GRADING

NHSX-100-1(39)--3H-57

LETTING DATE
JULY 2015

LINN Co.

INDEX OF SHEETS

Iowa Department of Transportation

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

LINN COUNTY

GRADING

US 30 TO COVINGTON ROAD

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

IOWA ONE CALL
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REVISIONS

	TOTAL
	861
PROJECT IDENTIFICATION NUMBER	
99-57-100-020-02	
PROJECT NUMBER	
NHSX-100-1(39)--3H-57	
R.O.W. PROJECT NUMBER	
NHSN-100-1(40)--R2-57	

MILEAGE SUMMARY

Div.	Location	Lin. Ft.	Miles
	Sta 709+00.00 to Sta 899+50.00	19050.00	
	Deduct Dual Bridges @ Access Rd.	207.00	
	Deduct Dual Bridges @ Morgan Creek	430.00	
	Deduct Dual Bridges @ Ellis Rd.	800.00	
	Total Length of Roadway	19050.00	3.608
	Total Length of Bridge	1437.00	0.272
	Total Net Length of Project	17613.00	3.336

For Project Location Map
Refer to Sheet A.2

DESIGN DATA RURAL

2005	AADT	0	V.P.D.
2040	AADT	11500	V.P.D.
2040	DHV	1155	V.P.H.
TRUCKS		10	%
Total Design ESALs		TBD	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	Sirpa Hall	Primary Signature Block

ROADWAY DESIGN

LICENSED PROFESSIONAL ENGINEER
Sirpa H. Hall
15616
IOWA

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

Signature Date

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

My license renewal date is December 31, 2014

Pages or sheets covered by this seal: _____

PRELIMINARY PLANS

Subject to change by final design.

D2 PLAN – Date: MARCH 11, 2014

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

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ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER A.2

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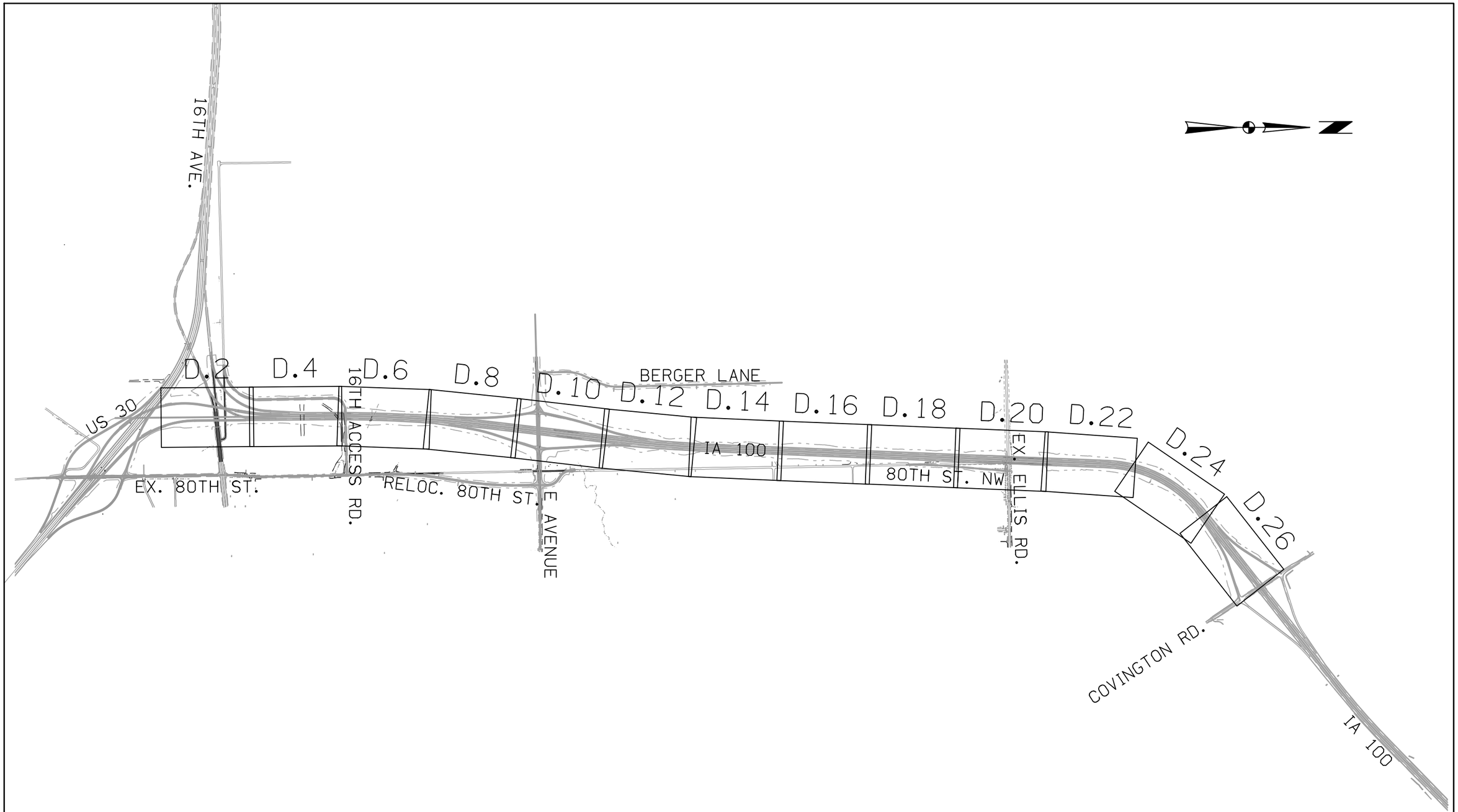

MAINLINE IA 100

Project Key Maps

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

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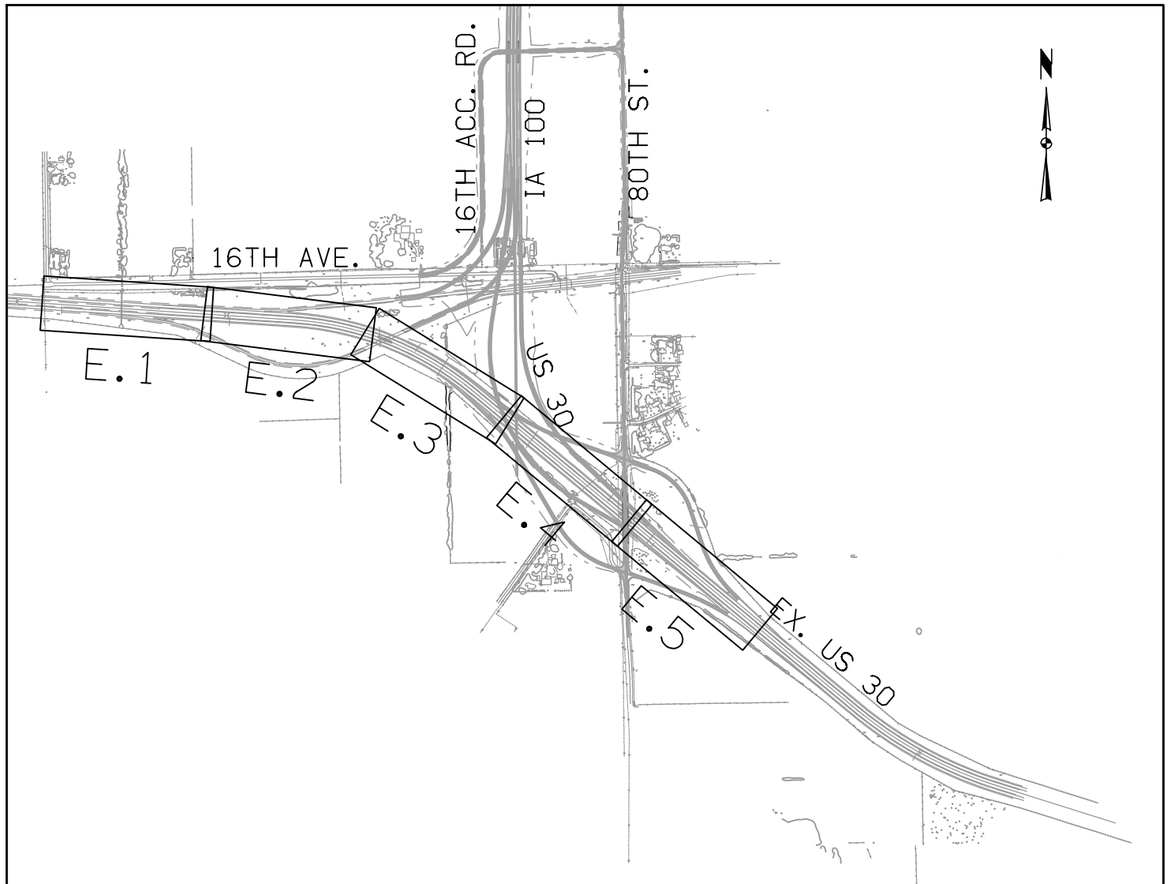
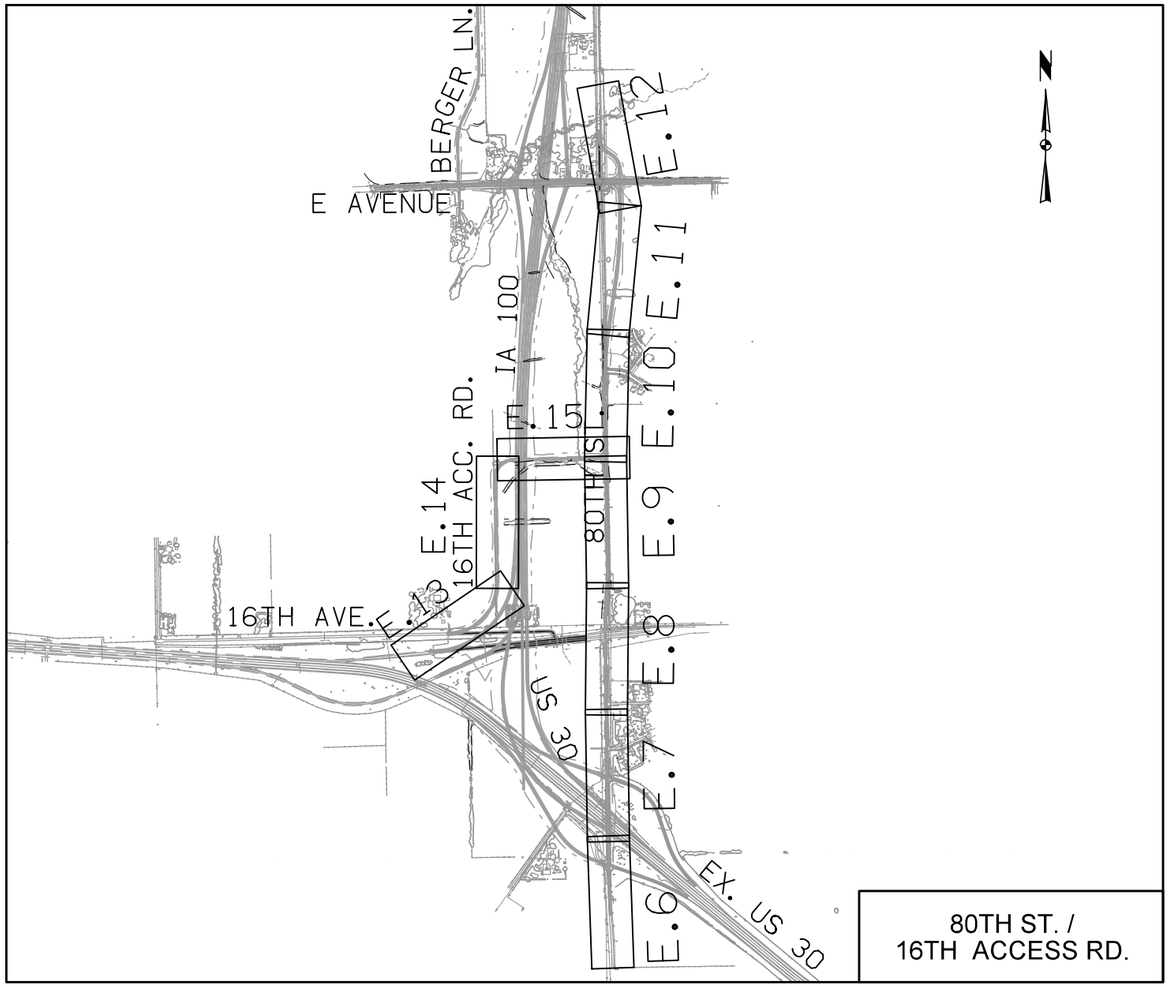
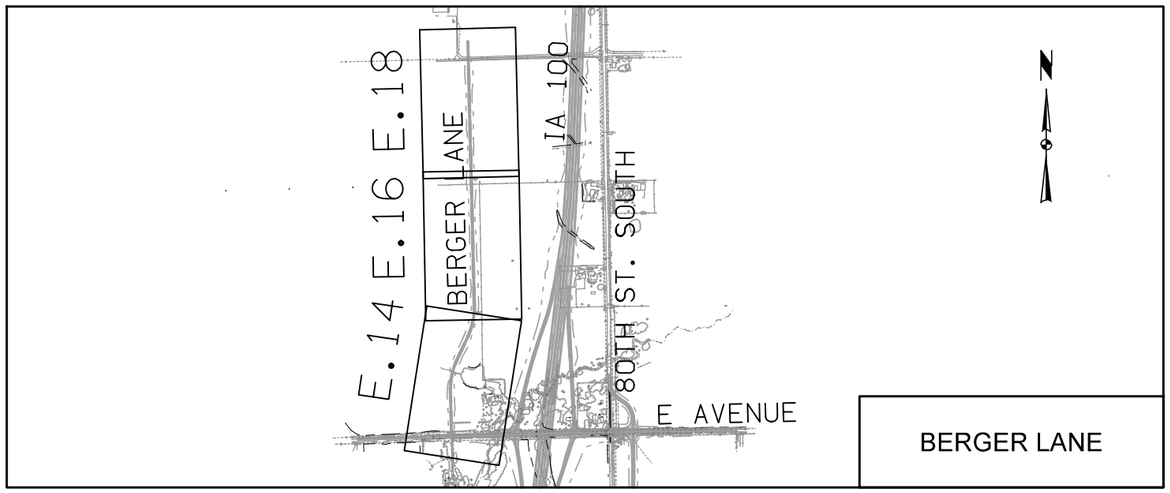


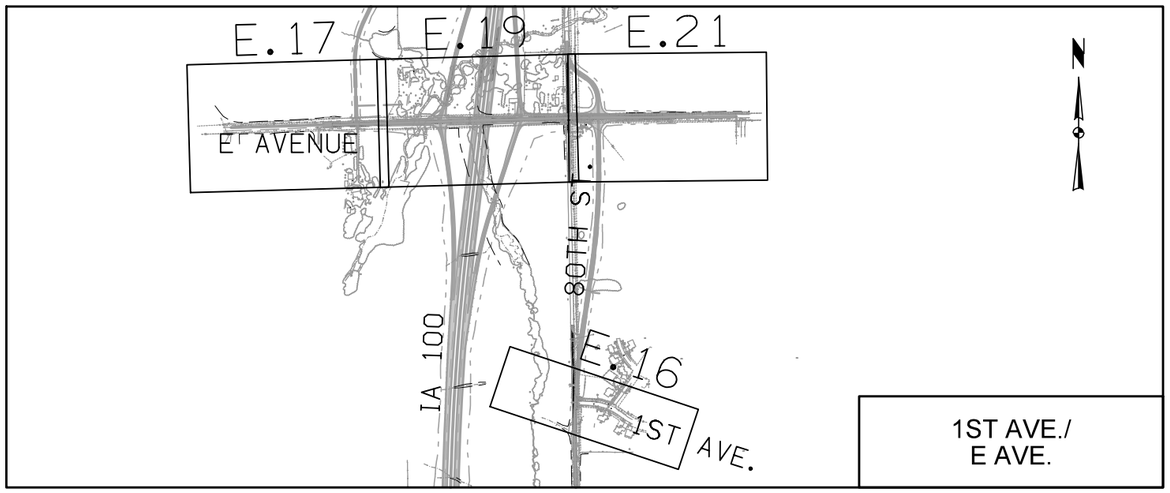
EX. US 30



80TH ST. /
16TH ACCESS RD.



BERGER LANE



1ST AVE./
E AVE.

Project Key Maps

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER A.4

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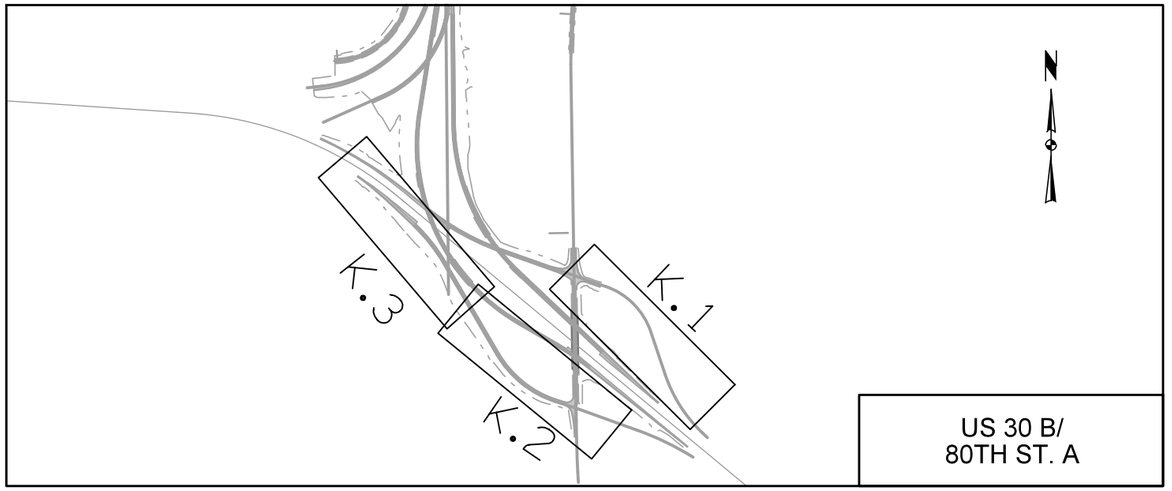
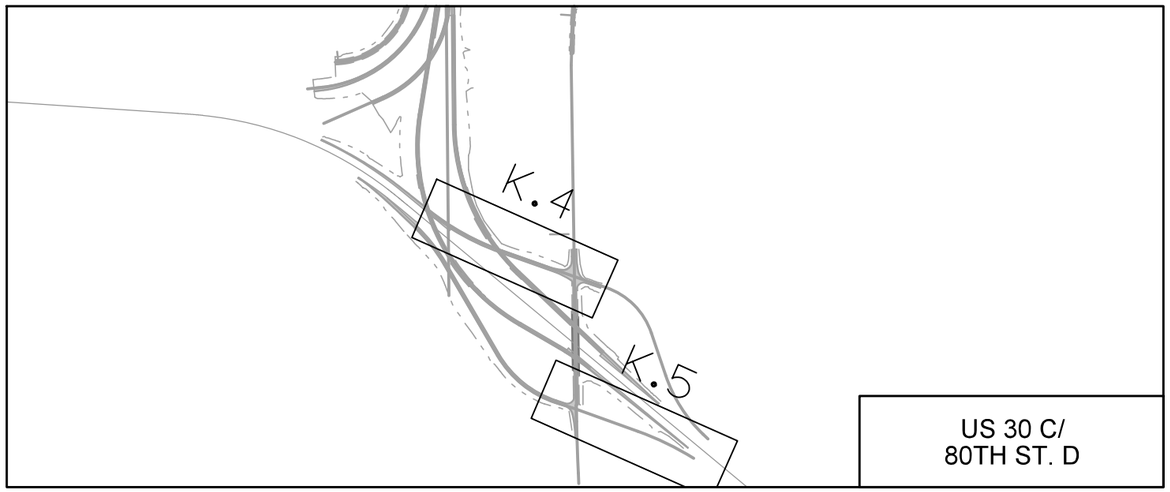
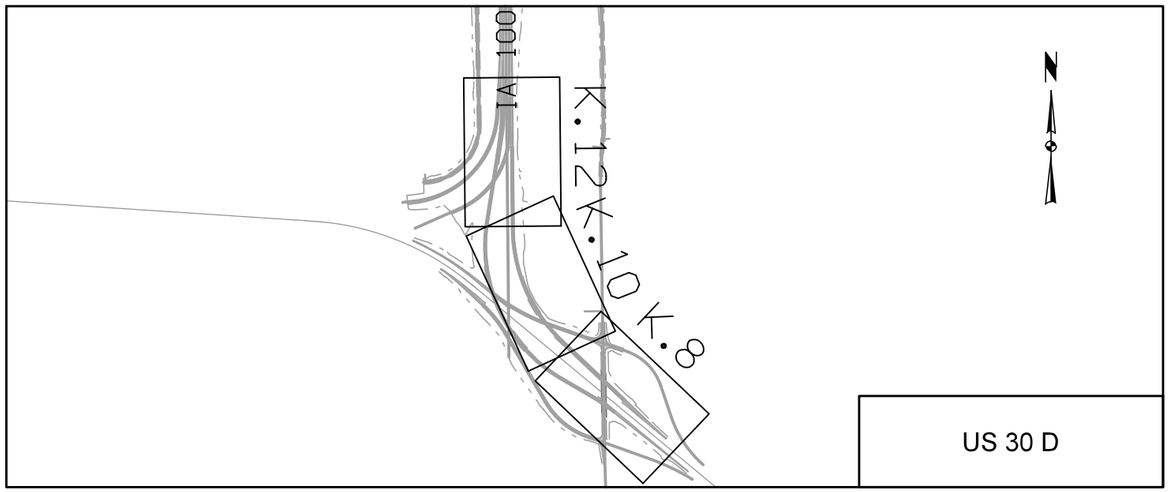
US 30 A



US 30 B/
80TH ST. A



US 30 C/
80TH ST. D



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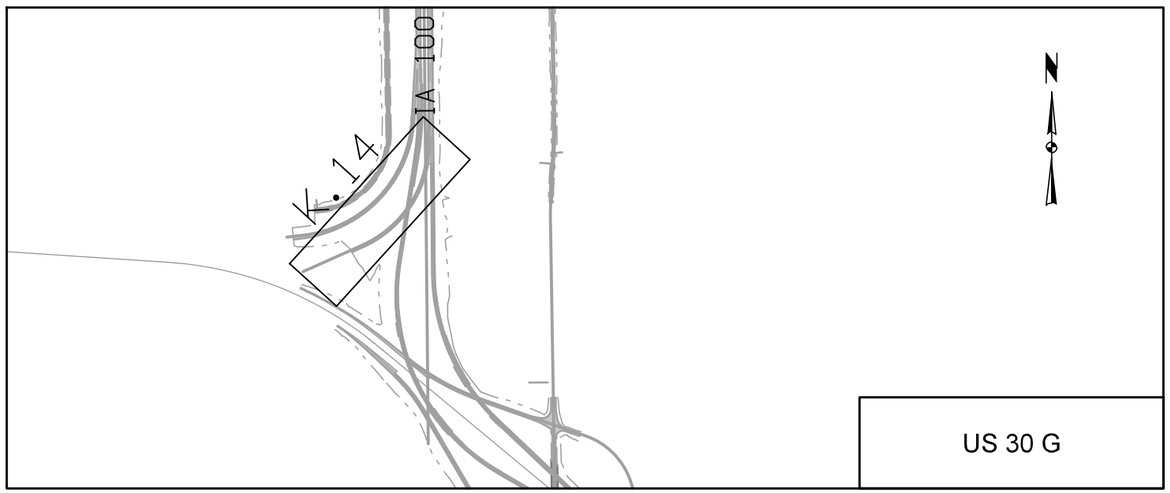

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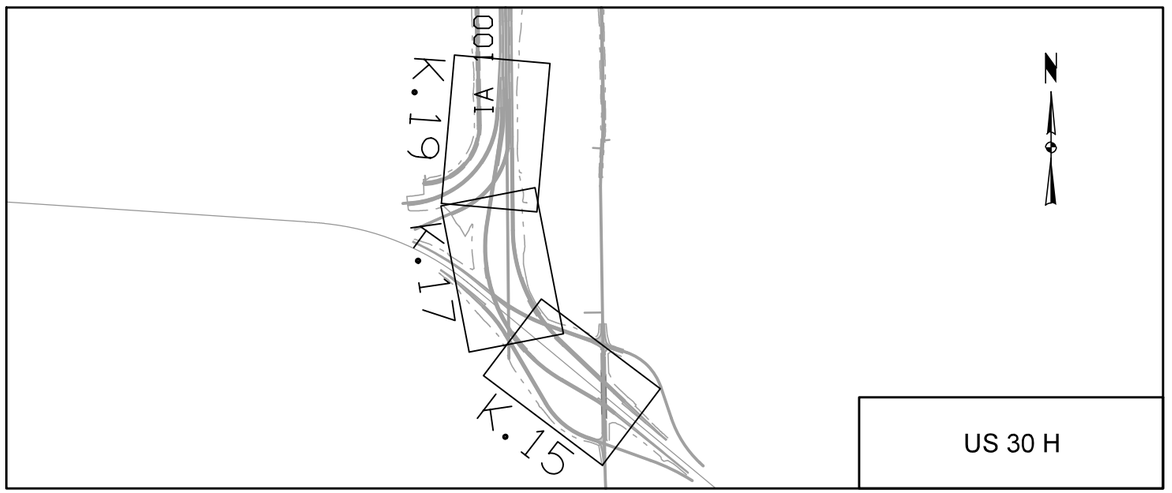

US 30 H

Project Key Maps

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER A.5

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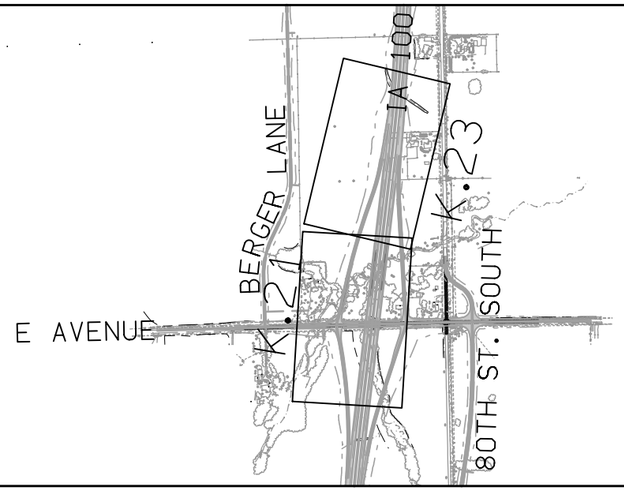

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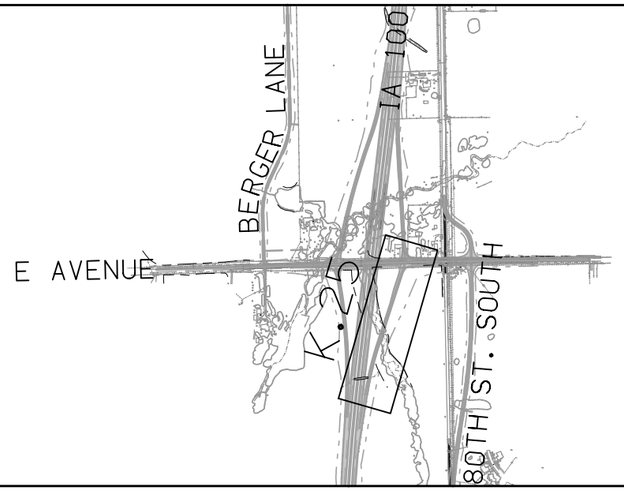
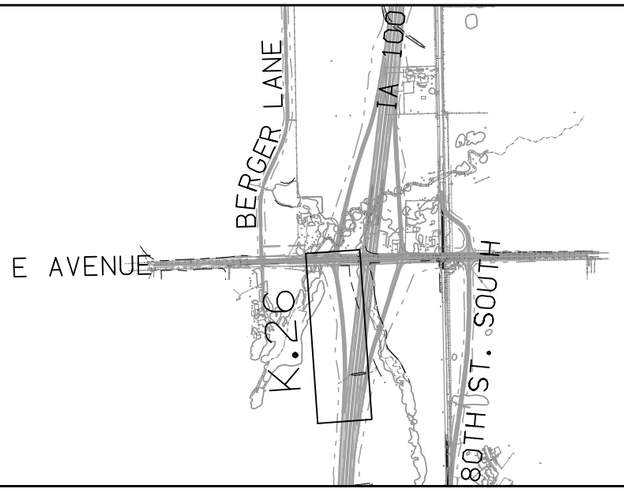


E AVENUE RAMP B



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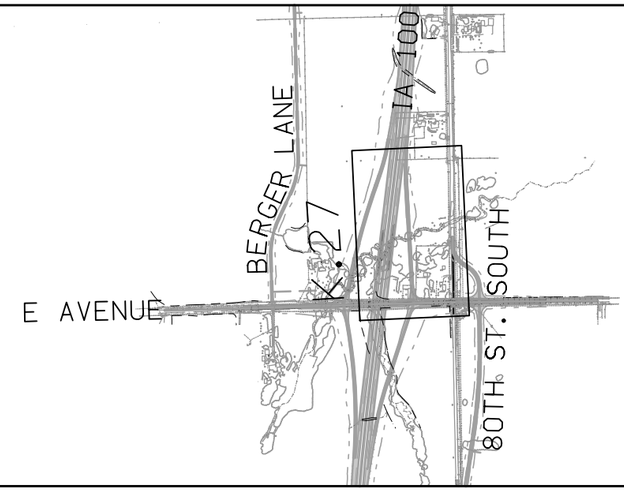

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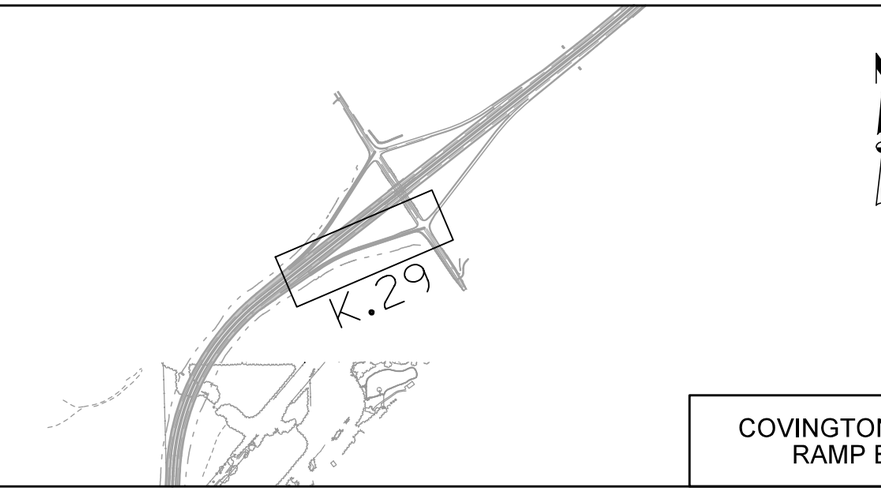
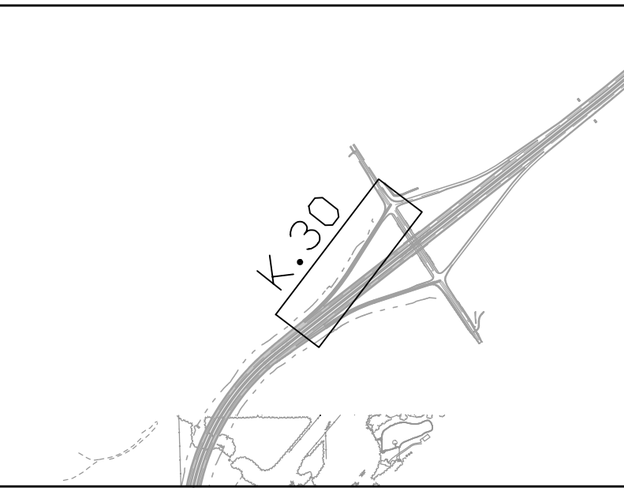


COVINGTON RD.
RAMP B



COVINGTON RD.
RAMP C

Project Key Maps

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER A.6

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Project #: NHSX-100-1(42)—3H-57

Roadway: IA 100 Rural Sections

Last Updated 6/31/2013	IA 100 ML By Roadway		Acceptable Values	Prefered Values	Project Values	Comments
Design Element			Roadway Type Expressways/ Freeways	Roadway Type Freeways/ Expressways	Roadway Type Freeways/Expressways	
design speed (mph)			Cannot be less than the posted speed limit	70	70	
full depth paved width (ft)		outside lane	12	14	14	Actual driving-lane width is 12 feet. Painted edge line is offset 2 feet from outside edge of pavement.
		inside lane(s)	12	12	12	
design lane width (ft)			12	12	12	
turn-lane width (ft) (see Section 6A-1 or Section 6C-6)			10	12	12	
auxiliary-lane width (ft)			10	12	12	
parking-lane width (ft)			--	--	--	
shoulder width (ft)	straight			10'/6'	10'/6'	
mainline cross-slope (%)				2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane between 1.5% and 3%	2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane between 1.5% and 3%	
effective shoulder width and type (see Section 3C-4)				Outside: 10' (6' Paved) Median Side: 6' (4' Paved)	Outside: 10' Median Side: 6'	Outside shoulder width includes 2' pavement (outside lane)
shoulder cross-slope (%)			not less than the adjacent lane, 2 to 6% for paved, 4 to 6% for granular, 6 to 8% for earth	4%	4%	
foreslope (see Roadway Typical Cross Sections)	adjacent to roadway		3:1	10:1 for 4' then 6:1	6:1	Typical barnroof section to minimize impacts.
	beyond standard ditch depth and clearzone			3.5:1	3:1	3:1 FS at clear zone to minimize impacts
	Curbed roadways			--	--	
normal outside ditch (depth × width) (ft) (check impacts to right-of-way)				5 x 10	5 x 10	5' x 10' ditches normal. DG x 10' or other depths as needed. Ditch dependent on allowable impacts and available ROW
normal median ditch (depth) (ft)				4	4	4' maintained when possible. Dependent on allowable impacts and available ROW.
normal median width (ft)			50	82	64	
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)				3:1	3:1	2.5:1 slopes will be consided as needed due to contraints within the corridor
bridge width—new (ft)				design lane widths + effective shoulder widths or curb to curb street width	design lane widths + effective shoulder widths or curb to curb street width	
bridge width—existing (ft)			design lane widths + 2 ft offset each side	design lane widths + 3.5' offset on each side	--	No existing bridges will be used
transverse slopes	w/ drainage structures			8:1	8:1	
	w/o drainage structures			10:1	10:1	
	at sideroads			6:1	6:1	
Vertical clearance (ft) (above lanes & shoulders)(see Section 1C-2)		over primary road	16	16.5	16.5	
		over non-primary	14	15	15	
		over railroad		23.3	23.3	
		sign truss		17.5	17.5	
Structural Capacity				--	--	
Level of Service				--	LOS B	

Project #: NHS-100-1(36)—19-57

Roadway: IA 100 Rural

Last Updated: 4/22/2013	IA 100 ML By Speed	Acceptable Values	Preferred Values	Project Values	Comments
Design Element		**Design Speed (cannot be less than posted speed limit)**	**Design Speed, mph (Prefered design speed is 5mph over posted speed limit)**		
Speed		70	70	70	
Stopping sight distance (ft) (see Section 6D-1)		730	730	731	
Minimum horizontal curve radius (ft)	e_{max} = 4%	--	--	--	
	e_{max} = 6%	2040	2040	2100	Spirals will be removed for curves with radius > 2480'
	e_{max} = 8%	1810	--	--	
Minimum horizontal curve length (including spirals) (ft)		1050	1050	1680	
Minimum vertical curve length (ft)		210	210	400	
Minimum rate of vertical curvature (K)	crest	247	405	248	AASHTO critiera (247) can be considered if necessary
	sag	181	181	185	
Minimum gradient (%)		0.3% with curb/0.5% without curb	0.50%	0.50%	Will maintain 0.5% where possible.
Maximum gradient (%) on ramps	Upgrades	--	4	3	
	Downgrades	Equal to the maximum upgrade gradient. In special cases, may be 2% greater but in no case greater than 8%	--	--	
Maximum gradient (%) on other roadways		4	3	3	
Curb type		6" Sloped for Non-Interstate Routes	6" Sloped for Non-Interstate Routes	6" Sloped Curb	

Project #: NHS-100-1(36)—19-57

Roadway: Single Lane Ramps

Last Updated: 4/22/2013

Ramps By Roadway

Design Element			Acceptable Values		Preferred Values		Project Values		Comments
			Roadway Type		Roadway Type		Roadway Type		
			Ramps		Ramps		Ramps		
			one lane	two lanes	one lane	two lanes	one lane	two lanes	
design speed (mph)			40	40	60	60	60 at gore point, 50 at sytsem ramp proper		
full depth paved width (ft)			14	22	16	24	16	24	
design lane width (ft)			14	11	16	12	16	12	
turn-lane width (ft) (see Section 6A-1 or Section 6C-6)			10	10	12	12	12		
auxiliary-lane width (ft)			10	10	12	12	12		
parking-lane width (ft)			--	--	--	--	--		
mainline cross-slope (%)			1.5% minimum, 3% maximum		2%		2%		
effective shoulder width and type (see Section 3C-4)			Outside: 6' Inside: 4'		Outside: 6' Inside: 4'		Outside: 6' Inside: 4'		In direction of travel
shoulder cross-slope (%)			not less than the adjacent lane, 2 to 6% for paved, 4 to 6% for granular, 6 to 8% for earth		4%		4%		
foreslope (see Roadway Typical Cross Sections)	adjacent to roadway		4:1 for interstates, 3:1 for others		10:1 for 4' then 6:1		6:1		Typical barnroof section to minimize impacts.
	beyond standard ditch depth and clearzone		3:1		3.5:1		3:1		3:1 FS at clear zone to minimize impacts
	Curbed roadways		--		Curbed Roadways are not preferred		--		
normal outside ditch (depth × width) (ft) (check impacts to right-of-way)			--		5 x 10		5 x 10		5' x 10' ditches normal. DG x 10' or other depths as needed. Ditch dependent on allowable impacts and available ROW
normal median ditch (depth) (ft)			--		--		--		
normal median width (ft)			--		--		--		
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)			2.5:1		3:1		3:1		2.5:1 slopes will be consided as needed due to contraints within the corridor
bridge width—new (ft)			lane widths + shoulder widths or curb to curb street width		design lane widths + effective shoulder widths		design lane widths + effective shoulder widths		
bridge width—existing (ft)			design lane widths + 2 ft offset each side		--		--		No existing bridges will be used
transverse slopes	w/ drainage structures		6:1		8:1		8:1		
	w/o drainage structures		6:1		10:1		10:1		
	at sideroads		6:1		6:1		6:1		
Vertical clearance (ft) (above lanes & shoulders)(see Section 1C-2)		over primary road	16		16.5		16.5		
		over non-primary	14		16.5		16.5		
		over railroad	23.3		23.3		23.3		
		sign truss	17		17.5		17.5		
Structural Capacity					--		--		
Level of Service			--		--		LOS B rural		

Project #: NHS-100-1(36)—19-57

Roadway: Ramp US30D

Last updated: 4/22/2013

Ramps By Speed		Acceptable Values		Preferred Values		Project Values		Comments
Design Element		**Design Speed (cannot be less than posted speed limit)**		**Design Speed, mph (Prefered design speed is 10mph below mainline design speed)**				
Speed		50	60	50	60	50	60	60 at gore point, 50 at sytsem ramp proper
Stopping sight distance (ft) (see Section 6D-1)		425	570	425	570	425	572	
Minimum horizontal curve radius (ft)	e_{max} = 4%	--	--	--	--	--		
	e_{max} = 6%	833	1330	833	1330	833	1330	
	e_{max} = 8%	758	1200	--	--	--		
Minimum horizontal curve length (including spirals) (ft)		750	900	750	900	292		300 Typical - Based on past Iowa DOT Experience
Minimum vertical curve length (ft)		150	180	150	180	200	200	
Minimum rate of vertical curvature (K)	crest	84	151	84	151	84	154	Iowa DOT DSD critiera will be used if necessary
	sag	96	136	96	136	96	137	
Minimum gradient (%)		0.5		0.5		0.2		Will maintain 0.5% where possible. 0.2 at tie into existing US30.
Maximum gradient (%) on ramps	Upgrades	5	5	4		4.12		maintain 4% where possible
	Downgrades	Equal to the maximum upgrade gradient. In special cases, may be 2% greater but in no case greater than 8%		--		4.56		
Maximum gradient (%) on other roadways		--		--		--		
Curb type		6" Sloped		Curbs not preferred		6" Sloped		

Project #: NHS-100-1(36)—19-57

Roadway: E Ave., 80th, Access

Last Updated: 4/22/2013	**Local Paved By Roadway**	**Acceptable Values**			**Linn County Preferred Values**			**Project Values**			**Comments**
Design Element		Linn County Functional Class			Linn County Functional Class			Roadway Type			
		Arterial			Arterial			Rural Two-Lane Arterial			
		E Avenue	80th Street	16th Ave SW/ Access Road	E Avenue	80th Street	16th Ave. SW/ Access Road	E Avenue	80th Street	16th Ave/Access Road	
design speed (mph)		Cannot be less than the posted speed limit			5 miles above the posted speed limit			50	50*	30	*north of E Ave tie into existing, design speed = 25 mph
full depth paved width (ft)	outside lane	11	11	11	12	12	11	12	15**	12	**12' on 80th at US 30 Interchange
	inside lane(s)	11	11	11	11	11	11	12	--	--	
design lane width (ft)		11	11	11	12	12	11	12	15**	12	
auxiliary-lane width (ft) (includes turn lanes)		11	11	11	12	12	11	12	--	--	
parking-lane width (ft)		--			--	--	--	--			
pavement cross-slope (%)		1.5% minimum			3%			2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%			
effective shoulder width and type (see Section 3C-4)		8	curb/gutter, 2	8	8	8	6	10 - paved/granular***	1 - earth****	8 - granular	***6' granular adjacent to auxiliary lane ****10' granular at US 30 Interchange
shoulder cross-slope (%)		4			4			4			
foreslope (see Roadway Typical Cross Sections)	adjacent to shoulder	4:1	4:1	4:1	4:1	4:1	3:1	6:1			Mainitain typical barnroof section where possible
	beyond standard ditch depth and design clearzone							3:1			3:1 FS at clear zone to minimize impacts
	Curbed roadways							4% toward roadway for 12' then not steeper than 4:1			
normal outside ditch (depth × width) (ft)		--			4'x6'	4' x 6'	4' x 6'	Preferred Criteria			Ditch dependent on allowable impacts and available ROW
normal median ditch depth (ft)					--			--			
normal median width (ft) (if applicable)		15	--	--	15	16	16	16			Through E Ave. interchange to add left turn lanes
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)		3:1	3:1	3:1	NA	NA	NA	3:1			2.5:1 slopes will be consided as needed due to contraints within the corridor
bridge width—new (ft)		lane width + 3 ft clearance each side			40	40	30	design lane widths + effective shoulder widths or curb to curb street width			
bridge width—existing (ft)		--			--	--	--	--			
transverse slopes	w/ drainage structures	--			--			8:1			
	w/o drainage structures							10:1			
	at sideroads							6:1			
Vertical clearance (ft) (above lanes & shoulders)(see Section 8A-2)	Over primary	16			16.5			16.5			
	over non-primary	14			15			15			
	over railroad	23.3			23.3			23.3			
	sign truss	17.5			17.5			17.5			
Structural Capacity		--			--			--			
Level of Service		D/E			C/D					B	

		Acceptable Values			Preferred Values				Project Values	Comments
Project #:	NHS-100-1(36)—19-57									
Roadway:	E-Avenue, 80th St., Access Road									

Last Updated: 04/22/2013 **Local Paved By Speed**		**Acceptable Values**			**Linn County Preferred Values**			**Project Values**			**Comments**
Design Element		**Design Speed (cannot be less than posted speed limit)**			**Design Speed, mph (Prefered design speed is 5mph over posted speed limit)**			**Design Speed, mph**			
Speed		25	30	50	25	30	50	25	30	50	
Stopping sight distance (ft) (see Section 6D-1)		155	200	425	155	200	425	543	458	434	
Minimum horizontal curve radius (ft)	e_{max} = 4%	758	1025	2800	209*	302	--	210*	100	--	*e_{max} = 3%
	e_{max} = 6%	350	525	1600	--	--	849	--	--	5500	
	e_{max} = 8%	134	214	758	--			--			
Minimum horizontal curve length (including spirals) (ft)		375	450	750	100	210	600	201	156	780	
Minimum vertical curve length (ft)		75	90	150	75	90	150	150	500	150	
Minimum rate of vertical curvature (K)	crest	12	19	84	12	19	84	--	158	87	Iowa DOT DSD criteria will be used where necessary.
	sag	26	37	96	26	37	96	128	197	102	
Minimum gradient (%)		0.3% with a curb, 0.5% without a curb				0.5	0.5	0.5			
Maximum gradient (%) on ramps	Upgrades	--	--		--			--			
	Downgrades	--	--		--			--			
Maximum gradient (%) on other roadways		9	5		7		6	Preferred Values			
Curb type		6" Standard	6" Sloped		6" Standard		6" Sloped	--	8" Sloped		Per City of Cedar Rapids Criteria

Project #: NHS-100-1(36)—19-57

Roadway: Berger, 80th

Last Updated: 4/22/2013	Local Granular By Roadway	Acceptable Values		Linn County Preferred Values		Project Values		Comments
Design Element		SUDAS Functional Class		SUDAS Functional Class		Roadway Type		
		Collector		Collector		Rural Two-Lane Collector		
		Berger Lane	80th Street (South of Ellis Ave.	Berger Lane	80th Street (South of Ellis Ave.)	Berger Lane	80th Street (South of Ellis Ave)	
design speed (mph)		Cannot be less than the posted speed limit		5 miles above the posted speed limit		30	50	
Roadway Top Width (ft)		22	22	30	30	24		
design lane width (ft)		11	11	NA	NA	12		
pavement cross-slope (%)		1.5% minimum		3%		3%		
effective shoulder width and type (see Section 3C-4)		8	8	1	1	1 - earth		
shoulder cross-slope (%)		--	--	--		--		
foreslope (see Roadway Typical Cross Sections)	adjacent to shoulder	3:1	3:1	3:1	3:1	3:1		
	beyond standard ditch depth and design clearzone							
	Curbed roadways	--	--	--	--	--		
normal outside ditch (depth × width) (ft)		--		2' x 2'		2' x 2'		Ditch dependent on allowable impacts and available ROW
normal median ditch depth (ft)				--		--		
normal median width (ft) (if applicable)		--		--	--	--		
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)		3:1	3:1	NA	NA	3:1		2.5:1 slopes will be consided as needed due to contraints within the corridor
bridge width—new (ft)		lane width + 3 ft clearance each side		24		design lane widths + effective shoulder widths or curb to curb street width		
bridge width—existing (ft)		--	--	--		--		
transverse slopes	w/ drainage structures	--		--		8:1		
	w/o drainage structures					10:1		
	at sideroads					6:1		
Vertical clearance (ft) (above lanes & shoulders)(see Section 8A-2)	Over primary	16		16.5		16.5		
	over non-primary	14		15		15		
	over railroad	23.3		23.3		23.3		
	sign truss	17.5		17.5		17.5		
Structural Capacity		--		--		--		
Level of Service		D	D/E	D	C/D	B		

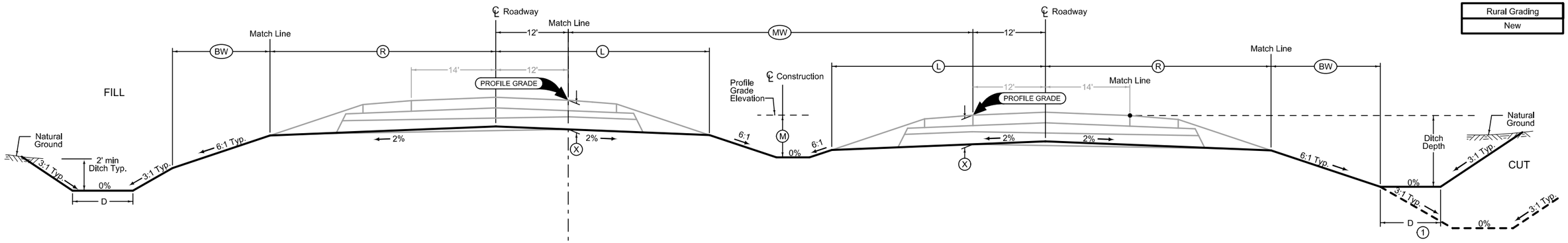
			Acceptable Values		Preferred Values			Project Values	Comments
Project #:	NHS-100-1(36)—19-57								
Roadway:	Berger, 80th St.,								

Last Updated: 04/22/2013 **Local Granular By Speed**		**Acceptable Values**		**Linn County Preferred Values**		**Project Values**		**Comments**
Design Element		**Design Speed (cannot be less than posted speed limit)**		**Design Speed, mph (Prefered design speed is 5mph over posted speed limit)**		**Design Speed, mph**		
Speed		30	50	30	50	30	50	
Stopping sight distance (ft) (see Section 6D-1)		200	425	200	425	193	446	
Minimum horizontal curve radius (ft)	e_{max} = 4%	250	--	250	--	--	--	
	e_{max} = 6%	231	833	231	849	750	6000	
	e_{max} = 8%	214	758	--		--		
Minimum horizontal curve length (including spirals) (ft)		450	750	210	550	347	603	
Minimum vertical curve length (ft)		90	150	90	150	200	175	
Minimum rate of vertical curvature (K)	crest	19	84	19	84	77	92	
	sag	37	96	37	96	35	131	
Minimum gradient (%)		0.3% with a curb, 0.5% without a curb		0.5		1.74%	1.00%	
Maximum gradient (%) on ramps	Upgrades	--	--	--		--		
	Downgrades	--	--	--		--		
Maximum gradient (%) on other roadways		9	5	7	6	Preferred Values		
Curb type		--	--	--	--	--		

D2 Field Exam Discussion Checklist

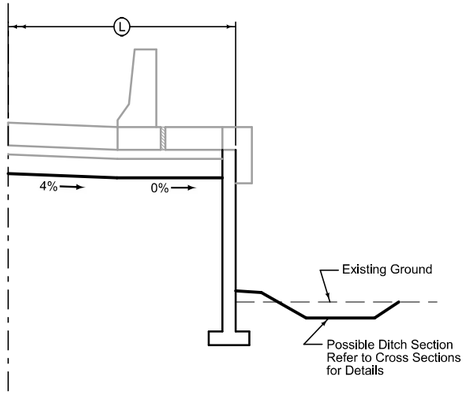
- Discuss any general plan format/content comments.
- Review roadway typical sections and end conditions used and discuss strategies needed to maintain construction within proposed ROW limits.
- Confirm local roadway typical sections:
    - 80th Street SW through US 30 Interchange
    - 80th Street SW Asphalt Surfacing Only Section
    - 80th Street SW Near E Avenue
    - Relocated 16th Street SW/Access Road at IA 100 Mainline Crossing
- Review of design alternatives at the IA 100 mainline crossing of Ellis Road/Silver Creek
- Review of DSD needs along US 30 mainline
- Review geometrics of the termination of IA 100 at US 30 system interchange ramps
- Review SSD needs around horizontal curves at the US 30 system interchange
- Local side road design speed and criteria
    - Relocated 16th Avenue SW/Access Road
    - 80th Street SW north of E Avenue
- ROW Needs
    - Allgood Property
    - Century Link
- Review of planned drainage concept
- Disposition of existing culverts at US 30 interchange
- Morgan Creek hydraulics, drainage needs, flood event review, and bridge and retaining wall needs.
- Review possible sequence of construction and construction packaging scenarios.
- Preliminary proposed bridge layouts and structure alternatives
- Review of geotechnical boring layout, soils information, and planned additional borings.

Rural Grading
New



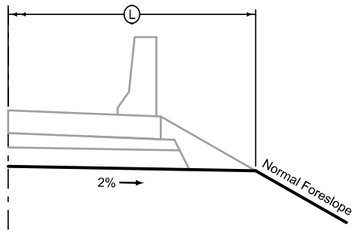
Retaining Wall Grading

LOCATION			DIMS
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet
IA 100	724+25.00	724+75.00	22.89



Concrete Barrier Grading

LOCATION			DIMS
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet
IA100	724+75	725+00	26.05



RURAL 4 LANE GRADING (DELAYED PAVING)

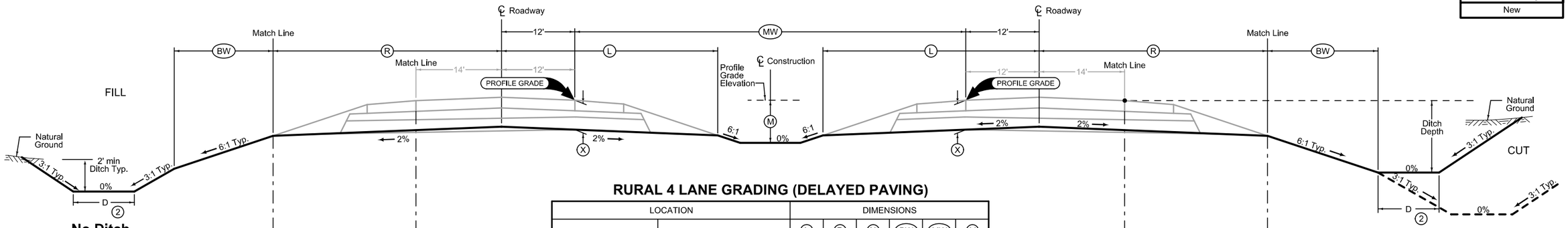
LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet	(MW) Feet	(M) Feet
IA 100 Eastbound	719+98.70	724+25.00	44.11-33.76	62.82-36.81	28	5.19	N/A	4
IA 100 Eastbound	724+25.00	725+12.15	33.76-33.09	36.81	28	5.19	63.32-64	4
IA100 Westbound	724+25.00	727+50.00	22.5-33.09	80.31-56.81	28	3.69	63.32-64	4
IA100 Eastbound	725+12.15	727+50.00	33.09	36.81	28	5.19	64	4

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

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

(1) Typical 10' Ditch Width. Refer to Cross Sections for ditch width details.

Rural Grading
New



RURAL 4 LANE GRADING (DELAYED PAVING)

LOCATION			DIMENSIONS					
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet	(MW) Feet	(M) Feet
IA 100	727+50.00	730+25.00	33.1	56.8-36.8	28	5.2	64	4
IA100	730+25.00	745+50.00	33.1	36.8	28	5.2	64	4
IA100	745+50.00	758+58.09	33.1	36.8-73.9	28	5.2-6.9	64	4
IA100	758+58.09	782+90.13	33.1	36.8	28	5.2	64	4
IA100	782+90.13	795+50.00	33.1	71.9-36.8	28	12.1-5.2	64	4
IA100	795+50.00	865+28.25	33.1	36.8	28	5.2	64	4
IA100	865+28.25	878+75.00	33.1	32.8-42	28	0-9.2	64	4
IA100	878+75.00	891+05.00	33.1	42-66.8	28	0-14.2	64	4
IA100	891+05.00	899+50.00	33.1	36.8	28	5.2	64	4

No Ditch Locations

LOCATION	
STATION TO STATION	
737+92.23	738+25.00

Toe Berm Locations

LOCATION	
STATION TO STATION	
737+92.23	740+96.00

Dropped Curbed Shoulder Grading at Bridge Berm

LOCATION		DIMS
BEGIN STATION	END STATION	(Ra) Feet
768+84.00	769+34.00	8
770+04.00	770+54.00	8

Dropped Curbed Shoulder Grading at Bridge Berm

LOCATION		DIMS
BEGIN STATION	END STATION	(Ra) Feet
769+05.00	769+55.00	8
770+25.00	770+75.00	8

Curbed Shoulder Grading at Bridge Berm

LOCATION		DIMS
BEGIN STATION	END STATION	(Ra) Feet
769+34.00	770+04.00	8

Curbed Shoulder Grading at Bridge Berm

LOCATION		DIMS
BEGIN STATION	END STATION	(Ra) Feet
769+55.00	770+25.00	8

Full Depth PCC Curbed Shoulder

LOCATION		DIMS
BEGIN STATION	END STATION	(P) Feet
797+00.00	790+70.20	6
790+70.20	791+00.00	6-8
791+00.00	798+50.00	8

Full Depth PCC Curbed Shoulder

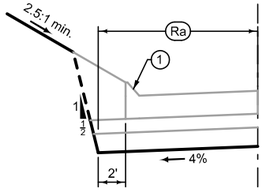
LOCATION		DIMS
BEGIN STATION	END STATION	(P) Feet
782+90.13	794+50.04	6
794+50.04	795+50.00	6-8
795+50.00	798+50.00	8

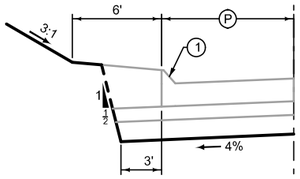
Full Depth PCC Shoulder with Barrier

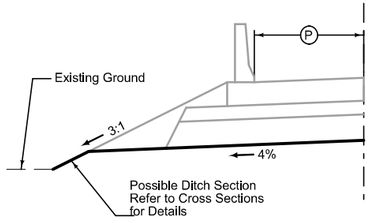
LOCATION		DIMS
BEGIN STATION	END STATION	(P) Feet
798+50.00	801+50.00	8
845+50.00	849+00.00	8

Full Depth PCC Shoulder with Barrier

LOCATION		DIMS
BEGIN STATION	END STATION	(P) Feet
856+50.00	801+50.00	8





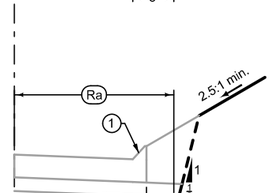


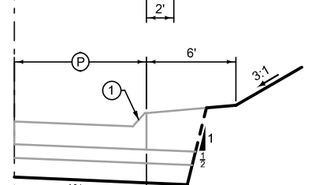
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

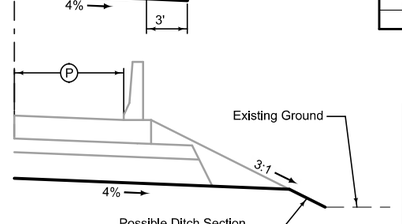
See Plan & Profile sheets and cross sections for additional details of ditches, foreslopes, and backslopes.

(1) 6" Sloped Curb

(2) Typical 10' Ditch Width. Refer to Cross Sections for ditch width details.





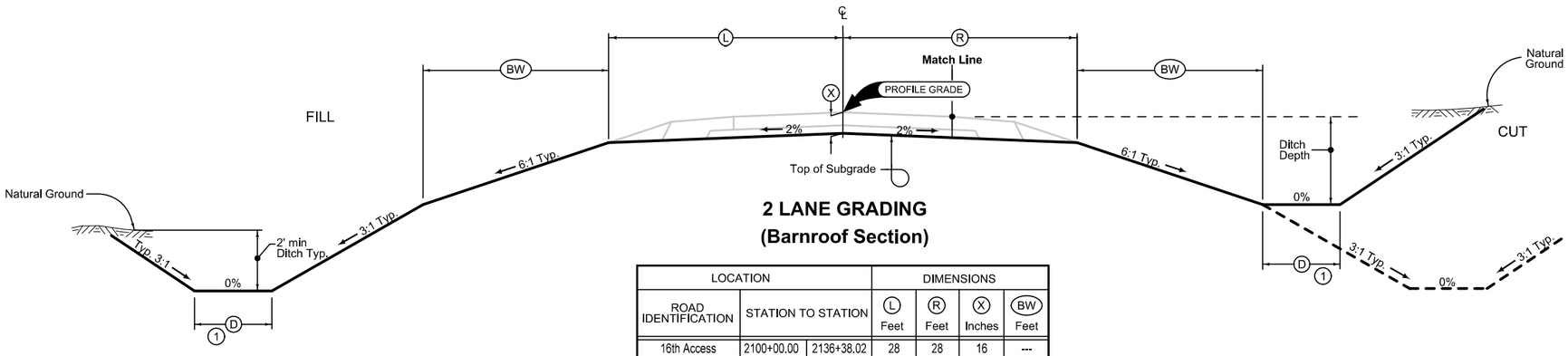


2_Grade_BR
Modified

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, foreslopes, and backslopes.

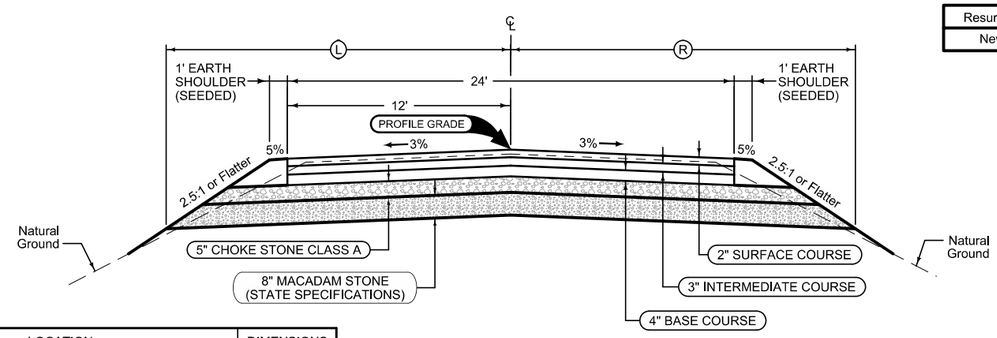
(1) Refer to Cross Sections for Details on varied ditch width.



2 LANE GRADING (Barnroof Section)

LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet
16th Access	2100+00.00	2136+38.02	28	28	16	---
80th St.	3006+20.00	3018+50.00	25.6	25.6	16	---
80th St.	3062+00.00	3093+92.55	20.2	20.2	16	---
80th St.						

Resurface
New



LOCATION			DIMENSIONS	
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet
80th St.	3033+90.83	3062+00.00	17.9	17.9

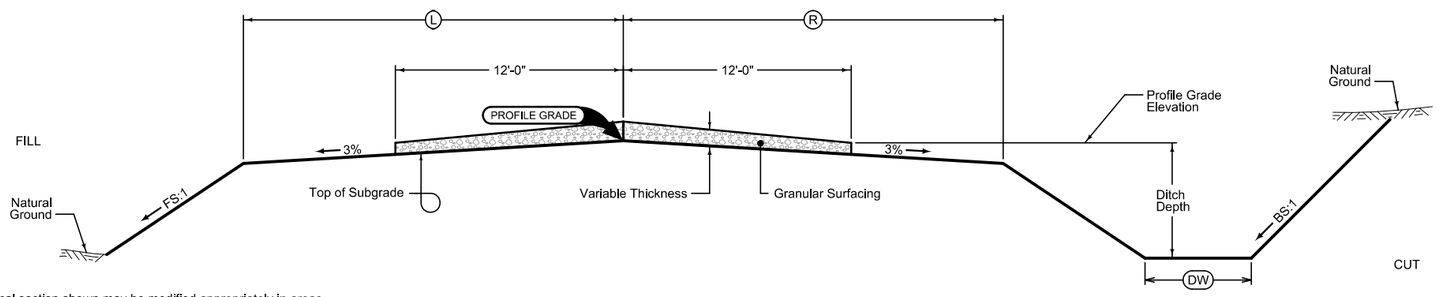
GRADING AND HMA RESURFACING

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.

LOCATION			DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	FS	BS	(DW) Feet
Berger Lane	4060+13.95	4099+97.18	14	14	3	3	2
80th Street North	3100+45.32	3117+21.50	14	14	3	3	2

G_2_GradeGran
04-17-12



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.

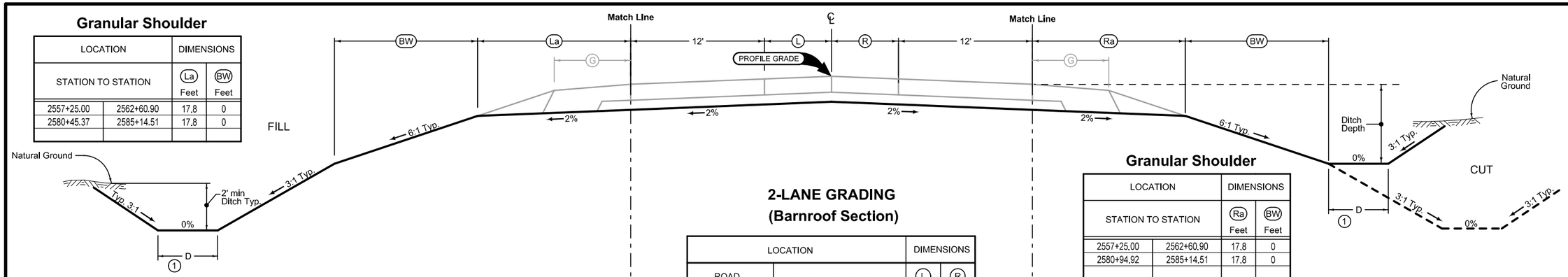
Place Granular Surfacing as follows:
Grading design application rate is ___ tons per mile.
Paving design application rate is ___ tons per mile.

GRADING AND GRANULAR SURFACING

2_Grade_BR
Modified

Granular Shoulder

LOCATION		DIMENSIONS	
STATION TO STATION		(La) Feet	(BW) Feet
2557+25.00	2562+60.90	17.8	0
2580+45.37	2585+14.51	17.8	0



Granular Shoulder

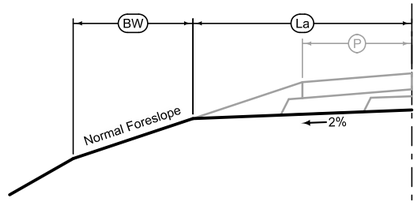
LOCATION		DIMENSIONS	
STATION TO STATION		(Ra) Feet	(BW) Feet
2557+25.00	2562+60.90	17.8	0
2580+94.92	2585+14.51	17.8	0

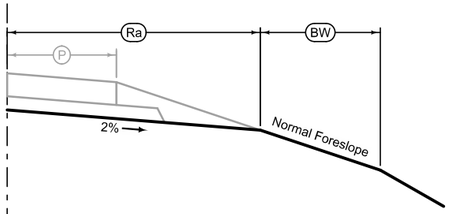
2-LANE GRADING (Barnroof Section)

LOCATION			DIMENSIONS	
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet
E Ave.	2557+25.00	2562+60.90	0	0
E Ave.	2562+60.90	2566+60.90	0-8	0-8
E Ave.	2566+60.90	2531+14.51	8	8
E Ave.	2581+14.51	2585+14.51	8-0	8-0

Paved Shoulder

LOCATION		DIMENSIONS	
STATION TO STATION		(La) Feet	(BW) Feet
2562+60.90	2572+33.73	17.8	0
2572+33.73	2573+50.12	17.8-16	0



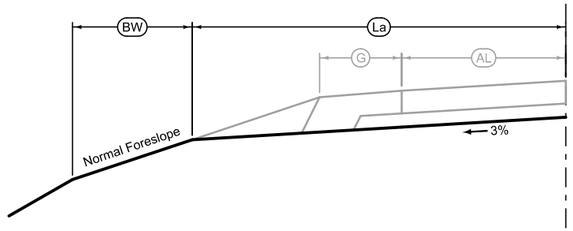


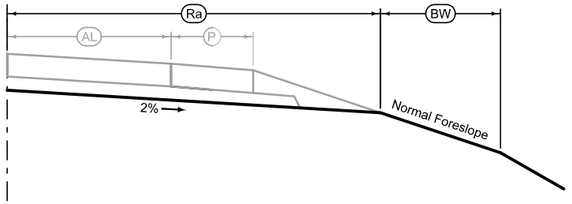
Paved Shoulder

LOCATION		DIMENSIONS	
STATION TO STATION		(Ra) Feet	(BW) Feet
2562+60.90	2572+12.53	17.8	0
2572+12.53	2573+46.76	17.8-16	0

Auxiliary Lane with Paved Shoulder

LOCATION		DIMENSIONS	
STATION TO STATION		(La) Feet	(BW) Feet
2573+50.12	2576+94.51	28	0
2576+94.51	2580+45.37	28-17.8	0





Auxiliary Lane with Paved Shoulder

LOCATION		DIMENSIONS	
STATION TO STATION		(Ra) Feet	(BW) Feet
2573+46.76	2577+60.43	28	0
2577+60.43	2580+94.92	28-17.8	0

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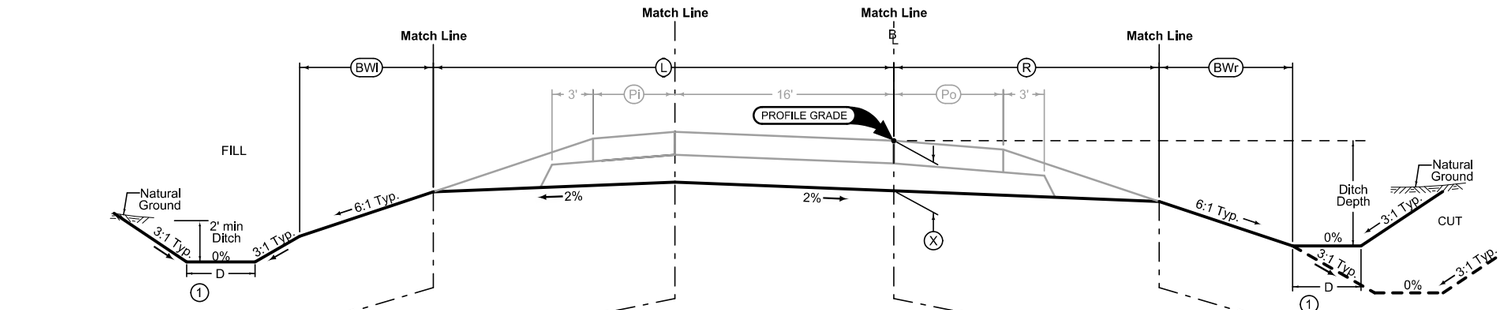
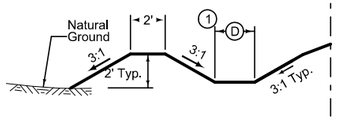
See Plan & Profile sheets and cross sections for additional details of ditches, foreslopes, and backslopes.

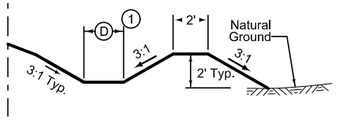
(1) Typical 6' Ditch Width. Refer to Cross Sections for ditch width details.

E AVENUE

1R_Grade
Modified







Toe Berm Locations

LOCATION	
STATION TO STATION	

Toe Berm Locations

LOCATION	
STATION TO STATION	

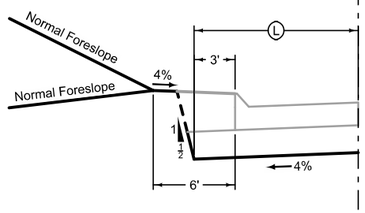
1 LANE RAMP GRADING

Section shown in the direction of traffic.

LOCATION				DIMENSIONS				
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BWl) Feet	(BWr) Feet
80th St.	A	10500+88.72	10503+00.00	31.9	17.7	22	14.1	12.3
80th St.	B	12388+50.00	12408+27.03	31.9	17.7	22	14.1	12.3
80th St.	C	13390+78.61	13401+10.42	31.9	17.7	22	14.1	12.3
US 30	A	11712+95.72	11718+25.00	32.5	23.2	22	13.5	6.8
US 30	A	11718+25.00	11724+25.00	---	23.2	22	---	6.8
US 30	D	14689+17.13	14719+98.70	31.9	17.7	22	14.1	12.3
US 30	H	18688+26.53	18696+00.00	31.9	17.7	22	14.1	12.3
US 30	H	18696+00.00	18697+00.00	33.9-31.9	15.7-17.7	22	14.1	12.3
US30	H	18697+00.00	18707+25.00	33.9	15.7	22	14.1	12.3
US30	H	18707+25.00	18708+25.00	31.9-33.9	17.7-15.7	22	14.1	12.3
US30	H	10708+25.00	18718+24.67	31.9	17.7	22	14.1	12.3
E Ave.	A	21774+21.34	21785+00.00	31.9	17.7	22	14.1	12.3
E Ave.	B	22757+75.00	22766+54.31	31.9	17.7	22	14.1	12.3
E Ave.	C	23758+58.35	23769+61.41	31.9	19.0	22	14.1	11.0
E Ave.	D	24770+25.32	24782+90.67	31.9	13.4	22	14.1	16.6

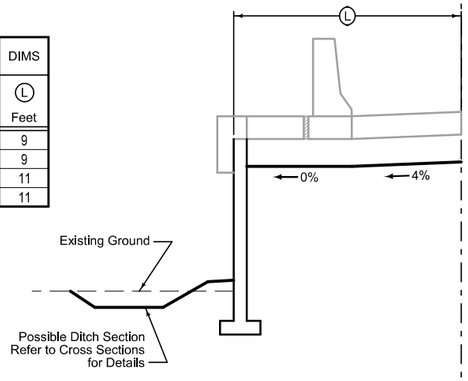
Curbed Shoulder Grading

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(L) Feet
US 30	A	11718+25.00	11724+25.00	8
US 30	D	14689+17.13	14690+50.00	8



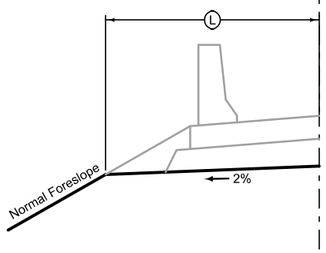
Retaining Wall Grading

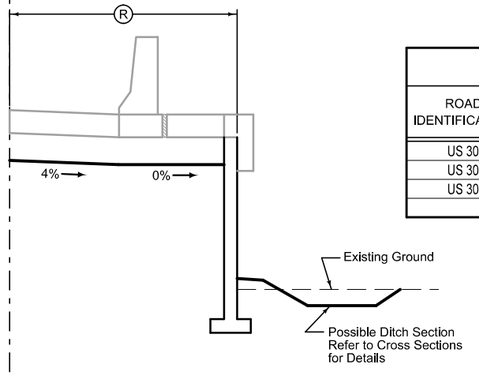
LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(L) Feet
US 30	D	14692+50.00	14699+00.00	9
US 30	D	14702+00.00	14703+75.00	9
US 30	H	18697+50.00	18699+75.00	11
US30	H	18718+25.00	18724+25.00	11

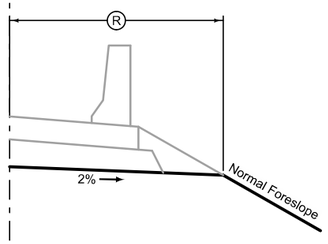


Paved Shoulder with Barrier Grading

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(L) Feet
US 30	D	14690+50.00	14692+50.00	7.5
E Ave.	D	24777+94.74	24781+50.00	







Retaining Wall Grading

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(R) Feet
US 30	D	14702+00.00	14706+25.00	11
US 30	H	18697+50.00	18699+75.00	9
US 30	H	18706+25.00	18707+25.00	9

Paved Shoulder with Barrier Grading

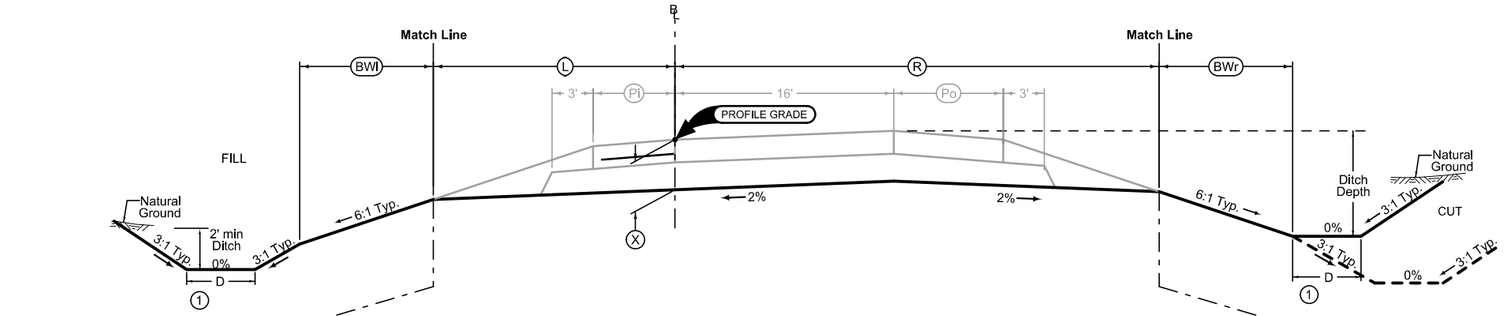
LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(R) Feet
US 30	D	14706+25.00	14709+50.00	12.8
US 30	H	18697+00.00	18697+50.00	14.3
US 30	H	18713+25.00	18713+80.00	13.9
E Ave.	D	24777+94.74	24781+50.00	

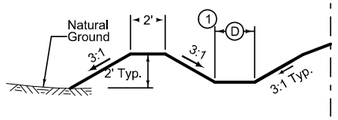
Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

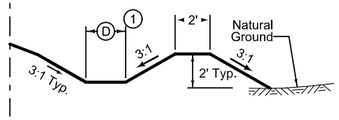
See Plan & Profile sheets and cross sections for additional details of ditches, foreslopes, and backslopes.

(1) Typical 10' Ditch Width. Refer to Cross Sections for ditch width details.

1R_Grade
Modified







Toe Berm Locations

LOCATION	
STATION TO STATION	

Toe Berm Locations

LOCATION	
STATION TO STATION	

1 LANE RAMP GRADING

Section shown in the direction of traffic.

LOCATION				DIMENSIONS				
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BWl) Feet	(BWr) Feet
US 30	G	17710+50.00	17720+00.40	32.5	23.2	22	13.5	6.8

C	ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	B.6

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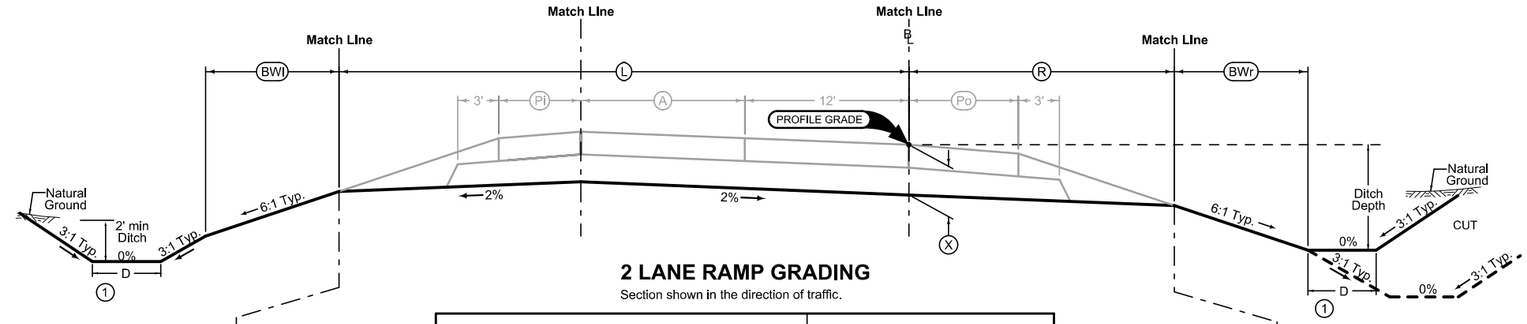


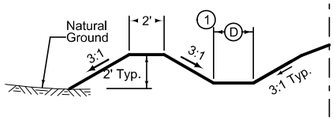
2 LANE RAMP GRADING

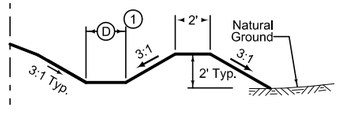
Section shown in the direction of traffic.

LOCATION				DIMENSIONS				
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BWl) Feet	(BWr) Feet
US 30	A	11709+05.00	11712+95.72	39.8-32.5	17.7-23.2	22	14.1-13.5	12.3-6.8
E Ave.	A	21769+14.35	21774+21.34	39.8-31.9	17.7	22	14.1	12.3
E Ave.	B	22766+54.31	22770+21.66	31.9-39.8	17.7	22	14.1	12.3

Toe Berm Locations

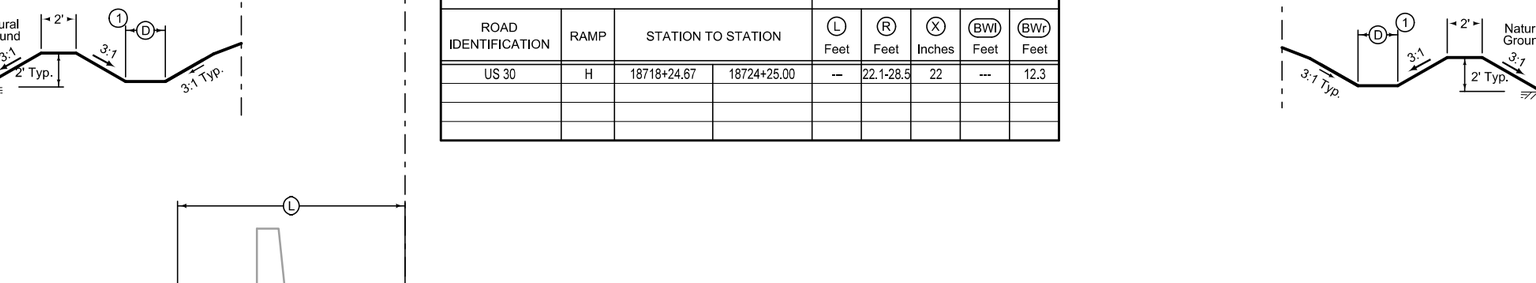
LOCATION	
STATION TO STATION	





Toe Berm Locations

LOCATION	
STATION TO STATION	



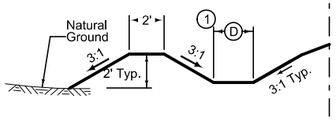
2 LANE RAMP GRADING

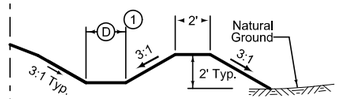
Section shown in the direction of traffic.

LOCATION				DIMENSIONS				
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BWl) Feet	(BWr) Feet
US 30	H	18718+24.67	18724+25.00	--	22.1-28.5	22	---	12.3

Toe Berm Locations

LOCATION	
STATION TO STATION	



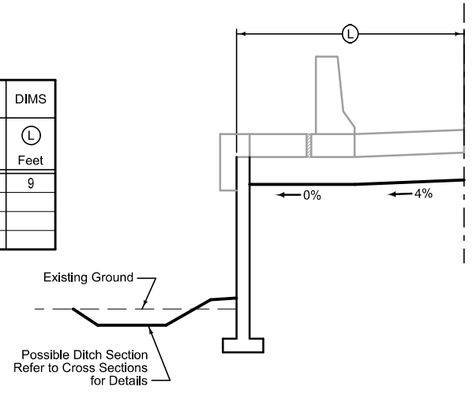


Toe Berm Locations

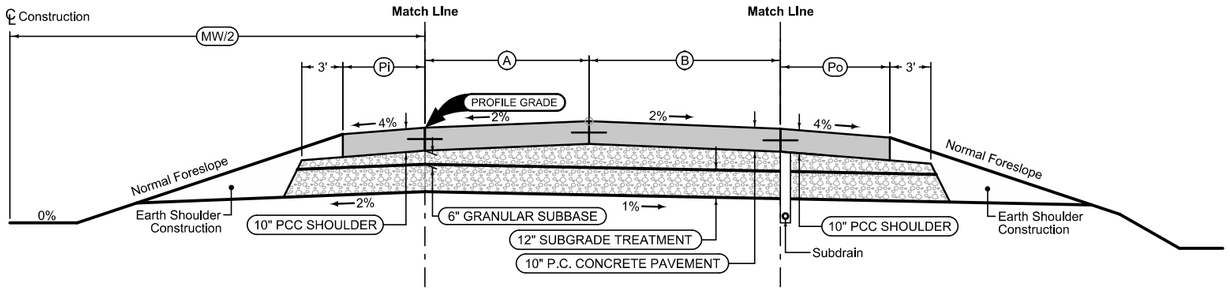
LOCATION	
STATION TO STATION	

Retaining Wall Grading

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(L) Feet
US 30	H	18718+25.00	18724+25.00	9



RURAL 4 LANE PCC PAVING



Section shown in the direction of traffic.

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

LOCATION				DIMENSIONS		
ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(MW) Feet	(A) Feet	(B) Feet
IA 100	EB	719+98.70	725+12.15	--	16.3-12	40-14
IA 100	WB	724+25.00	730+25.00	64	12	54-14
IA 100	EB	725+15.15	751+75.00	64	12	14
IA 100	WB	730+25.00	745+50.00	64	12	14
IA 100	WB	745+50.00	758+58.09	64	12	14-51.8
IA 100	EB	751+75.00	757+75.00	64	12	14-54
IA 100	WB	758+58.09	785+00.00	64	12	14
IA 100	EB	757+75.00	782+90.13	64	12	14
IA 100	WB	785+00.00	791+00.00	64	12	54-14
IA 100	EB	782+90.13	795+50.00	64	12	51.8-14
IA 100	WB	791+00.00	878+75.00	64	12	14
IA 100	EB	795+50.00	884+00.00	64	12	14
IA 100	WB	878+75.00	891+05.00	64	12	14-51.8
IA 100	EB	884+00.00	890+00.00	64	12	14-54
IA 100	WB	891+05.00	899+50.00	64	12	14
IA 100	EB	890+00.00	899+50.00	64	12	14

Full Depth PCC Shoulder

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

LOCATION				DIMS
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION		(Pi) Feet
IA 100	EB	719+98.70	899+50.00	6
IA 100	WB	725+00.00	899+50.00	6

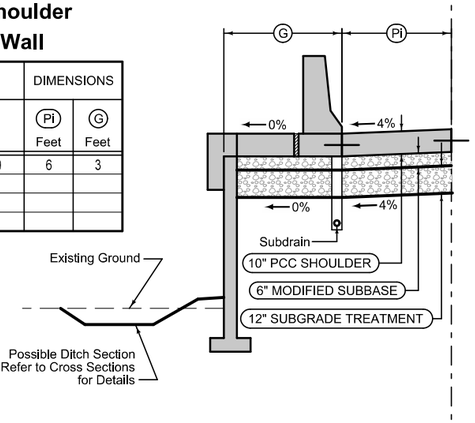
Full Depth PCC Shoulder

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

LOCATION				DIMS
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION		(Po) Feet
IA 100	EB	719+98.70	721+23.15	6-8
IA 100	EB	721+23.15	751+75.00	8
IA 100	WB	724+25.00	729+95.20	6
IA 100	WB	729+95.20	730+25.00	6-8
IA 100	WB	730+25.00	745+50.00	8
IA 100	EB	751+75.00	752+04.80	8-6
IA 100	WB	745+50.00	746+49.94	8-6
IA 100	EB	752+04.80	757+75.00	6
IA 100	WB	746+49.94	758+58.09	6
IA 100	EB	757+75.00	782+90.13	8
IA 100	WB	758+58.09	785+00.00	8
IA 100	WB	785+00.00	787+00.00	6
IA 100	EB	798+50.00	858+50.00	8
IA 100	EB	858+00.00	884+00.00	8
IA 100	EB	884+00.00	884+29.79	8-6
IA 100	EB	884+29.79	890+00.00	6
IA 100	EB	890+00.00	899+50.00	8
IA 100	WB	801+50.00	845+50.00	8
IA 100	WB	849+00.00	878+75.00	8
IA 100	WB	878+75.00	789+74.95	8-6
IA 100	WB	879+74.95	891+05.00	6
IA 100	WB	891+05.00	899+50.00	8

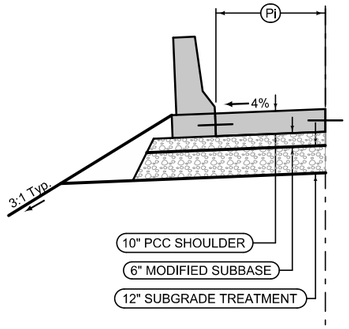
Full Depth PCC Shoulder with Retaining Wall

LOCATION				DIMENSIONS	
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION		(Pi) Feet	(G) Feet
IA 100	WB	724+25.00	724+75.00	6	3



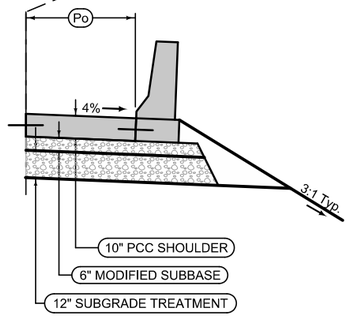
Full Depth PCC Shoulder with Barrier

LOCATION				DIMS
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION		(Pi) Feet
IA 100	WB	724+75.00	725+00.00	6



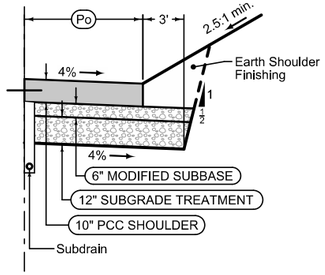
Full Depth PCC Shoulder with Barrier

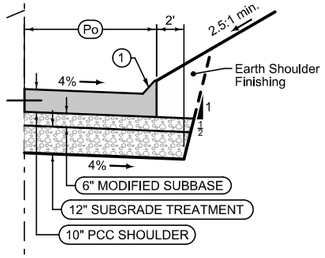
LOCATION				DIMS
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION		(Pi) Feet
IA 100	WB	798+50.00	801+50.00	8
IA 100	EB	856+50.00	858+00.00	8
IA 100	WB	845+50.00	849+00.00	8

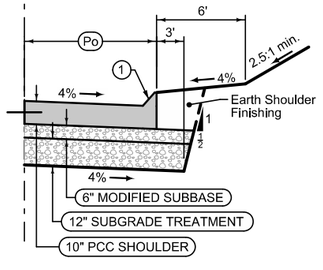


Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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







(1) 6" Sloped Curb

Dropped Curbed Shoulder Grading at Bridge Berm

LOCATION				DIMS
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION		(Po) Feet
IA 100	WB	768+84.00	769+34.00	8
IA 100	EB	769+05.00	769+55.00	8
IA 100	WB	770+04.00	770+54.00	8
IA 100	EB	770+25.00	770+75.00	8

Curbed Shoulder Grading at Bridge Berm

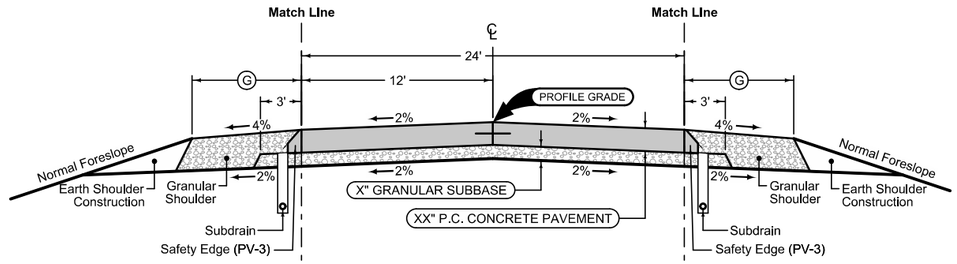
LOCATION				DIMS
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION		(Po) Feet
IA 100	WB	769+34.00	770+04.00	8
IA 100	EB	769+55.00	770+25.00	8

Full Depth PCC Curbed Shoulder

LOCATION				DIMS
ROAD IDENTIFICATION	Direction of Travel	STATION TO STATION		(Po) Feet
IA 100	EB	782+90.13	794+50.04	6
IA 100	WB	787+00.00	790+70.20	6
IA 100	EB	794+50.04	795+50.00	6-8
IA 100	WB	790+70.20	791+00.00	6-8
IA 100	EB	795+50.00	798+50.00	8
IA 100	WB	791+00.00	798+50.00	8

Granular Shoulder with Safety Edge

LOCATION			DIMS
ROAD IDENTIFICATION	STATION TO STATION		(G) Feet
16th Access	2100+00.00	2136+38.02	8
80th St.	3006+20.00	3018+50.00	10



2 LANE PCC PAVING

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

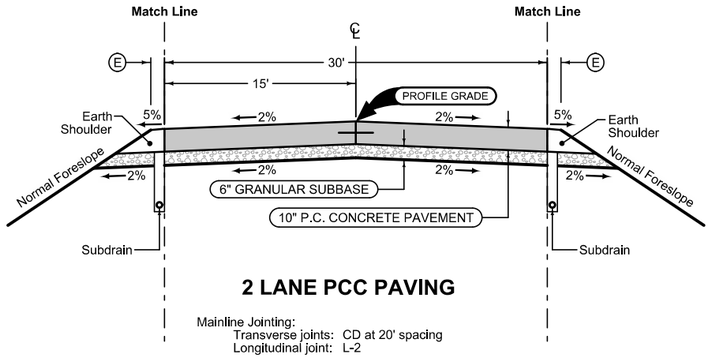
LOCATION		
ROAD IDENTIFICATION	STATION TO STATION	
16th Access	2100+00.00	2136+38.02
80th St.	3006+20.00	3018+50.00

Granular Shoulder with Safety Edge

LOCATION			DIMS
ROAD IDENTIFICATION	STATION TO STATION		(G) Feet
16th Access	2100+00.00	2136+38.02	8
80th St.	3006+20.00	3018+50.00	10

Earth Shoulder

LOCATION			DIMS
ROAD IDENTIFICATION	STATION TO STATION		(E) Feet
80th St.	3062+00.00	3093+92.55	1



2 LANE PCC PAVING

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

LOCATION		
ROAD IDENTIFICATION	STATION TO STATION	
80th St.	3062+00.00	3093+92.55

Earth Shoulder

LOCATION			DIMS
ROAD IDENTIFICATION	STATION TO STATION		(E) Feet
80th St.	3062+00.00	3093+92.55	1

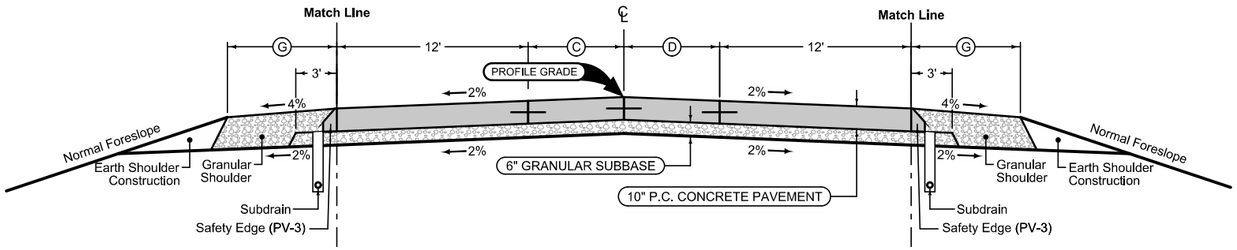
Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

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

2_Grade_BR
Modified

Granular Shoulder with Safety Edge

LOCATION		DIMS
STATION TO STATION		(G) Feet
2557+25.00	2562+60.90	10
2580+45.37	2581+14.51	10
2581+14.51	2585+14.51	10



Granular Shoulder with Safety Edge

LOCATION		DIMS
STATION TO STATION		(G) Feet
2557+25.00	2562+60.90	10
2580+94.92	2581+14.51	10
2581+14.51	2585+14.51	10

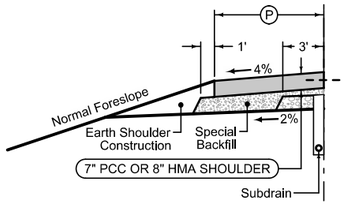
2 LANE PCC PAVING

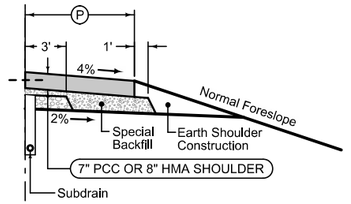
LOCATION			DIMENSIONS	
ROAD IDENTIFICATION	STATION TO STATION		(C) Feet	(D) Feet
E Ave.	2557+25.00	2562+60.90	0	0
E Ave.	2562+60.90	2566+60.90	0-8	0-8
E Ave.	2566+60.90	2581+14.51	8	8
E Ave.	2581+14.51	2585+14.51	8-0	8-0

Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

LOCATION		DIMS
STATION TO STATION		(P) Feet
2562+60.90	2572+33.73	10
2572+33.73	2573+50.12	10-6





Paved Shoulder Alternates

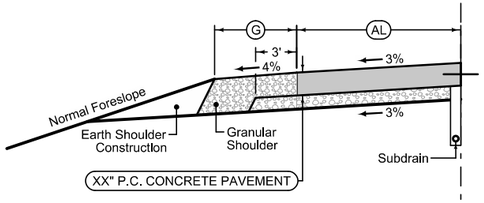
PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-3
Transverse joints: C at 20' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

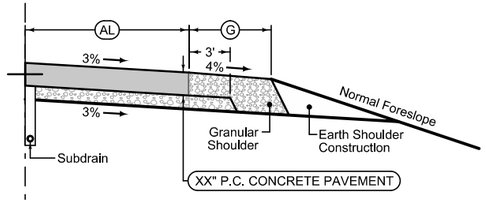
LOCATION		DIMS
STATION TO STATION		(P) Feet
2562+60.90	2572+12.53	10
2572+12.53	2573+46.76	10-6

Auxiliary Lane with Granular Shoulder

Longitudinal joint: L or KT
Transverse joint: Match Mainline

LOCATION		DIMENSIONS	
STATION TO STATION		(AL) Feet	(G) Feet
2573+50.12	2576+94.51	12	6
2576+94.51	2580+45.37	12-0	6-10





Auxiliary Lane with Granular Shoulder

Longitudinal joint: L or KT
Transverse joint: Match Mainline

LOCATION		DIMENSIONS	
STATION TO STATION		(AL) Feet	(G) Feet
2573+46.76	2577+60.43	12	6
2577+60.43	2580+94.92	12-0	6-10

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

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

(1) Typical 6' Ditch Width. Refer to Cross Sections for ditch width details.

E AVENUE

Full Depth PCC Shoulder

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Pi) Feet
80th St.	A	10500+88.72	10503+00.00	4
80th St.	B	12388+50.00	12408+27.03	4
80th St.	C	13340+78.61	13401+10.42	4
US 30	A	11712+95.72	11718+25.00	4
US 30	D	14703+75.00	14719+98.70	4
US 30	H	18688+26.53	18696+00.00	4
US 30	H	18696+00.00	18697+00.00	4-6
US 30	H	18697+00.00	18697+50.00	6
US 30	H	18706+50.00	18707+25.00	6
US 30	H	18707+25.00	18708+25.00	6-4
US 30	H	18708+25.00	18715+85.00	4
E Ave.	A	21775+00.00	21785+00.00	4
E Ave.	B	22757+75.00	22766+54.31	4
E Ave.	C	23758+58.35	23769+41.38	4
E Ave.	D	24770+25.32	24777+94.74	4
E Ave.	D	24781+50.00	24782+90.67	4

Curbed Shoulder

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Pi) Feet
US 30	A	11718+25.00	11724+25.00	5
US 30	D	14689+17.13	14690+50.00	5

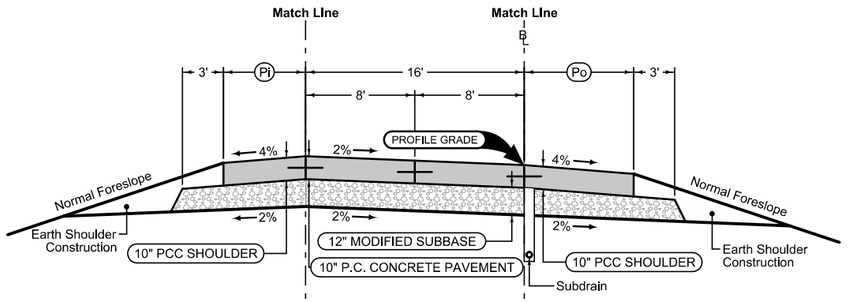
Full Depth PCC Shoulder with Retaining Wall

LOCATION				DIMENSIONS	
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Pi) Feet	(G) Feet
US 30	D	14692+50.00	14699+00.00	4	5
US 30	D	14702+00.00	14703+75.00	4	5
US 30	H	18697+50.00	18699+75.00	6	5

Full Depth PCC Shoulder with Barrier

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Pi) Feet
US 30	D	14690+50.00	14692+50.00	5.6
E Ave.	A	21774+21.34	21775+00.00	5.6
E Ave.	D	24777+94.74	24781+50.00	5.6

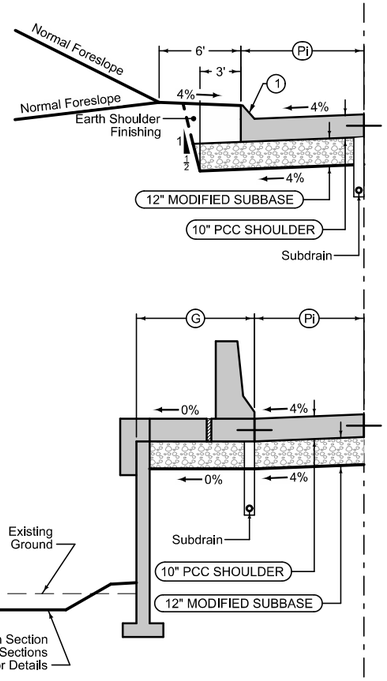


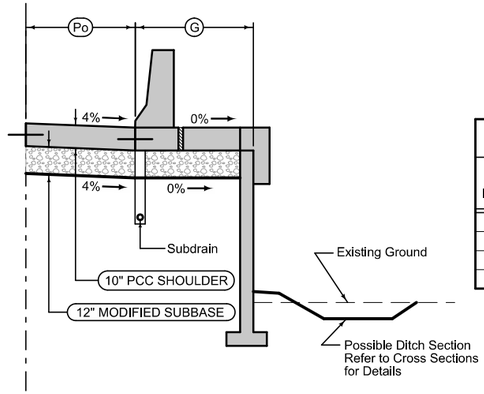
1 LANE PCC RAMP PAVING

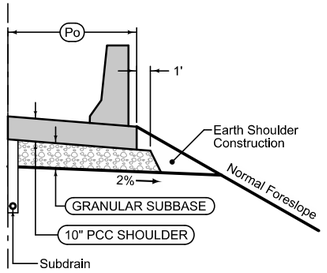
Section shown in the direction of traffic.

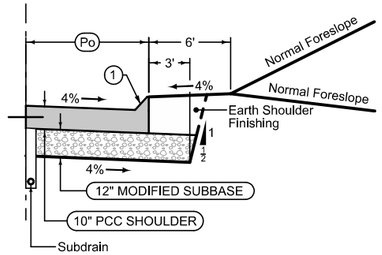
Ramp Jointing:
Transverse joints: See L Sheets
Longitudinal joint: L-2 or KT-2

LOCATION			
ROAD IDENTIFICATION	RAMP	STATION TO STATION	
80th St.	A	10500+88.72	10503+00.00
80th St.	B	12388+50.00	12408+27.03
80th St.	C	13390+78.61	13401+10.42
US 30	A	11712+95.72	11724+25.00
US 30	D	14689+17.13	14719+98.70
US 30	H	18688+26.53	18715+85.00
E Ave.	A	21774+21.34	21785+00.00
E Ave.	B	22757+75.00	22766+54.31
E Ave.	C	23758+58.35	23769+41.38
E Ave.	D	24771+25.32	24782+90.67









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

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

(1) 6" Sloped Curb

Full Depth PCC Shoulder

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Po) Feet
80th St.	A	10500+88.72	10503+00.00	6
80th St.	B	12388+50.00	12408+27.03	6
80th St.	C	13390+78.61	13401+10.42	6
US 30	A	11712+95.72	11724+25.00	6
US 30	D	14689+16.28	14698+50.00	6
US 30	D	14709+50.00	14719+98.70	6
US 30	H	18688+26.53	18696+00.00	6
US 30	H	18696+00.00	18697+00.00	6-4
US 30	H	18699+75.00	18706+25.00	4
US 30	H	18707+25.00	18708+25.00	4-6
US 30	H	18708+25.00	18713+25.00	6
E Ave.	A	18713+80.00	18715+85.00	6
E Ave.	B	21774+21.34	21785+00.00	6
E Ave.	C	22757+75.00	22766+54.31	6
E Ave.	D	23758+58.35	23769+41.38	6
		24770+25.32	24777+94.74	6

Full Depth PCC Shoulder with Retaining Wall

LOCATION				DIMENSIONS	
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Po) Feet	(G) Feet
US 30	D	14702+00.00	14706+25.00	6	5
US 30	H	18697+50.00	18699+75.00	4	5
US 30	H	18706+25.00	18707+25.00	4	5

Full Depth PCC Shoulder with Barrier

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Po) Feet
US 30	D	14706+25.00	14709+50.00	7.6
US 30	H	18697+00.00	18697+50.00	5.6
US 30	H	18713+25.00	18713+80.00	7.6
E Ave.	D	24777+94.74	24781+50.00	7.6

Curbed Shoulder

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Po) Feet
E Ave.	D	24781+50.00	24782+90.67	7

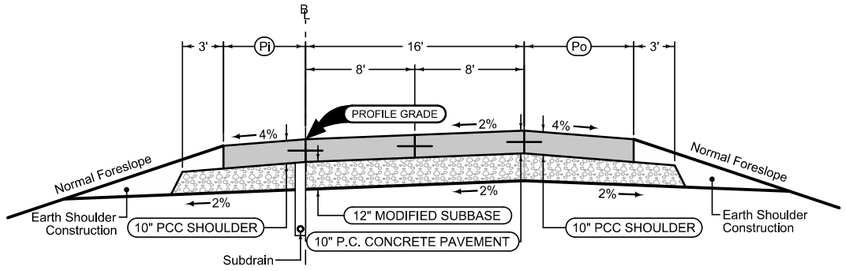
Full Depth PCC Shoulder with Retaining Wall

LOCATION				DIMENSIONS	
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Po) Feet	(G) Feet
US 30	D	14702+00.00	14706+25.00	6	5
US 30	H	18697+50.00	18699+75.00	4	5
US 30	H	18706+25.00	18707+25.00	4	5

Full Depth PCC Shoulder

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Pi) Feet
US 30	G	17710+50.00	17720+00.40	4



1 LANE PCC RAMP PAVING

Section shown in the direction of traffic.

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

LOCATION			
ROAD IDENTIFICATION	RAMP	STATION TO STATION	
US 30	G	17710+50.00	17720.00.40

Full Depth PCC Shoulder

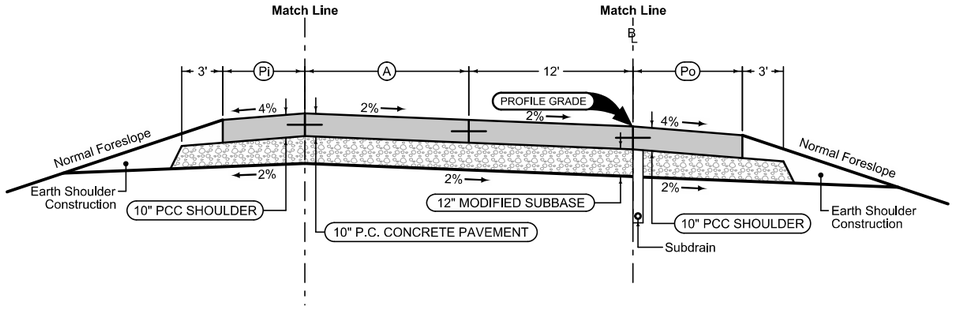
Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: See L Sheets

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Po) Feet
US 30	G	17710+50.00	17720+00.40	6

Full Depth PCC Shoulder

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Pi) Feet
E Ave.	A	21769+34.85	21774+21.34	4
E Ave.	B	22766+54.31	22770+21.66	4



2 LANE PCC RAMP PAVING

Section shown in the direction of traffic.

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(A) Feet
E Ave.	A	21769+34.85	21772+91.00	12
E Ave.	A	21772+71.00	21774+21.34	12-4
E Ave.	B	22766+54.31	22767+74.31	4-12
E Ave.	B	22767+74.31	22770+21.66	12

Full Depth PCC Shoulder

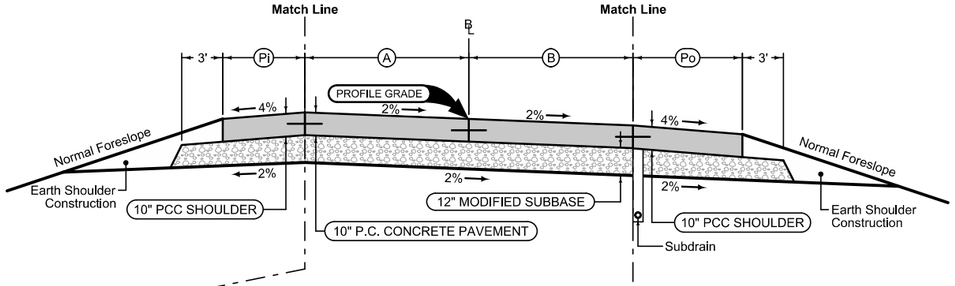
Shoulder Jointing:
Longitudinal joint: L-2 or KT-2
Transverse joints: See L Sheets

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Po) Feet
E Ave.	A	21769+34.85	21774+21.34	6
E Ave.	B	22766+54.31	22770+21.66	6

Full Depth PCC Shoulder

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Pi) Feet
US 30	—	—	—	—
US 30				
US 30				



2 LANE PCC RAMP PAVING

Section shown in the direction of traffic.

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

LOCATION				DIMENSIONS	
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(A) Feet	(B) Feet
US 30	H	18718+24.67	18721+00.89	0-4.6	16
US 30	H	18721+00.89	18724+25.00	4.6-12	16-12

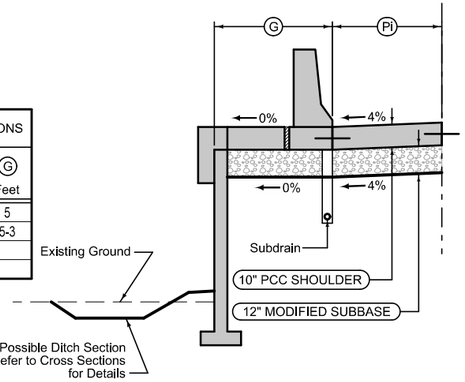
Full Depth PCC Shoulder

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

LOCATION				DIMS
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Po) Feet
US 30	H	18718+24.67	18724+25.00	6

Full Depth PCC Shoulder with Retaining Wall

LOCATION				DIMENSIONS	
ROAD IDENTIFICATION	RAMP	STATION TO STATION		(Pi) Feet	(G) Feet
US 30	H	18718+24.67	18724+05.36	4	5
US 30	H	18724+05.36	18724+25.00	4-6	5-3

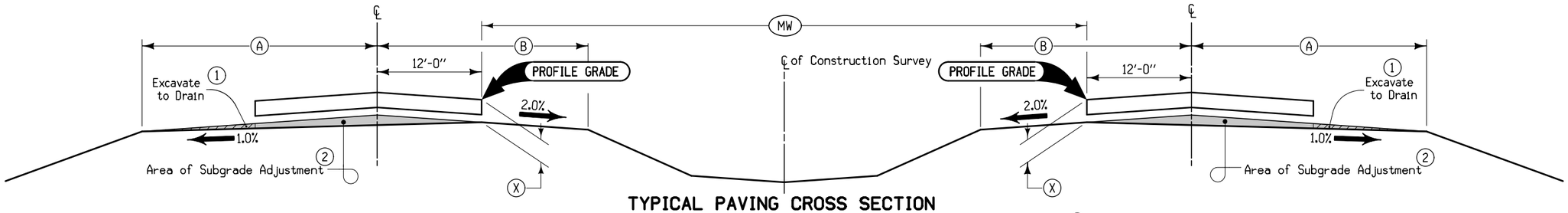


Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

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

(1) 6" Sloped Curb

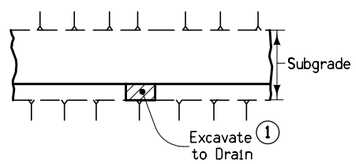
3221
10-15-13



TYPICAL PAVING CROSS SECTION SUBGRADE ADJUSTMENT TO 1% SLOPE 4-LANE DIVIDED ROADWAY

Subgrade adjustment is required on tangent section of the roadbed. Curved sections that require superelevation will not require subgrade adjustment once a 2% cross slope is attained across the entire subgrade.

(X) is the distance between the Profile Grade and the bottom of the 1% grade line at the inside of pavement.



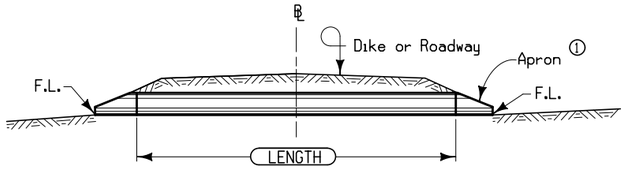
PLAN VIEW

LOCATION			A	B	MW	X
ROAD IDENTIFICATION	STATION TO STATION		Feet	Feet	Feet	Inches

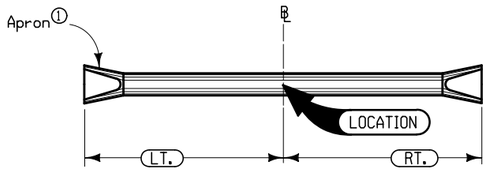
(1) Cut trenches in the outside shoulders to prevent water ponding in the trimmed area. The contractor may backfill the trenches with open graded crushed stone, gravel, or recycled PCC to allow water to drain. The material used to backfill is incidental.

(2) Trim the roadbed to within 0.05 feet of final subgrade elevation. Exercise extreme care in the trimming operation so that the stability of the subgrade is not damaged. If using trimmed material for shoulder construction, place the material in a windrow on either foreslope. Do not allow stored materials to pond water. Granular surfacing material, if placed over winter, is included in the trimmed volume.

1101
04-30-02



SECTION



PLAN

Notes:

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

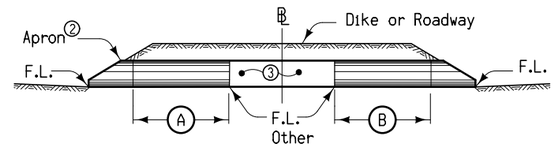
Skew angle is the angle which one end of the pipe is ahead (by stationing) of line perpendicular to the ℄ (example skew Rt. ahead 30°).

Refer to tabular listing and other plans for additional information.

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

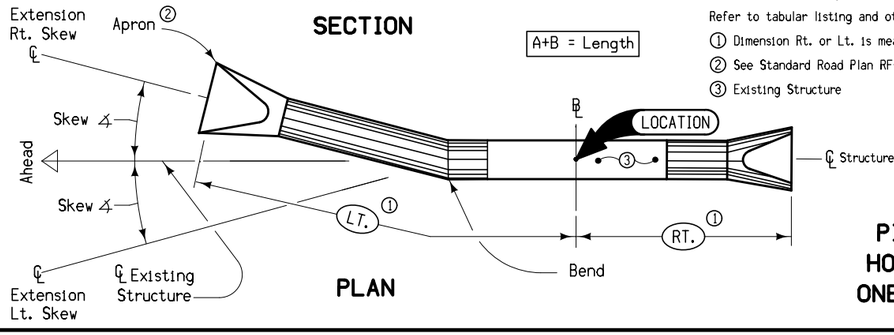
PIPE CULVERT

1302
10-03-00



SECTION

A+B = Length



PLAN

Notes:

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

'Bend' may be accomplished by use of metal elbow, Adaptor (RF-2,) Type 'D' Section or Concrete Elbow (RF-13) as specified.

Extension shall be in the direction specified with skew measured from centerline of existing structure.

Refer to tabular listing and other plans for additional information.

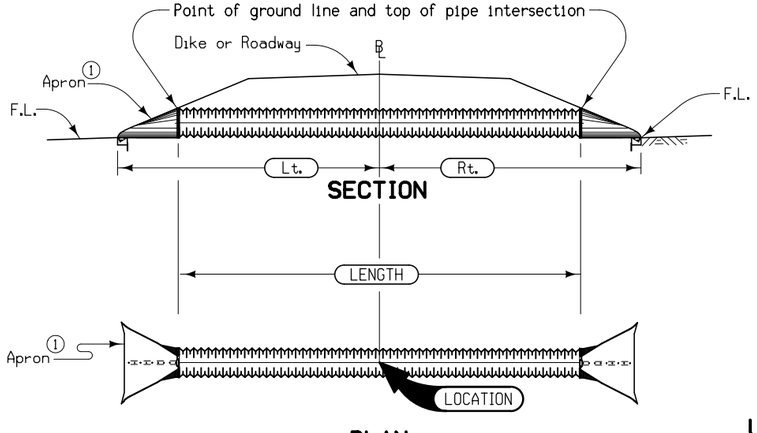
(1) Dimension Rt. or Lt. is measured at ℄ of pipe along laying length

(2) See Standard Road Plan RF-3 for concrete, or RF-5 for metal.

(3) Existing Structure

PIPE EXTENSION HORIZONTAL BEND ONE OR BOTH ENDS

1601
10-16-12



SECTION

PLAN

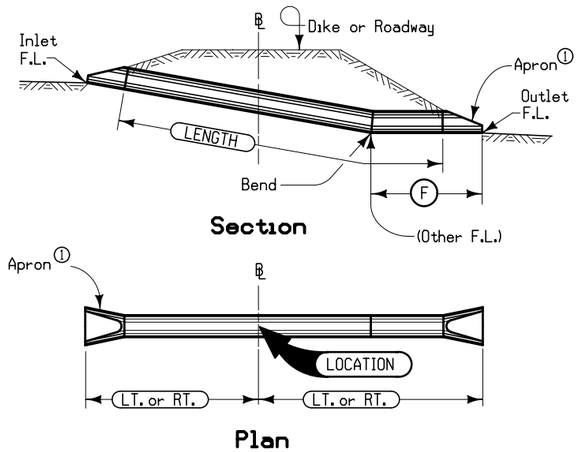
℄ shall be ℄ of roadway, dike, survey, or other; as detailed on plans.

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

(1) See Standard Road Plan RF-3 for Concrete or RF-5 for Metal and Polyethylene.

UNCLASSIFIED PIPE CULVERT

1201
10-16-12



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

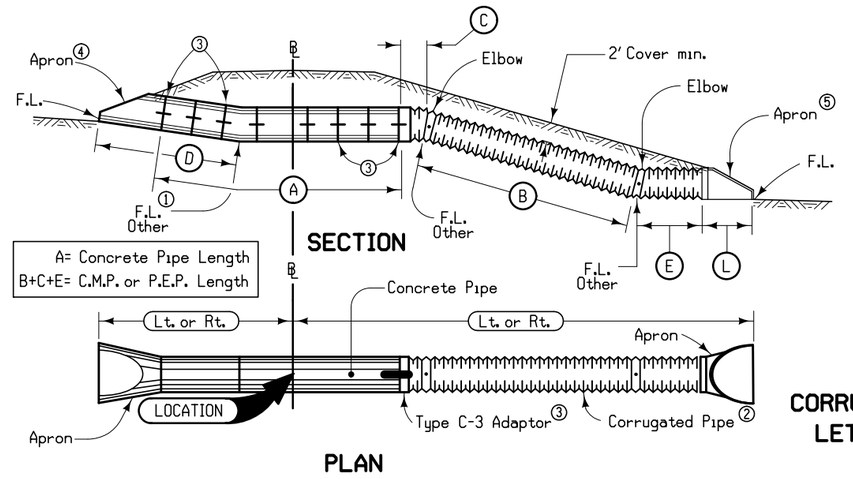
"Bend" may be accomplished by use of metal elbow, Pipe Adapter (RF-2), Type "D" Section or Concrete Elbow (RF-13) as specified.

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

Ⓕ is from bend to end of outlet.

PIPE CULVERT LETDOWN STRUCTURE

1501
04-20-10



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

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

Refer to Tabulation 104-3.

① Optional D section only when specified in tabulation.

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

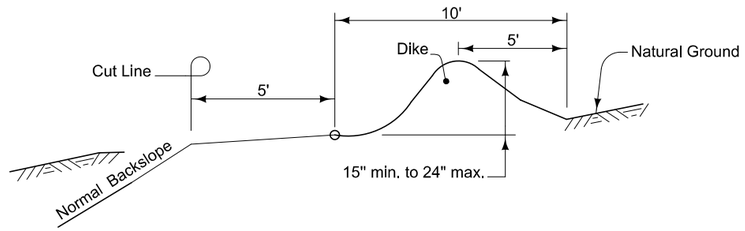
③ See RF-2 & RF-14.

④ See RF-3.

⑤ See RF-5 for Metal and Polyethylene.

CORRUGATED PIPE - CONCRETE LETDOWN STRUCTURE WITH METAL APRON

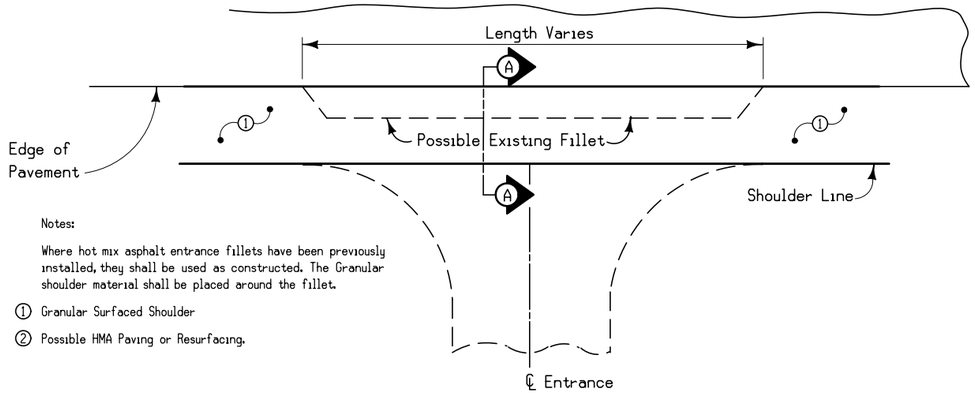
4101
04-20-10



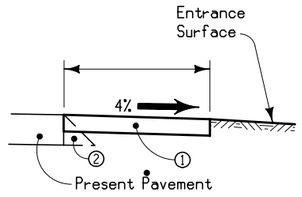
Refer to plans for locations of intercepting ditches. Dike for intercepting ditch shall be made by taking earth from roadway side. Do not excavate back of dike.

TYPICAL CROSS SECTION INTERCEPTING DITCH

7117
10-02-01

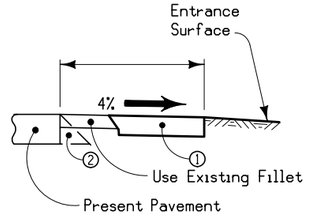


Plan



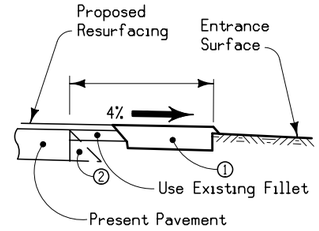
Section A-A

Without Fillet



Section A-A

With Previous Fillet

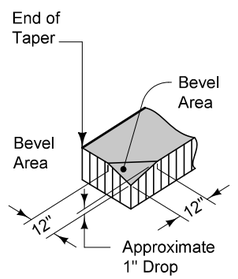


Section A-A

With Previous Fillet
And Resurfacing Less than 1½″

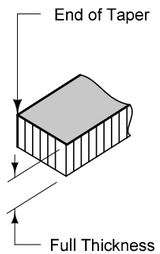
GRANULAR SHOULDER CONSTRUCTION THRU ENTRANCES

7101
10-19-10



DETAIL 'A'

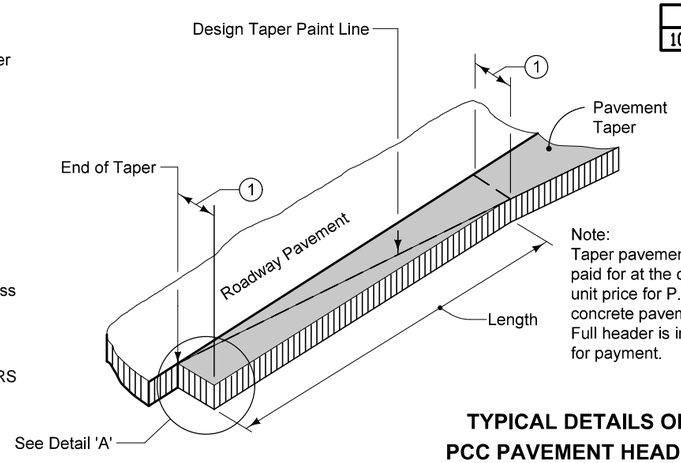
FOR
GRANULAR SHOULDERS



DETAIL 'A'

FOR
PAVED SHOULDERS

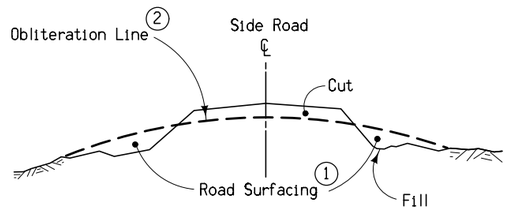
(1) Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).



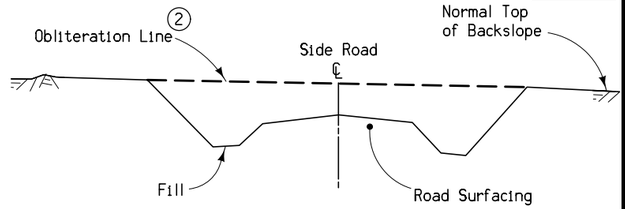
Note:
Taper pavement to be paid for at the contract unit price for P.C. concrete pavement. Full header is included for payment.

TYPICAL DETAILS OF PCC PAVEMENT HEADER

4302
04-03-01



Fill Section



Cut Section

(1) Existing road surfacing (granular material) shall be placed as shown unless otherwise directed by the Engineer or provided for in the detail project plans.

(2) When specified, the upper 1′ to be suitable for vegetation (grass or crops).

Note:
The work of obliterating or reshaping old roadbeds shall be done at the direction of the Engineer.

TYPICAL DETAILS FOR OBLITERATION EXISTING ROADBED

SURVEY SYMBOLS

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

UTILITY LEGEND

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
Brown, Light	(236)	Grading Shading
Tan	(8)	Proposed Sidewalk Shading
Blue, Light	(230)	Proposed Sidewalk Landing Shading
Pink	(11)	Proposed Sidewalk Ramp Shading

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- 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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

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

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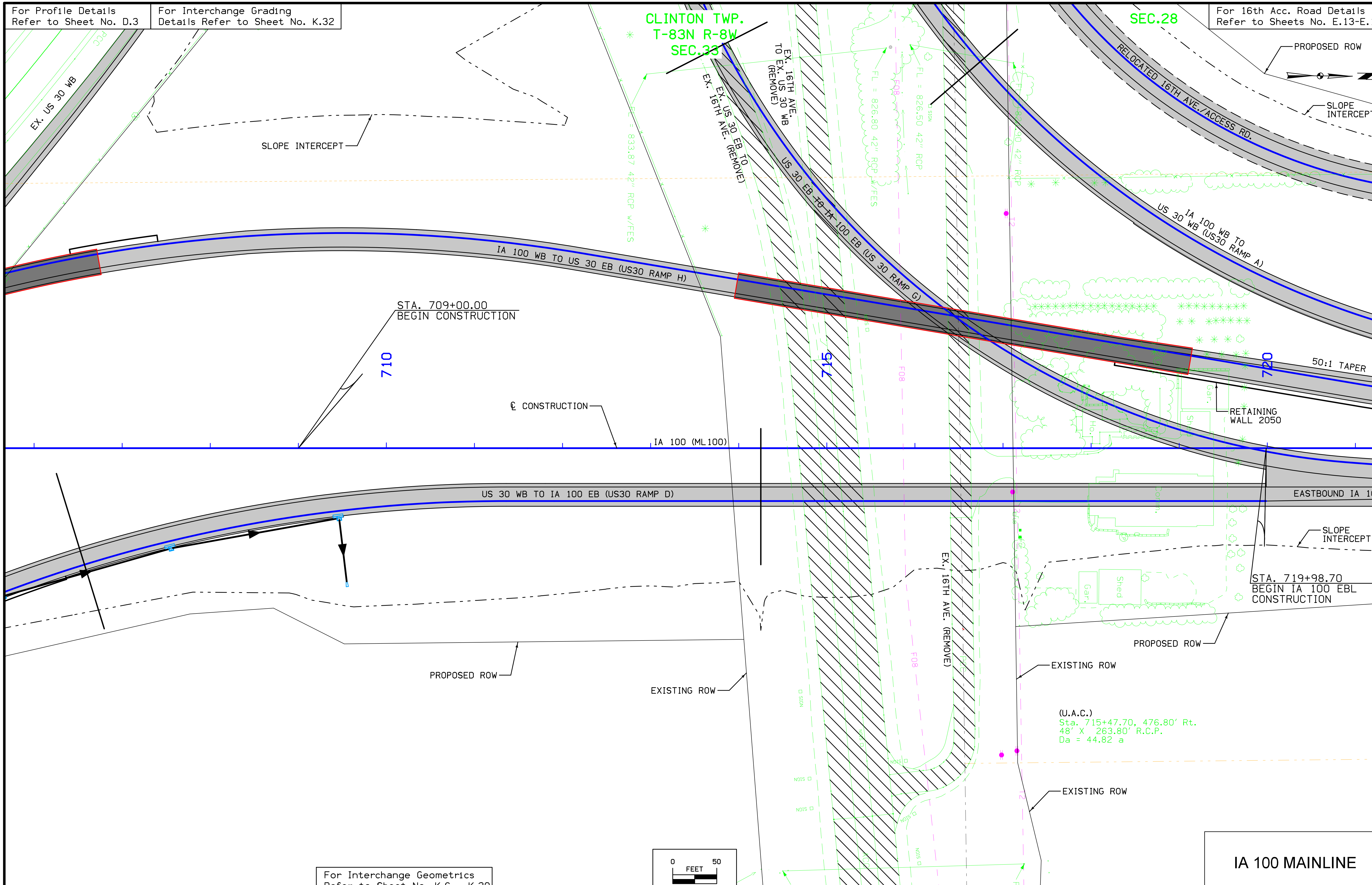
For Profile Details
Refer to Sheet No. D.3

For Interchange Grading
Details Refer to Sheet No. K.32

For 16th Acc. Road Details
Refer to Sheets No. E.13-E.15



CLINTON TWP.
T-83N R-8W
SEC.33
SEC.28
EX. US 30 WB
SLOPE INTERCEPT
EX. 16TH AVE. TO EX. US 30 WB (REMOVE)
EX. US 30 EB TO EX. 16TH AVE. (REMOVE)
RELOCATED 16TH AVE./ACCESS RD.
PROPOSED ROW
SLOPE INTERCEPT
IA 100 WB TO US 30 EB (US30 RAMP H)
US 30 EB TO IA 100 EB (US 30 RAMP G)
IA 100 WB TO US 30 WB (US30 RAMP A)
STA. 709+00.00
BEGIN CONSTRUCTION
710
715
720
50:1 TAPER
RETAINING WALL 2050
℄ CONSTRUCTION
IA 100 (ML100)
US 30 WB TO IA 100 EB (US30 RAMP D)
EASTBOUND IA 100
SLOPE INTERCEPT
STA. 719+98.70
BEGIN IA 100 EBL CONSTRUCTION
EX. 16TH AVE. (REMOVE)
PROPOSED ROW
EXISTING ROW
PROPOSED ROW
EXISTING ROW
EXISTING ROW
(U.A.C.)
Sta. 715+47.70, 476.80' Rt.
48' X 263.80' R.C.P.
Da = 44.82 a
0 FEET 50

For Interchange Geometrics
Refer to Sheet No. K.6 - K.20

IA 100 MAINLINE

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.2

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885
880
875
870
865
860
855
850
845
840
835
830
825
820
815
810

EXISTING GROUND

STA. 719+98.70
BEGIN IA 100 EBL
CONSTRUCTION
ELEV. 835.16

PROPOSED PGL

-2.17%
Rt.
D.G.

+98.70 Rt.
830.88

+25 Rt.
830.31

IA 100 MAINLINE

Lt
Med
Rt

4' Ditch
D.G.
5' Ditch

Lt
Med
Rt

709 +50 710 +50 711 +50 712 +50 713 +50 714 +50 715 +50 716 +50 717 +50 718 +50 719 +50 720 +50 721

C	ENGLISH	IOWA DOT	DESIGN TEAM	COUNTY	PROJECT NUMBER	SHEET NUMBER D.3

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For Profile Details
Refer to Sheet No. D.5

For Interchange Grading
Details Refer to Sheet K.33

For Interchange Geometrics
Refer to Sheet No. K.6

CLINTON TWP.
T-83N R-8W
SEC.33

For 16th Acc. Road Details
Refer to Sheets No. E.13-E.15

PROPOSED ROW

SLOPE INTERCEPT

RELOCATED 16TH AVE./ACCESS RD.

FUTURE UTILITY
CASING PIPE

STA. 727+50.00
END INDEPENDENT ALIGNMENT
BEGIN CONSTRUCTION

IA 100 WB TO US 30 WB (US30 RAMP A)

1 TAPER

15:1 TAPER

725

730

735

℄ CONSTRUCTION

WESTBOUND IA 100

RETAINING
WALL 2050

CONCRETE BARRIER
(HALF SECTION)

IA 100 (ML100)

PC Sta 733+38.95

EASTBOUND IA 100

STA. 724+25.00
BEGIN IA 100 WBL
CONSTRUCTION

SLOPE INTERCEPT

PROPOSED ROW

Sta. 735+02.06
Install Dual 44″x27″x562′ 1201 RCP
Skew = 40.2° Rt. Ahd.
Lt. 796.20
F.L. = Rt. 787.20
Other 787.86

Sta. 734+25.00
Install 24″x64′ 1501 RCP & 74′ CMP
Lt. 819.65
F.L. = Rt. 797.43
Other 818.42
Other 816.96
Other 797.62

0 50
FEET

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.4

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STA. 724+25.00
BEGIN IA 100 WBL
CONSTRUCTION
ELEV. 832.46

STA. 727+50.00
END IA 100 WBL
CONSTRUCTION
ELEV. 827.09

-3.000%

-0.510%

VPI +73.300
Elv 827.99
K = 141
Len 350.00 ft
DS = 70 mph

840 835 830 825 820 815 810

Lt Med Rt

832.46 831.78 831.15 830.56 830.01 829.51 829.05 828.64 828.27 827.94 827.66 827.43 827.23 827.09

-2.200%

VPI +50.000
Elv 829.64
K = 207
Len 350.00 ft
DS = 70 mph

PROPOSED PGL

-0.510%

END SPLIT PROFILE
BEGIN COMMON PROFILE
ELEV. 827.09

+75 Rt.
822.94

-3.23% Rt. Ditch Grade

+25 Rt.
811.63

-0.60% Rt.
Ditch Grade

+75 Rt.
810.73

EXISTING GROUND

-4.80% Rt. D.G.

+50 Rt.
802.33

-2.86% Rt. D.G.

+50 Lt.
796.55

+0.40% Lt. Ditch Grade

+75 Rt.
793.05

+25 Lt.
806.50

-3.13% Lt. Ditch Grade

+25 Lt.
801.80

-0.82% Lt. Ditch Grade

+0.37% Lt. Ditch Grade

+65 Lt.

Ditch Grade

4' Ditch

5' Ditch

Ditch Grade

832.45 831.97 831.53 831.12 830.73 830.38 830.05 829.76 829.50 829.26 829.06 828.89 828.75 828.62 828.49 828.36 828.24 828.11 827.98 827.85 827.73 827.60 827.47 827.34 827.22 827.09 826.96 826.83 826.71 826.58 826.45 826.32 826.20 826.07 825.94 825.81 825.69 825.56 825.43 825.30 825.18 825.05 824.92 824.79 824.67 824.54 824.41 824.28 824.16 824.03 823.90 823.77 823.65 823.52 823.39 823.26 823.13 823.01 822.88 822.75

721 +50 722 +50 723 +50 724 +50 725 +50 726 +50 727 +50 728 +50 729 +50 730 +50 731 +50 732 +50 733 +50 734 +50 735 +50 736

C	ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN	COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	D.5	

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For Profile Details Refer to Sheet No. D.7	For 16th Acc. Road Details Refer to Sheets No. E.13-E.16	For Bridge Options Refer to V Sheets

CLINTON TWP.
T-83N R-8W
SEC.28

N

PROPOSED ROW

SLOPE INTERCEPT

740

745

750

℄ CONSTRUCTION

P.I. Sta 747+30.36

WESTBOUND IA 100

IA 100 (ML100)

EASTBOUND IA 100

POT STA. 736+91.23 (IA 100) =
POT STA. 2126+03.84 (16TH ACCESS RD.)

SLOPE INTERCEPT

PROPOSED ROW

PROPOSED ROW

RELOCATED 16TH AVE./ACCESS RD.

Curve Data
△ = 7° 14′ 16.09″ (RT)
D = 0° 15′ 37.57″
R = 22,000.00
T = 1,391.41
L = 2,779.12
E = 43.96
e = N.C.
DS = 70 mph

Sta. 741+26.30
Install 24″x246′ 1101 RCP
Skew = 11.7° Lt. Ahd.
F.L. = Lt. 803.09
Rt. 795.40

Sta. 748+57.33
Install 24″x190′ 1201 RCP
Skew = 12.3° Rt. Ahd.
Lt. 799.09
F.L. = Rt. 790.13
Other 798.19

0 50
FEET

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.6

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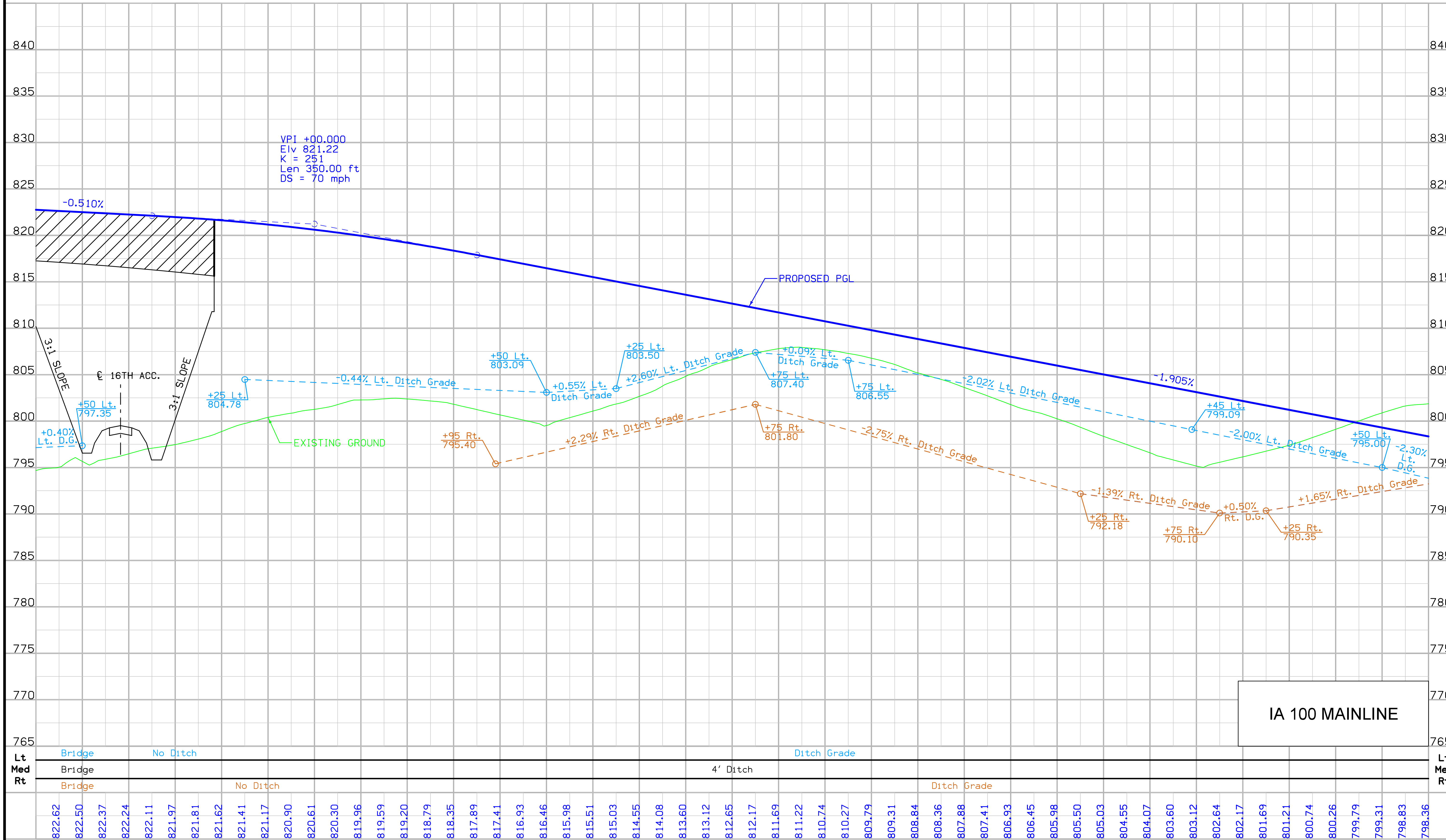

C	ENGLISH	IOWA DOT	DESIGN TEAM **Iowa DOT\CH2MHILL**		**LINN** COUNTY	PROJECT NUMBER **NHSX-100-1(39)--3H-57**	SHEET NUMBER **D.7**	

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For Profile Details	For Interchange Grading Details	For Interchange Geometrics
Refer to Sheet No. D.9	Refer to Sheet K.33 & K.34	Refer to Sheet No. K.25 & K.26

CLINTON TWP.
T-83N R-8W
SEC.28

Sta. 752+50.00
Install 24"x80' 1201 RCP
F.L. = Lt. 790.00
Rt. 791.50
Other 790.70

PROPOSED ROW

SLOPE INTERCEPT

E AVENUE RAMP C

℄ CONSTRUCTION

50:1 TAPER

755

760

765

WESTBOUND IA 100

IA 100 (ML100)

EASTBOUND IA 100

Pt Sta 761+18.06

SLOPE INTERCEPT

15:1 TAPER

E AVENUE RAMP B

PROPOSED ROW

0 FEET 50

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.8

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815 810 805 800 795 790 785 780 775 770 765 760 755 750 745 740

+25 Rt.
793.65

-4.90%
Rt. D.G.

+75 Rt.
791.20

-2.30% Lt. Ditch Grade

+25 Lt.
786.34

PROPOSED PGL

-1.905%

+00 Lt.
777.58

-0.48%
Lt. D.G.

+50 Lt.
777.34

+00 Lt.
776.21

EXISTING GROUND

1.55% Lt. Ditch Grade

+50 Rt.
769.59

-0.95% Rt. Ditch Grade

IA 100 MAINLINE

Lt	Ditch Grade	D.G.	V Ditch	Ditch Grade	Lt
Med			4' Ditch		Med
Rt	D.G.			Ditch Grade	Rt

797.88 797.40 796.93 796.45 796.97 795.50 795.02 794.55 794.07 793.59 793.12 792.64 792.16 791.69 791.21 790.73 790.26 789.78 789.31 788.83 788.35 787.88 787.40 786.92 786.45 785.97 785.49 785.02 784.54 784.07 783.59 783.11 782.64 782.16 781.68 781.21 780.73 780.25 779.78 779.30 778.83 778.35 777.87 777.40 776.92 776.44 775.97 775.49 775.01 774.54 774.06 773.59 773.11 772.63 772.16 771.68 771.20 770.73 770.25 769.77

751 +50 752 +50 753 +50 754 +50 755 +50 756 +50 757 +50 758 +50 759 +50 760 +50 761 +50 762 +50 763 +50 764 +50 765 +50 766

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.9

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For Profile Details
Refer to Sheet No. D.11

For E Avenue Road Details
Refer to Sheets No. E.17-E.22

For Bridge Options
Refer to V Sheets

For Interchange Grading
Details Refer to Sheet K.34

For Interchange Geometrics
Refer to Sheets No. K.21 & K.27

CLINTON TWP.
T-83N R-8W
SEC.21

SEC.28

PROPOSED ROW

FUTURE ROW

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

PROPOSED ROW

EX. MORGAN CREEK

SLOPE INTERCEPT

Sta. 777+50.00
Install 24"x80' 1201 RCP
F.L. = Lt. 762.59
Rt. 766.99
Other 765.78

E AVENUE RAMP C

E AVENUE RAMP A

FL = 762.16 10'0"W x 6'H BOX CULVERT

POT STA. 769+79.53 (IA 100) =
POT STA. 2569+79.53 (E AVENUE)

770

775

780

℄ CONSTRUCTION

WESTBOUND IA 100 (BY OTHERS)

IA 100 (ML100)

EASTBOUND IA 100 (BY OTHERS)

E AVENUE

E2

Sta. 771+25.00
Install 24"x70' 1101 RCP
F.L. = Lt. 760.38
Rt. 759.05

E AVENUE RAMP D

SLOPE INTERCEPT

PROPOSED ROW

E AVENUE RAMP B

Sta. 766+50.00
Install 24"x74' 1201 RCP
F.L. = Lt. 764.82
Rt. 762.47
Other 763.95

SLOPE INTERCEPT

FUTURE ROW

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

Ruins

EX. MORGAN CREEK

PROPOSED ROW

0 FEET 50

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER D.10

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-1.905%

763.11

-1.55% Lt. Ditch Grade

-0.95% Rt. Ditch Grade

+50 Lt.
761.49

+00 Rt.
760.09

VPI +50.000
Elv 763.11
K = 191
Len 550.00 ft
DS = 70 mph

+0.973%

-0.40% Med.
Ditch Grade

+75 Med.
760.98

+25 Med.
760.38

+3.26% Med. D.G.

+50 Med.
761.20

+25 Rt.
759.05

-3.00% Rt. Ditch Grade

+00 Rt.
753.80

EXISTING GROUND

PROPOSED PGL

+0.973%

3:1 SLOPE

3:1 SLOPE

+50 Lt.
759.77

+25 Rt.
756.25

VPI +75.000
Elv 772.10
K = 284
Len 400.00 ft
DS = 70 mph

+2.379%

+25 Rt.
772.45

+2.82% Lt. Ditch Grade

+5.40% Rt. Ditch Grade

IA 100 MAINLINE

Lt	Ditch Grade	4' Ditch	Ditch Grade	5' Ditch/Bridge Berm	Ditch Grade	Bridge	Bridge	Ditch Grade	4' Ditch	Ditch Grade	V Ditch	Lt
Med		2' Ditch/Bridge Berm										Med
Rt												Rt

766	+50	767	+50	768	+50	769	+50	770	+50	771	+50	772	+50	773	+50	774	+50	775	+50	776	+50	777	+50	778	+50	779	+50	780	+50	781
769.30	768.82	768.35	767.87	767.40	766.98	766.49	766.06	765.81	765.58	765.08	764.98	764.92	764.88	764.88	764.91	764.97	765.07	765.20	765.36	765.55	765.78	766.02	766.27	766.51	766.75	767.00	767.24	767.48	767.73	767.97	768.21	768.45	768.70	768.94	769.18	769.43	769.67	769.91	770.16	770.41	770.69	770.99	771.31	771.65	772.01	772.40	772.81	773.24	773.69	774.16	774.66	775.18	775.71	776.28	776.86	777.46

C	ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	D.11

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For Profile Details Refer to Sheet No. D.13	For Interchange Grading Details Refer to Sheet K.35	For Interchange Geometrics Refer to Sheet No. K.23

CLINTON TWP.
T-83N R-8W
SEC.21

Sta. 786+25.00
Install 24"x100' 1201 RCP
F.L. = Lt. 783.27
Rt. 785.58
Other 784.43

PROPOSED ROW

SLOPE INTERCEPT

Curve Data
Δ = 4° 22' 28.78" (LT)
D = 0° 15' 37.57"
R = 22,000.00
T = 840.28
L = 1,679.75
E = 16.04
e = N.C.
DS = mph

E AVENUE RAMP A

PC Sta 783+94.17

785

15:1 TAPER

790

℄ CONSTRUCTION

795

6" SLOPE CURB

WESTBOUND IA 100

IA 100 (ML100)

PI Sta 792+34.45

EASTBOUND IA 100

E AVENUE RAMP D

50:1 TAPER

6" SLOPE CURB

SLOPE INTERCEPT

FUTURE ROW

PROPOSED ROW

PROPOSED ROW

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

Barn

Barn

Shed

Ho.

Shed

Shed

Gar.

Ho.

(U.A.C.)
Sta. 788+81.10, 438.00' Rt.
30" X 48.60' R.C.P.
Da = 12.81 a

EX. 80TH ST. SW

0 FEET 50

SEC.22

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.12

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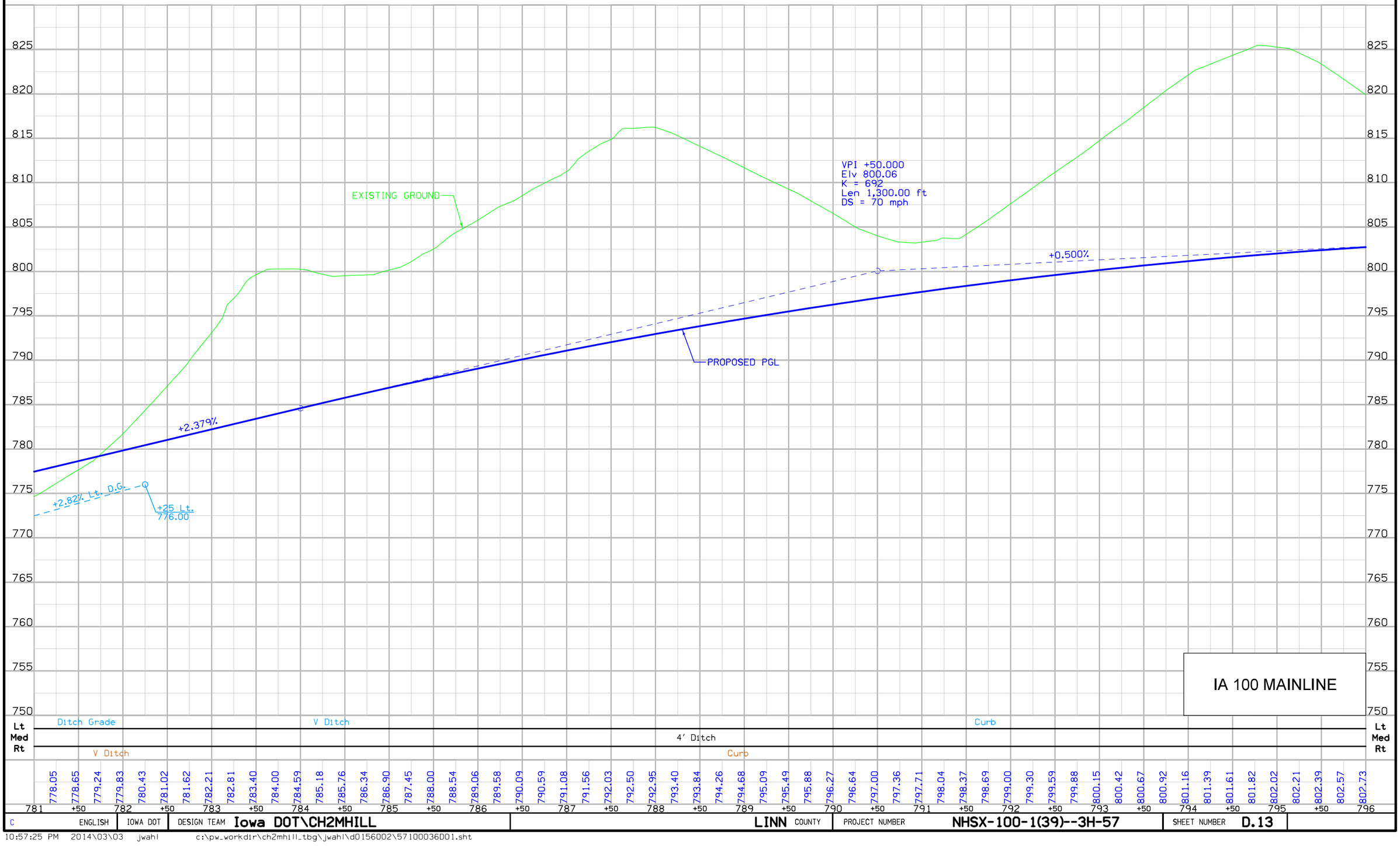

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.13	

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For Profile Details
Refer to Sheet No. D.15

CLINTON TWP.
T-83N R-8W
SEC.21

(REMOVE)
Sta. 809+56.70, 87.90' Lt.
20" X 19.70' D.I.P.
Da = 9.96 a

(REMOVE)
Sta. 809+86.40, 81.20' Lt.
15" X 32.30' R.C.P.
Da = 8.87 a

Sta. 801+00.00
Install 24"x84' 1201 RCP
F.L. = Lt. 793.30
Rt. 801.31
Other 793.83

PROPOSED ROW

CONCRETE BARRIER
(HALF SECTION)

℄ CONSTRUCTION

PT Sta 800+73.92

800

805

810

FUTURE UTILITY
CASING PIPE

FL = 810.73 20" DIP

FL = 811.19 20" DIP

FL = 814.26 15" RCP

FL = 812.51 15" RCP

WESTBOUND IA 100

IA 100 (ML100)

EASTBOUND IA 100

FUTURE ROW

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

FL = 782.50 48" CMP

FL = 781.25 48" CMP

EX. 80TH ST. NW

PROPOSED ROW

EXISTING ROW

EX. BERGER LANE
(CLOSED)

EX. ENT

EX. WORCESTER RD.
(U.A.C.)

EXISTING
ROW

Shed

Barn

Ho.

(U.A.C.)
Sta. 801+84.40, 328.80' Rt.
48" X 48.50' C.M.P.
Da = 76.41 a

Sta. 800+20.29
Install 48"x202' 1101 RCP
Skew = 8.2° Rt. Ahd.
F.L. = Lt. 792.32
Rt. 788.83

0 50
FEET

Sta. 807+87.89
Install 36"x284' 1101 RCP
Skew = 50.5° Lt. Ahd.
F.L. = Lt. 808.70
Rt. 798.39

SEC.22

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.14

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EXISTING GROUND

PROPOSED PGL

+0.500%

VPI +00.000
Elv 806.80
K = 237
Len 250.00 ft
DS = 60 mph (IowaDOT)

+1.555%

+00 Lt.
800.51

+2.68% Lt. D.G

+50 Lt.
801.85

+1.11% Lt. Ditch Grade

+00 Lt.
803.52

+2.00% Lt. Ditch Grade

+75 Lt.
807.02

+0.75% Lt. Ditch Grade

+00 Lt.
808.70

+4.50% Lt. D.G.

+50 Lt.
810.95

+0.60% Lt. Ditch Grade

+50 Lt.
811.55

+00 Rt.
793.22

+1.80% Rt. Ditch Grade

+25 Rt.
799.07

IA 100 MAINLINE

Lt	Curb	Barrier w/ No Ditch	No Ditch	Ditch Grade	5' Ditch	Lt
Med		4' Ditch				Med
Rt	Curb	No Ditch			5' Ditch	Rt

802.89 803.04 803.18 803.31 803.43 803.56 803.68 803.81 803.93 804.06 804.18 804.31 804.43 804.56 804.68 804.81 804.93 805.06 805.18 805.31 805.43 805.56 805.68 805.81 805.93 806.06 806.18 806.32 806.48 806.67 806.89 807.13 807.40 807.70 808.02 808.37 808.75 809.14 809.53 809.91 810.30 810.69 811.08 811.47 811.86 812.25 812.64 813.02 813.41 813.80 814.19 814.58 814.97 815.36 815.75 816.13 816.52 816.91 817.30 817.69

796 +50 797 +50 798 +50 799 +50 800 +50 801 +50 802 +50 803 +50 804 +50 805 +50 806 +50 807 +50 808 +50 809 +50 810 +50 811

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.15

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For Profile Details
Refer to Sheet No. D.17

CLINTON TWP.
T-83N R-8W
SEC.21

SEC.16

Sta. 822+84.62
Install 24"x178' 1201 RCP
Skew = 21° Lt. Ahd.
Lt. 806.94
F.L. = Rt. 805.00
Other 805.51

PROPOSED ROW

SLOPE INTERCEPT

815

℄ CONSTRUCTION

820

825

WESTBOUND IA 100

IA 100 (ML100)

EASTBOUND IA 100

SLOPE INTERCEPT

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

FL = 816.26 24" CMP

FUTURE ROW

FL = 817.94 18" CMP

EX. 80TH ST. NW

PROPOSED ROW

PROPOSED ROW

(U.A.C.)
Sta. 813+15.60, 264.20' Rt.
24" X 40.50' C.M.P.
Da = 3.11 a

FL = 815.75 24" CMP

(U.A.C.)
Sta. 822+68.00, 209.' Rt.
18" X 35.60' C.M.P.
Da = 5.17 Ac

FL = 819.16 18" CMP

EX. WATERPLANT ENT. (U.A.C.)

Stockpile

Barn

Shed

Foundation

Ho.

Gar

Gravel

0 FEET 50

SEC.22

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.16

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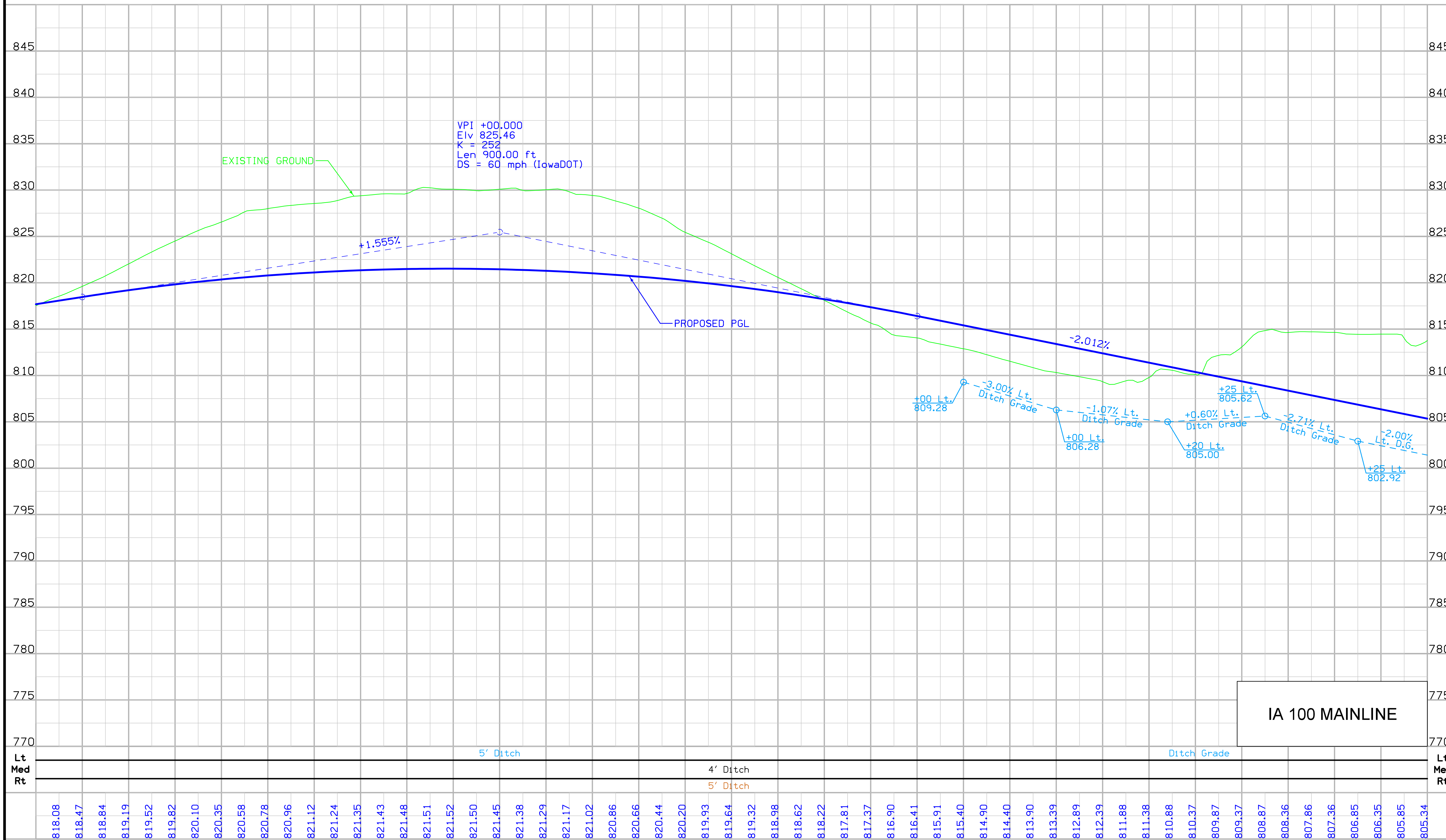

C	ENGLISH	IOWA DOT	DESIGN TEAM **Iowa DOT\CH2MHILL**	**LINN** COUNTY	PROJECT NUMBER **NHSX-100-1(39)--3H-57**	SHEET NUMBER **D.17**

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For Profile Details
Refer to Sheet No. D.19

For 80th North Road Details
Refer to Sheets No. E.29-E.30

Sta. 836+77.90
Install 59"x36"x174' 1101 RCP
Skew = 19.3° Rt. Ahd.
Lt. 778.85
F.L. = Rt. 779.90

PROPOSED ROW

830

℄ CONSTRUCTION

835

SLOPE INTERCEPT

840

WESTBOUND IA 100

IA 100 (ML100)

EASTBOUND IA 100

EXISTING ROW

F.L. = 782.13 36" CMP

EXISTING ROW

EX. 80TH ST. SW (U.A.C.)

EX. 80TH ST. SW (REMOVE)

80TH ST. NORTH

SLOPE INTERCEPT

F.L. = 782.71 36" CMP

EXISTING ROW

PROPOSED ROW

(REMOVE)
Sta. 837+11.60, 119.90' Rt.
36" X 36.70' C.M.P.
Da = 28.45 a

Sta. 826+50.00
Install 24"x68' 1201 RCP
F.L. = Lt. 800.34
Rt. 798.98
Other 799.29

Sta. 838+25.92
Install 24"x66' 1201 RCP
F.L. = Lt. 781.92
Rt. 780.62
Other 780.97

0 FEET 50

SEC. 15

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.18

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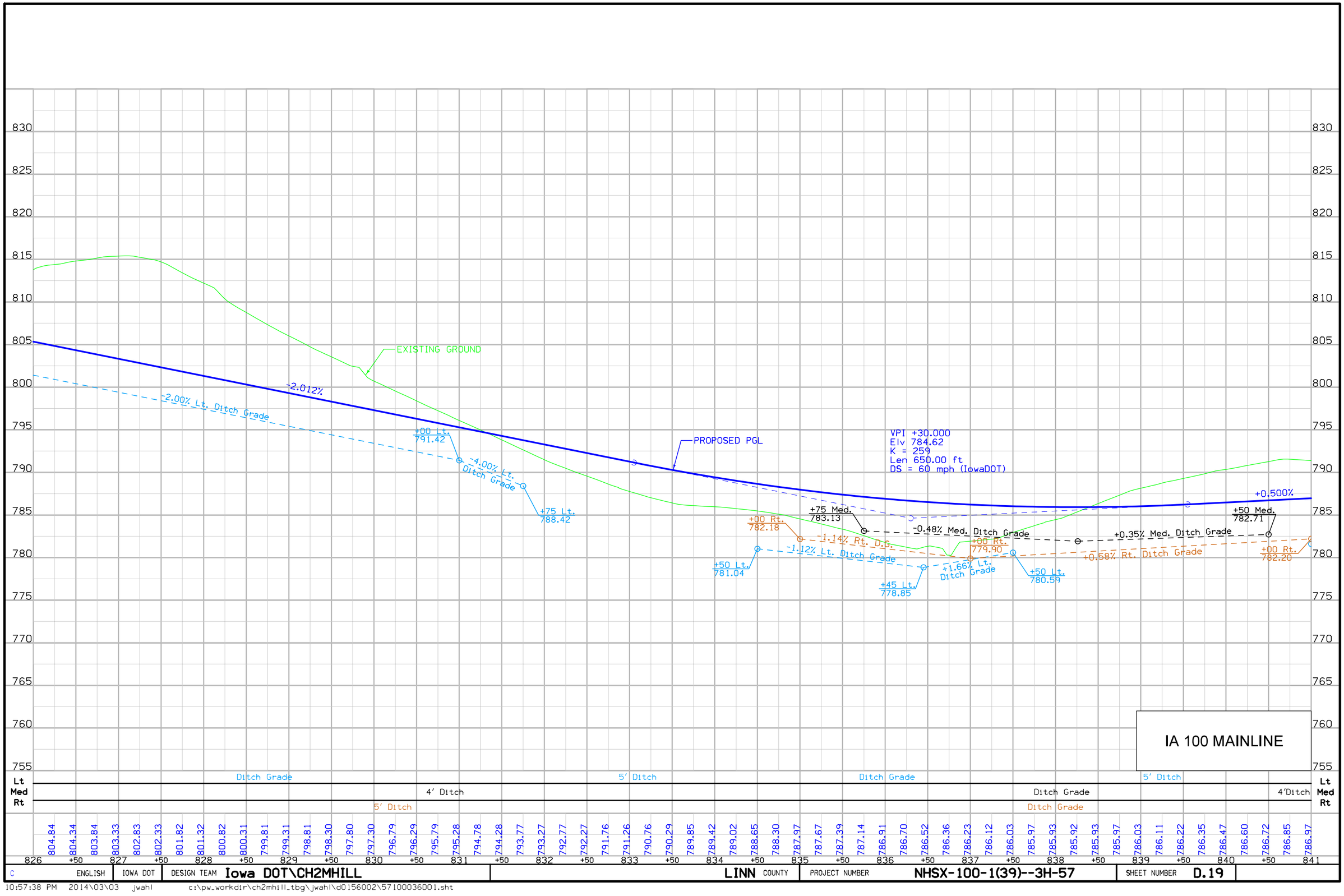

C	ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	D.19

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For Profile Details
Refer to Sheet No. D.21

For 80th St. North Road Details
Refer to Sheet No. E.29-E.30

For Bridge Options
Refer to V Sheets

CLINTON TWP.
T-83N R-8W
SEC.16

EXISTING ROW

Stockpile

Sta. 848+75.00
Install 48"x270' 1101 RCP
F.L. = Lt. 763.18
Rt. 765.60

(U.A.C.)
Sta. 849+65.50, 173.0' Lt.
Twin 12' X 9' X 74' R.C.B.
Da = 3840 a

EX. ELLIS RD. (U.A.C.)

Ho.
Shed
Gar.
Shed
Shed
Foundation
Barn
Barn
Barn

EXISTING ROW

PROPOSED ROW

Sta. ---+---
Build 12'x10'x430' RCB
Skew = ° Rt. Ahd.
F.L. = Lt.
Rt.
Design No.

PROPOSED ROW

SLOPE INTERCEPT

SLOPE INTERCEPT

PROPOSED ROW

℄ CONSTRUCTION

845

CONCRETE BARRIER
(HALF SECTION)

850

855

WESTBOUND IA 100

EXISTING ROW

IA 100 (ML100)

EASTBOUND IA 100

EX. 80TH ST. SW (REMOVE)

80TH ST. NORTH

EXISTING ROW

SLOPE INTERCEPT

PROPOSED ROW

(REMOVE)
Sta. 849+36.10, 40.5' Rt.
24" X 65.00 C.M.P.
Da = 12.37 a

PROPOSED ROW

EXISTING ROW

0 50
FEET

SEC.15

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER D.20

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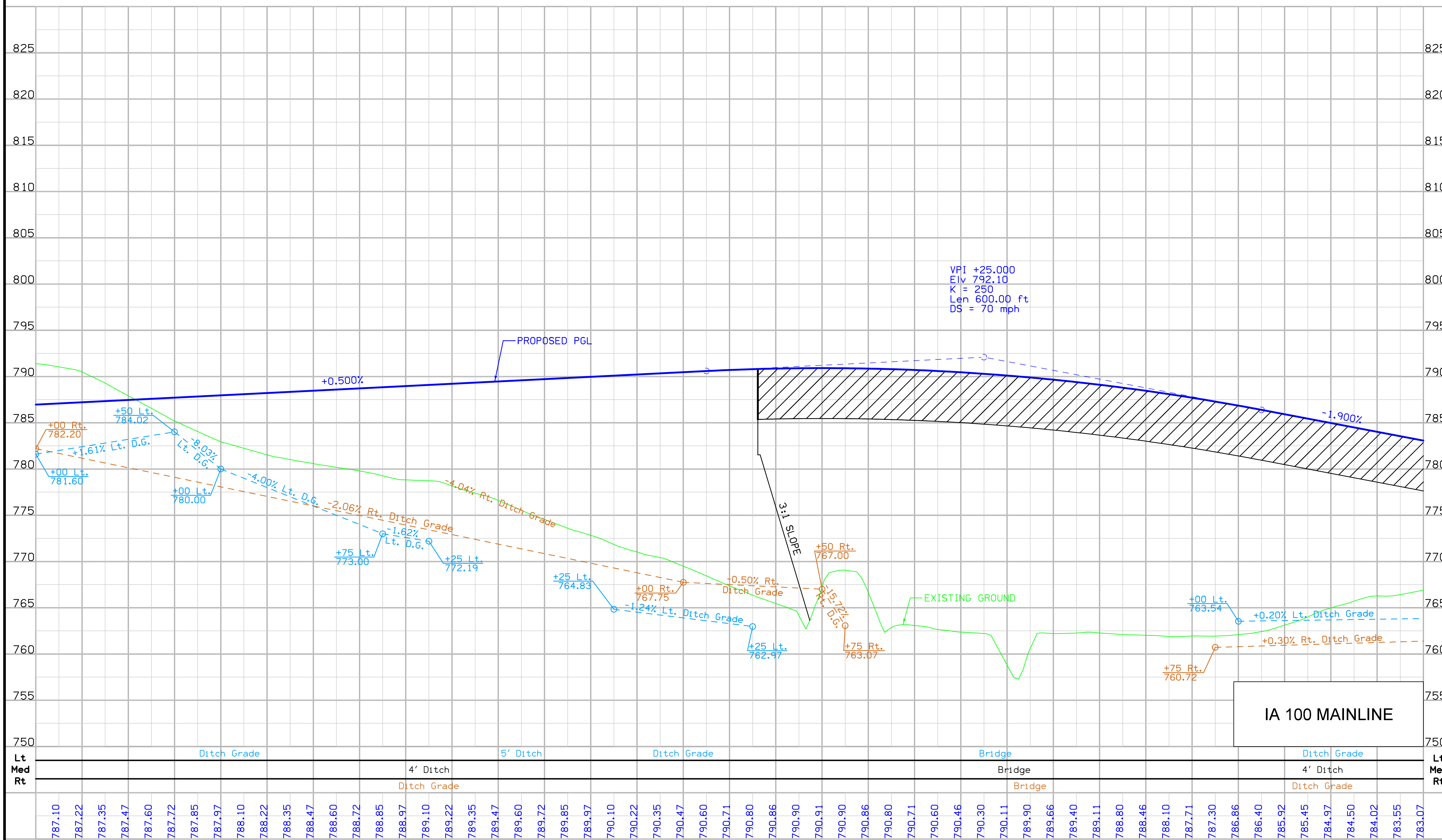

C	ENGLISH	IOWA DOT	DESIGN TEAM **Iowa DOT\CH2MHILL**		**LINN** COUNTY	PROJECT NUMBER	**NHSX-100-1(39)--3H-57**	SHEET NUMBER **D.21**

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For Profile Details
Refer to Sheet No. D.23

CLINTON TWP.
T-83N R-8W
SEC.16

Sta. 863+74.15
Install 24"x74' 1201 RCP
F.L. = Lt. 765.49
Rt. 767.68
Other 766.41

EXISTING ROW

PROPOSED ROW

SLOPE INTERCEPT

860

865

℄ CONSTRUCTION

PI Sta 867+18.96

870

WESTBOUND IA 100

IA 100 (ML 100)

TS Sta 865+28.25

SC Sta 868+14.25

EASTBOUND IA 100

CONCRETE BARRIER
(HALF SECTION)

PROPOSED ROW

EXISTING ROW

0 FEET 50

SEC.15

IA 100 MAINLINE

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	D.22

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825
820
815
810
805
800
795
790
785
780
775
770
765
760
755
750

-1.900%

PROPOSED PGL

VPI +25.000
Elv 769.30
K = 184
Len 600.00 ft
DS = 70 mph

+1.365%

EXISTING GROUND

3:1 SLOPE

+25 Rt.
768.01

-3.01%
Rt. D.G.

+75 Lt.
765.49

+1.16% Lt. Ditch Grade

+0.20% Lt. Ditch Grade

+0.79%
Rt. D.G.

+25 Rt.
765.00

-0.24% Rt. Ditch Grade

+0.30% Rt. Ditch Grade

+75 Rt.
763.12

IA 100 MAINLINE

Lt
Med
Rt

Ditch Grade
4' Ditch
Ditch Grade

856	+50	857	+50	858	+50	859	+50	860	+50	861	+50	862	+50	863	+50	864	+50	865	+50	866	+50	867	+50	868	+50	869	+50	870	+50	871
782.60	782.12	781.65	781.17	780.70	780.22	779.75	779.27	778.80	778.32	777.85	777.37	776.90	776.42	775.95	775.47	775.00	774.54	774.11	773.72	773.37	773.05	772.76	772.50	772.28	772.10	771.95	771.83	771.74	771.69	771.68	771.70	771.75	771.83	771.96	772.11	772.30	772.52	772.78	773.07	773.39	773.73	774.07	774.41	774.76	775.10	775.44	775.78	776.12	776.46	776.80	777.14	777.49	777.83	778.17	778.51	778.85	779.19	779.53	779.87

C	ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	D.23		

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For Profile Details
Refer to Sheet No. D.25

SEC.16

SEC.9

CLINTON TWP.
T-83N R-8W
SEC.10

Spiral Data
Δ = 49° 35′ 53.16″ (RT)
θs = 3° 54′ 05.65″
Ls = 286.00
Ts = 1,114.02
Es = 215.11
P = 1.62
K = 142.98
Xc = 285.87
Yc = 6.49
LT = 190.71
ST = 95.38
LC = 285.94

Curve Data
Δ = 41° 47′ 41.85″ (RT)
D = 02° 43′ 42.13″
R = 2,100.00
T = 801.81
L = 1,531.87
E = 147.86
e = 6.00%
L = 286.00
x = 96.00
m = 85.80
DS = 70 mph

PI Sta 876+16.05

PROPOSED ROW

875

880

℄ CONSTRUCTION

WESTBOUND IA 100

IA 100 (ML100)

EASTBOUND IA 100

SLOPE INTERCEPT

PI Sta 884+41.49

885

50:1 TAPER

FUTURE ROW

PROPOSED ROW

SLOPE INTERCEPT

CS Sta 883+46.11

15:1 TAPER

ST Sta 886+32.11

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

Sta. 875+00.00
Install 12′x4′x250′ RCB
Skew = 15° Lt. Ahd.
F.L. = Lt. 763.30
Rt. 762.30

Sta. 886+00.00
Install 24″x80′ 1201 RCP
F.L. = Lt. 772.94
Rt. 770.94
Other 771.38

SEC.15

0 FEET 50

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.24

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VPI +50.000
Elv 783.29
K = 254
Len 475.00 ft
DS = 70 mph

PROPOSED PGL

+1.365%

-0.508%

EXISTING GROUND

+25 Lt.
774.17

-2.66% Lt. Ditch Grade

+33 Lt.
763.30

+25 Lt.
767.35

+2.11% Lt. Ditch Grade

-0.24% Rt. Ditch Grade

+63 Rt.
762.30

+0.69% Rt. Ditch Grade

+25 Rt.
763.42

+25 Lt.
776.48

+0.70%
Lt. D.G.

+00 Lt.
777.00

-0.50% Lt. Ditch Grade

+00 Lt.
777.50

-1.57% Lt. Ditch Grade

+75 Rt.
770.46

+1.00% Rt. Ditch Grade

+75 Rt.
772.46

+0.50% Rt. Ditch Grade

+75 Rt.
773.46

-0.50% Rt. Ditch Grade

+75 Rt.
772.46

-2.42%
Rt. D.G.

+25 Rt.
771.25

IA 100 MAINLINE

Lt	Ditch Grade	5' Ditch		Ditch Grade
Med		4' Ditch		
Rt	5' Ditch		Ditch Grade	5' Ditch

871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886
+50	780.21 780.53 780.82 781.09	781.33 781.55 781.74 781.91	782.06 782.17 782.27 782.34	782.39 782.41 782.40 782.37	782.32 782.24 782.14 782.02	781.89 781.76 781.64 781.51	781.38 781.26 781.13 781.00	780.87 780.75 780.62 780.49	780.37 780.24 780.11 779.99	779.86 779.73 779.60 779.48	779.35 779.22 779.10 778.97	778.84 778.72 778.59 778.46	778.33 778.21 778.08 777.95	777.83 777.70 777.57 777.45	777.32 777.19 777.06 776.94

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.25

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For Profile Details Refer to Sheet No. D.27	For Interchange Grading Details Refer to Sheet K.38	For Interchange Geometrics Refer to Sheets No. K.29 & K.30

CLINTON TWP.
T-83N R-8W
SEC.10

Sta. 897+75.00
Install 24"x74' 1101 RCP
F.L. = Lt. 763.01
Rt. 766.30

PROPOSED ROW

SLOPE INTERCEPT

COVINGTON RD. RAMP C

STA. 899+50.00
END CONSTRUCTION

050

075

100

50:1 TAPER

WESTBOUND IA 100

(BY OTHERS)

IA 100 (ML100)

EASTBOUND IA 100

℄ CONSTRUCTION

ST Sta 886+32.11

15:1 TAPER

SLOPE INTERCEPT

COVINGTON RD. RAMP B

FUTURE ROW

COVINGTON RD. (BY OTHERS)

Sta. 886+00.00
Install 24"x80' 1201 RCP
F.L. = Lt. 772.94
Rt. 770.94
Other 771.38

Sta. 889+20.51
Install 65"x40"x308' 1101 RCP
Skew = 40.7° Rt. Ahd.
F.L. = Lt. 767.60
Rt. 764.61

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

Sta. 898+50.00
Install 42"x180 1101 RCP
F.L. = Lt. 762.51
Rt. 761.40

0 FEET 50

IA 100 MAINLINE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER D.26

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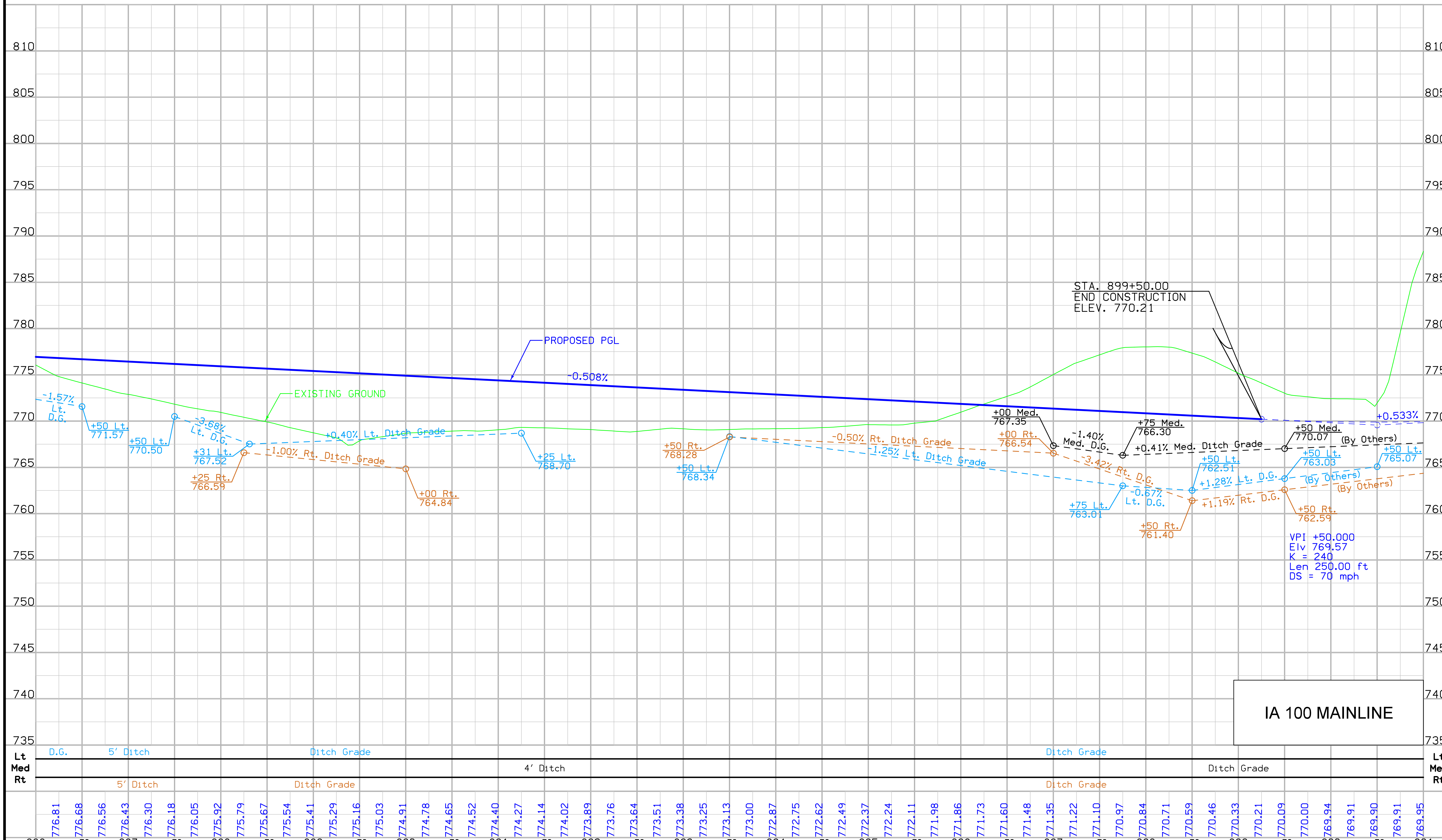

C | ENGLISH | IOWA DOT | DESIGN TEAM **Iowa DOT\CH2MHILL** | **LINN** COUNTY | PROJECT NUMBER **NHSX-100-1(39)--3H-57** | SHEET NUMBER **D.27**

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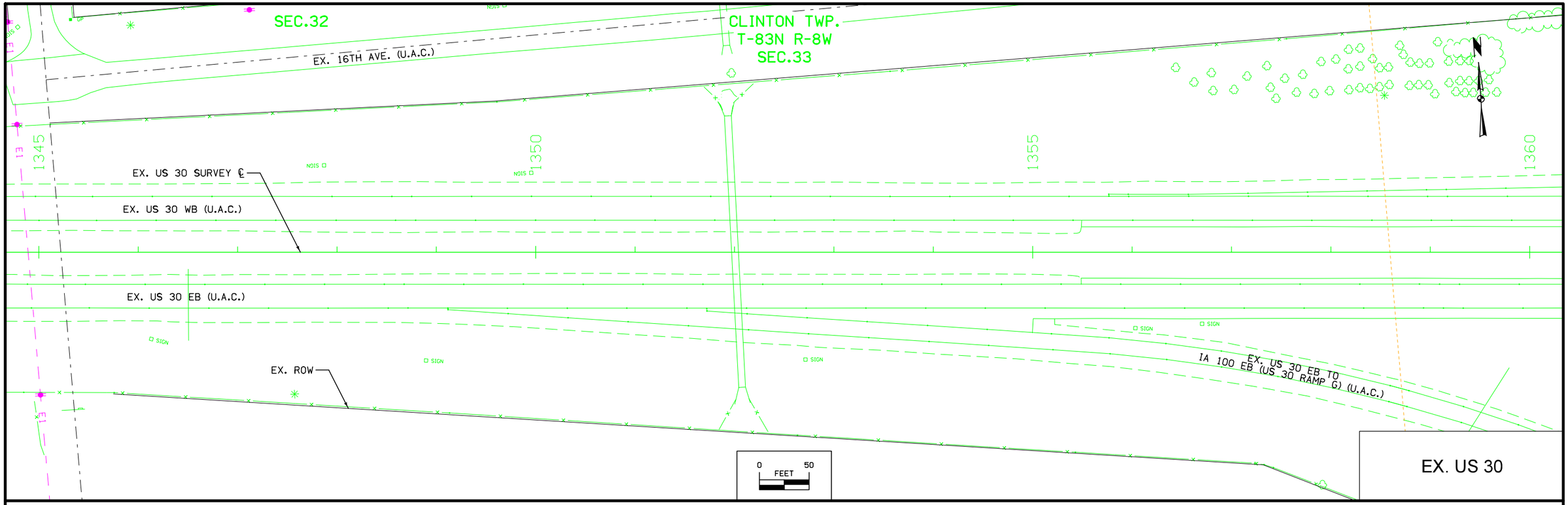

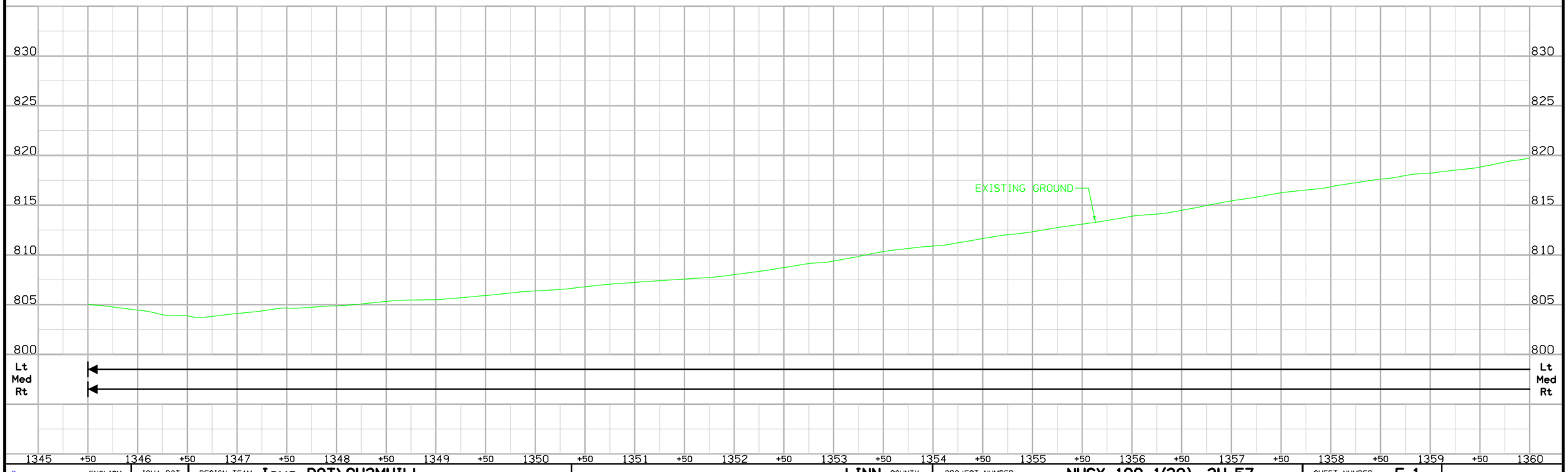

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.1	

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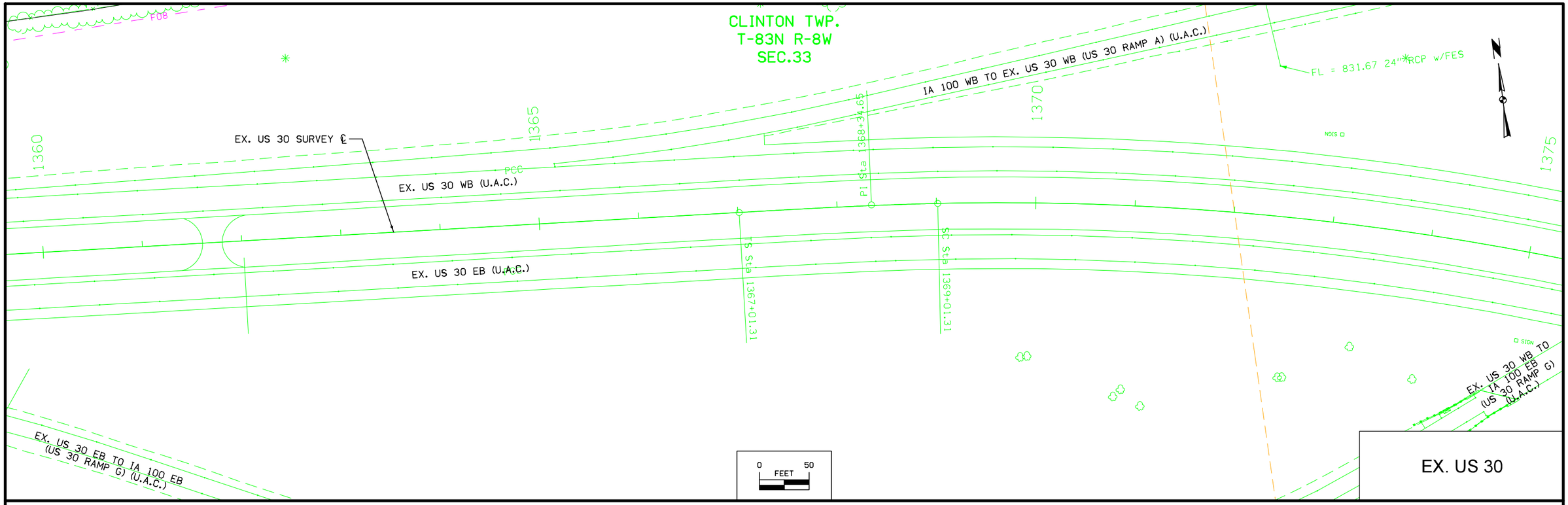

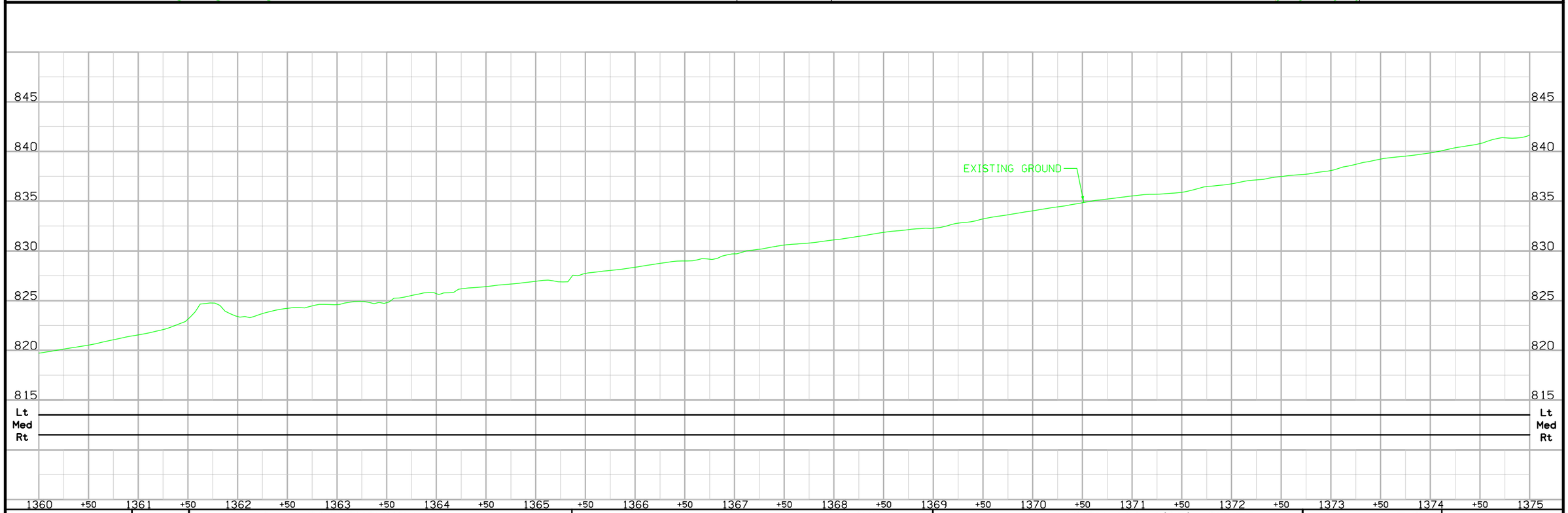

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.2	

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For Interchange Grading
Details Refer to Sheet K.32

For Interchange Geometrics
Refer to Sheet No. K.3 & K.4

CLINTON TWP.
T-83N R-8W
SEC.33

(U.A.C.)
Sta. 1379+99.75, 5.85' Lt.
24" X 180" R.C.P.
Da = 2.64 a

FL = 839.91 24" RCP

Pl Sta 1377+19.91

SLOPE INTERCEPT

STA. 1378+50.00,
56.00' LT.
BEGIN RAMP TAPER

FL = 845.90 24" RCP w/FES

(U.A.C.)
Sta. 1379+53.15, 17.28 Lt.
24" X 78.40' R.C.P.
Da = 1.81 a

FL = 846.86 24" RCP w/FES

EX. US 30 WB (U.A.C.)

EX. US 30 EB (U.A.C.)

FL = 841.24 24" RCP w/FES

EX. US 30 SURVEY ℄

EX. US 30 WB TO IA 100 EB
EX. (US 30 RAMP G) (U.A.C.)

SIGN

EXISTING ROW

FL = 844.92 24" RCP w/FES

STA. 1382+50.00,
56.00' RT.
BEGIN RAMP TAPER

SLOPE INTERCEPT

(U.A.C.)
Sta. 1386+40.61
24" X 198.20' R.C.P.
Da = 3.47 a

FL = 843.38 24" RCP

Pl Sta 1384+96.01

Pl Sta 1385+62.69

PCC

50:1 TAPER

15:1 TAPER

80TH ST. SW RAMP C

80TH ST. SW RAMP B

PROPOSED ROW

STA. 1385+50.00,
96.00' RT.
END RAMP TAPER

POT STA. 1389+53.80 (EX. US 30) =
POC STA. 18703+06.85 (US 30 RAMP H)

0 50
FEET

EX. US 30

1375 1385 1390

865
860
855
850
845
840
835

EXISTING GROUND

+50 Lt.
848.97

-2.40% Lt. Ditch Grade

+00 Lt.
845.37

+0.50% Lt. Ditch Grade

+50 Lt.
844.12

+50 Rt.
849.73

+0.50% Rt. Ditch Grade

+00 Lt.
847.08

+0.50% Lt. Ditch Grade

+0.48% Rt. Ditch Grade

+50 Rt.
851.24

+0.31% Rt. Ditch Grade

+43.21 Rt.
852.14

Lt	U.A.C.	Ditch Grade	U.A.C.	No Ditch	Ditch Grade	Lt
Med						Med
Rt	U.A.C.			Ditch Grade	Vari.	Rt

1375 +50 1376 +50 1377 +50 1378 +50 1379 +50 1380 +50 1381 +50 1382 +50 1383 +50 1384 +50 1385 +50 1386 +50 1387 +50 1388 +50 1389 +50 1390

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

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For Interchange Geometrics Refer to Sheet No. K.8 & K.17

For 80th St. SW Details Refer to Sheets No. E.6-E.7

CLINTON TWP.
T-83N R-8W
SEC.33

SEC.34

Sta. 1392+99.25
30" X 182.20' R.C.P.
Da = 6.67 a
Extend Lt.
With __" X
F.L. = Lt. ---.--
Rt. ---.--
OTHER ---.--

STA. 1390+77.81,
93.61' LT.
END RAMP TAPER

FL = 849.19 30" RCP w/FES

EX. US 30 WB TO IA 100 EB (US 30 RAMP D)

EX. US 30 SURVEY ℄

EX. US 30 WB (U.A.C.)

EX. US 30 EB (U.A.C.)

FL = 851.19 30" RCP w/FES

(U.A.C.)
Sta. 1401+98.94, 52.53' Lt.
24" X 70.90' R.C.P.
Da = 1.85 a

SLOPE INTERCEPT

80TH ST. SW

FL = 844.46 24" RCP

FL = 845.57 24" RCP w/FES

PCC

PCC

POT STA. 1404+21.41 (EX. US 30) =
POC STA. 3010+96.24 (80TH ST.)

IA 100 WB TO EX. US 30 EB (US 30 RAMP H)

FL = 847.[illegible] RCP w/FES

STA. 1403+97.14,
93.62' RT.
BEGIN RAMP TAPER

FL = 842.[illegible] RCP w/FES

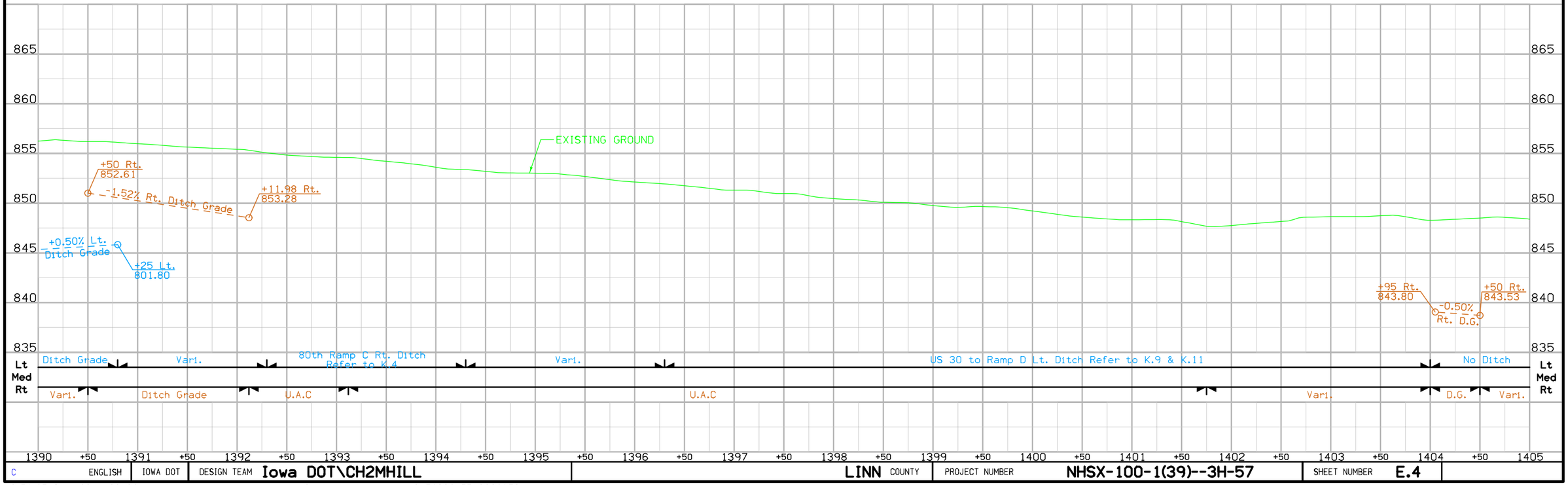
EX. ANGLE RD.

EX. US 30

0 50
FEET

For Interchange Grading Details Refer to Sheet K.31

SLOPE INTERCEPT



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.4

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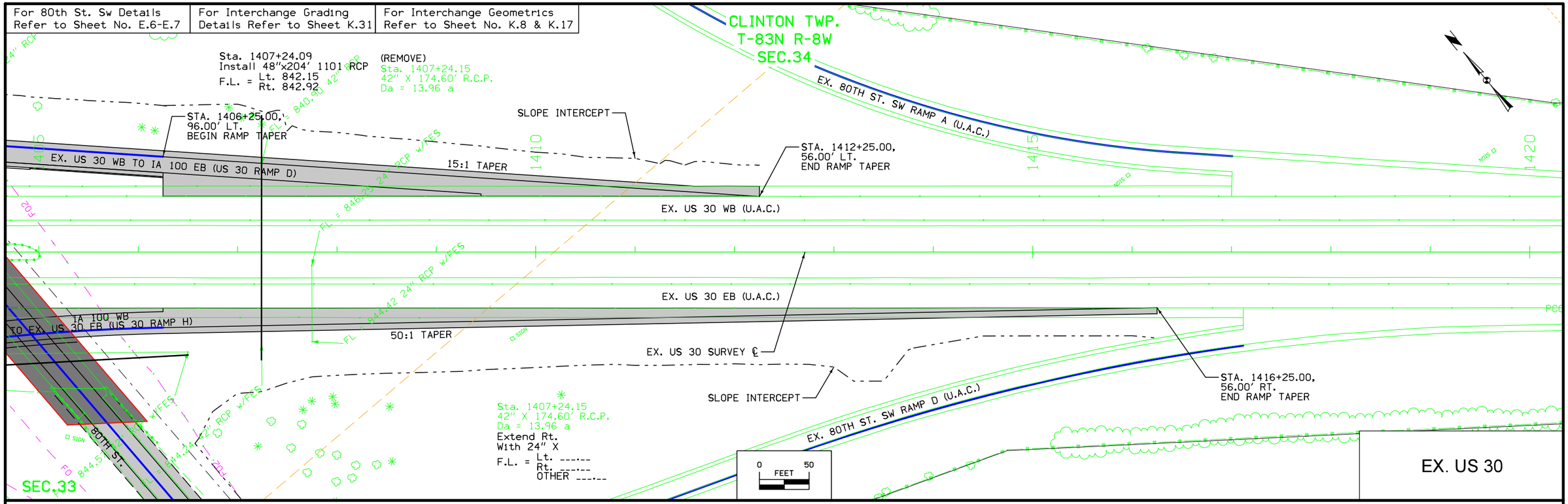
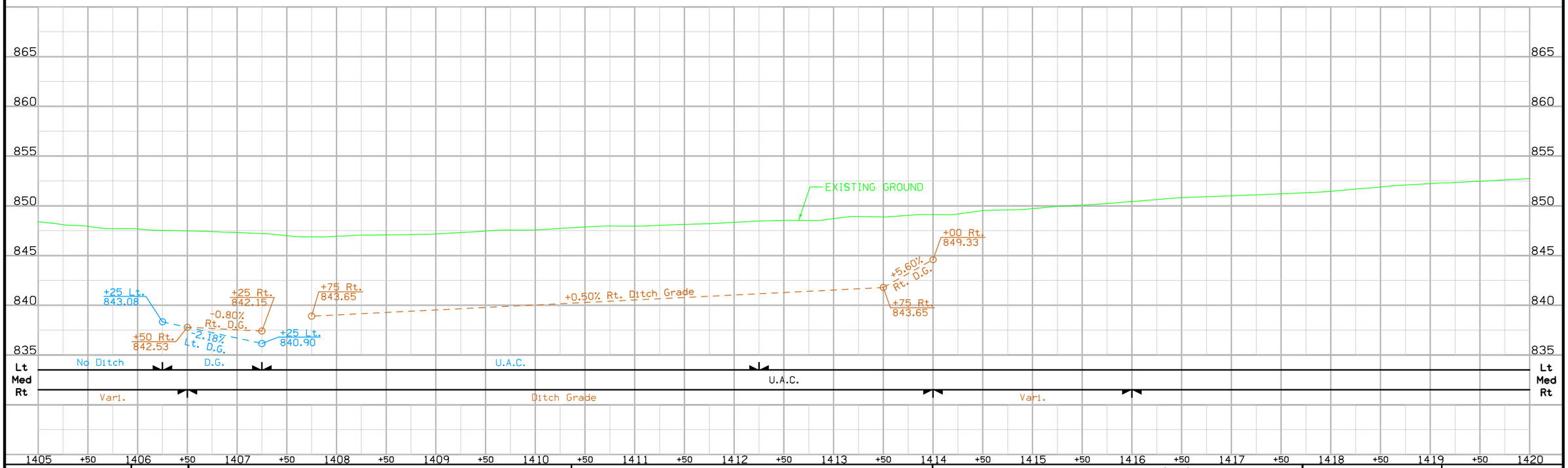
For 80th St. Sw Details Refer to Sheet No. E.6-E.7	For Interchange Grading Details Refer to Sheet K.31	For Interchange Geometrics Refer to Sheet No. K.8 & K.17





C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.5

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For Bridge Options
Refer to V Sheets

CLINTON TWP.
T-83N R-8W
SEC.33

For Interchange Grading
Details Refer to Sheet K.31

For Interchange Geometrics
Refer to Sheets No. K.3 & K.5

For US 30 Survey Details
Refer to Sheets No. E.1-E.5

Curve Data
Δ = 1° 53′ 12.07″ (RT)
D = 0° 27′ 43.43″
R = 12,400.00
T = 204.18
L = 408.32
E = 1.68
e = N.C.
DS = 50 mph

POT Sta 3000+00.00
3000
PI Sta 3002+85.99
PC Sta 3000+81.81
PT Sta 3004+90.13
3005

EXISTING ROW
EXISTING ROW
PROPOSED ROW
PROPOSED ROW
SLOPE INTERCEPT
SLOPE INTERCEPT
STA. 3006+20.00
BEGIN CONSTRUCTION
℄ CONSTRUCTION
EX. ANGLE RD.
EX. 80TH ST. SW (U.A.C.)
80TH ST. SW (SR80)
80TH ST. SW RAMP B
EX. 80TH ST. SW RAMP D
80TH ST. SW

POT STA. 3005+86.00 (80TH ST. SW)
POT STA. 12408+38.32 (80TH ST. SW RAMP B)
POT STA. 19508+34.18 (EX. 80TH ST. SW RAMP D)

Sta. 3009+50.14
Install 48″x196′ 1101 RCP
Skew = 37.4° Lt. Ahd.
F.L. = Lt. 843.70
Rt. 843.00

(REMOVE)
Sta. 3009+34.20, 33.04′ Rt.
42″ X 185.70′ R.C.P.
Da = 11.75 Ac

0 FEET 50

PROPOSED PGL
+1.333%
EXISTING GROUND
STA. 3006+20.00
BEGIN CONSTRUCTION
ELEV. 871.81
3:1 SLOPE

875 870 865 860 855 850 845
Lt
Rt
Var.
Var.

3006	+50	3007	+50	3008	+50	3009
871.88	872.21	872.54	872.88	873.21	873.54	873.88	874.21	874.54	874.87	875.17	875.44

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.6

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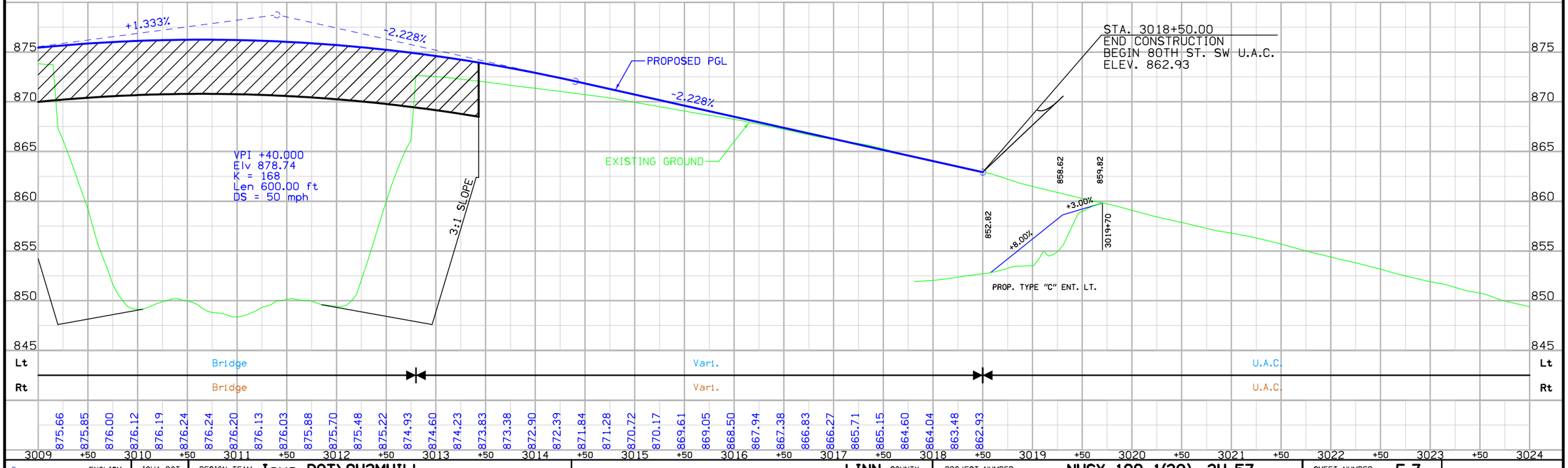
For Interchange Grading Details Refer to Sheet K.31	For Interchange Geometrics Refer to Sheet No. K.1 & K.4	For Bridge Options Refer to V Sheets

CLINTON TWP.
T-83N R-8W
SEC.33

EX. ANGLE RD.
EX. US 30 EB
EX. US 30 WB
IA 100 WB TO EX. US 30 EB (US 30 RAMP H)
IA 100 EB (US 30 RAMP D)
EX. US 30 WB TO IA 100 EB (US 30 RAMP D)
80TH ST. SW RAMP C
80TH ST. SW RAMP A
80TH ST. SW (SR80)
EX. 80TH ST. SW (U.A.C.)
EX. WIENEKE CIR.
3010
3015
3020
SLOPE INTERCEPT
PROPOSED ROW
EXISTING ROW
℄ CONSTRUCTION
POT STA. 3016+34.44 (80TH ST. SW) =
POT STA. 13401+23.22 (80TH ST. SW RAMP C) =
POT STA. 10500+75.96 (EX. 80TH ST. SW RAMP A)
+19.70 PROP. TYPE "C" ENT. LT.
POT STA. 3012+49.26 (80TH ST.) =
POT STA. 14692+21.10 (US 30 RAMP D)
POT STA. 3010+96.24 (80TH ST. SW) =
POT STA. 1404+21.41 (EX. US 30)
(REMOVE)
Sta. 3012+53.54, 23.08 Rt.
24" X 180.90' R.C.P.
Da = 5.09 Ac
SLOPE INTERCEPT
EXISTING ROW
STA. 3018+50.00
END CONSTRUCTION
BEGIN 80TH SW ST. U.A.C.
POT STA. 3009+86.88 (80TH ST. SW) =
POT STA. 18687+30.52 (US 30 RAMP H)
Sta. 3009+50.14
Install 48"x196' 1101 RCP
Skew = 37.4° Lt. Ahd.
F.L. = Lt. 843.70
Rt. 843.00
For US 30 Survey Details Refer to Sheets No. E.1-E.5
0 FEET 50
80TH ST. SW



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.7

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CLINTON TWP.
T-83N R-8W
SEC.33

SEC.28

3025

3030

3035

EXISTING ROW

EX. 80TH ST. SW (U.A.C.)

PI Sta 3033+02.40

PI Sta 3035+59.60

PC Sta 3036+81.96

+97 PROP. TYPE "C" ENT. LT.

80TH ST. SW RESURFACE (SR80)

SLOPE INTERCEPT

SLOPE INTERCEPT

℄ CONSTRUCTION

PC Sta 3034+64.61

PT Sta 3036+54.56

PI Sta 3038+68.88

+80 PROP. TYPE "C" ENT. RT.

EXISTING ROW

EXISTING ROW

EX. 16TH AVE. (U.A.C.)

EX. WIENEKE CIR.

FL = 843.32 24" CMP w/FES

FL = 841.35 24" CMP w/FES

FL = 826.23 18" RCP w/FES

FL = 822.33 18" RCP w/FES

FL = 820.84 18" CMP w/FES

FL = 819.29 18" CMP w/FES

FL = 822.55 18" CMP

FL = 817.51 18" CMP w/FES

FL = 816.55 18" CMP w/FES

STA. 3033+90.83
END 80TH ST. SW U.A.C.
BEGIN 80TH ST. SW
ASPHALT SURFACE

(U.A.C.)
Sta. 3037+08.21, 32.59' Lt.
18" X 34.50' C.M.P.
Da = 0.38 Ac

(U.A.C.)
Sta. 3036+94.28, 29.41' Lt.
18" X 32.90' C.M.P.
Da = 0.69 ac

Curve Data
Δ = 2° 43' 14.82" (RT)
D = 1° 25' 56.62"
R = 4,000.00
T = 94.99
L = 189.95
E = 1.13
e = R.C.
L = 41.00
x = 41.00
m = 12.30
DS = 40 mph

Curve Data
Δ = 5° 21' 03.06" (LT)
D = 1° 25' 56.62"
R = 4,000.00
T = 186.92
L = 373.56
E = 4.36
e = R.C.
L = 41.00
x = 41.00
m = 12.30
DS = 40 mph

0 50 FEET

SEC.34

SEC.27

80TH ST. SW

EXISTING GROUND

STA. 3033+90.83
END 80TH ST. SW U.A.C.
BEGIN 80TH ST. SW
ASPHALT RESURFACE

823.61 824.60 +3.00% 3036+97

822.01 821.69 822.12 -3.00% +3.55% 3037+80

PROP. TYPE "C" ENT. LT.

PROP. TYPE "C" ENT. RT.

U.A.C.

U.A.C.

845 840 835 830 825 820 815

Lt Rt

3024 +50 3025 +50 3026 +50 3027 +50 3028 +50 3029 +50 3030 +50 3031 +50 3032 +50 3033 +50 3034 +50 3035 +50 3036 +50 3037 +50 3038 +50 3039

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.8

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CLINTON TWP.
T-83N R-8W
SEC.28

For 16th Access Rd. Details
Refer to Sheets No. E.15

Curve Data
△ = 5° 21′ 03.06″ (LT)
D = 1° 25′ 56.62″
R = 4,000.00
T = 186.92
L = 373.56
E = 4.36
e = R.C.
L = 41.00
x = 41.00
m = 12.30
DS = 40 mph

3040 3045 3050

EXISTING ROW
PROPOSED ROW
RELOCATED 16TH AVE./ACCESS RD.
SLOPE INTERCEPT
℄ CONSTRUCTION
80TH ST. SW RESURFACE (SR80)
(SR80)
PT Sta 3040+55.52
PI Sta 3048+40.59
Sta 3038+88.88
SLOPE INTERCEPT

(U.A.C.)
Sta. 3052+10.56, 4.08′ Lt.
42″ X 48.50′ C.M.P.
Da = 76.82 a

(U.A.C.)
Sta. 3052+15.24, 4.74′ Lt.
42″ X 48.70′ C.M.P.
Da = 76.82 a

POT STA. 3054+16.63 (80TH ST. SW) =
POT STA. 2136+49.02 (16TH ACC.)

FL = 785.17
FL = 787.86 42″ CMP
FL = 788.15 42″ CMP

SEC.27

0 50 FEET

80TH ST. SW

820
815
810
805
800
795
790
Lt
Rt

EXISTING GROUND
U.A.C.
U.A.C.

3039 +50 3040 +50 3041 +50 3042 +50 3043 +50 3044 +50 3045 +50 3046 +50 3047 +50 3048 +50 3049 +50 3050 +50 3051 +50 3052 +50 3053 +50 3054

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.9

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For 16th Access Rd. Details
Refer to Sheets No. E.15

CLINTON TWP.
T-83N R-8W
SEC.28

SEC.27

RELOCATED 16TH AVE./ACCESS RD.

PROPOSED ROW

3055

STA. 3062+00.00
END 80TH ST. SW RESURFACE
BEGIN CONSTRUCTION

3060

3065

80TH ST. SW RESURFACE (SR80)

POT STA. 3054+16.63 (80TH ST. SW) =
POT STA. 2136+49.02 (16TH ACC.)

(U.A.C.)
Sta. 3059+87.50, 23.96' Rt.
18" X 39.30' C.M.P.
Da = 0.61 a

FL = 790.44 18" CMP

FL = 789.95 18" CMP

Field Tile Riser

Field Tile Riser

(U.A.C.)
Sta. 3062+03.78, 1.85' Lt.
24" X 48.70' C.M.P.
Da = 24.54 Ac

PC Sta 3061+99.73

FL = 785.45 24" CMP

PROPOSED ROW

EXISTING ROW

EX. 1ST AVE. (U.A.C.)

PROPOSED ROW

PROP. TYPE "C" ENT. LT.
Sta 3065+90.19

℄ CONSTRUCTION

EXISTING ROW

EX. 80TH ST. SW (REMOVE)

RELOCATED 80TH ST. SW (SR80)

EXISTING ROW

PROPOSED ROW

Curve Data
Δ = 8° 07' 17.08" (RT)
D = 1° 02' 30.27"
R = 5,500.00
T = 390.45
L = 779.60
E = 13.84

FL = 777.98 24" CMP

FL = 778.03 24" CMP

0 50
FEET

80TH ST. SW

EXISTING GROUND

STA. 3062+00.00
END 80TH ST. SW RESURFACE
BEGIN CONSTRUCTION
ELEV. 790.55

VPI +50.000
Elv 792.09
K = 148
Len 350.00 ft
DS = 50 mph

+0.617%

-1.743%

+25 Lt.
788.15

+0.50%
Lt. D.G.

+00 Lt.
788.52

-2.14%
Rt. D.G.

+25 Rt.
788.00

+00 Rt.
786.39

+00 Rt.
757.24

+0.60% Rt. Ditch Grade

-1.14% Rt. Ditch Grade

-2.16% Lt. Ditch Grade

PROPOSED PGL

787.39
787.53
787.13
3065+75
+1.40%
-2.00%
PROP. TYPE "C" ENT. LT.

805 800 795 790 785 780 775

Lt U.A.C. No Ditch Ditch Grade
Rt U.A.C. Ditch Grade

790.55 790.70 790.86 791.01 791.14 791.23 791.28 791.29 791.25 791.18 791.06 790.90 790.69 790.45 790.16 789.83 789.45 789.04 788.60 788.17 787.73 787.32 786.95 786.62 786.34 786.09 785.90 785.74 785.63

3054 +50 3055 +50 3056 +50 3057 +50 3058 +50 3059 +50 3060 +50 3061 +50 3062 +50 3063 +50 3064 +50 3065 +50 3066 +50 3067 +50 3068 +50 3069

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.10

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(REMOVE)
Sta. 3069+33.26, 68.27' Lt.
24" X 40.10' C.M.P.
Da = 36.98 a

CLINTON TWP.
T-83N R-8W
SEC.28

SEC.28

EX. 80TH ST. SW (U.A.C.)

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

FL = 777.98 24" CMP

EXISTING ROW

FUTURE ROW

3070

3075

3080

PC Sta 3074+70.33

PT Sta 3083+30.67

FUTURE ROW

SLOPE INTERCEPT

℄ CONSTRUCTION

EXISTING ROW

PT Sta 3069+79.33

RELOCATED 80TH ST. SW (SR80)

+75 PROP. TYPE
"C" ENT. LT.

Curve Data
Δ = 8° 57' 45.05" (LT)
D = 1° 02' 30.27"
R = 5,500.00
T = 431.05
L = 860.34
E = 16.87
e = 2.28%
L = 53.00
x = 48.00
m = 15.90
DS = 50 mph

PI Sta 3079+01.38

PROPOSED ROW

PROPOSED ROW

+20 PROP. TYPE
"C" ENT. RT.

SLOPE INTERCEPT

PROPOSED ROW

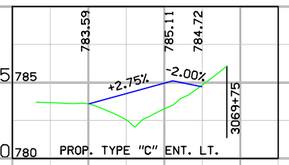
(REMOVE)
Sta. 3069+63.52, 20.45' Rt.
30" X 135.20' R.C.P.
Da = 33.26 a

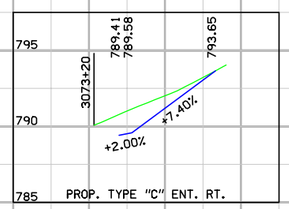
Sta. 3069+55.12
Install Triple 24"x190' 1101 RCP
Skew = 22.3° Rt. Ahd.
F.L. = Lt. 778.50
Rt. 780.58

SEC.27

0 50
FEET

80TH ST. SW





795 790 785 780 775 770 765

-1.743%
-1.14% Rt. D.G.
+50 Rt. 781.24
+3.45% Lt. D.G.
+00 Lt. 781.32
-2.16% Lt. D.G.
+36 Lt. 779.11

VPI +50.000
Elv 783.37
K = 144
Len 500.00 ft
DS = 50 mph

+1.720%
+1.65% Rt. Ditch Grade
+7.15% Rt. D.G.
+00 Rt. 787.00
+20 Rt. 788.43
PROPOSED PGL
-0.21% Rt. Ditch Grade
+00 Rt. 787.65
-2.28% Rt. Ditch Grade
+50 Rt. 784.22
EXISTING GROUND

VPI +75.000
Elv 795.84
K = 87
Len 500.00 ft
DS = 50 mph

-4.000%

VPI +25.000
Elv 773.84
K = 104
Len 300.00 ft
DS = 50 mph

-1.104%
+50 Rt. 770.02
-0.61% Lt. Ditch Grade

Lt Ditch Grade 2' Ditch
Rt Ditch Grade 2' Ditch Ditch Grade

785.56 785.54 785.56 785.62 785.73 785.87 786.07 786.30 786.58 786.90 787.27 787.67 788.10 788.53 788.96 789.39 789.82 790.25 790.68 791.11 791.54 791.94 792.26 792.51 792.69 792.80 792.84 792.80 792.70 792.52 792.27 791.95 791.56 791.09 790.56 789.95 789.27 788.52 787.70 786.81 785.84 784.84 783.84 782.84 781.84 780.84 779.84 778.87 777.97 777.12 776.33 775.60 774.93 774.32 773.78 773.29 772.86 772.49 772.19 771.91

3069 +50 3070 +50 3071 +50 3072 +50 3073 +50 3074 +50 3075 +50 3076 +50 3077 +50 3078 +50 3079 +50 3080 +50 3081 +50 3082 +50 3083 +50 3084

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.11

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SEC.28

EX. 80TH ST. SW (U.A.C.)

NOTE: AREA RESTRICTED. DO NOT DISTURB.

NOTE: AREA RESTRICTED. DO NOT DISTURB.

NOTE: AREA RESTRICTED. DO NOT DISTURB.

CLINTON TWP.
T-83N R-8W
SEC.21

EX. 80TH ST. SW (REMOVE)

FUTURE ROW

SLOPE INTERCEPT

Curve Data
Δ = 54° 57′ 28.38″ (RT)
D = 27° 17′ 01.34″
R = 210.00
T = 109.22
L = 201.43
E = 26.70
e = 3.00%
DS = 25 mph

EXISTING ROW

PT Sta 3092+30.67

3085

SLOPE INTERCEPT

FUTURE ROW

RELOCATED 80TH ST. SW (SR80)

E AVENUE

PC Sta 3088+39.66

PT Sta 3090+42.15

FUTURE ROW

PC Sta 3091+15.82

PT Sta 3093+17.25

EXISTING ROW

EX. 80TH ST. SW (U.A.C.)

STA. 3093+92.55
END CONSTRUCTION

SLOPE INTERCEPT

℄ CONSTRUCTION

SLOPE INTERCEPT

POT STA. 3086+98.80 (80TH ST. SW)
POT STA. 2579+01.40 (E AVE.)

PI Sta 3089+49.56

Curve Data
Δ = 55° 14′ 54.08″ (LT)
D = 27° 17′ 01.34″
R = 210.00
T = 109.90
L = 202.50
E = 27.02
e = 3.00%
DS = 25 mph

EX. MORGAN CREEK

PROPOSED ROW

PROPOSED ROW

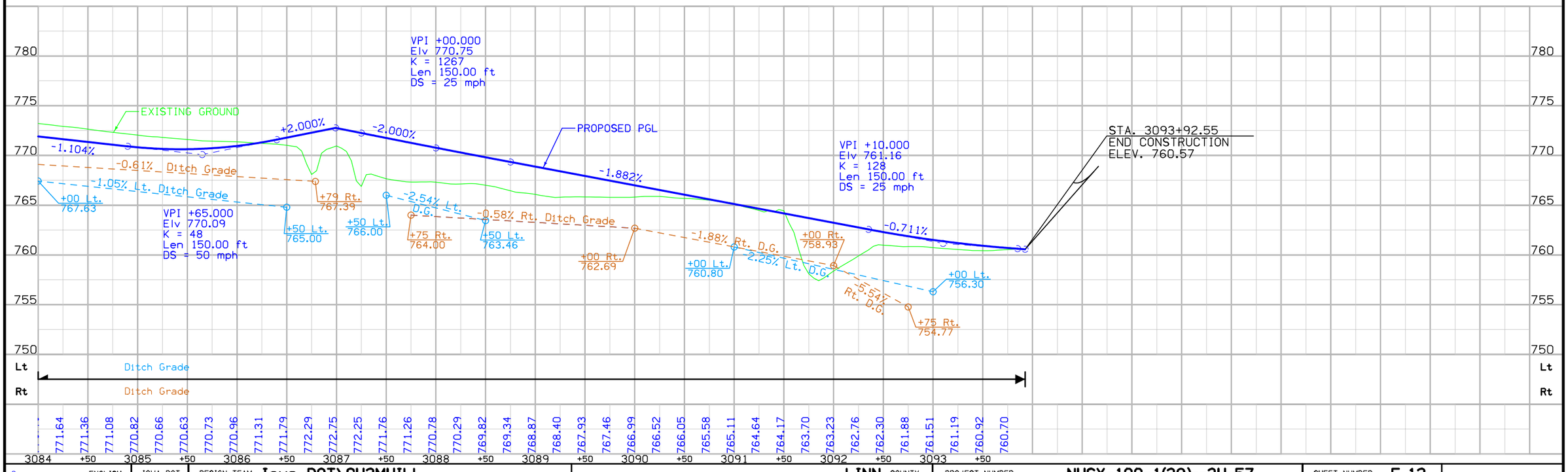
SEC.27

SEC.22

For E Avenue Road Details
Refer to Sheets No. E.21-E.22

0 50 FEET

80TH ST. SW



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.12	

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For Main Line Details
Refer to Sheet No. D.2-D.3

For Interchange Grading
Details Refer to Sheet K.32

For Interchange Geometrics
Refer to Sheet No. K.6 & K.19

CLINTON TWP.
T-83N R-8W
SEC.28

SEC.33

EXISTING ROW

EXISTING ROW

EX. 16TH AVE. (U.A.C.)

EX. 16TH AVE. TO US 30 WB (U.A.C.)

F08

STA. 2100+00.0
BEGIN CONSTRUCTION

PC Sta 2100+00.00

2100

+00.22 PROP.
TYPE "C" ENT. LT.

PROPOSED ROW

SLOPE INTERCEPT

2105

℄ CONSTRUCTION

PT Sta 2109+39.63

Curve Data
Δ = 89° 43' 39.81" (LT)
D = 9° 32' 57.47"
R = 600.00
T = 597.16
L = 939.63
E = 246.52
e = N.C.
DS = 30 mph

RELOCATED 16TH AVE./ACCESS RD. (SR16ACC)

IA 100 WB TO US 30 WB (US 30 RAMP A)

IA 100 WB TO US 30 EB
(US 30 RAMP H)

(REMOVE)

(REMOVE)

0 FEET 50

PI Sta 2105+97.16
(POINT OFF SHEET)

RELOCATED 16TH AVE.
/ ACCESS RD.

839.69
838.97
841.11
2100+22

+4.28%
-4.00%
-0.650%

PROP. TYPE "C" ENT. LT.

+00 Lt.
838.36

+00 Rt.
835.40

-3.46% Rt. Ditch Grade

+00 Lt.
834.90

-2.00% Rt. Ditch Grade

VPI +00.000
Elv 838.79
K = 86
Len 200.00 ft
DS = 30 mph

+50 Rt.
826.40

-2.965%

-2.97% Rt. Ditch Grade

PROPOSED PGL

EXISTING GROUND

Ditch Grade | 4' Ditch | 2' Toe Ditch | Ditch Grade

Lt / Rt

840.09 839.93 839.77 839.60 839.44 839.24 838.97 838.63 838.21 837.72 837.16 836.53 835.82 835.08 834.34 833.60 832.86 832.12 831.38 830.64 829.89 829.15 828.41 827.67 826.93 826.19 825.45 824.71 823.96 823.22 822.48 821.74 821.00 820.26 819.52 818.77 818.03

2100 +50 2101 +50 2102 +50 2103 +50 2104 +50 2105 +50 2106 +50 2107 +50 2108 +50 2109

840 835 830 825 820 815 810

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.13	

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For Main Line Details Refer to Sheets No. D.4-D.5	For Interchange Grading Details Refer to Sheet K.32	For Interchange Geometrics Refer to Sheets No. K.7 & K.19

CLINTON TWP.
T-83N R-8W
SEC.28

Curve Data
△ = 89° 34' 21.26" (RT)
D = 28° 38' 52.40"
R = 200.00
T = 198.51
L = 312.67
E = 81.79
e = N.C.
DS = 20 mph

PT Sta 2109+39.63
PI Sta 2123+81.30
PC Sta 2121+82.79
PT Sta 2124+95.46

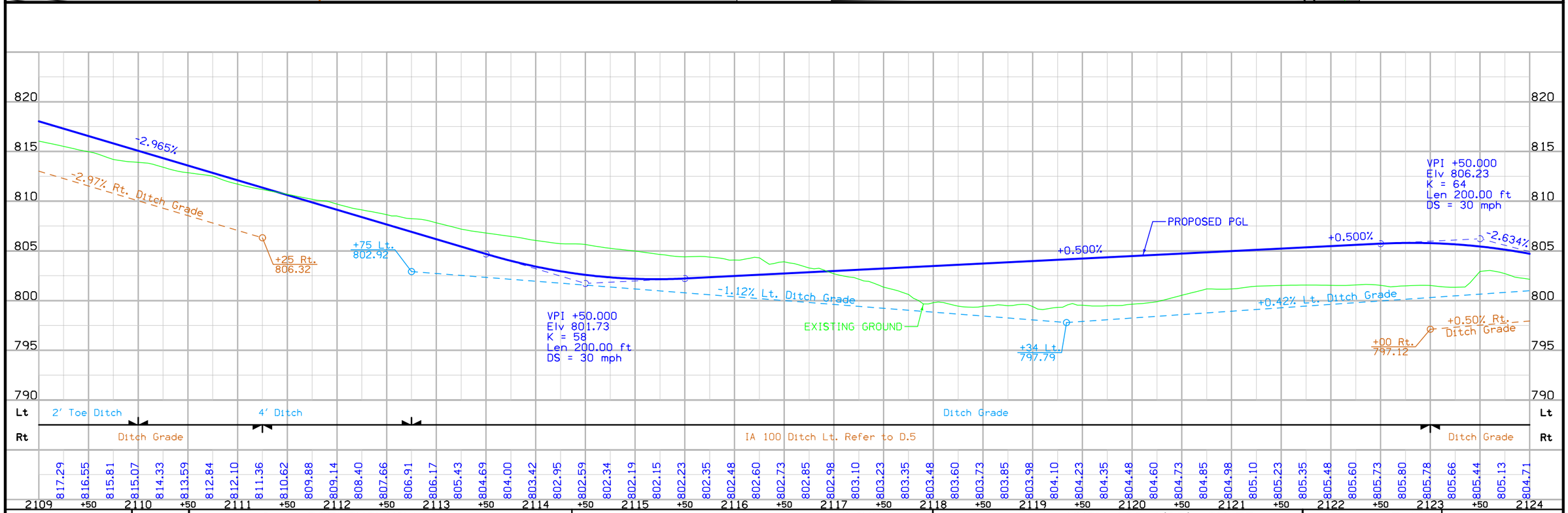
2110 2115 2120

℄ CONSTRUCTION
SLOPE INTERCEPT
PROPOSED ROW
RELOCATED 16TH AVE./ACCESS RD. (SR16ACC)
FUTURE UTILITY CASING PIPE
IA 100 WB TO US 30 WB (US 30 RAMP A)
WESTBOUND IA 100

Sta. 2118+05.73
Install 59"x36"x128' 1101 RCP
Skew = 61.8° Rt. Ahd.
F.L. = Lt. 797.79
Rt. 796.85

0 50 FEET

RELOCATED 16TH AVE. / ACCESS RD.



C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.14

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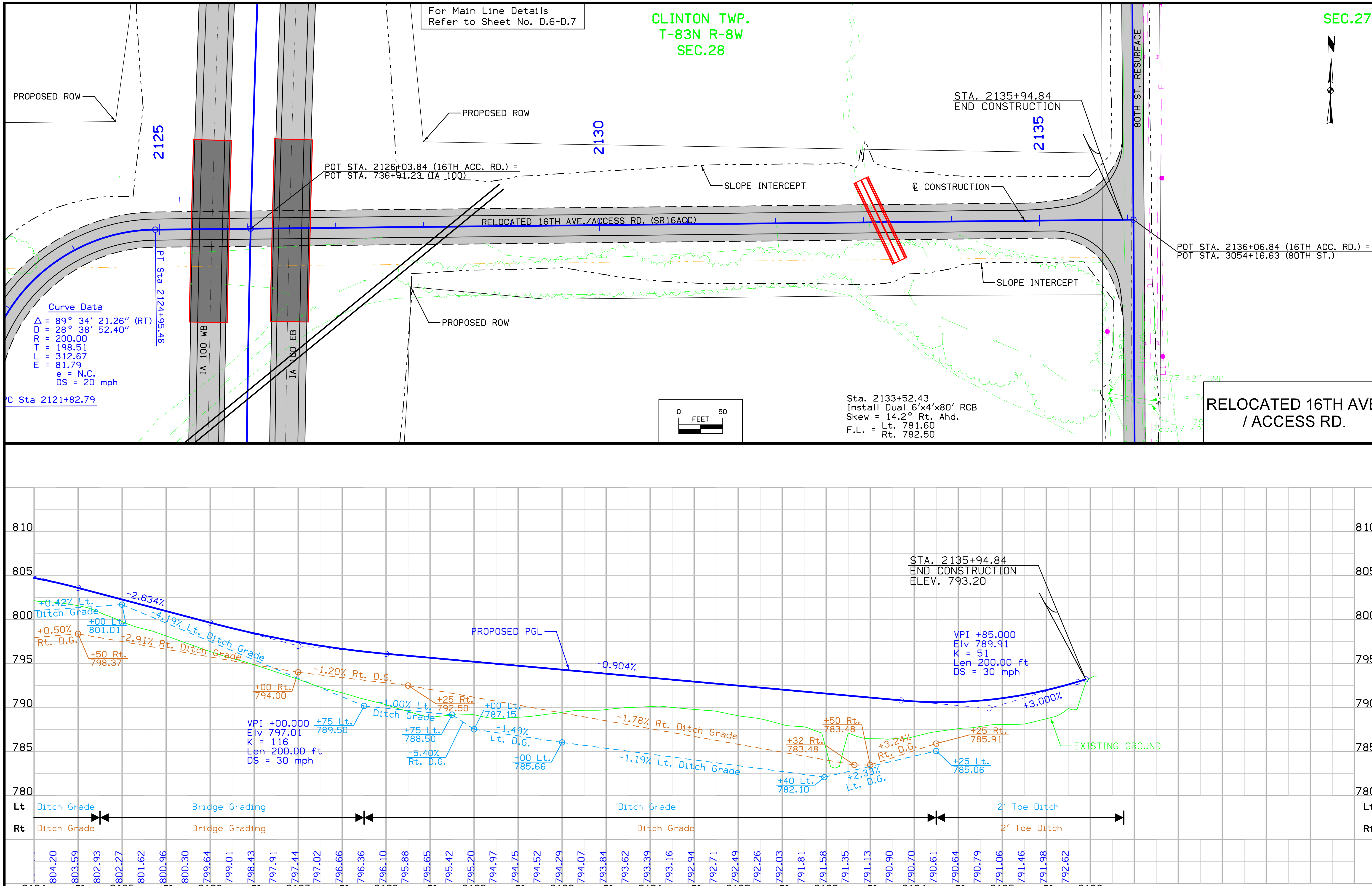

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.15

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SEC.28

For 80th St. SW Details
Refer to Sheet No. E.10

CLINTON TWP.
T-83N R-8W
SEC.27

EXISTING ROW

SLOPE INTERCEPT

RELOCATED 80TH ST. SW 9000

EXISTING ROW

SLOPE INTERCEPT

EXISTING ROW

PROPOSED ROW

PROPOSED ROW

Field Tile Riser

78" RE 24" CMP

24" CMP

EX. BELLAMY ST. NW

PI Sta 9002+66.40

EX. 1ST. AVE. NW (SR1ST) (U.A.C.)

PC Sta 9001+43.27

PT Sta 9003+82.96

Curve Data
Δ = 32° 18' 48.09" (RT)
D = 9° 32' 57.47"
R = 425.00
T = 123.13
L = 239.69
E = 17.48
e = N.C.
DS = 40 mph

0 50 FEET

1ST AVENUE

EXISTING GROUND

810
805
800
795
790
785
780
Lt
Rt

9000 +50 9001 +50 9002 +50 9003 +50 9004

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	E.16

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For Profile Details
Refer to Sheet No. E.18

For Berger Lane Details
Refer to Sheets No. E.23-E.28

CLINTON TWP.
T-83N R-8W
SEC.21

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

BERGER LANE

SLOPE INTERCEPT

FUTURE ROW

PROPOSED ROW

STA. 2557+25.00
BEGIN CONSTRUCTION
MATCH EXISTING GRADE

2555

2560

POT Sta 2550+00.94

℄ CONSTRUCTION

E AVENUE (SREAVE)

Gravel EX. E AVE. (U.A.C)

FL = 773.67 18" CMP

FL = 772.61 18" CMP

FL = 765.77 30" CMP

FL = 765.01 30" CMP

POT STA. 2559+91.93 (E AVE.) =
POT STA. 4059+91.95 (BERGER LN.)

+00 PROP.
TYPE "C" ENT.
SLOPE INTERCEPT
PROPOSED ROW

(REMOVE)
Sta. 2576+33.78, 54.70' Rt.
18" X 41.60' C.M.P.
Da = 0.69 a

Gar.

Gar.

Shed

E AVENUE

SEC.28

0 50
FEET

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	E.17

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STA. 2557+25.00
BEGIN CONSTRUCTION
ELEV. 769.08

EXISTING GROUND

PROPOSED PGL

-1.384%

+3.500%

+25 Rt.
765.52

-1.25%
Rt. D.G.

+75 Rt.
764.90

-2.00% Rt. Ditch Grade

-1.87%
Lt. D.G.

+25 Lt.
763.62

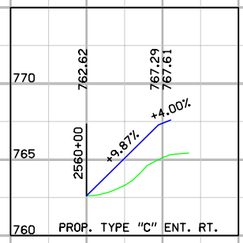
+75 Lt.
762.69

-0.80% Lt. Ditch Grade

+75 Rt.
758.90

-0.60% Rt. D.G.

VPI +75.000
Elv 764.24
K = 102
Len 500.00 ft
DS = 50 mph



E AVENUE

Ditch Grade

Ditch Grade

Lt	769.08	768.74	768.39	768.05	767.70	767.38	767.13	766.94	766.80	766.73	766.72	766.77	766.89	767.06	767.29	767.59	767.94	768.36	768.84	769.38
Rt																				

2557 +50 2558 +50 2559 +50 2560 +50 2561 +50 2562

For Bridge Options
Refer to V Sheets

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

(REMOVE)
Sta. 2568+87.62
10' X 6' X 42.7' R.C.B.
Da = 449 a

CLINTON TWP.
T-83N R-8W
SEC.21

E AVENUE RAMP D

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

FUTURE ROW

PROPOSED ROW

SLOPE INTERCEPT

STA. 2562+60.90, 12.00' LT.
BEGIN 50:1 SHIFTING TAPER

RETAINING
WALL 2070

FUTURE UTILITY
CASING PIPE

℄ CONSTRUCTION

E AVE. RAMP A

2565

STA. 2566+60.90, 20.00' LT.
END 50:1 SHIFTING TAPER

CONCRETE BARRIER

2570

STA. 2570+37.90, 4.00' RT.
END PAINTED TAPER

SLOPE INTERCEPT

FUTURE ROW

2575

PROPOSED ROW

STA. 2576+63.43, 4.00' LT.
END PAINTED TAPER

EX. 80TH ST. SW (REMOVE)

Sta. 2576+63.43

E AVE. (SREAVE)

10:1 TAPER

10:1 TAPER

10:1 TAPER

STA. 2562+60.90, 12.00' LT.
BEGIN 50:1 SHIFTING TAPER

POT STA. 2566+50.09 (E AVE.) =
POT STA. 21769+14.35 (E AVE. RAMP A) =
POT STA. 23769+61.41 (E AVE. RAMP C)

EX. MORGAN CK.

PROPOSED ROW

SLOPE INTERCEPT

STA. 2566+17.90, 4.00' RT.
BEGIN PAINTED TAPER

STA. 2566+60.90, 20.00' RT.
END 50:1 SHIFTING TAPER

E AVE. RAMP C

WESTBOUND IA 100

IA 100 (ML100)

EASTBOUND IA 100

POT STA. 2569+79.53 (E AVE.) =
POT STA. 769+79.53 (IA 100)

E AVE. RAMP B

STA. 2575+43.52, 8.00' RT.
BEGIN PAINTED TAPER

POT STA. 2572+95.44 (E AVE.) =
POT STA. 22770+42.89 (E AVE. RAMP B) =
POT STA. 23768+71.59 (E AVE. RAMP C)

(REMOVE)
Sta. 2576+33.78, 54.70' Rt.
18" X 41.60' C.M.P.
Da = 0.69 a

PROPOSED ROW

SLOPE INTERCEPT

EX. 80TH ST. SW (U.A.C.)

