles.

TUBULAR THRIE-BEAM GUARDRAIL (1)

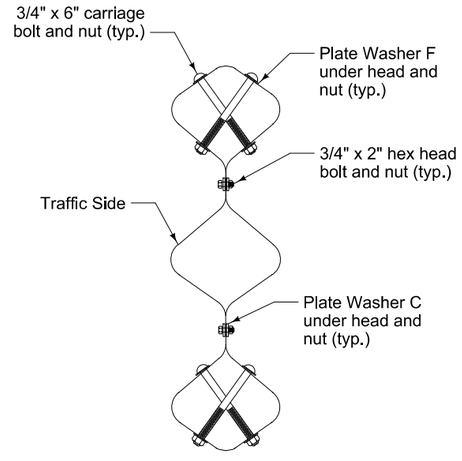
(Sta. 319+90.73 to Sta. 349+02.93)



TUBULAR THRIE-BEAM



LAP SPLICE
(Bolts and washers not shown for clarity)



SECTION B-B

Hardware required per lap splice:
(4) Plate Washers C
(8) Plate Washers F
(4) 3/4" x 6" carriage bolts and nuts
(12) 3/4" x 2" hex head bolts and nuts

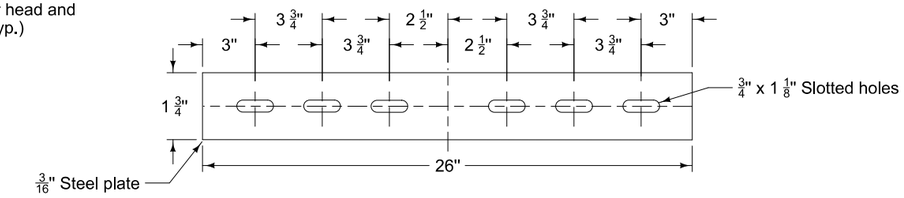


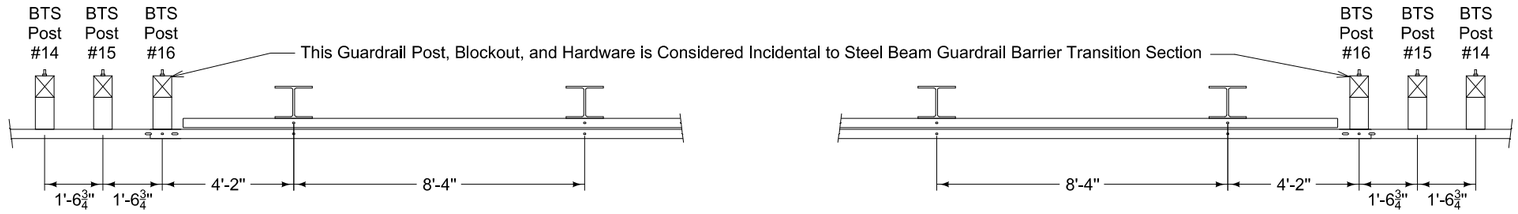
PLATE WASHER C

TUBULAR THRIE-BEAM GUARDRAIL (2)

(Sta. 319+90.73 to Sta. 349+02.93)

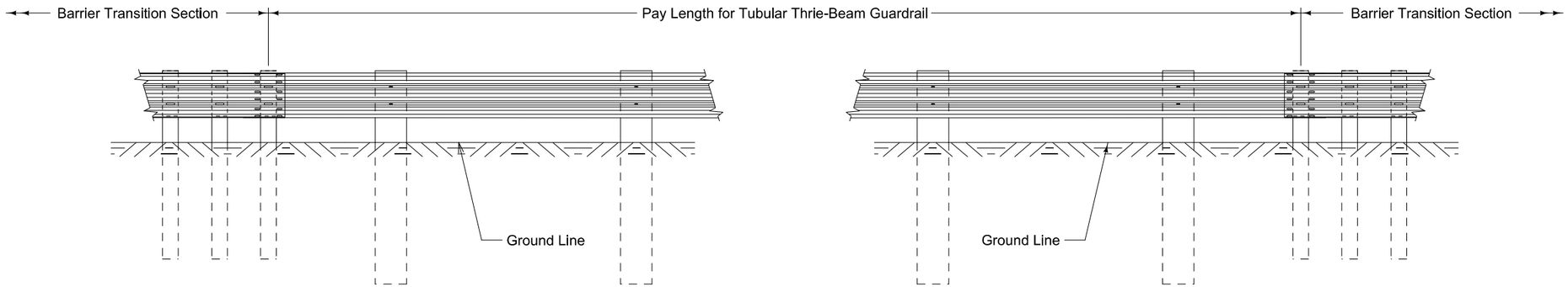
FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.3

9:28:48 AM 1/11/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.01.dgn



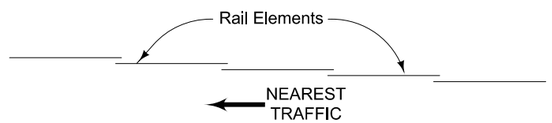
DOWNSTREAM END **UPSTREAM END**

PLAN



DOWNSTREAM END **UPSTREAM END**

ELEVATION



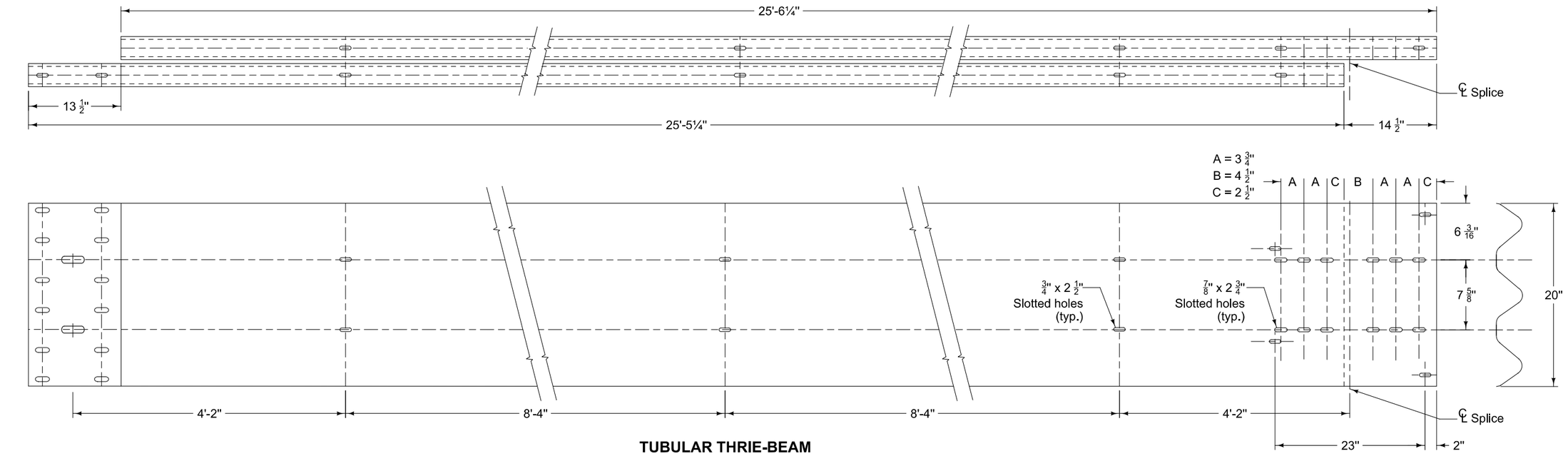
LAPPING PROCEDURE

TUBULAR THRIE-BEAM GUARDRAIL (3)

(Sta. 319+90.73 to Sta. 349+02.93)

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.4	

9:28:49 AM 1/11/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.01.dgn

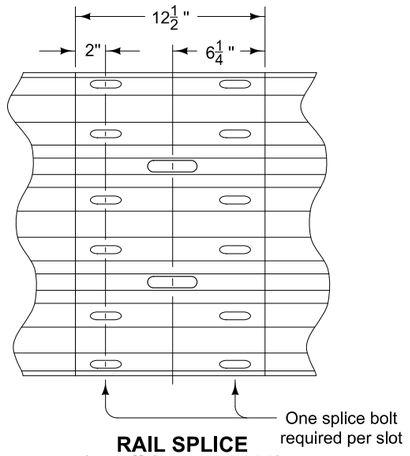


TUBULAR THRIE-BEAM

DOWNSTREAM END

UPSTREAM END

LAP SPLICE
(detailed on previous plan sheets)



RAIL SPLICE
(detail from BA-200)

TUBULAR THRIE-BEAM GUARDRAIL (4)

DOWNSTREAM END (Sta. 319+90.73 to Sta. 349+02.93)

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.5

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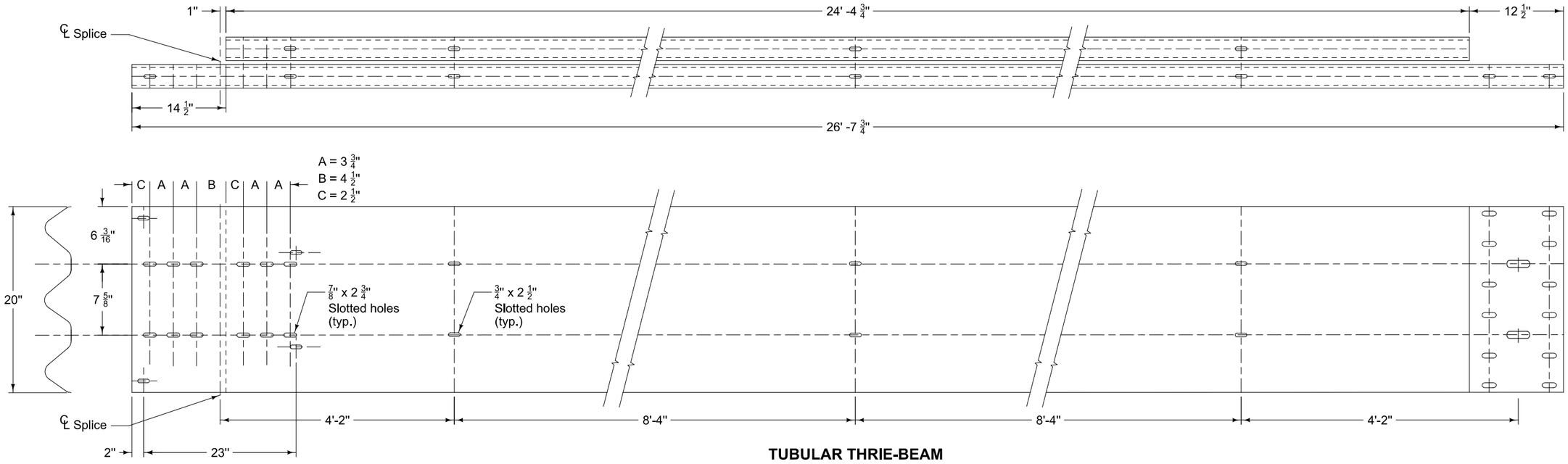
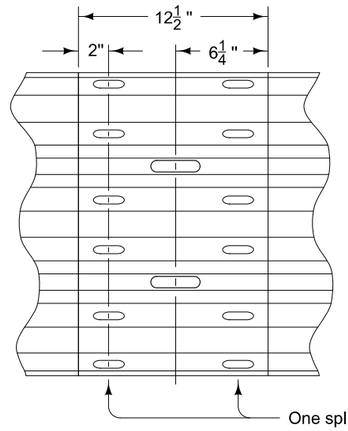


DOWNSTREAM END **TUBULAR THRIE-BEAM** **UPSTREAM END**

LAP SPLICE
(detailed on previous plan sheets)



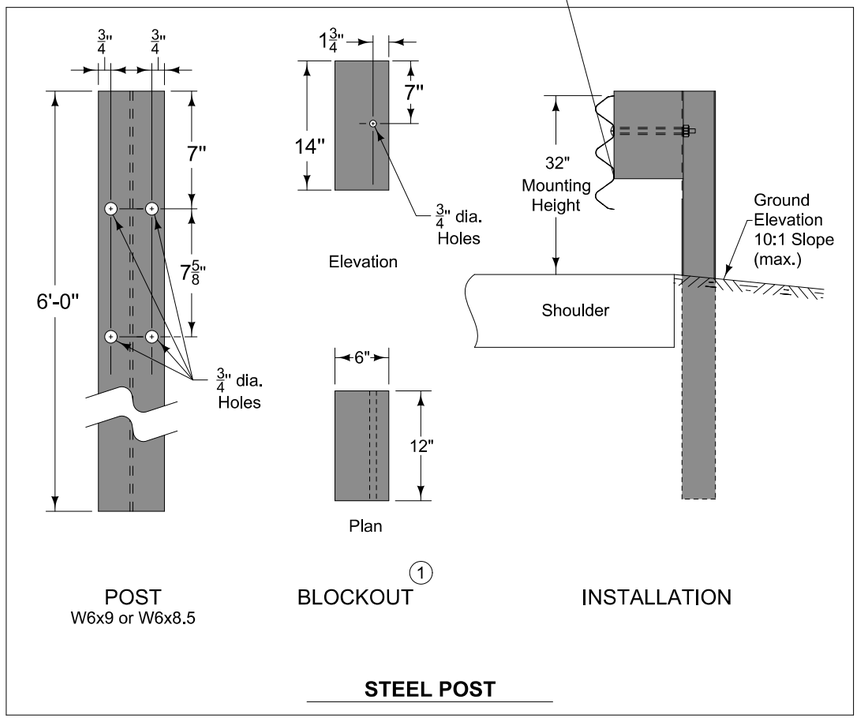
RAIL SPLICE
(detail from BA-200)

TUBULAR THRIE-BEAM GUARDRAIL (5)

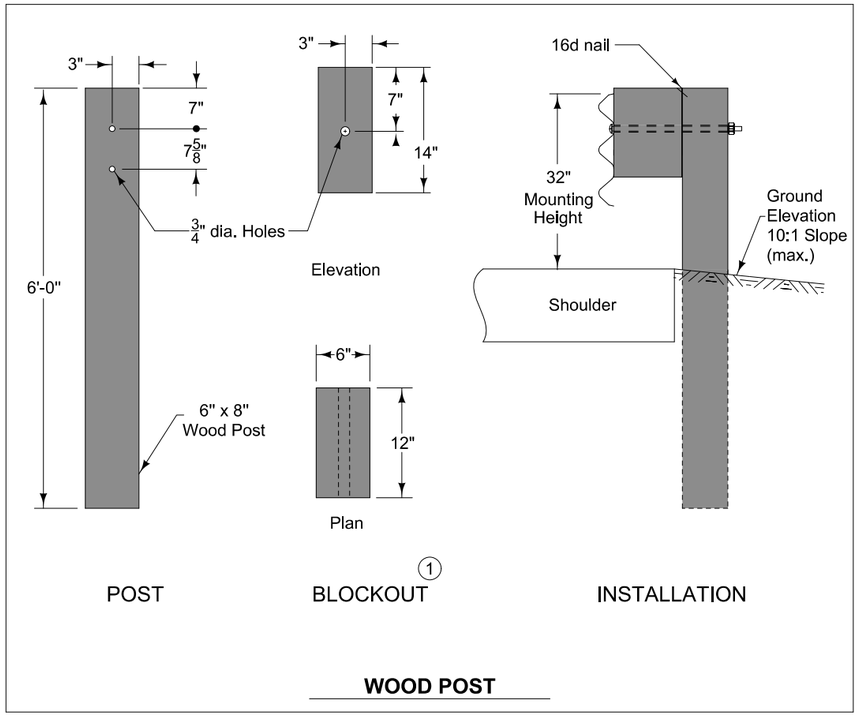
UPSTREAM END **(Sta. 319+90.73 to Sta. 349+02.93)**

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.6

9:28:51 AM 1/11/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.01.dgn

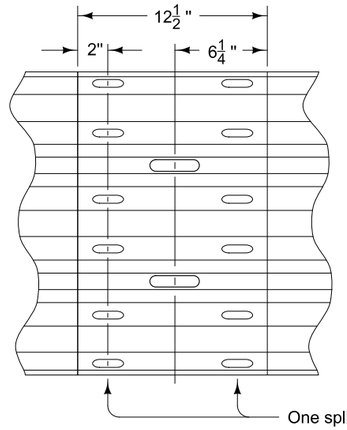


STEEL POST

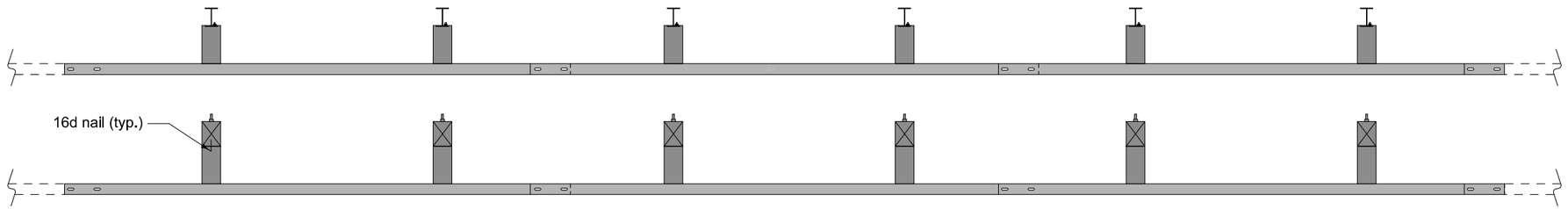


WOOD POST

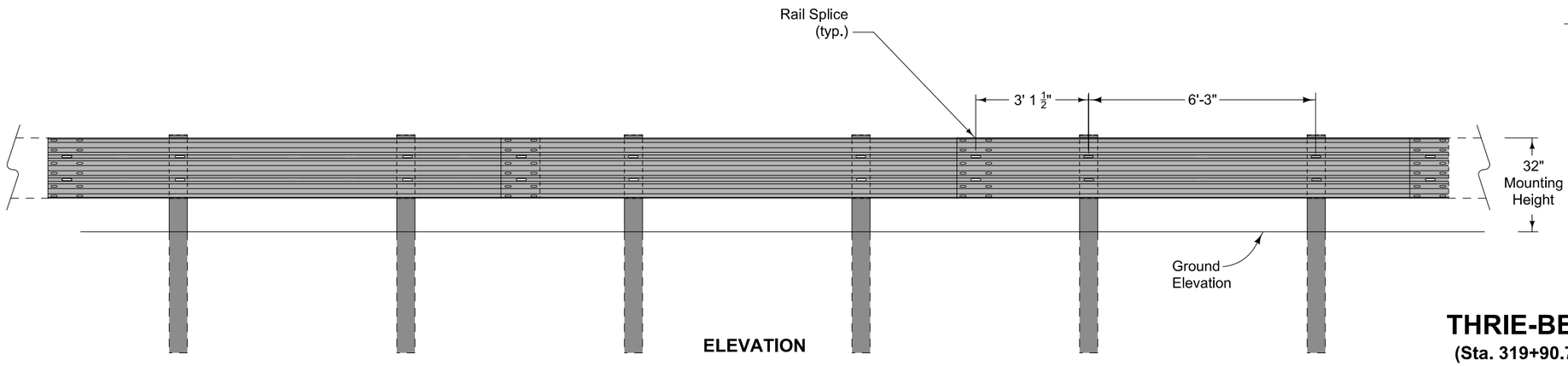
(1) Wood or composite only. Steel blockouts will not be allowed.



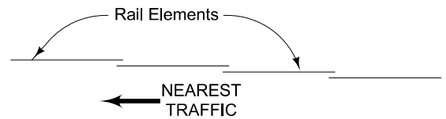
RAIL SPLICE (detail from BA-200)



PLAN



ELEVATION



LAPPING PROCEDURE

THRIE-BEAM GUARDRAIL

(Sta. 319+90.73 to Sta. 349+02.93)

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.7

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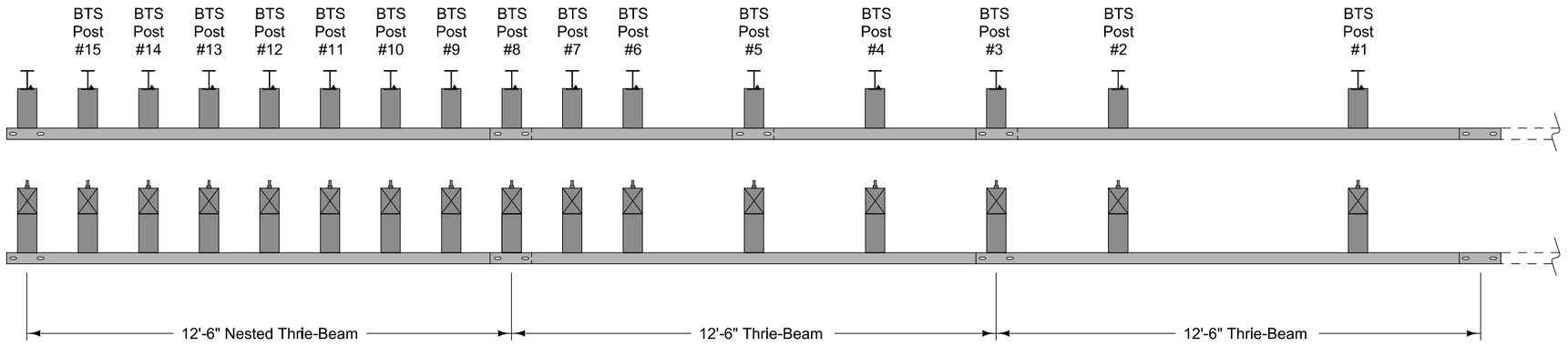
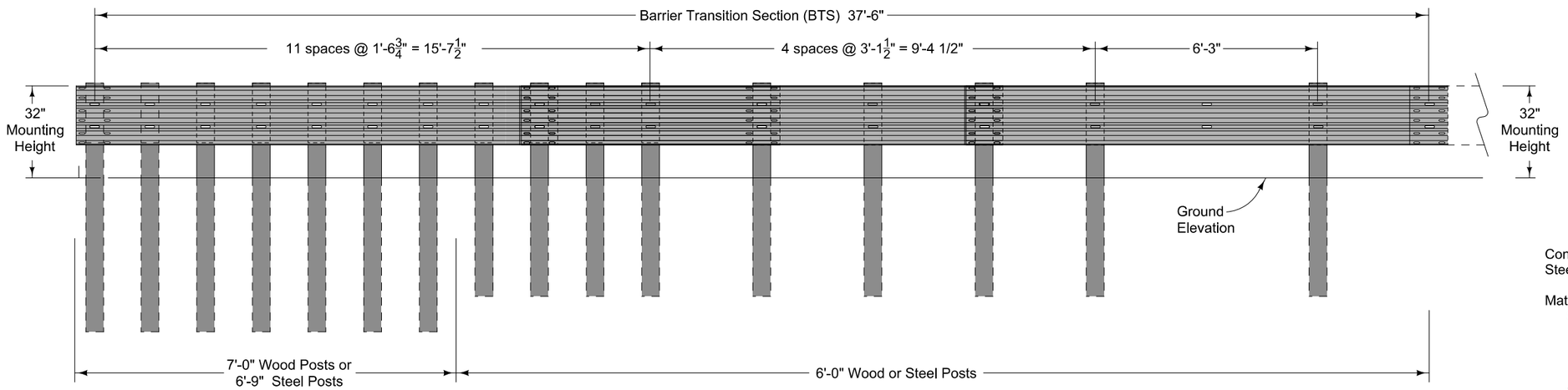


PLAN



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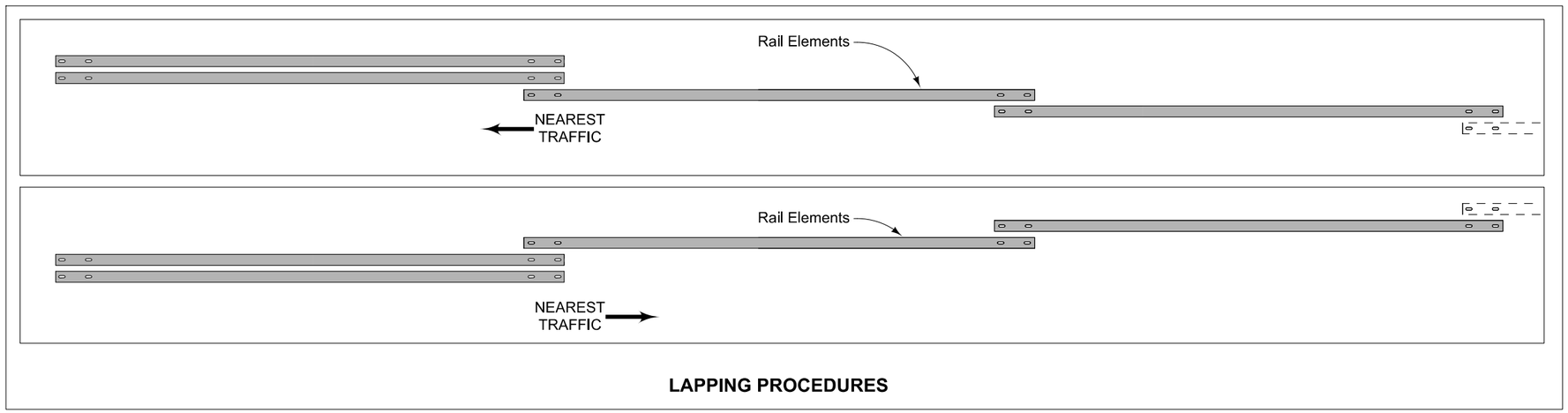


LAPPING PROCEDURES

Contract Item:
Steel Beam Guardrail Barrier Transition Section, Modified BA-201

Materials included in the Contract Item:
- Steel Post Option:
  - (9) 6" x 8" x 6'-0" posts
  - (7) 6" x 8" x 6'-9" posts
  - (13) 6" x 12" x 19" blockouts
  - (3) 6" x 12" x 14" blockouts
- Wood Post Option:
  - (9) 6" x 8" x 6'-0" posts
  - (7) 6" x 8" x 7'-0" posts
  - (13) 6" x 12" x 19" blockouts
  - (3) 6" x 12" x 14" blockouts
- (4) 12'-6" Thrie-Beam rail sections
- Approved bolts, nuts, and washers
- Refer to BA-200 for guardrail components

(Sta. 319+90.73 to Sta. 349+02.93)

MODIFIED

STANDARD ROAD PLAN

REVISION	
5	04-18-17

BA-201

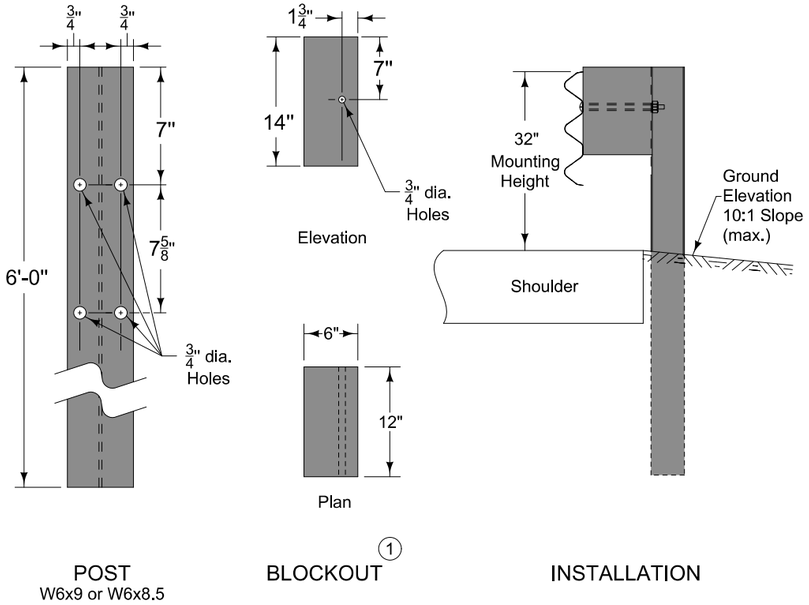
SHEET 1 of 2

MODIFICATIONS: Changed W-beam to thrie beam, added post #16.

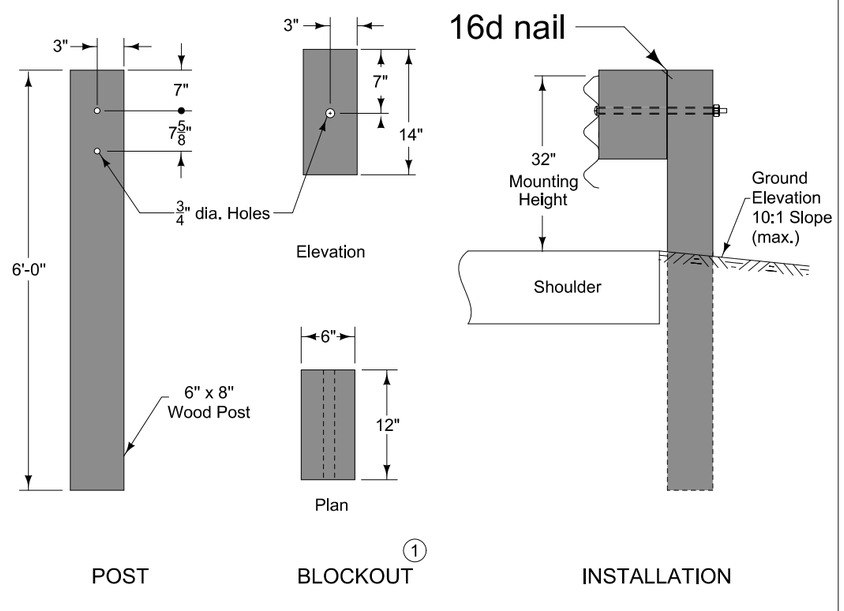
STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION (MASH TL-3)

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.8

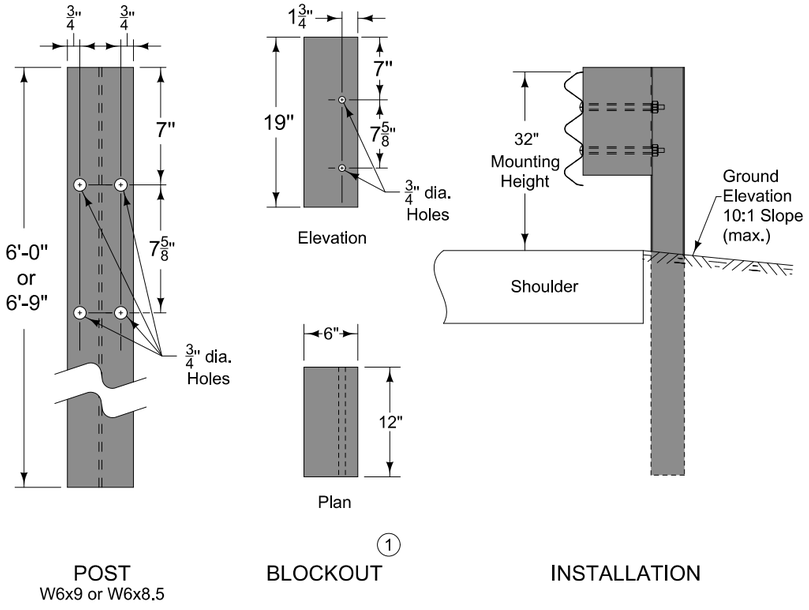
9:39:46 AM 1/11/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.01.dgn



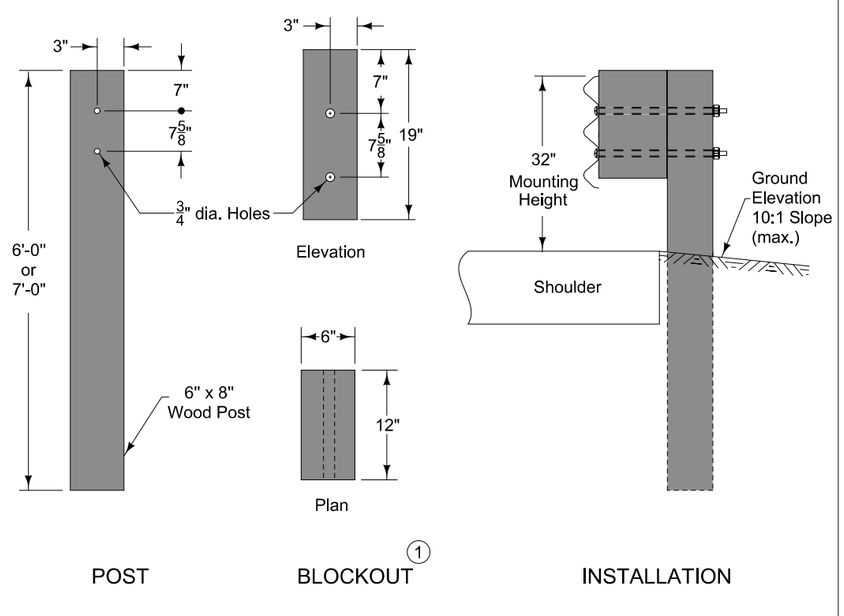
STEEL BTS POST #1-3



WOOD BTS POST #1 - 3



STEEL BTS POSTS# 4-16



WOOD BTS POSTS # 4 - 16

(1) Wood or composite only. Steel blockouts will not be allowed.

(Sta. 319+90.73 to Sta. 349+02.93)

MODIFIED STANDARD ROAD PLAN

REVISION	
5	04-18-17

BA-201

SHEET 2 of 2

MODIFICATIONS: Changed W-beam to thrie beam, added post #16.

STEEL BEAM GUARDRAIL BARRIER TRANSITION SECTION (MASH TL-3)

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.9

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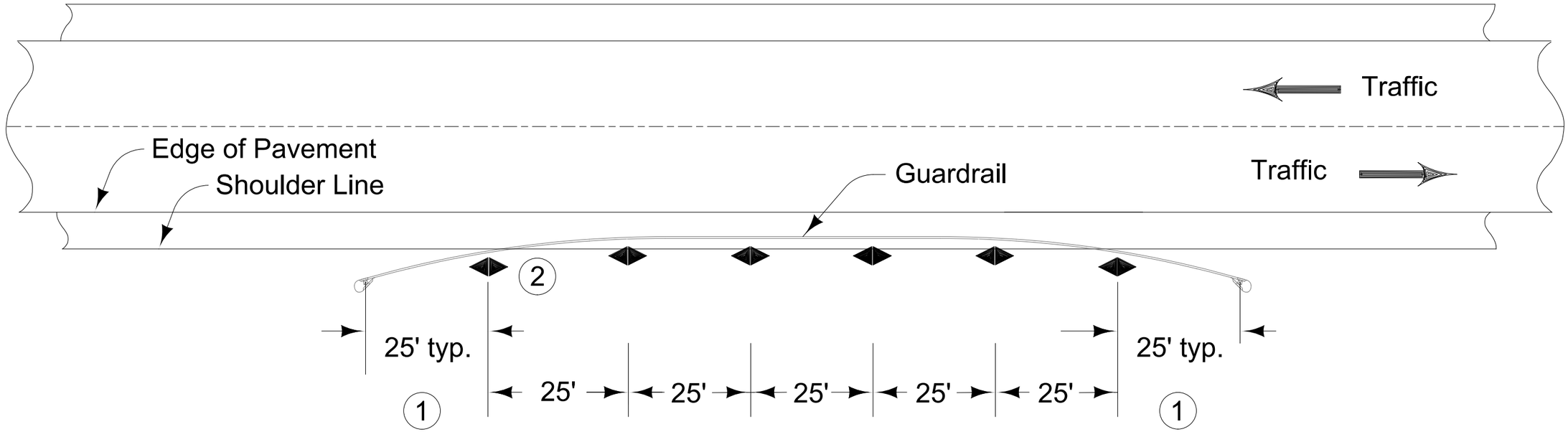
MARKING SIDE OBSTACLES
(STEEL BEAM GUARDRAIL ON THE SHOULDER)



1. Beginning 25 ft. from the end of guardrail, install Type 2 Object Markers at 25 ft. intervals behind the guardrail. Refer to other U sheets for additional information on Type 2 Delineator
2. Approximate quantity of Object Markers : 116

LEGEND

Type 2 Object Marker
Double Sided

OBJECT MARKER PLACEMENT WITH GUARDRAIL

(Sta. 319+90.73 to Sta. 349+02.93)

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.10**

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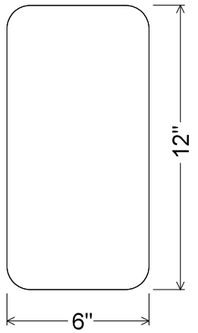
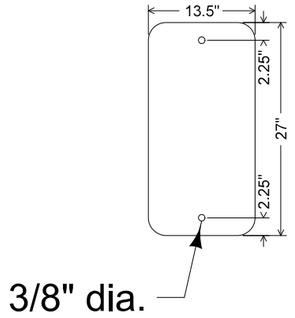
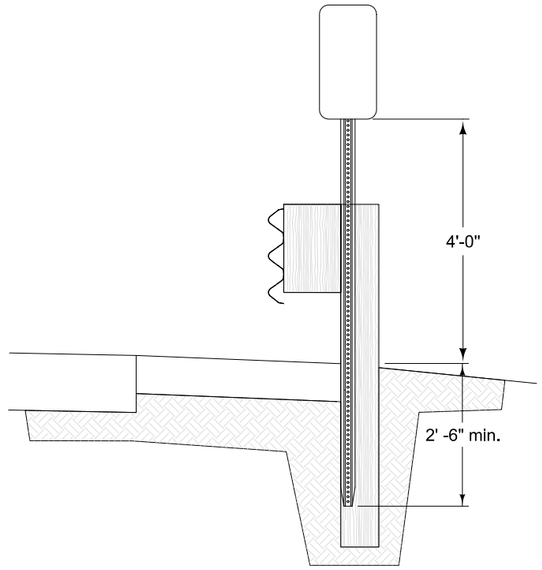


OM2-2;
1.000" Radius, No border, Yellow

TYPE 2 OBJECT MARKER



SIGN BLANKS
0.063 inch aluminum



TYPE 2 OBJECT MARKER
INSTALLATION AT THRIE-BEAM
GUARDRAIL LOCATIONS

Type 1 Delineator Posts:

U.A.C. existing Type I delineator posts at locations with tabular thrie beam / H-Piles. Furnish Type I delineator posts at locations with new thrie beam only. Post lengths are to be sufficient to ensure the proper installation height and provide a minimum of 2'-6" embedment.

Type 2 Object Markers:

Install new type 2 object markers at all locations.

Fabricate object markers from materials complying with Section 4186 of the Standard Specifications.

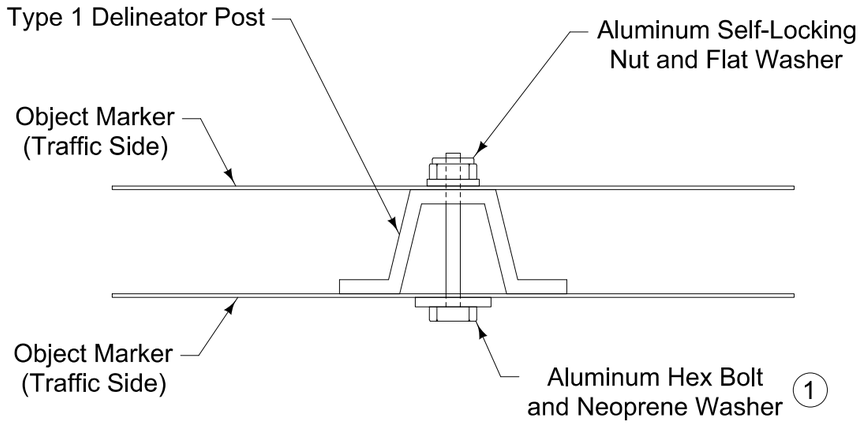
Install object markers truly vertical.

Ensure top of post does not extend above top of object marker.

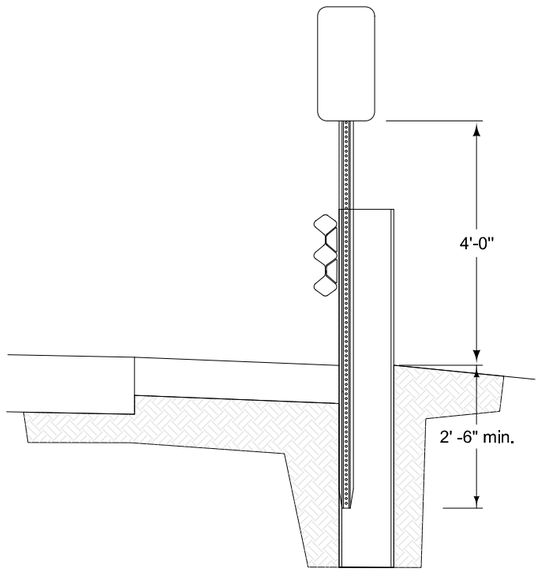
(1) Attach object marker to the delineator post at two locations. Use the following per bolt hole location:

- one aluminum $\frac{5}{16}$ in. dia x 3 in. length hex head bolt with matching self-locking nut,
- one aluminum flat washer of 0.344 in. ID x 0.688 in. OD x 0.091 thickness behind the nut, and
- for object marker attachment only, one neoprene washer of 1 in. OD x $\frac{1}{8}$ in. thickness behind the bolt head.

All labor, materials, and equipment necessary for performing work described above, is included in the price bid for the steel beam guardrail. No separate payment will be made.



STANDARD ATTACHMENT FOR
DOUBLE-SIDED TYPE 2 OBJECT MARKER



TYPE 2 OBJECT MARKER

INSTALLATION AT TUBULAR THRIE BEAM
GUARDRAIL LOCATIONS

OBJECT MARKERS
(Sta. 319+90.73 to Sta. 349+02.93)

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.11**

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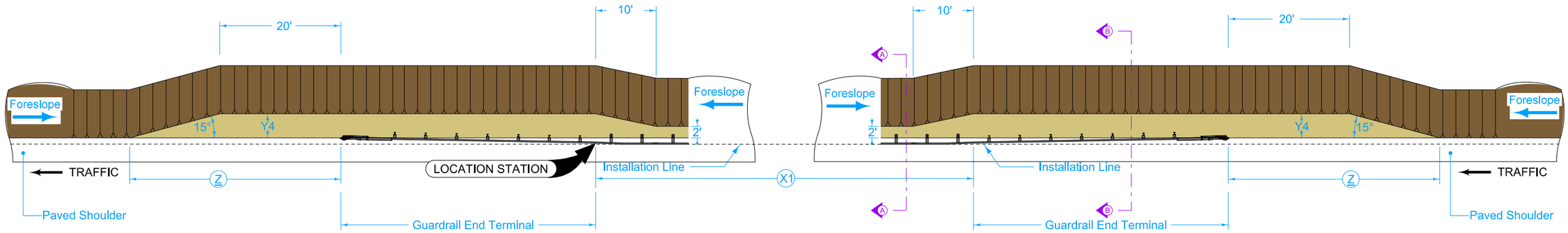
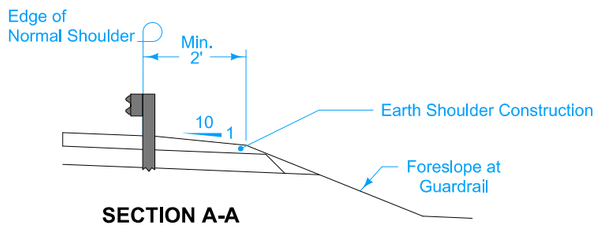
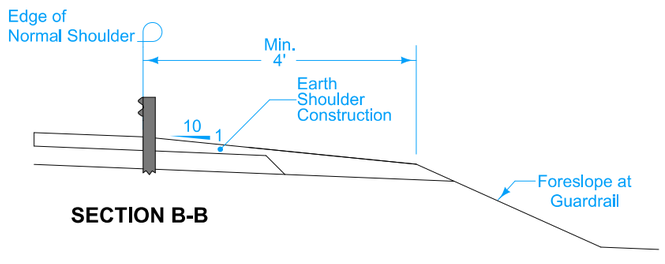


PLAN



SECTION A-A



SECTION B-B

Y4 feet	Z feet
4	35
5	39

X Measured from Location Station.

Y Distance from edge of normal shoulder to toe of 10:1 slope

LEGEND

Foreslope

Slope - 10:1

GUARDRAIL INSTALLATION LINE WITHIN SHOULDER

GUARDRAIL GRADING
(Sta. 319+90.73 to Sta. 349+02.93)

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.12

9:26:10 AM 1/11/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.01.dgn

er at g-rail

30

35

40

45

Station: 34+60.00
Offset: 0.00sf

3

Station: 41+37.00
Offset: 12.00sf Lt.

Station: 40+90.00
Offset: 4.00sf Lt.

DCY4

SLW4

SLW4

CHY8

CHW8

Station: 36+50.00
Offset: 12.00sf Rt.

Station: 39+34.89
Offset: 12.00sf Rt.

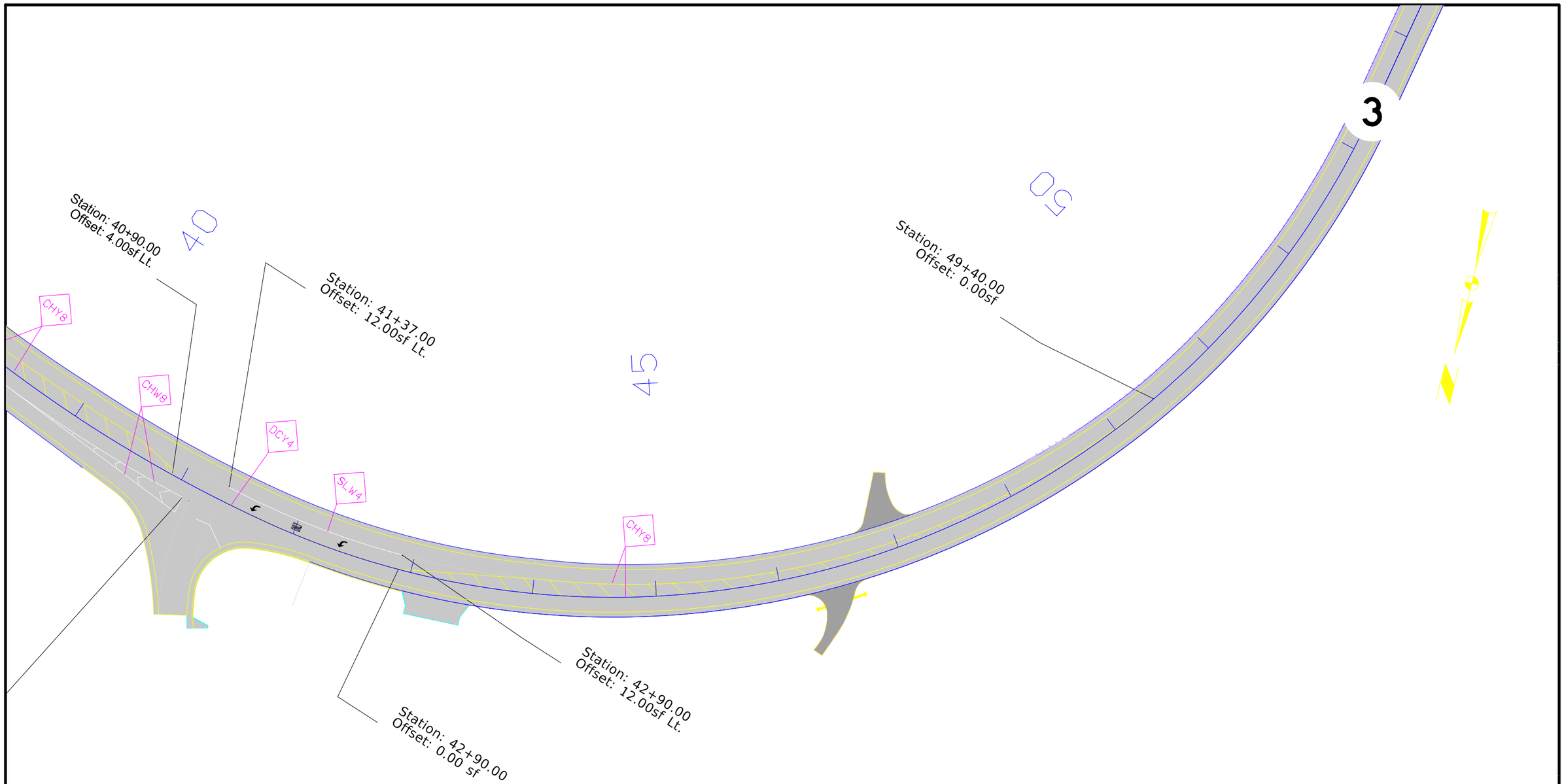
Station: 41+07.50
Offset: 12.00sf Rt.

0 50
FEET

PAVEMENT MARKINGS
IA 3 & Sherrill Road

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.13	

9:26:11 AM 1/11/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.01.dgn



PAVEMENT MARKINGS
IA 3 & Sherrill Road

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.14

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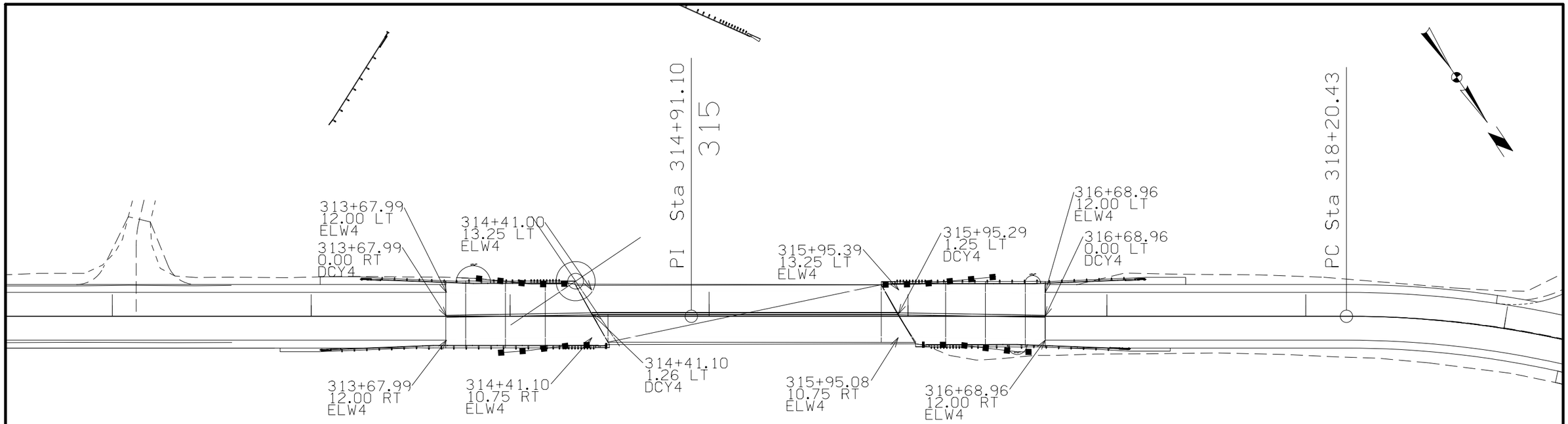
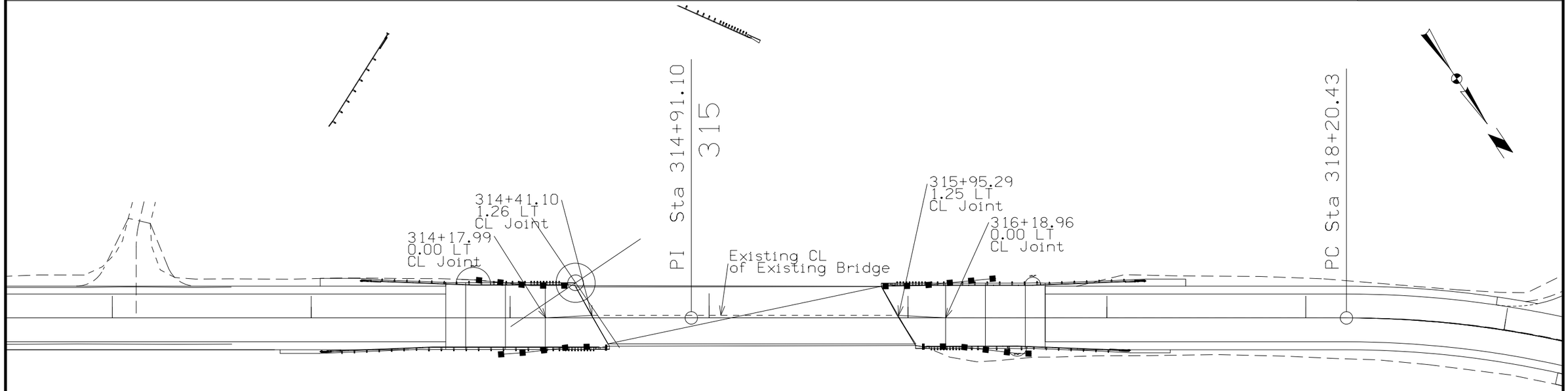


Pavement Markings at
Existing Bridge



Jointing Correction at
Existing Bridge

FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.15	

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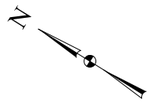

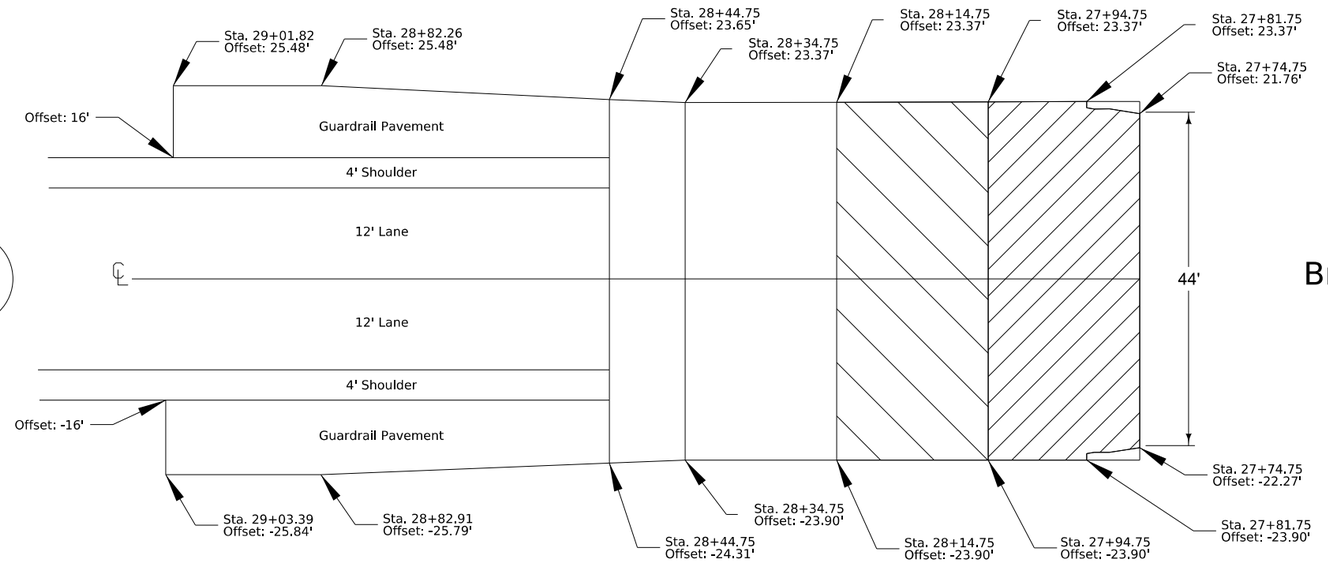

IA 3

Bridge #24001

Double Reinforced

Single Reinforced

Non-Reinforced

IA 3 Bridge Approach near Sageville

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.16**

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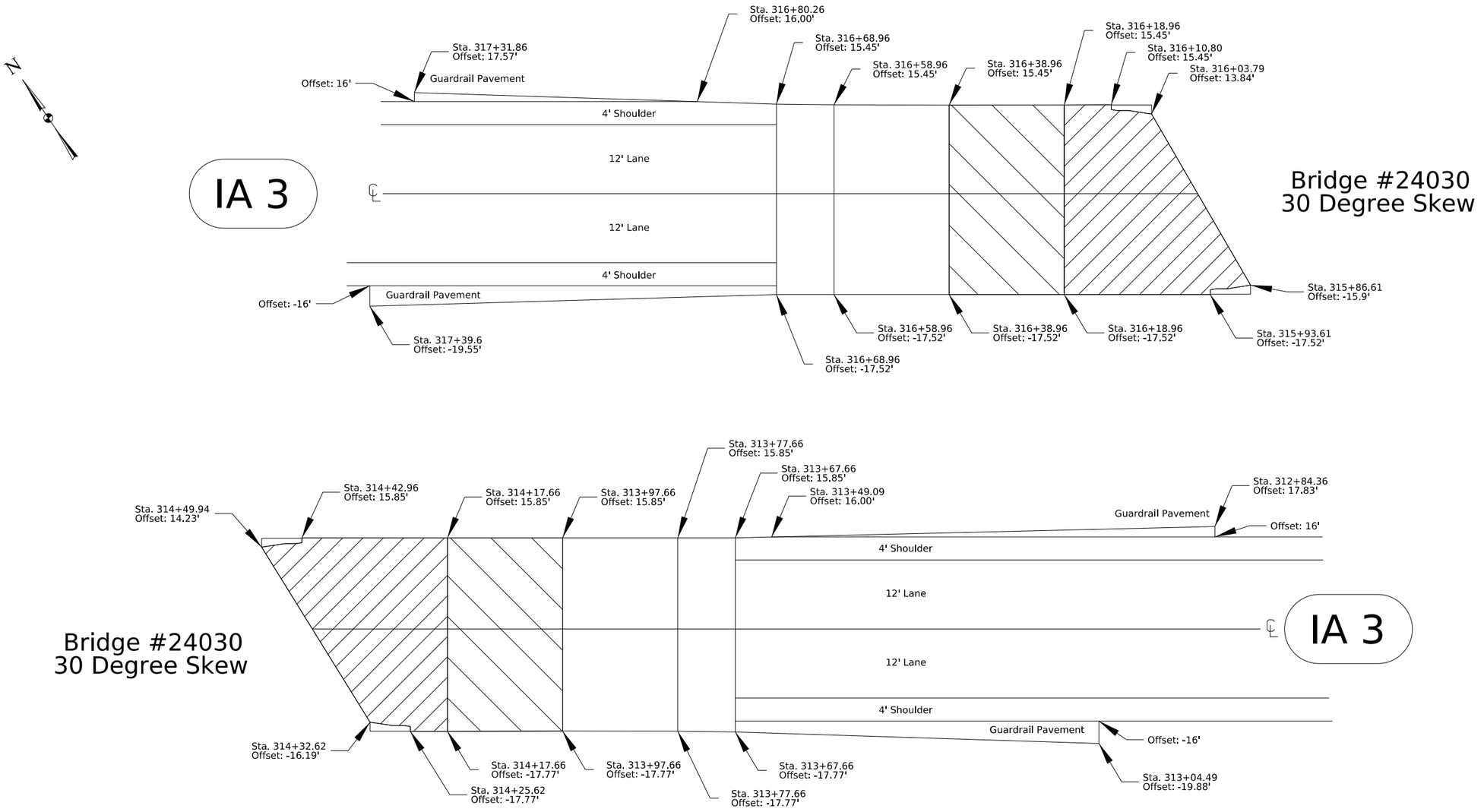

Double Reinforced

Single Reinforced

Non-Reinforced

IA 3 Bridge Approach near Boy Scout Rd

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.17**

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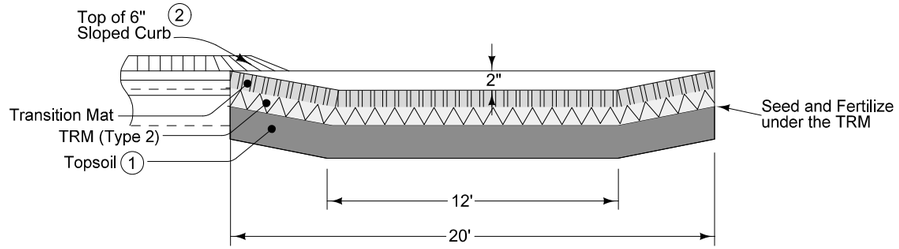
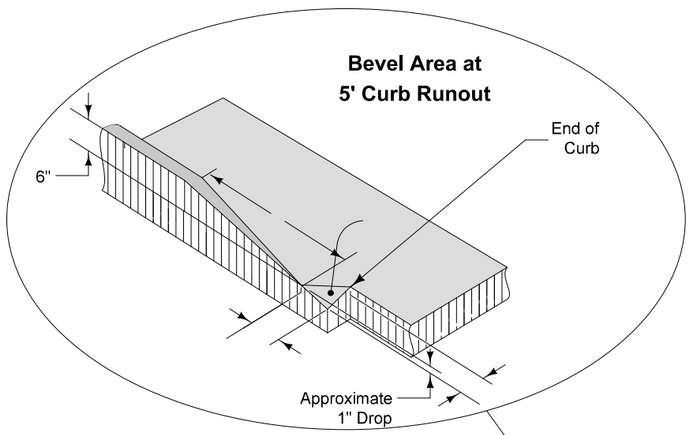
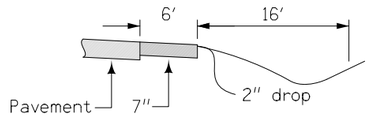


SECTION A-A

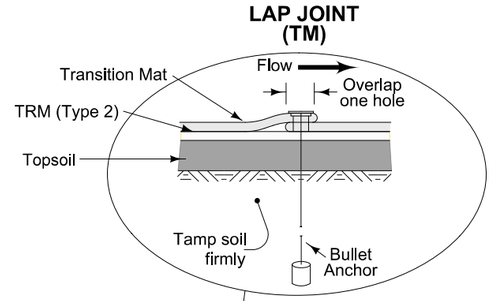
(1) Place at same thickness as surrounding area. Refer to T Sheets to determine topsoil thickness for the surrounding area.

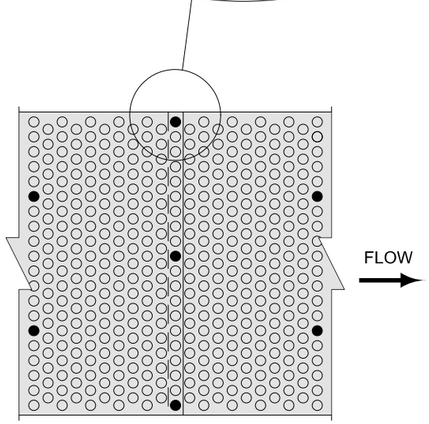
(2) 6" Sloped Curb - Refer to PV-102 for details.



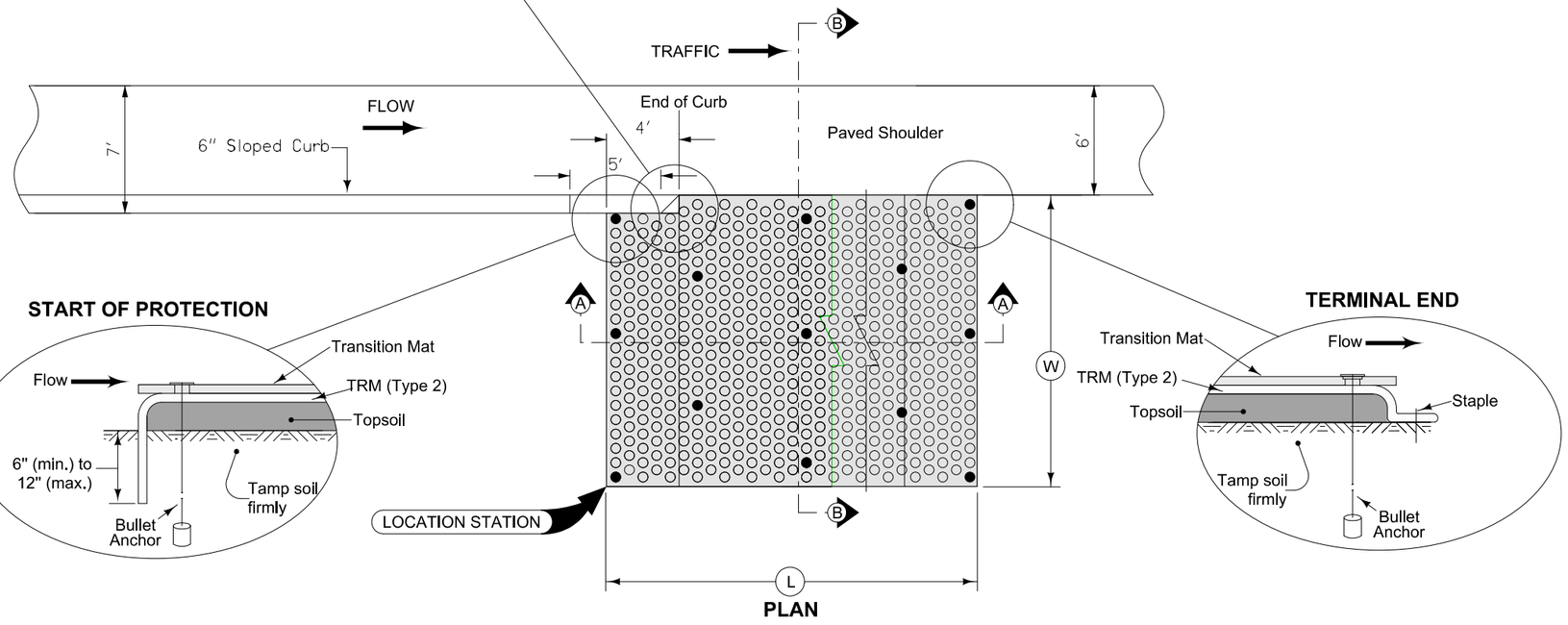


SECTION B-B





PLAN



PLAN

TRM (Type 2) TM

TRANSITION MAT

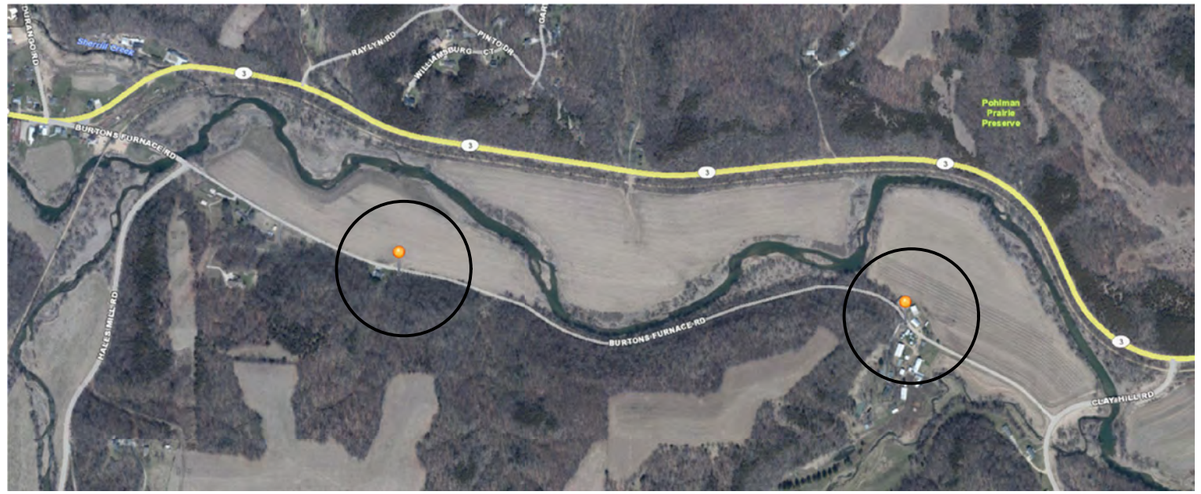
FILE NO.	ENGLISH	DESIGN TEAM Jia\Thiel\Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.18

9:29:05 AM 1/11/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.01.dgn

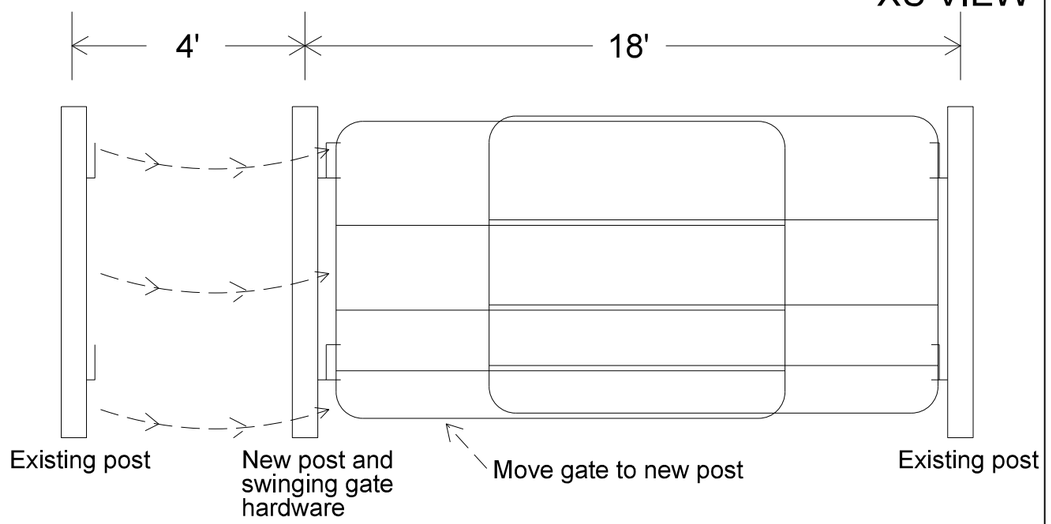
A



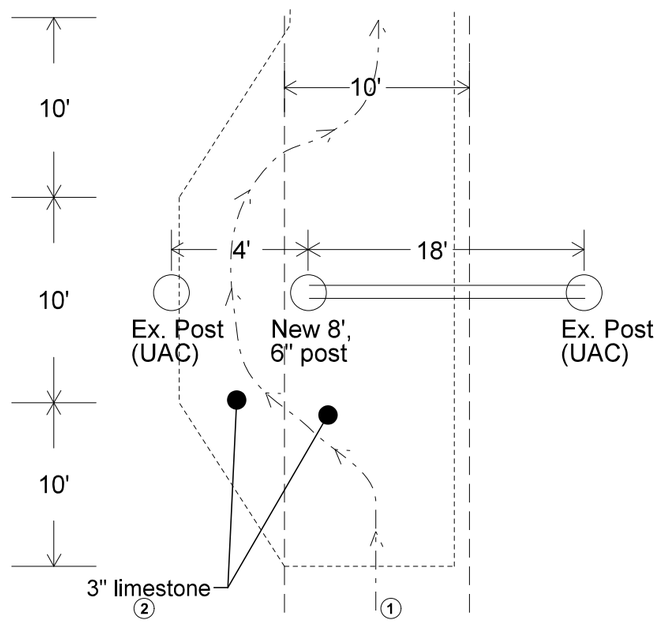
B



C



D



A - Current gate configuation.

B - Approximate locations (circled) of each swinging gate.
Distance between gates: 0.81 miles (4,276.8')

C - Install a new post, (8'x6" diameter), new post 4' away from an existing post, and move gate to the new post at each gate.
Install new 8' post to a depth that attains a similar heigth as the exising posts.

D - Limestone fill configuration at each gate location.
Limestone fill placement 10' wide and 3" thick for 0.81 miles (4,276.8')

BID QTY's: 2 each - Gate Assemblies (8' x 6" diameter wooden fence posts)
781.0 tons limestone

(Between Gates - 4,276.8' x 10' x 0.25' = 10,692 CF x (145 lbs/CF) / (2,000 lbs/ton) = 775.2 tons
At Gates - 5.8 tons)

① Trail detour at gates.

② Refer to sheet B.9 (Note ③) for additional information.

Gate Assembly
Heritage Trail Detour
(Burtons Furnace Road)

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER U.19

8:54:09 AM 1/17/2024 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_U01.dgn

IOWADOT

TO OFFICE: Contracts

ATTENTION Stacy Ryan

FROM: Sandy Sells

OFFICE: Property Management

SUBJECT: **PARCEL INSPECTION**
REMOVAL OF IMPROVEMENTS

DATE:

COUNTY: Dubuque
ROW PROJECT NO: NHSN-003-9(28)—2R-31
PARCEL NO: 41 PIN:
POSSESSION DATE: 1/24/24
FORMER OWNER: DeeAnn Ballard and Mike Hathaway
ADDRESS: 1342 Forest Lane
Dubuque, IA 52001

The above referenced property was inspected to determine the feasibility to demolish, sell, or rent such property. The inspection also addressed pest or rodent control, property maintenance requirements, and hazardous waste concerns. A pest and rodent inspection was completed on this date.

ITEM (approx. size)	FOUNDATION	PREVIOUS USE	DEMOLISH, SELL, RENT
Wooden arbor	none	decorative	demolish
Landscaping- block foundation	none	decorative	demolish

Approximate location of parcel See address above

Comments 1.6 acre parcel with just the arbor and landscape improvements above

Location of well (if known) ☒N/A

Location of septic system (if known) ☒N/A

Utilities have been notified. Yes ☐ No ☐ N/A ☒

There may be miscellaneous junk, debris, concrete and/or fencing located on this parcel.

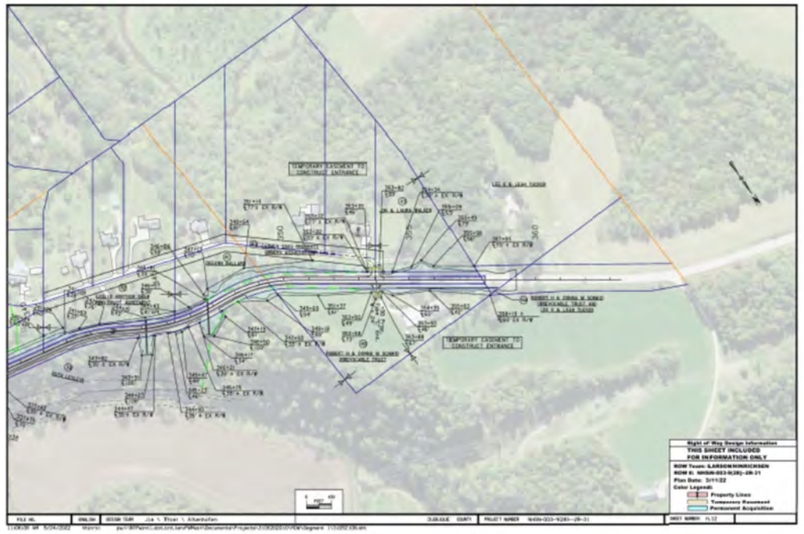
Extermination of pest or rodent required? Yes ☐ No ☒

Buildings to be boarded or secured? Yes ☐ No ☒

Tanks were secure upon possession? Yes ☐ No ☐ N/A ☒

By copy of this memo we are also requesting an asbestos inspection.

cc: Brad Azeltine, Office of Location and Environment
Eric Wright, Right of Way Design.
Brennan Dolan, Office of Location and Environment
Jim Schnoebelen, District 6 Engineer
Jesse Tibodeau, Assistant District 6 Engineer
Danielle Alvarez, District 6 Construction Engineer
Sandy Sells, Property Manager
Parcel File







DEMO





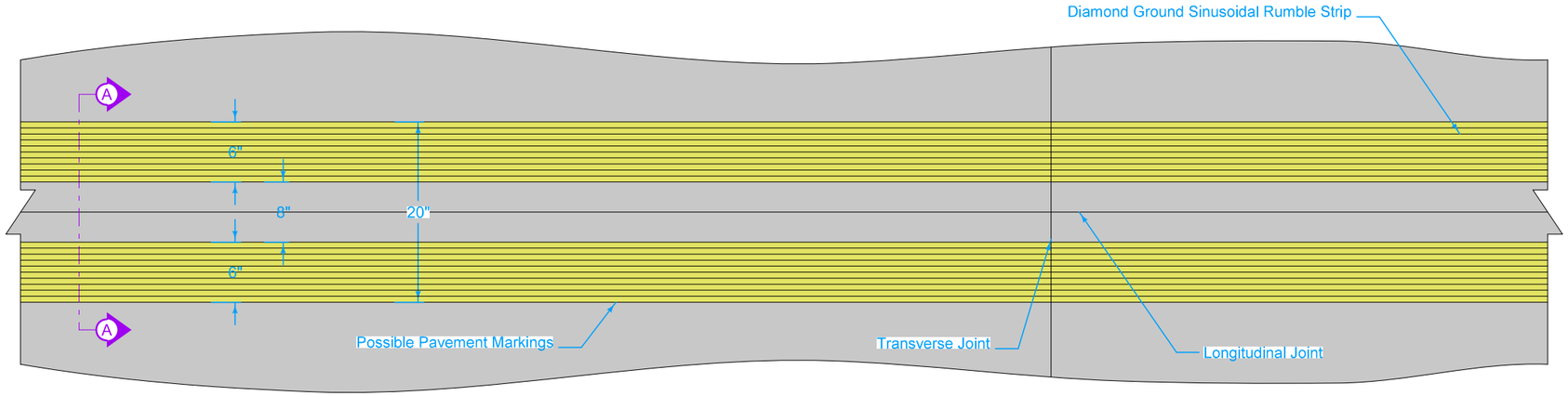


Looking northerly from Carmen Oaks Drive at landscaped patio area on subject property – not in acquistion area.



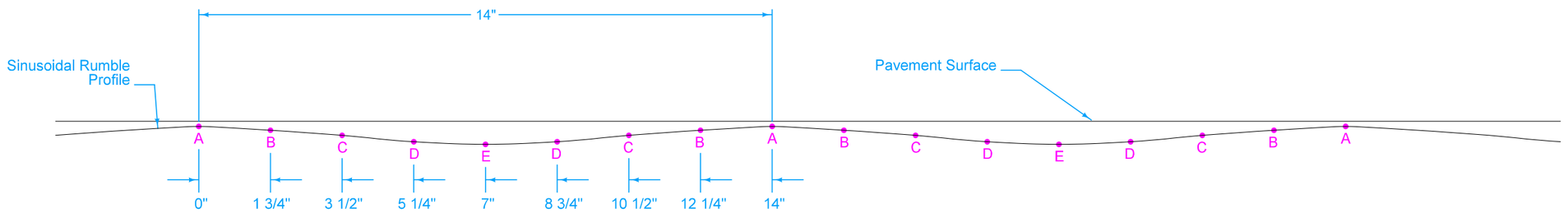
Looking northeasterly at approximate location of current building site on subject property.

DEMO

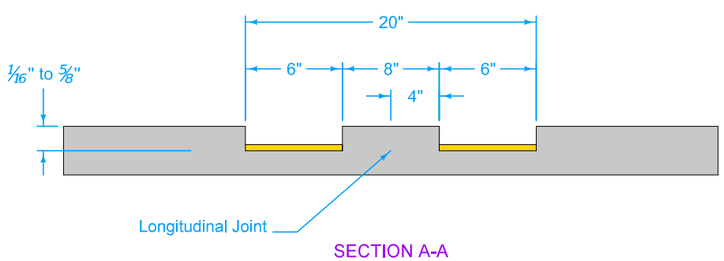


Centerline rumble strip placement is the same regardless of centerline pavement marking.

(1) Depth tolerance is ±1/16.



Location	Depth (1) (inches)
A	1/8
B	7/32
C	11/32
D	1/2
E	9/16



SECTION A-A

DIAMOND GROUND SINUSOIDAL CENTERLINE RUMBLE STRIPS

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.22**

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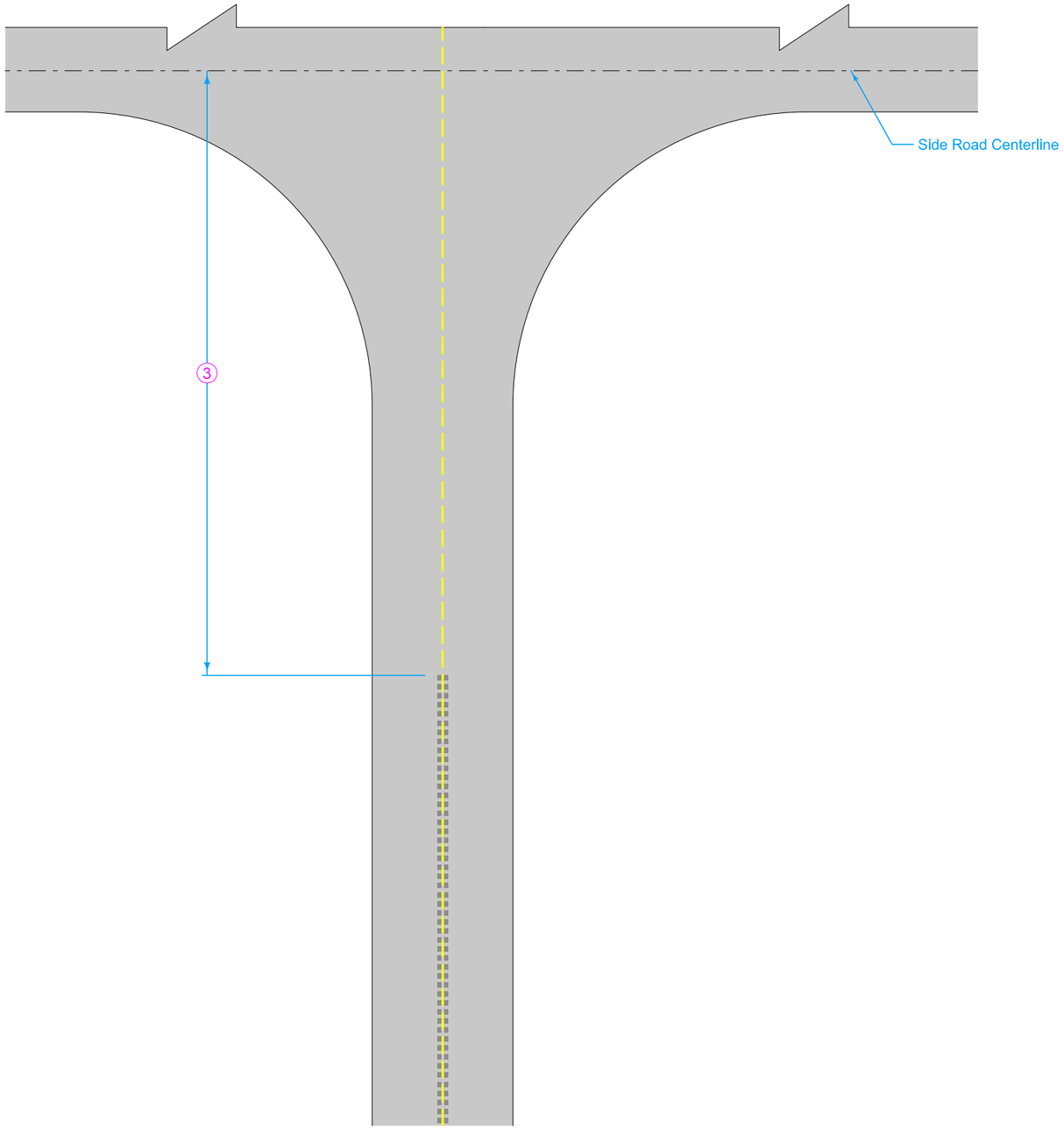
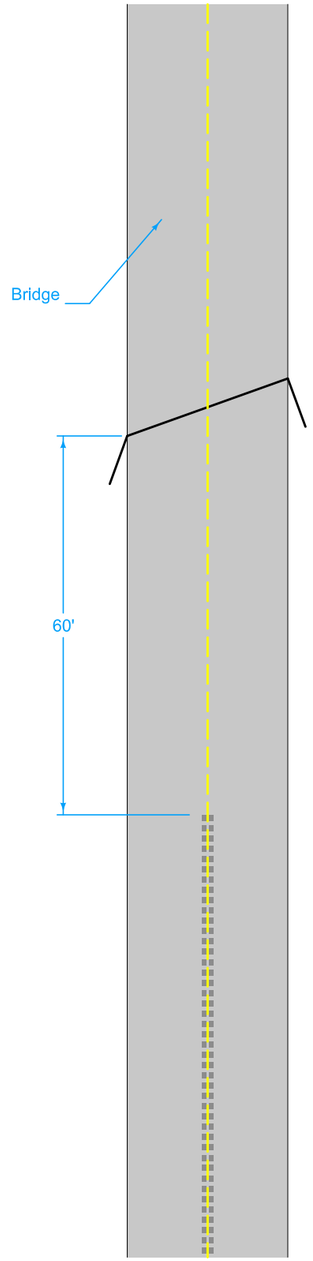


INTERSECTION WITH
SIDE ROAD



BRIDGE APPROACH

3 Stop rumbles 180 feet in advance of paved side roads or 75 feet for granular side roads.

DIAMOND GROUND
SINUSOIDAL
CENTERLINE RUMBLE STRIPS

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.23**

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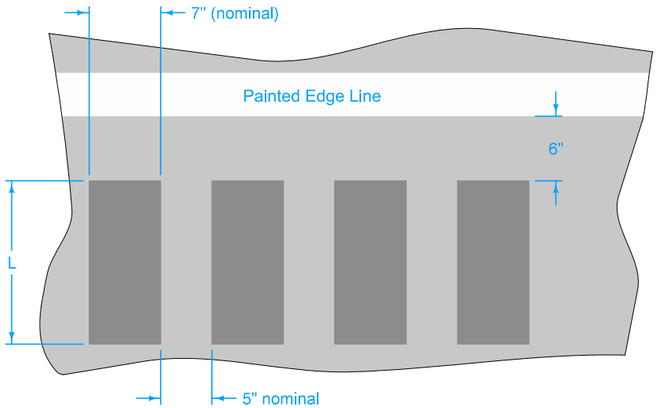
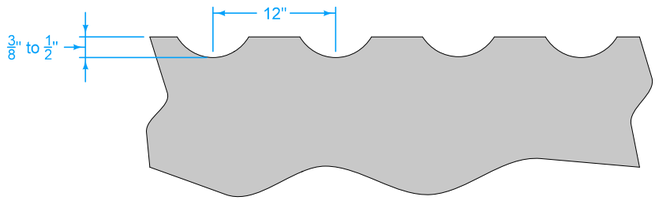
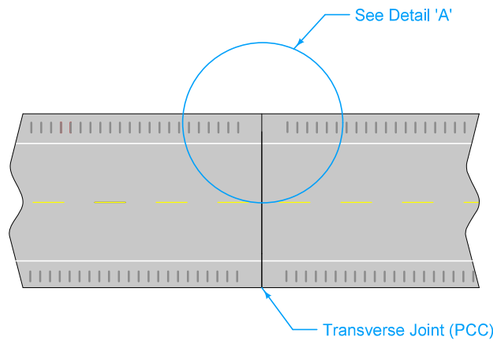
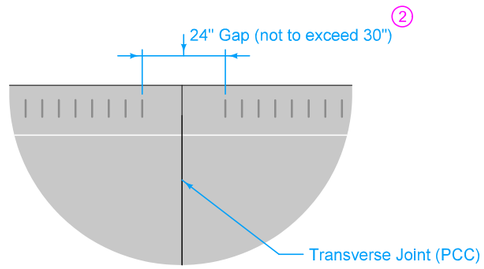
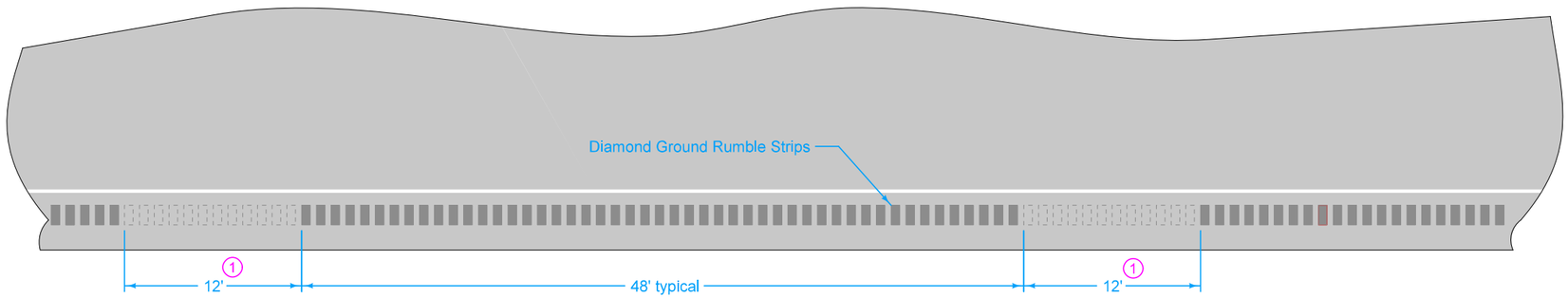








1. Place continuous diamond ground rumble strips (no 12 foot gaps) on all median side shoulders and on all interstate shoulders.
2. Gap rumble strips at transverse joints. Centering the gap about the joint is desireable. Maintain a minimum of 3 inches between rumble and transverse joint.



MODIFIED

STANDARD ROAD PLAN

REVISION 8 4-16-24

PV-12

SHEET 1 of 2

MODIFICATIONS: Diamond Ground

APPROVED BY DESIGN METHODS ENGINEER

DIAMOND GROUND SHOULDER RUMBLE STRIPS

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.24**

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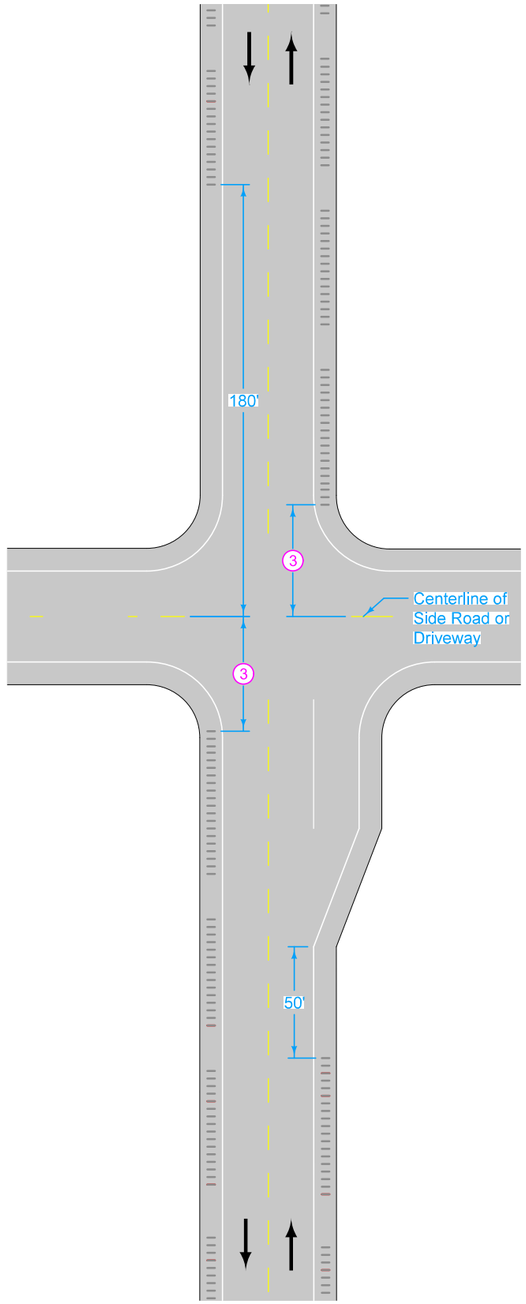
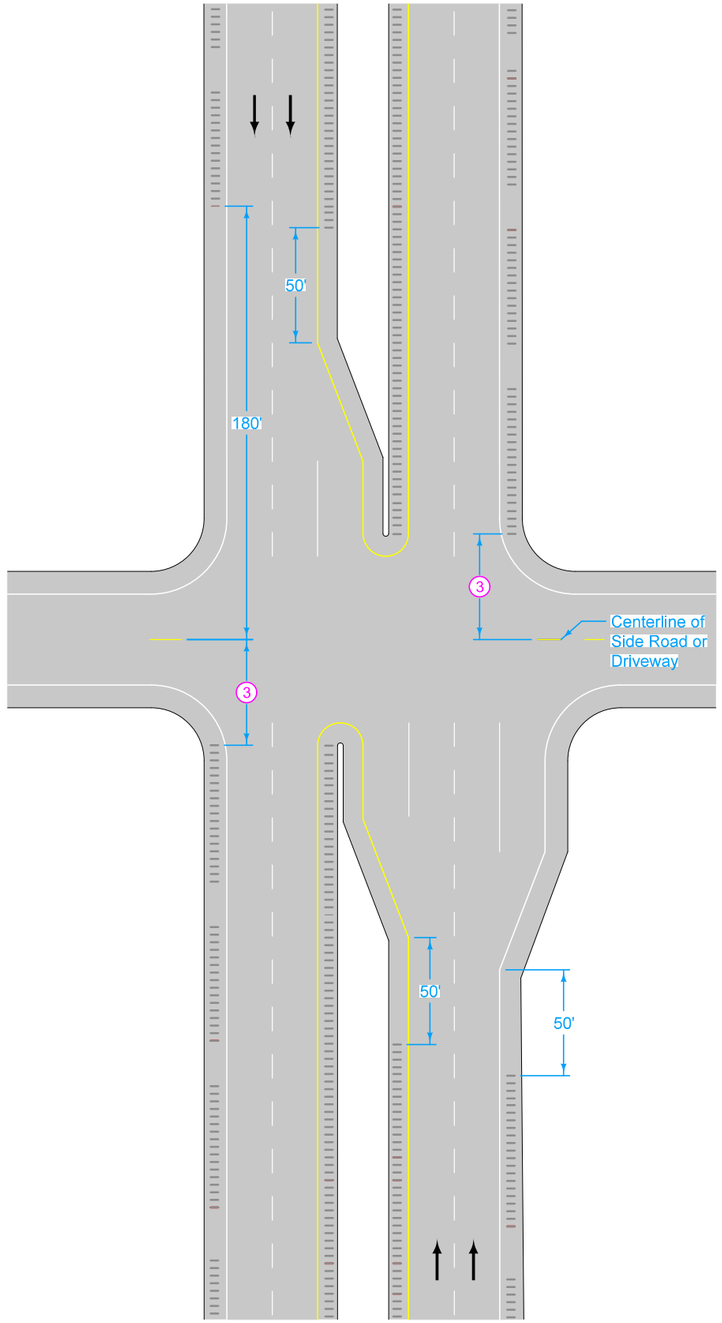
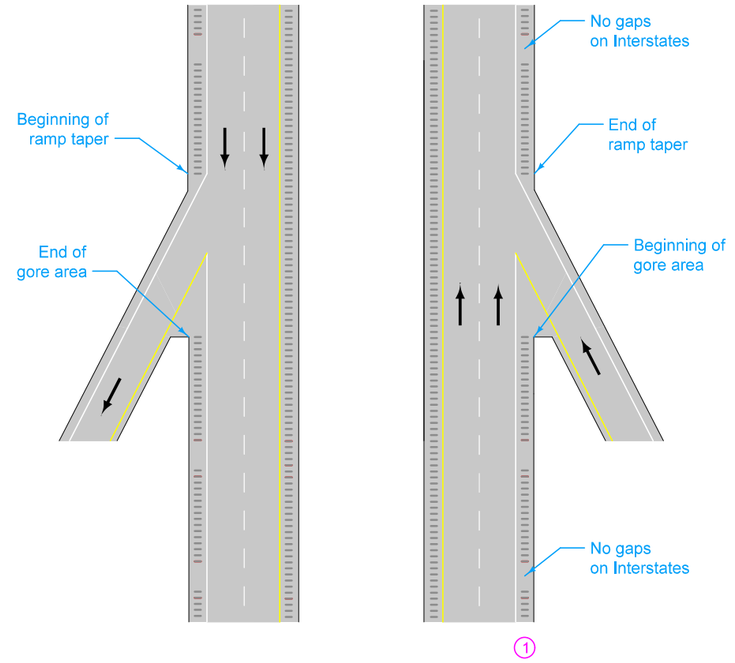
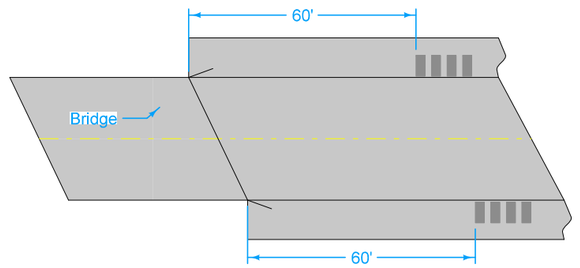








(1) Place continuous diamond ground rumble strips (no 12 foot gaps) on all median side shoulders and on all interstate shoulders.

(3) Begin rumbles 100 feet beyond paved side roads or 50 feet for driveways or granular side roads.

MODIFIED

STANDARD ROAD PLAN

REVISION 8 4-16-24

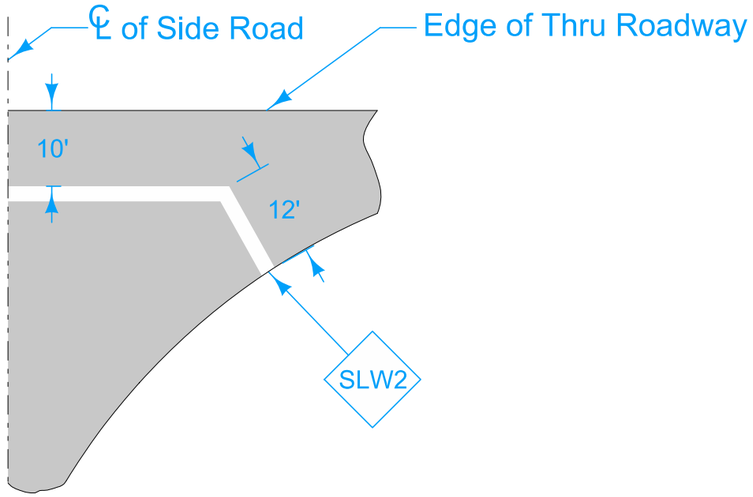
PV-12

SHEET 2 of 2

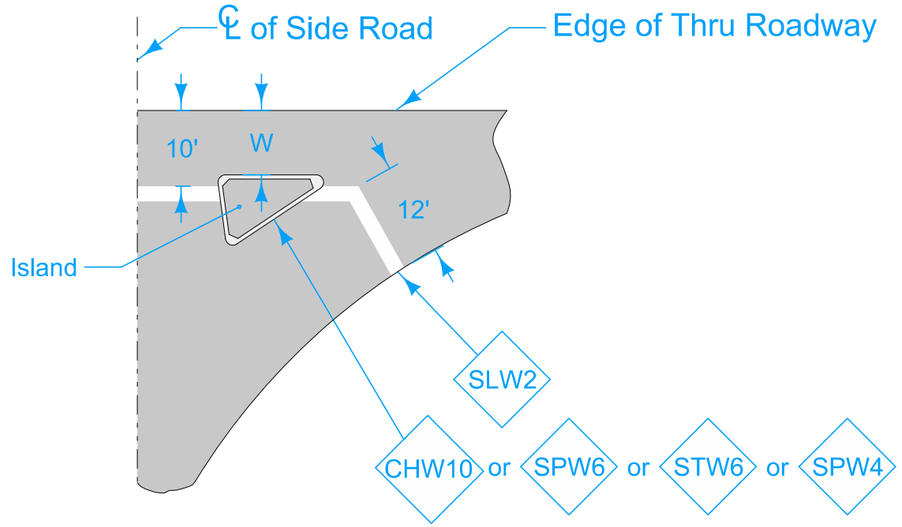
MODIFICATIONS: Diamond Ground

APPROVED BY DESIGN METHODS ENGINEER

DIAMOND GROUND SHOULDER RUMBLE STRIPS



CASE 'A'
NO ISLAND

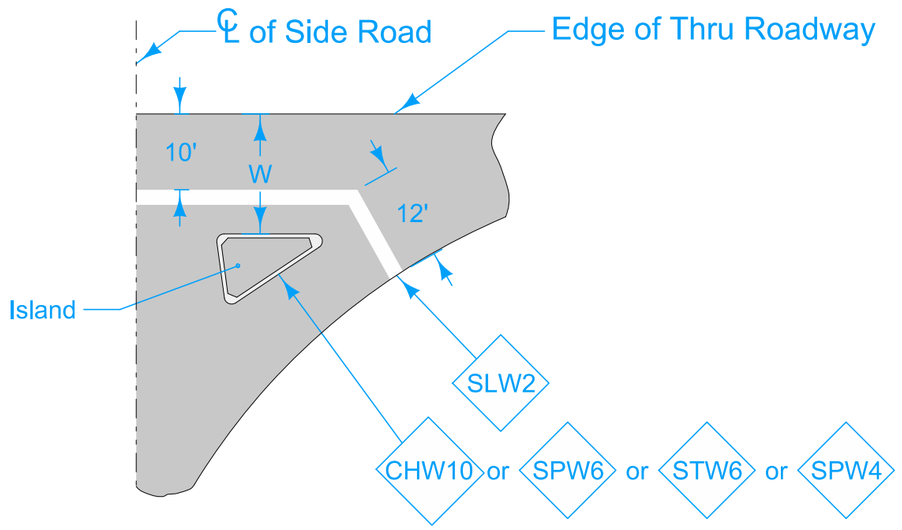


CASE 'B'
ISLAND AND W < 10 FT.

Place Stop Line perpendicular to radius and parallel to Thru Roadway.

For line information, see PM-110.

For Island information, see PV-20.



CASE 'C'
ISLAND AND W ≥ 10 FT.

LEGEND

CHW10	Channelizing Line (White)
SLW2	Stop Line (White)
SPW6	Sloped Curb 6" (White)
STW6	Standard Curb 6" (White)
SPW4	Sloped Curb 4" (White)

MODIFIED
STANDARD ROAD PLAN

REVISION 4 10-15-24

PM-120

SHEET 1 of 1

MODIFICATIONS: Modified CHW8 to CHW10.

APPROVED BY DESIGN METHODS ENGINEER

STOP LINES AND ISLANDS

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.26**

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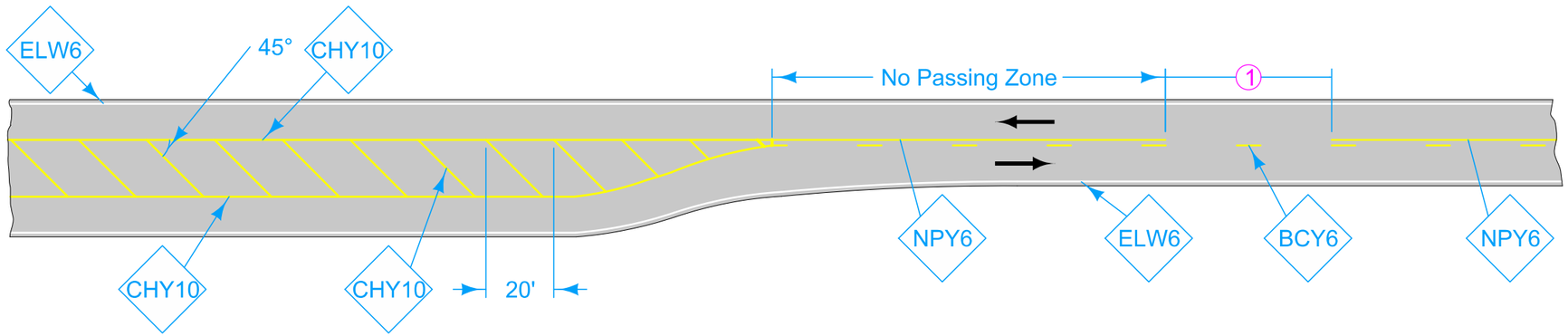
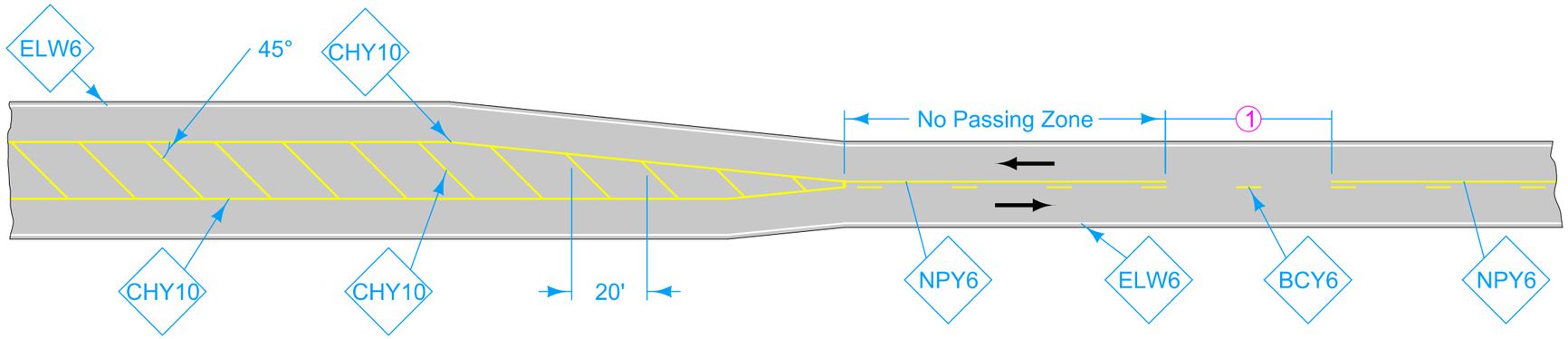


OFFSET ALL TO ONE SIDE



OFFSET SPLIT BETWEEN SIDES

For line information, see PM-110.

For projects not on the Primary system the following substitutions may be made. See plan sheets for substitutions.

ELW6 → ELW4
CHY10 → CHY8
NPY6 → NPY4
BCY6 → BCY4
DCY6 → DCY4

(1) If less than 400 feet, join solid yellow lines.

FLUSH MEDIANS

Speed (mph)	Length of No Passing Zone
20	300'
25	300'
30	360'
35	360'
40	480'
45	480'
50	600'
55	600'

LEGEND

- Centerline Extension
- Direction of Traffic
- BCY6 Broken Centerline (Yellow)
- CHY10 Channelizing Line (Yellow)
- ELW6 Edge Line Right (White)
- NPY6 No Passing Zone Line (Yellow)

Possible Contract Item:
Pavement Marking Line Items

Possible Tabulation:
108-22

MODIFIED
STANDARD ROAD PLAN

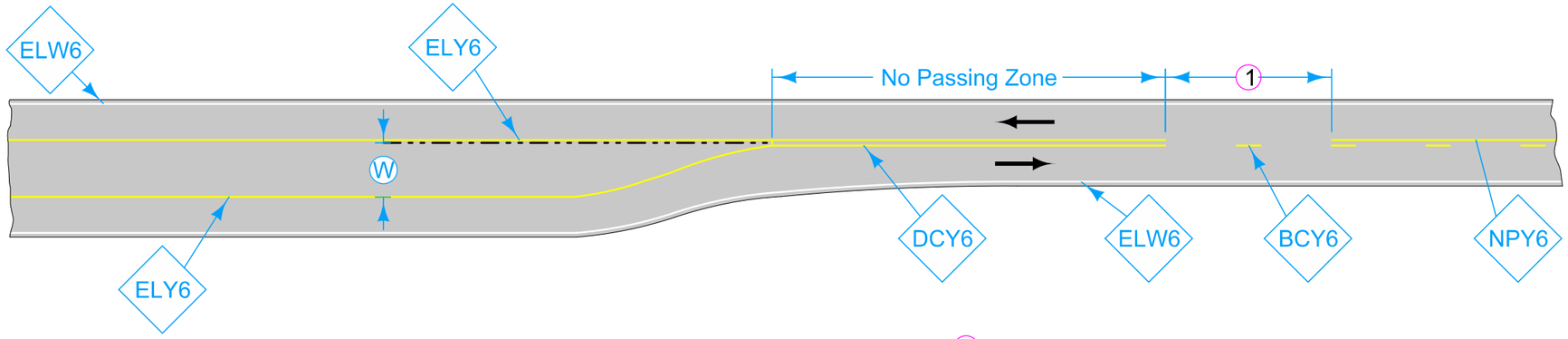
REVISION
4 | 10-15-24

PM-210
SHEET 1 of 2

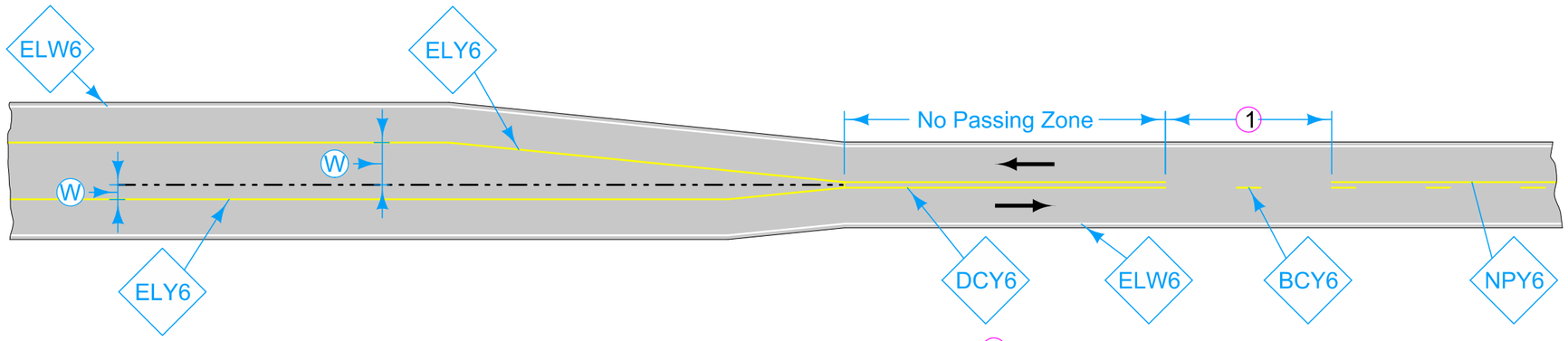
MODIFICATIONS: Modified line widths from 4-inches and 8-inches to 6-inches and 10-inches.

APPROVED BY DESIGN METHODS ENGINEER

SEPARATION IN TWO-LANE ROADWAY



OFFSET (W) ALL TO ONE SIDE (2)



OFFSET (W) SPLIT BETWEEN SIDES (2)

Paint the edge line along the taper and 50 feet of the parallel curbing. If the distance between edge lines is 100 feet or less, connect them.

(1) If less than 400 feet, join solid yellow lines.

(2) The offset distance from centerline, W, can be either the entire width of the offset if the offset is all to one side, or it is the larger of the two partial offsets if the entire width of the offset is split between the two directions of traffic. Measure W from the midpoint of the centerline to the outside edge of the painted curb.

RAISED MEDIANS

LEGEND

— - - —	Centerline Extension	ELW6	Edge Line Right (White)
◄—	Direction of Traffic	NPY6	No Passing Zone Line (Yellow)
BCY6	Broken Centerline (Yellow)	ELY6	Edge Line Left (Yellow)
DCY6	Double Centerline (Yellow)		

Length of No Passing Zone						
Speed (mph)	(W) = offset distance from centerline					
	6'	8'	10'	12'	14'	16'
25	200	200	210	250	300	340
35	250	330	410	490	580	660
45	540	720	900	1080	1260	1440
55	660	880	1100	1320	1540	1760
65	780	1040	1300	1560	1820	2080

MODIFIED

STANDARD ROAD PLAN

REVISION 4 10-15-24

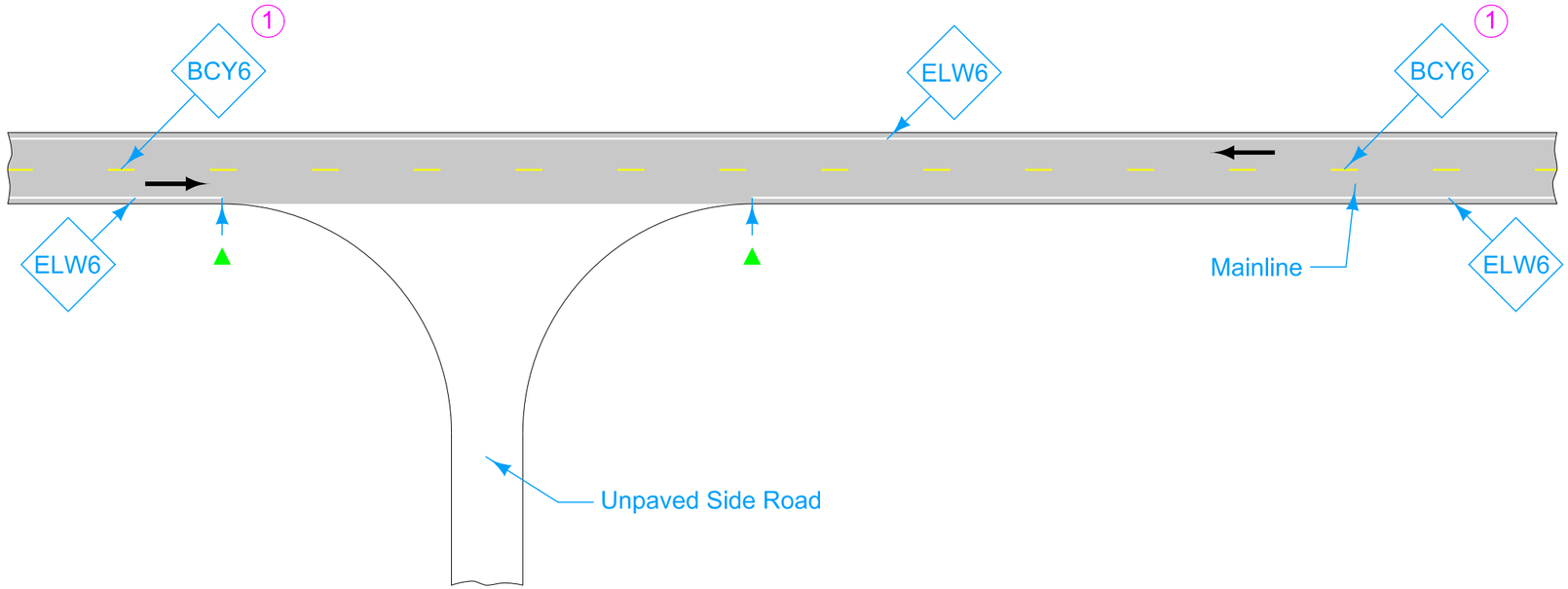
PM-210

SHEET 2 of 2

MODIFICATIONS: Modified line widths from 4-inches and 8-inches to 6-inches and 10-inches.

APPROVED BY DESIGN METHODS ENGINEER

SEPARATION IN TWO-LANE ROADWAY



Roadways may or may not have edge lines. When the free flow roadway has edge lines but the stop controlled roadway does not, end edge lines at the end of returns (marked by ▲s). When the stop controlled roadway has edge lines but the free flow roadway does not, end edge lines at the end of returns (marked by ■s). If both roadways have edge lines, continue edge lines around the returns.

For line information, see PM-110.

For projects not on the Primary system the following substitutions may be made. See plan sheets for substitutions.

ELW6 → ELW4
BCY6 → BCY4
NPY6 → NPY4
DCY6 → DCY4

(1) Broken Centerline changes to No Passing Zone Line or Double Centerline if required by sight distance.

LEGEND

←	Direction of Traffic
BCY6	Broken Centerline (Yellow)
ELW6	Edge Line Right (White)

Possible Contract Item:
Pavement Marking Line Items

Possible Tabulation:
108-22

MODIFIED

STANDARD ROAD PLAN

REVISION	
2	10-15-24

PM-420

SHEET 1 of 2

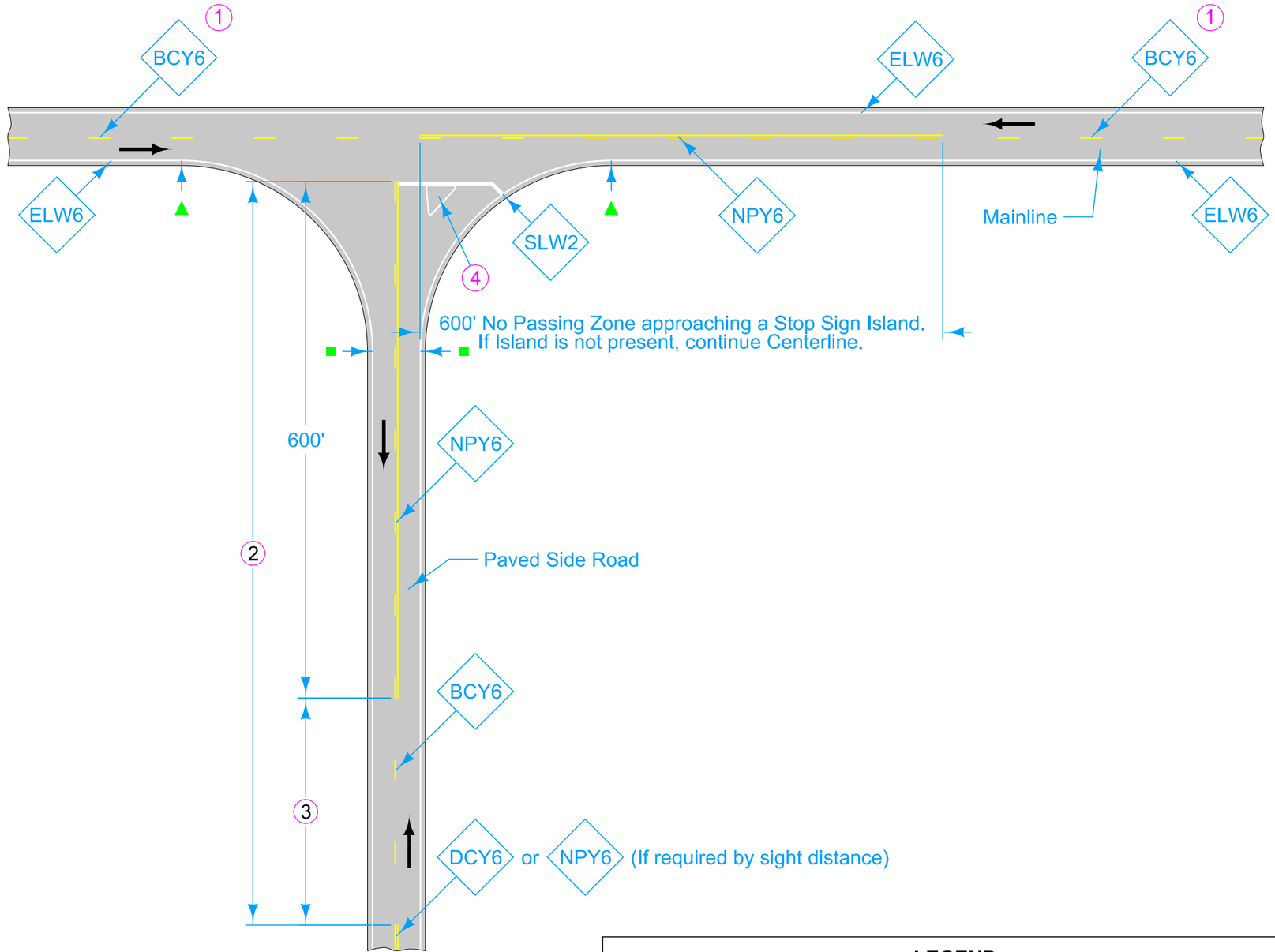
MODIFICATIONS: Modified line widths from 4-inches to 6-inches.

APPROVED BY DESIGN METHODS ENGINEER

TWO-LANE ROADWAY
WITH NO TURN LANES
(ONE-WAY STOP CONDITION)

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.29**

11:55:12 AM 3/4/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.02.dgn



1. Broken Centerline changes to No Passing Zone Line or Double Centerline if required by sight distance.
2. If less than 1000 feet, extend Yellow Line to Stop Line.
3. If less than 400 feet, join Yellow Lines.
4. For Island information, see PM-120.

LEGEND

←	Direction of Traffic	ELW6	Edge Line Right (White)
BCY6	Broken Centerline (Yellow)	NPY6	No Passing Zone Line (Yellow)
DCY6	Double Centerline (Yellow)	SLW2	Stop Line (White)

MODIFIED

STANDARD ROAD PLAN

REVISION 2 10-15-24

PM-420

SHEET 2 of 2

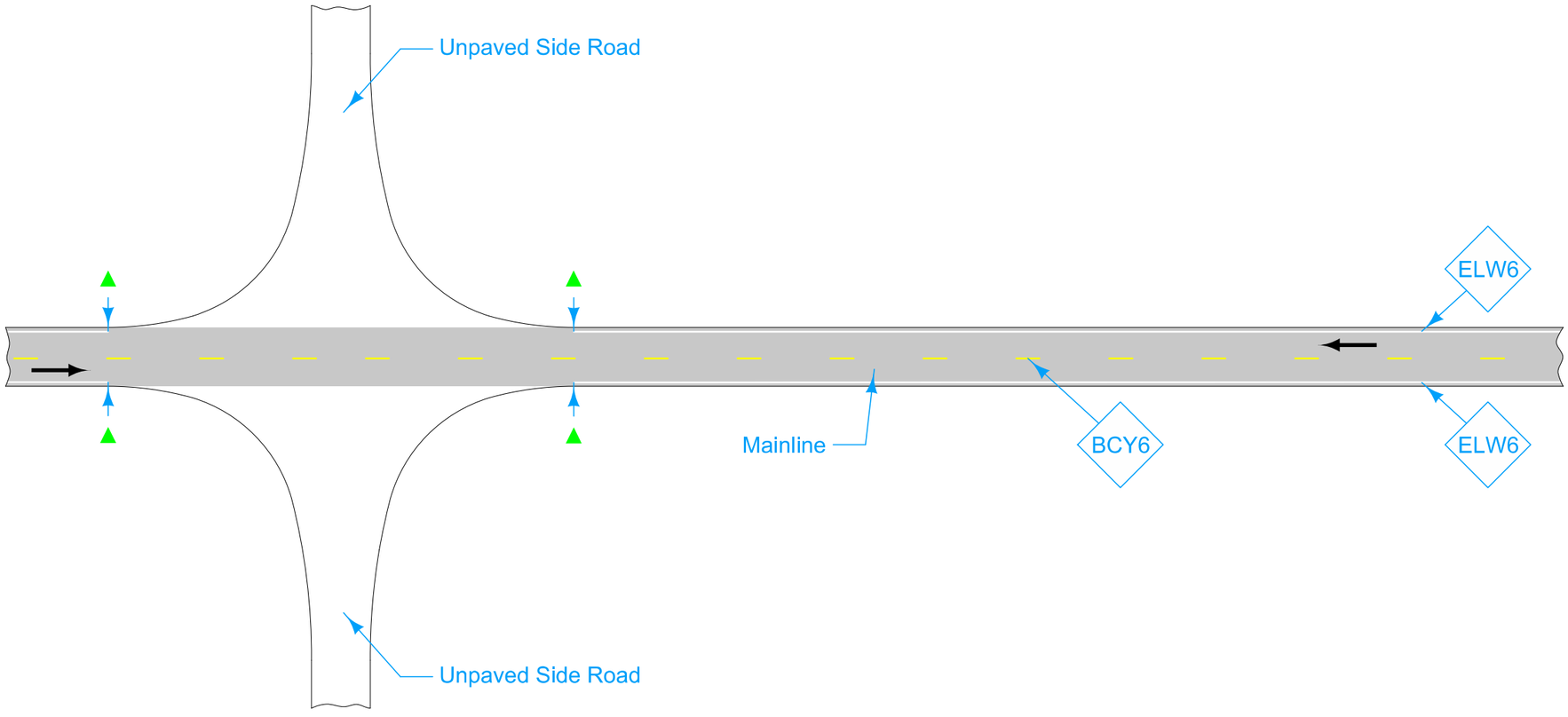
MODIFICATIONS: Modified line widths from 4-inches to 6-inches.

APPROVED BY DESIGN METHODS ENGINEER

TWO-LANE ROADWAY WITH NO TURN LANES (ONE-WAY STOP CONDITION)

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.30**

11:55:24 AM 3/4/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.02.dgn



Roadways may or may not have edge lines. When the free flow roadway has edge lines but the stop controlled roadway does not, end edge lines at the end of returns (marked by ▲s). When the stop controlled roadway has edge lines but the free flow roadway does not, end edge lines at the end of returns (marked by ■s). If both roadways have edge lines, continue edge lines around the returns.

Terminate all mainline centerline markings at the edge of the thru lanes of a paved side road.

For line information, see PM-110.

For projects not on the Primary system the following substitutions may be made. See plan sheets for substitutions.

ELW6 → ELW4
BCY6 → BCY4
NPY6 → NPY4
DCY6 → DCY4

LEGEND

- ← Direction of Traffic
- BCY6 Broken Centerline (Yellow)
- ELW6 Edge Line Right (White)

UNPAVED SIDE ROADS

Possible Contract Item:
Pavement Marking Line Items

Possible Tabulation:
108-22

MODIFIED

STANDARD ROAD PLAN

REVISION 2 10-15-24

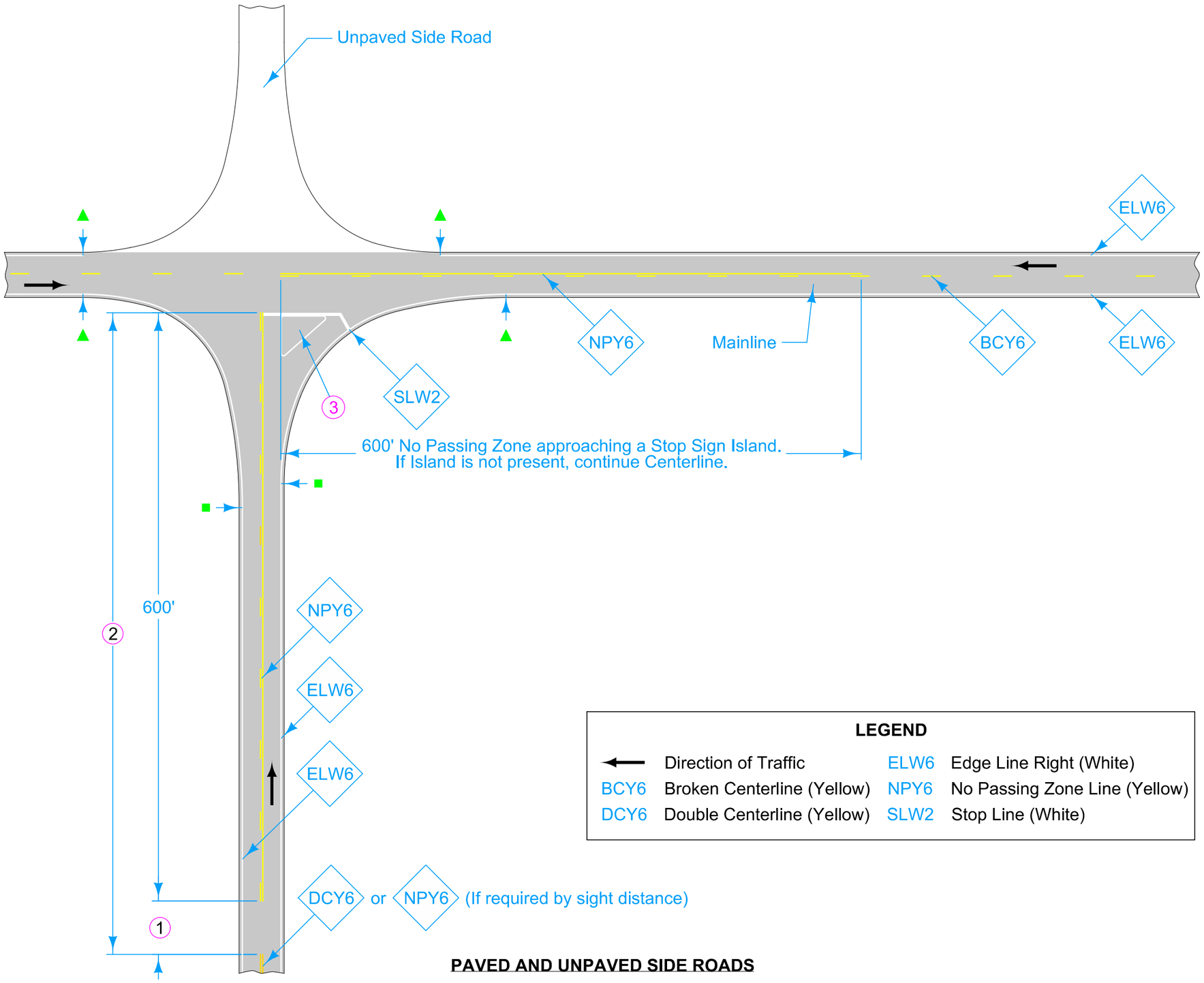
PM-520

SHEET 1 of 3

MODIFICATIONS: Modified line widths from 4-inches to 6-inches.

APPROVED BY DESIGN METHODS ENGINEER

TWO-LANE ROADWAY WITH NO TURN LANES (TWO-WAY STOP CONDITION)



1. If less than 400 feet, join Yellow Lines.
2. If less than 1000 feet, extend Yellow Line to Stop Line.
3. For Island information, see PM-120.

LEGEND

←	Direction of Traffic	ELW6	Edge Line Right (White)
BCY6	Broken Centerline (Yellow)	NPY6	No Passing Zone Line (Yellow)
DCY6	Double Centerline (Yellow)	SLW2	Stop Line (White)

PAVED AND UNPAVED SIDE ROADS

MODIFIED

STANDARD ROAD PLAN

REVISION	
2	10-15-24

PM-520

SHEET 2 of 3

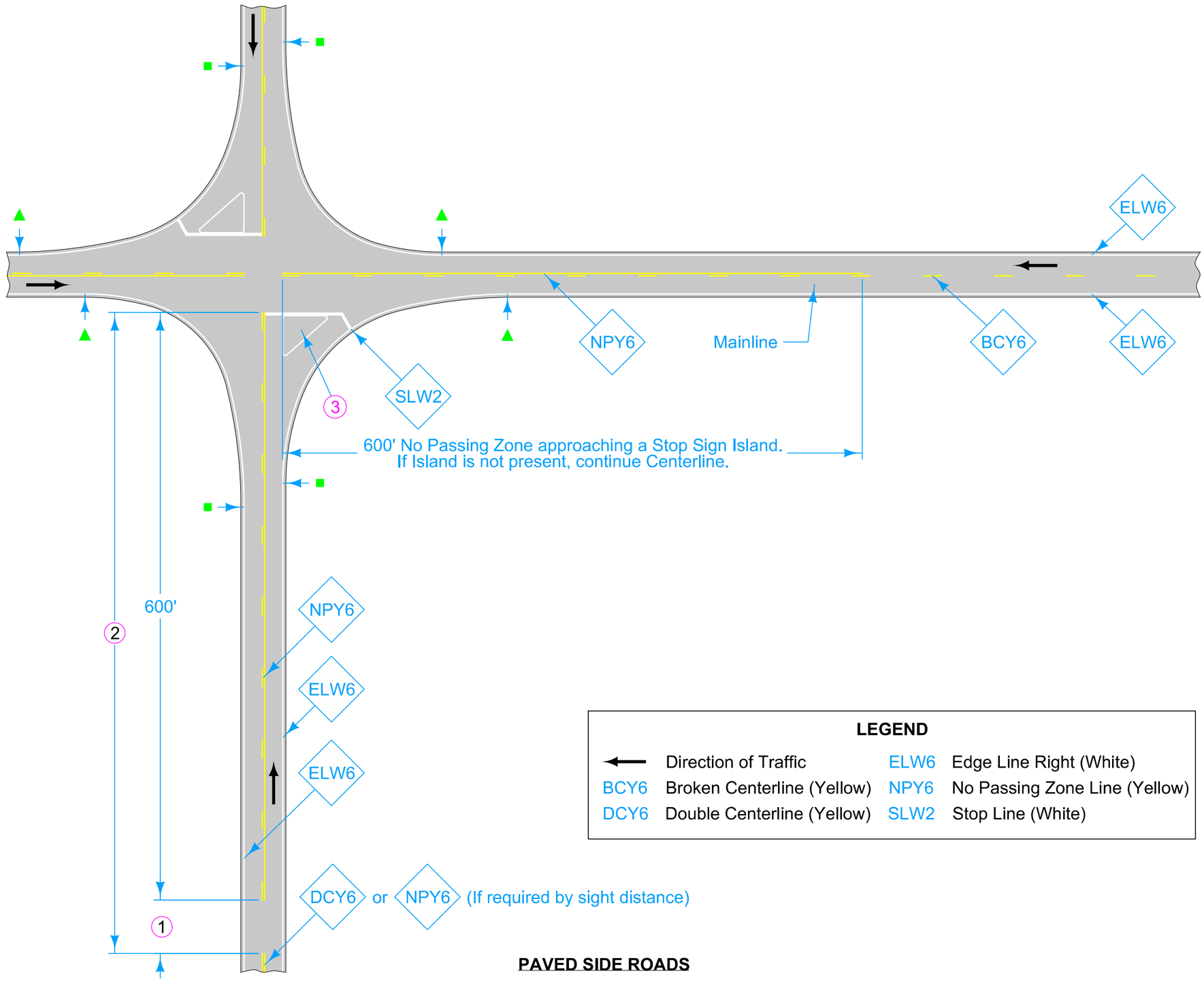
MODIFICATIONS: Modified line widths from 4-inches to 6-inches.

APPROVED BY DESIGN METHODS ENGINEER

TWO-LANE ROADWAY WITH NO TURN LANES (TWO-WAY STOP CONDITION)

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.32**

11:55:46 AM 3/4/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.02.dgn



1. If less than 400 feet, join Yellow Lines.
2. If less than 1000 feet, extend Yellow Line to Stop Line.
3. For Island information, see PM-120.

LEGEND

←	Direction of Traffic	ELW6	Edge Line Right (White)
BCY6	Broken Centerline (Yellow)	NPY6	No Passing Zone Line (Yellow)
DCY6	Double Centerline (Yellow)	SLW2	Stop Line (White)

PAVED SIDE ROADS

MODIFIED

STANDARD ROAD PLAN

REVISION	
2	10-15-24

PM-520

SHEET 3 of 3

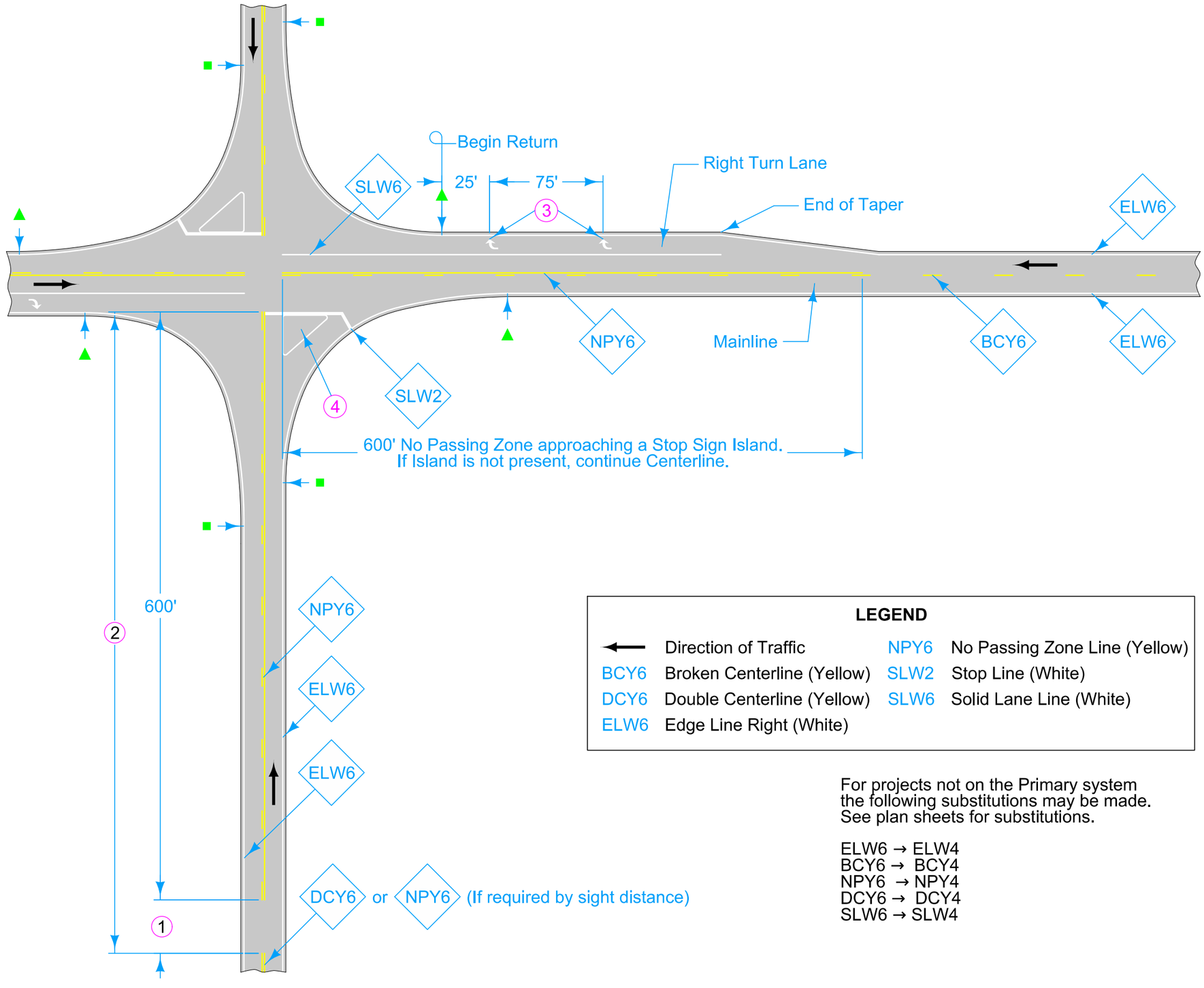
MODIFICATIONS: Modified line widths from 4-inches to 6-inches.

APPROVED BY DESIGN METHODS ENGINEER

TWO-LANE ROADWAY WITH NO TURN LANES (TWO-WAY STOP CONDITION)

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.33**

11:55:57 AM 3/4/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.02.dgn



LEGEND

←	Direction of Traffic	NPY6	No Passing Zone Line (Yellow)
BCY6	Broken Centerline (Yellow)	SLW2	Stop Line (White)
DCY6	Double Centerline (Yellow)	SLW6	Solid Lane Line (White)
ELW6	Edge Line Right (White)		

For projects not on the Primary system the following substitutions may be made. See plan sheets for substitutions.

ELW6 → ELW4
BCY6 → BCY4
NPY6 → NPY4
DCY6 → DCY4
SLW6 → SLW4

Roadways may or may not have edge lines. When the free flow roadway has edge lines but the stop controlled roadway does not, end edge lines at the end of returns (marked by ▲s). When the stop controlled roadway has edge lines but the free flow roadway does not, end edge lines at the end of returns (marked by ■s). If both roadways have edge lines, continue edge lines around the returns.

Terminate all mainline centerline markings at the edge of the thru lanes of the side road.

Start Solid Lane Line for Right Turn Lane at end of taper.

For line information, see PM-110.

For symbol and legend information, see PM-111.

(1) If less than 400 feet, join Yellow Lines.

(2) If less than 1000 feet, extend Yellow Line to Stop Line.

(3) Symbol and Legend (when listed in 108-29).

(4) For Island information, see PM-120.

Possible Contract Items:
- Pavement Marking Line Items
- Pavement Marking Symbol and Legend Items

Possible Tabulations:
- 108-22
- 108-29

MODIFIED
STANDARD ROAD PLAN

REVISION 2 10-15-24

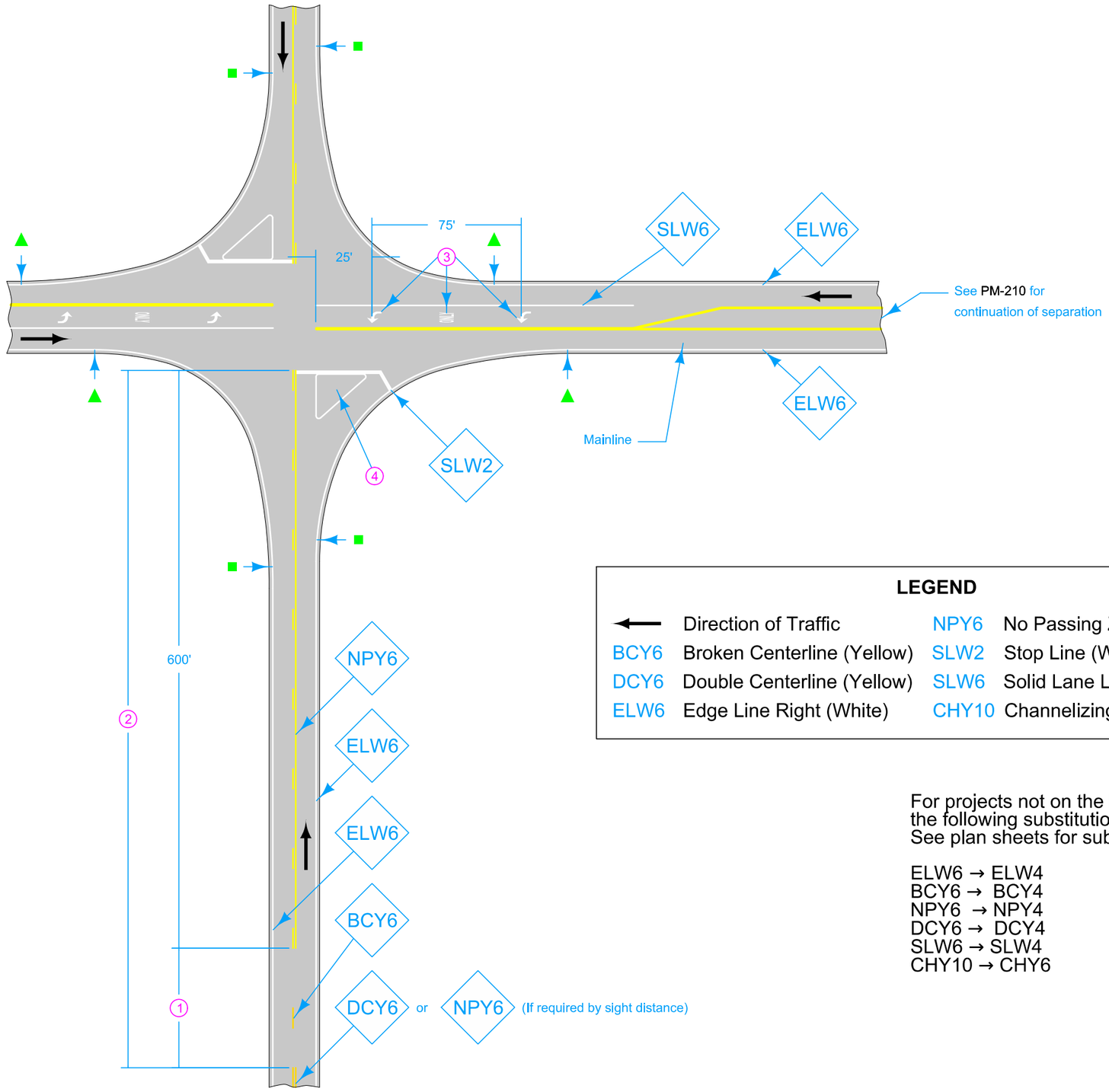
PM-521

SHEET 1 of 1

MODIFICATIONS: Modified line widths from 4-inches to 6-inches.

APPROVED BY DESIGN METHODS ENGINEER

TWO-LANE ROADWAY WITH RIGHT TURN LANES



Roadways may or may not have edge lines. When the free flow roadway has edge lines but the stop controlled roadway does not, end edge lines at the end of returns (marked by ▲s). When the stop controlled roadway has edge lines but the free flow roadway does not, end edge lines at the end of returns (marked by ■s). If both roadways have edge lines, continue edge lines around the returns.

Terminate all mainline centerline markings at the edge of the thru lanes of the side road.

For line information, see PM-110.

For symbol and legend information, see PM-111.

LEGEND

←	Direction of Traffic	NPY6	No Passing Zone Line (Yellow)
BCY6	Broken Centerline (Yellow)	SLW2	Stop Line (White)
DCY6	Double Centerline (Yellow)	SLW6	Solid Lane Line (White)
ELW6	Edge Line Right (White)	CHY10	Channelizing Line (Yellow)

For projects not on the Primary system the following substitutions may be made. See plan sheets for substitutions.

ELW6 → ELW4
BCY6 → BCY4
NPY6 → NPY4
DCY6 → DCY4
SLW6 → SLW4
CHY10 → CHY6

① If less than 400 feet, join Yellow Lines.

② If less than 1000 feet, extend Yellow Line to Stop Line.

③ Symbol and Legend (when listed in 108-29).

④ For Island information, see PM-120.

Possible Contract Items:
- Pavement Marking Line Items
- Pavement Marking Symbol and and Legend Items

Possible Tabulations:
- 108-22
- 108-29

MODIFIED
STANDARD ROAD PLAN

REVISION
3 | 10-15-24

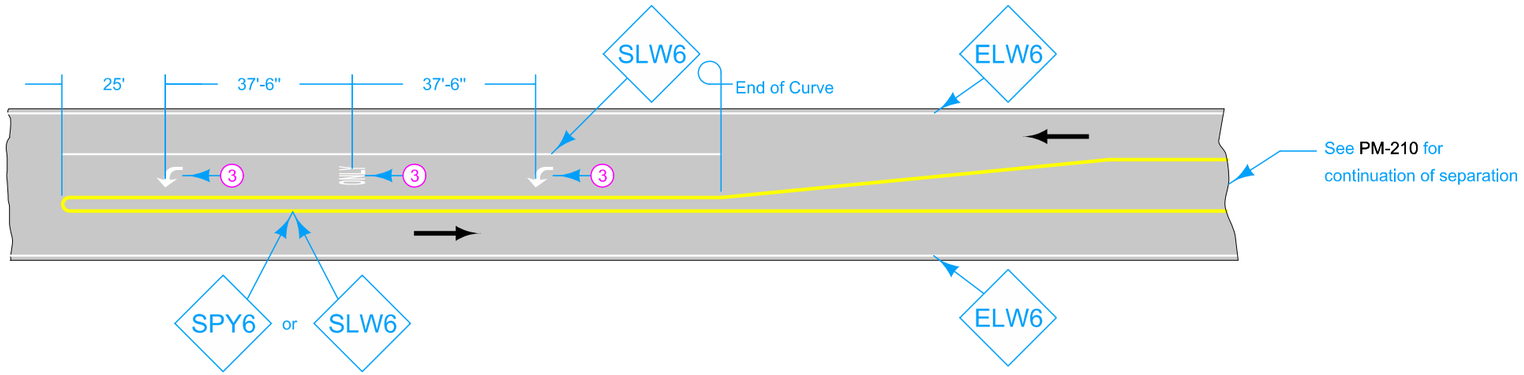
PM-522

SHEET 1 of 2

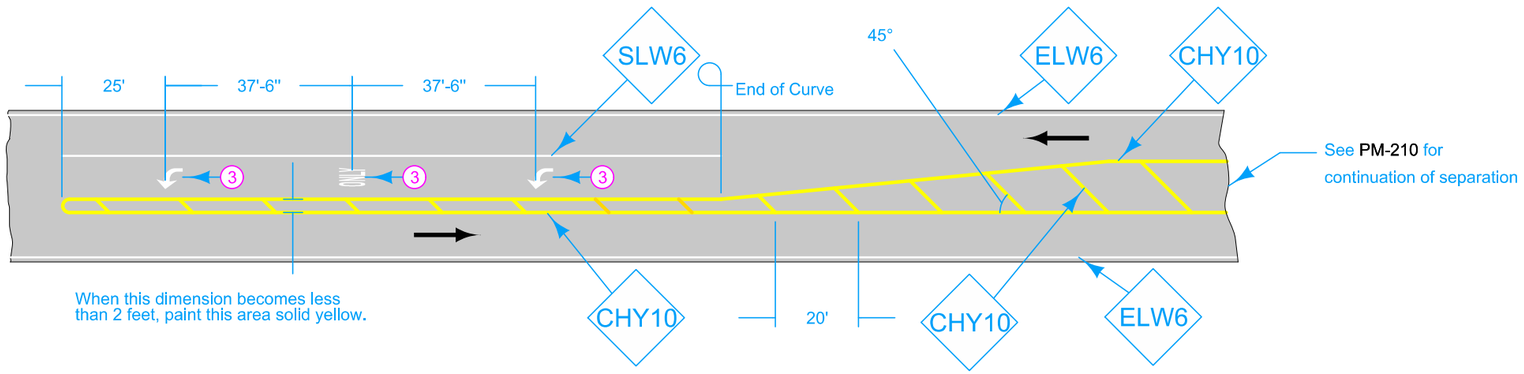
MODIFICATIONS: Modified line widths from 4-inches to 6-inches.

APPROVED BY DESIGN METHODS ENGINEER

TWO-LANE ROADWAY WITH LEFT TURN LANES



CURBED CHANNELIZED ISLAND



PAINTED CHANNELIZED ISLAND

3 Symbol and Legend (when listed in 108-29).

LEGEND

←	Direction of Traffic	NPY6	No Passing Zone Line (Yellow)
BCY6	Broken Centerline (Yellow)	SLW2	Stop Line (White)
DCY6	Double Centerline (Yellow)	SLW6	Solid Lane Line (White)
ELW6	Edge Line Right (White)	CHY10	Channelizing Line (Yellow)

MODIFIED

STANDARD ROAD PLAN

REVISION	
3	10-15-24

PM-522

SHEET 2 of 2

MODIFICATIONS: Modified line widths from 4-inches to 6-inches.

APPROVED BY DESIGN METHODS ENGINEER

TWO-LANE ROADWAY
WITH LEFT TURN LANES

FILE NO.	ENGLISH	DESIGN TEAM **Jia\Thiel\Altenhofen**	**DUBUQUE** COUNTY	PROJECT NUMBER **NHSX-003-9(25)--3H-31**	SHEET NUMBER **U.36**

11:56:31 AM 3/4/2024 JEVANS4 pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1_CONNECT\SHT\SHT_31052107_U.02.dgn

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	ITEM CODE	ITEM	UNIT	TOTAL	AS BUILT QUAN.
1	2101-0850001	CLEARING AND GRUBBING	ACRE	0.3	
2	2104-2713020	EXCAVATION, CLASS 13, CHANNEL	CY	678.0	
3	2507-3250005	ENGINEERING FABRIC	SY	720.0	
4	2507-6800061	REVETMENT, CLASS E	TON	660.0	

ESTIMATE REFERENCE INFORMATION

ITEM NO.	ITEM CODE	DESCRIPTION
1	2101-0850001	**CLEARING AND GRUBBING** - -
2	2104-2713020	**EXCAVATION, CLASS 13, CHANNEL** MATERIAL EXCAVATED FOR THE BANK SHAPING WILL BE USED FOR ALL FILL NEEDED FOR THE PROJECT. ESTIMATE 678 CY OF CLASS 13 CHANNEL EXCAVATION AND 440 CY OF FILL FILL ESTIMATES INCLUDE 25% SHRINKAGE FACTOR. THE WASTE (238 CY) WILL BECOME THE PROPERTY OF THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBLITY TO PROVIDE DISPOSAL SITE FOR WASTE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT AREAS (INCLUDING HAUL ROADS) SELECTED FOR WASTE OR DISPOSAL NOT IMPACT 1)CULTURALLY SENSITIVE SITES OR GRAVES OR 2)WETLANDS OR "WATERS OF THE U.S.", INCLUDING STREAMS OR STREAM BANKS BELOW THE "ORDINARY HIGH WATER MARK", WITHOUT AN APPROVED U.S. ARMY CORPS OF ENGINEERS 404 PERMIT. NO PAYMENT FOR OVERHAUL WILL BE ALLOWED FOR MATERIAL HAULED TO THESE SITES. NO MATERIAL SHALL BE PLACED WITHIN THE RIGHT OF WAY.
3	2507-3250005	**ENGINEERING FABRIC** ENGINEERING FABRIC SHALL BE MATERIAL AS SPECIFIED FOR EMBANKMENT EROSION CONTROL IN ACCORDANCE WITH ARTICLE 4196.01,B,3, OF THE STANDARD SPECIFICATIONS.
4	2507-6800061	**REVETMENT, CLASS E** ESTIMATED AT 1.6 TON/CY.

GENERAL NOTES:

THIS DESIGN IS FOR THE CONSTRUCTION OF STREAMBANK STABILIZATION MEASURES ALONG THE NORTH FORK OF THE LITTLE MAQUOKETA RIVER NEAR U.S. HIGHWAY 52. PROJECT LOCATION IS APPROXIMATELY 0.30 MILES WEST OF PARADISE VALLEY ROAD AND U.S. HIGHWAY 52 INTERSECTION.

PROJECT SHALL CONSIST OF:

1. INSTALLATION OF CLASS E REVETMENT BANK STABILIZATION AND BANK GRADING.

ROADWAY QUANTITIES SHOWN ELSEWHERE IN THESE PLANS.

REFER TO TITLE SHEET FOR TRAFFIC DATA.

SPECIFICATIONS:

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

HYDRAULIC DESIGN

LICENSED PROFESSIONAL ENGINEER
David J. Mulholland
14746
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.

David J. Mulholland 1/6/2020

Signature Date

David J. Mulholland

Printed or Typed Name

My license renewal date is December 31, 2020

Pages or sheets covered by this seal: V.1 AND V.2

DESIGN FOR REPAIR TO

US 52 ADJACENT TO NORTH FORK LITTLE MAQUOKETA RIVER BANK STABILIZATION

SITUATION PLAN
DUBUQUE COUNTY

STA. 277+00 JANUARY 2020

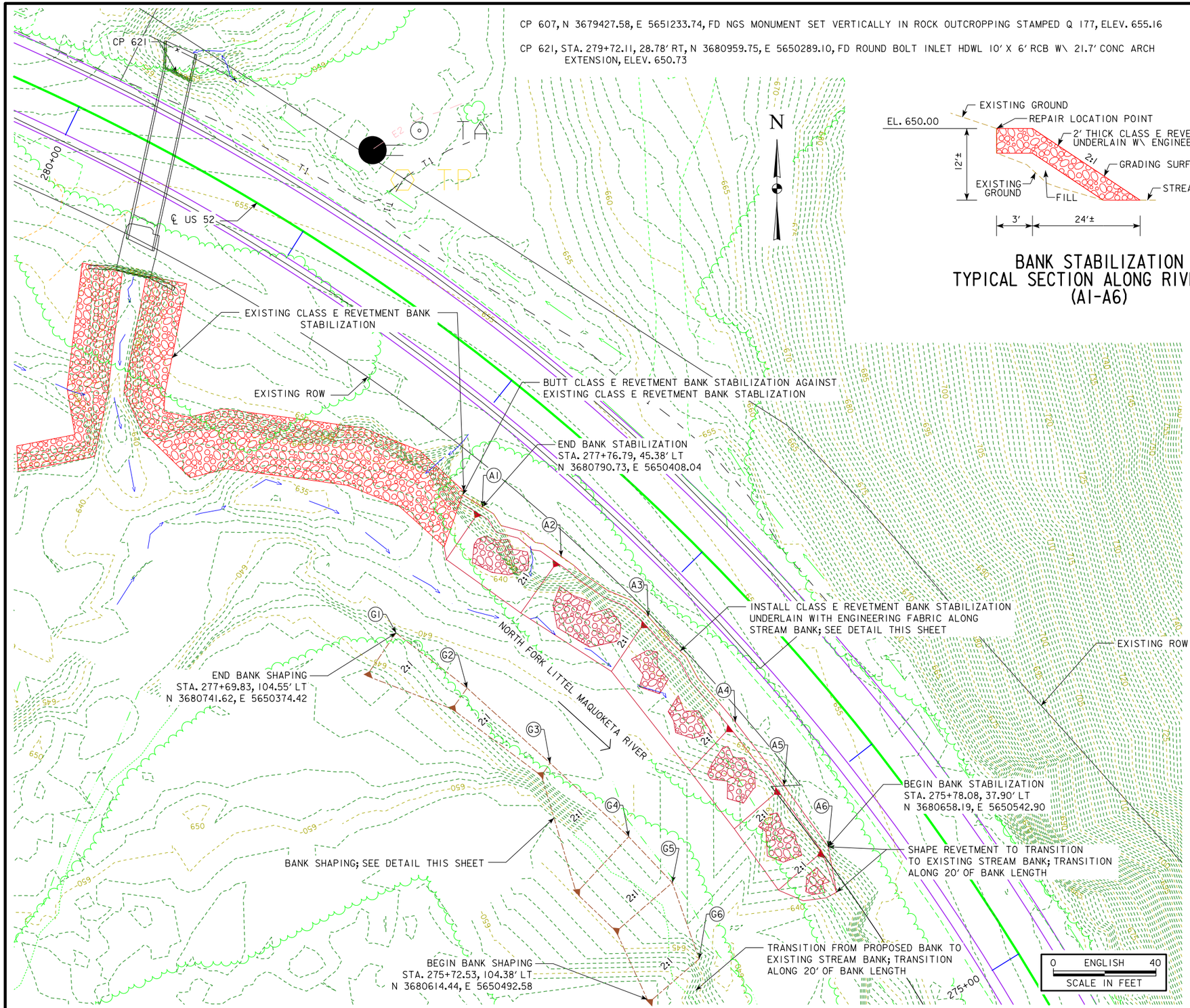
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 2 FILE NO. 31283 DESIGN NO. 223

DESIGN TEAM | DUBUQUE COUNTY | PROJECT NUMBER NHSX-003-9(25)--3H-31 | SHEET NUMBER V.1

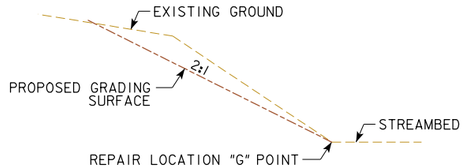
CP 607, N 3679427.58, E 5651233.74, FD NGS MONUMENT SET VERTICALLY IN ROCK OUTCROPPING STAMPED Q 177, ELEV. 655.16

CP 621, STA. 279+72.11, 28.78' RT, N 3680959.75, E 5650289.10, FD ROUND BOLT INLET HDWL 10' X 6' RCB W\ 21.7' CONC ARCH EXTENSION, ELEV. 650.73



SITUATION PLAN

BANK STABILIZATION TYPICAL SECTION ALONG RIVERBANK (A1-A6)



BANK SHAPING (SOUTH) TYPICAL SECTION (G1-G6)

REPAIR LOCATION TABLE

POINTS	REPAIR LOCATION				
	STATION	OFFSET	N	E	ELEV.
A1	277+76.79	45.38' LT	3680790.73	5650408.04	650.00
A2	277+39.18	39.41' LT	3680771.47	5650438.80	650.00
A3	276+96.76	32.60' LT	3680748.02	5650472.73	650.00
A4	276+41.35	35.57' LT	3680706.86	5650506.68	650.00
A5	276+08.79	36.91' LT	3680682.03	5650525.65	650.00
A6	275+78.08	37.90' LT	3680658.19	5650542.90	650.00
G1	277+69.83	104.55' LT	3680741.62	5650374.42	637.42
G2	277+30.22	101.99' LT	3680720.10	5650402.11	637.96
G3	276+81.02	99.85' LT	3680690.84	5650434.47	638.16
G4	276+33.94	96.26' LT	3680662.12	5650465.11	638.01
G5	276+06.30	94.54' LT	3680644.19	5650482.13	638.22
G6	275+72.53	104.38' LT	3680614.44	5650492.58	638.14

HYDRAULIC DATA

DRAINAGE AREA = 64.5 SQ. MI.
STREAM SLOPE = 11.48 FT./MI.

LOCATION

US HIGHWAY 52 NEAR
NORTH FORK LITTLE MAQUOKETA RIVER
T-90N R-1E
SECTION 36
JEFFERSON TOWNSHIP
DUBUQUE COUNTY
LATITUDE 42.565262°
LONGITUDE -90.792516°

UTILITIES LEGEND:

E2 - ELECTRIC - MAQUOKETA VALLEY REC
TI - TELEPHONE - CENTURYLINK

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

NOTE: CLEAR AND GRUB ALL TREES AND SHRUBS AS NECESSARY FOR CONSTRUCTION.

DESIGN FOR REPAIR TO

US 52 ADJACENT TO NORTH FORK LITTLE MAQUOKETA RIVER BANK STABILIZATION

SITUATION PLAN DUBUQUE COUNTY

STA. 277+00 JANUARY 2020

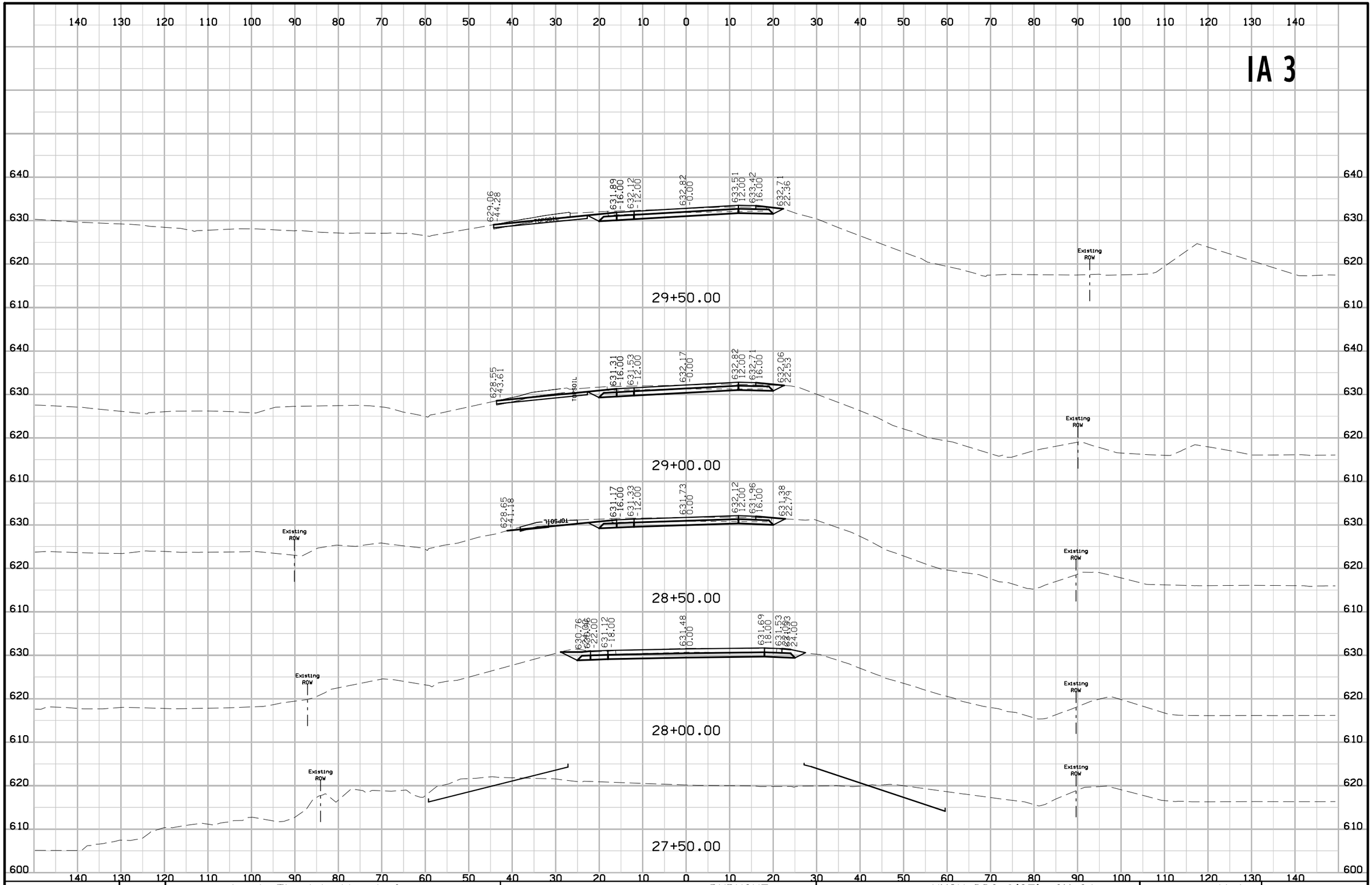
IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 2 FILE NO. 31283 DESIGN NO. 223

DESIGN TEAM | DUBUQUE COUNTY | PROJECT NUMBER NHSX-003-9(25)--3H-31 | SHEET NUMBER V.2

1/6/2020 10:50:20 AM dmulhol pw:\\ntPwInt1.dot.int.lan:PWMain\Documents\Projects\3105202010\BRPrelim\STR_31052107_DOT_SPN.dgn 310223s002P 11x17_pdf.pltcfg

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.1

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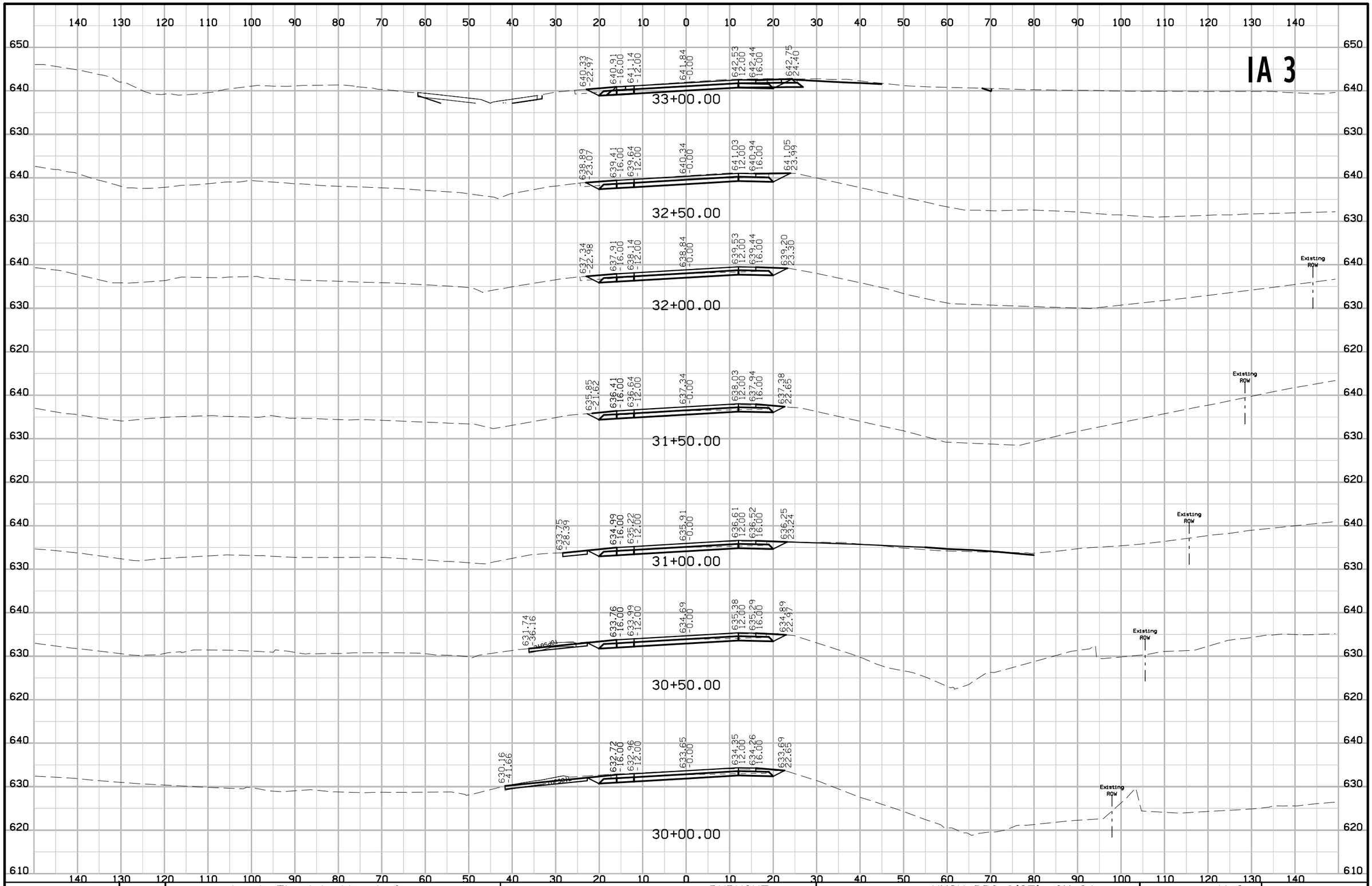
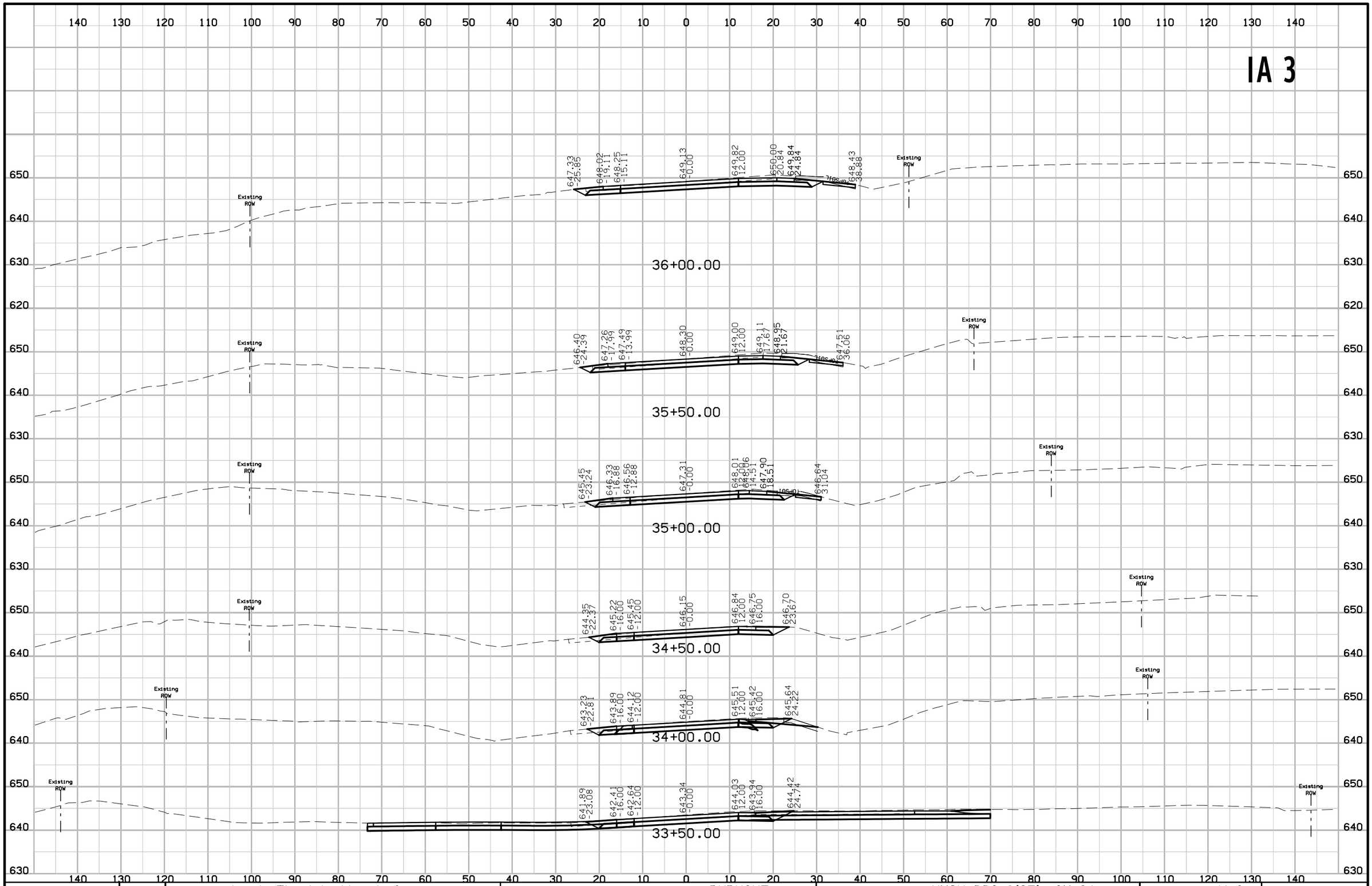
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.2

9:29:30 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

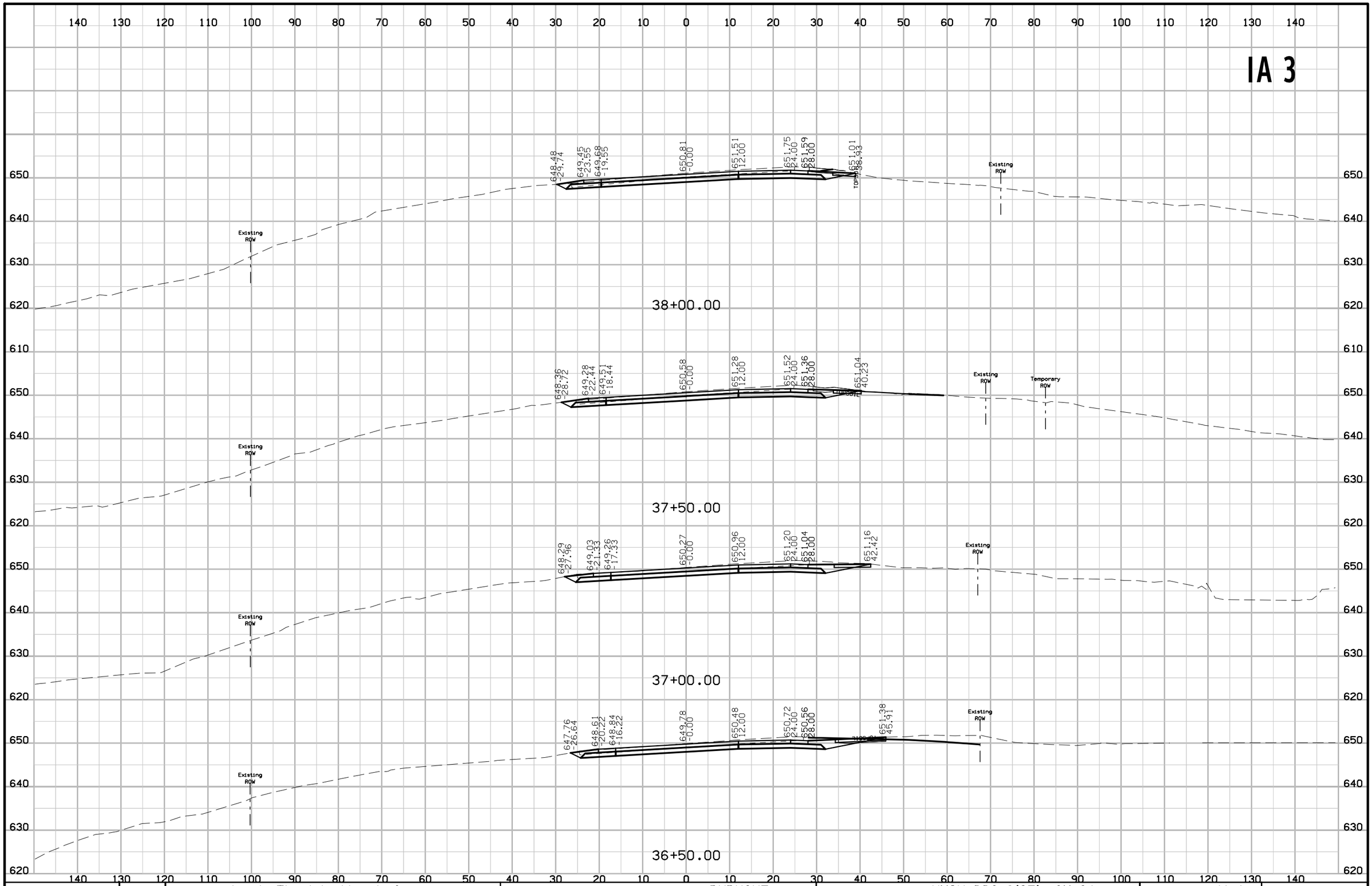
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.3

9:29:31 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.4

9:29:31 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

660 650 640 630 620 610

649.17 -34.26 | 650.10 -28.00 | 650.34 -24.00 | 651.73 -0.00 | 652.42 12.00

TOPSOIL

Existing ROW

Existing ROW

40+00.00

649.01 -33.15 | 649.94 -26.89 | 650.17 -22.89 | 651.50 -0.00 | 652.20 12.00

TOPSOIL

Existing ROW

Existing ROW

Temporary ROW

39+50.00

648.79 -34.01 | 649.78 -25.78 | 650.01 -21.78 | 651.27 -0.00 | 651.97 12.00 | 651.85 24.00 | 651.69 58.00

TOPSOIL

Existing ROW

Existing ROW

Temporary ROW

39+00.00

648.48 -32.30 | 649.61 -24.66 | 649.84 -20.66 | 651.04 -0.00 | 651.74 12.00 | 651.80 24.00 | 651.64 58.00

TOPSOIL

Existing ROW

Existing ROW

38+50.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.5

9:29:32 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

42+00.00

650.03 -33.88 | 651.15 -28.00 | 651.38 -24.00 | 652.78 -0.00 | 653.47 12.00

Existing ROW

41+50.00

650.30 -35.09 | 650.81 -28.00 | 651.04 -24.00 | 652.44 -0.00 | 653.13 12.00

Existing ROW

41+00.00

650.07 -35.14 | 650.56 -28.00 | 650.80 -24.00 | 652.19 -0.00 | 652.88 12.00

Existing ROW | Proposed ROW

40+50.00

649.58 -34.60 | 650.33 -28.00 | 650.57 -24.00 | 651.96 -0.00 | 652.65 12.00

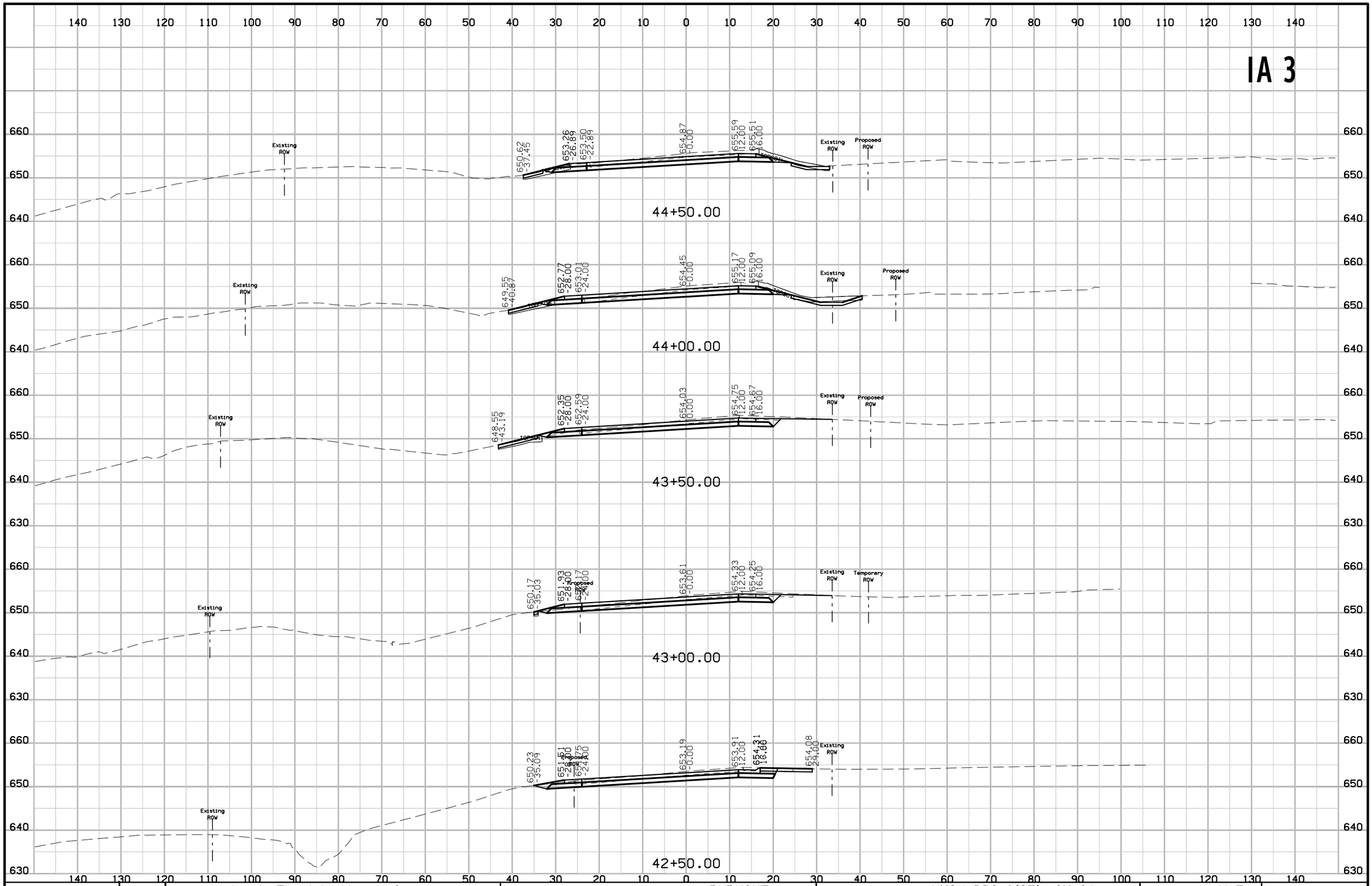
TOPSOIL | TOPSOIL

Existing ROW | Proposed ROW

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.6

2:36:55 PM 2/23/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

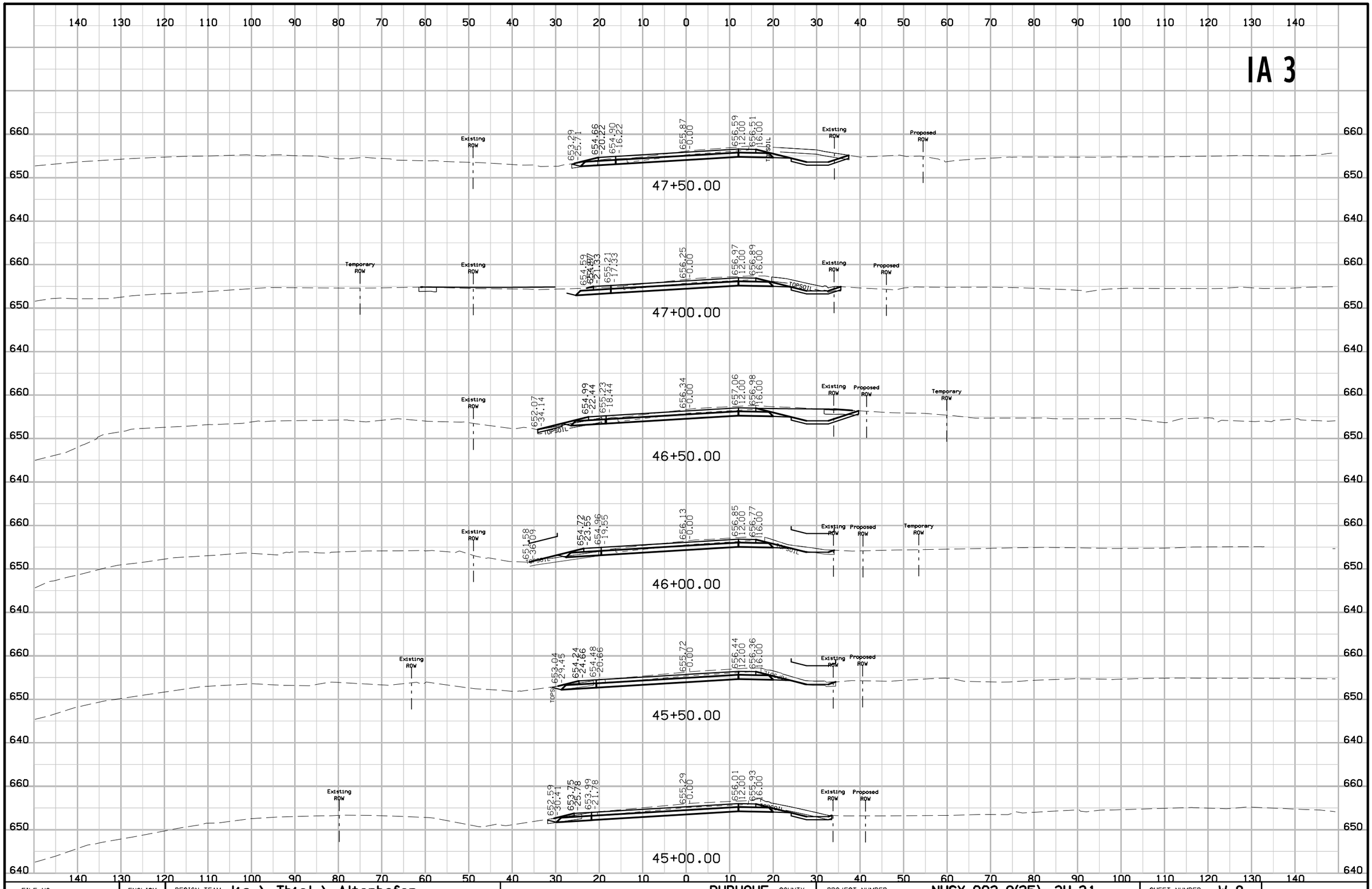
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.7

2:36:55 PM 2/23/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.8

9:29:35 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

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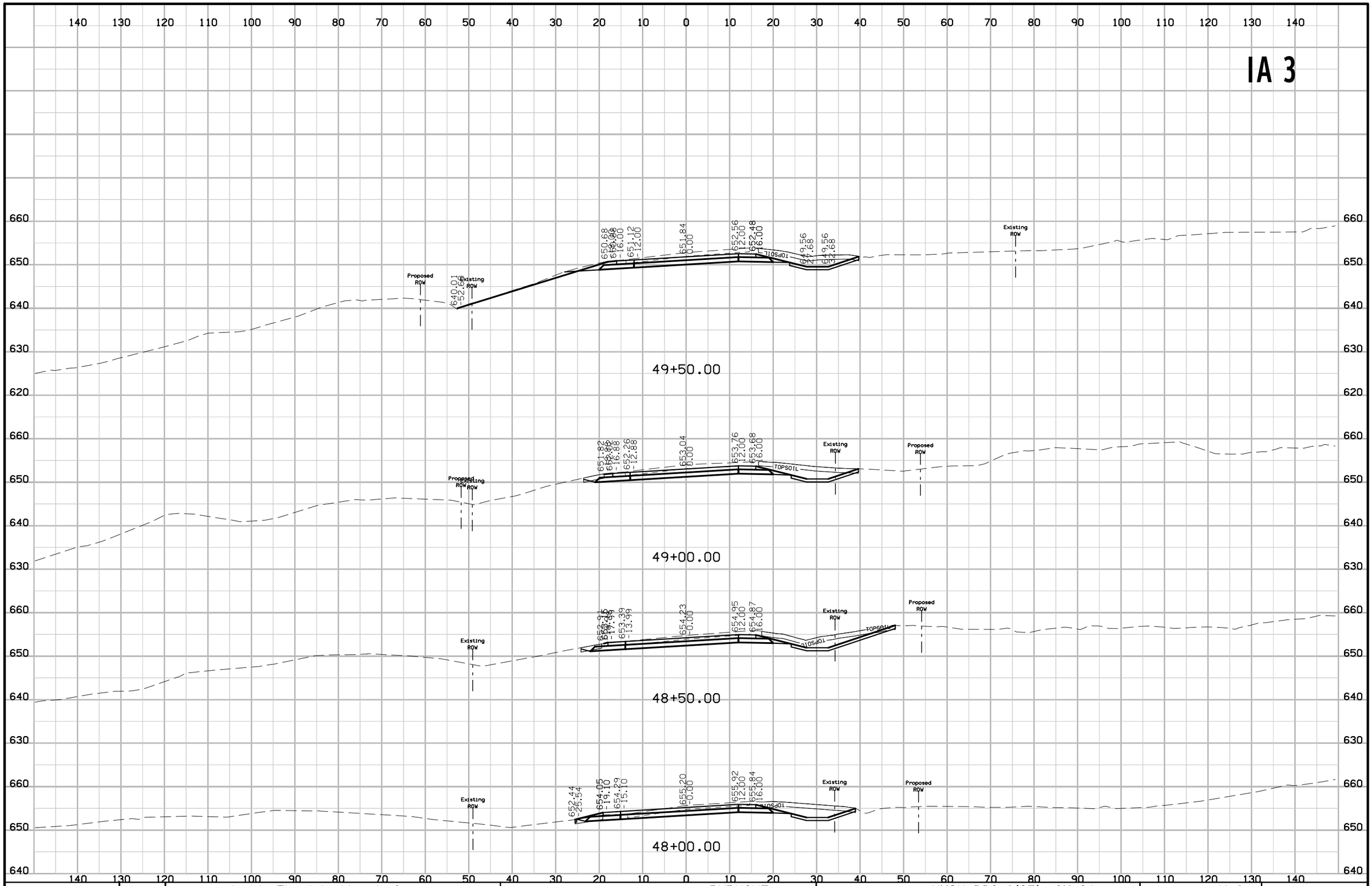
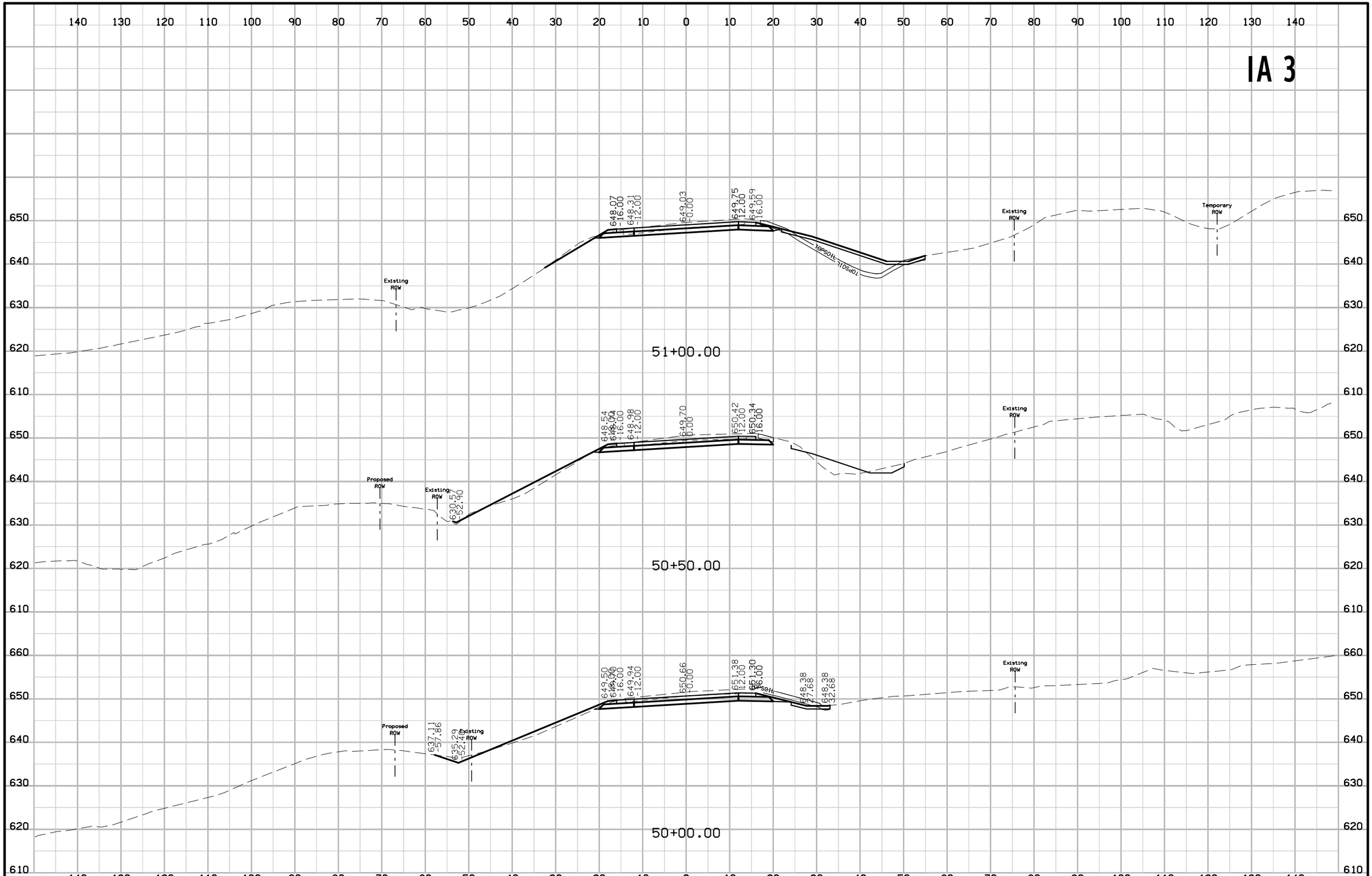


FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.9

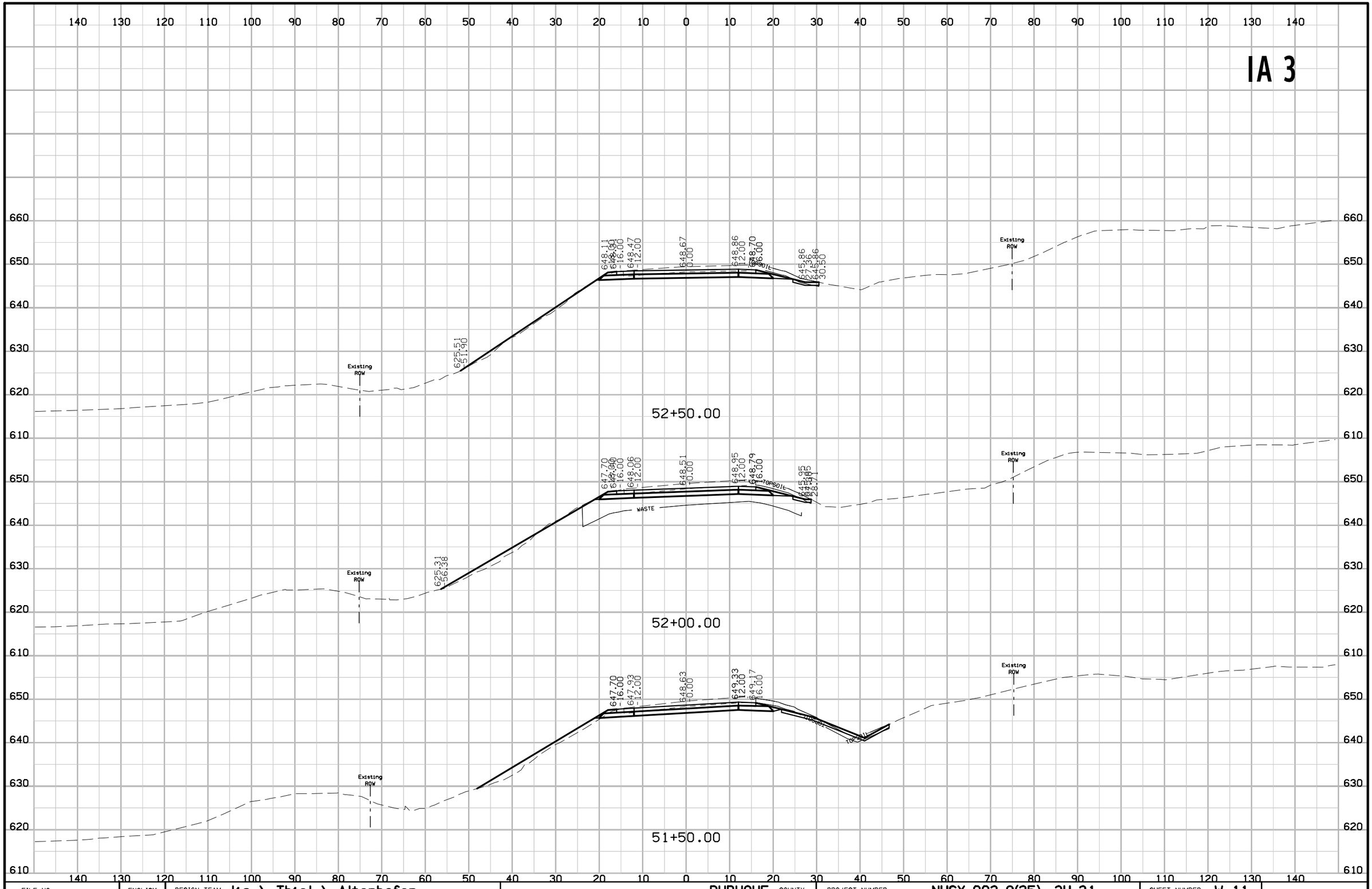
9:29:36 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.10

9:29:37 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

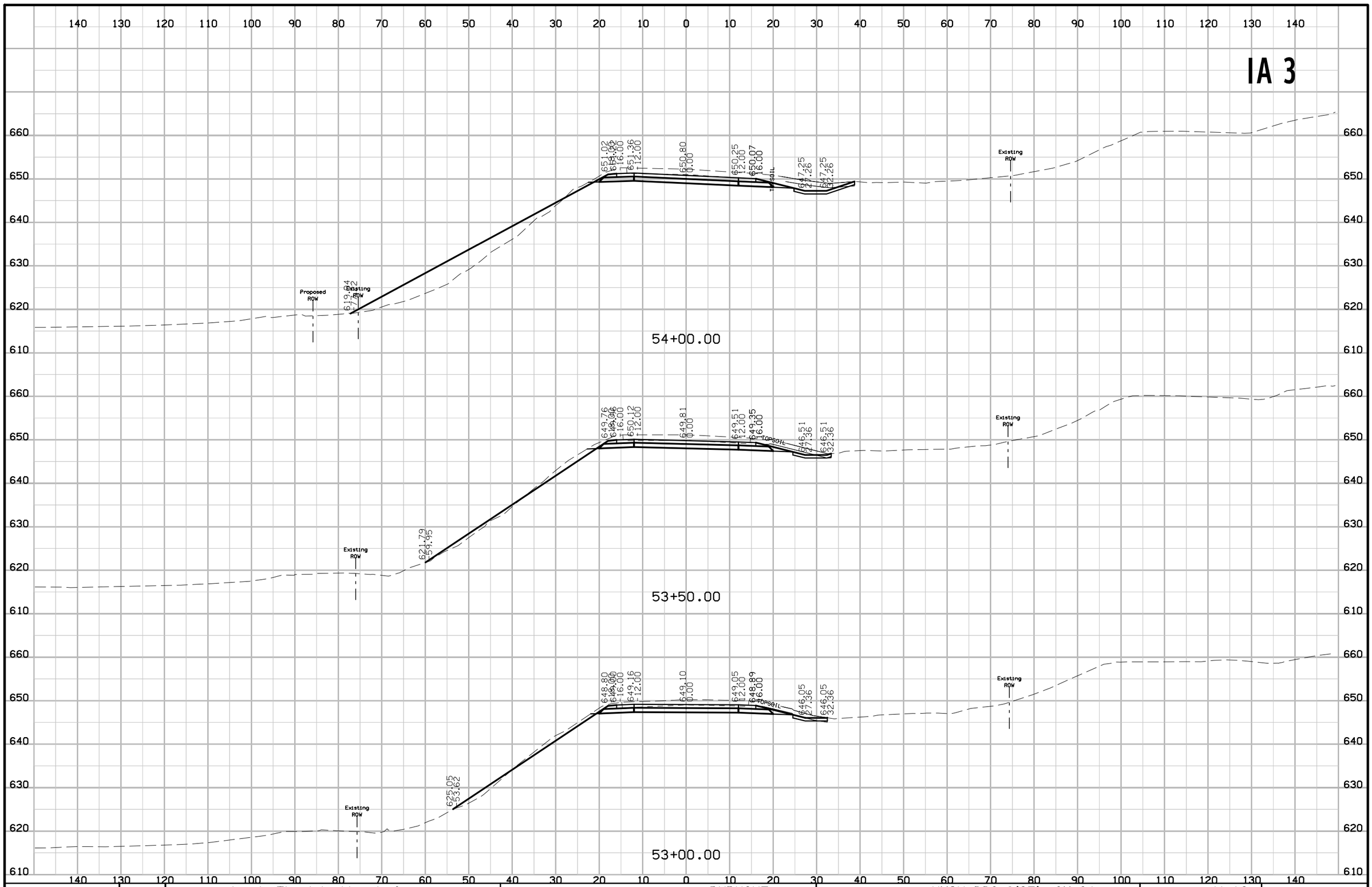
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.11