Sta. 2573+75.00
Install 10'x6'x210' RCB
F.L. = Lt. 754.20
Rt. 756.87

0 FEET 50

SEC.28

For Profile Details
Refer to Sheet No. E.20

For Retaining Wall Details
Details Refer to Sheet V.8

For Interchange Geometrics
Refer to Sheets No. K.21-K.28

For Main Line Details
Refer to Sheet No. D.10-D.11

E AVENUE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.19

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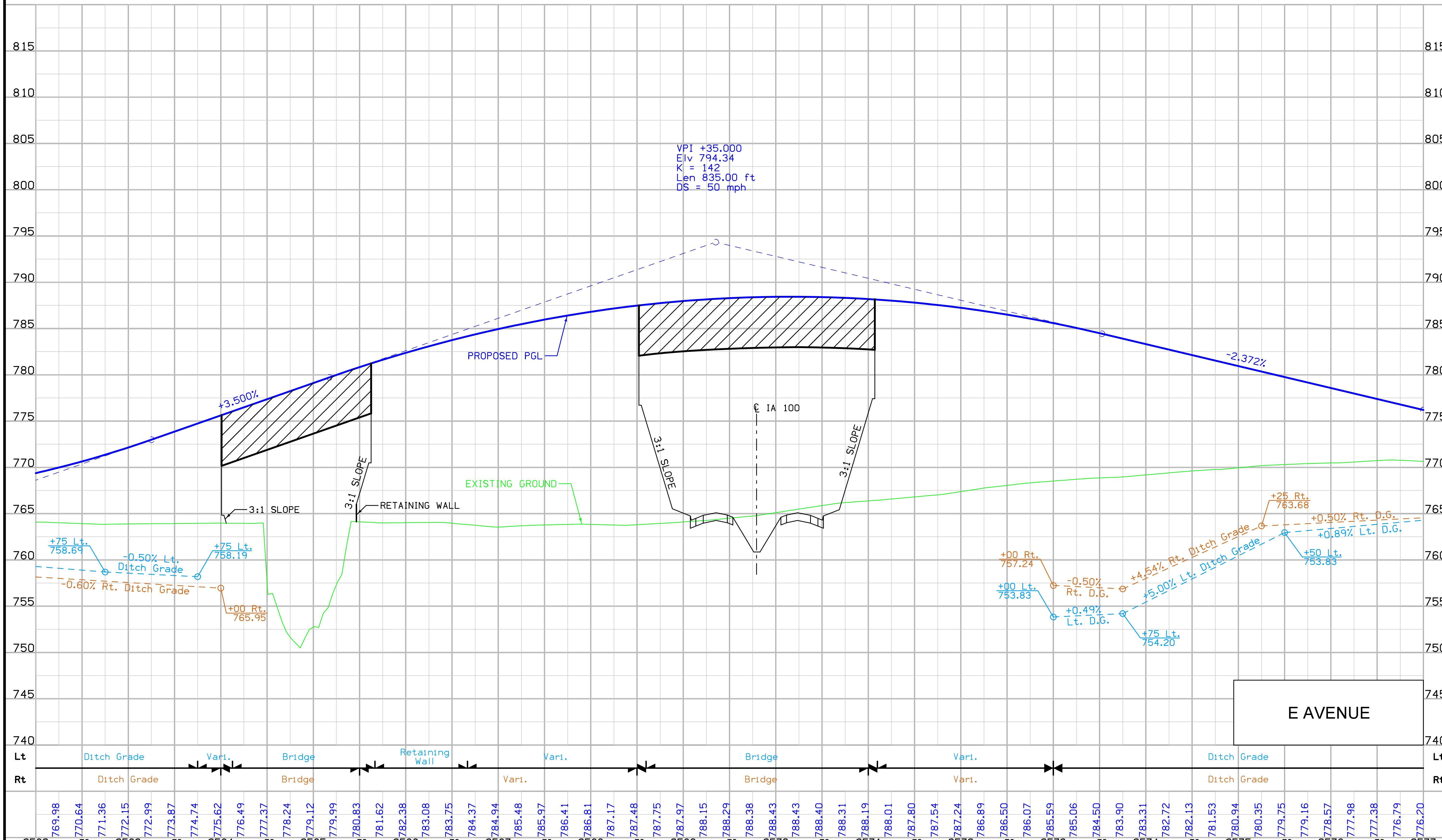

C	ENGLISH	IOWA DOT	DESIGN TEAM **Iowa DOT\CH2MHILL**	**LINN** COUNTY	PROJECT NUMBER **NHSX-100-1(39)--3H-57**	SHEET NUMBER **E.20**

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For Profile Details Refer to Sheet No. E.22	For 80th St. SW Details Refer to Sheets No. E.12-E.13	For Retaining Wall Details Details Refer to Sheet V.9

CLINTON TWP.
T-83N R-8W
SEC.22

N

SLOPE INTERCEPT

EX. 80TH ST. SW (REMOVE)

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

FUTURE ROW

POT STA. 2579+01.40 (E AVE.) =
POT STA. 3086+98.80 (80TH ST. SW)

2580

PROPOSED ROW

STA. 2581+14.51, 20.00' LT.
BEGIN 50:1 SHIFTING TAPER

STA. 2582+14.39, 6.00' LT.
END PAINTED TAPER

℄ CONSTRUCTION

2585

STA. 2581+14.51, 12.00' LT.
END 50:1 SHIFTING TAPER

POT Sta 2589+91.37

766.20 42"W x 30"H CMP ARCH

766.67 42"W x 30"H CMP ARCH

10:1 TAPER

E AVE. (SREAVE)

EX. E AVE. (U.A.C)

FL = 773.02 24" CMP

FL = 772.44 24" CMP

STA. 2581+14.39, 4.00' RT.
BEGIN PAINTED TAPER

STA. 2581+14.51, 20.00' RT.
BEGIN 50:1 SHIFTING TAPER

STA. 2585+14.51, 12.00' RT.
END 50:1 SHIFTING TAPER

STA. 2585+14.51
END CONSTRUCTION
MATCH EXISTING GRADE

RETAINING WALL 2080

PROPOSED ROW

(REMOVE)
Sta. 2576+61.32, 31.78' Rt.
42" X 30" X 41.60' C.M.P. Arch
Da = 52.23 a

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

FUTURE ROW

FL = 767.82 24" CMP

FL = 768.30 24" CMP

EX. 80TH ST. SW (U.A.C.)

RELOCATED 80TH ST. SW

SLOPE INTERCEPT

Sta. 2580+00.00
Install Dual 44"x27"x74' 1101 RCP
F.L. = Lt. 766.90
Rt. 767.45

SEC.27

0 50
FEET

E AVENUE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.21

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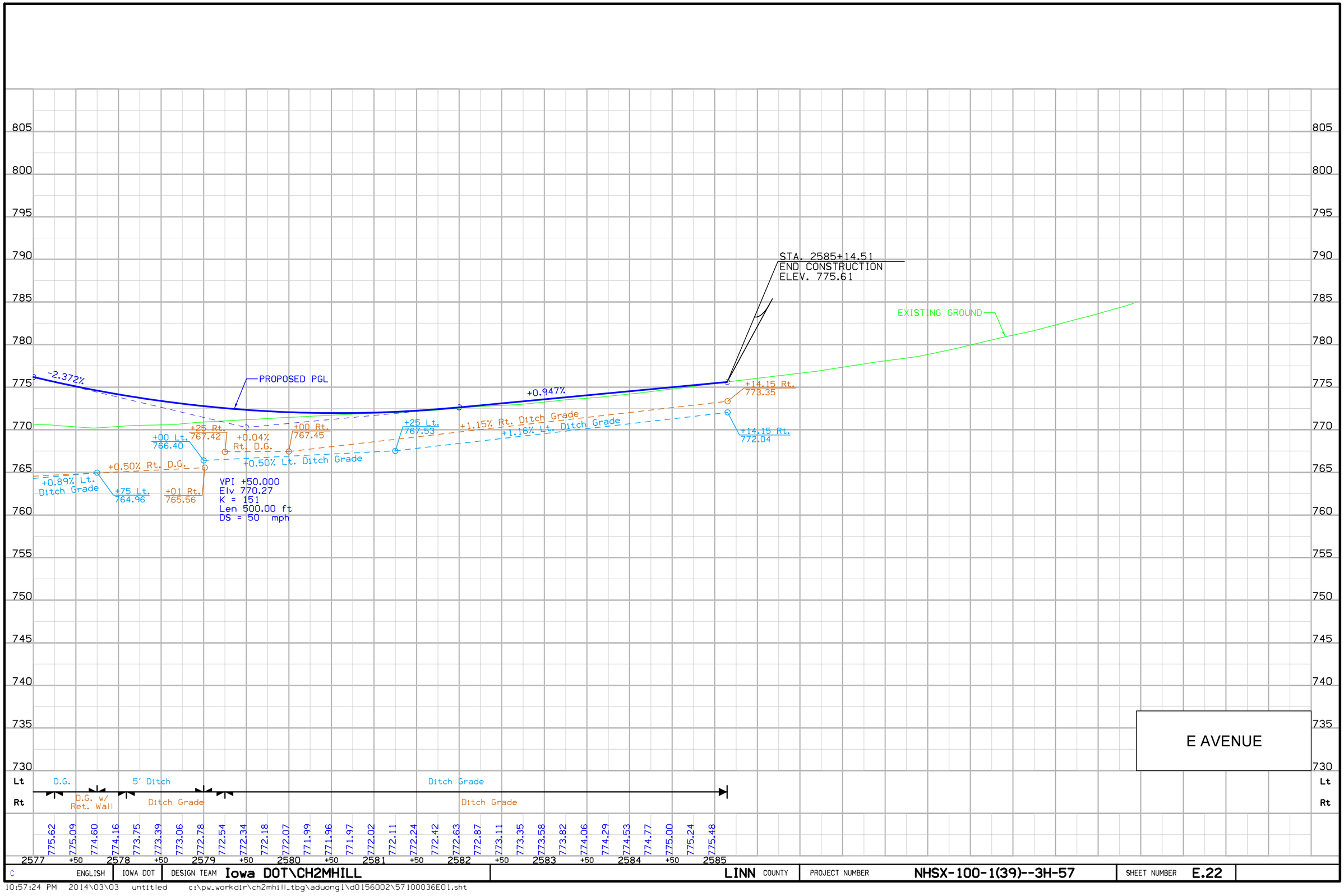

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER E.22

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SEC.28

For Profile Details	For E Avenue Road Details
Refer to Sheet No. E.24	Refer to Sheet No. E.17-E.19

CLINTON TWP.
T-83N R-8W
SEC.21

Sta. 4060+46.50
Install Triple 52"x32"x30' 1101 RCP
Skew = 2.6° Rt. Ahd.
F.L. = Lt. 761.22
Rt. 760.50

EXISTING ROW

EXISTING ROW

PROPOSED ROW

PROPOSED ROW

POT STA. 4059+91.95 (BERGER LN.) =
POT STA. 2559+91.93 (E AVE.)

STA. 4060+13.95 (BERGER LN.)
STA. 2559+91.93, 22.00' LT. (E AVE.)
BEGIN CONSTRUCTION

SLOPE INTERCEPT

PI Sta 4066+41.75

℄ CONSTRUCTION

BERGER LANE (SRBERGR)

PC Sta 4064+63.48

PT Sta 4068+13.53

PC Sta 4070+73.66

Curve Data
Δ = 26° 32' 13.24" (LT)
D = 7° 38' 21.97"
R = 750.00
T = 176.86
L = 347.37
E = 20.57
e = N.C.
DS = 30 mph

+35 PROP. ~~TYPE~~ "C" ENT.

Curve Data
Δ = 26° 44' 31.13" (RT)
D = 7° 38' 21.97"
R = 750.00
T = 178.27
L = 350.05
E = 20.90
e = N.C.
DS = 30 mph

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

SLOPE INTERCEPT

PI Sta 4072+50.52

FUTURE ROW

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

Sta. 4066+76.70
Install Dual 6'x4'x36' RCB
Skew = 6.4° Lt. Ahd.
F.L. = Lt. 767.51
Rt. 766.28

PROPOSED ROW

PROPOSED ROW

FUTURE ROW

0 FEET 50

BERGER LANE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.23

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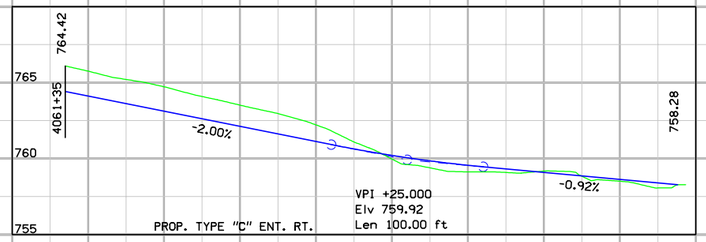

STA. 4060+13.95
BEGIN CONSTRUCTION
ELEV. 766.11

EXISTING GROUND

PROPOSED PGL

VPI +25.000
Elv 778.80
K = 67
Len 200.00 ft
DS = 30 mph

+4.710%

-4.000%

+1.742%

+0.83% Lt. Ditch Grade

+0.50% Rt. Ditch Grade

+2.55% Lt. Ditch Grade

-0.80% Lt. D.G.

-3.72% Rt. D.G.

+0.55% Lt. Ditch Grade

+0.83% Rt. Ditch Grade

+2.33% Lt. D.G.

+5.00% Rt. Ditch Grade

+25 Lt. 761.22

+50 Rt. 760.82

VPI +30.000
Elv 761.47
K = 39
Len 225.00 ft
DS = 30 mph

+50 Rt. 761.82

+25 Lt. 764.54

+75 Lt. 768.36

+81 Lt. 767.51

+25 Rt. 767.74

+72 Rt. 766.28

+75 Lt. 769.14

+00 Rt. 768.99

+50 Lt. 770.88

+00 Rt. 778.99

BERGER LANE

Lt Med Rt	Vari.	Ditch Grade	4' Ditch	Ditch Grade	Ditch Grade	2' Ditch	Lt Med Rt

4060	+50	4061	+50	4062	+50	4063	+50	4064	+50	4065	+50	4066	+50	4067	+50	4068	+50	4069	+50	4070	+50	4071	+50	4072	+50	4073
765.68	764.80	764.09	763.54	763.14	762.91	762.83	762.92	763.16	763.56	763.99	764.43	764.87	765.30	765.74	766.17	766.61	767.04	767.48	767.91	768.35	768.78	769.22	769.66	770.09	770.53	770.96	771.40	771.83	772.27	772.70	773.14	773.57	774.01	774.45	774.88	775.32	775.75	776.19	776.62	777.06	777.54	778.11	778.78	779.54	780.39	781.34	782.38	783.51	784.69	785.87	787.04

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.24

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For Profile Details
Refer to Sheet No. E.26

CLINTON TWP.
T-83N R-8W
SEC.21

N

Curve Data
Δ = 26° 32' 13.24" (LT)
D = 7° 38' 21.97"
R = 750.00
T = 176.86
L = 347.37
E = 20.57
e = N.C.
DS = 30 mph

PT Sta 4074+21.03

4075

4080

4085

PROPOSED ROW

℄ CONSTRUCTION

SLOPE INTERCEPT

BERGER LANE (SRBERGR)

FUTURE ROW

+50 PROP. TYPE "C" ENT.

SLOPE INTERCEPT

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

+50 PROP.
TYPE "C" ENT.

0 FEET 50

BERGER LANE

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER E.25

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VPI +10.000
Elv 837.93
K = 107
Len 700.00 ft
DS = 30 mph

EXISTING GROUND

VPI +25.000
Elv 814.65
K = 77
Len 200.00 ft
DS = 30 mph

VPI +00.000
Elv 801.17
K = 156
Len 200.00 ft
DS = 30 mph

+5.98%
+4.71%
+3.39%
-3.16%

+4.30% Lt. Ditch Grade
+75 Lt. 812.70

+3.57% Lt. Ditch Grade
+25 Lt. 818.06

+1.04% Lt. Ditch Grade
+50 Lt. 827.00
+25 Lt. 828.81

PROPOSED PGL

+4.30% Lt. Ditch Grade
+75 Lt. 808.40

+6.00% Lt. Ditch Grade
+75 Lt. 802.40

+5.00% Lt. Ditch Grade
+00 Lt. 798.65

+8.50% Lt. Ditch Grade
+25 Lt. 792.27

4087+50 829.39 831.69 +4.90%
PROP. TYPE "C" ENT. RT.

4073+50 789.01 788.80 791.93 -3.00% +5.70%
PROP. TYPE "C" ENT. RT.

BERGER LANE

Lt Med Rt: 2' Ditch | Ditch Grade | 2' Ditch | Ditch Grade | 2' Ditch

2' Ditch

4073	+50	4074	+50	4075	+50	4076	+50	4077	+50	4078	+50	4079	+50	4080	+50	4081	+50	4082	+50	4083	+50	4084	+50	4085	+50	4086	+50	4087	+50	4088
788.22	789.40	790.57	791.75	792.93	794.11	795.28	796.46	797.66	798.90	800.17	801.49	802.85	804.25	805.68	807.16	808.66	810.12	811.49	812.79	814.00	815.13	816.18	817.16	818.05	818.90	819.75	820.60	821.45	822.30	823.14	823.99	824.84	825.69	826.53	827.32	828.05	828.71	829.32	829.87	830.37	830.80	831.18	831.49	831.75	831.95	832.09	832.17	832.20	832.16	832.07	831.92	831.71	831.44	831.11	830.73	830.28	829.78	829.22	828.60

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.26

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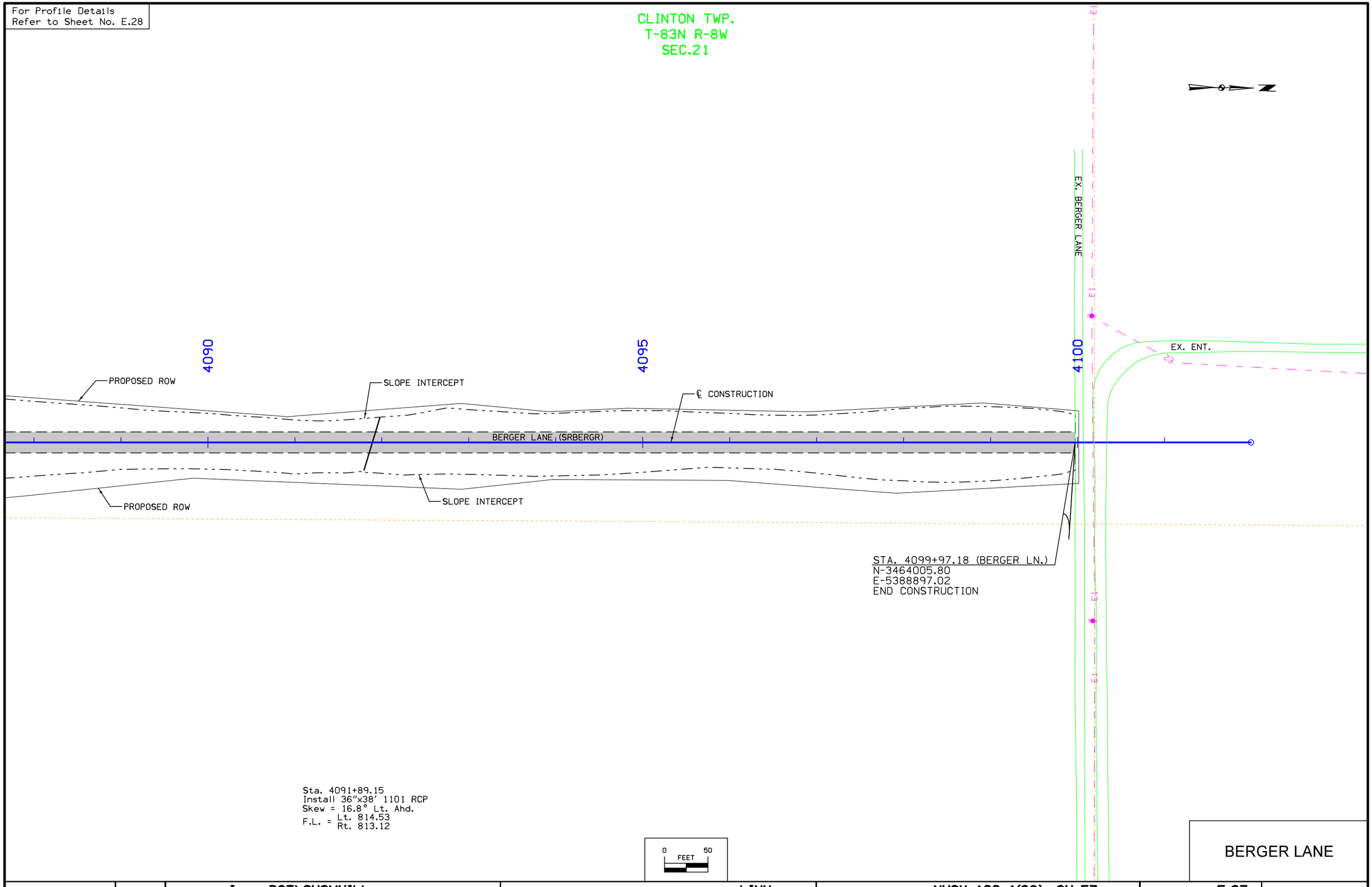
For Profile Details
Refer to Sheet No. E.28

CLINTON TWP.
T-83N R-8W
SEC.21



BERGER LANE

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER E.27

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STA. 4099+97.18
END CONSTRUCTION
ELEV. 839.69

PROPOSED PGL

VPI +50.000
Elv 817.70
K = 35
Len 200.00 ft
DS = 30 mph

-3.16%
+2.59%
-4.20% Rt. Ditch Grade
+3.29% Rt. Ditch Grade
-2.26% Lt. D.G.
+5.17% Lt. D.G.
-0.89% Rt. D.G.
+0.60% Lt. D.G.
+0.40% Rt. D.G.

+00 Rt. 822.21
+00 Lt. 819.05
+00 Lt. 814.53
+00 Rt. 813.81
+79 Rt. 813.11
+25 Rt. 813.30
+75 Lt. 814.98
+75 Lt. 820.15
+50 Rt. 827.29

EXISTING GROUND

BERGER LANE

Lt Med Rt	2' Ditch	Ditch Grade	2' Ditch

4088	+50	4089	+50	4090	+50	4091	+50	4092	+50	4093	+50	4094	+50	4095	+50	4096	+50	4097	+50	4098	+50	4099	+50	4100
827.92	827.18	826.39	825.60	824.81	824.02	823.23	822.44	821.65	820.86	820.16	819.64	819.30	819.14	819.16	819.36	819.74	820.30	820.95	821.60	822.24	822.89	823.54	824.19	824.84	825.49	826.14	826.79	827.44	828.09	828.73	829.38	830.03	830.68	831.33	831.98	832.63	833.28	833.93	834.57	835.22	835.87	836.52	837.17	837.82	838.47	839.12

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.28

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CLINTON TWP.
T-83N R-8W
SEC.16

EASTBOUND IA 100

IA 100 (ML 100)

EASTBOUND IA 100

IA 1

IA

3100

3105

℄ CONSTRUCTION

EXISTING ROW

EX. 80TH ST. SW

80TH ST. NORTH (SR80N)

PROPOSED ROW

EXISTING ROW

SLOPE INTERCEPT

PC Sta 3100+45.32

PI Sta 3103+47.10

PT Sta 3106+48.38

Curve Data
Δ = 5° 45′ 31.68″ (RT)
D = 0° 57′ 17.75″
R = 6,000.00
T = 301.78
L = 603.06
E = 7.58
e = R.C.
L = 48.00
x = 48.00
m = 14.40
DS = 50 mph

STA. 3100+45.32 (80TH ST. SW)
STA. 833+00.73, 146.69′ RT. (IA 100)
BEGIN CONSTRUCTION

(REMOVE)
Sta. 3104+56.26, 16.74′ Lt.
36″ X 36.70′ C.M.P.
Da = 28.45 a

Sta. 3104+58.00
Install 59″x36″x34′ 1101 RCP
F.L. = Lt. 779.98
Rt. 782.96

+50 PROP. TYPE "C" ENT.

782.13 36" CMP

782.71 36" CMP

For Main Line Details Refer to Sheet No. D.18-D.19

SEC.15

0 50 FEET

80TH ST. NORTH

STA. 3100+45.32
BEGIN CONSTRUCTION
ELEV. 791.35

VPI +75.000
Elv 784.38
K = 131
Len 500.00 ft
DS = 50 mph

-2.114%

+1.695%

-0.40% Rt. Ditch Grade

PROPOSED PGL

EXISTING GROUND

+45 Rt. 789.03

-4.55% Rt. Ditch Grade

+00 Rt. 786.54

+75 Rt. 783.69

+58 Rt. 782.96

+1.02% Rt. Ditch Grade

+50 Rt. 783.90

+75 Rt. 787.50

+2.59% Rt. Ditch Grade

+50 Rt. 789.44

PROP. TYPE "C" ENT. RT.
3108+50
791.50
791.14
792.79
795
790
-3.00%
+3.30%

Refer to Mainline 100 Ditch Grade Sheets D.19

D.G. | 2′ Ditch | Ditch Grade | 2′ Ditch | Ditch Grade

805 800 795 790 785 780 775 Lt Rt

791.25 790.72 790.19 789.67 789.16 788.70 788.29 787.93 787.62 787.35 787.13 786.96 786.84 786.76 786.73 786.75 786.82 786.93 787.09 787.30 787.56 787.86 788.22 788.62 789.04 789.46 789.89 790.31 790.74 791.13 791.45 791.70 791.89 792.01 792.06

3100 +50 3101 +50 3102 +50 3103 +50 3104 +50 3105 +50 3106 +50 3107 +50 3108 +50 3109

C | ENGLISH | IOWA DOT | DESIGN TEAM Iowa DOT\CH2MHILL | LINN COUNTY | PROJECT NUMBER NHSX-100-1(39)--3H-57 | SHEET NUMBER E.29

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CLINTON TWP.
T-83N R-8W
SEC.16

IA 100 WB

EXISTING ROW

IA 100 EB

311D

311B

EX. 80TH ST. SW

℄ CONSTRUCTION

80TH ST. NORTH (SR80N)

POT Sta 3117+31.63

POT STA. 3117+31.63 (80TH ST.) =
POT STA. 1087+63.06 (EX. ELLIS RD.)

EXISTING ROW

SLOPE INTERCEPT

PROPOSED ROW

RCP

EXISTING ROW

EX. ELLIS RD. (U.A.C.)

EX. SILVER CK.

STA. 3117+21.50 (80TH ST. NORTH)
STA. 849+75.70, 186.28' RT. (IA 100)
END CONSTRUCTION

Sta. 3116+20.00
Install 52"x32"x26' 1101 RCP
F.L. = Lt. 765.60
Rt. 765.85

0 FEET 50

80TH ST. NORTH

For Main Line Details Refer to Sheet No. D.20-D.21

SEC.15

795
790
785
780
775
770
765

+1.695%

-0.50% Rt. Ditch Grade

+75 Rt.
788.81

VPI +50.000
Elv 795.82
K = 92
Len 600.00 ft
DS = 50 mph

PROPOSED PGL

EXISTING GROUND

-4.816%

+50 Rt.
777.71

-4.39% Rt. Ditch Grade

VPI +25.000
Elv 768.13
K = 30
Len 175.00 ft
DS = 30 mph

+1.000%

+1.99% Rt. D.G.

+20 Rt.
765.85

+16 Rt.
767.76

STA. 3117+21.50
END CONSTRUCTION
ELEV. 769.09

Refer to Mainline 100 Ditch Grade Sheets D.21

Lt
Rt

D.G. | 2' Ditch | Ditch Grade

3109	+50	3110	+50	3111	+50	3112	+50	3113	+50	3114	+50	3115	+50	3116	+50	3117
792.04	791.95	791.80	791.58	791.29	790.94	790.51	790.02	789.46	788.83	788.14	787.37	786.54	785.65	784.68	783.64	782.54	781.37	780.17	778.96	777.76	776.56	775.35	774.15	772.94	771.77	770.77	769.98	769.40	769.03	768.86	768.90

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER E.30

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HORIZONTAL CONTROL INFORMATION:

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

VERTICAL DATUM INFORMATION:

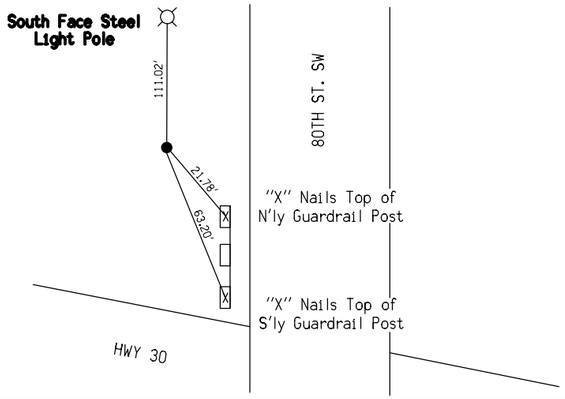
STANDARD ELEVATIONS BASED ON THE SEA-LEVEL DATUM NAVD 1988 ADJUSTED THROUGH A DIGITAL LEVEL LOOP STARTING AT BM 500 AND TURNING THROUGH ORIGINAL PROJECT BM's 513, 521, 528, & 564. PROJECT NHS-100-1(36)--19-57

DETAILS OF REFERENCE INFORMATION

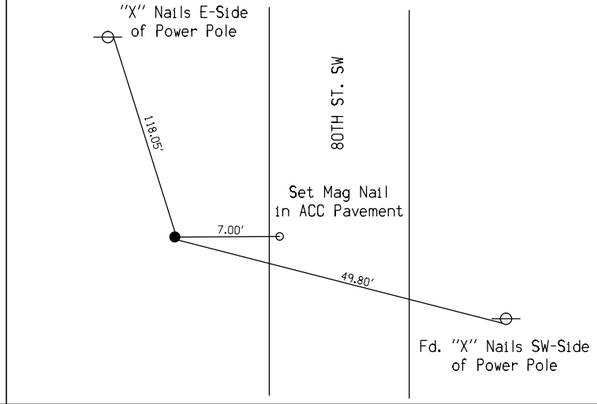
All References are Plumb Distances unless otherwise noted.

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

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

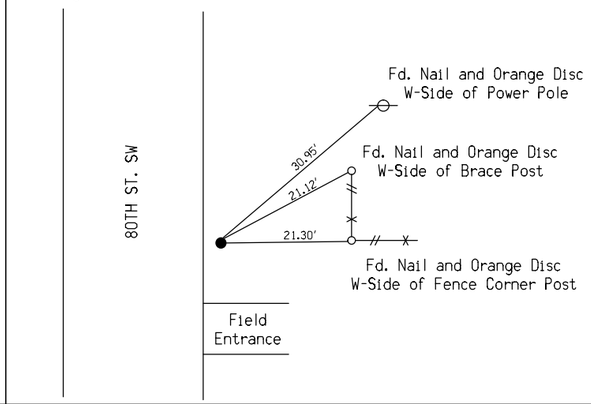


CONTROL POINT #201
SET 5/8" REBAR
Xc=5390460.332, Yc=3456088.161

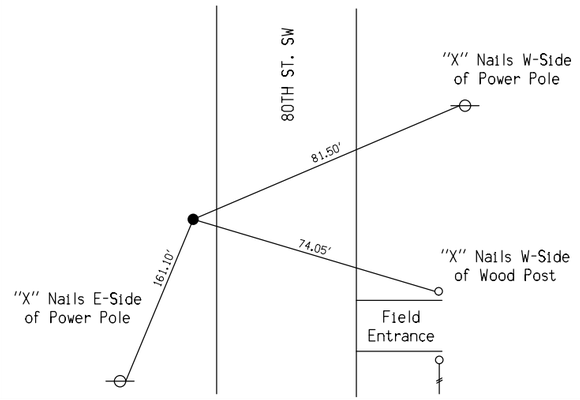


CONTROL POINT #202
SET 5/8" REBAR
Xc=5390459.117, Yc=3457455.705

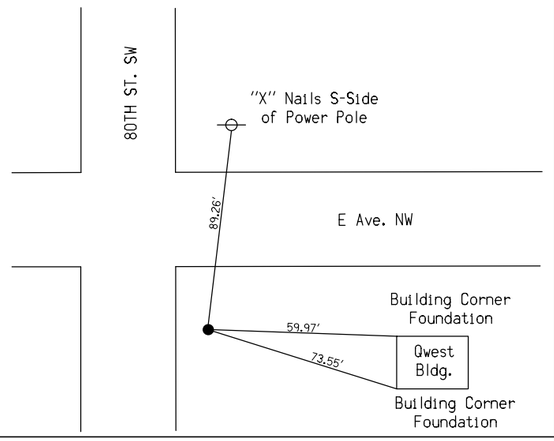
* Orange Disc = Hart-Frederick



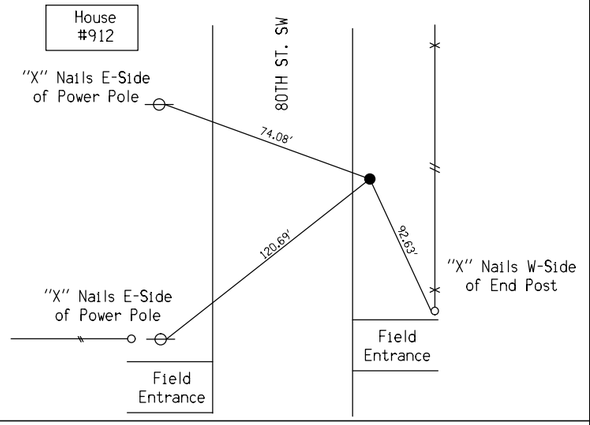
CONTROL POINT #203
SET 5/8" REBAR
Xc=5390404.624, Yc=3458822.274



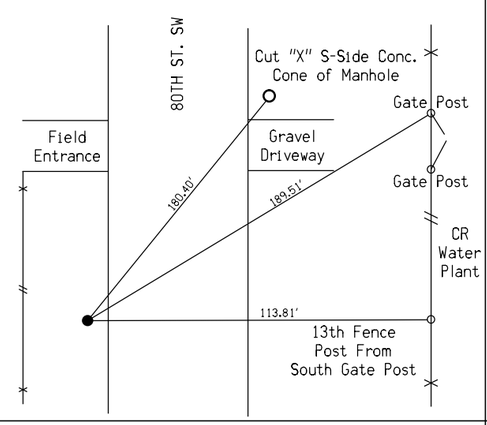
CONTROL POINT #204
SET 5/8" REBAR
Xc=5390423.162, Yc=3460036.475



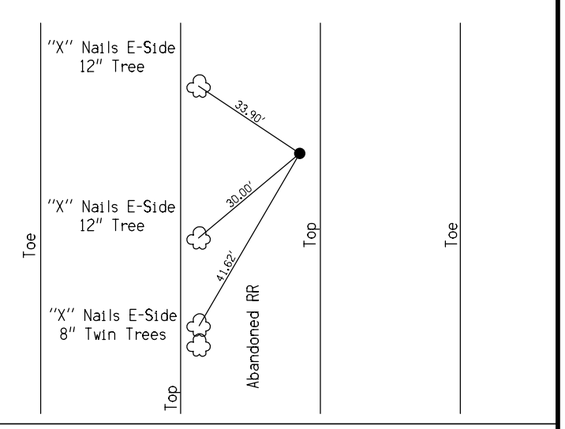
CONTROL POINT #205
SET 5/8" REBAR
Xc=5390387.872, Yc=3461529.234



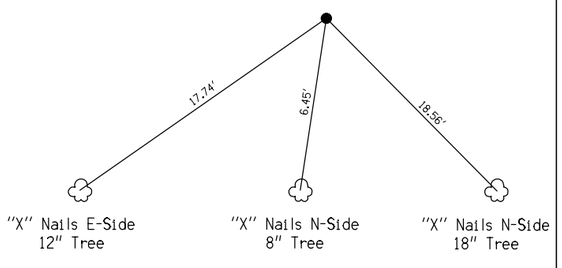
CONTROL POINT #206
SET 5/8" REBAR
Xc=5390253.638, Yc=3467028.096



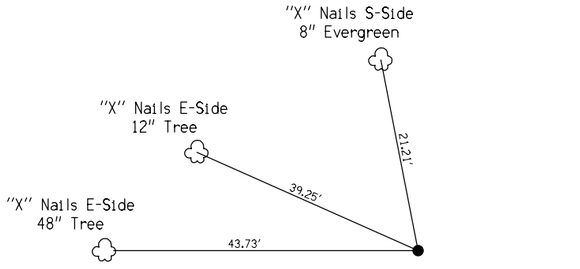
CONTROL POINT #207
SET 5/8" REBAR
Xc=5390507.381, Yc=3469423.415



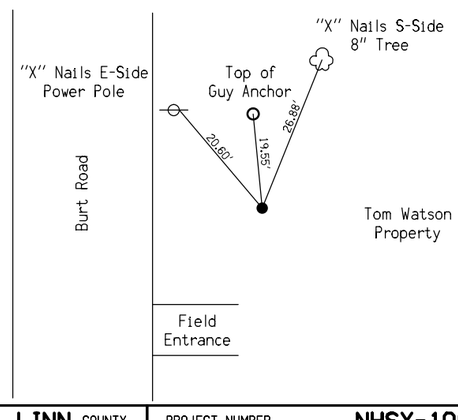
CONTROL POINT #208
SET 5/8" REBAR
Xc=5390759.885, Yc=3470756.782



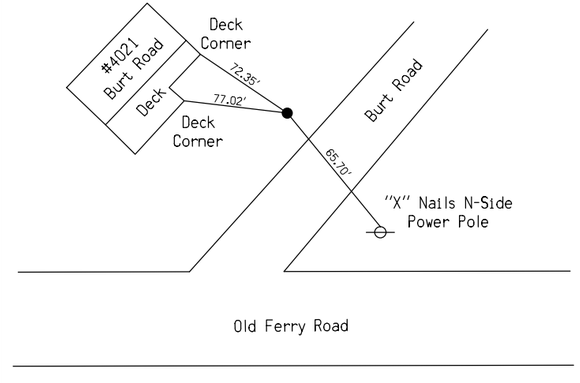
CONTROL POINT #209
SET 5/8" REBAR
Xc=5393566.652, Yc=3473389.196



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



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



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.2

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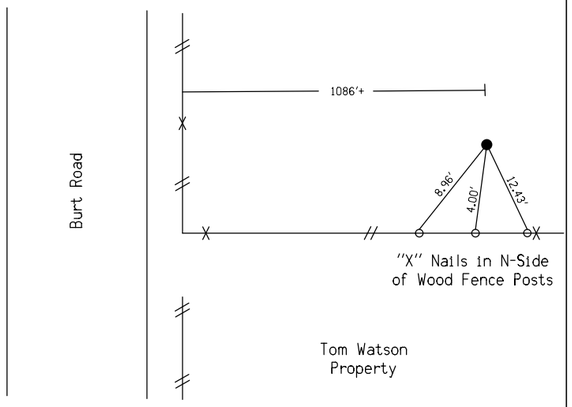
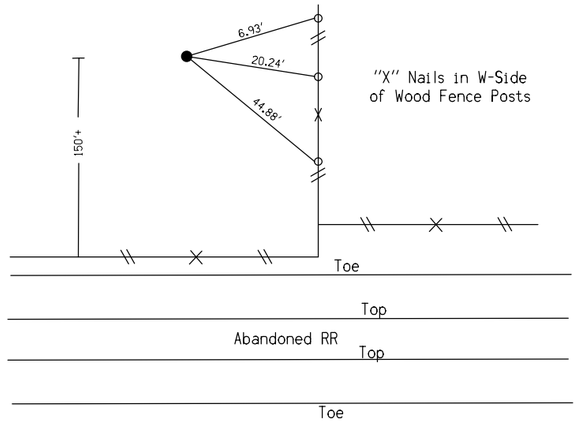
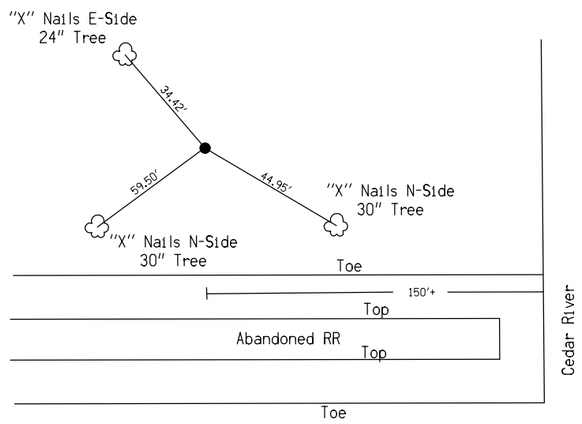
CONTROL POINT #212
SET 5/8" REBAR
Xc=5396578.459, Yc=3477115.968



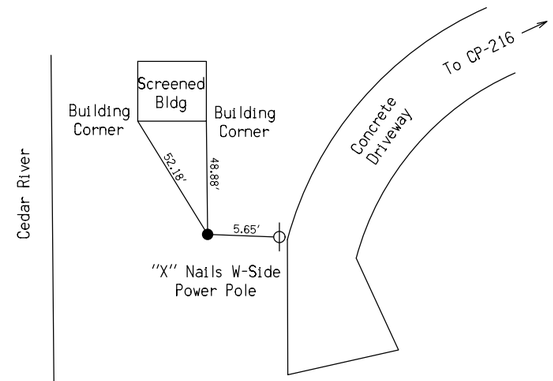
CONTROL POINT #213
SET 5/8" REBAR
Xc=5397976.081, Yc=3477644.189



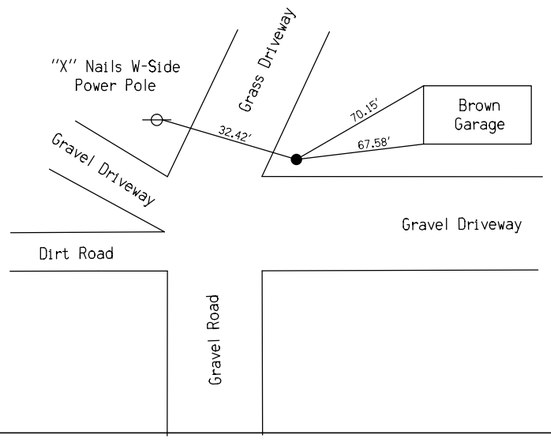
CONTROL POINT #214
SET 5/8" REBAR
Xc=5398998.050, Yc=3477668.551



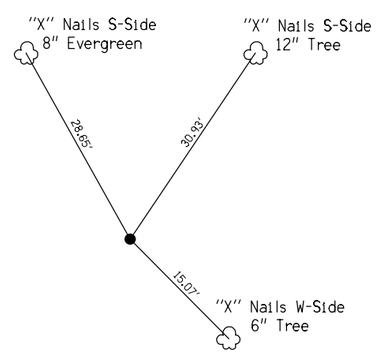
CONTROL POINT #215
SET 5/8" REBAR
Xc=5400225.952, Yc=3477615.353



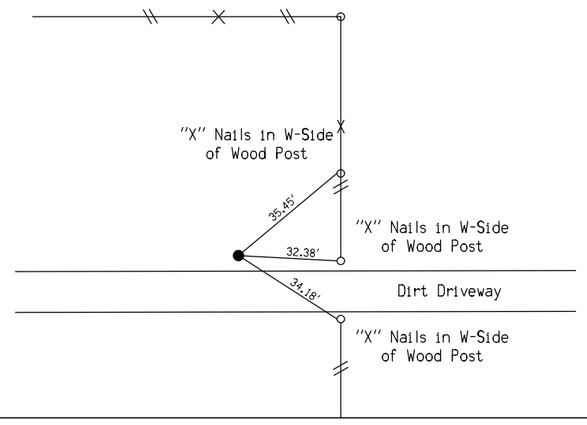
CONTROL POINT #216
SET 5/8" REBAR
Xc=5400574.857, Yc=3477663.984



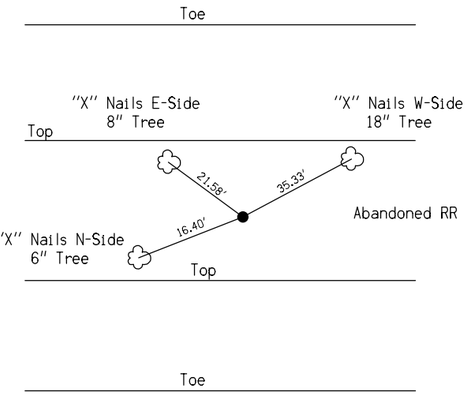
CONTROL POINT #217
SET 5/8" REBAR
Xc=5400963.863, Yc=3477963.765



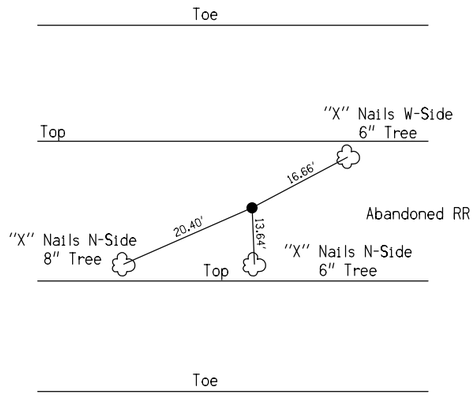
CONTROL POINT #218
SET 5/8" REBAR
Xc=5403021.252, Yc=3478441.174



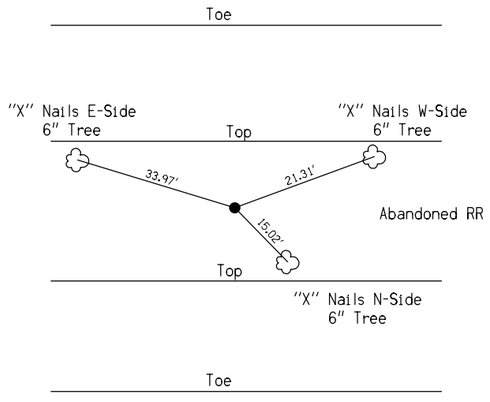
CONTROL POINT #219
SET 5/8" REBAR
Xc=5403911.638, Yc=3478637.706



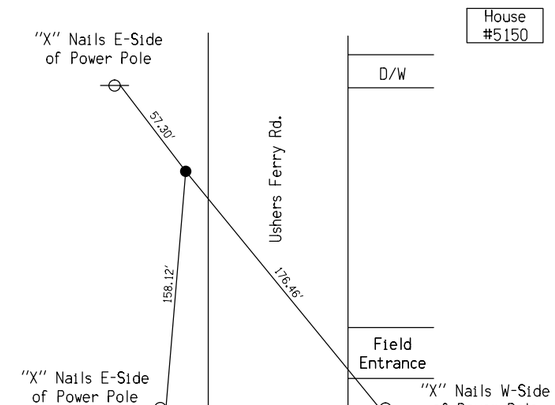
CONTROL POINT #220
SET 5/8" REBAR
Xc=5404721.715, Yc=3478825.490



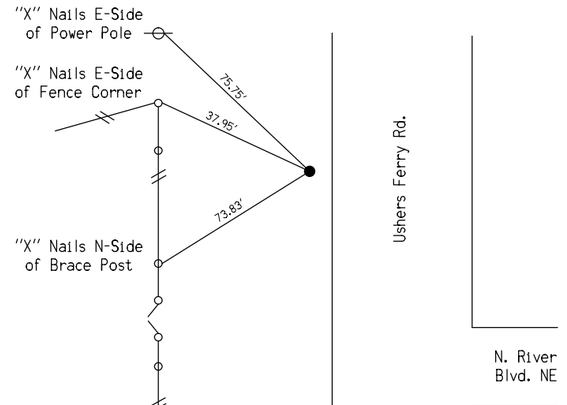
CONTROL POINT #221
SET 5/8" REBAR
Xc=5405574.711, Yc=3479020.396



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



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



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

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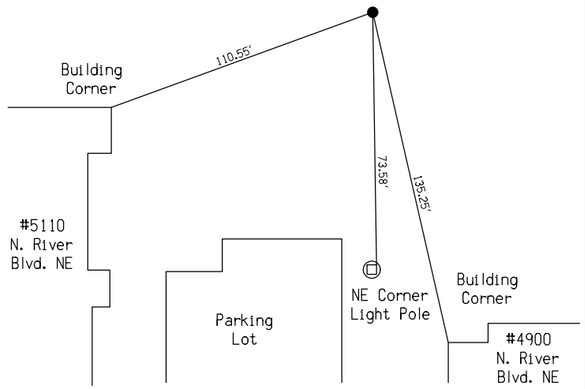
CONTROL POINT #226

SET 5/8" REBAR

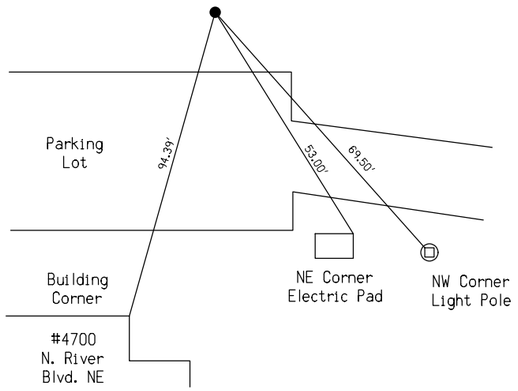
Xc=5407715.302, Yc=3479096.455



CONTROL POINT #227

SET 5/8" REBAR

Xc=5408584.907, Yc=3478830.311



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.4

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ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
ML100	MAINLINE 100																		
20020		697+87.50	3,452,894.4676	5,389,492.4216															
20021								733+38.95	3,456,445.7597	5,389,459.0669	747+30.36	3,457,837.1072	5,389,445.9990	761+18.06	3,459,219.0146	5,389,608.3280			
20022								783+94.17	3,461,479.5742	5,389,873.8699	792+34.45	3,462,314.1190	5,389,971.9017	800+73.92	3,463,153.7101	5,390,005.9903			
20023					865+28.25	3,469,602.7265	5,390,267.8303	868+14.25	3,469,888.0953	5,390,285.9116	876+42.27	3,470,715.8310	5,390,313.0240	883+46.11	3,471,221.4603	5,390,968.9359	886+32.11	3,471,402.8685	5,391,189.9639
20024								922+43.67	3,473,630.1856	5,394,032.9283	928+57.77	3,474,008.9110	5,394,516.3363	934+70.71	3,474,436.9637	5,394,956.6625			
US30A	RAMP A																		
22000		11708+54.22	3,454,526.3716	5,388,375.4890															
22001								11709+73.71	3,454,538.9387	5,388,494.3184	11718+01.84	3,454,626.0342	5,389,317.8599	11723+46.76	3,455,452.8151	5,389,365.1837			
22002		11724+25.00	3,455,530.9308	5,389,369.6549															
US30D	RAMP D																		
25000		14689+17.13	3,452,449.7218	5,390,709.8618															
25001								14698+33.00	3,453,080.3815	5,390,045.7204	14705+21.82	3,453,554.6974	5,389,546.2232	14711+36.02	3,454,243.4871	5,389,539.7539			
25002		14719+98.70	3,455,106.1310	5,389,531.6517															
US30G	RAMP G																		
28000		17706+34.73	3,454,253.7499	5,388,503.8012															
28001								17711+44.02	3,454,460.4505	5,388,969.2536	17716+73.25	3,454,675.2492	5,389,452.9416	17720+95.97	3,455,203.3719	5,389,487.2788			
28002								17720+95.97	3,455,203.3719	5,389,487.2788	17723+04.16	3,455,411.1192	5,389,500.7859	17725+12.15	3,455,619.2960	5,389,498.8307			
28003		17725+12.15	3,455,619.2960	5,389,498.8307															
US30H	RAMP H																		
29000		18685+97.87	3,452,317.3940	5,390,599.9829															
29001								18685+97.87	3,452,317.3940	5,390,599.9829	18687+43.89	3,452,408.4146	5,390,485.7956	18688+89.40	3,452,481.8840	5,390,359.5984			
29002								18692+53.67	3,452,665.1576	5,390,044.7922	18703+66.42	3,453,225.0098	5,389,083.1429	18712+05.06	3,454,324.0222	5,389,257.4291			
29003								18721+25.00	3,455,232.6039	5,389,401.5160	18722+75.35	3,455,381.0964	5,389,425.0646	18724+25.00	3,455,531.4380	5,389,423.6525			
29004		18724+25.00	3,455,531.4380	5,389,423.6525															
80A	RAMP A																		
48000		10500+75.96	3,453,044.0647	5,390,483.6218															
48001								10503+41.16	3,452,957.5493	5,390,734.3101	10506+22.61	3,452,865.7299	5,391,000.3673	10508+64.39	3,452,599.0325	5,391,090.3100			
48002								10512+18.69	3,452,263.3128	5,391,203.5303	10515+02.75	3,451,994.1459	5,391,294.3058	10517+75.59	3,451,798.5434	5,391,500.2929			
48003		10518+27.44	3,451,762.8379	5,391,537.8940															
80B	RAMP B																		
23001								12388+50.00	3,453,435.9313	5,389,221.6145	12390+38.98	3,453,305.8013	5,389,358.6531	12392+25.45	3,453,142.6489	5,389,454.0192			
23002								12400+61.72	3,452,420.6695	5,389,876.0315	12403+77.78	3,452,147.8011	5,390,035.5289	12406+65.89	3,452,049.4164	5,390,335.8905			
23003		12408+38.32	3,451,995.7418	5,390,499.7554															
80C	RAMP C																		
24001								13388+50.00	3,453,568.2590	5,389,331.4934	13391+85.90	3,453,358.8851	5,389,594.1577	13395+15.59	3,453,246.8079	5,389,910.8100			
24002		13401+23.22	3,453,044.0647	5,390,483.6218															
80D	RAMP D																		
49000		19508+34.18	3,451,995.7418	5,390,499.7554															
49001								19513+49.03	3,451,822.1502	5,390,984.4625	19515+94.86	3,451,739.2654	5,391,215.8958	19518+38.82	3,451,609.1825	5,391,424.4856			
SR80	80TH ST.																		
41000		3000+00.00	3,451,410.0778	5,390,518.1853															
41005								3000+81.81	3,451,491.7924	5,390,514.2340	3002+85.99	3,451,695.7316	5,390,504.3725	3004+90.13	3,451,899.8849	5,390,501.2306			
41010		3033+02.40	3,454,711.8259	5,390,457.9551															
41015								3034+64.61	3,454,873.9606	5,390,462.7776	3035+59.60	3,454,968.9098	5,390,465.6017	3036+54.56	3,455,063.6178	5,390,472.9298			
41020								3036+81.96	3,455,090.9416	5,390,475.0440	3038+68.88	3,455,277.3003	5,390,489.4637	3040+55.52	3,455,464.1916	5,390,486.4417			
41025		3048+40.59	3,456,249.1586	5,390,473.7492															
41030		3061+99.73	3,457,607.9785	5,390,444.1802															
41035								3061+99.73	3,457,607.9785	5,390,444.1802	3065+90.19	3,457,998.4272	5,390,446.1499	3069+79.33	3,458,384.6819	5,390,503.2591			
41040								3074+70.33	3,458,870.4042	5,390,575.0748	3079+01.38	3,459,296.8176	5,390,638.1216	3083+30.67	3,459,727.8467	5,390,633.9684			
41045								3088+39.66	3,460,236.8072	5,390,629.0643	3089+49.56	3,460,346.7003	5,390,628.0054	3090+42.15	3,460,408.4716	5,390,537.1103			
41050								3091+15.82	3,460,449.8798	5,390,476.1791	3092+25.04	3,460,511.2704	5,390,385.8441	3093+17.25	3,460,620.4796	5,390,384.2380			
41055		3093+92.55	3,460,695.7715	5,390,383.1308															
SR16ACC	16TH ACCESS RD.																		
30001								2100+00.00	3,454,736.8424	5,388,594.5599	2105+97.16	3,454,751.3191	5,389,191.5399	2109+39.63	3,455,348.3612	5,389,179.9002			
30002								2121+82.79	3,456,591.2899	5,389,155.6686	2123+81.30	3,456,789.7657	5,389,151.7992	2124+95.46	3,456,795.1156	5,389,350.2406			
30003		2136+06.84	3,456,825.0671	5,390,461.2170															

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.5

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ALIGNMENT COORDINATES

101-16
10-20-09

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
EAVEA	RAMP A																		
44000		21769+14.35	3,460,065.4085	5,389,379.5200															
44001								21772+72.62	3,460,415.3121	5,389,456.4623	21776+66.99	3,460,800.4850	5,389,541.1602	21780+60.40	3,461,172.5924	5,389,671.8046			
44002								21781+52.01	3,461,259.0313	5,389,702.1528	21783+11.31	3,461,409.3318	5,389,754.9223	21784+69.93	3,461,566.0904	5,389,783.2353			
44003		21785+00.00	3,461,595.6783	5,389,788.5794															
EAVEB	RAMP B																		
45000		22757+75.00	3,458,868.0800	5,389,668.4596															
45001								22758+14.98	3,458,907.4928	5,389,675.1402	22760+36.70	3,459,126.1013	5,389,712.1947	22762+57.62	3,459,336.8869	5,389,780.9852			
45002		22770+42.89	3,460,083.4083	5,390,024.6148															
EAVEC	RAMP C																		
46000		23755+50.00	3,458,661.1327	5,389,471.6690															
46001								23755+50.40	3,458,661.5356	5,389,471.6977	23761+56.01	3,459,265.6114	5,389,514.7709	23767+55.87	3,459,862.7429	5,389,413.7921			
46002		23769+61.41	3,460,065.4085	5,389,379.5200															
EAVED	RAMP D																		
47000		24770+05.31	3,460,083.4083	5,390,024.6148															
47001								24781+09.69	3,461,186.0000	5,389,961.7885	24783+30.24	3,461,406.1937	5,389,949.2417	24785+50.00	3,461,625.8548	5,389,969.0317			
47002		24785+50.00	3,461,625.8548	5,389,969.0317															
SREAVE	E AVENUE																		
40000		2550+00.94	3,460,019.4110	5,387,731.0086															
40005		2576+63.43	3,460,093.6722	5,390,392.4630															
40010		2589+91.37	3,460,106.4240	5,391,720.3394															
SRBERGR	BERGER LN.																		
43000		4059+91.95	3,460,047.0513	5,388,721.6146															
43001								4064+63.48	3,460,518.3903	5,388,708.3494	4066+41.75	3,460,696.5937	5,388,703.3341	4068+13.53	3,460,857.9935	5,388,779.0420			
43002								4070+73.66	3,461,093.5061	5,388,889.5141	4072+50.52	3,461,253.6234	5,388,964.6203	4074+21.03	3,461,430.4273	5,388,960.2774			
43003		4101+99.30	3,464,207.8546	5,388,892.0532															
SR80N	80TH ST. NORTH																		
42000		3100+00.00	3,466,326.6050	5,390,284.2921															
42001								3100+45.32	3,466,371.9136	5,390,283.4664	3103+47.10	3,466,673.6477	5,390,277.9673	3106+48.38	3,466,974.4107	5,390,302.7723			
42003		3117+31.63	3,468,053.9964	5,390,391.8094															
COVRDB	RAMP B																		
65001		32590+00.00	3,471,552.6092	5,391,539.9997															
65003								32590+96.64	3,471,607.0144	5,391,619.8660	32593+03.37	3,471,723.4039	5,391,790.7248	32595+07.34	3,471,787.4058	5,391,987.3030			
65005		32601+39.92	3,471,983.2451	5,392,588.8117															
COVRDC	RAMP C																		
66001		33588+75.00	3,471,614.0638	5,391,333.0593															
66002								33588+75.00	3,471,614.0638	5,391,333.0593	33591+97.23	3,471,817.8195	5,391,582.6869	33595+13.96	3,472,089.6665	5,391,755.6885			
66003		33602+17.34	3,472,683.0740	5,392,133.3291															

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.6

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SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

Name	Location	Δ_{scs}	Horizontal Alignment Data												Remarks
			Spiral Data								Curve Data				
			θs	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	Δ_c	T	L	R	E	
ML100	MAINLINE 100														
20021											7° 14' 16.09" RT	1,391.4089'	2,779.1162'	22,000.0000'	43.9565'	
20022											4° 22' 28.78" LT	840.2829'	1,679.7492'	22,000.0000'	16.0413'	
20023											41° 47' 41.85" RT	801.8062'	1,531.8653'	2,100.0000'	147.8641'	
20023A		49° 35' 53.16" RT	3° 54' 05.65"	286.0000'	1,114.0216	215.1120	285.8674'	6.4896'	190.7130'	95.3755'						
20023B		49° 35' 53.16" RT	3° 54' 05.65"	286.0000'	1,114.0216	215.1120	285.8674'	6.4896'	190.7130'	95.3755'						
20024											6° 06' 48.10" LT	614.0979'	1,227.0303'	11,500.0000'	16.3847'	
US30A	RAMP A															
22001											80° 41' 13.35" LT	828.1342'	1,373.0482'	975.0000'	304.2307'	
US30D	RAMP D															
25001											45° 56' 35.28" RT	688.8201'	1,303.0208'	1,625.0000'	139.9640'	
US30G	RAMP G															
28001											62° 20' 04.99" LT	529.2378'	951.9529'	875.0000'	147.6034'	
28002											4° 15' 29.17" LT	208.1860'	416.1803'	5,600.0000'	3.8684'	
US30H	RAMP H															
29001											8° 21' 06.60" LT	146.0257'	291.5340'	2,000.0000'	5.3238'	
29002											68° 48' 14.76" RT	1,112.7461'	1,951.3944'	1,625.0000'	344.4743'	
29003											9° 32' 57.47" LT	150.3482'	300.0000'	1,800.0000'	6.2681'	
80A	RAMP A															
48001											52° 19' 24.16" RT	281.4555'	523.2358'	572.9600'	65.3976'	
48002											27° 50' 41.15" LT	284.0616'	556.8974	1,145.9200'	34.6831'	
80B	RAMP B															
23001											16° 10' 26.61" RT	188.9798'	375.4464'	1,330.0000'	13.3590'	
23002											41° 33' 22.97" LT	316.0642'	604.1713'	833.0000'	57.9465'	
80C	RAMP C															
24001											19° 04' 04.06" LT	335.9017'	665.5916'	2,000.0000'	28.0113'	
80D	RAMP D															
49001											12° 14' 40.47" RT	245.8277'	489.7827'	2,291.8300'	13.1464'	
SR80	80TH ST.															
41005											1° 53' 12.07" RT	204.1775'	408.3181'	12,400.0000'	1.6809'	
41015											2° 43' 14.82" RT	94.9912'	189.9466'	4,000.0000'	1.1274'	
41020											5° 21' 03.06" LT	186.9158'	373.5598	4,000.0000'	4.3648'	
41035											8° 07' 17.08" RT	390.4538'	779.5996'	5,500.0000'	13.8420'	
41040											8° 57' 45.05" LT	431.0490'	860.3395'	5,500.0000'	16.8653'	
41045											55° 14' 54.08" LT	109.8982'	202.4958'	210.0000'	27.0182'	
41050											54° 57' 28.38" RT	109.2210'	201.4312'	210.0000'	26.7049'	
SR16ACC	16TH ACCESS RD.															
30001											89° 43' 39.81" LT	597.1555'	939.6265'	600.0000'	246.5192'	
30002											89° 34' 21.26" RT	198.5135'	312.6673'	200.0000'	81.7936'	
EAVEA	RAMP A															
44001											6° 56' 38.82" RT	394.3753'	787.7849'	6,500.0000'	11.9530'	
44002											9° 06' 27.73" LT	159.2949'	317.9188'	2,000.0000'	6.3337'	
EAVEB	RAMP B															
45001											8° 27' 14.26" RT	221.7266'	442.6484'	3,000.0000'	8.1826'	
EAVEC	RAMP C															
46001											13° 40' 36.52" LT	605.6094'	1,205.4621'	5,050.0000'	36.1835'	
EAVED	RAMP D															
47001											8° 24' 33.46" RT	220.5509'	440.3096'	3,000.0000'	8.0962'	
SRBERGR	BERGER LN.															
43001											26° 44' 31.13" RT	178.2740'	350.0517'	750.0000'	20.8966'	
43002											26° 32' 13.24" LT	176.8573'	347.3687'	750.0000'	20.5702'	
SR80N	80TH ST. NORTH															
42001											5° 45' 31.68" RT	301.7842'	603.0602'	6,000.0000'	7.5847'	

SPIRAL OR CIRCULAR CURVE DATA

101-17
04-19-11

Name	Location	Δ_{scs}	Horizontal Alignment Data												Remarks
			Spiral Data								Curve Data				
			θs	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	Δ_c	T	L	R	E	
COVRDB	RAMP B														
65003											16° 13' 42.93" RT	206.7347'	410.7014'	1,450.0000'	14.6635'	
COVRDC	RAMP C														
66002											18° 18' 17.84" LT	322.2272'	638.9634'	2,000.0000'	25.7913'	

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.8

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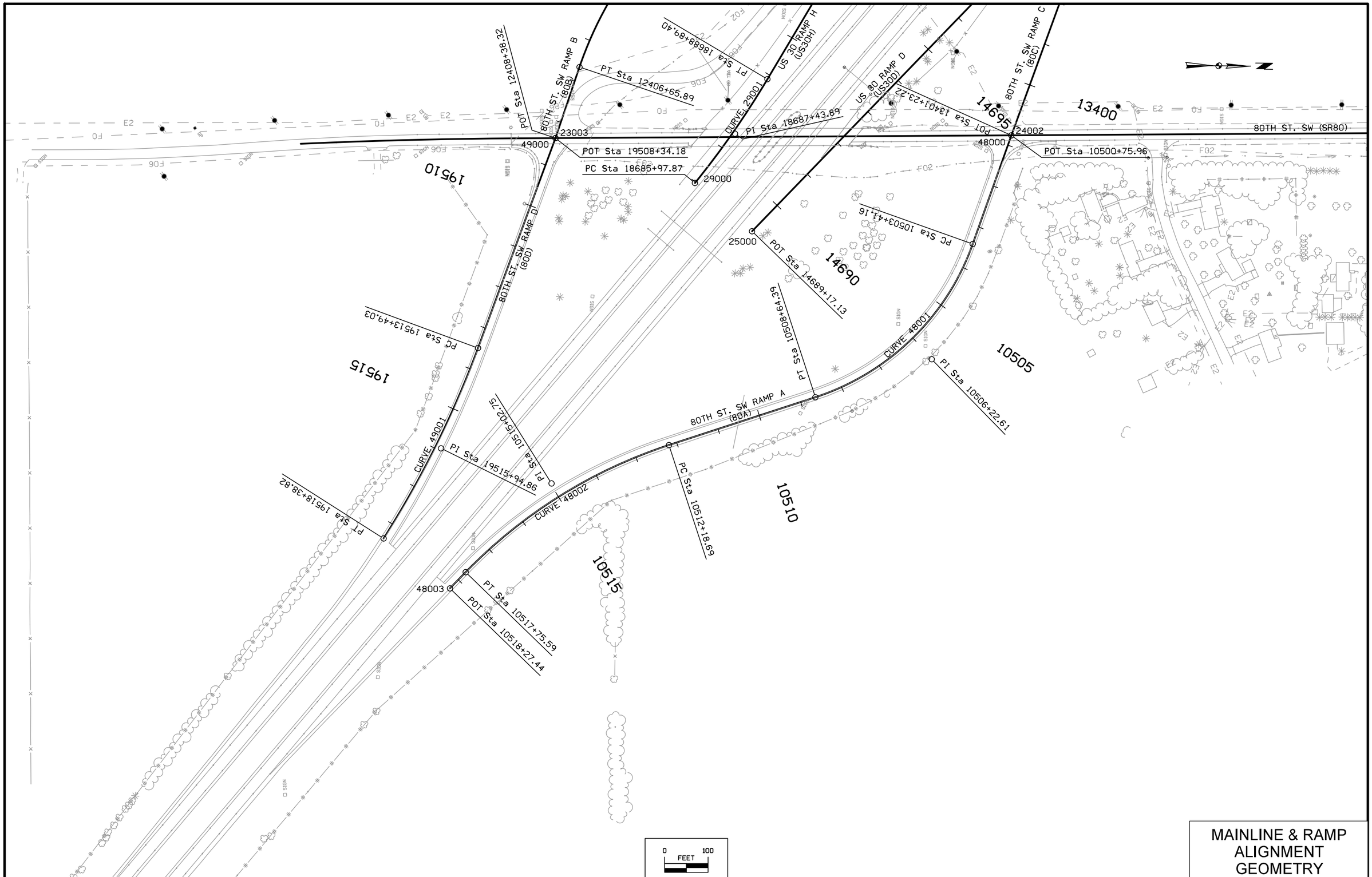

MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.9

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Curve Data (CURVE 29002)

Δ = 68° 48′ 14.76″ (RT)
D = 3° 31′ 33.22″
R = 1,625.00
T = 1,112.75
L = 1,951.39
E = 344.47
e = 4.8%
L = 136.00
x = 56.00
m = 40.80
DS = 50 mph

Curve Data (CURVE 28001)

Δ = 62° 20′ 04.99″ (LT)
D = 6° 32′ 53.12″
R = 875.00
T = 529.24
L = 951.95
E = 147.60
e = 6.0%
L = 168.00
x = 56.00
m = 50.40
DS = 50 mph

Curve Data (CURVE 22001)

Δ = 80° 41′ 13.35″ (LT)
D = 5° 52′ 35.36″
R = 975.00
T = 828.13
L = 1,373.05
E = 304.23
e = 6.0%
L = 168.00
x = 56.00
m = 50.40
DS = 50 mph

Curve Data (CURVE 23002)

Δ = 41° 33′ 22.97″ (LT)
D = 6° 52′ 41.68″
R = 833.00
T = 316.06
L = 604.17
E = 57.95
e = 6.0%
L = 168.00
x = 56.00
m = 50.40
DS = 50 mph

Curve Data (CURVE 23001)

Δ = 16° 10′ 26.61″ (RT)
D = 4° 18′ 28.63″
R = 1,330.00
T = 188.98
L = 375.45
E = 13.36
e = 6.0%
L = 186.00
x = 62.00
m = 55.80
DS = 60 mph

Curve Data (CURVE 29001)

Δ = 8° 21′ 06.60″ (LT)
D = 2° 51′ 53.24″
R = 2,000.00
T = 146.03
L = 291.53
E = 5.32
e = 5.4%
L = 168.00
x = 62.00
m = 50.40
DS = 60 mph

Curve Data (CURVE 24001)

Δ = 19° 04′ 04.06″ (LT)
D = 2° 51′ 53.24″
R = 2,000.00
T = 335.90
L = 665.59
E = 28.01
e = 5.4%
L = 168.00
x = 62.00
m = 50.40
DS = 60 mph

Curve Data (CURVE 25001)

Δ = 45° 56′ 35.28″ (RT)
D = 3° 31′ 33.22″
R = 1,625.00
T = 688.82
L = 1,303.02
E = 139.96
e = 4.8%
L = 136.00
x = 56.00
m = 40.80
DS = 50 mph

MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.10

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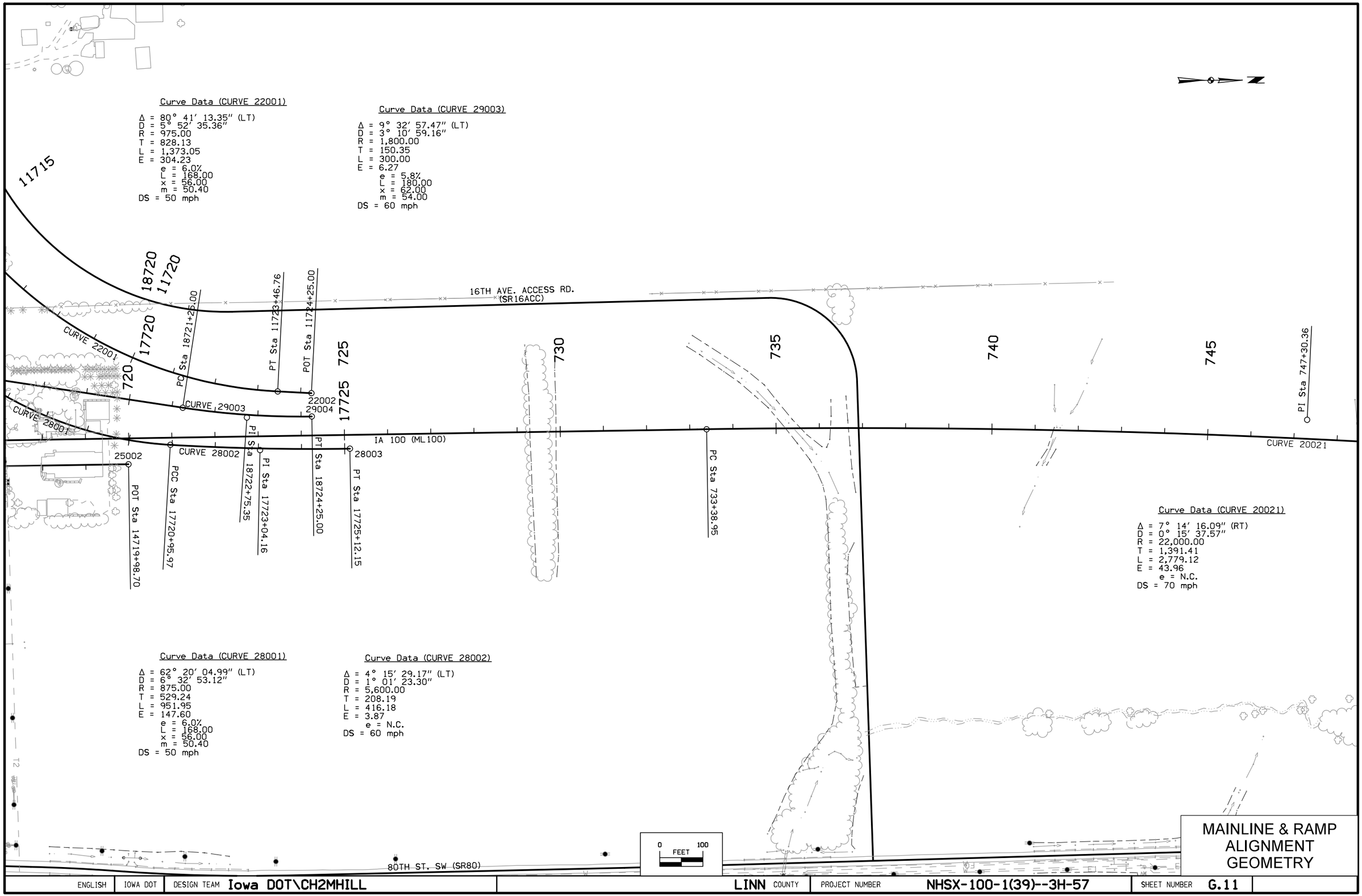

MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.11

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Curve Data (CURVE 46001)

Δ = 13° 40′ 36.52″ (LT)
D = 1° 08′ 04.45″
R = 5,050.00
T = 605.61
L = 1,205.46
E = 36.18
e = 3.0%
x = 93.00
m = 62.00
m = 27.90
DS = 60 mph

Curve Data (CURVE 44001)

Δ = 6° 56′ 38.82″ (RT)
D = 0° 52′ 53.30″
R = 6,500.00
T = 394.38
L = 787.78
E = 11.95
e = N.C.
DS = 50 mph

Curve Data (CURVE 20021)

Δ = 7° 14′ 16.09″ (RT)
D = 0° 15′ 37.57″
R = 22,000.00
T = 1,391.41
L = 2,779.12
E = 43.96
e = N.C.
DS = 70 mph

Curve Data (CURVE 45001)

Δ = 8° 27′ 14.26″ (RT)
D = 1° 54′ 35.49″
R = 3,000.00
T = 221.73
L = 442.65
E = 8.18
e = 4.4%
L = 137.00
x = 62.00
m = 41.10
DS = 60 mph

POT Sta 23755+50.00
PC Sta 23755+50.40
46000
E AVENUE RAMP C (EAVEC)
CURVE 46001
PI Sta 23761+56.01
PT Sta 23767+55.87
POT Sta 23769+61.11
POT Sta 21769+14.35
46002 44000
E AVENUE RAMP A (EAVEA)
CURVE 44001
PI Sta 21776+66.99
PC Sta 21772+72.62
IA 100 (ML100)
CURVE 20021
PI Sta 22760+36.70
PT Sta 761+18.06
45000
POT Sta 22757+75.00
CURVE 45001
PC Sta 22758+14.98
PT Sta 22925+57.92
E AVENUE RAMP B (EAVEB)
POT Sta 22770+42.89
POT Sta 24770+05.31
45002 47000
E AVENUE RAMP D (EAVED)
E AVENUE (SREAVE)
RELOCATED 80TH ST. SW (SR80)
0 FEET 100

MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.12

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BERGER LANE
(SRBERGR)

Curve Data (CURVE 44002)

Δ = 9° 06′ 27.73″ (LT)
D = 2° 51′ 53.24″
R = 2,000.00
T = 159.29
L = 317.92
E = 6.33
e = 5.4%
L = 168.00
x = 62.00
m = 50.40
DS = 60 mph

21780

PC Sta 21781+52.01

PT Sta 21784+69.93

21785

E AVENUE
RAMP A (EAVEA)

780

PT Sta 21780+60.40

CURVE 44002

PI Sta 21783+11.31

PC Sta 783+94.17

785

POT Sta 21785+00.00

44003

790

795

800

PT Sta 800+73.92

805

CURVE 20022

IA 100 (ML100)

PI Sta 24783+30.24

E AVENUE
RAMP D (EAVED)

CURVE 47001

47002

PC Sta 24781+09.69

PT Sta 24785+50.00

24780

24785

PI Sta 792+34.45

Curve Data (CURVE 47001)

Δ = 8° 24′ 33.46″ (RT)
D = 1° 54′ 35.49″
R = 3,000.00
T = 220.55
L = 440.31
E = 8.10
e = 4.4%
L = 137.00
x = 62.00
m = 41.10
DS = 60 mph

Curve Data (CURVE 20022)

Δ = 4° 22′ 28.78″ (LT)
D = 0° 15′ 37.57″
R = 22,000.00
T = 840.28
L = 1,679.75
E = 16.04
e = N.C.
DS = 30 mph

0 100
FEET

MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.13

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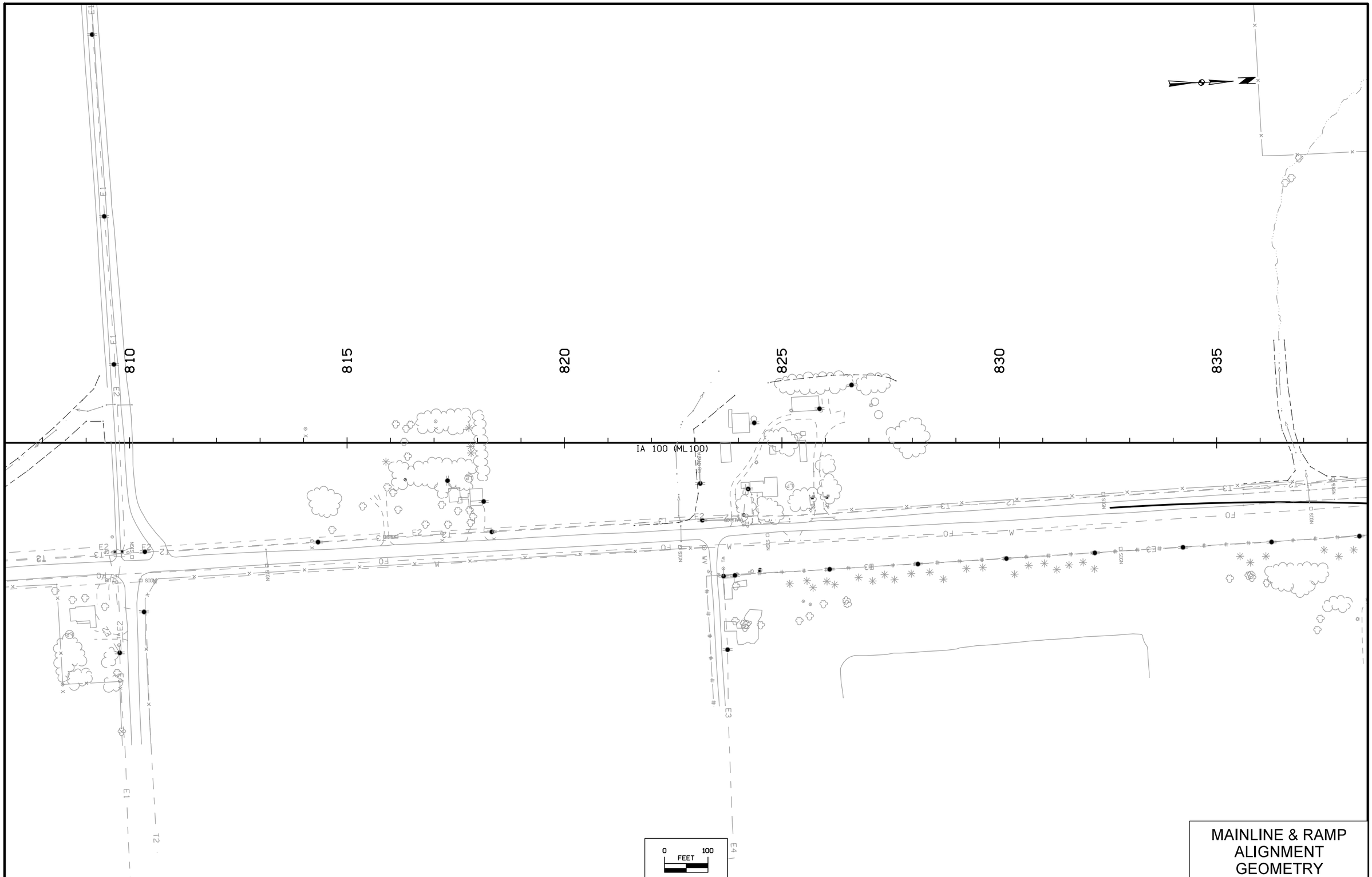

MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.14

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840

845

850

855

860

865

PI Sta 867+18.96

IA 100 (ML100)

CURVE 20023B

TS Sta 865+28.25

SC Sta 868+14.25

80TH ST. NORTH
(SR80N)

Spiral Data (CURVE 20023)

Δ = 49°35′53.16″ Rt.
θs = 3° 54′ 05.65″
Ls = 286.00
Ts = 1,114.02
Es = 215.11
P = 1.62
K = 142.98
Xc = 285.87
Yc = 6.49
LT = 190.71
ST = 95.38
LC = 285.94

Curve Data

Δ = 41° 47′ 41.85″ Rt.
D = 2° 43′ 42.13″
R = 2,100.00
T = 801.81
L = 1,531.87
E = 147.86
e = 6.0%
L = 286.00
x = 96.00
m = 85.80
DS = 70 mph

0 100
FEET

MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.15

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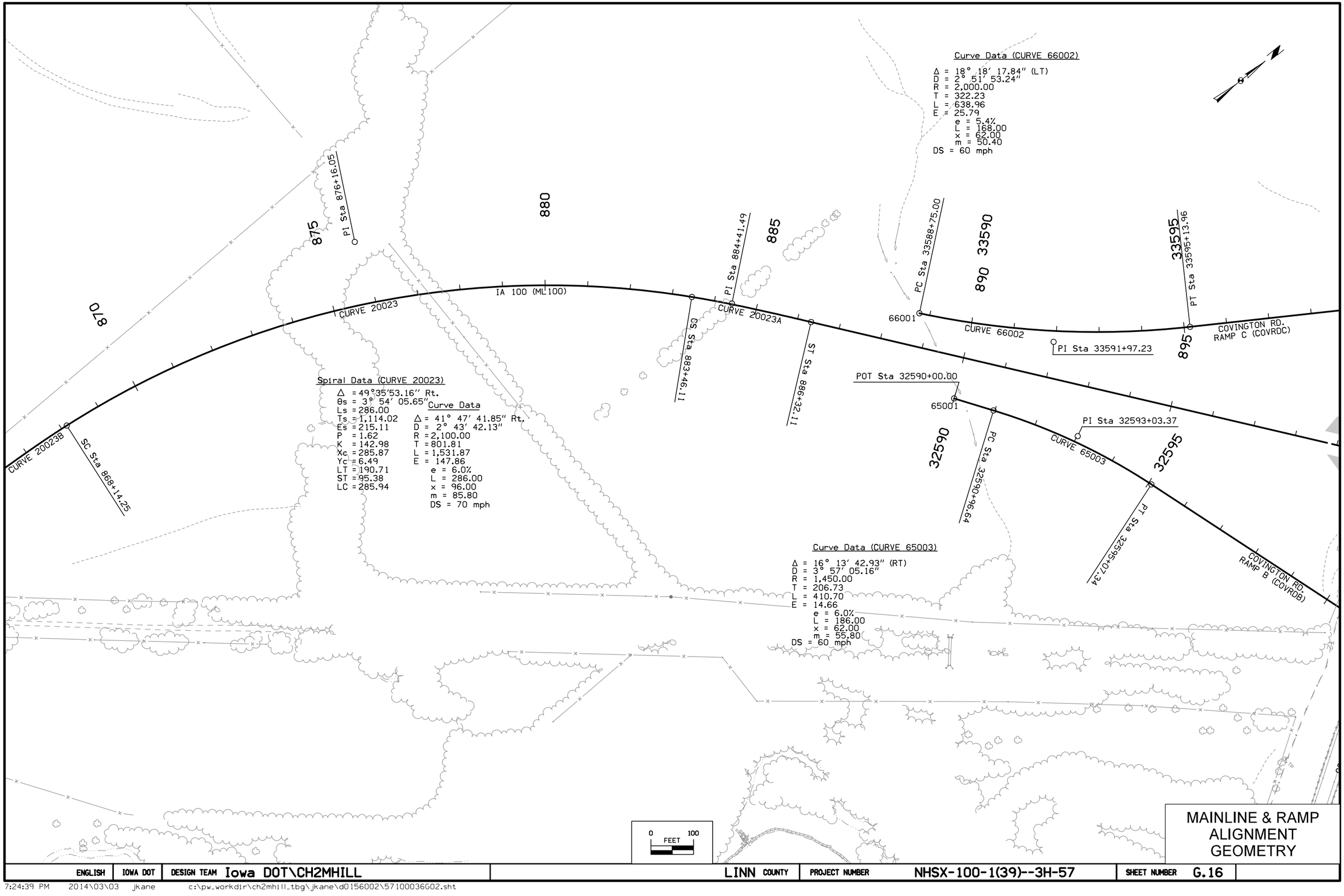

Spiral Data (CURVE 20023)

Δ = 49°35'53.16" Rt.
θs = 3° 54' 05.65"
Ls = 286.00
Ts = 1,114.02
Es = 215.11
P = 1.62
K = 142.98
Xc = 285.87
Yc = 6.49
LT = 190.71
ST = 95.38
LC = 285.94

Curve Data

Δ = 41° 47' 41.85" Rt.
D = 2° 43' 42.13"
R = 2,100.00
T = 801.81
L = 1,531.87
E = 147.86
e = 6.0%
L = 286.00
x = 96.00
m = 85.80
DS = 70 mph

Curve Data (CURVE 66002)

Δ = 18° 18' 17.84" (LT)
D = 2° 51' 53.24"
R = 2,000.00
T = 322.23
L = 638.96
E = 25.79
e = 5.4%
L = 168.00
x = 62.00
m = 50.40
DS = 60 mph

Curve Data (CURVE 65003)

Δ = 16° 13' 42.93" (RT)
D = 3° 57' 05.16"
R = 1,450.00
T = 206.73
L = 410.70
E = 14.66
e = 6.0%
L = 186.00
x = 62.00
m = 55.80
DS = 60 mph

MAINLINE & RAMP ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.16

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33600

32600

66003

POT Sta 33602+17.34

COVINGTON RD.
RAMP C (COVRDC)

POT Sta 899+25.00

900

905

910

915

920

925

STA. 899+25.00
END CONSTRUCTION
BEGIN CONSTRUCTION BY OTHERS

PC Sta 922+43.67

IA 100 (ML100)

CURVE 20024

65005

POT Sta 32601+39.92

COVINGTON RD.
RAMP B (COVRDB)

COVINGTON RD.
(SRCOVRD)

San.2 FDS

T3

T2

0 100
FEET

MAINLINE & RAMP
ALIGNMENT
GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.17

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IA 100 (ML100)

US 30 RAMP D
(US30D)

80TH ST. SW RAMP B
(80B)

US 30 RAMP H
(US30H)

80TH ST. SW RAMP C
(80C)

80TH ST. SW RAMP D
(80D)

80TH ST. SW RAMP A
(80A)

80TH ST. SW (SR80)

Curve Data (CURVE 41005)

Δ = 1° 53′ 12.07″ (RT)
D = 0° 27′ 43.43″
R = 12,400.00
T = 204.18
L = 408.32
E = 1.68
e = N.C.
DS = 50 mph

PI Sta 3002+85.99

CURVE 41005

PT Sta 3004+90.13

POT Sta 3000+00.00
41000
(OFF SHEET)

3005 3010 3015 3020 3025 3030

PI Sta 3033+02.40

41010

0 100
FEET

SIDEROAD
ALIGNMENT
GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.18

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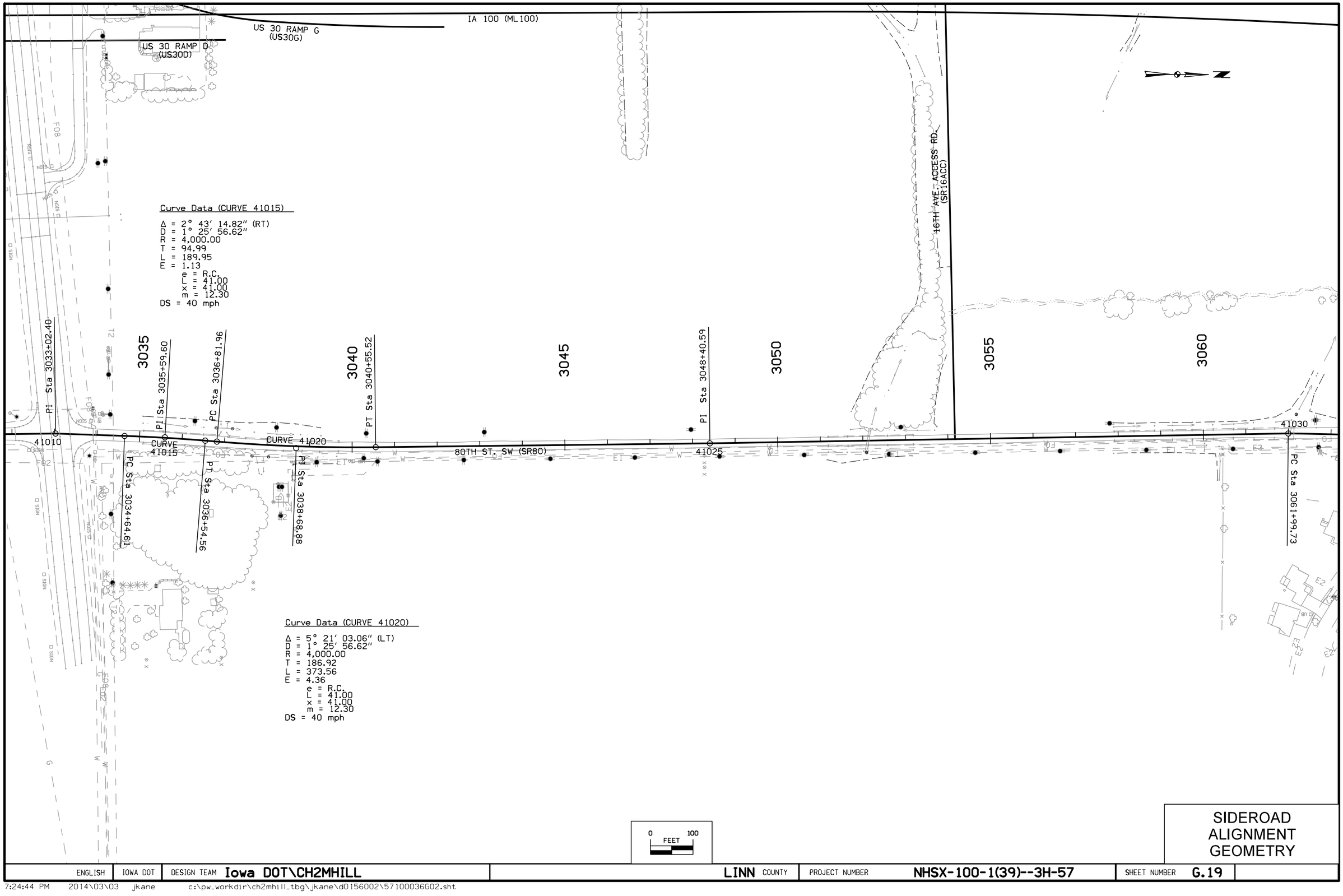

SIDEROAD ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.19

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E AVENUE
RAMP C (EAVEC)

IA 100 (ML100)

E AVENUE
RAMP A (EAVEA)

E AVENUE
RAMP B (EAVEB)

E AVENUE
RAMP D (EAVED)

E AVENUE
(SREAVE)

Curve Data (CURVE 41035)

Δ = 8° 07′ 17.08″ (RT)
D = 1° 02′ 30.27″
R = 5,500.00
T = 390.45
L = 779.60
E = 13.84
e = 2.2%
L = 53.00
x = 48.00
m = 15.90
DS = 50 mph

3065

3070

3075

3080

3085

3090

41030

41055

PI Sta 3065+90.19

PC Sta 3061+99.73

PT Sta 3069+79.33

PC Sta 3074+70.33

CURVE 41035

80TH ST. SW (SR80)

EX. 80TH ST. (REMOVE)

PI Sta 3079+01.38

CURVE 41040

PT Sta 3083+60.67

PC Sta 3088+39.66

PI Sta 3089+49.56

CURVE 41045

PT Sta 3090+42.15

PC Sta 3091+15.82

CURVE 41050

PI Sta 3092+25.04

PT Sta 3093+17.25

POT Sta 3093+92.55

Curve Data (CURVE 41040)

Δ = 8° 57′ 45.05″ (LT)
D = 1° 02′ 30.27″
R = 5,500.00
T = 431.05
L = 860.34
E = 16.87
e = 2.2%
L = 53.00
x = 48.00
m = 15.90
DS = 50 mph

Curve Data (CURVE 41050)

Δ = 54° 57′ 28.38″ (RT)
D = 27° 17′ 01.34″
R = 210.00
T = 109.22
L = 201.43
E = 26.70
e = N.C.
DS = 25 mph

Curve Data (CURVE 41045)

Δ = 55° 14′ 54.08″ (LT)
D = 27° 17′ 01.34″
R = 210.00
T = 109.90
L = 202.50
E = 27.02
e = N.C.
DS = 25 mph

0 100
FEET

SIDEROAD ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.20

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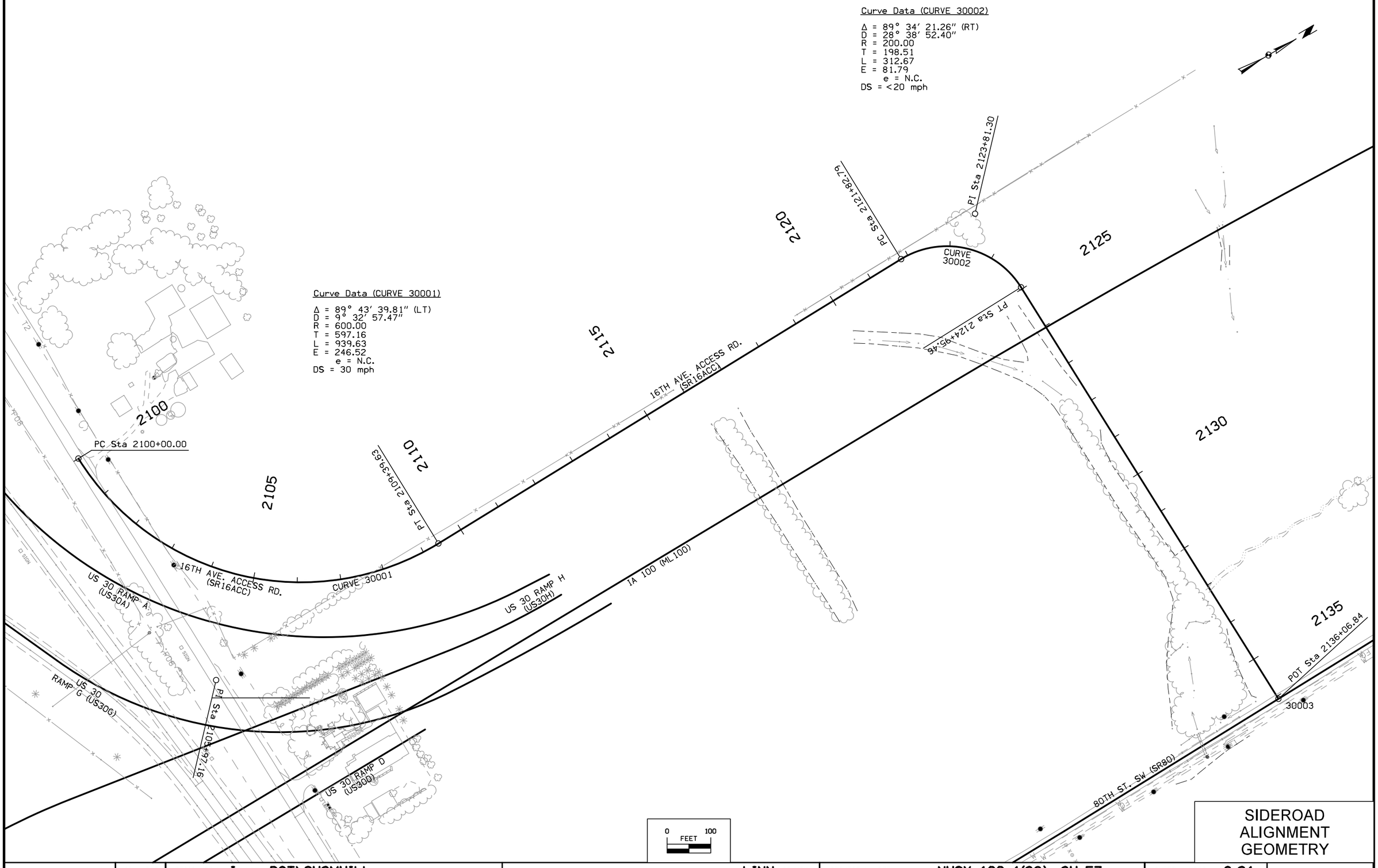
Curve Data (CURVE 30001)

Δ = 89° 43′ 39.81″ (LT)
D = 9° 32′ 57.47″
R = 600.00
T = 597.16
L = 939.63
E = 246.52
e = N.C.
DS = 30 mph

Curve Data (CURVE 30002)

Δ = 89° 34′ 21.26″ (RT)
D = 28° 38′ 52.40″
R = 200.00
T = 198.51
L = 312.67
E = 81.79
e = N.C.
DS = <20 mph



SIDEROAD ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.21

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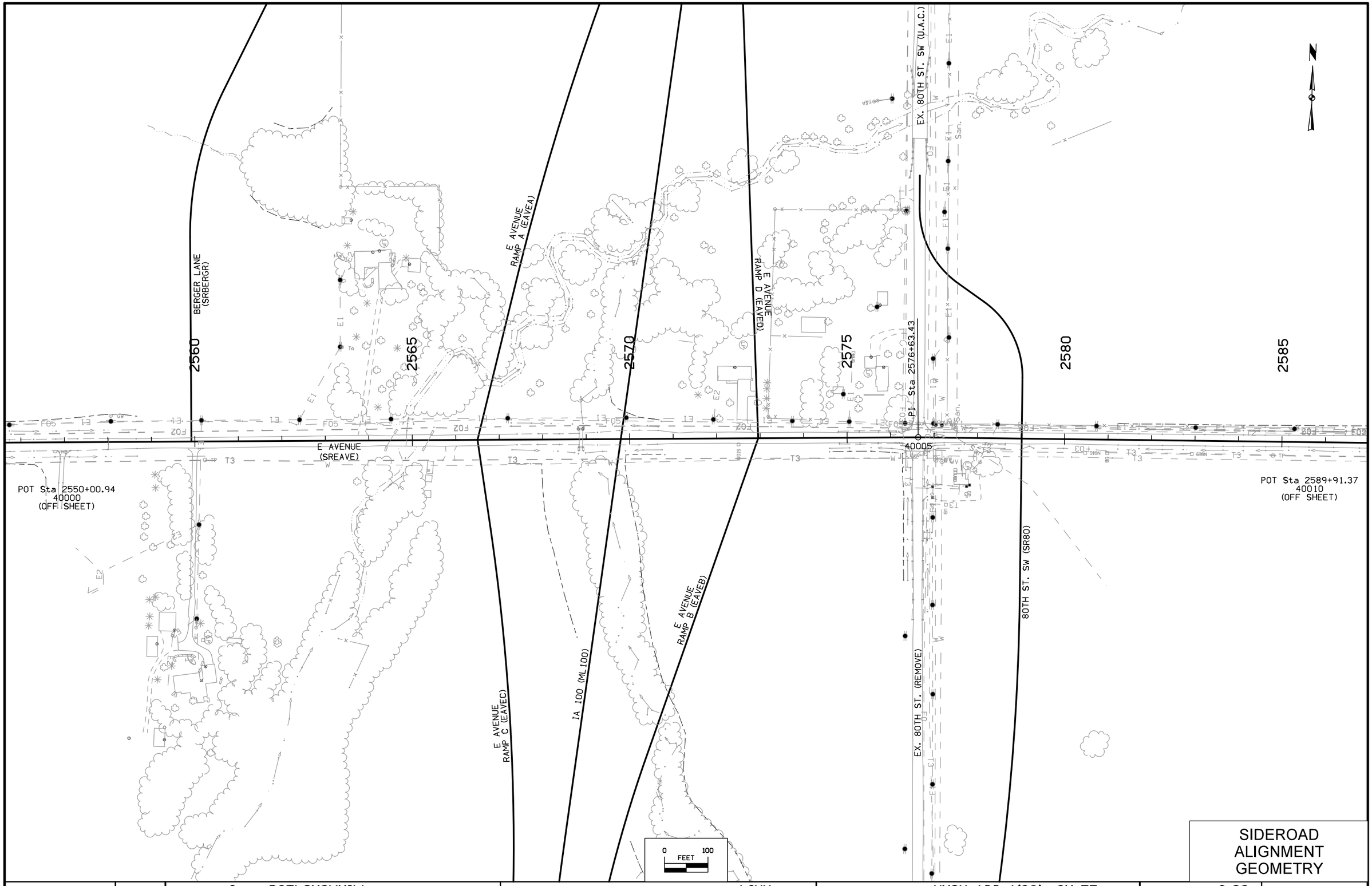

SIDEROAD ALIGNMENT GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.22

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Curve Data (CURVE 43001)

Δ = 26° 44′ 31.13″ (RT)
D = 7° 38′ 21.97″
R = 750.00
T = 178.27
L = 350.05
E = 20.90
e = N.C.
DS = 30 mph

Curve Data (CURVE 43002)

Δ = 26° 32′ 13.24″ (LT)
D = 7° 38′ 21.97″
R = 750.00
T = 176.86
L = 347.37
E = 20.57
e = N.C.
DS = 30 mph

4060
4065
4070
4075
4080

POT Sta 4059+91.55
43000
PI Sta 4066+41.75
PC Sta 4064+63.48
PT Sta 4068+13.53
PC Sta 4070+73.66
PT Sta 4074+21.03
PI Sta 4072+50.52

CURVE 43001
CURVE 43002

BERGER LANE
(SRBERGR)

E AVENUE
(SREAVE)

E AVENUE
RAMP A (EAVEA)

E AVENUE
RAMP C (EAVEC)

IA 100 (ML100)

0 FEET 100

SIDEROAD
ALIGNMENT
GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.23

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4085

4090

4095

4100

E1

POT Sta 4101+99.30

43003

BERGER LANE
(SRBERGR)

0 FEET 100

SIDEROAD
ALIGNMENT
GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.24

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3100

3105

3110

3115

IA 100 (ML100)

POT Sta 3100+00.00

42000

EX. 80TH ST.

PC Sta 3100+45.32

PI Sta 3103+47.10

CURVE 42001

EX. 80TH ST. (REMOVE)

PI Sta 3106+48.38

80TH ST. NORTH
(SR80N)

POT Sta 3117+31.63

42003

EX. ELLIS RD. (U.A.C.)

Curve Data (CURVE 42001)

Δ = 5° 45′ 31.68″ (RT)
D = 0° 57′ 17.75″
R = 6,000.00
T = 301.78
L = 603.06
E = 7.58
e = R.C.
L = 48.00
x = 48.00
m = 14.40
DS = 50 mph

0 100
FEET

SIDEROAD
ALIGNMENT
GEOMETRY

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER G.25

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108-23A
08-01-08

TRAFFIC CONTROL PLAN

80th Street SW at US 30 and E Avenue will be closed to traffic for a period of time during the construction of the US 30 and E Avenue interchanges respectively. Refer to Tabulation 108-26 “Staging Notes” for possible detour routes.

Traffic shall be maintained on all other local roadways and US 30. Access to local residences and field entrances are to be maintained at all times.

Traffic control for this project shall be in accordance with Iowa DOT Standard Road Plans.

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

The Contractor shall coordinate traffic control needs with other projects in the area. Refer to Tabulation 111-01 “Coordinated Operations” for other projects within the area.

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

108-26A
08-01-08

STAGING NOTES

GENERAL NOTES:
1. Contractor furnished borrows will be used for this project.
2. The Contractor shall take precautions to avoid disturbing areas outside of the projects proposed right-of-way limits.
3. Grading IA 100 mainline from near Covington Road and points north will be constructed as part of a previous project. It is anticipated that grading operations will be completed prior to or during this Phase II project. Paving operations from Covington Road north will also occur during Phase II grading. The grading Contractor shall tie to the previously graded roadways south of Covington Road.
4. The staging sequence presented below represents one possible sequence of construction assuming the full Phase II corridor is let as a single grading project. The below sequence has elements that can occur concurrently and/or moved up or down in sequence.
5. The staging plan below assumes bridge abutments are graded as soon as possible within the construction sequence to provide for any settlement needs that may be required. Additional geotechnical study is required to determine actual settlement values. Abutment grading may also be dependent on the ultimate packaging and lettings for Phase II bridge construction.
6. All bridges are assumed to be constructed following some settlement period and can be constructed at any time in the construction sequence following abutment grading unless specified otherwise.
7. The staging sequence below assumes roadway closures at adjacent interchanges will not occur simultaneously.

STAGE 1
-Close and remove existing Angle Road near the proposed US 30 interchange.
-Grade and pave proposed US 30 eastbound exit Ramp B and westbound entrance Ramp C to 80th Street SW. Reconstruct local 80th Street SW ramp terminal intersections under traffic with staged construction and temporary connections as needed. Maintain traffic on existing 80th Street SW ramps east of 80th Street SW.
-Grade and pave the proposed Relocated 16th Avenue/Access Road from existing 16th Avenue SW to 80th Street SW. Construct connections to existing 16th Avenue SW and 80th Street SW under traffic. Includes construction of RCB culvert.
-Begin bridge abutment grading and bridge construction for dual mainline bridges over Relocated 16th Avenue SW/Access Road.
-Mill and place asphalt surface on existing 80th Street SW from existing 16th Avenue SW to Relocated 80th Street SW south of E Avenue.
-Grade and pave relocated 80th Street SW north and south of E Avenue. Provide temporary connections to E Avenue.
-Construct Relocated Berger Lane including proposed RCB culvert.
-Construct Relocated 80th Street SW near Ellis Road under traffic.

STAGE 2
-Open Relocated 16th Avenue SW/Access Road, Berger Lane, and Relocated 80th Street SW south of Ellis Road to traffic.
-Open newly constructed US 30 eastbound and westbound exit and entrance ramps to 80th Street SW to traffic.
-Close existing US 30 eastbound exit ramp and US 30 westbound entrance ramp from existing 16th Avenue SW.
  Note: When reopened, the existing US 30 eastbound exit ramp will serve a system to system movement. If the existing ramp structure over US 30 is in need of maintenance or repair, it may be desirable to consider those activities while the ramp is closed to traffic.
-Close and remove existing 16th Avenue SW west of 80th Street SW.
-Close 80th Street SW at the US 30 interchange between ramp terminal intersections.
  Possible detour route:
    East on 16th Avenue to Stoney Point Road SW
    South of Stoney Point Road SW to Boulevard/US 151
    Northeast on Williams Boulevard to access US 30 or southwest on Williams Boulevard/US 151 to 80th Street SW
-Grade and pave 80th Street SW at the US 30 interchange. Construct new bridge over US 30.
-Grade US 30 Ramp D bridge abutments including partial construction of the retaining wall at the south bridge abutment and full construction of the retaining wall at the north bridge abutment.
-Grade US 30 Ramp H bridge abutments and retaining walls. Includes roadway embankment construction between the ramp bridges over US 30 mainline and US 30 Ramp G.
-Grade IA 100 mainline dual bridge abutments and E Avenue Ramp D bridge abutments at Morgan Creek.
-Grade IA 100 mainline dual bridge abutments at Ellis Road/Silver Creek.

STAGE 3
-Open newly constructed 80th Street SW through the US 30 interchange.
-Open Relocated 80th Street SW north and south of E Avenue and newly surfaced 80th Street SW between existing 16th Avenue SW and E Avenue.
-Maintain existing 80th Street SW from Relocated 80th Street SW to E Avenue.
-Close E Avenue from just east of Relocated 80th Street SW to Berger Lane.
  Possible detour route:
    Stoney Point Road south from E Avenue to existing 16th Avenue SW
    West on existing 16th Avenue SW to existing 80th Street SW.
    North of existing 80th Street SW to Relocated 16th Avenue SW/Access Road
    West on Relocated 16th Avenue/Access Road to existing 16th Avenue.
    West on existing 16th Avenue to Morgan Bridge Road SW.
    North on Morgan Bridge Road SW to E Avenue.
-Complete US 30/IA 100 System Interchange Ramp H grading with connection to existing US 30.
-Grade US 30/IA 100 System Interchange Ramp D and complete proposed retaining wall construction south of the proposed bridge over 80th Street SW Ramp C.
-Grade US 30 interchange Ramps A and G
-Grade IA 100 mainline from the Relocated 16th Avenue SW/Access Road bridges south to the US 30 system interchange.
-Grade IA 100 mainline from just north of Relocated 16th Avenue SW/Access Road to previously constructed IA 100 mainline near Covington Road. Tie to previously completed grading project. Includes construction of RCB culvert.
-Grade and pave proposed E Avenue east of relocated Berger Lane. Maintain thru traffic along Relocated 80th Street SW. Closure of the Relocated 80th Street SW intersection may be required at a point to complete the gap in E Avenue construction.
-Remove portion of existing 80th Street SW north of E Avenue.
-Construct RCB culverts under E Avenue.
-Grade E Avenue ramps including Ramp A bridge abutments at Morgan Creek.
-Construct E Avenue bridges over IA 100 mainline and Morgan Creek.
-Construct retaining wall in conjunction with E Avenue side road and interchange Ramp A grading and bridge construction.
-Remove portion of existing Berger Lane
-Grade Covington Road Ramps B and C. Tie to previously completed grading project.

LEGEND

- PROPOSED BRIDGES
- X X X PAVEMENT REMOVAL
- PROPOSED STAGE 1
- PROPOSED STAGE 2
- PROPOSED STAGE 3

30

EX. US 30 EB EXIT RAMP

EX. US 30 WB EXIT RAMP

EX. 16TH AVE. SW

US 30 RAMP A

US 30 RAMP G

RETAINING WALL

RELOCATED 16TH AVE./ACCESS RD.

700 705 710 715 720 725 730 735 740

100

EX. ANGLE RD. SW

RETAINING WALL

US 30 RAMP H

US 30 RAMP D

RETAINING WALL

RETAINING WALL

RETAINING WALL

80TH ST. RAMP B

80TH ST. RAMP C

RCB CULVERT

EX. 80TH ST. SW

EX. 80TH ST. SW

EX. 16TH AVE. SW

80TH ST. RAMP D

80TH ST. RAMP A

0 200 FEET

IA 100 - PHASE II CONSTRUCTION STAGING CONCEPT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER J.2

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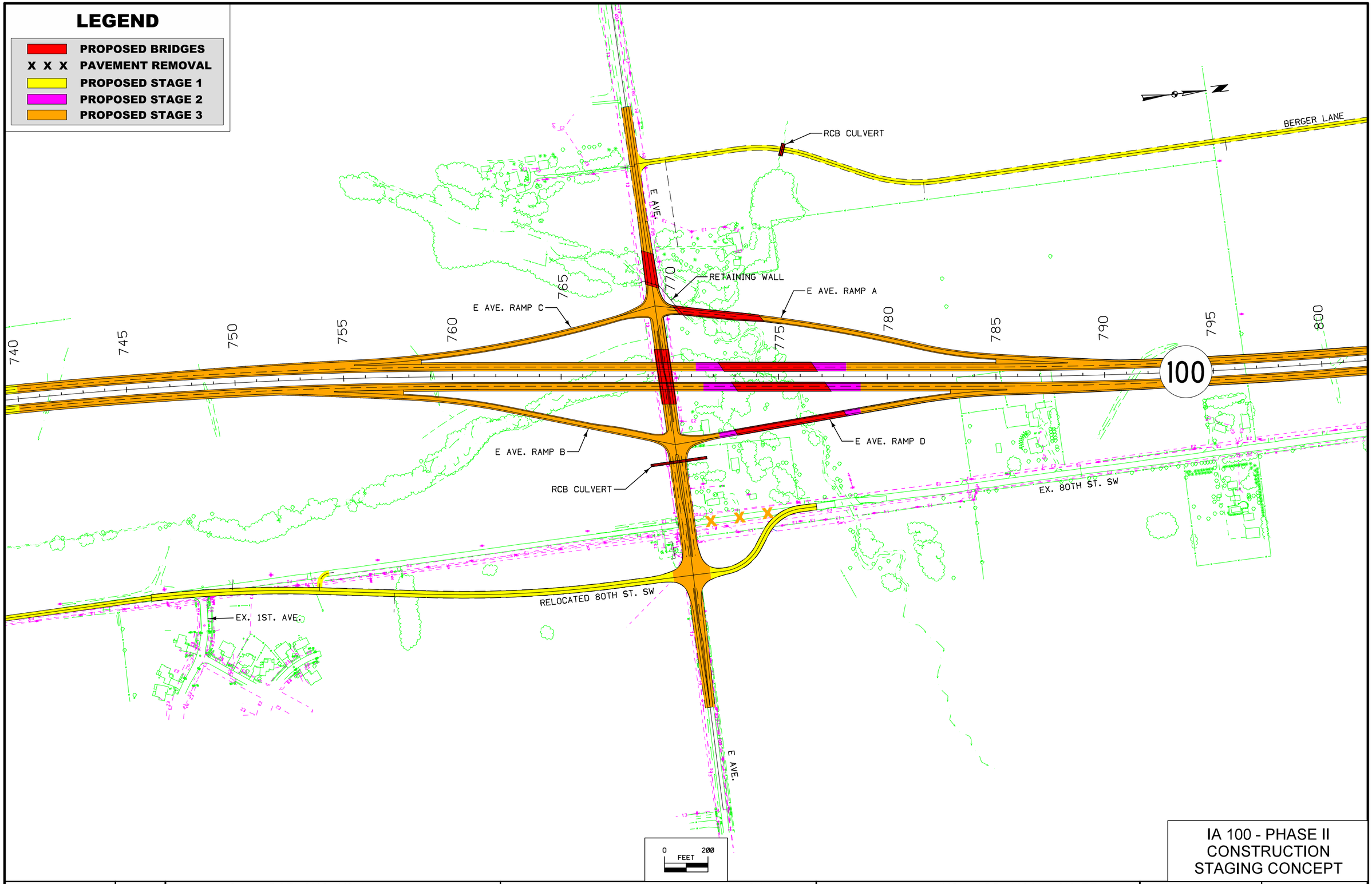
LEGEND

- PROPOSED BRIDGES
- X X X PAVEMENT REMOVAL
- PROPOSED STAGE 1
- PROPOSED STAGE 2
- PROPOSED STAGE 3



IA 100 - PHASE II CONSTRUCTION STAGING CONCEPT

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

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LEGEND

- PROPOSED BRIDGES
- X X X PAVEMENT REMOVAL
- PROPOSED STAGE 1
- PROPOSED STAGE 2
- PROPOSED STAGE 3

BERGER LANE

EX. BERGER LANE

800 805 815 820 825 830 835 840 845 850 855 860

100

EX. 80TH ST. SW

RELOCATED 80TH ST. SW

EX. ELLIS RD.

EX. ELLIS ROAD

0 200 FEET

IA 100 - PHASE II CONSTRUCTION STAGING CONCEPT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER J.4	

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LEGEND

- PROPOSED BRIDGES
- X X X PAVEMENT REMOVAL
- PROPOSED STAGE 1
- PROPOSED STAGE 2
- PROPOSED STAGE 3

RCB CULVERT

COVINGTON RD. RAMP C

COVINGTON RD. RAMP B

COVINGTON RD.

CONSTRUCTION BY OTHERS

CONSTRUCTION BY OTHERS

EX. ELLIS ROAD

855 860 865 870 875 880 885 890 895 900 905 910 915

100

0 200 FEET

IA 100 - PHASE II CONSTRUCTION STAGING CONCEPT

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER J.5

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For Interchange Grading Details Refer to Sheet K.31

For 80th St. SW Road Details Refer to Sheets No. E.6-E.12

CLINTON TWP.
T-83N R-8W
SEC.34

SEC.33

10505

STA. 10503+00.00 (RAMP A)
END RAMP A CONSTRUCTION

℄ CONSTRUCTION

℄ CONSTRUCTION

U.A.C.

EXISTING ROW

EXISTING ROW

PROPOSED ROW

SLOPE INTERCEPT

SLOPE INTERCEPT

80TH ST. SW RAMP A (80A)

80TH ST. SW RAMP C

80TH ST. SW

STA. 10500+88.72 (RAMP A)
STA. 3016+30.10, 12.00' RT. (80TH ST. SW)
BEGIN RAMP A CONSTRUCTION

POT STA. 10500+75.96 (80TH ST. SW RAMP A) =
POT STA. 13401+23.22 (80TH ST. SW RAMP C) =
POT STA. 3016+34.44 (80TH ST. SW)

EX. US 30 WB TO IA 100 EB (US 30 RAMP D)

EX. US 30 WB

FO

F1

F2

SIGN

w/FES

-844.86 24" RCP

FL

0 50
FEET

80TH ST. SW RAMP A

870
865
860
855
850
845
840
Lt
Rt

STA. 10503+00.00
END RAMP A CONSTRUCTION
ELEV. 862.92

PROPOSED PGL

-2.403%

-1.996%

EXISTING GROUND

VPI +00.000
Elv 864.91
K = 491
Len 200.00 ft
DS = 50 mph (IowaDOT)

STA. 10500+88.72
BEGIN RAMP A CONSTRUCTION
ELEV. 867.59

U.A.C.

U.A.C.

867.31 866.72 866.14 865.57 865.01 864.47 863.94 863.42 862.92

10500 +50 10501 +50 10502 +50 10503

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

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CLINTON TWP.
T-83N R-8W
SEC.33

80TH ST. SW RAMP C

EX. US 30 WB (U.A.C.)

EX. US 30 EB (U.A.C.)

PCC

EXISTING ROW

FL = 883.38 24" RCP w/FES

FL = 884.92 24" RCP w/FES

PROPOSED ROW

STA. 12388+50.00 (RAMP B)
STA. 1388+50.00, 96,00' RT. (EX. US 30)
BEGIN RAMP B CONSTRUCTION

PI Sta 12390+38.98

IA 100 EB TO
EX. US 30 EB
(US 30 RAMP H)

FL = 861.19

RETAINING
WALL 2030

℄ CONSTRUCTION

80TH ST. SW RAMP B (80B)

PI Sta 12388+50.00

Curve Data
Δ = 16° 10' 26.61" (RT)
D = 4° 18' 28.63"
R = 1,330.00
T = 188.98
L = 375.45
E = 13.36
e = 6.0%
L = 186.00
x = 62.00
m = 55.80
DS = 60 mph

SLOPE INTERCEPT

PT Sta 12392+25.45

0 50 FEET

For US 30 Survey Details Refer to Sheets No. E1-E5

For Interchange Grading Details Refer to Sheet K.31

80TH ST. SW RAMP B

EXISTING GROUND

PROPOSED PGL

STA. 12388+50.00
BEGIN RAMP B CONSTRUCTION
ELEV. 858.38

-0.819%

+1.800%

+50 Rt.
852.14

+50 Lt.
855.75

-1.65% Lt. D.G.

+0.30% Rt. Ditch Grade

+1.61% Lt. Ditch Grade

+0.96% Rt. Ditch Grade

+00 Lt.
853.28

+00 Rt.
853.49

+00 Rt.
856.36

VPI +25.000
Elv 855.31
K = 153
Len 400.00 ft
DS = 50 mph (IowaDOT)

Variable

Ditch Grade

Ditch Grade

870 865 860 855 850 845 840

Lt
Rt

858.38 858.18 857.97 857.77 857.56 857.36 857.15 856.95 856.76 856.62 856.52 856.45 856.43 856.45 856.52 856.62 856.76 856.95 857.17 857.44 857.74 858.09 858.48 858.91 859.36 859.81 860.26 860.71 861.16 861.61 862.06

12389 12390 12391 12392 12393 12394 12395 12396

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.2

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CLINTON TWP.
T-83N R-8W
SEC.33

IA 100 EB TO EX. US 30 EB (US 30 RAMP H)

EXISTING ROW

EX. ANGLE RD. (REMOVE)

EXISTING ROW

12400

PC Sta 12400+61.72

855.88 36" CMP

12405

Curve Data
Δ = 41° 33' 22.97" (LT)
D = 6° 52' 41.68"
R = 833.00
T = 316.06
L = 604.17
E = 57.95
e = 6.0%
L = 168.00
x = 56.00
m = 50.40
DS = 50 mph

SLOPE INTERCEPT

80TH ST. SW RAMP B (80B)

℄ CONSTRUCTION

PROPOSED ROW

PROPOSED ROW

PI Sta 12403+77.78

Sta. 12403+00.00
Install 24"x64' 1101 RCP
F.L. = Lt. 863.73
Rt. 864.23

0 50 FEET

FL = 845.66 42" RCP w/FES

FES FL = 844.51

FL = 844.71 42" RCP w/FES

80TH ST. SW

PT Sta 12406+65.89

STA. 12408+27.03 (RAMP B) =
STA. 3005+89.68,
10.67 LT. (80TH ST. SW)
END RAMP B CONSTRUCTION

80TH ST. SW RAMP D

PCC

Gravel

EXISTING ROW

POT STA. 12408+38.32 (80TH ST. SW RAMP B) =
POT STA. 19508+34.18 (80TH ST. SW RAMP D)
POT STA. 3005+86.00 (80TH ST. SW)

For Interchange Grading Details Refer to Sheet K.31

For 80th St. SW Road Details Refer to Sheet No. E.6-E.12

80TH ST. SW RAMP B

VPI +25.000
Elv 871.51
K = 86
Len 200.00 ft
DS = 50 mph (IowaDOT)

VPI +00.000
Elv 868.52
K = 99
Len 250.00 ft
DS = 50 mph (IowaDOT)

PROPOSED PGL

+1.800%

-0.520%

+2.000%

+1.61% Lt. Ditch Grade

+2.17% Rt. Ditch Grade

+50 Lt. 866.98

1.30% Lt. D.G.

+25 Rt. 865.60

-0.50% Rt. Ditch Grade

+00 Rt. 864.23

+0.80% Rt. Ditch Grade

+00 Lt. 863.73

-0.50% Lt. Ditch Grade

EXISTING GROUND

+50 Rt. 867.83

-0.44% Rt. D.G.

+28.69 Rt. 867.48

+25 Lt. 861.60

STA. 12408+27.03
END RAMP B CONSTRUCTION
ELEV. 871.06

880 875 870 865 860 855 850

Lt Ditch Grade Vari.
Rt Ditch Grade

862.51 862.96 863.41 863.86 864.31 864.76 865.21 865.66 866.11 866.56 867.01 867.46 867.91 868.36 868.81 869.26 869.71 870.12 870.46 870.73 870.93 871.05 871.10 871.08 870.99 870.86 870.73 870.60 870.47 870.34 870.21 870.08 869.95 869.82 869.69 869.56 869.43 869.30 869.17 869.07 869.04 869.06 869.15 869.31 869.52 869.80 870.15 870.55 871.02

12396 12397 12398 12399 12400 12401 12402 12403 12404 12405 12406 12407 12408

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

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For Interchange Grading Details Refer to Sheet K.31

For US 30 Survey Details Refer to Sheets No. E.1-E.5

CLINTON TWP.
T-83N R-8W
SEC.33

SEC.34

For 80th St. SW Road Details Refer to Sheets No. E.6-E.12

Curve Data
Δ = 19° 04′ 04.06″ (LT)
D = 2° 51′ 53.24″
R = 2,000.00
T = 335.90
L = 665.59
E = 28.01
e = 5.4%
L = 168.00
x = 62.00
m = 50.40
DS = 60 mph

PROPOSED ROW

RETAINING WALL 2010

EX. US 30 WB TO IA 100 EB (US 30 RAMP D)

SLOPE INTERCEPT

Sta. 13397+50.00
Install 24″x72′ 1101 RCP
F.L. = Lt. 850.20
Rt. 851.25

STA. 13401+10.42 (RAMP C)
STA. 3016+38.90, 12.00′ LT. (80TH ST. SW)
END RAMP C CONSTRUCTION

13400

EXISTING ROW

PC Sta 13388+50.00

EXISTING ROW

13390

Sta. 13392+76.62
Install 30″x54′ 1302 RCP
Skew = 14.1° Rt. Ahd.
F.L. = Lt. 849.19
Rt. 847.40

RETAINING WALL 2060

13395

POC STA. 13394+89.42 (80TH ST. SW RAMP C) =
POC STA. 14700+70.24 (US 30 RAMP D)

PT Sta 13395+15.59

℄ CONSTRUCTION

80TH ST. SW RAMP A

80TH ST. SW RAMP C (80C)

POT STA. 13401+23.22 (80TH ST. SWRAMP C) =
POT STA. 10500+75.96 (80TH ST. SW RAMP A) =
POT STA. 3016+34.44 (80TH ST. SW)

EXISTING ROW

PI Sta 13391+85.00

FL = 849.19 30″ RCP

IA 100 EB TO EX. US 30 EB (US 30 RAMP H)

STA. 13390+78.61 (RAMP C)
STA. 1390+77.81, 93.61′ LT. (EX. US 30)
BEGIN RAMP C CONSTRUCTION

80TH ST. SW RAMP B

EX. US 30 EB

EX. US 30 WB

RCP w/FES

0 FEET 50

RETAINING WALL 2000

80TH ST. SW

80TH ST. SW RAMP C

VPI +05.000
Elv 865.28
K = 131
Len 200.00 ft
DS = 50 mph

+2.000%

+3.522%

STA. 13390+78.61
BEGIN RAMP C CONSTRUCTION
ELEV. 857.07

PROPOSED PGL

-1.161%

+25 Rt. 853.50

-0.40% Rt. D.G.

-4.00% Rt. D.G.

+00 Rt. 853.30

+50 Rt. 851.20

+0.50% Rt. Ditch Grade

+50 Rt. 852.25

+75 Rt. 851.83

-0.50% Rt. Ditch Grade

+50 Rt. 851.25

+5.19% Lt. D.G.

+25 Lt. 854.09

+0.50% Rt. Ditch Grade

+00 Rt. 853.00

EXISTING GROUND

+50 Lt. 849.38

-1.5% Lt. Ditch Grade

+67 Lt. 847.40

+0.58% Lt. Ditch Grade

VPI +00.000
Elv 851.02
K = 96
Len 450.00 ft
DS = 50 mph

+50 Lt. 850.20

STA. 13401+10.42
END RAMP C CONSTRUCTION
ELEV. 867.39

870 865 860 855 850 845 840

Lt / Rt

2′ Toe — Vari. — Ditch Grade — Ditch Grade — Bridge Grading — Ditch Grade — 5′ Ditch

856.82 856.53 856.24 855.95 855.66 855.37 855.08 854.79 854.50 854.21 853.92 853.63 853.37 853.18 853.05 852.99 852.99 853.06 853.19 853.39 853.65 853.98 854.37 854.83 855.35 855.94 856.59 857.31 858.09 858.94 859.82 860.70 861.58 862.45 863.27 864.04 864.76 865.44 866.07 866.65 867.18

13391 +50 13392 +50 13393 +50 13394 +50 13395 +50 13396 +50 13397 +50 13398 +50 13399 +50 13400 +50 13401

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.4

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For 80th St. SW Road Details Refer to Sheets No. E.6-E.12

For Interchange Grading Details Refer to Sheet K.31

CLINTON TWP.
T-83N R-8W
SEC.34

SEC.33

EX. ANGLE RD.

80TH ST.

80TH ST. RAMP B

19510

19515

EX. US 30 WB

EX. US 30 EB

℄ CONSTRUCTION

POT STA. 19508+34.18 (80TH ST. RAMP D) =
POT STA. 13401+23.22 (80TH ST. RAMP B) =
POT STA. 3005+86.00 (80TH ST.)

EX. 80TH ST. RAMP D (80D)

U.A.C.

PCC

Gravel

PROPOSED ROW

SLOPE INTERCEPT

EX. 80TH ST. (U.A.C.)

EXISTING ROW

0 FEET 50

For US 30 Survey Details Refer to Sheets No. E.1-E.5

80TH ST. RAMP D

875
870
865
860
855
850
845

EXISTING GROUND

Lt
Rt

U.A.C.
U.A.C.

19508 +50 19509 +50 19510 +50 19511 +50 19512 +50 19513 +50 19514 +50 19515 +50 19516 +50 19517 +50 19518 +50

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.5

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For Interchange Grading Details Refer to Sheet K.32

For 16th Access Rd. Details Refer to Sheets No. E.13-E.14

CLINTON TWP.
T-83N R-8W
SEC.28

SEC.33

EX. 16TH AVE. (U.A.C.)

EXISTING ROW

PROPOSED ROW

SLOPE INTERCEPT

RELOCATED 16TH AVE./ACCESS RD.

(REMOVE)
Sta. _____+_____, _____ Rt.
42" X 119.00' R.C.P.
Da = 21.56 a

Sta. 11715+75.00
Install 42"x104' 1101 RCP
F.L. = Lt. 827.53
Rt. 830.77

FL = 817.01 2.25'Hx2'W RCB

FL = 820.60 2.25'Hx2'W RCB

FL = 826.00 24" RCP w/FES

FL = 831.67 24" RCP w/FES

FL = 826.90 42" RCP

IA 100 WB TO EX. US 30 WB (U.A.C.)

EX. US 30 WB

EX. US 30 EB

POT Sta 11708+54.22

PC Sta 11709+73.71

11710

Curve Data
Δ = 80° 41' 13.35" (LT)
D = 5° 52' 35.36"
R = 975.00
T = 828.13
L = 1,373.05
E = 304.23
e = 6.0%
L = 168.00
x = 56.00
m = 50.40
DS = 50 mph

℄ CONSTRUCTION

IA 100 WB TO EX. US 30 WB
(US 30 RAMP A)(US30A)

PI Sta 11718+01.84
(POINT OFF SHEET)

STA. 11709+05.00 (RAMP A)
BEGIN RAMP A CONSTRUCTION

0 FEET 50

US 30 RAMP A

STA. 11709+05.00
BEGIN RAMP A CONSTRUCTION
ELEV. 846.77

+0.777%

-1.681%

PROPOSED PGL

+00 Rt.
841.77

+0.60% Rt. Ditch Grade

-4.00% Rt. Ditch Grade

+0.90% Rt.
Ditch Grade

VPI +75.000
Elv 848.87
K = 203
Len 500.00 ft
DS = 50 mph

+05 Rt.
839.40

+0.46% Lt. Ditch Grade

+05 Lt.
834.40

+00 Lt.
835.30

EXISTING GROUND

+75 Rt.
830.77

Ditch Grade

Access Rd. Ditch Rt. Refer to E.13-E.14

Ditch Grade

11709	+50	11710	+50	11711	+50	11712	+50	11713	+50	11714	+50	11715	+50	11716	+50	11717
846.93	847.11	847.26	847.37	847.46	847.52	847.54	847.54	847.50	847.43	847.34	847.21	847.05	846.86	846.64	846.39	846.11	845.79	845.45	845.08	844.67	844.25	843.83	843.41	842.99	842.57	842.15	841.73	841.31	840.89	840.47	840.05

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.6

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For Interchange Grading Details Refer to Sheet K.32

For 16th Access Rd. Details Refer to Sheets No. E.14-E.15

CLINTON TWP.
T-83N R-8W
SEC.28

Curve Data
△ = 80° 41′ 13.35″ (LT)
D = 5° 52′ 35.36″
R = 975.00
T = 828.13
L = 1,373.05
E = 304.23
e = 6.0%
L = 168.00
x = 56.00
m = 50.40
DS = 50 mph

PROPOSED ROW

SLOPE INTERCEPT

11720

FUTURE UTILITY CASING PIPE

PT Sta 11723+46.76

STA. 11724+25.00 (RAMP A) =
STA. 724+25.00, 98.00′ LT. (IA 100)
END RAMP A CONSTRUCTION

IA 100 WB

15:1 TAPER

IA 100 EB

E CONSTRUCTION

IA 100 WB TO EX. US 30 WB
(US 30 RAMP A)(US30A)

IA 100 WB TO US 30 EB
(US 30 RAMP H)

0 FEET 50

PROPOSED ROW

US 30 RAMP A

845
840
835
830
825
820
815

PROPOSED PGL

-1.681%

+0.90% Rt. Ditch Grade

+25 Rt. 833.02

VPI +50.000
Elv 832.48
K = 276
Len 200.00 ft
DS = 50 mph

-0.955%

STA. 11724+25.00
END RAMP A CONSTRUCTION
ELEV. 829.86

EXISTING GROUND

Lt Access Rd. Ditch Rt. Refer to E.13-E.14

Rt Ditch Grade — Curb & Gutter

839.63 839.21 838.79 838.37 837.95 837.53 837.11 836.69 836.27 835.85 835.43 835.01 834.58 834.16 833.76 833.37 833.01 832.67 832.35 832.05 831.78 831.53 831.29 831.05 830.81 830.57 830.33 830.10 829.86

11717 +50 11718 +50 11719 +50 11720 +50 11721 +50 11722 +50 11723 +50 11724

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.7

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For US 30 Survey Details
Refer to Sheets No. E.1-E.5

For Interchange Grading
Details Refer to Sheet K.31

For Profile Details
Refer to Sheet No. K.9

CLINTON TWP.
T-83N R-8W
SEC.33

EXISTING ROW

EX. 80TH ST. SW RAMP D

EXISTING ROW

EX. ANGLE RD. (REMOVE)

IA 100 WB TO EX. US 30 EB
(US 30 RAMP H)

SLOPE INTERCEPT

50:1 TAPER

EX. US 30 EB

14690

14695

RETAINING
WALL 2000

℄ CONSTRUCTION

EX. US 30 WB

15:1 TAPER

EX. US 30 WB TO
IA 100 EB (US 30 RAMP D)
(US30D)

~~POT STA. 14692+20.95 (US 30 RAMP D)~~ =
POT STA. 3012+49.26 (80TH ST. SW)

STA. 14689+17.13 (RAMP D)
STA. 1406+25.00, 96.00' LT. (EX. US 30)
BEGIN RAMP D CONSTRUCTION

EXISTING
ROW

80TH ST. SW RAMP C

SLOPE INTERCEPT

Sta. 14692+27.17
Install 30"x116' 1101 RCP
Skew = 67.8° Lt. Ahd.
F.L. = Lt. 846.00
Rt. 844.13

80TH ST. SW RAMP A

PROPOSED ROW

80TH ST. SW

0 FEET 50

SEC.34

US 30 RAMP D

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.8

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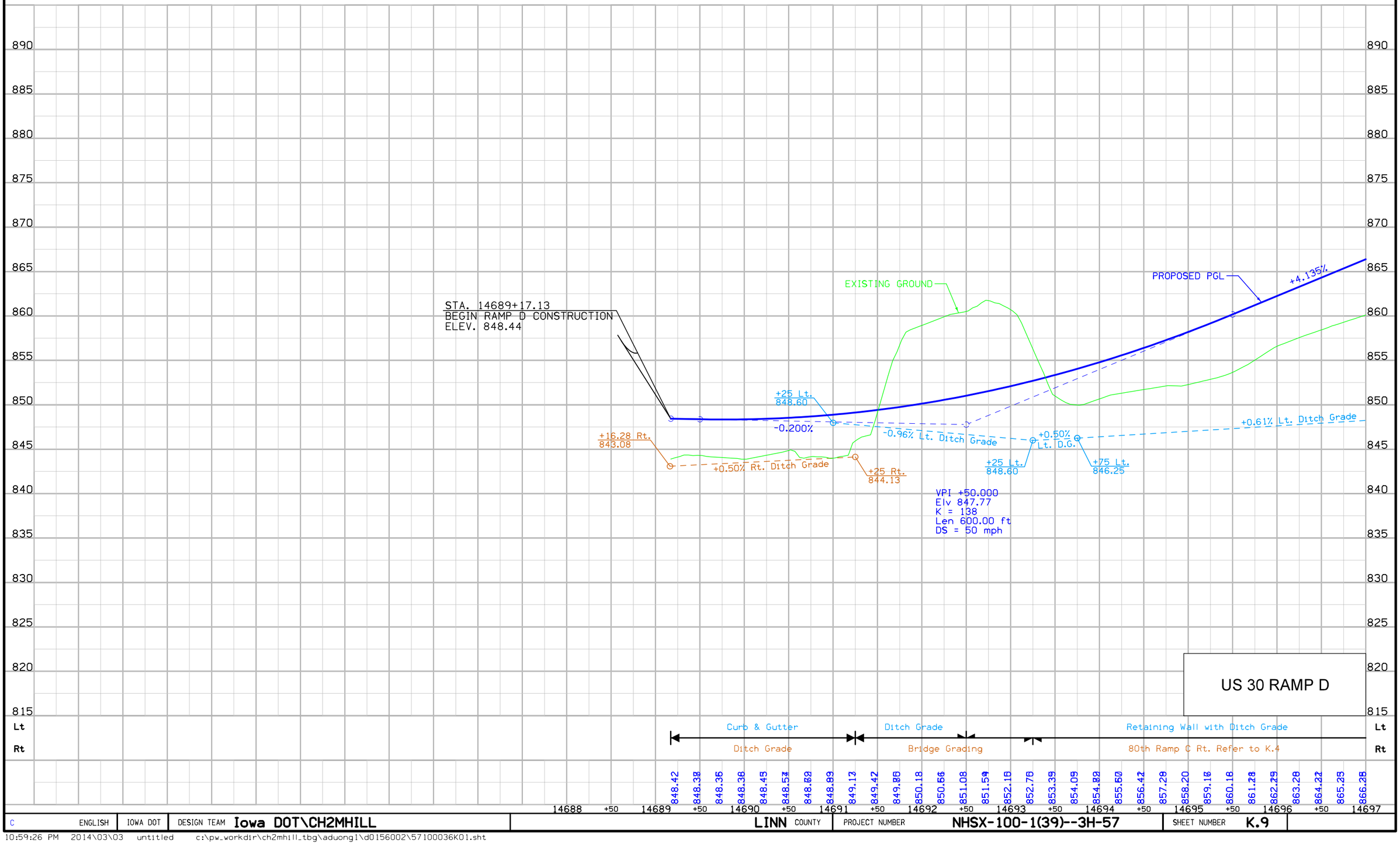

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.9

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For Interchange Grading
Details Refer to Sheet K.32

For Profile Details
Refer to Sheet No. K.11

CLINTON TWP.
T-83N R-8W
SEC.33

Curve Data
△ = 45° 56′ 35.28″ (RT)
D = 3° 31′ 33.22″
R = 1,625.00
T = 688.82
L = 1,303.02
E = 139.96
e = 4.80
L = 136.00
x = 56.00
m = 40.80
DS = 50 mph

PI Sta 14705+21.82

14700
14705
14710

EX. US 30 EB
EX. US 30 WB
IA 100
℄ CONSTRUCTION
RETAINING WALL 2060
EX. US 30 WB TO IA 100 EB (US 30 RAMP D)(US30D)
RETAINING WALL 2010
RETAINING WALL 2000
CONCRETE BARRIER
SLOPE INTERCEPT
POC STA. 14700+70.24 (US 30 RAMP D) =
POC STA. 13394+89.42 (80TH ST. SW RAMP C)
PC Sta 14698+33.00
PI Sta 14711+36.02
80TH ST. SW RAMP C
PROPOSED ROW
PROPOSED ROW
80TH ST. SW
EXISTING ROW

Sta. 14706+50.00
Install 24″x172′ 1101 RCP
F.L. = Lt. 845.52
Rt. 842.31

For Bridge Options
Refer to V Sheets

0 FEET 50

US 30 RAMP D

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.10

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VPI +30.000
Elv 884.16
K = 86
Len 575.00 ft
DS = 50 mph

+4.135%

PROPOSED PGL

-2.562%

℄ RAMP C

+0.61% Lt. Ditch Grade

+75 Lt.
849.31

+50 Lt.
847.03

-0.50% Lt. Ditch Grade

+50 Lt.
845.53

+2.00% Lt. D.G.

+50 Lt.
847.58

EXISTING GROUND

-1.93% Lt. Ditch Grade

+0.50% Rt.
Ditch Grade

+50 Rt.
842.42

+50 Rt.
842.92

-1.73% Rt. Ditch Grade

US 30 RAMP D

Lt	Retaining Wall w/ D.G.	Bridge	Retaining Wall	Ditch Grade
Rt	80th Ramp C Rt. Refer to K.4	Bridge	Retaining Wall	

14697 +50 14698 +50 14699 +50 14700 +50 14701 +50 14702 +50 14703 +50 14704 +50 14705 +50 14706 +50 14707 +50 14708 +50 14709 +50 14710 +50 14711 +50 14712

C | ENGLISH | IOWA DOT | DESIGN TEAM Iowa DOT\CH2MHILL | LINN COUNTY | PROJECT NUMBER NHSX-100-1(39)--3H-57 | SHEET NUMBER K.11

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For Interchange Geometrics Refer to Sheet No. K.1 & K.4	For 16th Access Rd. Details Refer to Sheets No. E.13-E.14	For Profile Details Refer to Sheet No. K.13

SEC.33

CLINTON TWP.
T-83N R-8W
SEC.28

EXISTING ROW

EX. EX. US 30 EB TO EX. 16TH AVE. (REMOVE)

EX. 16TH AVE. TO EX. US 30 WB (REMOVE)

EX. 16TH AVE. (REMOVE)

PROPOSED ROW

SLOPE INTERCEPT

RELOCATED 16TH AVE./ACCESS RD.

IA 100 WB TO EX. US 30 WB (US 30 RAMP A)(US30A)

FUTURE UTILITY CASING PIPE

Sta. 14714+25.00
Install 24"x142' 1101 RCP
F.L. = Lt. 834.30
Rt. 832.32

IA 100 WB TO US 30 EB (US 30 RAMP H)

IA 100 WB

℄ CONSTRUCTION

IA 100 EB

EX. US 30 WB TO IA 100 EB (US 30 RAMP D)(US30D)

SLOPE INTERCEPT

STA. 14719+98.70 (RAMP D)
END RAMP D CONSTRUCTION

PROPOSED ROW

PROPOSED ROW

EXISTING ROW

EX. 16TH AVE. (REMOVE)

0 50 FEET

For Interchange Grading Details Refer to Sheet K.32

US 30 RAMP D

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.12

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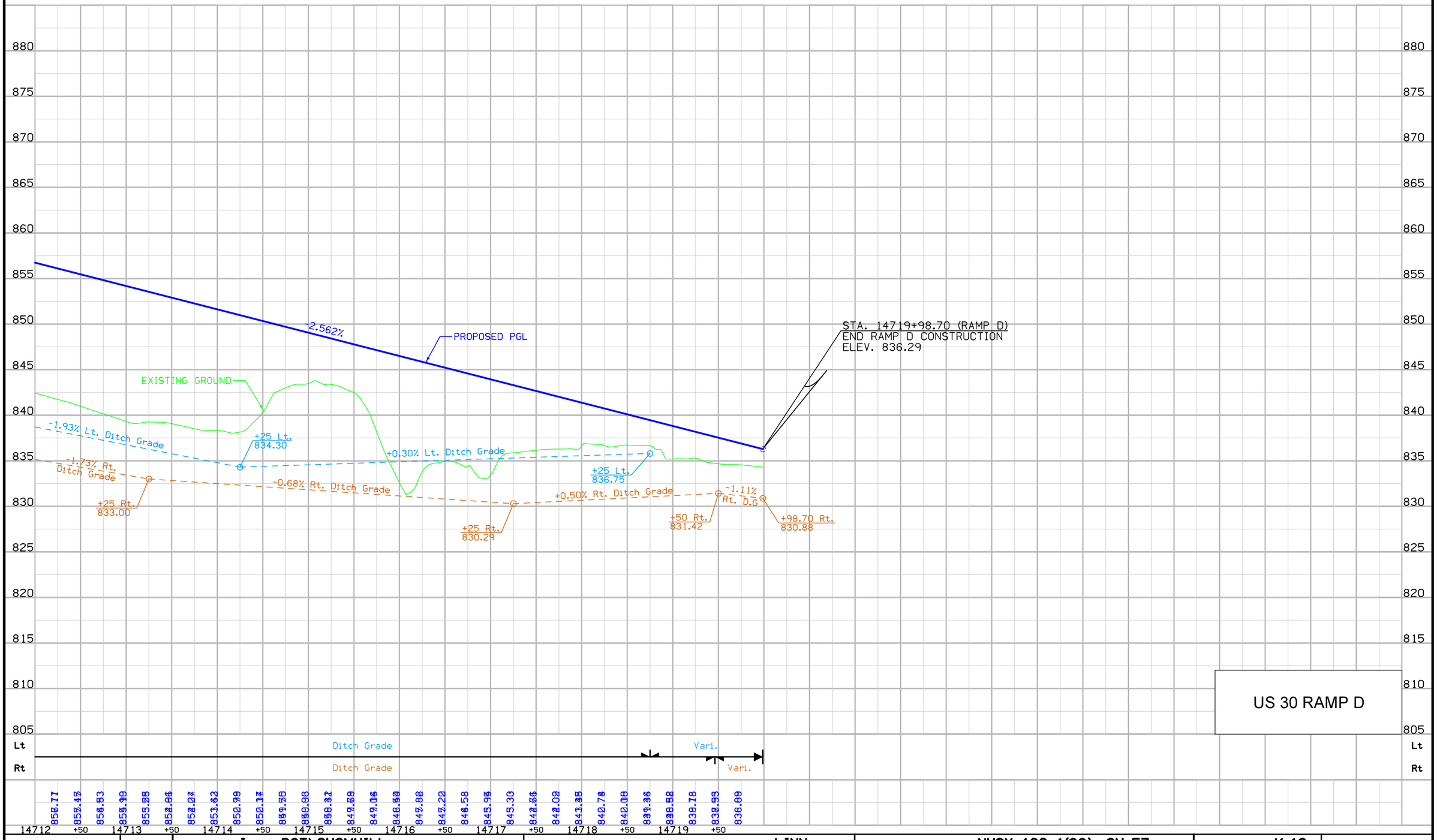

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.13

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For Interchange Grading Details Refer to Sheet K.32

For Ramp Gore Geometrics Refer to Sheet No. K.1 & K.4

For 16th Access Rd. Details Refer to Sheets No. E.13

SEC.33

CLINTON TWP.
T-83N R-8W
SEC.28

RELOCATED 16TH AVE./ACCESS RD.

EXISTING ROW

EX. 16TH AVE. (REMOVE)

EXISTING ROW

POT Sta 17706+34.73

STA. 17710+50.00 (RAMP G)
BEGIN RAMP G CONSTRUCTION

17710

EX. 16TH AVE. TO EX. US 30 WB (REMOVE)

PC Sta 17711+44.02

FL = 826.50 42" RCP

FL = 826.30 42" RCP w/FES

17715

IA 100 WB TO EX. US 30 WB (US30 RAMP A)

17720

PCC Sta 17719+95.97

IA 100 EB

POC STA. 17716+08.06 (US 30 RAMP G) =
POT STA. 18716+36.29 (US 30 RAMP H)

IA 100 WB TO US 30 EB (US30 RAMP H)

EX. US 30 EB TO IA 100 EB (US 30 RAMP G) (US30G)

Gar.

Curve Data
Δ = 62° 20' 04.99" (LT)
D = 6° 32' 53.12"
R = 875.00
T = 529.24
L = 951.95
E = 147.60
e = 6.0%
L = 168.00
x = 56.00
m = 50.40
DS = 50 mph

EXISTING ROW

(REMOVE)
Sta. 17712+39.27, 49.48' Rt.
42" X 263.10' R.C.P.
Da = 18.17 a

845.40 24" RCP w/FES

Sta. 17712+00.00
Install 42"x112' 1101 RCP
F.L. = Lt. 837.33
Rt. 837.88

℄ CONSTRUCTION

EX. US 30 EB TO EX. 16TH AVE. (REMOVE)

0 FEET 50

PI Sta 17716+73.25
(POINT OFF SHEET)

US 30 EB TO IA 100 WB (US30 RAMP D)

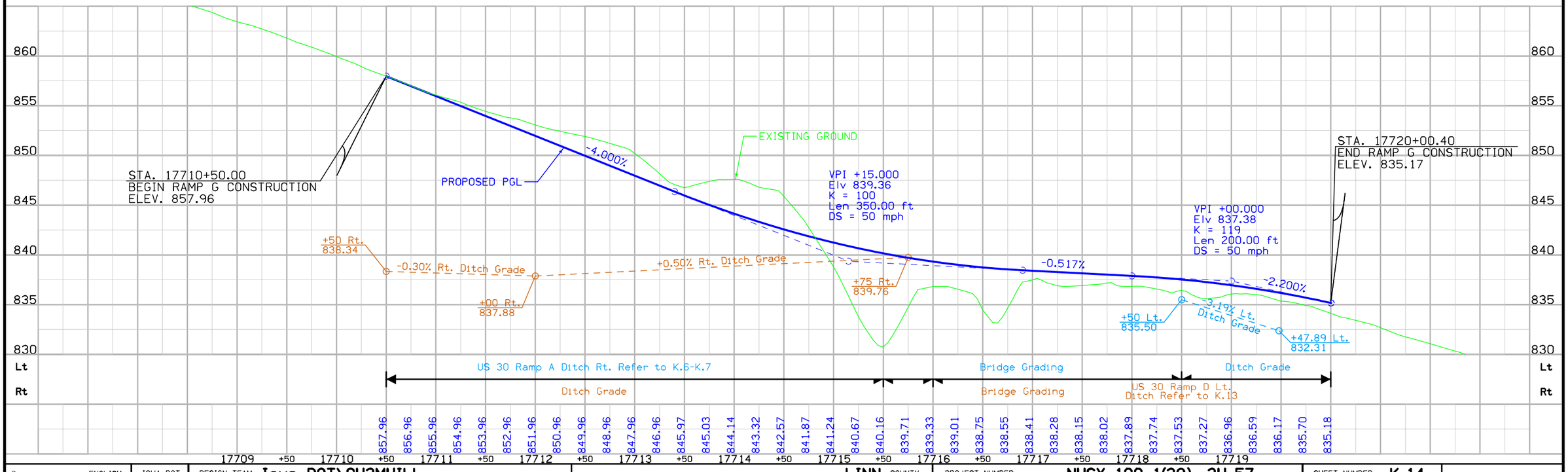
PROPOSED ROW

Curve Data
Δ = 4° 15' 29.17" (LT)
D = 1° 01' 23.30"
R = 5,600.00
T = 208.19
L = 416.18
E = 3.87
e = R.C.
L = 56.00
x = 56.00
m = 16.80
DS = 50 mph

STA. 17720+00.40 (RAMP G)
STA. 14719+99.70 (RAMP D)
END RAMP G CONSTRUCTION

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

US 30 RAMP G



C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.14	

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For Interchange Grading Details Refer to Sheet K.31

For US 30 SurveyDetails Refer to Sheets No. E.1-E.5

For Ramp Gore Geometrics Refer to Sheets No. U._&U._

For Main Line Details Refer to Sheet No. D.2-D.3

For Profile Details Refer to Sheet No. K.16

CLINTON TWP.
T-83N R-8W
SEC.33

PROPOSED ROW

EXISTING ROW

80TH ST. SW RAMP D

80TH ST. SW

Curve Data
Δ = 8° 21′ 06.60″ (LT)
D = 2° 51′ 53.24″
R = 2,000.00
T = 146.03
L = 291.53
E = 5.32
e = 5.4%
L = 168.00
x = 62.00
m = 50.40
DS = 60 mph

Sta. 18691+75.00
Install 24″x60′ 1101 RCP
F.L. = Lt. 845.20
Rt. 846.90

STA. 18688+26.53 (RAMP H) =
STA. 1403+97.14, 93.62′ RT. (EX. US 30)
BEGIN RAMP H CONSTRUCTION

18690

18695

EX. ANGLE RD. (REMOVE)

PROPOSED ROW

Curve Data
Δ = 68° 48′ 14.76″ (RT)
D = 3° 31′ 33.22″
R = 1,625.00
T = 1,112.75
L = 1,951.39
E = 344.47
e = 4.80%
L = 136.00
x = 56.00
m = 40.80
DS = 50 mph

SLOPE INTERCEPT

80TH ST. SW RAMP B

EXISTING ROW

CONCRETE BARRIER

RETAINING WALL 2030

SLOPE INTERCEPT

PC Sta 18685+97.87

PT Sta 18688+89.40

B CONSTRUCTION

IA 100 WB TO EX. US 30 EB (US 30 RAMP H) (US30H)

50:1 TAPER

50:1 SHOULDER TRANSITION

RETAINING WALL 2020

PC Sta 18692+53.67

POC STA. 18687+30.52 (US 30 RAMP G) =
POT STA. 3009+86.88 (80TH ST.)

PT Sta 18689+43.89

EX. US 30 EB

EX. US 30 WB

EX. US 30 WB TO IA 100 EB (US 30 RAMP D)

EXISTING ROW

SLOPE INTERCEPT

80TH ST. SW RAMP C

PROPOSED ROW

SEC.34

0 50
FEET

US 30 RAMP H

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.15

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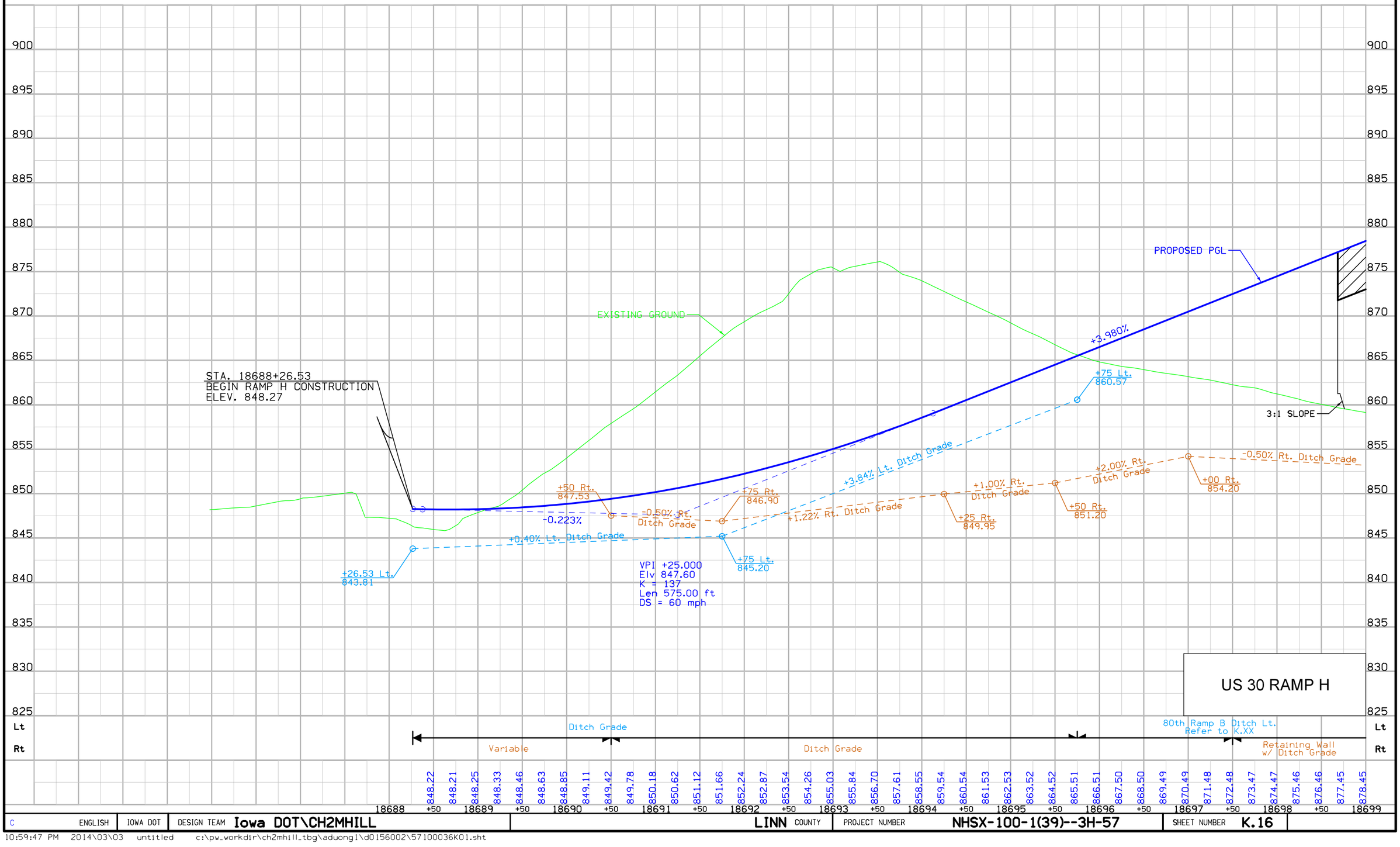

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER K.16

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For US 30 Survey Details
Refer to Sheets No. E.1-E.5

For Interchange Grading
Details Refer to Sheet K.32

For Main Line Details
Refer to Sheet No. D.2-D.3

For Profile Details
Refer to Sheet No. K.18

CLINTON TWP.
T-83N R-8W
SEC.33

PI Sta 18703+66.42

Curve Data
Δ = 68° 48' 14.76" (RT)
D = 3° 31' 33.22"
R = 1,625.00
T = 1,112.75
L = 1,951.39
E = 344.47
e = 4.80%
L = 136.00
x = 56.00
m = 40.80
DS = 50 mph

PROPOSED ROW

SLOPE INTERCEPT

EXISTING ROW

EX. US 30 EB

EX. US 30 WB

18705

18700

18710

RETAINING WALL 2040

50:1 SHOULDER TRANSITION

℄ CONSTRUCTION

IA 100 WB TO
EX. US 30 EB
(US 30 RAMP H) (US30H)

80TH ST. SW RAMP B

RETAINING WALL 2030

RETAINING WALL 2020

POC STA. 18703+06.85 (US 30 RAMP H) =
POT STA. 1389+53.80 (EX. US 30)

80TH ST. RAMP C

EXISTING ROW

PT Sta 18712+05.06

EX. US 30 EB TO
EX. 16TH AVE.
(REMOVE)

EXISTING ROW

FL = 849.38 24" RCP

FL = 833.87 42" RCP w/FES

FL = 851.19 30" RCP w/FES

FL = 849.40 30" RCP w/FES

EX. US 30 WB TO
IA 100 EB (US 30 RAMP D)

SLOPE INTERCEPT

PROPOSED ROW

SLOPE INTERCEPT

(REMOVE)

For Bridge Options
Refer to V Sheets

0 FEET 50

US 30 RAMP H

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.17

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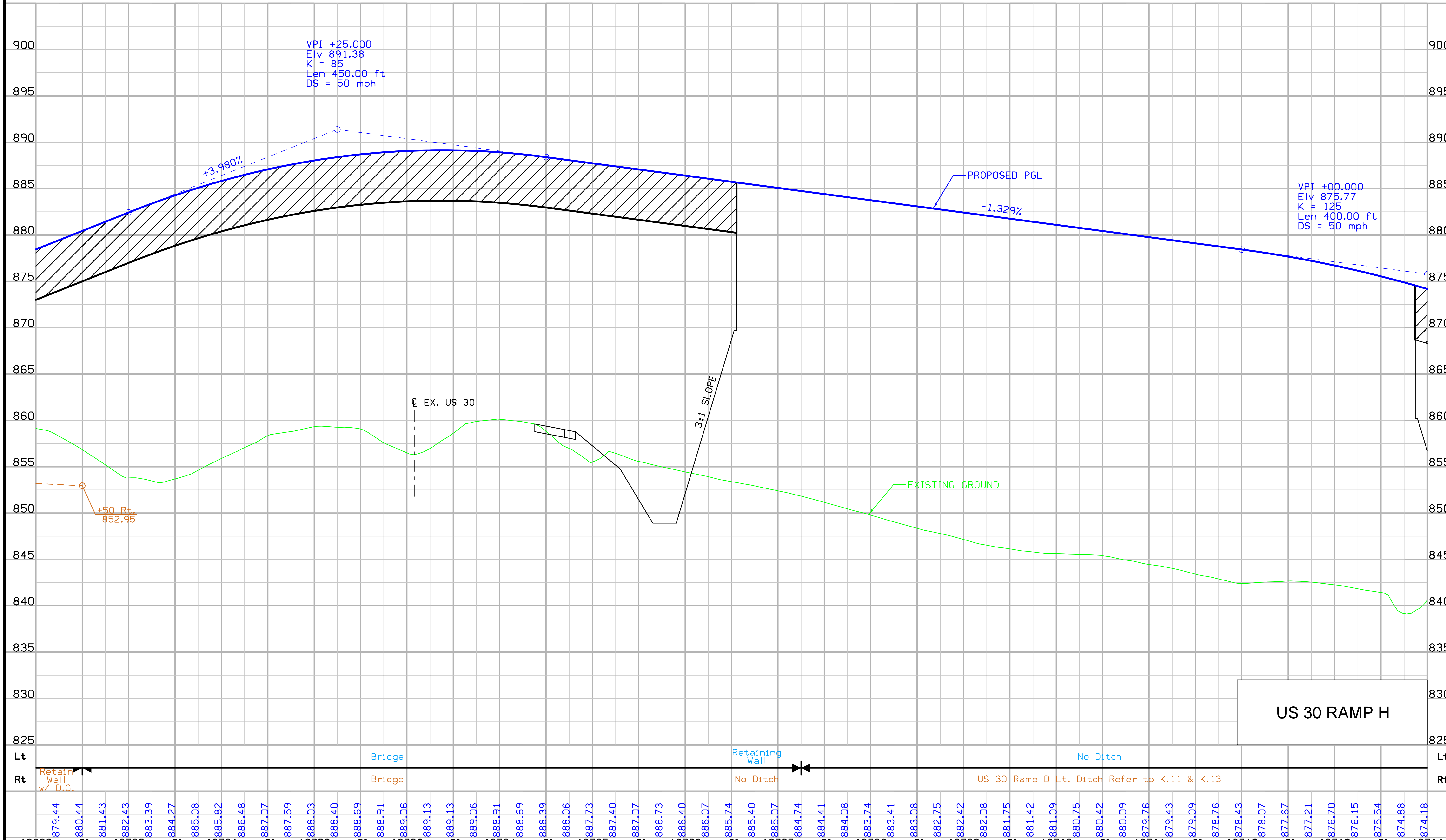

ENGLISH	IOWA DOT	DESIGN TEAM **Iowa DOT\CH2MHILL**	**LINN** COUNTY	PROJECT NUMBER **NHSX-100-1(39)--3H-57**	SHEET NUMBER **K.18**	

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For Interchange Grading Details Refer to Sheet K.32	For 16th Access Rd. Details Refer to Sheets No. E.13-E.14	For Profile Details Refer to Sheet No. K.20

SEC.33

CLINTON TWP.
T-83N R-8W
SEC.28

PROPOSED ROW

SLOPE INTERCEPT

RELOCATED 16TH AVE./ACCESS RD.

EX. 16TH AVE. TO EX. US 30 WB (REMOVE)

EX. 16TH AVE. (REMOVE)

FL = 826.50 42" RCP

FL = 826.80 42" RCP W/FES

FL = 826.90 42" RCP

EX. US 30 WB (US 30 RAMP A)

IA 100 WB TO

18715

18720

Curve Data
Δ = 9° 32′ 57.47″ (LT)
D = 3° 10′ 59.16″
R = 1,800.00
T = 150.35
L = 300.00
E = 6.27
e = 5.8%
L = 180.00
x = 62.00
m = 54.00
DS = 60 mph

Sta 18721+25.00

Sta 18724+25.00

STA. 18724+25.00 (RAMP H) =
STA. 724+25.00, 44.00′ LT. (IA 100)
END RAMP H CONSTRUCTION

15:1 TAPER

IA 100 WB

60:1 TAPER

POT STA. 18716+36.29 (US 30 RAMP H) =
POC STA. 17716+08.06 (US 30 RAMP G)

B CONSTRUCTION

IA 100 WB TO US 30 EB (US 30 RAMP H) (US30H)

EX. US 30 EB TO IA 100 EB (US 30 RAMP G) (US30G)

EXISTING ROW

PI Sta 18722+75.35

IA 100 EB

US 30 EB TO IA 100 WB (US 30 RAMP D)

SLOPE INTERCEPT

PROPOSED ROW

EXISTING ROW

(REMOVE)

0 FEET 50

For Bridge Options Refer to V Sheets

US 30 RAMP H

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.19

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MIN. VERT. CLR. = __'-_
ACTUAL VERT. CLR. = __'-__

VPI +00.000
Elv 875.77
K = 125
Len 400.00 ft
DS = 50 mph

3:1 SLOPE

-4.522%

PROPOSED PGL

℄ RAMP G

3:1 SLOPE

-2.810%

STA. 18724+25.00
END RAMP H CONSTRUCTION
ELEV. 831.99

VPI +75.000
Elv 836.20
K = 146
Len 250.00 ft
DS = 60 mph

EXISTING GROUND

US 30 RAMP H

890 885 880 875 870 865 860 855 850 845 840 835 830 825 820 815

Lt
Med
Rt

Bridge

Bridge

Retaining wall to US 30
Ramp G Lt. Ditch

No Ditch

Retaining Wall to IA 100 Median Ditch See D.5

877.21 876.70 876.15 875.54 874.88 874.18 873.42 872.61 871.76 870.85 869.90 868.89 867.83 866.73 865.60 864.47 863.34 862.21 861.08 859.95 858.81 857.68 856.55 855.42 854.29 853.16 852.03 850.90 849.77 848.64 847.51 846.38 845.25 844.12 842.99 841.86 840.75 839.68 838.66 837.68 836.74 835.84 834.99 834.18 833.42 832.69 831.99

18714 +50 18715 +50 18716 +50 18717 +50 18718 +50 18719 +50 18720 +50 18721 +50 18722 +50 18723 +50 18724

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER K.20

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For Profile Details Refer to Sheet No. K.22

For Main Line Details Refer to Sheets No. D.10 - D.11

For E Avenue Road Details Refer to Sheets No. E.19-E.20

For Interchange Grading Details Refer to Sheet K.34

CLINTON TWP.
T-83N R-8W
SEC.21

NOTE: AREA RESTRICTED. DO NOT DISTURB.

NOTE: AREA RESTRICTED. DO NOT DISTURB.

PROPOSED ROW

PROPOSED ROW

FUTURE ROW

PROPOSED ROW

FUTURE UTILITY CASING PIPE

CONCRETE BARRIER

RETAINING WALL

21770

21775

SLOPE INTERCEPT

STA. 21772+91.00, 24.00' RT.
BEGIN TAPER

Curve Data
Δ = 6° 56' 38.82" (RT)
D = 0° 52' 53.30"
R = 6,500.00
T = 394.38
L = 787.78
E = 11.95
e = N.C.
DS = 50 mph

℄ CONSTRUCTION

16:1 TAPER

PI Sta 21776+66.99

SLOPE INTERCEPT

E AVENUE RAMP C

E AVENUE RAMP A (EAVEA)

CONCRETE BARRIER

CONCRETE BARRIER

EX. MORGAN CK.

℄ Sta 21772+72.62

POT STA. 21769+14.35 (E AVE. RAMP A) =
POT STA. 2566+50.09 (E AVE.) =
POT STA. 23769+61.41 (E AVE. RAMP C)

STA. 21774+21.34, 16.00' RT.
END TAPER

STA. 21769+34.85 (RAMP A)
STA. 2566+55.05, 19.89' LT. (E AVE.)
BEGIN RAMP A CONSTRUCTION

E AVENUE

FOR 42" REINFORCED BOX CULVERT

IA 100 WB

IA 100 EB

E AVENUE RAMP B

E AVENUE RAMP D

SLOPE INTERCEPT

PROPOSED ROW

0 FEET 50

E AVENUE RAMP A

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.21

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STA. 21769+34.85
BEGIN RAMP A CONSTRUCTION
ELEV. 783.48

PROPOSED PGL

-1.99%

3:1 SLOPE

RETAINING WALL

3:1 SLOPE

EXISTING GROUND

+1.30% Lt. Ditch Grade

+00 Lt.
757.88

E AVENUE RAMP A

Retaining Wall — Vari.

Retaining Wall — Bridge

Ditch Grade — IA 100 Lt. Ditch Refer to Sheet D.11

21769	+50	21770	+50	21771	+50	21772	+50	21773	+50	21774	+50	21775	+50	21776	+50	21777
783.18	782.68	782.18	781.68	781.18	780.68	780.18	779.68	779.18	778.68	778.18	777.68	777.18	776.68	776.18	775.68	775.18	774.68	774.19	773.69	773.20	772.75	772.35	771.99	771.68	771.41	771.18	771.00	770.87	770.77	770.73

Lt Med Rt

Lt Med Rt

C | ENGLISH | IOWA DOT | DESIGN TEAM Iowa DOT\CH2MHILL | LINN COUNTY | PROJECT NUMBER NHSX-100-1(39)--3H-57 | SHEET NUMBER K.22

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For Profile Details
Refer to Sheet No. K.24

For Interchange Grading
Details Refer to Sheet K.34

For Main Line Details
Refer to Sheet No. D.12-D.13

CLINTON TWP.
T-83N R-8W
SEC.21

PROPOSED ROW

Curve Data
△ = 6° 56′ 38.82″ (RT)
D = 0° 52′ 53.30″
R = 6,500.00
T = 394.38
L = 787.78
E = 11.95
e = N.C.
DS = 50 mph

21780

PC Sta 21781+52.01

SLOPE INTERCEPT

℄ CONSTRUCTION

E AVENUE RAMP A

PT Sta 21780+80.40

Curve Data
△ = 9° 06′ 27.73″ (LT)
D = 2° 51′ 53.24″
R = 2,000.00
T = 159.29
L = 317.92
E = 6.33
e = 5.4%
L = 168.00
x = 62.00
m = 50.40
DS = 60 mph

PT Sta 21784+69.93

21785

PT Sta 21788+11.31

STA. 21785+00.00 (RAMP A) =
STA. ~~785~~+00.00, 98.00′ LT. (IA 100)
END RAMP A CONSTRUCTION

IA 100 WB

IA 100 EB

E AVENUE RAMP D

SLOPE
INTERCEPT

PROPOSED ROW

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

Barn

House

0 50
FEET

E AVENUE RAMP A

C ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL		LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER K.23

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EXISTING GROUND

STA. 21785+00.00
END RAMP A CONSTRUCTION
ELEV. 785.66

+2.433%

PROPOSED PGL

+3.93% Lt. Ditch Grade

+75 Lt.
769.30

+1.30% Lt.
Ditch Grade

+25 Lt.
763.41

VPI +45.005
Elv 767.29
K = 141
Len 625.00 ft
DS = 60 mph

2' Ditch

IA 100 Lt. Ditch Refer to Sheet D.13

E AVENUE RAMP A

Lt Med Rt	770.72	770.77	770.85	770.98	771.15	771.37	771.63	771.94	772.29	772.69	773.13	773.61	774.14	774.71	775.32	775.93	776.54	777.14	777.75	778.36	778.97	779.58	780.19	780.79	781.40	782.01	782.62	783.23	783.84	784.44	785.05	785.66	Lt Med Rt
	21777	+50	21778	+50	21779	+50	21780	+50	21781	+50	21782	+50	21783	+50	21784	+50	21785																

C	ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	K.24

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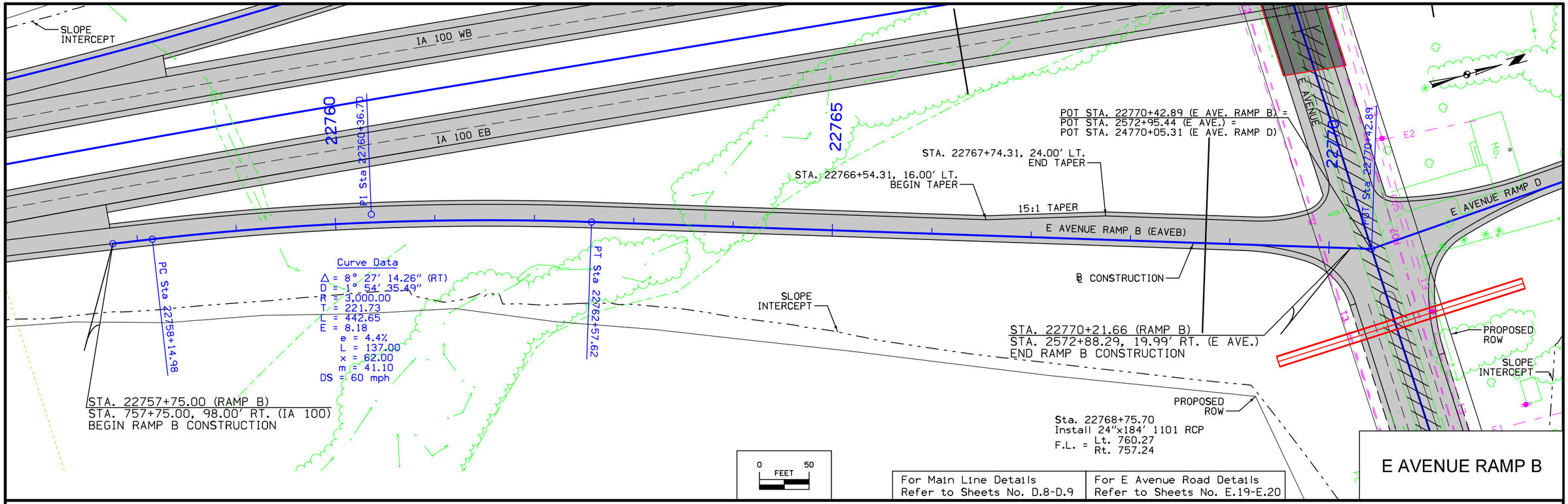

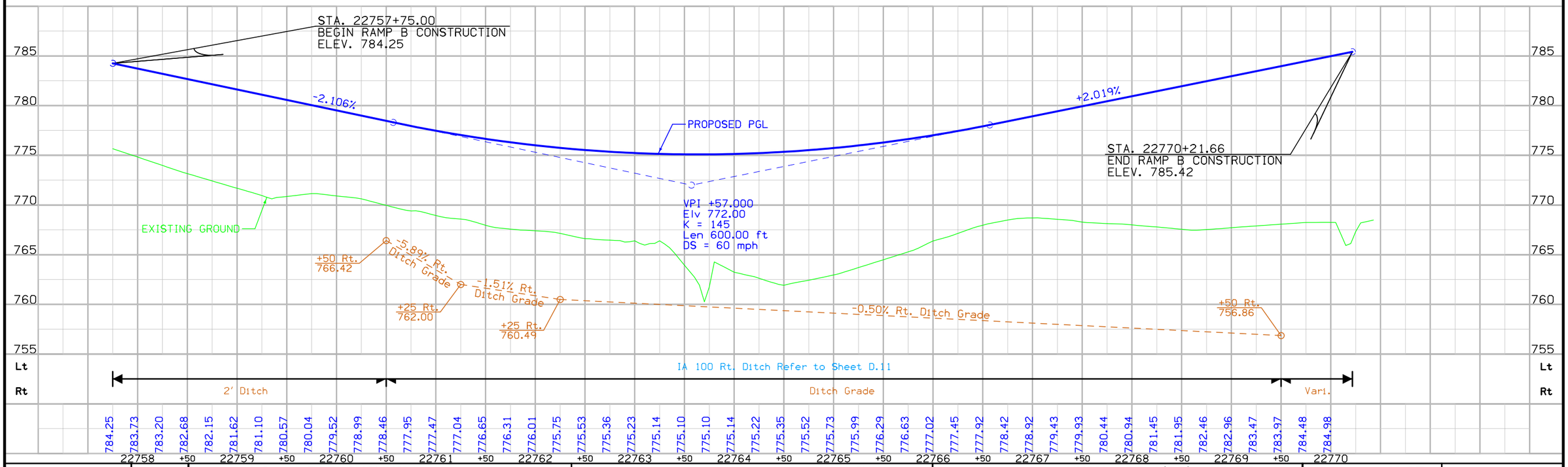

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.25	

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For Main Line Details Refer to Sheets No. D.8 - D.9

For Ramp Gore Geometrics Refer to Sheet No. U.4

For E Avenue Road Details Refer to Sheets No. E.19-E.20

POT Sta 23755+50.00

PC Sta 23755+50.40

STA. 23758+58.35 (RAMP C)
STA. 758+56.58, 95.67' LT. (IA 100)
BEGIN RAMP C CONSTRUCTION

Curve Data
Δ = 13° 40' 36.52" (LT)
D = 1° 08' 04.45"
R = 5,050.00
T = 605.61
L = 1,205.46
E = 36.18
e = 3.00'
L = 93.00
x = 62.00
m = 27.90
DS = 60 mph

23760

23765

Sta. 23768+40.00
Install 24"x160' 1101 RCP
F.L. = Lt. 759.25
Rt. 761.62

FUTURE UTILITY CASING PIPE

RETAINING WALL

STA. 23769+41.38 (RAMP C)
STA. 2566+52.88, 19.83' RT.
END RAMP C CONSTRUCTION

PROPOSED ROW

PT Sta 23767+55.87

℄ CONSTRUCTION

E AVENUE RAMP C (EAVEC)

E AVENUE

IA 100 WB

PI Sta 23761+59.01

IA 100 EB

PROPOSED ROW

E AVENUE RAMP B

POT STA. 23769+61.41 (E AVE. RAMP C) =
POT STA. 2566+50.09 (E AVE.) =
POT STA. 21769+14.35 (E AVE. RAMP A)

0 FEET 50

E AVENUE RAMP C

EXISTING GROUND

PROPOSED PGL

-2.362%

-2.53% Lt. DG

+35 Lt. 777.42

+50 Lt. 777.04

STA. 23758+58.35
BEGIN RAMP C CONSTRUCTION
ELEV. 782.74

-0.51% Lt. Ditch Grade

+25 Lt. 771.77

+75 Lt. 770.50

-3.40% Lt. Ditch Grade

VPI +40.000
Elv 771.36
K = 138
Len 600.00 ft
DS = 60 mph (IowaDOT)

+1.993%

STA. 23769+41.38
END RAMP C CONSTRUCTION
ELEV. 783.35

-1.00% Lt. Ditch Grade

+25 Lt. 762.00

+25 Lt. 760.00

-5.00% Lt. to Ditch Grade

+75 Lt. 757.50

785 780 775 770 765 760 755

Lt / Rt

D.G. 2' Ditch Ditch Grade Vari.

IA 100 Lt. Ditch Refer to Sheet D.13

782.35 781.76 781.17 780.58 779.98 779.39 778.80 778.22 777.67 777.16 776.70 776.29 775.92 775.60 775.32 775.09 774.90 774.76 774.66 774.61 774.61 774.65 774.73 774.87 775.04 775.26 775.53 775.84 776.20 776.60 777.05 777.54 778.04 778.54 779.04 779.54 780.03 780.53 781.03 781.53 782.03 782.53 783.02

23758 +50 23759 +50 23760 +50 23761 +50 23762 +50 23763 +50 23764 +50 23765 +50 23766 +50 23767 +50 23768 +50 23769

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.26

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For E Avenue Road Details
Refer to Sheets No. E.19-E.20

For Ramp Gore Geometrics
Refer to Sheet No. U.5

For Main Line Details Refer
to Sheet No. D.10 - D.13

For Profile Details
Refer to Sheet No. K.28

PROPOSED ROW

SLOPE INTERCEPT

E AVENUE RAMP A

IA 100 WB

IA 100 EB

PROPOSED ROW

STA. 24770+25.32 (RAMP D)
STA. 2572+94.86, 20.00' LT. (E AVE.)
BEGIN RAMP D CONSTRUCTION

24775

24780

PI Sta 24783+30.24

E AVENUE

E AVE. RAMP B

E AVENUE RAMP D (EAVED)

℄ CONSTRUCTION

CONCRETE BARRIER

CONCRETE BARRIER

SLOPE INTERCEPT

PC Sta 24781+09.69

6" SLOPE CURB

FUTURE ROW

PROPOSED ROW

POT STA. 24770+05.31 (RAMP D) =
POT STA. 2572+95.44 (E AVE.) =
POT STA. 22770+42.89 (RAMP B)

FUTURE ROW

Curve Data
Δ = 8° 24' 33.46" (RT)
D = 1° 54' 35.49"
R = 3,000.00
T = 220.55
L = 440.31
E = 8.10
e = 4.4%
L = 137.00
x = 62.00
m = 41.10
DS = 60 mph

STA. 24782+90.67 (RAMP D)
STA. 782+91.94, 95.66' RT. (IA 100)
END RAMP D CONSTRUCTION

SLOPE INTERCEPT

EX. MORGAN CK.

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

EX. 80TH ST. SW (REMOVE)

RELOCATED 80TH ST. SW

EX. 80TH ST. (U.A.C.)

NOTE: AREA RESTRICTED.
DO NOT DISTURB.

0 FEET 50

E AVENUE RAMP D

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.27

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STA. 24770+25.32
BEGIN RAMP D CONSTRUCTION
ELEV. 785.28

STA. 24782+90.67
END RAMP D CONSTRUCTION
ELEV. 780.36

-1.80%

VPI +05.000
Elv 769.44
K = 146
Len 675 ft
DS = 60 mph

PROPOSED PGL

+2.83%

+4.23% Rt. Ditch Grade

+91 Rt.
780.48

+00 Rt.
776.64

+6.00% Rt. Ditch Grade

3:1 SLOPE

EXISTING GROUND

+4.80% Rt. Ditch Grade

+50 Rt.
761.64

+00 Rt.
751.82

3:1 SLOPE

+1.20% Rt. Ditch Grade

+50 Rt.
756.84

+75 Rt.
755.94

-0.50% Rt. Ditch Grade

+25 Rt.
754.20

E AVENUE RAMP D

Lt	IA 100 Rt. Ditch - Refer to Sheet D.11	Bridge	IA 100 Rt. Ditch Refer to Sheet D.11
Rt	Vari. Ditch Grade	Bridge w/ Ditch Grade	Ditch Grade

784.84 784.39 783.94 783.49 783.03 782.58 782.13 781.68 781.23 780.78 780.33 779.88 779.43 778.98 778.53 778.08 777.63 777.18 776.73 776.28 775.83 775.38 774.97 774.60 774.27 773.98 773.73 773.53 773.37 773.26 773.19 773.16 773.17 773.23 773.32 773.47 773.65 773.88 774.15 774.46 774.82 775.22 775.66 776.15 776.67 777.24 777.86 778.52 779.21 779.92

24770 +50 24771 +50 24772 +50 24773 +50 24774 +50 24775 +50 24776 +50 24777 +50 24778 +50 24779 +50 24780 +50 24781 +50 24782 +50 24783

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER K.28

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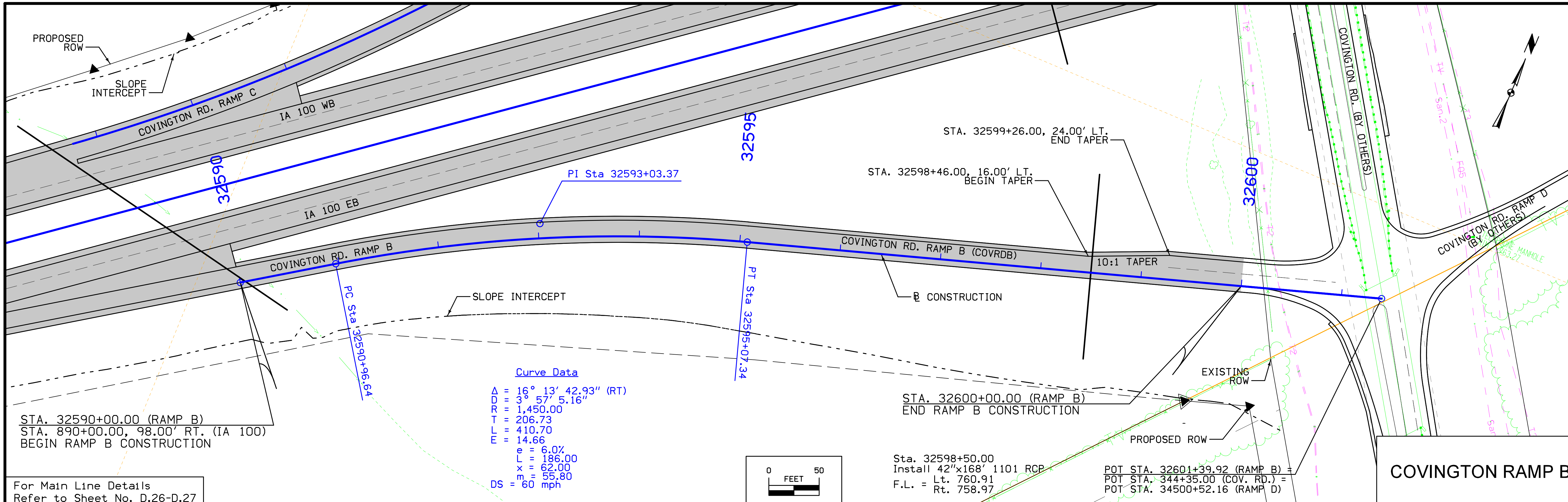
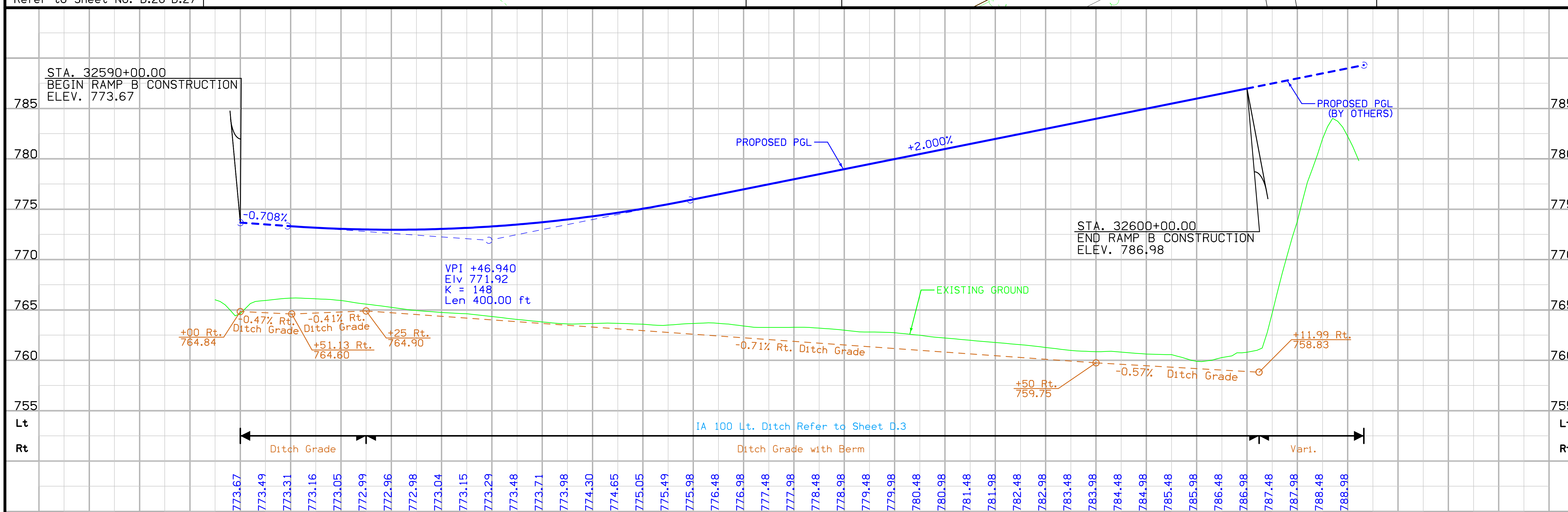

PROPOSED ROW
SLOPE INTERCEPT
COVINGTON RD. RAMP C
IA 100 WB
IA 100 EB
32590
32595
32600
PI Sta 32593+03.37
COVINGTON RD. RAMP B
COVINGTON RD. RAMP B (COVRDB)
STA. 32599+26.00, 24.00' LT.
END TAPER
STA. 32598+46.00, 16.00' LT.
BEGIN TAPER
10:1 TAPER
℄ CONSTRUCTION
COVINGTON RD. (BY OTHERS)
COVINGTON RD. RAMP D (BY OTHERS)
SLOPE INTERCEPT
PC Sta 32590+96.64
PT Sta 32595+07.34
Curve Data
Δ = 16° 13' 42.93" (RT)
D = 3° 57' 5.16"
R = 1,450.00
T = 206.73
L = 410.70
E = 14.66
e = 6.0%
L = 186.00
x = 62.00
m = 55.80
DS = 60 mph
EXISTING ROW
PROPOSED ROW
STA. 32590+00.00 (RAMP B)
STA. 890+00.00, 98.00' RT. (IA 100)
BEGIN RAMP B CONSTRUCTION
STA. 32600+00.00 (RAMP B)
END RAMP B CONSTRUCTION
Sta. 32598+50.00
Install 42"x168' 1101 RCP
F.L. = Lt. 760.91
Rt. 758.97
POT STA. 32601+39.92 (RAMP B) =
POT STA. 344+35.00 (COV. RD.) =
POT STA. 34500+52.16 (RAMP D)
0 FEET 50
For Main Line Details
Refer to Sheet No. D.26-D.27
COVINGTON RAMP B


STA. 32590+00.00
BEGIN RAMP B CONSTRUCTION
ELEV. 773.67
-0.708%
PROPOSED PGL
+2.000%
PROPOSED PGL (BY OTHERS)
STA. 32600+00.00
END RAMP B CONSTRUCTION
ELEV. 786.98
VPI +46.940
Elv 771.92
K = 148
Len 400.00 ft
EXISTING GROUND
+00 Rt.
764.84
-0.47% Rt.
Ditch Grade
-0.41% Rt.
Ditch Grade
+51.13 Rt.
764.60
+25 Rt.
764.90
-0.71% Rt. Ditch Grade
+50 Rt.
759.75
-0.57% Ditch Grade
+11.99 Rt.
758.83
785
780
775
770
765
760
755
Lt
Rt
IA 100 Lt. Ditch Refer to Sheet D.3
Ditch Grade
Ditch Grade with Berm
Vari.
773.67 773.49 773.31 773.16 773.05 772.99 772.96 772.98 773.04 773.15 773.29 773.48 773.71 773.98 774.30 774.65 775.05 775.49 775.98 776.48 776.98 777.48 777.98 778.48 778.98 779.48 779.98 780.48 780.98 781.48 781.98 782.48 782.98 783.48 783.98 784.48 784.98 785.48 785.98 786.48 786.98 787.48 787.98 788.48 788.98
32590 +50 32591 +50 32592 +50 32593 +50 32594 +50 32595 +50 32596 +50 32597 +50 32598 +50 32599 +50 32600 +50 32601

For Main Line Details
Refer to Sheets No. D.26-D.27

CLINTON TWP.
T-83N R-8W
SEC.10

Curve Data
Δ = 18° 18′ 17.84″ (LT)
D = 2° 51′ 53.24″
R = 2,000.00
T = 322.23
L = 638.96
E = 25.79
e = 5.4%
L = 168.00
x = 62.00
m = 50.40
DS = 60 mph

PC Sta 33588+75.00

33590

STA. 33591+03.65 (RAMP C)
STA. 891+02.85, 95.62′ LT. (IA 100)
BEGIN RAMP C CONSTRUCTION

PROPOSED ROW

SLOPE INTERCEPT

IA 100 WB

IA 100 EB

SLOPE INTERCEPT

COVINGTON RD. RAMP B

PI Sta 33591+97.28

33595

PT Sta 33595+13.96

6" SLOPED CURB

℄ CONSTRUCTION

COVINGTON RD. RAMP C (COVRDC)

Sta. 33600+10.00
Install 36″x114′ 1101 RCP
F.L. = Lt. 776.54
Rt. 769.84

STA. 33600+12.98 (RAMP C)
END RAMP C CONSTRUCTION

33600

COVINGTON RD. (BY OTHERS)

COV. RD. RAMP A (BY OTHERS)

POT STA. 33602+17.34 (RAMP C) =
POT STA. 336+00.00 (COV. RD.) =
POT STA. 31501+10.58 (RAMP A)

EXISTING ROW

0 FEET 50

COVINGTON RAMP C

STA. 33591+03.65
BEGIN RAMP C CONSTRUCTION
(BY OTHERS)
ELEV. 772.60

EXISTING GROUND

VPI +00.000
Elv 769.51
K = 137
Len 550.00 ft

-0.54% Lt. Ditch Grade

-1.043%

+03.65 Lt.
769.25

+75 Lt.
768.31

STA. 33600+12.98
END RAMP C CONSTRUCTION
ELE. 787.70

VPI +75.000
Elv 789.58
K = 205
Len 200.00 ft

+2.974%

+2.000%

PROPOSED PGL

PROPOSED PGL (BY OTHERS)

+0.43% Lt. Ditch Grade (BY OTHERS)

+75 Lt.
776.39

+33.32 Lt.
776.64

795 790 785 780 775 770 765

Lt / Rt

Ditch Grade | 6" Sloped Curb with Intercepting Berm | 6" Sloped Curb | Ditch Grade | Vari.

IA 100 Lt. Ditch Refer to Sheet D.3

33591	+50	33592	+50	33593	+50	33594	+50	33595	+50	33596	+50	33597	+50	33598	+50	33599	+50	33600	+50	33601	+50
772.37	772.14	771.94	771.80	771.70	771.64	771.63	771.67	771.75	771.88	772.05	772.27	772.53	772.84	773.20	773.60	774.04	774.54	775.07	775.66	776.29	776.96	777.68	778.43	779.17	779.91	780.66	781.40	782.14	782.89	783.63	784.37	785.12	785.86	786.60	787.33	788.03	788.70	789.33	789.94	790.52	791.06	791.58

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.30

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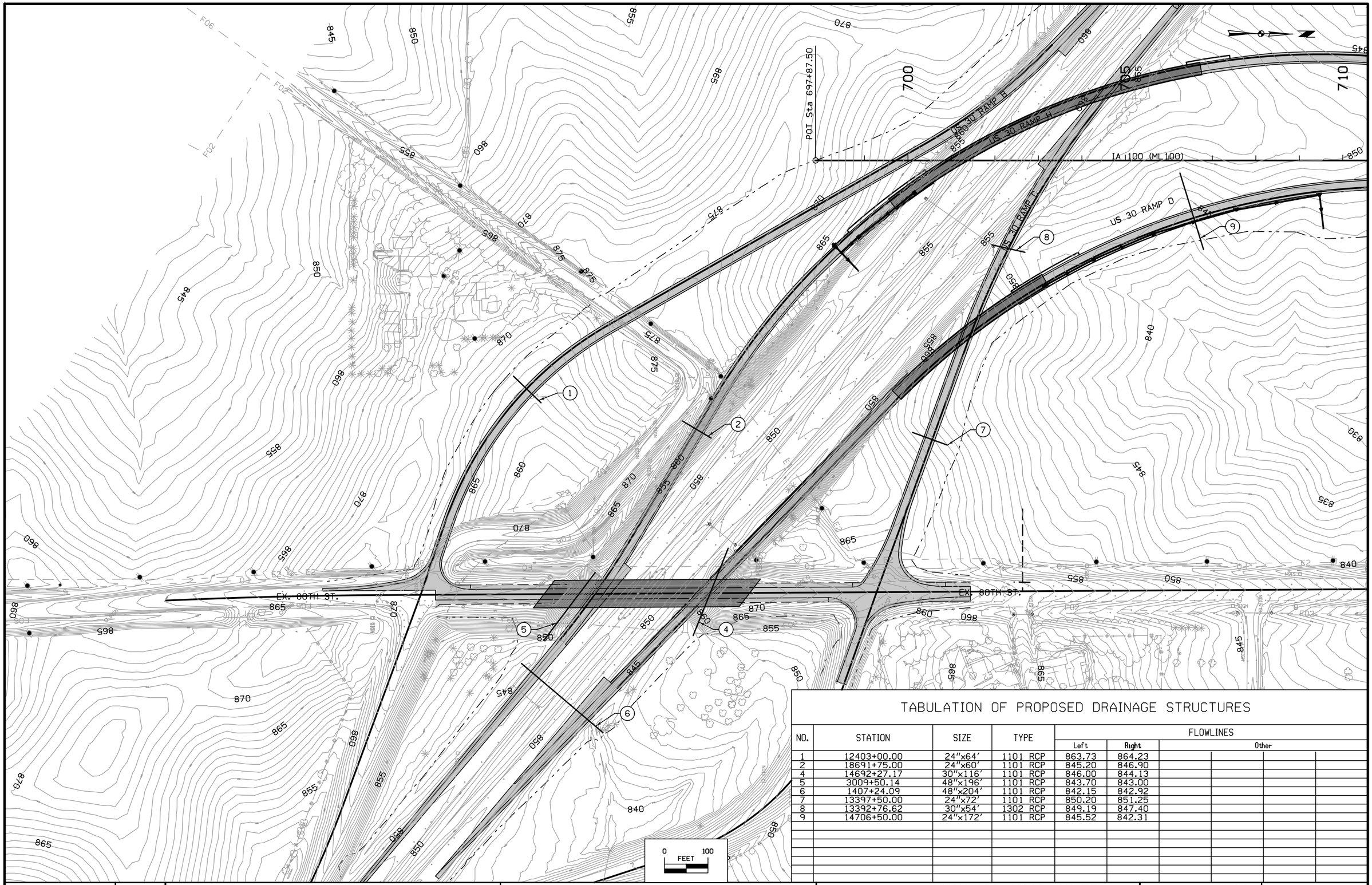

TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES		
				Left	Right	Other
1	12403+00.00	24″x64′	1101 RCP	863.73	864.23	
2	18691+75.00	24″x60′	1101 RCP	845.20	846.90	
4	14692+27.17	30″x116′	1101 RCP	846.00	844.13	
5	3009+50.14	48″x196′	1101 RCP	843.70	843.00	
6	1407+24.09	48″x204′	1101 RCP	842.15	842.92	
7	13397+50.00	24″x72′	1101 RCP	850.20	851.25	
8	13392+76.62	30″x54′	1302 RCP	849.19	847.40	
9	14706+50.00	24″x172′	1101 RCP	845.52	842.31	

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.31

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POI Sta 697+87.50

IA 100 (ML 100)

IA 100 (ML 100)

WESTBOUND IA 100

EASTBOUND IA 100

16TH AVE. ACCESS RD.

US 30 RAMP B

US 30 RAMP H

US 30 RAMP C

US 30 RAMP D

US 30 RAMP G

US 30 RAMP A

EX. 80TH ST.

0 100 FEET

TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES		
				Left	Right	Other
7	13397+50.00	24"x72'	1101 RCP	850.20	851.25	
8	13392+76.62	30"x54'	1302 RCP	849.19	847.40	
9	14706+50.00	24"x172'	1101 RCP	845.52	842.31	
10	17712+00.00	42"x112'	1101 RCP	837.33	837.88	
11	11715+75.00	42"x104'	1101 RCP	827.53	830.77	
12	14714+25.00	24"x142'	1101 RCP	834.30	832.32	

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.32

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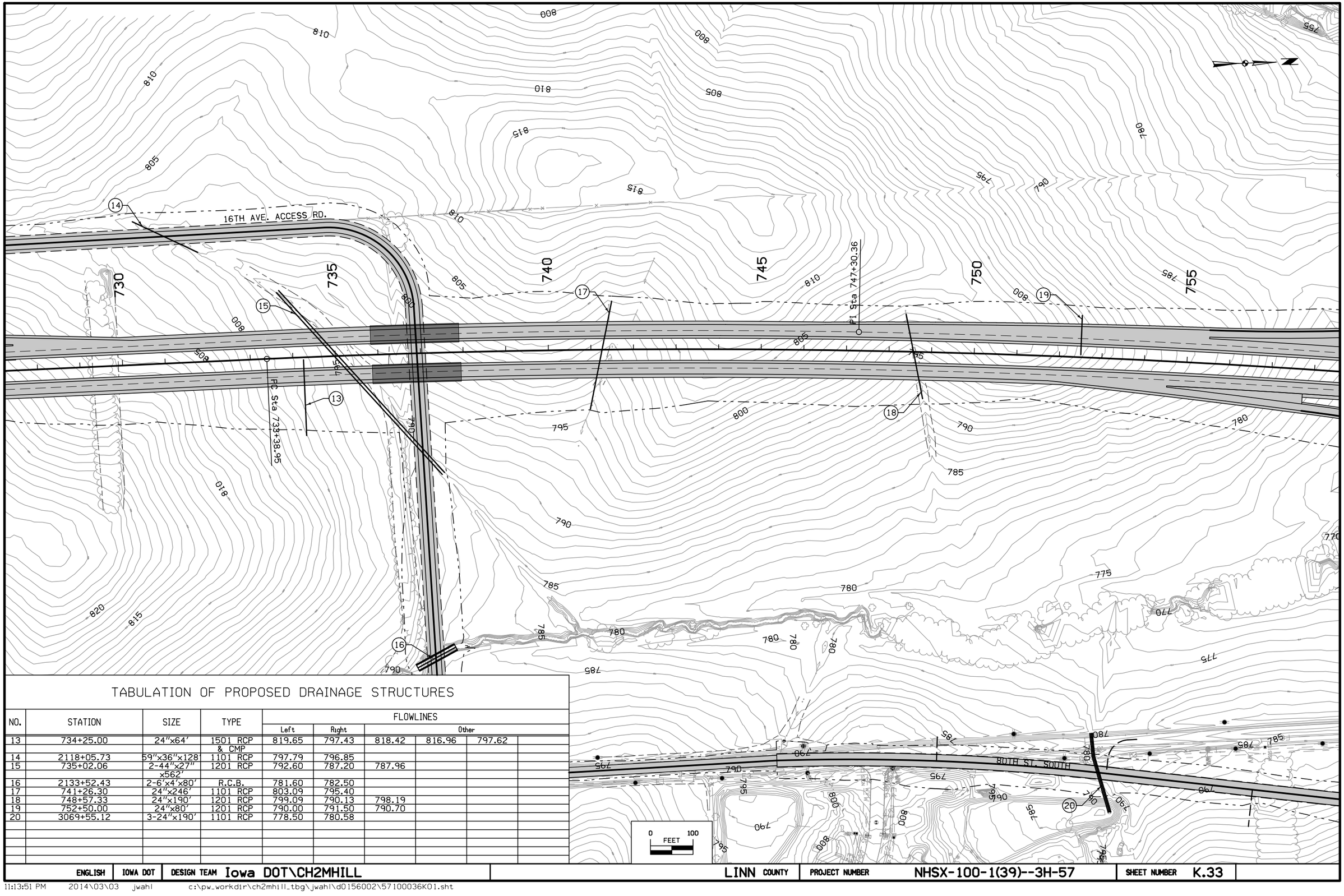

TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES					
				Left	Right	Other			
13	734+25.00	24"x64'	1501 RCP & CMP	819.65	797.43	818.42	816.96	797.62	
14	2118+05.73	59"x36"x128'	1101 RCP	797.79	796.85				
15	735+02.06	2-44"x27" x562'	1201 RCP	792.60	787.20	787.96			
16	2133+52.43	2-6'x4'x80'	R.C.B.	781.60	782.50				
17	741+26.30	24"x246'	1101 RCP	803.09	795.40				
18	748+57.33	24"x190'	1201 RCP	799.09	790.13	798.19			
19	752+50.00	24"x80'	1201 RCP	790.00	791.50	790.70			
20	3069+55.12	3-24"x190'	1101 RCP	778.50	780.58				

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.33

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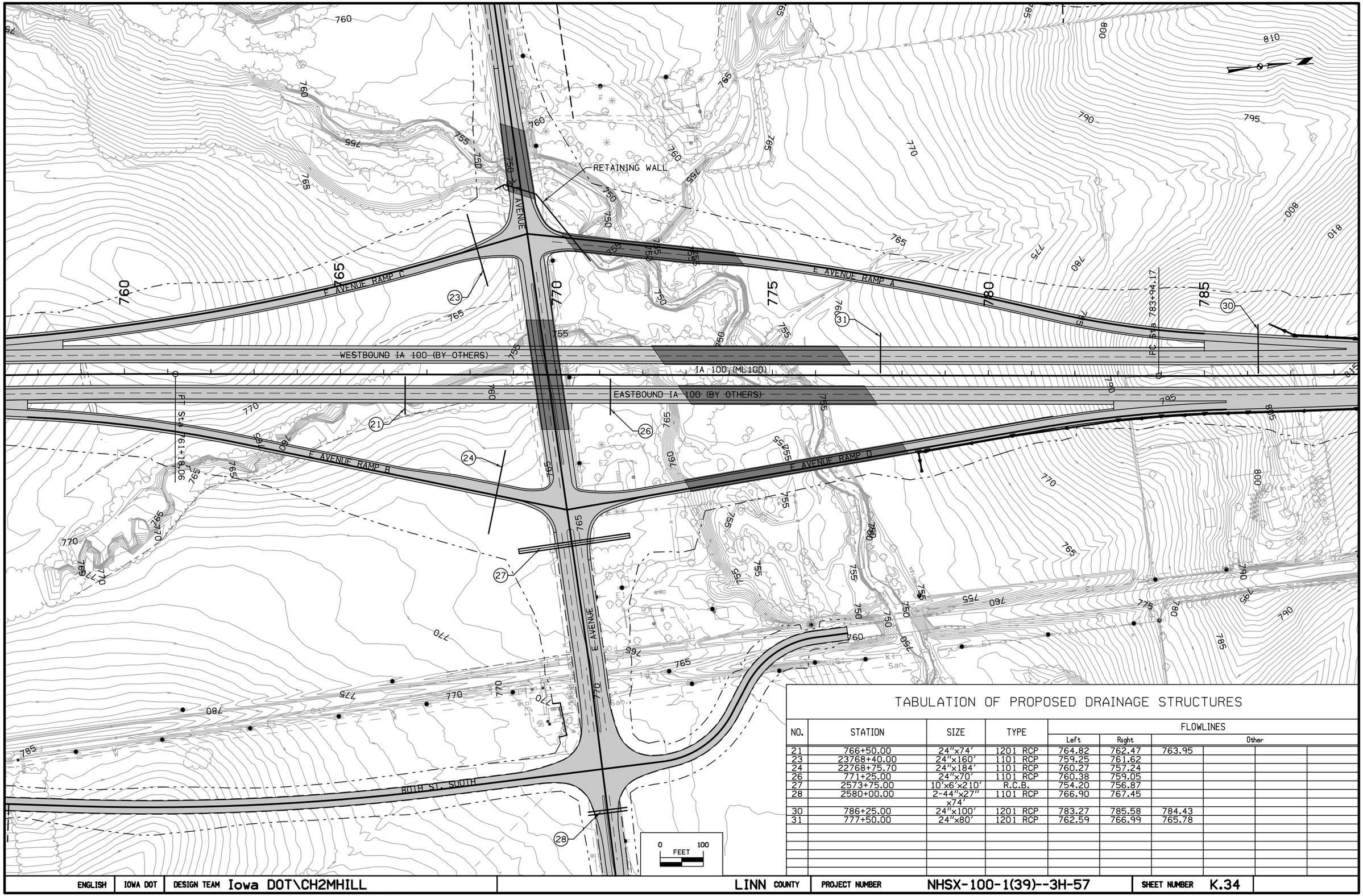

TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES					
				Left	Right	Other			
21	766+50.00	24″x74′	1201 RCP	764.82	762.47	763.95			
23	23768+40.00	24″x160′	1101 RCP	759.25	761.62				
24	22768+75.70	24″x184′	1101 RCP	760.27	757.24				
26	771+25.00	24″x70′	1101 RCP	760.38	759.05				
27	2573+75.00	10′x6′x210′	R.C.B.	754.20	756.87				
28	2580+00.00	2-44″x27″ x74′	1101 RCP	766.90	767.45				
30	786+25.00	24″x100′	1201 RCP	783.27	785.58	784.43			
31	777+50.00	24″x80′	1201 RCP	762.59	766.99	765.78			

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.34

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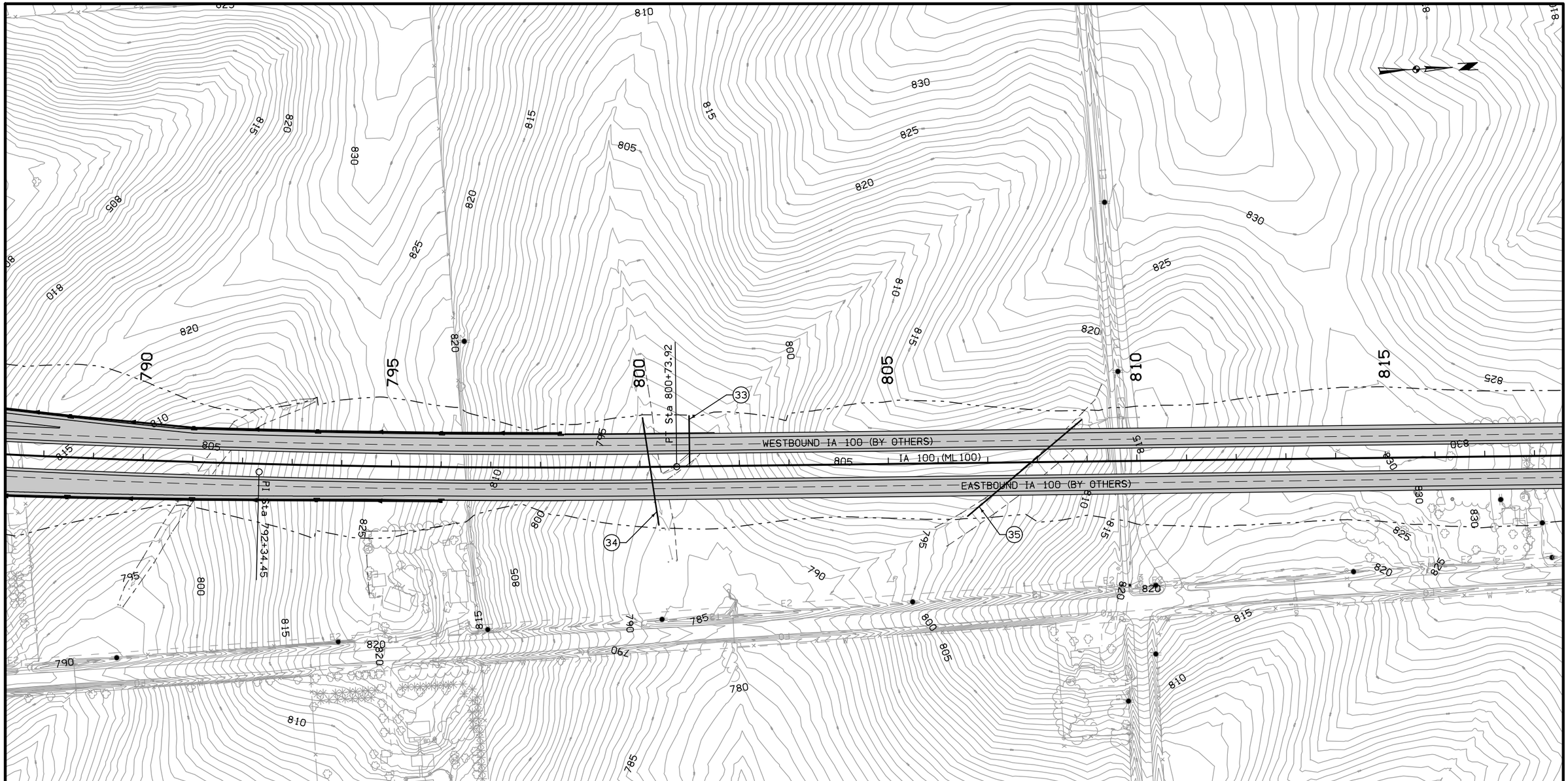

TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES					
				Left	Right	Other			
33	801+00.00	24″x84′	1201 RCP	793.30	801.31	793.83			
34	800+20.29	48″x202′	1101 RCP	792.32	788.83				
35	807+87.89	36″x284′	1101 RCP	808.70	798.39				

0 100 FEET

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.35

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WESTBOUND IA 100 (BY OTHERS)

IA 100 (ML100)

EASTBOUND IA 100 (BY OTHERS)

80TH ST. NORTH

36 37 38 39 40

TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES					
				Left	Right	Other			
36	822+84.62	24"x178'	1201 RCP	806.94	805.00	805.51			
37	826+50.00	24"x68'	1201 RCP	800.34	798.98	799.29			
38	836+77.90	59"x36"x174'	1101 RCP	778.85	799.90				
39	3104+58.00	59"x36"x34'	1101 RCP	779.98	782.96				
40	838+25.92	24"x66'	1201 RCP	781.92	780.62	780.97			

0 100 FEET

ENGLISH | IOWA DOT | DESIGN TEAM Iowa DOT\CH2MHILL | LINN COUNTY | PROJECT NUMBER NHSX-100-1(39)--3H-57 | SHEET NUMBER K.36

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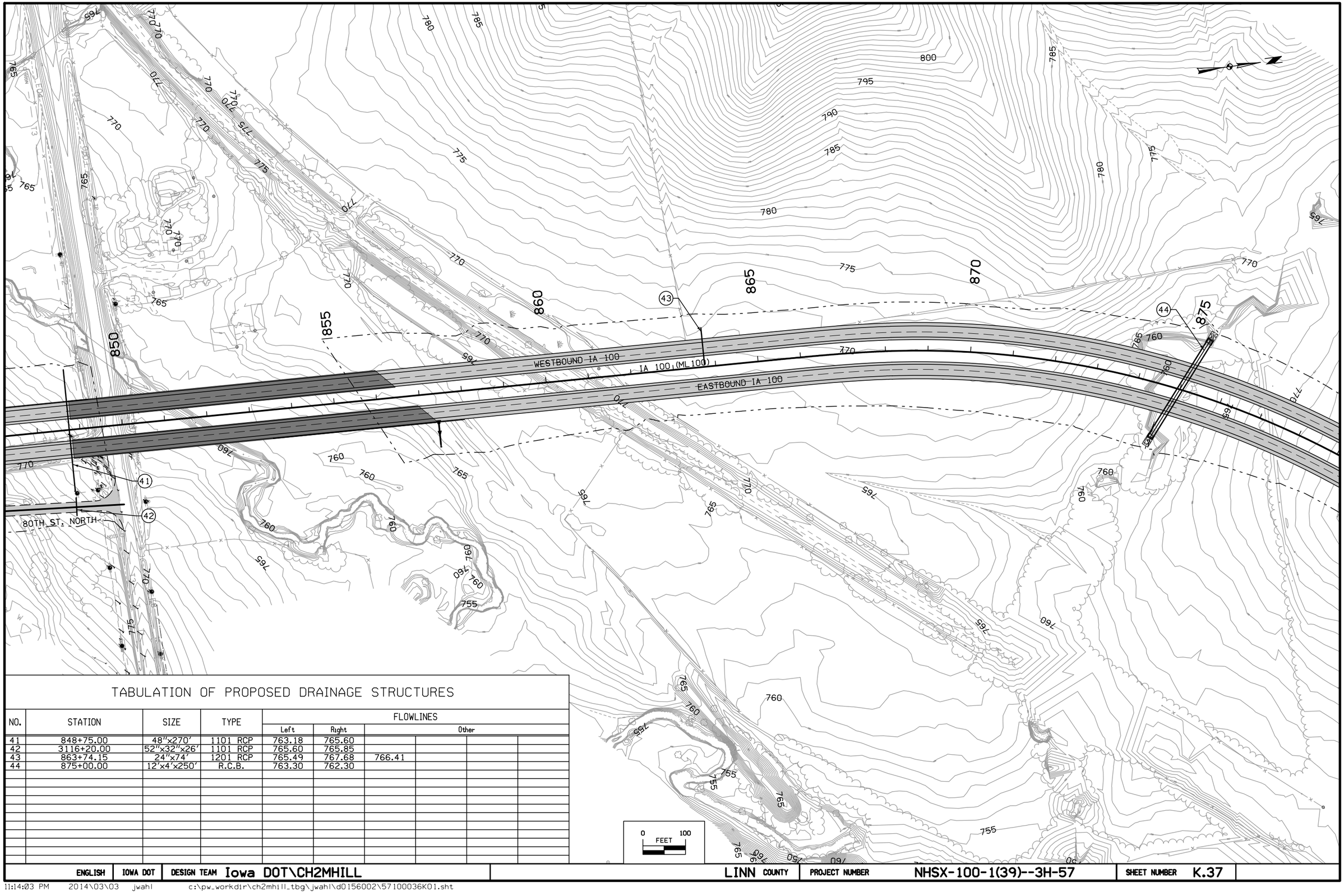

TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES					
				Left	Right	Other			
41	848+75.00	48″x270′	1101 RCP	763.18	765.60				
42	3116+20.00	52″x32″x26′	1101 RCP	765.60	765.85				
43	863+74.15	24″x74′	1201 RCP	765.49	767.68	766.41			
44	875+00.00	12′x4′x250′	R.C.B.	763.30	762.30				

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.37

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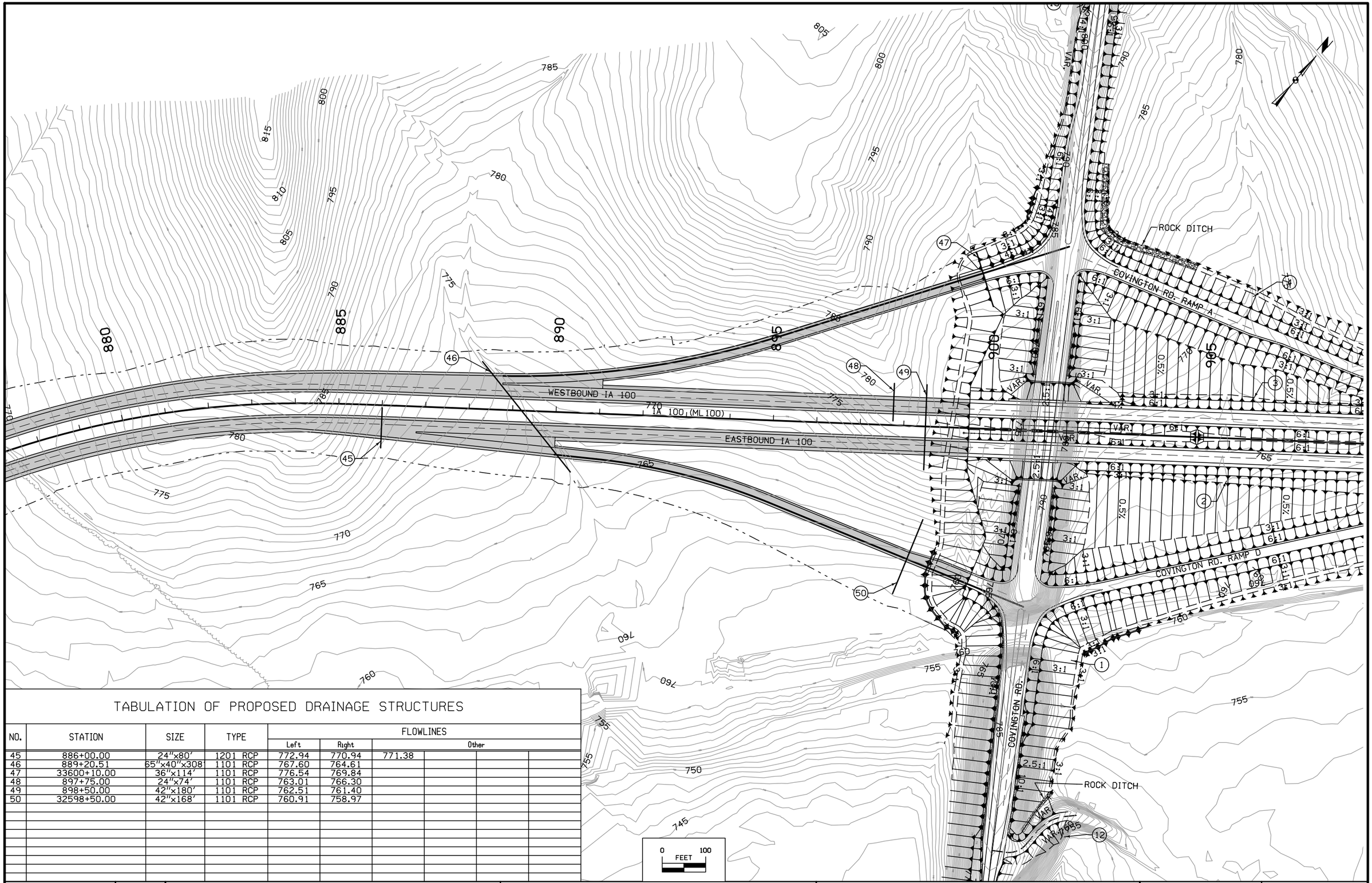

TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES					
				Left	Right	Other			
45	886+00.00	24″x80′	1201 RCP	772.94	770.94	771.38			
46	889+20.51	65″x40″x308′	1101 RCP	767.60	764.61				
47	33600+10.00	36″x114′	1101 RCP	776.54	769.84				
48	897+75.00	24″x74′	1101 RCP	763.01	766.30				
49	898+50.00	42″x180′	1101 RCP	762.51	761.40				
50	32598+50.00	42″x168′	1101 RCP	760.91	758.97				

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	K.38

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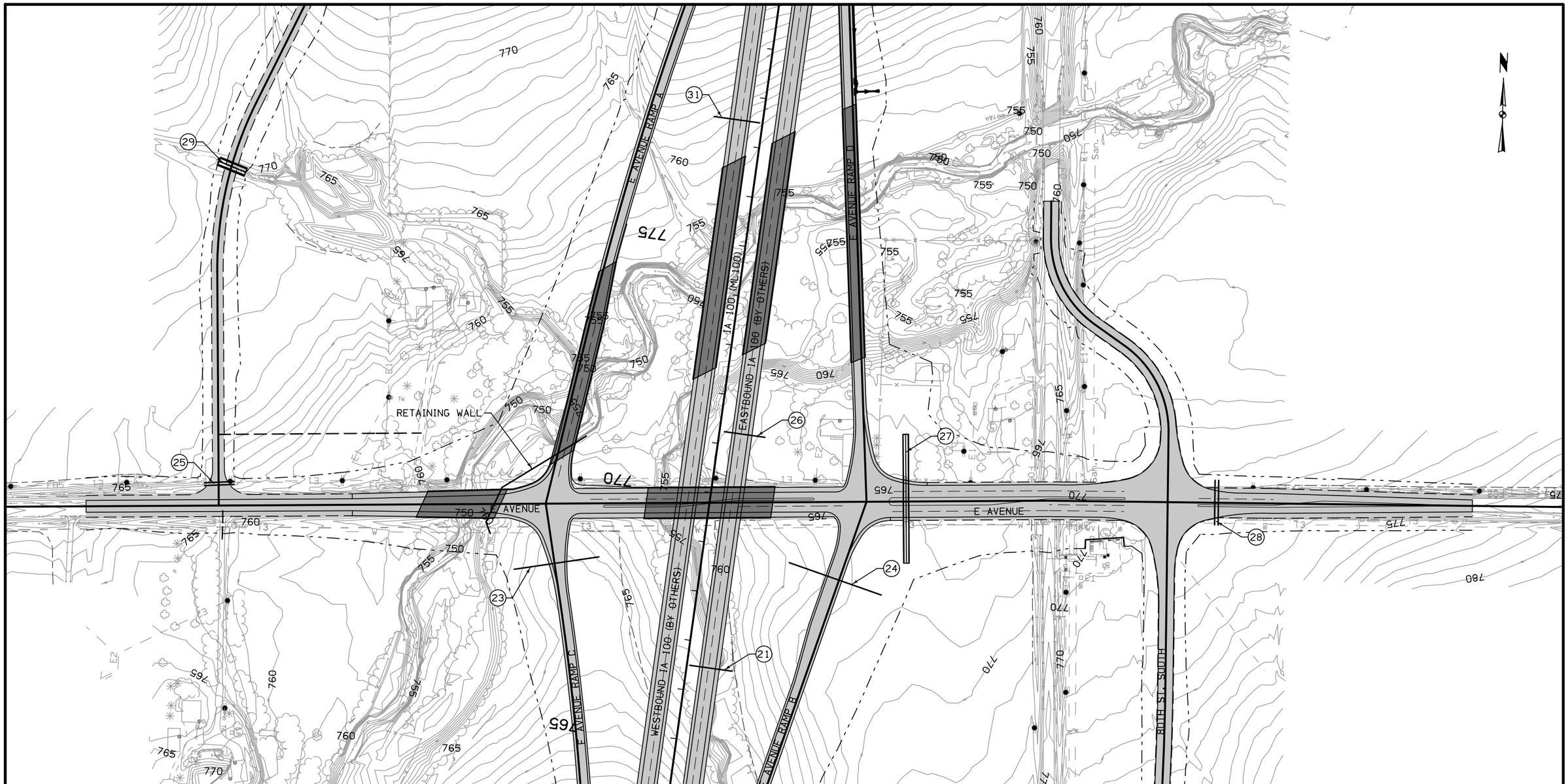


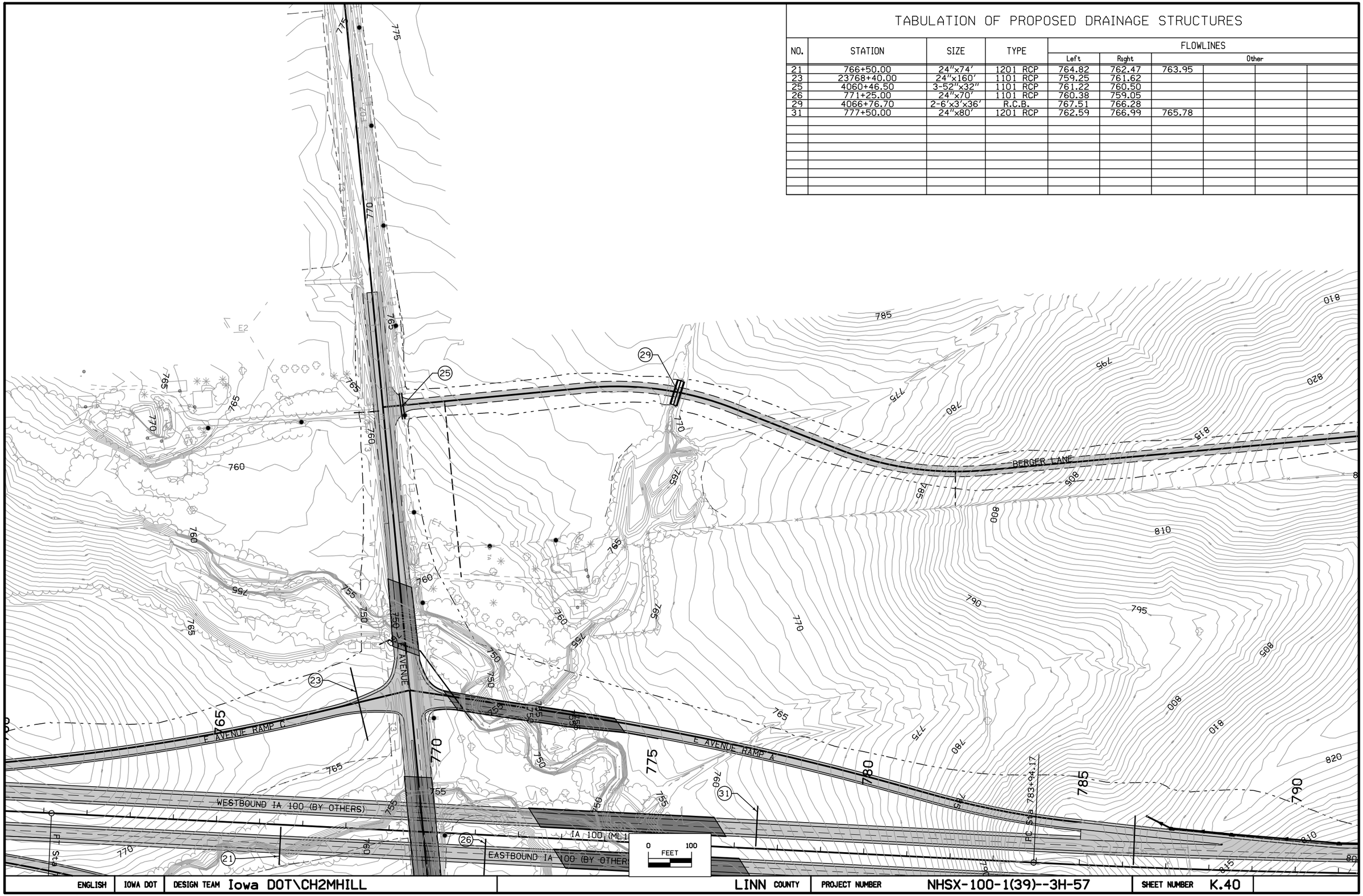
TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES					
				Left	Right	Other			
21	766+50.00	24"x74'	1201 RCP	764.82	762.47	763.95			
23	23768+40.00	24"x160'	1101 RCP	759.25	761.62				
24	22768+75.70	24"x184'	1101 RCP	760.27	757.24				
25	4060+46.50	3-52"x32" x30'	1101 RCP	761.22	760.50				
26	771+25.00	24"x70'	1101 RCP	760.38	759.05				
27	2573+75.00	10'x6'x210'	R.C.B.	754.20	756.87				
28	2580+00.00	2-44"x27" x74'	1101 RCP	766.90	767.45				
29	4066+76.70	2-6'x3'x36'	R.C.B.	767.51	766.28				
31	777+50.00	24"x80'	1201 RCP	762.59	766.99	765.78			

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

TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES					
				Left	Right	Other			
21	766+50.00	24"x74'	1201 RCP	764.82	762.47	763.95			
23	23768+40.00	24"x160'	1101 RCP	759.25	761.62				
25	4060+46.50	3-52"x32"	1101 RCP	761.22	760.50				
26	771+25.00	24"x70'	1101 RCP	760.38	759.05				
29	4066+76.70	2-6'x3'x36'	R.C.B.	767.51	766.28				
31	777+50.00	24"x80'	1201 RCP	762.59	766.99	765.78			



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.40

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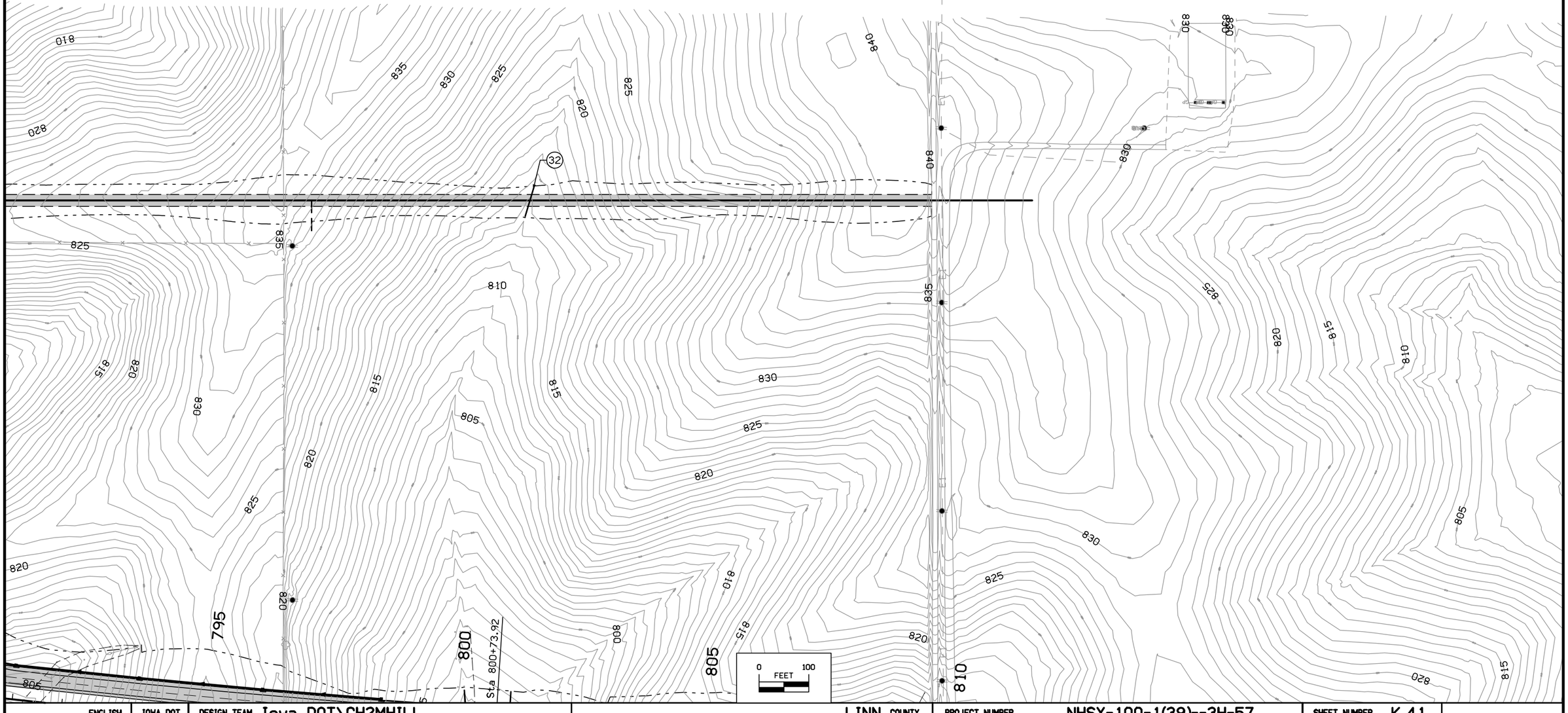
TABULATION OF PROPOSED DRAINAGE STRUCTURES

NO.	STATION	SIZE	TYPE	FLOWLINES					
				Left	Right	Other			
32	4091+89.15	36"x38'	1101 RCP	814.53	813.12				



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER K.41

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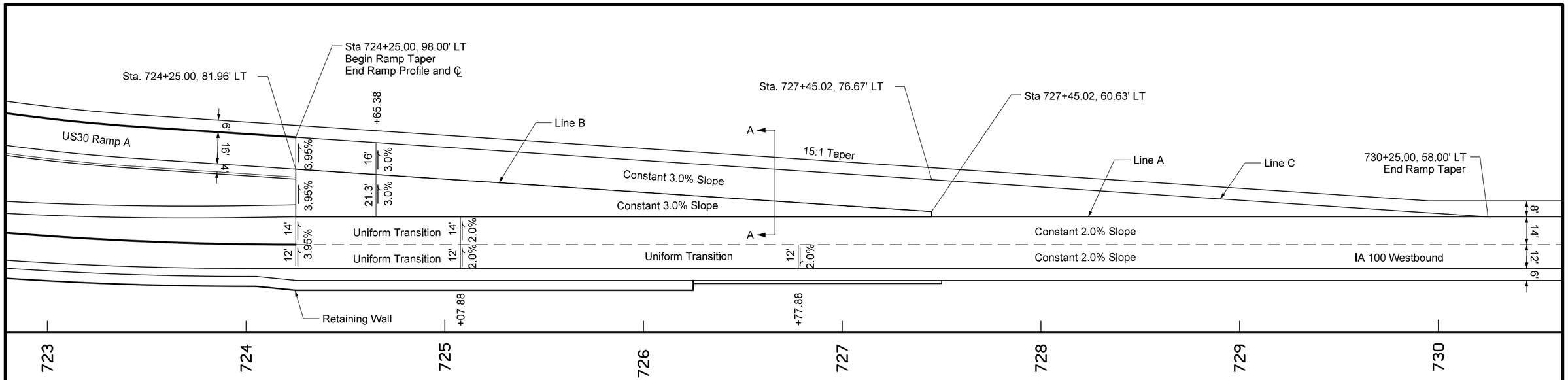
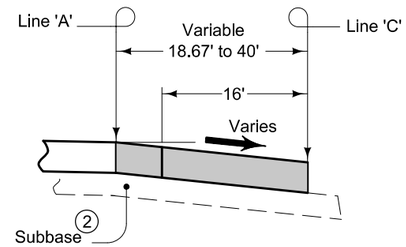


IA 100 STATIONING		724+25	724+50	724+65.38	724+75	725+00	725+25	725+50	725+75	726+00	726+25	726+50	726+75	727+00	727+25	727+45.02
From Line 'A' To Line 'B'	OFFSET (FT.)	23.96'	22.30'	21.27	20.63'	18.96'	17.30'	15.63'	13.96'	12.30'	10.63'	8.96'	7.30'	5.63'	3.96'	2.63'
	SLOPE (%)	-3.95%	-3.36%	← Constant -3.0% Slope →												-3.0%
	ELEVATION 'B'	830.49	830.16	829.97	829.81	829.42	829.02	828.64	828.30	828.01	827.55	827.55	827.39	827.22	827.08	827.00
From Line 'A' To Line 'C'	OFFSET (FT.)	40.00'	38.33'	37.31'	36.67'	35.00'	33.33'	31.67'	30.00'	28.33'	26.67'	25.00'	23.33'	21.67'	20.00'	18.67'
	SLOPE (%)	-3.95%	-3.36%	← Constant -3.0% Slope →												-3.0%
	ELEVATION 'C'	829.86	829.63	829.49	829.33	828.94	828.54	828.16	827.82	827.53	827.28	827.07	826.91	826.74	826.59	826.51

IA 100 STATIONING		727+50	727+75	728+00	728+25	728+50	728+75	729+00	729+25	729+50	729+75	730+00	730+25
From Line 'A' To Line 'C'	OFFSET (Ft.)	18.33'	16.67'	15.00'	13.33'	11.67'	10.00'	8.33'	6.67'	5.00'	3.33'	1.67'	0
	SLOPE (%)	-3.0%	← Constant -3.0% Slope →										-3.0%
	ELEVATION	826.50	826.42	826.34	826.27	826.19	826.11	826.03	825.96	825.88	825.80	825.72	825.65



SECTION A-A

Construct ramp exit pavement the same thickness as mainline pavement.

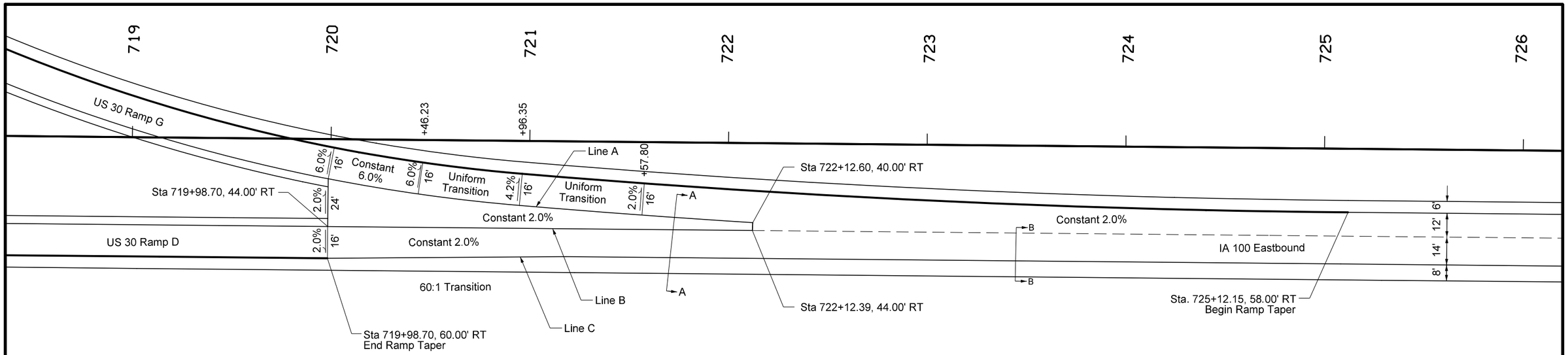
For joint details, see XX.

① For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.

② Construct subbase for ramp exit pavement the same thickness as mainline subbase.

0 25
FEET

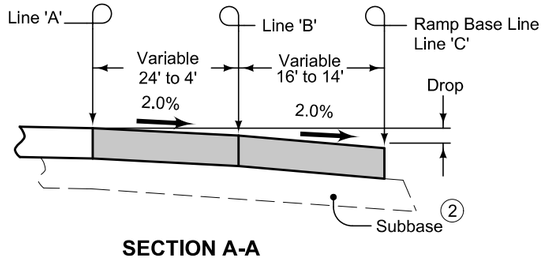
Geometric and Staking Detail
IA 100 / US 30
Interchange
Westbound Exit Taper
(Ramp A)



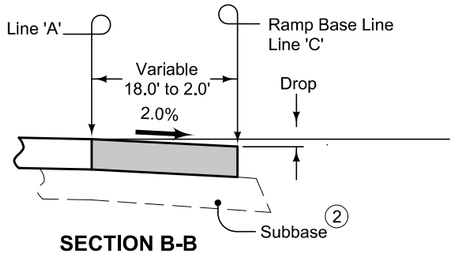
		719+98.70	720+00	720+25	720+50	720+75	721+00	721+25	721+50	721+75	722+00	722+12.60
From Line 'A' To Line 'B'	OFFSET (FT.)	24.00'	23.77'	19.53'	16.00'	13.23'	11.14'	9.36'	7.69'	6.13'	4.68'	4.00'
	SLOPE (%)	-2.0%	◄ Constant -2.0% Slope ►									
	ELEVATION 'B'	836.62	836.59	835.95	835.30	834.55	833.83	833.15	832.49	831.97	831.53	831.32
From Line 'B' To Line 'C'	OFFSET (FT.)	15.98'	15.56'	15.15'	14.73'	14.3'	◄ Constant 14.0' Width ►					
	SLOPE (%)	2.0%	◄ Constant 2.0% Slope ►									
	ELEVATION 'C'	836.30	836.28	835.66	835.02	834.27	833.55	832.87	832.21	831.69	831.25	831.04

IA 100 STATIONING		722+25	722+75	723+25	723+75	724+25	724+75	725+12.15
From Line 'A' To Line 'C'	OFFSET (FT.)	17.35'	16.12'	15.00'	14.00'	14.00'	14.00'	14.00'
	SLOPE (%)	◄ Constant 2.0% Slope ►						
	ELEVATION 'C'	830.77	830.07	829.50	829.05	828.72	828.45	828.26

Construct ramp entrance pavement the same thickness as mainline pavement.



SECTION A-A



SECTION B-B

① For header construction details at the end of taper, see Typical 7101 or Typical 7102.

② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

0 FEET 25

Geometric and Staking Detail
IA 100 / US 30
Interchange
Eastbound Entrance Taper
(Ramp D)

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER U.2

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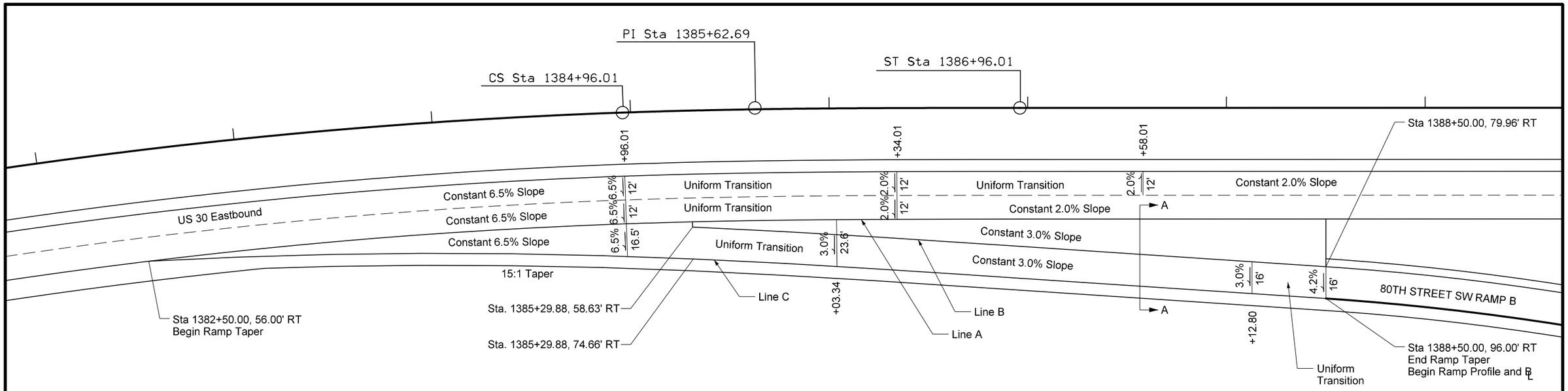
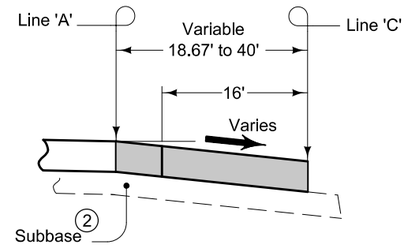


IA 100 STATIONING		1382+50	1382+75	1383+00	1383+25	1383+50	1383+75	1384+00	1384+25	1384+50	1384+75	1384+96.01	1385+00	1385+25
From Line 'A' To Line 'C'	OFFSET (Ft.)	0'	1.76'	3.36'	5.09'	6.71'	8.42'	10.06'	11.74'	13.41'	15.05'	16.47'	16.75'	18.36'
	SLOPE (%)	6.5%	← Constant 6.5% Slope →										6.4%	5.55%
	ELEVATION	853.51	853.78	853.99	854.20	854.44	854.67	854.91	855.13	855.35	855.60	855.81	855.87	856.31

IA 100 STATIONING		1385+29.88	1385+50	1385+75	1386+00	1386+03.34	1386+25	1386+50	1386+75	1387+00	1387+25	1387+50	1387+75	1388+00	1388+12.80	1388+25	1388+50
From Line 'A' To Line 'B'	OFFSET (FT.)	2.36'	3.98'	5.64'	7.34'		8.96'	10.65'	12.30'	13.96'	15.63'	17.30'	18.96'	20.63'	21.48'	22.30'	24.00'
	SLOPE (%)	5.4%	4.79%	4.0%	3.22%	← Constant -3.0% Slope →											-3.0%
	ELEVATION 'B'	857.27	857.56	857.95	858.33	858.39	858.69	858.93	859.11	859.26	859.30	859.35	859.30	859.22	859.17	859.13	859.06
From Line 'B' To Line 'C'	OFFSET (FT.)	16.00'	← Constant 16.00' →														16.00'
	SLOPE (%)	5.4%	4.79%	4.0%	3.22%	← Constant -3.0% Slope →											-3.0%
	ELEVATION 'C'	856.40	856.79	857.31	857.81	857.91	858.21	858.45	858.63	858.78	858.82	858.87	858.82	858.74	858.69	858.68	858.58



SECTION A-A

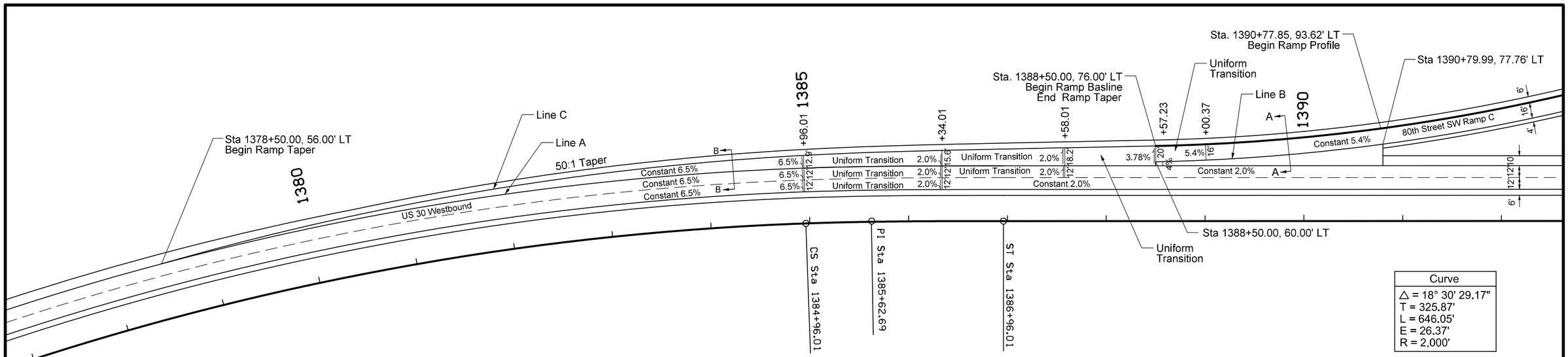
Construct ramp exit pavement the same thickness as mainline pavement.

For joint details, see XX.

1. For header construction details at the beginning of taper, see Typical 7101 or Typical 7102.
2. Construct subbase for ramp exit pavement the same thickness as mainline subbase.

0 25 FEET

Geometric and Staking Detail
US 30 / 80th St.
Interchange
Eastbound Exit Taper
(Ramp B)

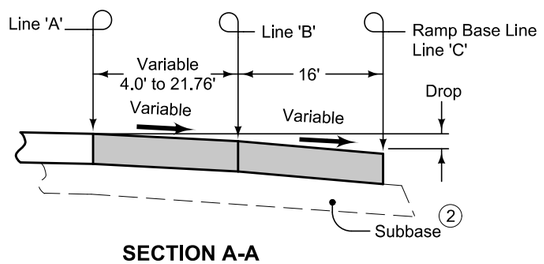


Curve
△ = 18° 30' 29.17"
T = 325.87'
L = 646.05'
E = 26.37'
R = 2,000'

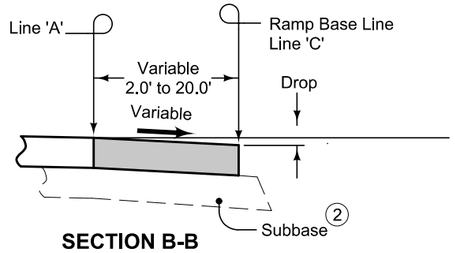
IA 100 STATIONING		1378+50	1379+00	1379+50	1380+00	1380+50	1381+00	1381+50	1382+00	1382+50	1383+00	1383+50	1384+00	1384+50	1384+96.01	1385+00	1385+50	1386+00	1386+34.01	1386+50	1387+00	1387+50	1387+58.01	1388+00
From Line 'A' To Line 'C'	OFFSET (FT.)	0.00'	1.00'	2.00'	3.00'	4.00'	5.00'	6.00'	7.00'	8.00'	9.00'	10.00'	11.00'	12.00'	12.87'	13.00'	14.00'	15.00'	15.64'	16.00'	17.00'	18.00'	18.16'	19.00'
	SLOPE (%)	6.5%	← Constant 6.5% Slope →												6.5%	6.37%	4.74%	3.1%	2.0%	1.48%	0.13%	1.74%	2.0%	2.81%
	ELEVATION 'B'	850.97	851.71	852.46	853.22	853.97	854.72	855.50	856.99	856.99	857.74	858.49	859.26	860.05	860.58	860.61	860.61	860.42	860.24	860.13	859.80	859.51	859.48	859.40

		1388+50	1388+57.23	1388+75	1389+00	1389+00.37	1389+25	1389+50	1389+75	1390+00	1390+25	1390+50	1390+75	1390+79.99
From Line 'A' To Line 'B'	OFFSET (FT.)	4.00'	4.15'	4.65'	5.61'	5.66'	6.88'	8.47'	10.36'	12.57'	15.10'	17.94'	21.09'	21.76'
	SLOPE (%)	3.78%	4.0%	← Constant 4.0% Slope →										
	ELEVATION 'B'	859.76	859.74	859.69	859.59	5859.58	859.47	859.30	859.08	858.85	858.58	858.28	857.98	857.92
From Line 'B' To Line 'C'	OFFSET (FT.)	← Constant 16.0' Width →												
	SLOPE (%)	3.78%	4.0%	4.59%	5.39%	← Constant 5.4% Slope →								
	ELEVATION 'C'	859.16	859.10	858.96	858.73	858.72	858.61	858.44	858.2	857.99	857.72	857.42	857.12	857.06

Construct ramp entrance pavement the same thickness as mainline pavement.



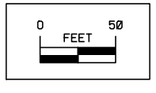
SECTION A-A



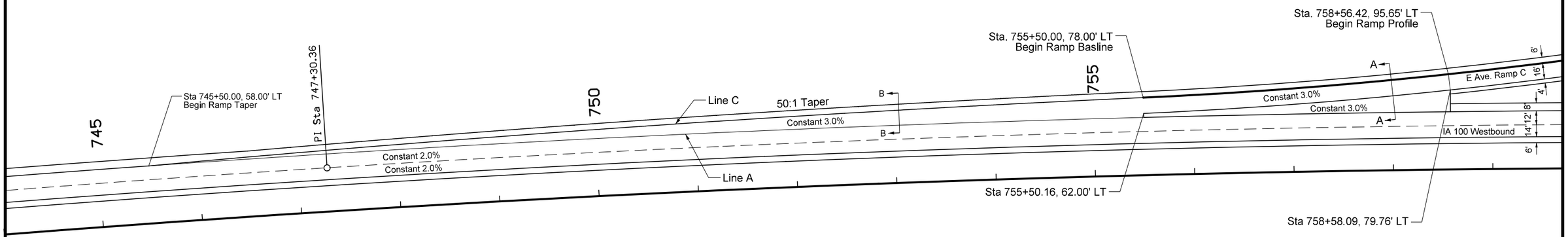
SECTION B-B

① For header construction details at the end of taper, see Typical 7101 or Typical 7102.

② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.



Geometric and Staking Detail
US 30 / 80th St.
Interchange
Westbound Entrance Taper
(Ramp C)

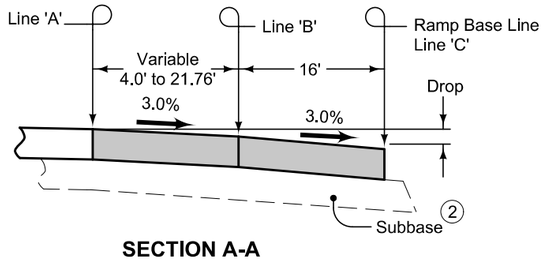


Curve
△ = 13° 40' 36.52"
T = 605.61'
L = 1,205.46'
E = 36.18'
R = 5,050'

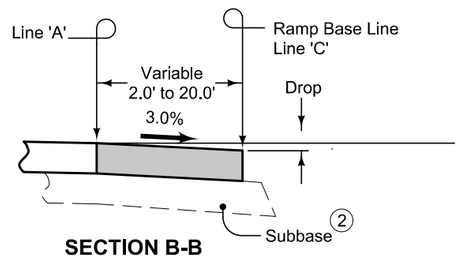
IA 100 STATIONING		745+50	746+00	746+50	747+00	747+50	748+00	748+50	749+00	749+50	750+00	750+50	751+00	751+50	752+00	752+50	753+00	753+50	754+00	754+50	755+00	755+50
From Line 'A' To Line 'C'	OFFSET (FT.)	0.00'	1.00'	2.00'	3.00'	4.00'	5.00'	6.00'	7.00'	8.00'	9.00'	10.00'	11.00'	12.00'	13.00'	14.00'	15.00'	16.00'	17.00'	18.00'	19.00'	20.00'
	SLOPE (%)	2.0%	2.0%	← Constant 3.0% Slope →																		
	ELEVATION 'B'	808.80	807.82	806.83	805.85	804.87	803.88	802.90	801.92	800.93	799.95	798.97	797.99	797.00	796.02	795.04	794.06	793.07	792.09	791.11	790.12	789.14

		755+50.16	755+75	756+00	756+25	756+50	756+75	757+00	757+25	757+50	757+75	758+00	758+25	758+50	758+58.09
From Line 'A' To Line 'B'	OFFSET (FT.)	4.00'	4.57'	5.30'	6.17'	7.21'	8.39'	9.74'	11.23'	12.87'	14.67'	16.63'	18.73'	20.99'	21.76'
	SLOPE (%)	← Constant 3.0% Slope →													
	ELEVATION 'B'	789.62	789.13	788.63	788.13	787.62	787.11	786.59	786.07	785.55	785.01	784.48	783.94	783.68	783.37
From Line 'B' To Line 'C'	OFFSET (FT.)	← Constant 16.0' Width →													
	SLOPE (%)	← Constant 3.0% Slope →													
	ELEVATION 'C'	789.14	788.65	788.15	787.65	787.14	786.63	786.11	785.59	785.07	784.53	784.00	783.46	783.20	782.89

Construct ramp entrance pavement the same thickness as mainline pavement.



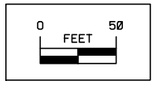
SECTION A-A



SECTION B-B

① For header construction details at the end of taper, see Typical 7101 or Typical 7102.

② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.



Geometric and Staking Detail
IA 100 / E Ave.
Interchange
Southbound Entrance Taper
(Ramp C)

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER U.5

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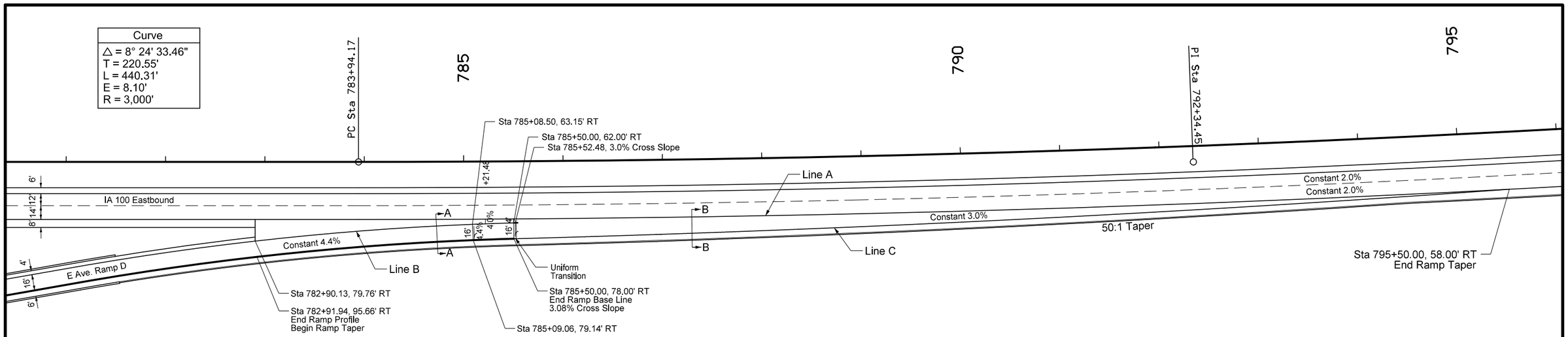
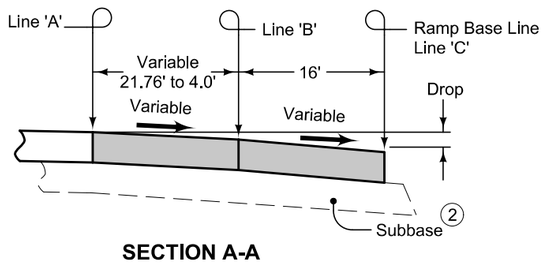
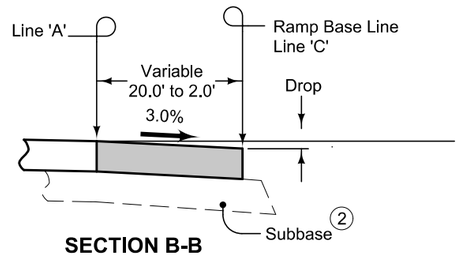


		782+90.13	783+00	783+25	783+50	783+75	784+00	784+25	784+50	784+75	785+00	785+08.50	785+21.48	785+25	785+50	785+52.48
From Line 'A' To Line 'B'	OFFSET (FT.)	21.76'	20.65'	17.99'	15.54'	13.30'	11.27'	9.46'	7.89'	6.56'	5.47'	5.15'	4.72'	4.61'	4.00'	
	SLOPE (%)	← Constant 4.0% Slope →												3.9%	3.1%	
	ELEVATION 'B'	781.07	781.35	782.05	782.74	783.43	784.10	784.77	785.41	786.03	786.64	786.84	787.15	787.24	787.84	
From Line 'B' To Line 'C'	OFFSET (FT.)	← Constant 16.0' Width →														
	SLOPE (%)	← Constant 4.4% Slope →											4.0%	3.9%	3.1%	
	ELEVATION 'C'	780.36	780.64	781.35	782.04	782.72	783.40	784.06	784.71	785.33	785.94	786.14	786.51	786.61	787.34	
From Line 'A' To Line 'C'	OFFSET (FT.)															19.95'
	SLOPE (%)															3.0%
	ELEVATION 'C'															787.41

IA 100 STATIONING		786+00	786+50	787+00	787+50	788+00	788+50	789+00	789+50	790+00	790+50	791+00	791+50	792+00	792+50	793+00	793+50	794+00	794+50	795+00	795+50
From Line 'A' To Line 'C'	OFFSET (FT.)	19.00'	18.00'	17.00'	16.00'	15.00'	14.00'	13.00'	12.00'	11.0'	10.00'	9.00'	8.00'	7.00'	6.00'	5.00'	4.00'	3.00'	2.00'	1.00'	0.00'
	SLOPE (%)	← Constant 3.0% Slope →																		2.0%	2.0%
	ELEVATION 'B'	788.45	789.51	790.53	791.51	792.46	793.38	794.25	795.09	795.90	796.66	797.40	798.09	798.75	799.37	799.96	800.51	801.03	801.51	801.96	802.35



SECTION A-A



SECTION B-B

Construct ramp entrance pavement the same thickness as mainline pavement.

(1) For header construction details at the end of taper, see Typical 7101 or Typical 7102.

(2) Construct subbase for ramp entrance pavement the same thickness as mainline subbase.

0 50 FEET

Geometric and Staking Detail
IA 100 / E Ave.
Interchange
Northbound Entrance Taper
(Ramp D)

ENGLISH | IOWA DOT | DESIGN TEAM Iowa DOT\CH2MHILL | LINN COUNTY | PROJECT NUMBER NHSX-100-1(39)--3H-57 | SHEET NUMBER U.6

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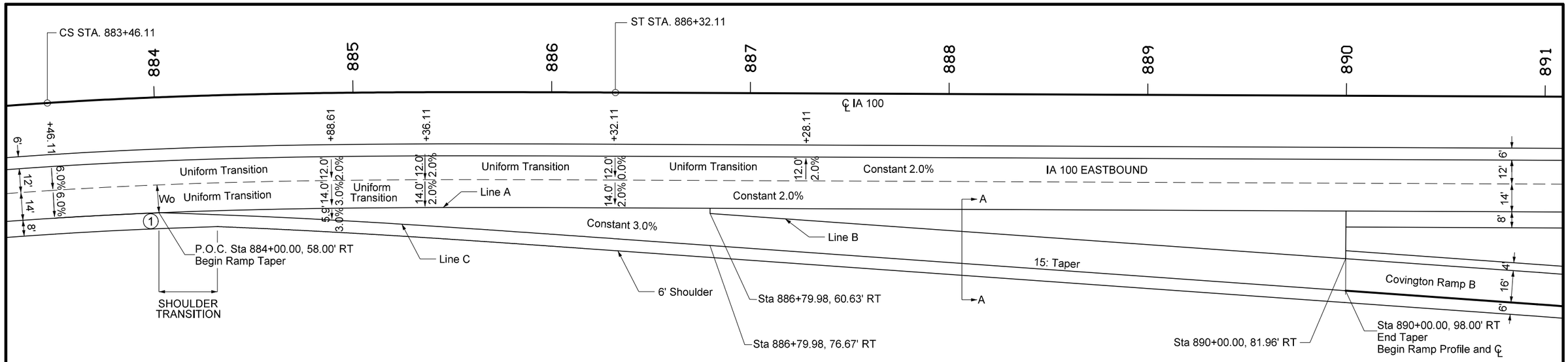
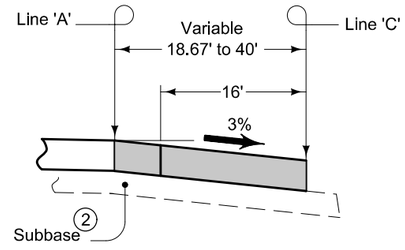


		884+00	884+25	884+50	884+75	884+88.61	885+00	885+25	885+36.11	885+50	885+75	886+00	886+25	886+32.11	886+50	886+75
FROM LINE 'A' TO LINE 'C'	OFFSET (Ft.)	0'	1.68'	3.34'	5.0'	5.91'	6.67'	8.34'	9.09'	10.0'	11.67'	13.34'	15.0'	15.47'	16.67'	18.33'
	SLOPE (%)	-4.88%	-4.35%	-3.82%	-3.29%	-3.0%	Constant 3.0%									-3.0%
	ELEVATION	776.69	776.63	776.58	776.55	776.55	776.53	776.49	776.47	776.41	776.29	776.18	776.06	776.03	775.95	775.83

		886+79.98	887+00	887+25	887+50	887+75	888+00	888+25	888+50	888+75	889+00	889+25	889+50	889+75	890+00
From Line 'A' To Line 'B'	OFFSET (FT.)	2.63	3.96'	5.63'	7.30'	8.96'	10.63'	12.30'	13.96'	15.63'	17.30'	18.96'	20.63'	22.30'	23.96'
	SLOPE (%)	-3.0%	Constant -3.0%												3.0%
	ELEVATION 'B'	776.29	776.20	776.09	775.92	775.74	775.56	775.39	775.21	775.03	774.85	774.68	774.50	774.32	774.15
From Line 'A' To Line 'C'	OFFSET (FT.)	18.67'	20.0'	21.67'	23.33'	25.00'	26.67'	28.33'	30.00'	31.67'	33.33'	35.00'	36.67'	38.33'	40.00'
	SLOPE (%)	-3.0%	Constant -3.0%												-3.0%
	ELEVATION 'C'	775.81	775.72	775.61	775.44	775.26	775.08	774.91	774.73	774.55	774.37	774.20	774.02	773.84	773.67



SECTION A-A

Construct ramp exit pavement the same thickness as mainline pavement.

For joint details, see PV-101.

(1) For header construction details at the beginning of taper, see Typical 7101.

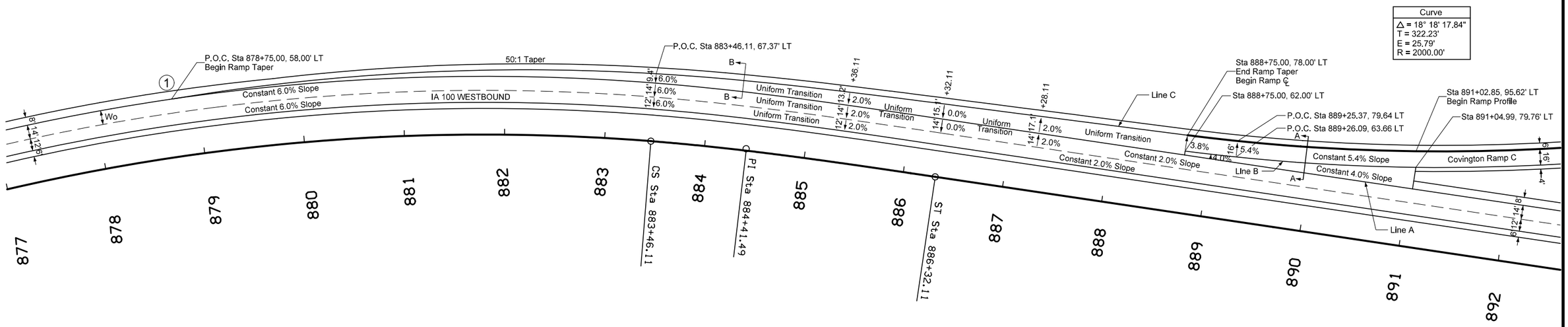
(2) Construct subbase for ramp exit pavement the same thickness as mainline subbase.

0 FEET 25

TABLE OF SHOULDER TRANSITION LENGTHS			
W_o	Shoulder Width beyond Edge of Mainline Pavement		
	8'	10'	12'
12'	NA	60'	90'
14'	30'	60'	NA

NOTE: W_o is the width of the outside lane to the Edge of Pavement.

Geometric and Staking Detail
IA 100 / Covington Road
Interchange
Eastbound Exit Taper
(Ramp B)
(By Others)



IA 100 STATION		875+75	879+25	879+75	880+25	880+75	881+25	881+75	882+25	882+75	883+25	883+46.11	883+75	884+25	884+75	885+25	885+75	886+25	886+75
FROM LINE 'A' TO LINE 'C'	OFFSET (Ft.)	0'	1.0'	2.0'	3.0'	4.0'	5.0'	6.0'	7.0'	8.0'	9.0'	9.37'	10.0'	11.0'	12.0'	13.0'	14.0'	15.0'	16.0'
	SLOPE (%)	6.0%	Constant 6.0%									6.0%	5.40%	4.36%	3.31%	2.27%	1.23%	0.19%	-0.85%
	ELEVATION	783.70	781.99	781.79	781.60	781.40	781.21	781.02	780.82	780.63	780.43	780.35	780.02	779.44	778.83	778.20	777.65	777.11	776.54

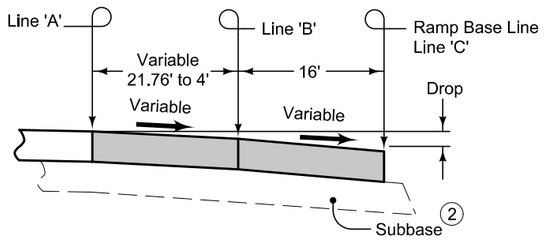
IA 100 STATION		887+00	887+25	887+28.11	887+50	887+75	888+00	888+25	888+50	888+75	889+00	889+25	889+26.09	889+50	889+75	890+00	890+25	890+50	890+75	891+00	891+04.99
RAMP C STATION										33588+75.00	33588+99.49	33589+24.31	33589+25.40	33589+49.15	33589+74.00	33589+98.87	33590+23.77	33590+48.70	33590+73.66	33590+98.66	33591+03.65
From Line 'A' To Line 'B'	OFFSET (FT.)									4.00'	4.66'	5.62'	5.66'	6.90'	8.48'	10.38'	12.59'	15.11'	17.95'	21.10'	21.76'
	SLOPE (%)									-3.78%	4.0%	Constant 4.0%									4.0%
	ELEVATION 'B'									775.35	775.19	775.02	775.01	774.84	774.65	774.45	774.23	774.01	773.77	773.51	773.46
From Line 'B' To Line 'C'	OFFSET (FT.)									16.0'	Constant 16.0' Width										16.0'
	SLOPE (%)									-3.78%	-4.58%	-5.37%	-5.4%	Constant 5.4%							5.4%
	ELEVATION 'C'									774.74	774.45	774.16	774.15	773.98	773.79	773.59	773.37	773.14	772.90	772.65	772.60
From Line 'A' To Line 'C'	OFFSET (FT.)	16.5'	17.0'	17.07'	17.5'	18.0'	18.5'	19.0'	19.5'												
	SLOPE (%)	-1.28%	-1.71%	-2.0%	-2.14%	-2.57%	-2.87%	-3.17%	-3.48%												
	ELEVATION 'C'	776.28	776.01	775.90	775.66	775.55	775.35	775.16	774.95												

Construct ramp entrance pavement the same thickness as mainline pavement.

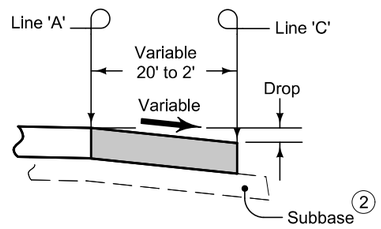
For joint details, see PV-101

① For header construction details at the end of taper, see Typical 7101.

② Construct subbase for ramp entrance pavement the same thickness as mainline subbase.



SECTION A-A

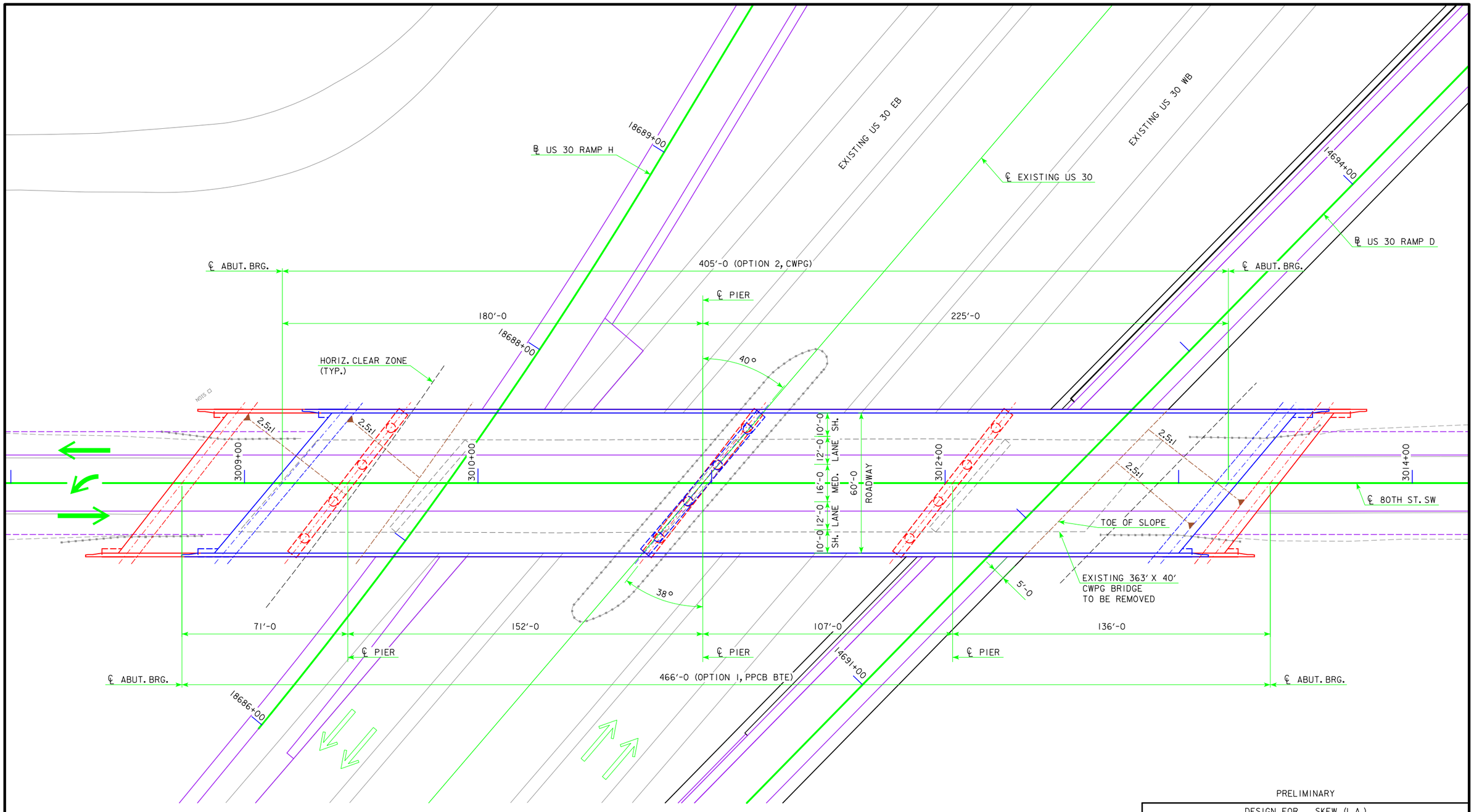


SECTION B-B

TABLE OF SHOULDER TRANSITION LENGTHS			
W_0	Shoulder Width beyond Edge of Mainline Pavement		
	8'	10'	12'
12'	NA	200'	300'
14'	100'	200'	NA

NOTE: W_0 is the width of the outside lane to the Edge of Pavement.

Geometric and Staking Detail
IA 100 / Covington Road
Interchange
Westbound Entrance Taper
(Ramp C)
(By Others)



SITUATION PLAN

PRELIMINARY

DESIGN FOR SKEW (L.A.)

PPCB OR CWPG BRIDGE

END SPANS BEAM TYPE INTERIOR SPAN

SITUATION PLAN

80TH STREET SW OVER US 30 MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.1

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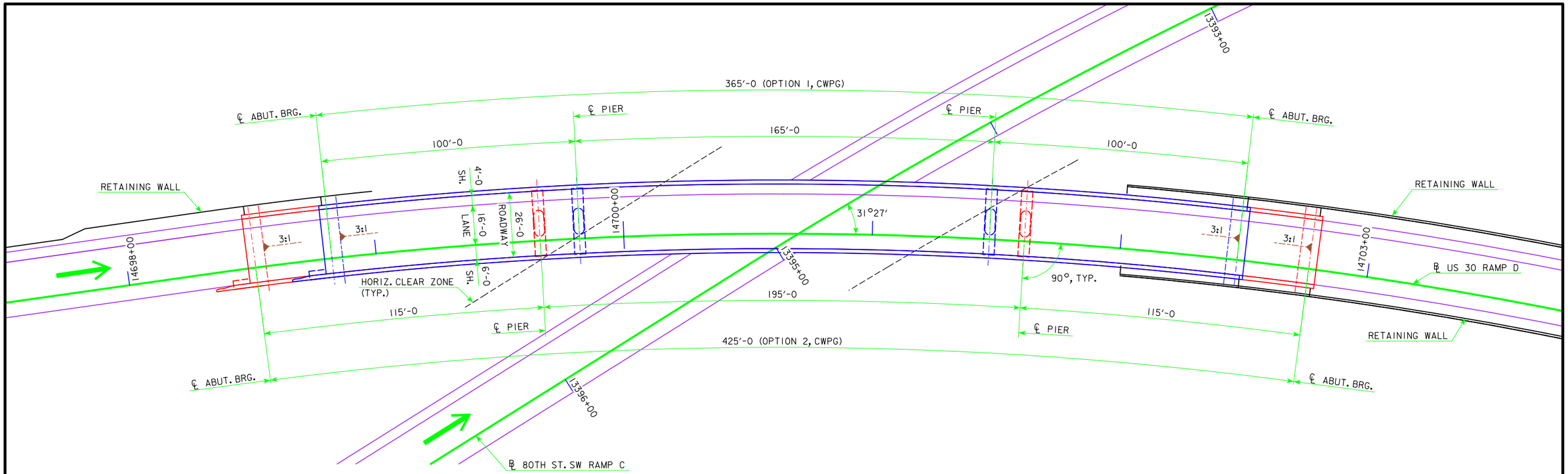
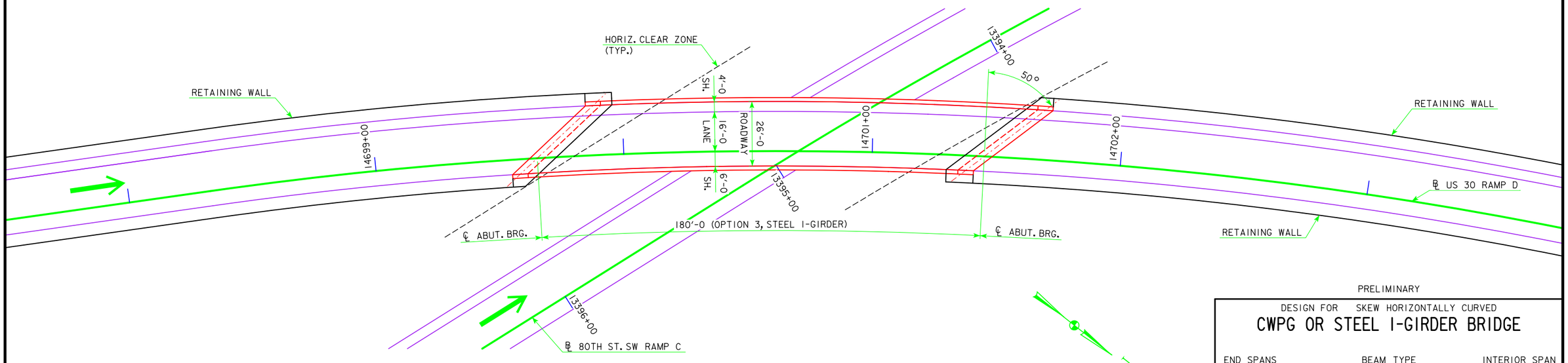


SITUATION PLAN
(OPTIONS 1 & 2)



SITUATION PLAN
(OPTION 3)

PRELIMINARY

DESIGN FOR SKEW HORIZONTALLY CURVED

CWPG OR STEEL I-GIRDER BRIDGE

END SPANS | BEAM TYPE | INTERIOR SPAN

SITUATION PLAN

RAMP D OVER 80TH ST. SW RAMP C — MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.2

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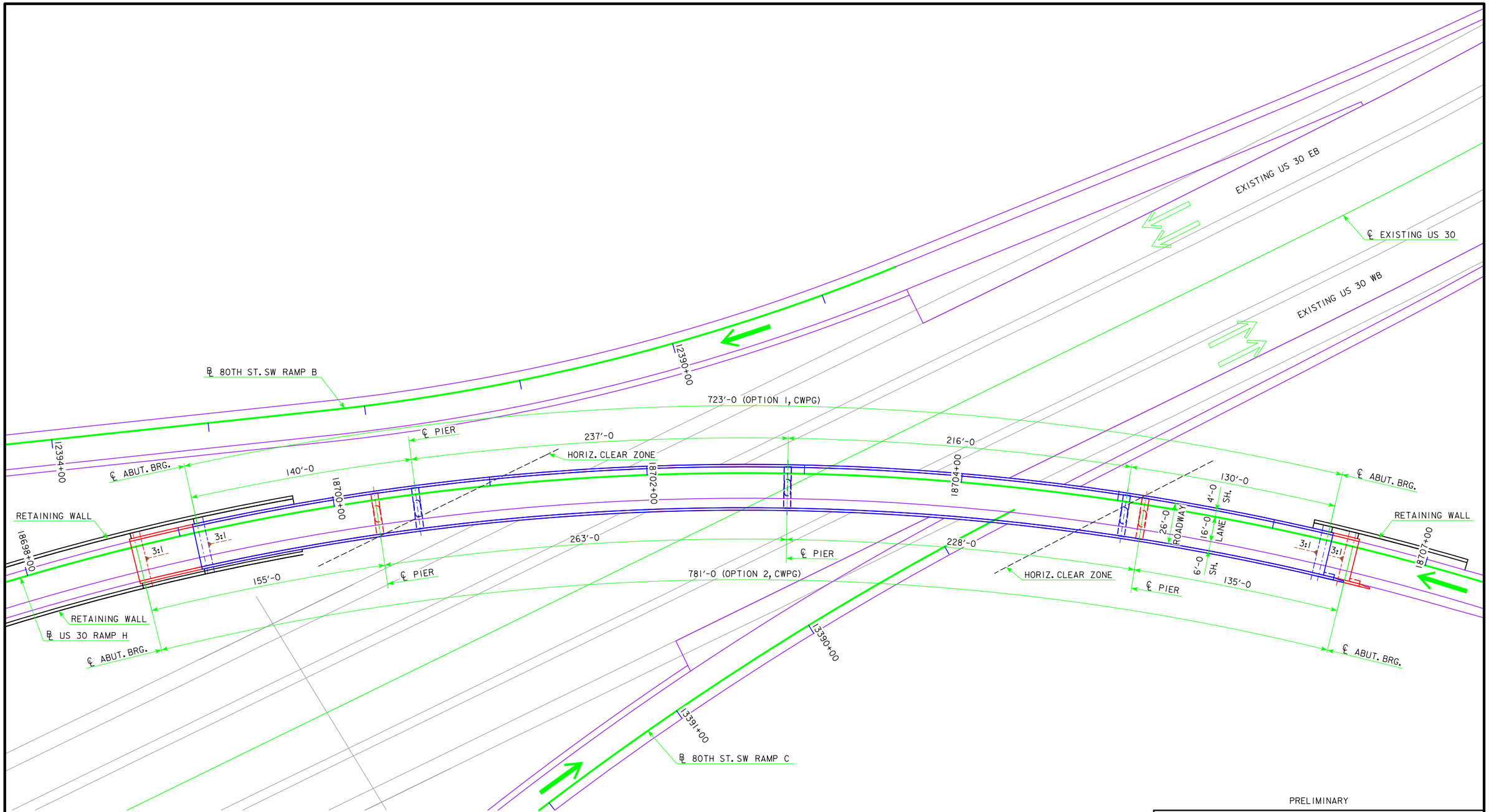

SITUATION PLAN

0 ENGLISH 60
SCALE IN FEET

PRELIMINARY

DESIGN FOR 0° SKEW HORIZONTALLY CURVED

CWPG BRIDGE

END SPANS | BEAM TYPE | INTERIOR SPAN

SITUATION PLAN

RAMP H OVER US 30 & 80TH ST. SW RAMP C

MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.3

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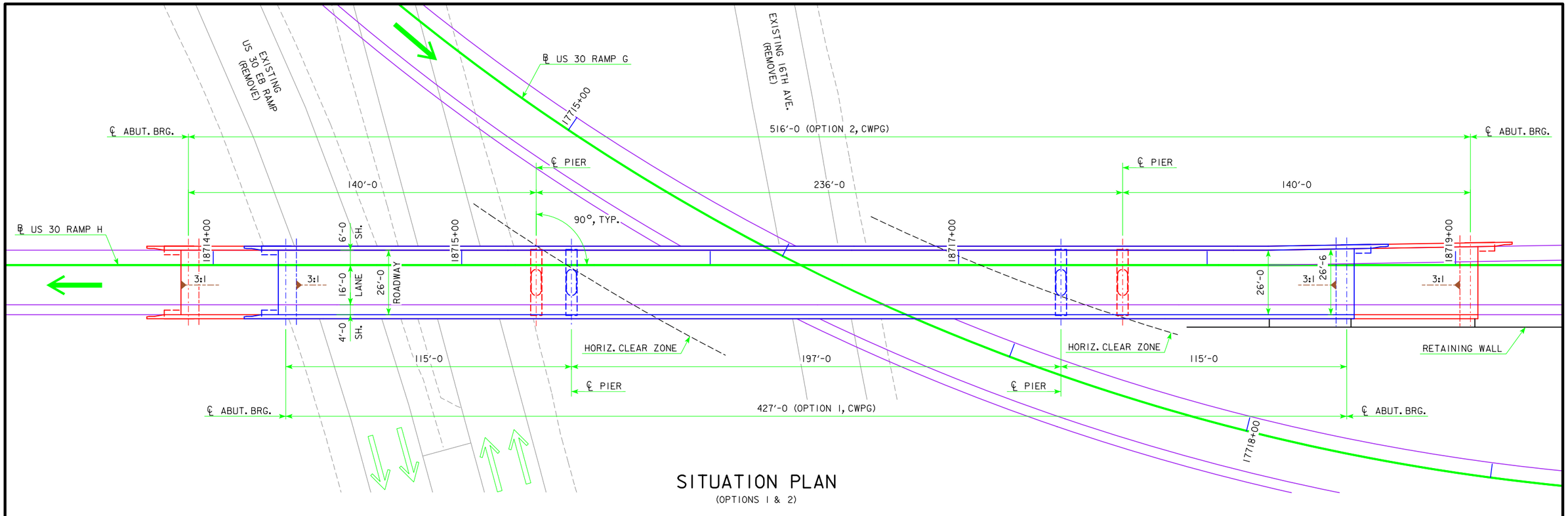
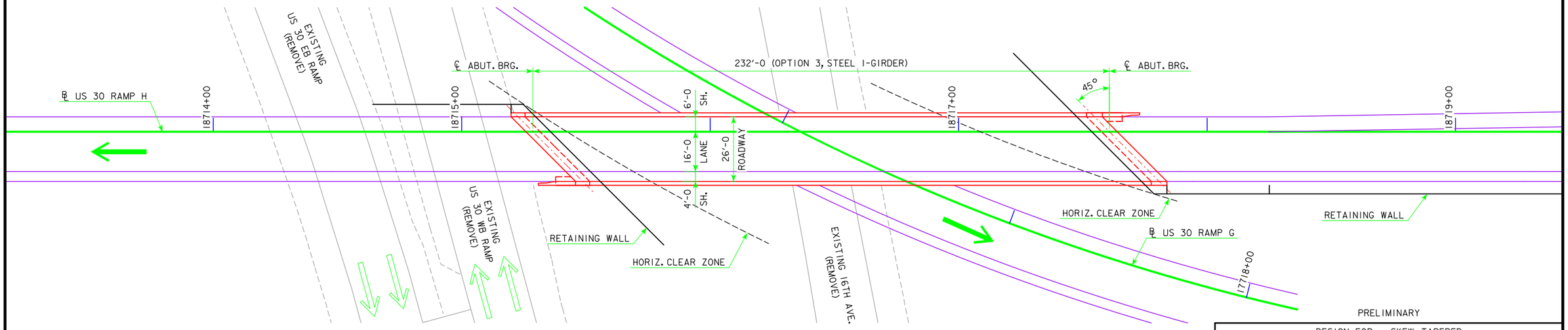


SITUATION PLAN
(OPTIONS 1 & 2)



SITUATION PLAN
(OPTION 3)

N

0 ENGLISH 40
SCALE IN FEET

PRELIMINARY

DESIGN FOR SKEW TAPERED
CWPG OR STEEL I-GIRDER BRIDGE

END SPANS | BEAM TYPE | INTERIOR SPAN

SITUATION PLAN

RAMP H OVER RAMP G — MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.4

3/3/2014 12:45:43 PM jkane c:\pw_workdir\ch2mhill_tbg\jkane\d0113226\57100036.str V04_US 30 Ramp H 2 11x17_pdf.pltcfg

℄ ABUT. BRG.

204′-0 (OPTION 1, PPCB BTB)
203′-0 (OPTION 2, PPCB D)

℄ ABUT. BRG.

℄ PIER

℄ PIER

(OPTION 1, PPCB BTB)
(OPTION 2, PPCB D)

61′-0
60′-9

87′-0
86′-6

56′-0
55′-9

3:1

3:1

8′-0 SH.
14′-0 LANE
12′-0 LANE
6′-0 SH.
40′-0 ROADWAY

℄ W.B. IA 100

1°55′

HORIZ. CLEAR ZONE (TYP.)

2126+00

736+00

738+00

℄ IA 100

℄ ABUT. BRG.

204′-0 (OPTION 1, PPCB BTB)
203′-0 (OPTION 2, PPCB D)

℄ ABUT. BRG.

℄ PIER

℄ PIER

(OPTION 1, PPCB BTB)
(OPTION 2, PPCB D)

61′-0
60′-9

87′-0
86′-6

56′-0
55′-9

3:1

90°, TYP.

3:1

6′-0 SH.
12′-0 LANE
14′-0 LANE
8′-0 SH.
40′-0 ROADWAY

℄ E.B. IA 100

℄ 16TH AVE./ACCESS RD.

N

0 ENGLISH 20
SCALE IN FEET

SITUATION PLAN

PRELIMINARY

DESIGN FOR SKEW

PPCB DUAL BRIDGES

END SPANS | BEAM TYPE | INTERIOR SPAN

SITUATION PLAN

IA 100 OVER 16TH AVE./ACCESS RD. MARCH 2014

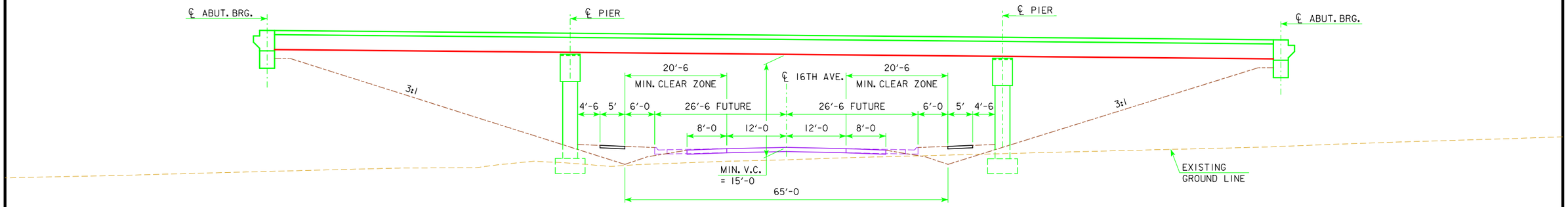
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 2 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP | LINN COUNTY | PROJECT NUMBER NHSX-100-1(39)--3H-57 | SHEET NUMBER V.5

3/3/2014 12:45:46 PM jkane c:\pw_workdir\ch2mhill_tbg\jkane\d0113226\57100036.str V05_16th Ave. Access Rd. 11x17_pdf.pltcfg



LONGITUDINAL SECTION

0 ENGLISH 20
SCALE IN FEET

PRELIMINARY

DESIGN FOR SKEW

PPCB DUAL BRIDGES

END SPANS BEAM TYPE INTERIOR SPAN

SITUATION PLAN

IA 100 OVER 16TH AVE./ACCESS RD. MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 2 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.6

3/3/2014 12:45:50 PM jkane c:\pw_workdir\ch2mhill_tbg\jkane\d0113226\57100036.str V06_16th Ave. Section 11x17_pdf.pltcfg

℄ W.B. IA 100

℄ IA 100

℄ E.B. IA 100

℄ ABUT. BRG.

252'-0 (PPCB BTD)

℄ ABUT. BRG.

℄ PIER

126'-0

126'-0

8°

5'-0

770+00

EXISTING
SINGLE 10' x 6'
RCB CULVERT
TO BE REMOVED

2569+00

2570+00

2571+00

3:1

3:1

10'-0 SH.

12'-0 LANE

16'-0 TURN LANE

12'-0 LANE

10'-0 SH.

60'-0

℄ E AVENUE

CABLE GUARDRAIL

N

SITUATION PLAN

0 ENGLISH 20
SCALE IN FEET

PRELIMINARY

DESIGN FOR 8° SKEW (L.A.)

252'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

126' SPANS (BTD BEAM TYPE)

SITUATION PLAN

E AVENUE OVER IA 100 MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP | LINN COUNTY | PROJECT NUMBER NHSX-100-1(39)--3H-57 | SHEET NUMBER V.7

3/3/2014 12:45:53 PM jkane c:\pw_workdir\ch2mhill_tbg\jkane\d0113226\57100036.str V07_EAve 11x17_pdf.pltcfg

EXISTING DRIVEWAY
TO BE REMOVED

FLOODWAY LIMITS

℄ ABUT. BRG.

155'-0 (PPCB BTE)

℄ ABUT. BRG.

FLOODWAY LIMITS

EXISTING 90' x 30' PPCB
BRIDGE TO BE REMOVED

25°

2564+00

50'-1

3:1

2565+00

10'-0 SH.

12'-0 LANE

VARIES MED.

12'-0 LANE

10'-0 SH.

55'-5

2566+00

℄ E AVENUE

10'-0

RETAINING WALL

EXISTING DRIVEWAY
TO BE REMOVED

MORGAN CREEK

N

0 ENGLISH 20
SCALE IN FEET

SITUATION PLAN

PRELIMINARY

DESIGN FOR 25°SKEW (L.A.) TAPERED

155'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

155' SINGLE SPAN (BTE BEAM TYPE)

SITUATION PLAN

E AVENUE OVER MORGAN CREEK MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.8

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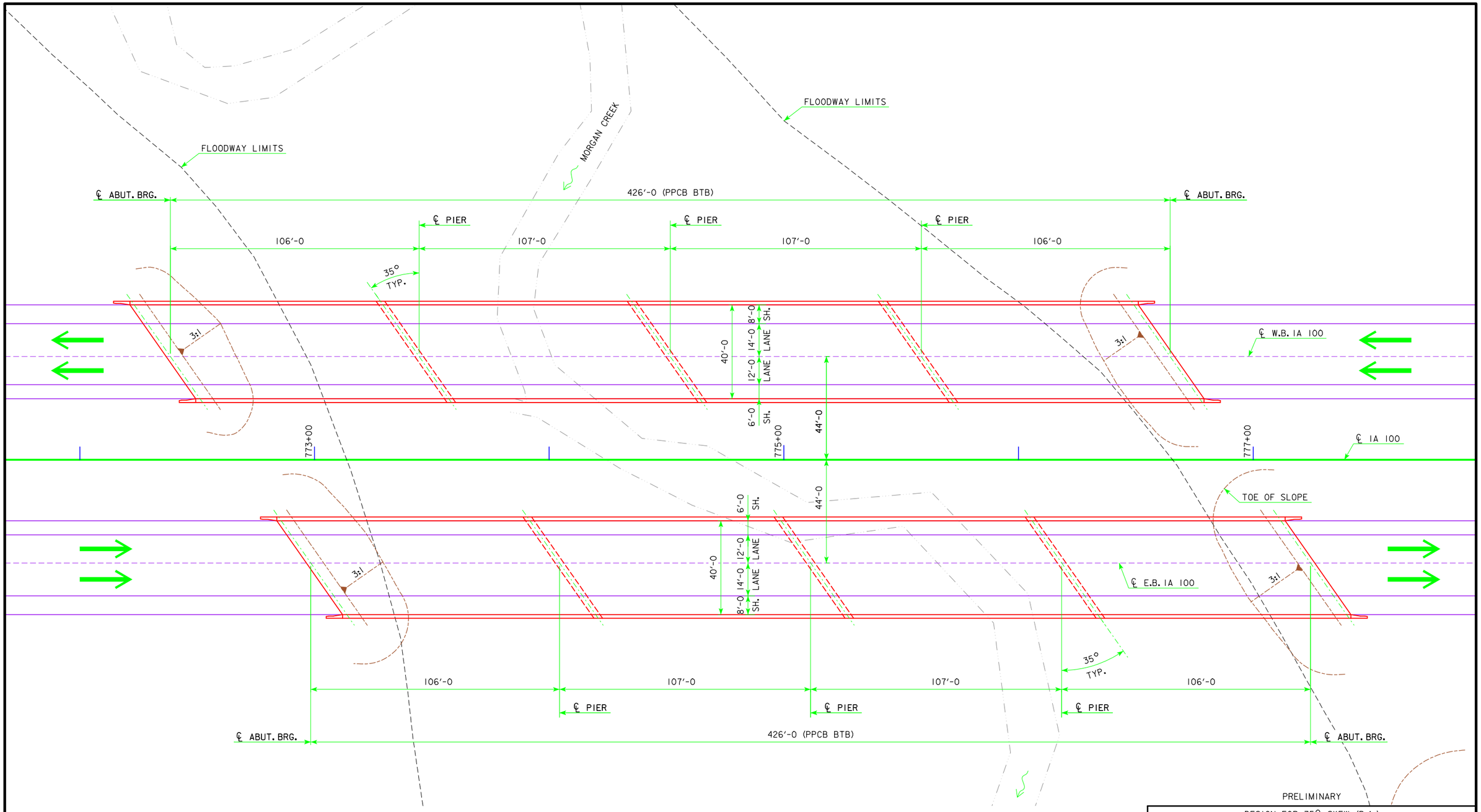

SITUATION PLAN

PRELIMINARY

DESIGN FOR 35° SKEW (R.A.)

TWIN 426'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

106' END SPANS (BTB BEAM TYPE) 107' INTERIOR SPANS

SITUATION PLAN

IA 100 OVER MORGAN CREEK

MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.9

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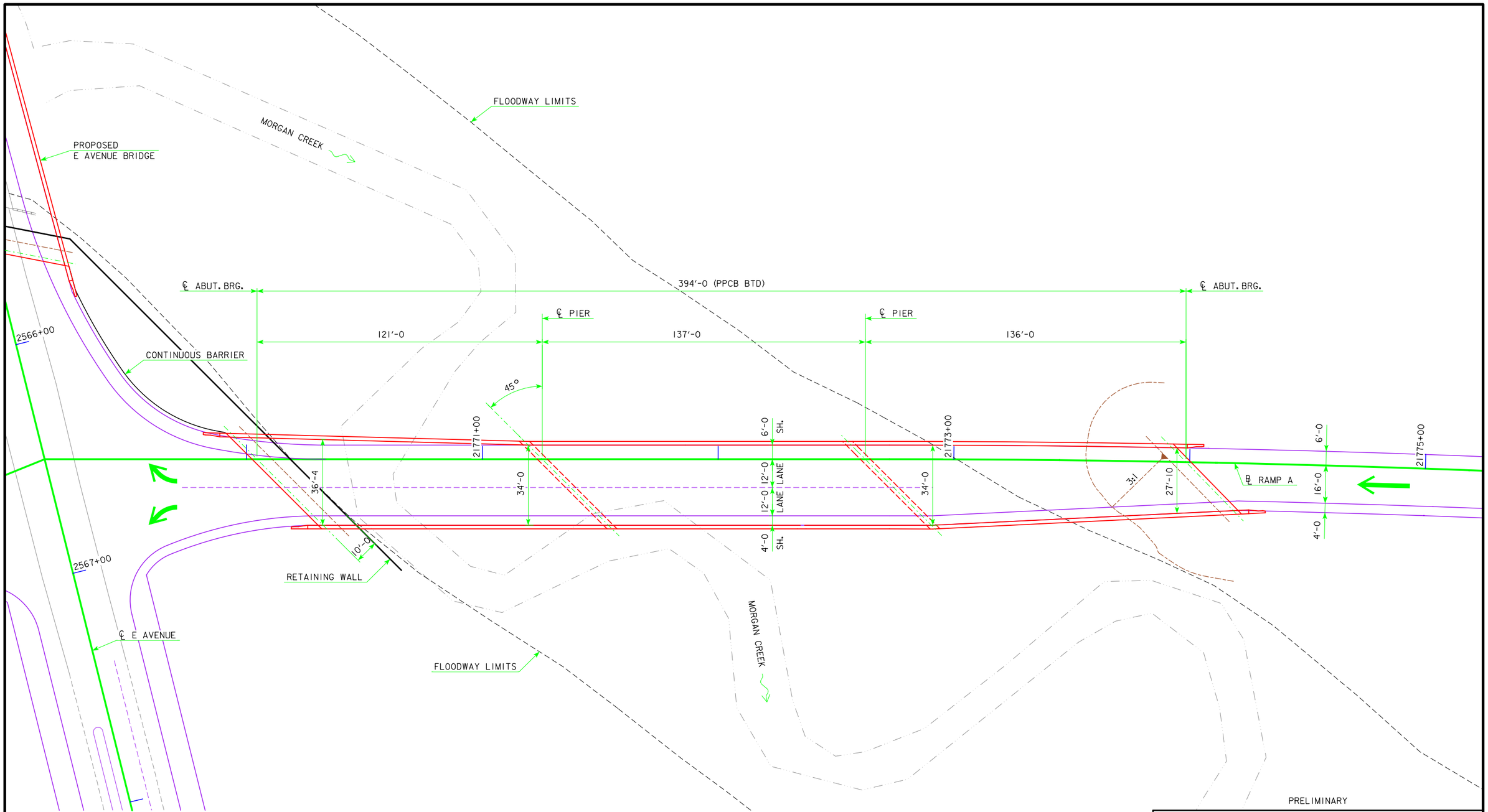

SITUATION PLAN

PRELIMINARY

DESIGN FOR 45° SKEW (R.A.)

394'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

121' & 136' END SPANS (BTD BEAM TYPE) 137' INTERIOR SPAN

SITUATION PLAN

RAMP A OVER MORGAN CREEK MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.10

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PROPOSED
IA 100 EB BRIDGE

MORGAN CREEK

℄ IA 100

℄ E.B. IA 100

777+00

778+00

FLOODWAY LIMITS

FLOODWAY LIMITS

TOE OF SLOPE

TOE OF SLOPE

℄ RAMP D

3:1

3:1

4'-0 SH.

16'-0 LANE

26'-0 ROADWAY

6'-0 SH.

24774+00

24775+00

24776+00

24777+00

20°

126'-0

127'-0

127'-0

126'-0

℄ PIER

℄ PIER

℄ PIER

℄ ABUT. BRG.

506'-0 (PPCB BTD)

℄ ABUT. BRG.

N

0 ENGLISH 40
SCALE IN FEET

SITUATION PLAN

PRELIMINARY

DESIGN FOR 20° SKEW (R.A.)

506'-0 PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGE

126' END SPANS (BTD BEAM TYPE) 127' INTERIOR SPANS

SITUATION PLAN

RAMP D OVER MORGAN CREEK MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER V.11

3/3/2014 12:46:06 PM jkane c:\pw_workdir\ch2mhill_tbg\jkane\d0113226\57100036.str V11_MorganEAveRampD 11x17_pdf.pltcfg

EXISTING ELLIS RD.

SILVER CREEK

BARN WITH POTENTIALLY HISTORIC HAY RACK

EXISTING 12' X 9' TWIN RCB TO REMAIN

FIS ZONE A LIMITS

℄ ABUT. BRG.

741'-11 (OPTION 1, PPCB BTE)

℄ ABUT. BRG.

℄ PIER

156'-0 | 140'-11 | 157'-0 | 157'-0 | 131'-0

8'-0 SH. | 12' 14' LA. LA. | 40'-0 ROADWAY | 6'-0 SH.

3:1

℄ W.B. IA 100

850+00 | 853+00 | 855+00 | 857+00

℄ IA 100

℄ E.B. IA 100

6'-0 SH. | 14' 12' LA. LA. | 40'-0 ROADWAY | 8'-0 SH.

EXISTING 80TH ST. (TO BE RELOCATED)

156'-0 | 71'-11 | 45° | 157'-0 | 157'-0 | 157'-0 | 131'-0

℄ PIER

829'-11 (OPTION 1, PPCB BTE)

℄ ABUT. BRG.

HORIZ. CLEAR ZONE

HORIZ. CLEAR ZONE

FIS ZONE A LIMITS

SILVER CREEK

3116+00

℄ 80TH ST. NORTH

N

0 ENGLISH 60

SCALE IN FEET

SITUATION PLAN

(OPTION 1)

PRELIMINARY

DESIGN FOR SKEW

PPCB DUAL BRIDGES (OPTION 1)

END SPANS | BEAM TYPE | INTERIOR SPAN

SITUATION PLAN

IA 100 OVER SILVER CREEK

MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 2 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.12

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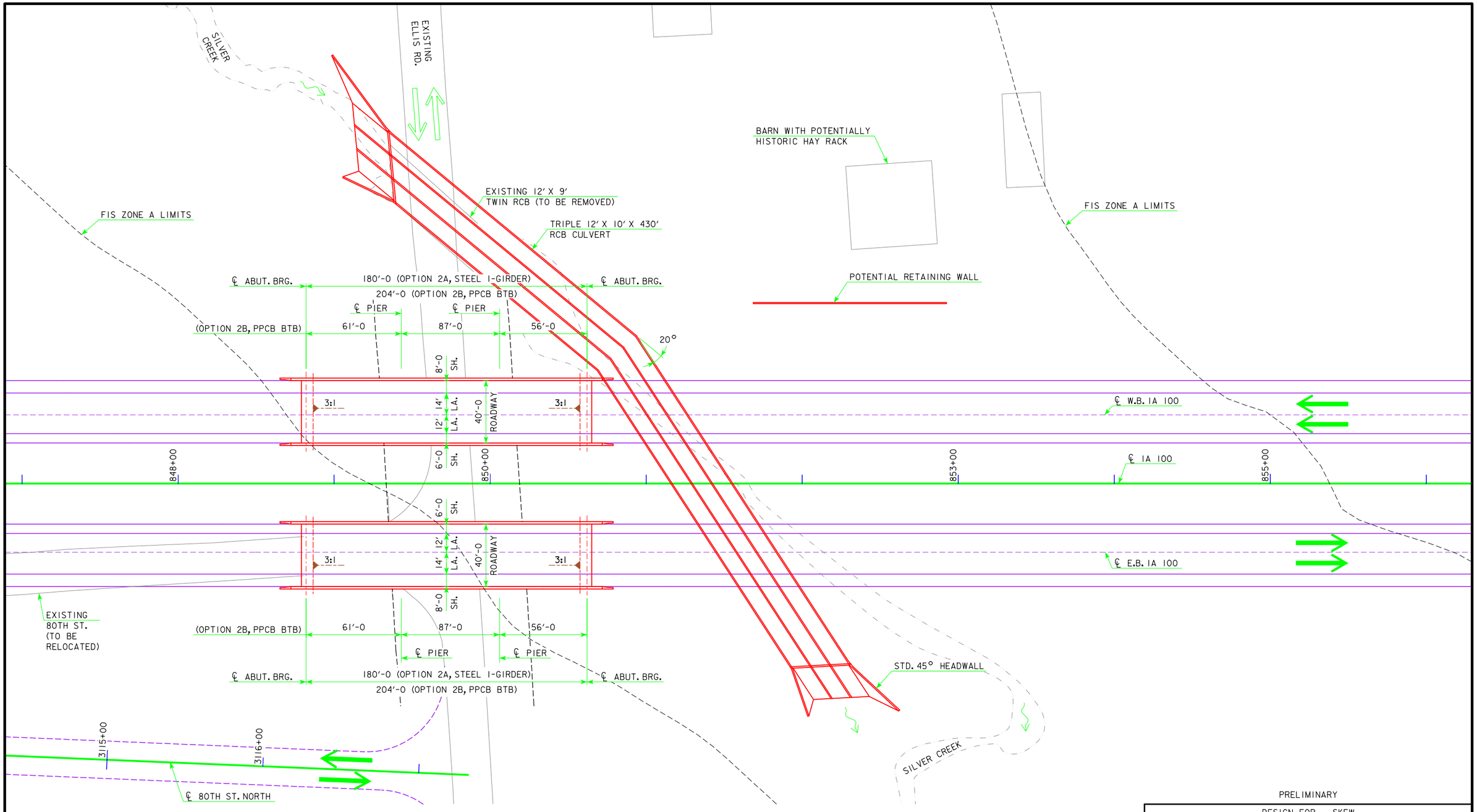

SITUATION PLAN
(OPTION 2A & 2B)

PRELIMINARY

DESIGN FOR SKEW

PPCB OR STEEL I-GIRDER DUAL BRIDGES (OPTION 2)

END SPANS BEAM TYPE INTERIOR SPAN

SITUATION PLAN

IA 100 OVER SILVER CREEK MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 2 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.13

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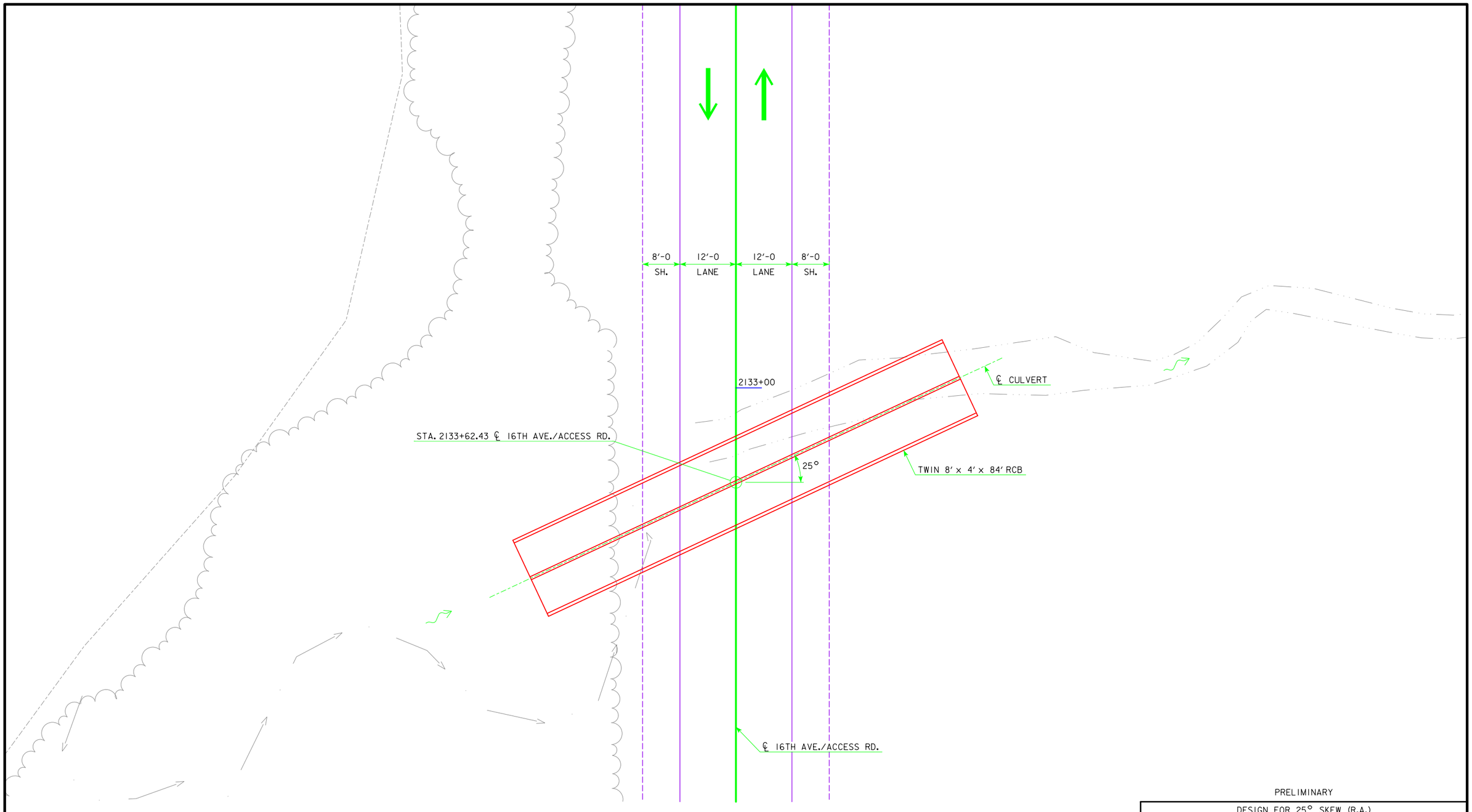

SITUATION PLAN

PRELIMINARY

DESIGN FOR 25° SKEW (R.A.)

TWIN 8′ X 4′ X 84′-0 REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN

STATION 2133+62.43 MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.14

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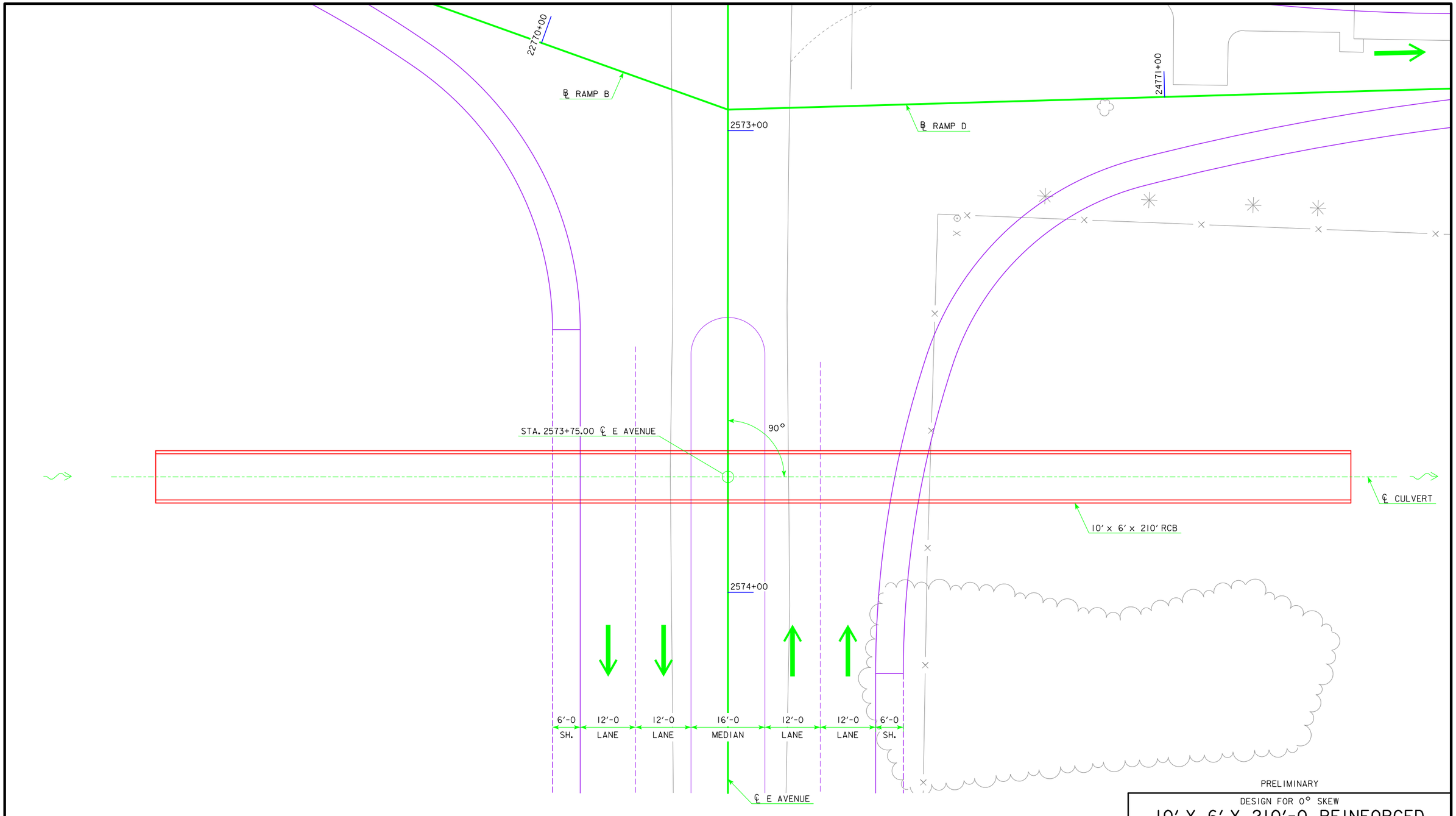

SITUATION PLAN

PRELIMINARY

DESIGN FOR 0° SKEW

10' X 6' X 210'-0 REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN

STATION 2573+75.00 MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.15

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℄ BERGER LANE

12′-0 LANE

12′-0 LANE

4067+00

TWIN 8′ x 4′ x 36′ RCB

6°23′

℄ CULVERT

STA. 4066+76.70 ℄ BERGER LANE

N

0 ENGLISH 20

SCALE IN FEET

SITUATION PLAN

PRELIMINARY

DESIGN FOR 6°23′ SKEW (L.A.)

TWIN 8′ X 4′ X 36′-0 REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN

STATION 4066+76.70 MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.16

3/3/2014 5:46:33 PM jkane c:\pw_workdir\ch2mhill_tbg\jkane\d0113226\57100036.str V16_RCB_Berger Lane 11x17_pdf.pltcfg

876+00

8′-0 SH. | 14′-0 LANE | 12′-0 LANE | 6′-0 SH. | 26′-0 | 26′-0 | 6′-0 SH. | 12′-0 LANE | 14′-0 LANE | 8′-0 SH.

℄ CULVERT

STA. 875+00.00 ℄ IA 100

875+00

15°

12′ x 4′ x 250′ RCB

℄ W.B. IA 100

℄ IA 100

℄ E.B. IA 100

N

0 ENGLISH 20
SCALE IN FEET

SITUATION PLAN

PRELIMINARY

DESIGN FOR 15° SKEW (L.A.)

12′ X 4′ X 250′-0 REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN

STATION 875+00.00 MARCH 2014

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM: CH2M HILL CMW/JLK/ACP	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.17

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CLINTON TWP.
T-83N R-8W
SEC.33

52000

52005

EX. US 30 EB

EX. US 30 WB

EX. US 30 WB TO IA 100 EB (US 30 RAMP D)

80TH ST.

80TH ST. RAMP C

POT Sta 52000+00.00

PI Sta 52006+67.67

PC Sta 52005+34.93

PT Sta 52007+01.00

Curve Data
Δ = 2° 17' 39.49" (RT)
T = 33.04
L = 66.07
R = 1,650.00
E = 0.33

PROPOSED MSE RETAINING WALL 2000

STA. 52000+00.00 (RW2000) =
STA. 14692+00.00, 25.00' LT. (US30D)
BEGIN MSE WALL CONSTRUCTION

STA. 52007+01.00 (RW2000) =
STA. 14699+00.00, 25.00' LT. (US30D)
END MSE WALL CONSTRUCTION

PROPOSED ROW

For Side Road Details
Refer to Sheets No. E.6 to E.12

For Grading Details
Refer to Sheet No. K.31

0 FEET 50

For US 30 Ramp D Details Refer to Sheets No. K.8 to K.13

For 80th Ramp C Details
Refer to Sheets No. K.4

MSE RETAINING WALL 2000

875 870 865 860 855 850 845 840

STA. 52000+00.00
BEGIN MSE WALL CONSTRUCTION
ELEV. 851.52

PROPOSED TOP OF MSE WALL

PROPOSED GROUND AT FACE OF MSE WALL

4' MINIMUM EMBEDMENT

EXISTING GROUND

STA. 52006+51.46
END MSE WALL CONSTRUCTION
ELEV. 875.59

	52000	+50	52001	+50	52002	+50	52003	+50	52004	+50	52005	+50	52006	+50	52007
PROPOSED TOP OF WALL ELEVATIONS	851.52	852.04	852.61	853.22	853.88	854.58	855.33	856.12	856.95	857.84	858.76	859.73	860.75	861.78	862.81	863.83	864.86	865.89	866.92	867.94	868.97	870.00	871.06	872.28	873.48	874.62	875.54
PROPOSED GROUND ELEVATIONS AT THE FACE OF WALL	851.52	848.44	848.30	848.20	848.10	848.25	848.40	848.55	848.70	848.85	849.00	849.15	849.30	849.45	849.60	849.75	849.90	850.05	850.20	850.35	850.50	850.70	850.90	851.05	851.20	851.35	851.50

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.18	

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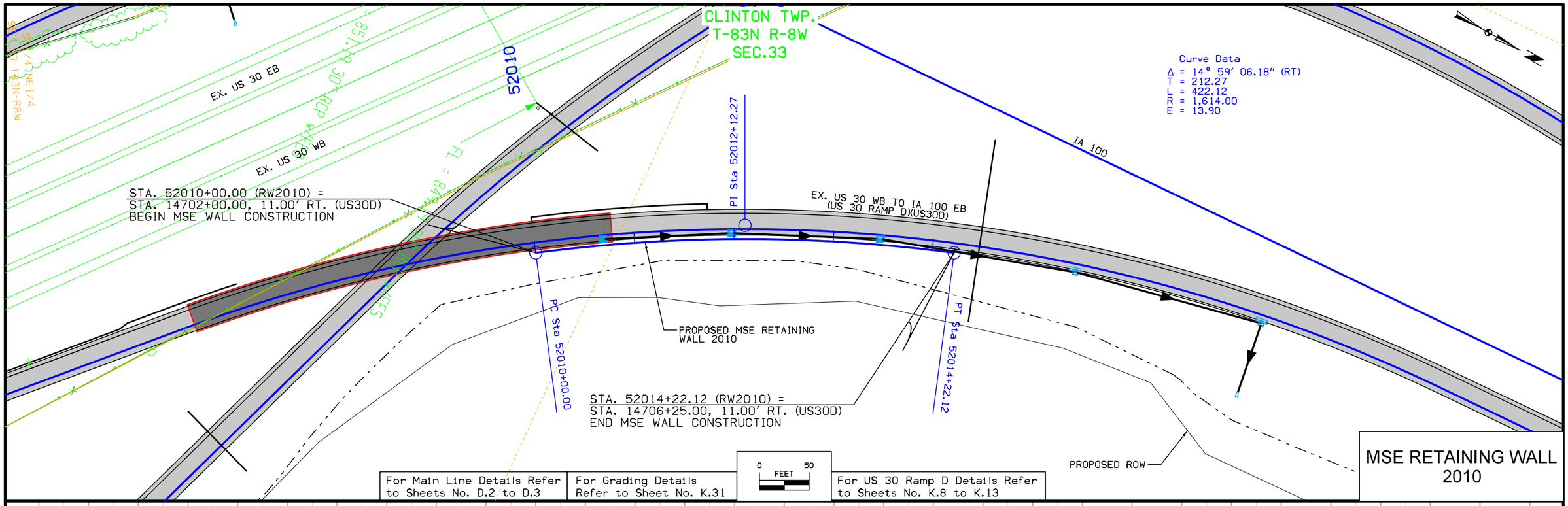


C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER V.19

7:52:54 PM 2014\03\03 jwahl c:\pw_workdir\ch2mhill_tbg\jwahl\d0156002\57100036V02.sht

For 80th Ramp C Details
Refer to Sheets No. K.4

For 80th Ramp B Details
Refer to Sheets No. K.2 to K.3

CLINTON TWP.
T-83N R-8W
SEC.33

For US 30 Ramp H Details Refer
to Sheets No. K.15 to K.20

52020

PROPOSED ROW

80TH ST. RAMP B

Curve Data
Δ = 7° 55' 59.74" (RT)
T = 110.95
L = 221.54
R = 1,600.00
E = 3.84

PI Sta 52021+10.95

IA 100 WB TO
EX. US 30 EB
(US 30 RAMP H) (US30H)

EX. ANGLE RD.

SE1/4 SW1/4 NE1/4 SEC.33-T83N-R8W

STA. 52020+00.00 (RW2020) =
STA. 18697+50.00, 25.00' RT. (US30H)
BEGIN MSE WALL CONSTRUCTION

PC Sta 52020+00.00

EX. US 30 EB

PROPOSED MSE RETAINING
WALL 2020

PT Sta 52022+21.54

STA. 52022+21.54 (RW2020) =
STA. 18699+75.00, 25.00' RT. (US30H)
END MSE WALL CONSTRUCTION

80TH ST. RAMP C

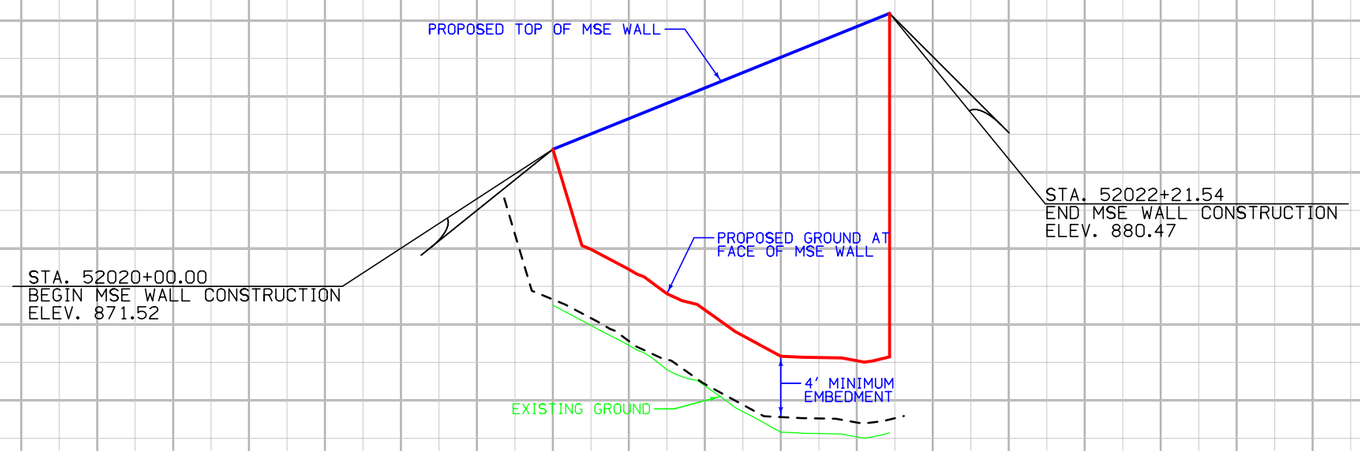
EX. US 30 WB

0 FEET 50

For Grading Details
Refer to Sheet No. K.31

For Main Line Details Refer
to Sheets No. D.2 to D.3

MSE RETAINING WALL 2020



	52020	+50	52021	+50	52022	+50
PROPOSED TOP OF WALL ELEVATIONS	871.52	872.53	873.54	874.55	875.56	876.57	877.58	878.59	879.60
PROPOSED GROUND ELEVATIONS AT THE FACE OF WALL	871.52	864.94	863.62	862.02	860.95	859.26	857.91	857.81	857.61

For 80th Ramp C Details
Refer to Sheets No. K.4

For 80th Ramp B Details
Refer to Sheets No. K.2 to K.3

CLINTON TWP.
T-83N R-8W
SEC.33

52030

For US 30 Ramp H Details Refer
to Sheets No. K.15 to K.20

PROPOSED ROW

80TH ST. RAMP B

PI Sta 52031+13.44

IA 100 WB TO
EX. US 30 EB
(US 30 RAMP H) (US30H)

PC Sta 52030+00.00

PT Sta 52032+26.52

PROPOSED MSE RETAINING
WALL 2030

STA. 52032+26.52 (RW2030) =
STA. 18699+75.00, 11.00' LT. (US30H)
END MSE WALL CONSTRUCTION

EX. ANGLE RD.

STA. 52030+00.00 (RW2030) =
STA. 18697+50.00, 11.00' LT. (US30H)
BEGIN MSE WALL CONSTRUCTION

EX. US 30 EB

EX. US 30 WB

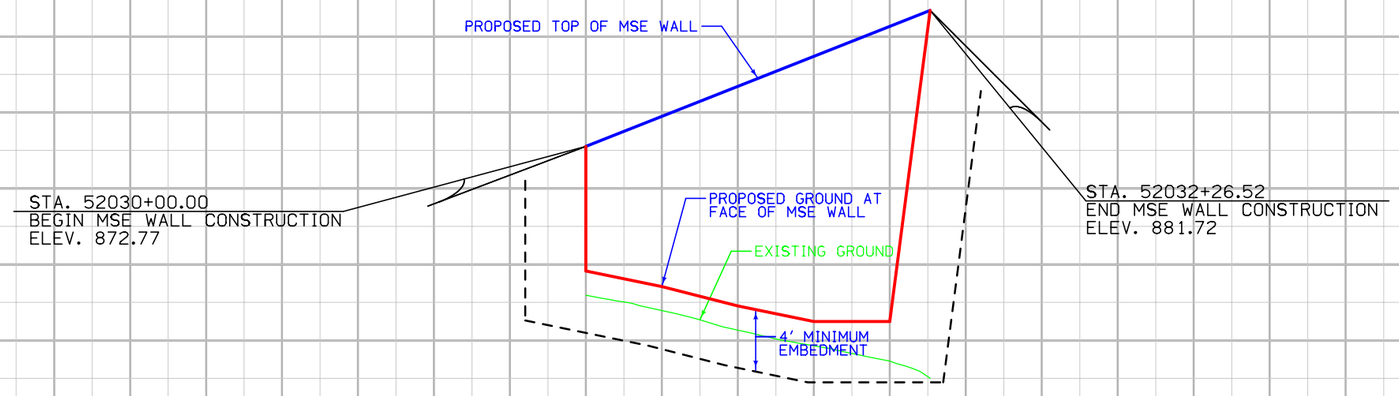
80TH ST. RAMP C

For Grading Details
Refer to Sheet No. K.31

0 FEET 50

For Main Line Details Refer
to Sheets No. D.2 to D.3

MSE RETAINING WALL
2030



	52030	+50	52031	+50	52032	+50
PROPOSED TOP OF WALL ELEVATIONS	872.77	873.76	874.75	875.73	876.72	877.71	878.70	879.68	880.67	881.66
PROPOSED GROUND ELEVATIONS AT THE FACE OF WALL	864.57	864.06	863.55	862.91	862.27	861.76	861.25	861.25	861.25	880.55

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	V.21

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For 80th Ramp C Details
Refer to Sheets No. K.4

For 80th Ramp B Details
Refer to Sheets No. K.2 to K.3

For US 30 Ramp H Details Refer
to Sheets No. K.15 to K.20

PROPOSED ROW

EX. US 30 EB

EX. US 30 WB

52040

CLINTON TWP.
T-83N R-8W
SEC.33

Curve Data
Δ = 2° 38' 39.92" (RT)
T = 37.76
L = 75.51
R = 1,636.00
E = 0.44

PI Sta 52040+37.76

PROPOSED MSE RETAINING
WALL 2040

IA 100 WB TO
EX. US 30 EB
(US 30 RAMP H) (US30H)

80TH ST. RAMP B

80TH ST. RAMP C

PC Sta 52040+00.00

PT Sta 52040+75.51

STA. 52040+75.51 (RW2040) =
STA. 18707+00.00, 11.00' LT. (US30H)
END MSE WALL CONSTRUCTION

STA. 52040+00.00 (RW2040) =
STA. 18706+25.00, 11.00' LT. (US30H)
BEGIN MSE WALL CONSTRUCTION

FL = 833.87 42" RCP W/FES

MSE RETAINING WALL
2040

For Grading Details
Refer to Sheet No. K.31

0 FEET 50

For Main Line Details Refer
to Sheets No. D.2 to D.3

PROPOSED TOP OF MSE WALL

STA. 52040+00.00
BEGIN MSE WALL CONSTRUCTION
ELEV. 886.36

STA. 52040+75.51
END MSE WALL CONSTRUCTION
ELEV. 885.03

PROPOSED GROUND AT
FACE OF MSE WALL

4' MINIMUM
EMBEDMENT

EXISTING GROUND

885 880 875 870 865 860 855 850

PROPOSED TOP OF WALL ELEVATIONS	886.36	886.03	885.70	885.37	885.04
PROPOSED GROUND ELEVATIONS AT THE FACE OF WALL	858.74	859.81	868.14	876.47	884.80

52040 +50 52041

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.22

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For US 30 Ramp A Details Refer to Sheets No. K.6 to K.7

For US 30 Ramp D Details Refer to Sheets No. K.8 to K.13

CLINTON TWP.
T-83N R-8W
SEC.33

For US 30 Ramp G Details Refer to Sheet No. K.14

For US 30 Ramp H Details Refer to Sheets No. K.15 to K.20

826.80 42" RCP

26.50 42" RCP

90 42" RCP

52050

POT Sta 52050+00.00

US 30 EB TO IA 100 EB (US 30 RAMP G)

STA. 52050+00.00 (RW2050) =
STA. 18718+25.00, 25.00' RT. (US30H)
BEGIN MSE WALL CONSTRUCTION

IA 100 WB TO US 30 WB (US30 RAMP A)

IA 100 WB TO
EX. US 30 EB
(US 30 RAMP H) (US30H)

WESTBOUND IA 100

POT Sta 52058+03.99

IA 100 (ML100)

PROPOSED MSE RETAINING
WALL 2050

℄ CONSTRUCTION

EASTBOUND IA 100

STA. 52058+03.99 (RW2050) =
STA. 726+25.00, 21.00' LT. (ML100)
END MSE WALL CONSTRUCTION

EASTBOUND IA 100

IA 100 WB TO US 30 EB (US30 RAMP D)

PROPOSED ROW

MSE RETAINING WALL
2050

For Grading Details
Refer to Sheet No. K.32

0 FEET 50

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

STA. 52050+00.00
BEGIN MSE WALL CONSTRUCTION
ELEV. 856.80

PROPOSED TOP OF MSE WALL

STA. 52058+03.99
END MSE WALL CONSTRUCTION
ELEV. 827.52

PROPOSED GROUND AT
FACE OF MSE WALL

4' MINIMUM
EMBEDMENT

EXISTING GROUND

	52050	+50	52051	+50	52052	+50	52053	+50	52054	+50	52055	+50	52056	+50	52057	+50	52058	+50
PROPOSED TOP OF WALL ELEVATIONS	856.80	855.66	854.52	853.38	852.24	851.10	849.96	848.82	847.69	846.60	845.57	844.54	843.51	842.52	841.58	840.66	839.68	838.73
	837.82	836.95	836.12	835.20	834.33	833.50	832.74	832.02	831.29	830.58	829.92	829.27	828.64	828.09	827.60			
PROPOSED GROUND ELEVATIONS AT THE FACE OF WALL	836.80	836.66	836.52	836.38	835.63	834.88	834.13	833.37	832.62	831.87	831.12	830.37	828.86	828.11	827.36	826.61	825.85	825.10
	824.35	824.18	824.01	823.83	823.66	822.90	822.14	821.38	820.62	819.86	819.10	818.34	817.58	826.19				

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.23	

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CLINTON TWP.
T-83N R-8W
SEC.33

EX. US 30 EB

EX. US 30 WB

52060

PI Sta 52060+88.33

Curve Data
Δ = 6° 10′ 13.13″ (RT)
T = 88.93
L = 177.69
R = 1,650.00
E = 2.39

STA. 52060+00.00 (RW2060) =
STA. 14702+00.00, 25.00′ LT. (US30D)
BEGIN MSE WALL CONSTRUCTION

PROPOSED MSE RETAINING WALL 2060

IA 100

EX. US 30 WB TO IA 100 EB
(US 30 RAMP D)(US30D)

PI Sta 52060+00.00

PI Sta 52061+77.69

PROPOSED ROW

STA. 52061+77.69 (RW2060) =
STA. 14703+75.00, 25.00′ LT. (US30D)
END MSE WALL CONSTRUCTION

For Main Line Details Refer to Sheets No. D.2 to D.3

For Grading Details Refer to Sheet No. K.31

0 FEET 50

For US 30 Ramp D Details Refer to Sheets No. K.8 to K.13

MSE RETAINING WALL 2060

PROPOSED TOP OF MSE WALL

STA. 52060+00.00
BEGIN MSE WALL CONSTRUCTION
ELEV. 880.65

STA. 52061+77.69
END MSE WALL CONSTRUCTION
ELEV. 878.54

PROPOSED GROUND AT FACE OF MSE WALL

4′ MINIMUM EMBEDMENT

EXISTING GROUND

875 870 865 860 855 850 845 840

	52050 +50	52051 +50	52052 +50	52053 +50	52054 +50	52055 +50	52056 +50	52057 +50	52058 +50
PROPOSED TOP OF WALL ELEVATIONS				880.65	880.58	880.43	880.21	879.92	879.56	879.12	878.60
PROPOSED GROUND ELEVATIONS AT THE FACE OF WALL				855.86	854.38	853.06	852.16	852.64	860.98	869.31	877.64

For Main Line Details Refer to Sheets No. D.10 to D.11

For Side Road Details Refer to Sheets No. E.17 to E.22

CLINTON TWP.
T-83N R-8W
SEC.21

STA. 52072+99.93 (RW2070) =
STA. 2567+32.42, 135.45' LT. (SREAVE)
BEGIN RETAINING WALL CONSTRUCTION

PROPOSED RETAINING WALL 2070

STA. 52070+00.00 (RW2070) =
STA. 2565+38.00, 59.40' RT. (SREAVE)
BEGIN RETAINING WALL CONSTRUCTION

PROPOSED ROW

E AVE. RAMP A

E AVE. RAMP C

E AVE. (SREAVE)

IA 100 WB

MU 100

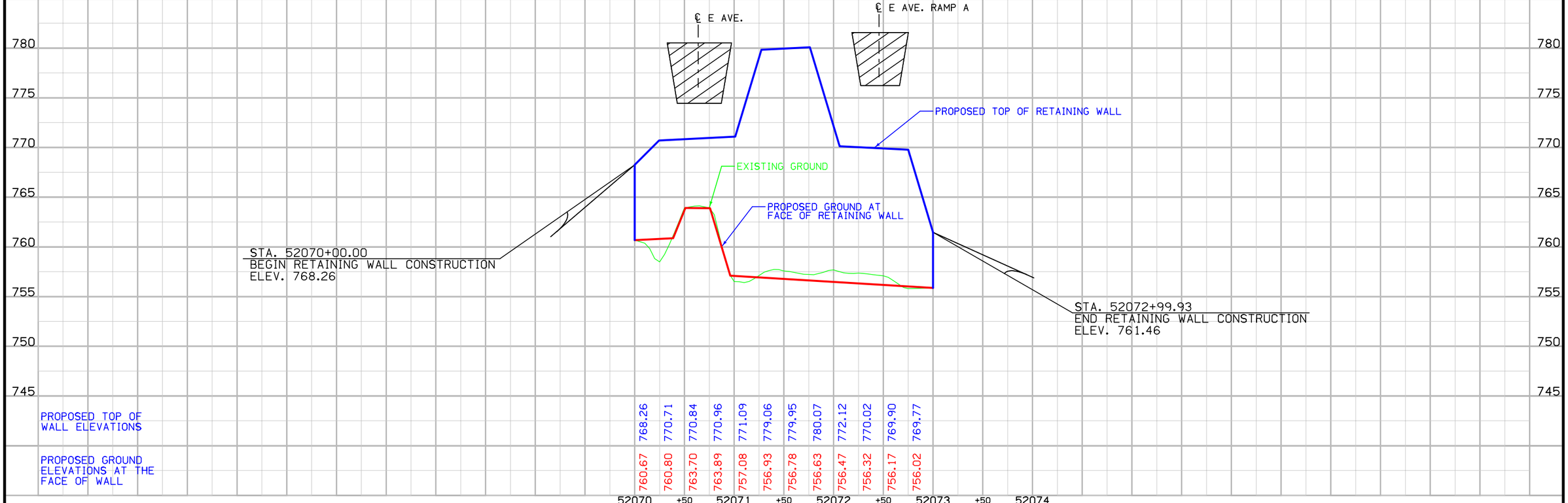
IA 100 EB

0 50 FEET

For E Ave. Ramp A Details Refer to Sheets No. K.21 to K.24

For E Ave. Ramp C Details Refer to Sheet No. K.26

RETAINING WALL 2070



	52070	+50	52071	+50	52072	+50	52073	+50	52074
PROPOSED TOP OF WALL ELEVATIONS	768.26	770.71	770.84	770.96	771.09	779.06	779.95	780.07	772.12	770.02	769.90	769.77
PROPOSED GROUND ELEVATIONS AT THE FACE OF WALL	760.67	760.80	763.70	763.89	757.08	756.93	756.78	756.63	756.47	756.32	756.17	756.02

C	ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER V.25	

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For Main Line Details Refer to Sheets No. D.10 to D.11

CLINTON TWP.
T-83N R-8W
SEC.22

For E Ave. Side Road Details Refer to Sheets No. E.17 to E.22

For 80th St. Side Road Details Refer to Sheets No. E.6 to E.12

E AVE. (SREAVE)

E AVENUE RAMP D

E AVE. RAMP B

EX. 80TH ST. SW (REMOVED)

PROPOSED RETAINING WALL 2080

PI Sta 52080+44.08

POT Sta 52081+11.77

PROPOSED ROW

STA. 52080+00.00 (RW2080) =
STA. 2577+36.97, 95.19' RT. (SREAVE)
BEGIN RETAINING WALL CONSTRUCTION

STA. 52081+11.77 (RW2080) =
STA. 2578+15.23, 89.96' RT. (SREAVE)
END RETAINING WALL CONSTRUCTION

RELOCAED 80TH ST.

RETAINING WALL
2080

For E Ave. Ramp B Details Refer to Sheets No. K.25

For E Ave. Ramp D Details Refer to Sheet No. K.27 to K.28

0 FEET 50

For Grading Details Refer to Sheet No. K.34

PROPOSED TOP OF RETAINING WALL

EXISTING GROUND

STA. 52081+11.77
END RETAINING WALL CONSTRUCTION
ELEV. 771.08

PROPOSED GROUND AT FACE OF RETAINING WALL

STA. 52080+00.00
BEGIN RETAINING WALL CONSTRUCTION
ELEV. 770.57

785 780 775 770 765 760 755 750

	52080	+50	52081	+50
PROPOSED TOP OF WALL ELEVATIONS	770.57	770.69	770.80	770.92	771.03
PROPOSED GROUND ELEVATIONS AT THE FACE OF WALL	770.57	764.77	764.90	765.02	767.11

LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

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

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TS — Topsoil (Class 10)
- TS A — Topsoil (Type A Disposal)
- TS B — Topsoil (Type B Disposal)
- TS C — Topsoil (Type C Disposal)
- CL 10 — Class 10 Materials
- SEL LO — Select Loams And Clay-Loams
- SEL SA — Select Sand
- UNS A — Unsuitable Type A Disposal
- UNS B — Unsuitable Type B Disposal
- UNS C — Unsuitable Type C Disposal
- SHALE — Shale
- WASTE — Waste
- B&W LS — Broken and Weathered Rock
- ROCK — Solid Rock
- BLDRS — Boulders

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

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

SYMBOL LEGEND OF CROSS SECTION SHEETS

Existing ROW — Existing Right-of-Way Limit

Proposed ROW — Proposed Right-of-Way Limit

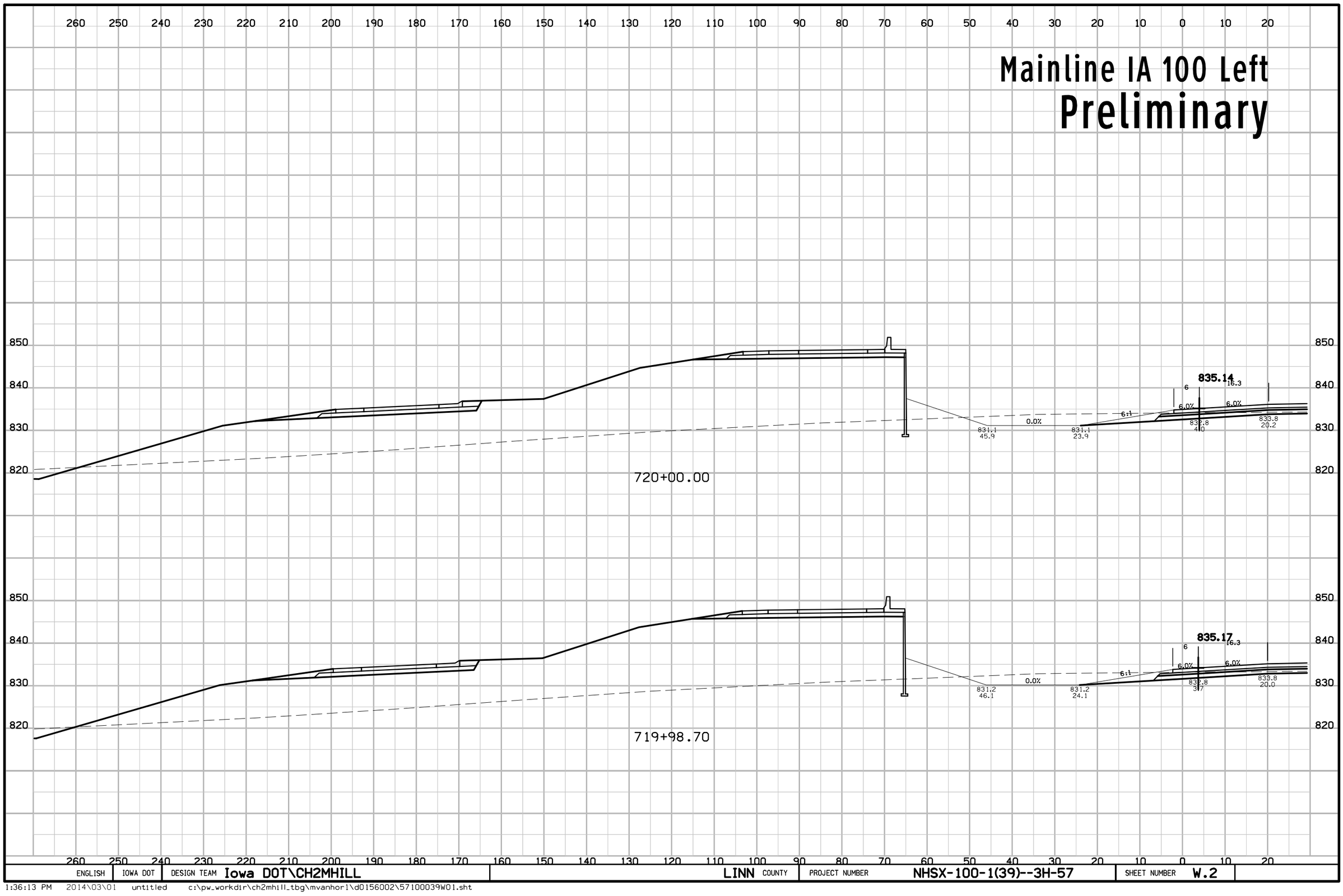
Temporary ROW — Temporary Right-of-Way Limit

CROSS SECTION LEGEND AND SYMBOL INFORMATION SHEET

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

Mainline IA 100 Left

Preliminary



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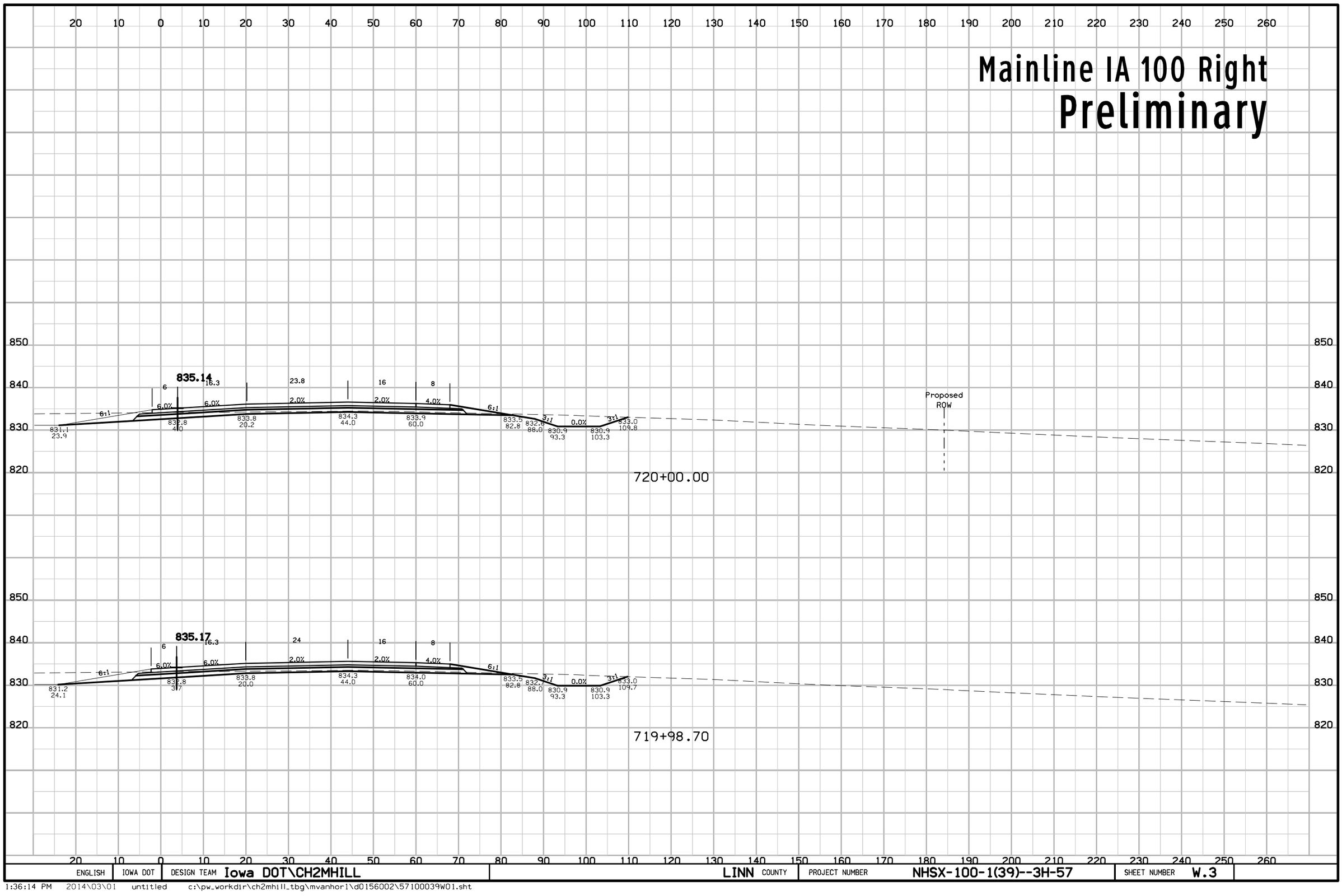
Preliminary



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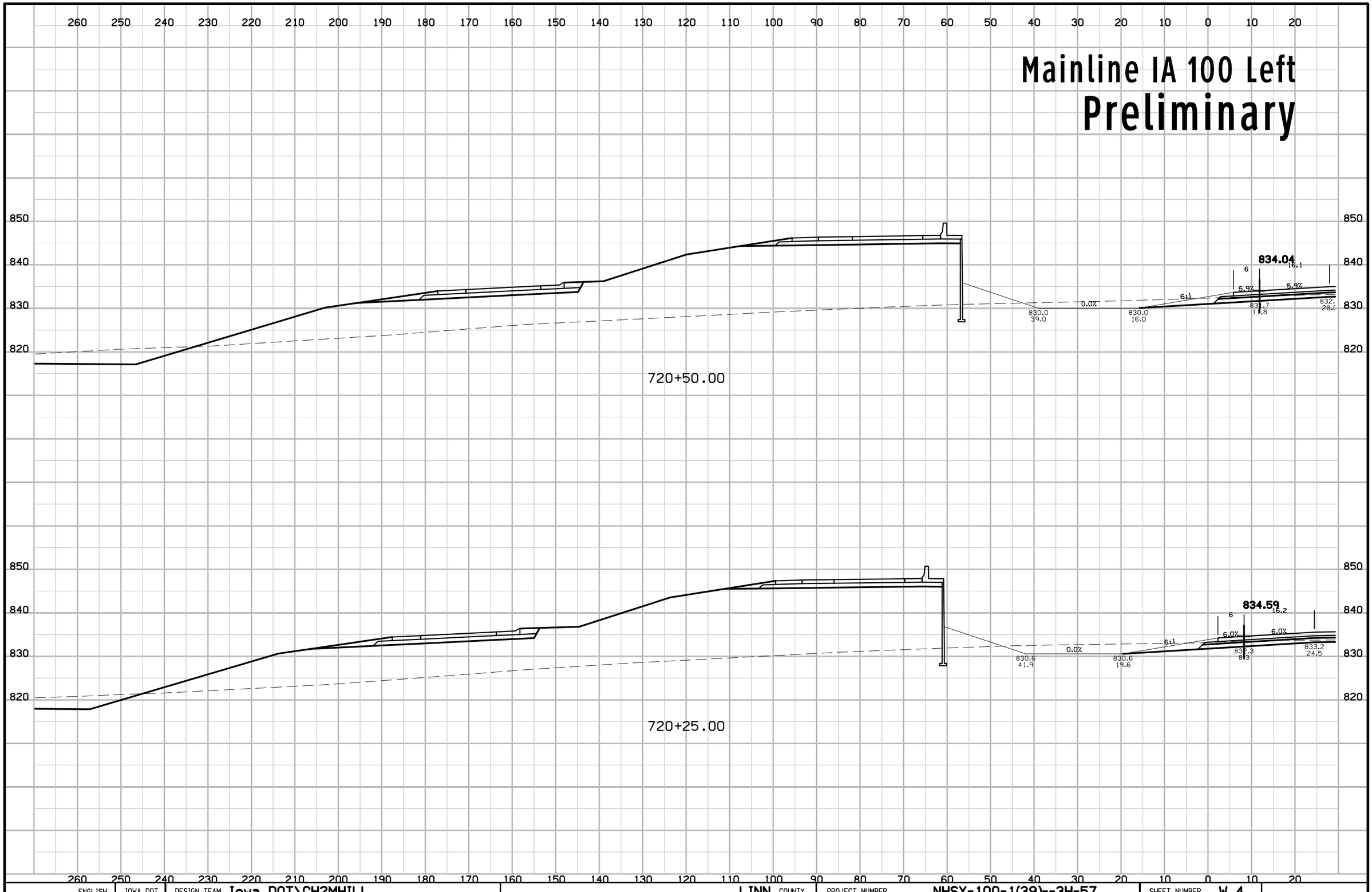
Preliminary



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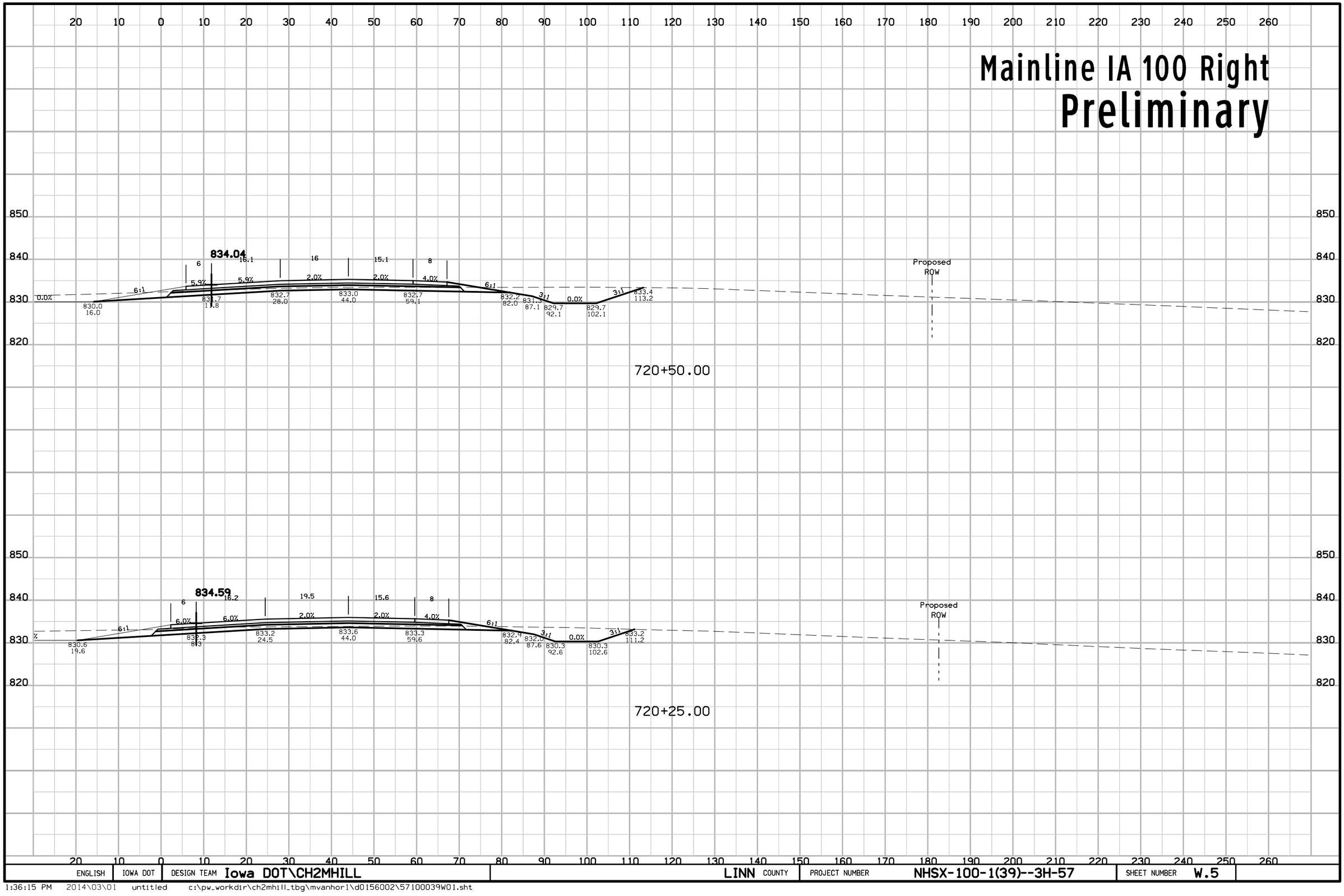
Preliminary



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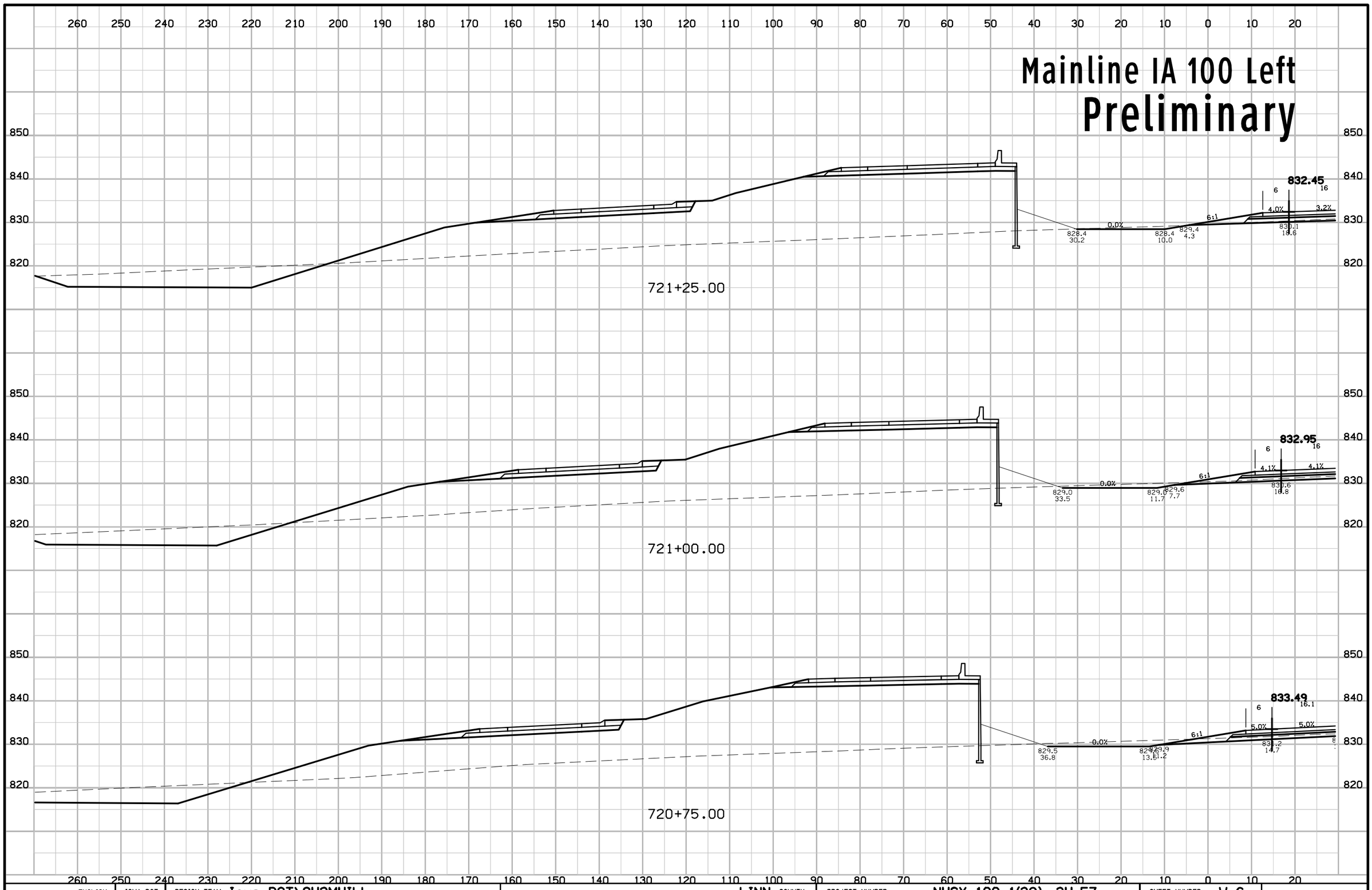
Mainline IA 100 Left

Preliminary



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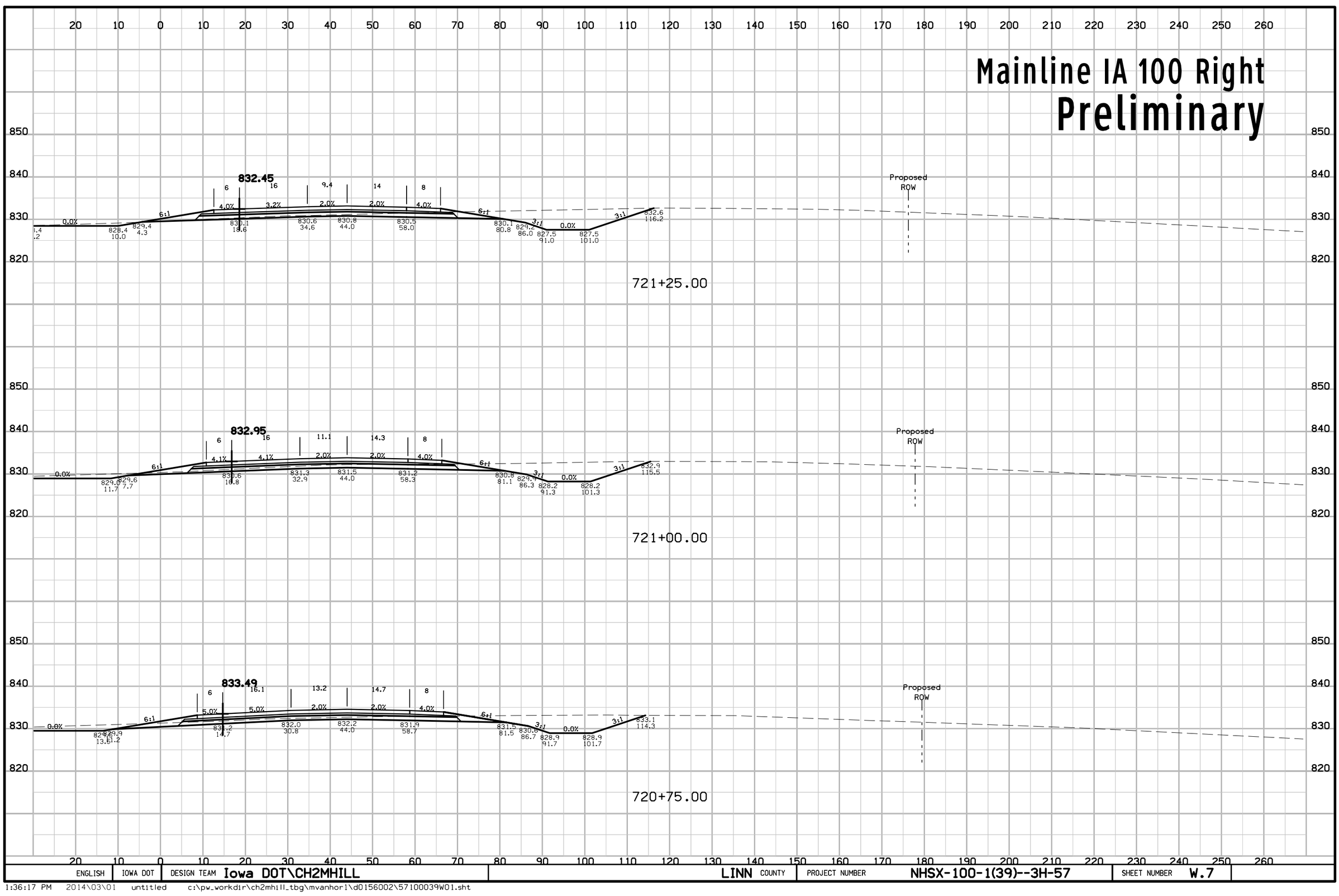
Mainline IA 100 Right

Preliminary



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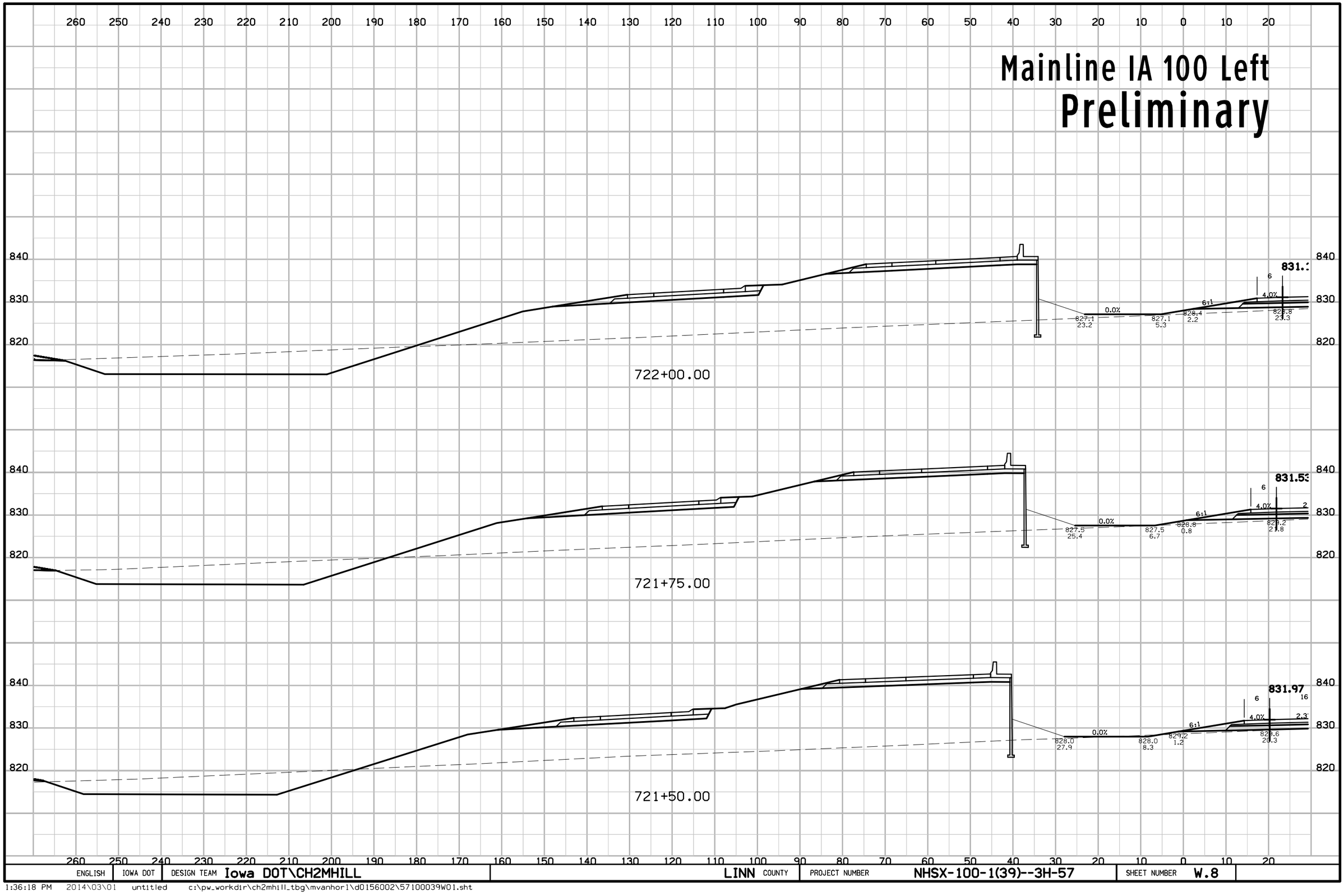
Mainline IA 100 Left

Preliminary



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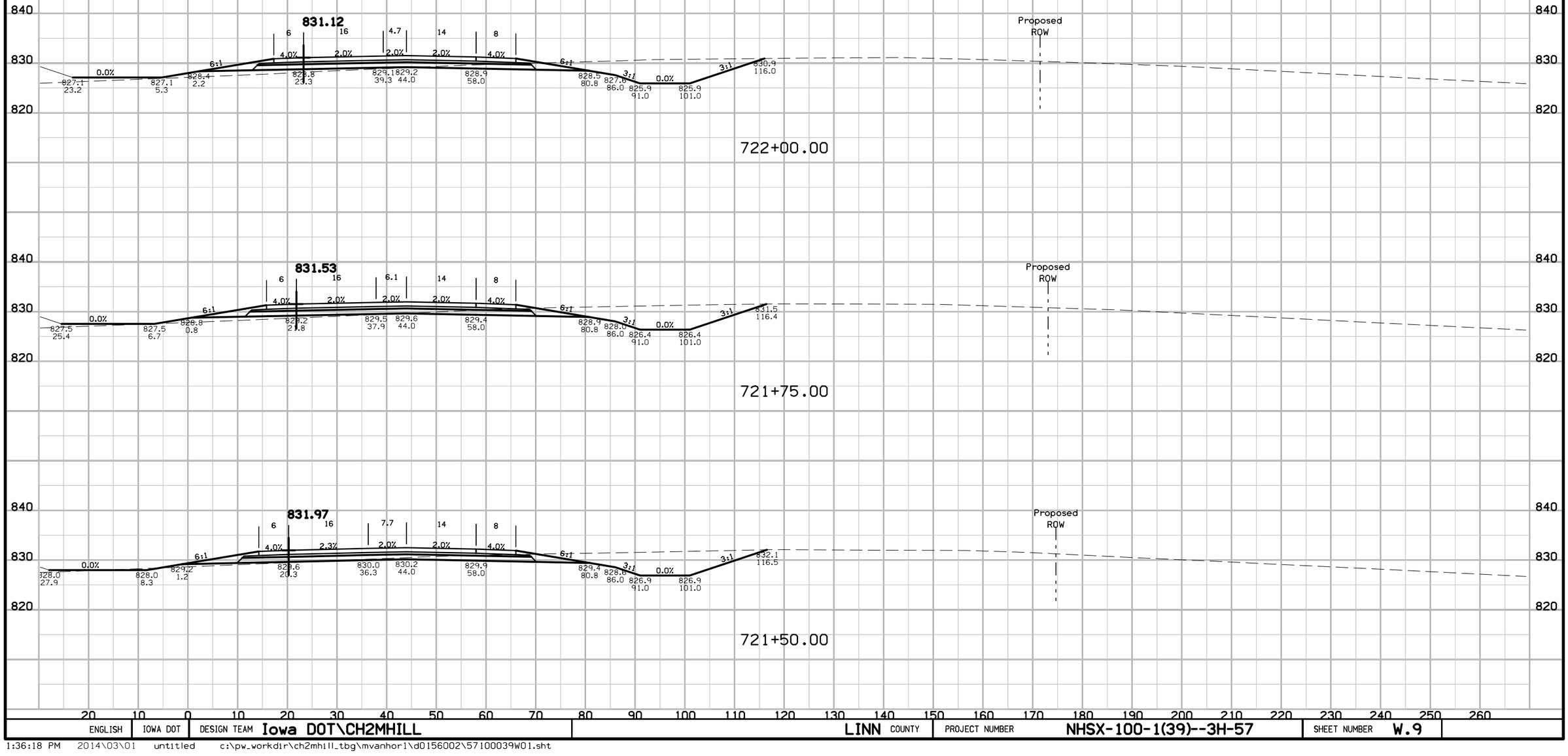
Mainline IA 100 Right
Preliminary



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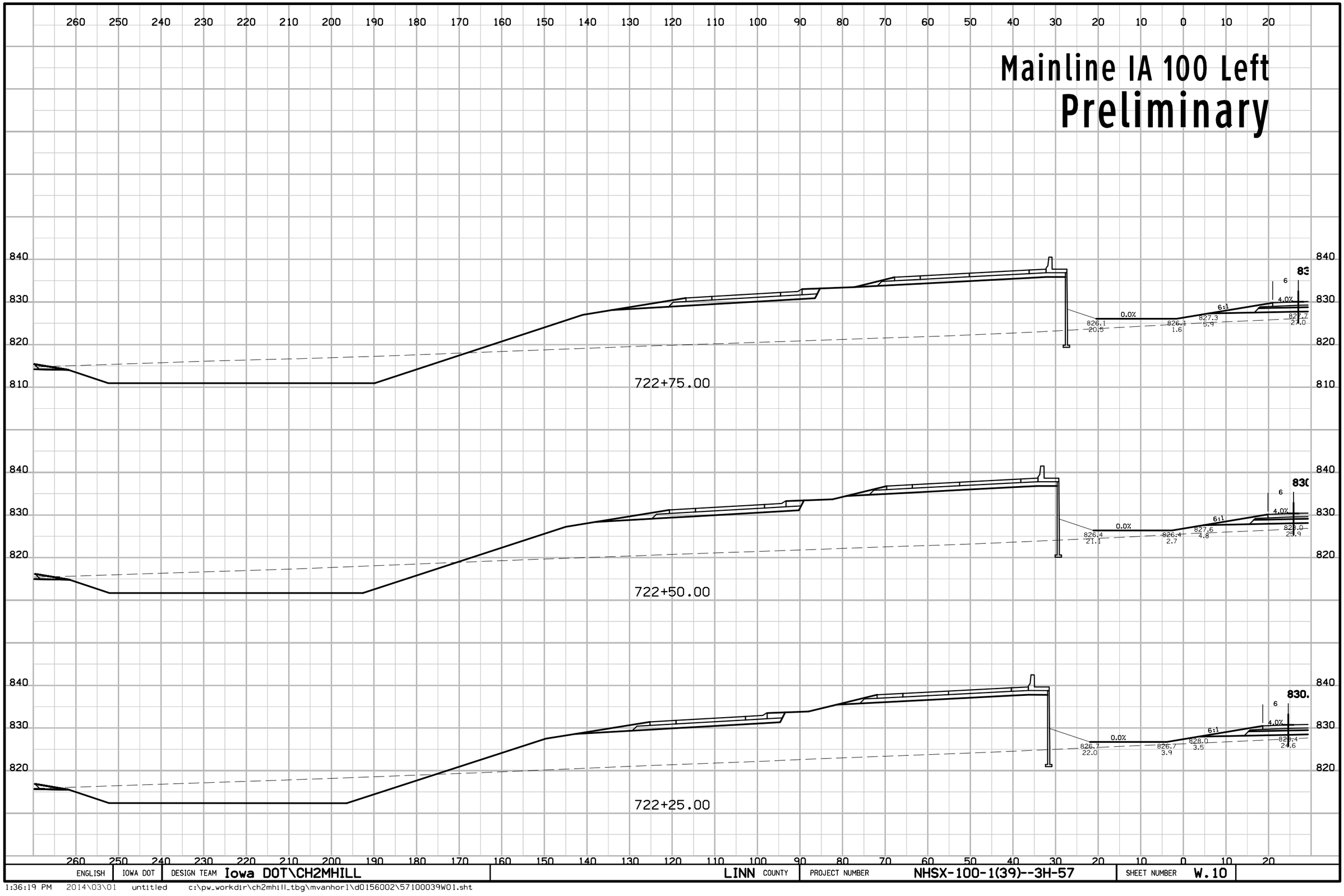
Preliminary



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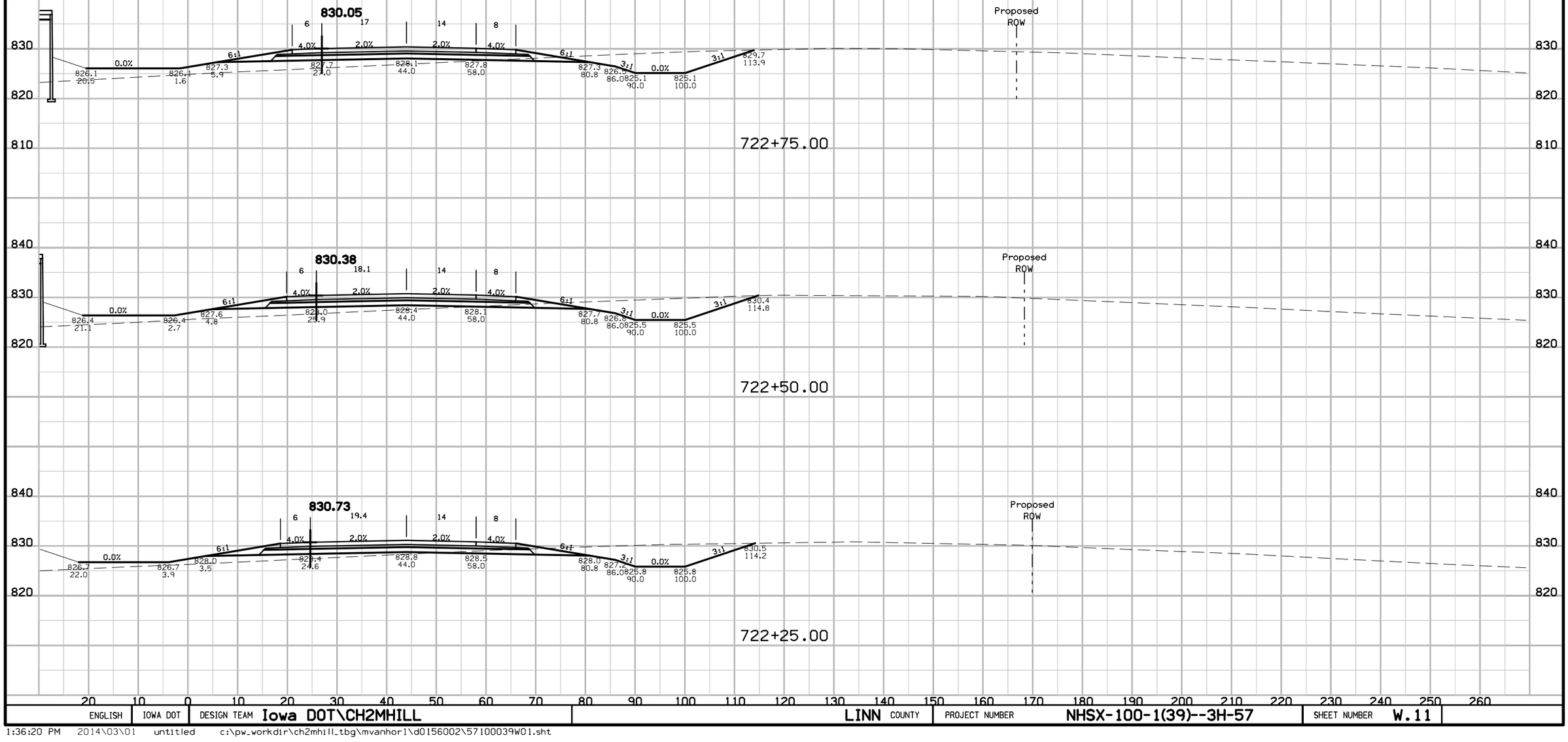
Mainline IA 100 Right

Preliminary



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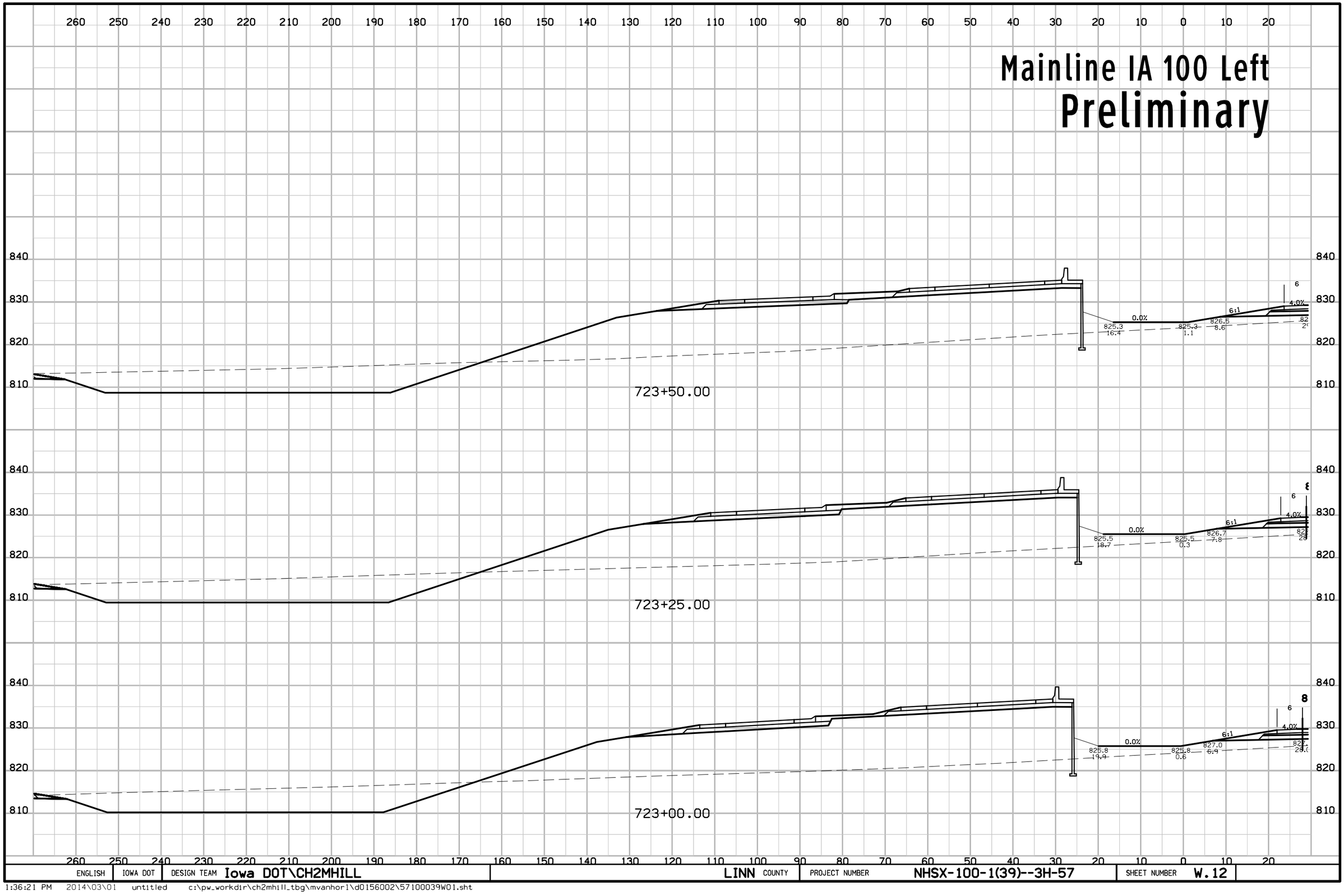
Mainline IA 100 Left

Preliminary



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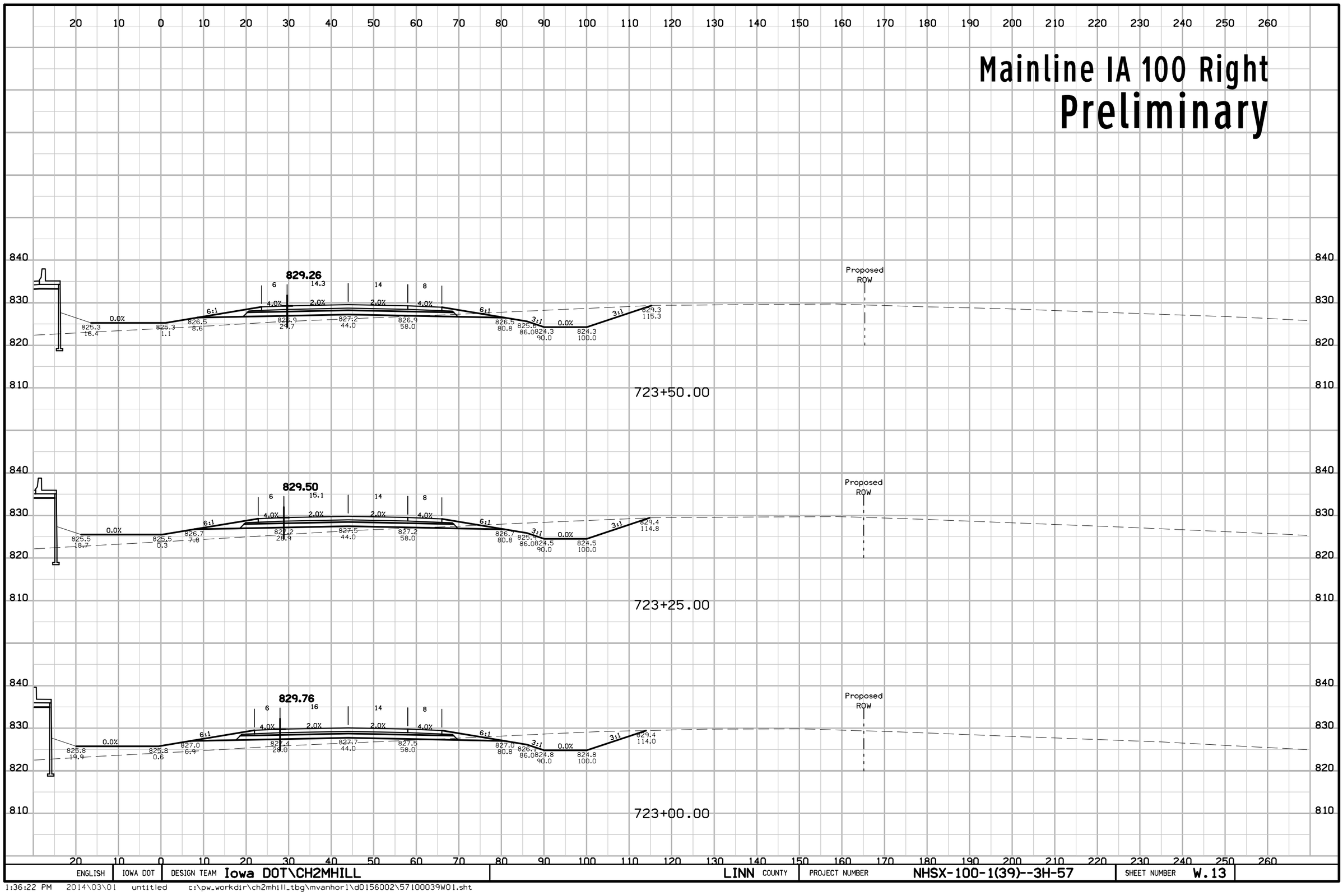
Mainline IA 100 Right

Preliminary



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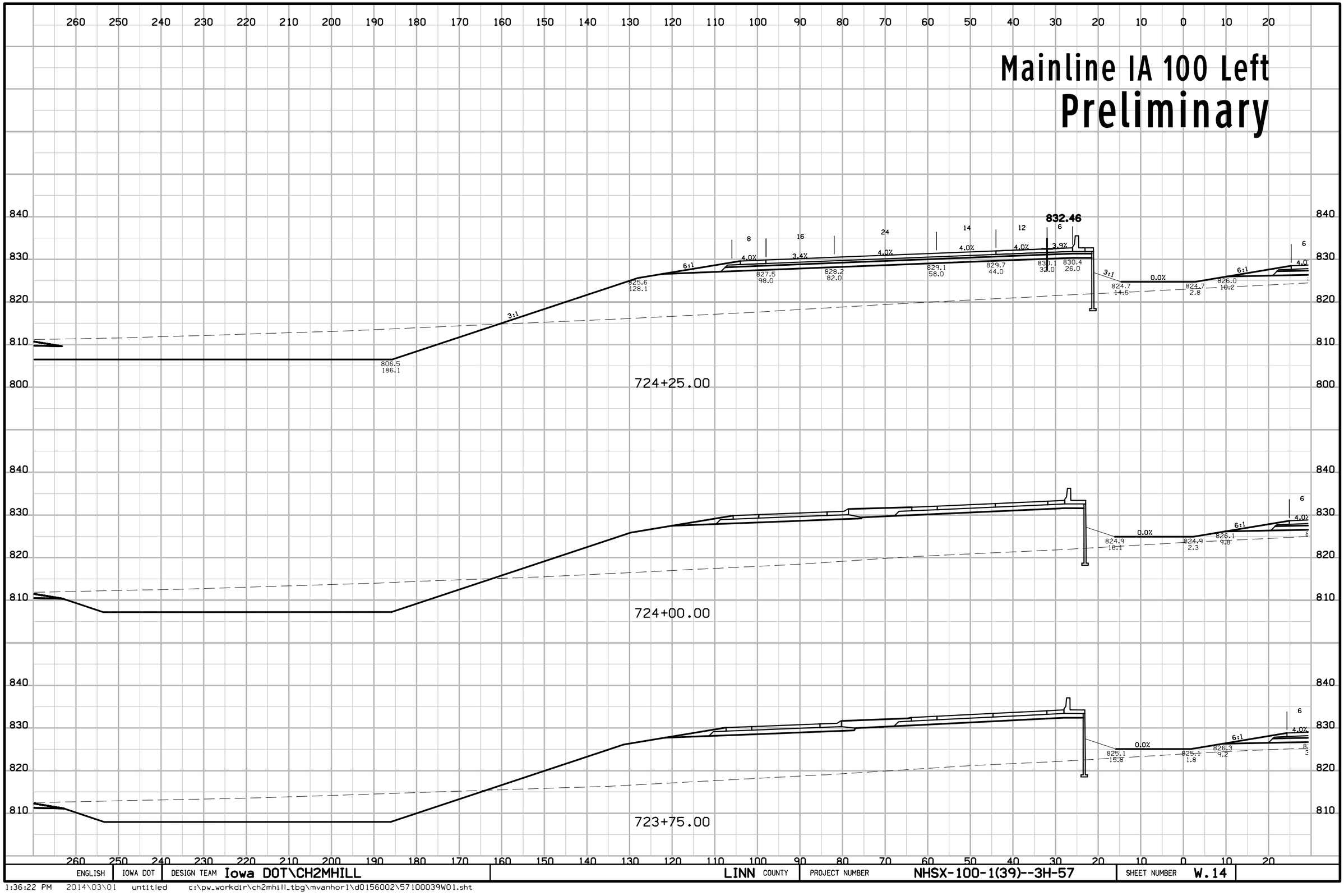
Preliminary



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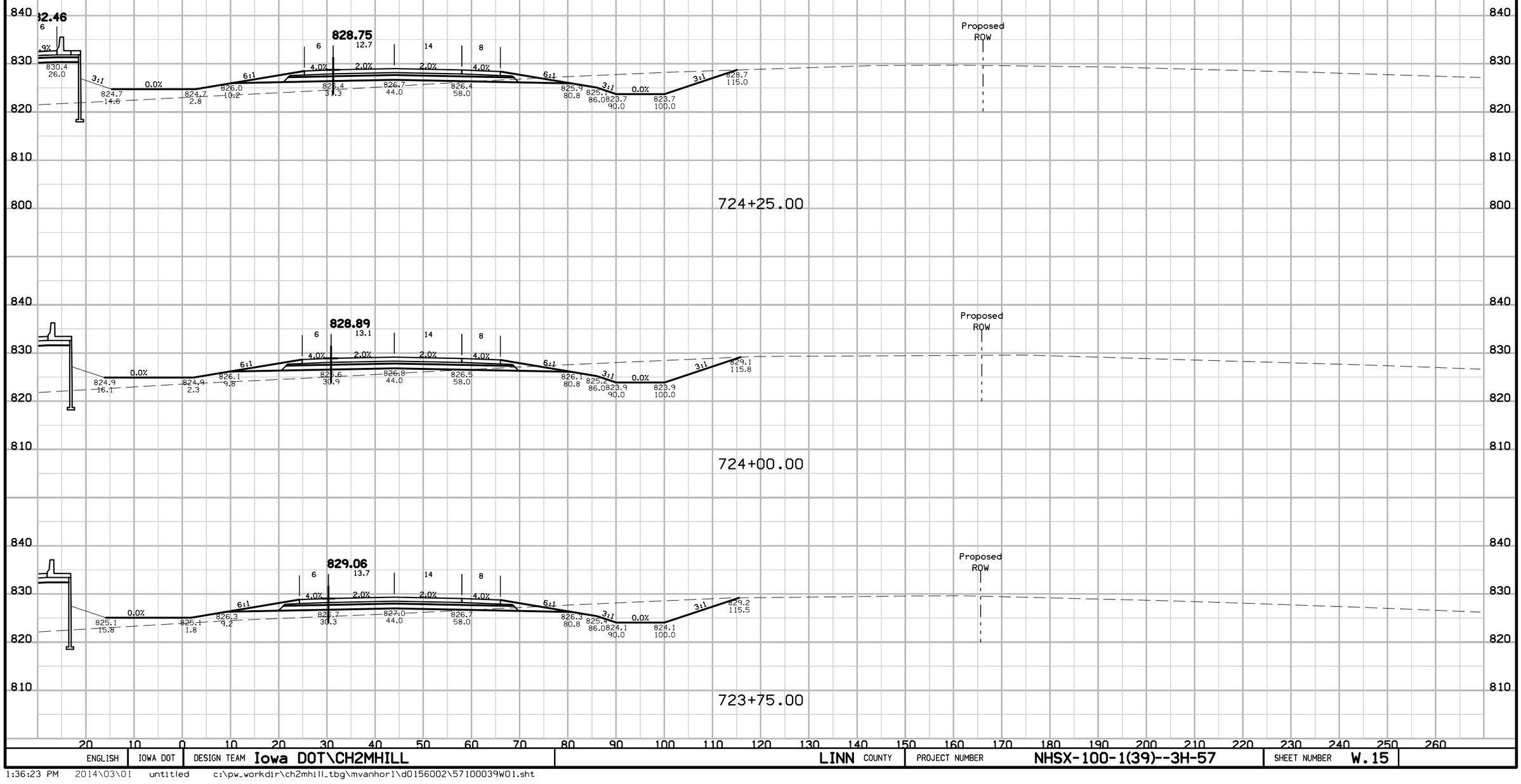

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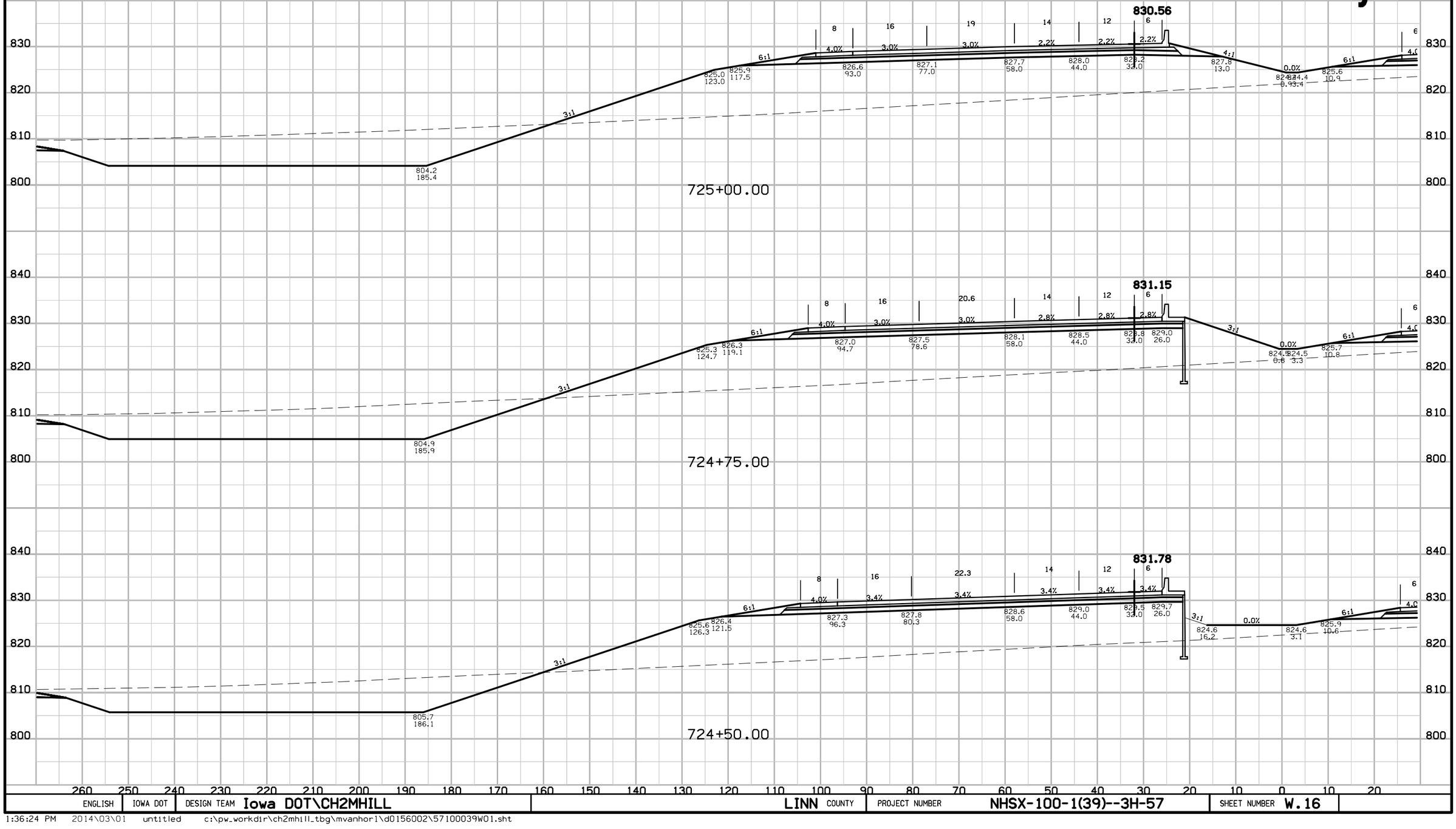

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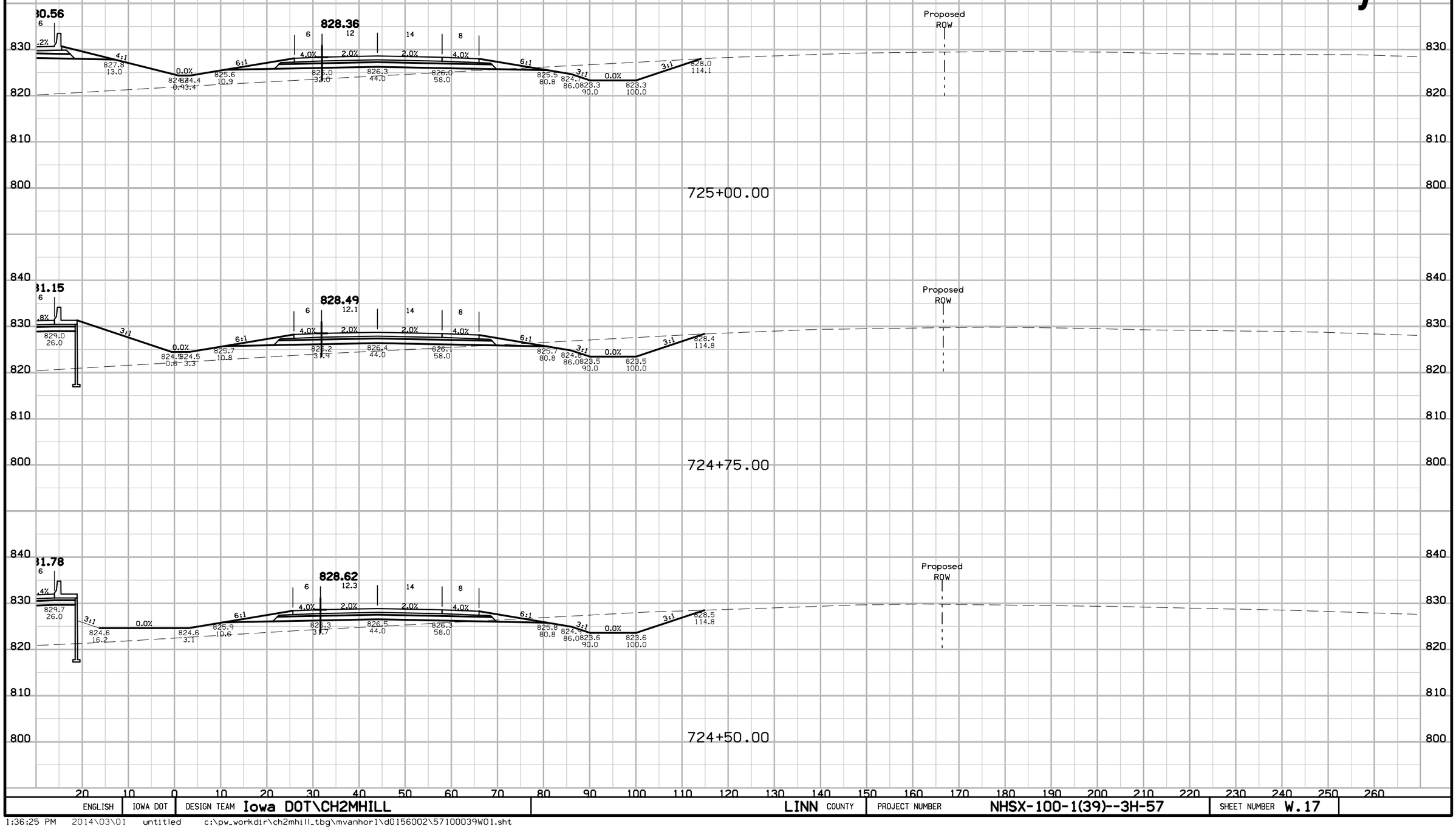

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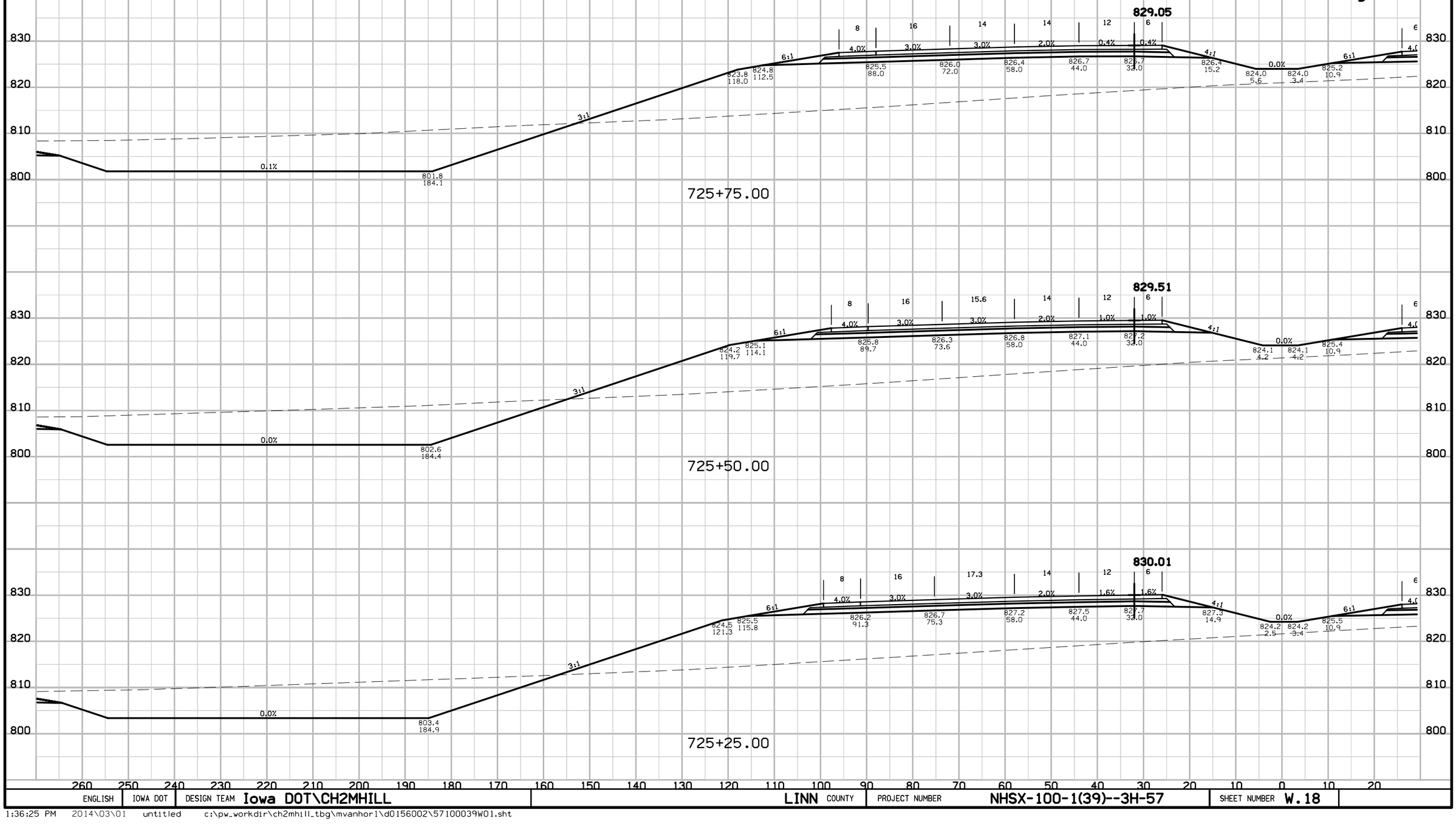

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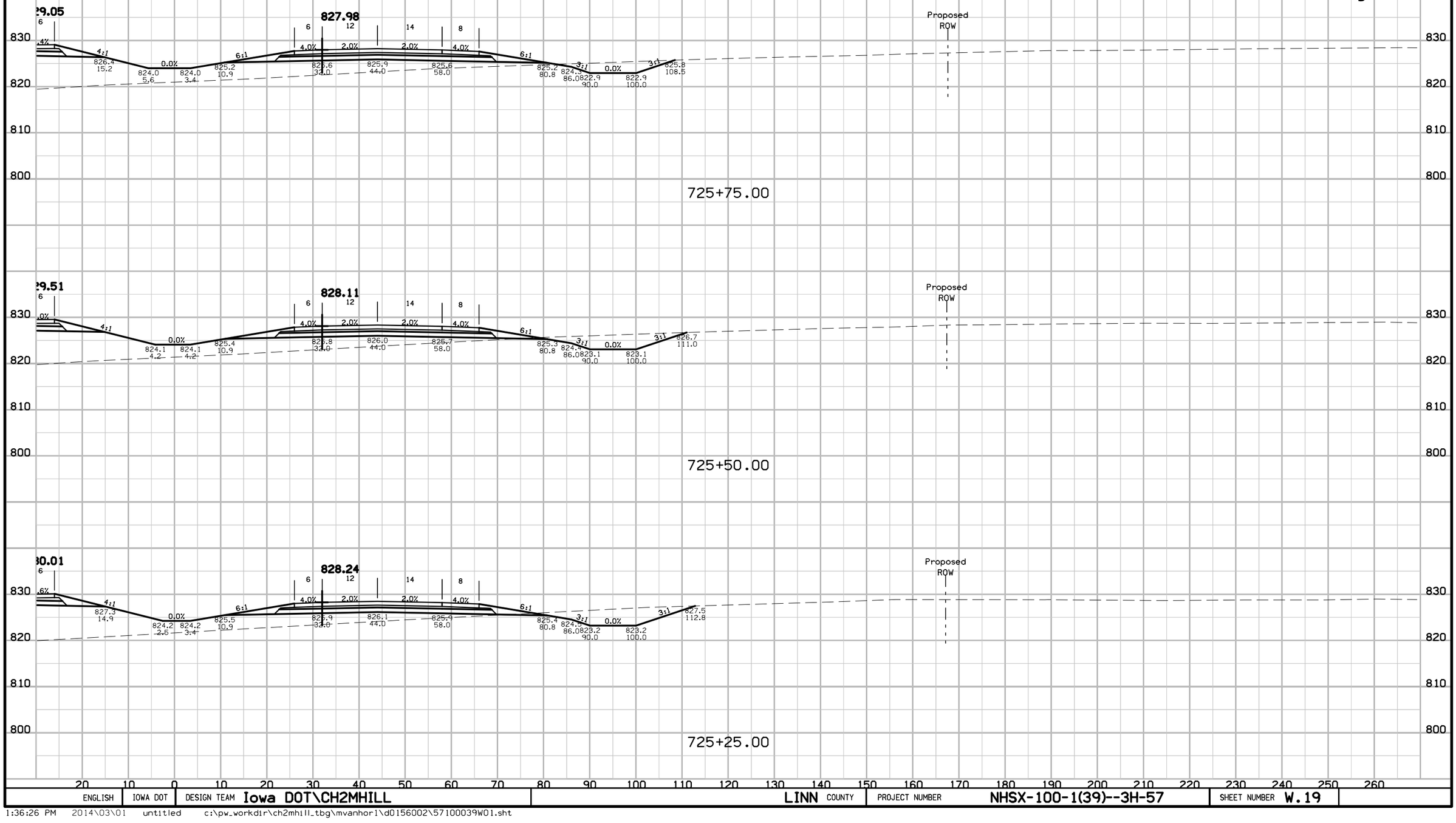

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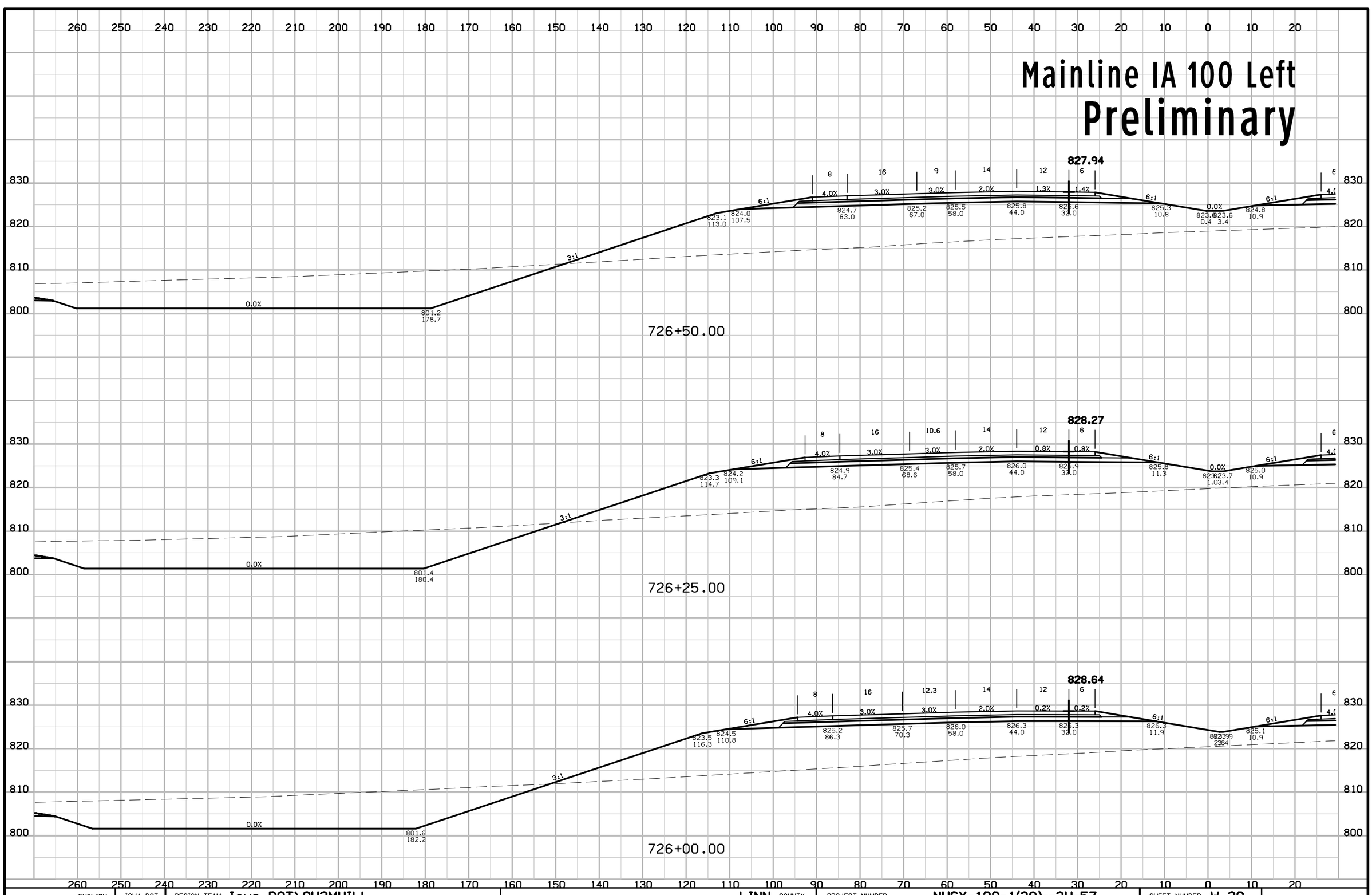

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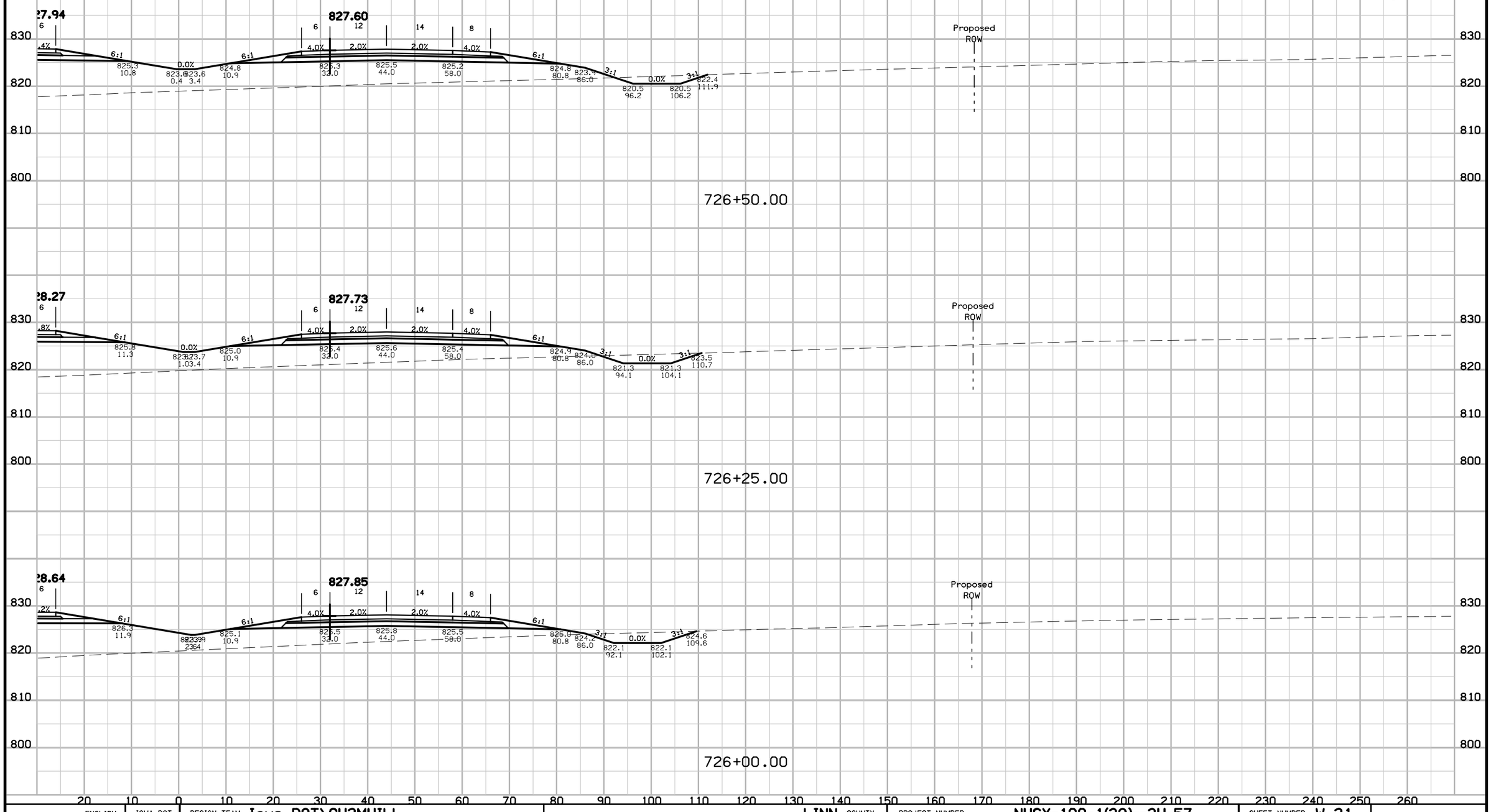

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.21

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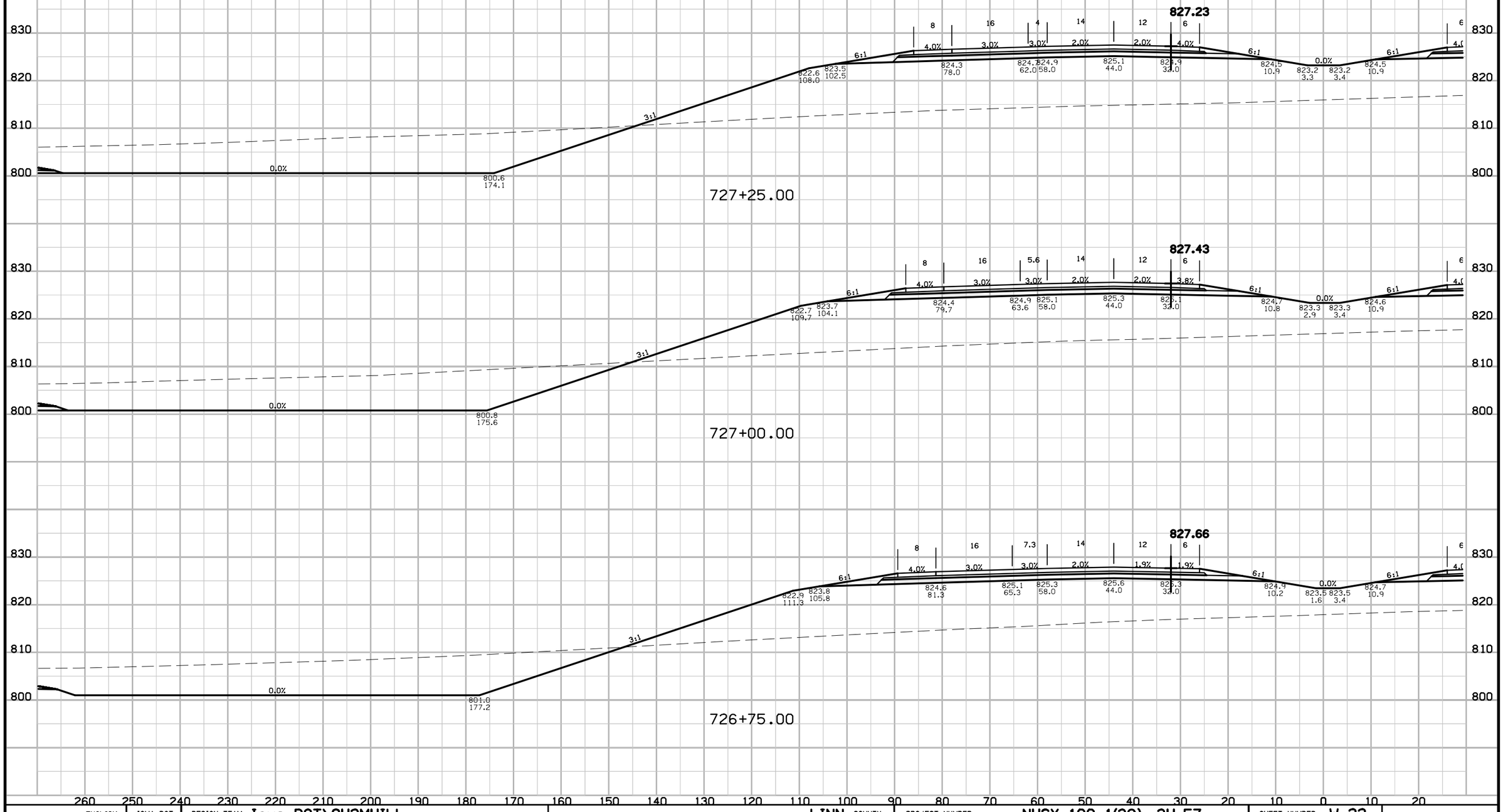
Preliminary



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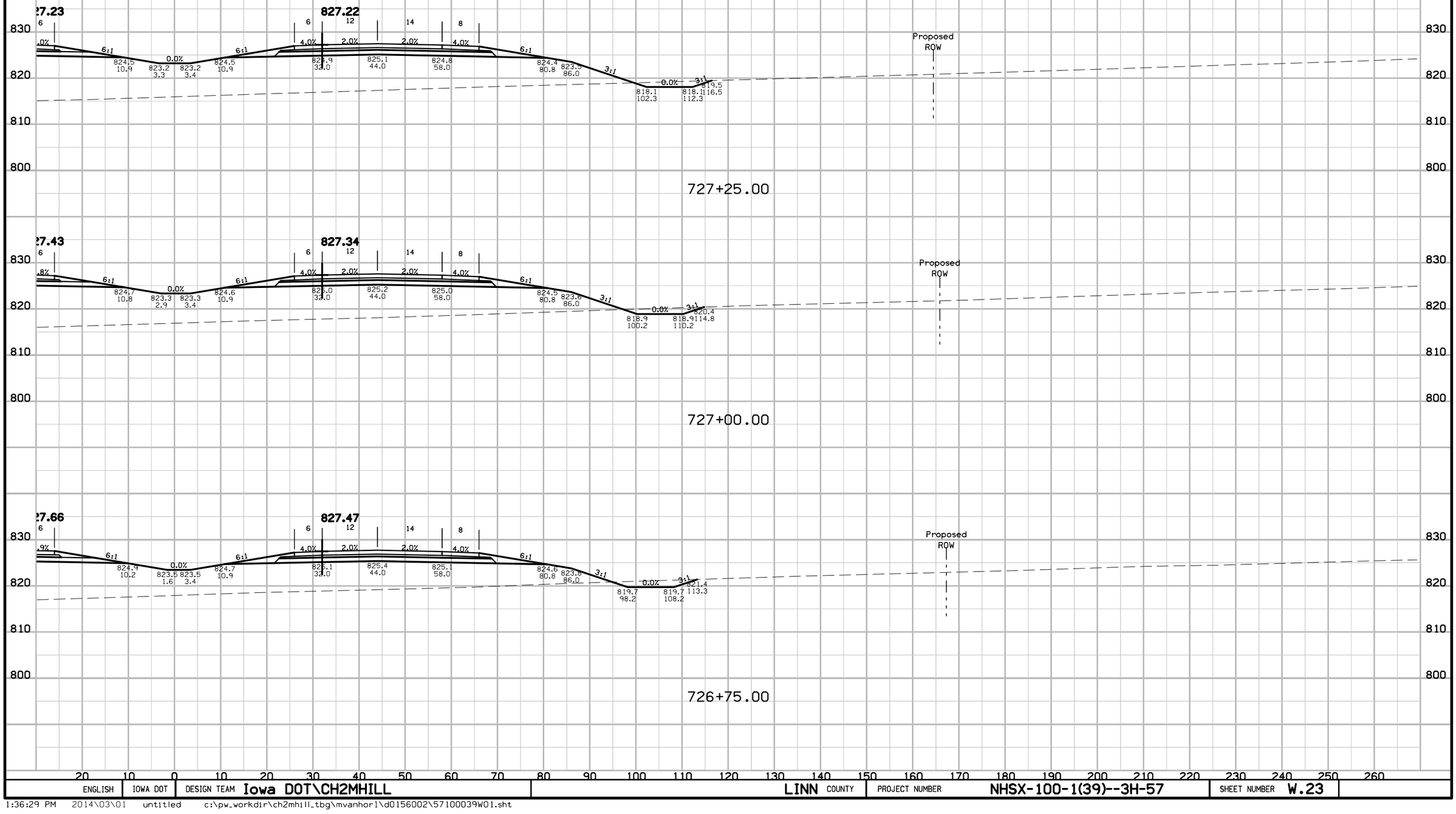

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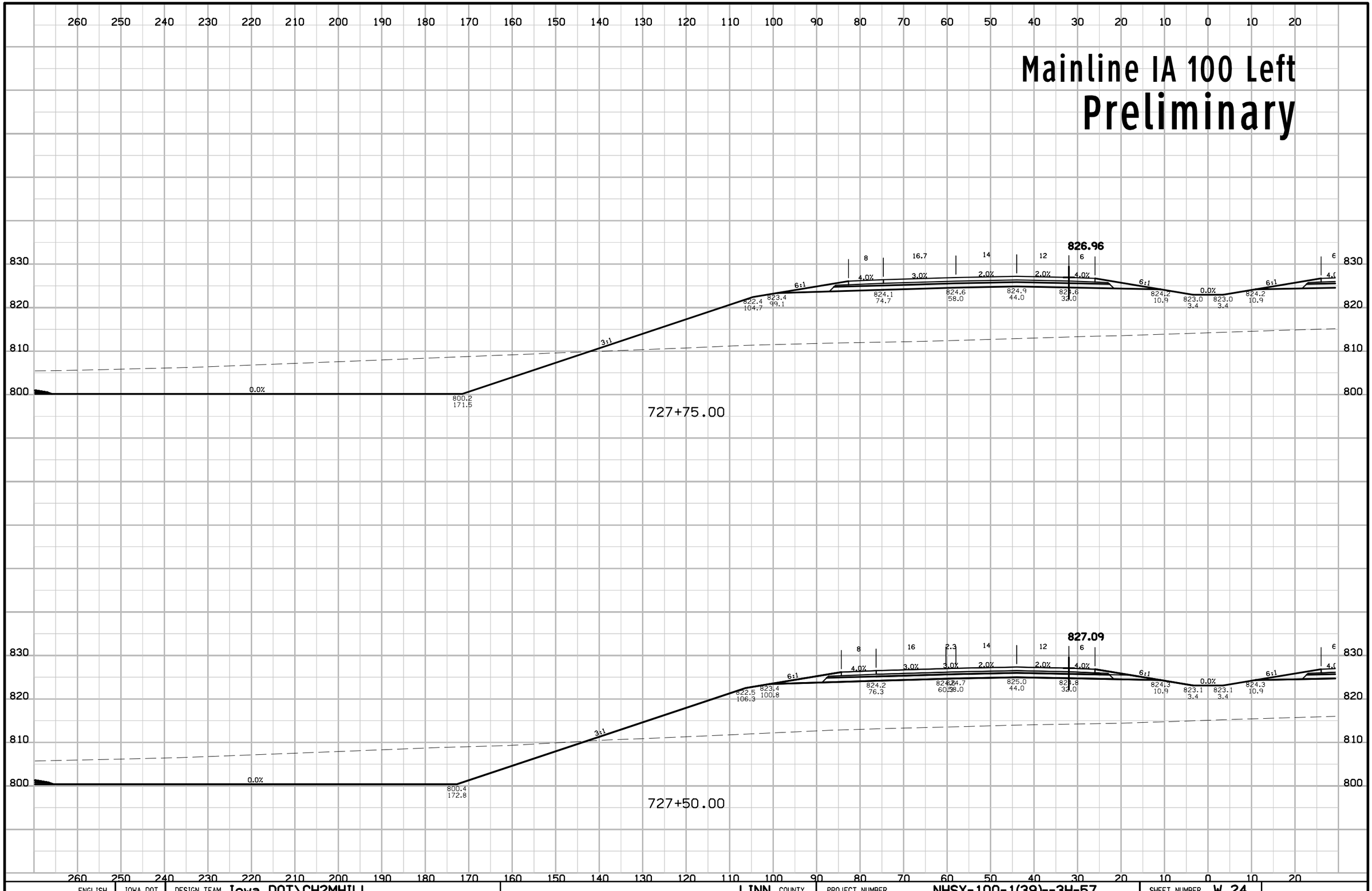
Preliminary



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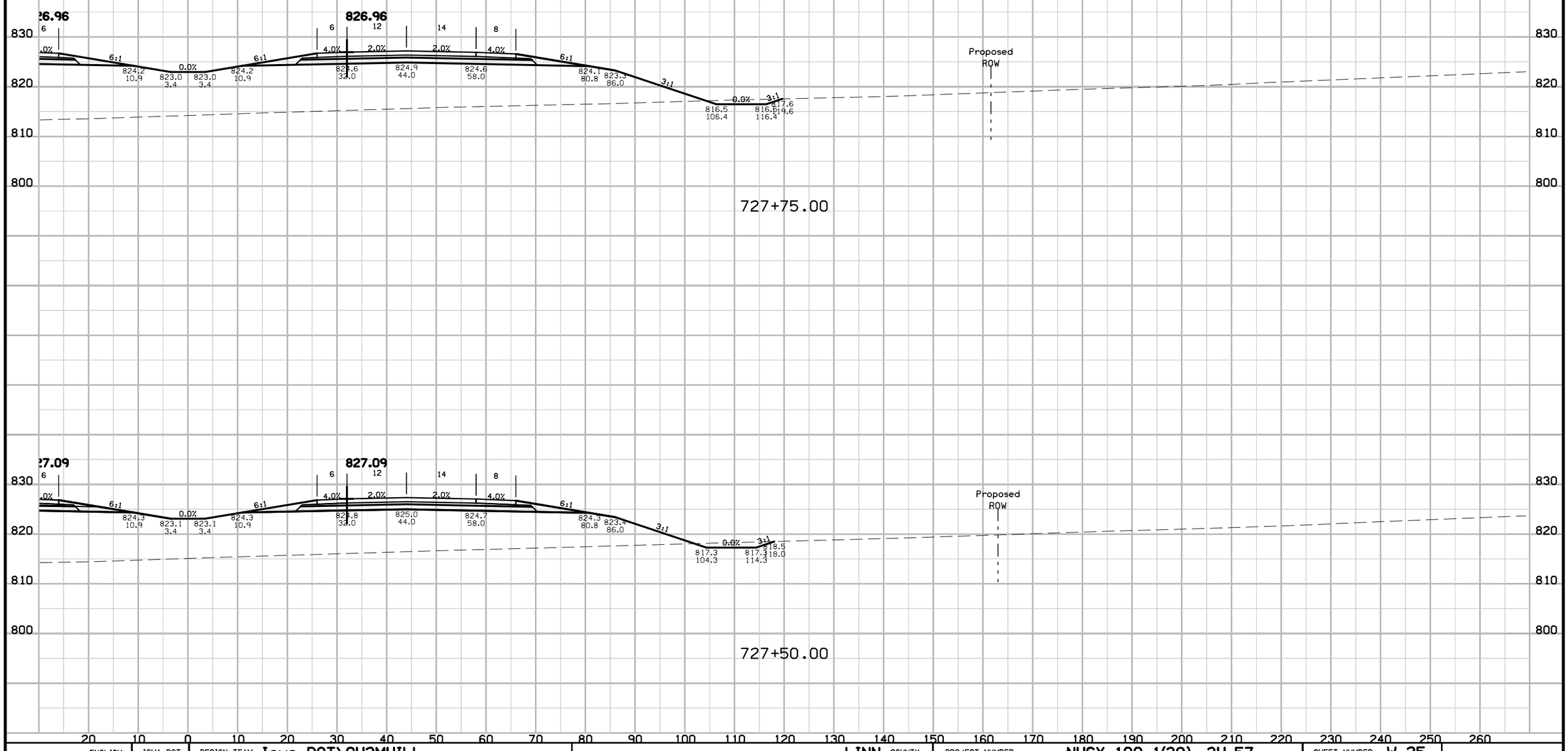

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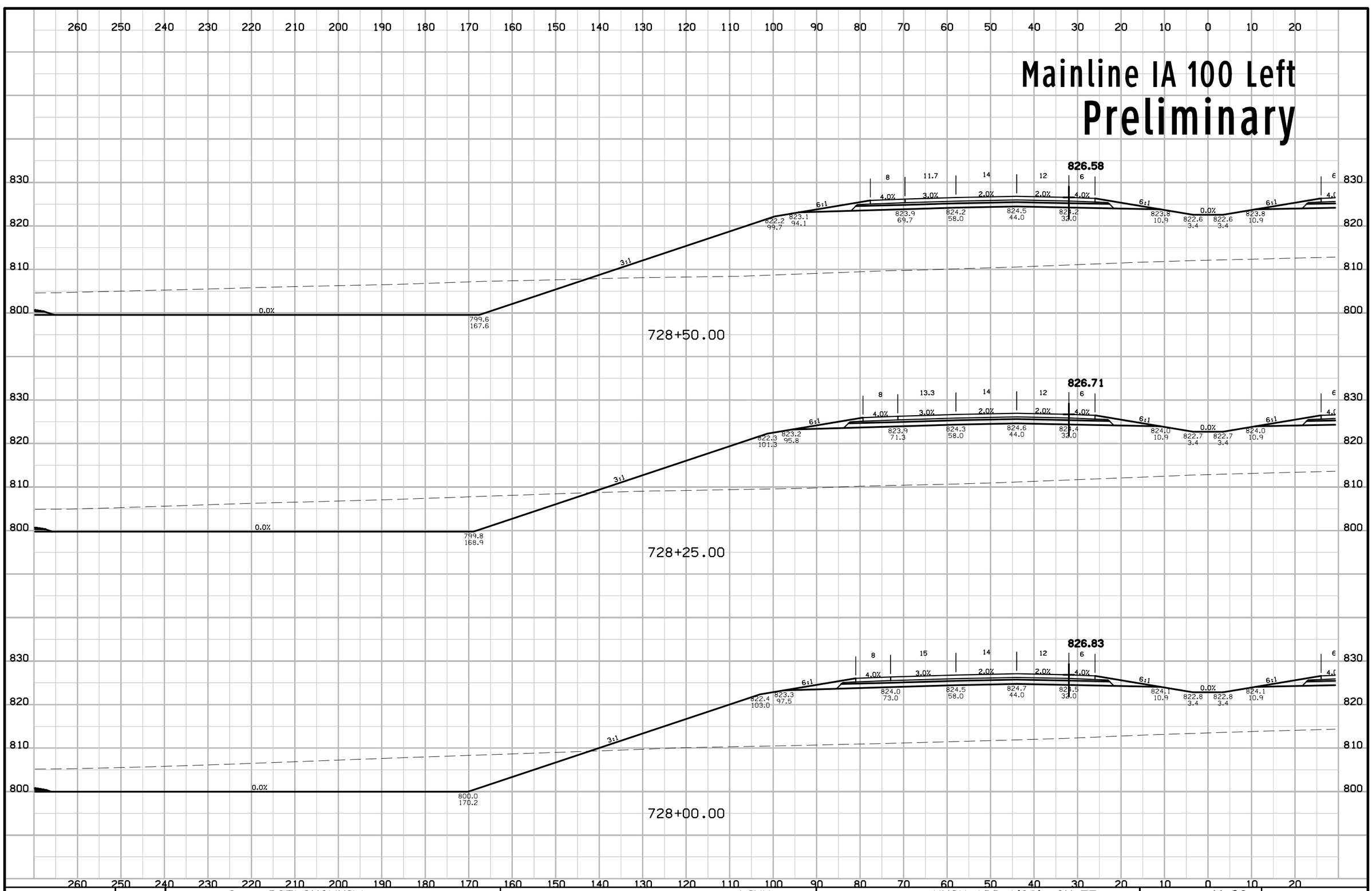

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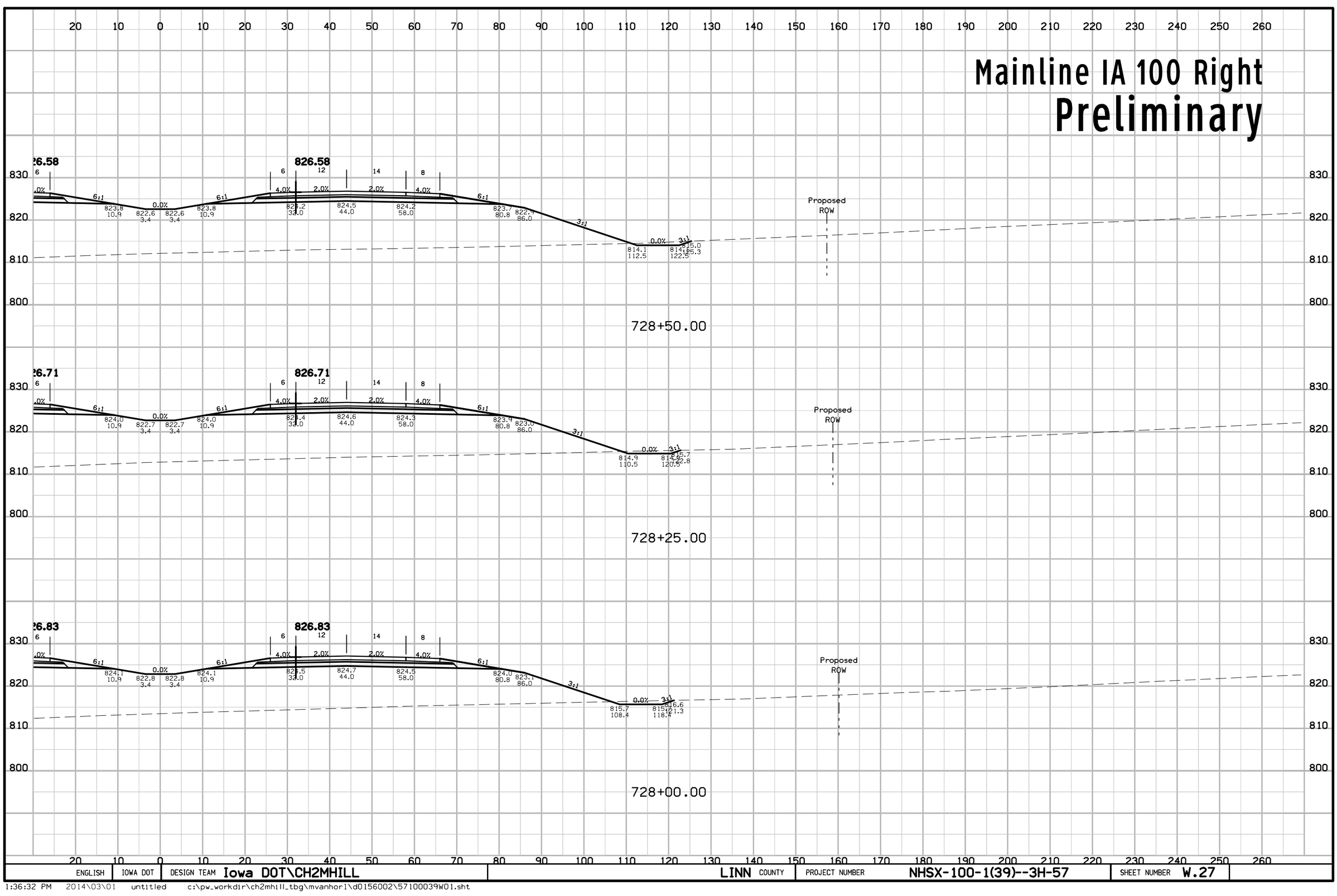

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.27

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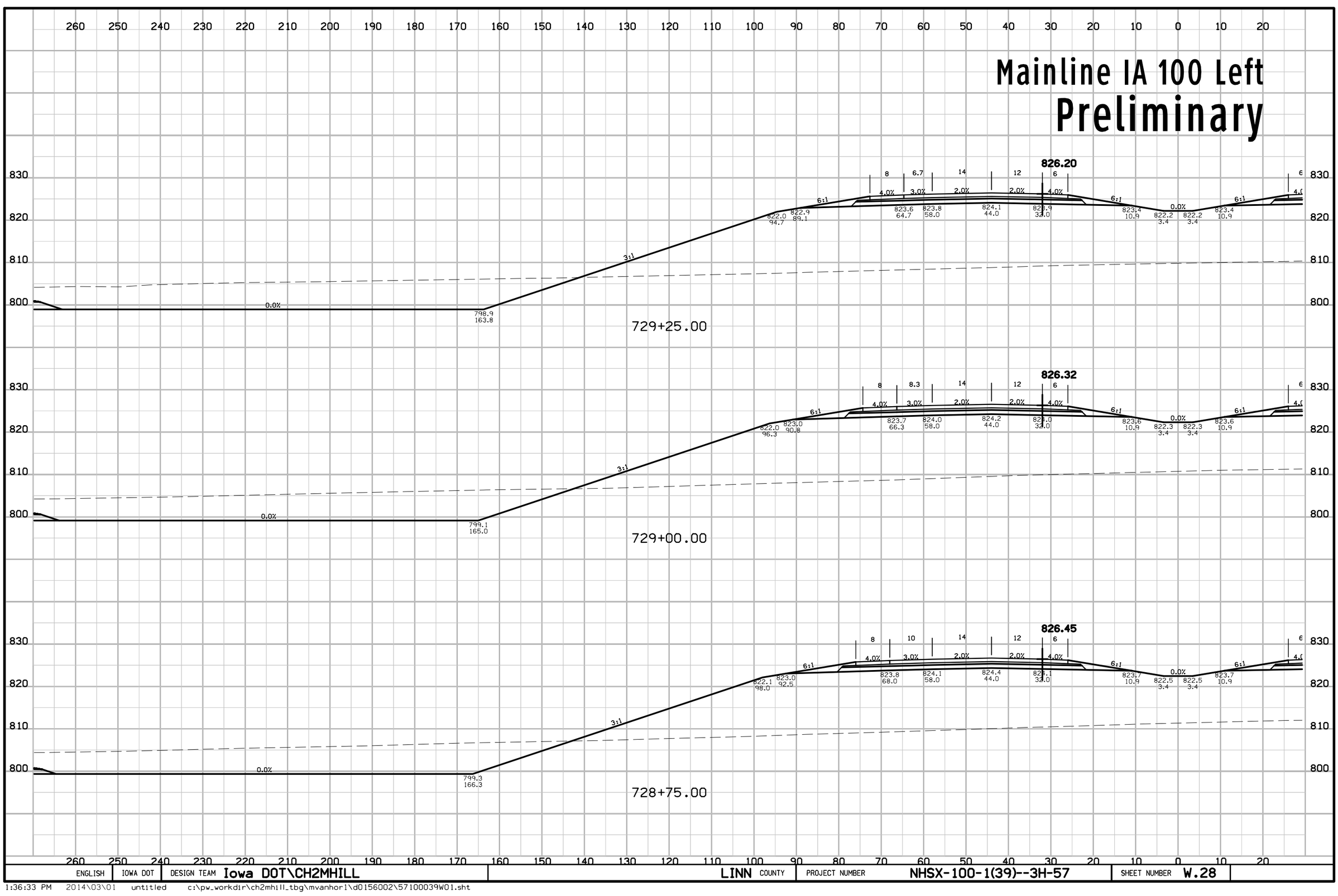

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.28

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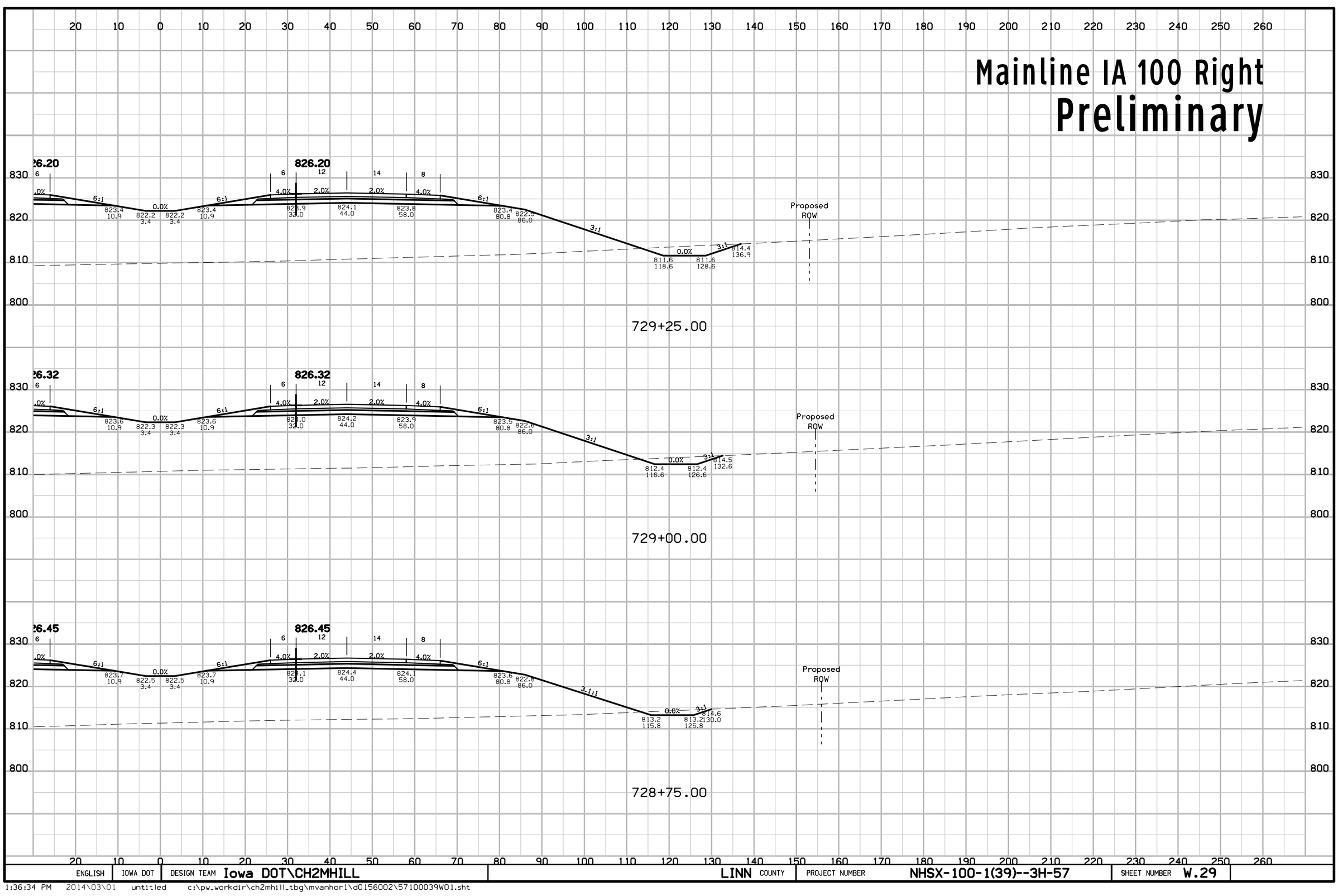

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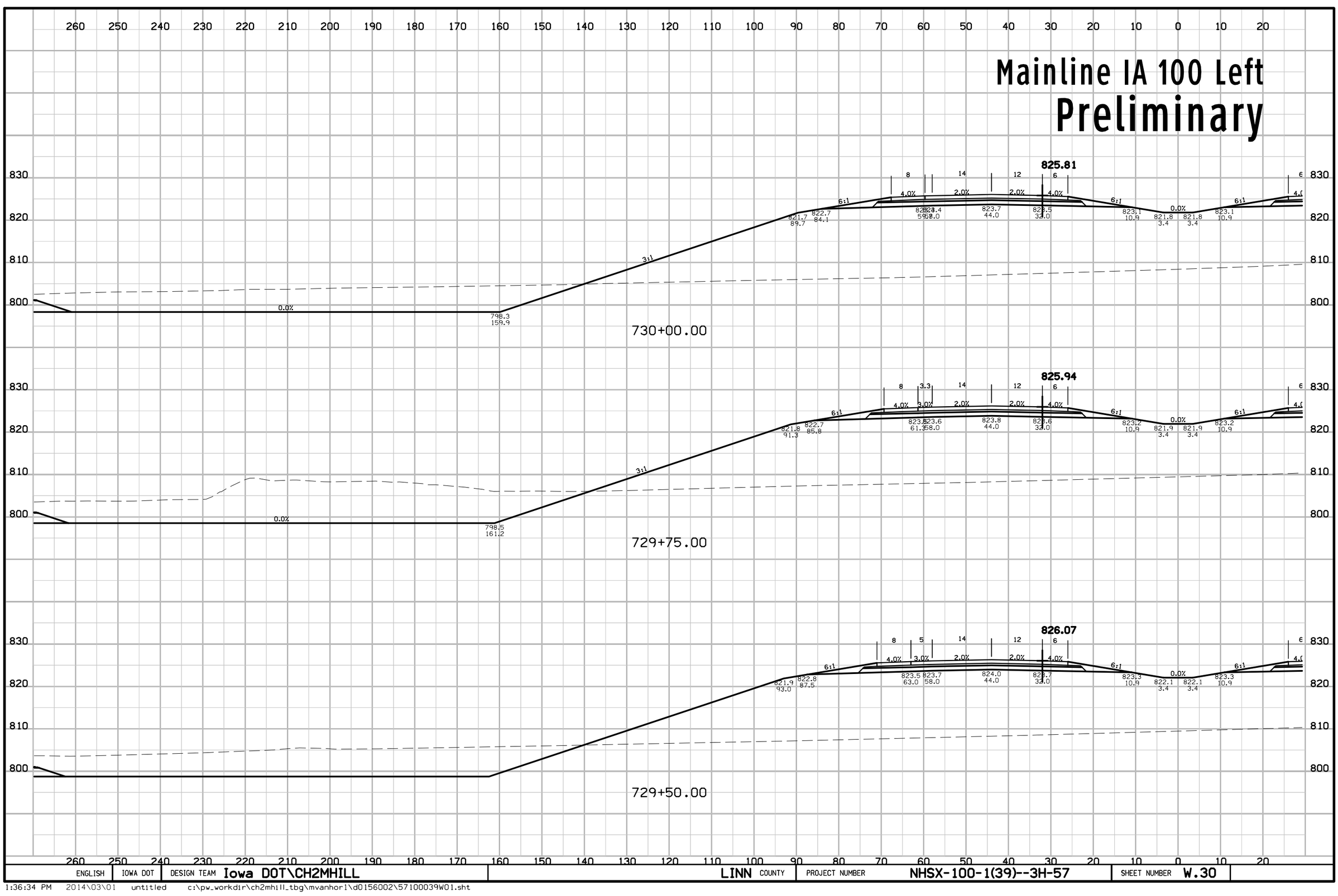

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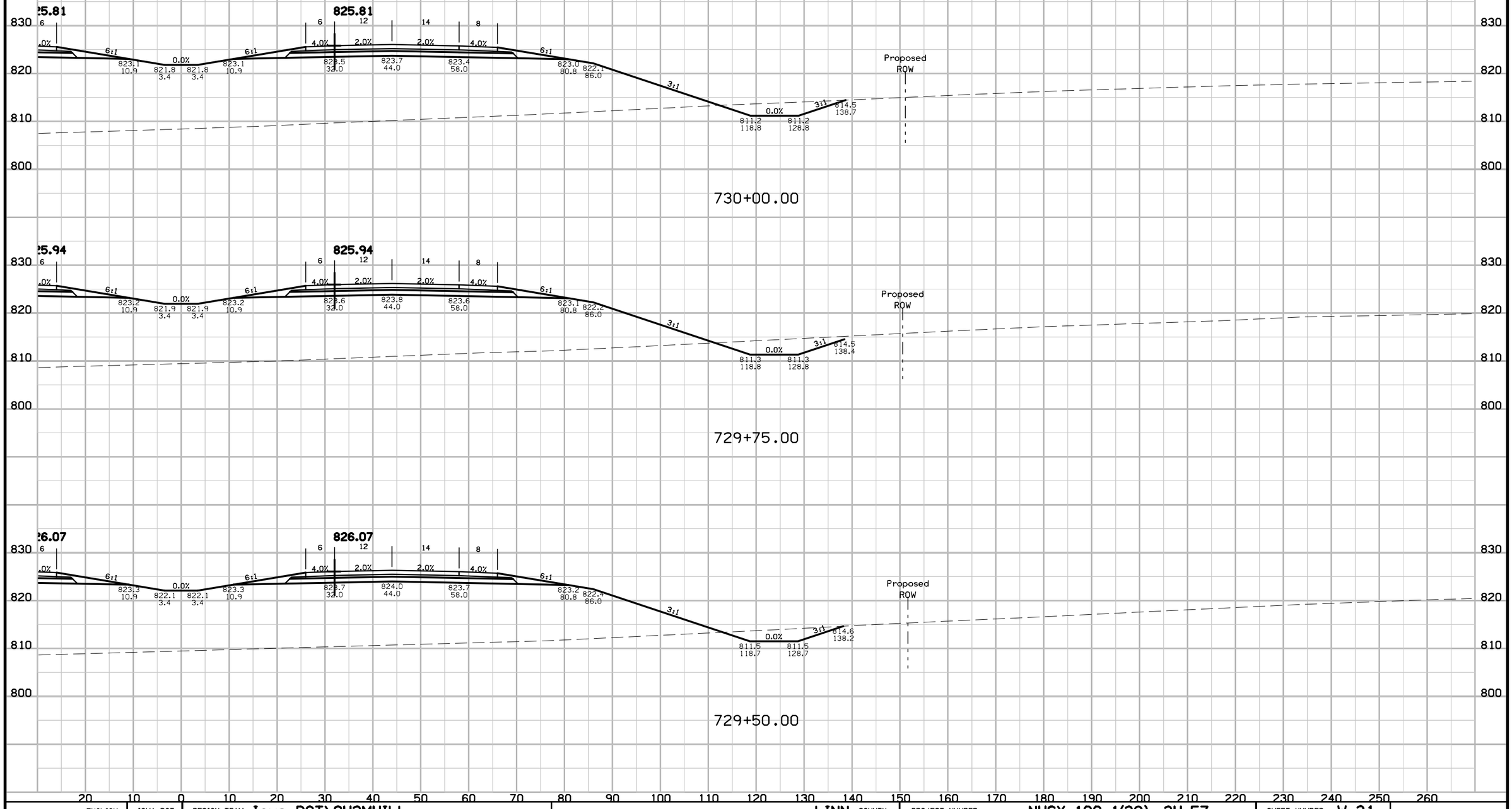

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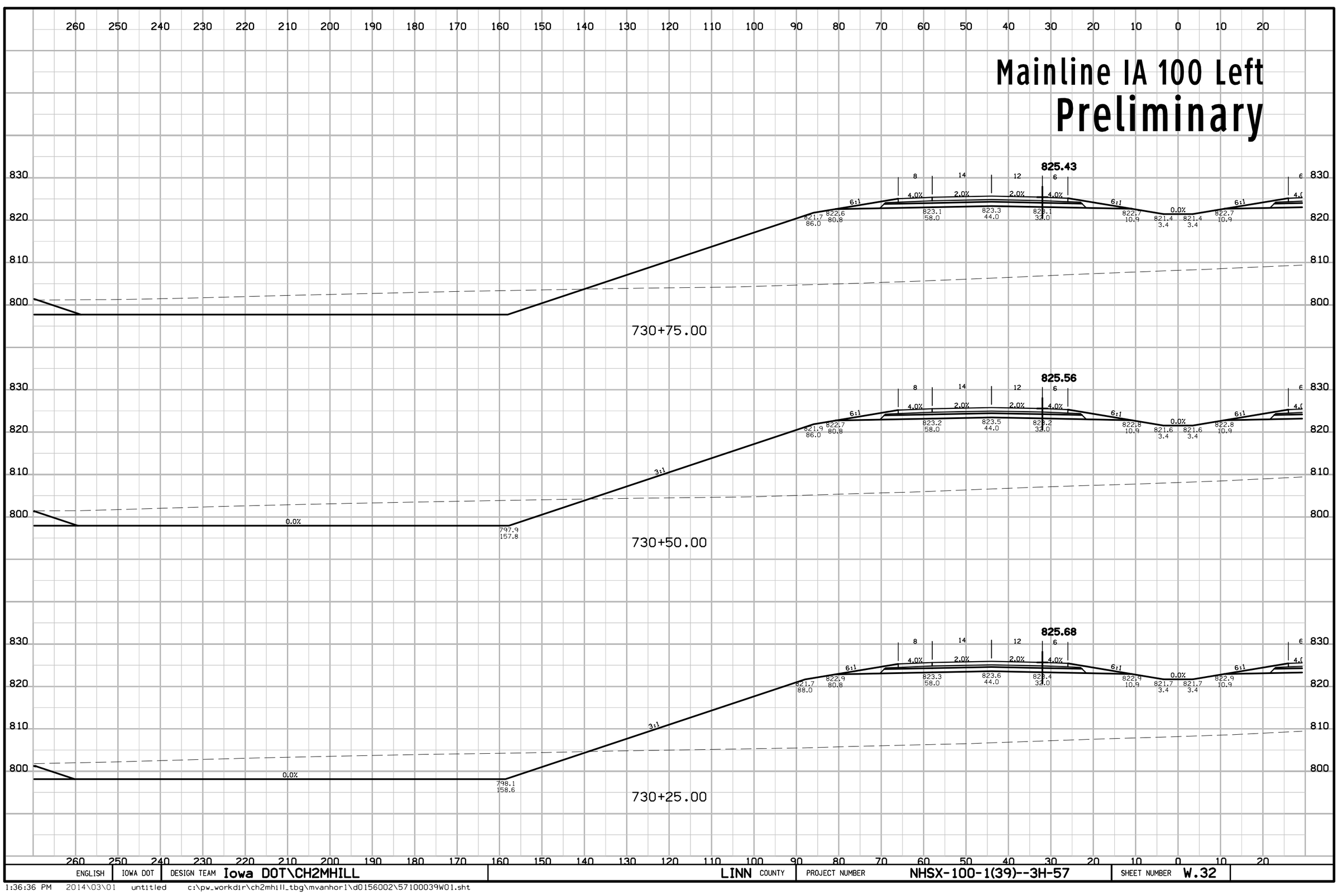

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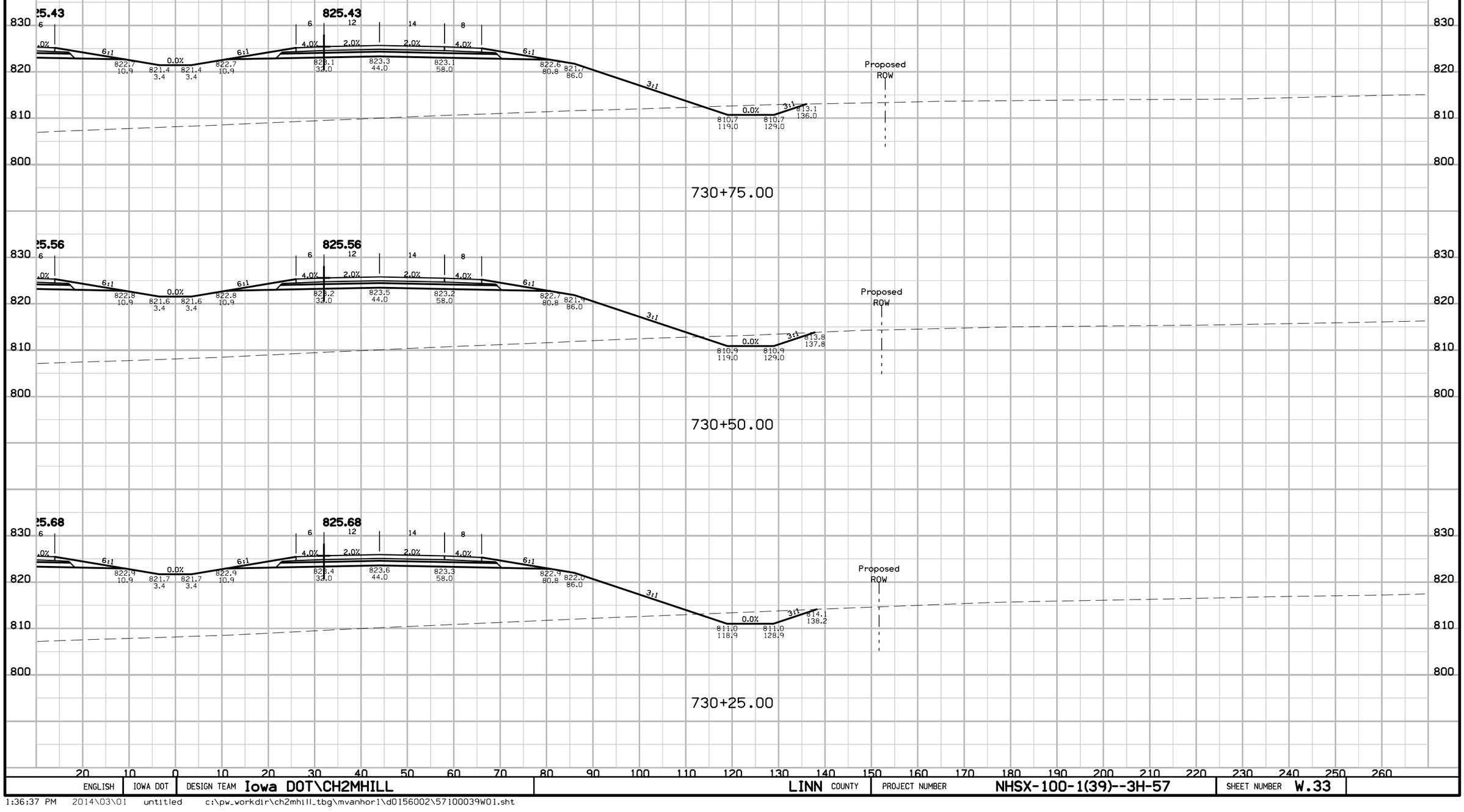

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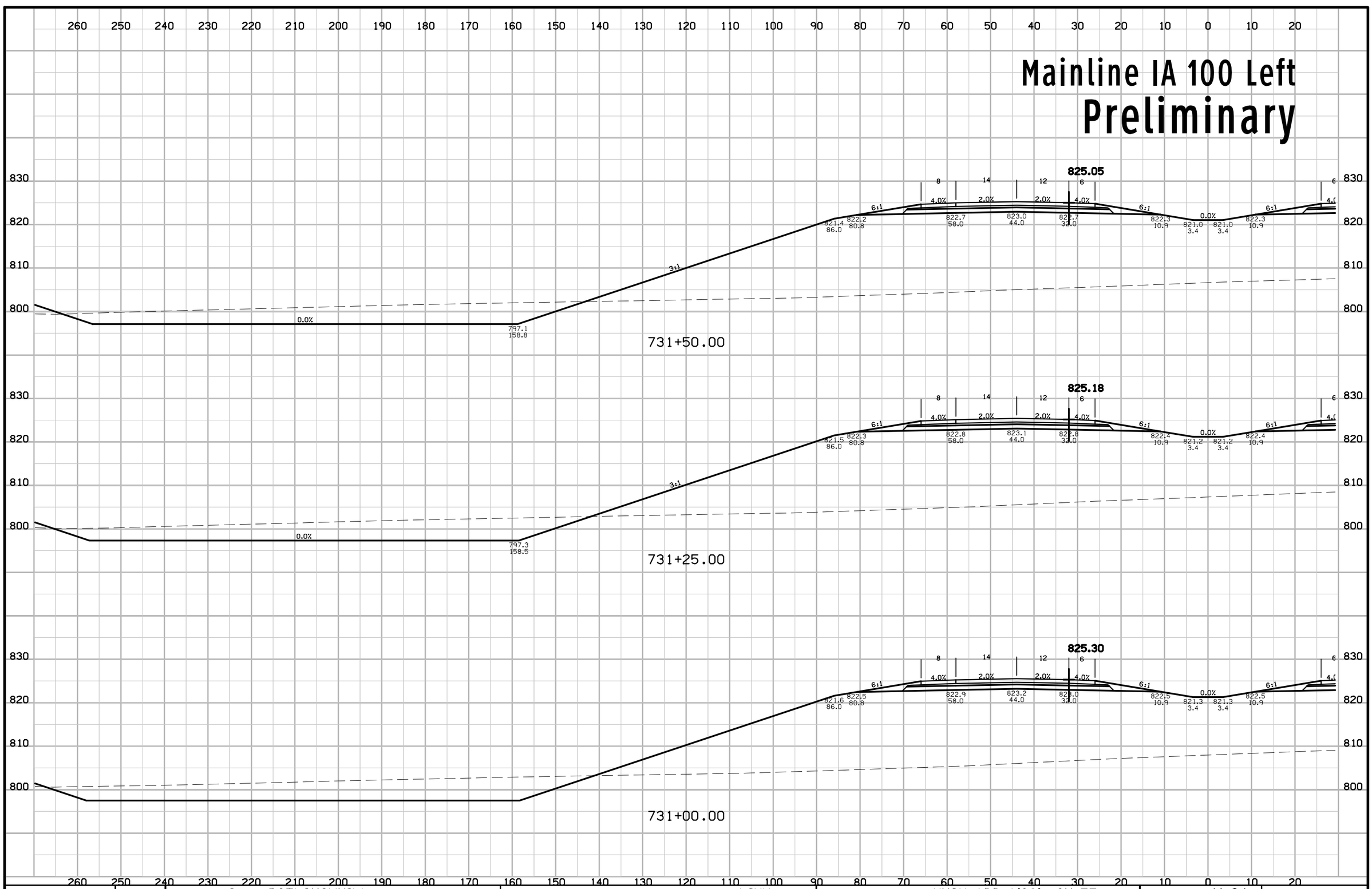

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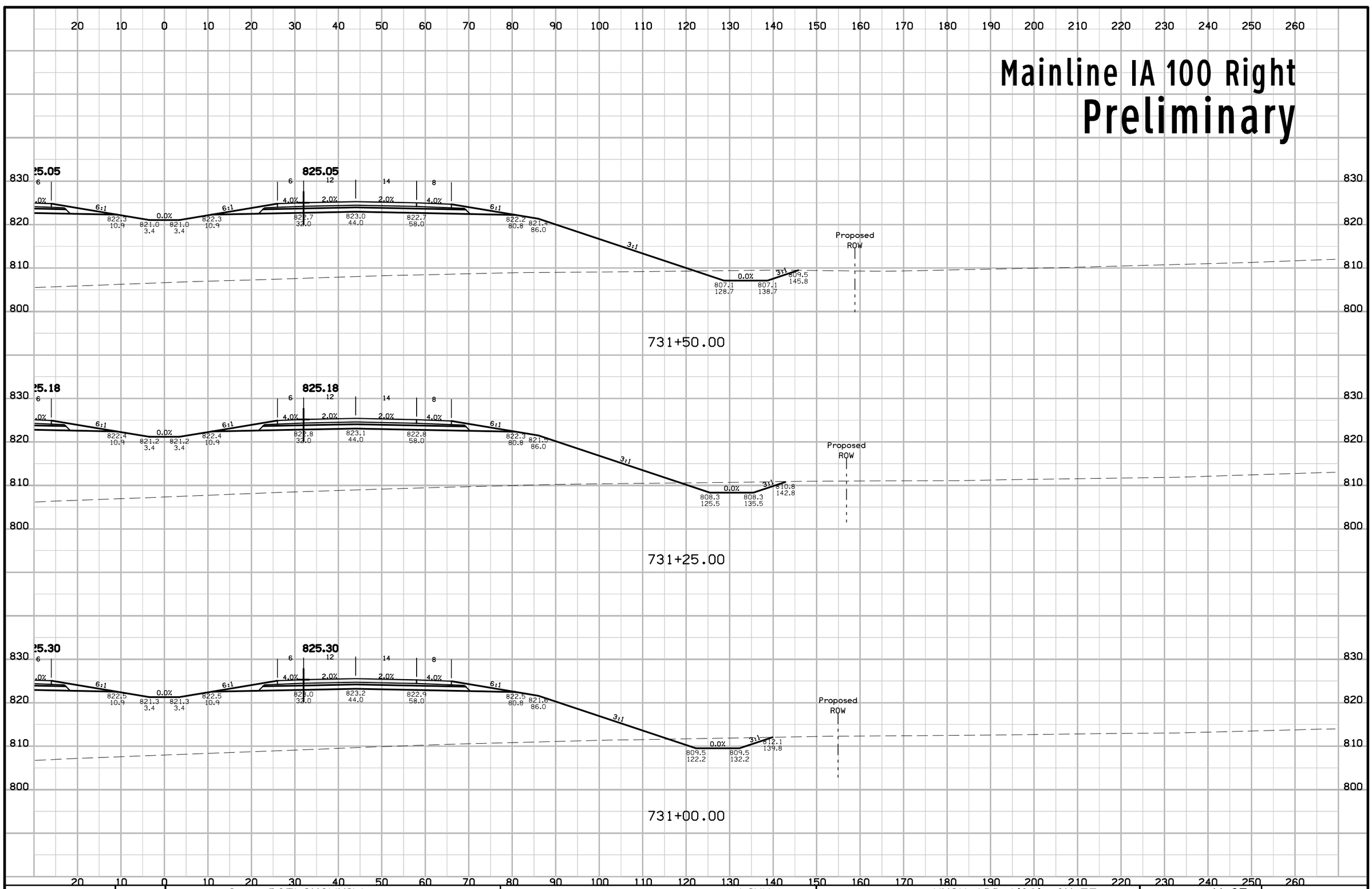

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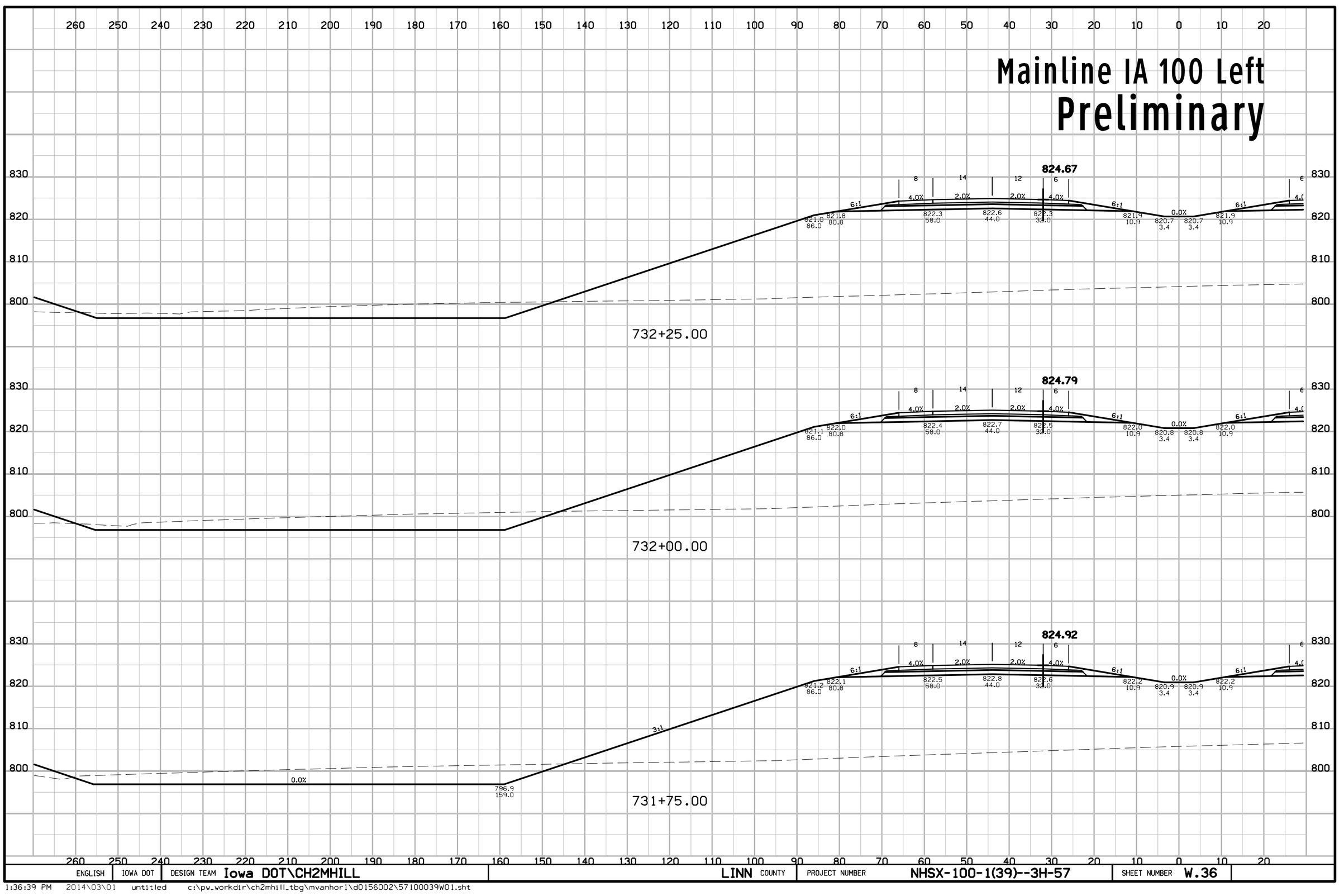

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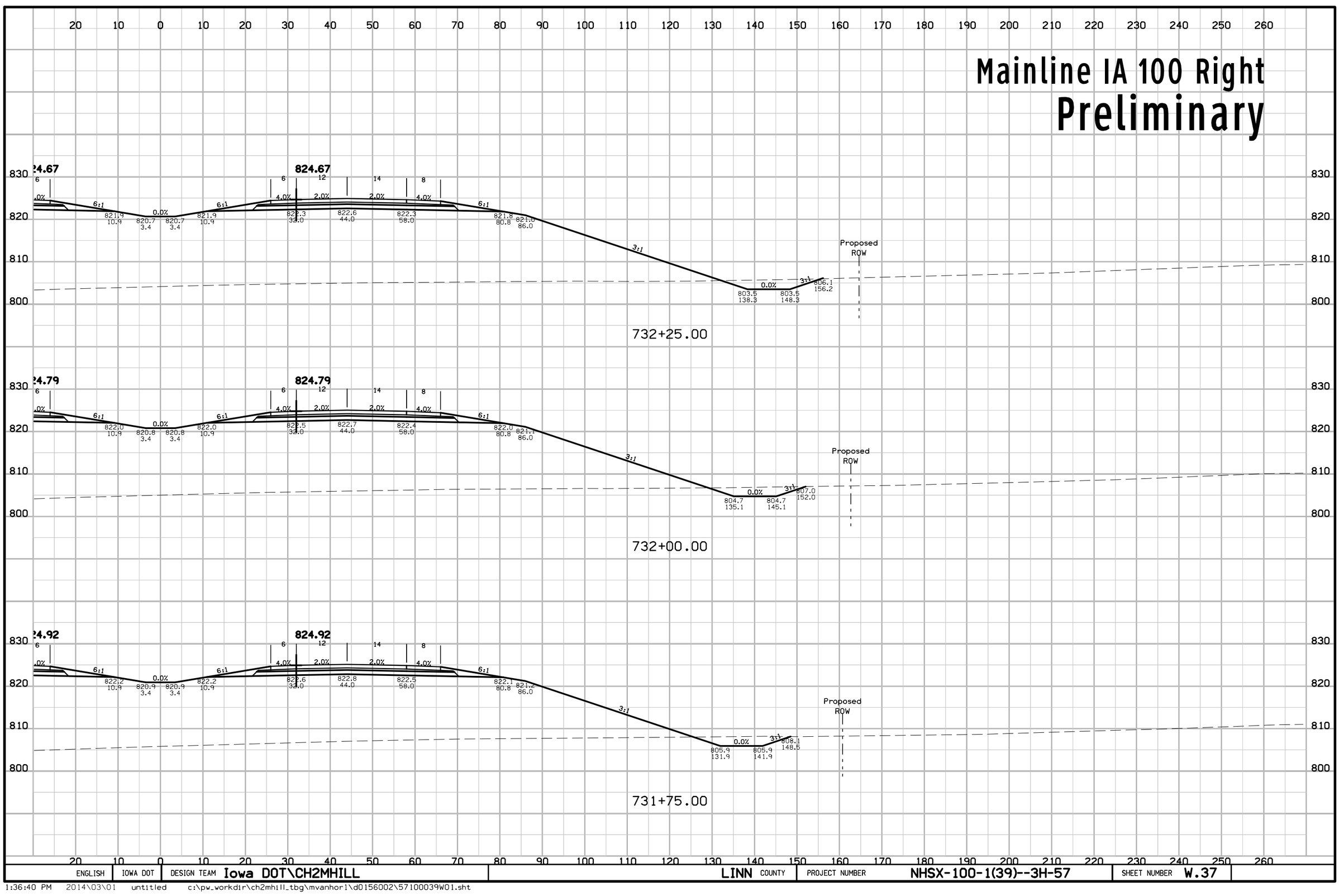

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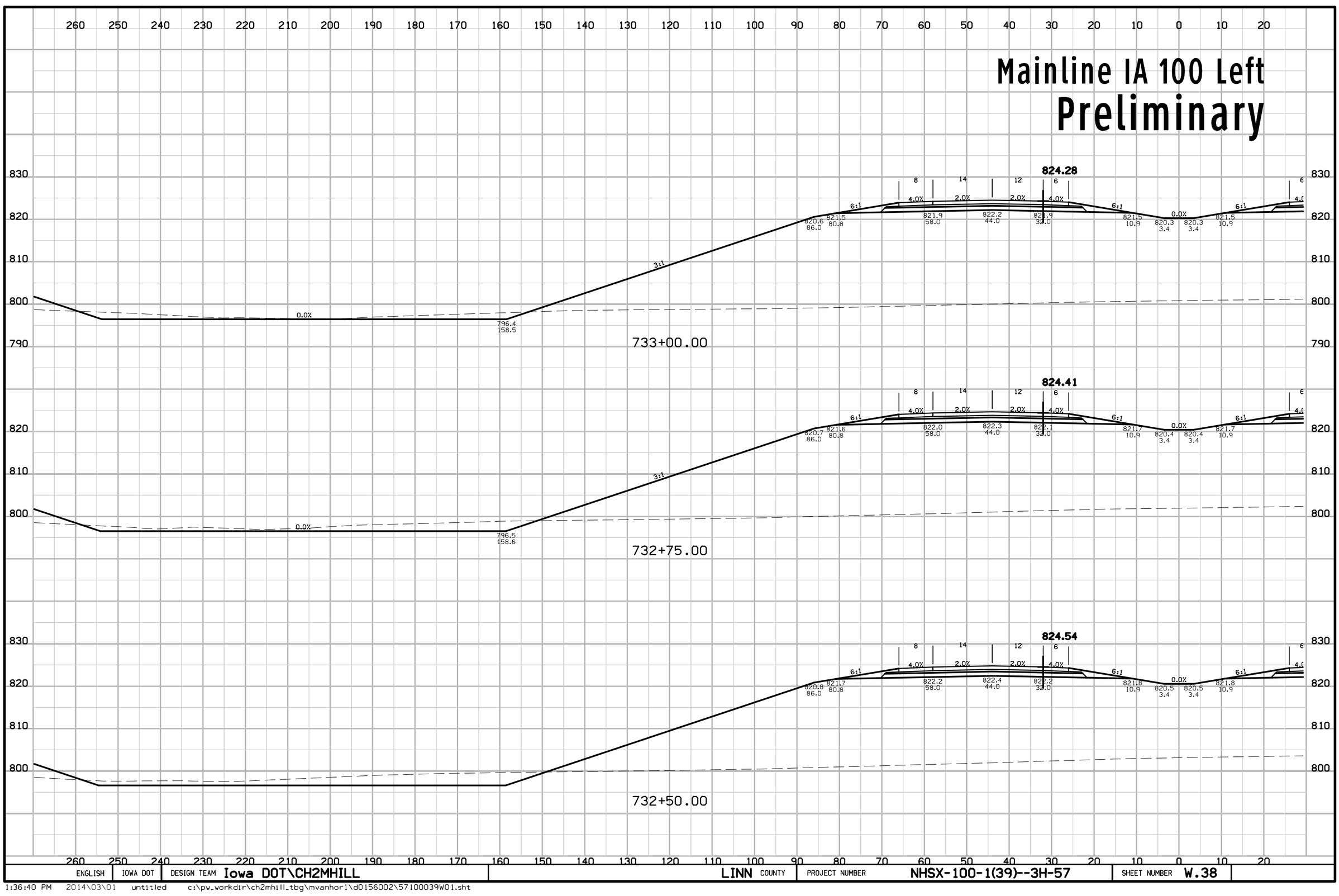

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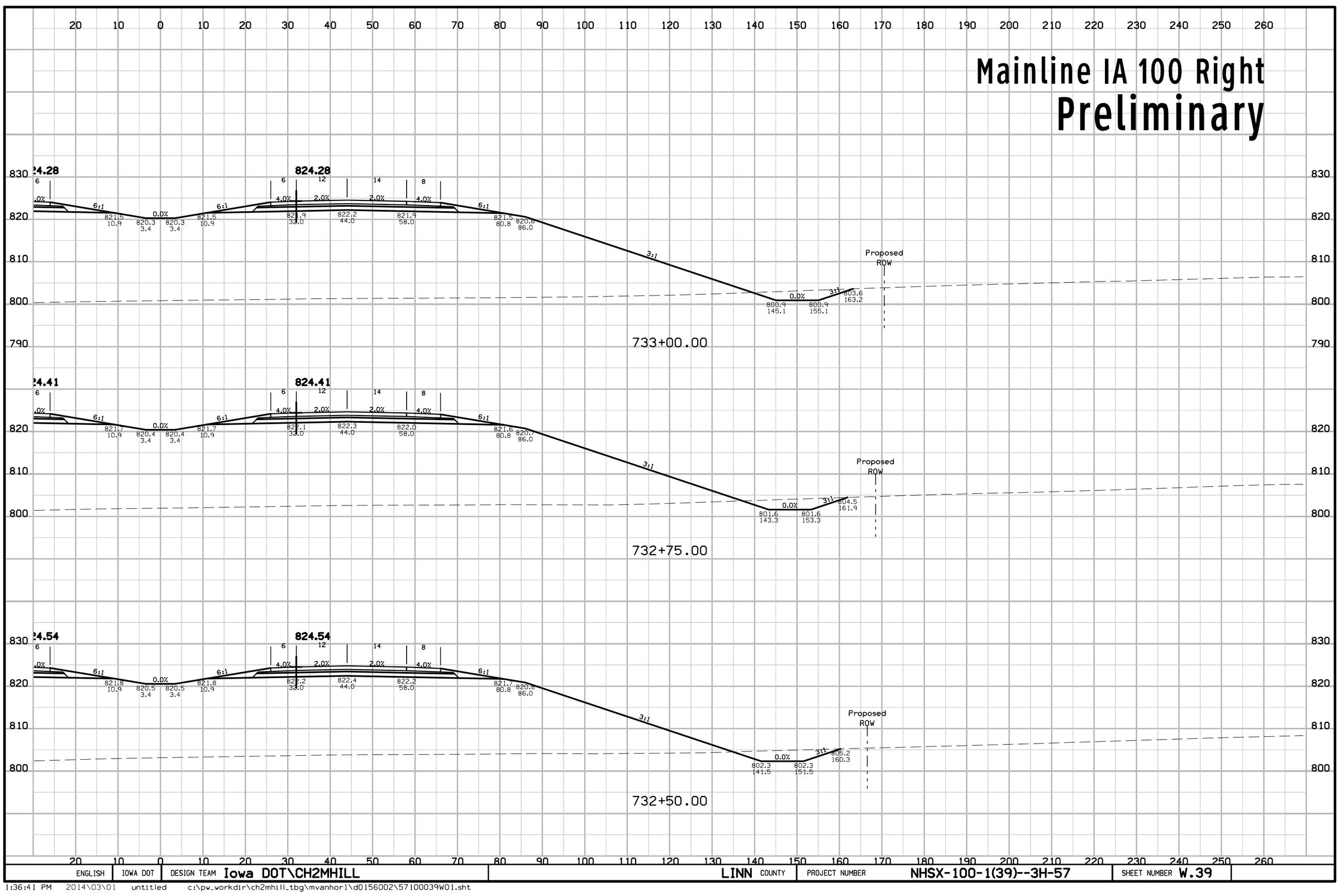

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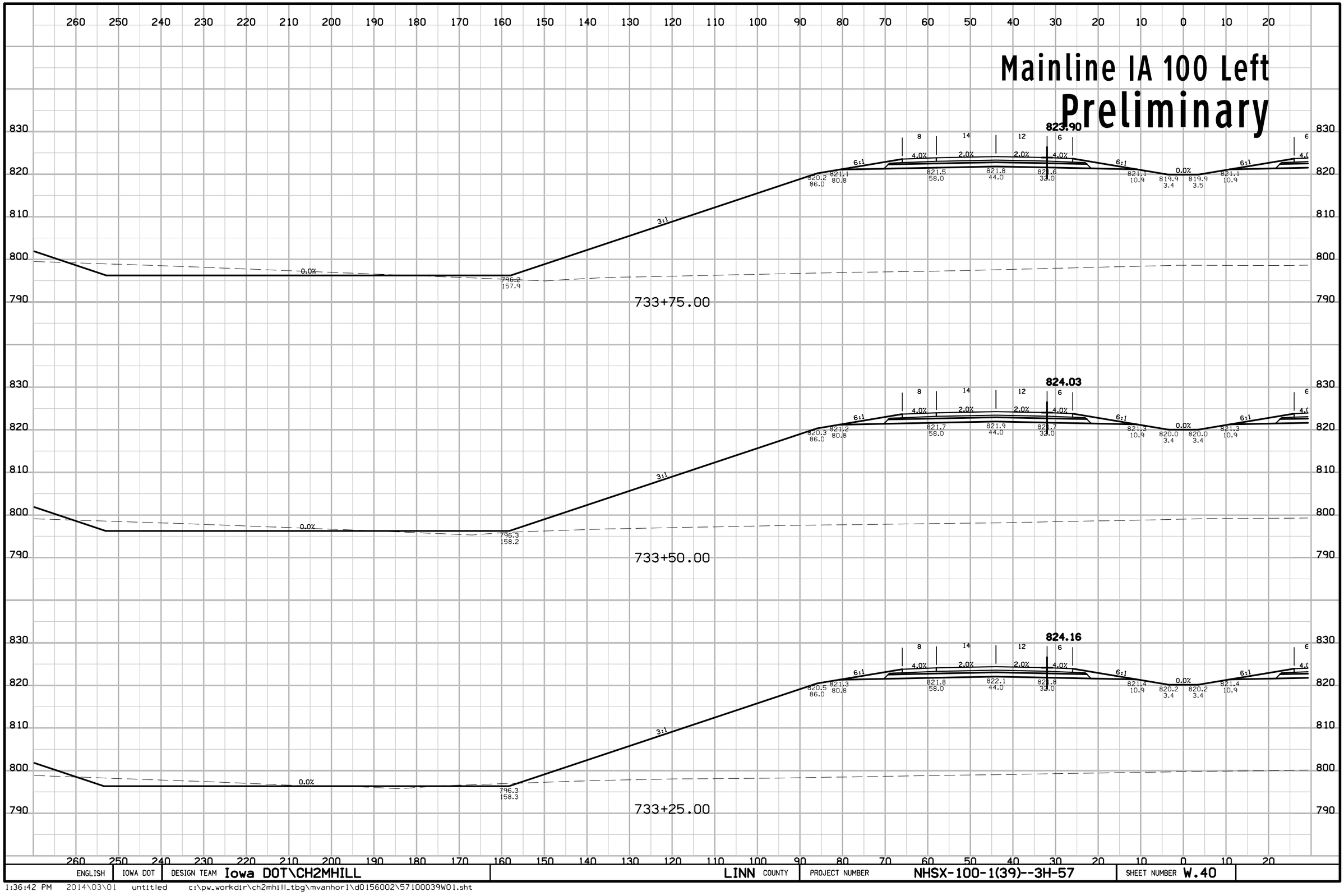