9:29:38 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

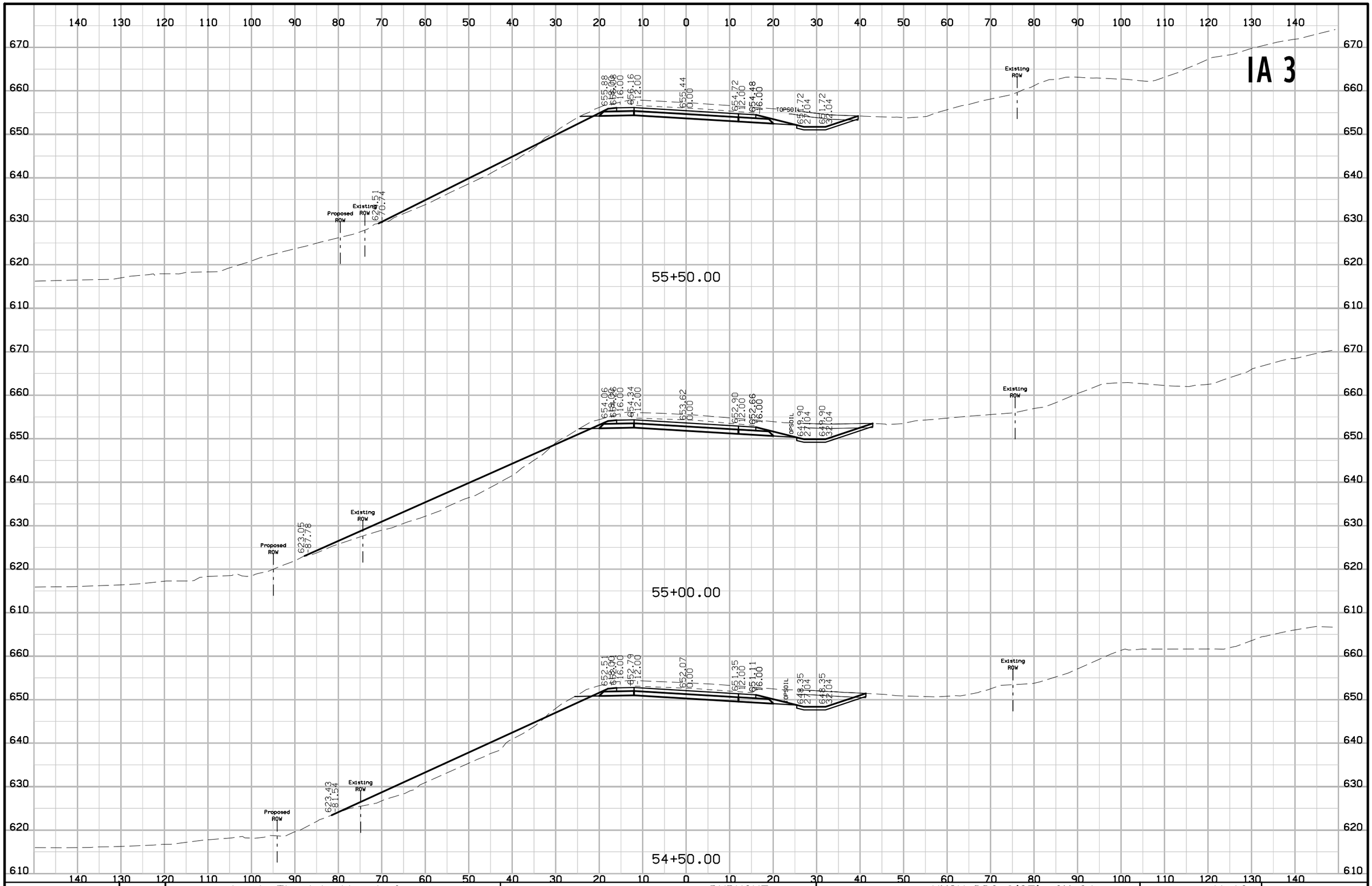
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.12

9:29:39 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

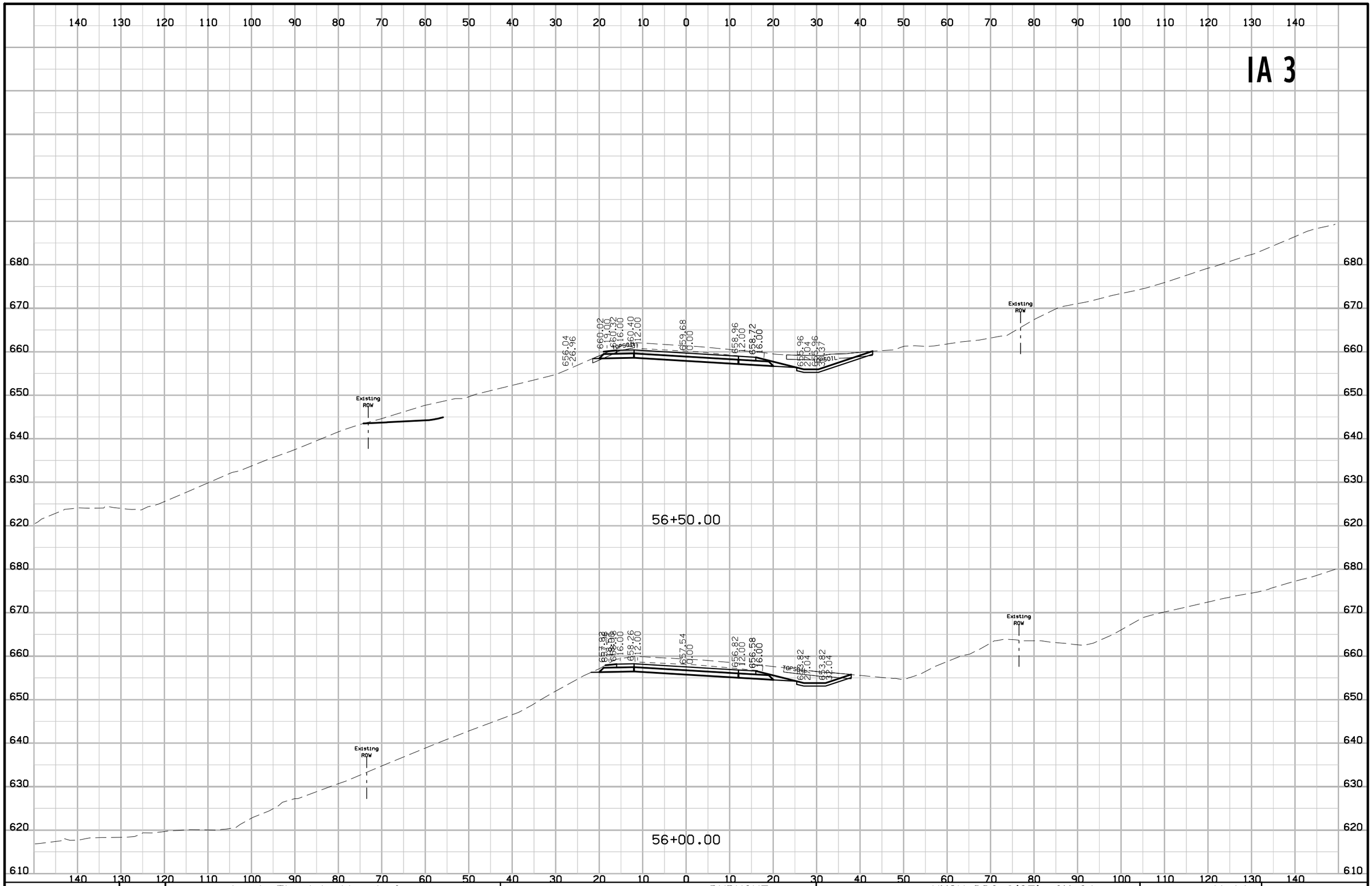
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.13

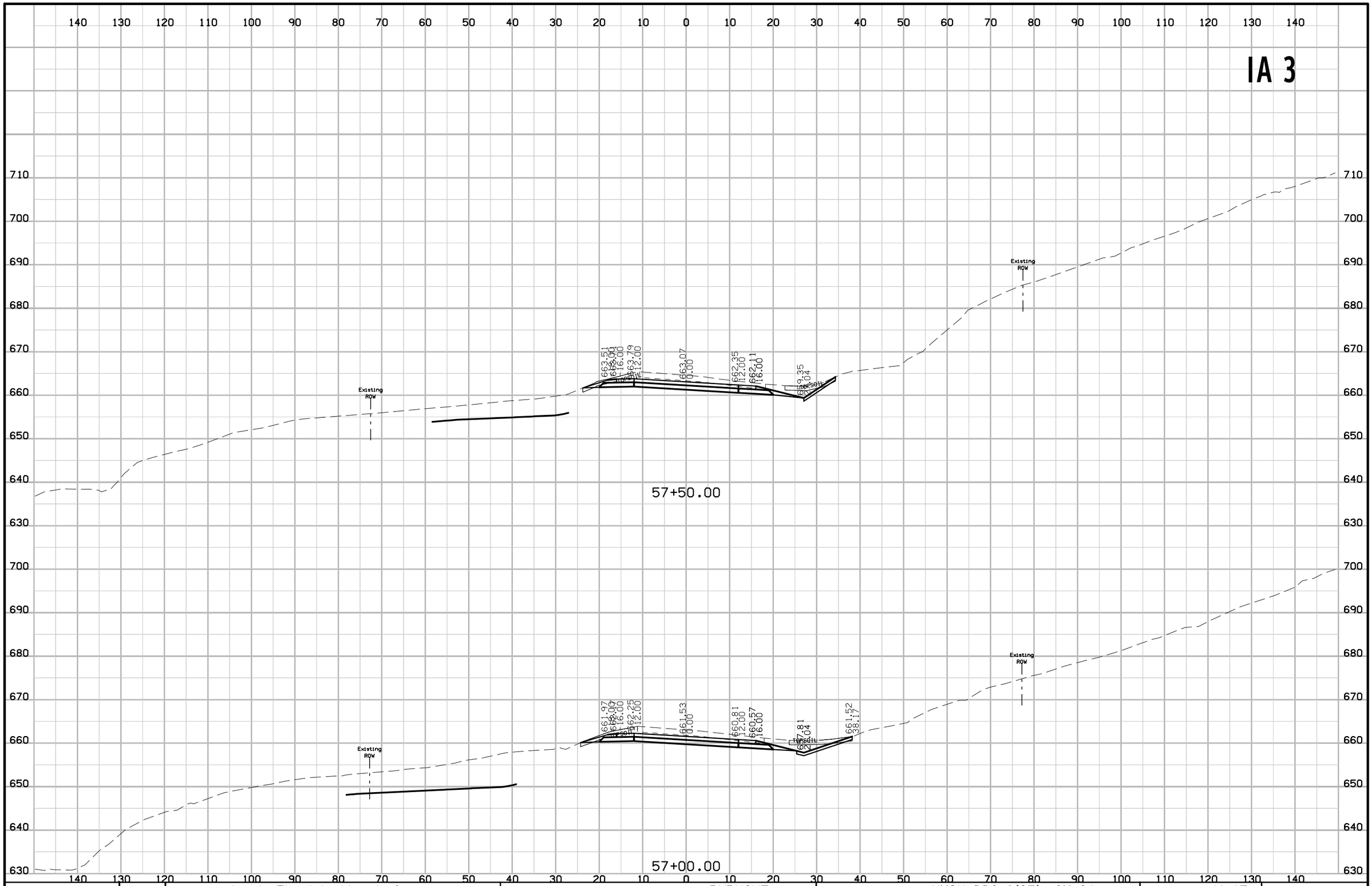
9:29:40 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.14

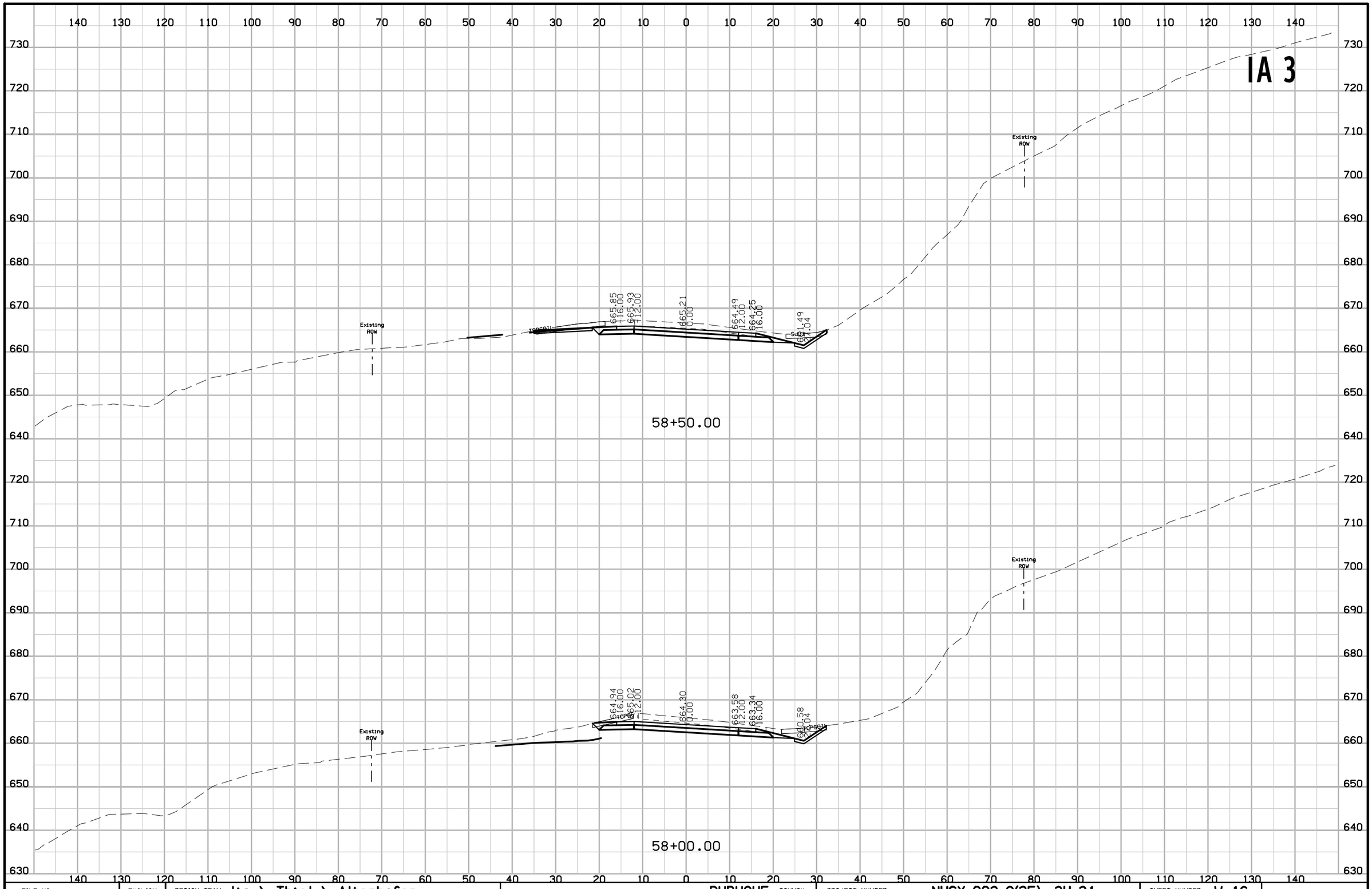
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.15

9:29:42 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

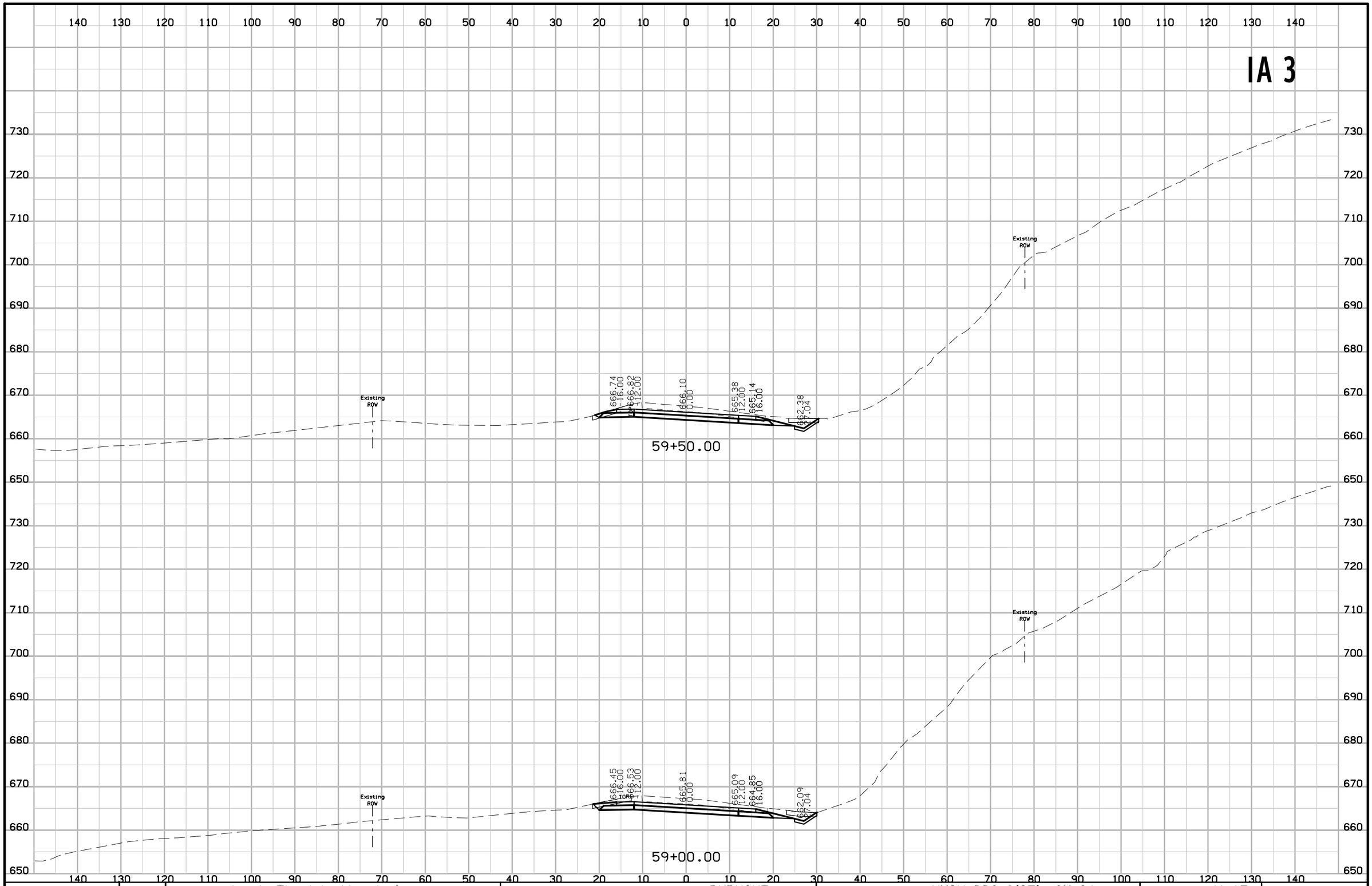
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.16

9:29:43 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

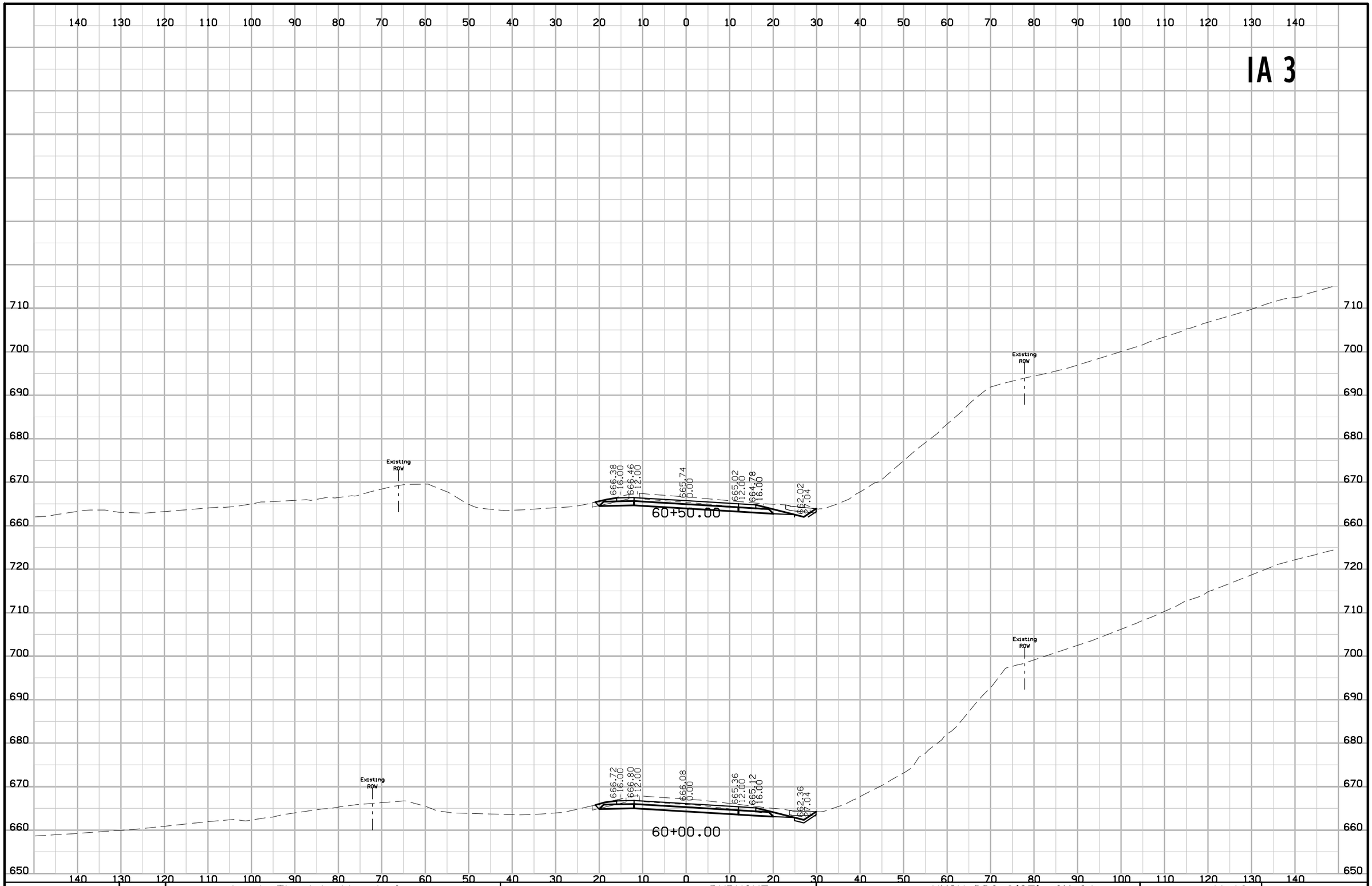
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.17

9:29:43 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

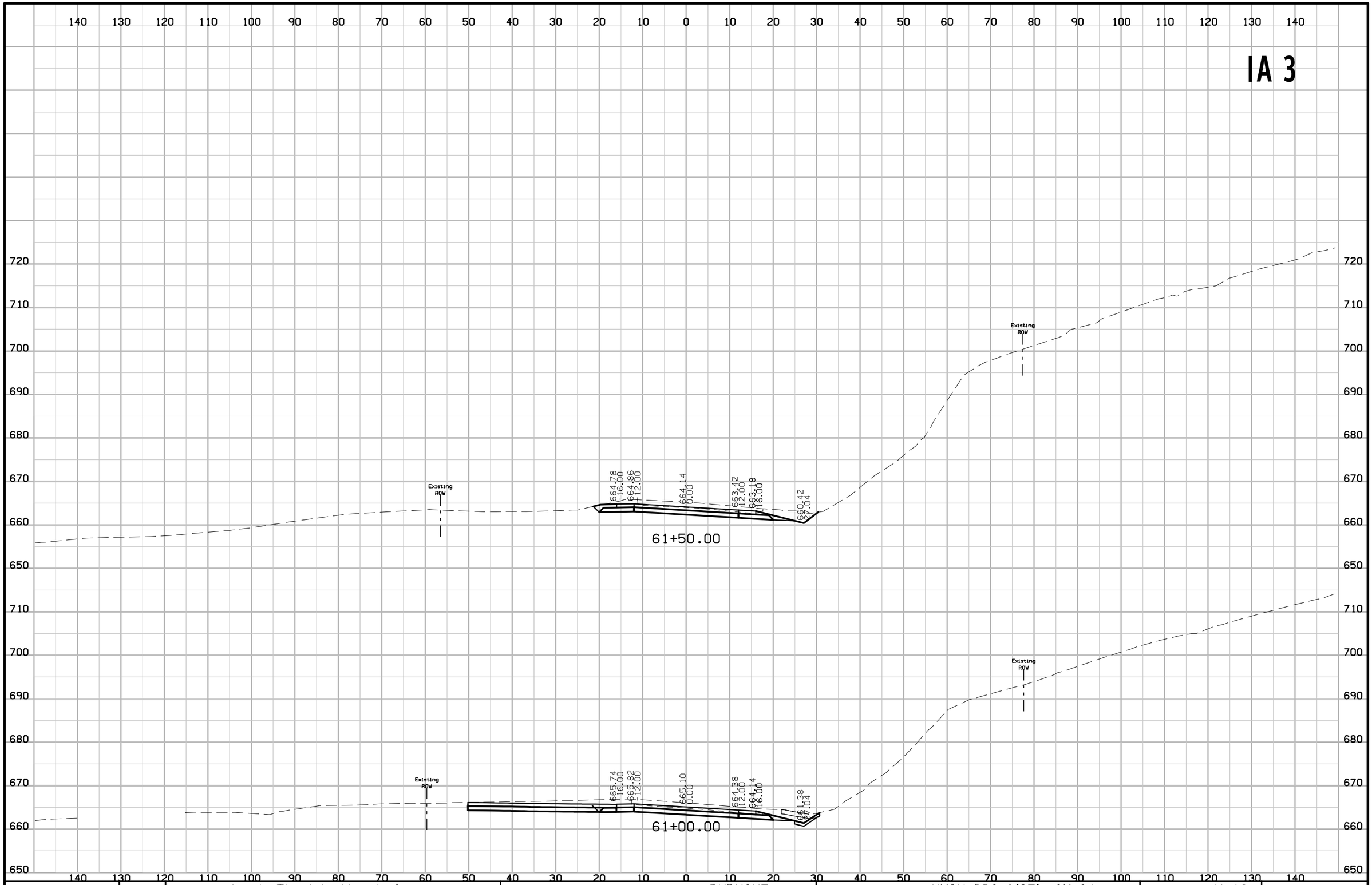
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.18

9:29:44 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

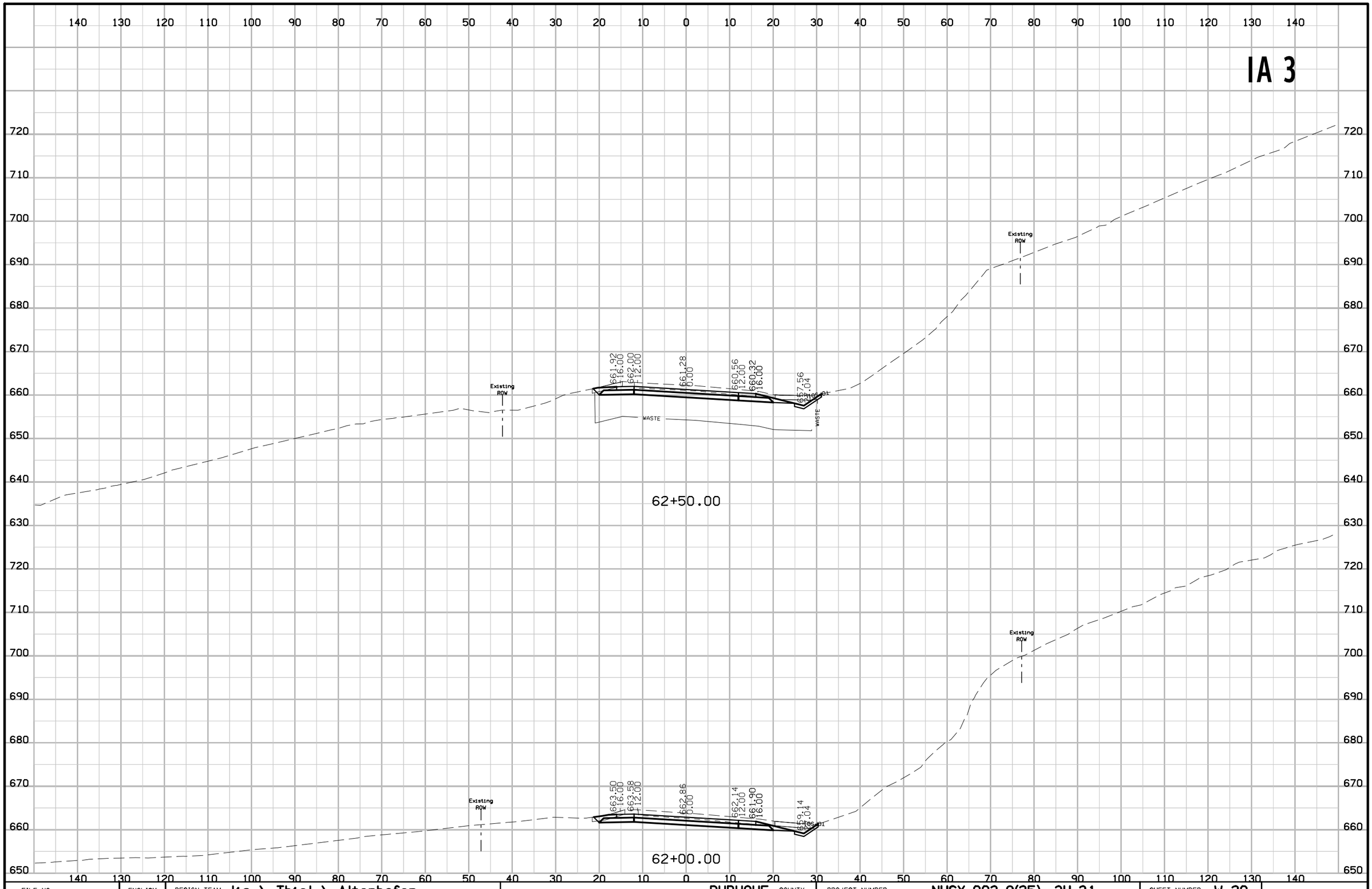
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.19

9:29:45 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

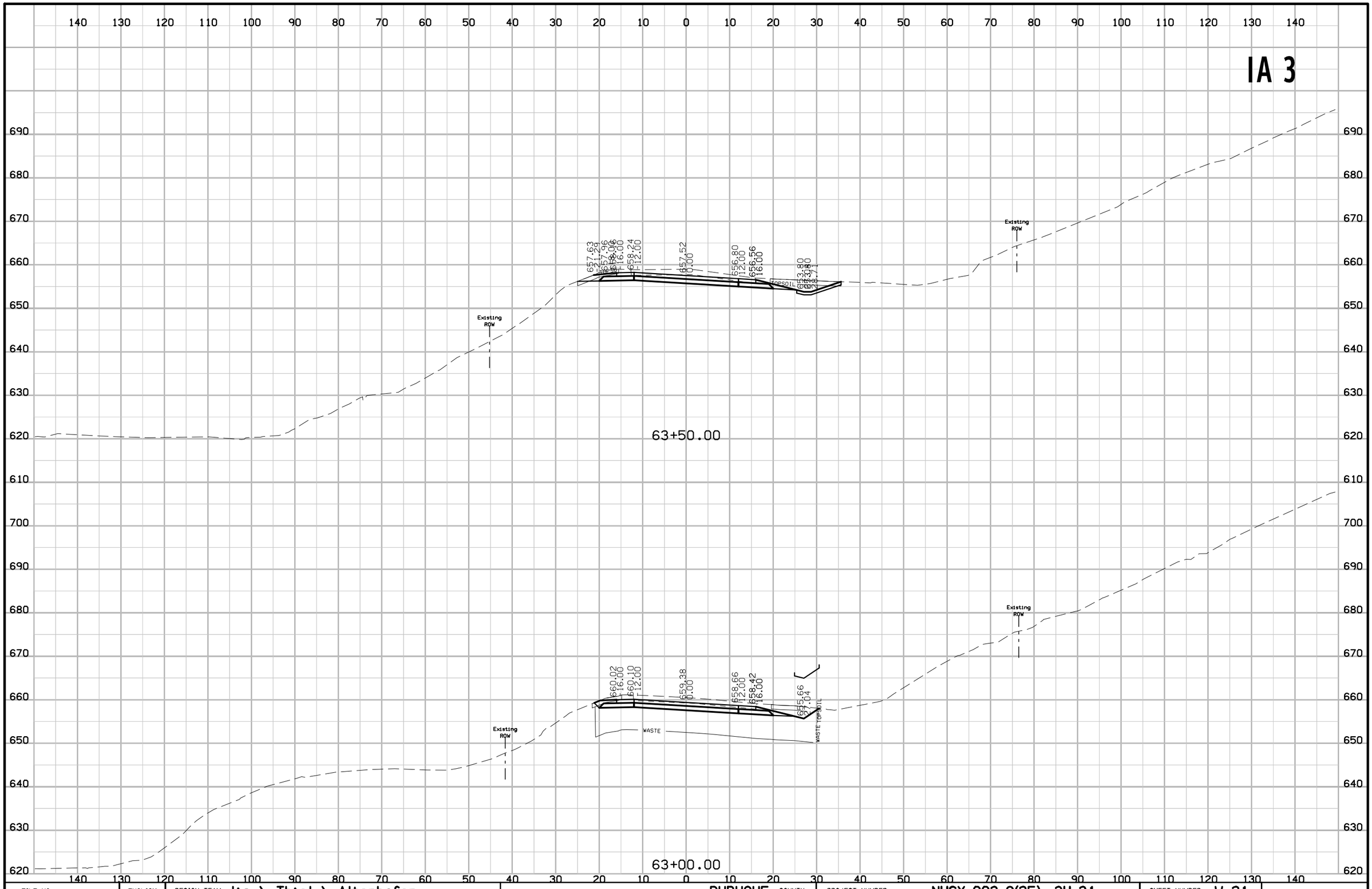
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.20

9:29:46 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

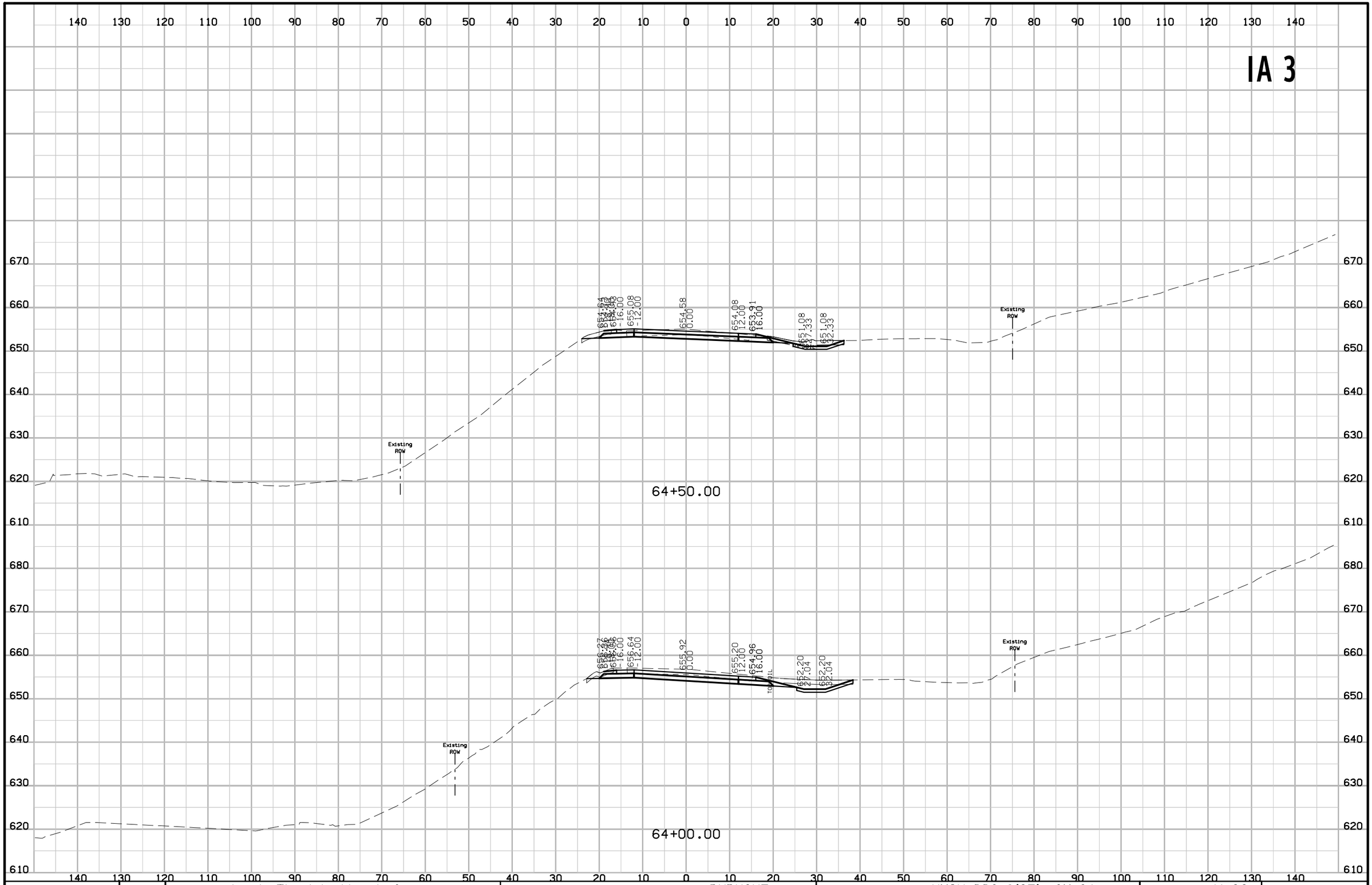
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.21

9:29:47 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.22

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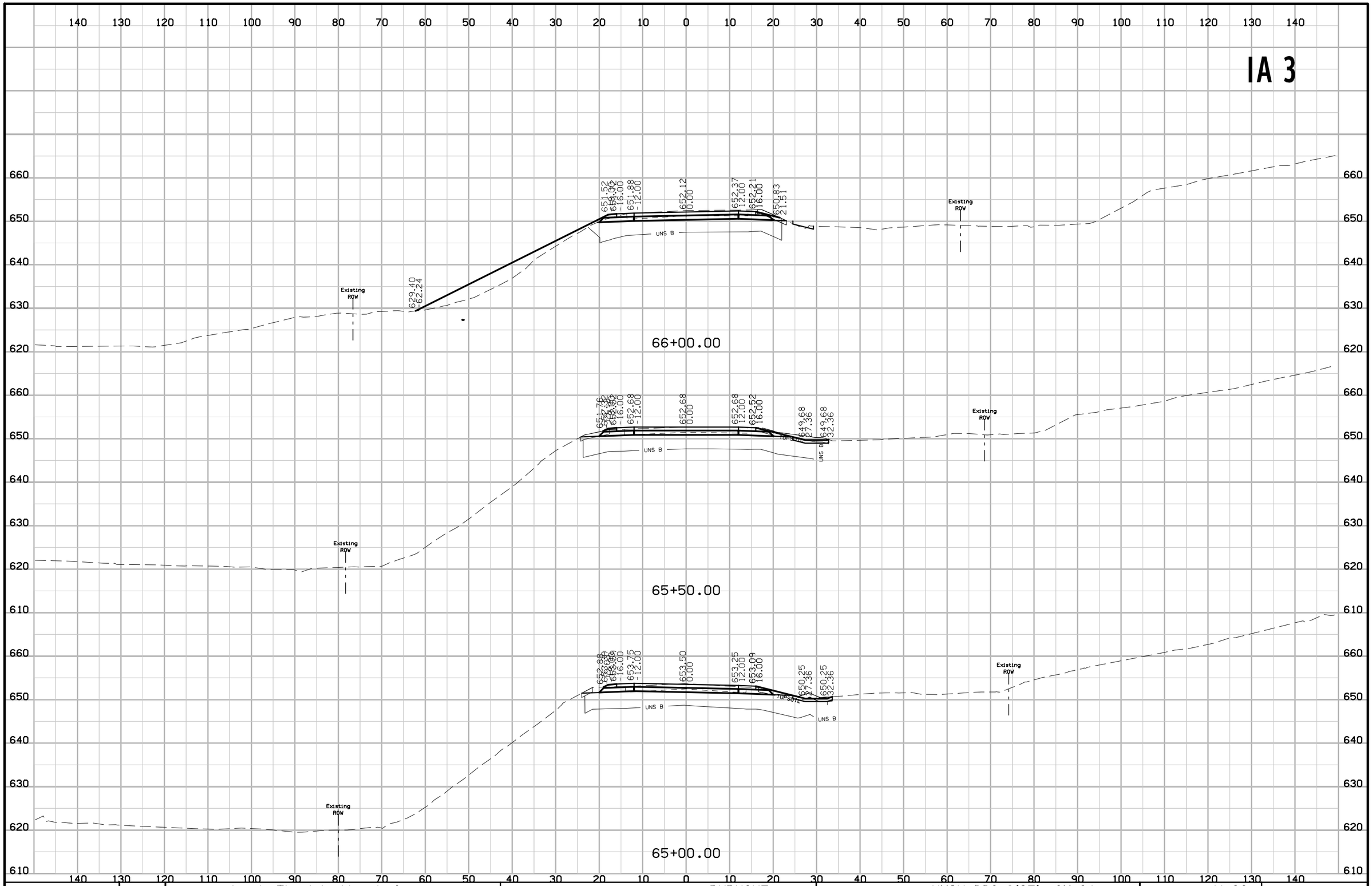
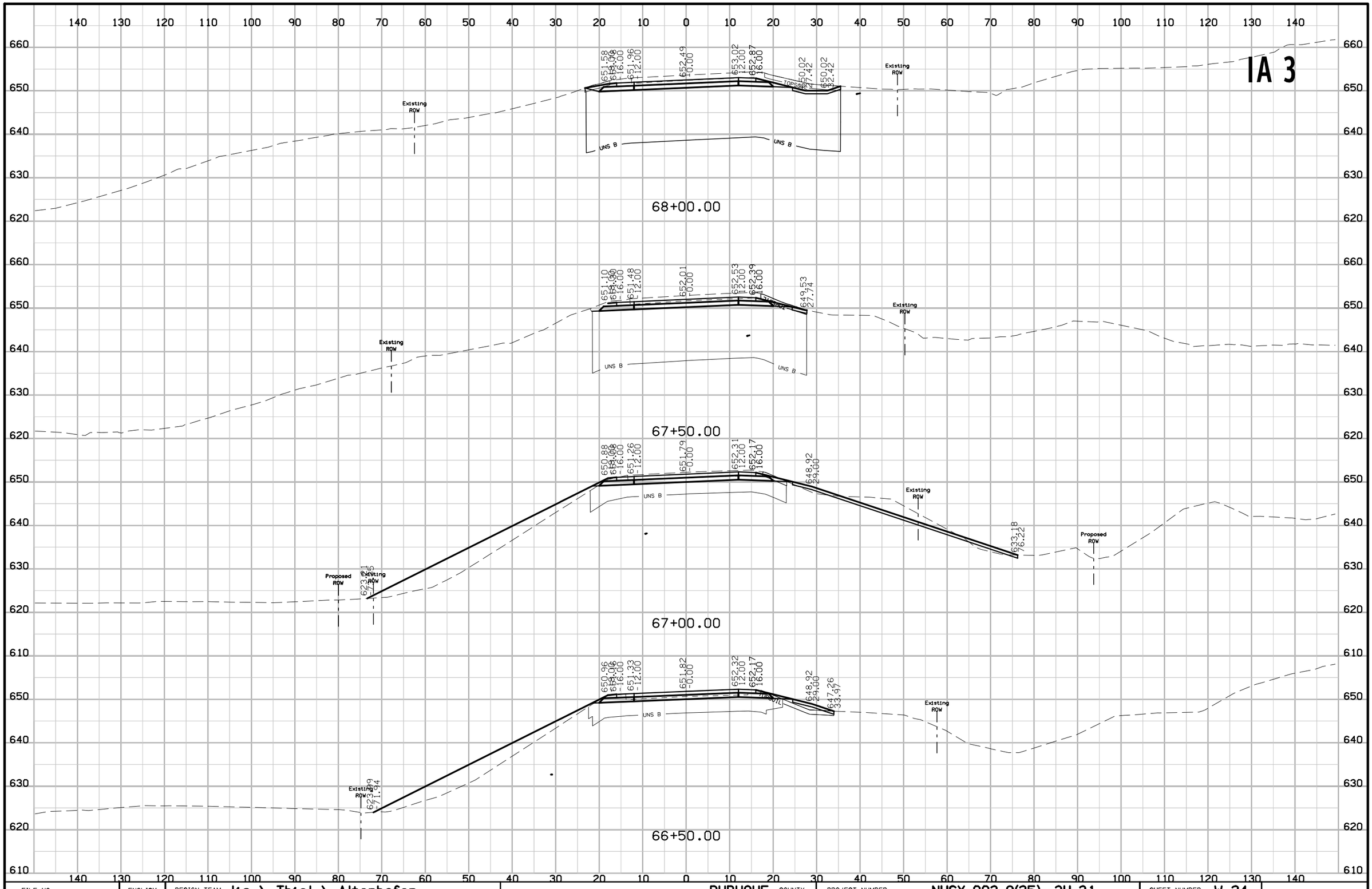
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.23

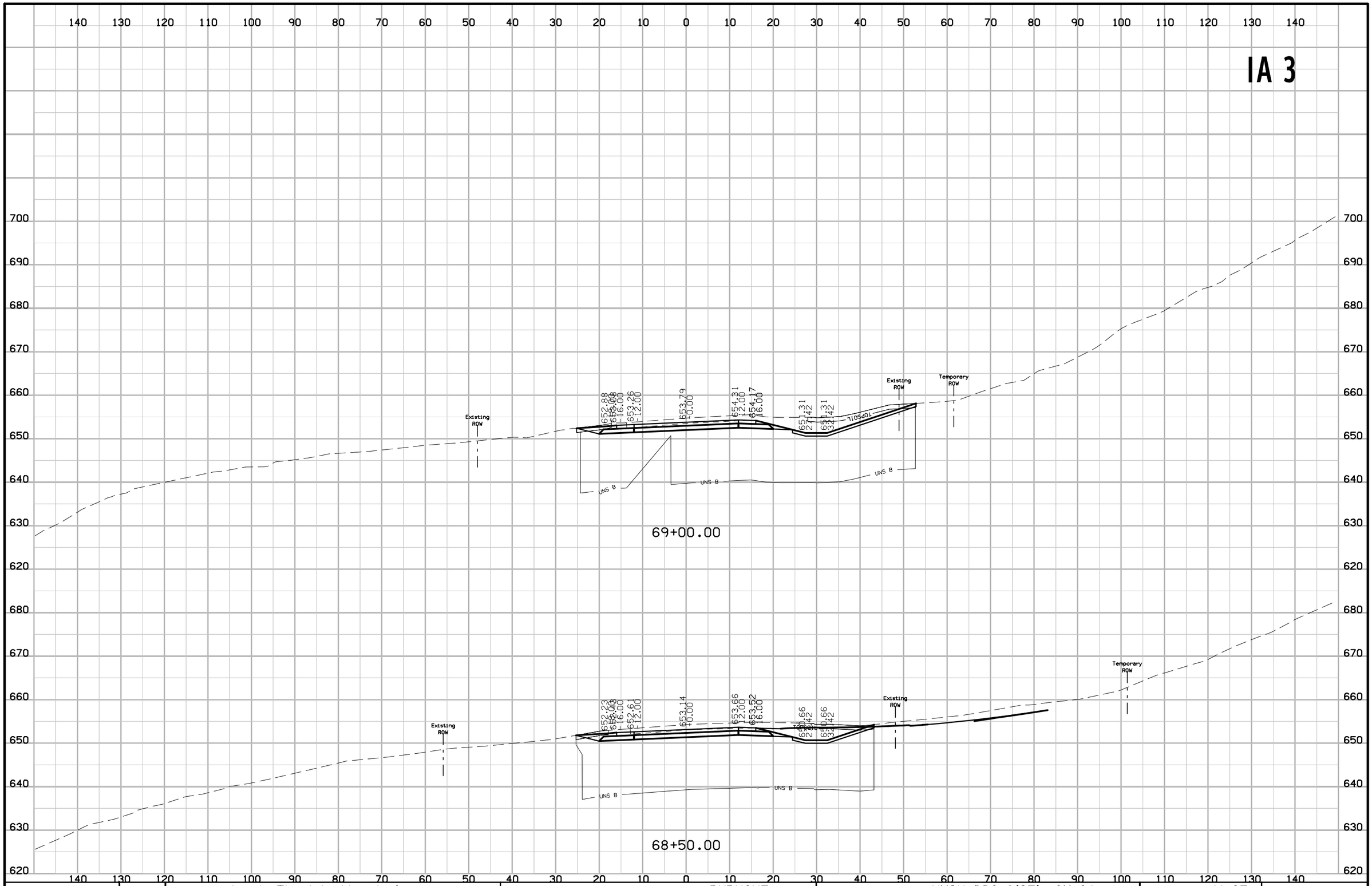
9:29:49 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn



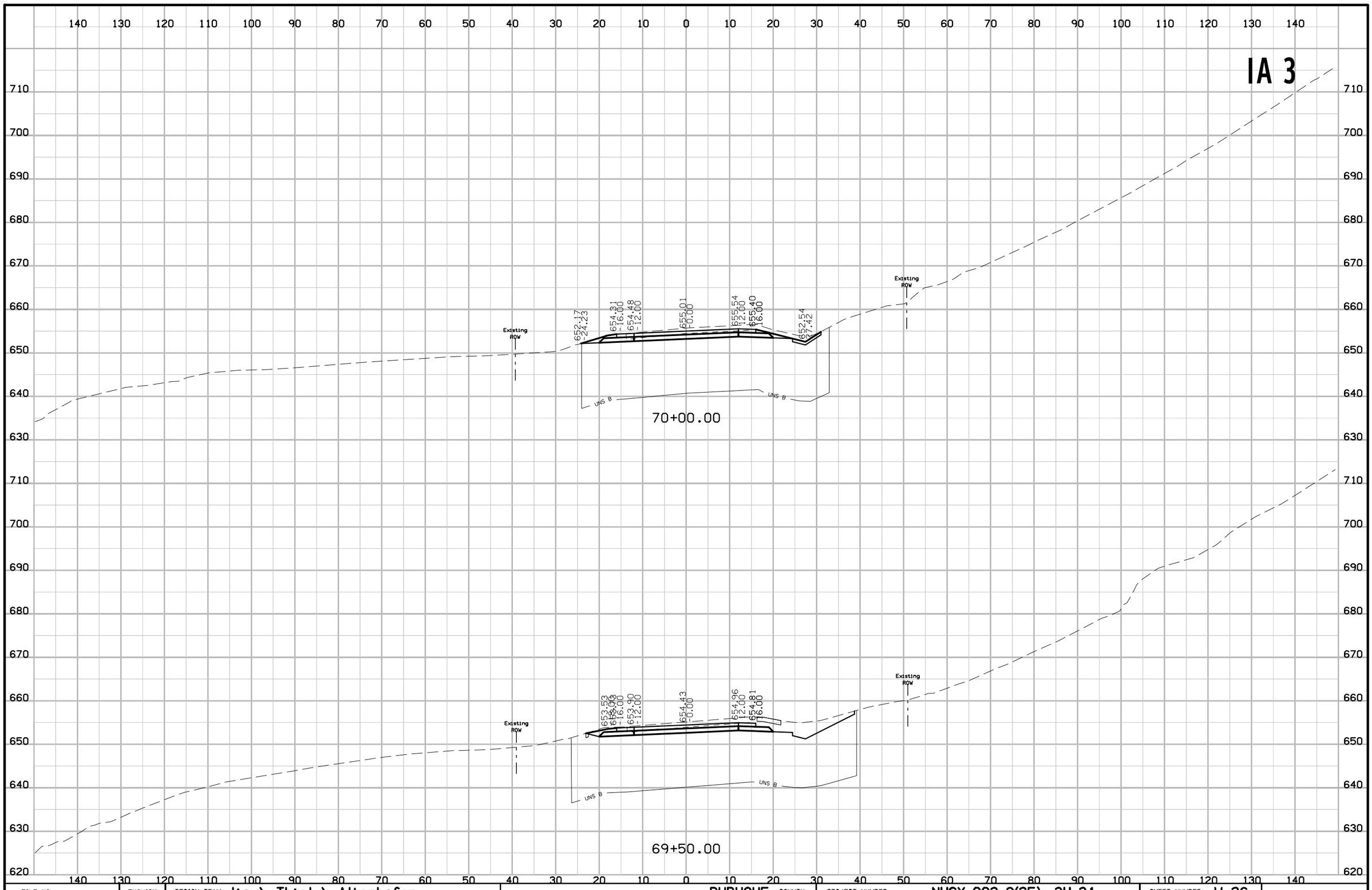
FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.24

9:29:50 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3


140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140
700 690 680 670 660 650 640 630 620
Existing ROW
652.88 652.88 652.88

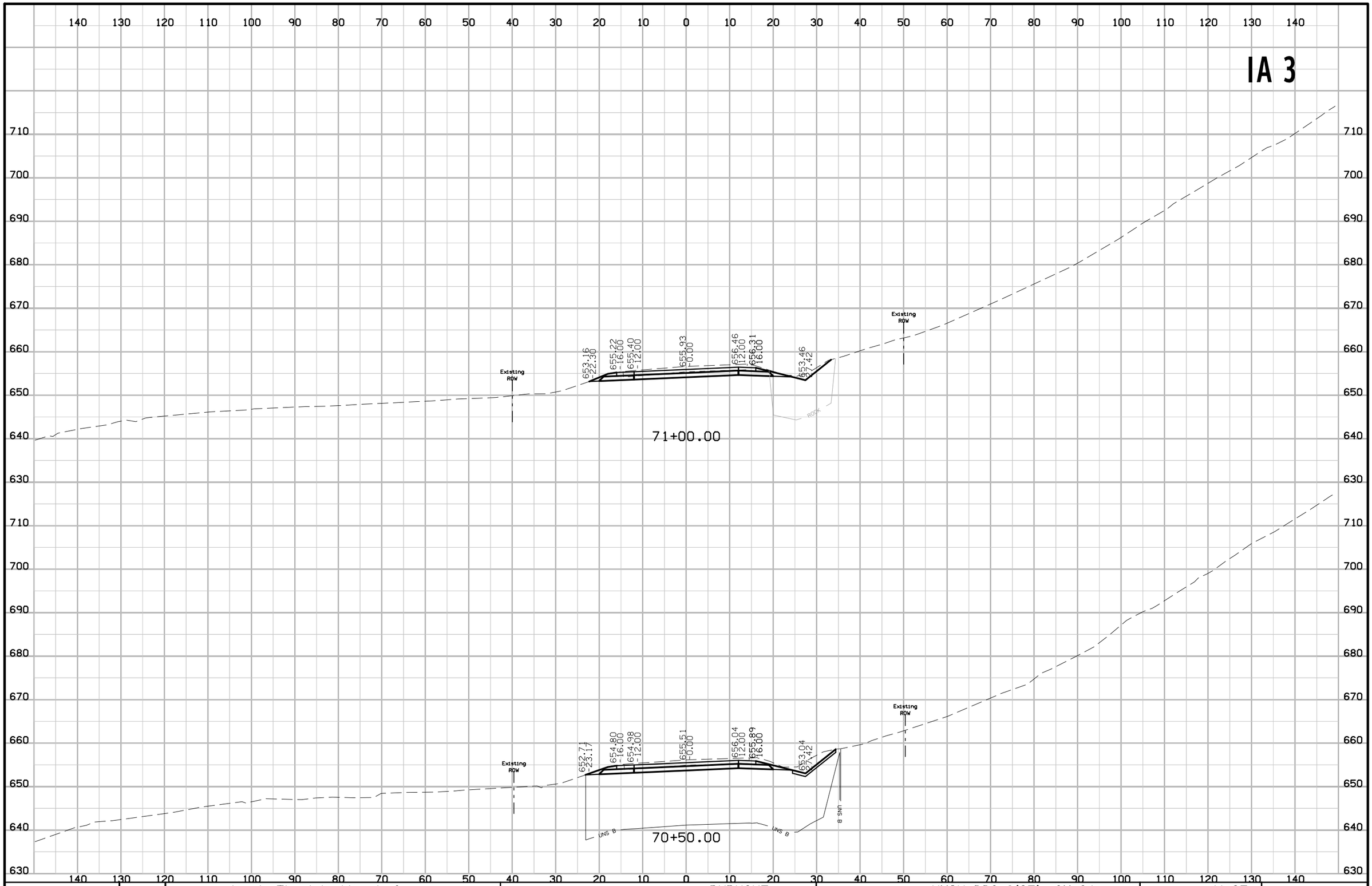
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.26

9:29:52 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.27

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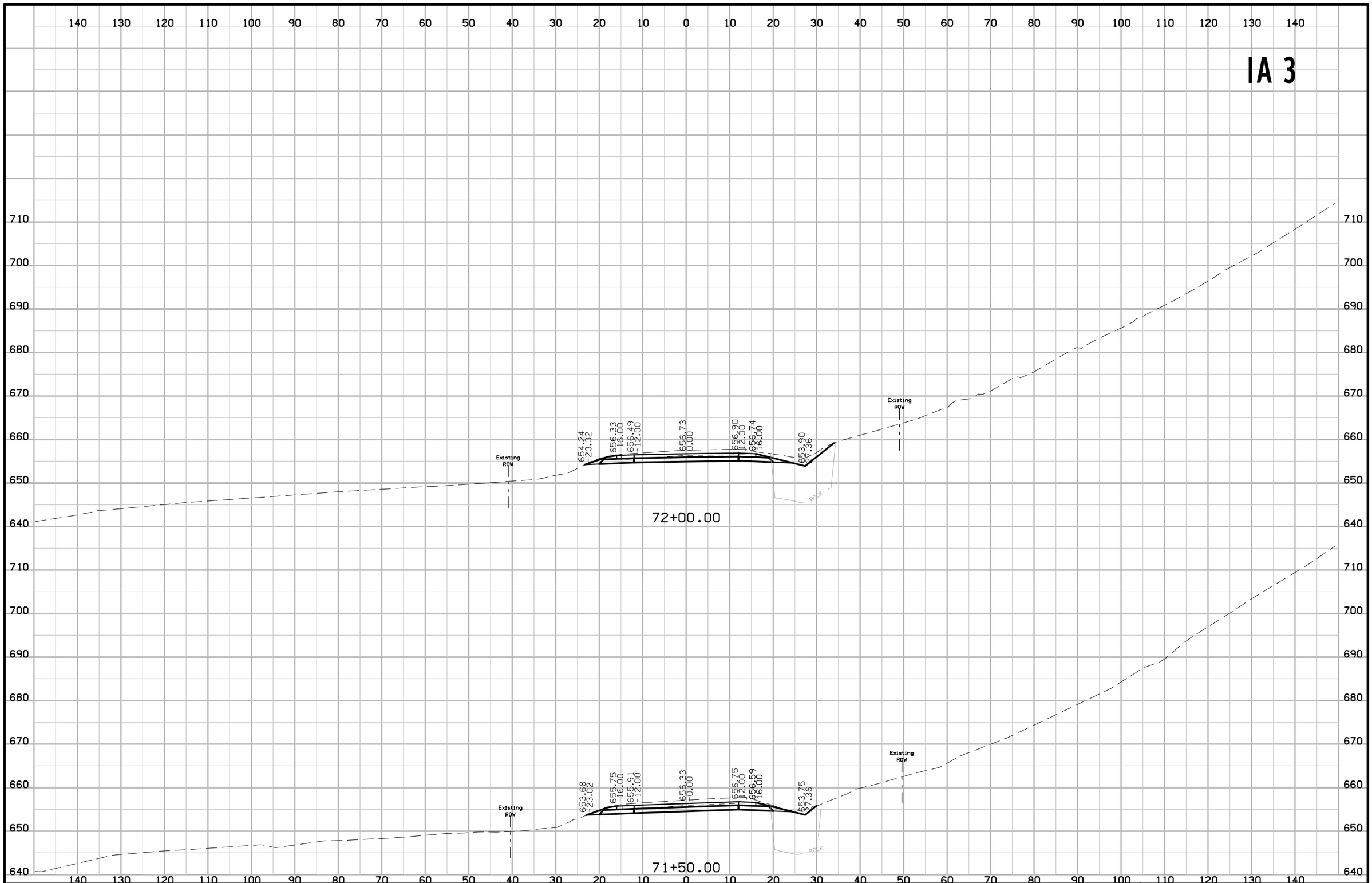
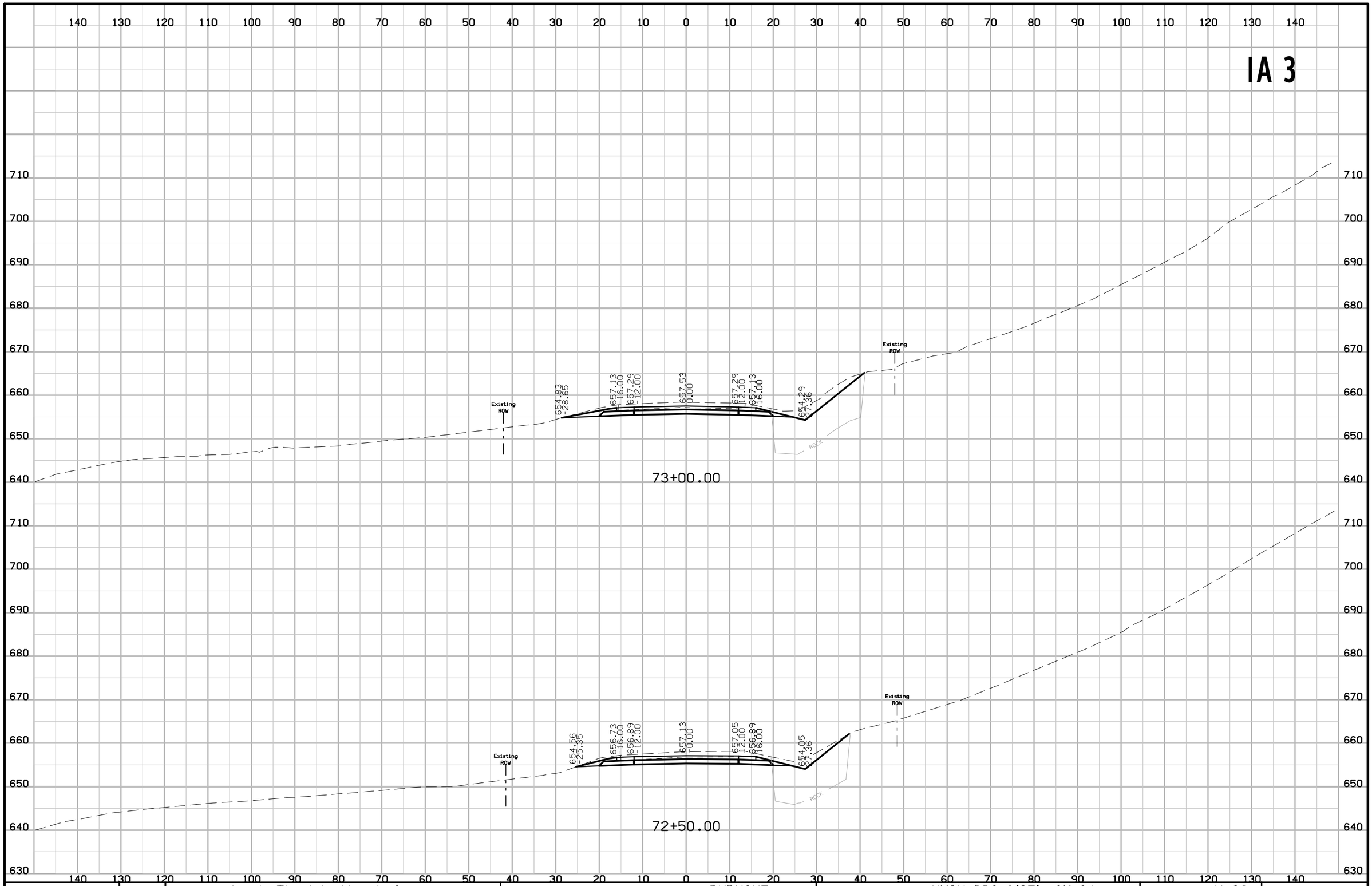
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.28

9:29:53 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

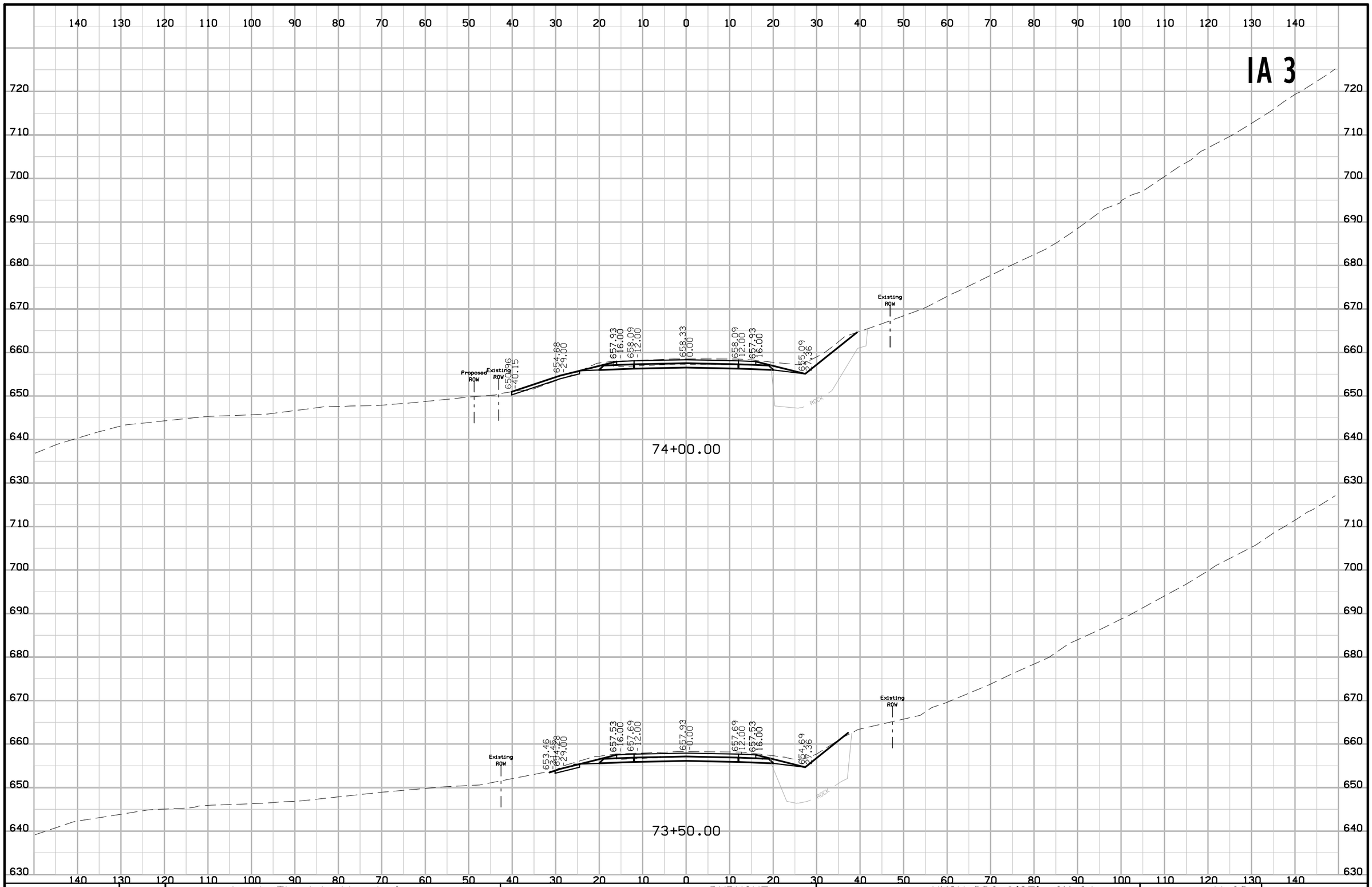
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.29

9:29:54 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.30

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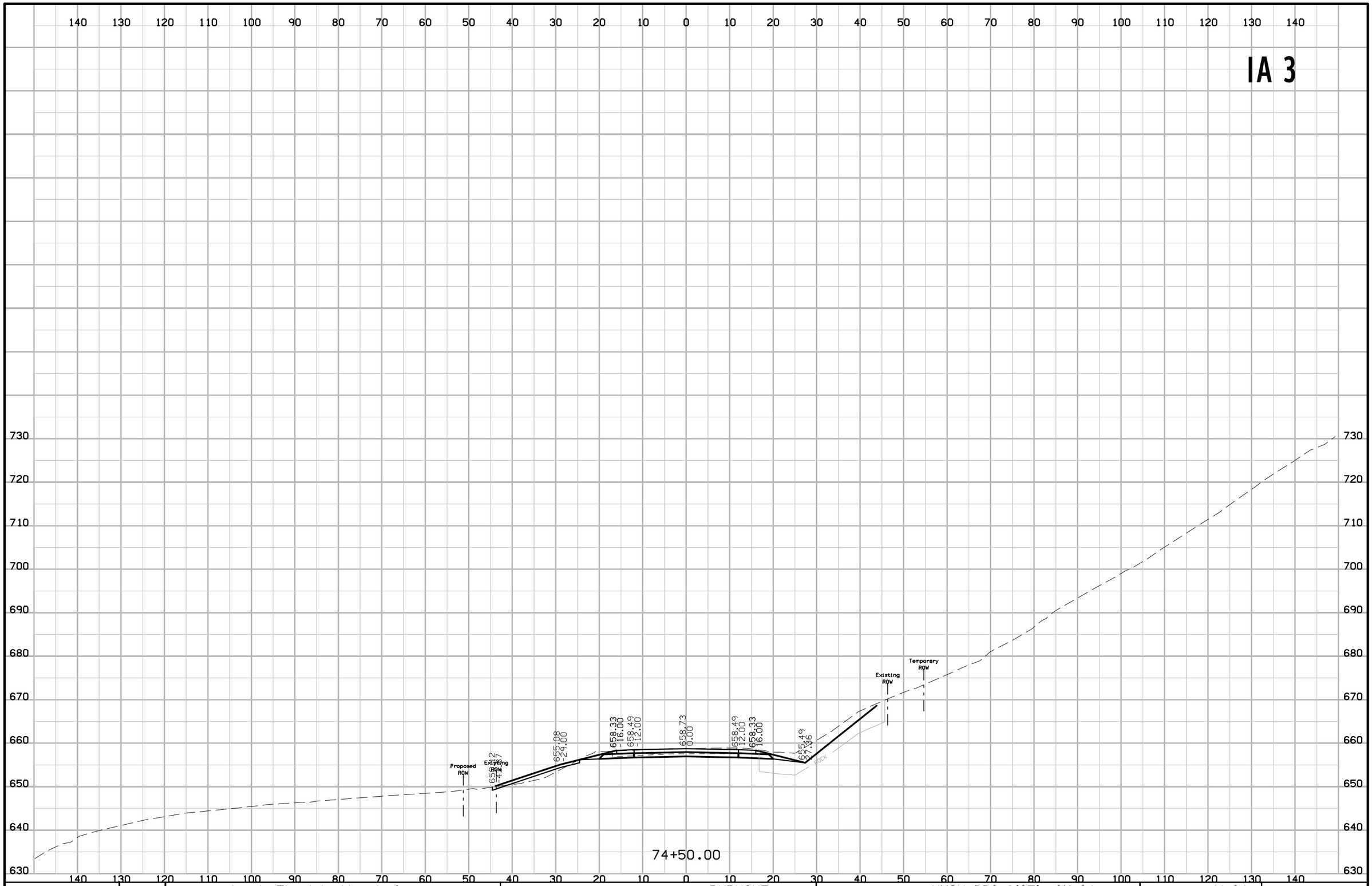
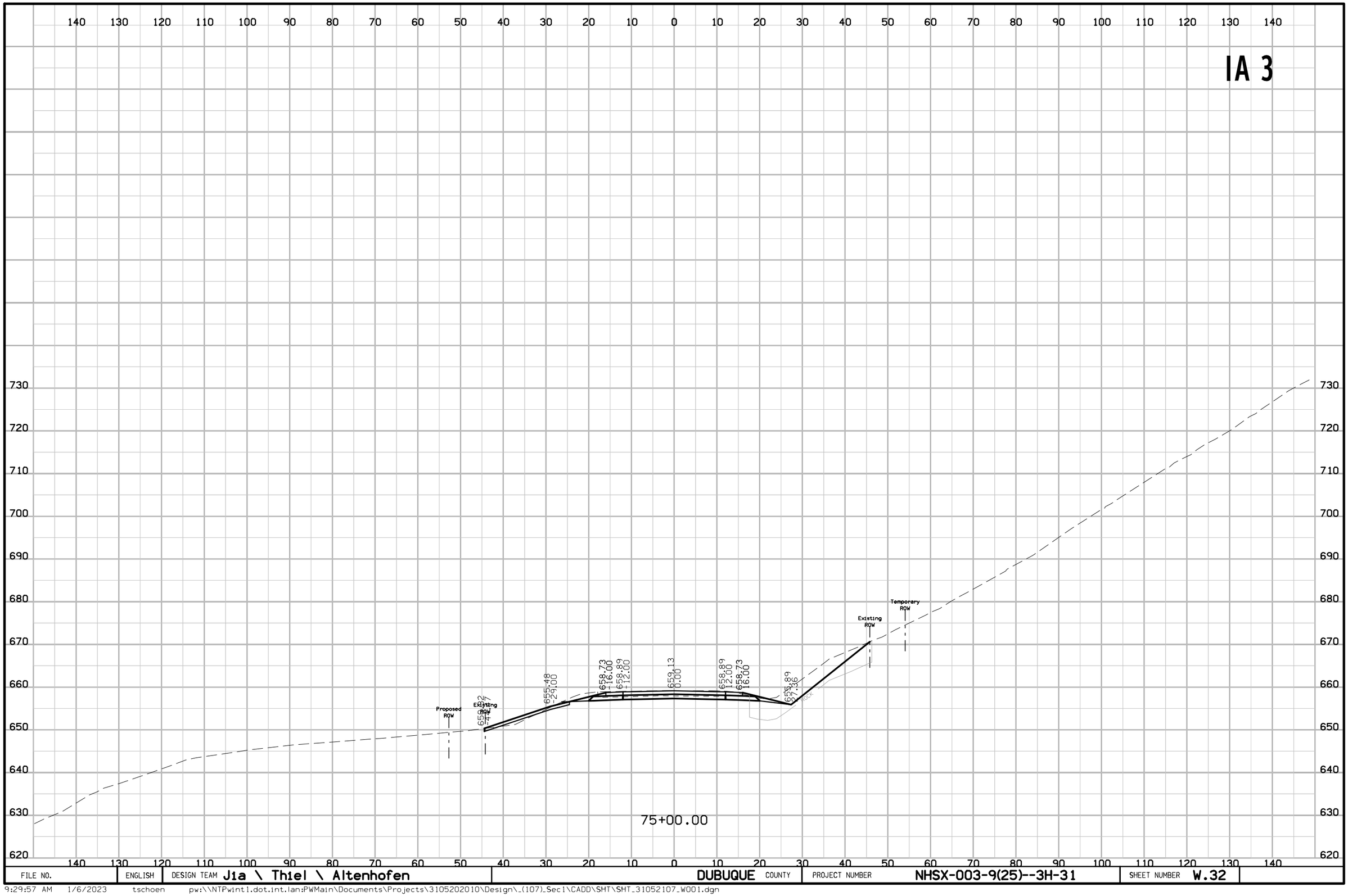
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.31

9:29:56 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

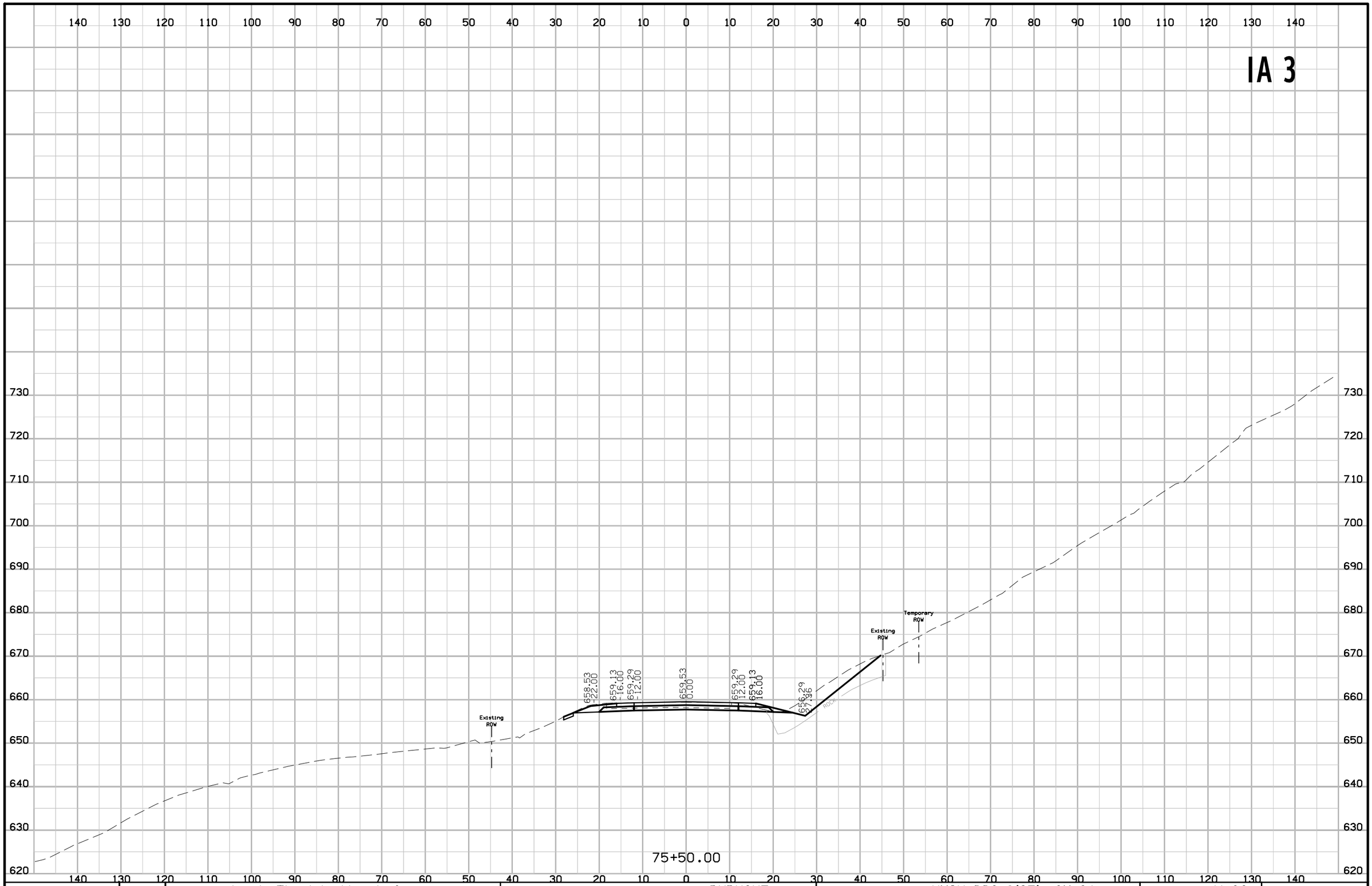
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.32

9:29:57 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

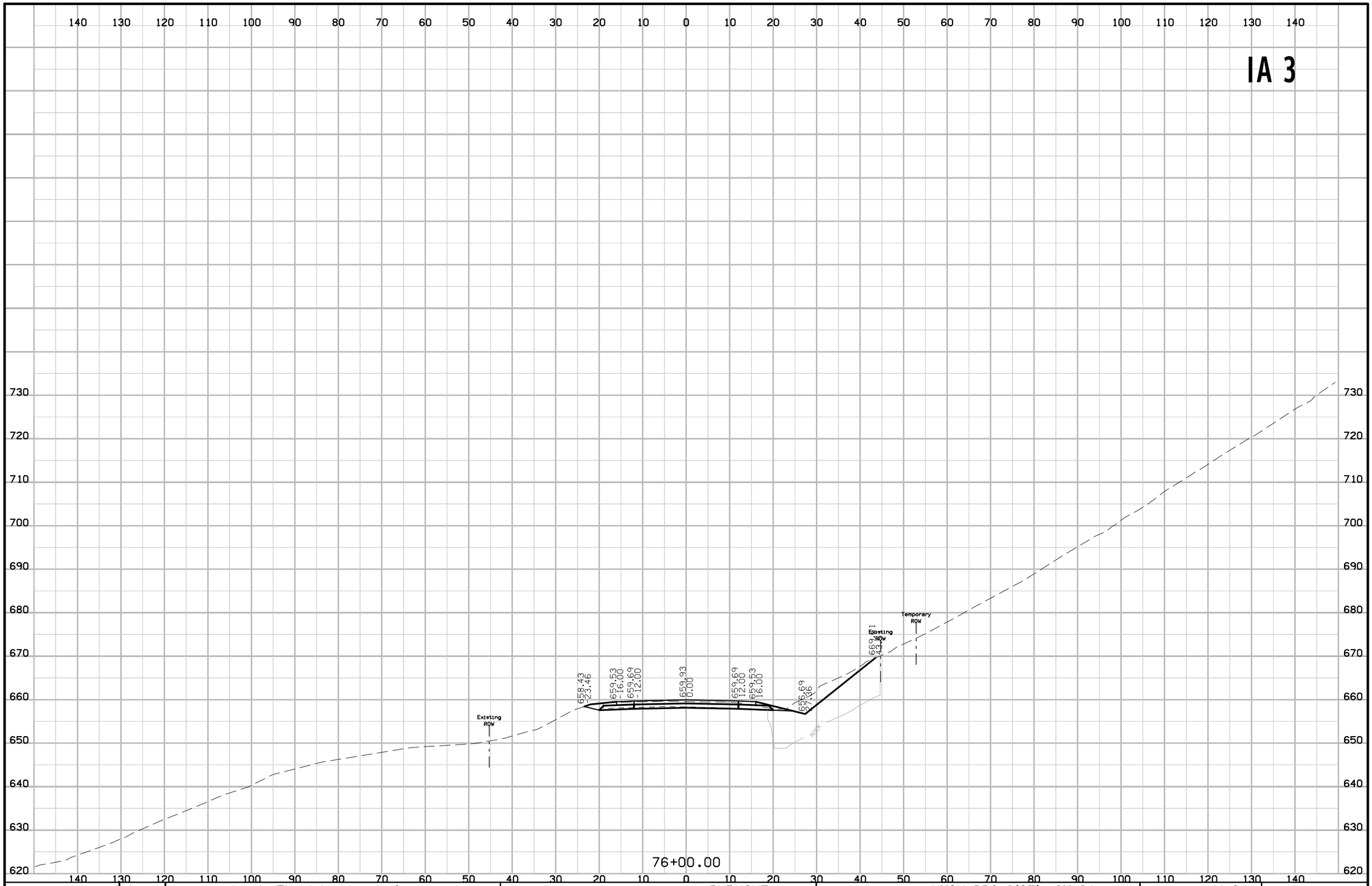
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.33

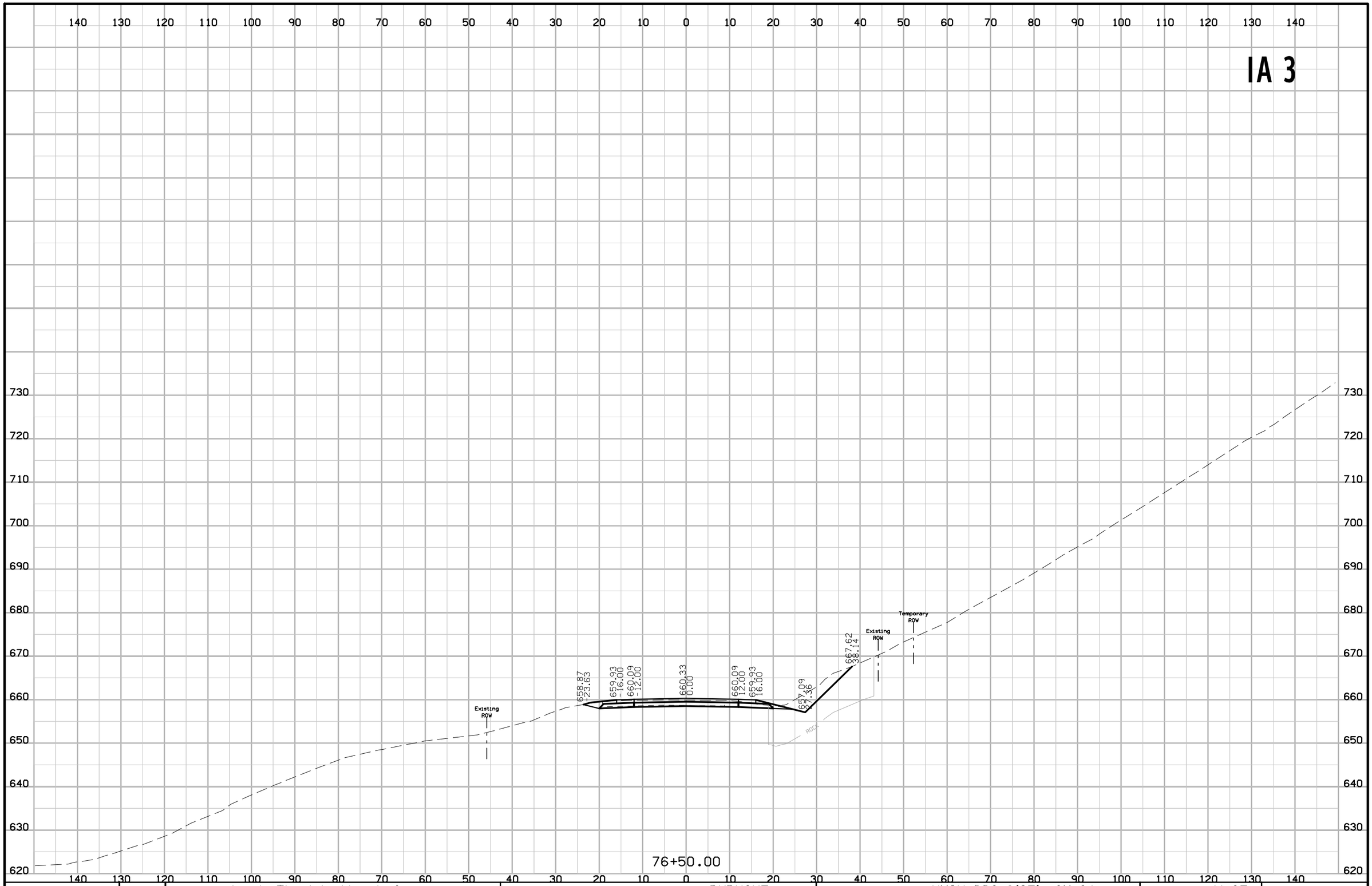
9:29:58 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.34

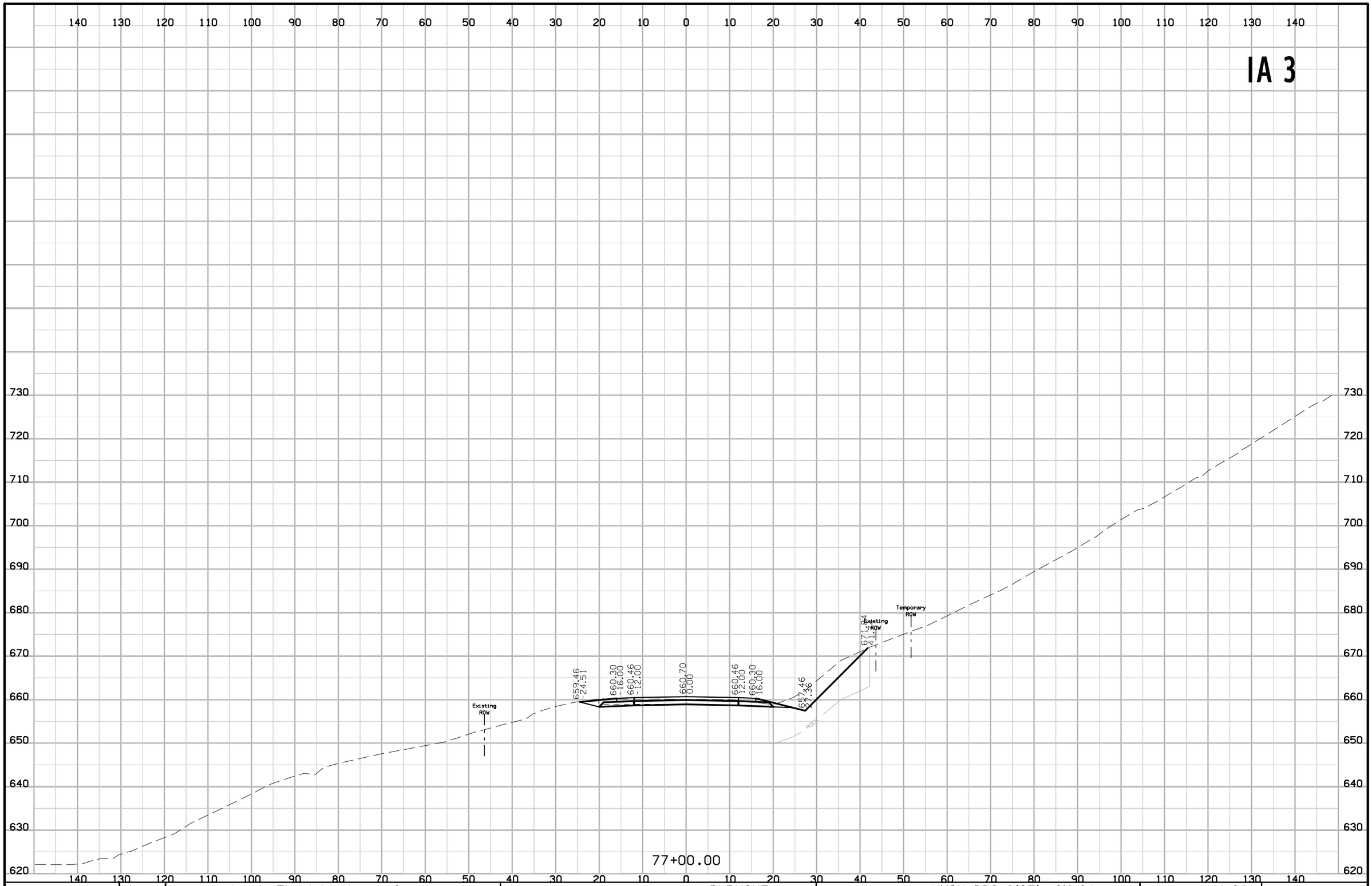
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.35

9:30:00 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.36

9:30:01 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.37

9:30:01 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

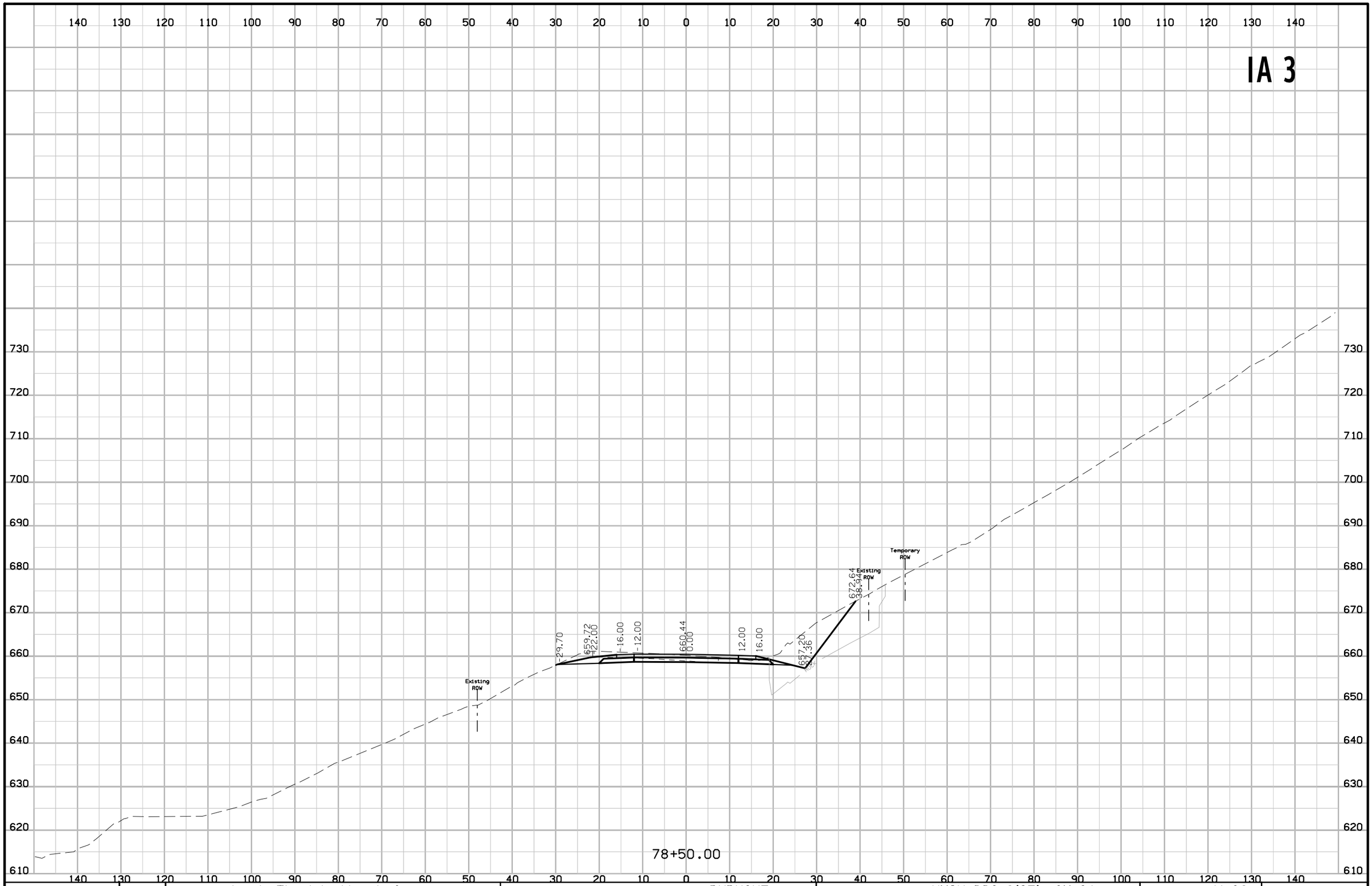
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.38

3:22:34 PM 1/23/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

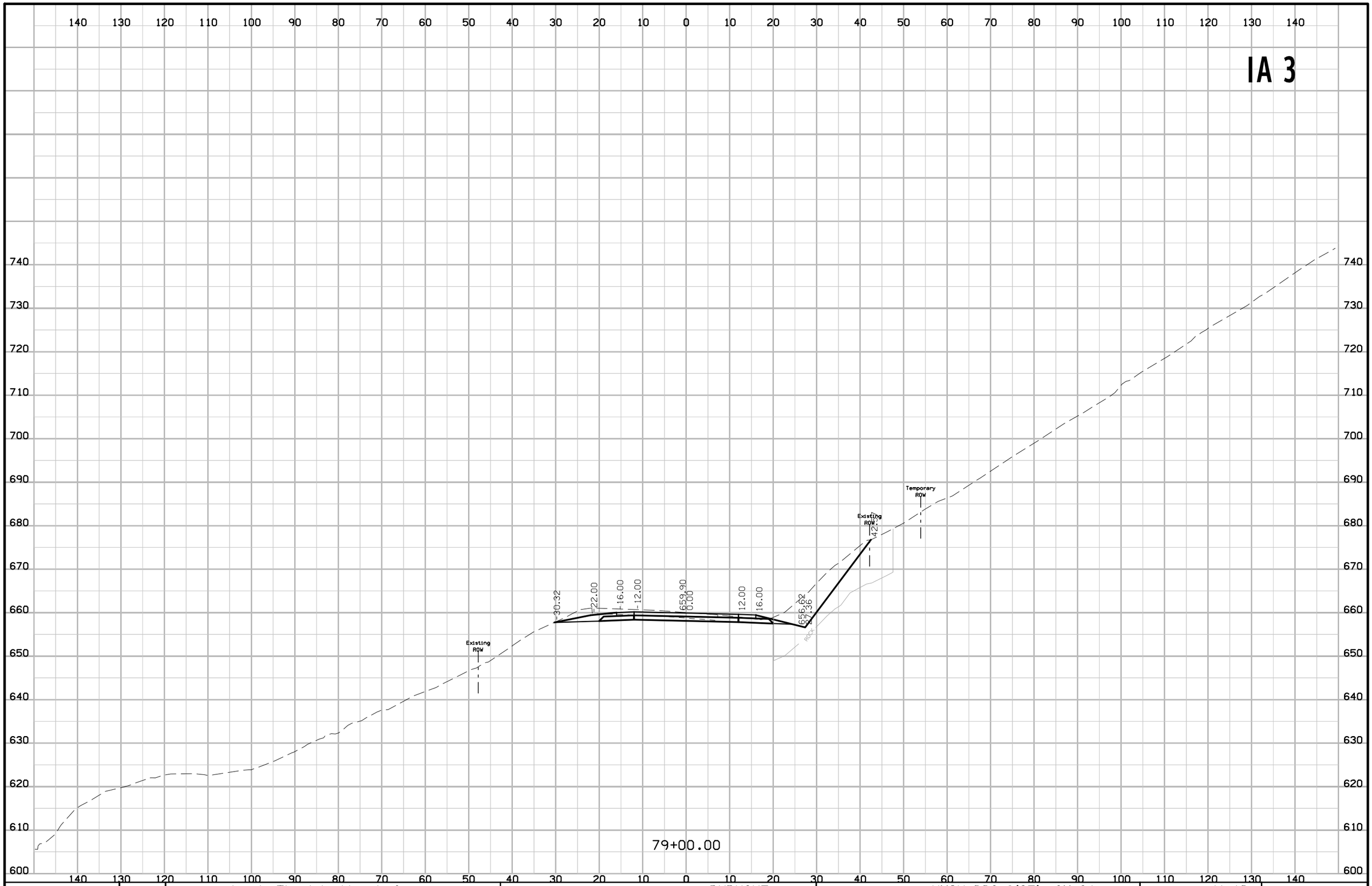
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.39

3:22:35 PM 1/23/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

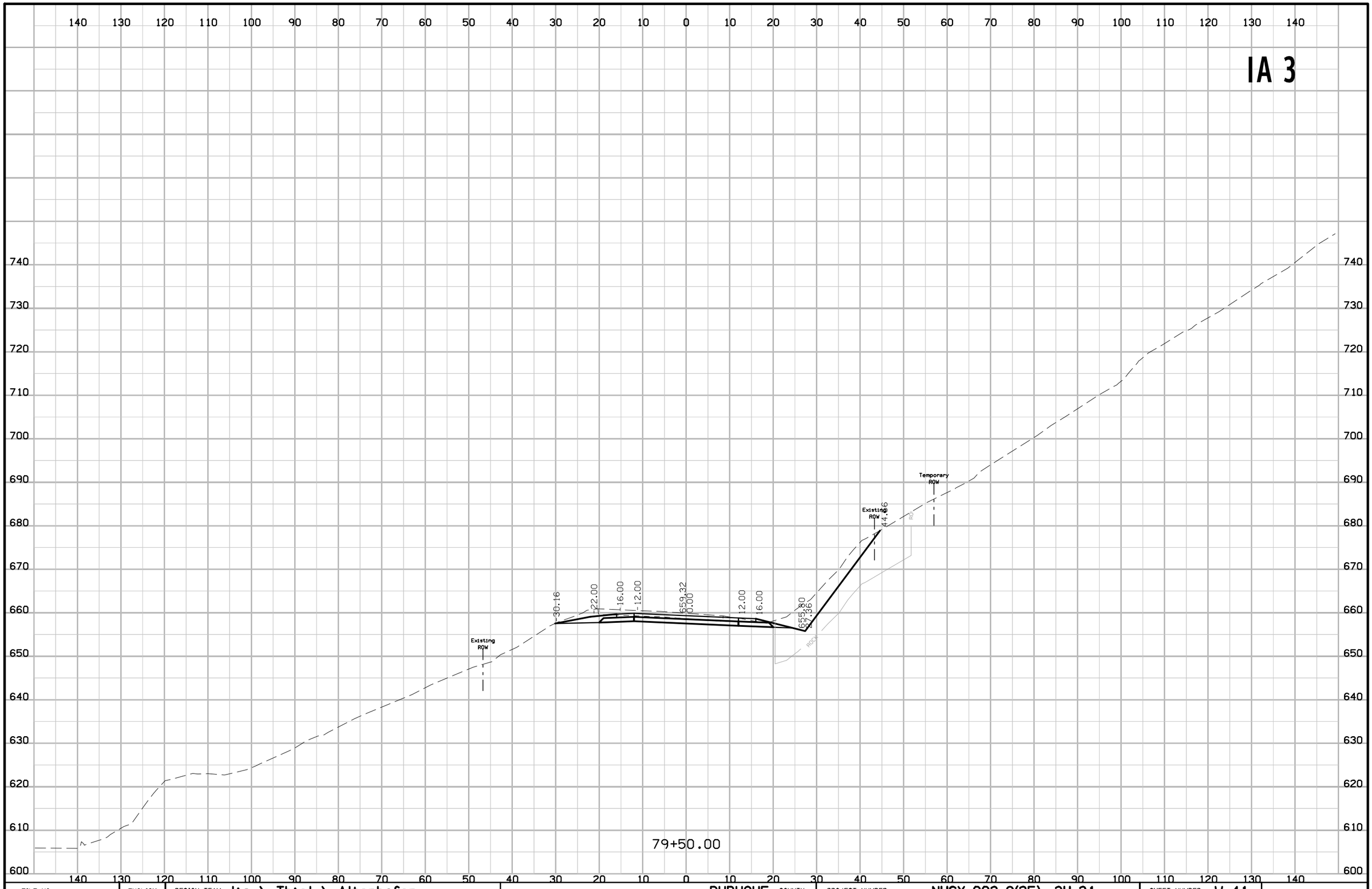
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.40

3:22:36 PM 1/23/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

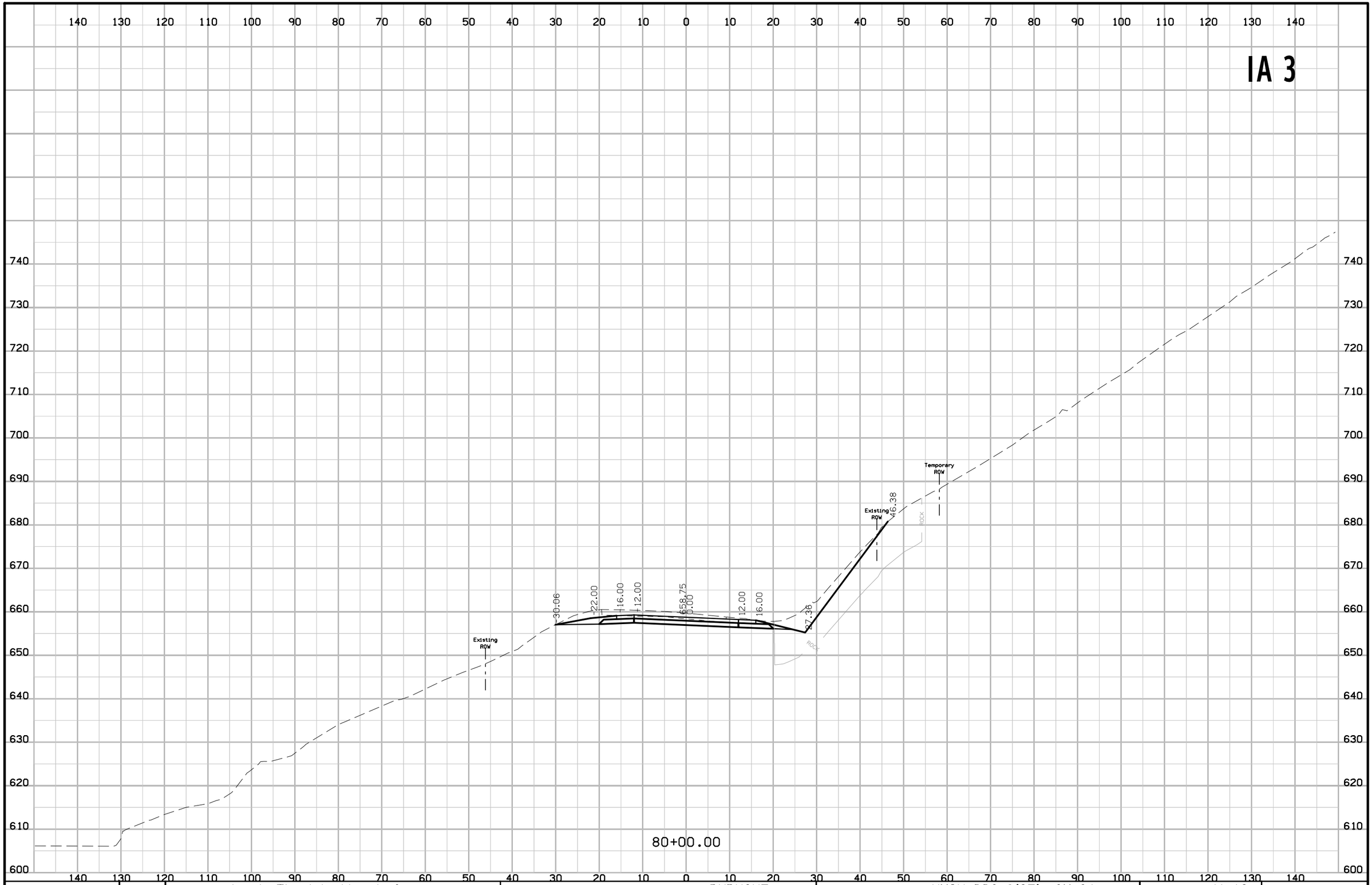
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.41

3:22:37 PM 1/23/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

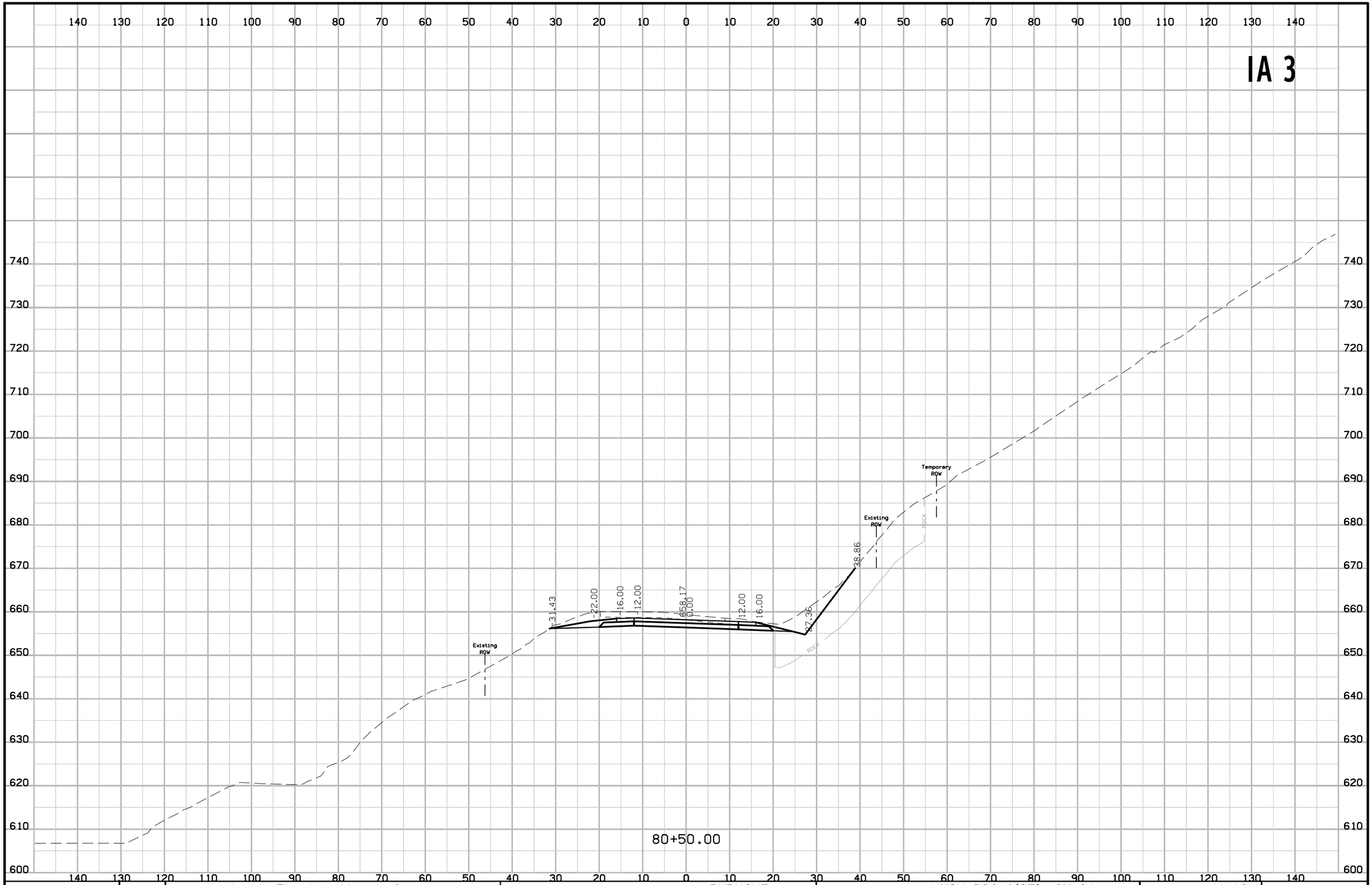
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.42

3:22:38 PM 1/23/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

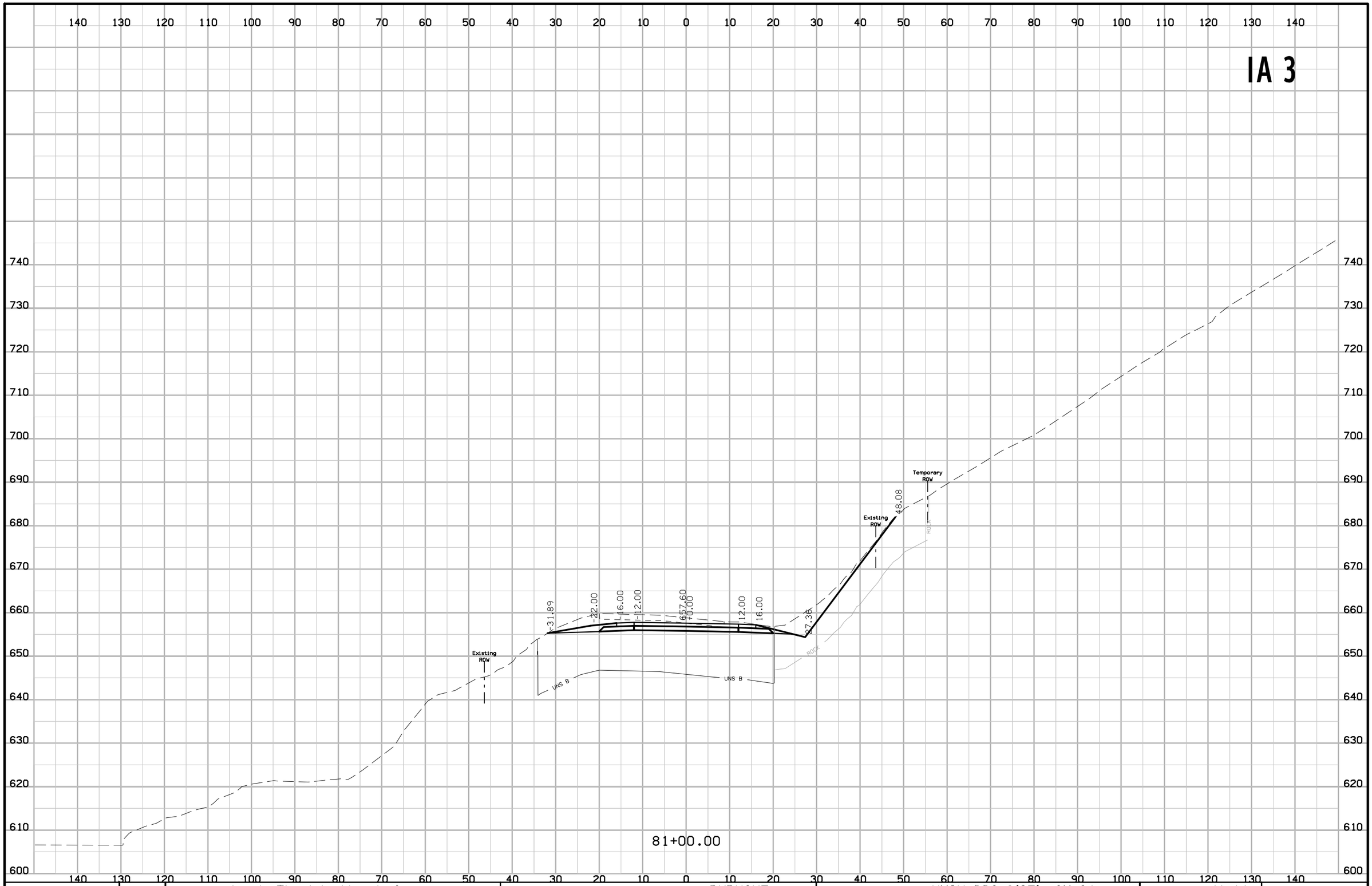
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.43

3:22:39 PM 1/23/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

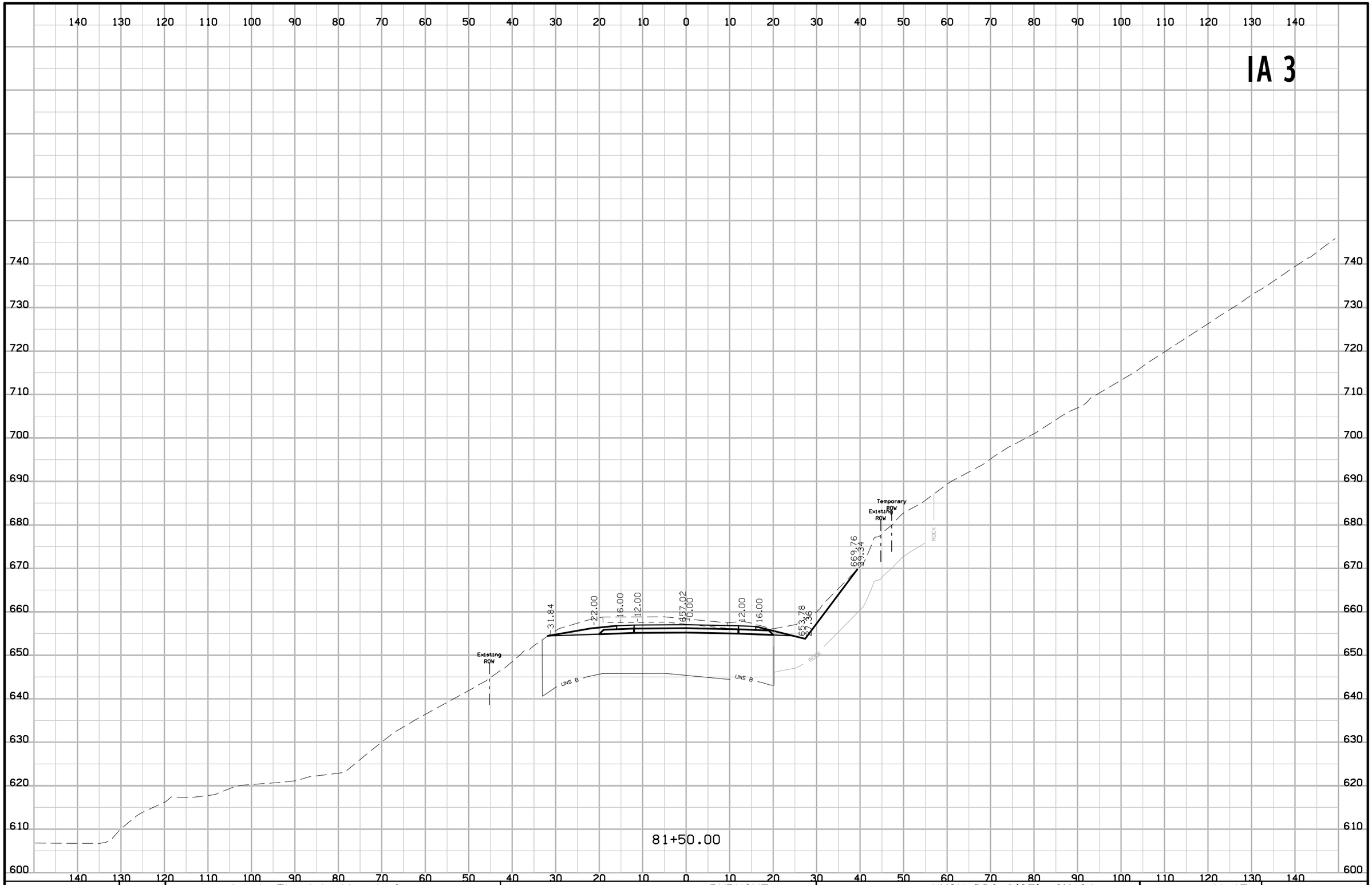
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.44

3:22:40 PM 1/23/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

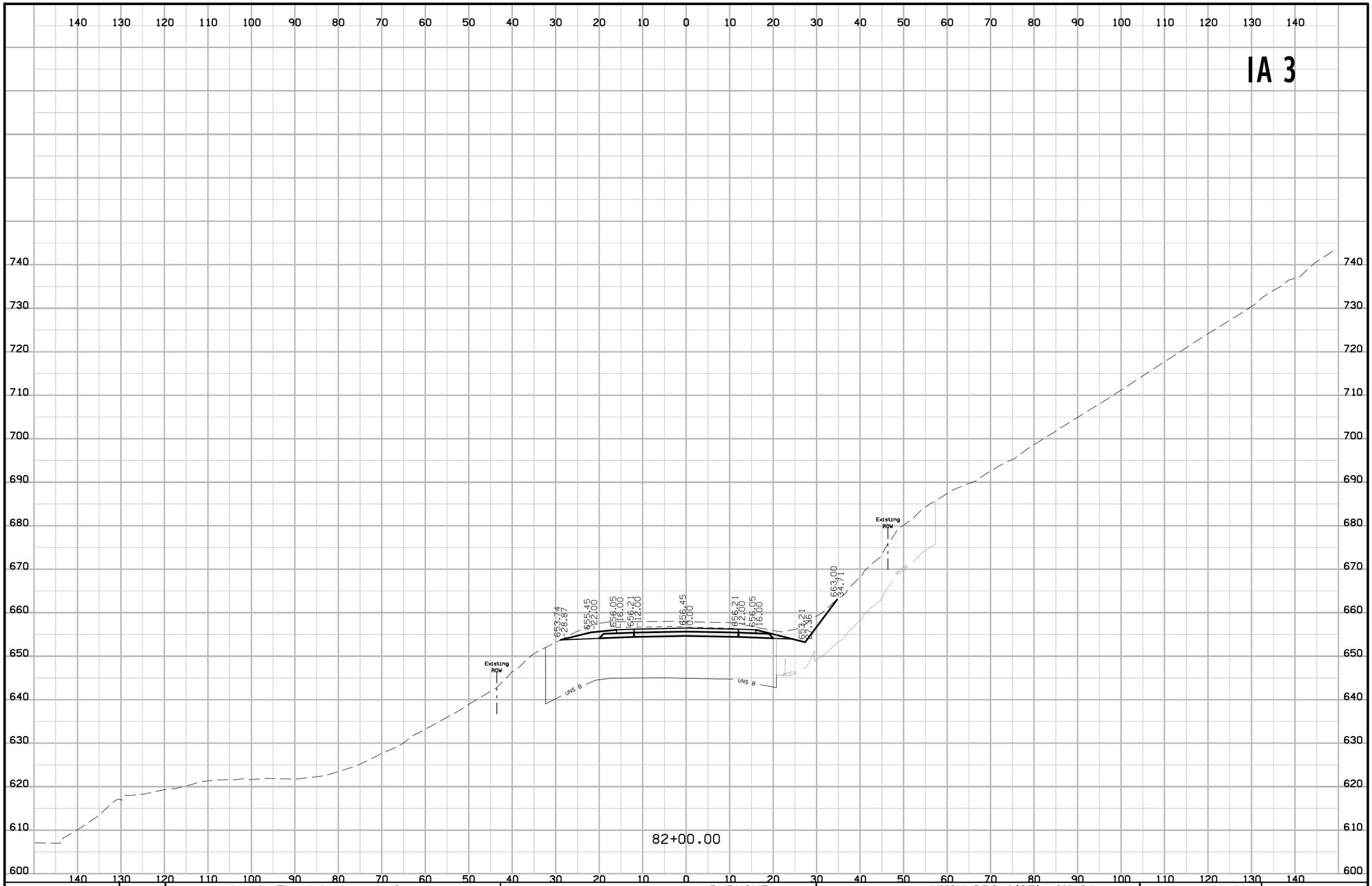
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.45

3:22:41 PM 1/23/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

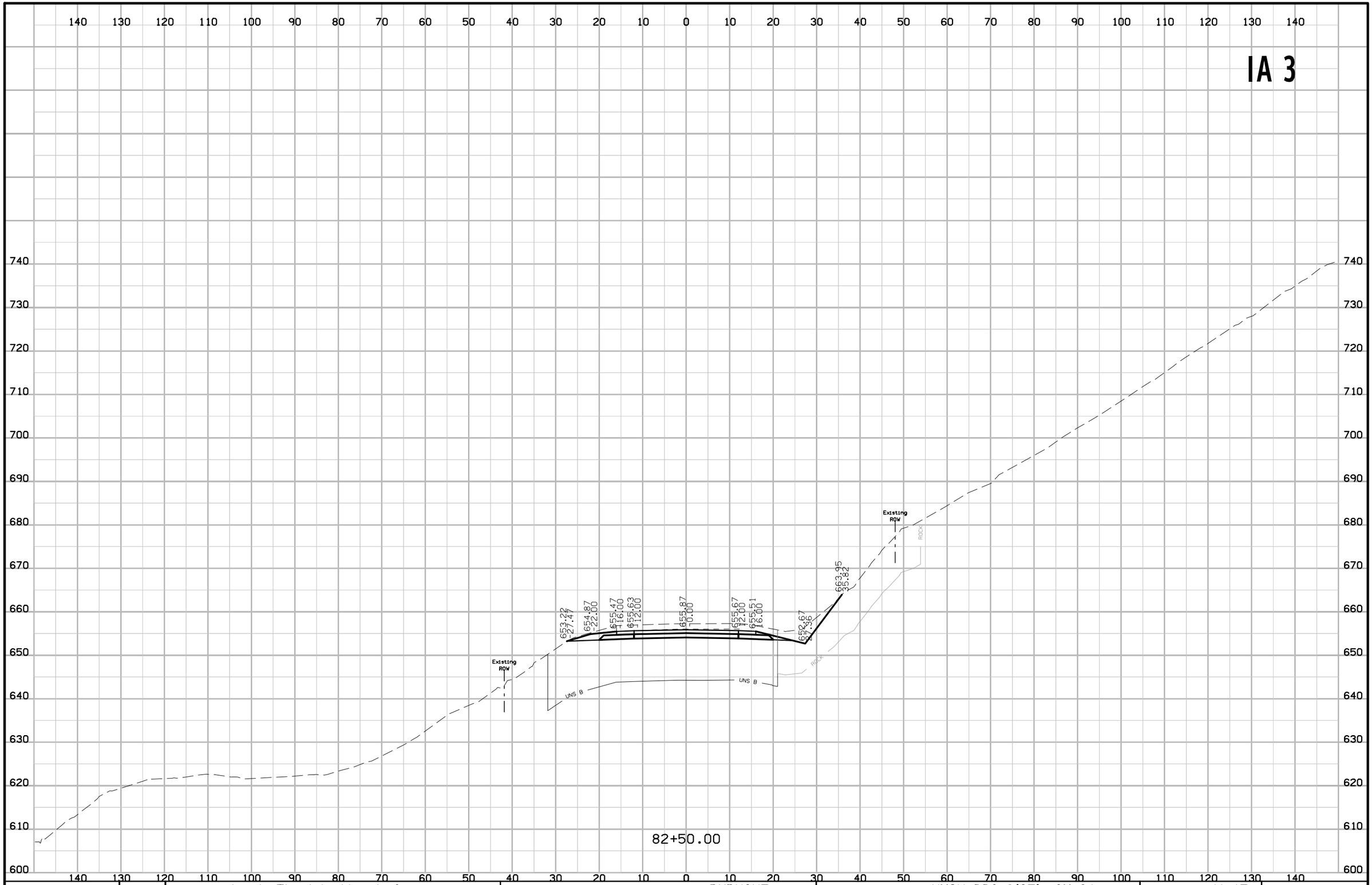
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.46

9:30:10 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.47

9:30:10 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

730 720 710 700 690 680 670 660 650 640 630 620 610 600

652.75
24.94
654.50
20.00
654.90
16.00
655.06
12.00
655.30
0.00
655.35
12.00
655.19
16.00
652.35
7.36
660.50
33.48

Existing ROW

Existing ROW

ROCK

ROCK

UNS B

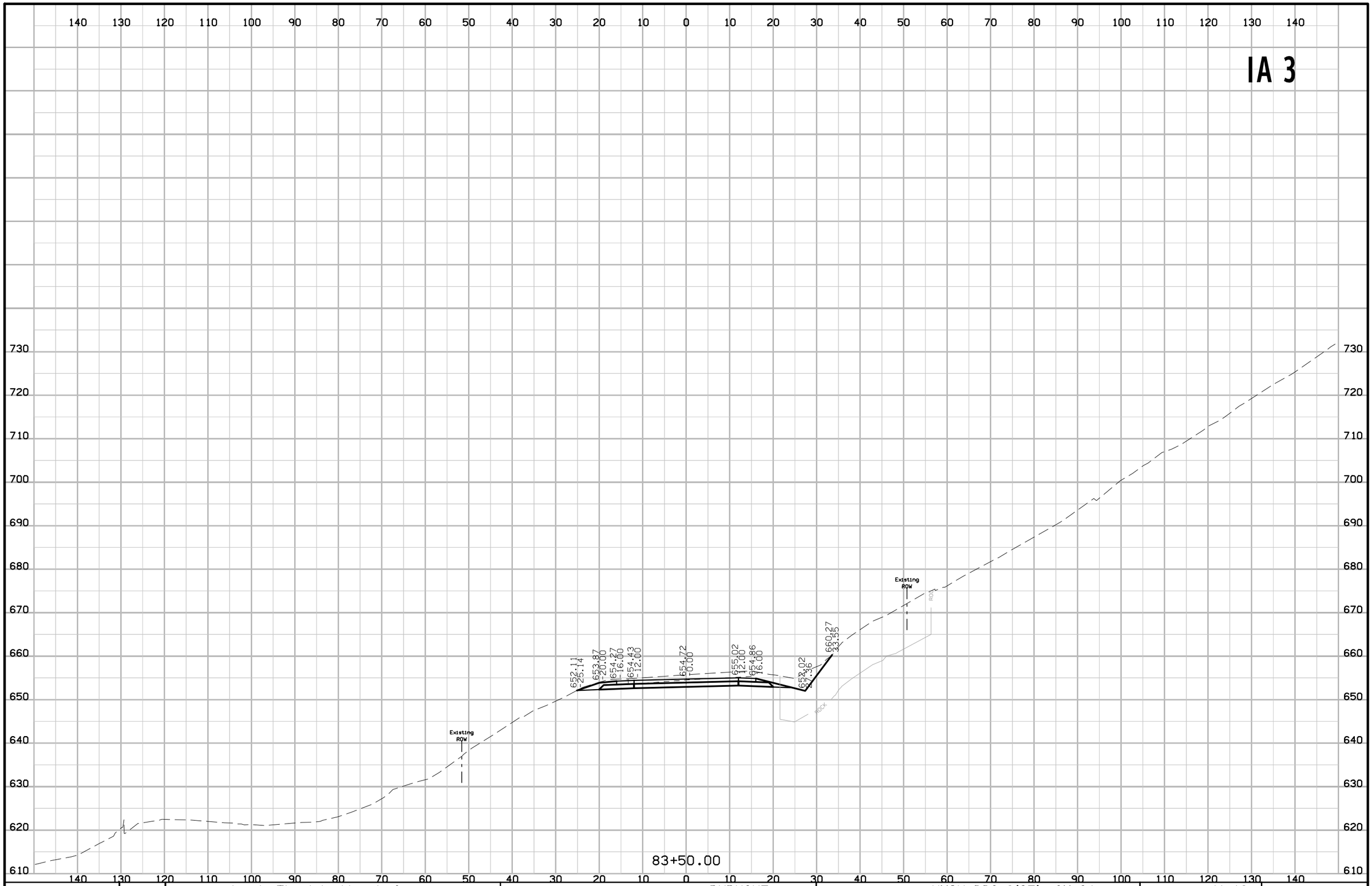
UNS B

83+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.48

9:30:11 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

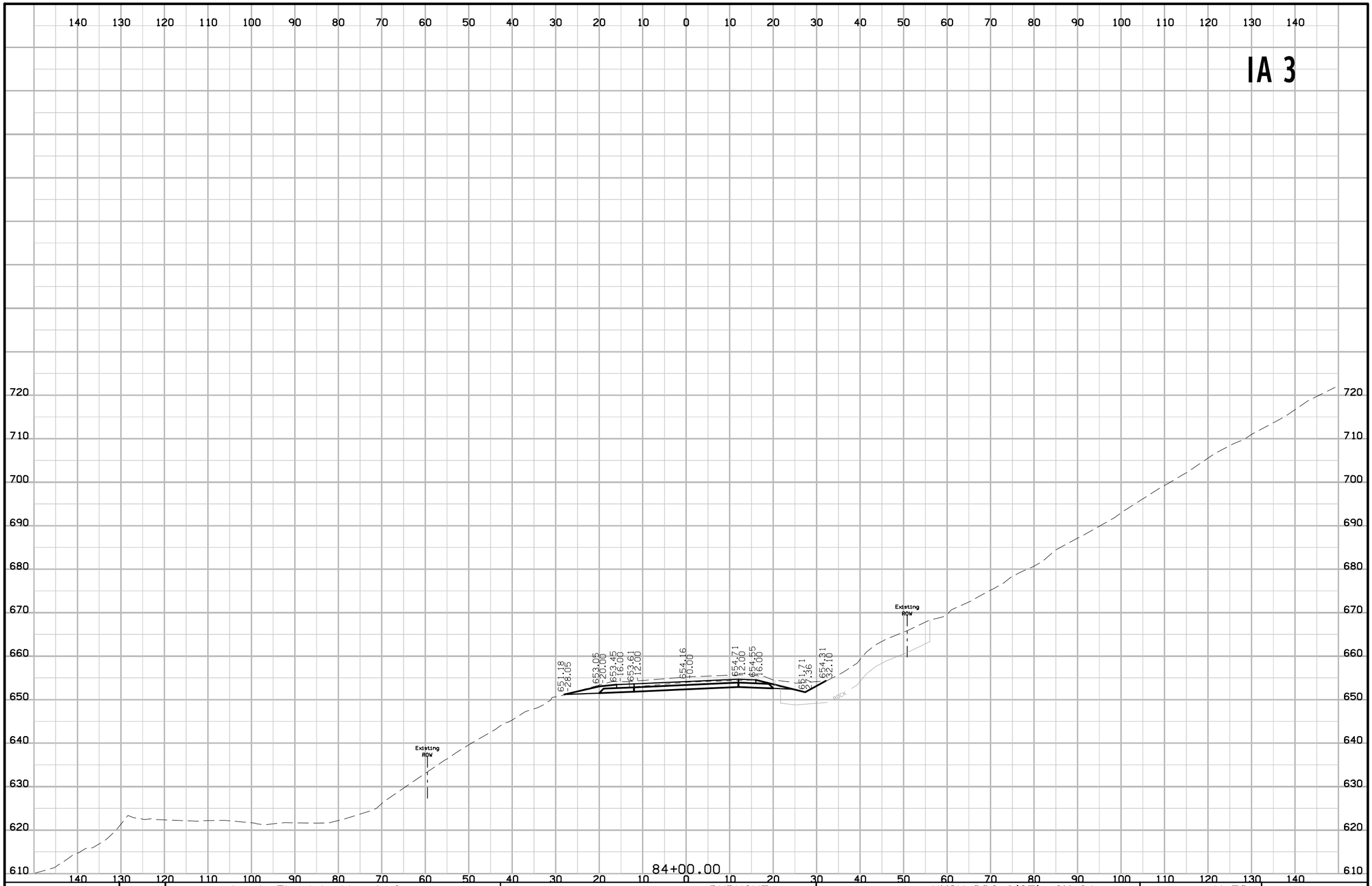
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.49

9:30:12 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

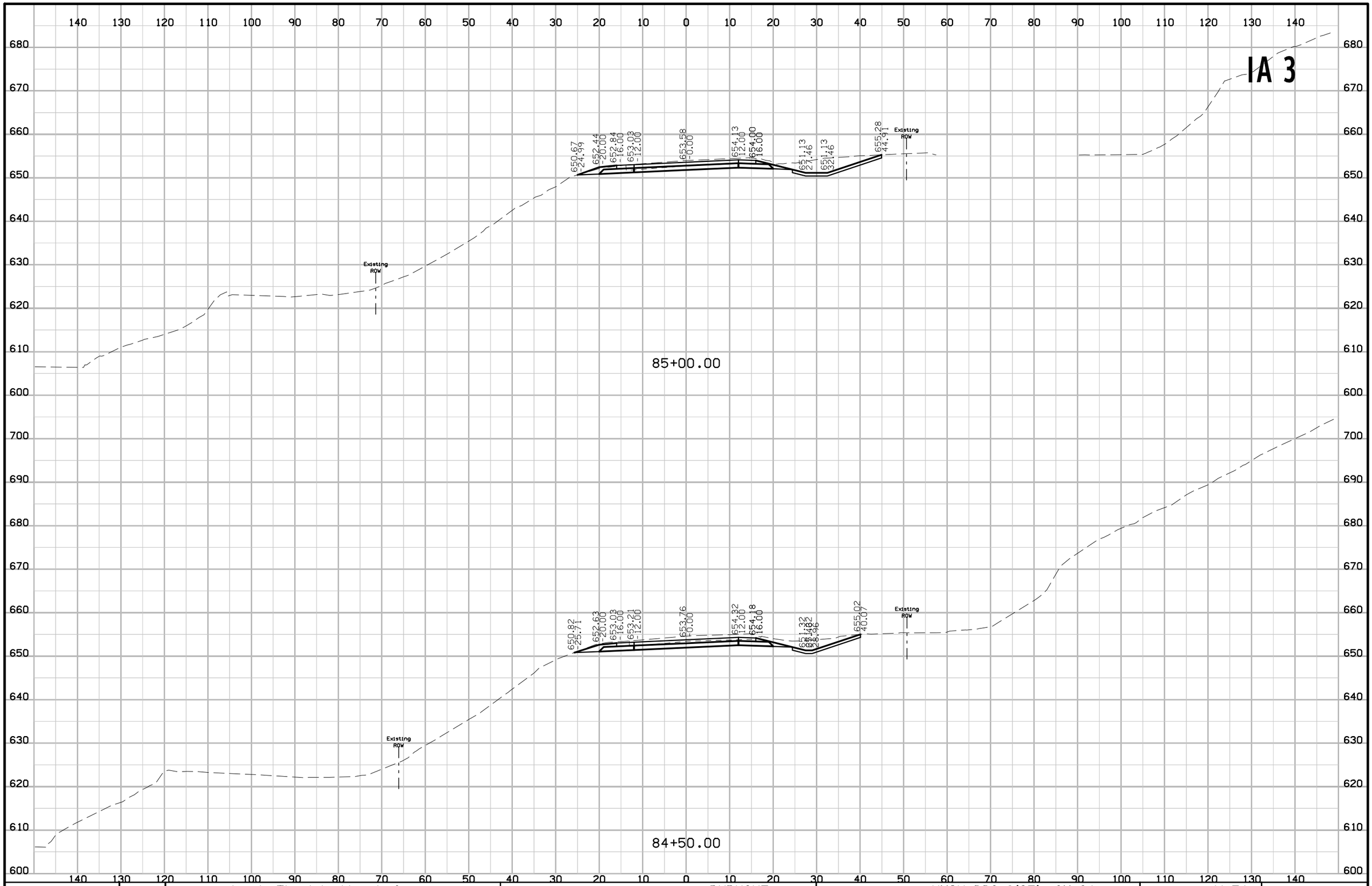
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.50

9:30:13 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

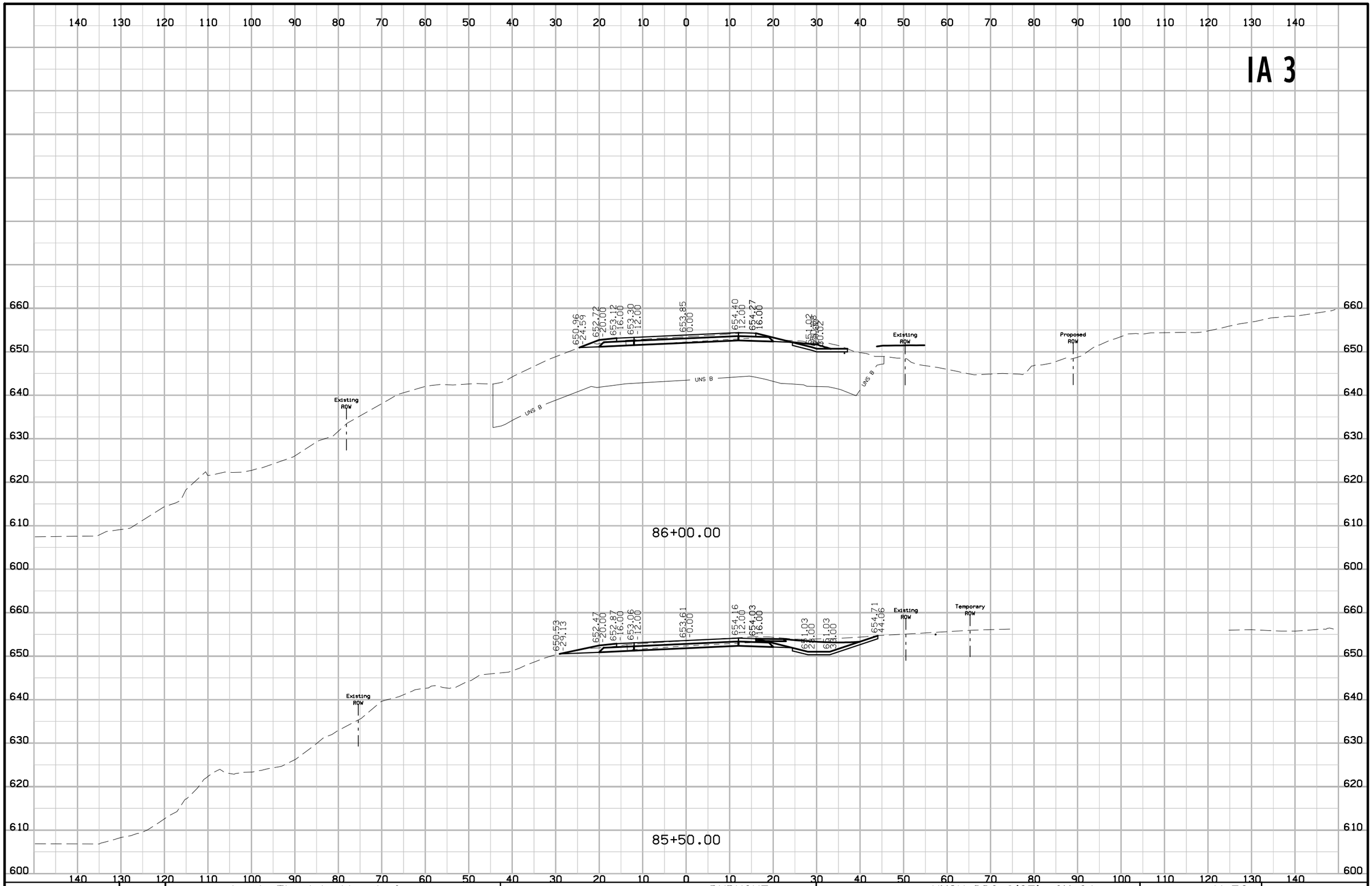
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.51

9:30:14 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

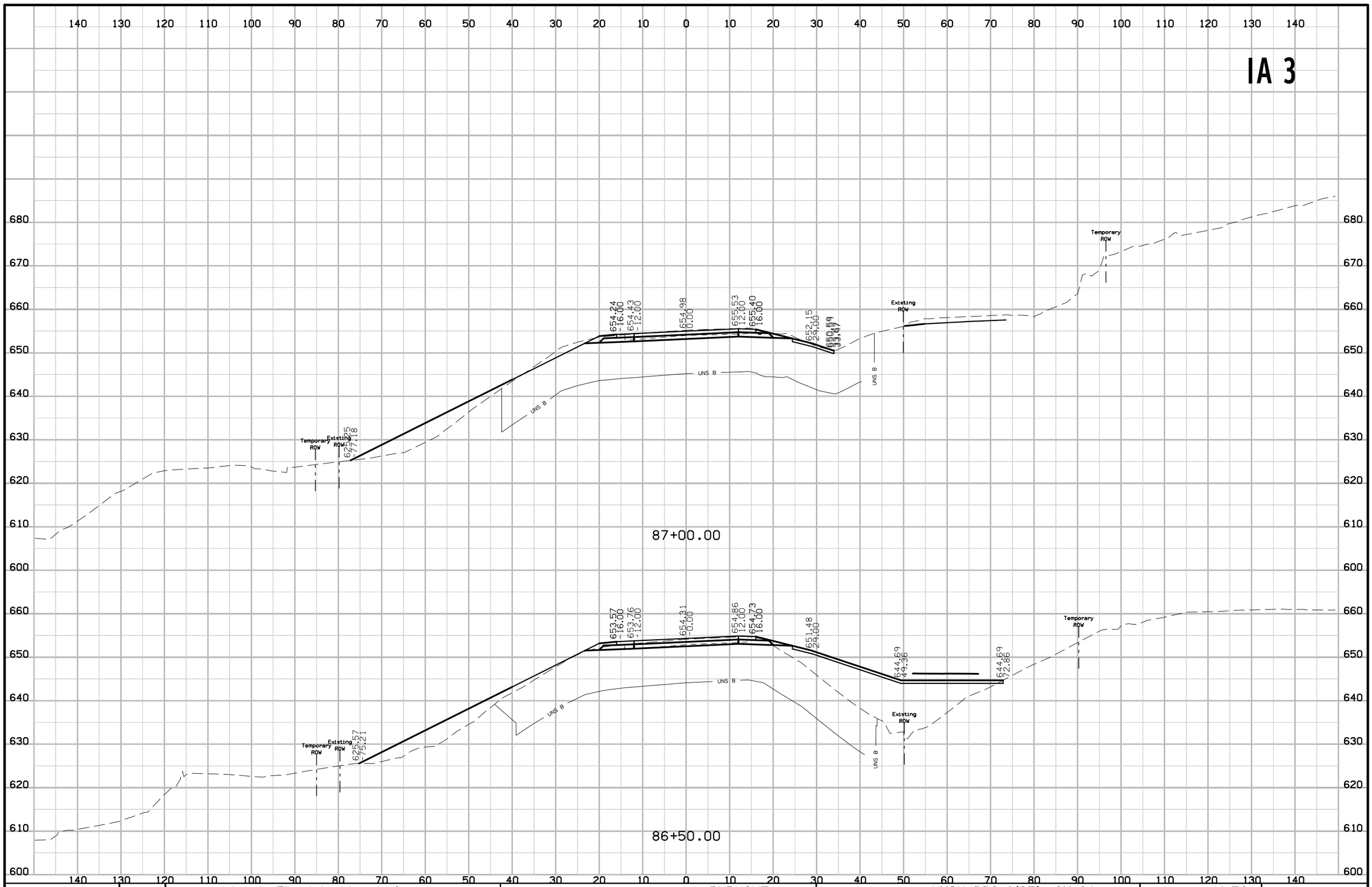
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.52

9:30:15 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.53

9:30:16 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

710
700
690
680
670
660
650
640
630
620
610
600

654.11
-23.89
654.73
-20.00
655.13
-16.00
655.31
12.00
655.86
-0.00
656.41
12.00
656.28
16.00
658.70
26.33
656.67
29.81

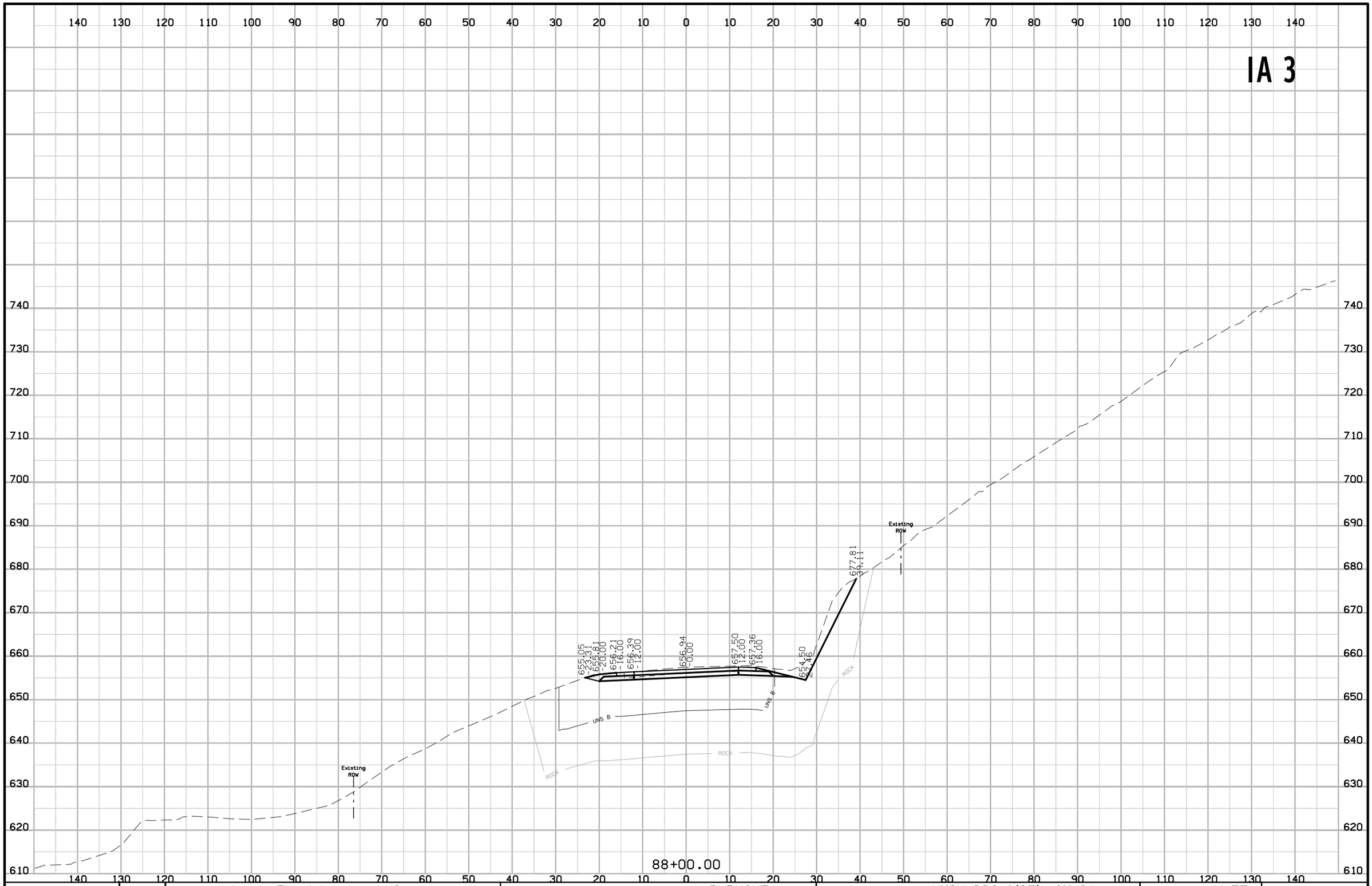
UNS B
UNS B

Existing ROW
Existing ROW
Temporary ROW

87+50.00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.54

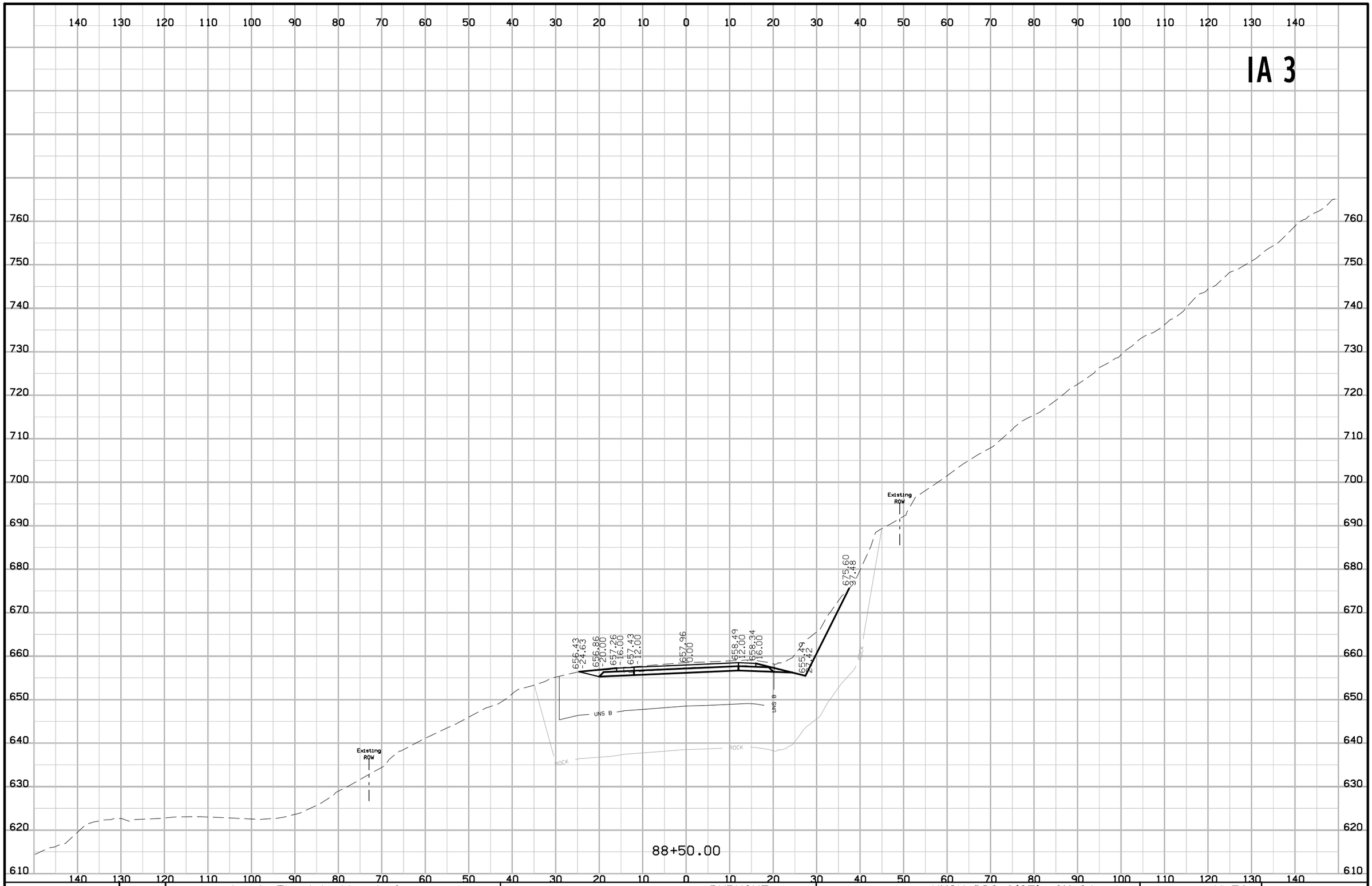
9:30:17 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.55

9:30:18 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

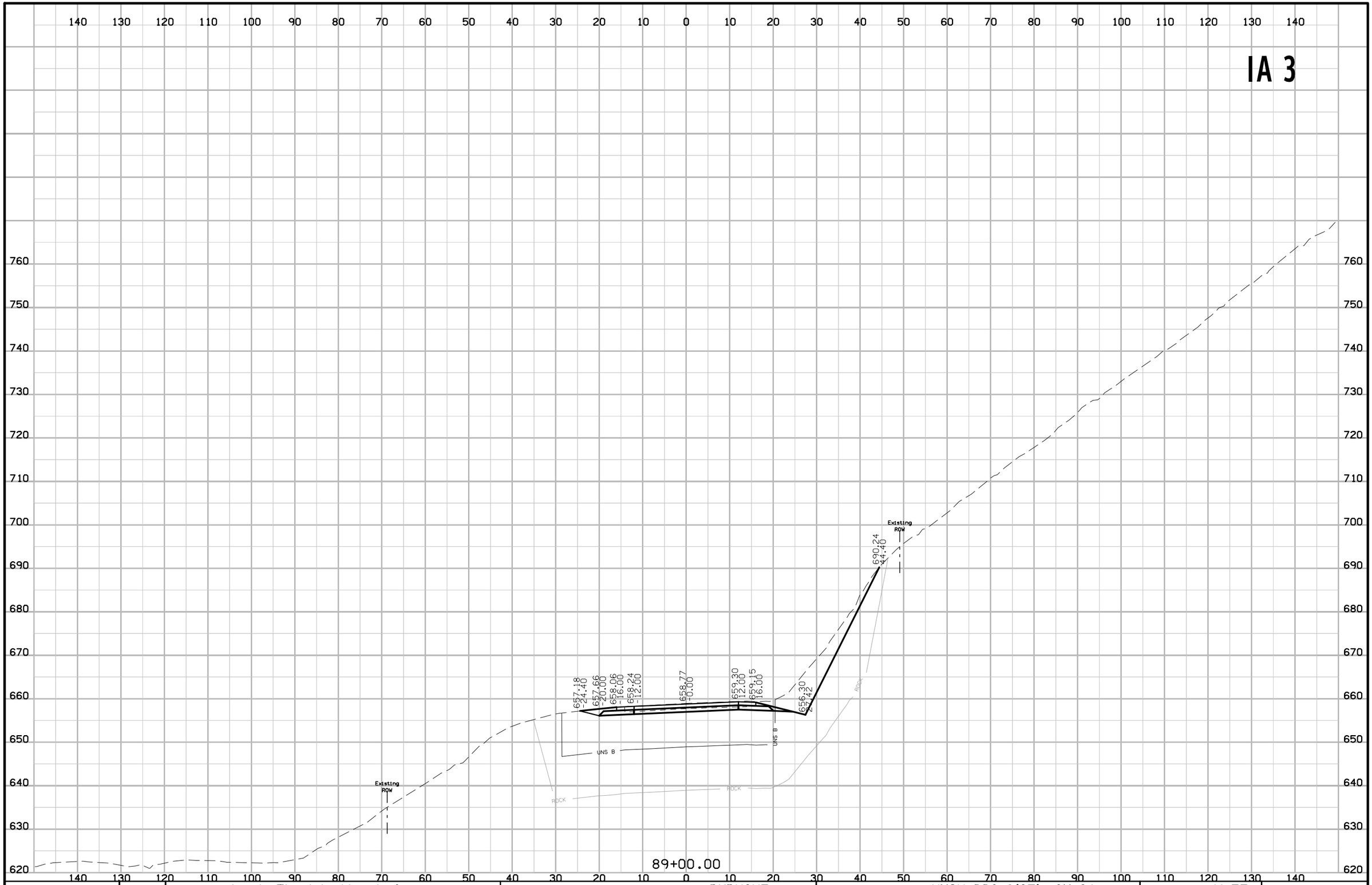
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.56

9:30:19 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

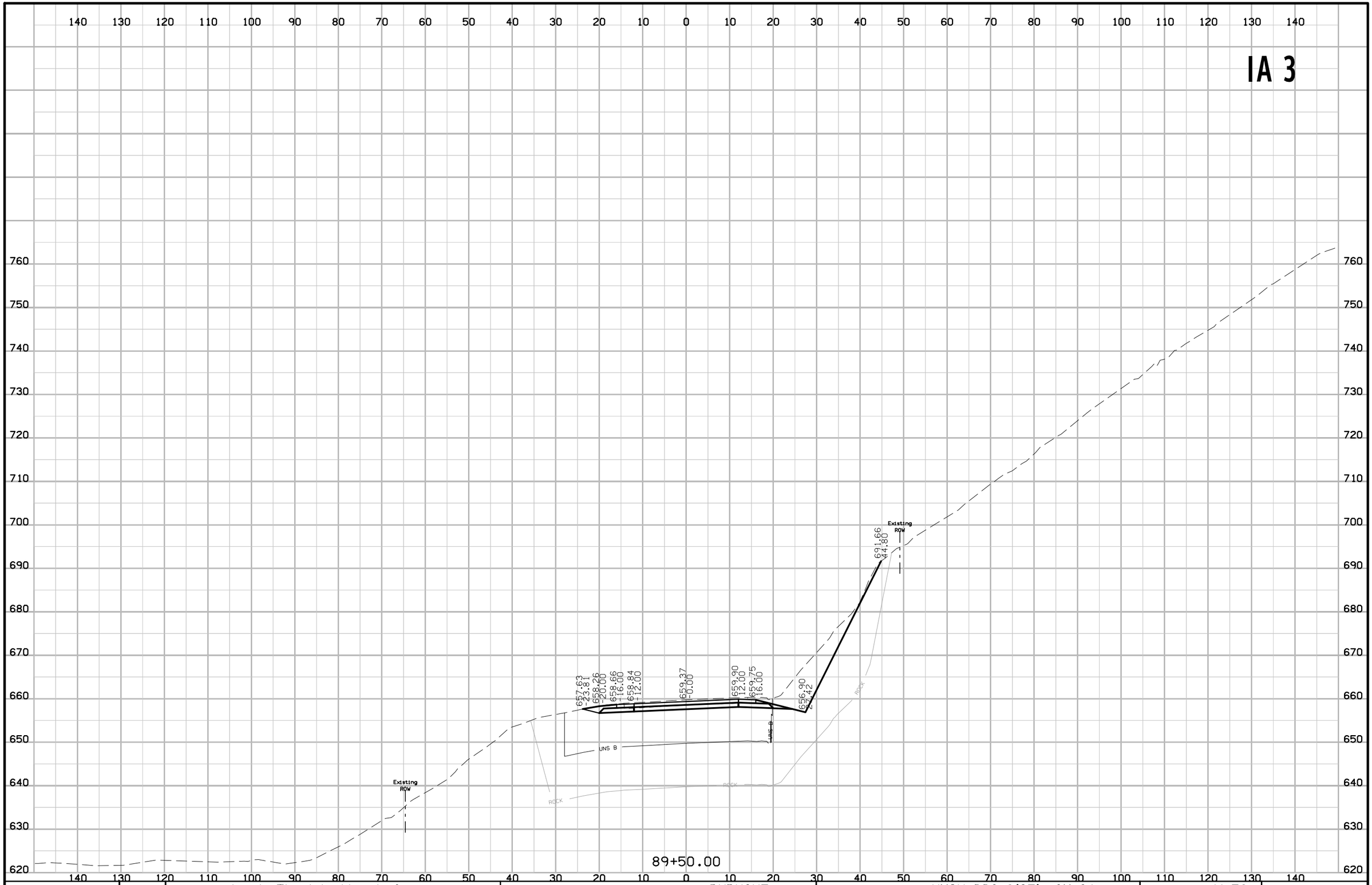
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.57

9:30:19 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

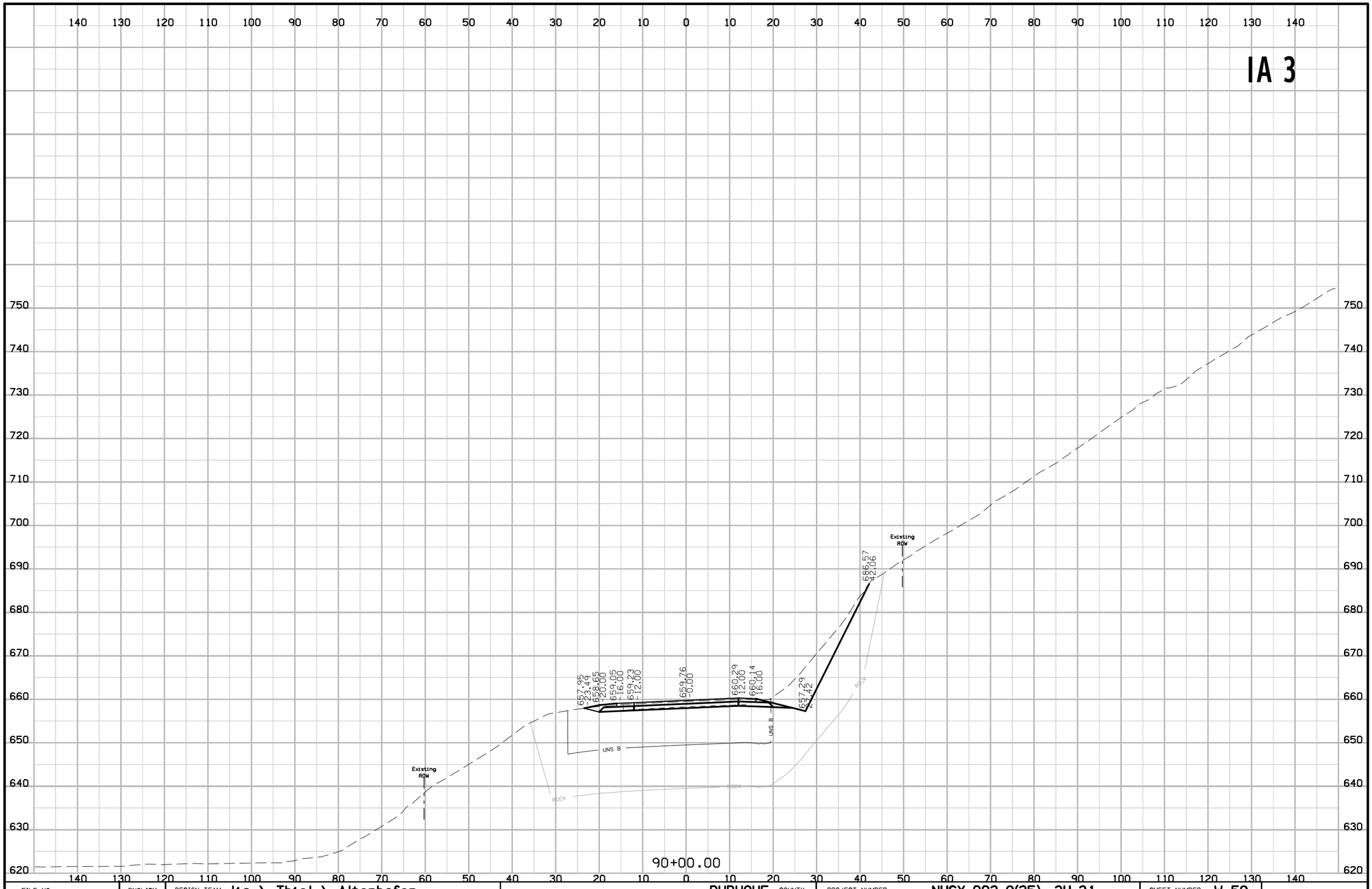
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.58

9:30:20 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

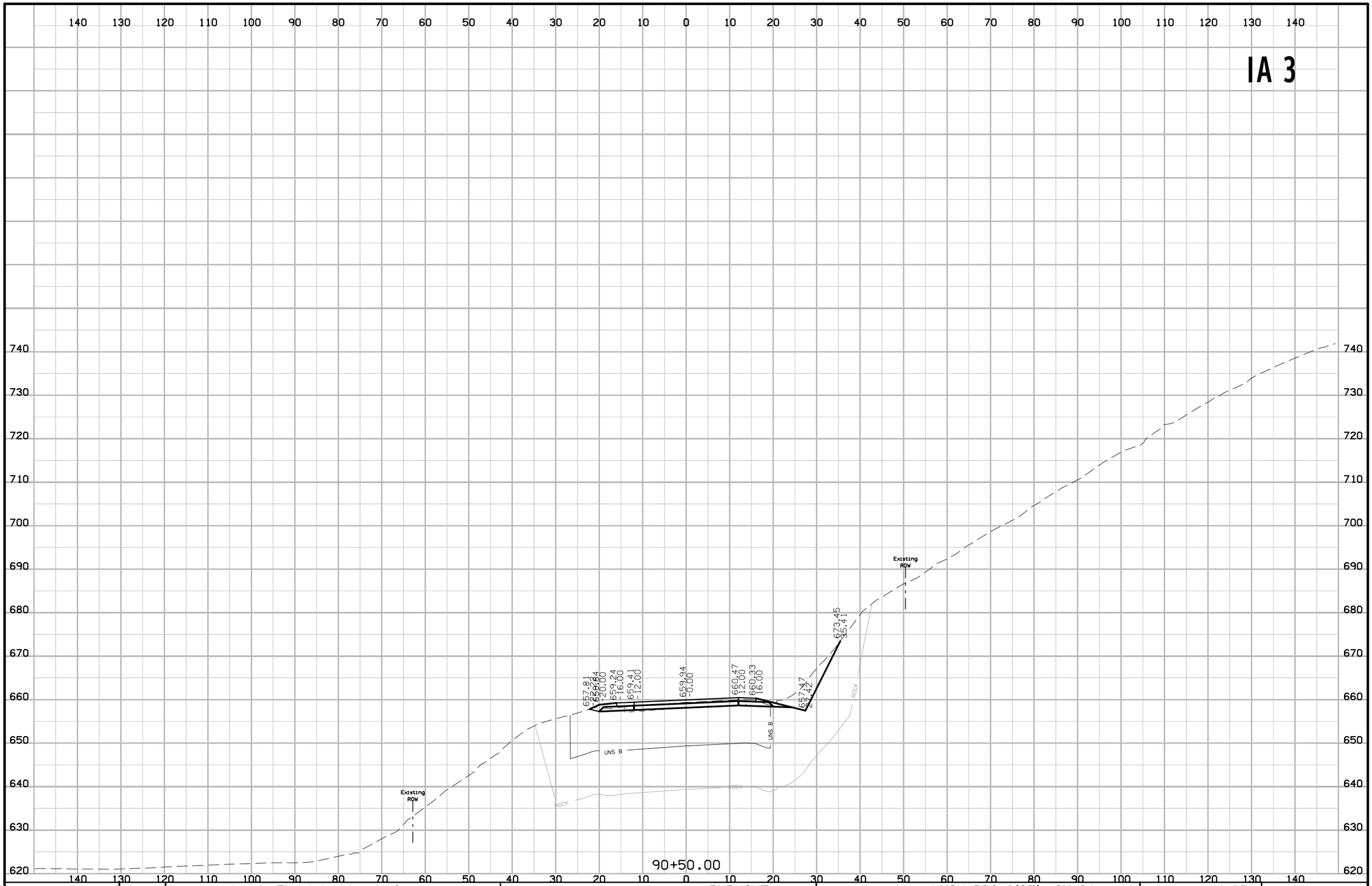
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.59

9:30:21 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

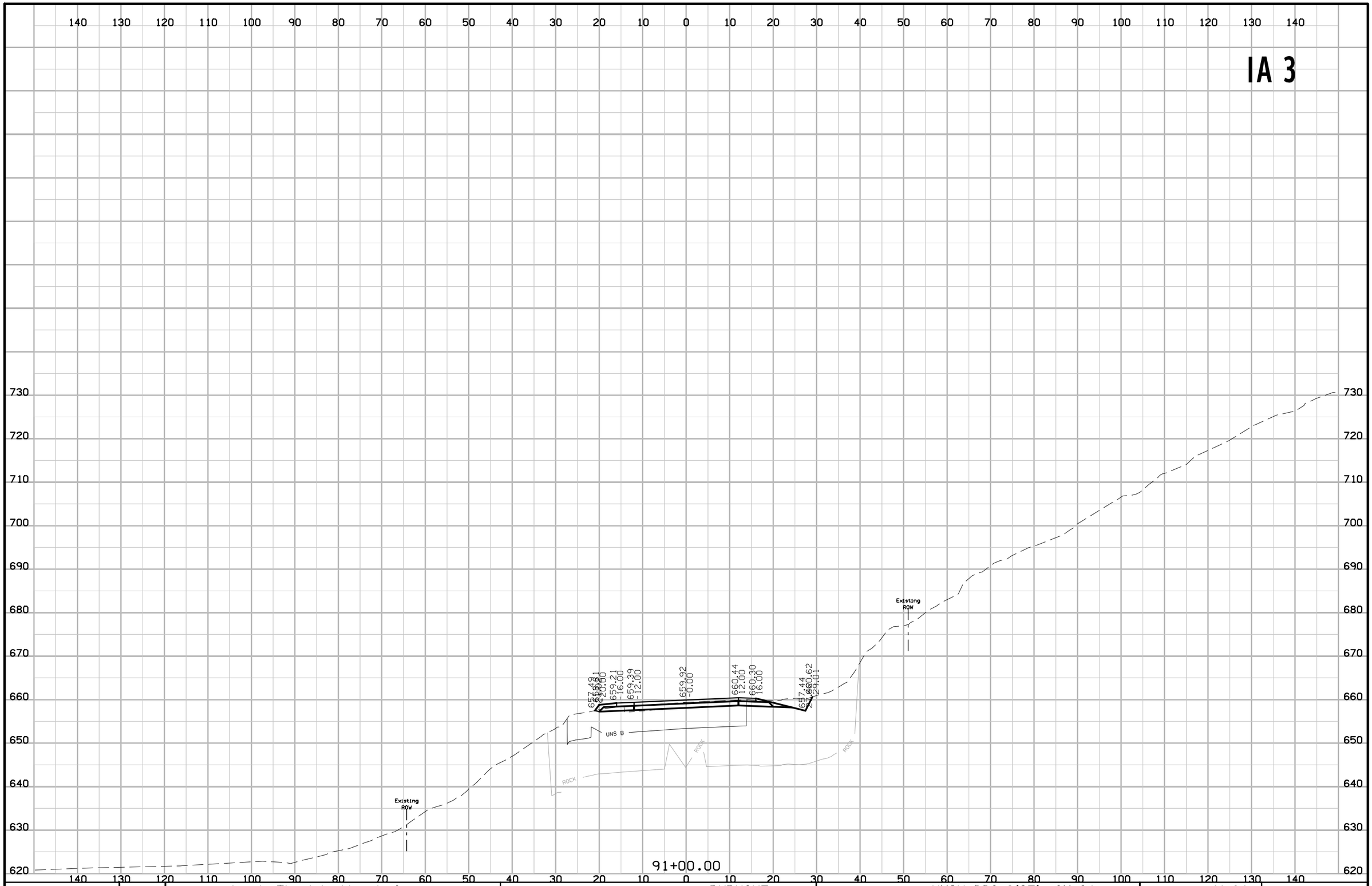
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.60

9:30:22 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

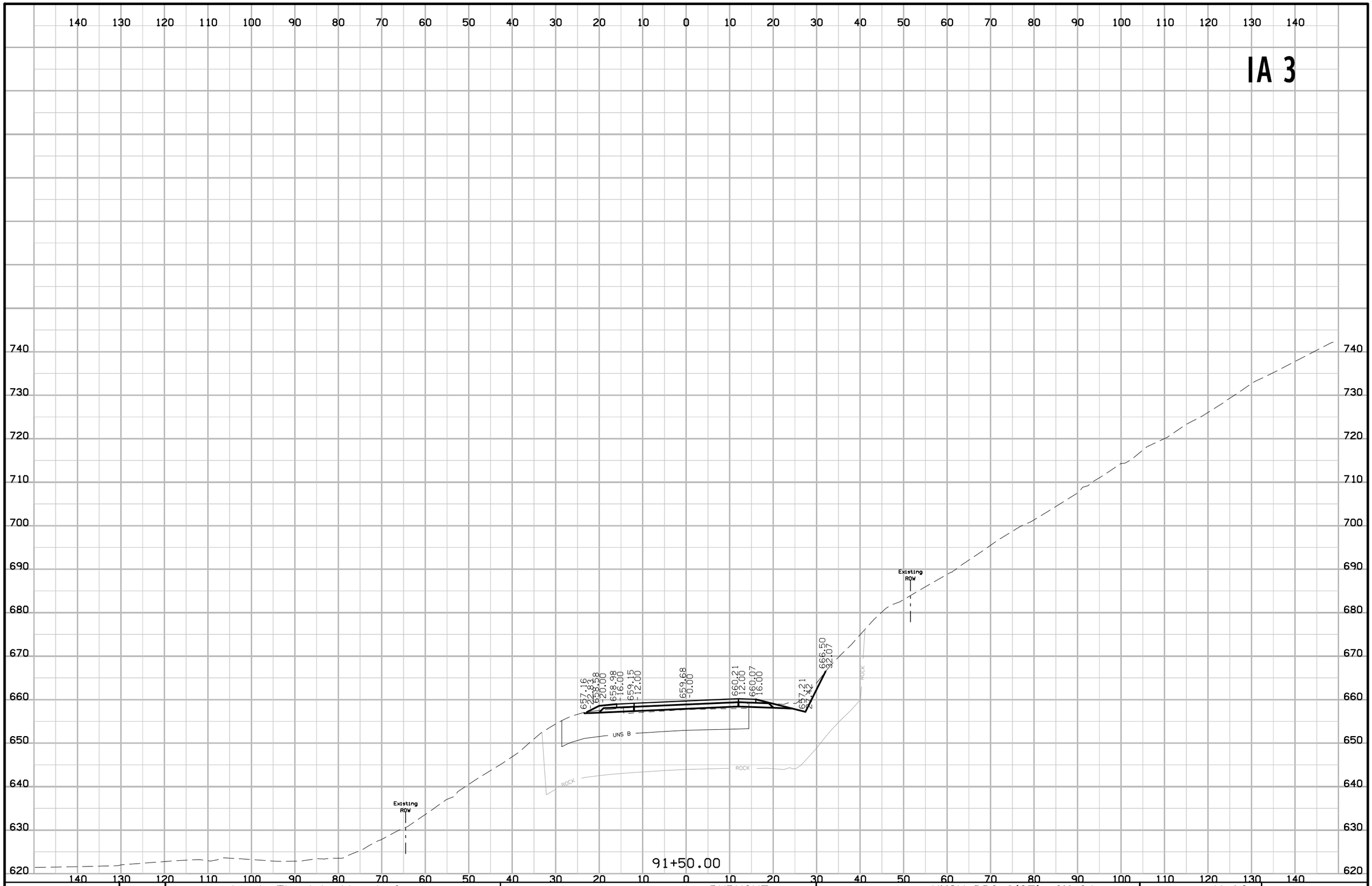
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.61

9:30:23 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.62

9:30:24 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

740 730 720 710 700 690 680 670 660 650 640 630 620

655.97
-24.33
658.14
-20.00
658.54
16.00
658.71
12.00
659.24
-0.00
659.77
12.00
659.62
16.00
656.77
24.46
661.36
26.72

UNS B

ROCK

ROCK

ROCK

Existing ROW

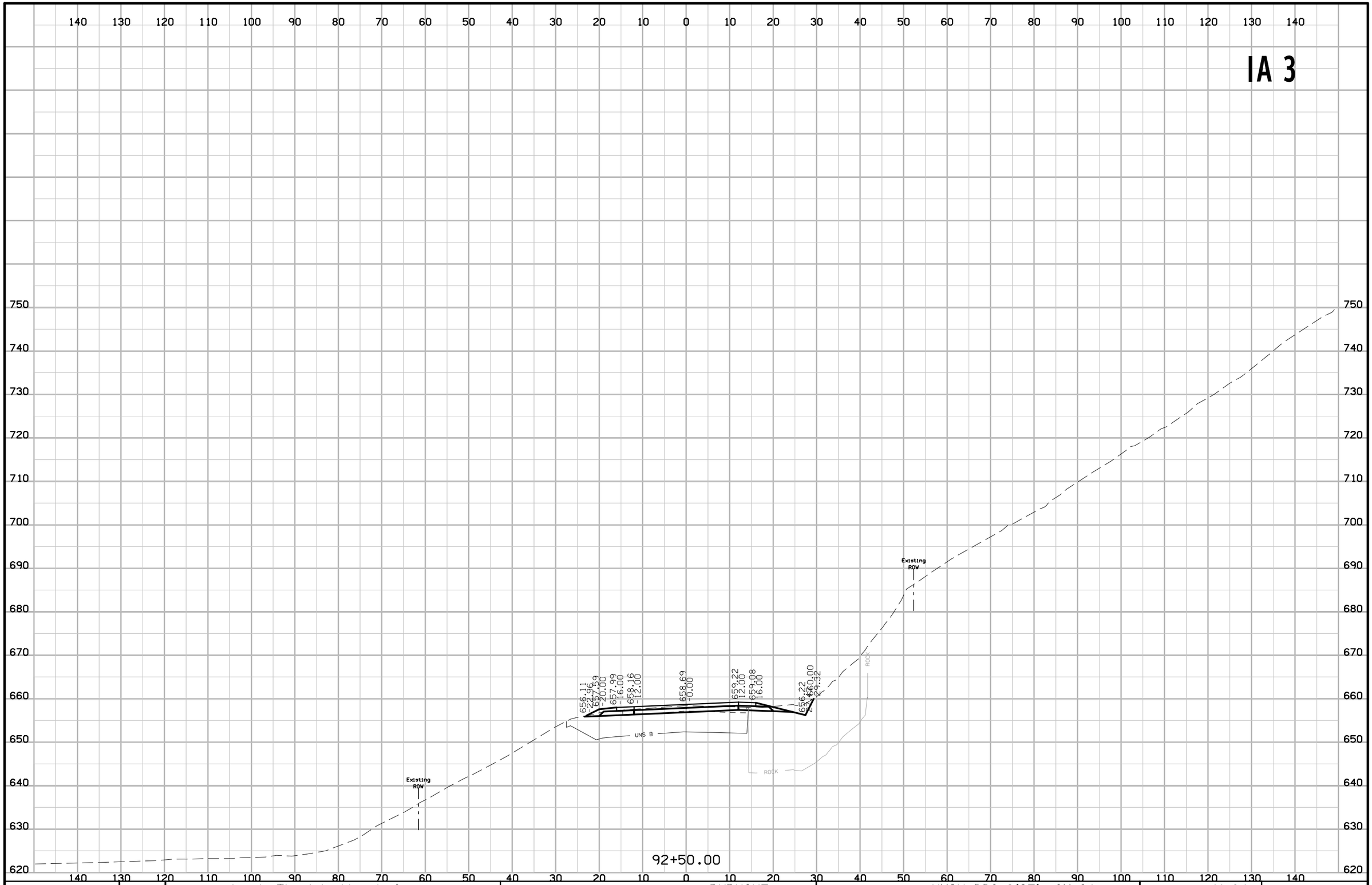
Existing ROW

92+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.63

9:30:25 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

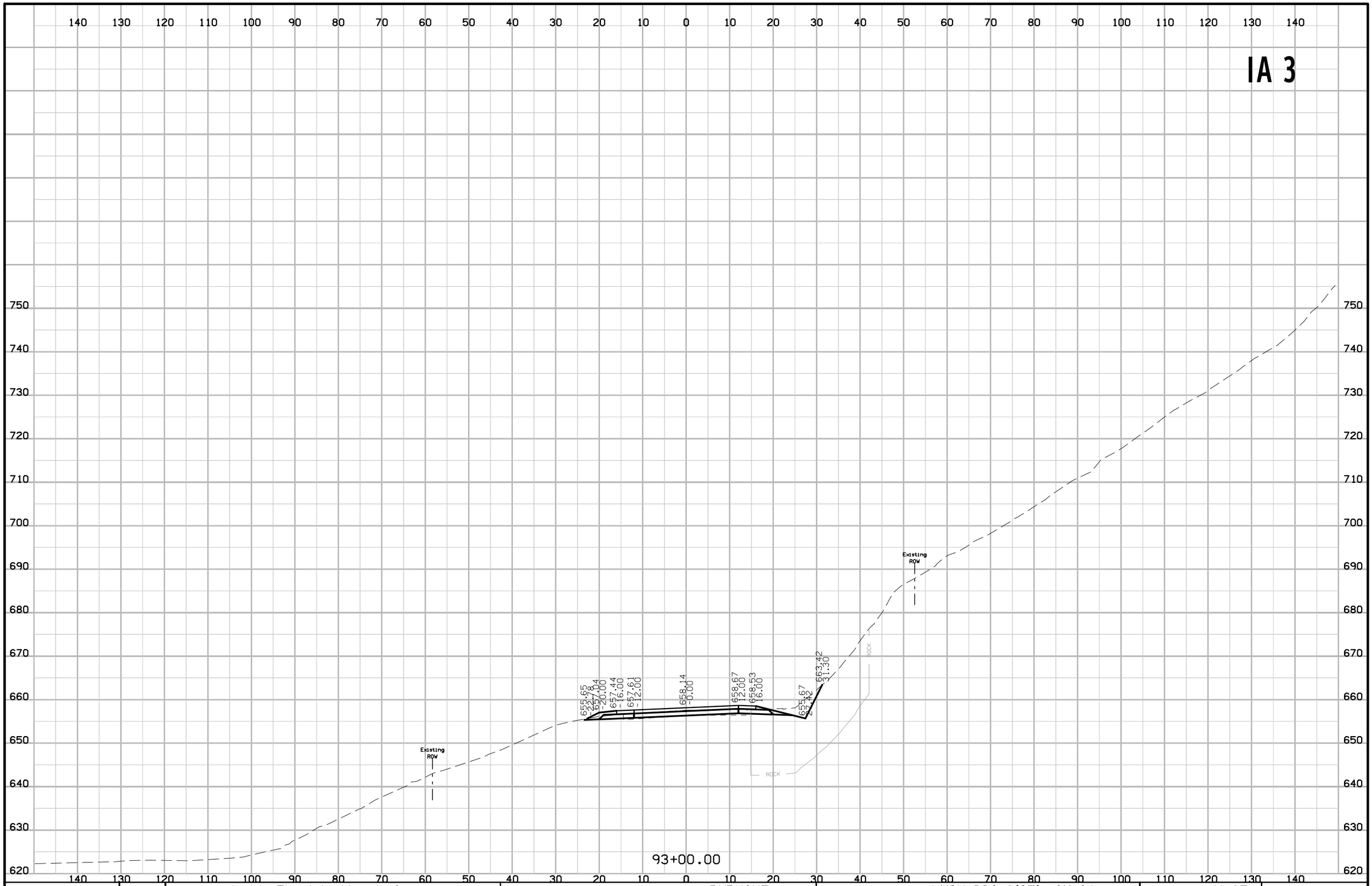
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.64

9:30:25 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

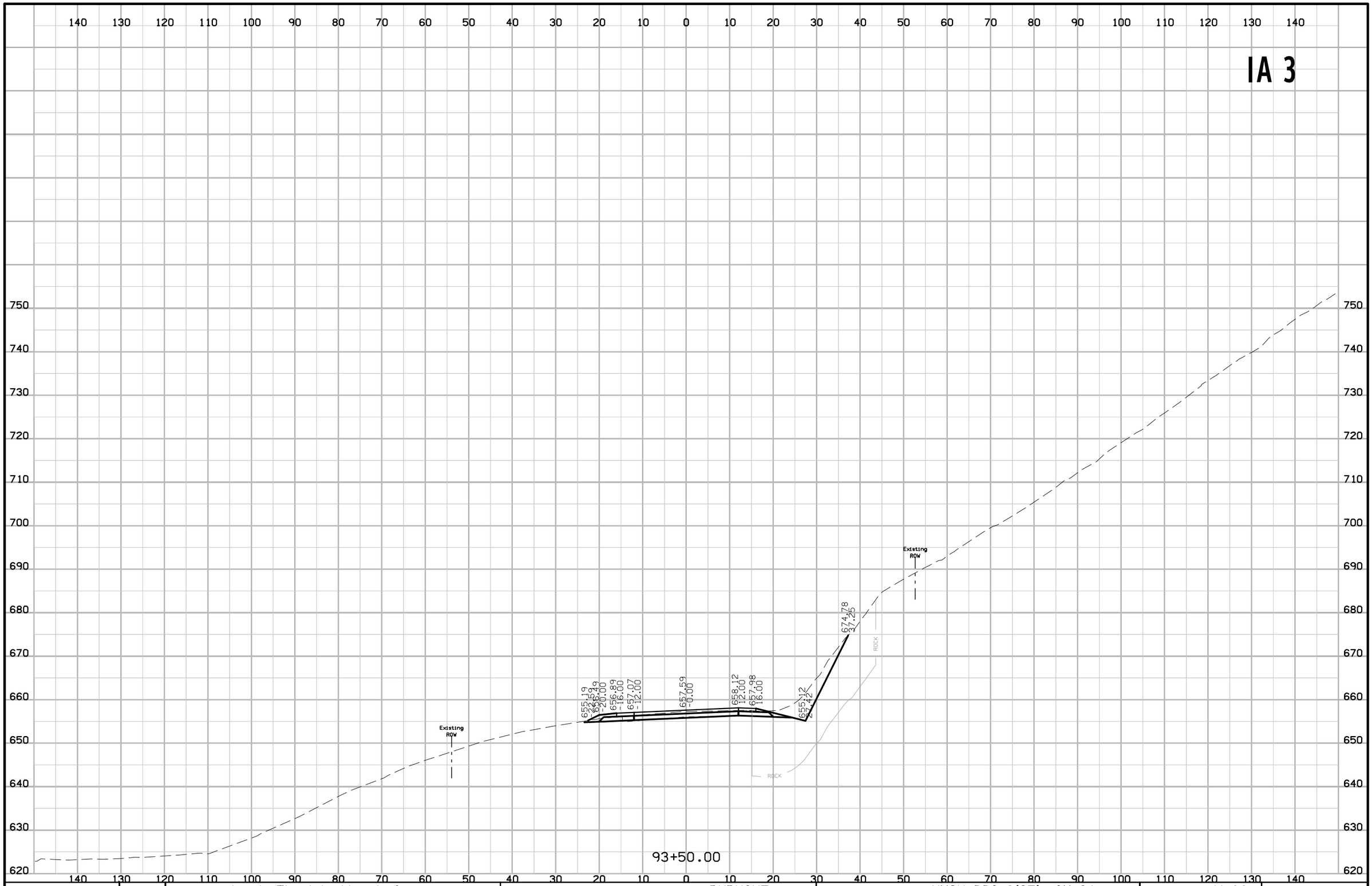
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.65

9:30:26 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

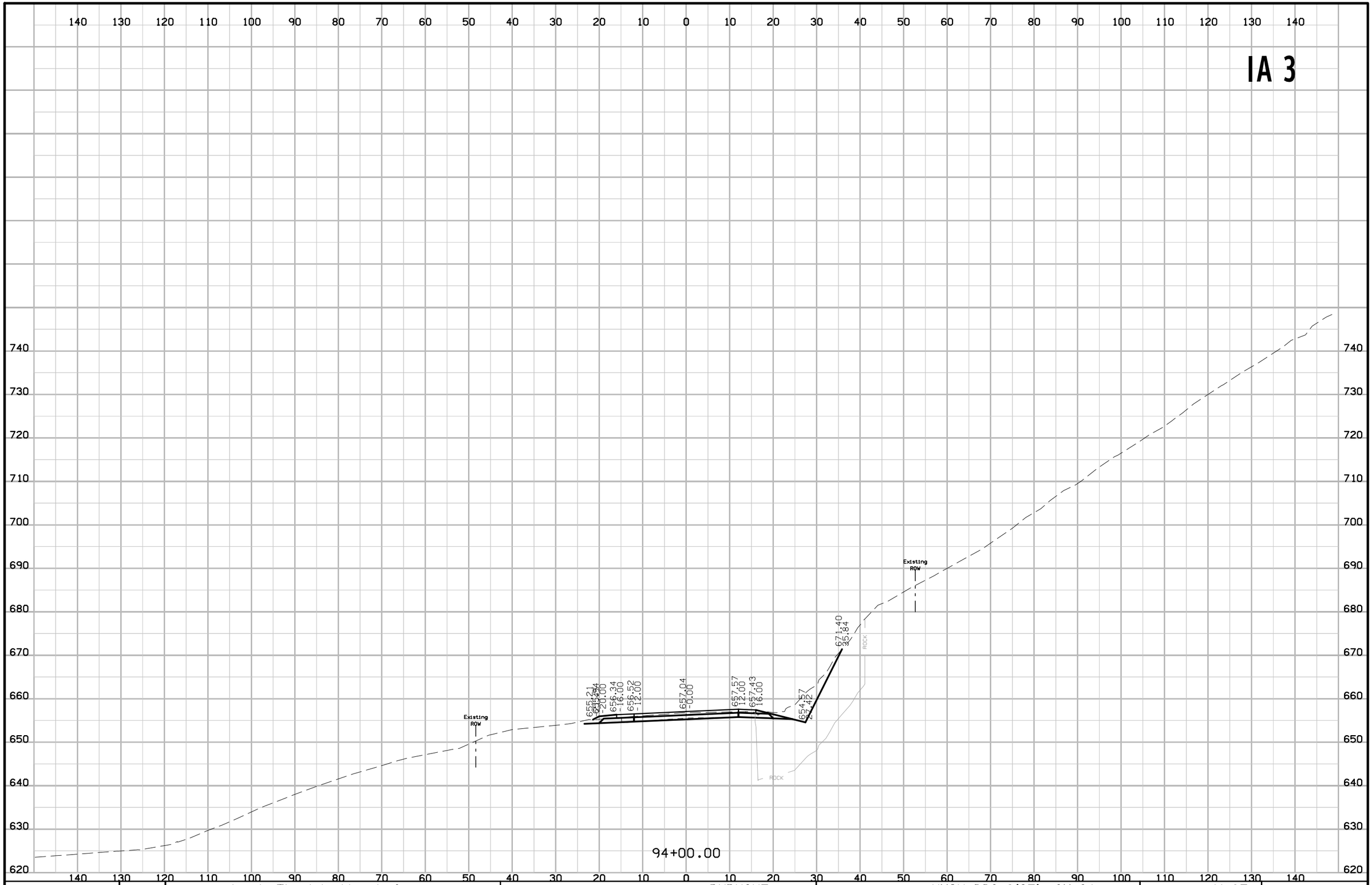
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.66

9:30:27 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

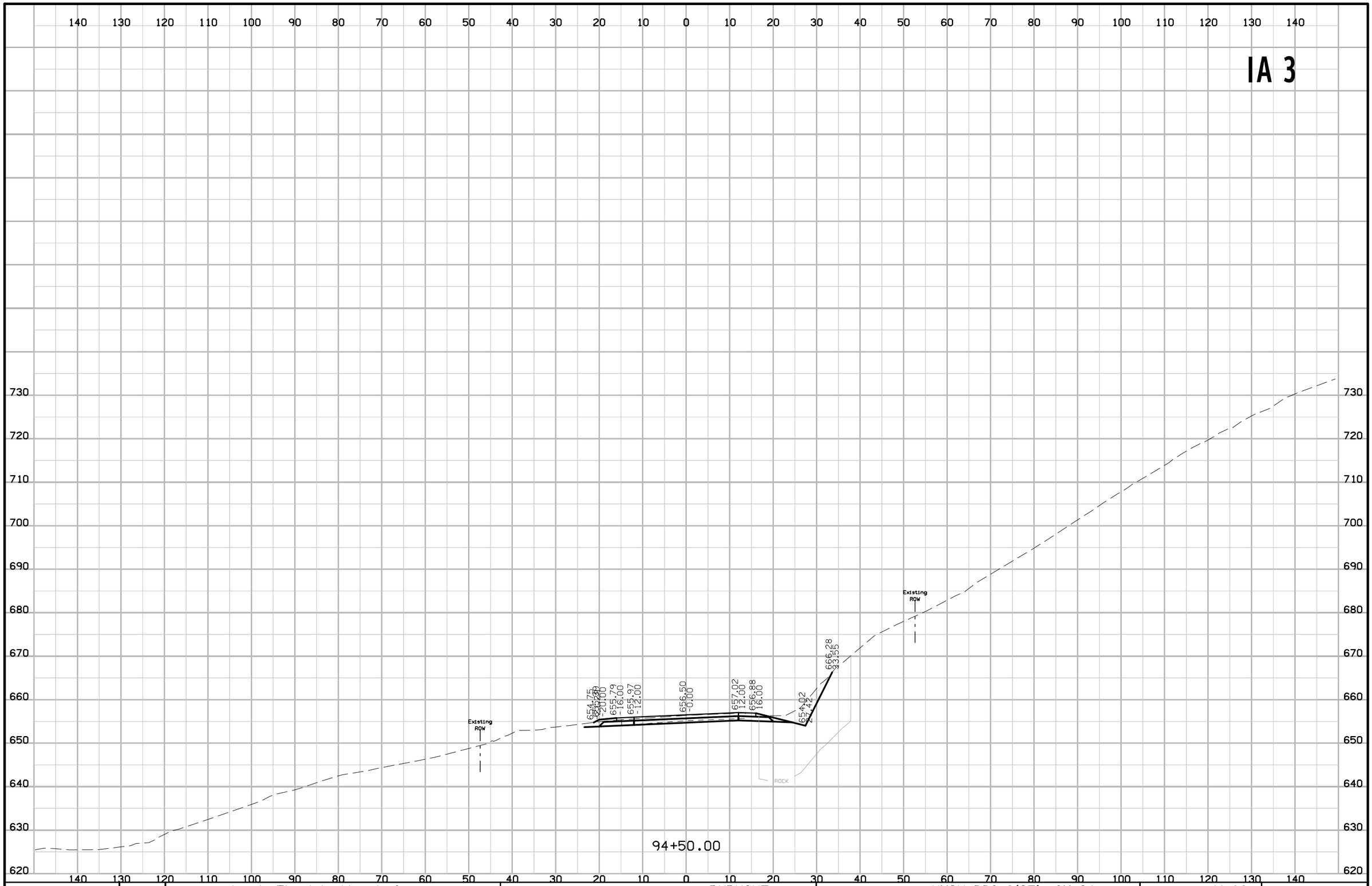
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.67

9:30:28 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

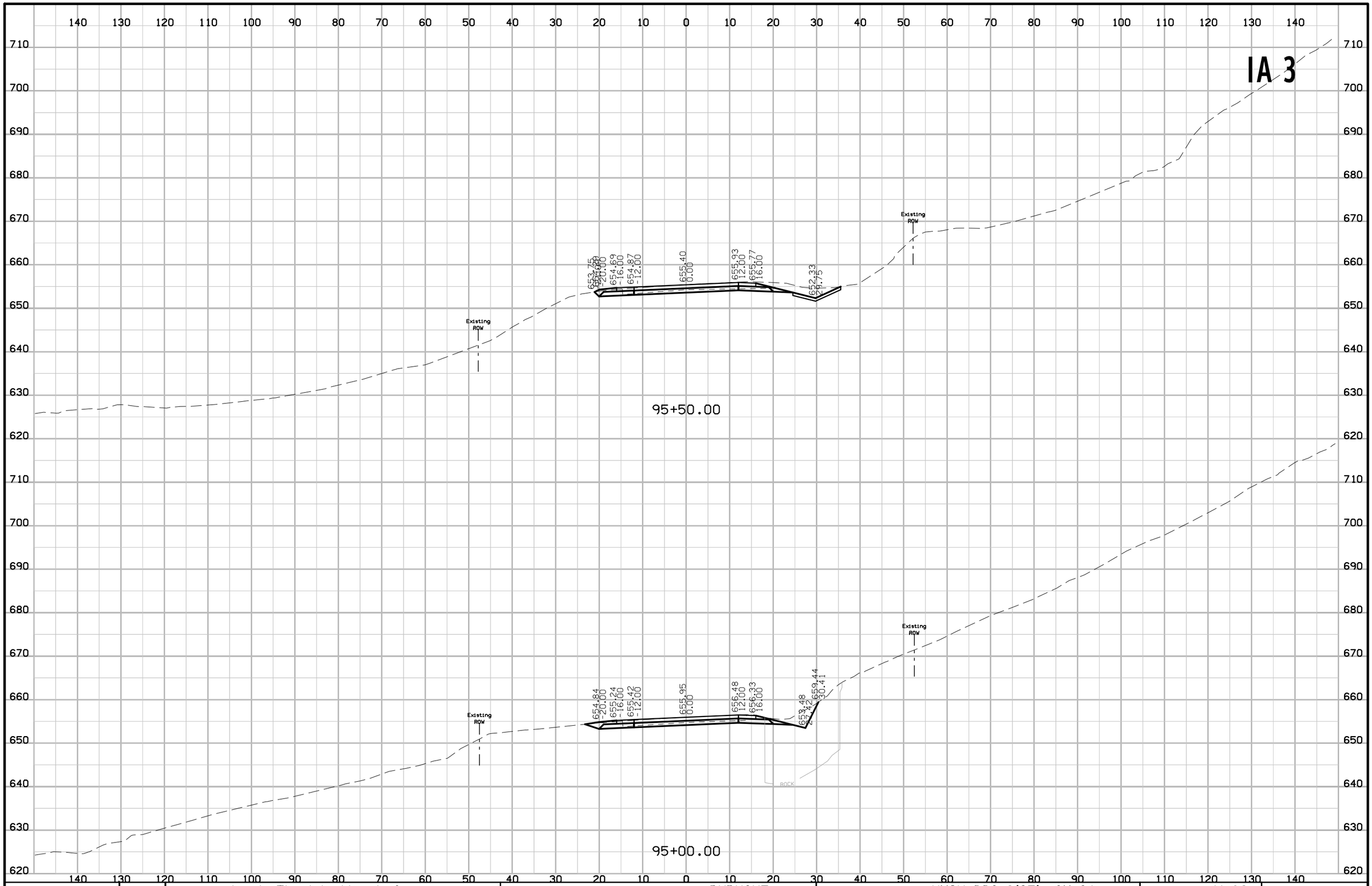
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Ja \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.68

9:30:29 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.69

11:25:41 AM 1/18/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

97+00.00

652.65
-20.00
653.22
-12.00
653.75
-0.00
654.28
12.00
654.74
46.40
647.50
89.16
Proposed ROW
Existing ROW
Existing ROW

96+50.00

653.20
-20.00
653.60
-16.00
653.77
-12.00
654.30
-0.00
654.83
12.00
654.69
16.00
649.23
87.52
633.64
159.11
Proposed ROW
Existing ROW
Existing ROW
Temporary ROW

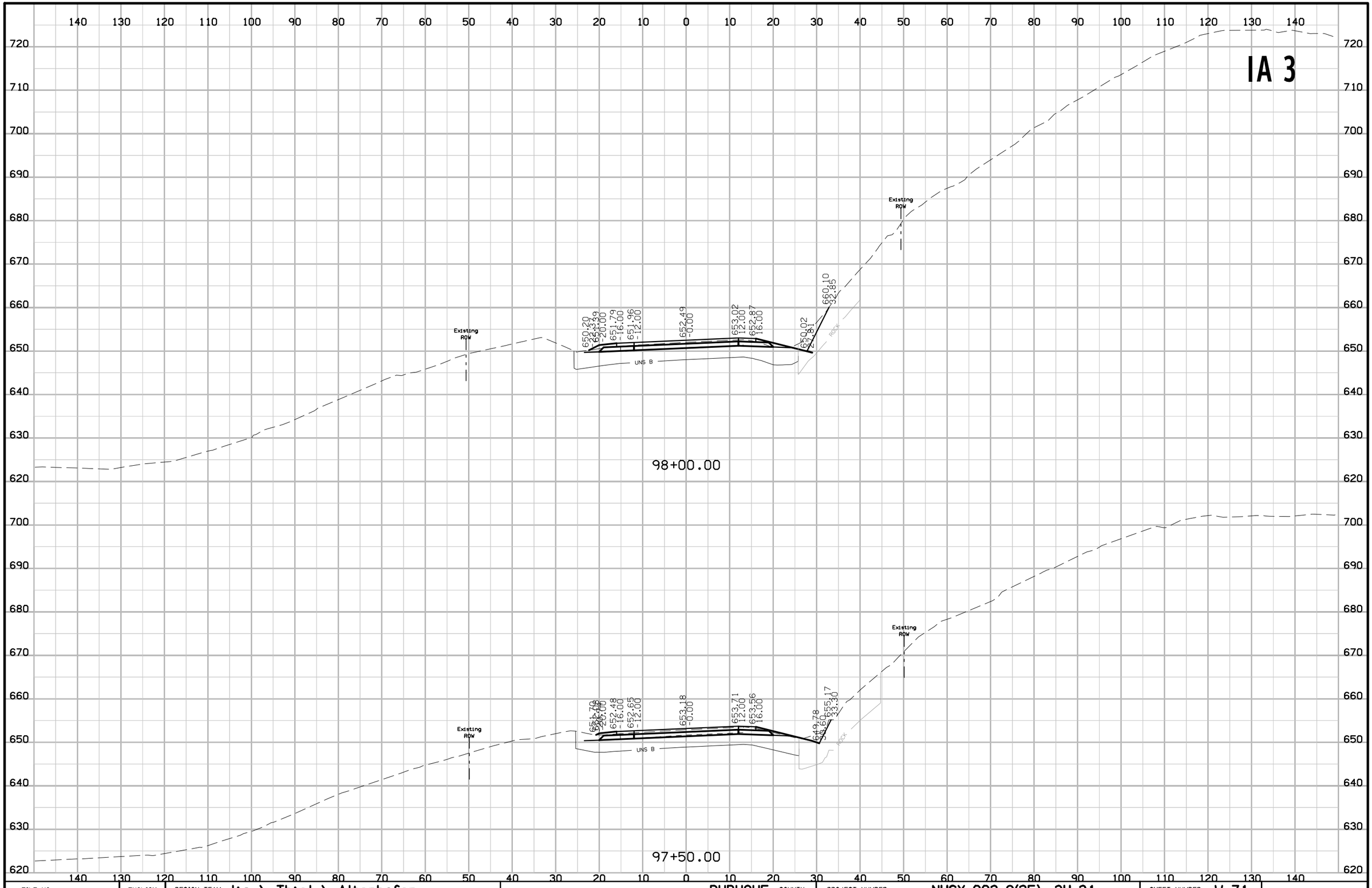
96+00.00

653.75
-20.00
654.15
-16.00
654.32
-12.00
654.85
-0.00
655.38
12.00
631.01
63.46
Proposed ROW
Existing ROW
Existing ROW
Temporary ROW

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.70

11:25:43 AM 1/18/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

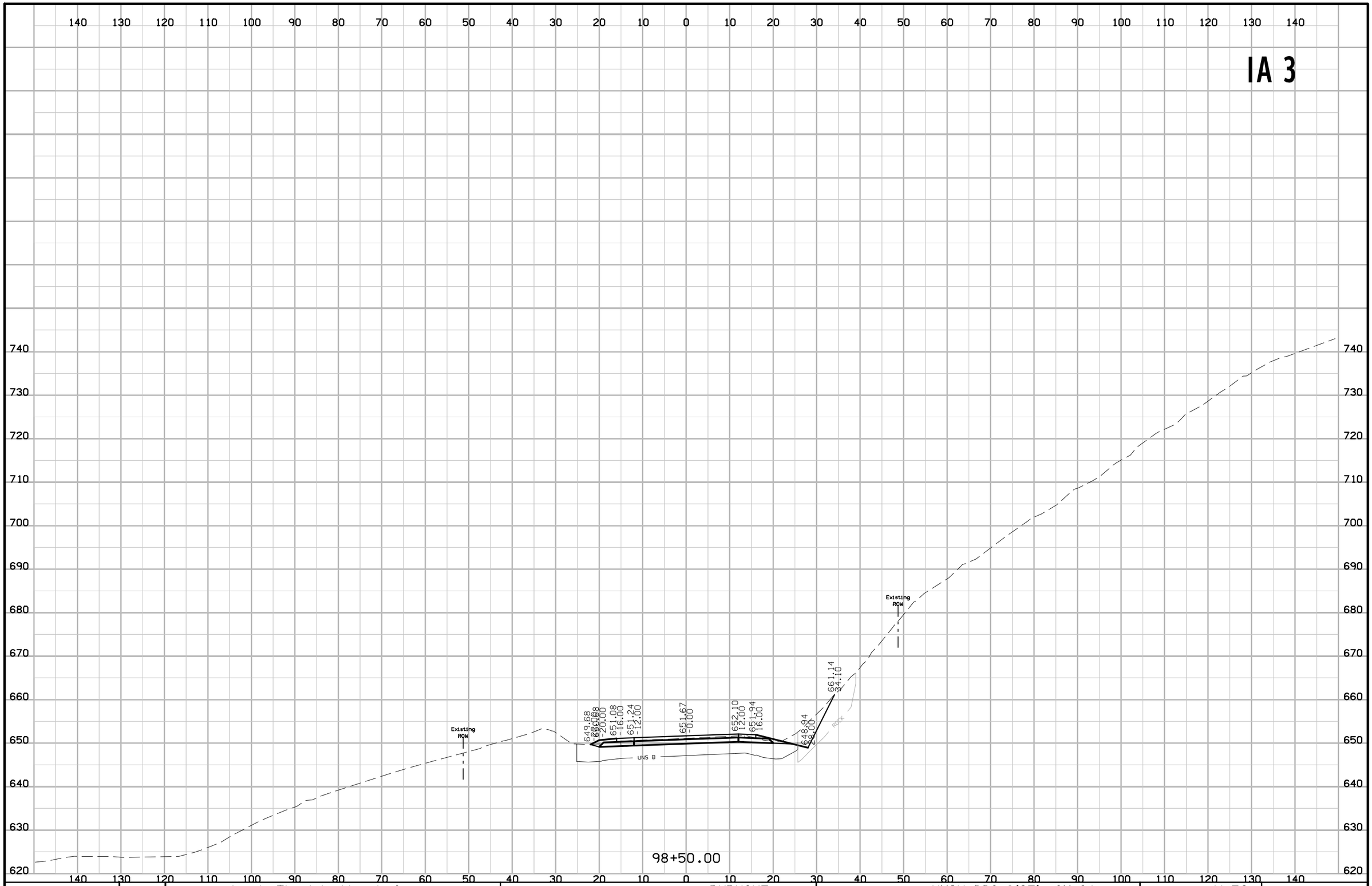
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.71

9:30:31 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

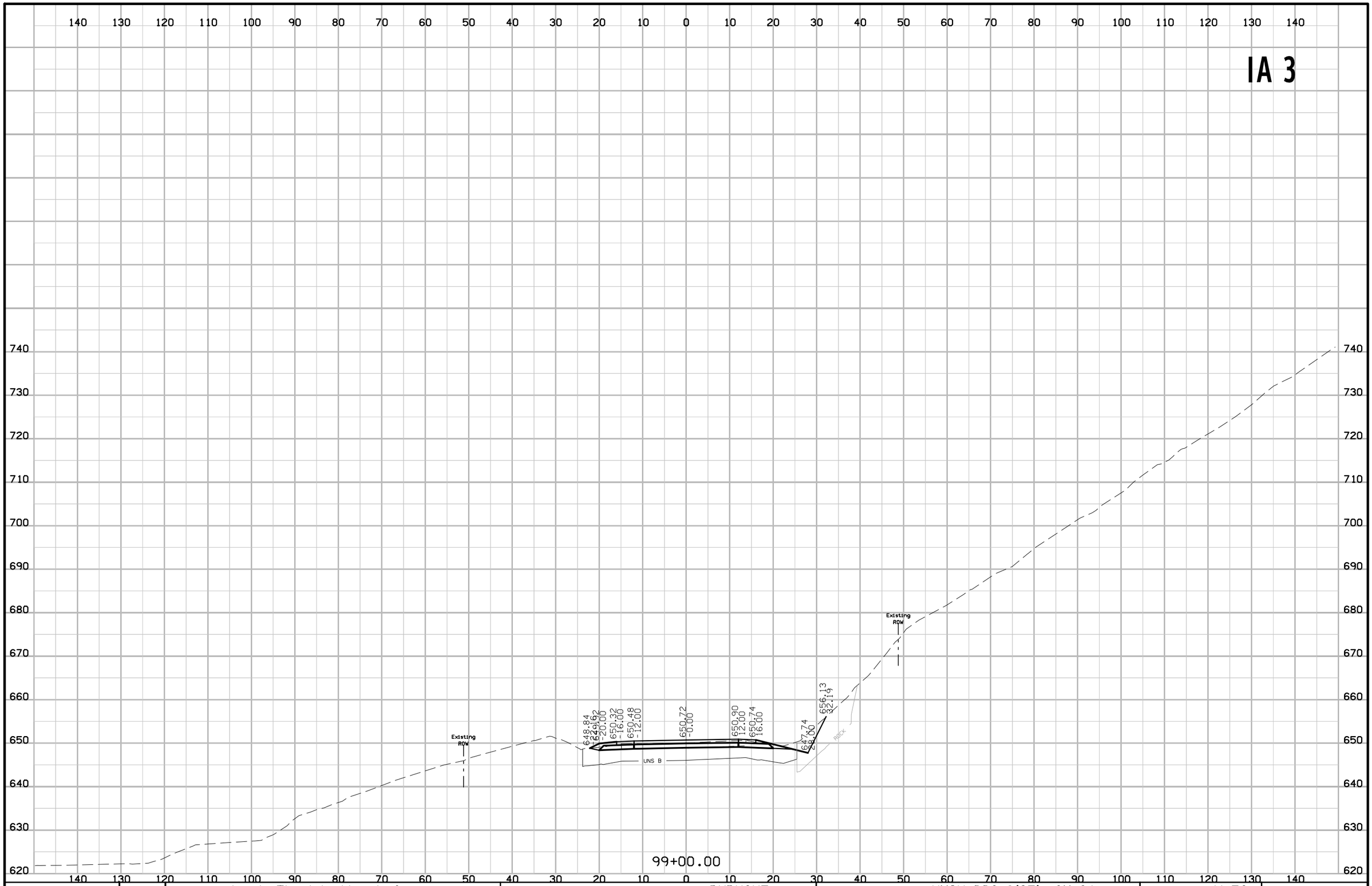
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.72

9:30:32 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

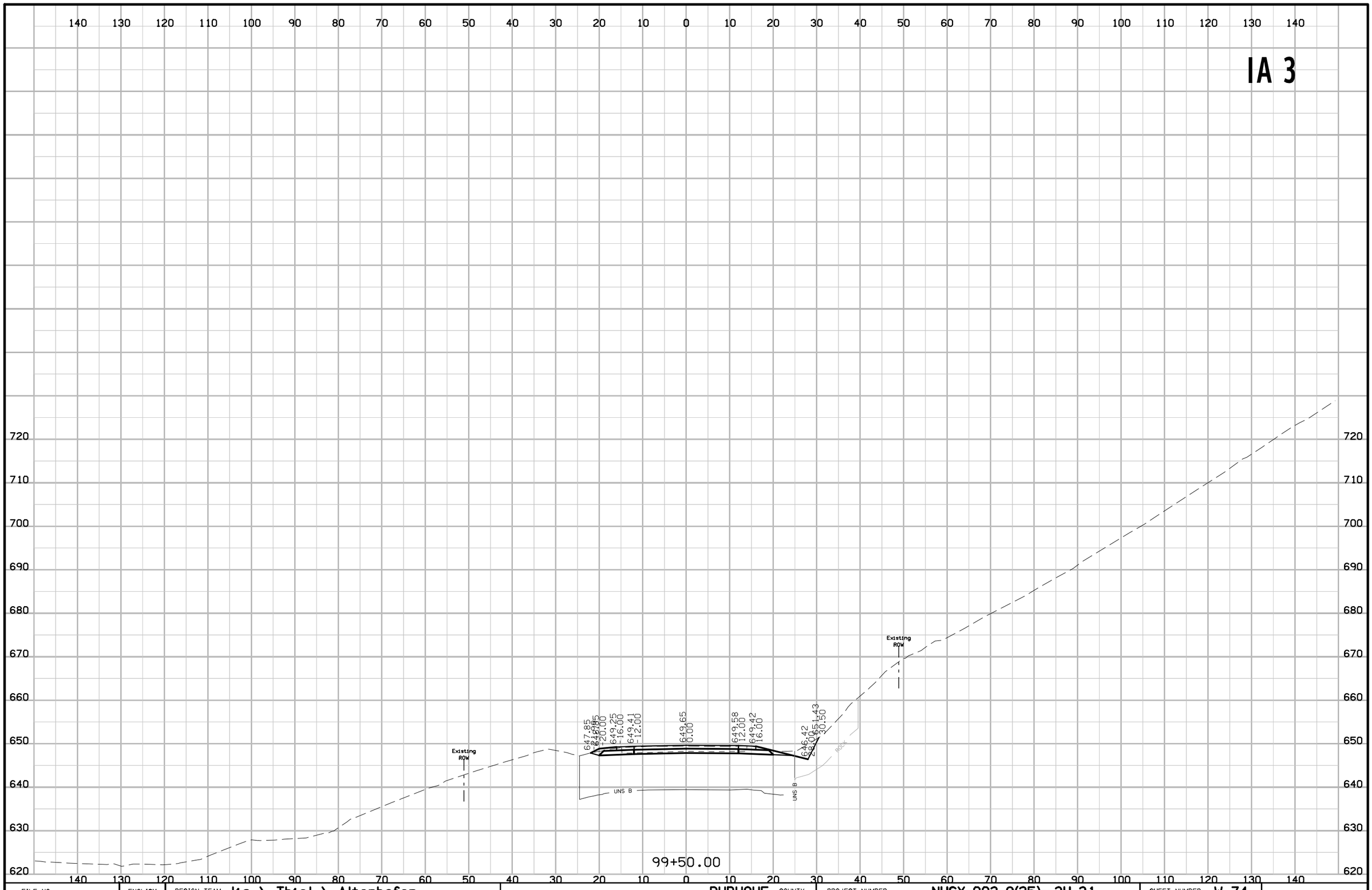
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.73

9:30:33 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.74

9:30:34 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

690 680 670 660 650 640 630 620

Existing ROW

646.31 -20.00 | 646.71 -16.00 | 646.87 -12.00 | 647.11 0.00 | 646.87 12.00 | 646.71 16.00 | 648.71 28.00 | 650.57 31.43

UNS B

UNS B

ROCK

Temporary ROW

Existing ROW

100+50.00

700 690 680 670 660 650 640 630 620

Existing ROW

646.73 -20.00 | 646.84 -16.00 | 648.04 -12.00 | 648.20 0.00 | 648.44 12.00 | 648.20 16.00 | 648.04 28.00 | 645.04 31.83

UNS B

UNS B

ROCK

Existing ROW

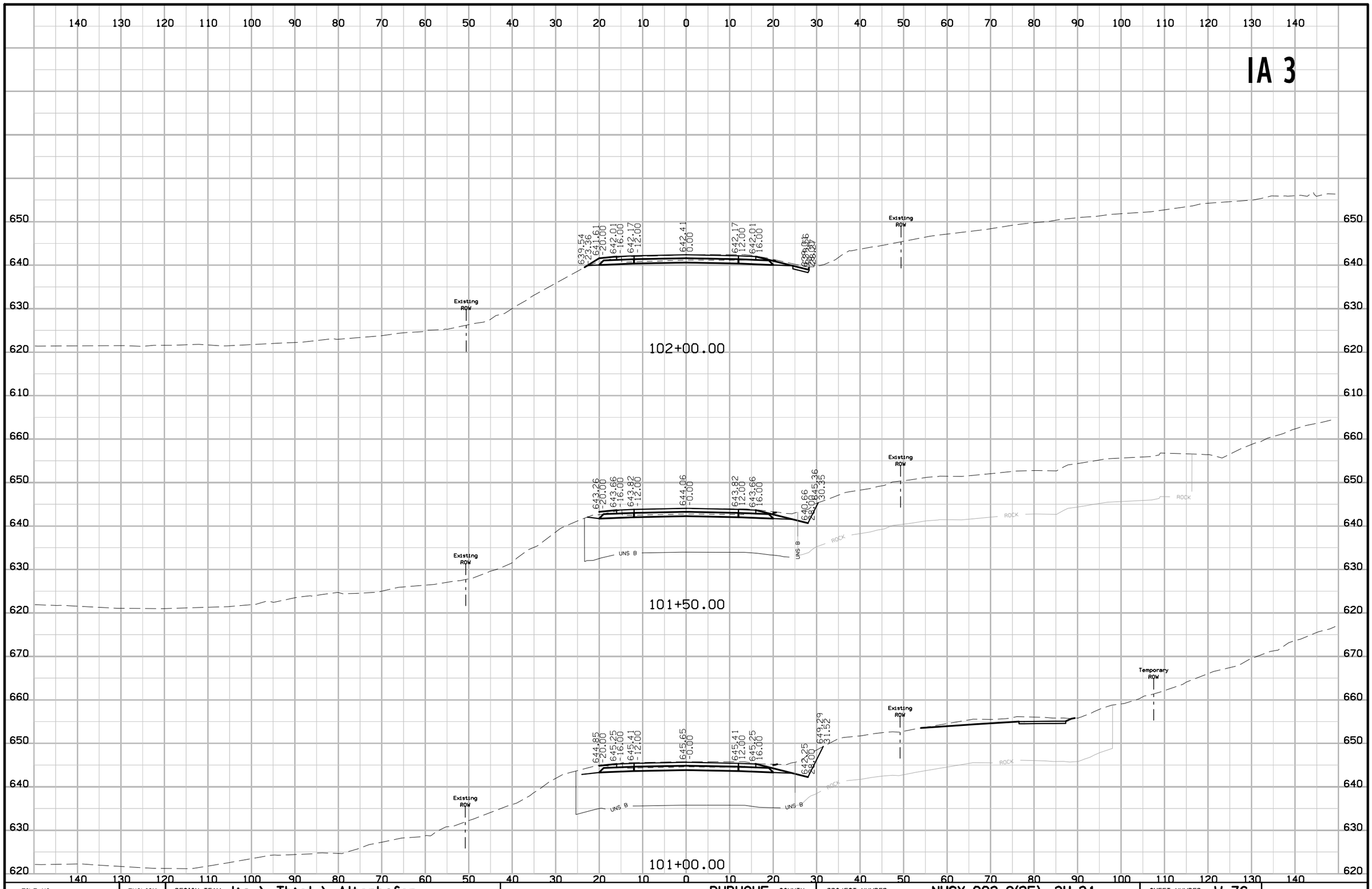
100+00.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.75

9:30:35 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

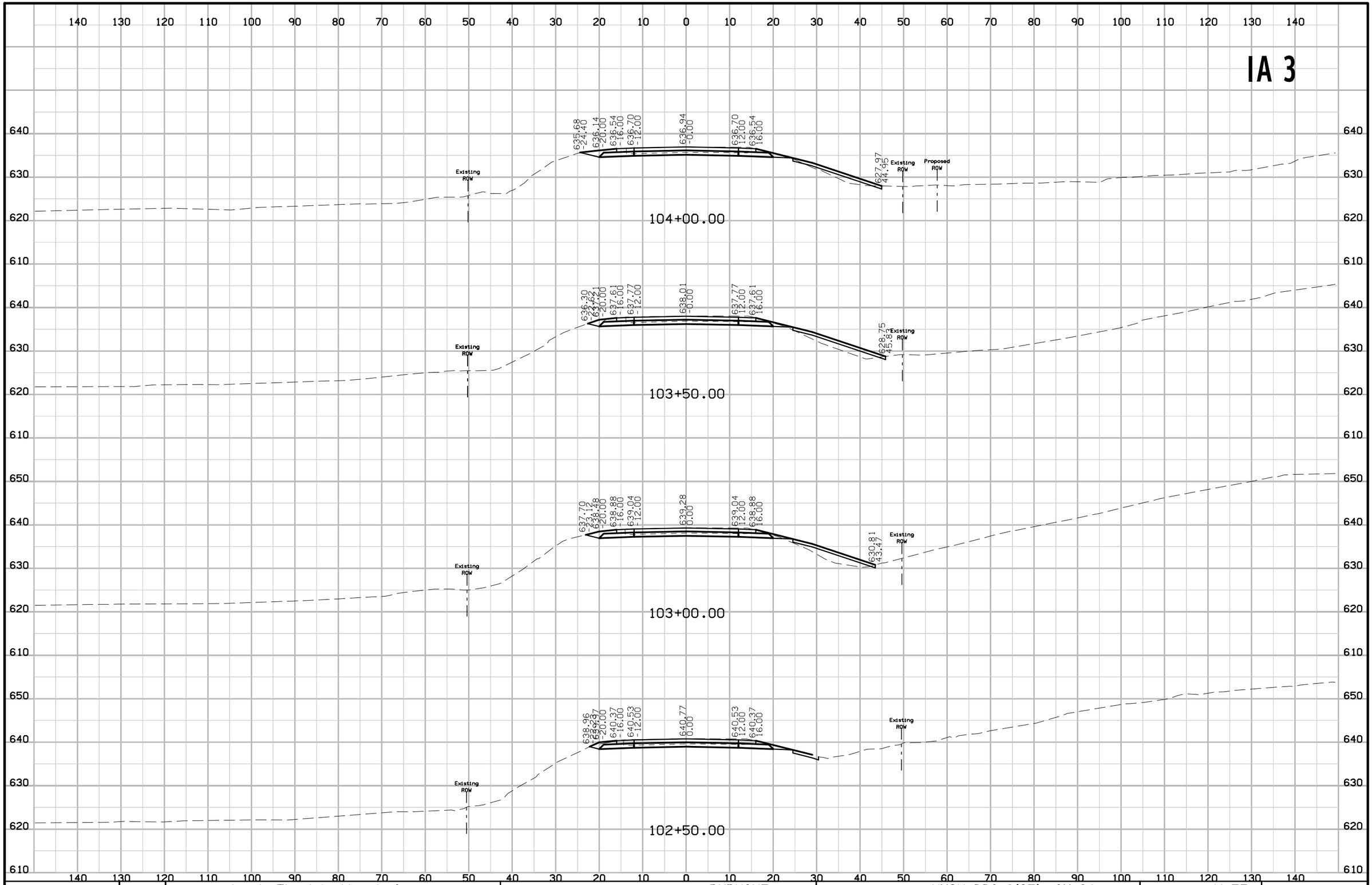
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.76

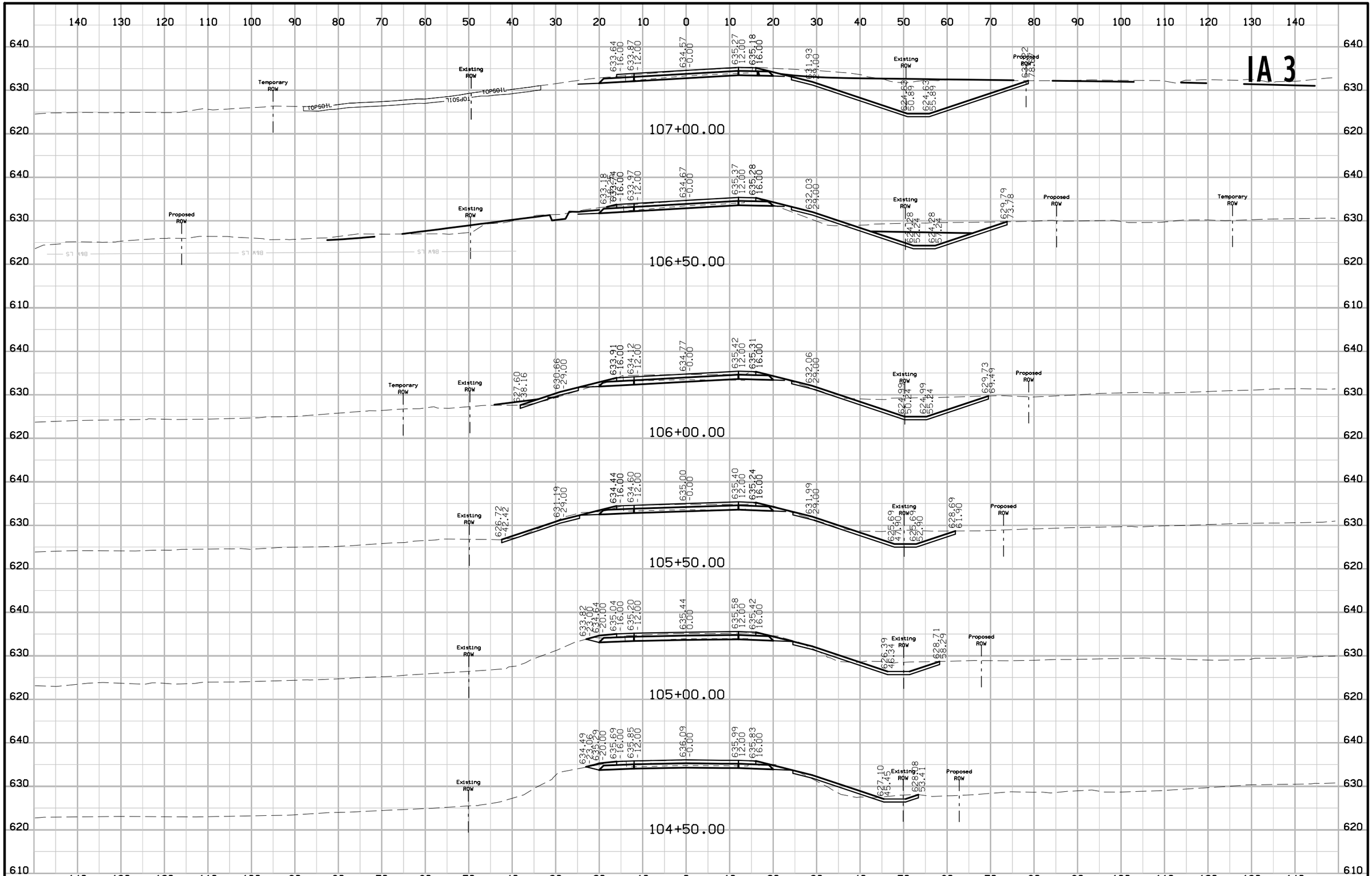
9:30:36 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.77

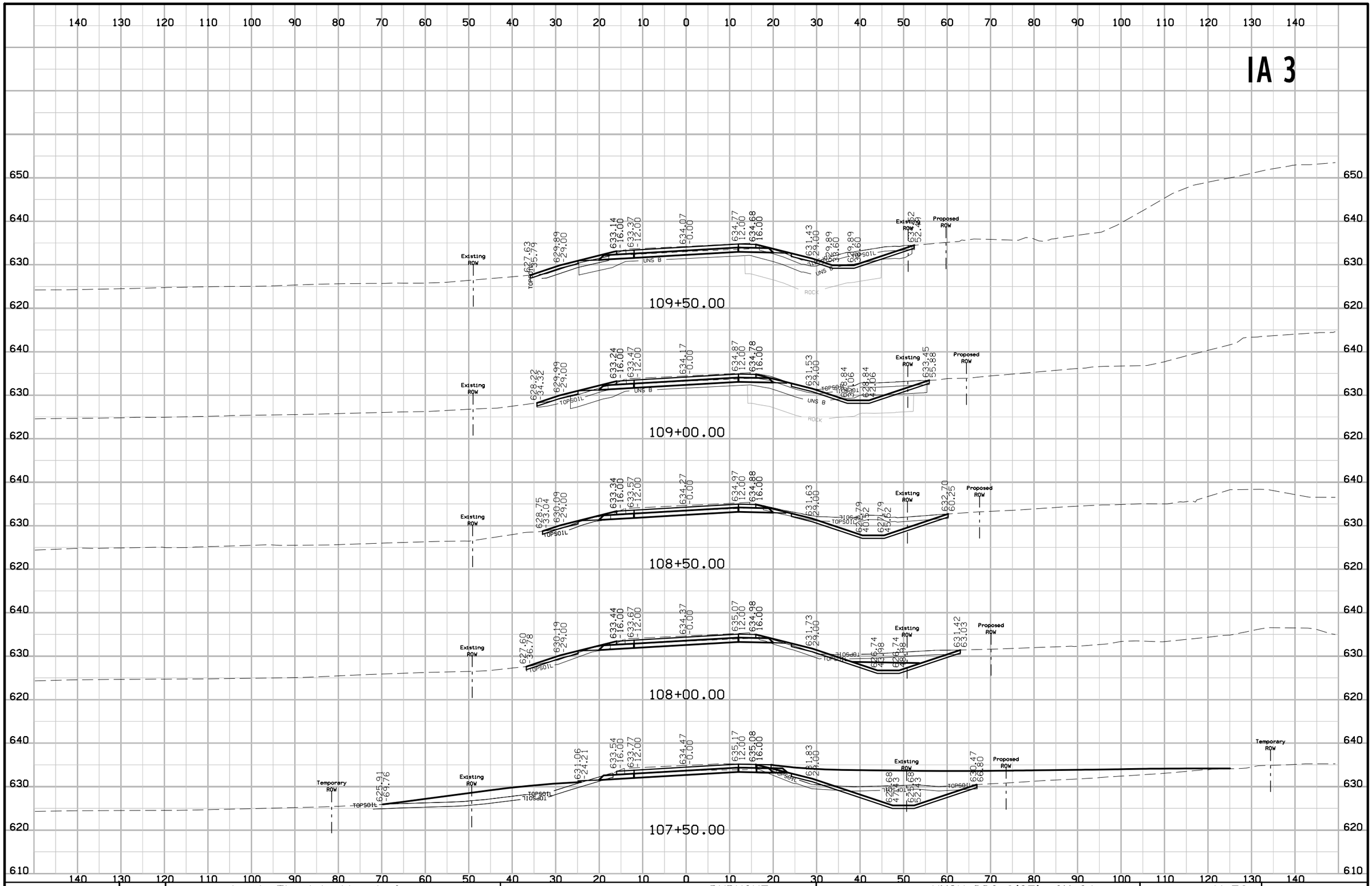
9:30:36 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.78

9:30:37 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

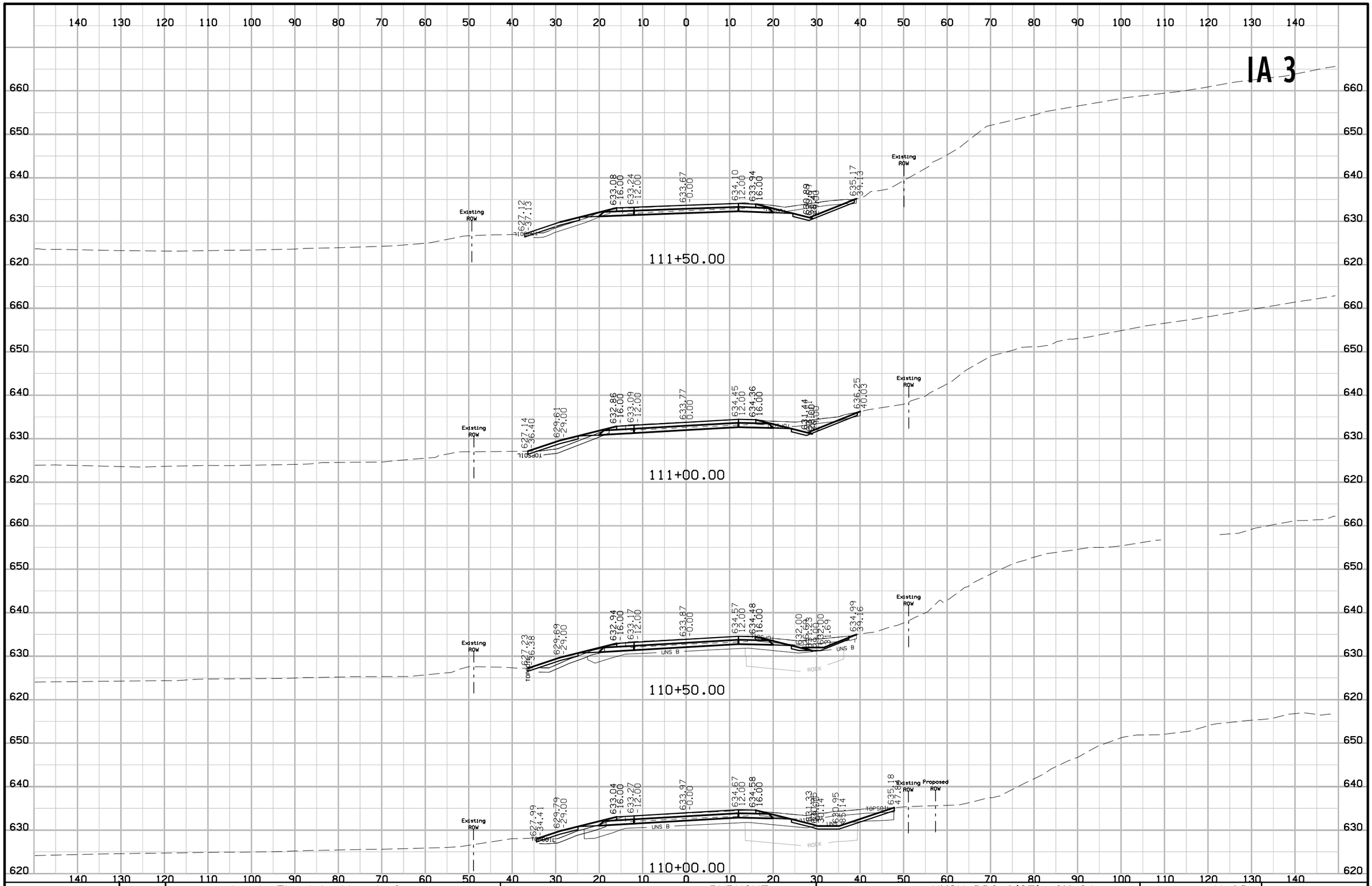
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.79

9:30:38 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

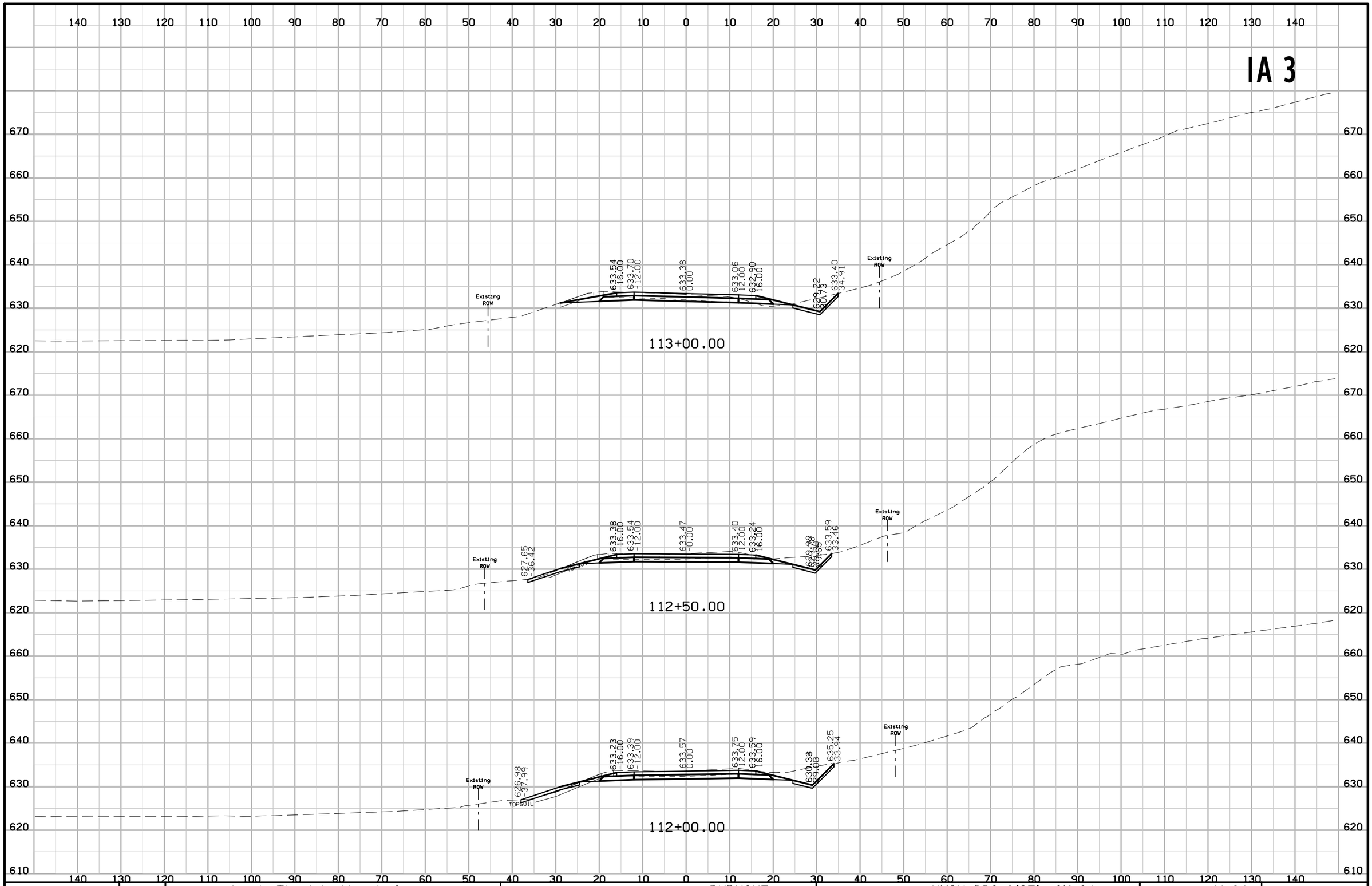
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.80

9:30:39 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

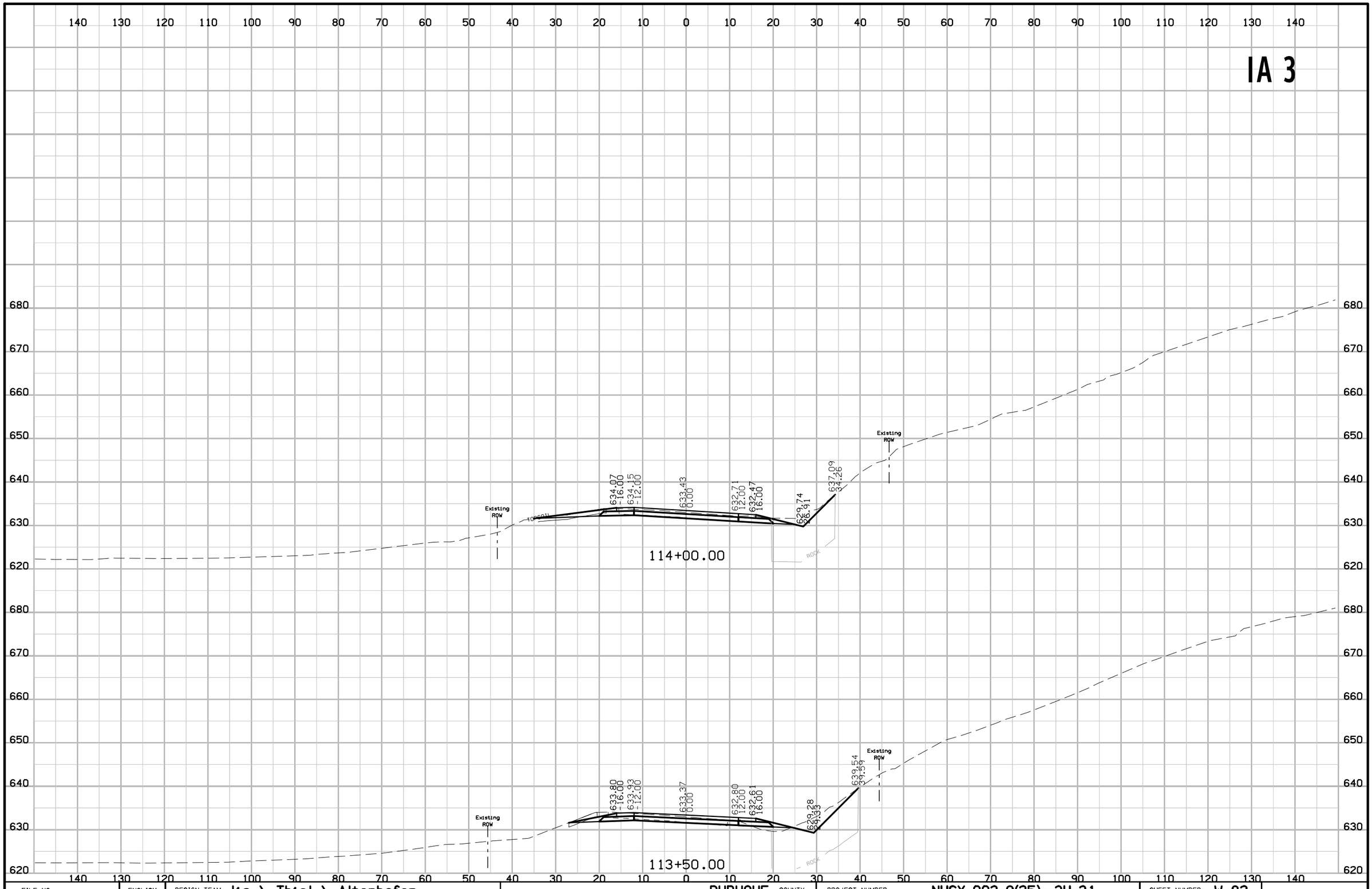
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.81

9:30:40 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

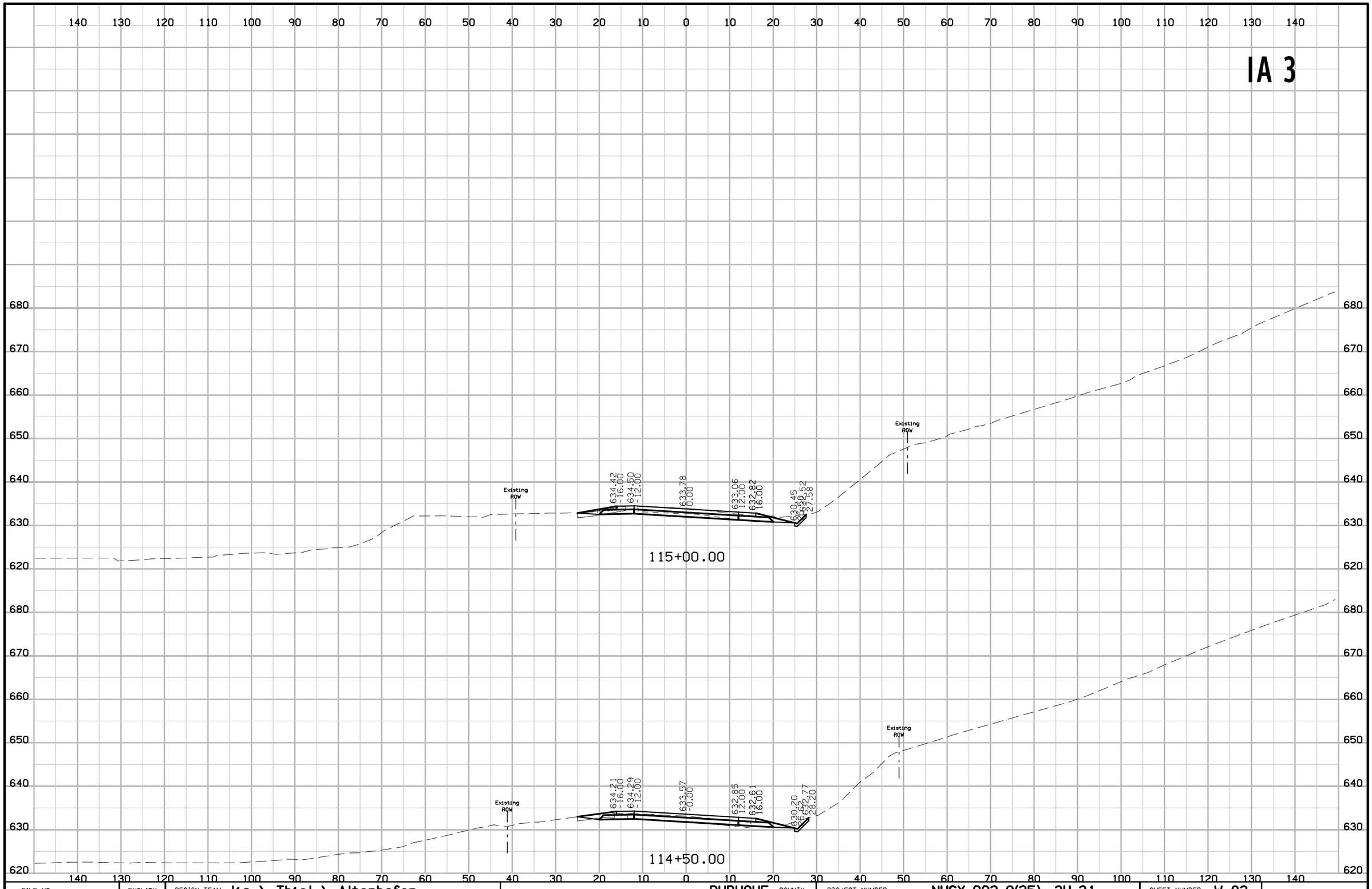
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.82

9:30:41 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

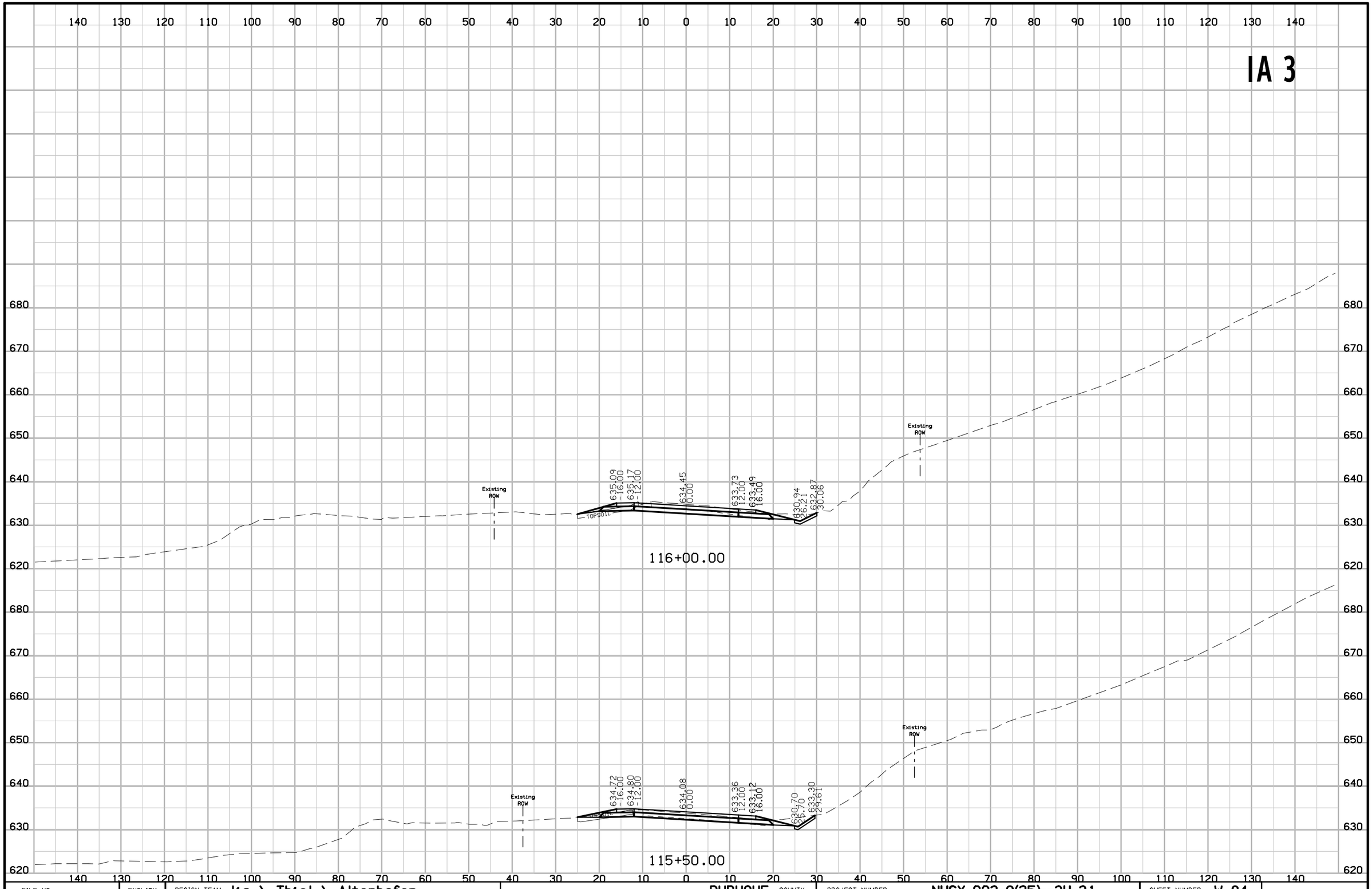
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.83

9:30:42 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

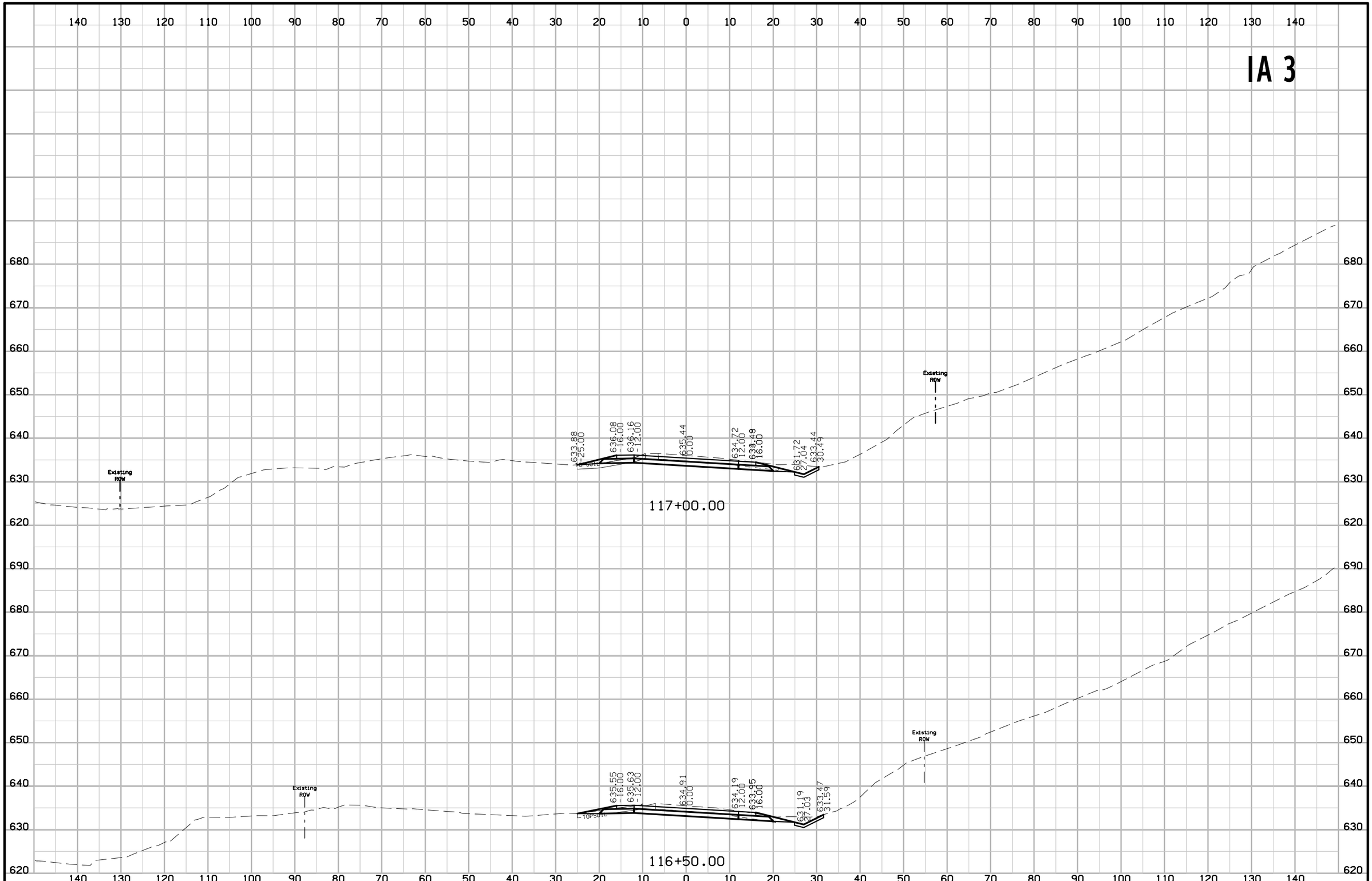
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.84

9:30:43 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.85

9:30:43 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

690 680 670 660 650 640 630 620

Existing ROW

637.38
16.00
637.46
12.00

636.74
10.00

636.02
12.00
635.78
16.00
633.02
633.46
29.93

118+00.00

Existing ROW

Existing ROW

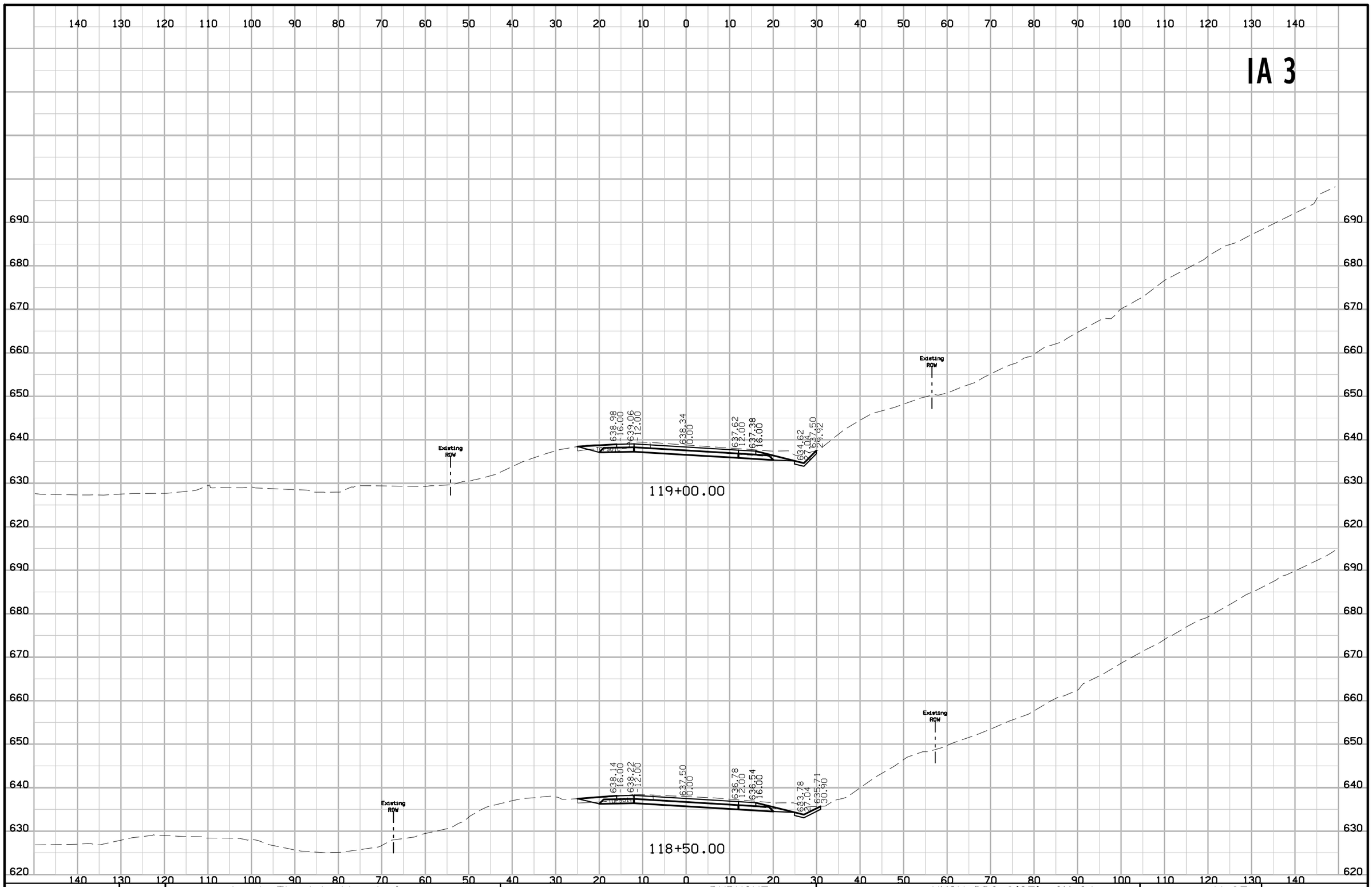
117+50.00

Existing ROW

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.86

9:30:44 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

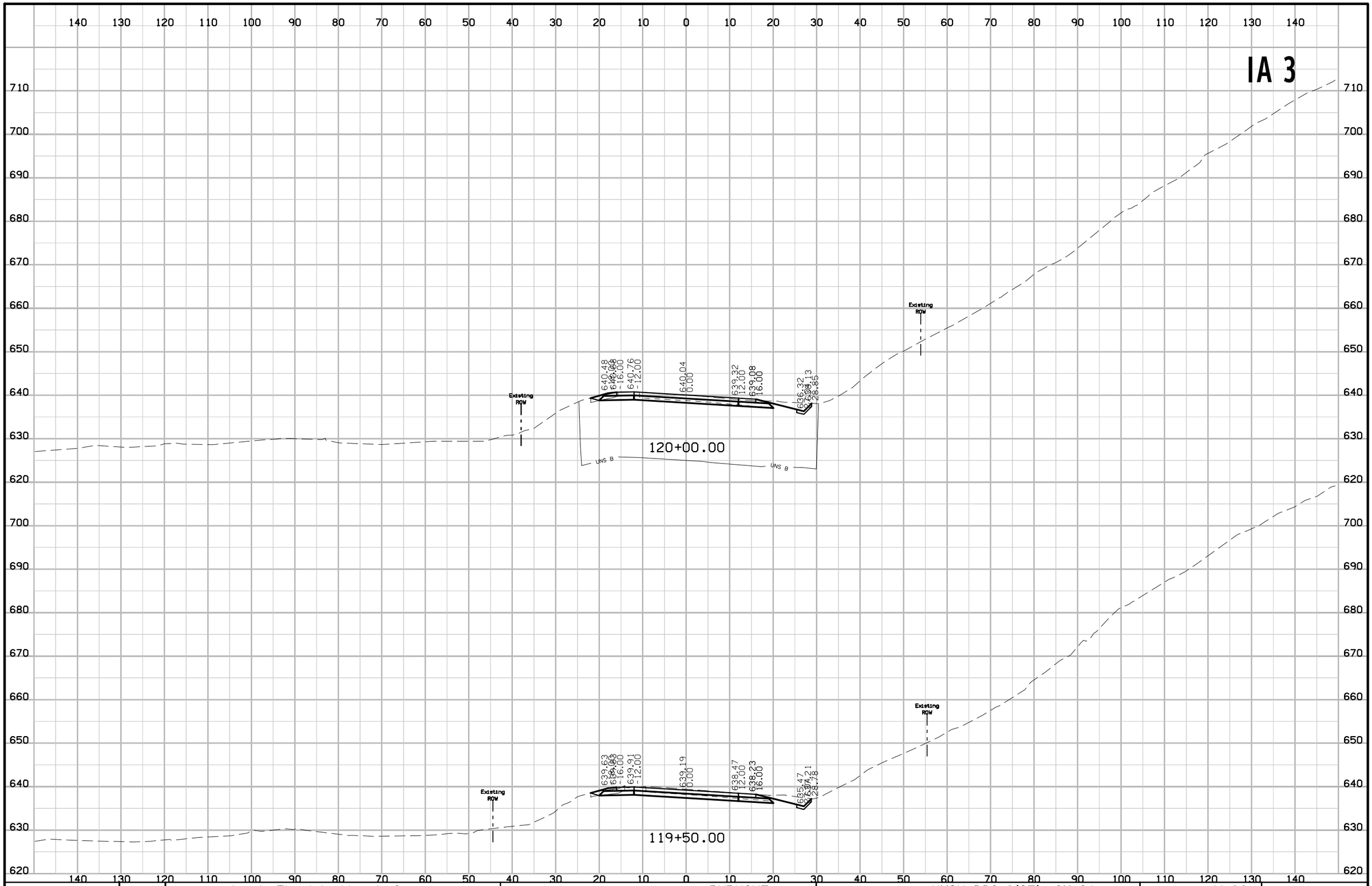
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.87

2:36:49 PM 2/23/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

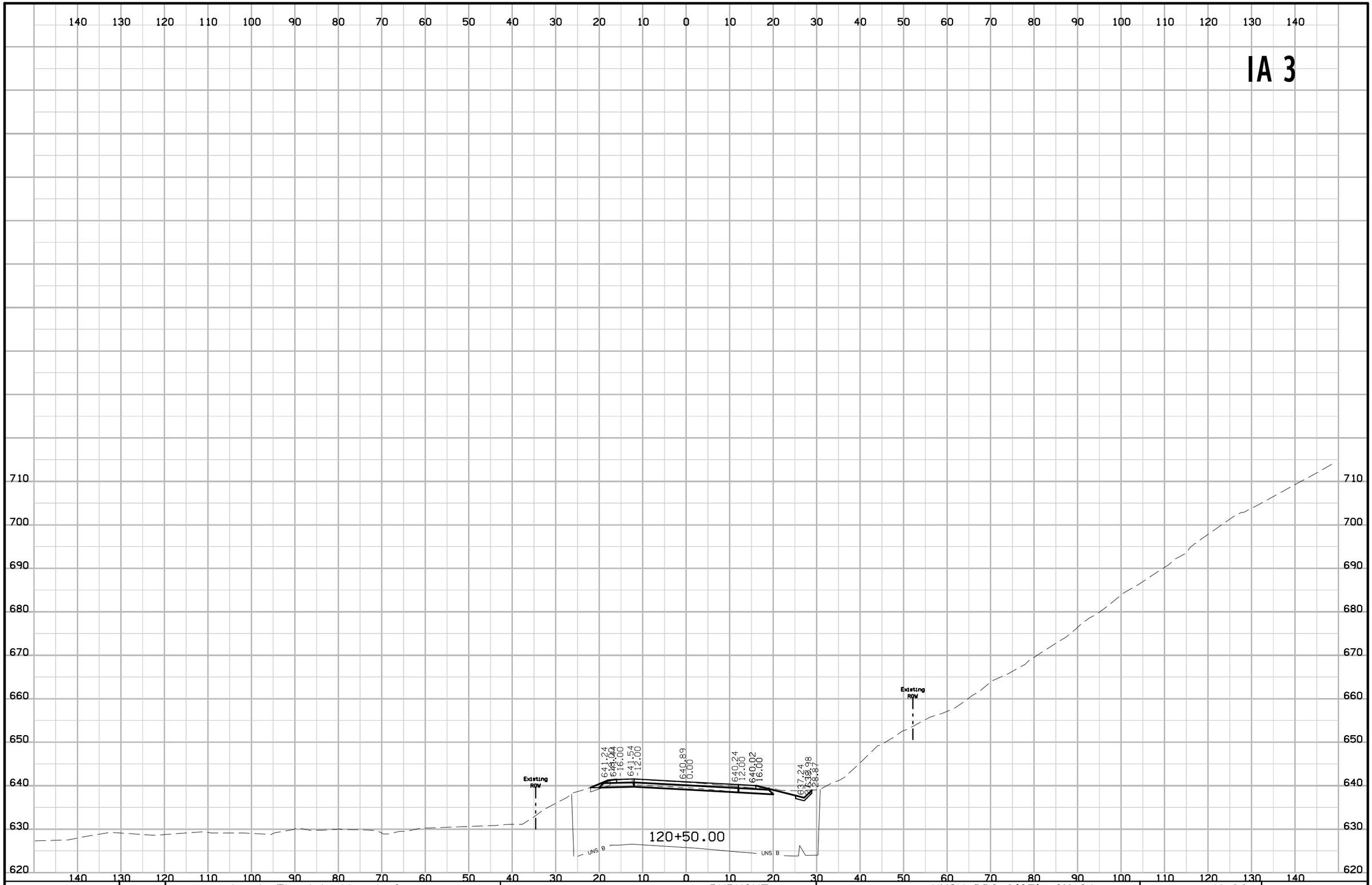
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.88

9:30:46 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

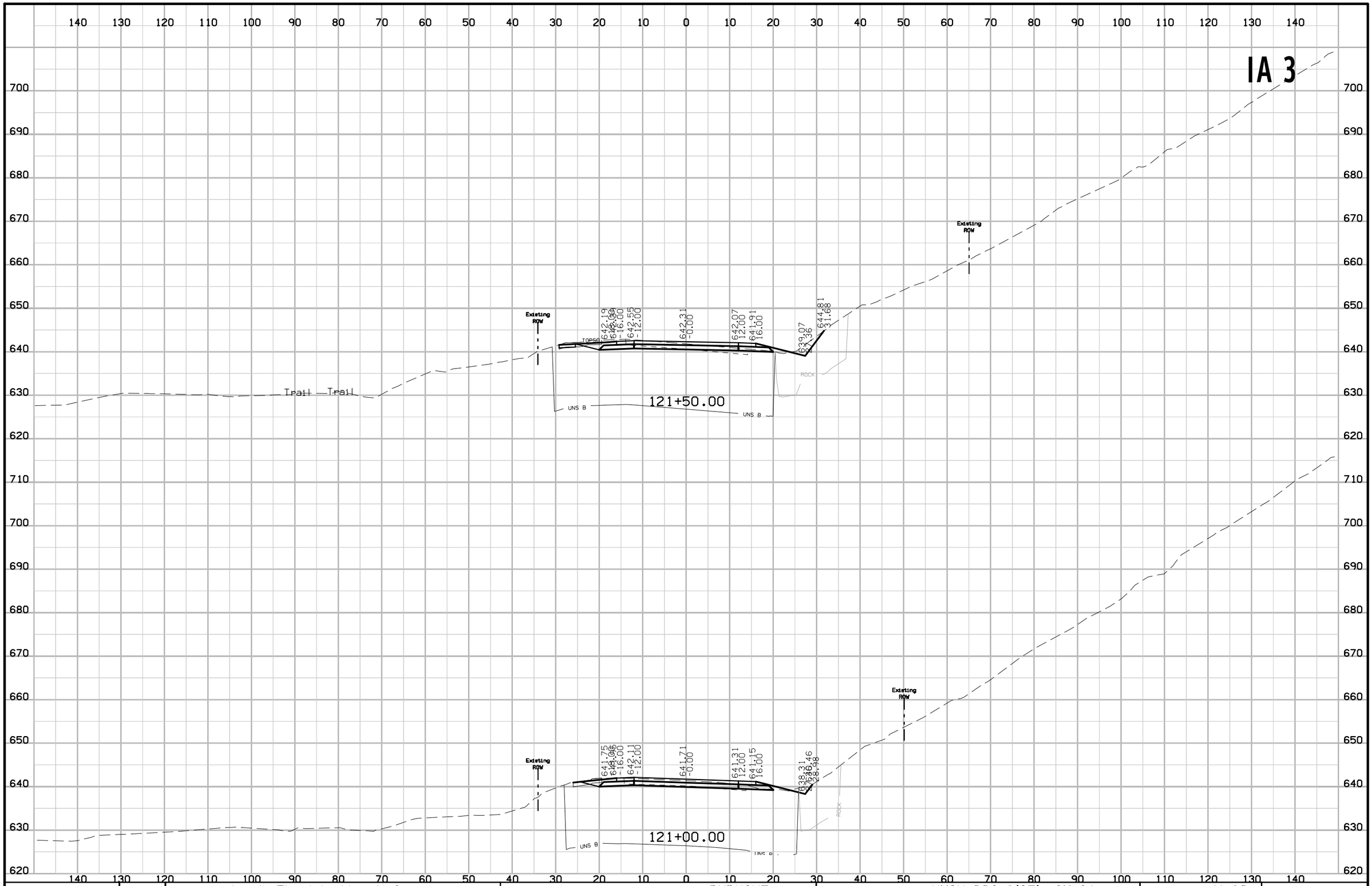
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.89

9:30:47 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

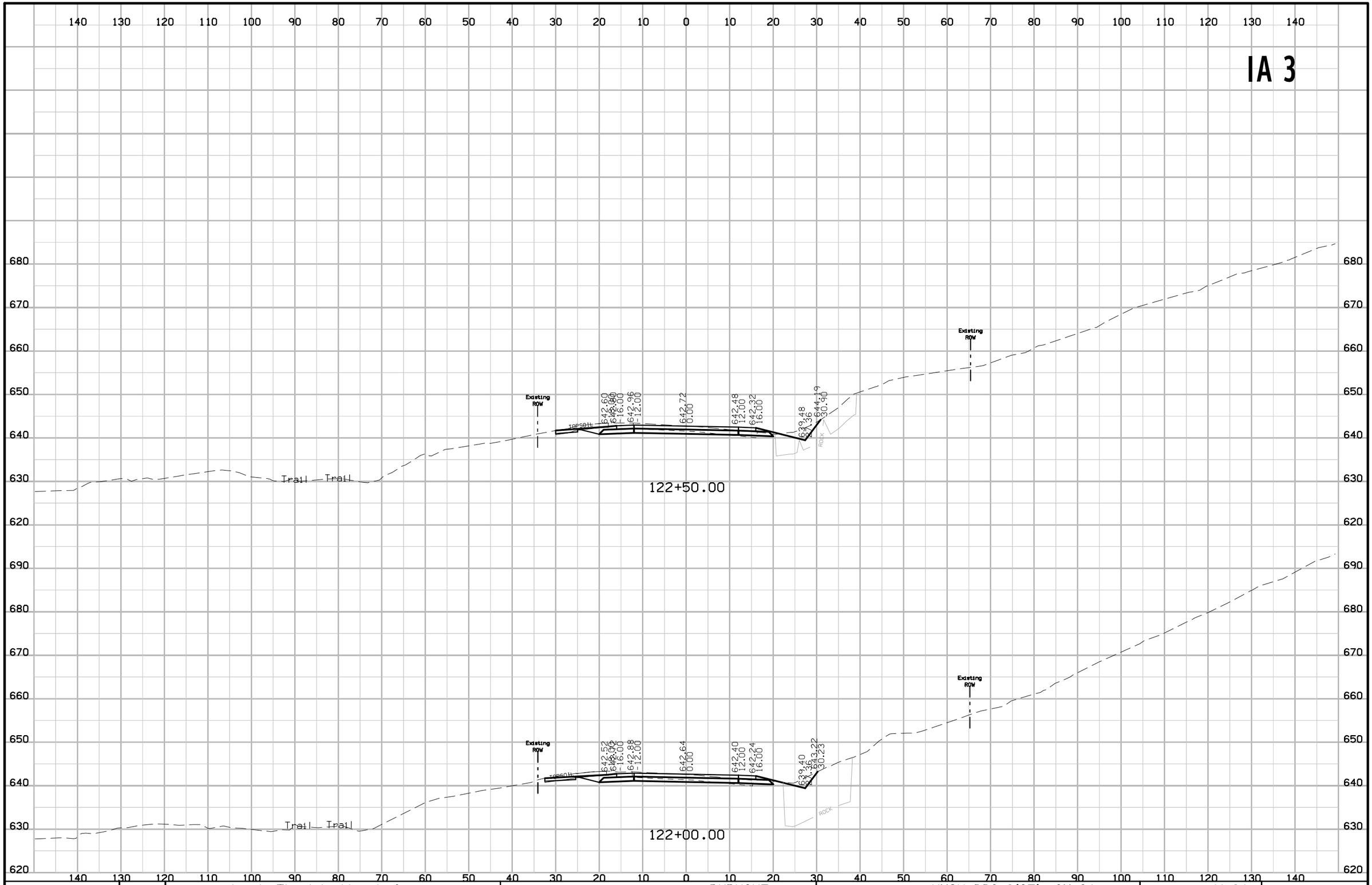
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.90

9:30:48 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

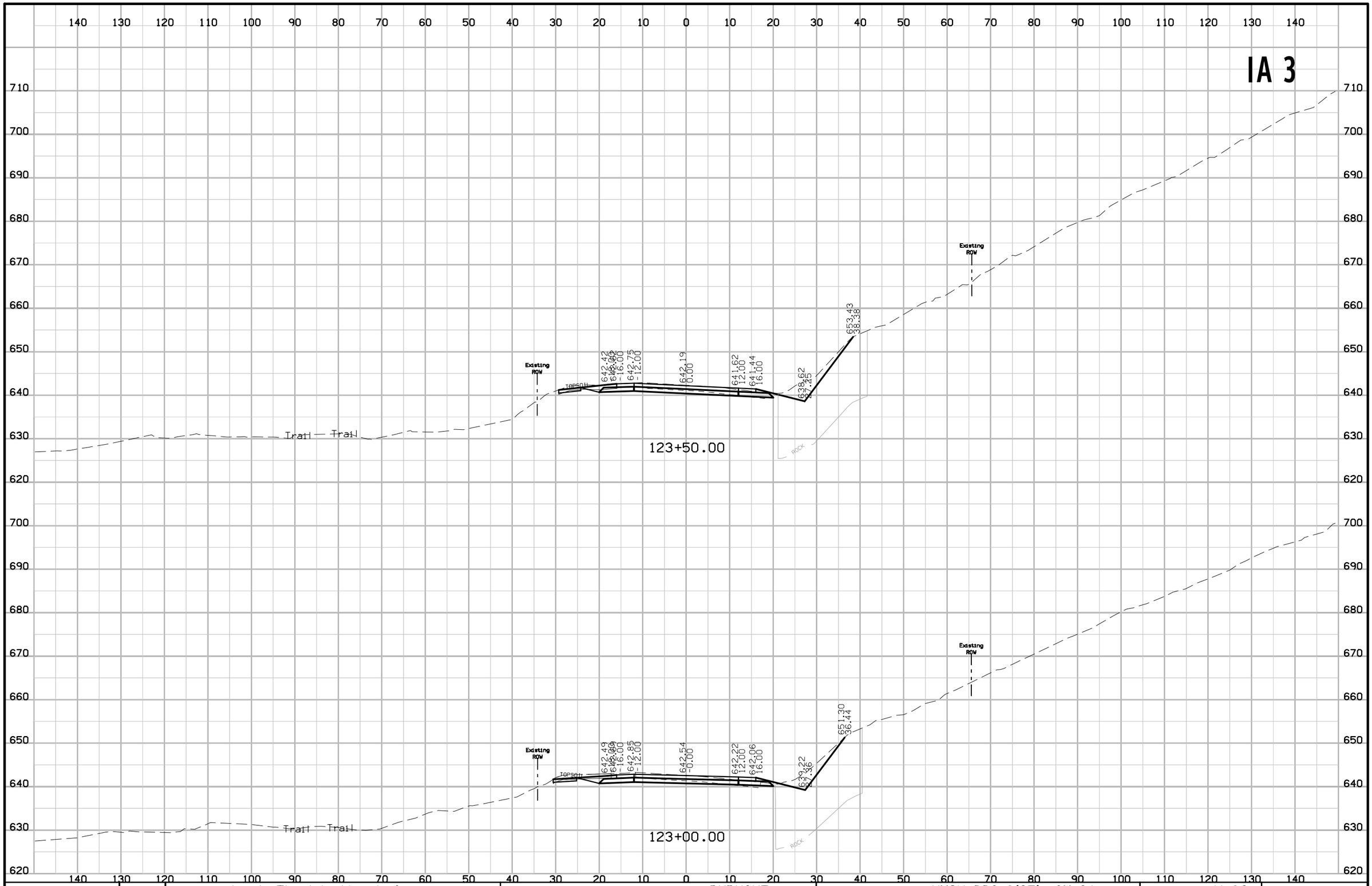
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.91

9:30:49 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

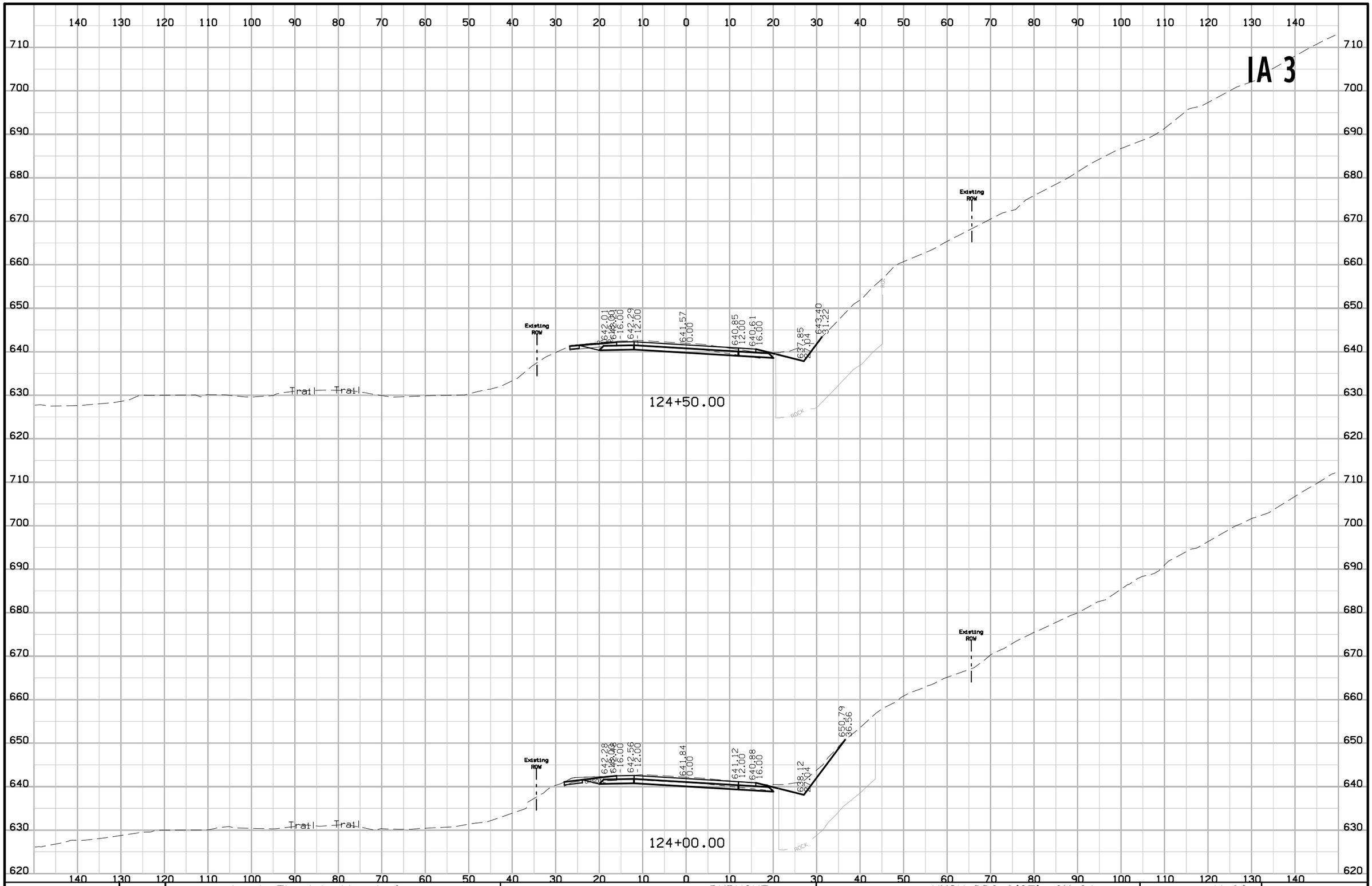
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.92

9:30:49 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

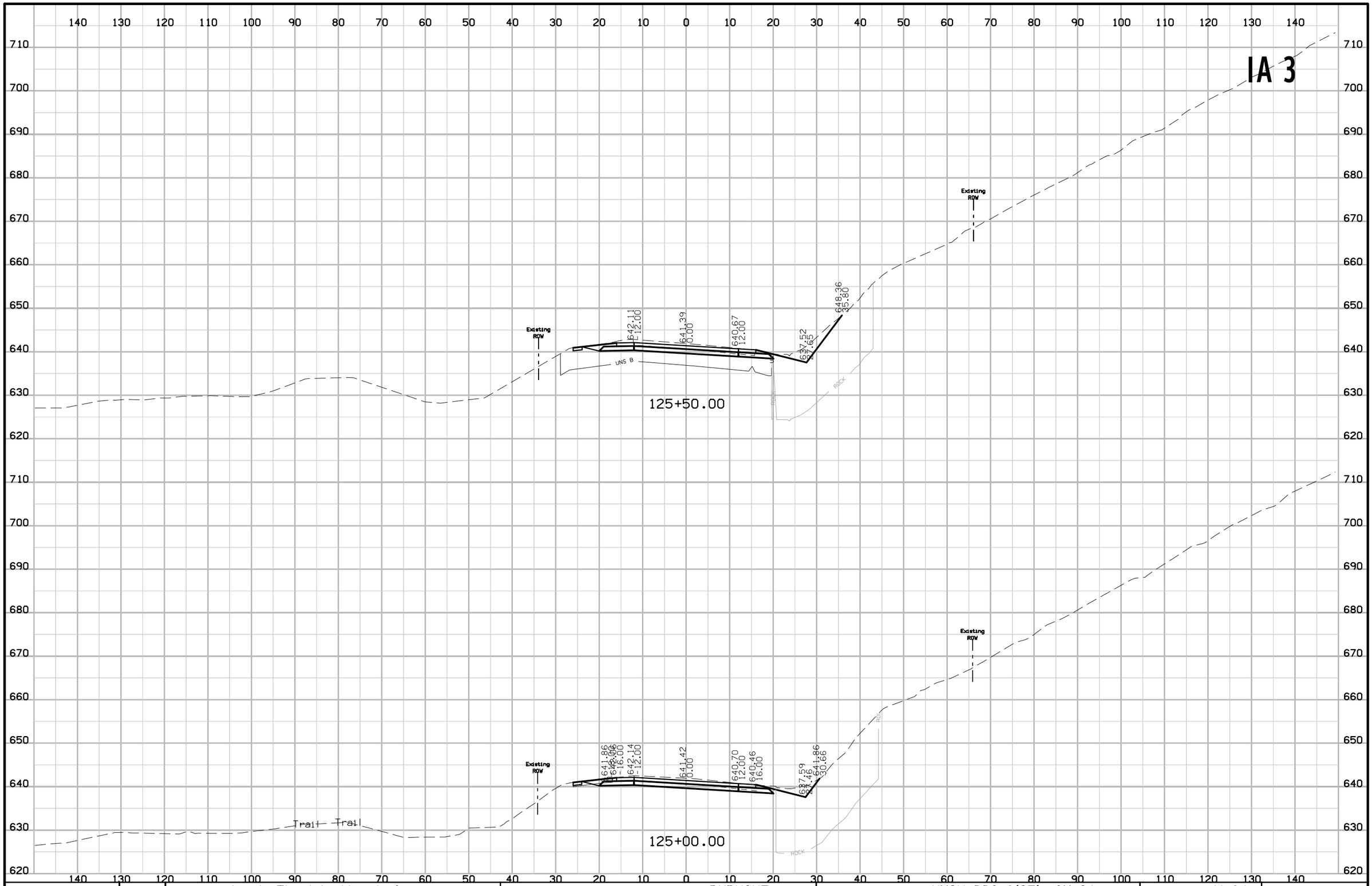
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.93

9:30:50 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

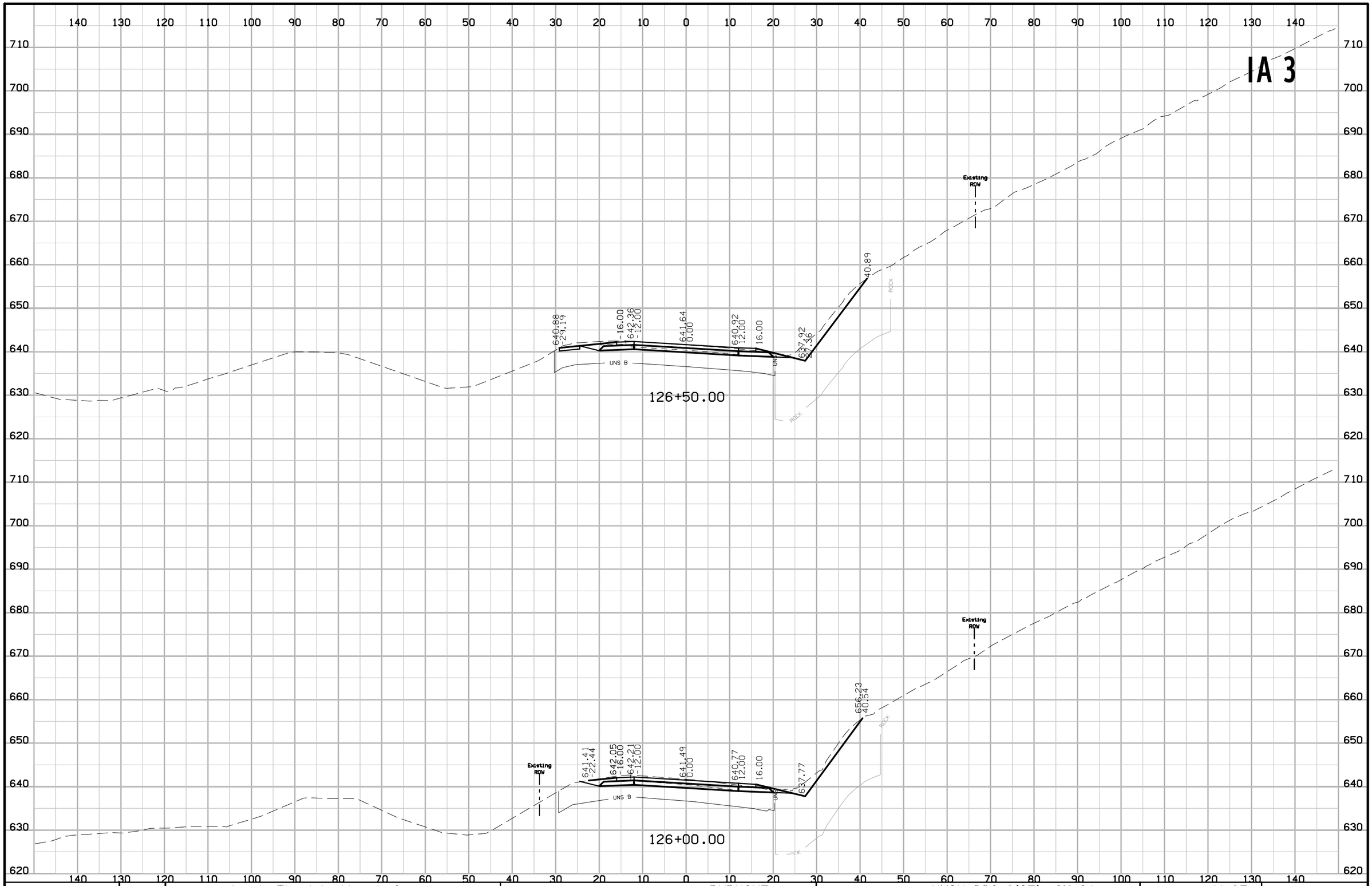
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.94

11:25:44 AM 1/18/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.95

11:25:45 AM 1/18/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

710 700 690 680 670 660 650 640 630

Existing ROW

642.66
12.00
641.94
0.00
641.22
12.00
641.06
16.00
638.22
646.35
28.96

127+50.00

ROCK

Existing ROW

642.51
12.00
641.79
0.00
641.07
12.00
640.91
16.00
638.07
644.60
32.27
637.36

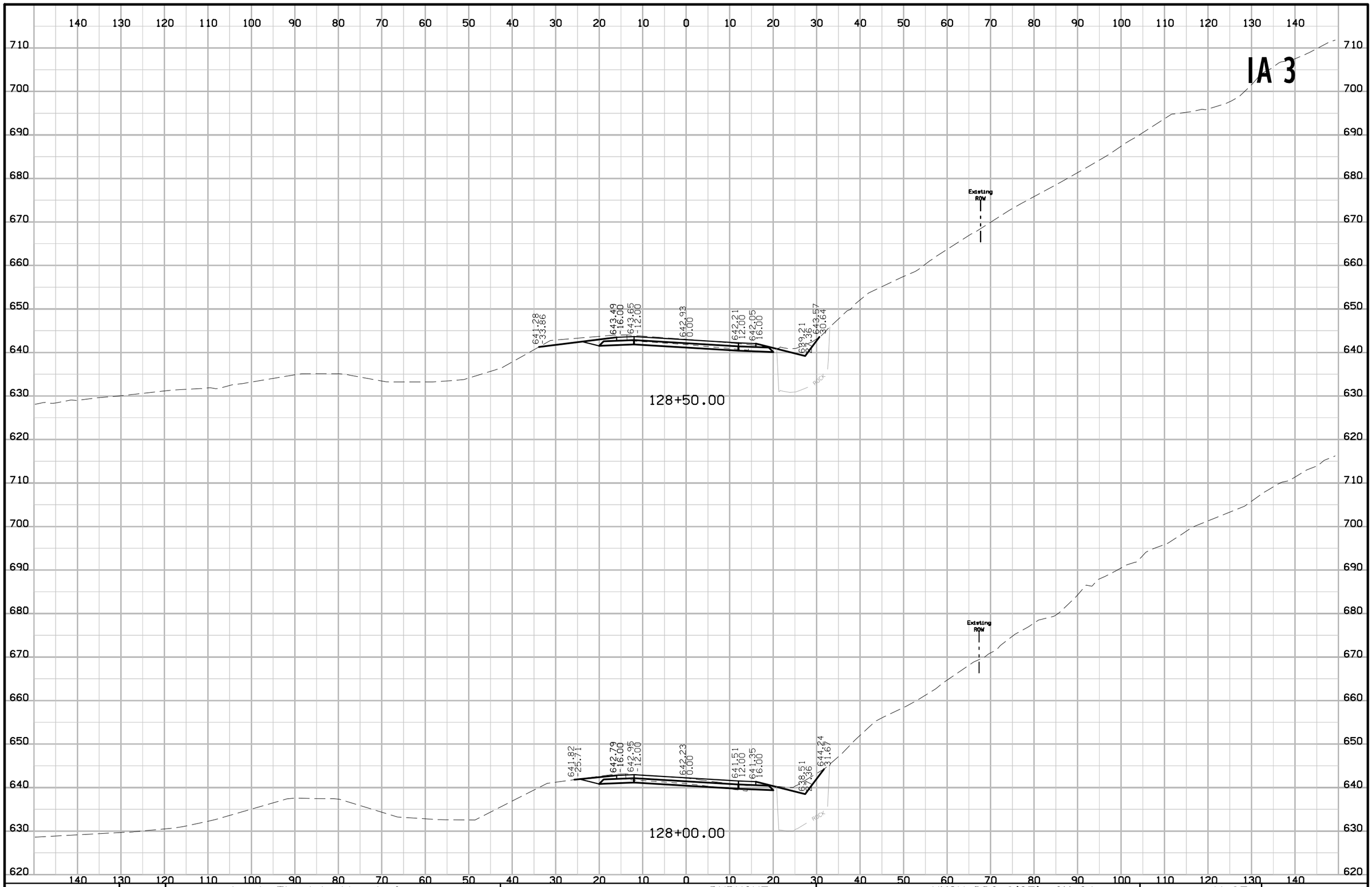
127+00.00

ROCK

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.96

9:30:53 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

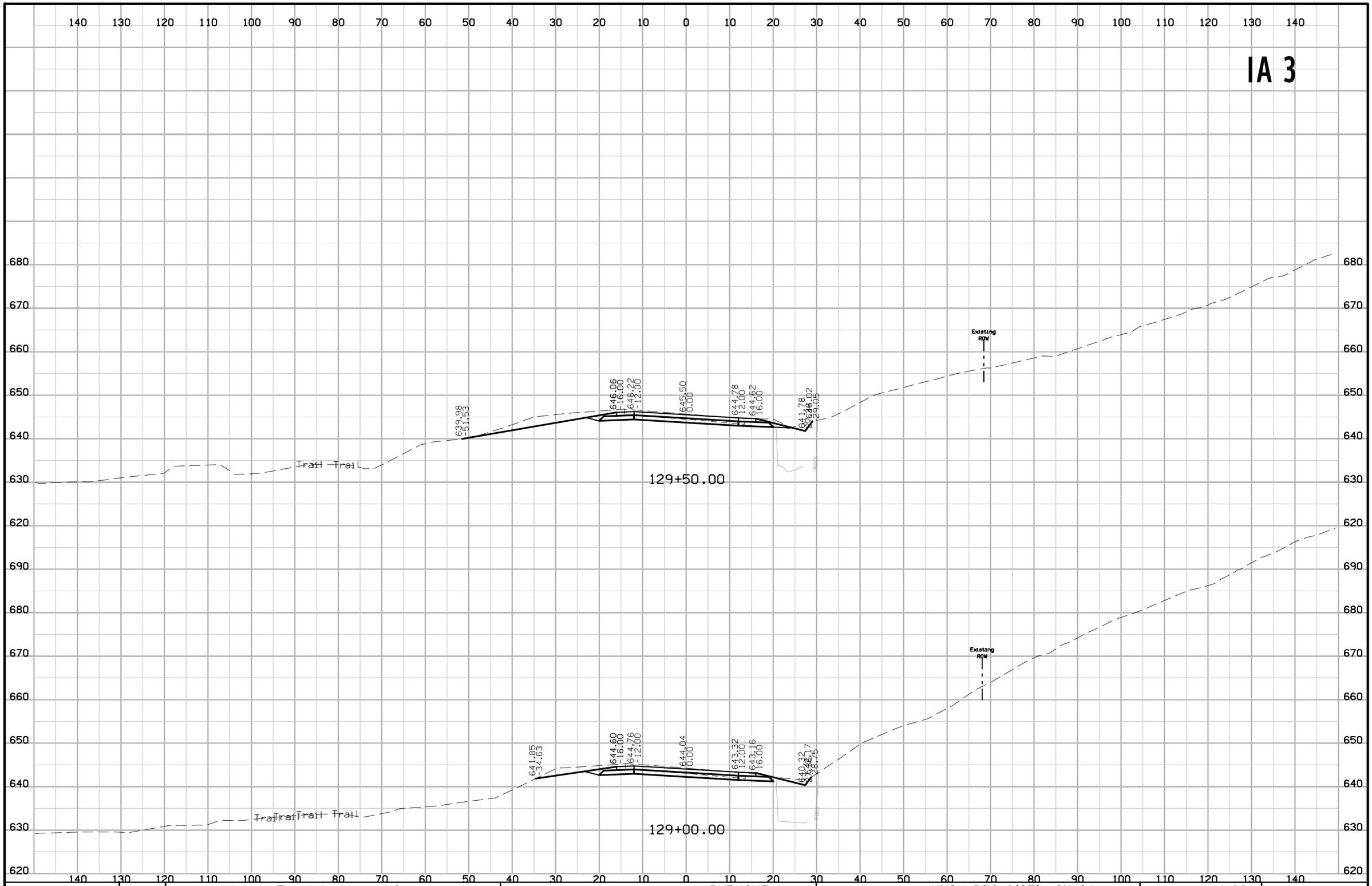
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.97

9:30:54 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.98

9:30:55 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

690 680 670 660 650 640 630 620

Existing ROW

648.50
-21.62

649.06
-16.00

649.22
-12.00

648.50
0.00

647.78
12.00

647.62
16.00

644.78
26.38
28.94

Trail Trail

130+50.00

Existing ROW

646.41
-27.54

647.56
-16.00

647.72
-12.00

647.00
0.00

646.28
12.00

646.12
16.00

643.28
24.36
27.15
30.27

Trail Trail

130+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.99

9:31:06 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn

IA 3

650.07
20.88
650.56
16.00
650.72
12.00
650.00
0.00
649.28
12.00
649.12
16.00
646.28
27.36
651.00
30.91

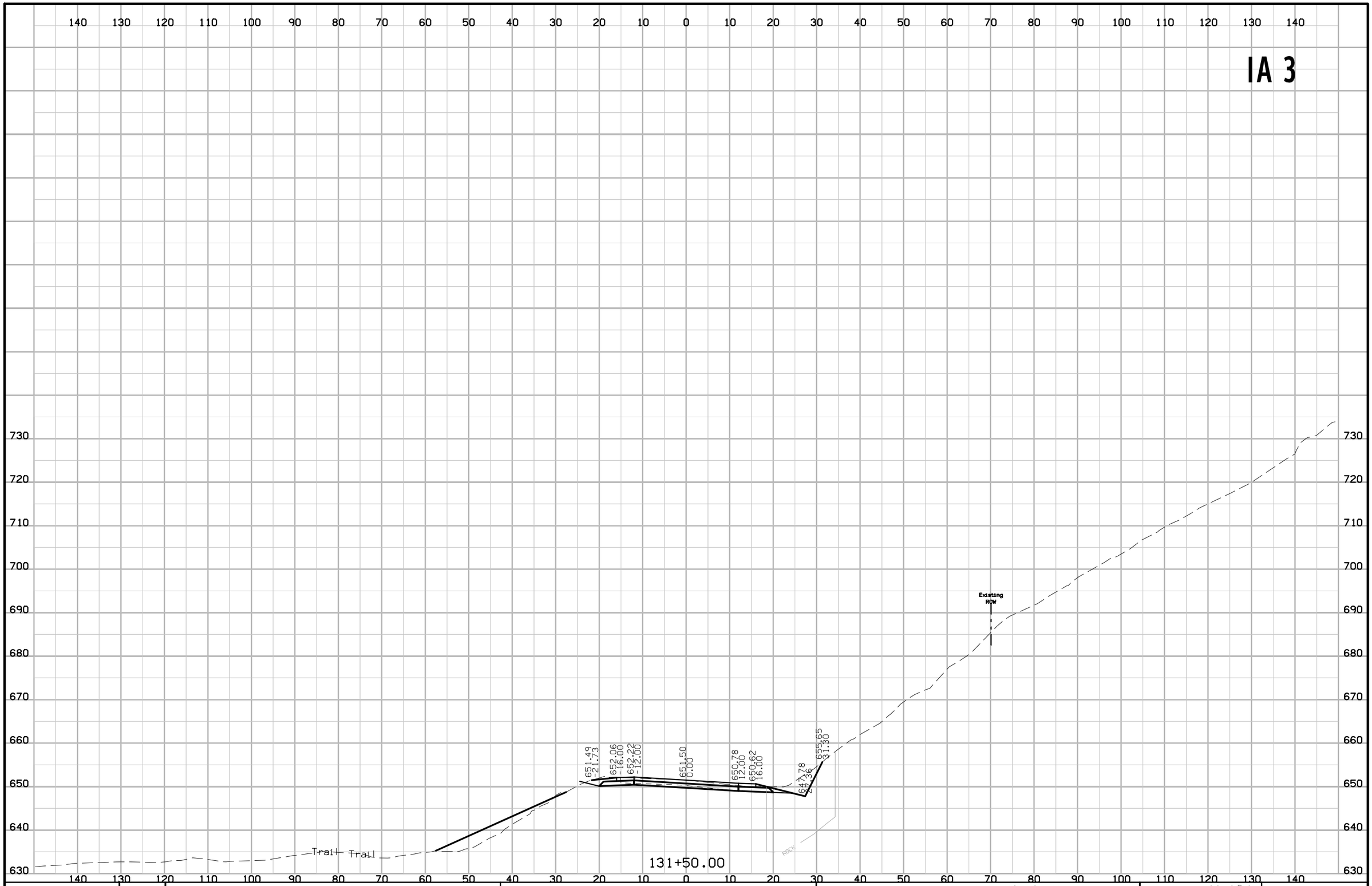
Existing ROW

Trail Trail

131+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.100

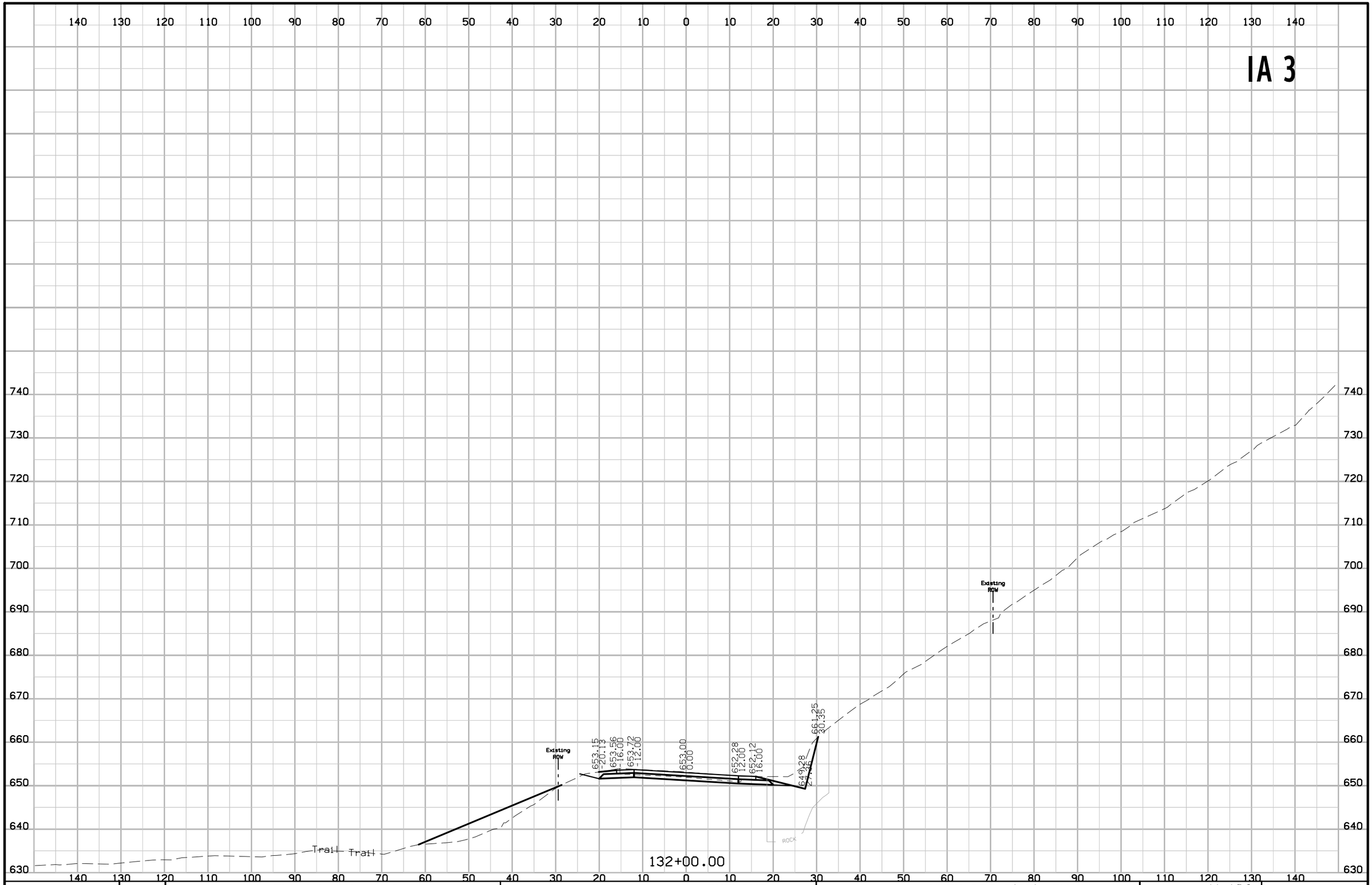
9:31:07 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W001.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.101

10:11:03 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

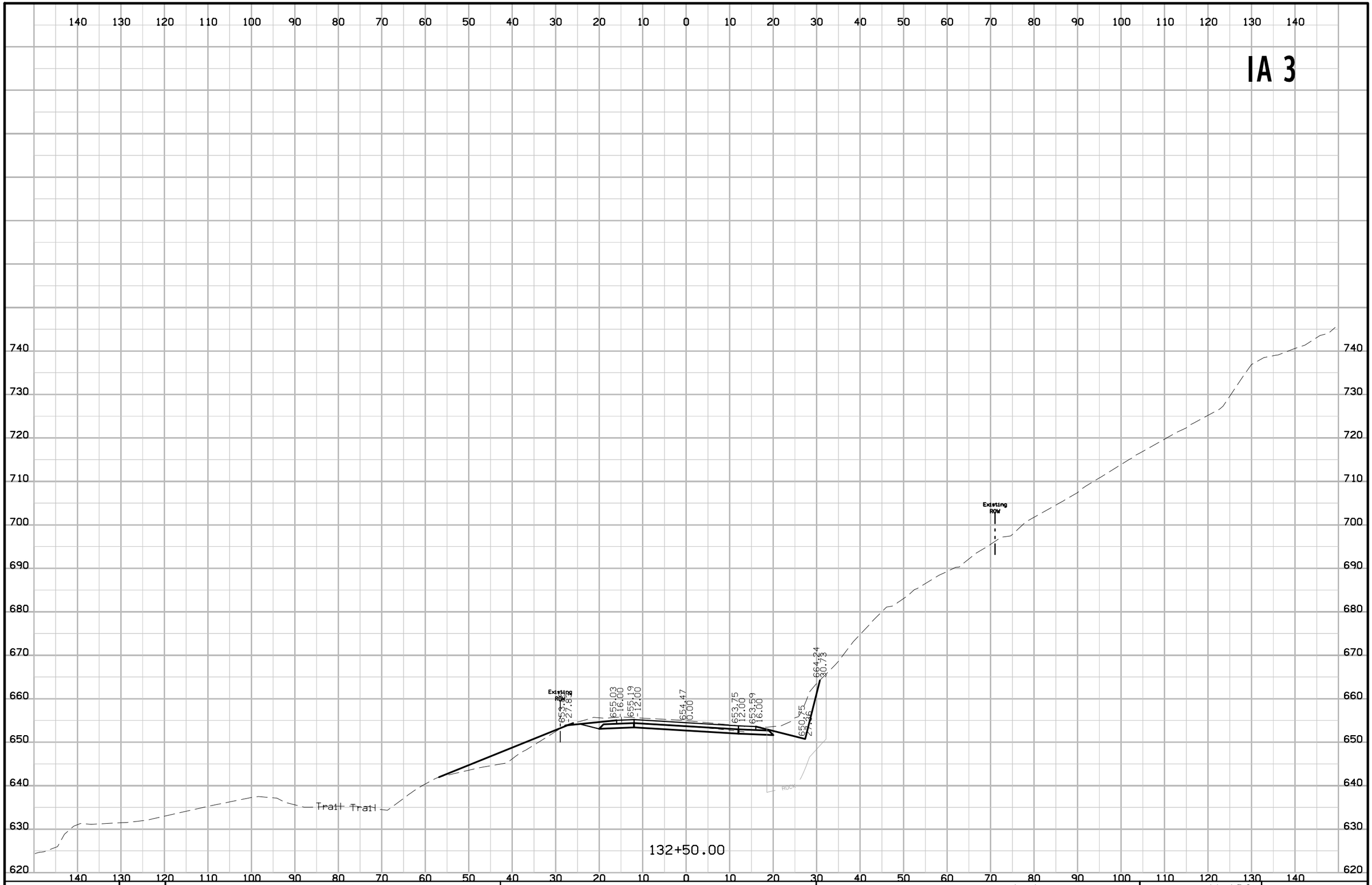
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.102

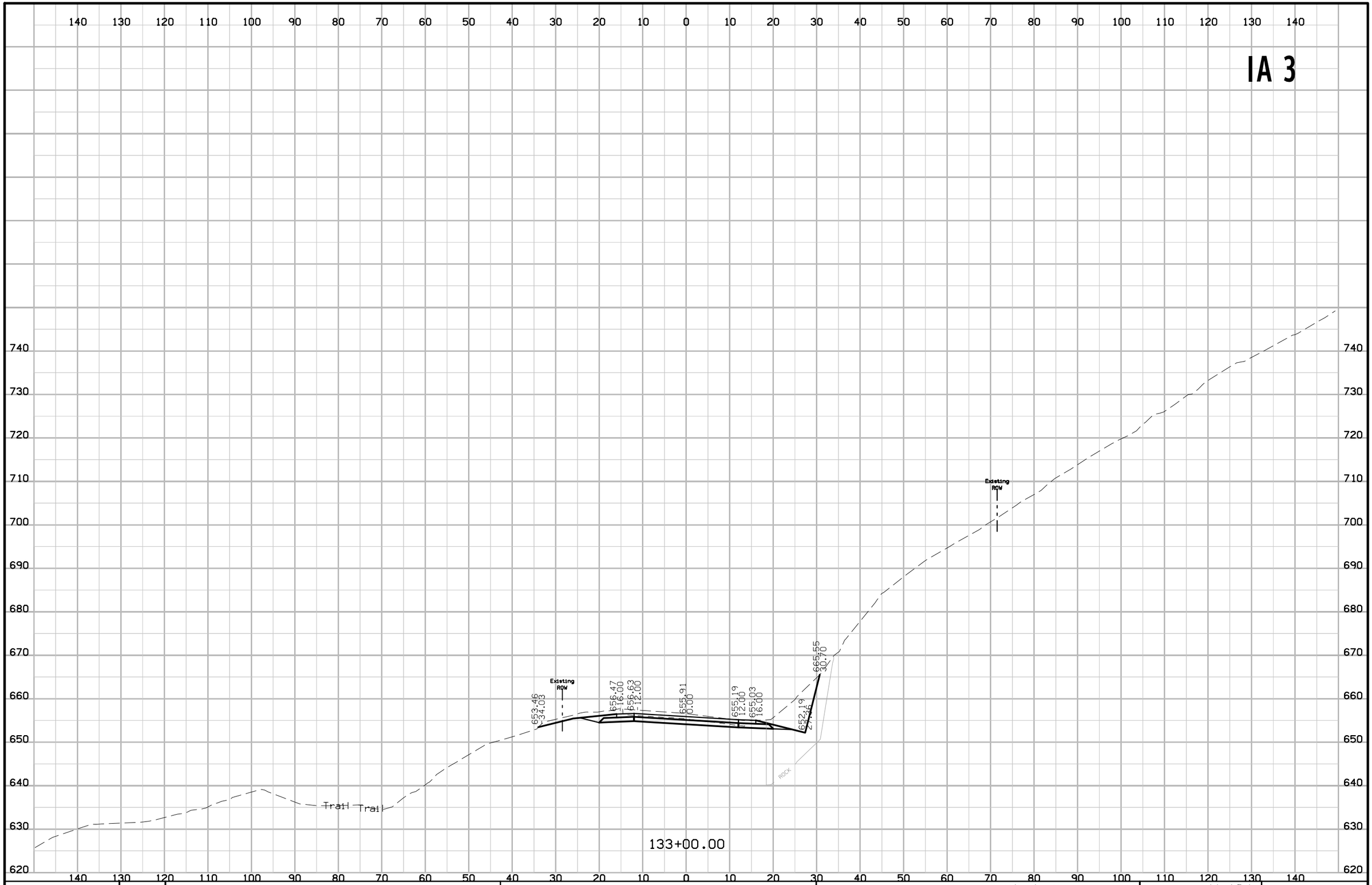
10:11:04 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.103

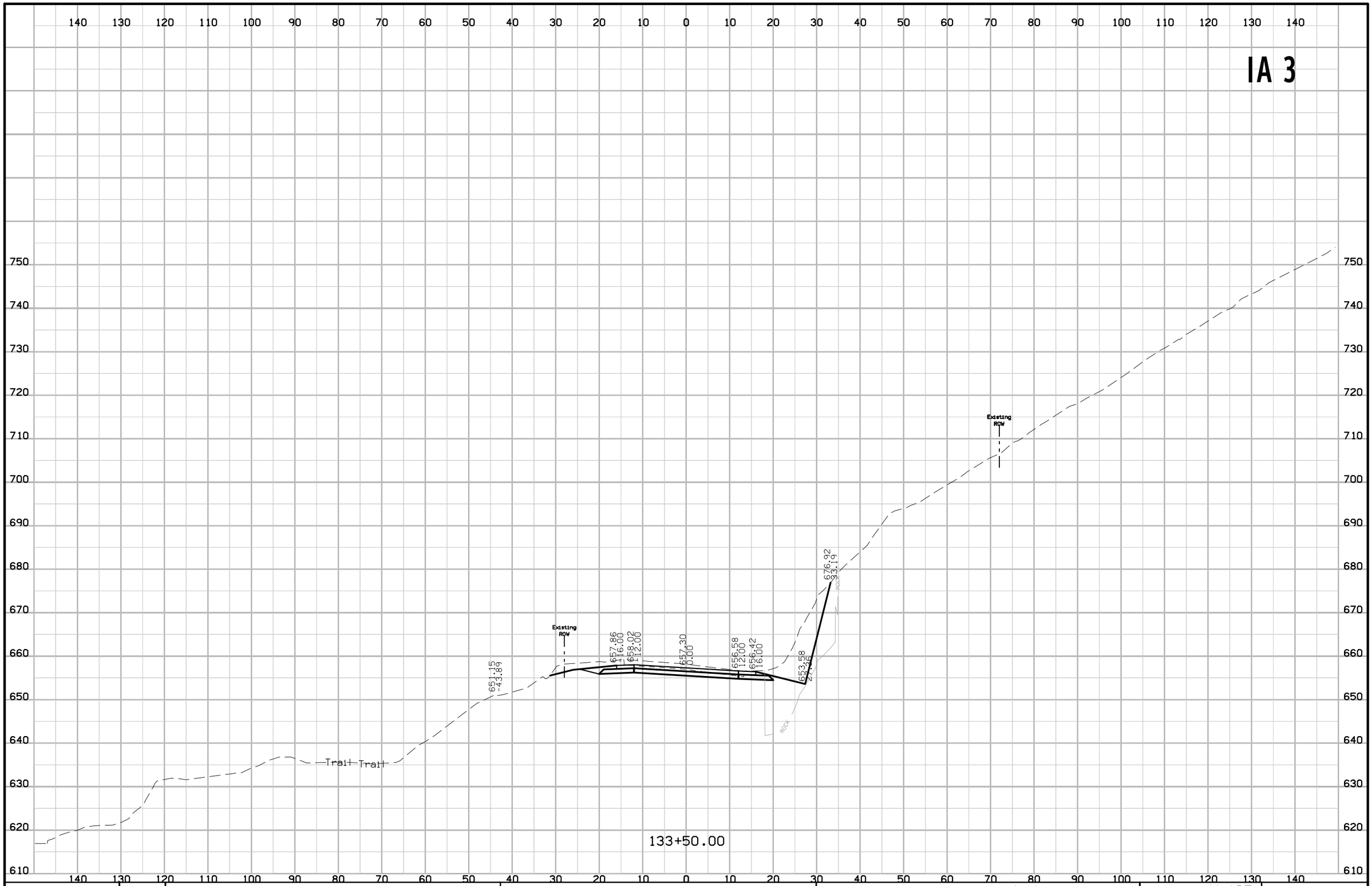
IA 3



FILE NO.	ENGLISH	DESIGN TEAM		COUNTY	PROJECT NUMBER	SHEET NUMBER
		J1a \ Th1el \ Altenhofen	DUBUQUE		NHSX-003-9(25)--3H-31	W.104

10:11:05 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

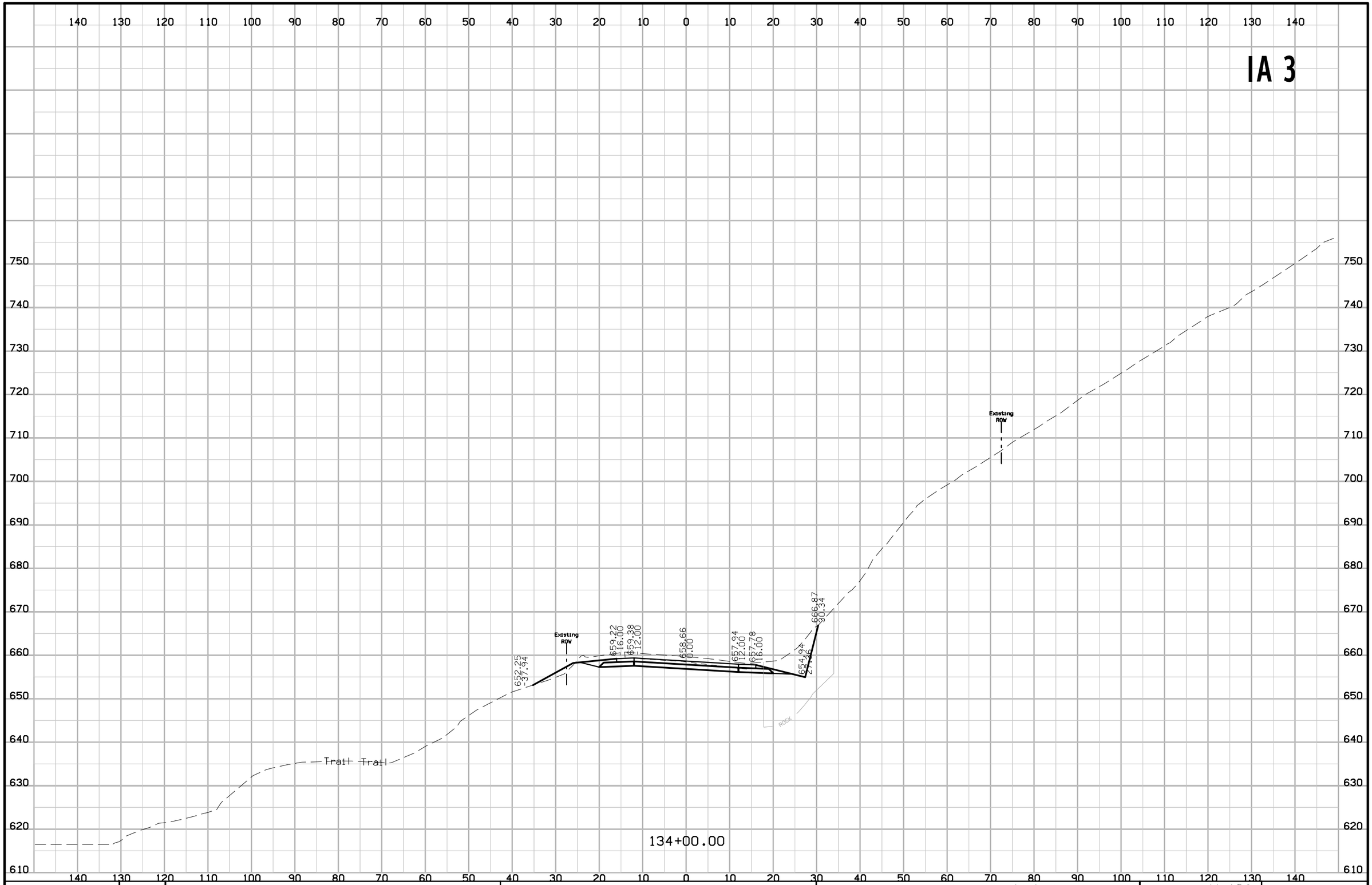
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.105

10:11:06 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

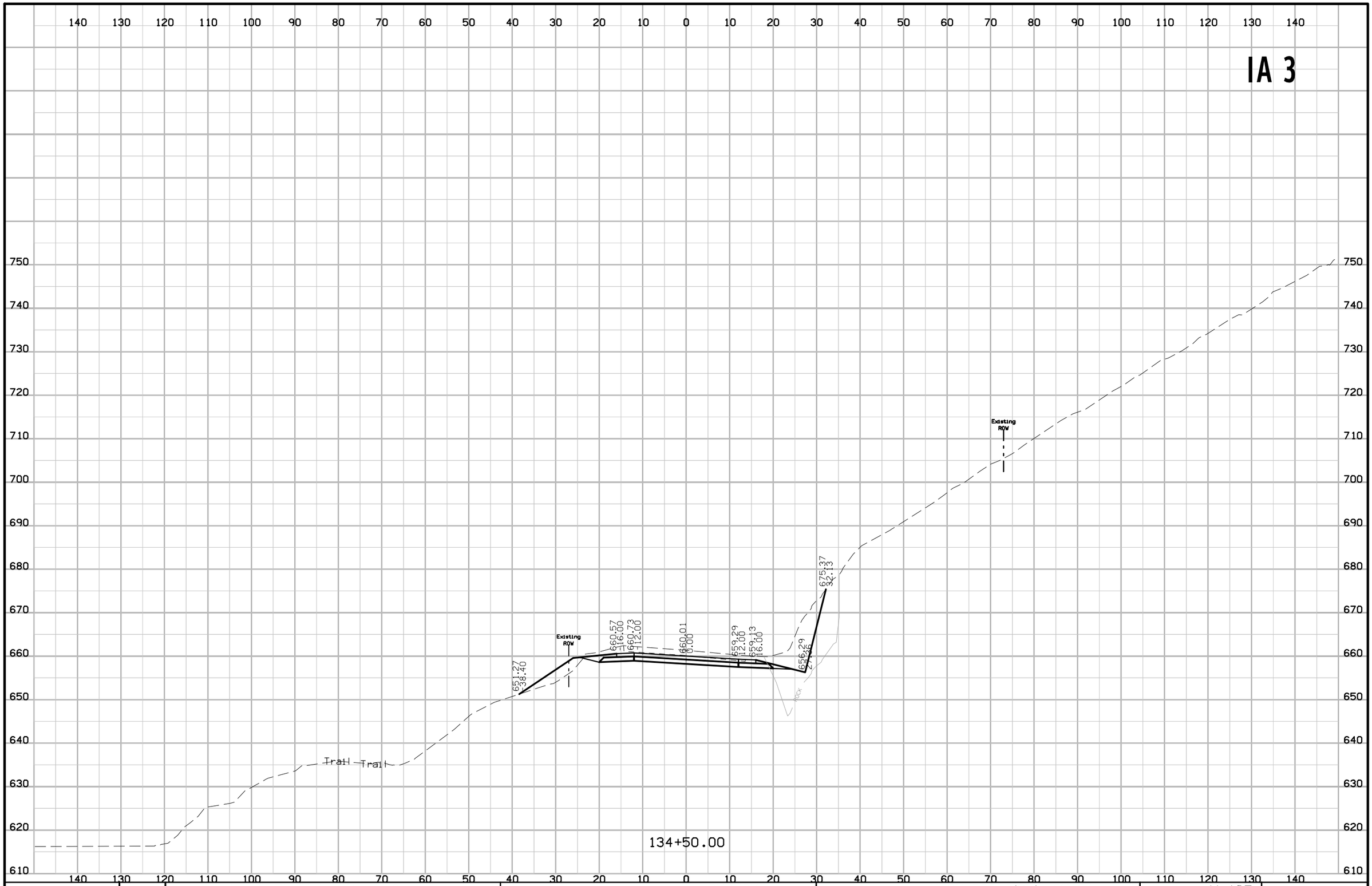
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.106

10:11:07 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

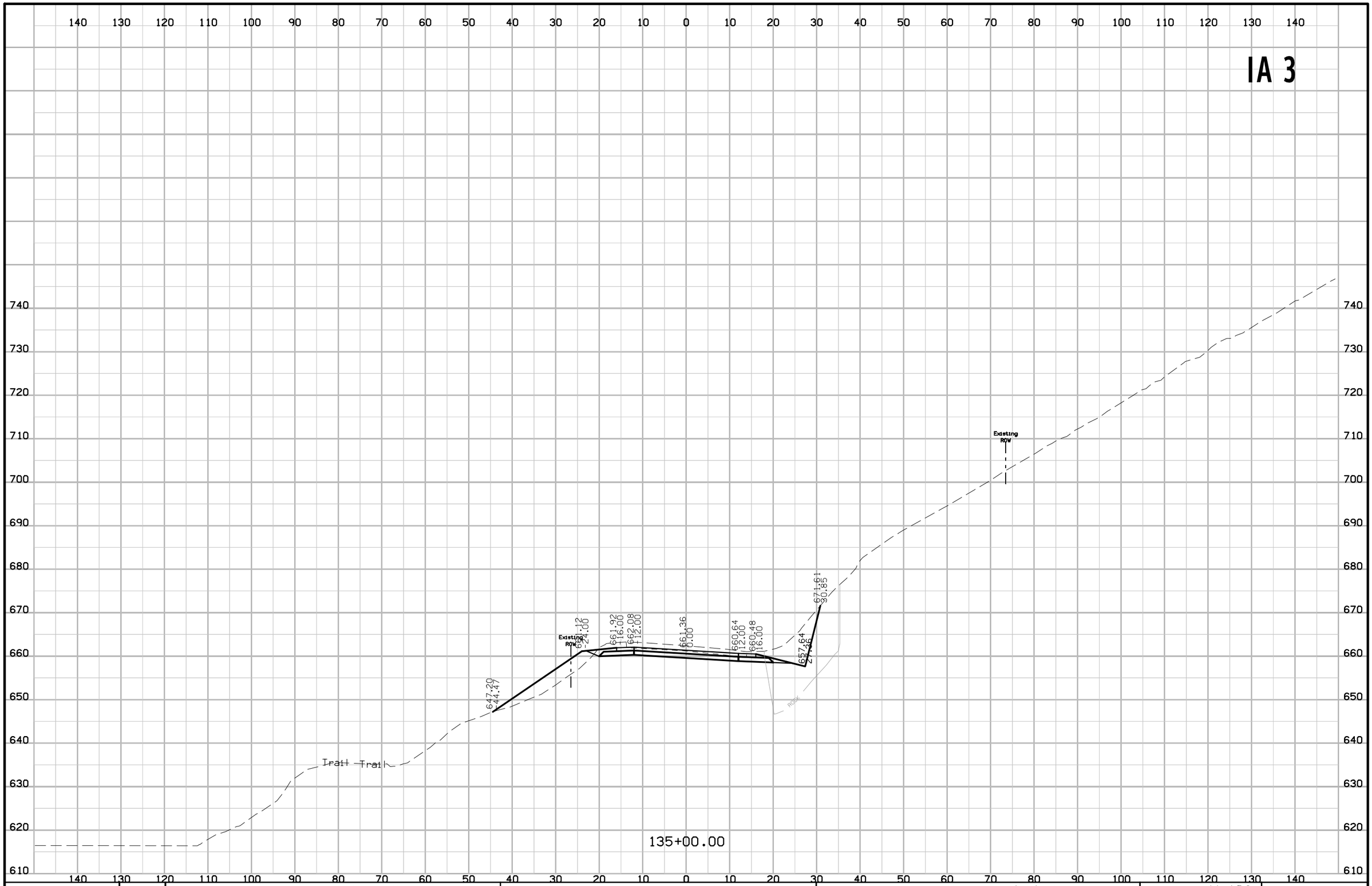
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.107

10:11:07 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

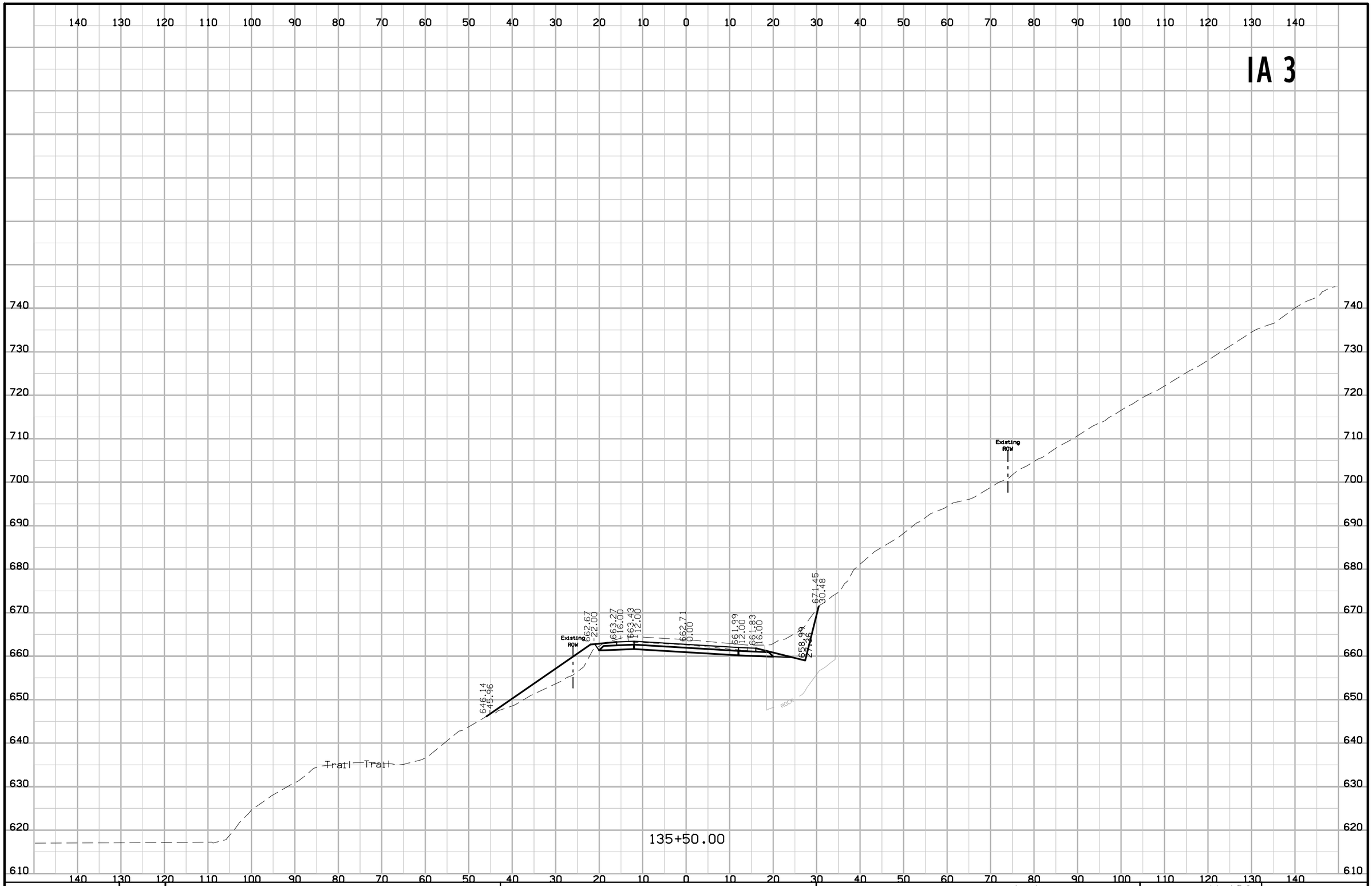
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.108

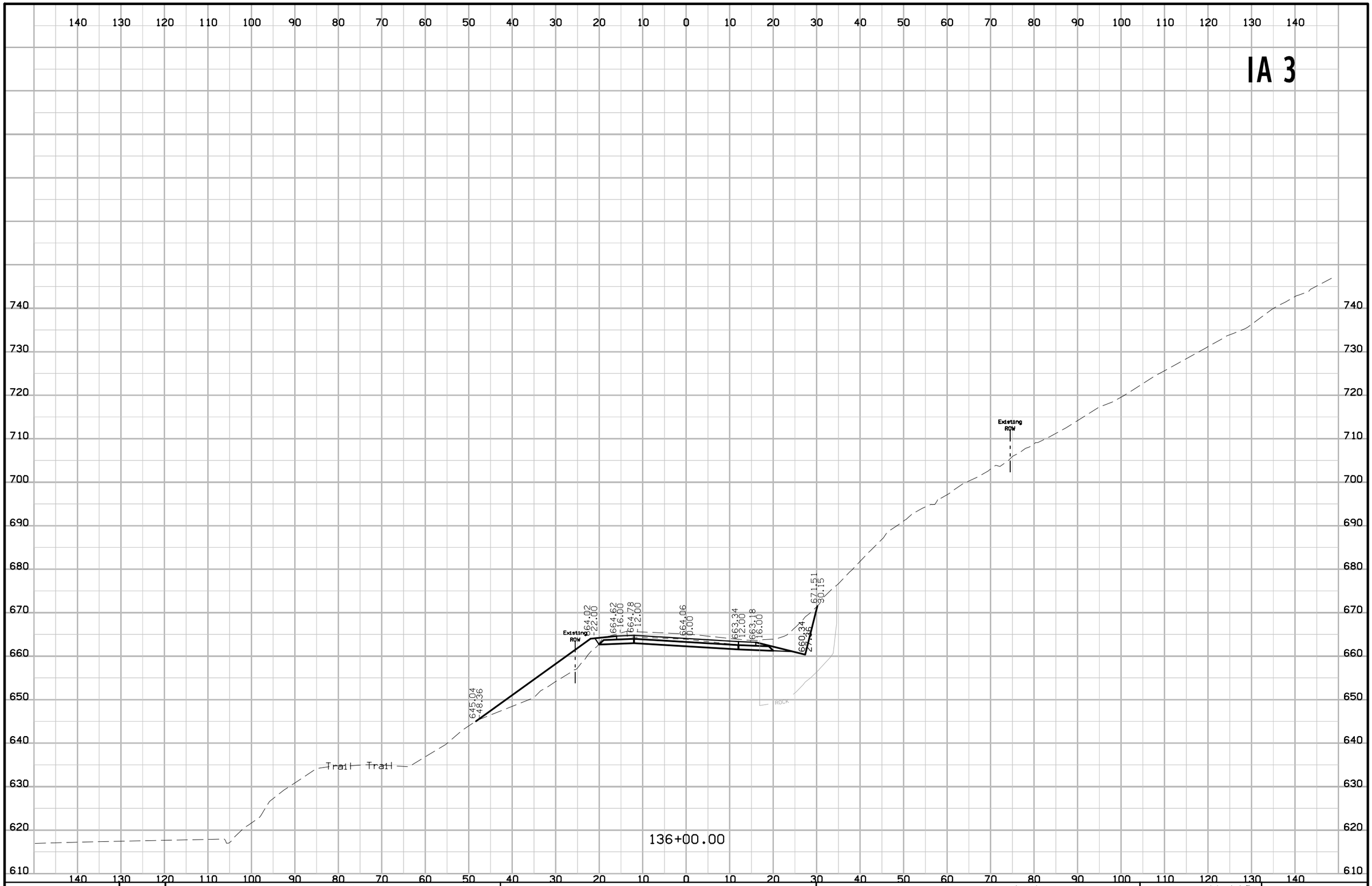
10:11:08 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.109

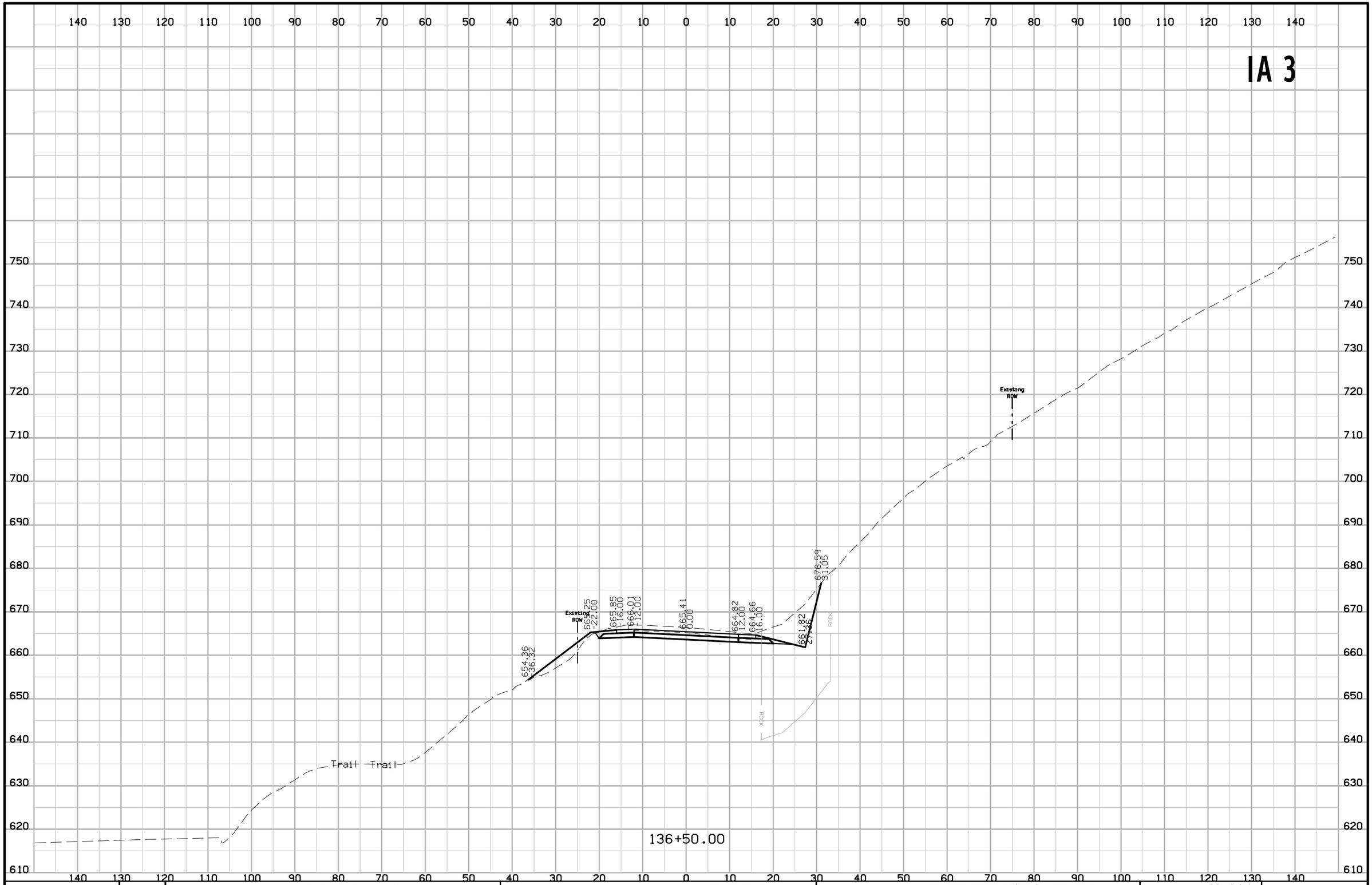
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.110

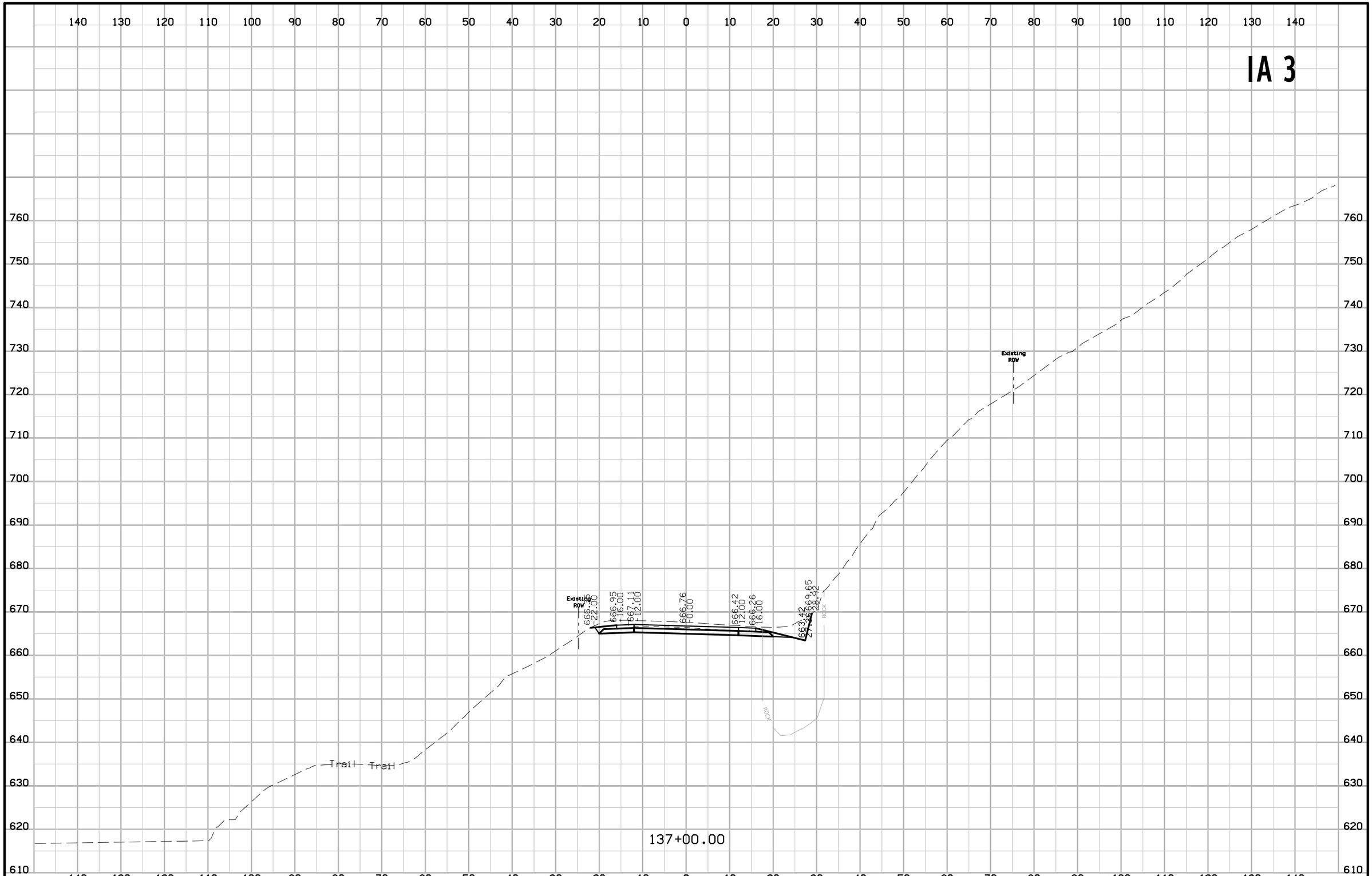
10:11:10 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.111

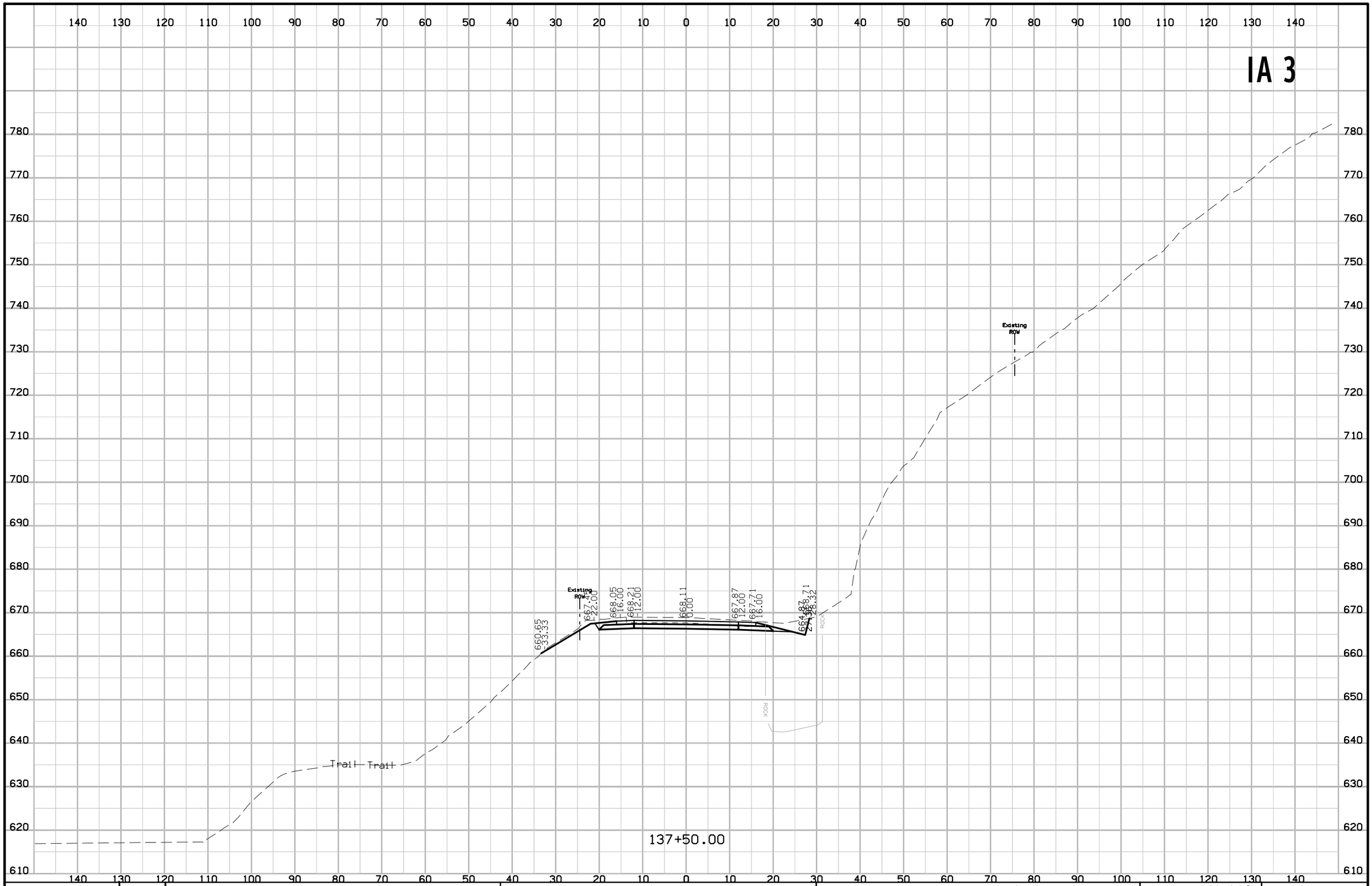
10:11:10 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.112

10:11:11 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

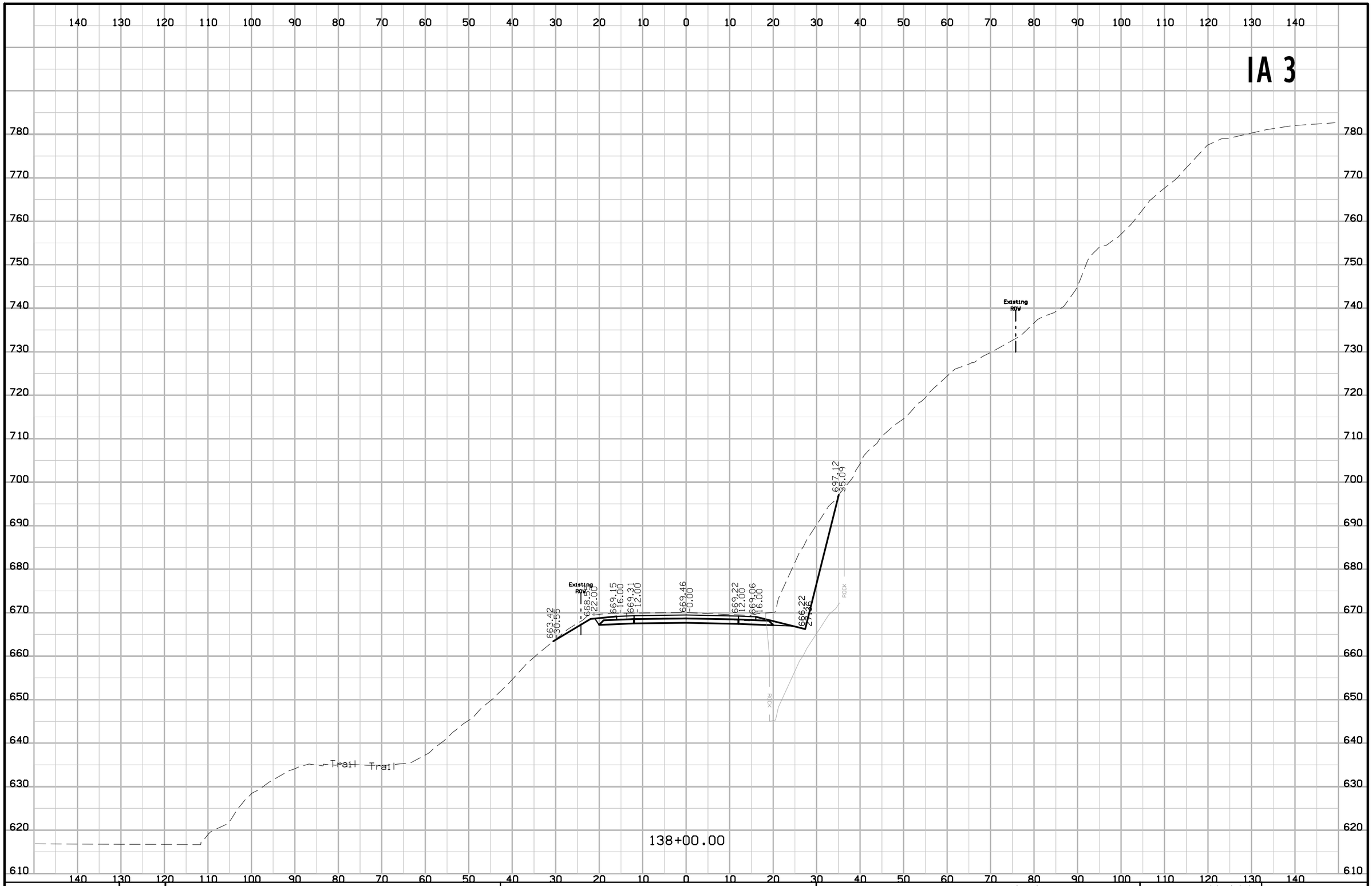
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.113

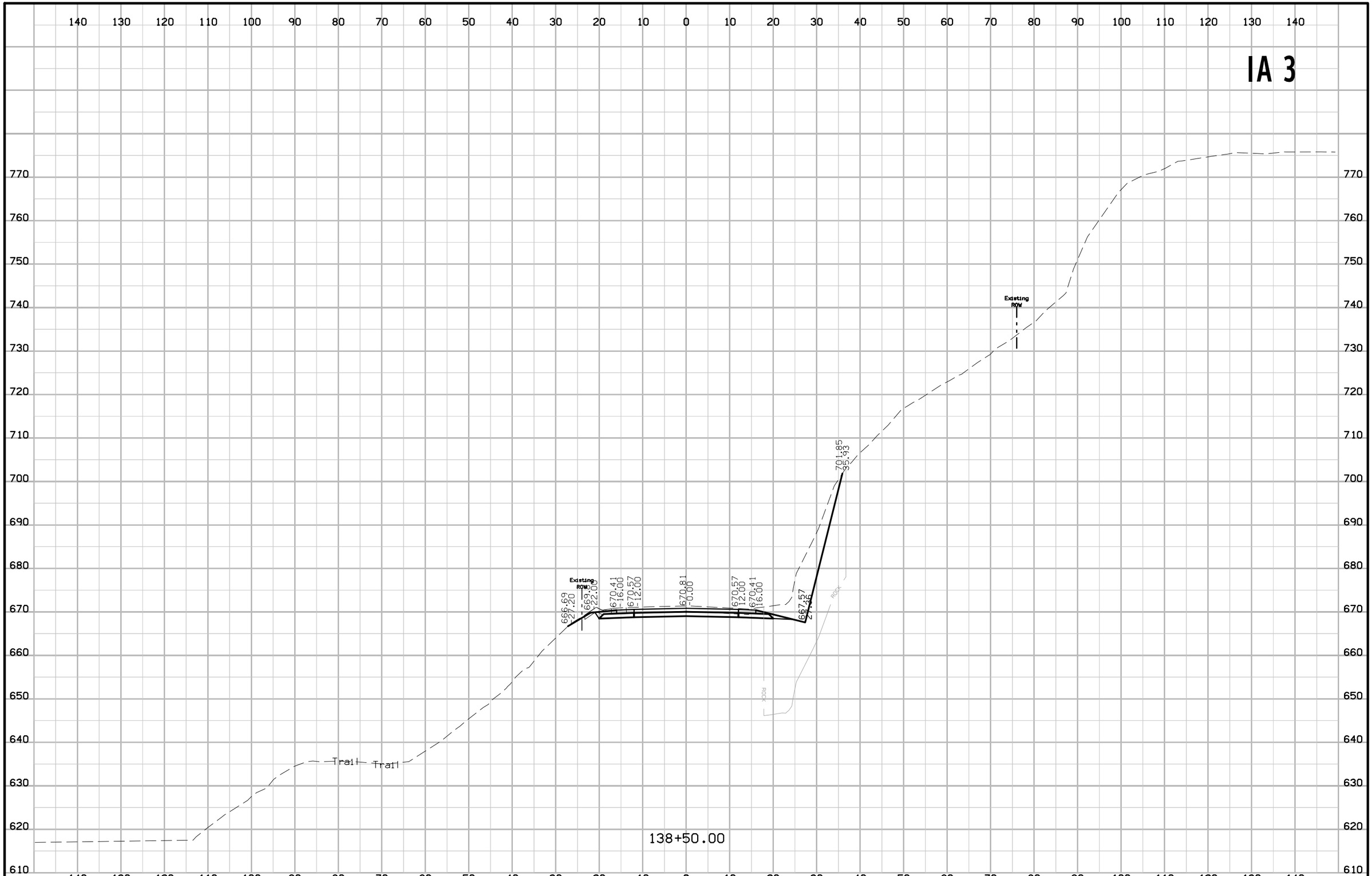
10:11:12 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.114

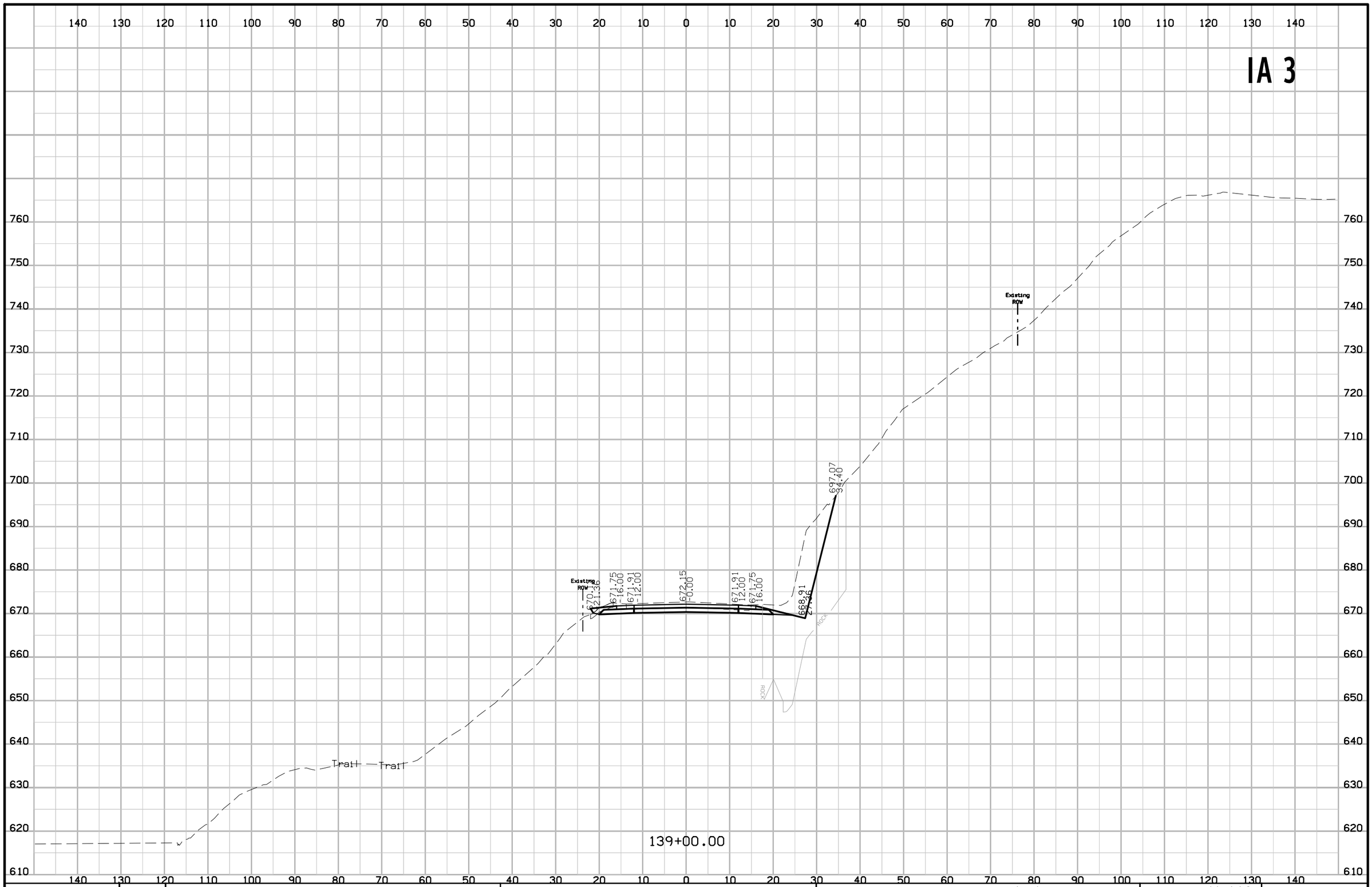
10:11:13 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.115

10:11:13 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

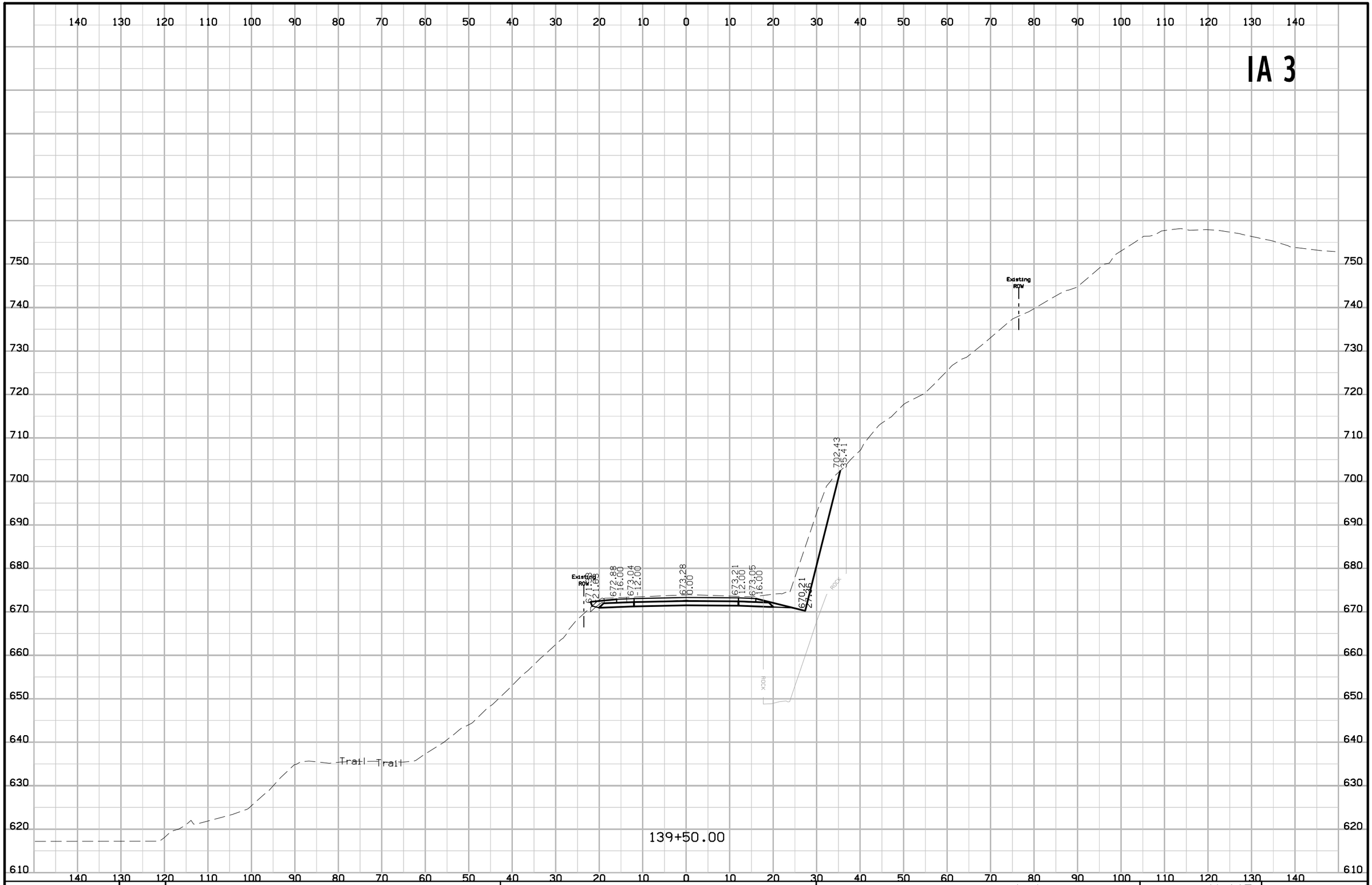
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.116

10:11:14 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

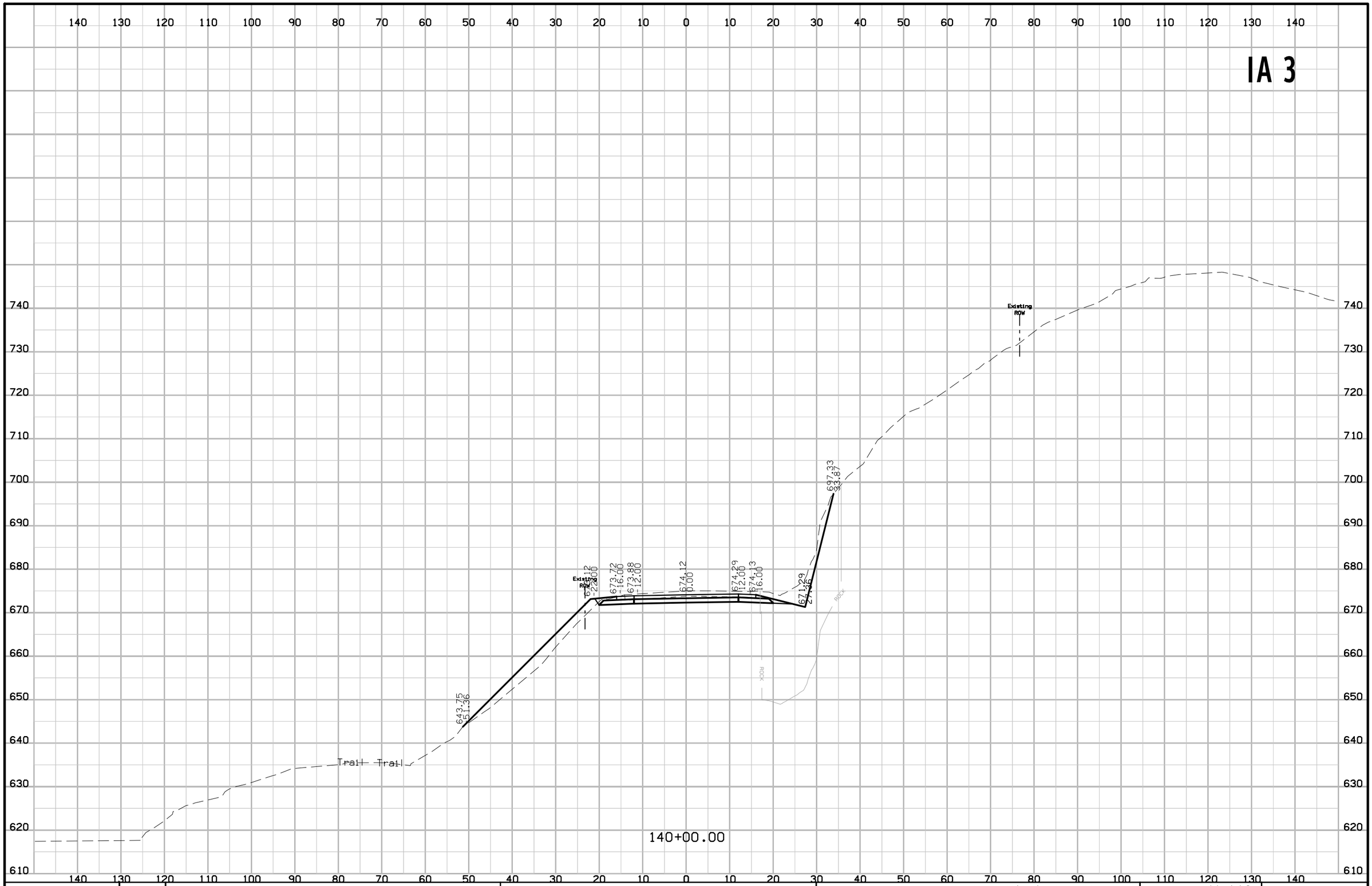
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.117

10:11:15 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

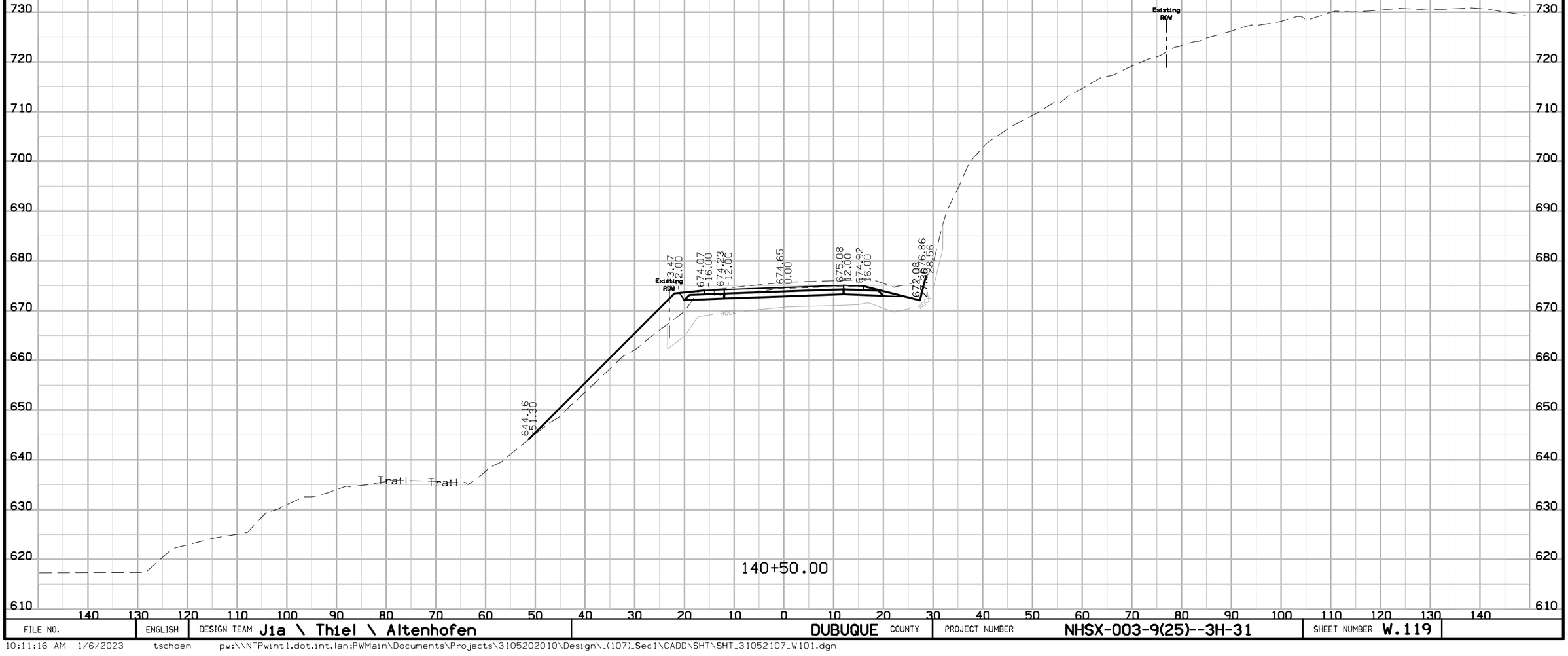
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.118

10:11:15 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

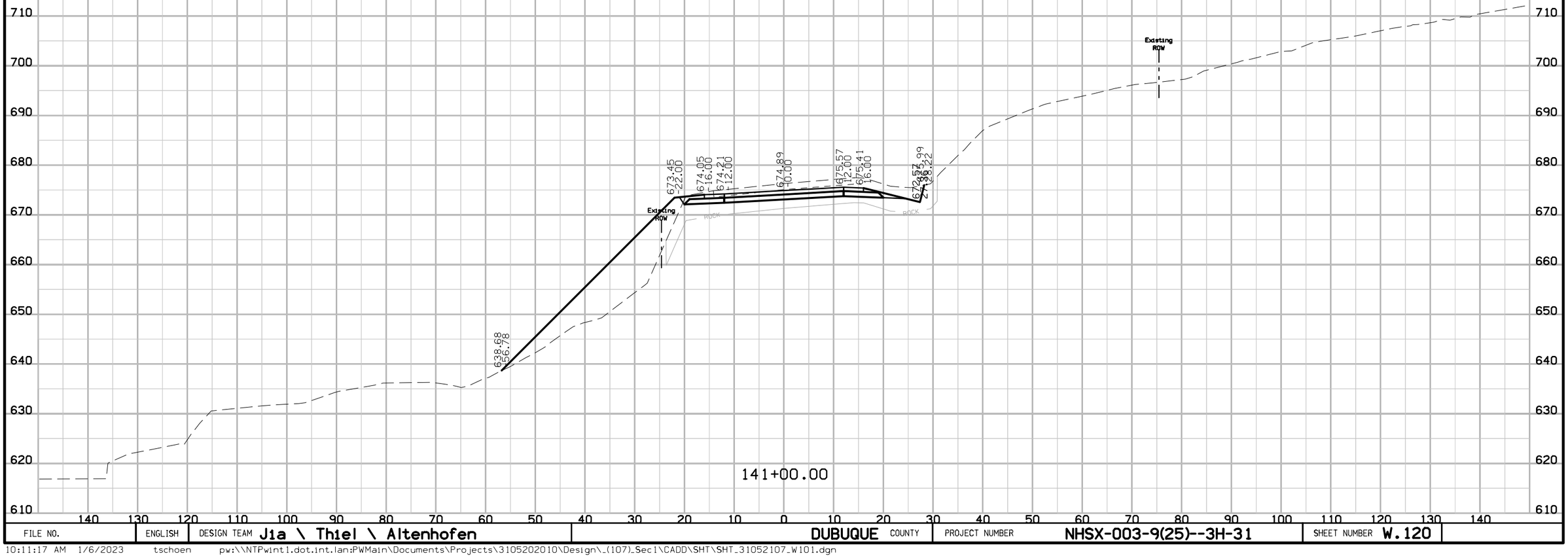
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.119

10:11:16 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

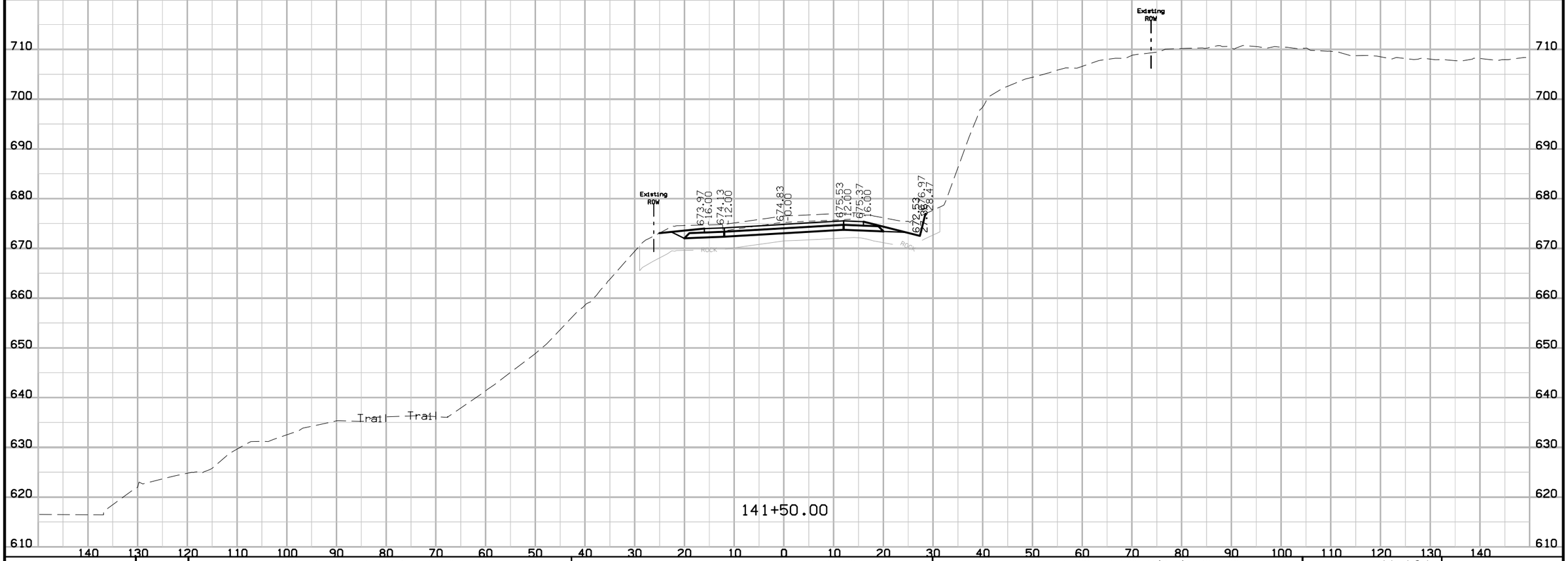
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.120

10:11:17 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

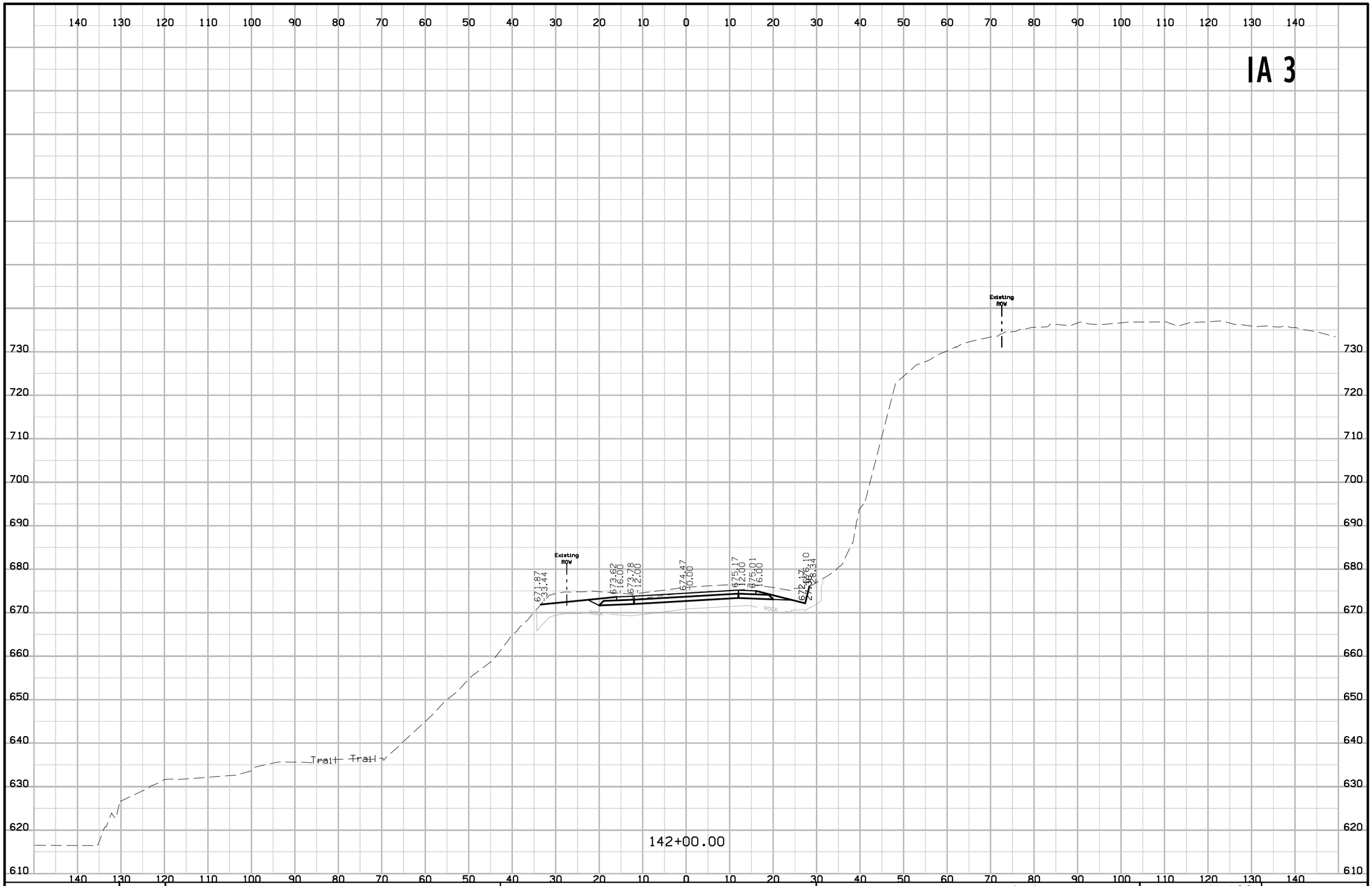
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.121

10:11:18 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

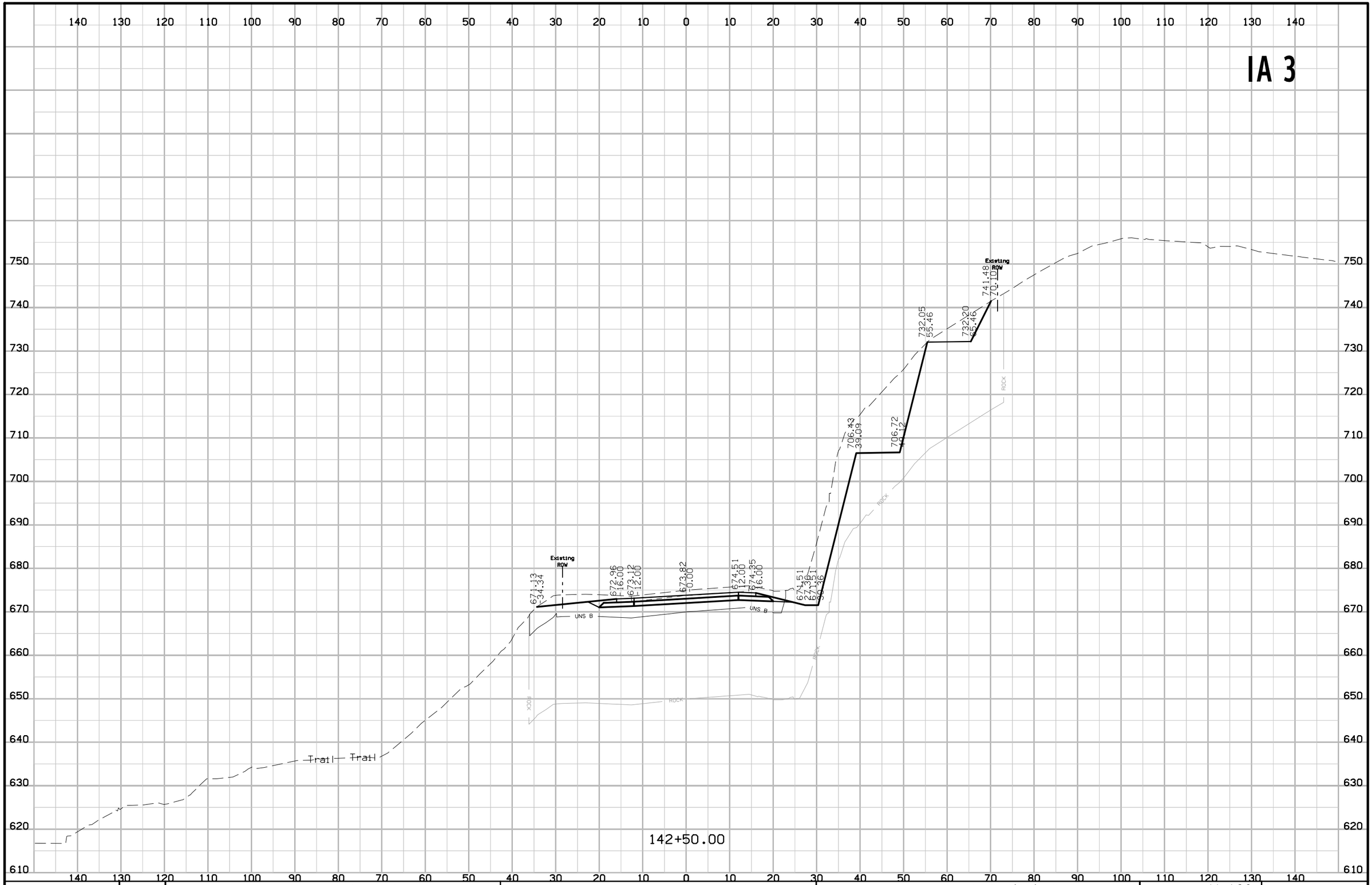
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.122

10:11:18 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

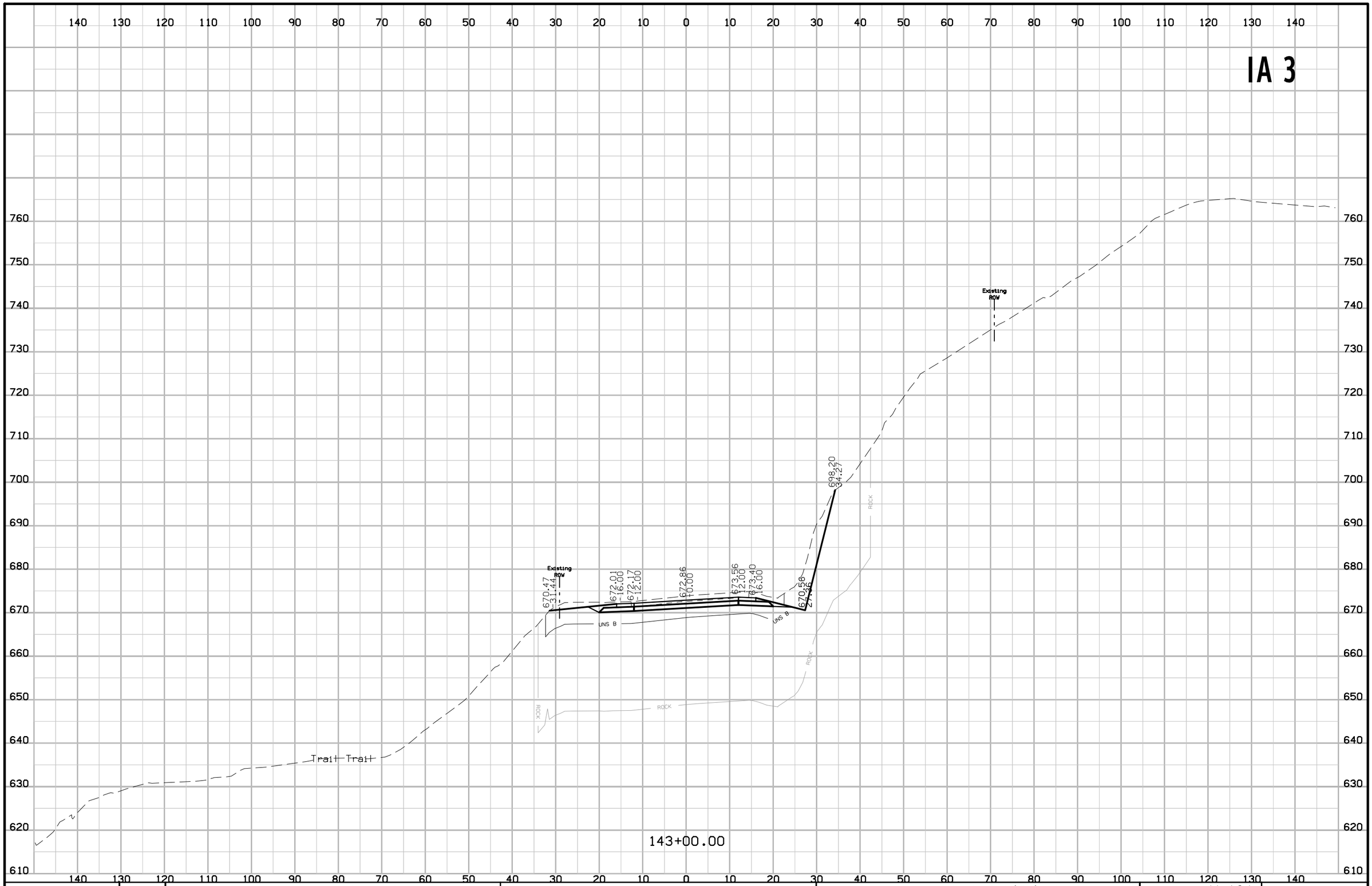
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.123

10:11:19 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

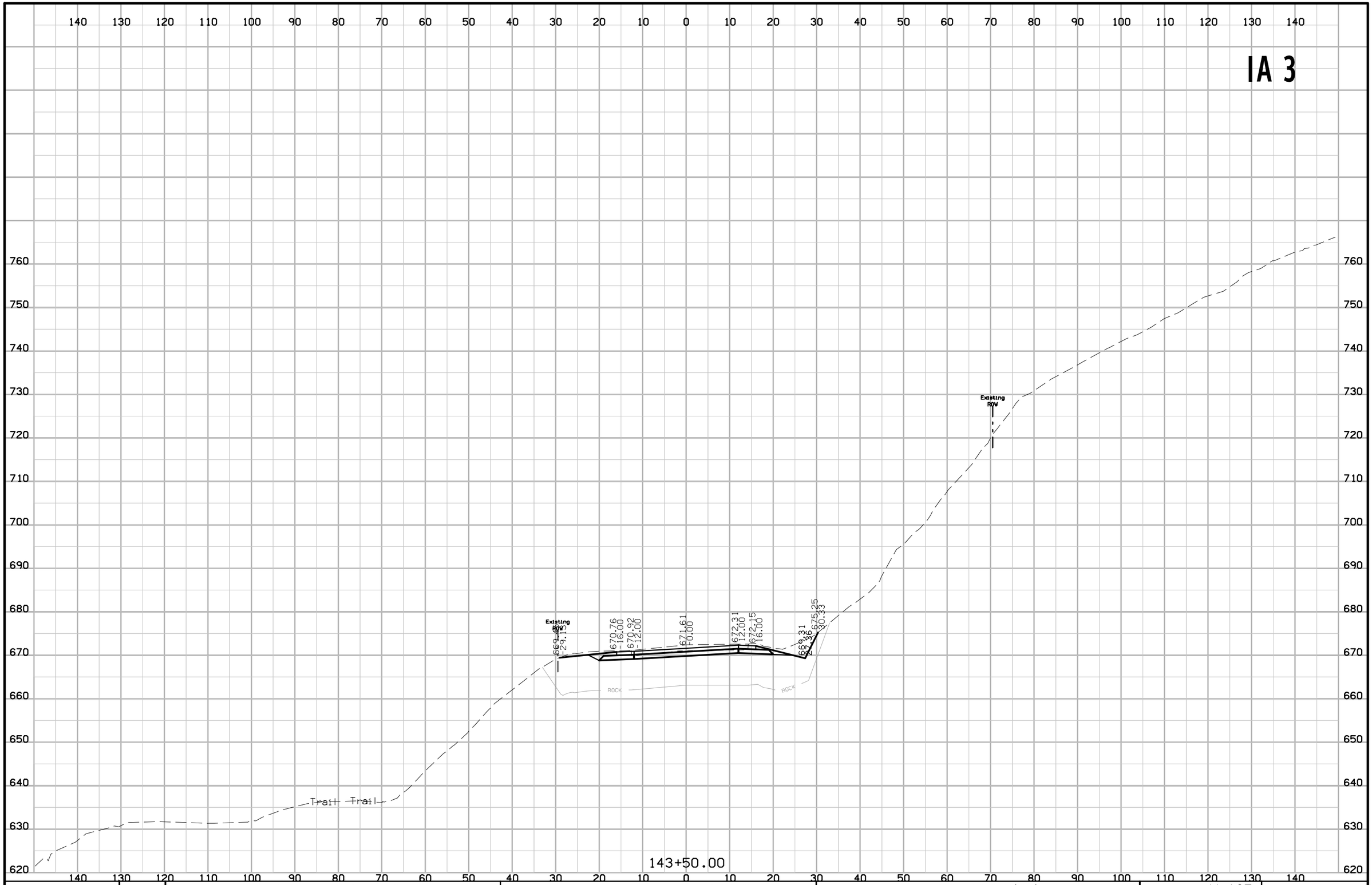
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.124

10:11:20 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

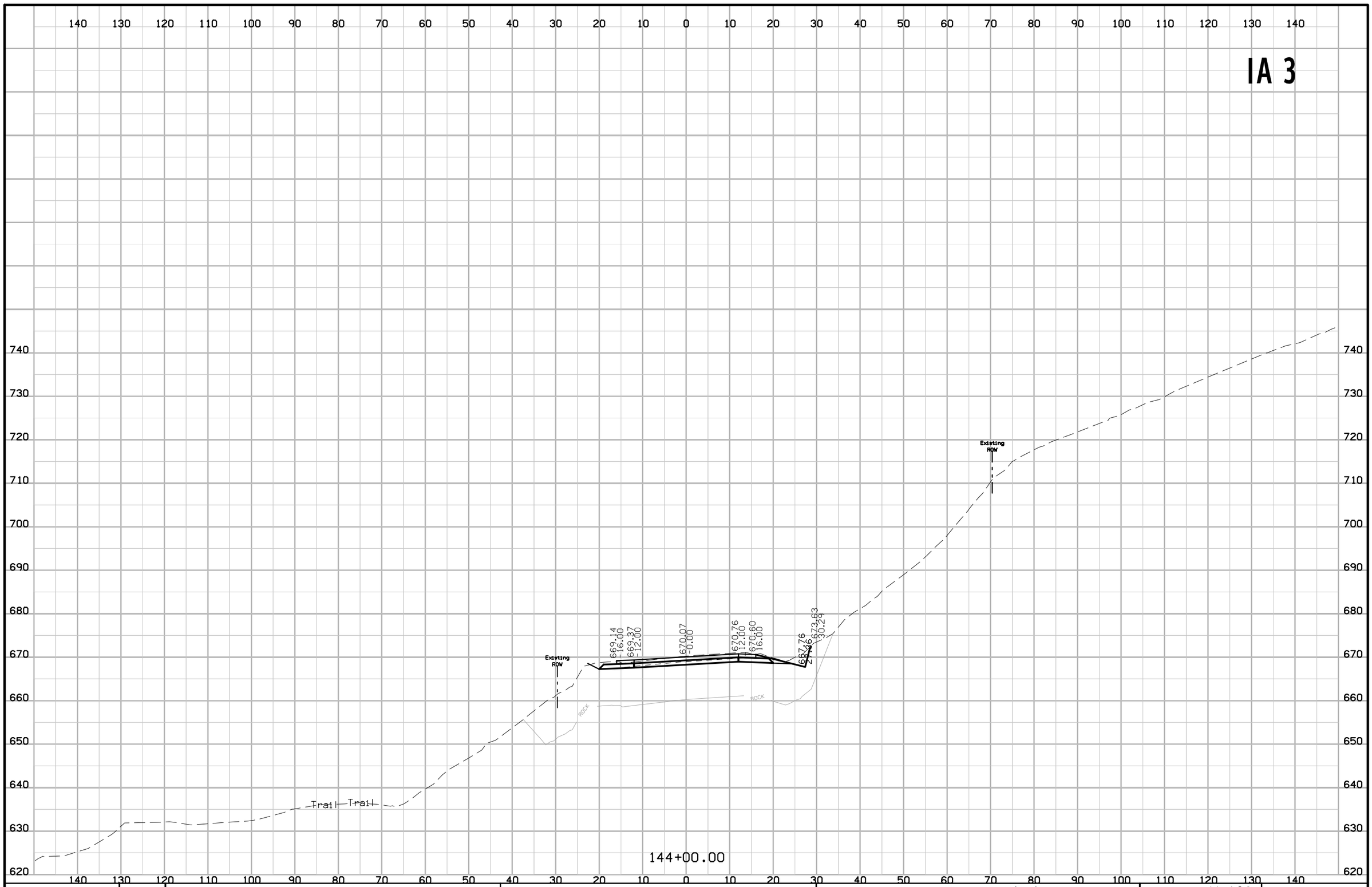
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.125

10:11:21 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

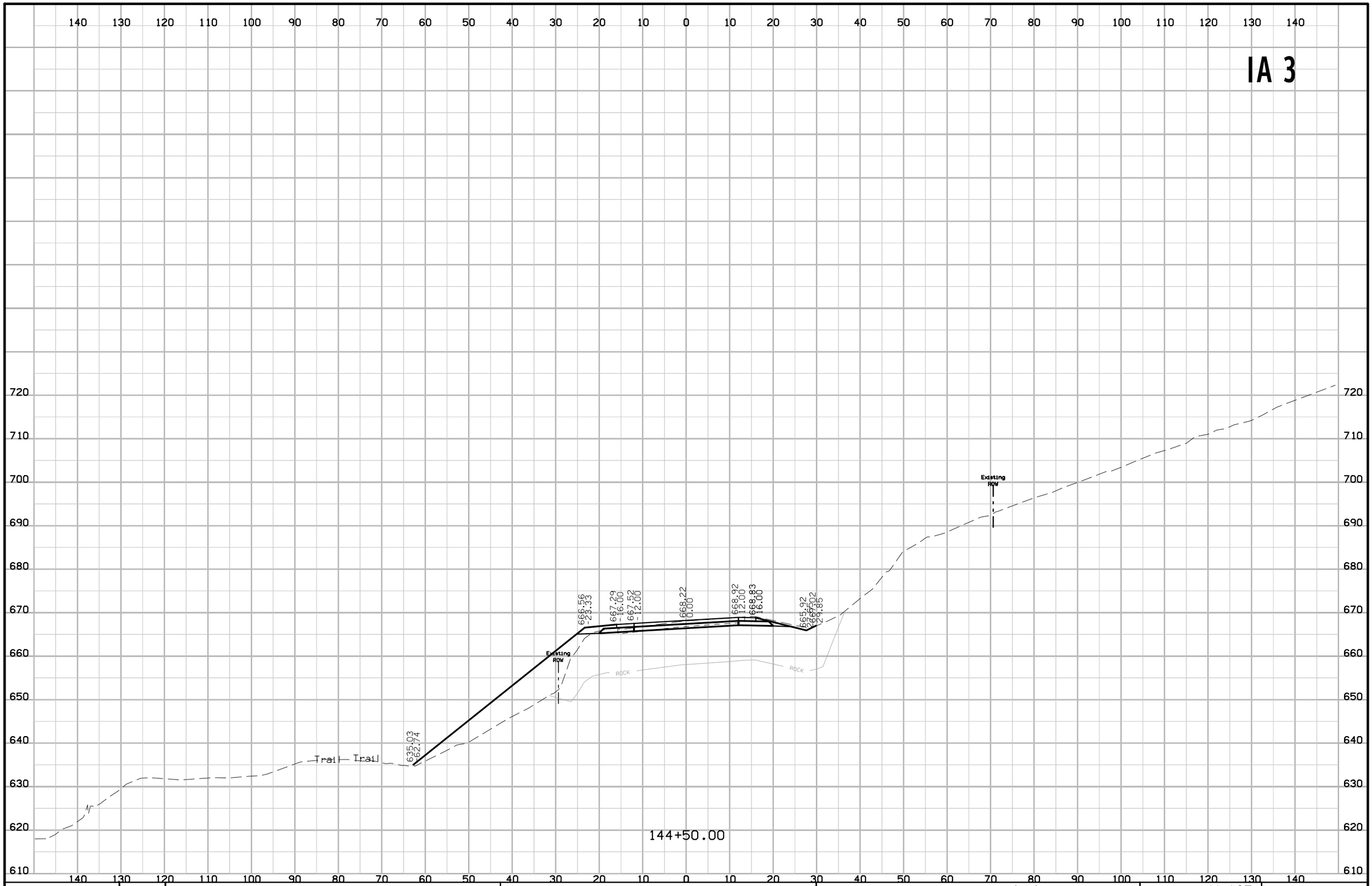
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.126

10:11:21 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.127

10:11:22 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

670 660 650 640 630 620

Existing ROW

662.81 -22.50 | 663.46 -16.00 | 663.89 -12.00 | 664.39 -0.00 | 665.08 12.00 | 665.00 16.00 | 662.08 27.65 | 664.27 34.22

ROCK

Trail Trail

633.43 632.58 633.13 631.60

145+50.00

664.53 -22.50 | 665.18 -16.00 | 665.41 -12.00 | 666.11 -0.00 | 666.80 12.00 | 666.72 16.00 | 663.80 27.65 | 665.49 32.70

ROCK

Trail Trail

633.38 633.23 631.63

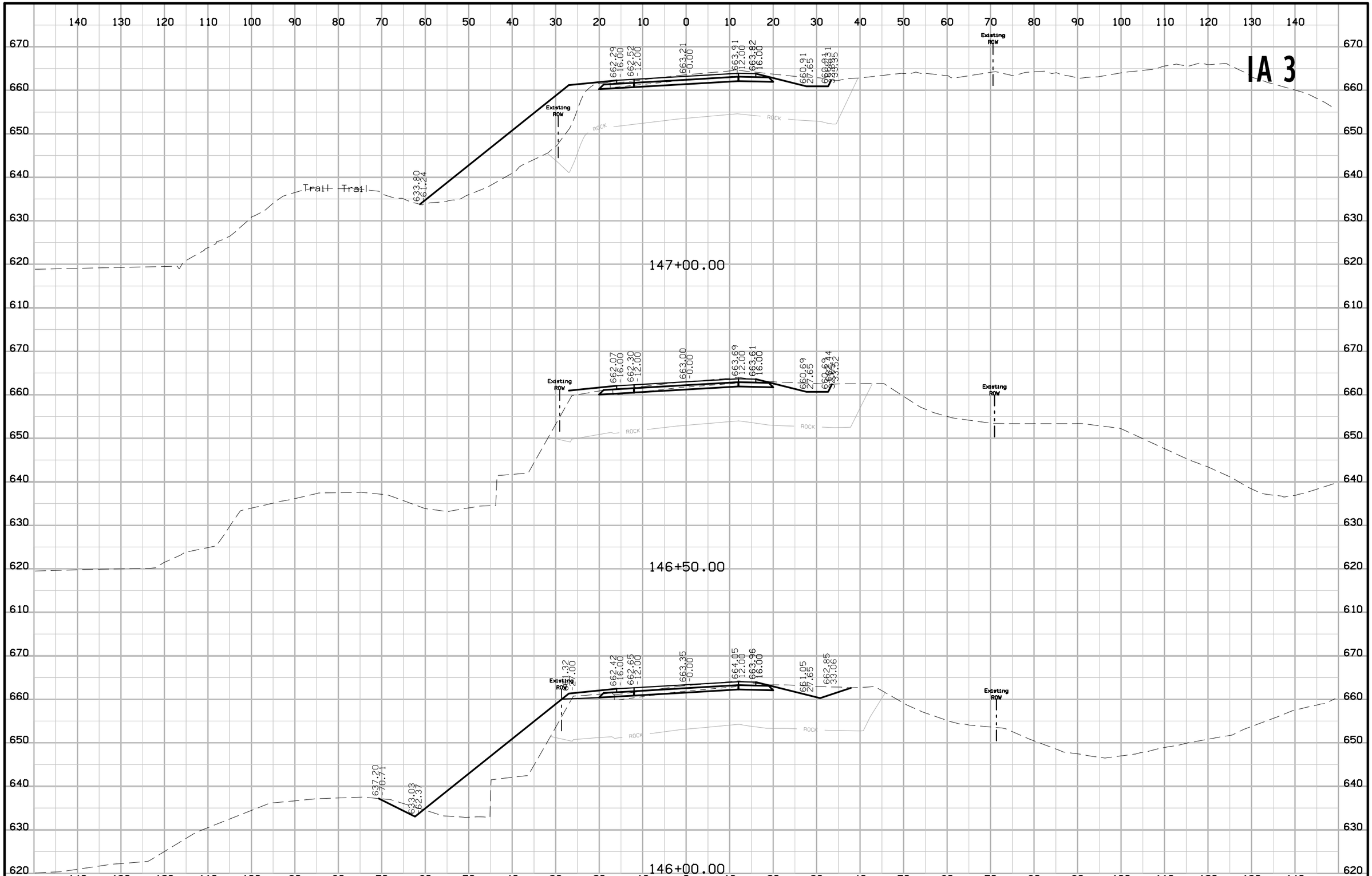
145+00.00

690 680 670 660 650 640 630 620 610

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.128

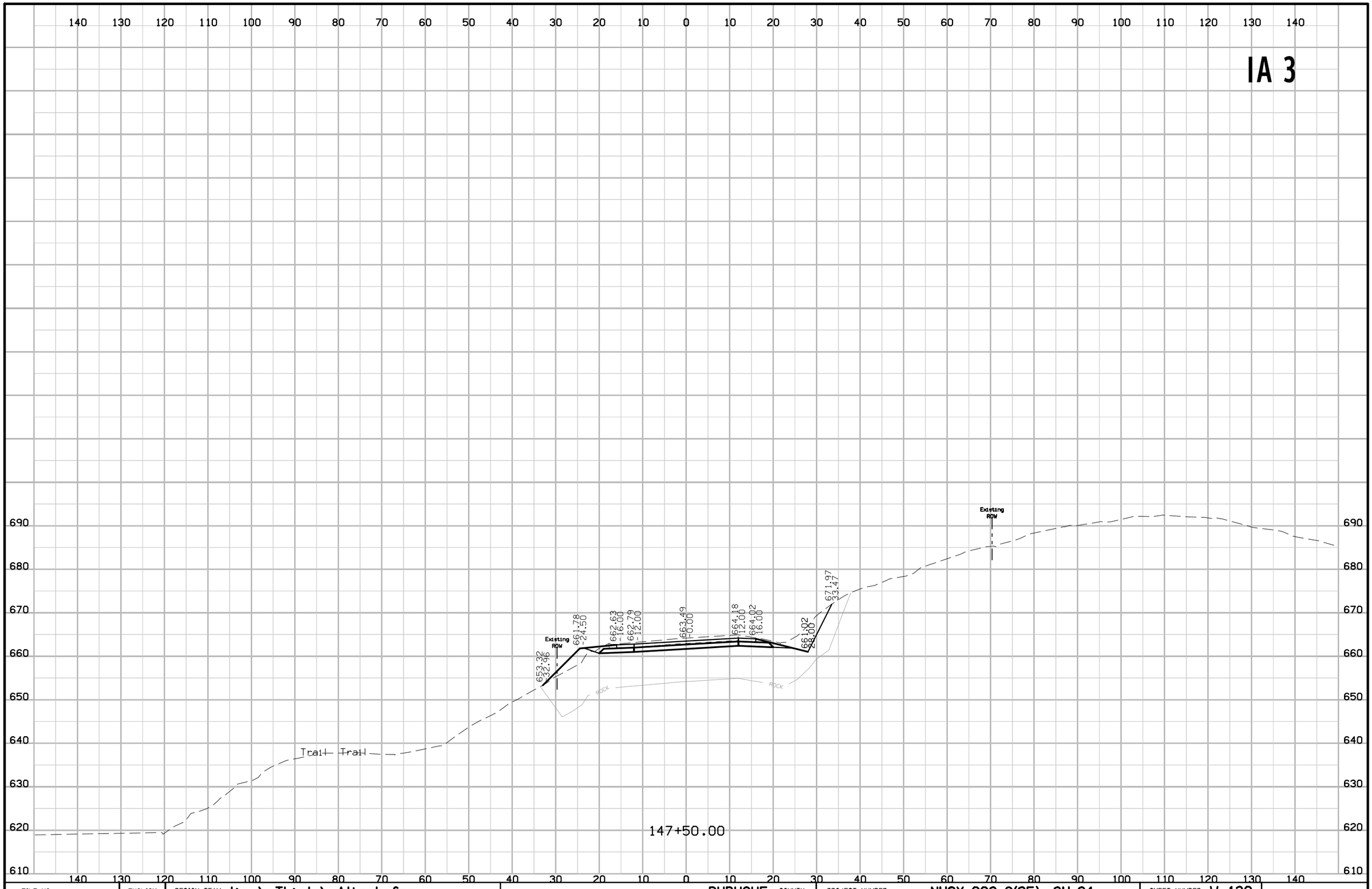
10:11:23 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.129