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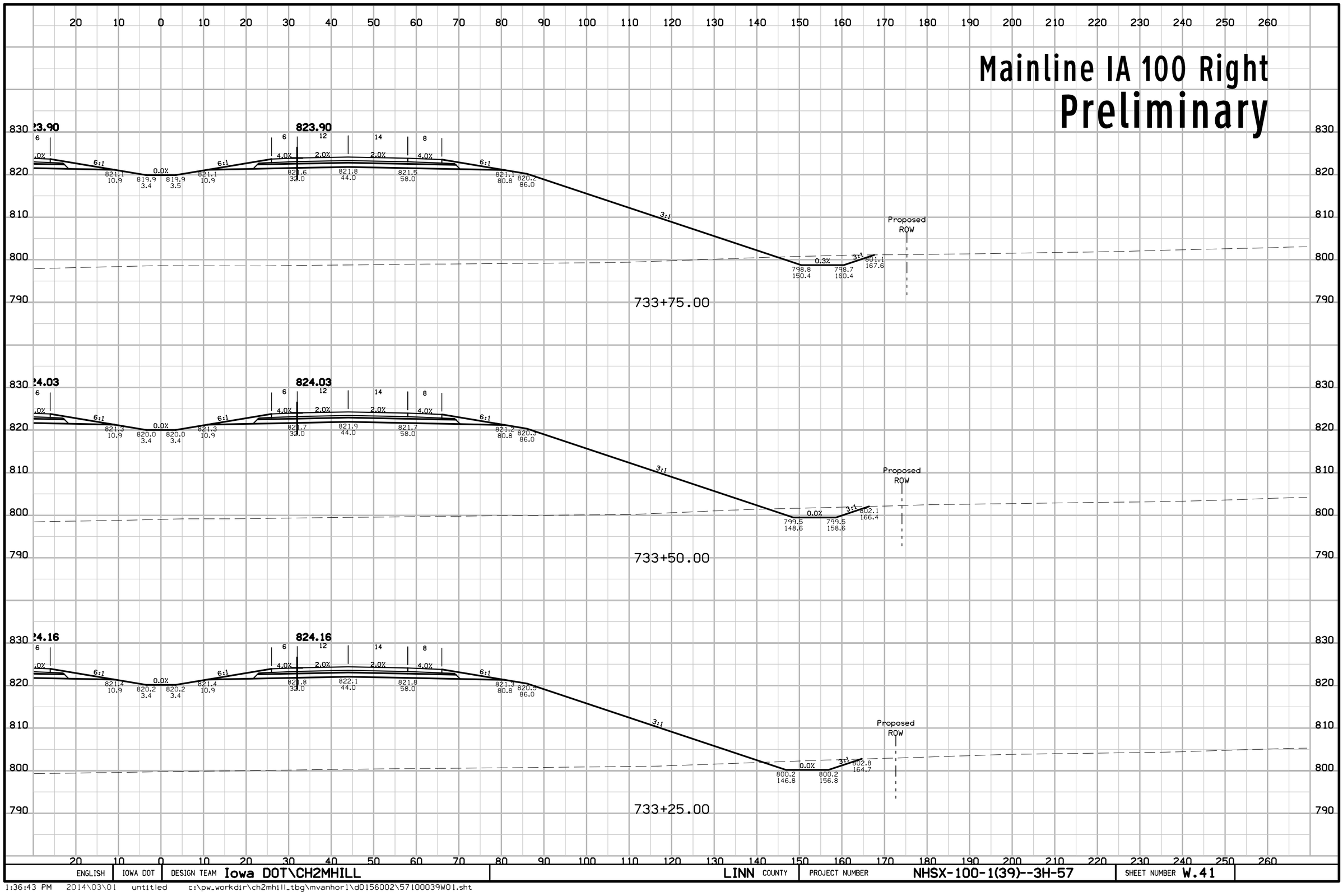

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.41

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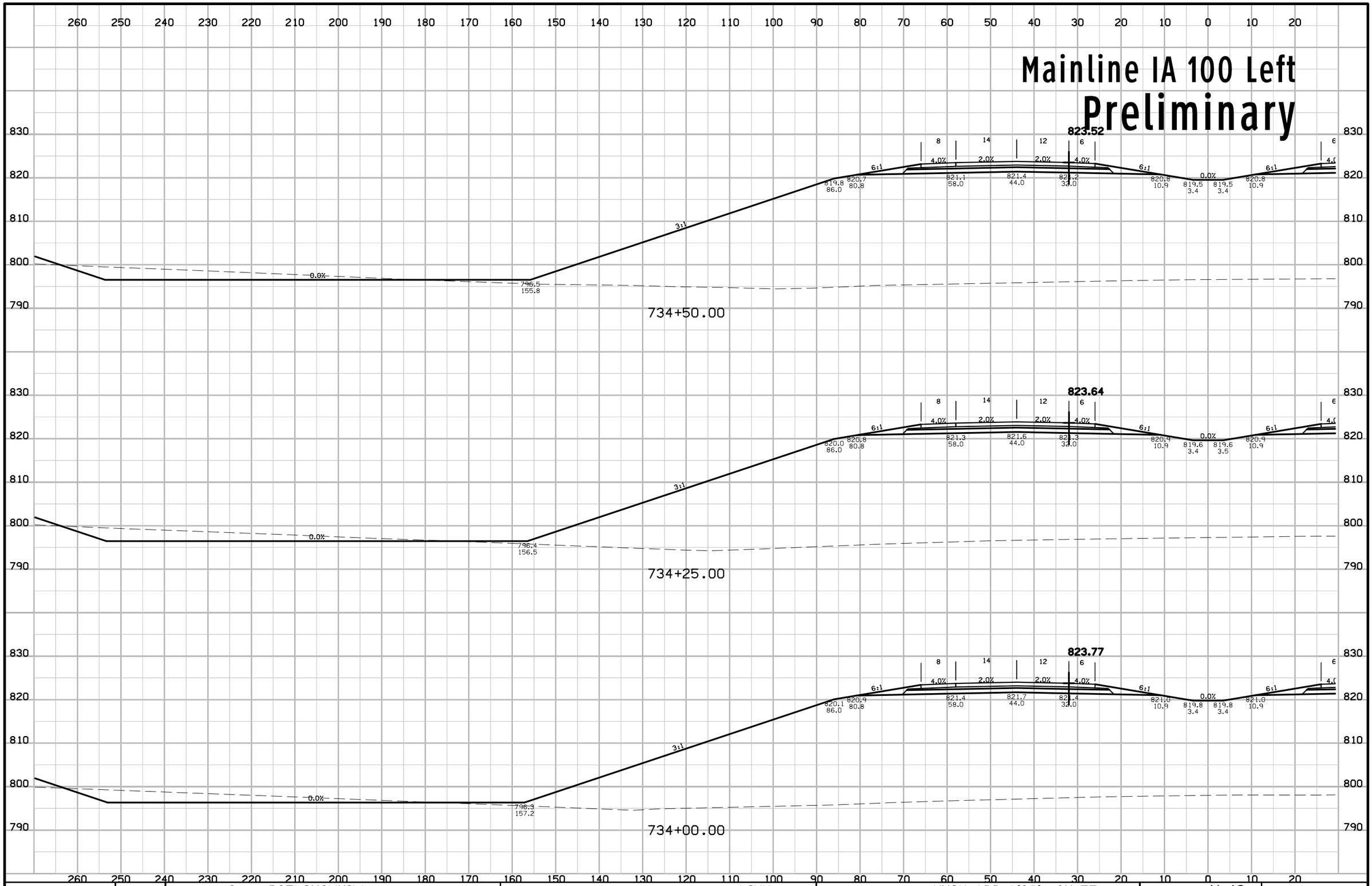

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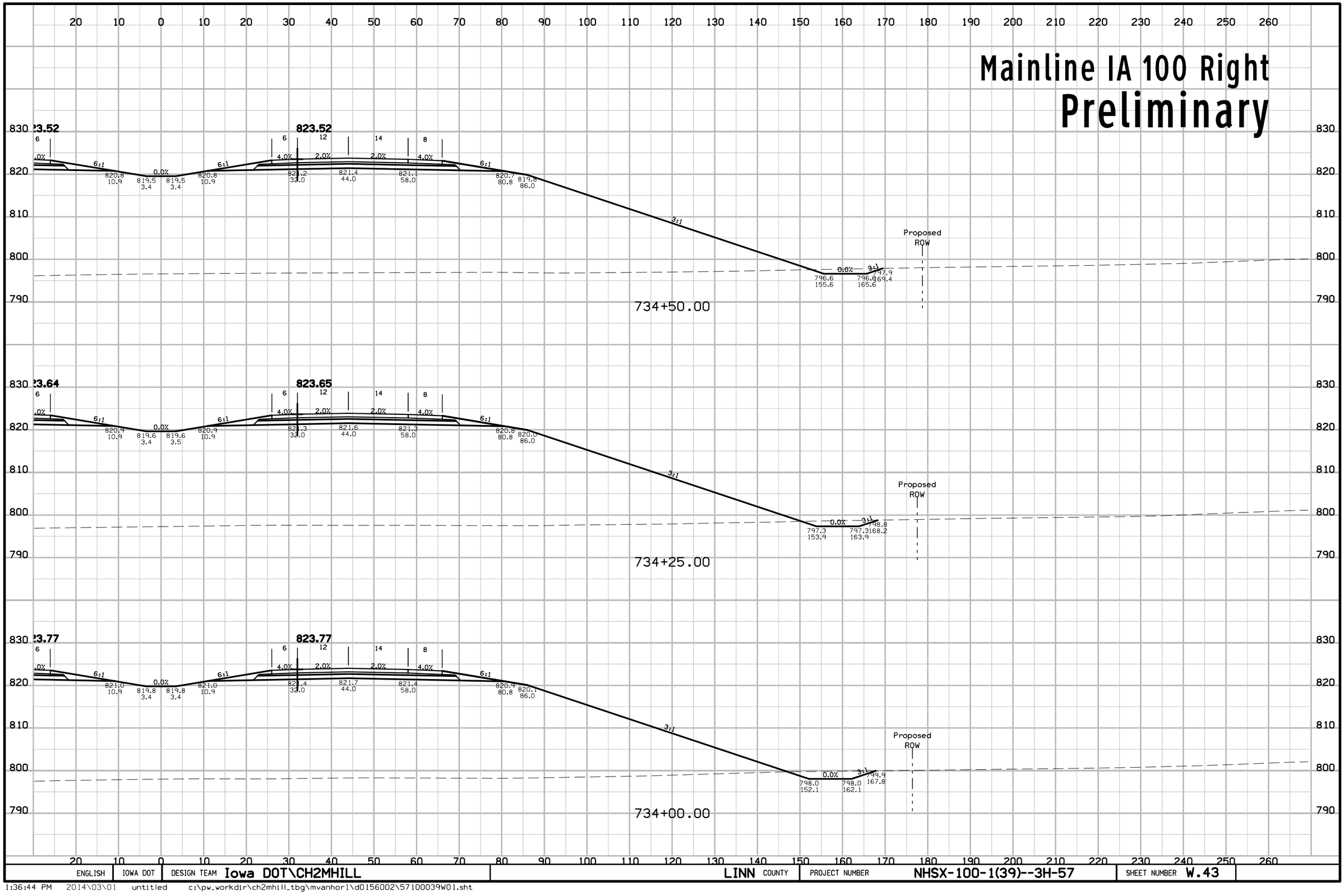

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.43

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Mainline IA 100 Left

Preliminary

735+00.00

734+97.26

734+75.00

CROSS SECTION SKEWED 40.2° RT AHEAD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.44	

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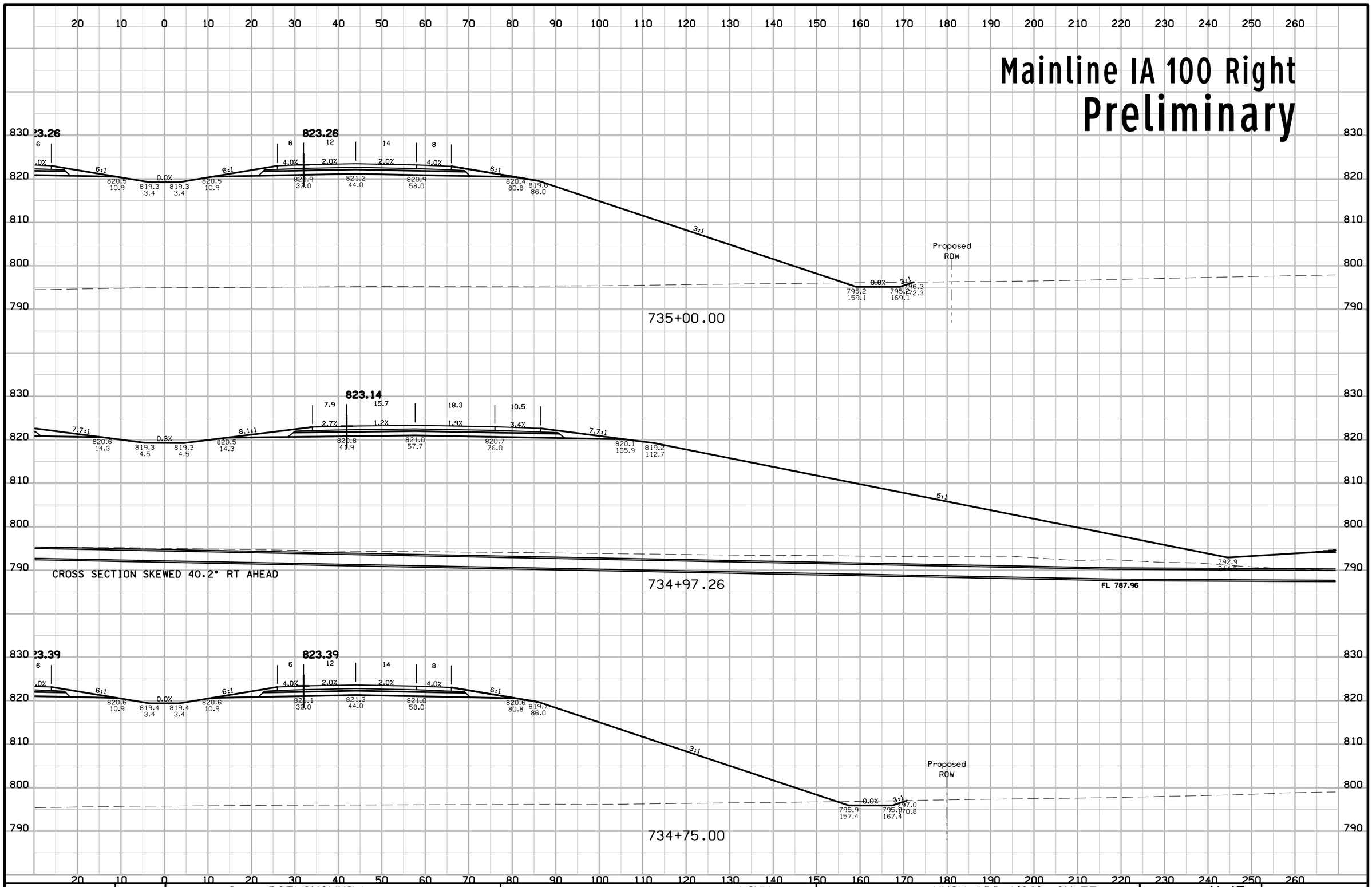

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Mainline IA 100 Left

Preliminary

735+50.00

735+25.00

735+06.87

CROSS SECTION SKEWED 40.2° RT AHEAD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.46		

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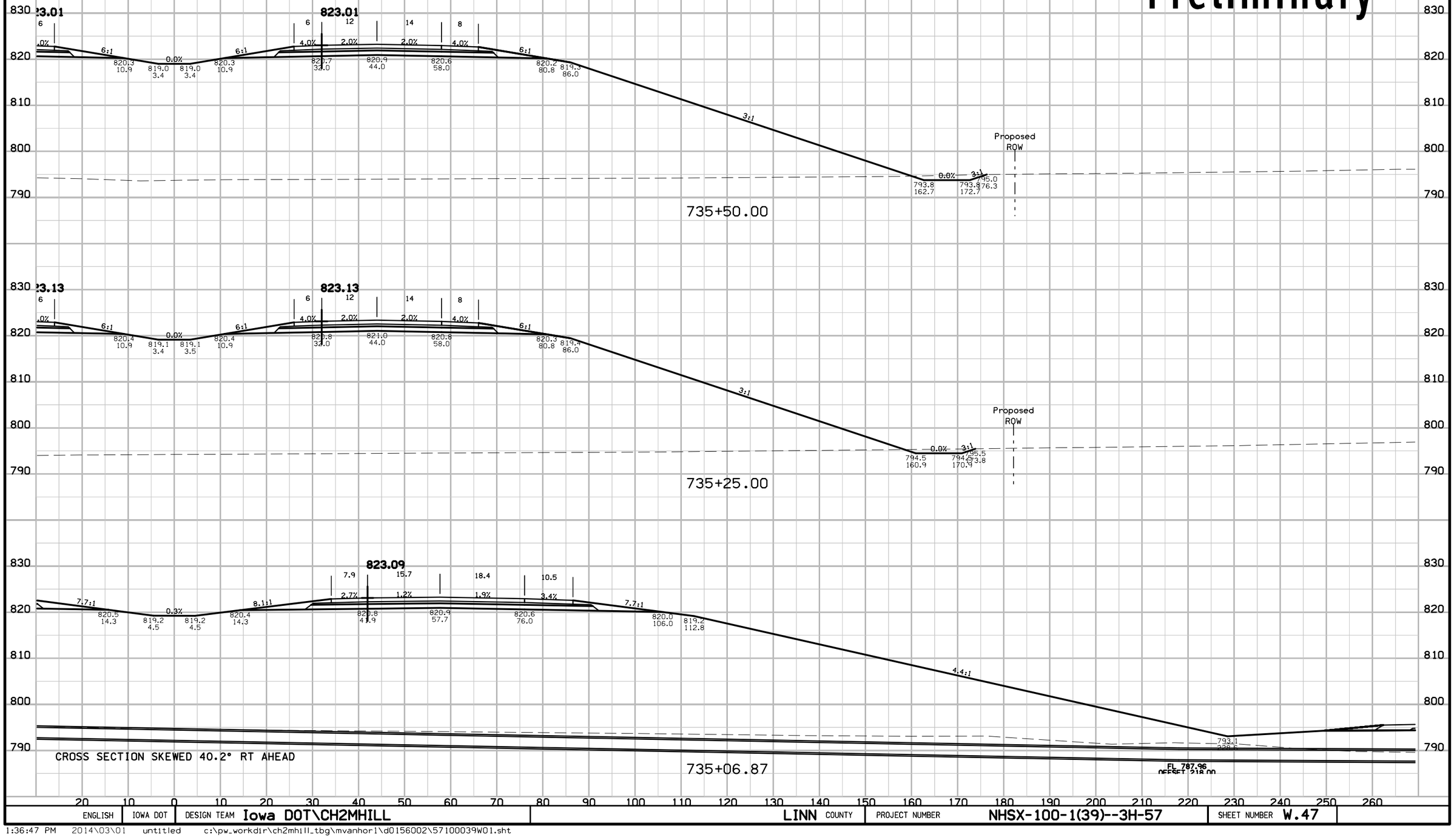
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.47

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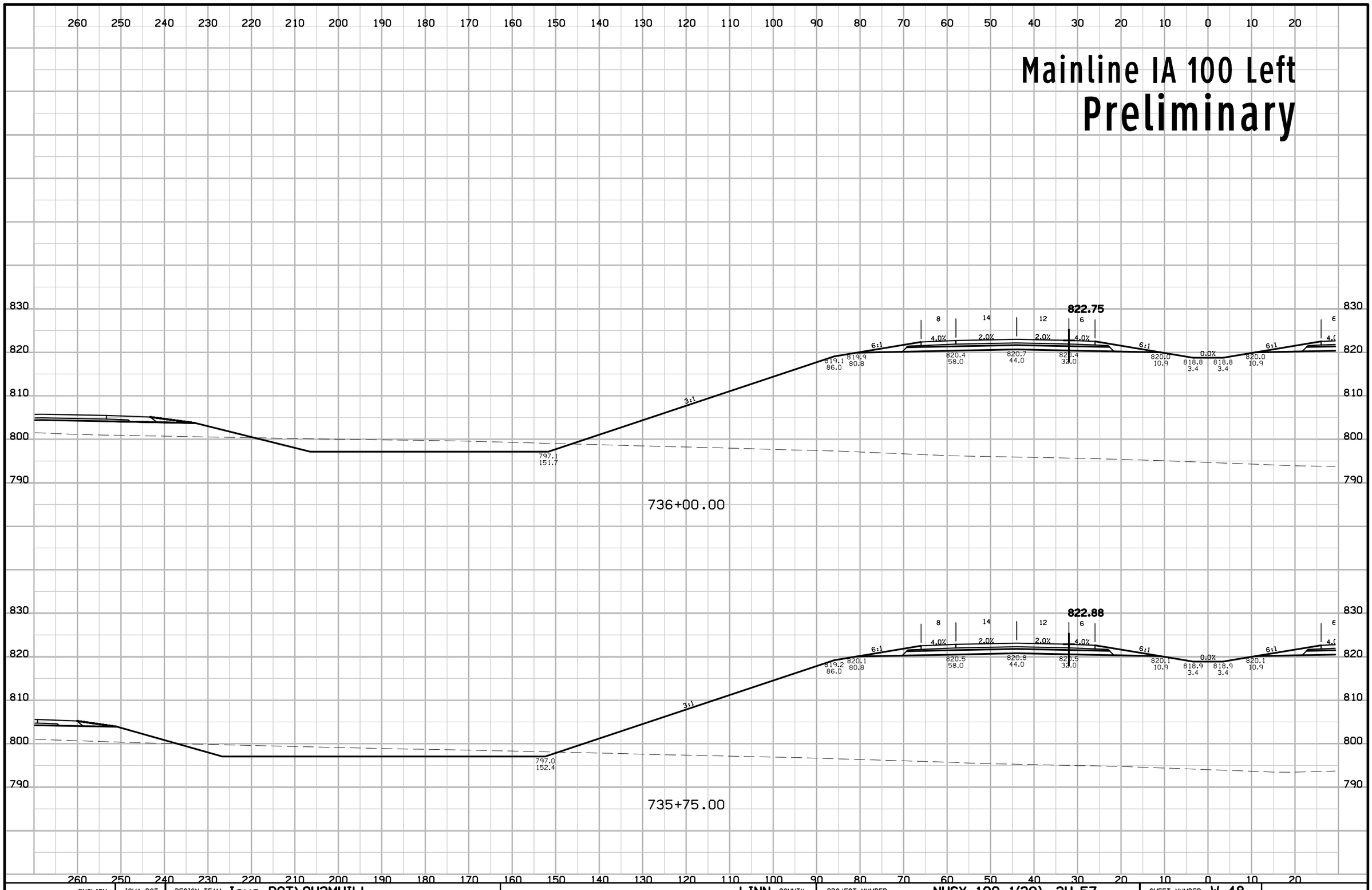
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.48

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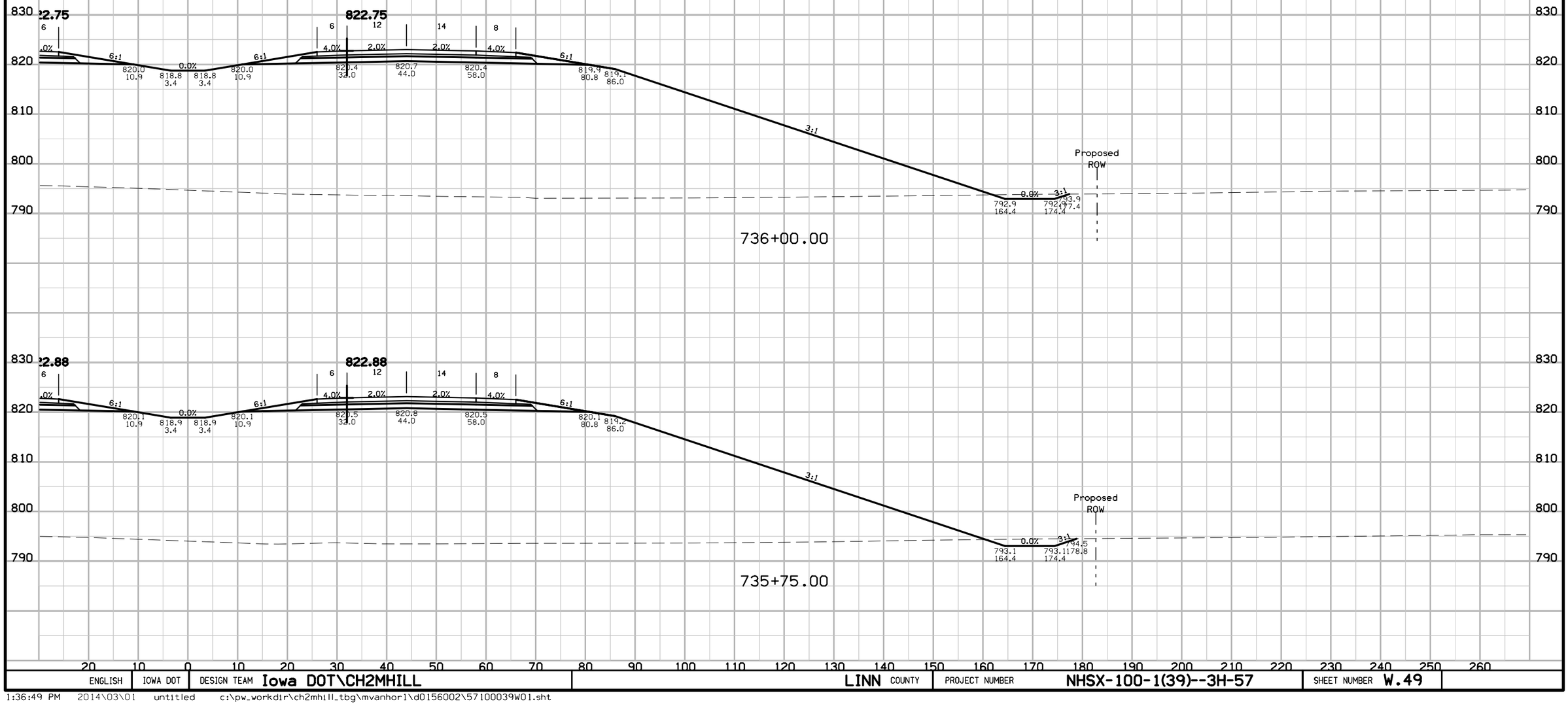
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.49

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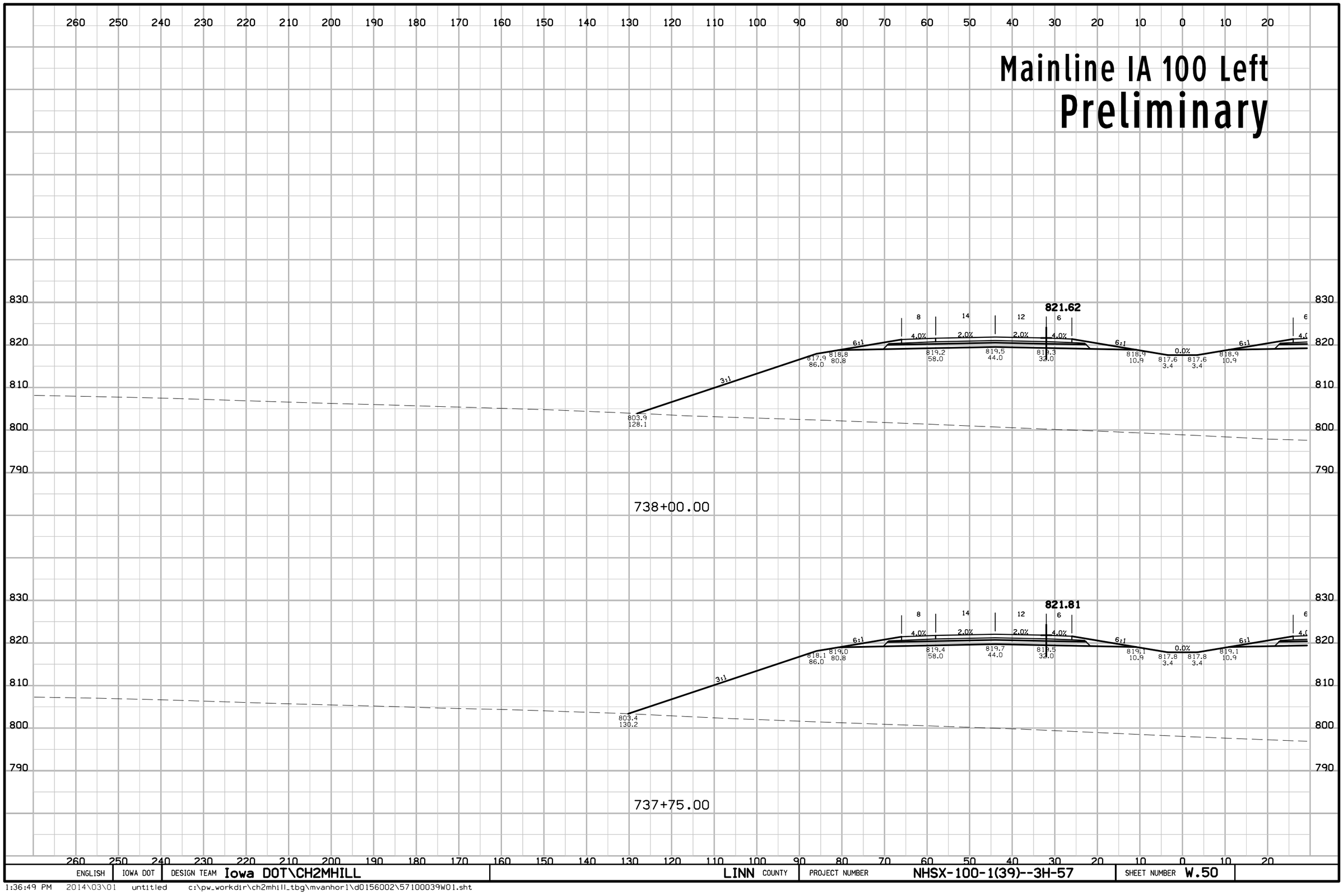
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.50

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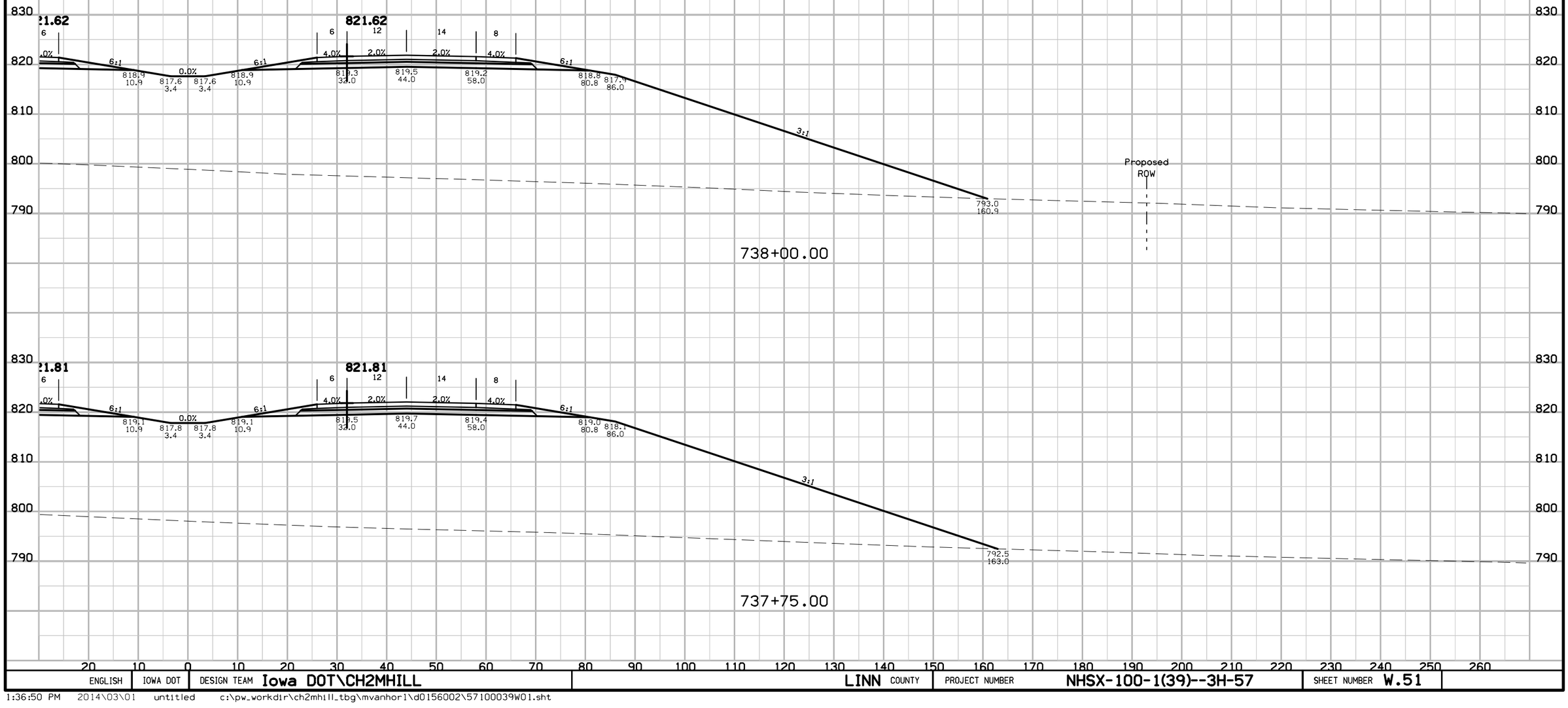
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.51

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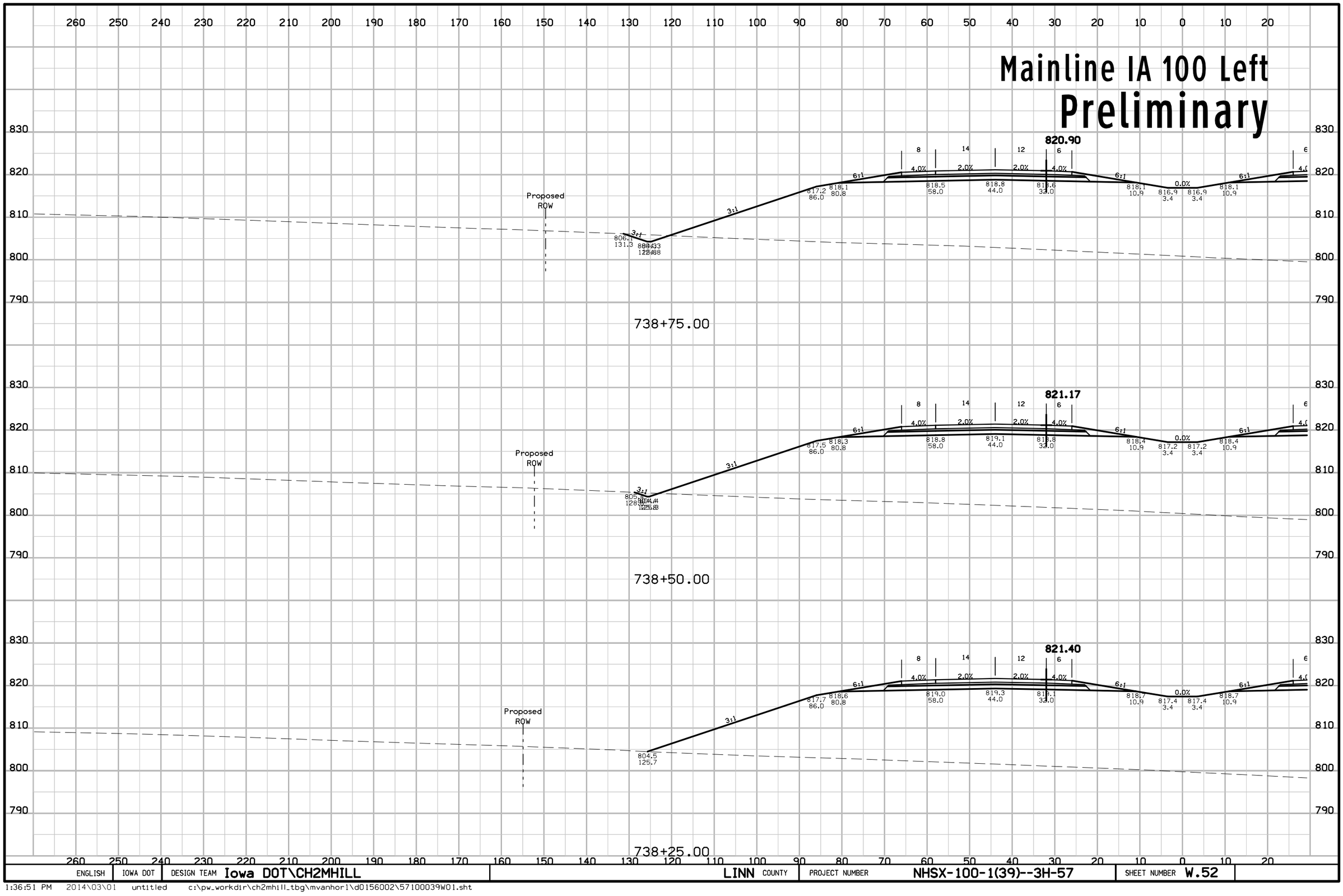
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.52

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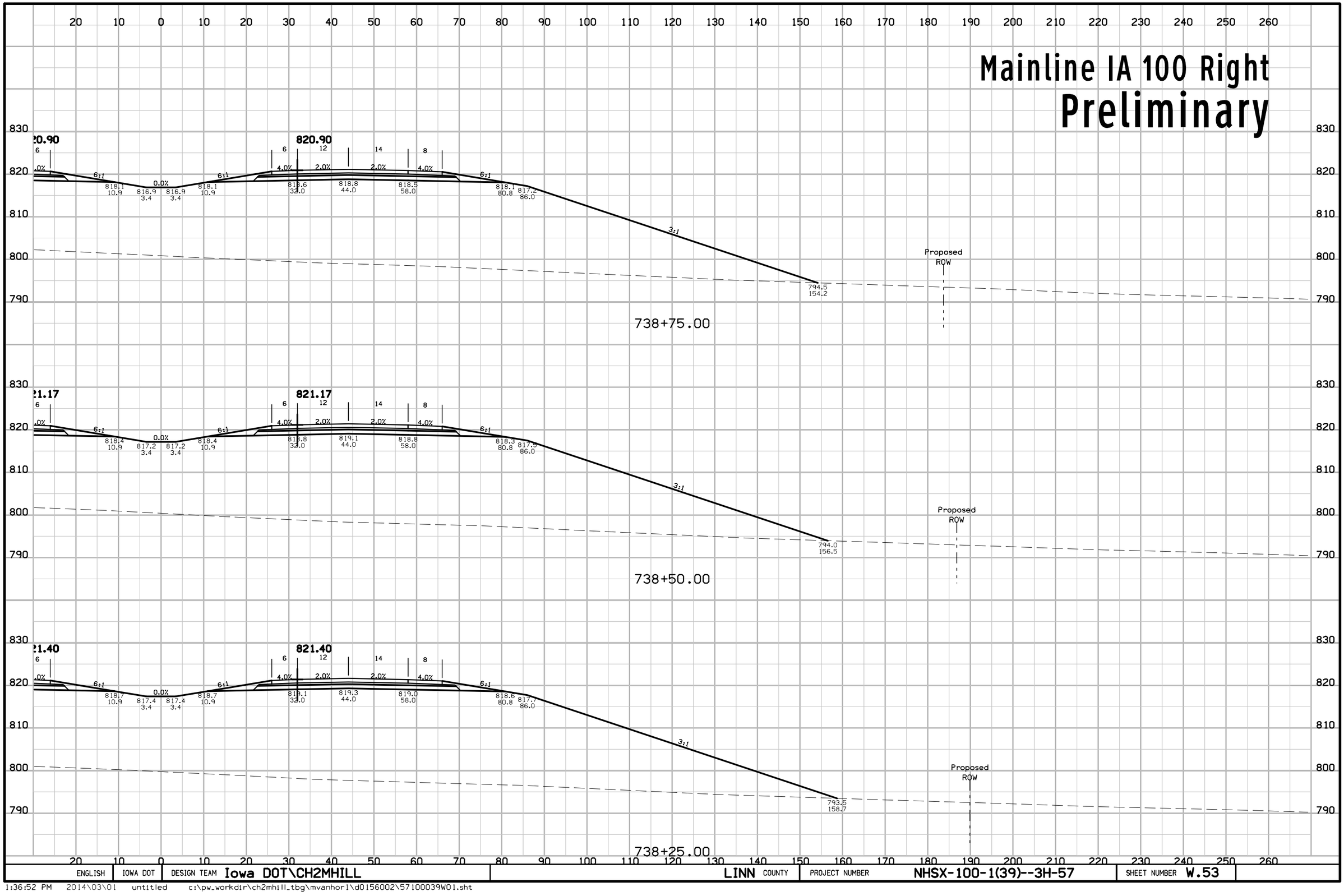

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.53	

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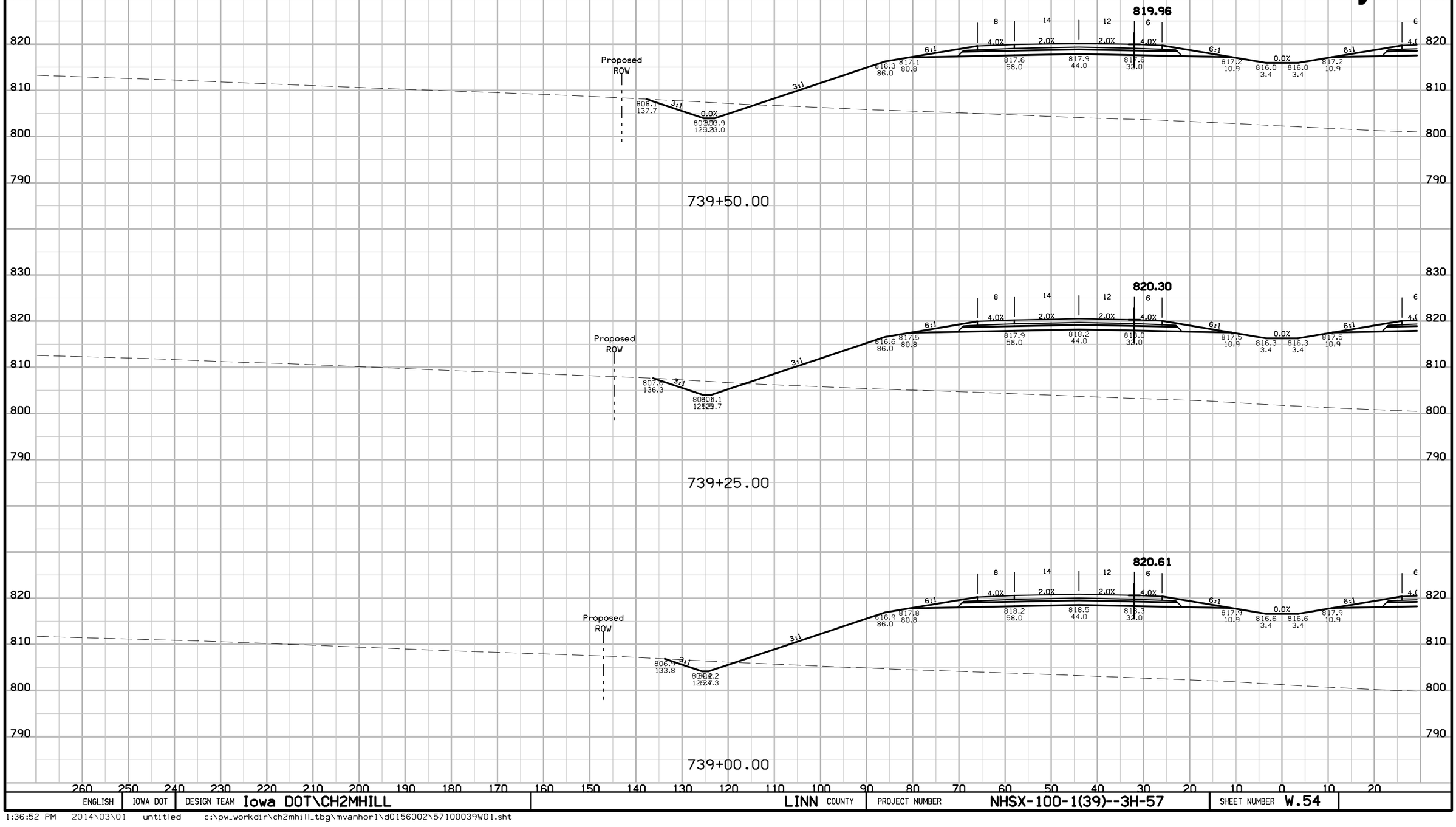
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.54

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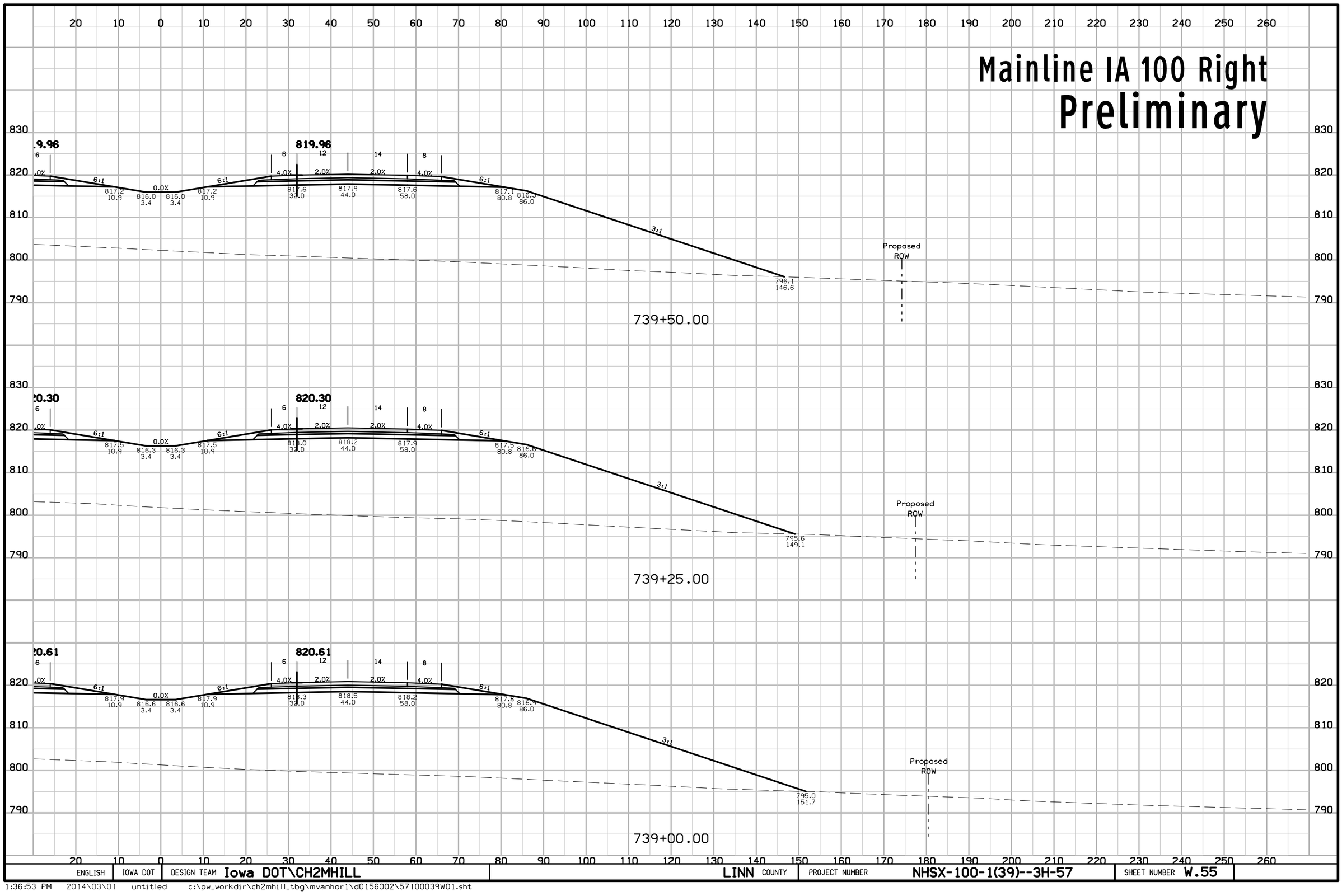
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.55

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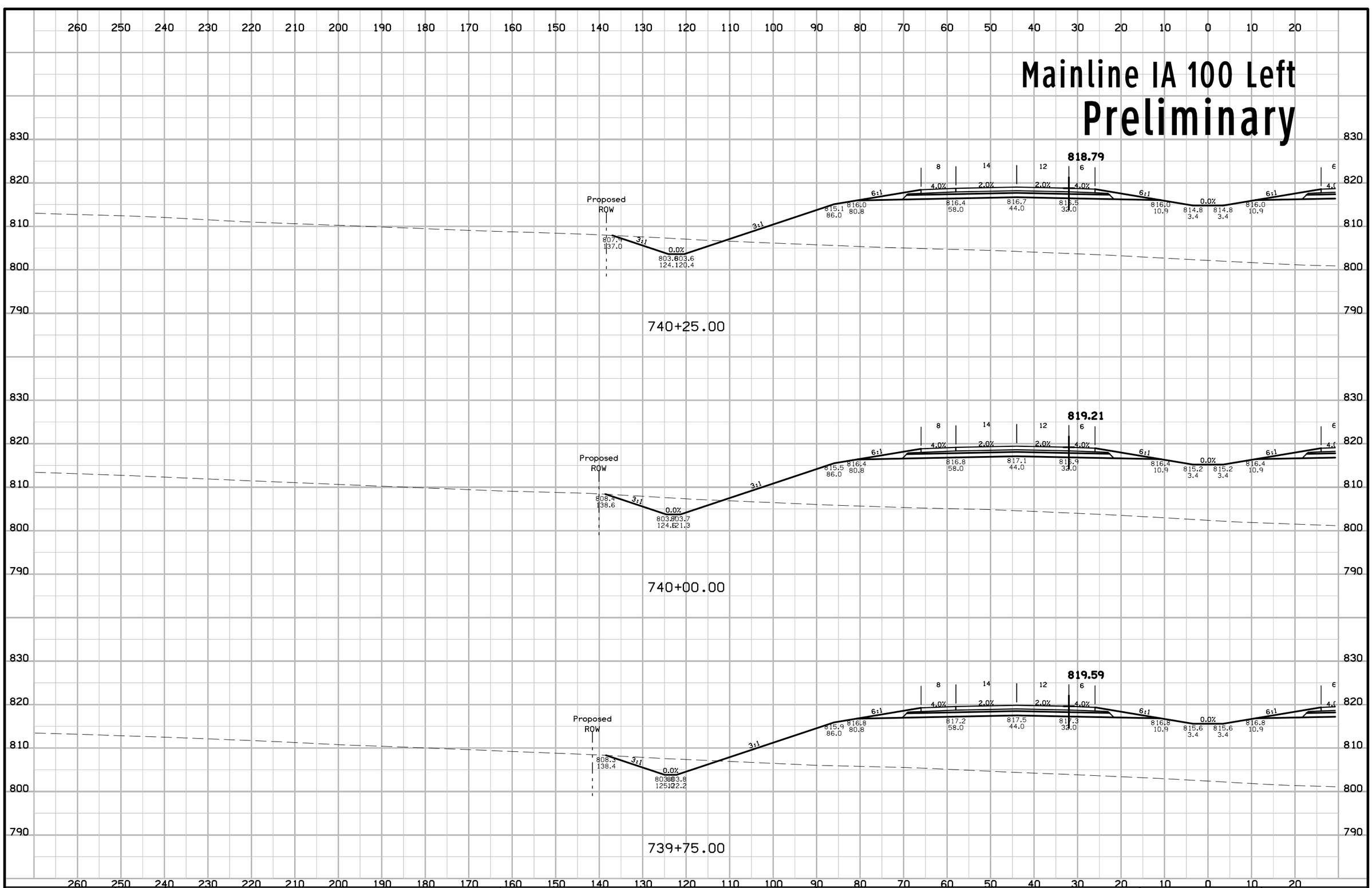
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.56

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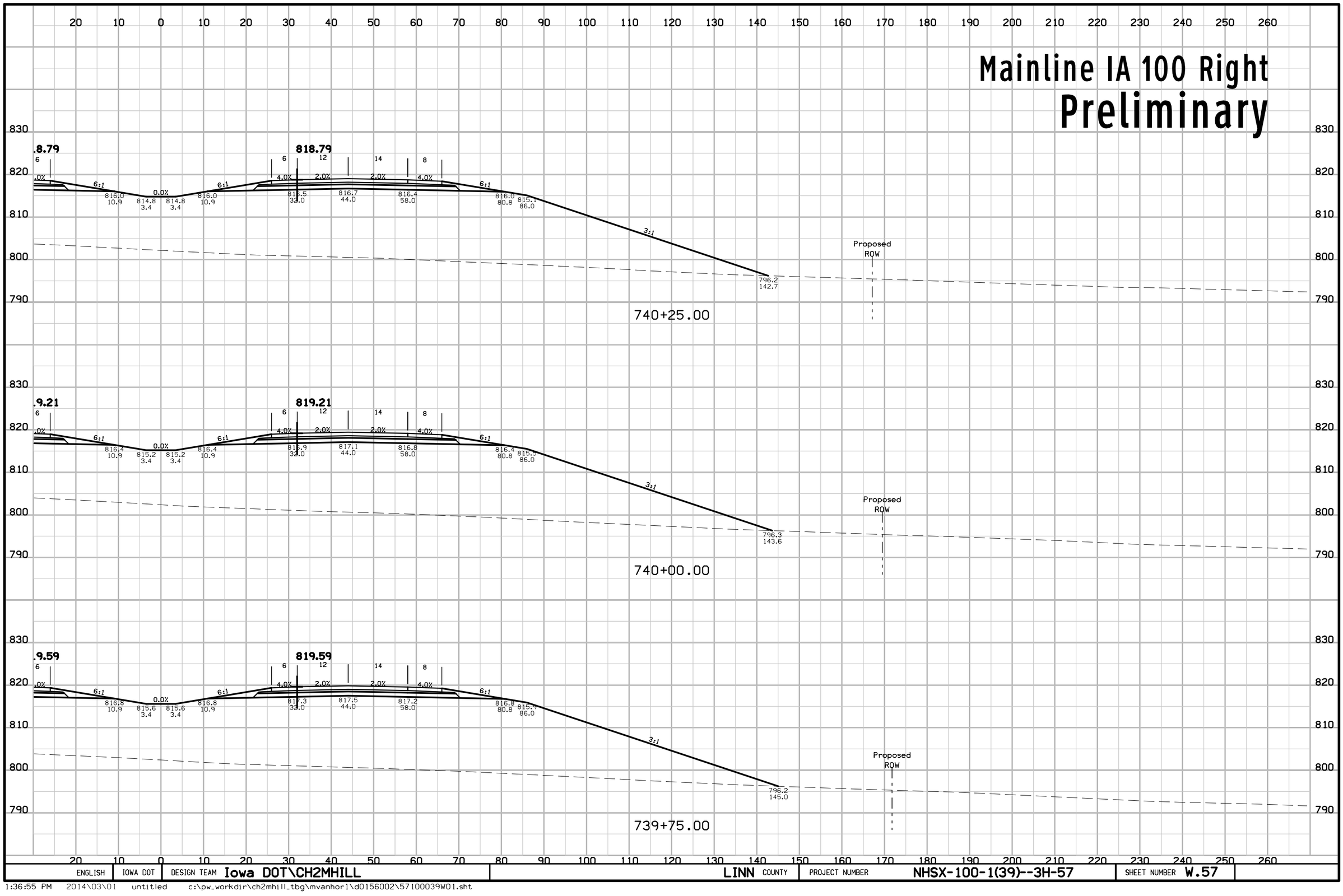
Preliminary



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

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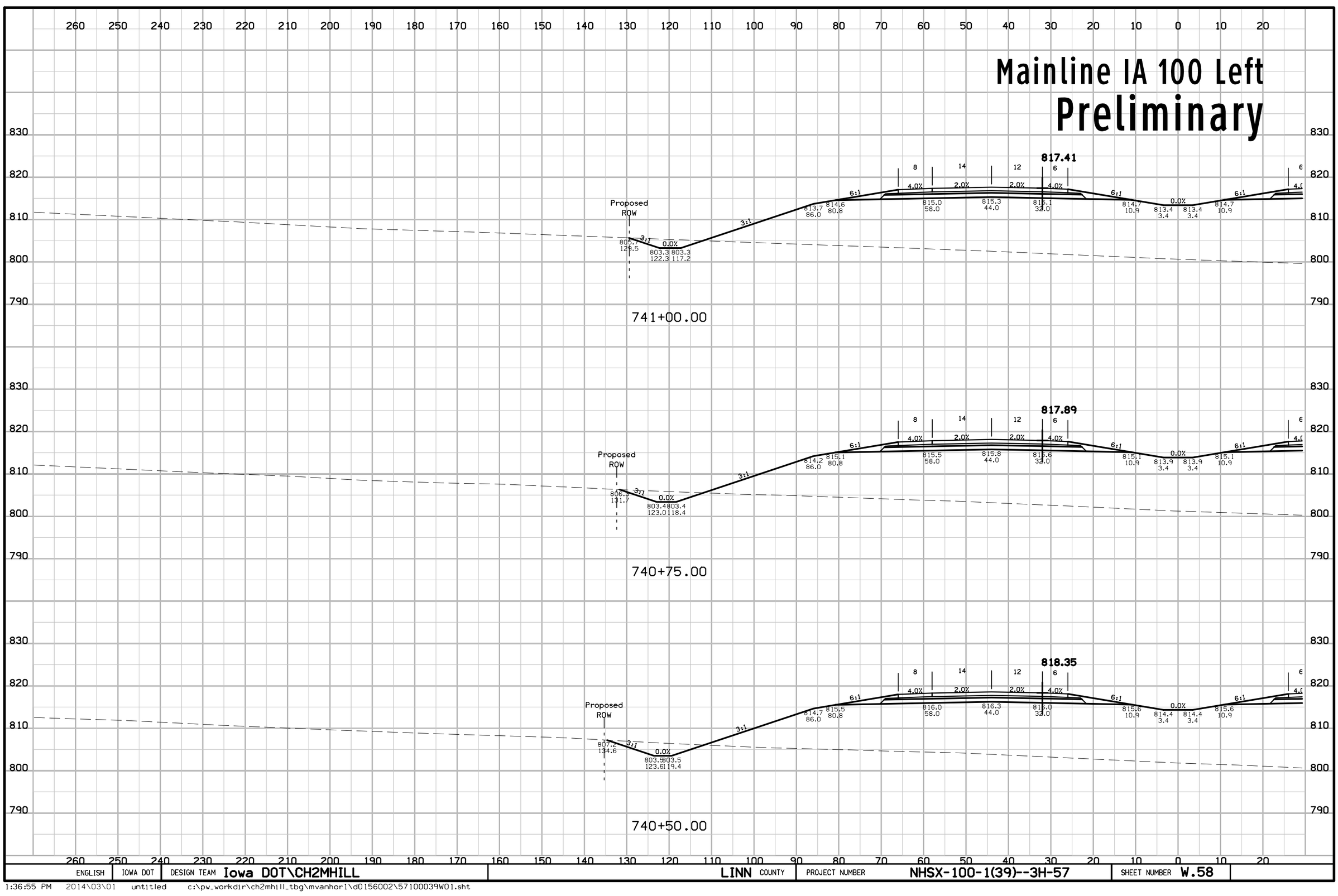
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.58

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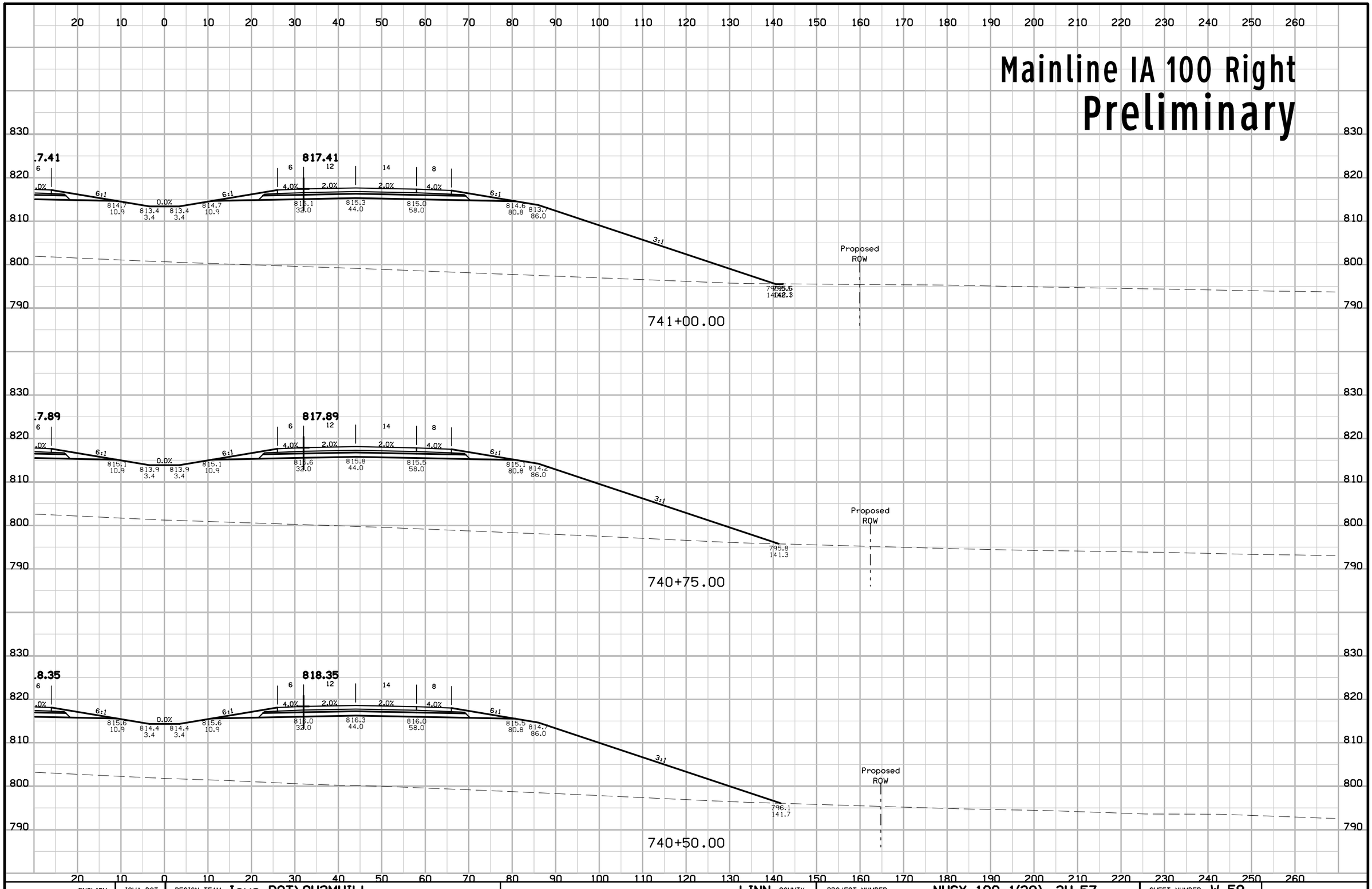

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.59

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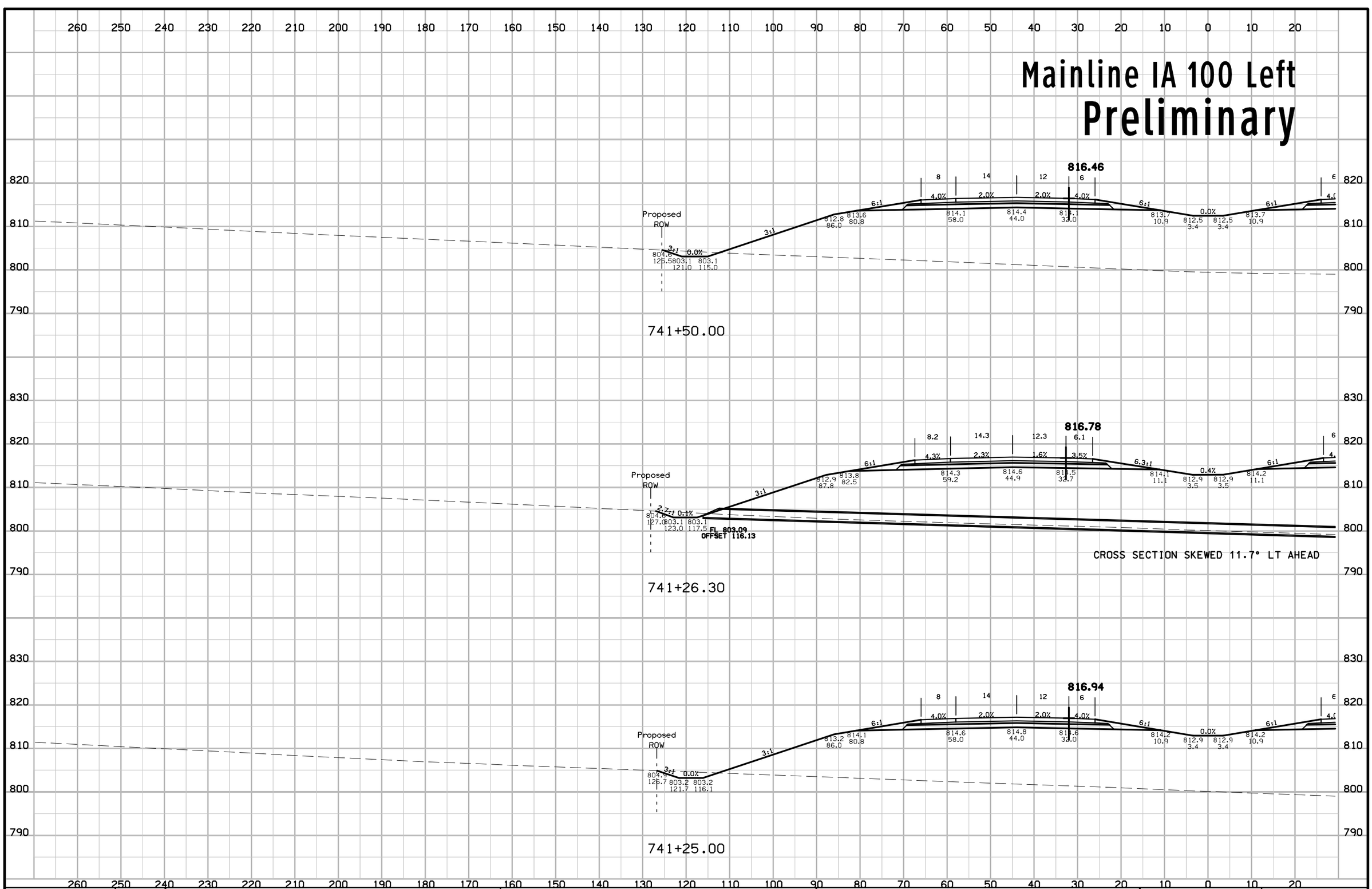
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.60

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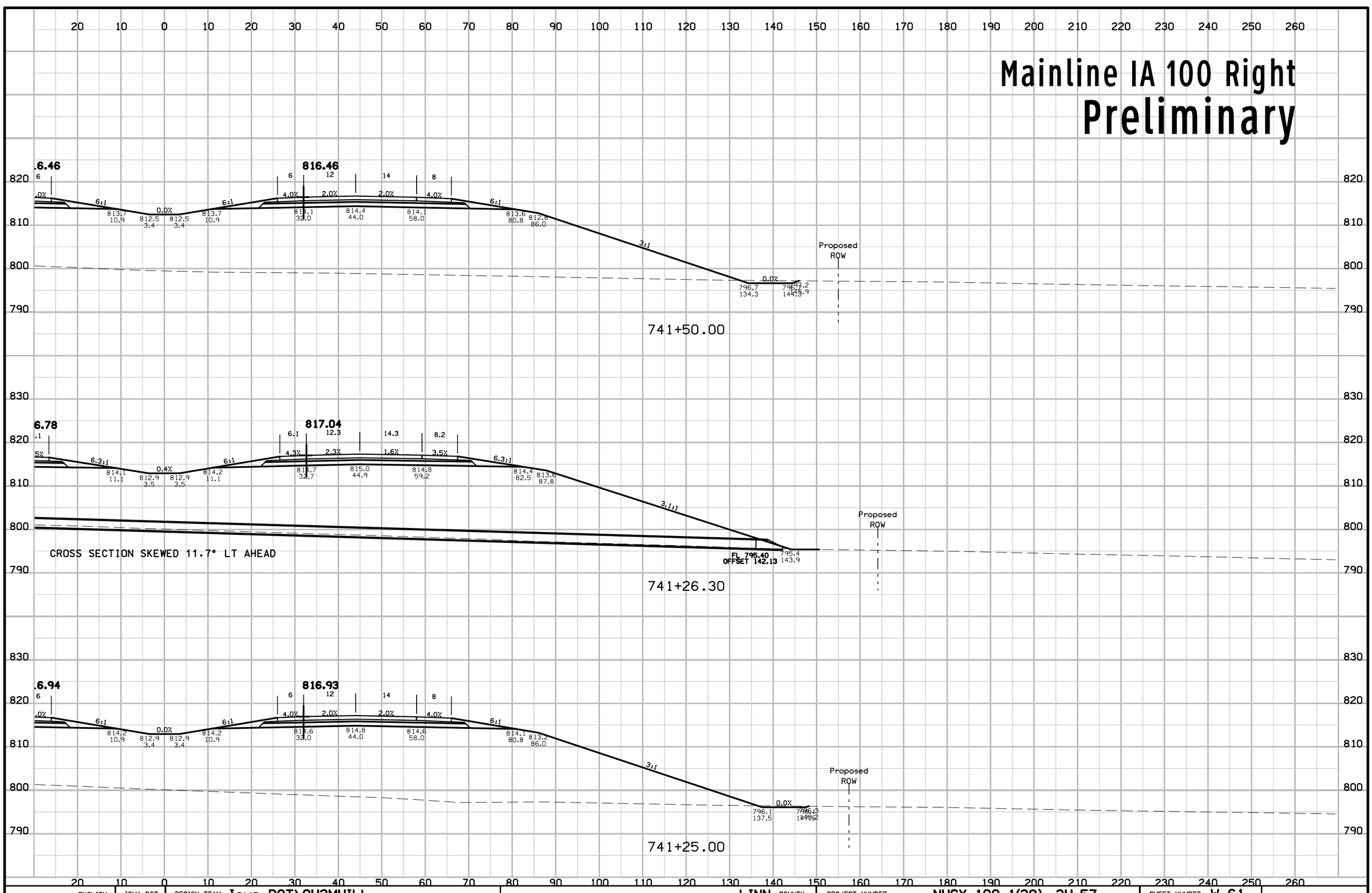

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.61

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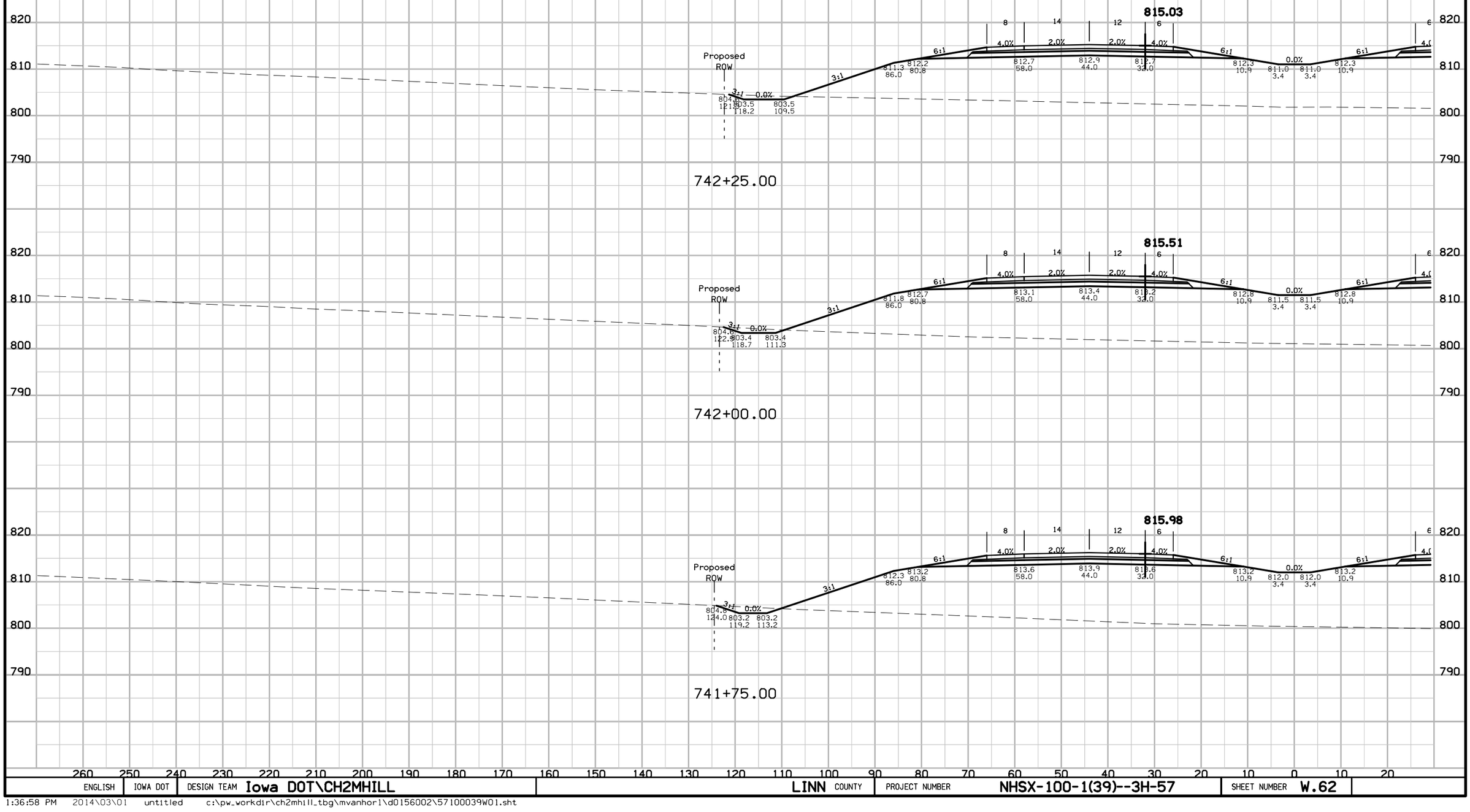
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.62

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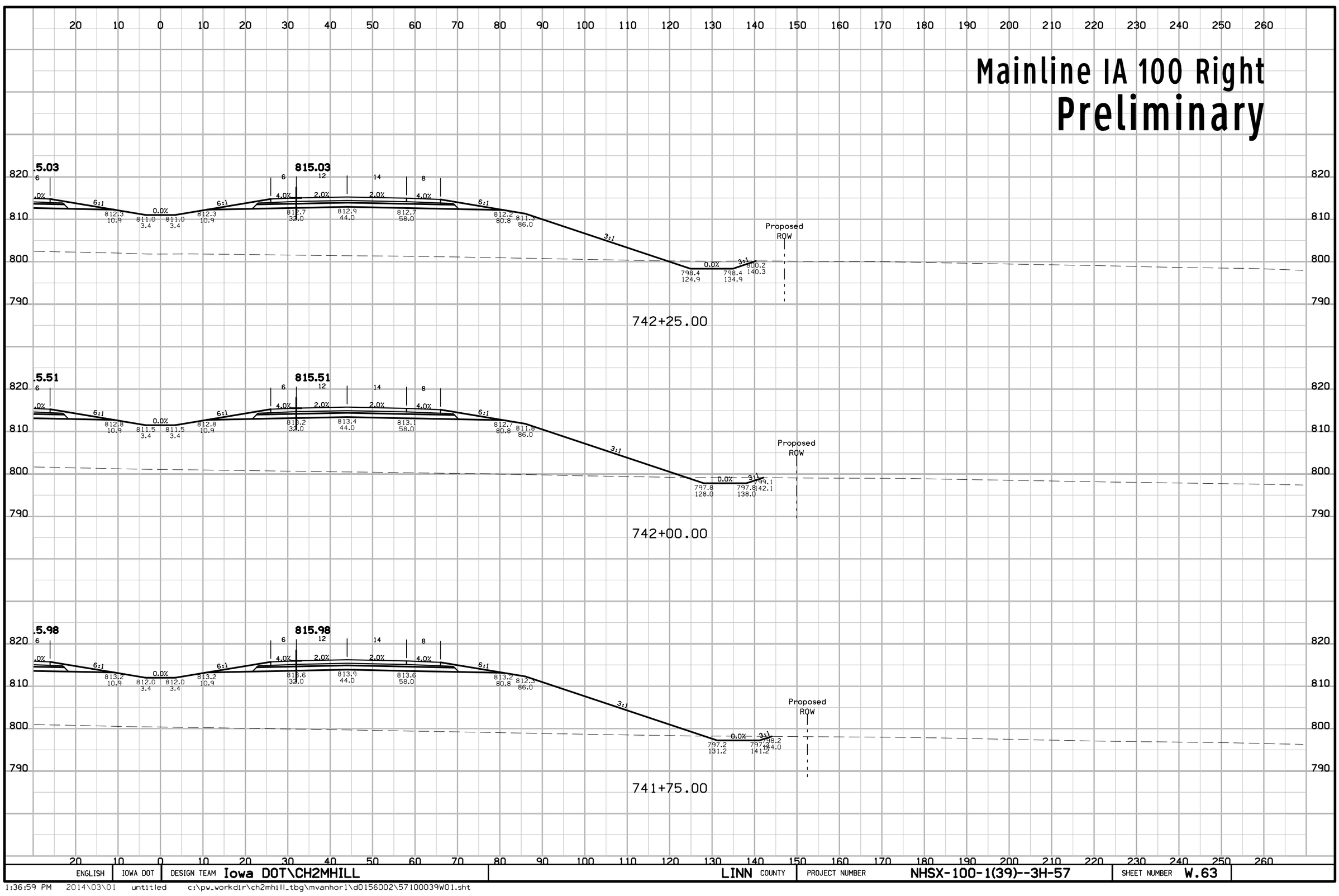

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.63

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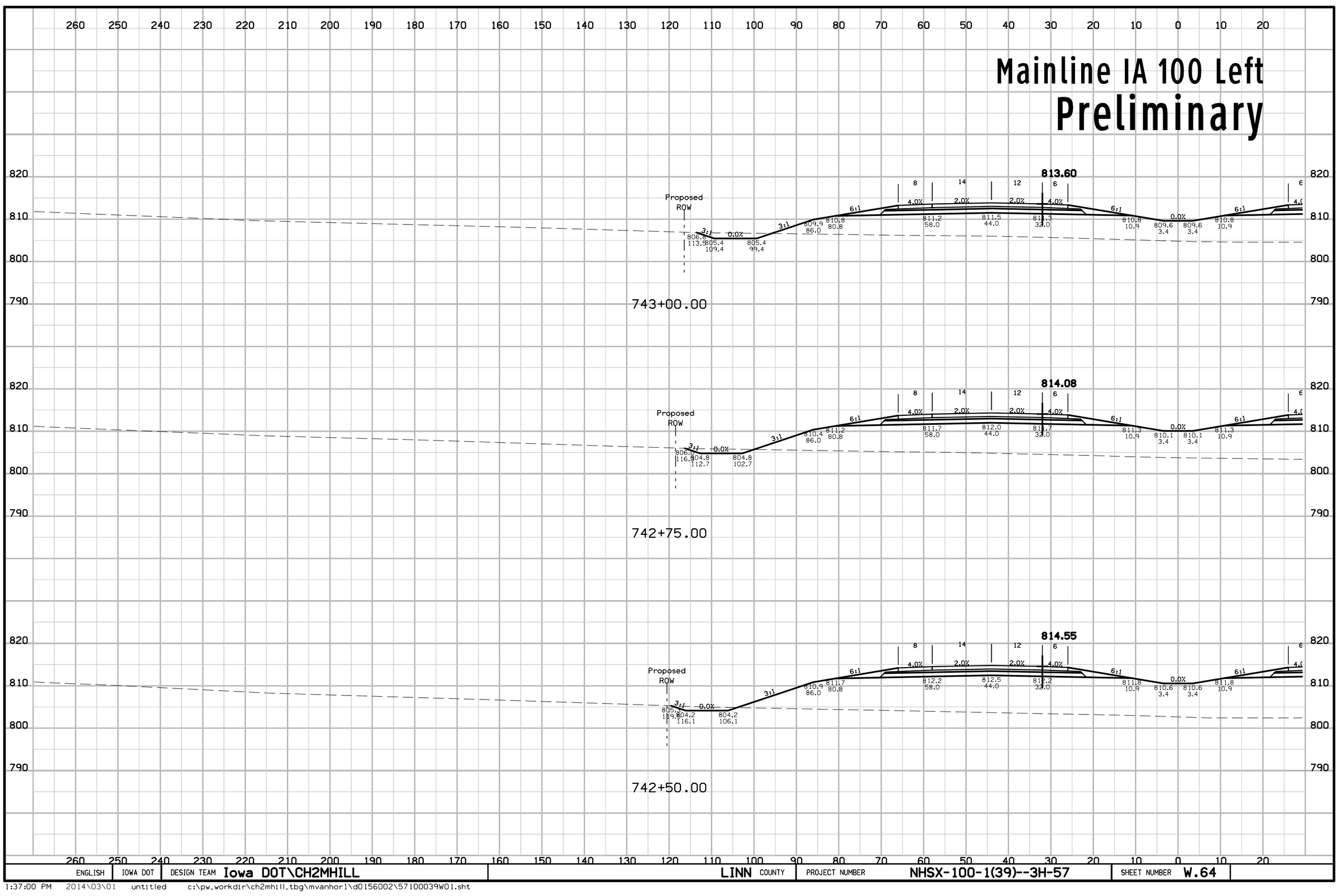
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.64

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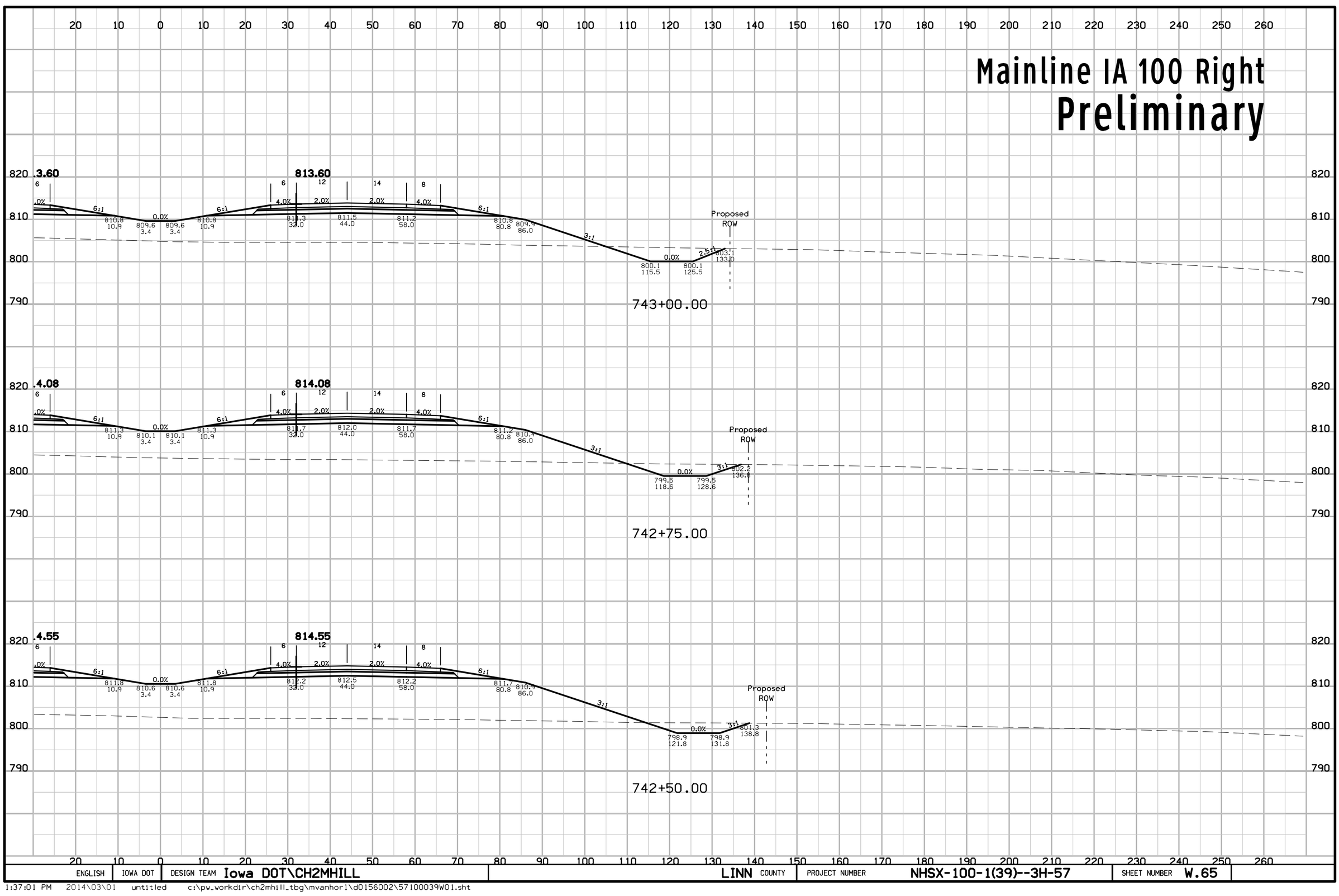
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	W.65

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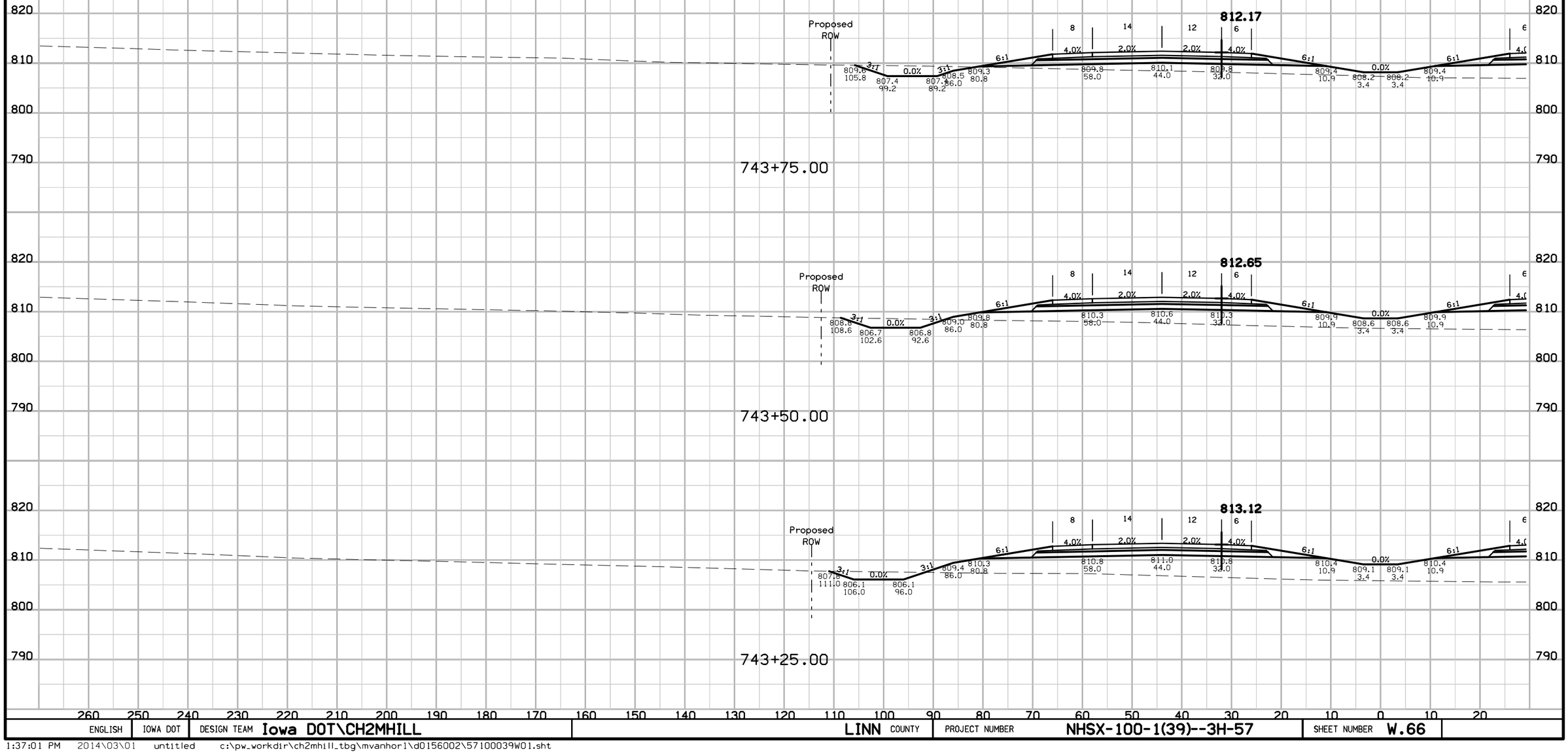
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.66

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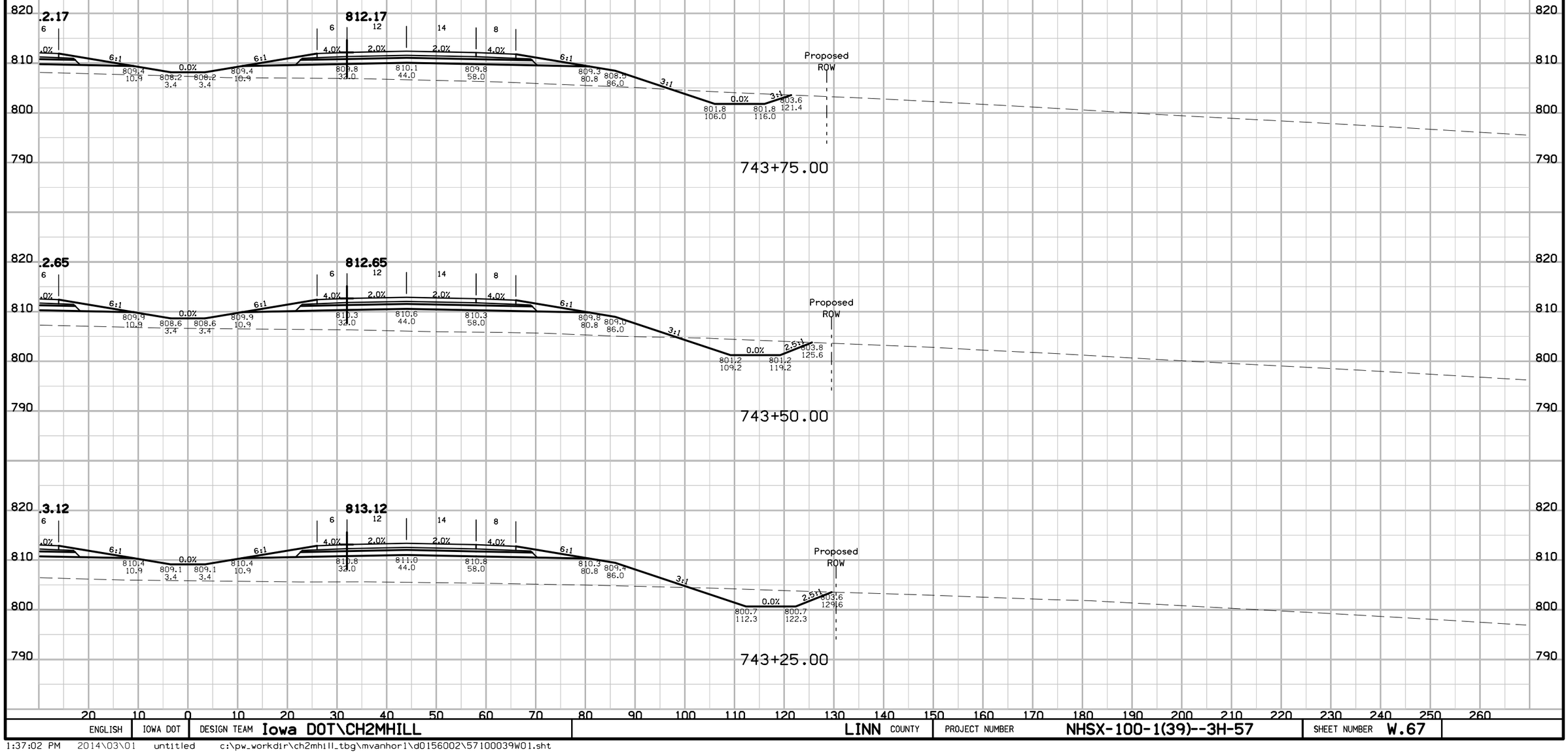

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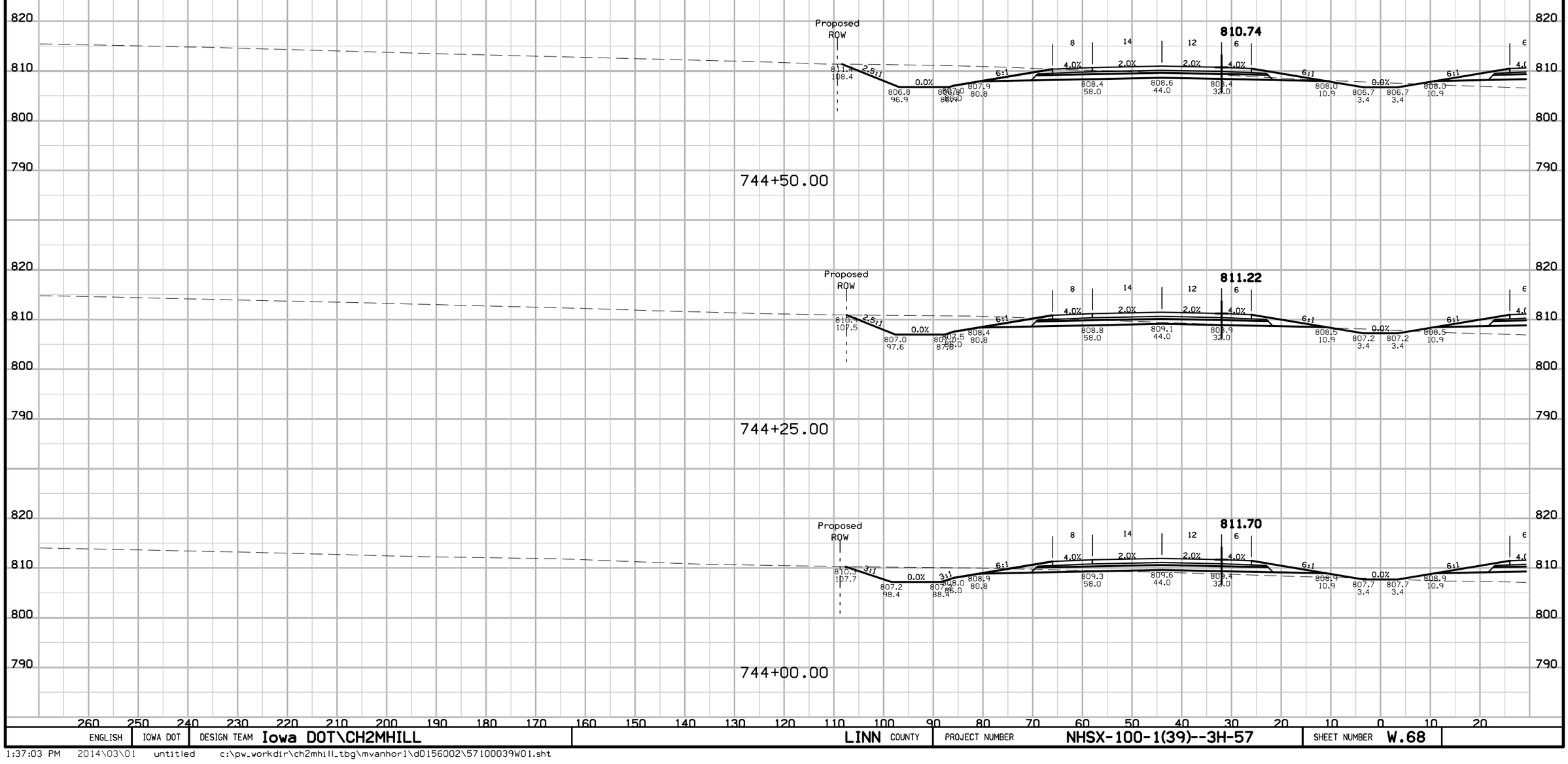
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.68

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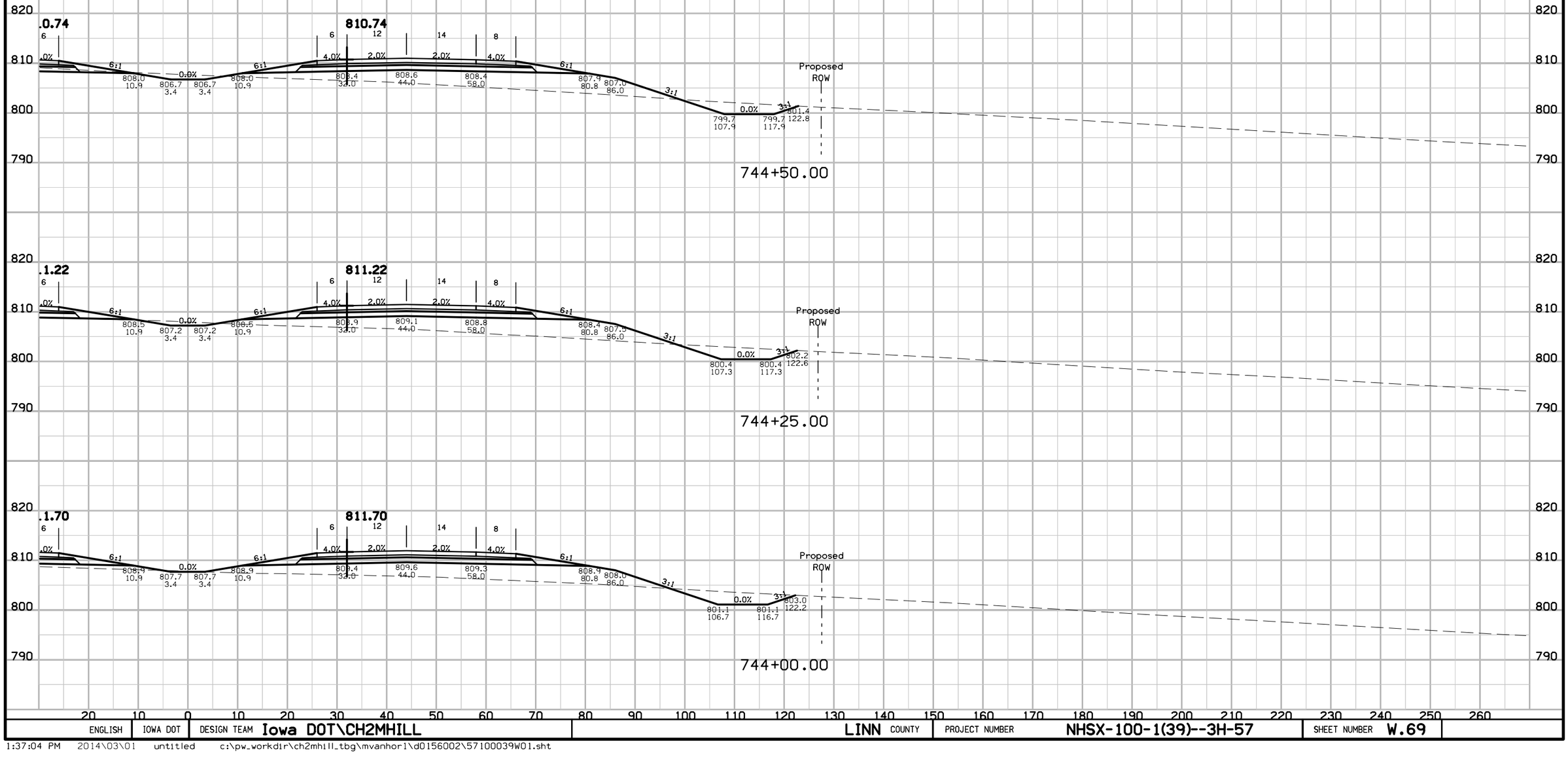

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.69

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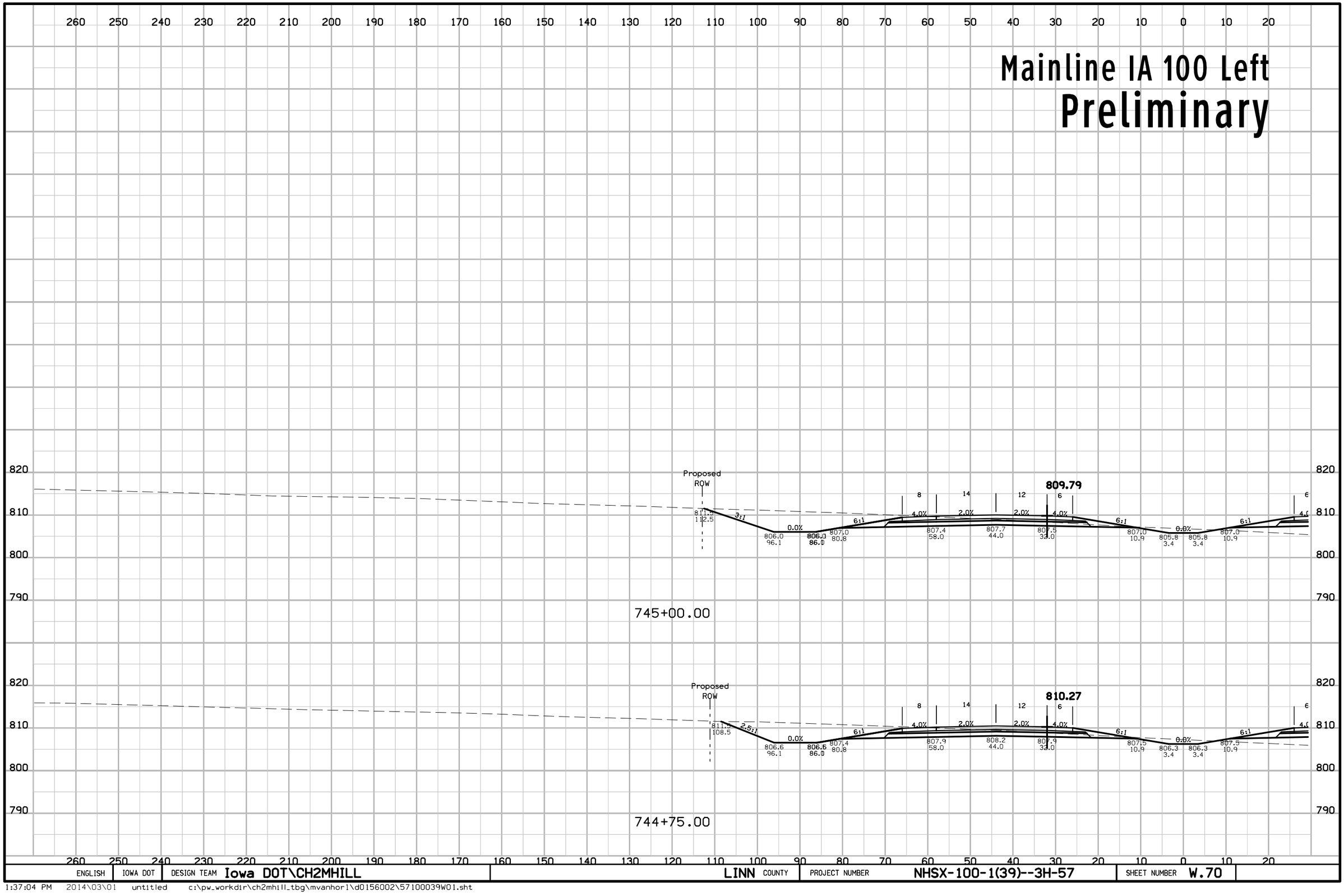
Preliminary



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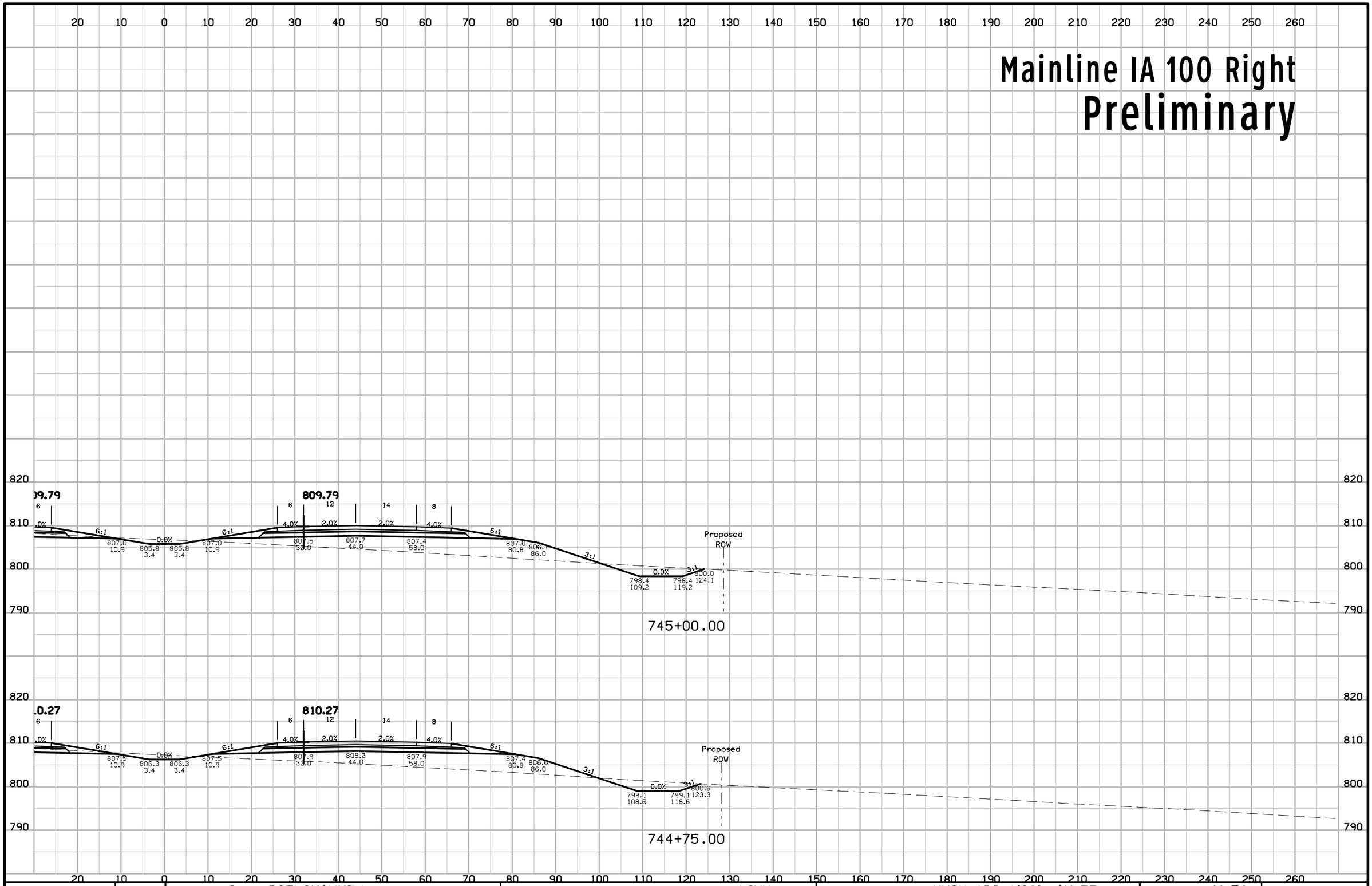
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.71

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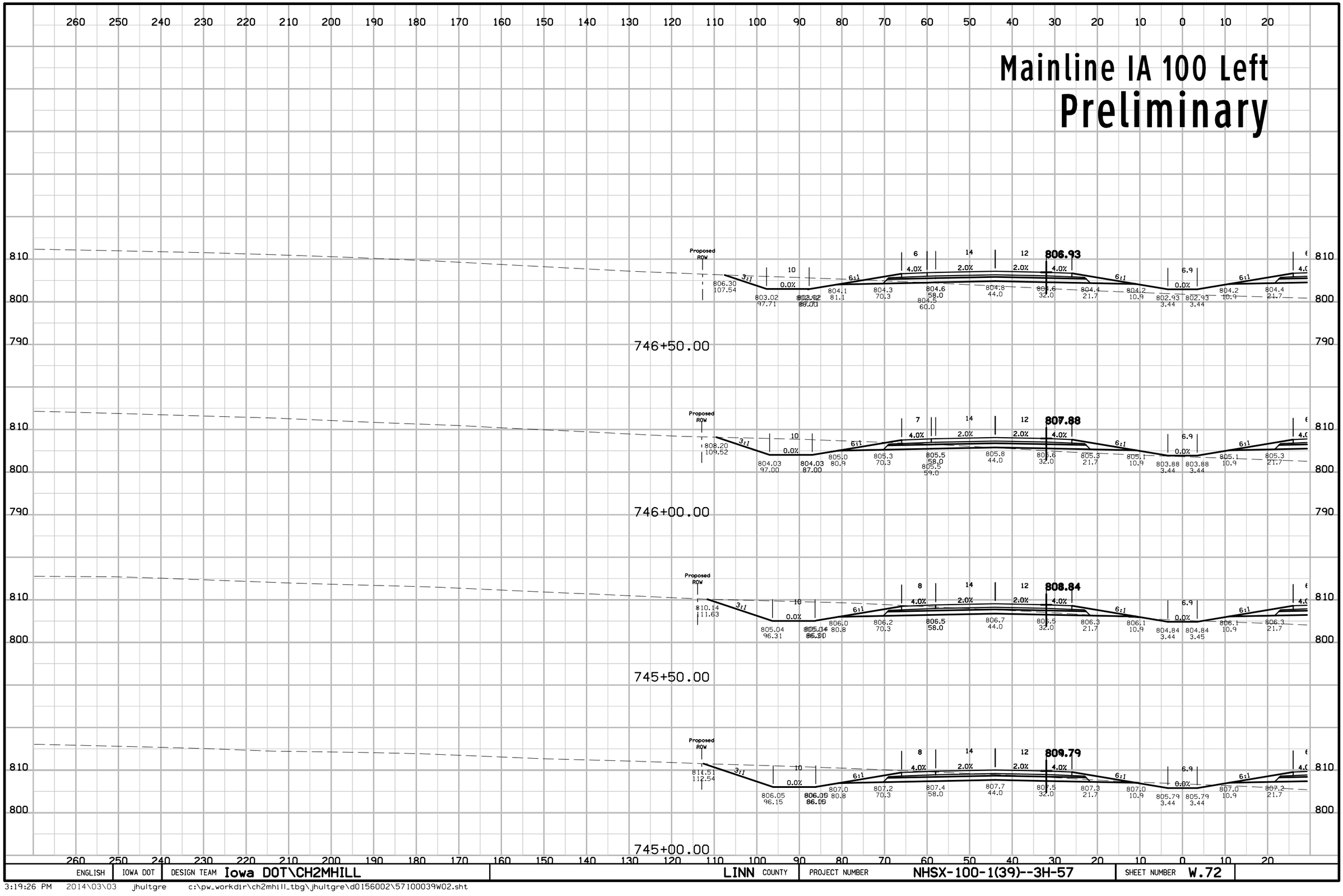
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.72

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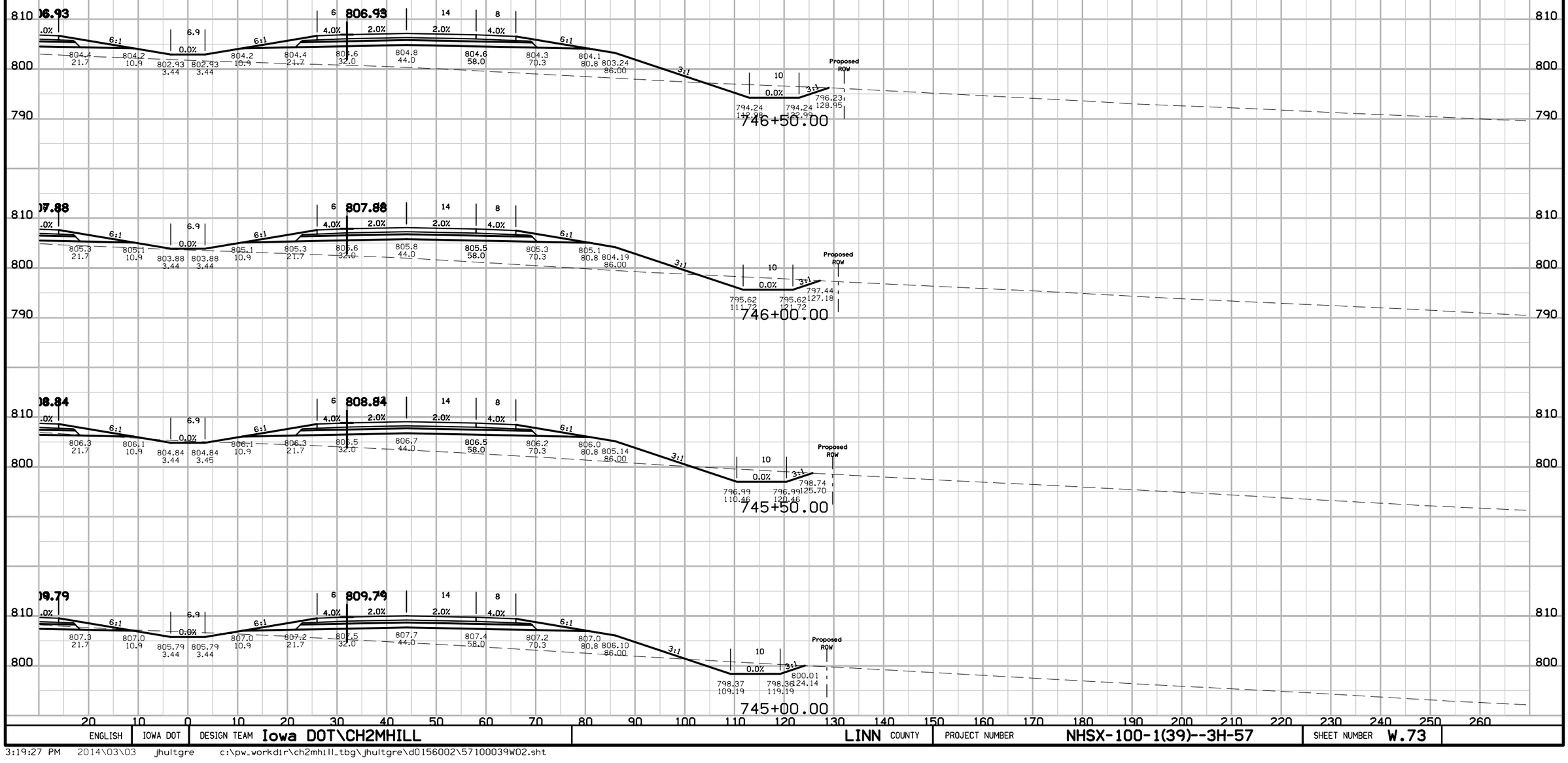
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.73

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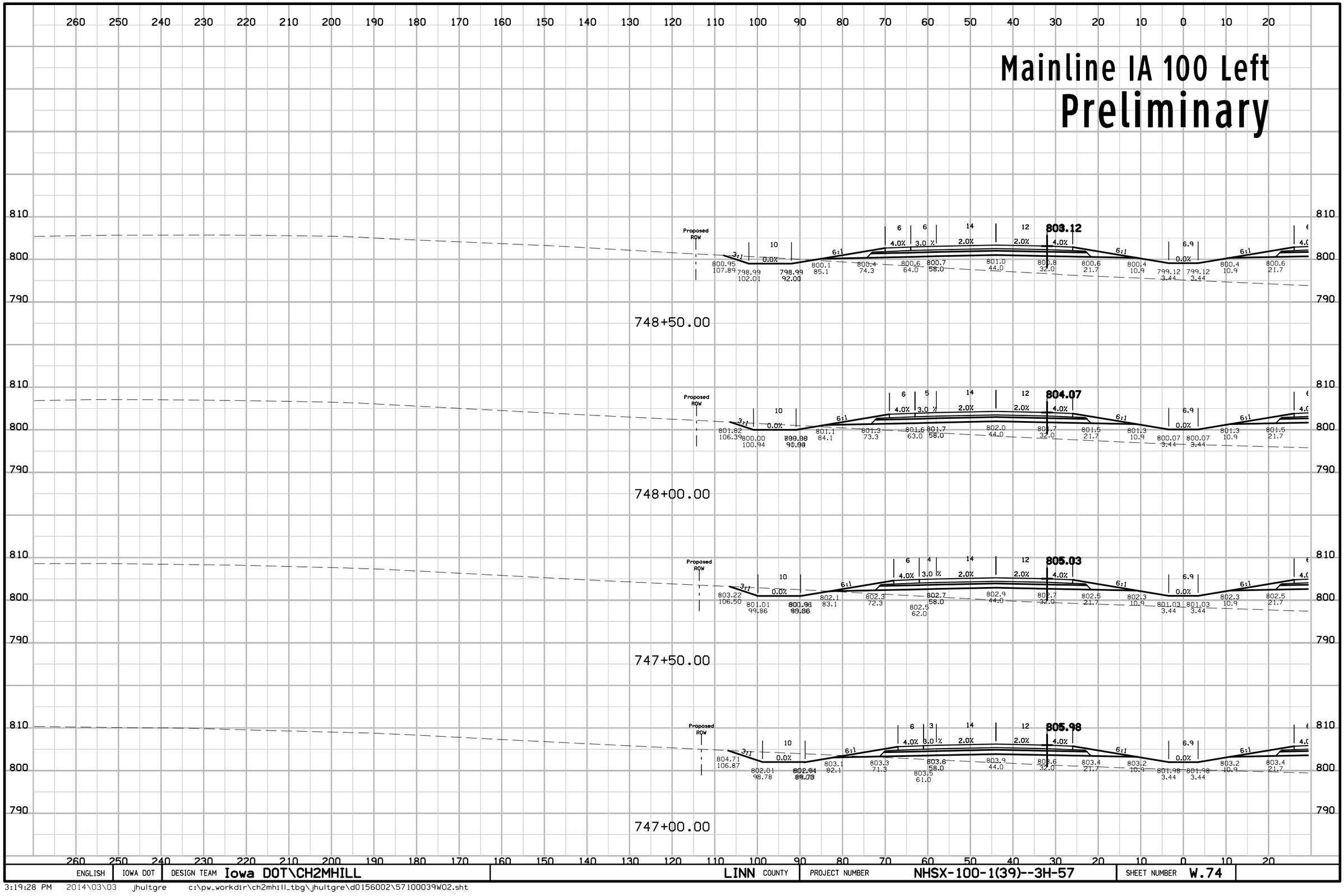
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.74

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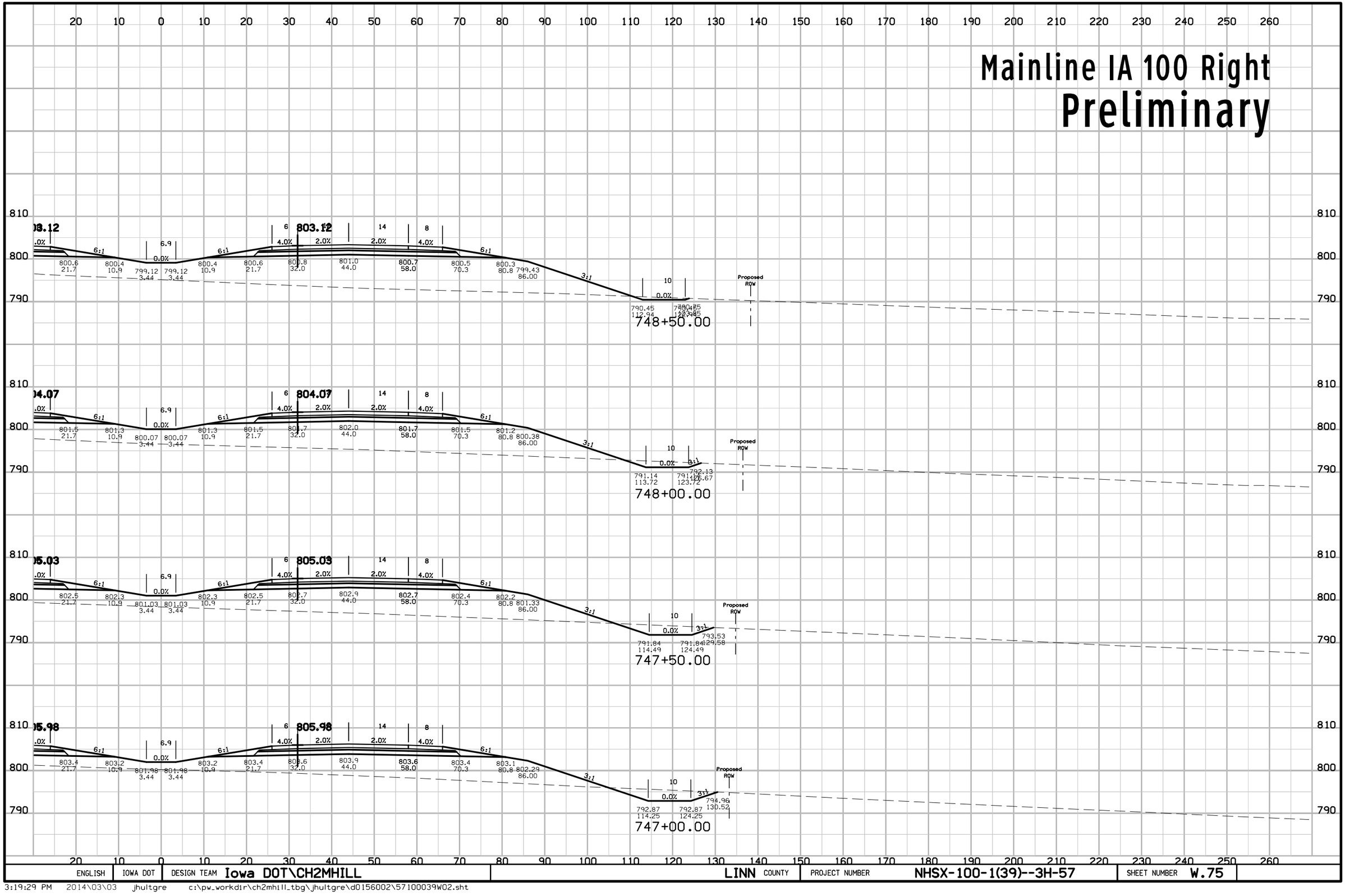
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.75

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Mainline IA 100 Left

Preliminary

260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20

800
790

Proposed ROW
802.95
122.14
2.5:1
9.6
0.0%
796.00
104.76
796.05
95.00
6:1
797.2
88.1
797.4
77.3
6
4.0%
797.6
67.0
9
3.0 %
14
2.0%
797.9
58.0
12
2.0%
798.2
44.0
806.26
4.0%
797.9
32.0
6:1
797.7
21.7
797.5
10.9
6.9
0.0%
796.26
3.44
796.26
3.44
6:1
797.5
10.9
797.7
21.7

750+00.00

Proposed ROW
802.54
117.95
2.5:1
10
0.0%
797.00
104.10
797.03
94.00
6:1
798.2
87.1
798.4
76.3
6
4.0%
798.6
66.0
8
3.0 %
14
2.0%
798.8
58.0
12
2.0%
799.1
44.0
801.22
4.0%
798.9
32.0
6:1
798.7
21.7
798.5
10.9
6.9
0.0%
797.22
3.44
797.22
3.44
6:1
798.5
10.9
798.7
21.7

749+50.00

Proposed ROW
801.50
113.58
3:1
10
0.0%
797.99
103.05
798.09
93.06
6:1
799.2
86.1
799.4
75.3
6
4.0%
799.6
65.0
7
3.0 %
14
2.0%
799.8
58.0
12
2.0%
800.1
44.0
802.17
4.0%
799.8
32.0
6:1
799.6
21.7
799.4
10.9
6.9
0.0%
798.17
3.44
798.17
3.44
6:1
799.4
10.9
799.6
21.7

749+00.00

Proposed ROW
801.0
109.2
799.3
104.1
3:1
10.2
0.4%
799.2
93.9
6.3:1
800.4
86.8
FL 799.09
OFFSET 90.13
6.1
3.5%
6
2.5%
20.314
1.8%1.5%
800.5
75.9
800.7
65.1
12.3
2.4%
803.11
4.3%
800.8
32.7
6:1
800.5
22.2
800.3
11.2
7.1
0.4%
799.0
3.5
799.0
3.5
6.3:1
800.2
11.2
800.4
22.2

748+57.33

CROSS SECTION SKEWED 12.3° RT AHEAD

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.76

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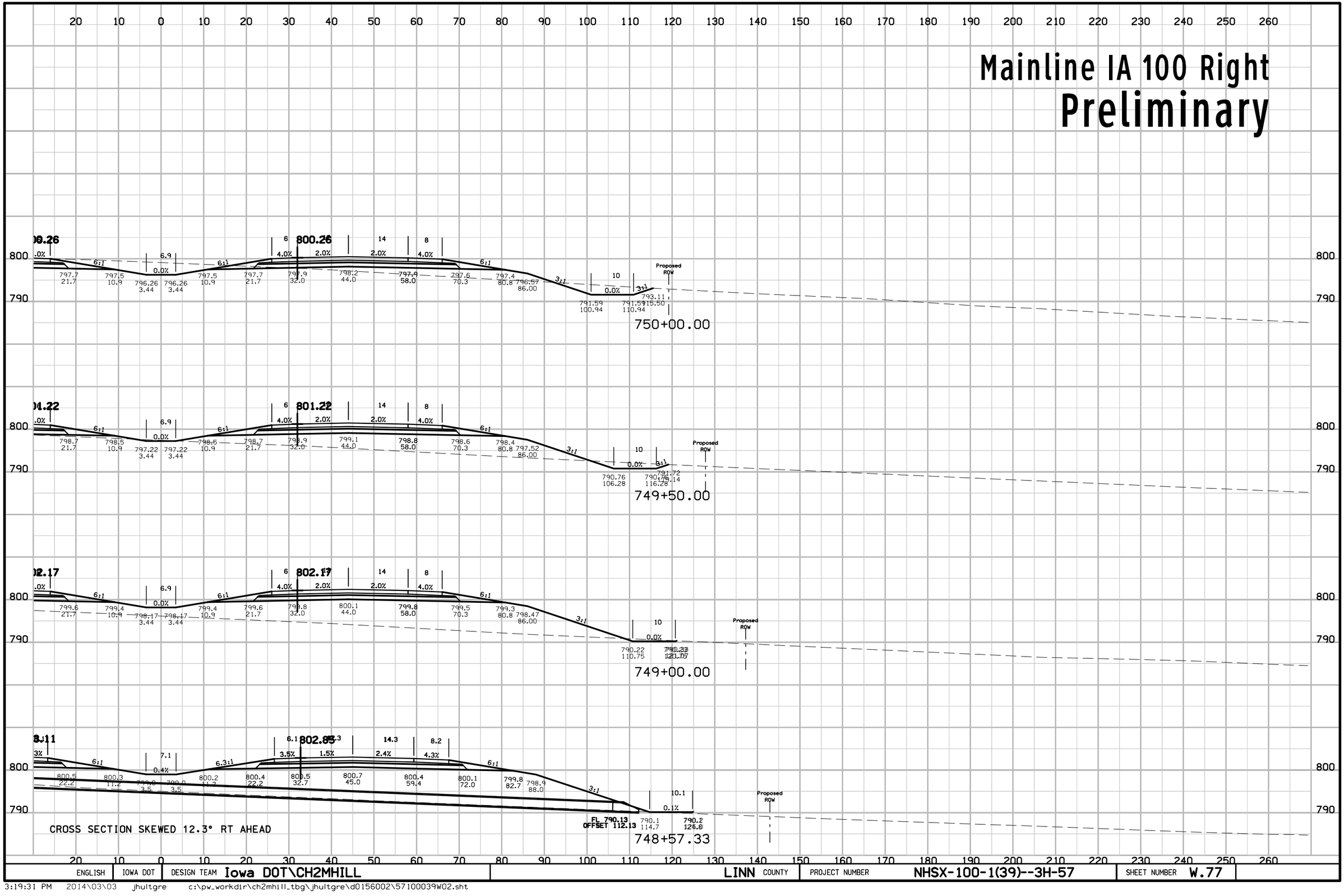
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.77

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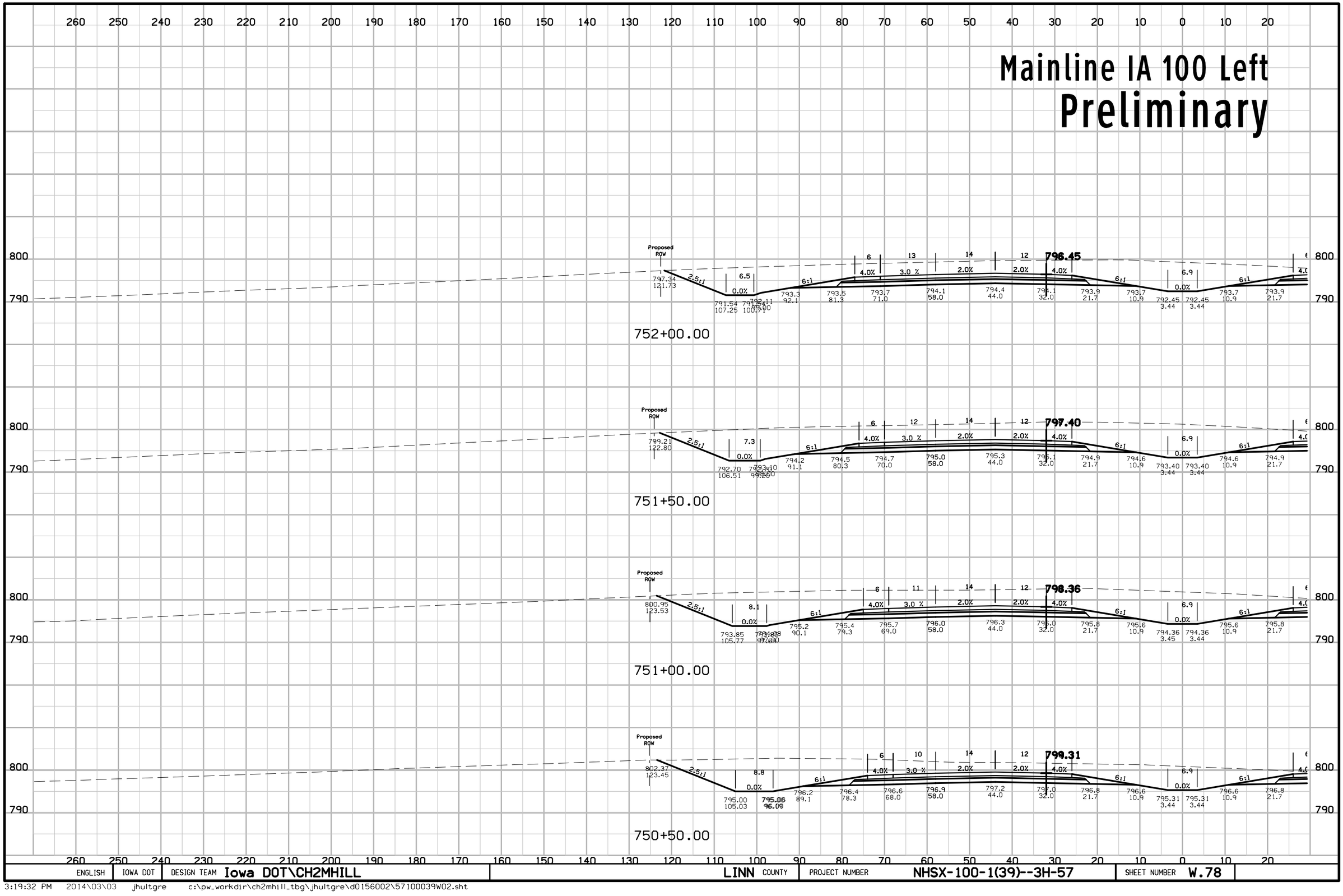
Preliminary



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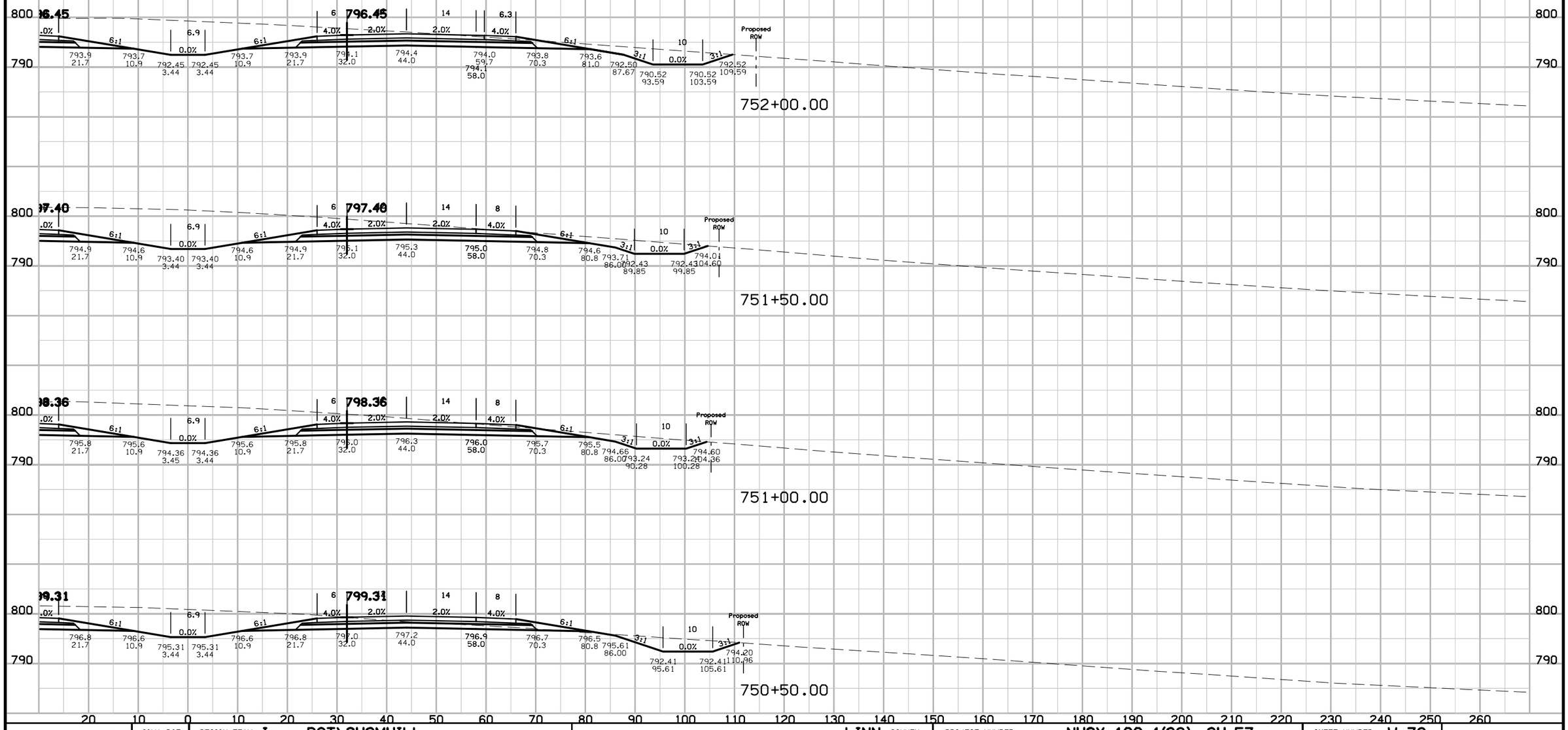
Preliminary



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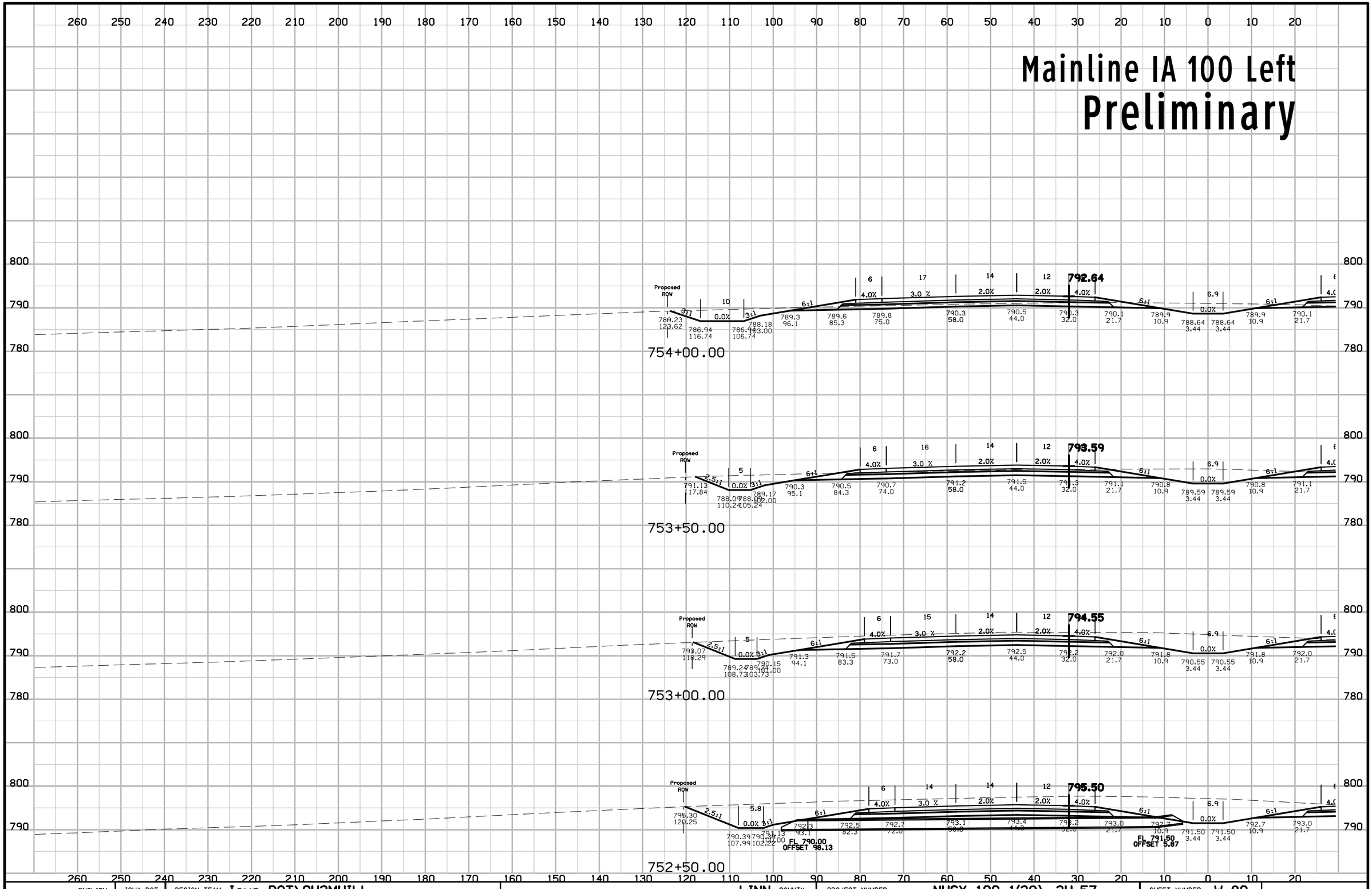
Preliminary



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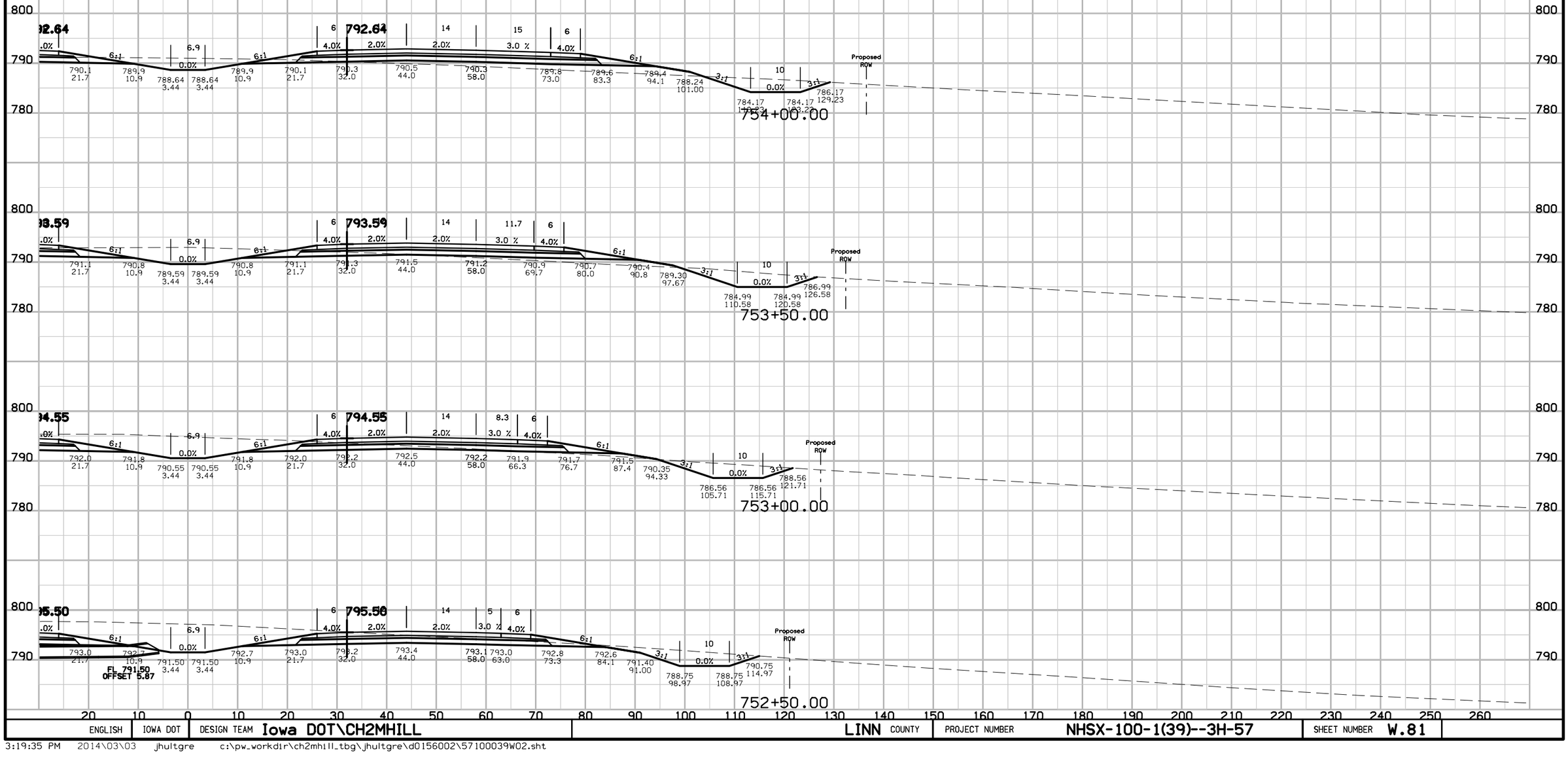
Preliminary



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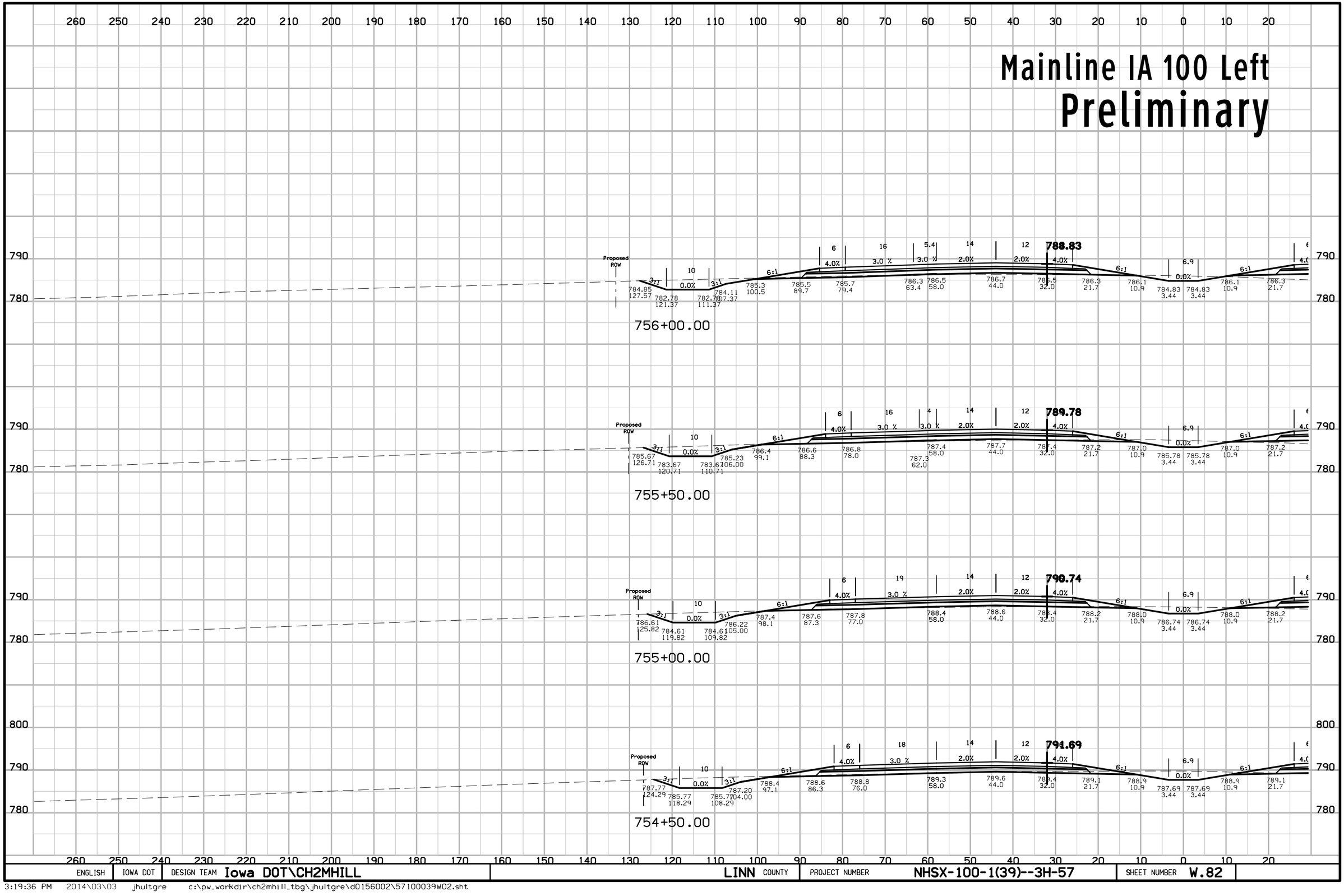
Preliminary



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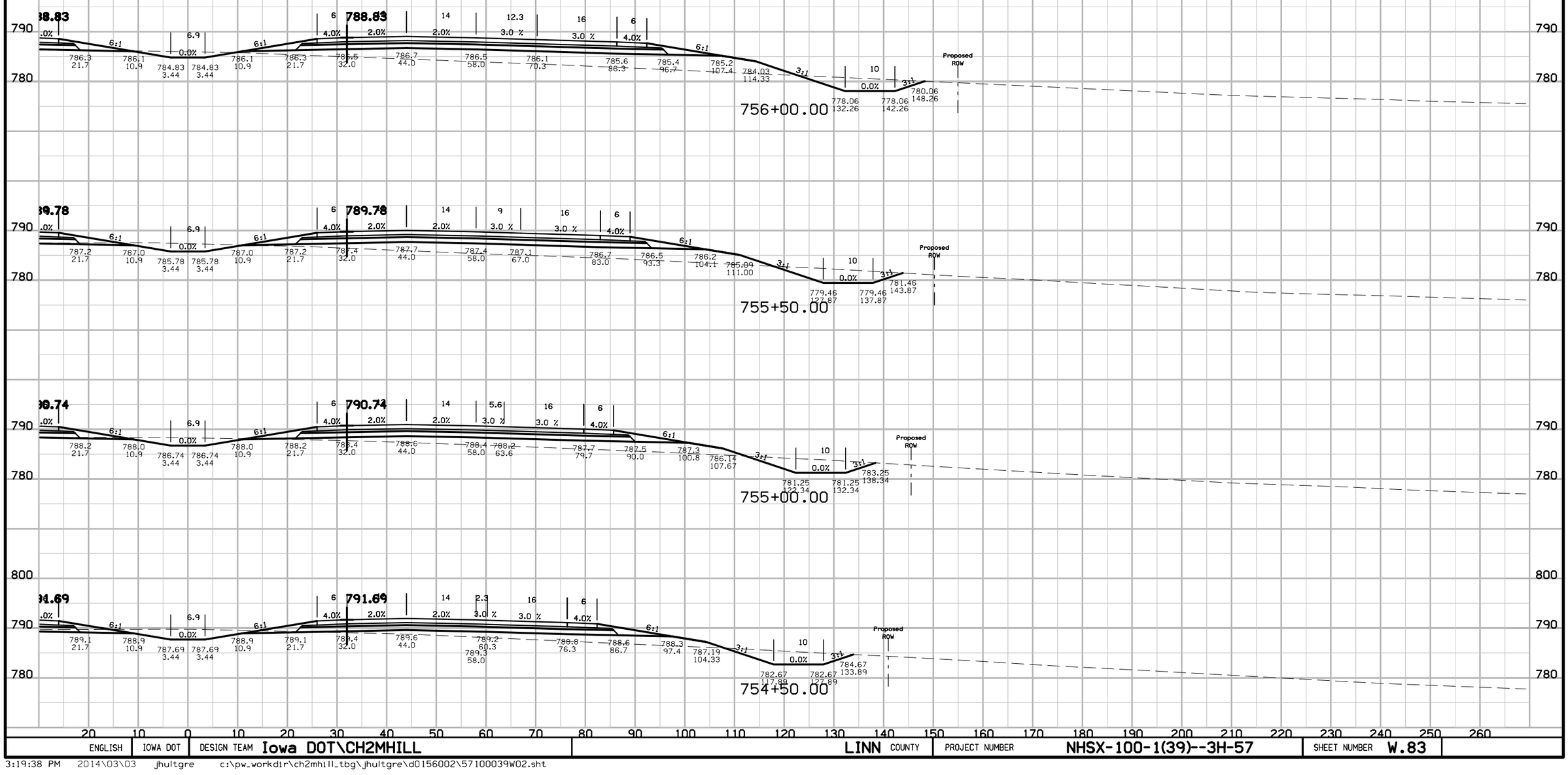
Preliminary



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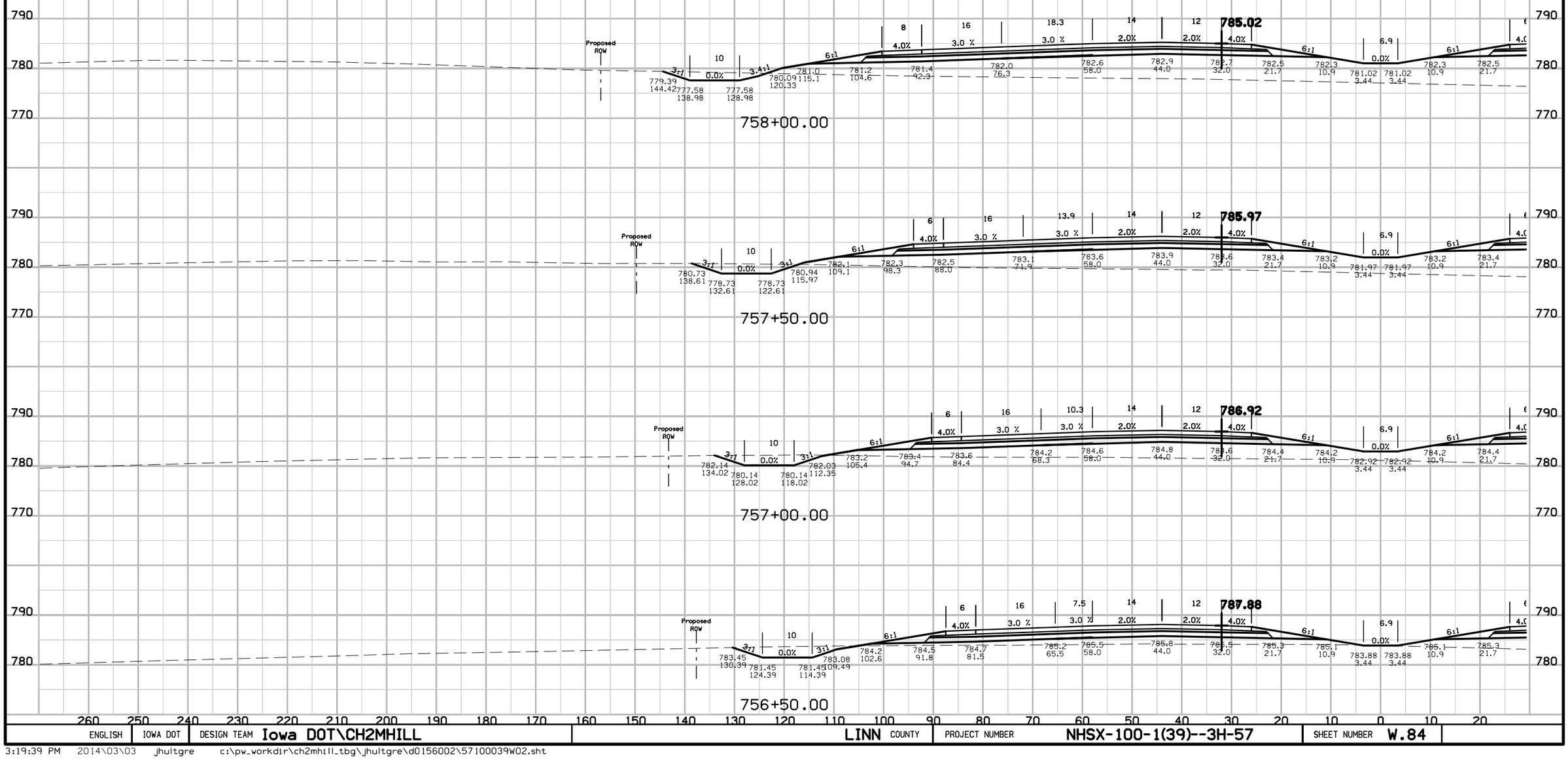
Preliminary



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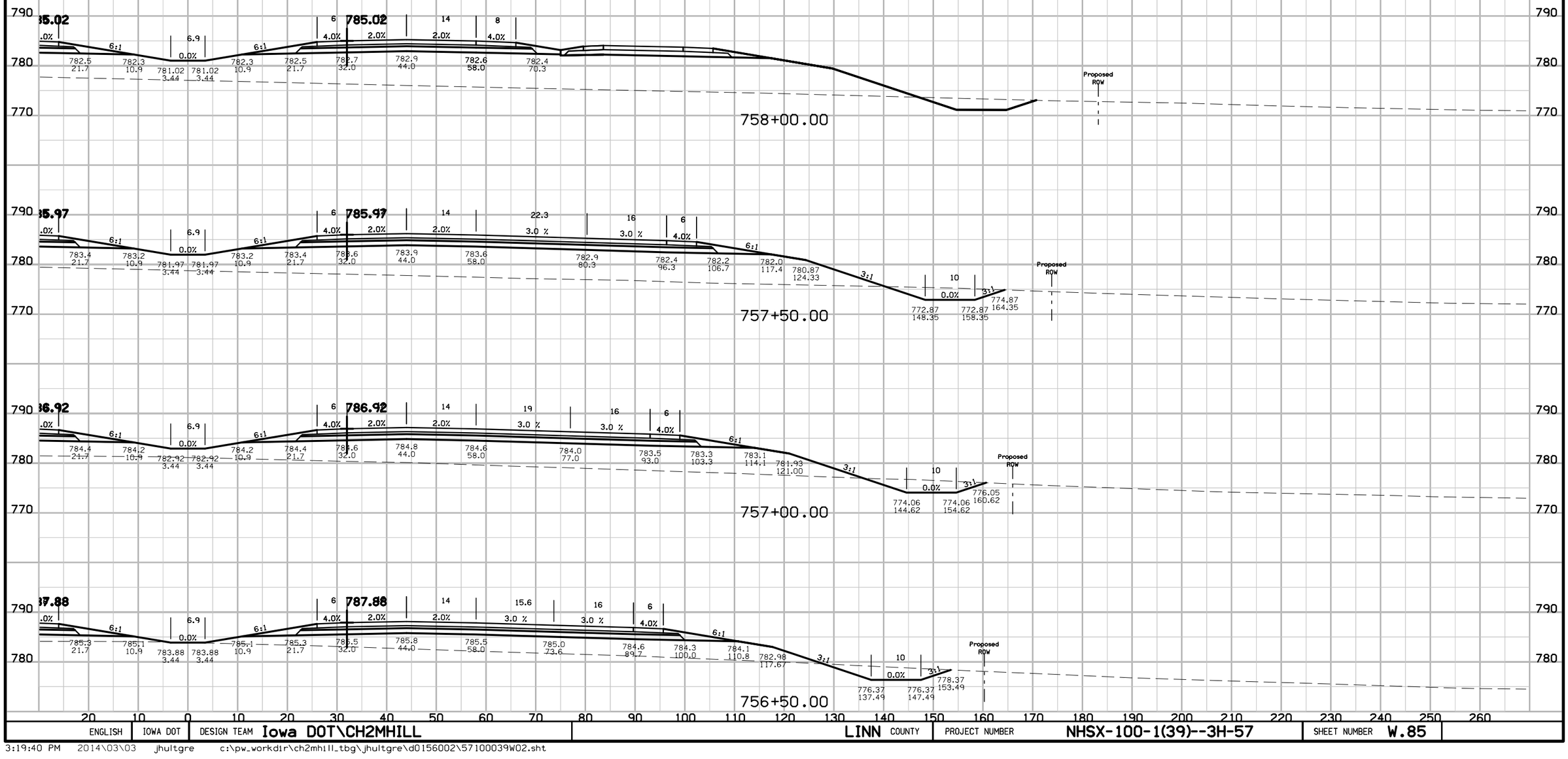

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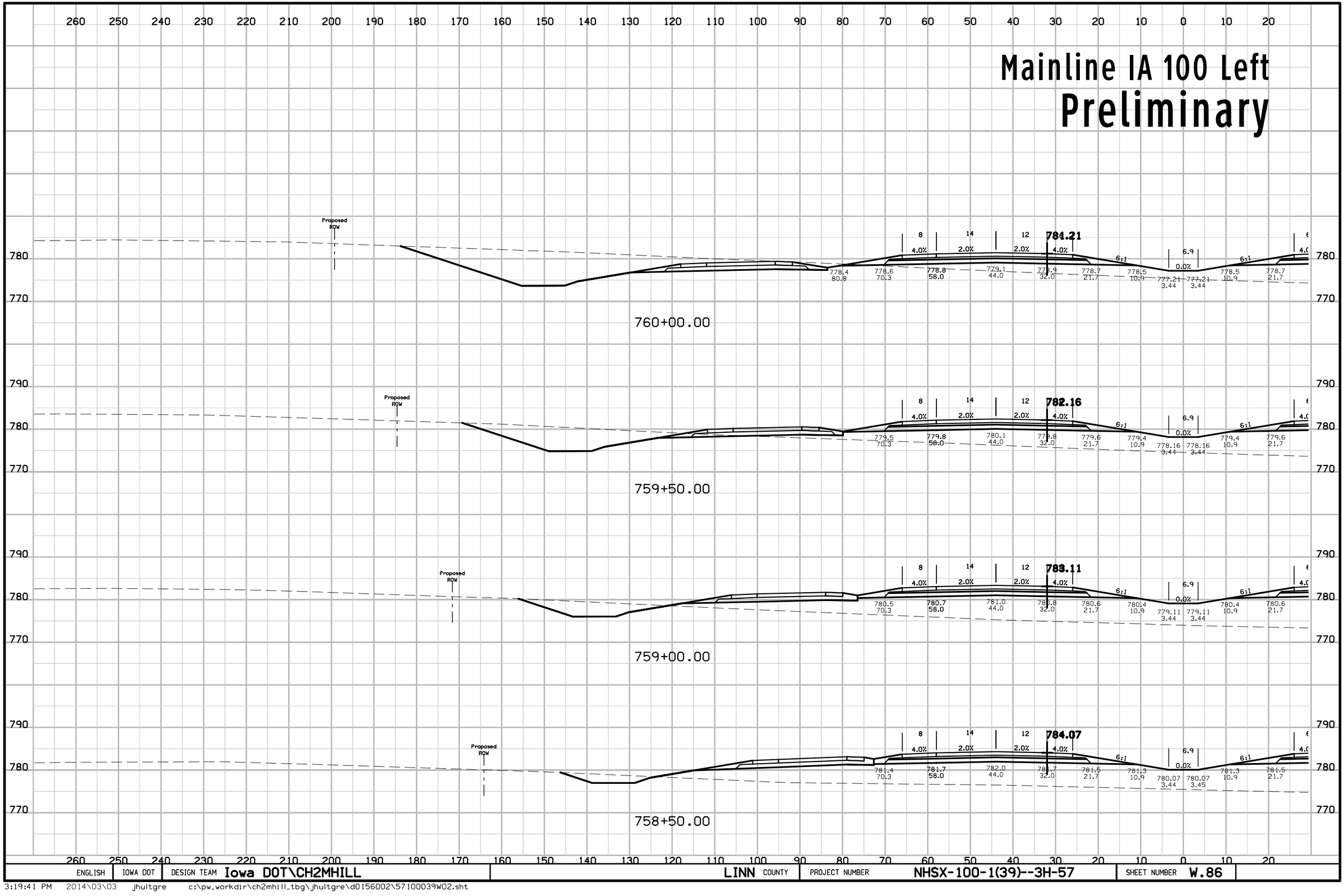

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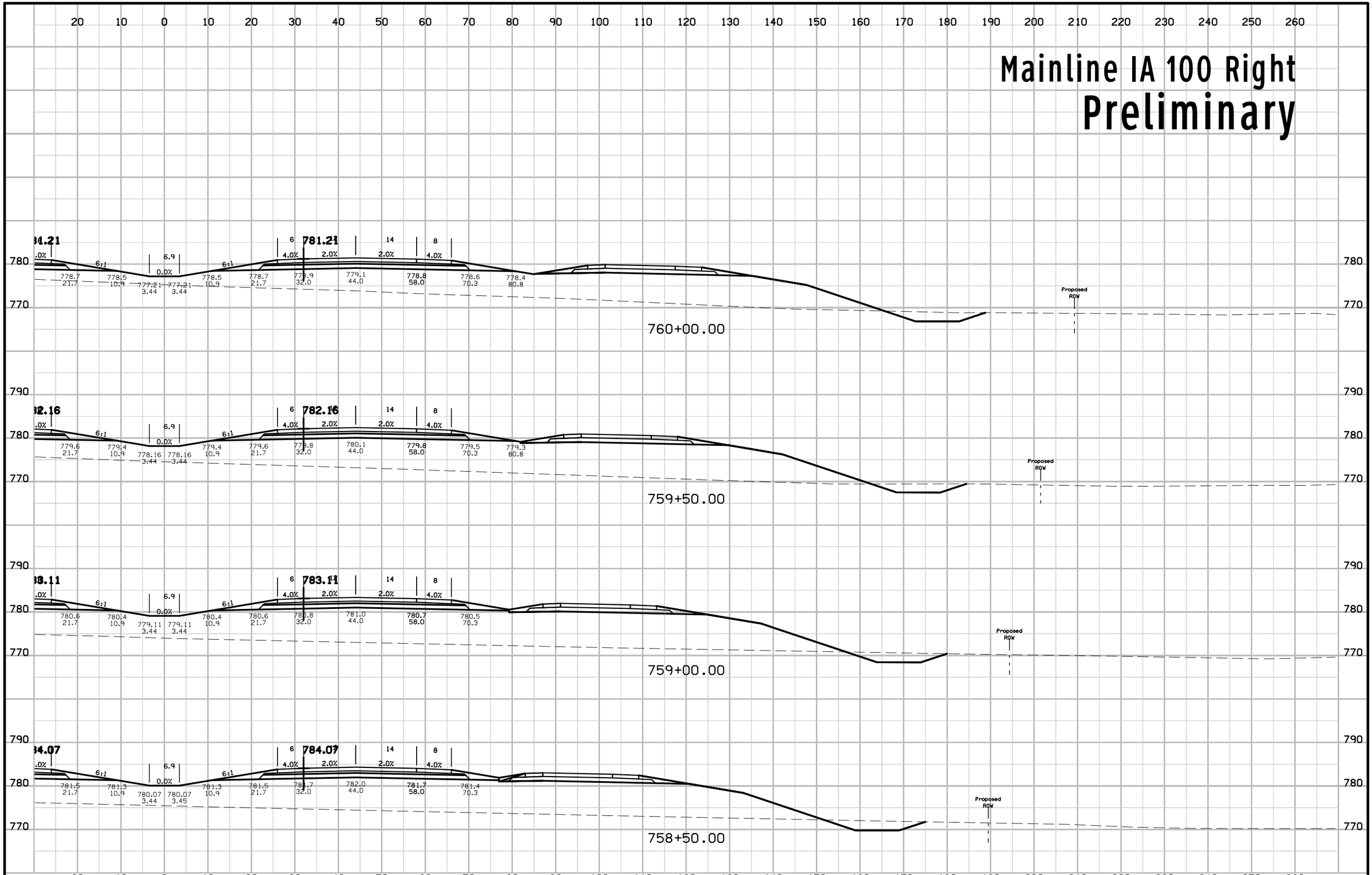
Preliminary



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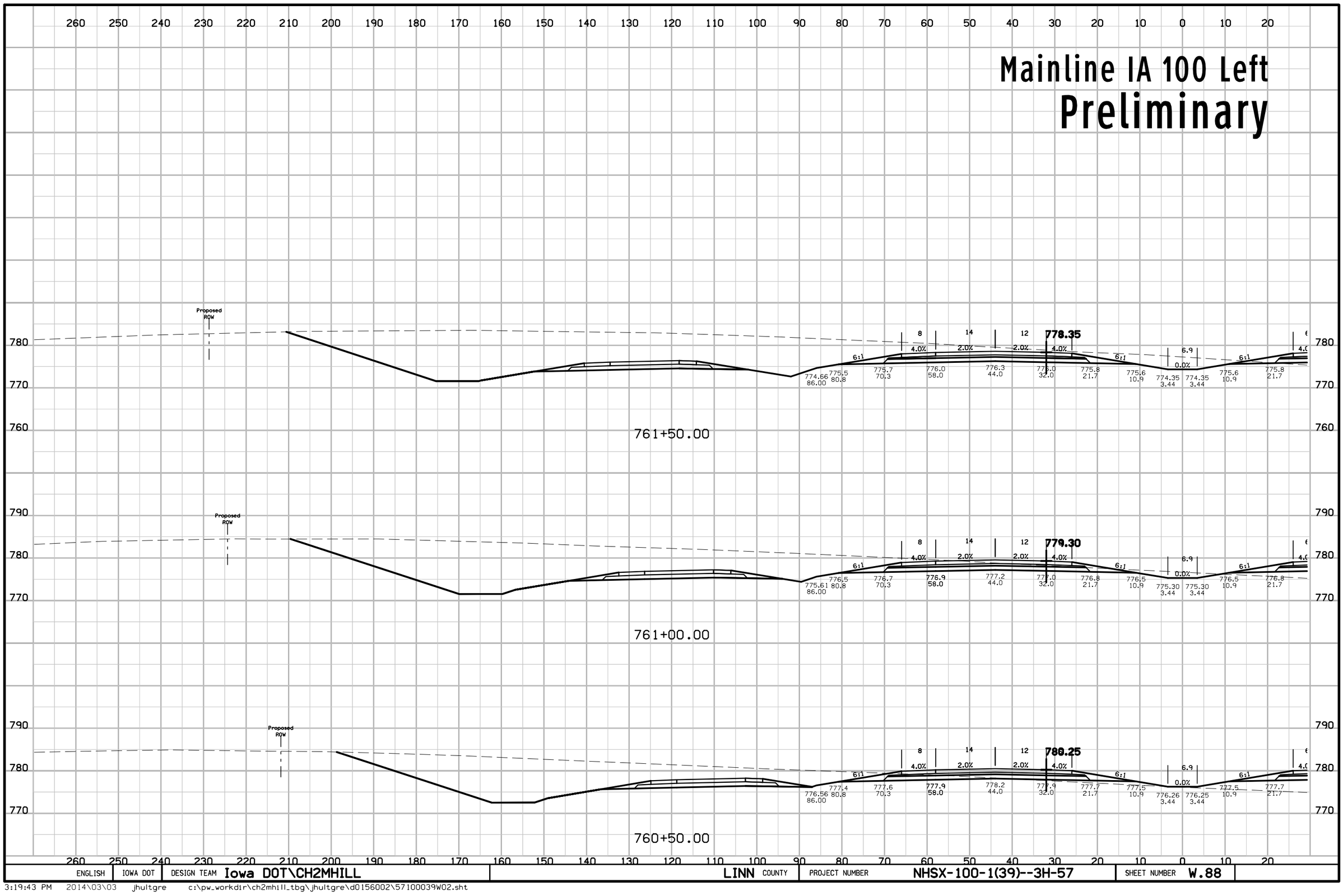
Preliminary



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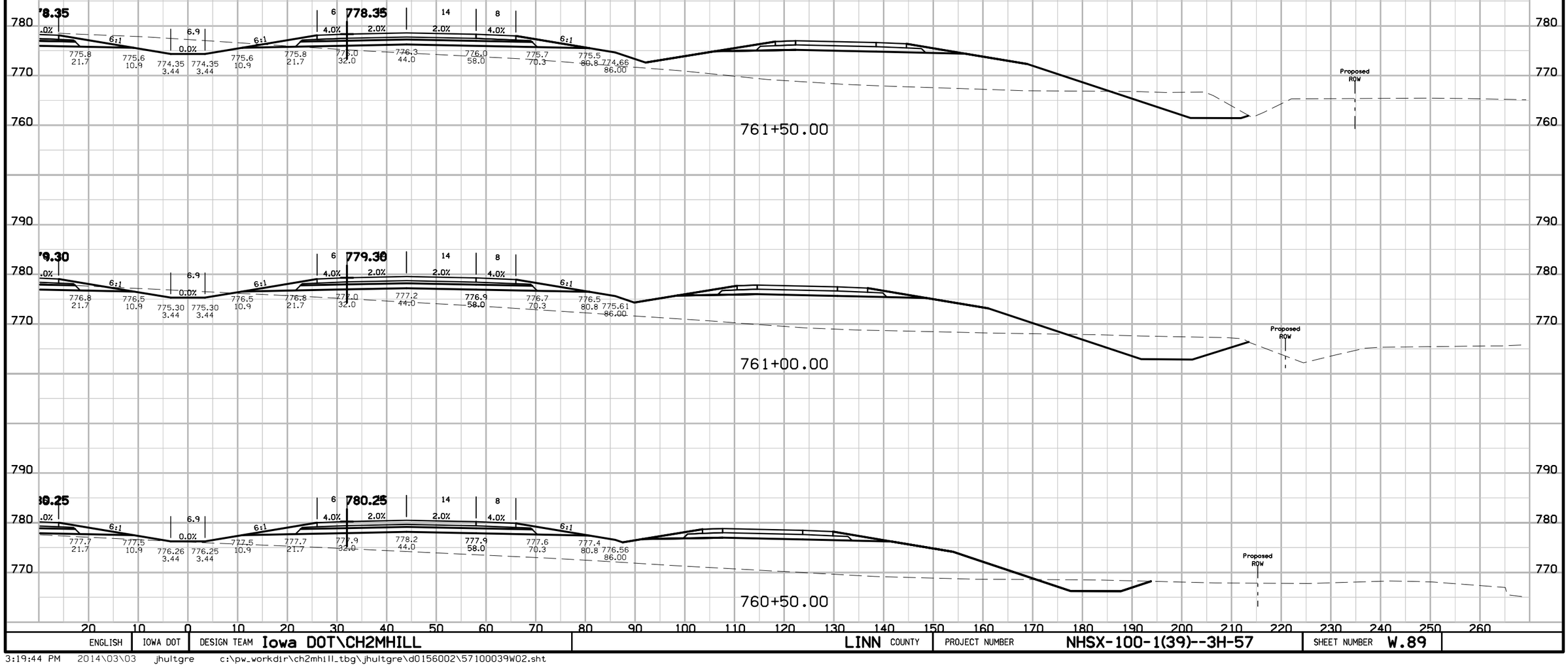

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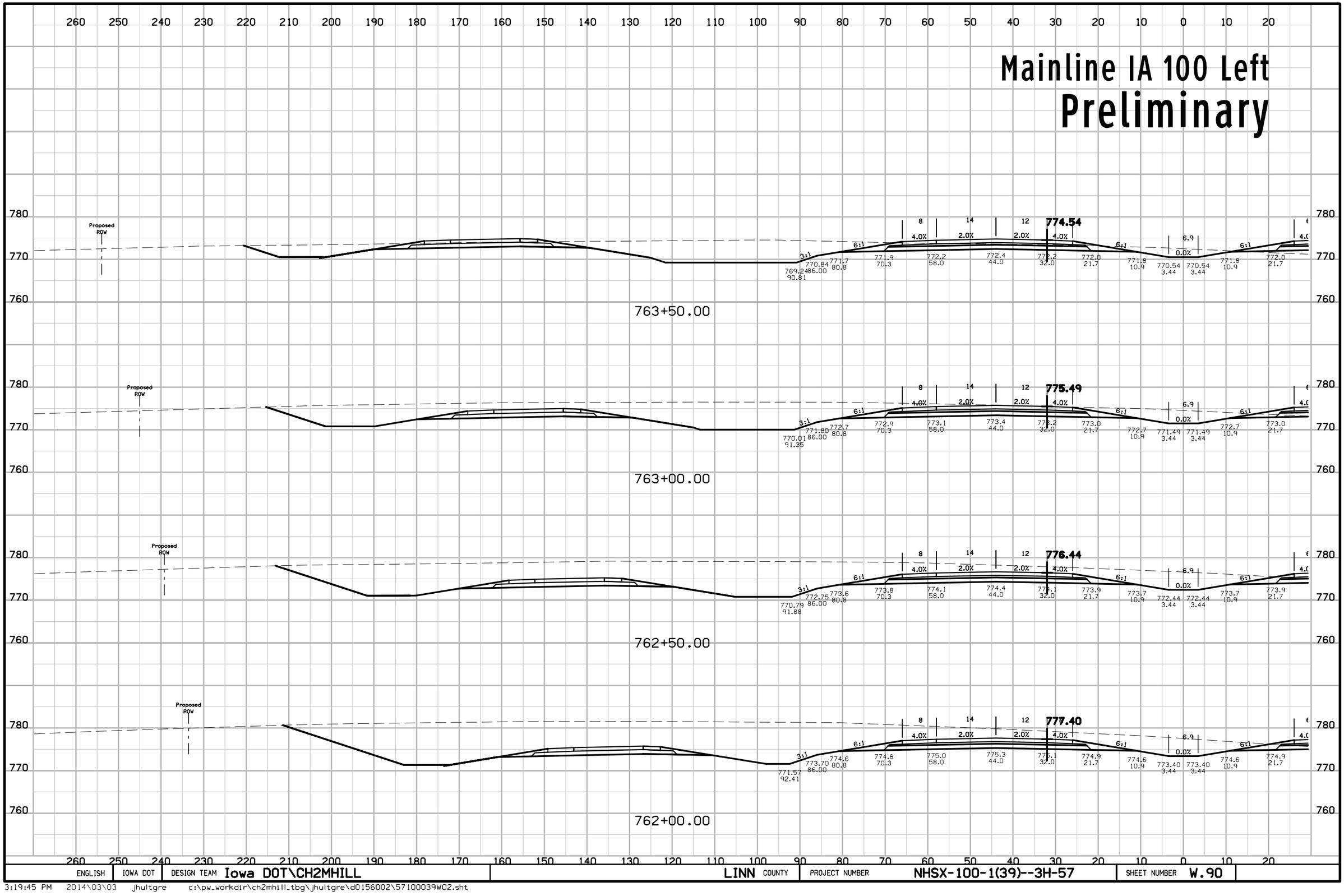
Preliminary



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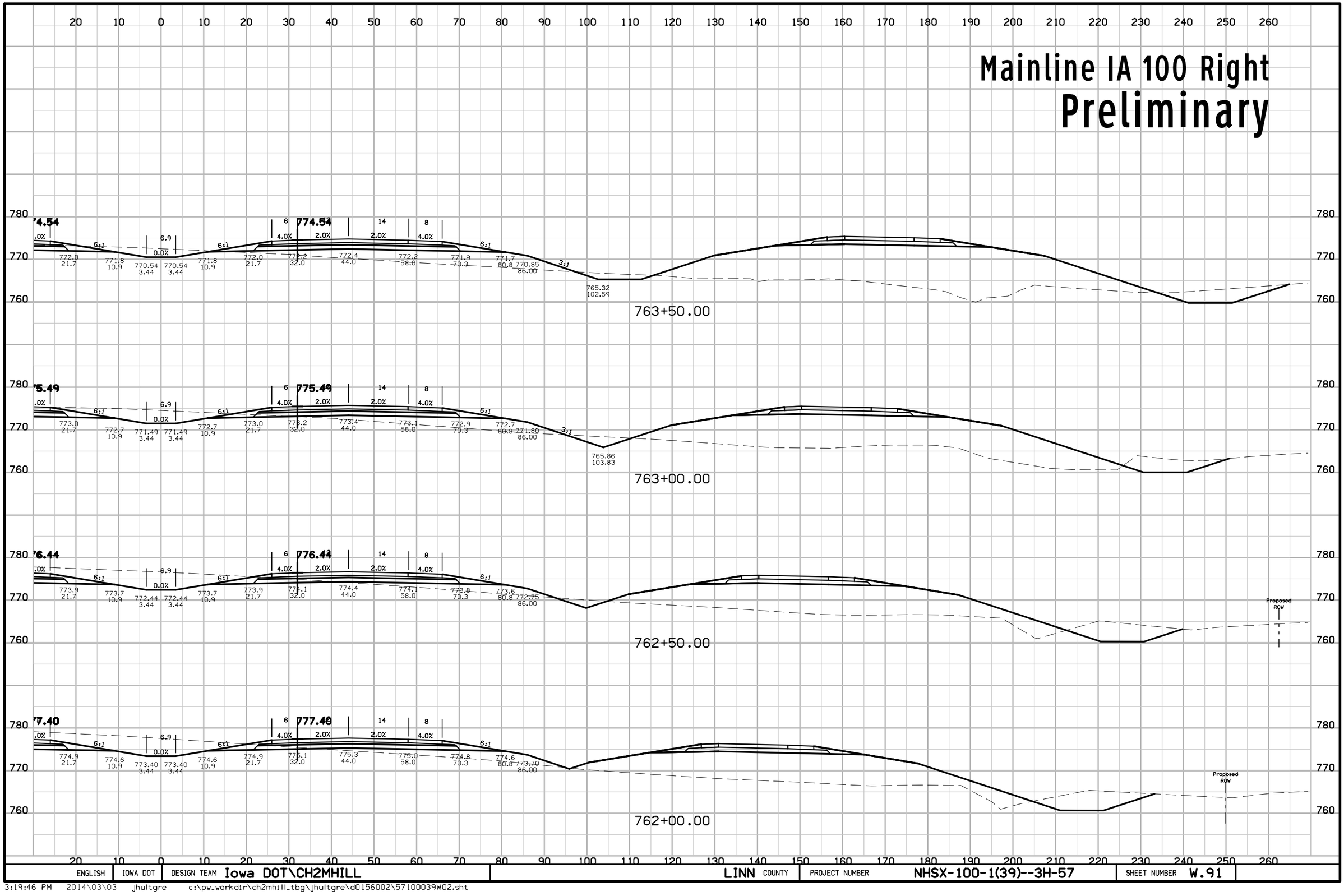
Preliminary



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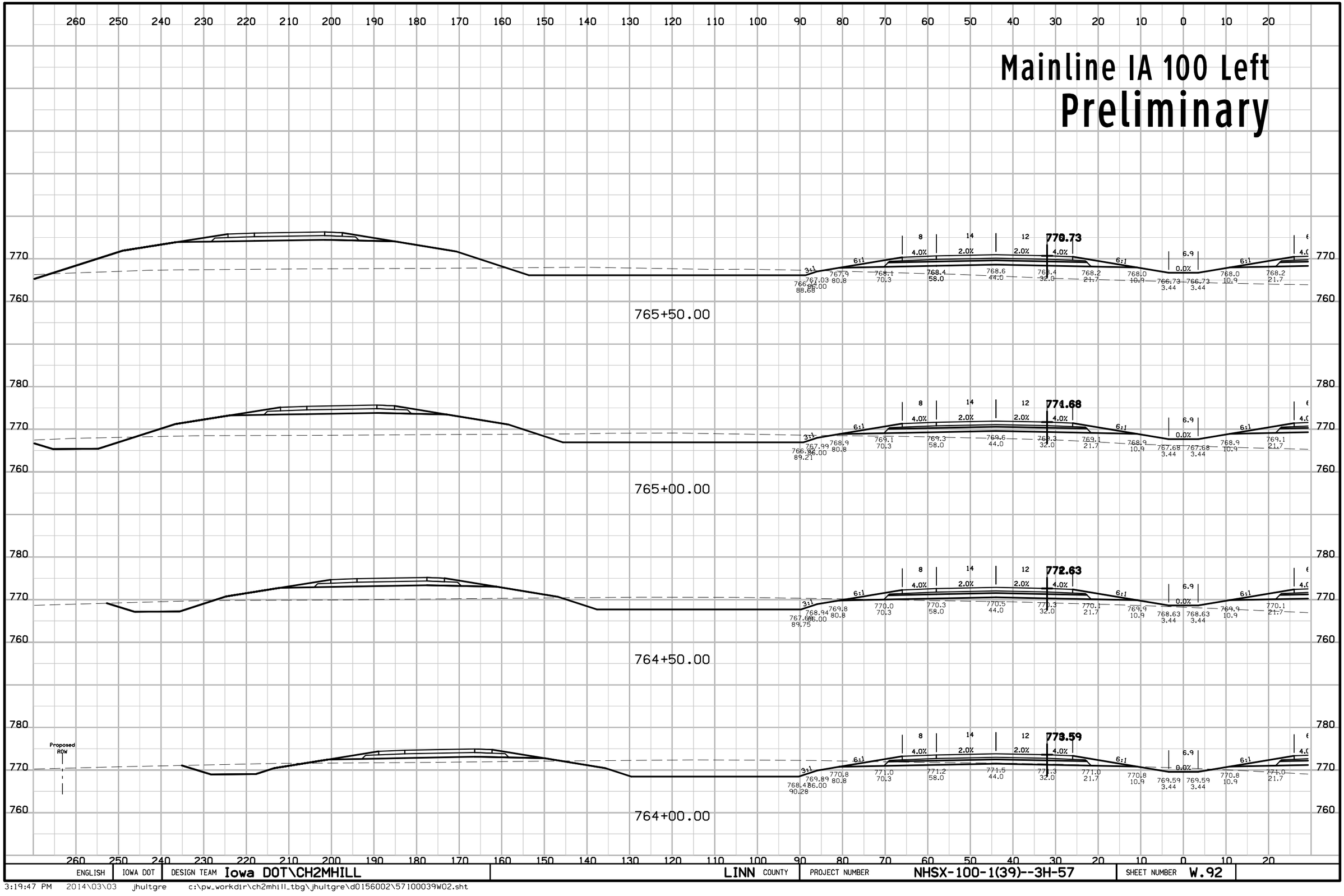
Preliminary



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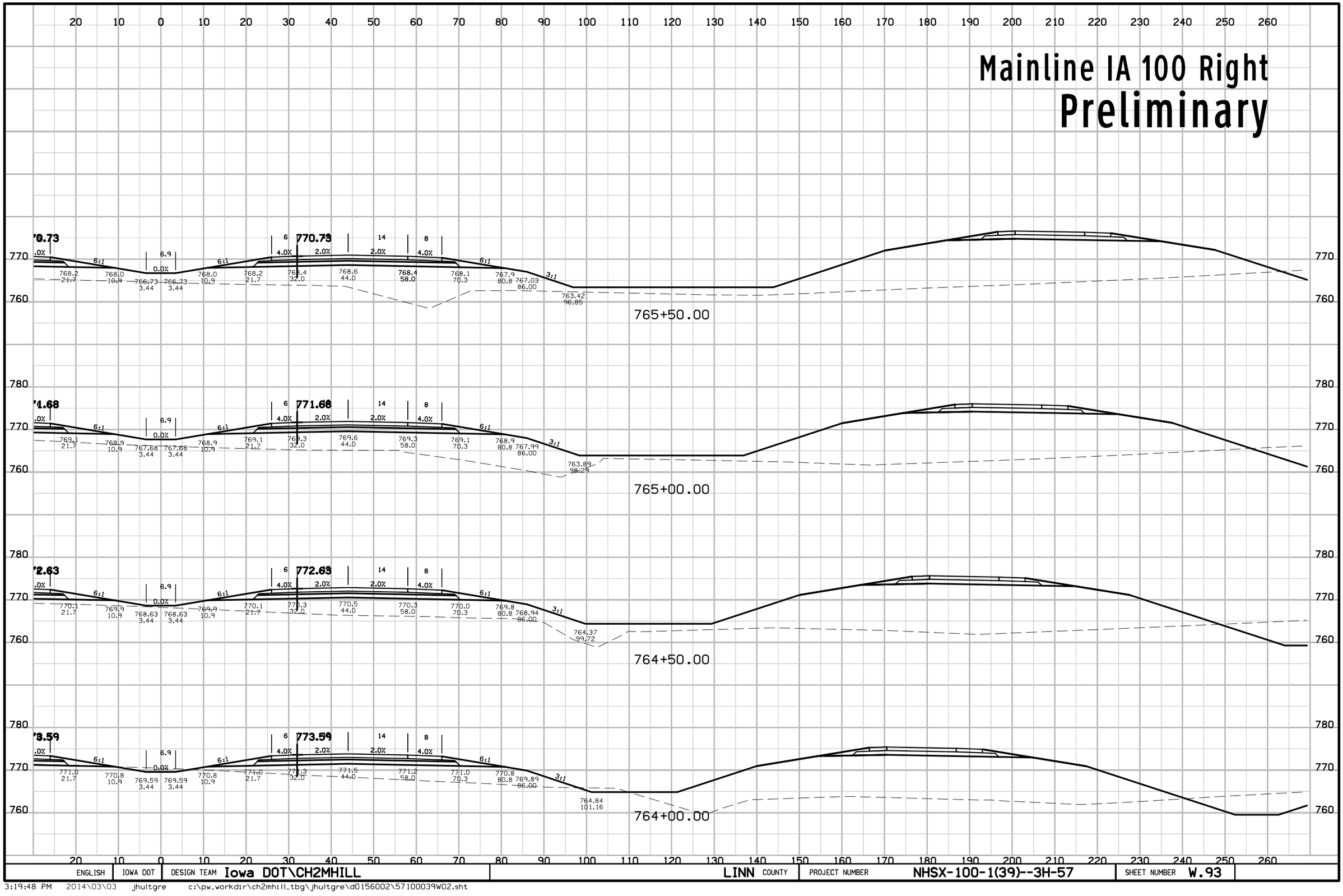

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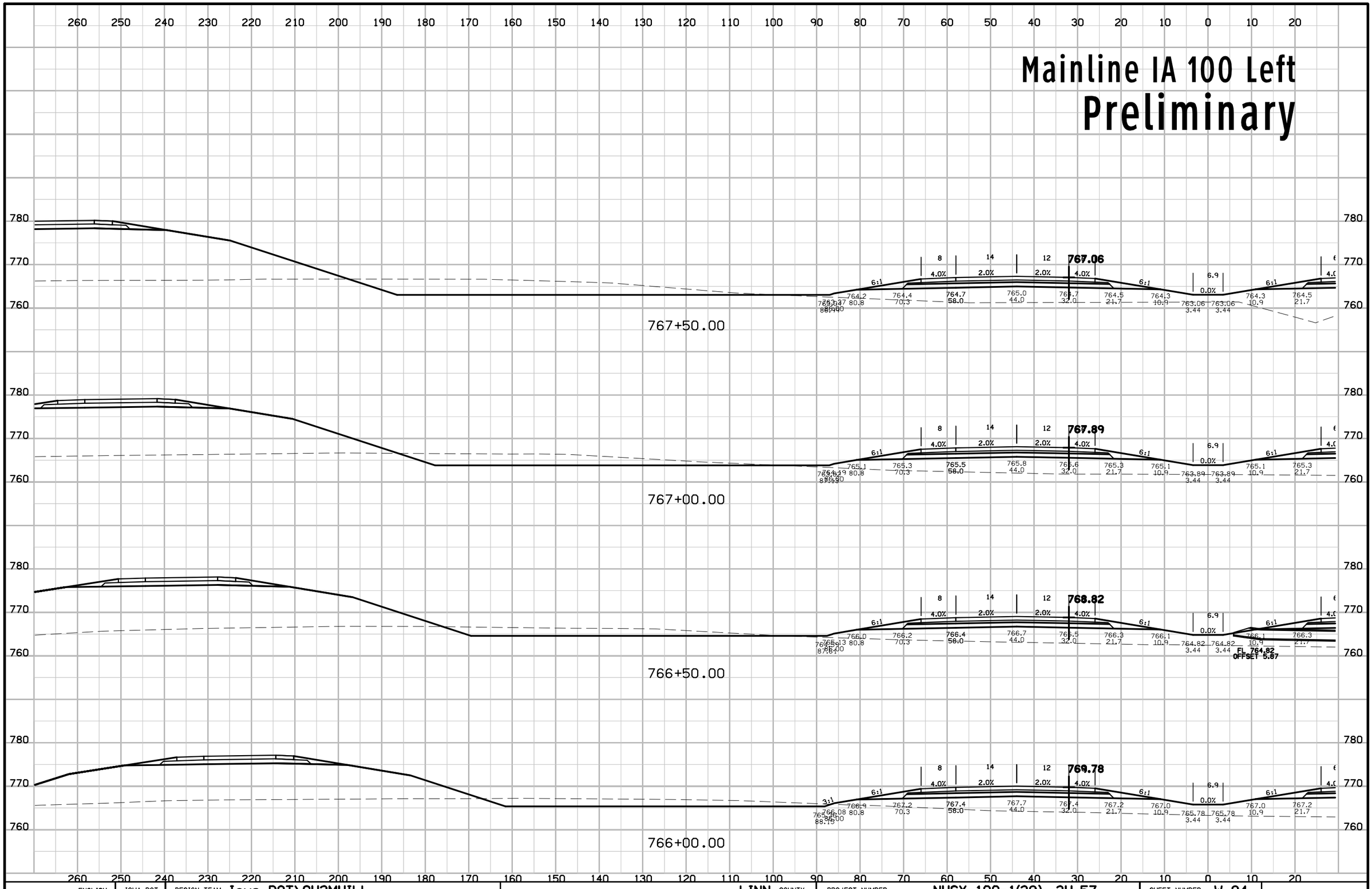
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.94

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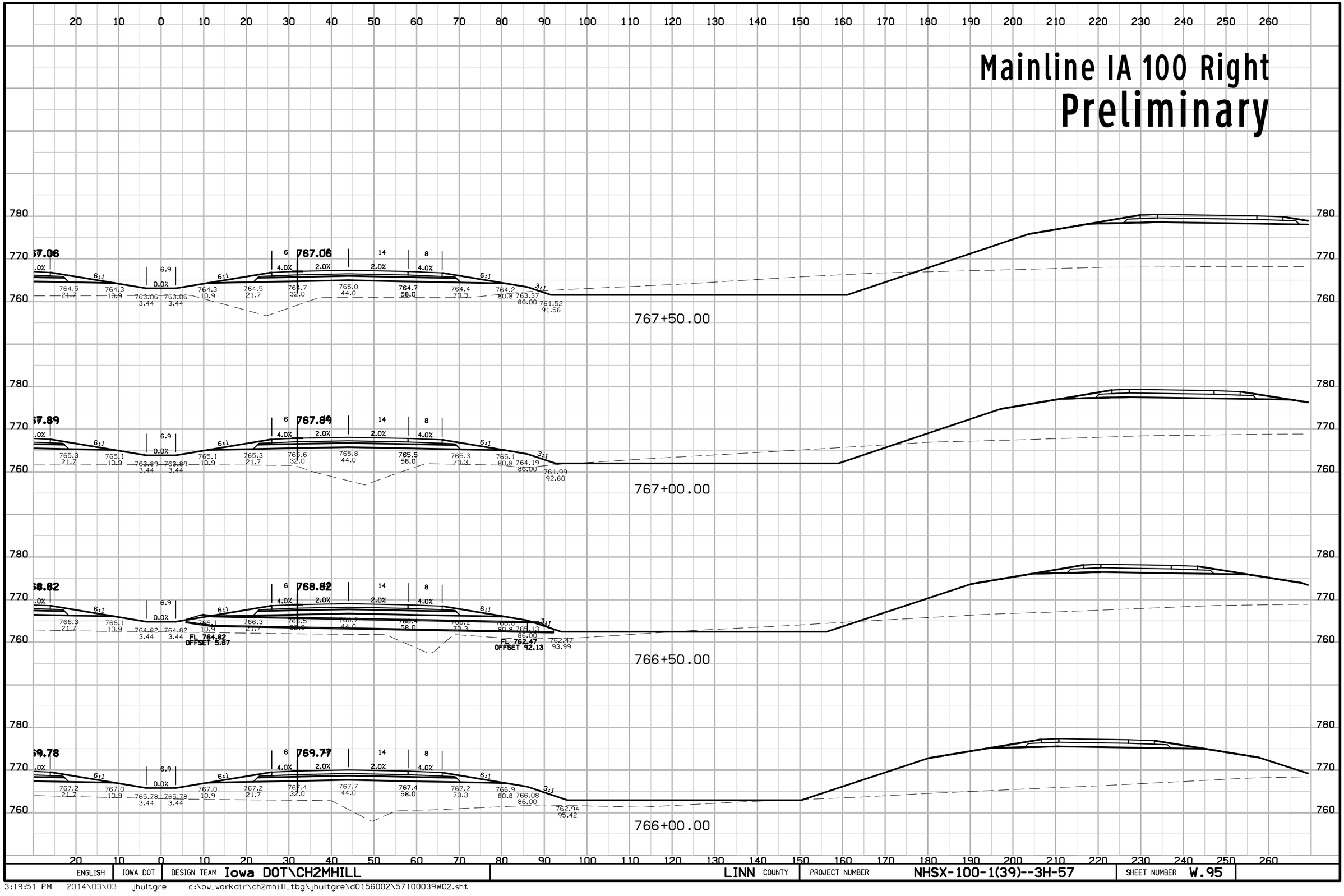
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.95

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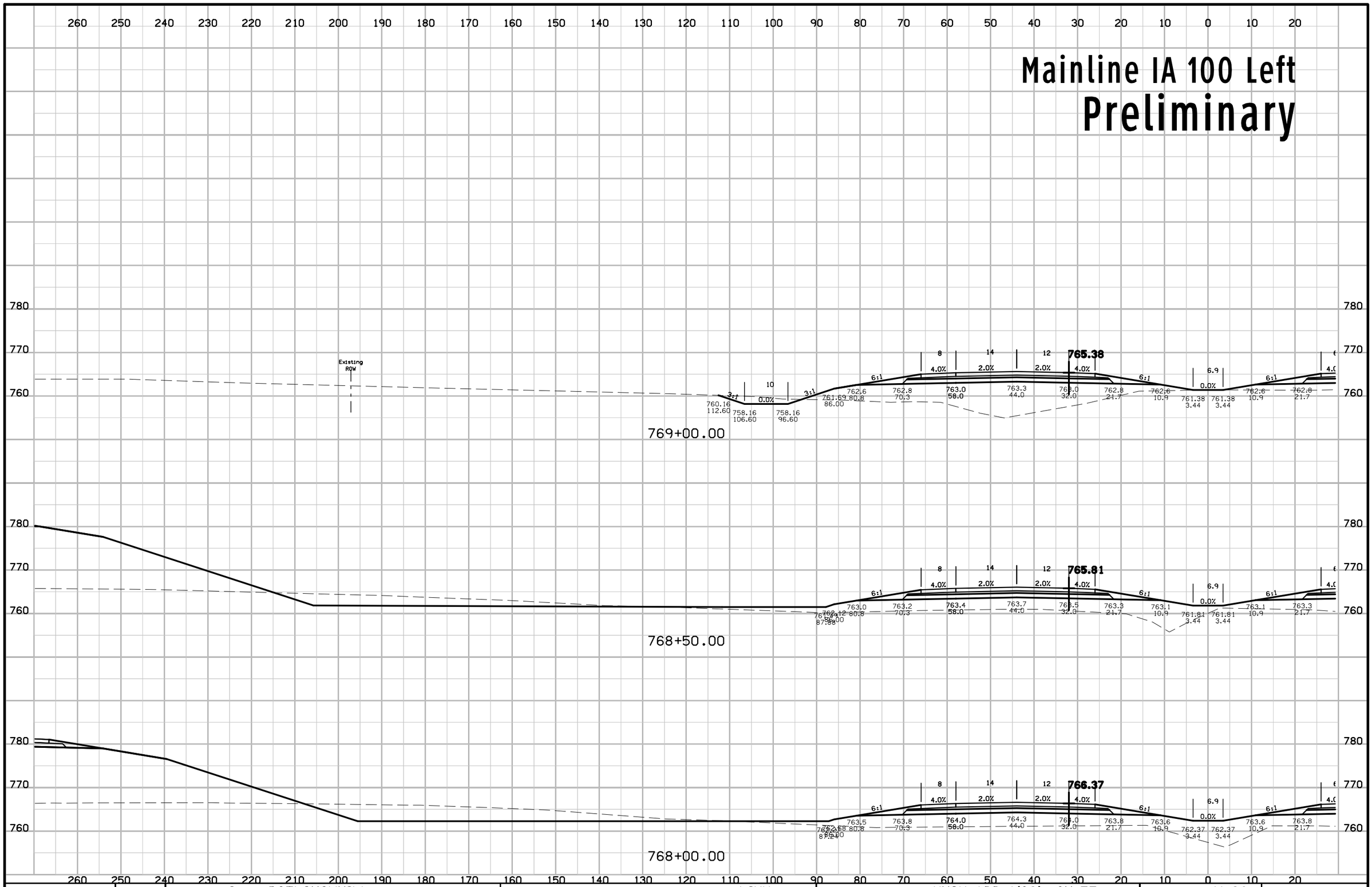
Preliminary



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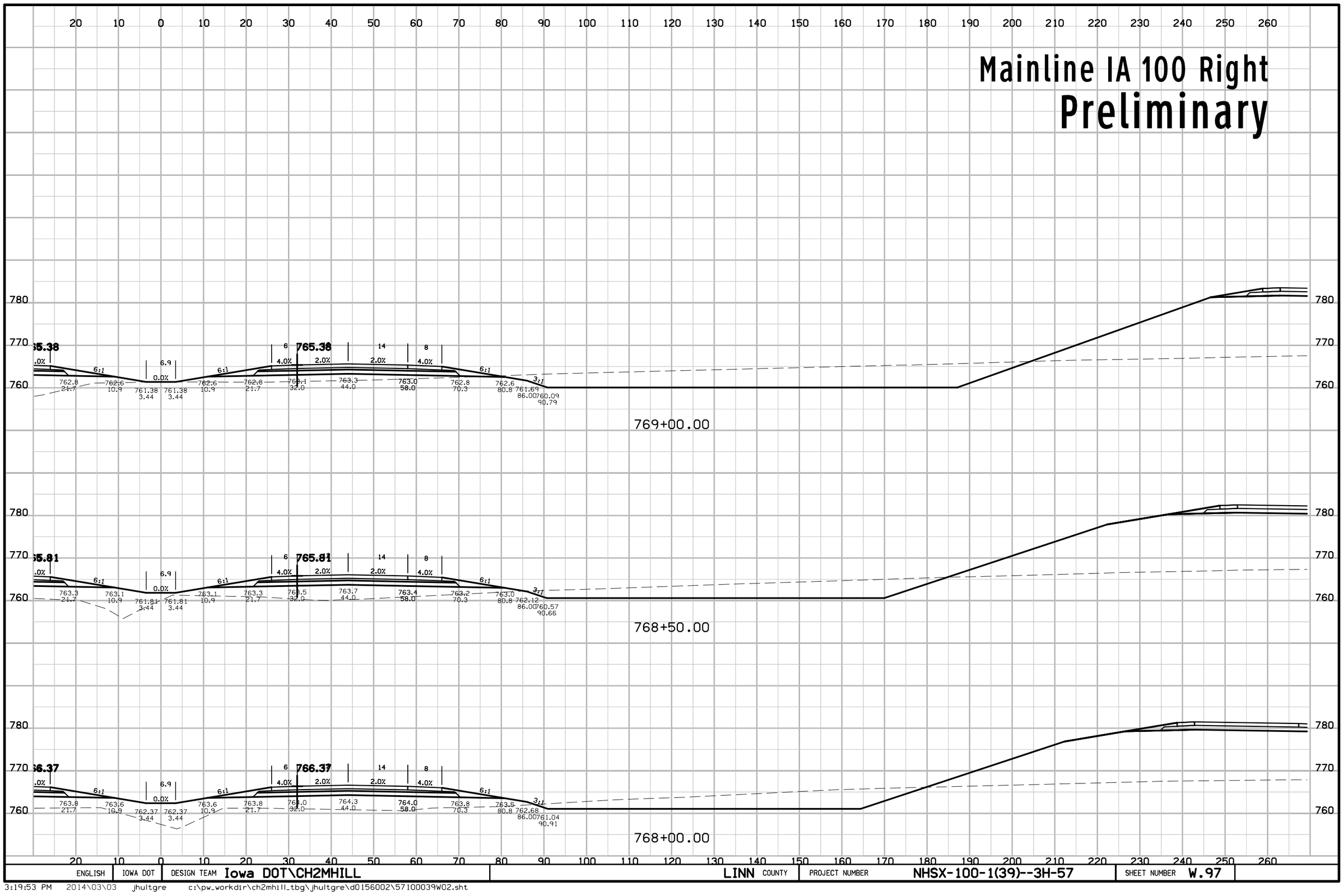
Preliminary



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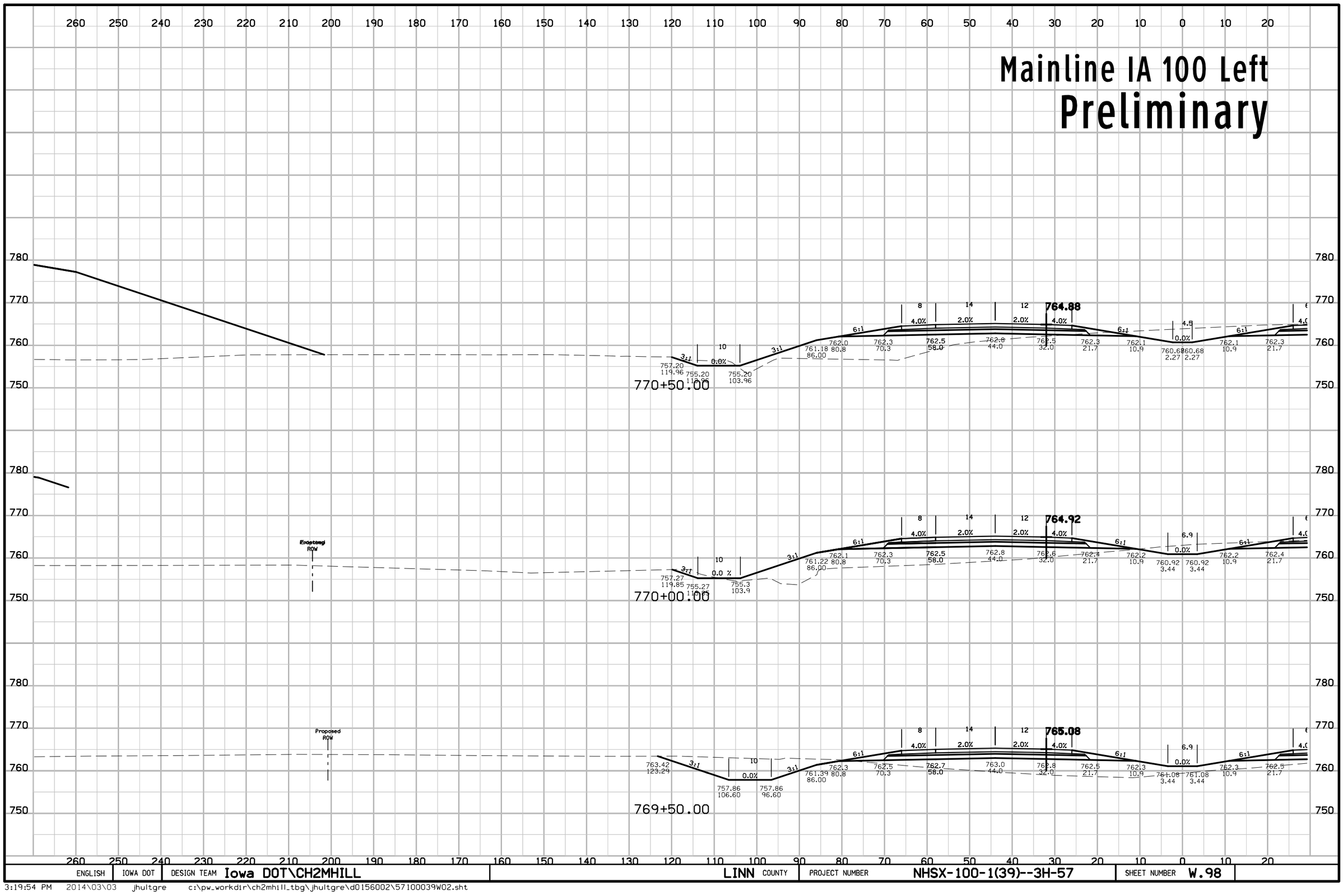
Preliminary



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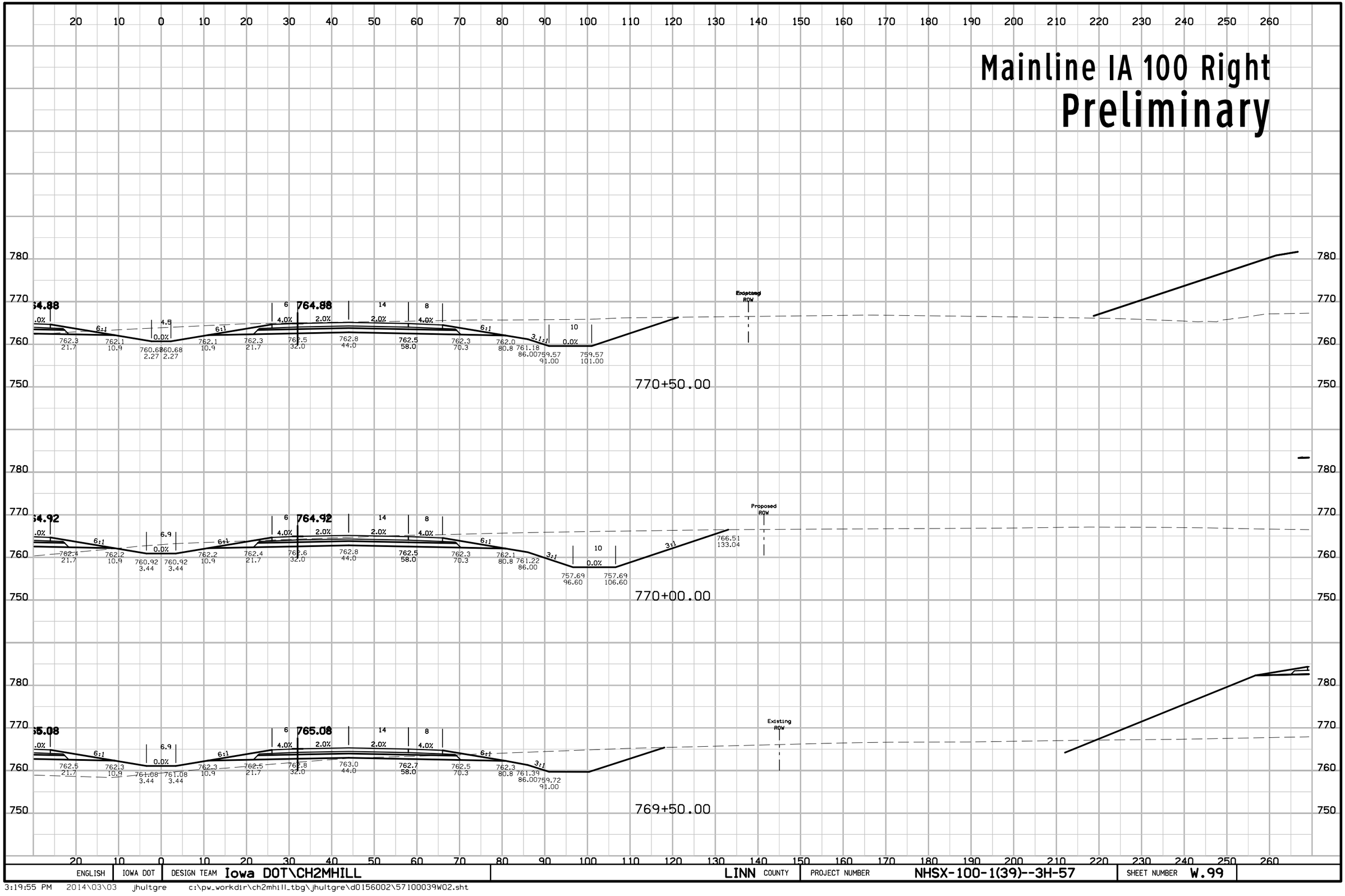
Preliminary



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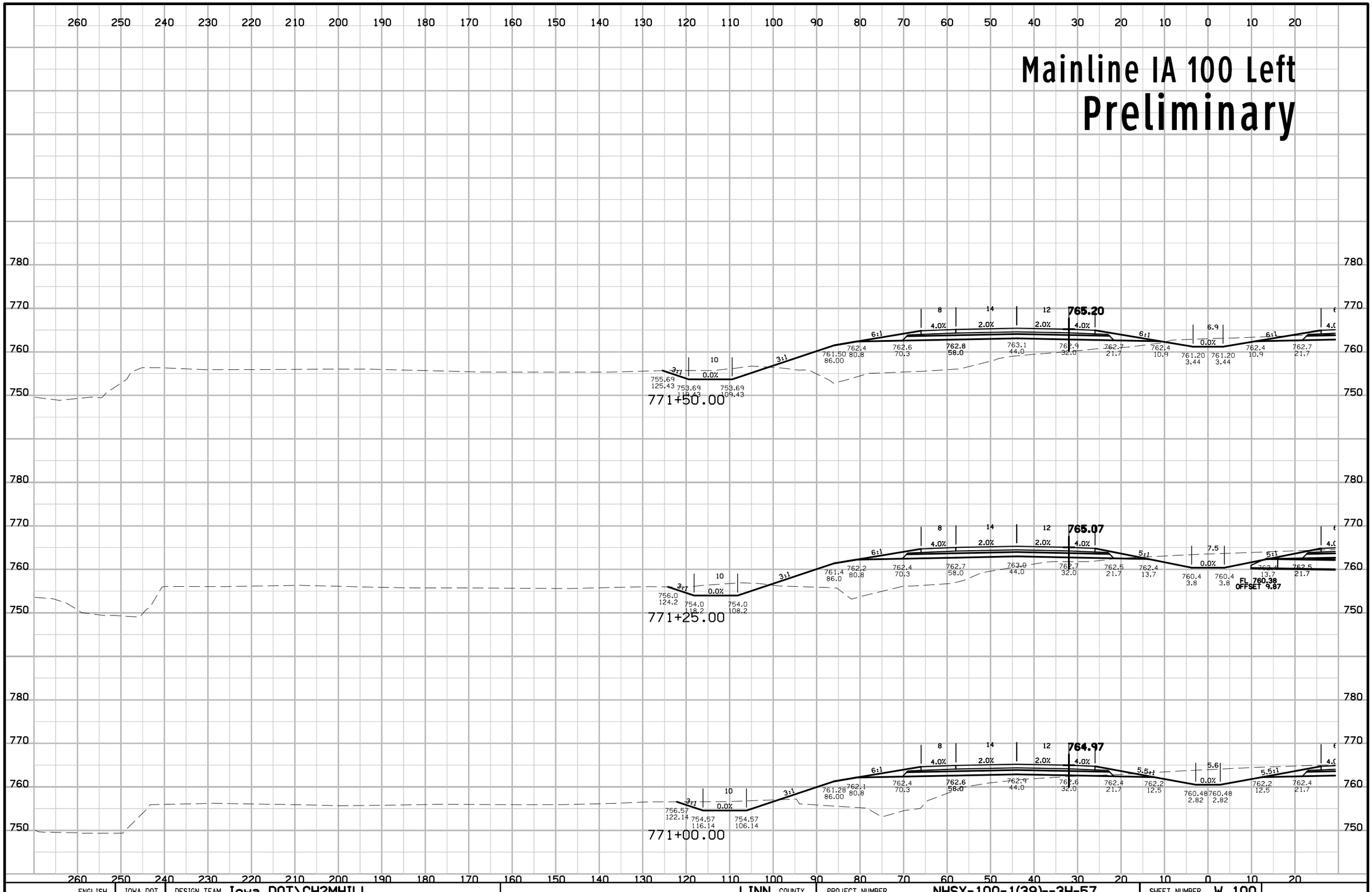
Preliminary



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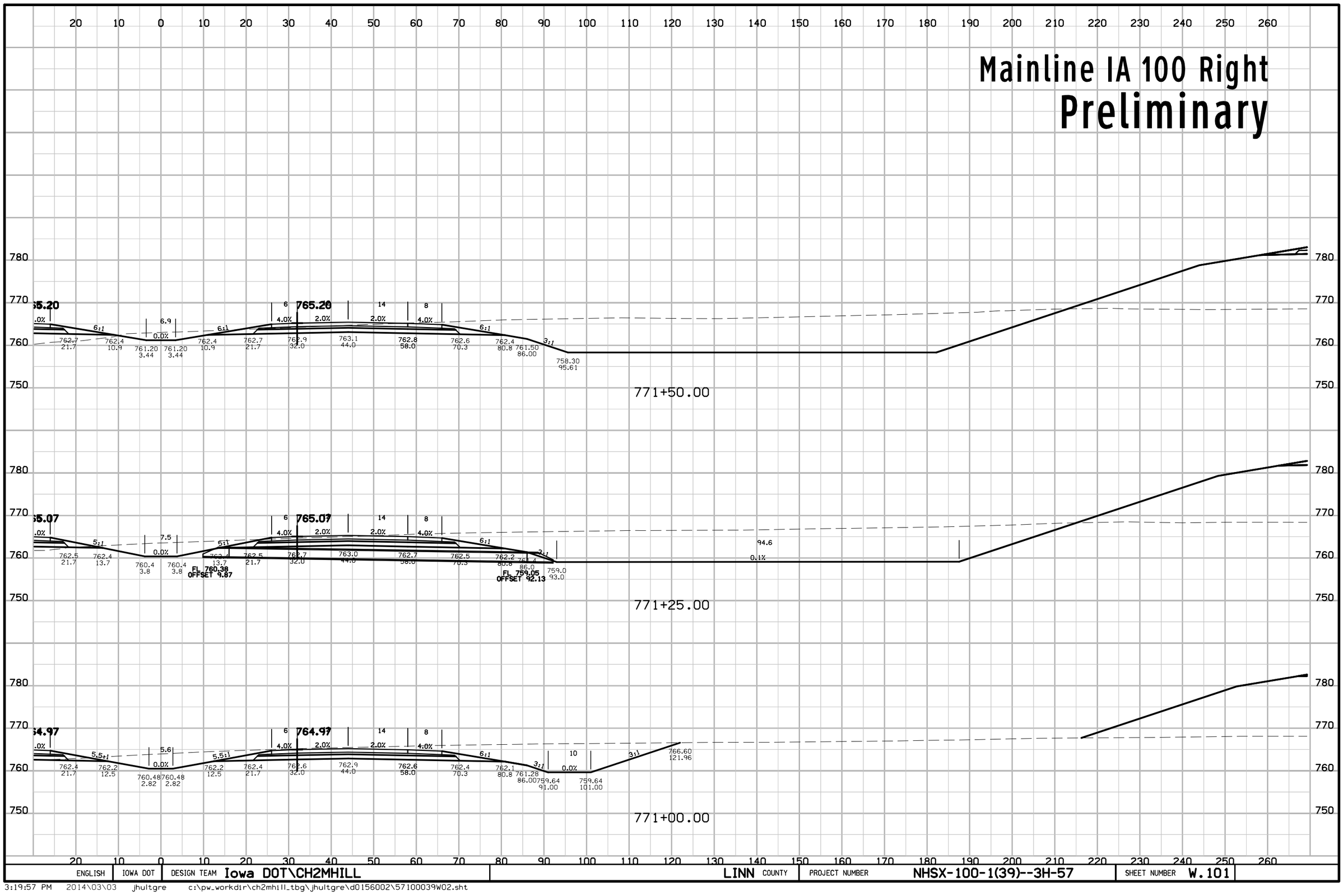
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.101

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Mainline IA 100 Left
Preliminary

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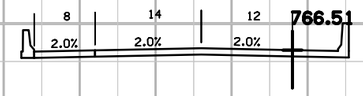
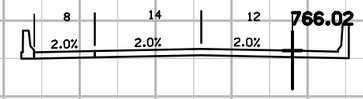
780 770 760 750



773+00.00

772+50.00



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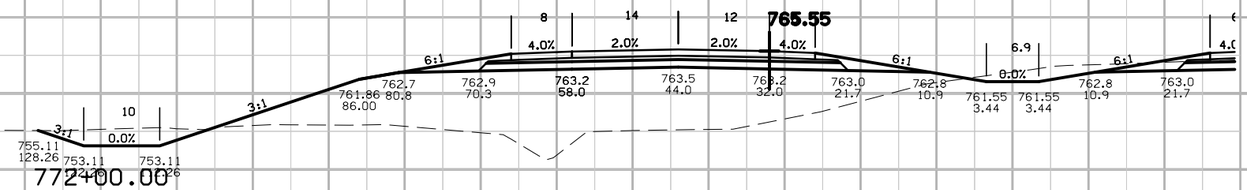

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Mainline IA 100 Right

Preliminary

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780 770 760 750

766.51 14 8
2.0% 2.0% 4.0%

773+00.00

780 770 760 750

766.02 14 8
2.0% 2.0% 4.0%

772+50.00

780 770 760 750

765.55 6 14 8
4.0% 2.0% 2.0% 4.0%
6:1 6.9 0.0% 6:1 6:1 3:1
763.0 21.7
762.8 10.9
761.55 3.44
761.55 3.44
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763.0 21.7
763.2 32.0
763.5 44.0
763.2 58.0
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762.7 80.8
761.86 86.00
756.80 101.18

772+00.00

20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.103

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Mainline IA 100 Left

Preliminary

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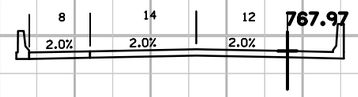
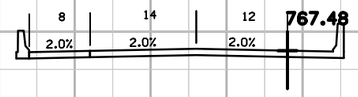
780 770 760 750

774+50.00



774+00.00



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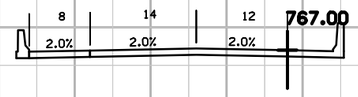

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.104

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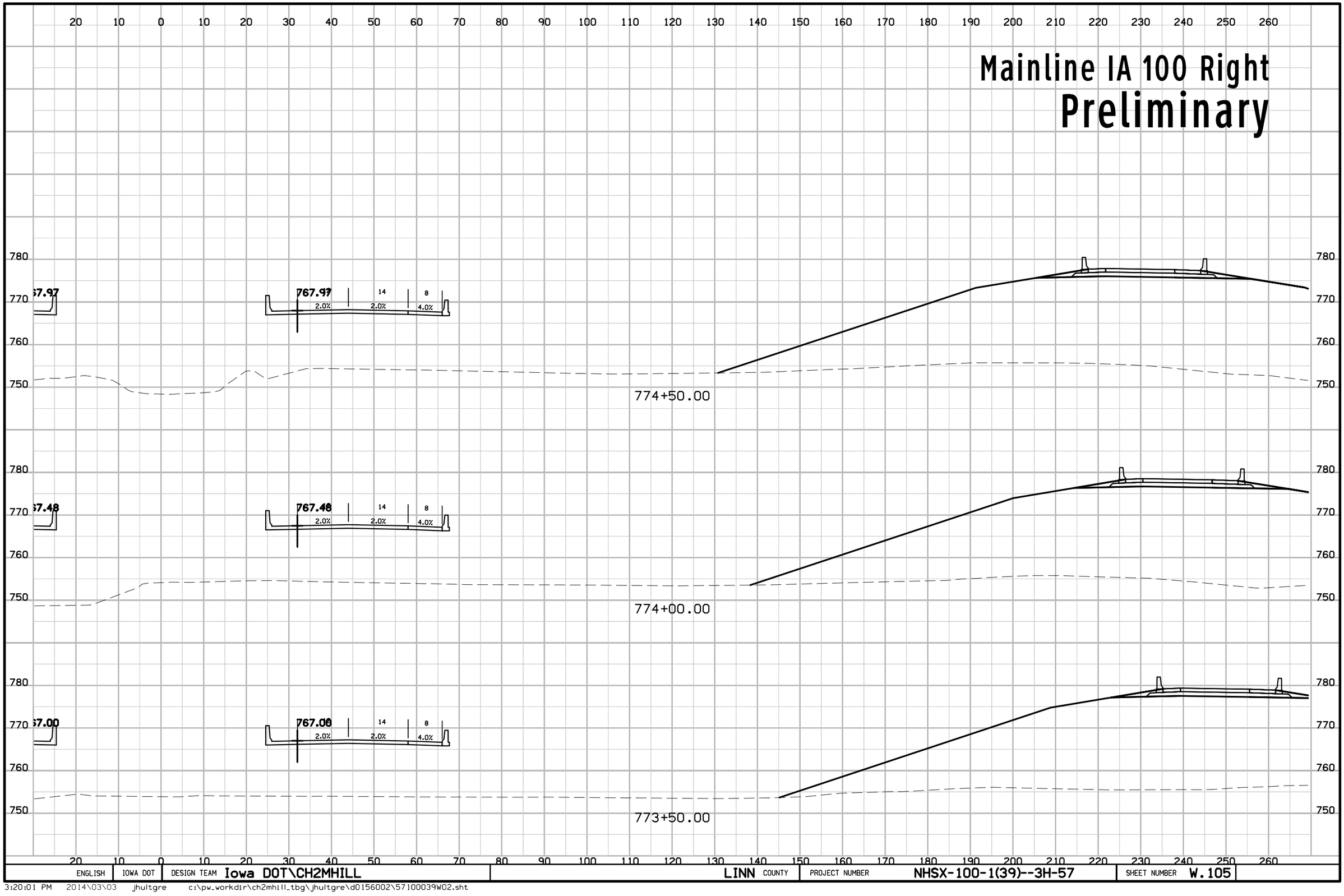
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.105

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Mainline IA 100 Left

Preliminary

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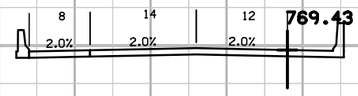
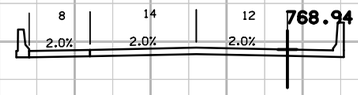
770
760
750

776+00.00



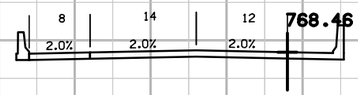
780
770
760
750

775+50.00



780
770
760
750

775+00.00



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ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.106

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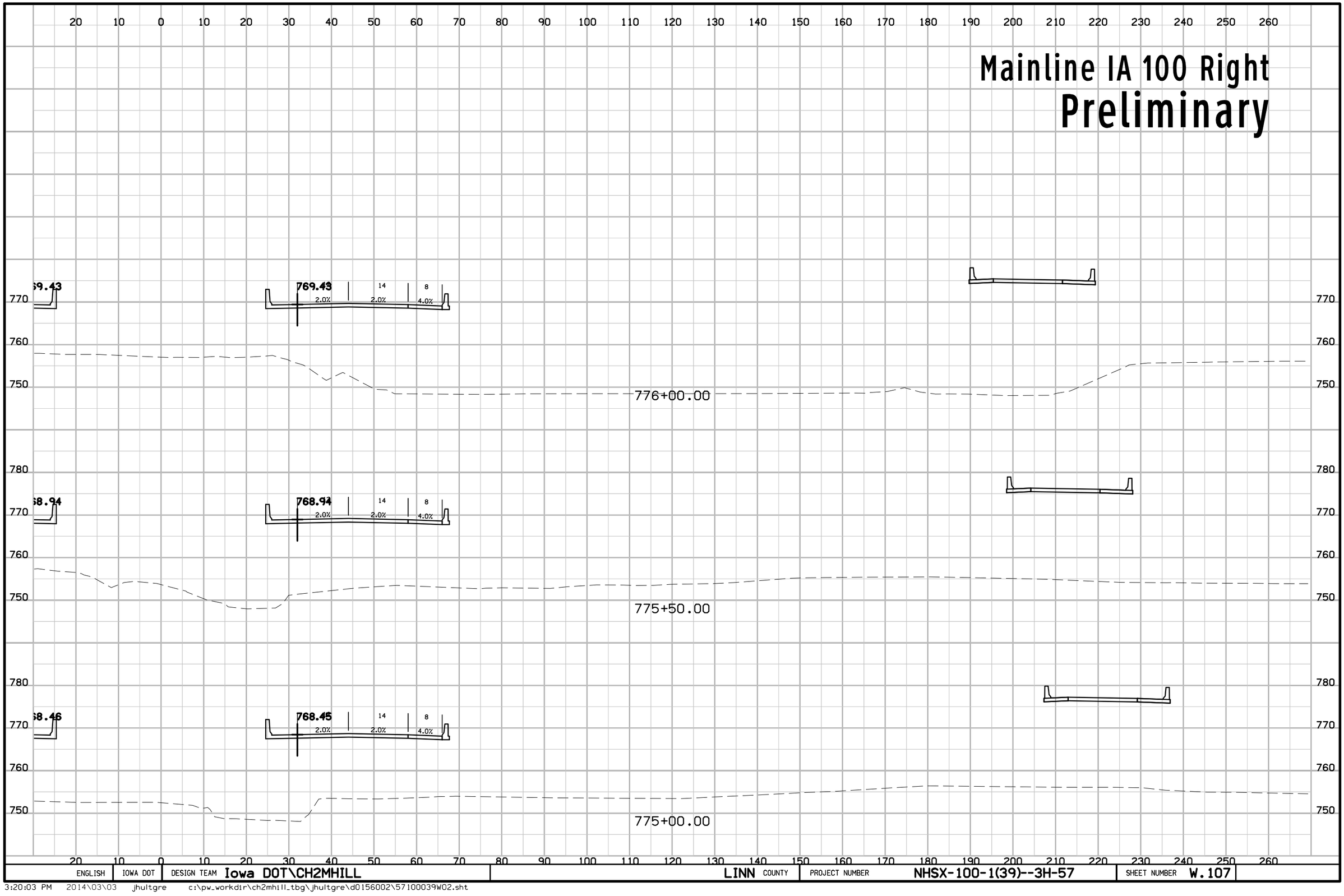
Preliminary



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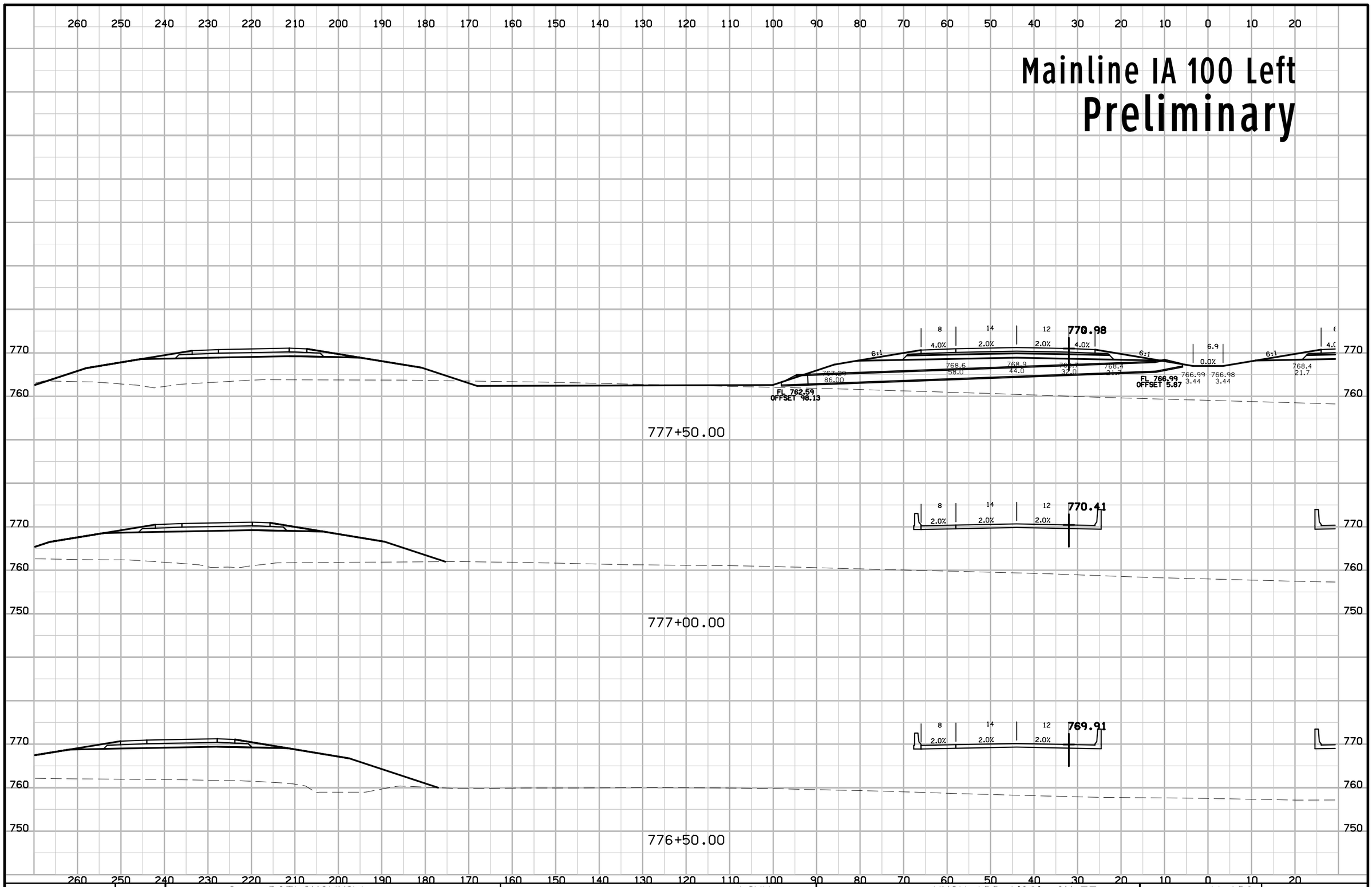
Preliminary



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Mainline IA 100 Right
Preliminary

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.109

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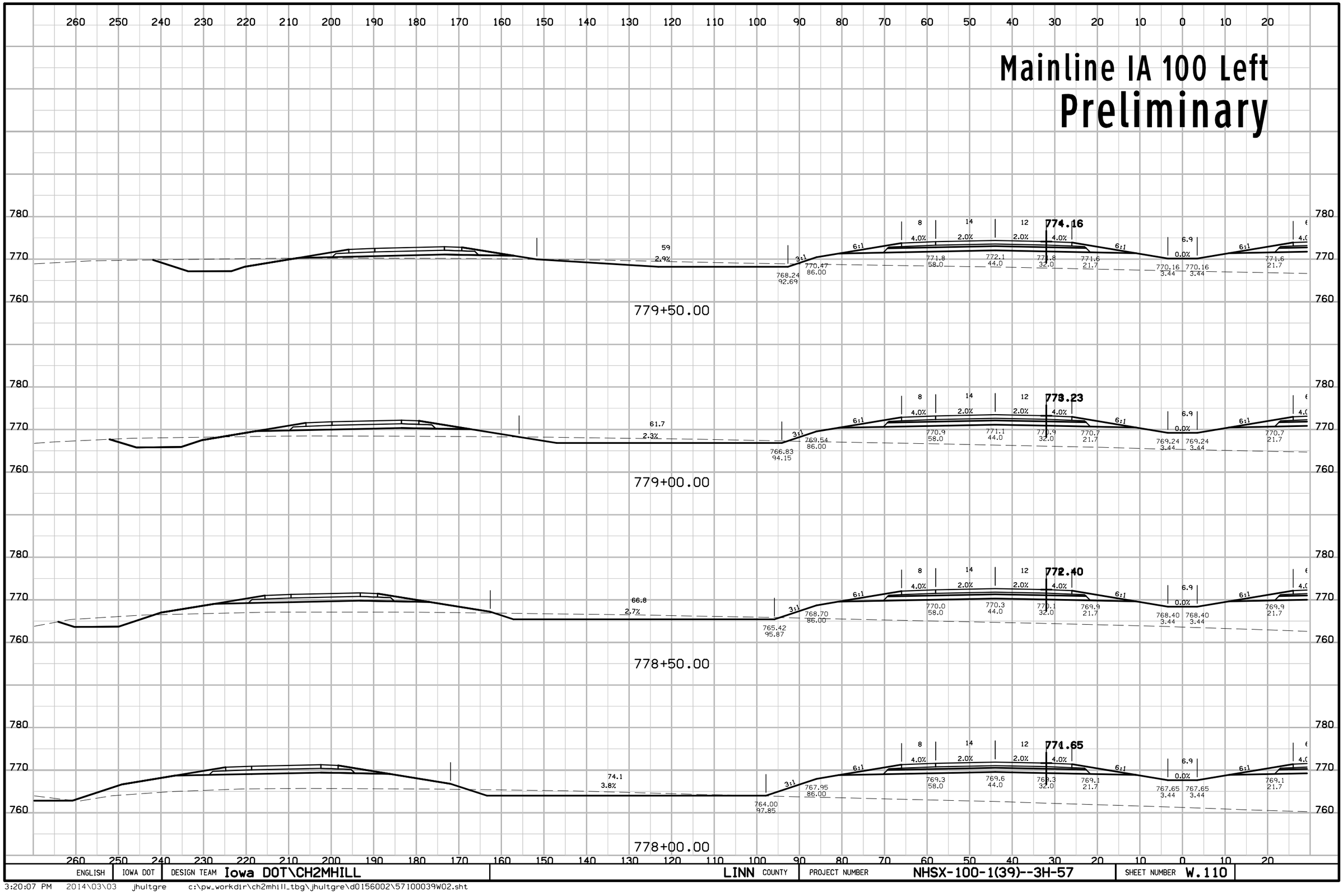
Preliminary



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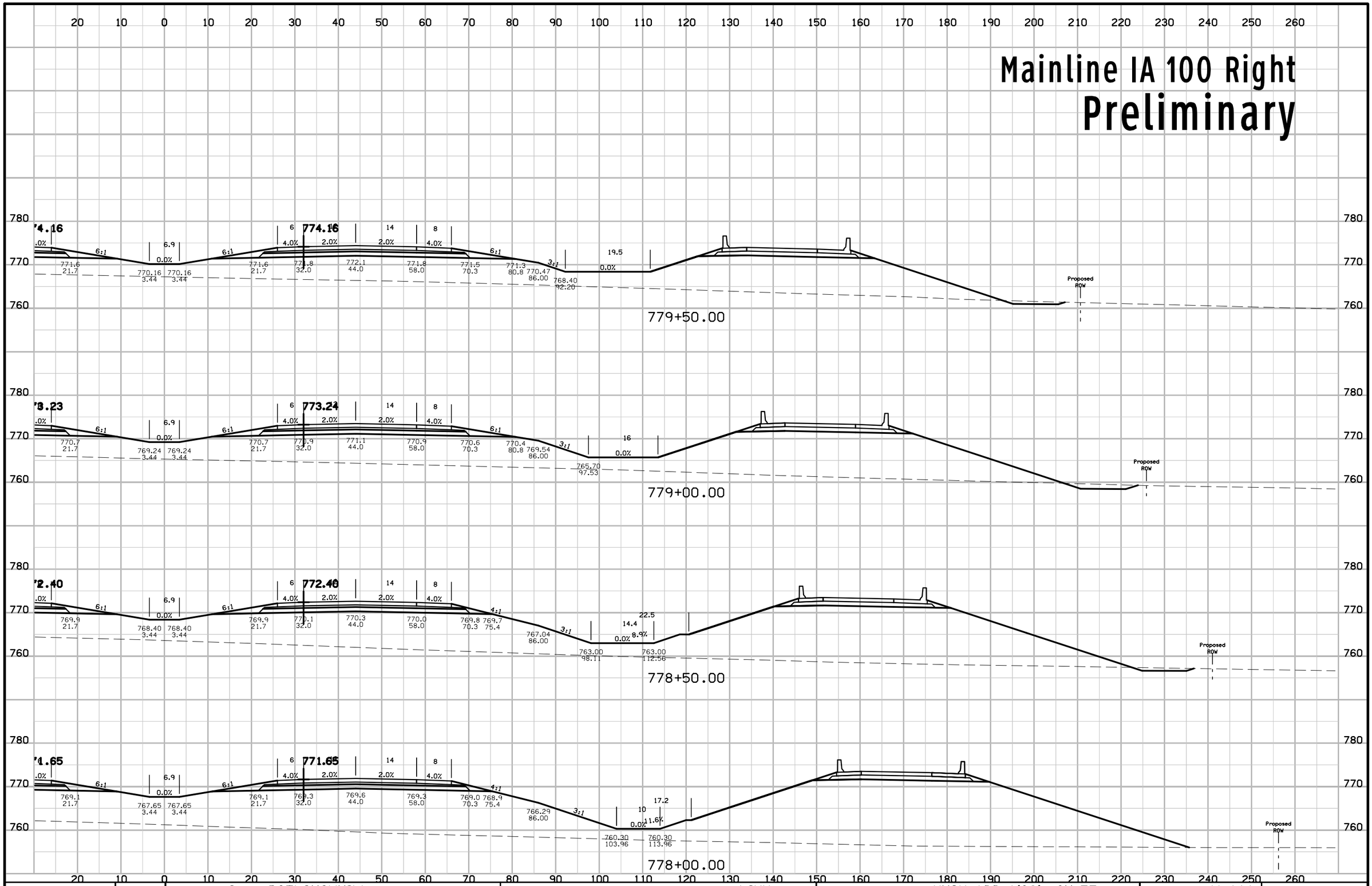
Preliminary



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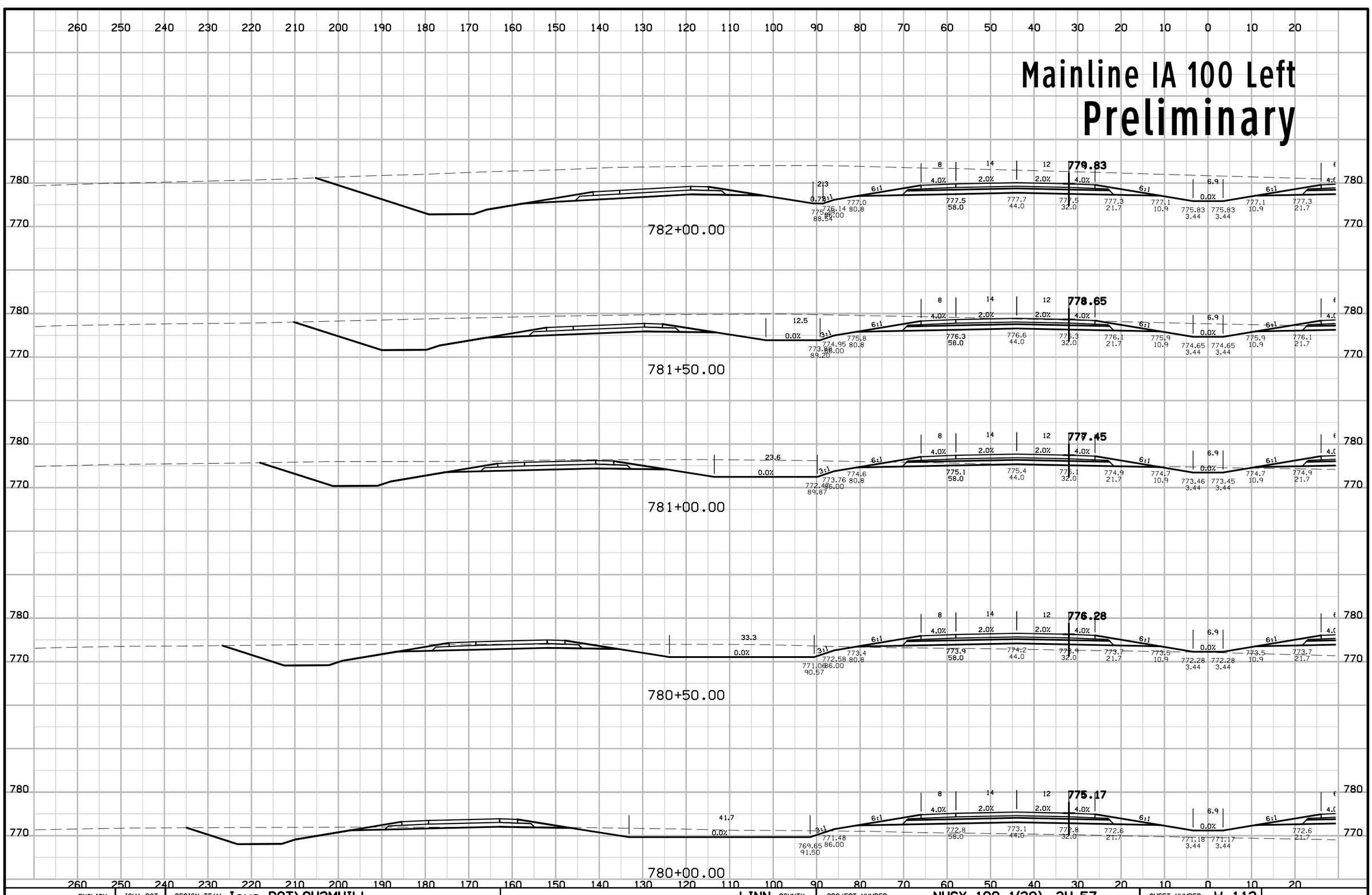
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.112