10:11:24 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

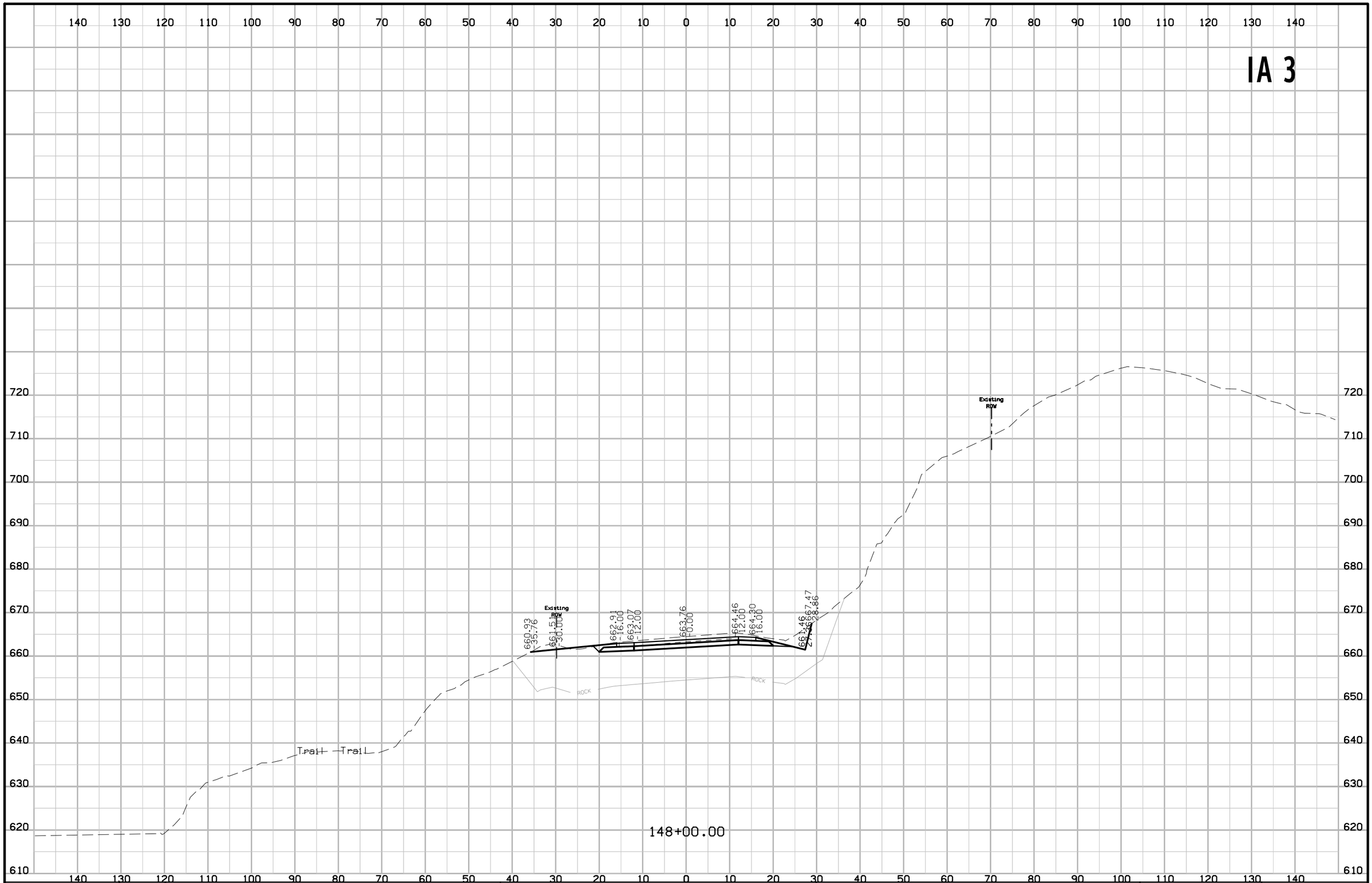
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.130

10:11:24 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

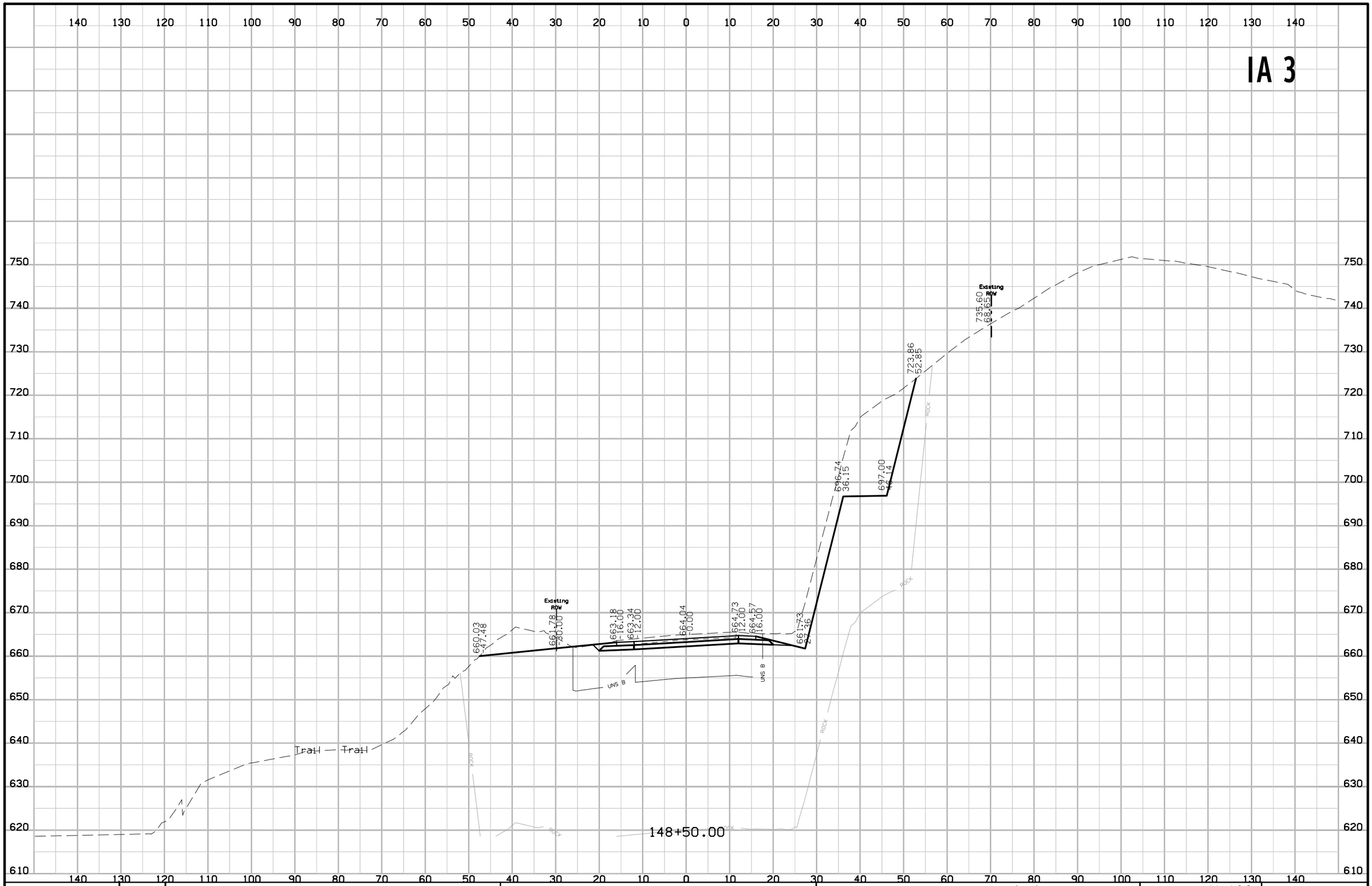
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.131

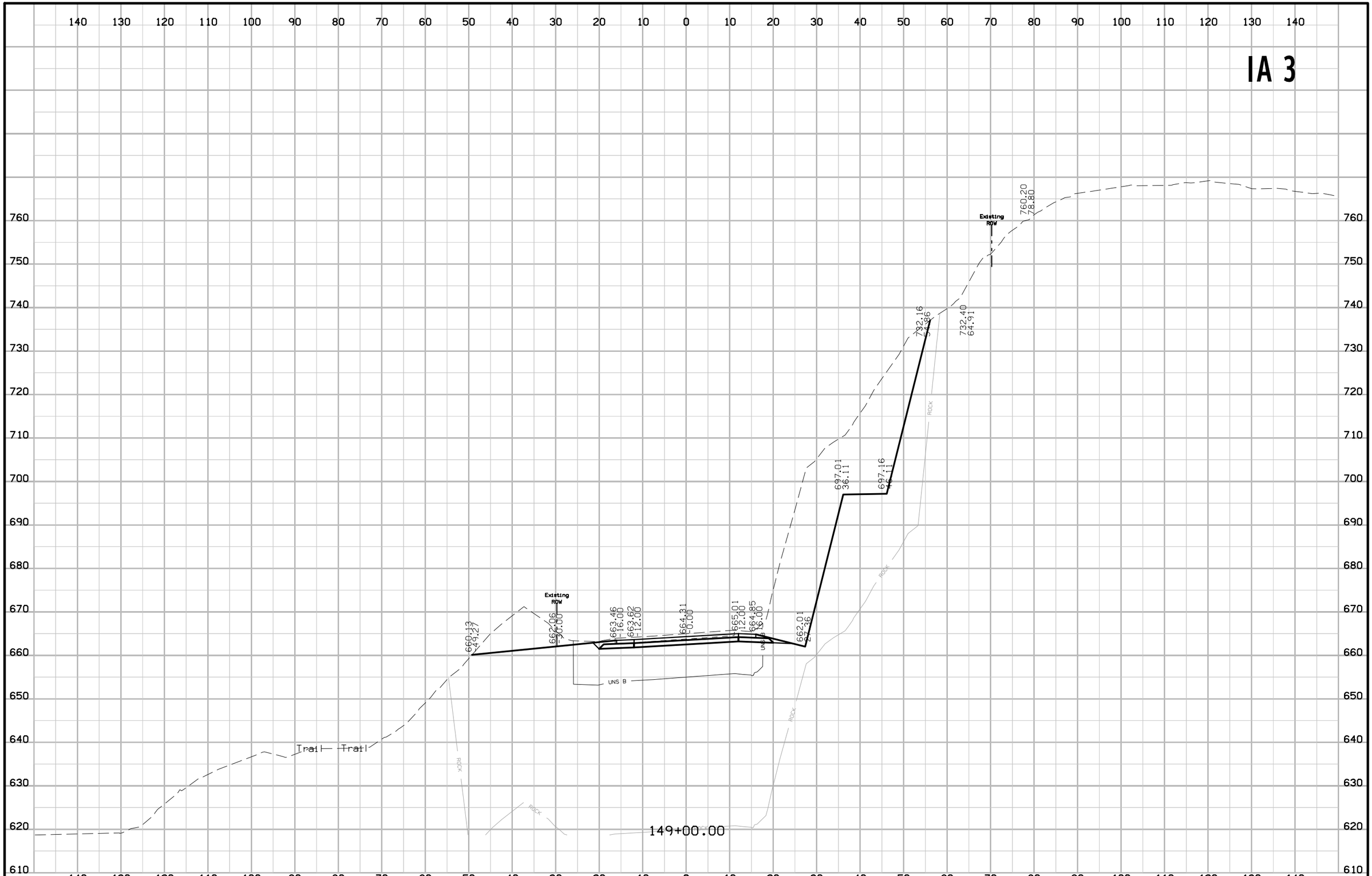
10:11:25 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.132

10:11:26 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.133

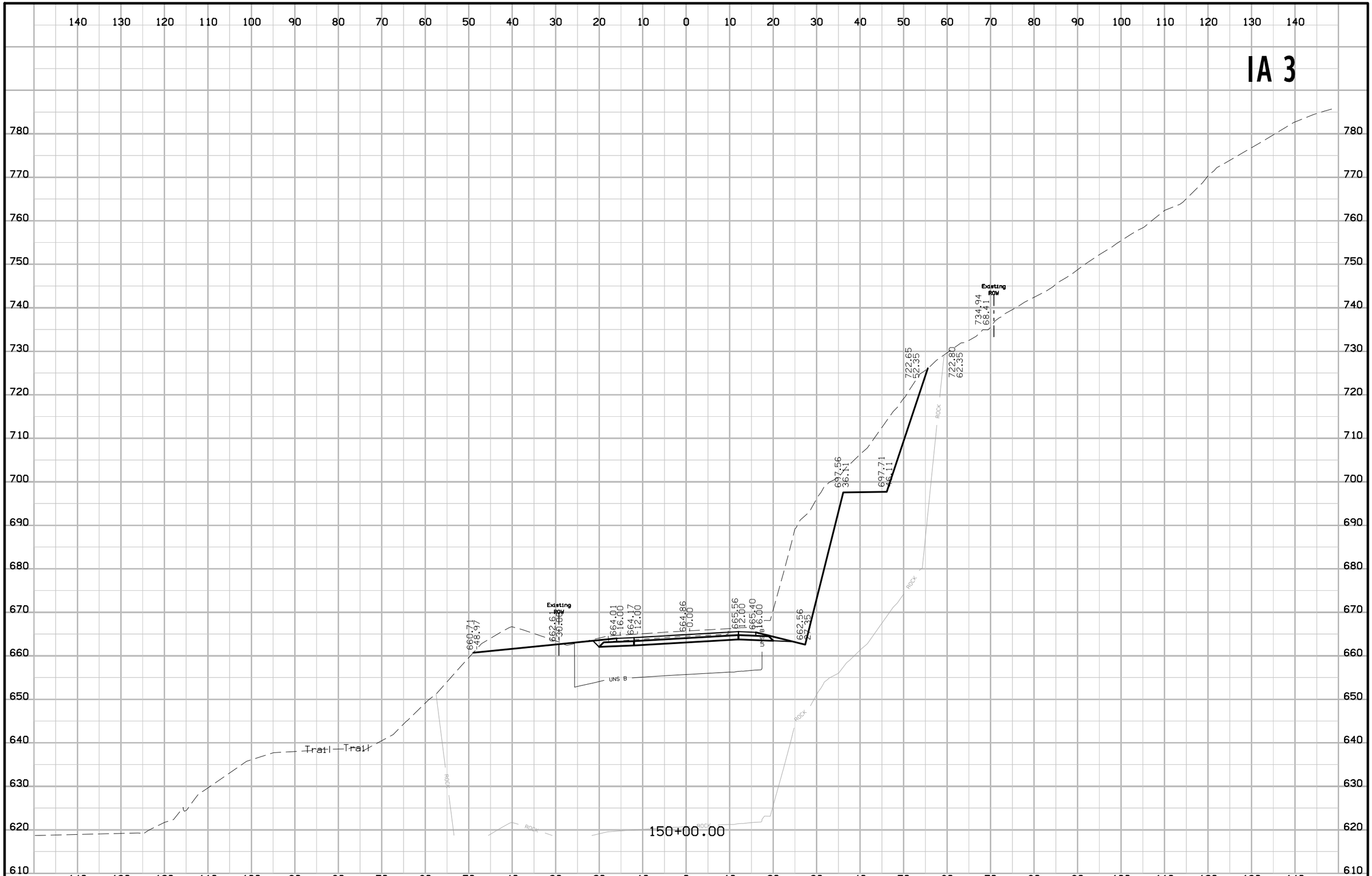
10:11:27 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3

Existing ROW
751.16
75.80
725.83
53.21
725.98
63.20
697.28
36.11
697.43
16.11
Existing ROW
662.33
30.00
663.73
16.00
663.89
12.00
664.59
0.00
665.28
12.00
665.12
16.00
662.28
2.36
660.18
51.51
UNS B
UNS B
ROCK
ROCK
ROCK
ROCK
ROCK
Trail
Trail
149+50.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.134

10:11:27 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.135

10:11:28 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

770 760 750 740 730 720 710 700 690 680 670 660 650 640 630 620 610

Existing ROW
729.01
64.52

706.05
48.15

706.20
58.13

690.04
34.16

690.19
44.16

Existing ROW
682.89
-30.00

661.87
-40.23

664.29
-16.00

664.45
12.00

665.14
-0.00

665.82
12.00

665.66
16.00

662.82
27.36

UNS

UNS B

Trail Trail

ROCK

ROCK

ROCK

ROCK

150+50.00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.136

10:11:29 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

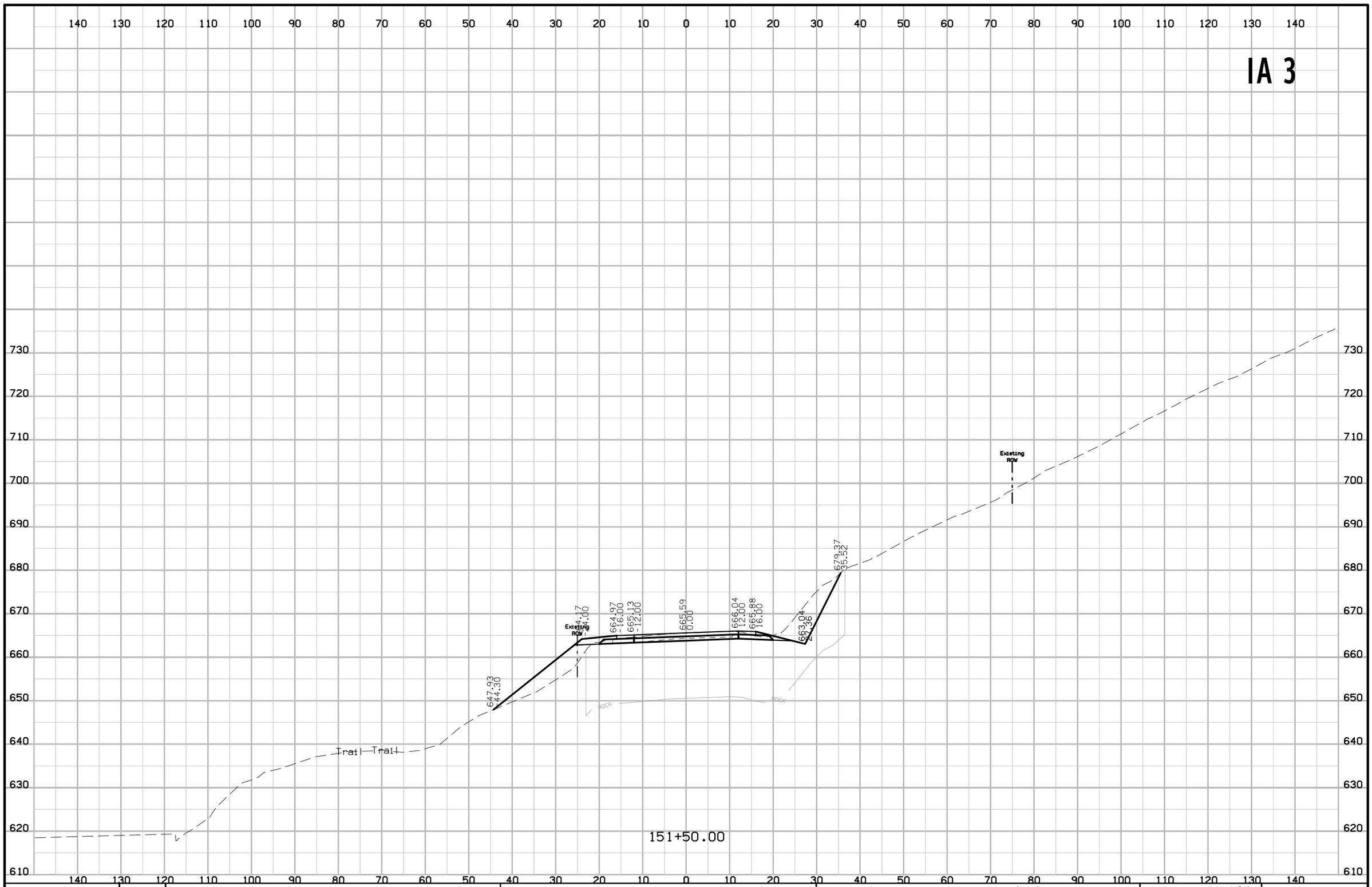
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.137

10:11:29 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

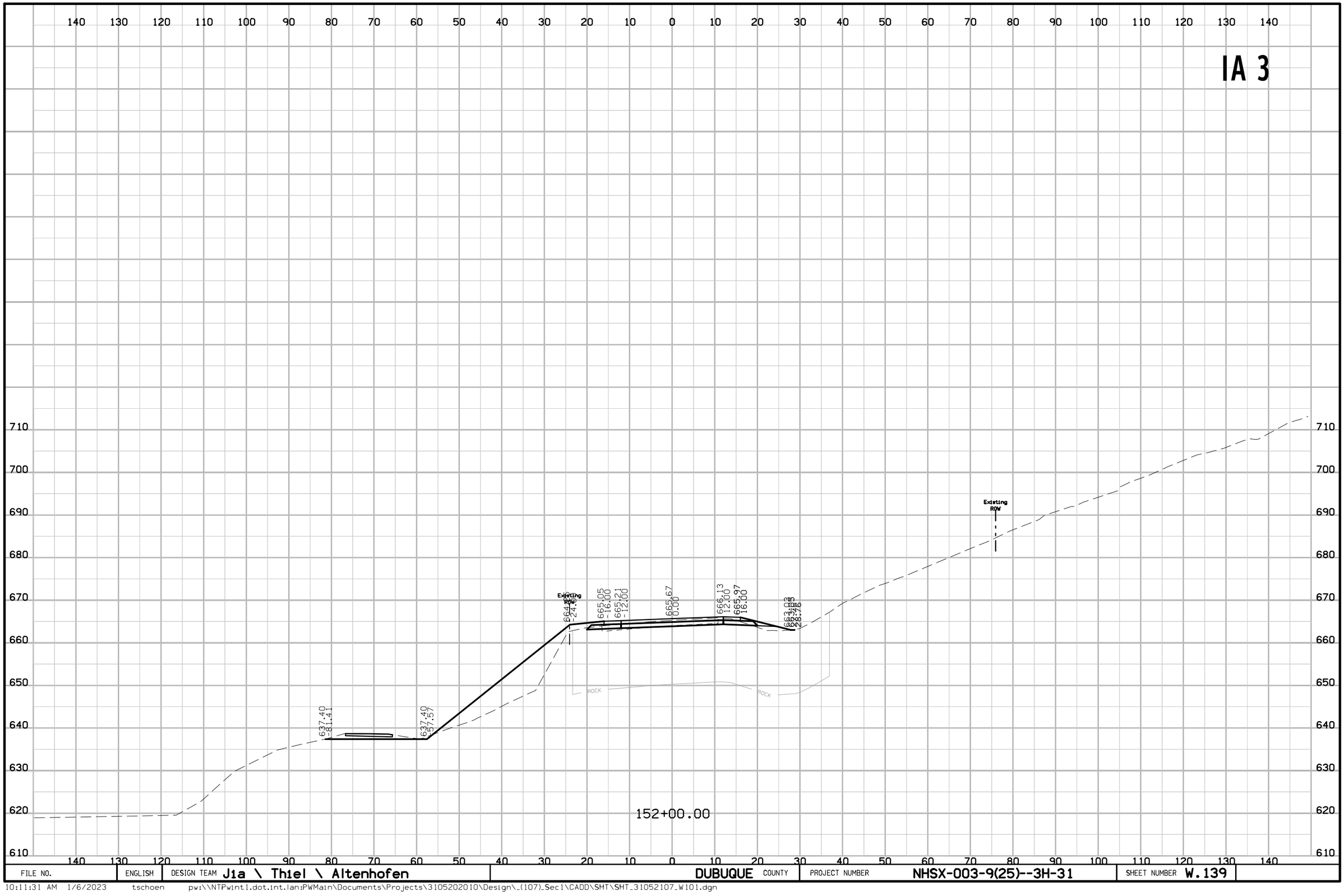
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.138

10:11:30 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

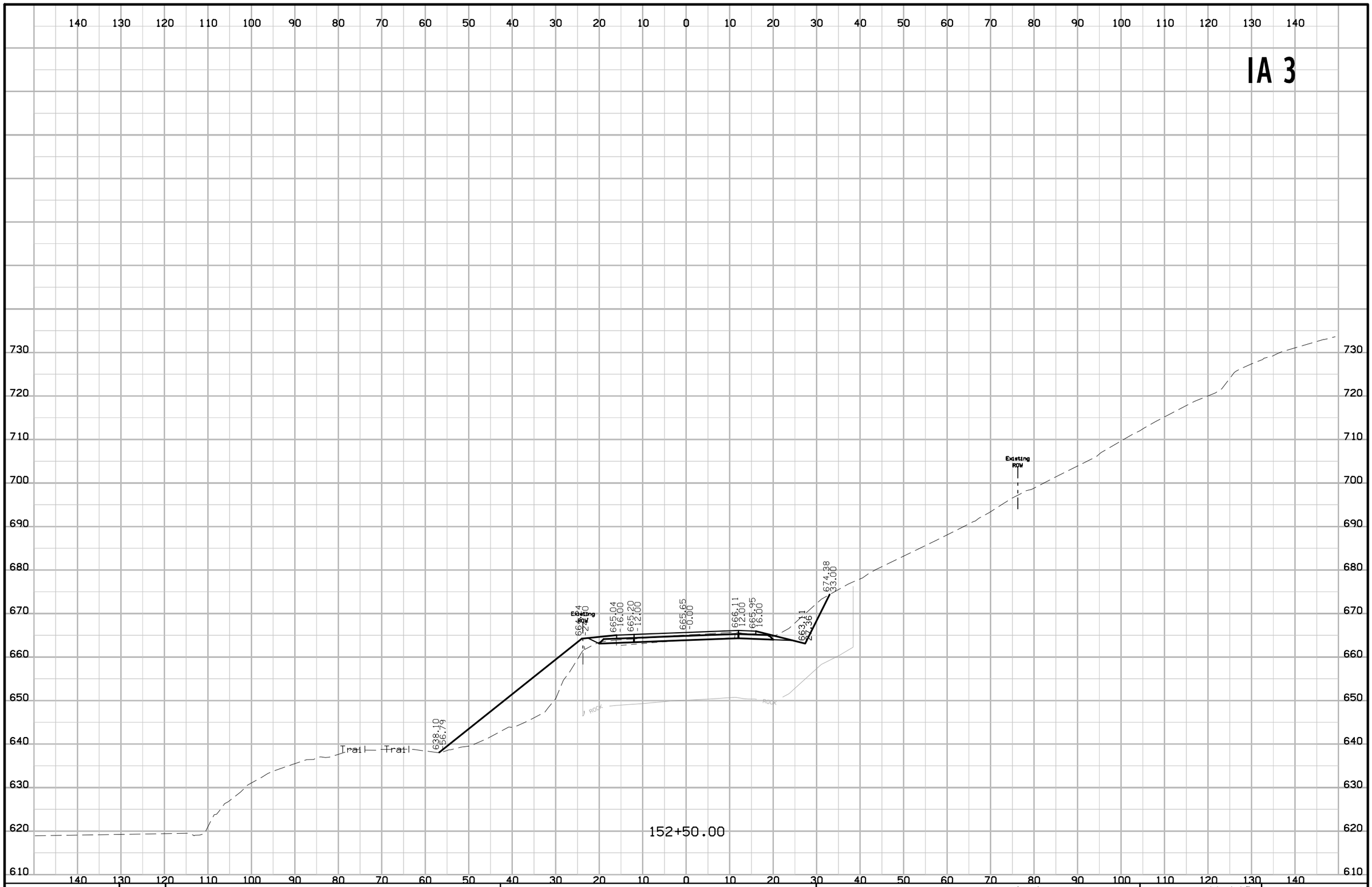
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.139

10:11:31 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

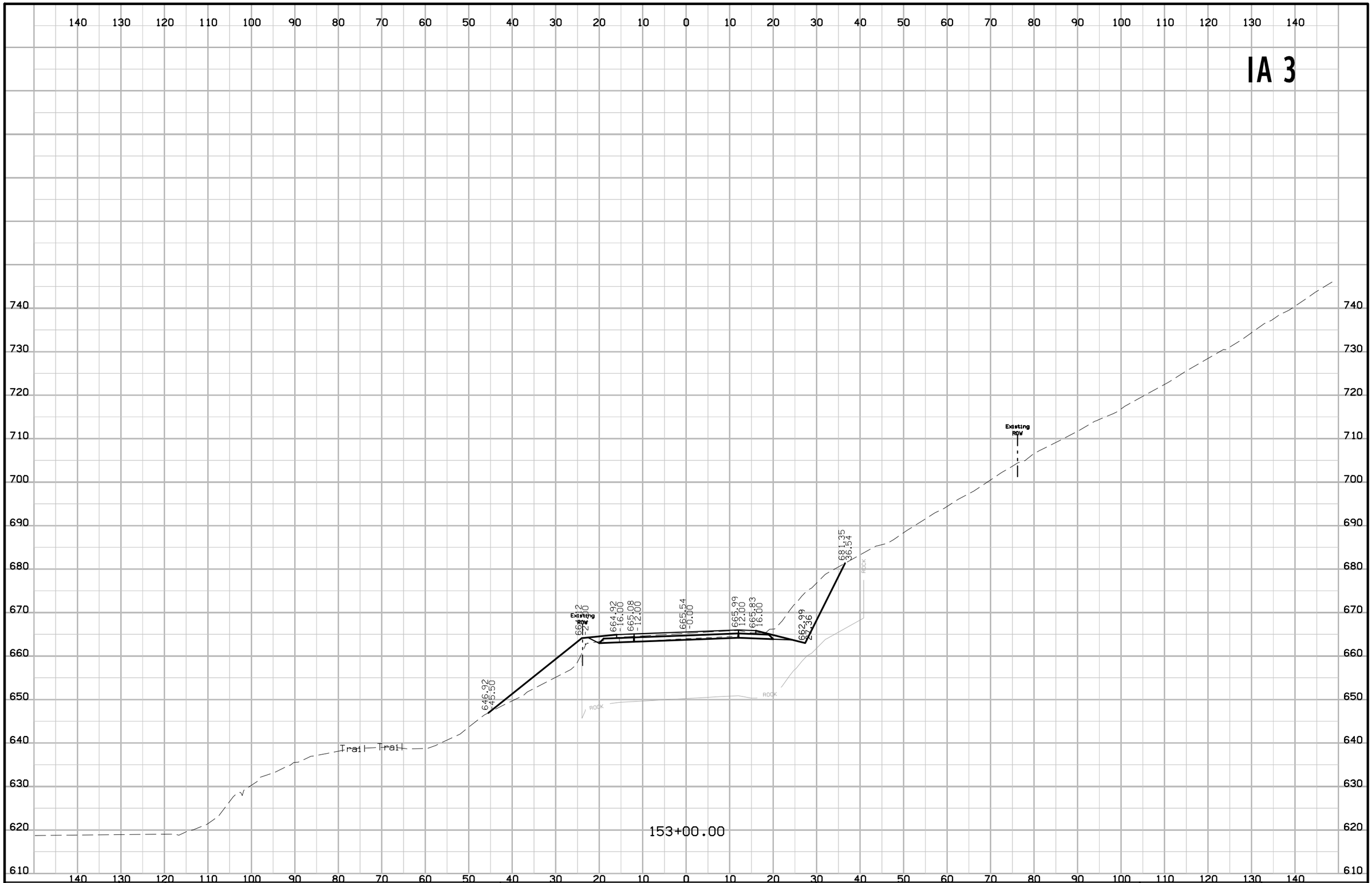
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.140

10:11:31 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

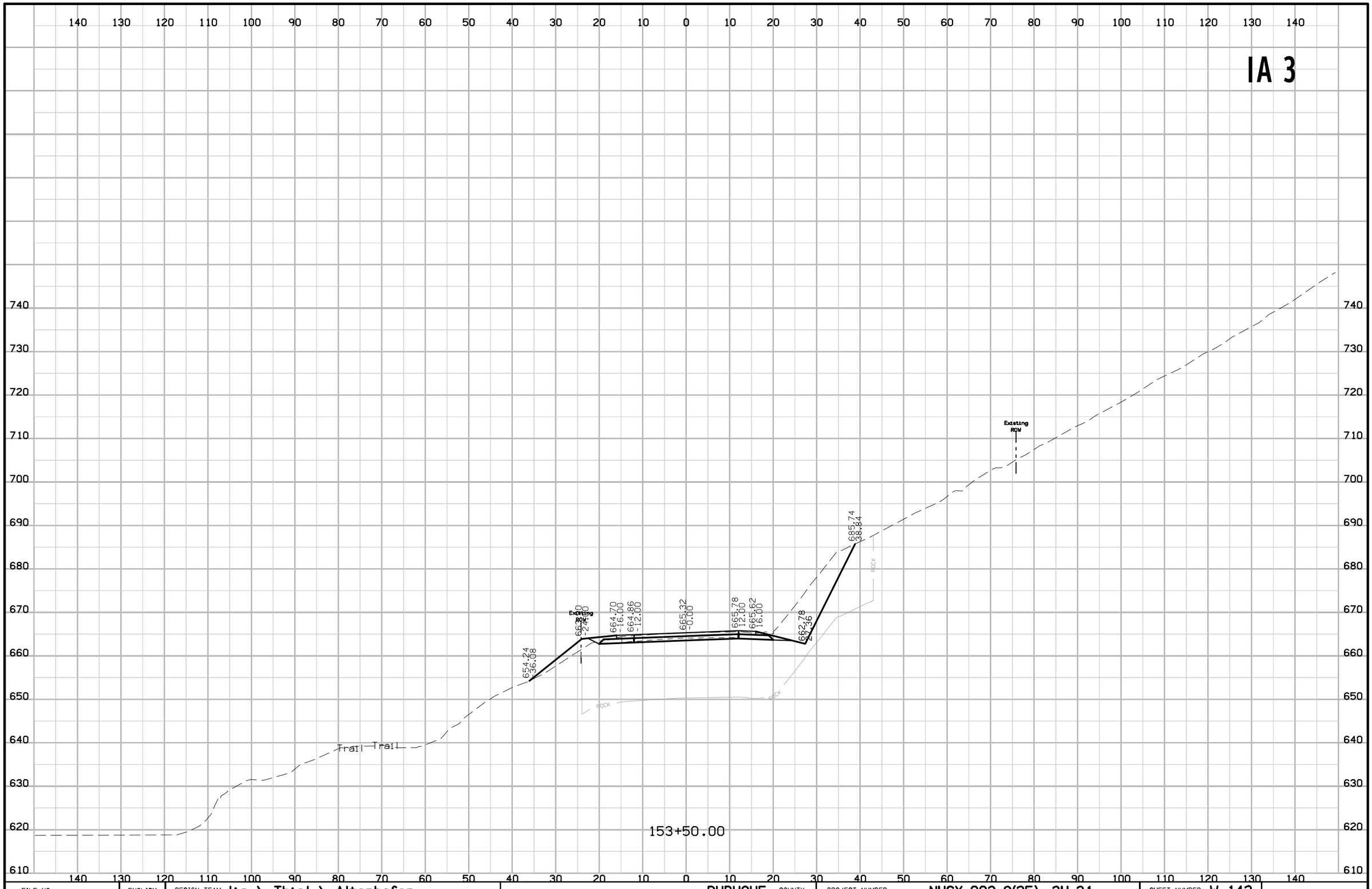
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.141

10:11:32 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

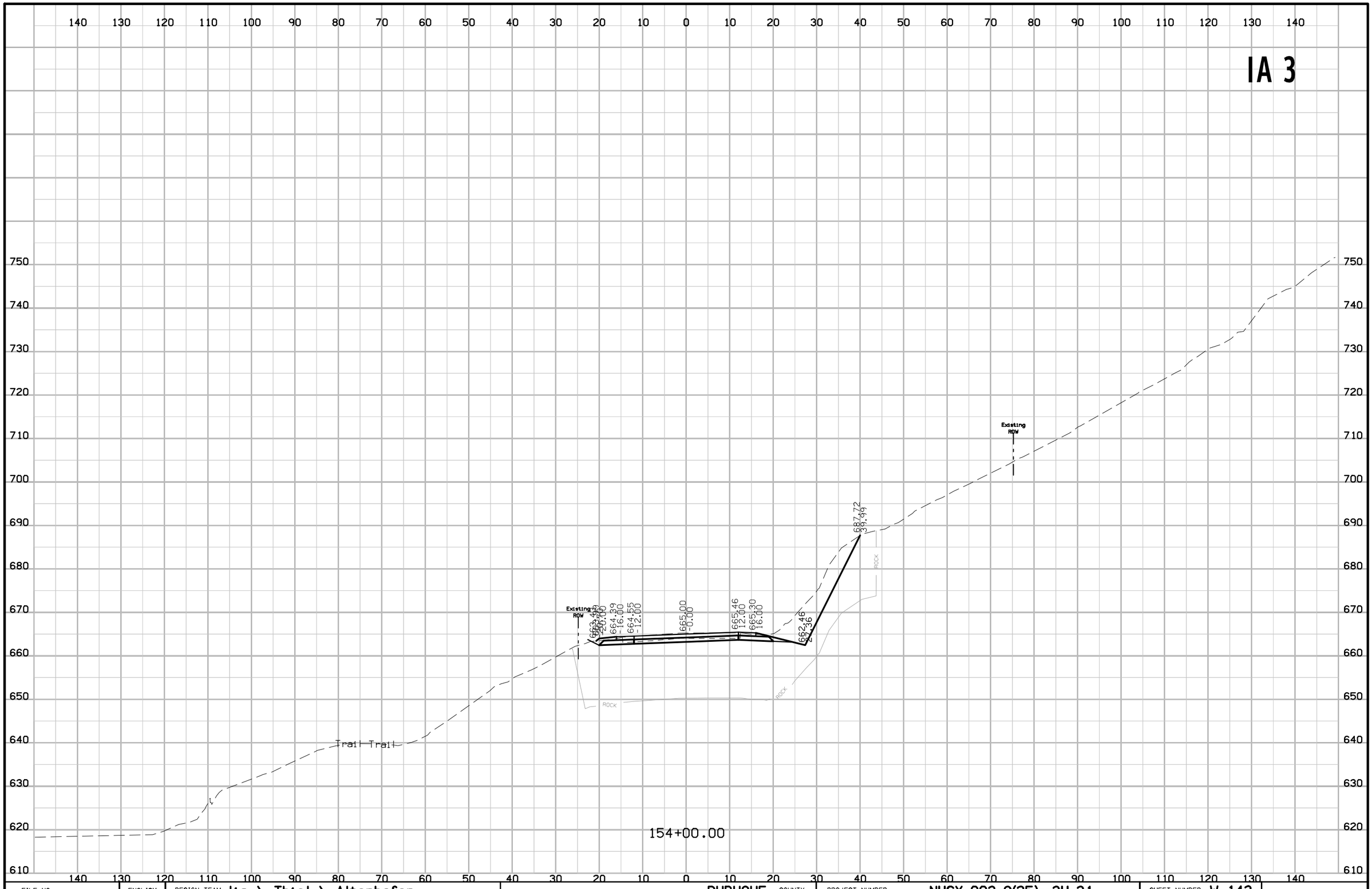
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.142

10:11:33 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

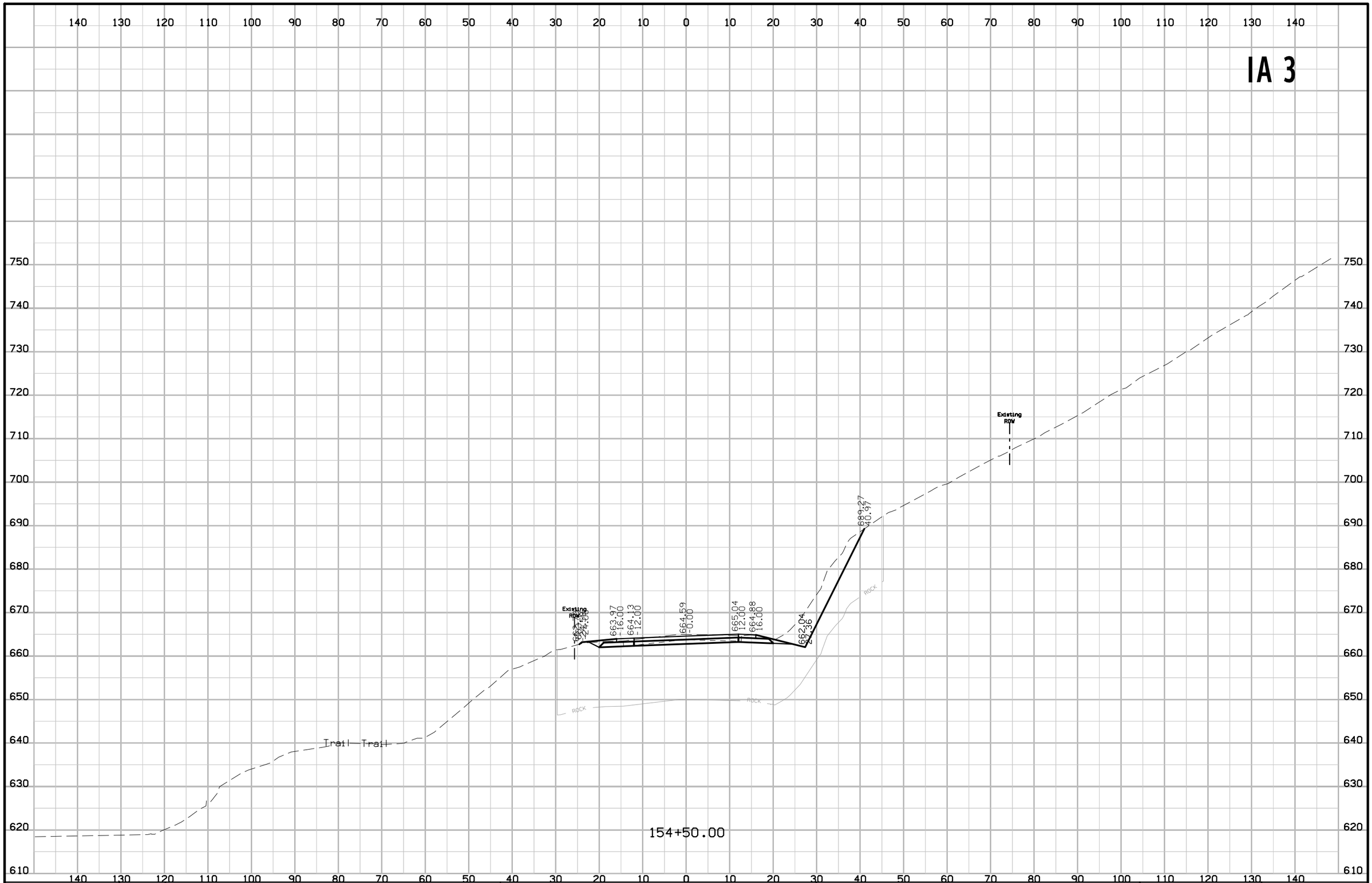
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.143

10:11:33 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

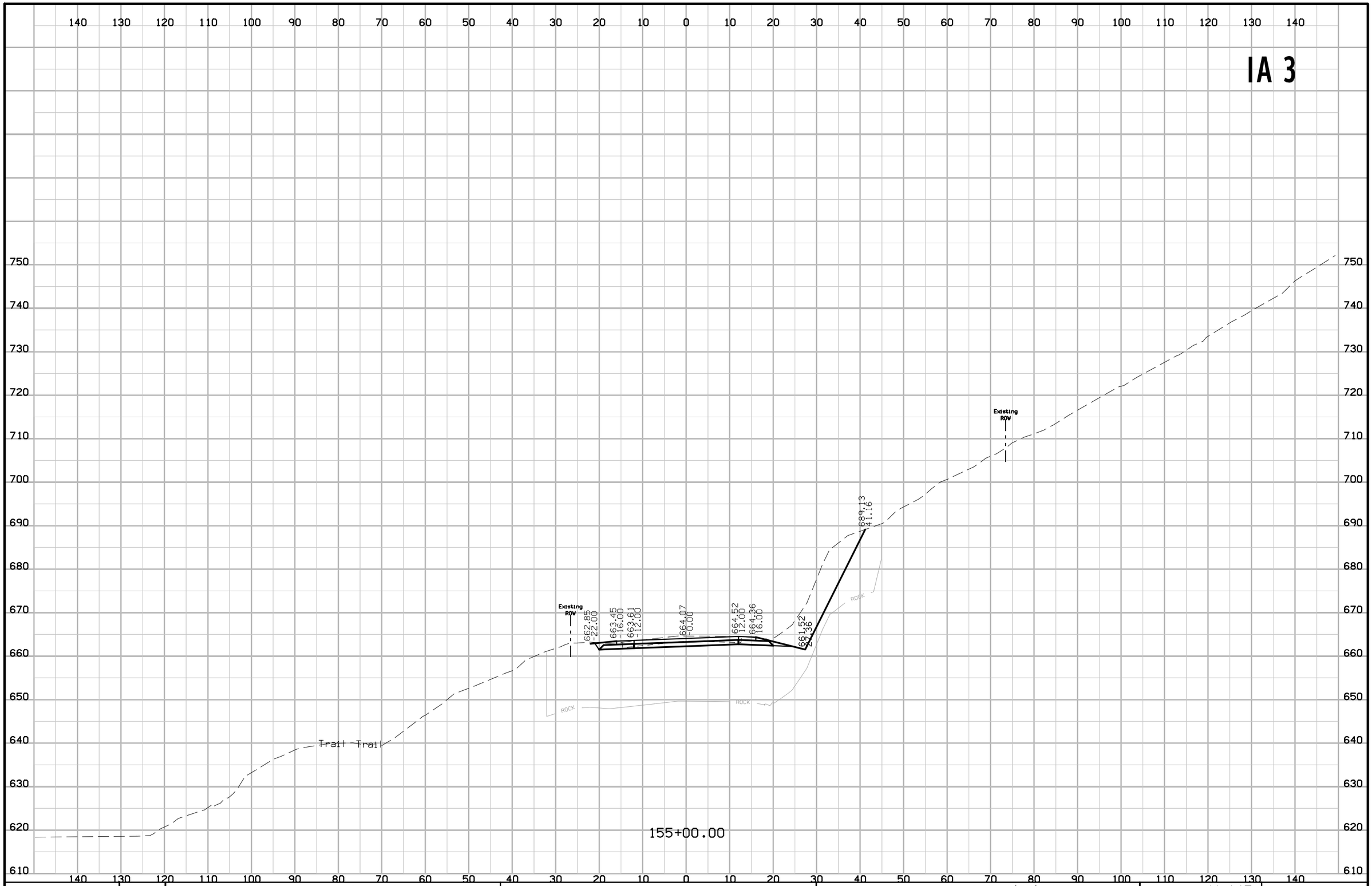
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.144

10:11:34 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

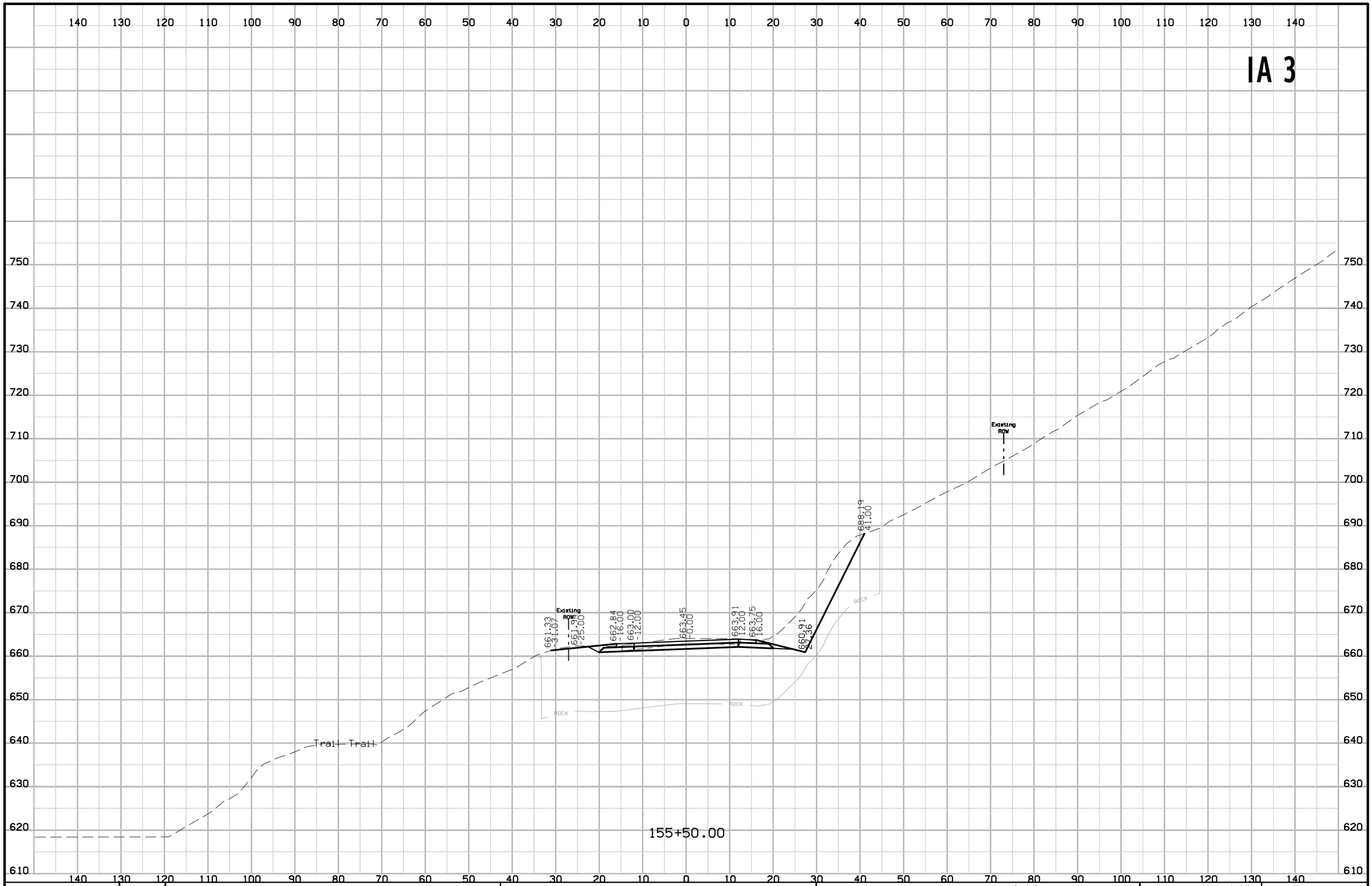
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.145

10:11:35 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

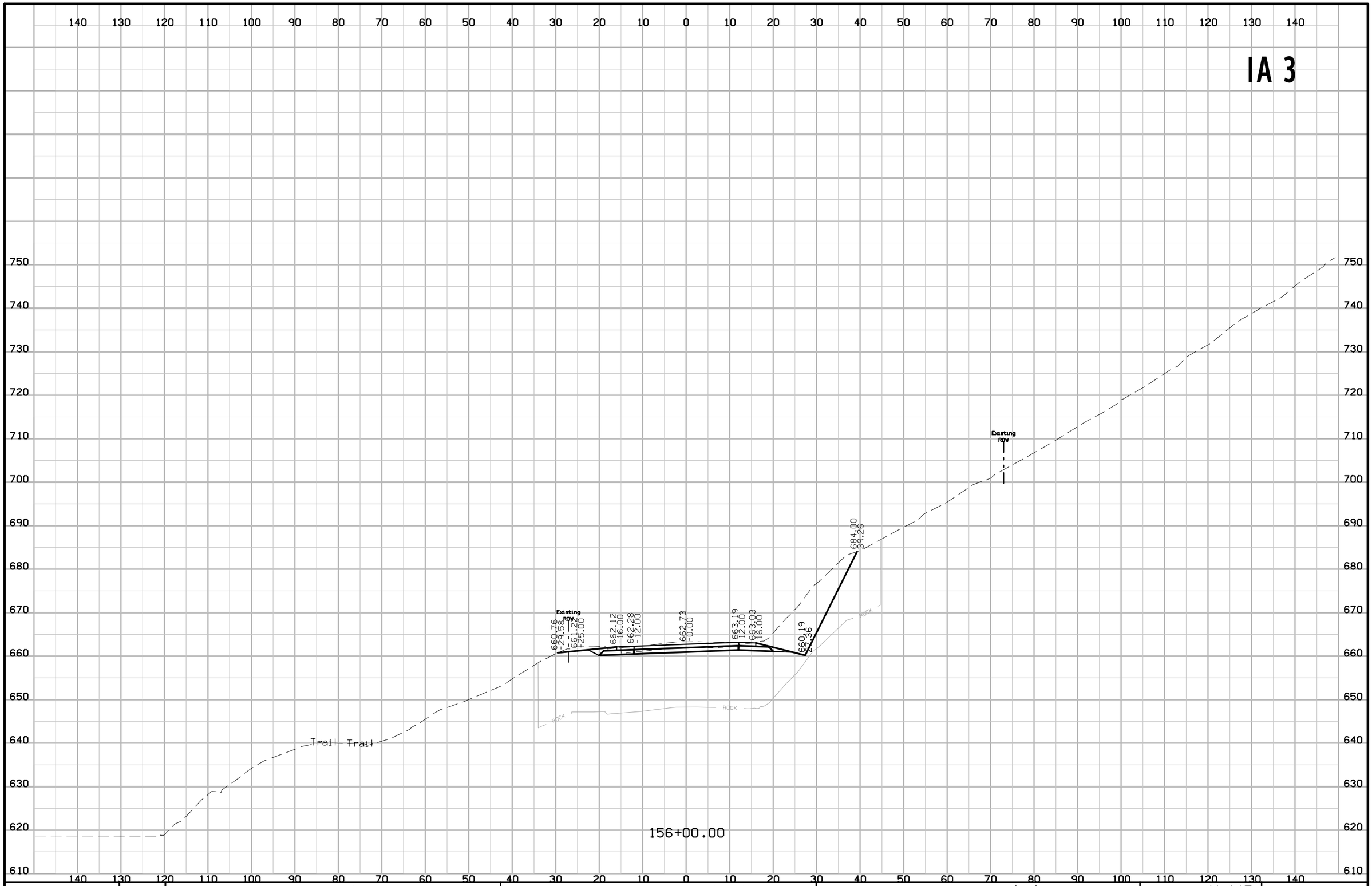
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.146

10:11:36 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

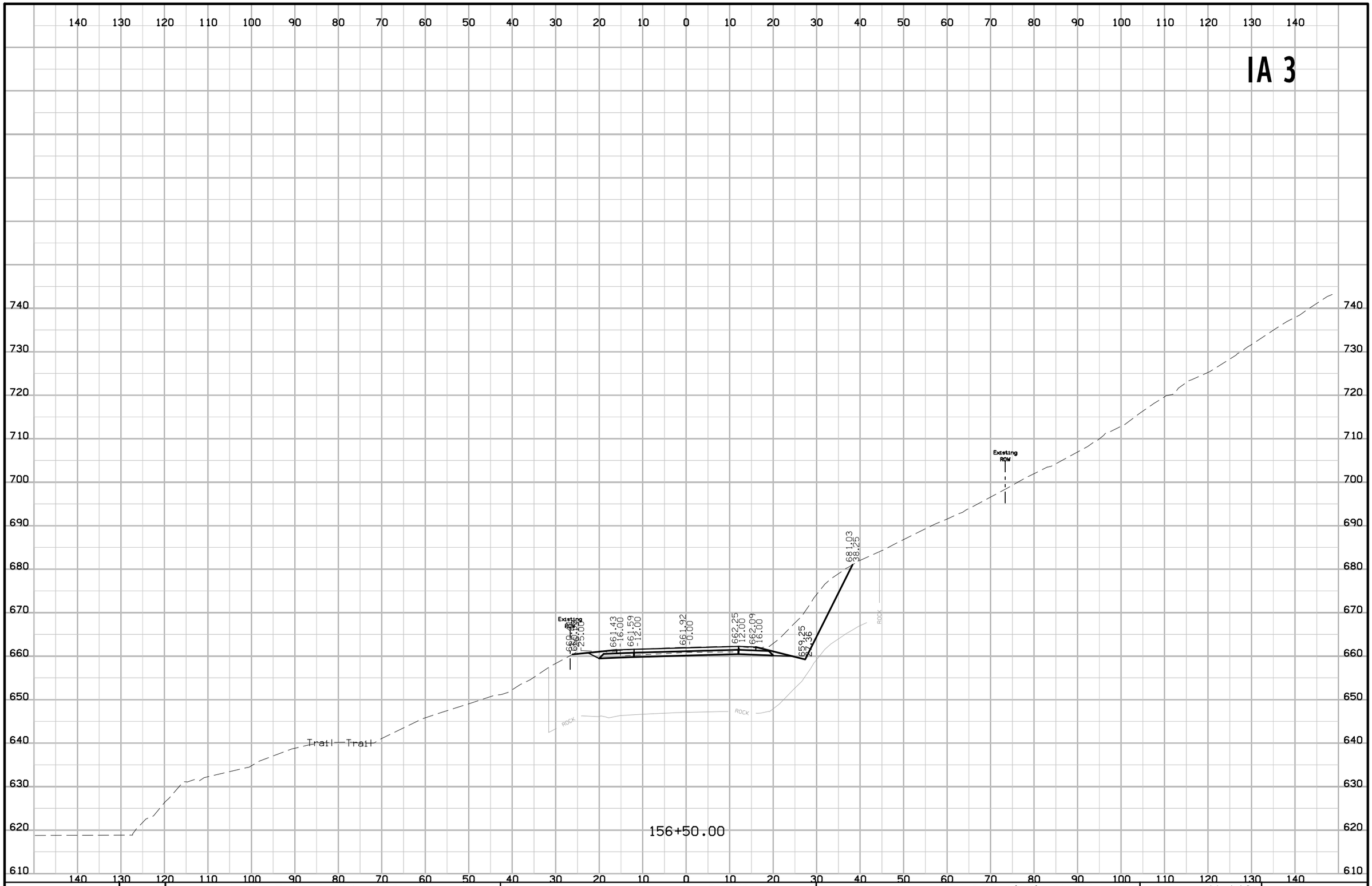
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.147

10:11:36 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

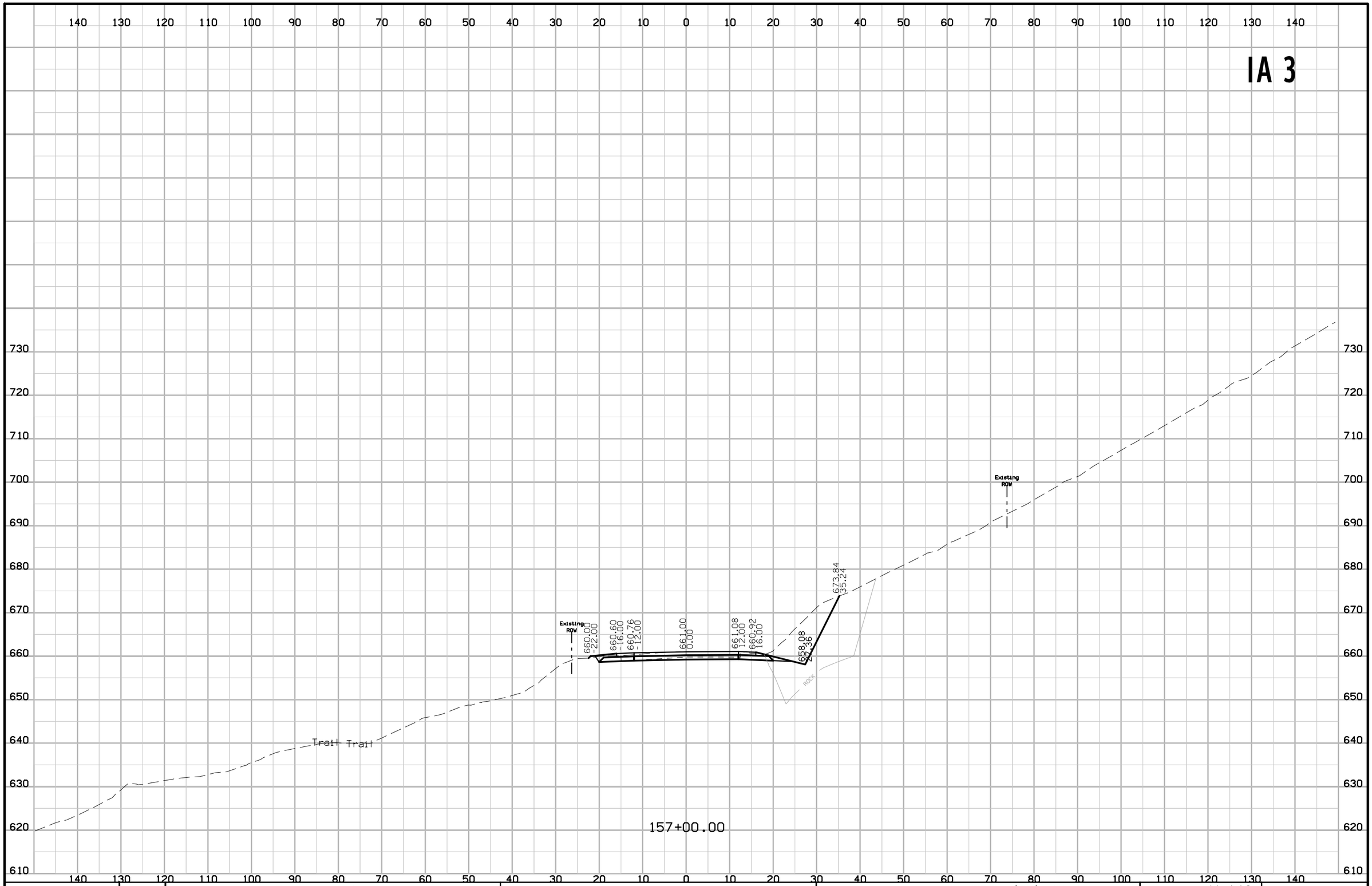
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.148

10:11:37 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

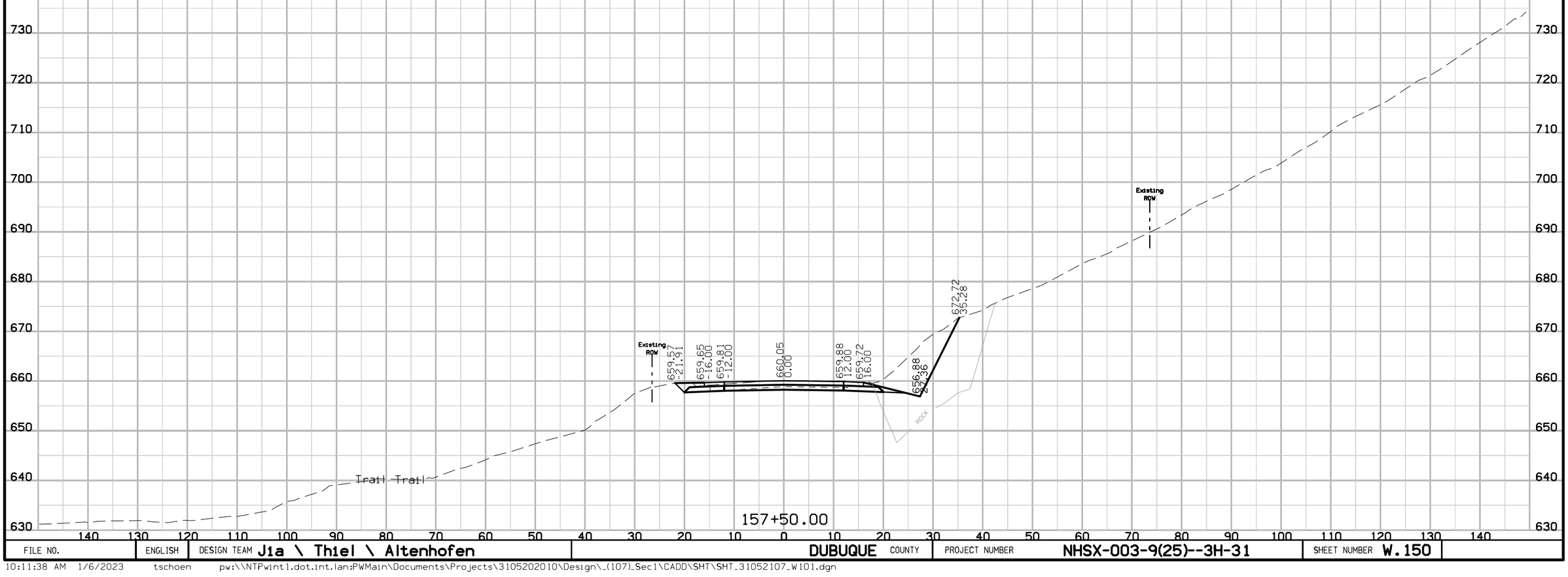
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.149

10:11:38 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

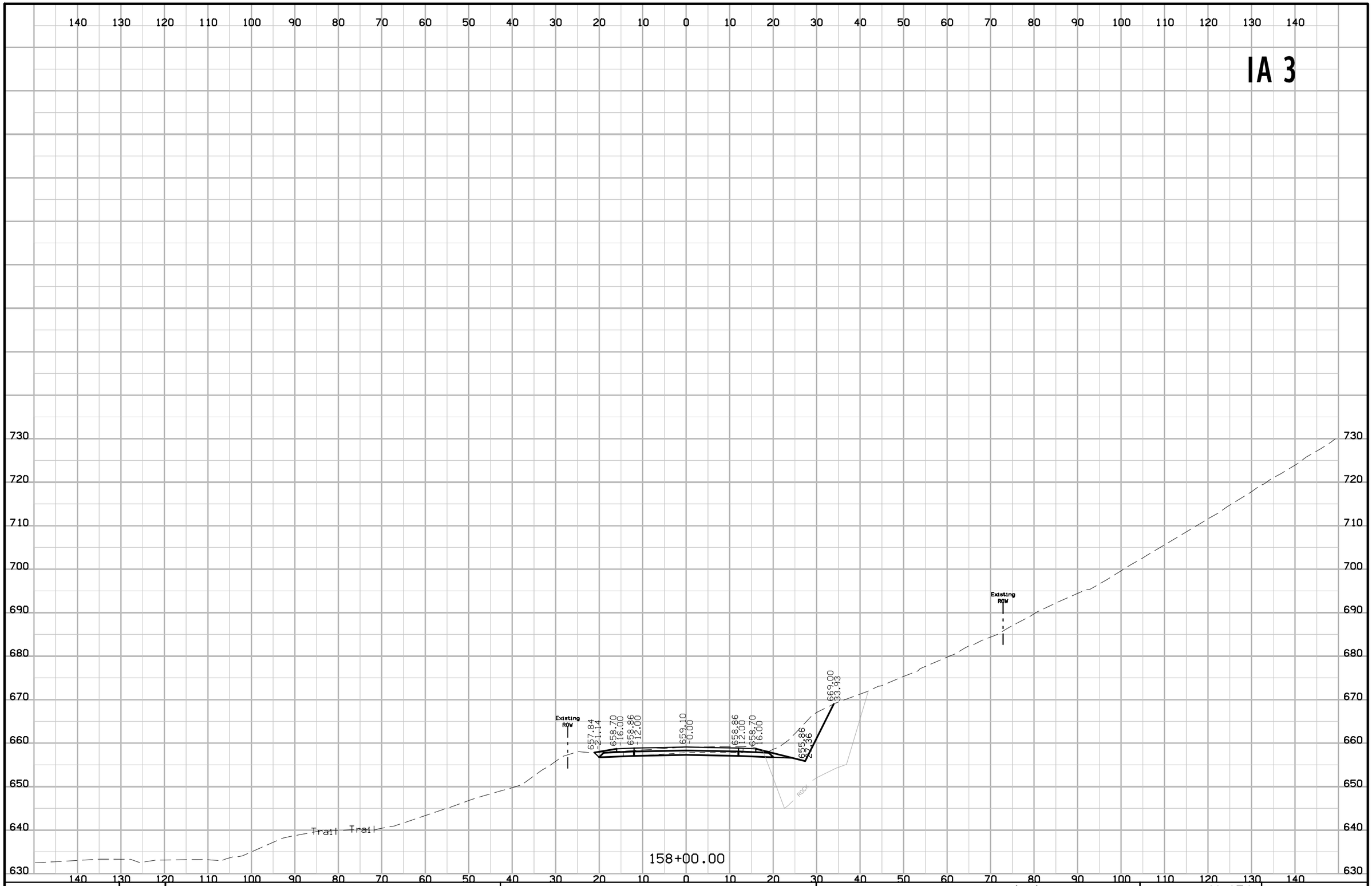
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.150

10:11:38 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

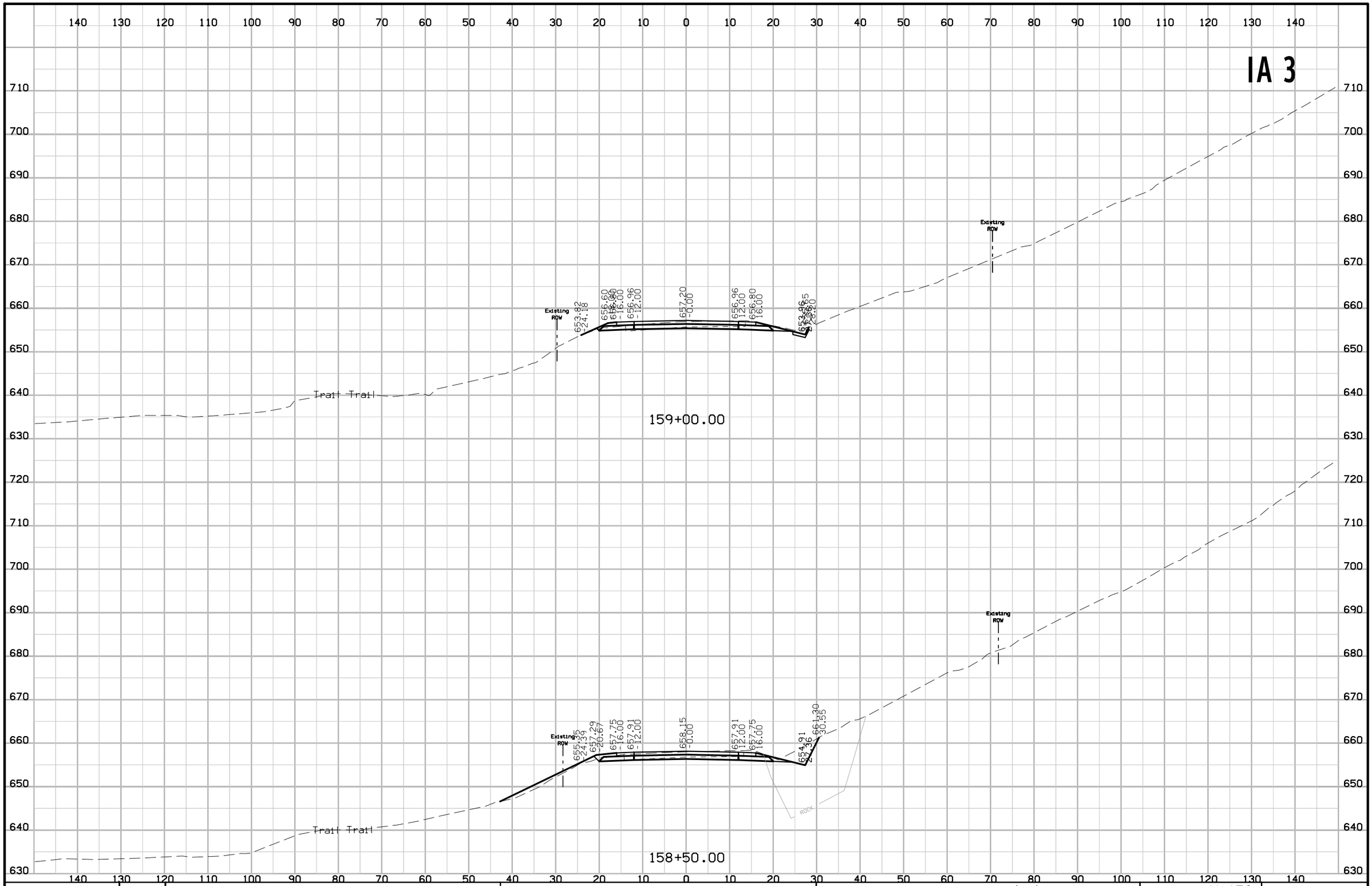
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.151

10:11:39 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

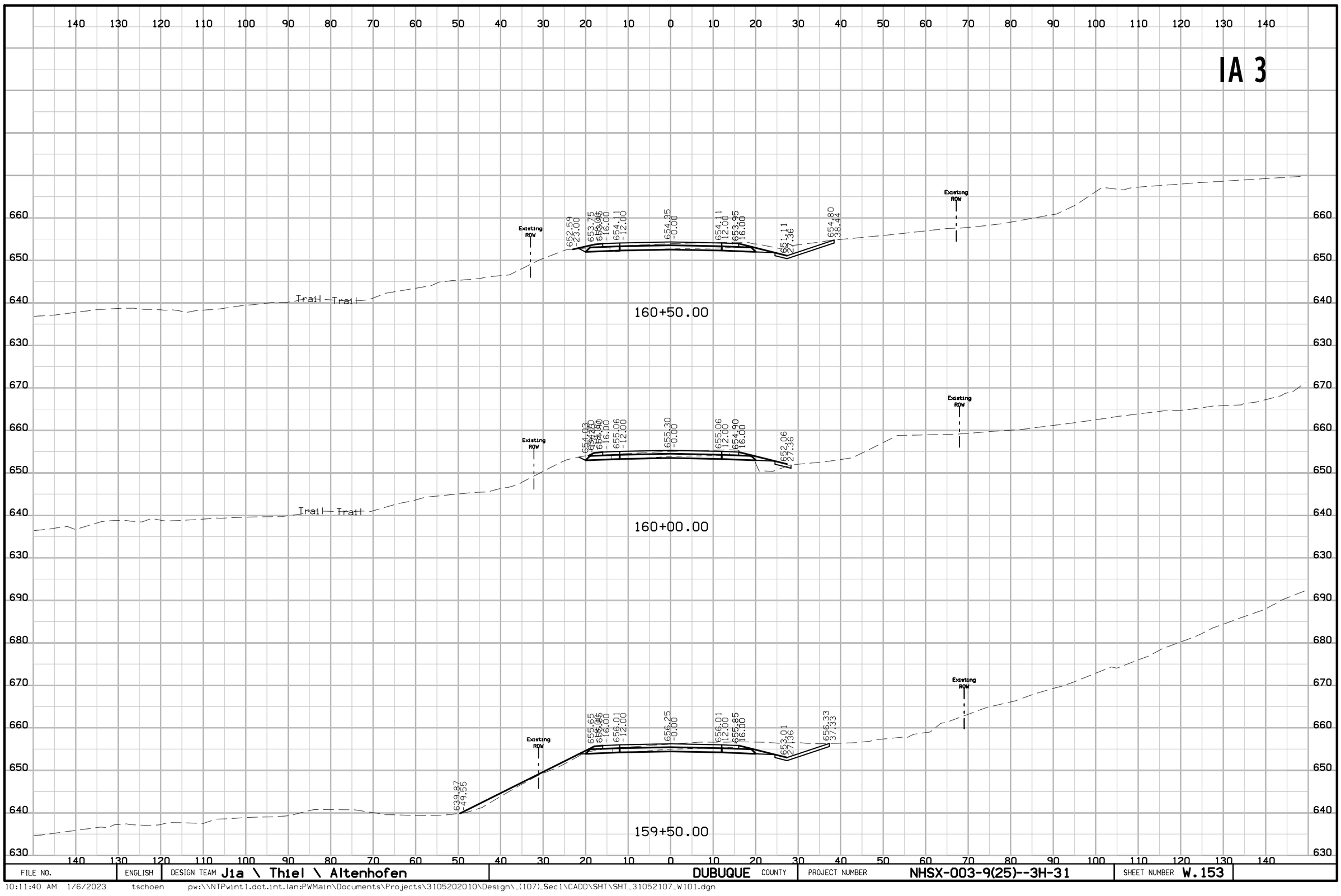
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.152

10:11:40 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

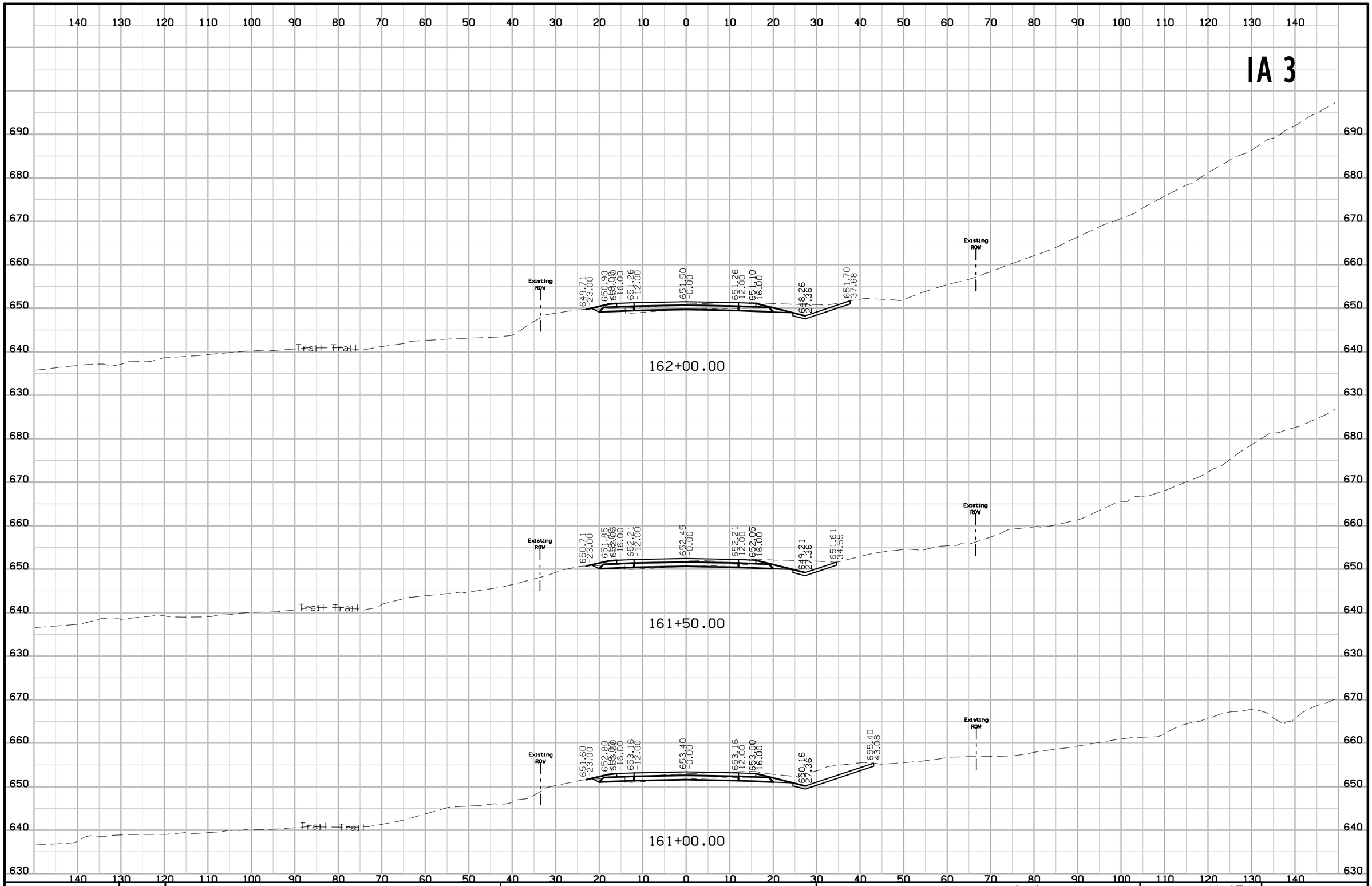
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.153

10:11:40 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

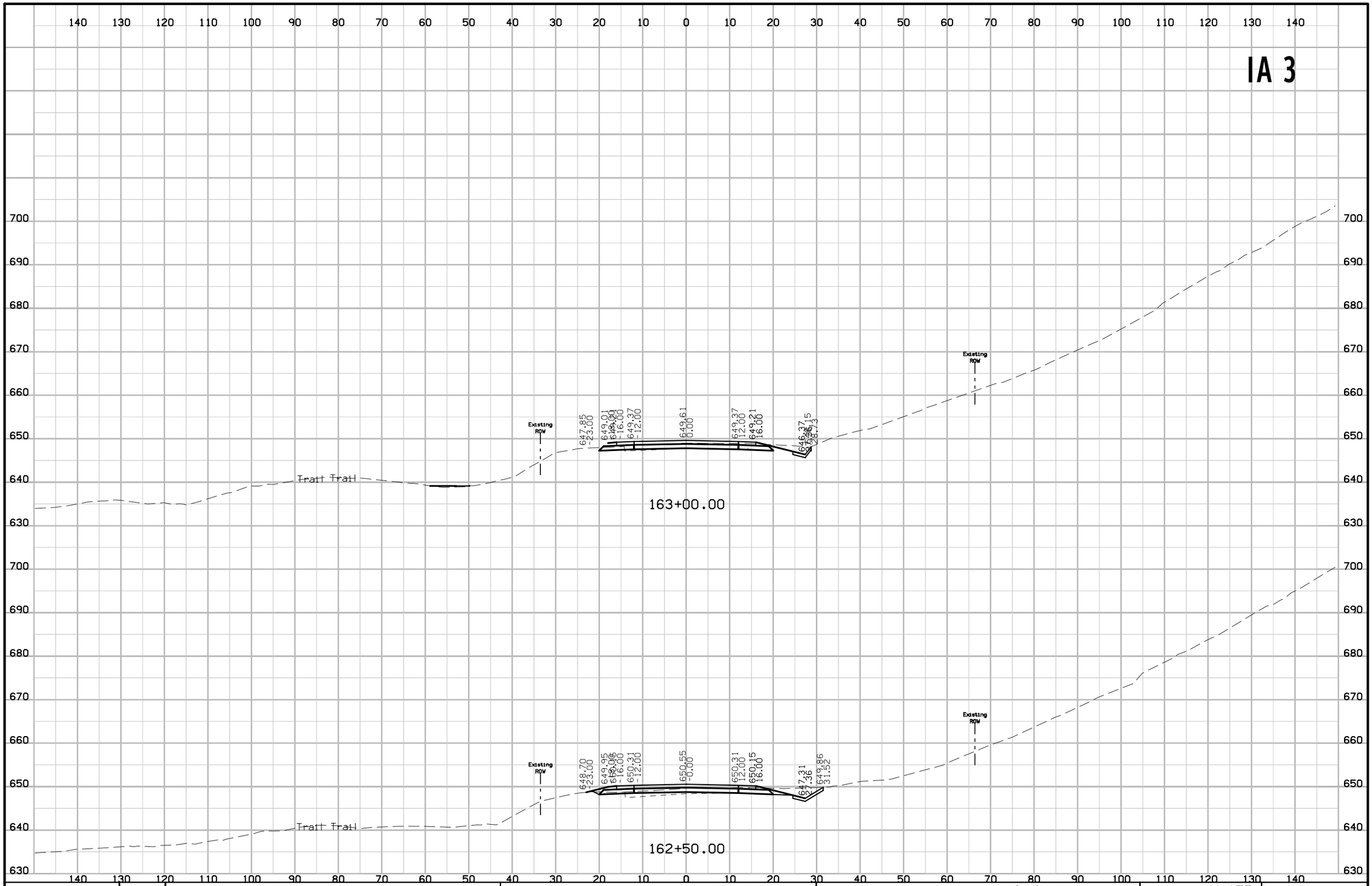
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.154

10:11:41 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

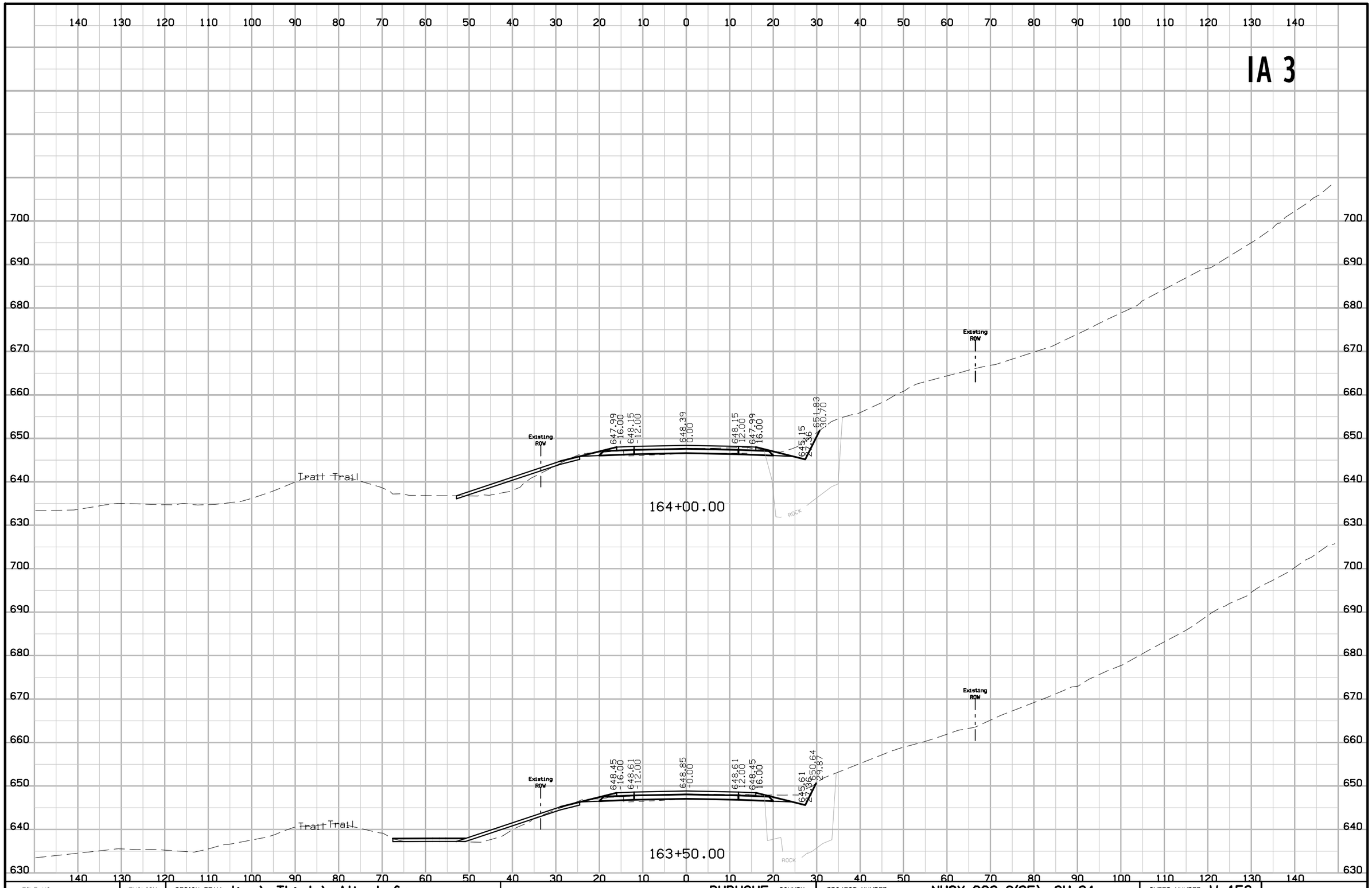
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.155

10:11:42 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

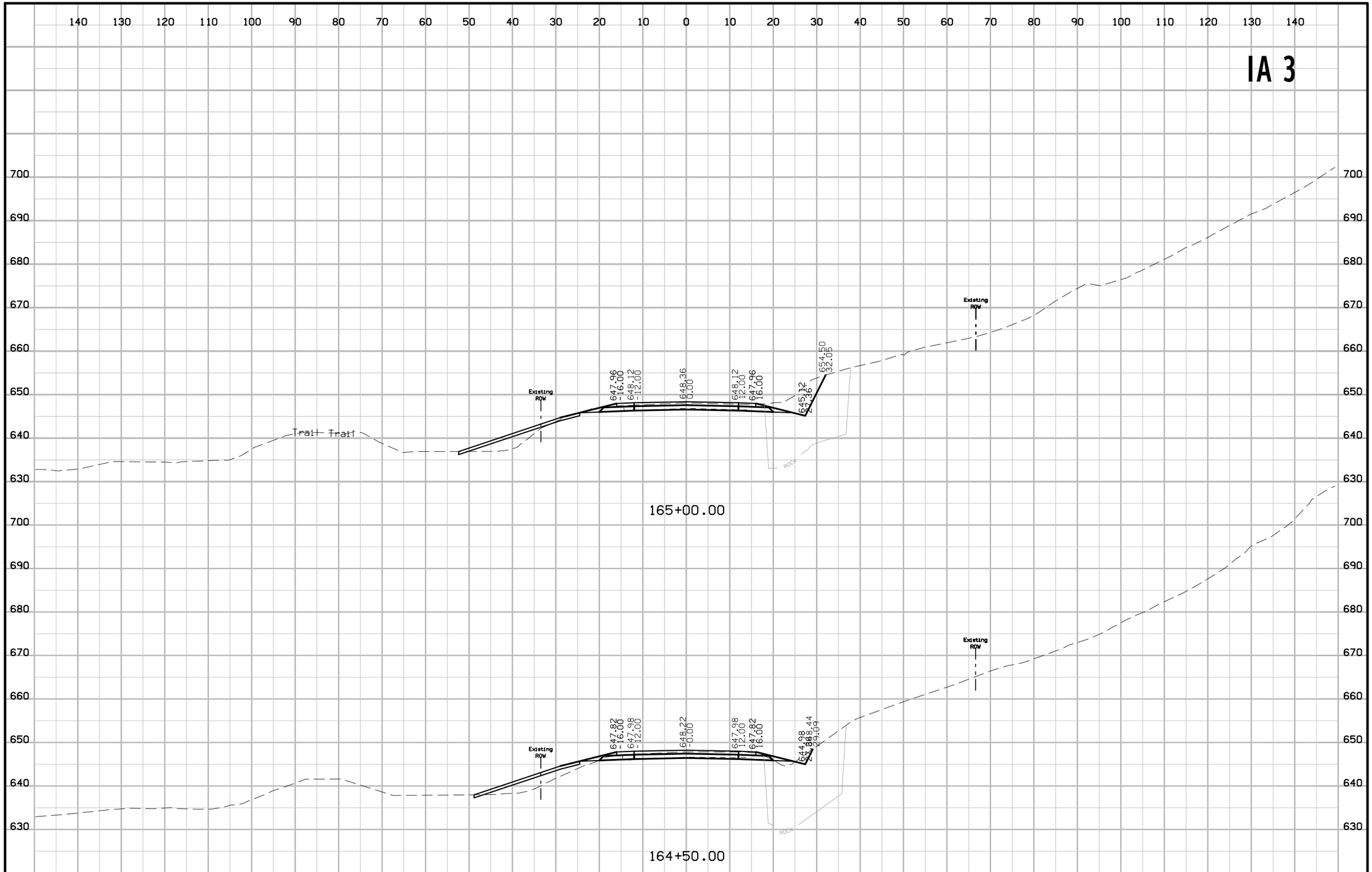
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.156

3:56:56 PM 2/13/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

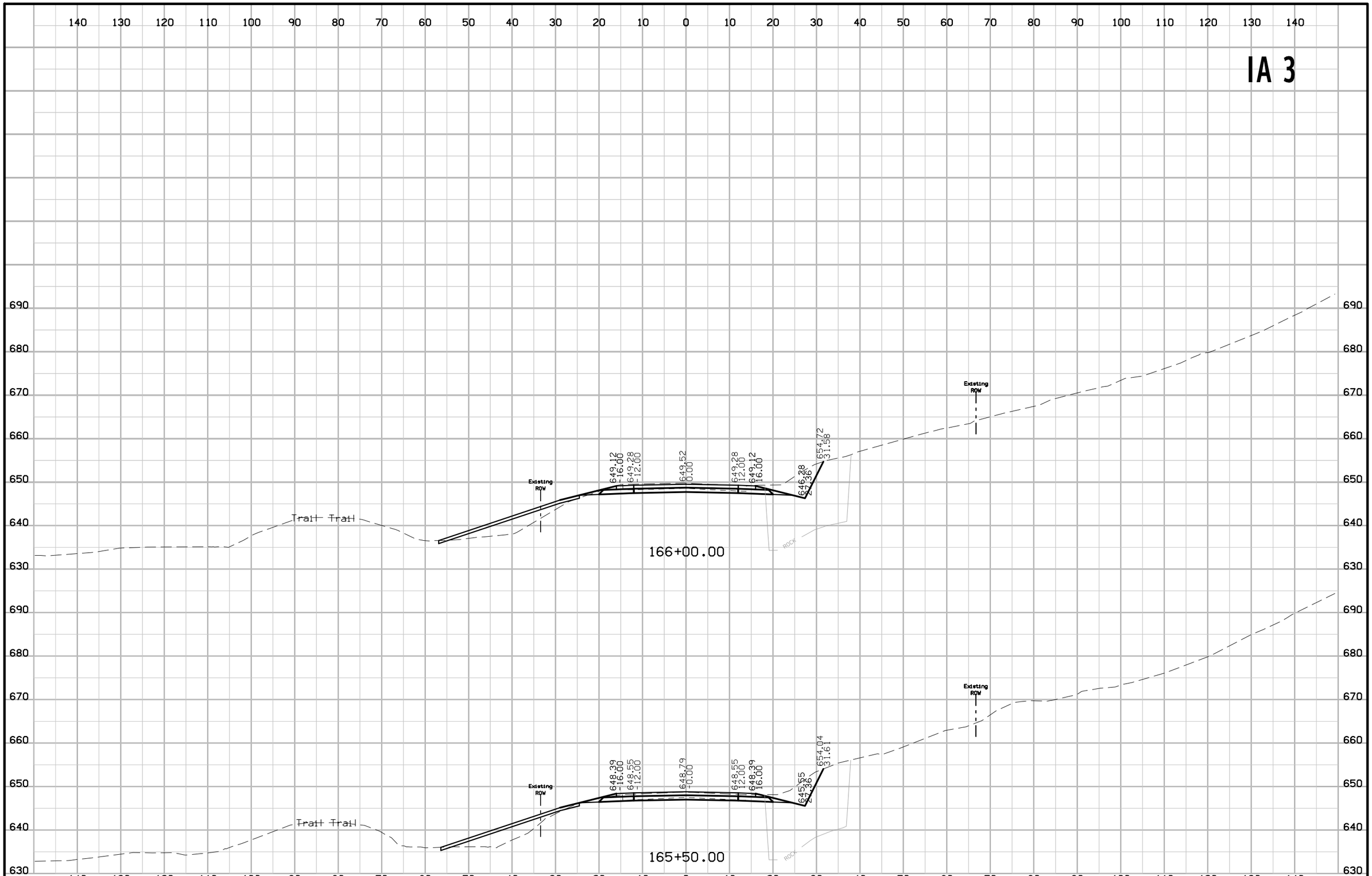
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.157

3:56:57 PM 2/13/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

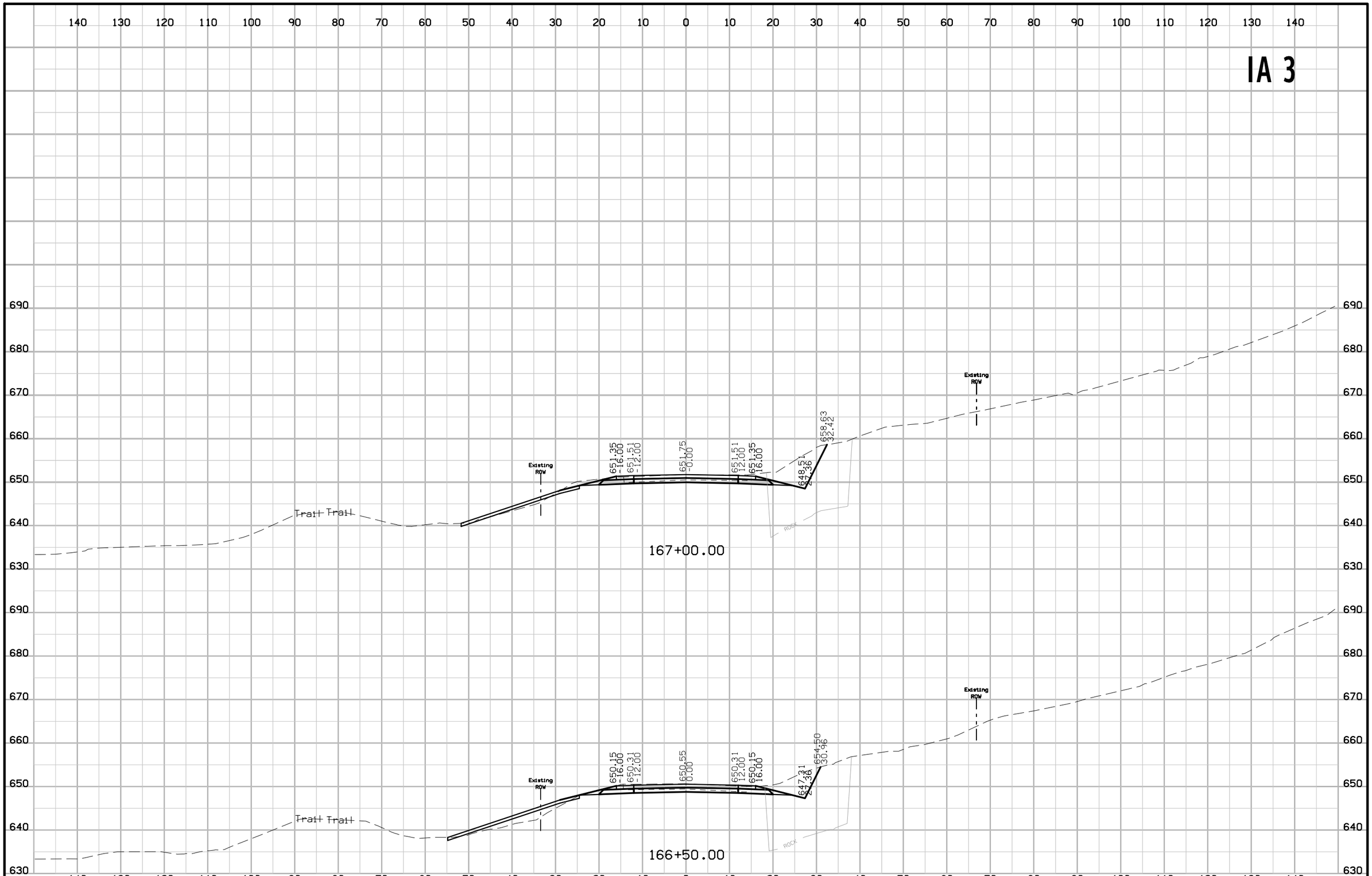
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.158

3:56:57 PM 2/13/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

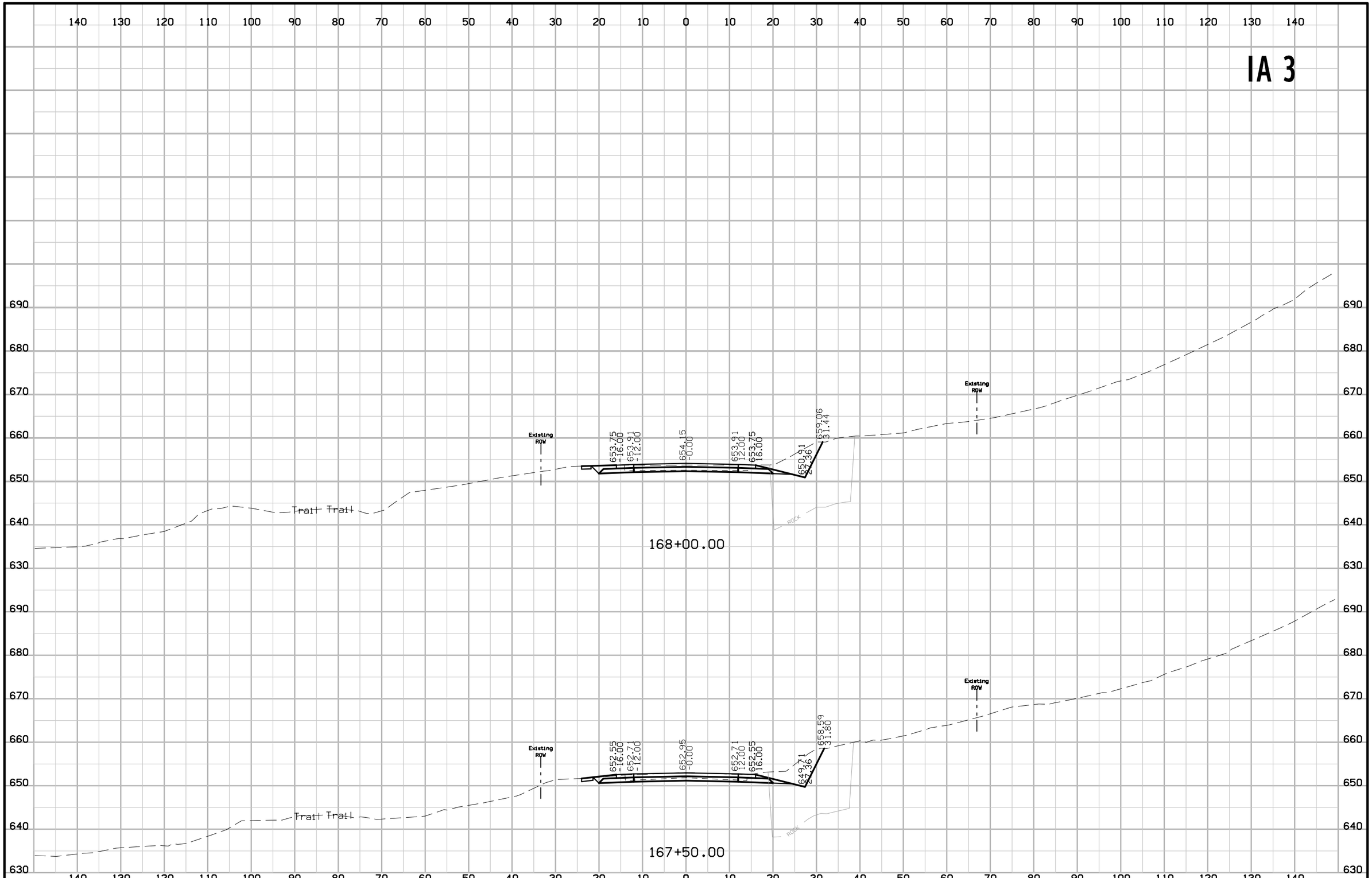
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.159

3:56:58 PM 2/13/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.160

11:47:30 AM 2/17/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

710 700 690 680 670 660 650 640 630

Existing ROW

656.31
16.00
656.47
12.00

656.49
0.00

656.25
12.00
656.09
16.00

653.25
22.36
661.69
31.58

Existing ROW

Trail Trail

ROCK

169+00.00

Existing ROW

654.95
16.00
655.11
12.00

655.35
0.00

655.11
12.00
654.95
16.00

652.11
22.36
659.55
31.08

Existing ROW

Trail Trail

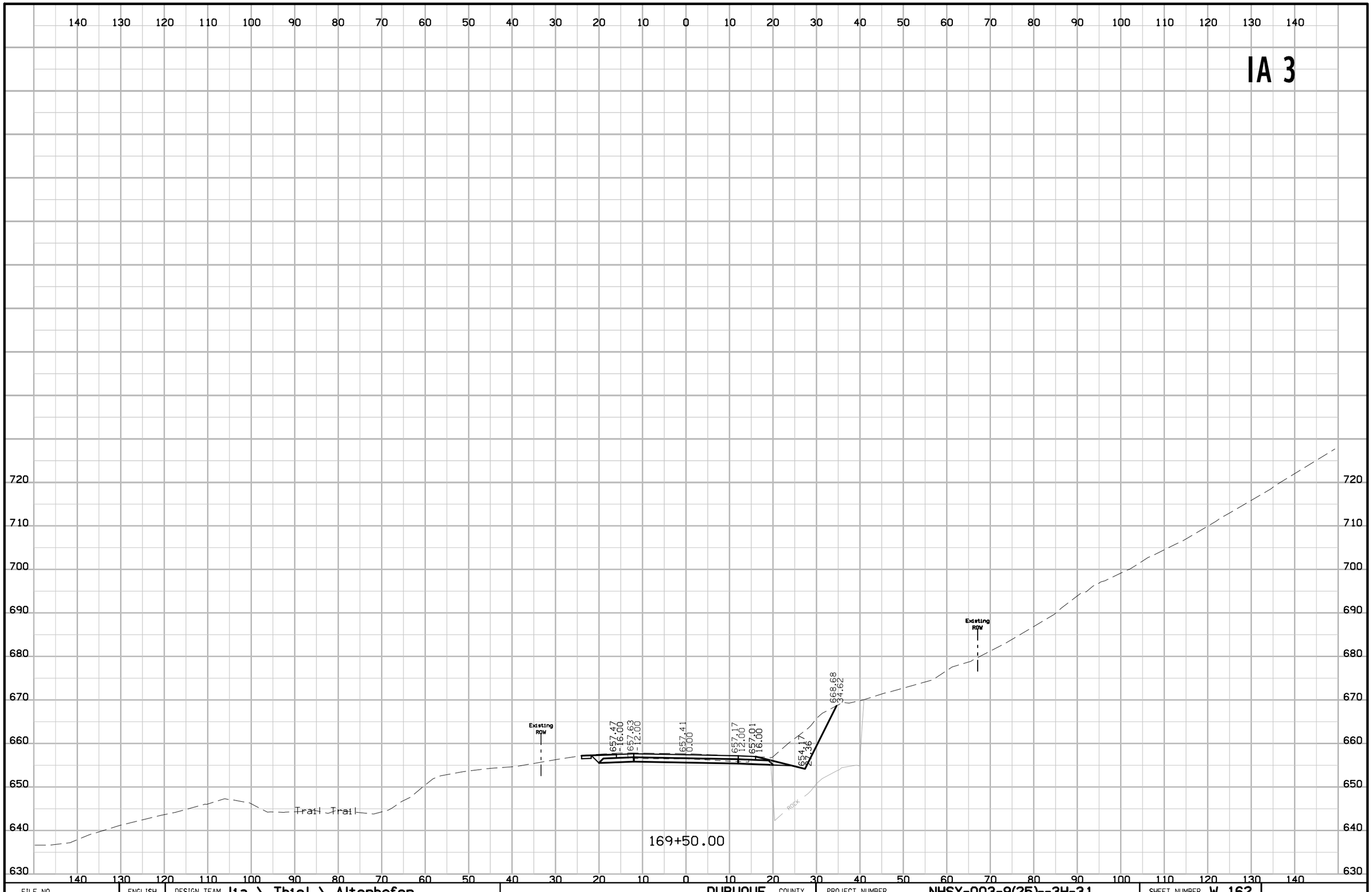
ROCK

168+50.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.161

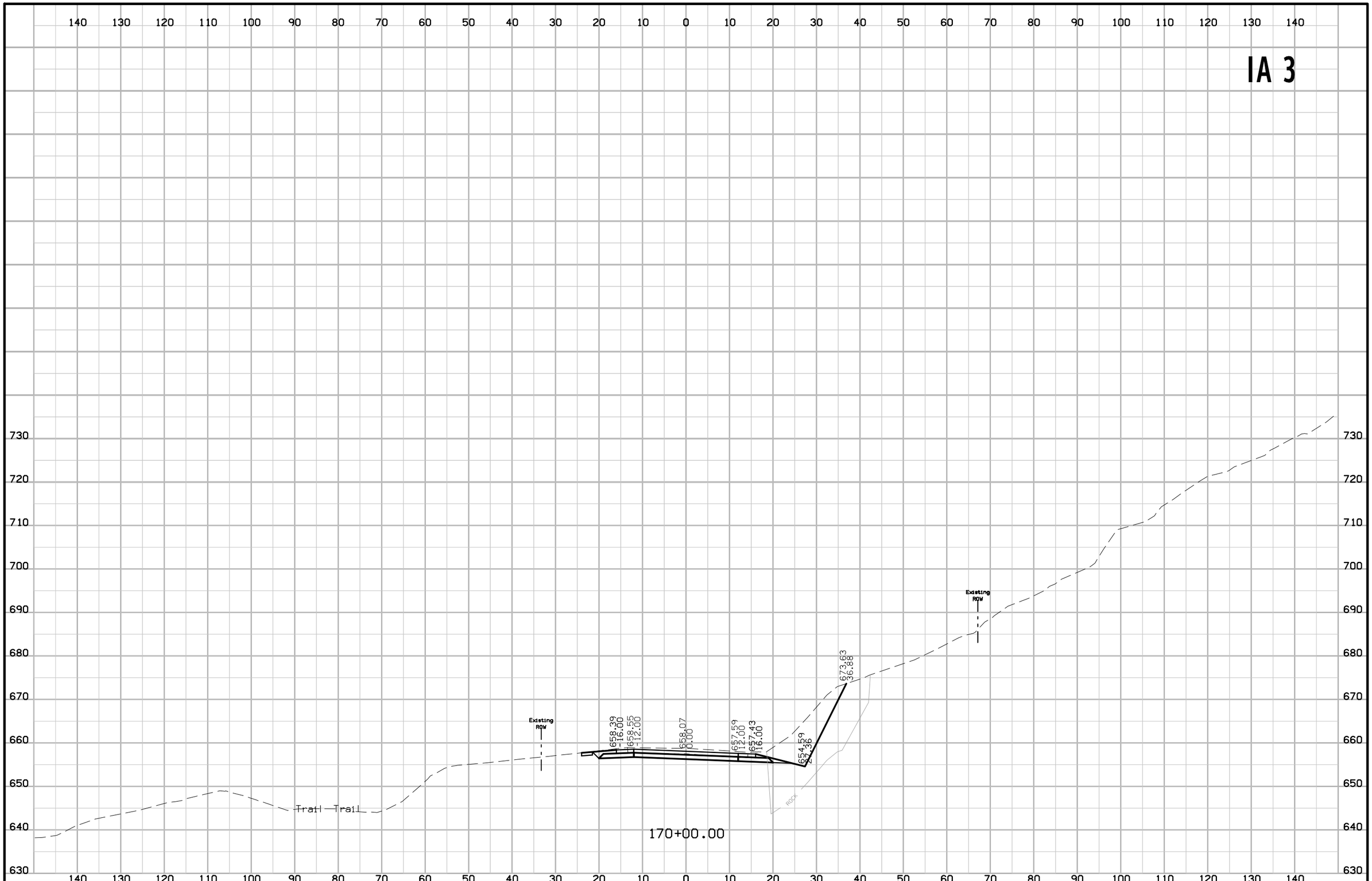
11:13:28 AM 3/16/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.162

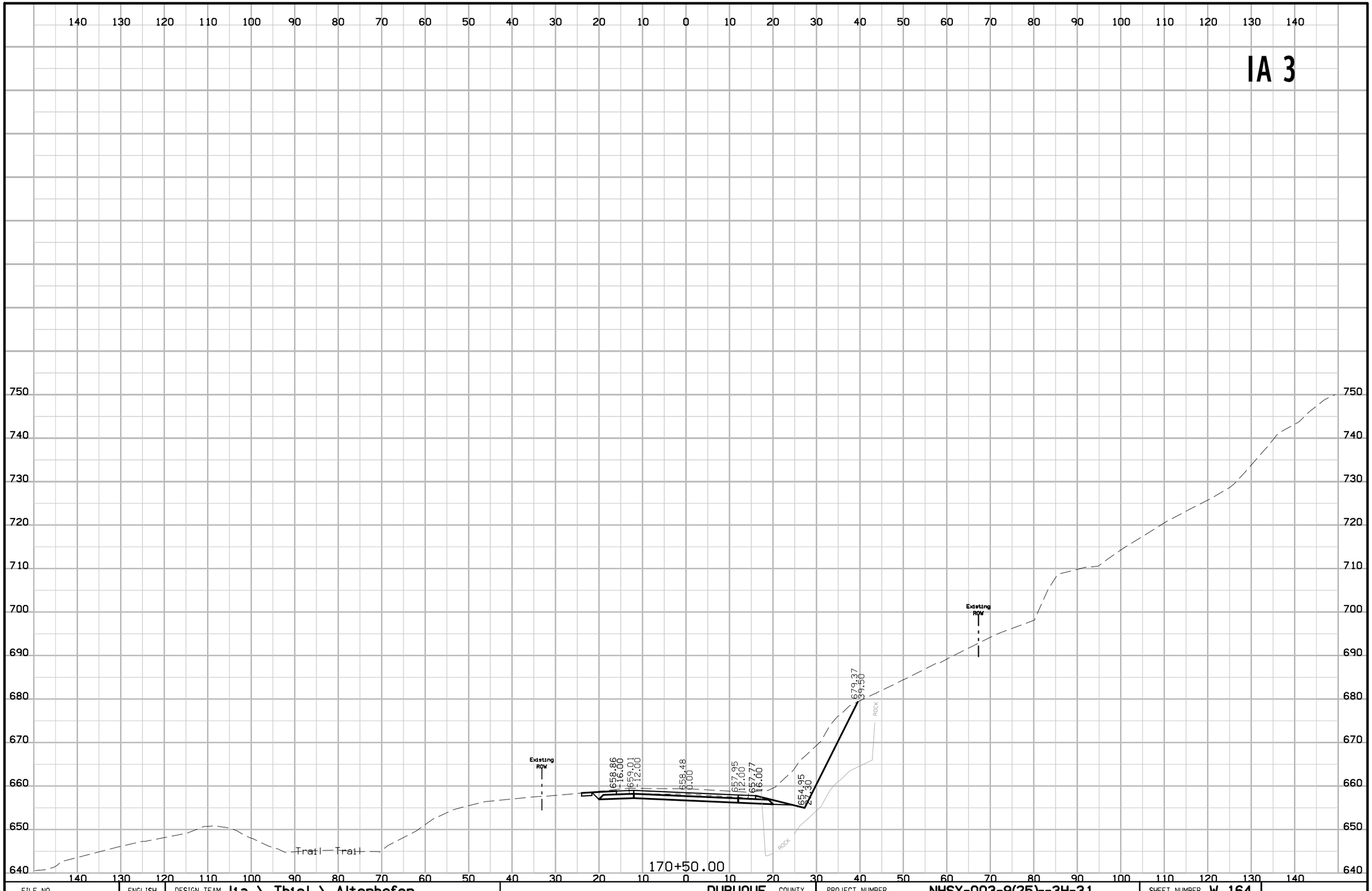
11:47:32 AM 2/17/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.163

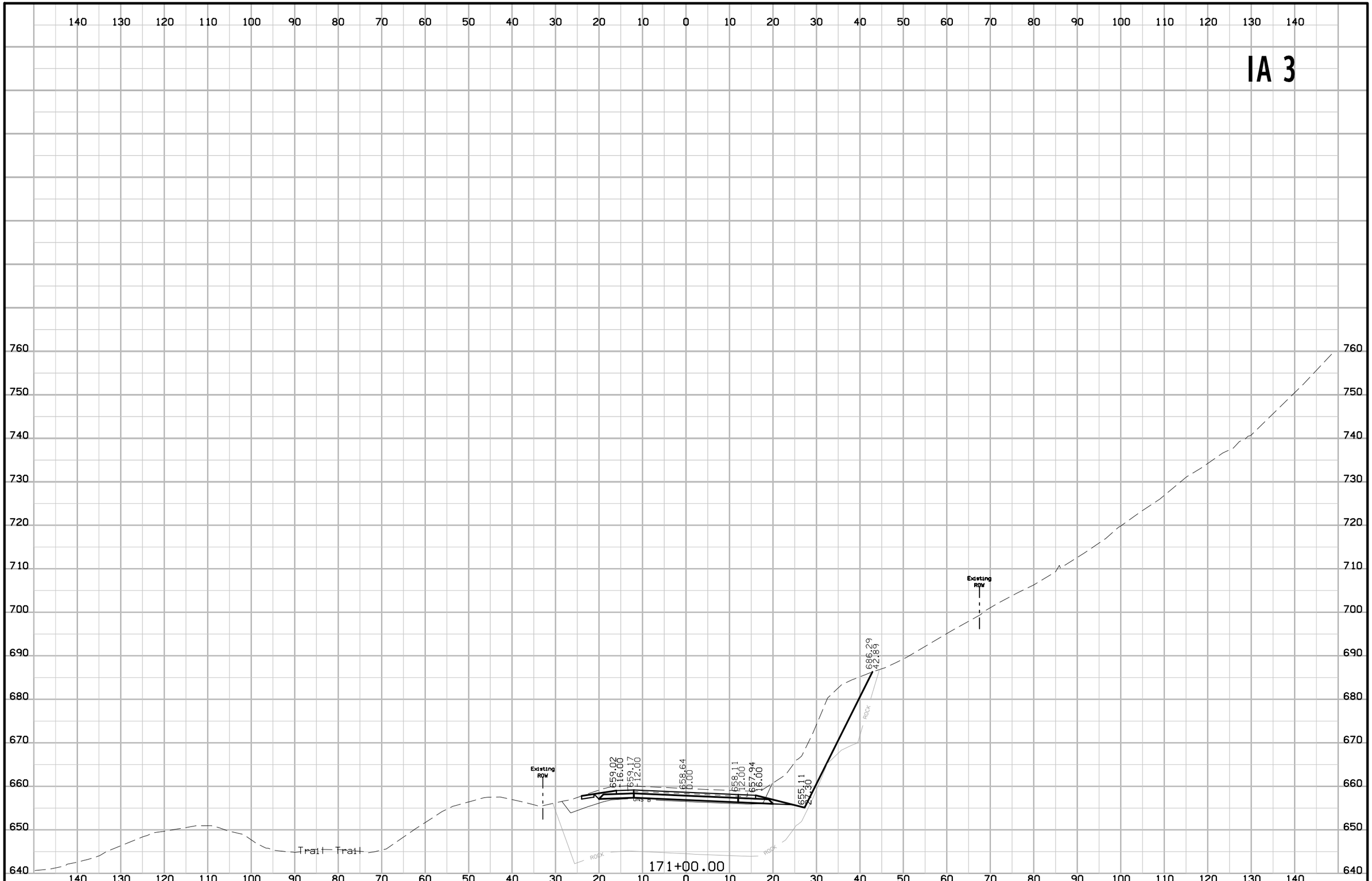
11:47:32 AM 2/17/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.164

11:47:33 AM 2/17/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.165

11:47:34 AM 2/17/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

770 760 750 740 730 720 710 700 690 680 670 660 650 640

Existing ROW

658.94
16.00
659.08
12.00

658.55
0.00

658.02
12.00
657.86
16.00

655.02
27.36

685.38
42.54

Existing ROW

ROCK

ROCK

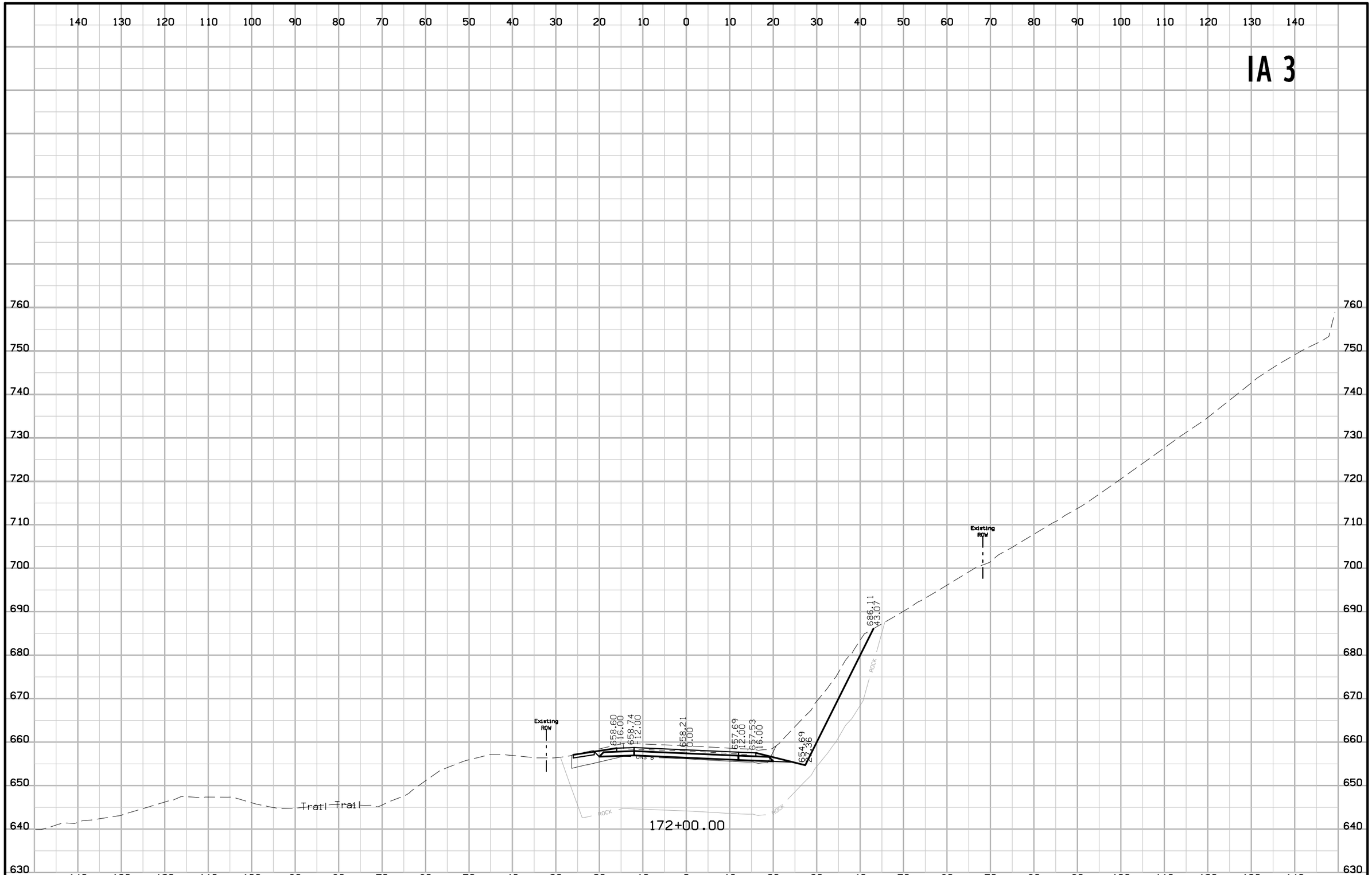
ROCK

Trail Trail

171+50.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.166

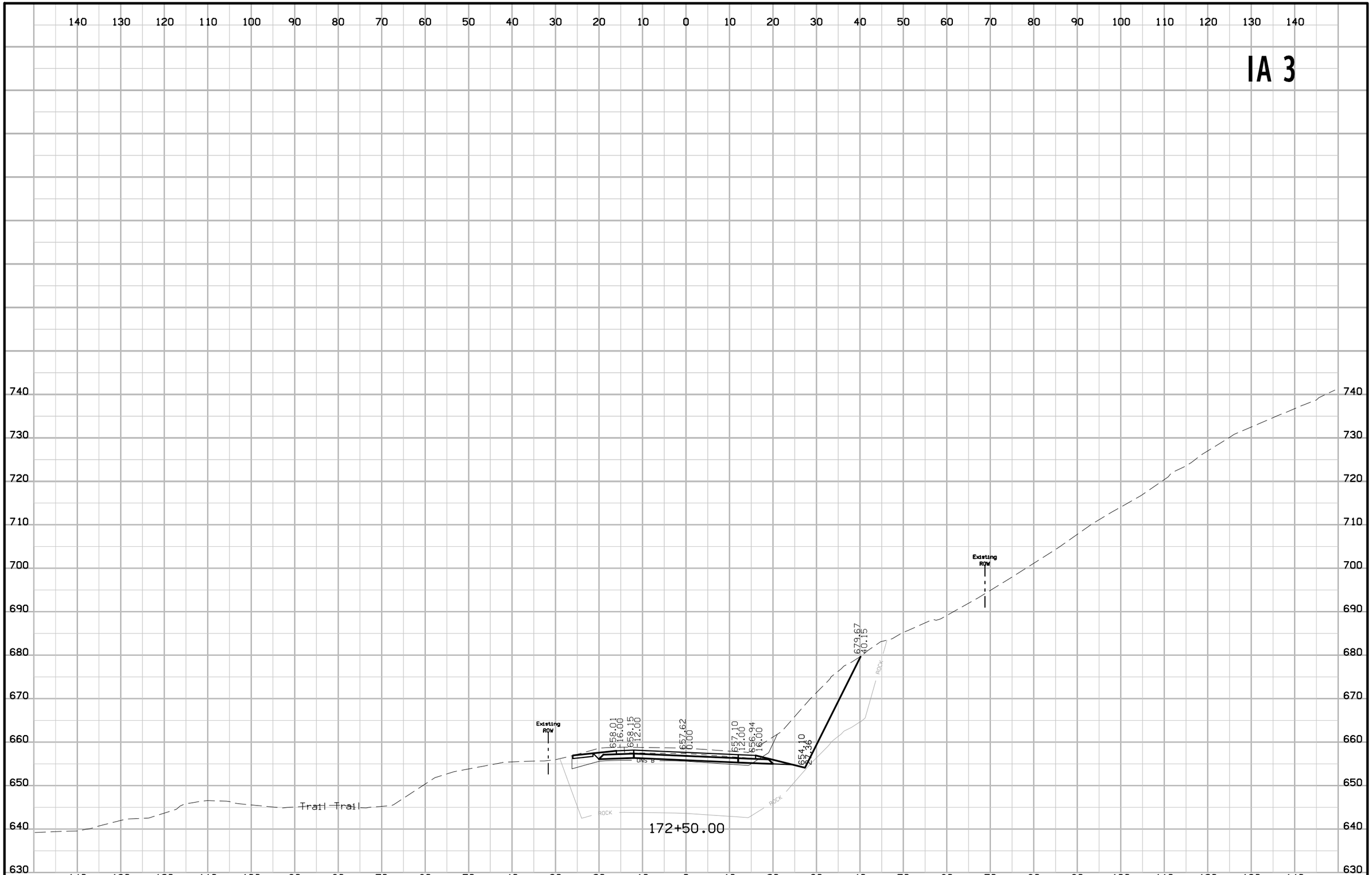
11:47:34 AM 2/17/2023 tschoen pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.167

11:47:35 AM 2/17/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.168

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

690 680 670 660 650 640 630

Existing ROW

656.25
16.00
656.39
12.00
655.86
0.00
655.34
12.00
655.18
16.00
657.05
29.72
UNS B

Trail Trail

ROCK

173+50.00

Existing ROW

720 710 700 690 680 670 660 650 640 630

Existing ROW

657.17
16.00
657.32
12.00
656.79
0.00
656.26
12.00
656.10
16.00
653.26
27.36
668.81
35.13
UNS B

Trail Trail

ROCK

ROCK

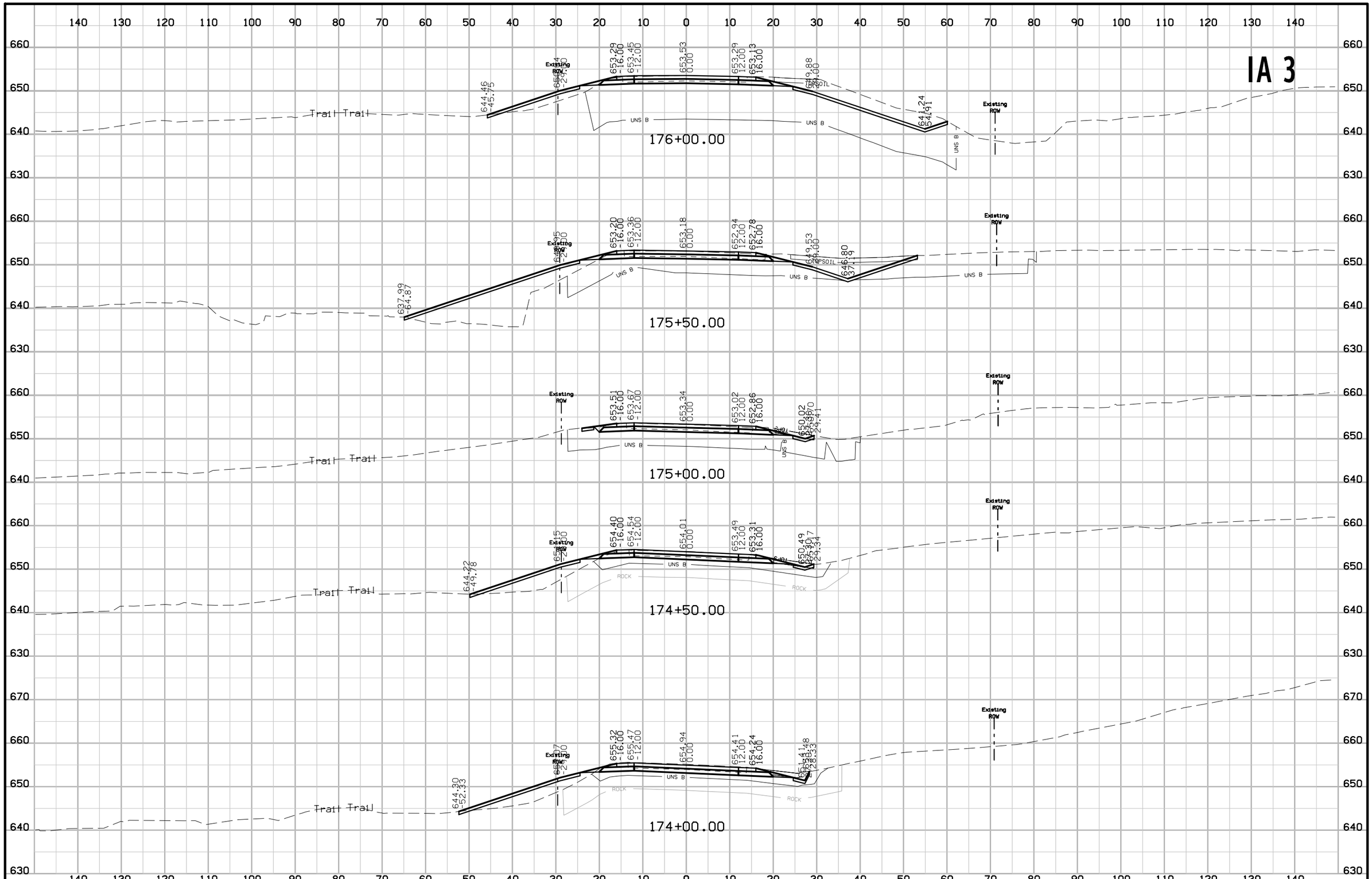
173+00.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.169

11:47:36 AM 2/17/2023 tschoen pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

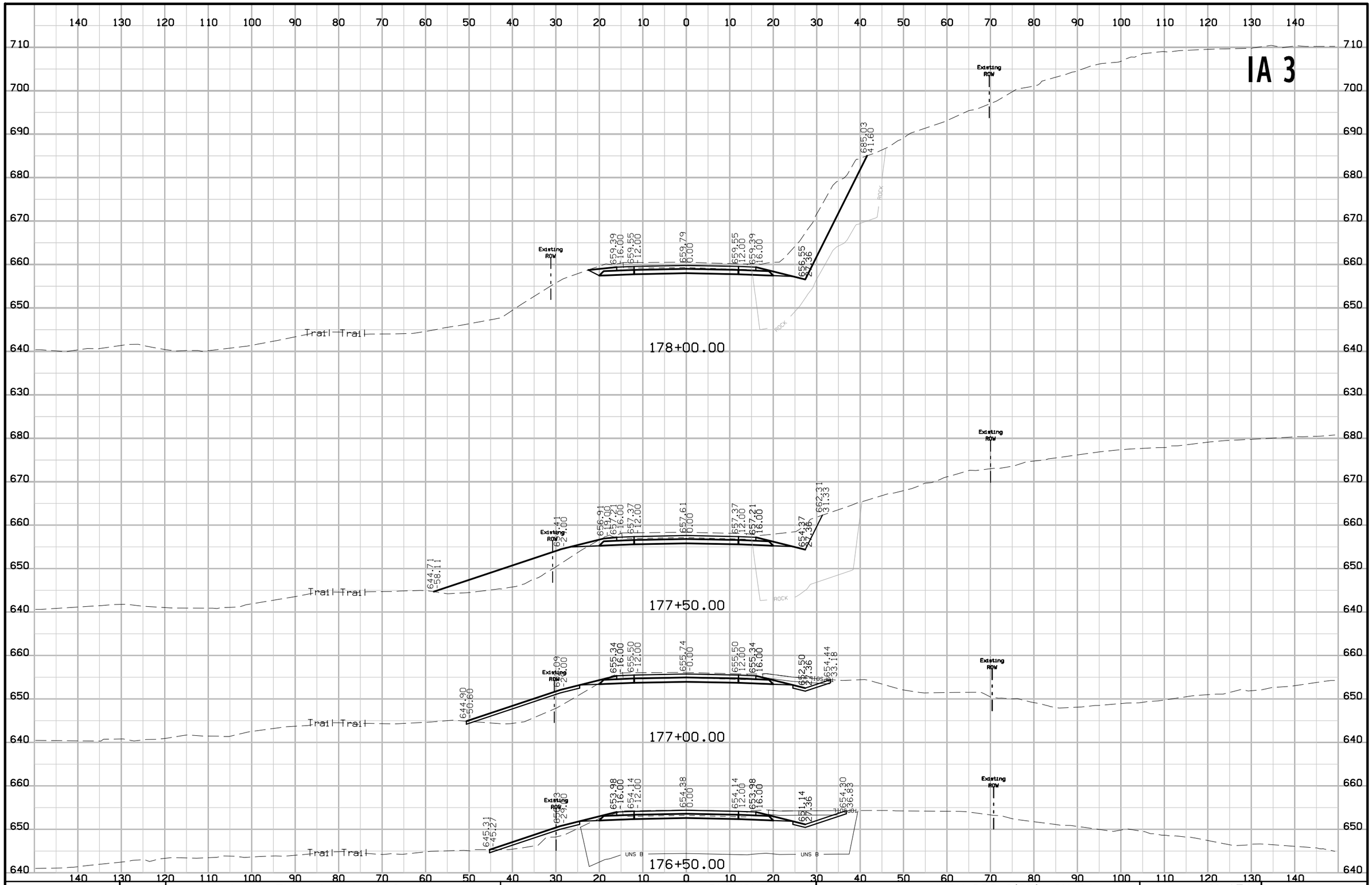
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.170

11:47:37 AM 2/17/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

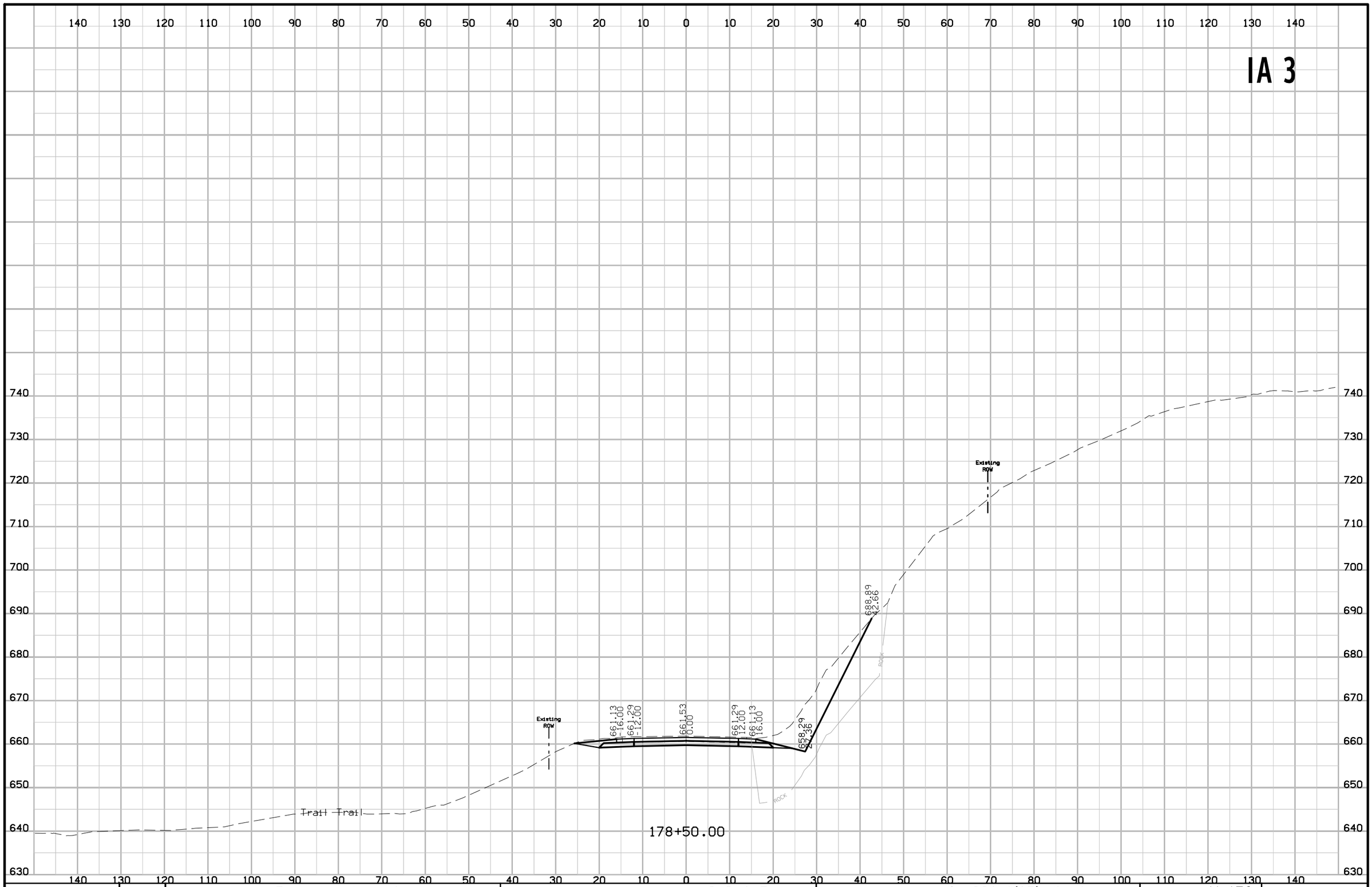
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.171

3:57:06 PM 2/13/2023 tschoen pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

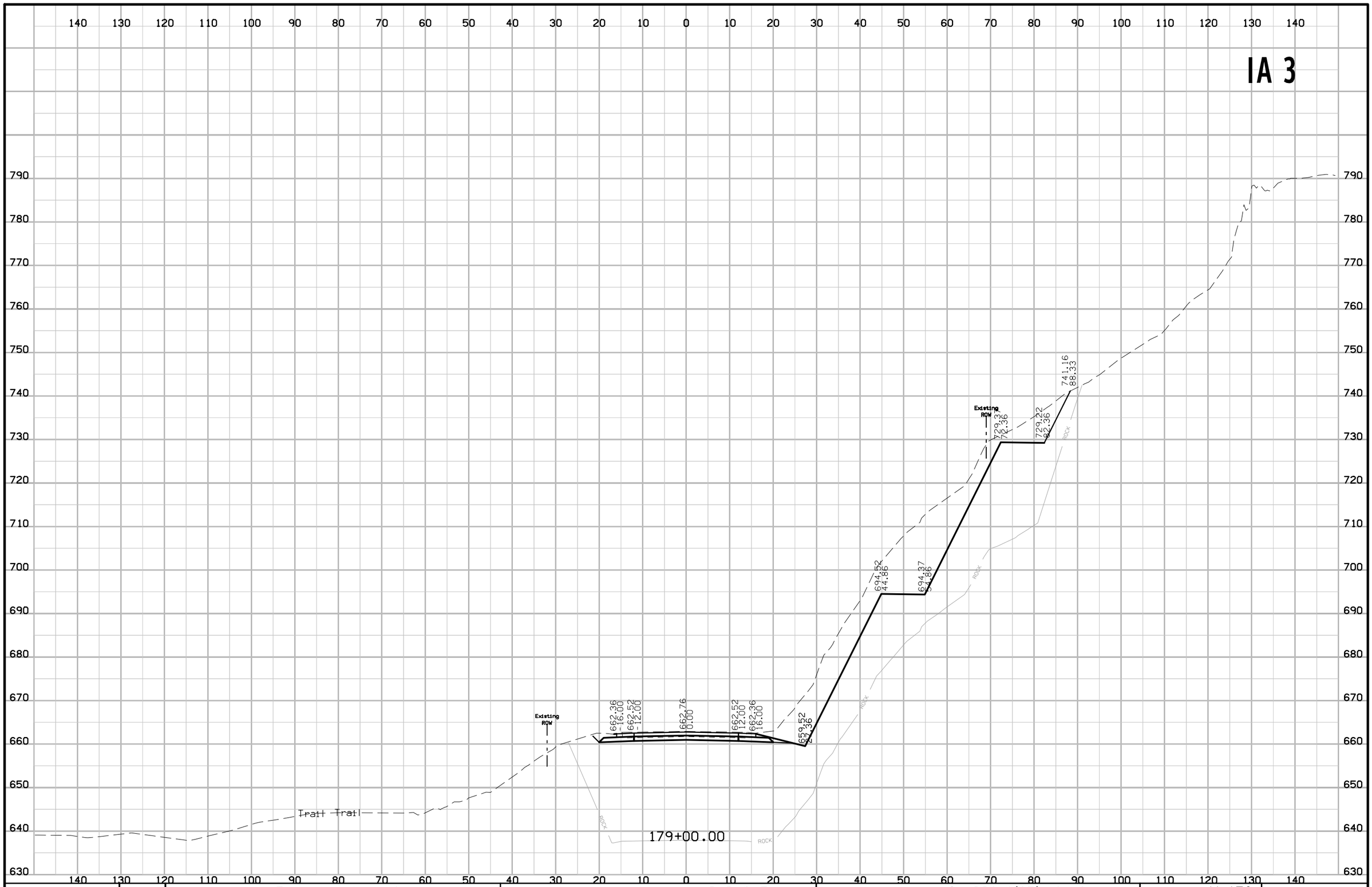
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.172

10:11:53 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

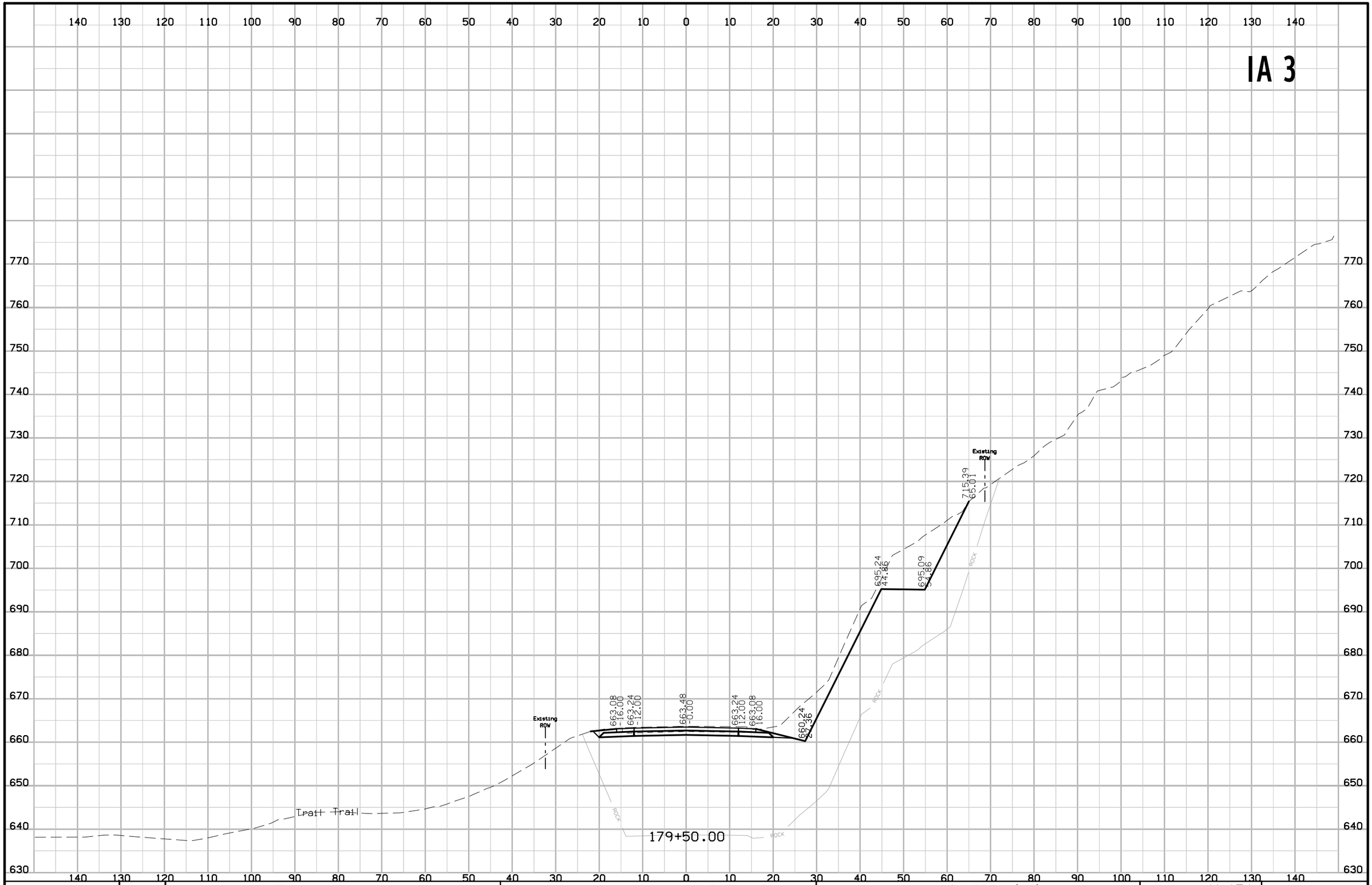
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.173

10:11:54 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

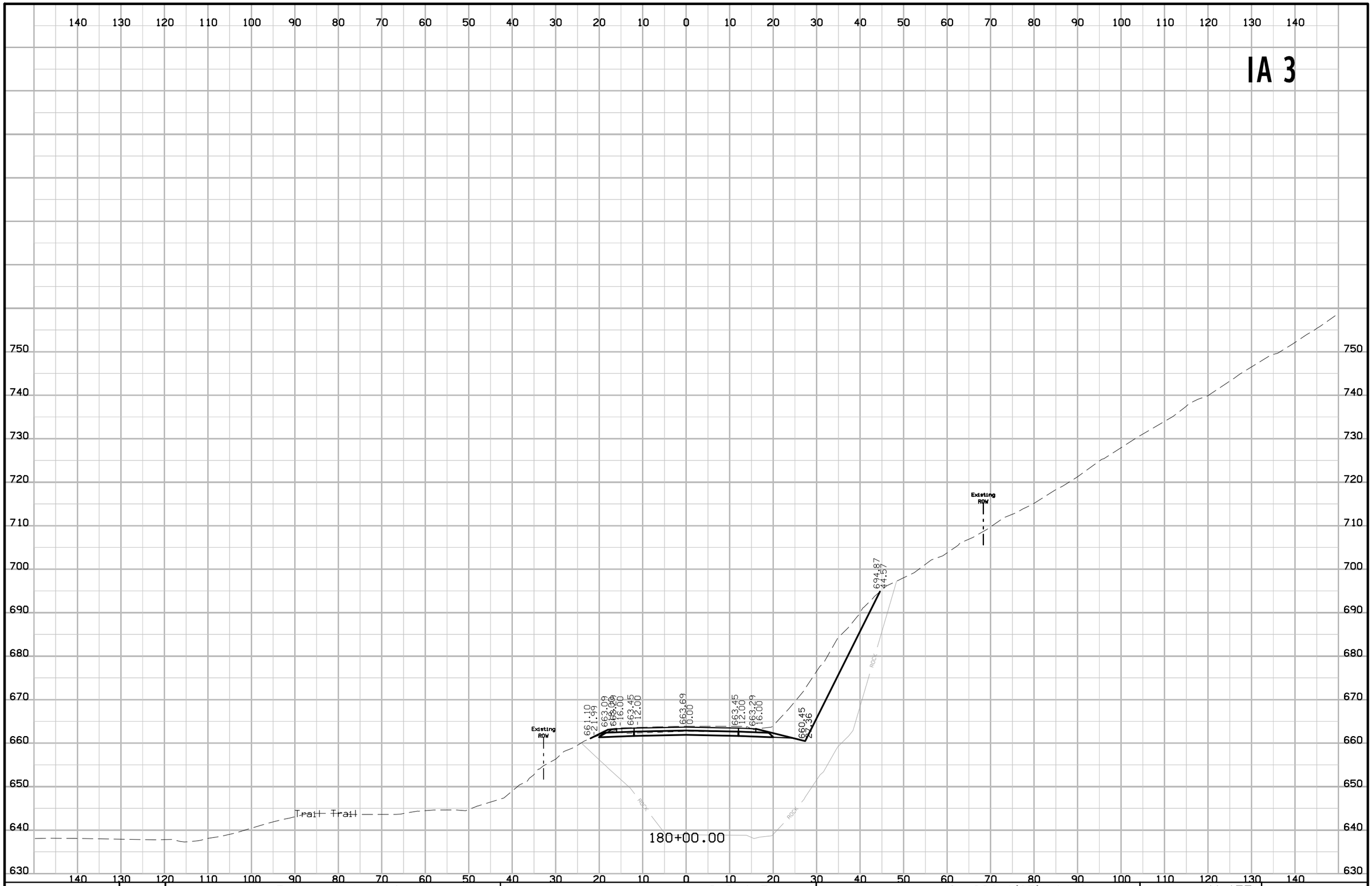
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.174

10:11:55 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

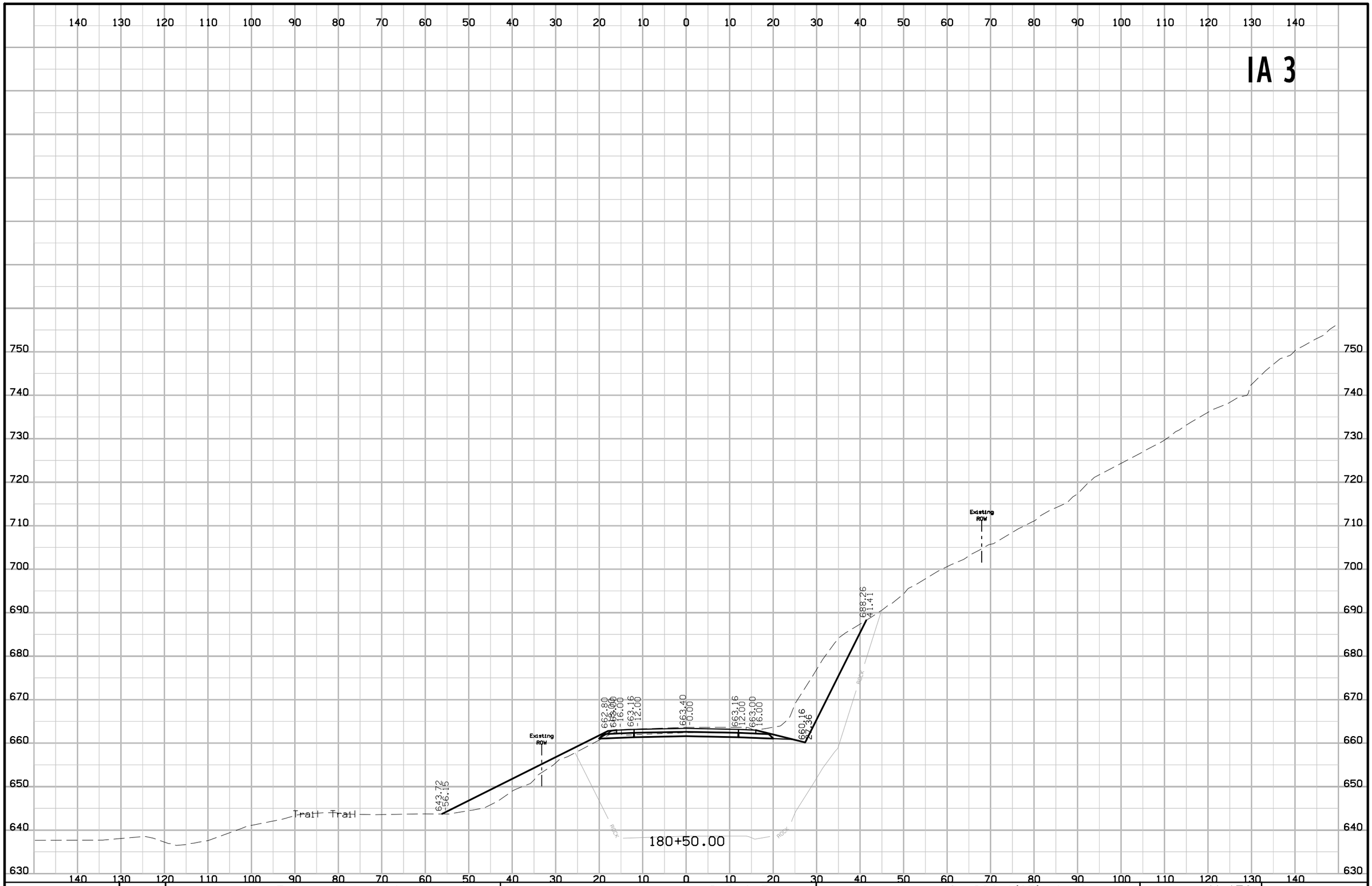
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.175

10:11:56 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

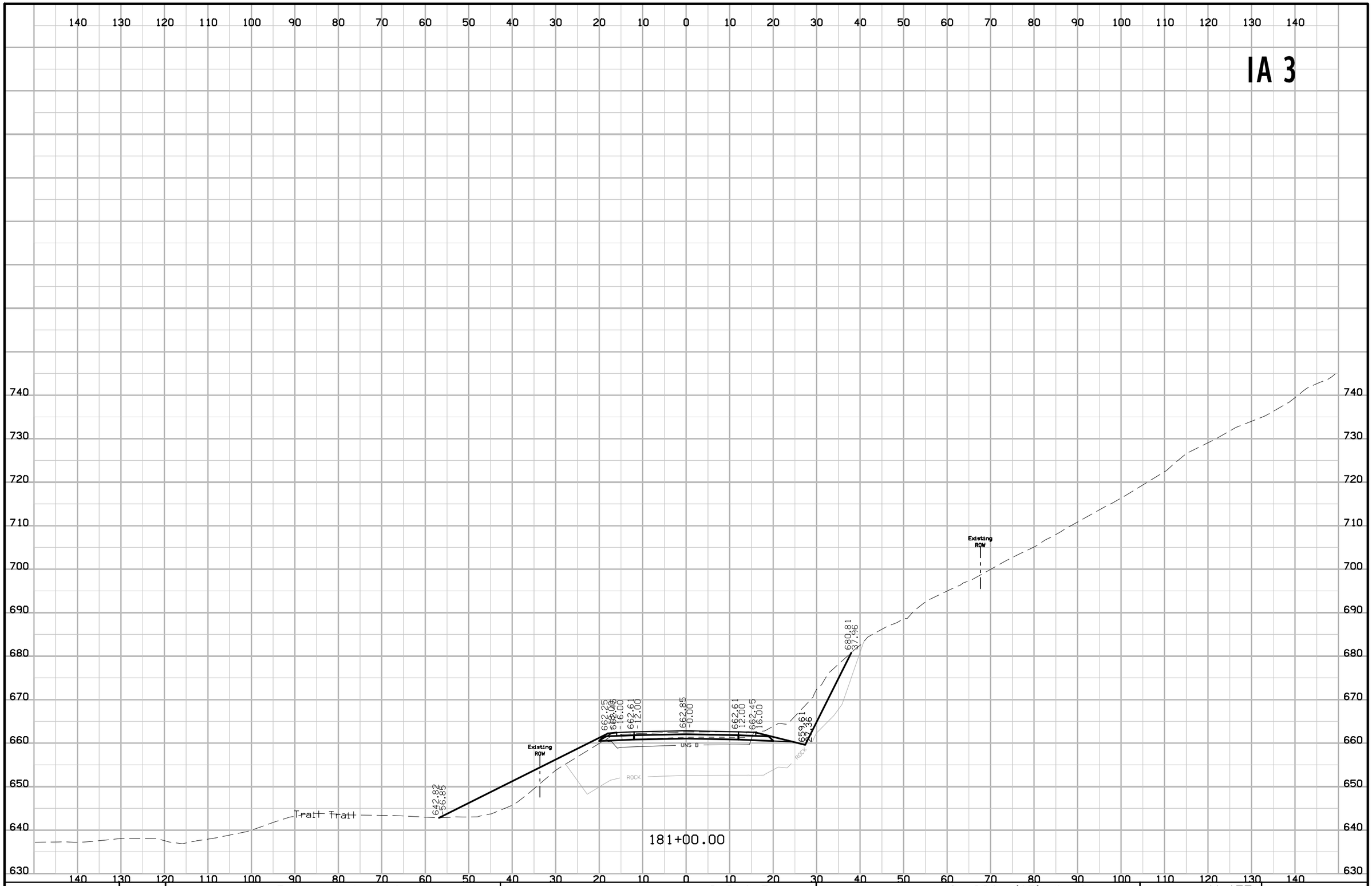
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.176

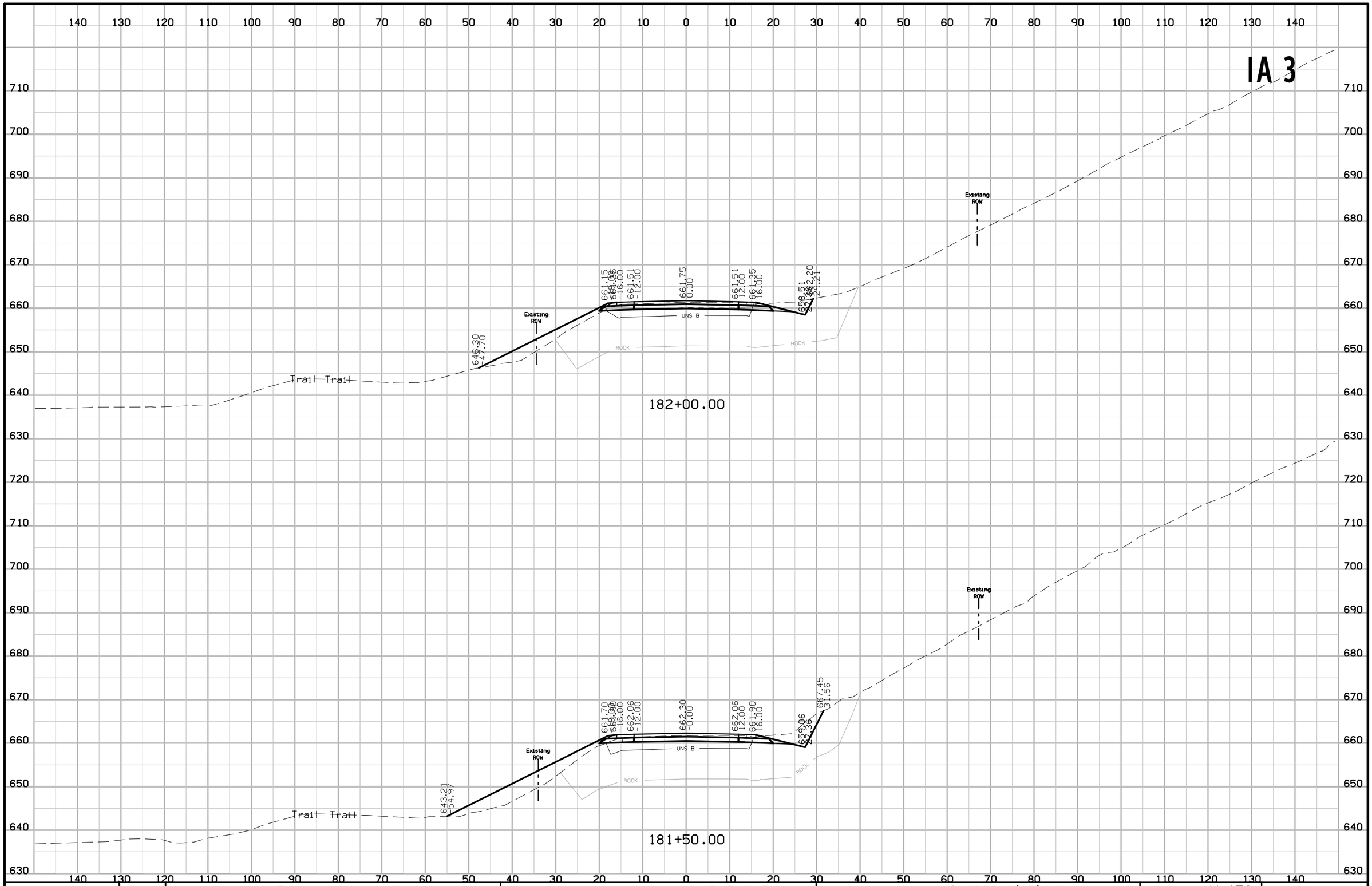
10:11:56 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



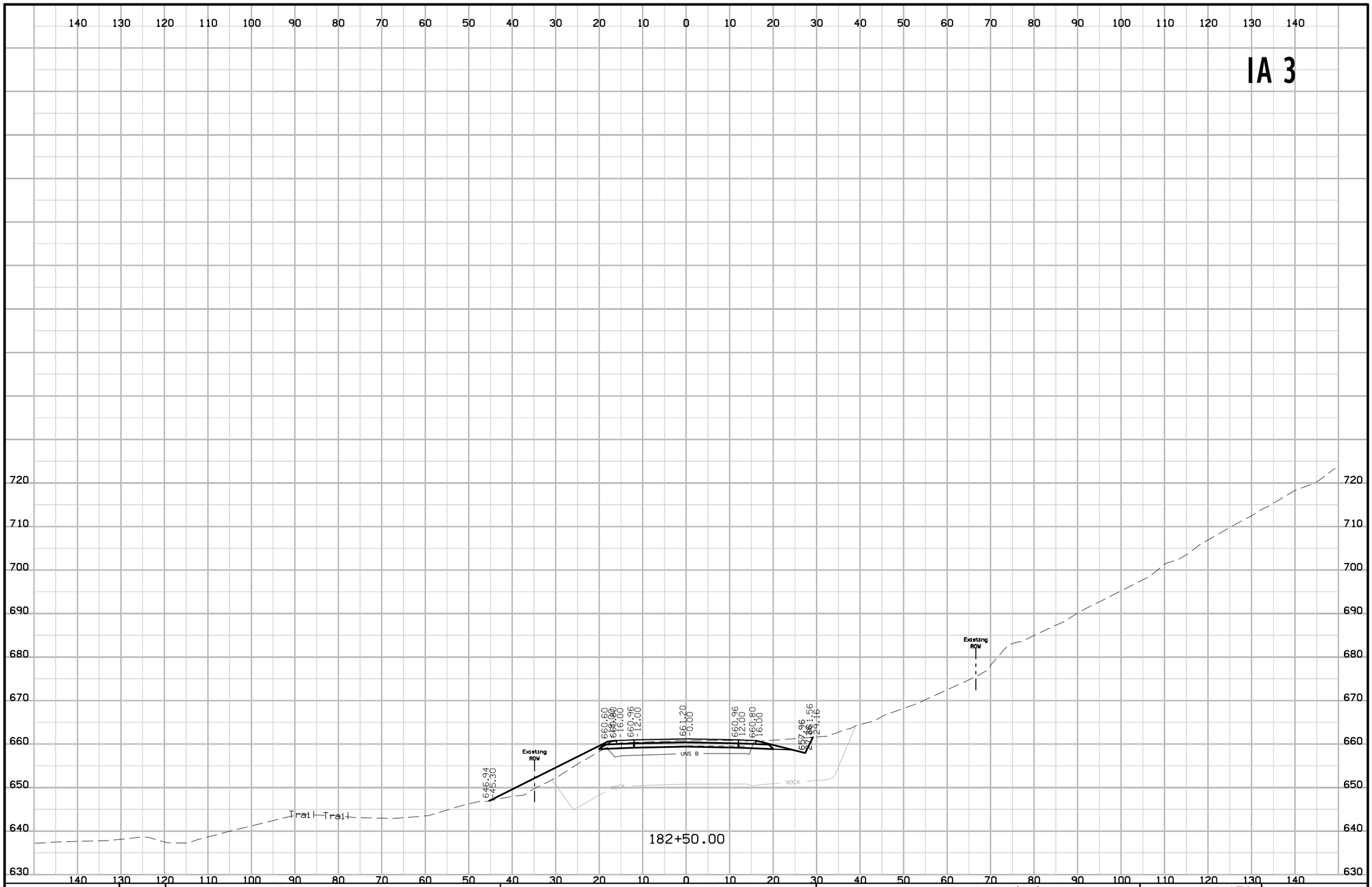
FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.177

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.178

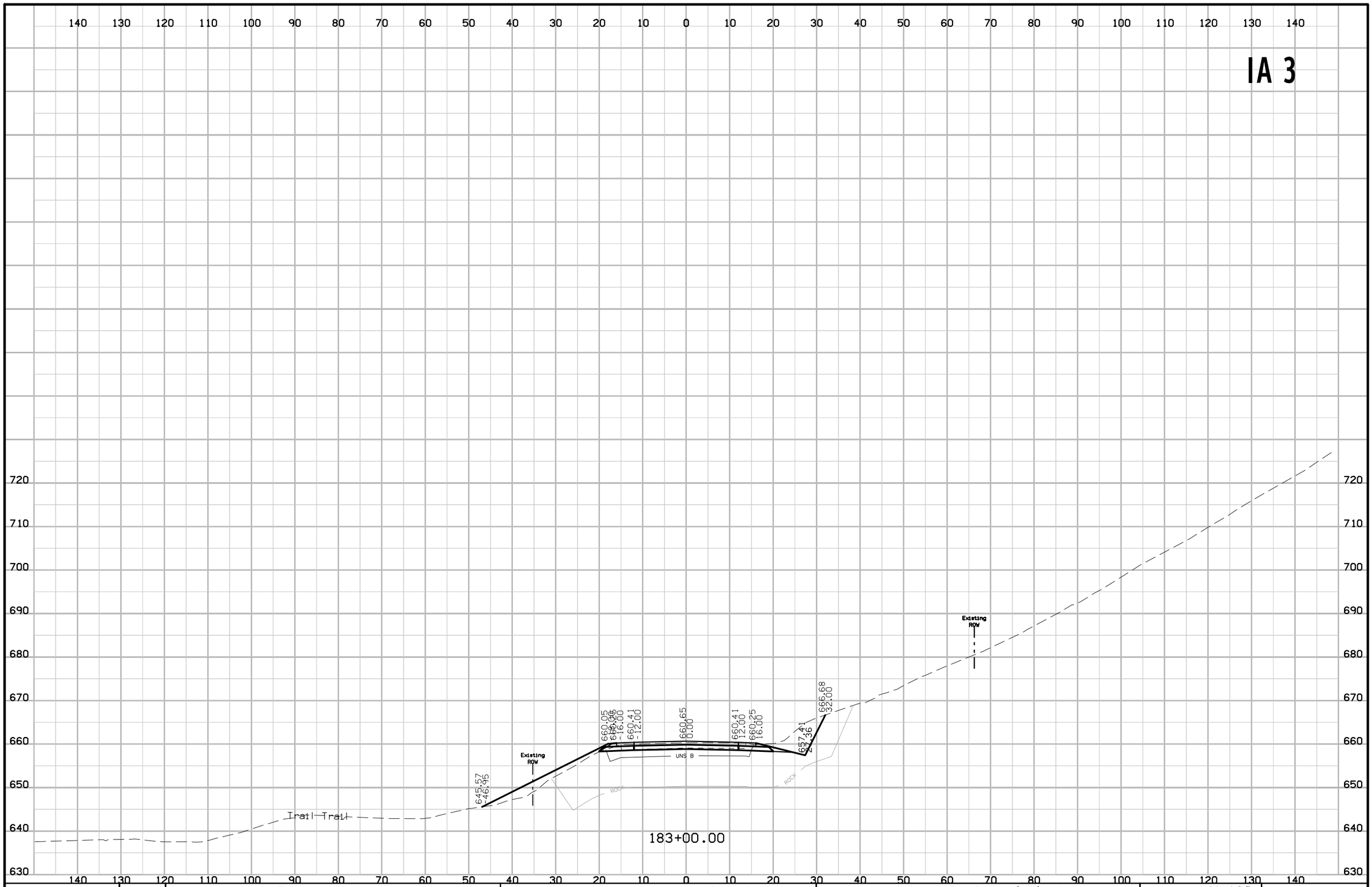
10:11:58 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.179

10:11:58 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

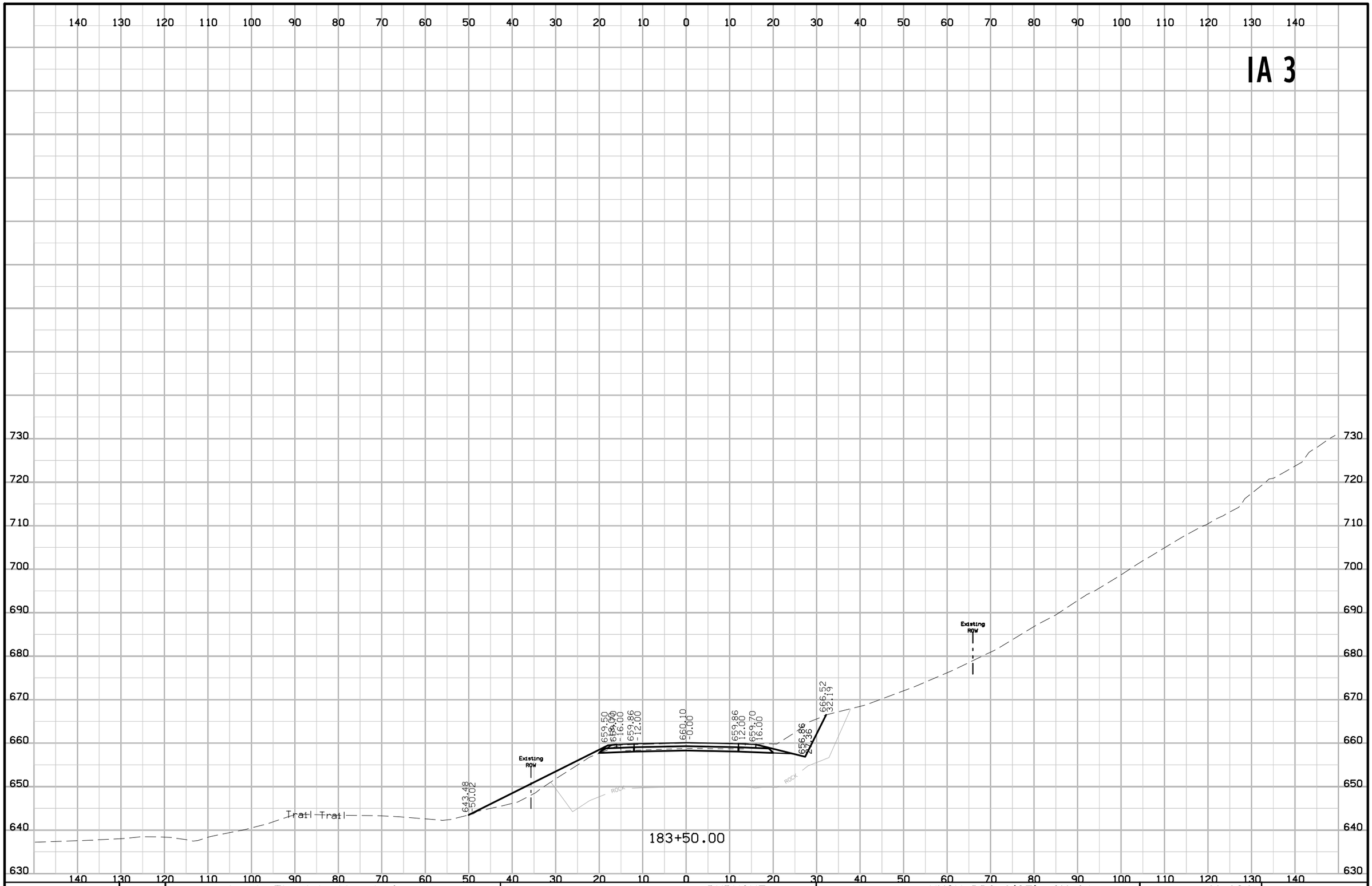
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.180

10:11:59 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

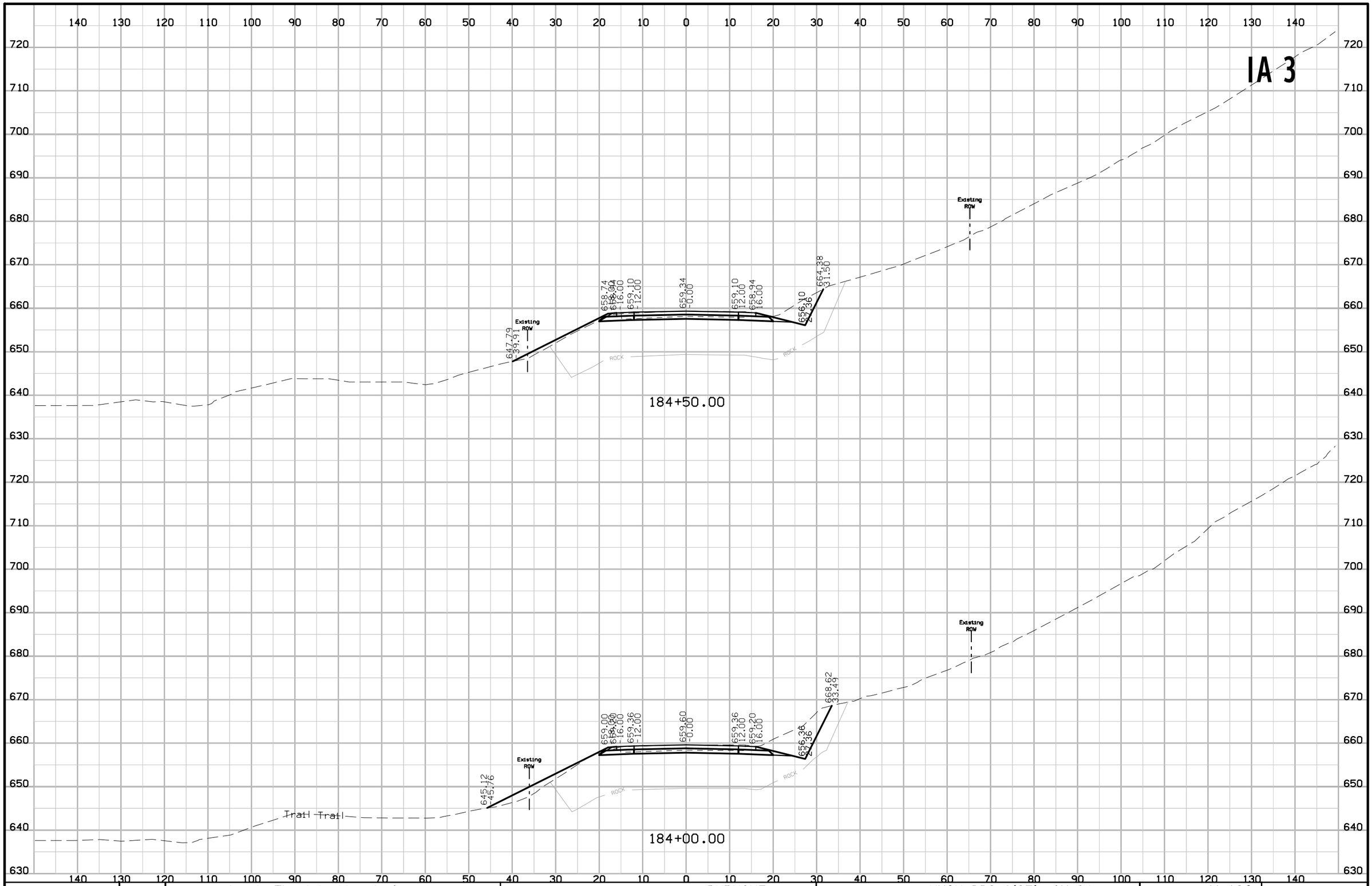
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.181

10:12:00 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

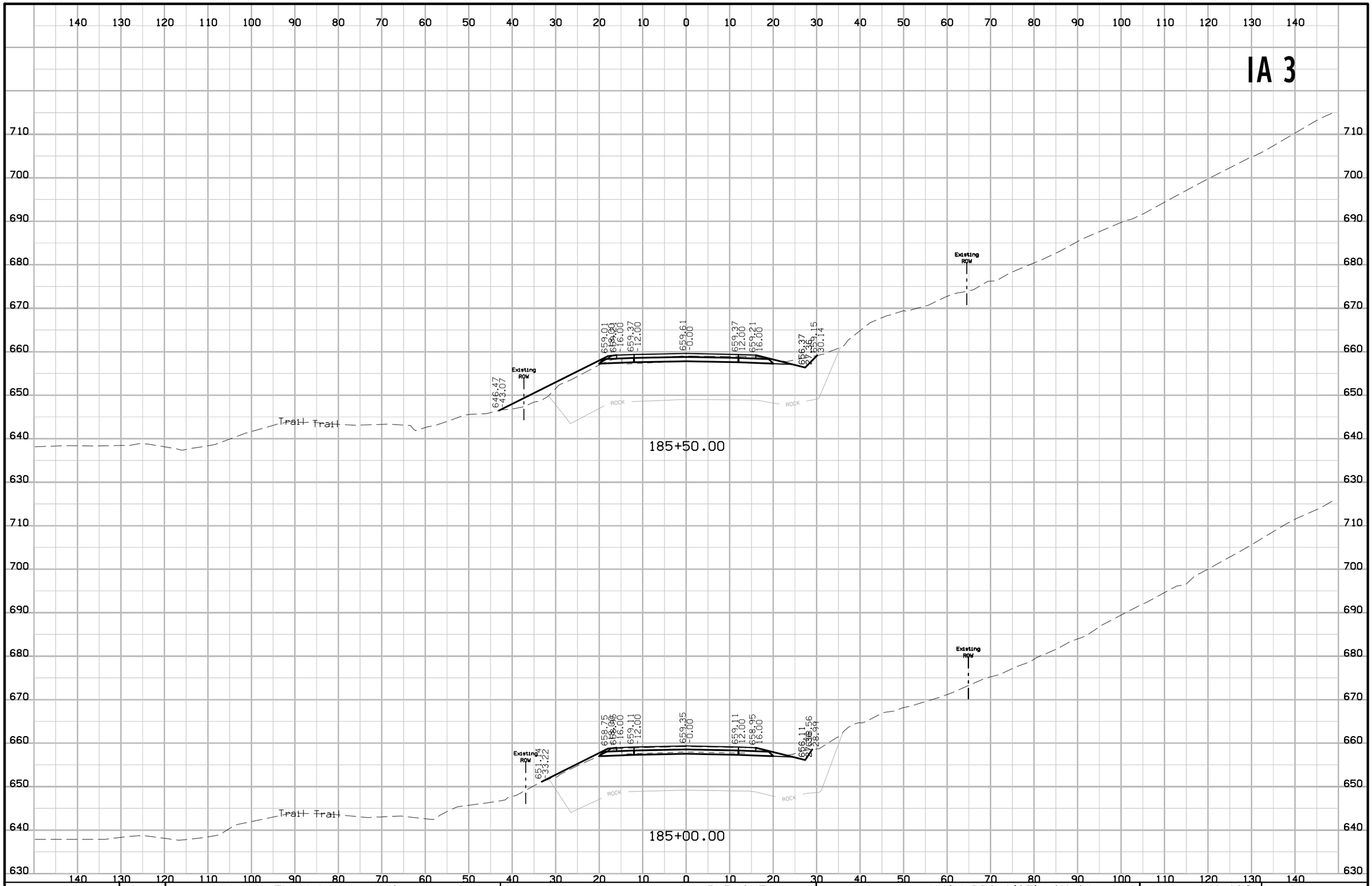
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.182

10:12:00 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

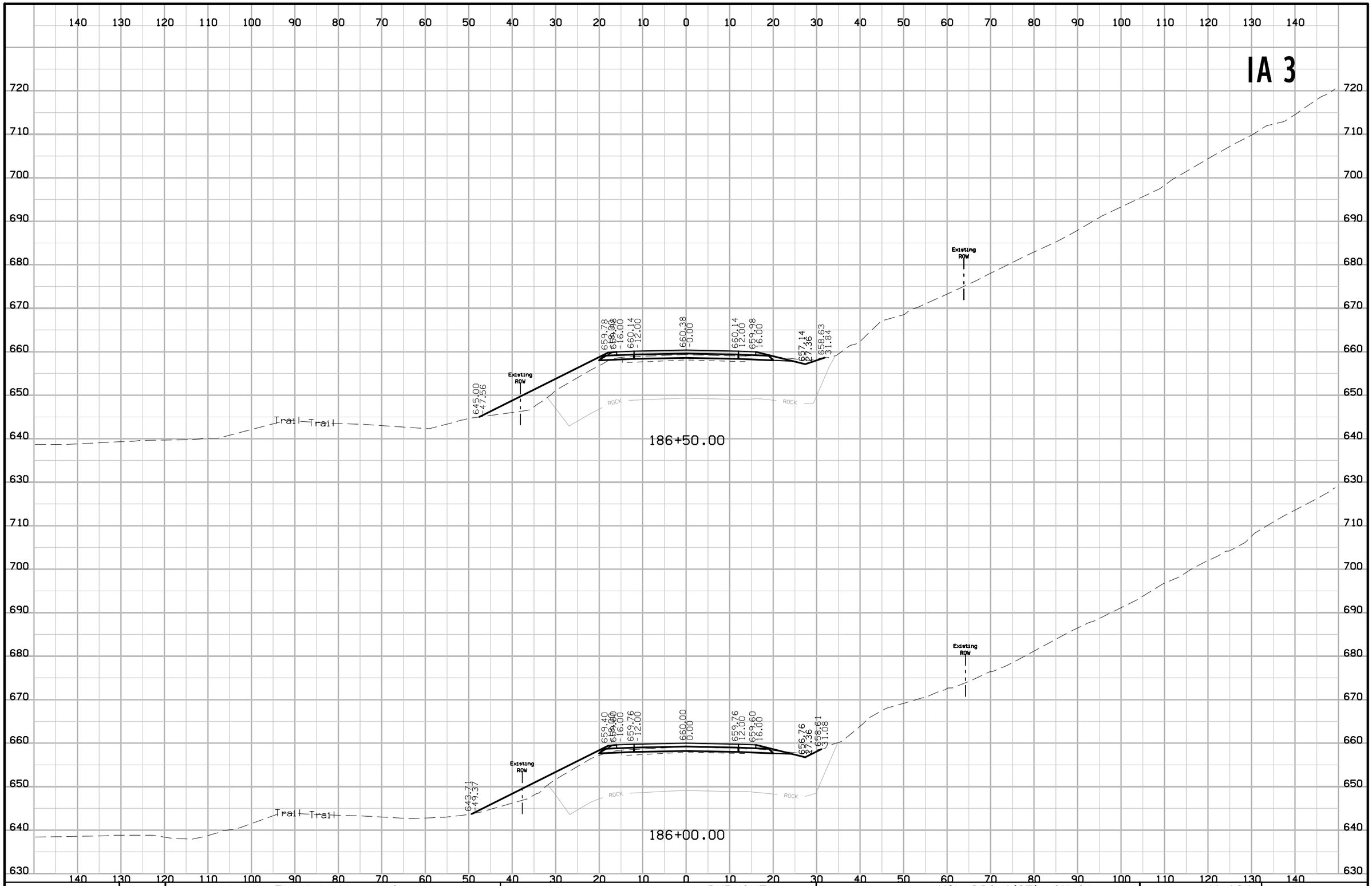
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.183

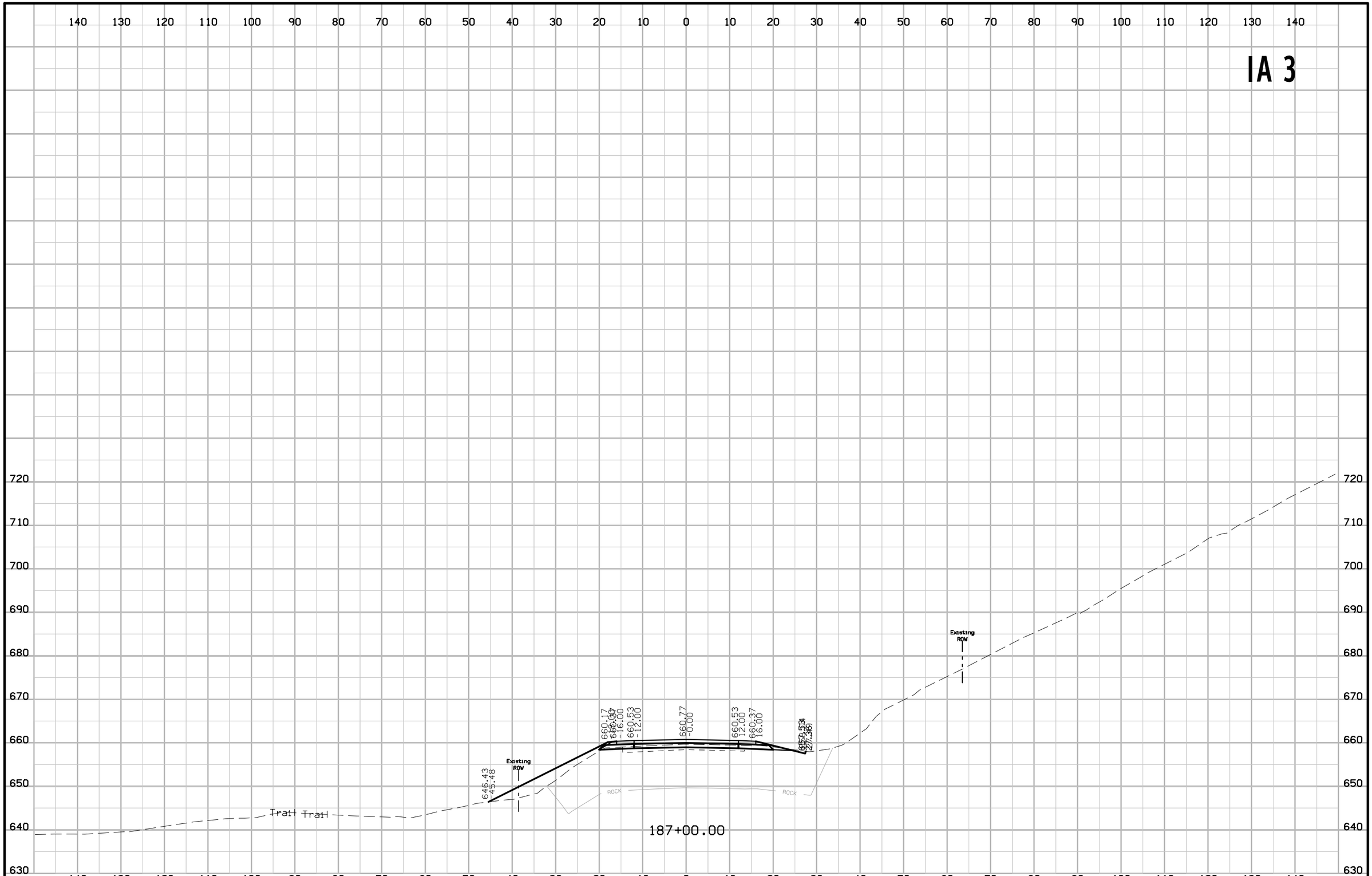
10:12:01 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.184

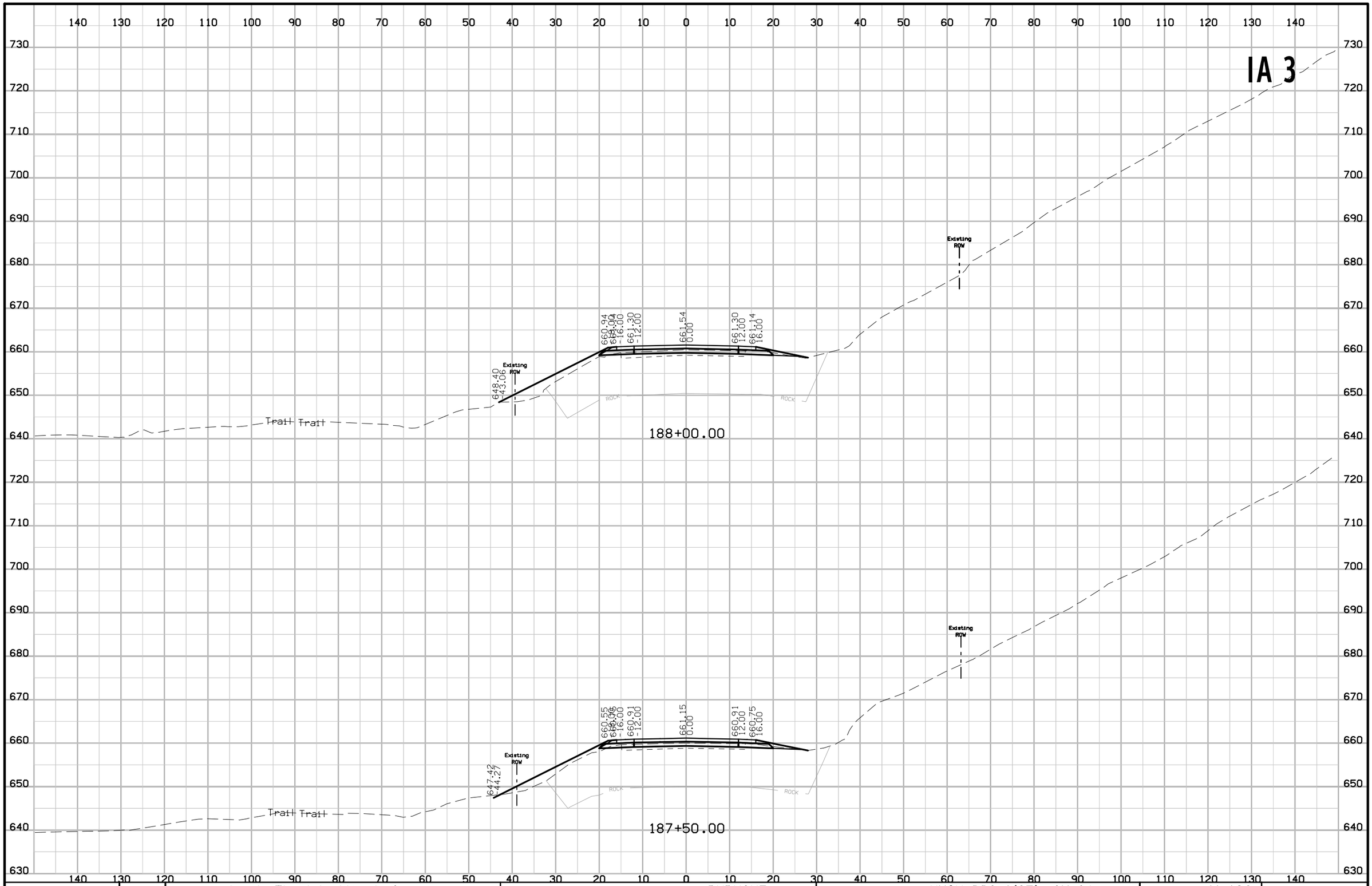
10:12:02 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.185

10:12:02 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

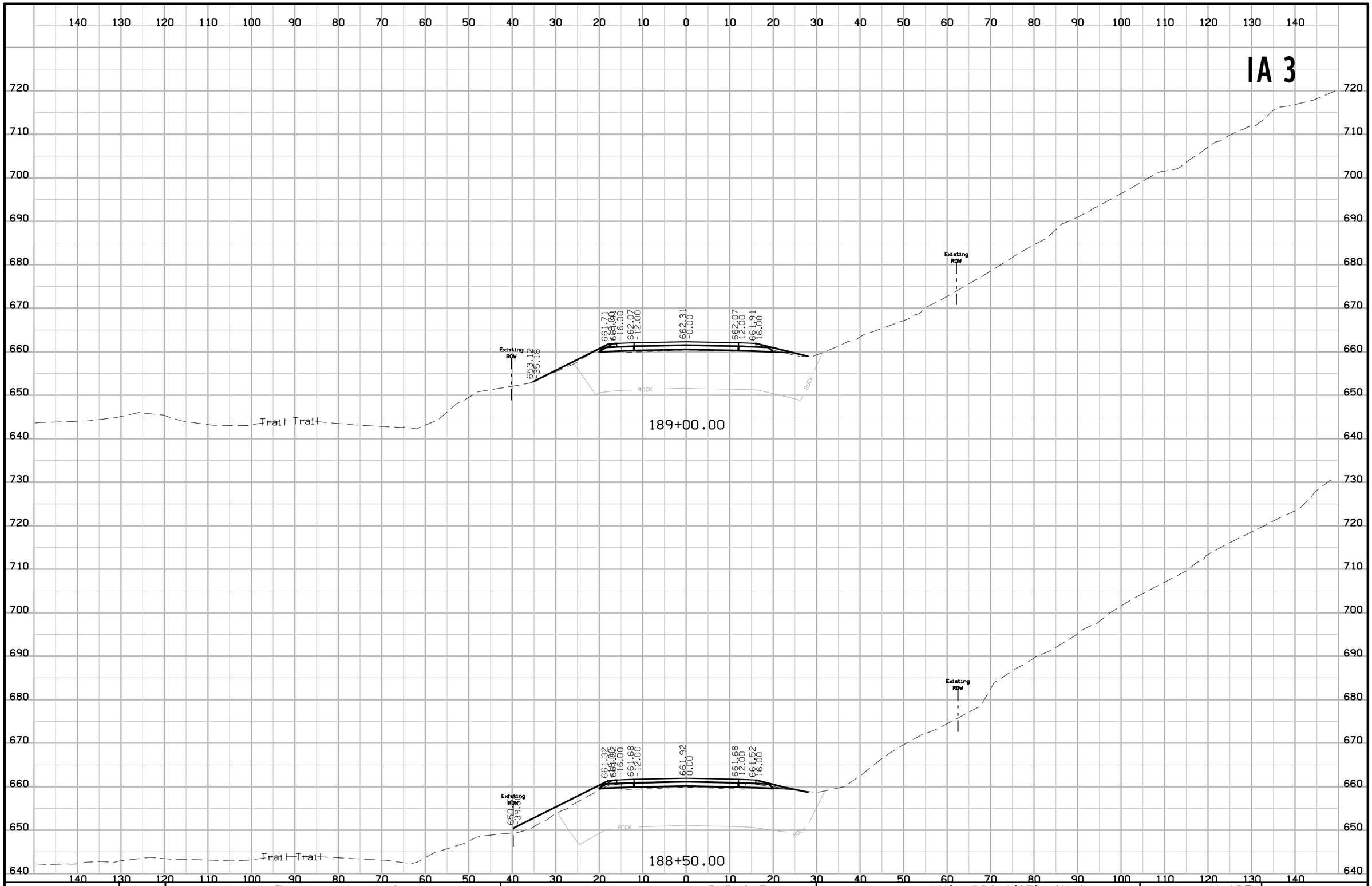
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.186

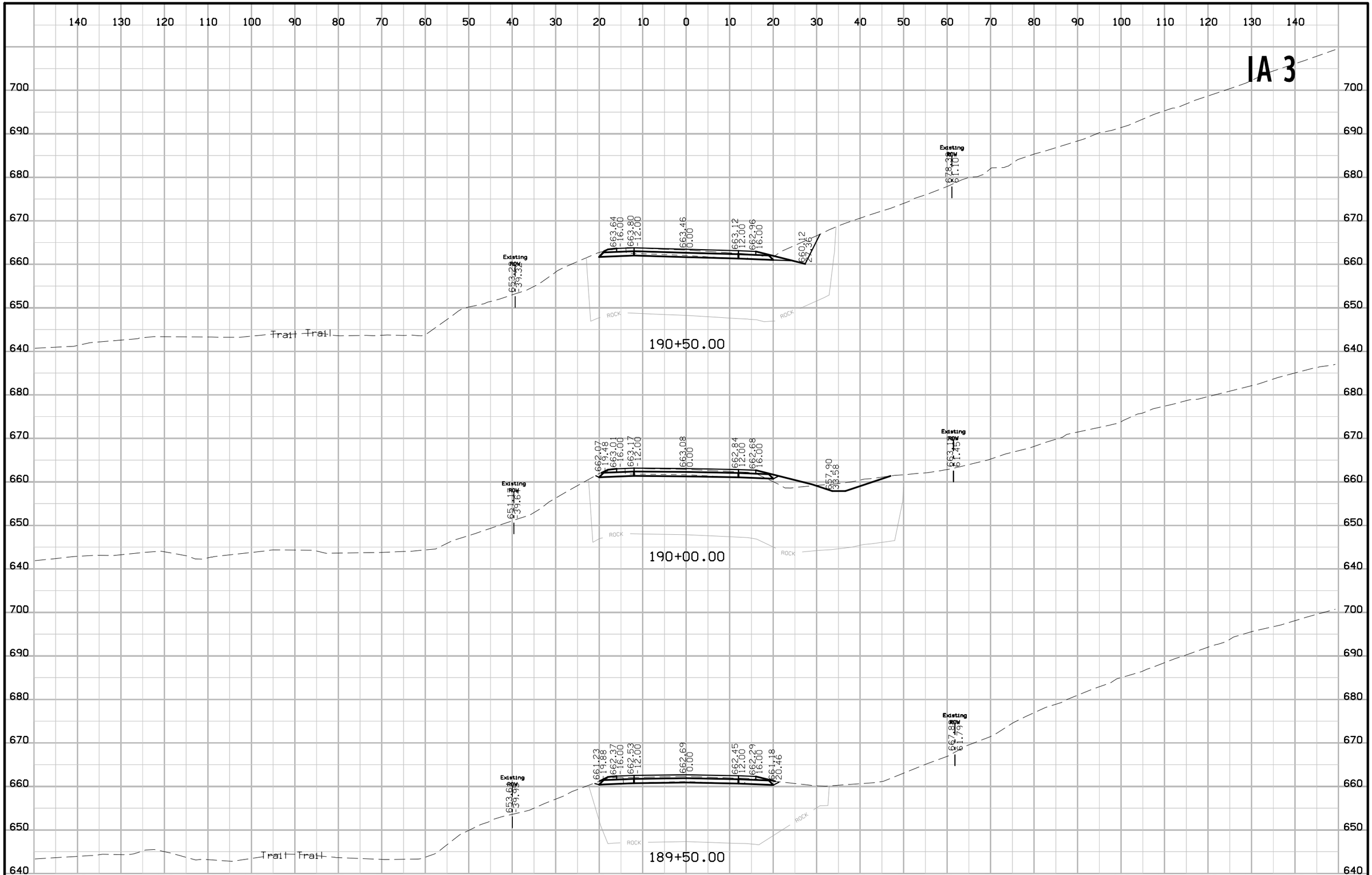
10:12:03 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.187