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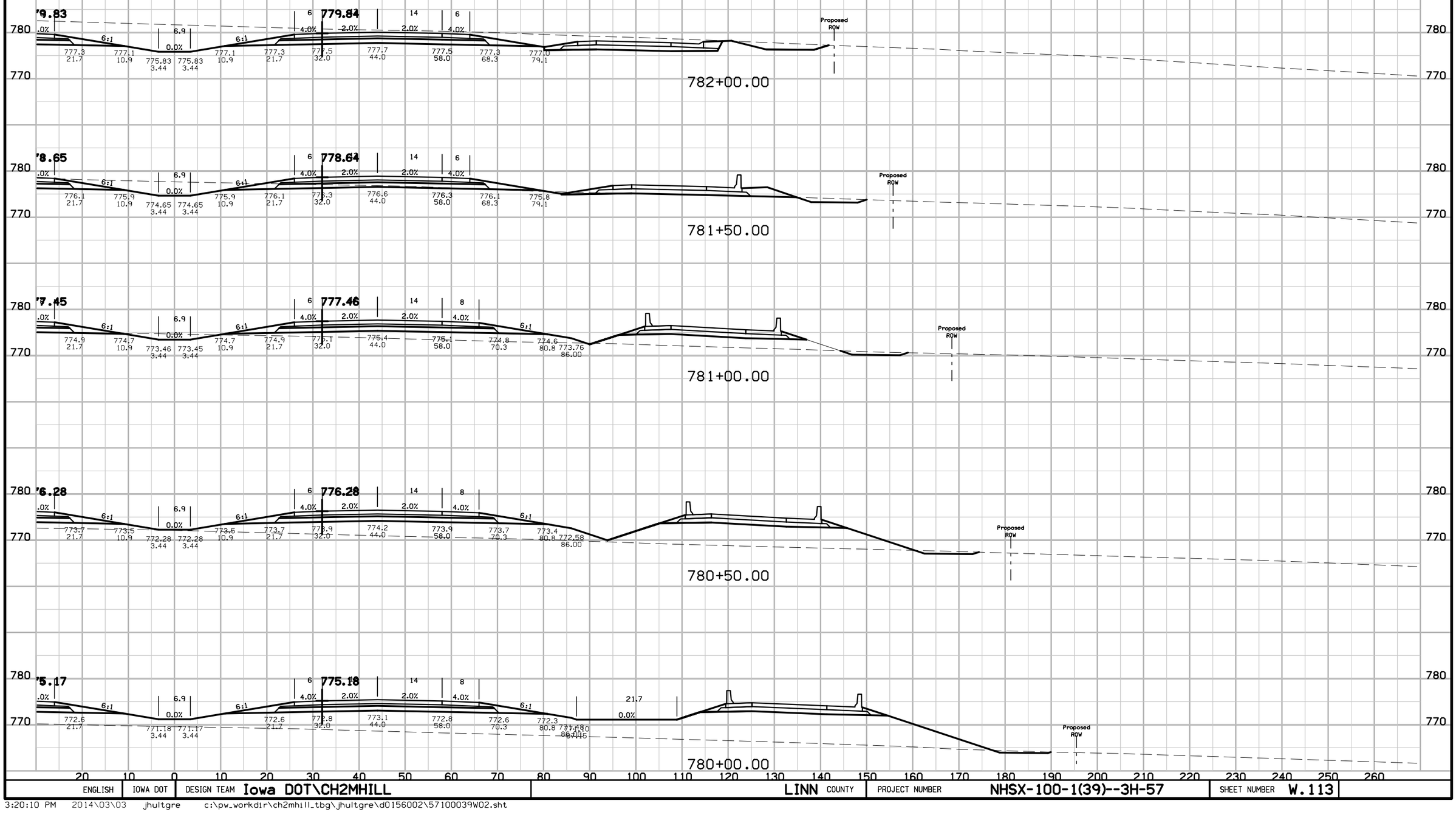
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.113

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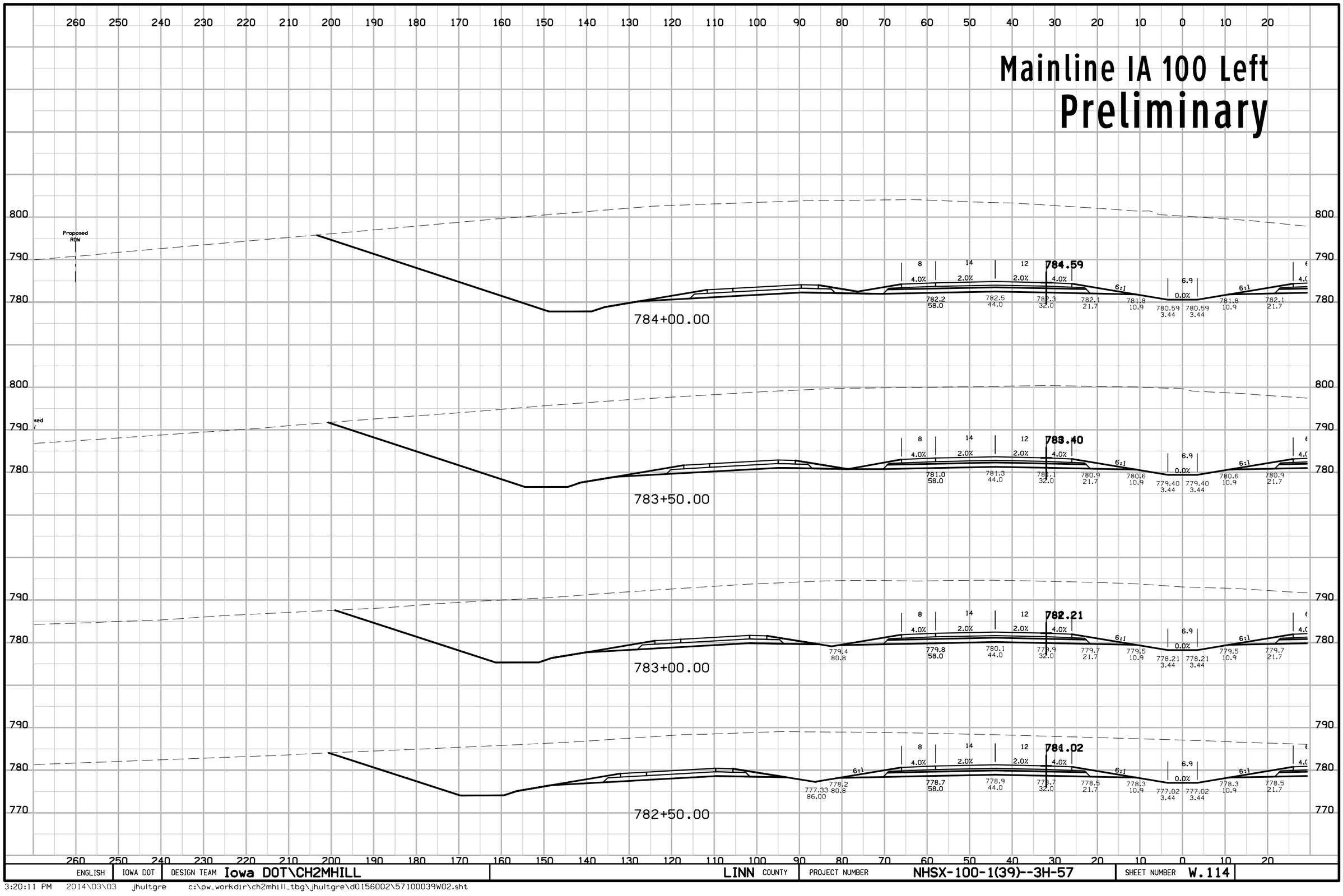
Preliminary



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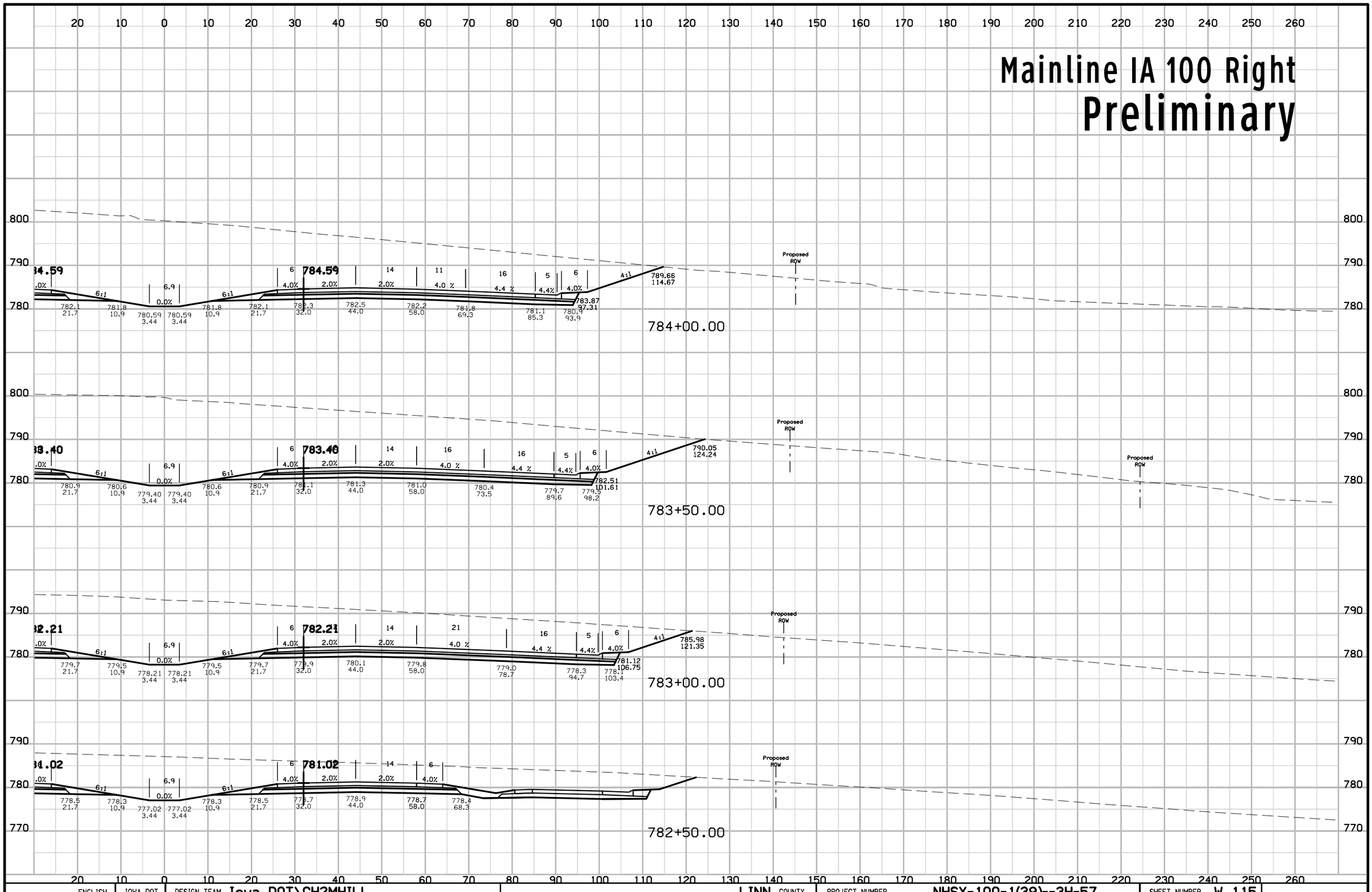
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.115

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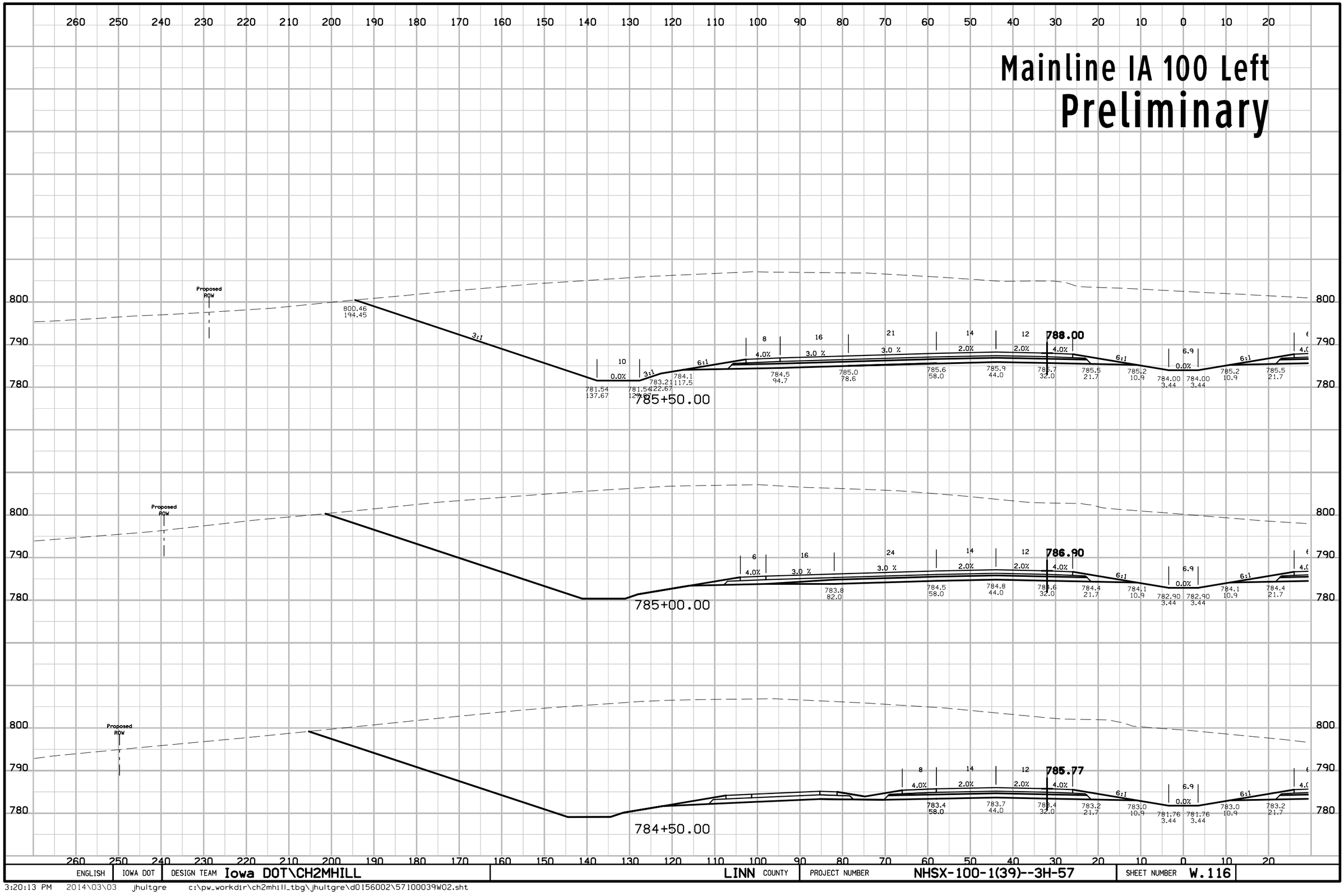
Preliminary



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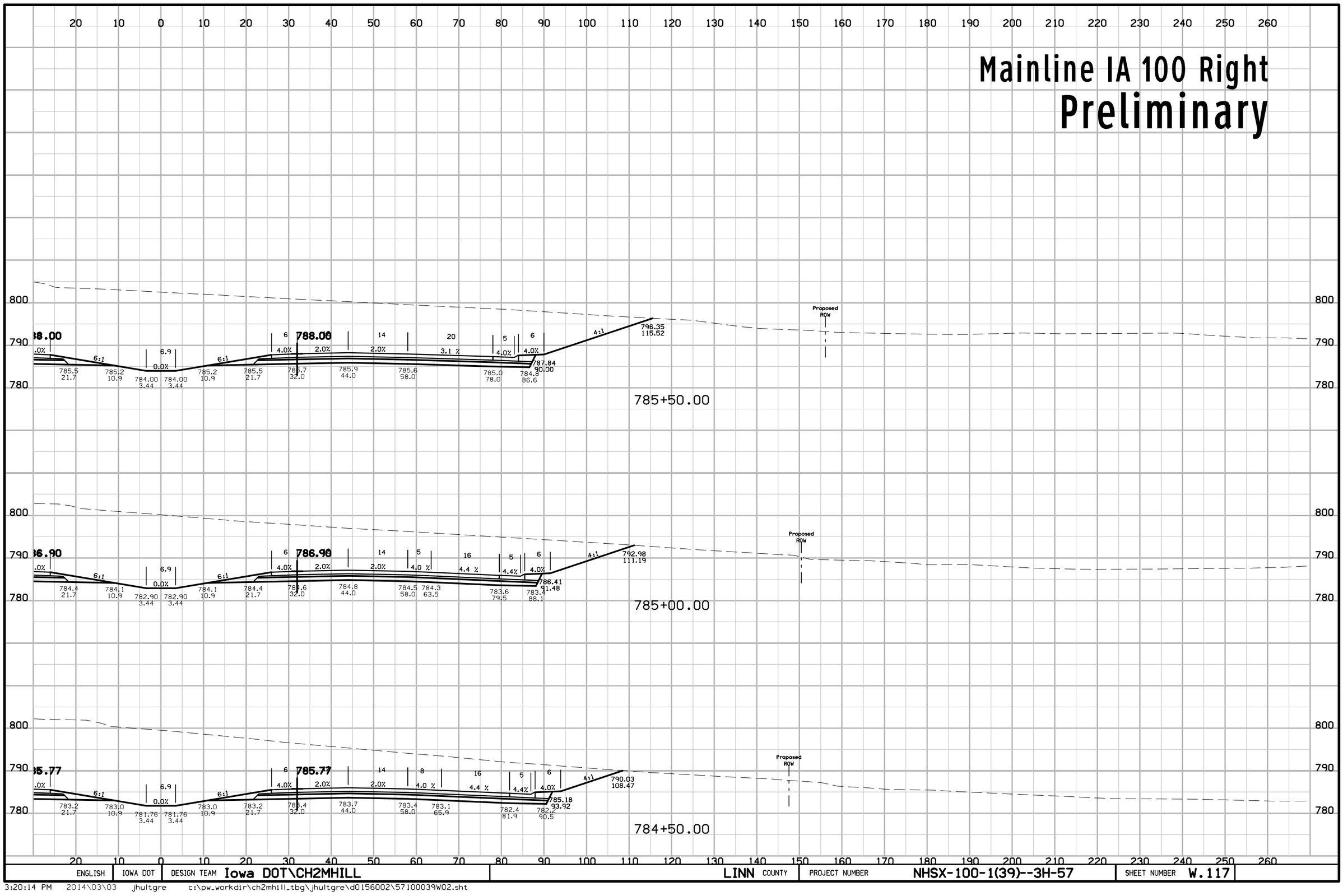
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.117

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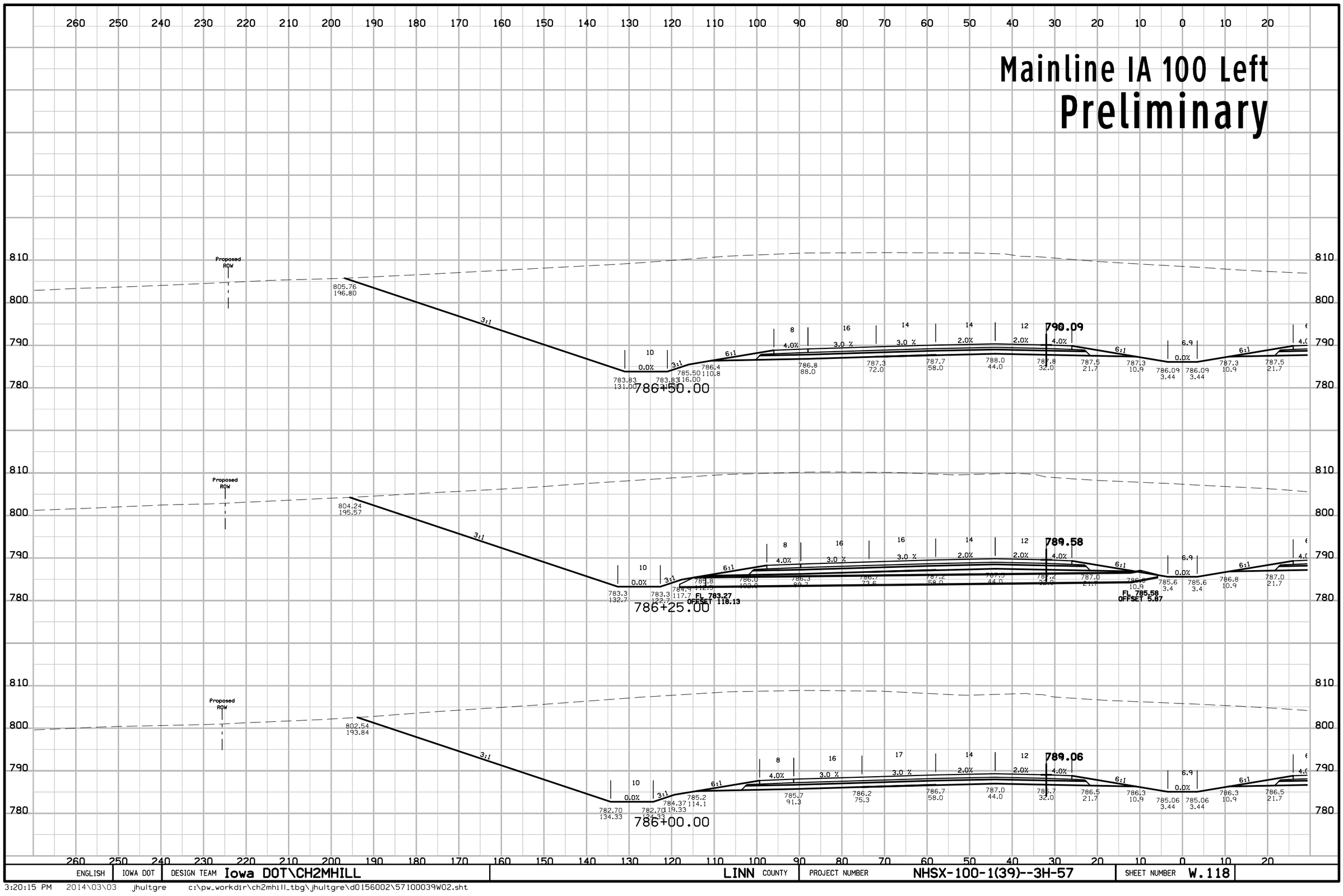
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.118

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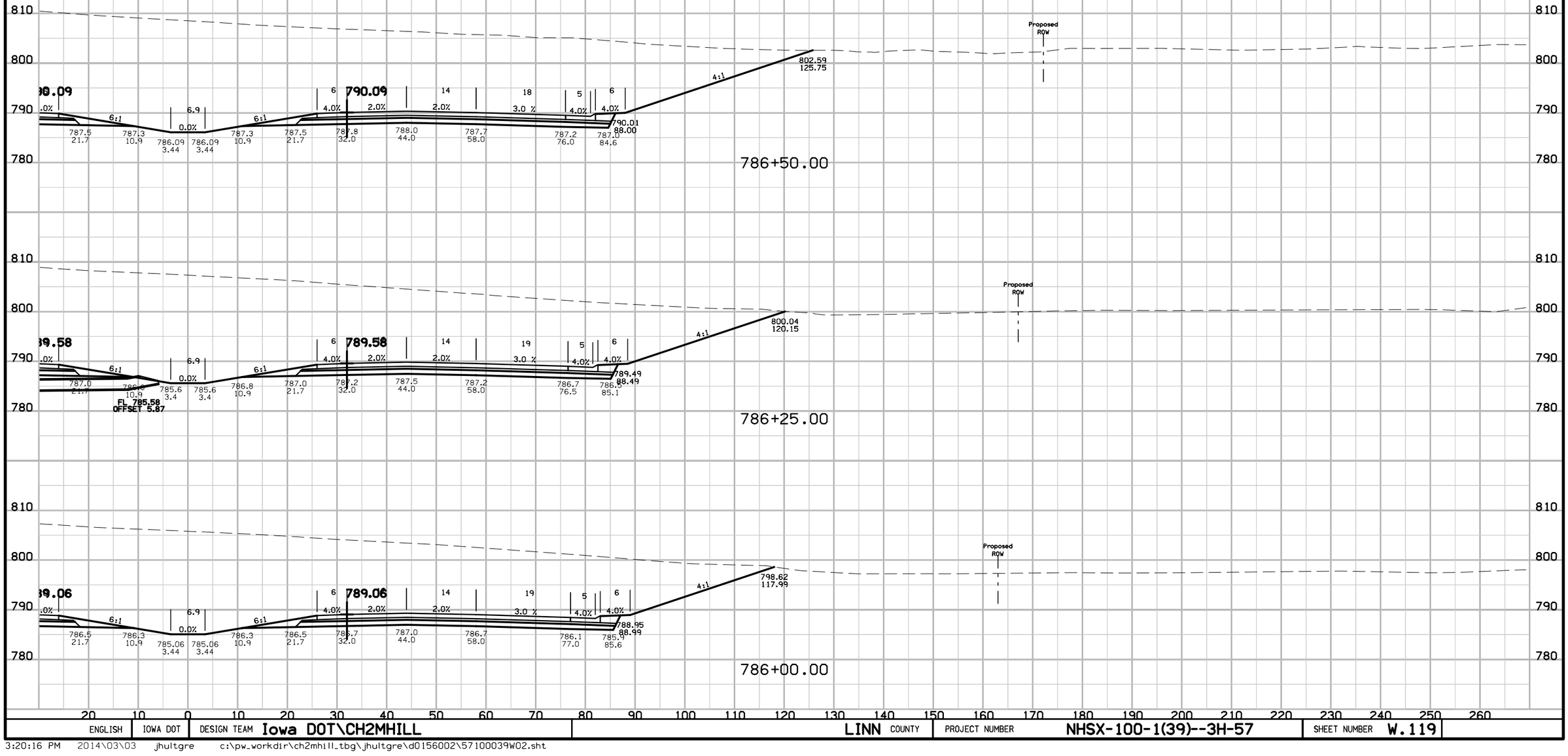

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.119

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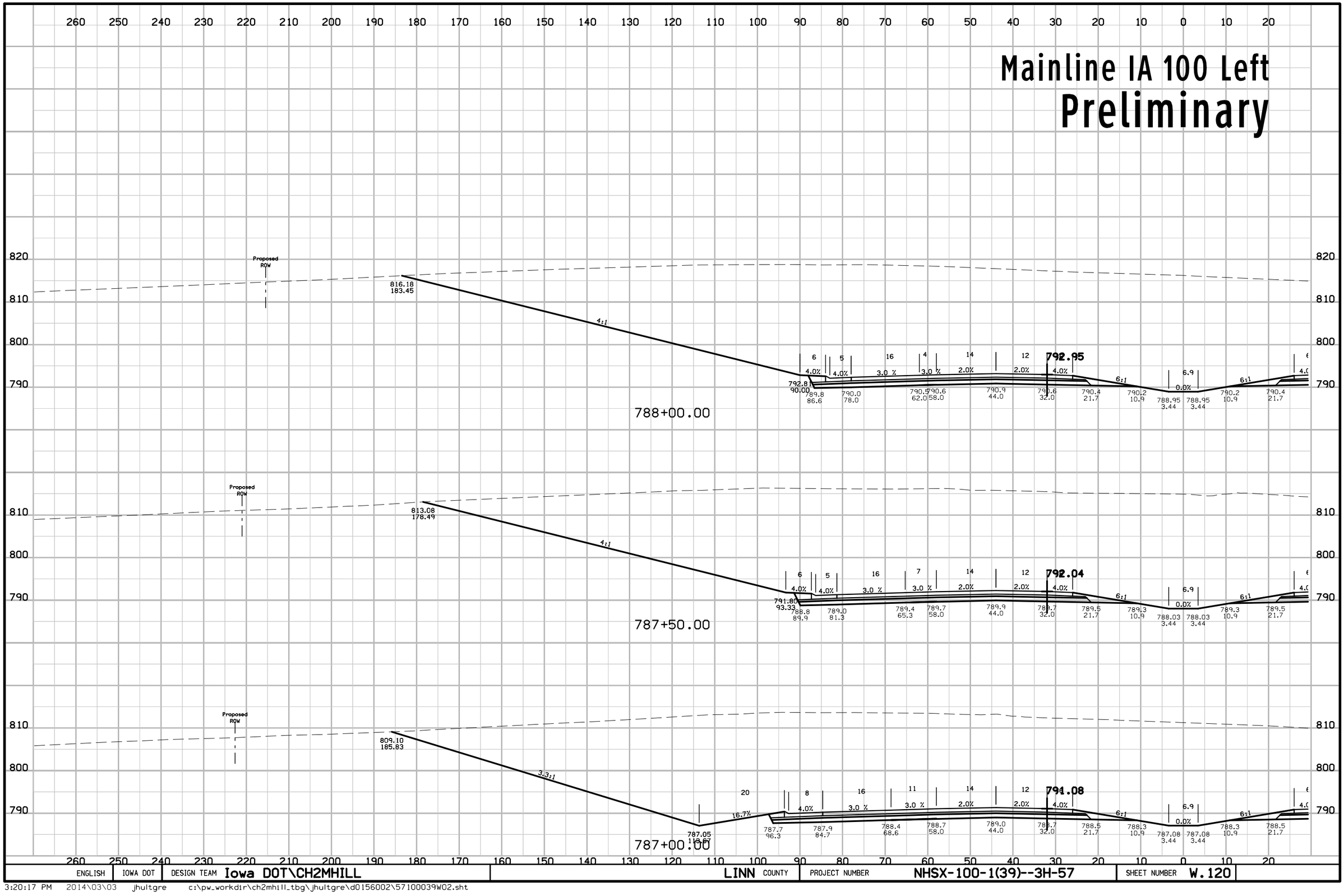
Preliminary



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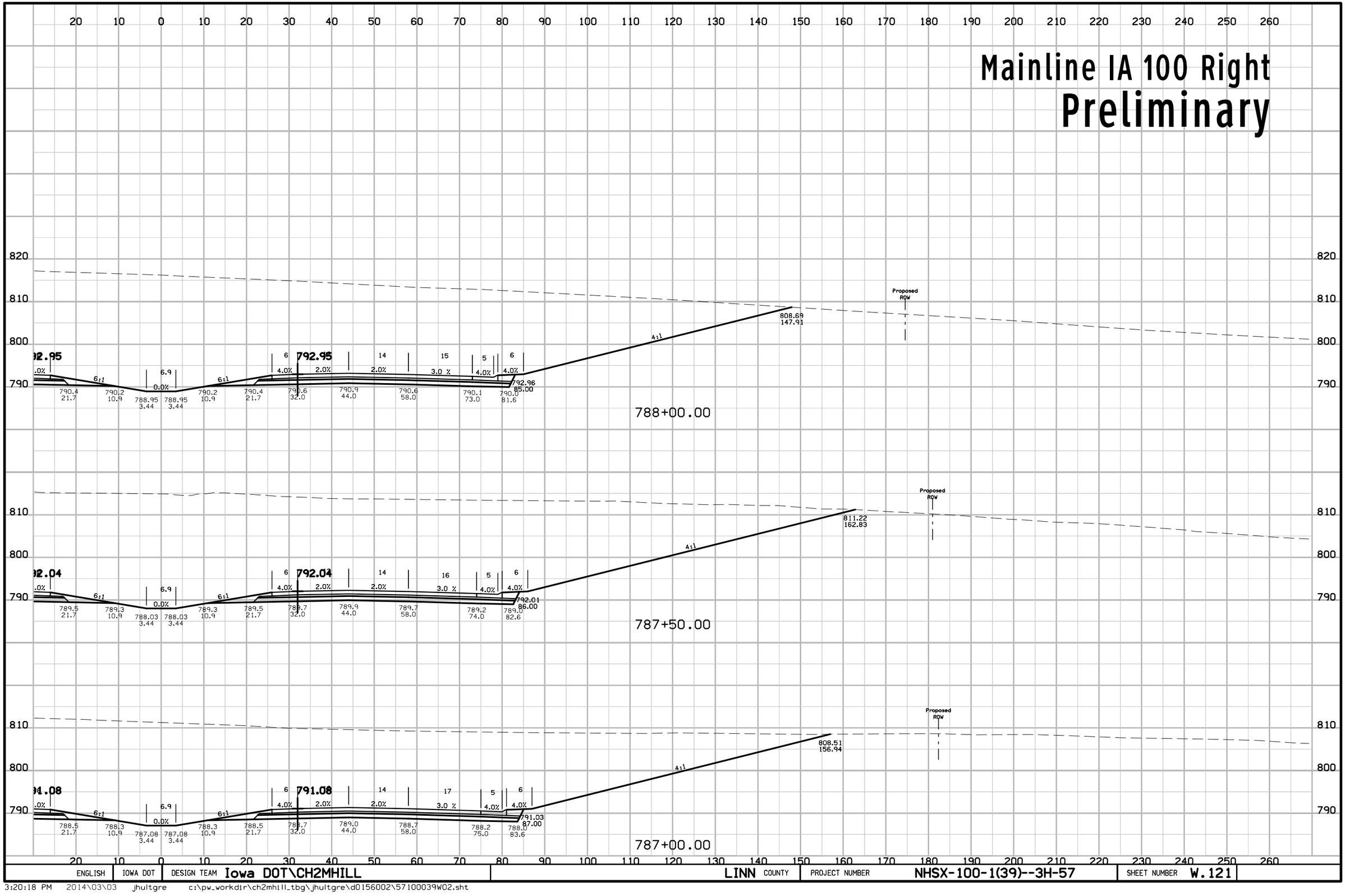
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.121

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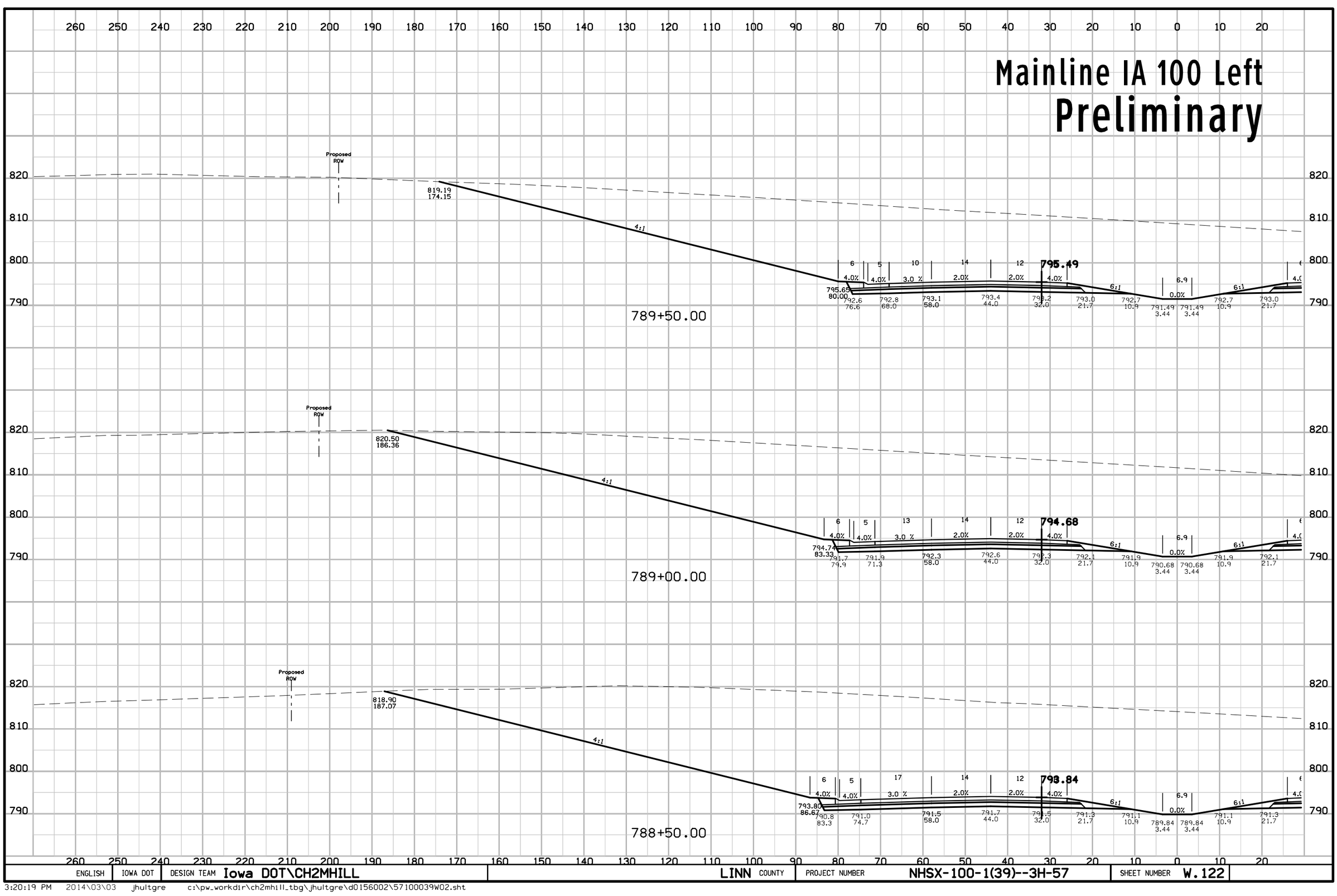
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.122

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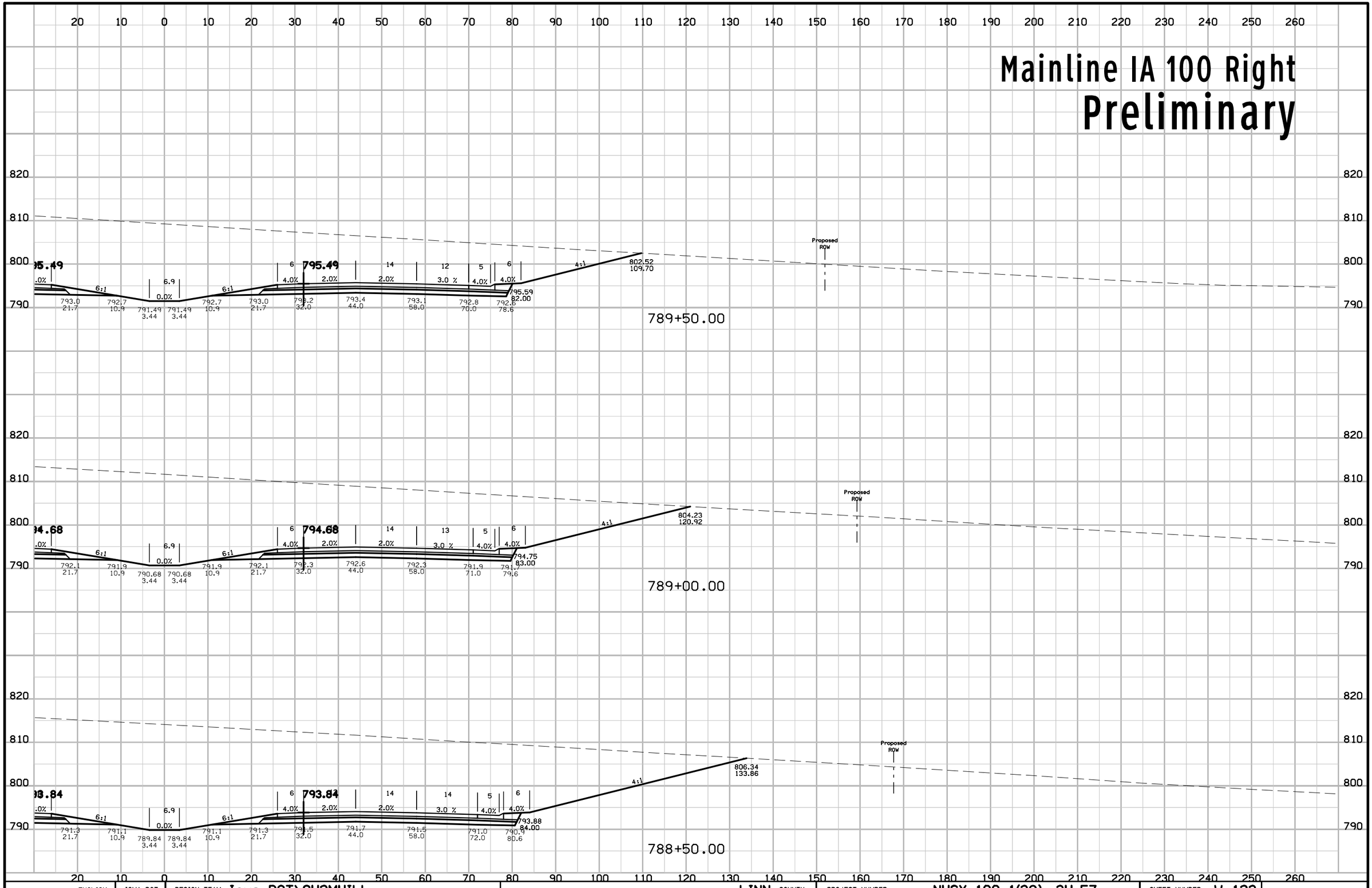
Preliminary



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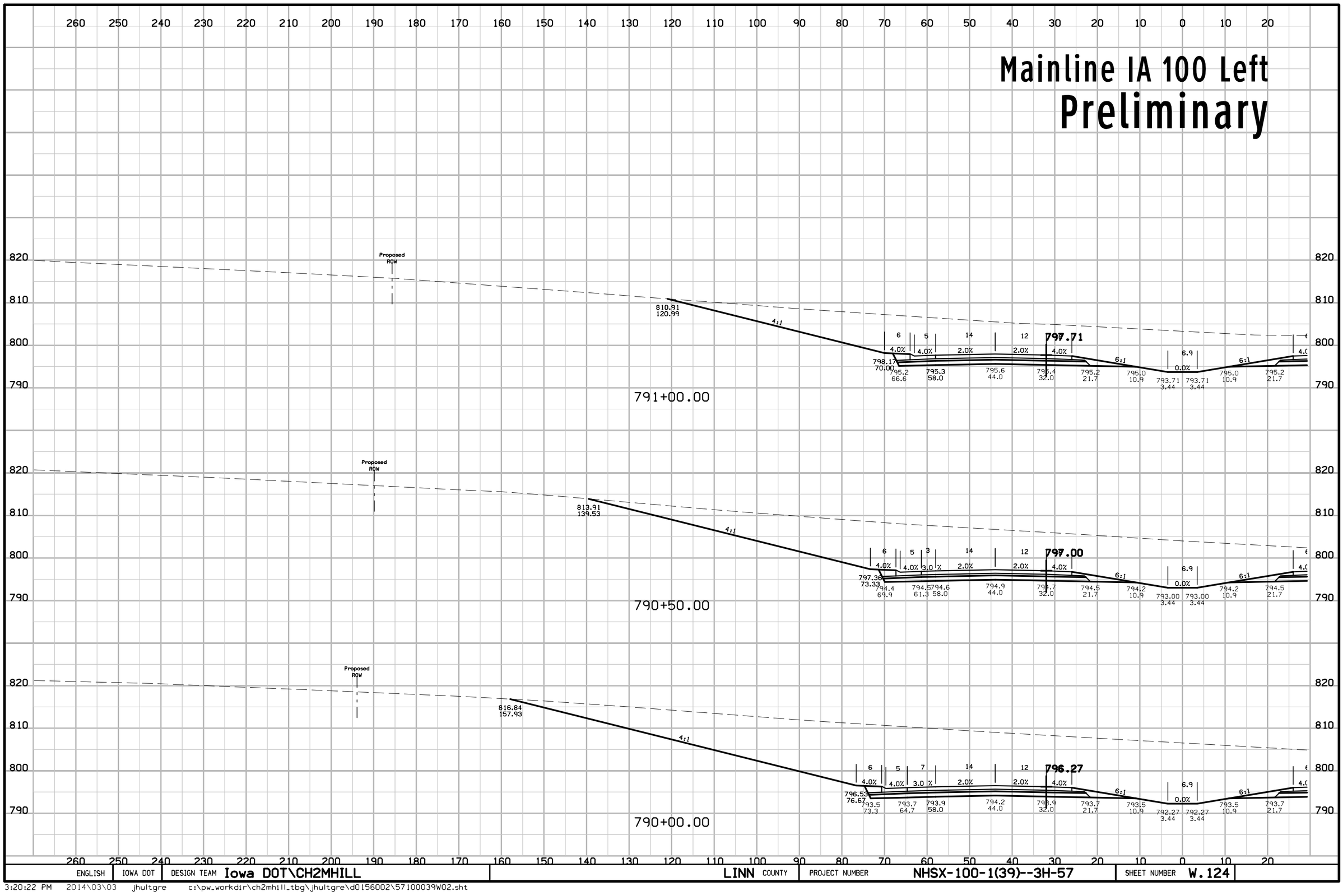
Preliminary



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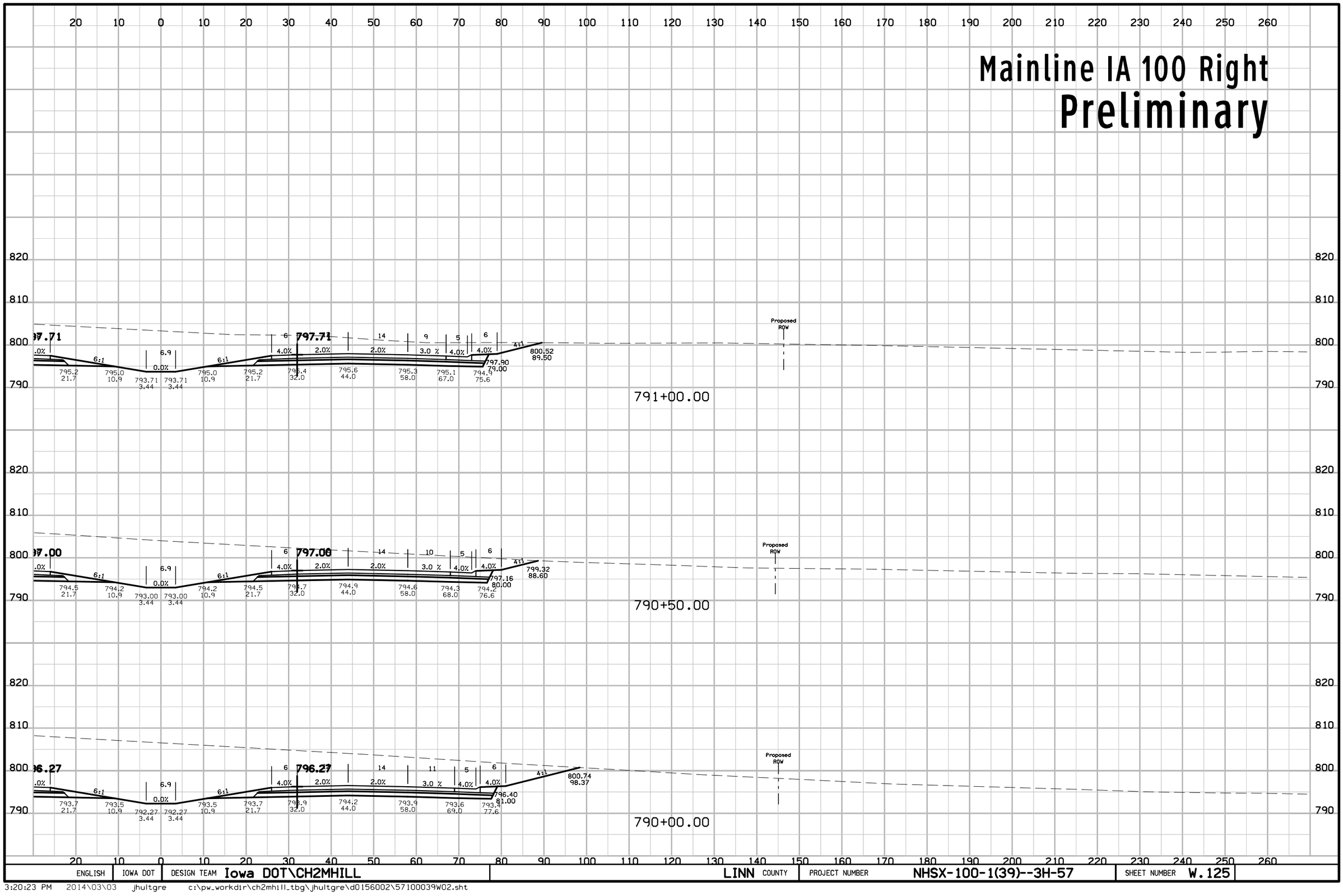
Preliminary



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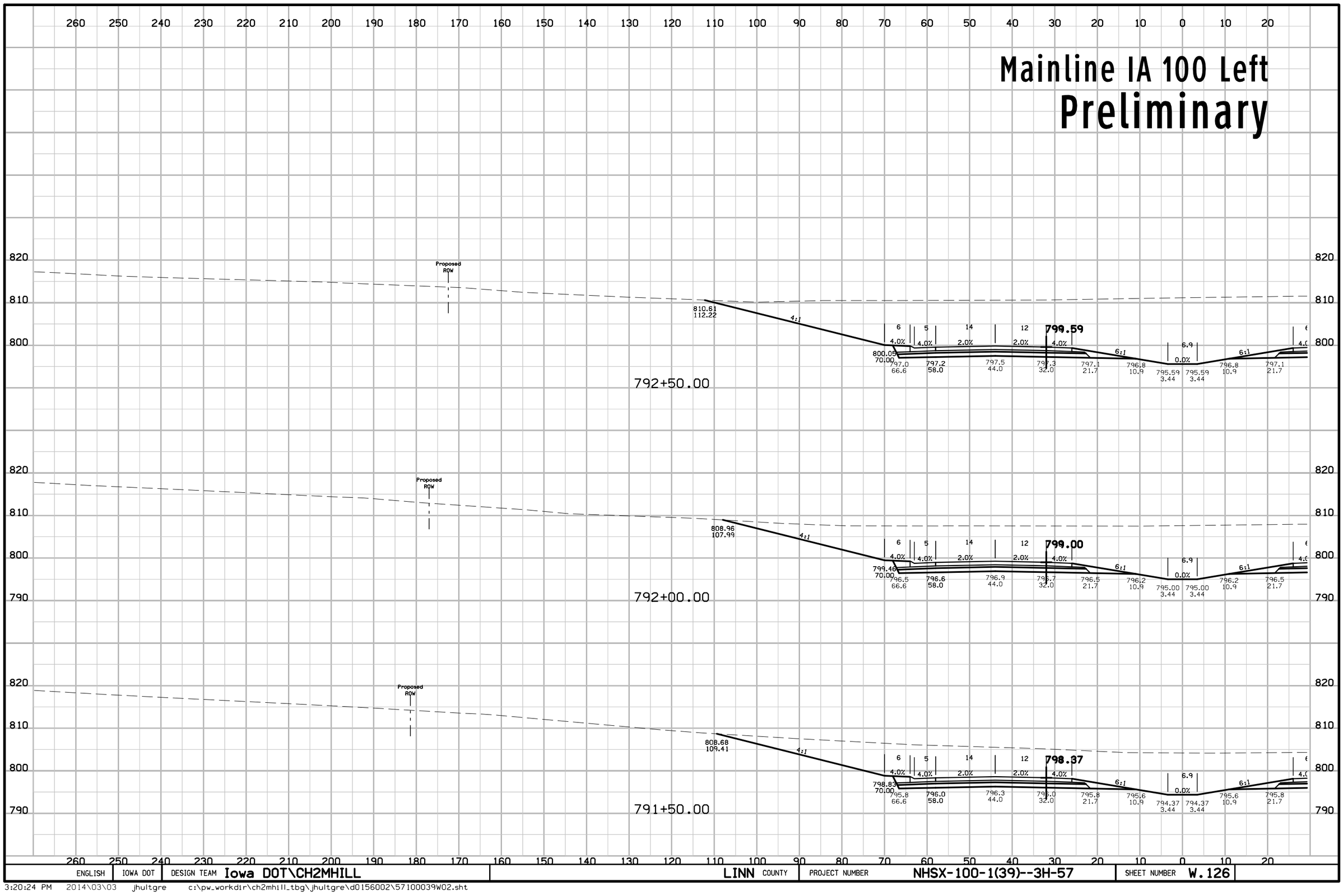
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.126

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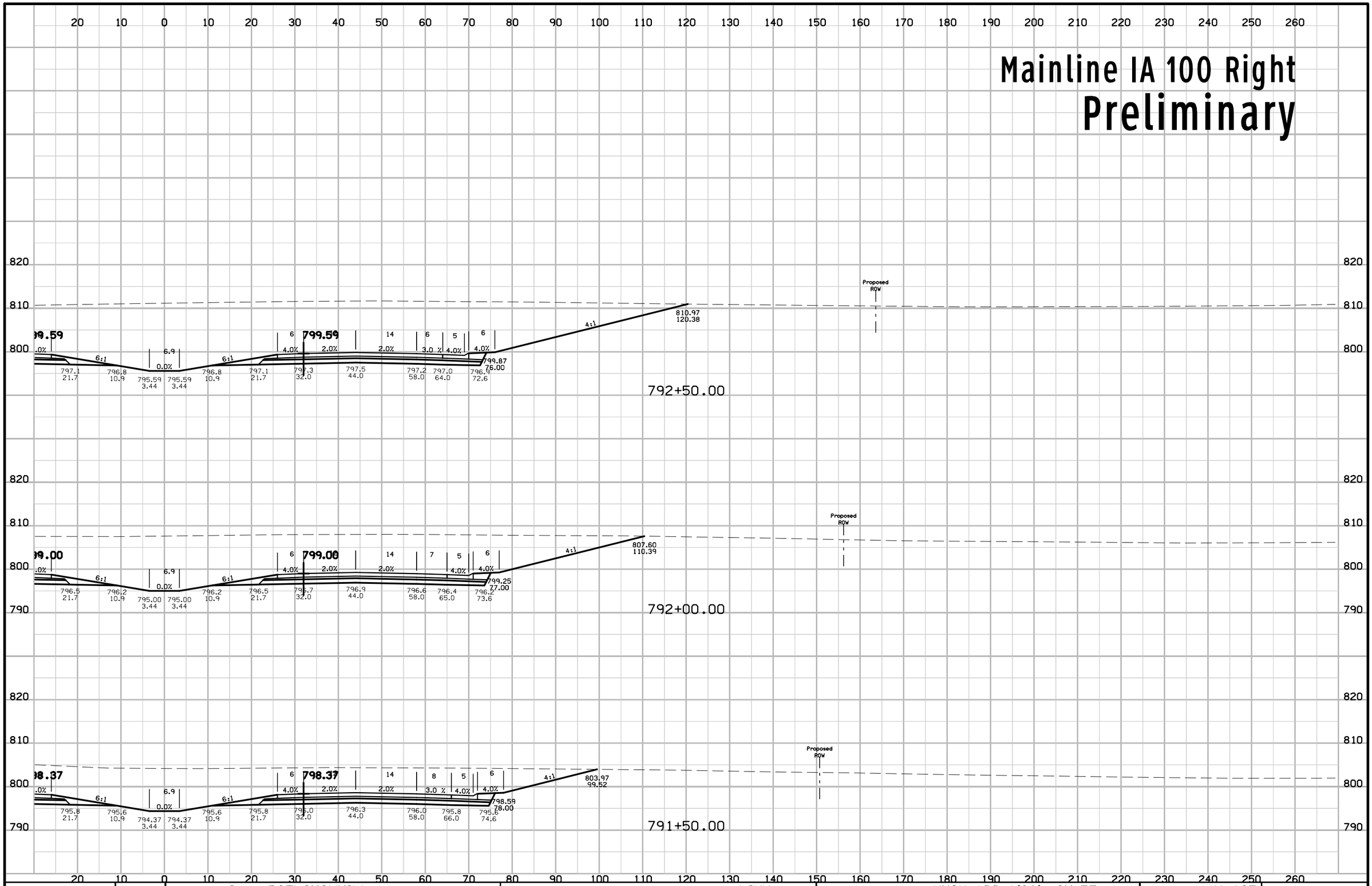
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.127

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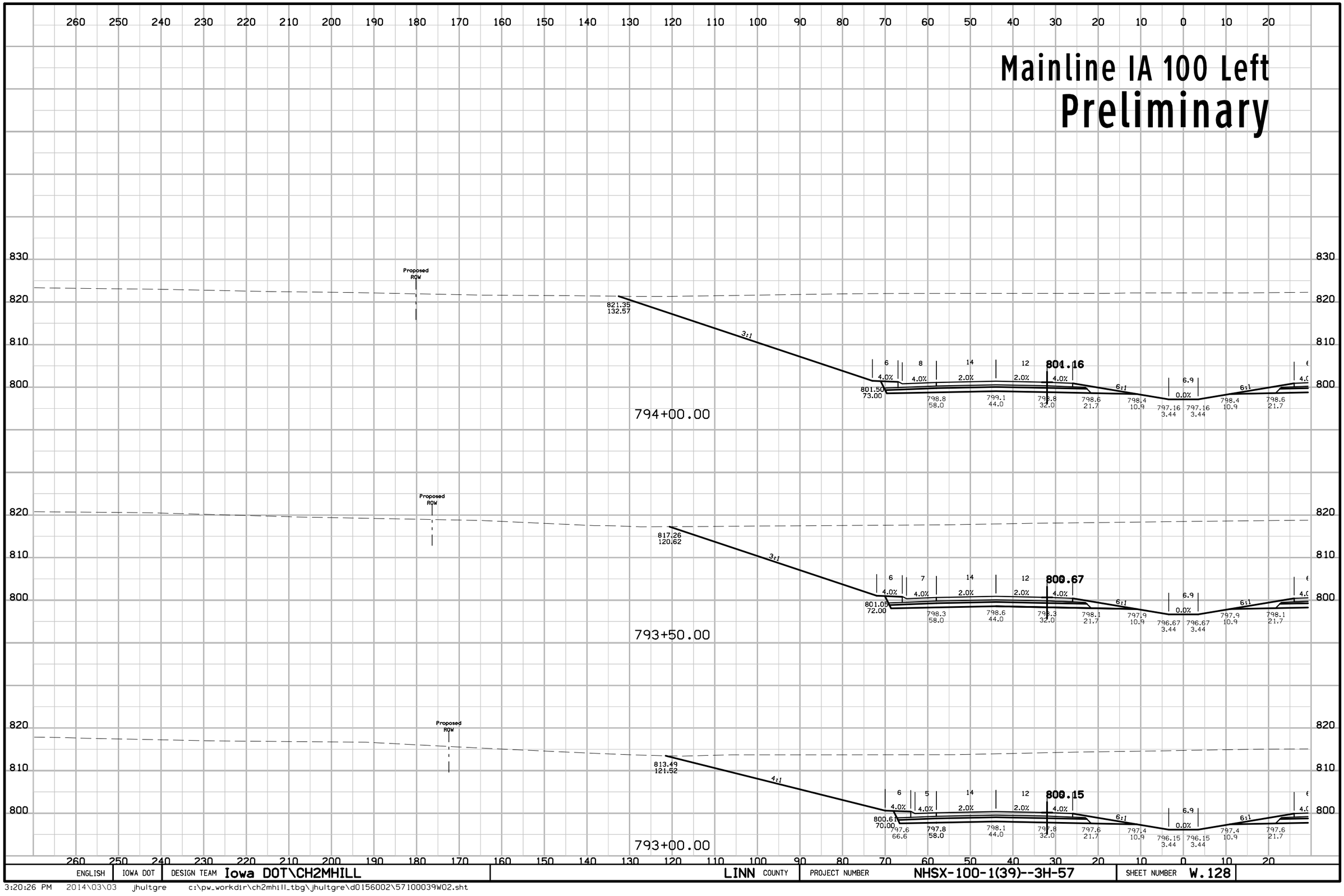
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	W.128

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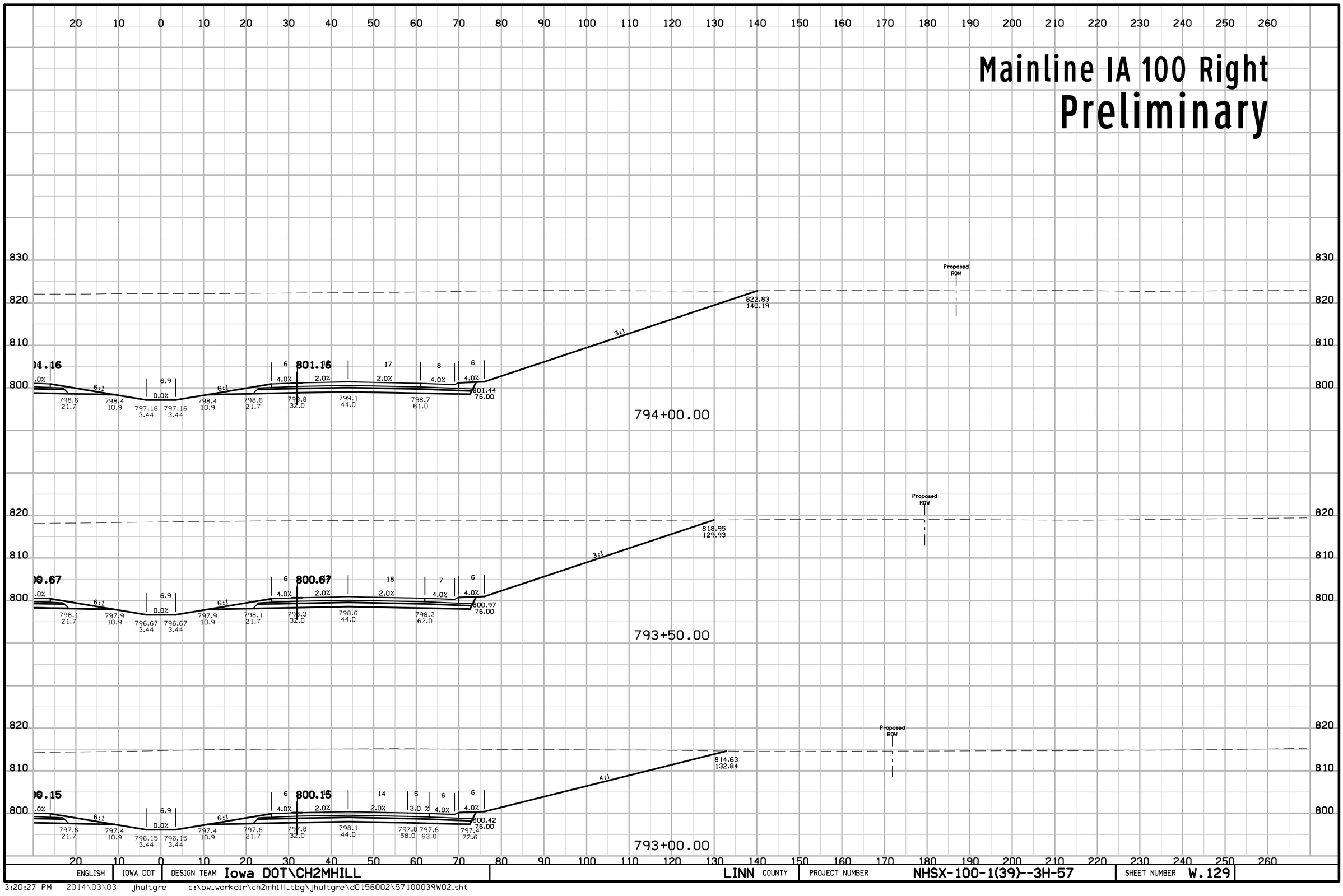
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.129

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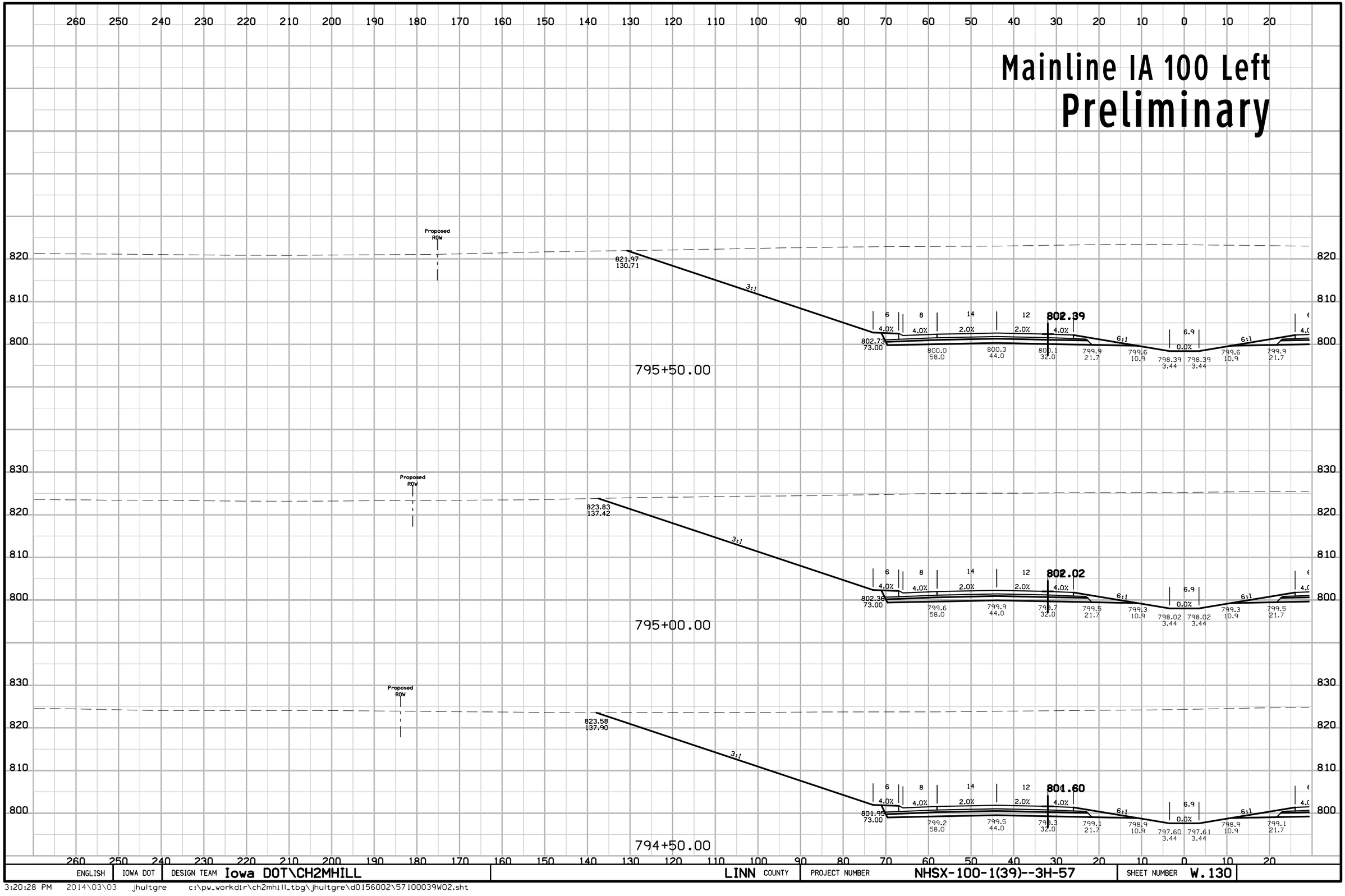
Preliminary



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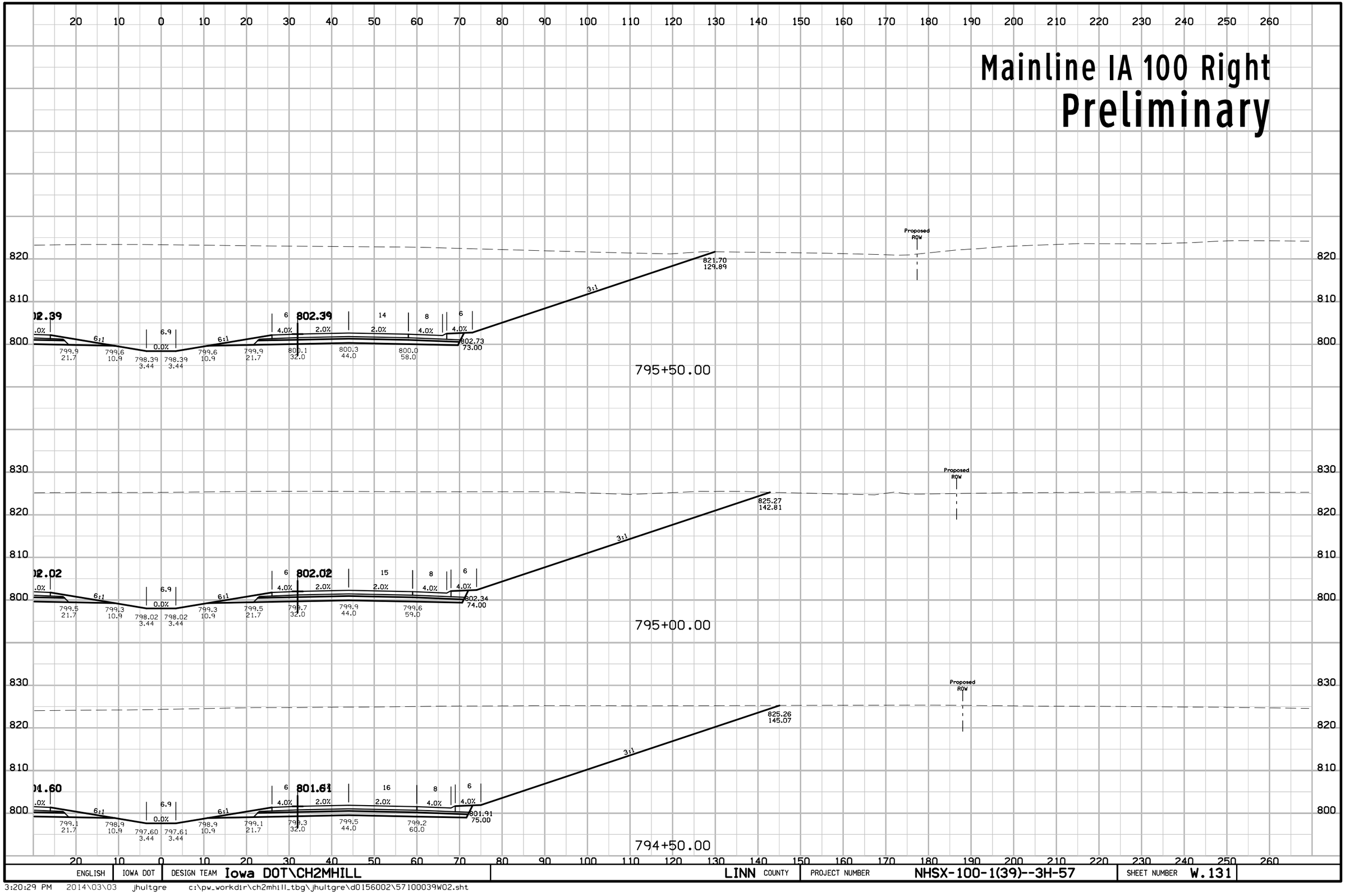
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.131

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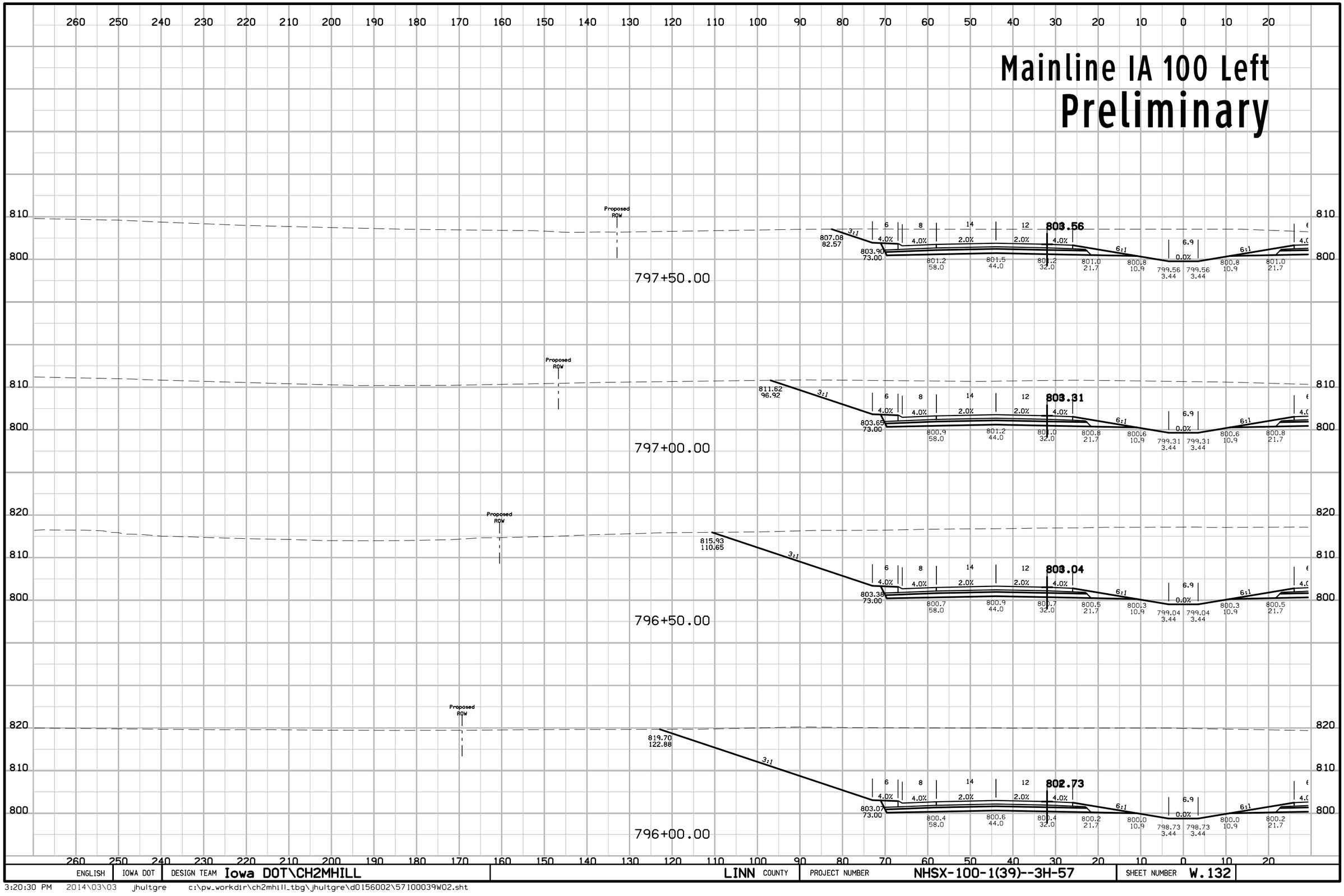
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	W.132

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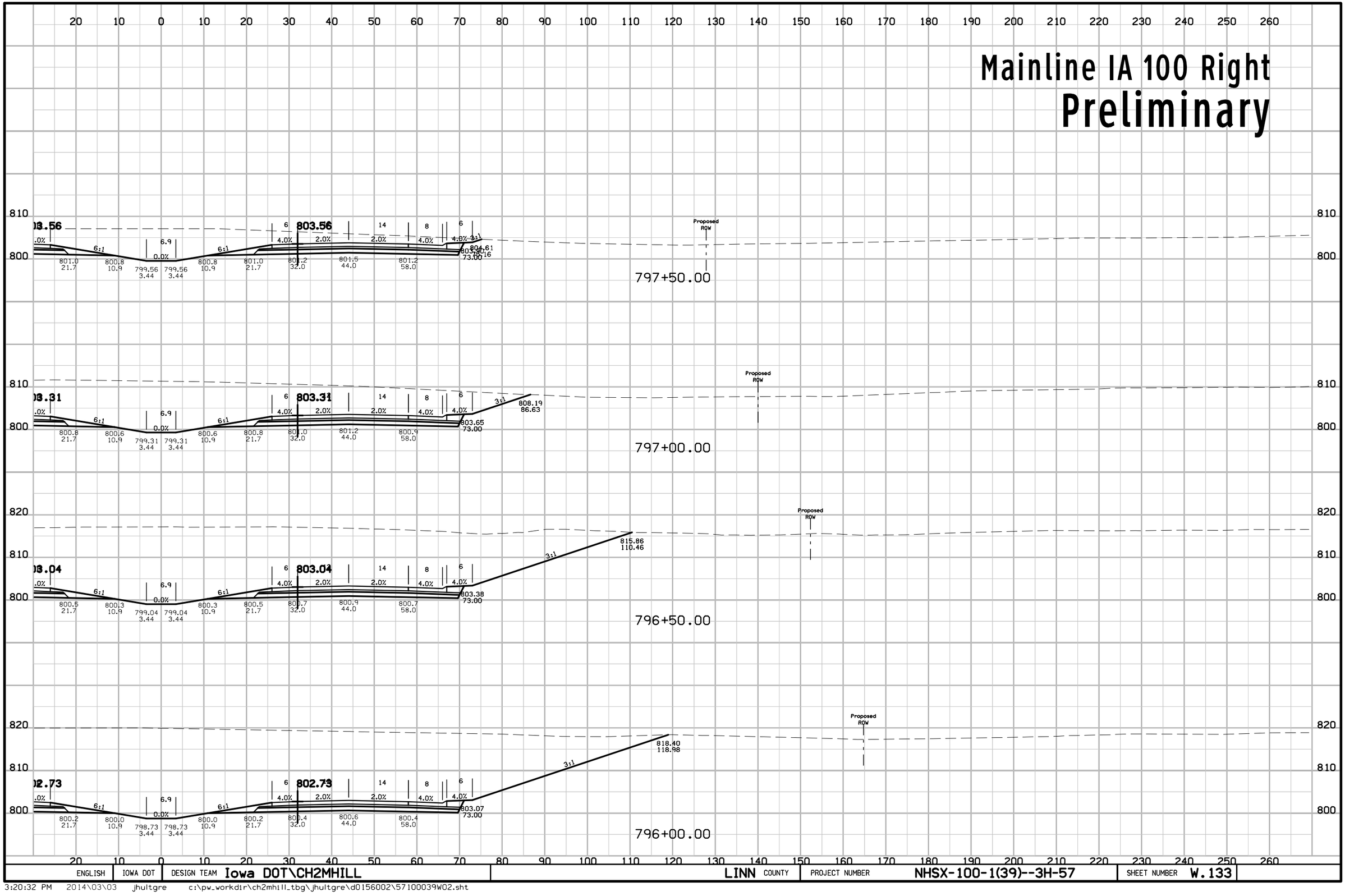
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.133

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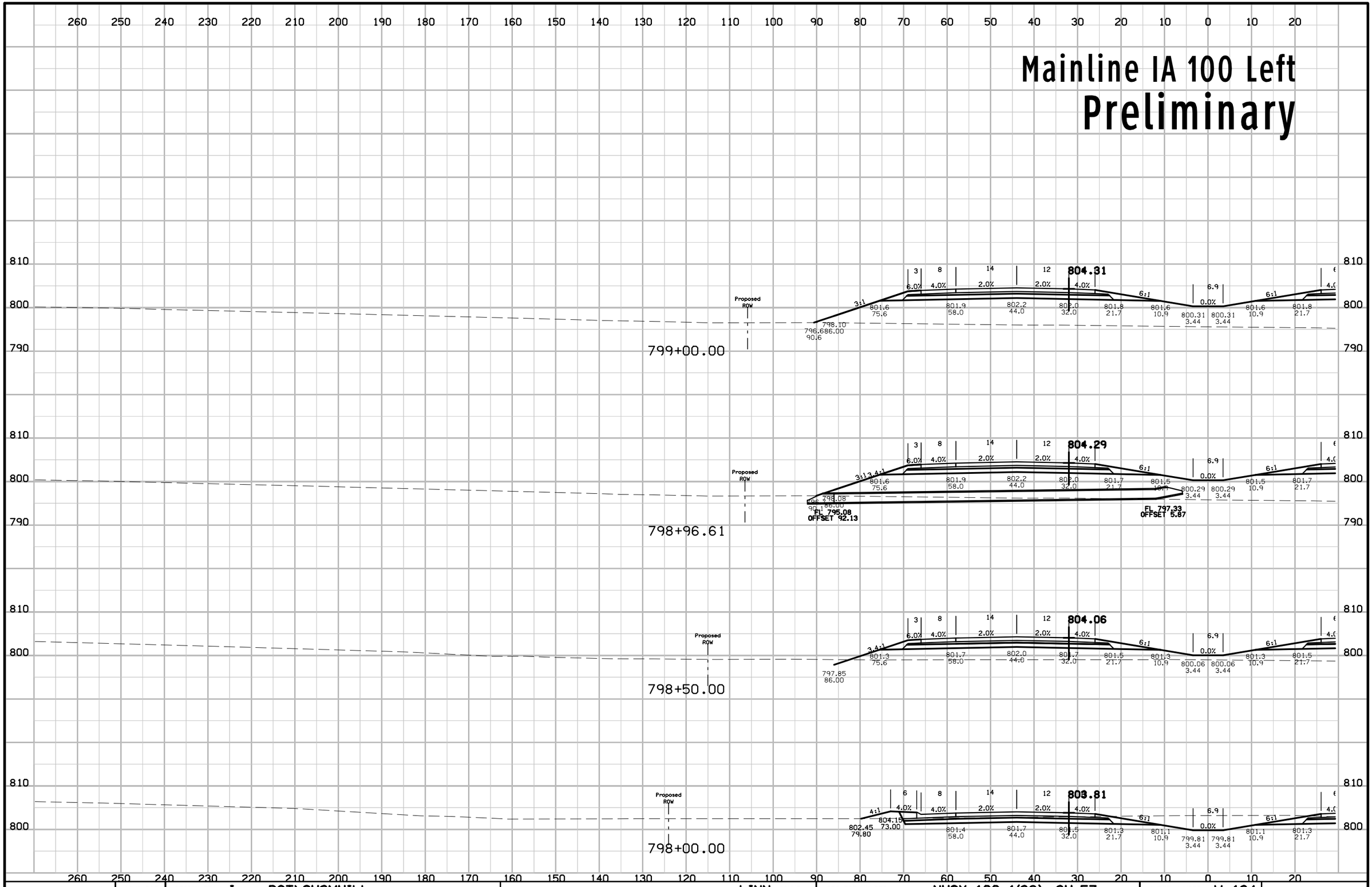
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.134

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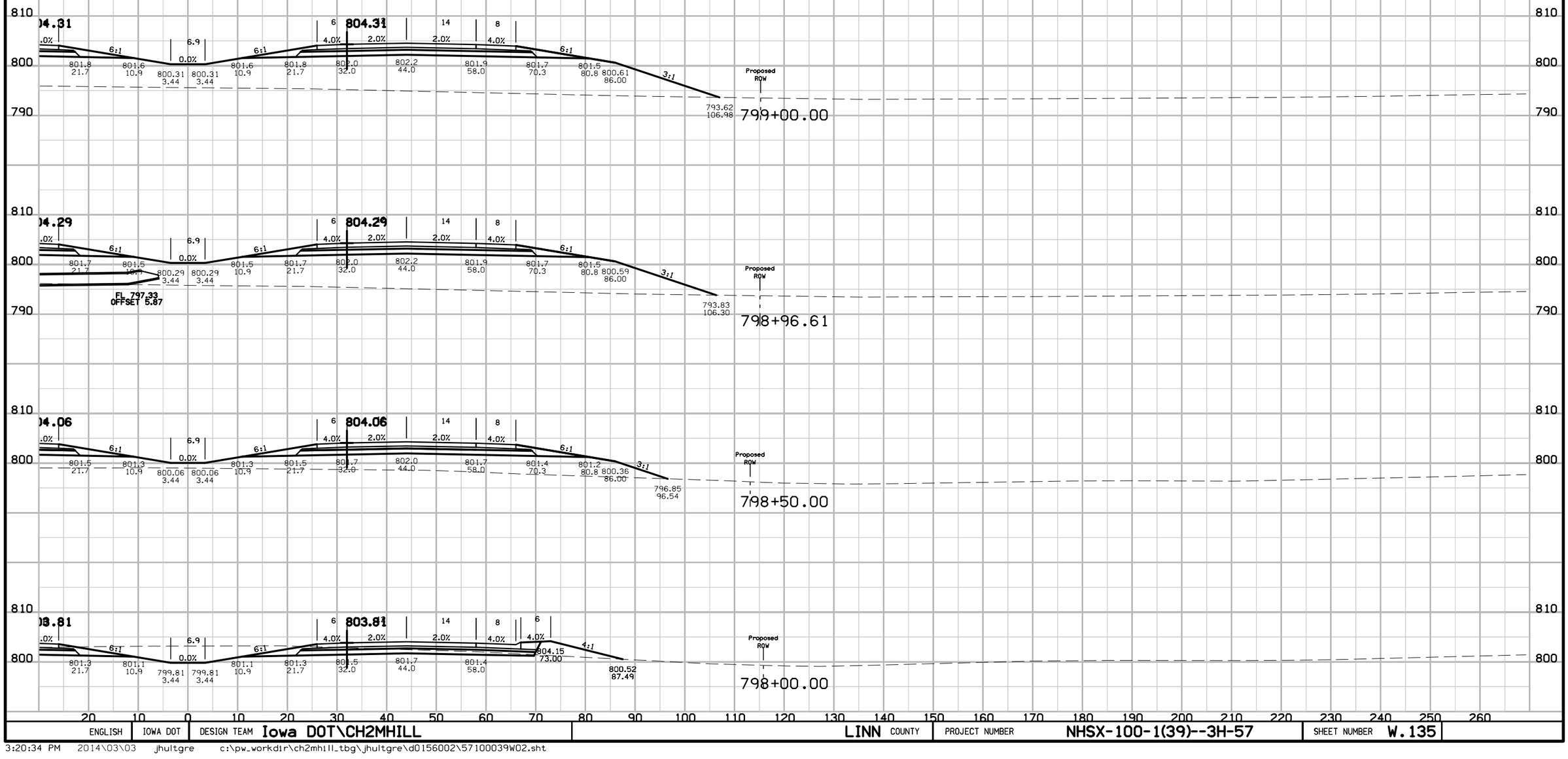
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.135

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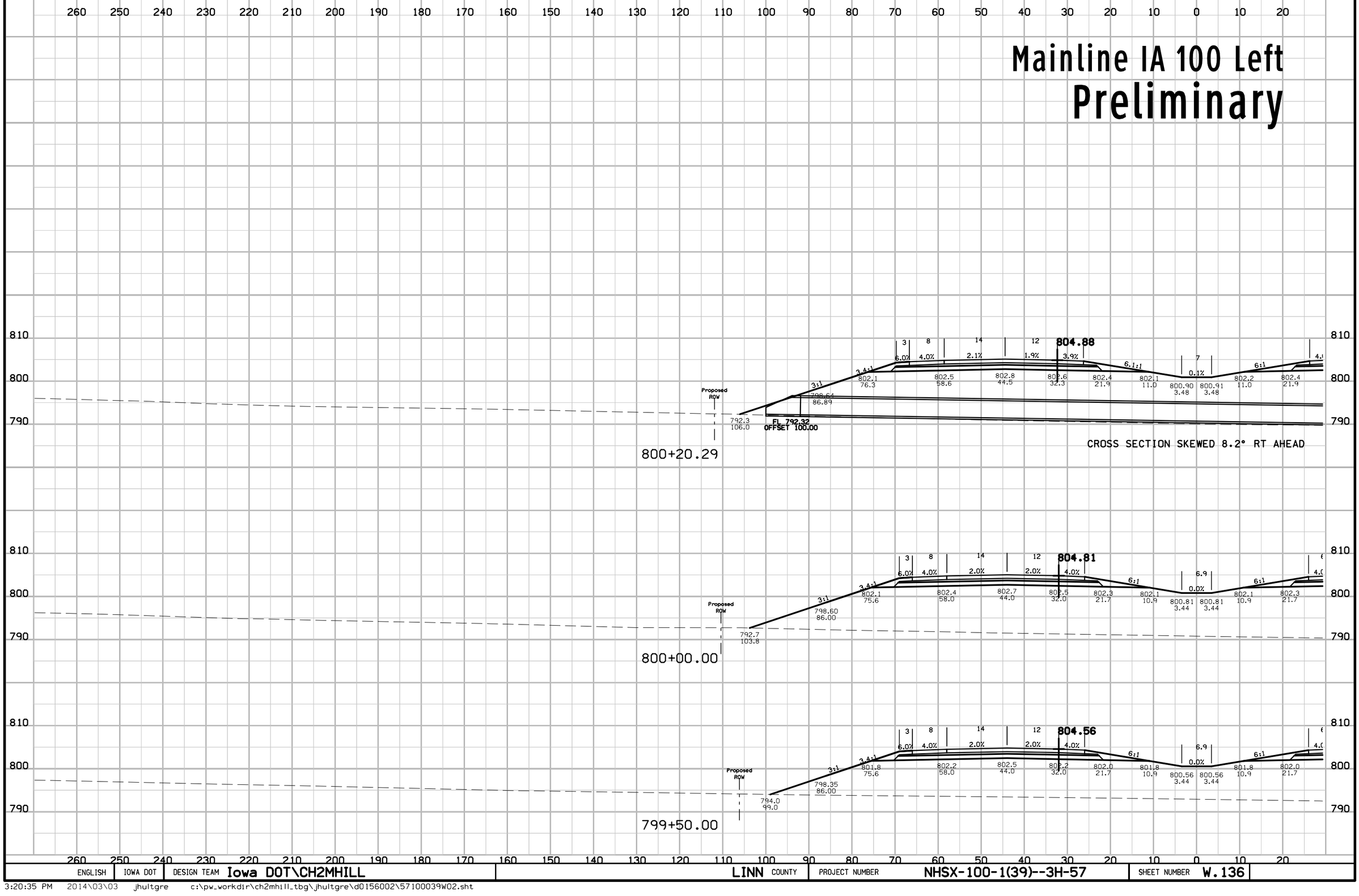
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.136

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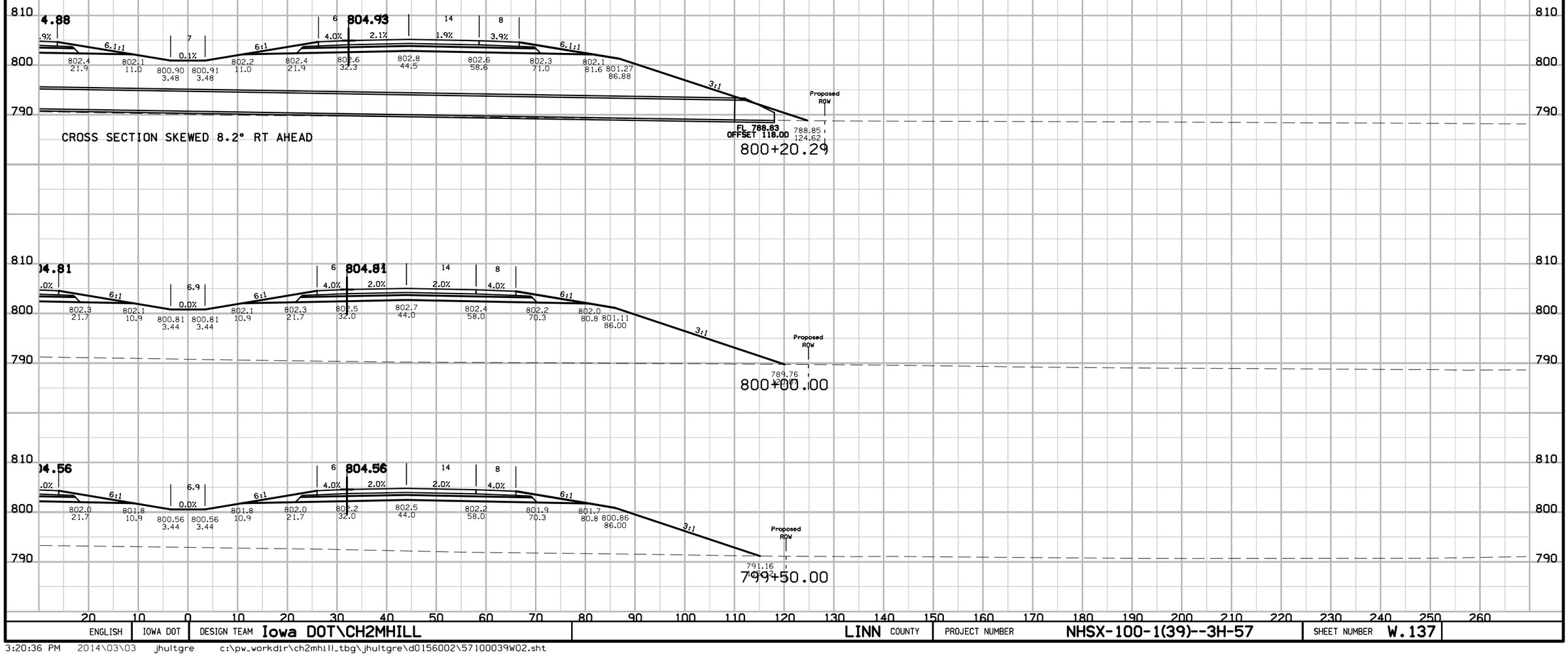
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.137

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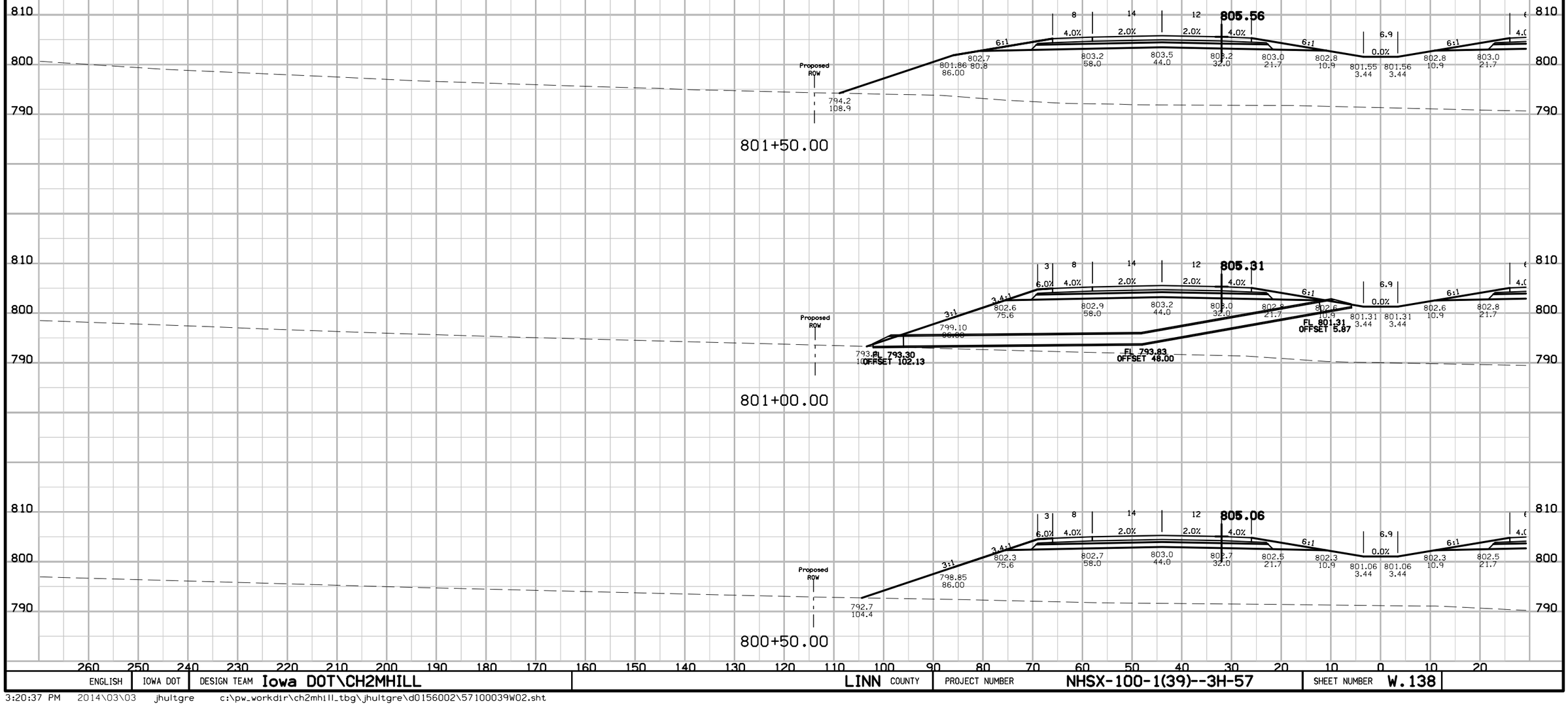
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.138

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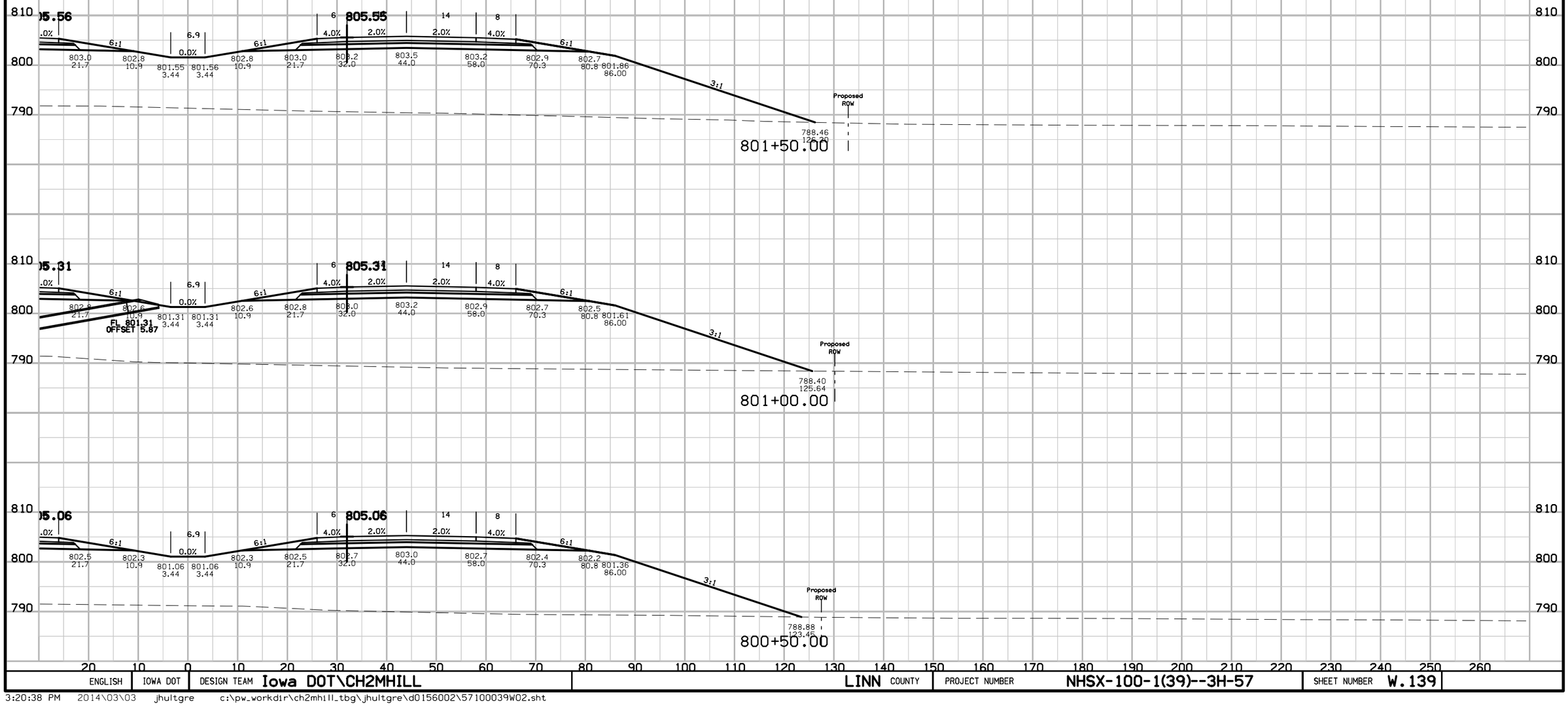
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.139	

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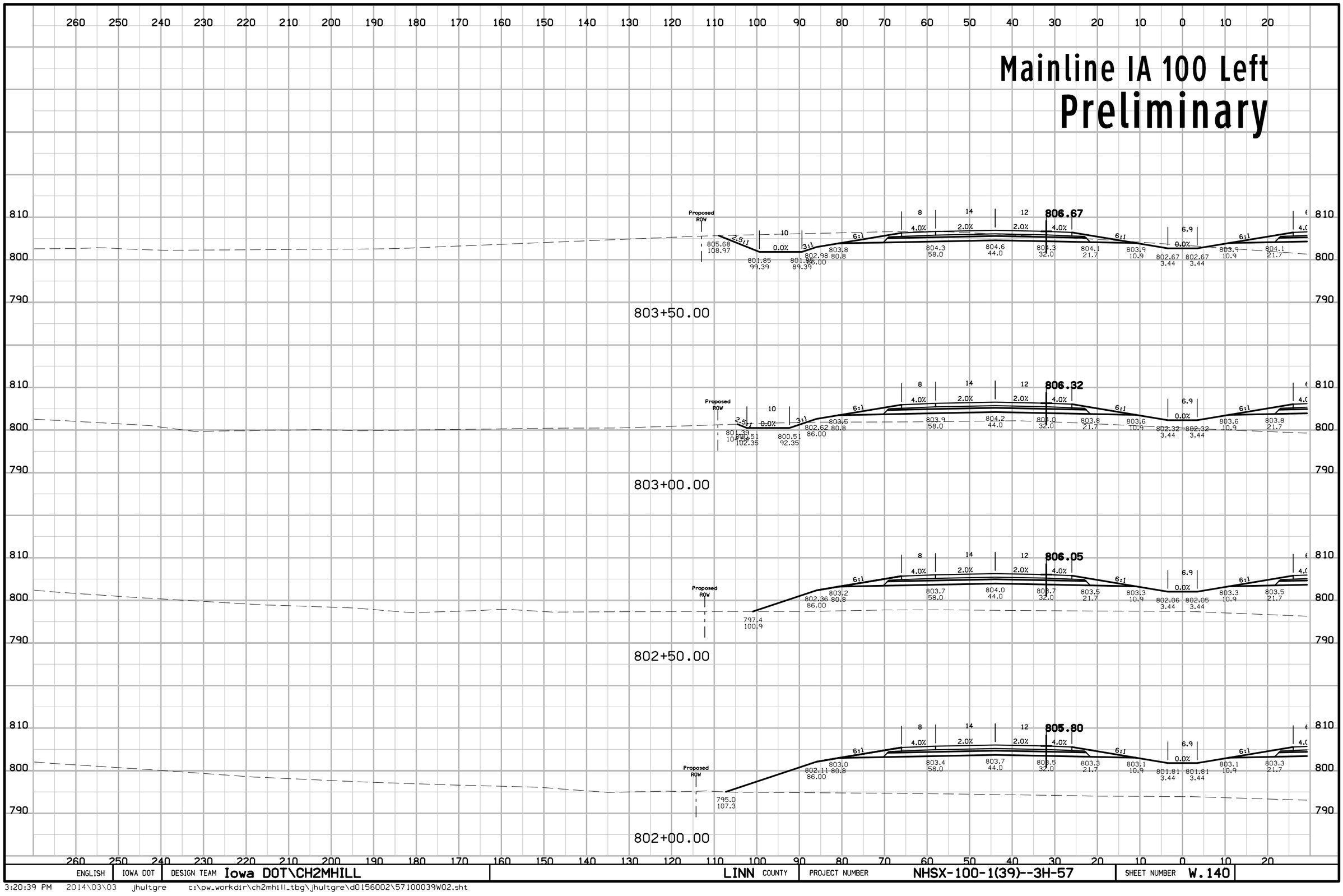
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.140

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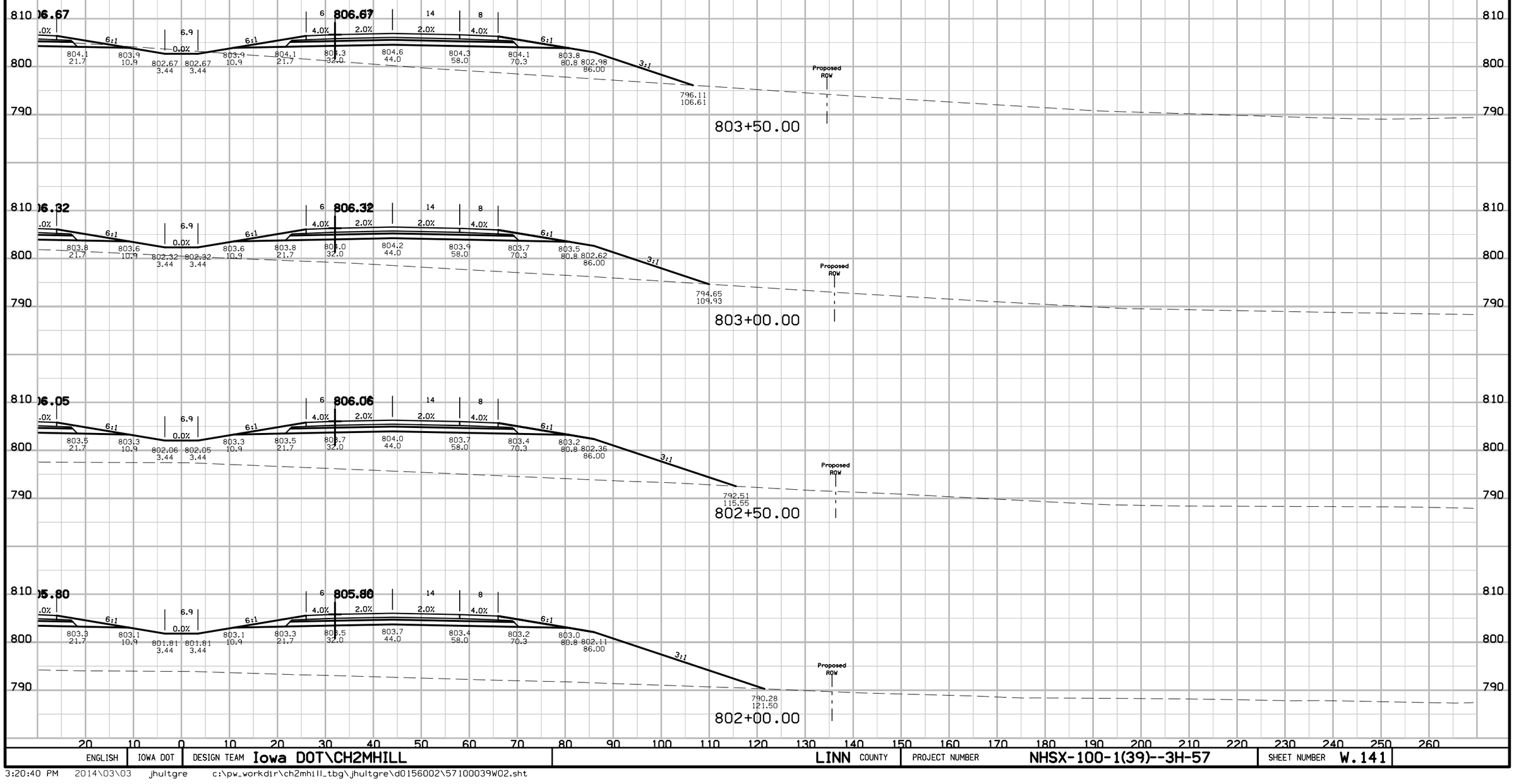
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.141	

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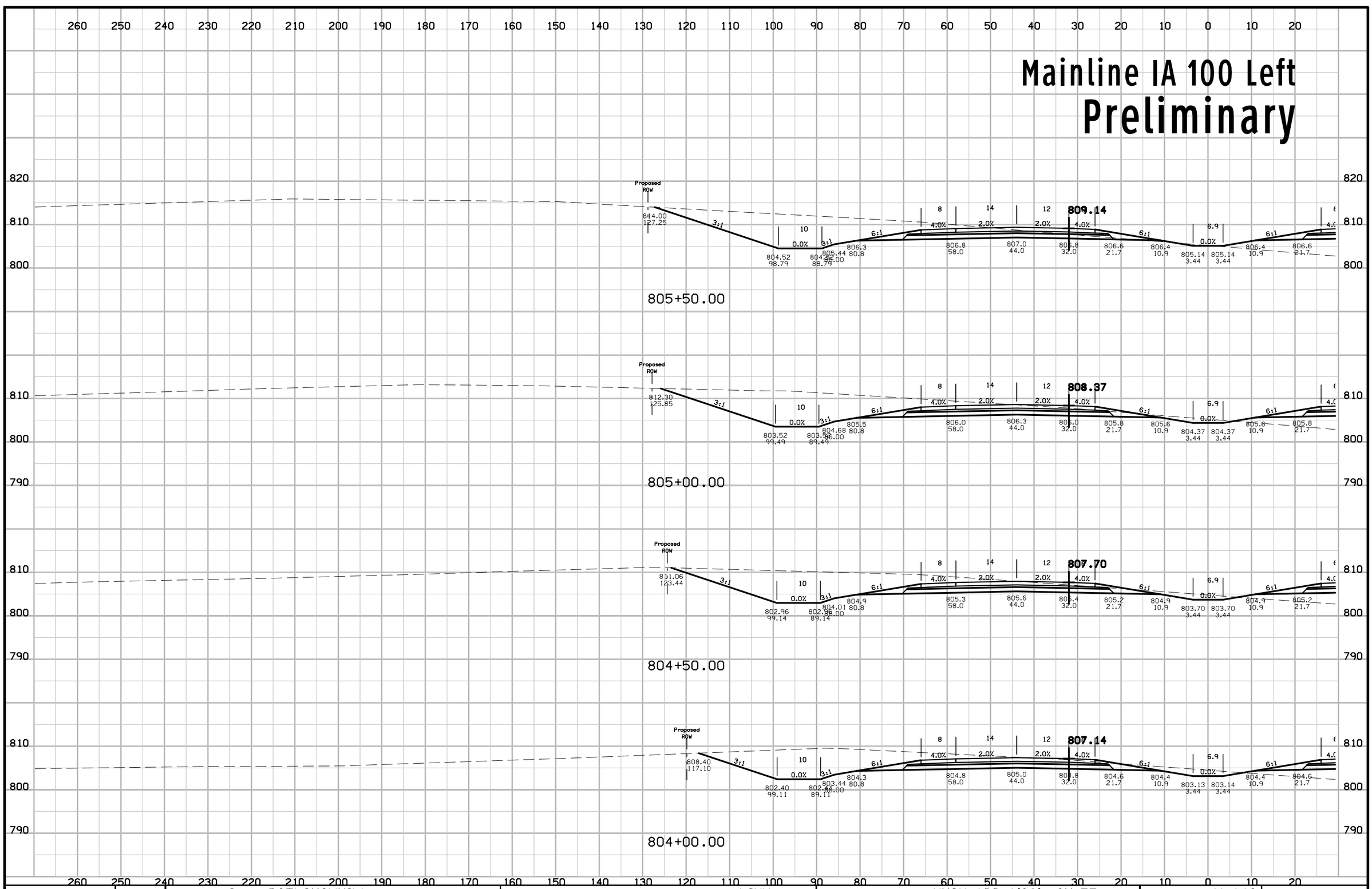
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.142

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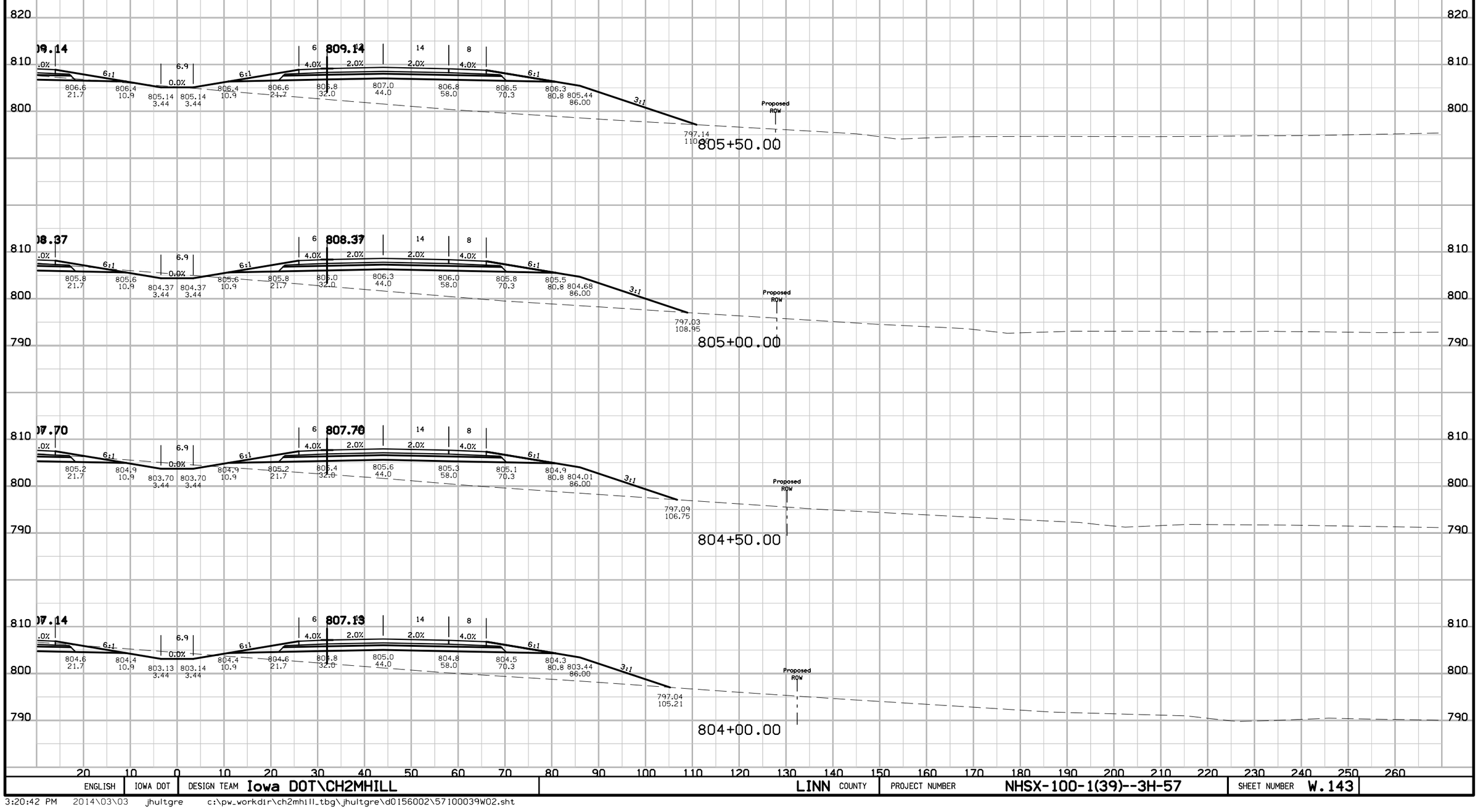
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	W.143

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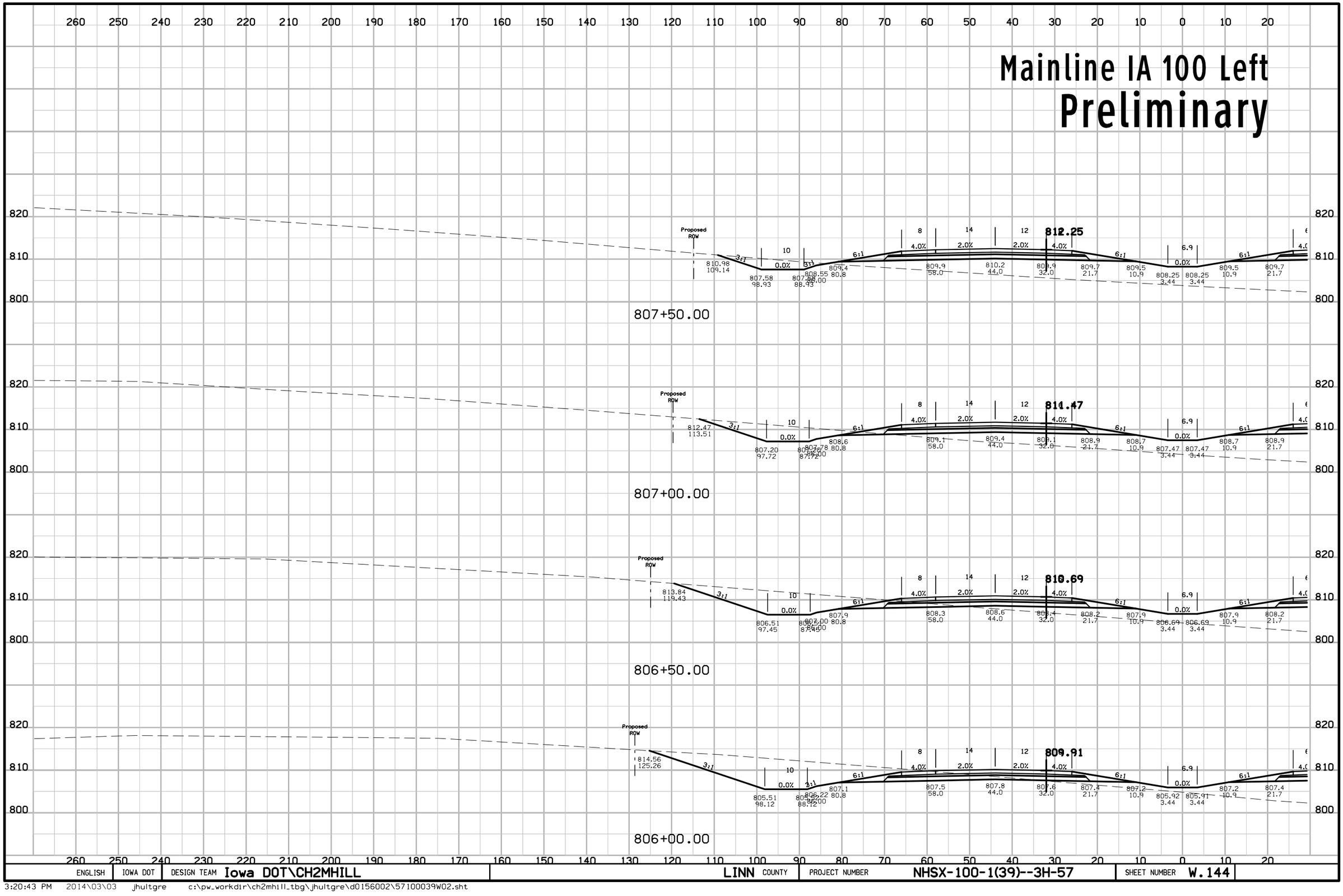
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.144

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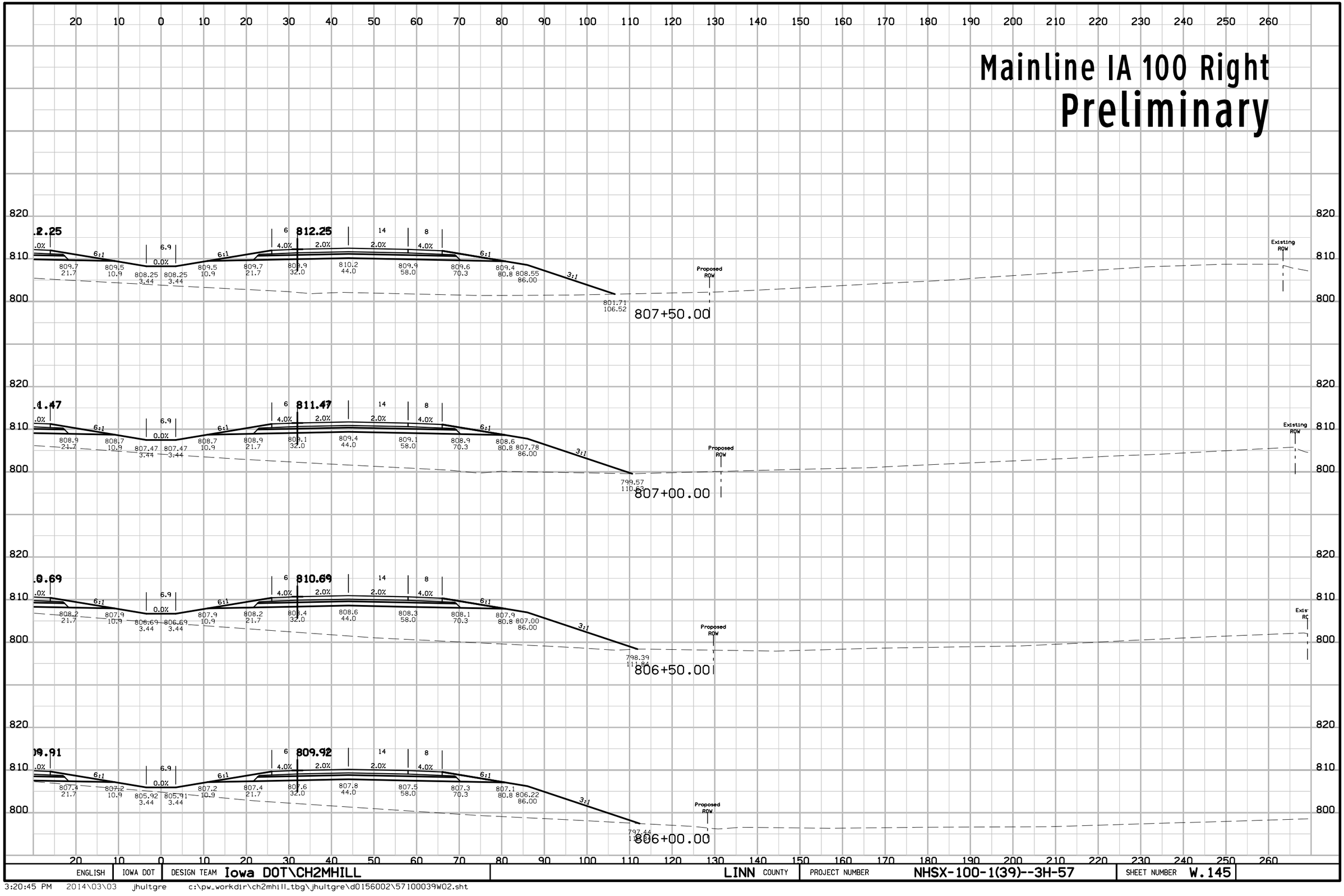
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.145	

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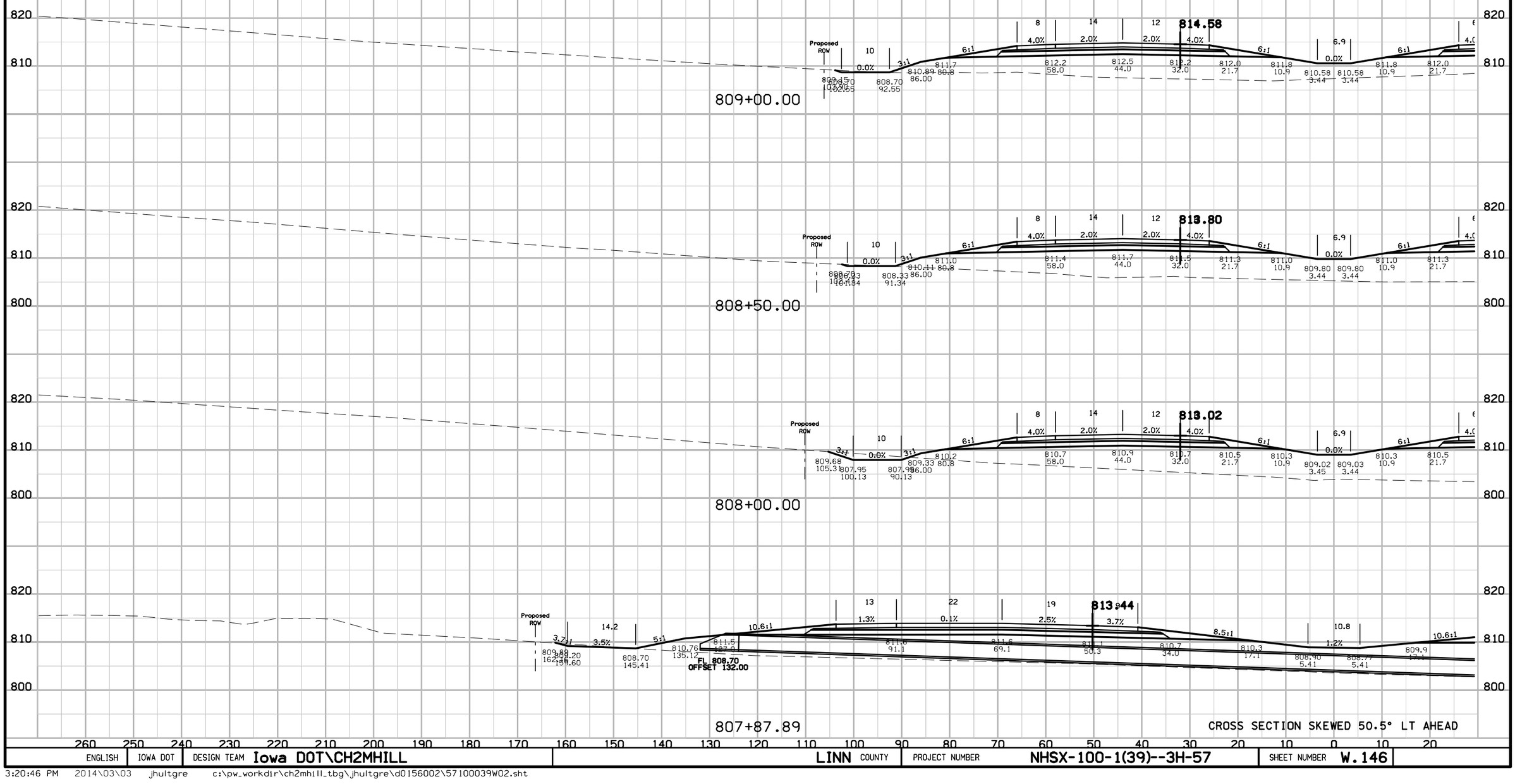
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.146

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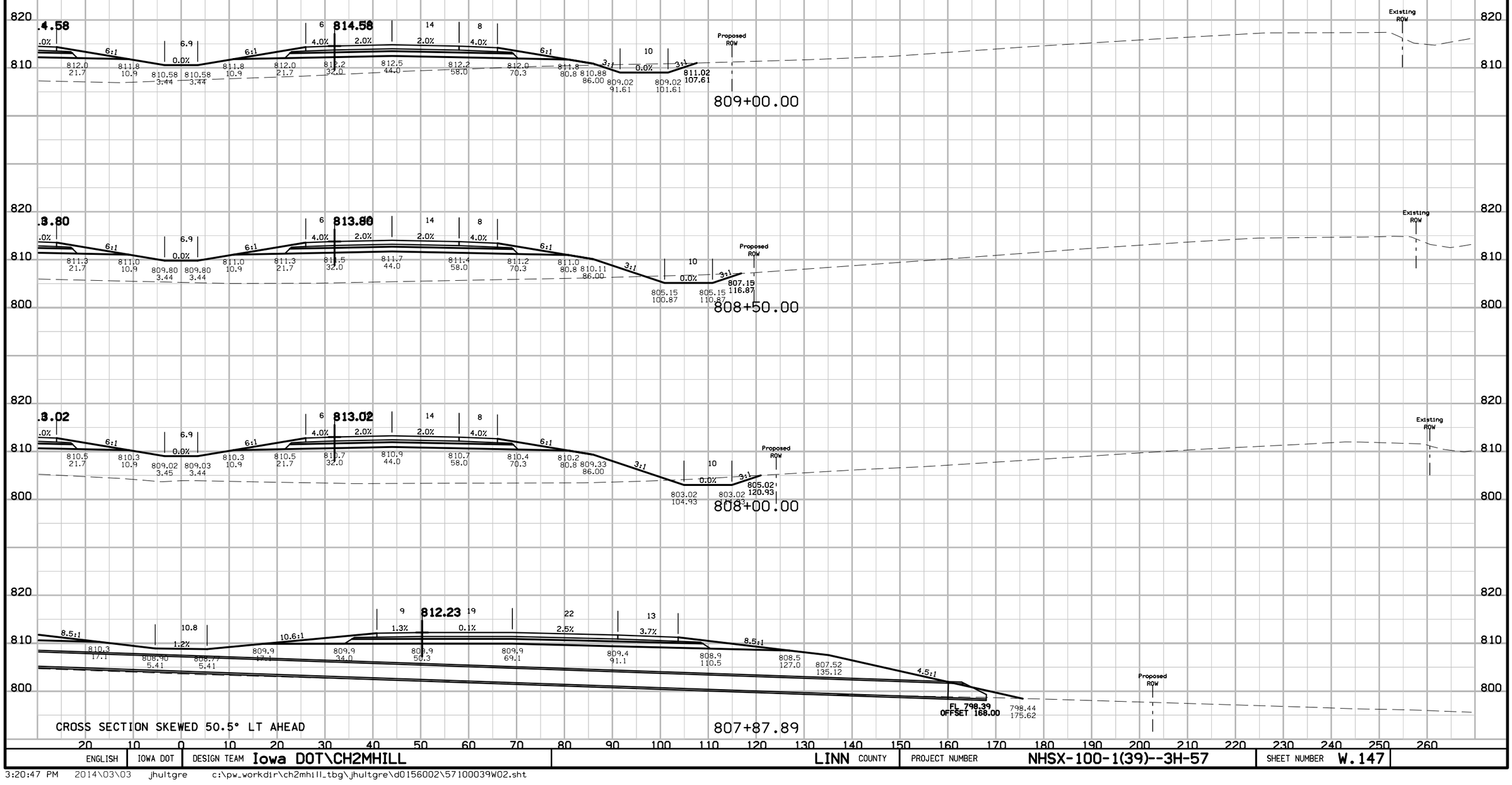
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.147

3:20:47 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W02.sht

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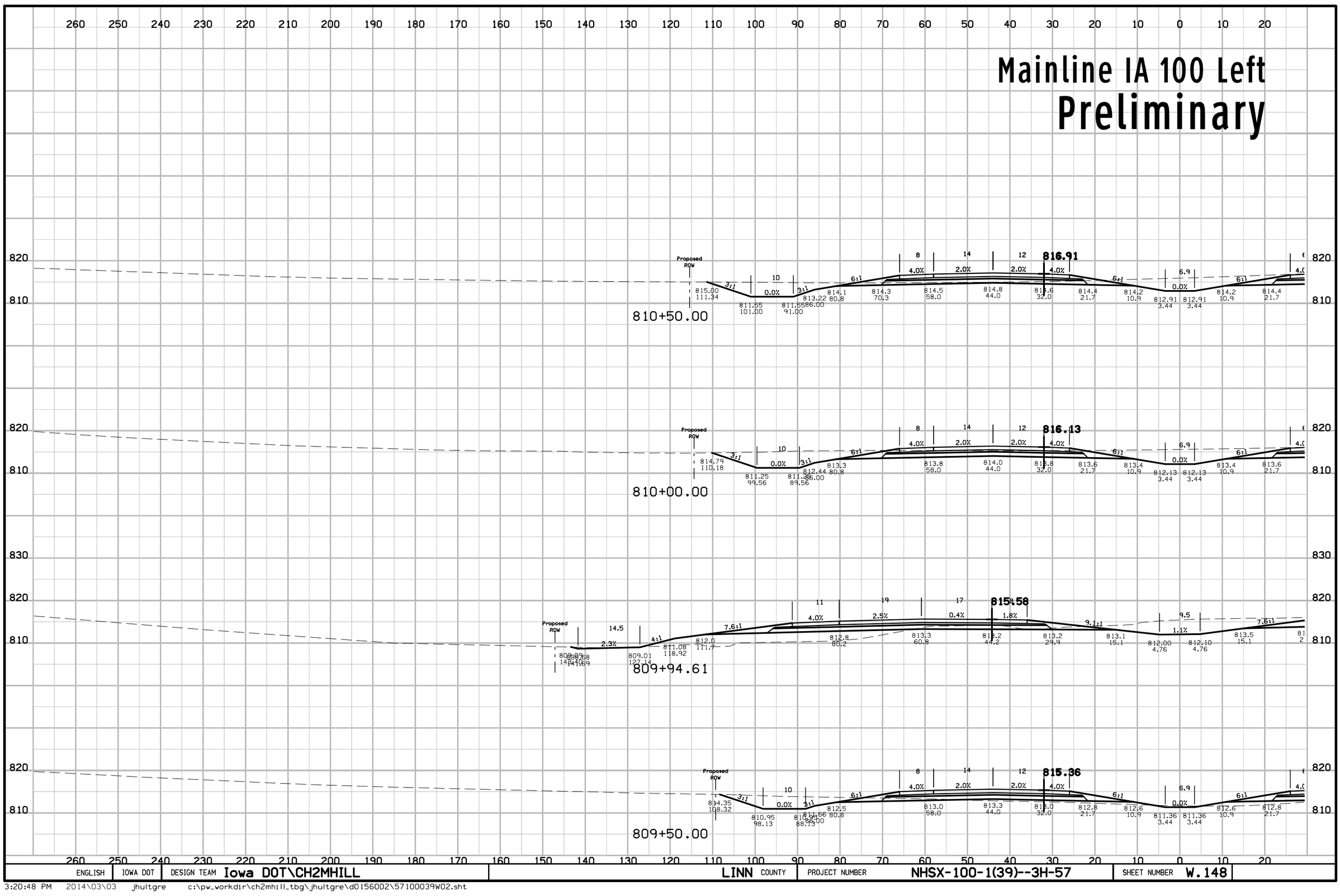
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.148

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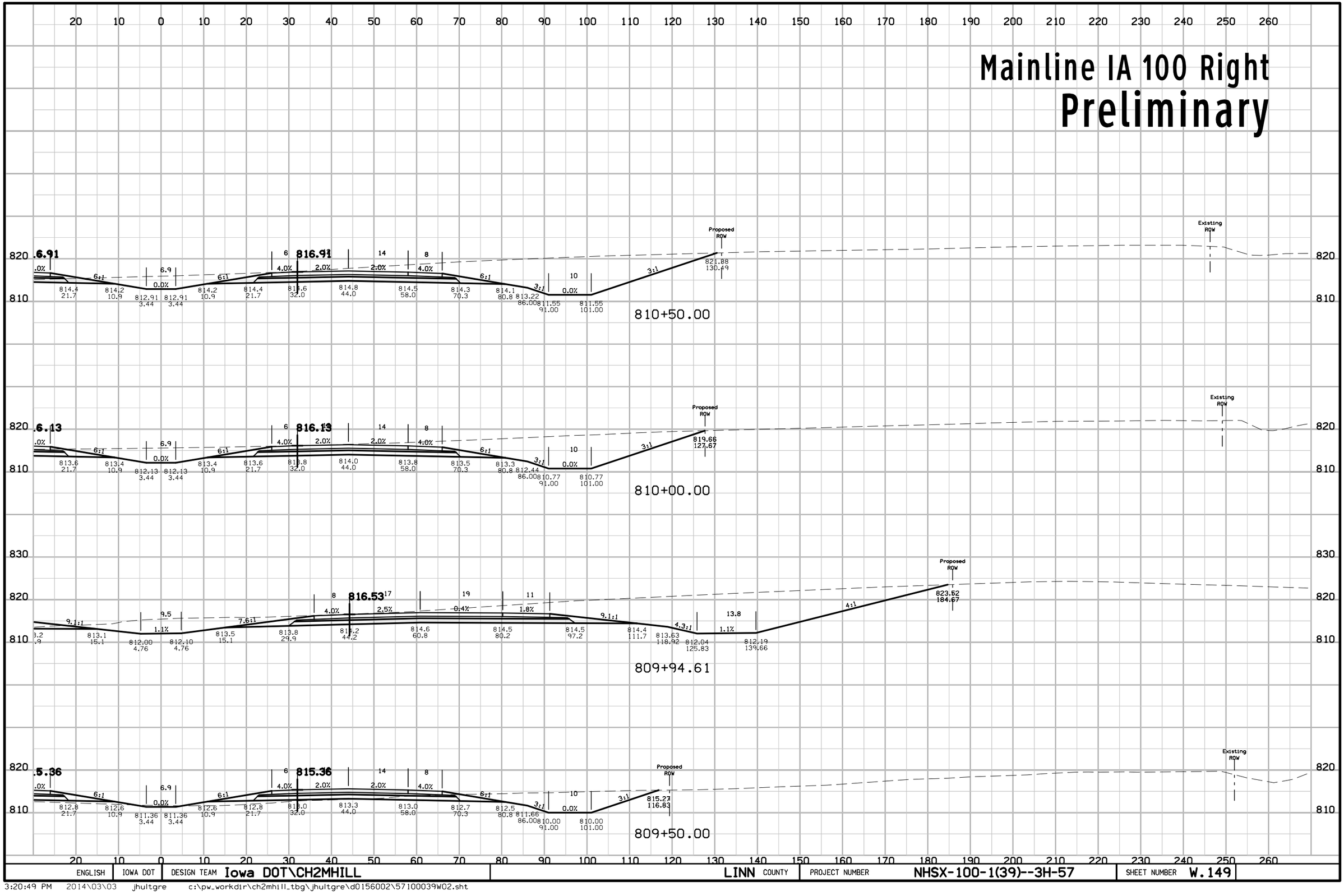
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.149

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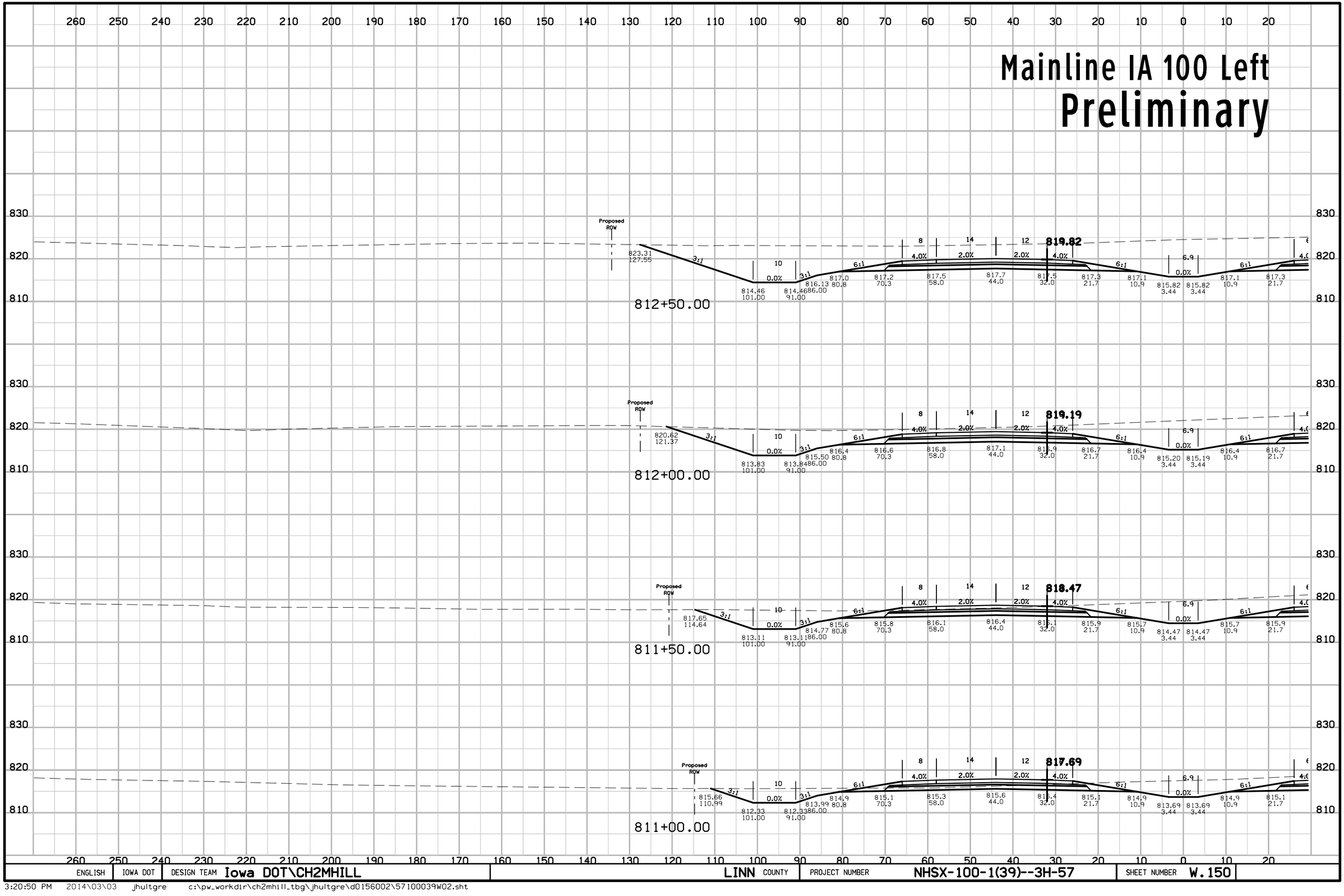
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.150

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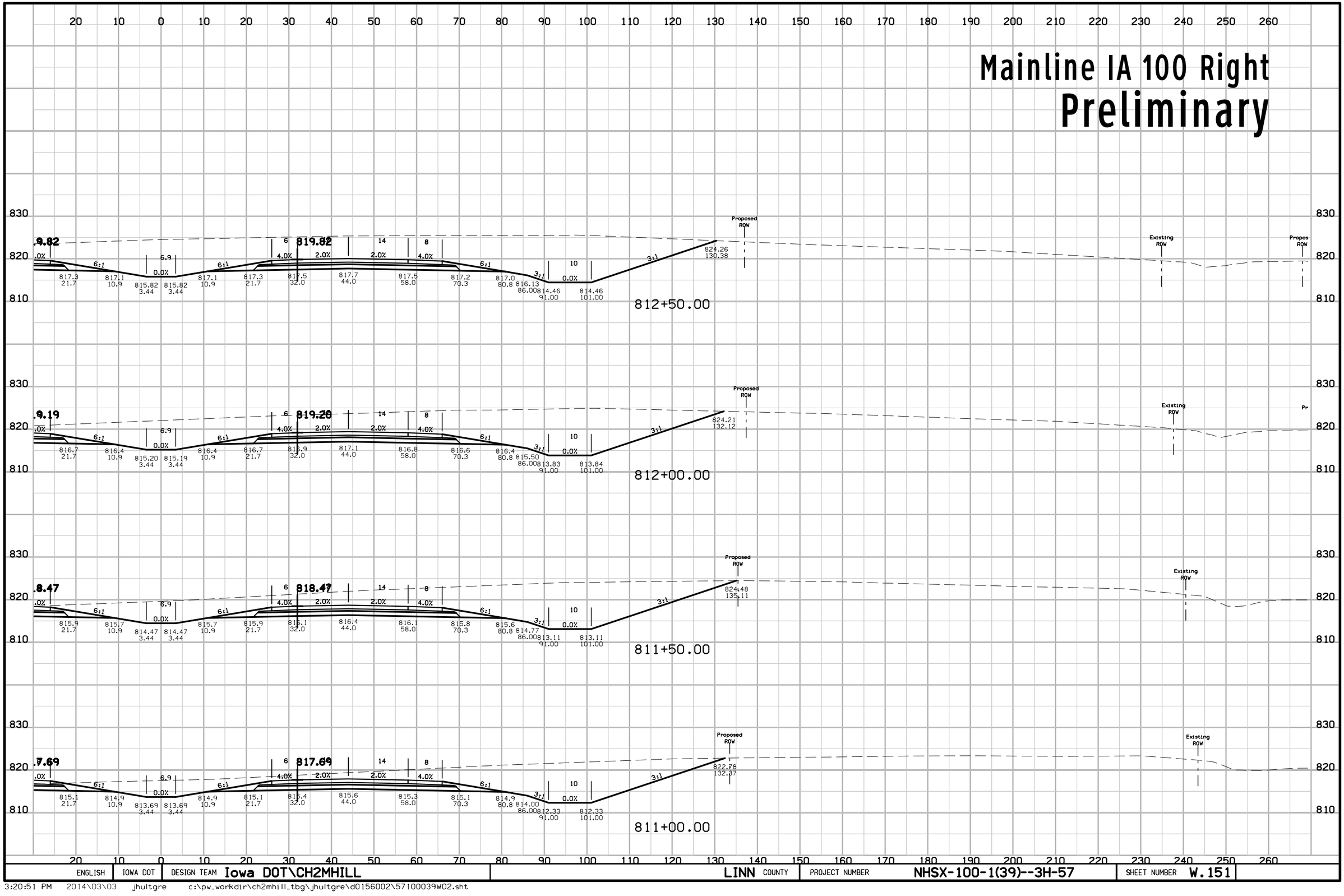
Preliminary



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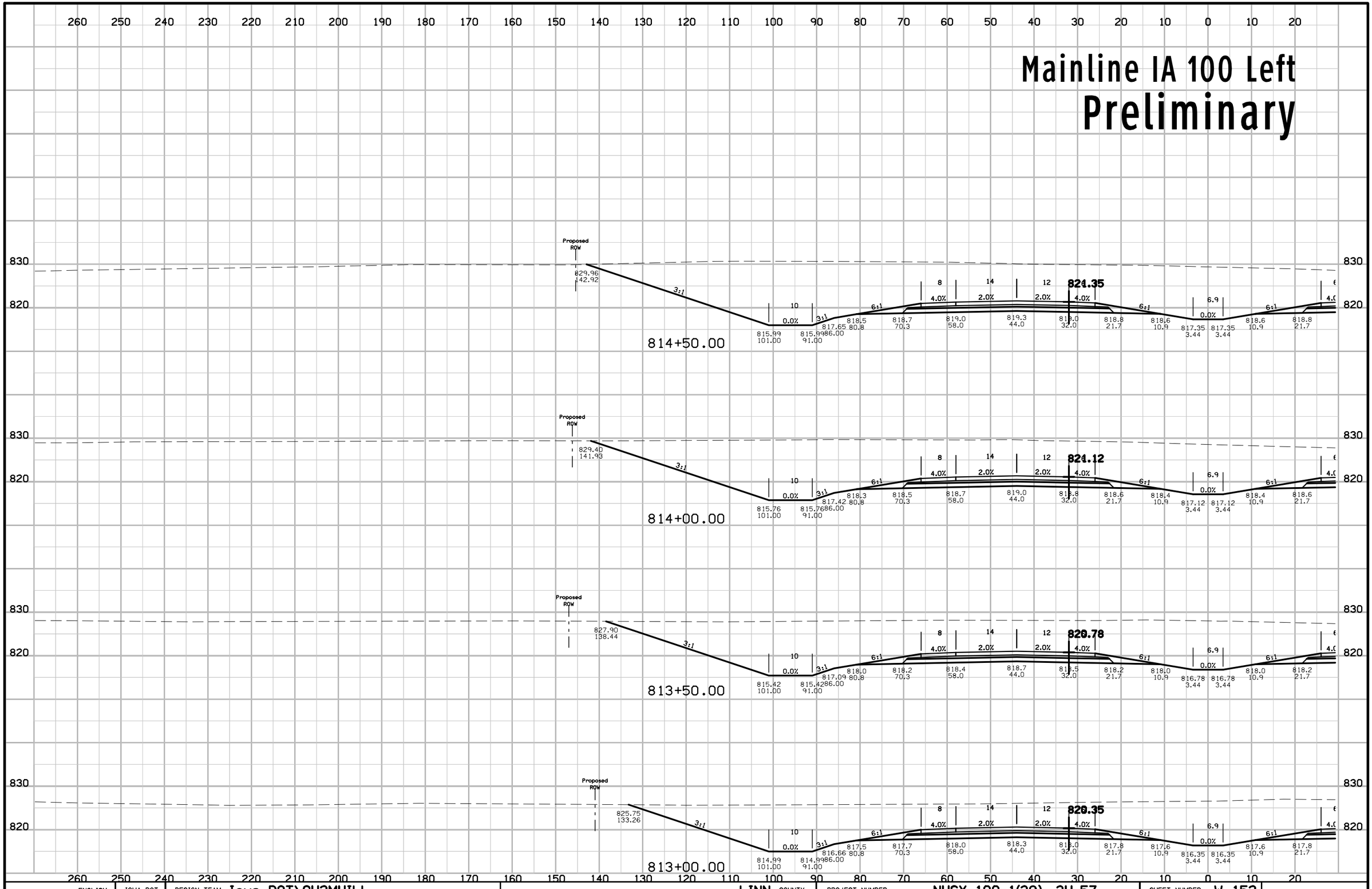
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.152

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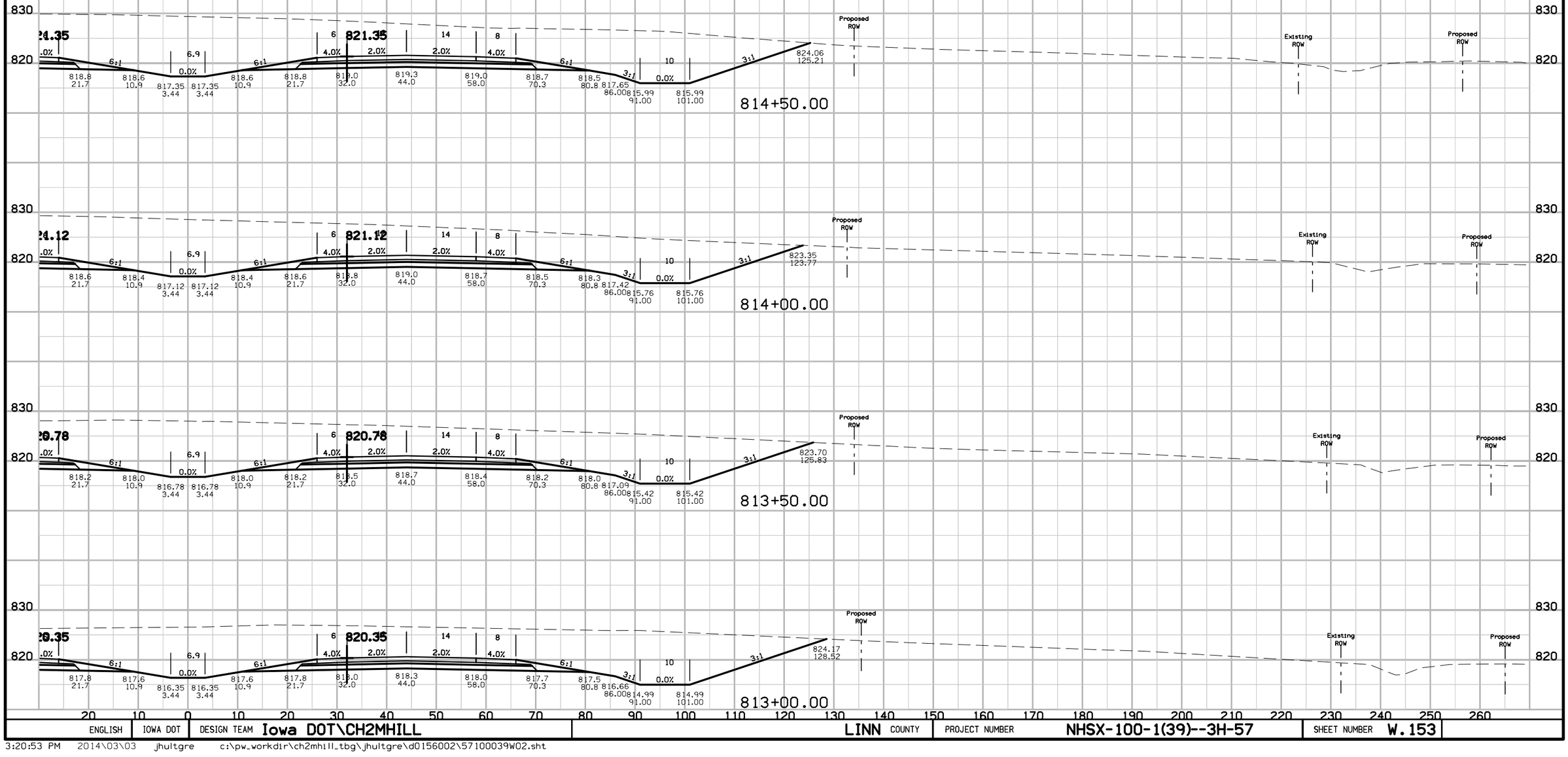
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.153

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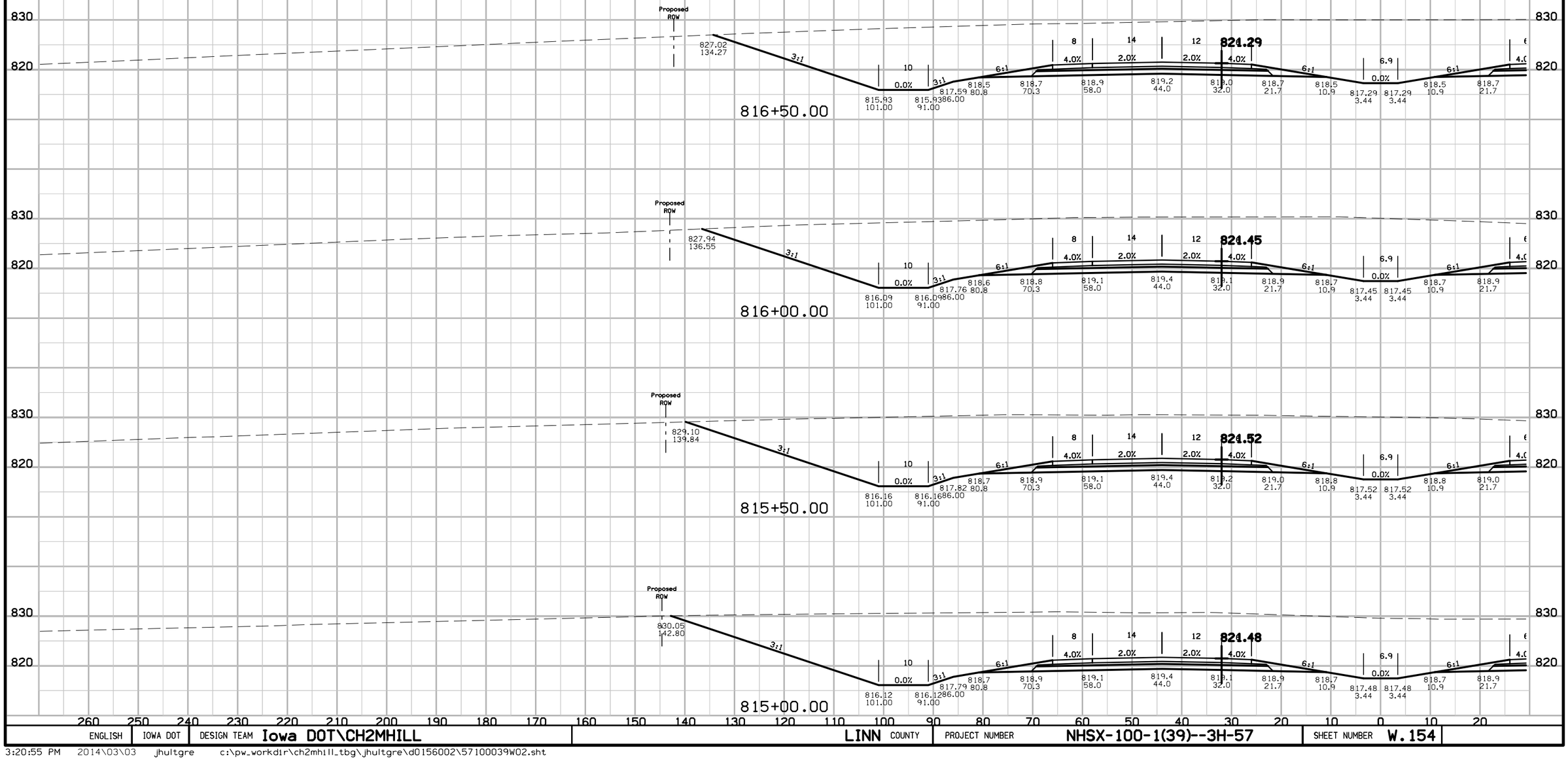
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.154

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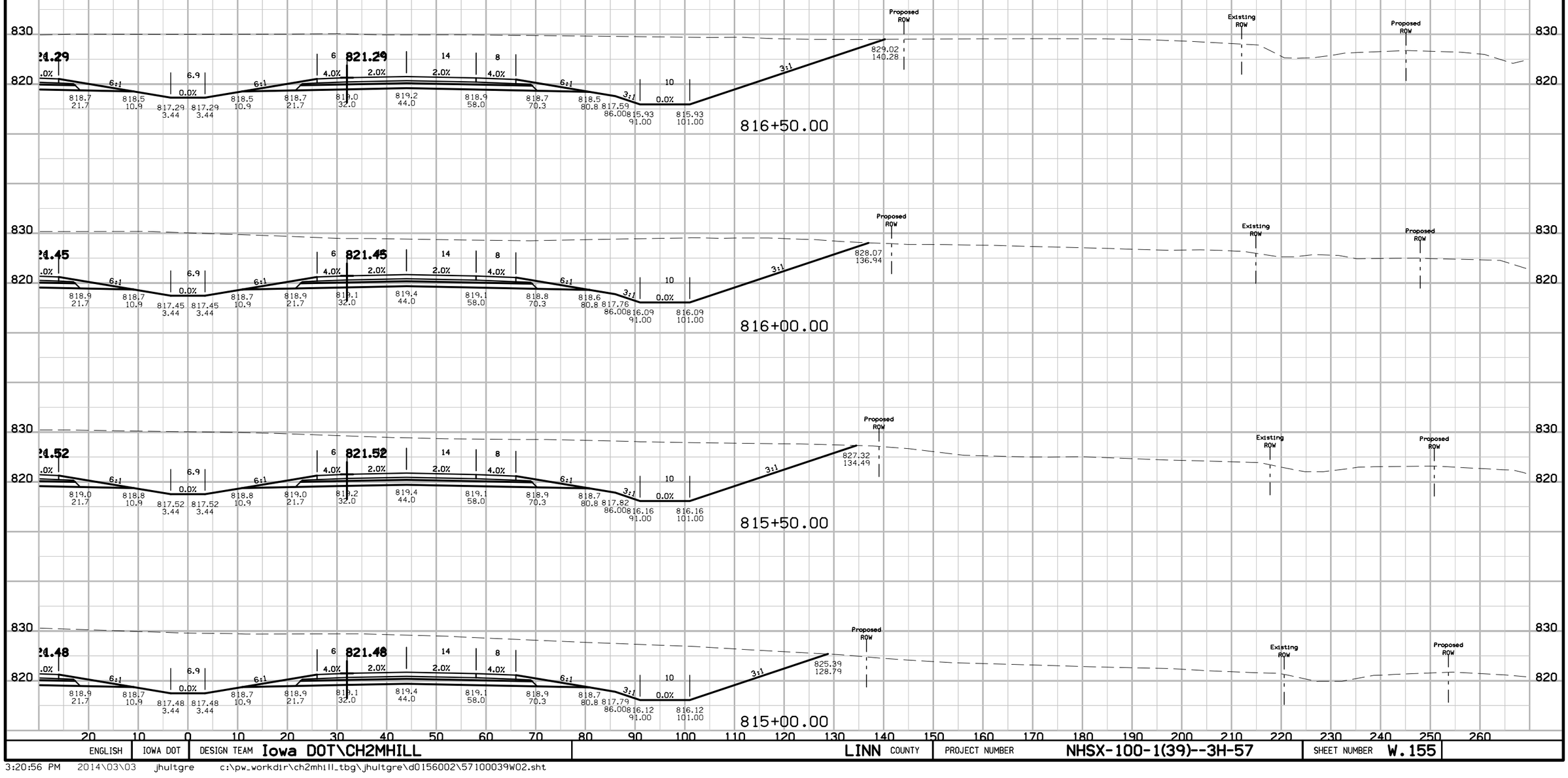
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.155

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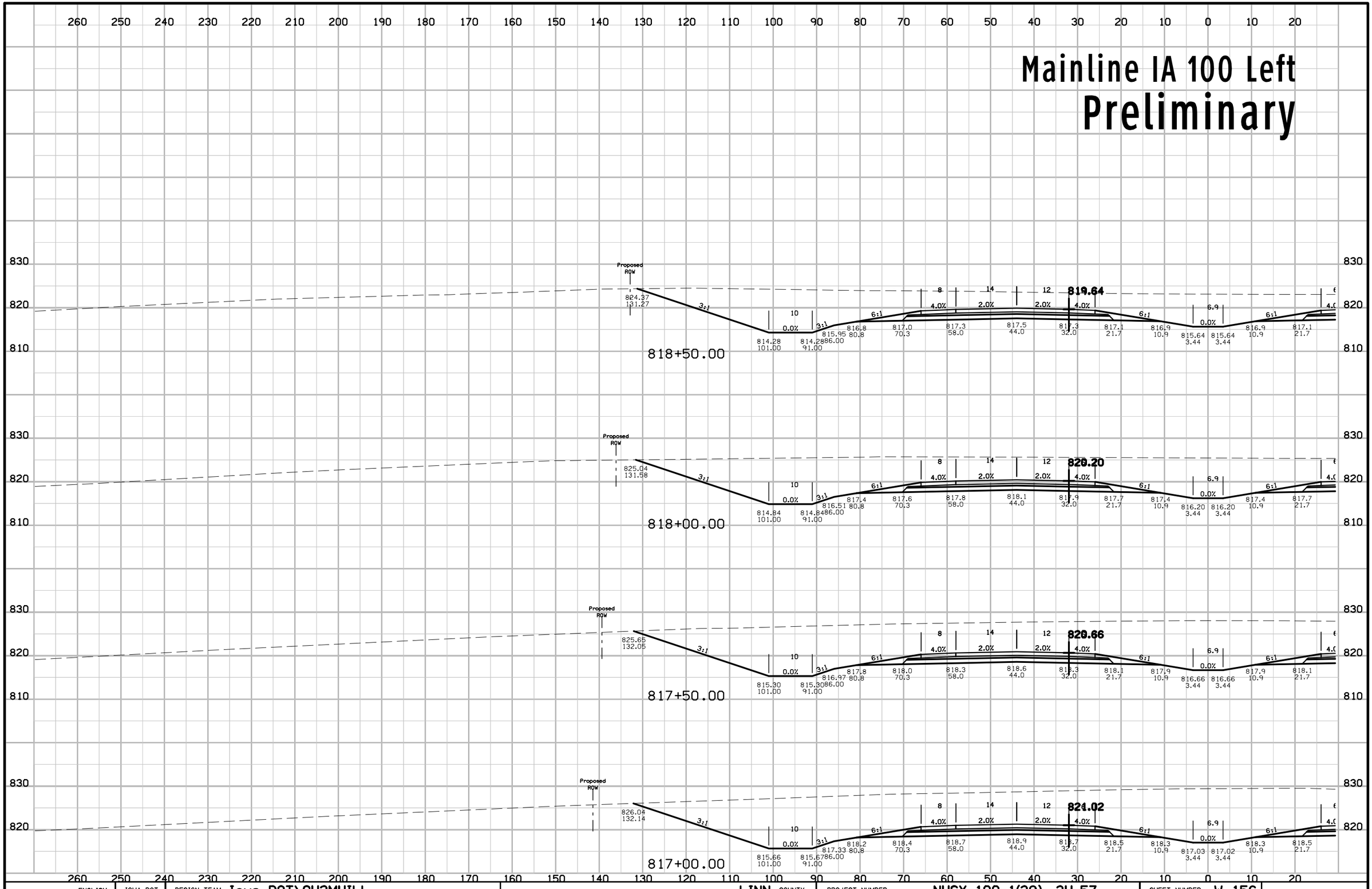
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	W.156

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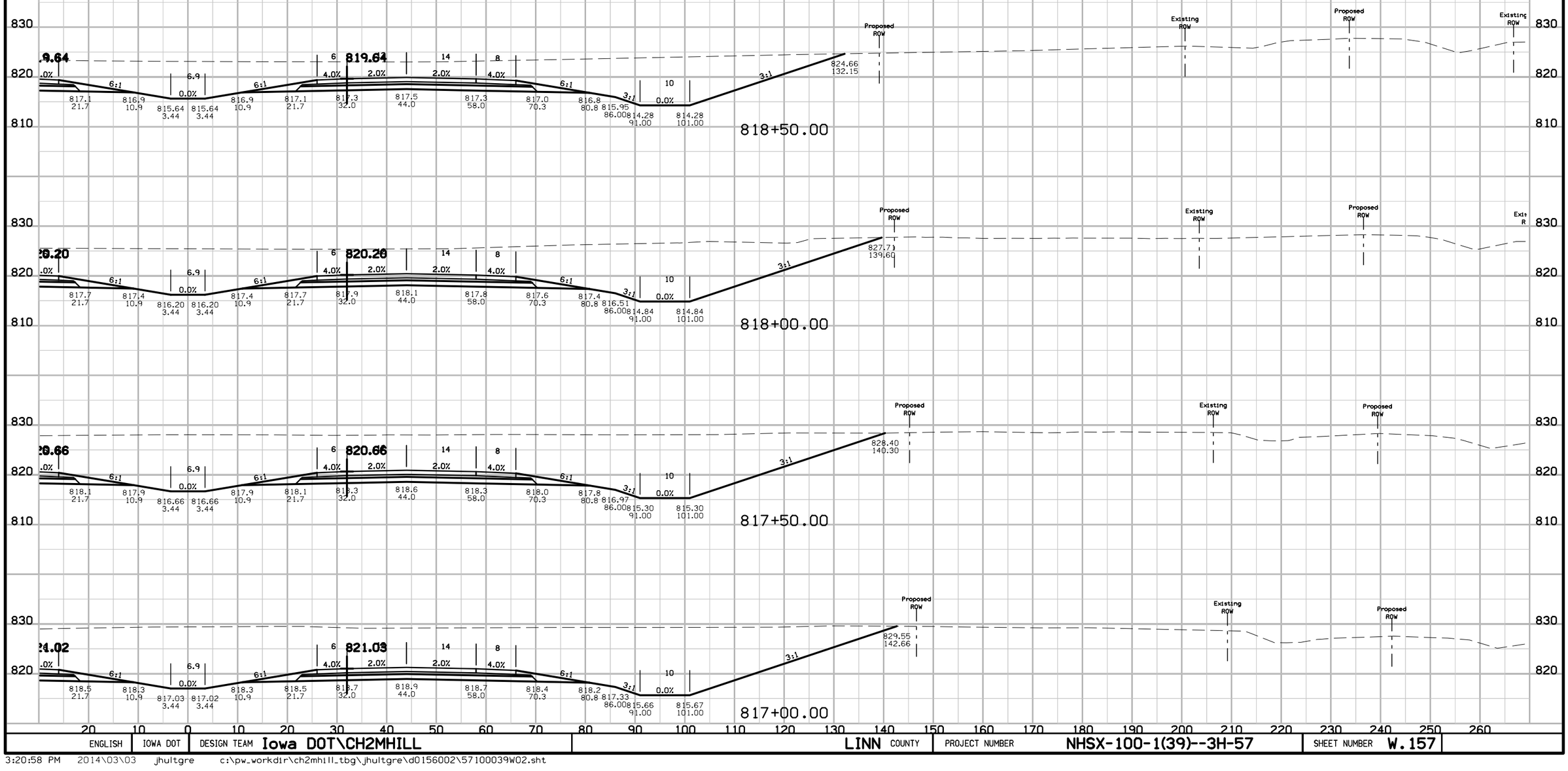
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.157

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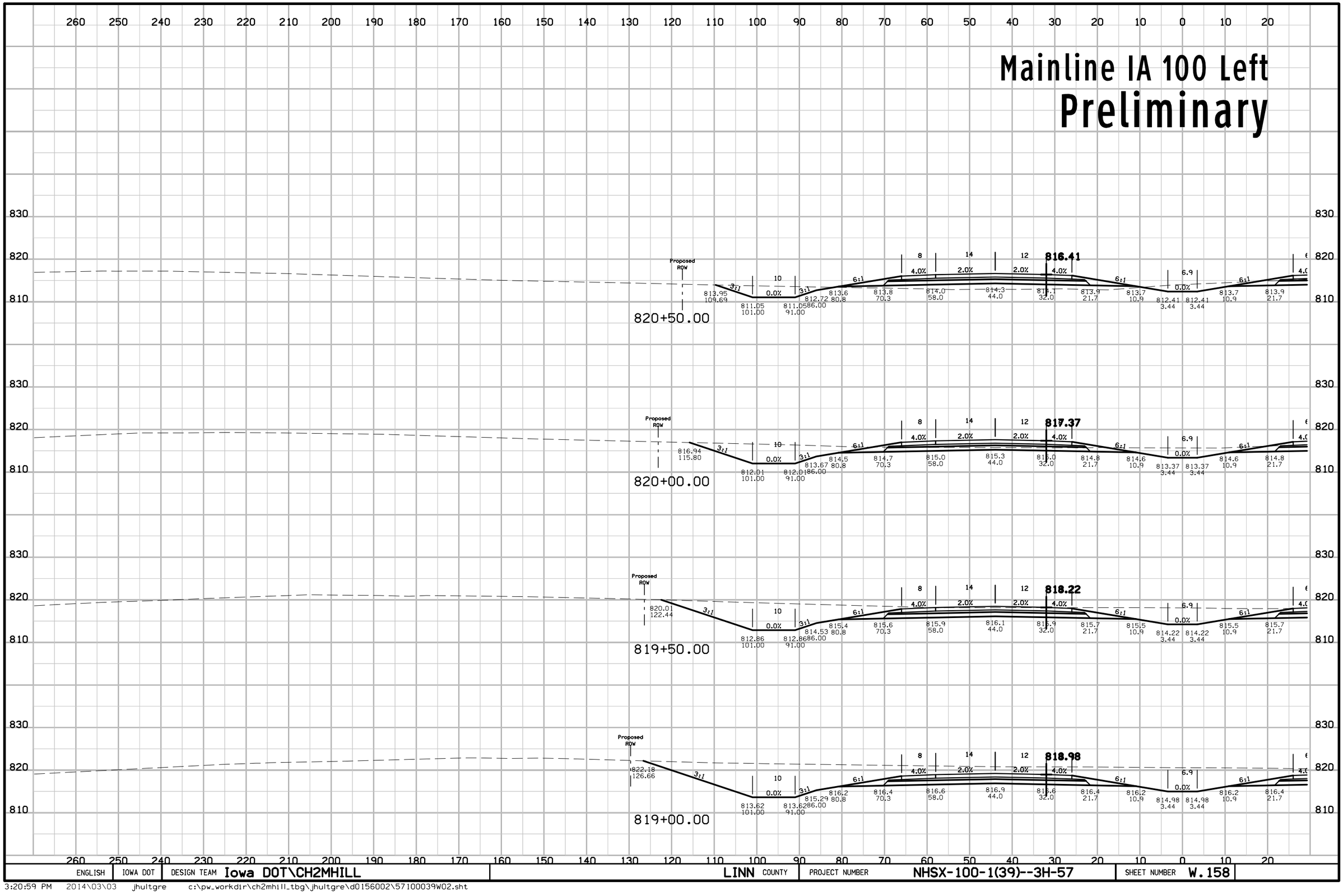
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.158

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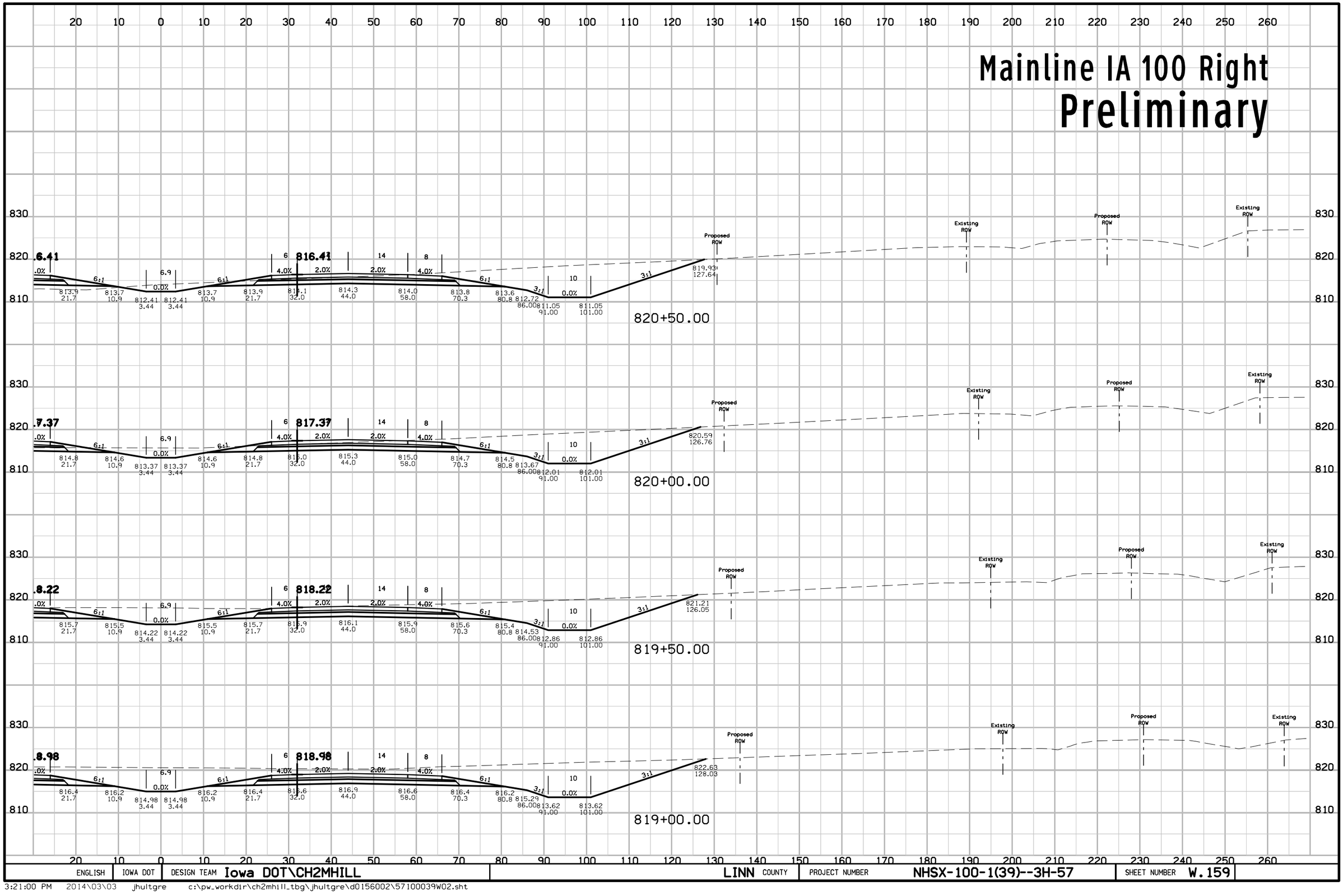
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.159

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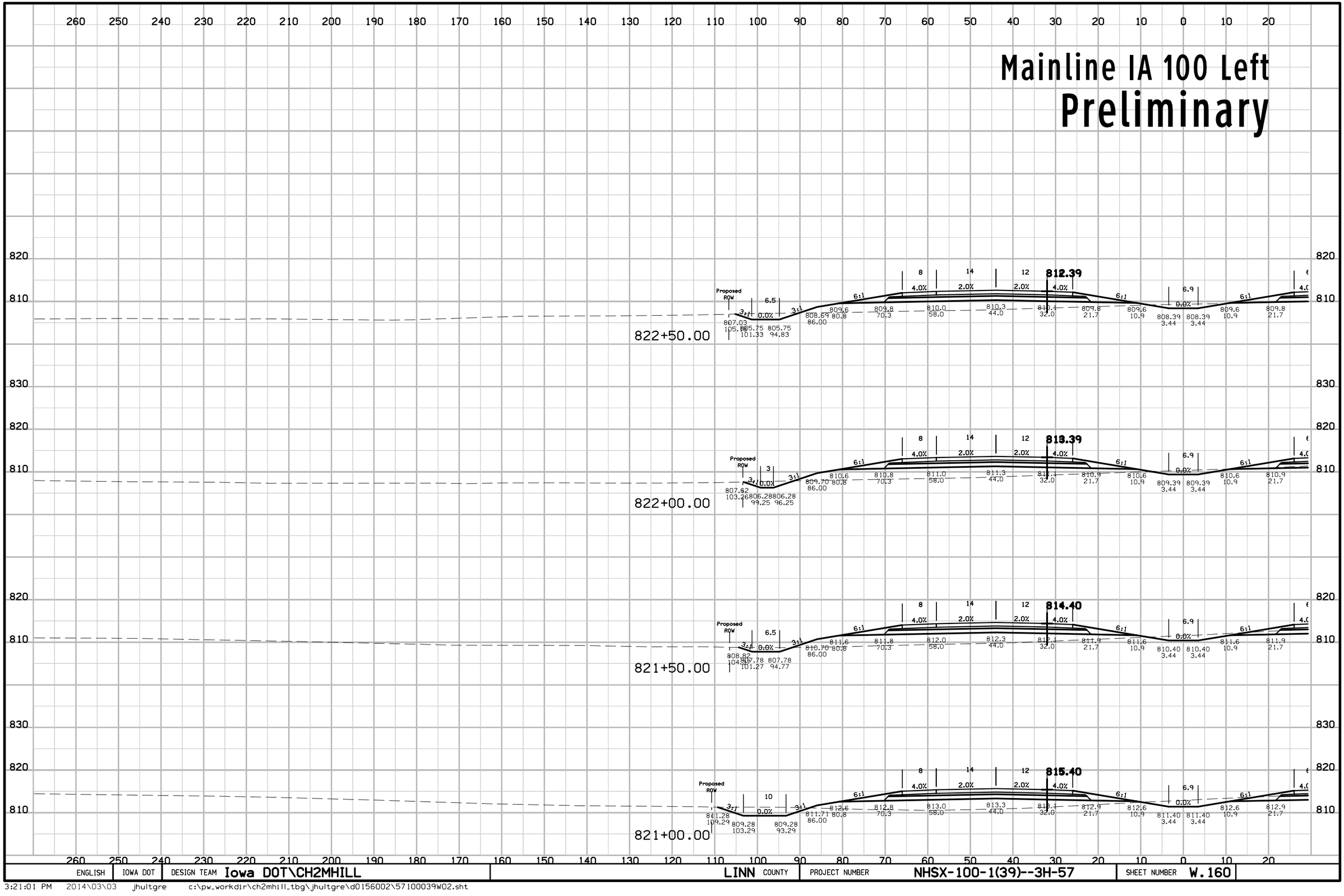
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	W.160

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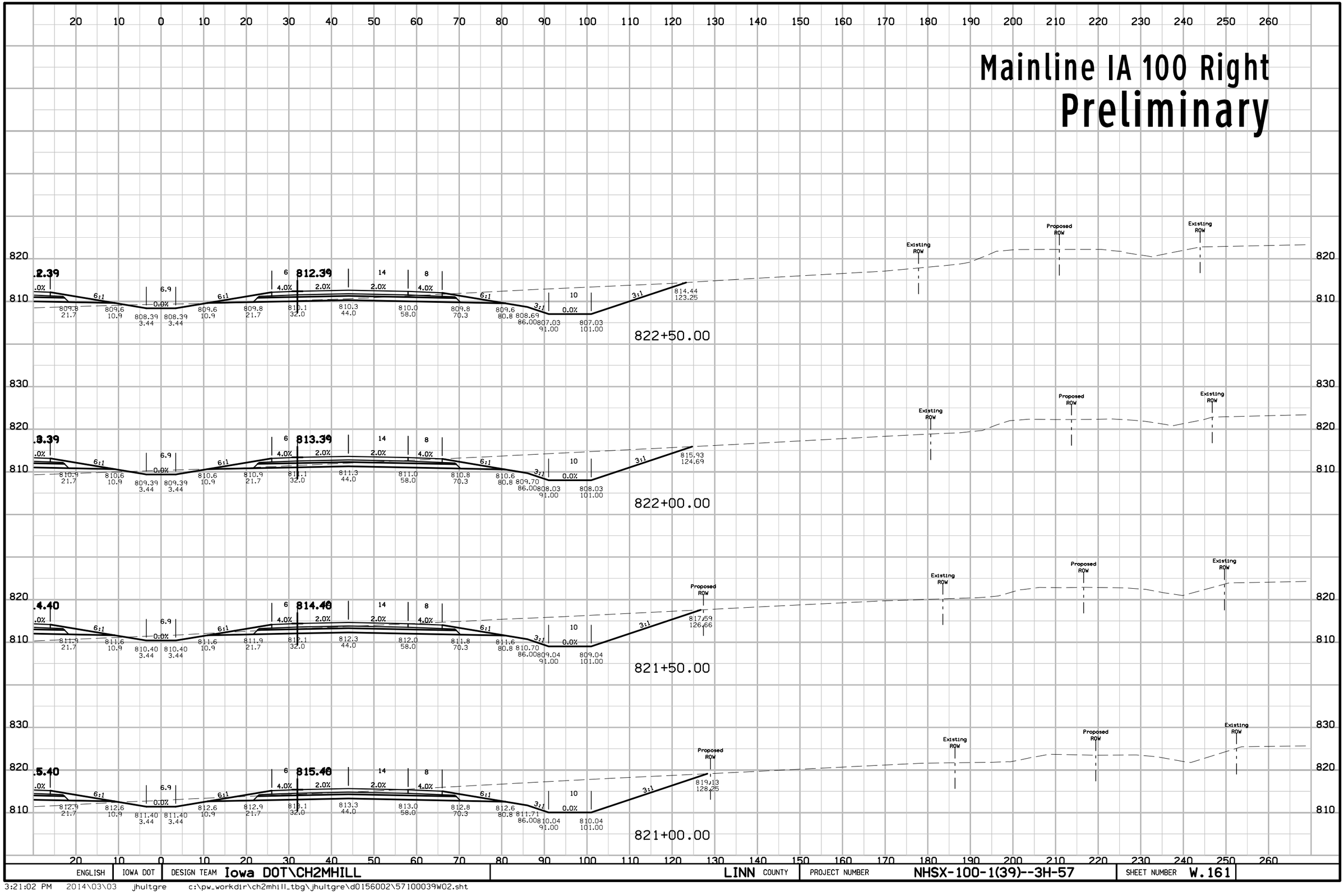
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.161

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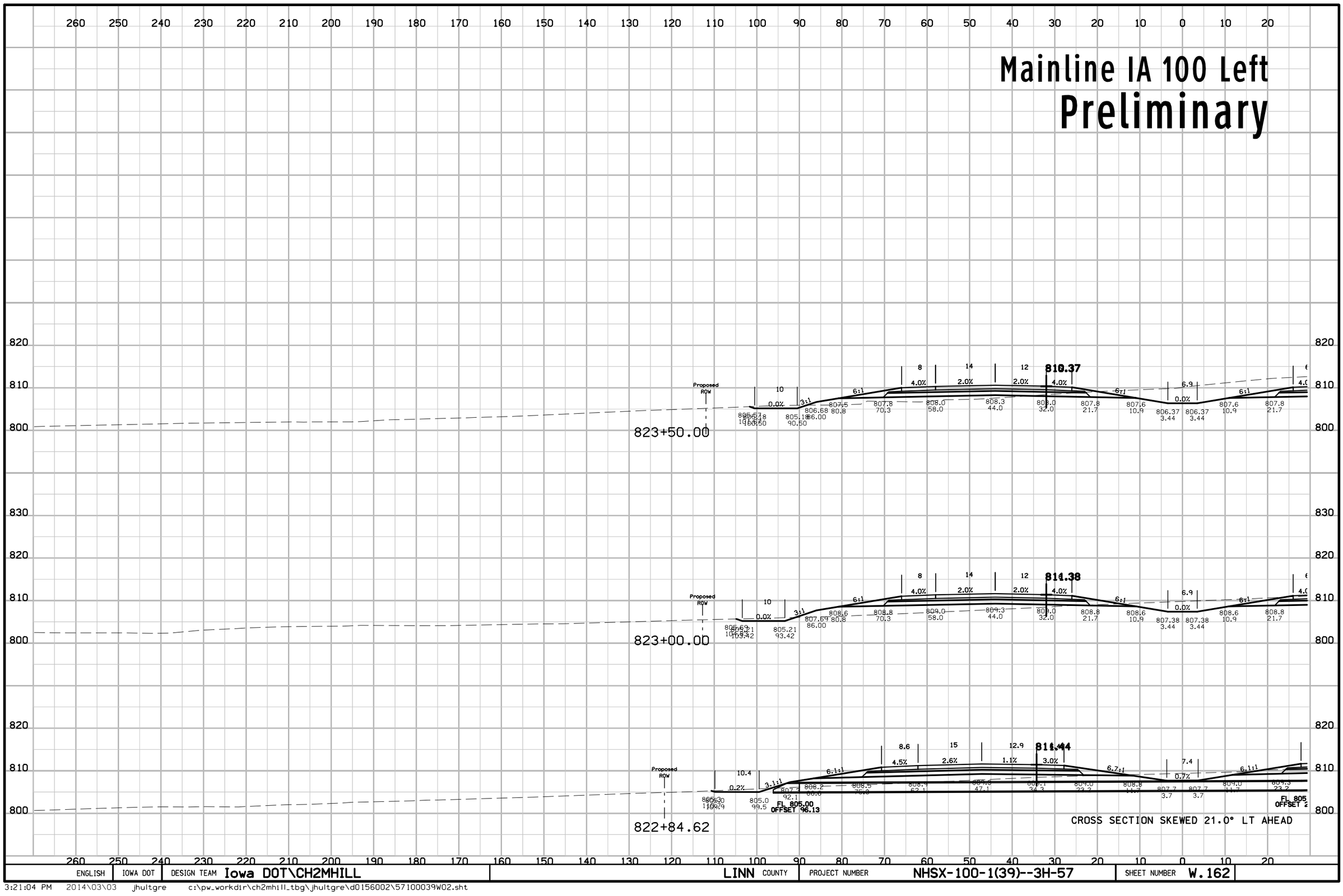
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	W.162

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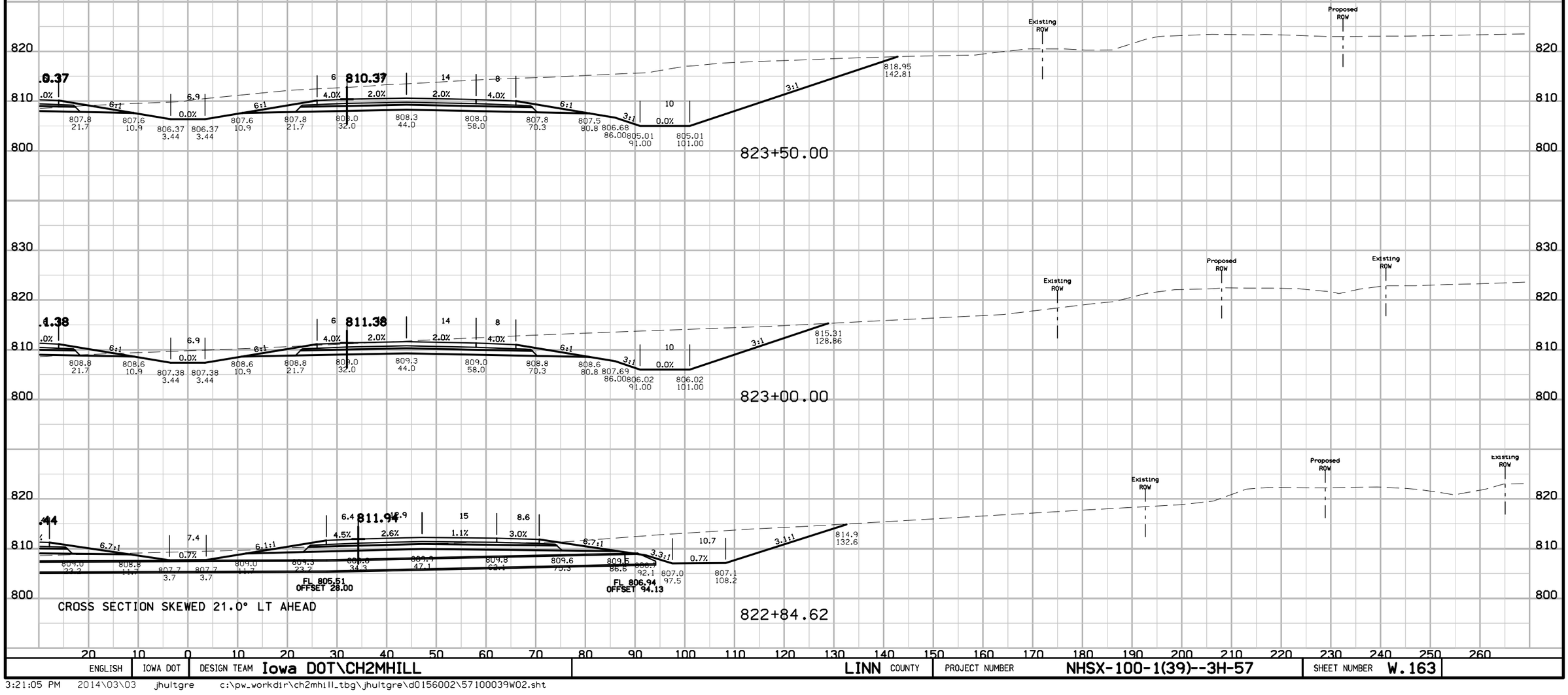
Mainline IA 100 Right

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.163

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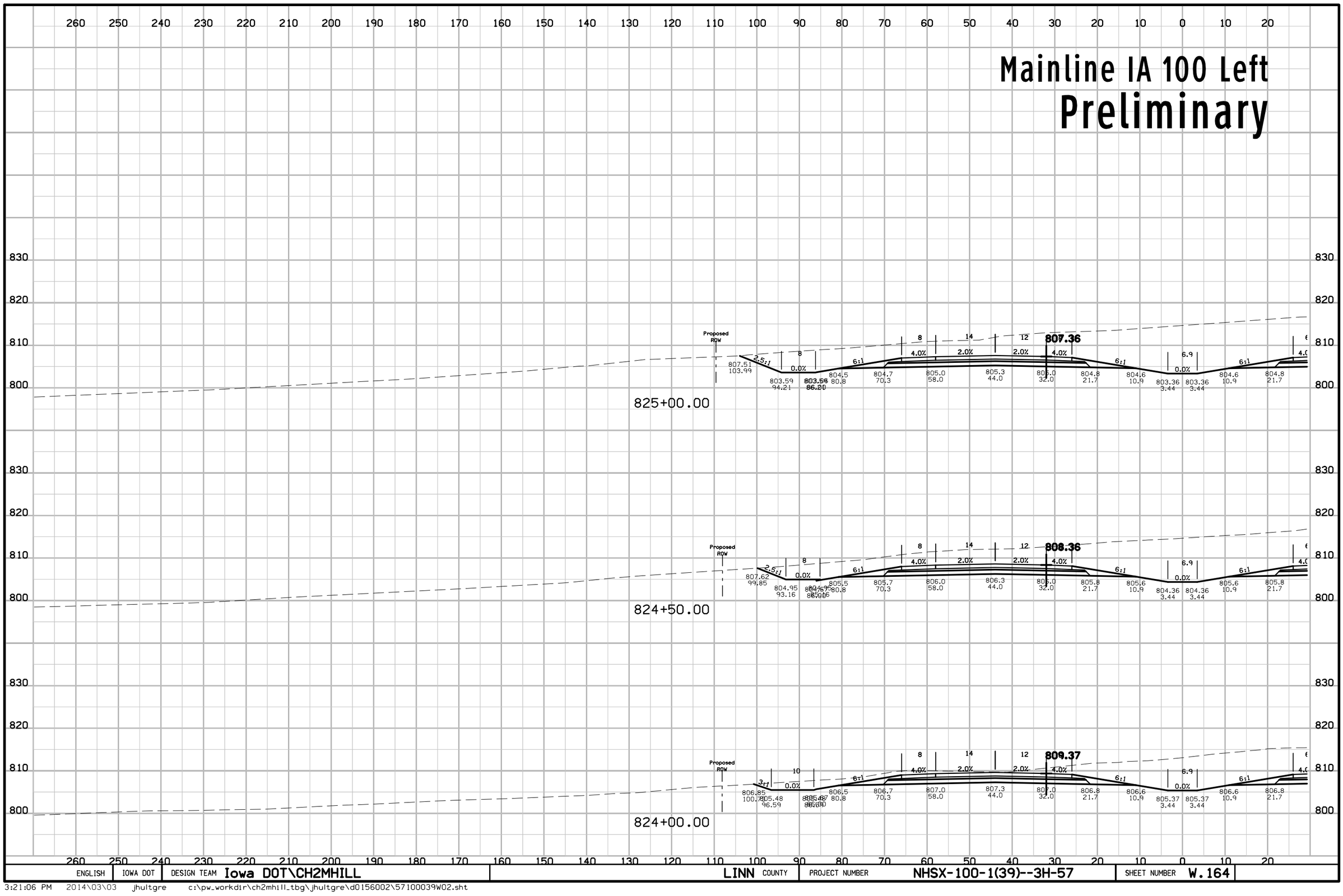
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.164

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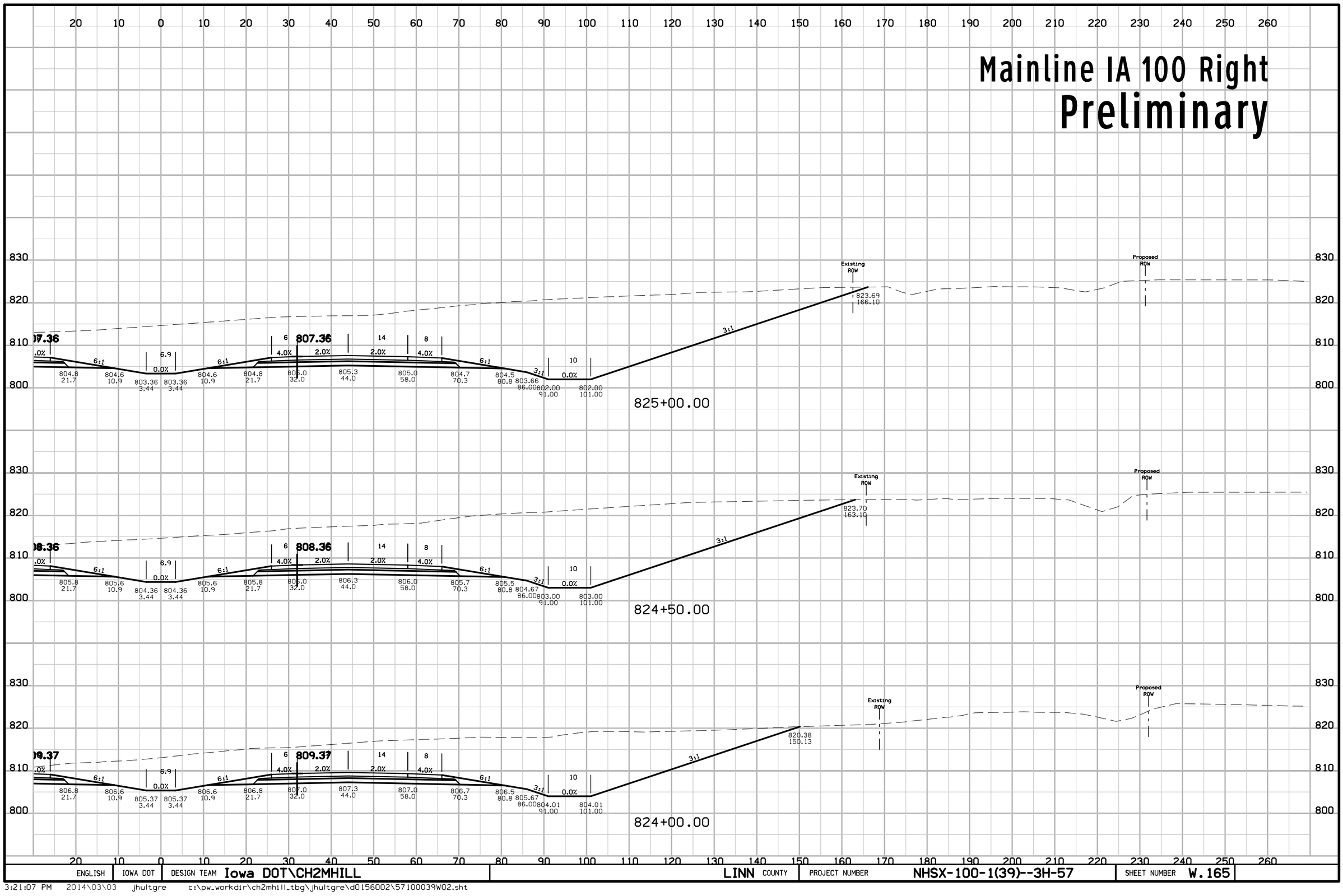
Mainline IA 100 Right

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.165

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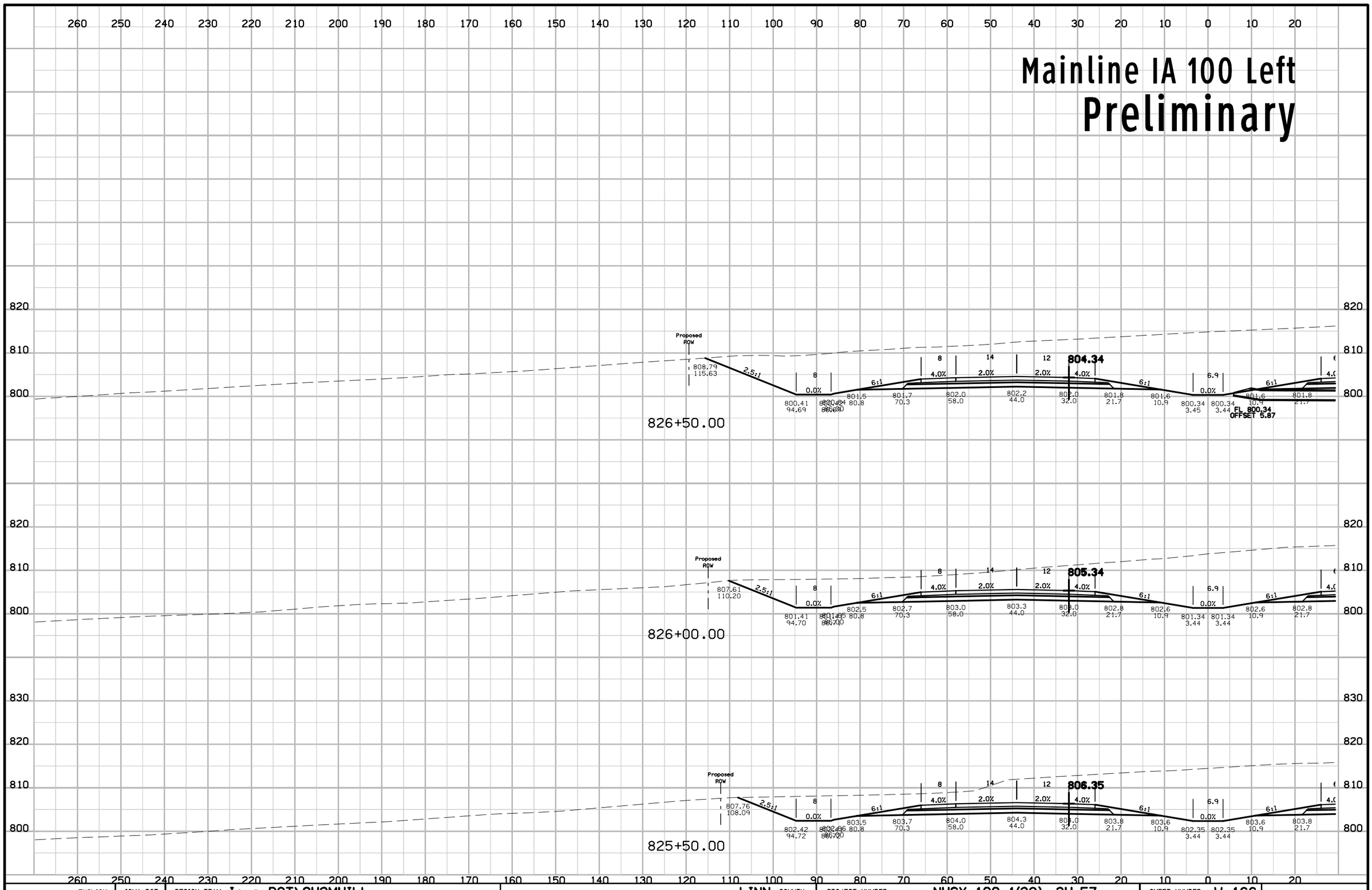
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.166

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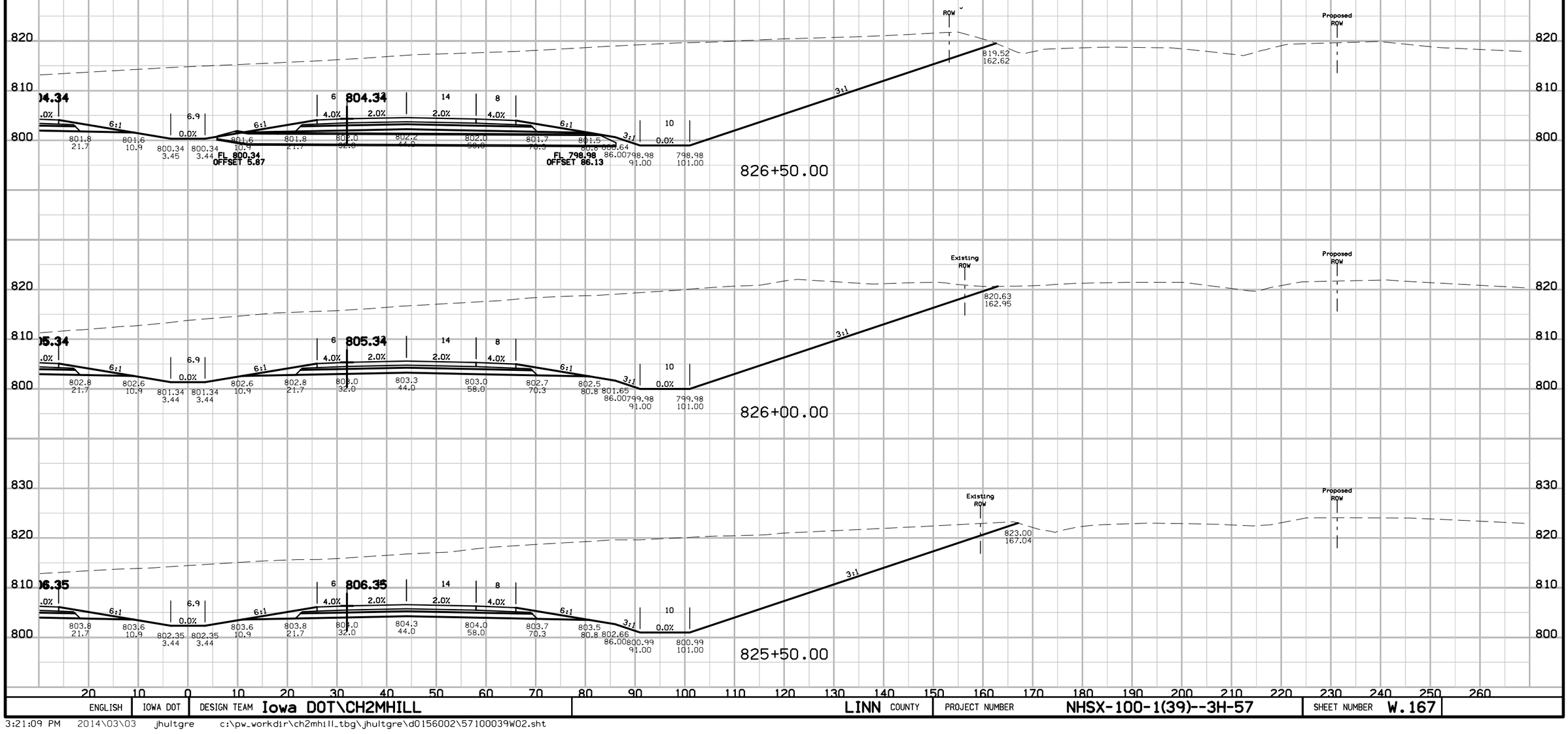
Mainline IA 100 Right

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.167

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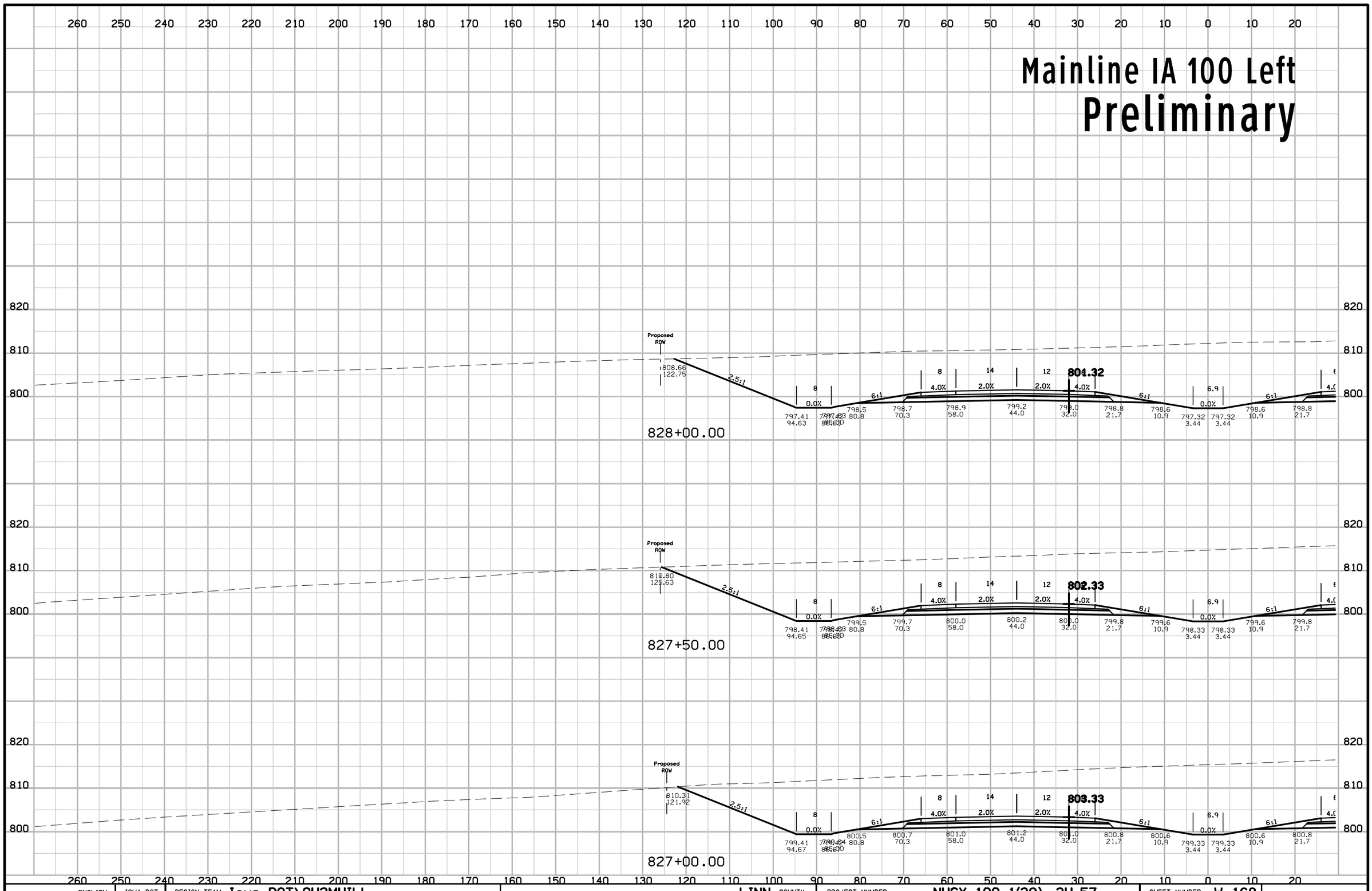
Mainline IA 100 Left
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.168

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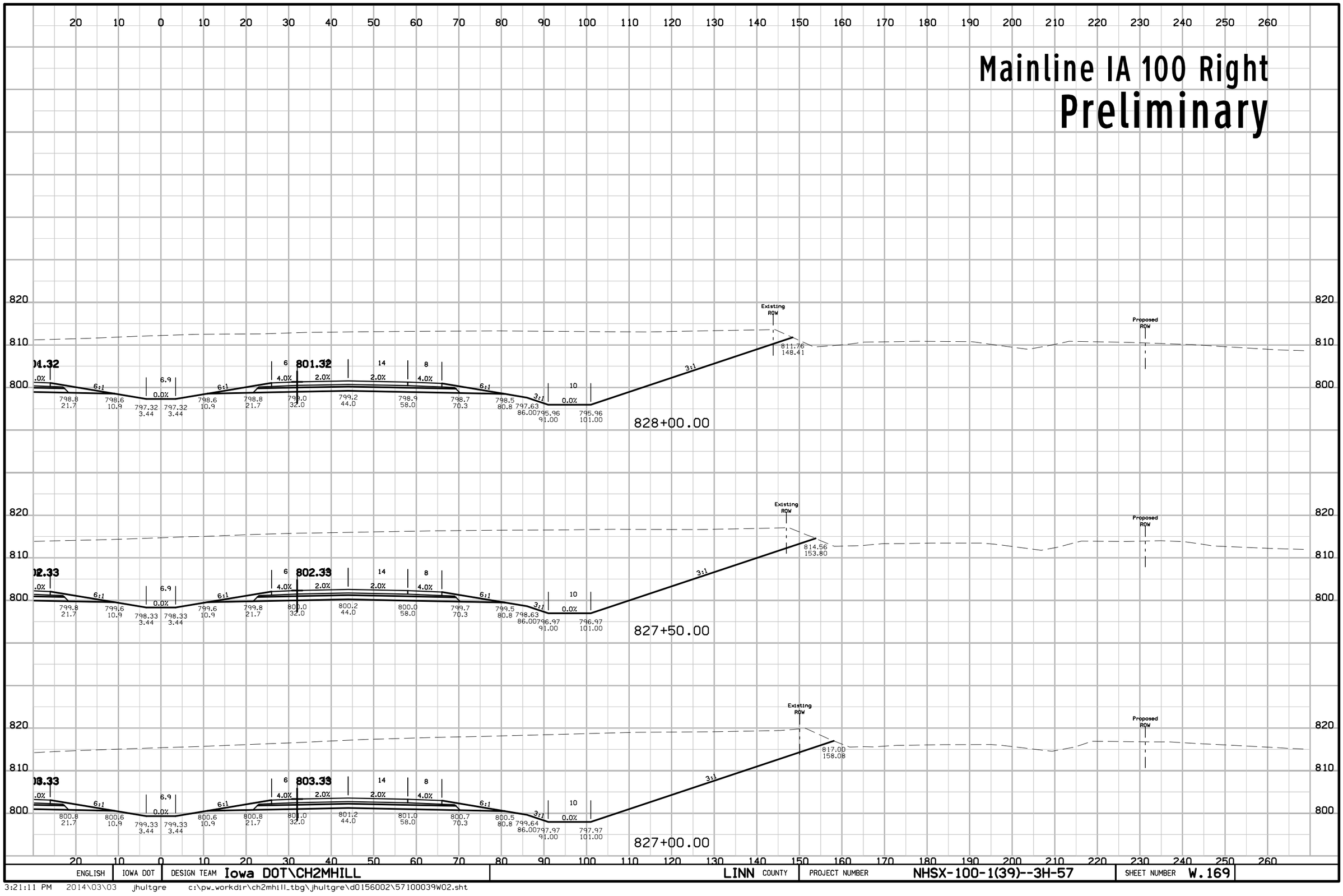
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.169

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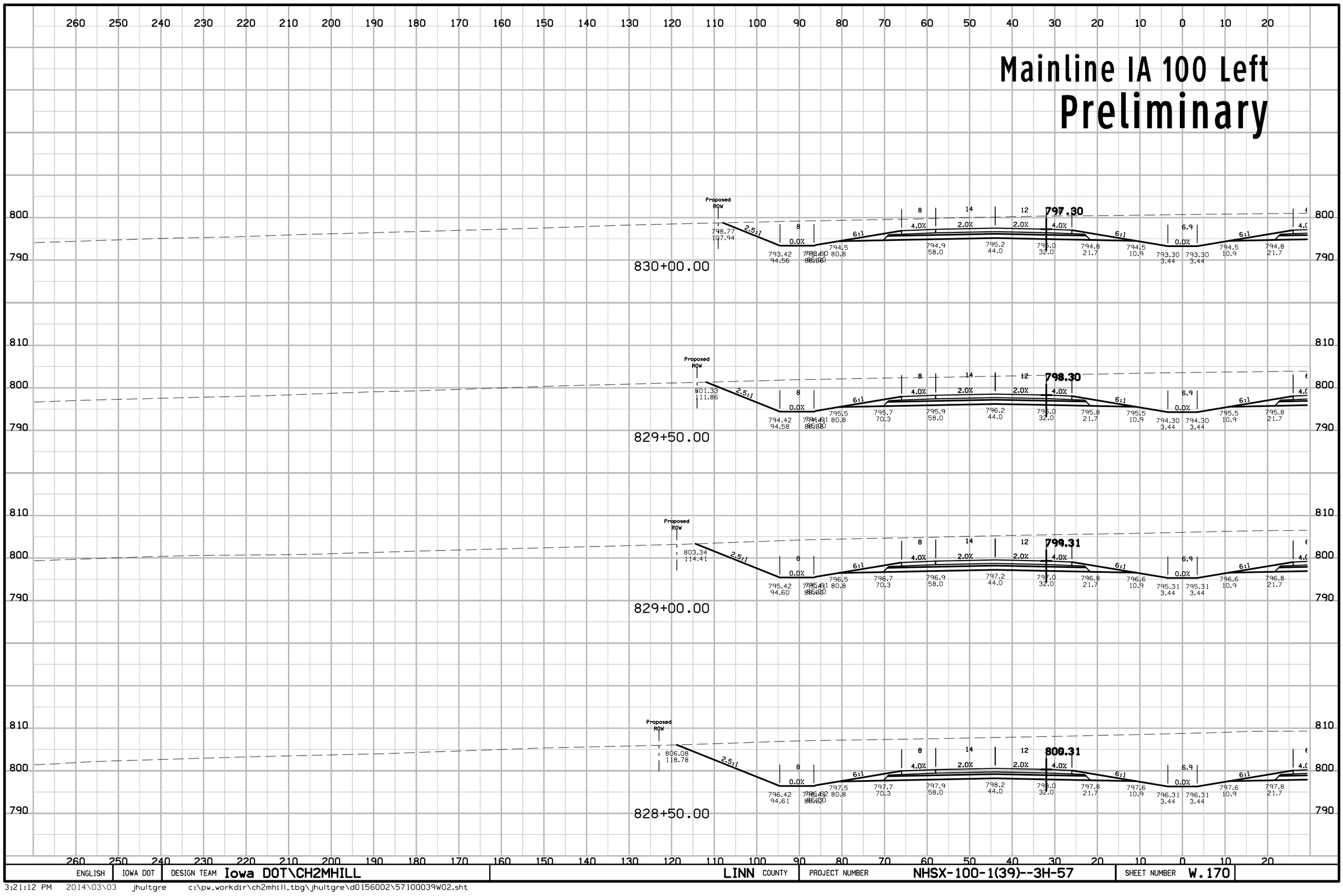
Mainline IA 100 Left
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM	Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	W.170

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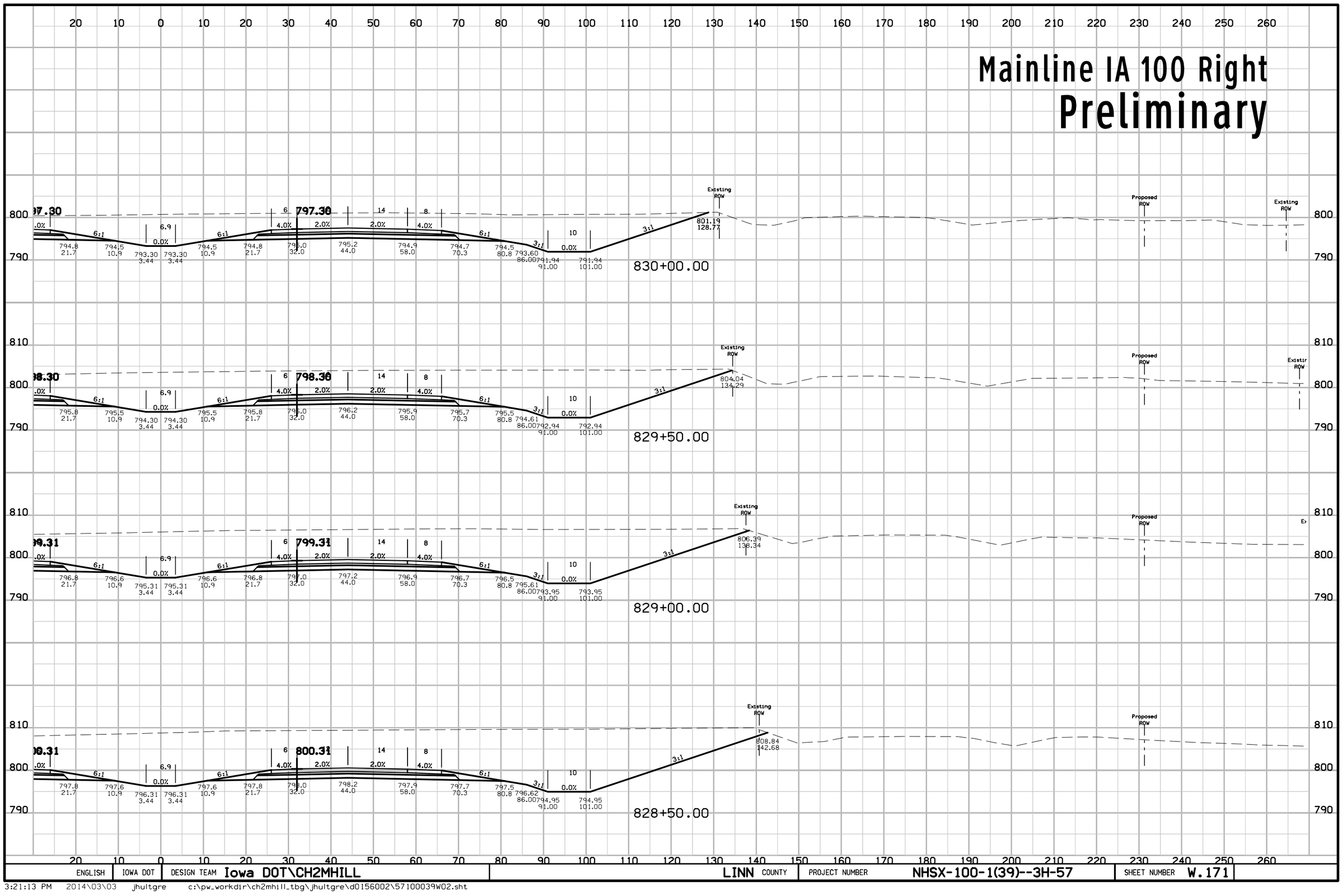
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER	W.171

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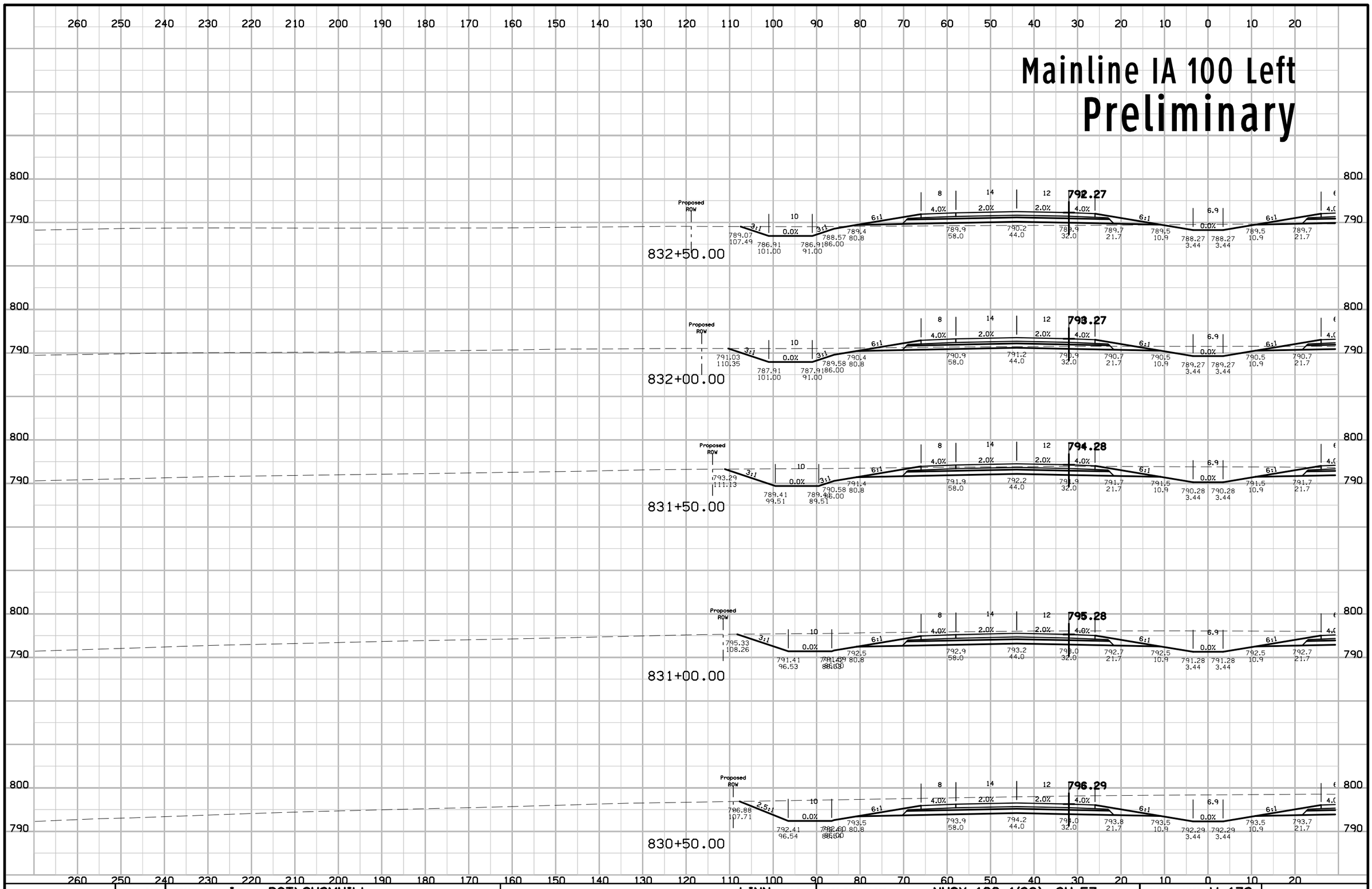
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.172

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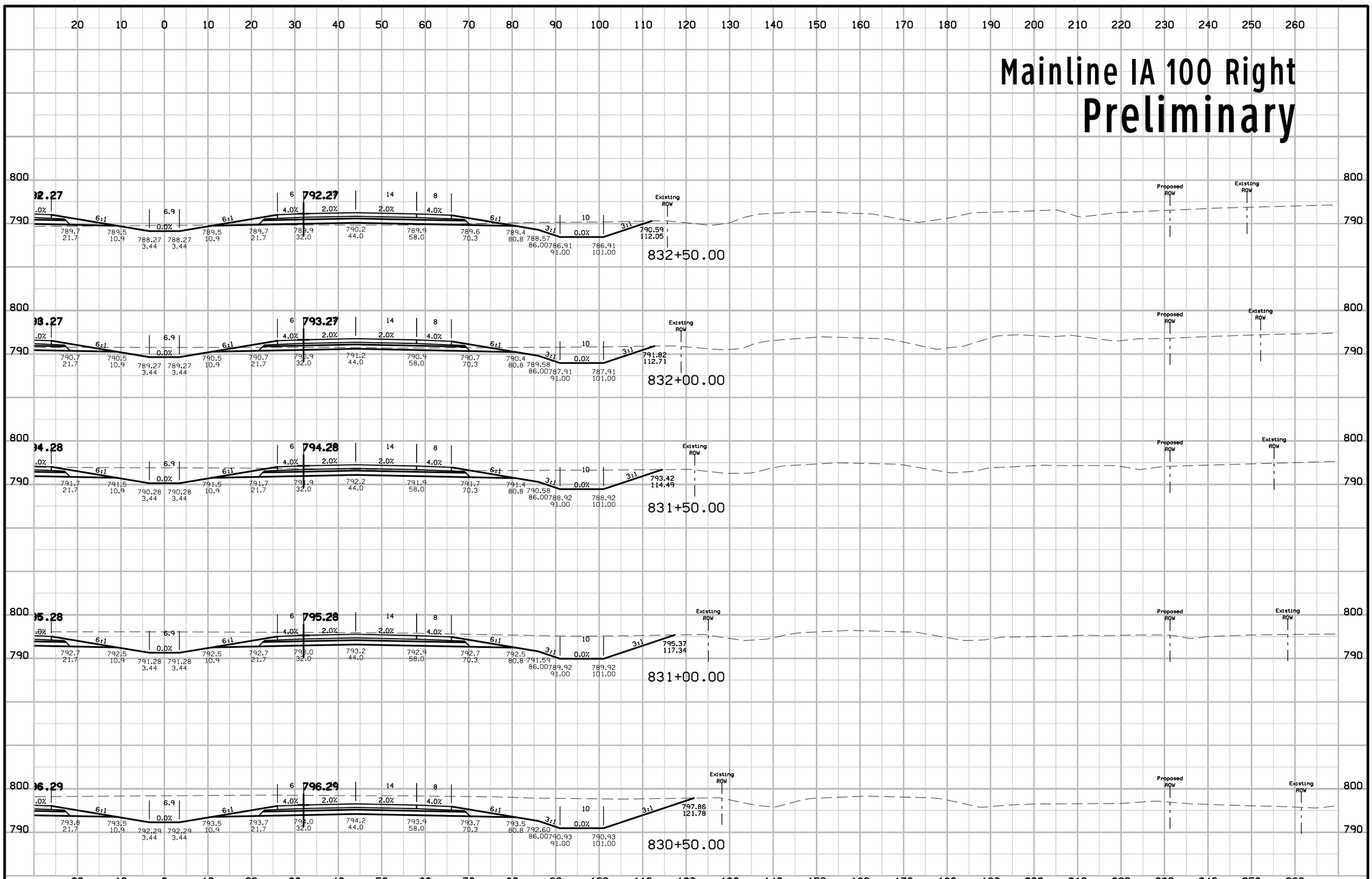
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.173	

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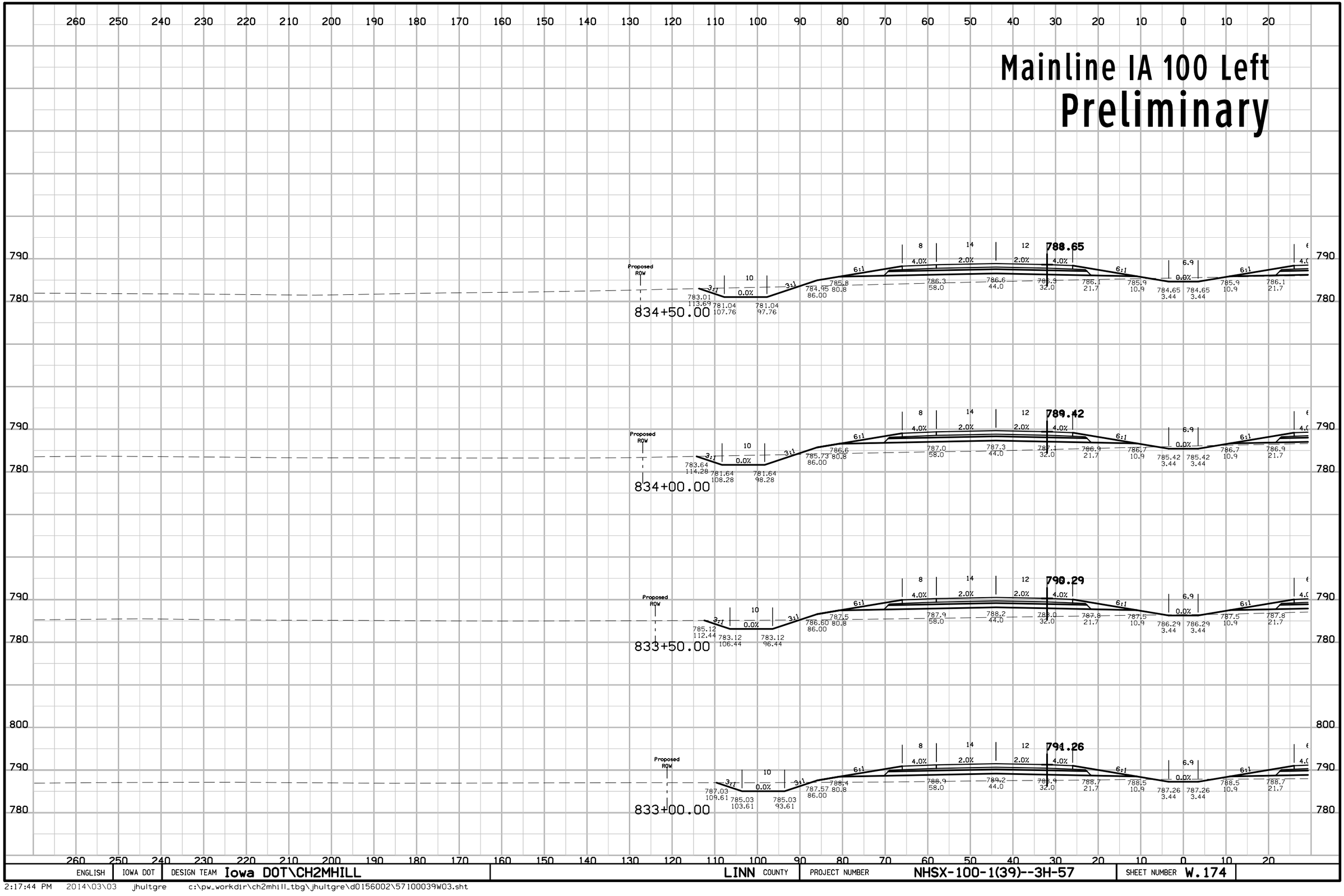
Mainline IA 100 Left

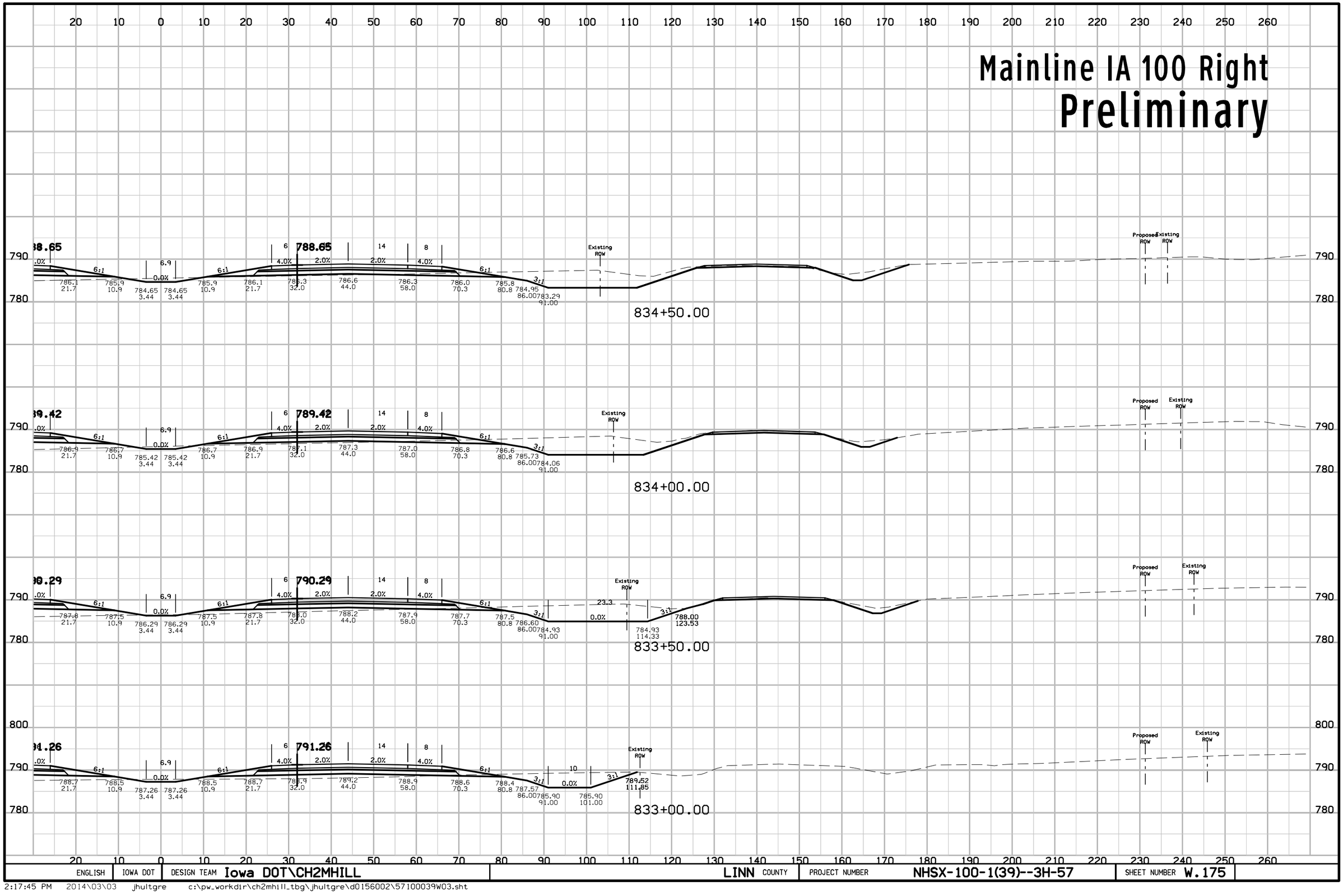
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.174

2:17:44 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.175

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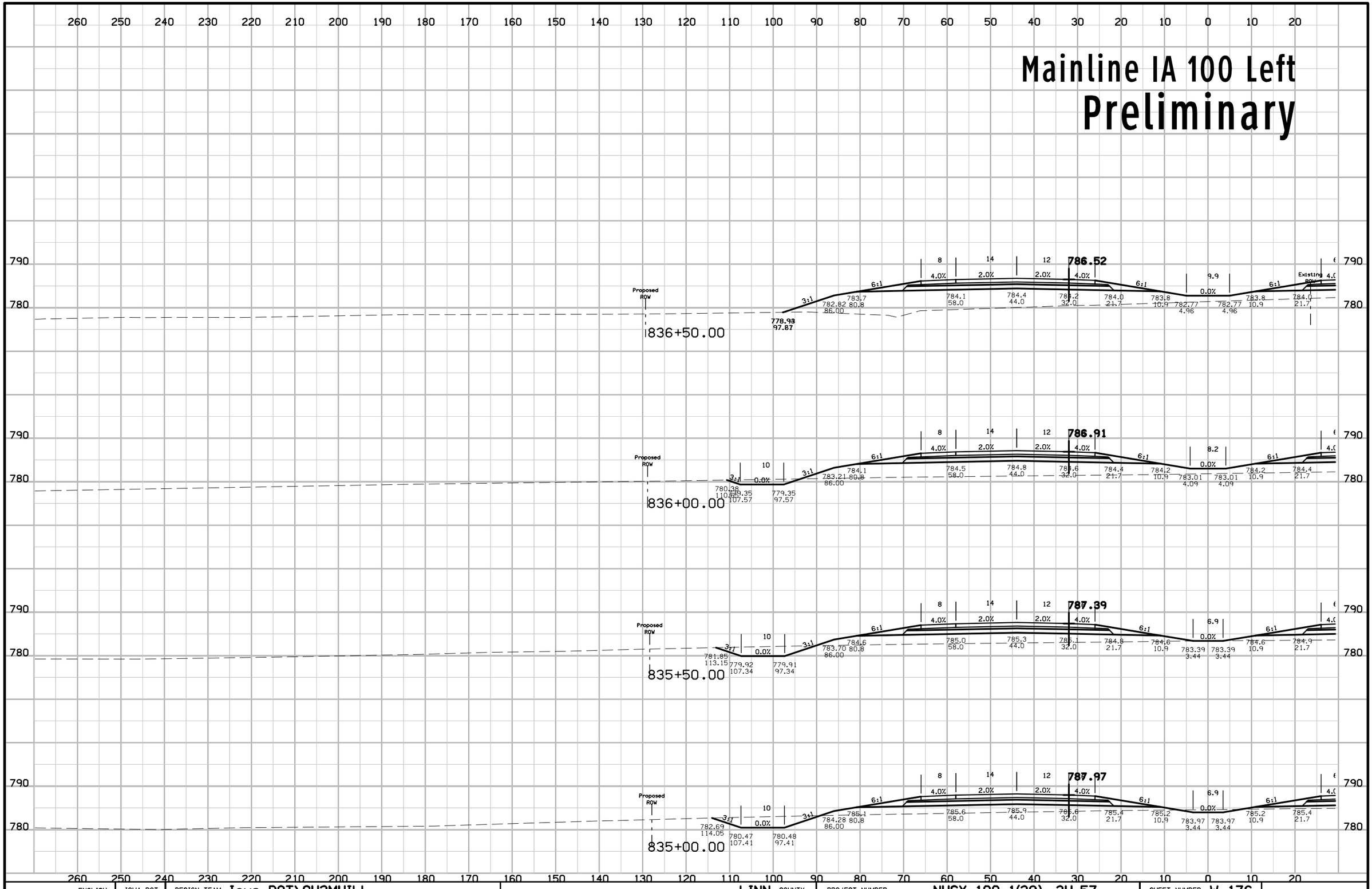
Mainline IA 100 Left

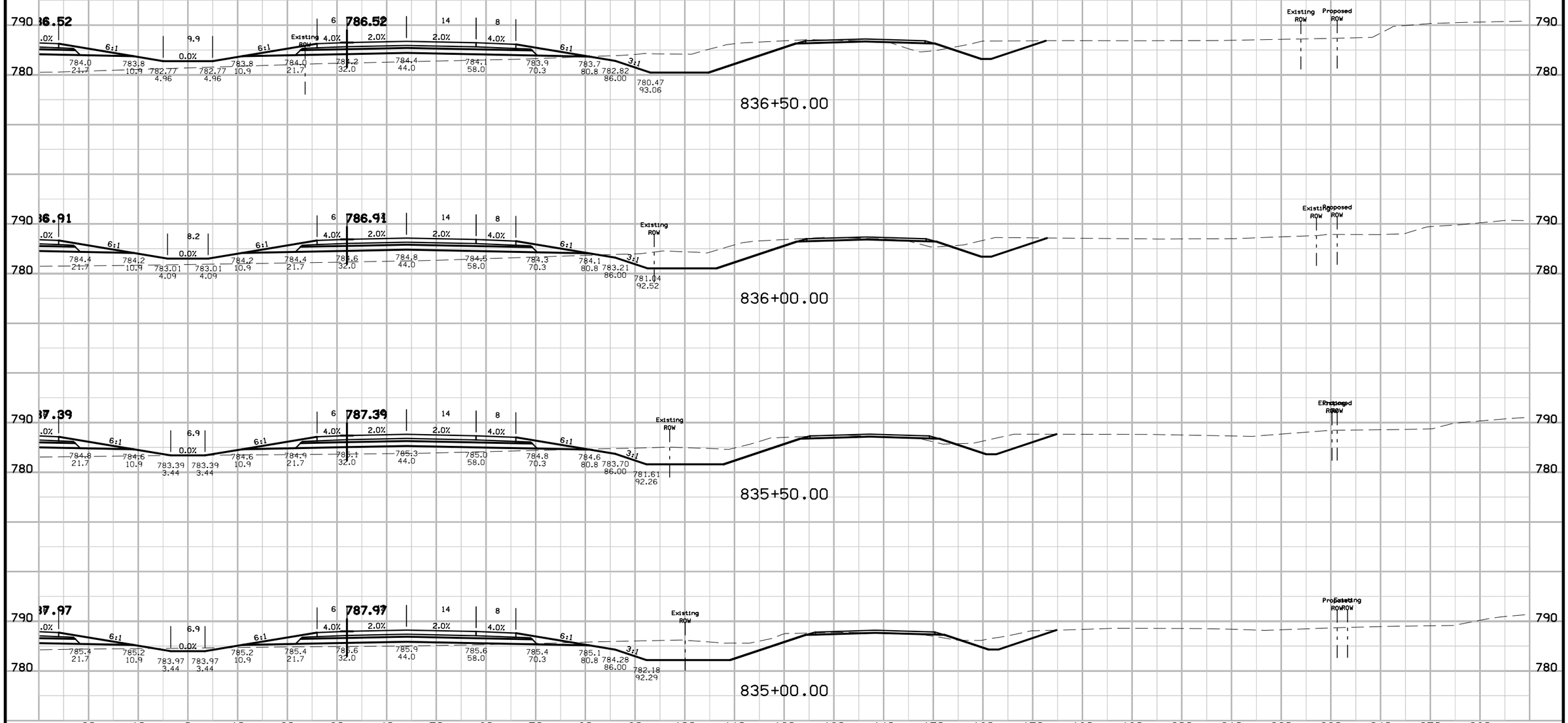
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.176