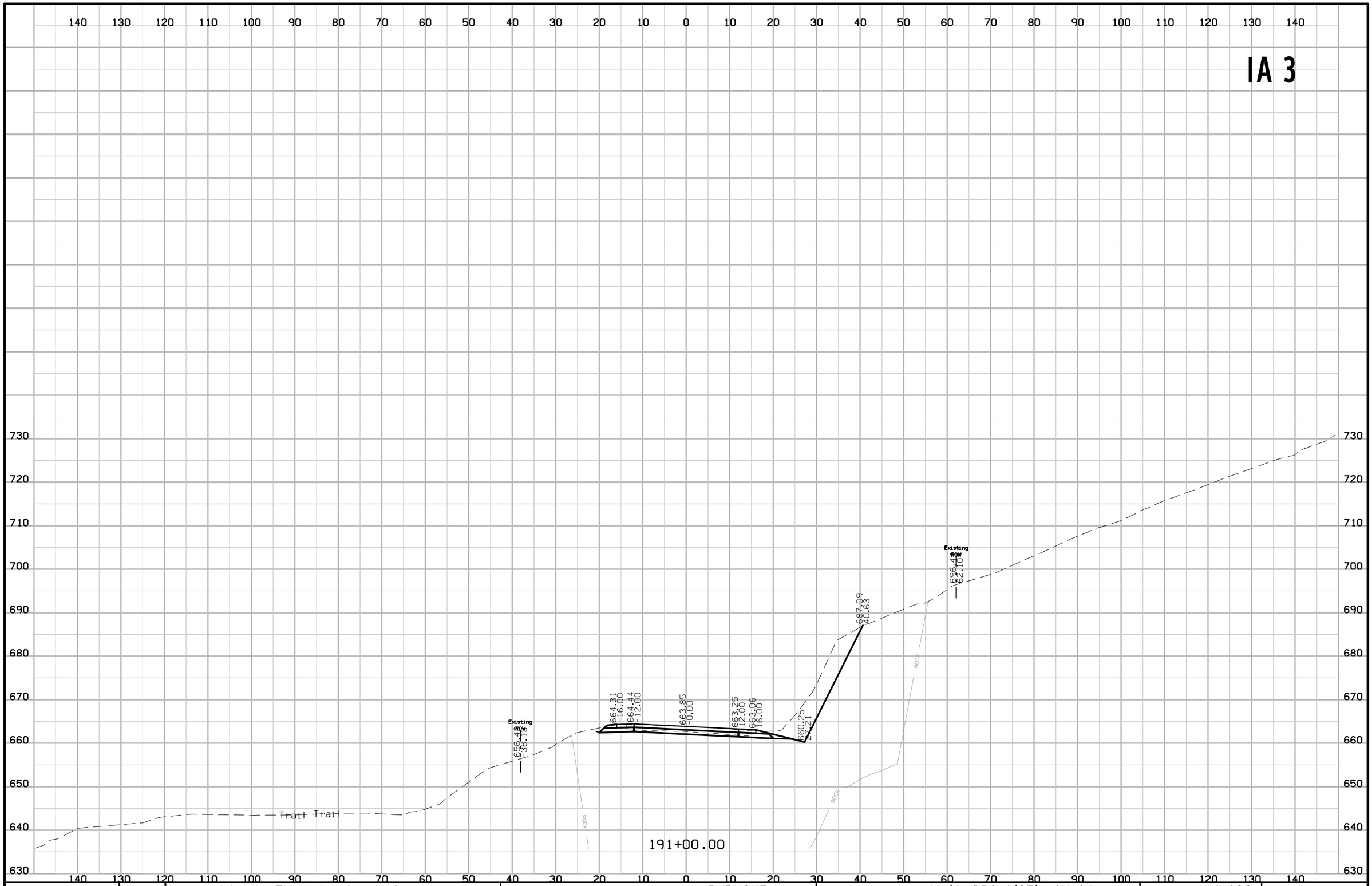
10:12:04 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.188

12:35:19 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.189

12:35:20 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

750 740 730 720 710 700 690 680 670 660 650 640 630

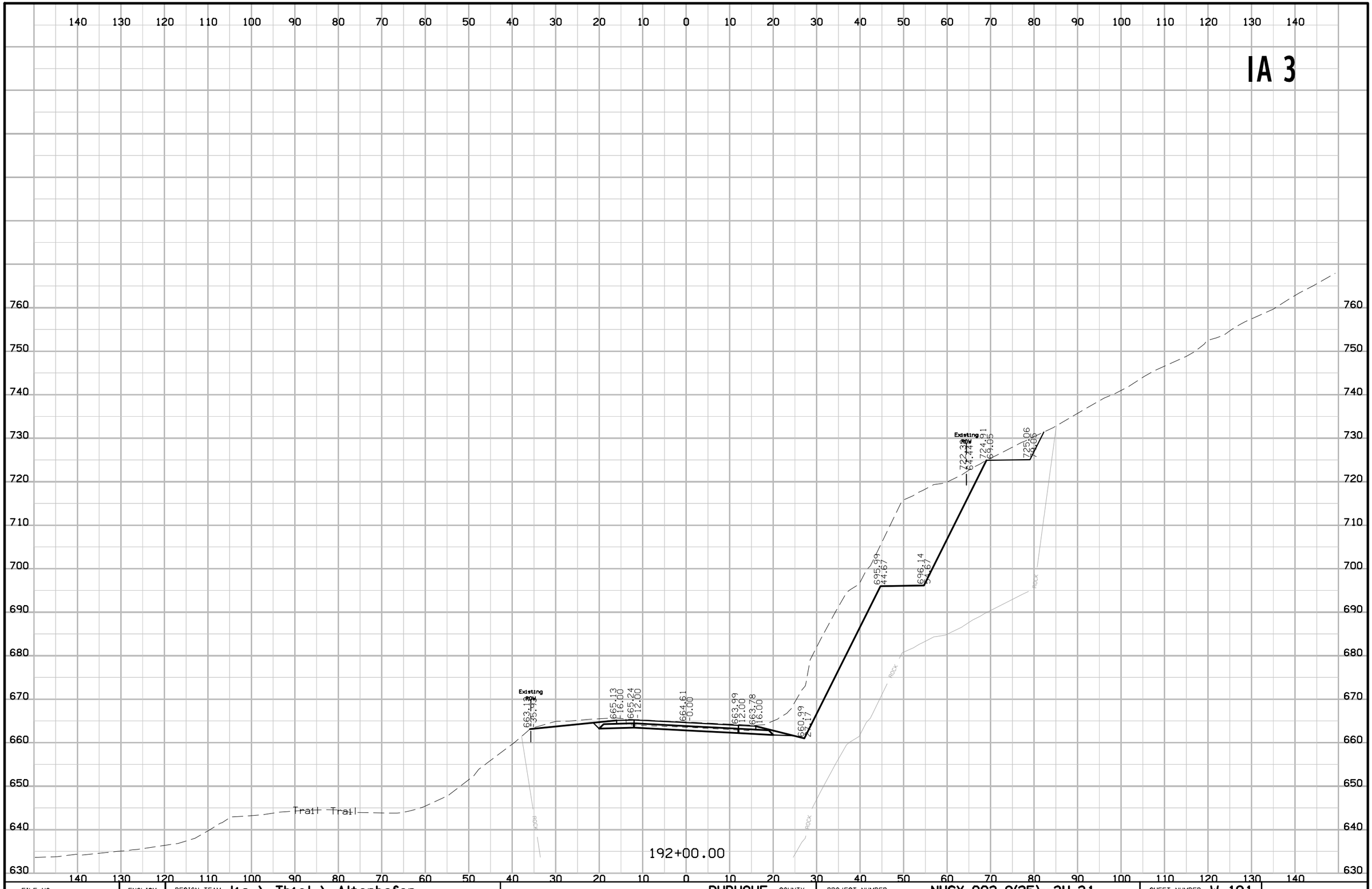
Existing ROW
660.47
36.75
663.60
27.46
664.74
16.00
664.85
12.00
664.23
0.00
663.61
12.00
663.40
16.00
660.61
27.17
695.61
44.67
695.76
54.67
Existing ROW
710.66
62.12
710.81
72.12
Trail
Trail
ROCK
ROCK
ROCK

191+50.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.190

12:35:20 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

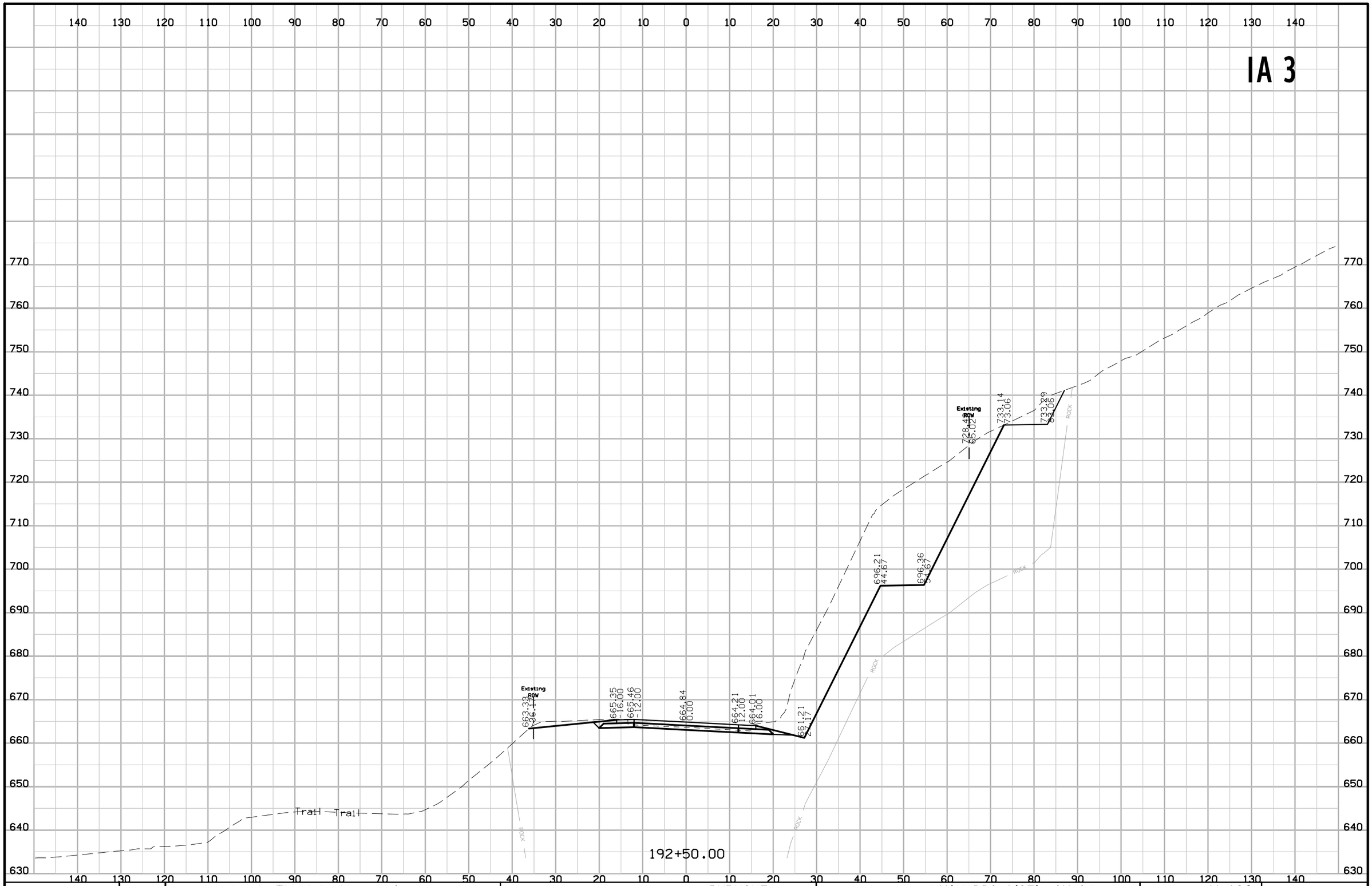
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.191

12:35:21 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.192

12:35:22 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

770 760 750 740 730 720 710 700 690 680 670 660 650 640 630 620

Existing R/W
730.48
65.20

735.61
74.43

735.76
84.43

695.95
44.67

696.10
54.67

Existing R/W
662.48
34.00

665.08
16.00

665.20
12.00

664.57
0.00

663.95
12.00

663.74
16.00

660.95
27.17

ROCK

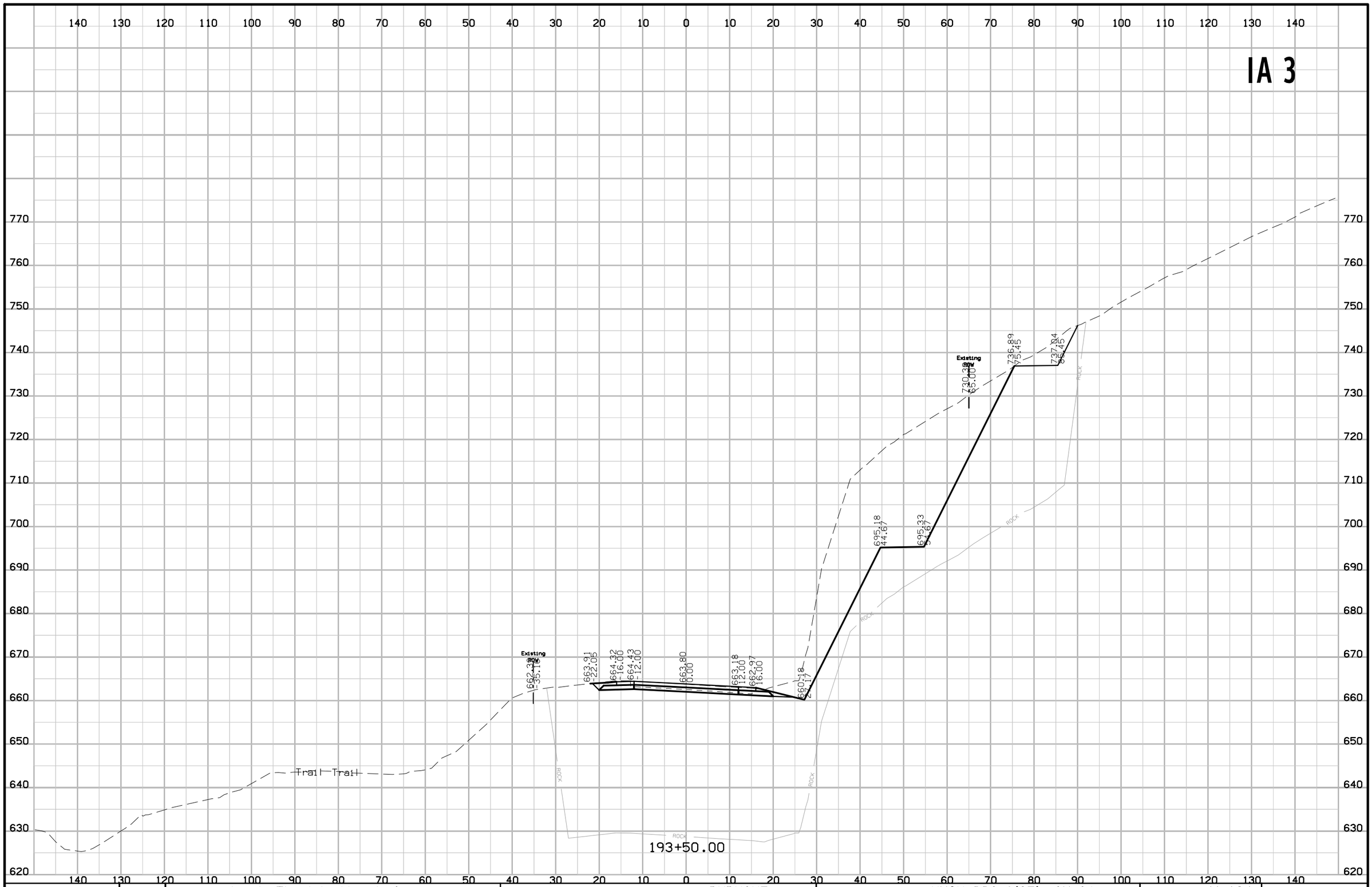
Trail Trail

193+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.193

12:35:23 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.194

12:35:24 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

760 750 740 730 720 710 700 690 680 670 660 650 640 630

Existing ROW
655.1
35.7

662.63
20.22
663.05
16.00
663.16
12.00
662.54
0.00
661.91
12.00
661.71
16.00
658.91
24.17

693.91
44.67
694.06
9.67

Existing ROW
718.6
64.39
720.87
68.07

721.02
76.07

Trail Trail

ROCK
ROCK
ROCK
ROCK

194+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.195

12:35:25 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

740 730 720 710 700 690 680 670 660 650 640 630 620

Existing ROW
648.97
36.74

658.81
22.54

661.28
16.00

661.40
12.00

660.77
0.00

660.15
12.00

659.94
16.00

657.45
22.17

690.30
43.74

Existing ROW
701.20
63.40

Trail Trail

ROCK

ROCK

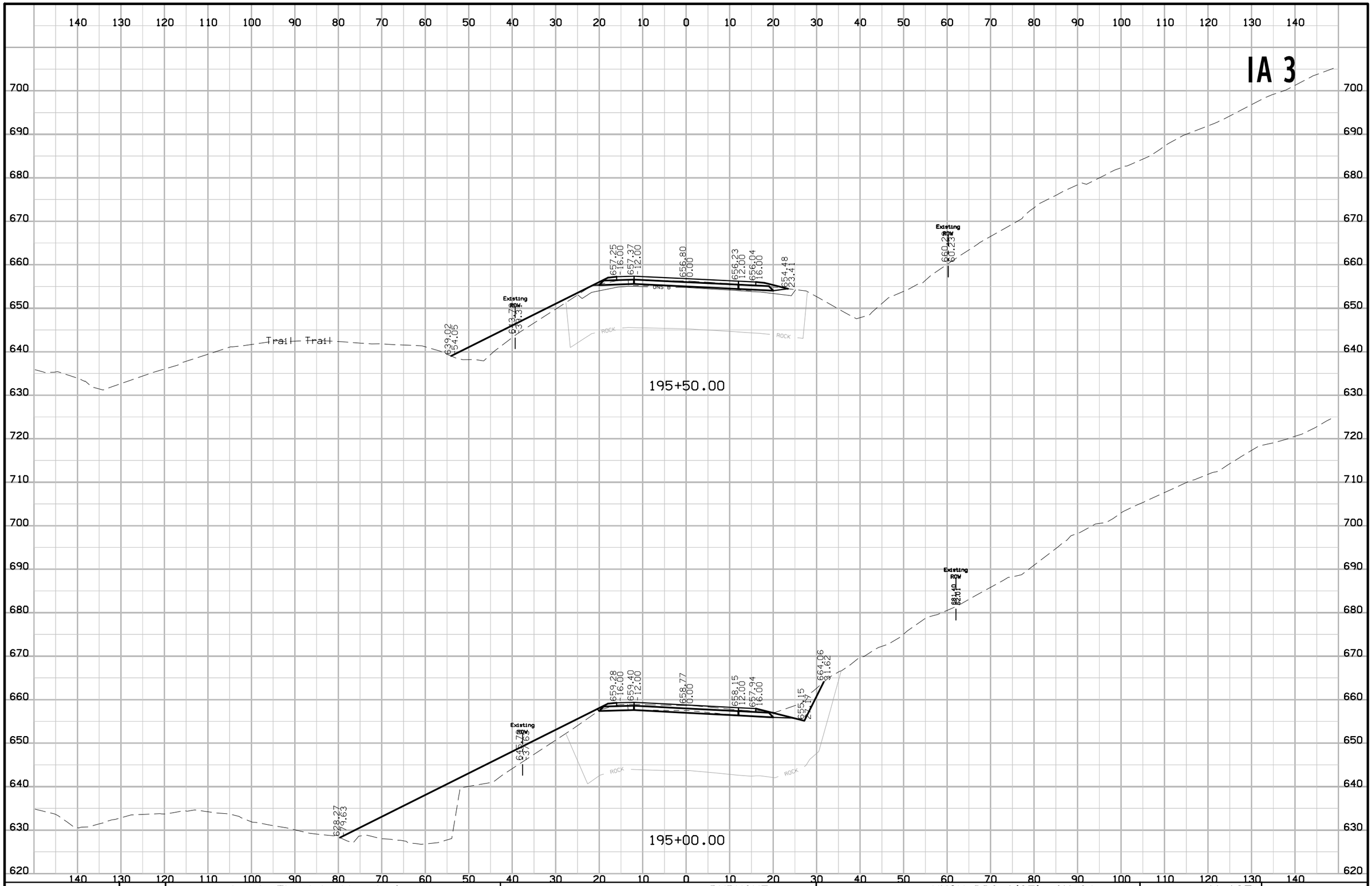
ROCK

194+50.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.196

12:35:26 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

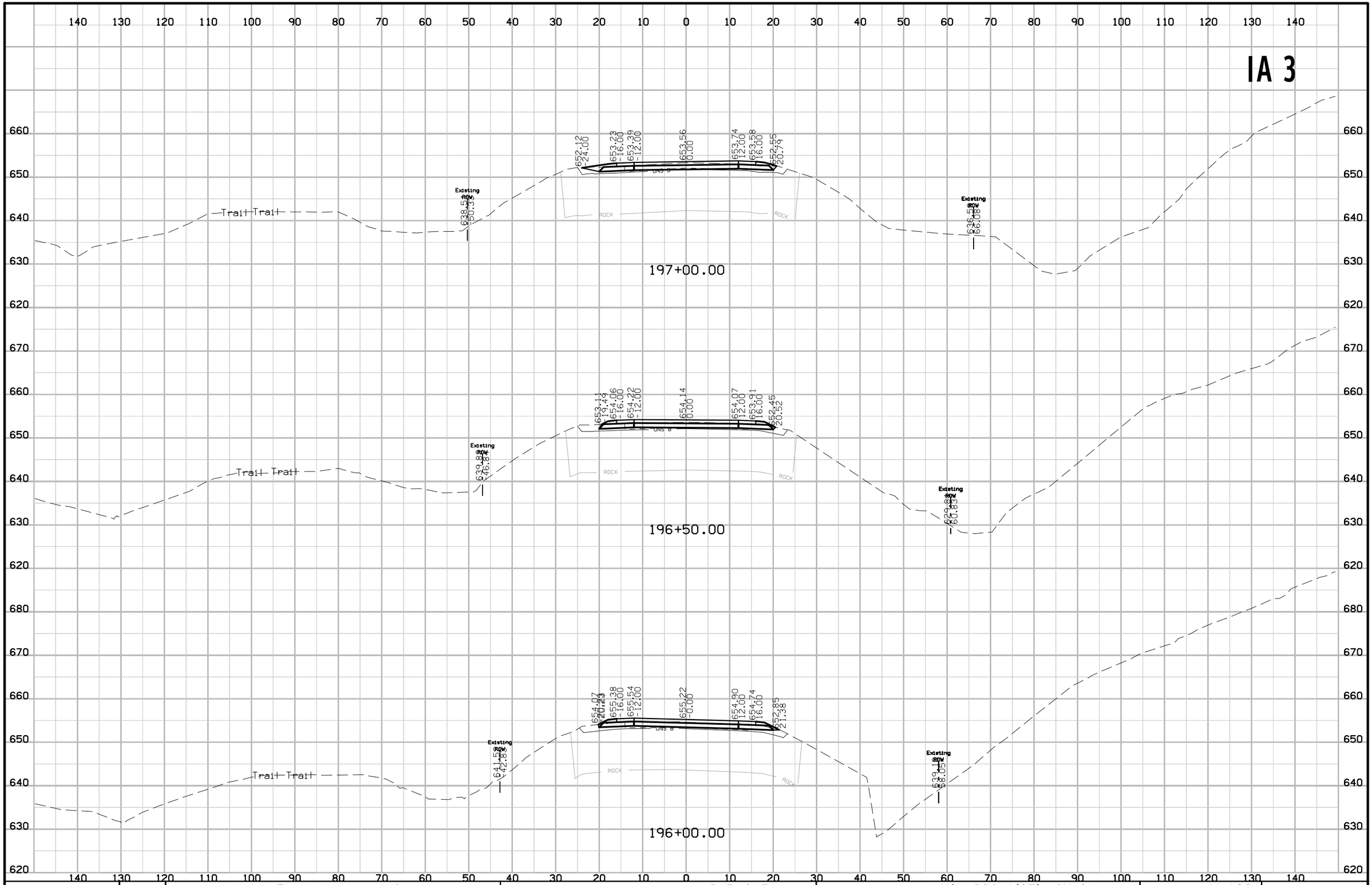
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.197

12:35:27 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

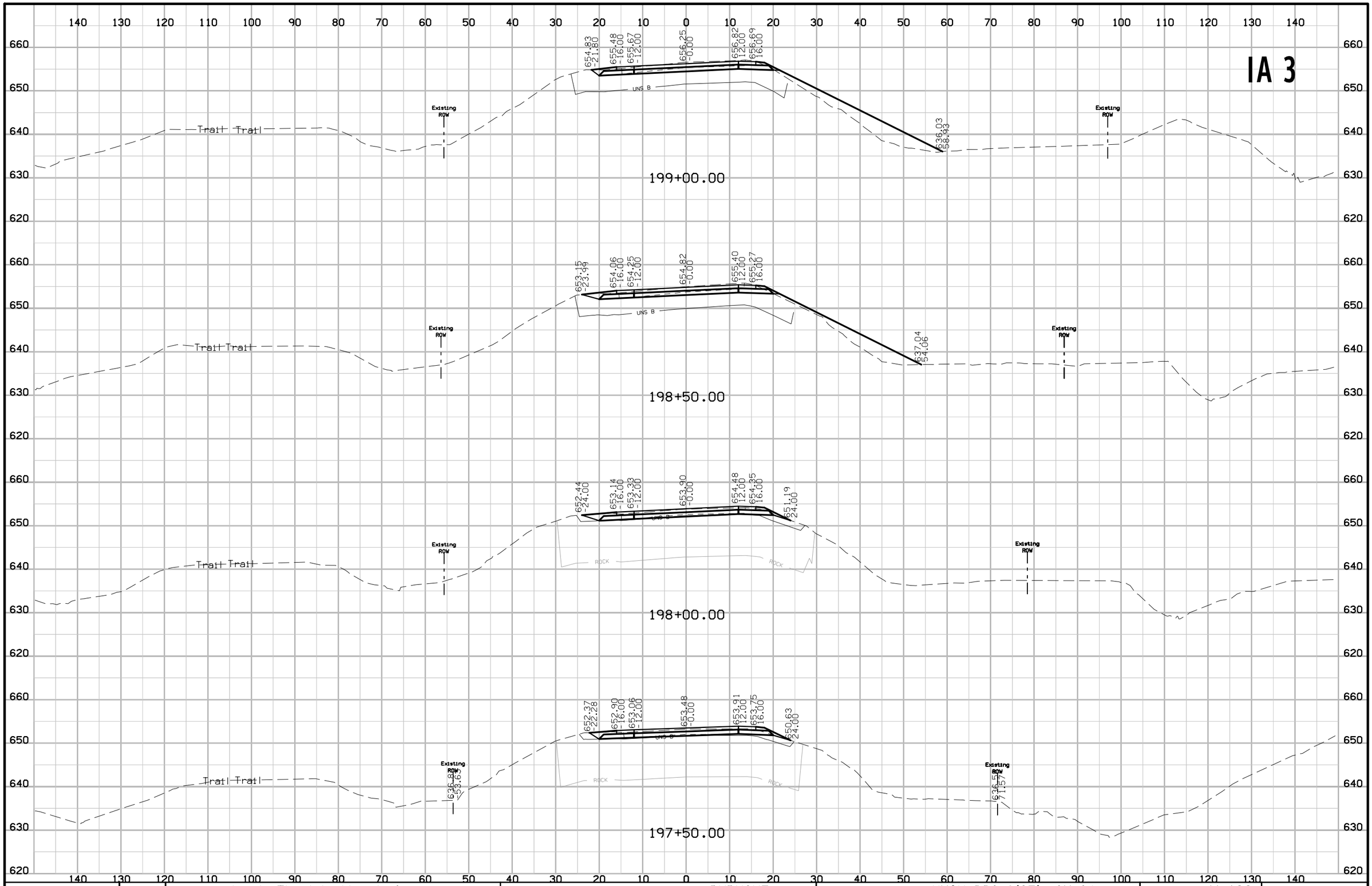
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.198

12:35:28 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.199

12:35:29 PM 1/25/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

670 660 650 640 630

Existing ROW

662.11
-31.66

663.67
-16.00
663.87
-12.00

664.44
-0.00

665.02
-12.00
664.89
-16.00

ROCK

Trail Trail

201+00.00

661.98
-16.00
662.17
-12.00

662.75
-0.00

663.32
-12.00
663.20
-16.00

UNS B

Existing ROW

Existing ROW

200+50.00

659.79
-16.00
659.98
-12.00

660.55
-0.00

661.13
-12.00
661.00
-16.00

UNS B

Existing ROW

Existing ROW

200+00.00

657.40
-16.00
657.59
-12.00

658.17
-0.00

658.74
-12.00
658.61
-16.00

UNS B

636.92
-60.98

Existing ROW

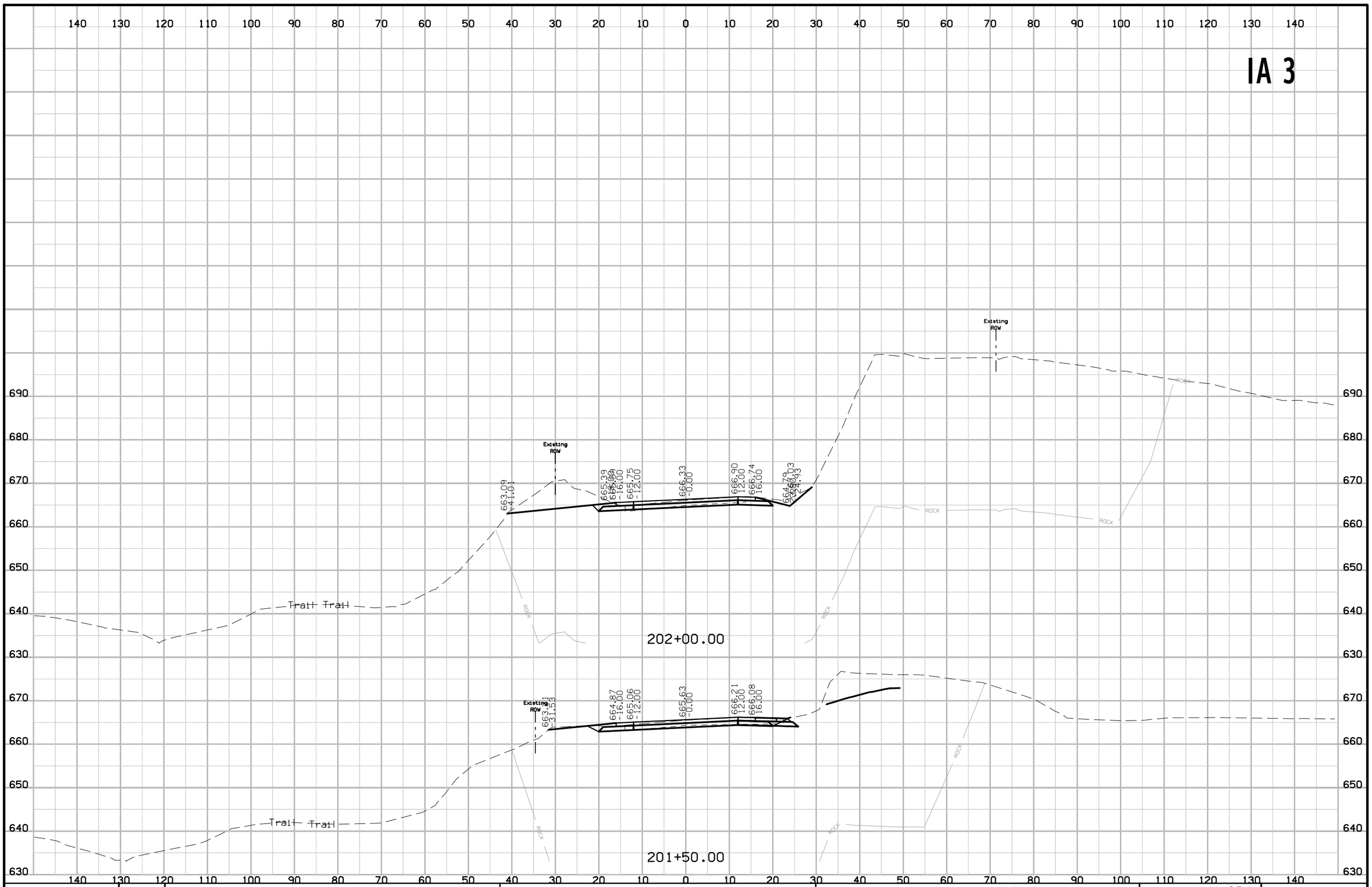
Existing ROW

199+50.00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.200

3:54:16 PM 2/23/2023 tschoen pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W101.dgn

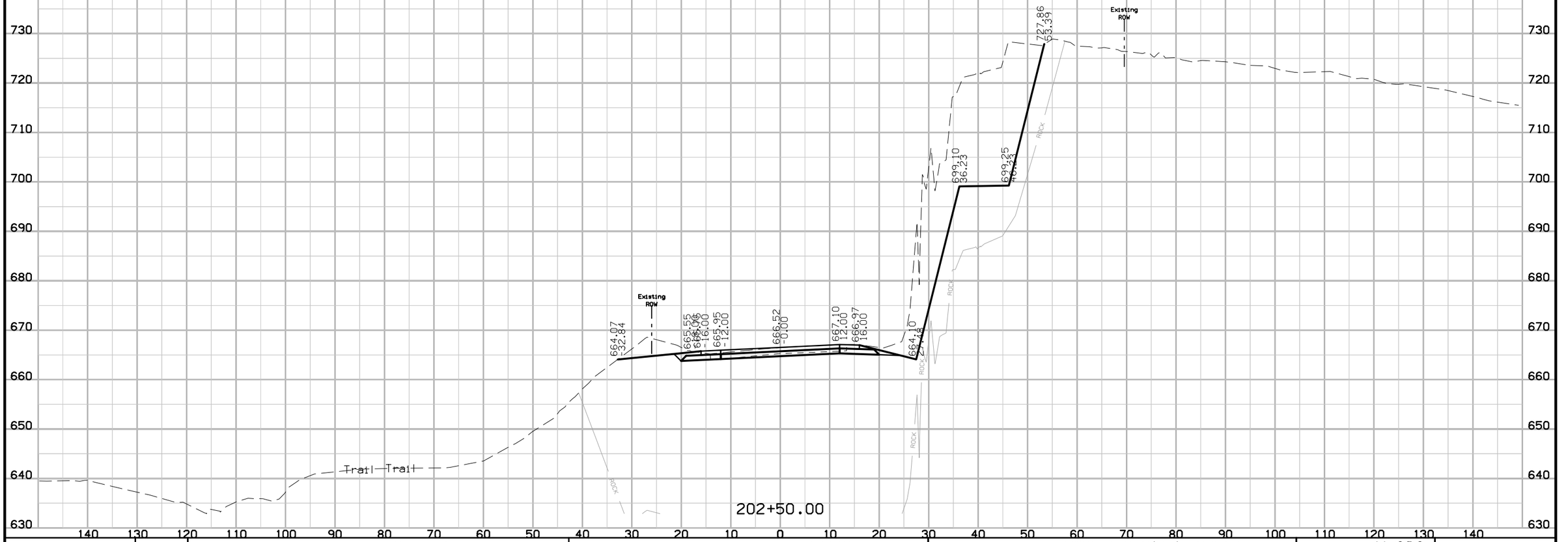
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.201

10:43:49 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

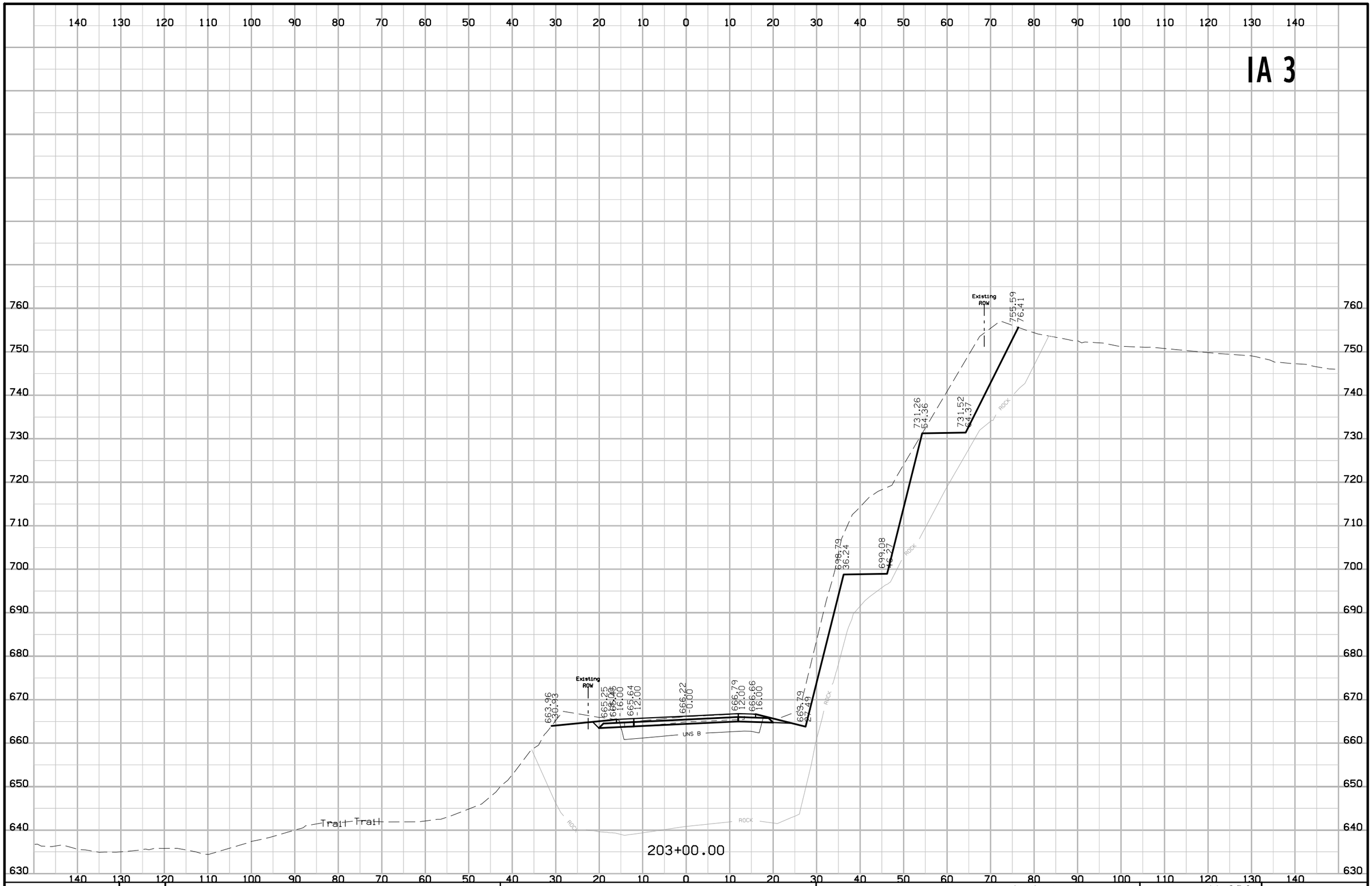
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.202

10:43:50 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

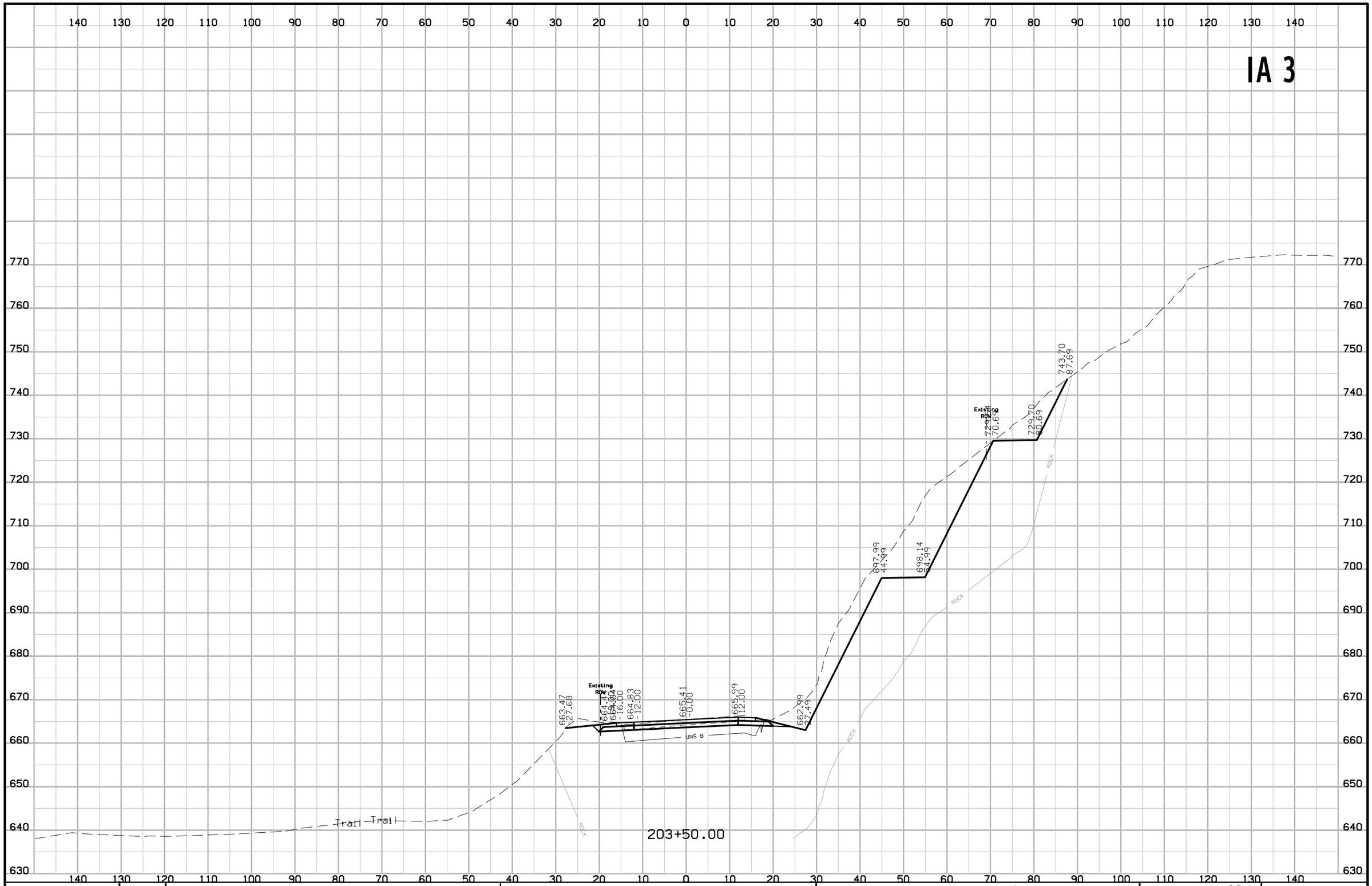
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.203

10:43:51 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

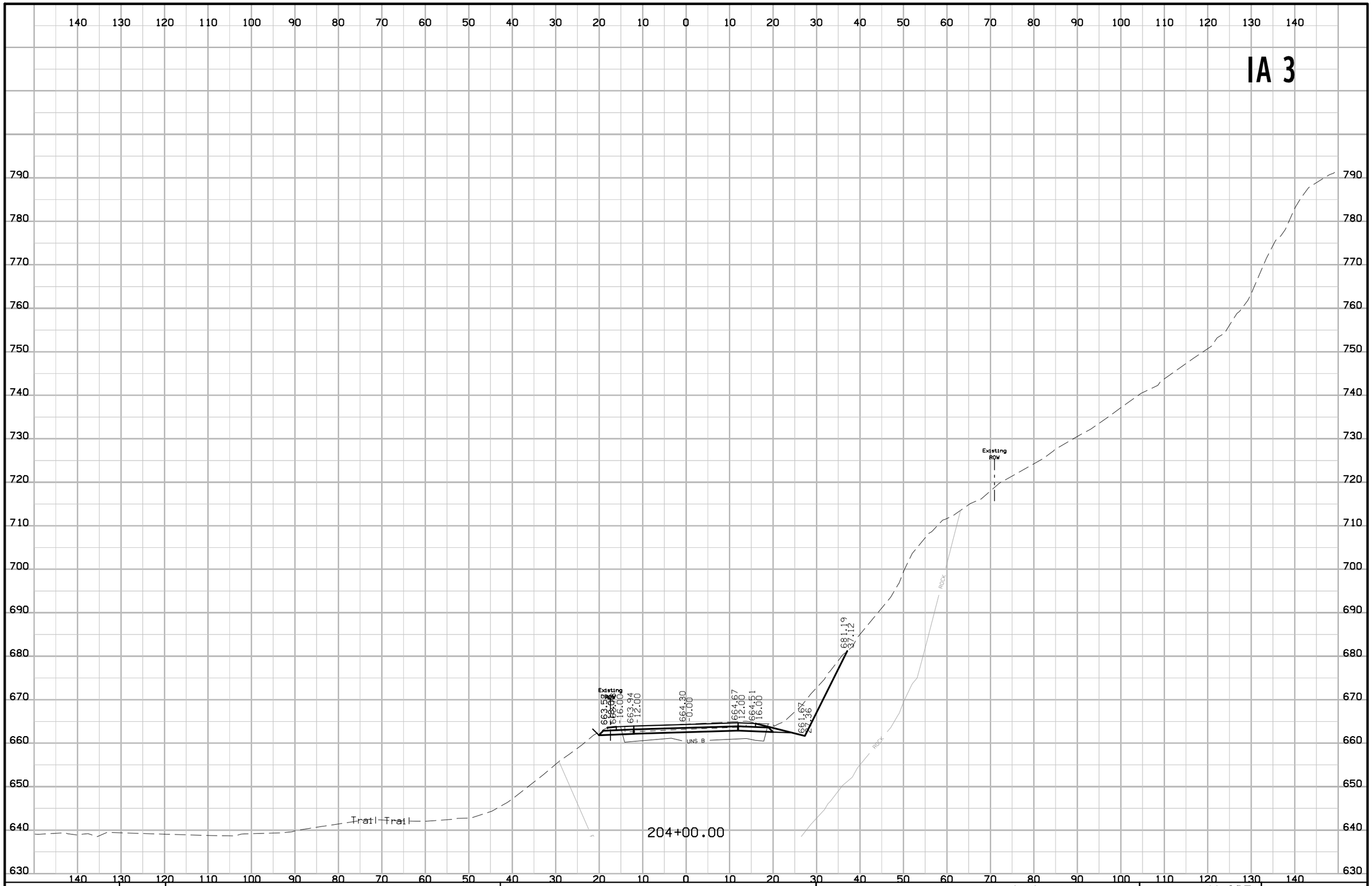
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.204

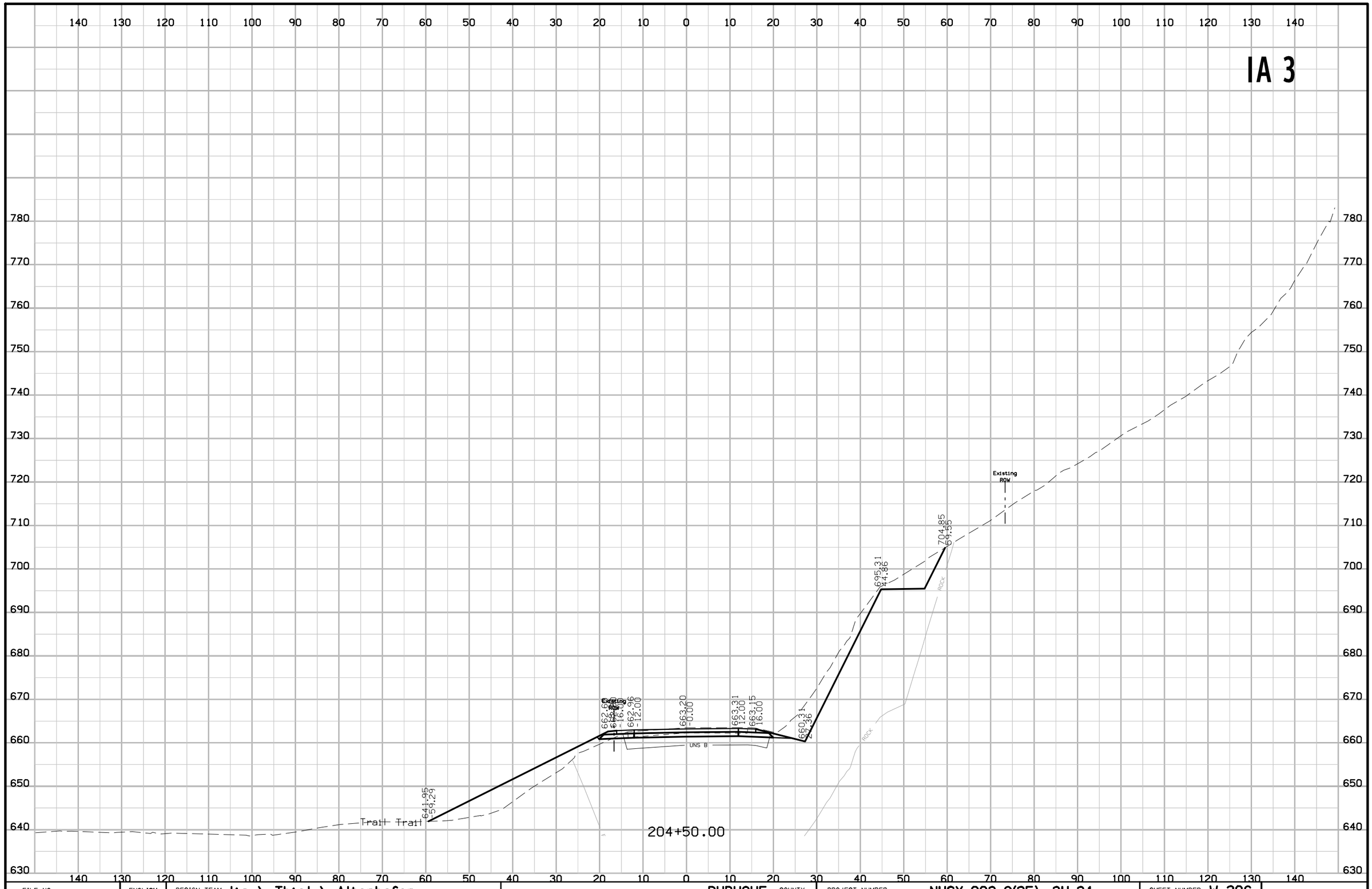
10:43:52 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.205

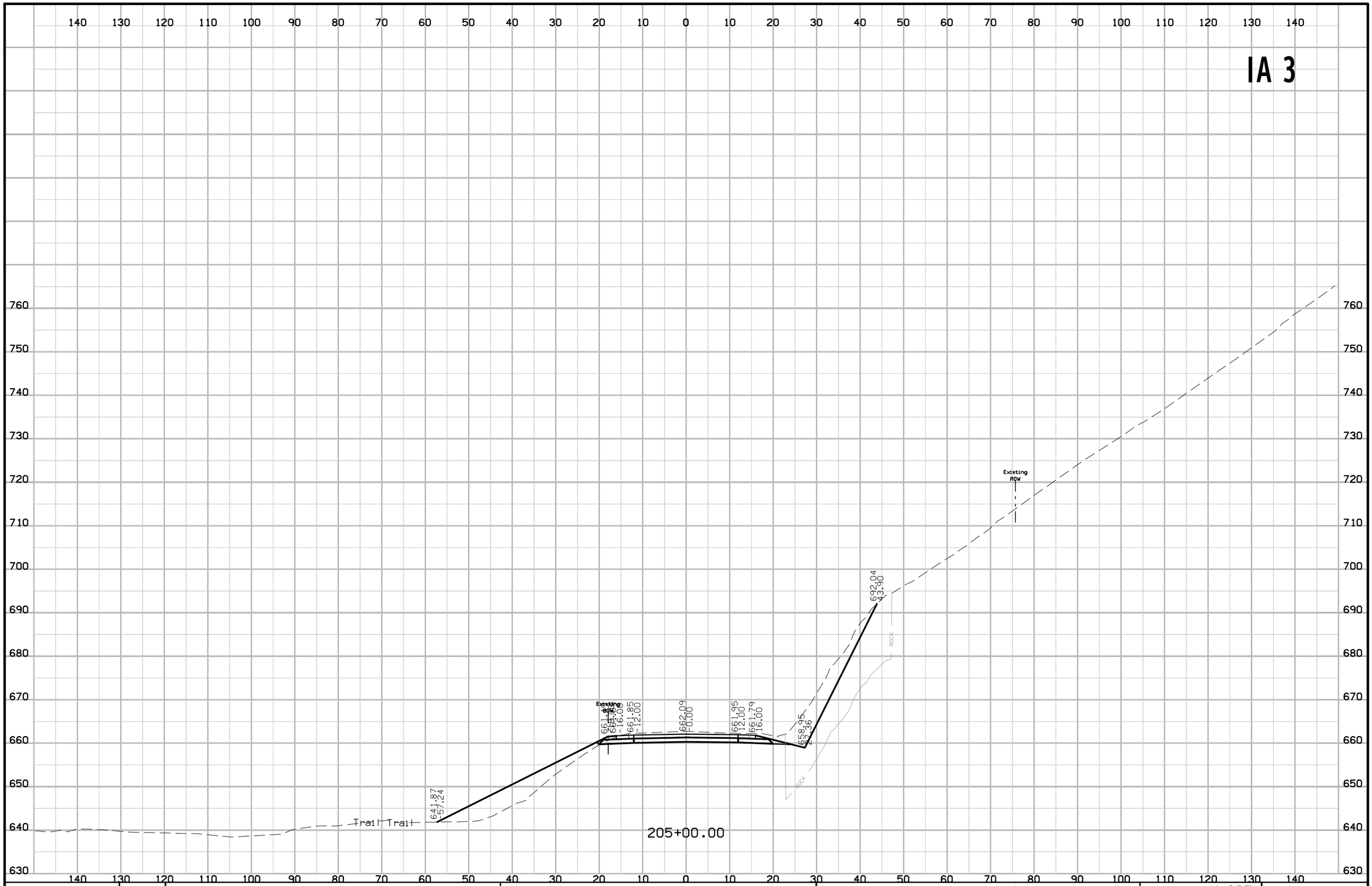
10:43:53 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.206

10:43:53 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

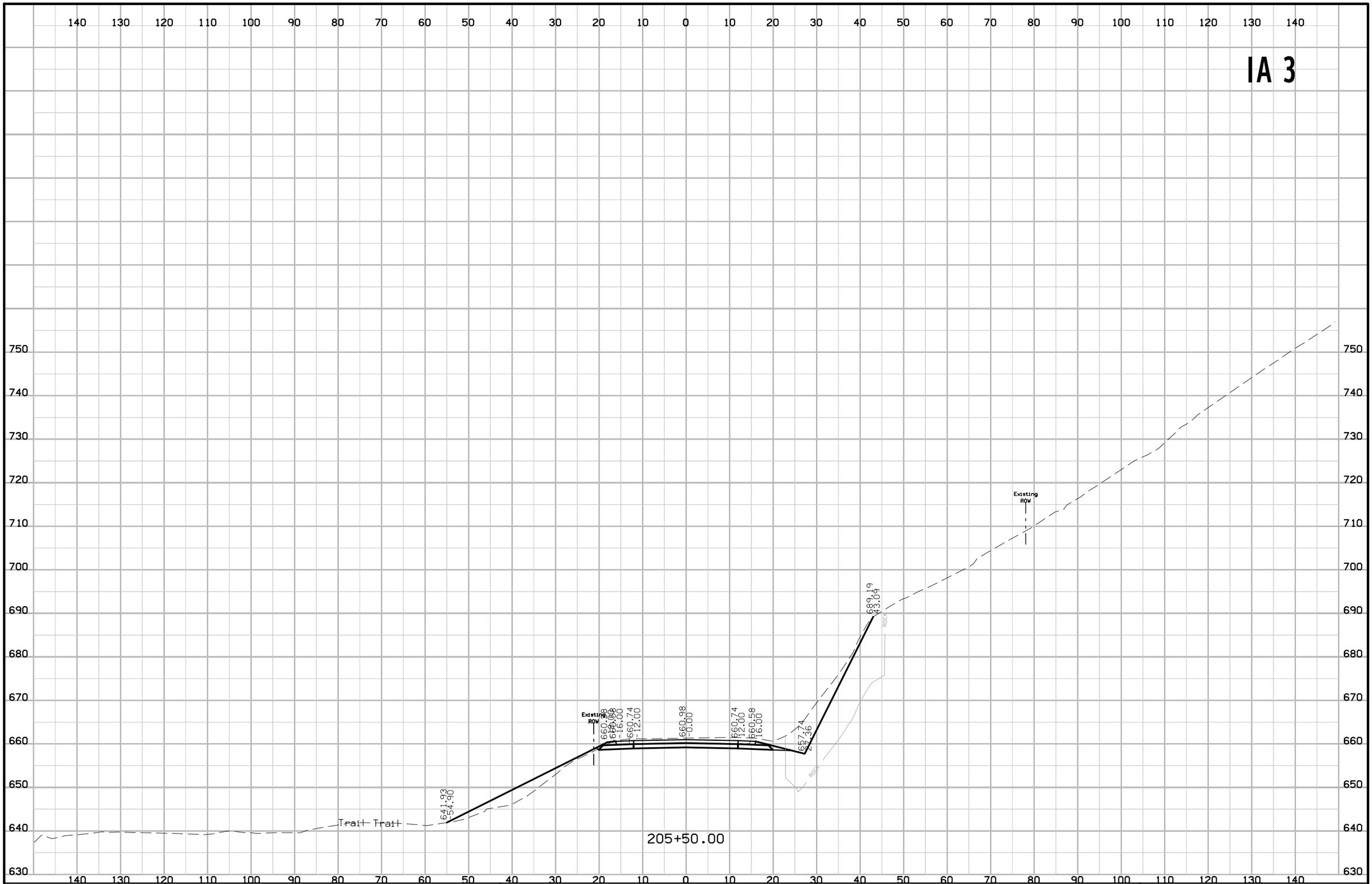
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.207

10:43:54 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

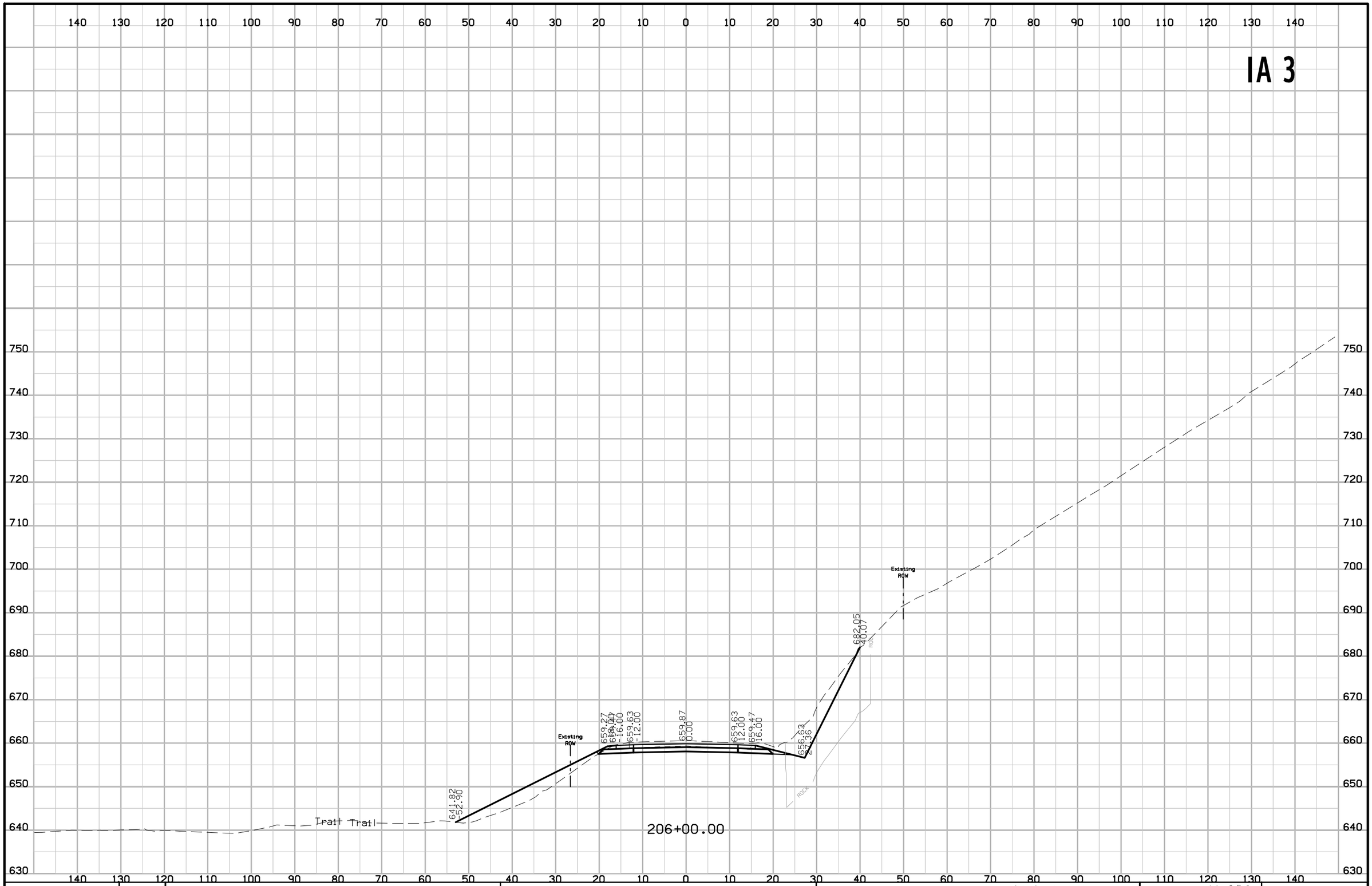
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.208

10:43:55 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

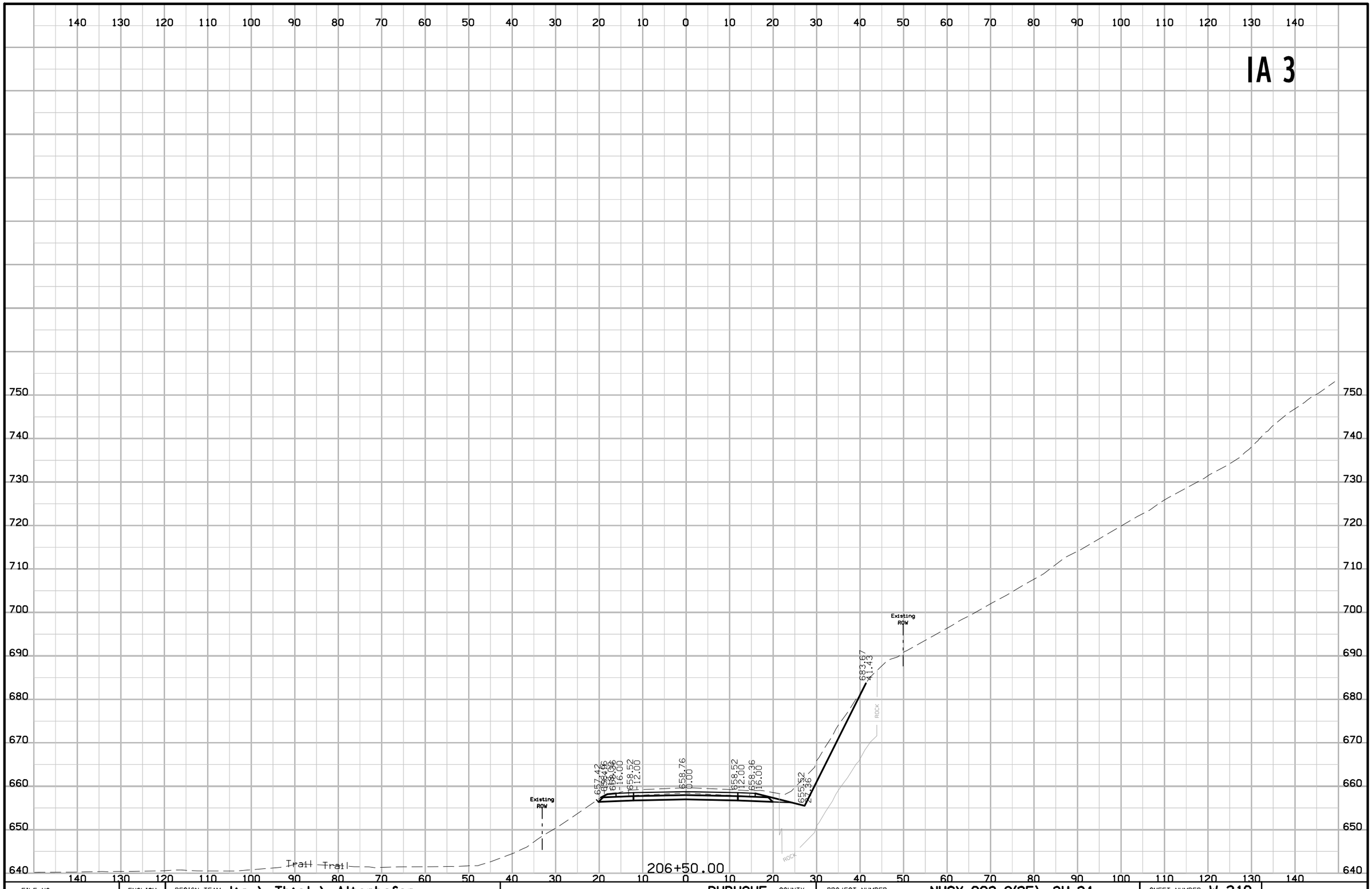
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.209

10:43:56 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

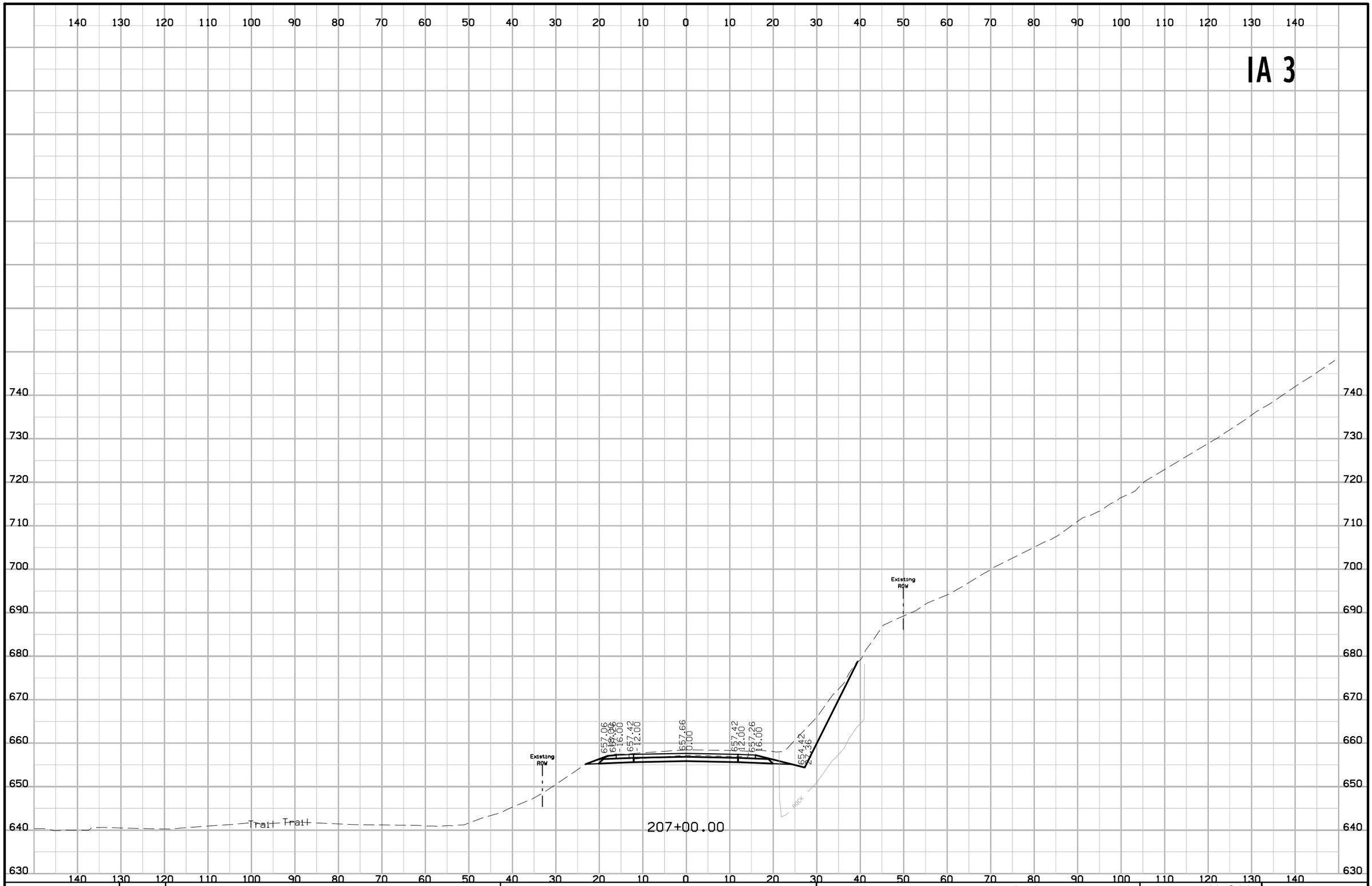
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.210

10:43:57 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

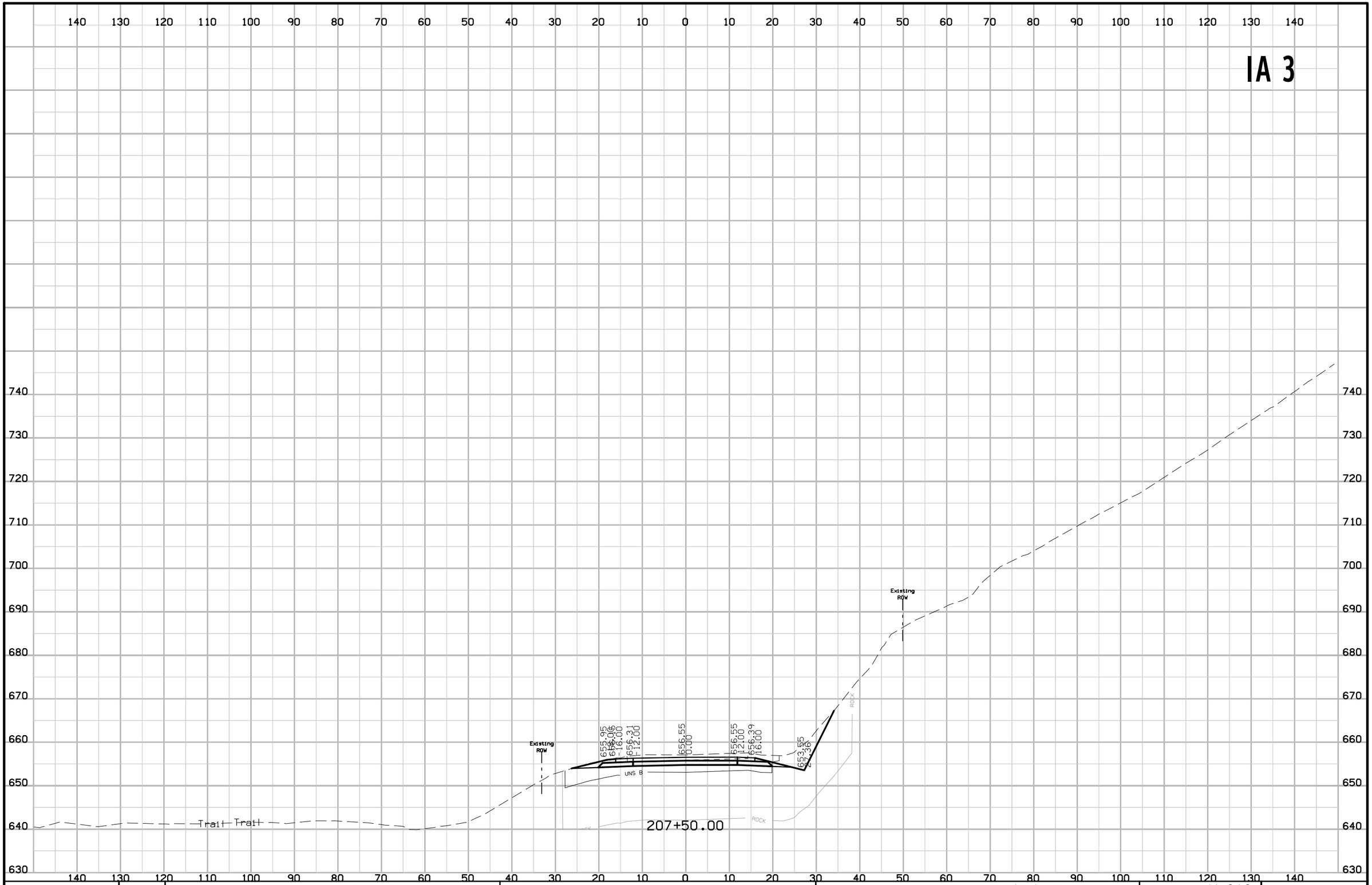
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.211

10:43:58 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

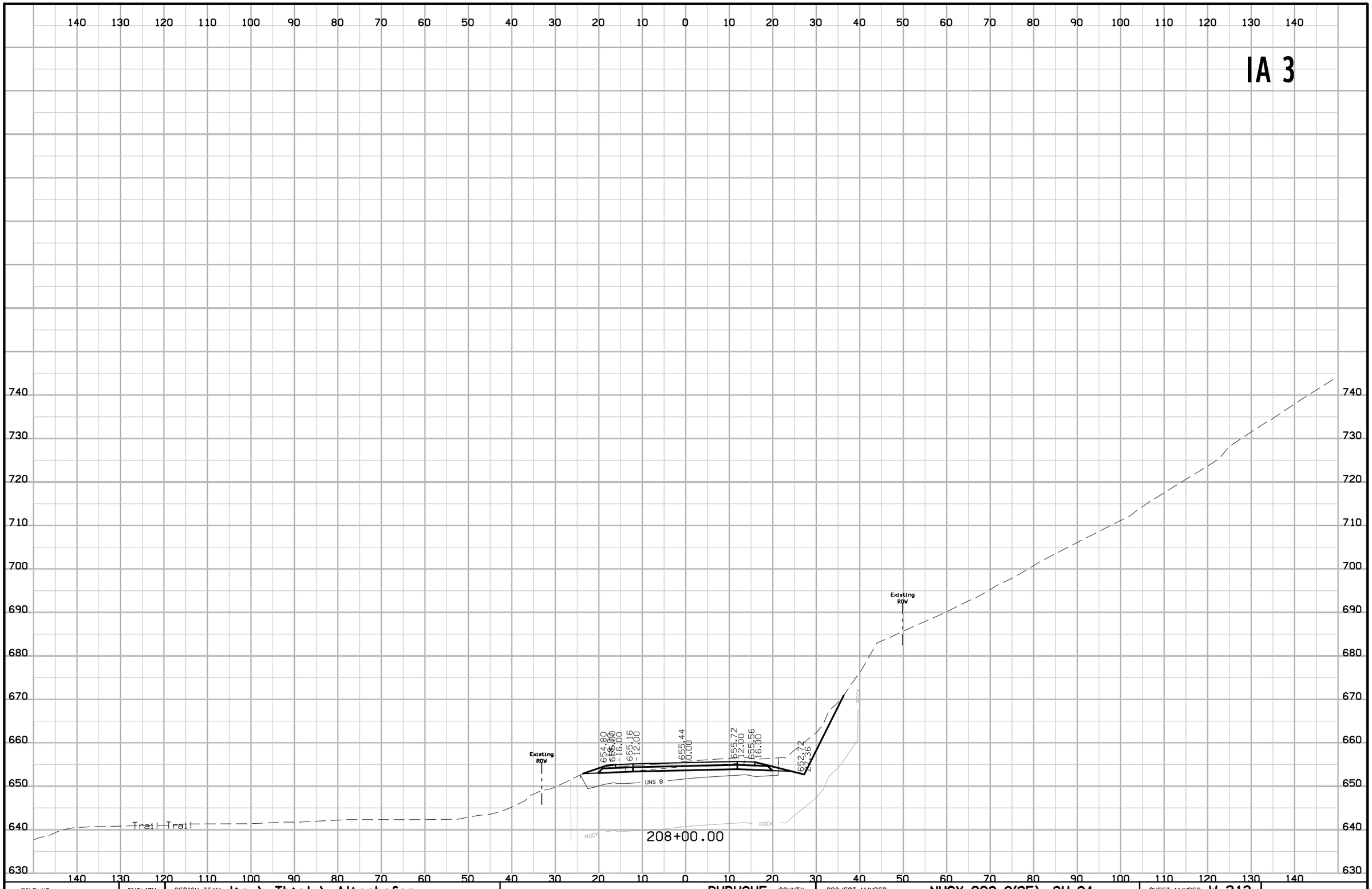
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.212

10:43:59 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.213

10:43:59 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

740 730 720 710 700 690 680 670 660 650 640 630 620

Existing ROW

653.40 -16.00
653.78 -12.00
654.33 0.00
654.88 12.00
654.74 16.00
651.88 2.45

UNS B

ROCK

ROCK

Existing ROW

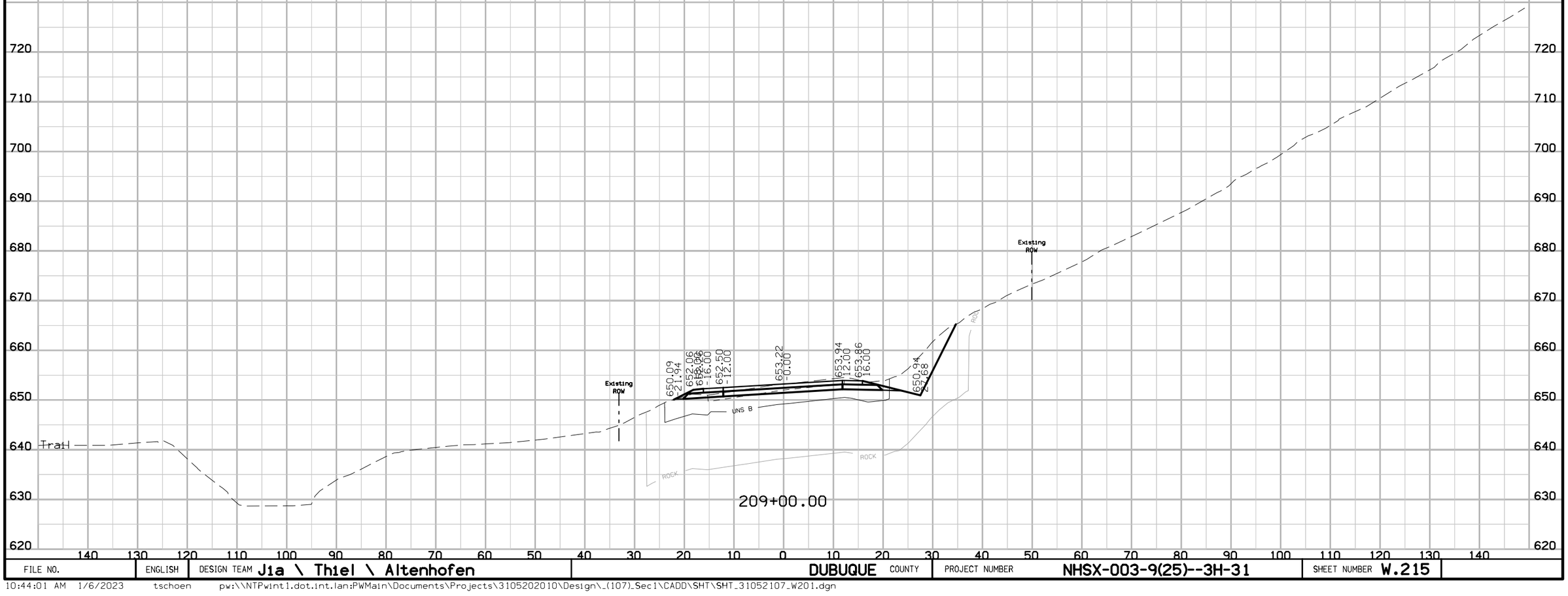
ROCK

208+50.00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.214

10:44:00 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

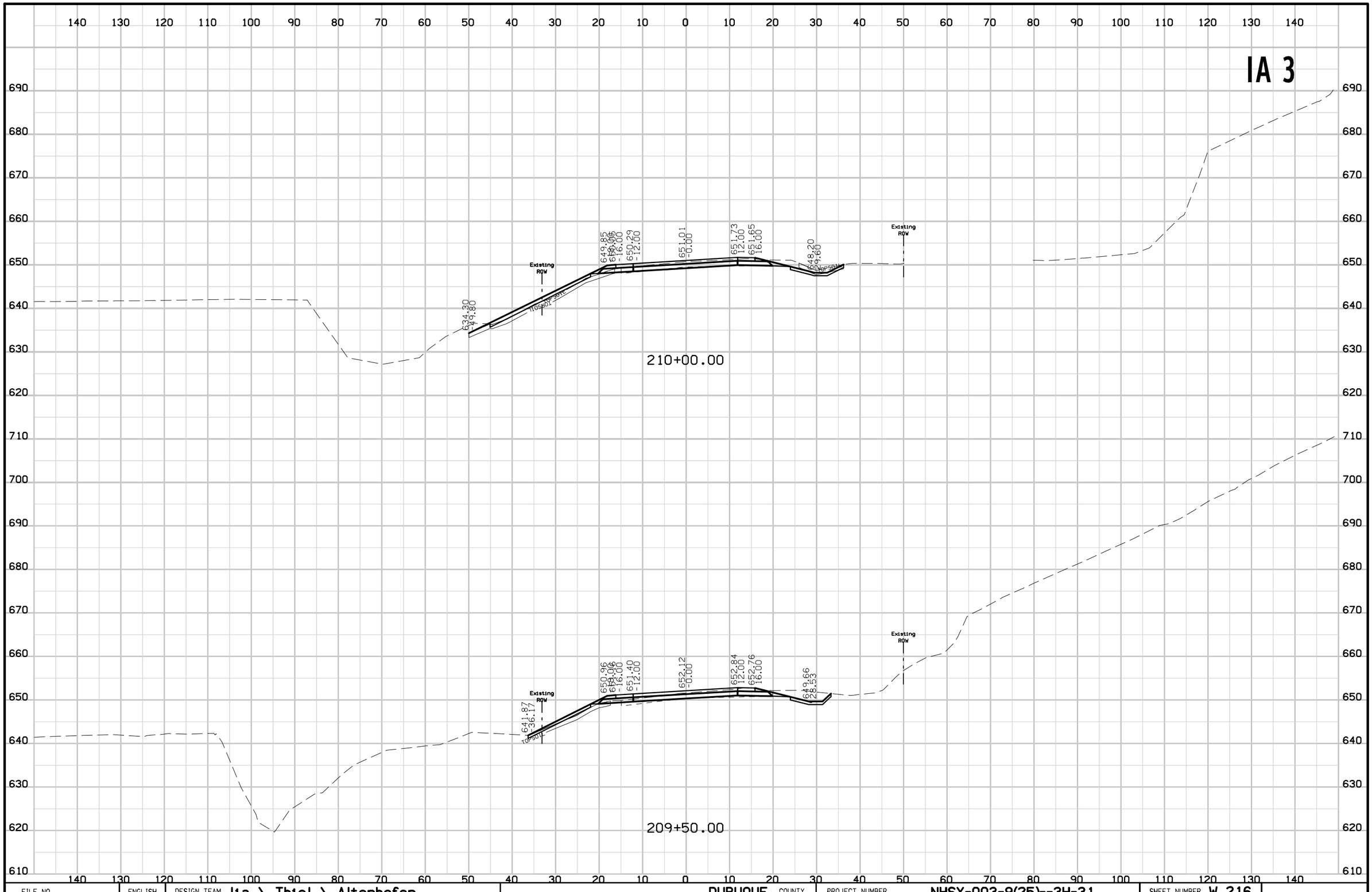
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.215

10:44:01 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

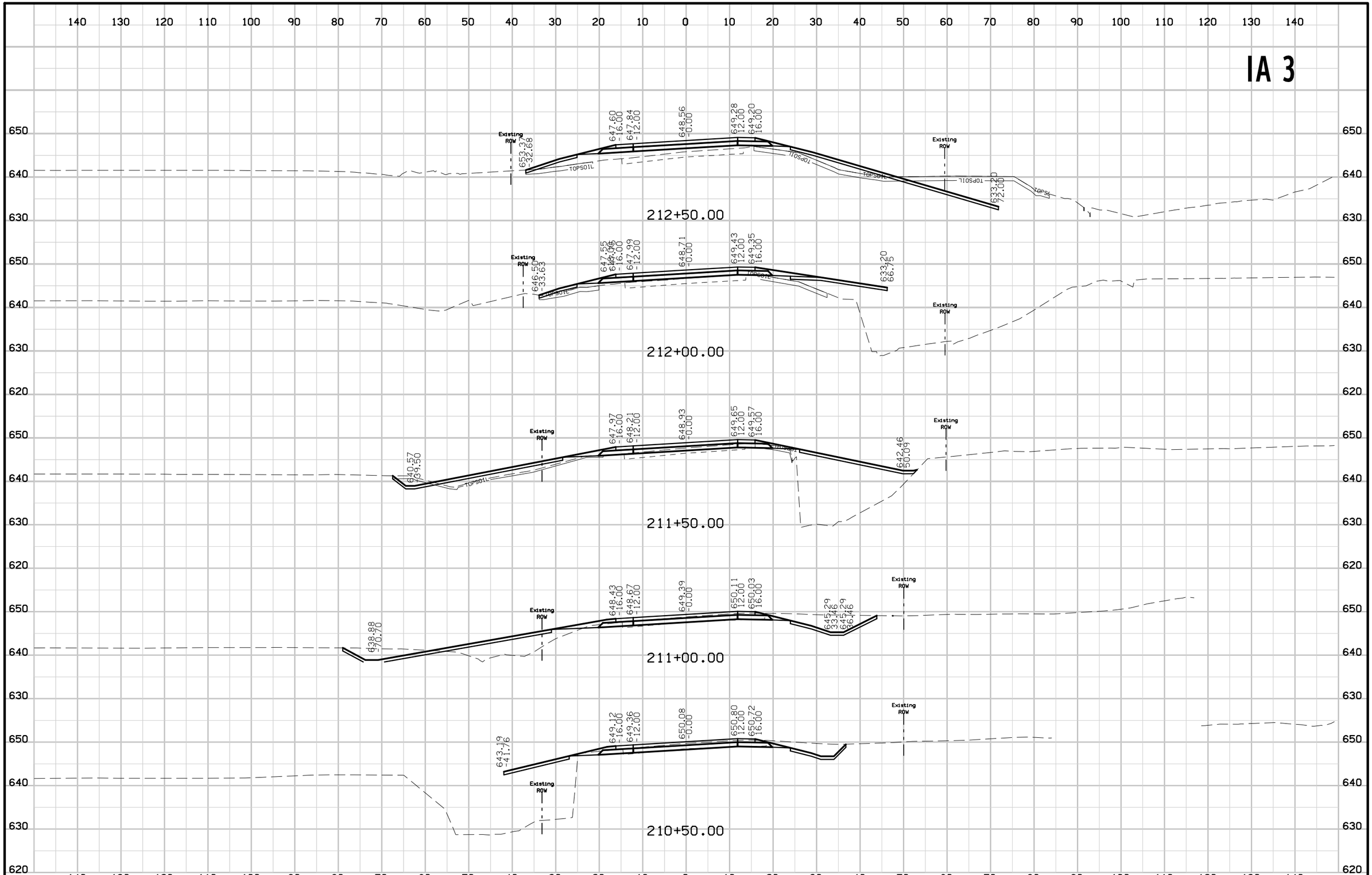
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.216

5:12:03 PM 4/3/2024 idot E:\4_3_2024\SHT_31052107_W201.dgn

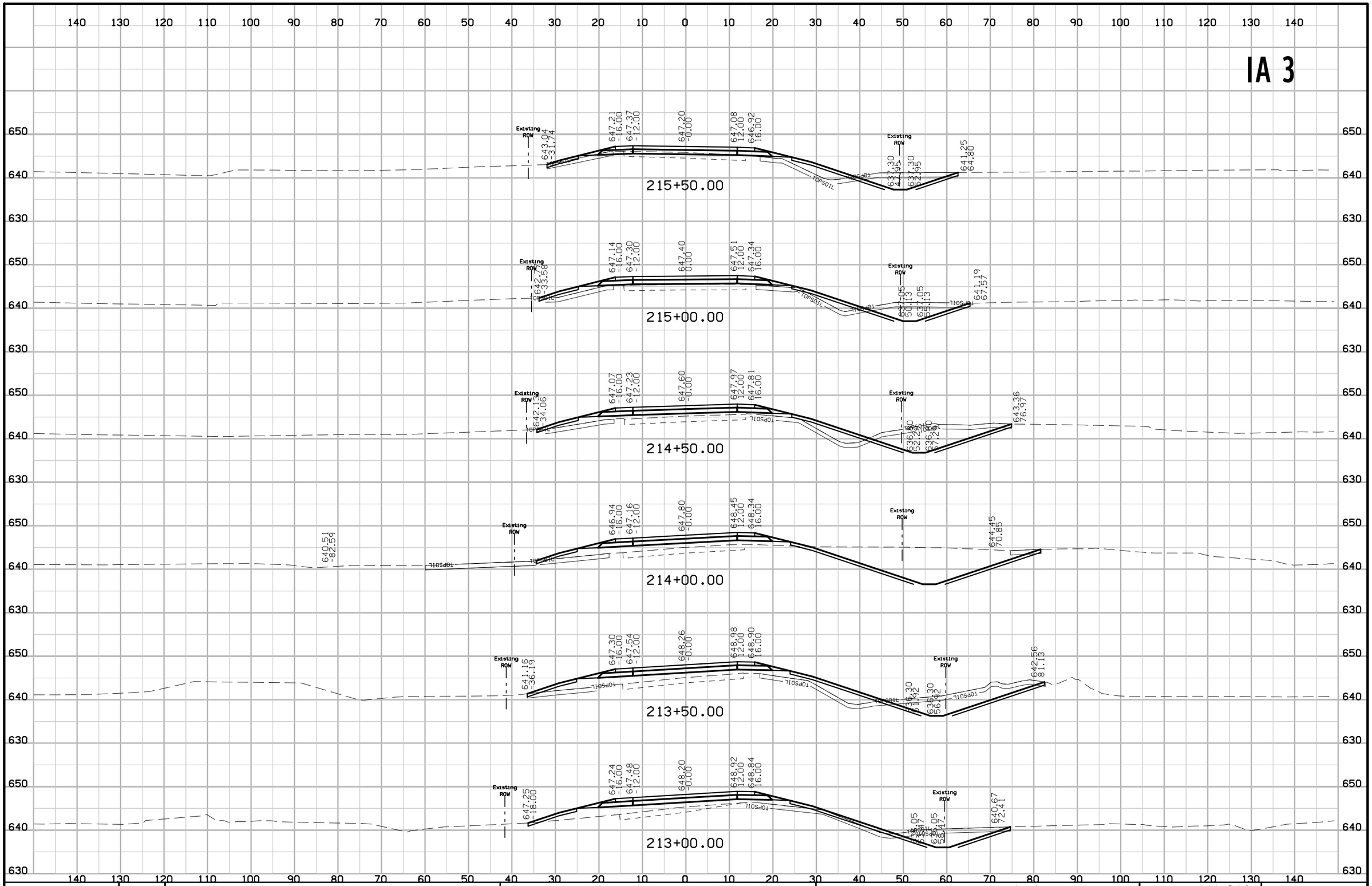
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.217

5:12:04 PM 4/3/2024 idot E:\4_3_2024\SHT_31052107_W201.dgn

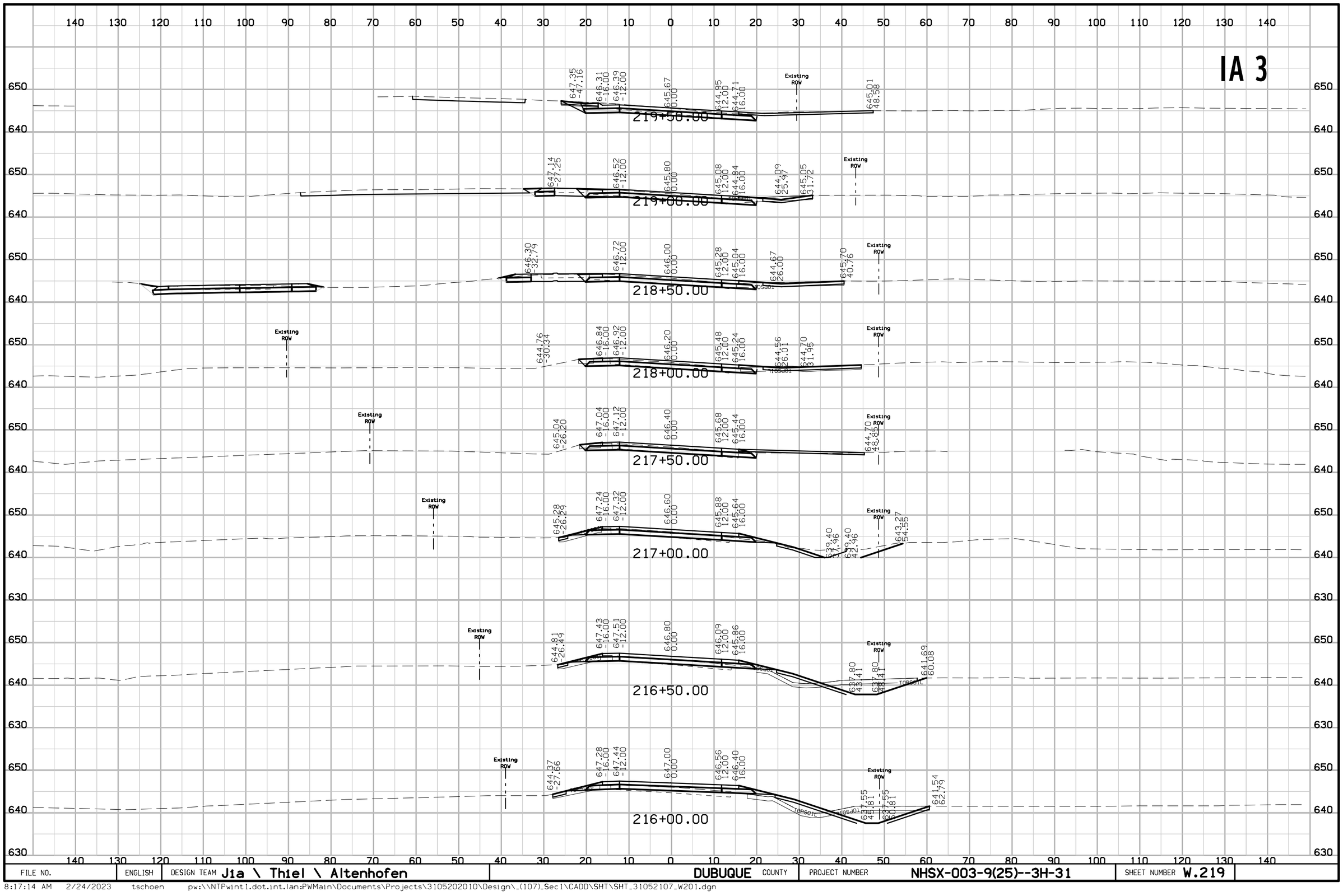
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.218

10:44:04 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

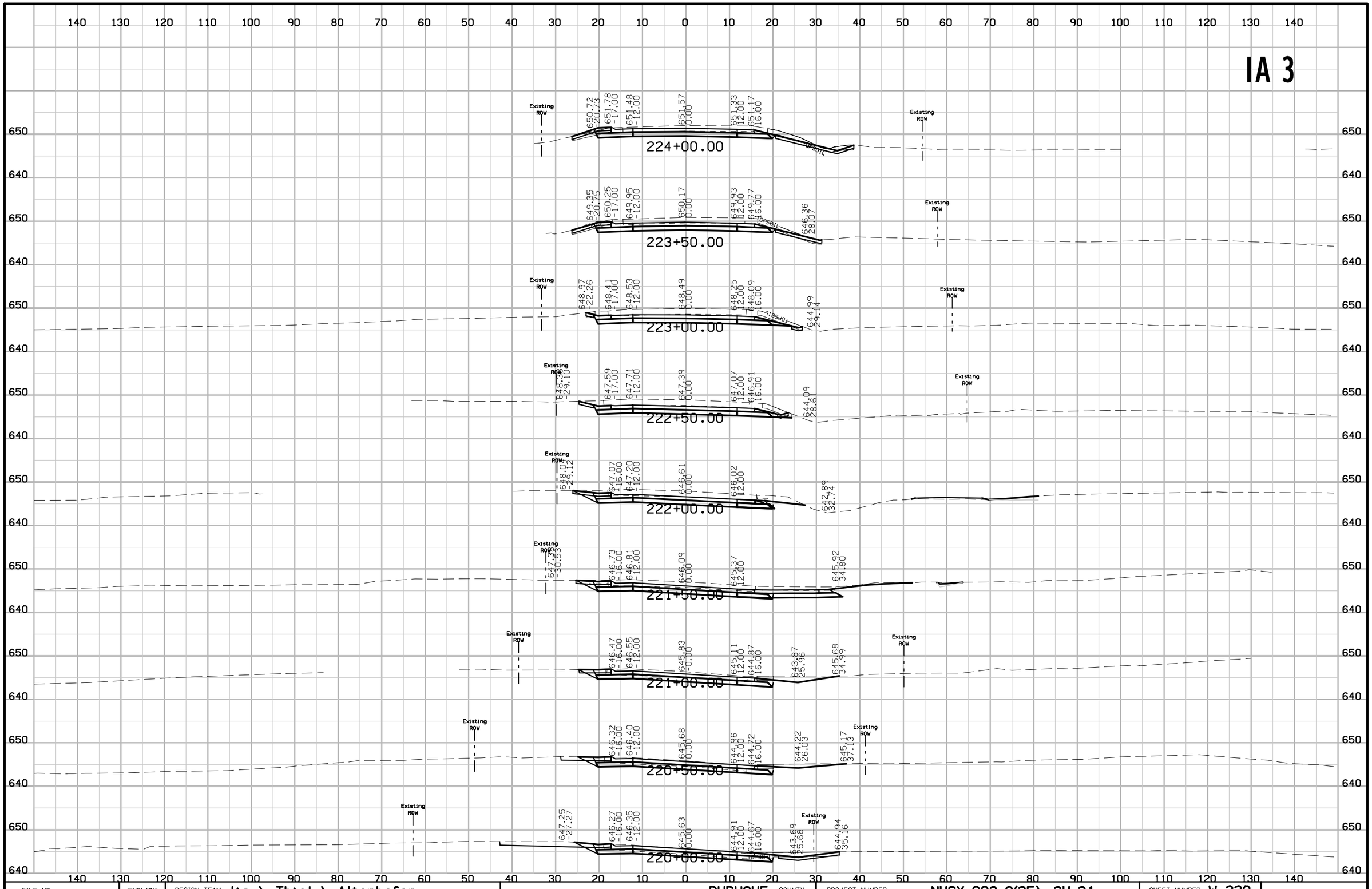
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.219

8:17:14 AM 2/24/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.220

10:44:05 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3

226+50.00

226+00.00

225+50.00

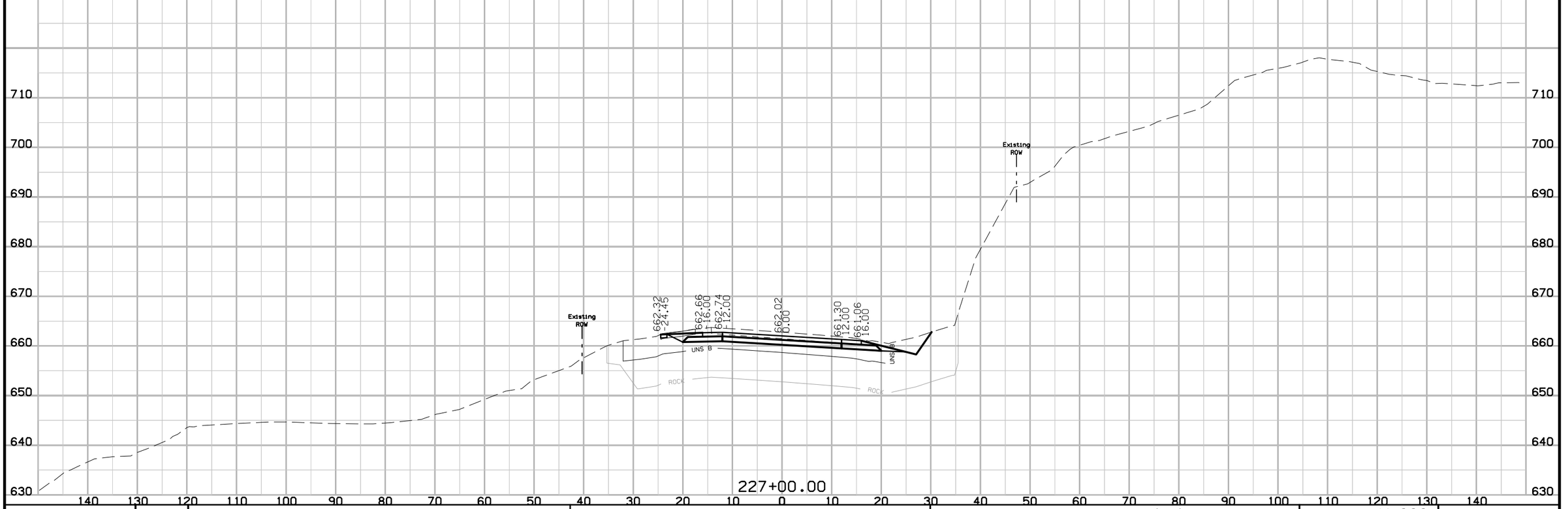
225+00.00

224+50.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.221

10:44:21 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

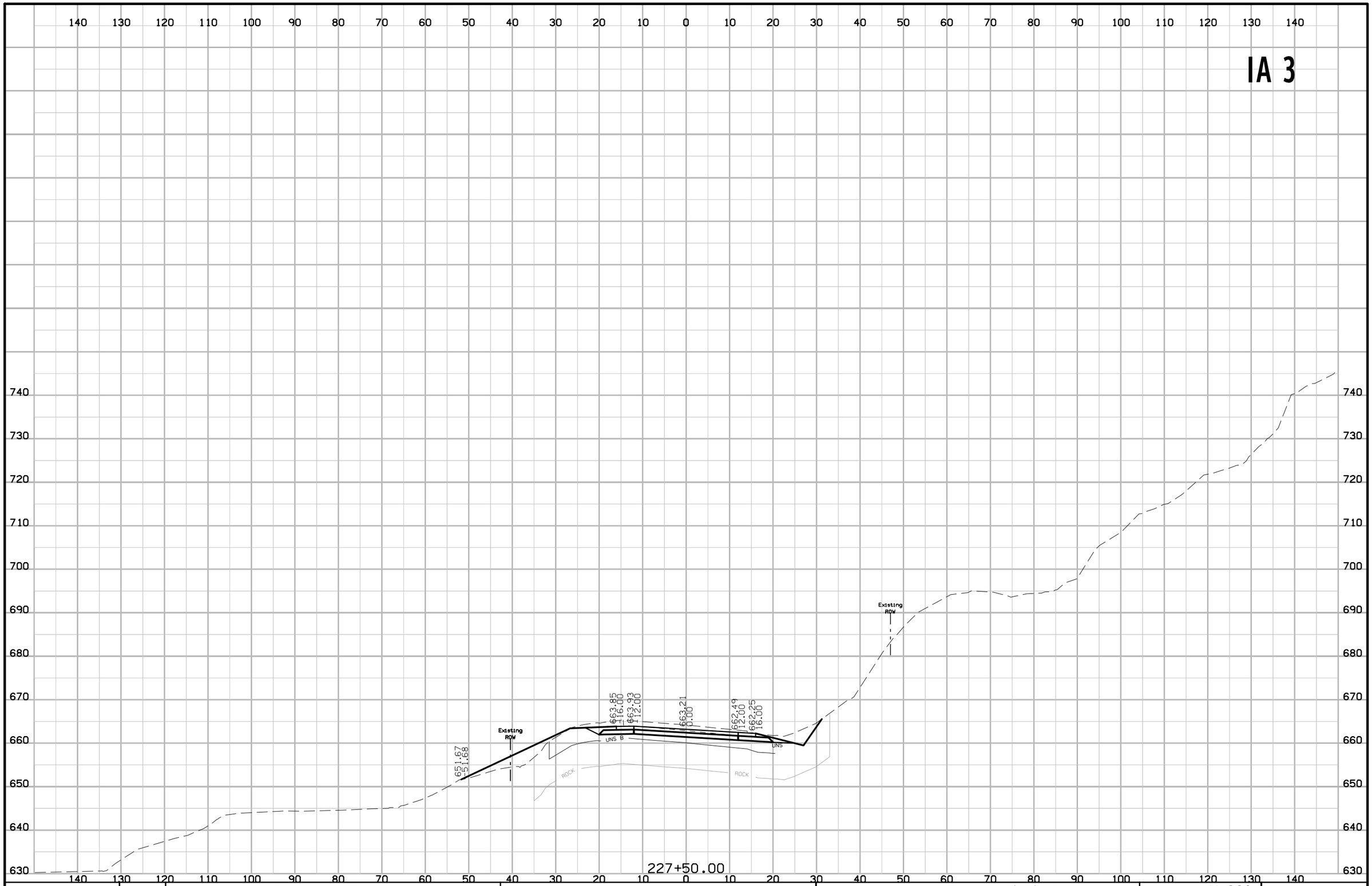
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.222

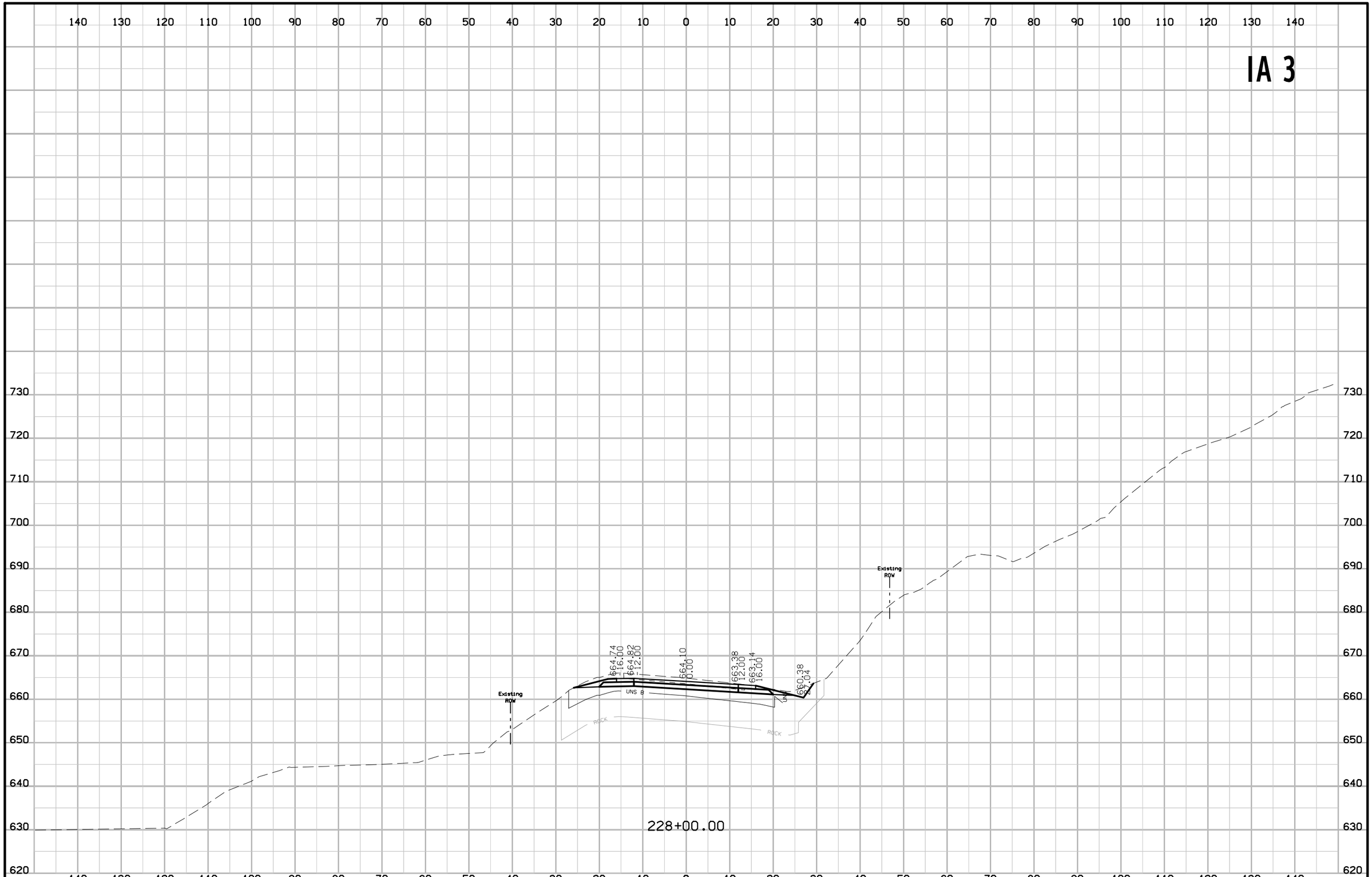
10:44:20 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.223

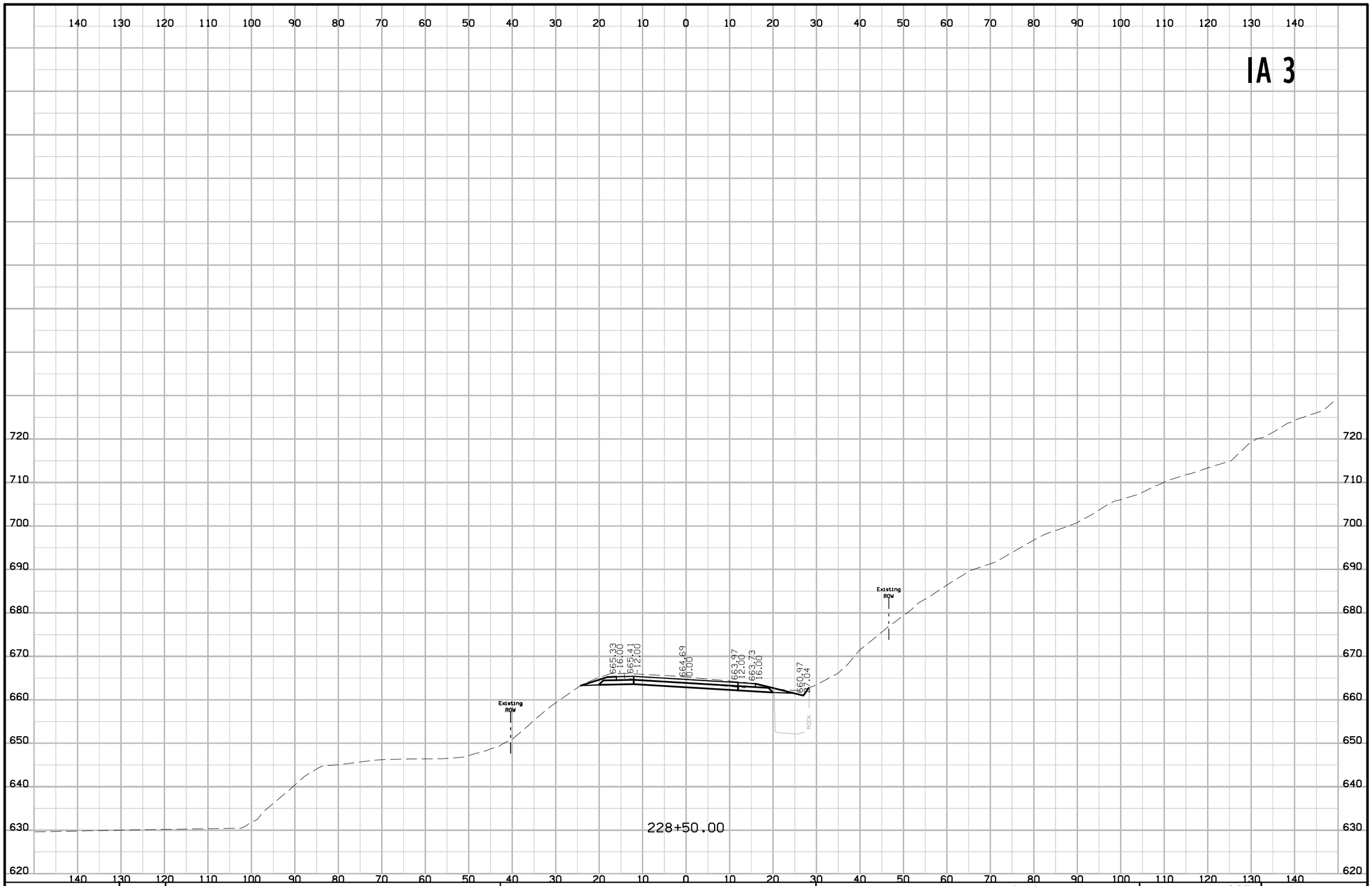
10:44:19 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.224

10:44:18 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

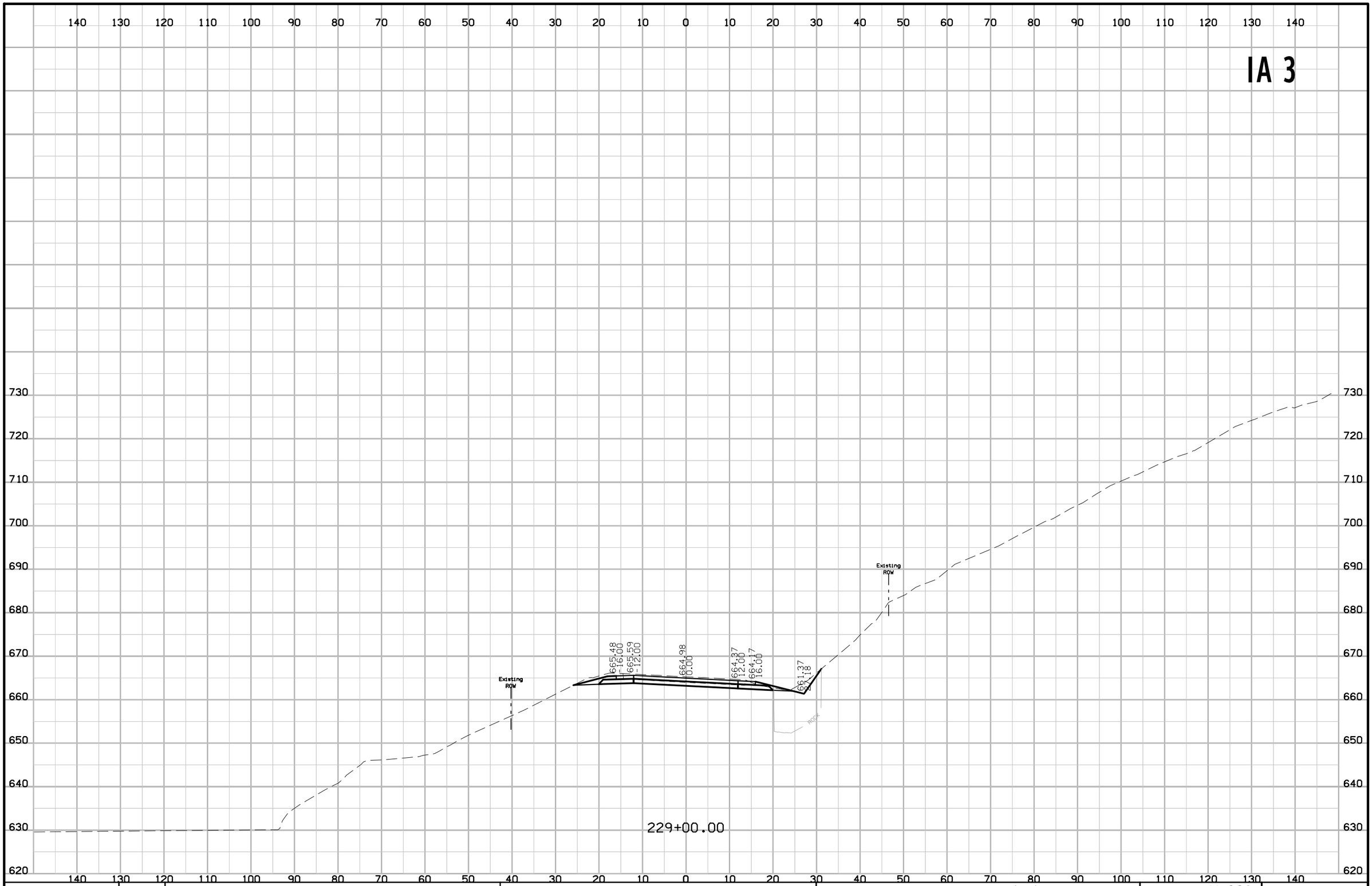
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.225

10:44:17 AM 1/6/2023 tschoen pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

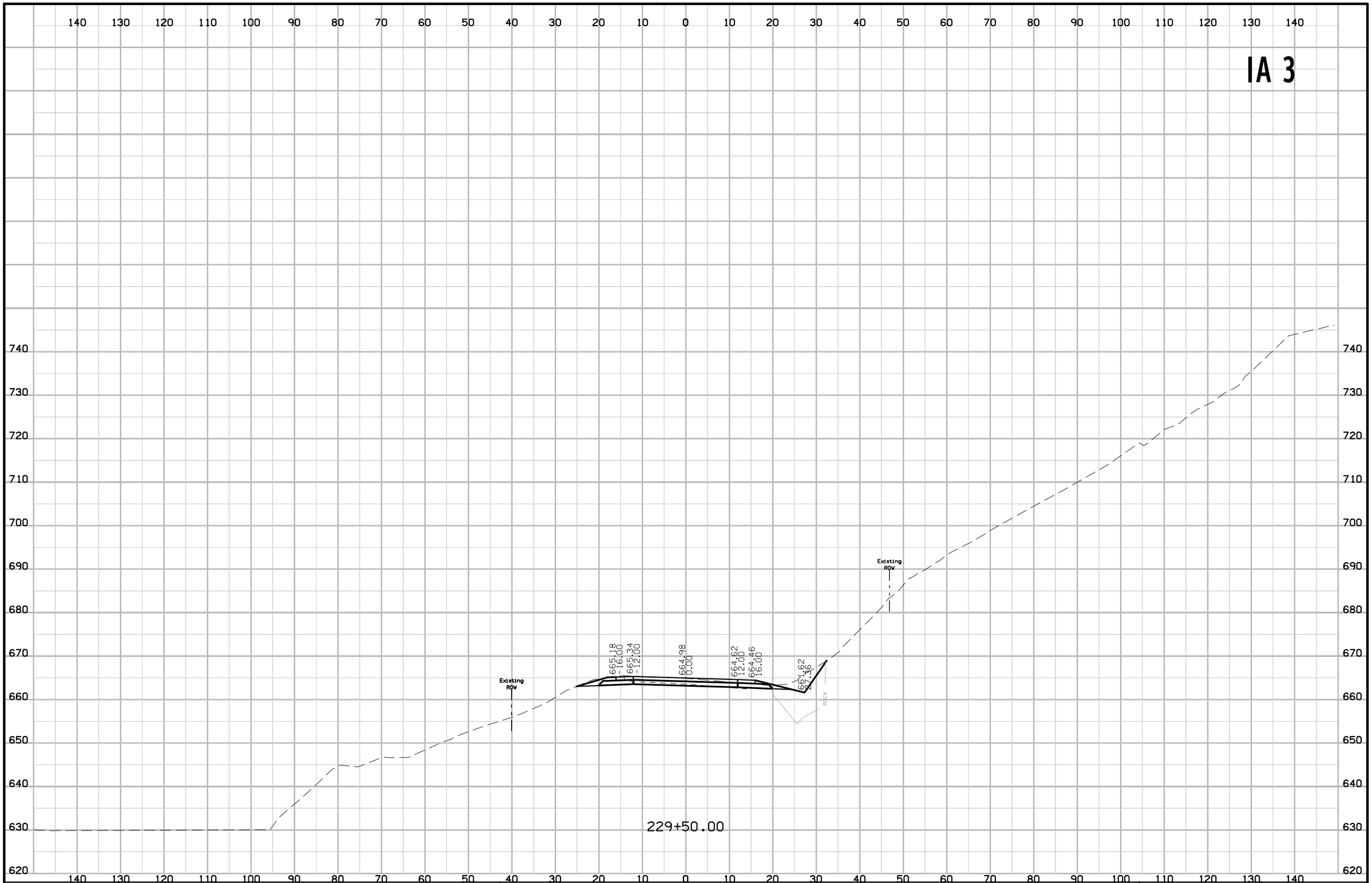
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.226

10:44:17 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

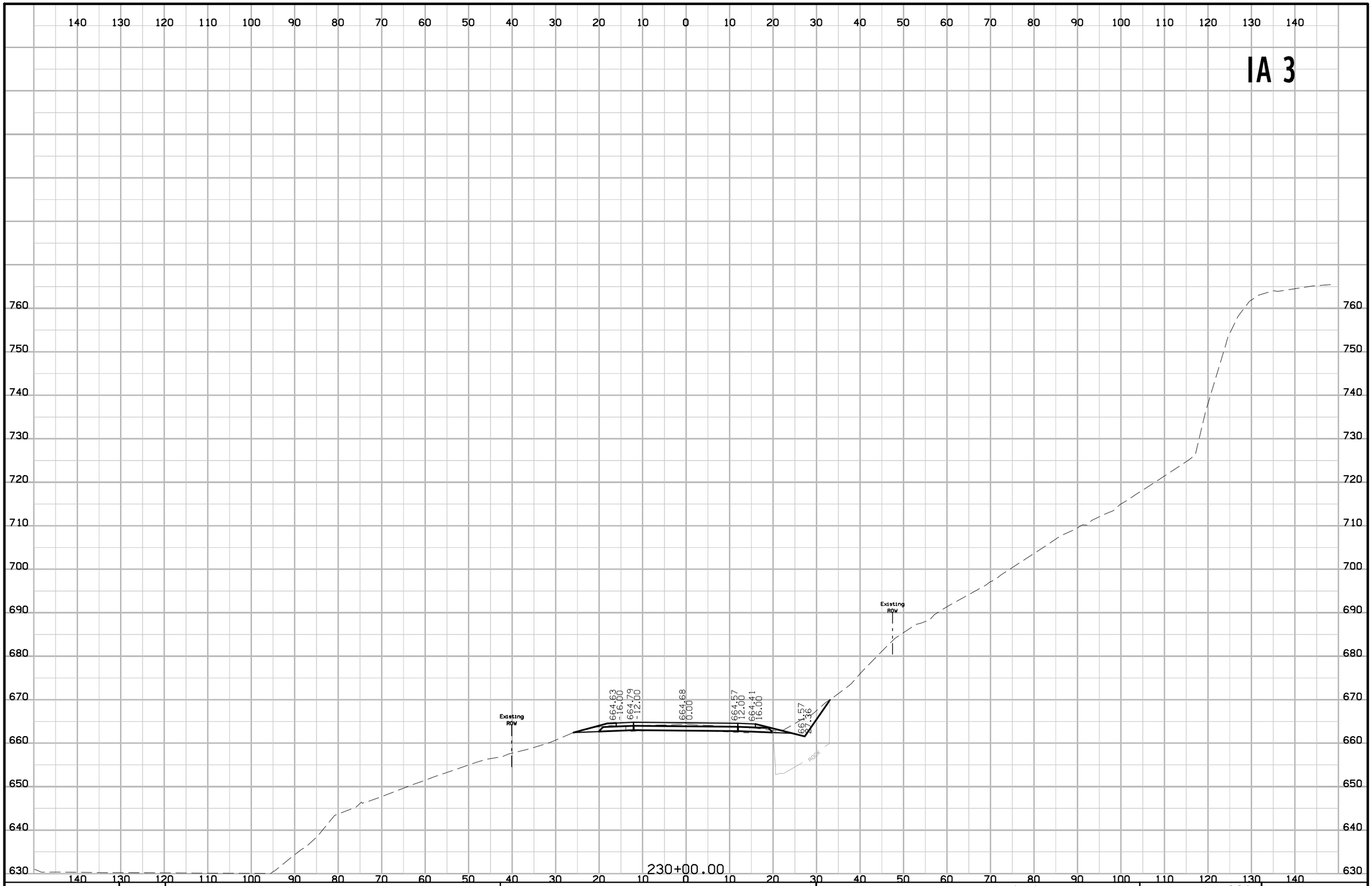
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.227

10:44:16 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

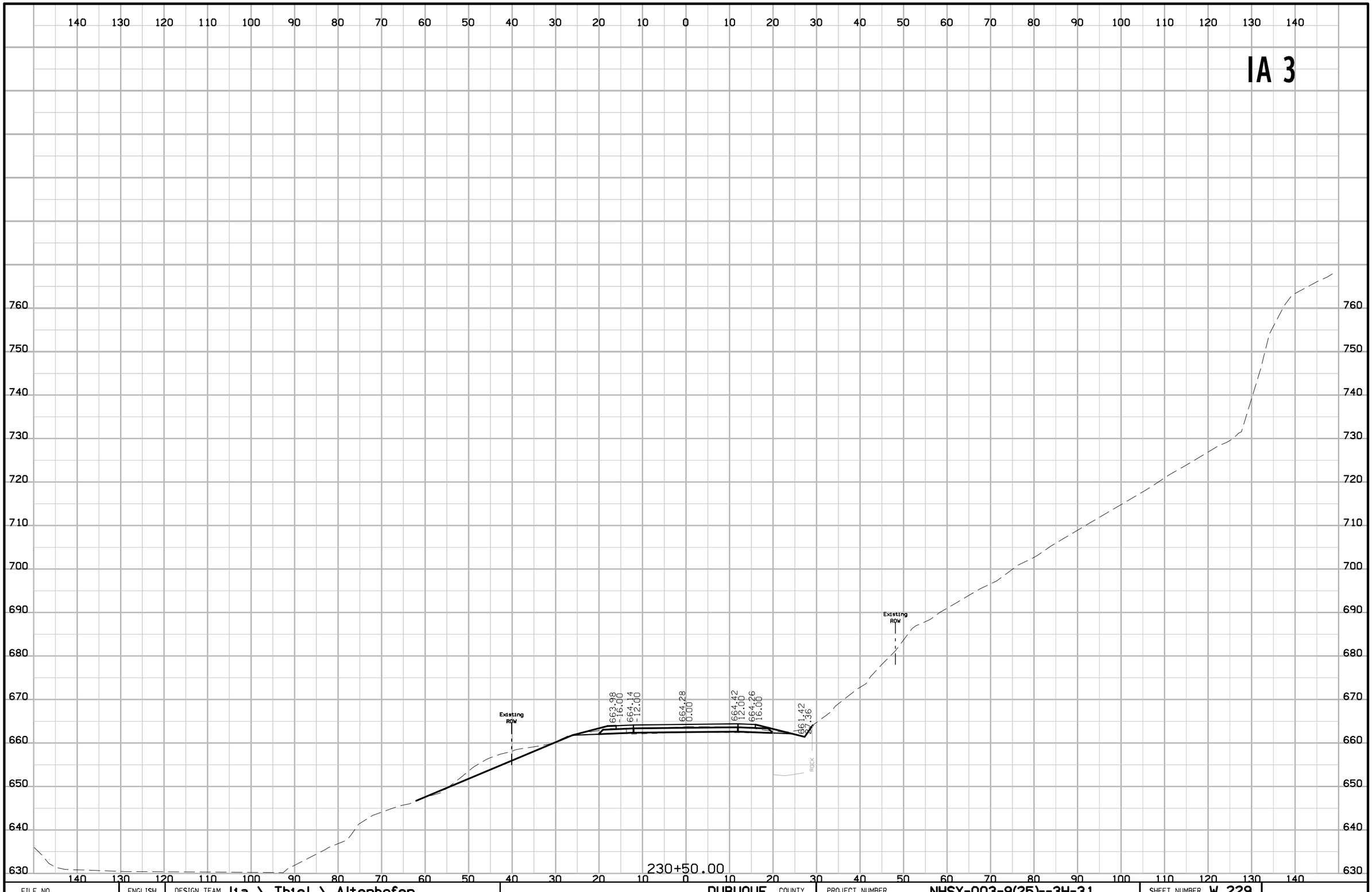
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.228

10:44:15 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

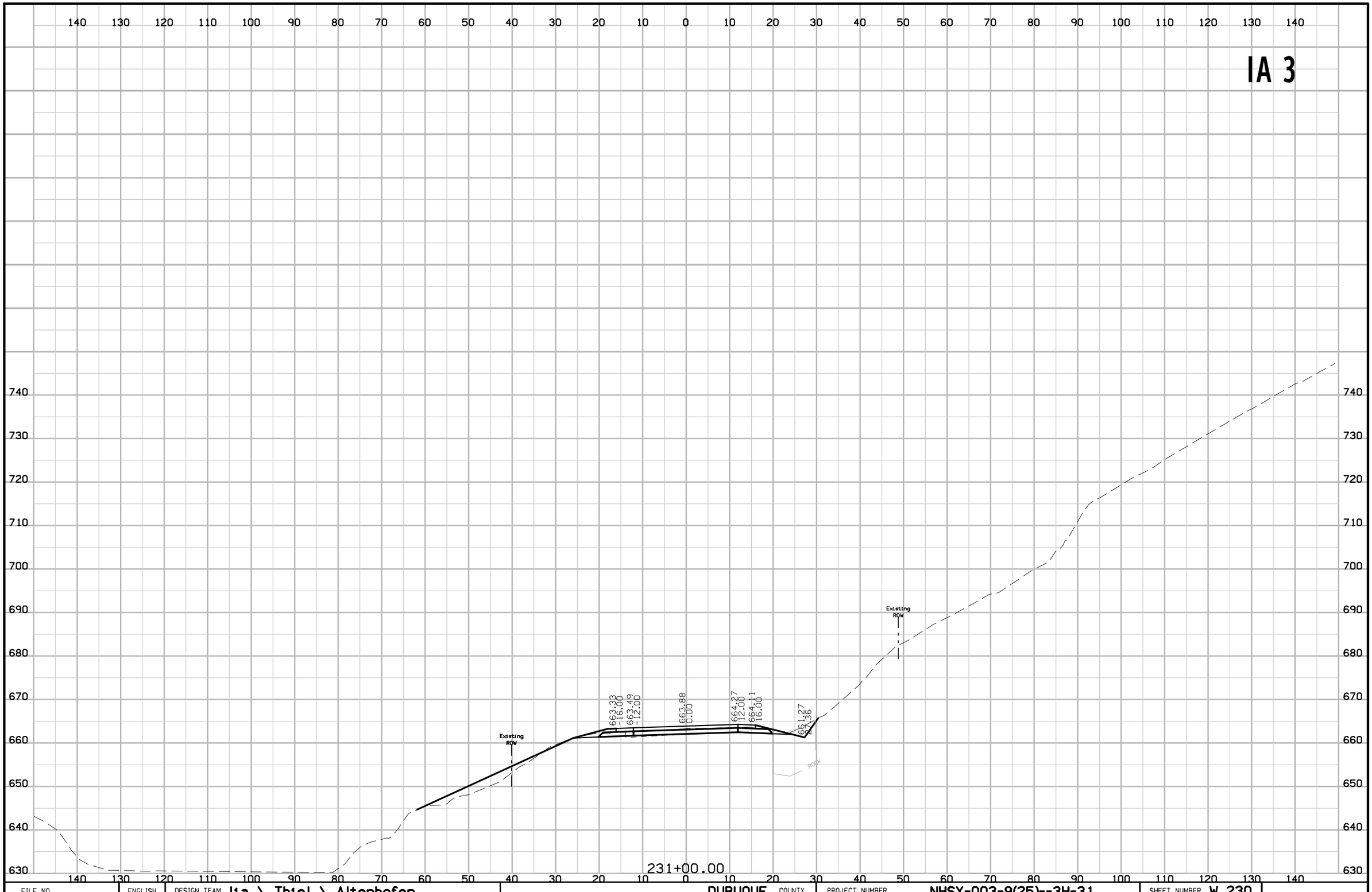
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.229

9:27:38 AM 8/8/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

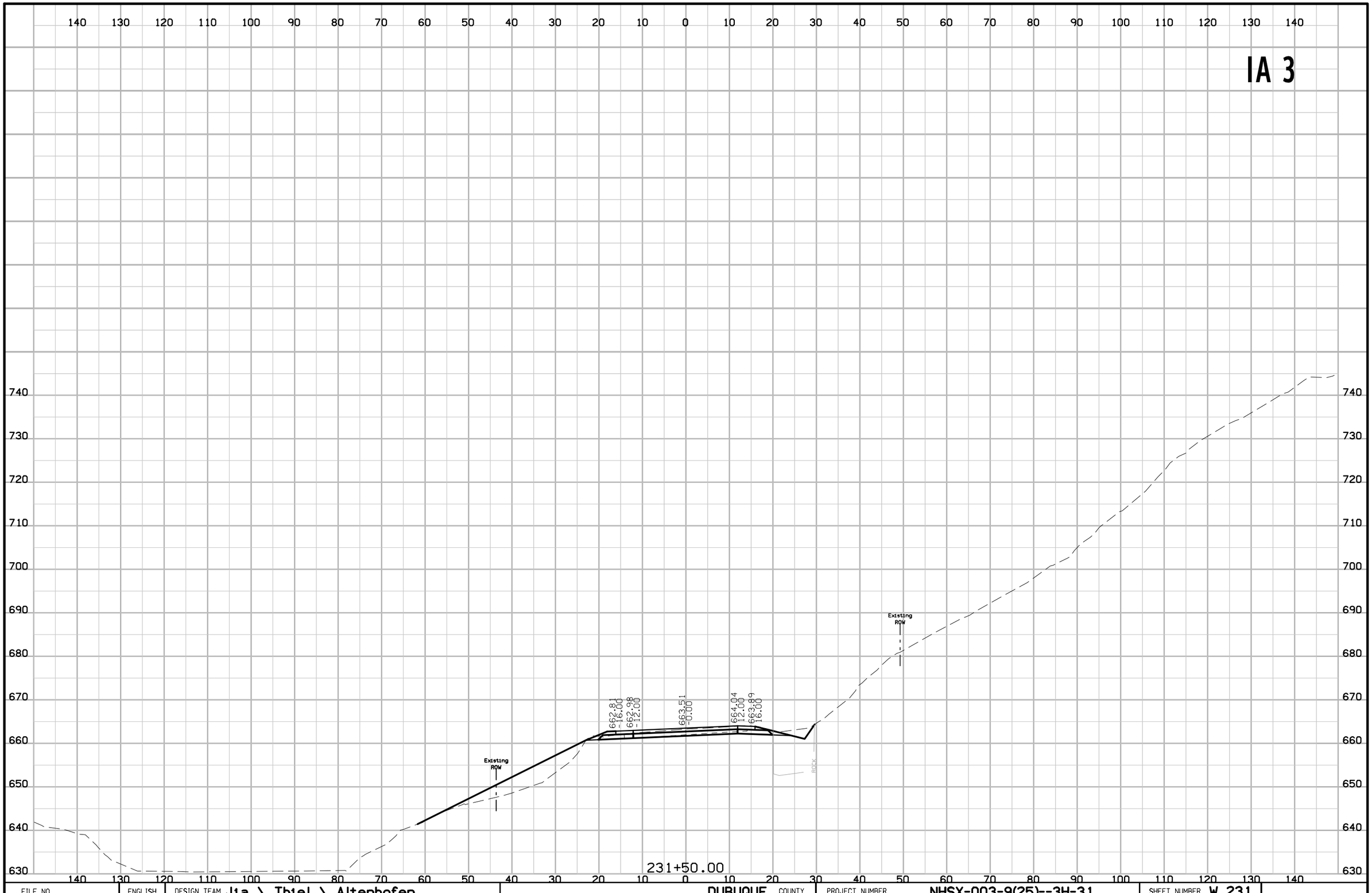
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.230

9:27:39 AM 8/8/2023 raltenh pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

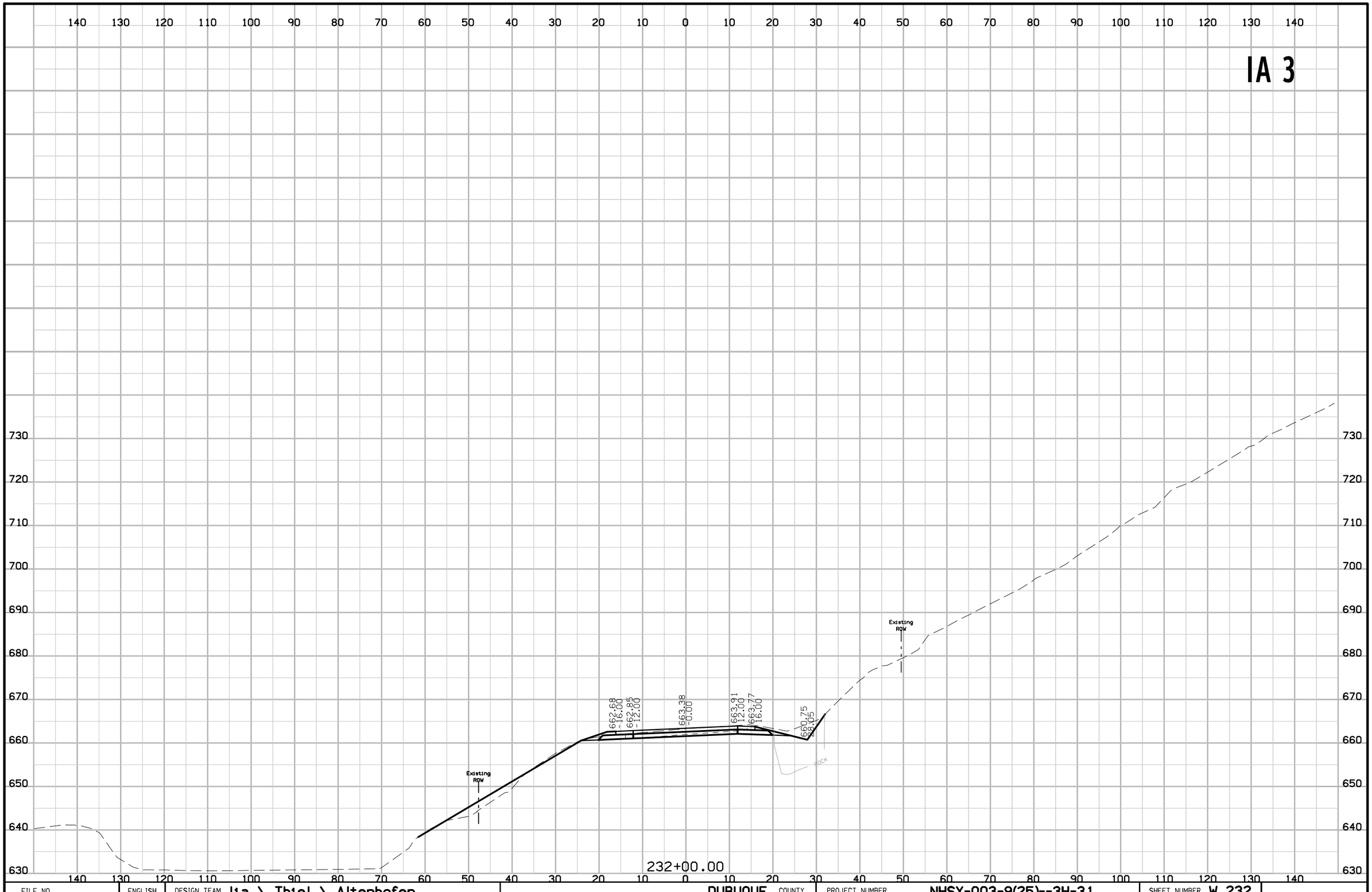
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.231

9:27:40 AM 8/8/2023 raltenh pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

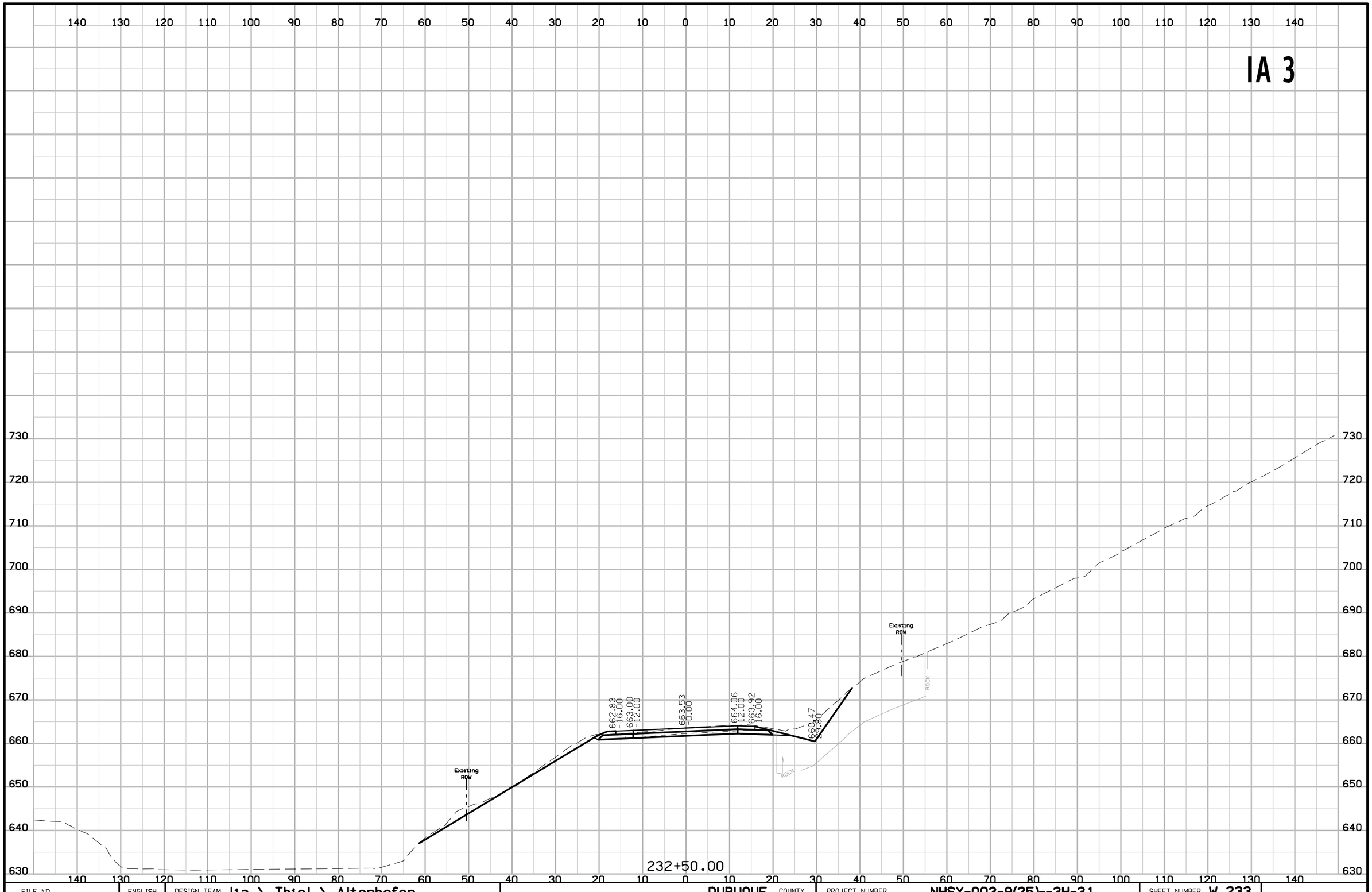
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.232

9:27:41 AM 8/8/2023 raltenh pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

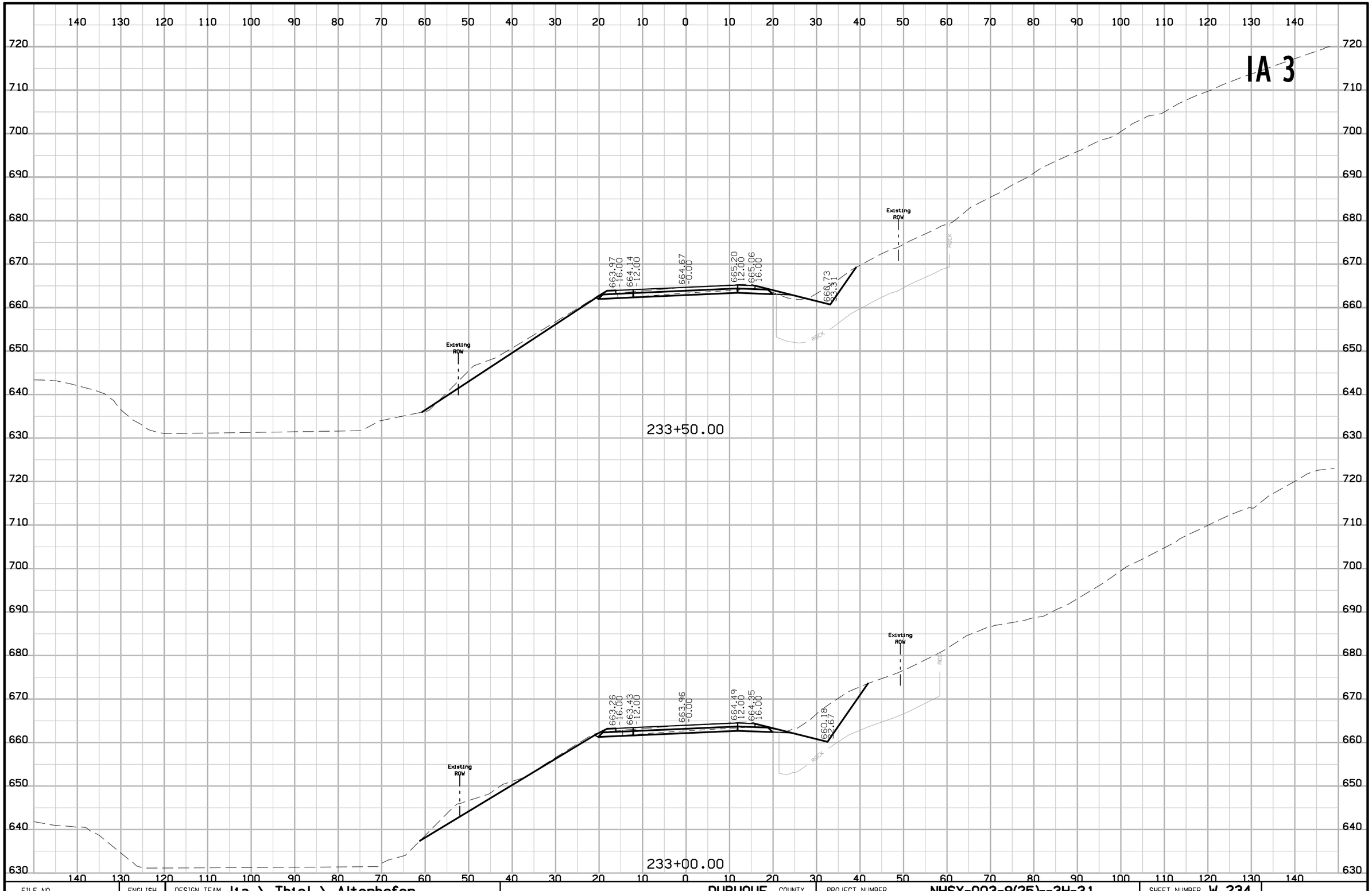
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.233

9:27:42 AM 8/8/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

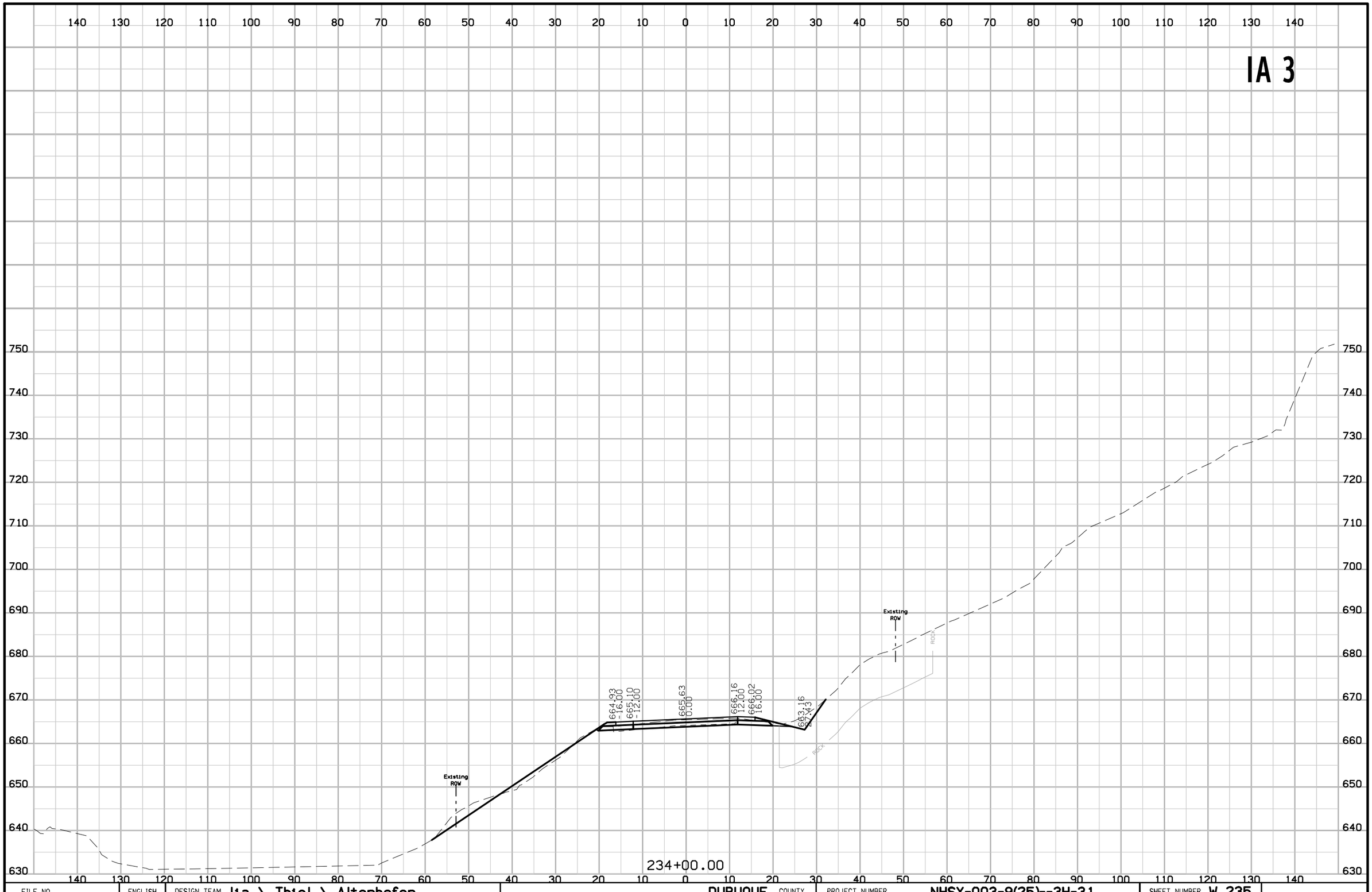
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.234

9:27:43 AM 8/8/2023 raltenh pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

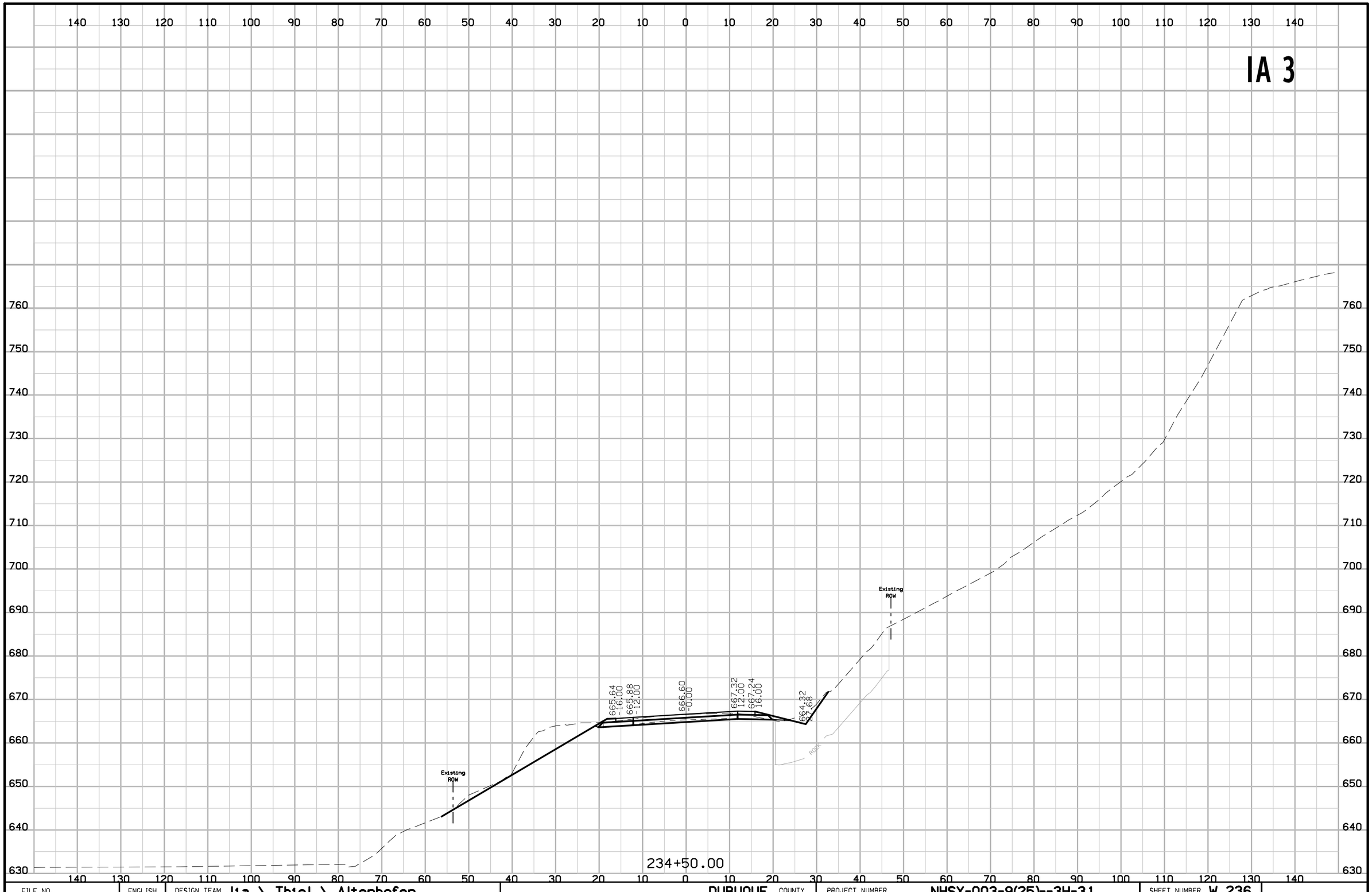
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.235

9:27:44 AM 8/8/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

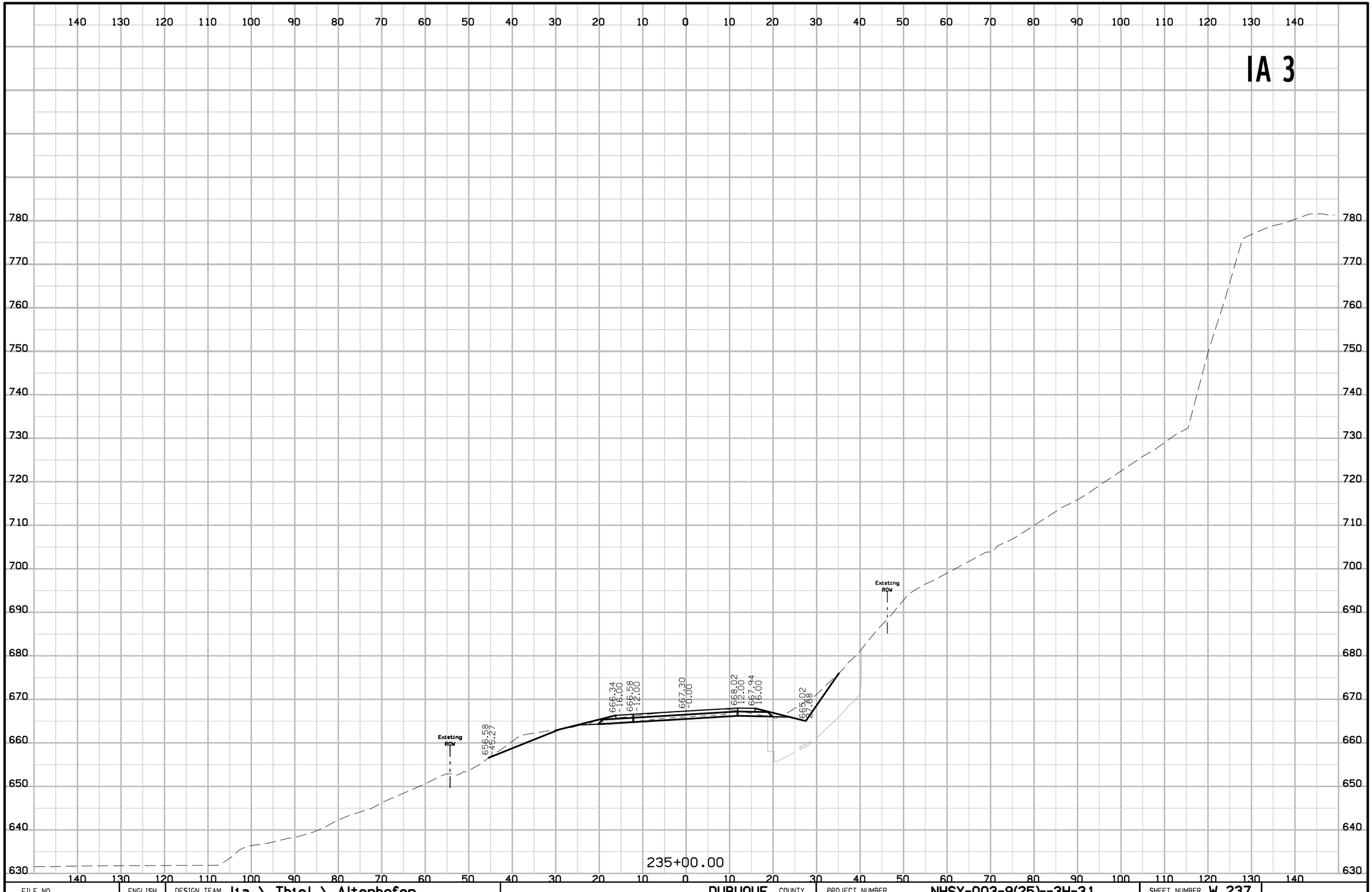
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.236

9:27:46 AM 8/8/2023 raltenh pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

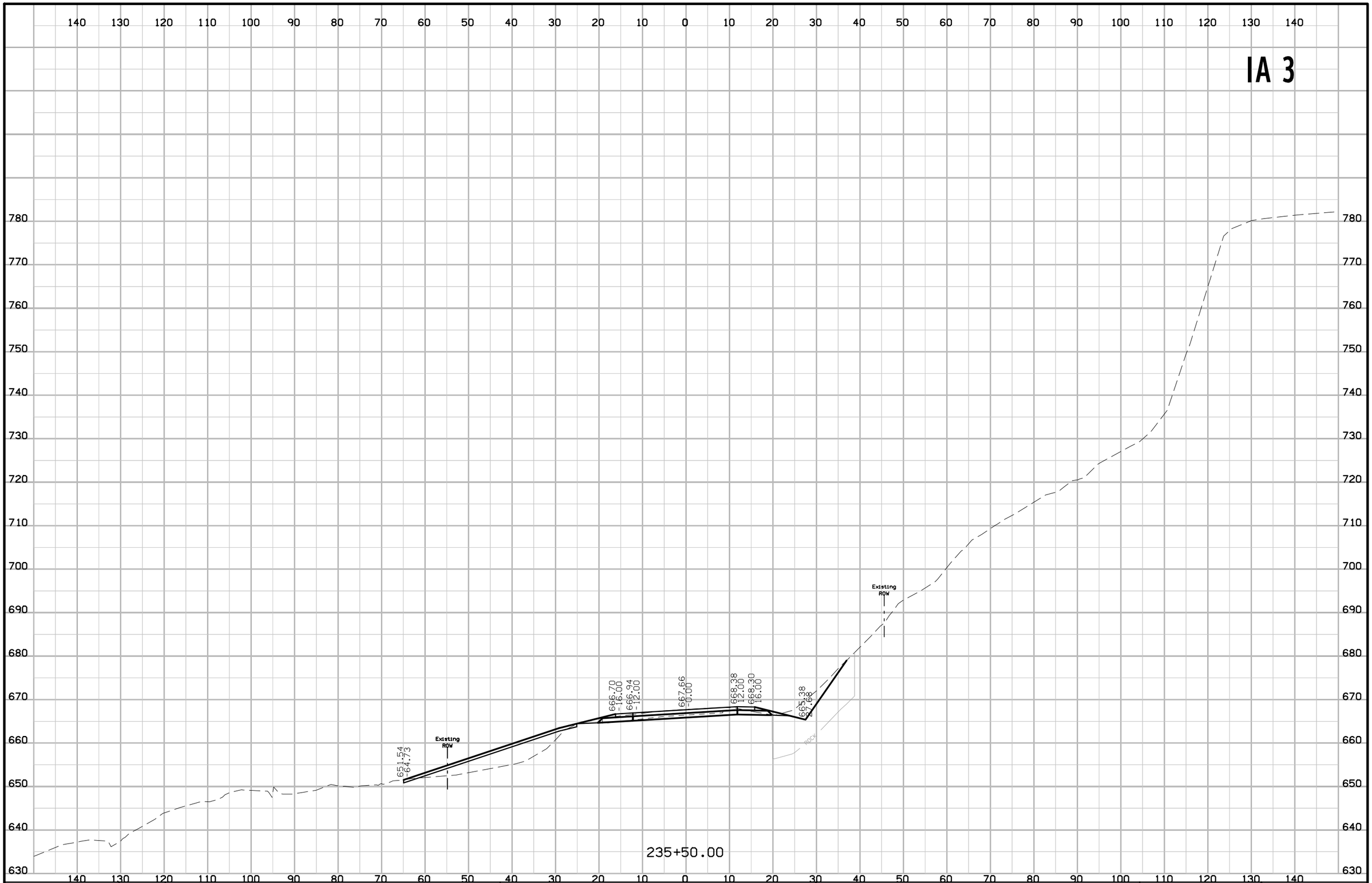
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.237

9:27:47 AM 8/8/2023 raltenh pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

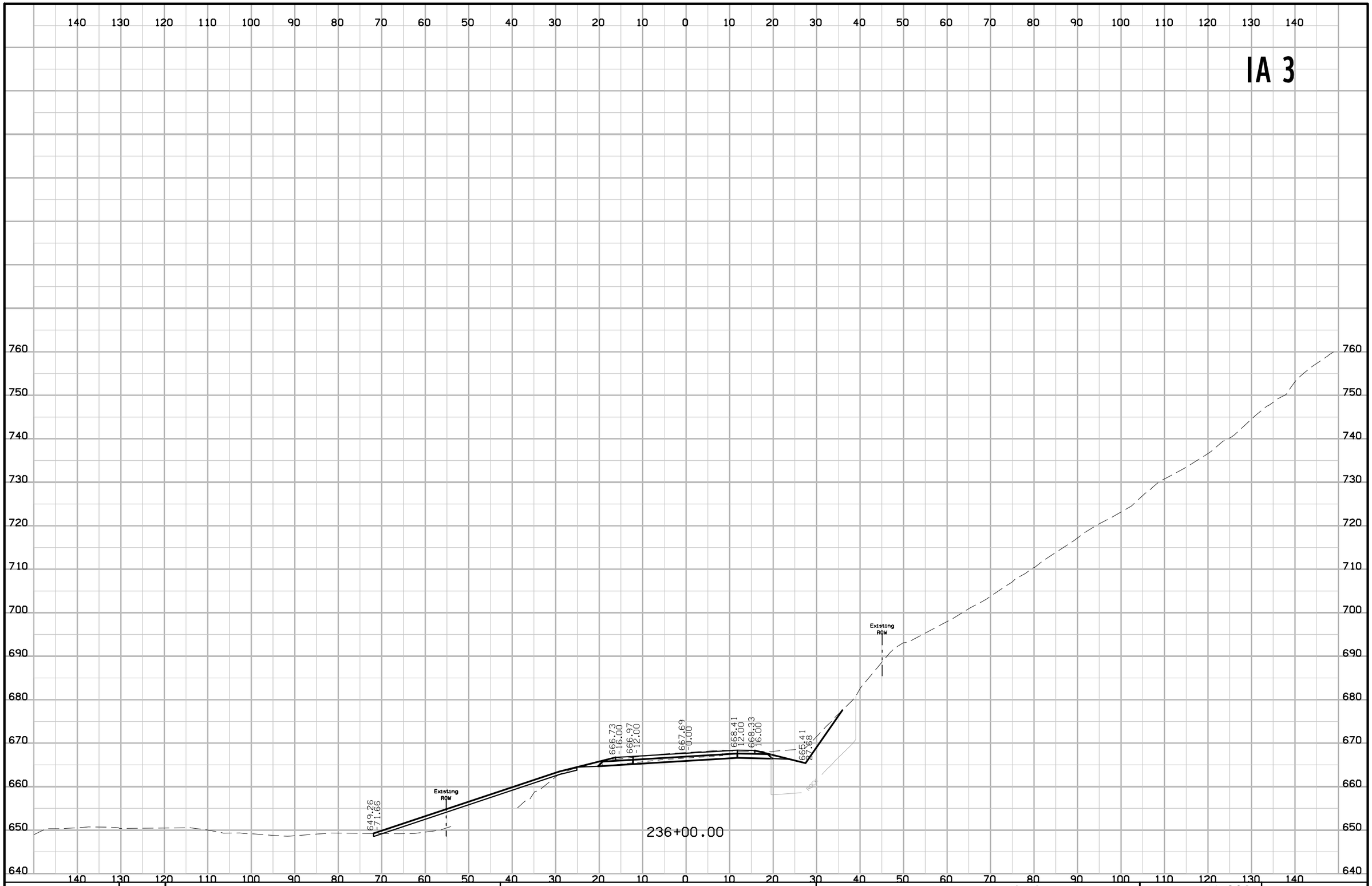
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.238

10:44:08 AM 1/6/2023 tschoen pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

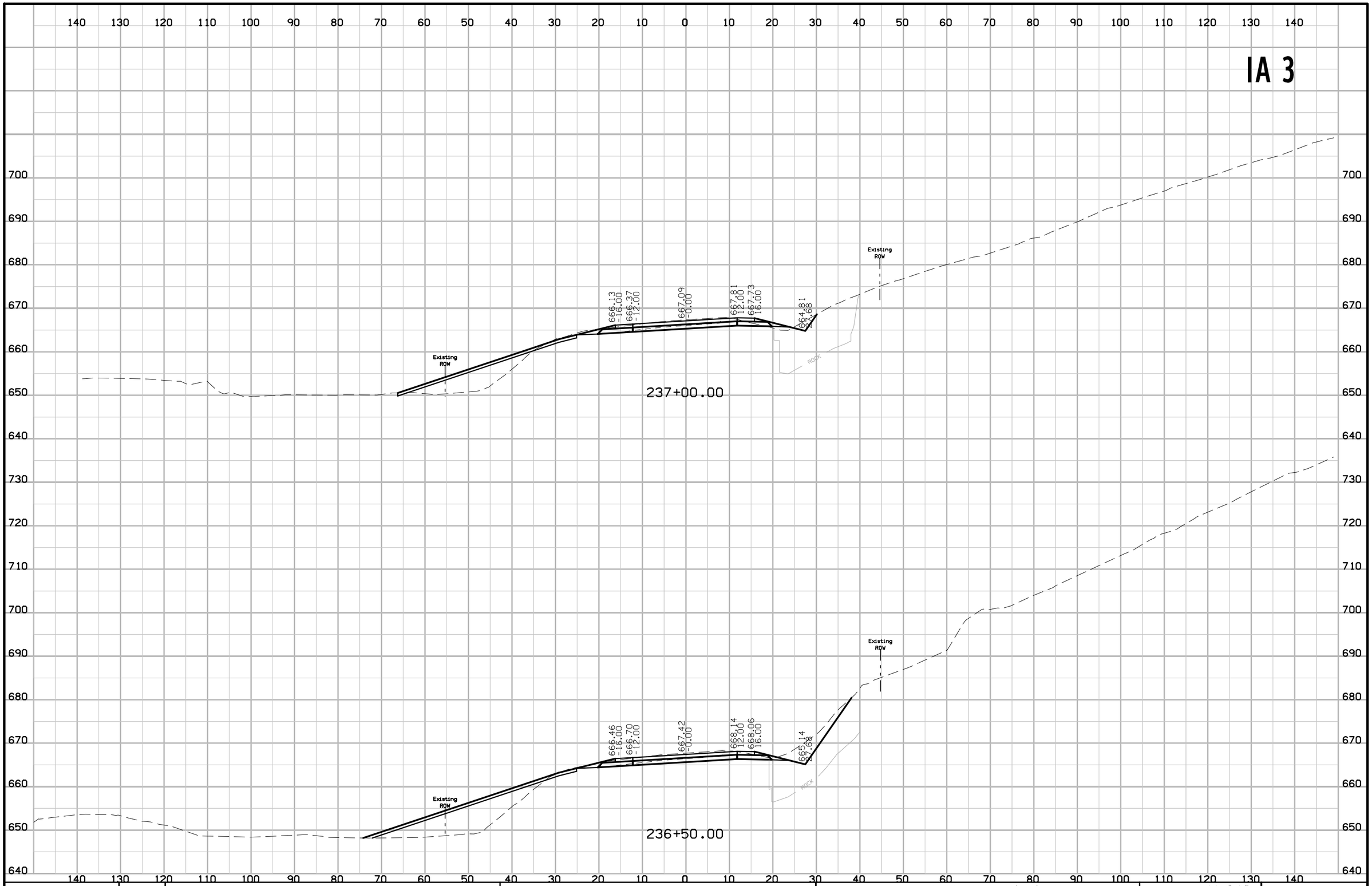
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.239

10:44:07 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

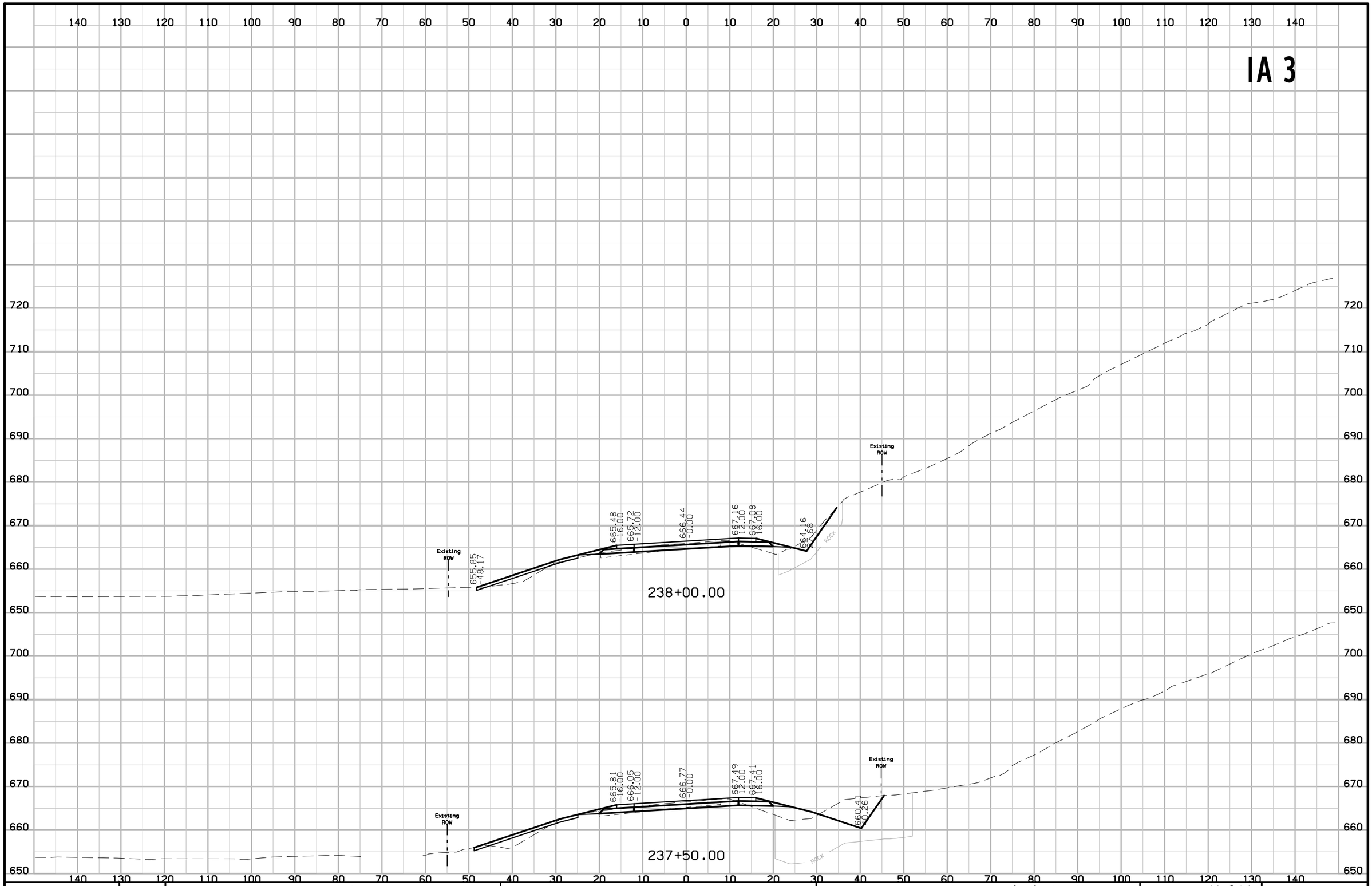
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.240

10:44:06 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

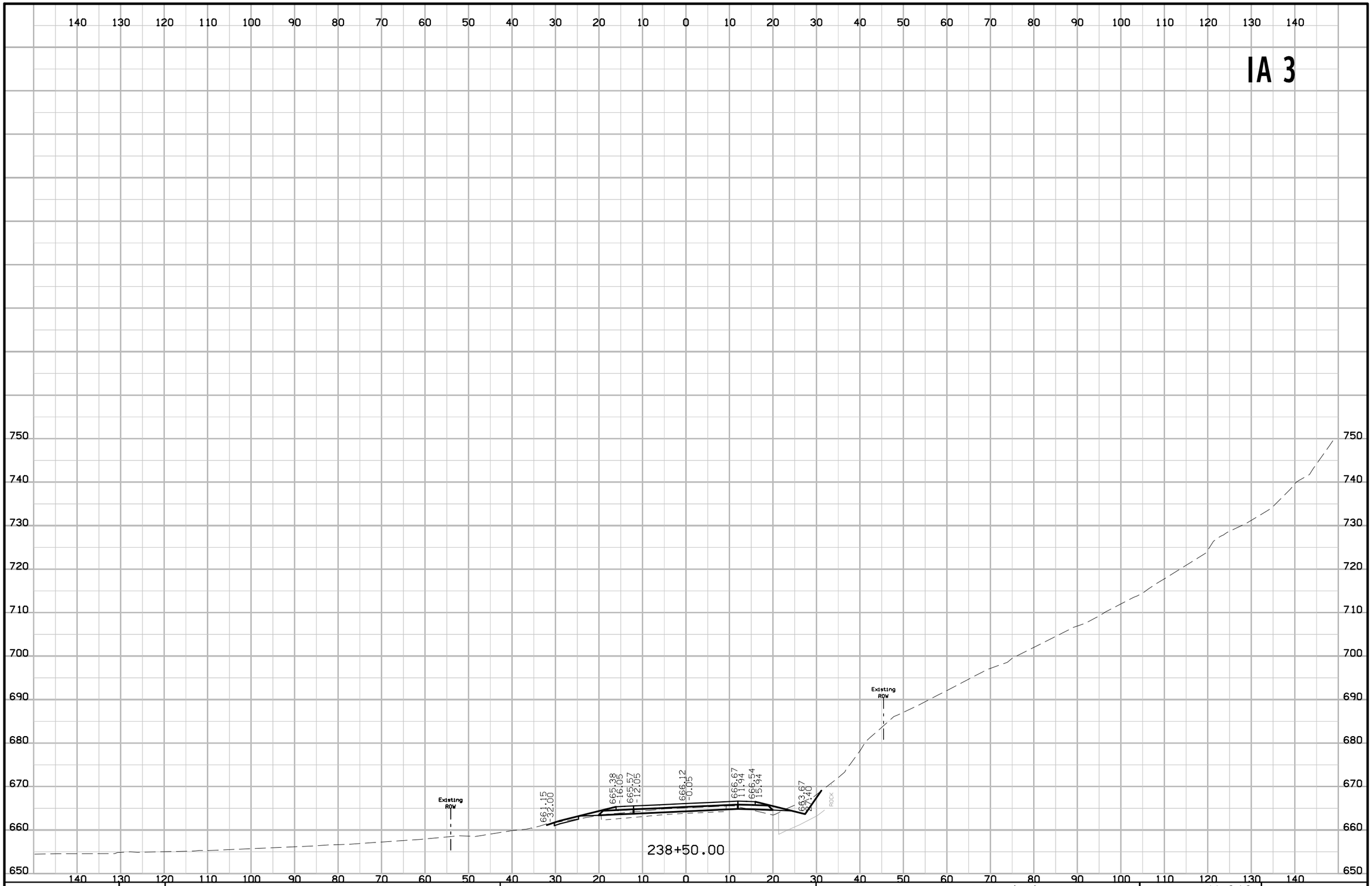
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.241

10:43:42 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

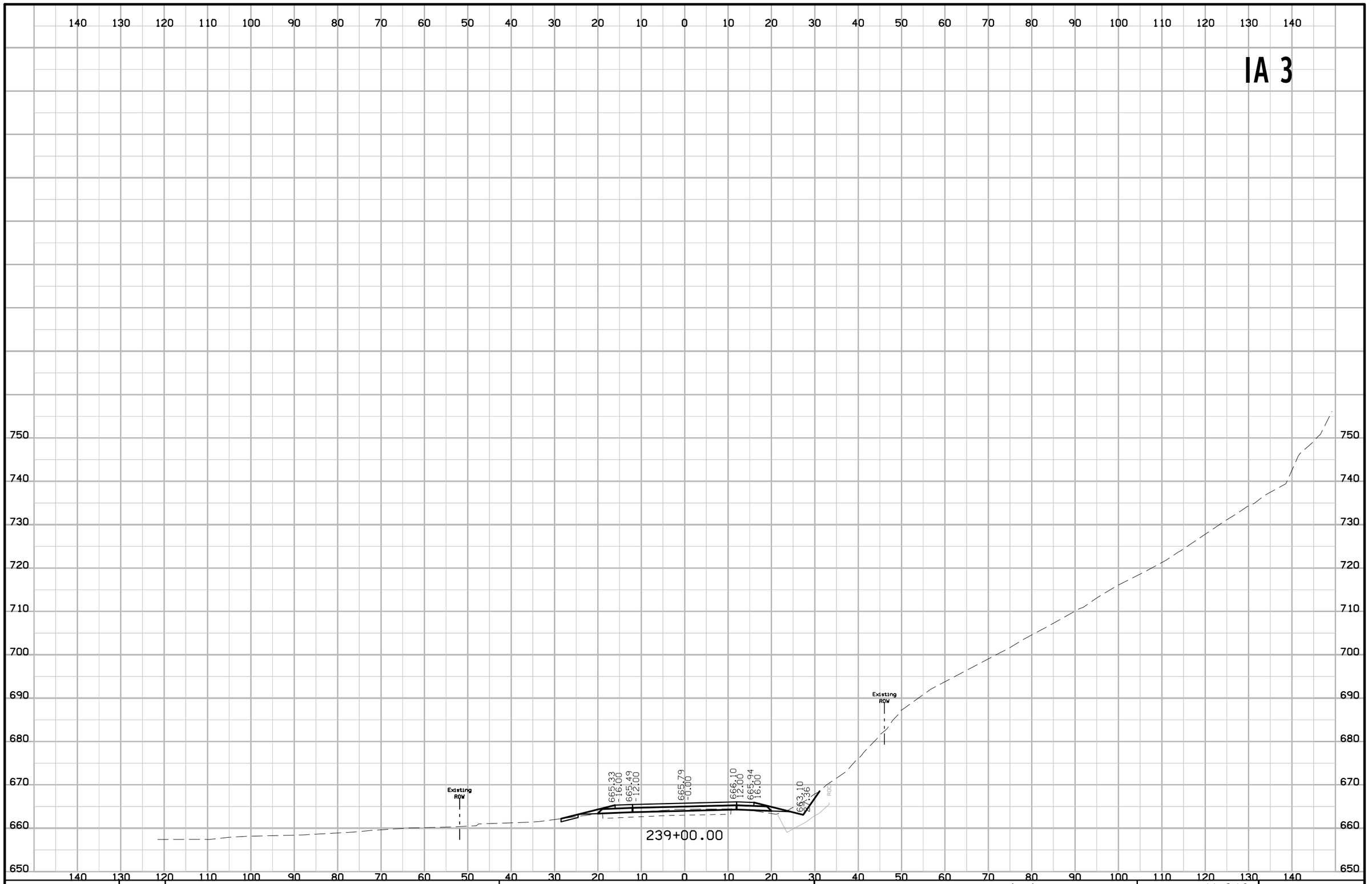
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.242

10:43:43 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

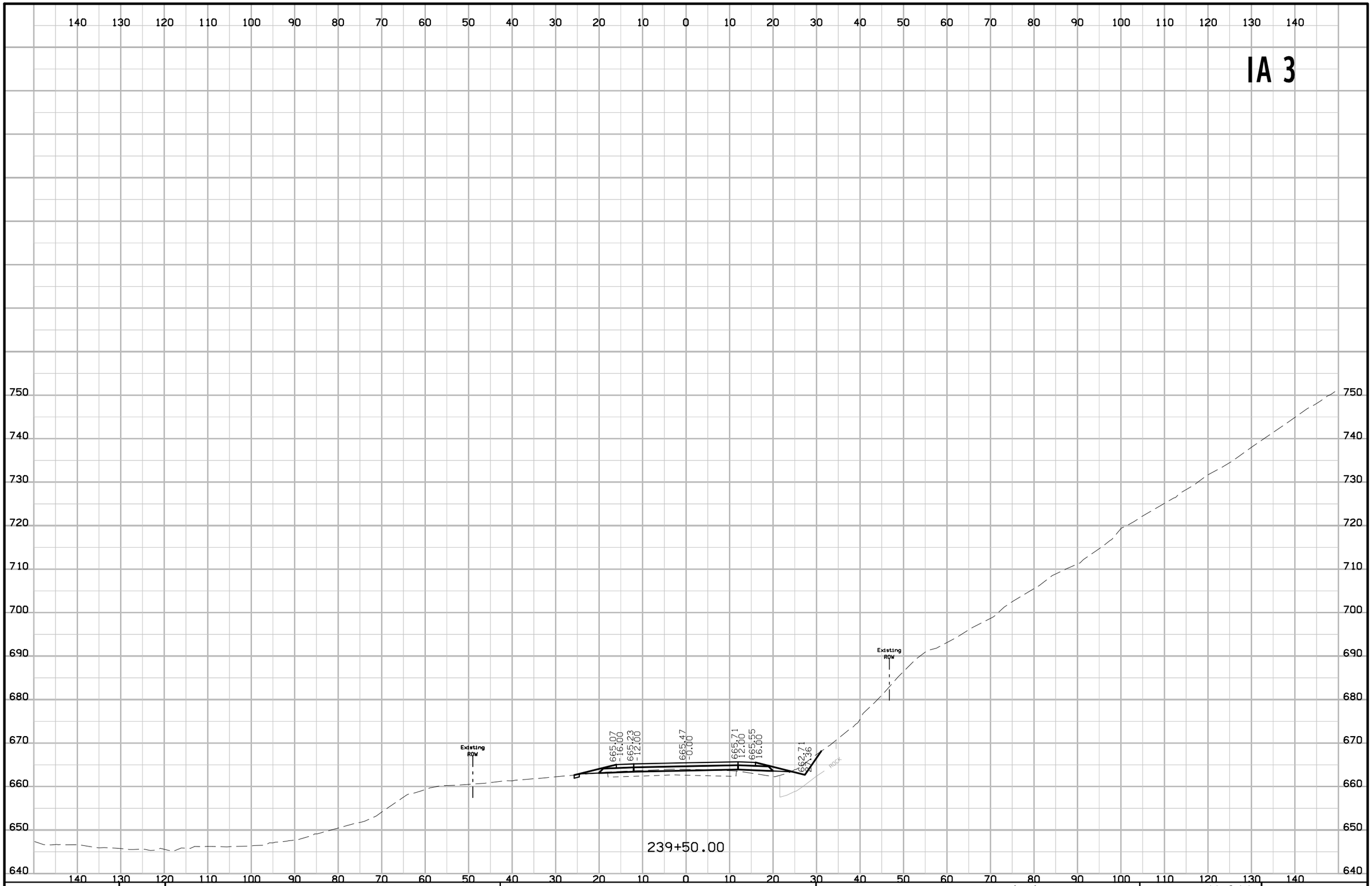
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.243

10:43:44 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.244

10:43:45 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

740 730 720 710 700 690 680 670 660 650 640

664.74
-16.00
664.90
-12.00
665.14
0.00
665.38
12.00
665.22
16.00
662.38
27.36

ROCK

Existing ROW

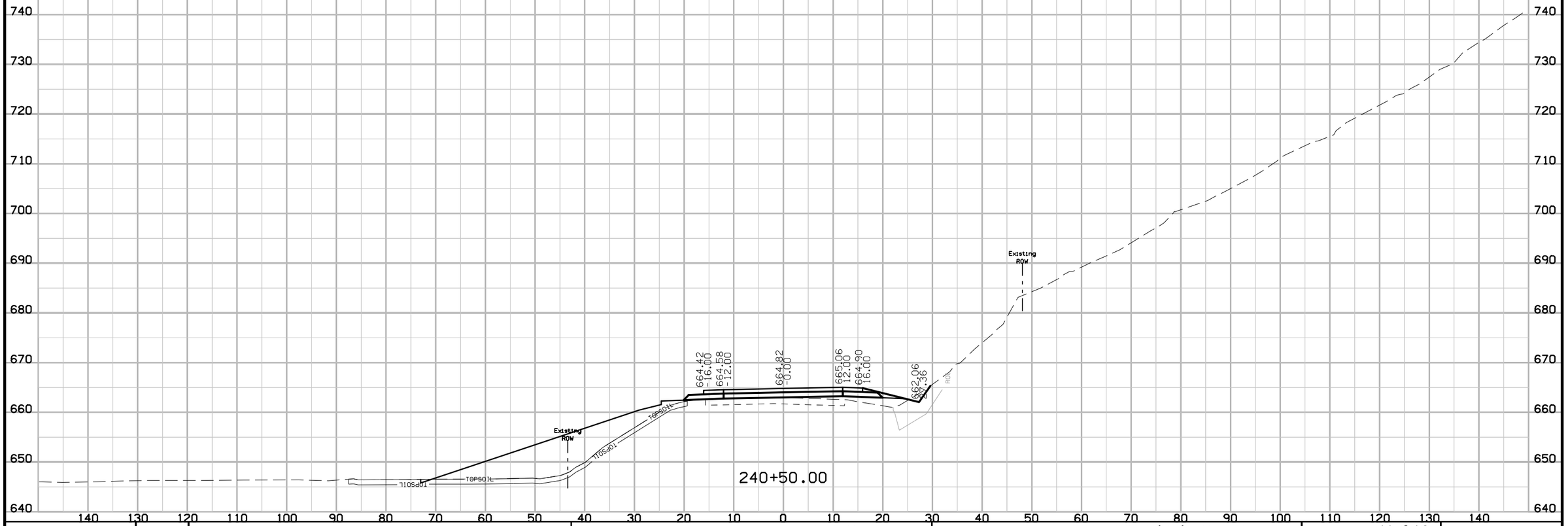
Existing ROW

240+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.245

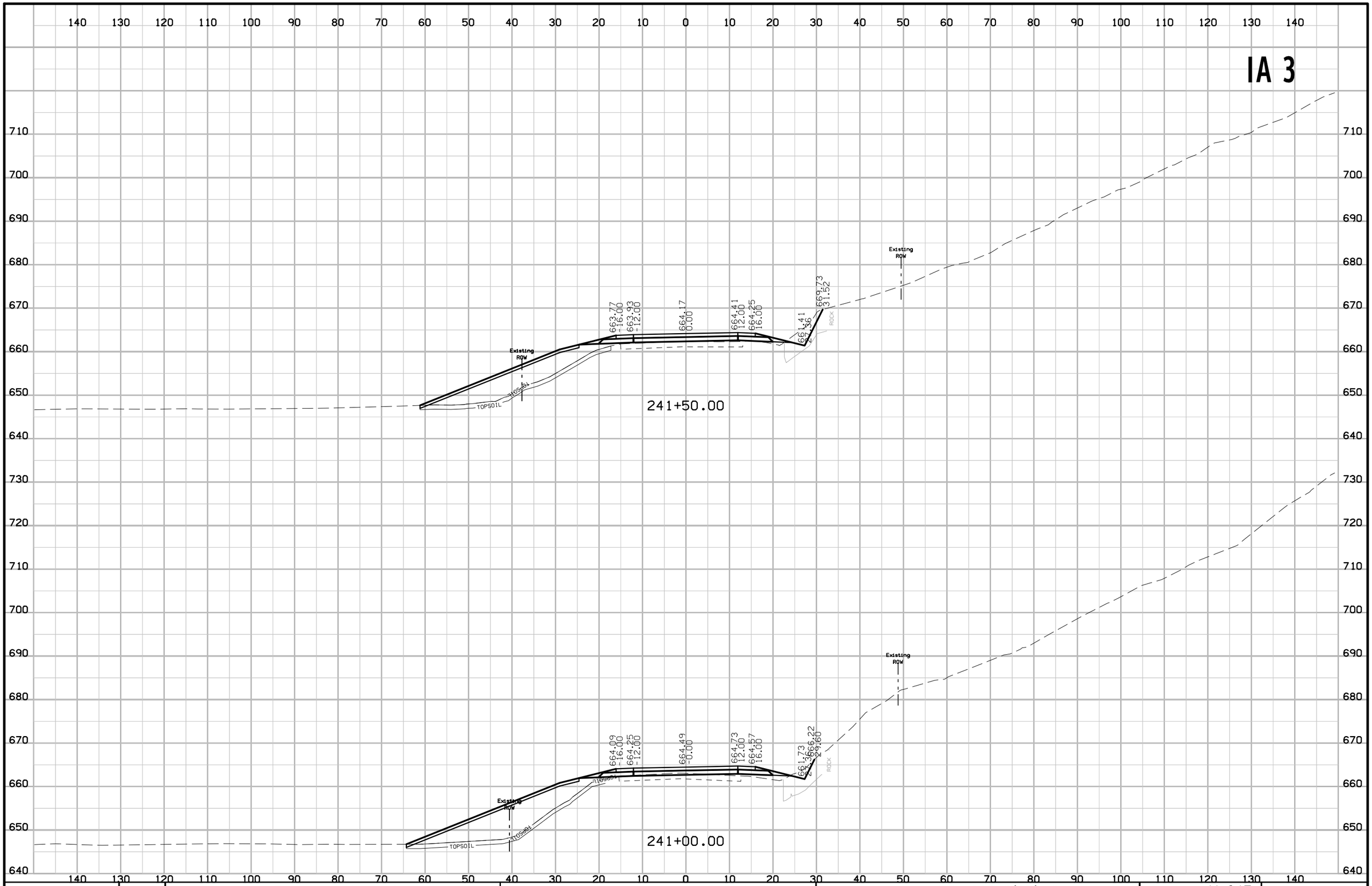
10:43:46 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.246

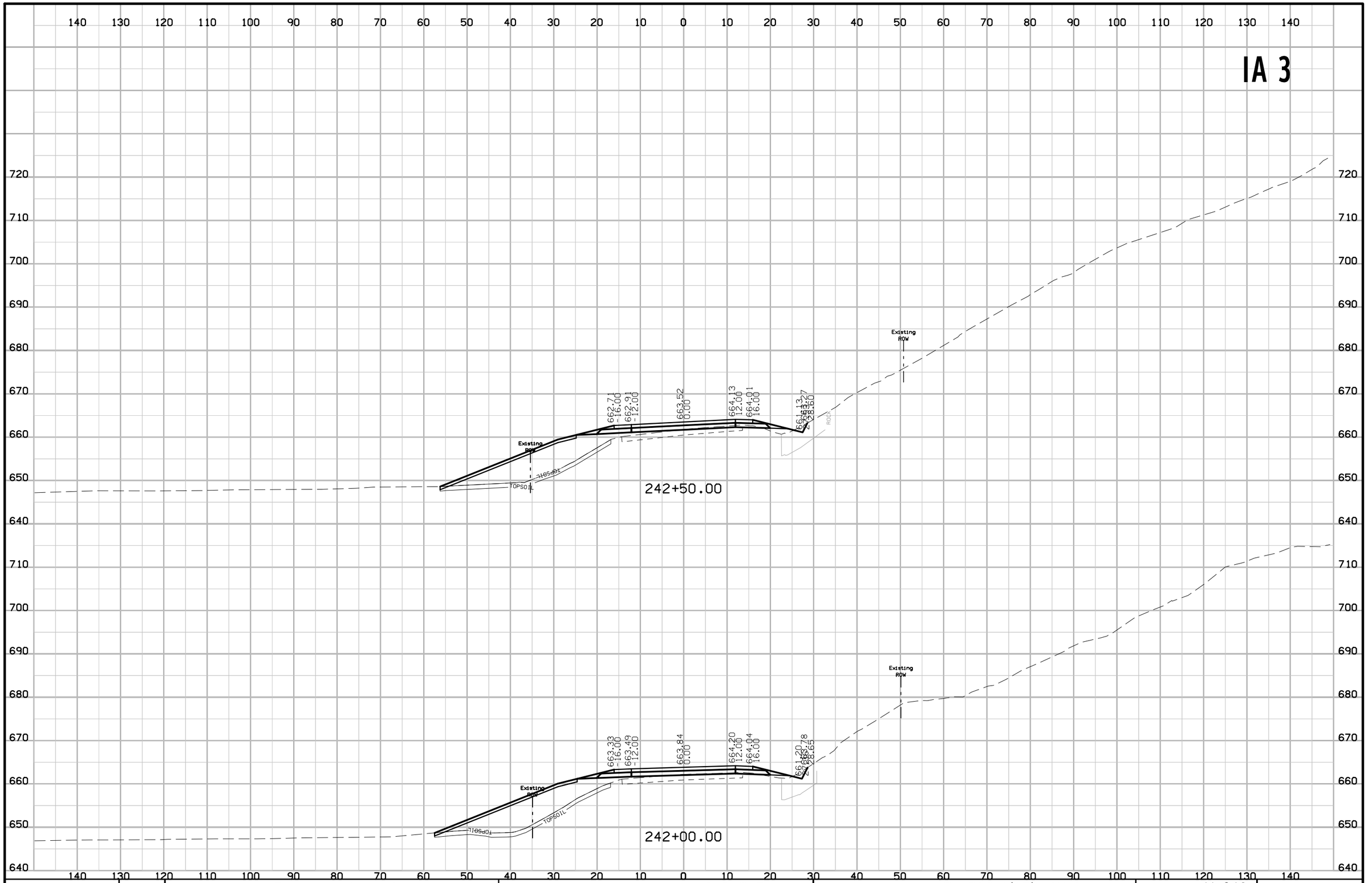
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.247

10:43:47 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

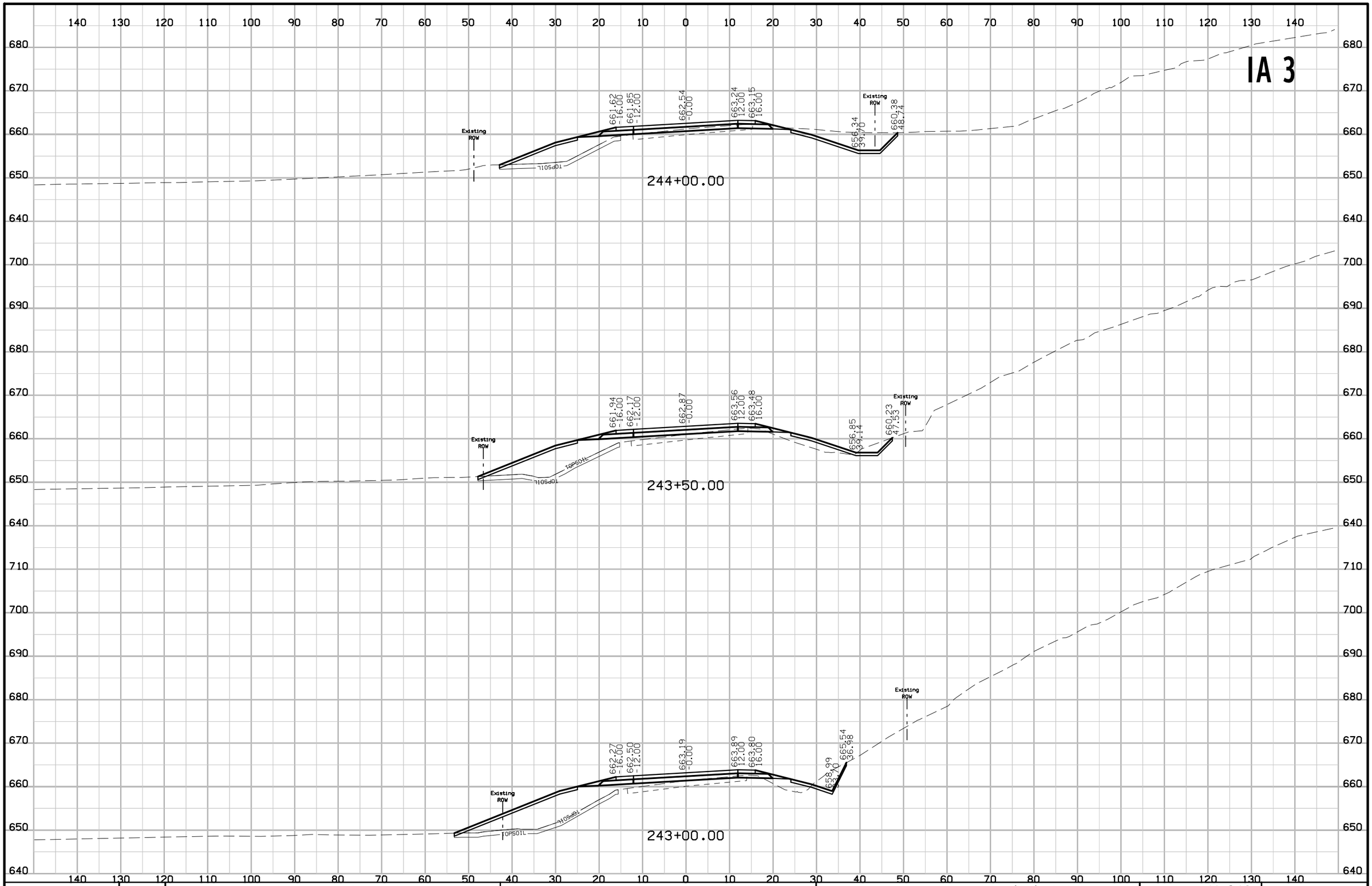
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.248