2:17:46 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Right
Preliminary

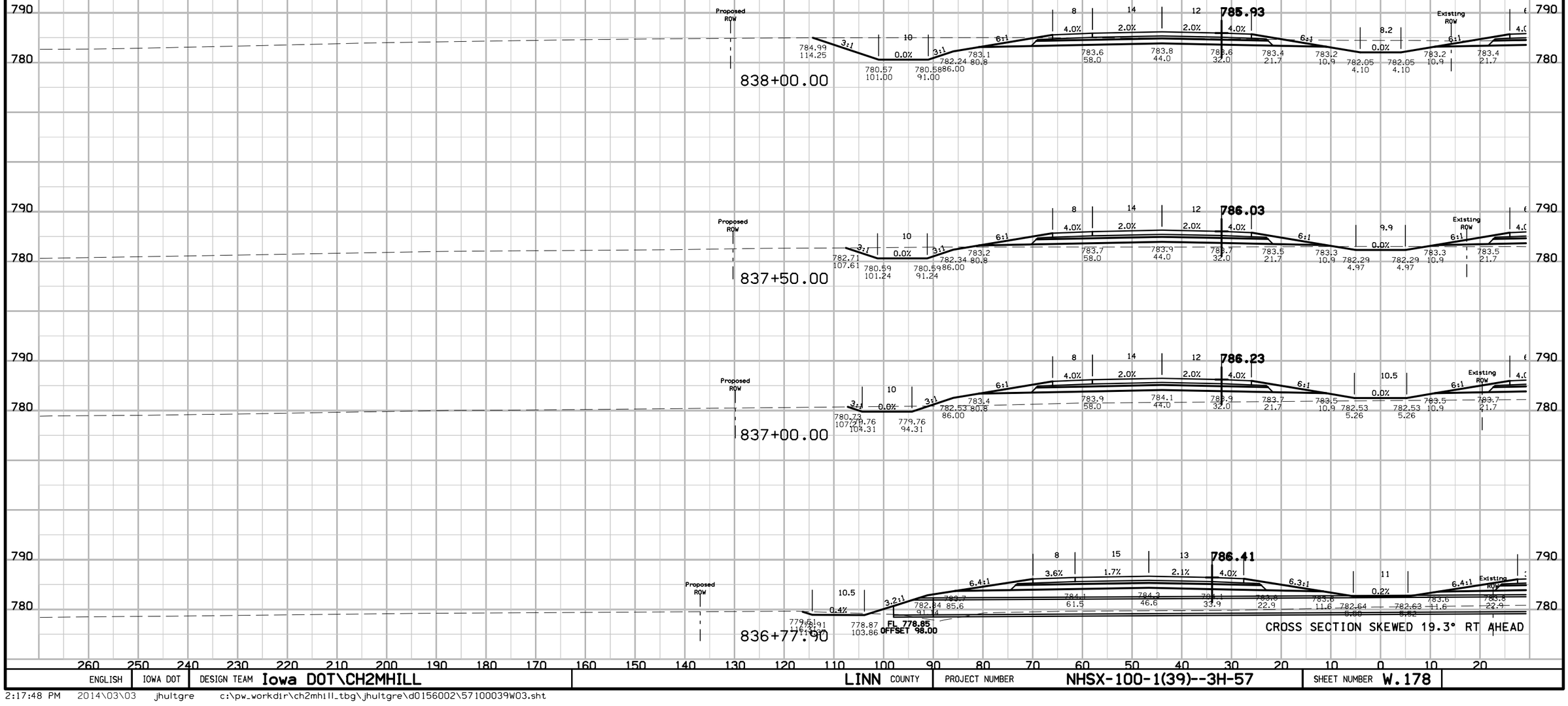


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.177

2:17:47 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Left

Preliminary

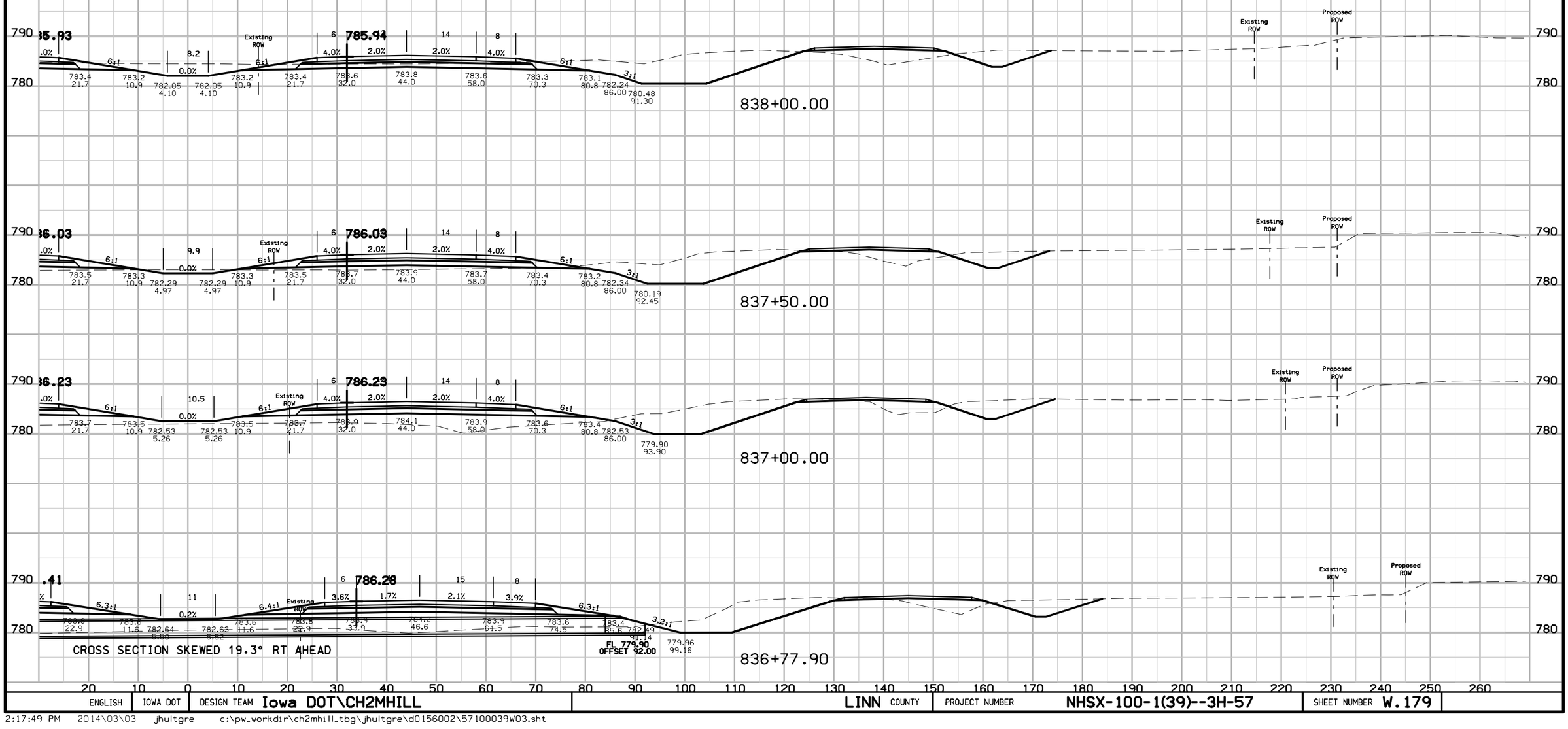


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.178

2:17:48 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Right

Preliminary

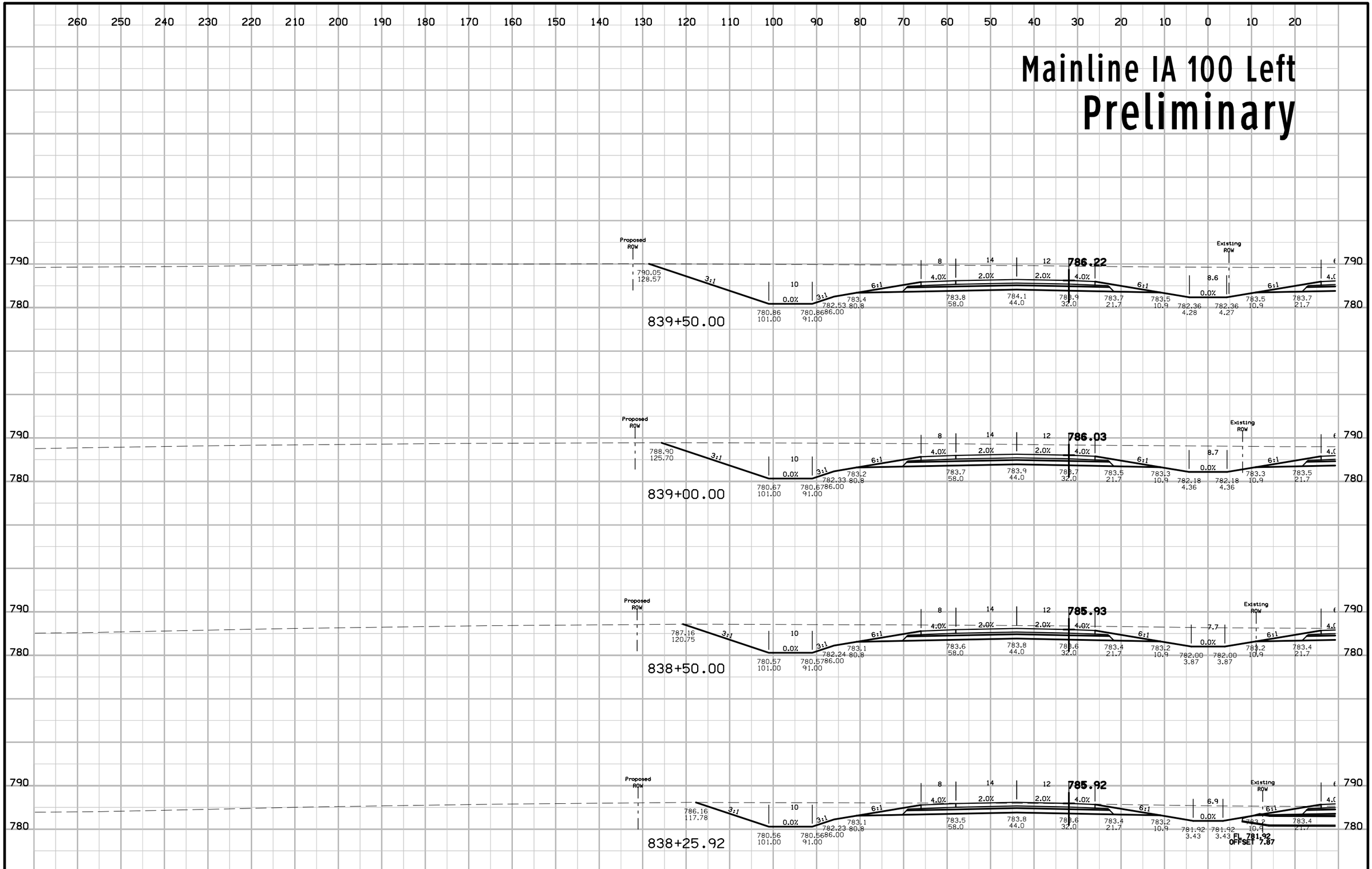


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.179

2:17:49 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Left

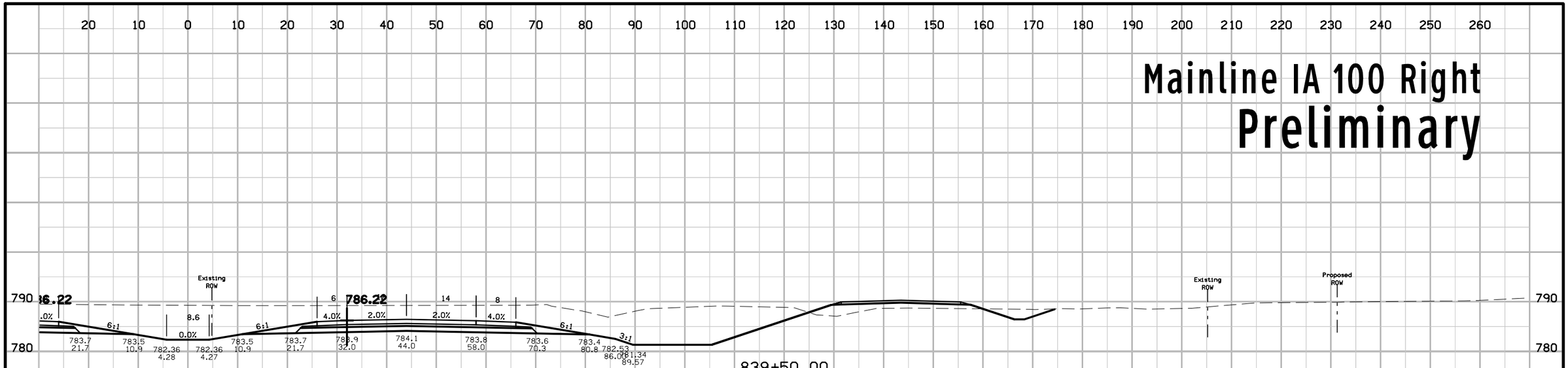
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.180

2:17:50 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\571000039W03.sht

Mainline IA 100 Right
Preliminary

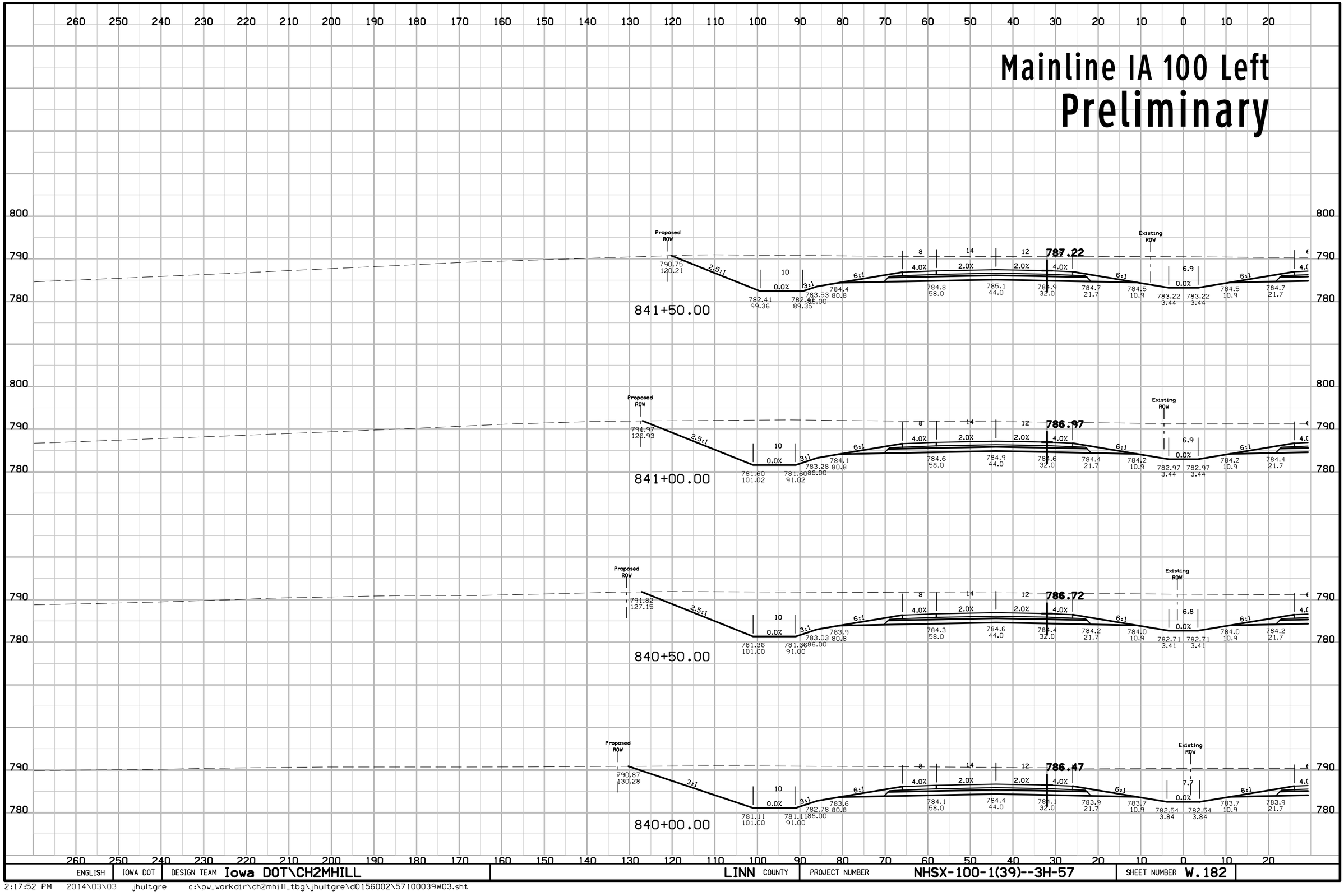


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.181	

2:17:51 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\571000039W03.sht

Mainline IA 100 Left

Preliminary

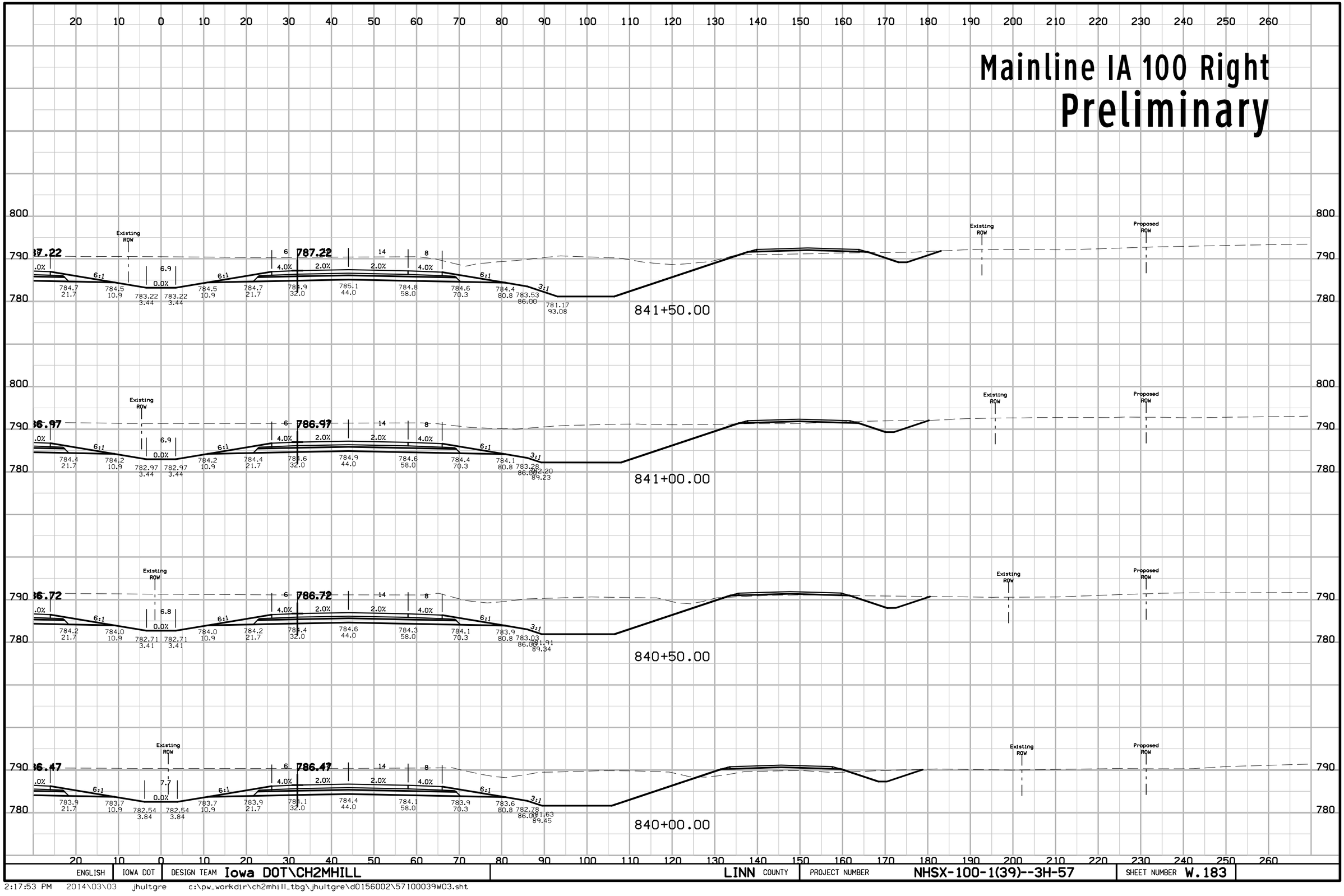


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.182

2:17:52 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Right

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.183

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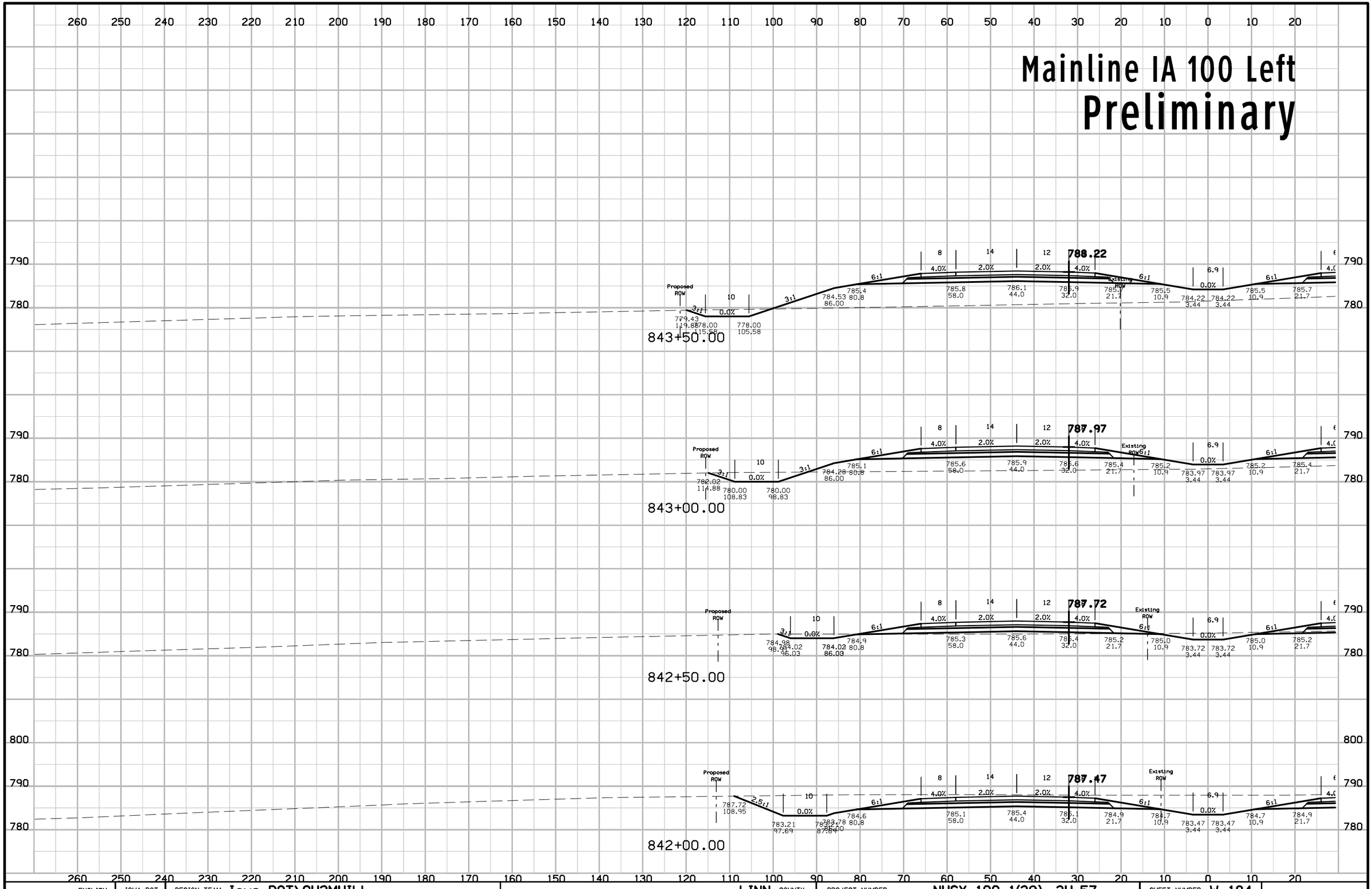
Mainline IA 100 Left
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.184

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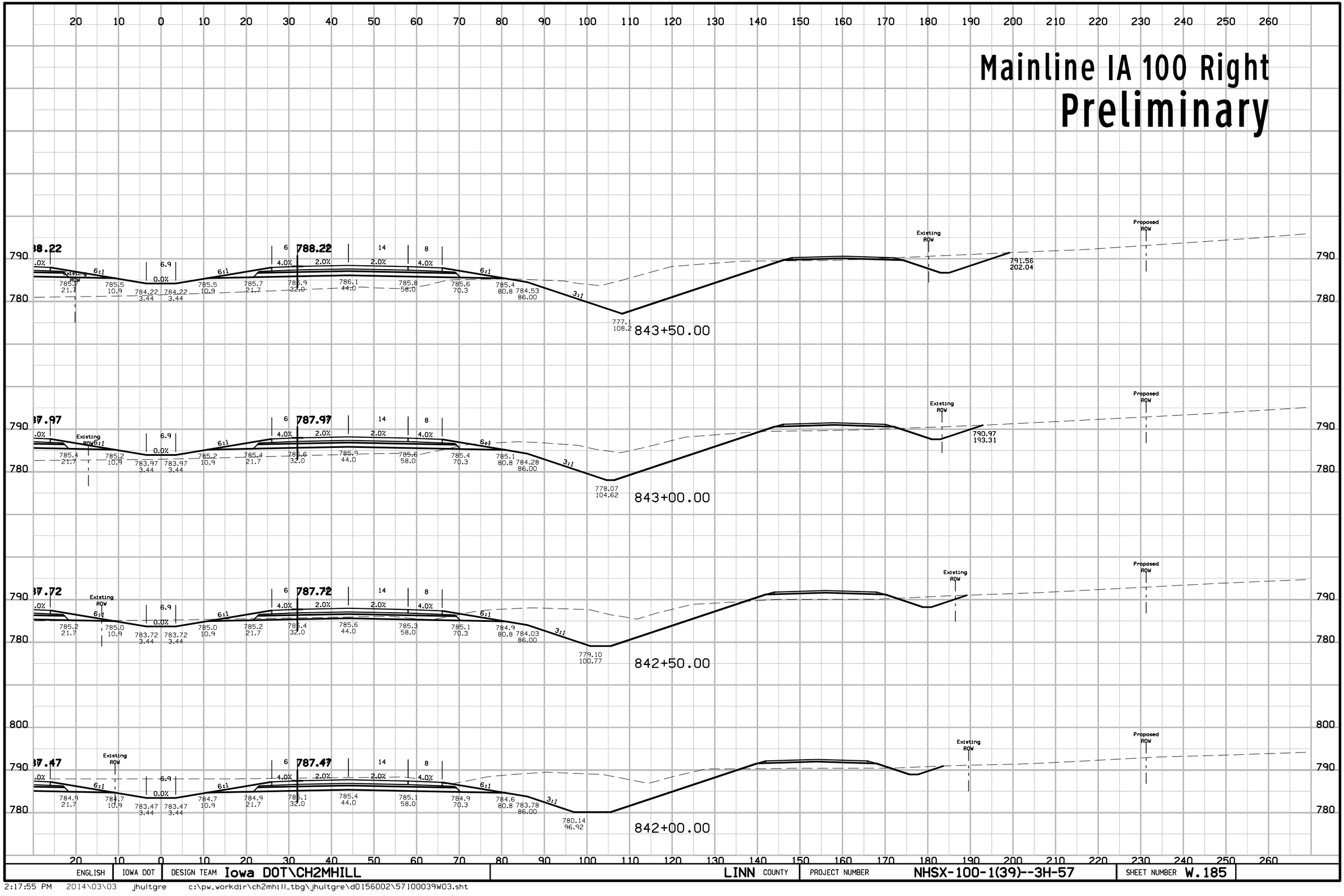
Mainline IA 100 Right
Preliminary

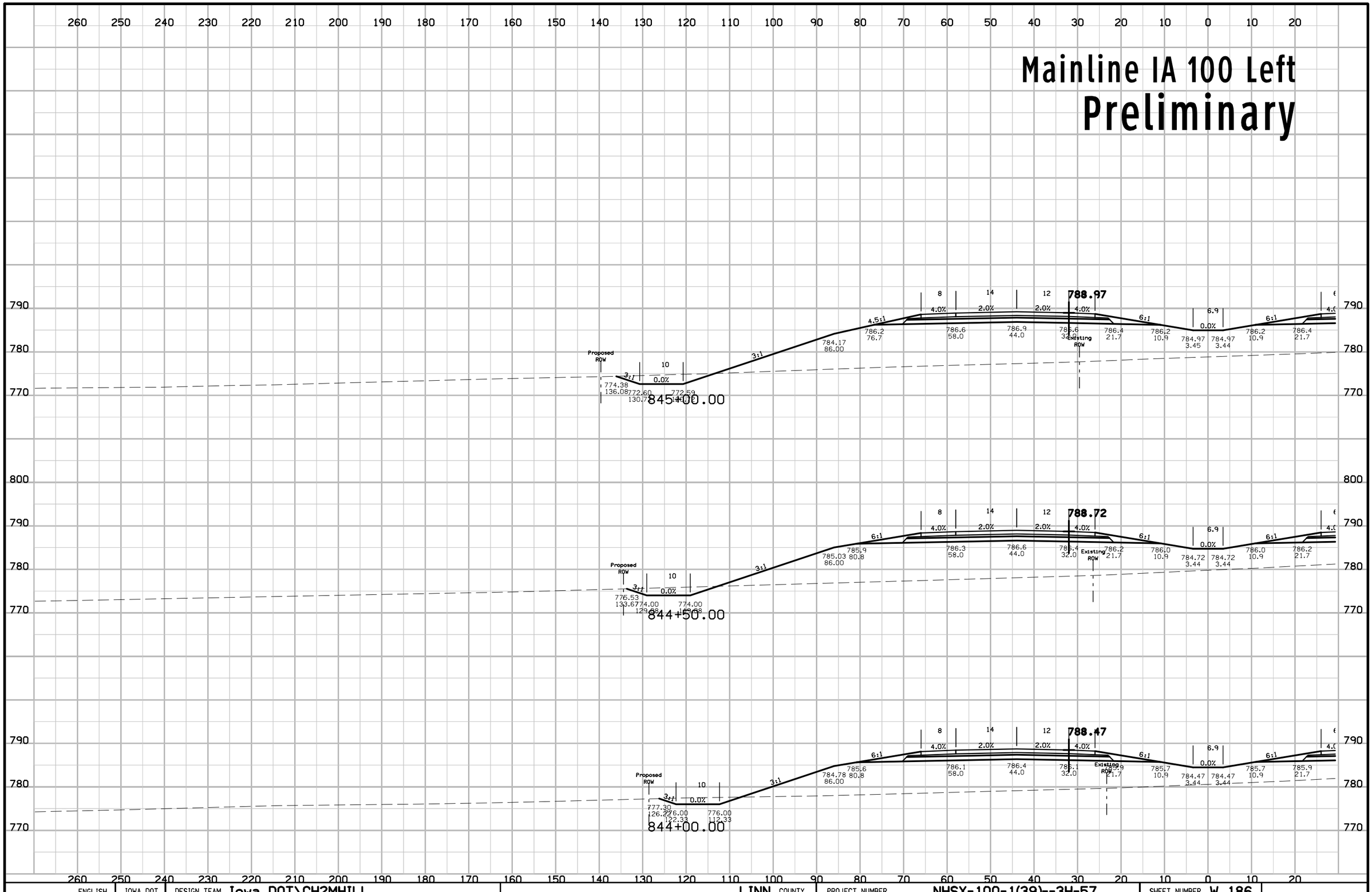


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.185

2:17:55 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Left

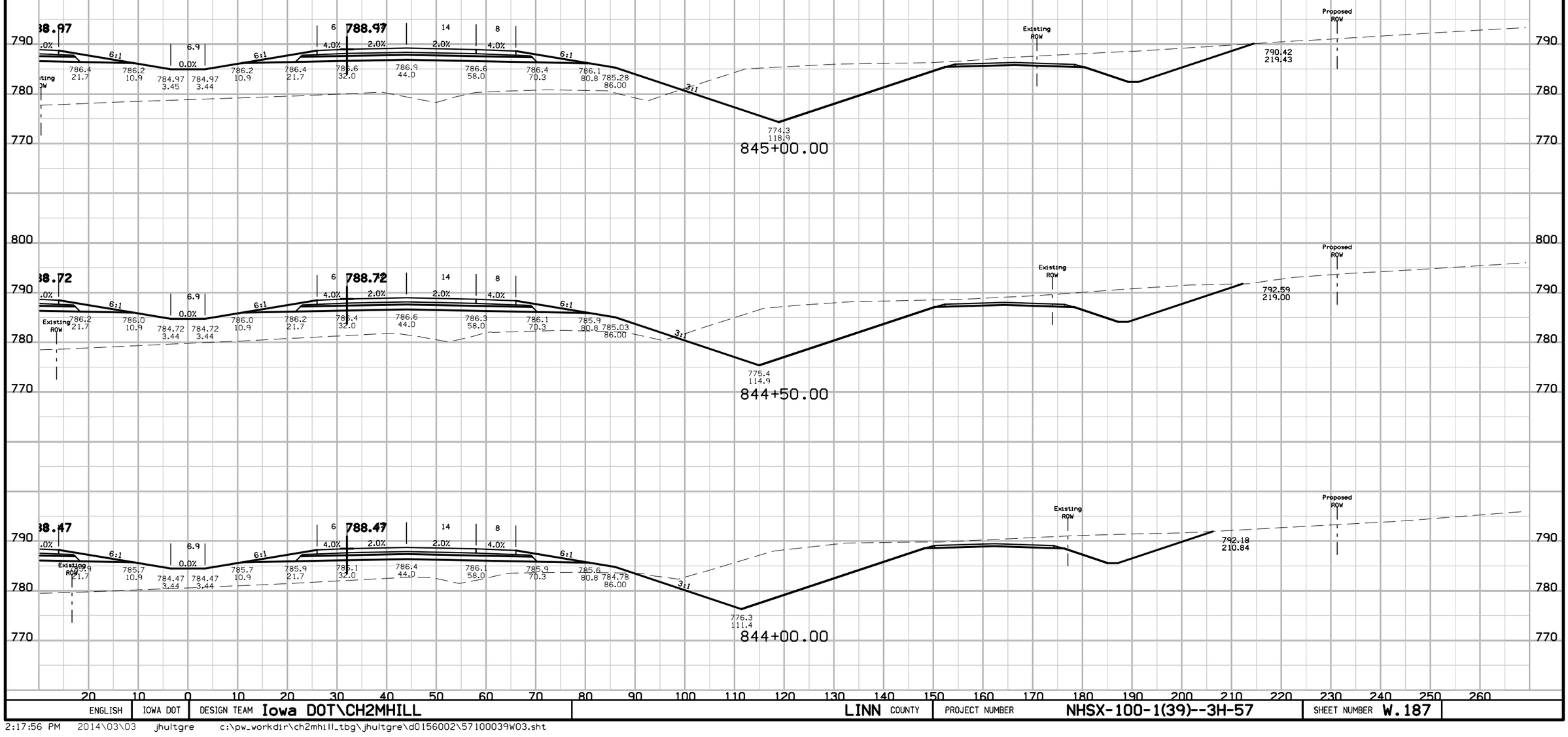
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.186

2:17:56 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.187	

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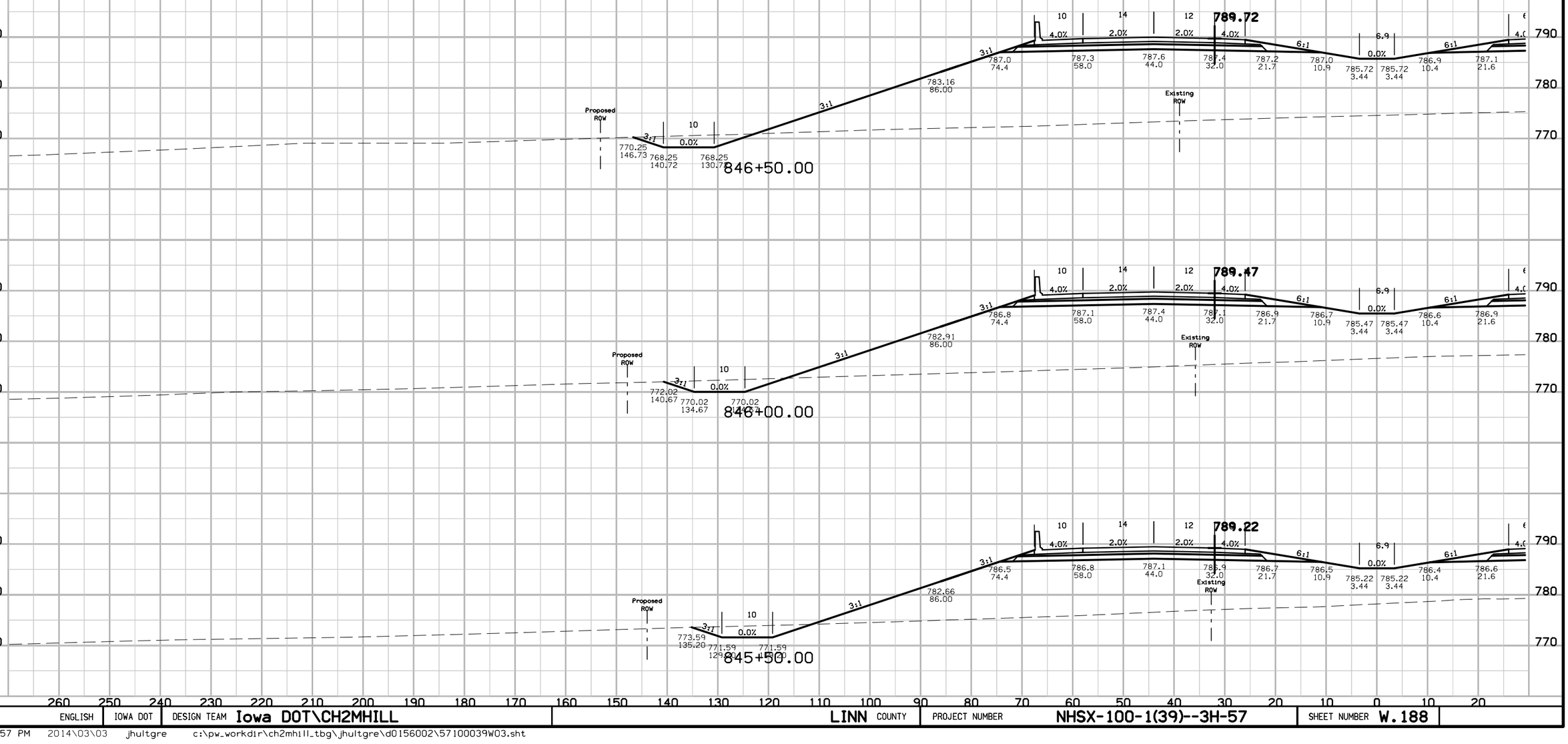
Mainline IA 100 Left
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.188

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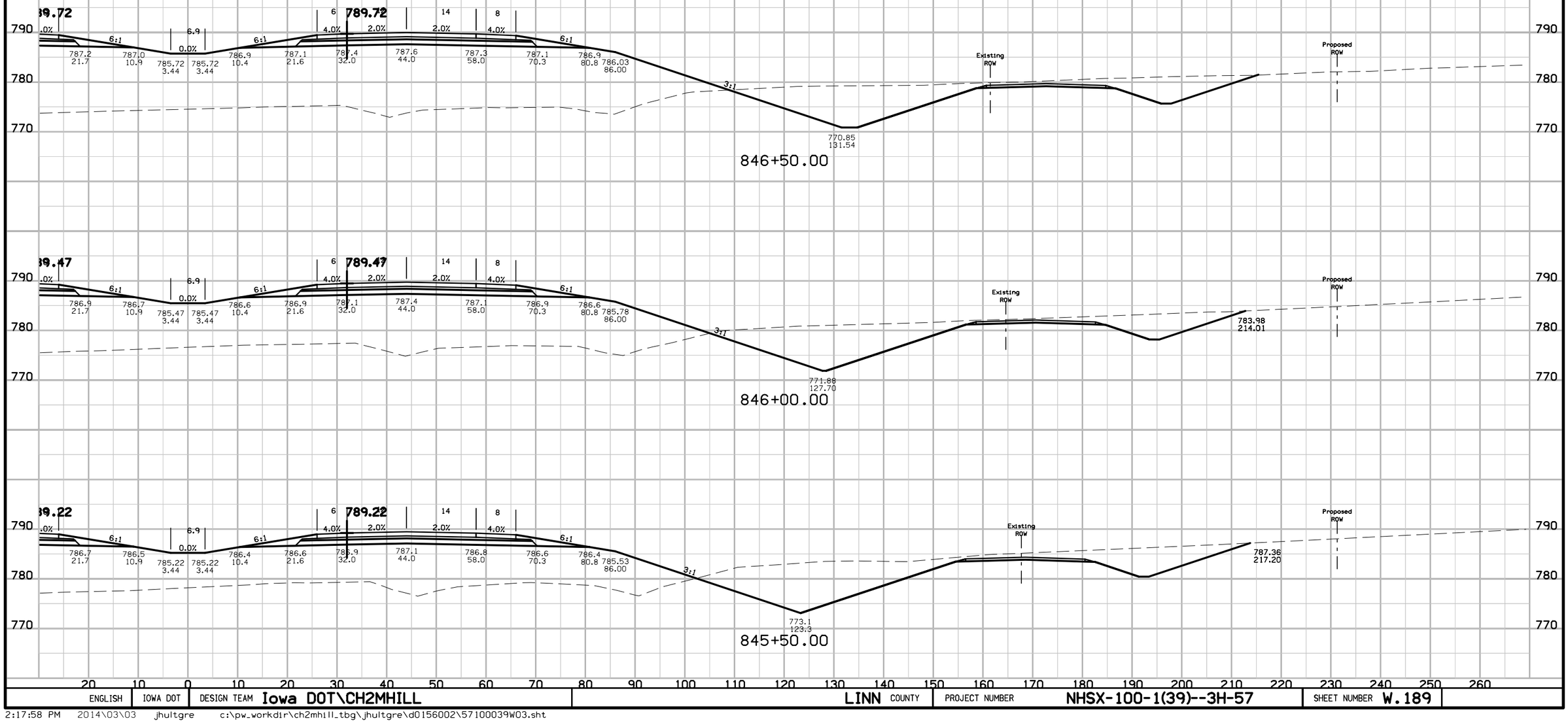
Mainline IA 100 Right
Preliminary

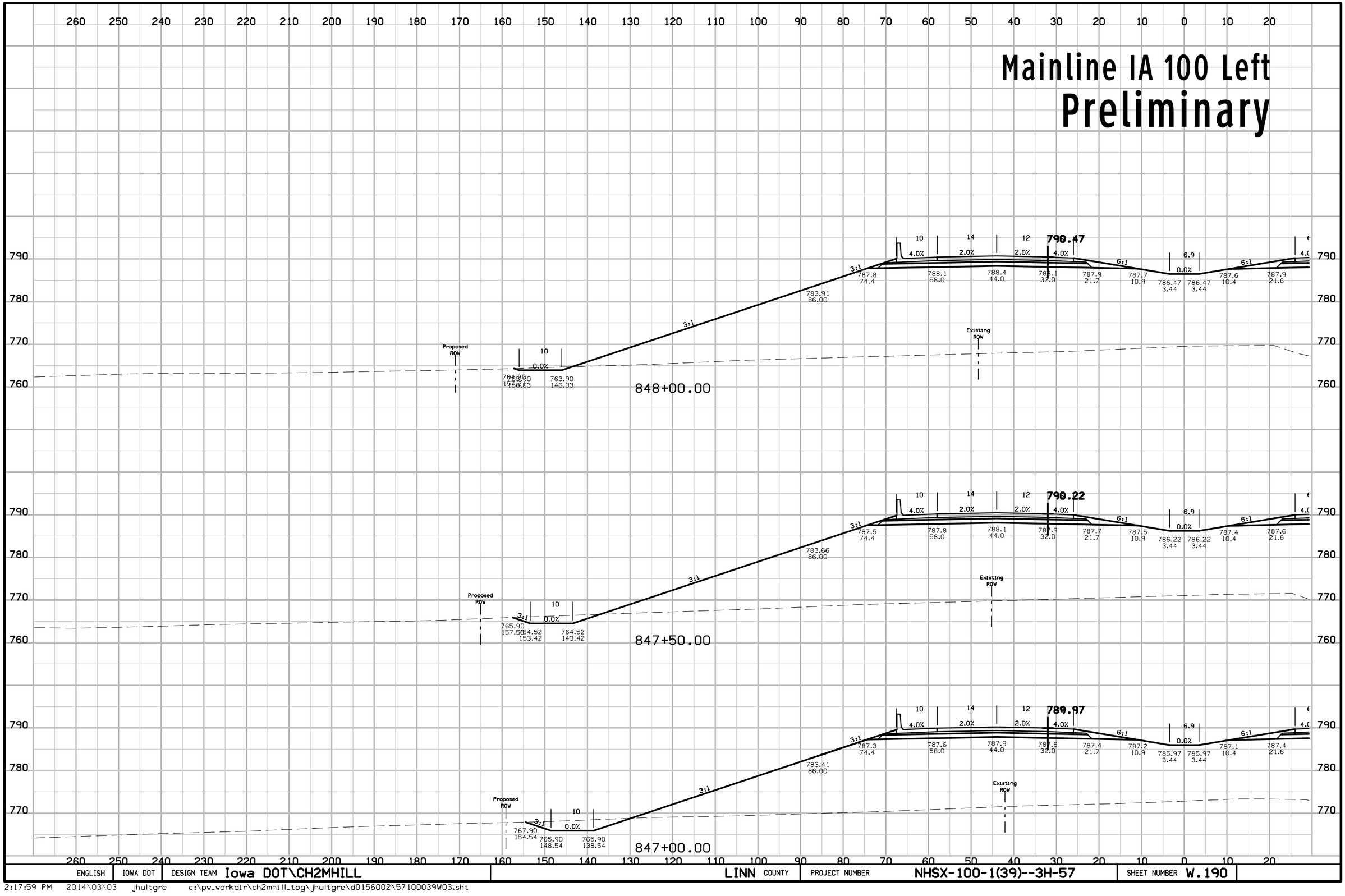


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.189

2:17:58 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.190

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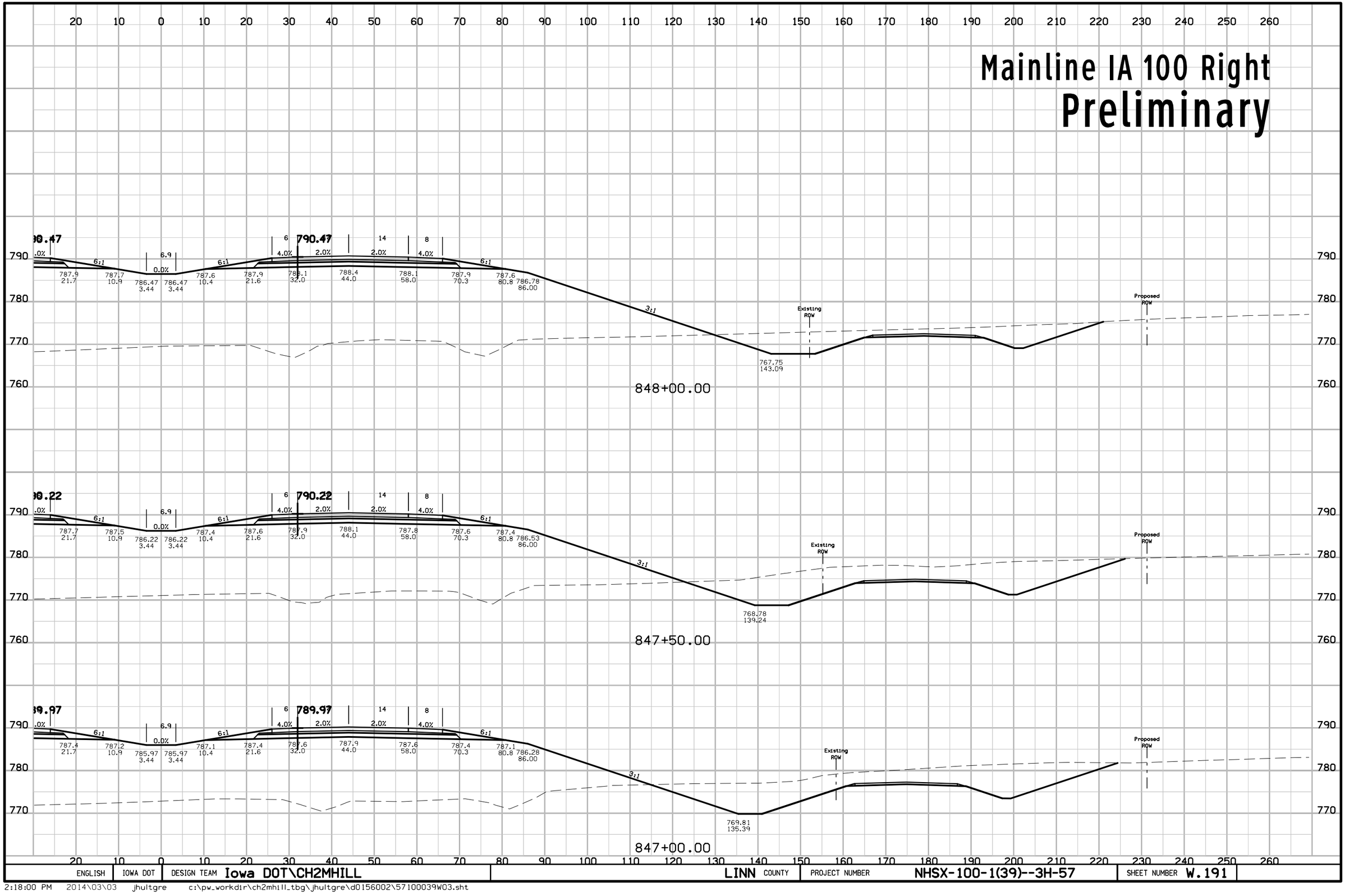
Mainline IA 100 Right
Preliminary

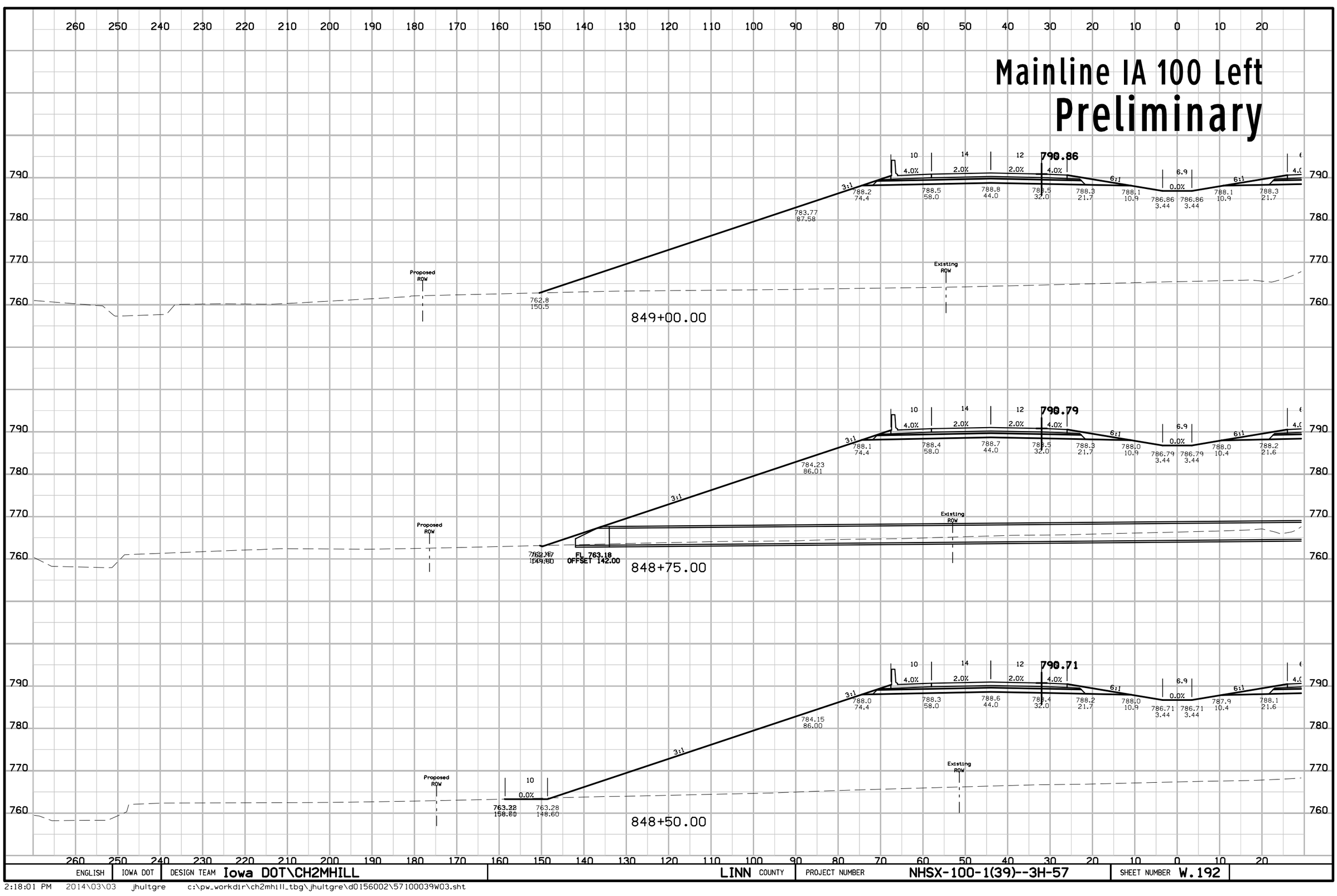


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.191

2:18:00 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.192

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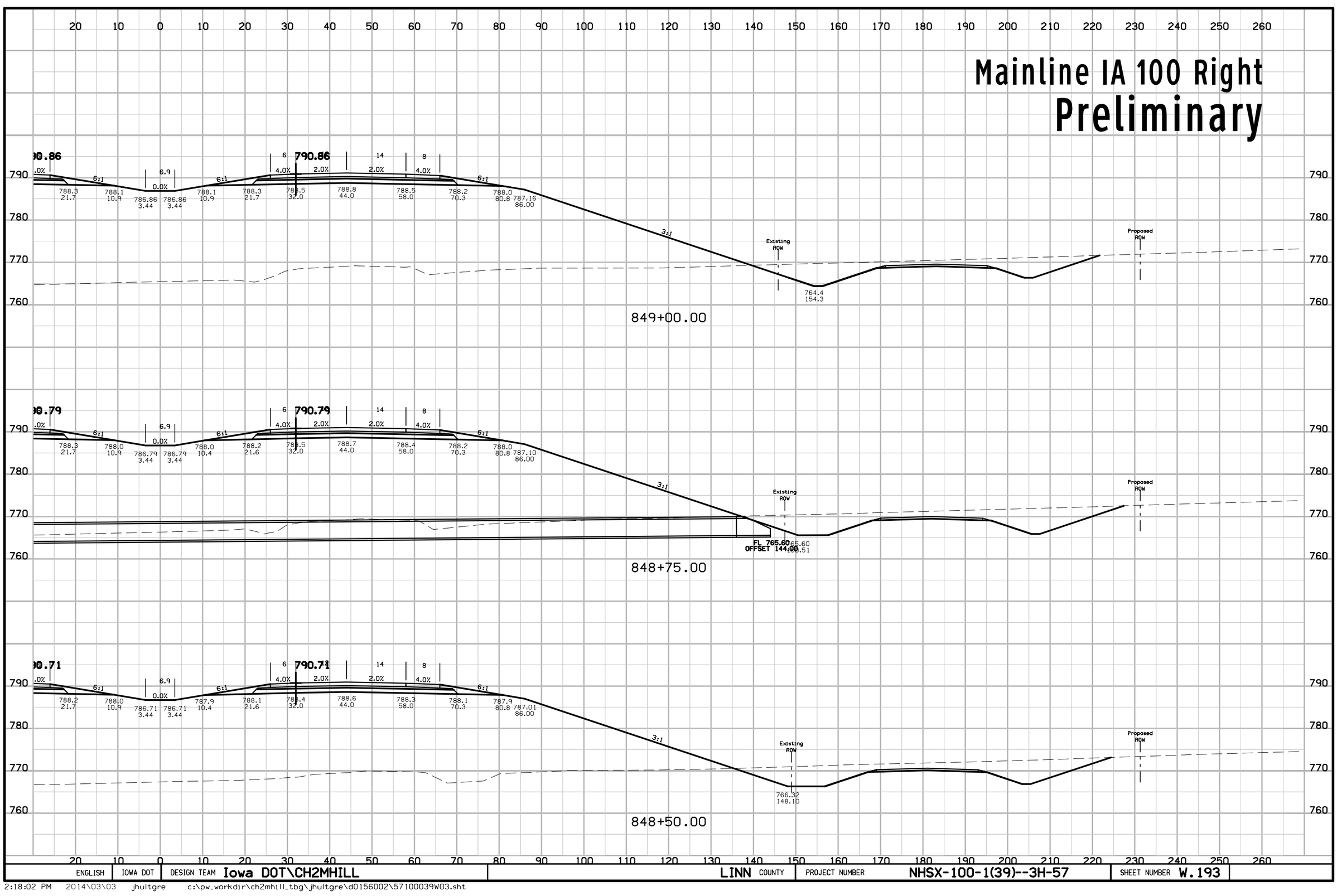
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.193

2:18:02 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\571000039W03.sht

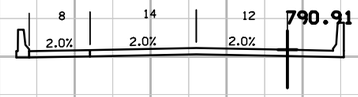
Mainline IA 100 Left
Preliminary

260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20

790
780
770

Proposed ROW

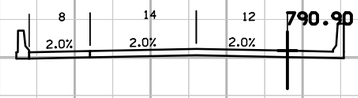
849+50.00



790
780
770

Proposed ROW

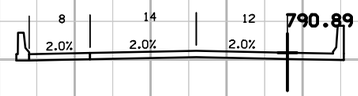
849+28.04



790
780
770
760

Proposed ROW

849+21.96



790
780
770
760

260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.194

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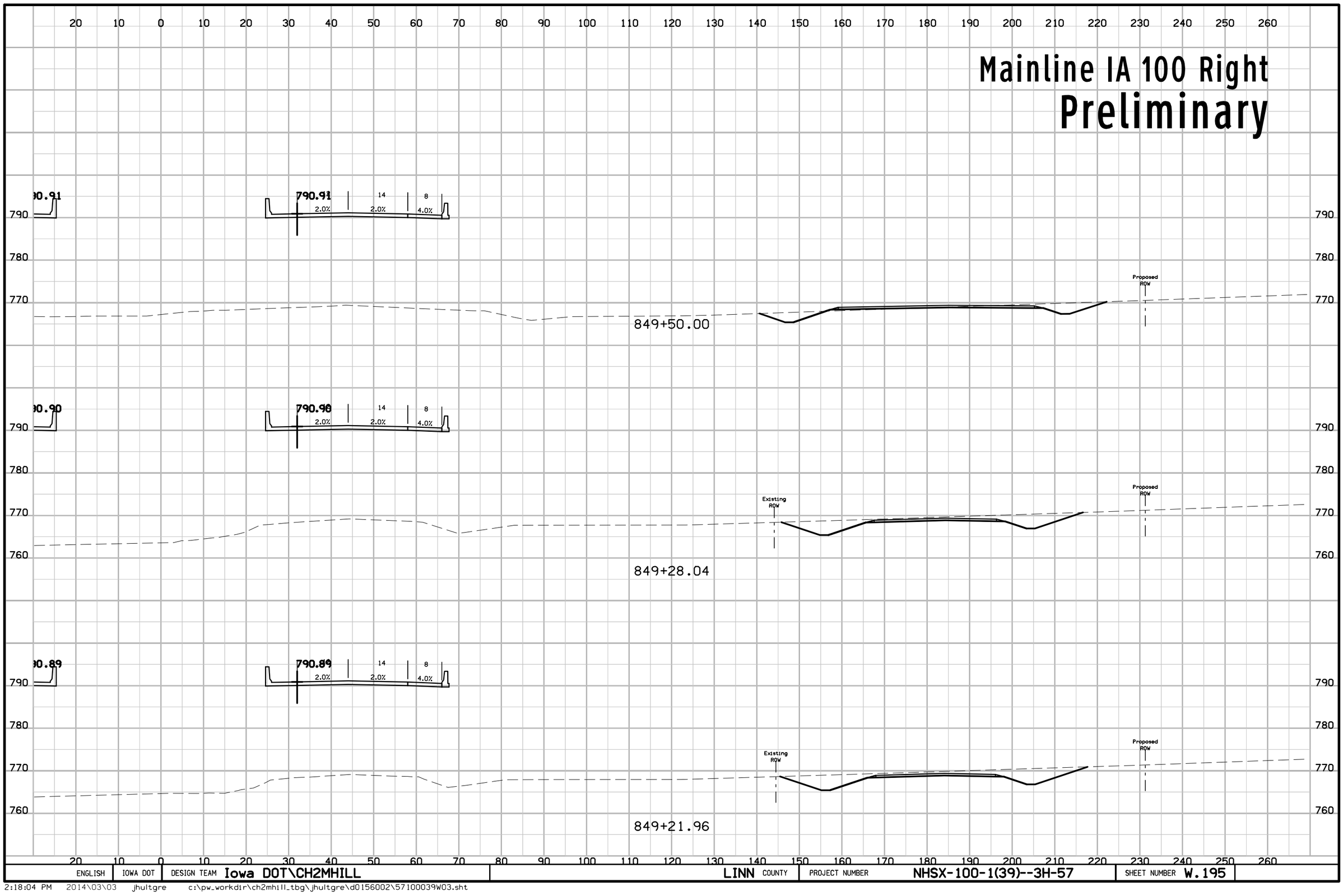
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.195	

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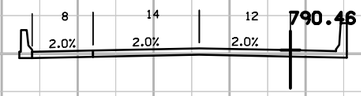
Mainline IA 100 Left
Preliminary

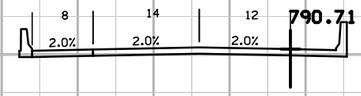
260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20

790
780
770
760



Proposed ROW

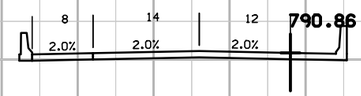
851+00.00



790
780
770
760

Proposed ROW

850+50.00



790
780
770
760

Proposed ROW

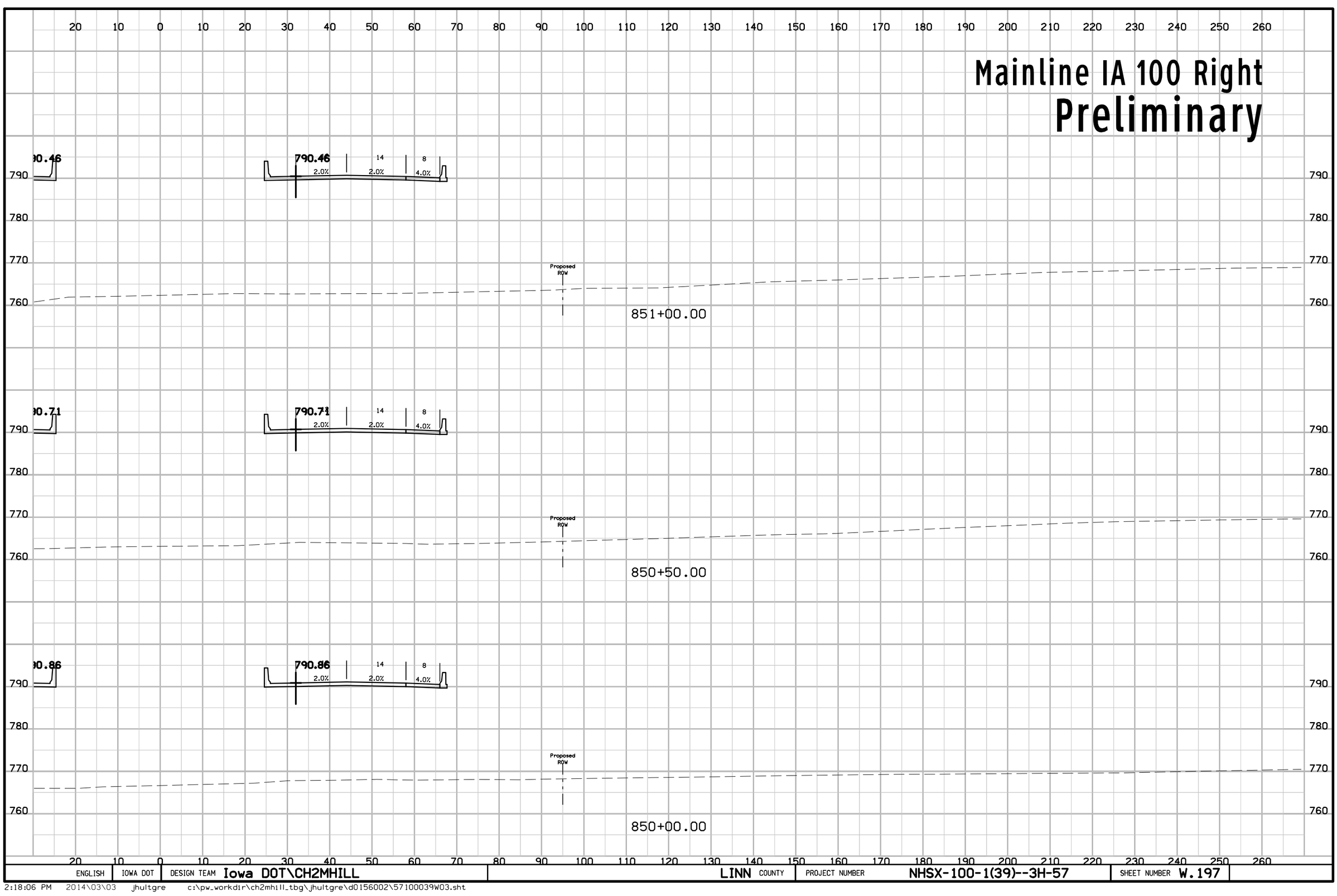
850+00.00

260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.196

2:18:05 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.197

2:18:06 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

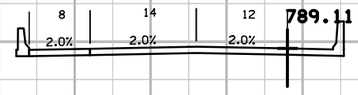
Mainline IA 100 Left
Preliminary

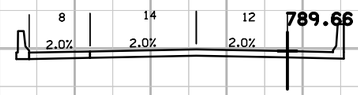
260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20

790
780
770
760

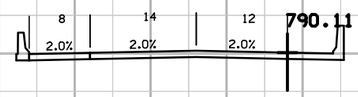
Proposed ROW

852+50.00





852+00.00



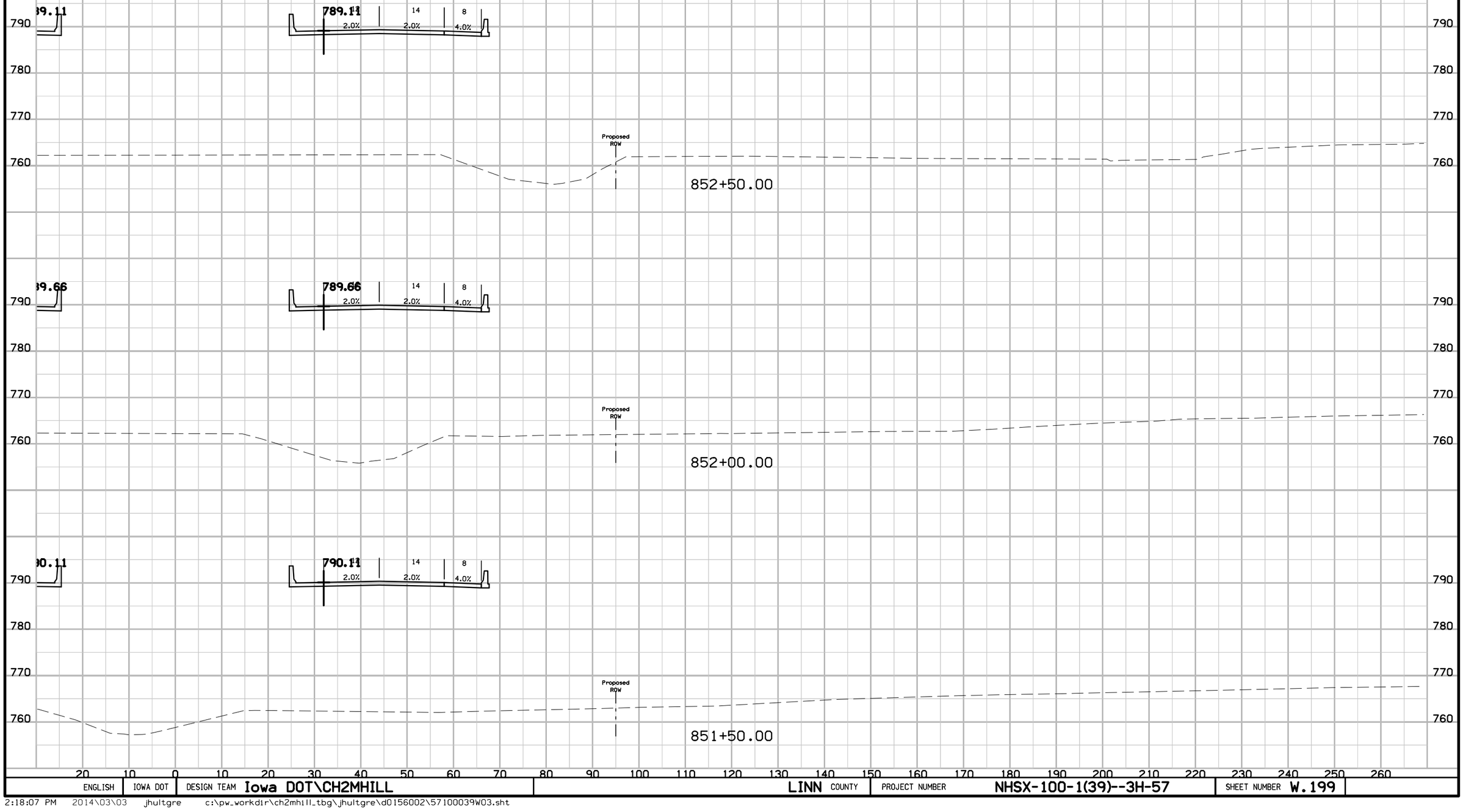
851+50.00

260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.198

2:18:07 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.199	

2:18:07 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Left
Preliminary

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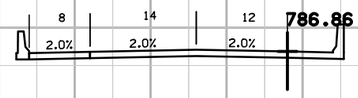
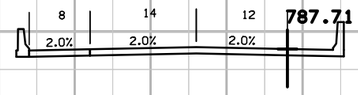
790 780 770 760

Proposed ROW

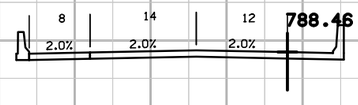
854+00.00





Proposed ROW

853+50.00



Proposed ROW

853+00.00

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ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.200

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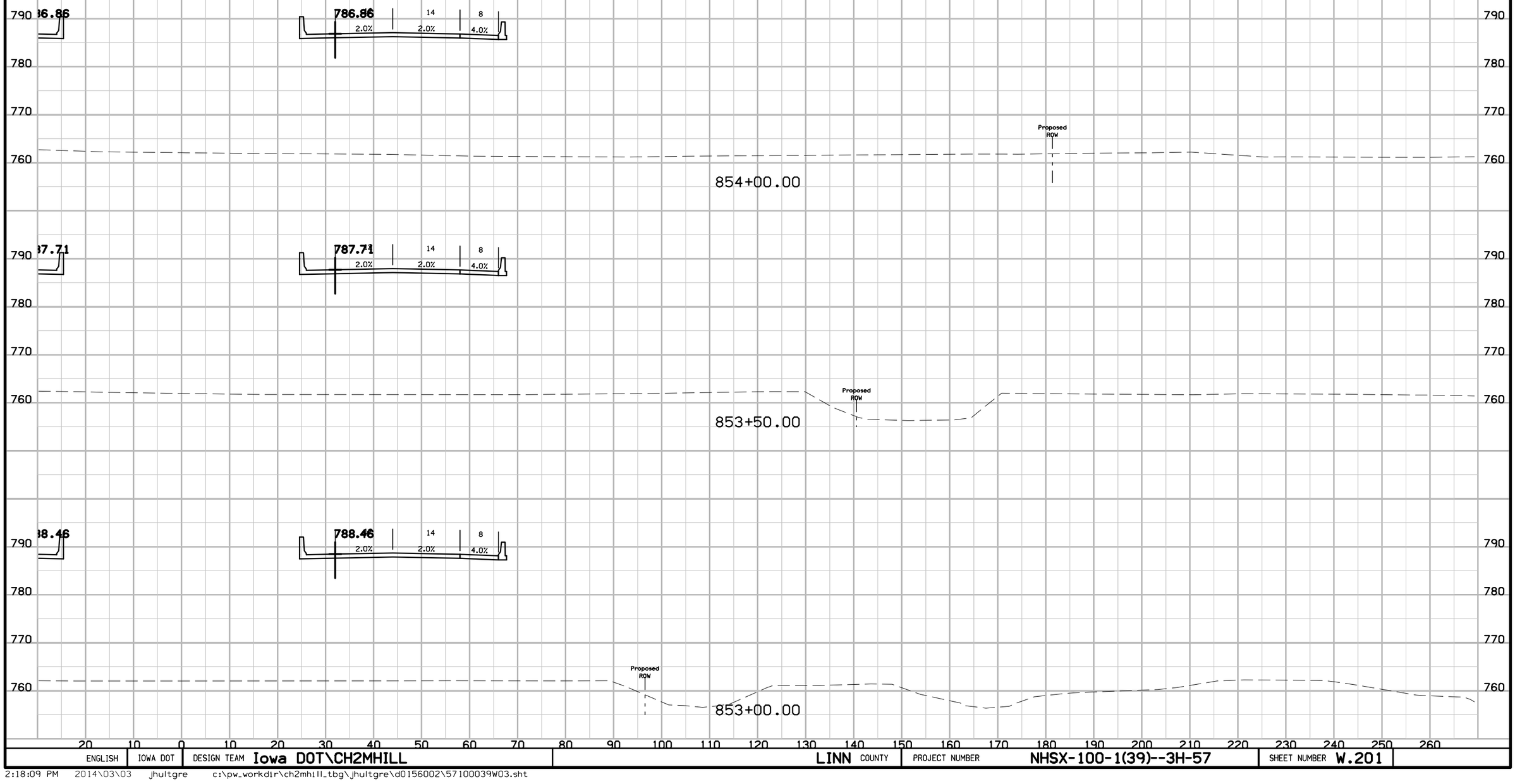
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL		LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.201

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Preliminary

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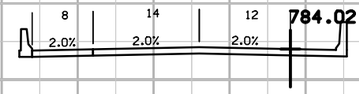
790 780 770 760

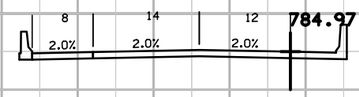
Proposed ROW

855+50.00



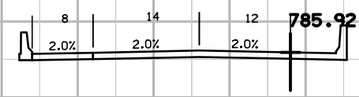
Proposed ROW

855+00.00



Proposed ROW

854+50.00



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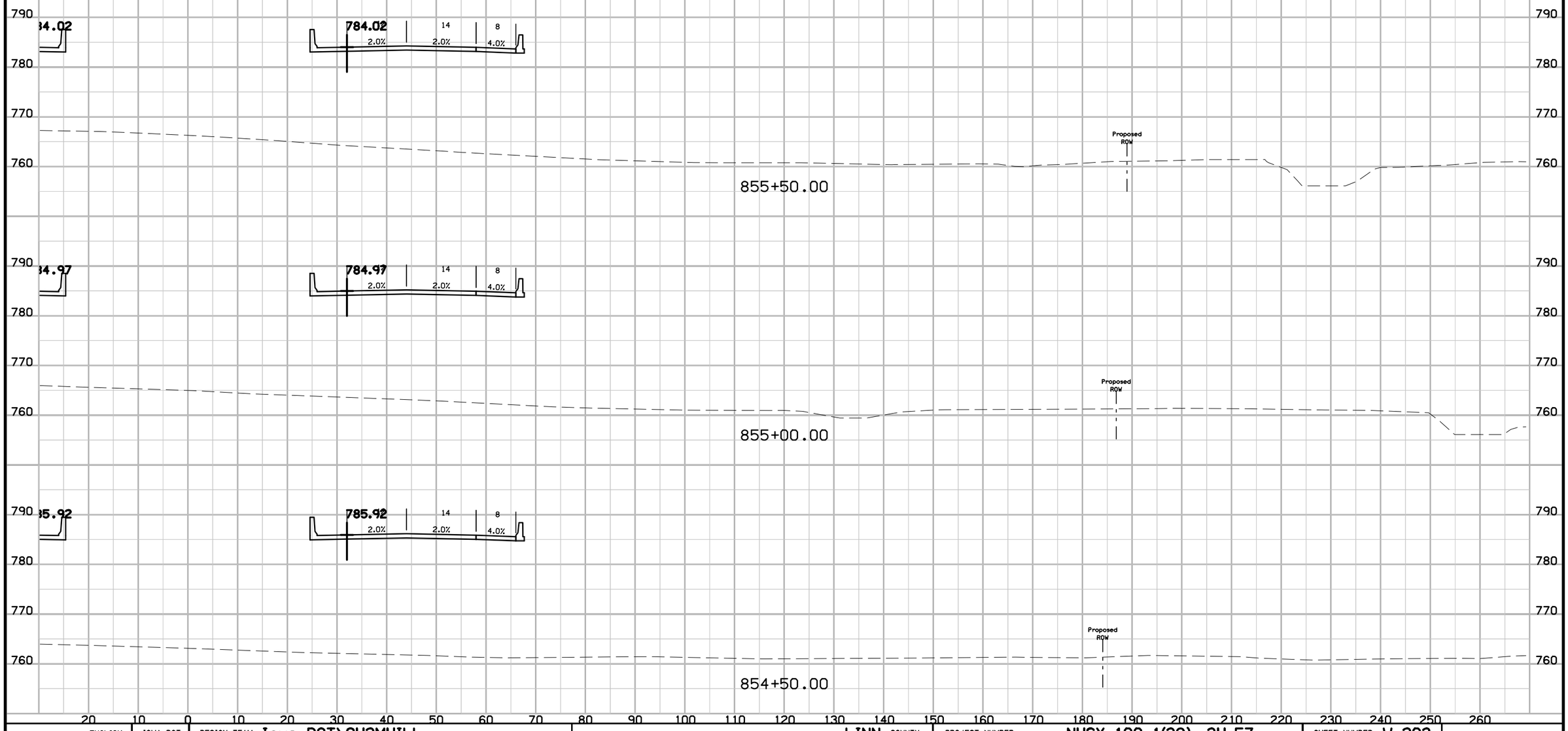
Preliminary



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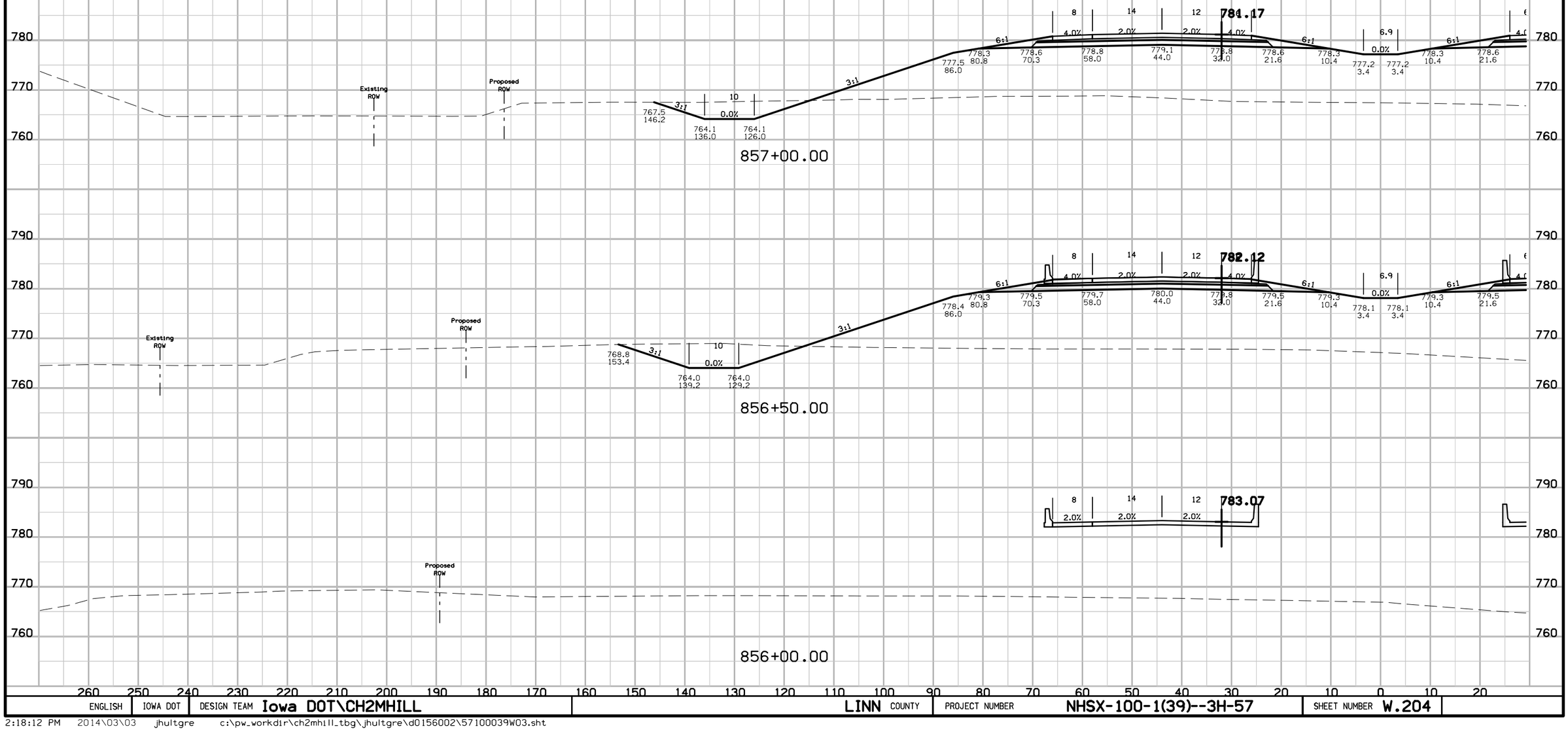
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.204

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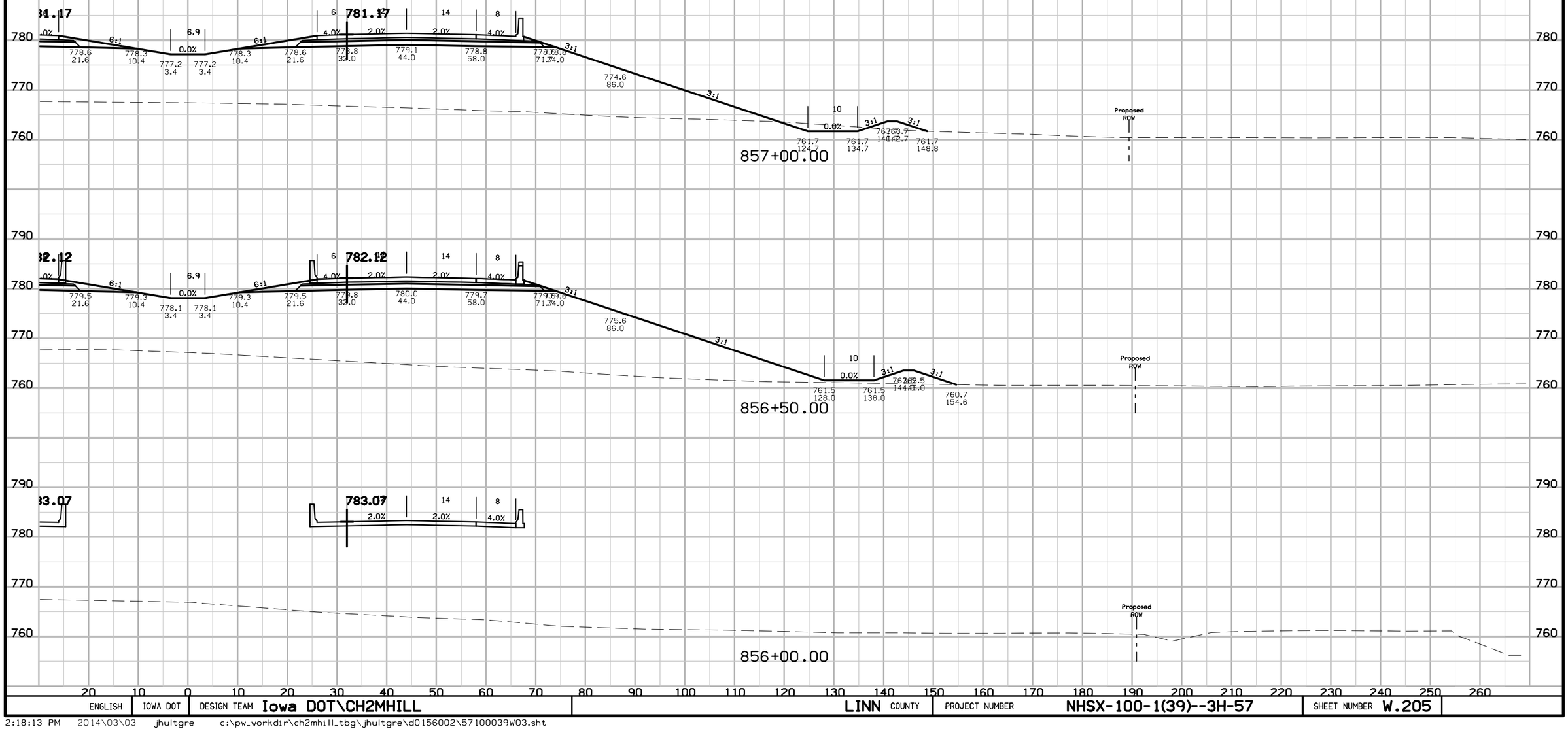
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.205	

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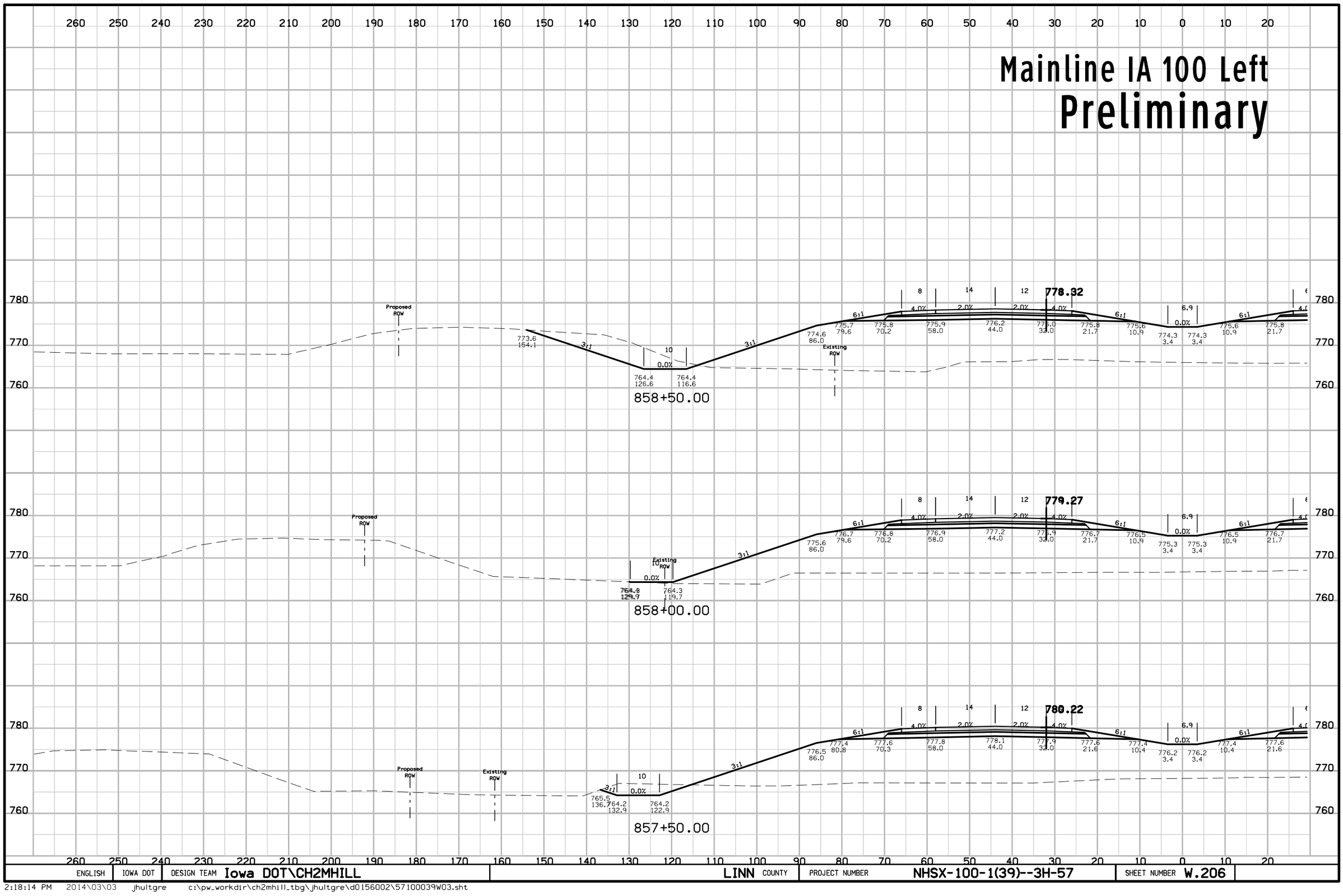
Preliminary



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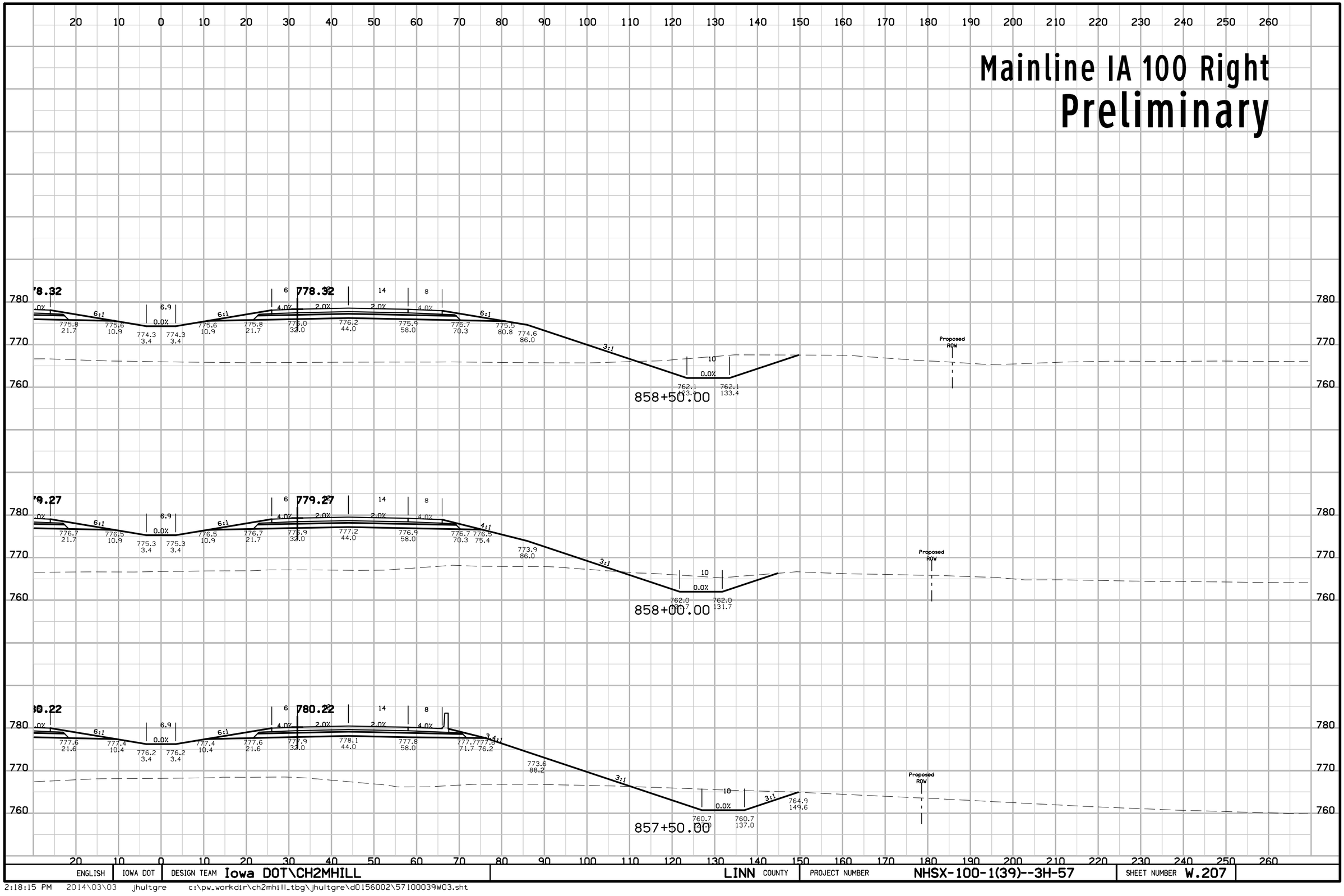

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.207

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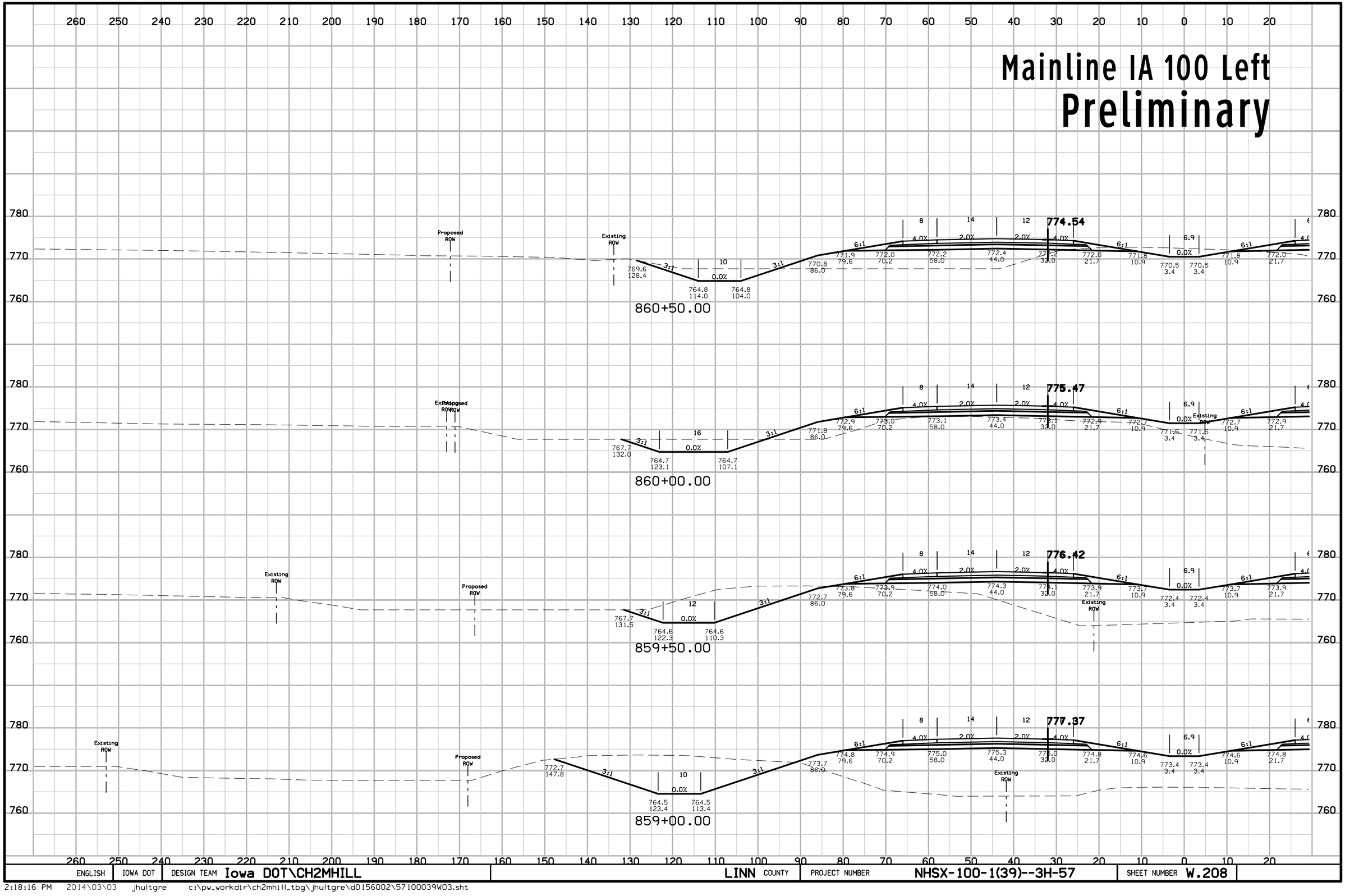
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.208

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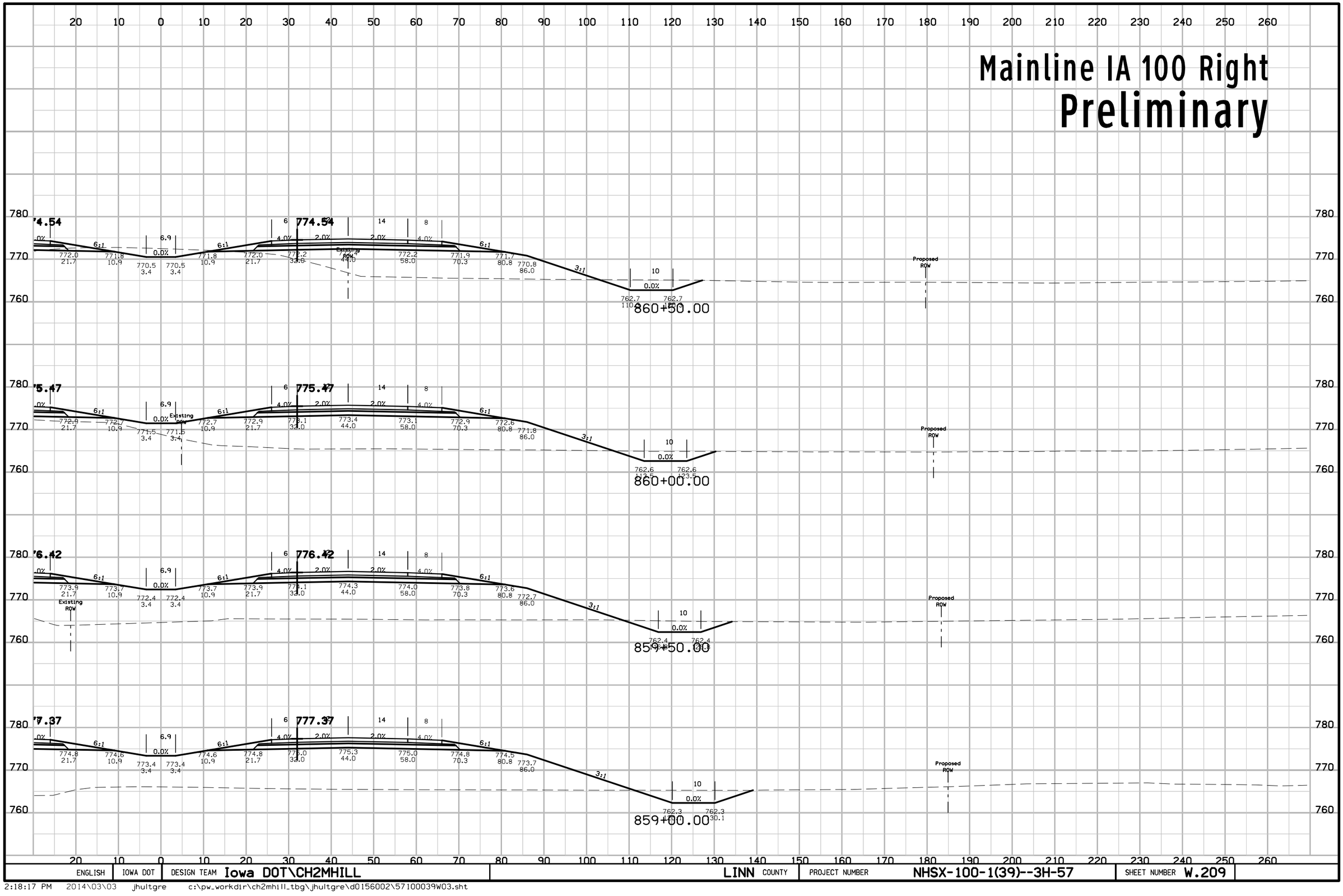
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.209	

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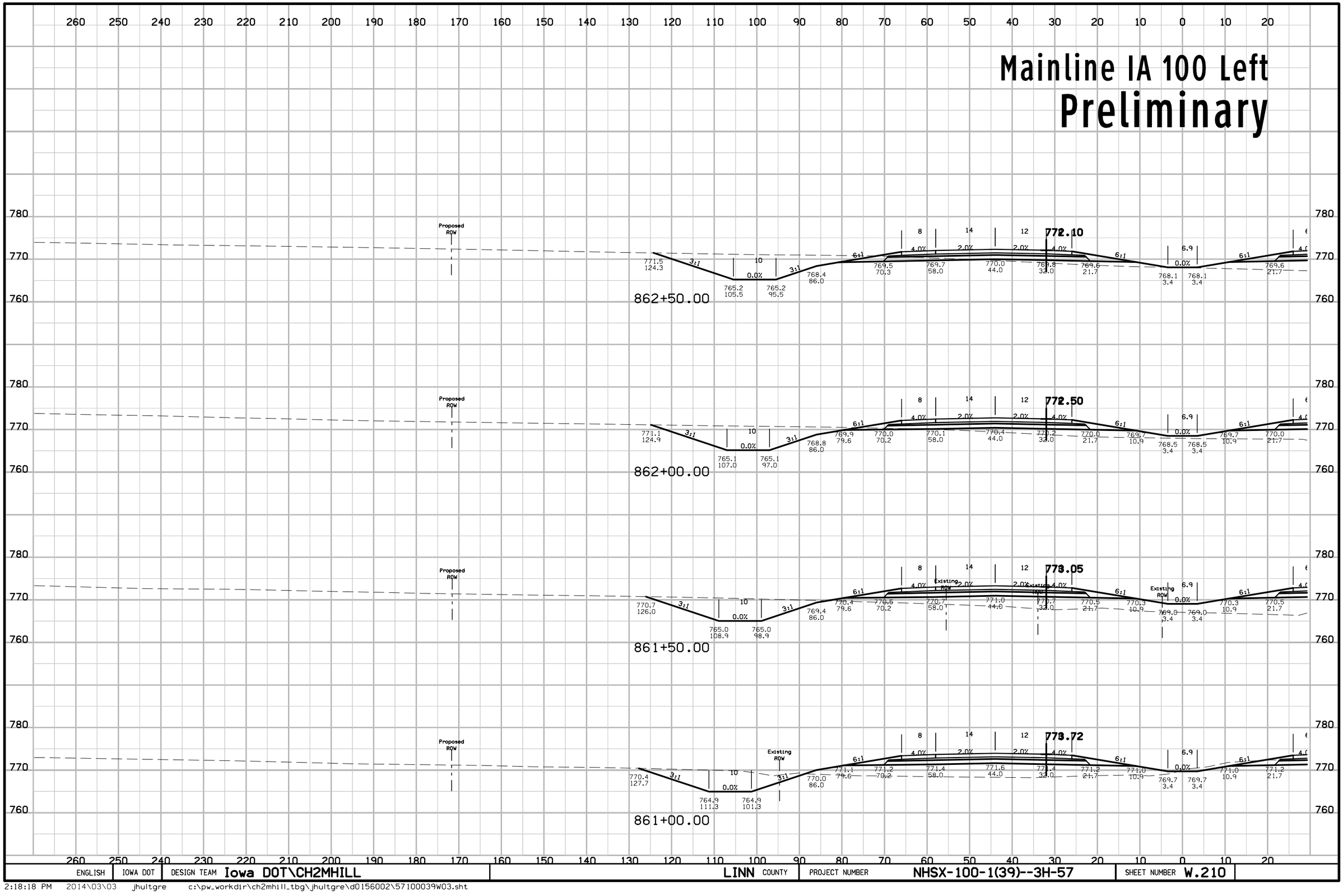
Preliminary



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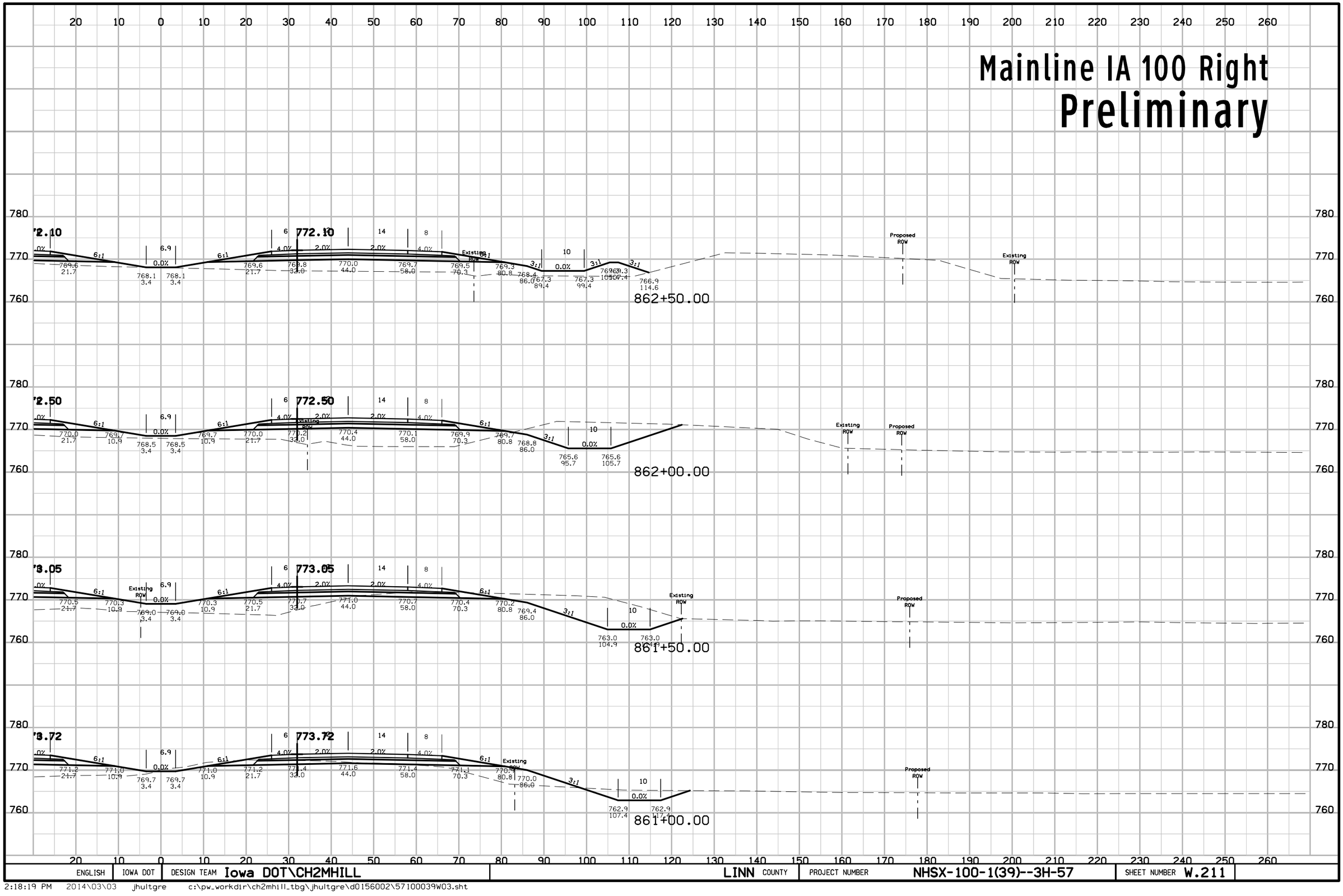

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.211

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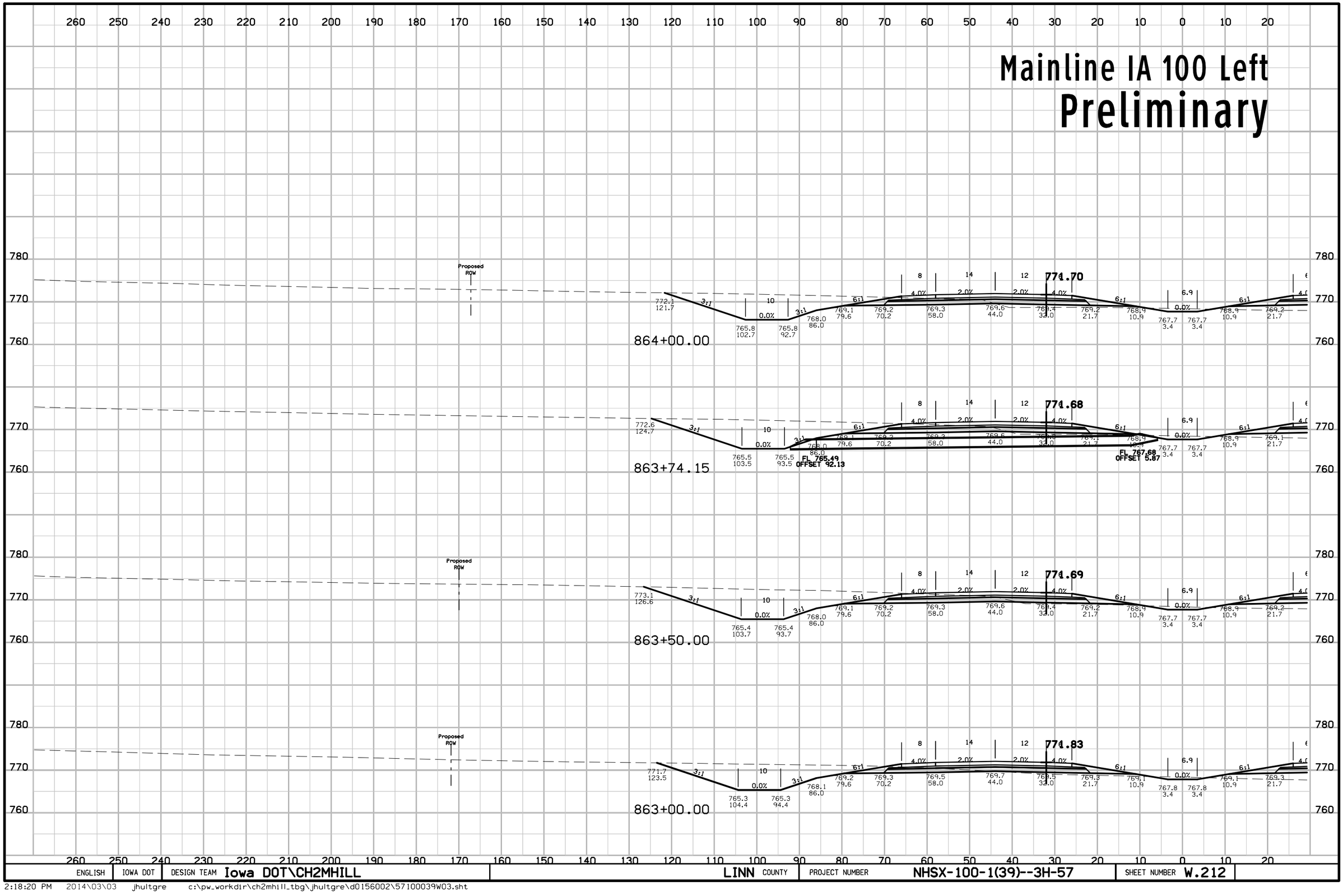
Preliminary



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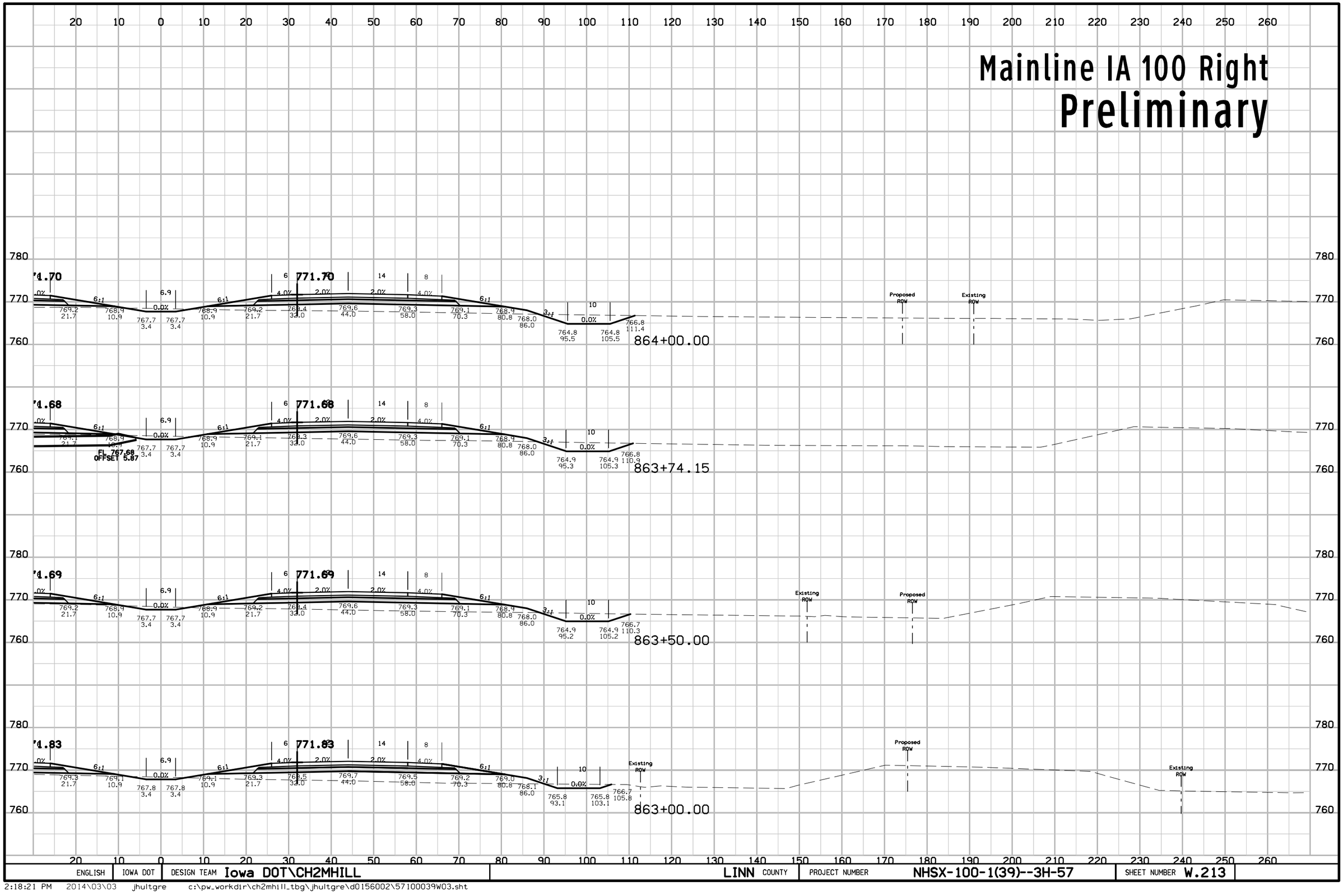

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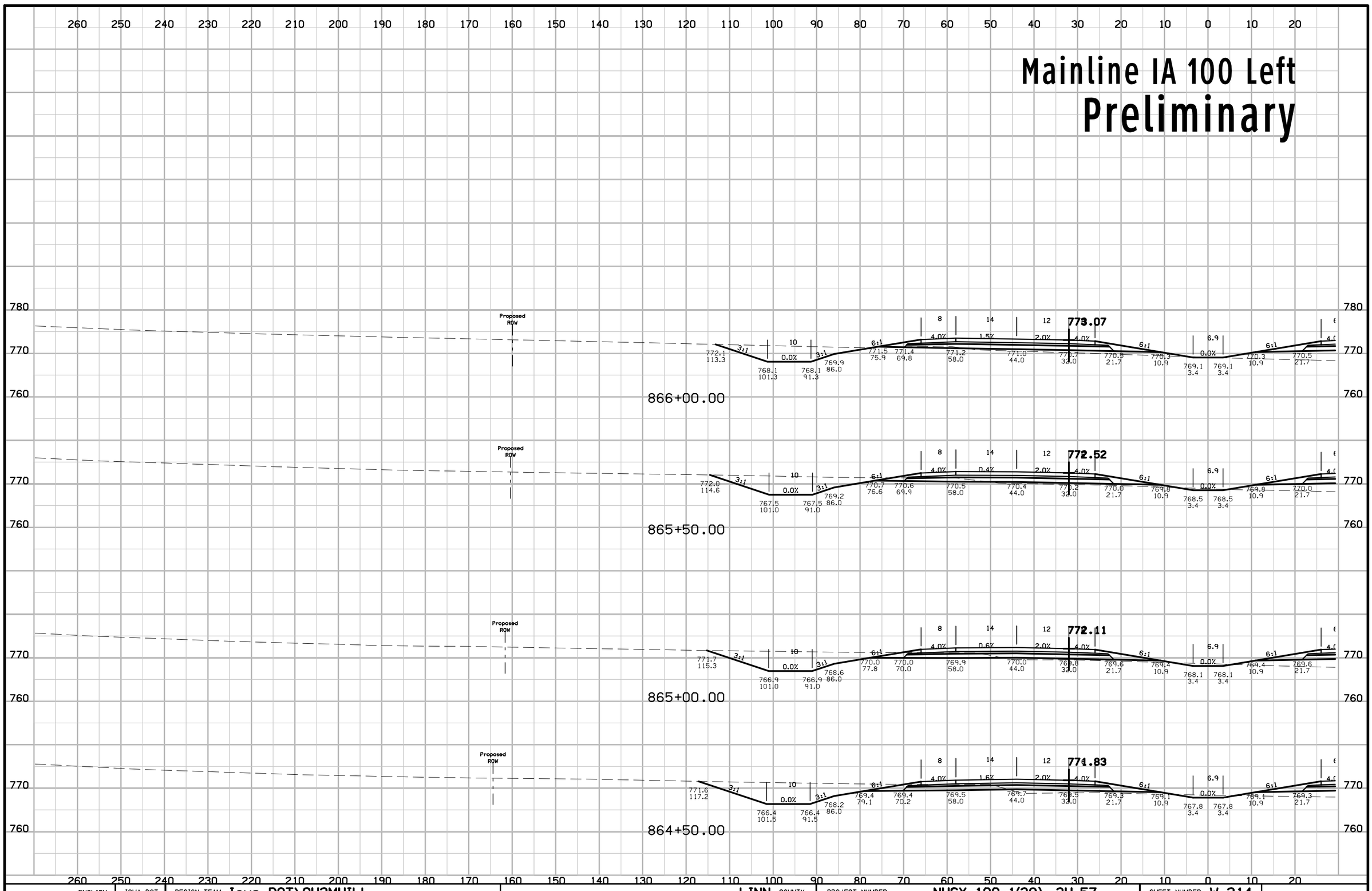
Preliminary



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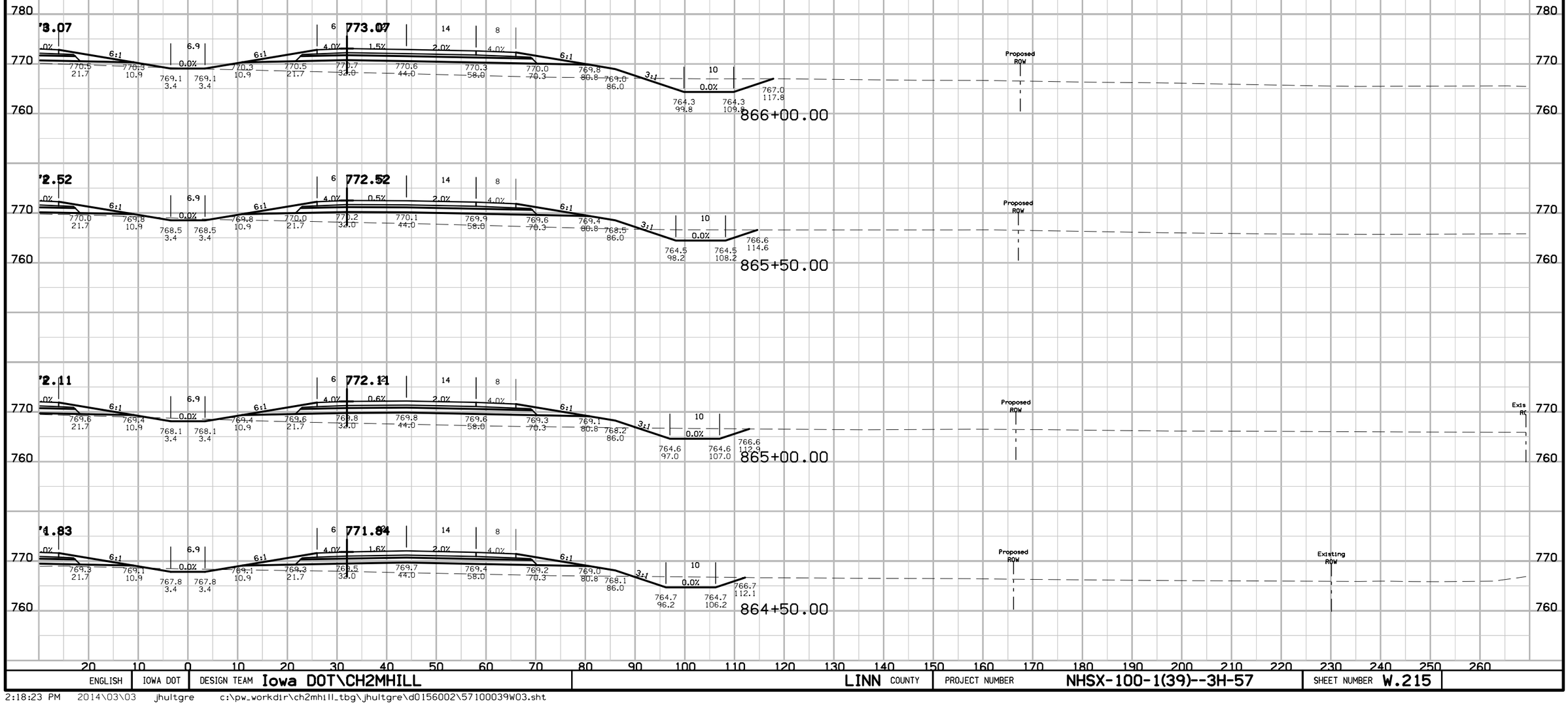

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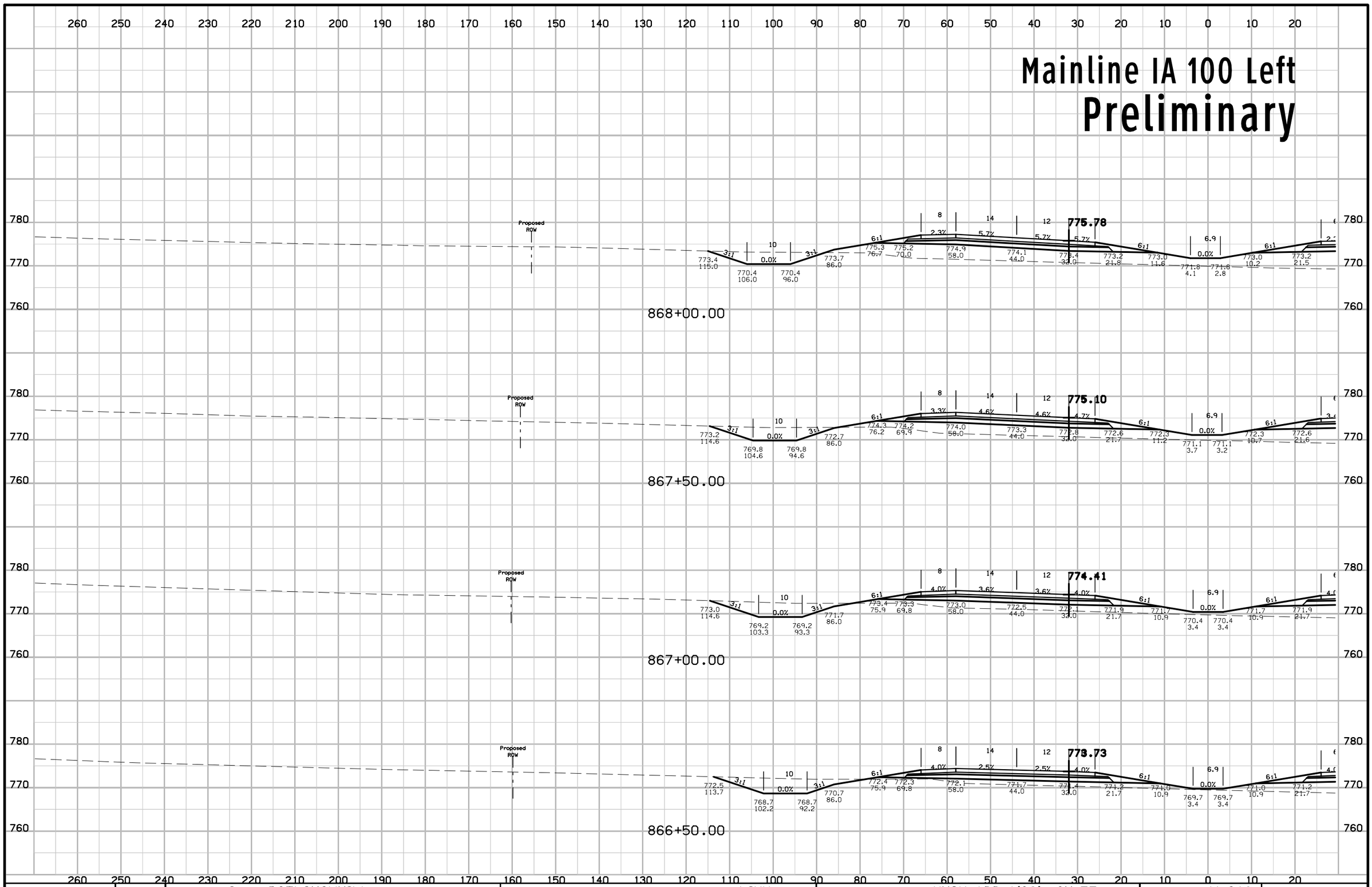
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.216

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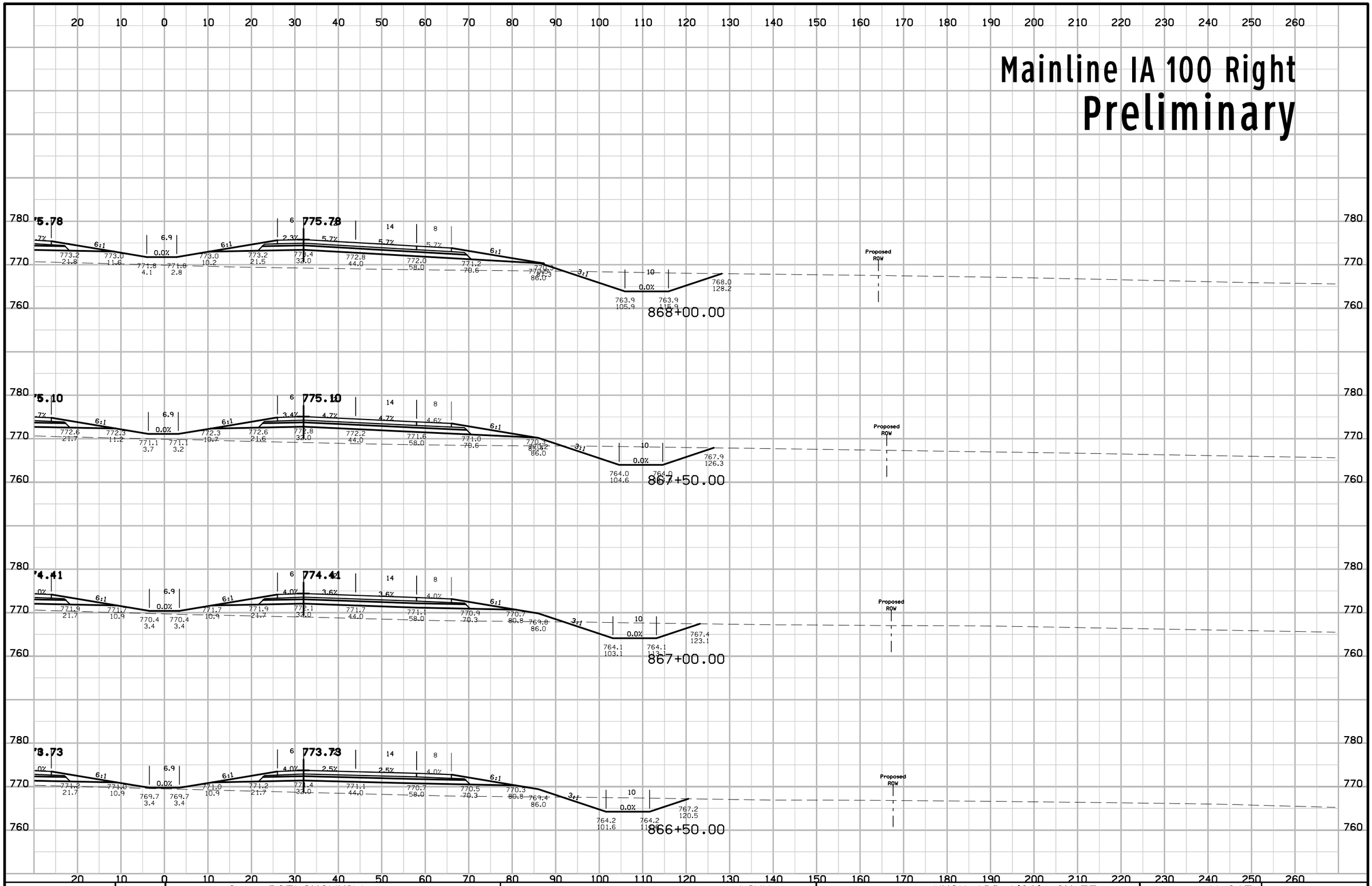

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.217

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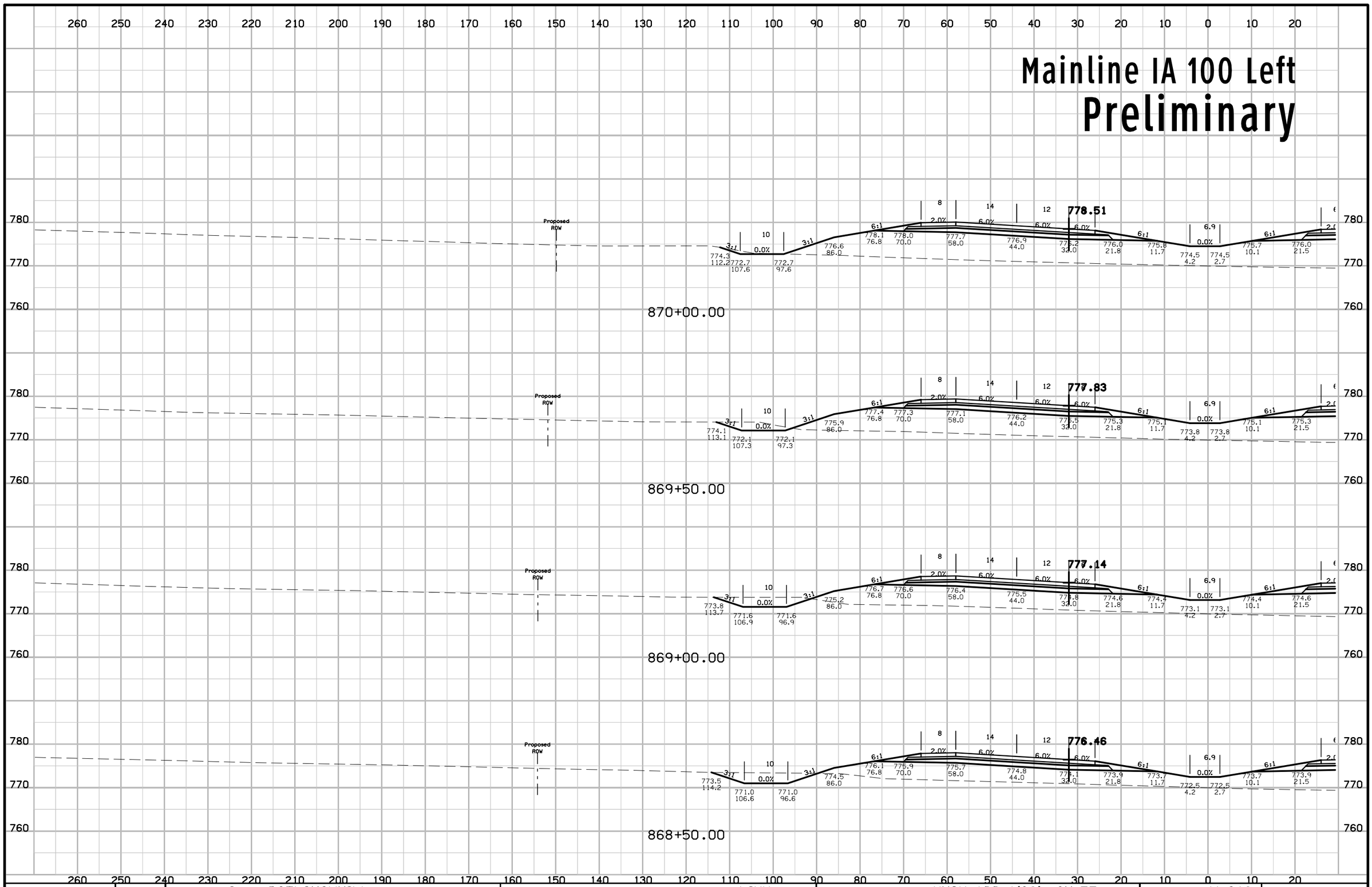
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.218

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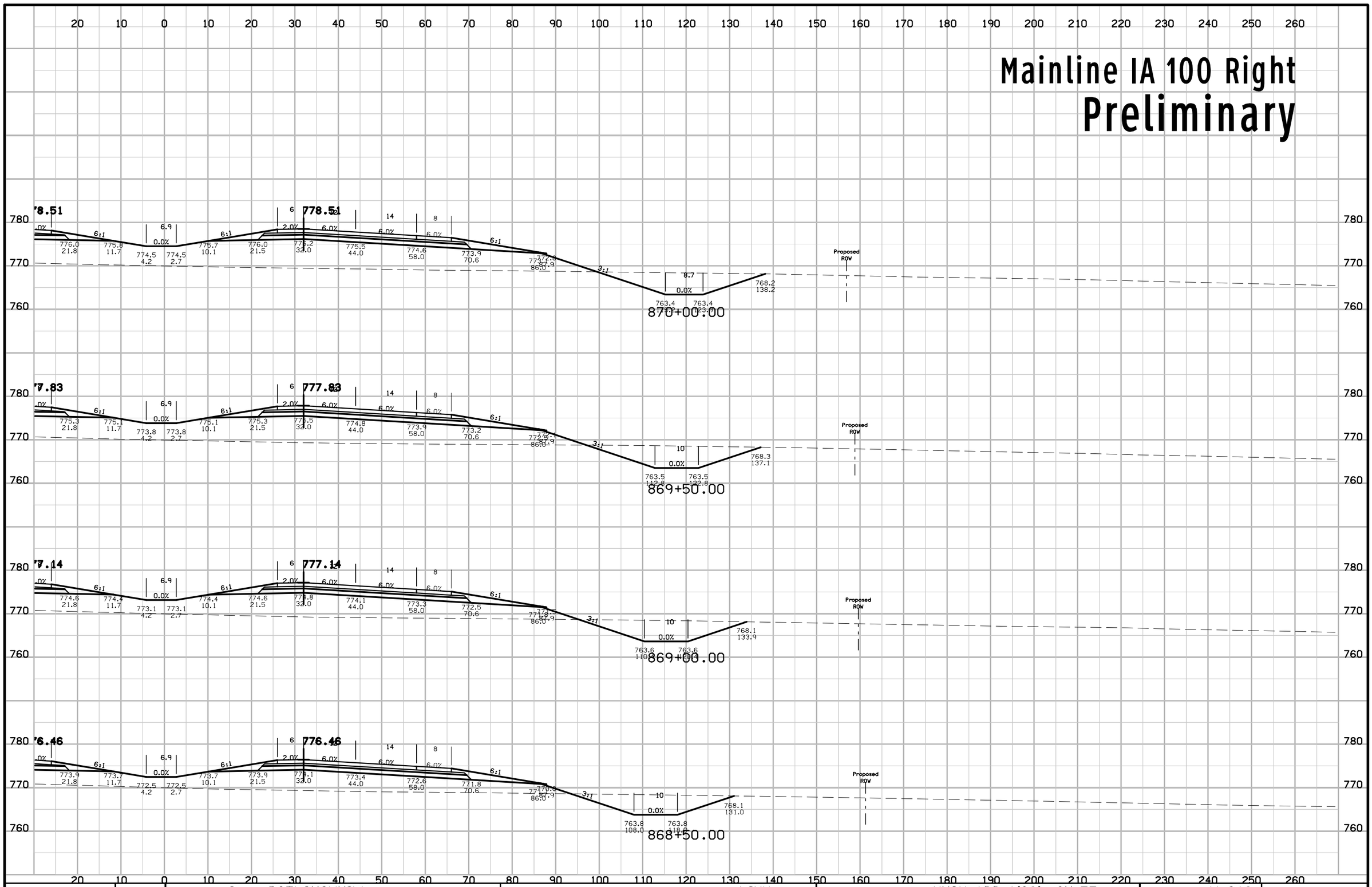

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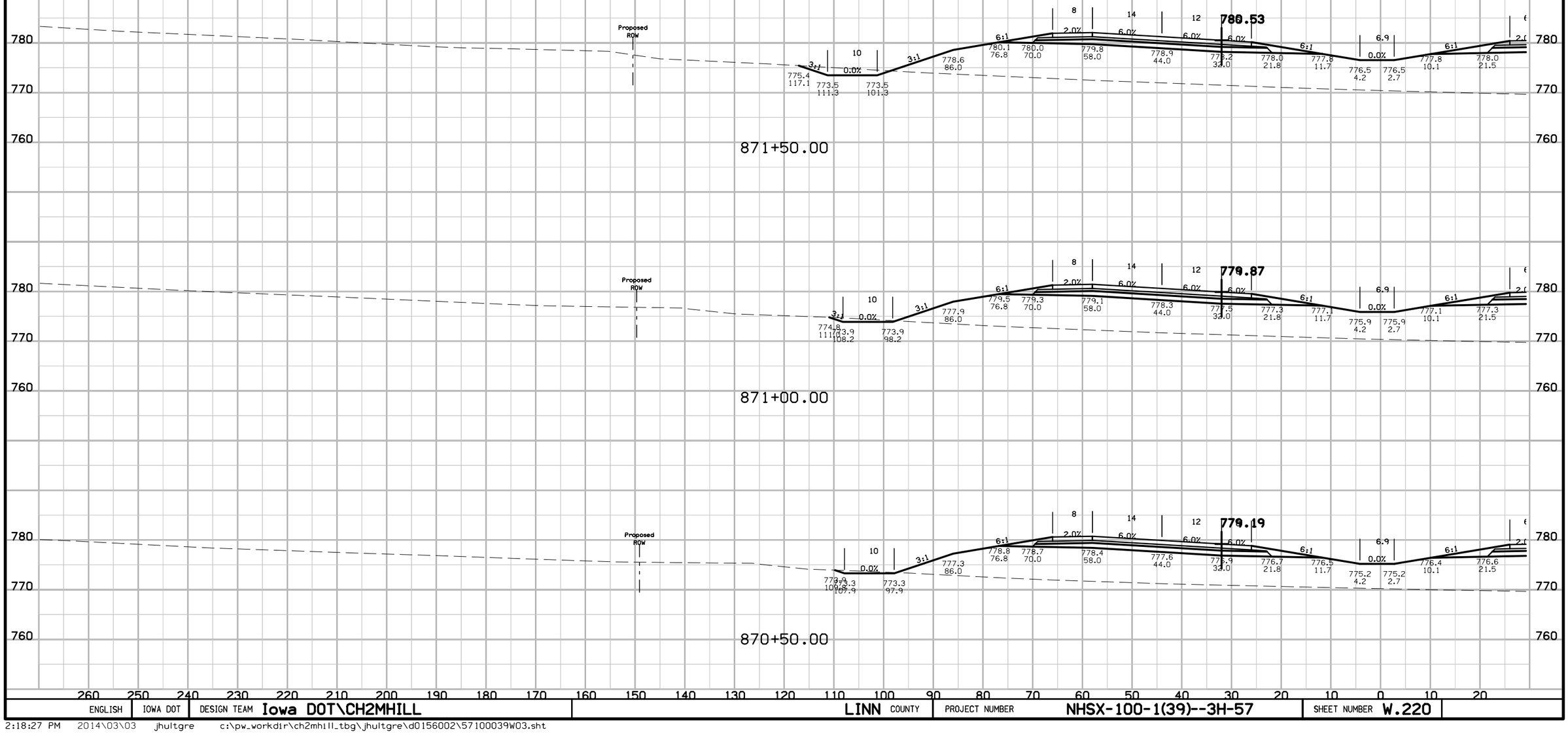
Preliminary



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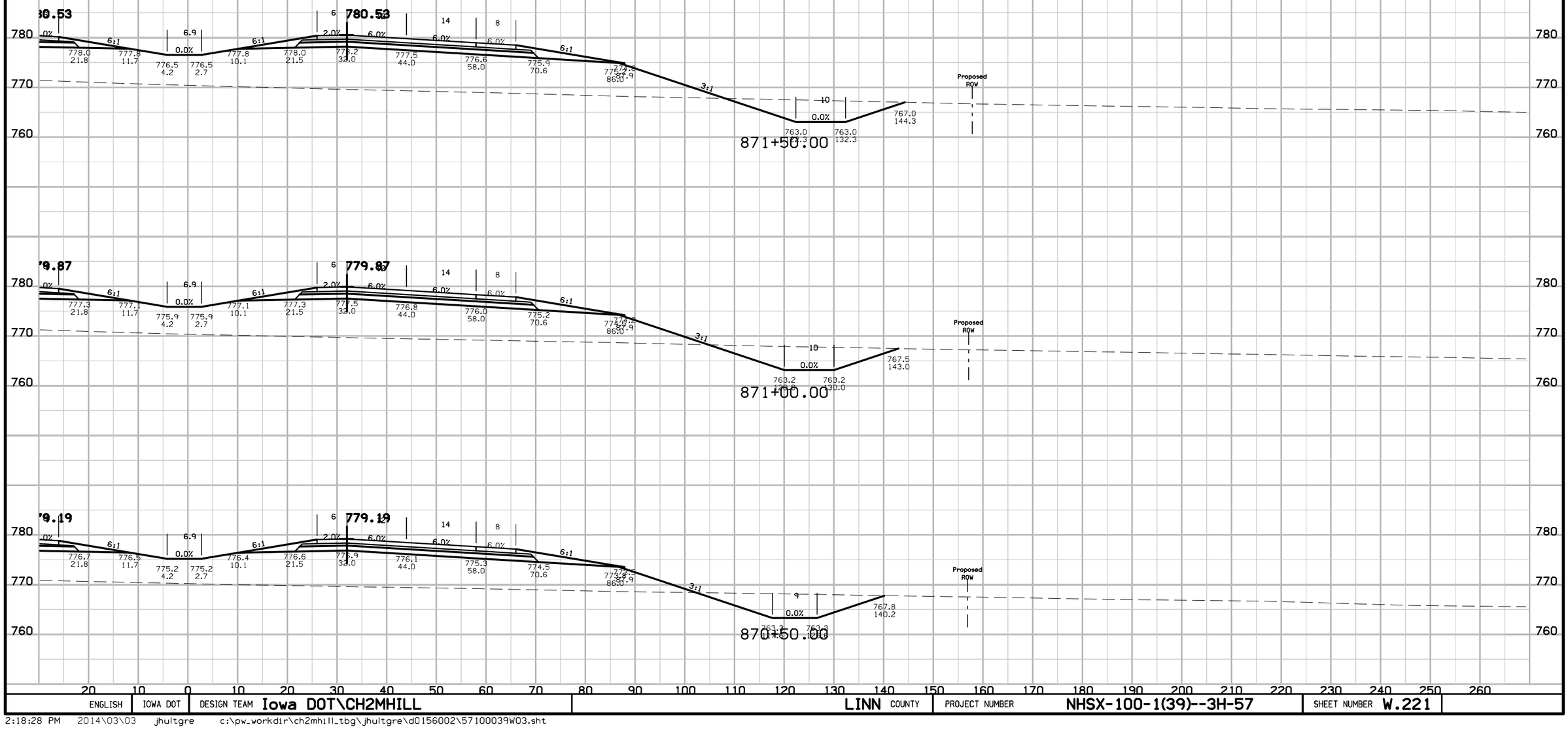
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.221

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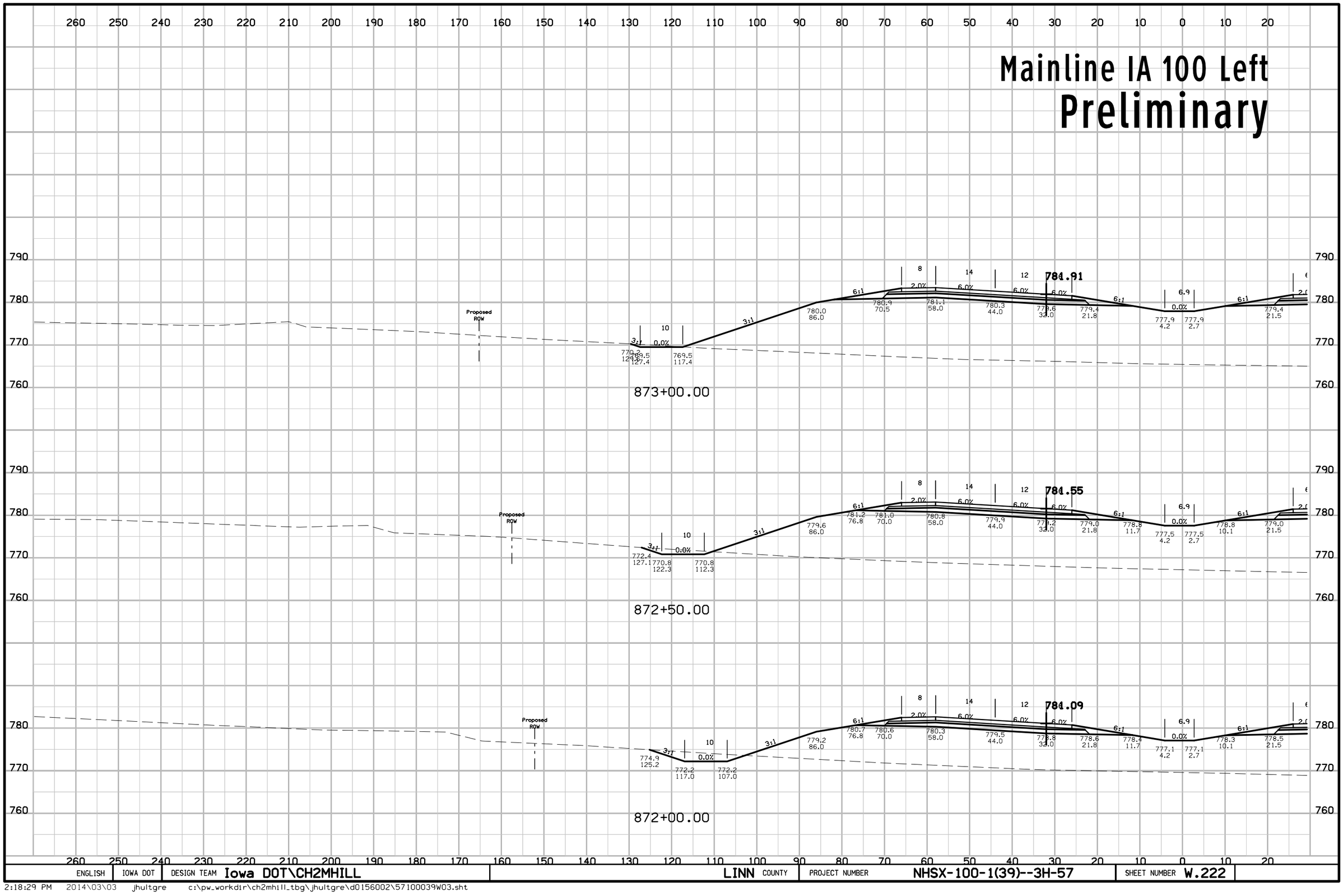
Preliminary



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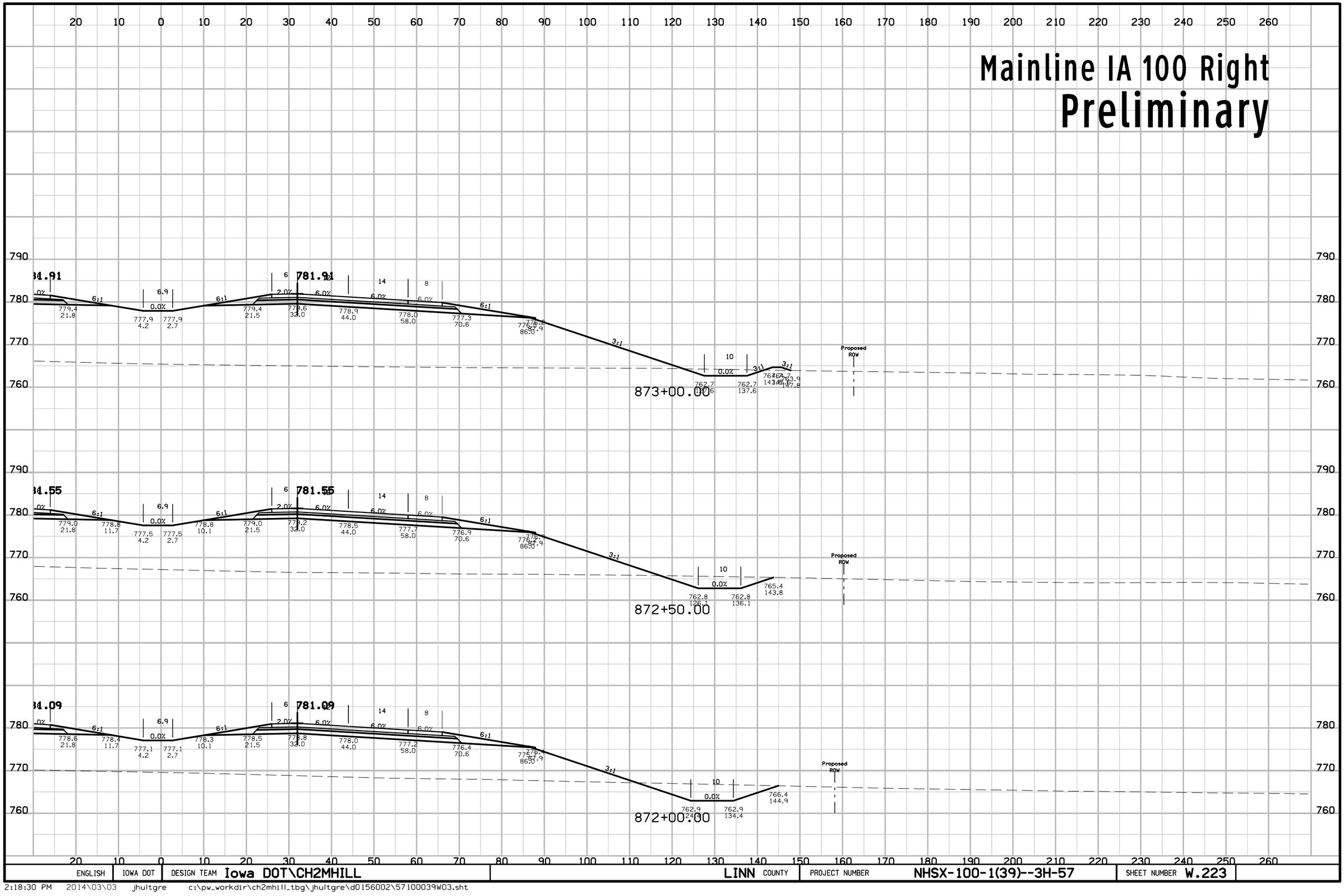
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.223

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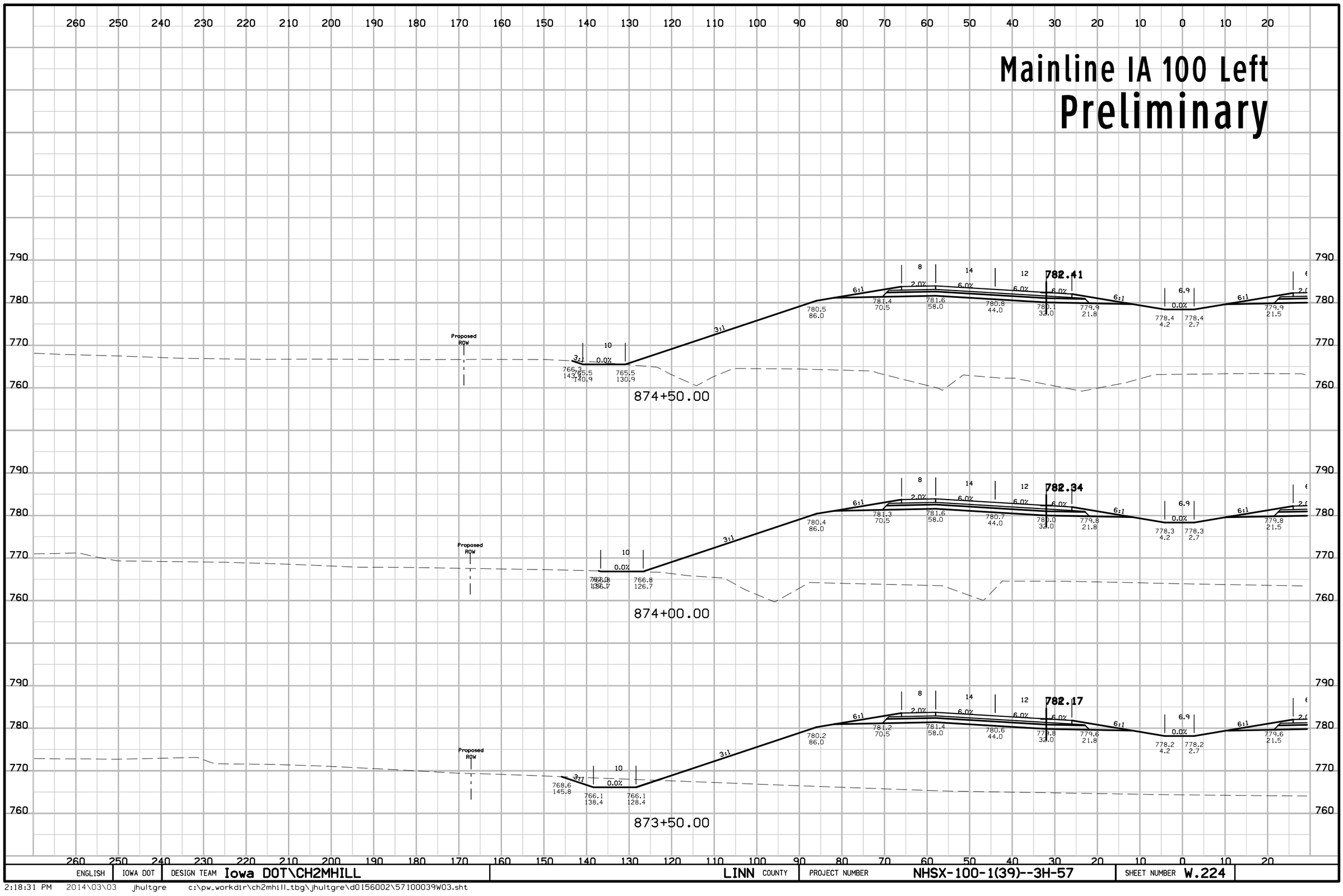
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.224

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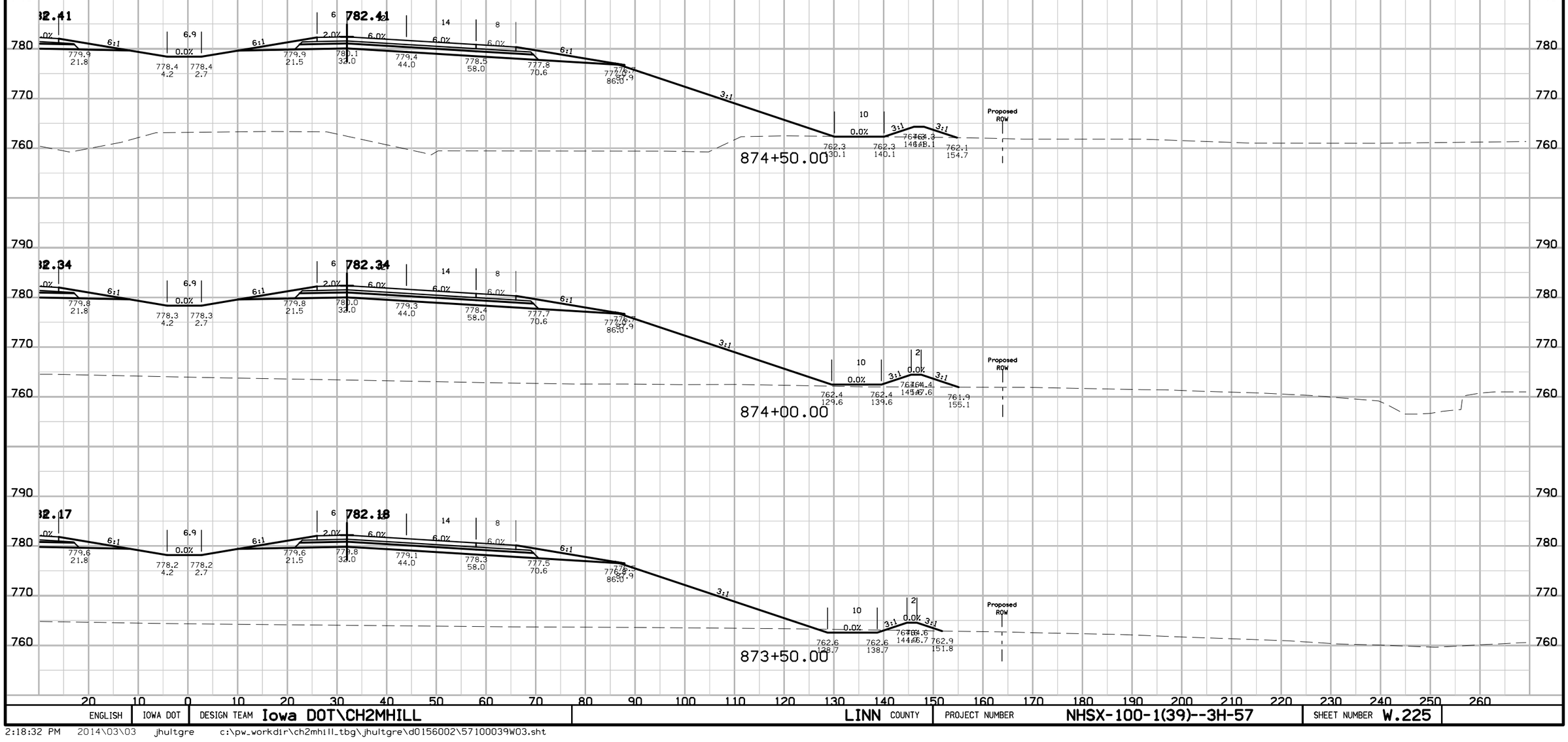
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.225

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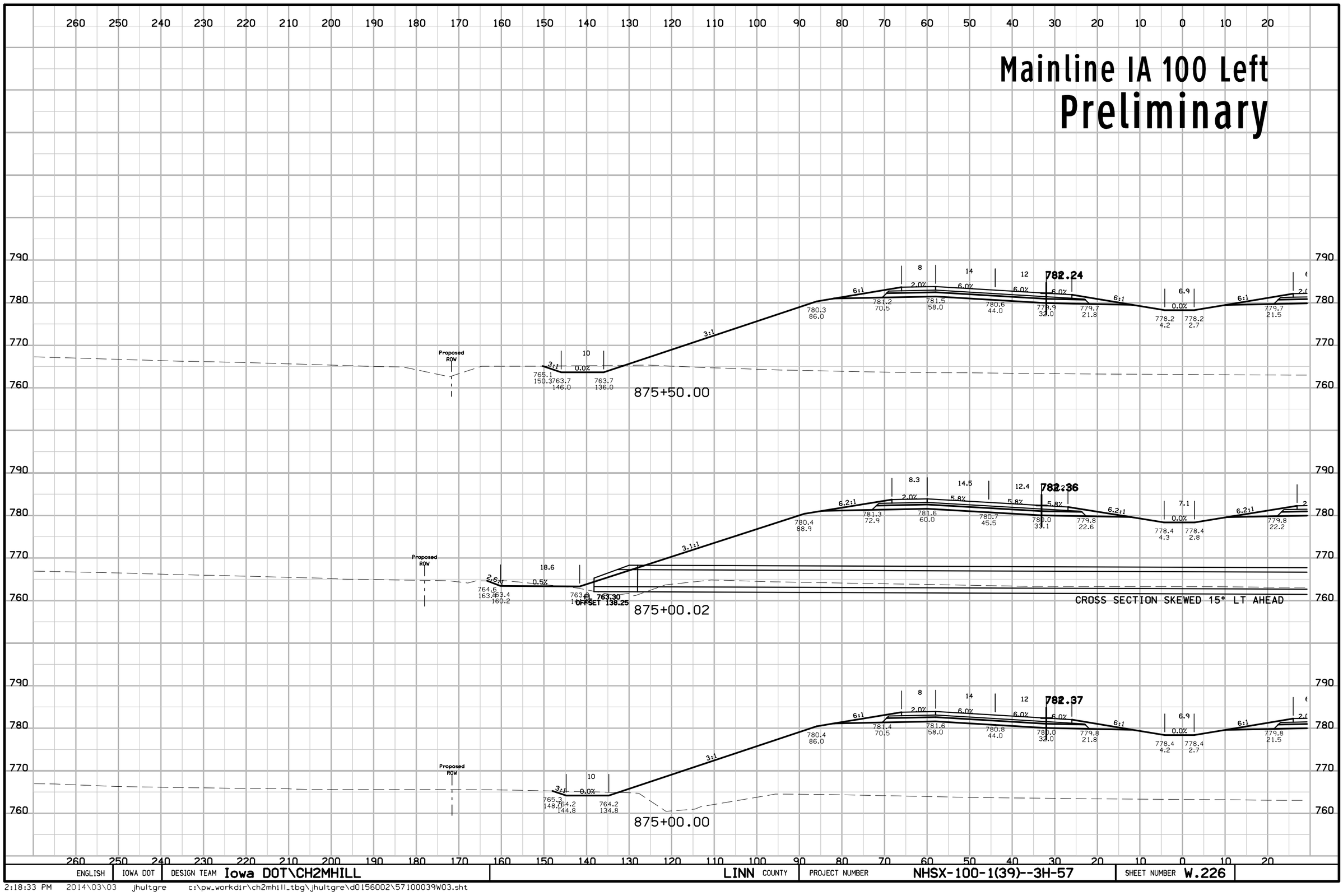
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.226

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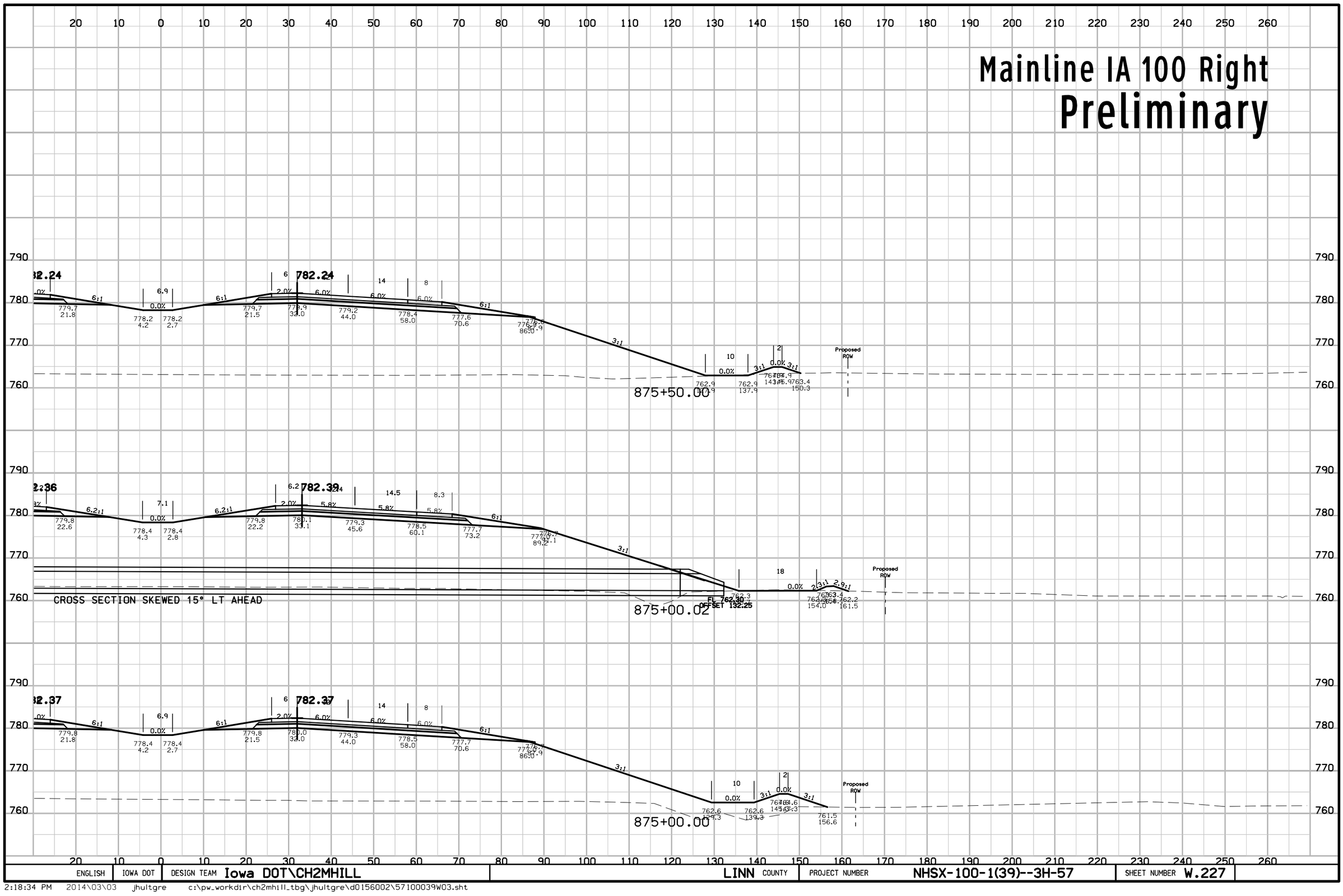
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.227

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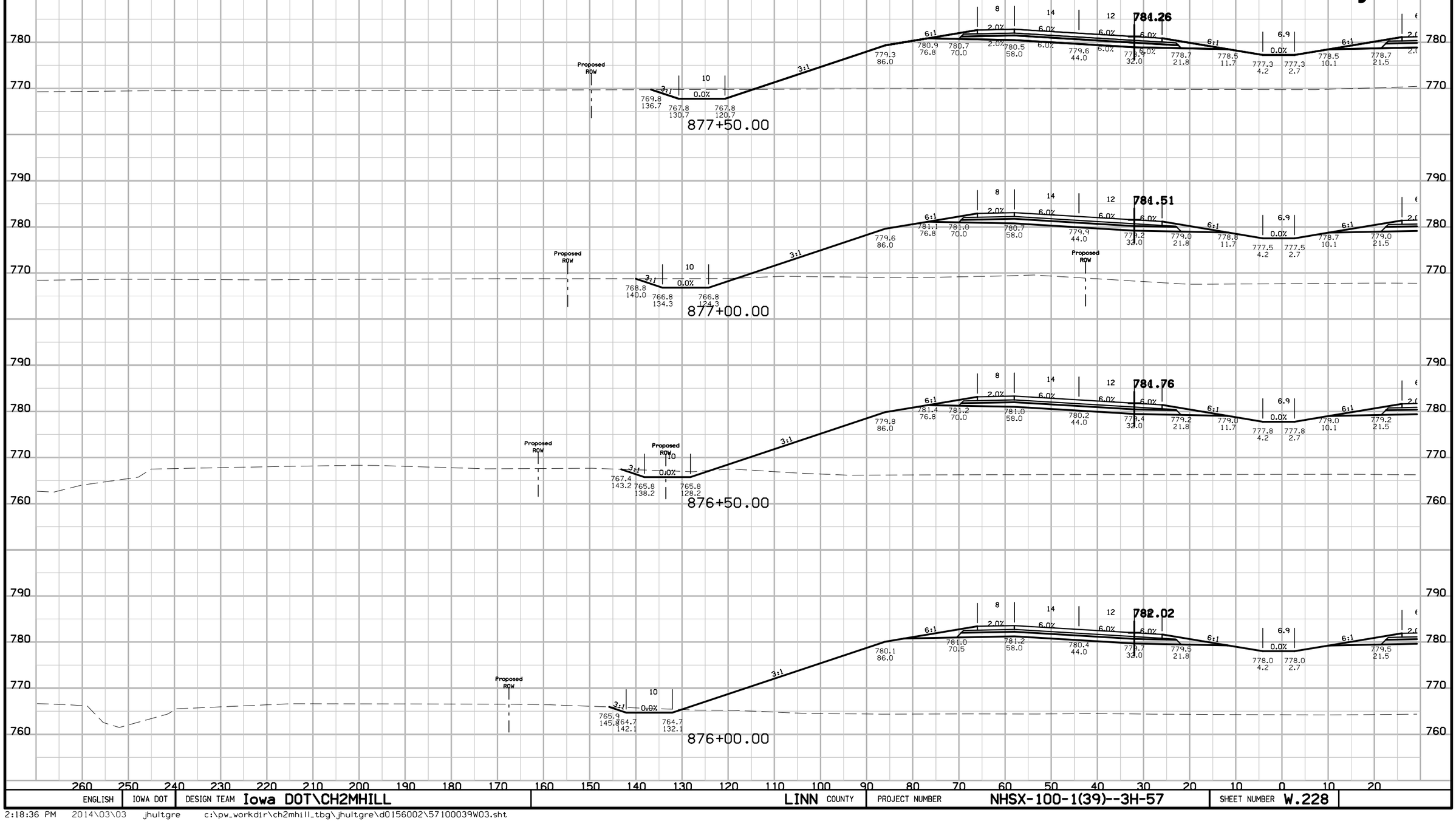
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.228

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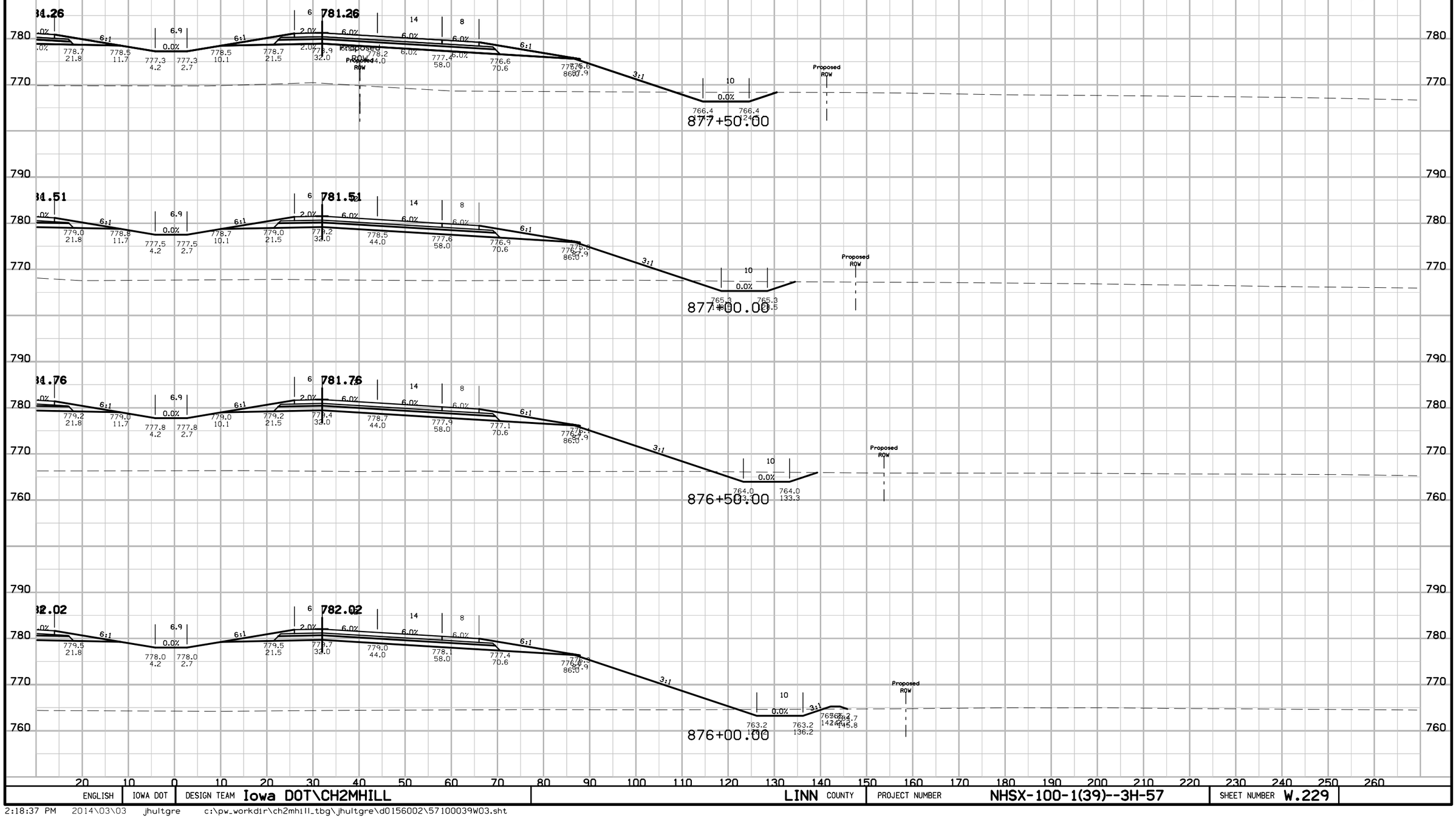
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.229

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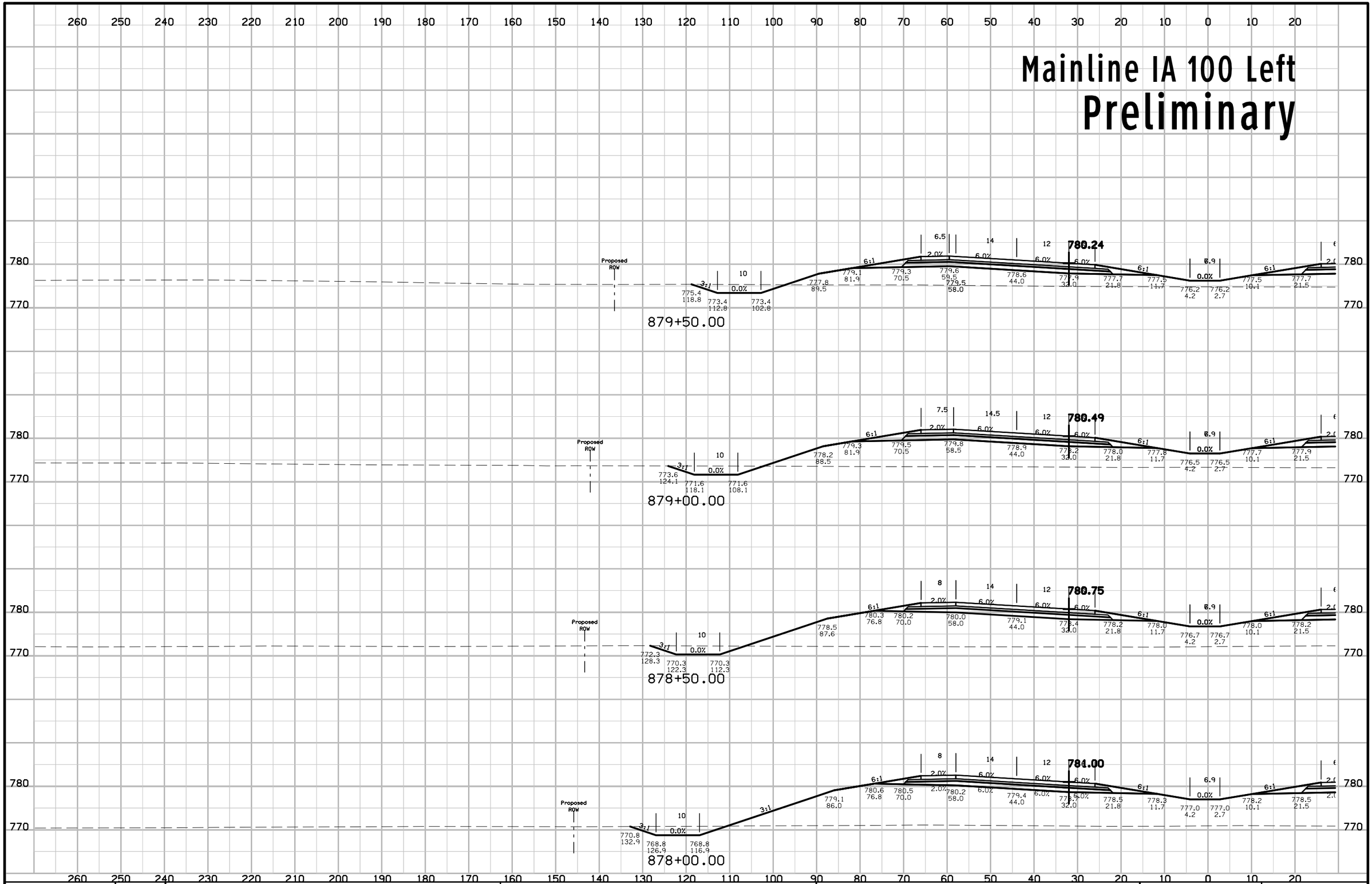
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.230

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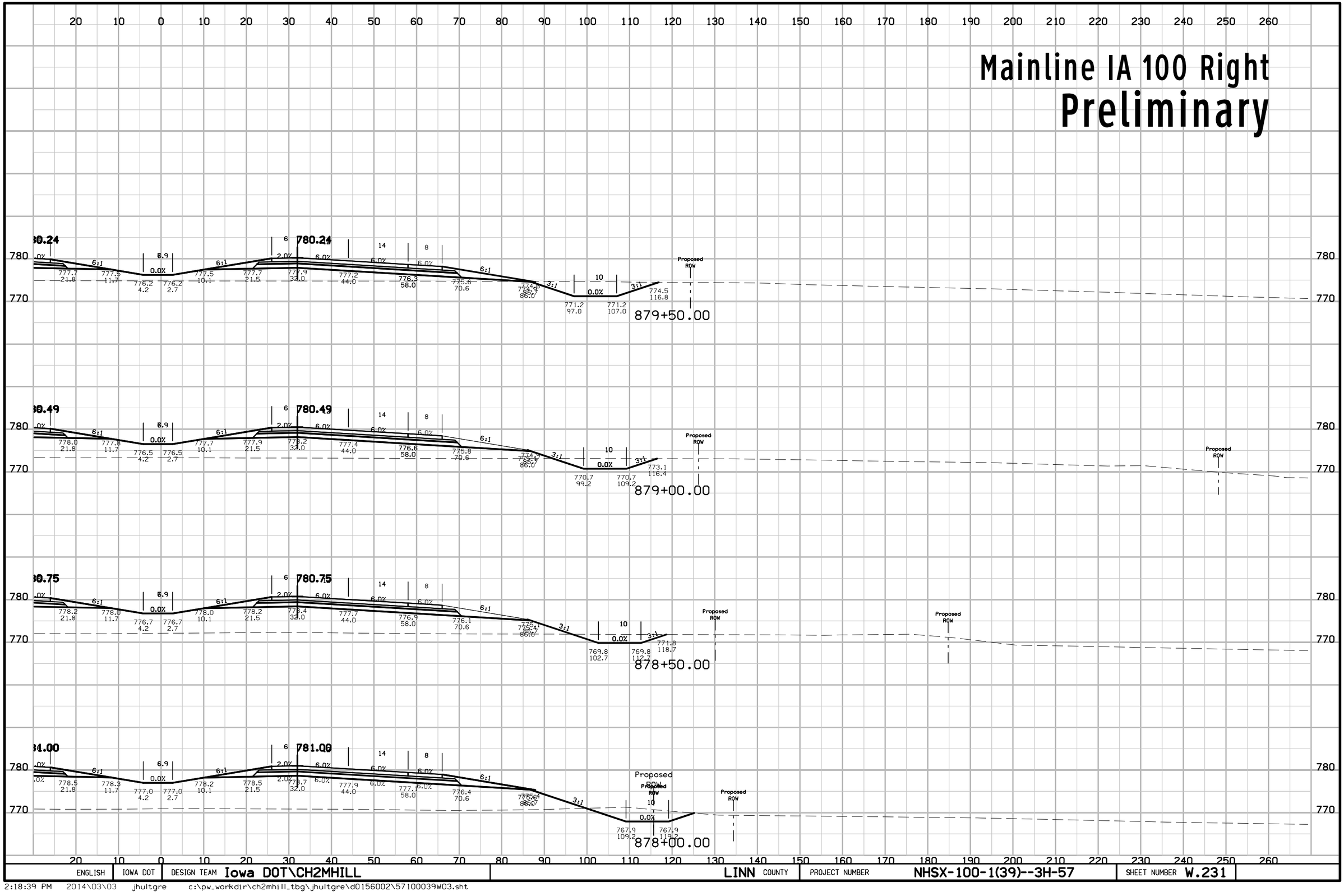
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.231

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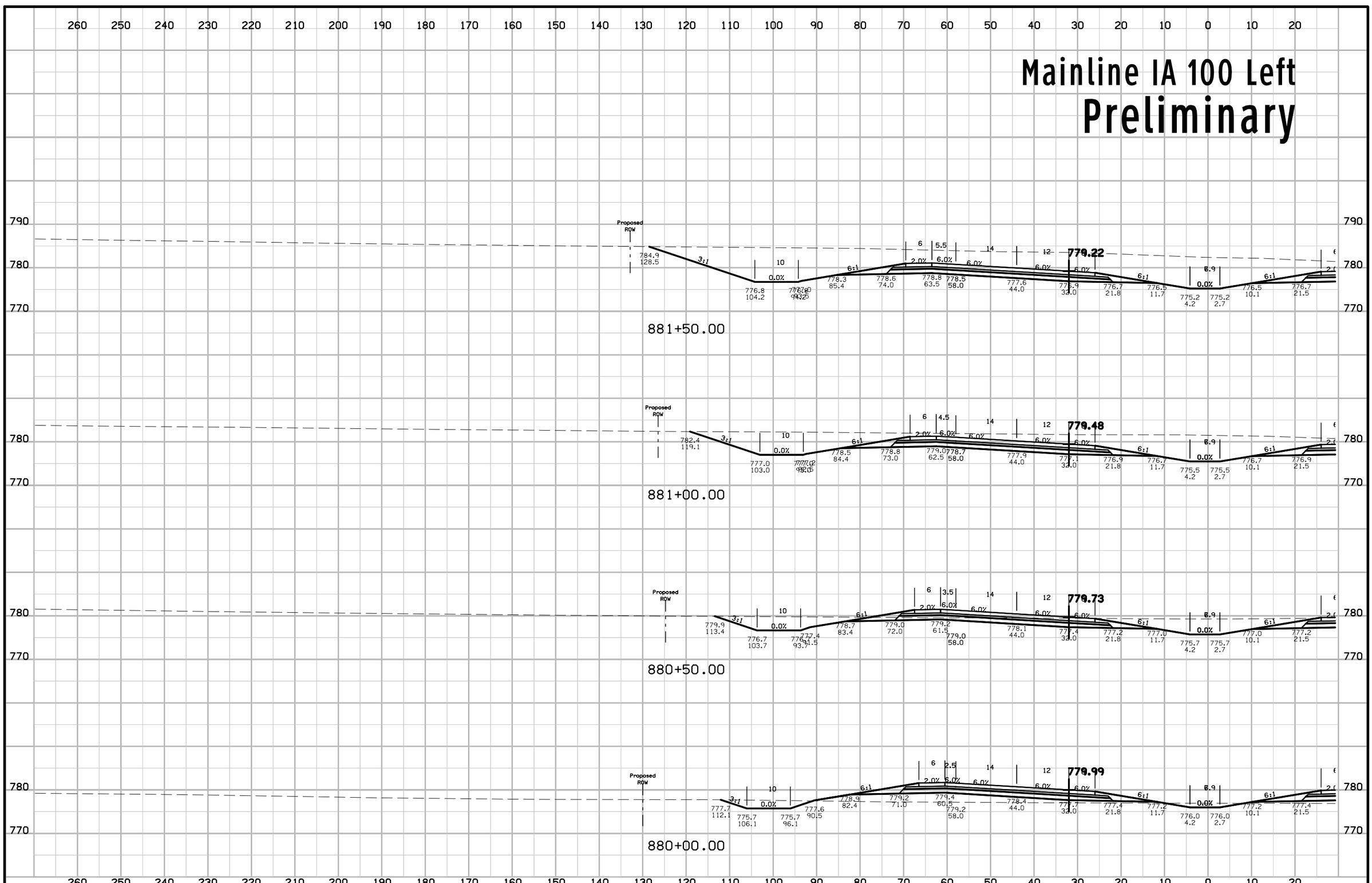
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.232

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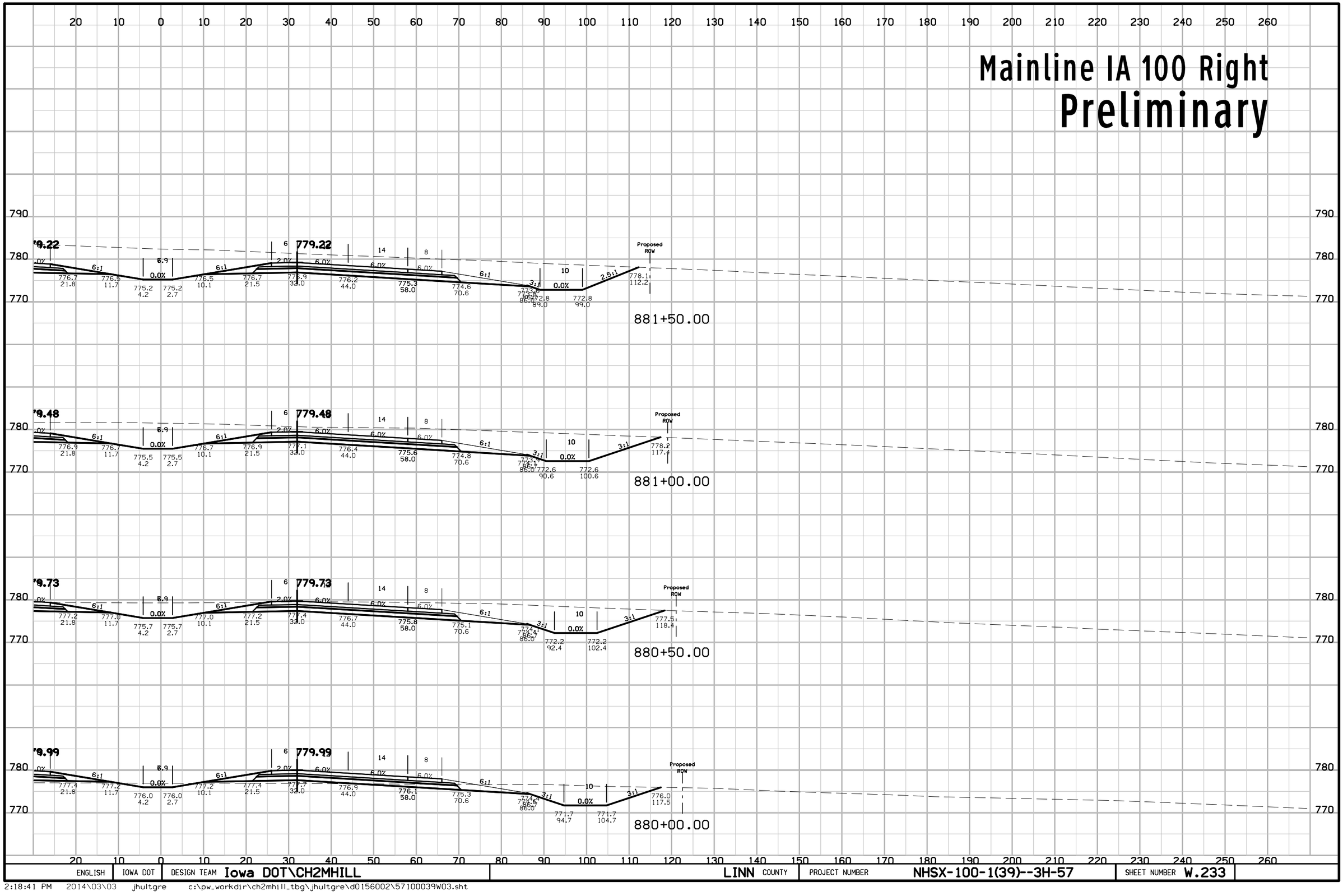
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.233

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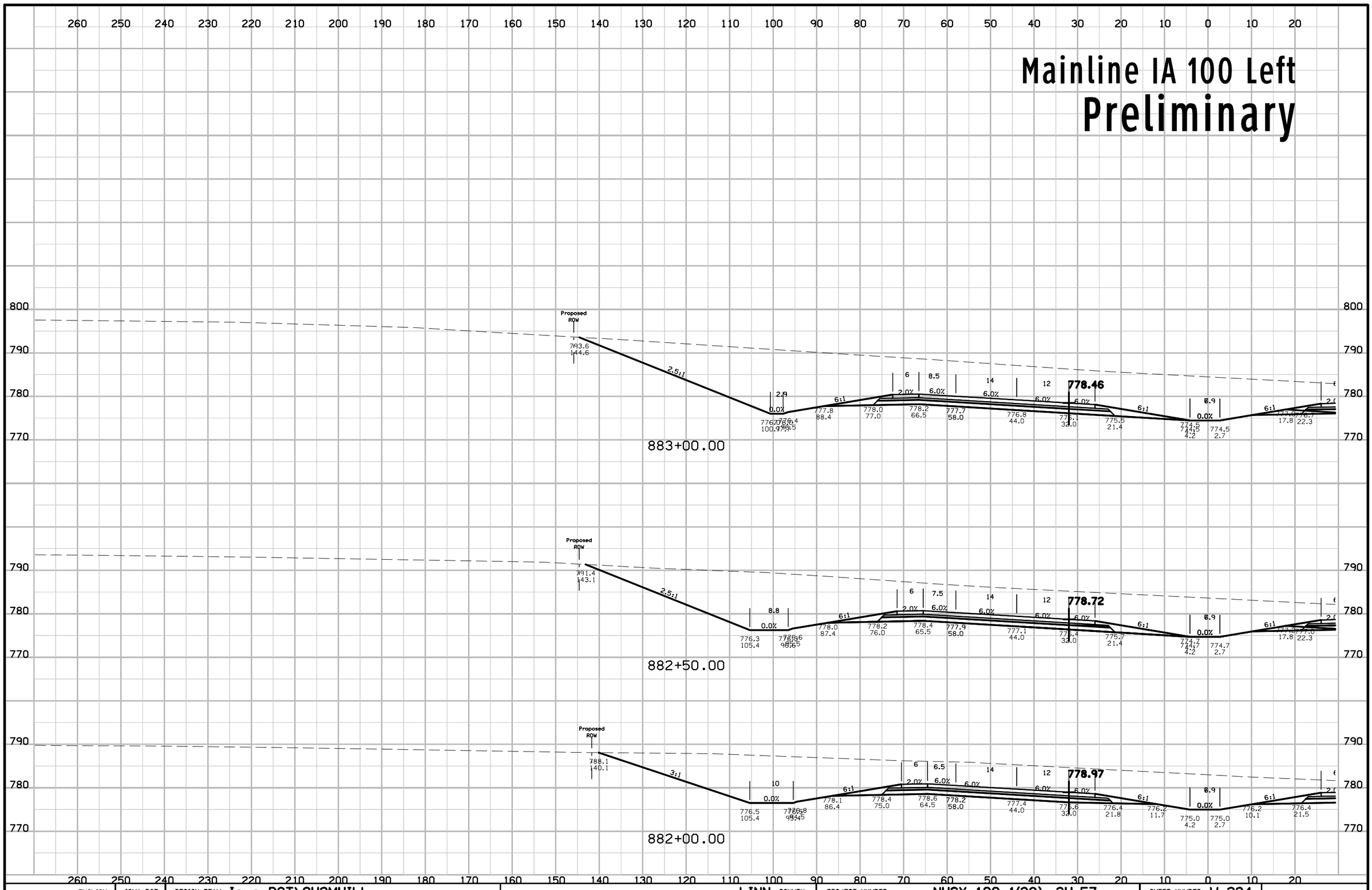
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.234

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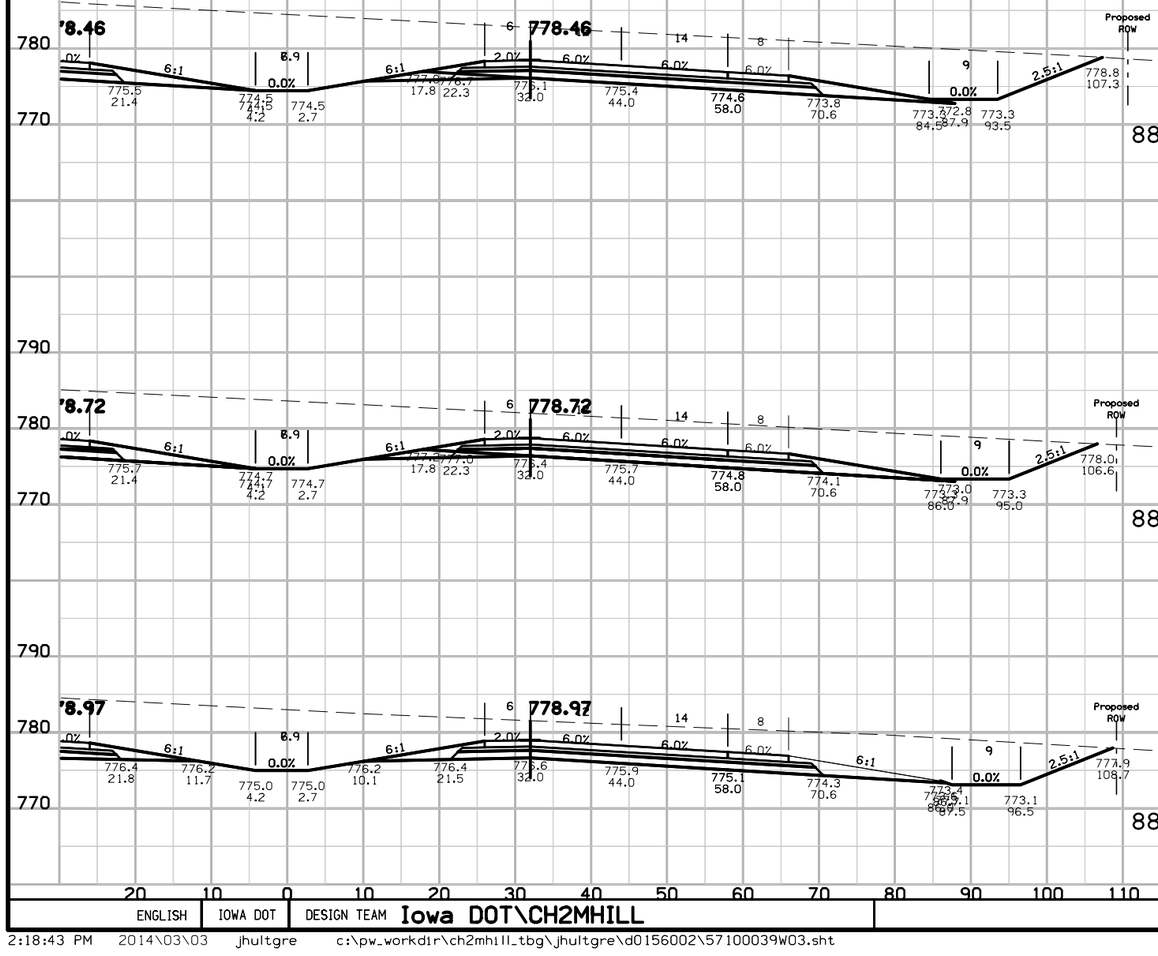
Mainline IA 100 Right

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.235

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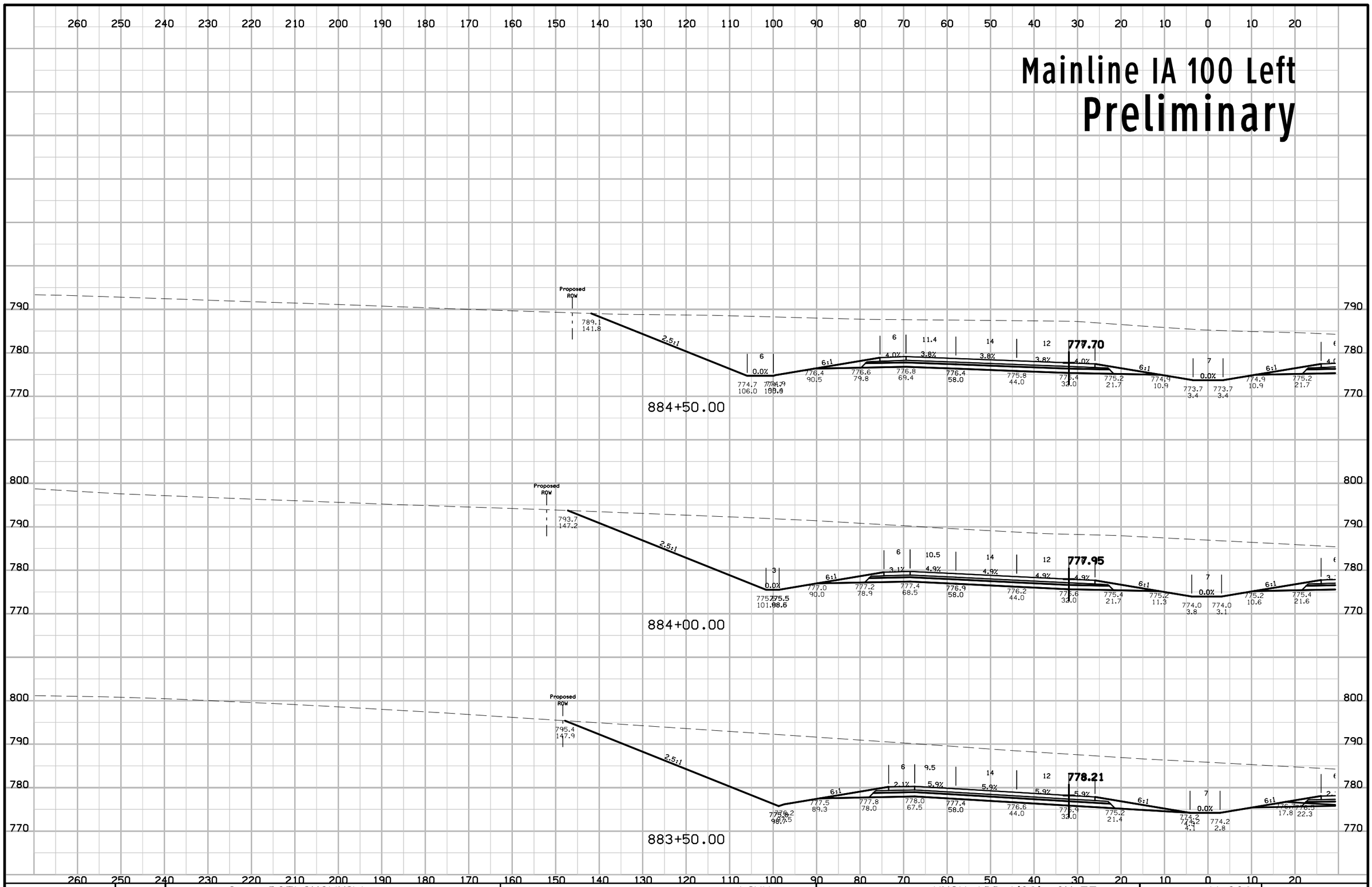
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL		LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.236

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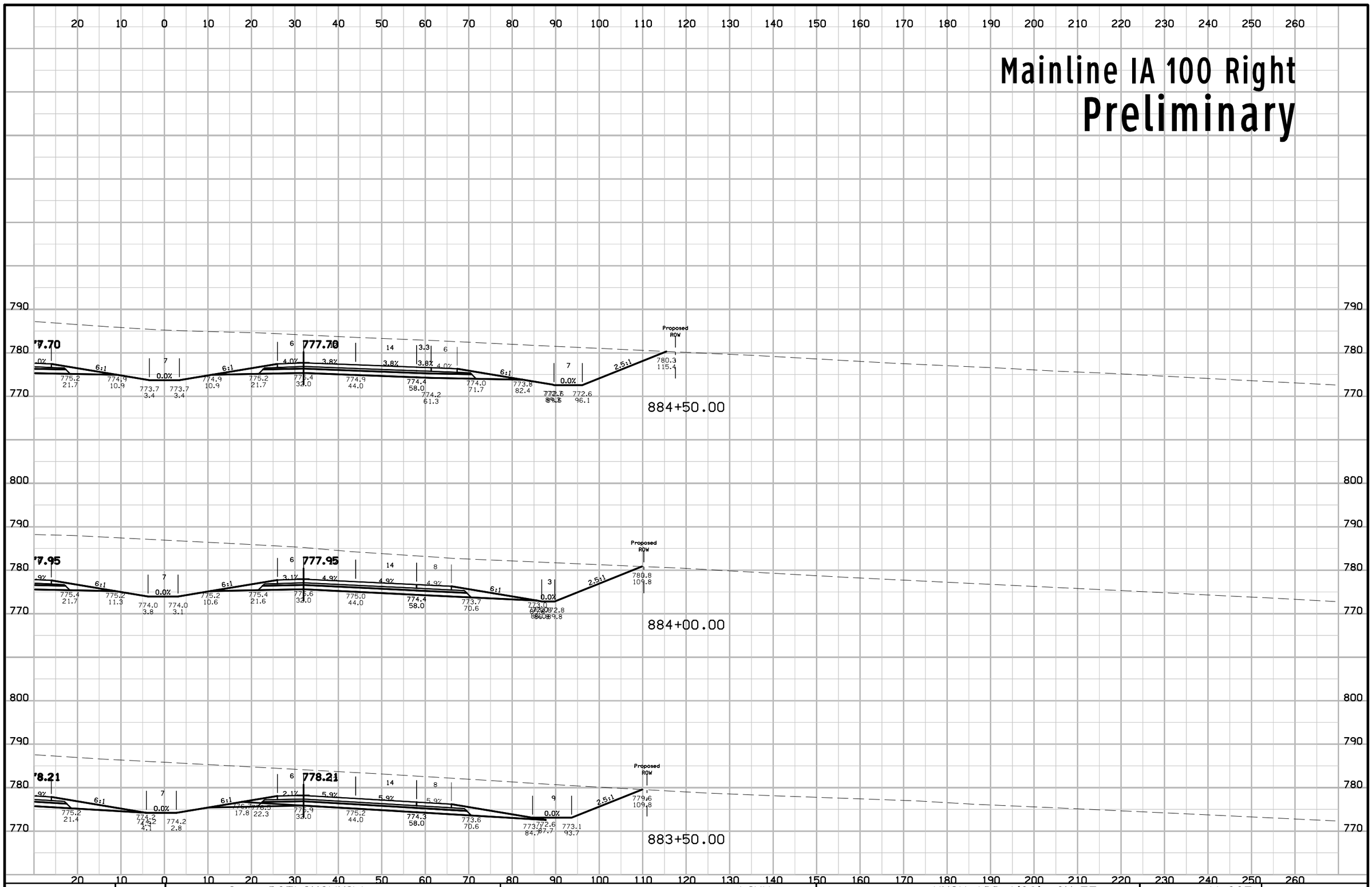
Mainline IA 100 Right

Preliminary

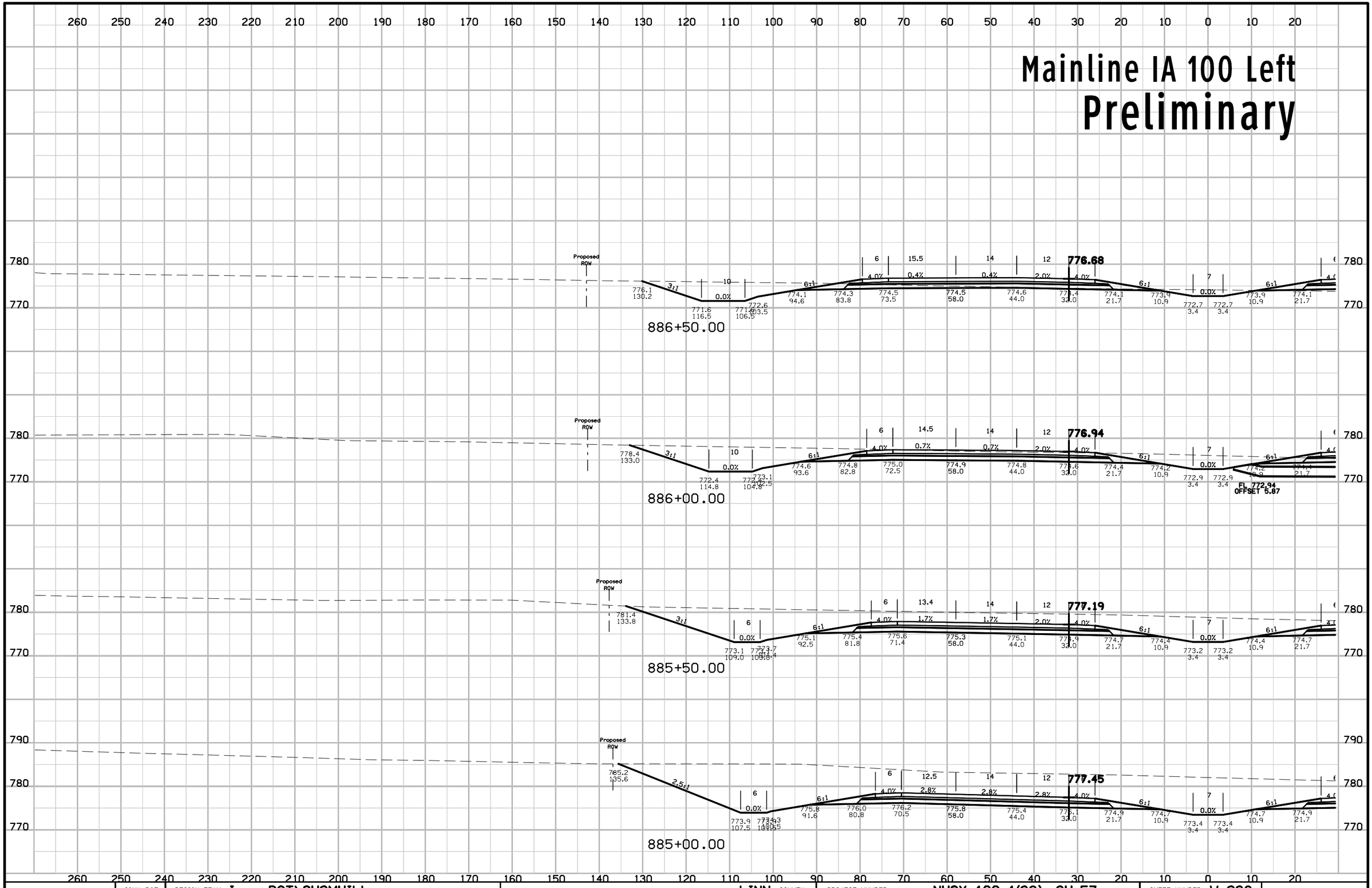


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.237

2:18:45 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Left

Preliminary

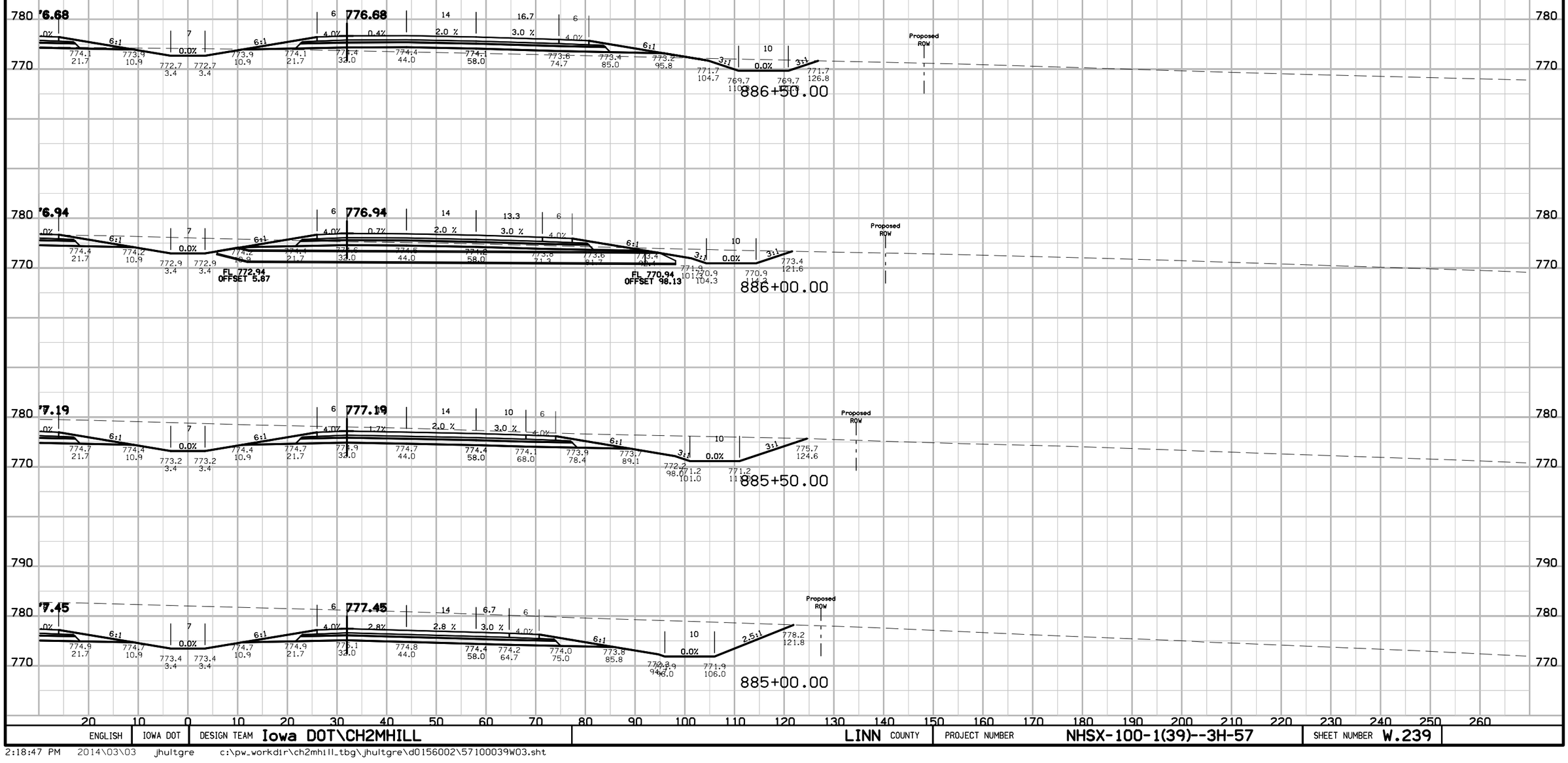


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.238

2:18:46 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039W03.sht

Mainline IA 100 Right

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.239

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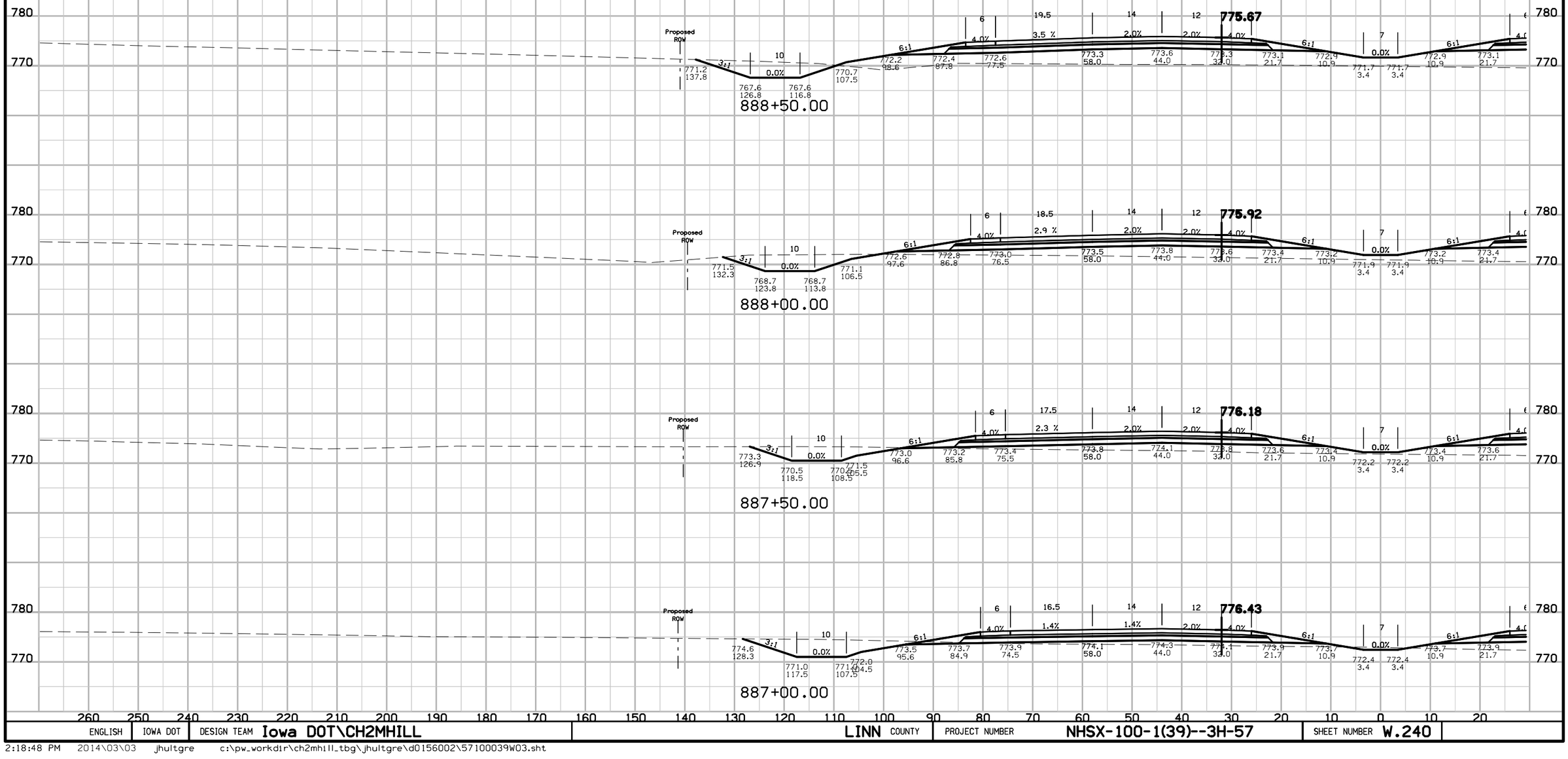
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.240

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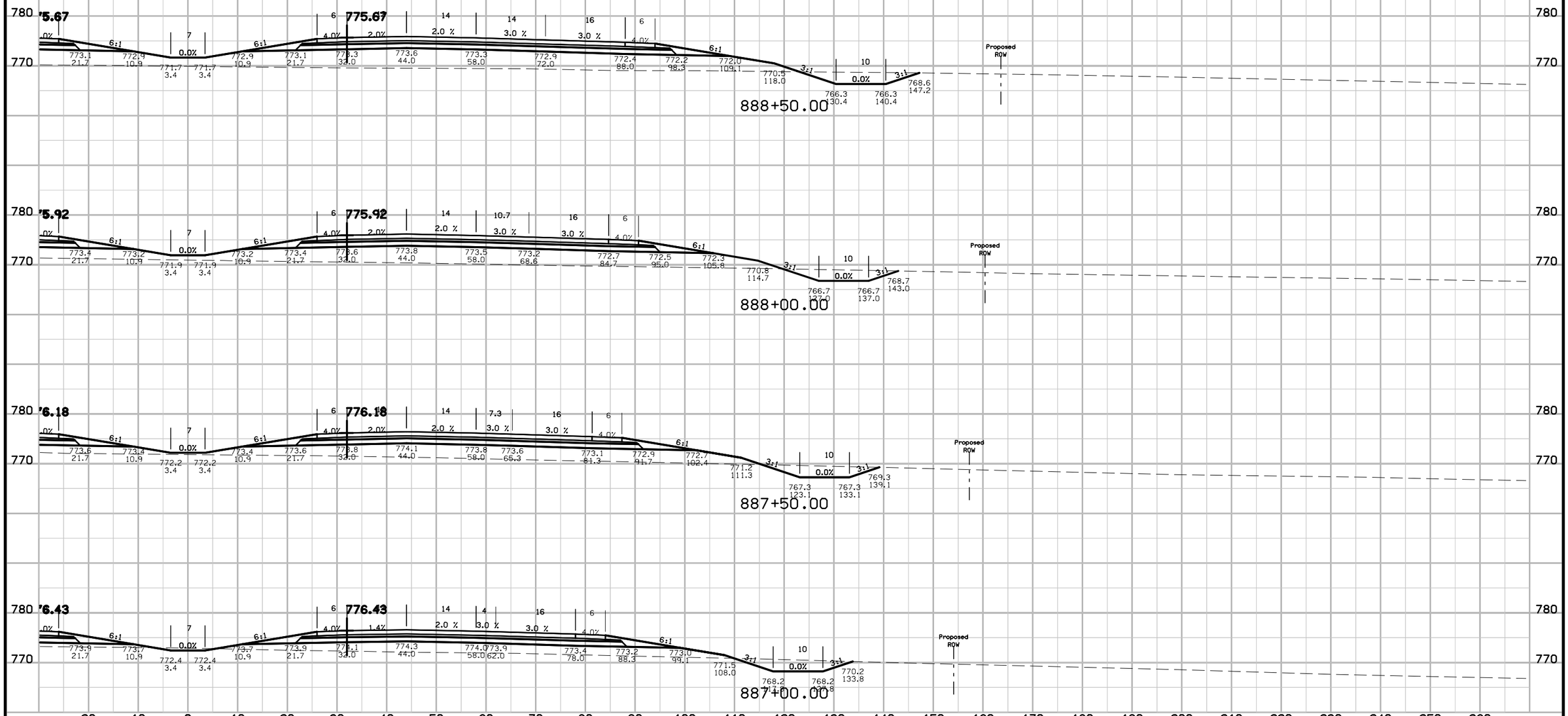
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.241

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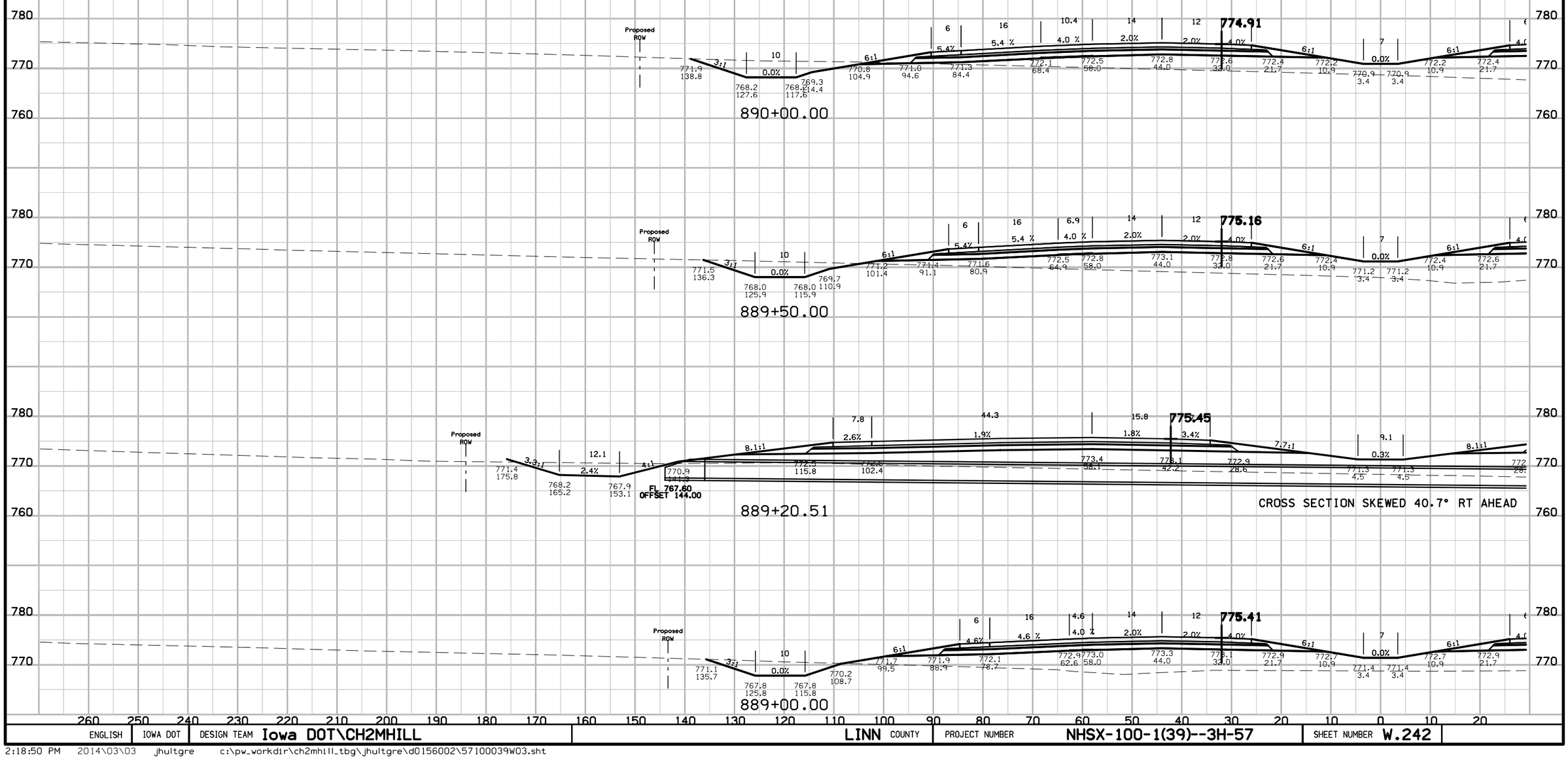
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.242

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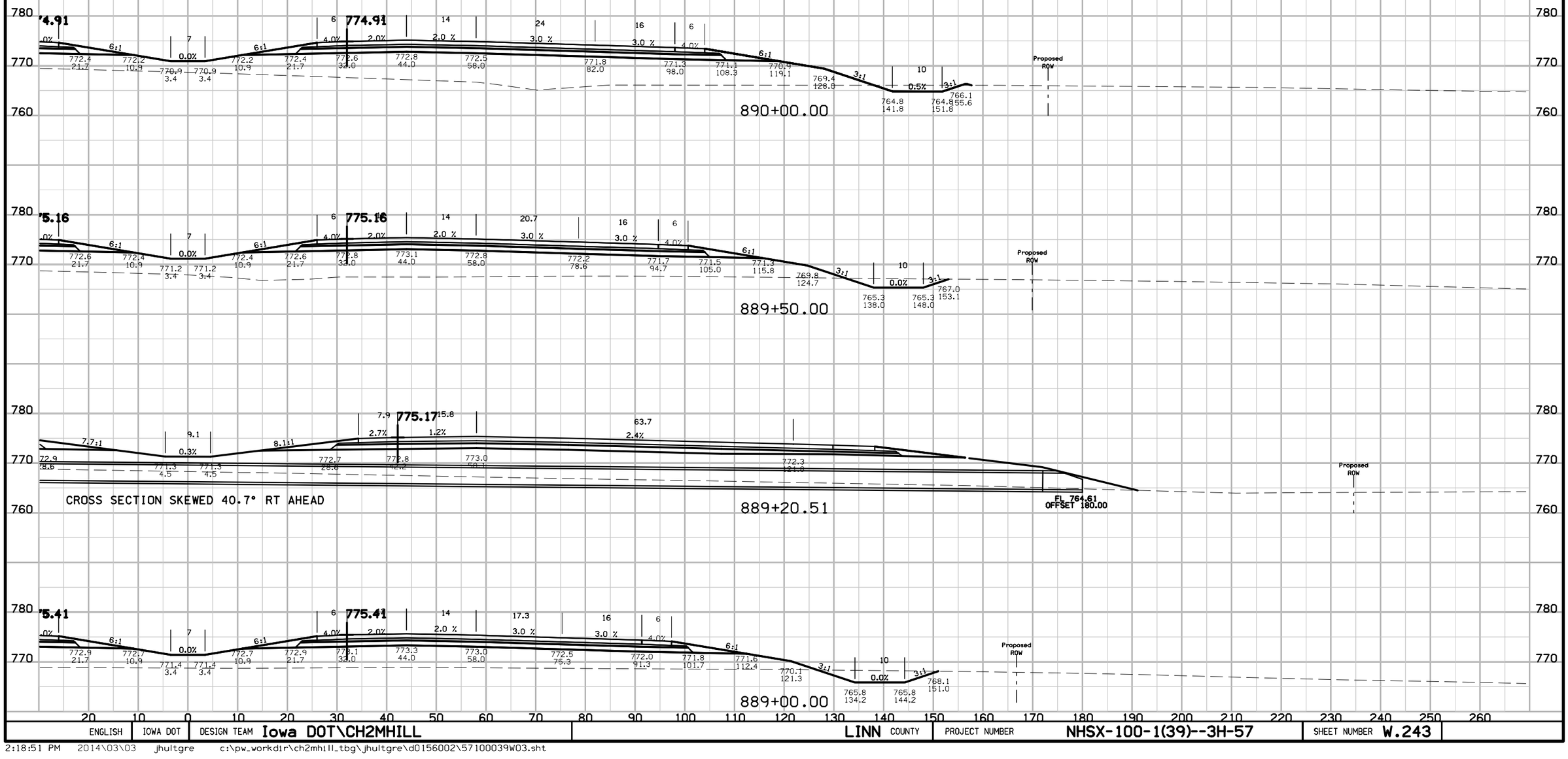
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.243	

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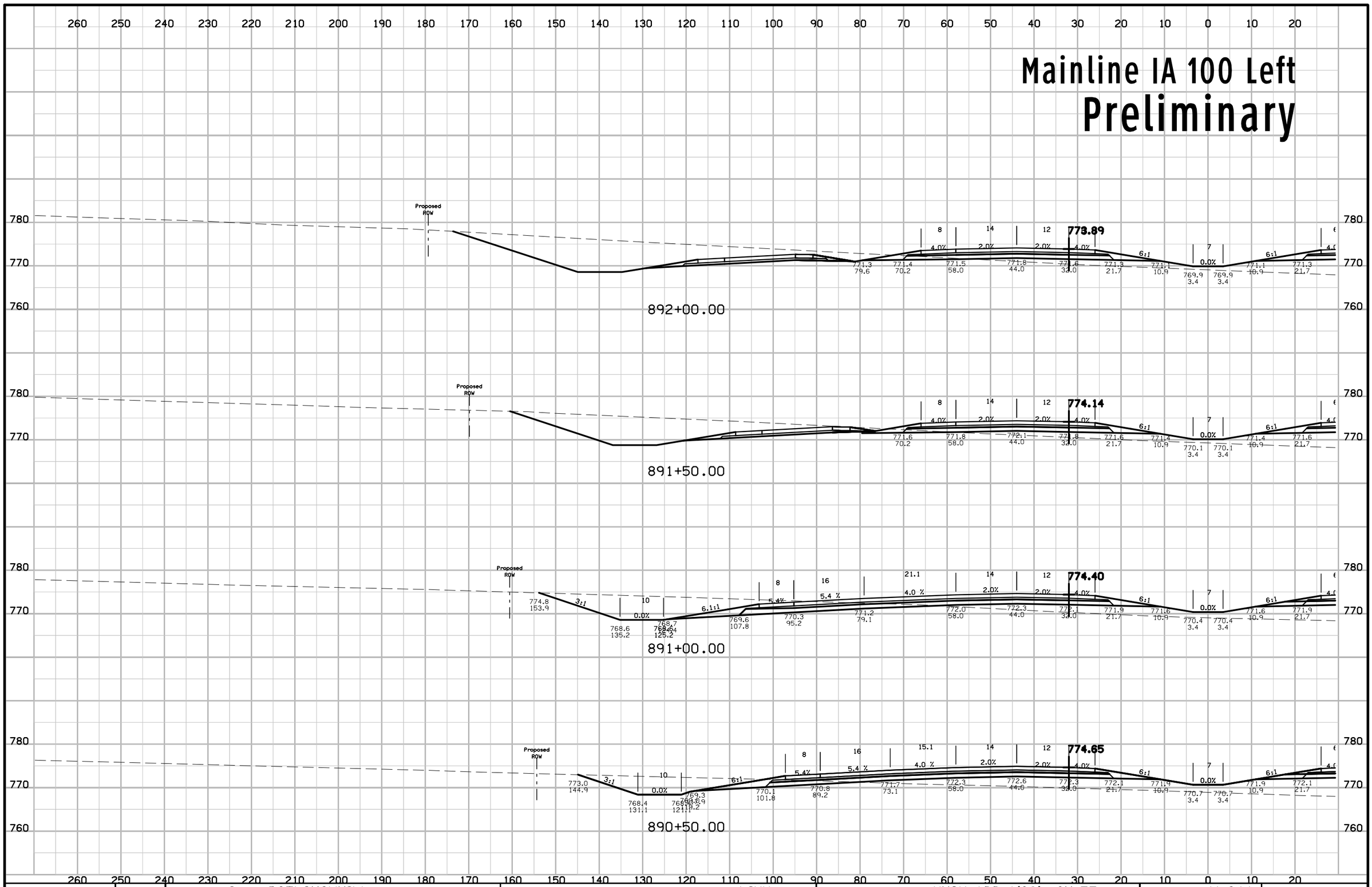
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.244

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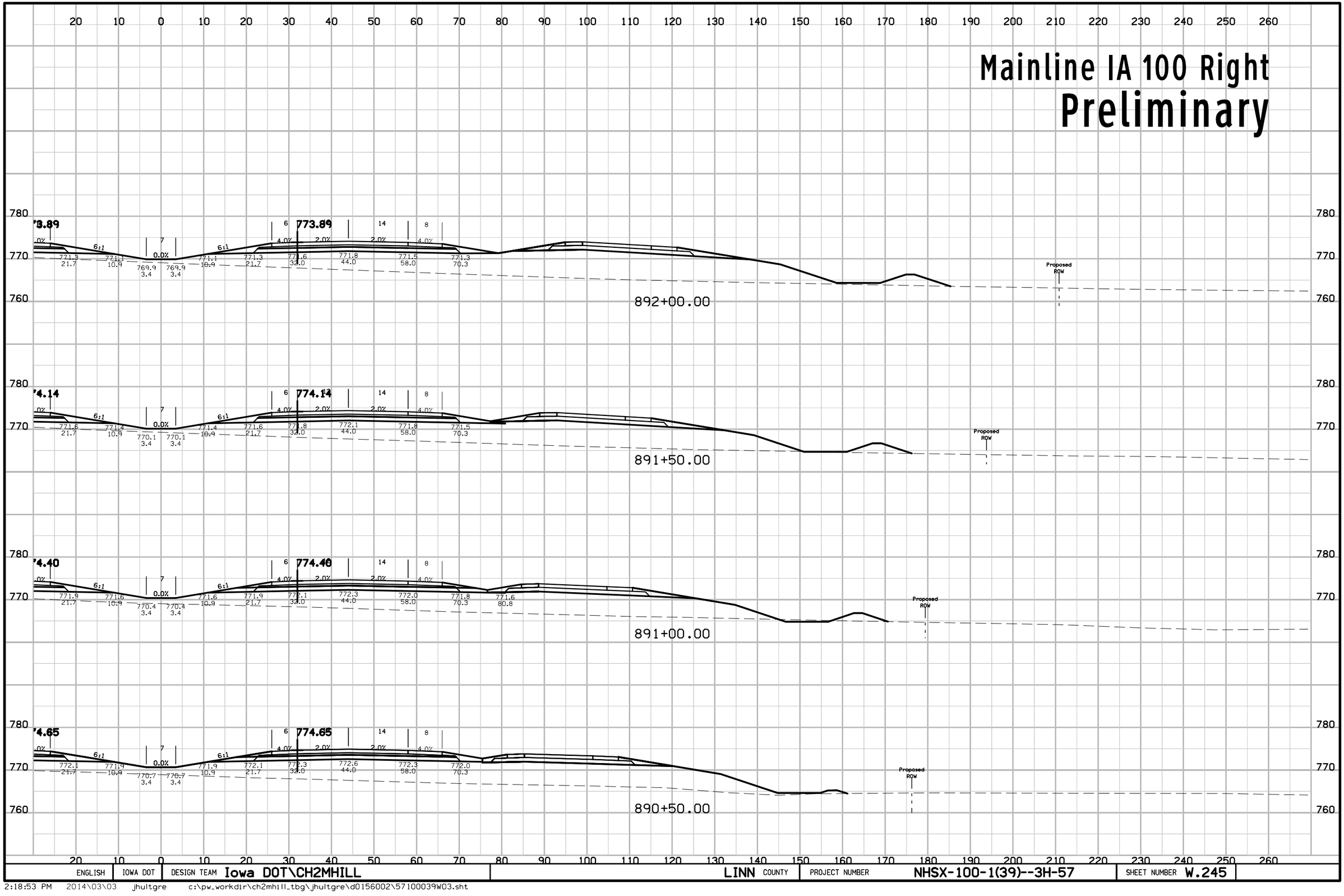
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.245

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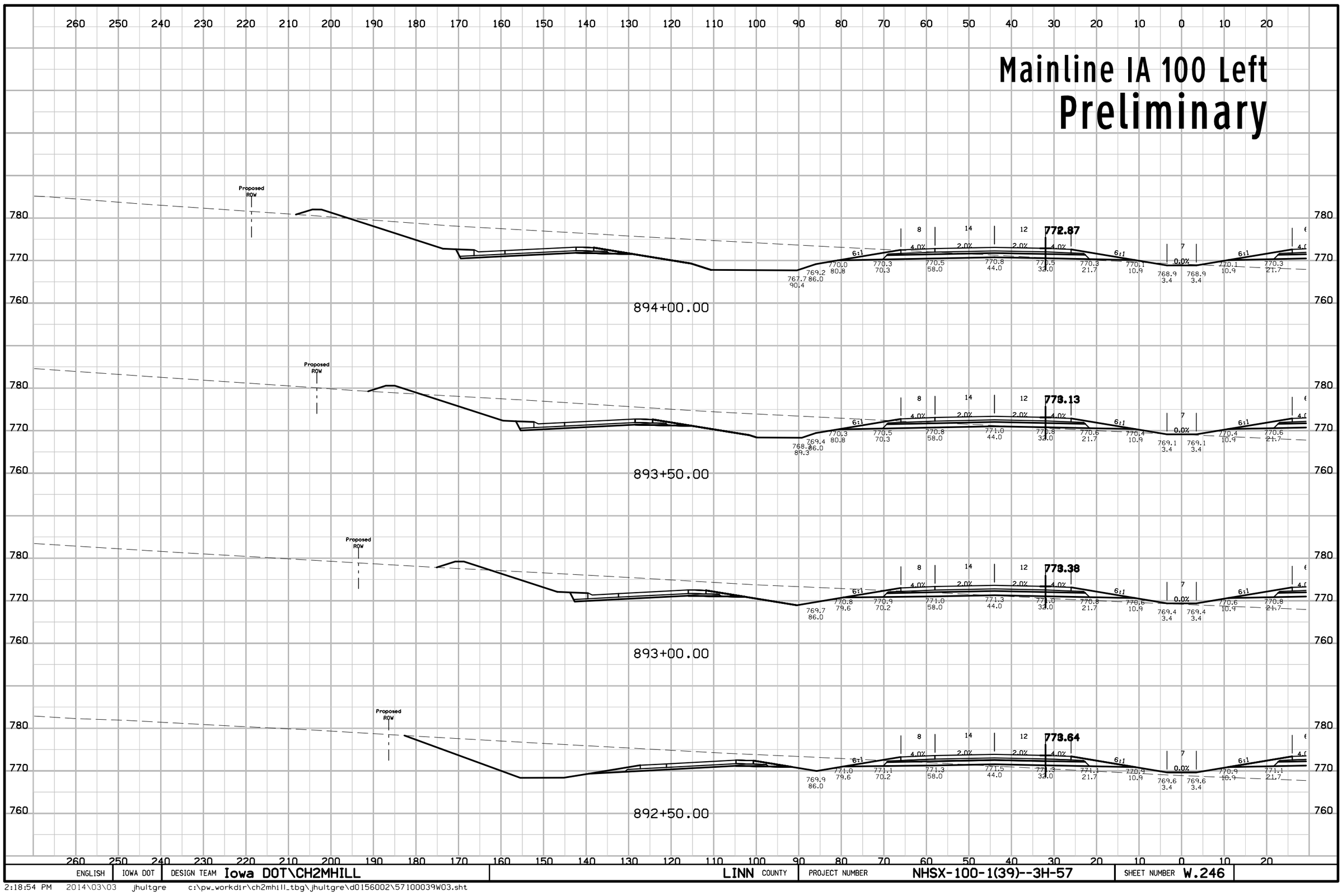
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.246

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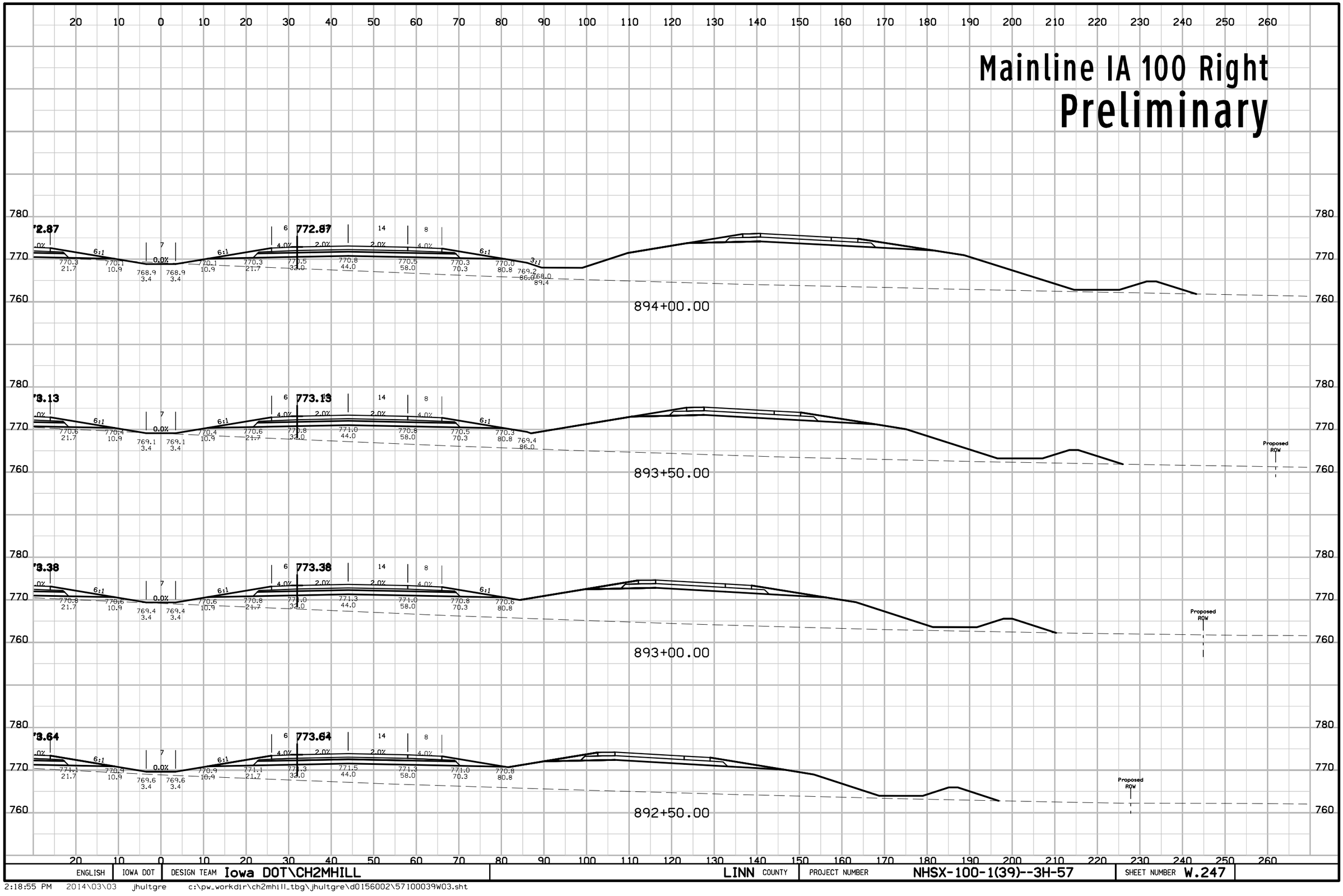
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.247

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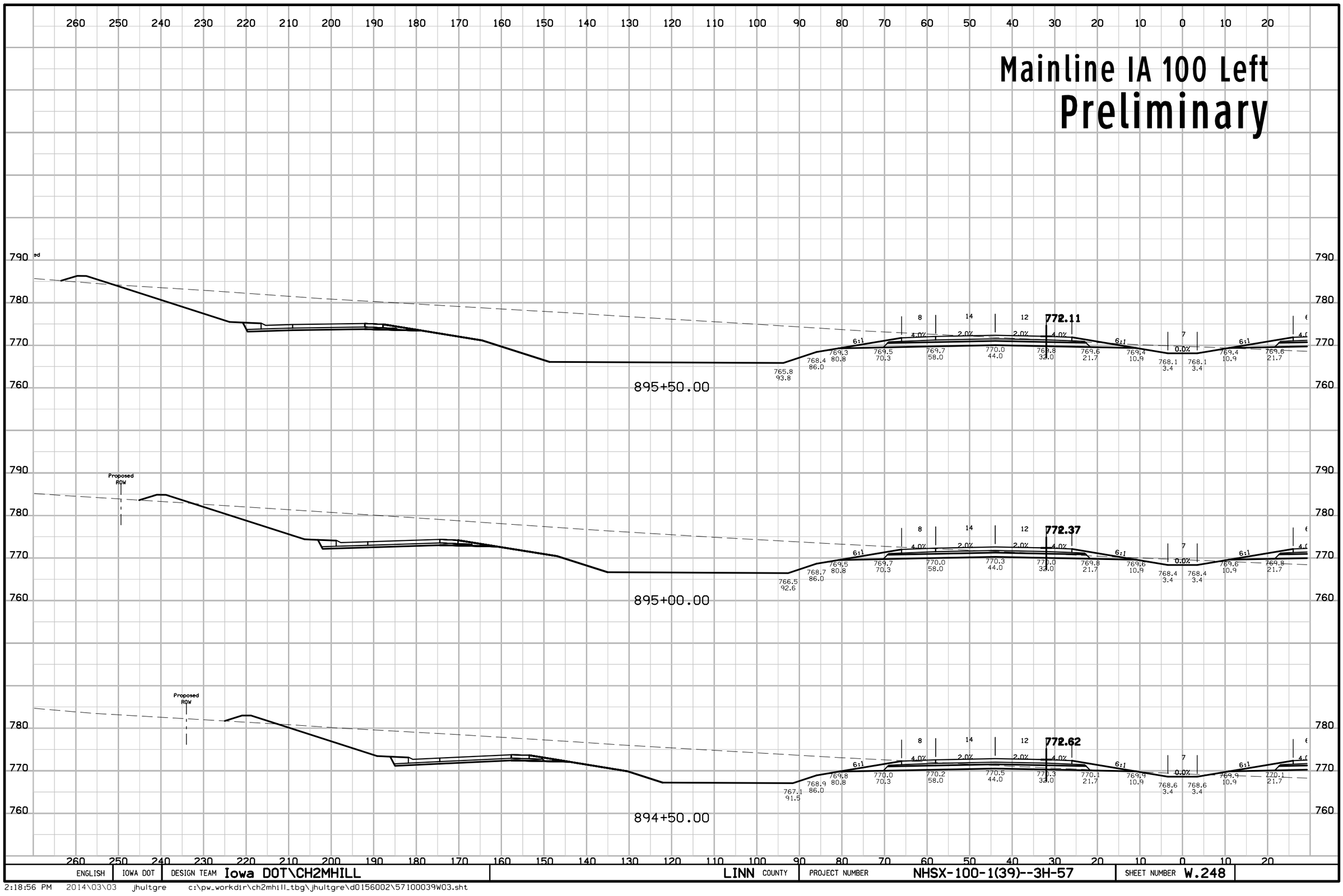
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.248

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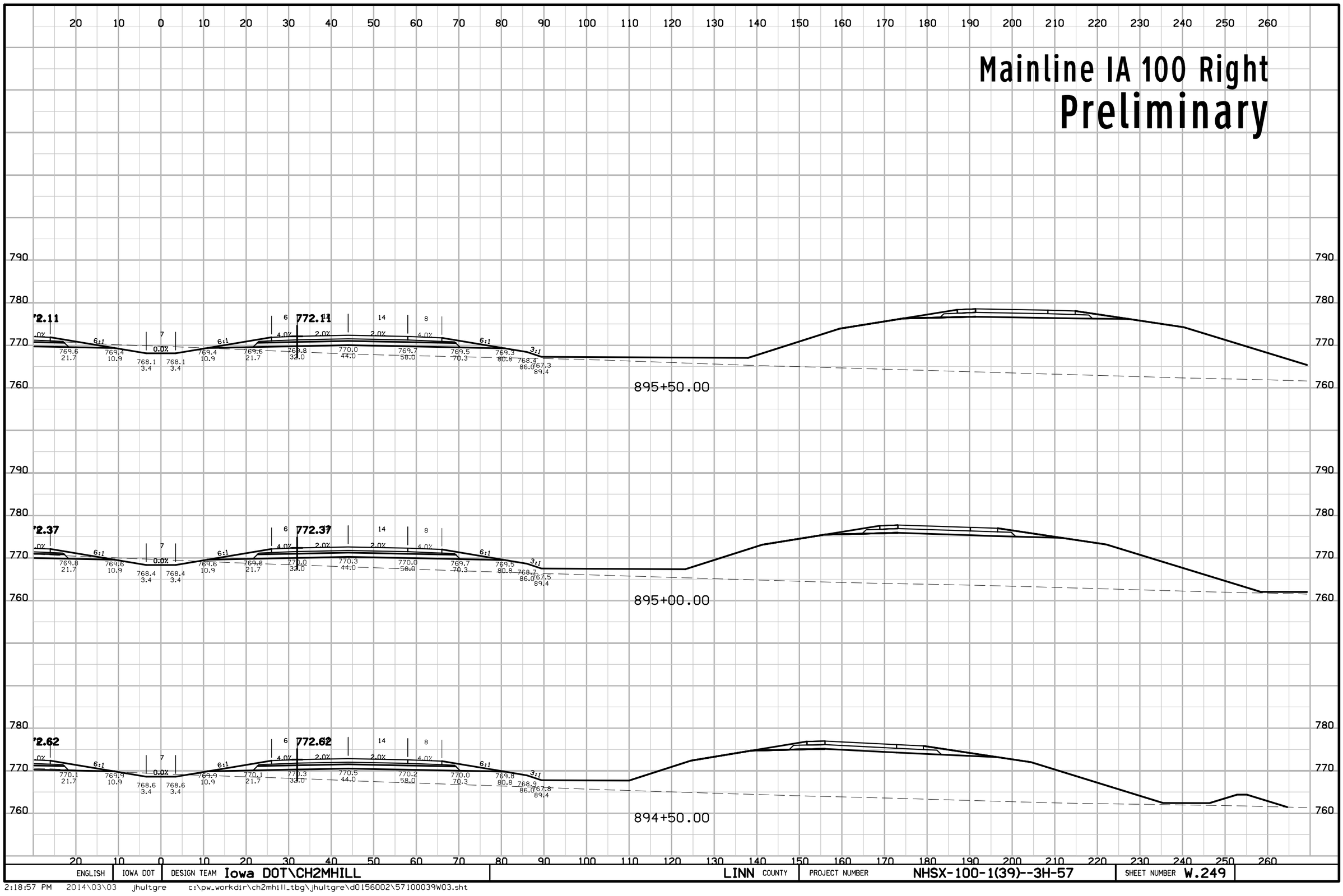
Mainline IA 100 Right

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER W.249	

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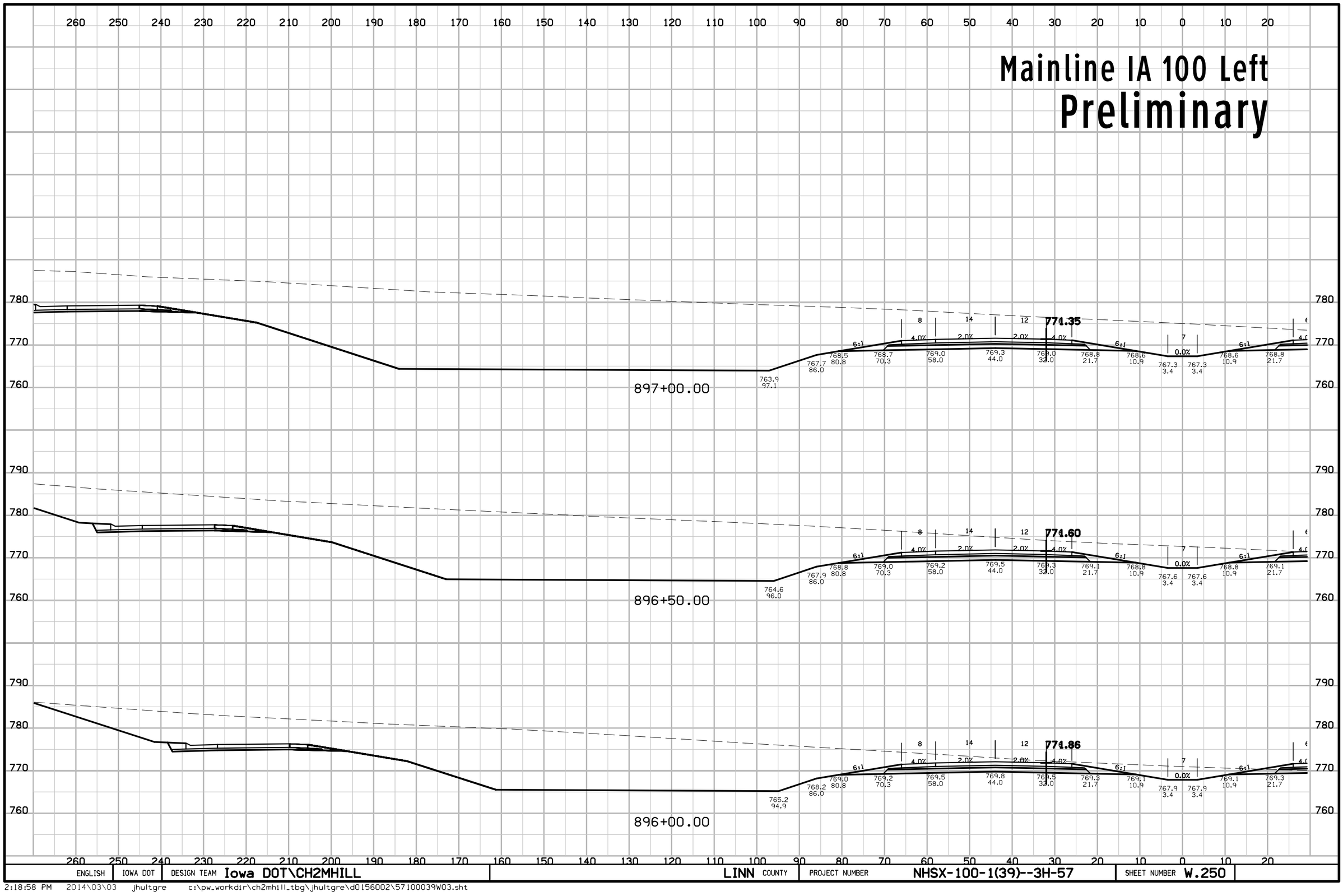
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.250

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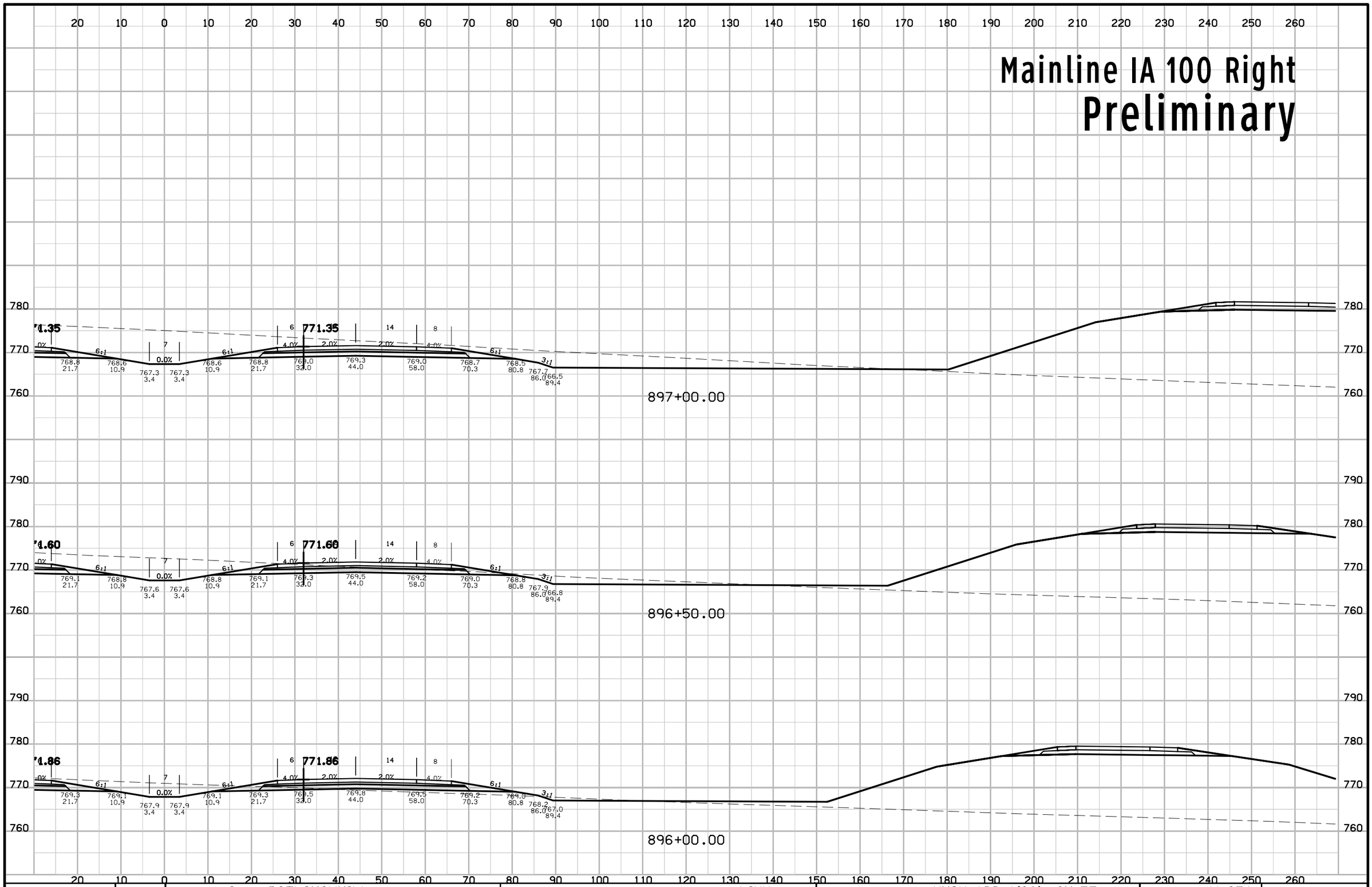
Mainline IA 100 Right

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.251

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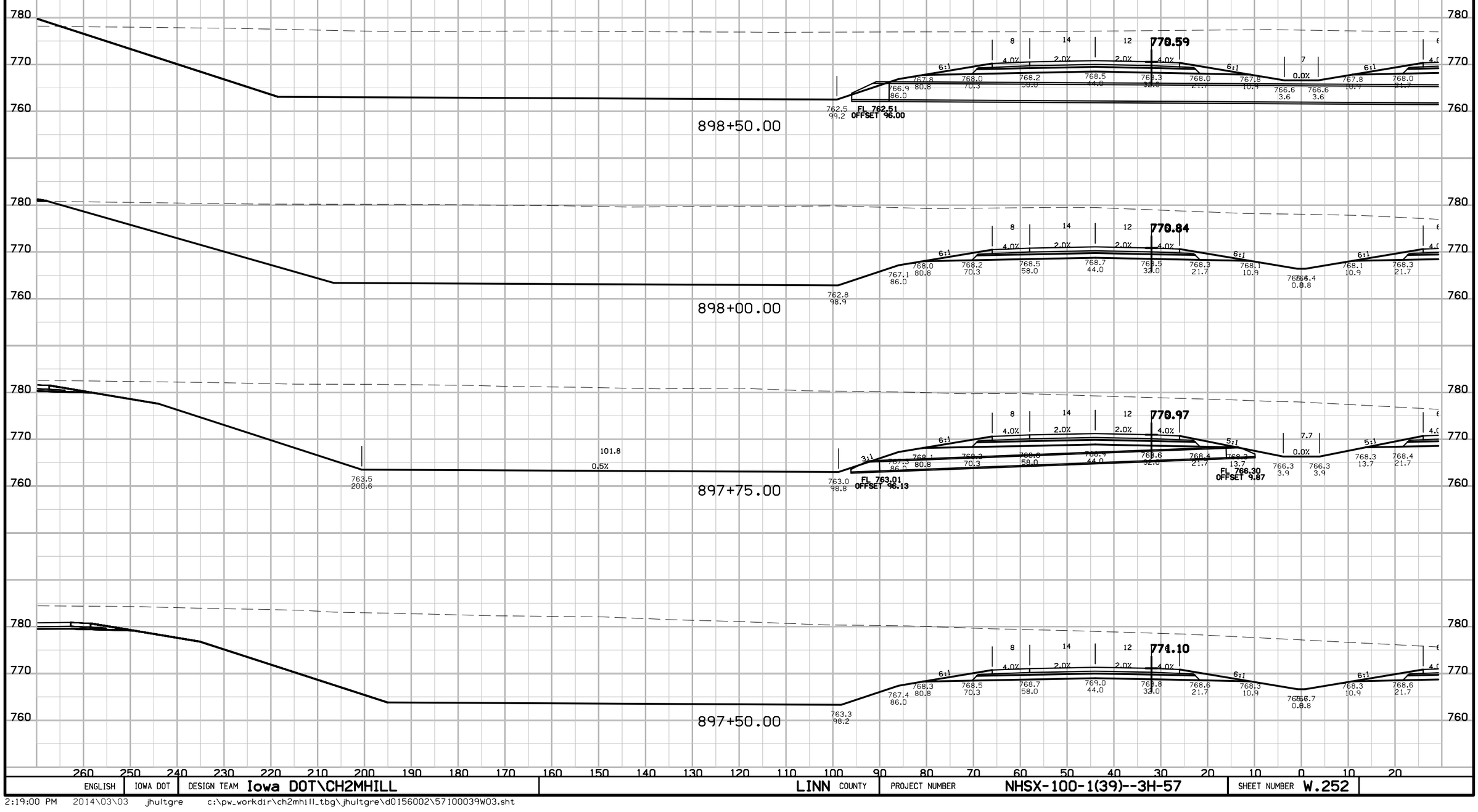
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.252

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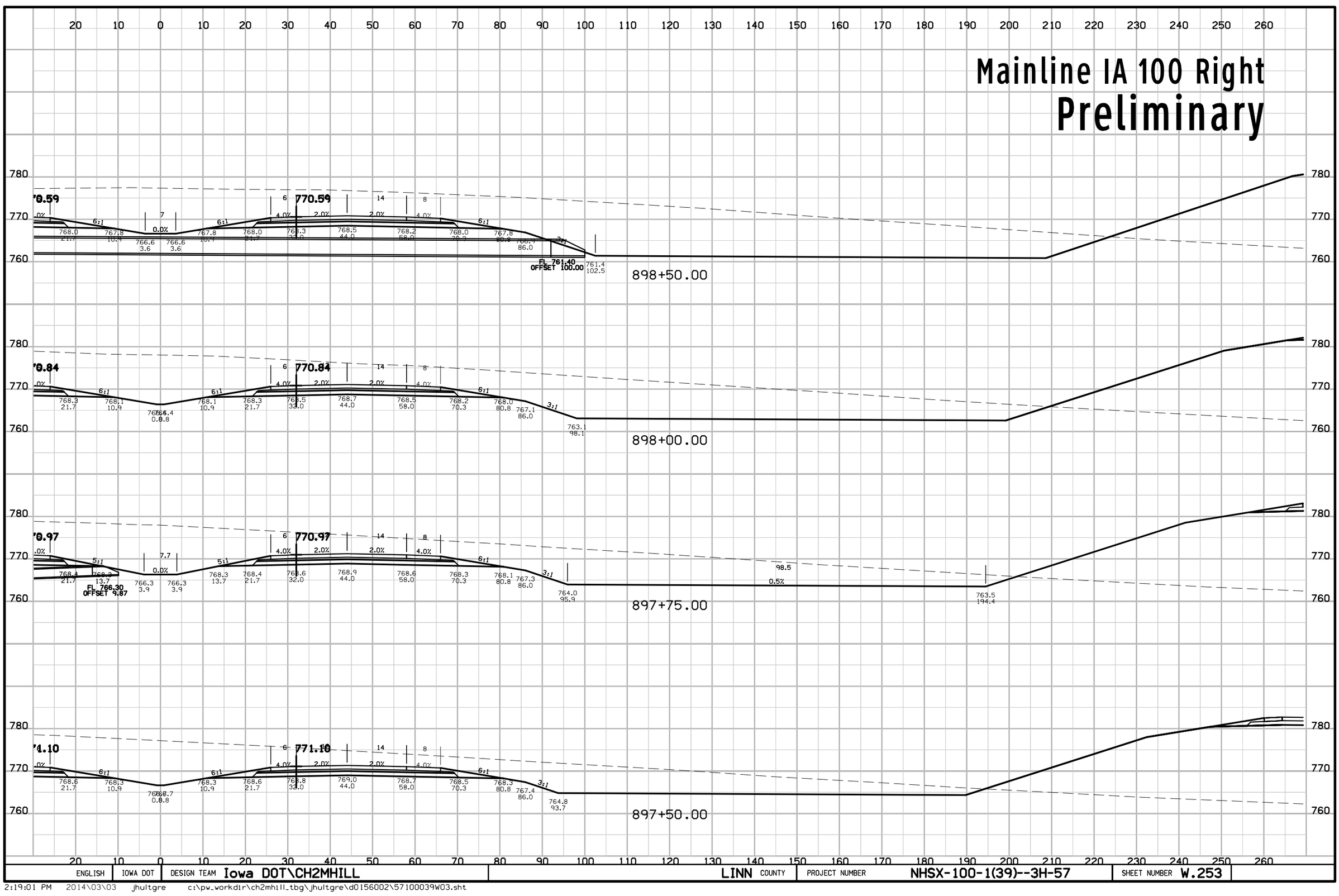
Mainline IA 100 Right

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.253

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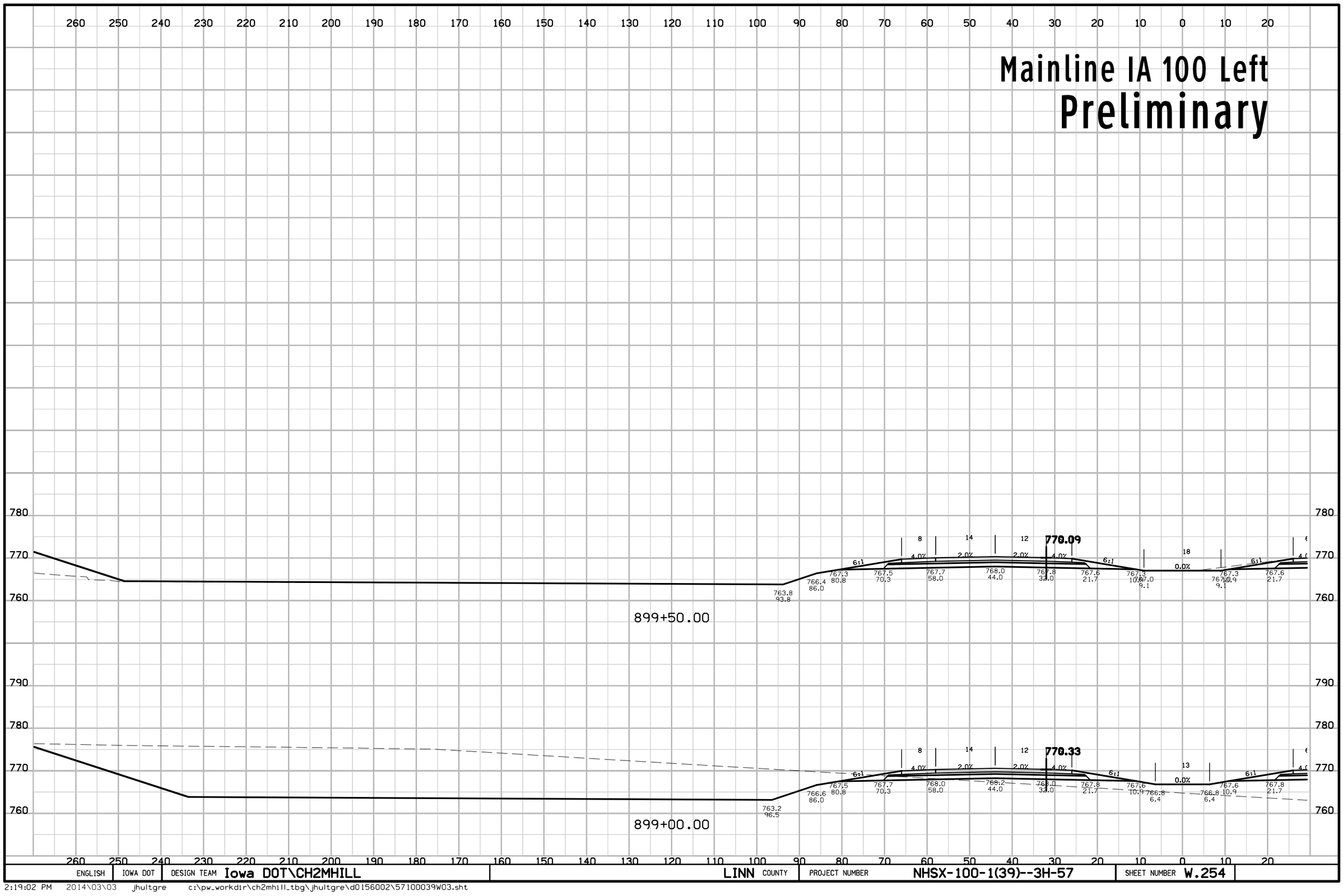
Mainline IA 100 Left

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.254

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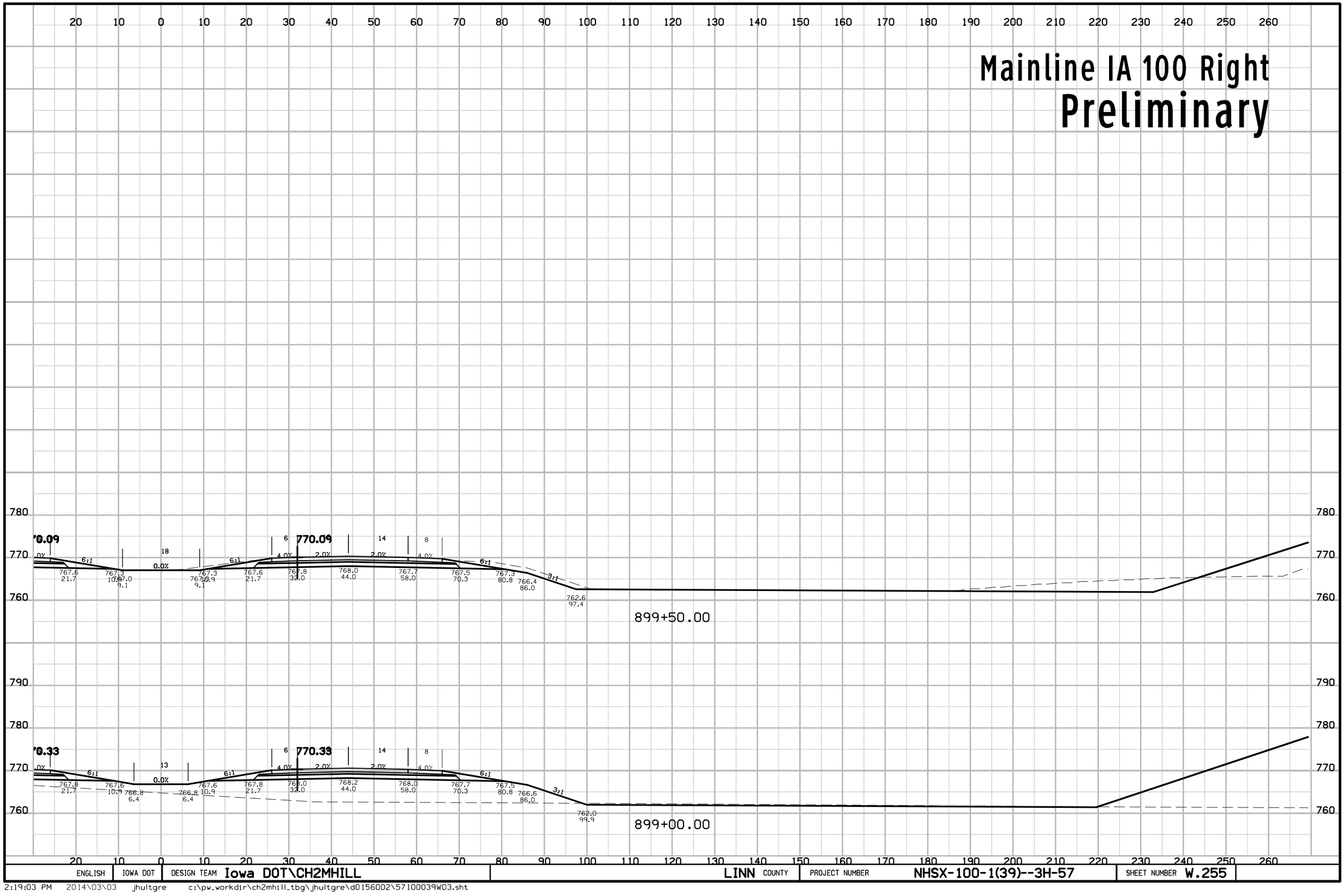
Mainline IA 100 Right
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER W.255

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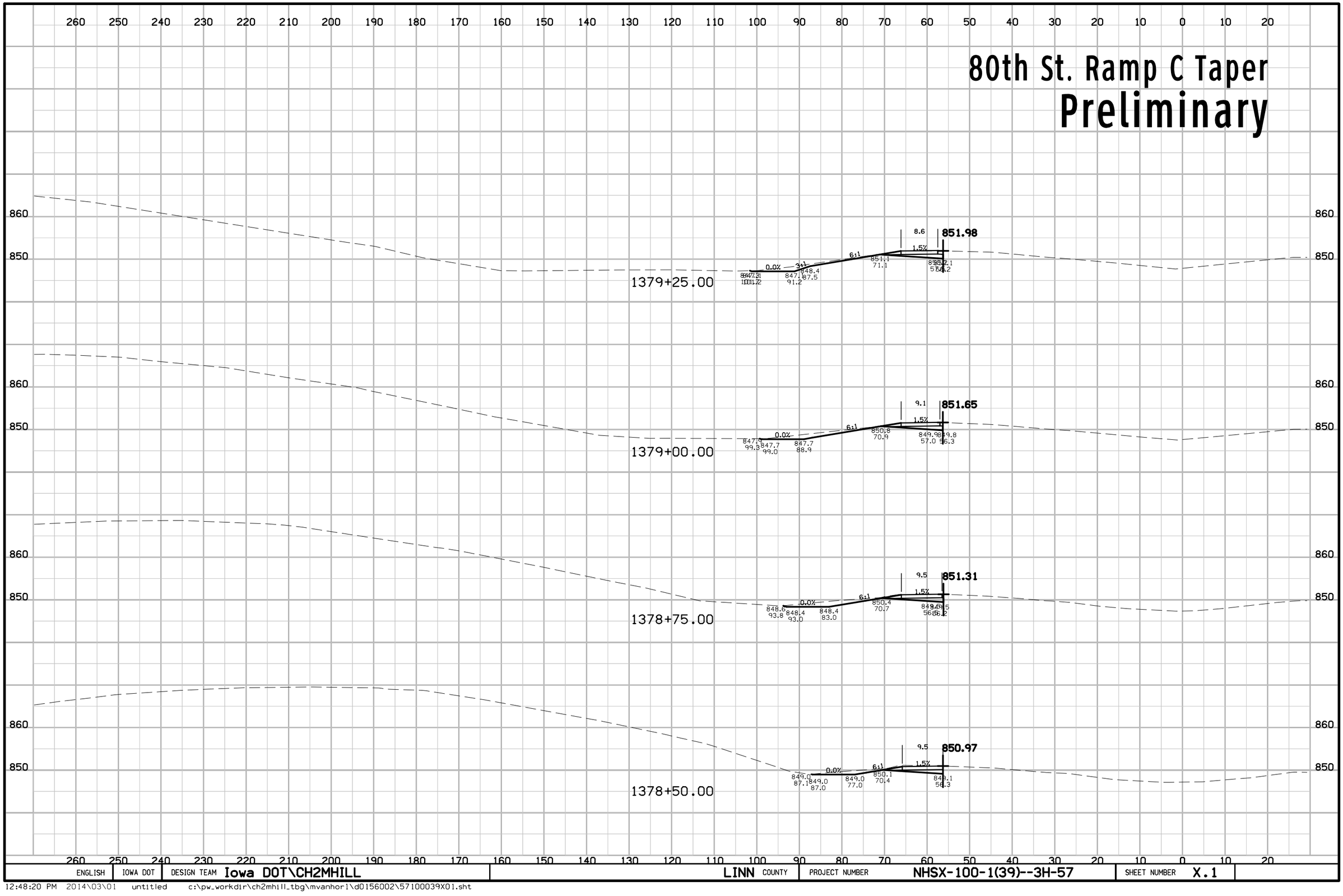
80th St. Ramp C Taper

Preliminary



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

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80th St. Ramp C Taper

Preliminary

260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20

850

6.4 3.7 **853.71**
1.5% 6.5%
6:1 3:1 3:1
852.9 72.1
849.9 90.0
846.5 117.0 845.1 114.4 0.0% 845.1 104.4
852.4 851.9 60.0 56.3

1380+50.00

850

6.8 3.2 **853.37**
1.5% 6.5%
6:1 3:1 3:1
852.6 71.9
849.6 89.5
846.2 116.4 845.2 112.7 0.0% 845.2 102.7
851.8 851.5 59.5 56.3

1380+25.00

850

7.3 2.8 **853.03**
1.5% 6.5%
6:1 3:1 3:1
852.2 71.7
849.3 89.0
846.8 114.6 845.4 110.9 0.0% 845.4 100.9
851.4 851.2 59.0 56.2

1380+00.00

850

7.7 2.2 **852.68**
1.5% 6.5%
6:1 3:1
851.8 71.5
849.0 88.5
846.5 109.5 845.9 107.8 0.0% 845.9 97.8
851.0 850.8 58.5 56.3

1379+75.00

860

850

8.2 **852.33**
1.5%
6:1 3:1
851.5 71.3
848.7 88.0
846.5 106.5 846.5 104.5 0.0% 846.5 94.5
850.6 850.5 58.0 56.2

1379+50.00

260 250 240 230 220 210 200 190 180 170 160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.2

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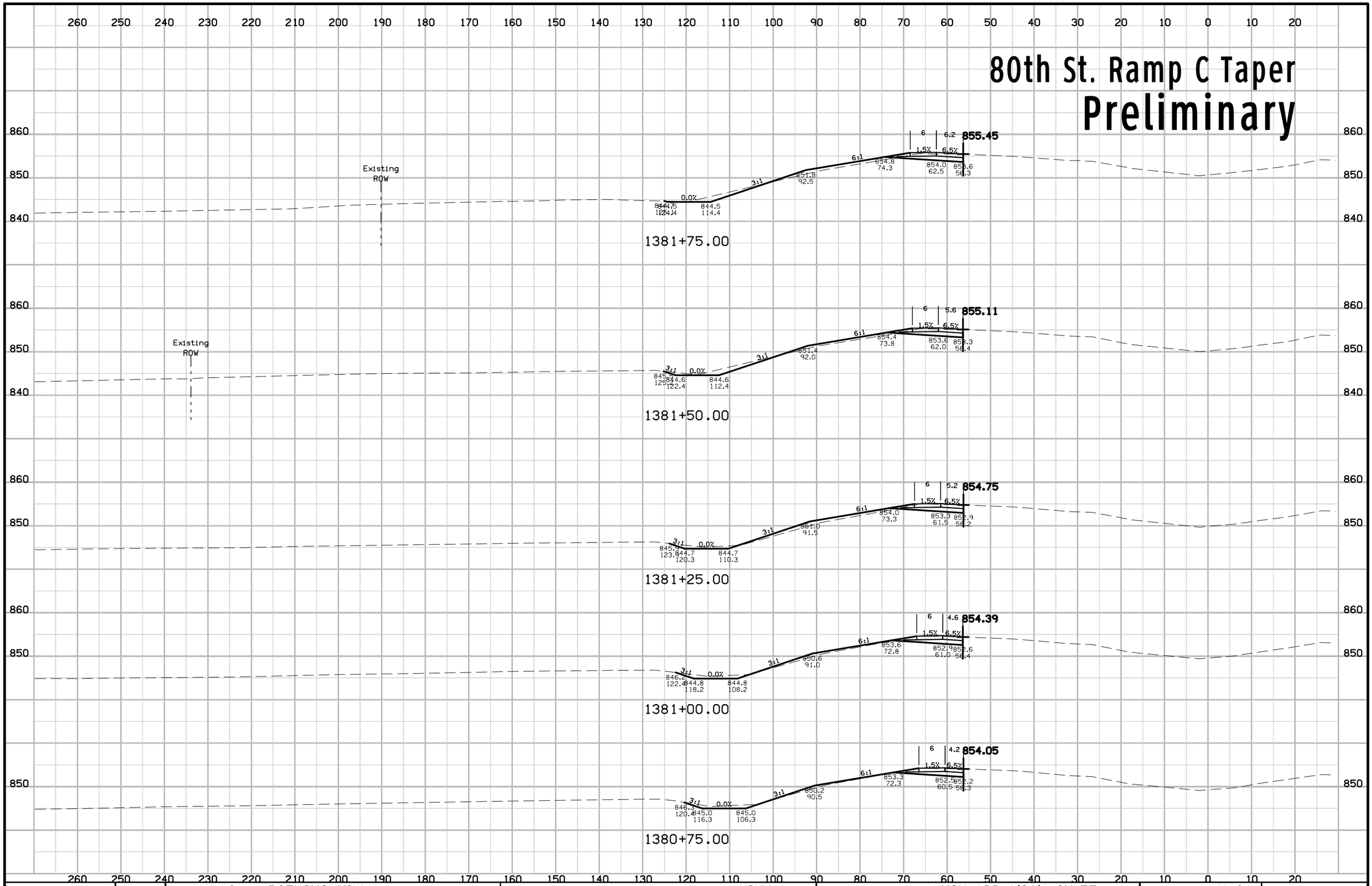
80th St. Ramp C Taper

Preliminary



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

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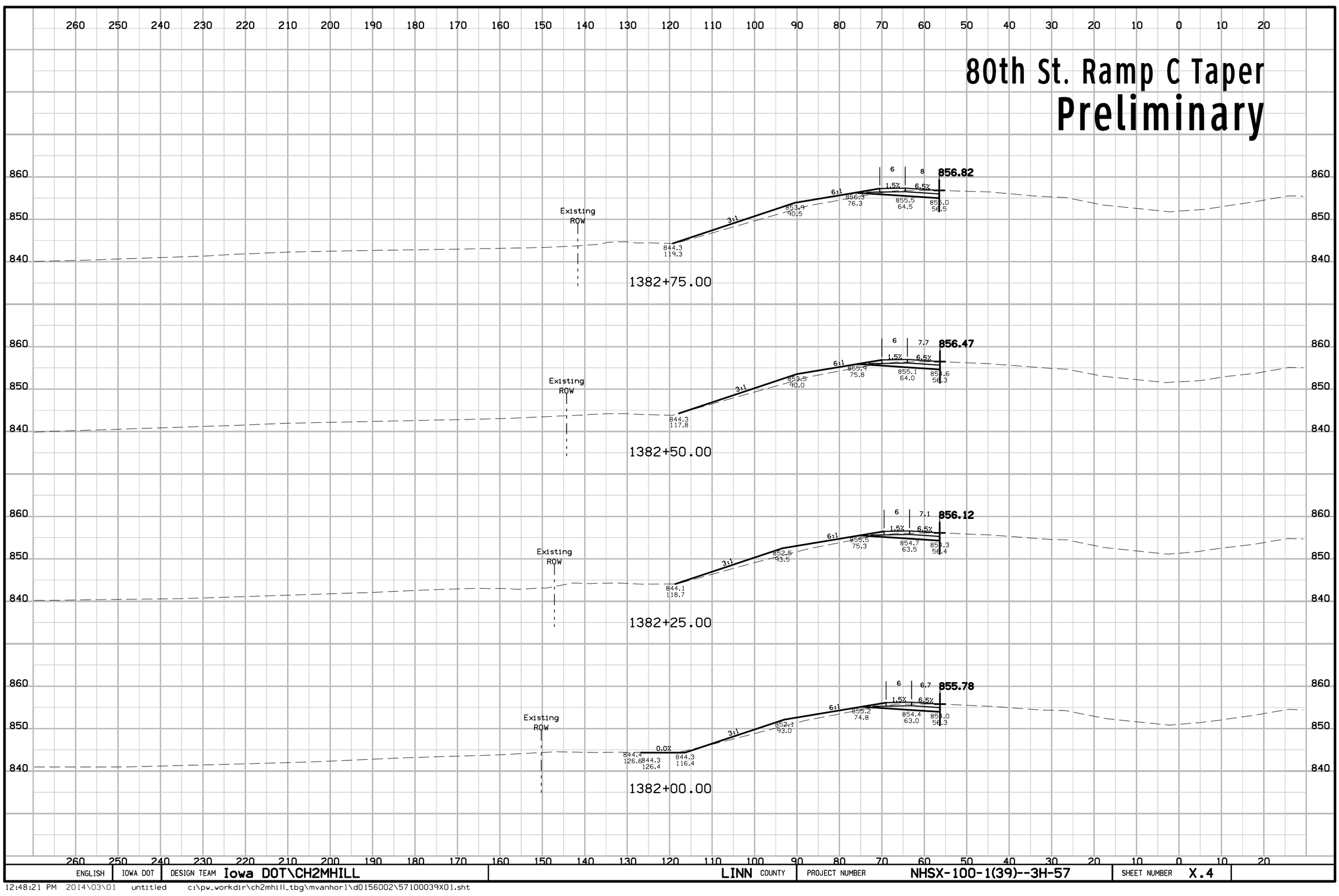
80th St. Ramp C Taper

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.4

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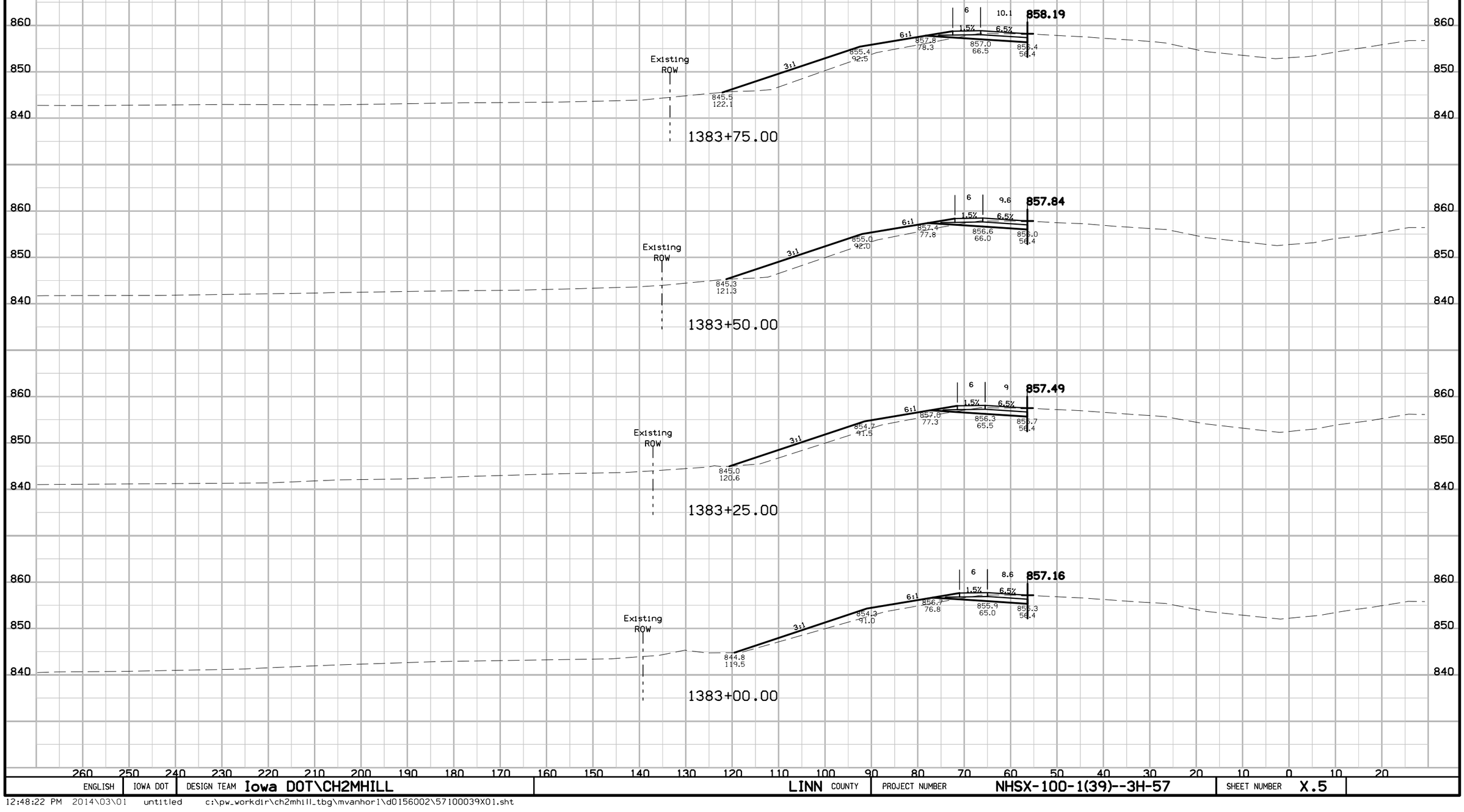
80th St. Ramp C Taper

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.5

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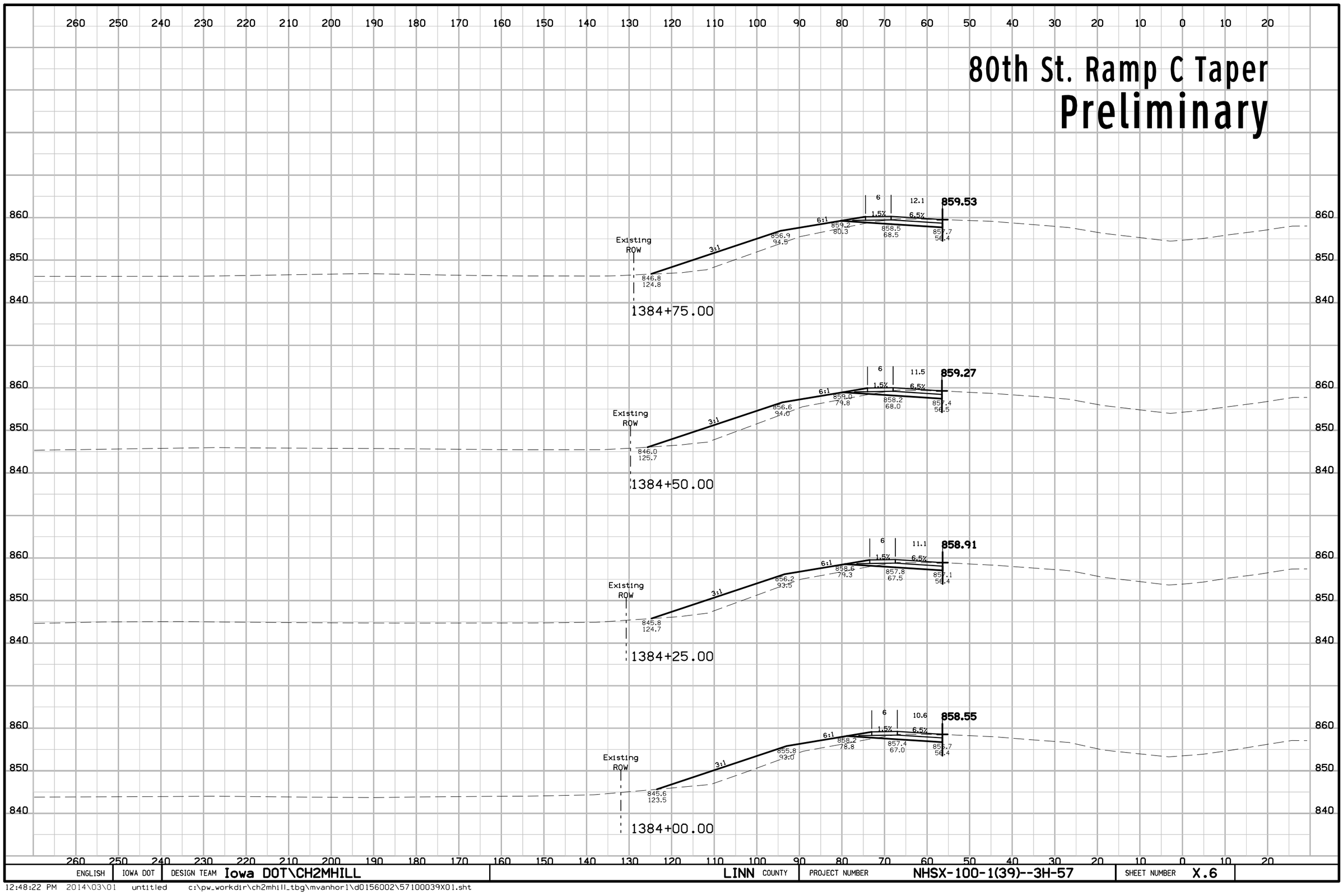
80th St. Ramp C Taper

Preliminary



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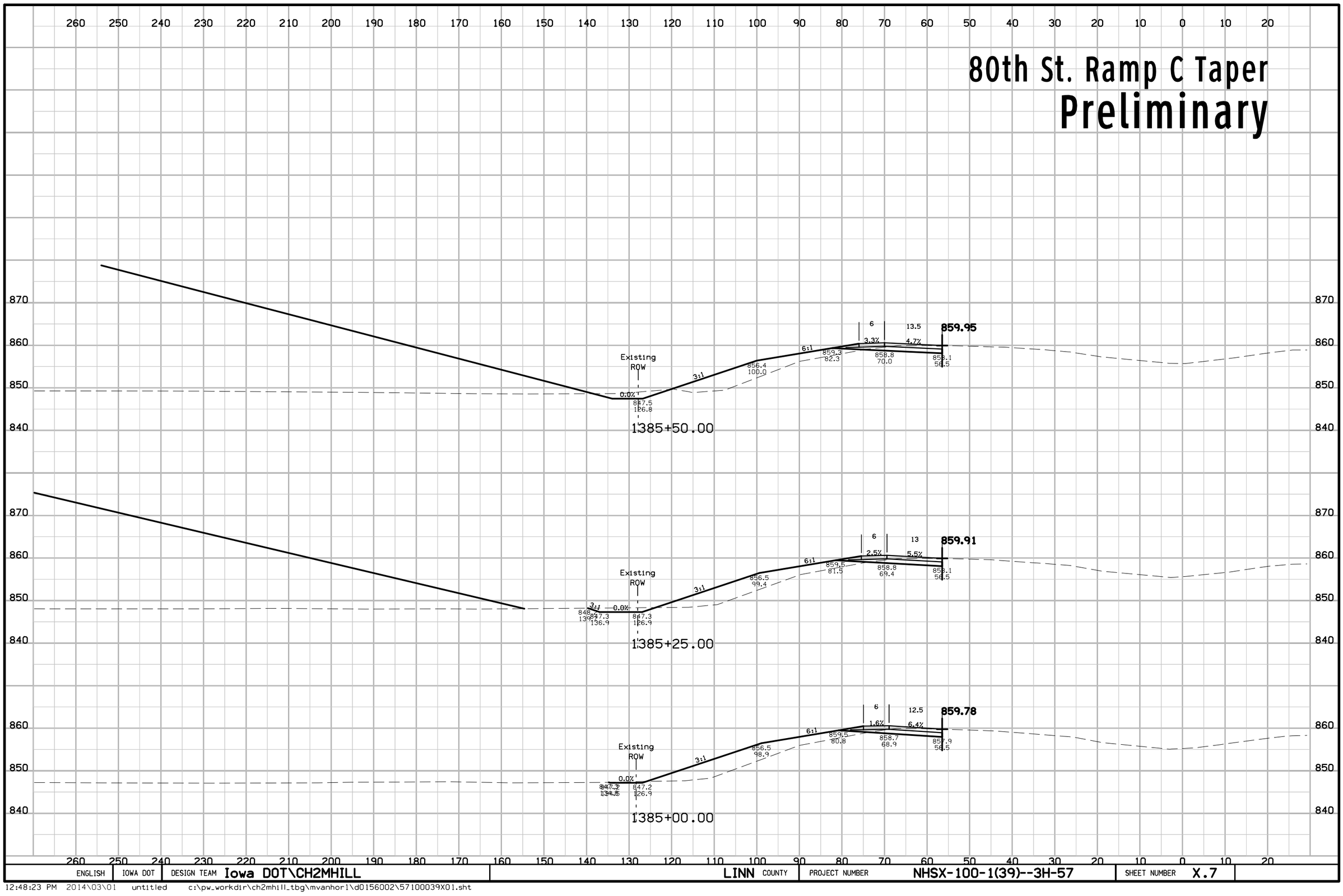
80th St. Ramp C Taper

Preliminary



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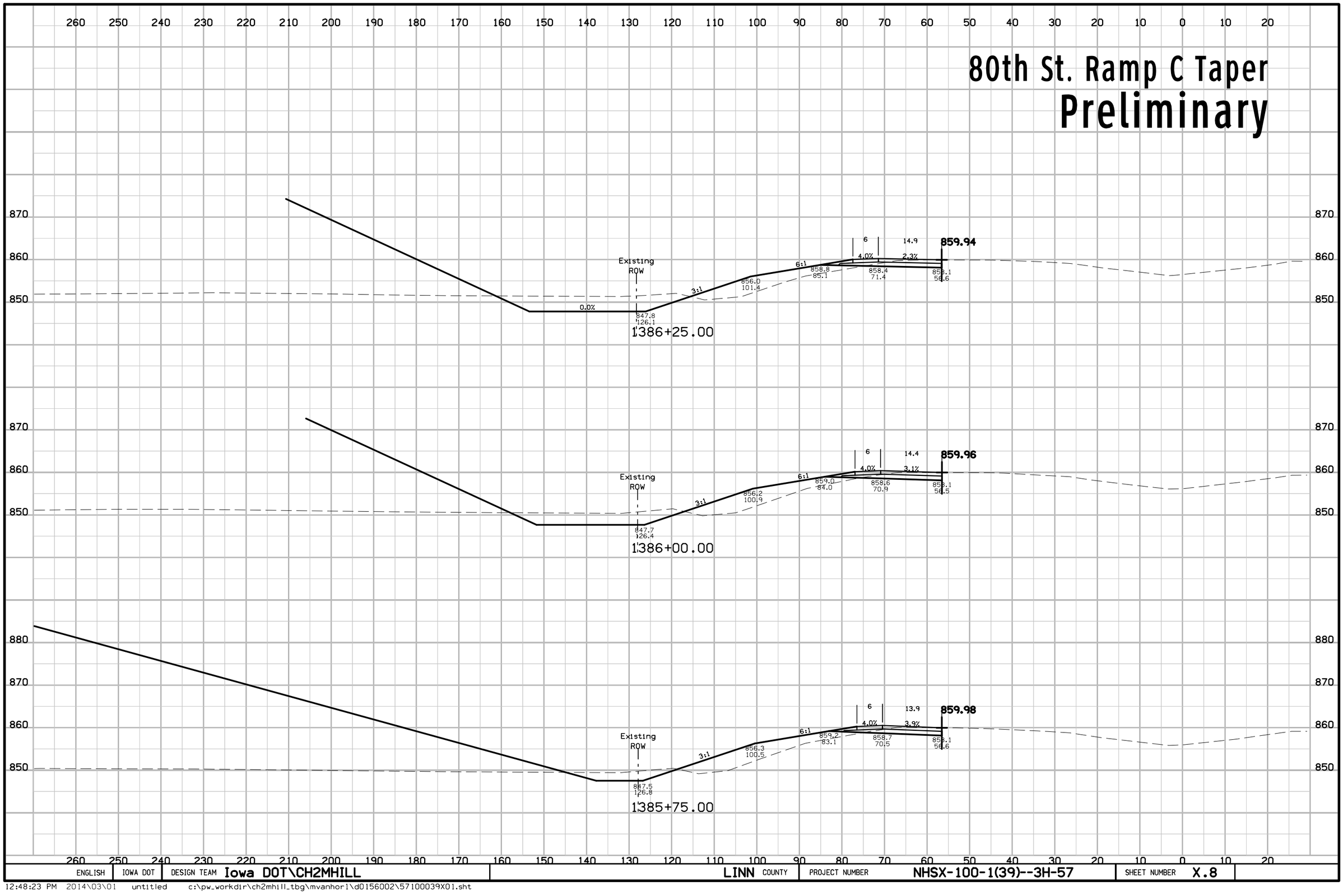
80th St. Ramp C Taper

Preliminary



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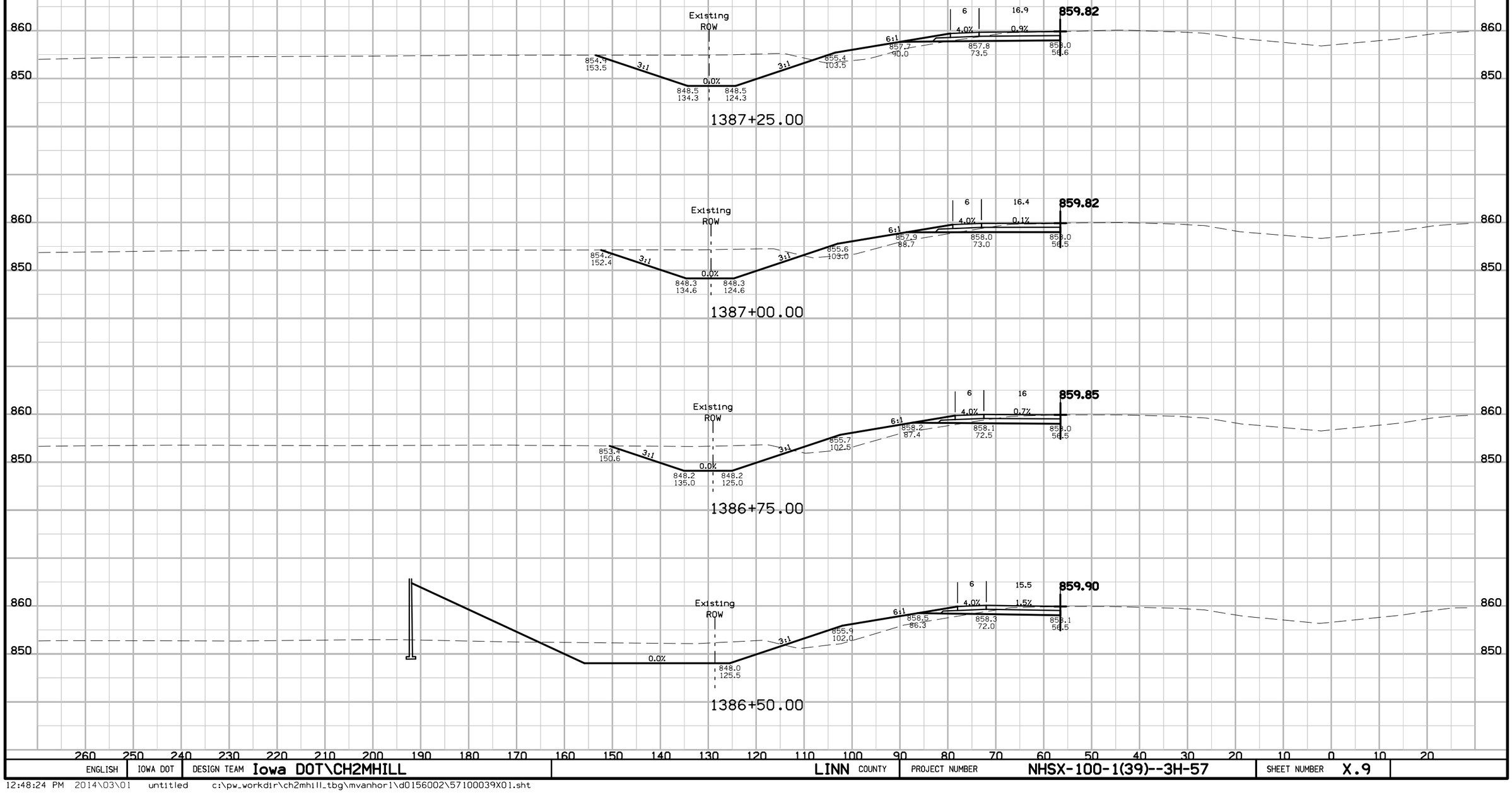
80th St. Ramp C Taper

Preliminary



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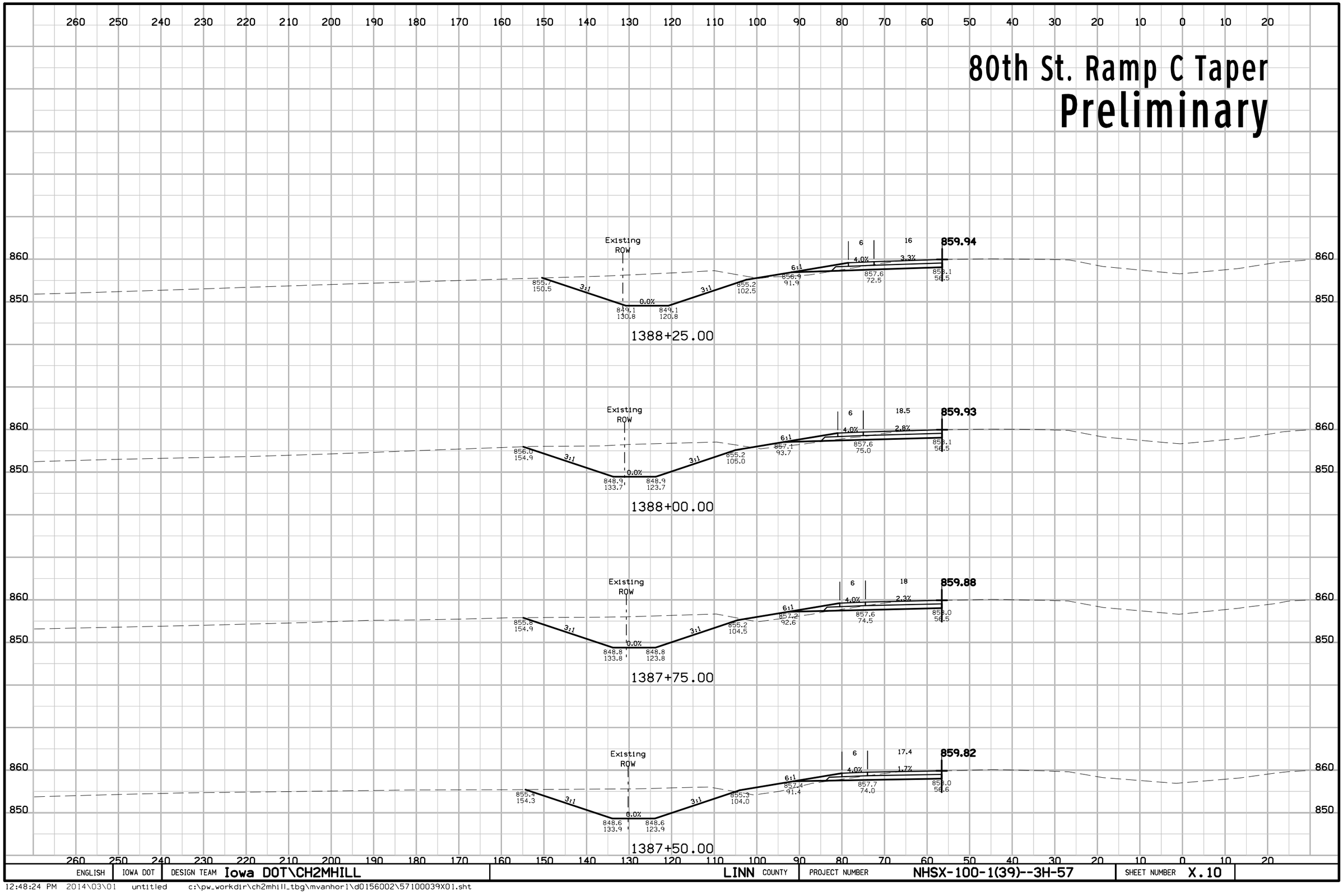
80th St. Ramp C Taper

Preliminary



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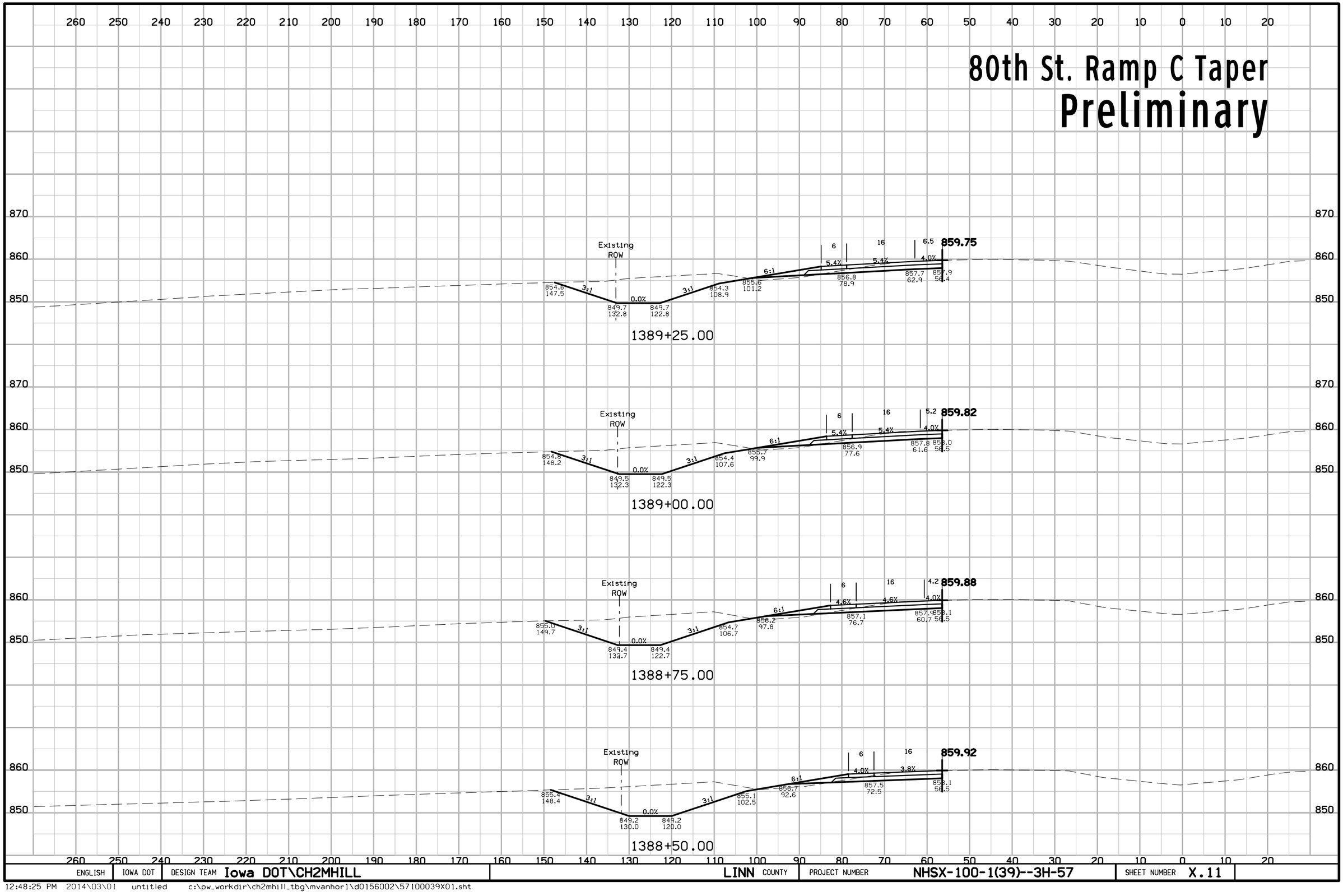
80th St. Ramp C Taper

Preliminary



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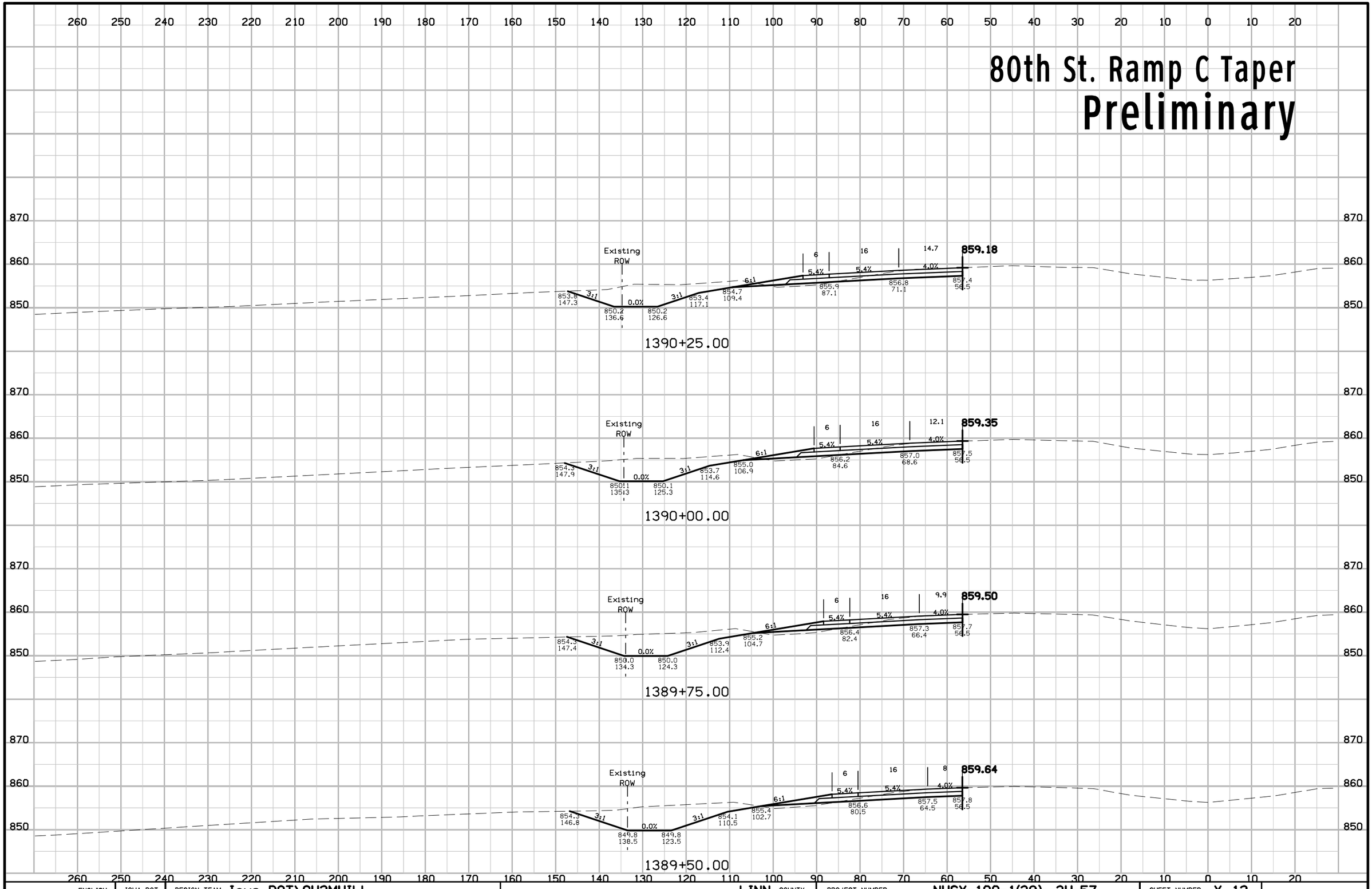
80th St. Ramp C Taper

Preliminary



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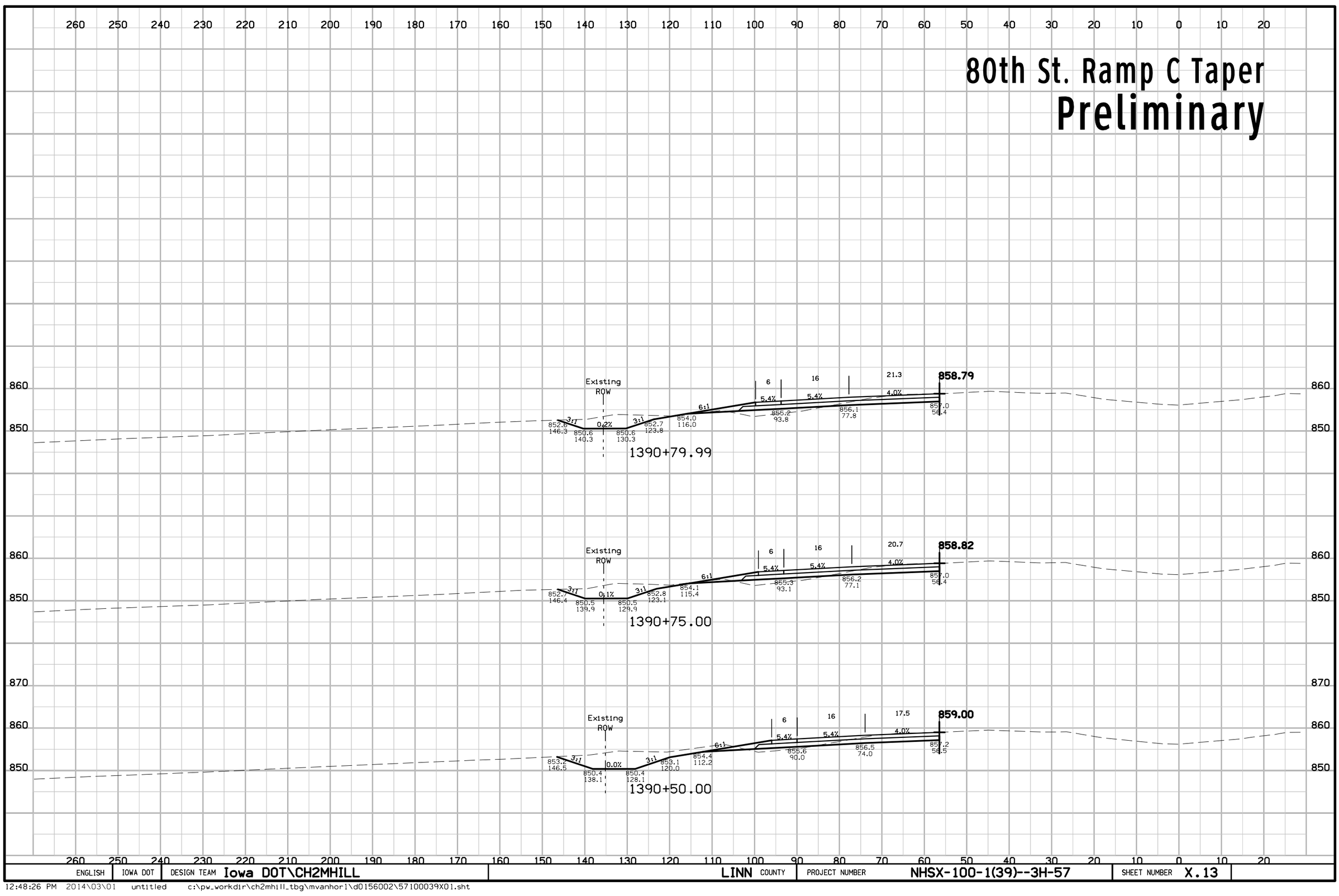
80th St. Ramp C Taper

Preliminary



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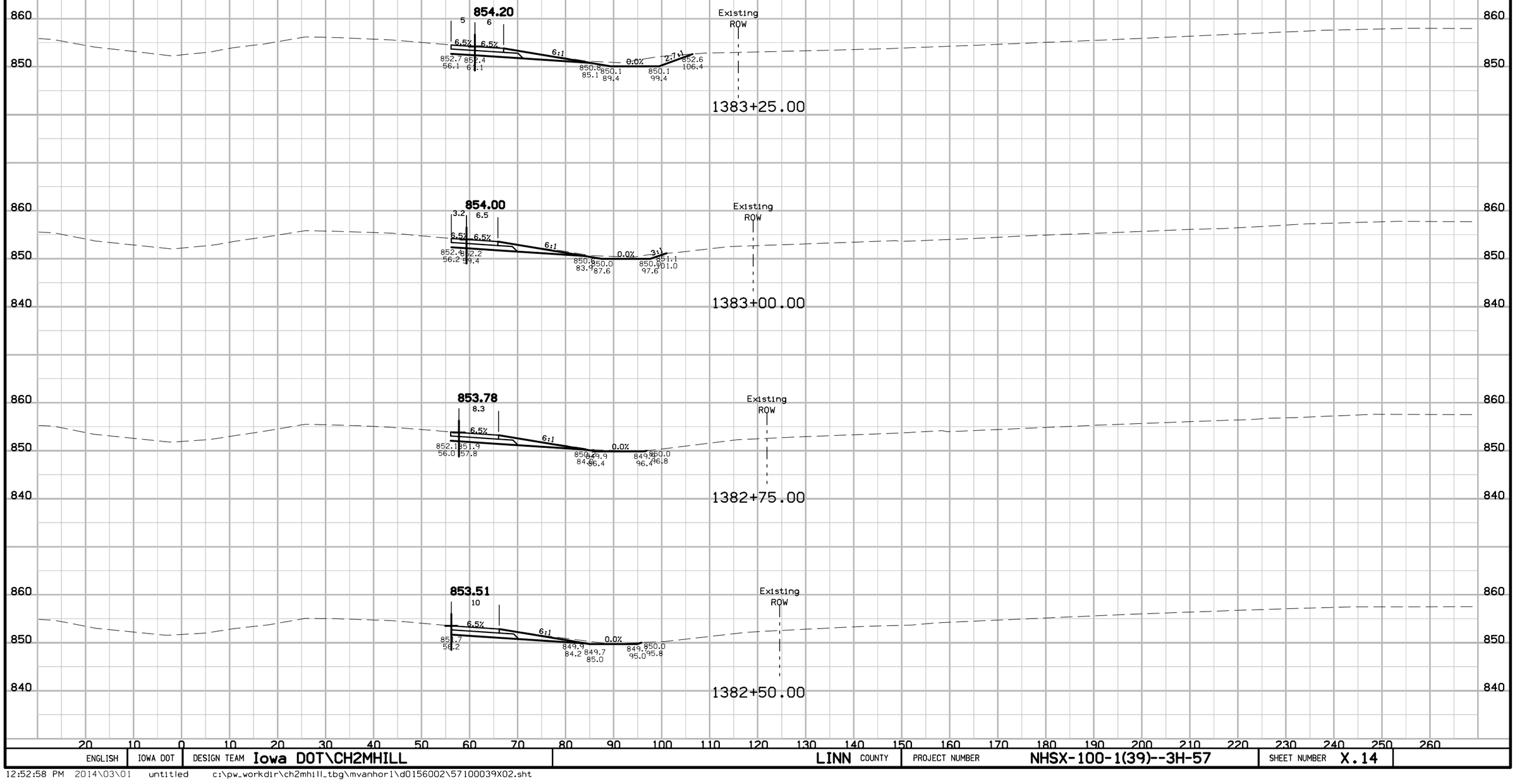
80th St. Ramp B Taper

Preliminary



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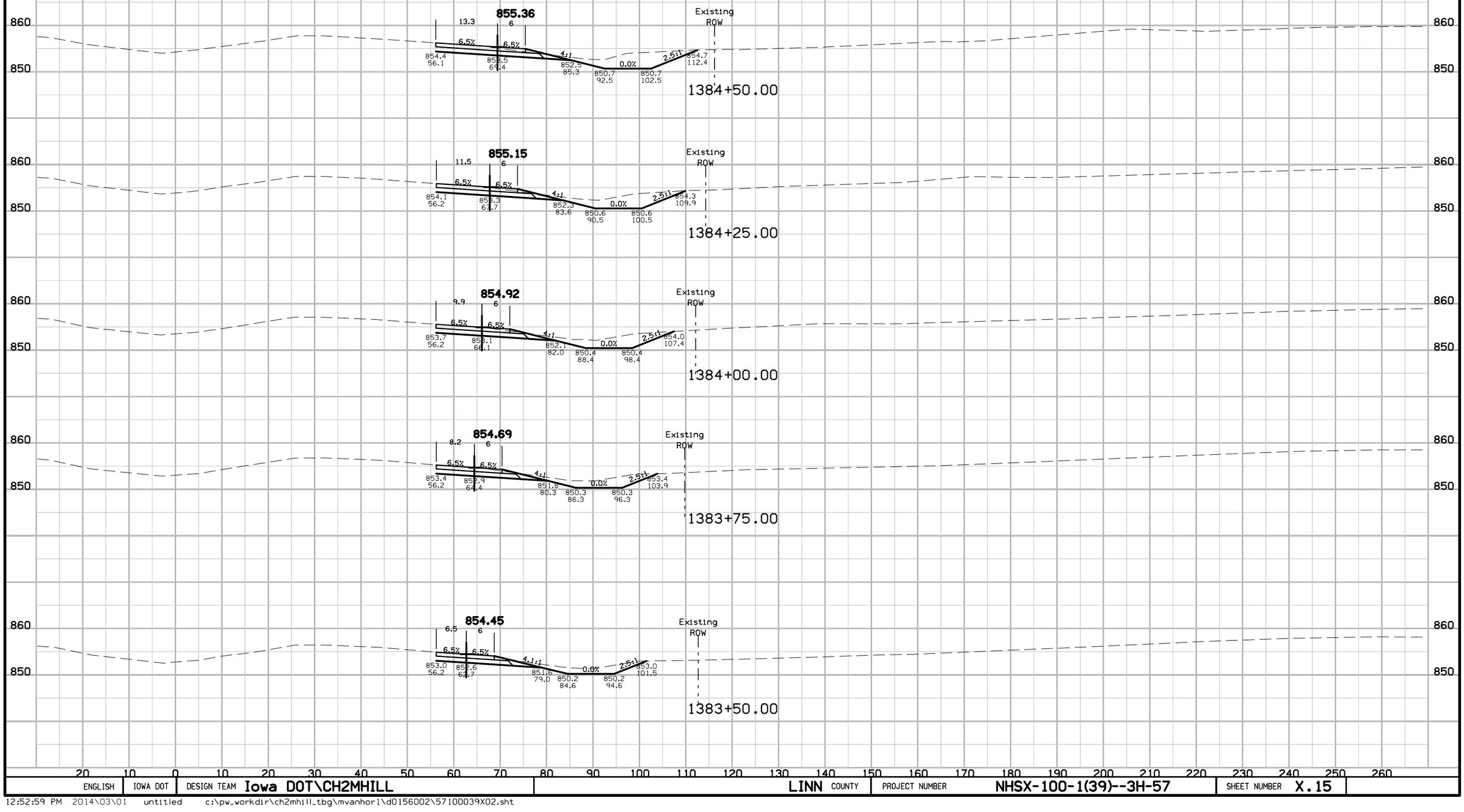
80th St. Ramp B Taper

Preliminary



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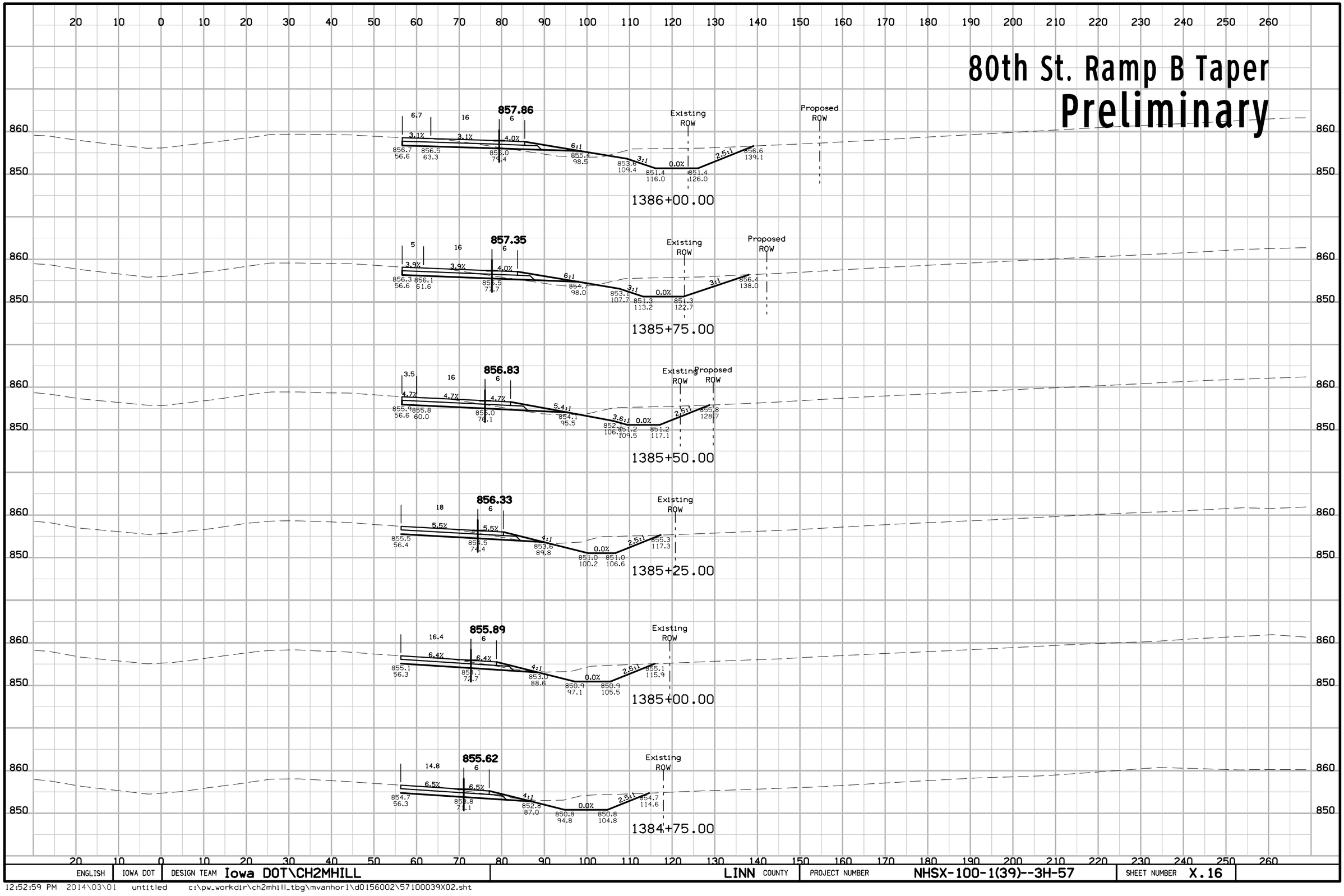
80th St. Ramp B Taper

Preliminary



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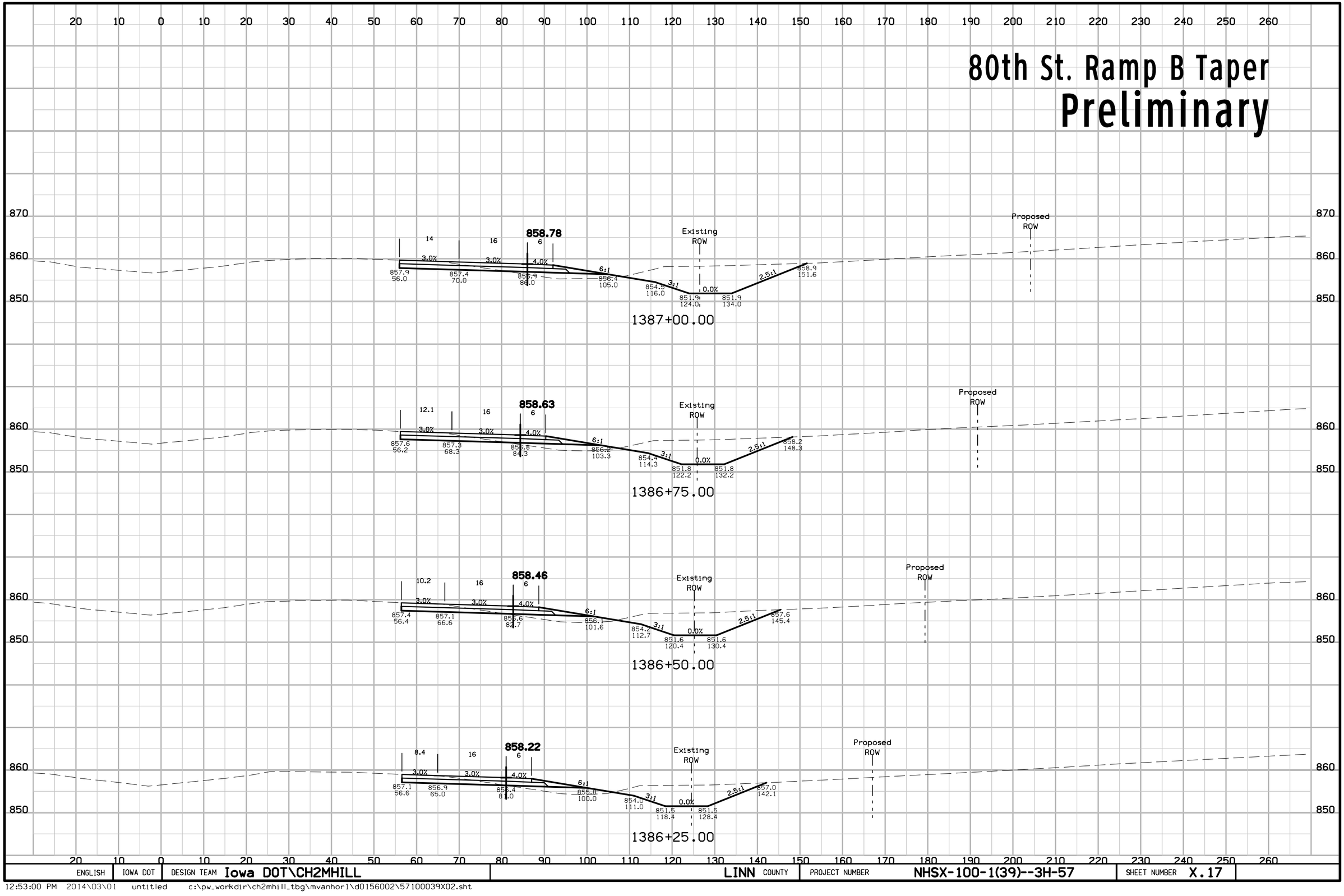
80th St. Ramp B Taper

Preliminary



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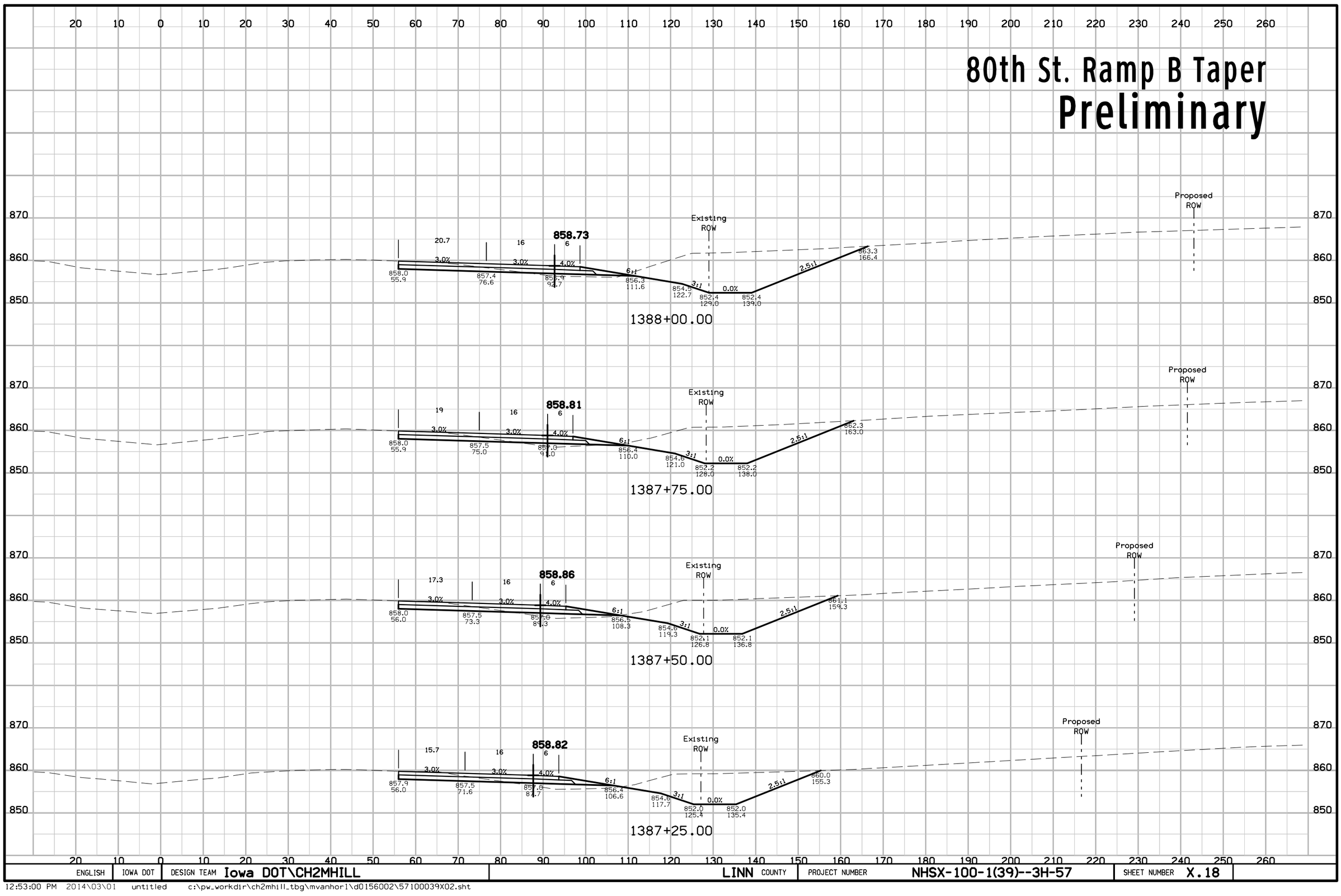
80th St. Ramp B Taper

Preliminary



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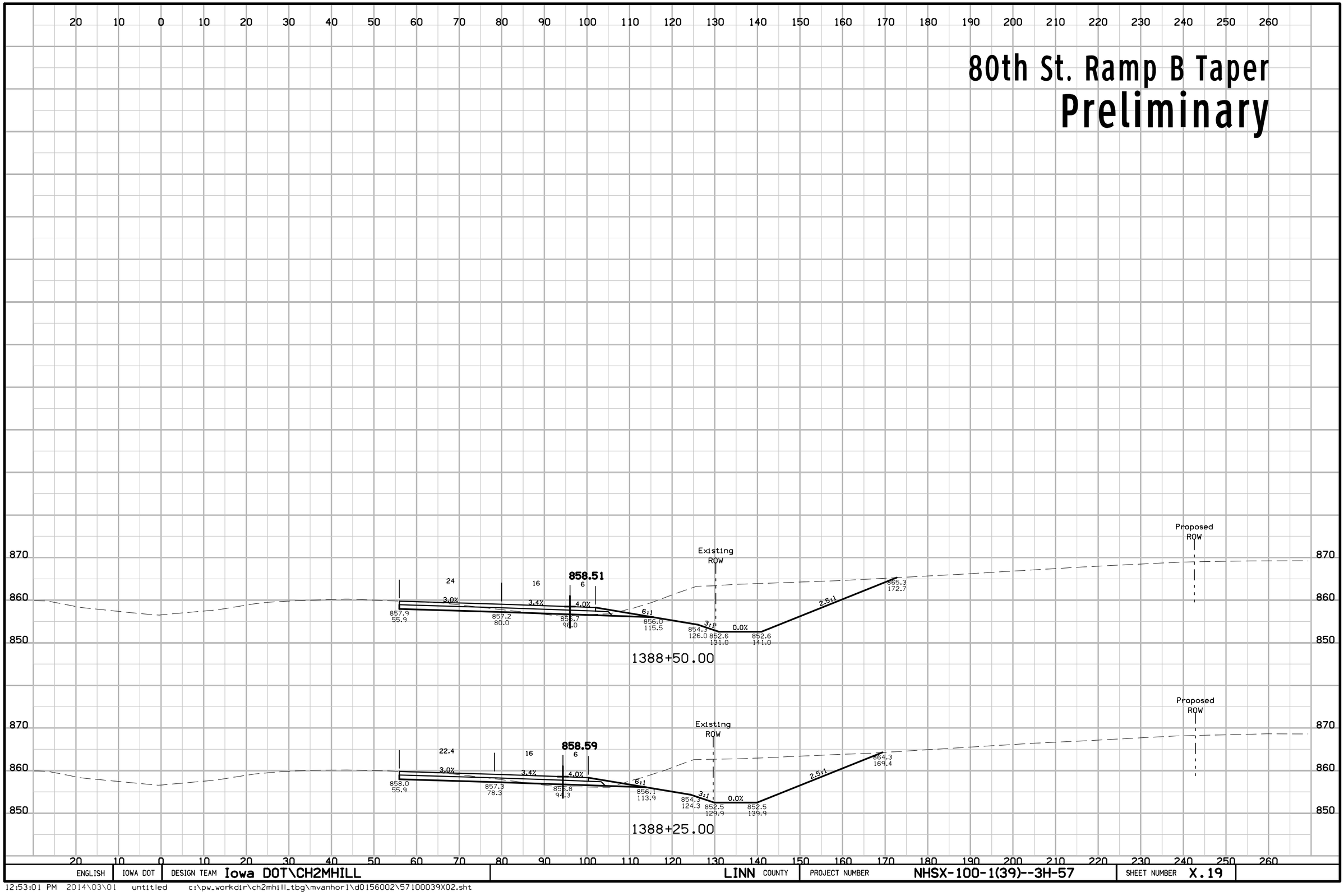
80th St. Ramp B Taper

Preliminary



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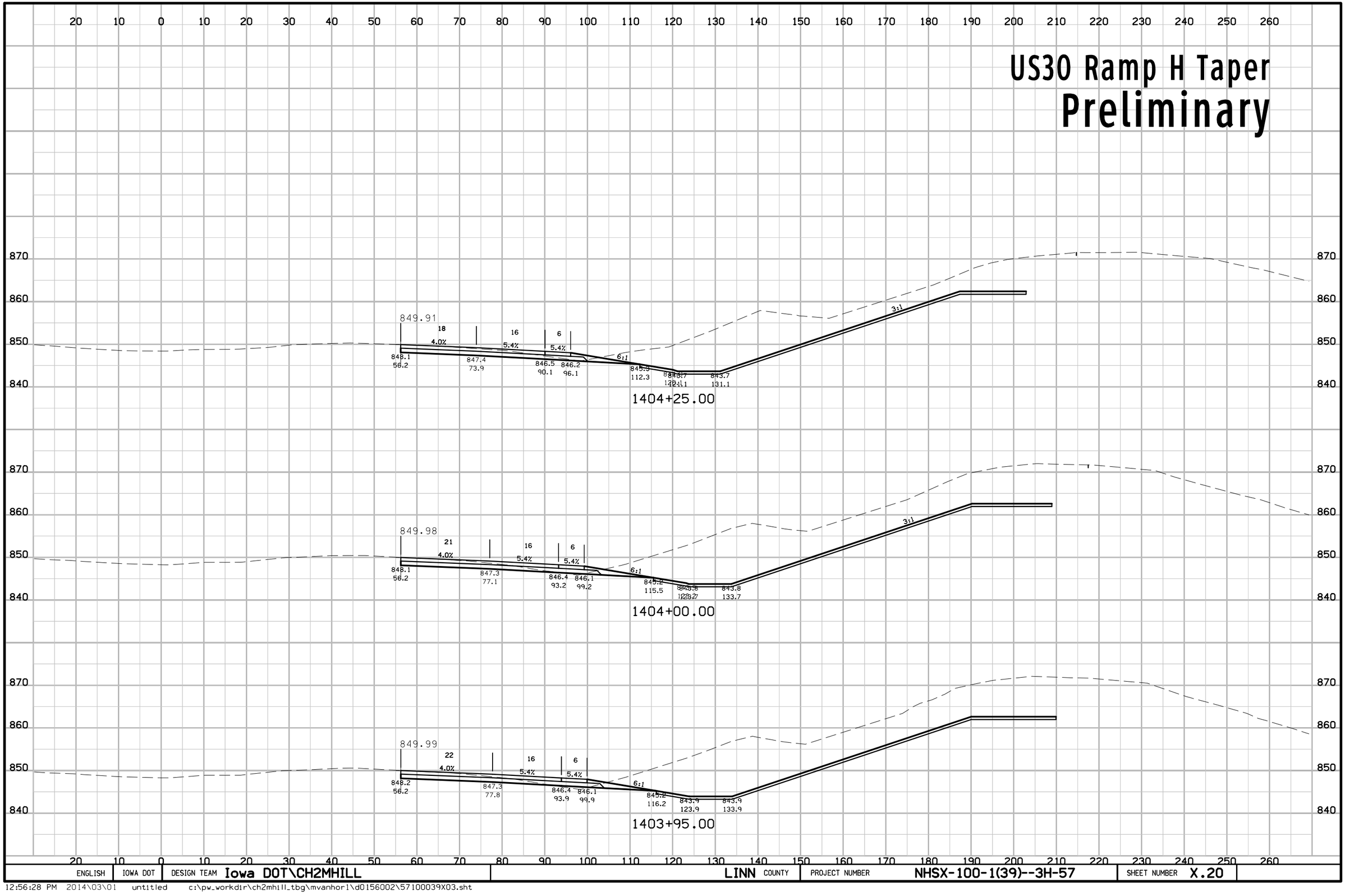
US30 Ramp H Taper

Preliminary



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US30 Ramp H Taper

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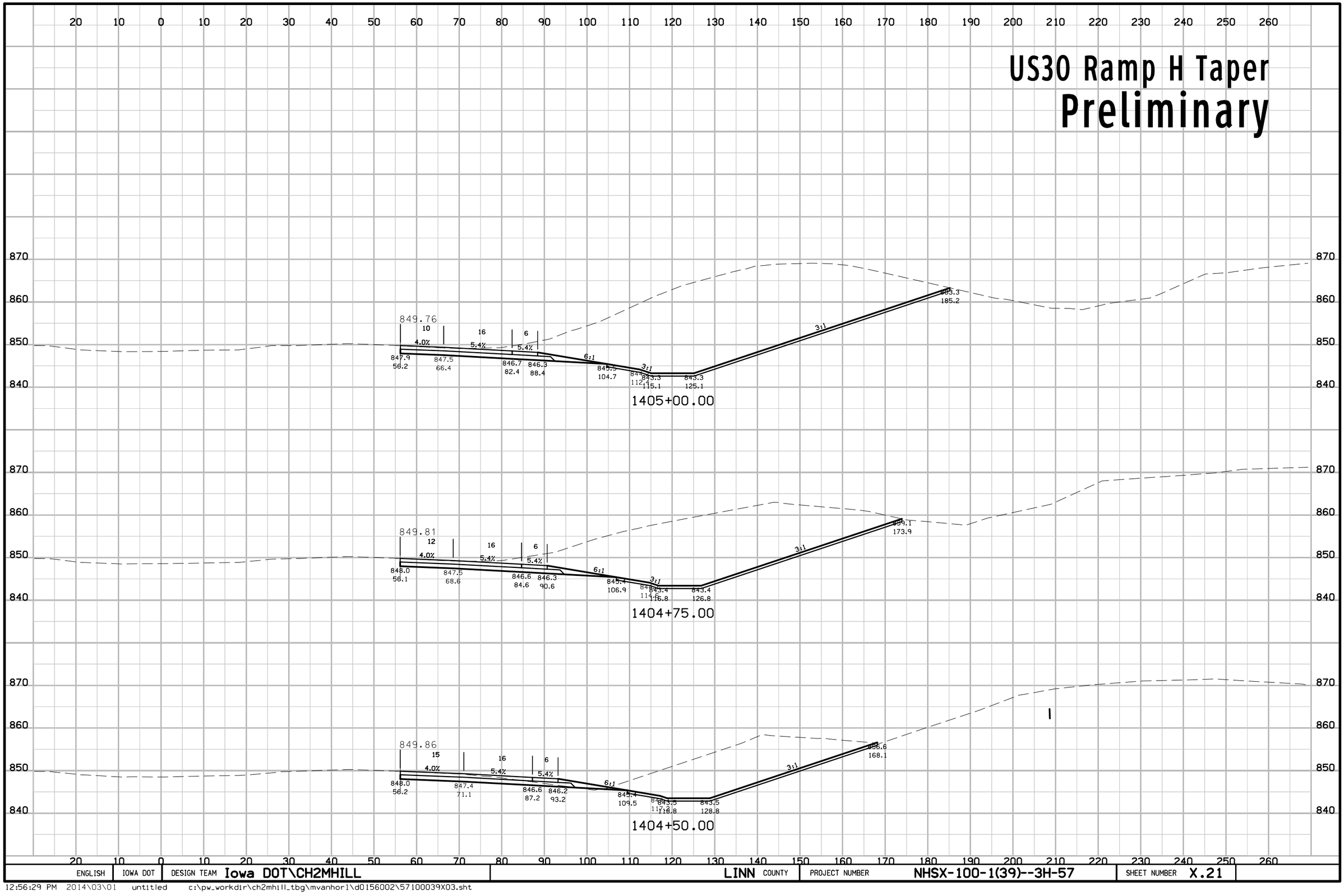

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US30 Ramp H Taper

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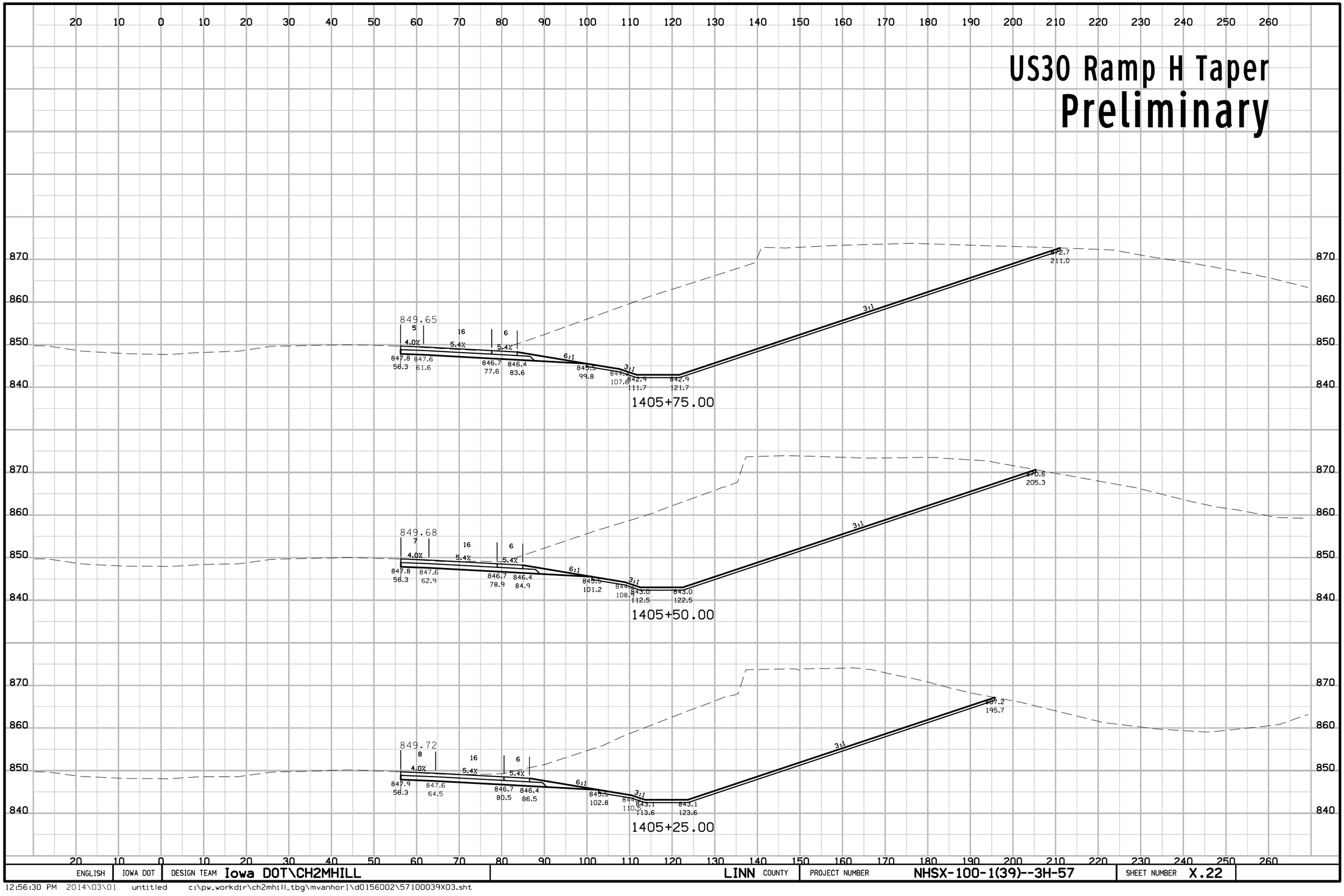

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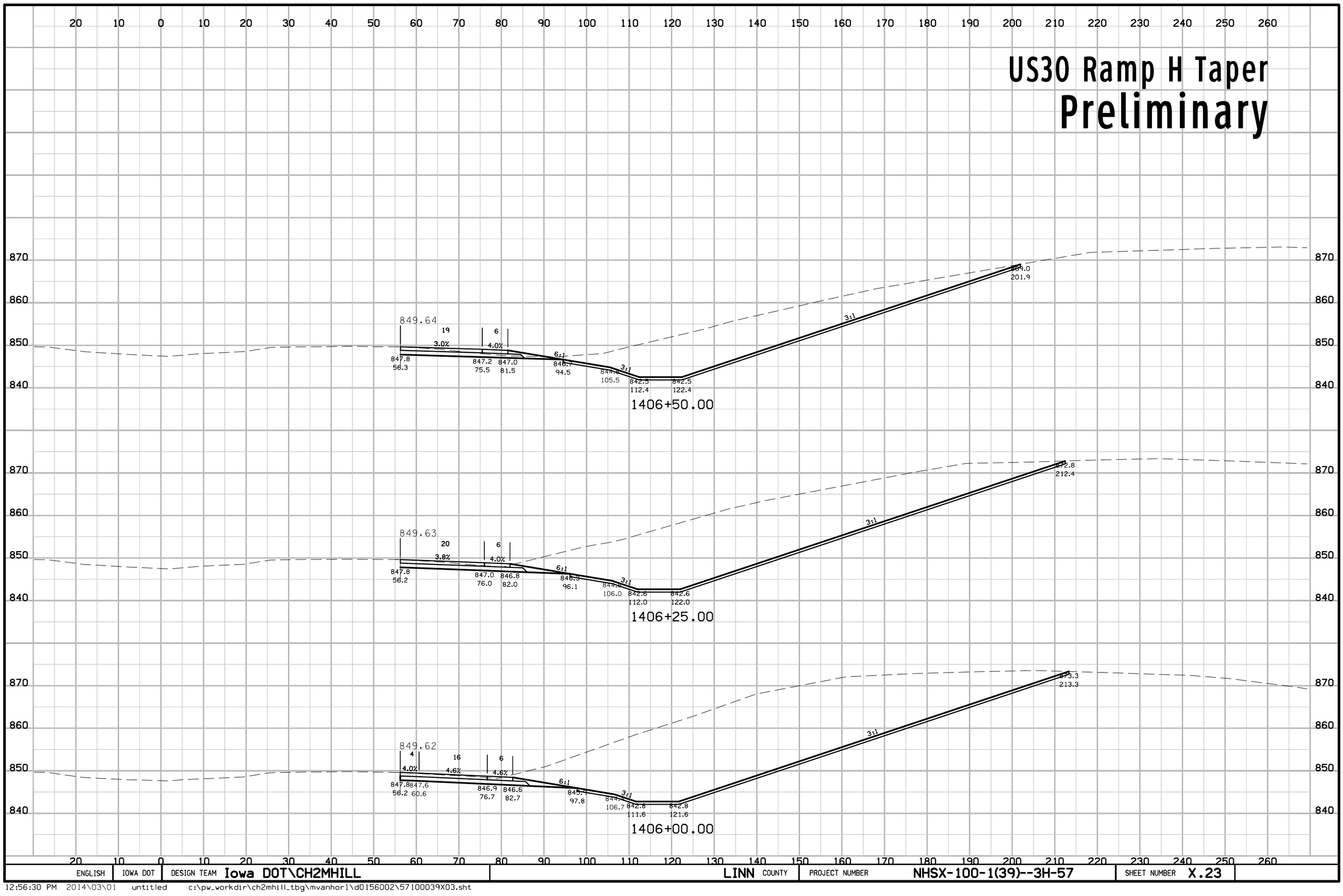
US30 Ramp H Taper

Preliminary



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US30 Ramp H Taper

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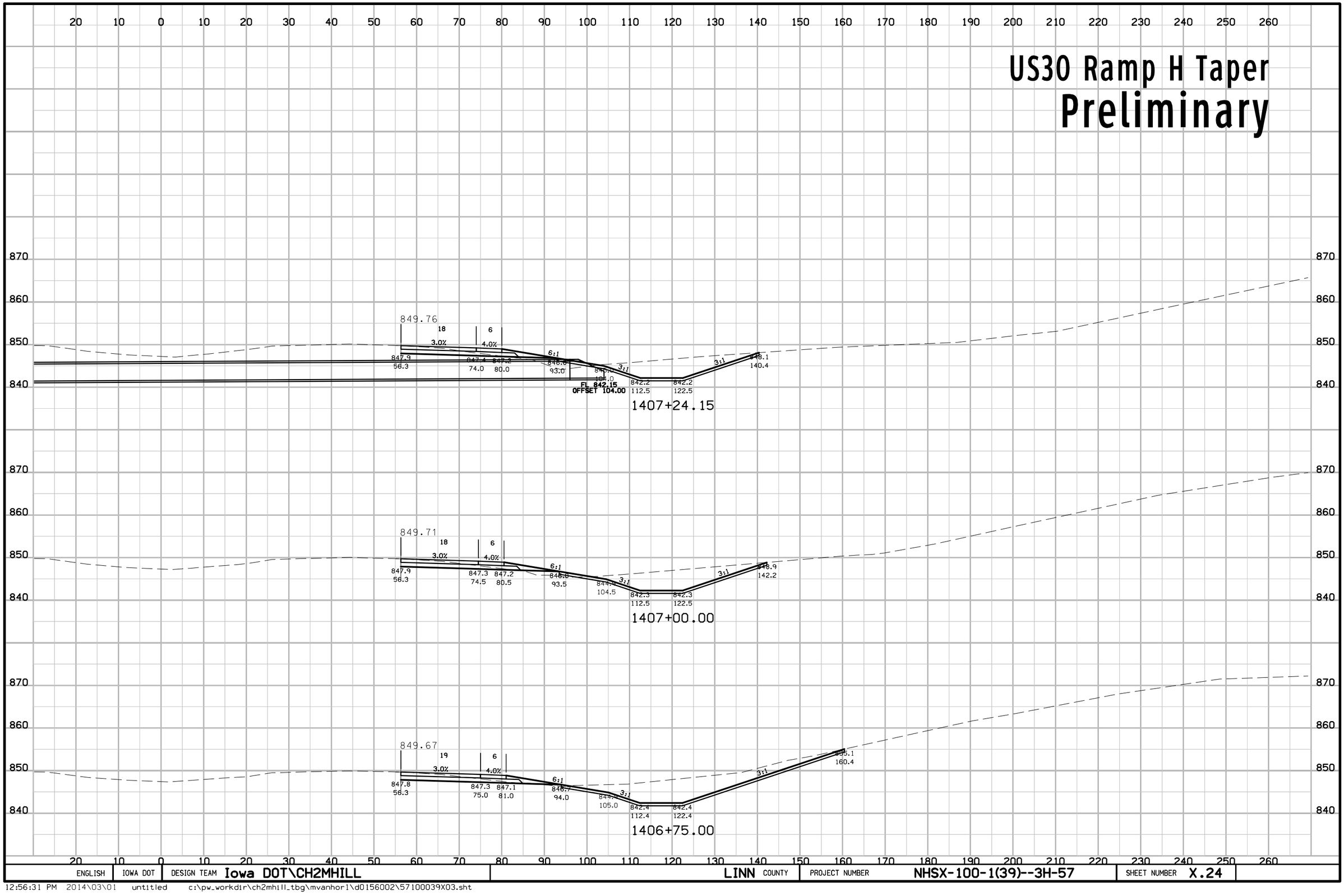

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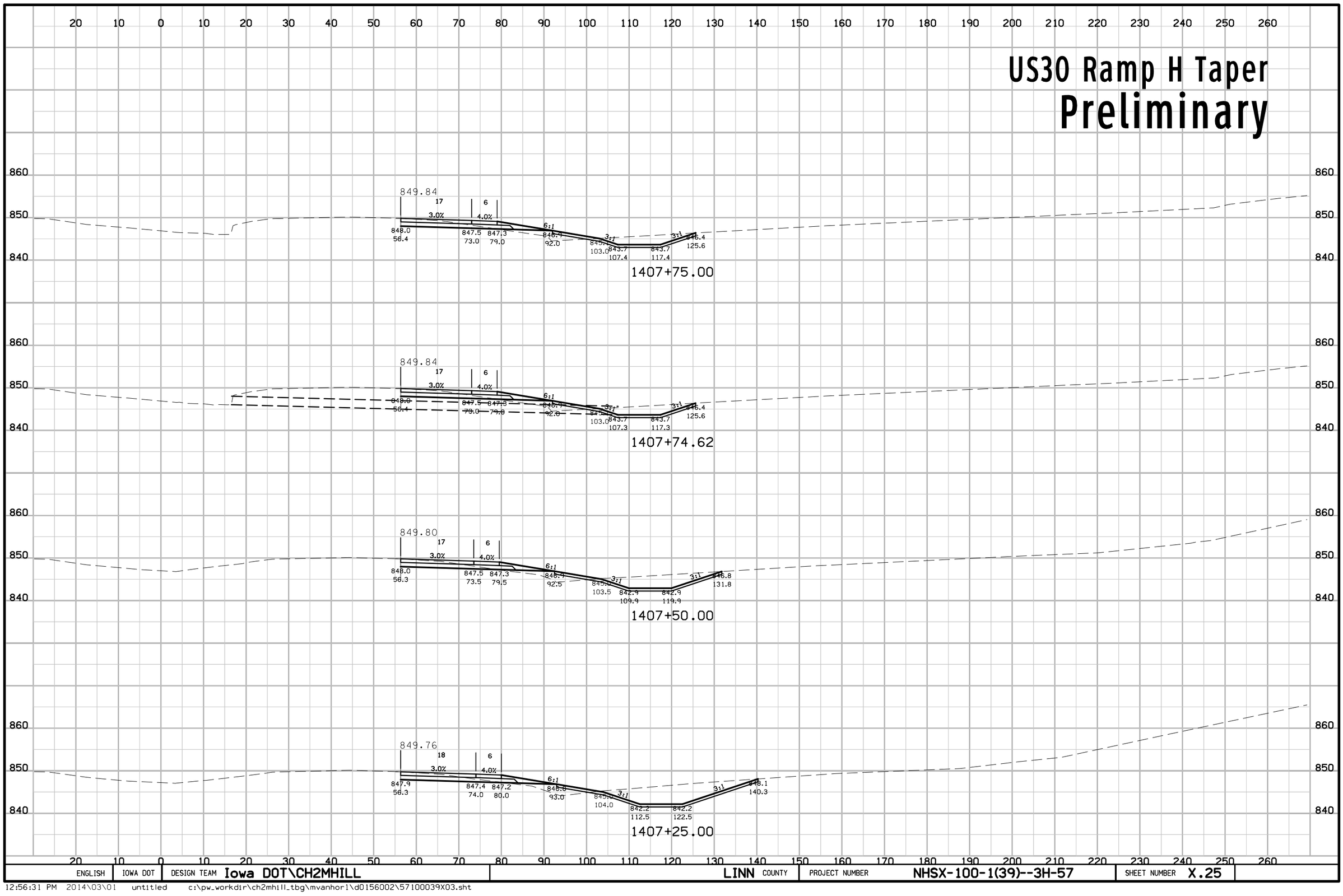
US30 Ramp H Taper

Preliminary



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US30 Ramp H Taper

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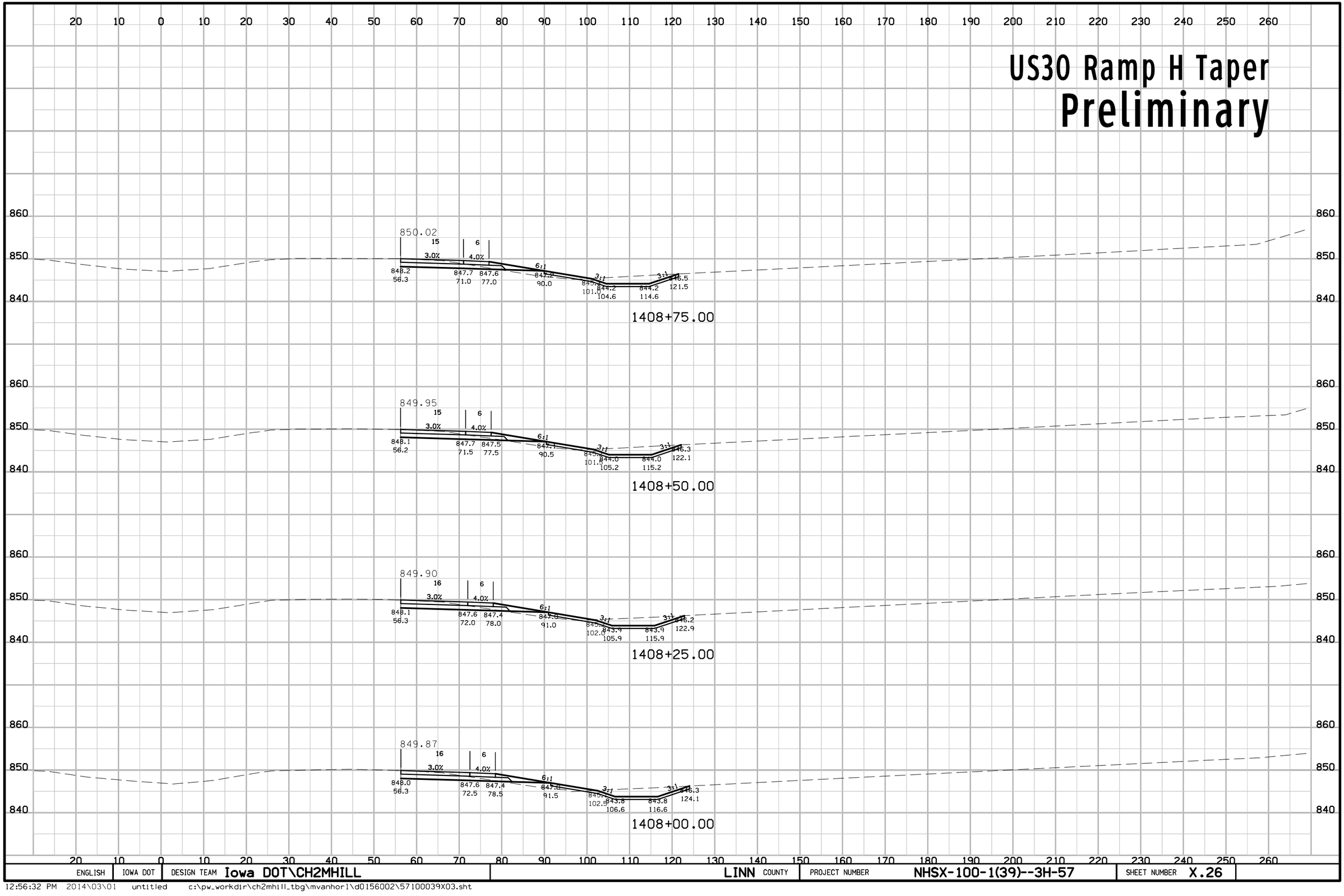

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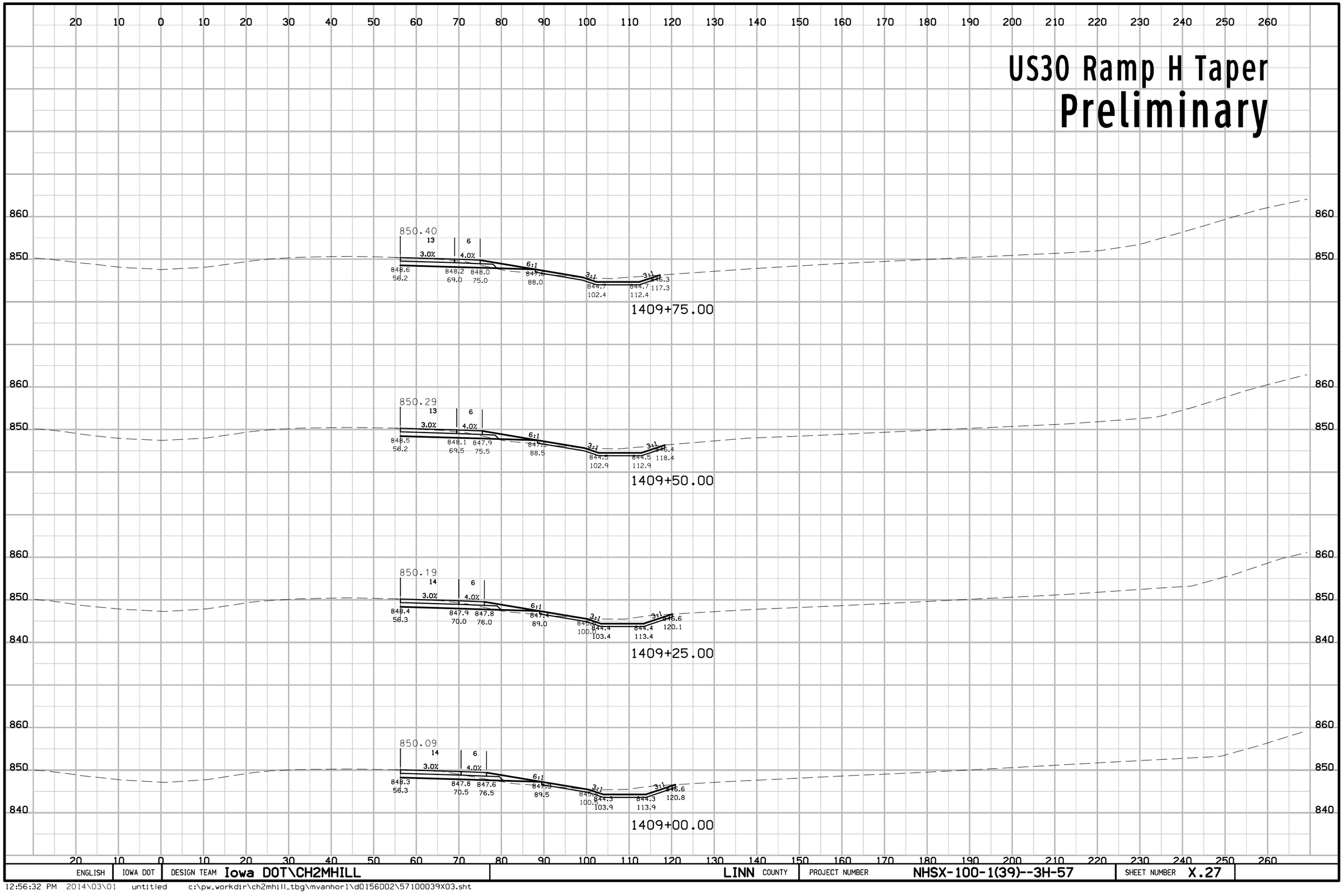
US30 Ramp H Taper

Preliminary



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US30 Ramp H Taper
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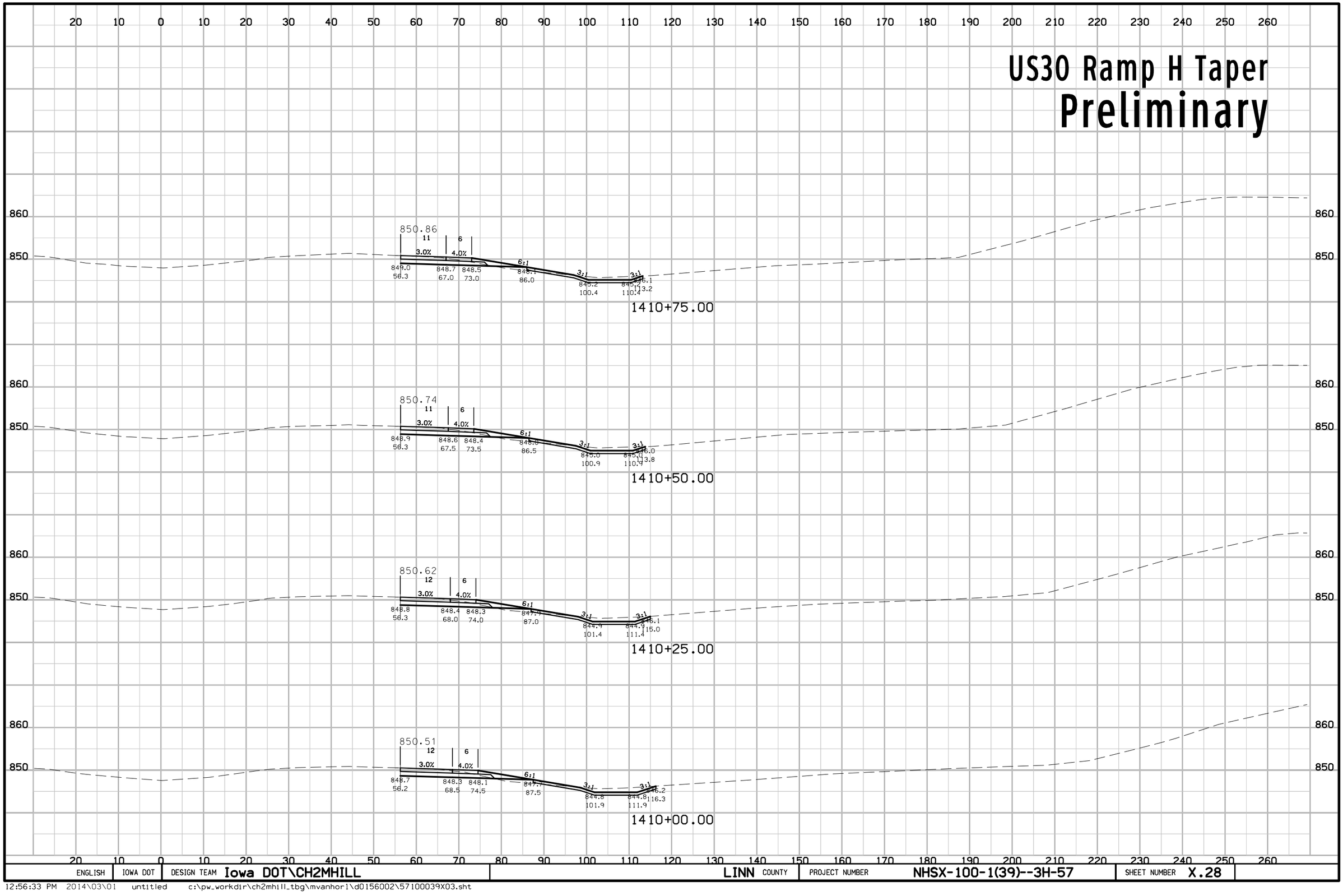

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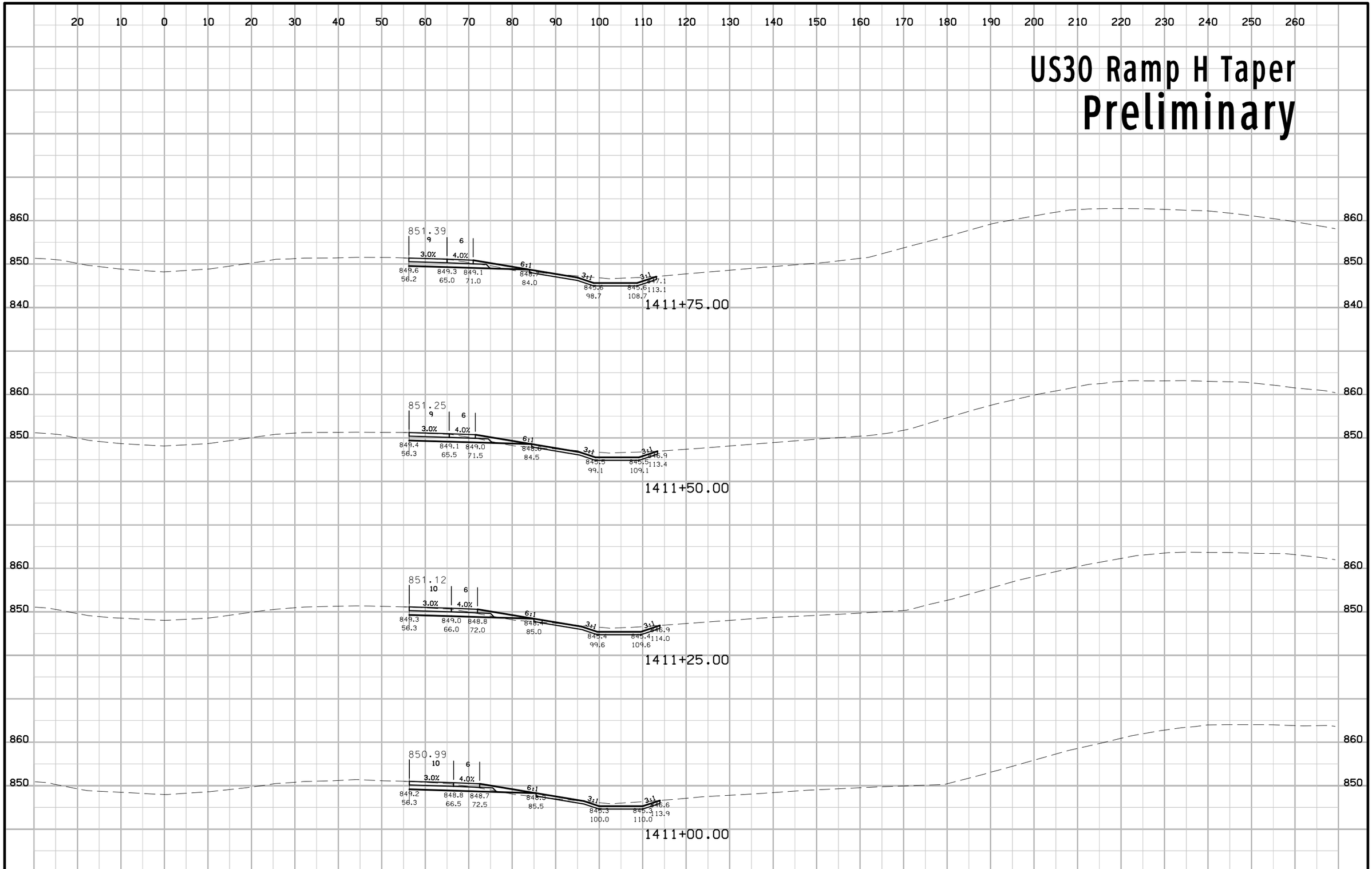
US30 Ramp H Taper

Preliminary



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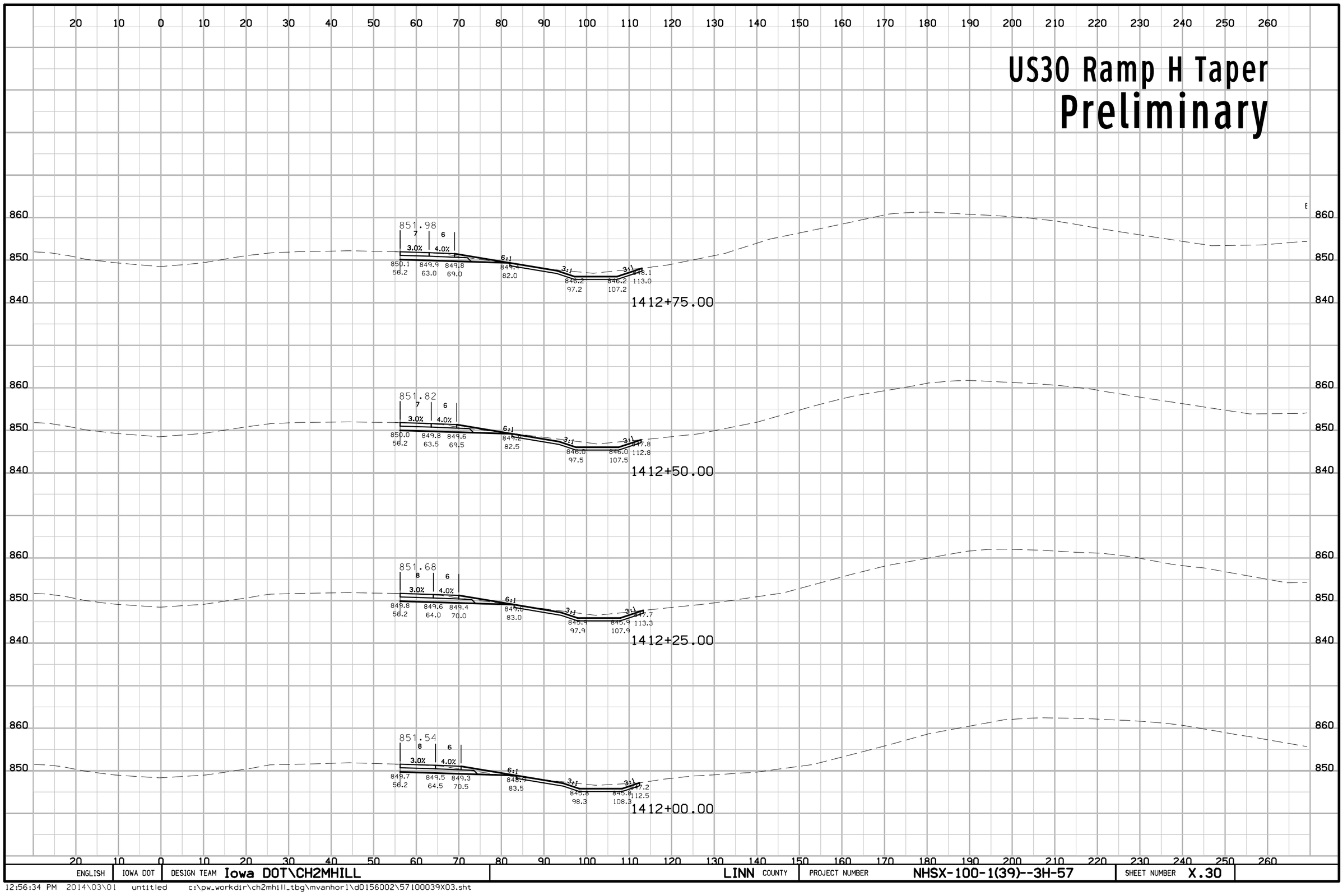
US30 Ramp H Taper

Preliminary



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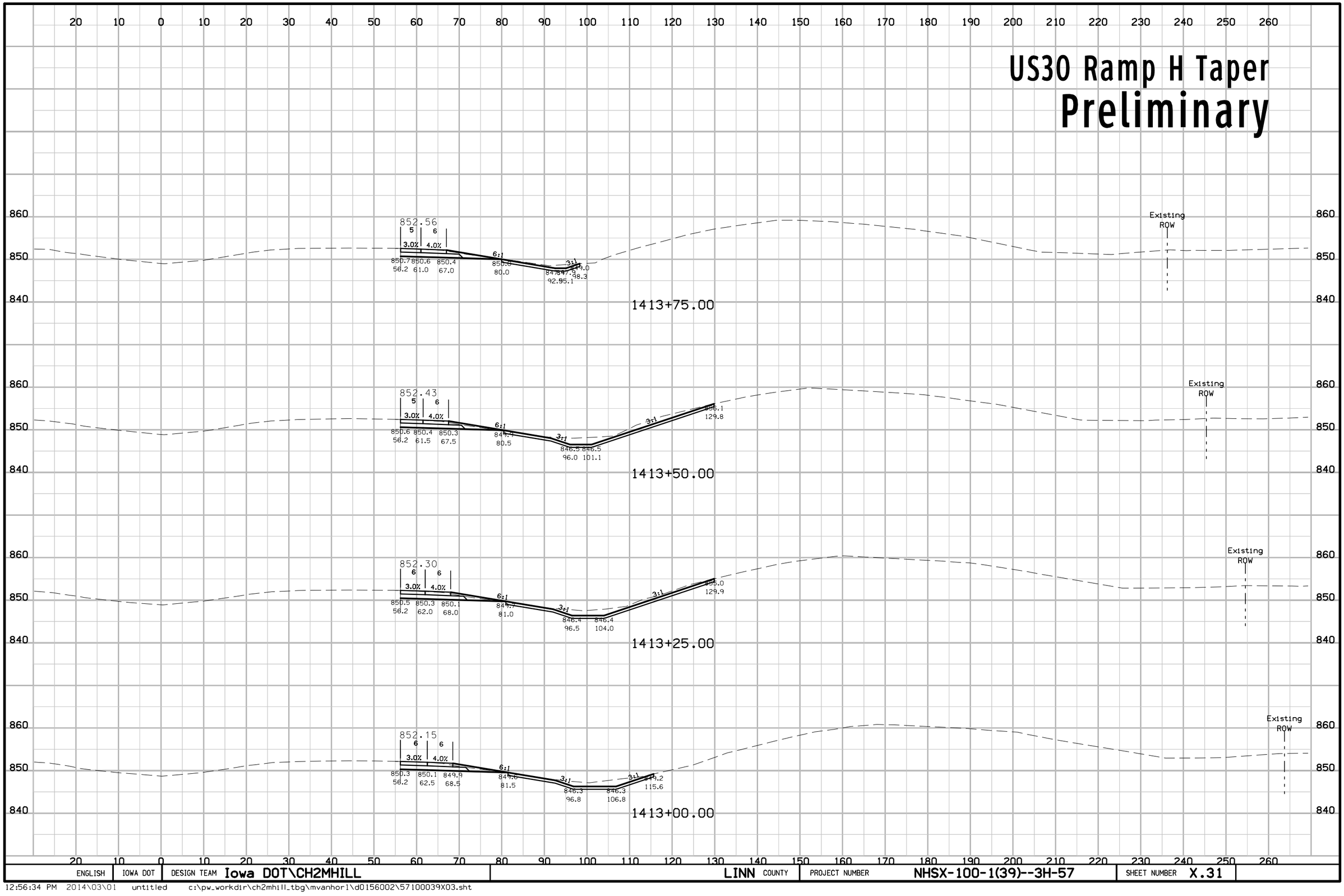

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US30 Ramp H Taper
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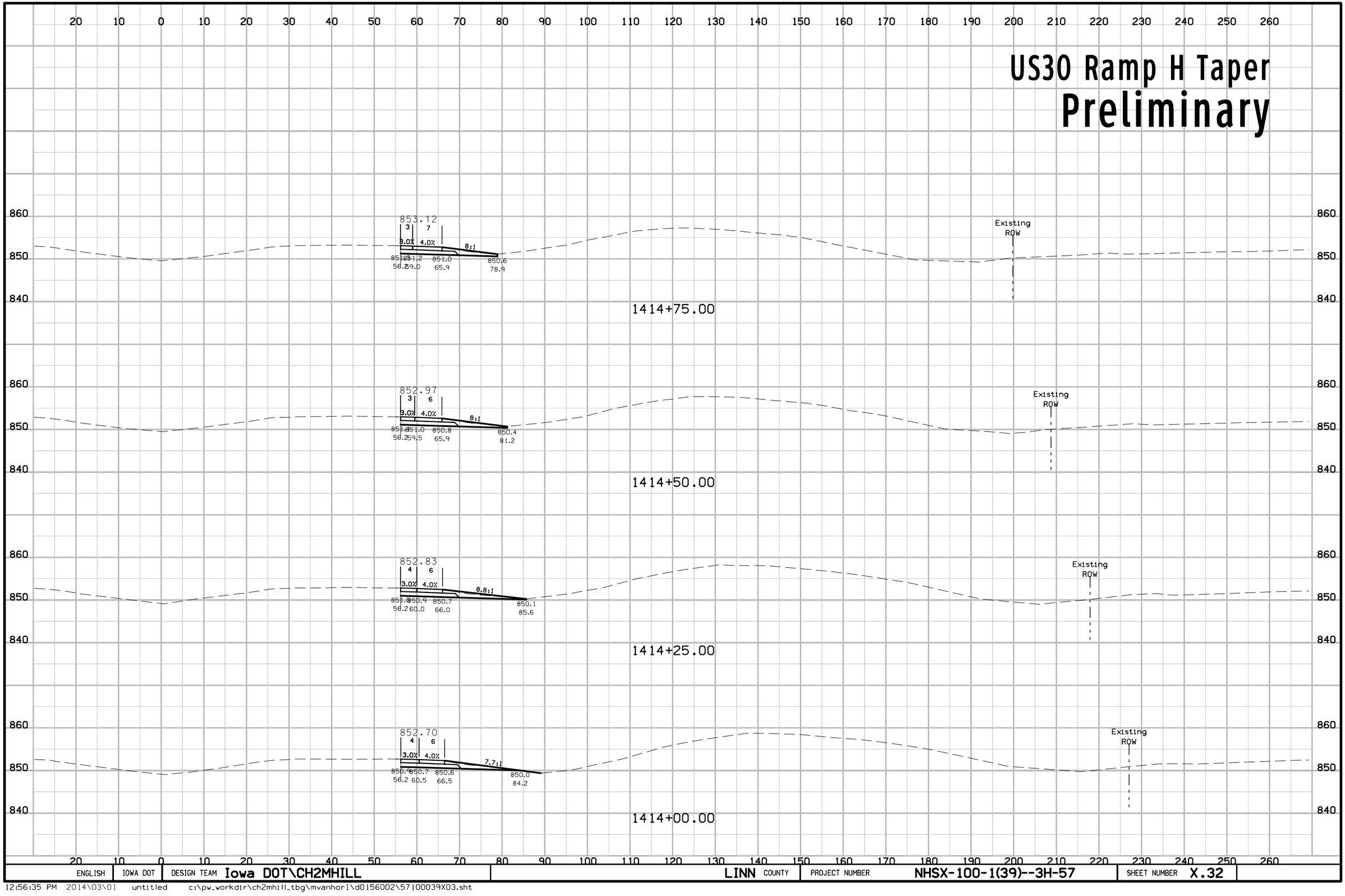

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US30 Ramp H Taper
Preliminary

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860 850 840

853.63
9
4.0%
9.1:1
851.5
66.0
851.2
75.0
Existing ROW

1415+75.00

853.51
8
4.0%
8:1
851.4
65.9
851.1
75.7
Existing ROW

1415+50.00

853.39
8
4.0%
8.1:1
851.3
65.9
851.0
76.2
Existing ROW

1415+25.00

853.27
2
7
3.0%
4.0%
8:1
851.1
65.9
850.8
77.1
Existing ROW

1415+00.00

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.33

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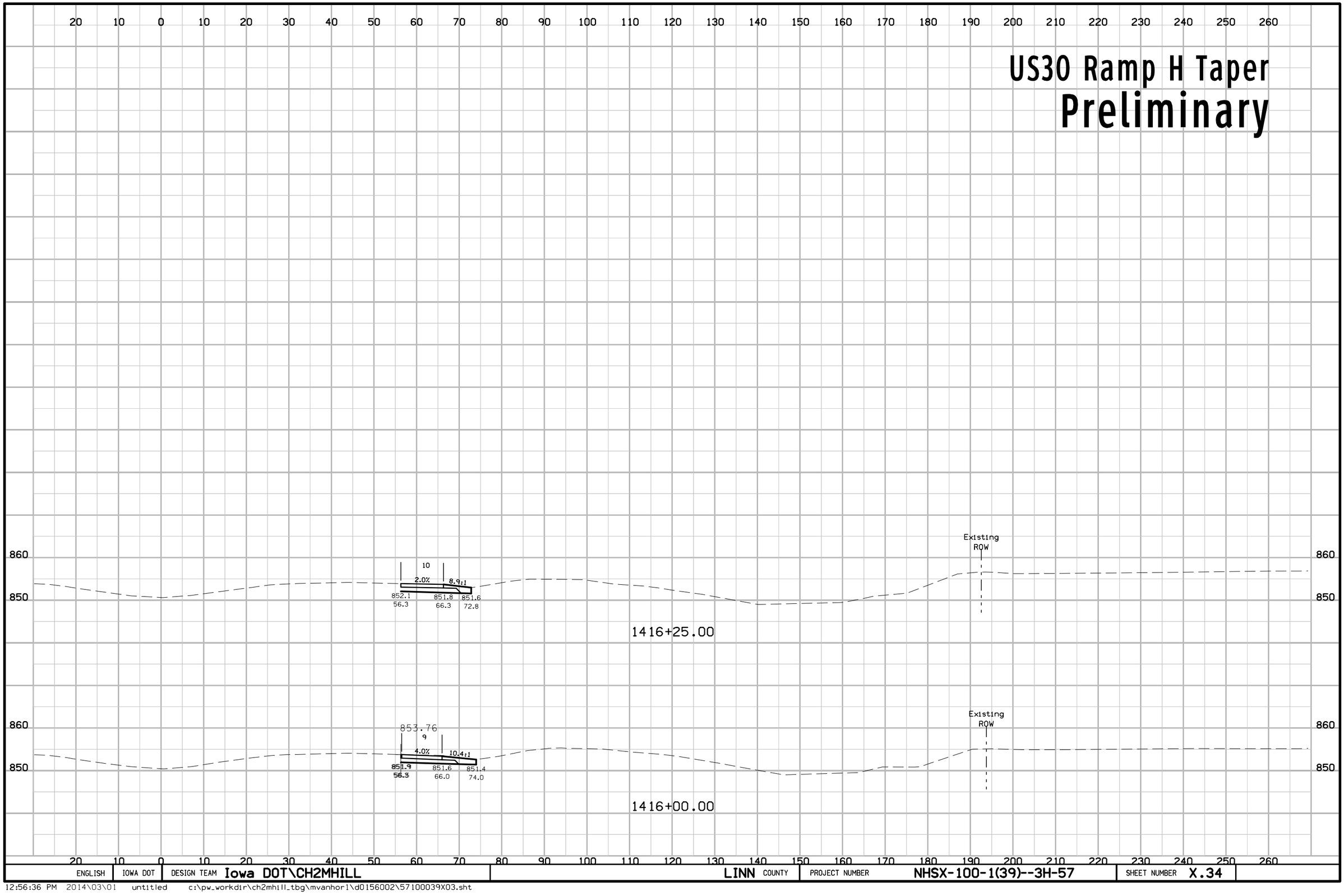
US30 Ramp H Taper

Preliminary



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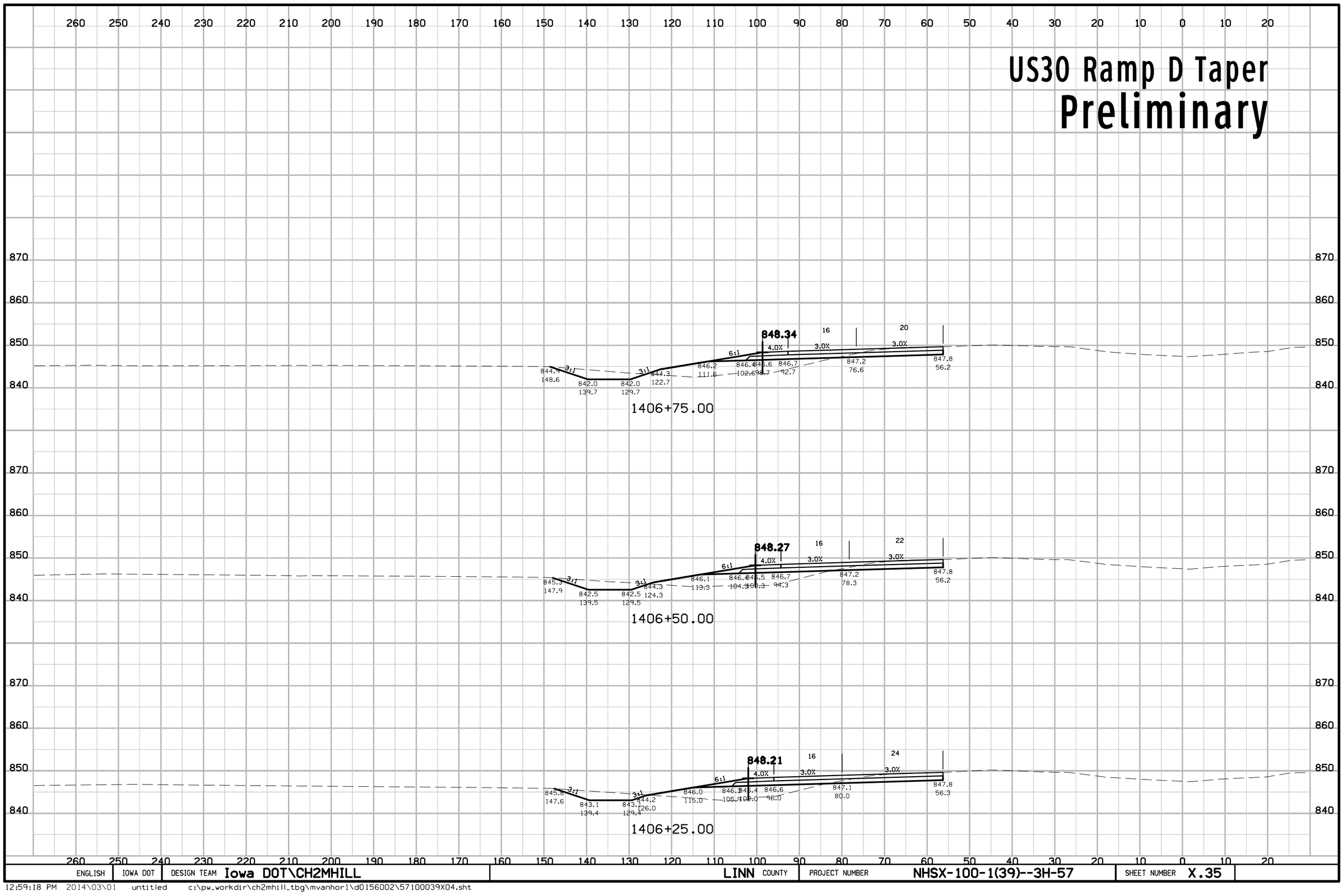
US30 Ramp D Taper

Preliminary



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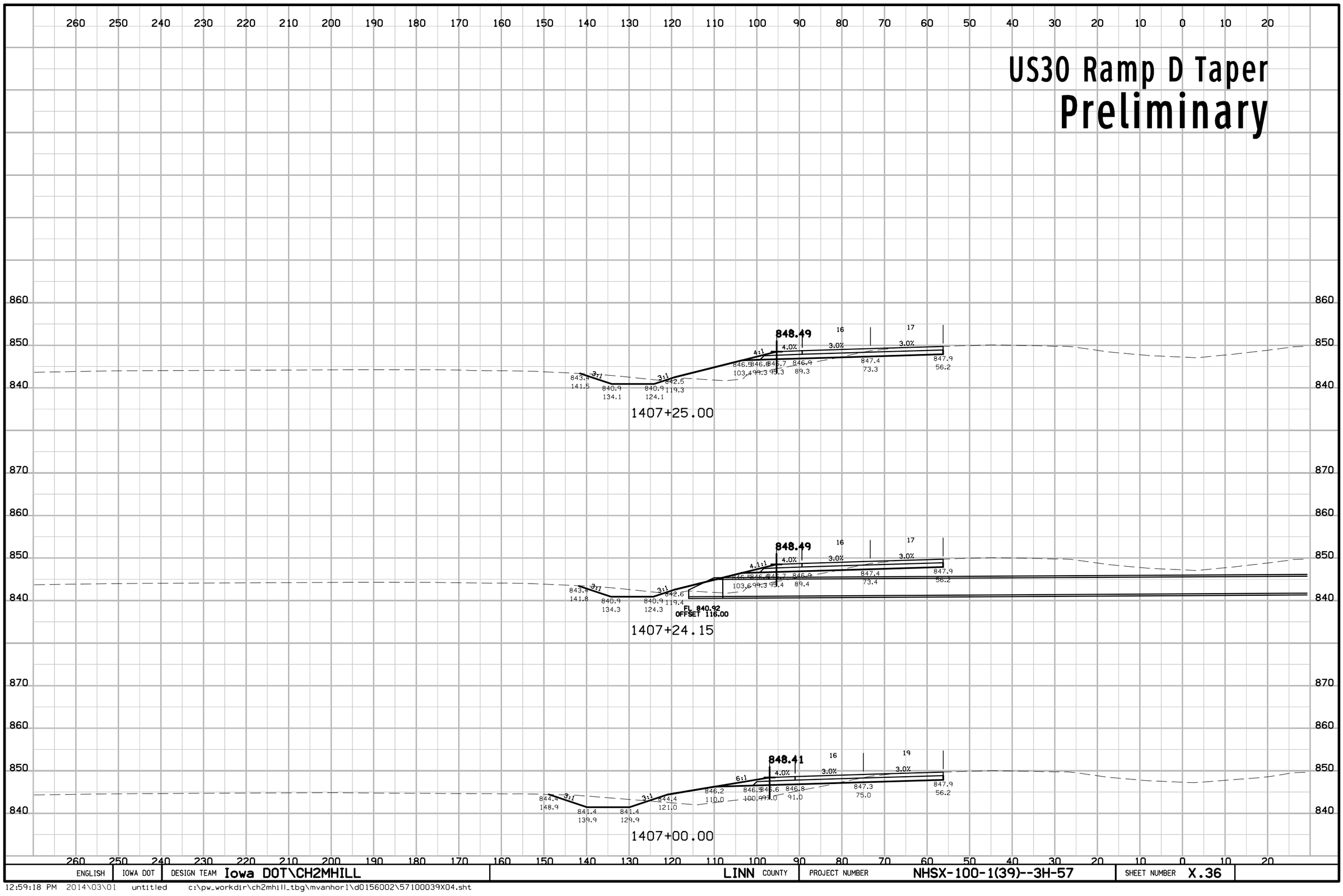
US30 Ramp D Taper

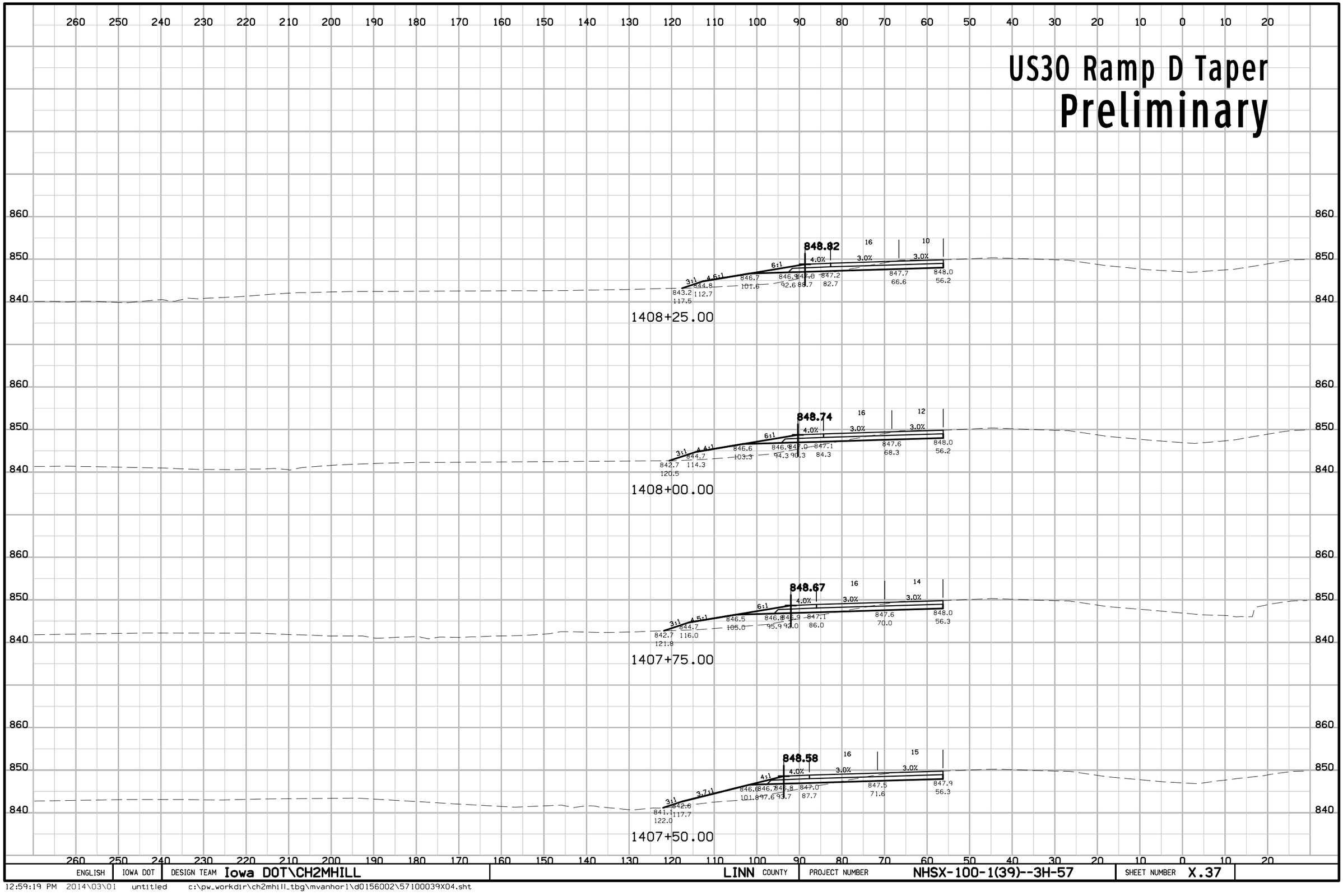
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.36

US30 Ramp D Taper

Preliminary



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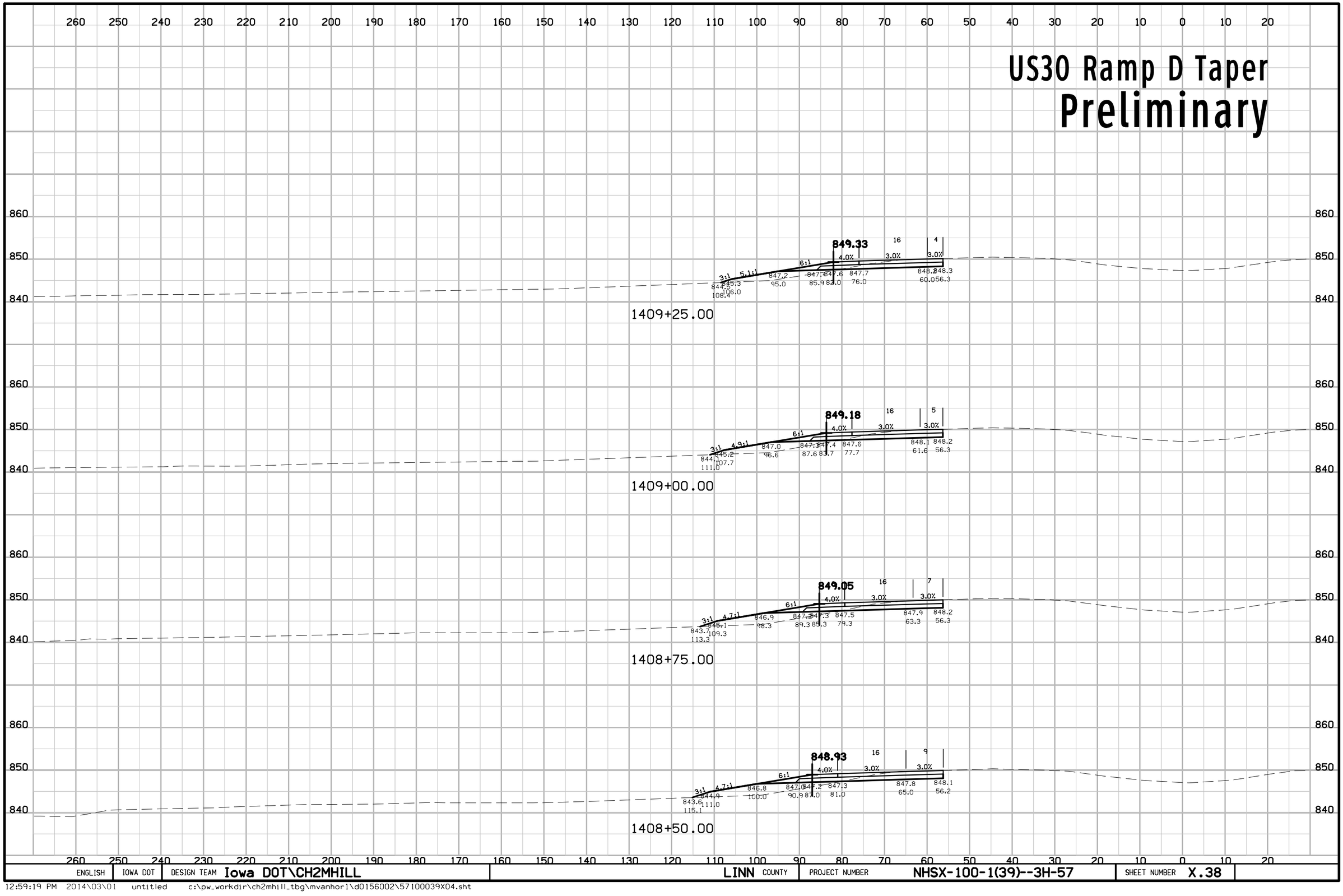
US30 Ramp D Taper

Preliminary



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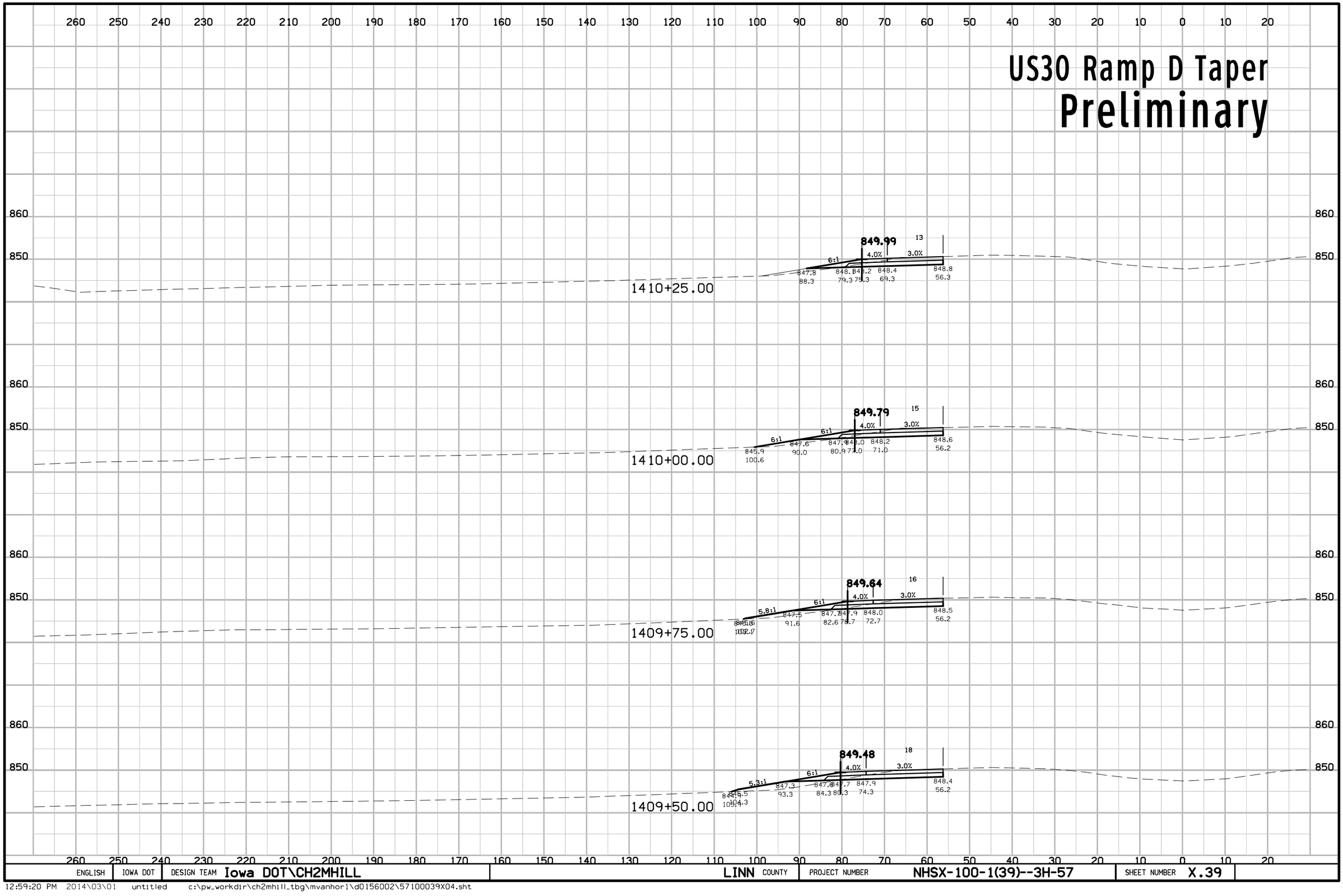
US30 Ramp D Taper

Preliminary



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

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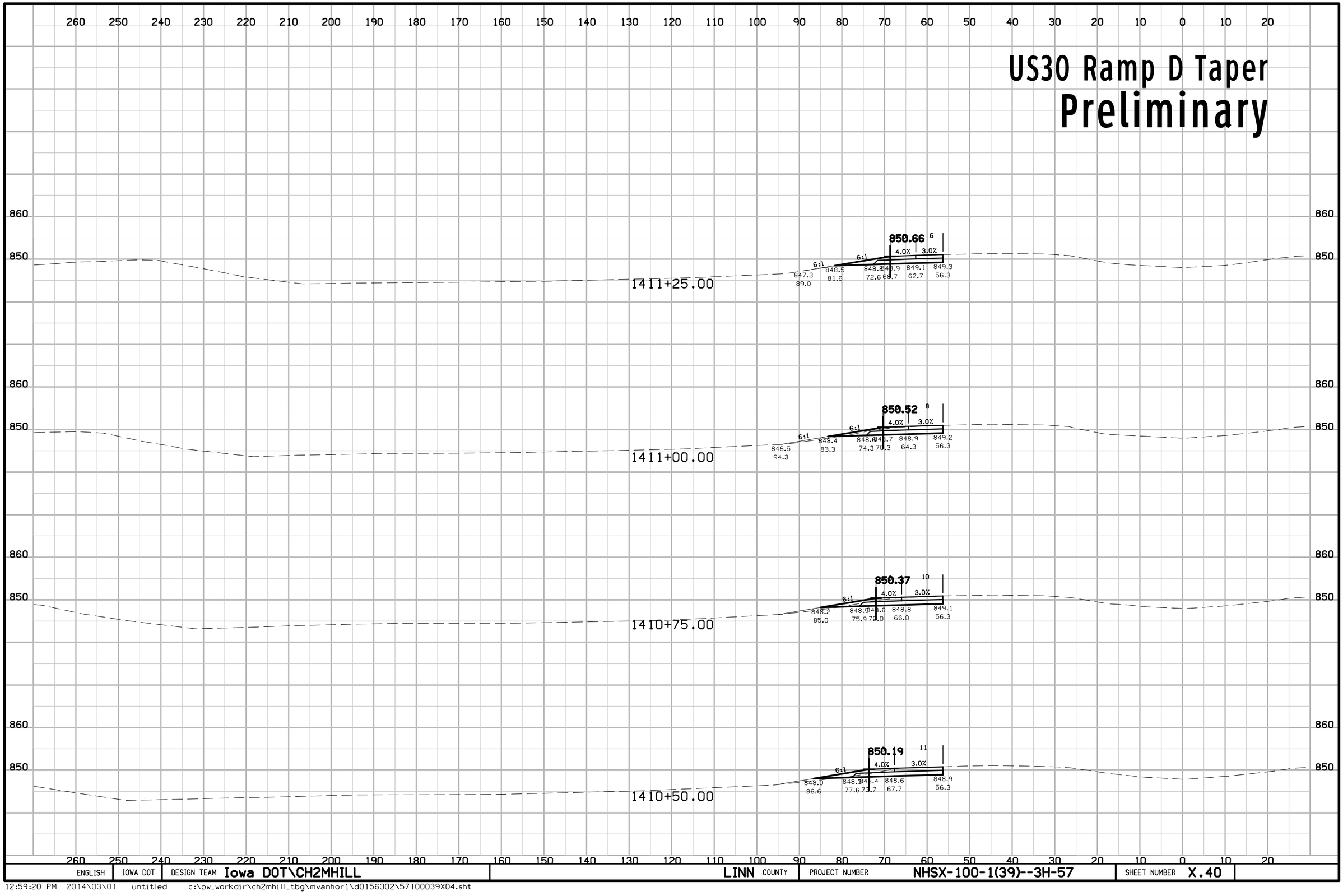
US30 Ramp D Taper

Preliminary



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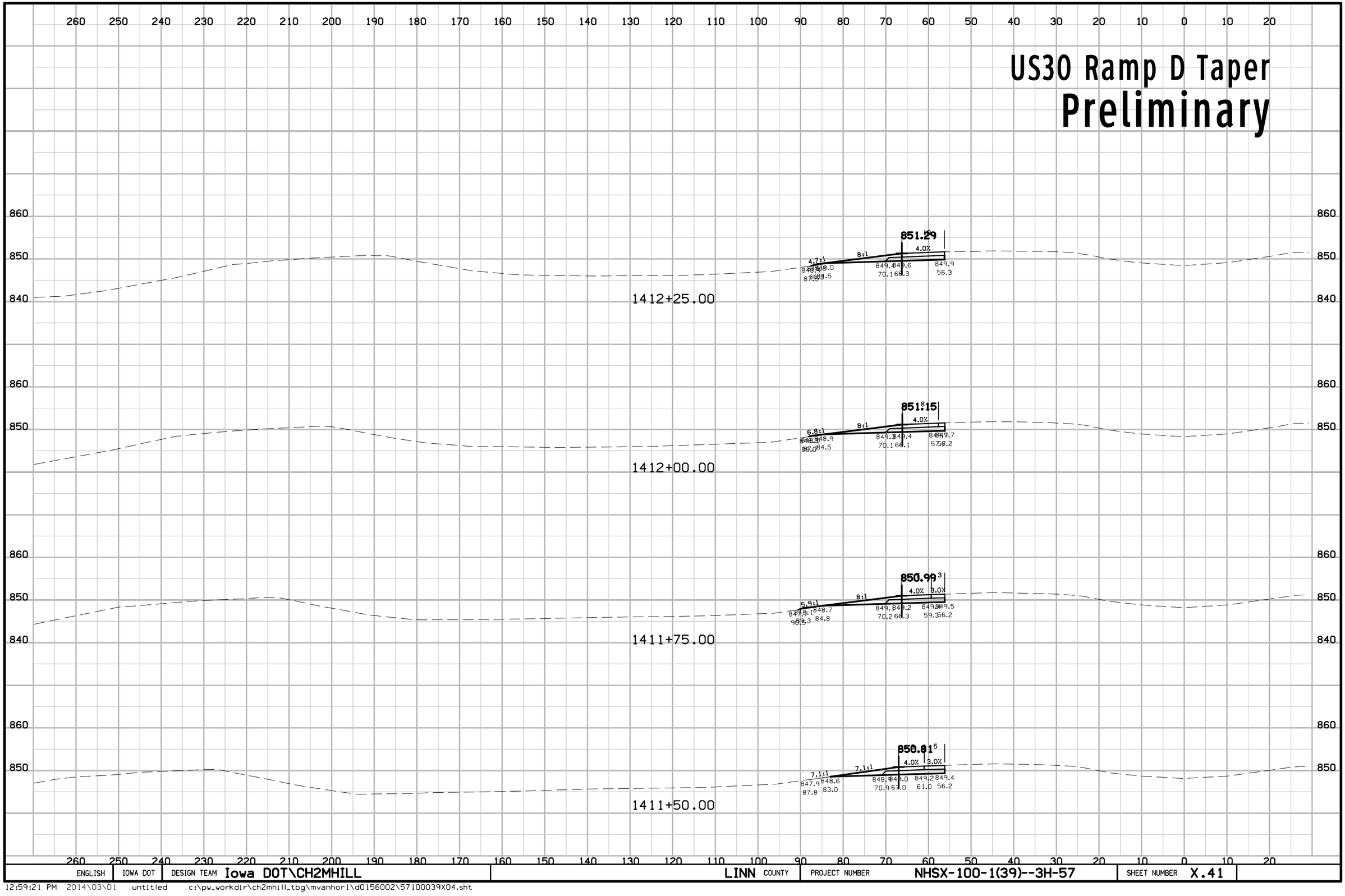
US30 Ramp D Taper

Preliminary



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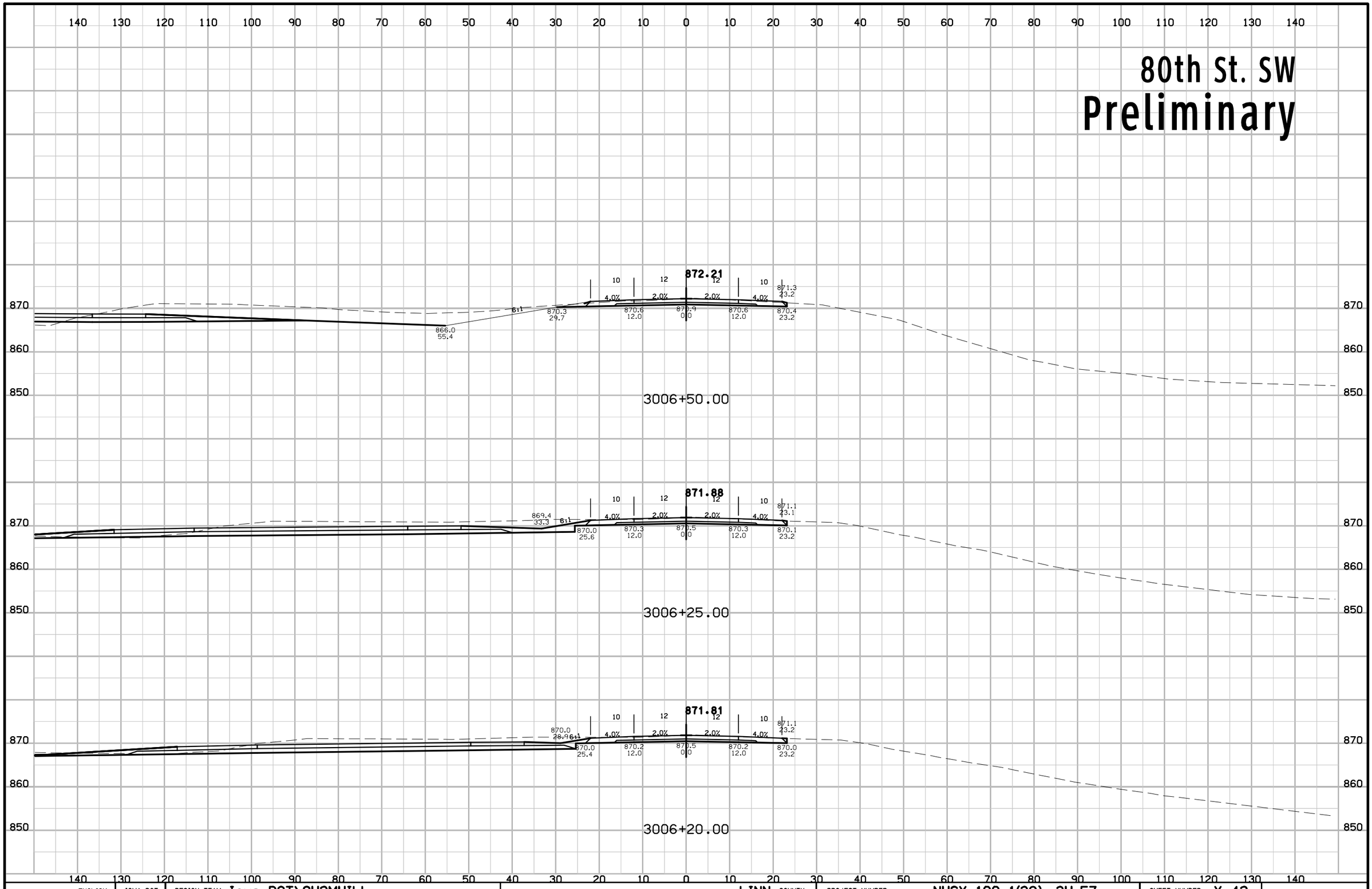
80th St. SW
Preliminary



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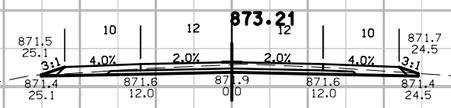
80th St. SW

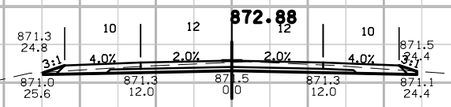
Preliminary

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

880
870
860
850



3007+25.00



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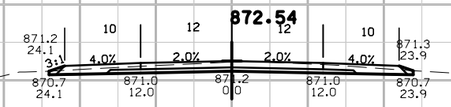

3006+75.00

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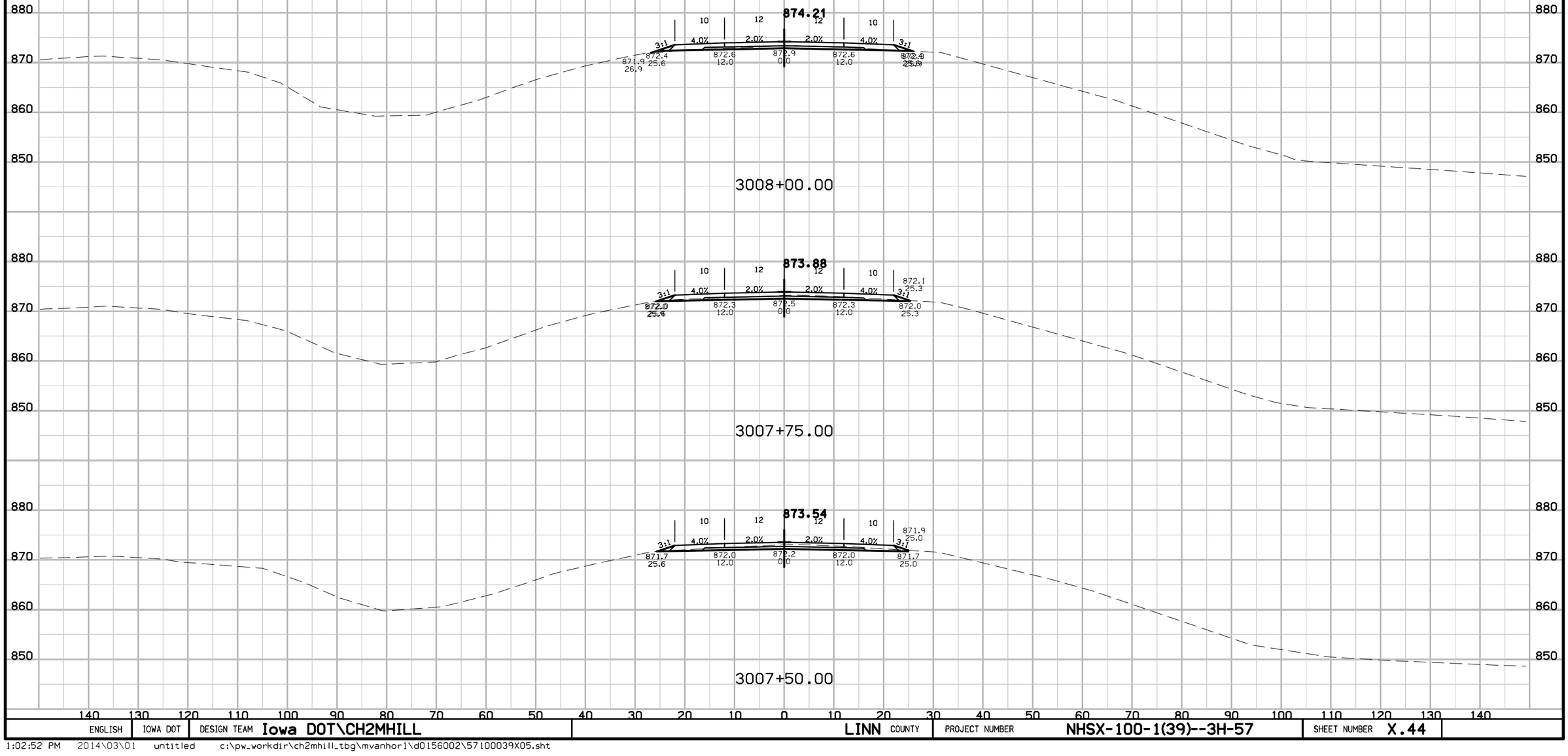
80th St. SW

Preliminary



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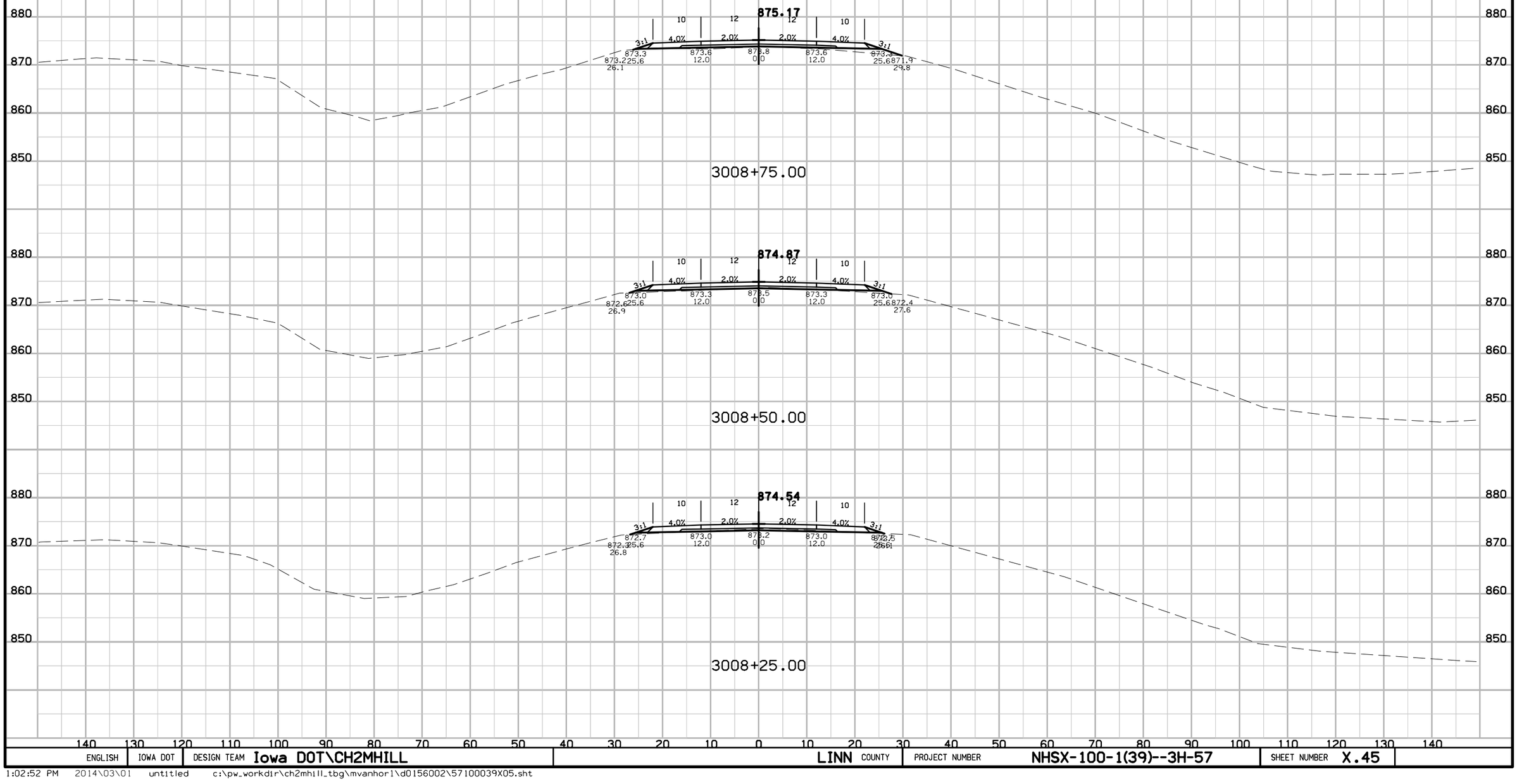
80th St. SW

Preliminary



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80th St. SW
Preliminary

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

880 870 860 850

874.60
10 12 12 10
4.0% 2.0% 2.0% 4.0%
3:1
873.0 873.3 873.0 872.8 871.7
12.0 0.0 12.0 25.6 28.8

3013+00.00

875.66
10 12 12 10
3:1 4.0% 2.0% 2.0% 4.0%
873.8 874.1 874.3 874.1
25.6 12.0 0.0 12.0
870.7
34.9

3009+25.00

875.44
10 12 12 10
874.0 4.0% 2.0% 2.0% 4.0%
24.3 3:1
873.6 873.9 874.1 873.9
24.3 12.0 0.0 12.0

3009+00.00

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.46

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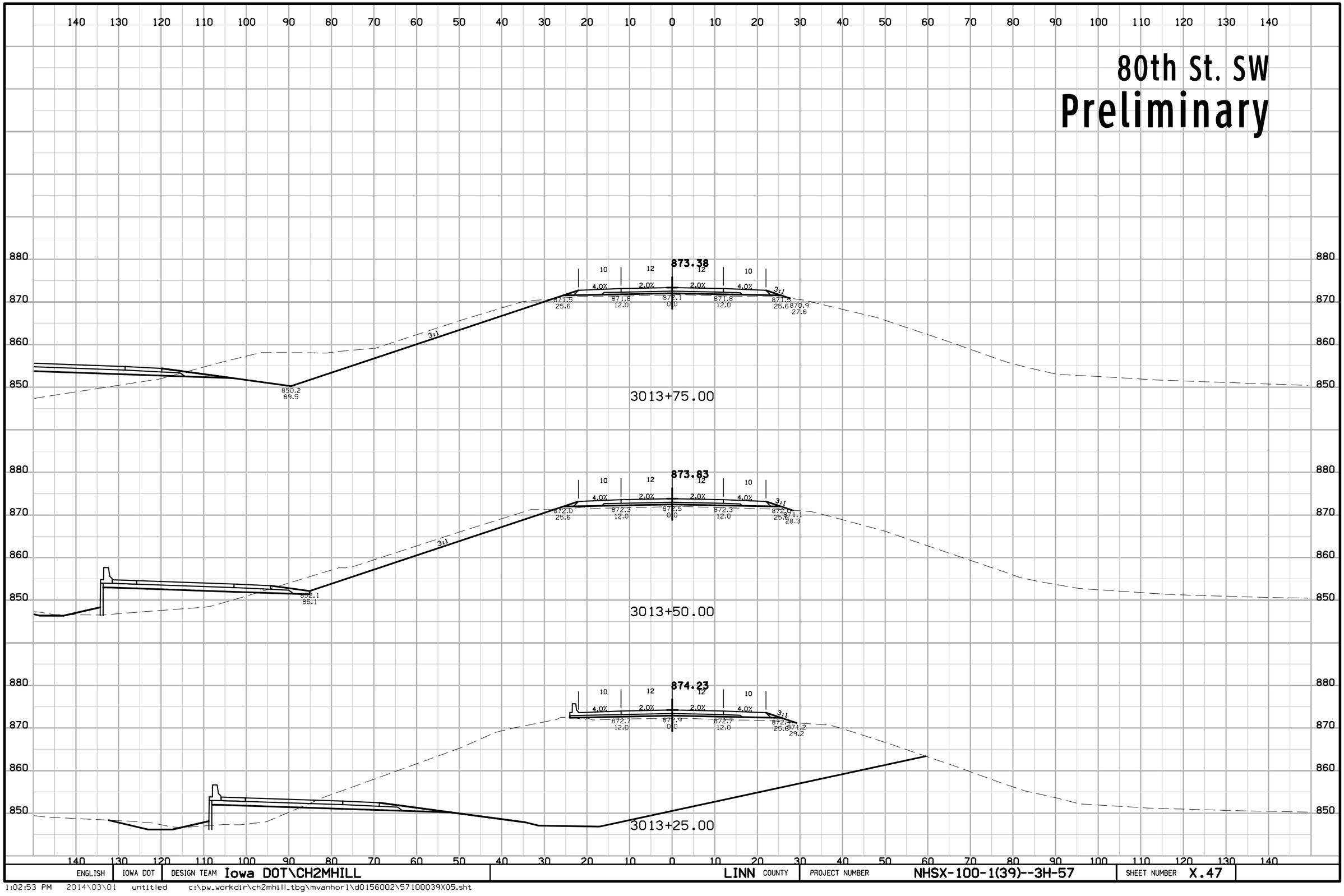
80th St. SW
Preliminary



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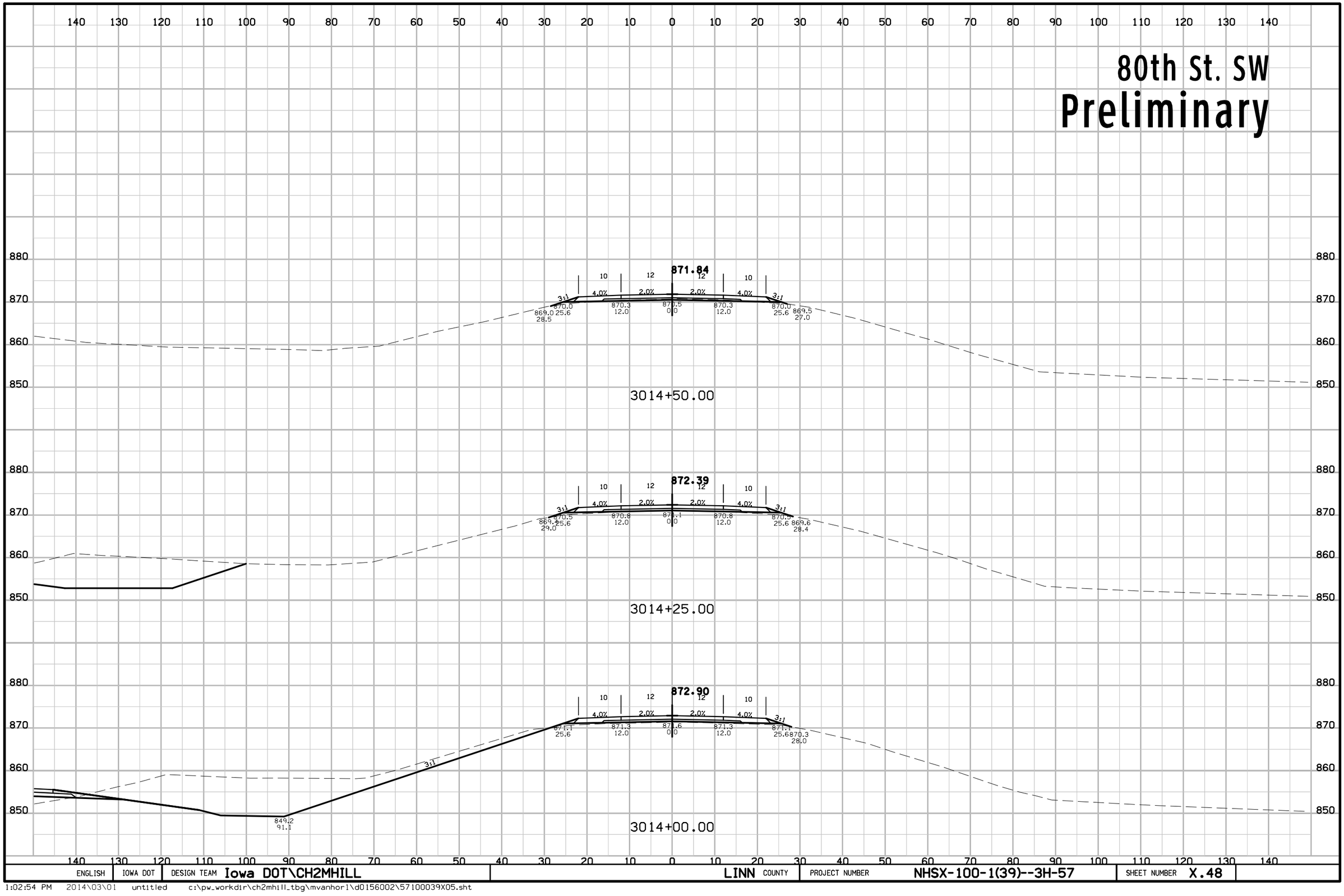
80th St. SW

Preliminary



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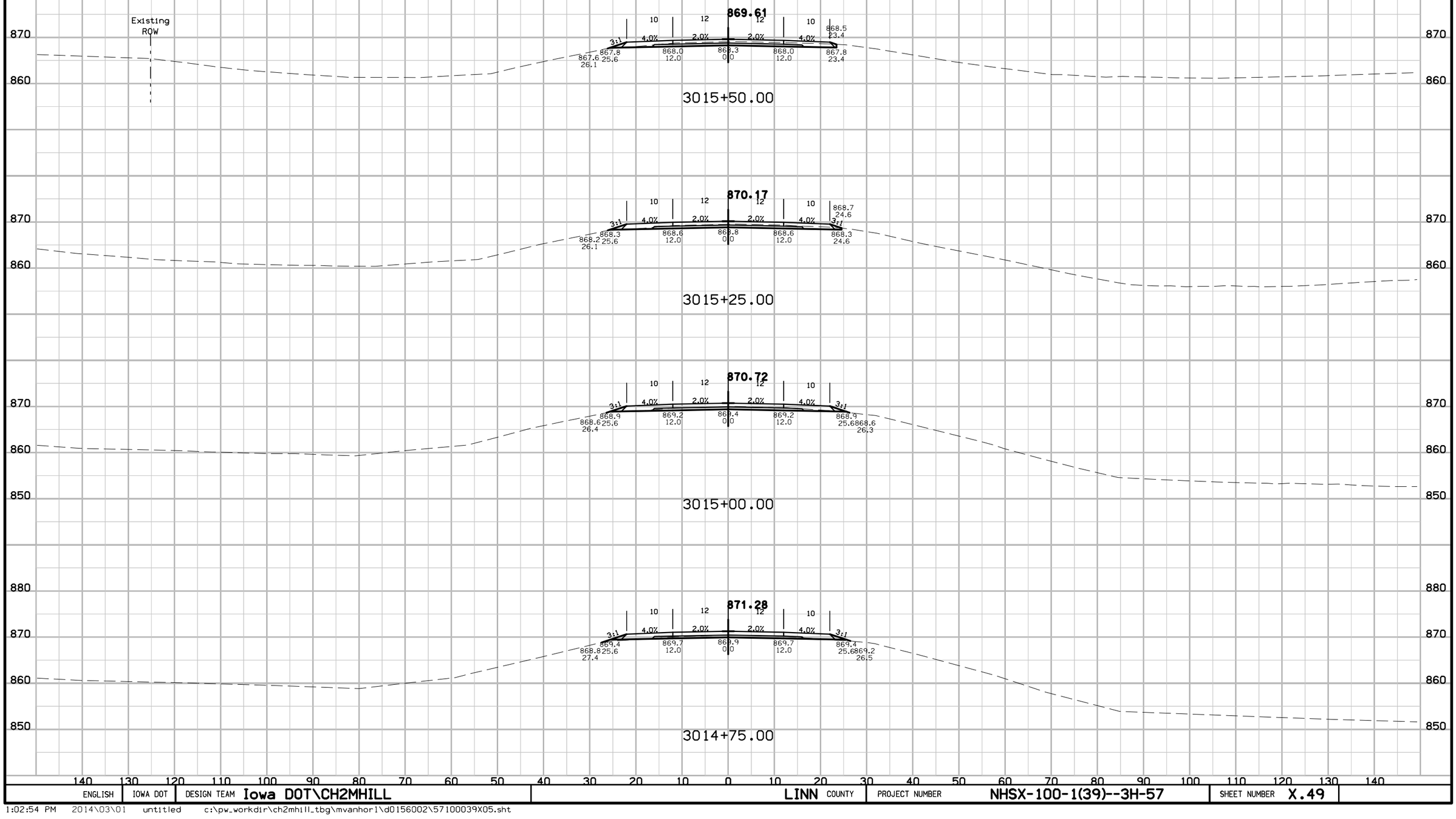
80th St. SW
Preliminary



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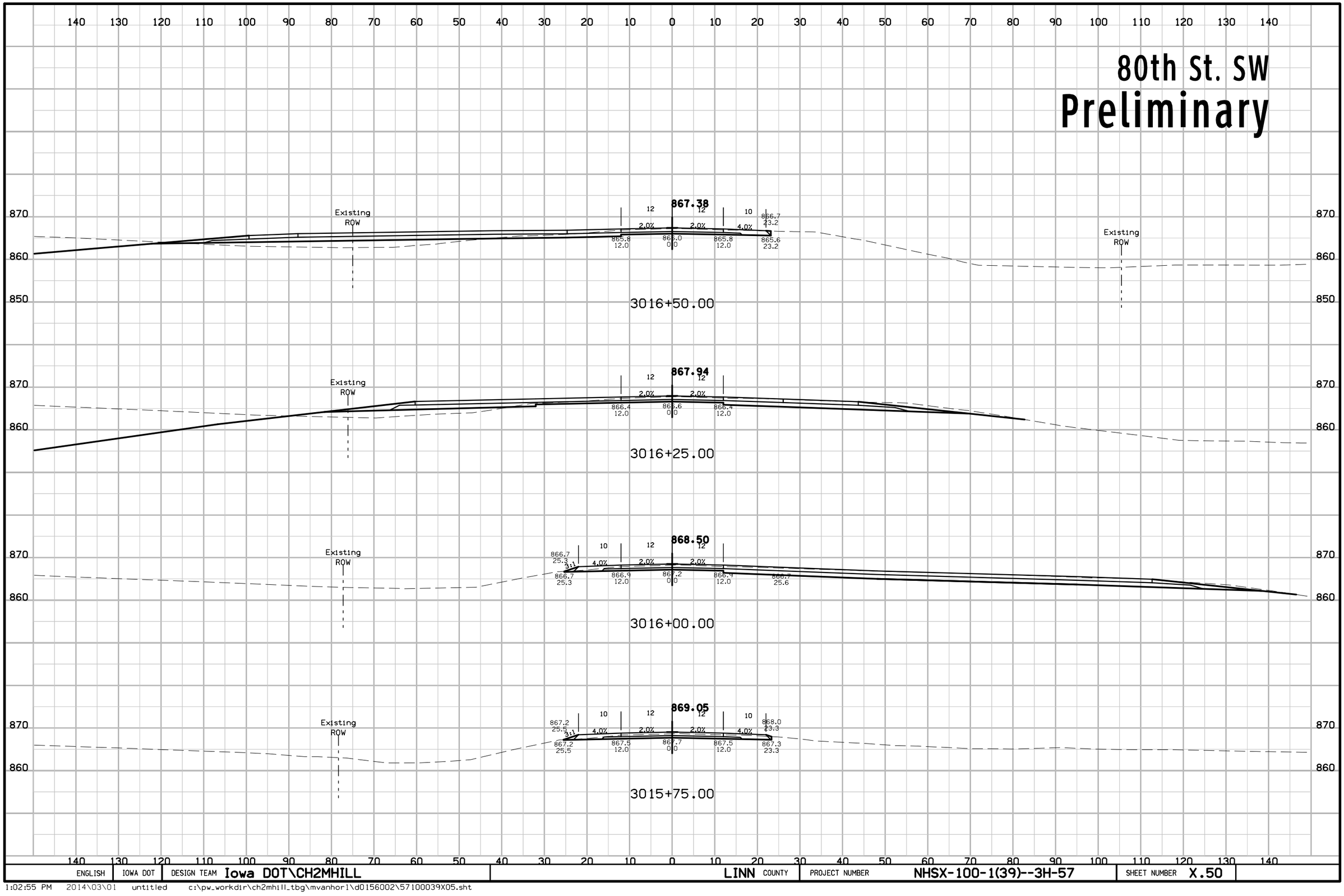
80th St. SW
Preliminary



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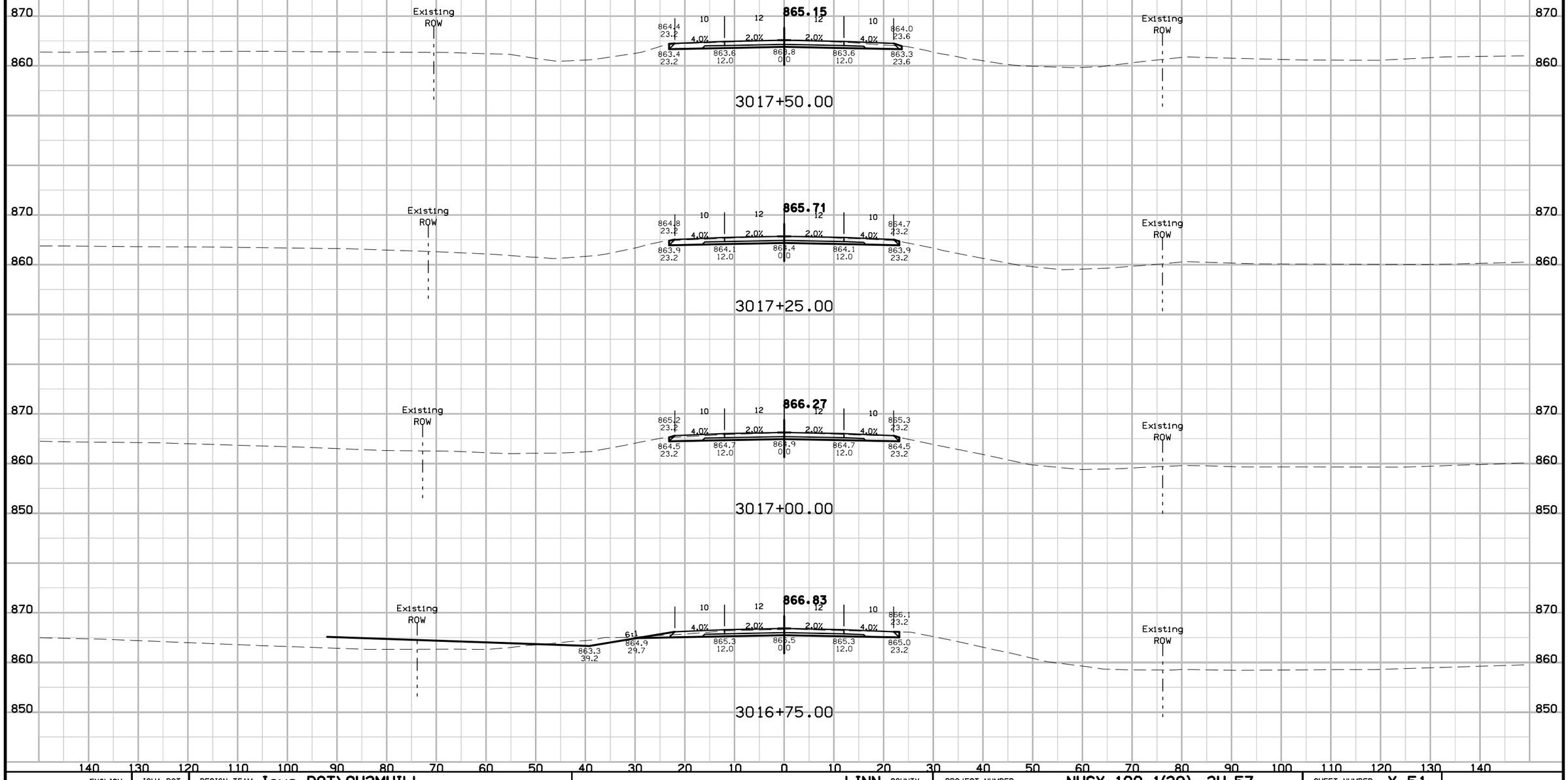
80th St. SW
Preliminary



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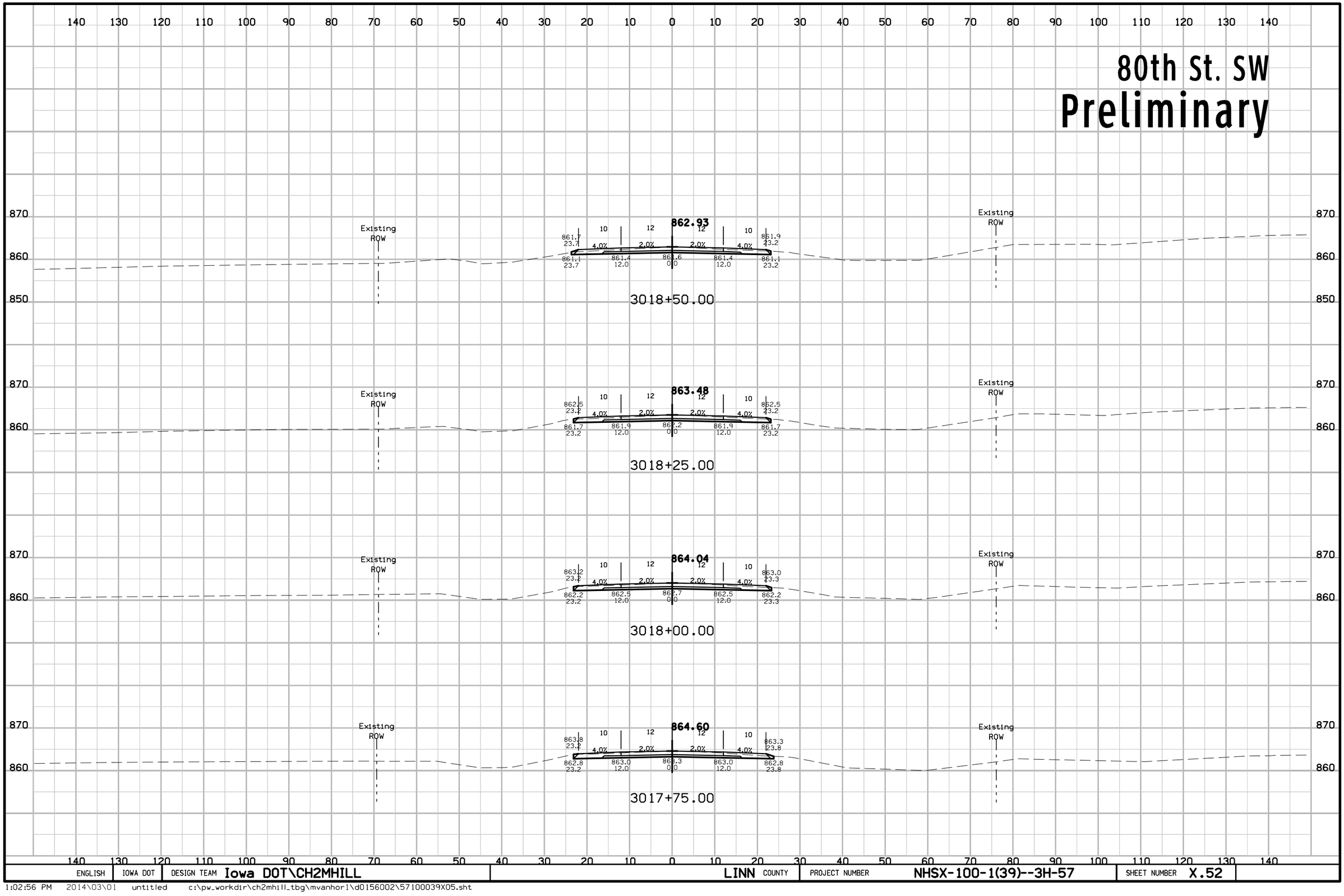
80th St. SW
Preliminary



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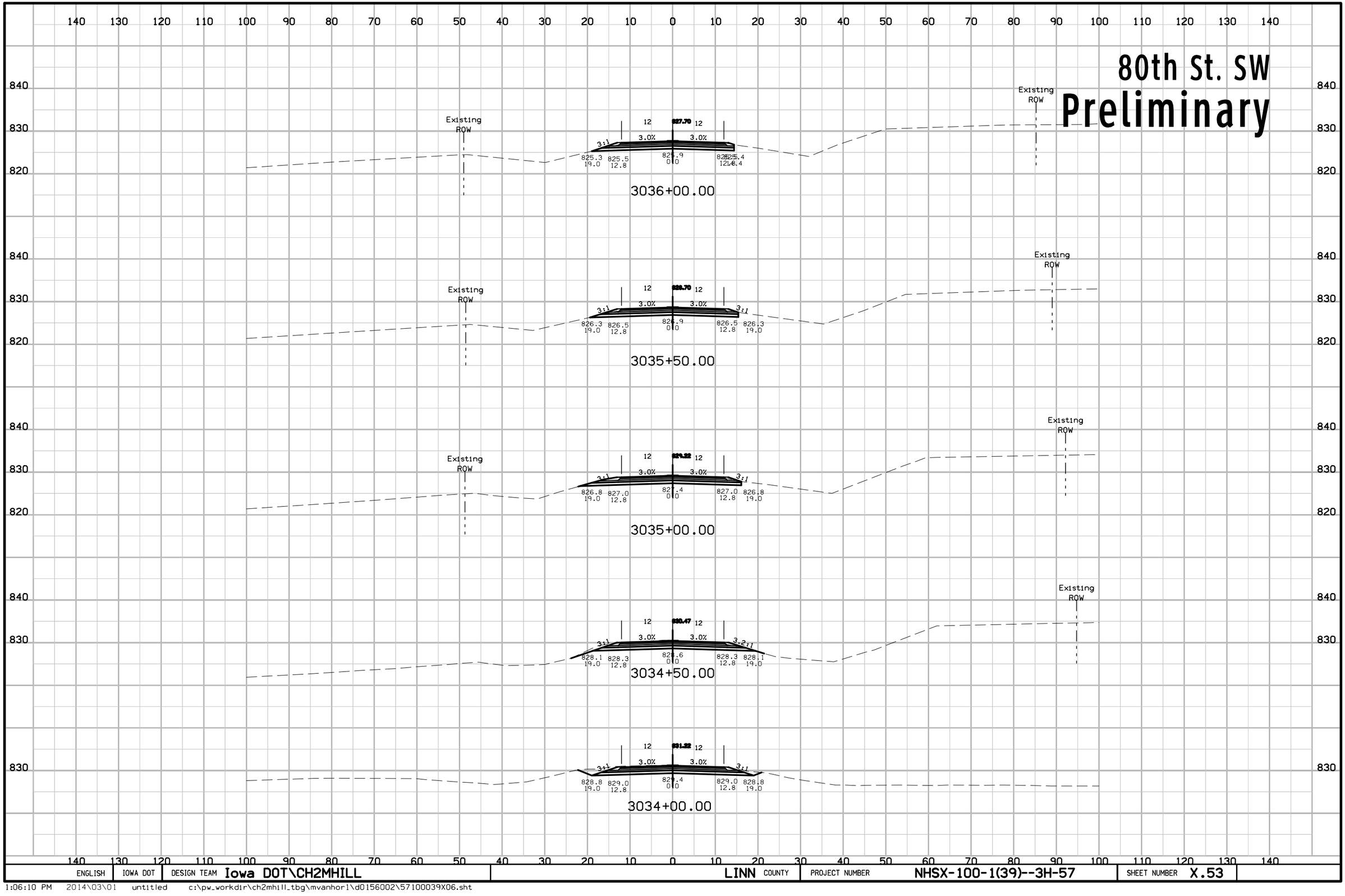
80th St. SW
Preliminary



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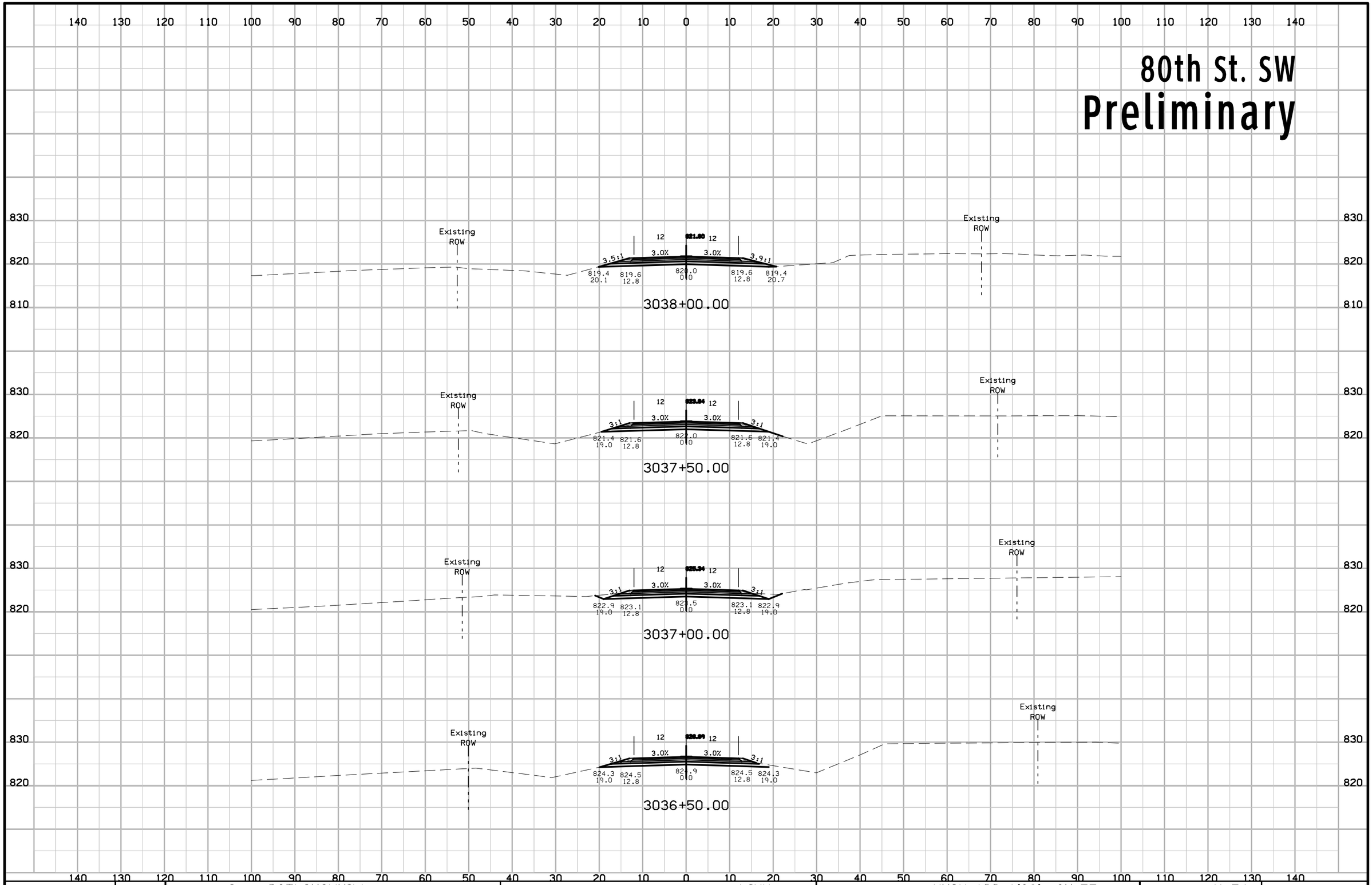
80th St. SW
Preliminary



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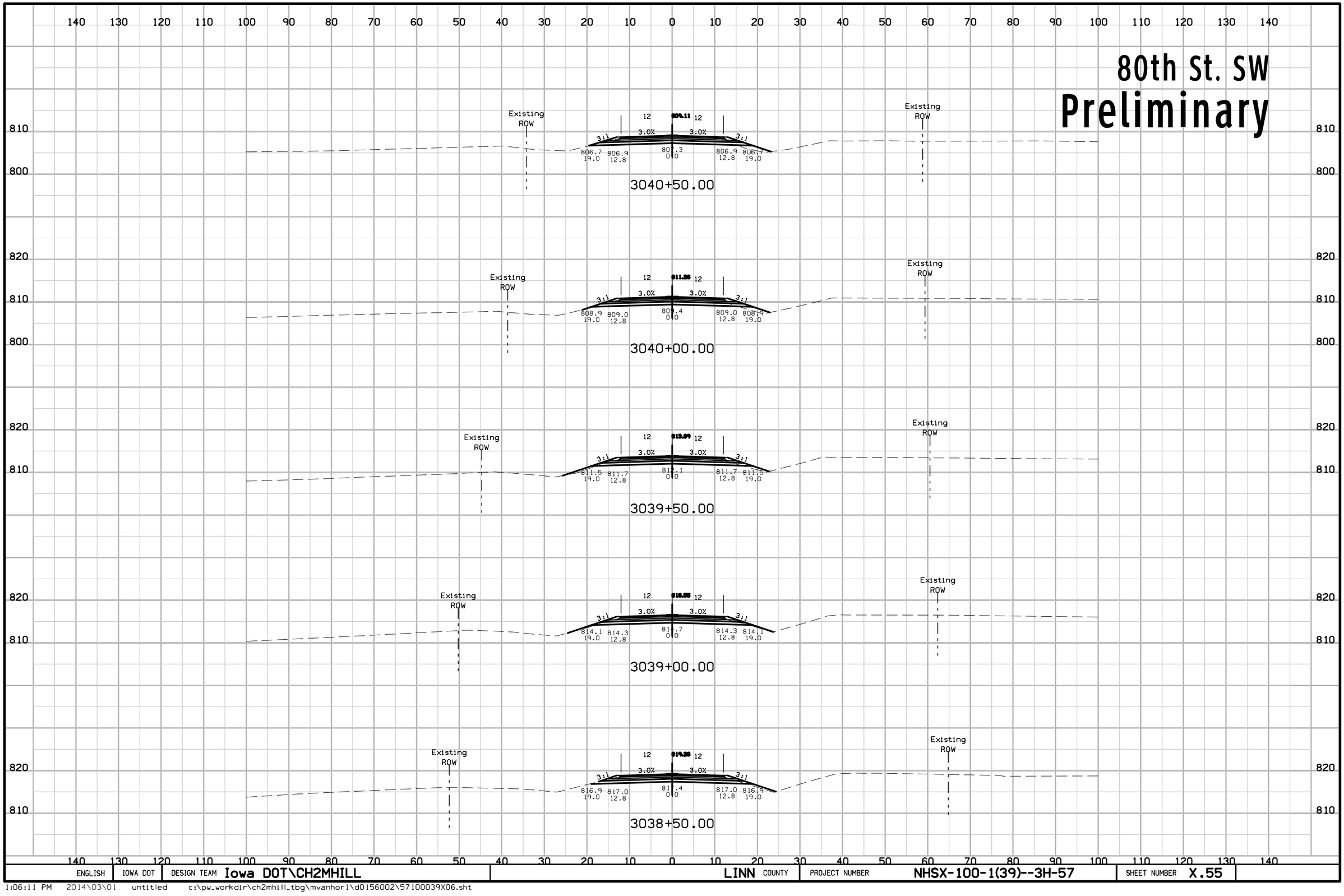
80th St. SW
Preliminary



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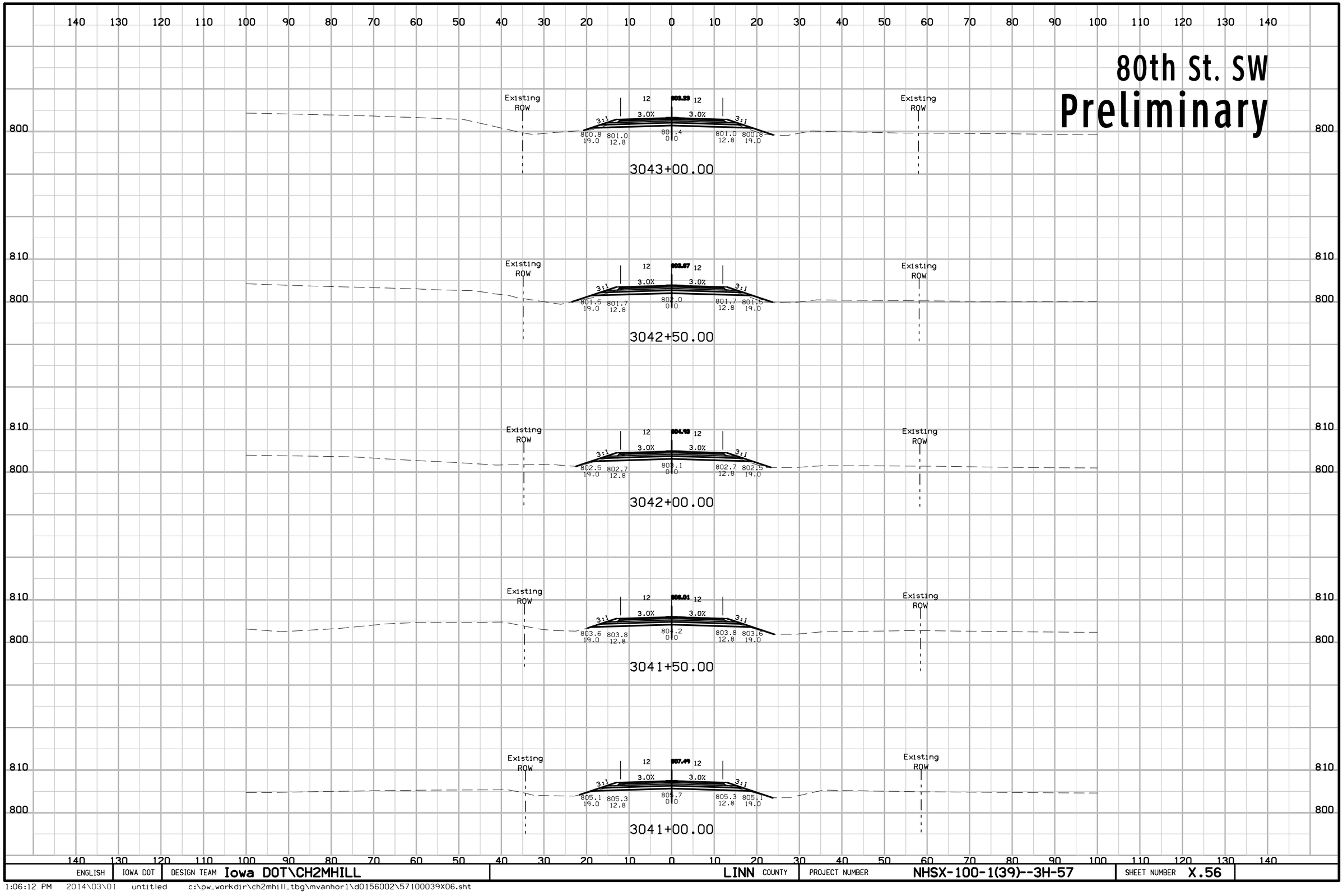
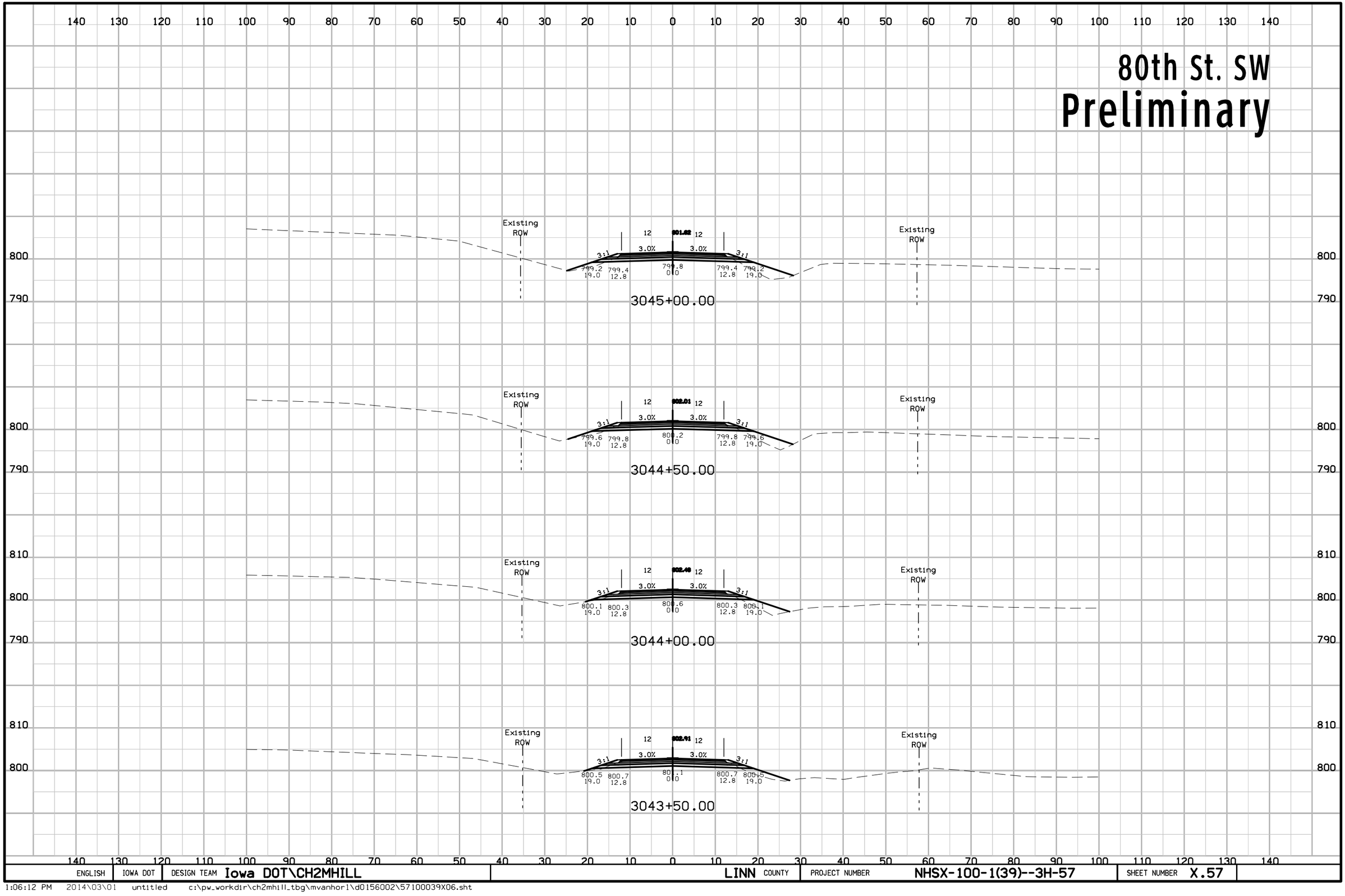
80th St. SW
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.56

80th St. SW
Preliminary



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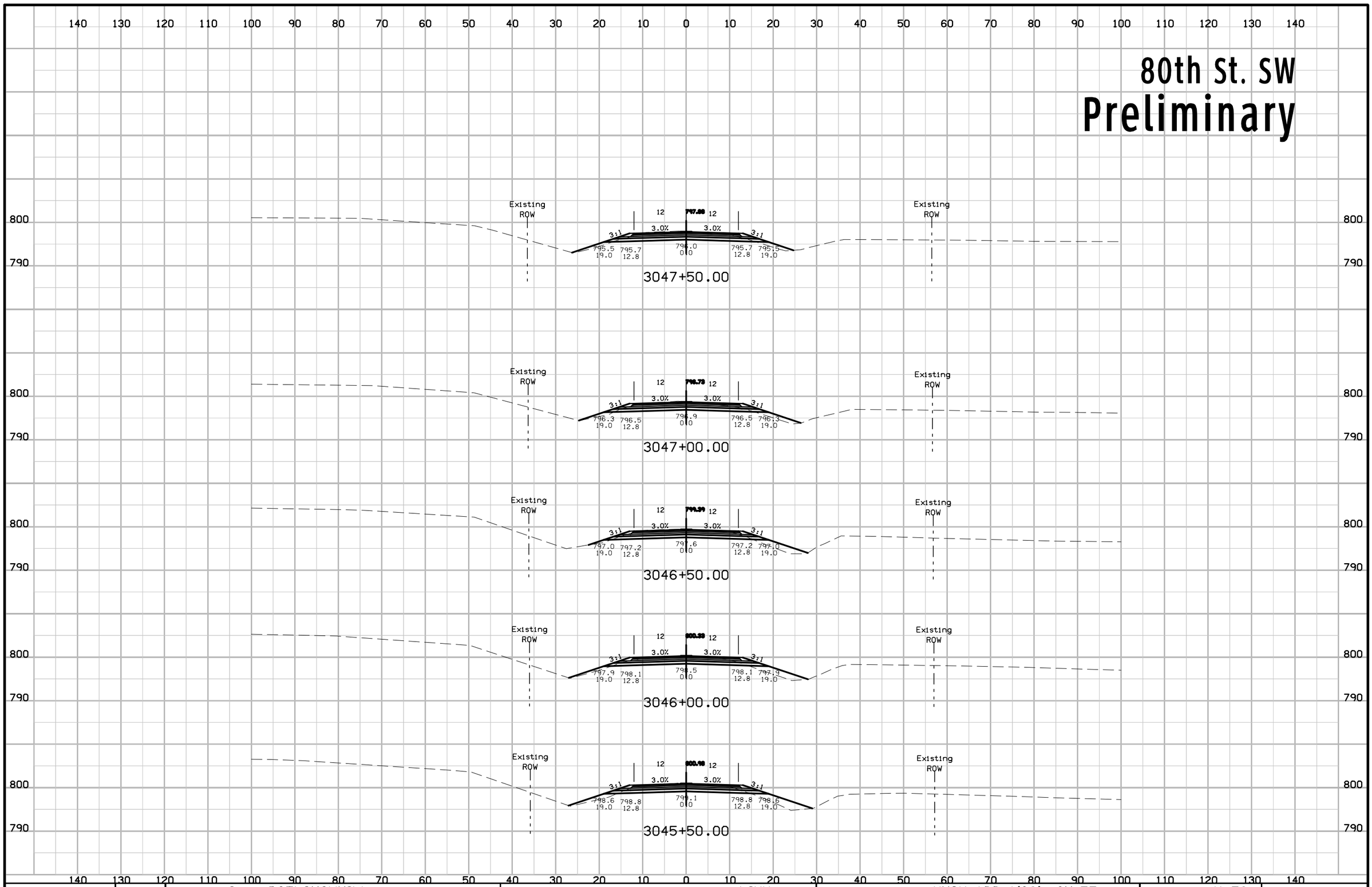
80th St. SW
Preliminary



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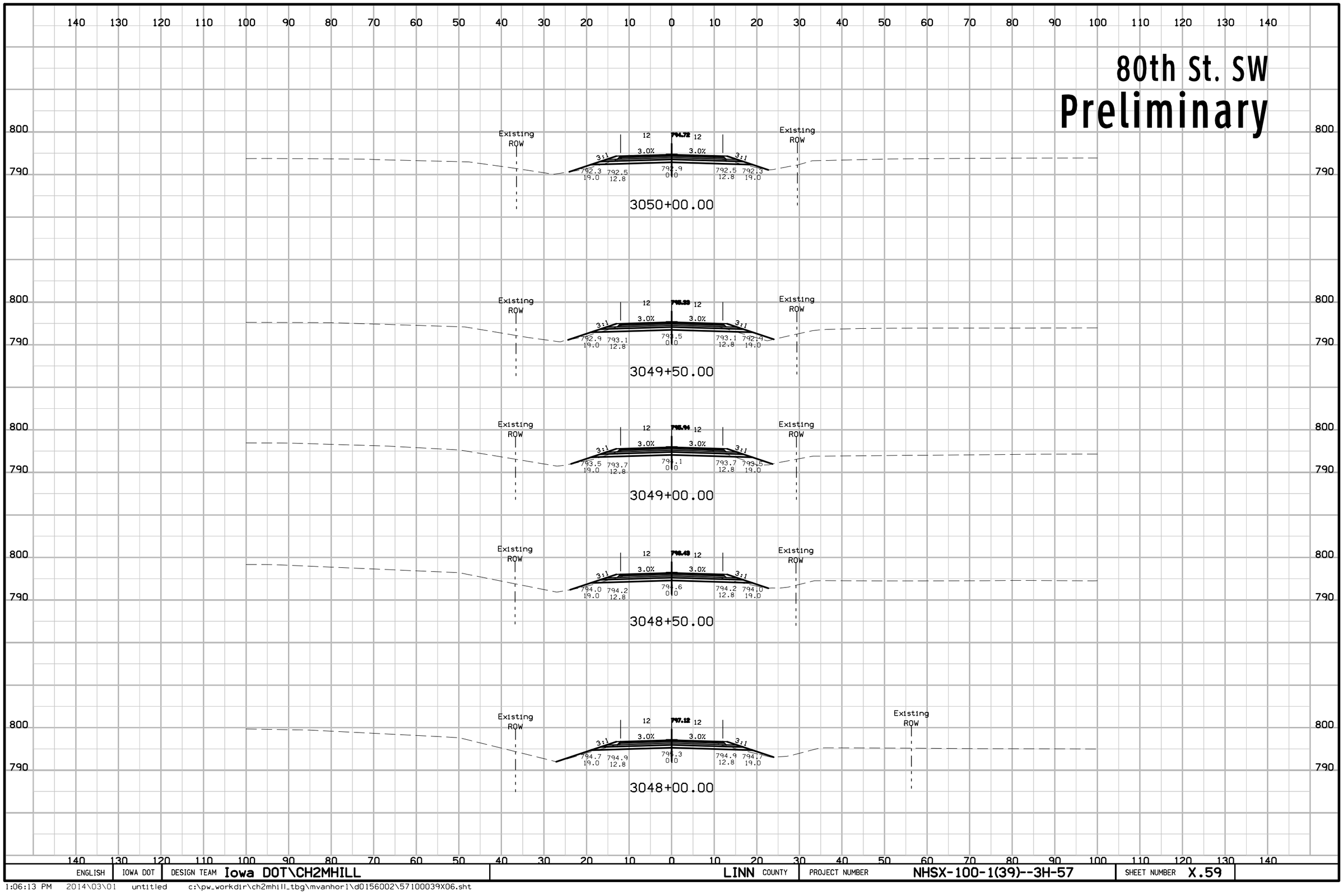
80th St. SW
Preliminary



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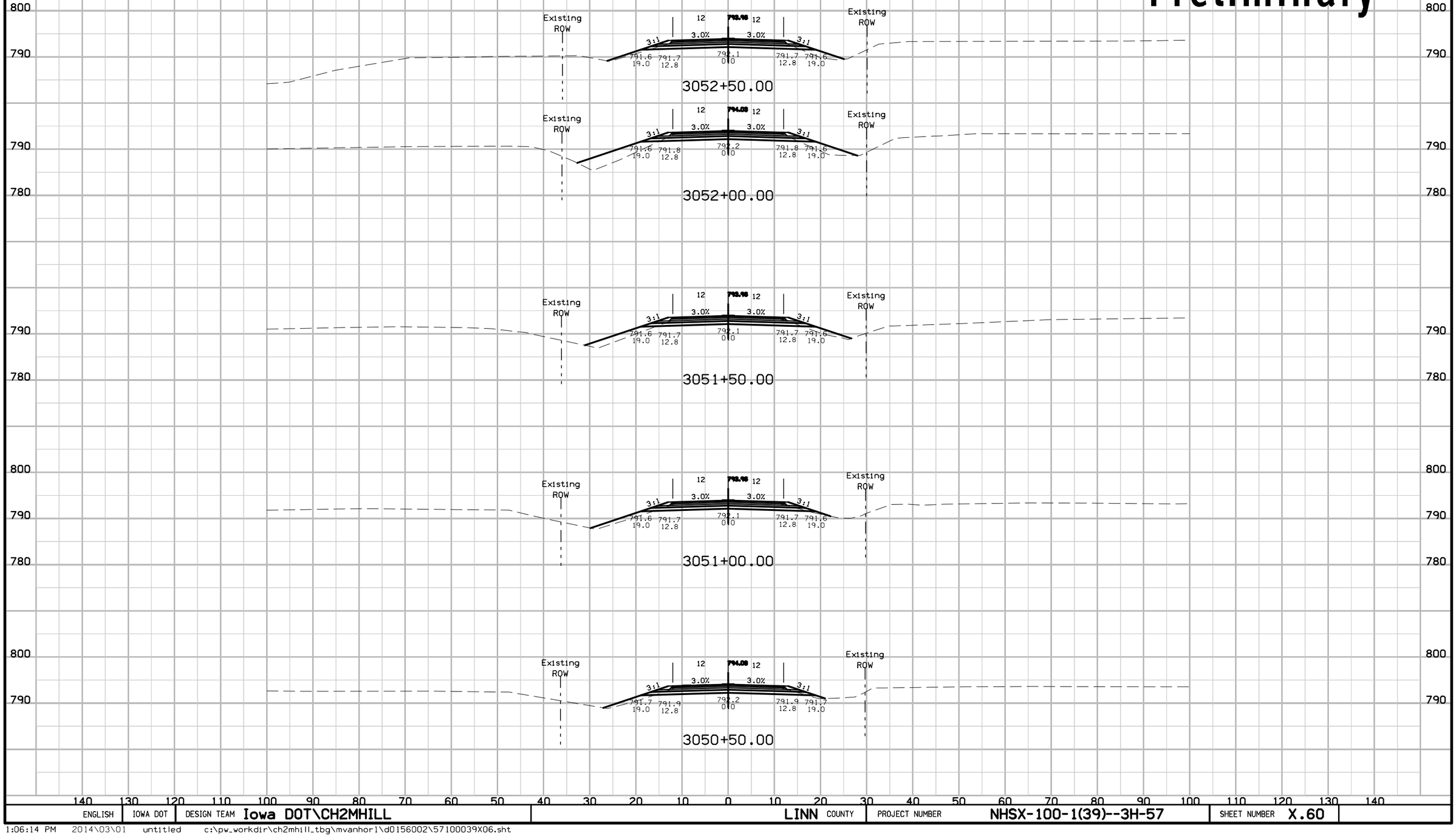
80th St. SW
Preliminary