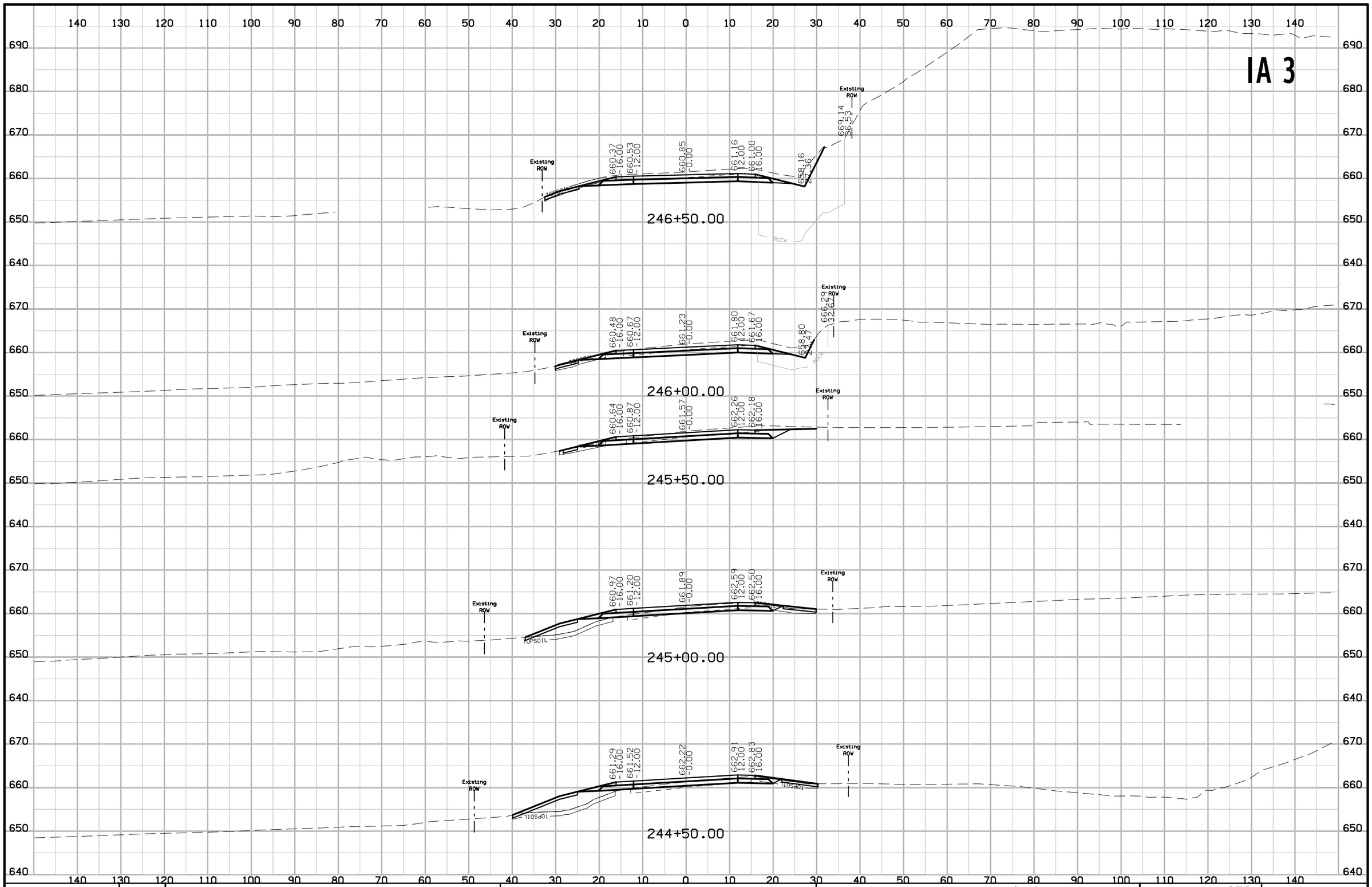
10:43:48 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.249

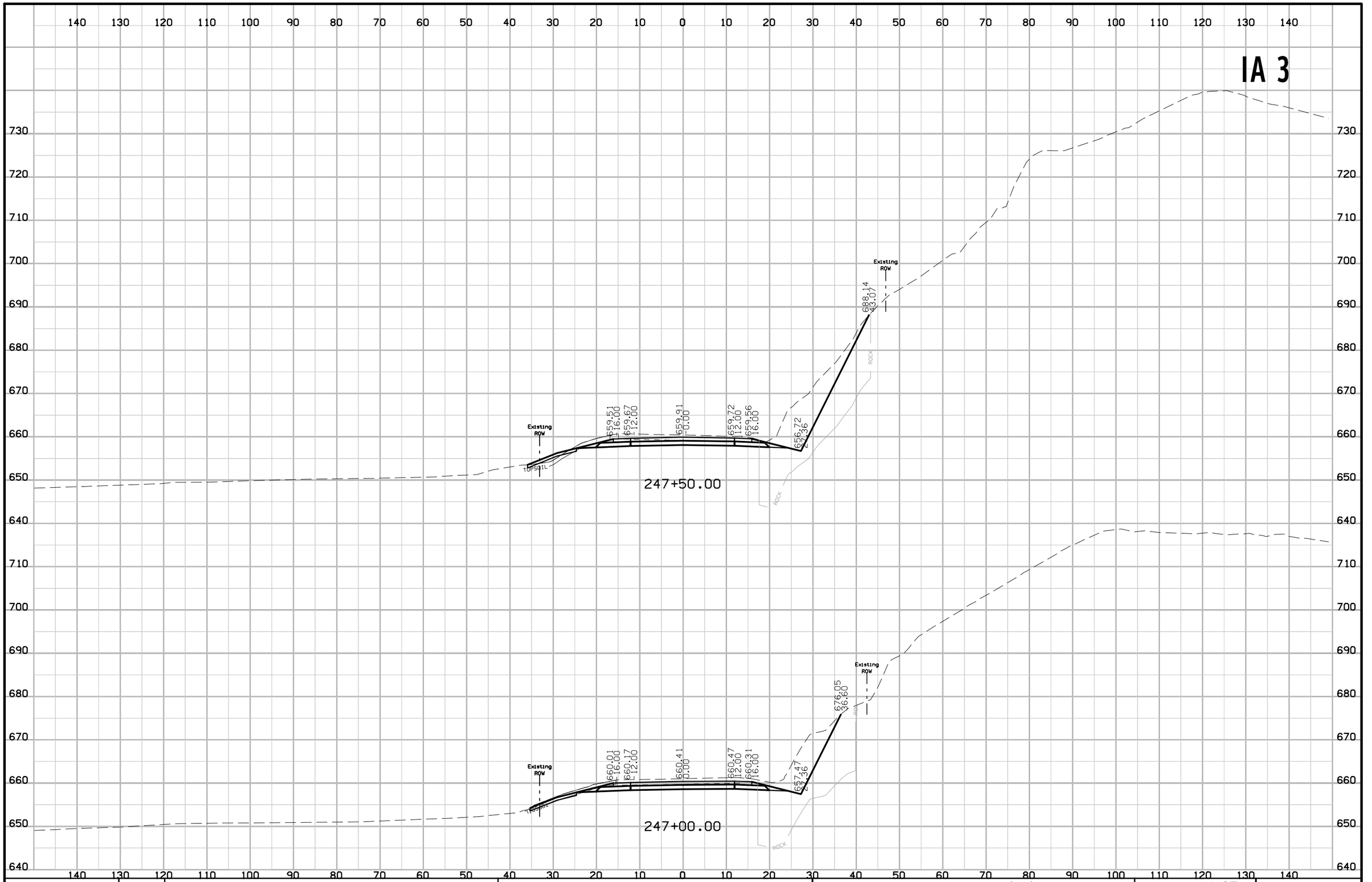
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.250

10:44:22 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

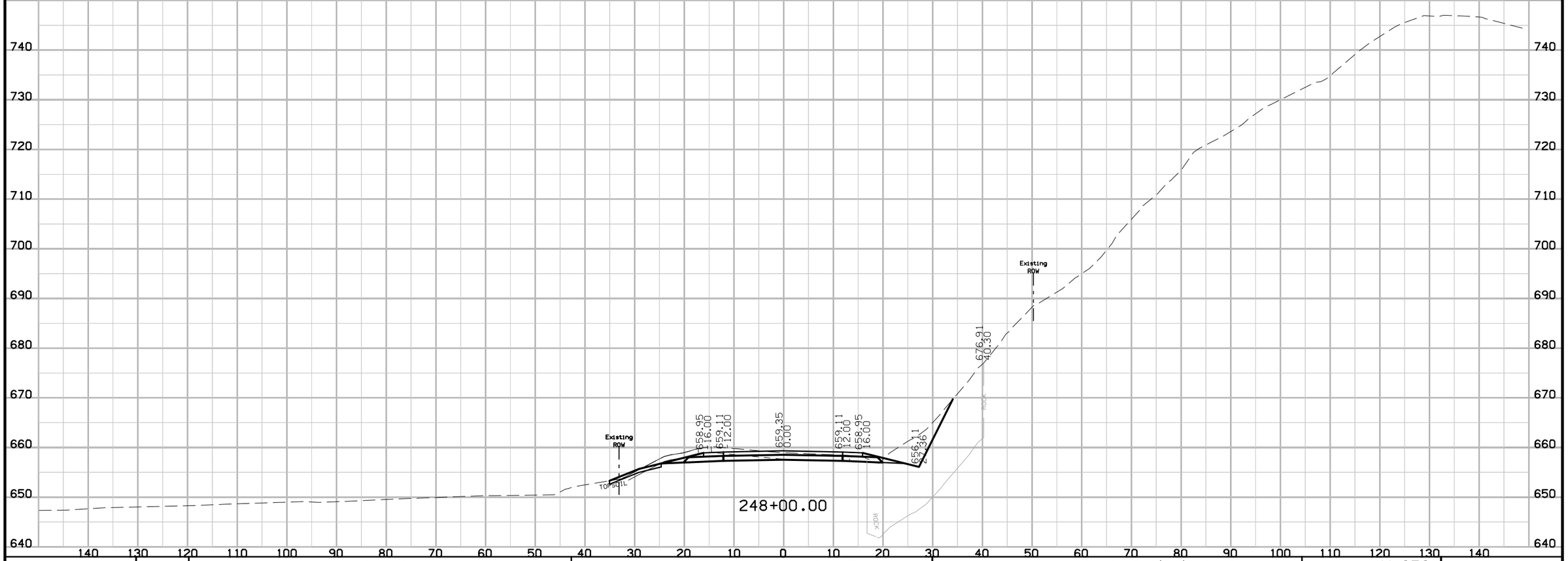
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.251

10:44:23 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

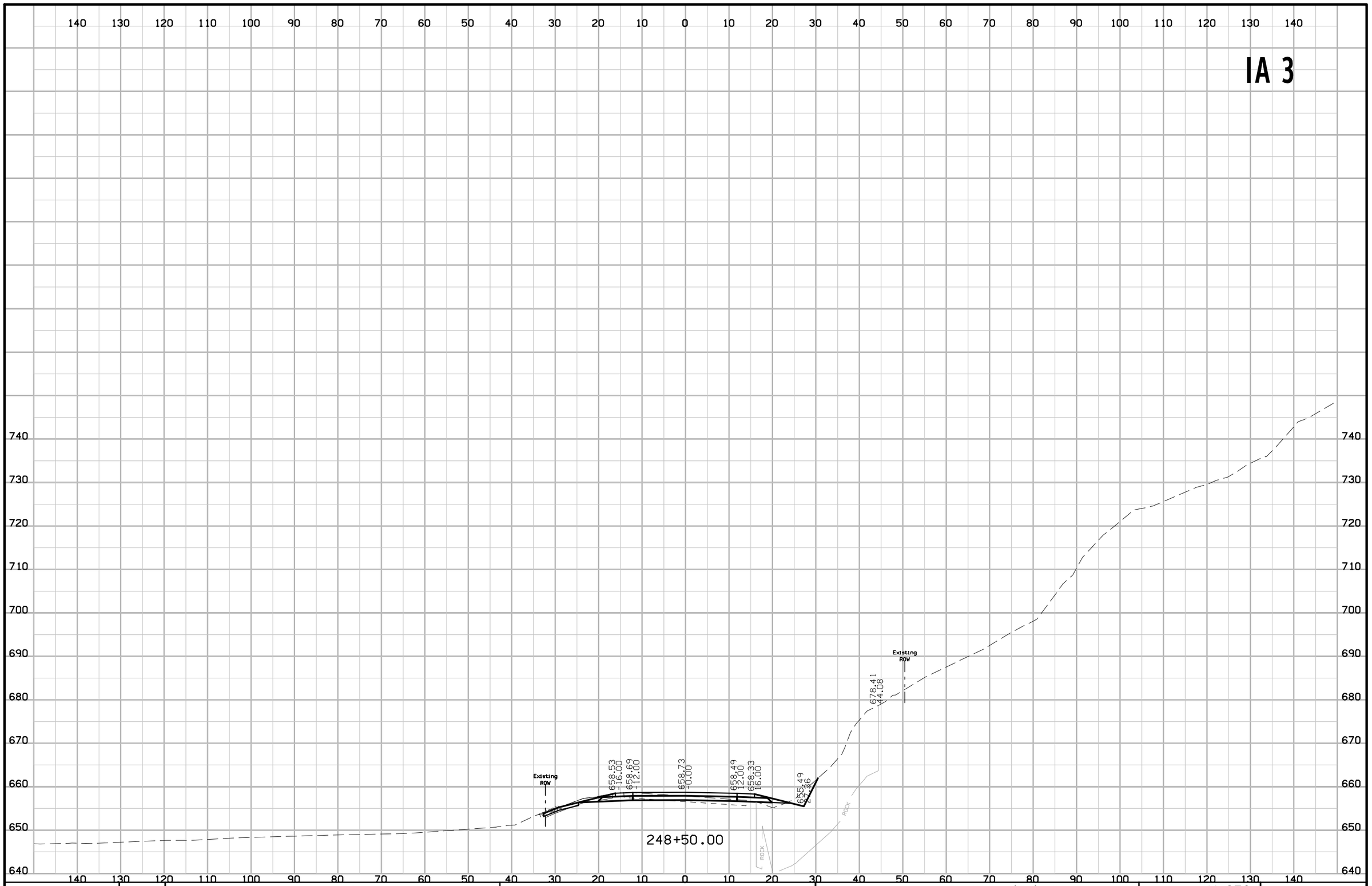
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.252

10:44:24 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

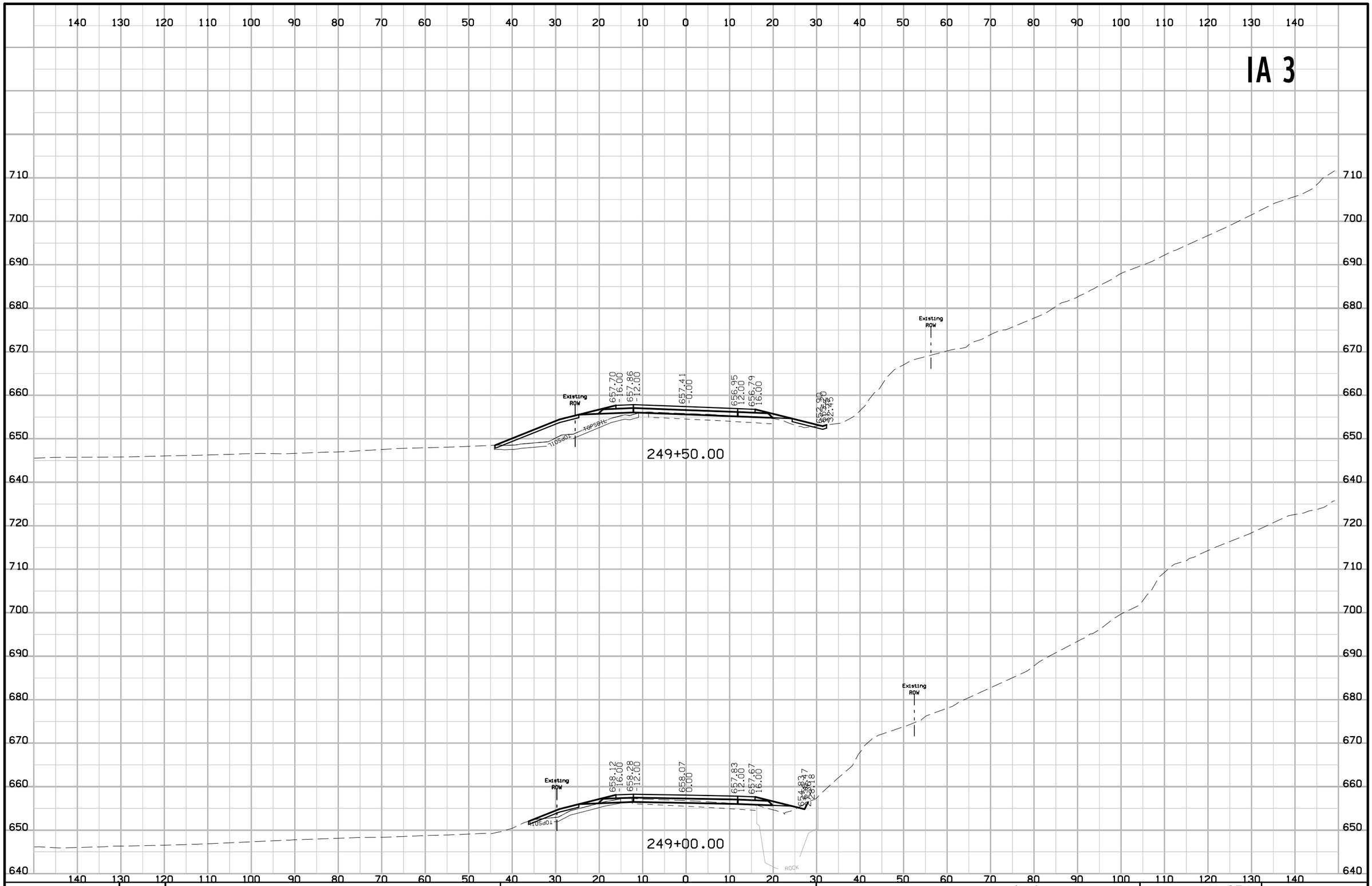
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.253

10:44:25 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

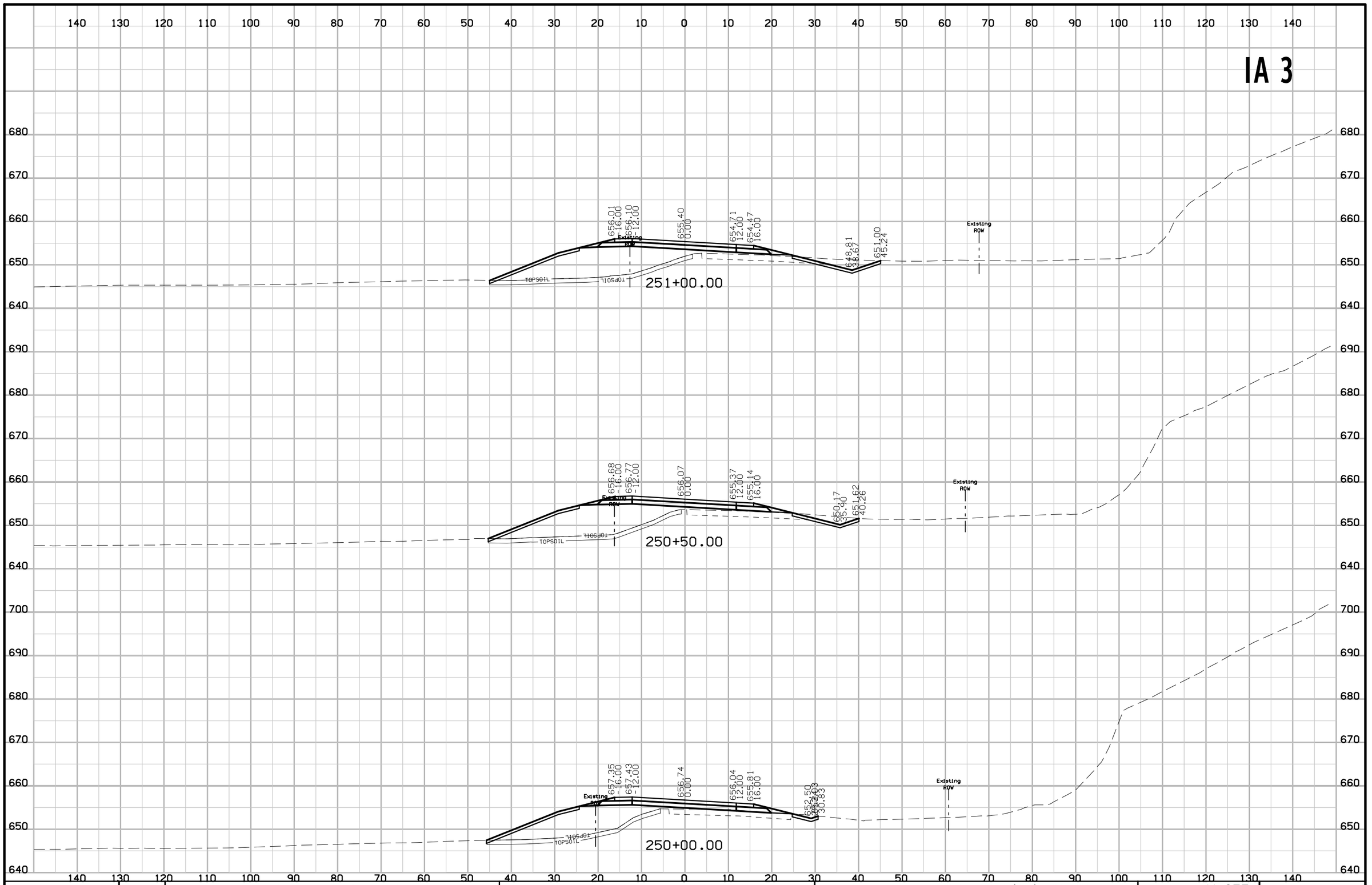
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.254

10:44:26 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

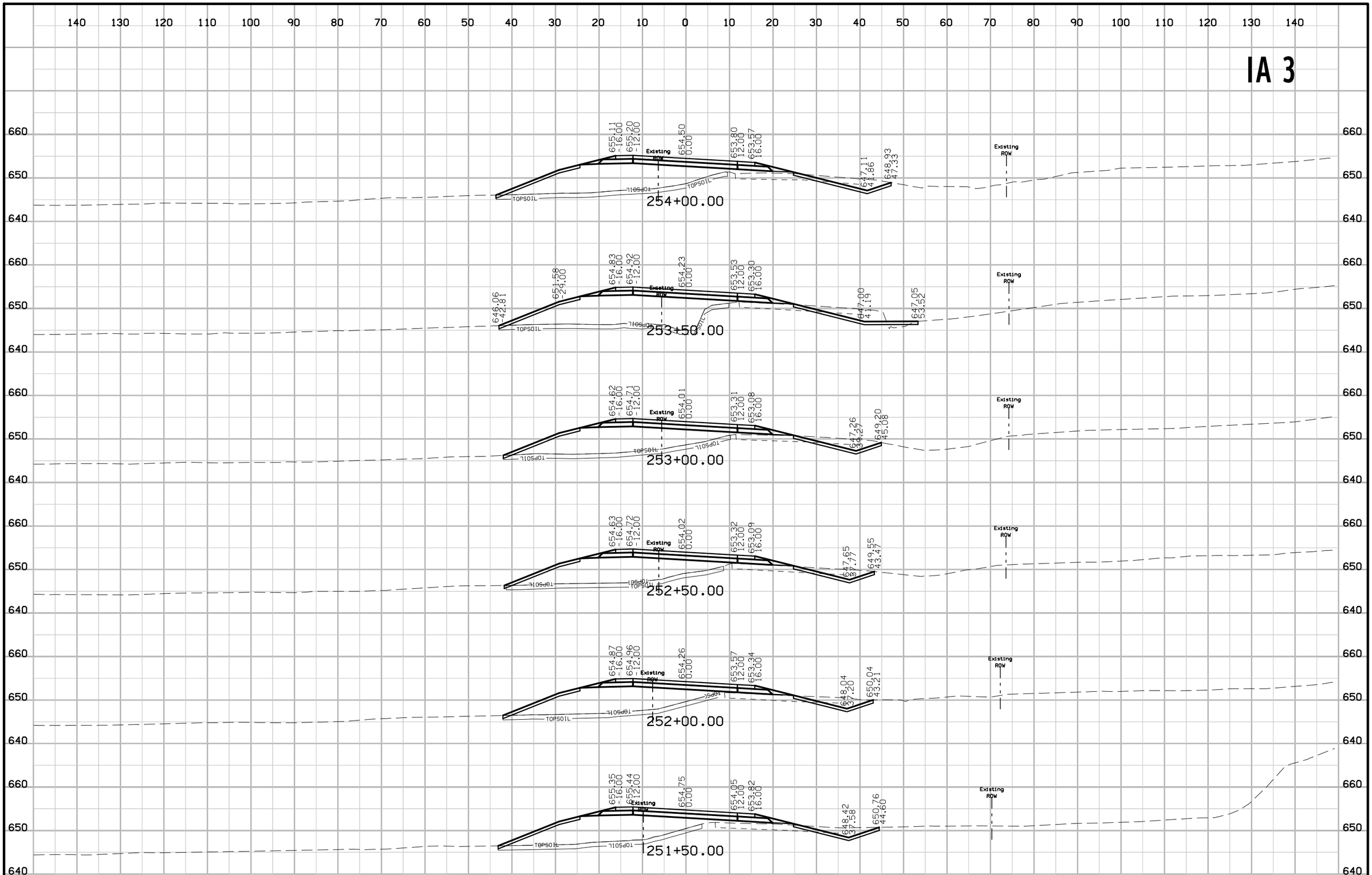
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.255

10:44:26 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

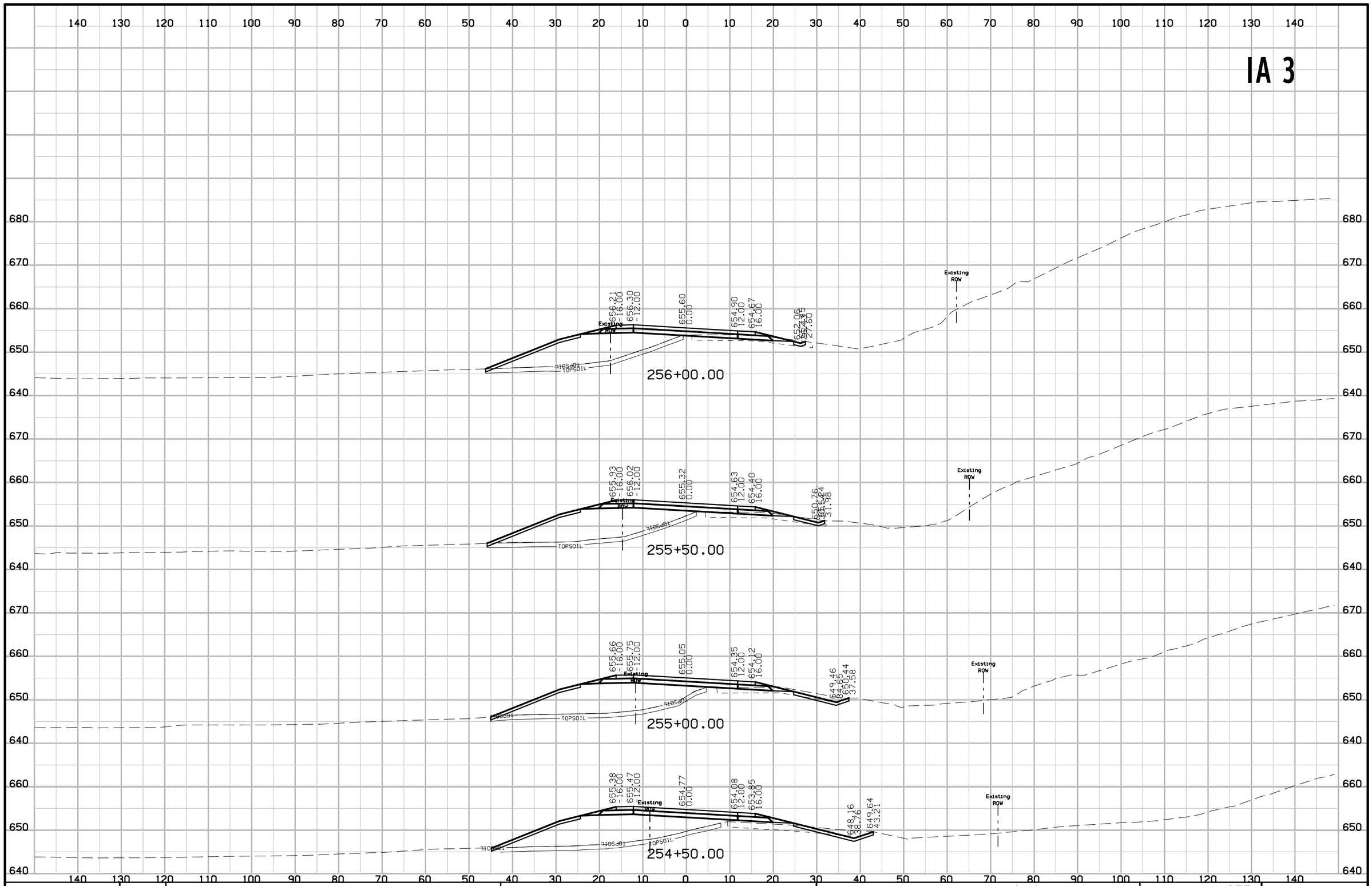
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.256

10:44:27 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.257

10:44:28 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

690 680 670 660 650 640

Existing ROW

656.76 -16.00 656.85 -12.00 656.15 0.00 655.46 12.00 655.22 16.00 652.46 27.07 653.90 31.42

TOPSOIL

ROCK

257+50.00

Existing ROW

656.69 -16.00 656.77 -12.00 656.08 0.00 655.38 12.00 655.15 16.00 652.38 27.07 653.41 30.15

TOPSOIL

ROCK

257+00.00

Existing ROW

656.48 -16.00 656.57 -12.00 655.87 0.00 655.18 12.00 654.95 16.00 652.18 27.07 653.79 28.91

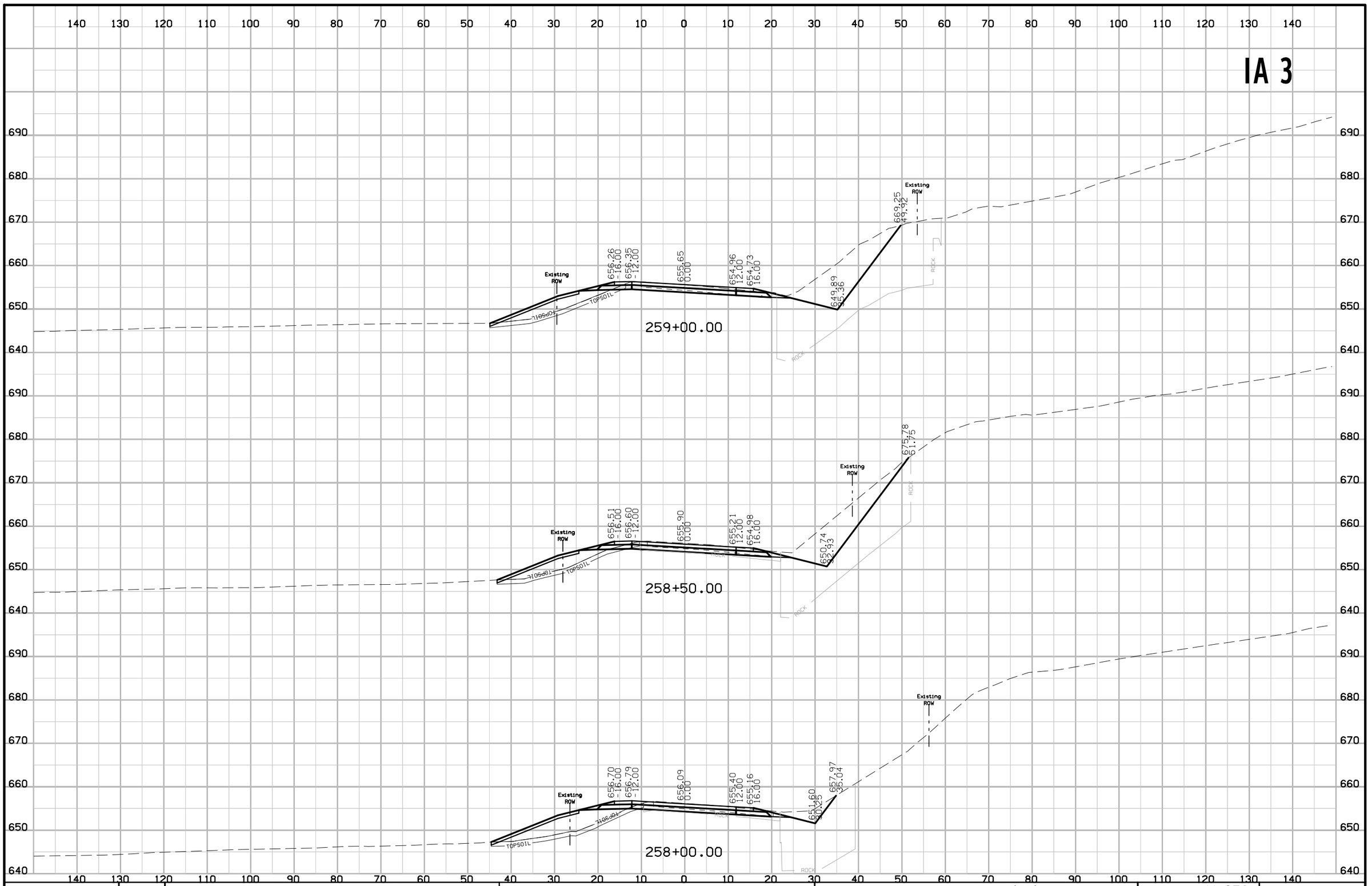
TOPSOIL

256+50.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.258

10:44:29 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

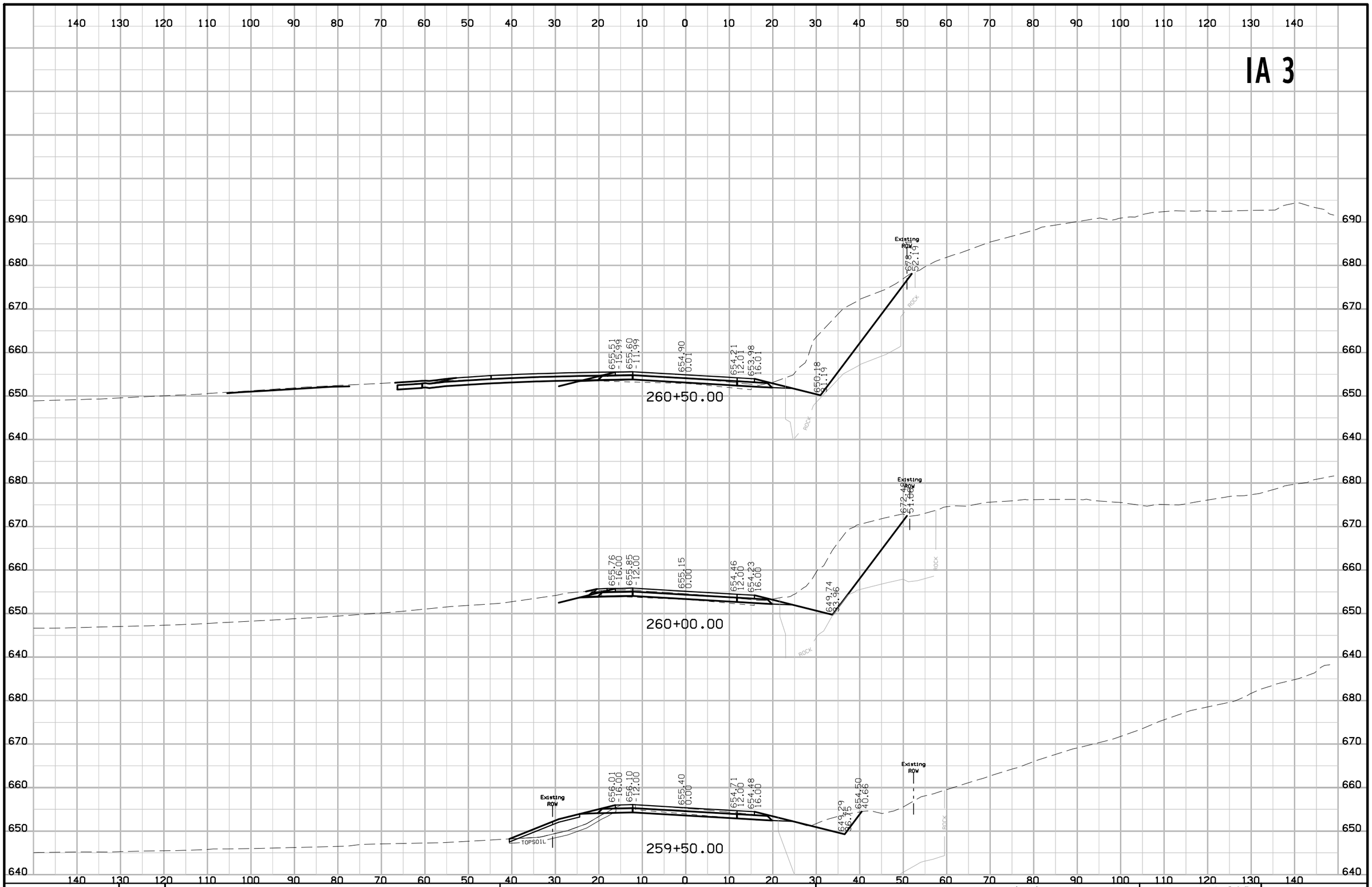
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.259

10:44:30 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

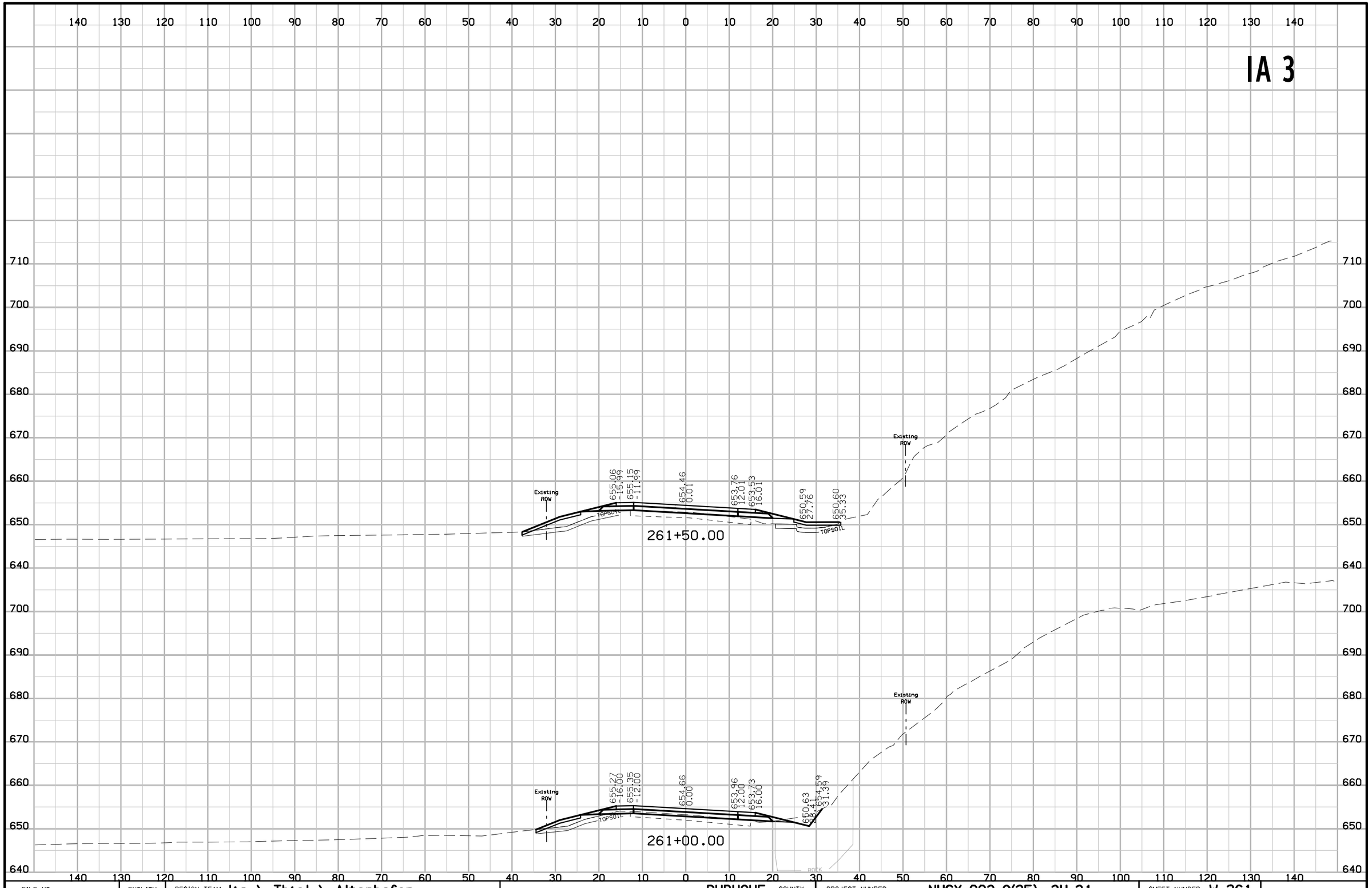
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.260

10:44:30 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

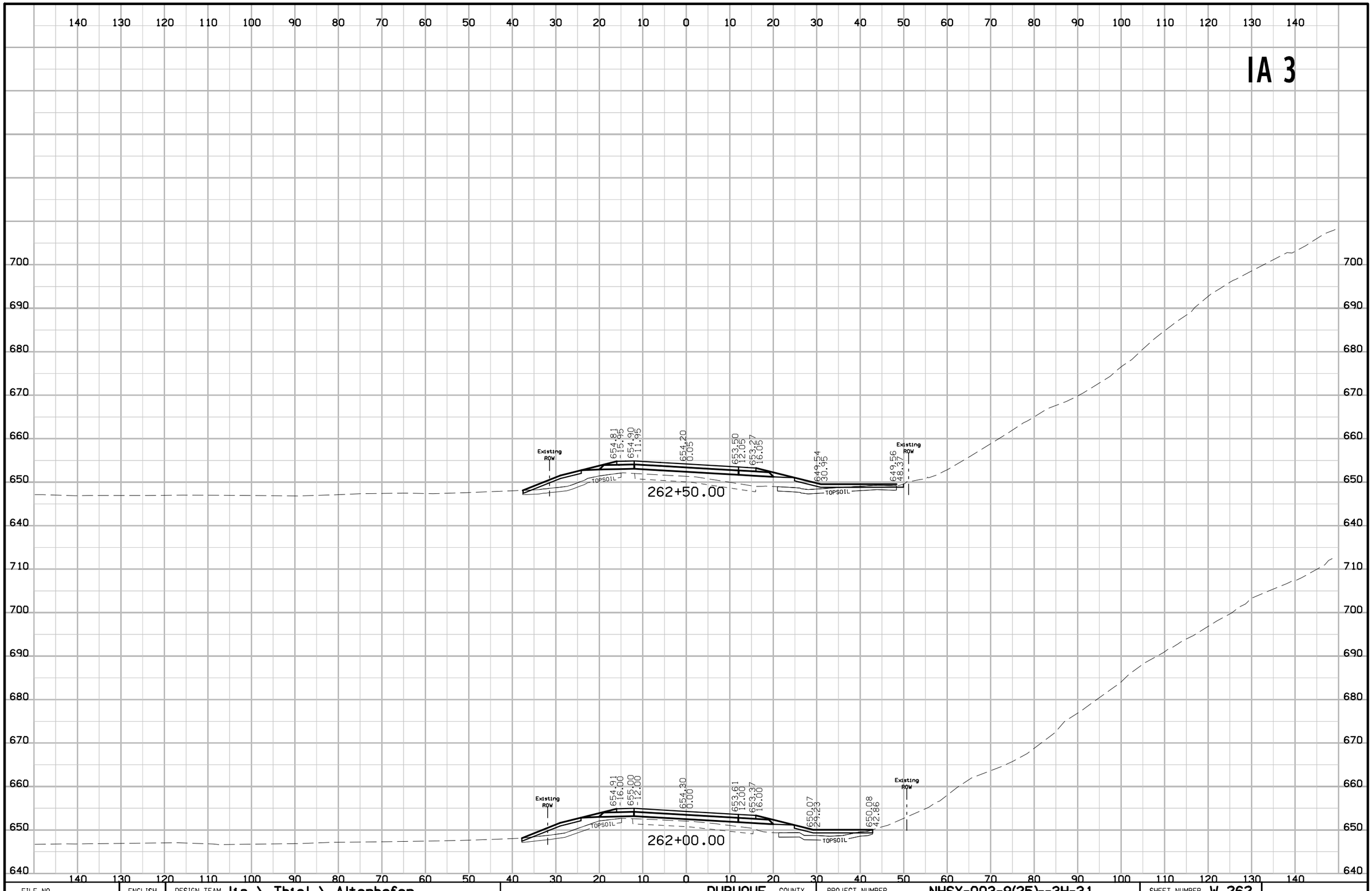
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.261

10:44:47 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

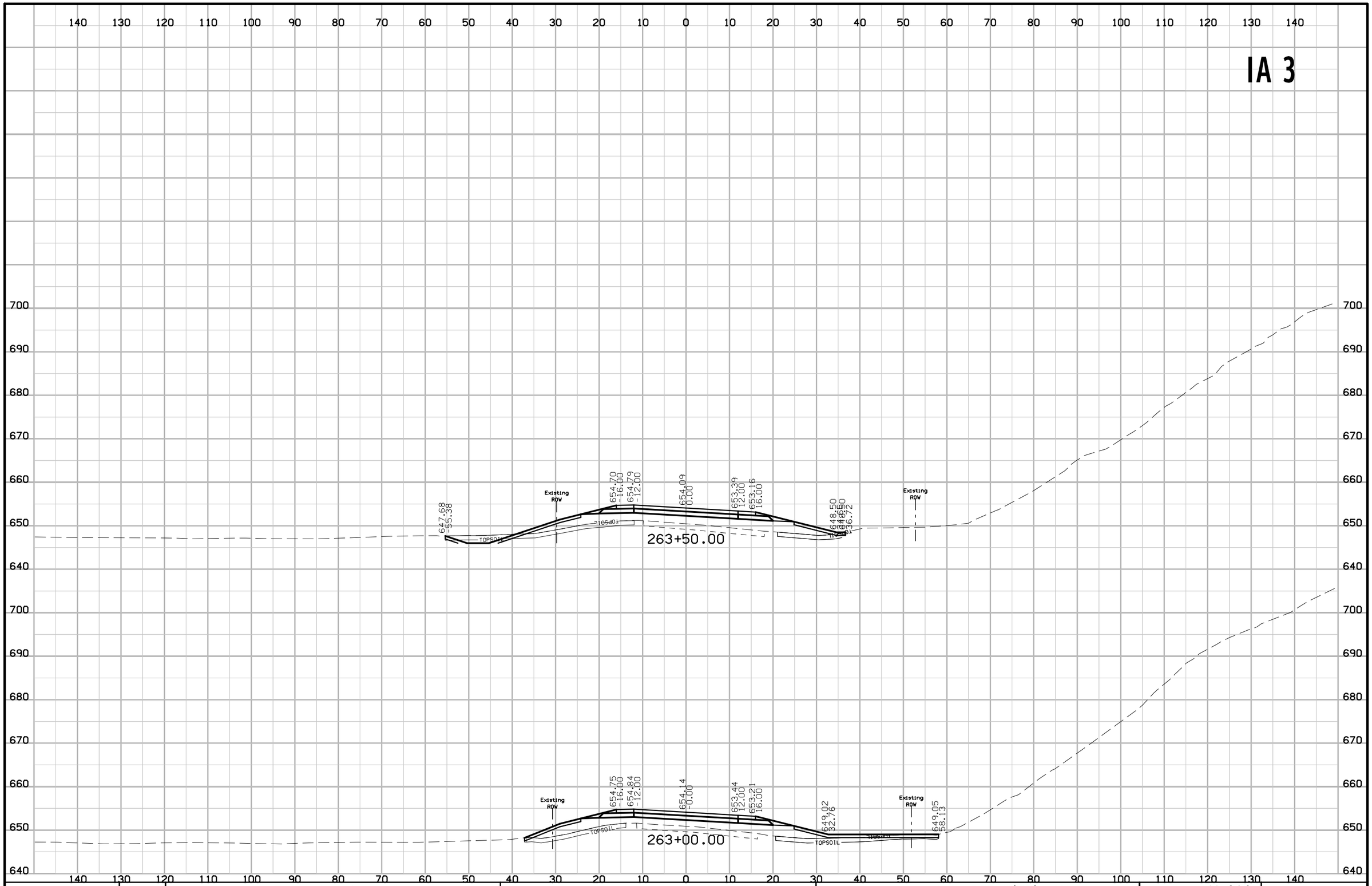
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.262

10:44:46 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



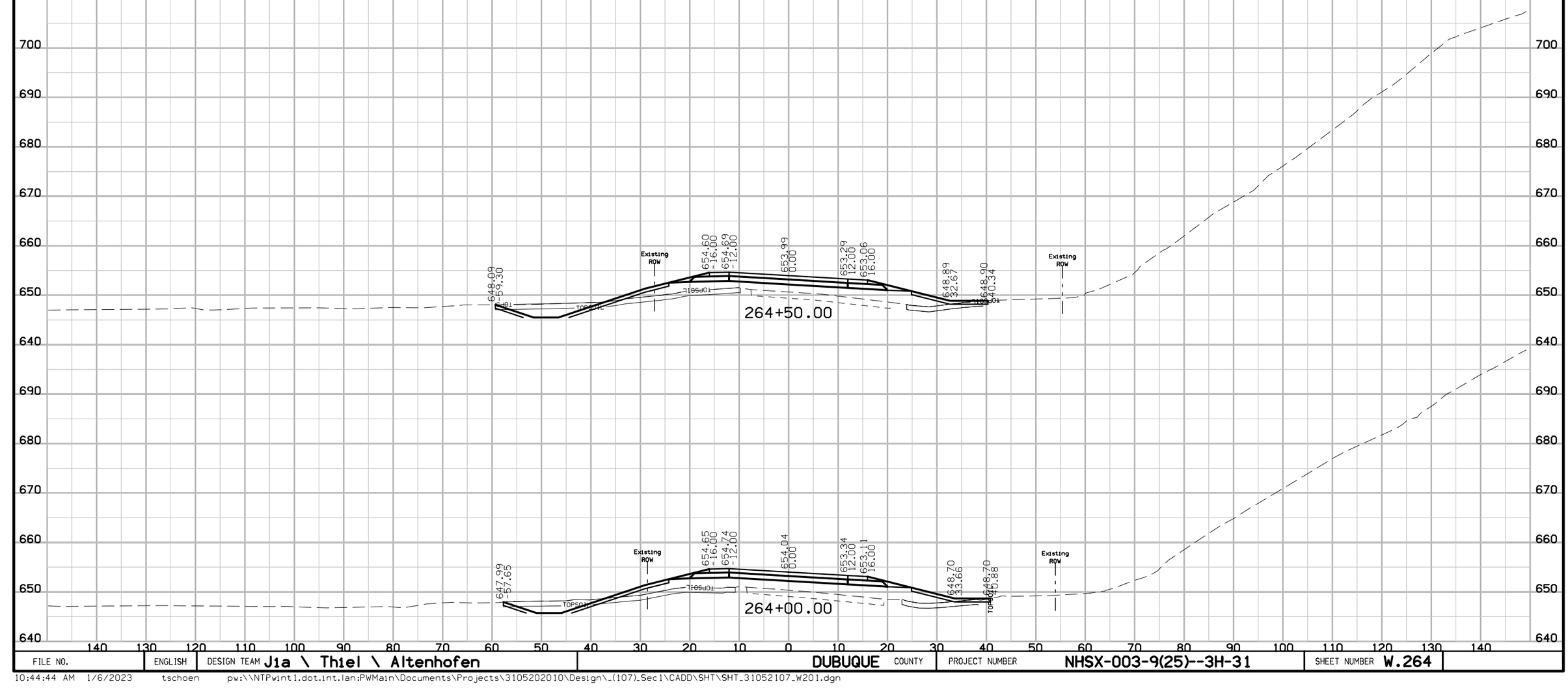
FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.263

10:44:45 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

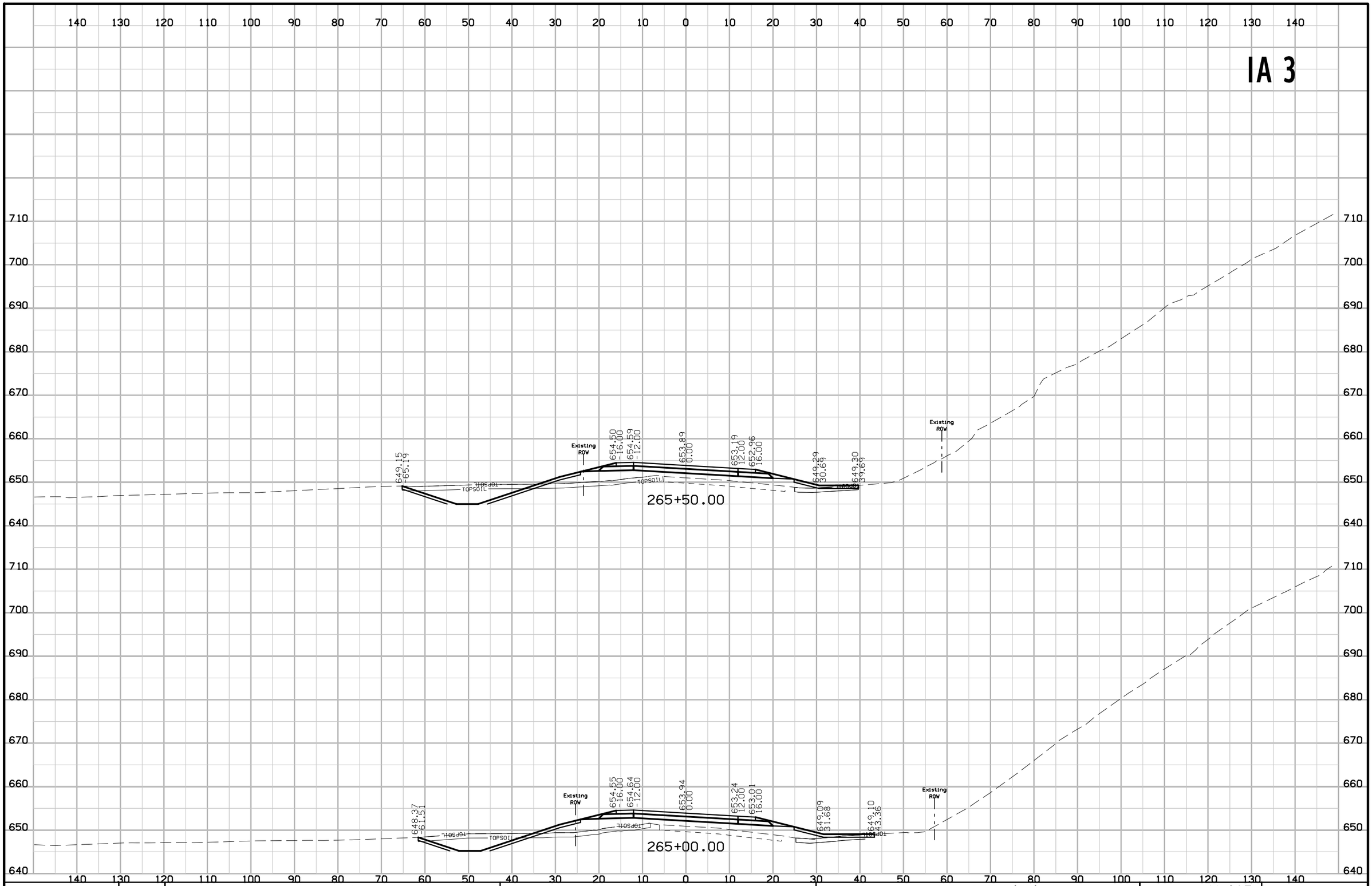
700 690 680 670 660 650 640



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.264

10:44:44 AM 1/6/2023 tschoen pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

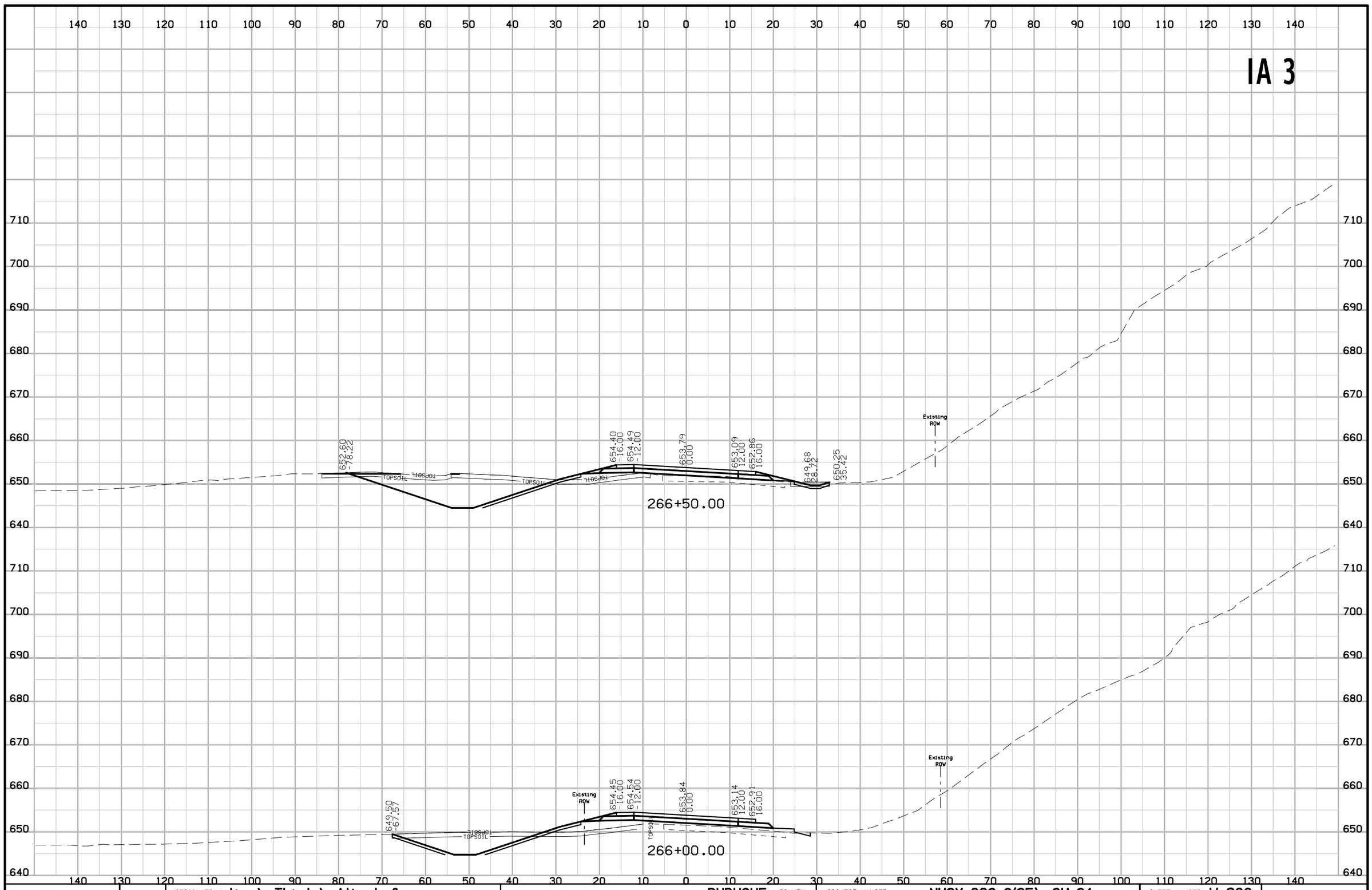
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.265

10:44:43 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

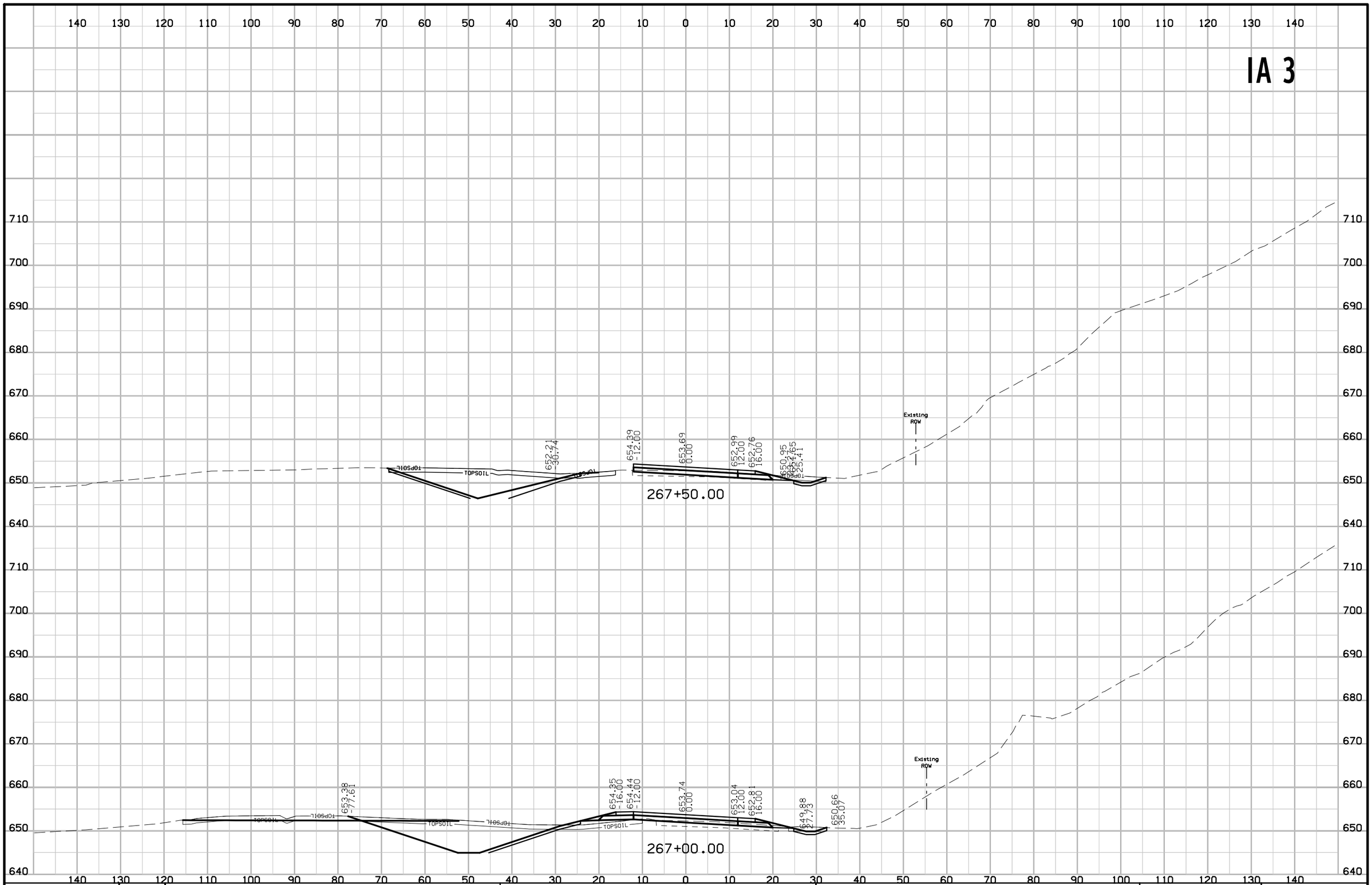
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.266

10:44:43 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

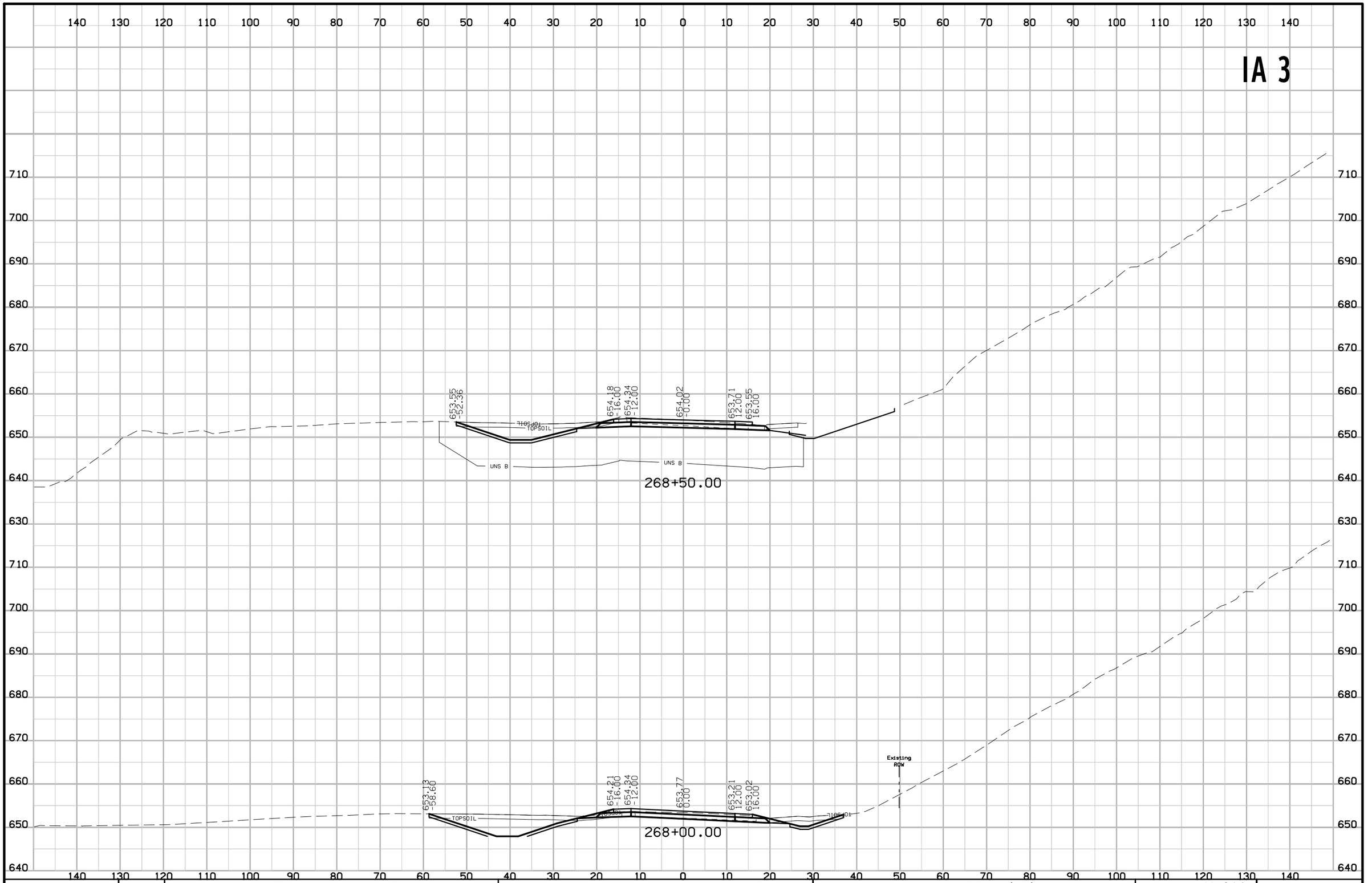
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.267

10:44:42 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

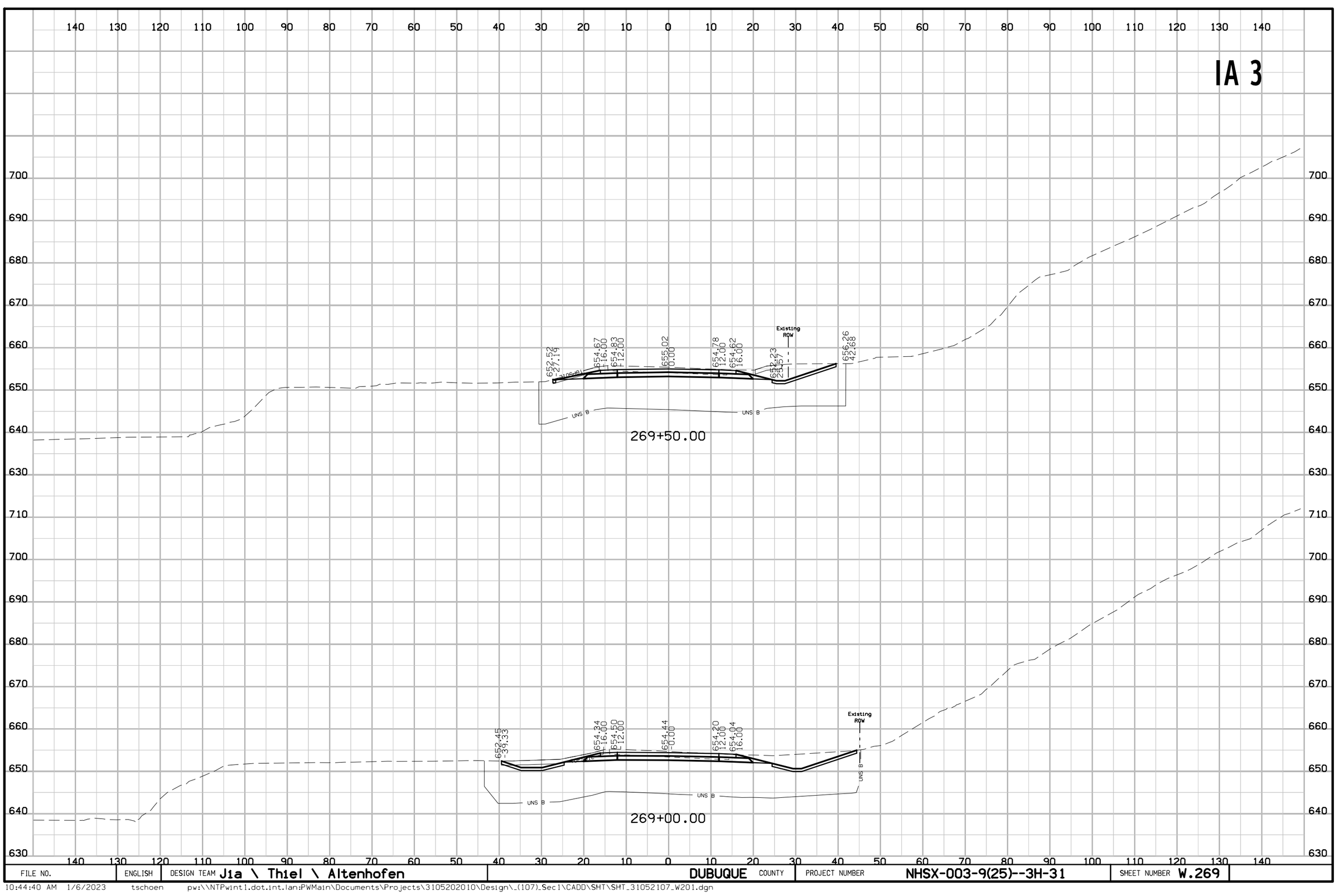
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.268

10:44:41 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

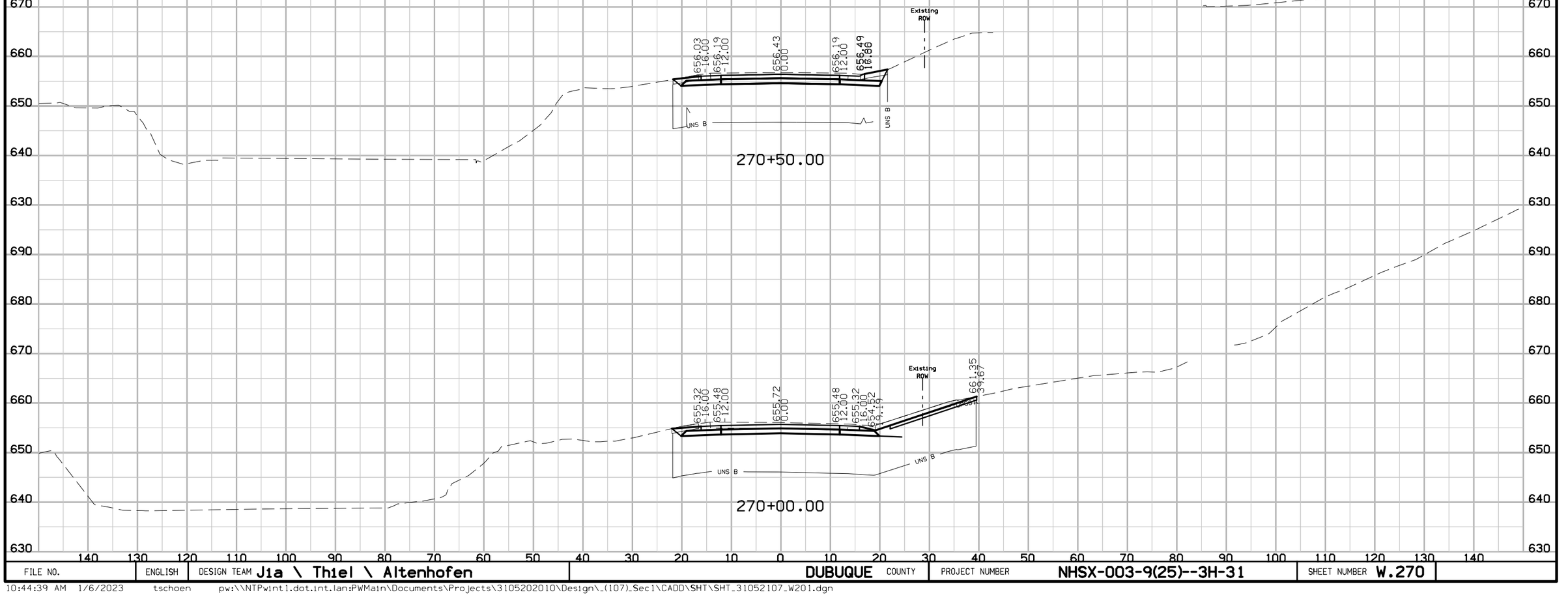
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.269

10:44:40 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

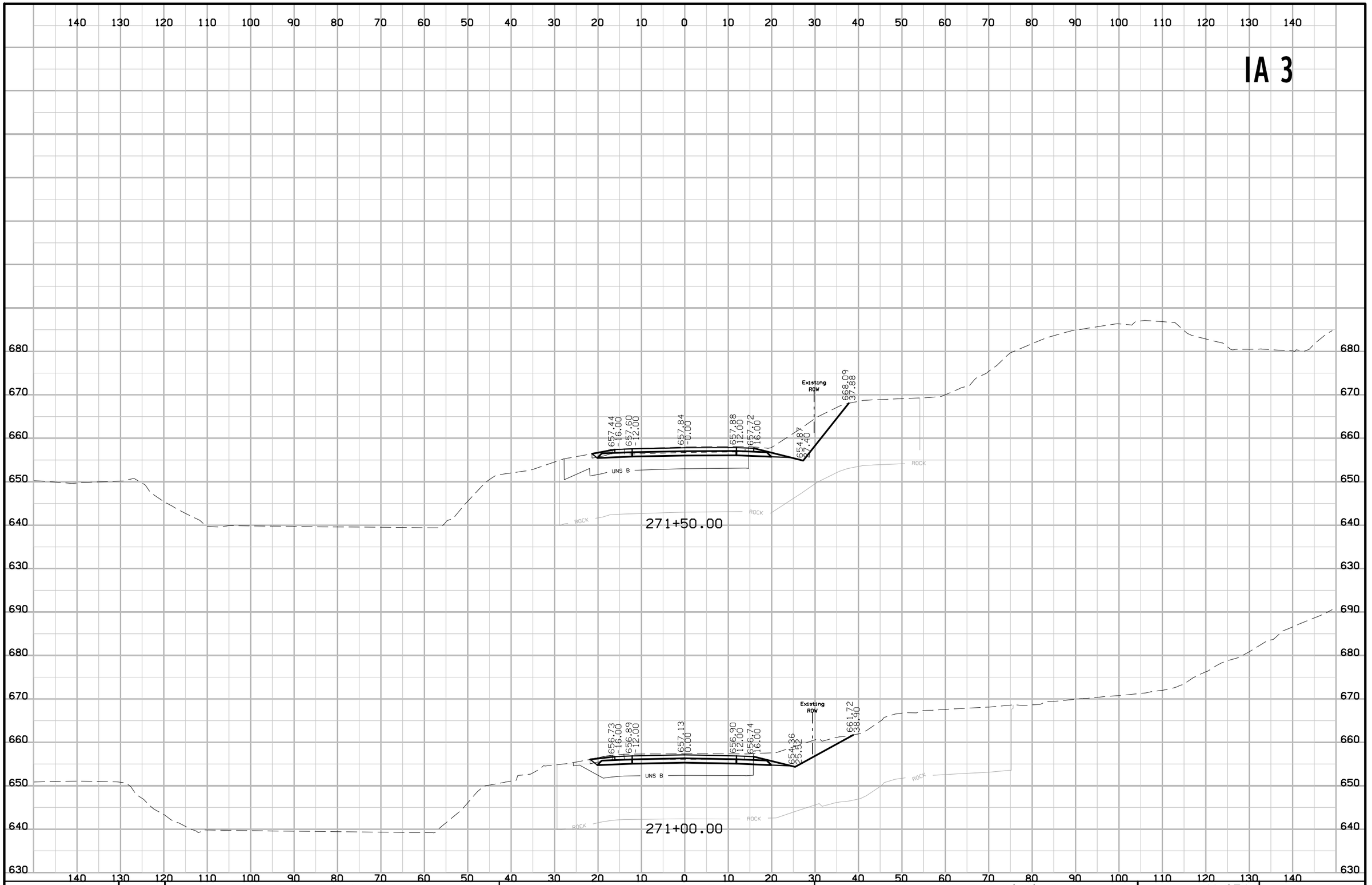
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.270

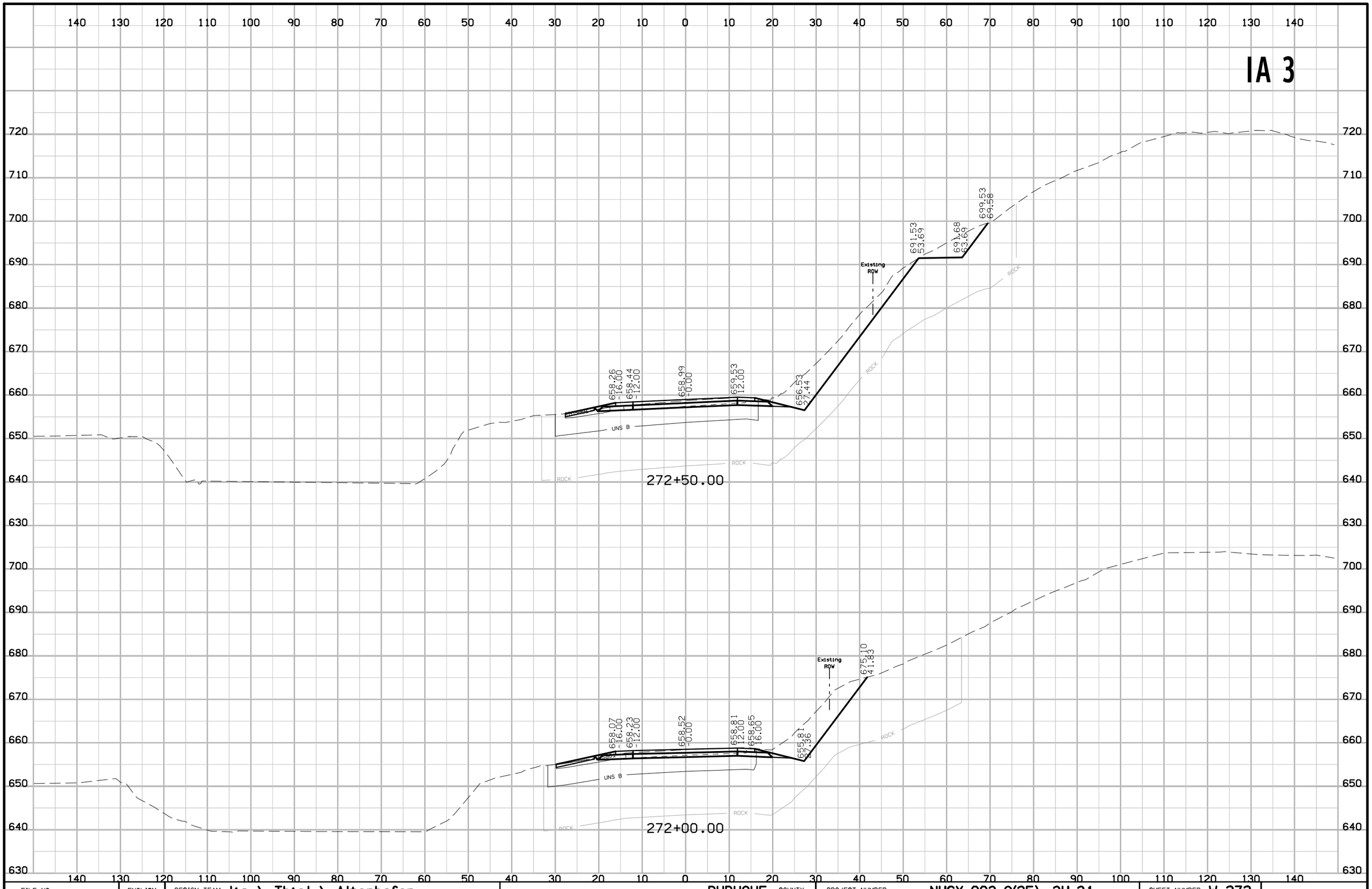
10:44:39 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.271

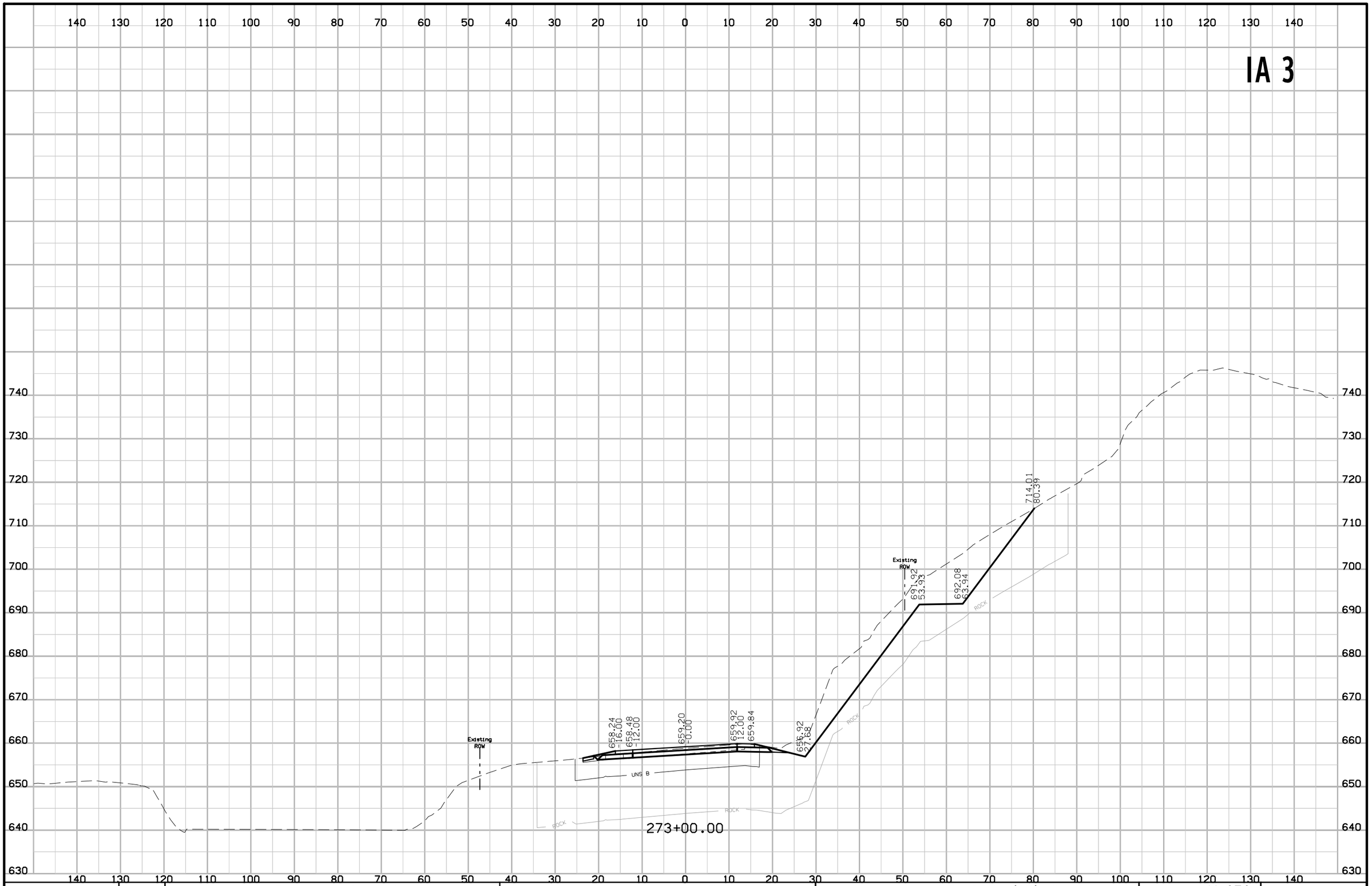
10:44:39 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.272

10:44:38 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.273

10:44:37 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3

Existing ROW

658.19
-16.00
658.43
12.00

659.15
-0.00

659.87
12.00

656.87
27.68

691.83
53.90

692.05
63.95

721.39
85.96

ROCK

ROCK

ROCK

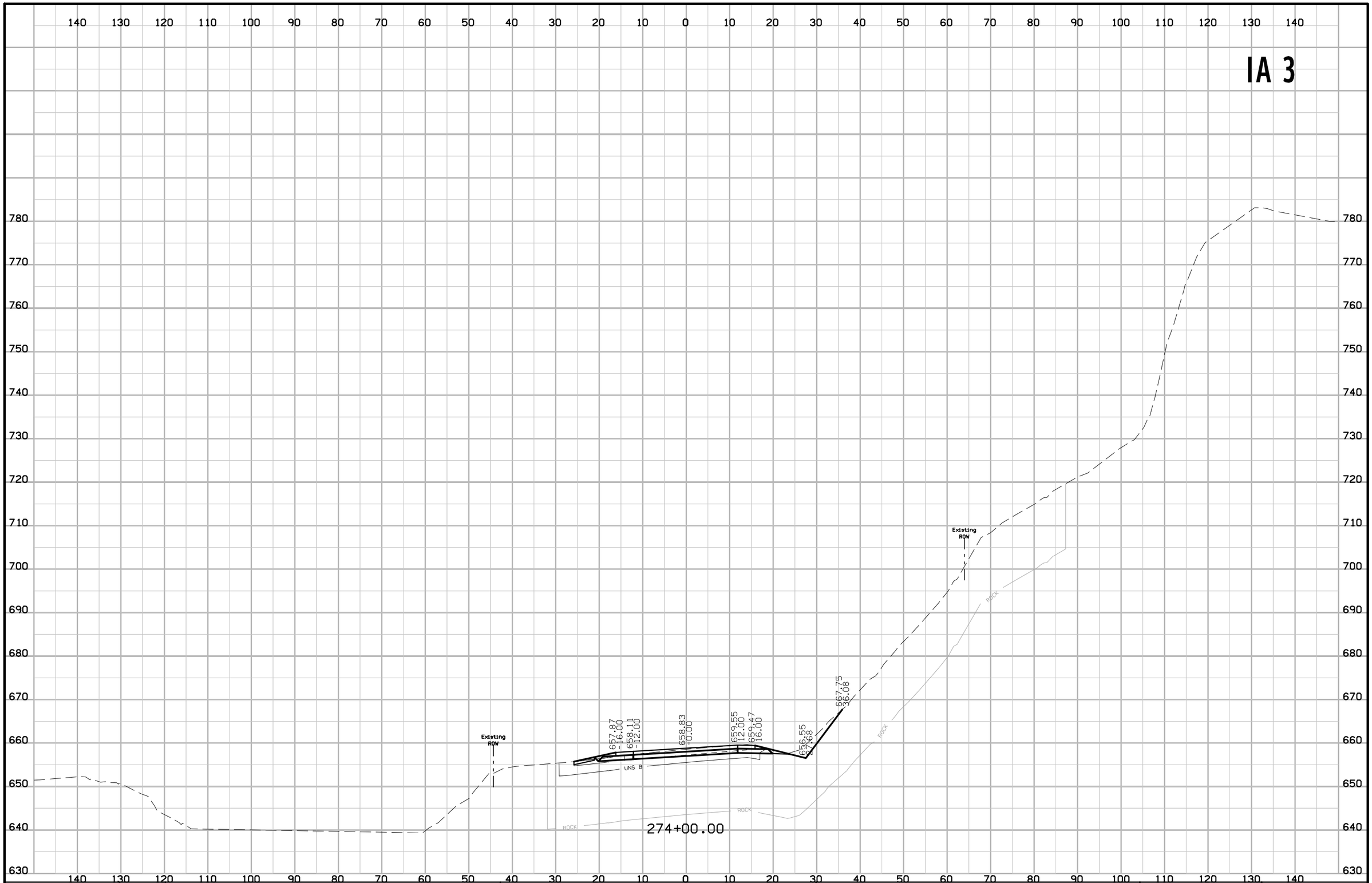
UNS B

273+50.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.274

10:44:36 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

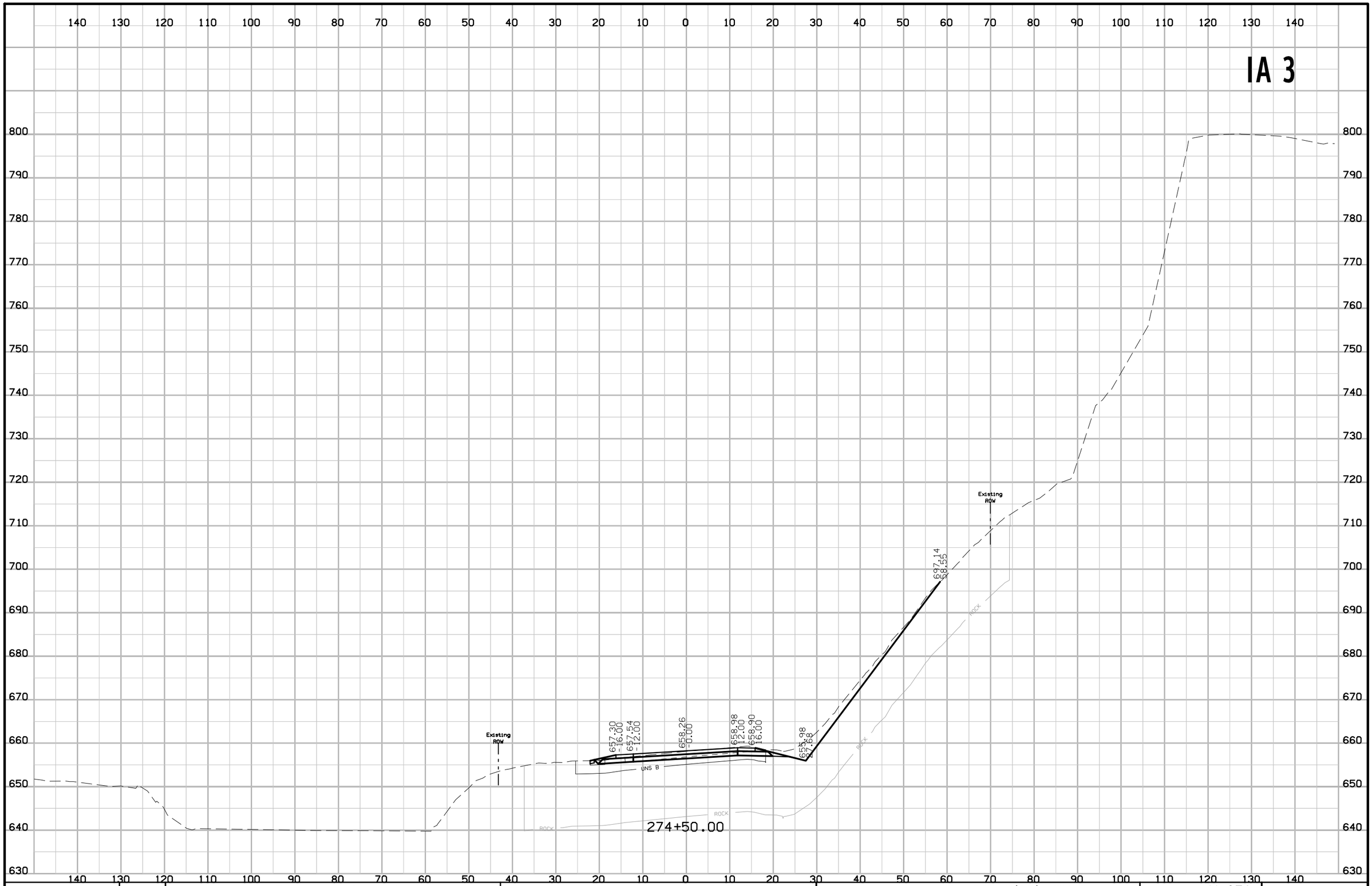
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.275

10:44:35 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

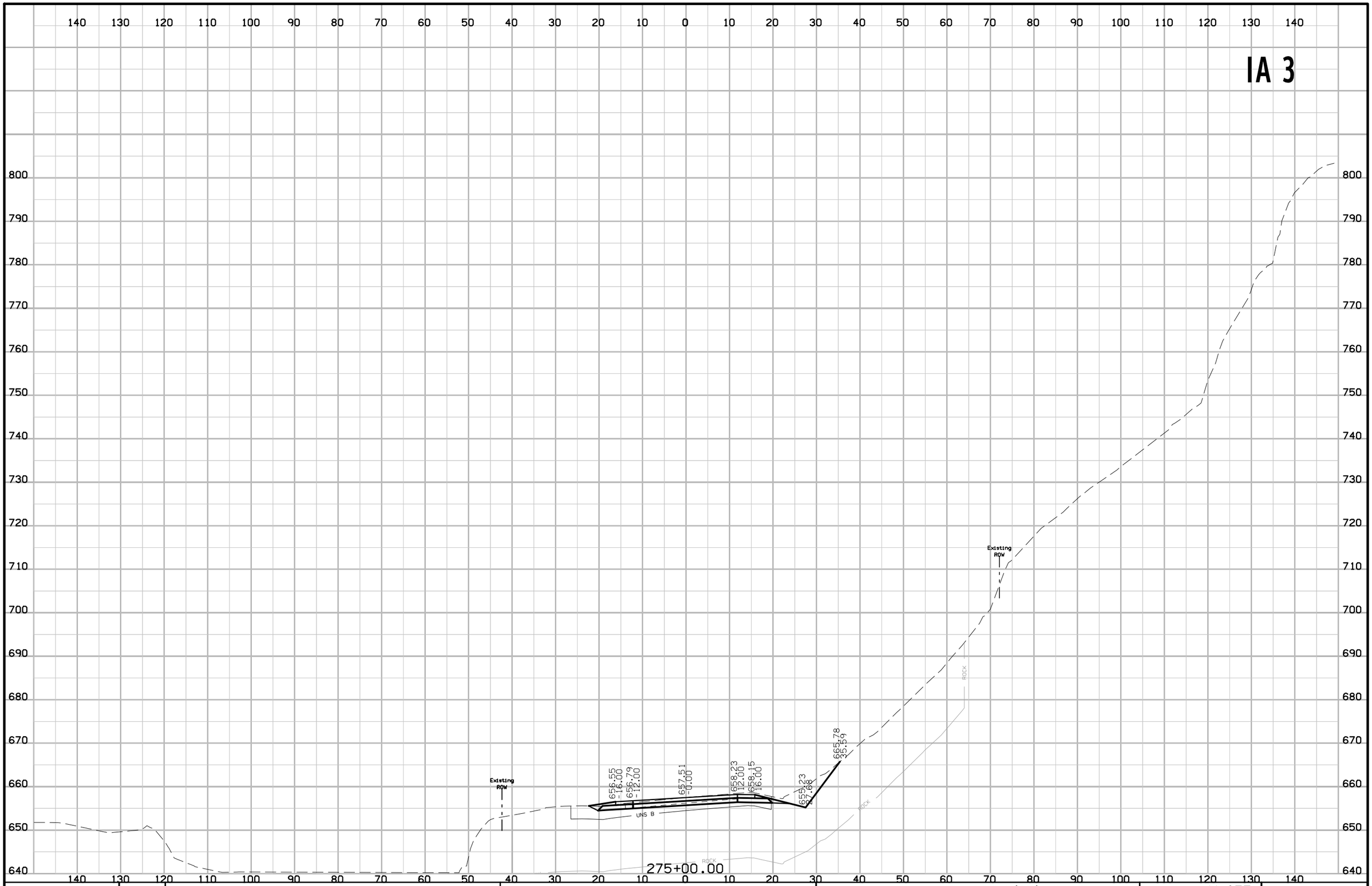
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.276

10:44:34 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

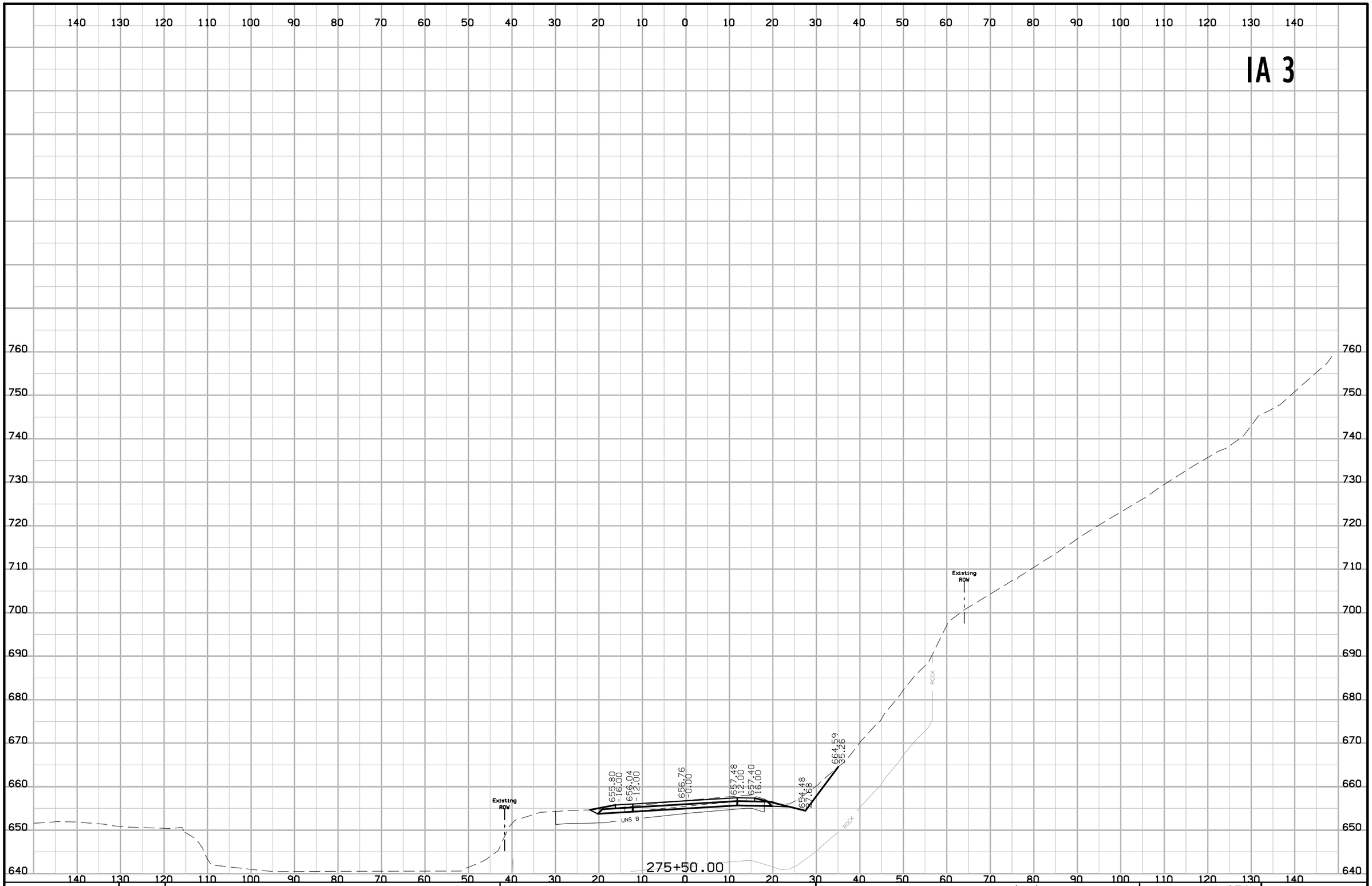
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.277

10:44:34 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

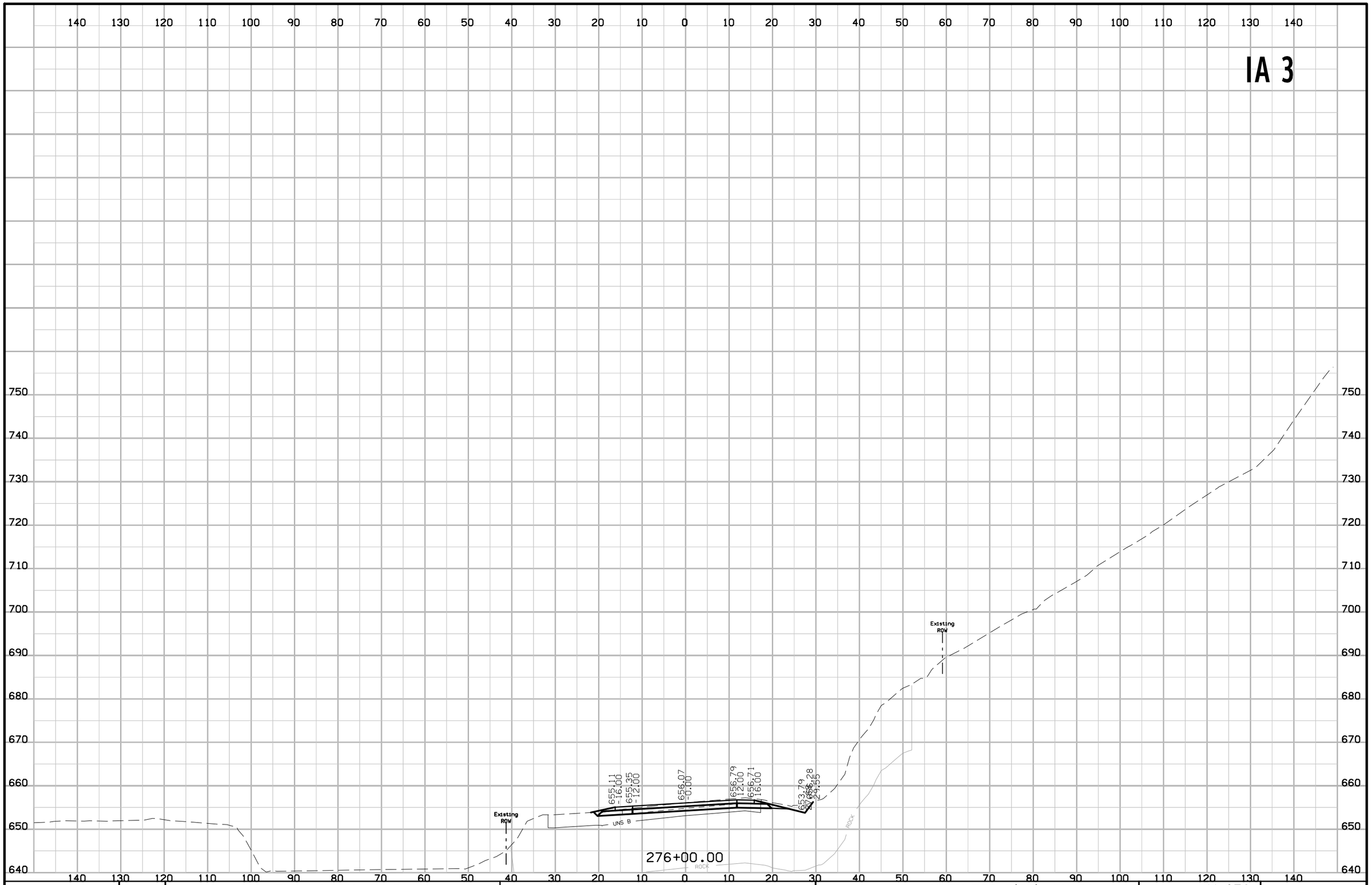
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.278

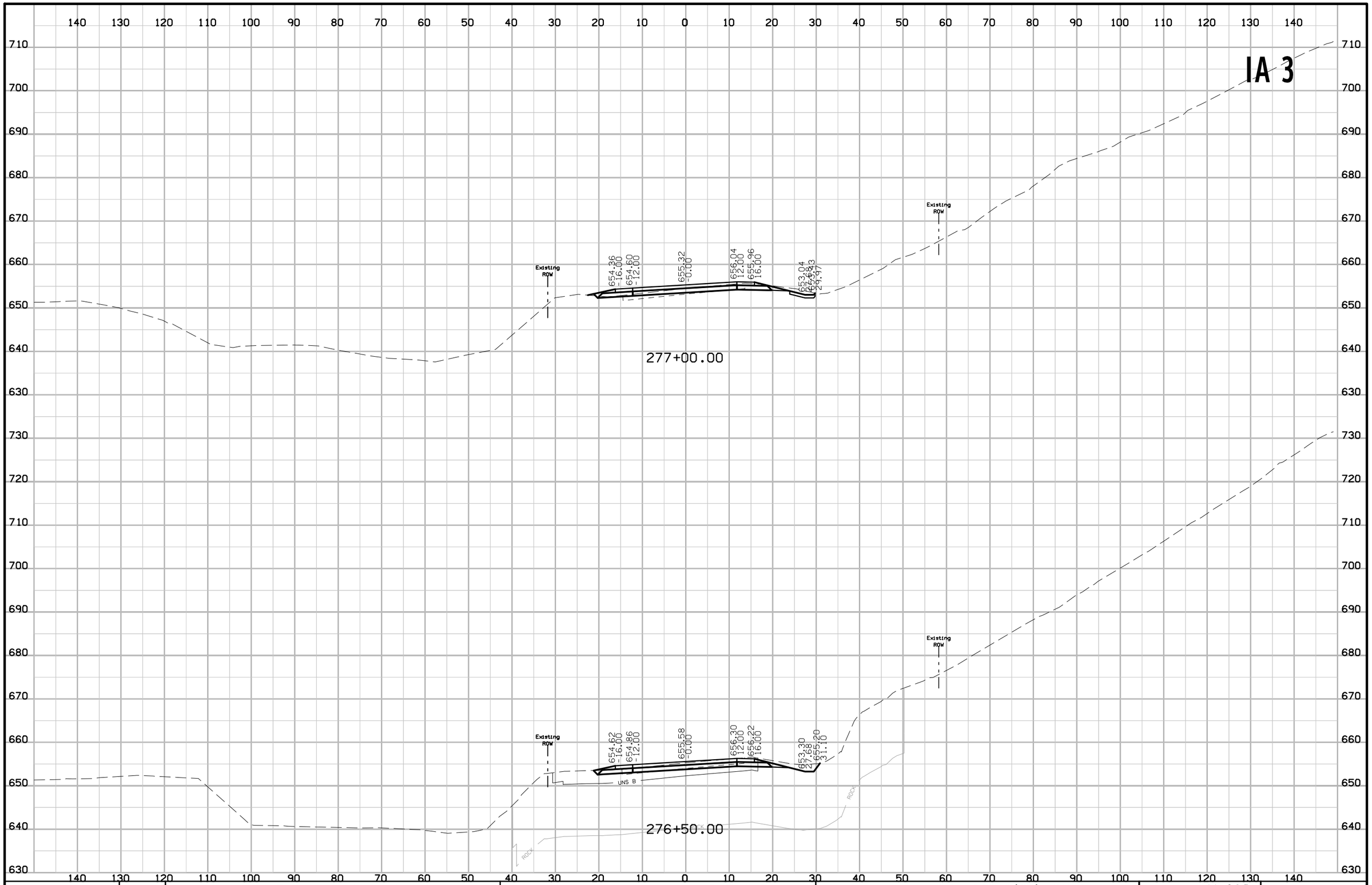
10:44:33 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.279

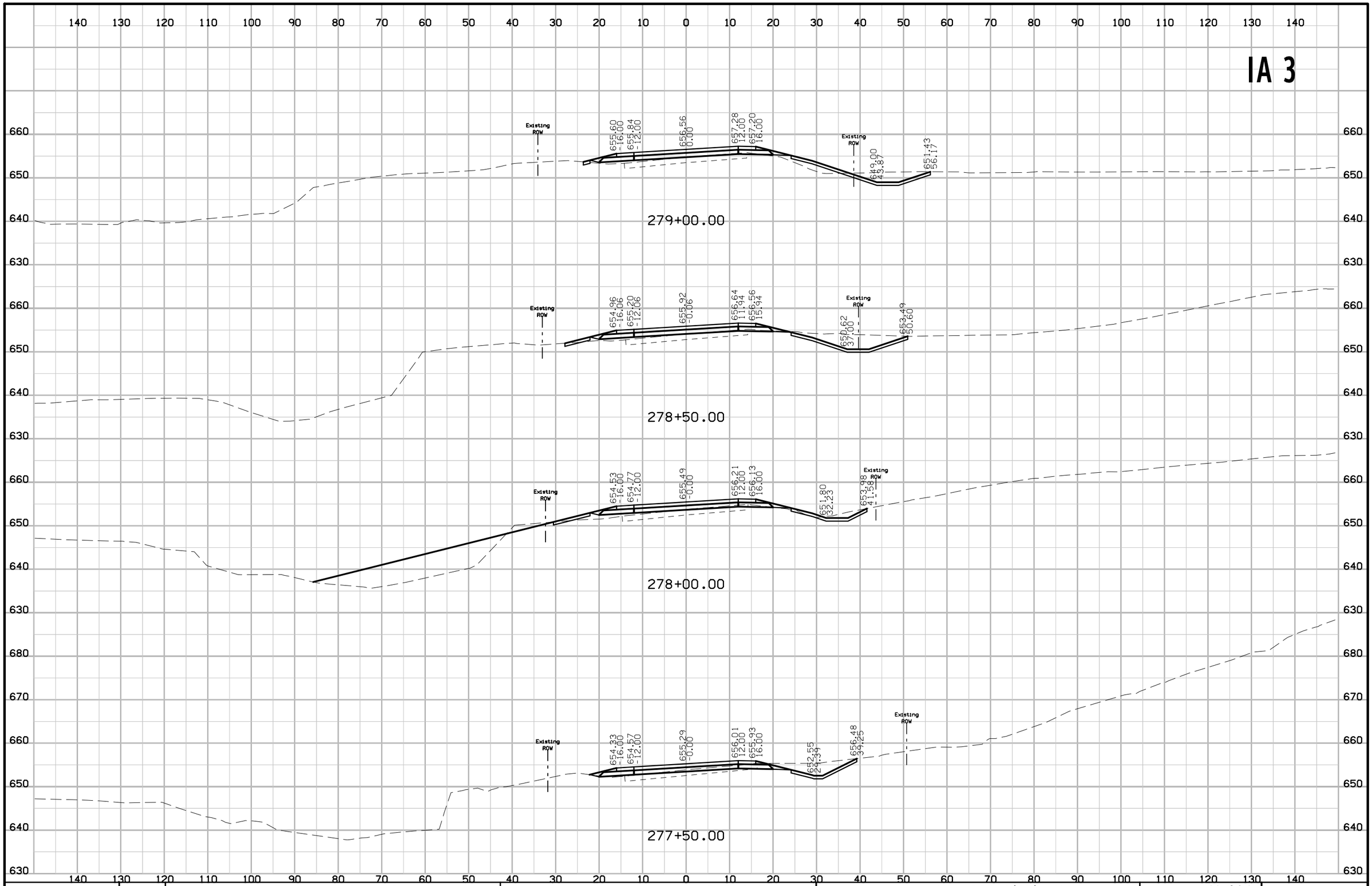
10:44:32 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.280

10:44:31 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

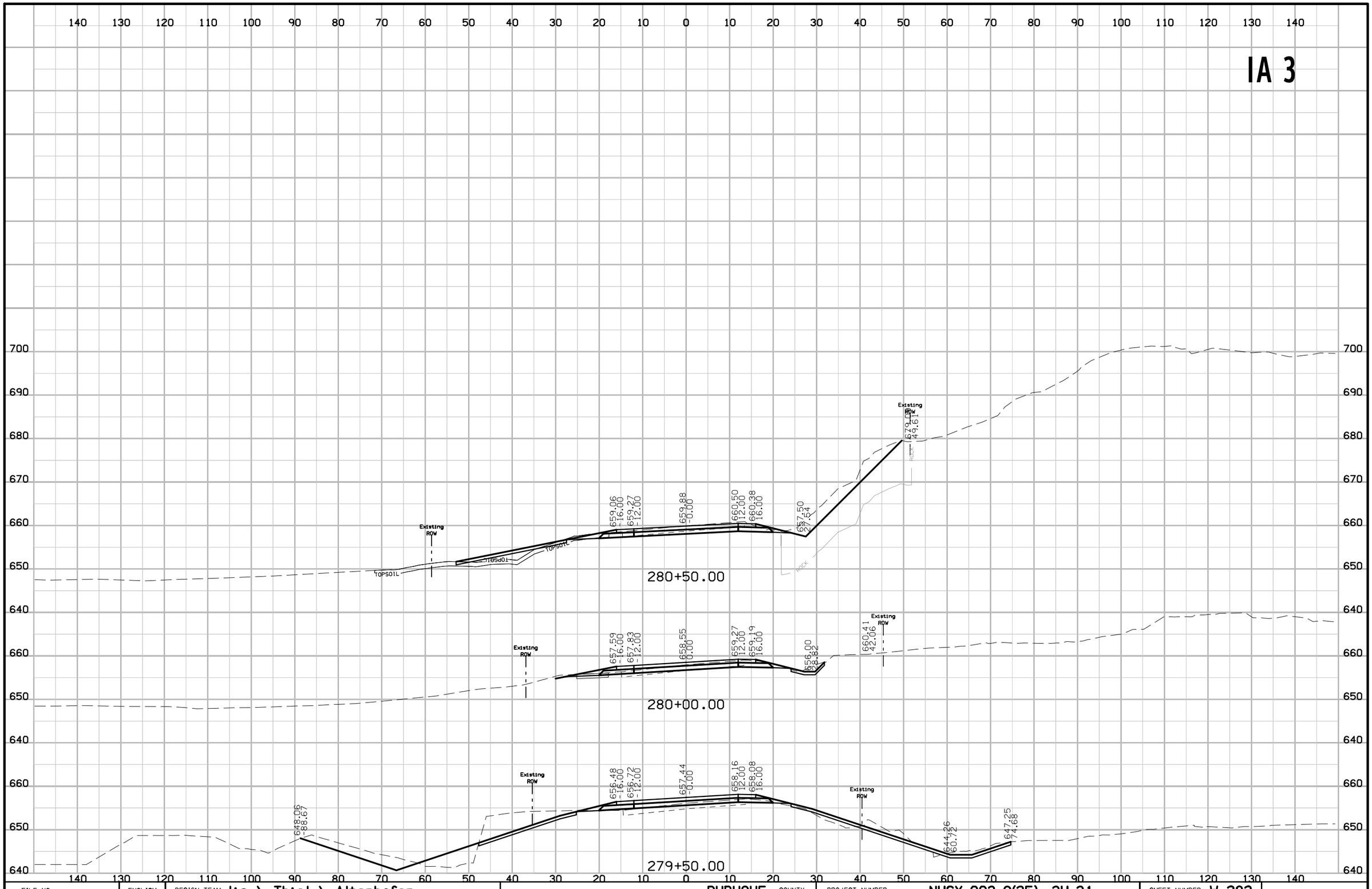
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.281

10:44:47 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

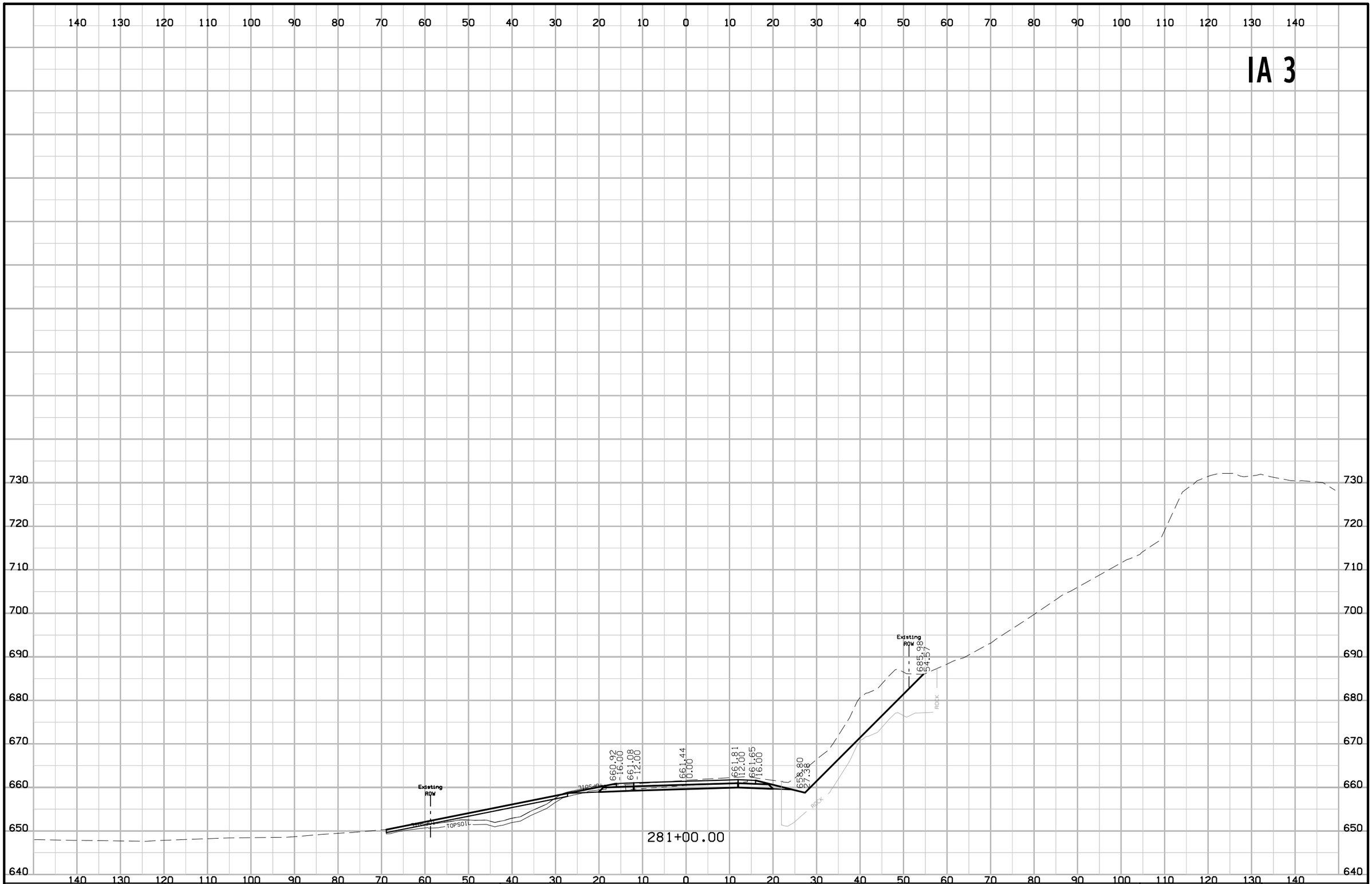
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.282

10:44:48 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

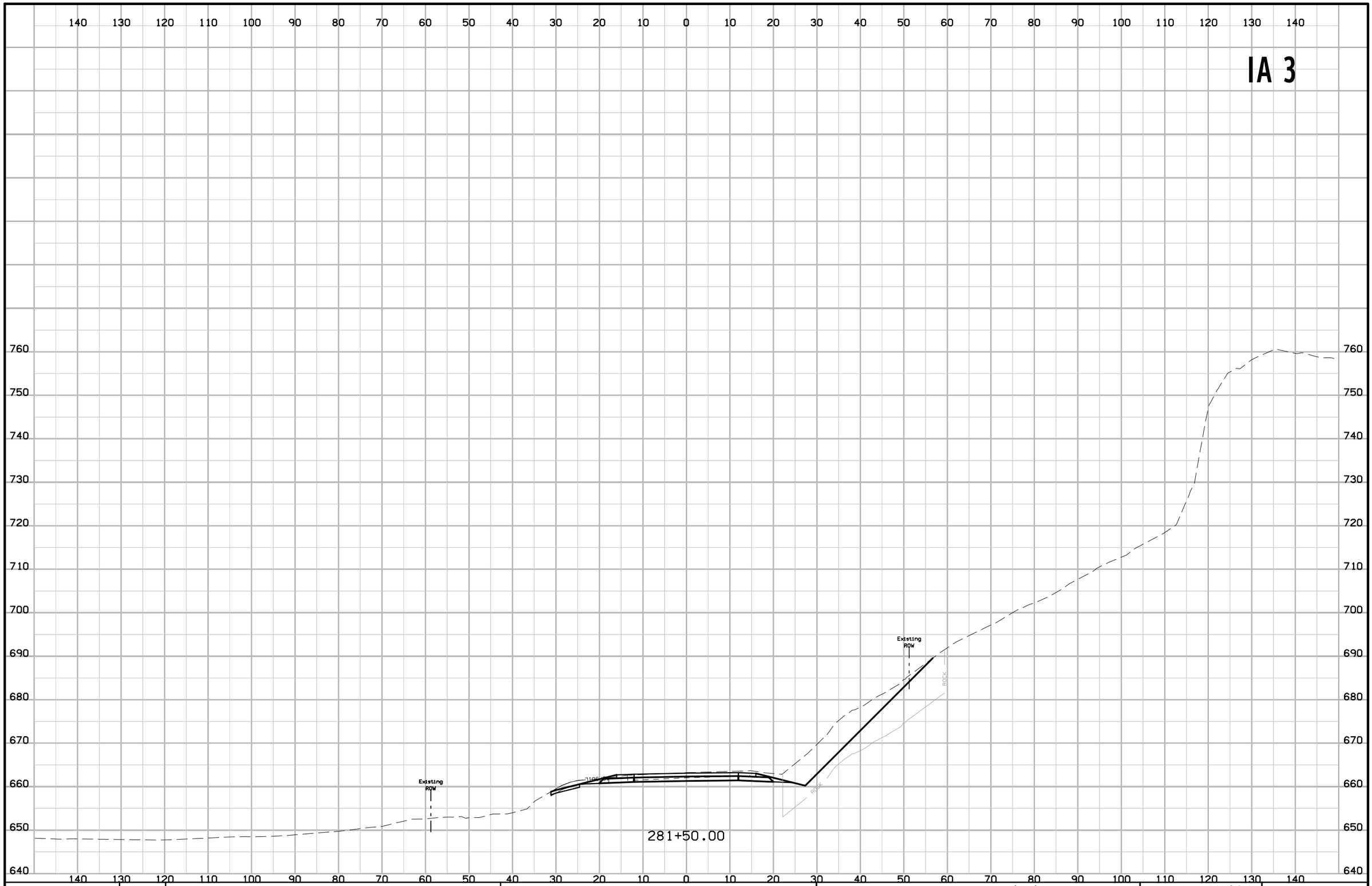
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.283

10:44:49 AM 1/6/2023 tschoen pw:\\NTPwintl.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

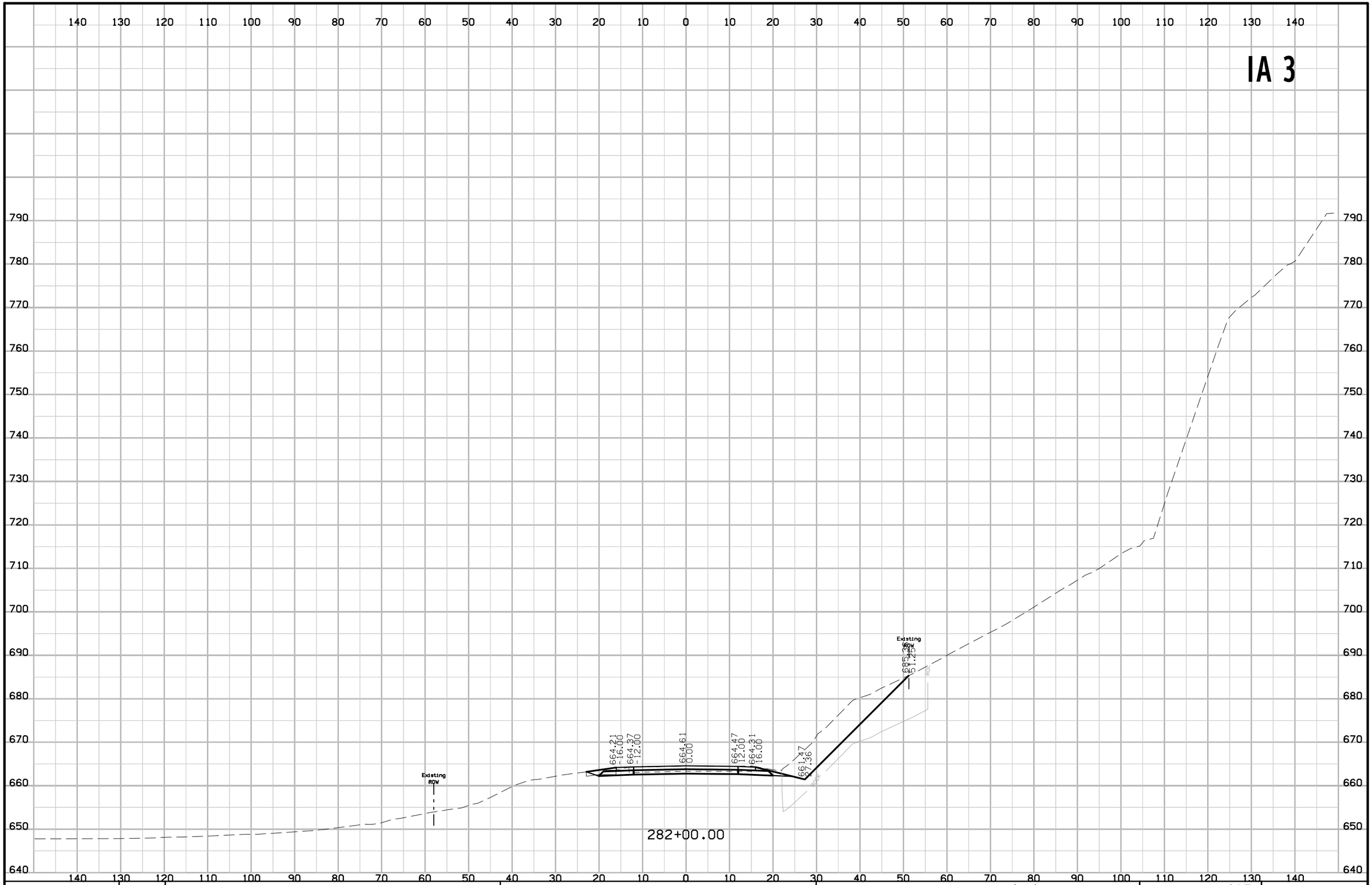
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.284

8:18:02 AM 2/24/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

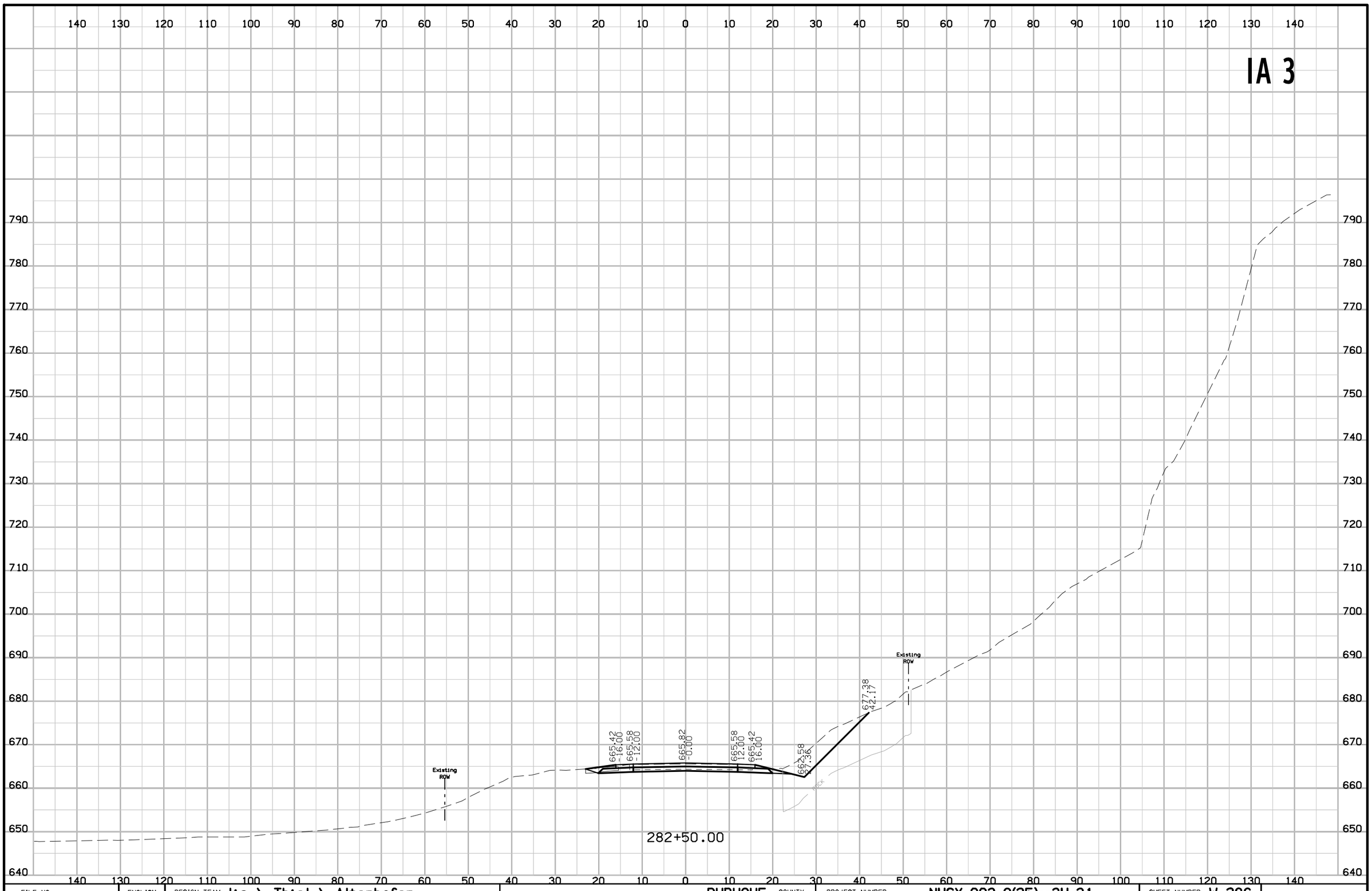
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.285

10:44:51 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

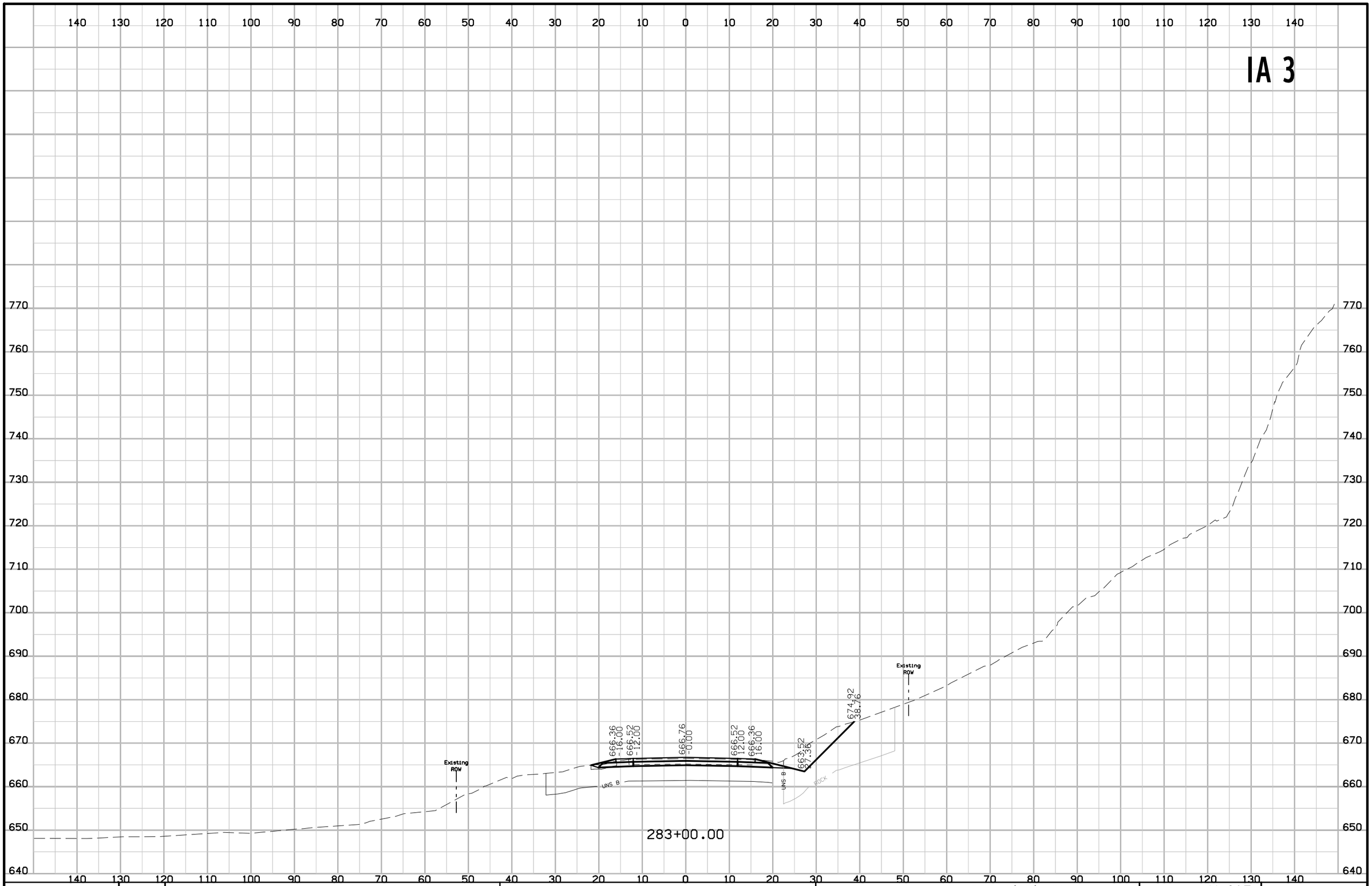
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.286

10:44:52 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

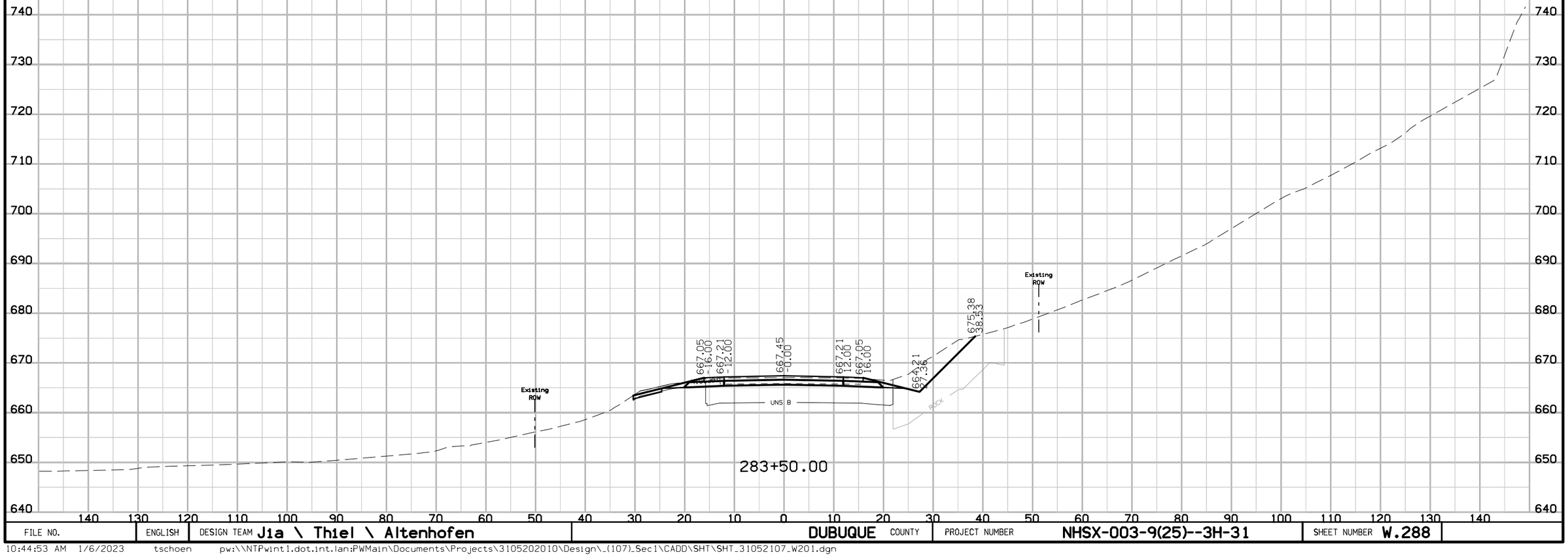
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.287

10:44:52 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

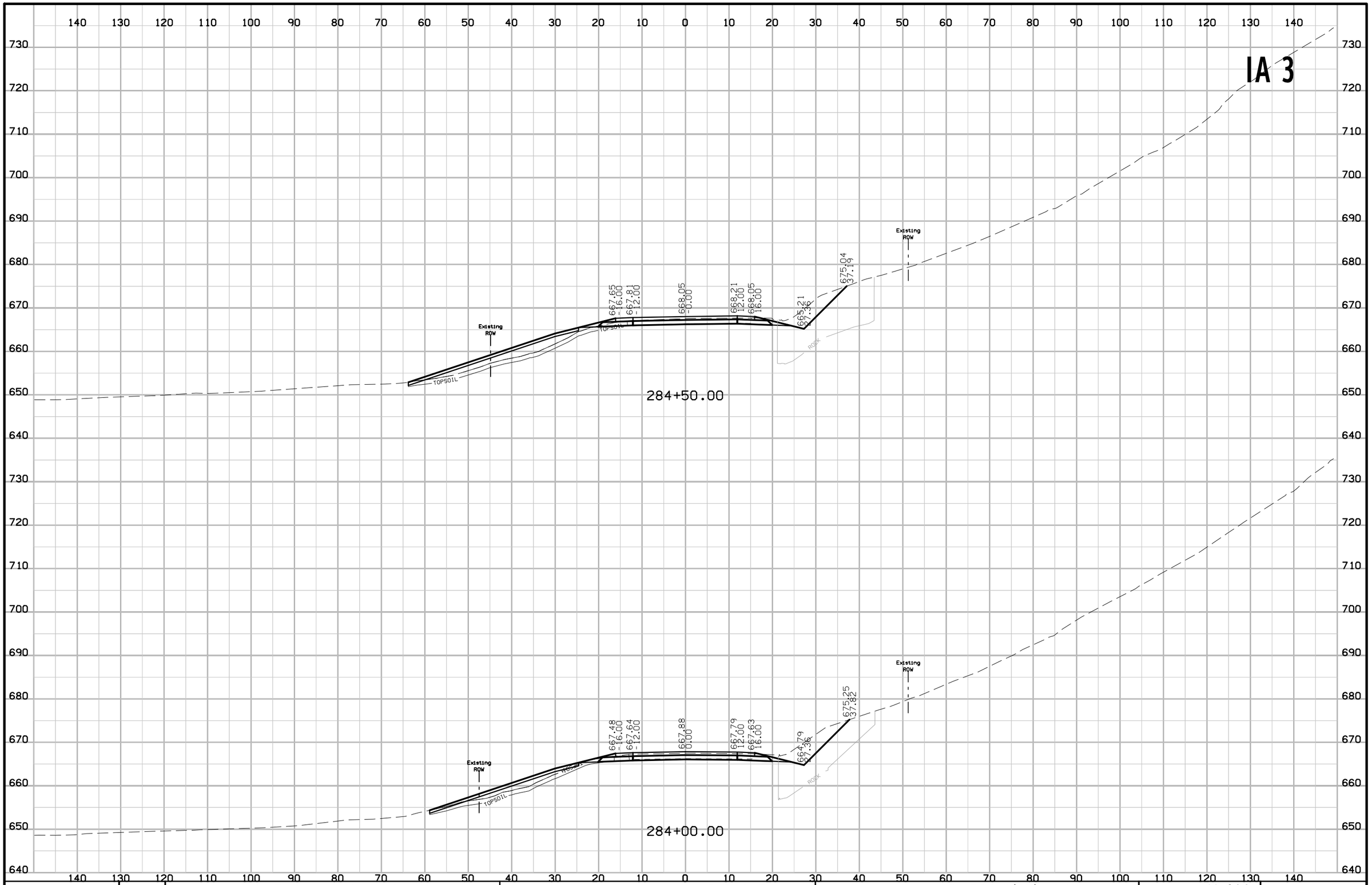
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.288

10:44:53 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

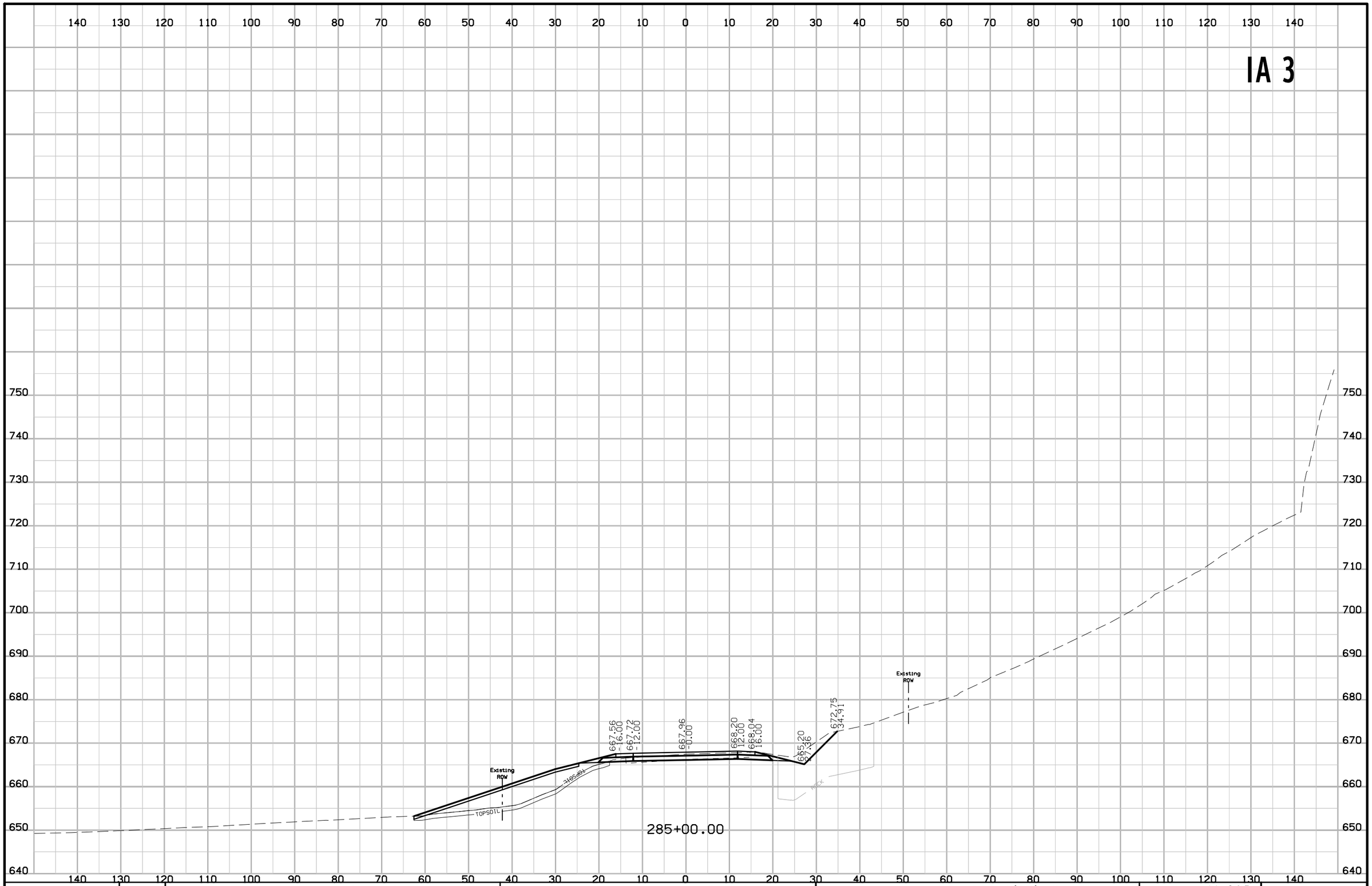
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.289

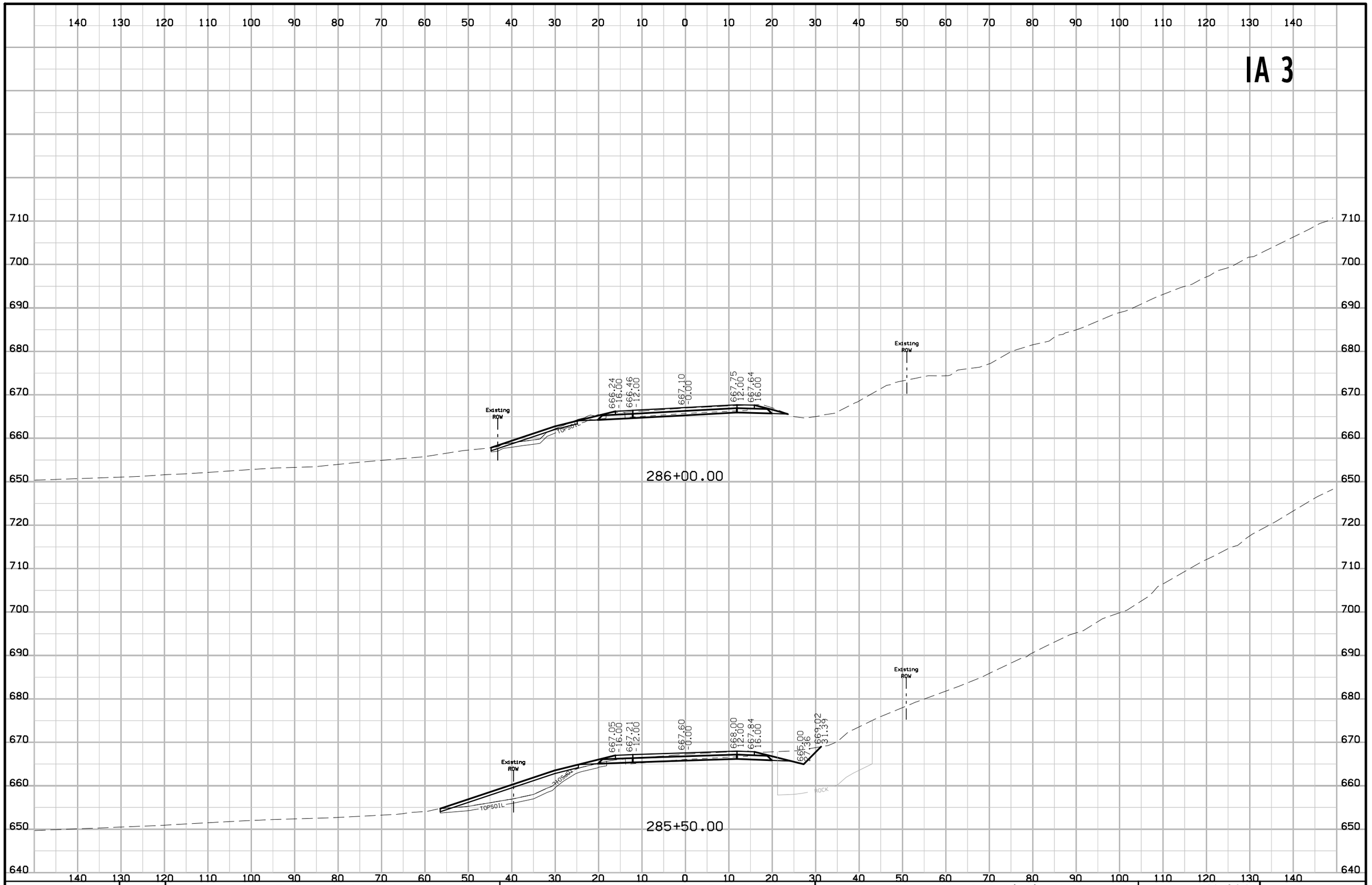
10:44:54 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.290

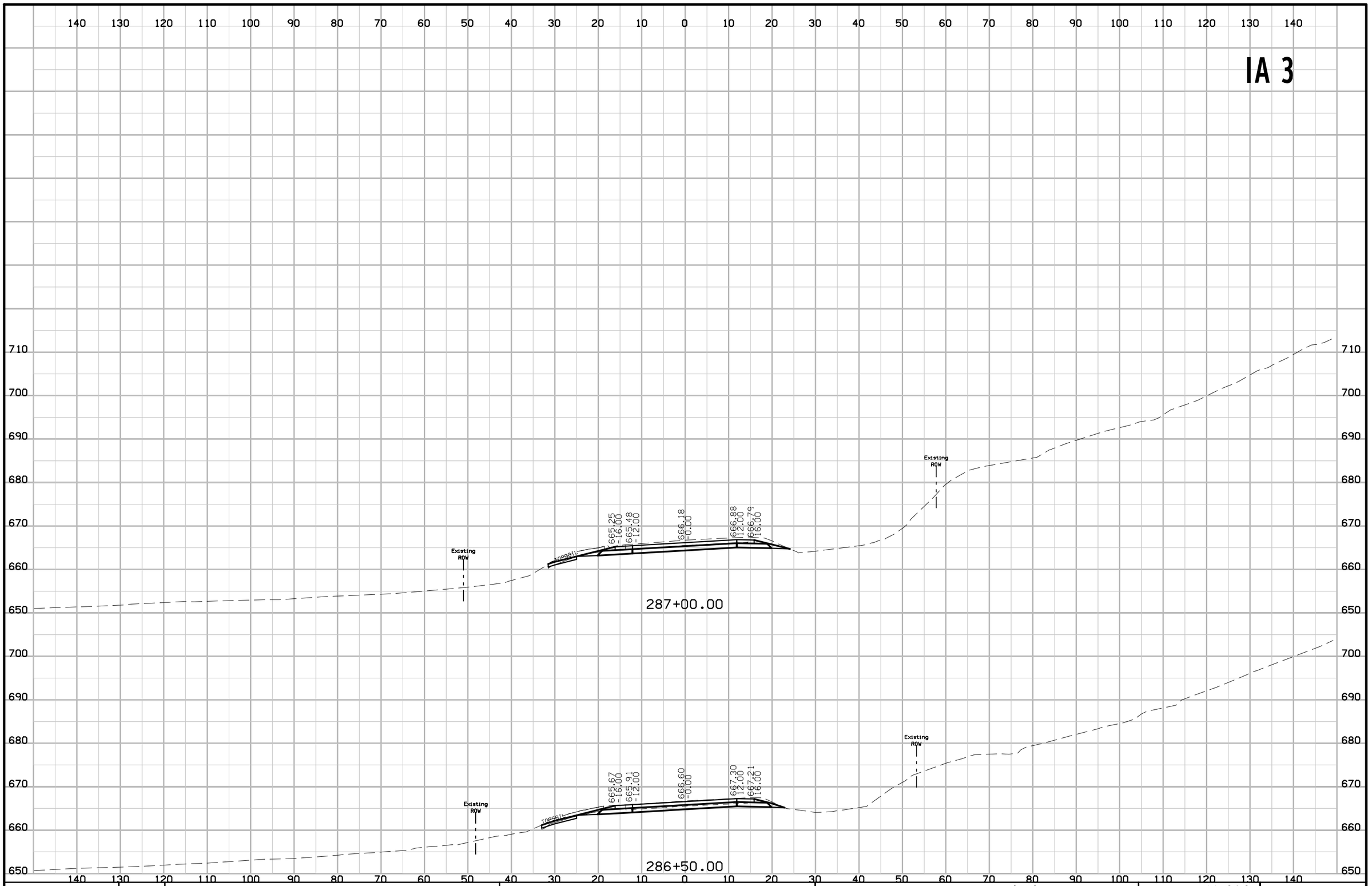
10:44:55 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.291

10:44:56 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

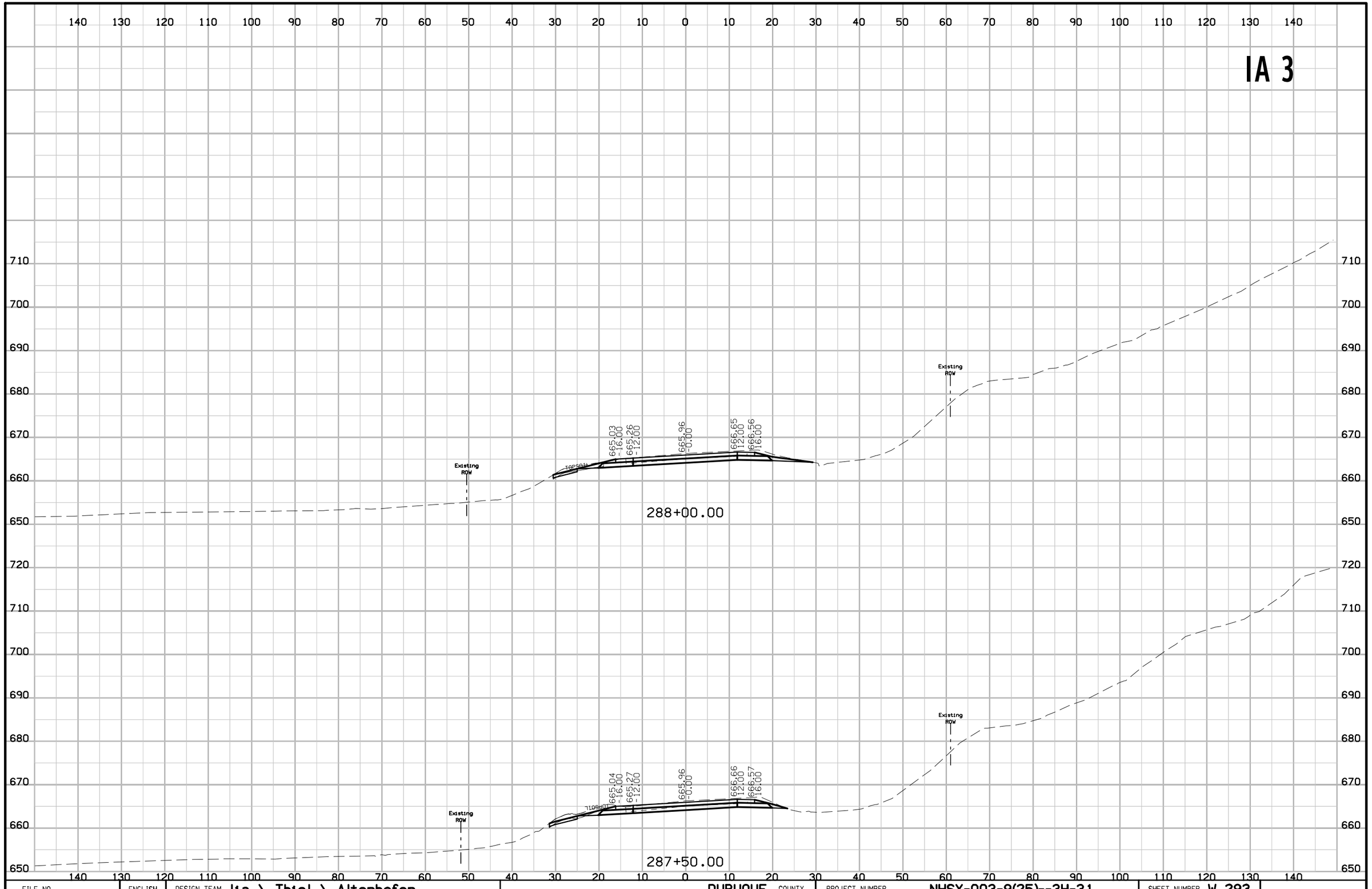
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.292

10:44:56 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

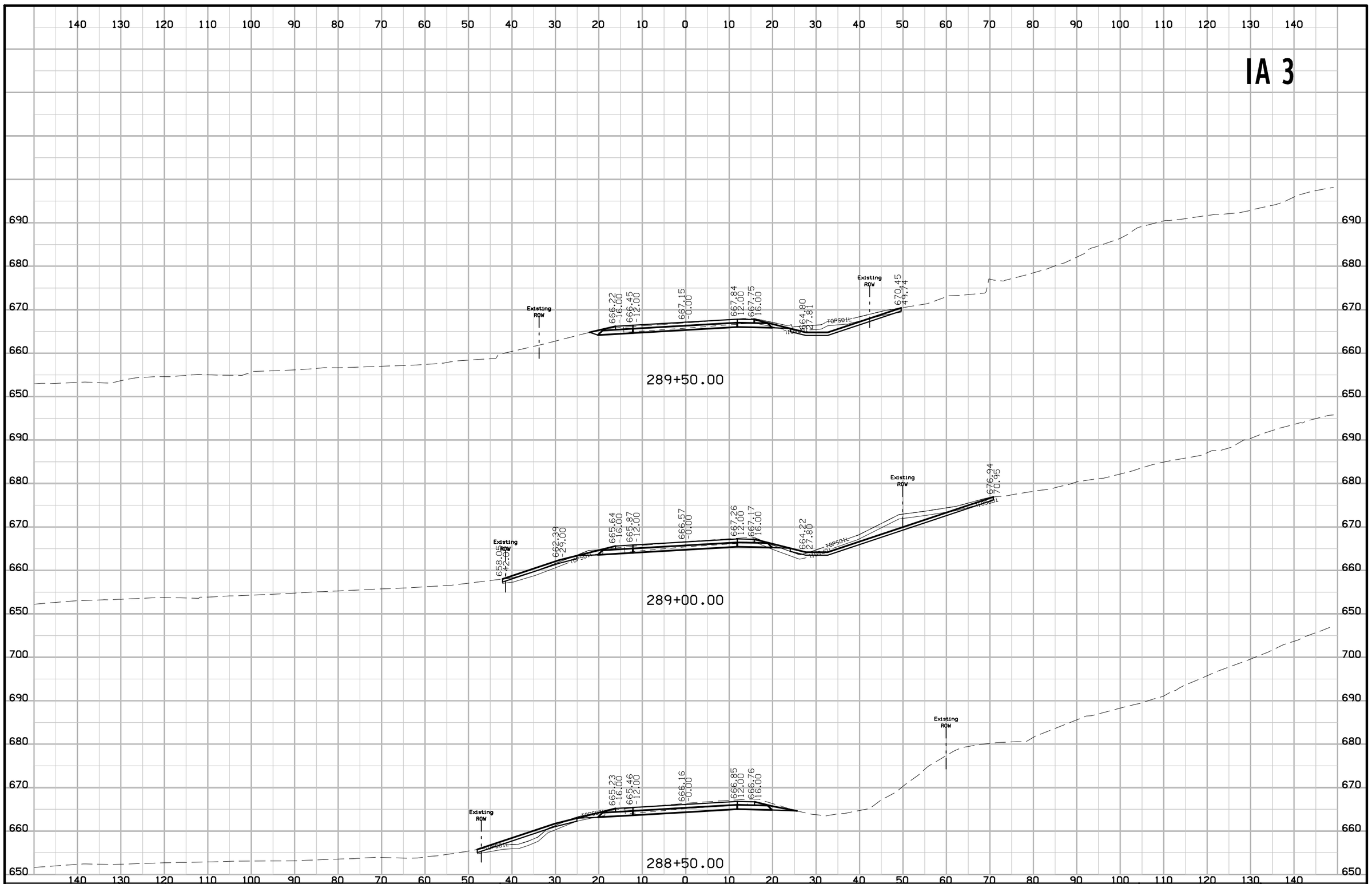
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.293

10:44:57 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

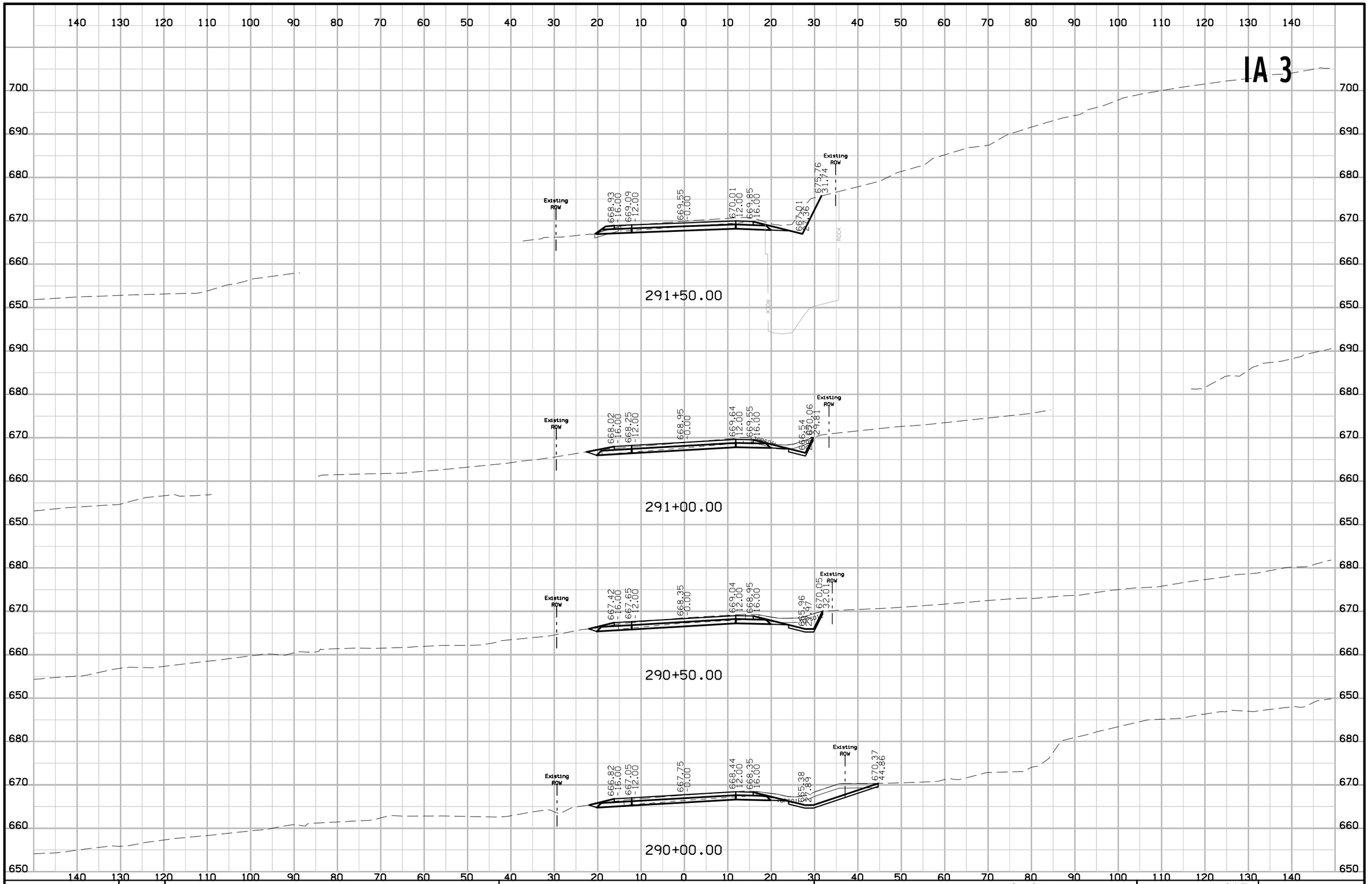
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.294

10:44:58 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

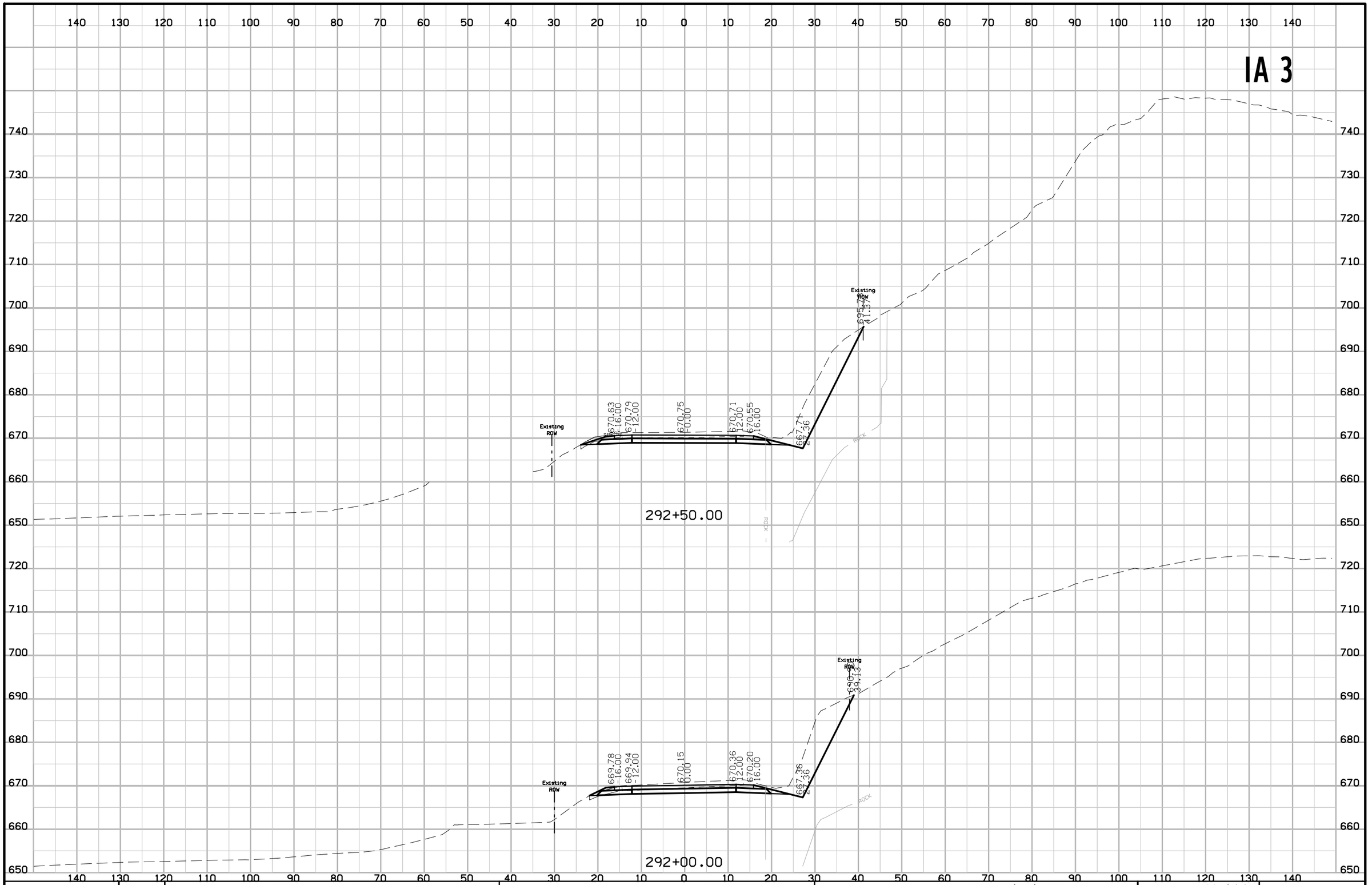
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.295

10:44:59 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

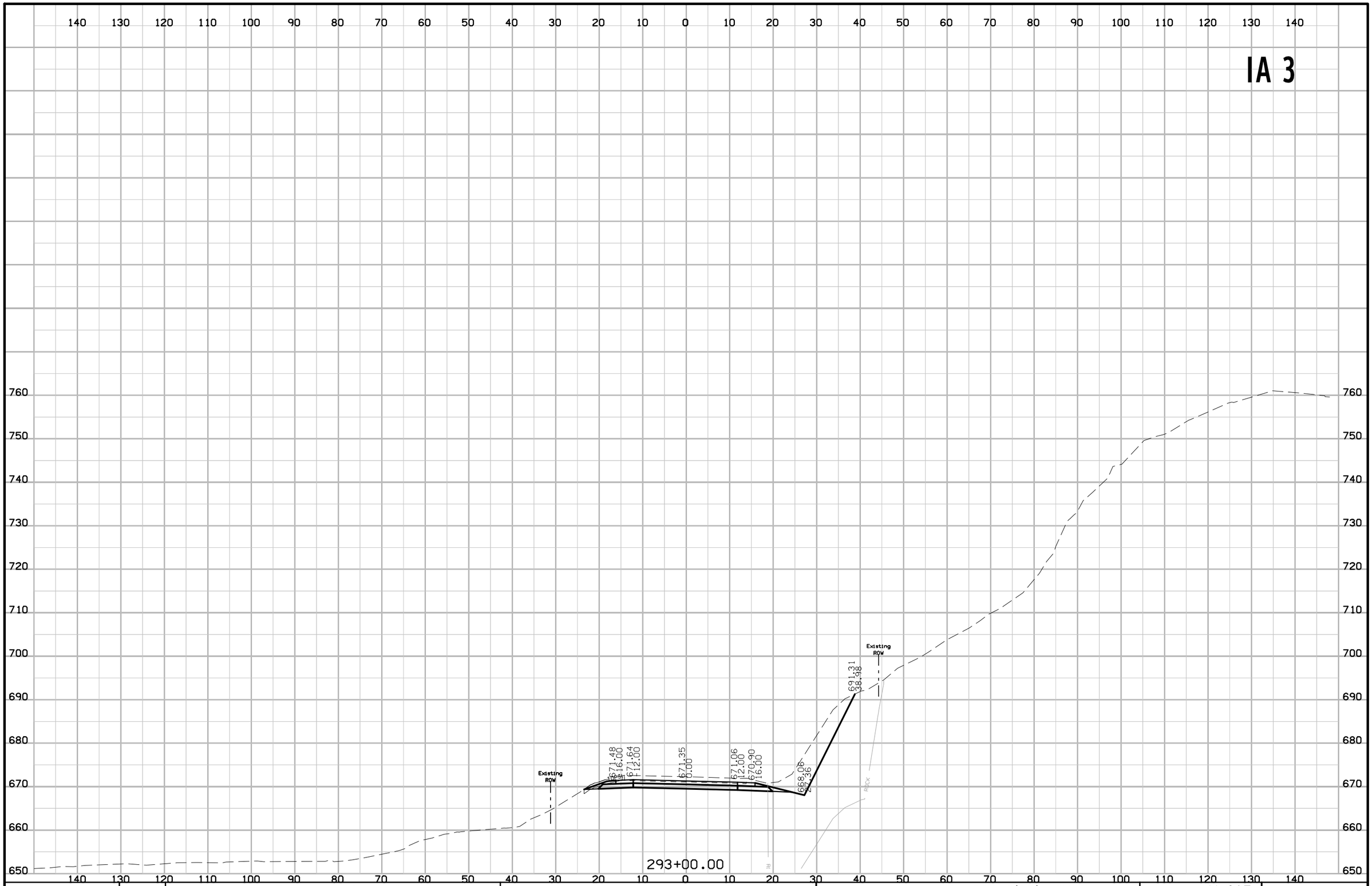
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.296

10:45:00 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

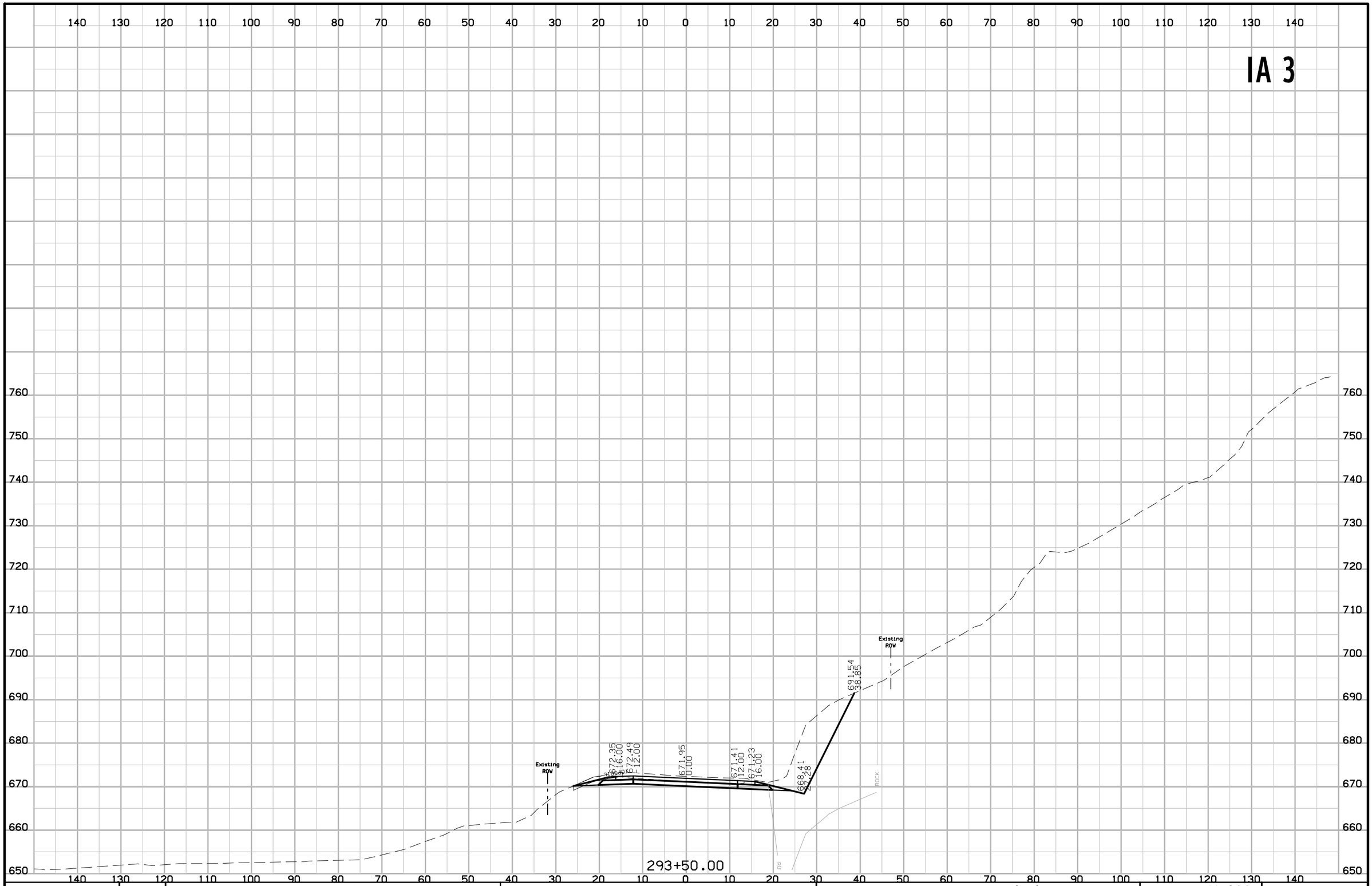
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.297

10:45:00 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

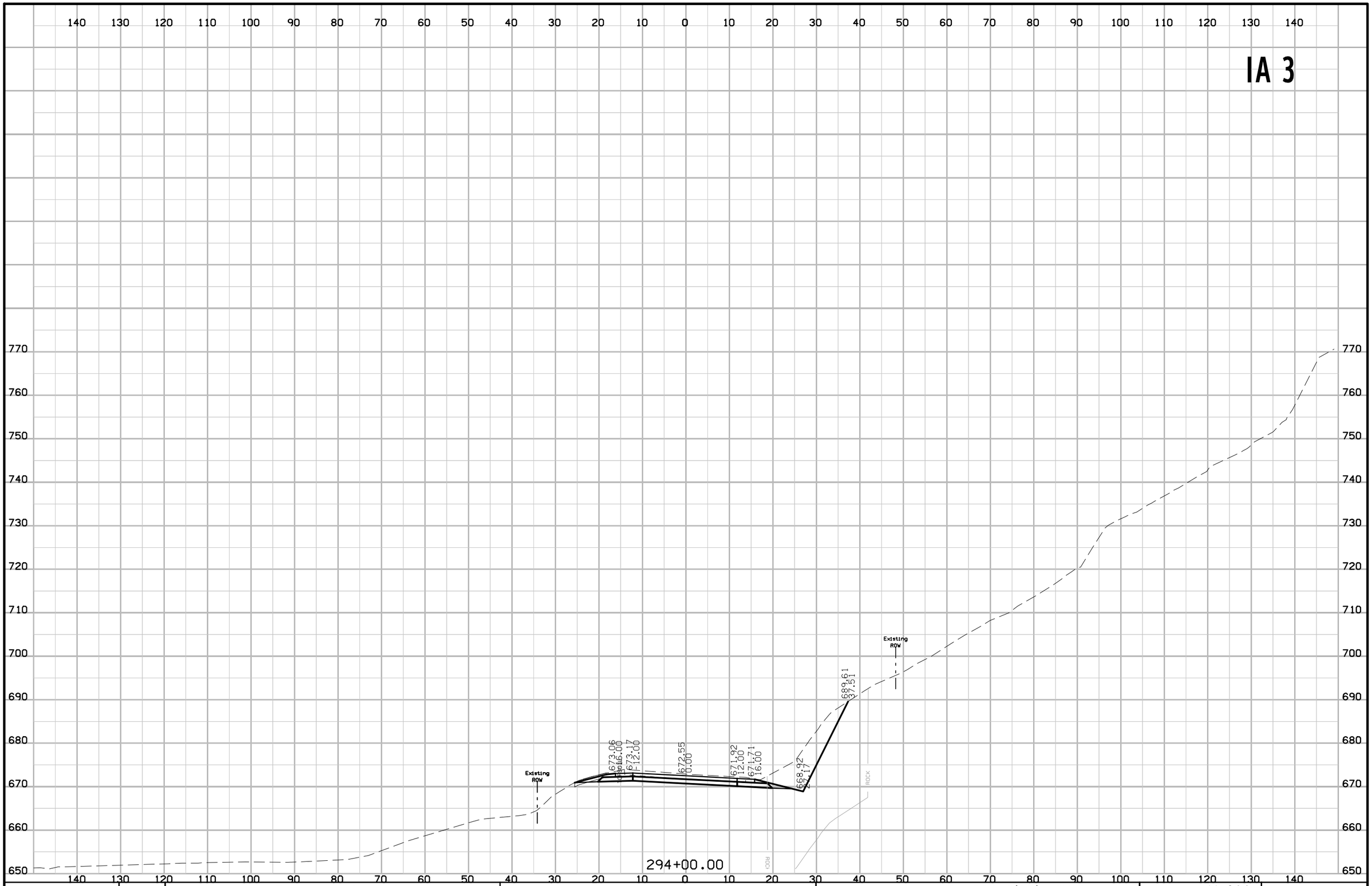
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.298

10:45:01 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

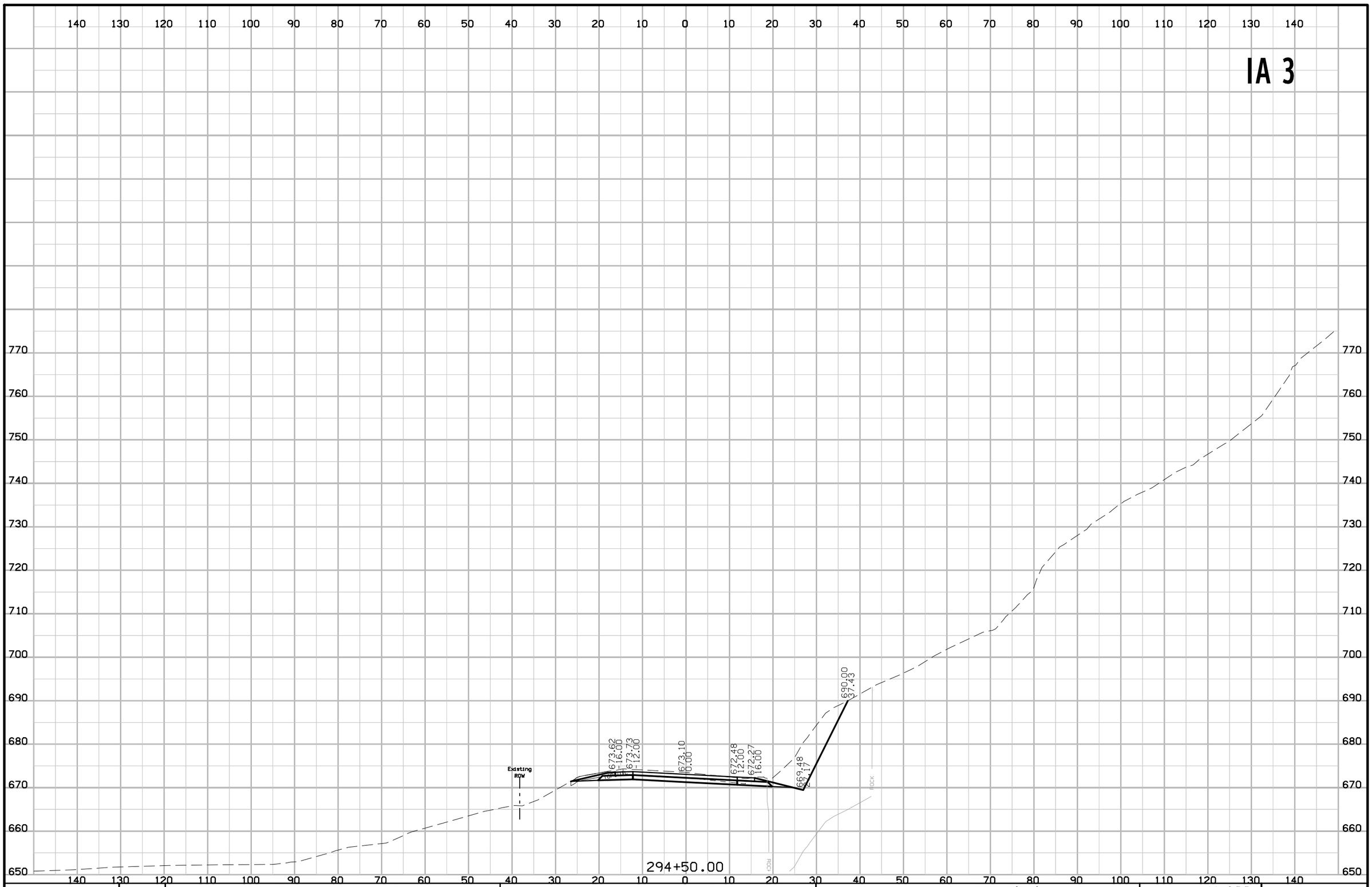
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.299

10:45:02 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

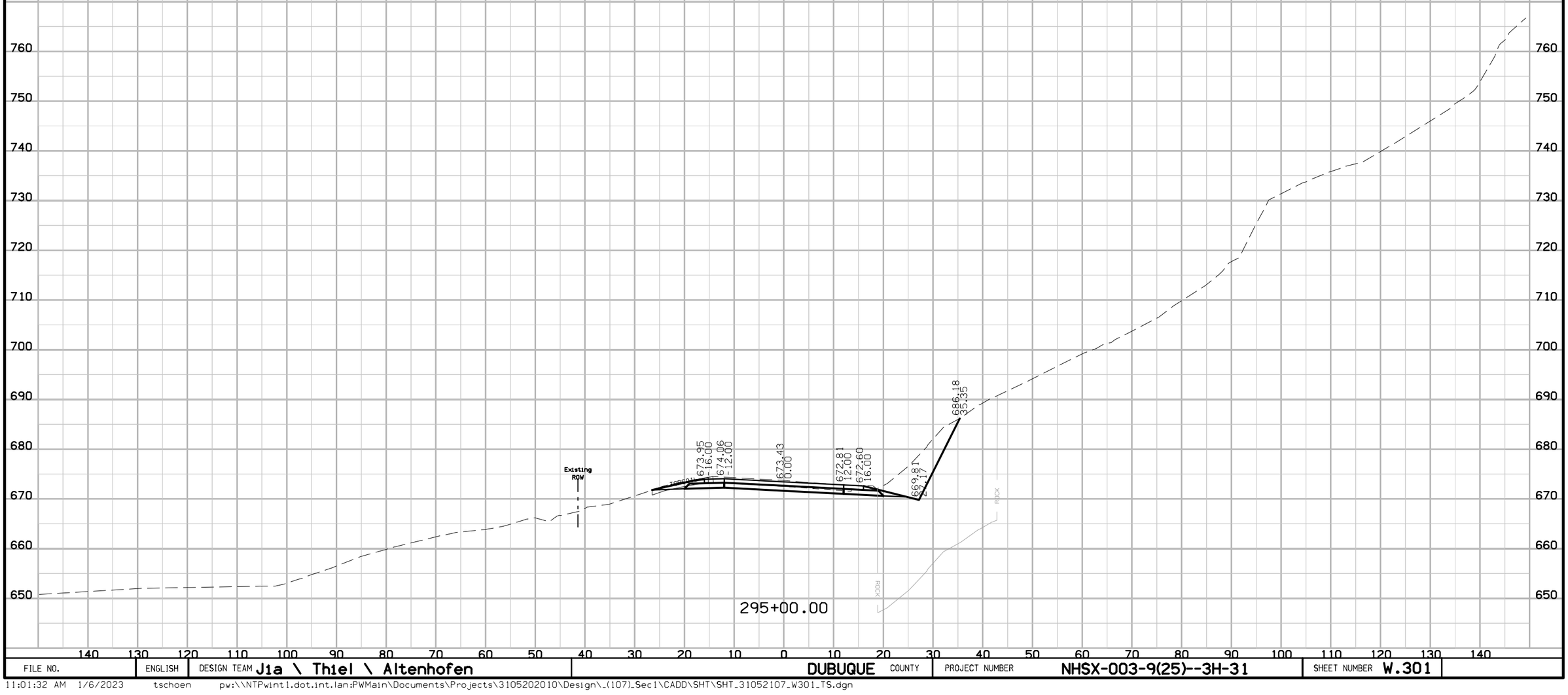
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.300

10:45:13 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W201.dgn

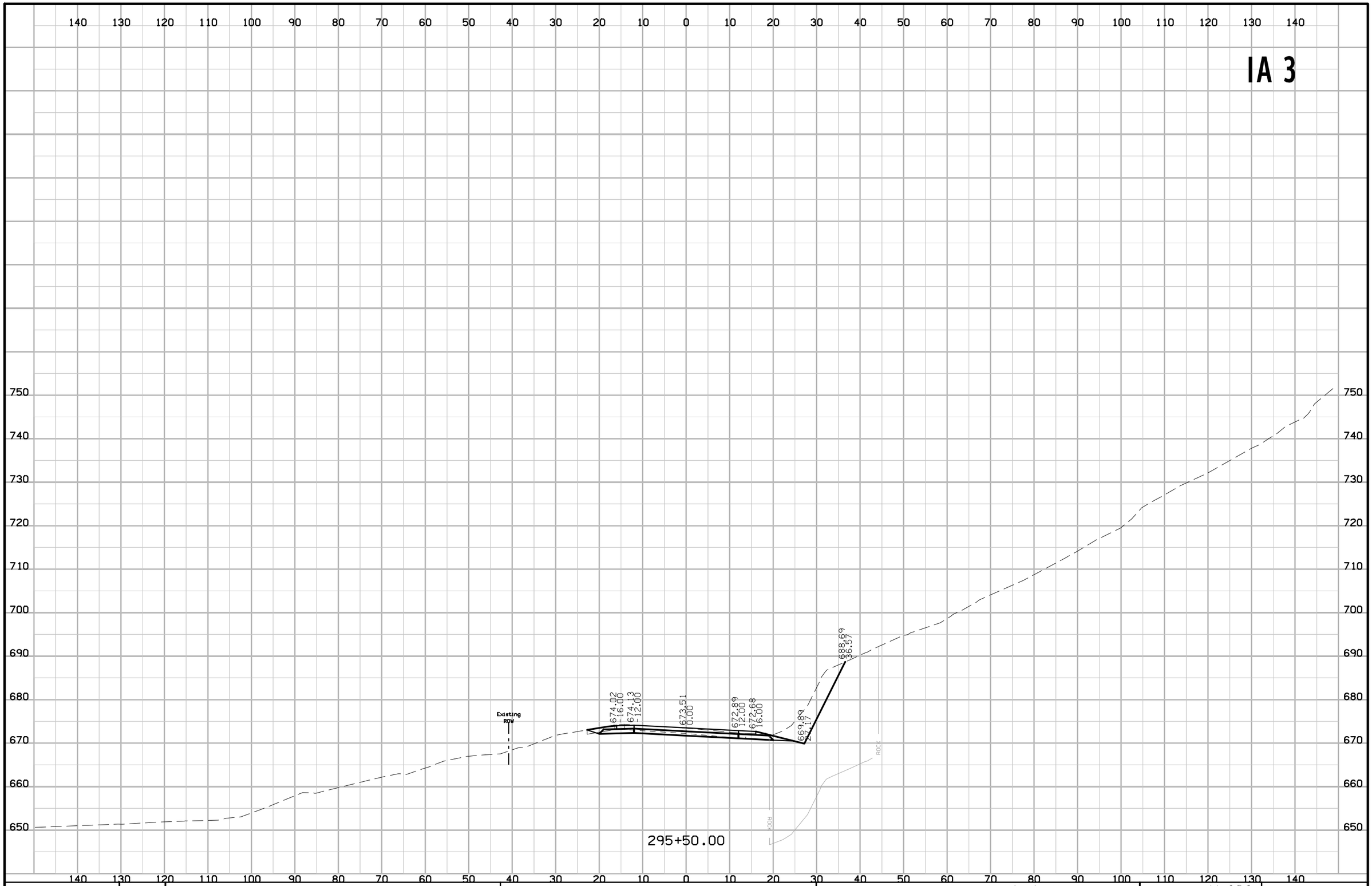
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.301

11:01:32 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

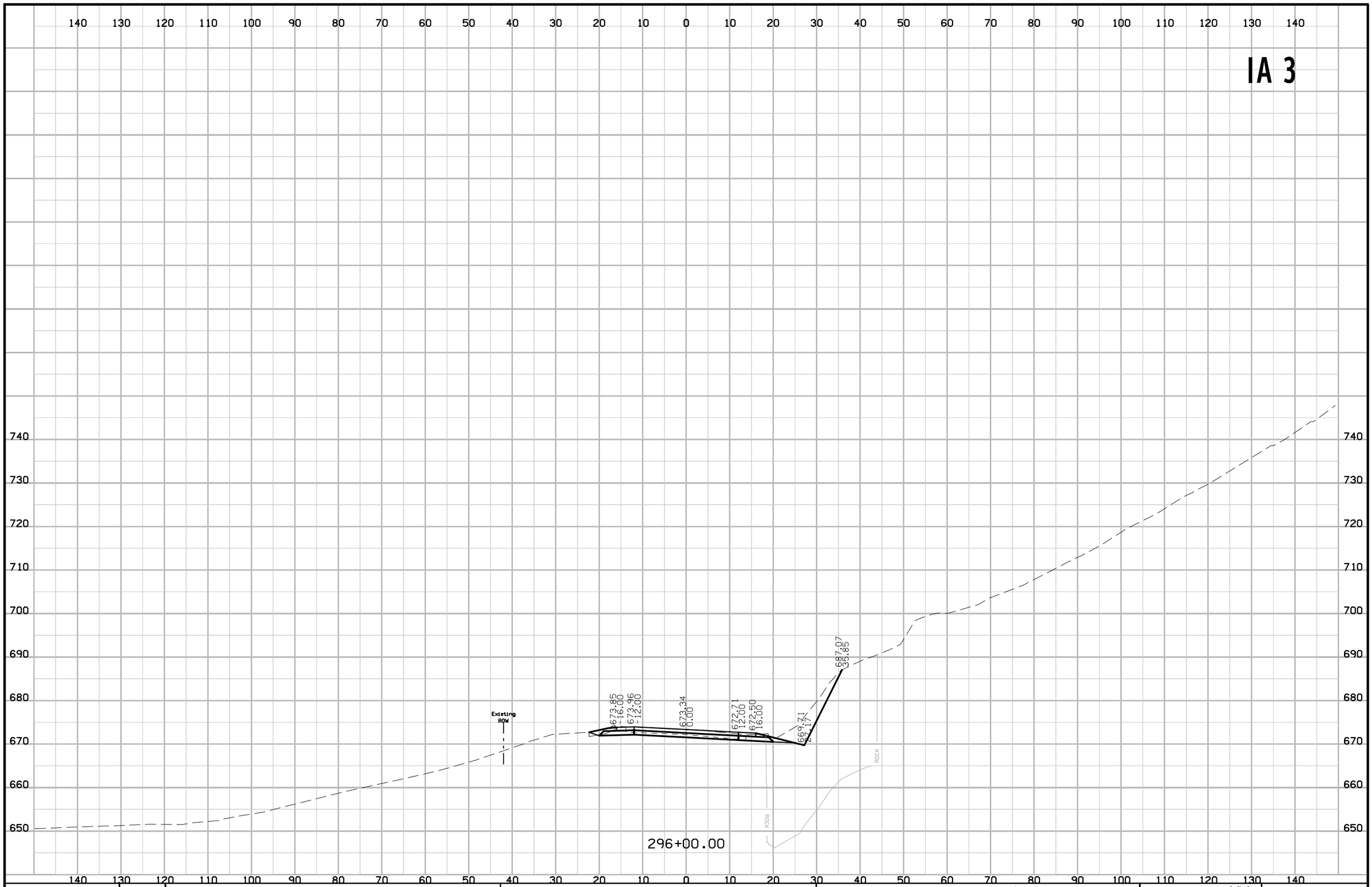
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.302

11:01:33 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

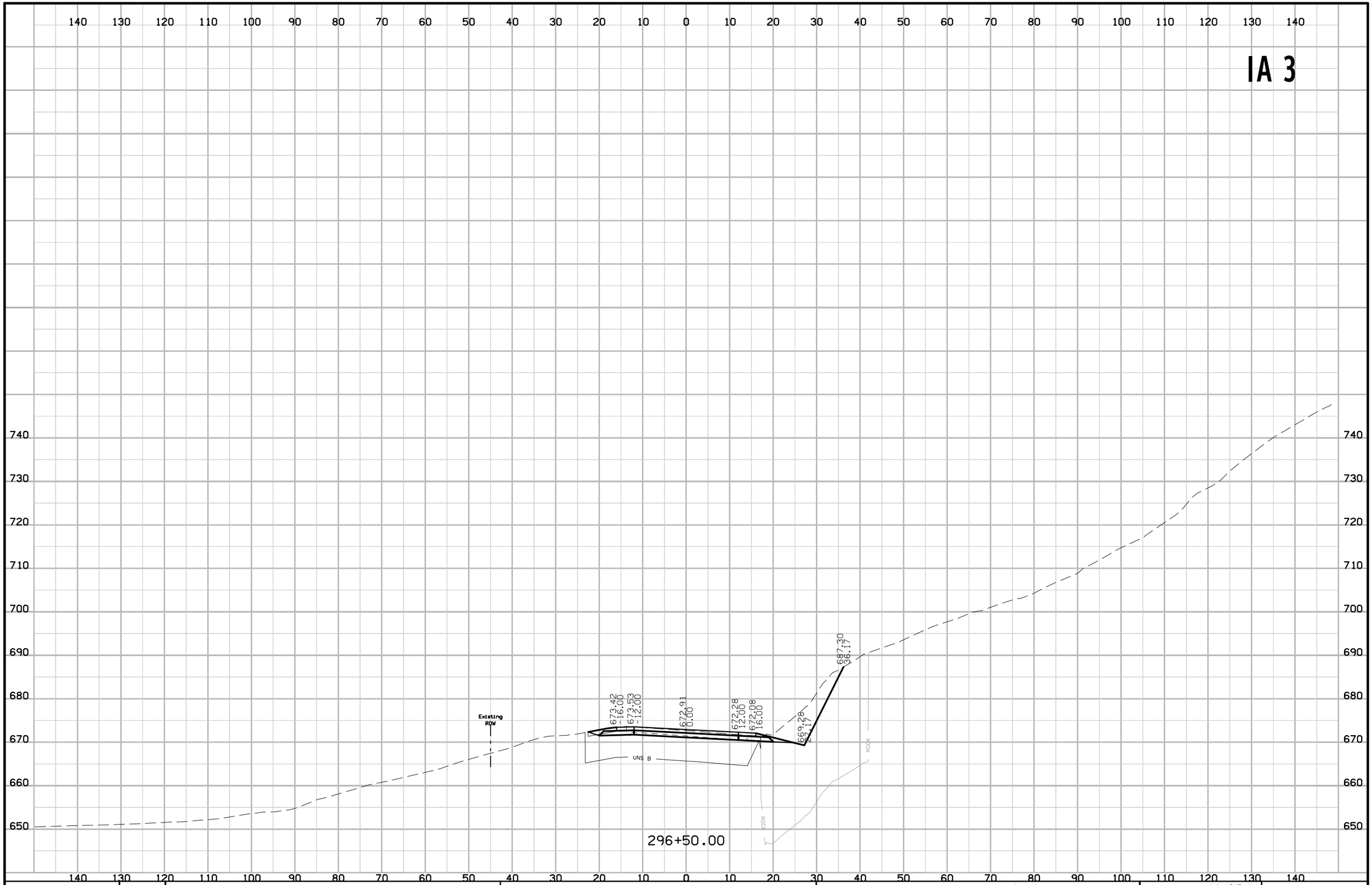
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.303

11:01:34 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

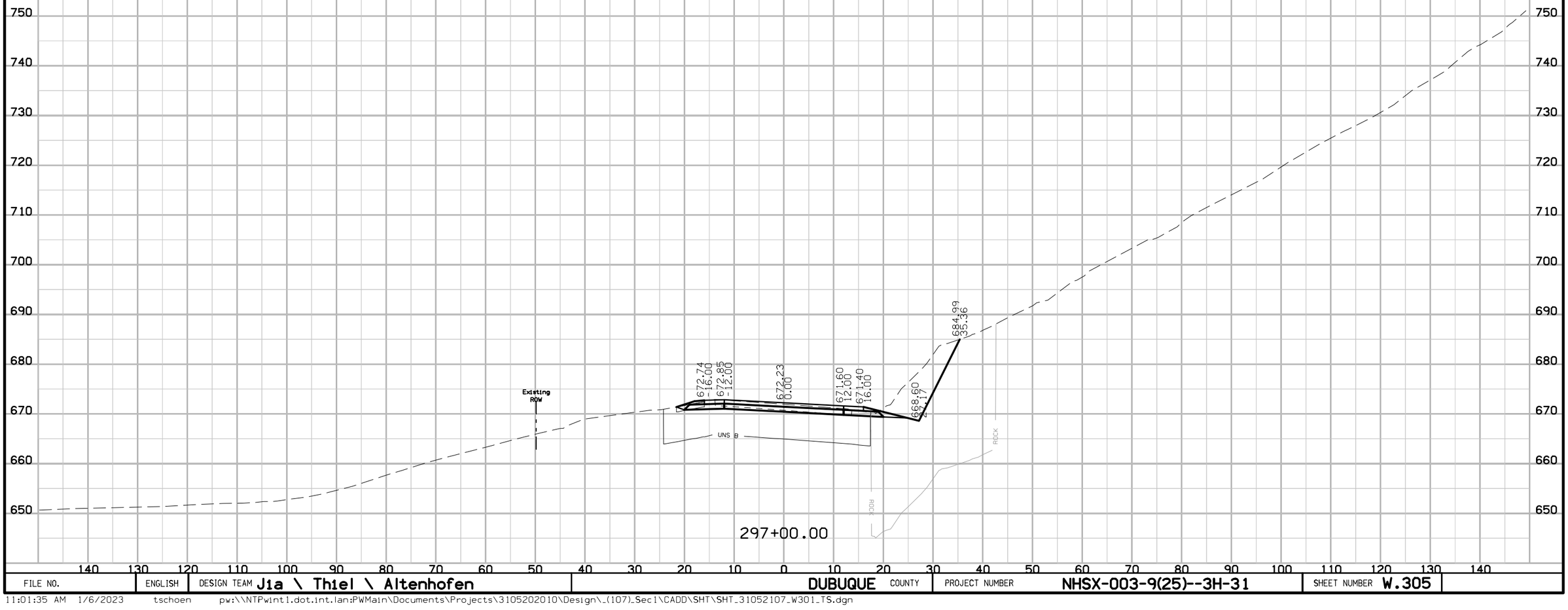
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.304

11:01:34 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



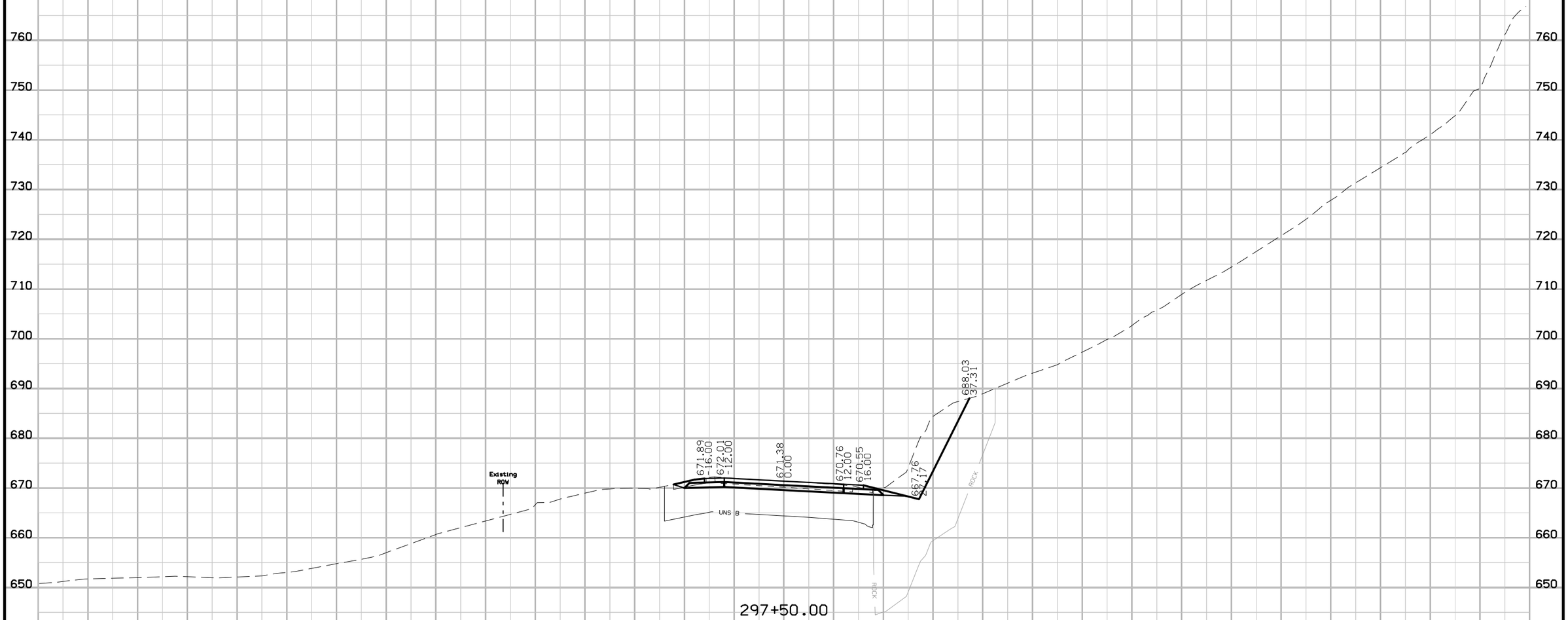
FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.305

11:01:35 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

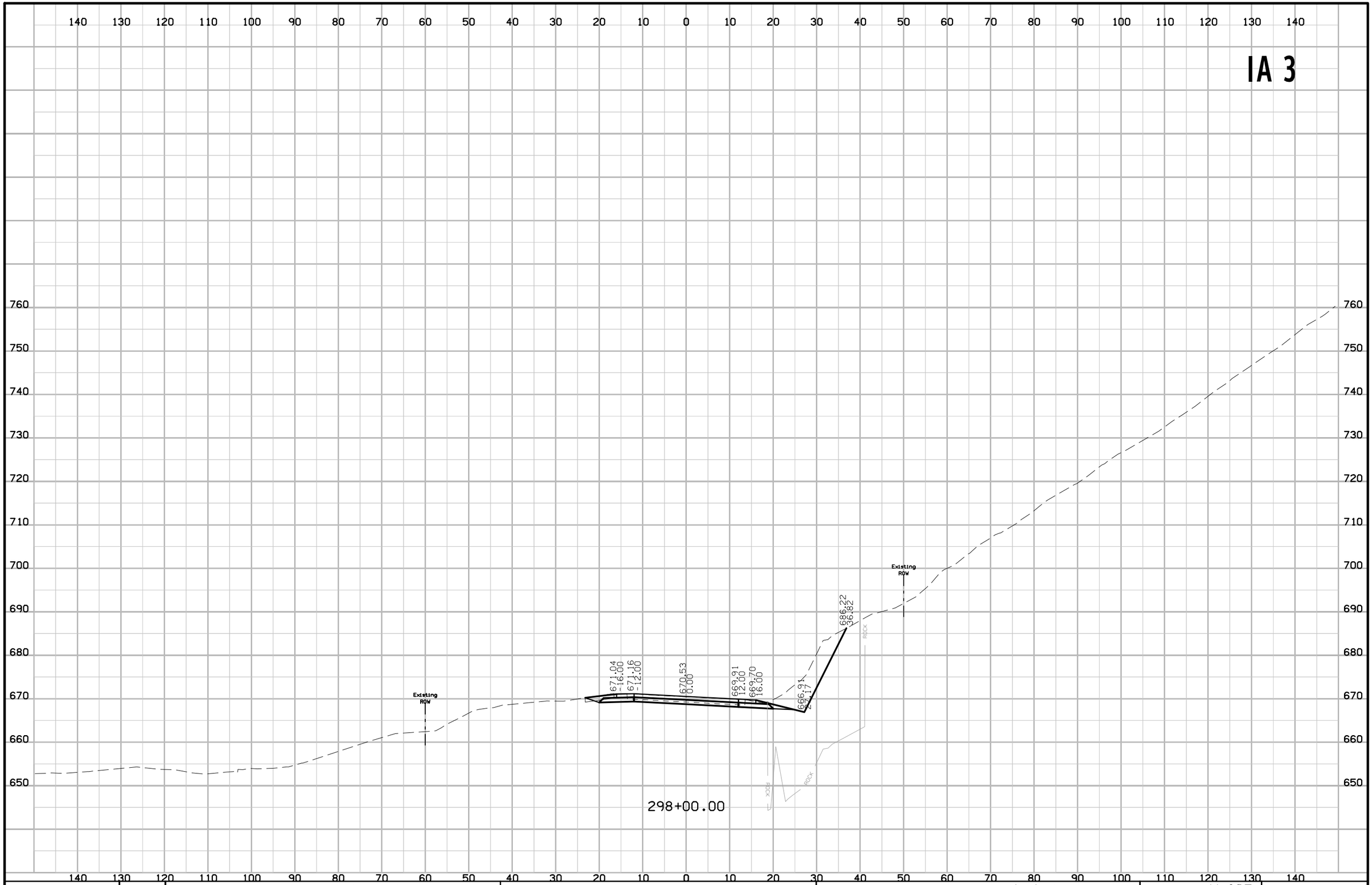
760 750 740 730 720 710 700 690 680 670 660 650



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.306

11:01:36 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

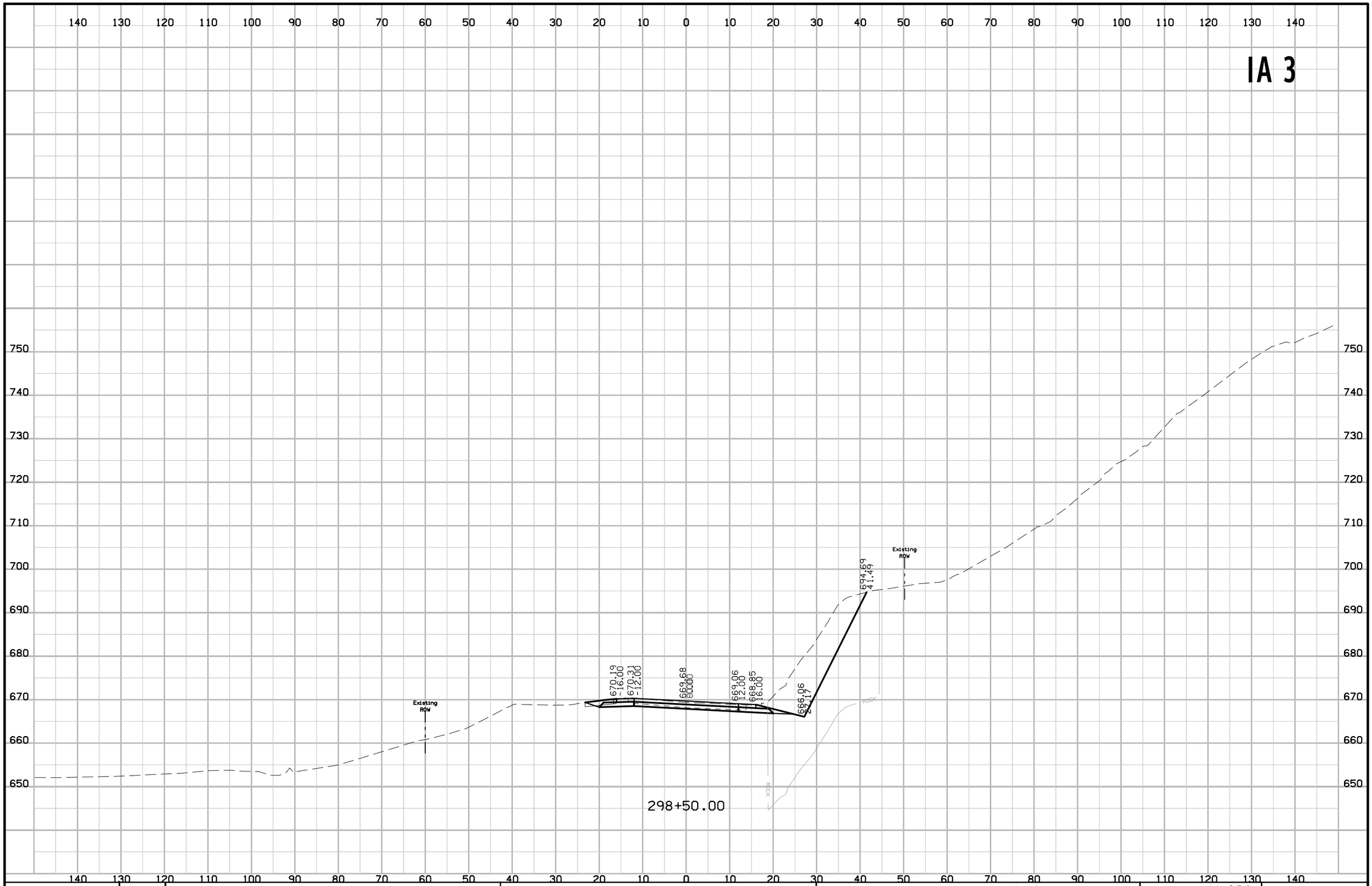
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.307

11:01:36 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

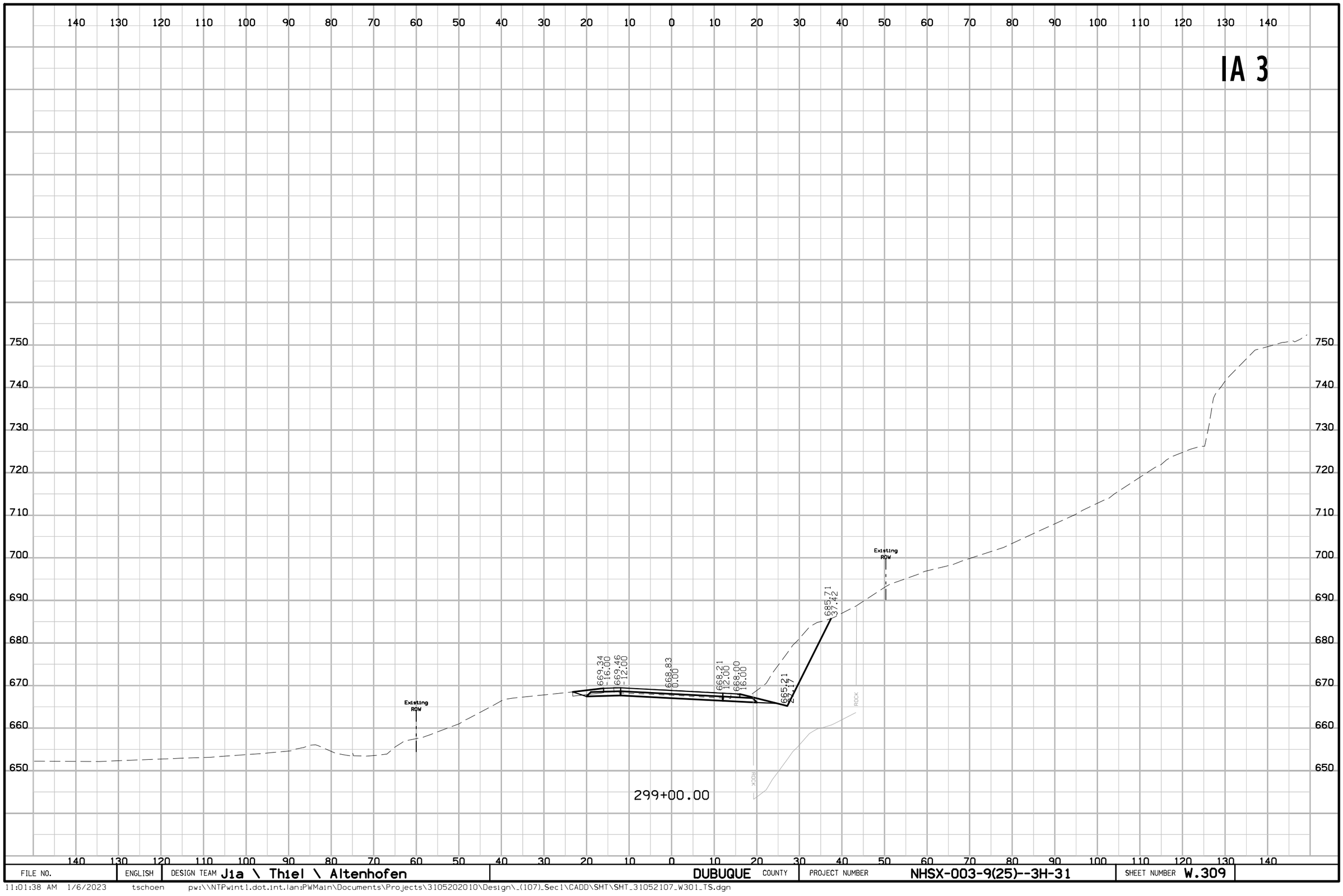
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.308

11:01:37 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

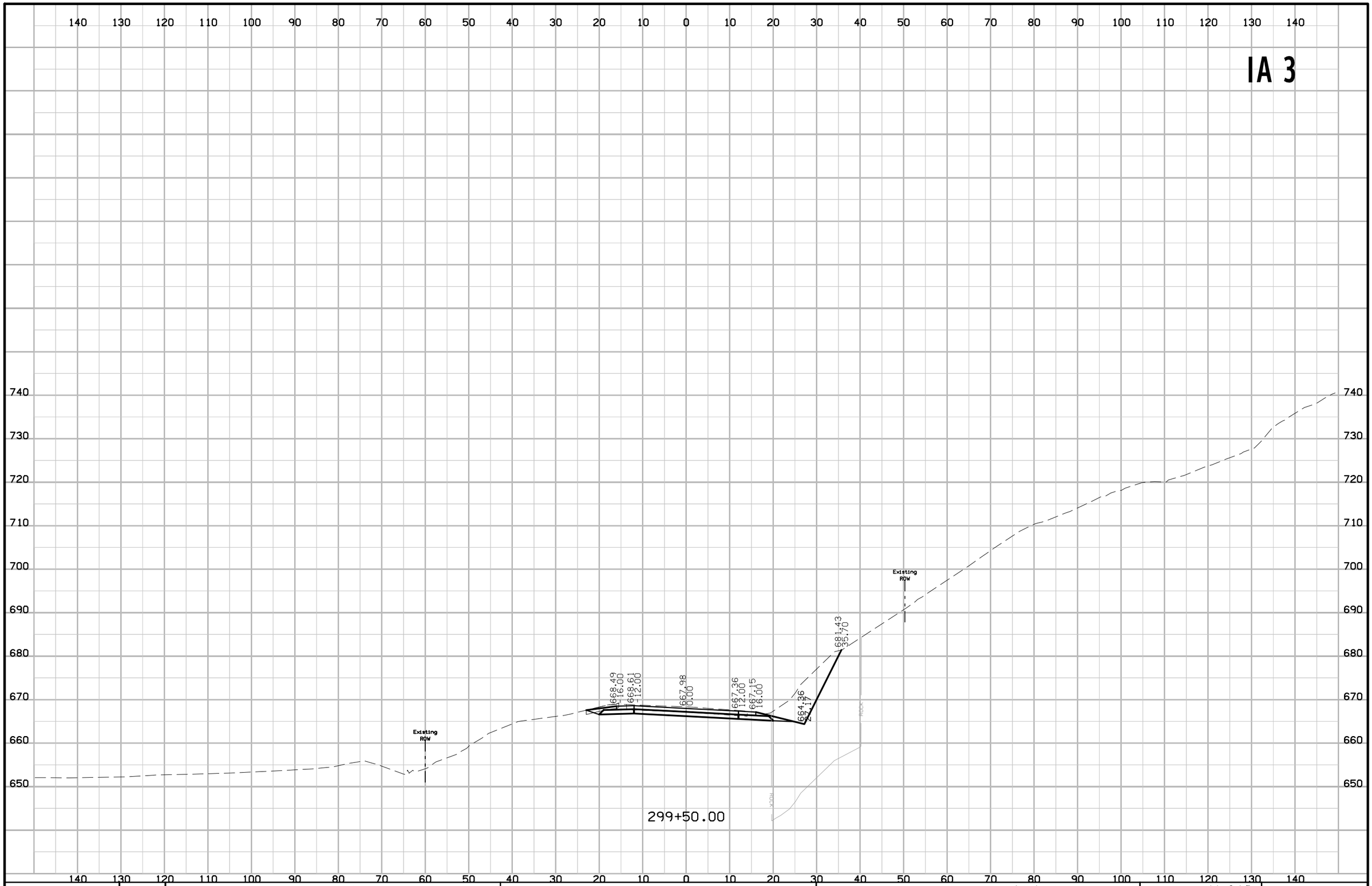
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.309

11:01:38 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

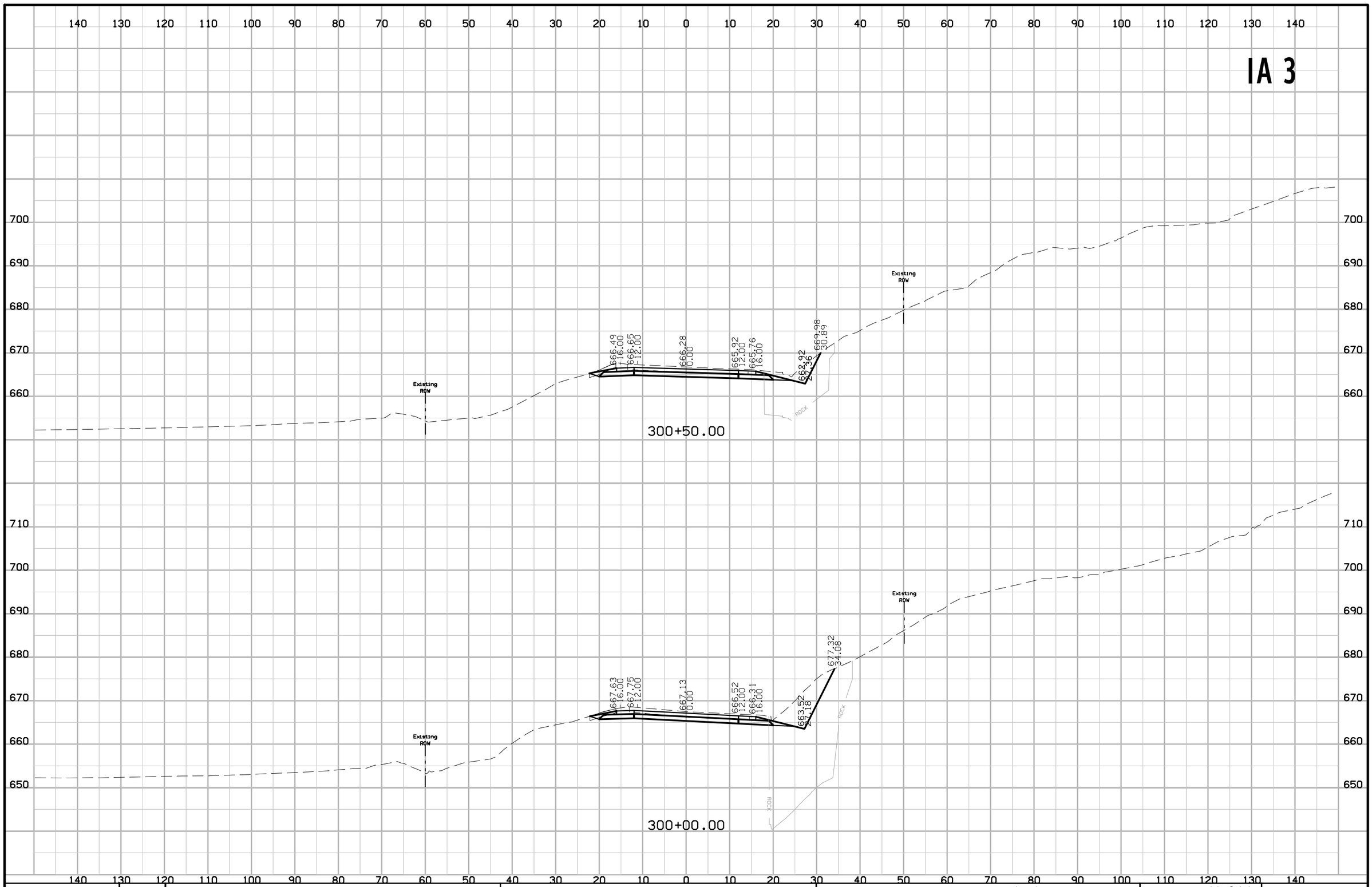
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.310

11:01:38 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

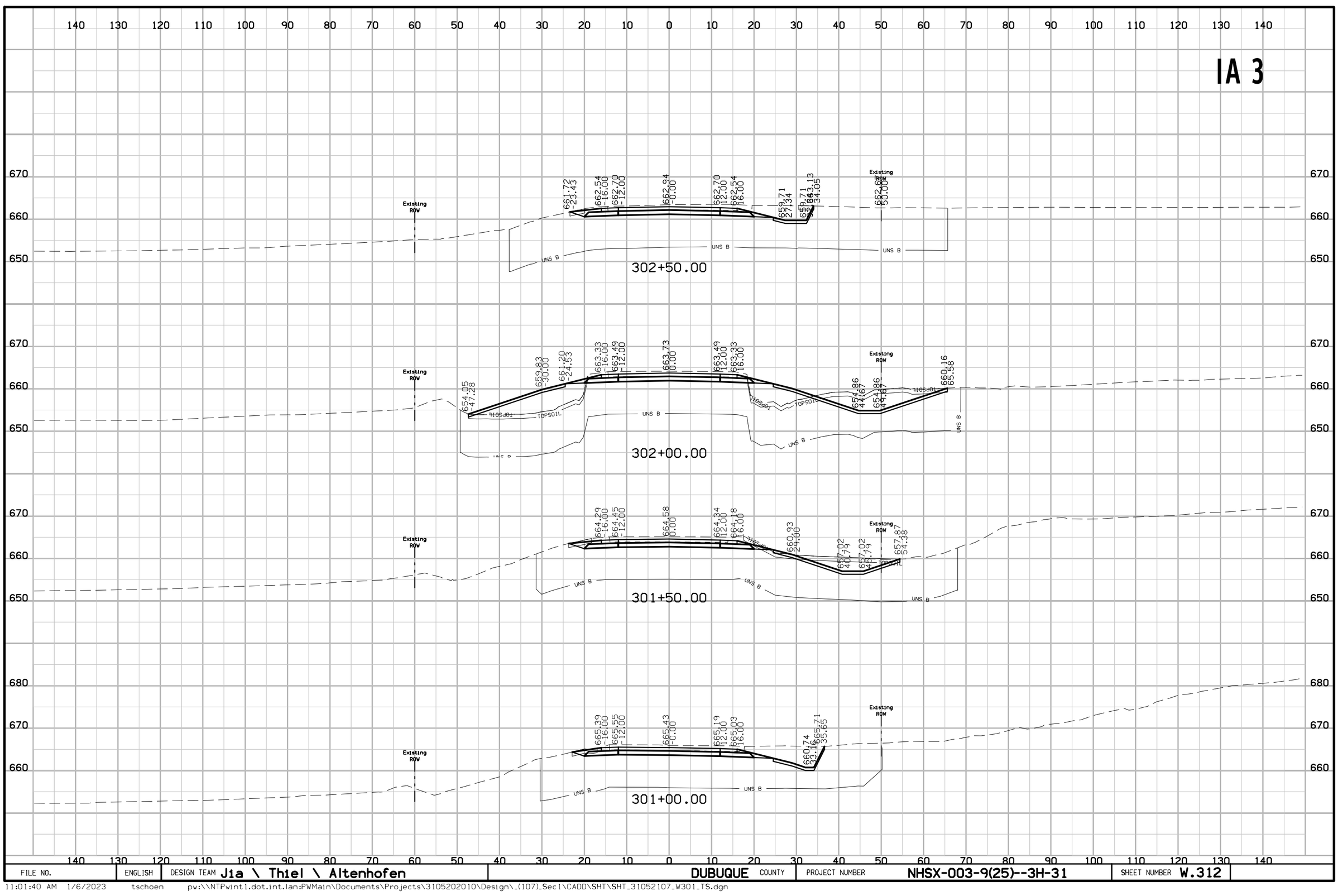
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.311

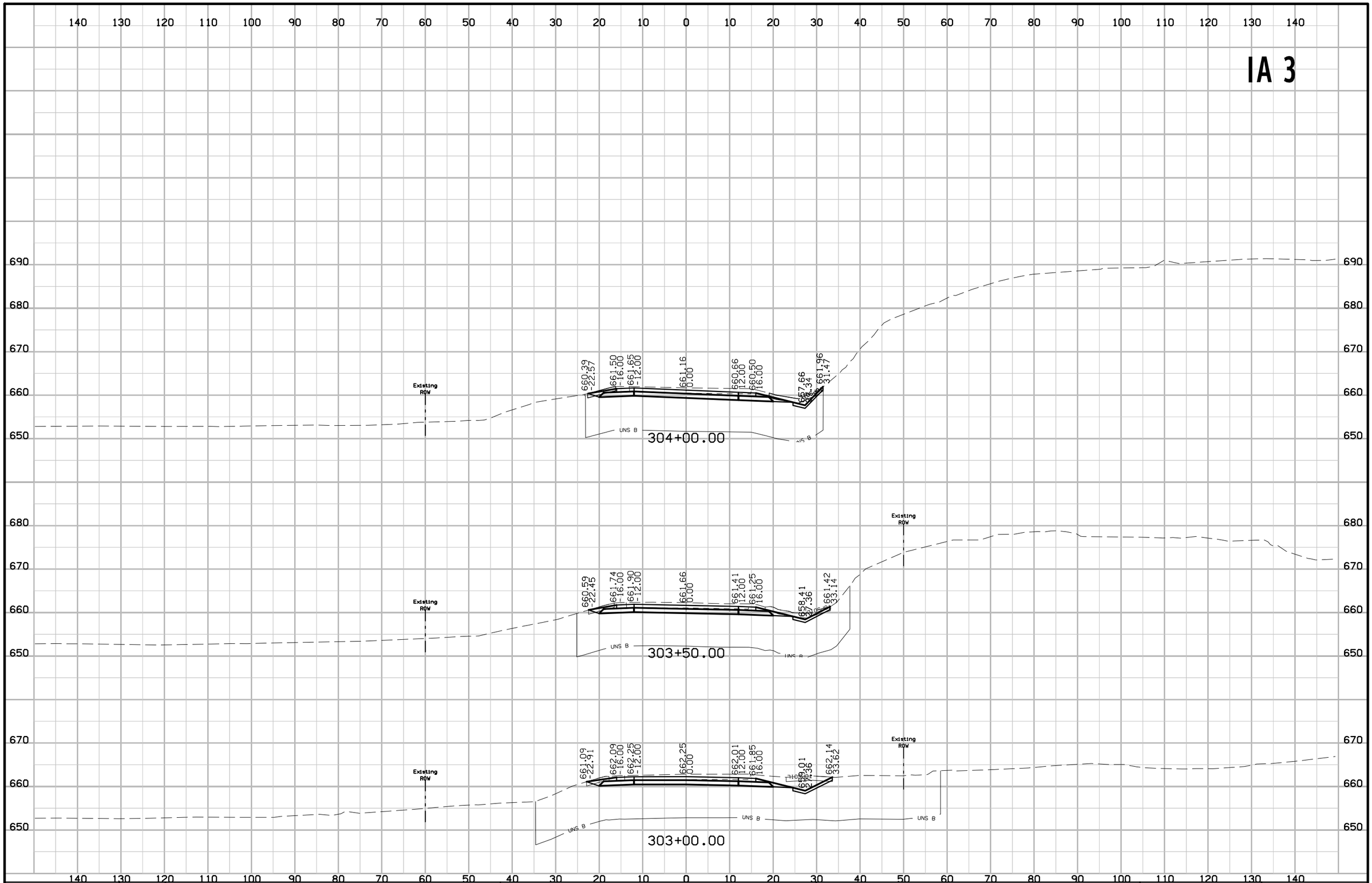
11:01:39 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.312

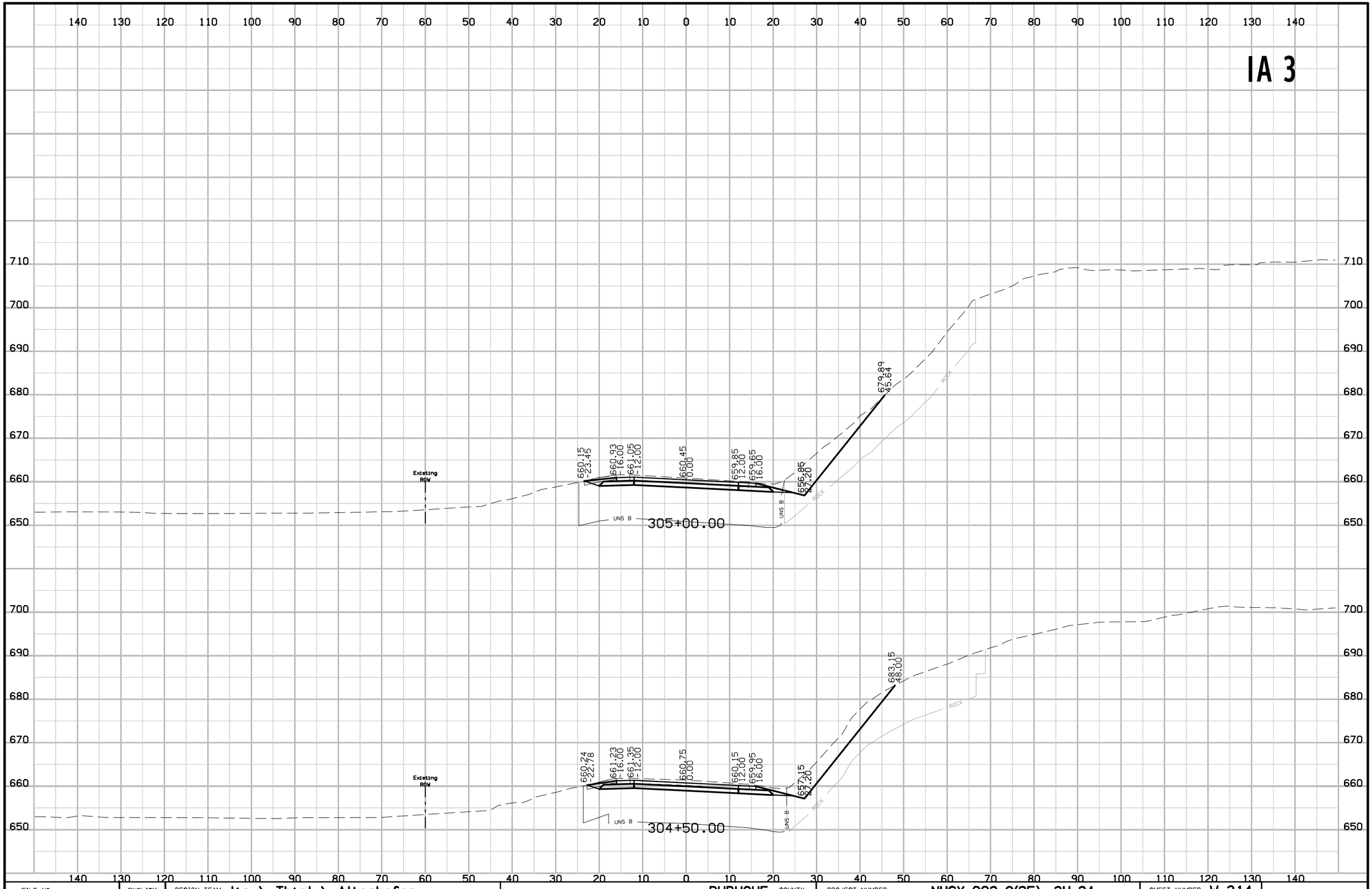
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.313

11:01:40 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

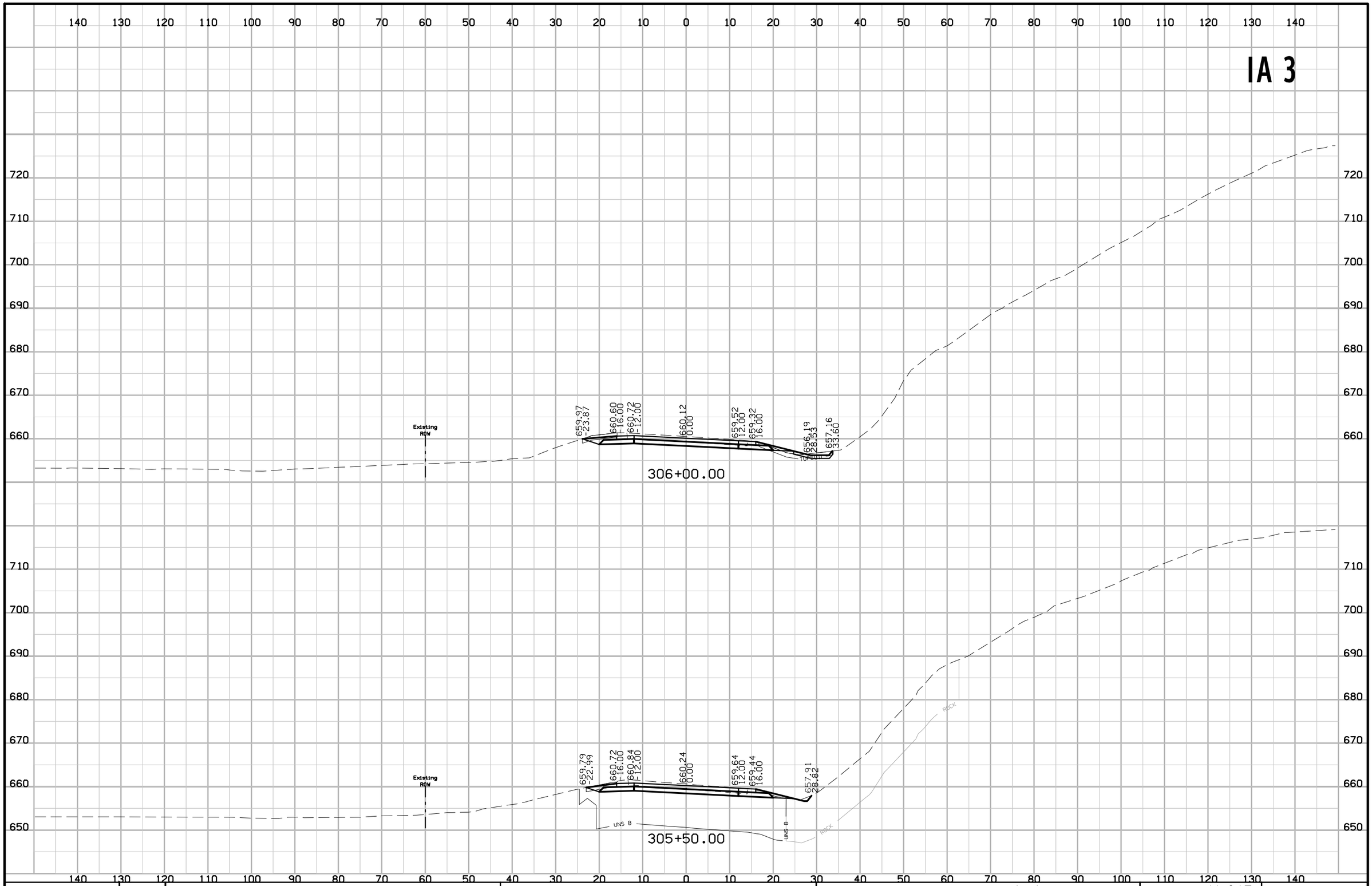
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.314

11:01:41 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

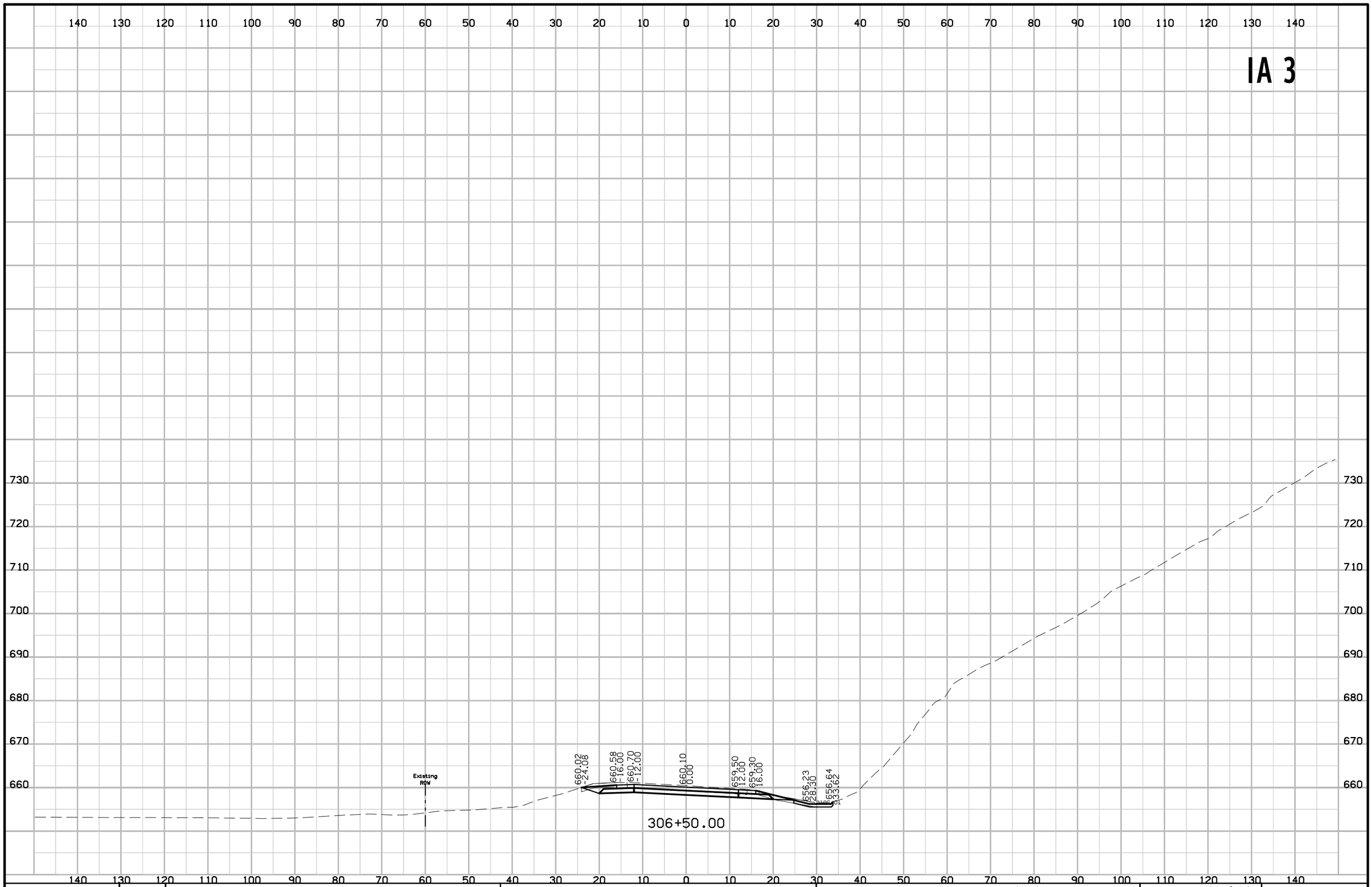
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.315

11:01:42 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

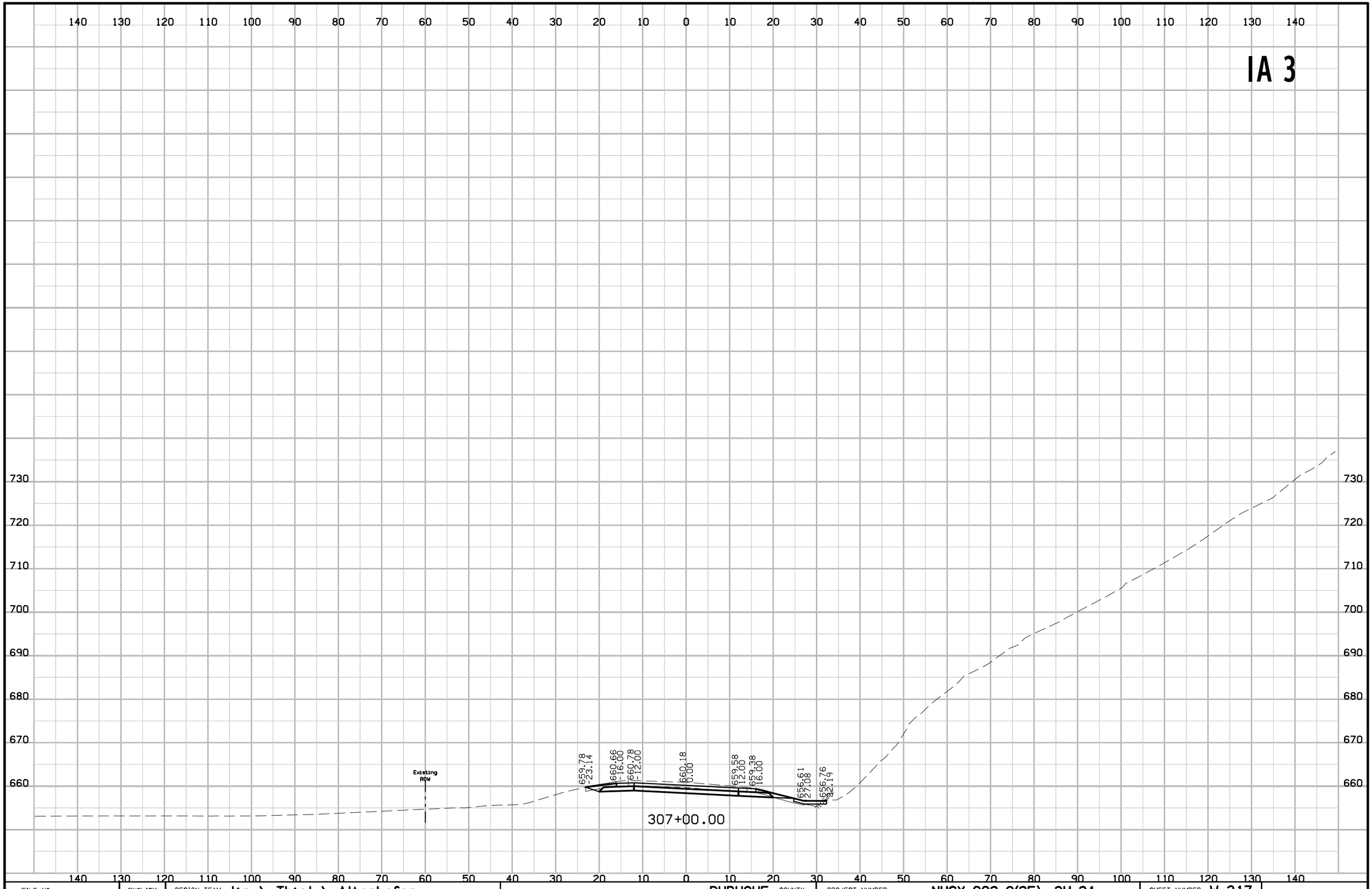
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.316

11:01:52 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

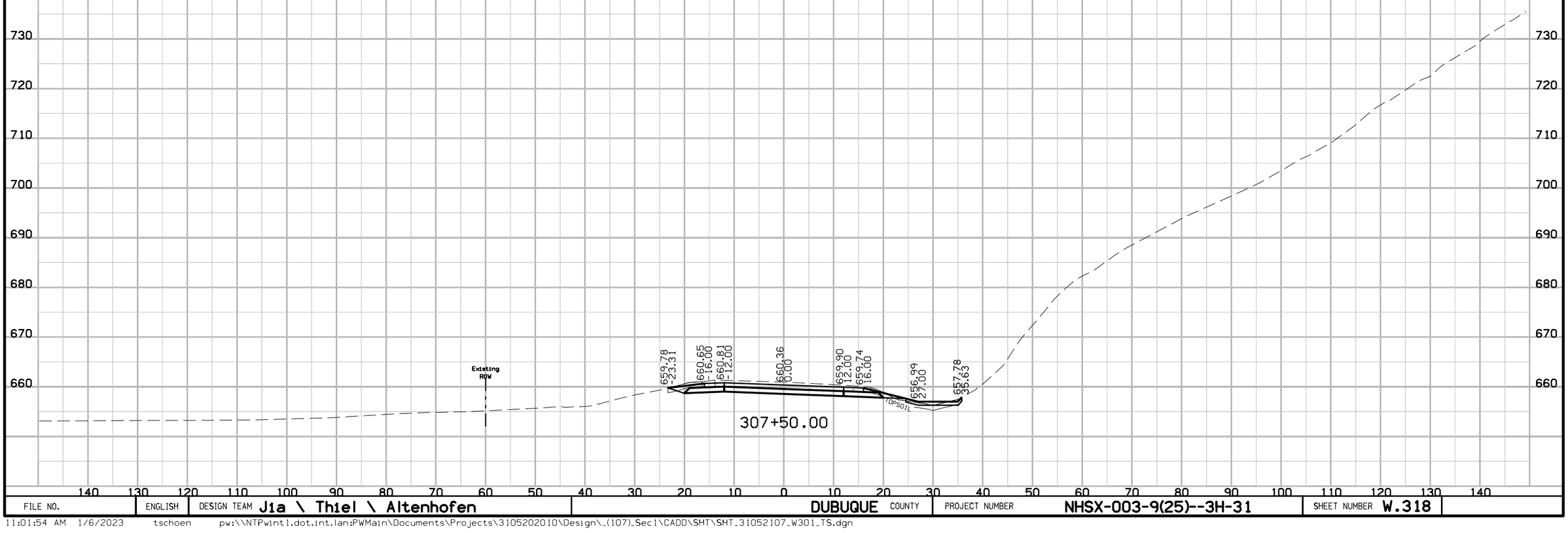
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.317

11:01:53 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

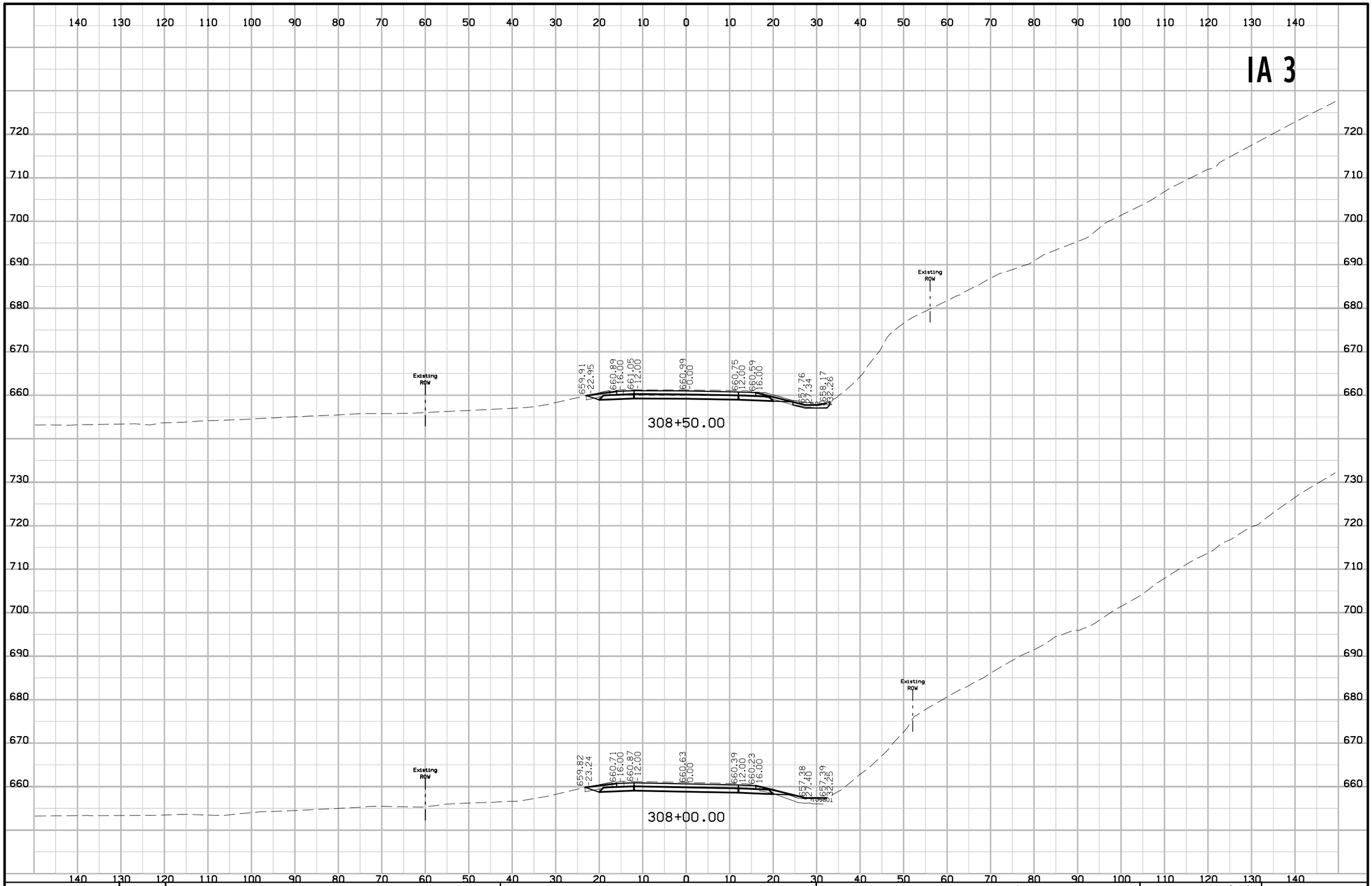
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.318

11:01:54 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

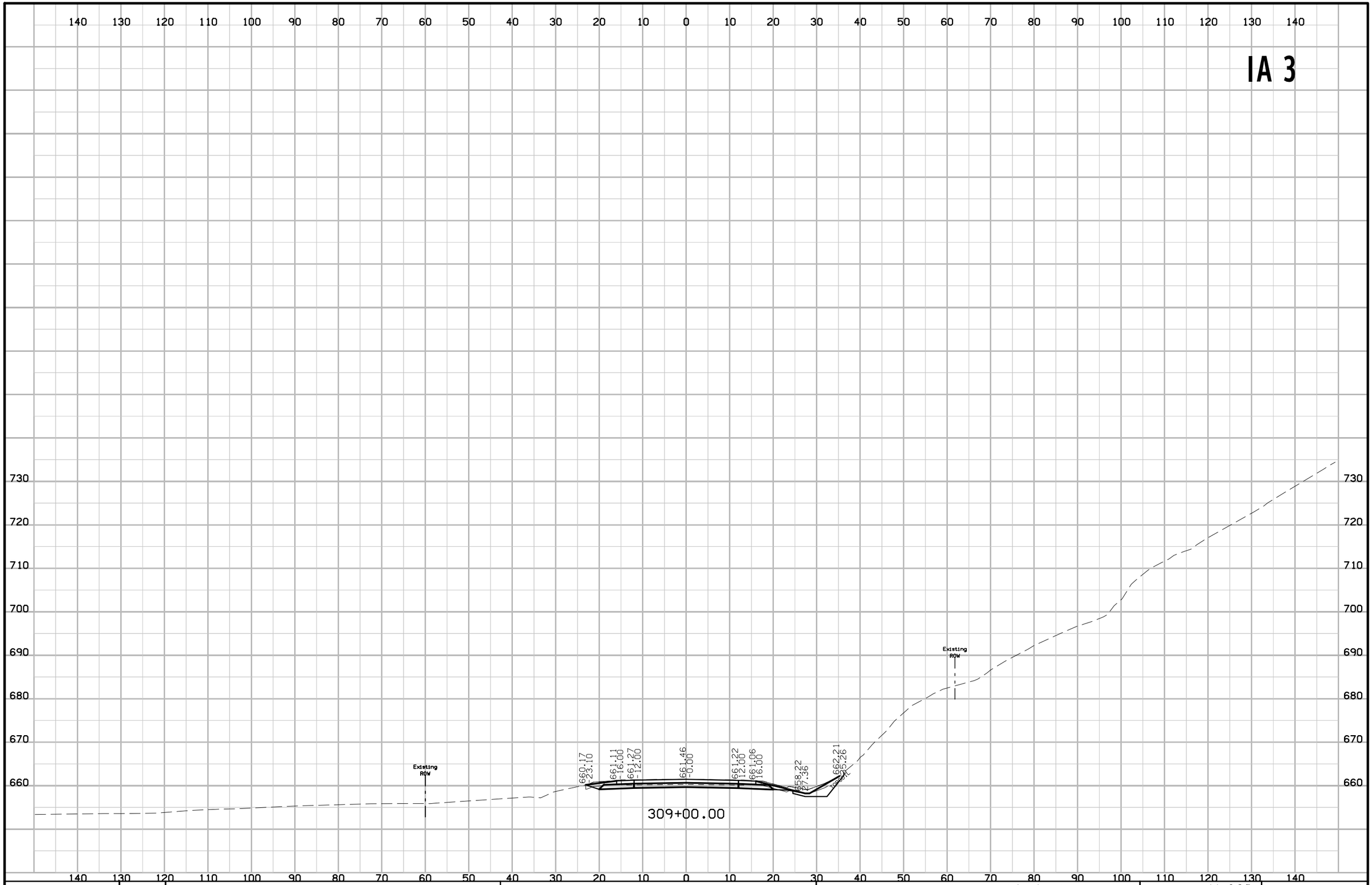
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.319

3:11:13 PM 1/26/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

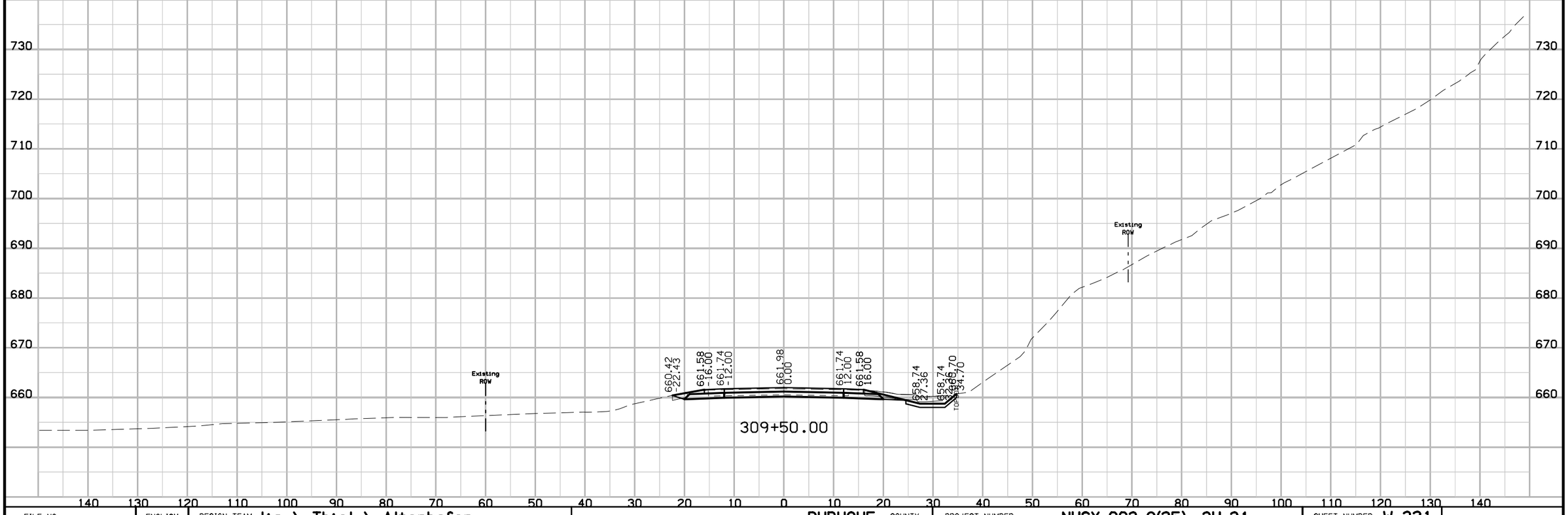
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.320

3:11:14 PM 1/26/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

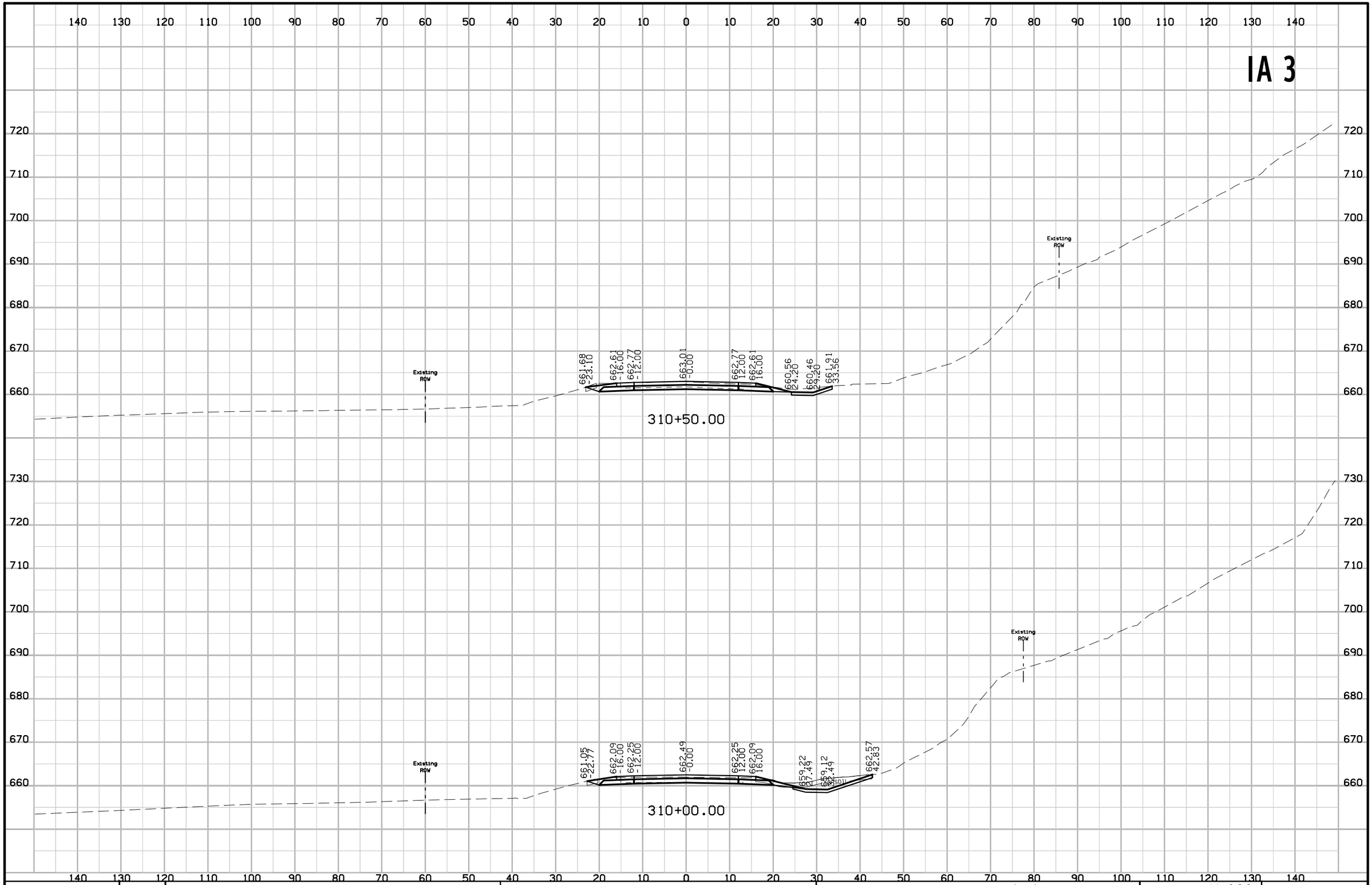
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.321

11:01:56 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

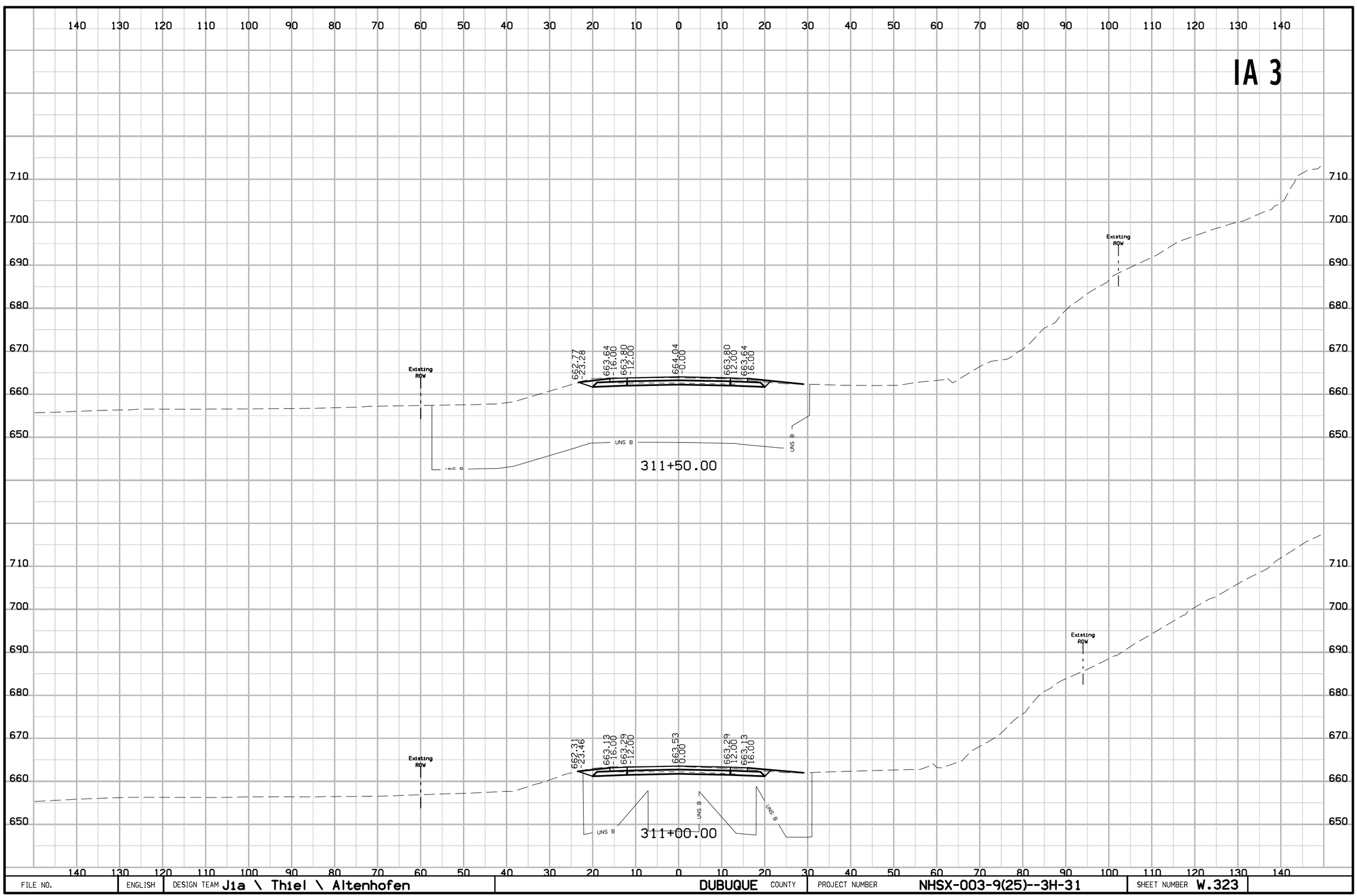
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.322

11:01:56 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

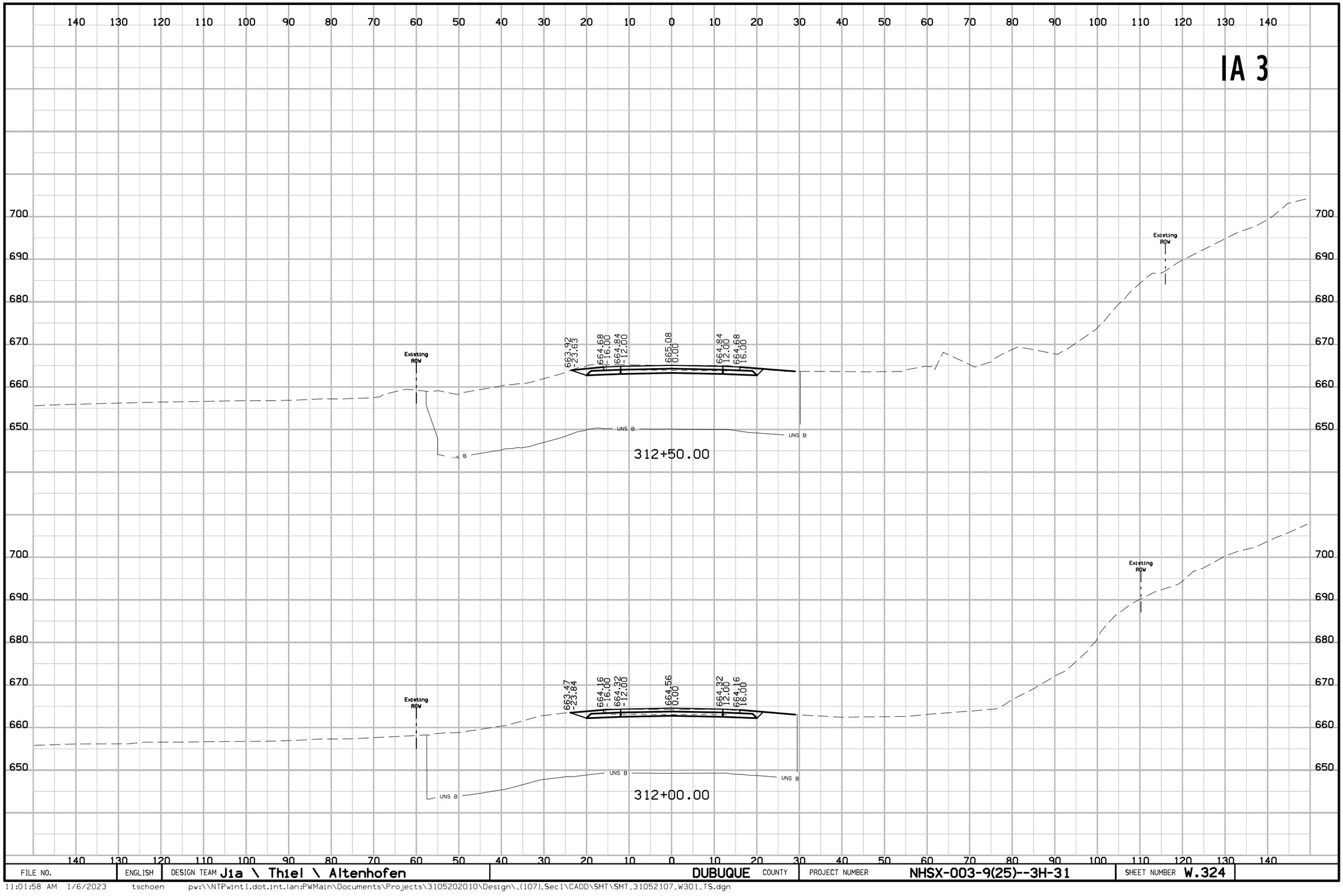
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.323

11:01:57 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.324

11:01:58 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

680
670
660
650

Existing ROW

314+00.00

690
680
670
660
650

Existing ROW

665.21 -24.54
665.79 -16.00
665.87 -12.00
666.11 0.00
665.87 12.00
665.79 16.00

313+50.00

690
680
670
660

Existing ROW

664.47 -23.73
665.19 -16.00
665.35 -12.00
665.59 0.00
665.35 12.00
665.27 16.00

313+00.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.325

11:01:58 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

670
660
650

666.83
-21.00
667.33
-16.00
667.41
-12.00
667.65
-0.00

Existing ROW

316+00.00

Existing ROW

315+50.00

Existing ROW

Existing ROW

315+00.00

Existing ROW

Existing ROW

314+50.00

666.91
-12.00
667.15
-0.00
666.91
12.00

Existing ROW

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.326

11:01:59 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

670
660

667.45 -16.00
667.55 -12.00
666.90 0.00
666.25 12.00
666.03 16.00
658.81 -51.61
Existing ROW
TOPSOIL
Existing ROW

318+50.00

667.29 -16.00
667.45 -12.00
667.05 0.00
666.65 12.00
666.49 16.00
658.96 -52.48
Existing ROW
TOPSOIL
Existing ROW

318+00.00

667.27 -16.00
667.35 -12.00
667.20 0.00
666.96 12.00
666.80 16.00
658.67 -52.15
Existing ROW
TOPSOIL
Existing ROW

317+50.00

666.67 -21.00
667.17 -16.00
667.25 -12.00
667.35 0.00
667.11 12.00
667.03 16.00
Existing ROW
Existing ROW

317+00.00

666.68 -21.00
667.18 -16.00
667.26 -12.00
667.50 0.00
667.26 12.00
667.18 16.00
Existing ROW
Existing ROW

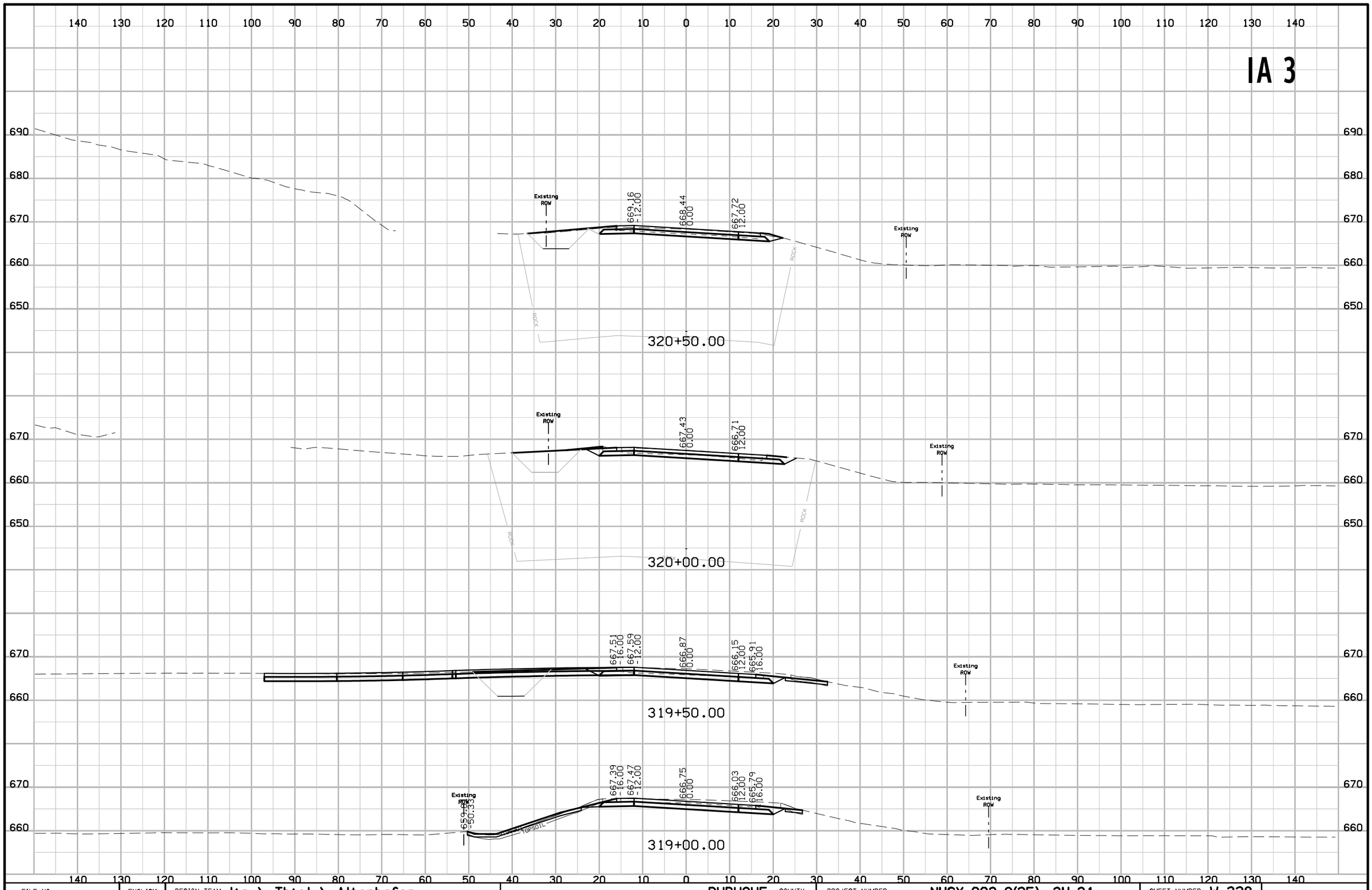
316+50.00

650

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.327

11:02:00 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

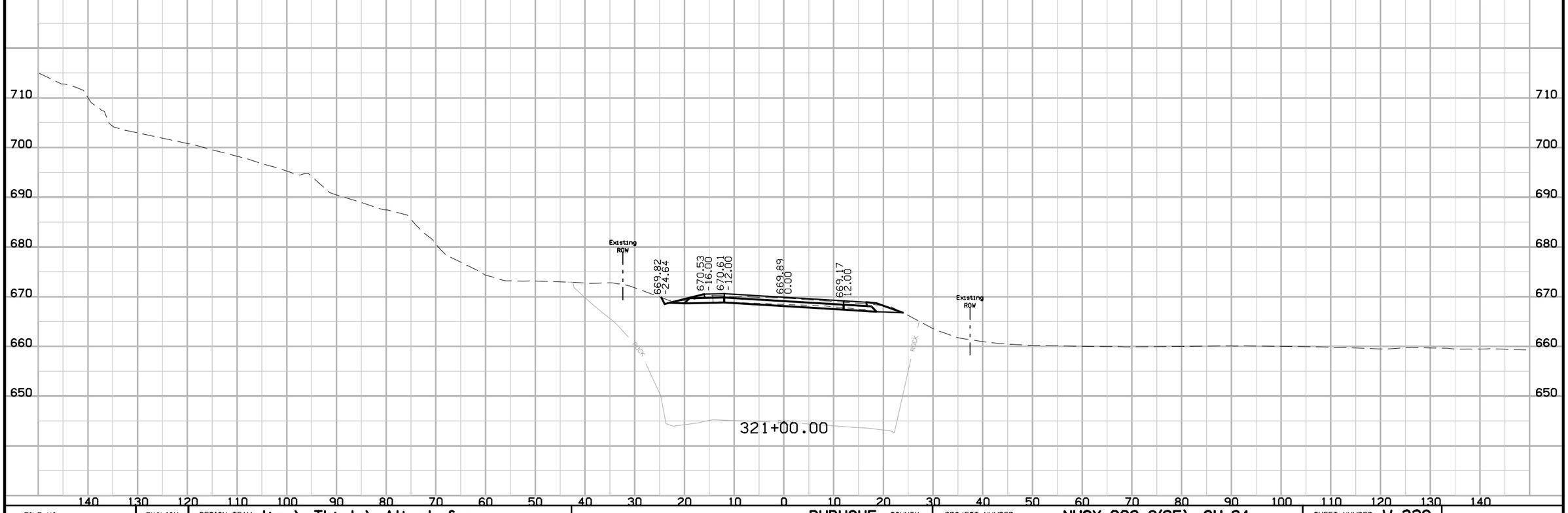
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.328

11:02:00 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

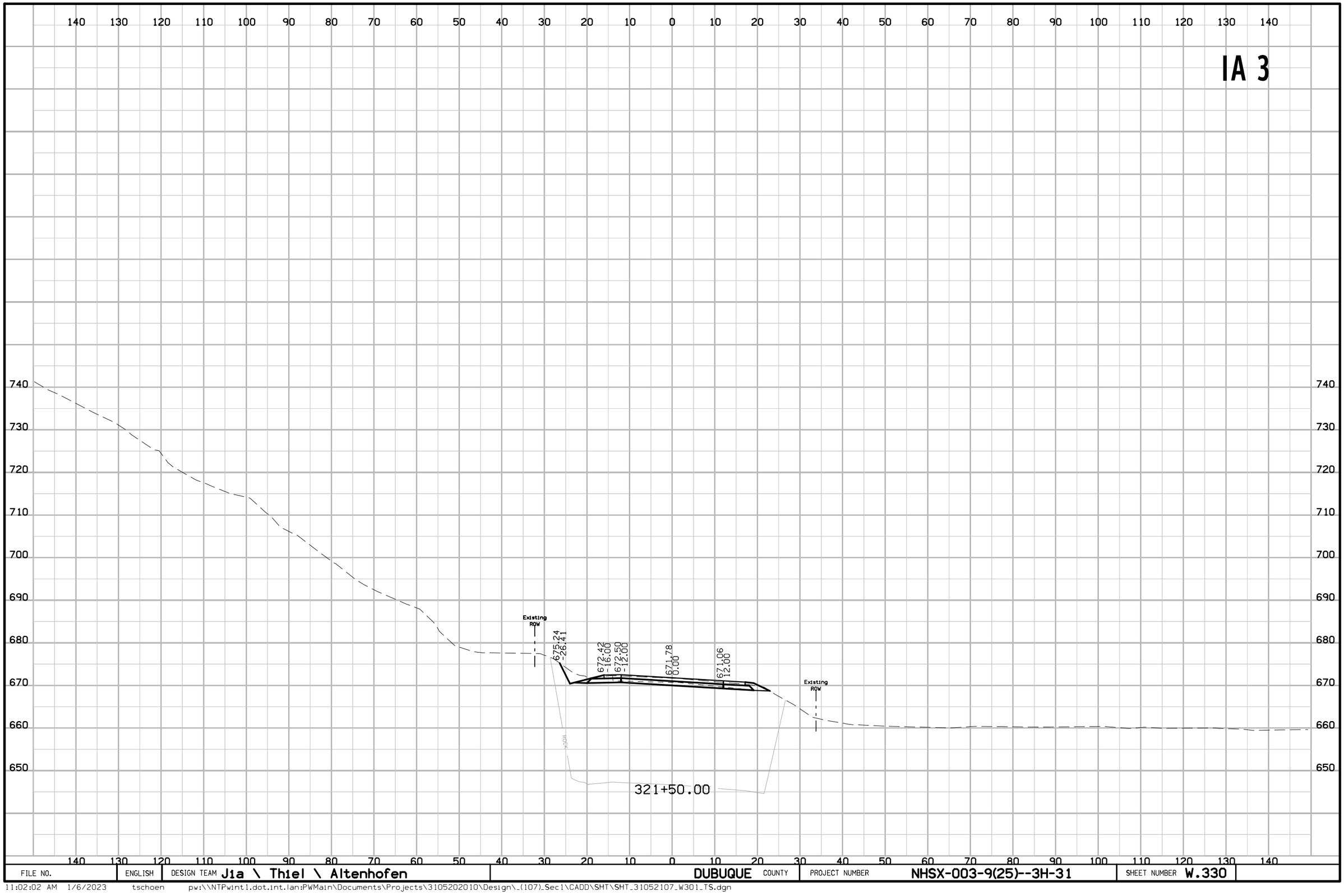
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.329

11:02:01 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.330

11:02:02 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

750
740
730
720
710
700
690
680
670
660
650

Existing ROW
679.30
27.27
674.76
-16.00
674.84
12.00
674.12
0.00
673.40
12.00
Existing ROW
ROCK
ROCK
322+00.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.331

11:02:02 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

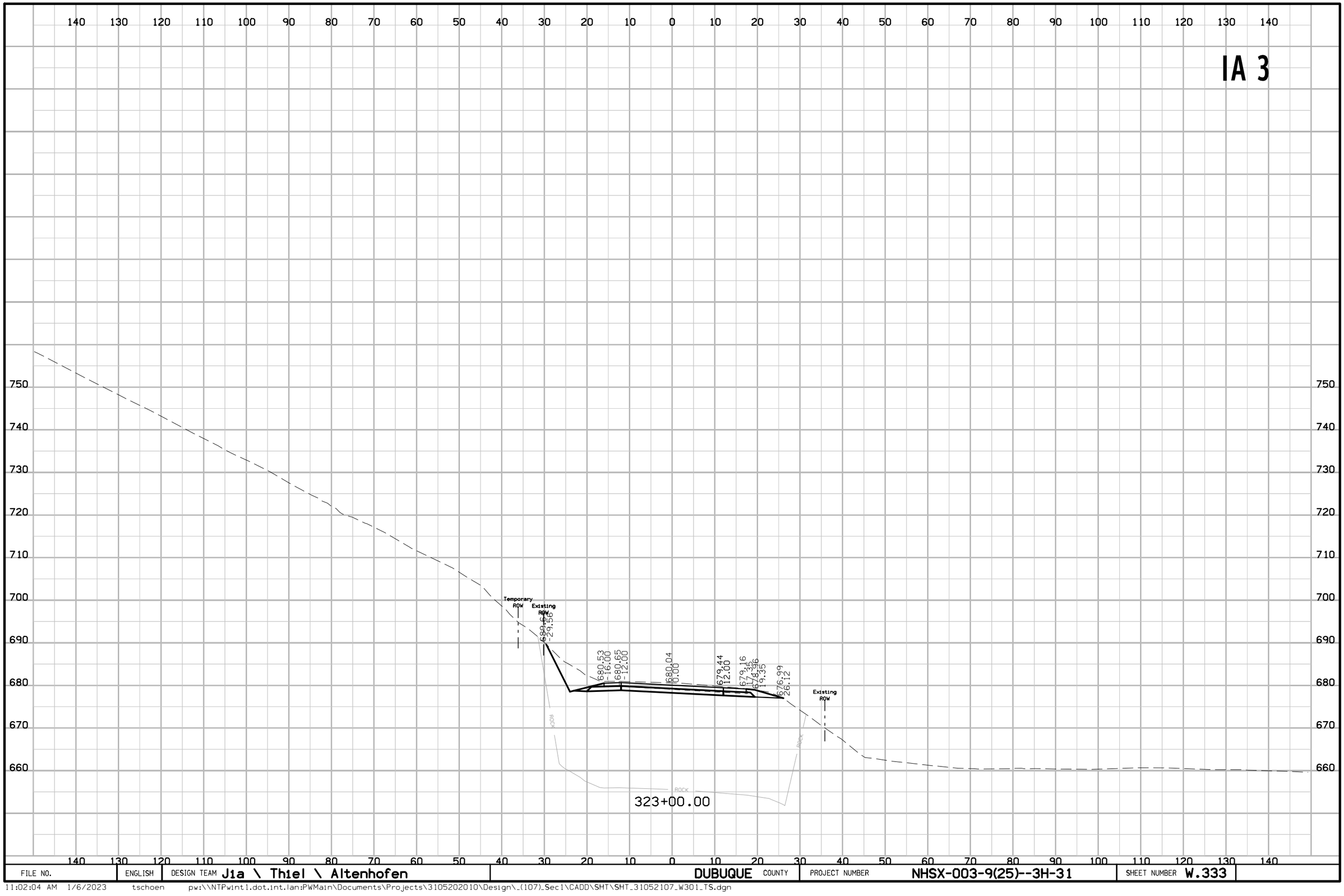
750
740
730
720
710
700
690
680
670
660
650

Temporary ROW
Existing ROW
686.90
29.72
677.51
16.00
677.59
12.00
676.87
0.00
676.15
12.00
675.80
675.40
19.84
673.67
25.20
Existing ROW
ROCK
ROCK
ROCK
322+50.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.332

11:02:03 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.333

11:02:04 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

750
740
730
720
710
700
690
680
670
660

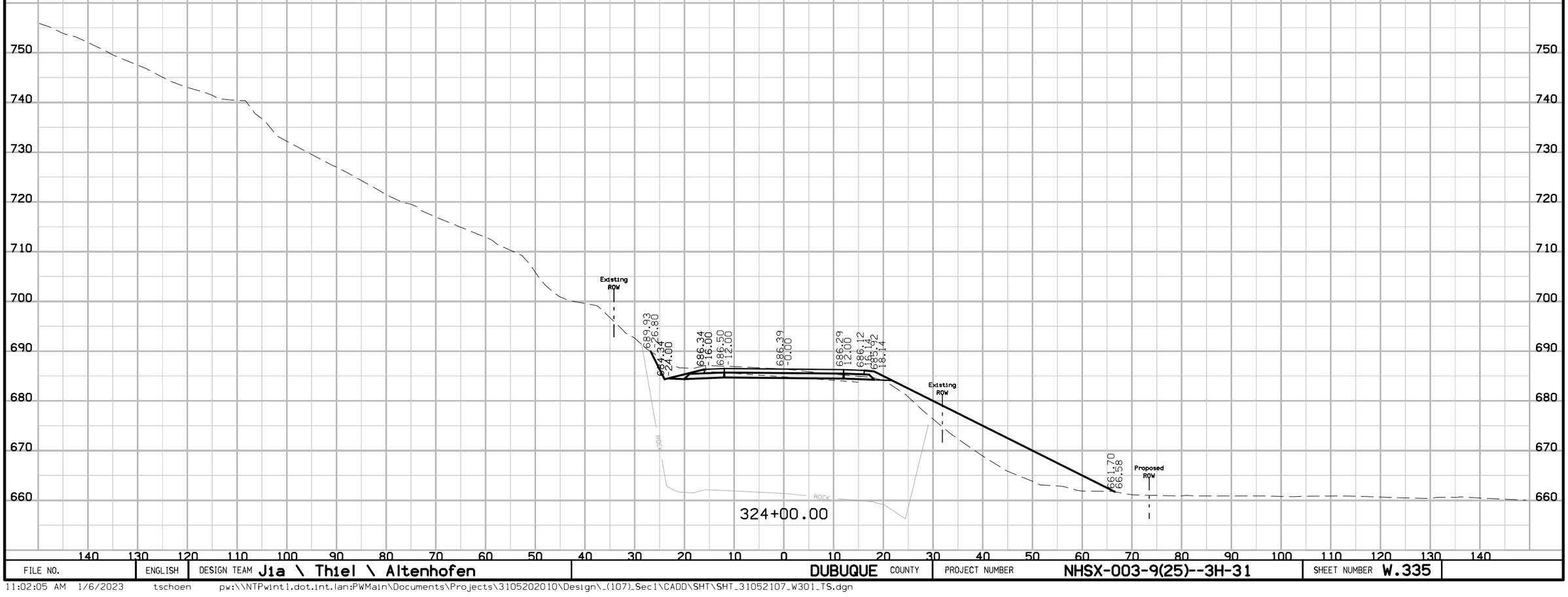
Temporary ROW
Existing ROW
699.05
27.82
691.41
24.00
683.41
16.00
693.57
12.00
683.22
0.00
682.86
12.00
682.68
16.53
682.48
18.53
Existing ROW
662.05
59.36
Proposed ROW
ROCK
ROCK
ROCK

323+50.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.334

11:02:04 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

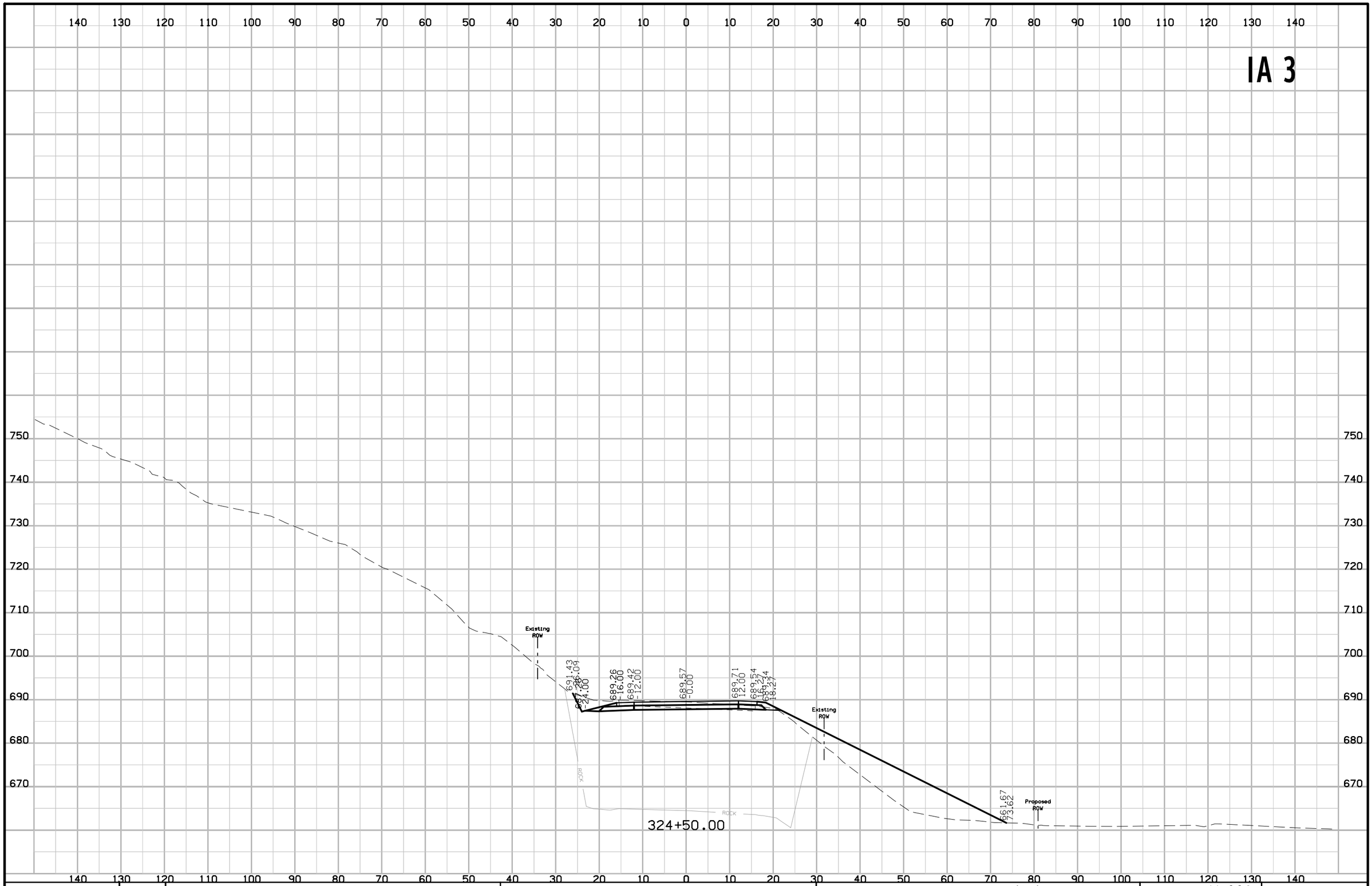
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.335

11:02:05 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

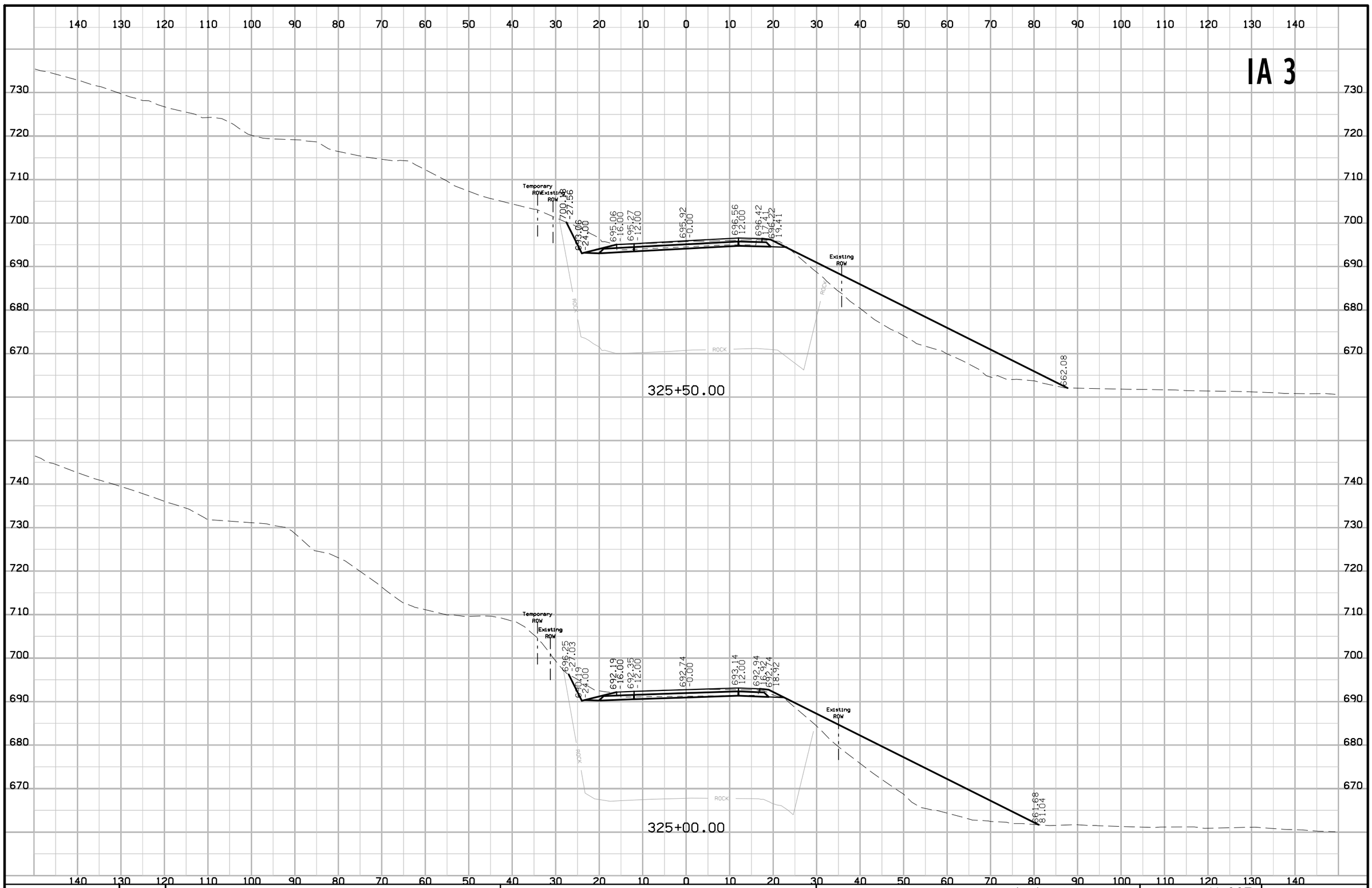
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.336

11:02:05 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

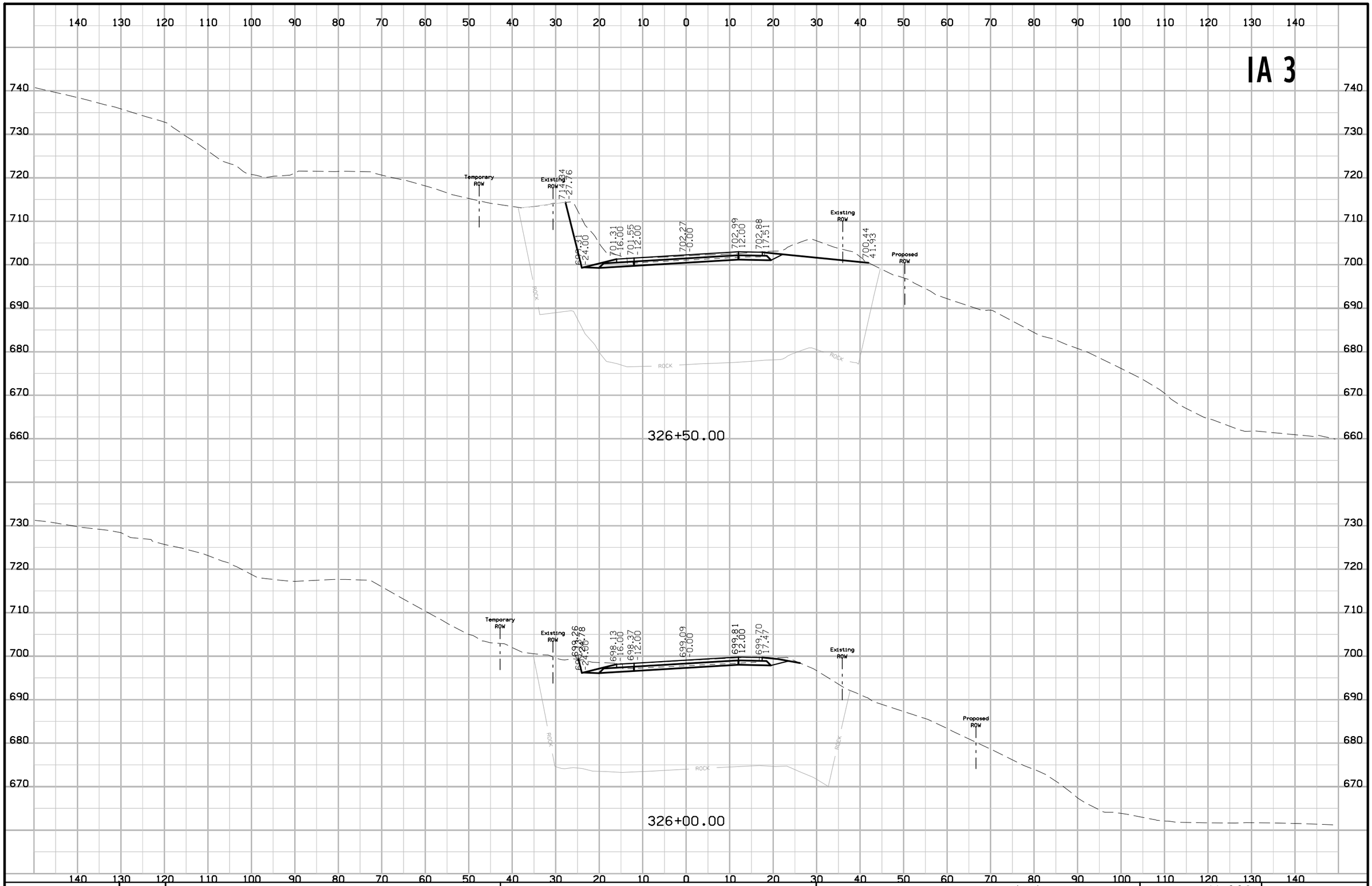
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.337

11:02:06 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

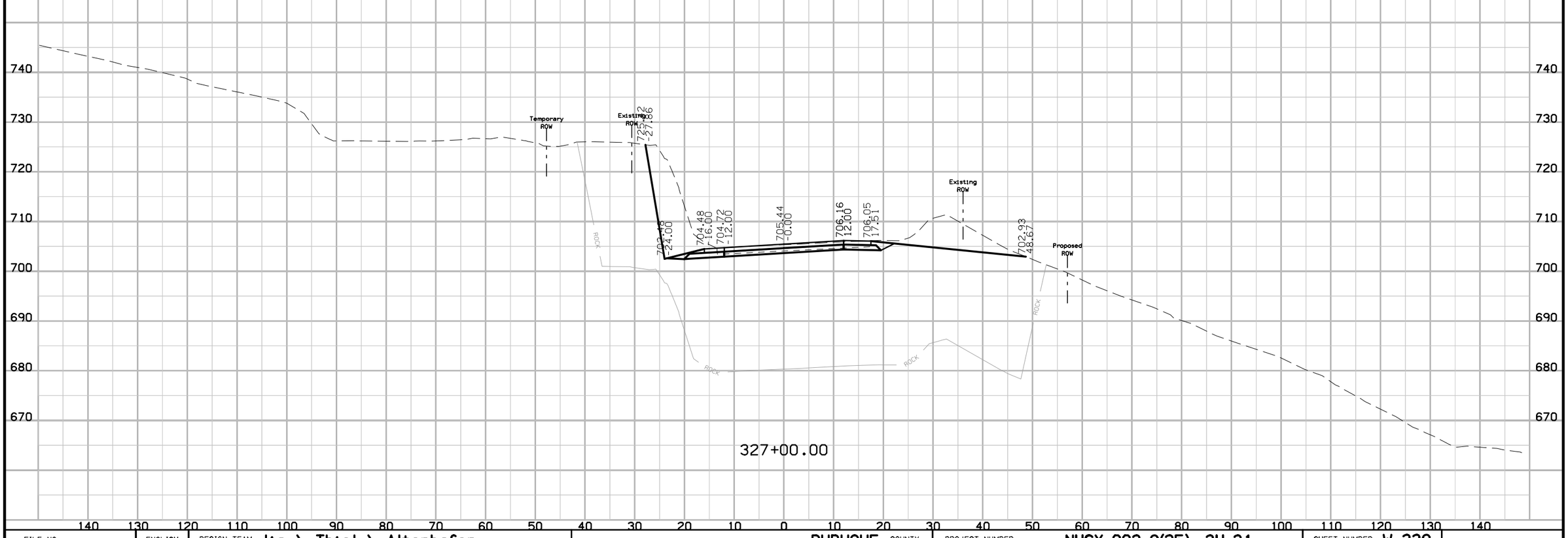
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.338

11:24:53 AM 3/15/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

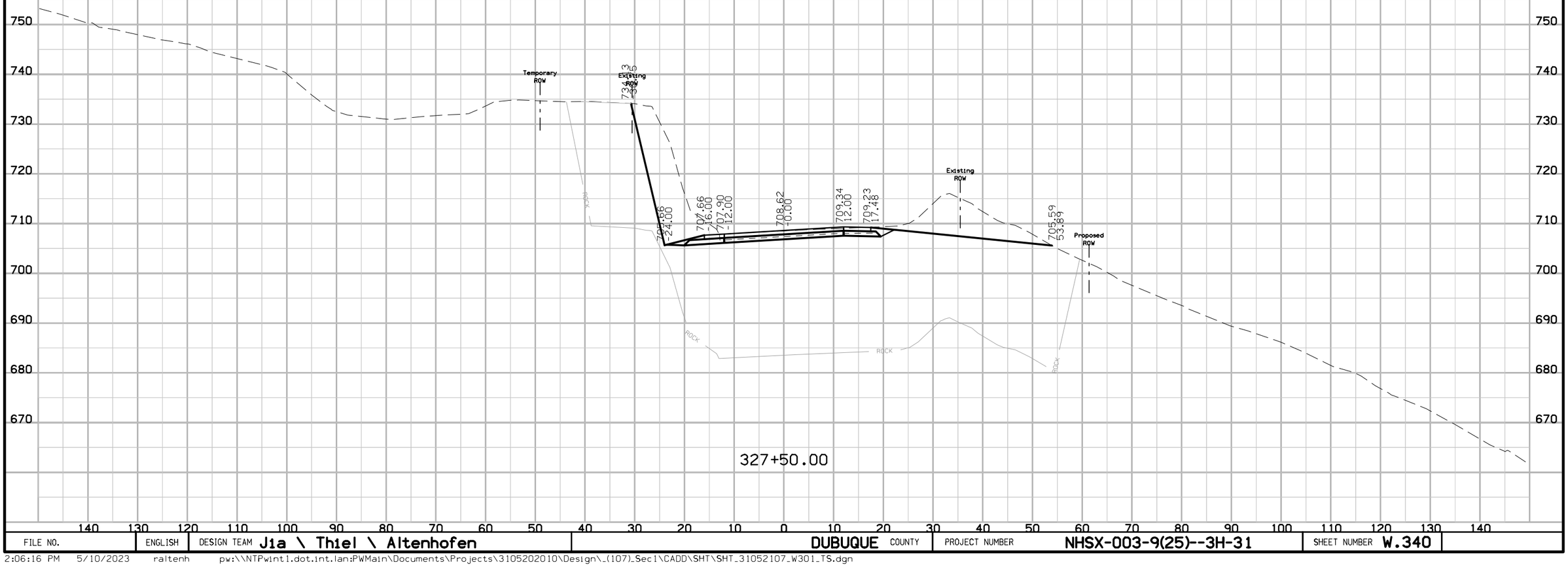
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.339

2:06:15 PM 5/10/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

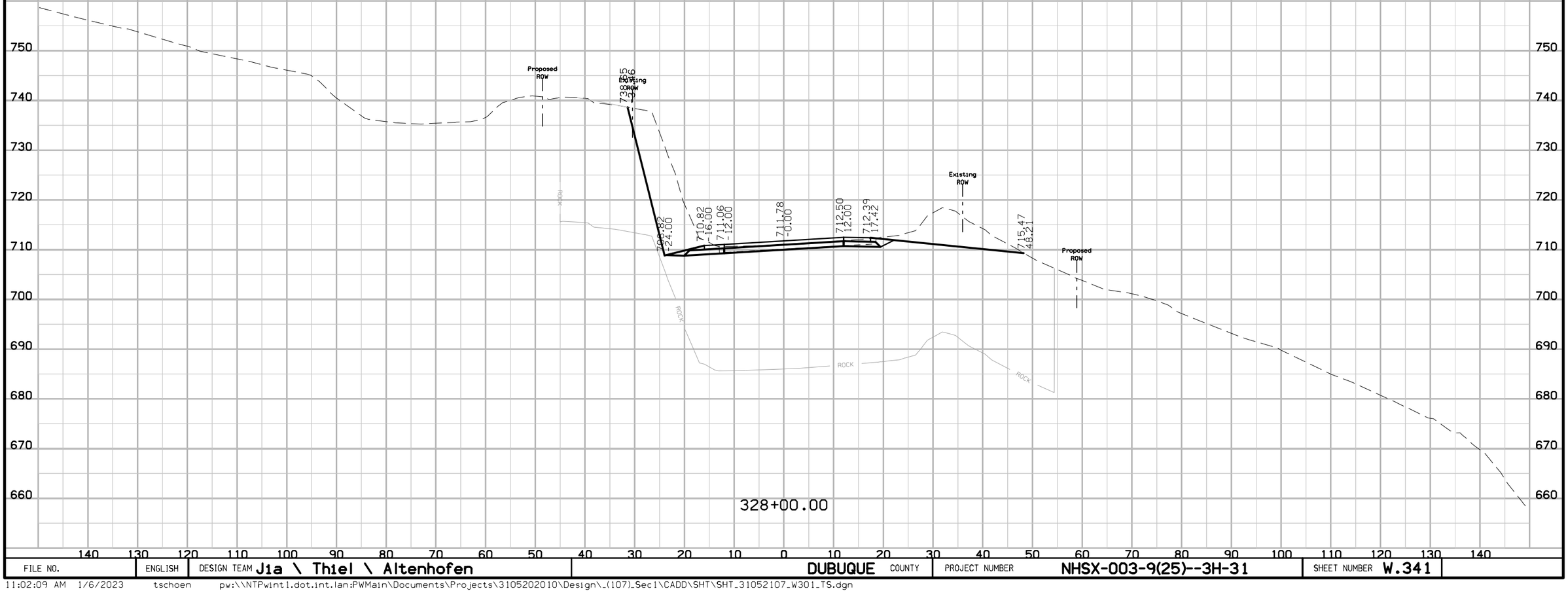
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.340

2:06:16 PM 5/10/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

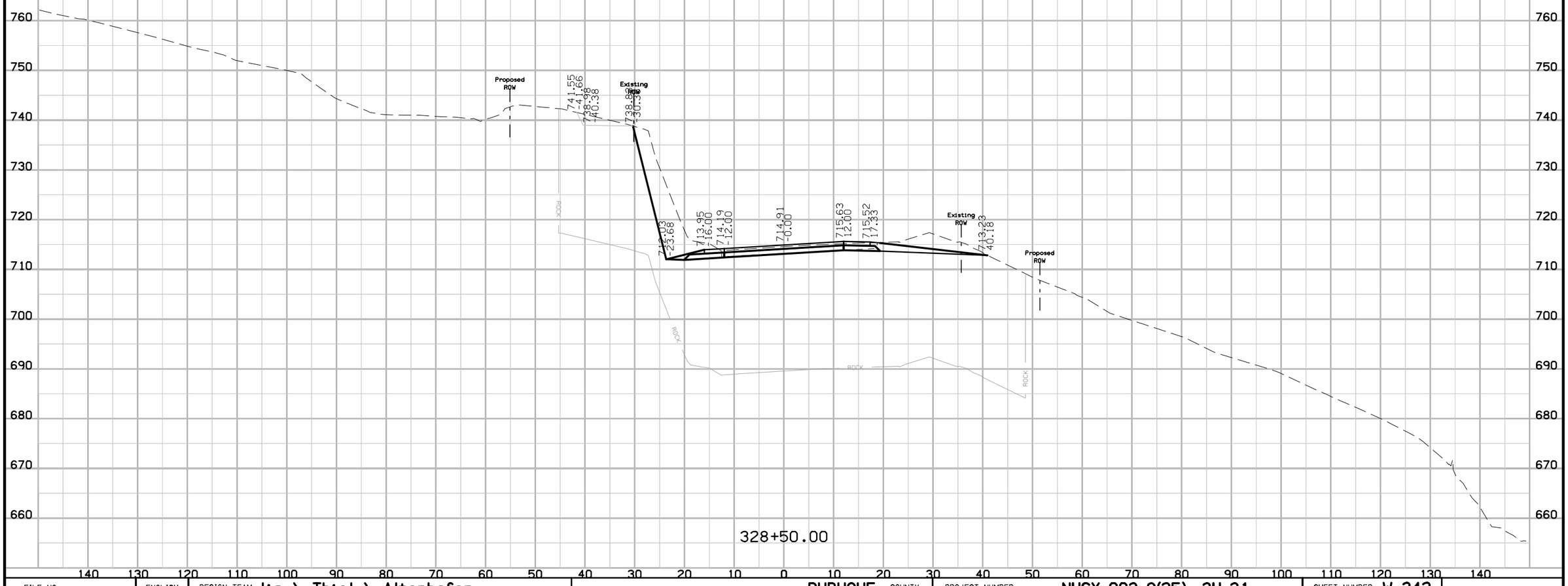
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.341

11:02:09 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

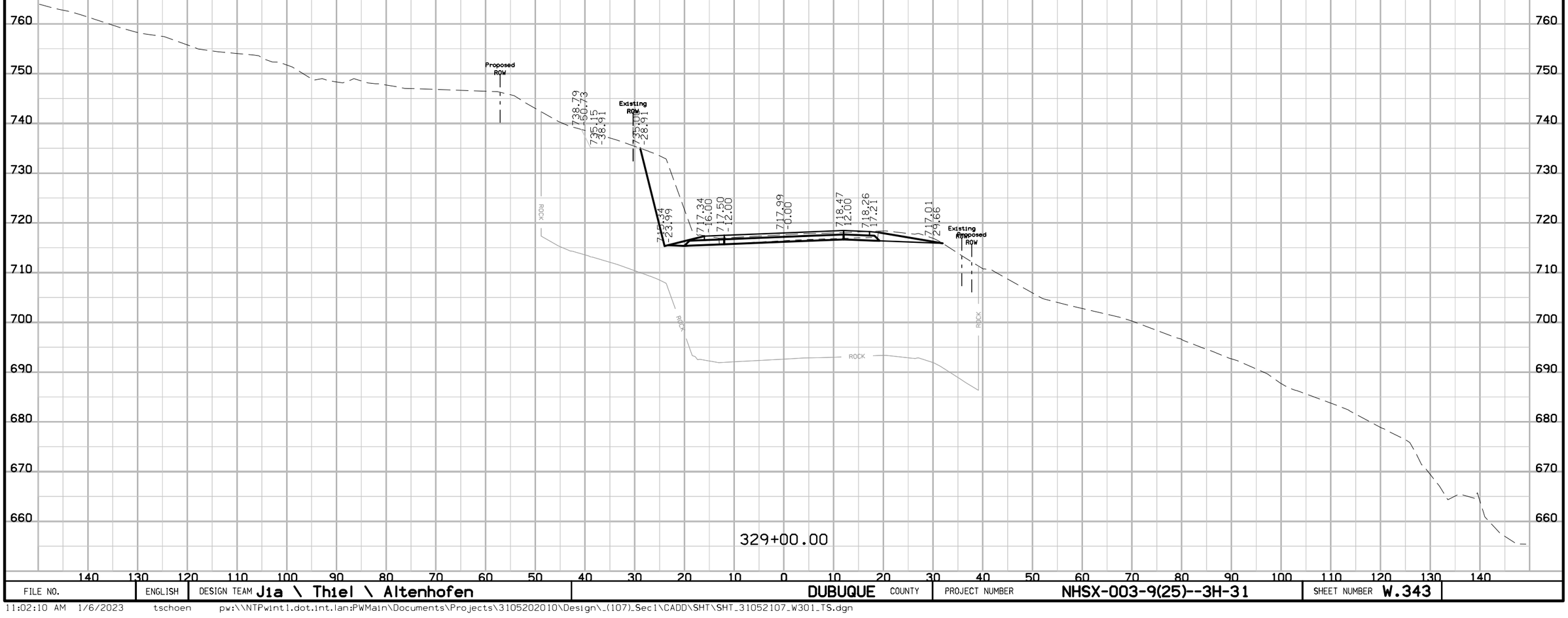
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.342

11:02:09 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

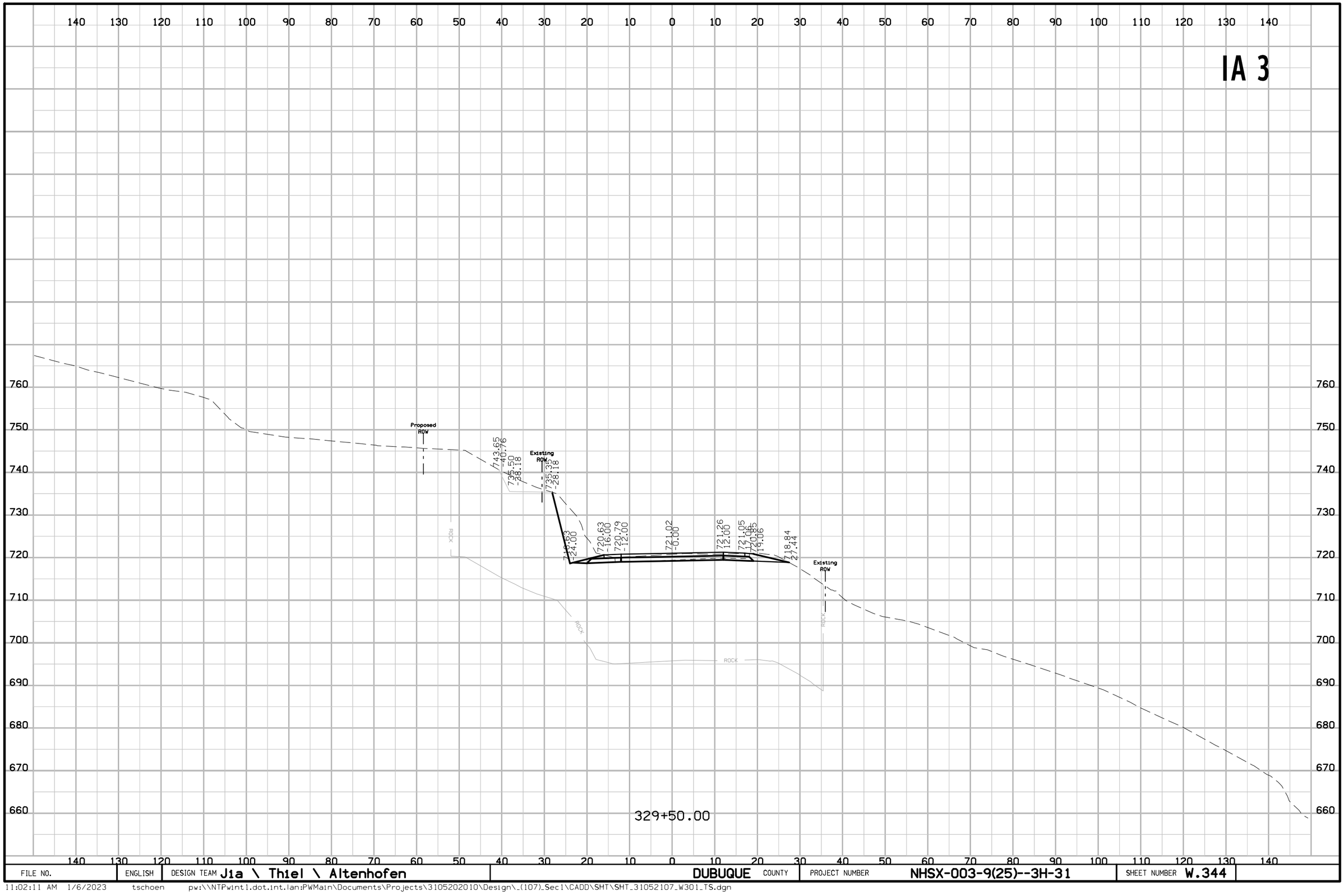
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.343

11:02:10 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.344

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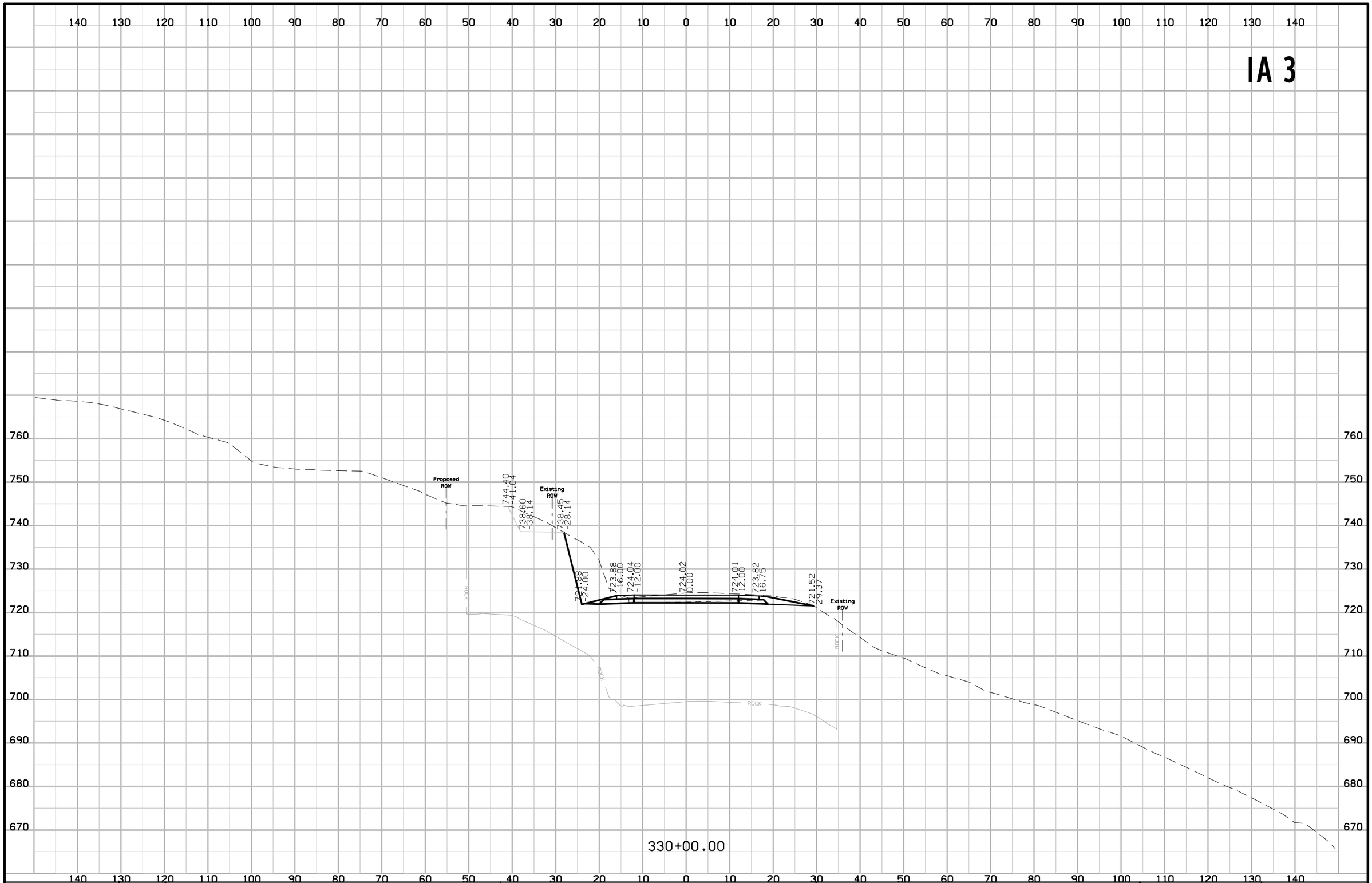

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.345

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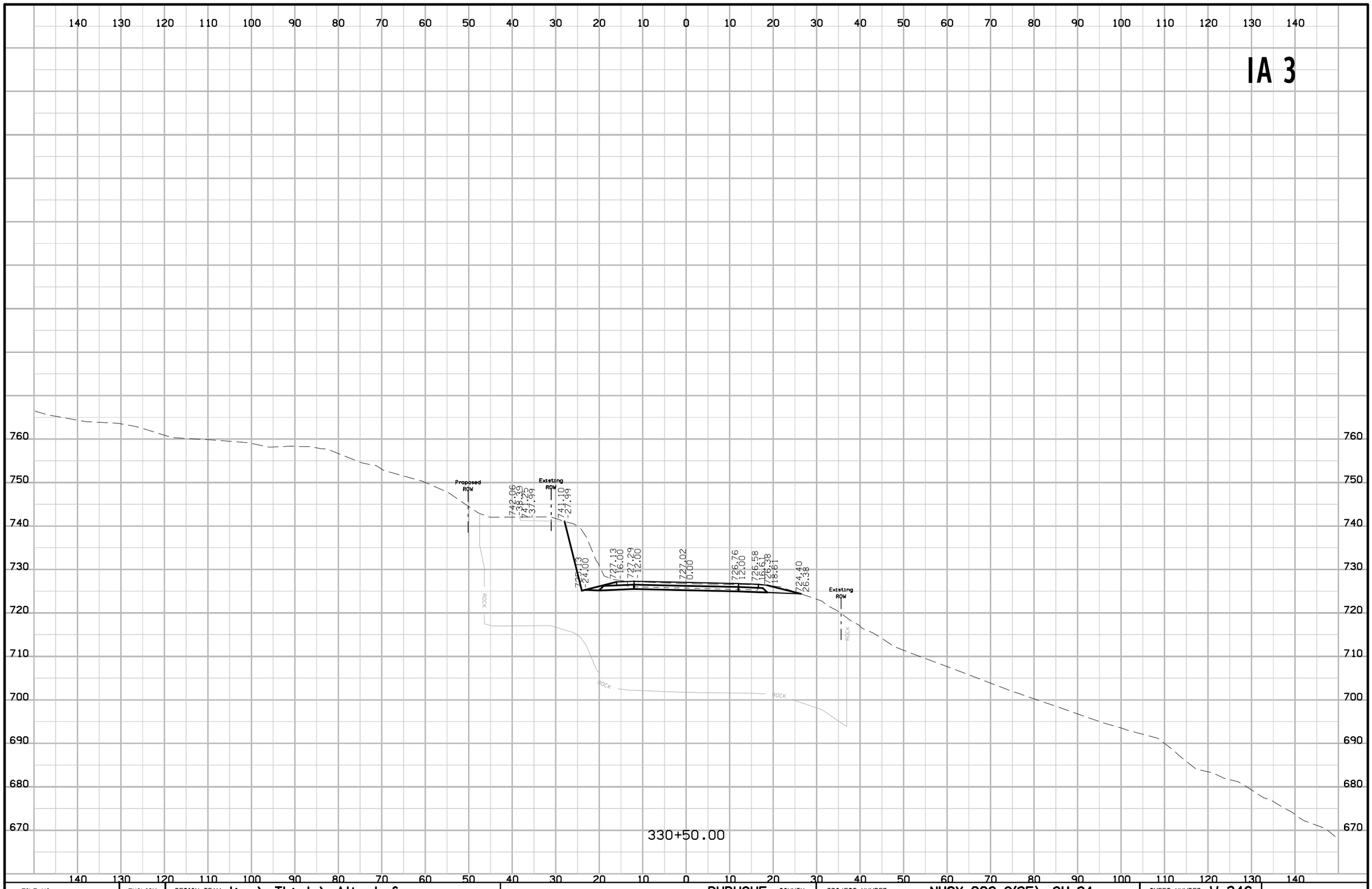
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.346

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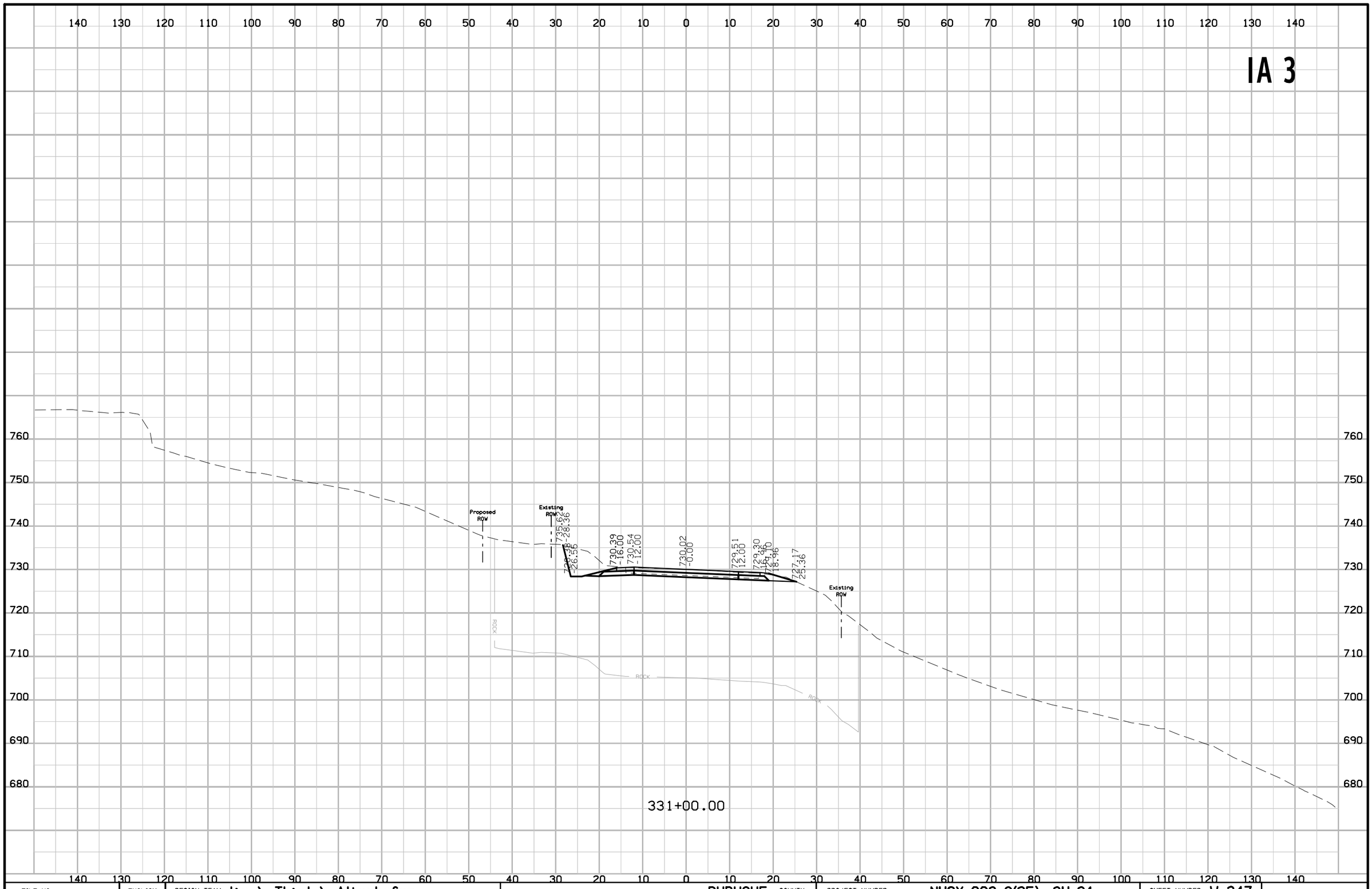
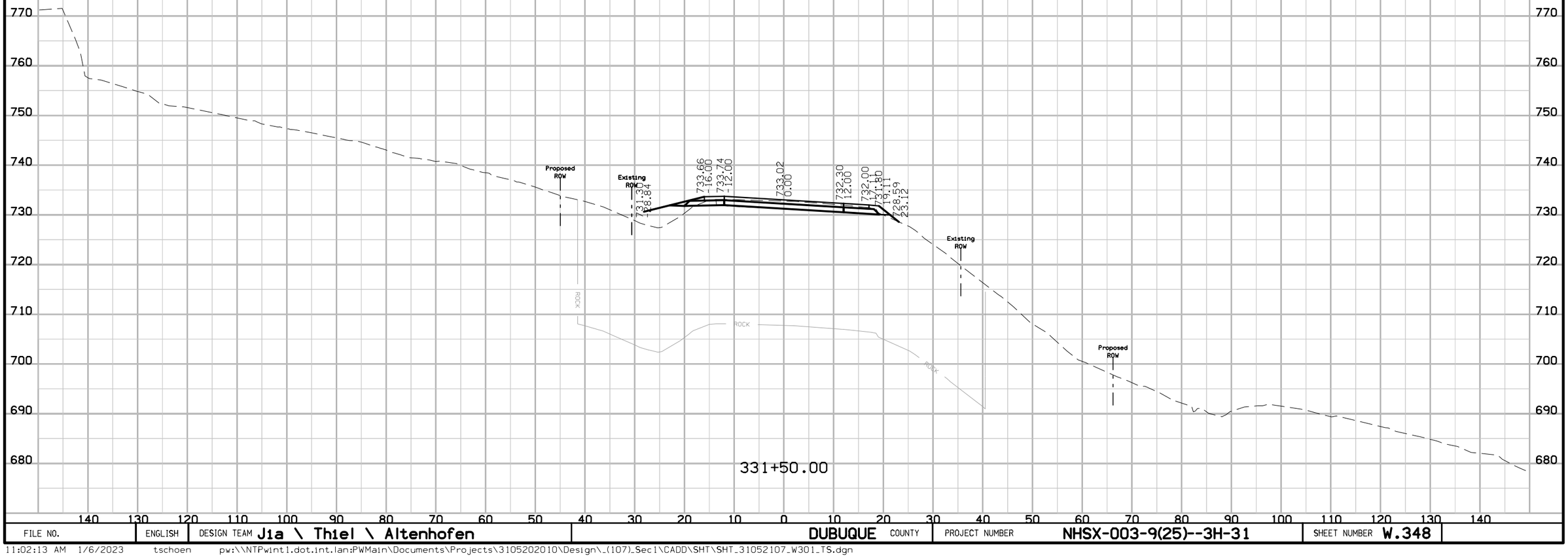
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.347

11:02:13 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.348

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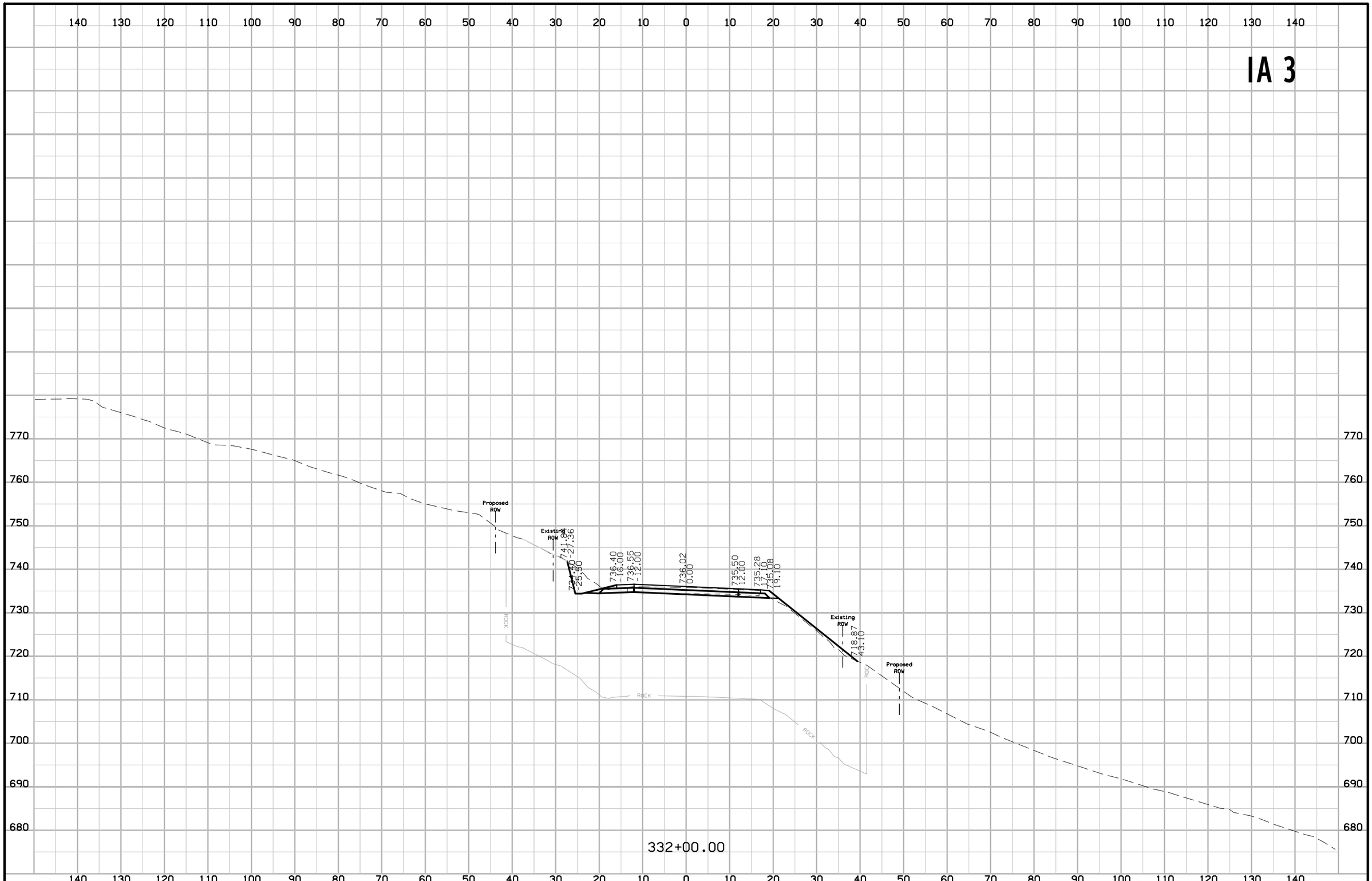
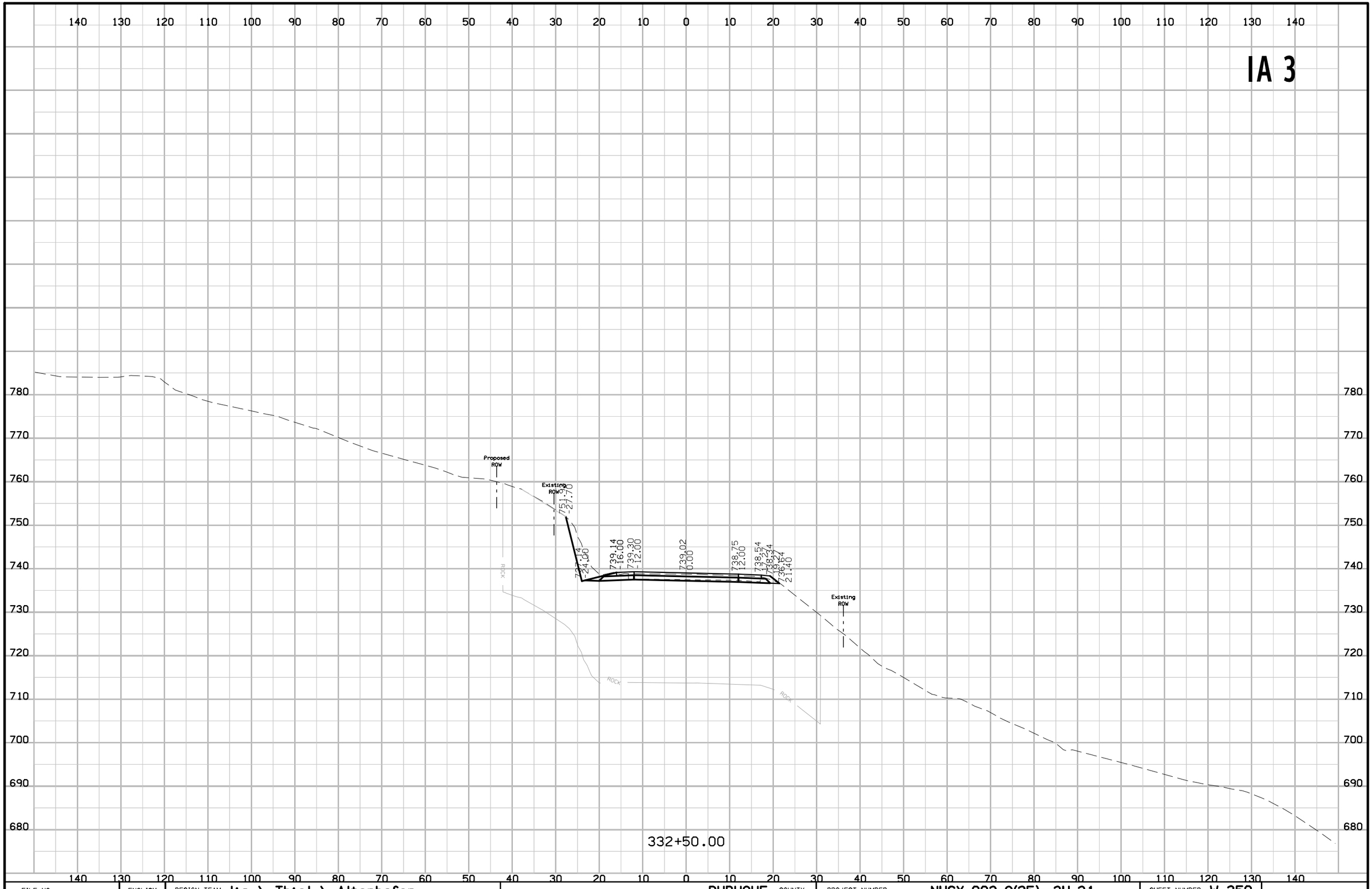
IA 3



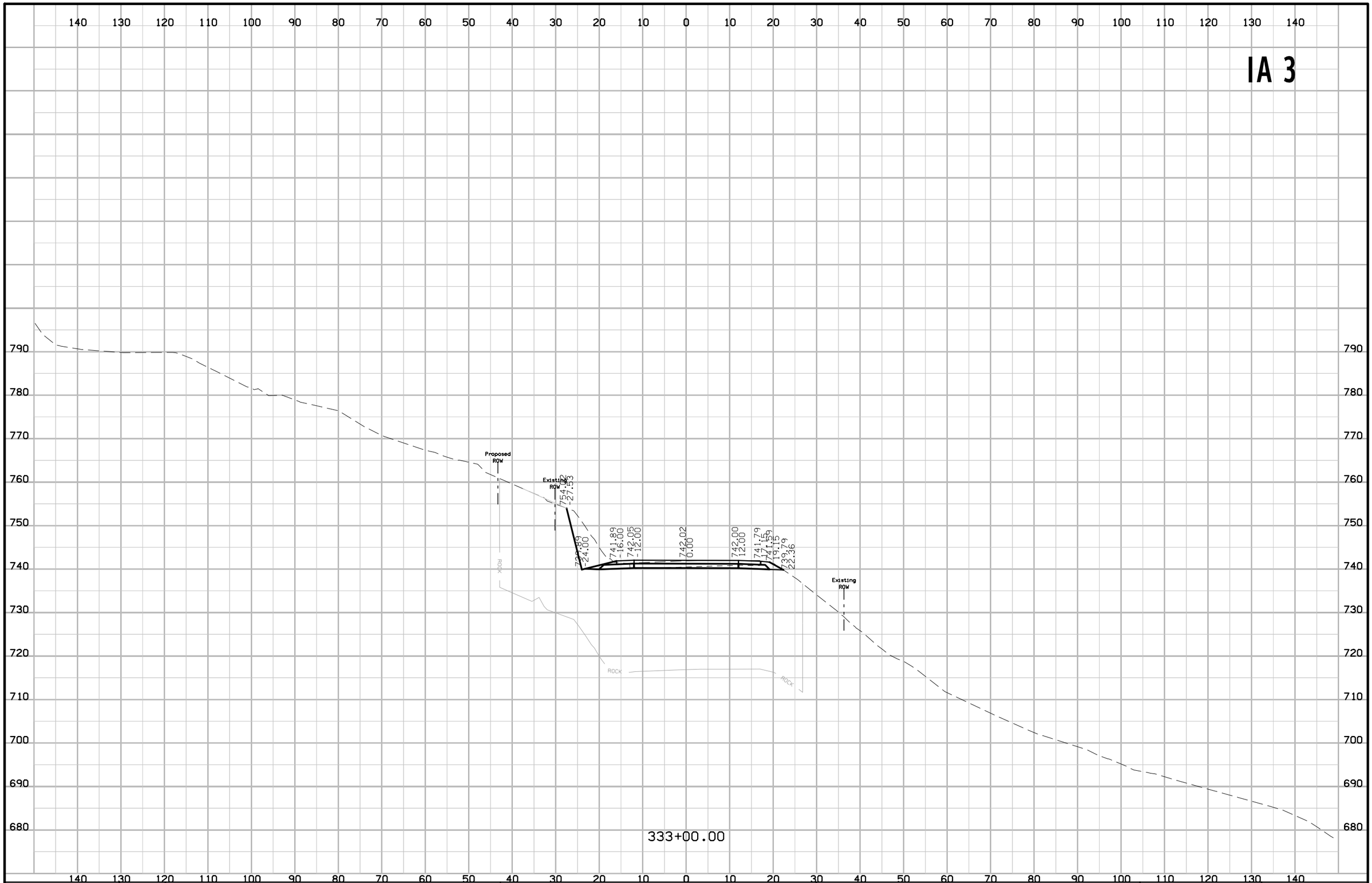
FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.349

11:02:14 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.350

11:02:15 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.351

11:02:15 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

790 780 770 760 750 740 730 720 710 700 690 680

Proposed ROW

Existing ROW

745.15
-28.00

742.64
-26.00

744.64
-16.00

744.80
-12.00

745.02
-0.00

745.25
12.00

745.04
17.31

744.84
19.31

743.01
23.30

Existing ROW

ROCK

ROCK

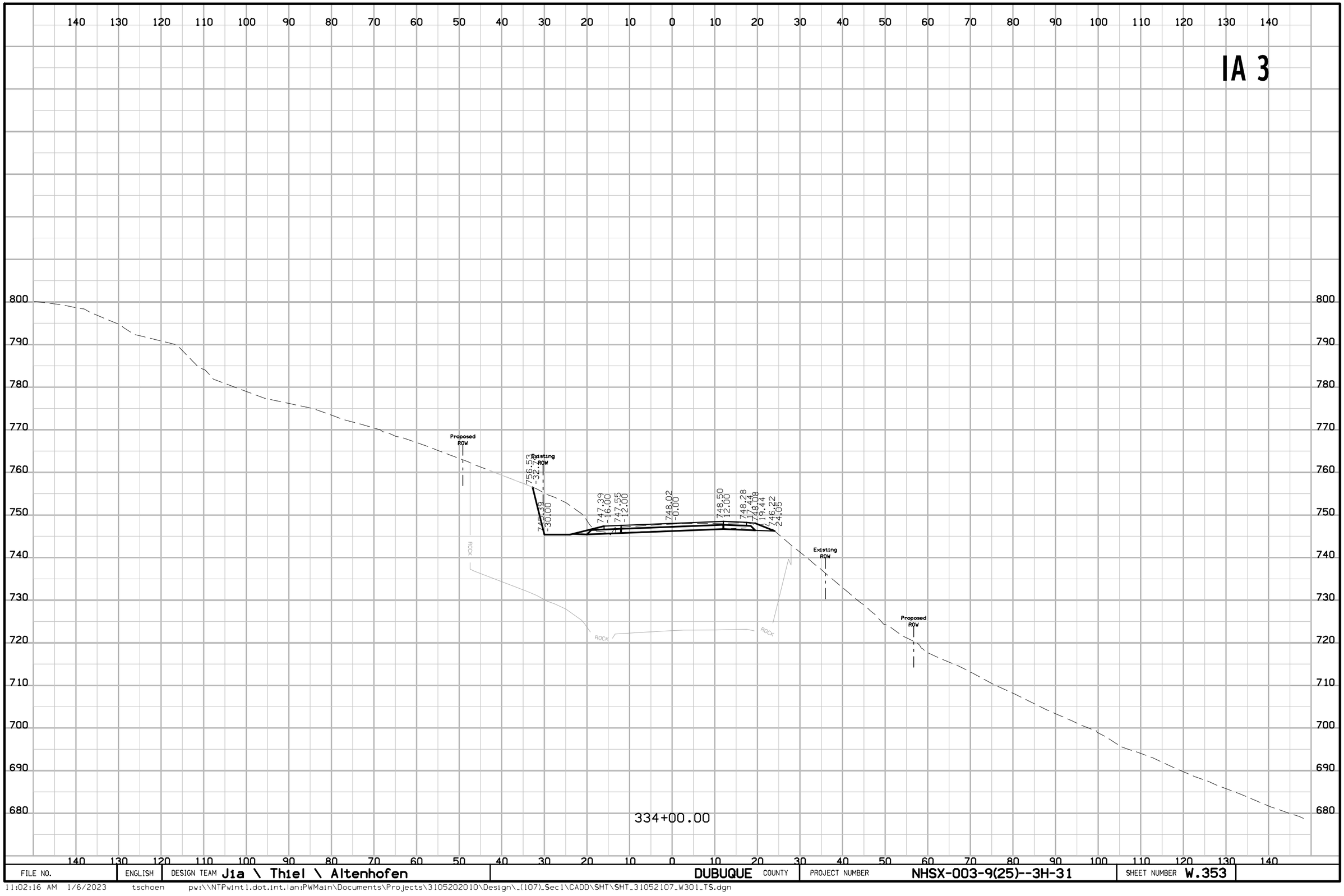
ROCK

333+50.00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.352

11:02:16 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.353

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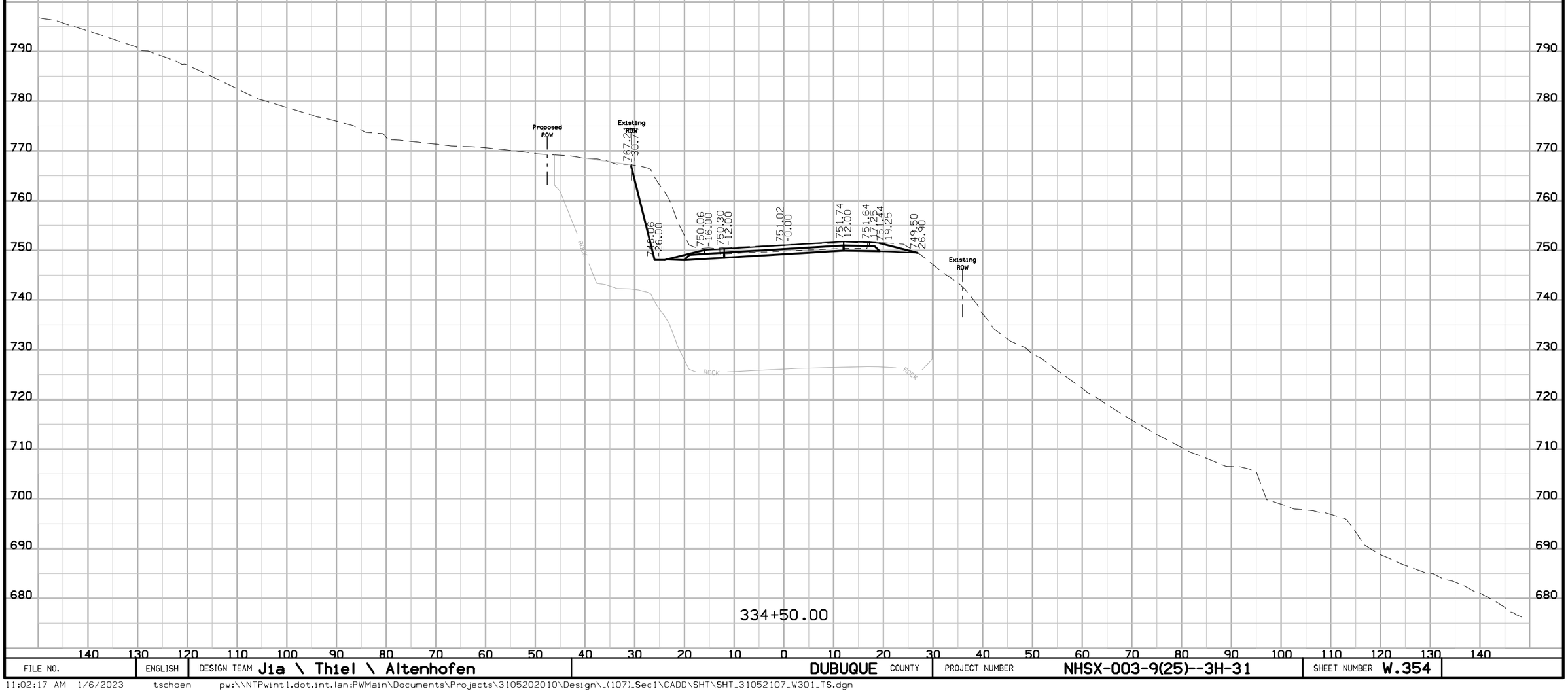
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.354

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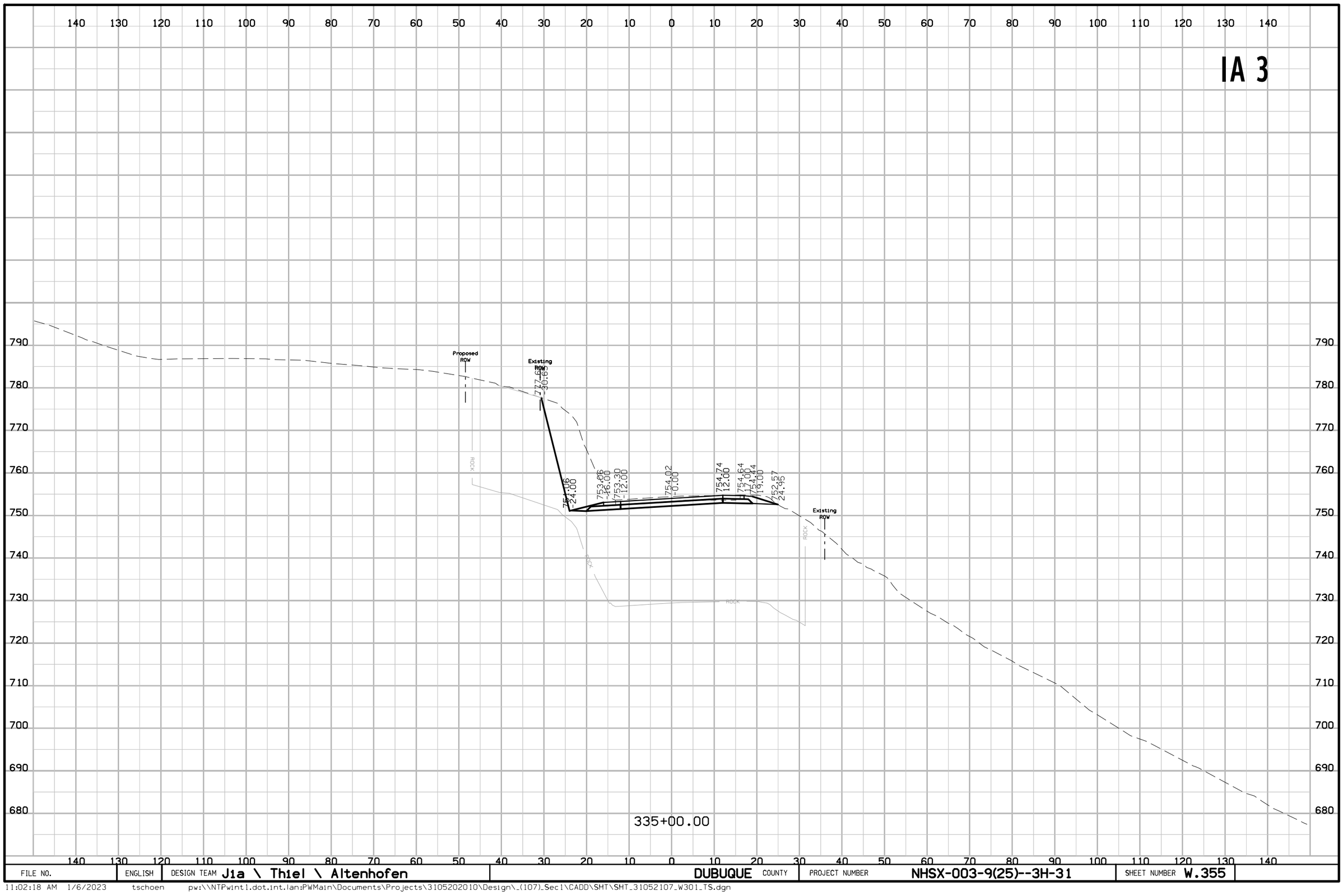
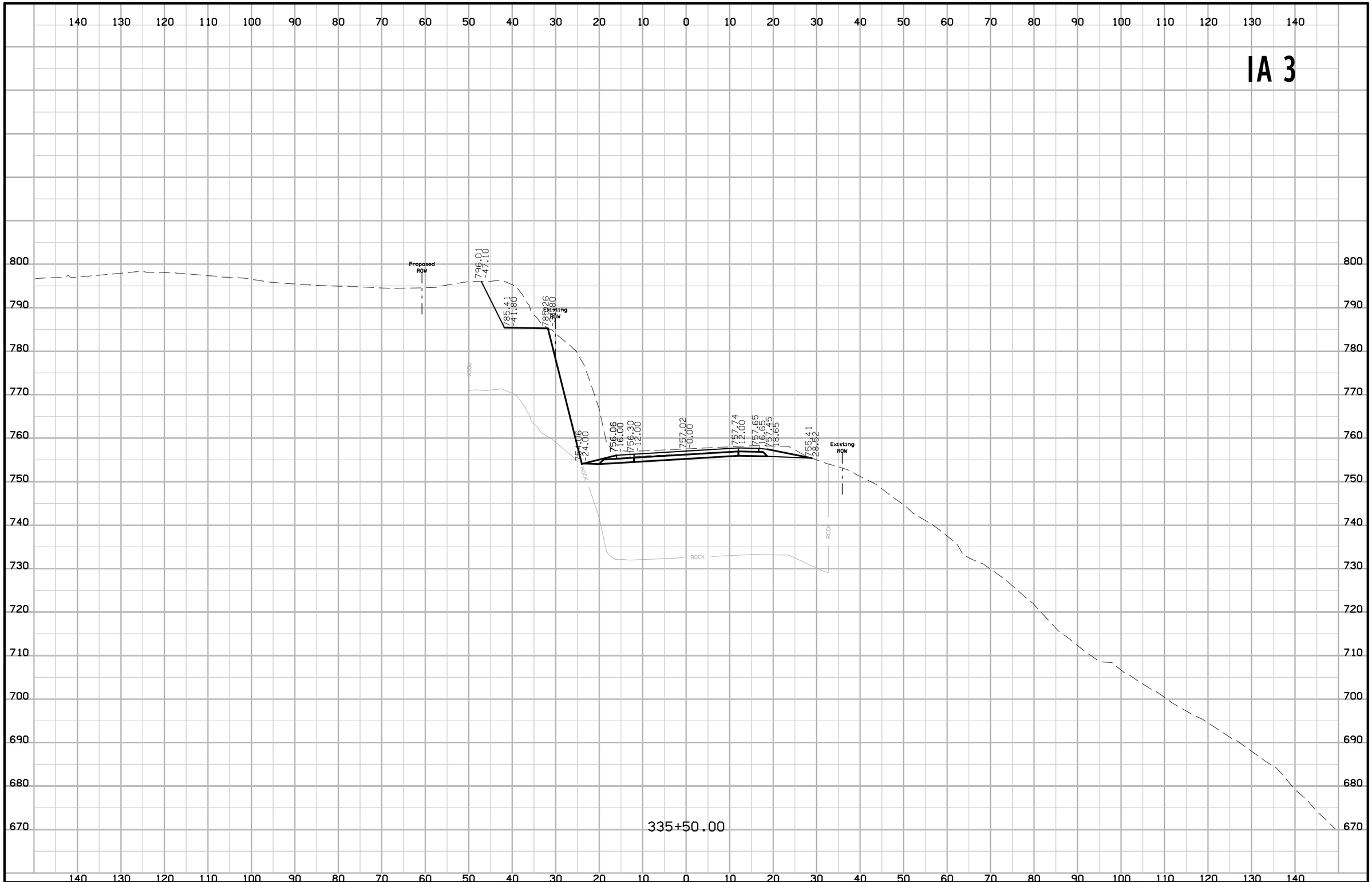
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.355

11:02:18 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

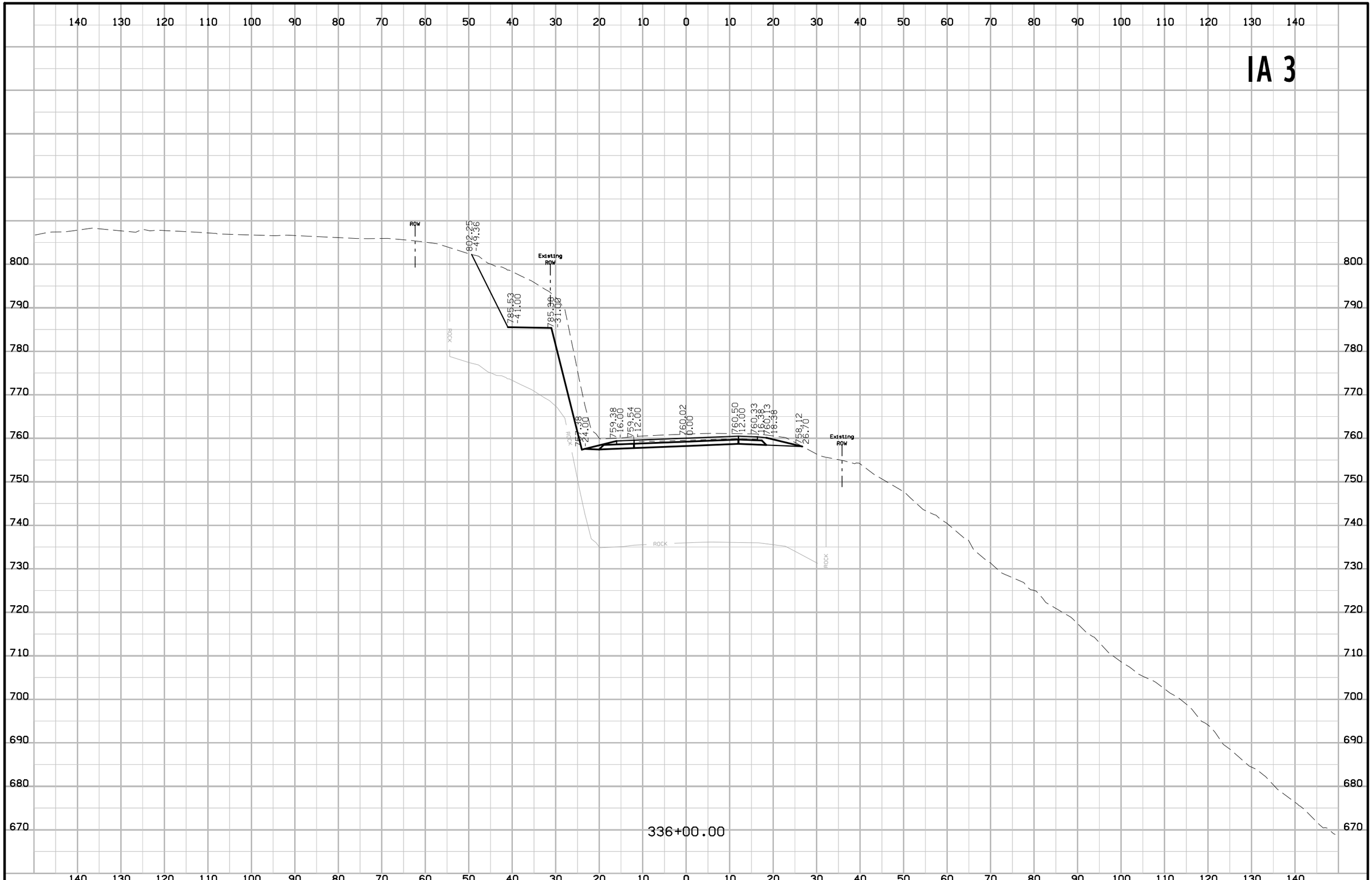
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.356

11:02:18 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

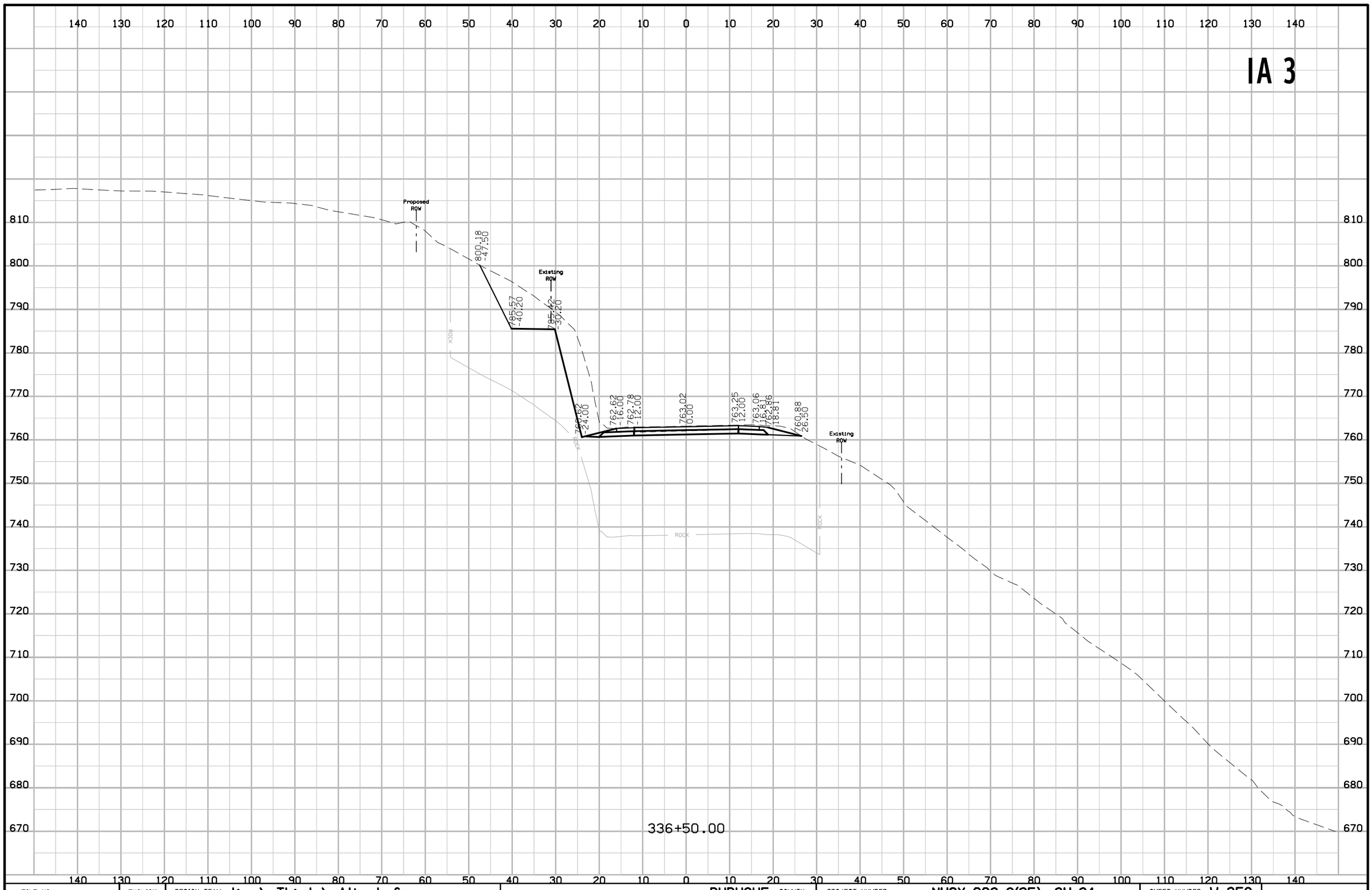
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.357

11:02:19 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

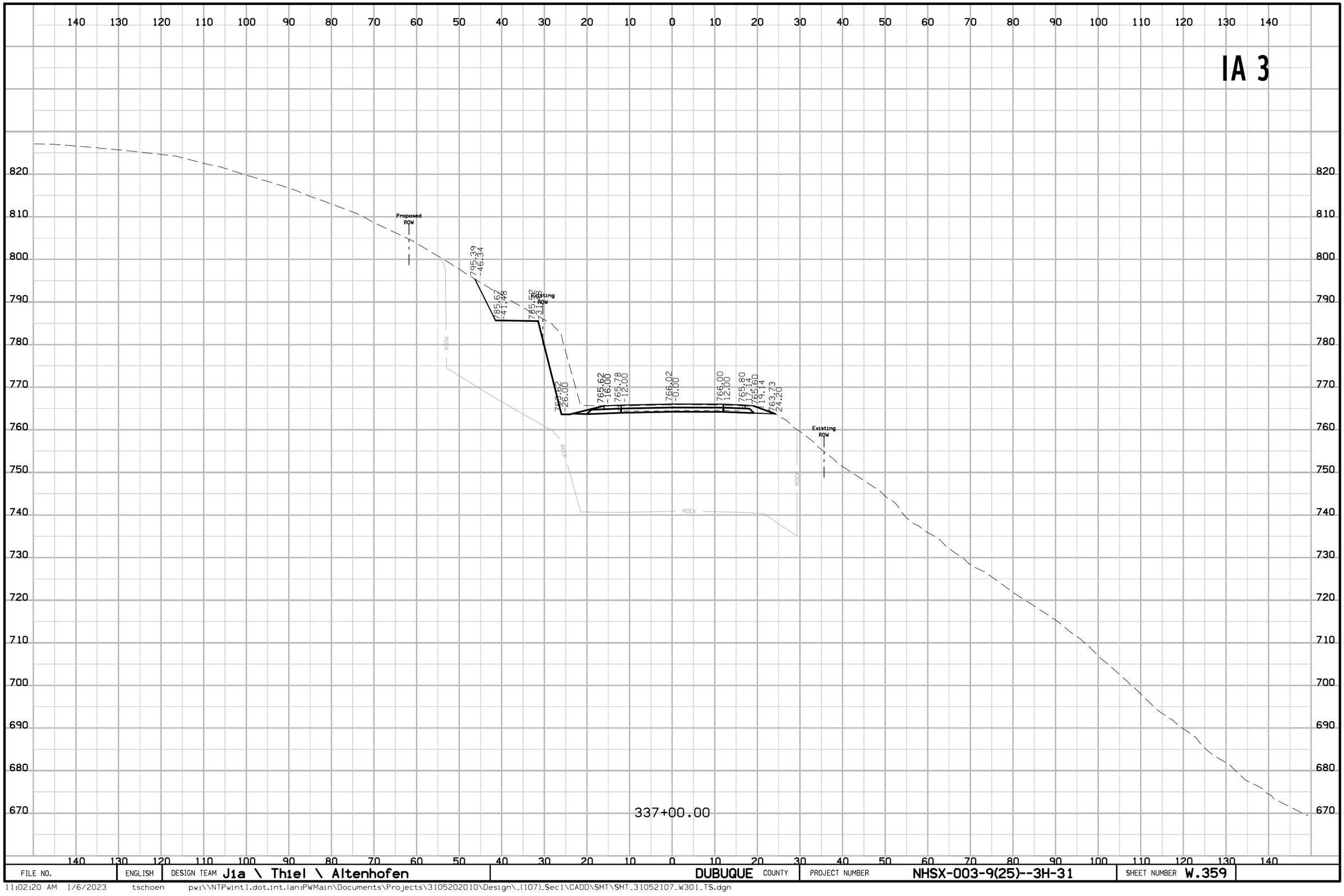
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.358

11:02:20 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.359

11:02:20 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3

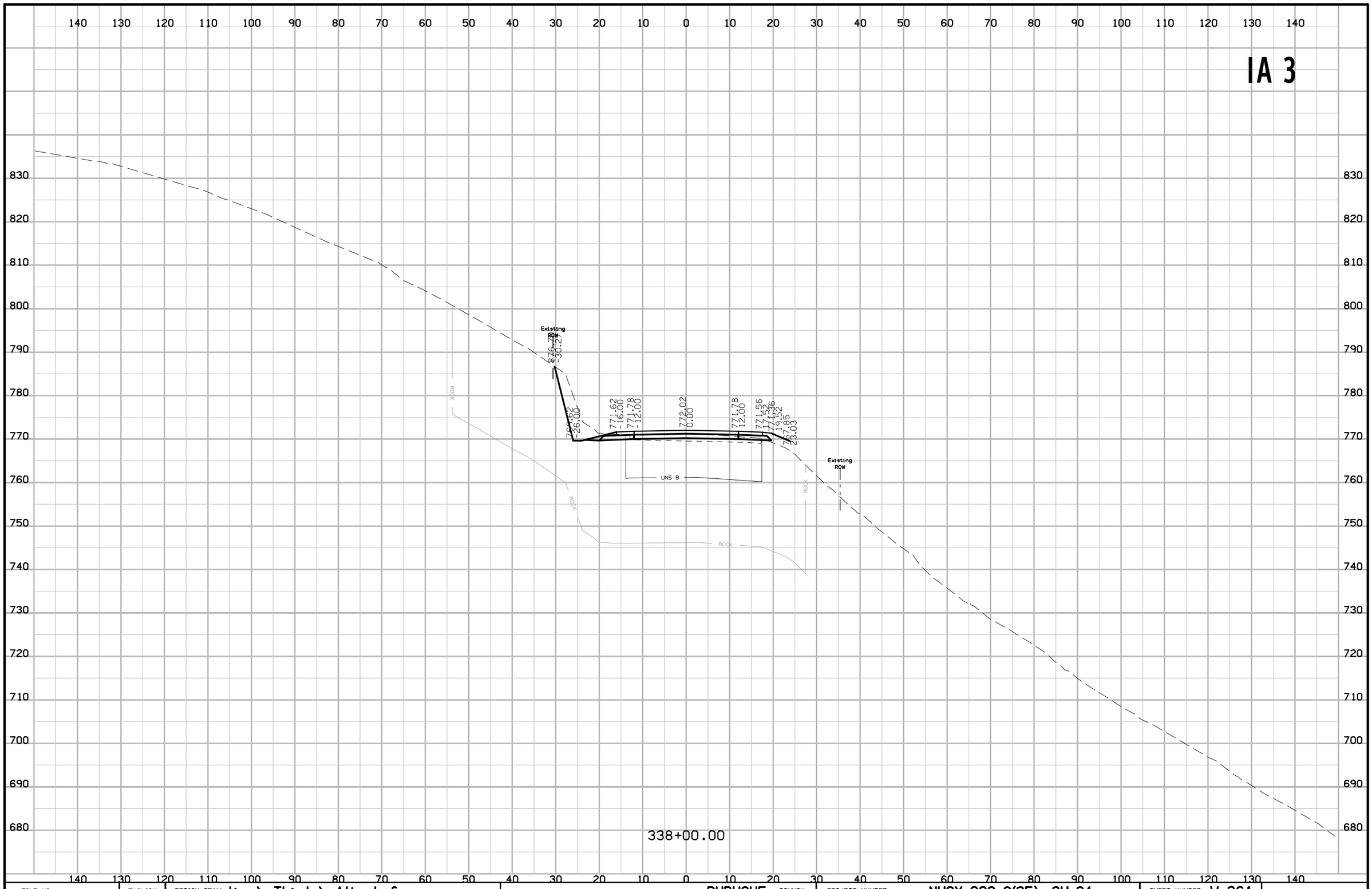
796.76
-48.93
787.07
-45.08
786.92
-34.98
Existing ROW
766.62
-30.00
768.62
16.00
768.78
12.00
769.02
-0.00
768.78
12.00
768.57
19.38
768.37
19.38
766.60
21.92
Existing ROW
UNS B
ROCK
ROCK
ROCK
ROCK

337+50.00

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.360

11:02:21 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

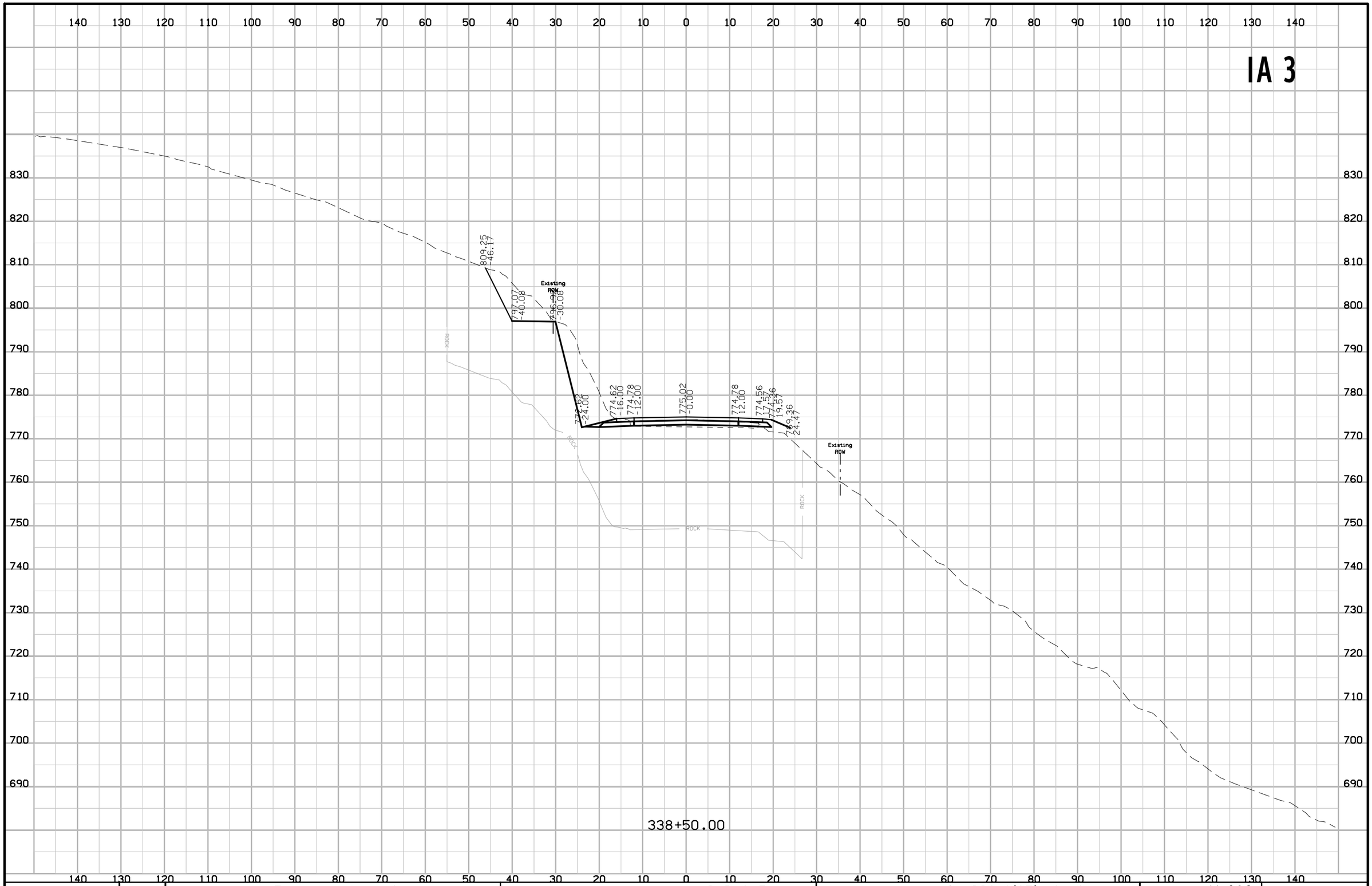
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.361

11:02:22 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

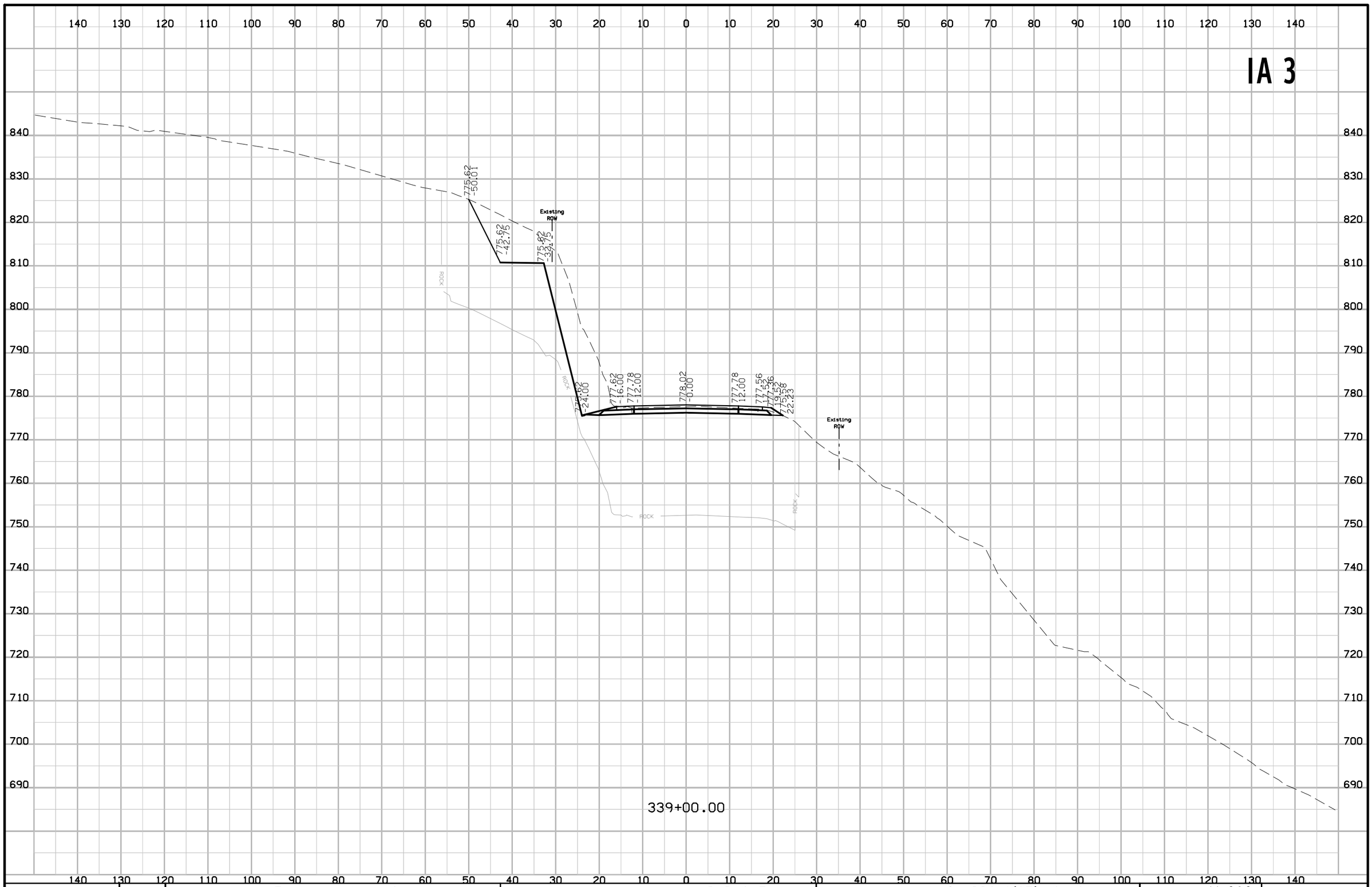
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.362

11:02:22 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

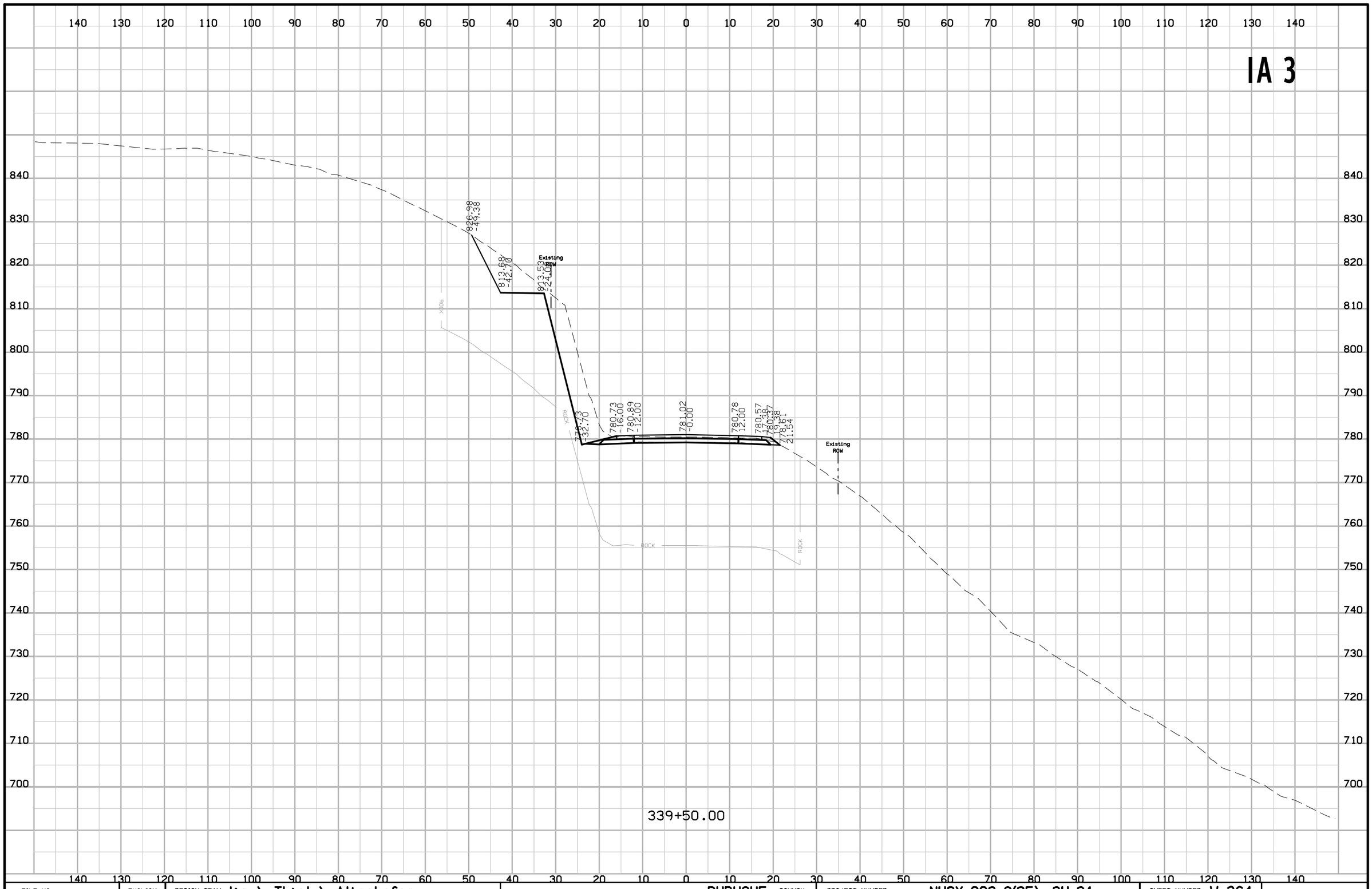
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.363

11:02:23 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

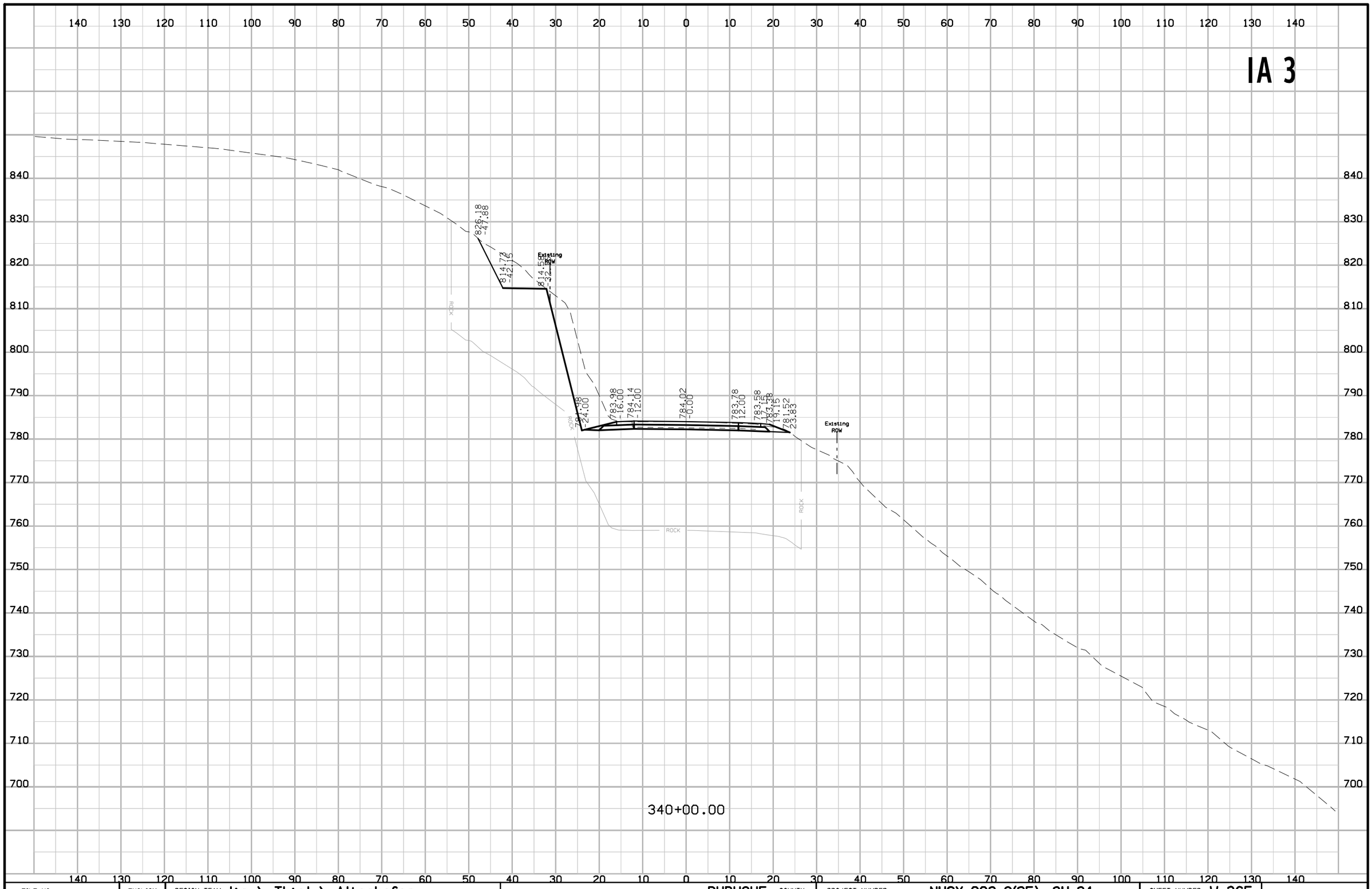
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.364

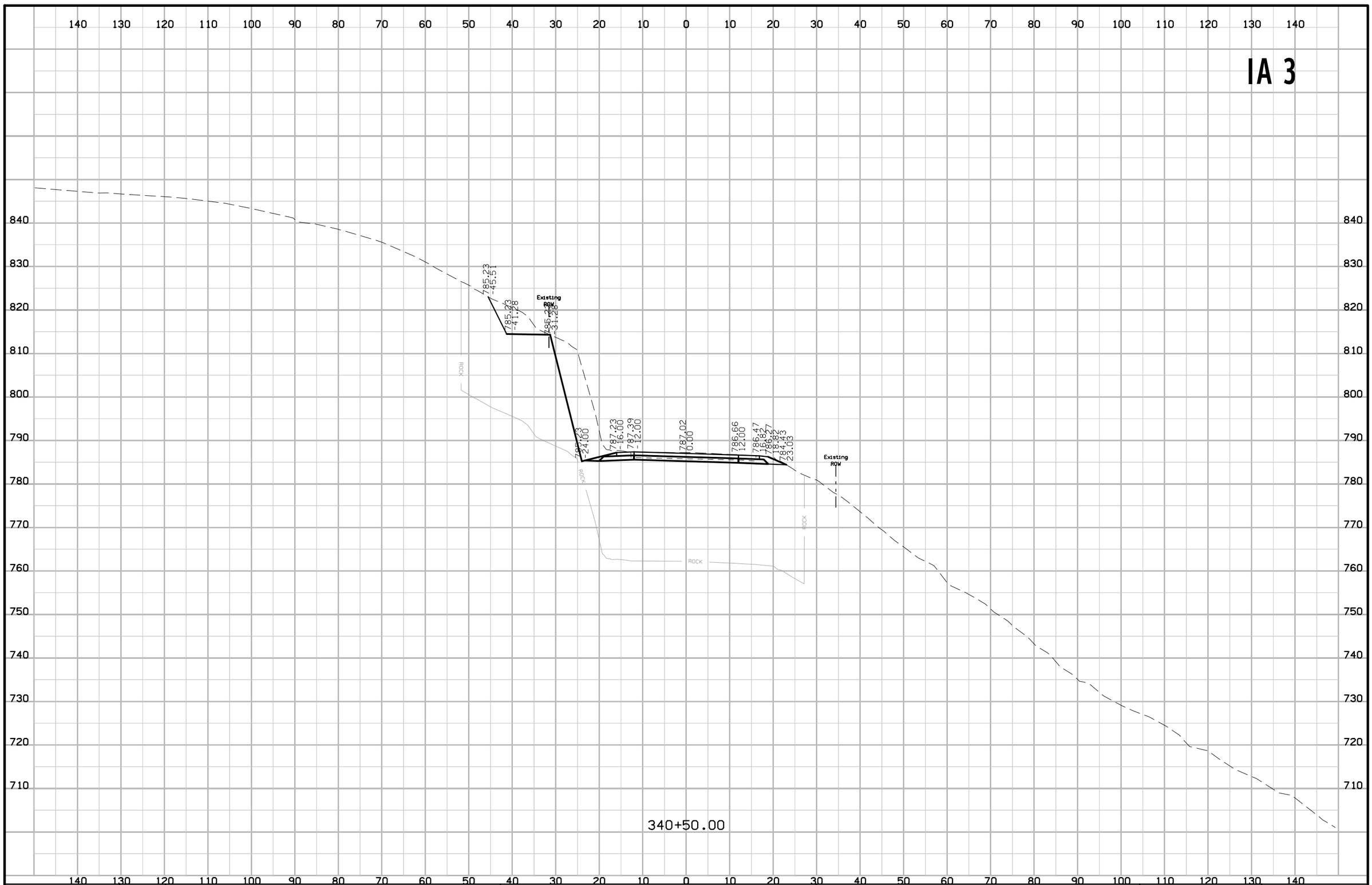
11:02:24 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.365

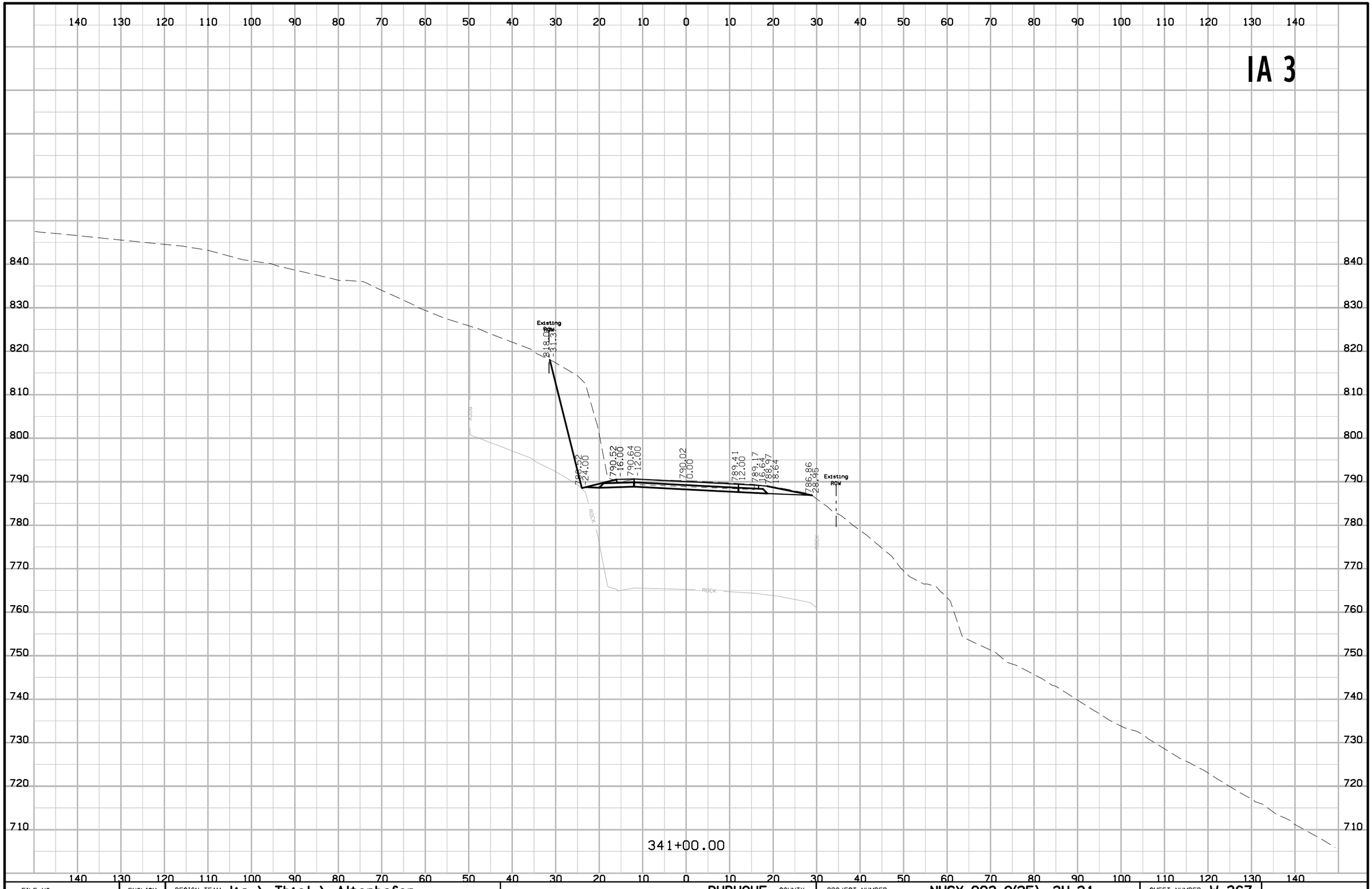
11:02:24 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.366

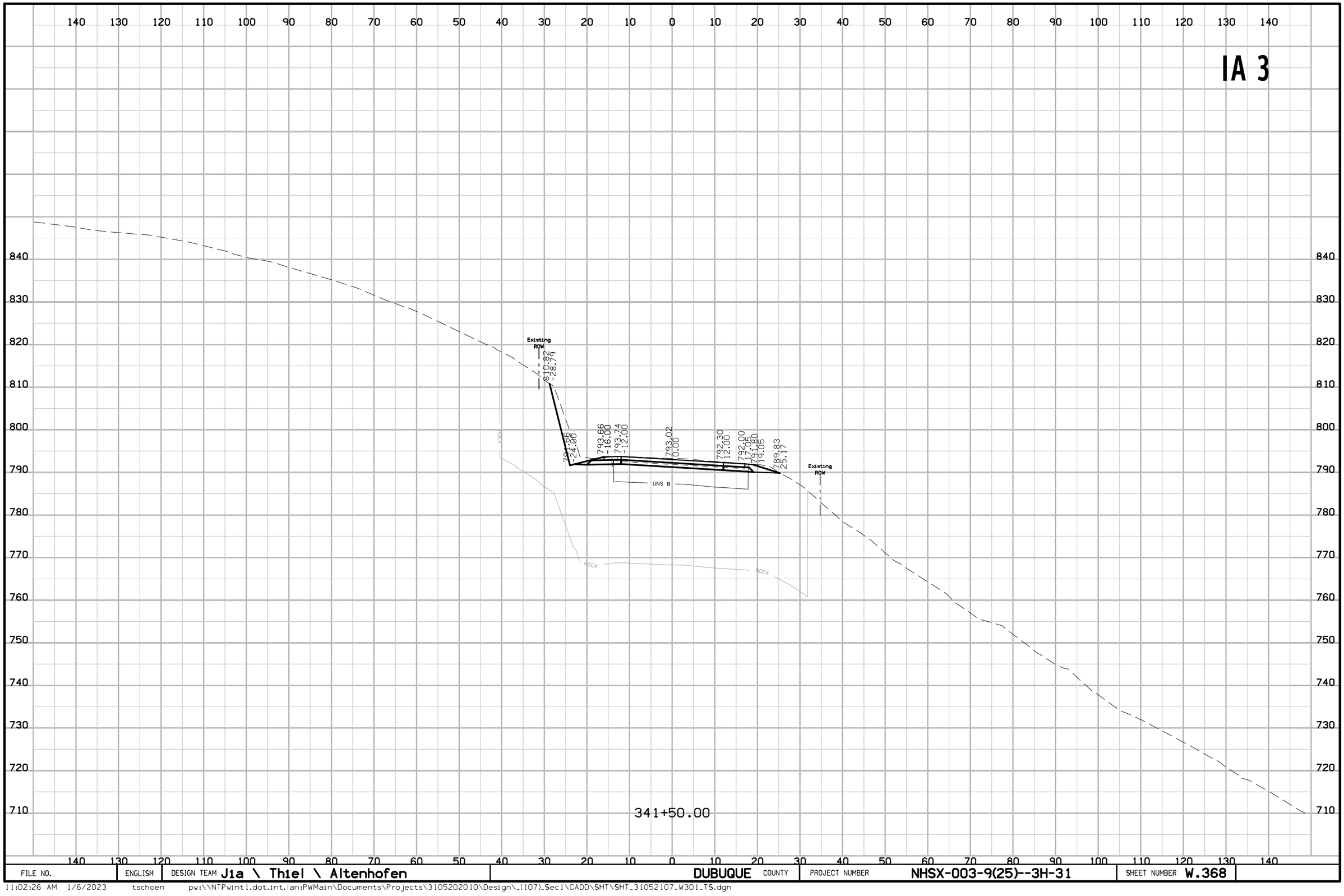
11:02:25 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.367

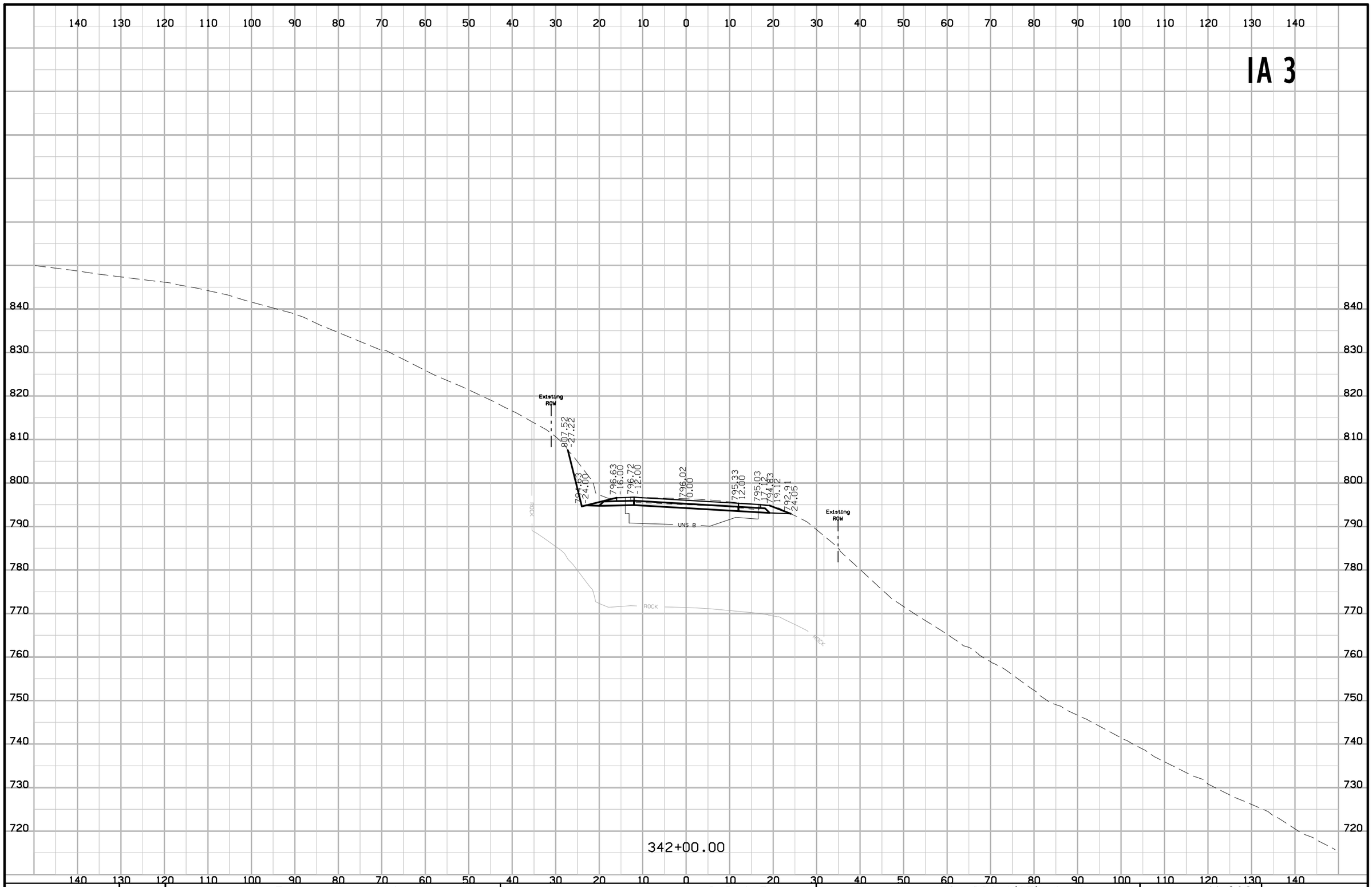
11:02:26 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.368

11:02:26 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.369

11:02:27 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

850 840 830 820 810 800 790 780 770 760 750 740 730 720

Existing ROW

815.40
28.52

797.31
24.00

799.31
16.00

799.47
12.00

799.02
0.00

798.58
12.00

798.39
16.88

798.19
18.88

796.30
24.36

Existing ROW

ROCK

ROCK

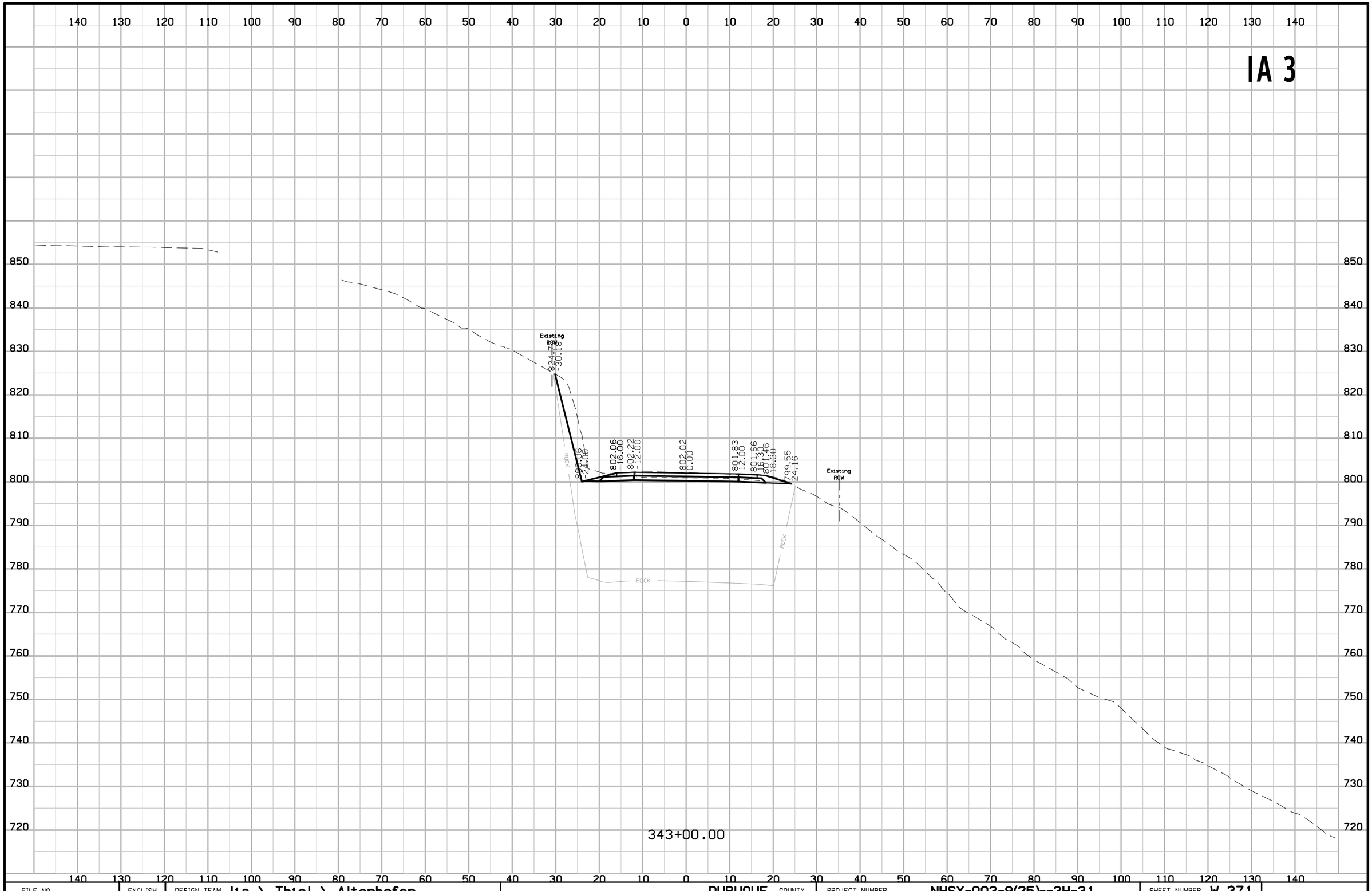
ROCK

342+50.00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.370

11:02:28 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

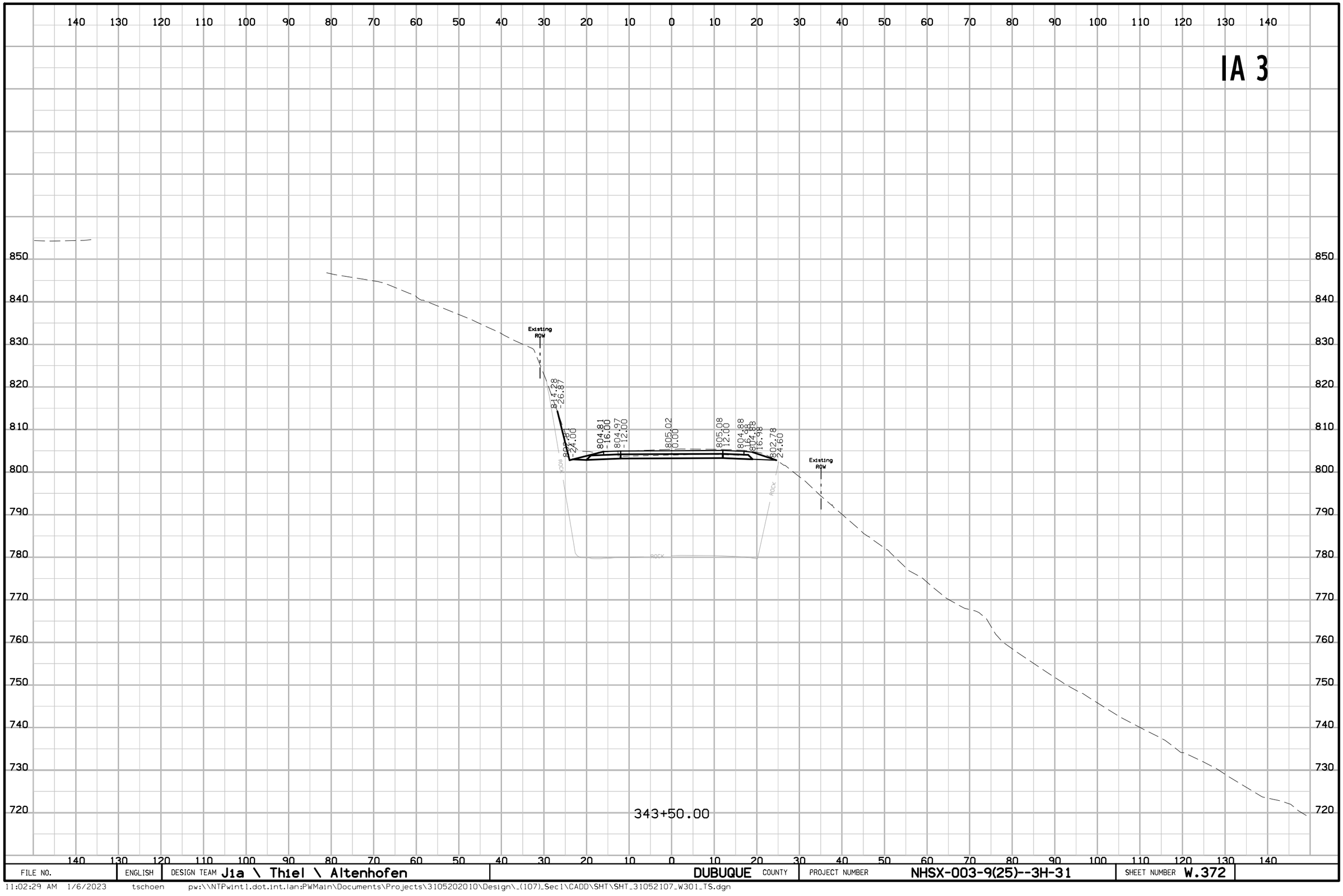
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.371

11:02:28 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

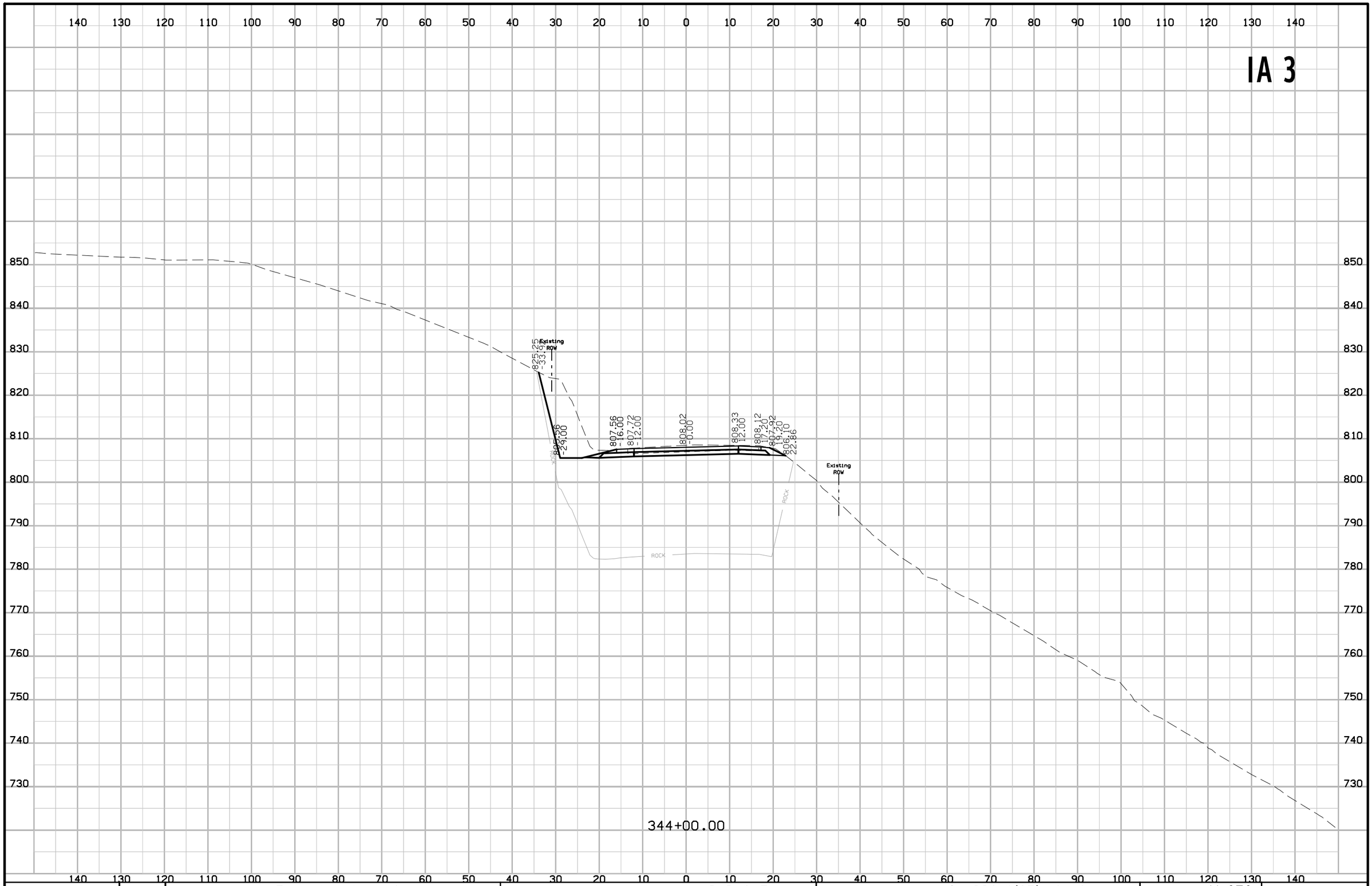
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.372

11:02:29 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

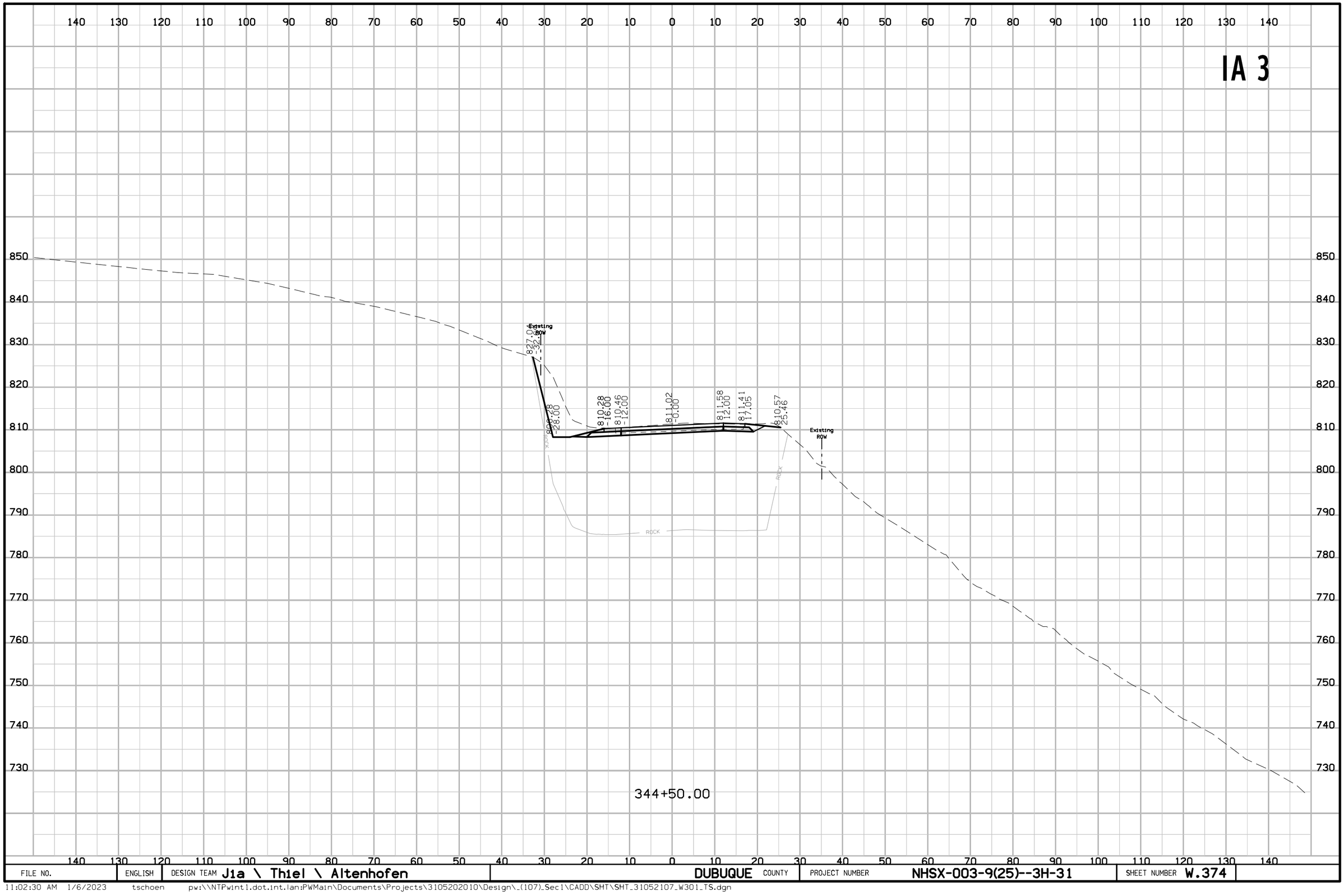
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.373

11:02:30 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

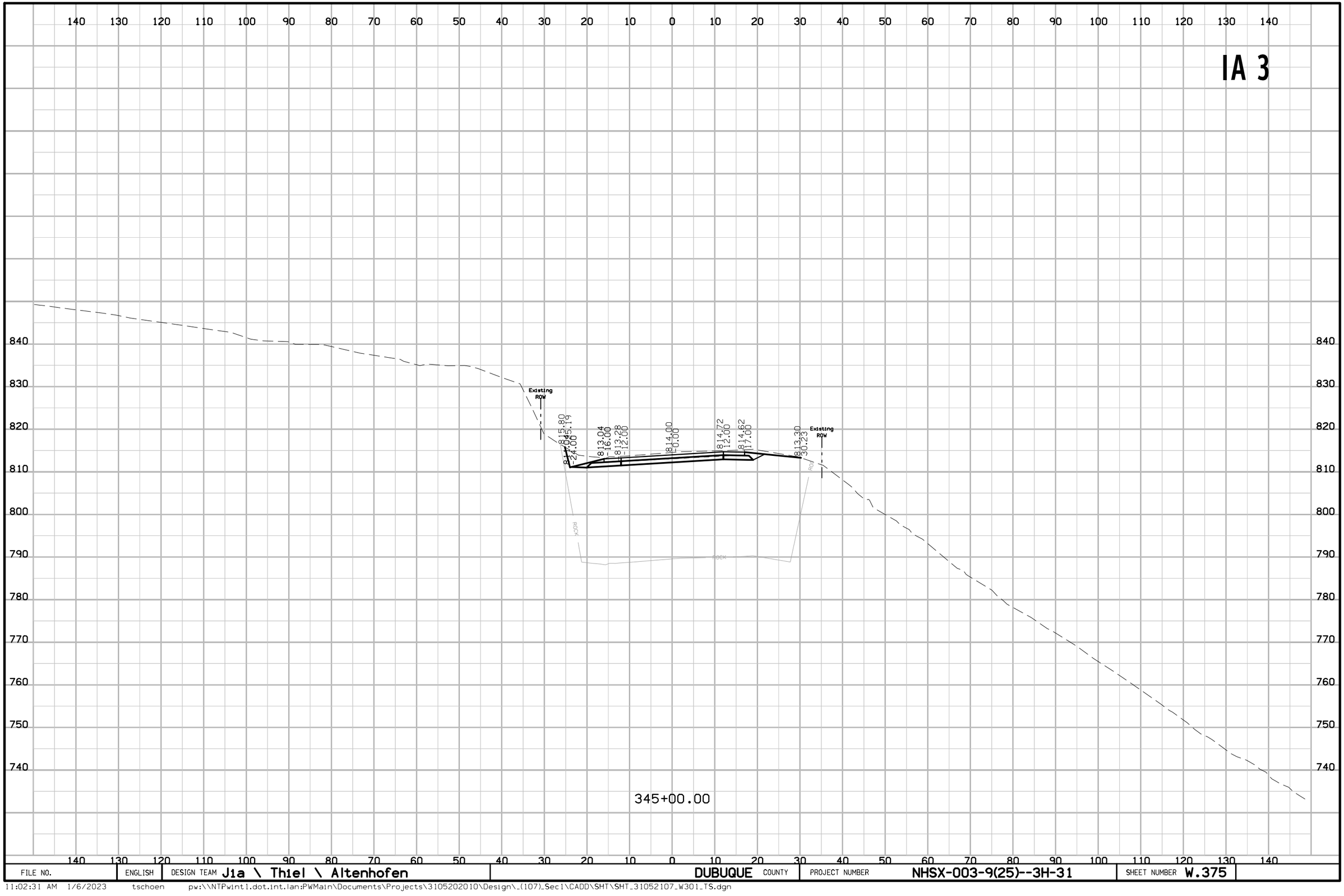
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.374

11:02:30 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

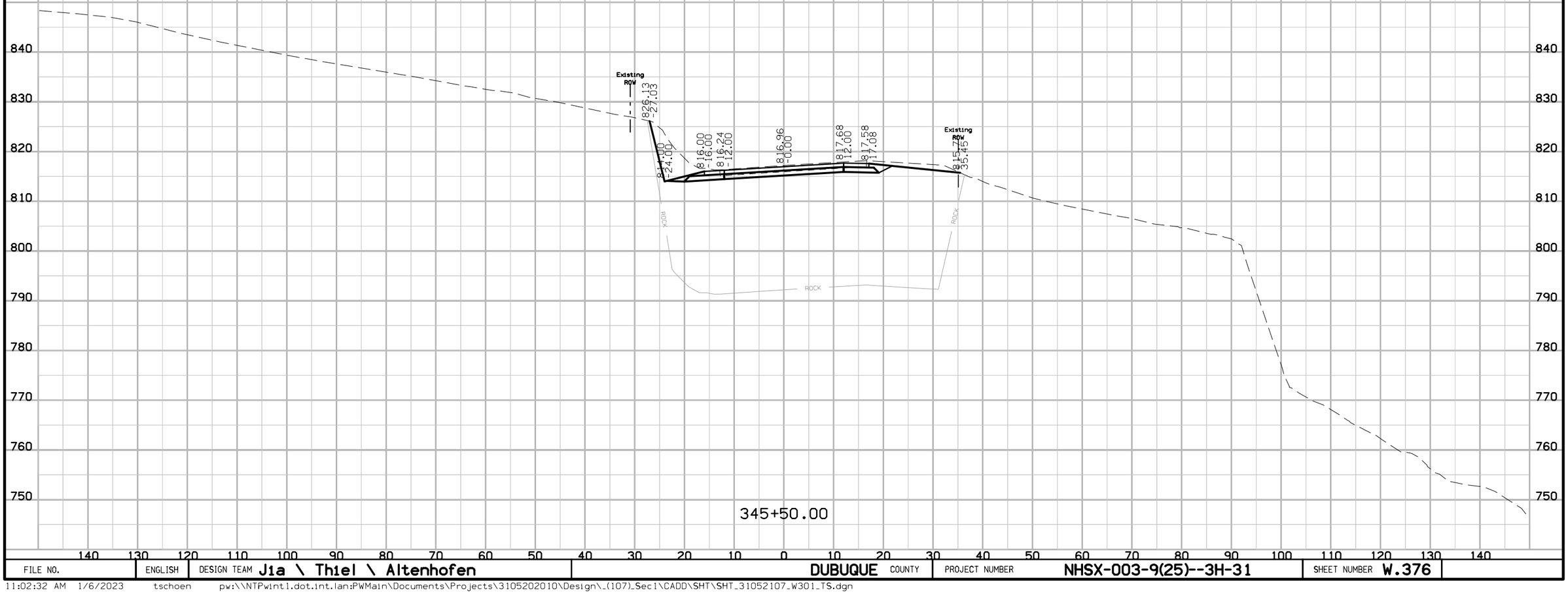
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.375

11:02:31 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

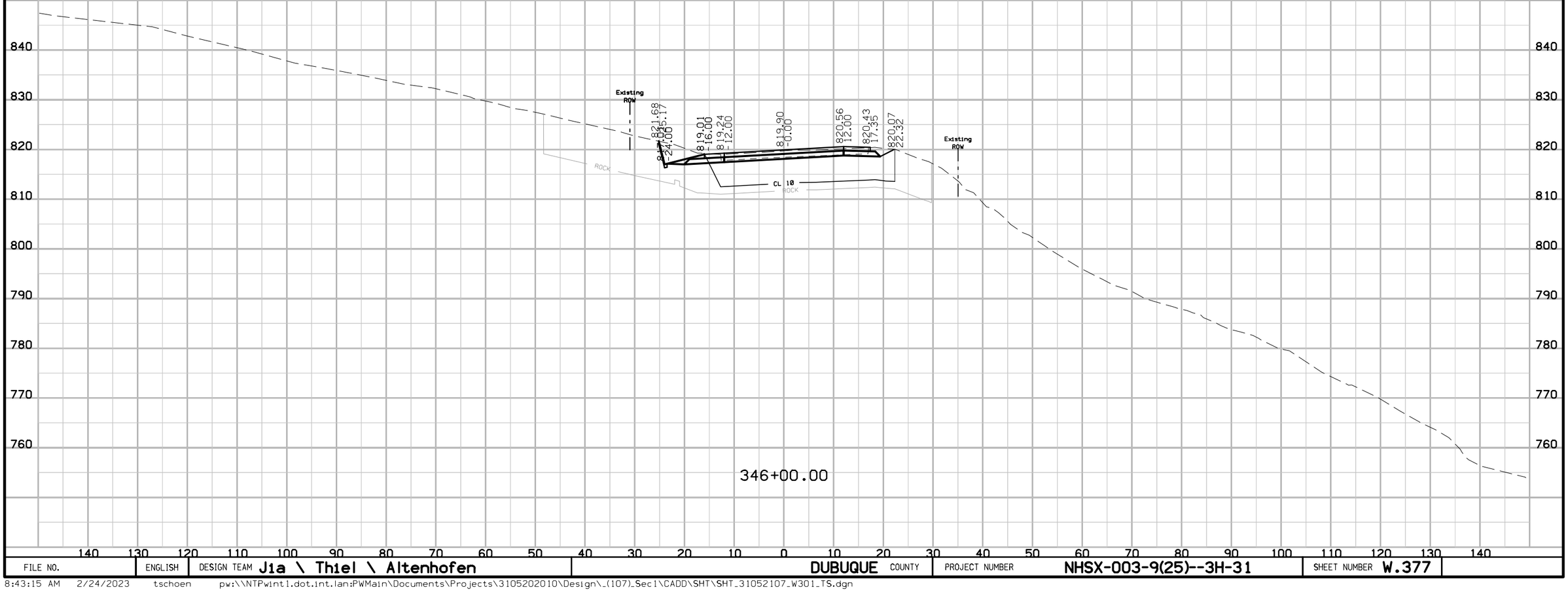
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.376

11:02:32 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

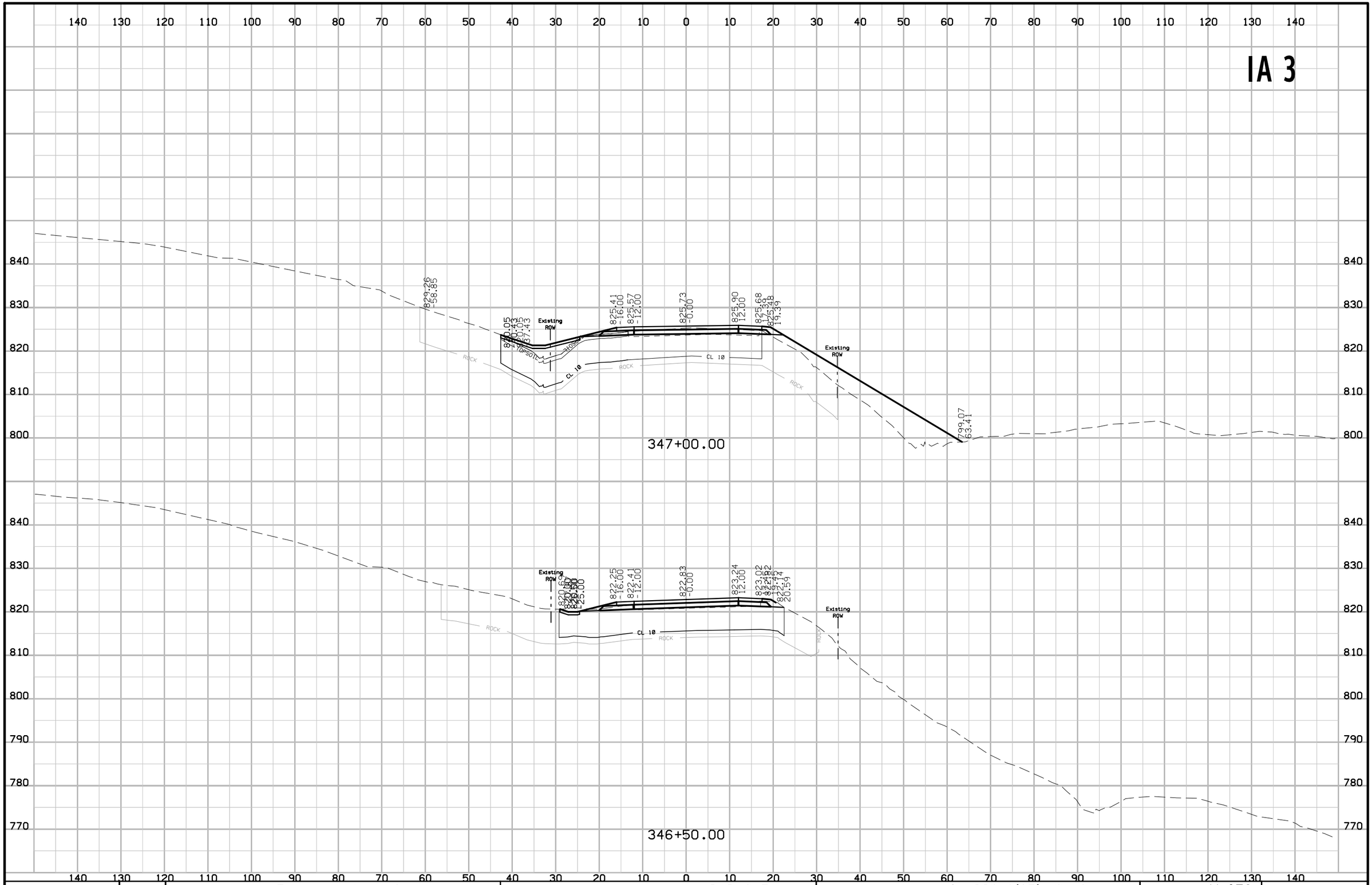
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.377

8:43:15 AM 2/24/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

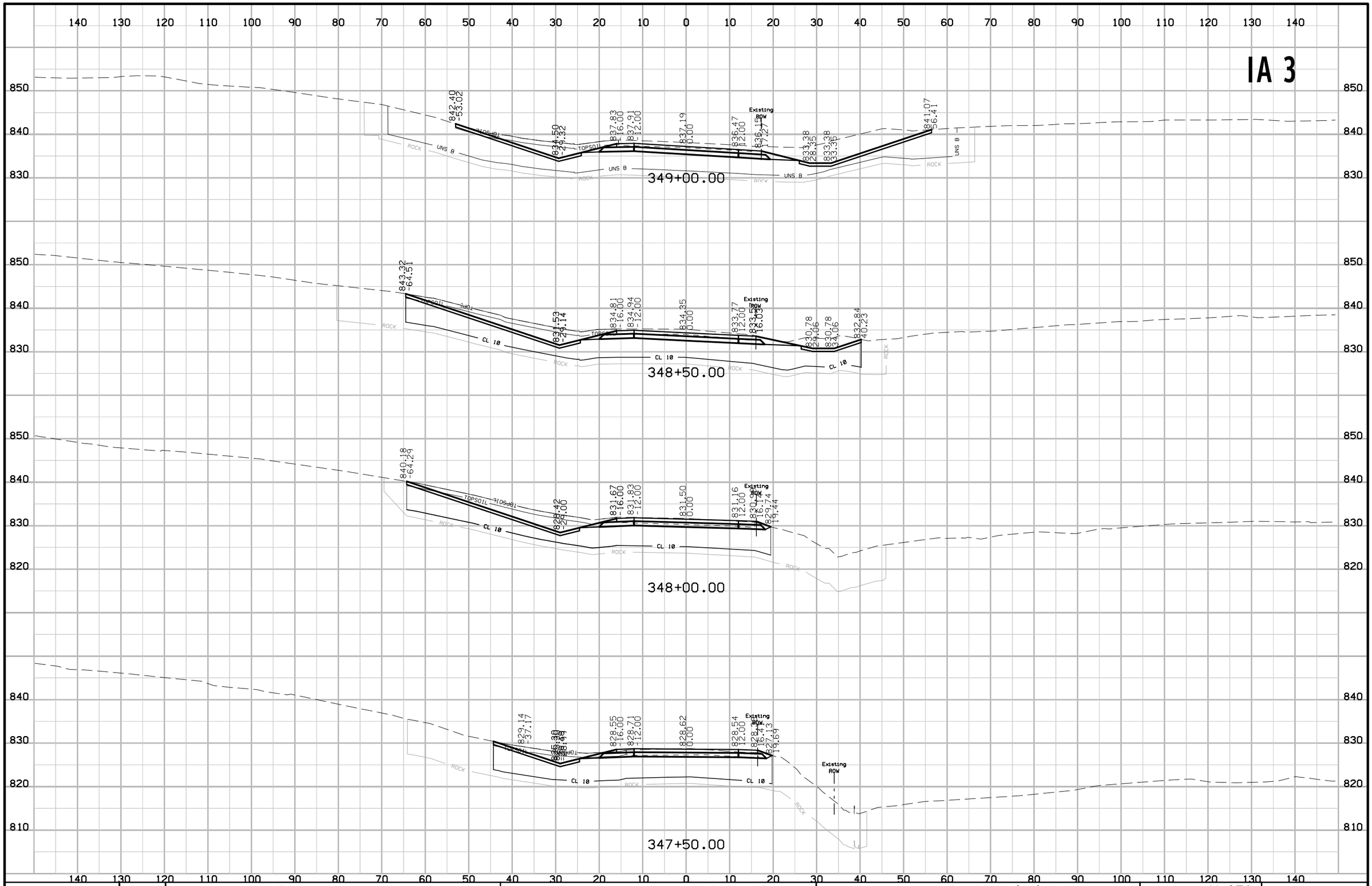
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.378

11:02:33 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

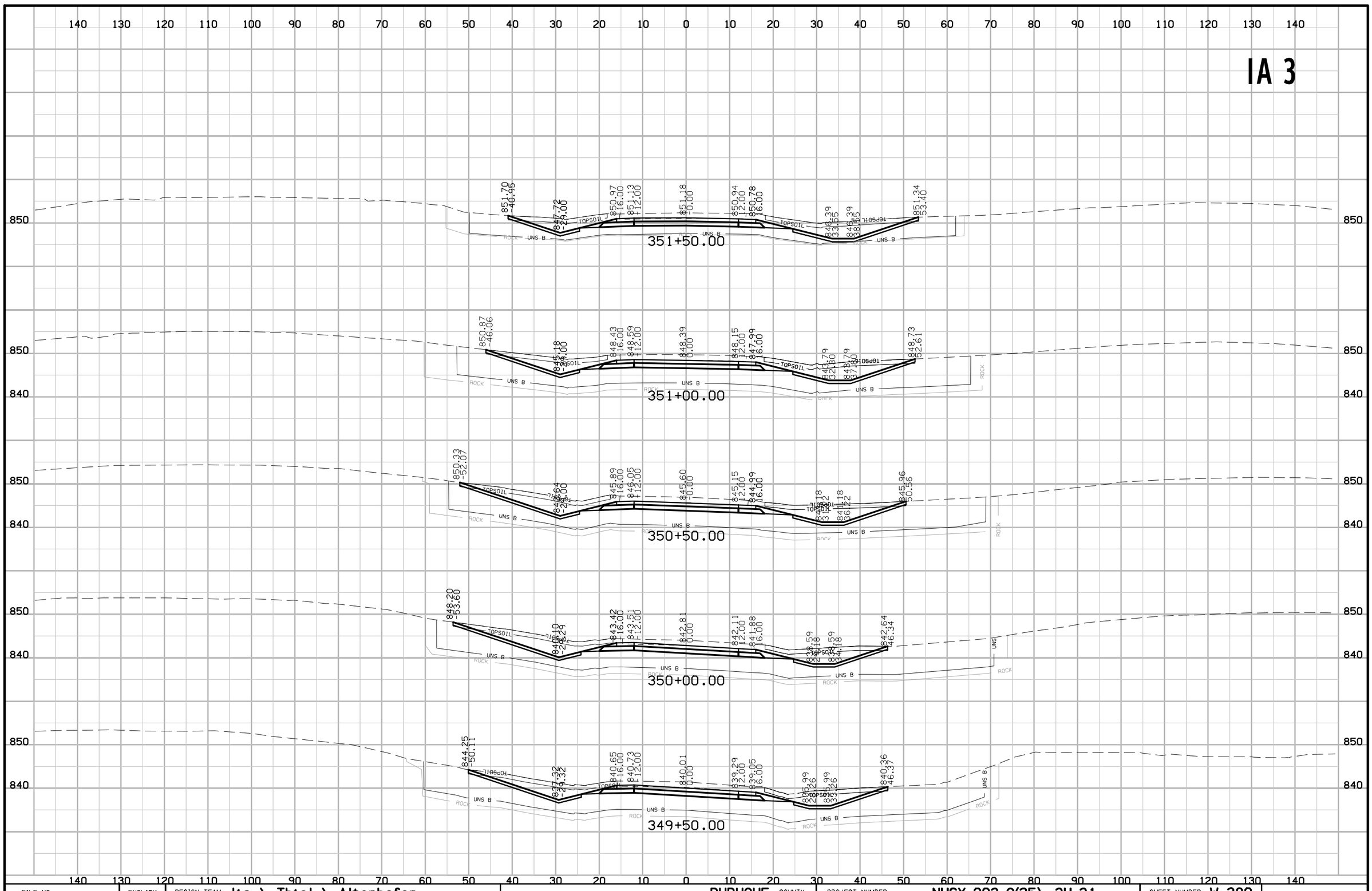
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.379

11:02:33 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

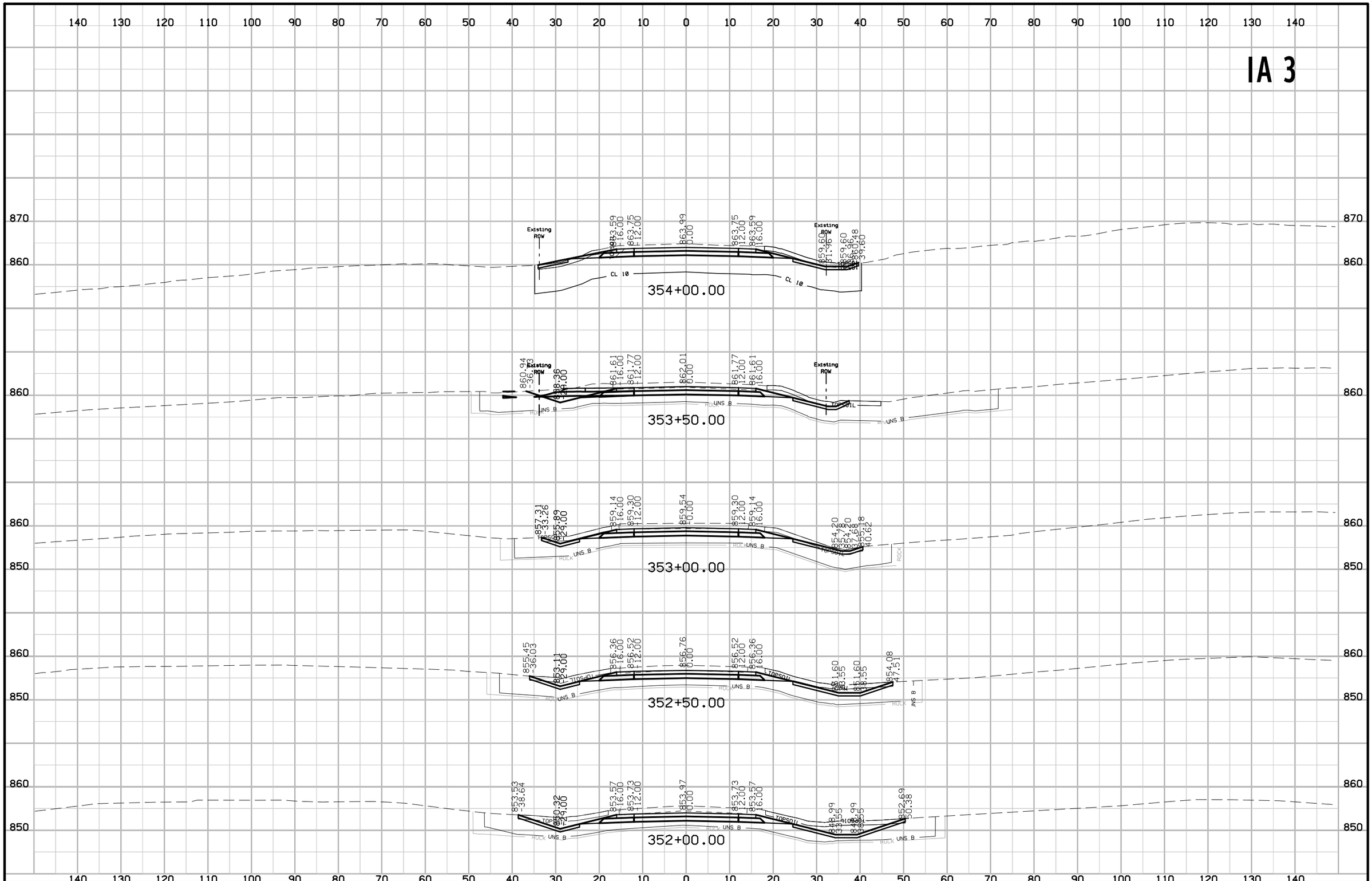
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.380

11:02:34 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

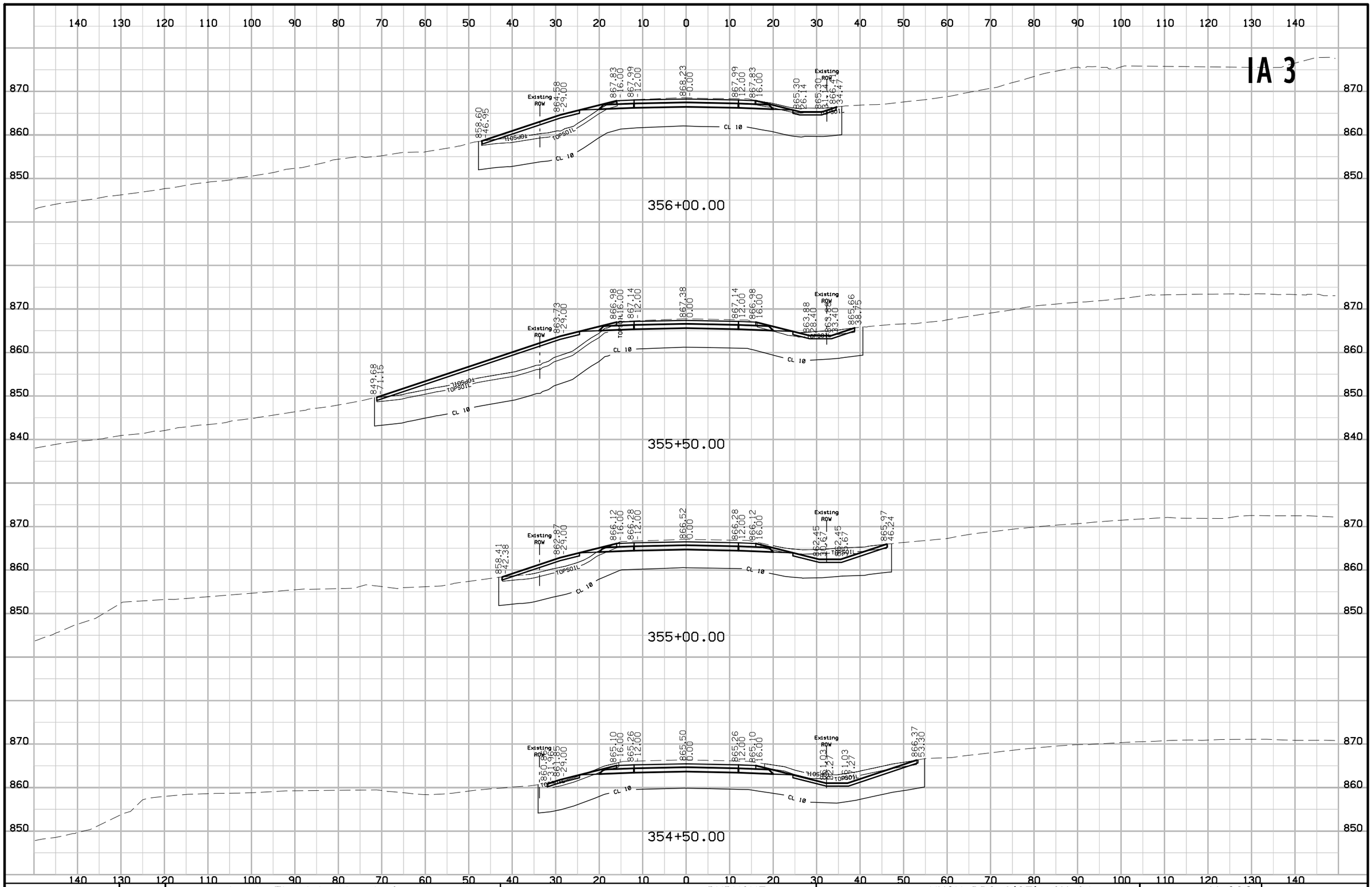
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.381

11:02:35 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

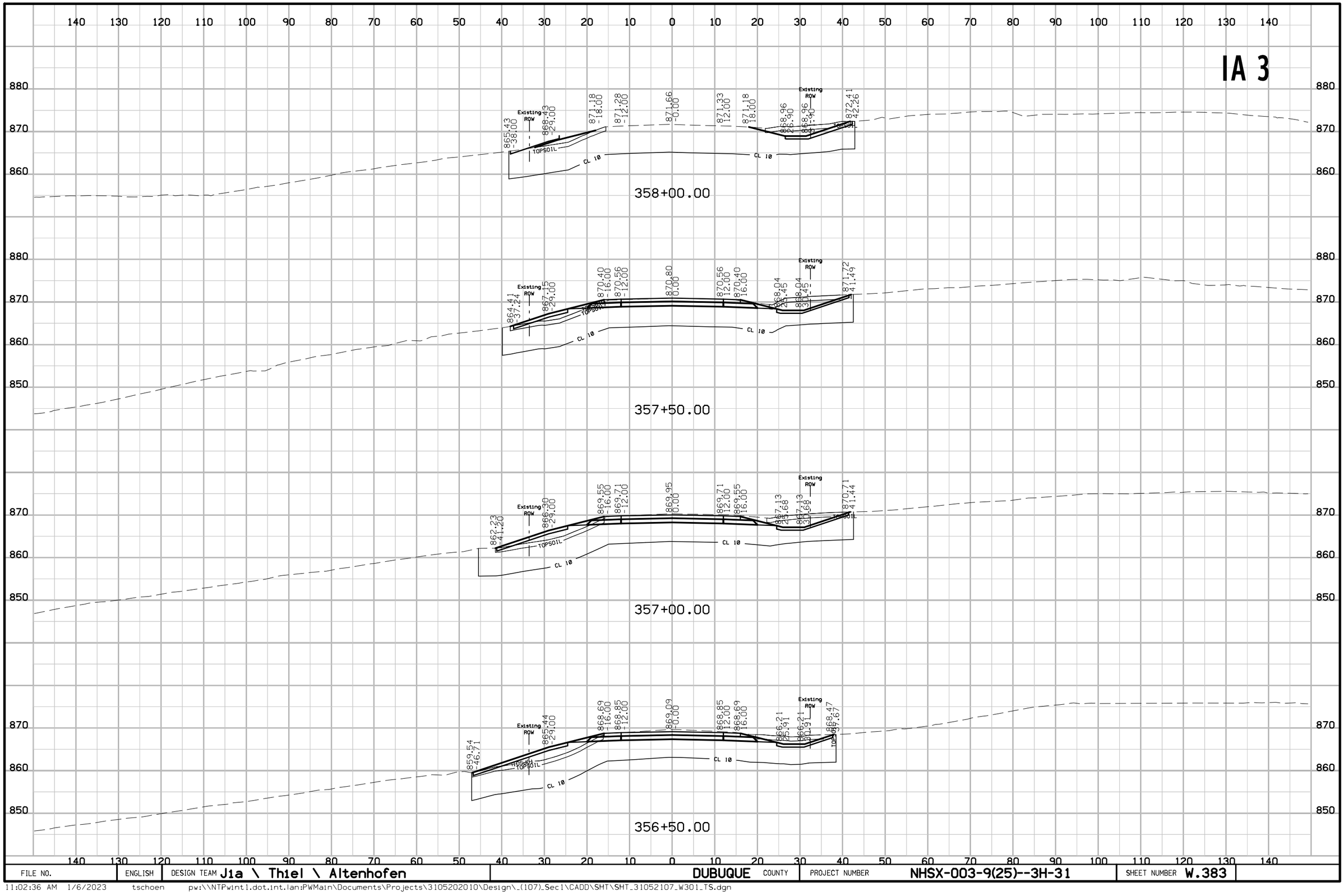
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.382

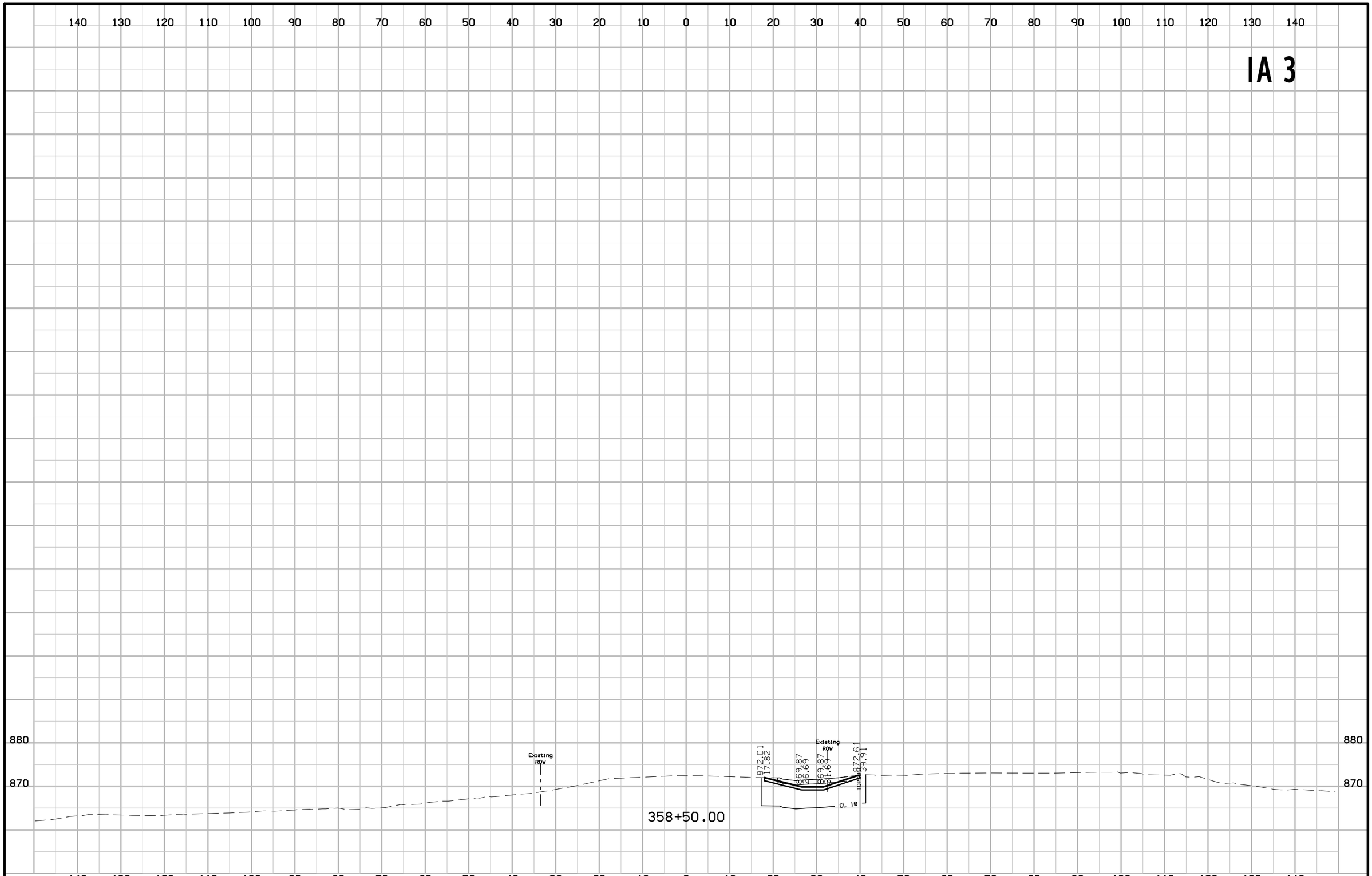
11:02:35 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.383

11:02:36 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER W.384

11:02:37 AM 1/6/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_W301_TS.dgn

Christensen Lane

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

640

642.09
-17.58

641.58
0.00

641.11
15.21

100+75.00

640

640

641.92
-17.42

641.73
0.00

640.94
15.04

100+50.00

640

641.59
-18.96

641.64
0.00

640.53
16.25

100+32.09

640

640

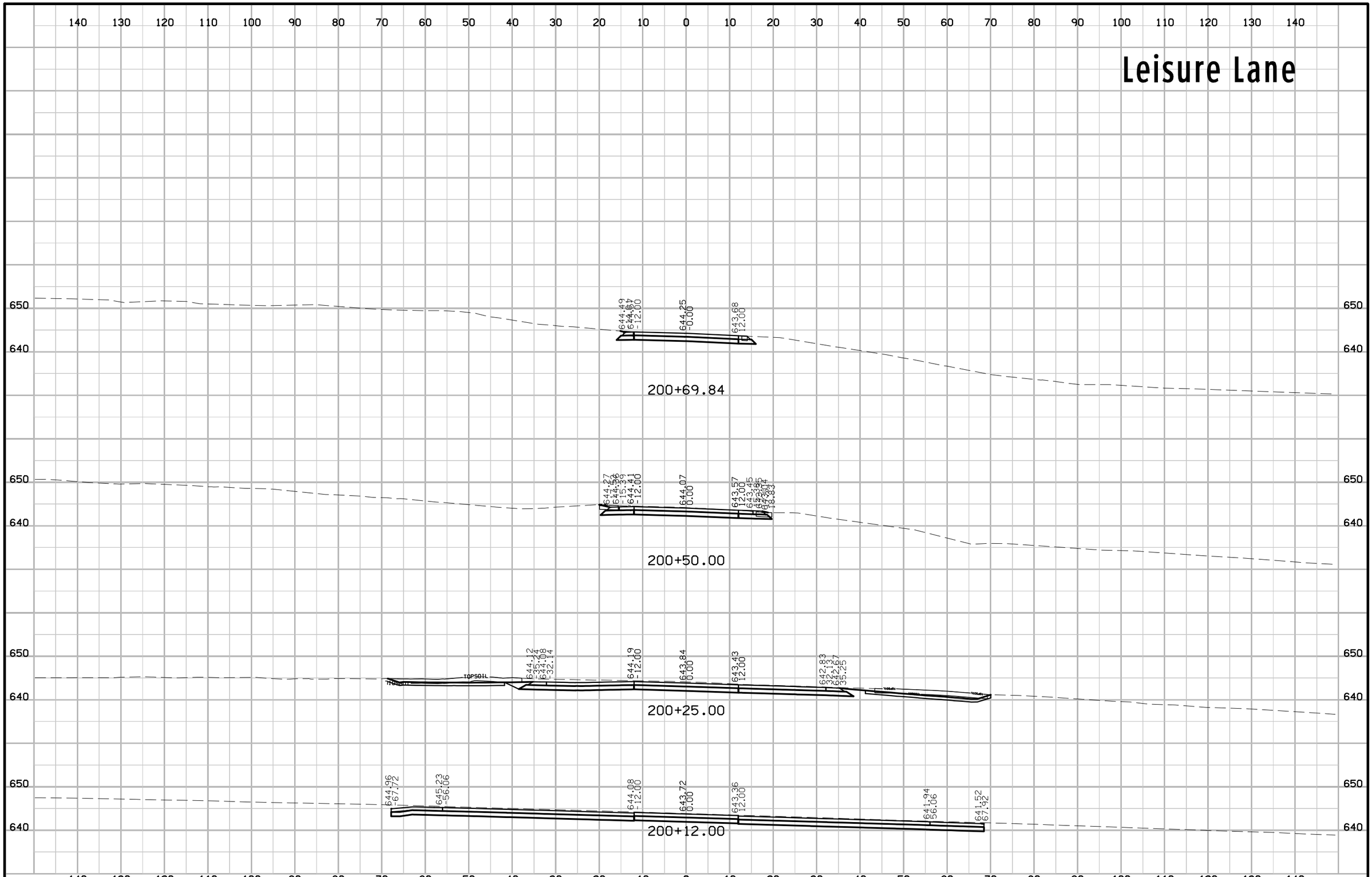
100+25.00

640

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.1

10:16:18 AM 2/14/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X01.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.2

4:05:34 PM 2/21/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X02.dgn

Sherrill Rd

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

660

655.22
15.44
654.85
31.67
301+75.00

660

654.95
15.42
654.65
32.20
301+50.00

660

654.71
15.42
654.46
32.20
301+25.00

660

654.31
-28.01
655.12
-16.01
654.27
16.14
654.16
38.24
301+00.00

660
650

653.88
-28.37
654.54
-16.25
653.67
21.65
653.42
58.21
300+75.00

660
650

653.68
-40.23
653.75
-24.25
652.81
34.51
652.65
79.51
TOPSOIL
300+50.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.3

4:27:35 PM 2/21/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X03.dgn

Whispering Hills Dr

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

710 700 690 680 670 660 650

651.68
-42.24
650.24
-36.34
650.66
-28.02
654.95
655.08
-9.01
655.50
0.00
655.57
655.49
655.15
12.37

400+66.94

690 680 670 660 650

648.71
-40.77
648.87
-36.09
654.84
-11.93
654.92
-9.93
655.32
-0.00
655.40
655.31
12.07
654.01
17.29

400+50.00

670 660

654.71
-19.52
654.85
-11.29
655.08
-0.00
655.20
11.52
655.07
19.76
652.26
37.23
653.62
42.39

400+25.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.4

8:02:03 AM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X04-05.dgn

Whispering Hills Dr

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

710
700
690
680
670
660

654.95
46.95
651.34
32.77
651.85
27.10
400+75.00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.5

8:02:04 AM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X04-05.dgn

Clay Hill Rd

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

650
640

641.28
-35.77
642.28
-29.14
642.59
12.00
642.65
0.00
642.70
12.00
642.14
28.79

Existing ROW

504+75.00

650
640
630

640.78
-20.69
642.07
-15.25
642.18
12.00
642.40
0.00
642.63
12.00
642.09
14.86
641.46
18.80

504+50.00

640
630

640.36
-23.74
641.33
-14.03
641.43
12.03
641.81
-0.00
642.20
642.42
13.99
641.64
18.84

504+25.00

640
630

641.07
12.12
641.64
-0.00
642.08
12.15

504+00.00

640
630

641.05
12.14
641.66
0.00
642.10
12.21
641.84
15.95

503+95.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.6

9:06:25 AM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X06.dgn

Clay Hill Rd

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

650

640

642.58
12.00

642.55
0.00

642.51
12.00

504+88.15

650

640

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.7

9:06:25 AM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X06.dgn

Raylyn Rd

600+50.00

664.27
-16.33
664.37
-12.00
664.39
0.00
664.18
12.00
664.06
16.84

600+25.00

666.37
-31.24
665.53
-12.00
665.35
-0.00
665.06
12.00
664.60
31.12
663.32
41.87

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.8

12:51:10 PM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X07-09.dgn

Raylyn Rd

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

730 720 710 700 690 680 670 660 650 640

663.52
-15.08
663.61
-12.00

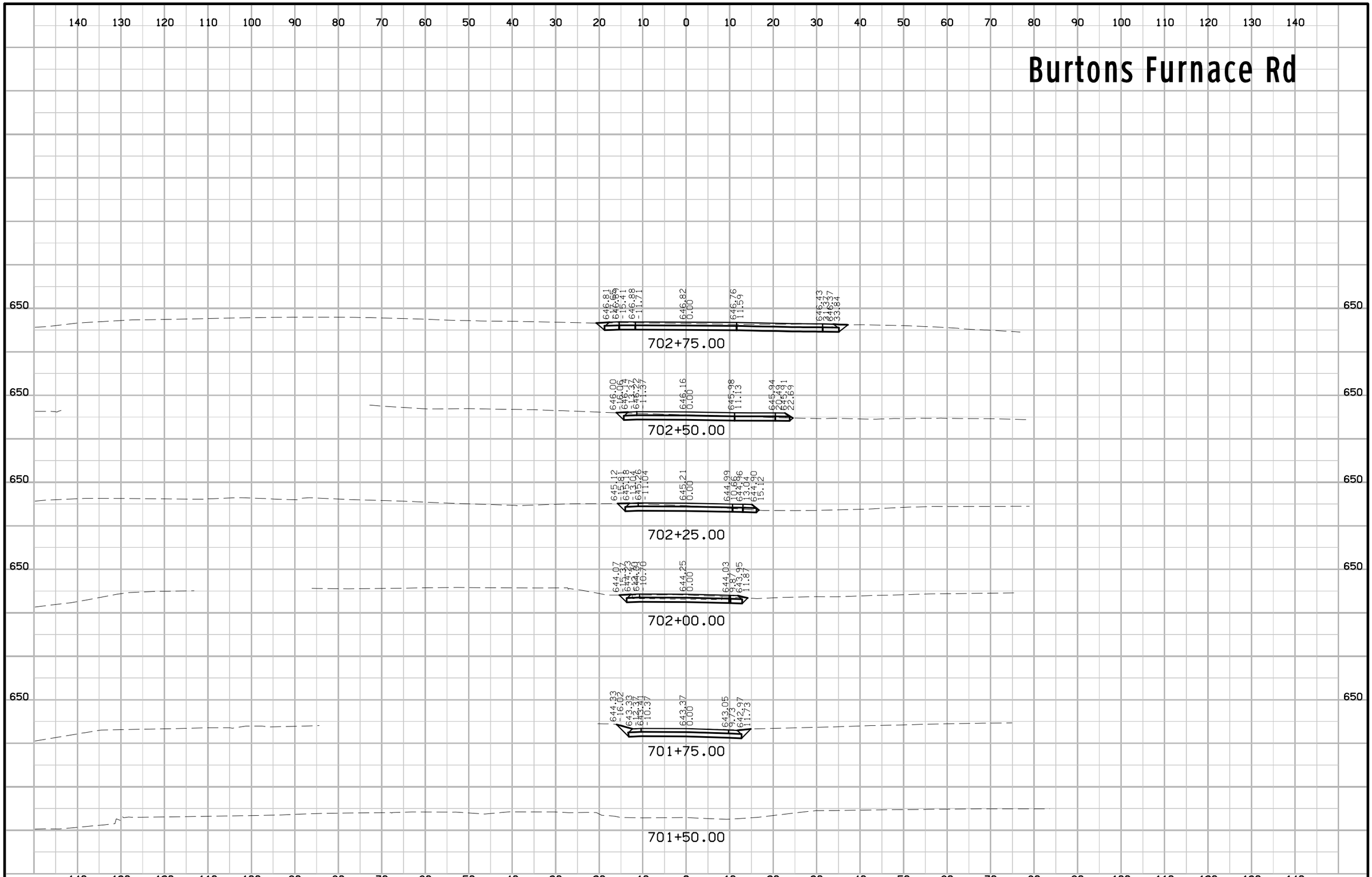
663.72
-0.00

663.55
-0.05
663.46
15.39

600+62.00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.9

12:51:11 PM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X07-09.dgn



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.10

2:27:17 PM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X10-11.dgn

Durango Rd

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

650

646.10
-15.42

647.03
-10.42

647.34
0.00

647.32
11.60

647.33
16.60

800+87.45

650

650

646.93
-10.66

647.14
-0.00

647.08
17.99

647.66
22.99

800+75.00

650

650

646.33
-16.90

646.37
-11.90

646.47
0.00

646.40
12.00

647.16
17.00

647.05
22.21

800+50.00

650

650

645.48
-23.13

646.69
-17.00

645.74
12.00

645.67
0.00

645.58
12.00

645.96
17.00

644.81
26.04

644.08
45.34

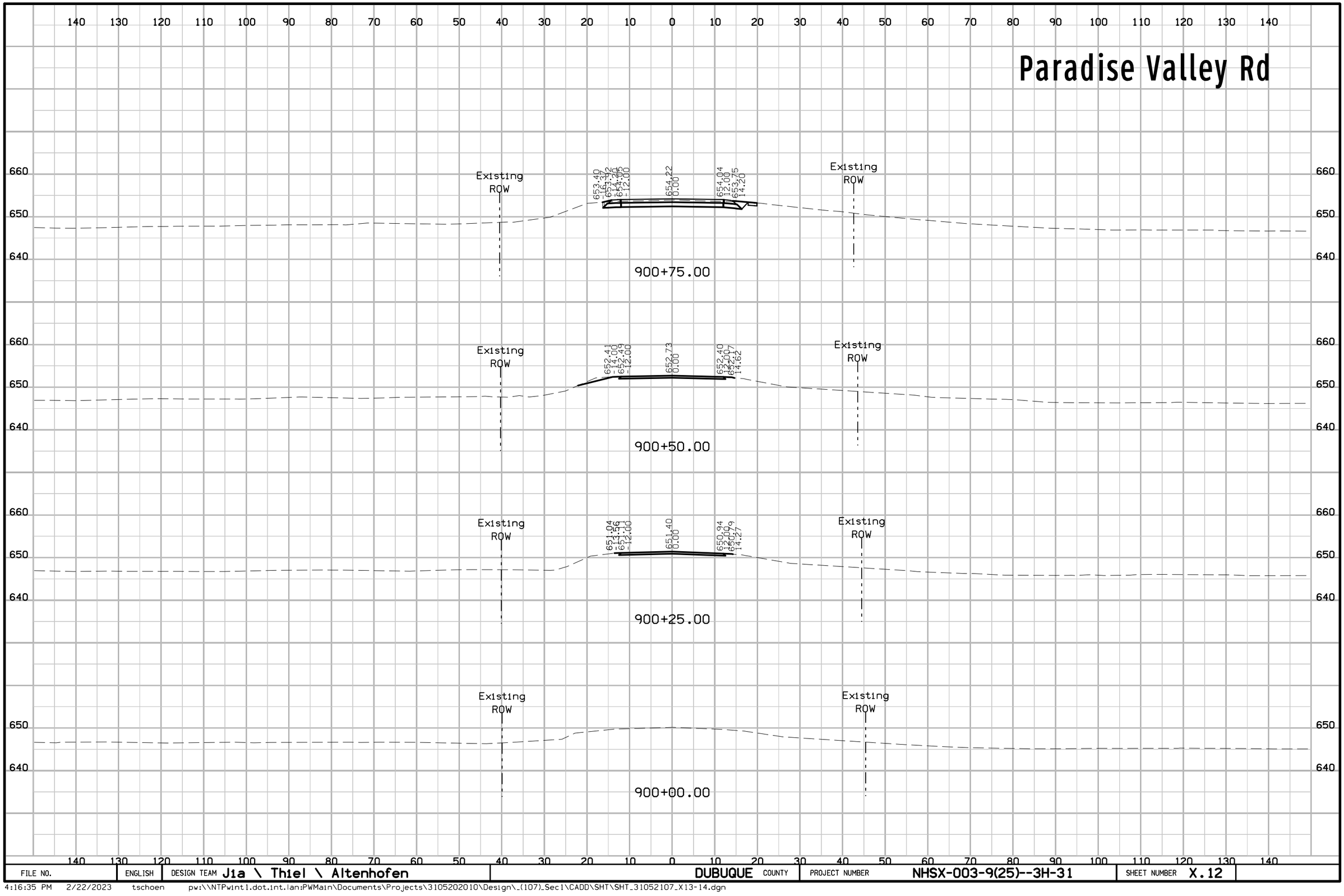
800+25.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.11

3:36:40 PM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X12.dgn

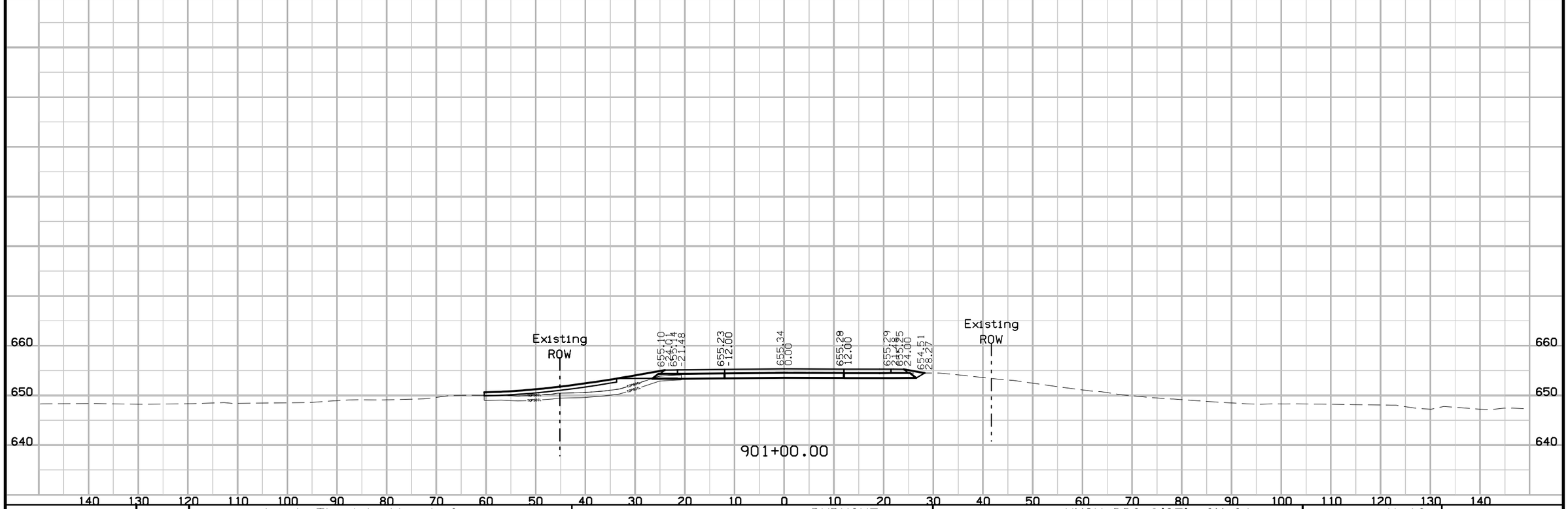
Paradise Valley Rd



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.12

4:16:35 PM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X13-14.dgn

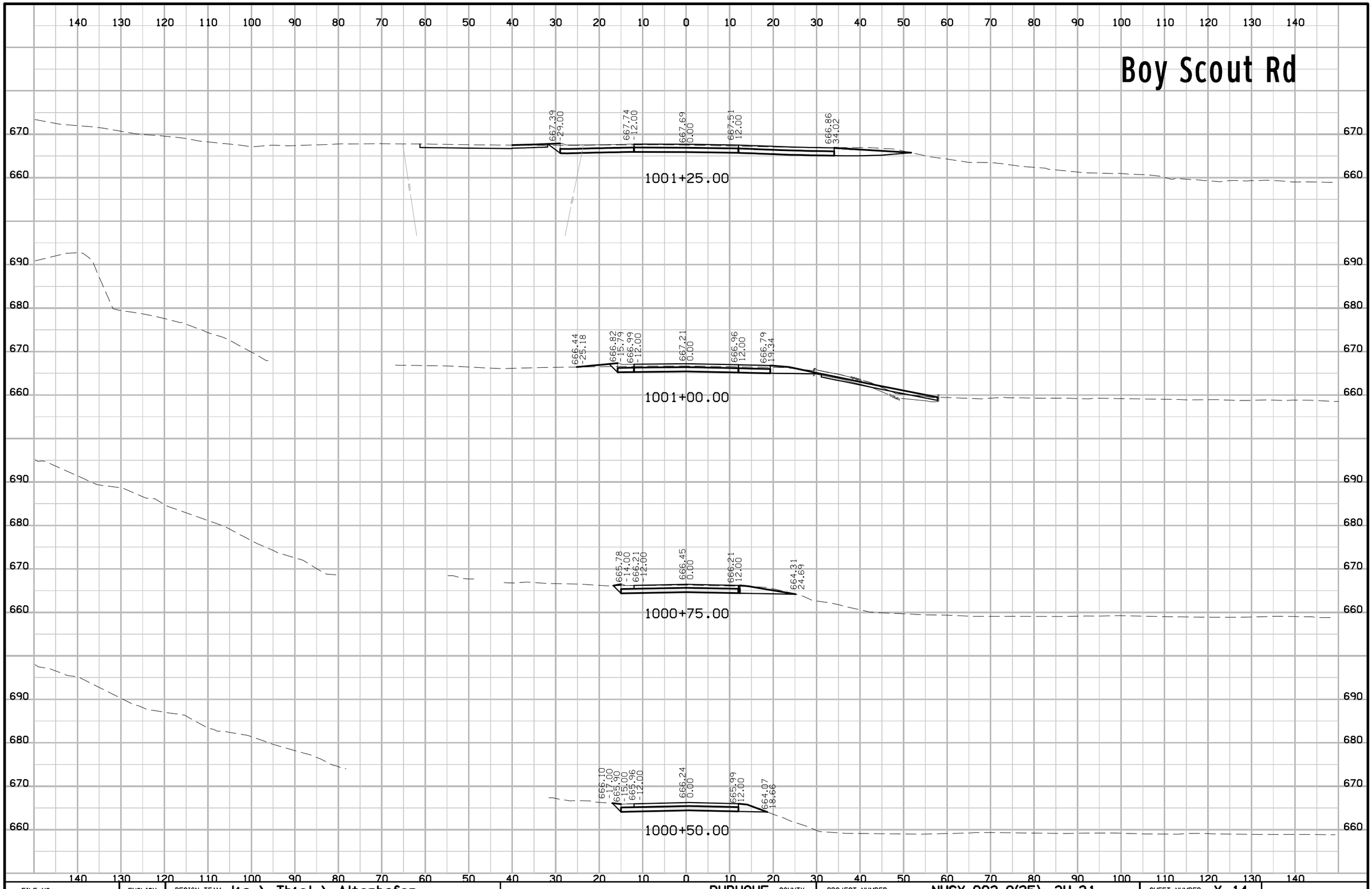
Paradise Valley Rd



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.13

4:16:36 PM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X13-14.dgn

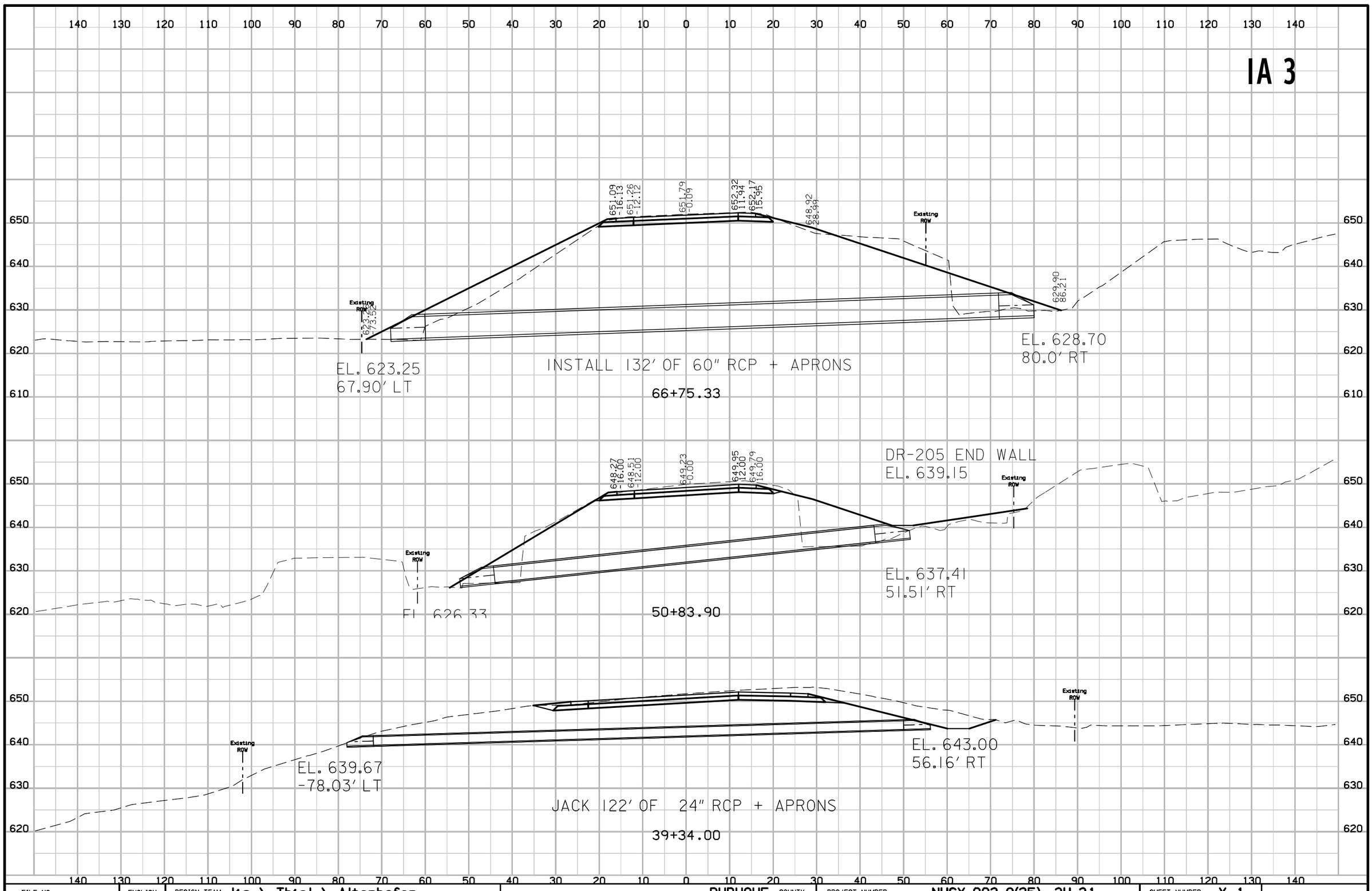
Boy Scout Rd



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER X.14

4:05:41 PM 2/22/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X15-17.dgn

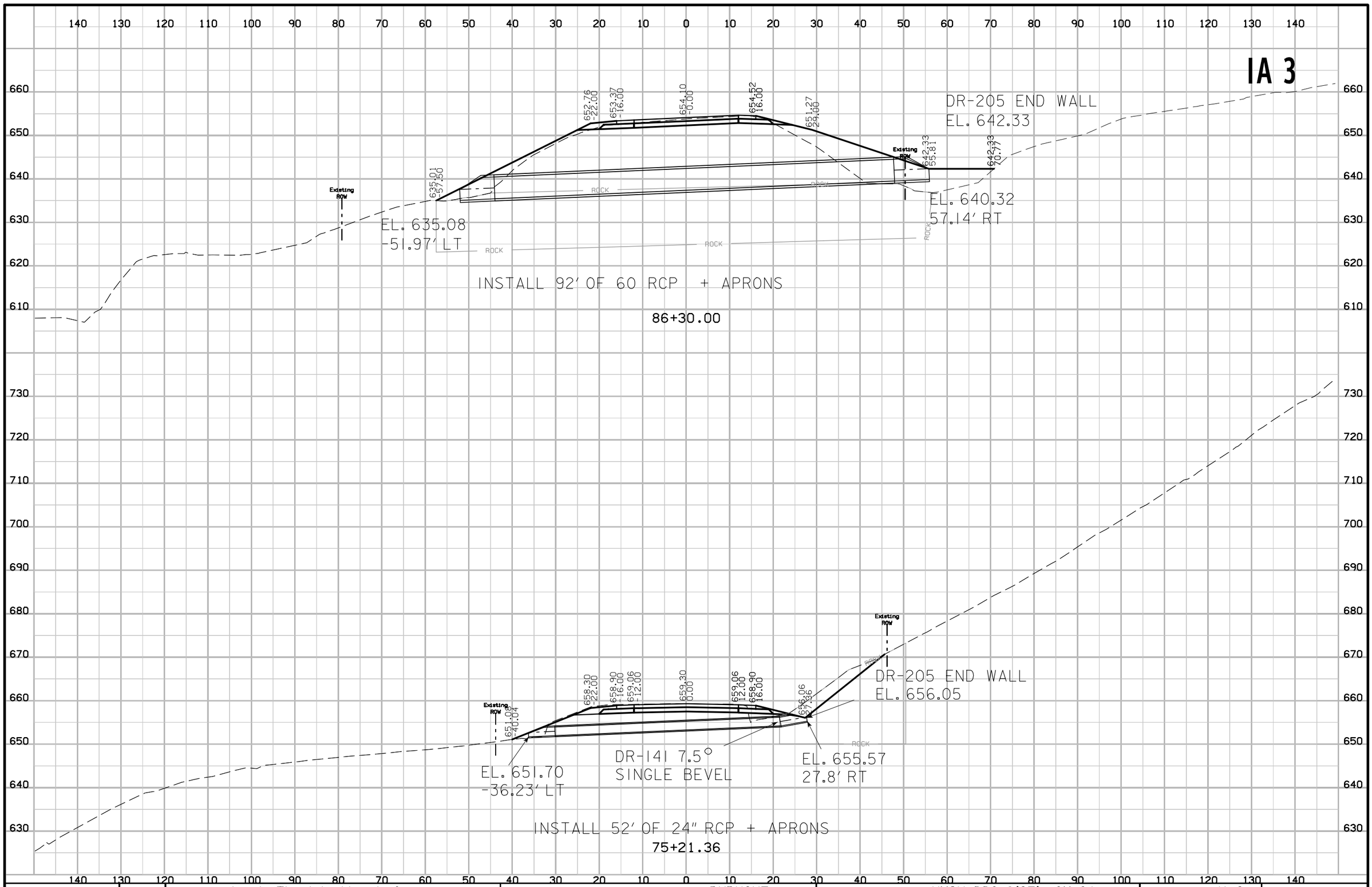
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.1

1:20:19 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

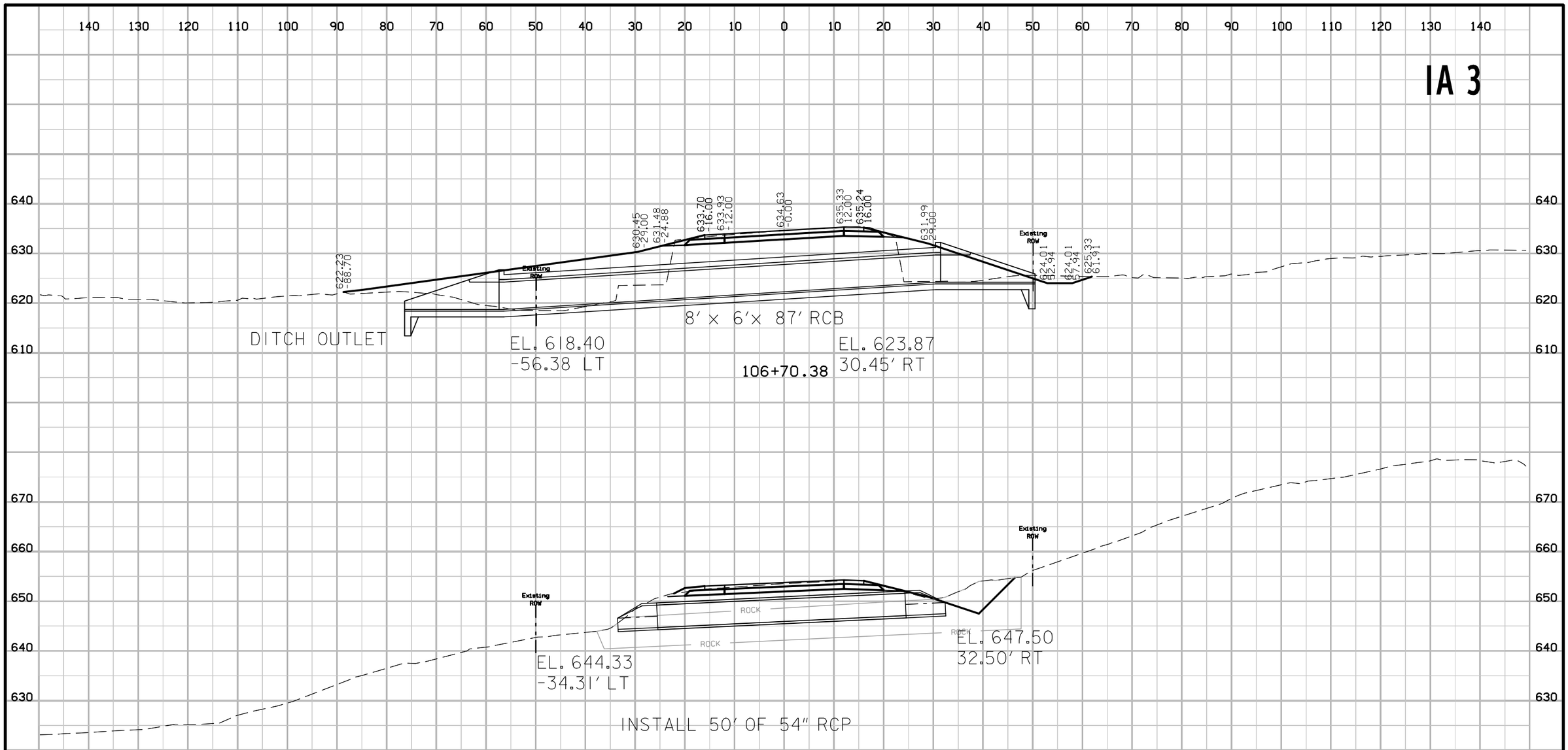
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.2

1:20:20 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

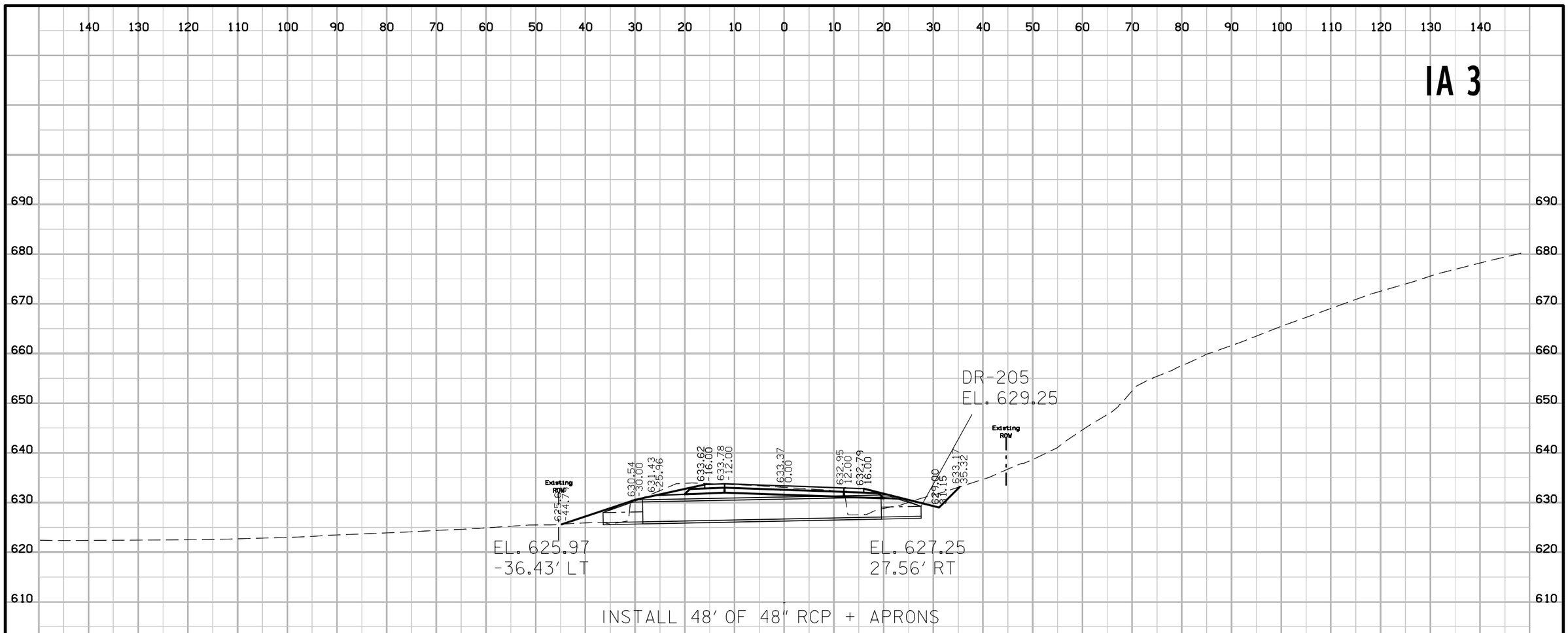
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.3

1:20:21 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

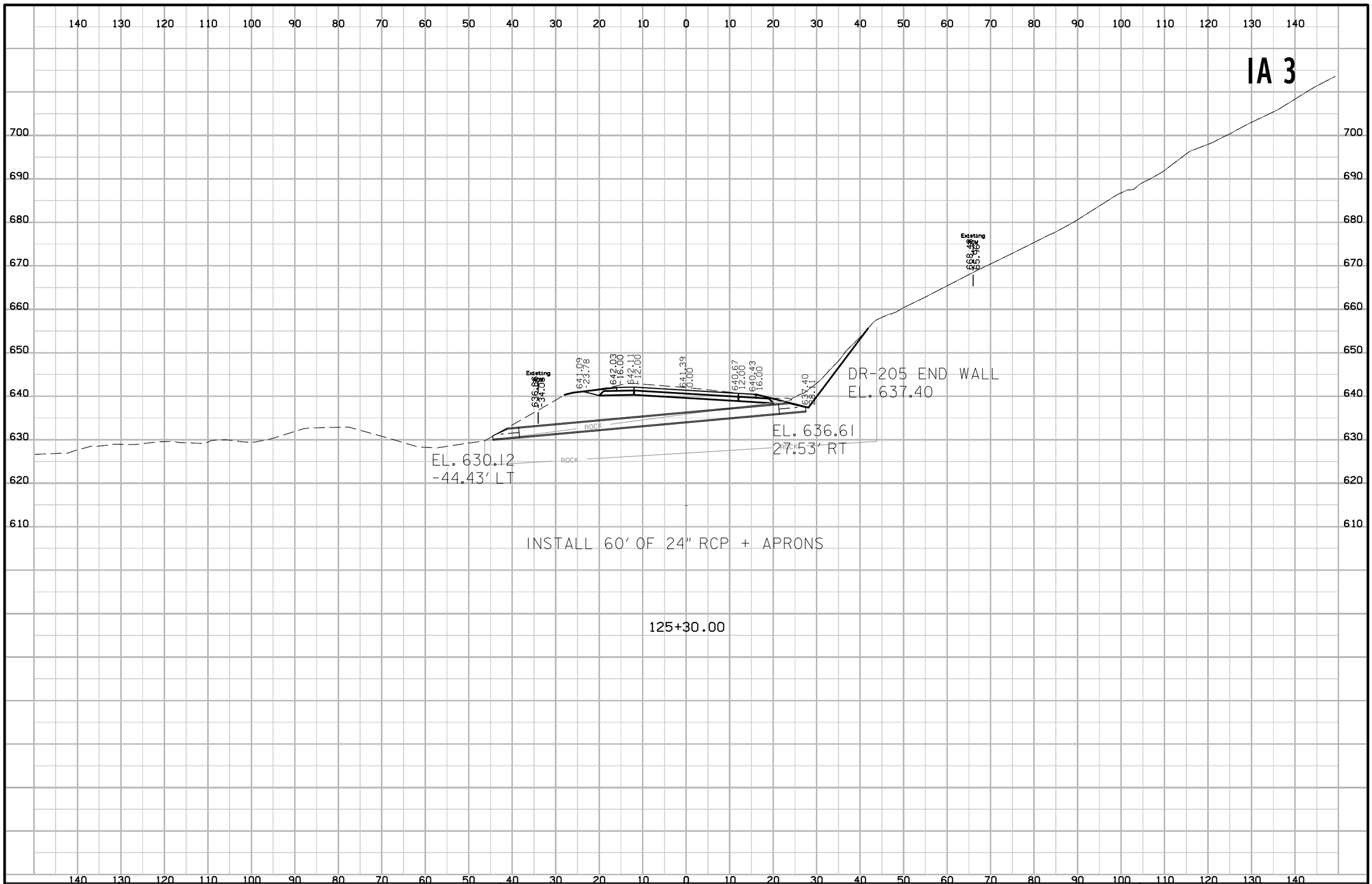
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.4

1:20:21 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.5

1:20:22 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

IA 3

DR-205 END WALL
EL. 672.60

Existing ROW

DR-141 40° ELBOW

674.05 -16.28
674.20 12.21
674.90 0.00
675.60 12.20
675.44 16.27
672.60 27.82

5' ROUND SW-401 UTILITY ACCESS
WITH OPEN GRATE FOR DITCH
DRAINAGE TOP OF WELL EL. 634.55
-64.38' LT

40'
36" RCP

EL. 667.74
-20.08' LT

EL. 671.27
26.59' RT

20' OF 36" CMP + APRON
UNDER TRAIL

40' OF 36" RCP UNDER ROAD WITH 40° CONC ELBOW
THEN PROP 36" 1/2" SMOOTH STEEL PIPE
FROM ELBOW TO UTILITY ACCESS

634.55
62.03

58' OF 36" SMOOTH STEEL PIPE

141+05.79

EL. 628.33
-92.92' LT
(DITCH OUTLET)

EL. 628.87
-66.37' LT

EL. 626.63
-62.87' LT

BOTT. OF WELL
EL. 624.55

Existing ROW

663.08
668.08

DR-205 END WALL
EL. 640.32

641.85 -34.63
644.60 -16.00
644.76 12.00
644.04 0.00
643.32 12.00
643.16 16.00
640.32 27.36
642.17 28.75

ROCK
ROCK
ROCK

EL. 639.55
26.77' RT

EL. 637.11
-43.44 LT

INSTALL 58' OF 24" RCP + APRONS

129+00.00

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.6

1:20:23 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

IA 3

SW-604
TYPE 9 GRATE

24" DIA RISER
F.L. 633.00
61.75' LT

662.18
-16.00
662.42
-12.00
663.11
0.00
663.81
12.00
663.72
16.00

Existing ROW

ROCK

7.5° ANGLE

REMOVE EXIST. CMP EXTENSIONS
SLIPLINE WITH 110' OF 60" AND LAY 86' OF CMP AND USE A
24" RISER

637.18
-70.47
633.00
-22.10

Existing ROW

EL. 633.93
101.48' RT

8'

EL. 628.87
71.87' RT

22' CMP

EL. 621.74
109.92' LT

56' CMP

EL. 624.25
45.97' LT

110' OF SLIPLINE 60" CMP

146+22.03

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.7

1:20:24 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

IA 3

USE DR-205 END WALL
EL. 653.01

Existing ROW

655.85 -16.00
656.01 -12.00
656.25 -0.00
656.01 12.00
655.85 16.00
653.01 24.36
656.33 37.33

ROCK
ROCK
ROCK

639.87 -49.55

EL. 641.64
-43.75' LT

56' OF 36" RCP + APRONS

EL. 651.78
27.54' RT

159+50.00

Existing ROW
687.39 -76.03

SW-402 5'X6' LOC.
STA 152+11.35
-52.12' LT EL. 643.22

Existing ROW
664.46 -24.10

665.06 -16.00
665.22 -12.00
665.68 0.00
666.13 12.00
665.97 16.00
663.0 27.89
664.23 29.50

ROCK

USE DR-205 END WALL
EL. 663.38

EL. 663.06
29.61' RT

25' OF 48" CMP
+ APRON UNDER TRAIL

34°

46'

EL. 655.36
-24.24' LT

7.5° D SECTION
EL. 659.25

638.45 -65.63
638.26 -54.65

34'

80' OF 48" RCP + APRONS

EL. 633.03
87.66' LT

EL. 633.03
-54.65' LT

EL. 635.08
-49.59' LT

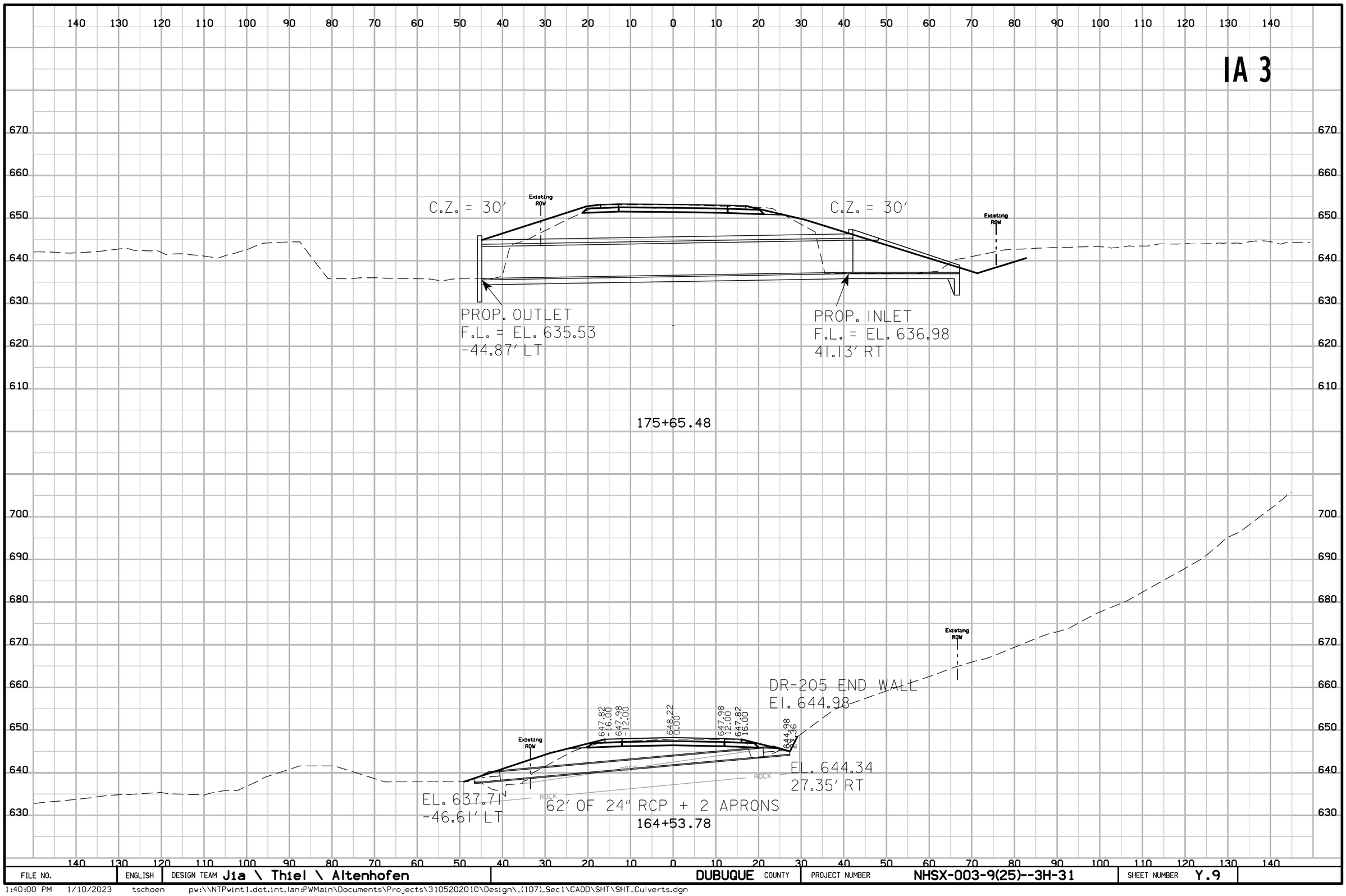
BOTT OF WELL
EL. 631.0
52.12' LT

152+11.35

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.8

1:20:25 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

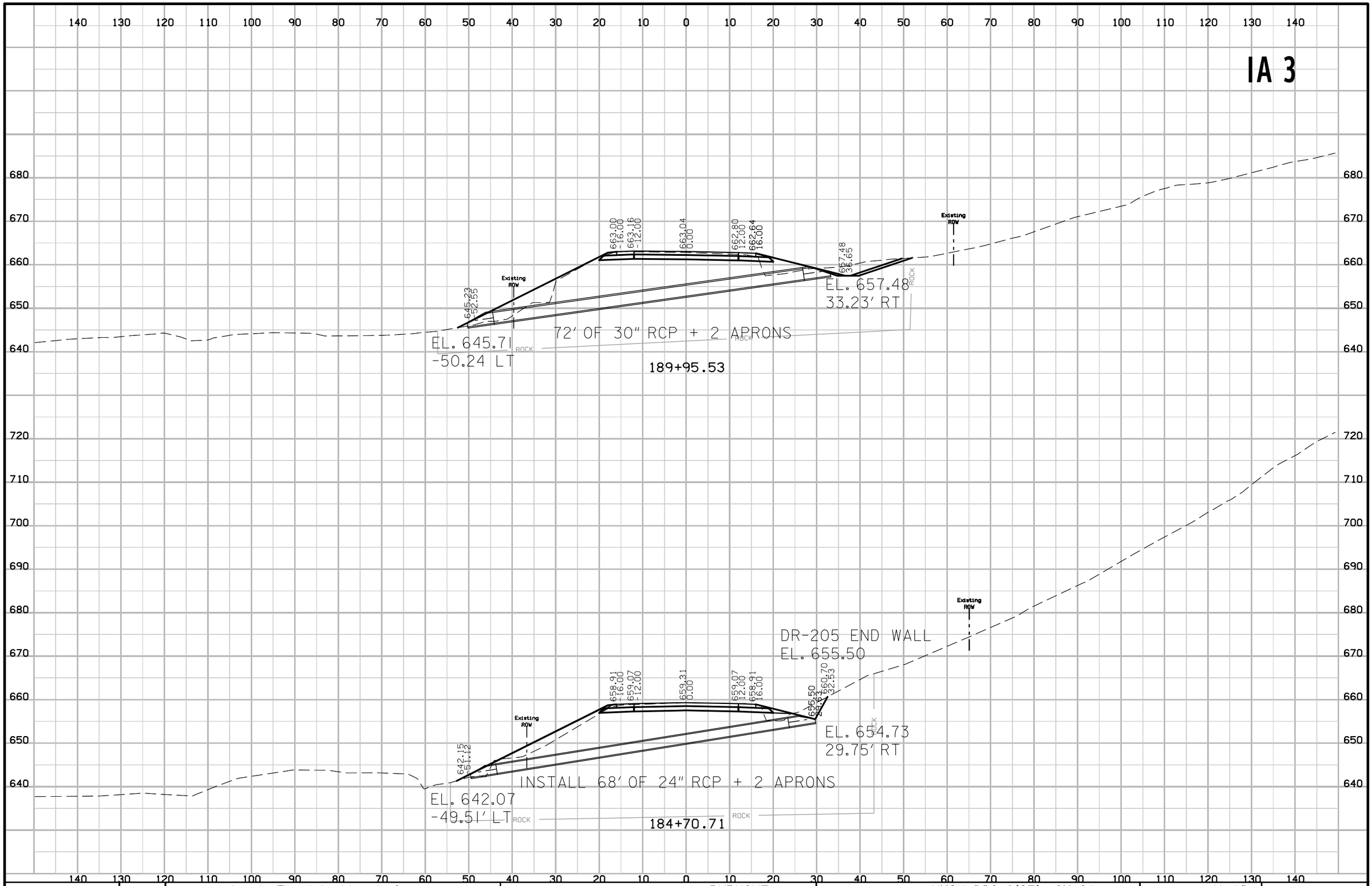
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.9

1:40:00 PM 1/10/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

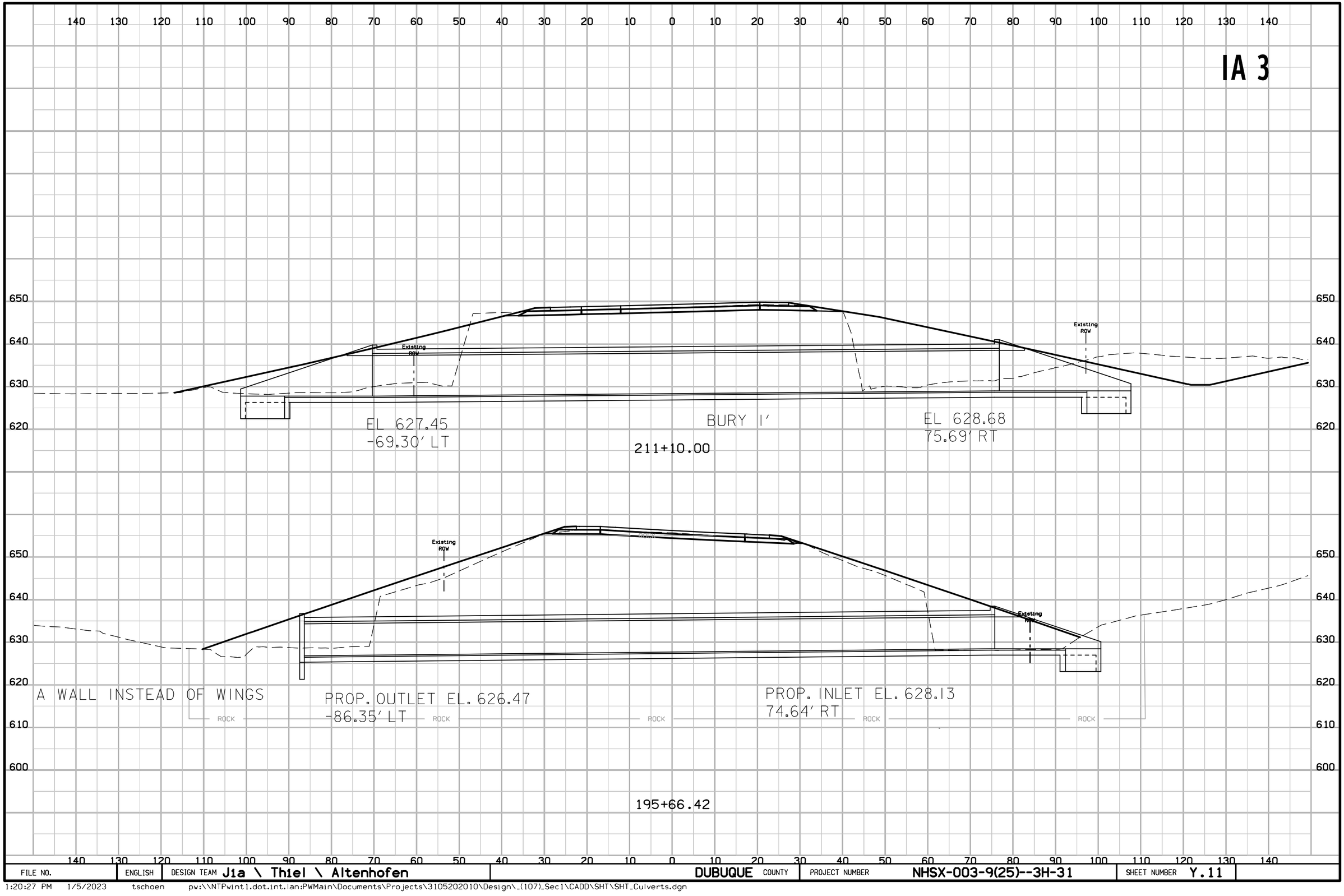
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.10

1:20:26 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

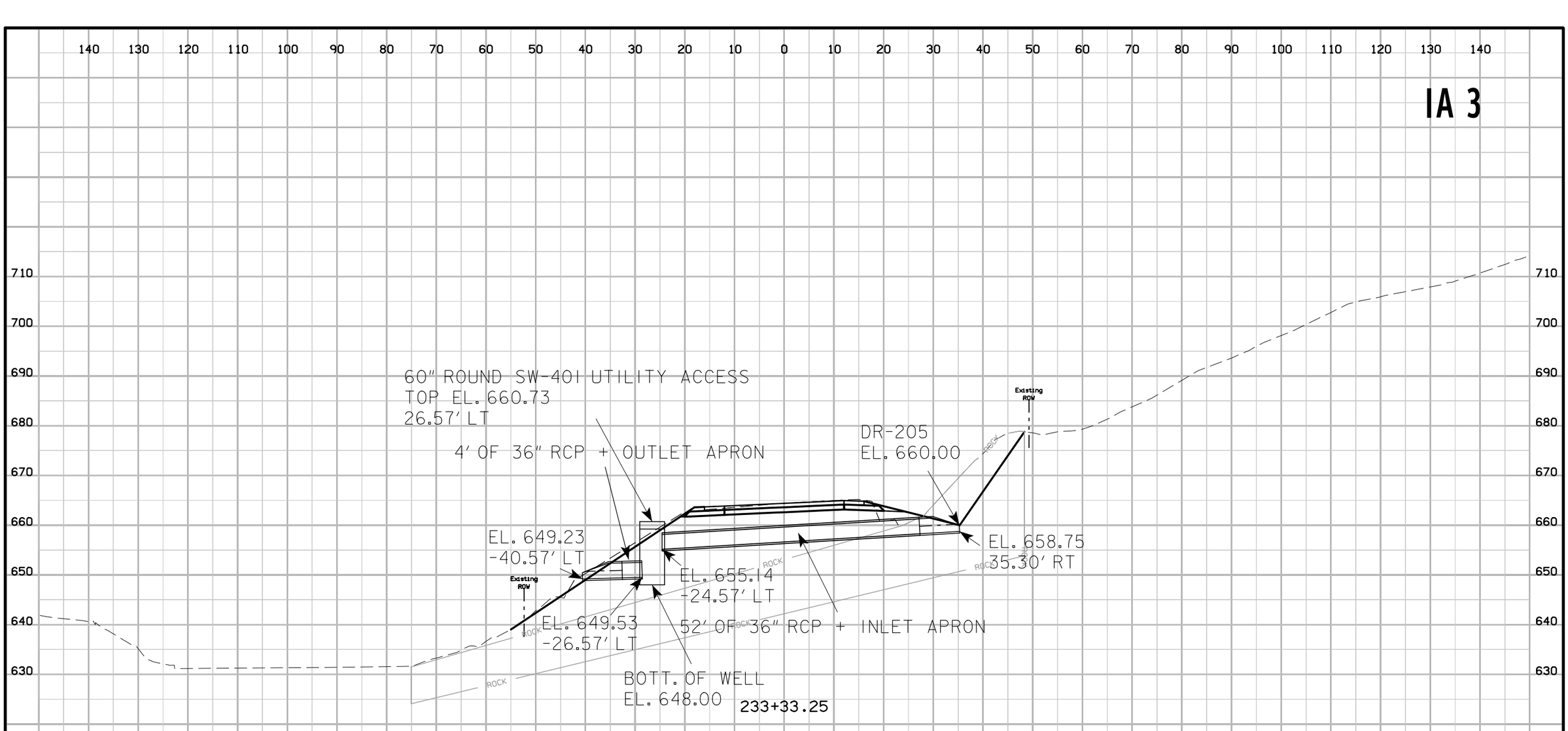
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.11

1:20:27 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

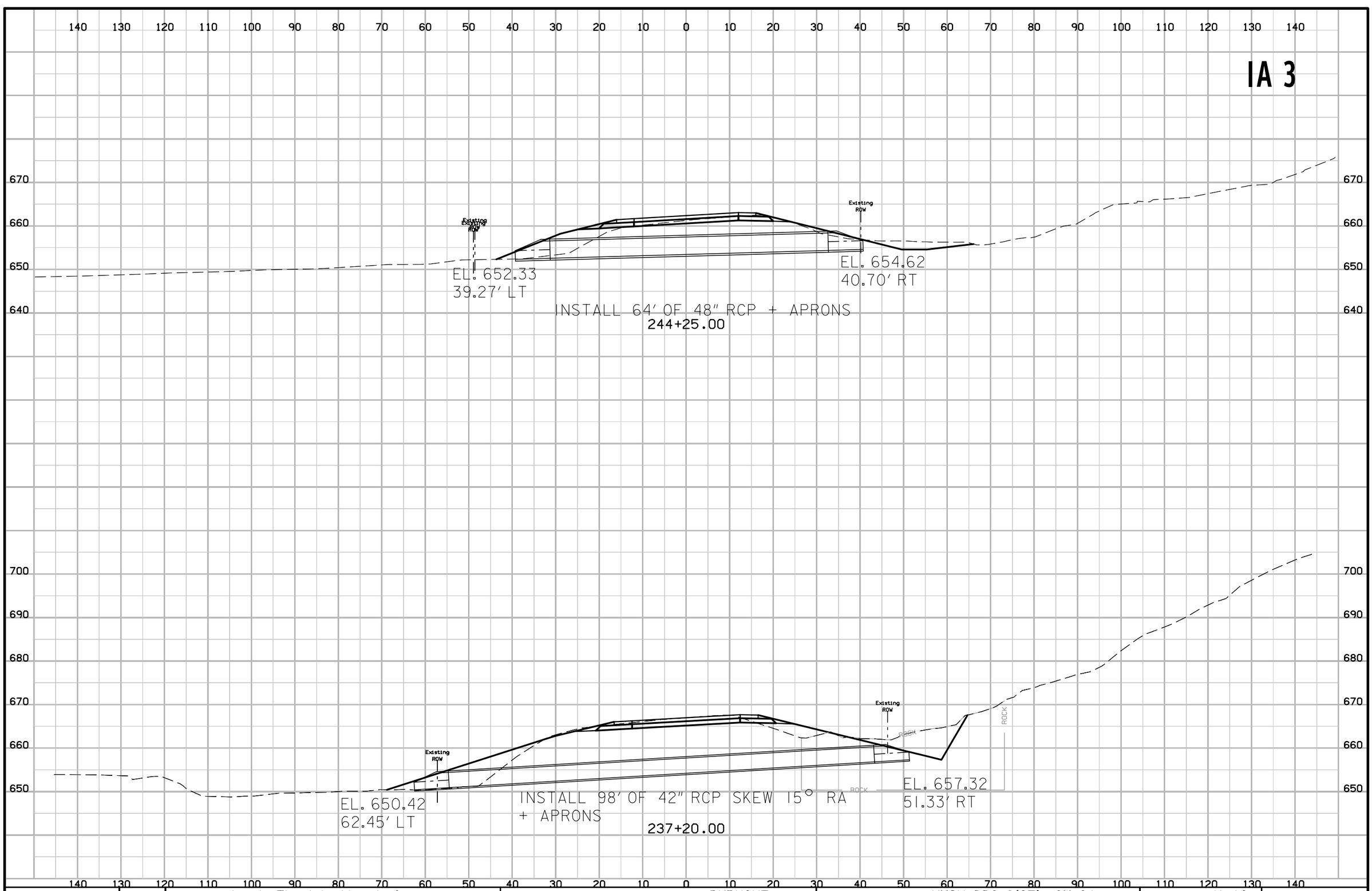
IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.12

1:20:28 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

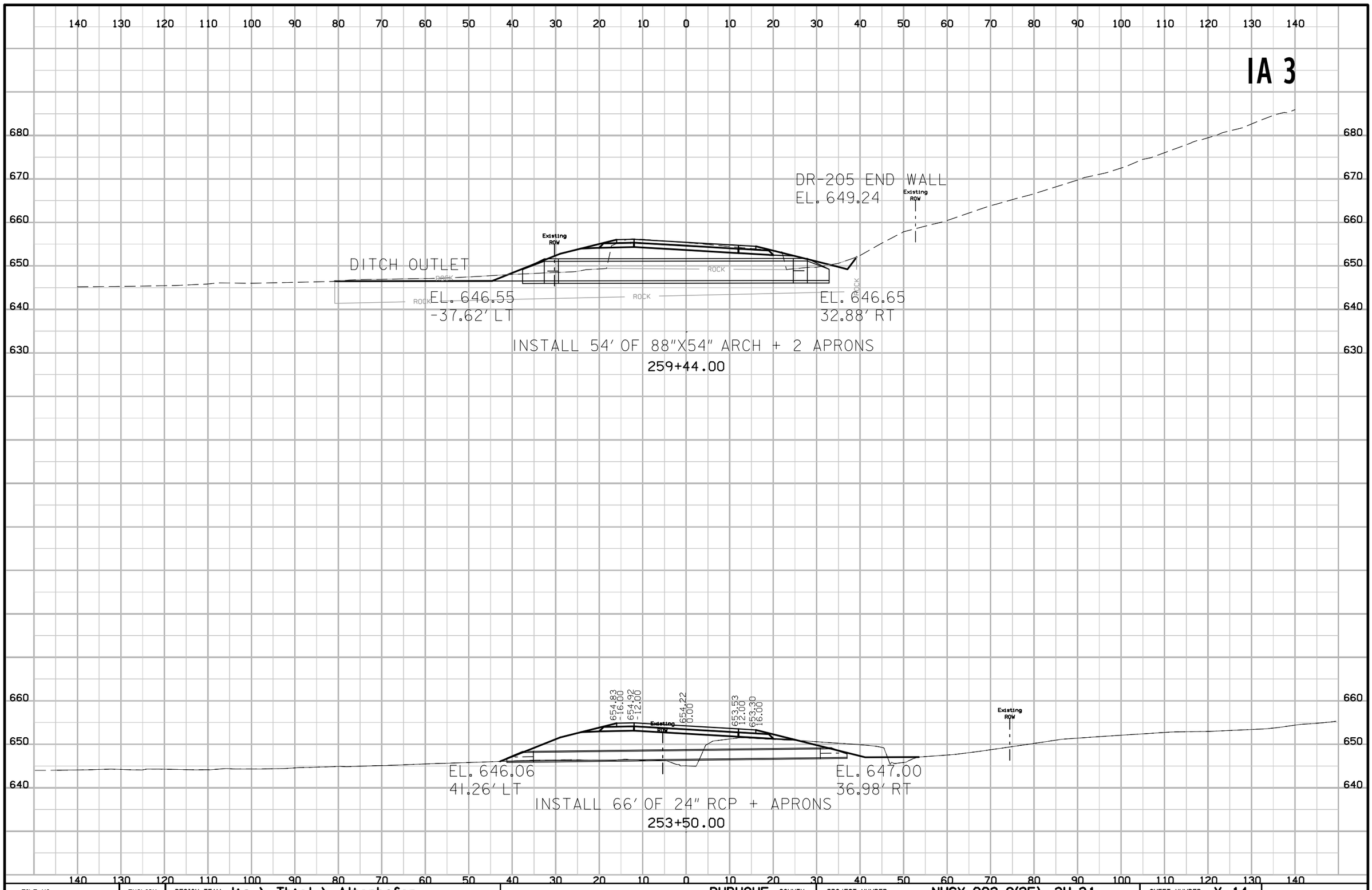
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.13

1:20:29 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

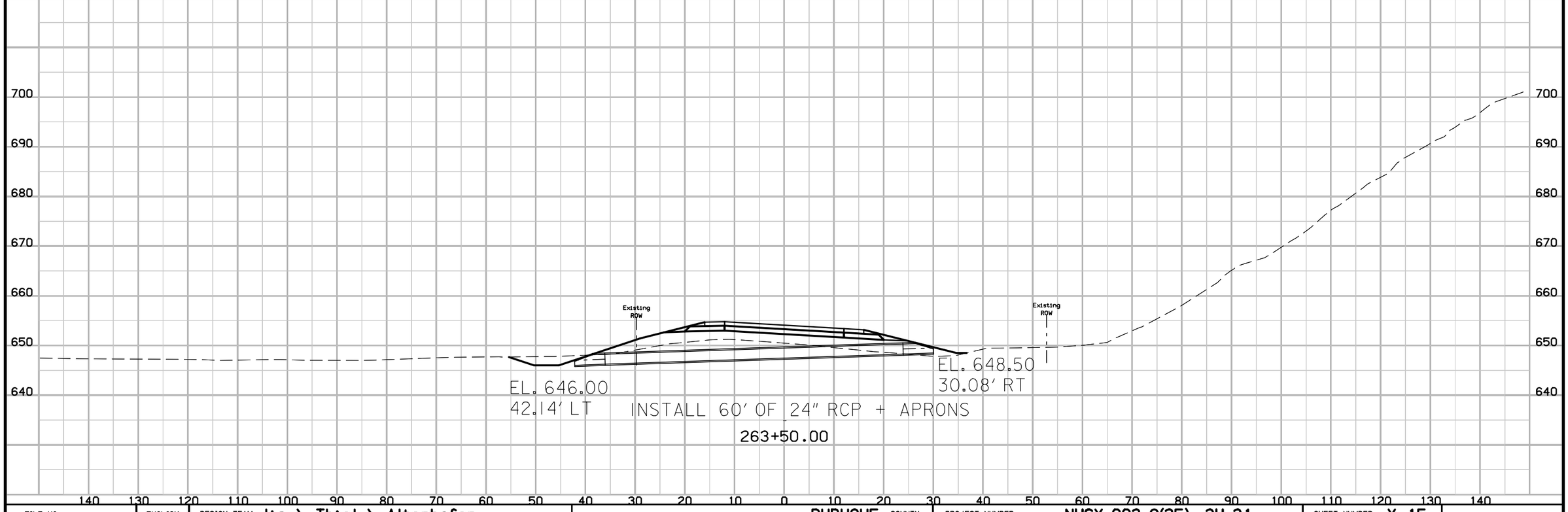
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.14

1:20:29 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

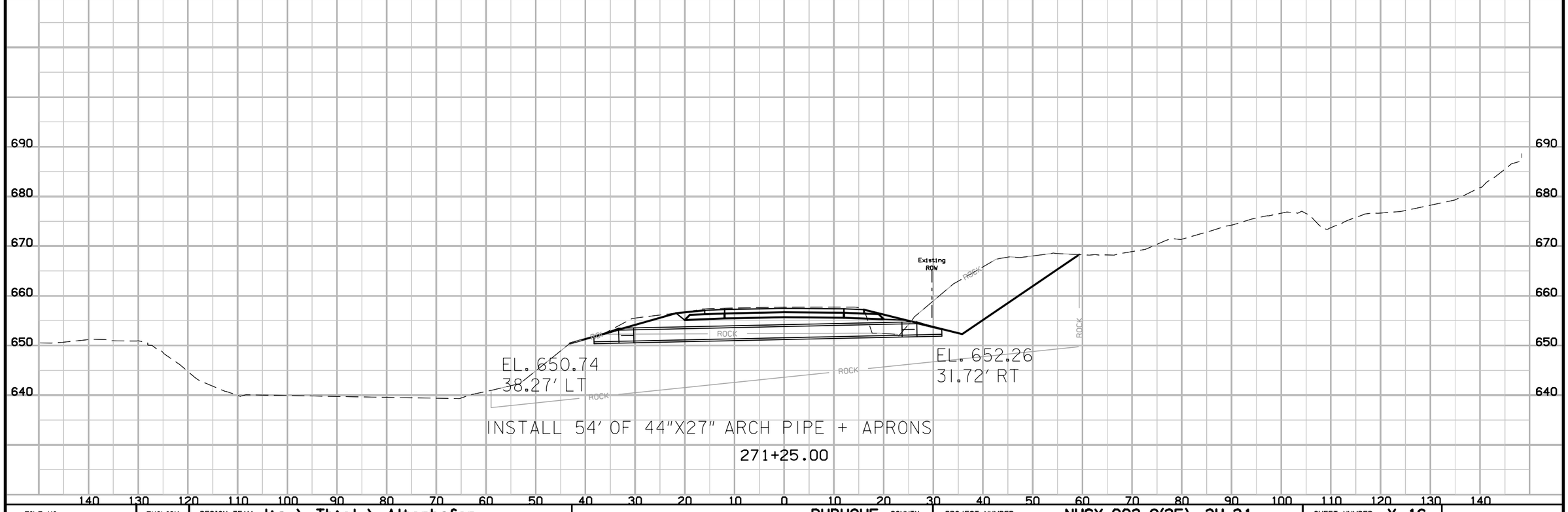
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.15

1:20:30 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

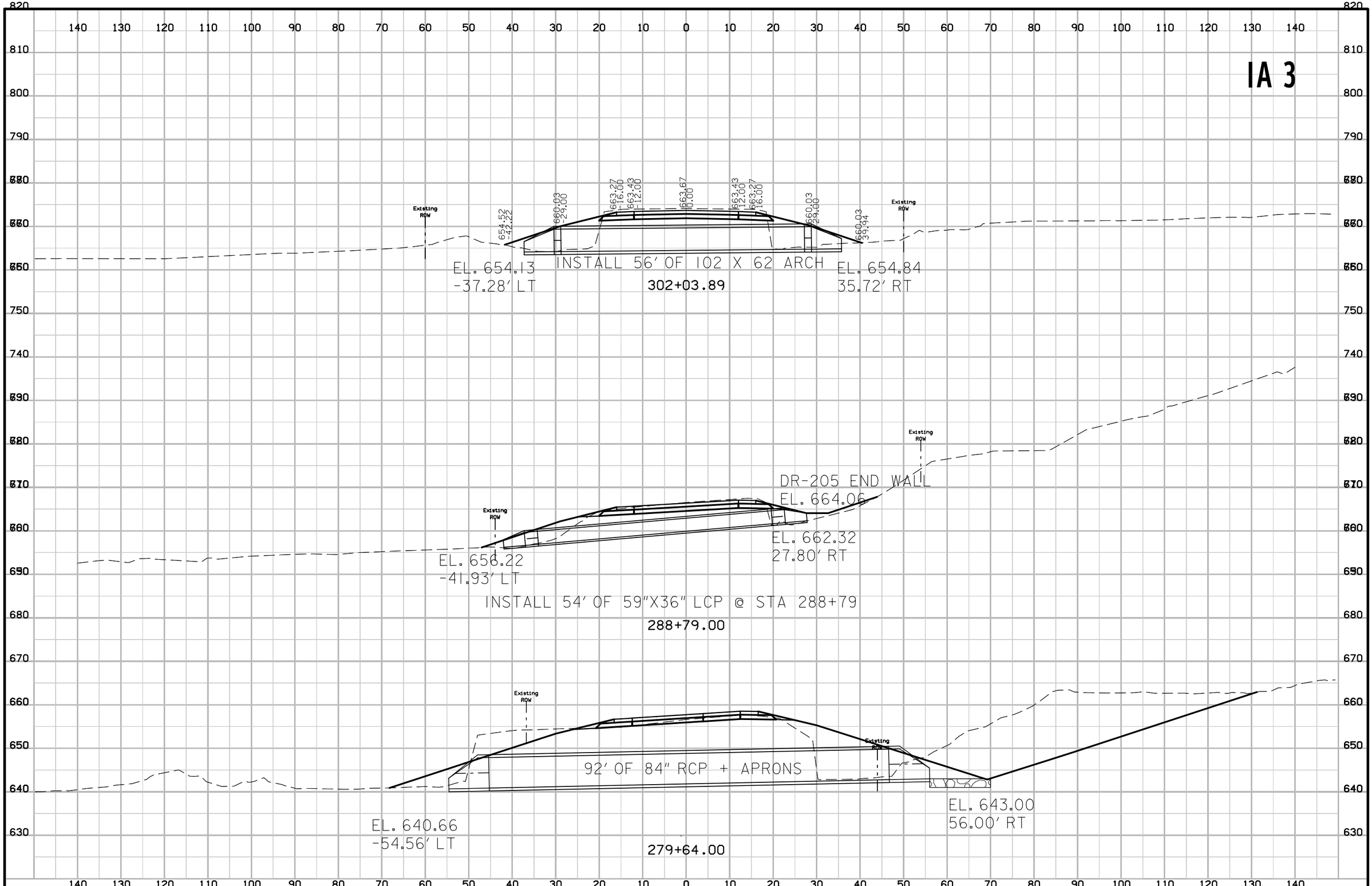
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.16

1:20:31 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

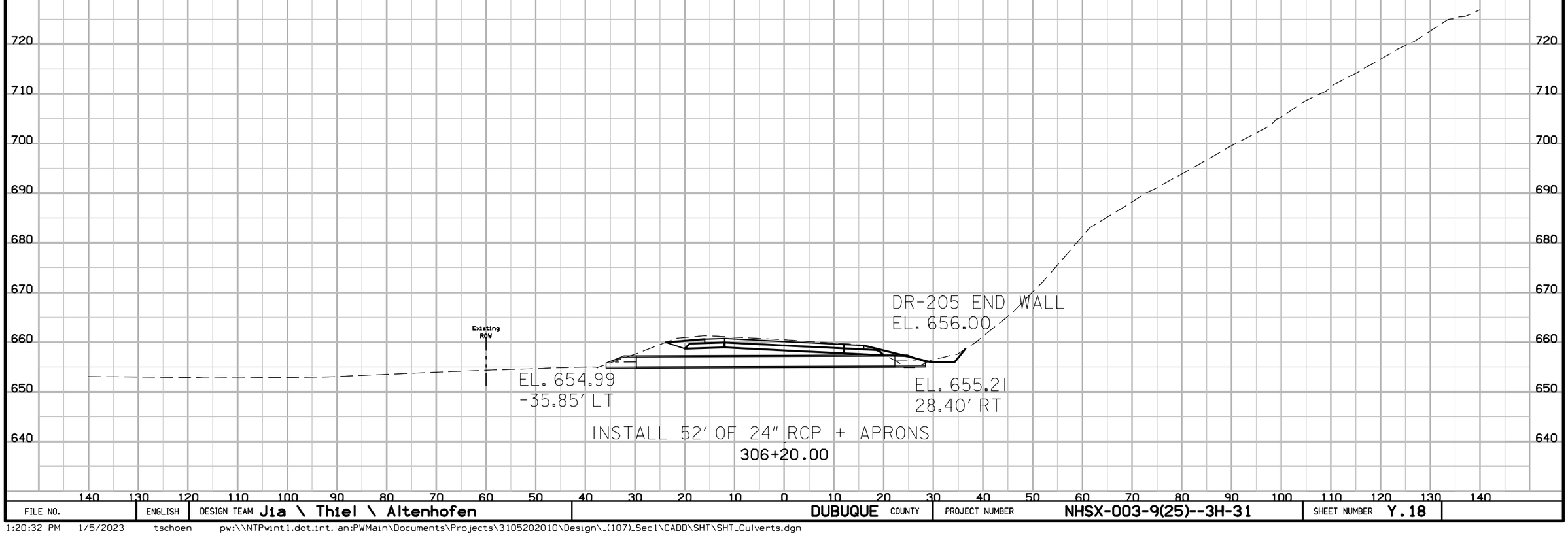
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.17

1:20:32 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.18

1:20:32 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

IA 3

EI. 694.62
-27.93' LT
SW-562 4'x4'

F.L. EI. 687.15
-27.30' LT

BOTT. WELL EL. 686.12

F.L. EI. 680.11
52.54 RT

2' DEEP ROCK FLUME

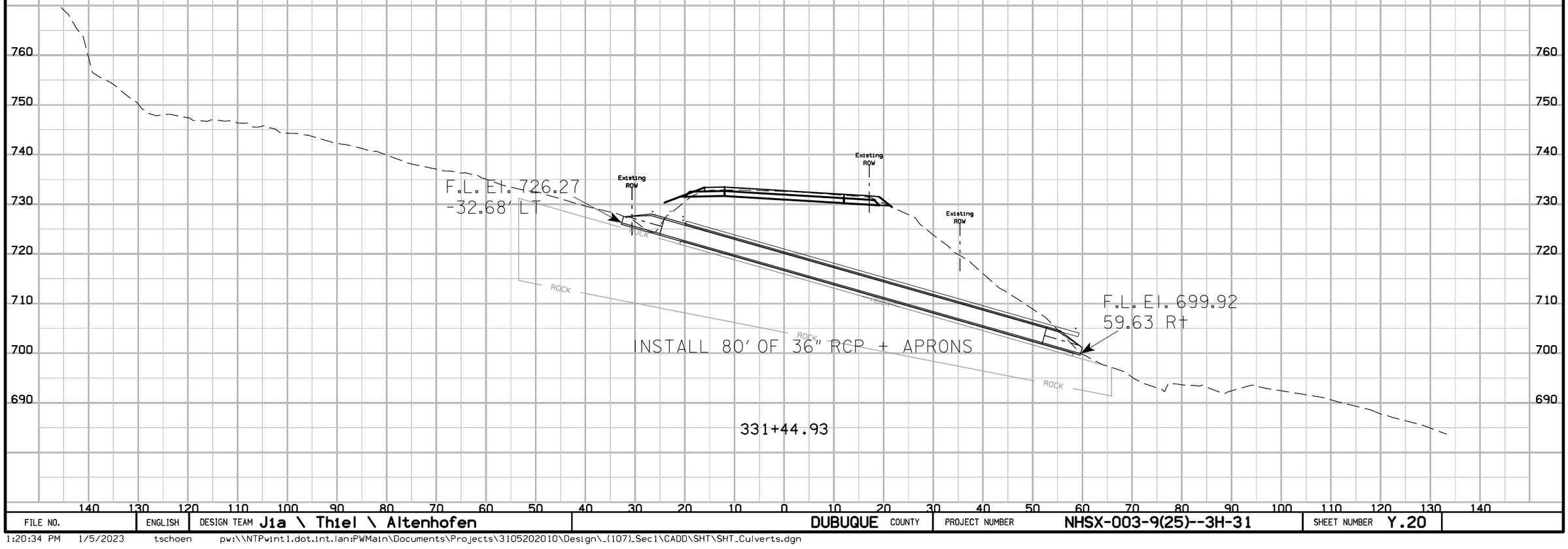
INSTALL 74' OF 30" RCP + OUTLET APRON
skew 14° LT AH

325+72.01

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.19

1:20:33 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

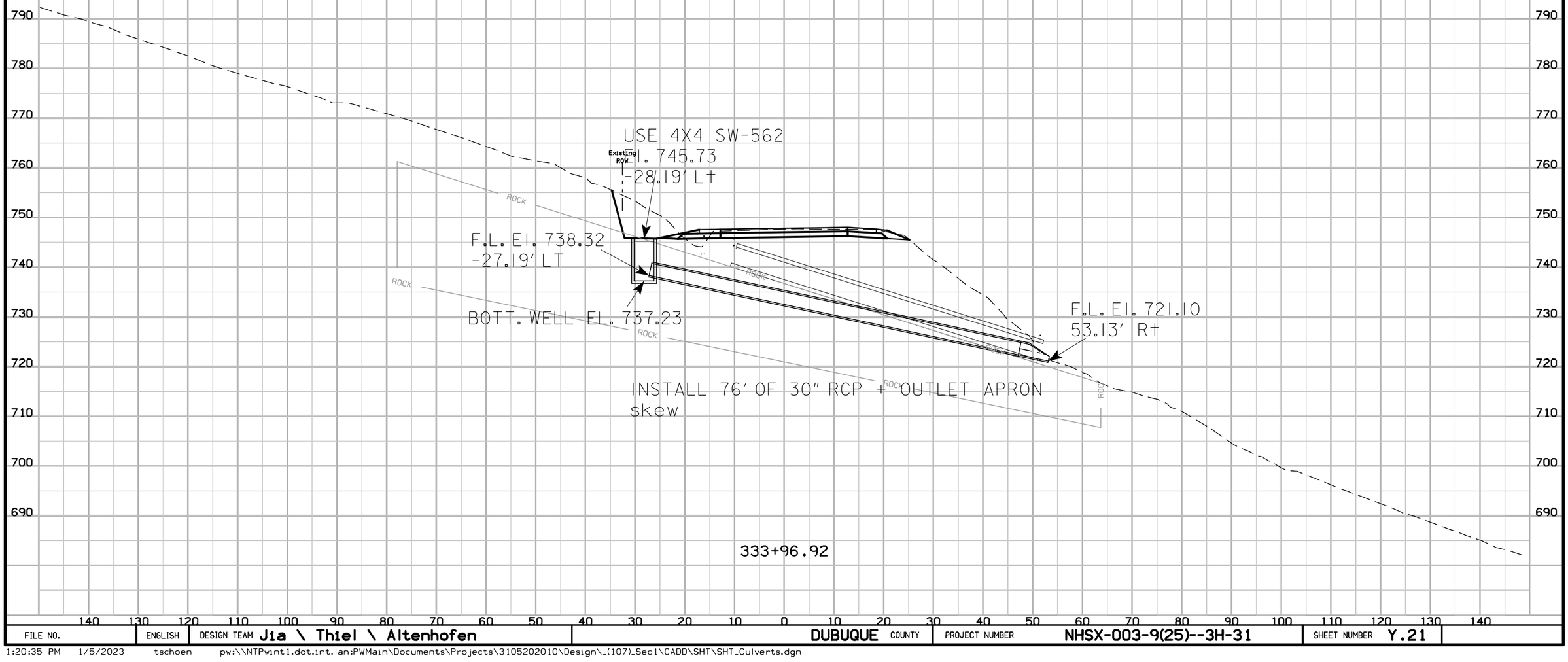
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.20

1:20:34 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

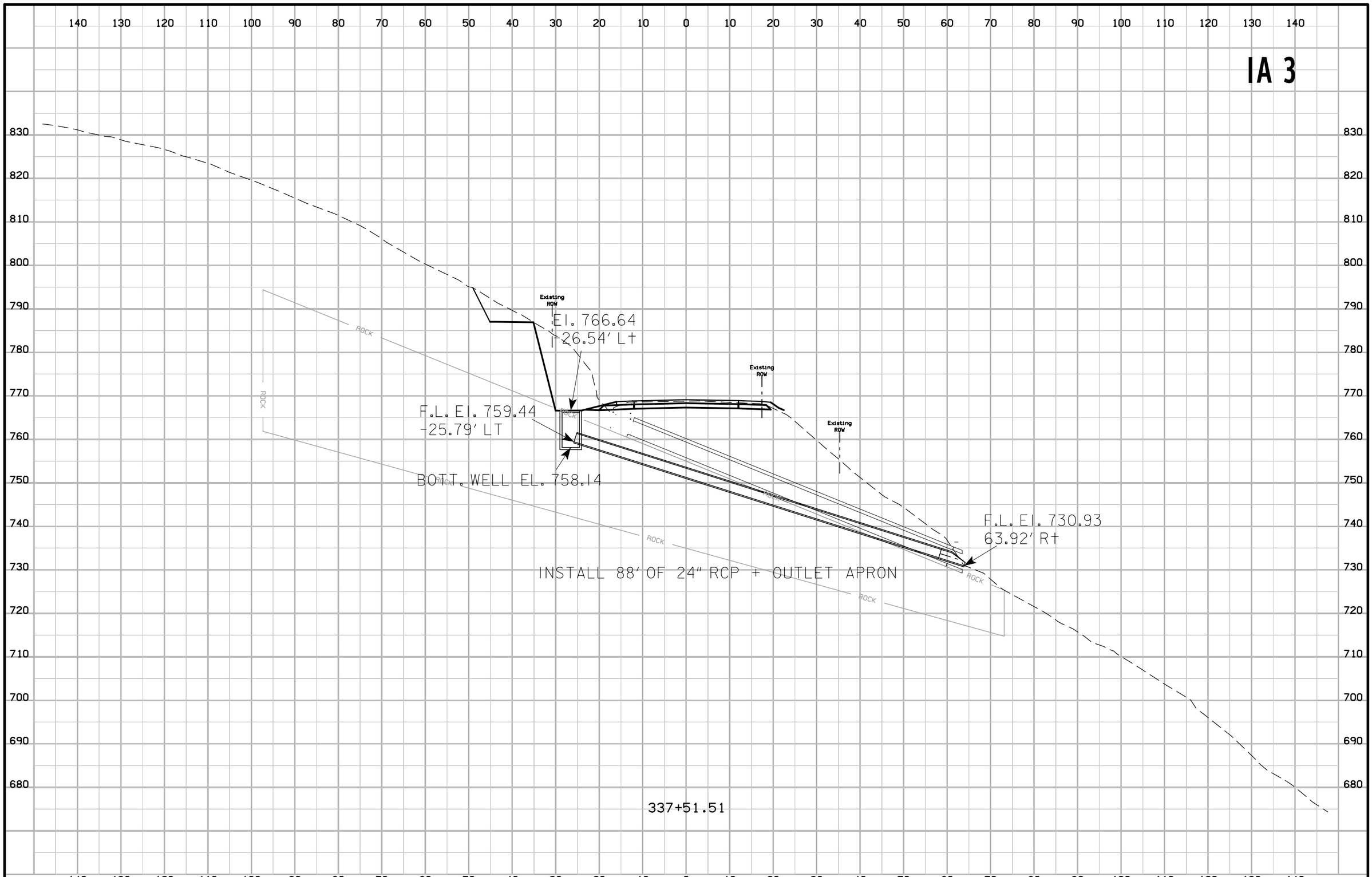
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.21

1:20:35 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

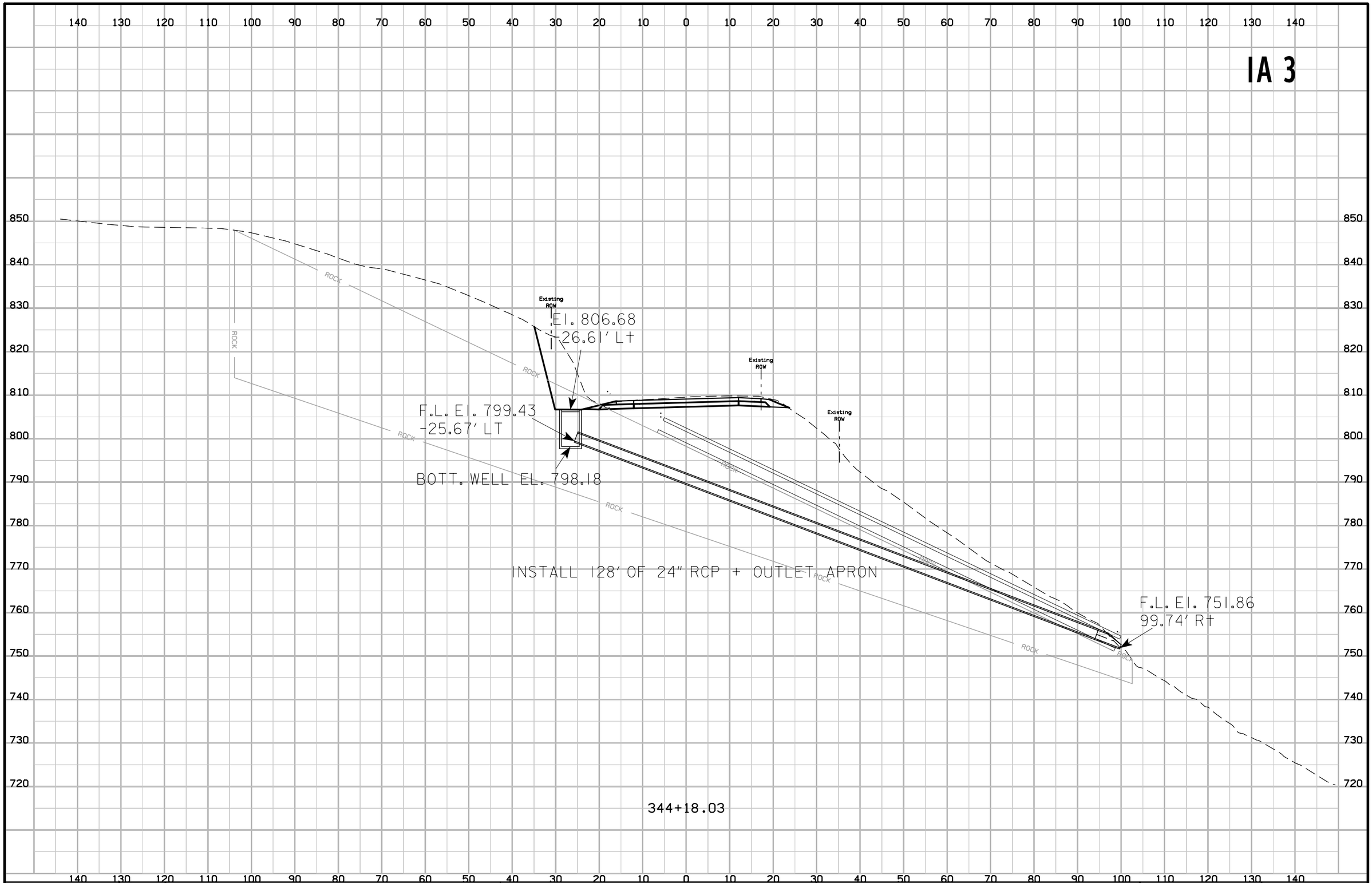
IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.22

1:20:36 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

IA 3



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.23

1:20:36 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

IA 3

EI. 820.82
-37.88' LT

Existing ROW

Existing ROW

Existing ROW

F.L. EI. 813.61
-37.15' LT

BOTT. WELL EL. 812.32

ROCK

INSTALL 142' OF 30" RCP + OUTLET APRON

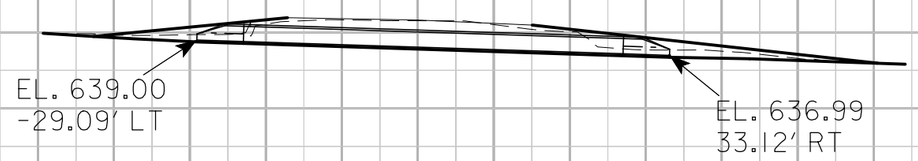
F.L. EI. 768.32
103.91' RT

346+73.78

FILE NO.	ENGLISH	DESIGN TEAM J1a \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.24

1:20:37 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

Christensen Lane



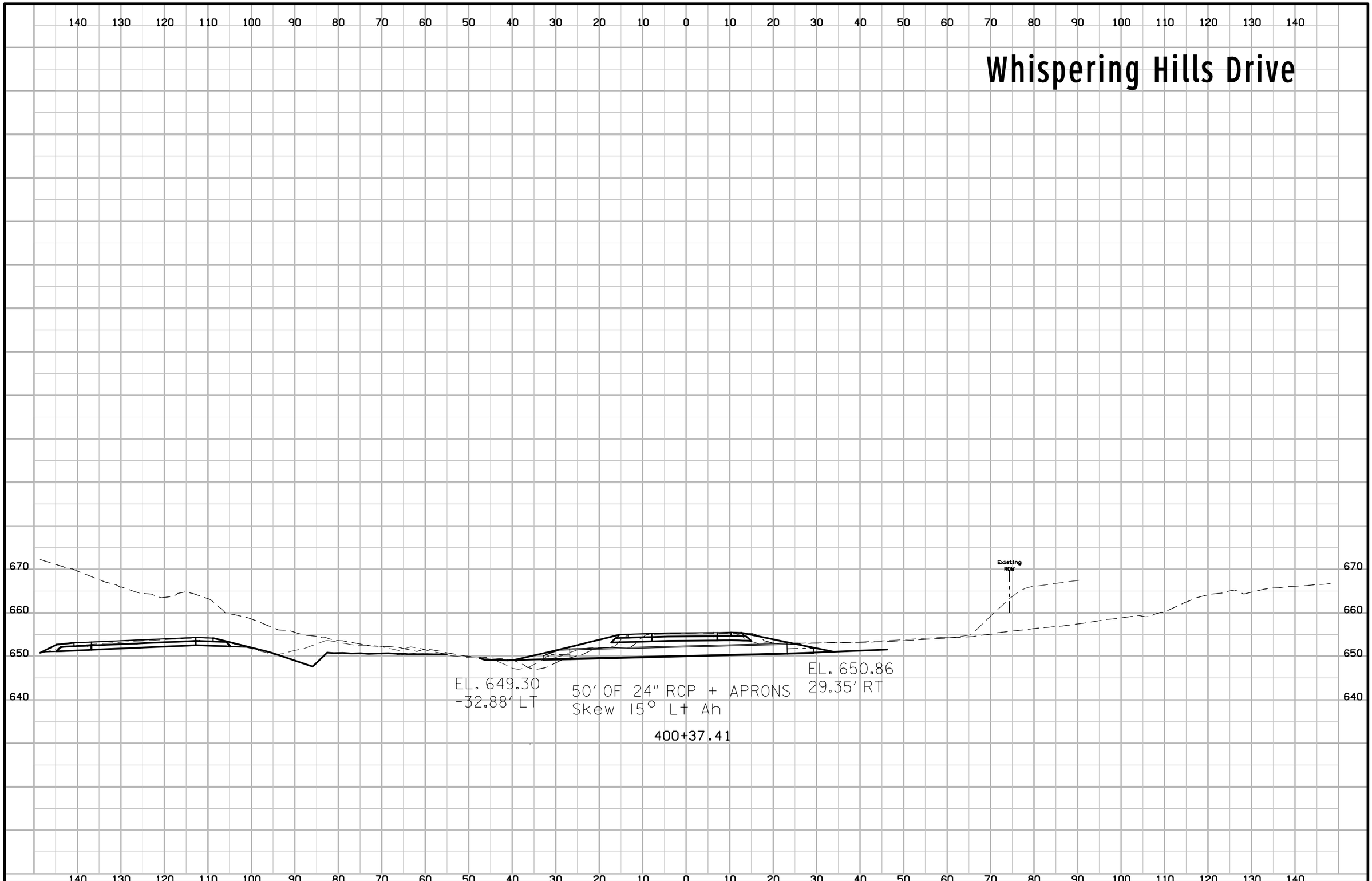
INSTALL 50' OF 24" RCP + APRONS
Skew 15° Rt Ahd

100+51.64

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.25

1:20:38 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

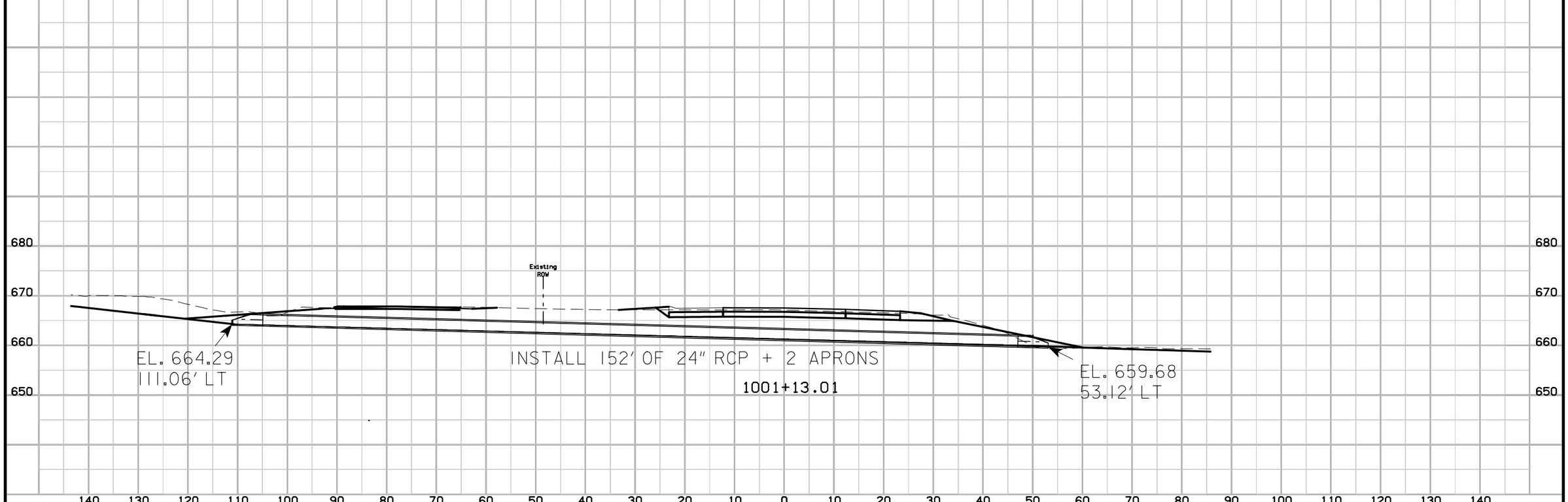
Whispering Hills Drive



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.26

1:20:39 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

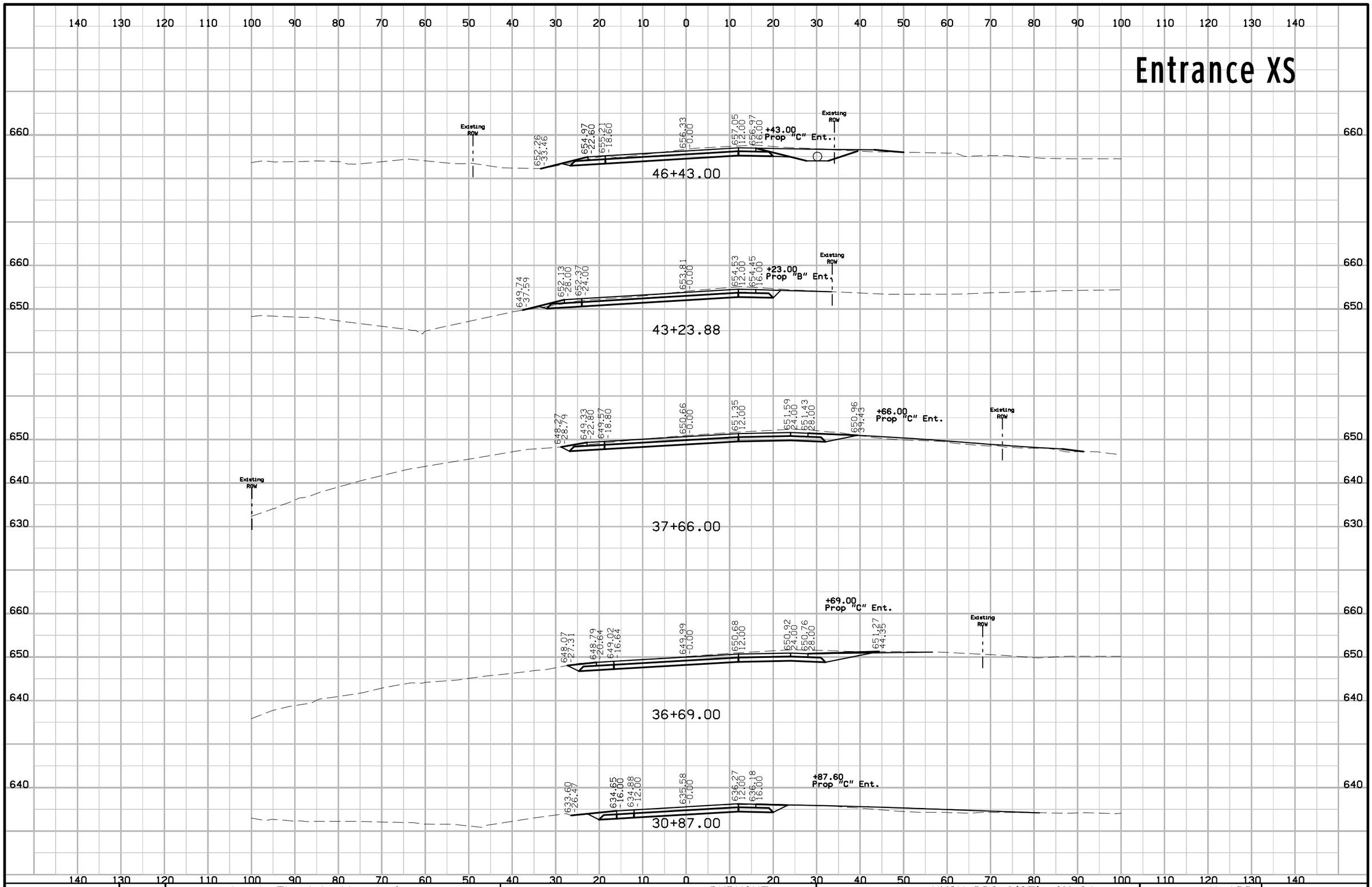
Boy Scout Road



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.27

1:20:40 PM 1/5/2023 tschoen pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_Culverts.dgn

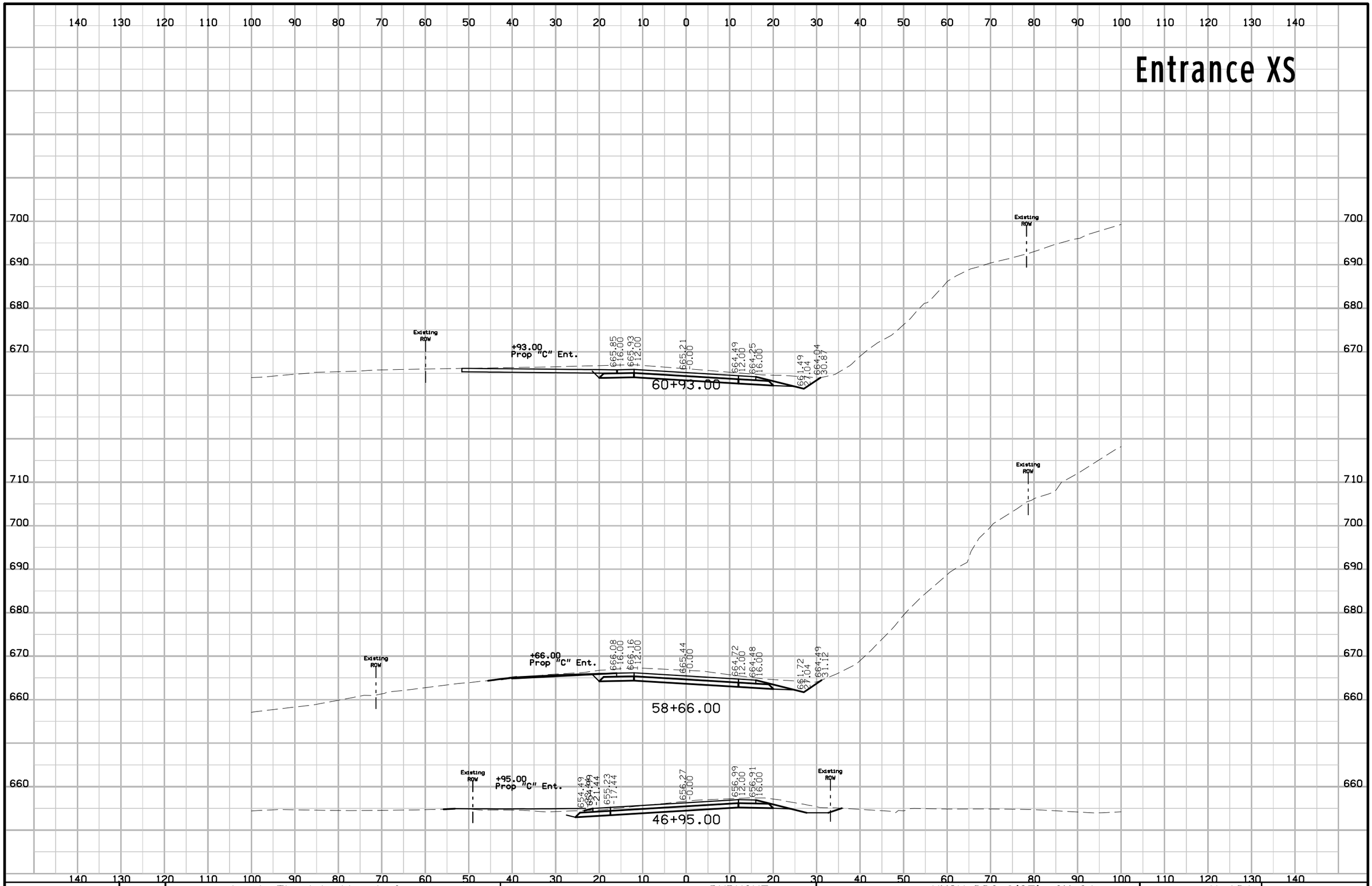
Entrance XS



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.100

3:31:30 PM 6/12/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X19_Entrances.dgn

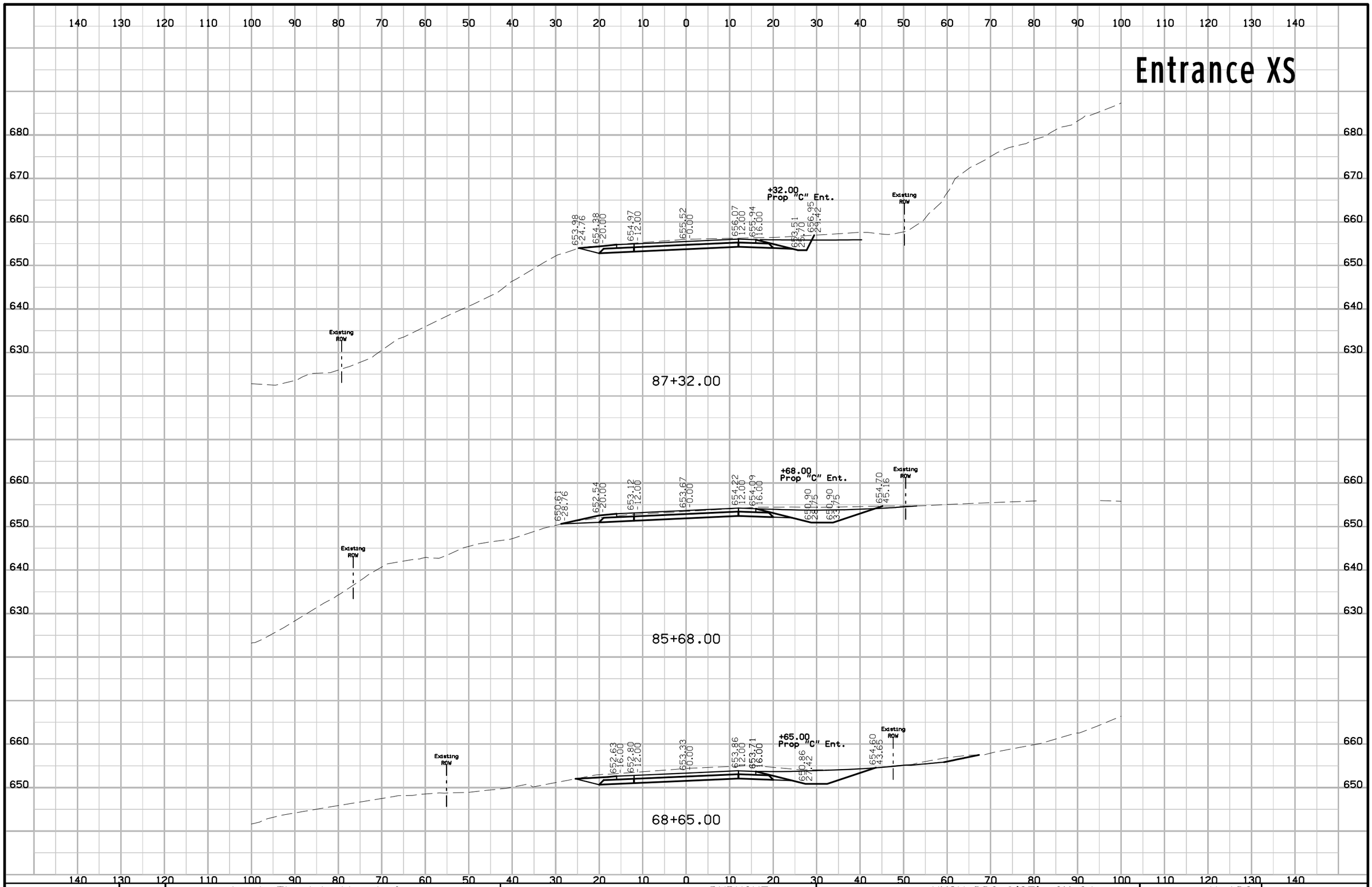
Entrance XS



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.101

3:31:31 PM 6/12/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X19_Entrances.dgn

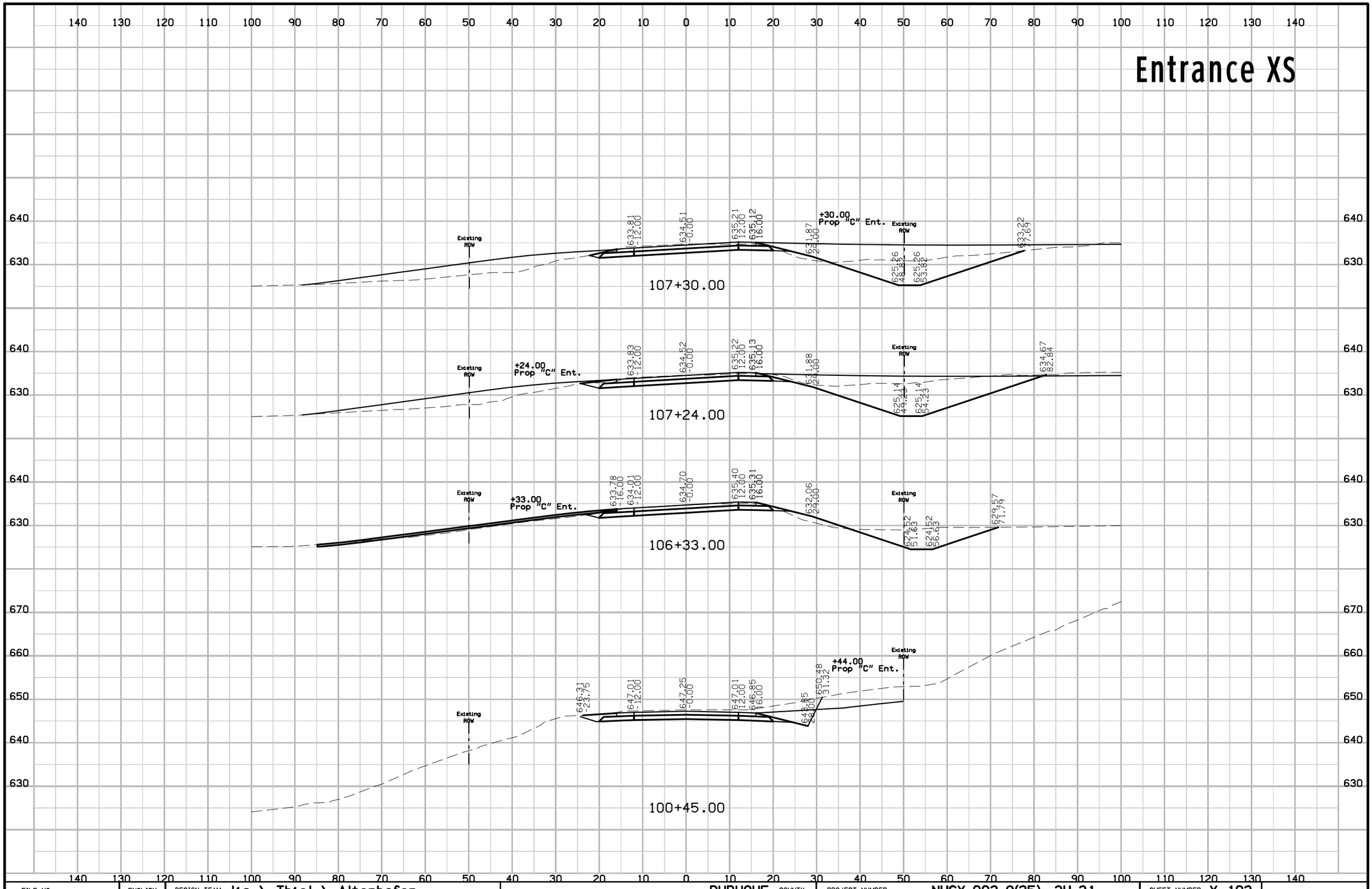
Entrance XS



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.102

3:31:31 PM 6/12/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X19_Entrances.dgn

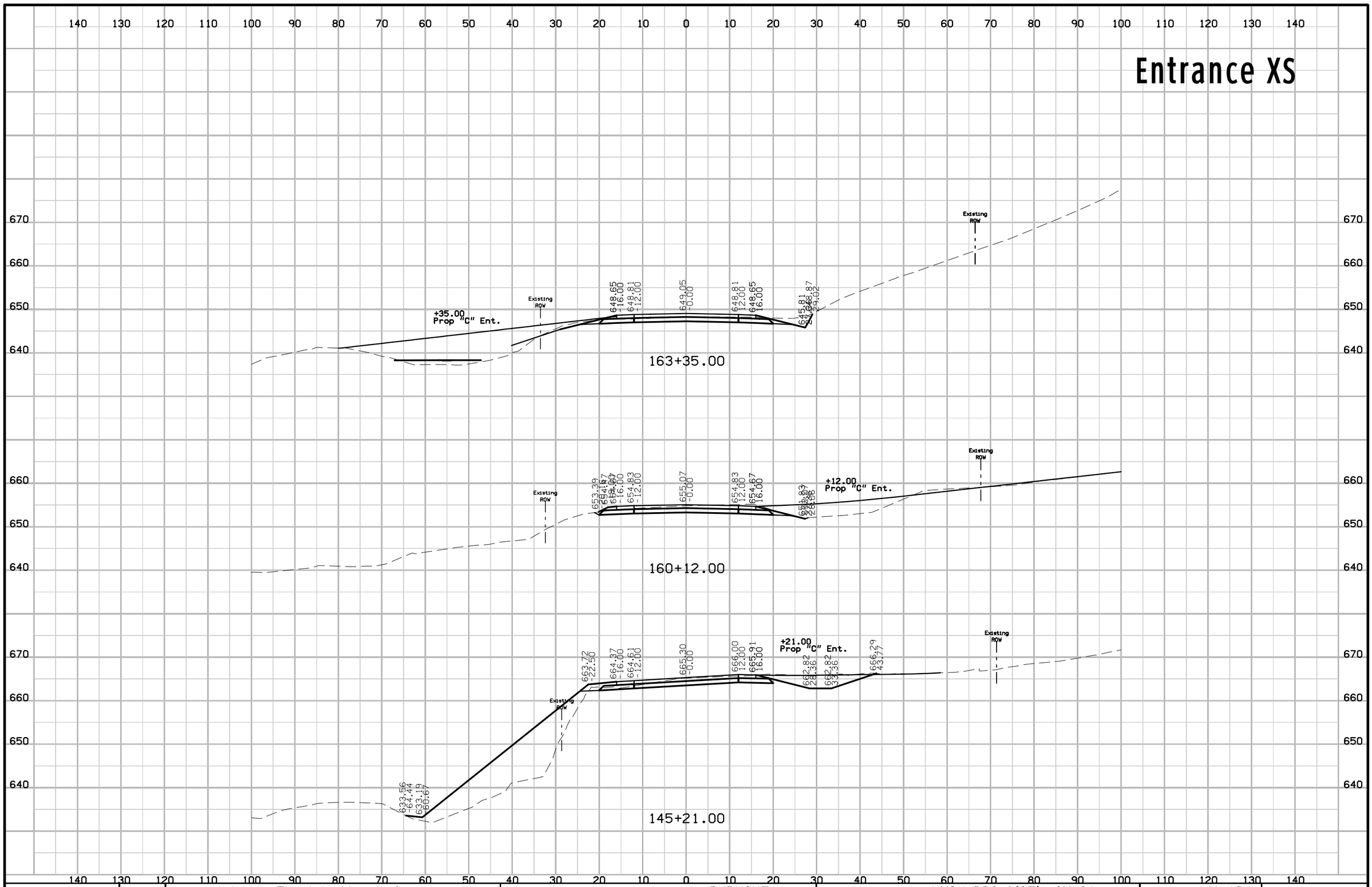
Entrance XS



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.103

3:31:32 PM 6/12/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X19_Entrances.dgn

Entrance XS



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.104

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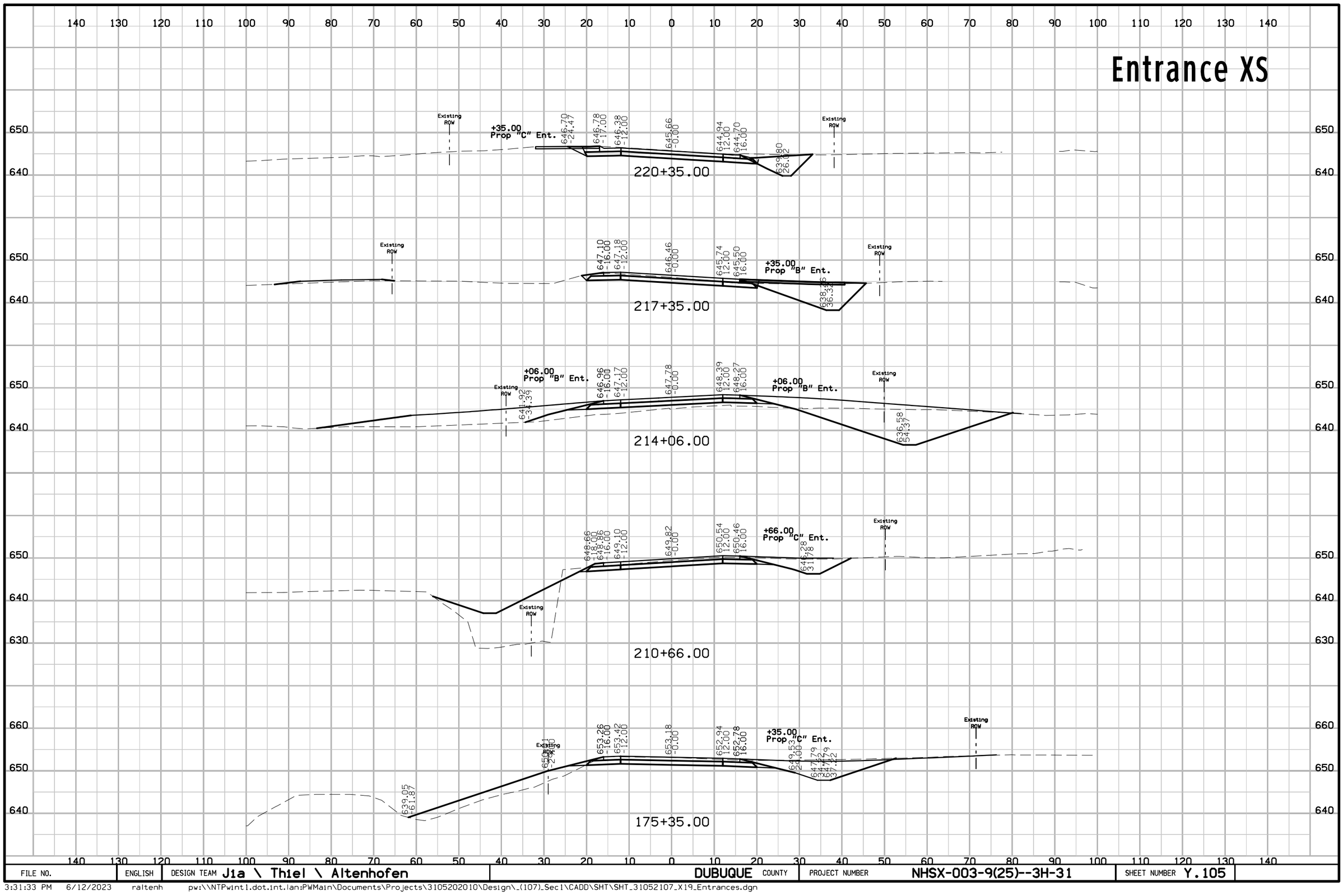
Entrance XS



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.105

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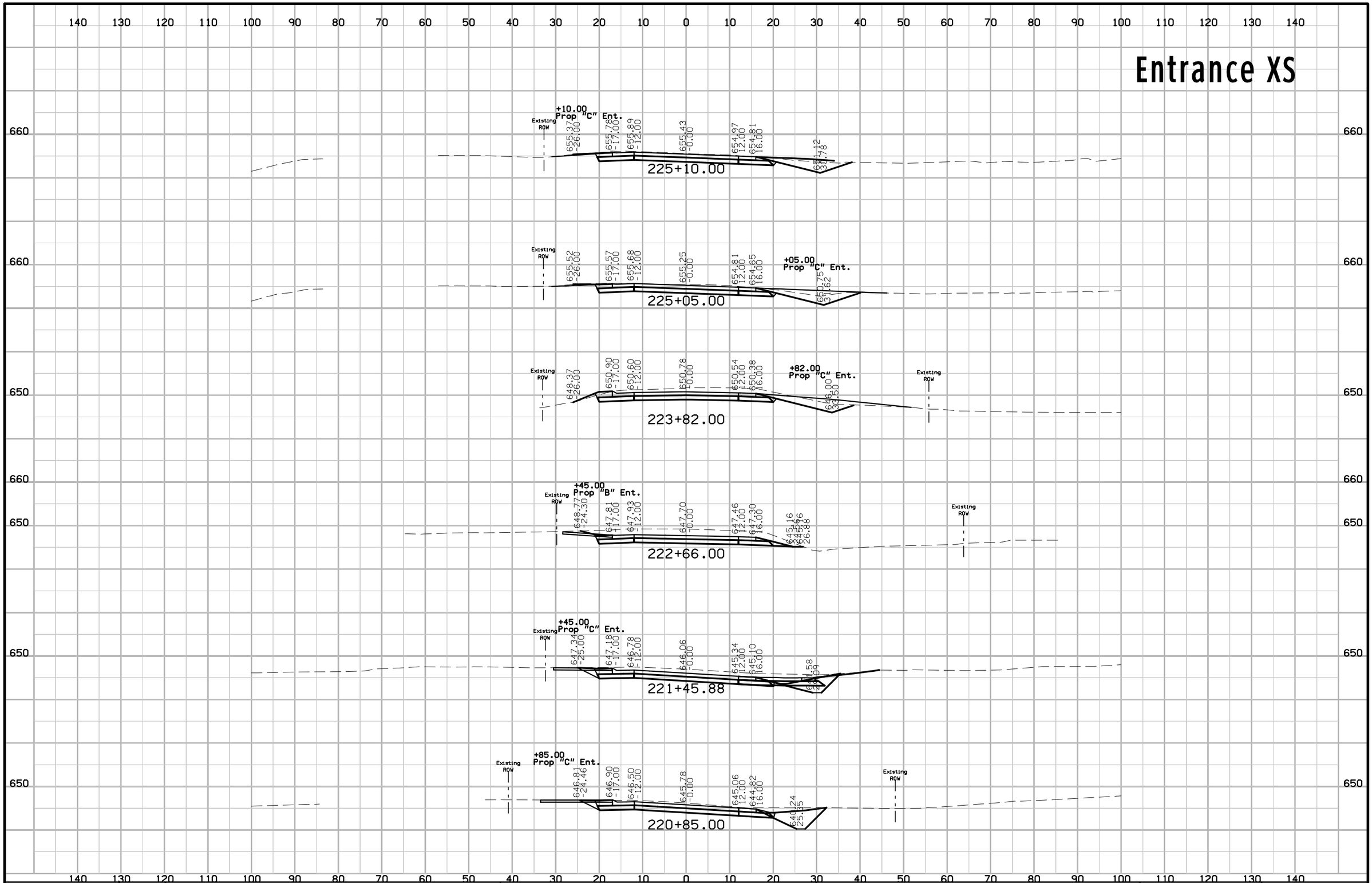
Entrance XS



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.106

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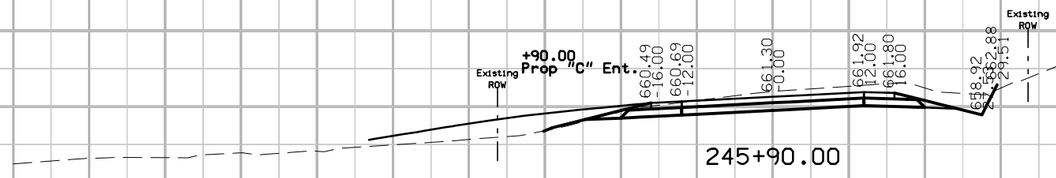
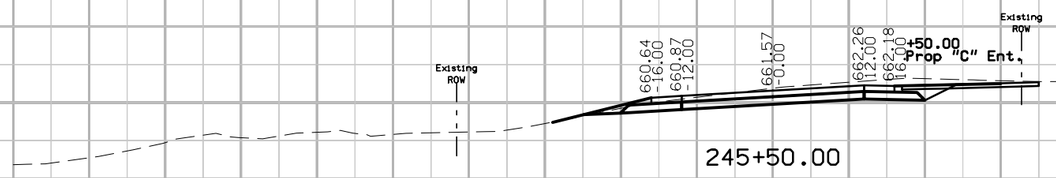
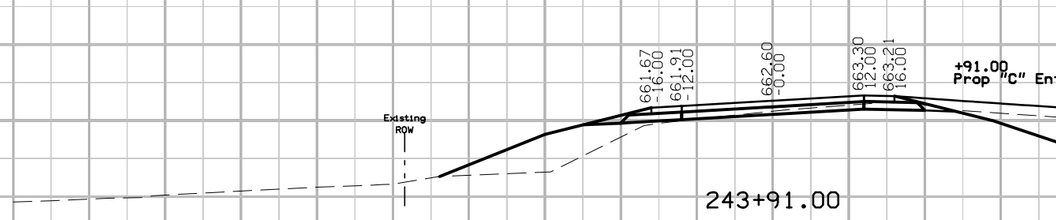
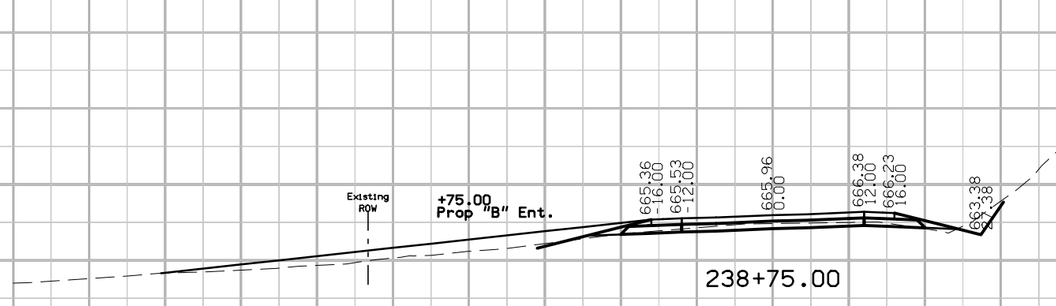
Entrance XS





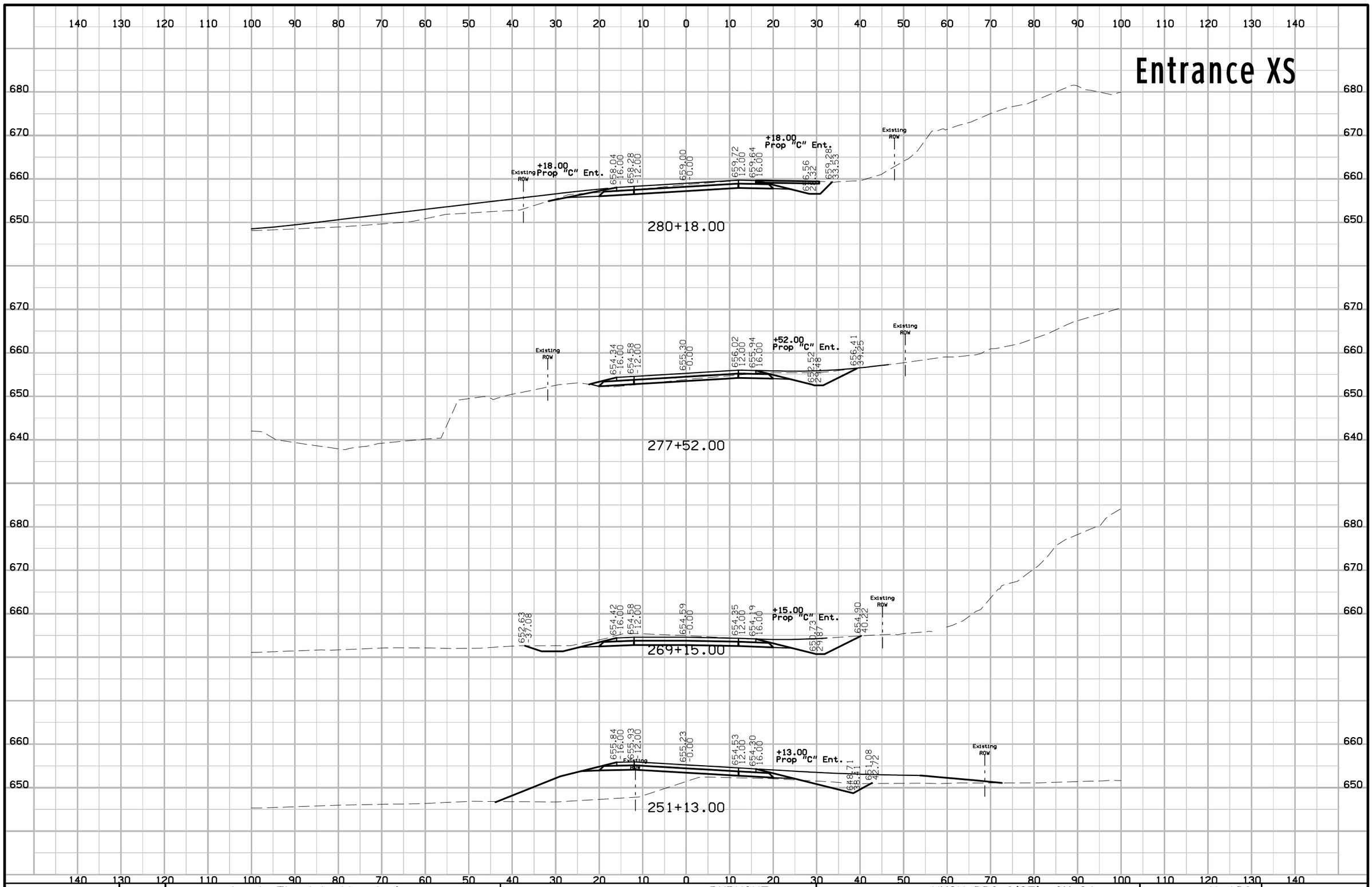




FILE NO.	ENGLISH	DESIGN TEAM J1a \ Th1el \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.107

3:31:34 PM 6/12/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X19_Entrances.dgn

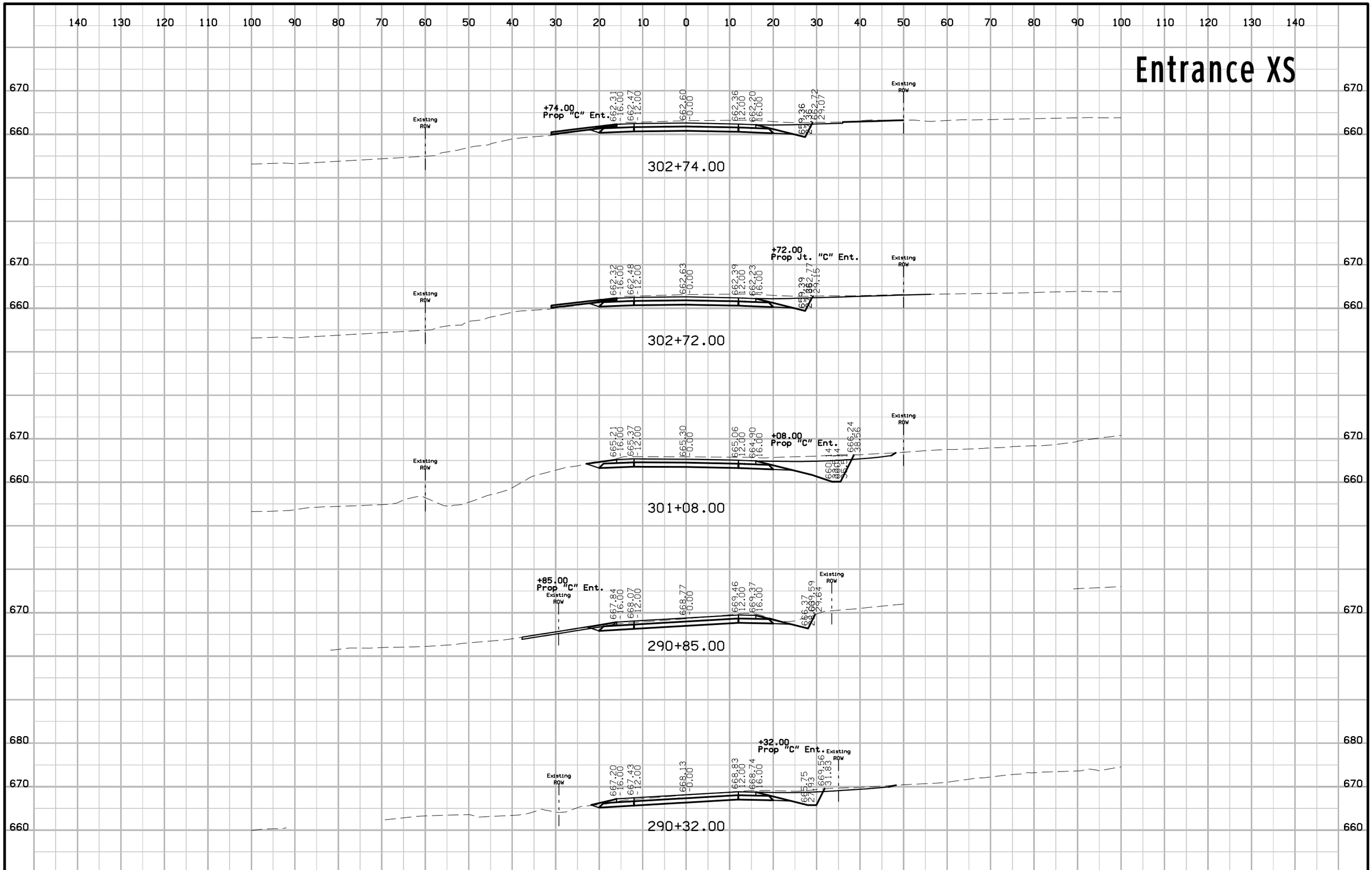
Entrance XS



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.108

3:31:35 PM 6/12/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X19_Entrances.dgn

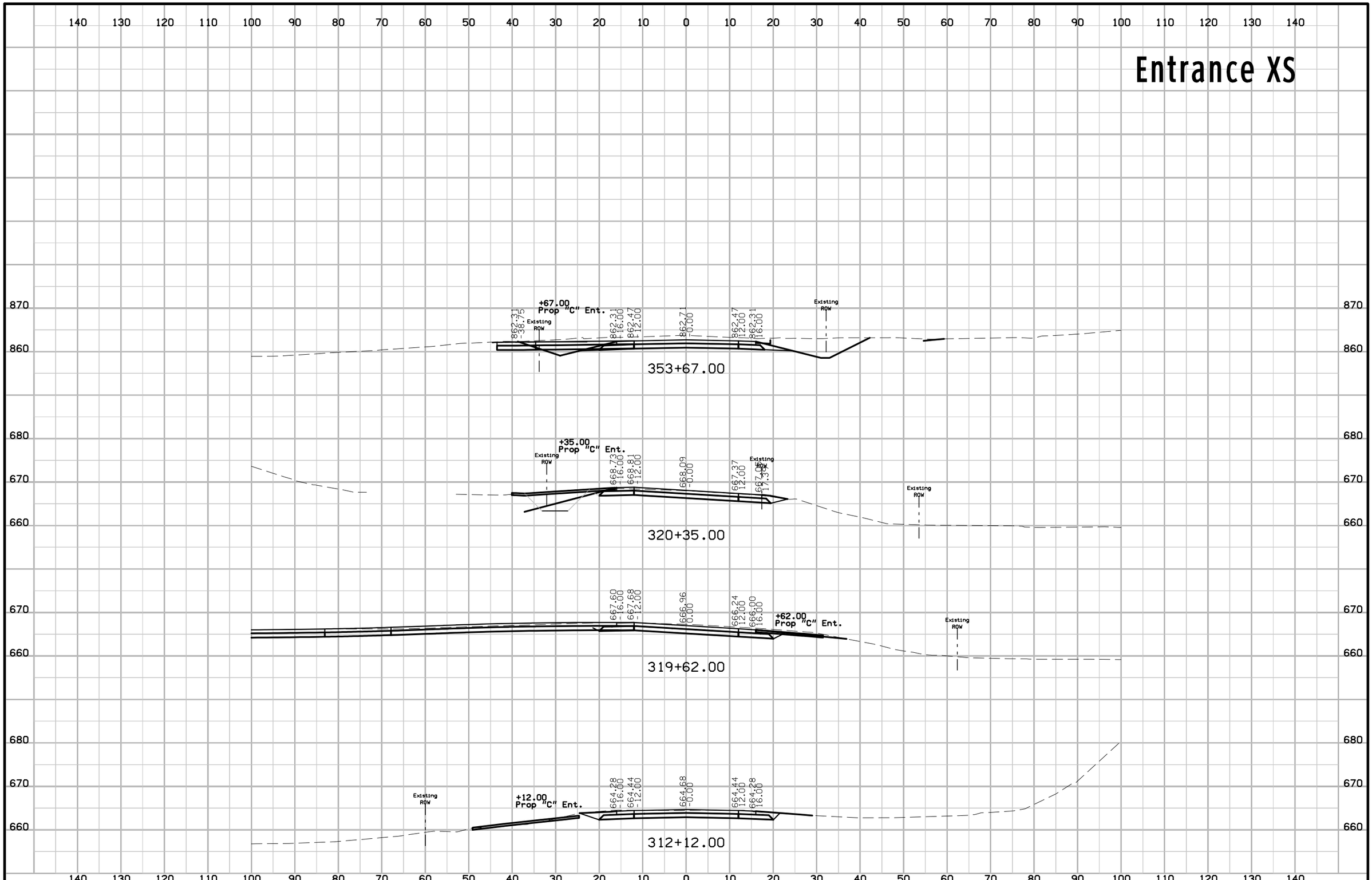
Entrance XS



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.109

3:31:35 PM 6/12/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X19_Entrances.dgn

Entrance XS



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.110

3:31:36 PM 6/12/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X19_Entrances.dgn

Burtons Furnace Entrances

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

660
650
640

+28.00
Prop "C" Ent.

645.19
6.09
-11.08

645.49
0.00

645.27
10.72
645.47
6.09
16.06

702+28.00

660
650
640

642.36
9.05

+19.00
Prop "C" Ent.

645.33
93.64
645.15
97.87

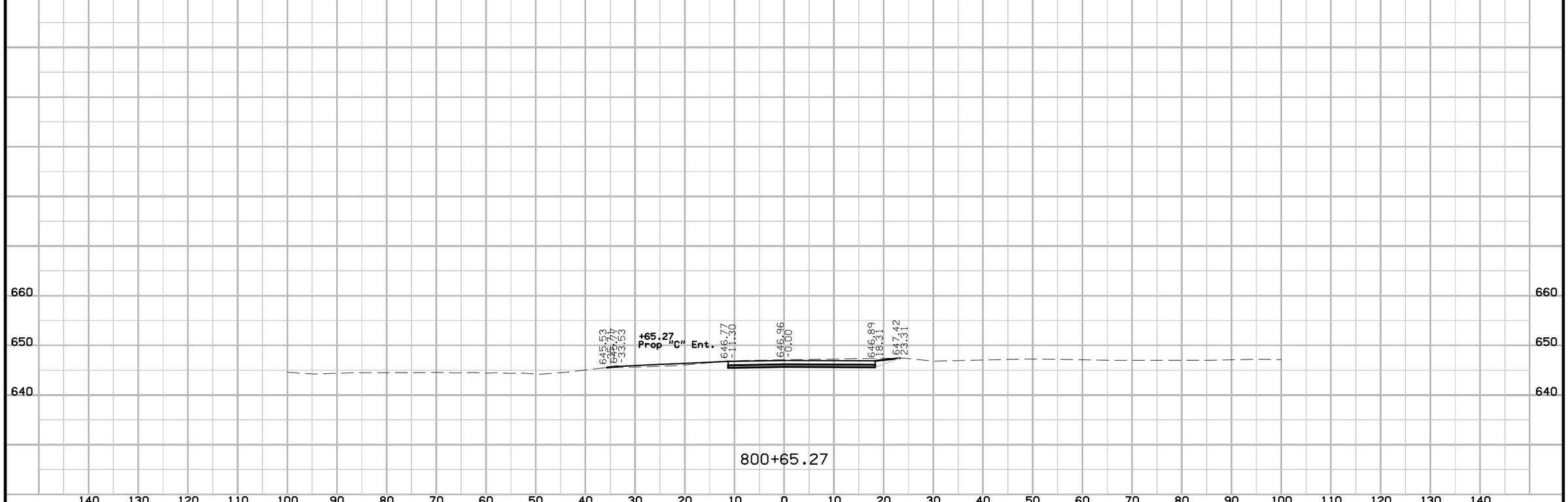
701+26.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.111

3:31:36 PM 6/12/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X19_Entrances.dgn

Durango Entrances



FILE NO.	ENGLISH	DESIGN TEAM Jia \ Thiel \ Altenhofen	DUBUQUE COUNTY	PROJECT NUMBER NHSX-003-9(25)--3H-31	SHEET NUMBER Y.112

3:31:37 PM 6/12/2023 raltenh pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\3105202010\Design_(107)_Sec1\CADD\SHT\SHT_31052107_X19_Entrances.dgn