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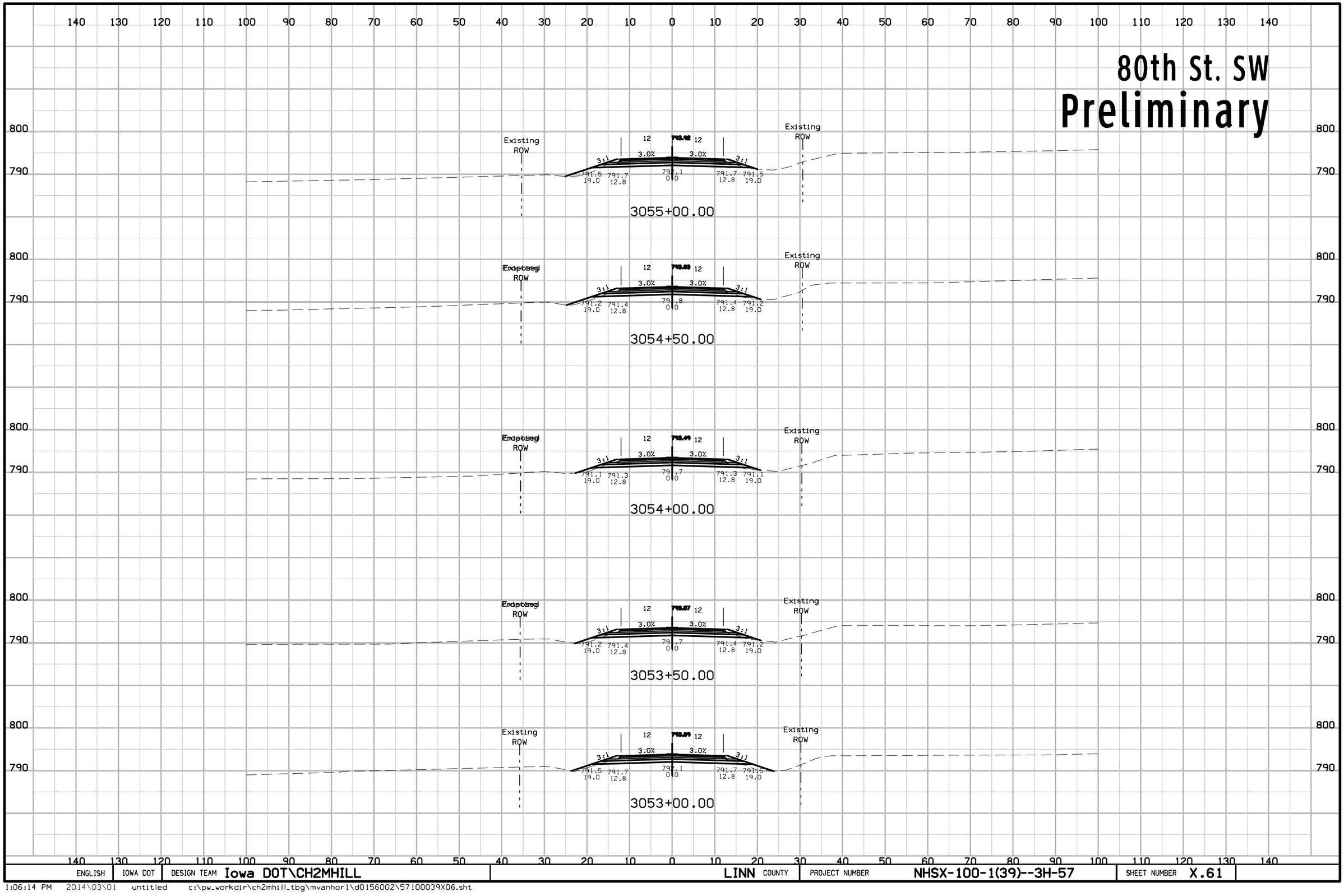
80th St. SW

Preliminary



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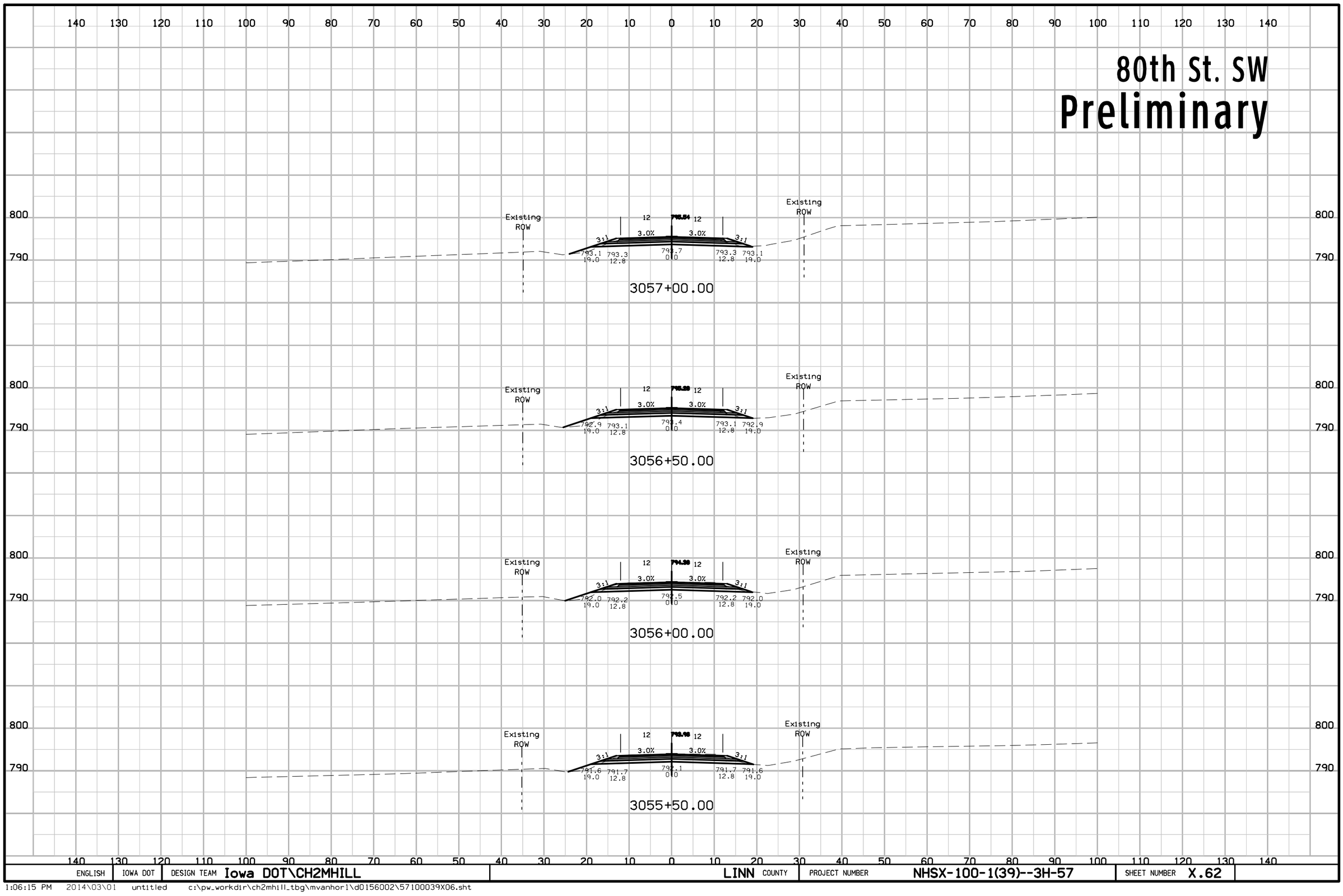
80th St. SW
Preliminary



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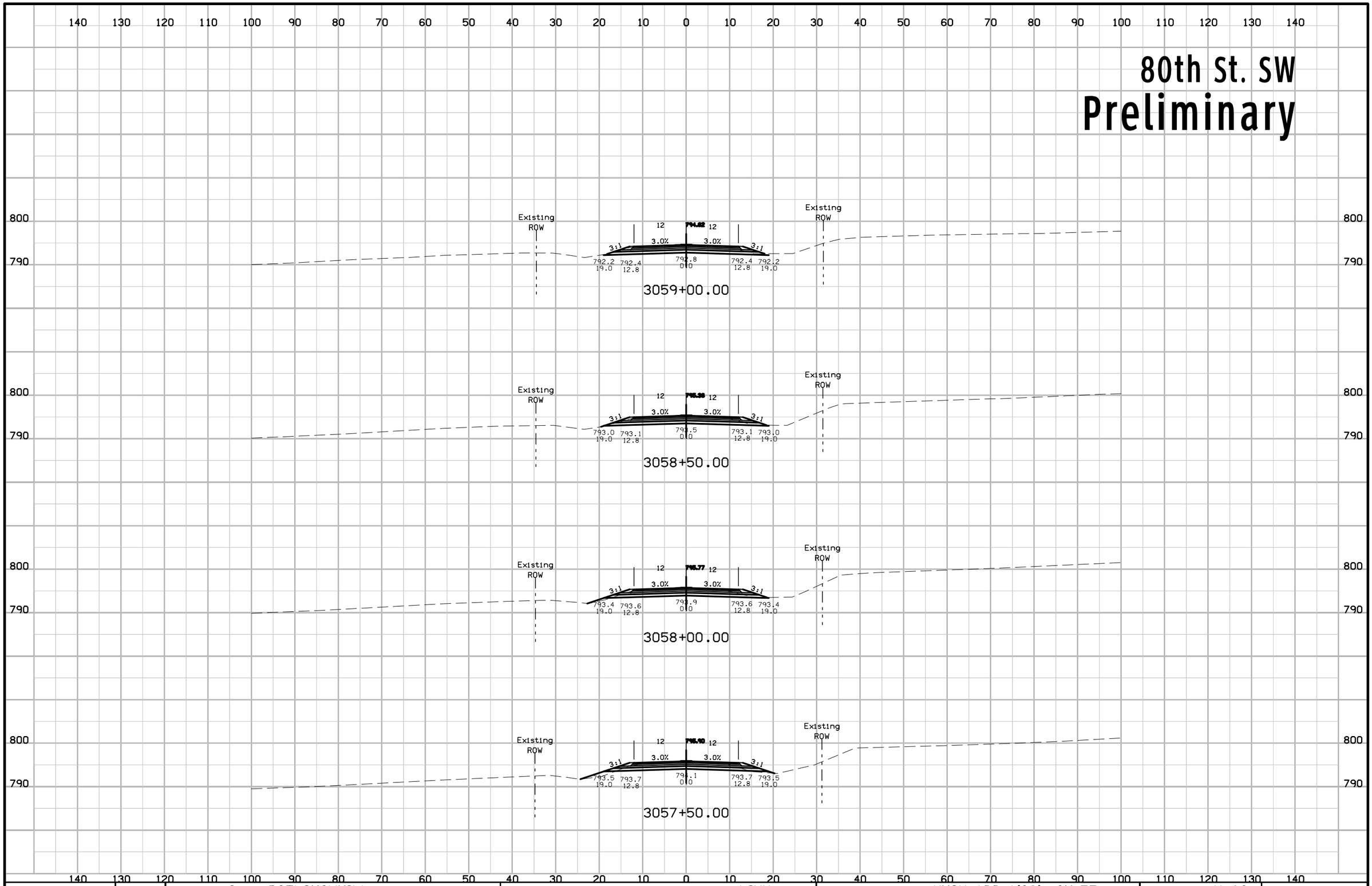
80th St. SW
Preliminary



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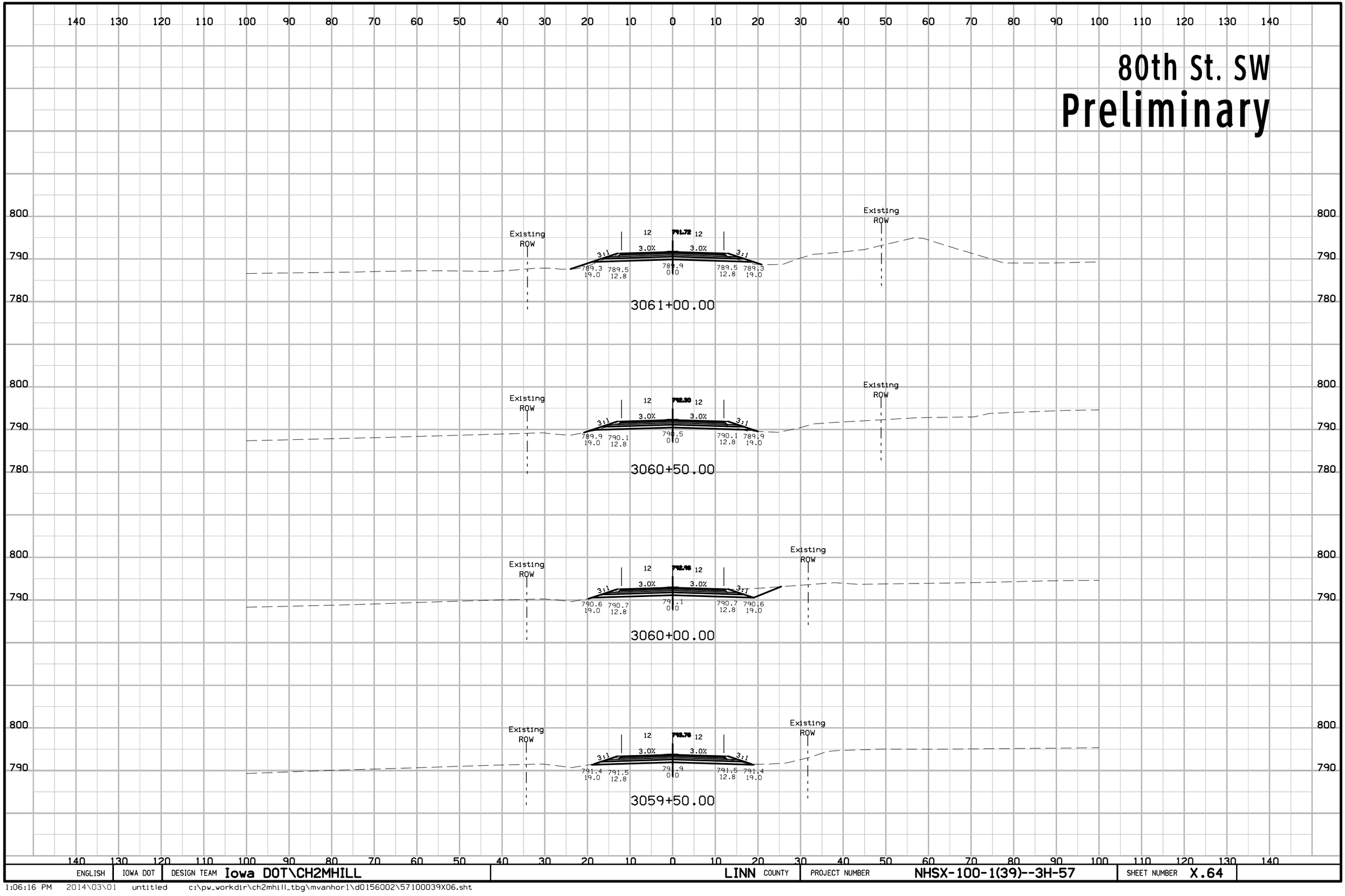
80th St. SW
Preliminary



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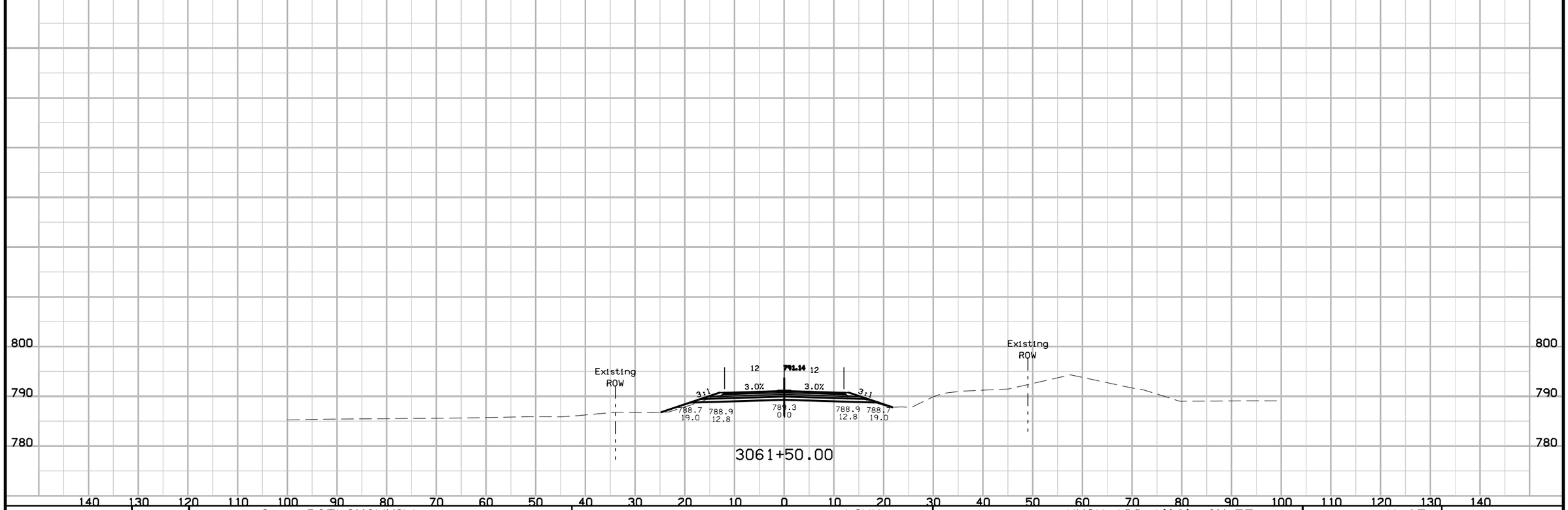
80th St. SW

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.65

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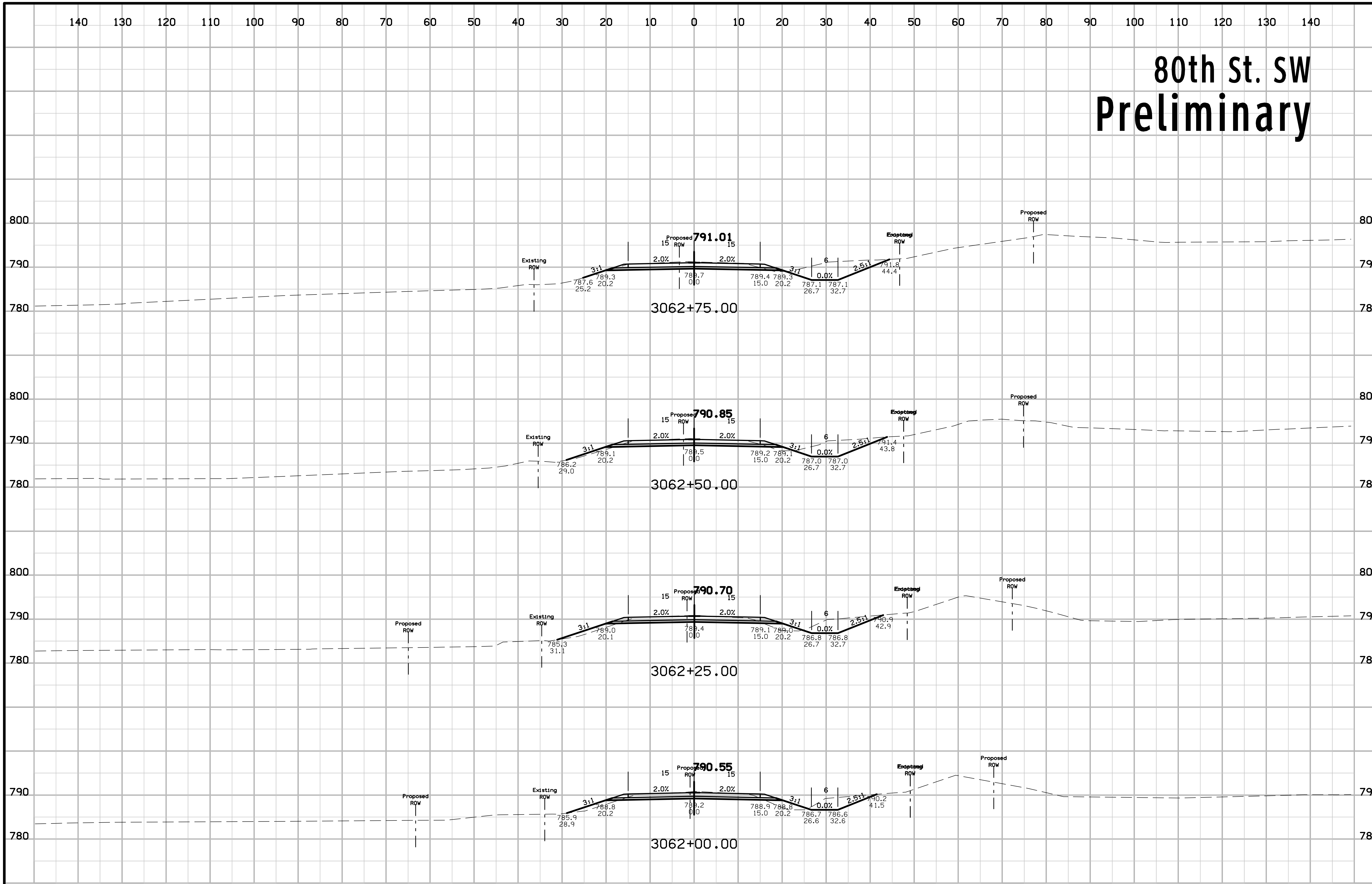
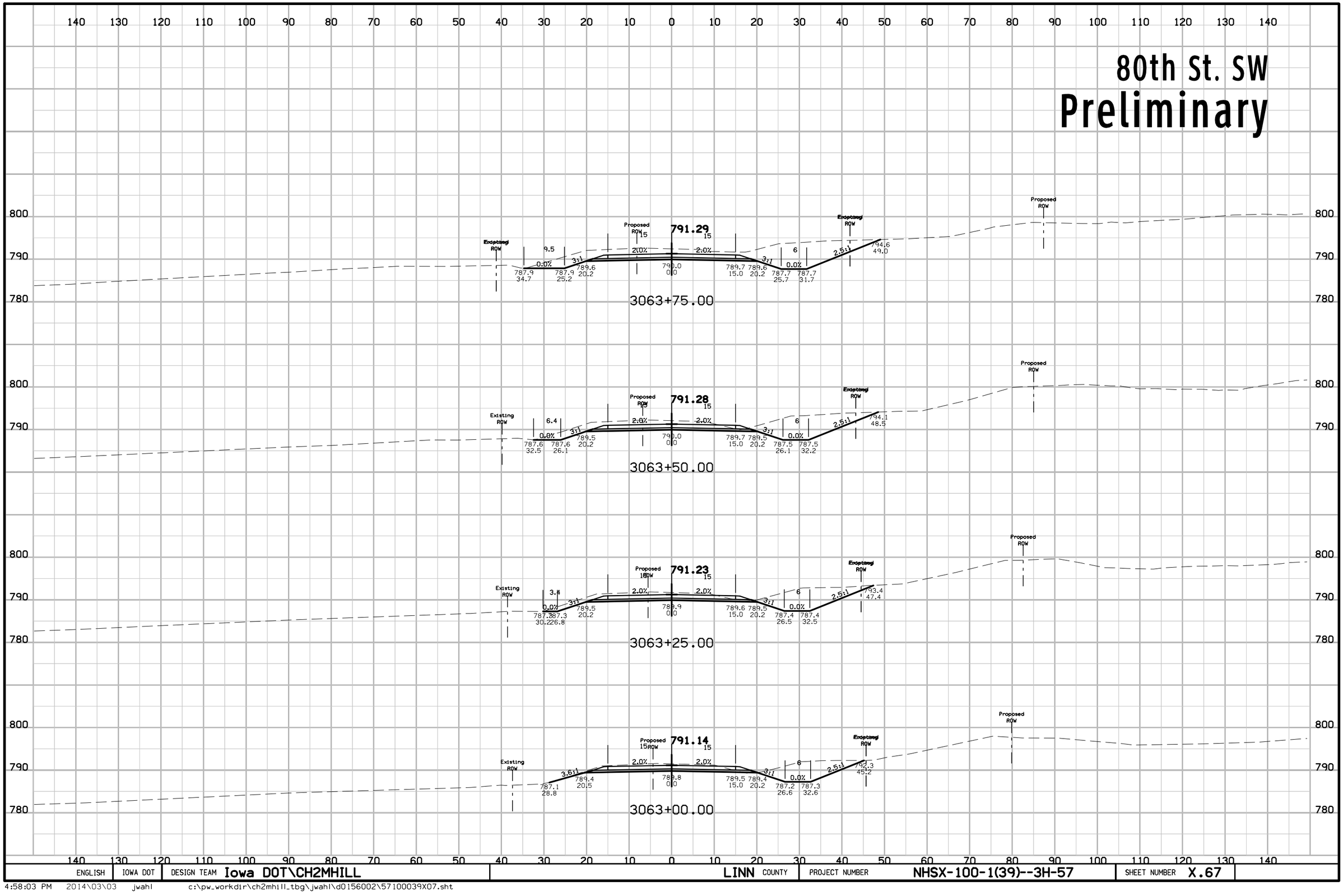
80th St. SW
Preliminary



80th St. SW
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.67

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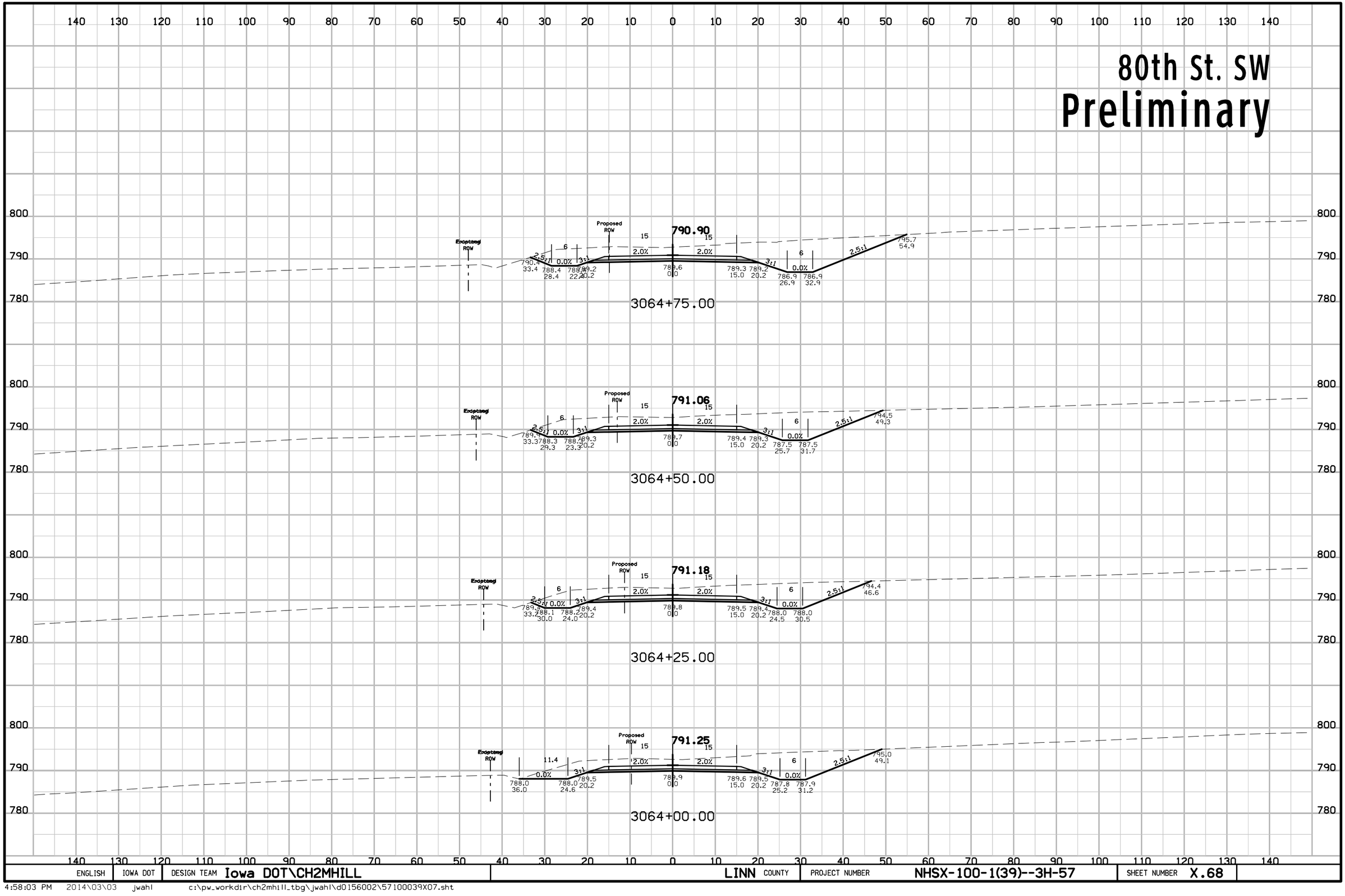
80th St. SW

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.68

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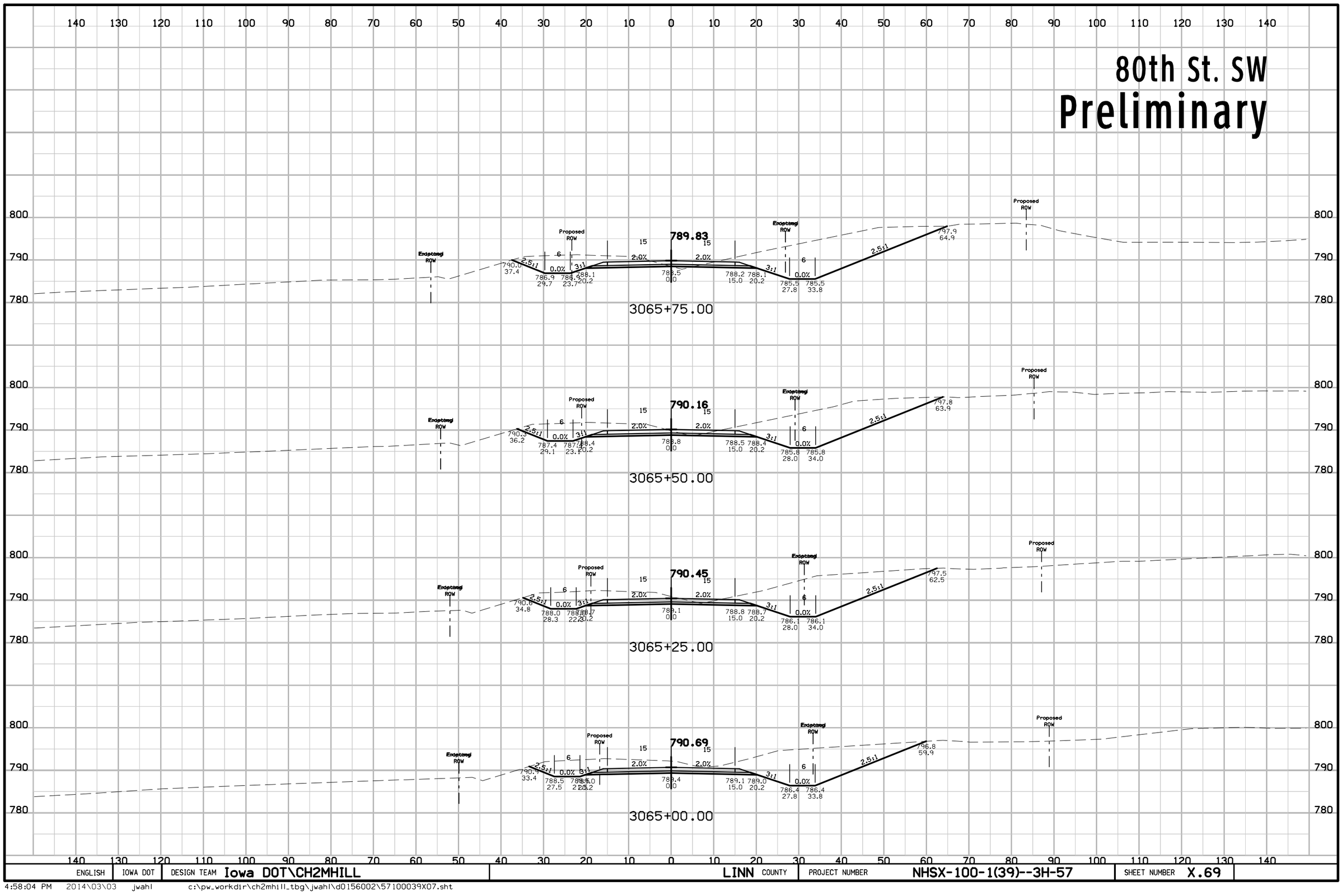
80th St. SW
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.69

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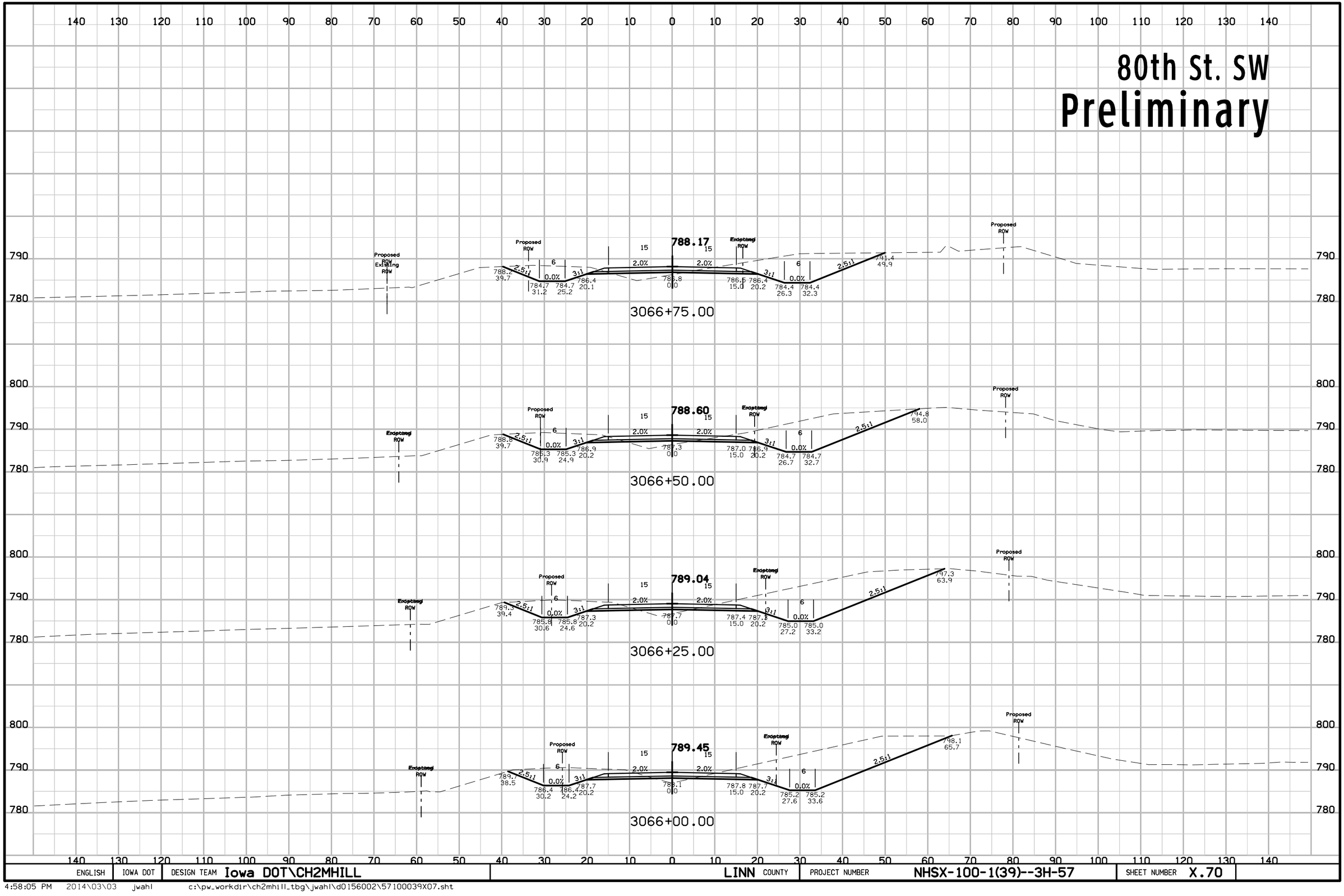
80th St. SW
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.70

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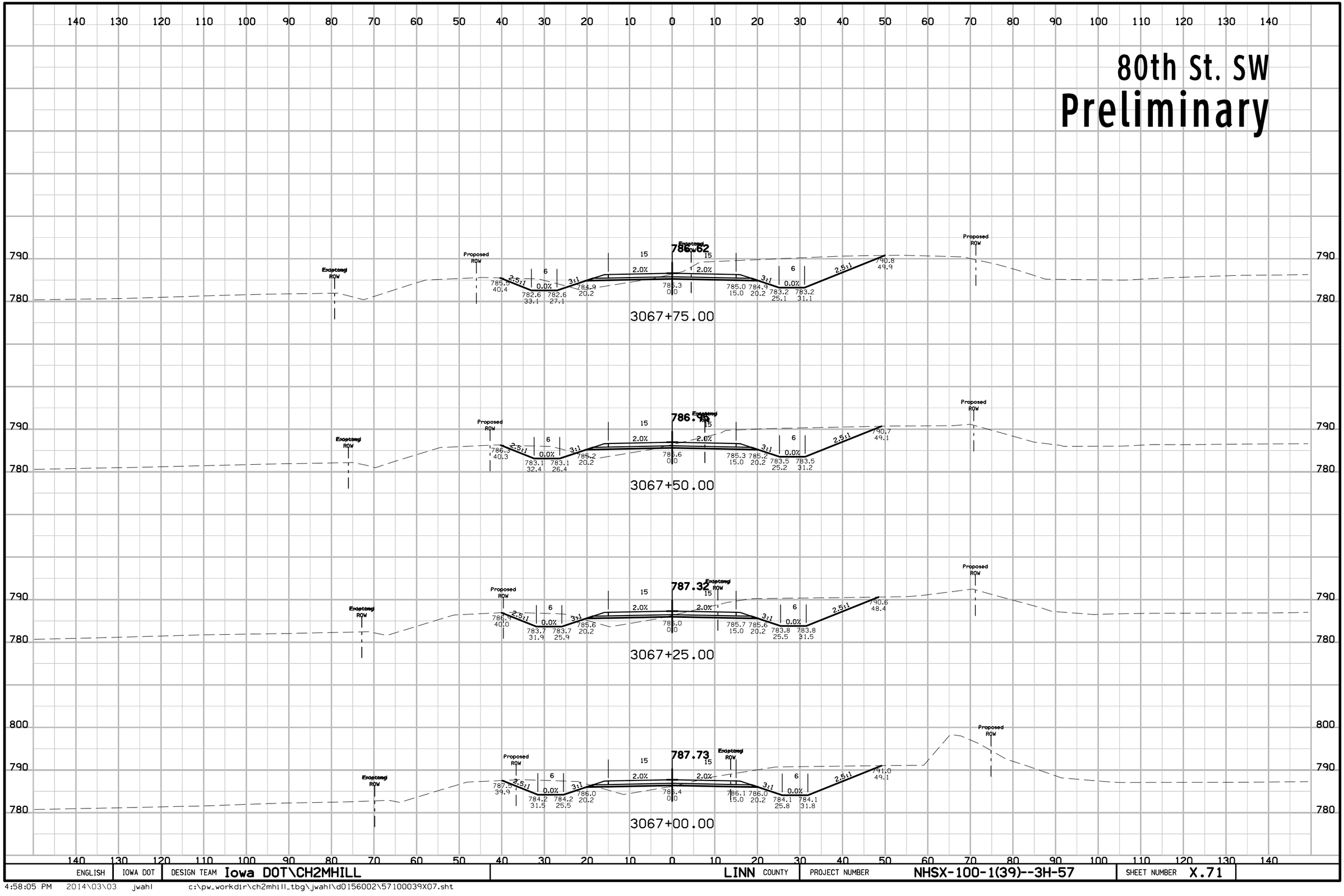
80th St. SW

Preliminary



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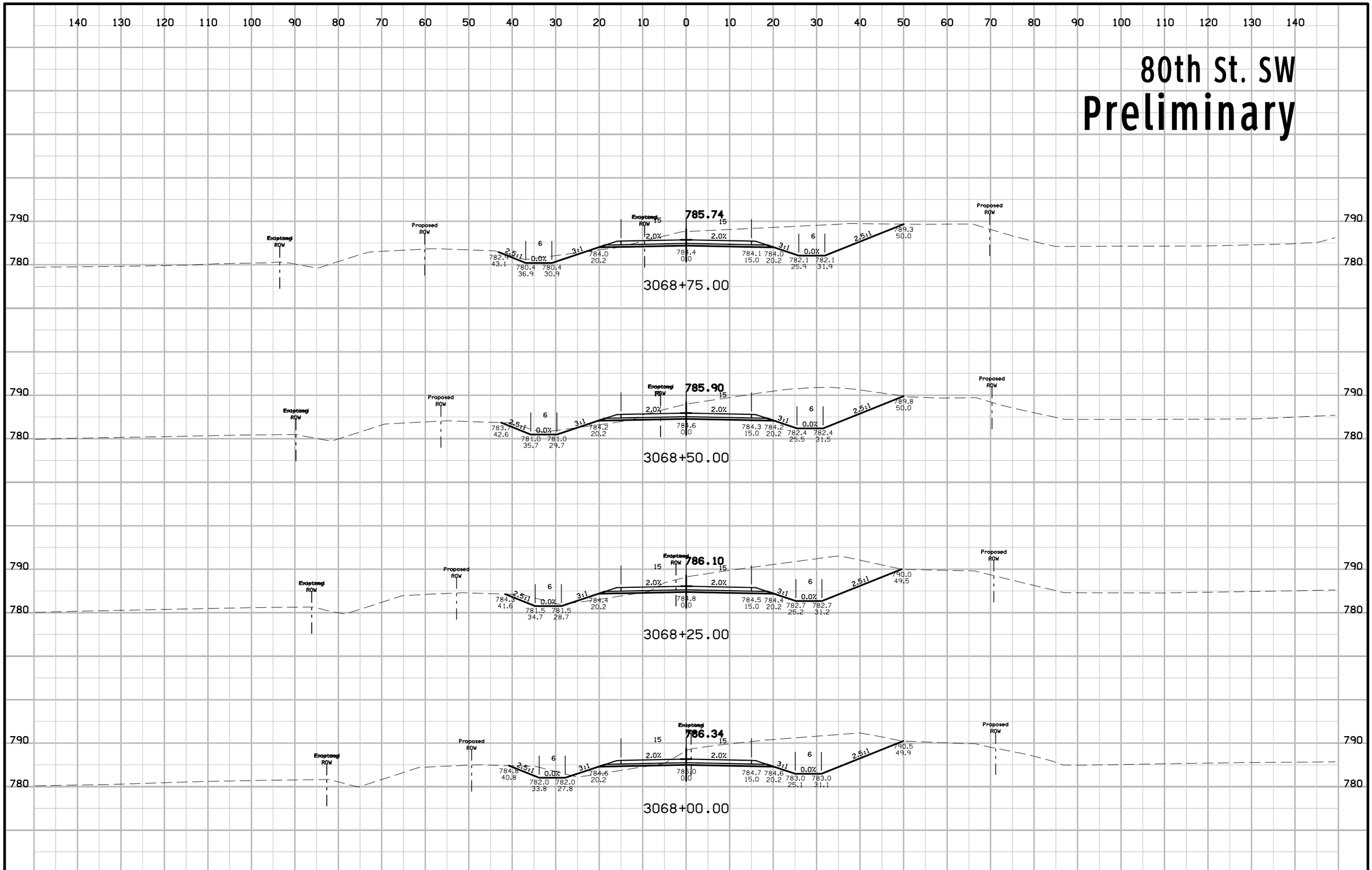
80th St. SW
Preliminary



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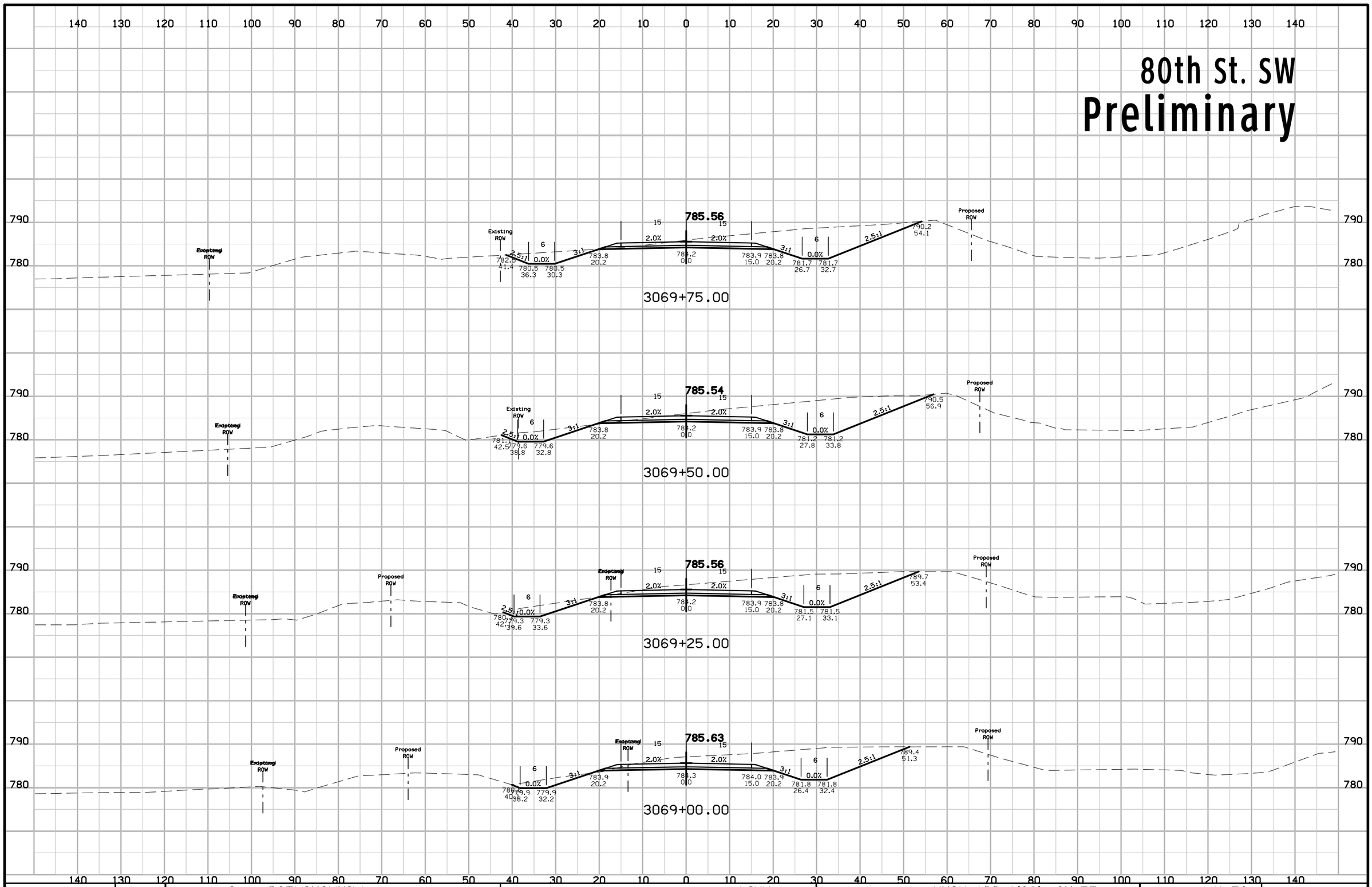
80th St. SW
Preliminary



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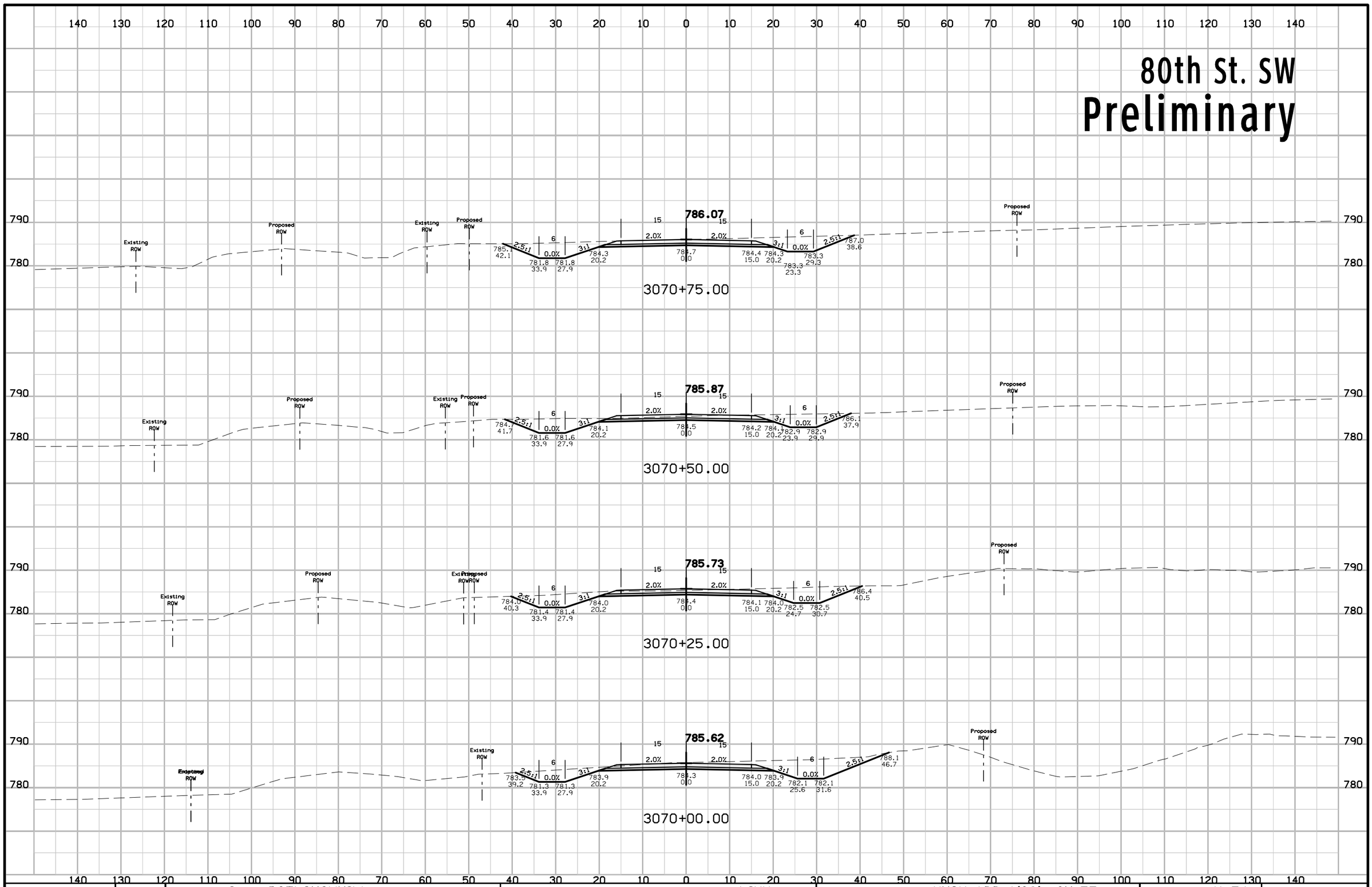
80th St. SW
Preliminary



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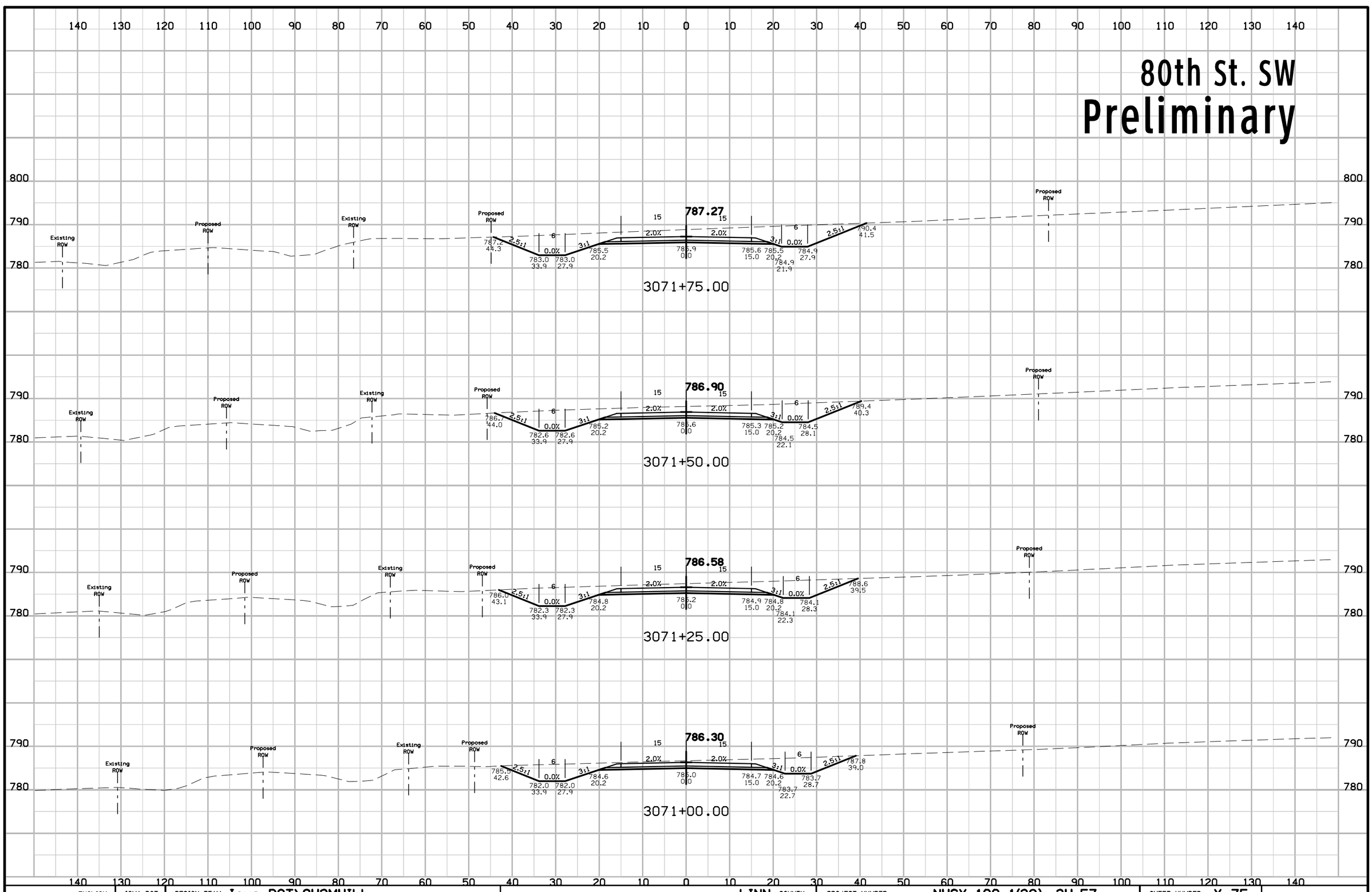
80th St. SW
Preliminary



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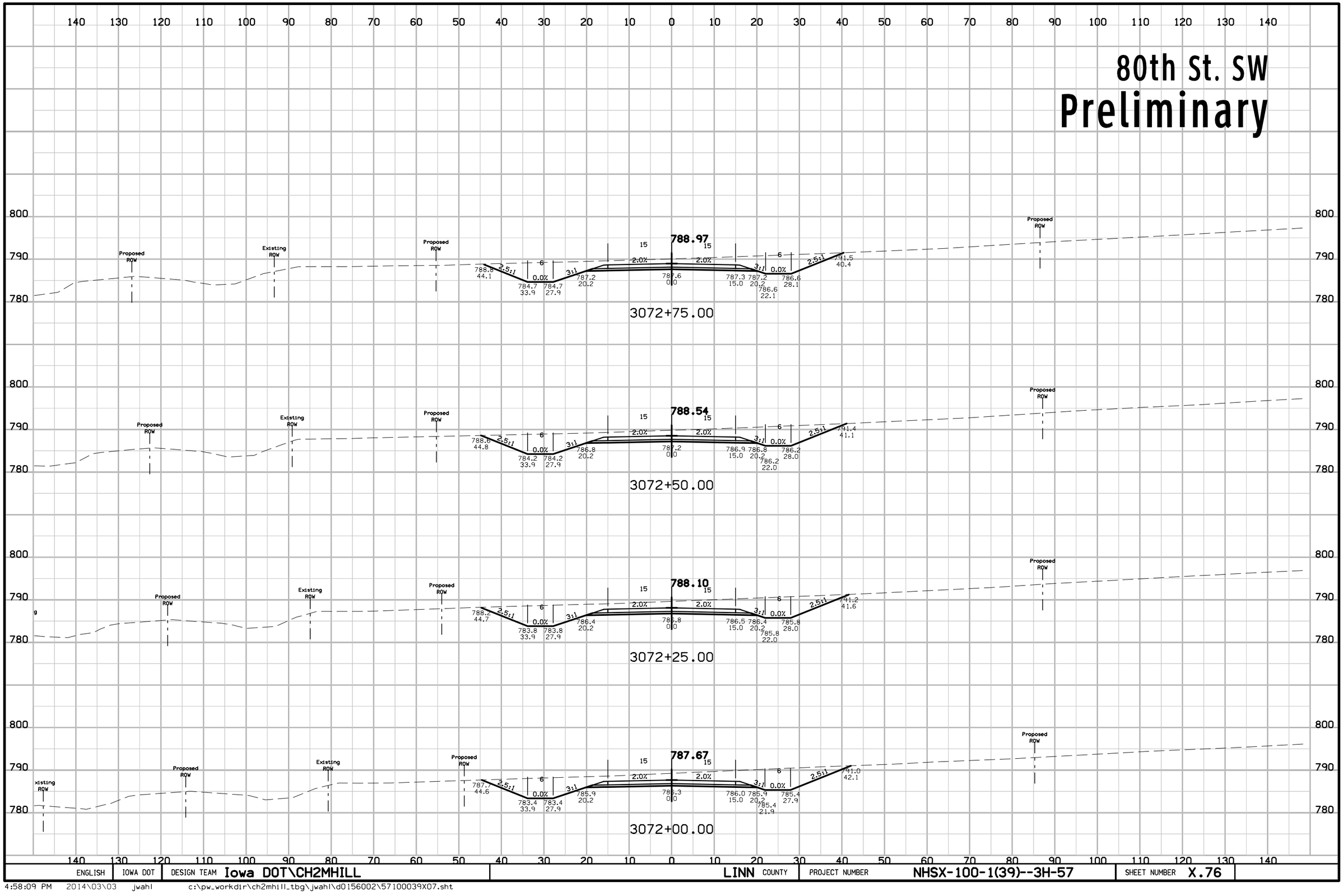
80th St. SW

Preliminary



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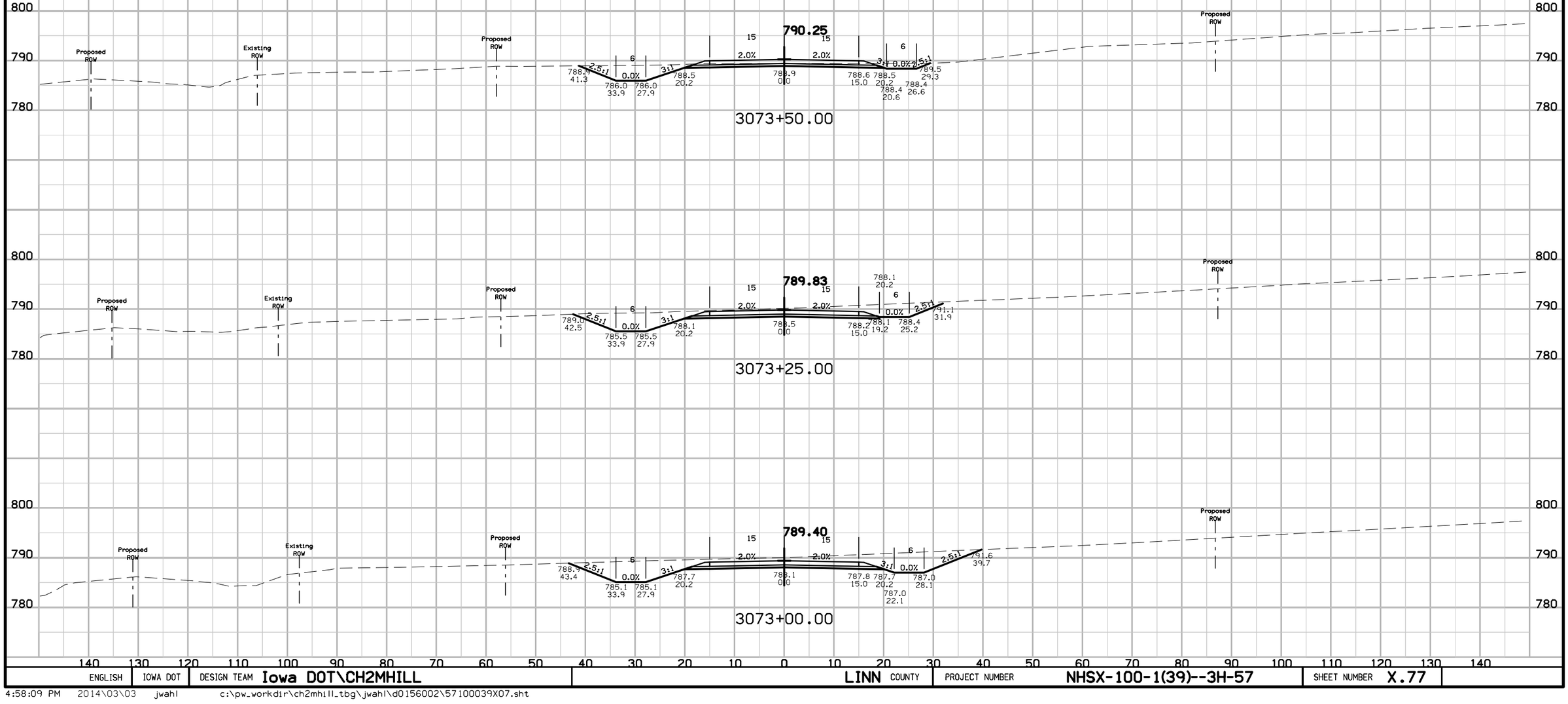
80th St. SW
Preliminary



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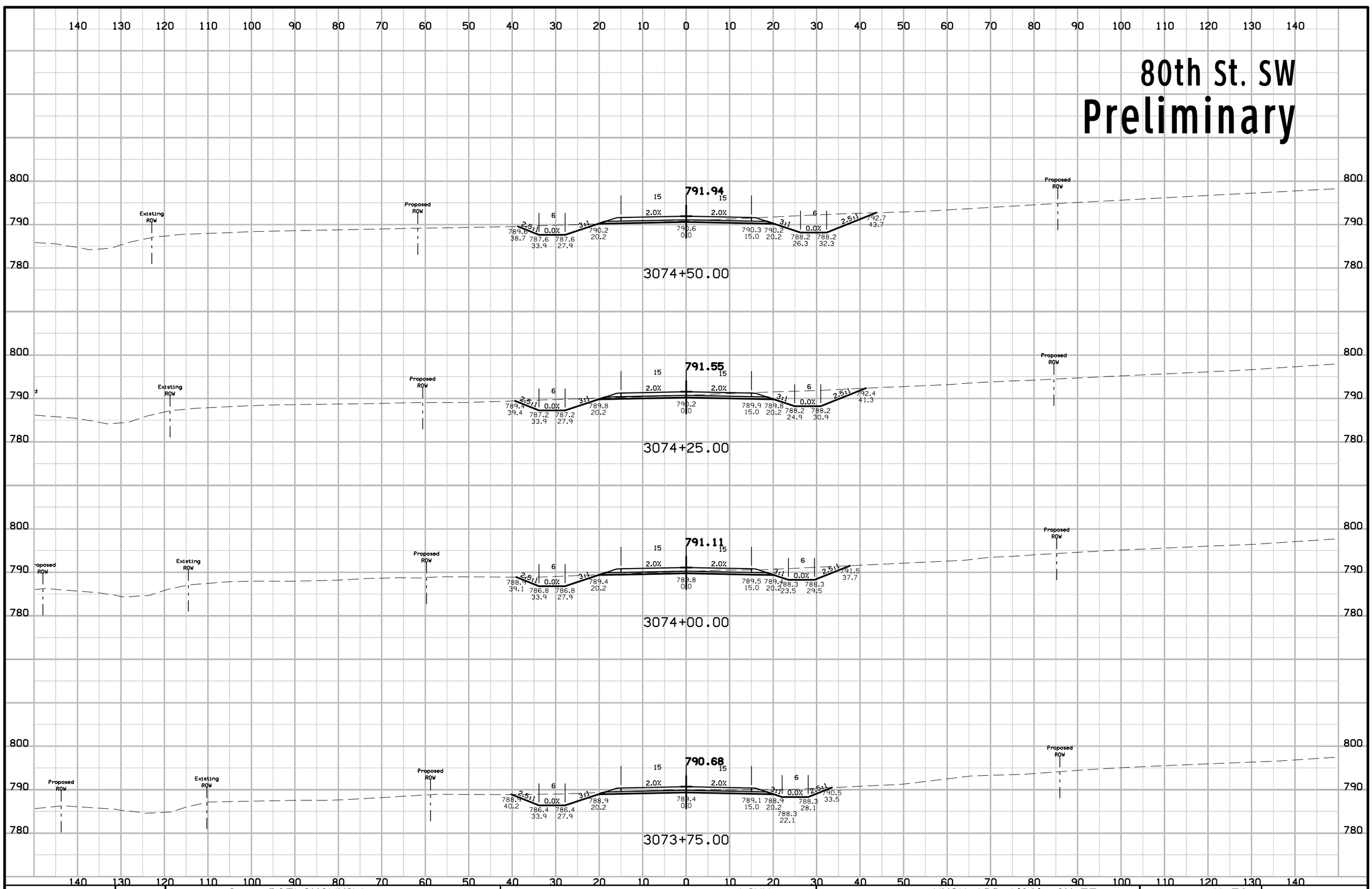
80th St. SW
Preliminary



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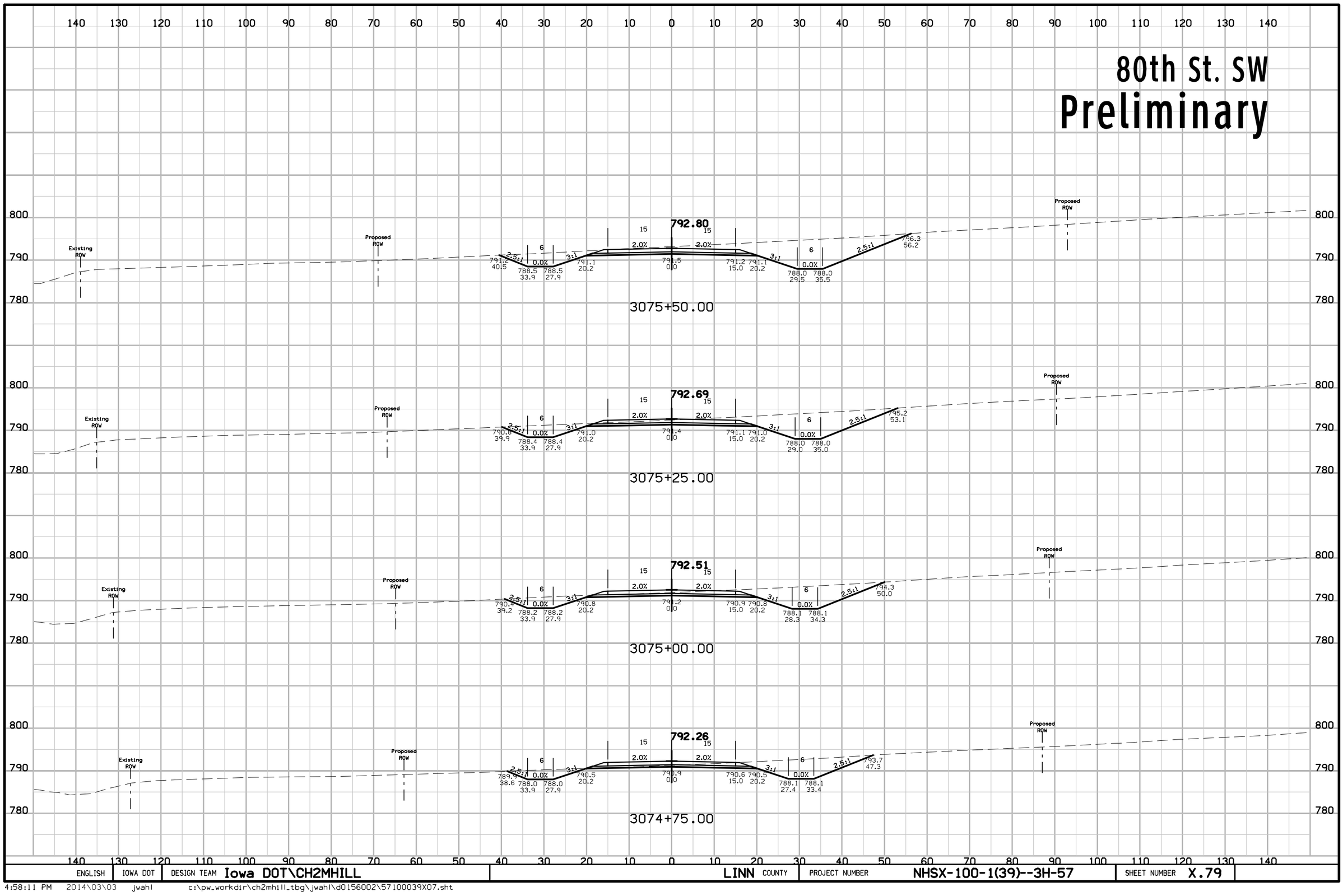
80th St. SW
Preliminary



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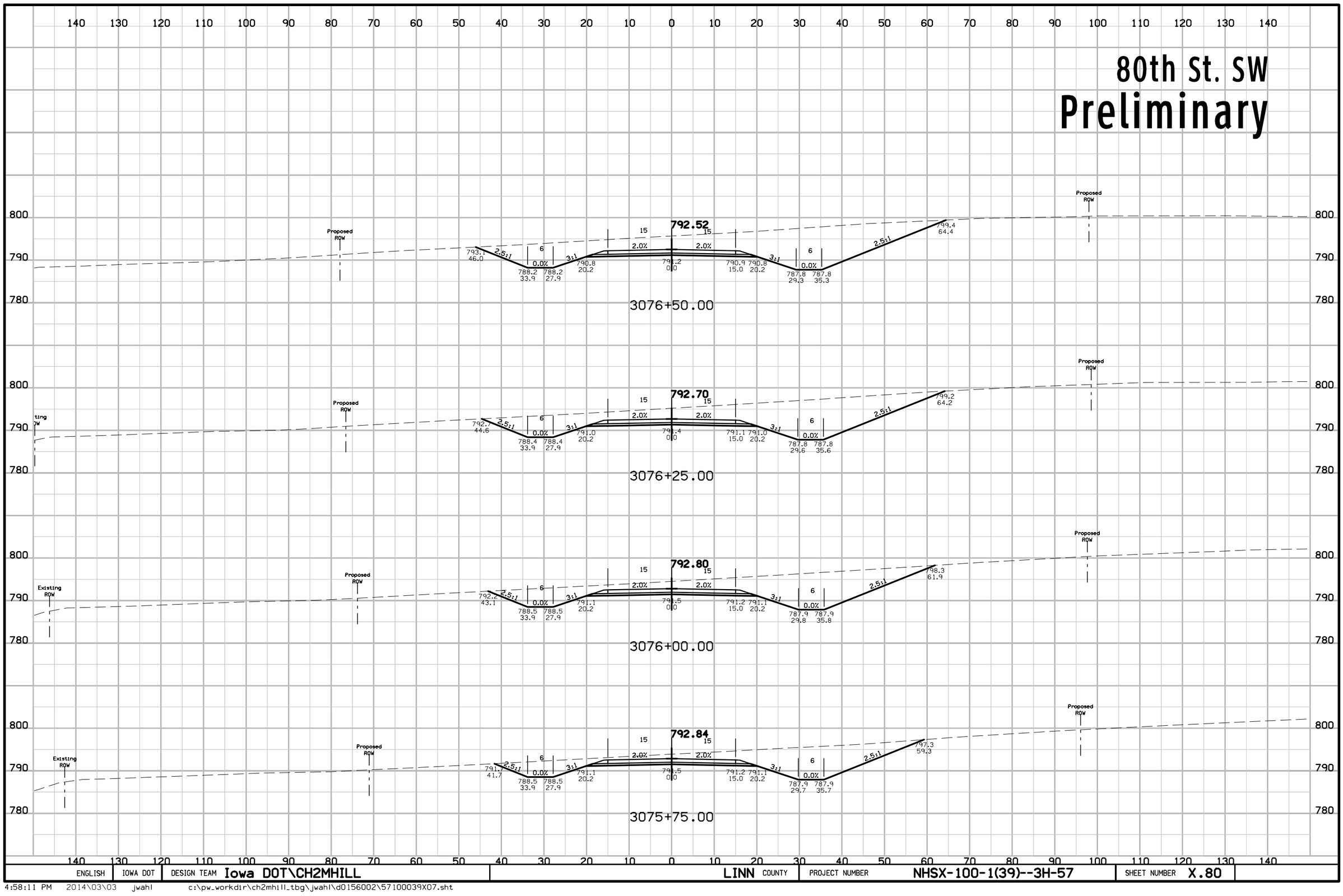
80th St. SW
Preliminary



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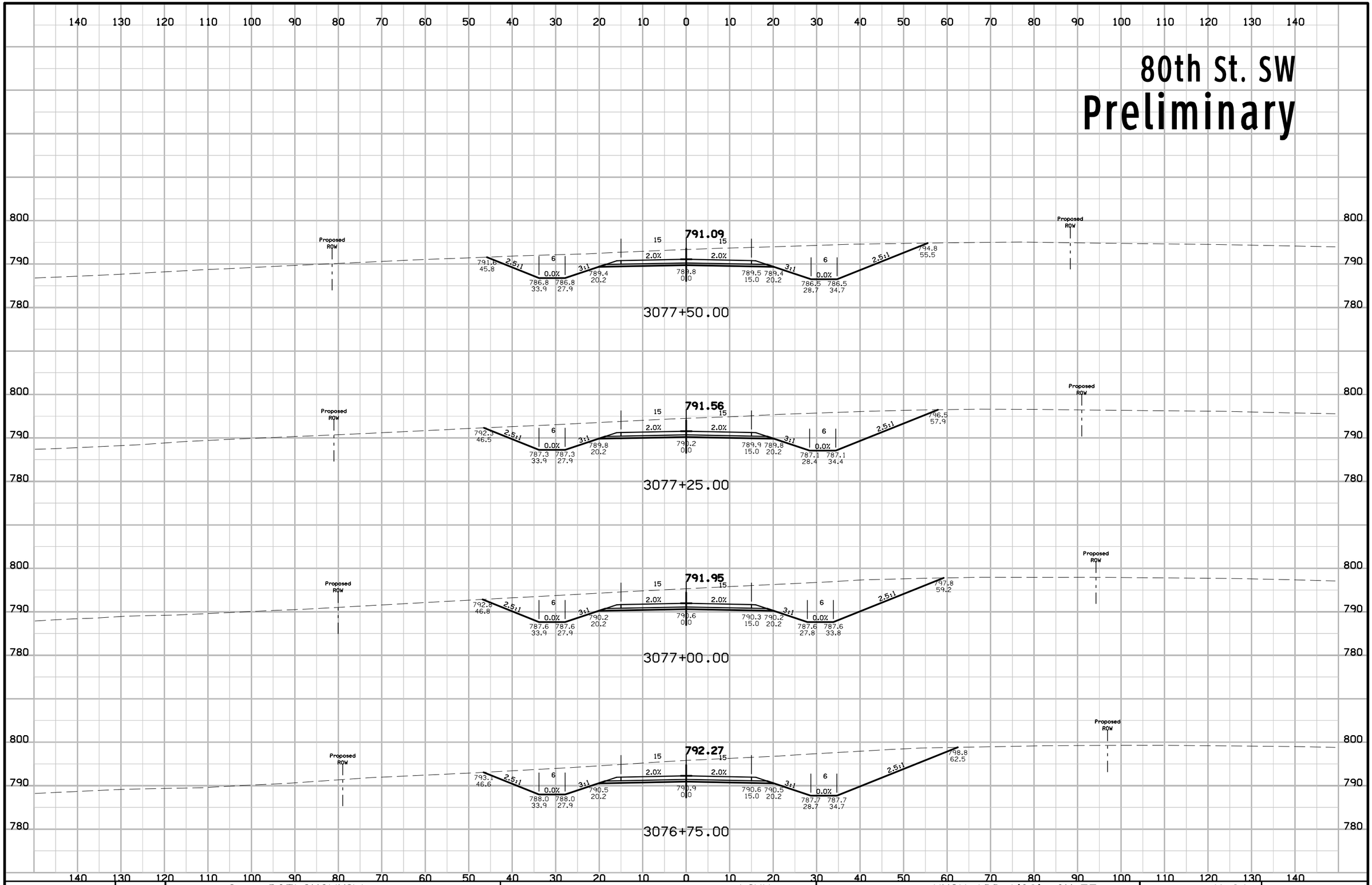
80th St. SW
Preliminary



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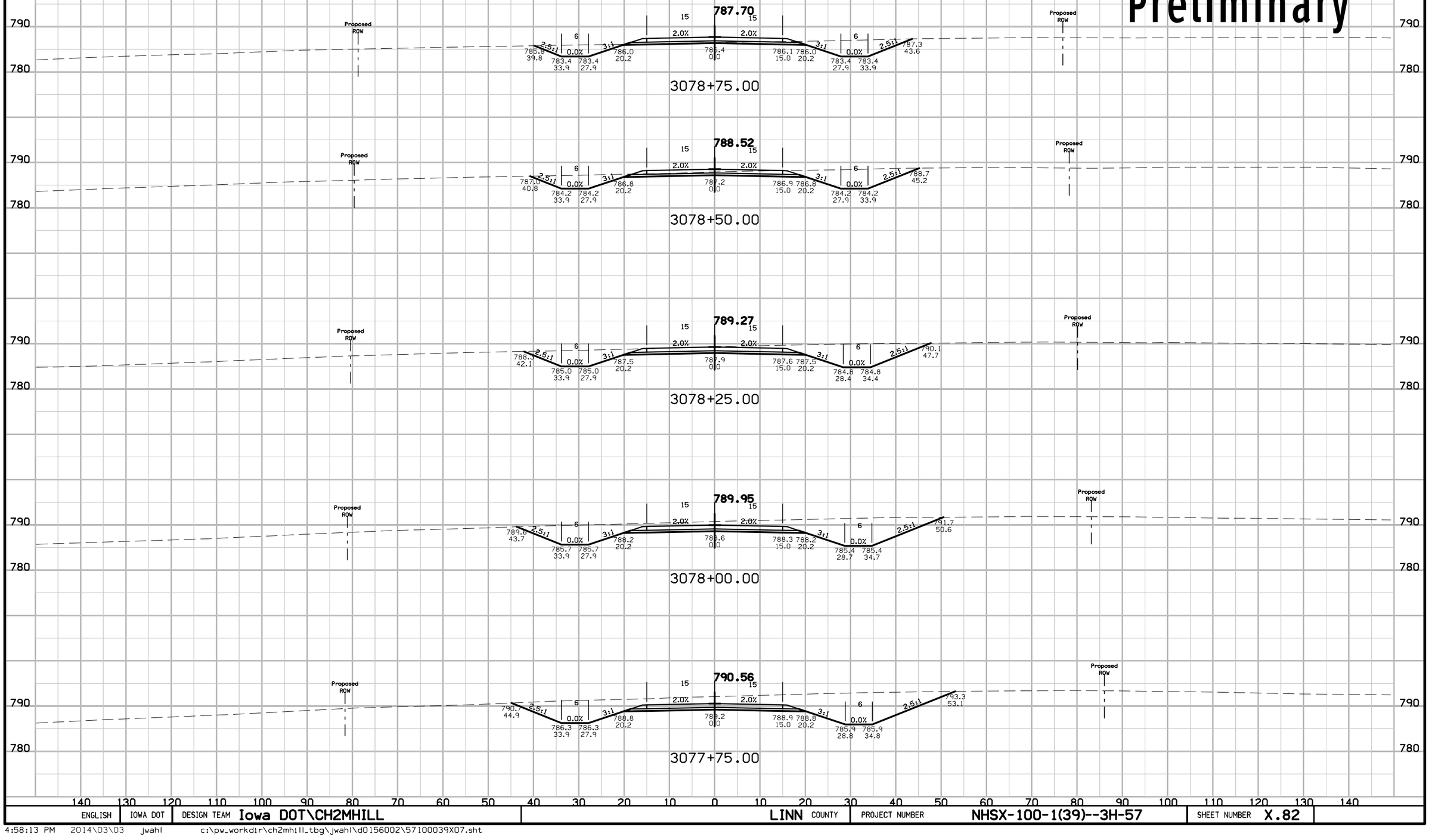
80th St. SW

Preliminary



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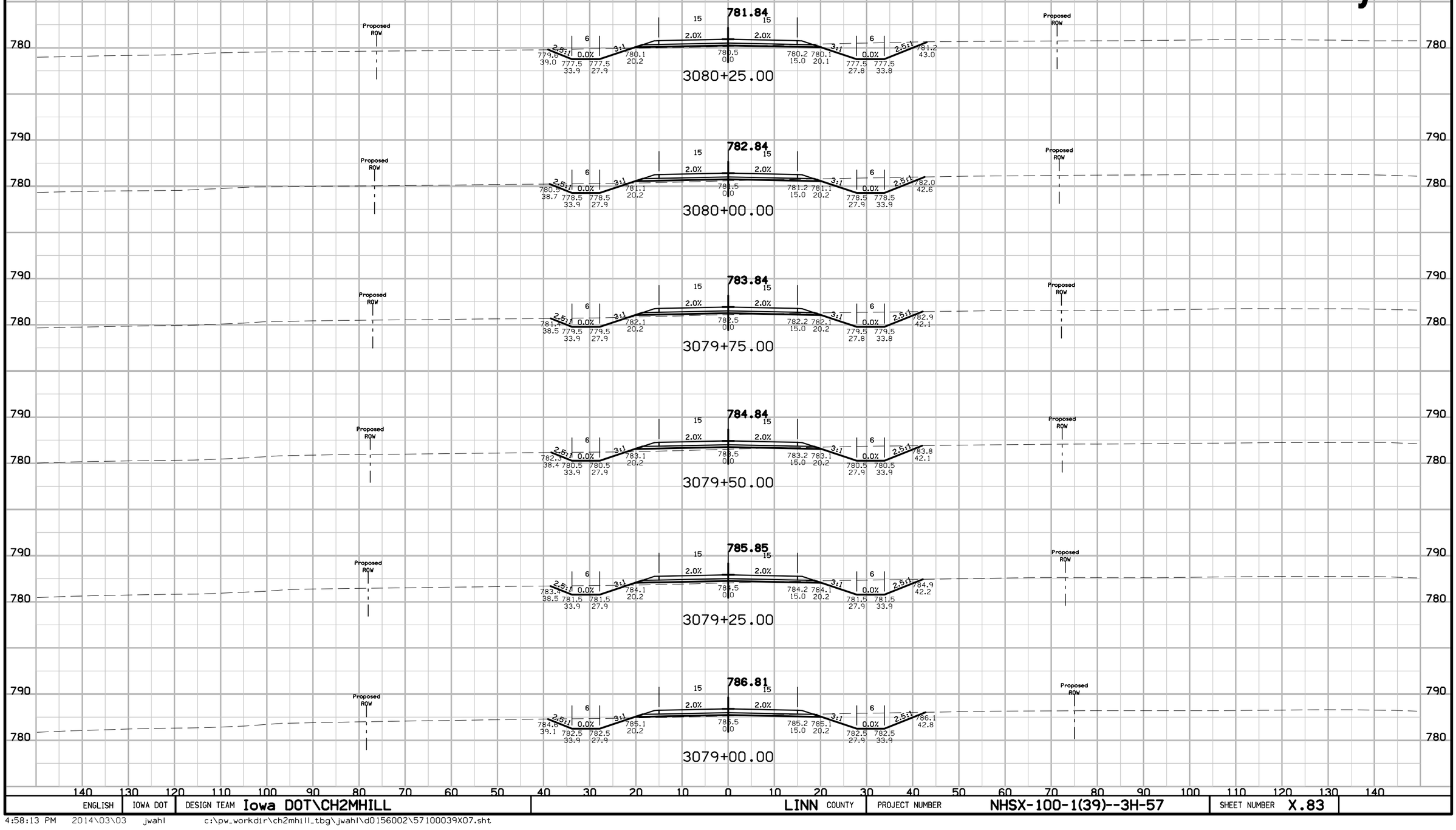
80th St. SW
Preliminary



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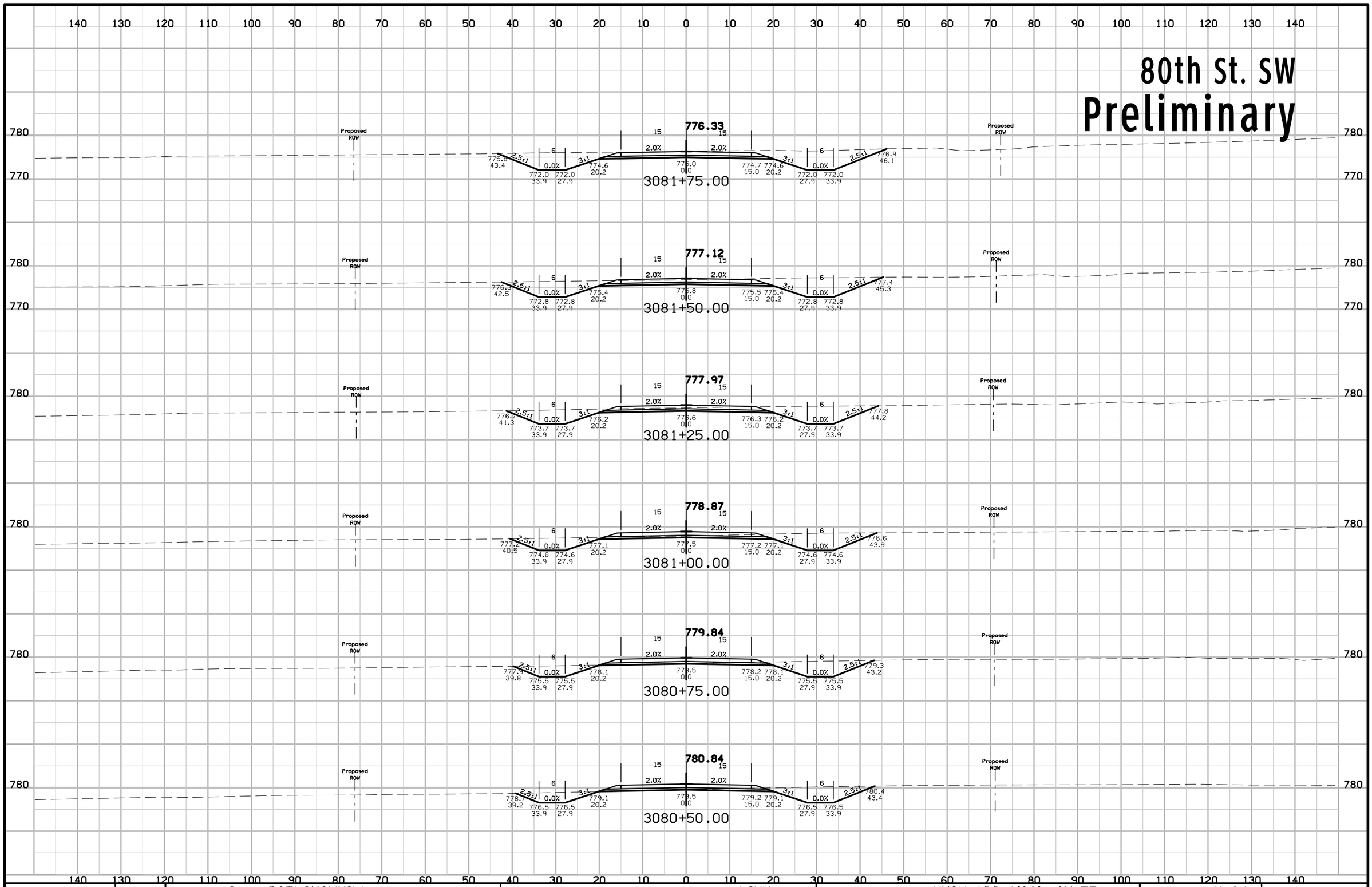
80th St. SW

Preliminary



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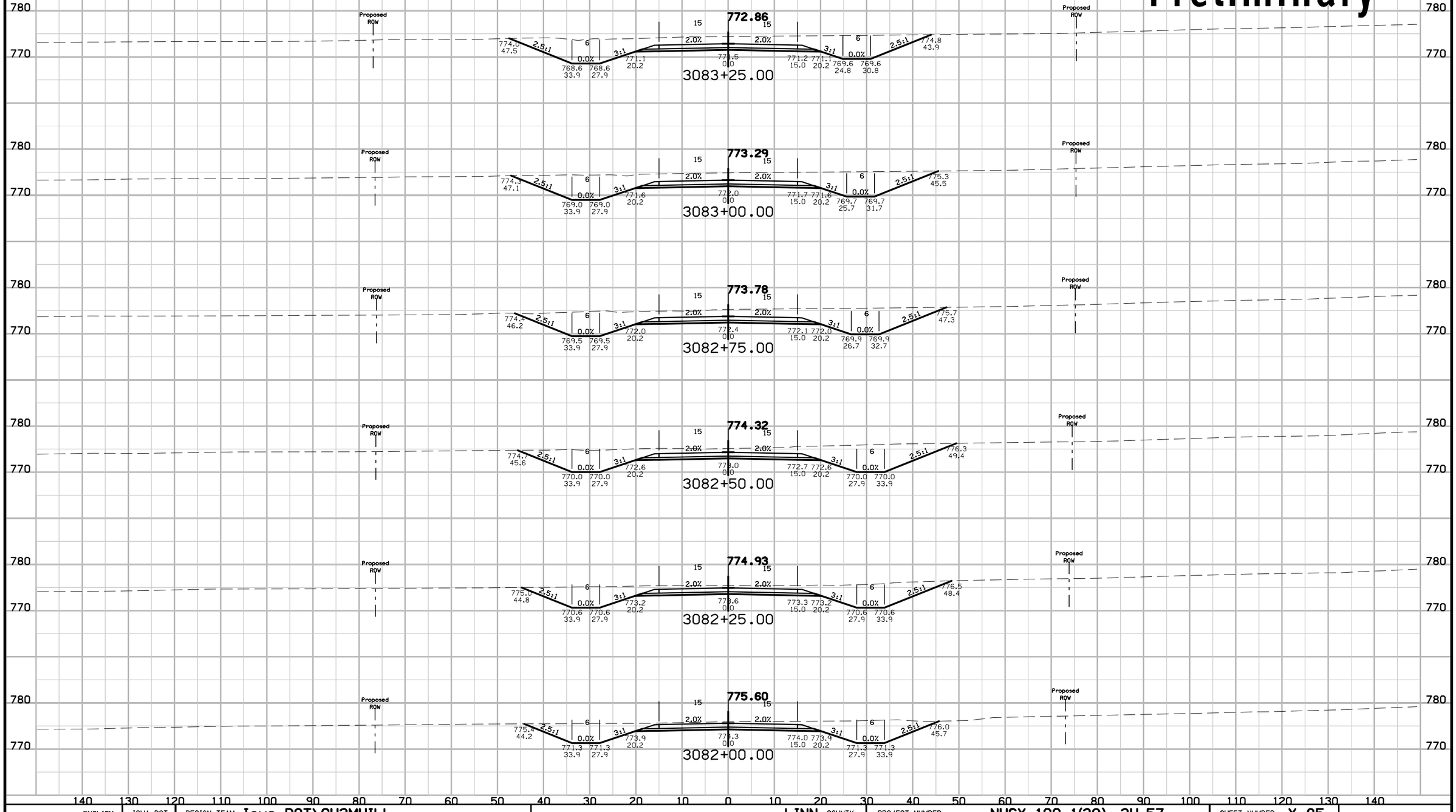
80th St. SW

Preliminary



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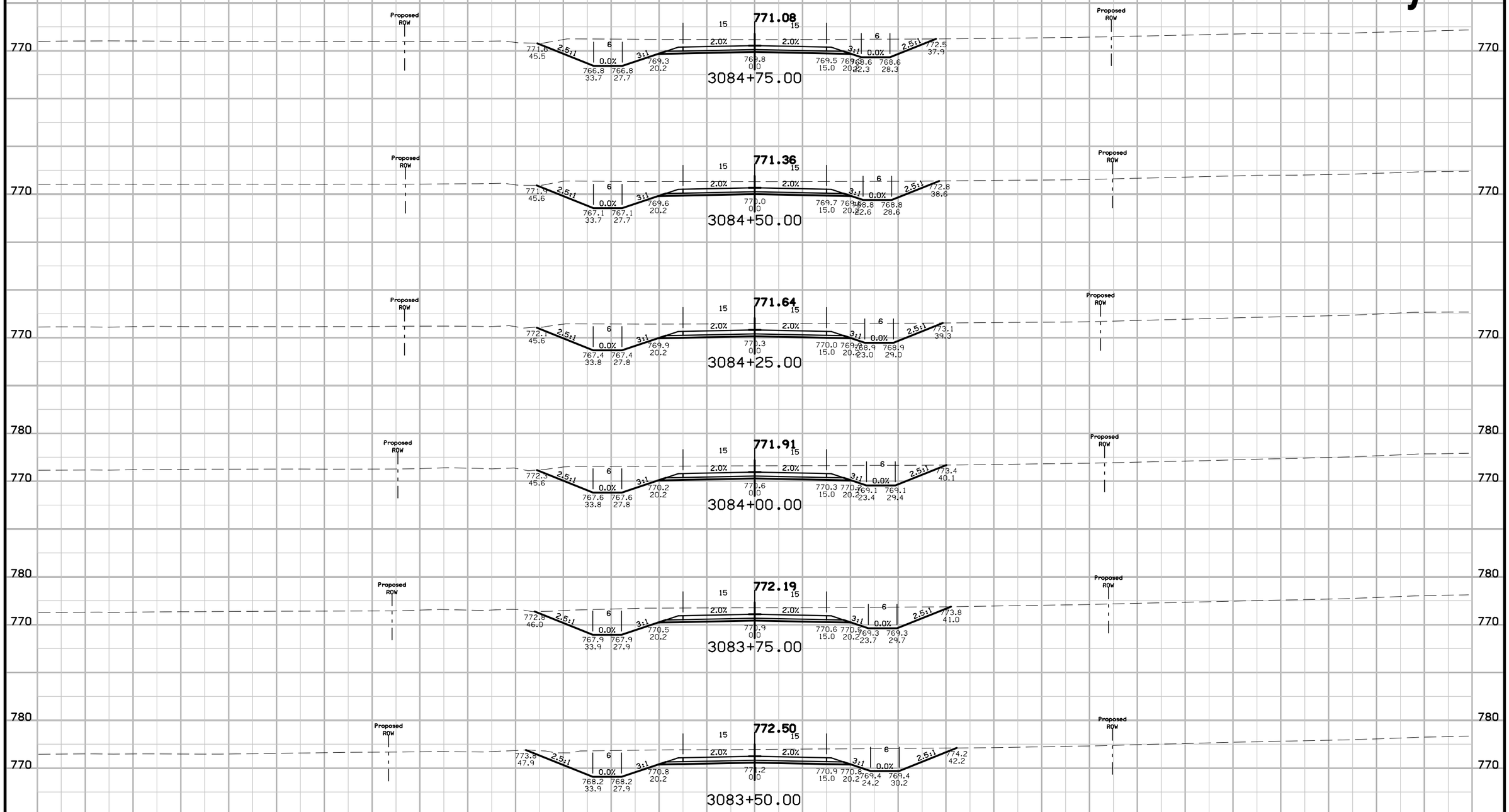
80th St. SW
Preliminary



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80th St. SW
Preliminary

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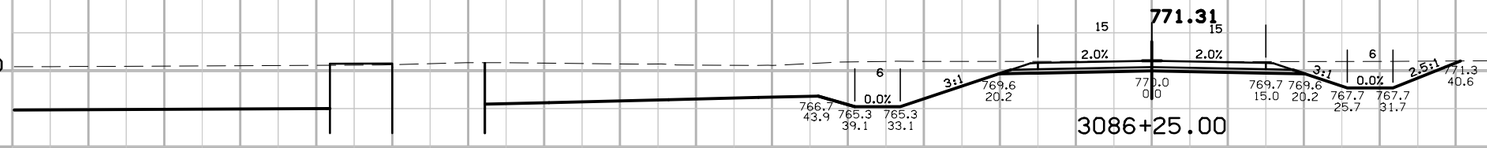
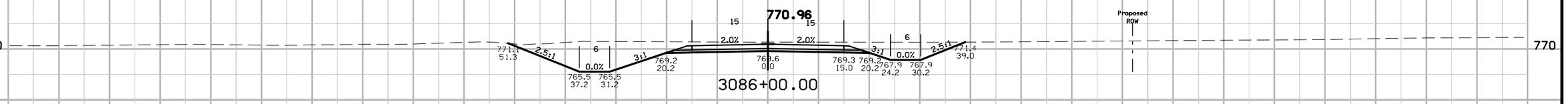
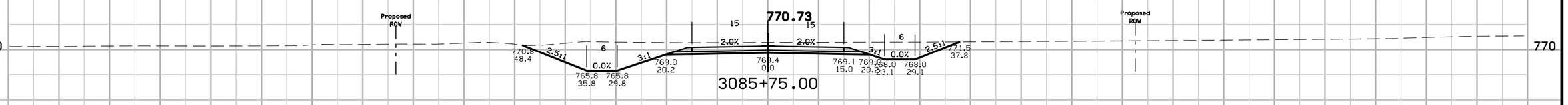
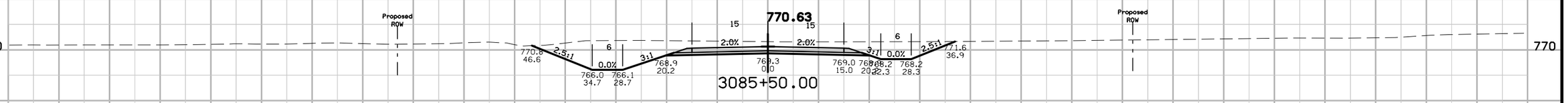
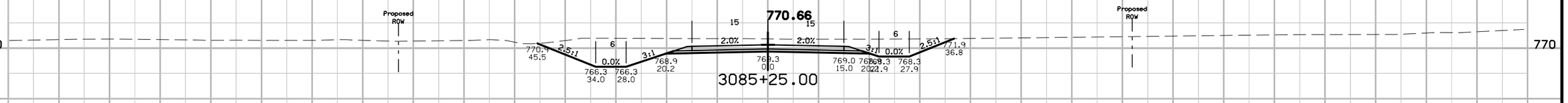
770

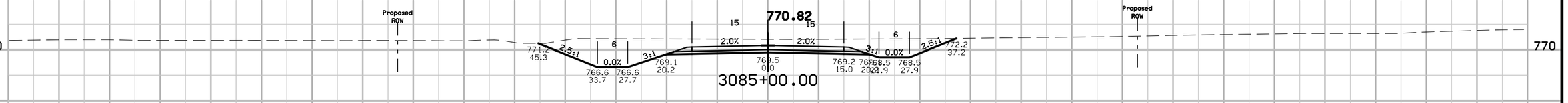












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ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.87

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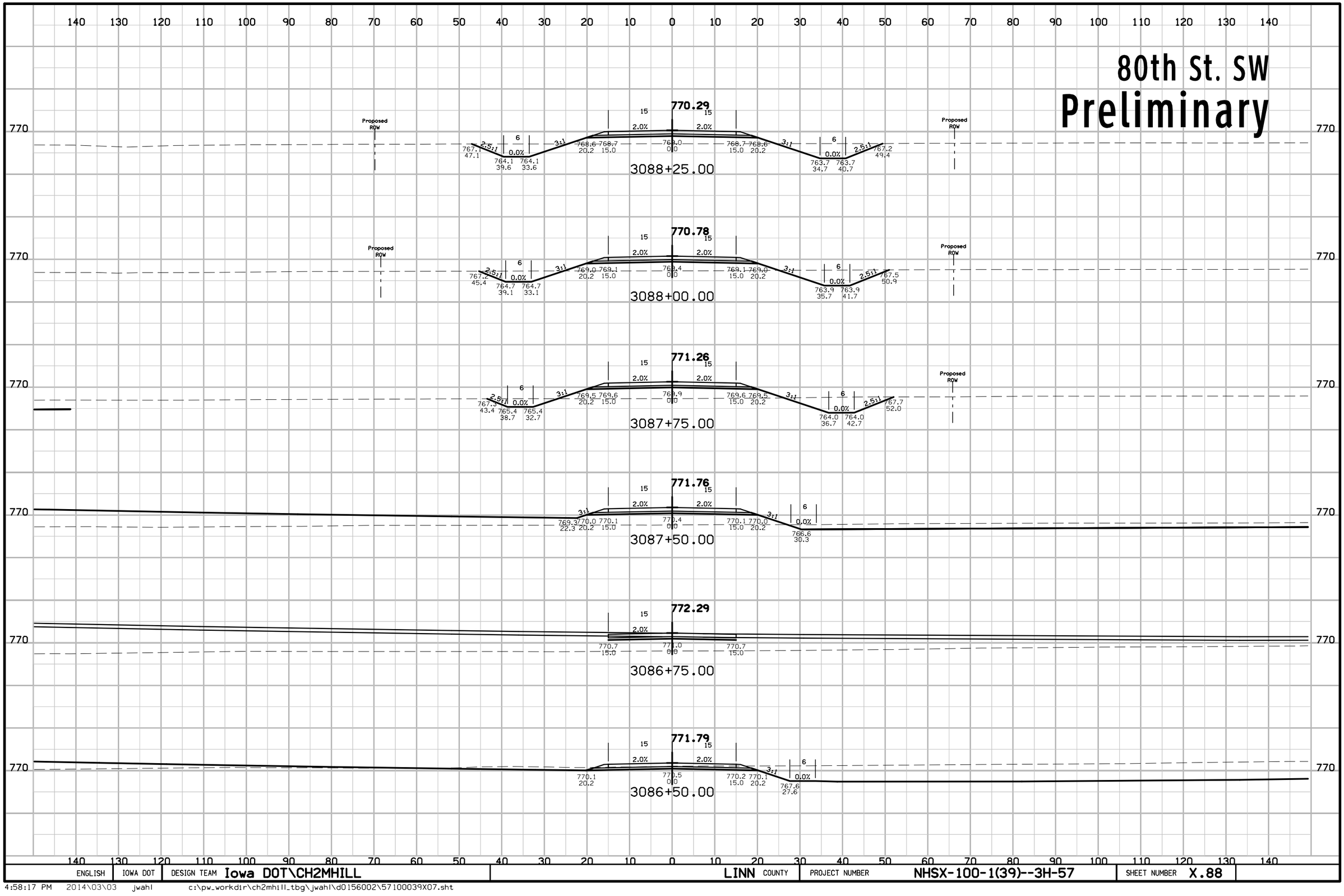
80th St. SW

Preliminary



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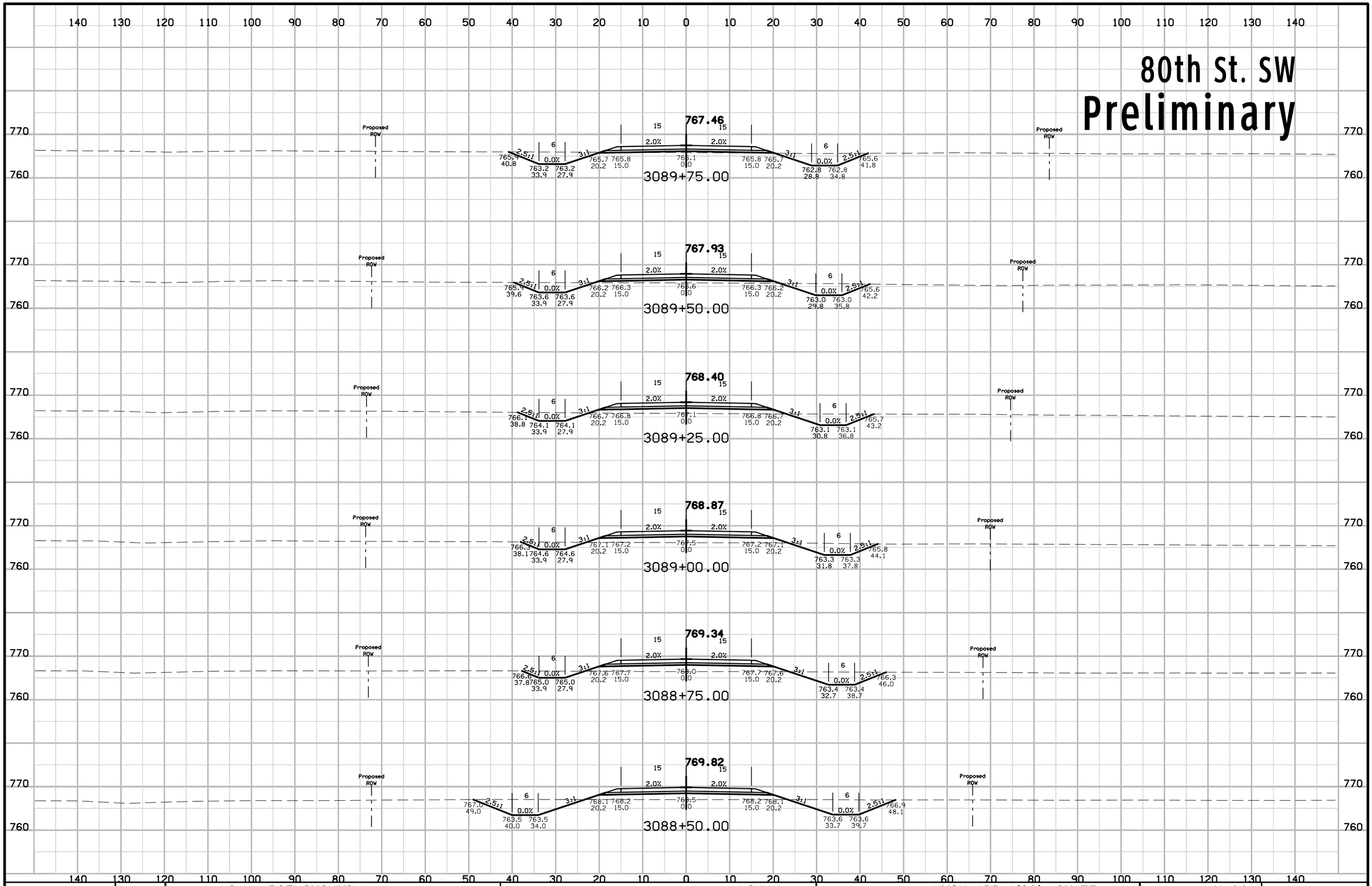
80th St. SW

Preliminary



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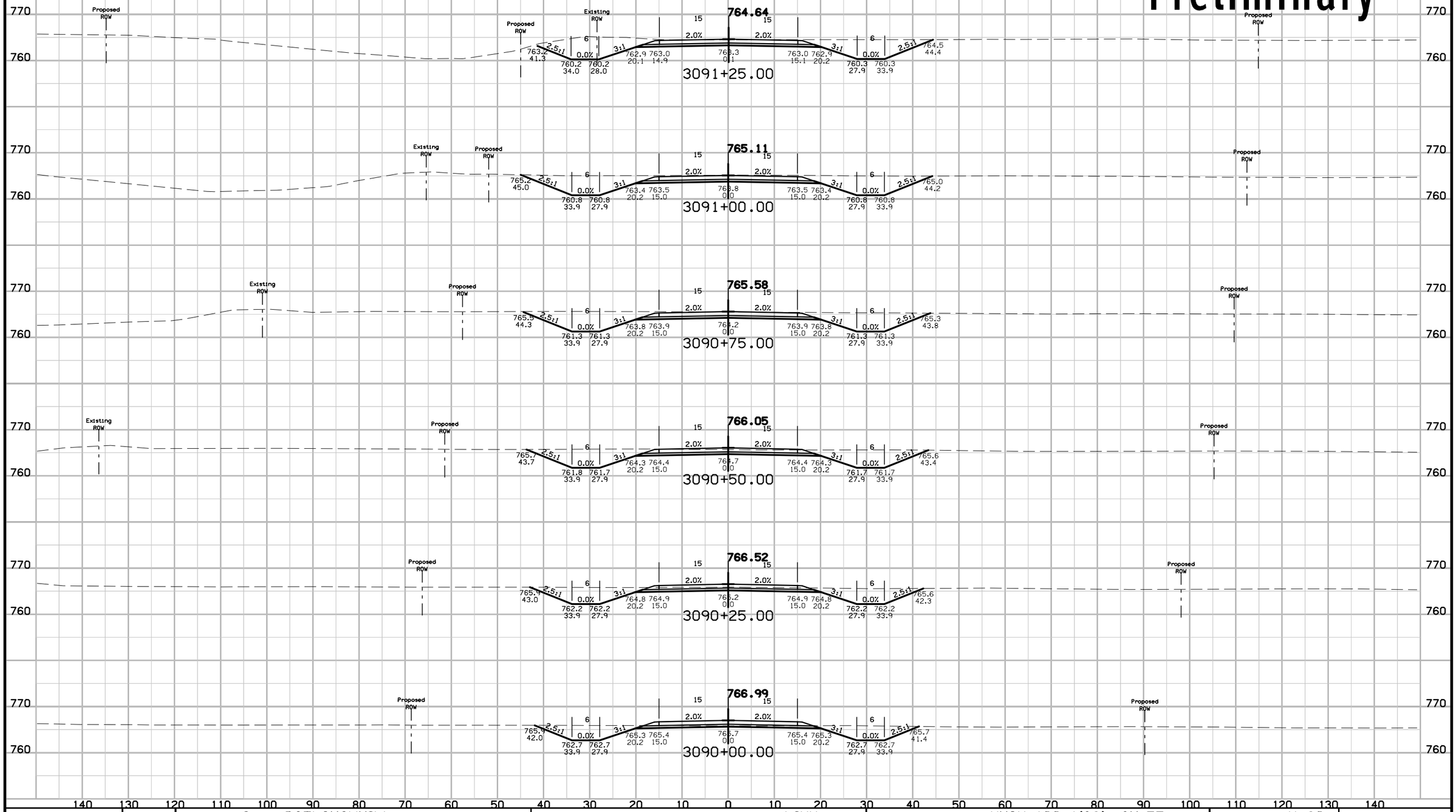
80th St. SW
Preliminary



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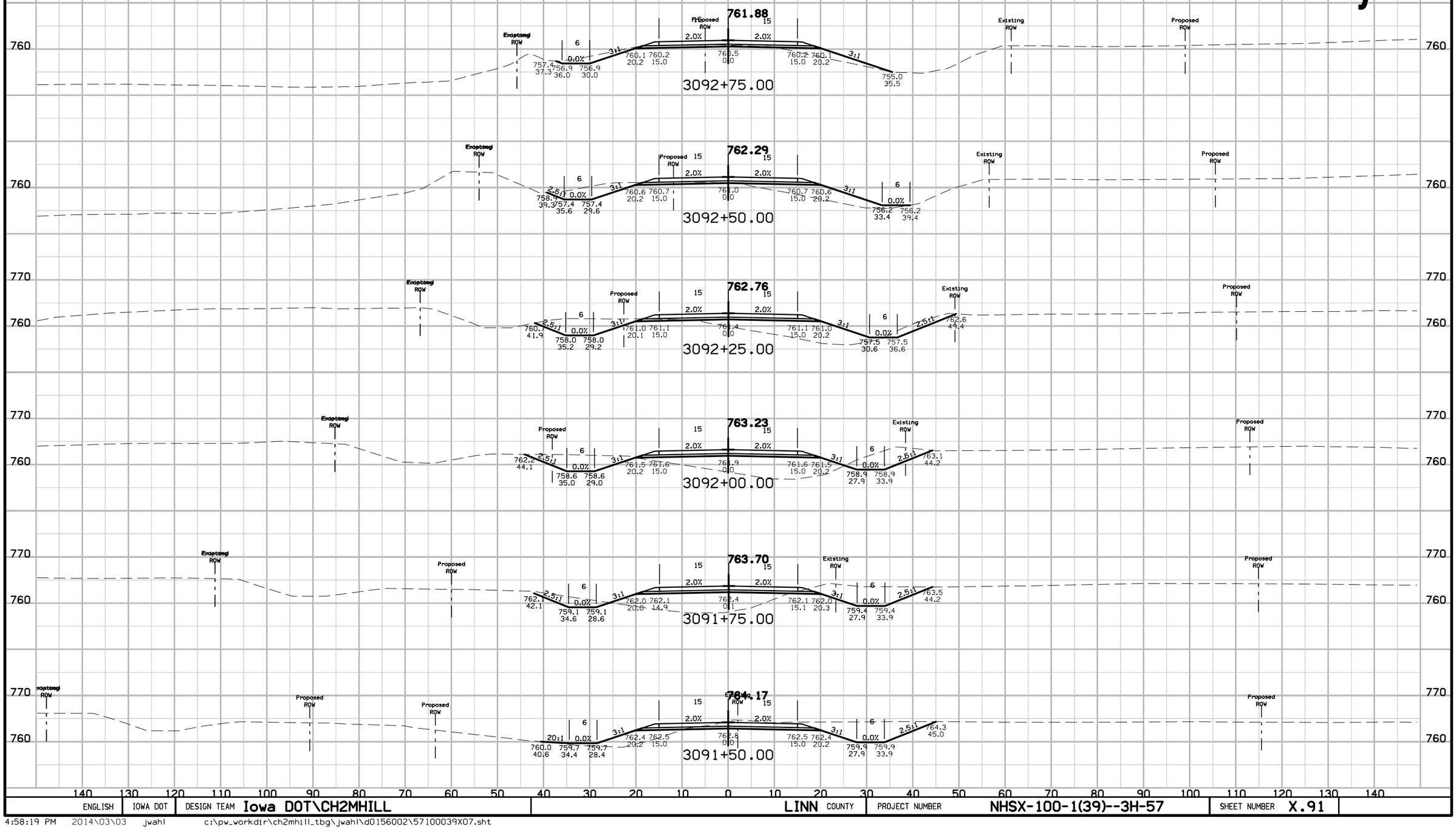
80th St. SW
Preliminary



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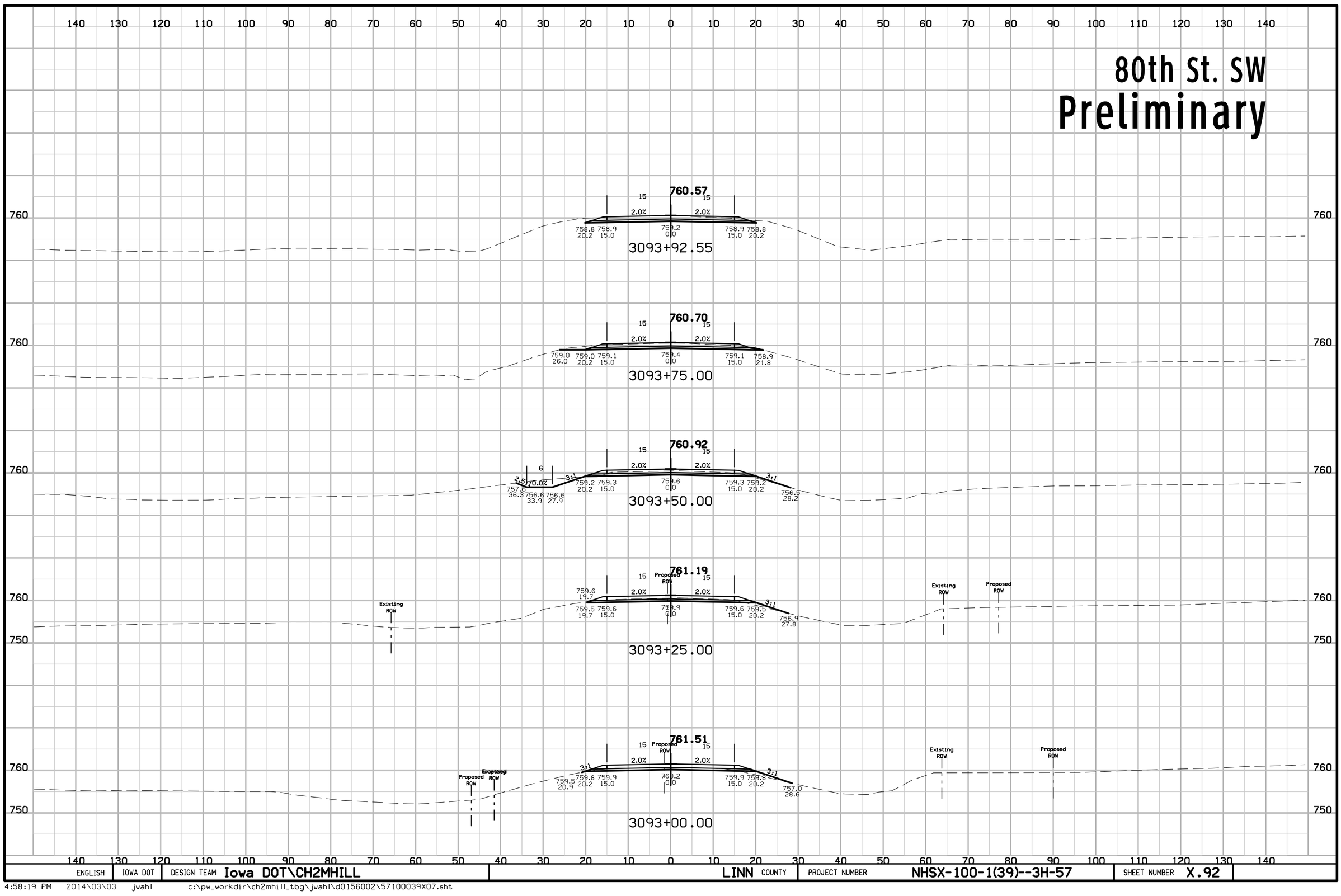
80th St. SW
Preliminary



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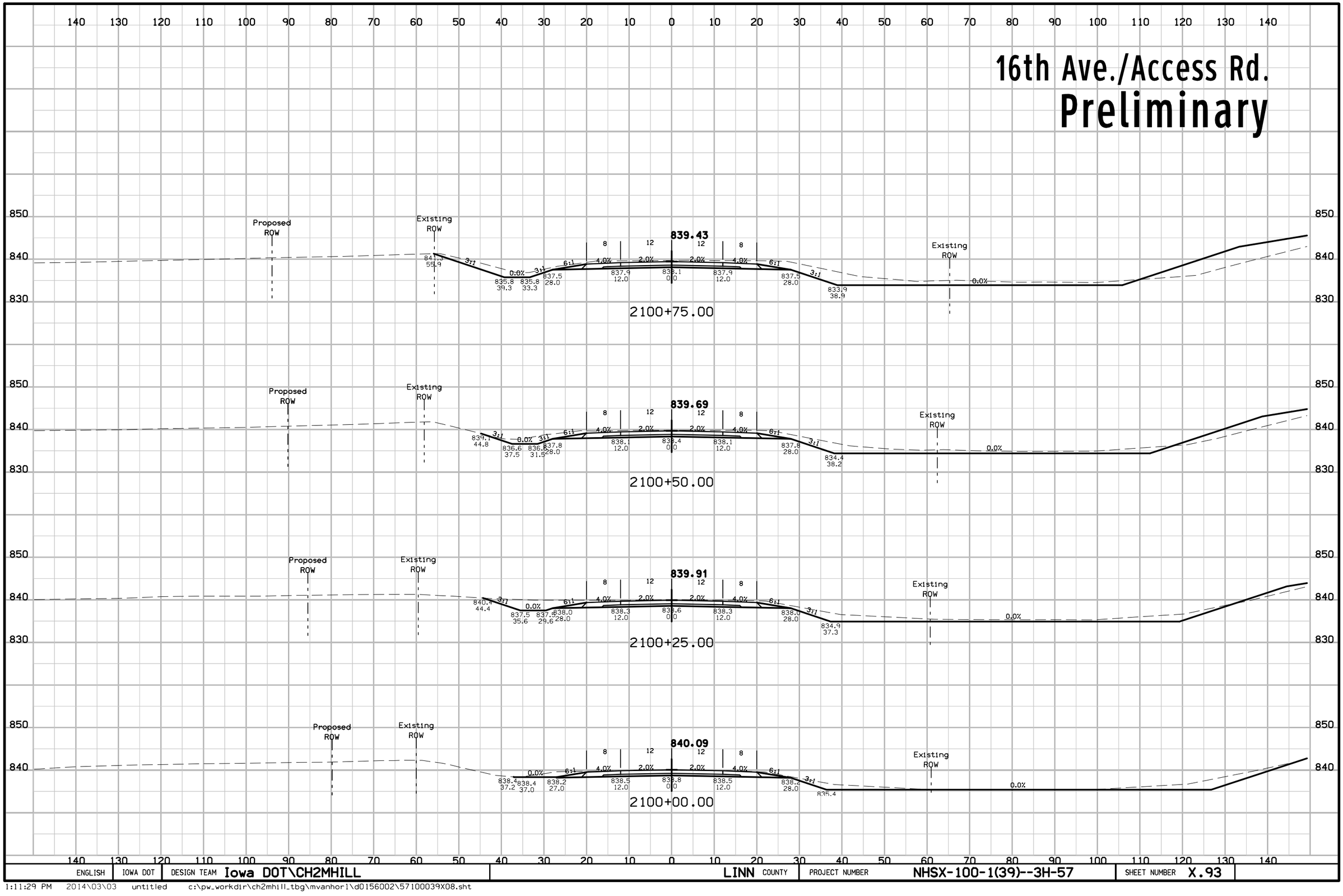
16th Ave./Access Rd.

Preliminary



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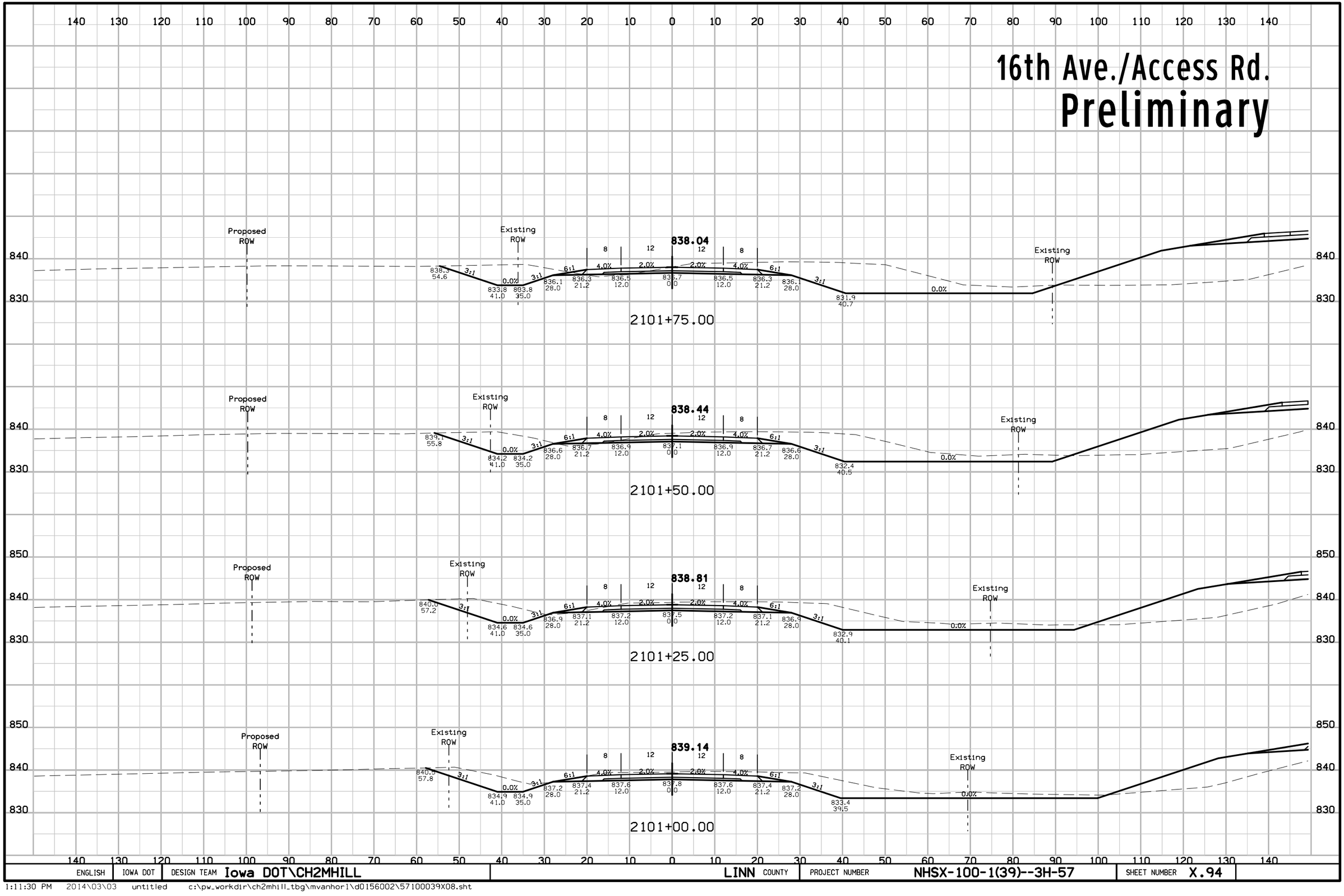
16th Ave./Access Rd.

Preliminary



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16th Ave./Access Rd.

Preliminary

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

840
830

Proposed ROW

Existing ROW

836.05

835.5 51.6 | 3:1 | 831.8 41.0 | 0.0% | 831.8 35.0 | 3:1 | 834.2 28.0 | 6:1 | 834.3 21.2 | 8 | 4.0% | 834.5 12.0 | 12 | 2.0% | 834.7 0.0 | 2.0% | 834.5 12.0 | 8 | 4.0% | 834.3 21.2 | 6:1 | 834.2 28.0 | 3:1 | 829.9 40.8 | 0.0%

2102+75.00

Proposed ROW

Existing ROW

836.60

836.2 52.7 | 3:1 | 832.4 41.0 | 0.0% | 832.4 35.0 | 3:1 | 834.7 28.0 | 6:1 | 834.8 21.2 | 8 | 4.0% | 835.0 12.0 | 12 | 2.0% | 835.3 0.0 | 2.0% | 835.0 12.0 | 8 | 4.0% | 834.8 21.2 | 6:1 | 834.7 28.0 | 3:1 | 830.4 40.9 | 0.0%

2102+50.00

Proposed ROW

Existing ROW

837.12

836.8 52.8 | 3:1 | 832.9 41.0 | 0.0% | 832.9 35.0 | 3:1 | 835.2 28.0 | 6:1 | 835.4 21.2 | 8 | 4.0% | 835.5 12.0 | 12 | 2.0% | 835.8 0.0 | 2.0% | 835.5 12.0 | 8 | 4.0% | 835.4 21.2 | 6:1 | 835.2 28.0 | 3:1 | 830.9 41.0 | 0.0%

2102+25.00

Proposed ROW

Existing ROW

837.60

Existing ROW

837.5 53.6 | 3:1 | 833.4 41.0 | 0.0% | 833.4 35.0 | 3:1 | 835.7 28.0 | 6:1 | 835.8 21.2 | 8 | 4.0% | 836.0 12.0 | 12 | 2.0% | 836.3 0.0 | 2.0% | 836.0 12.0 | 8 | 4.0% | 835.8 21.2 | 6:1 | 835.7 28.0 | 3:1 | 831.4 40.9 | 0.0%

2102+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

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.95

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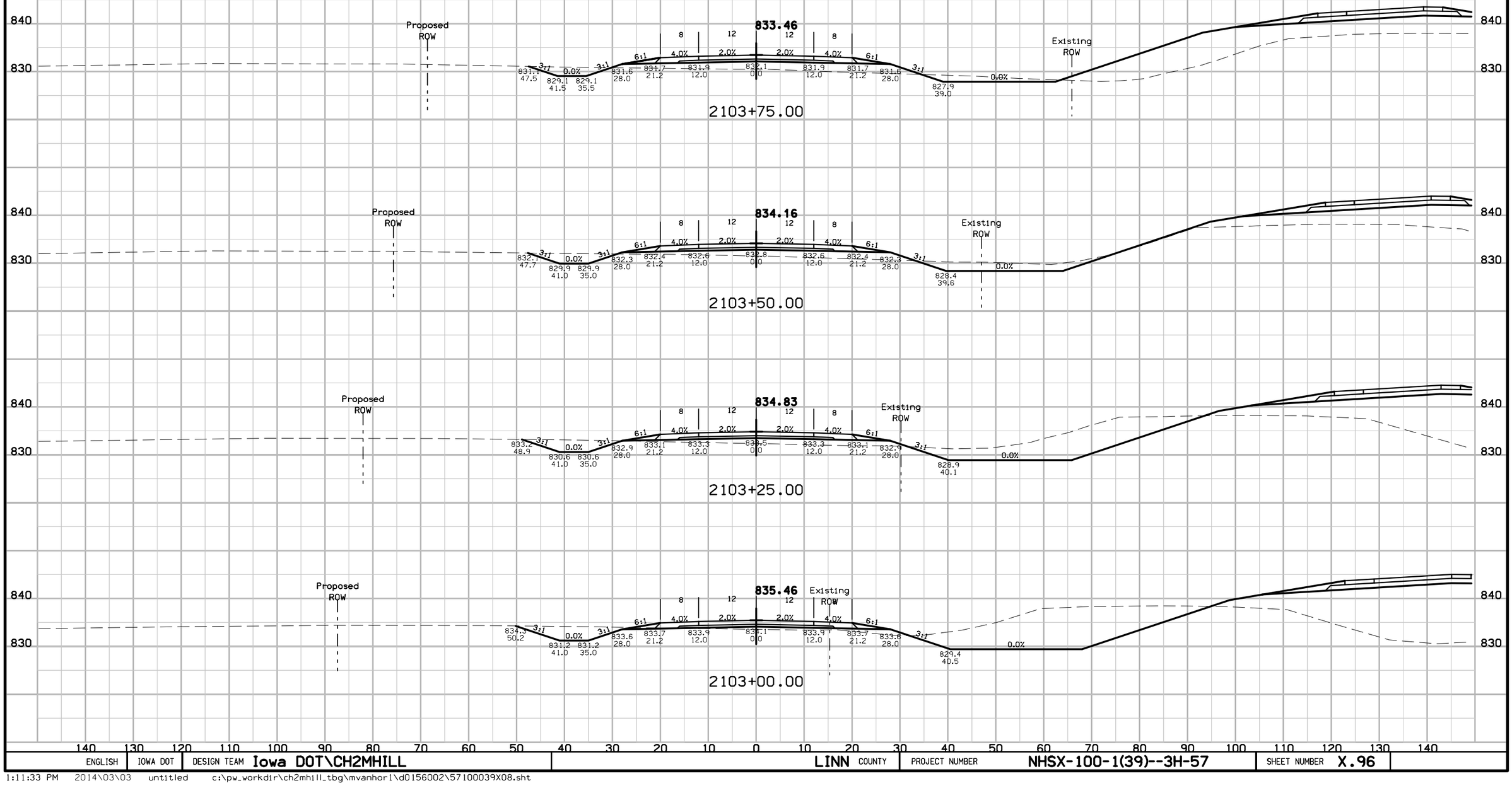
16th Ave./Access Rd.

Preliminary



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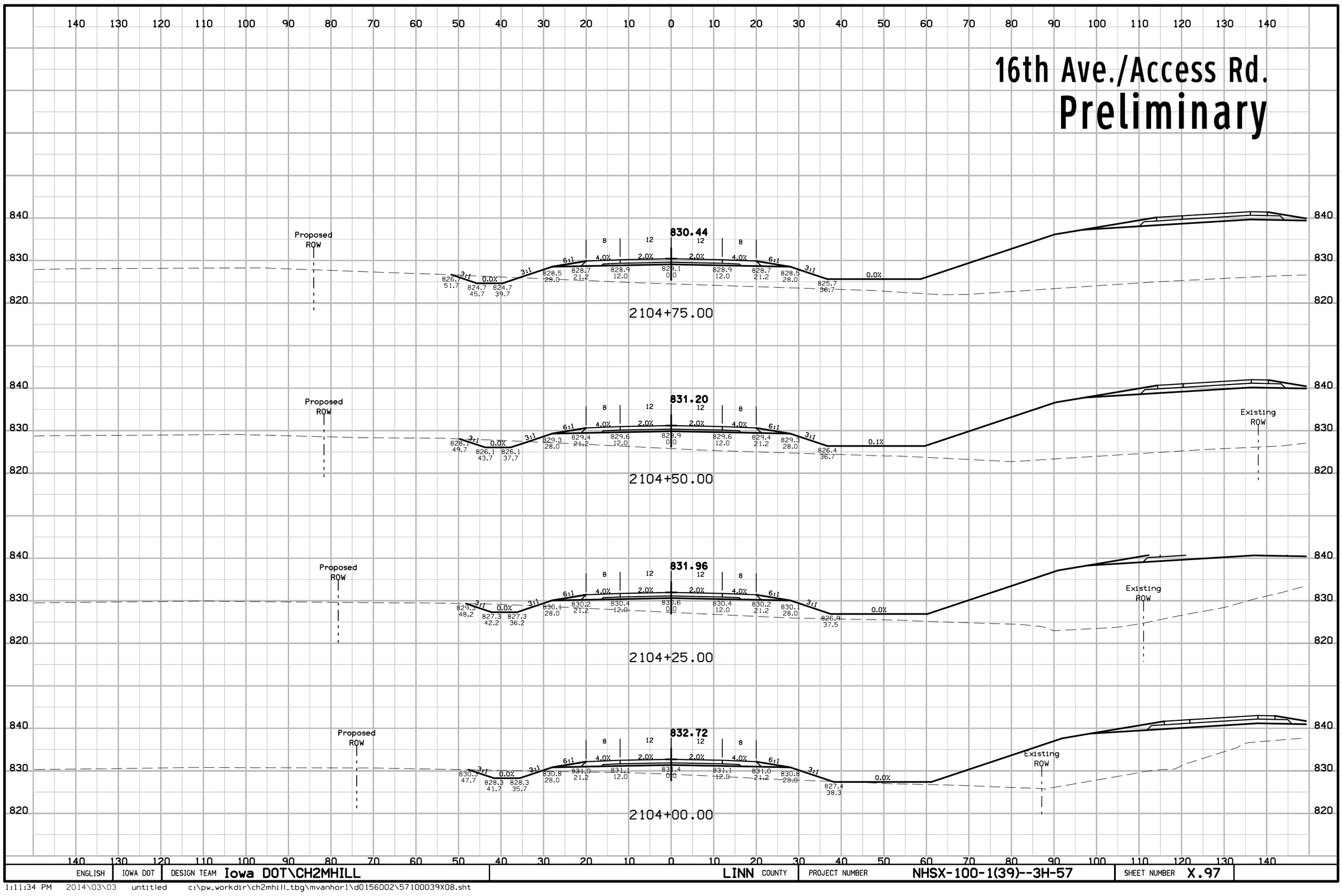
16th Ave./Access Rd.

Preliminary



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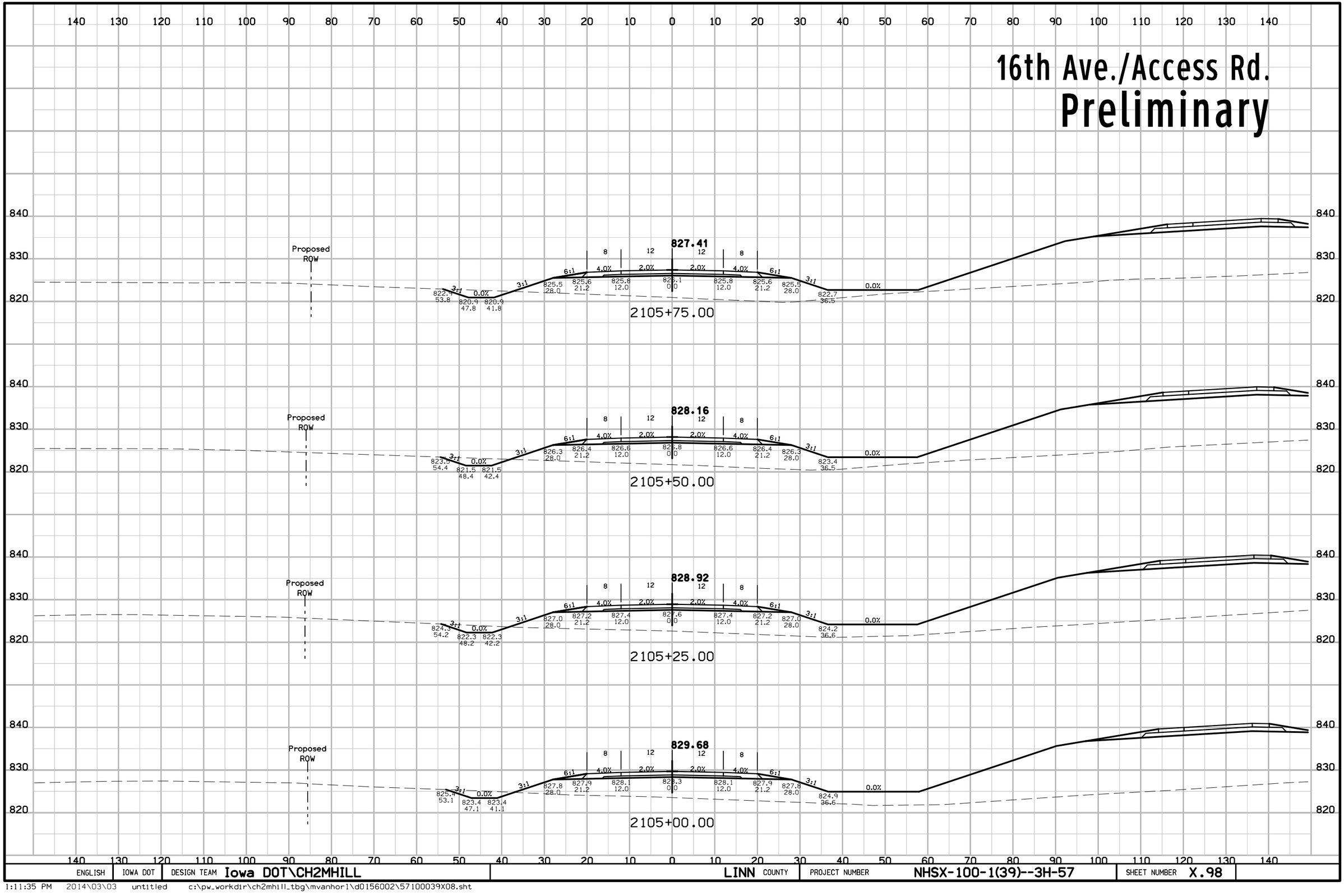
16th Ave./Access Rd.

Preliminary



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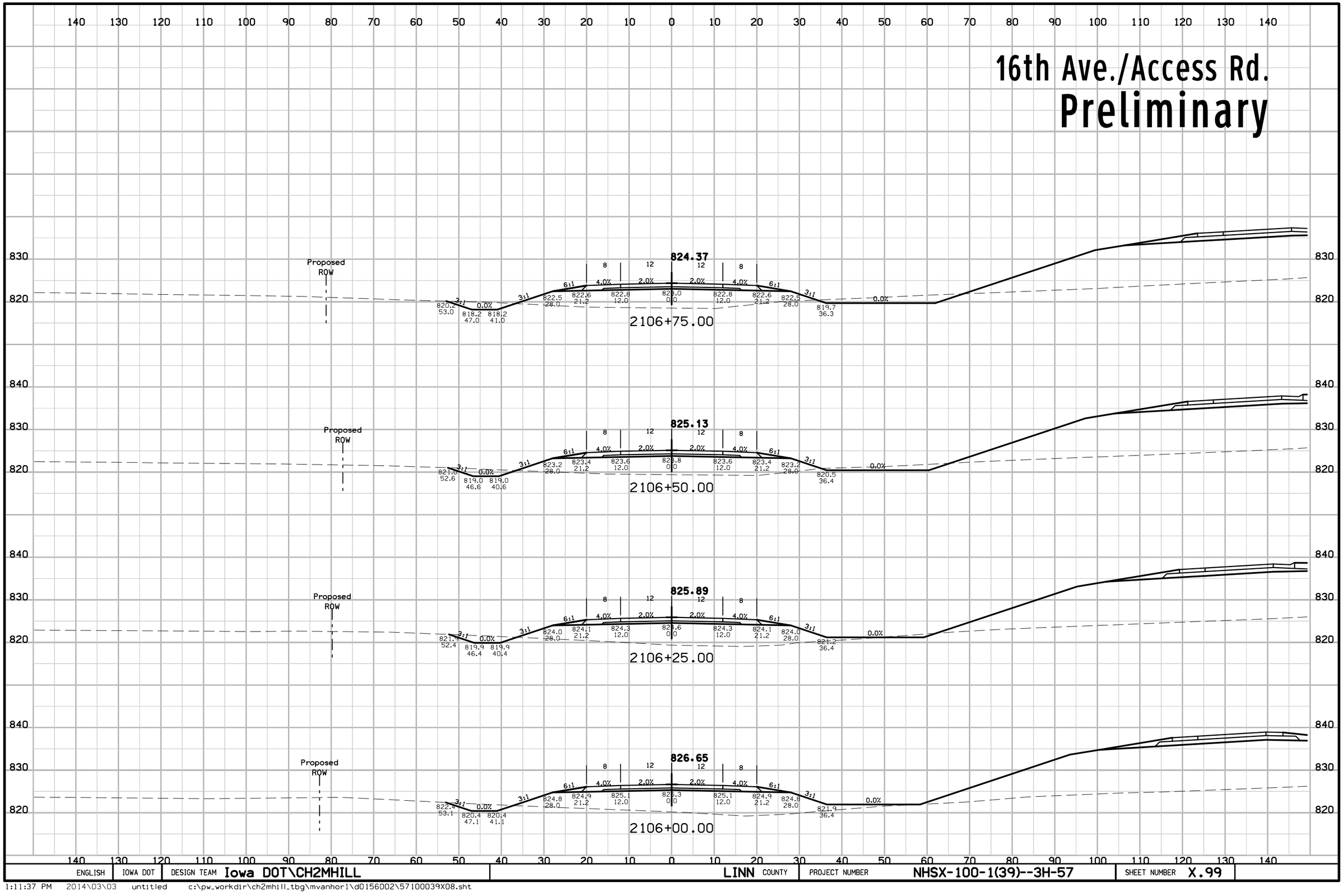
16th Ave./Access Rd.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.99

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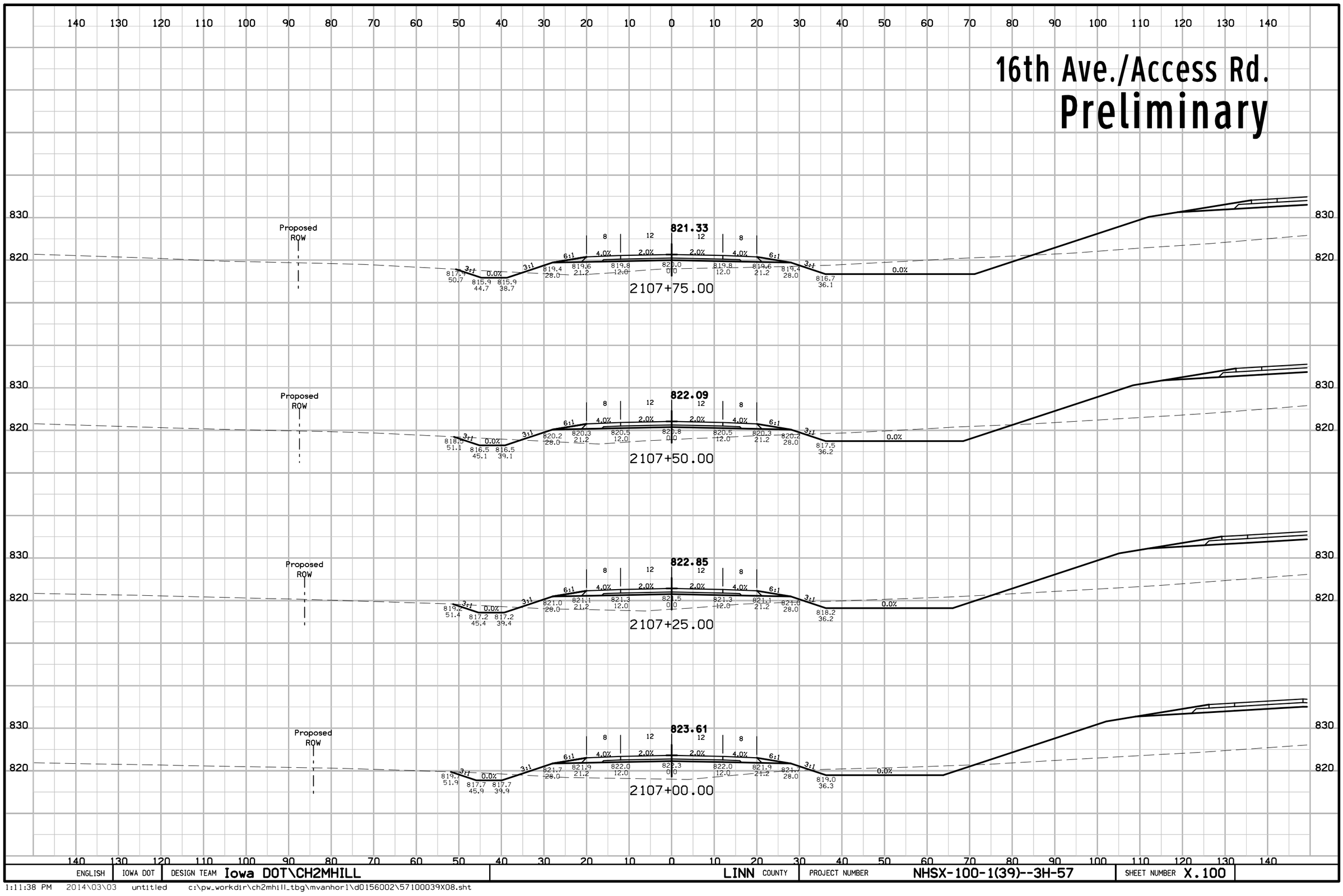
16th Ave./Access Rd.

Preliminary



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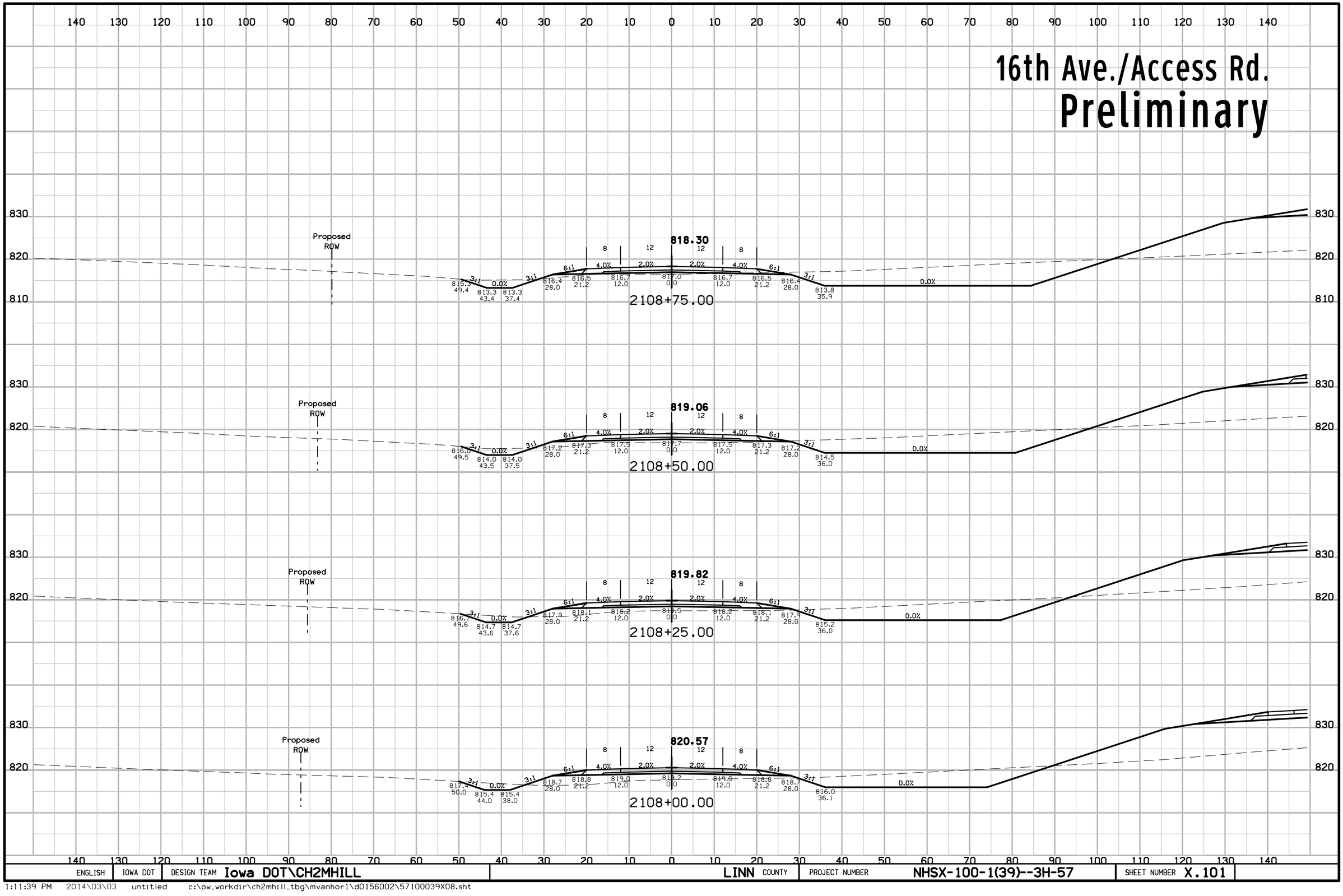
16th Ave./Access Rd.

Preliminary



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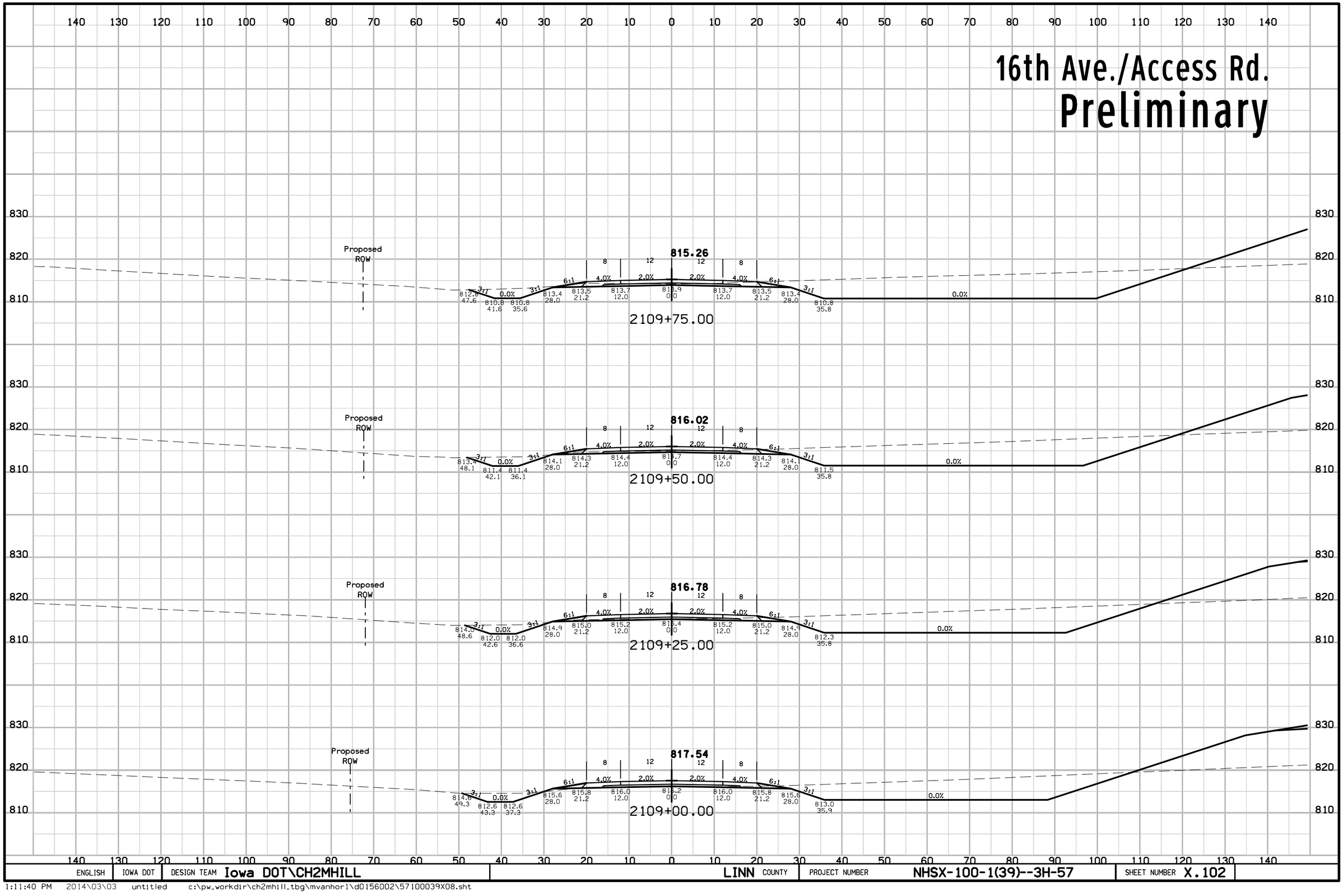
16th Ave./Access Rd.

Preliminary



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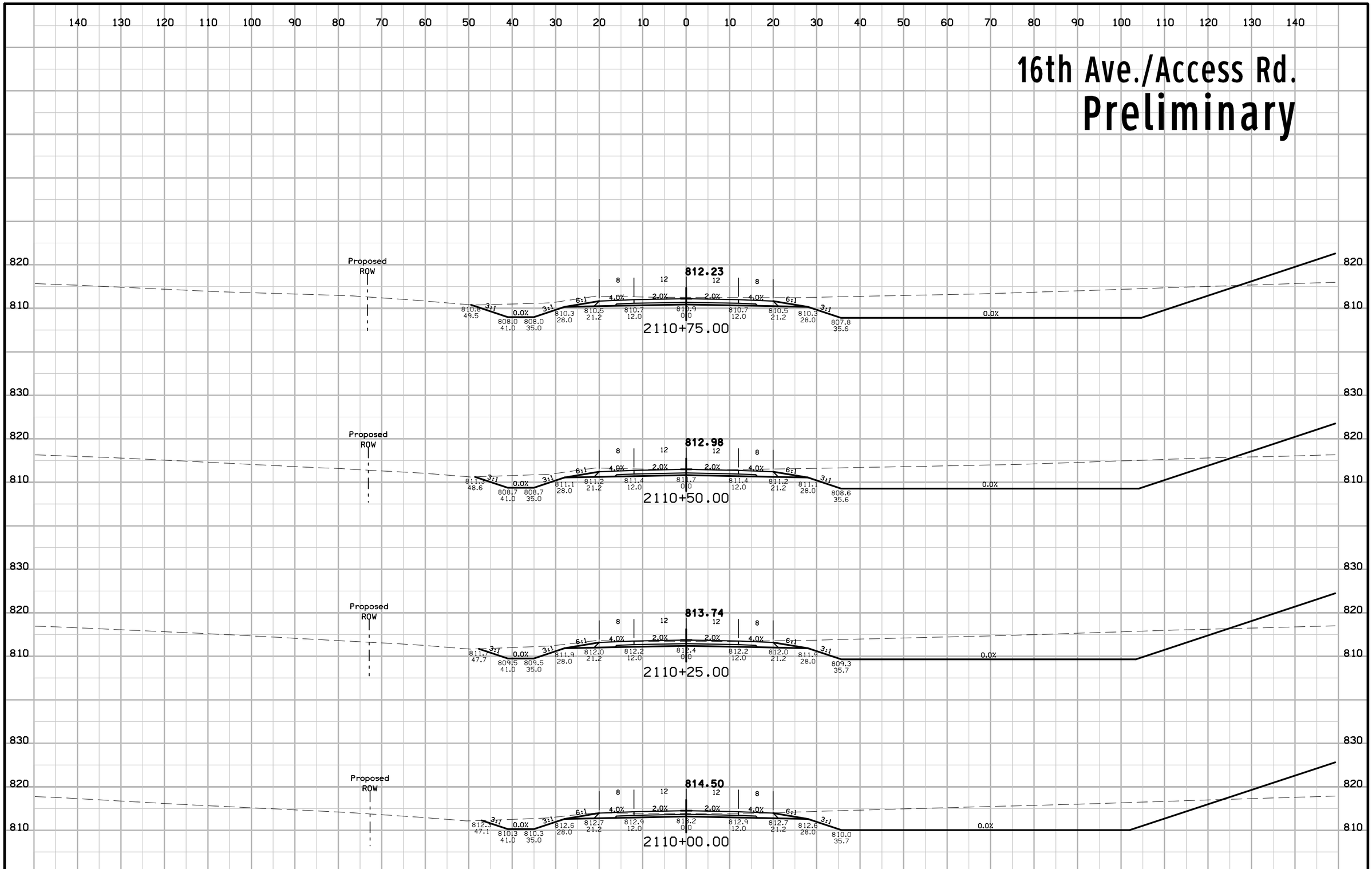

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16th Ave./Access Rd.

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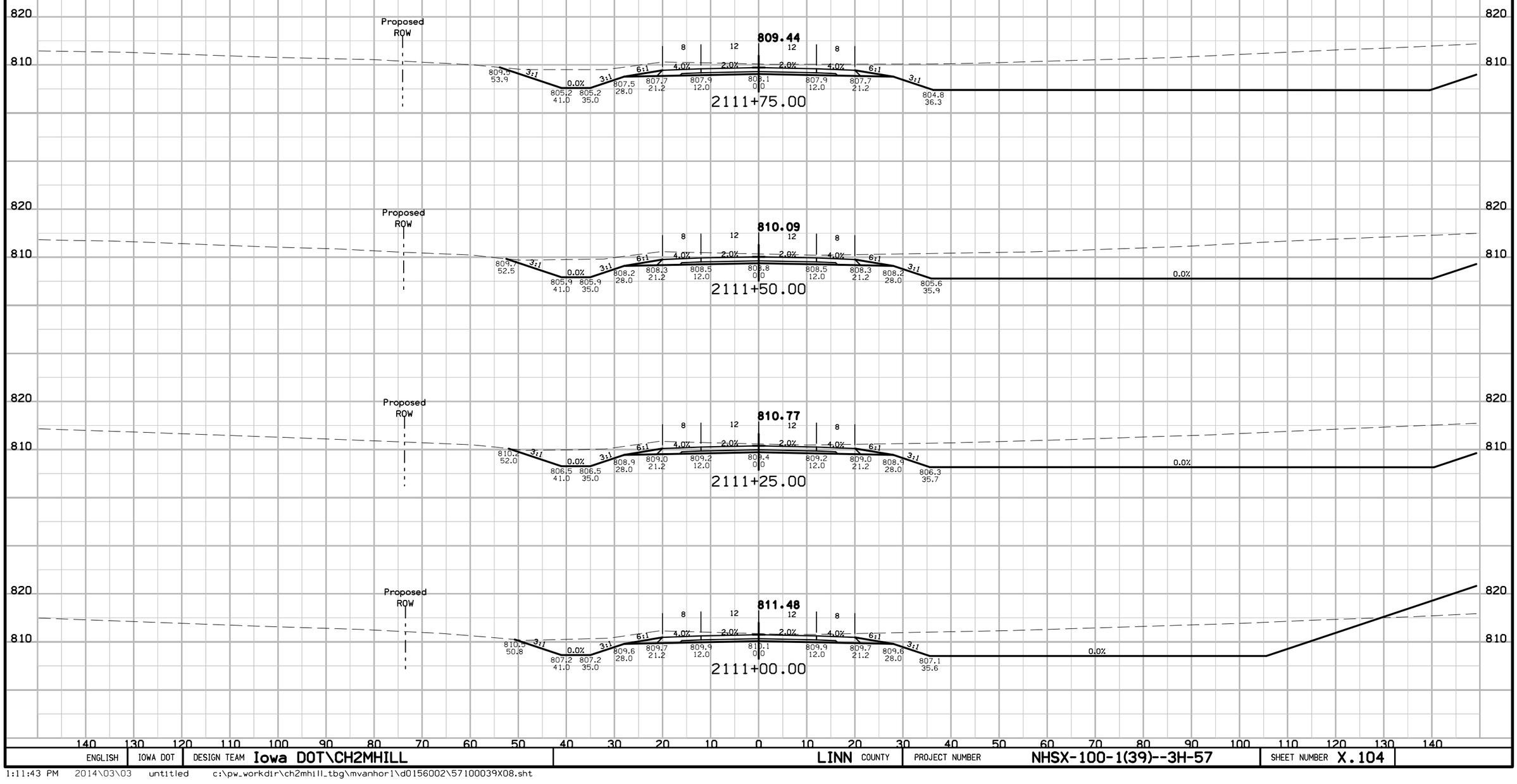

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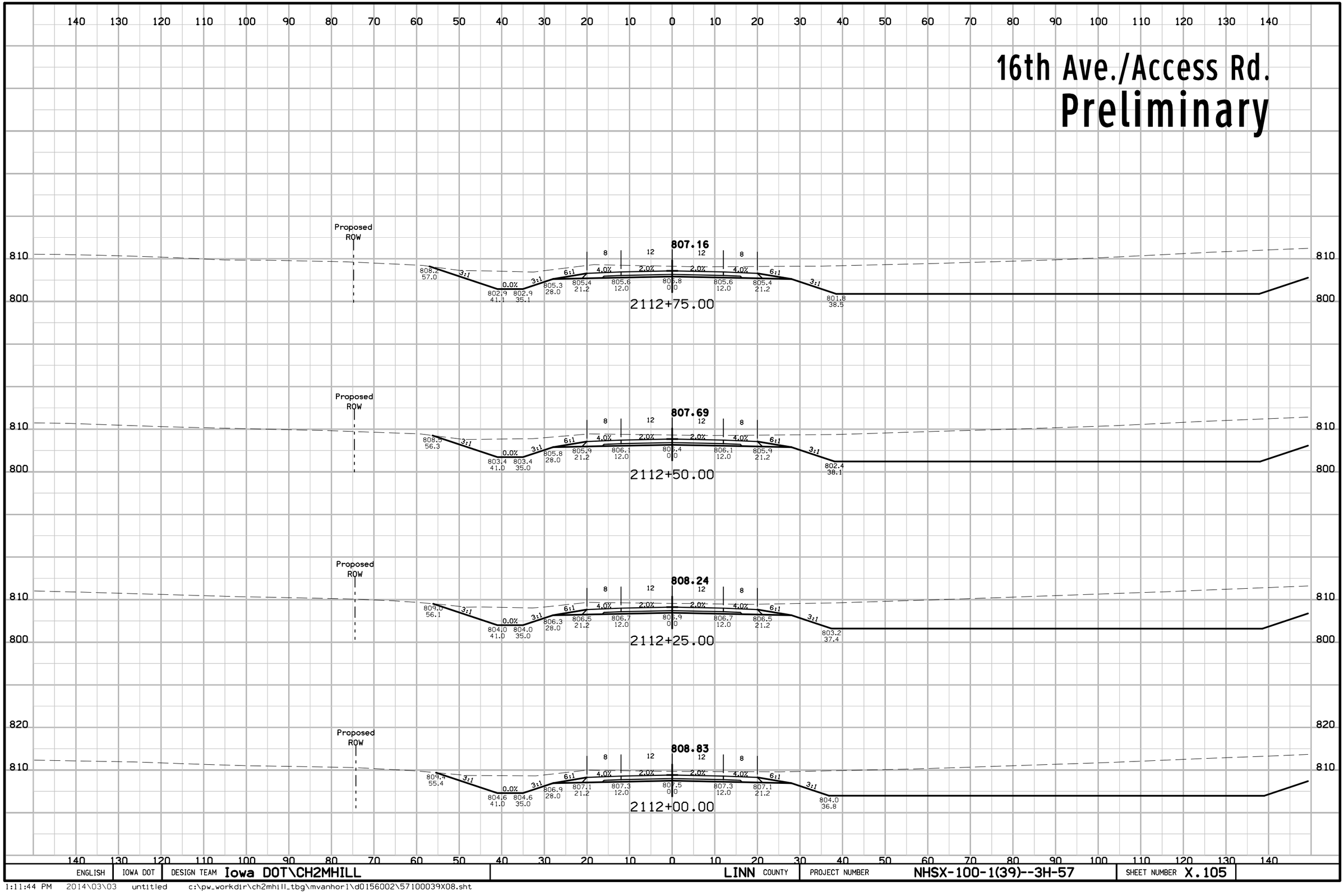

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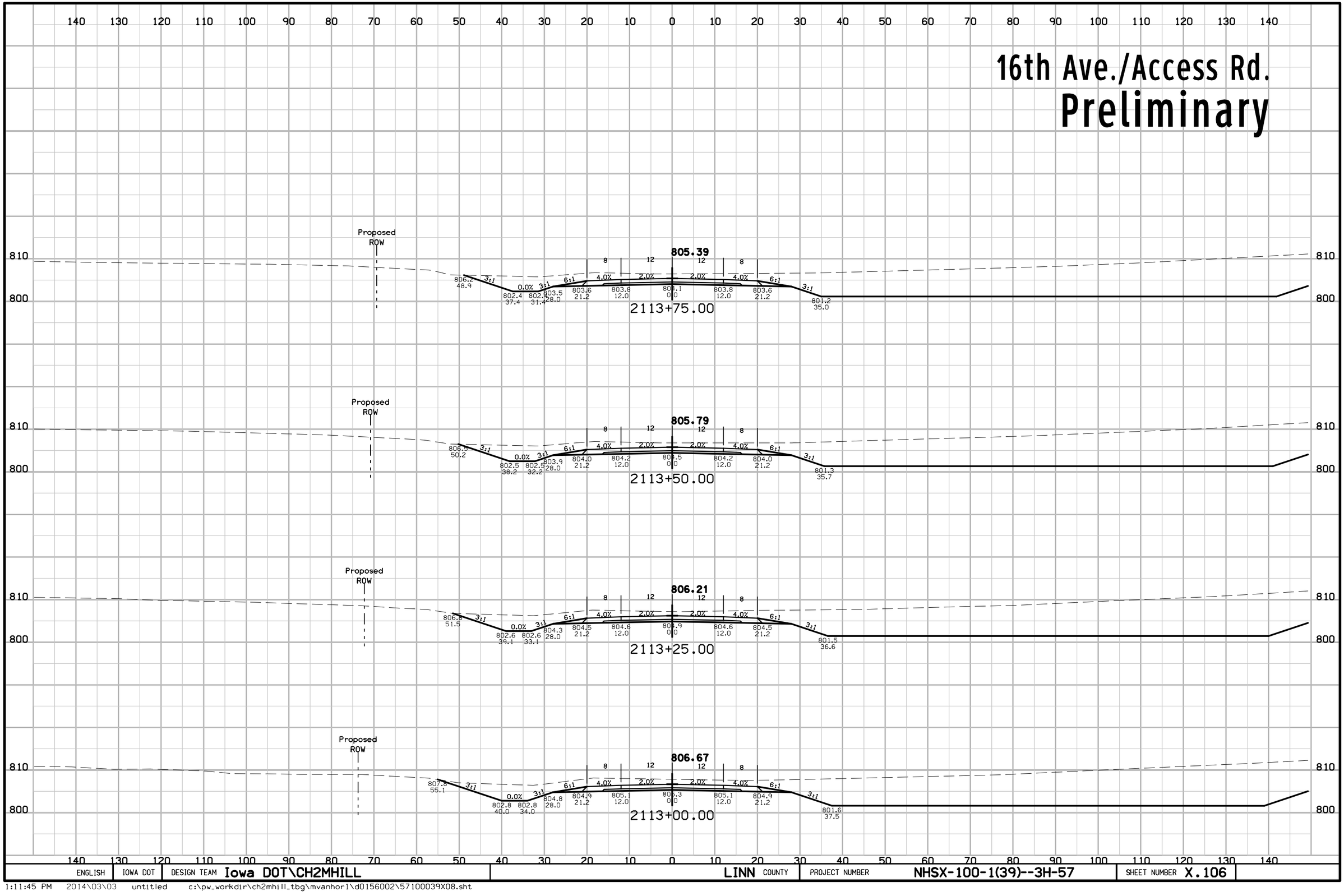

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16th Ave./Access Rd.

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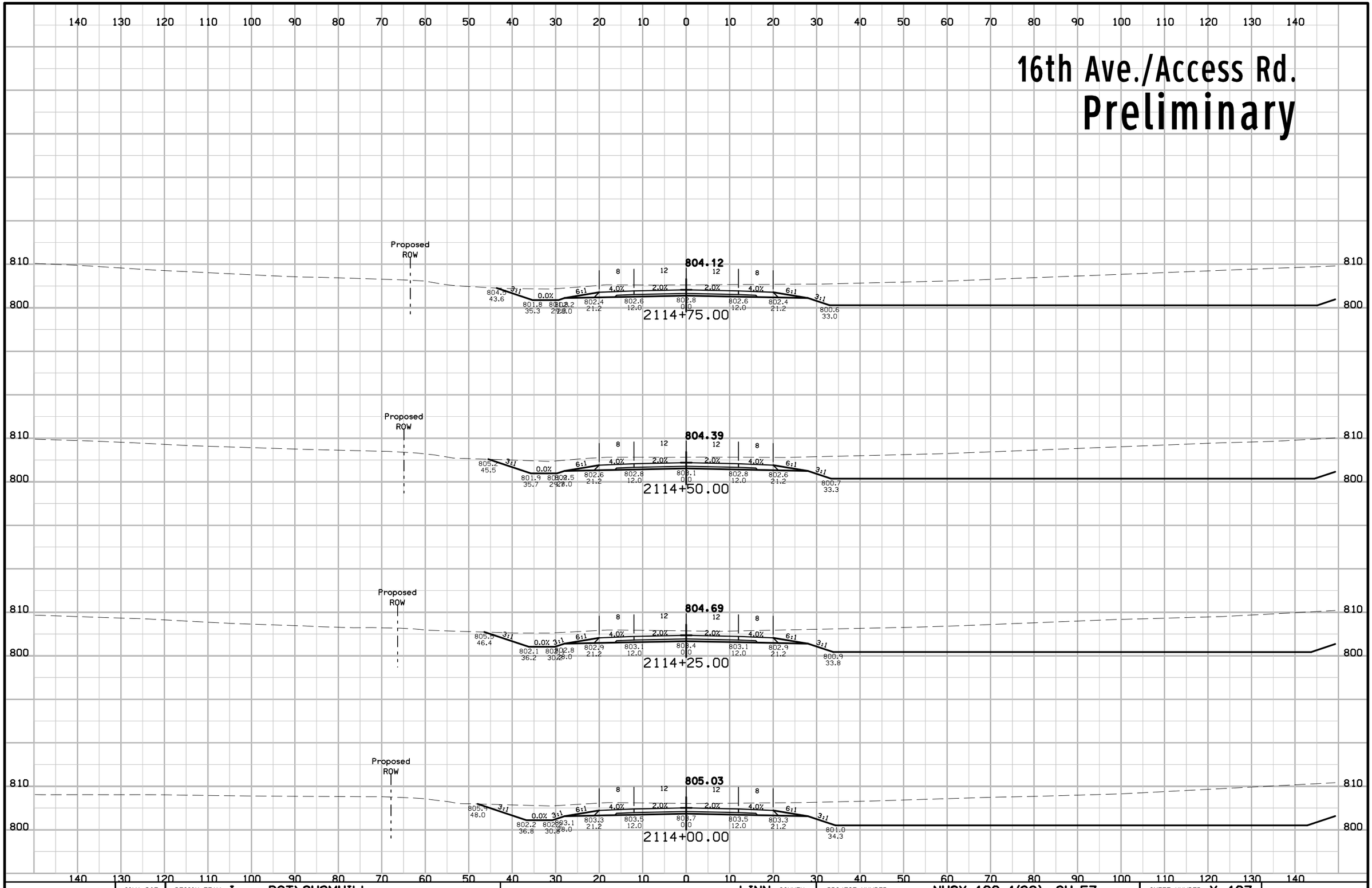

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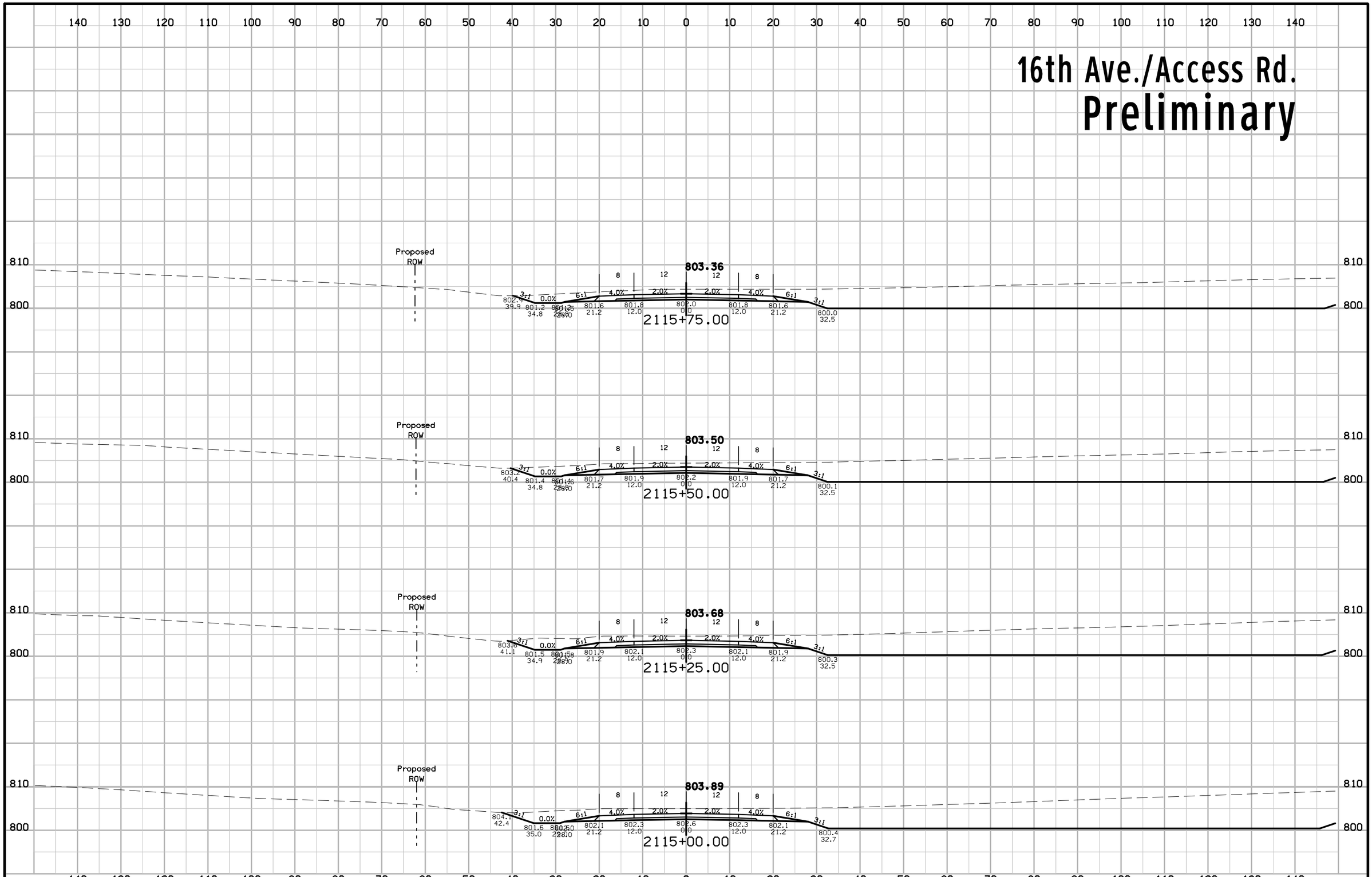

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16th Ave./Access Rd.

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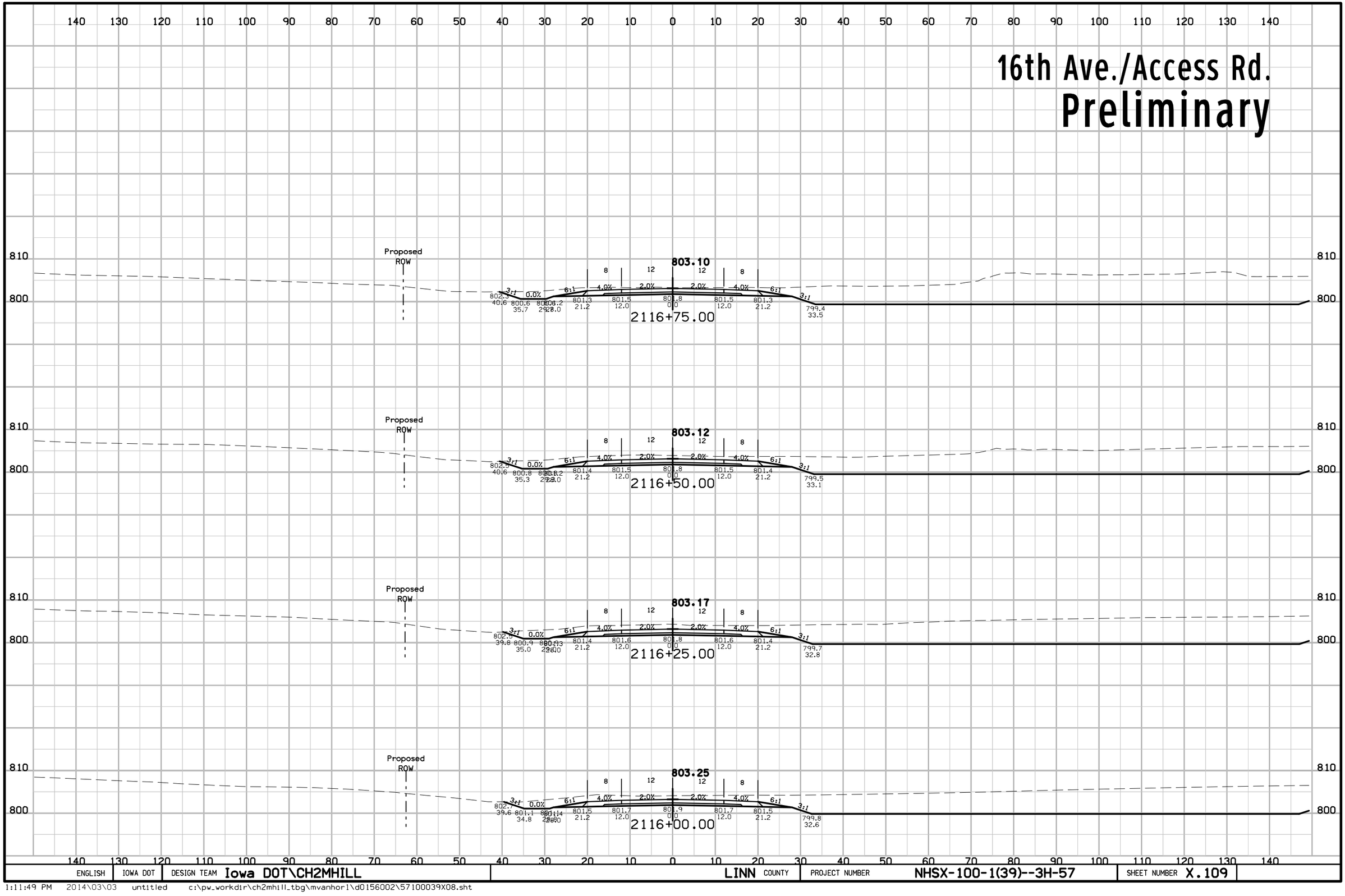

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16th Ave./Access Rd.

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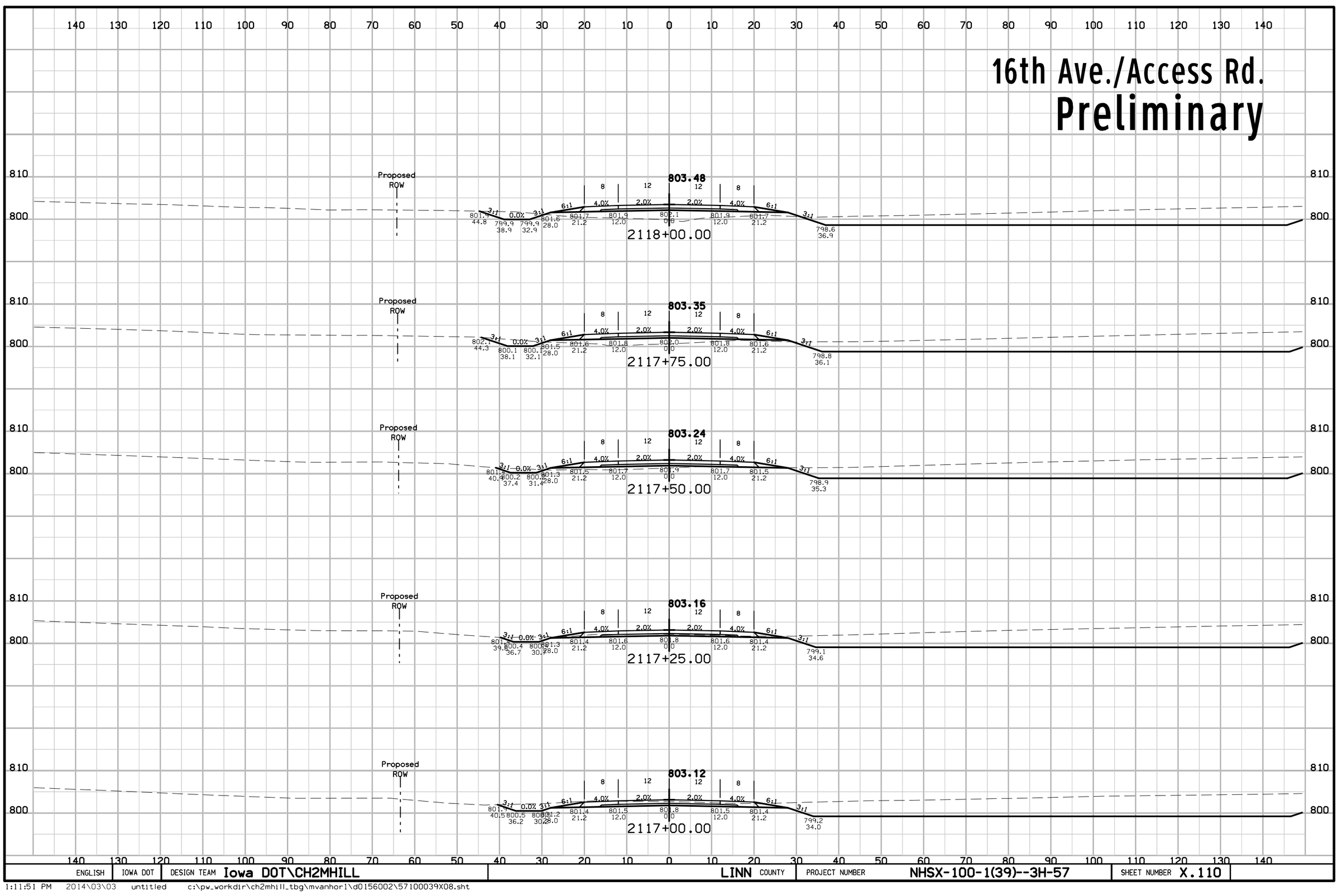

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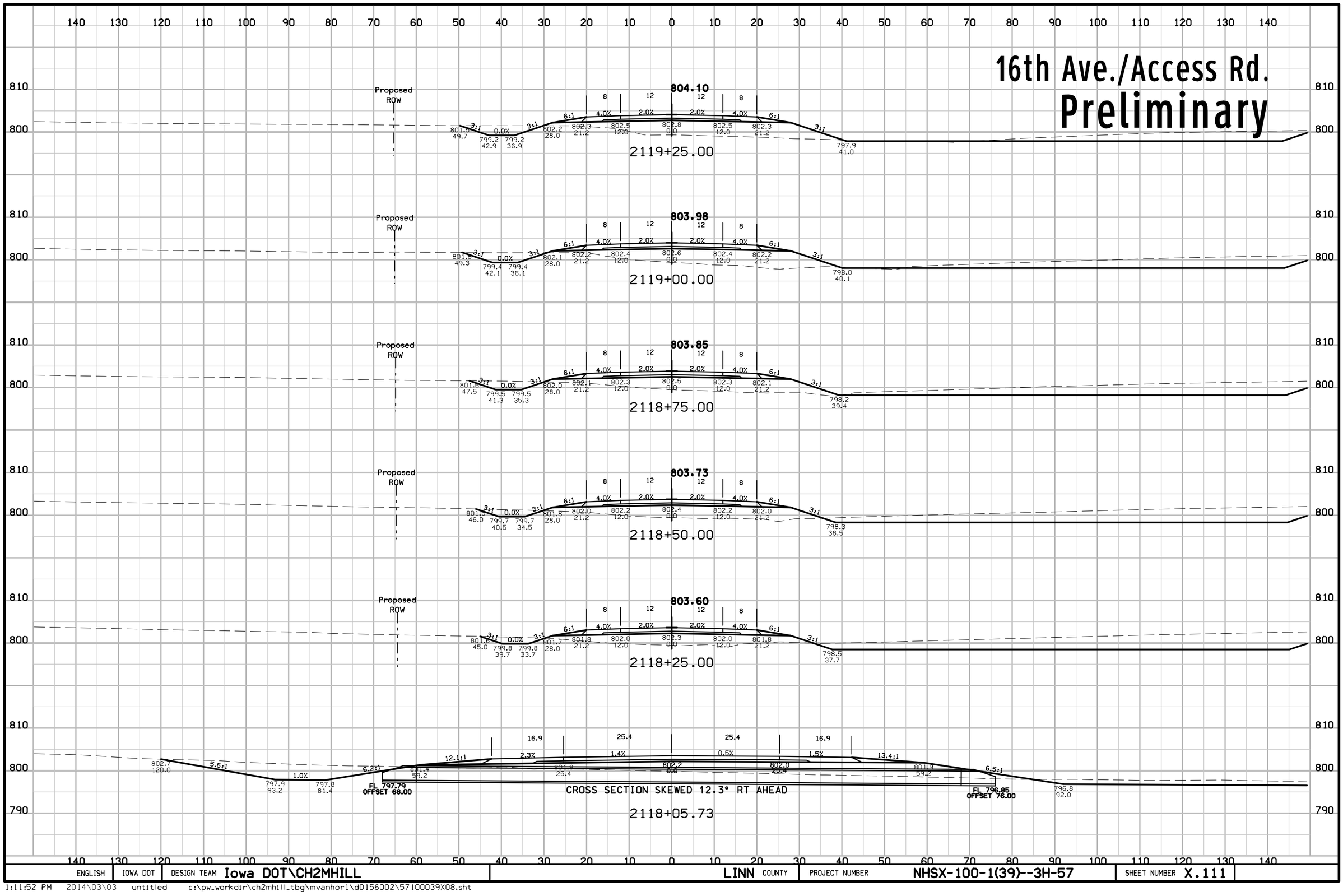
16th Ave./Access Rd.

Preliminary



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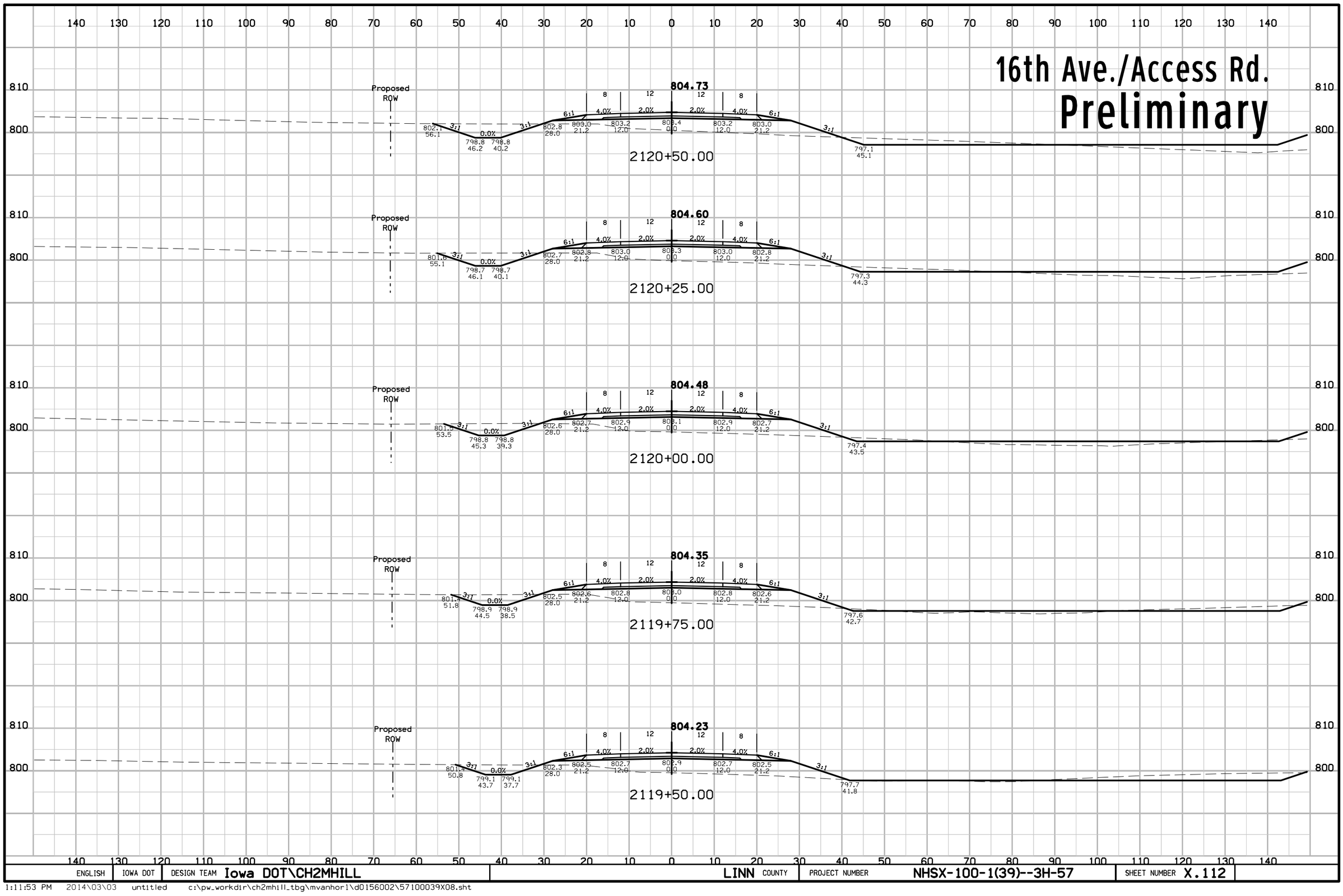
16th Ave./Access Rd.

Preliminary



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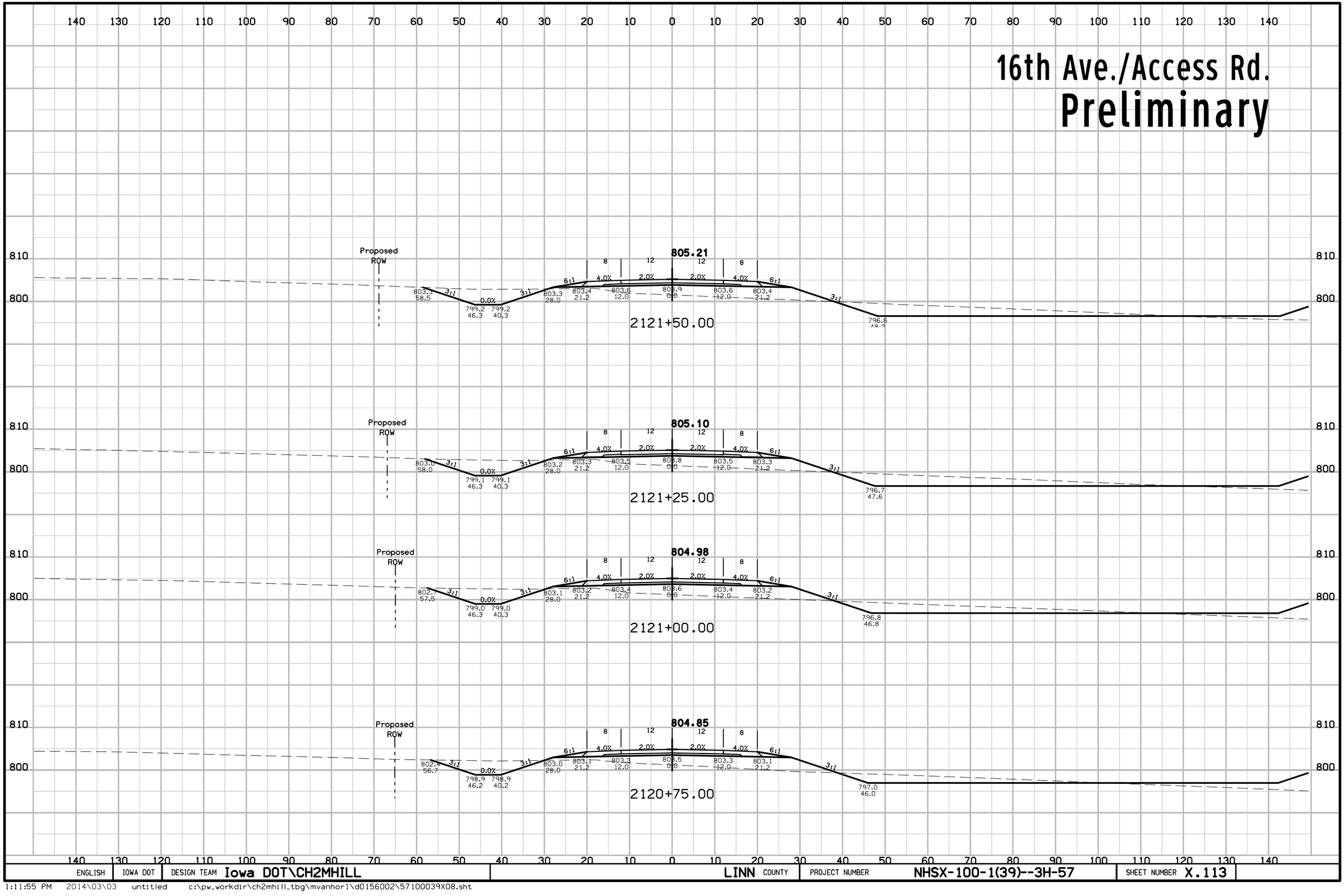

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16th Ave./Access Rd.

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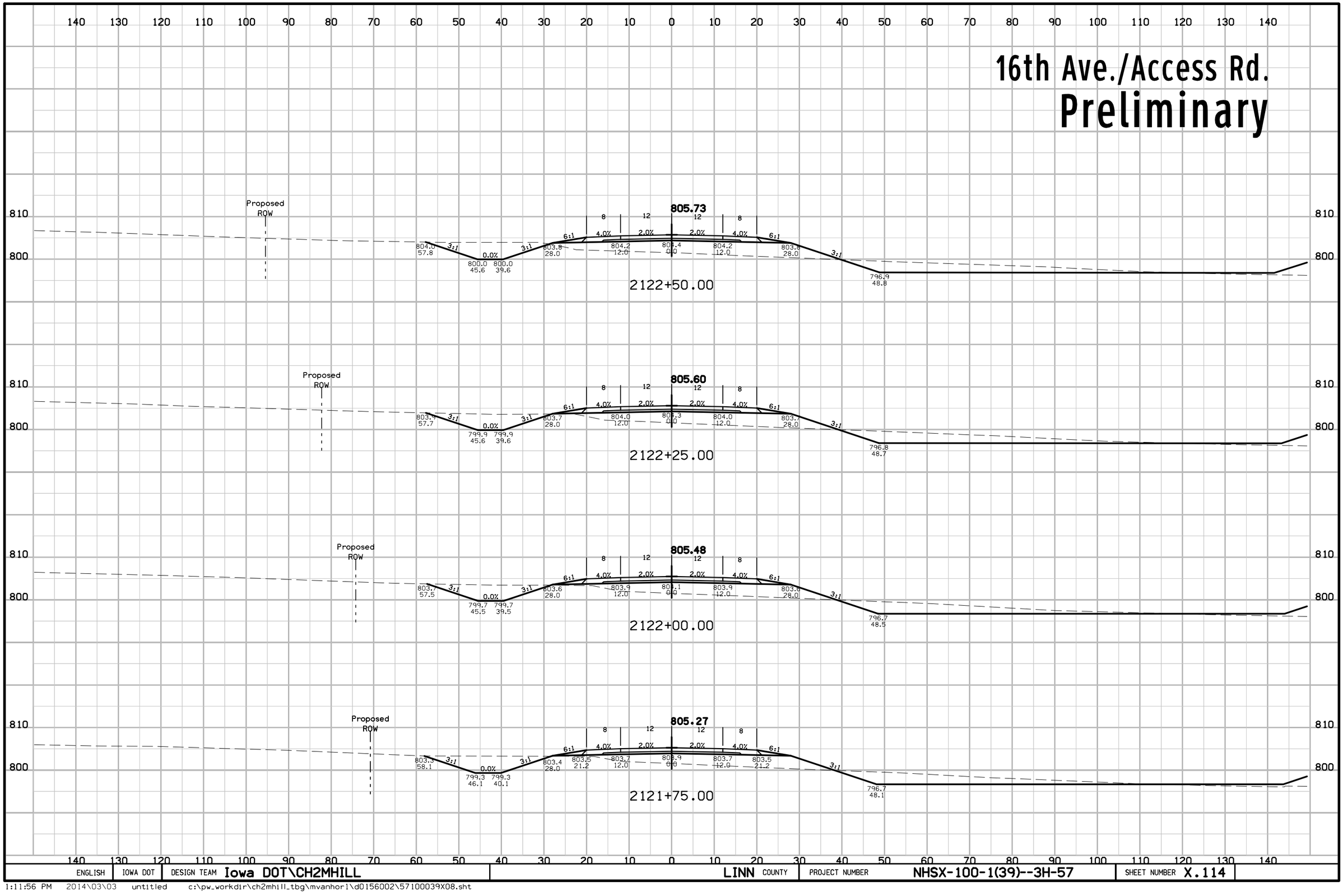

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16th Ave./Access Rd.

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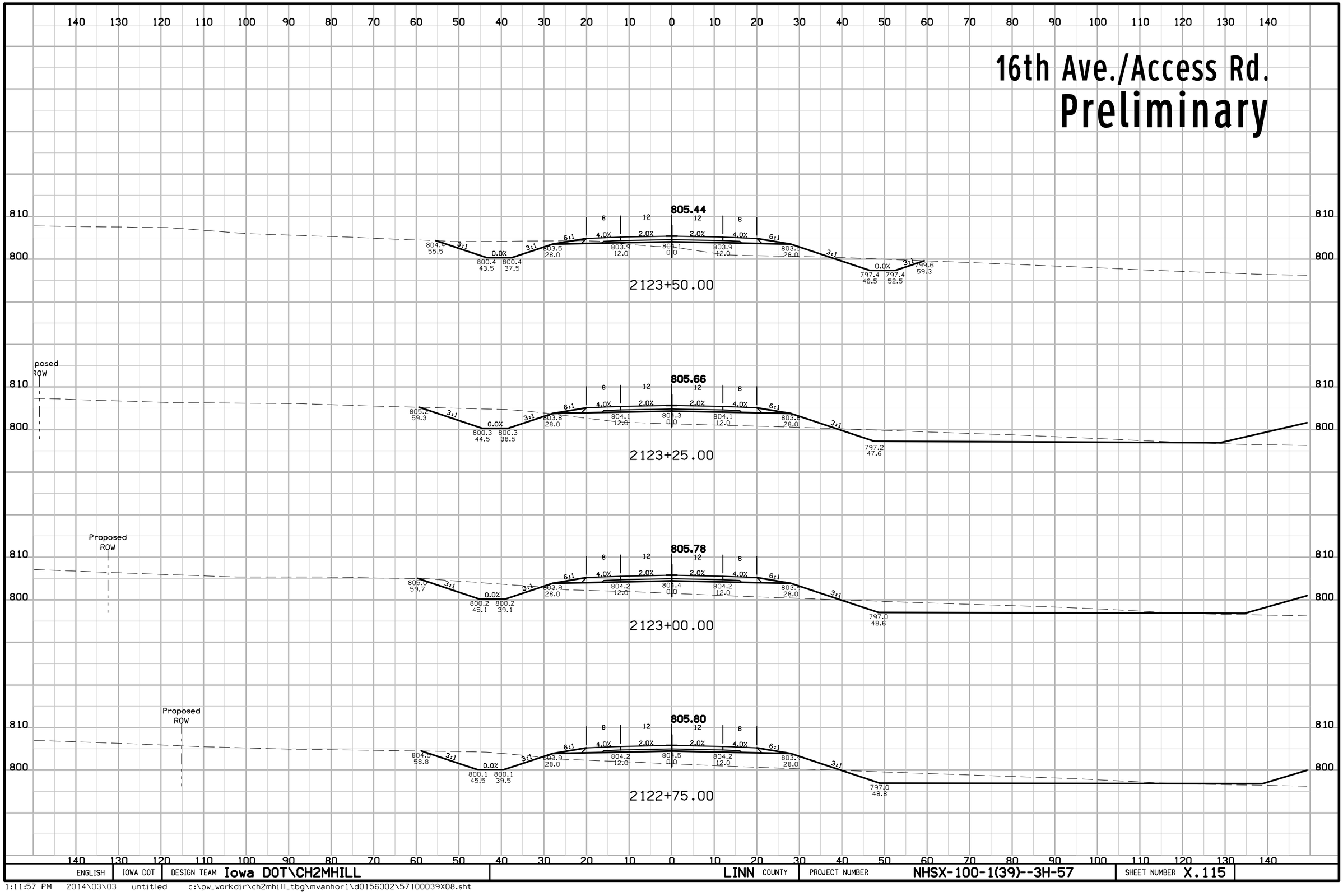

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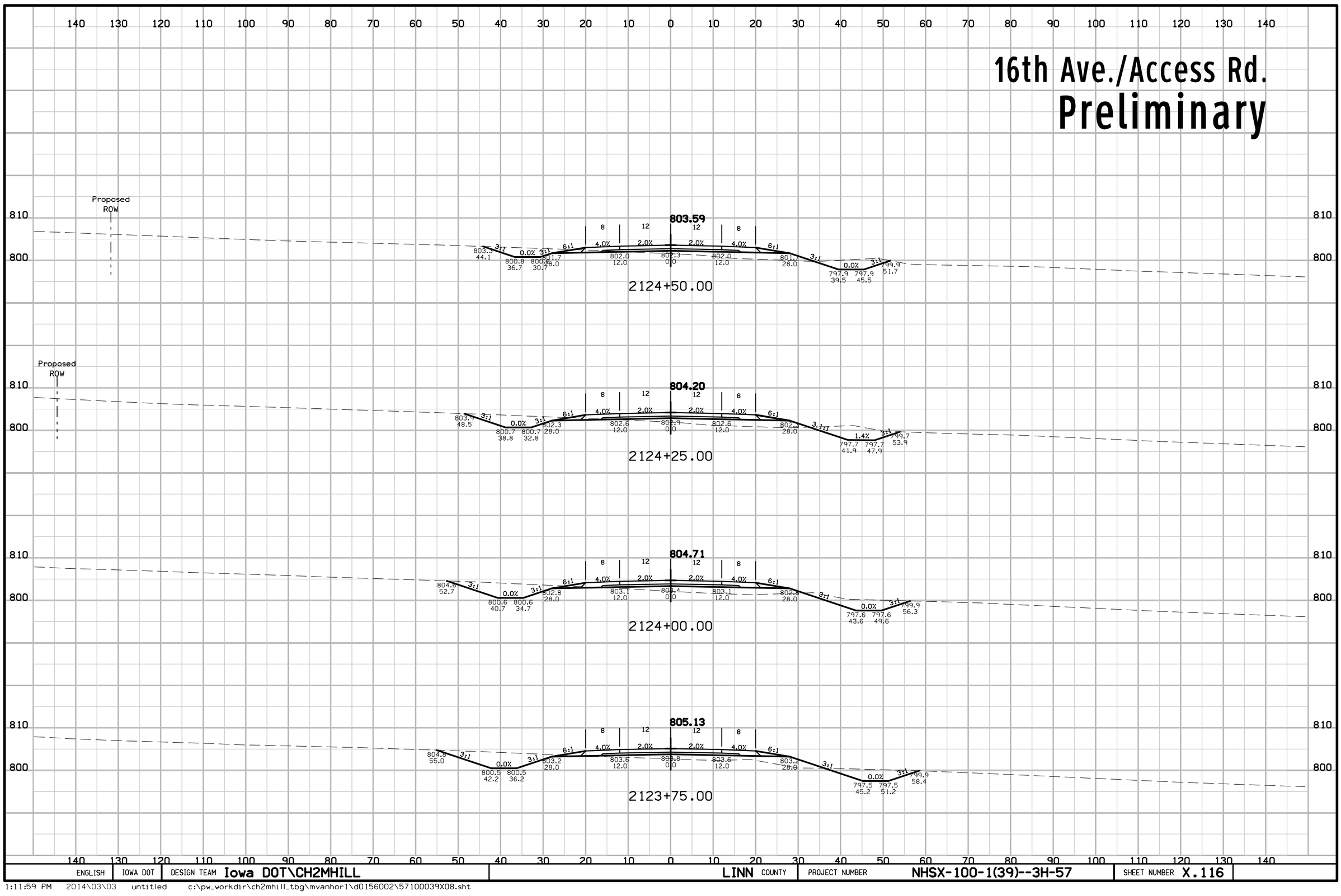

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16th Ave./Access Rd.

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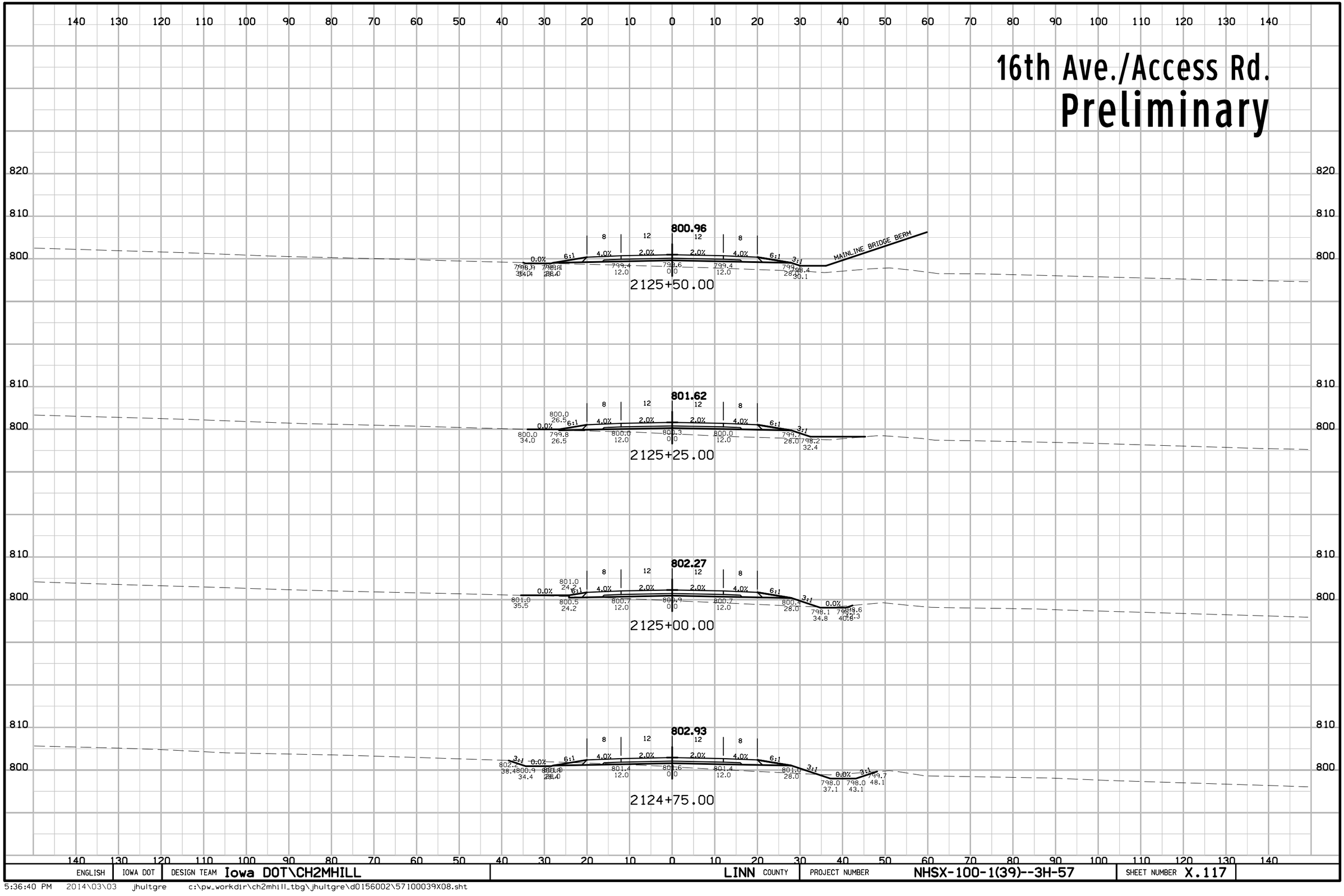

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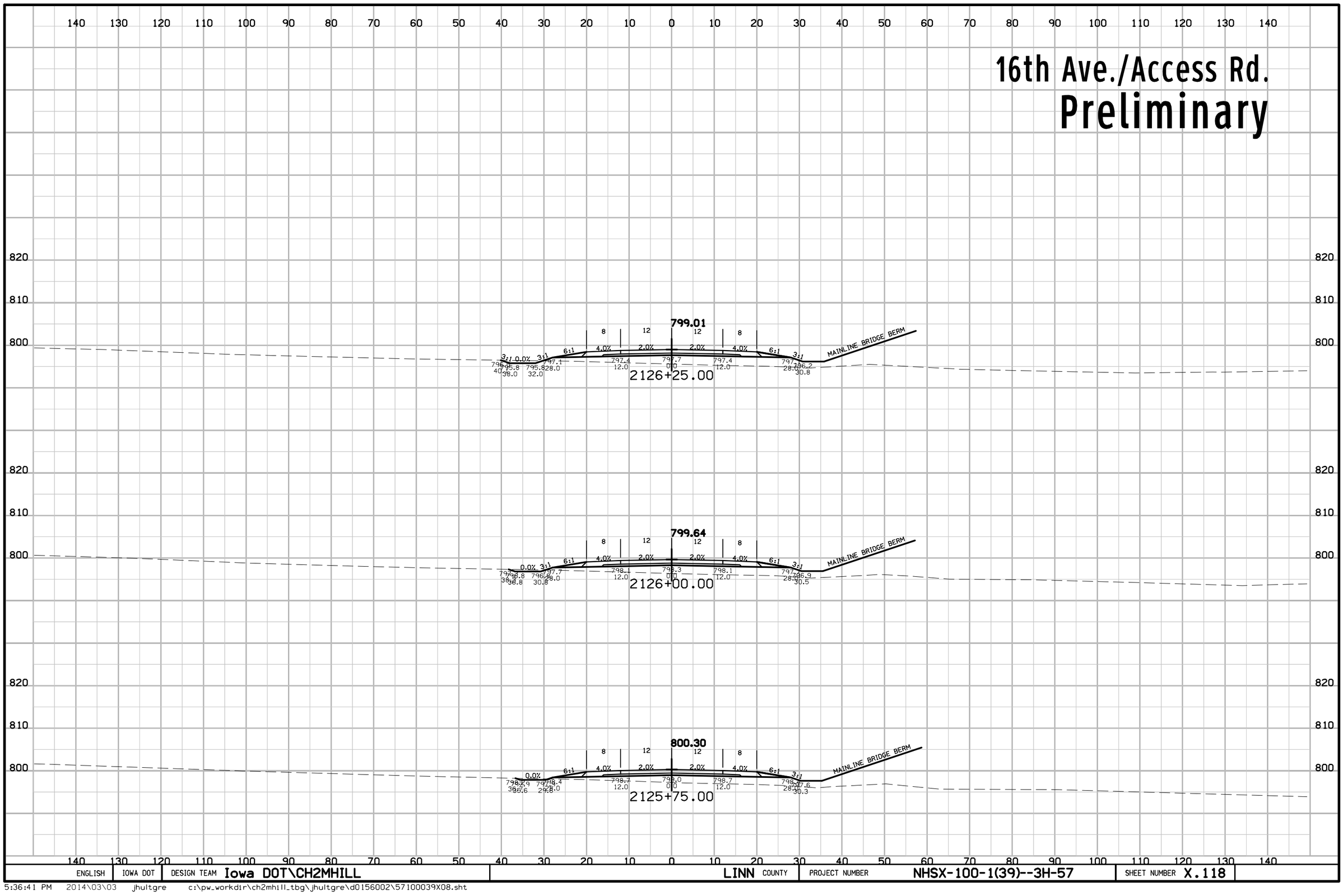

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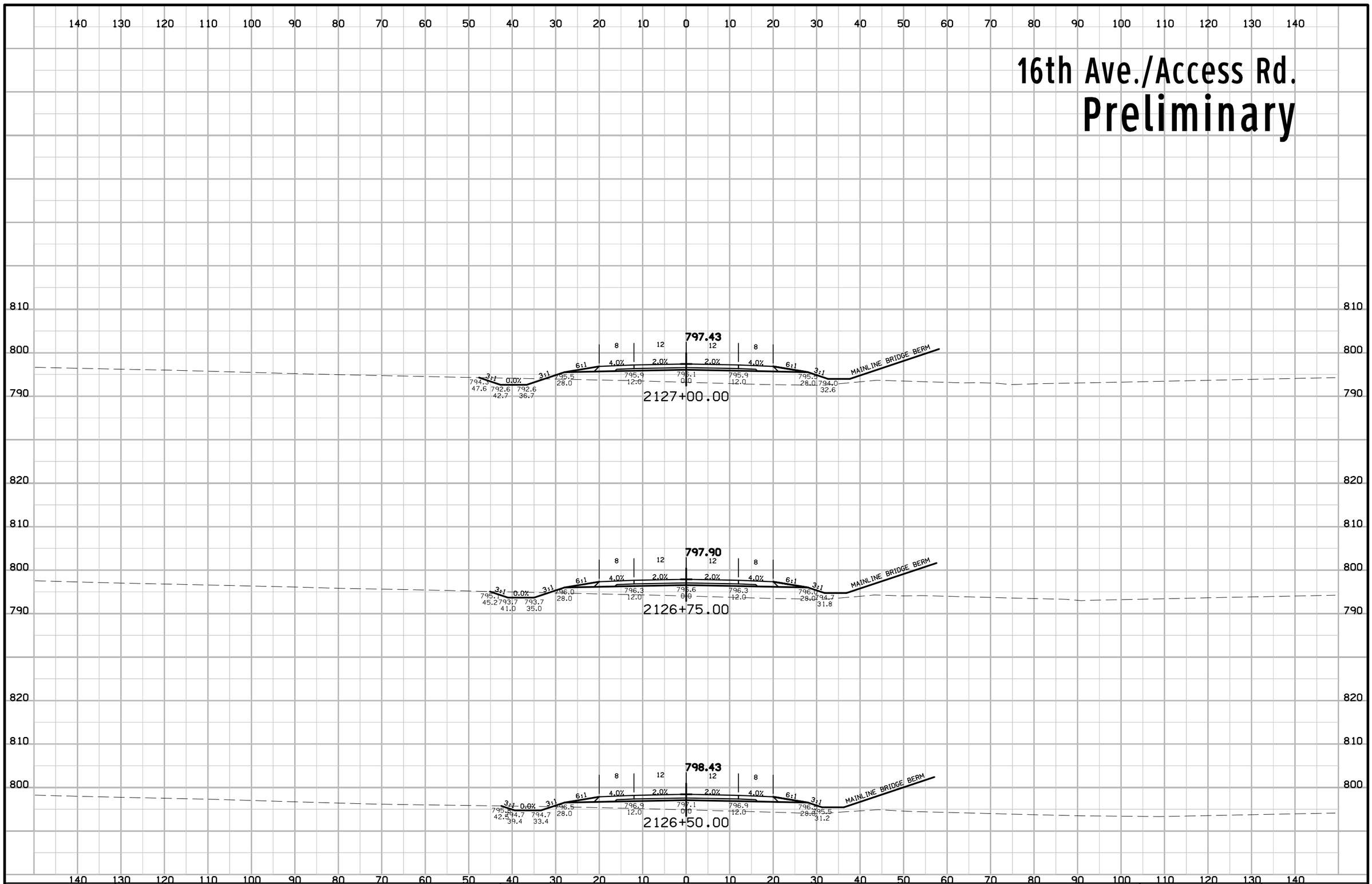

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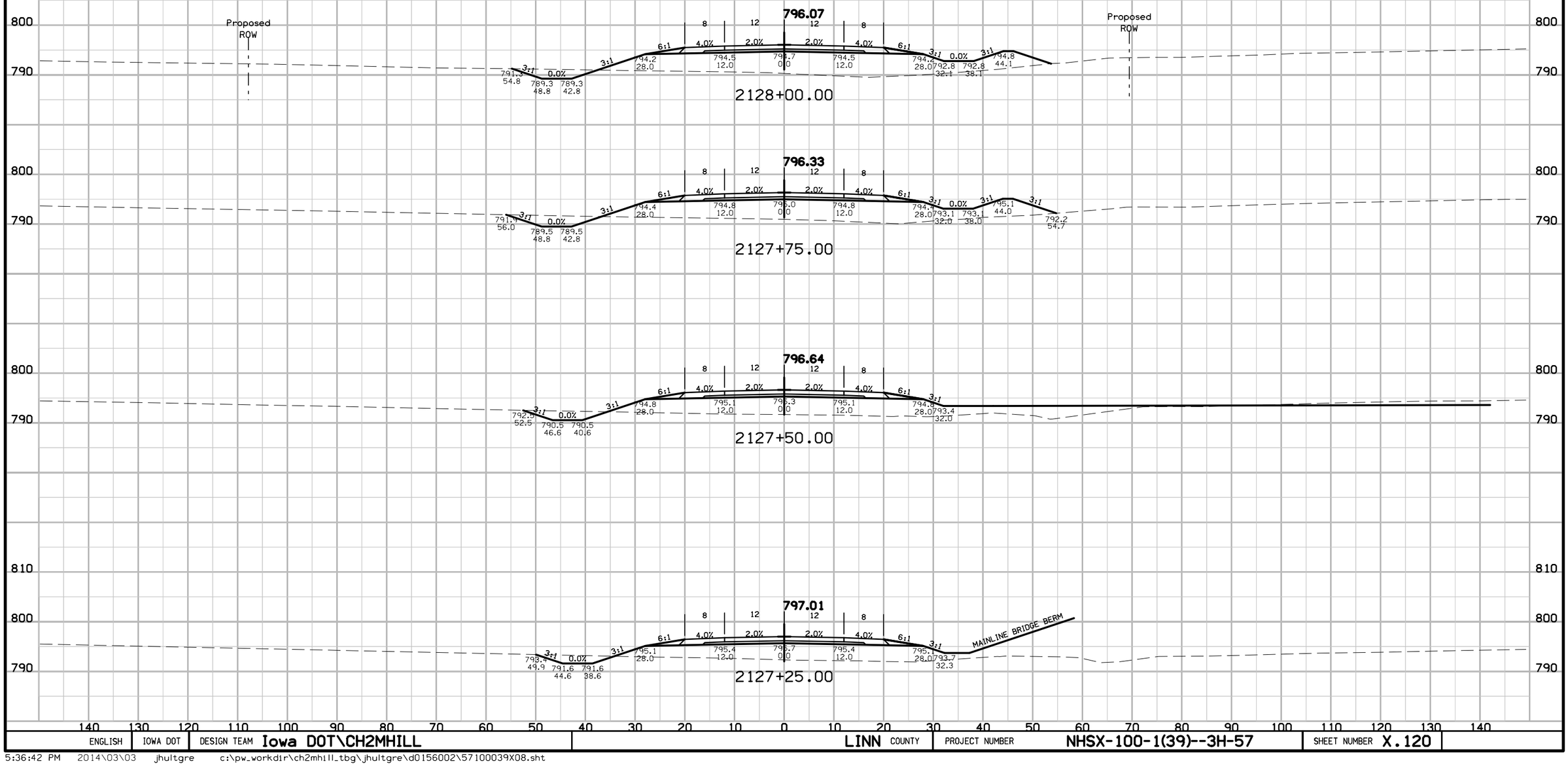
16th Ave./Access Rd.

Preliminary



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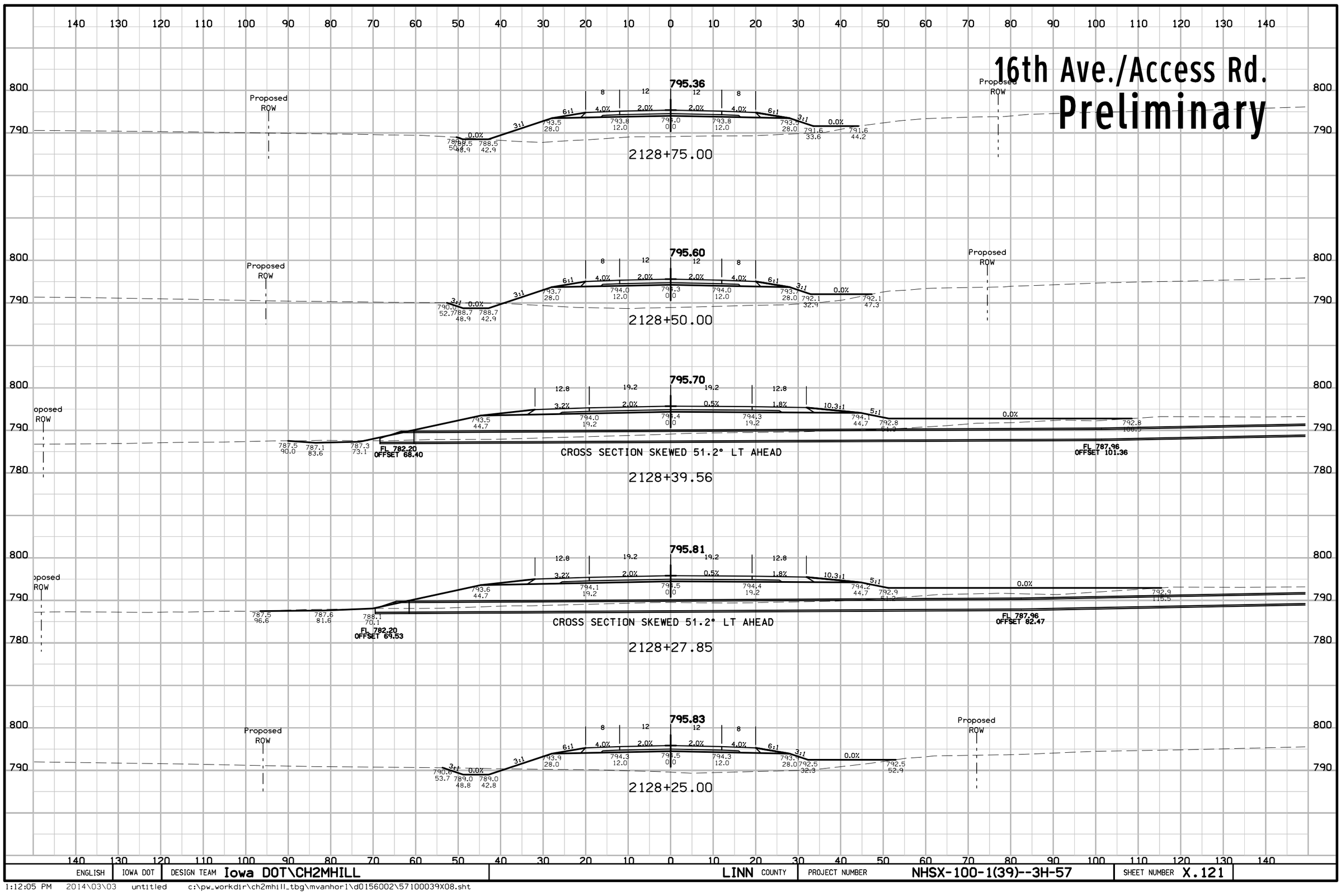

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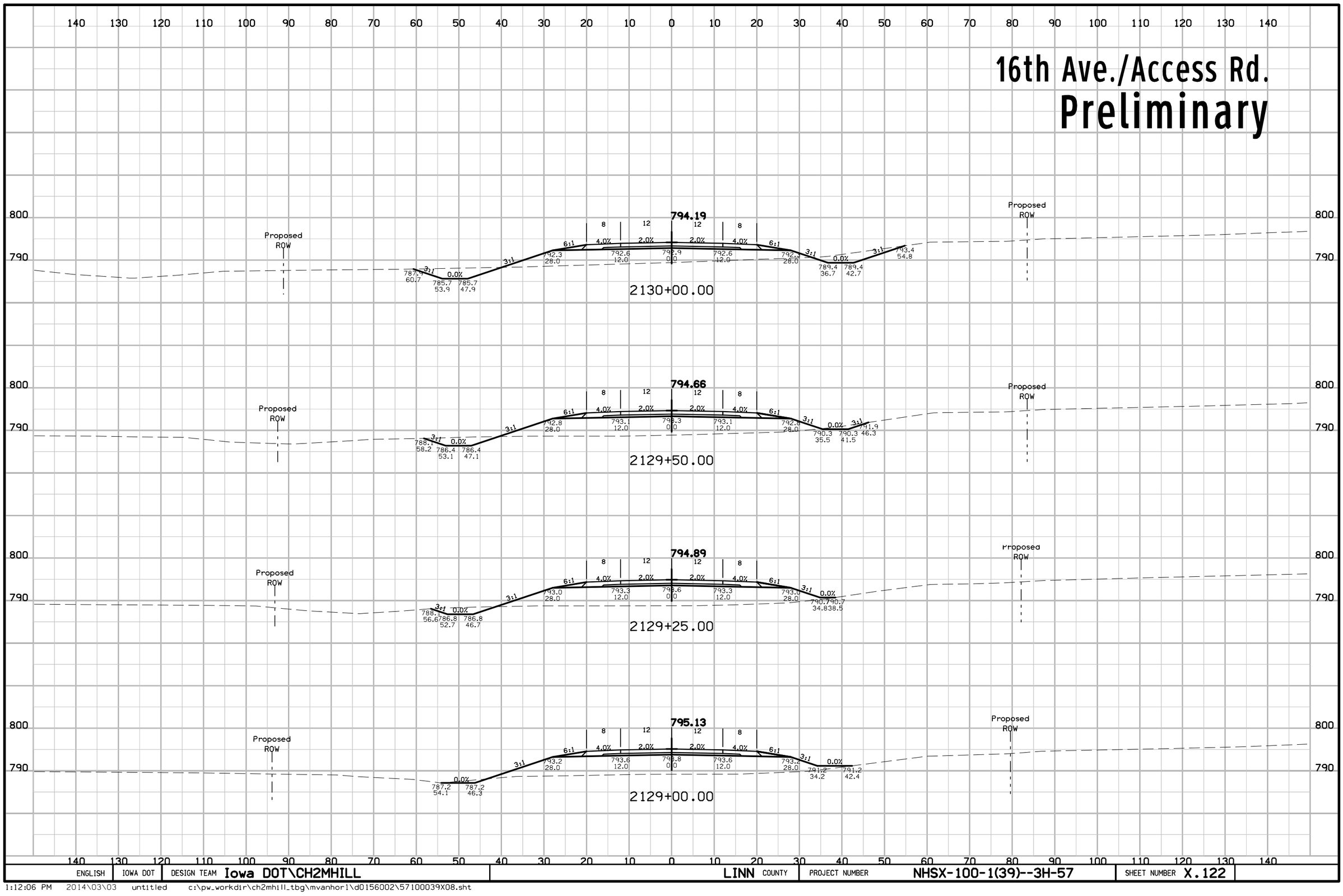

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16th Ave./Access Rd.

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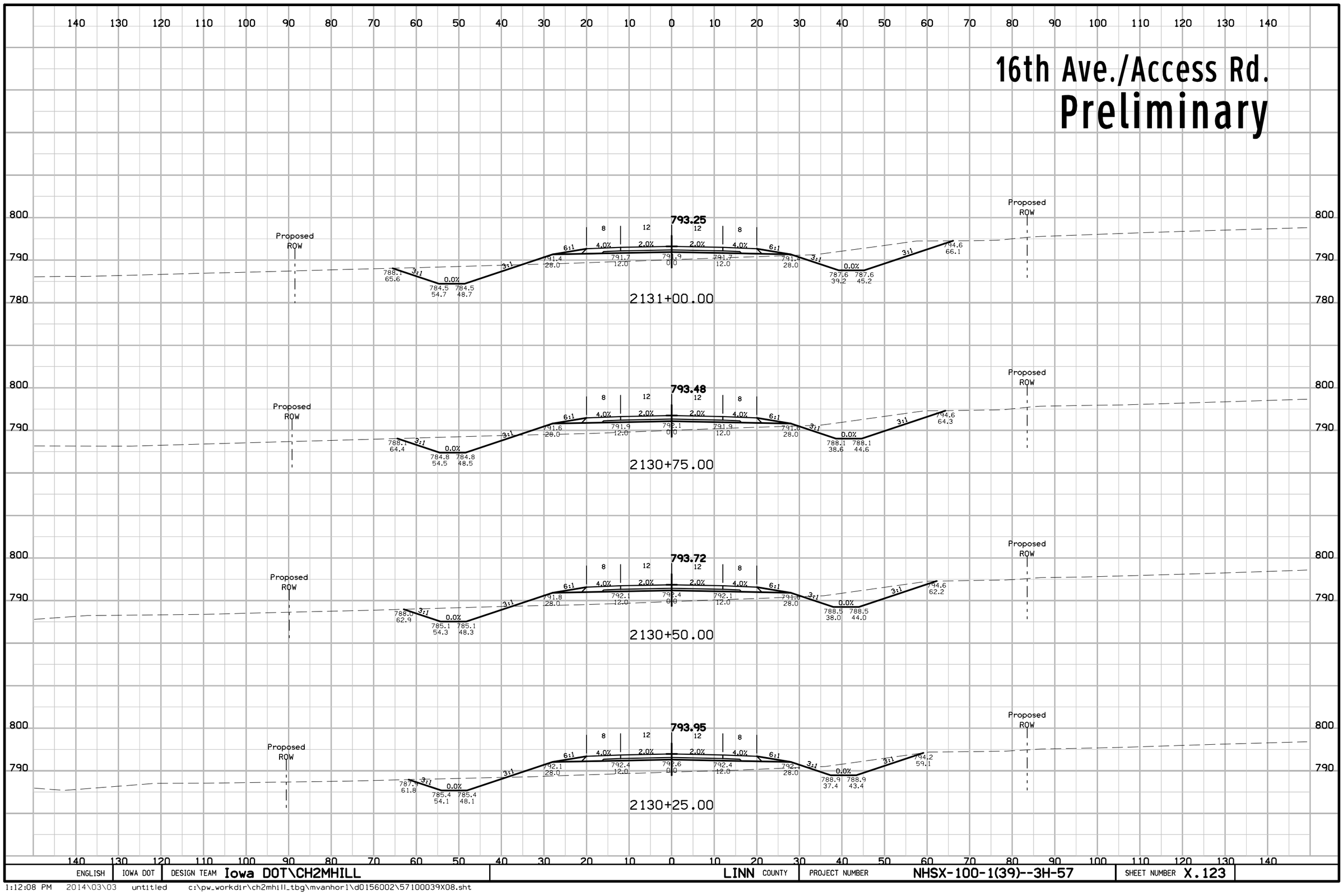

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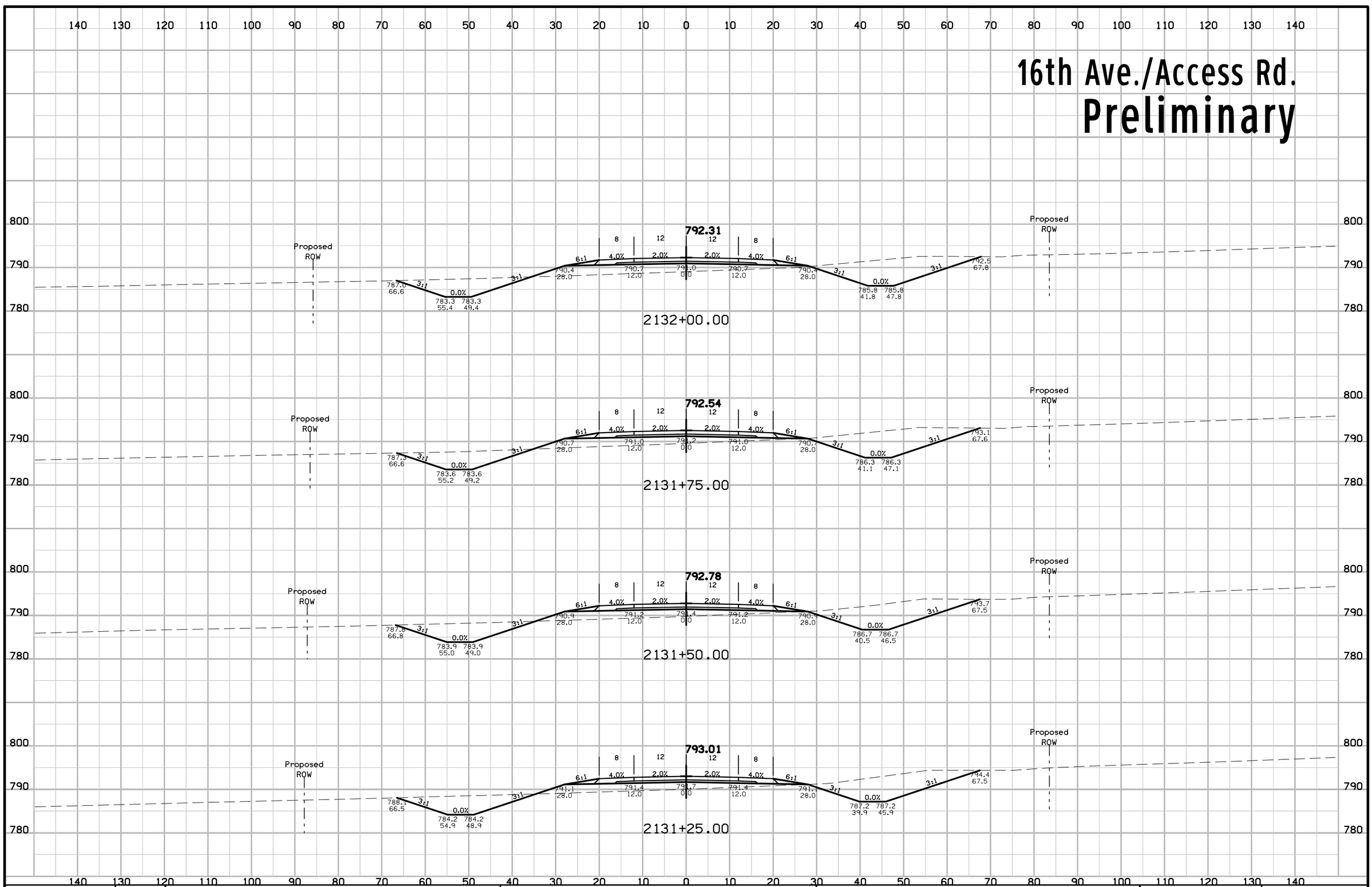
16th Ave./Access Rd.

Preliminary



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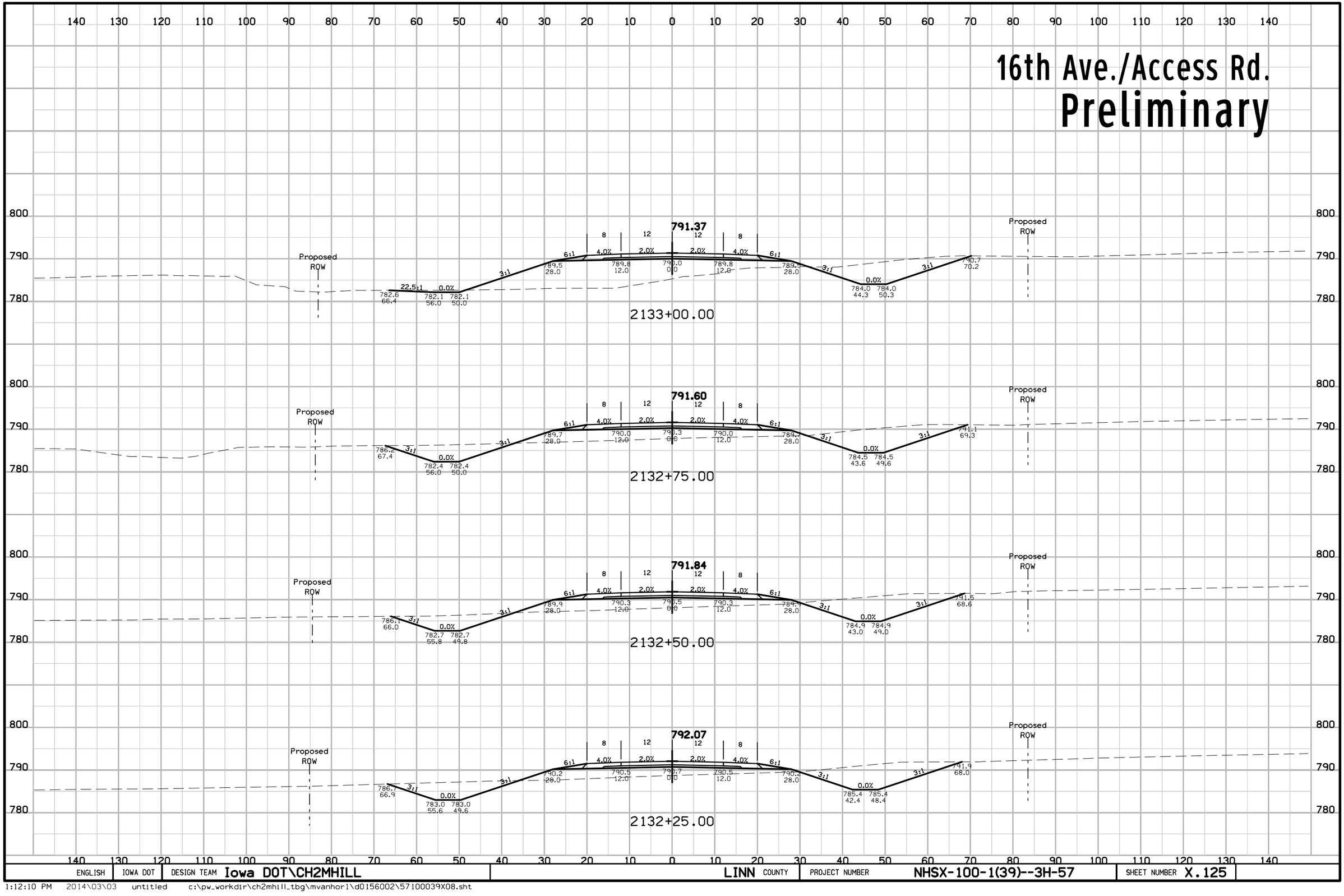
16th Ave./Access Rd.

Preliminary



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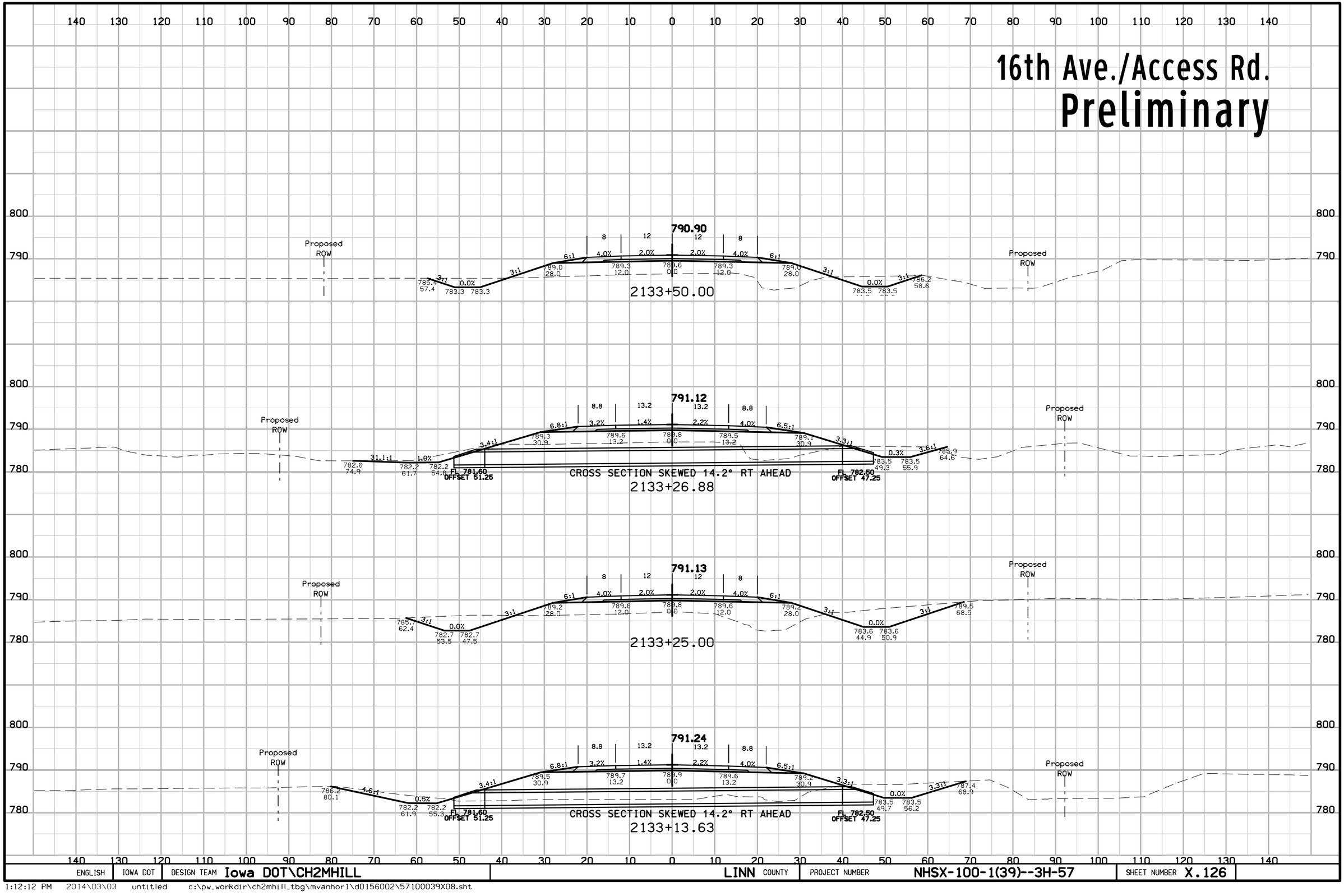
16th Ave./Access Rd.

Preliminary



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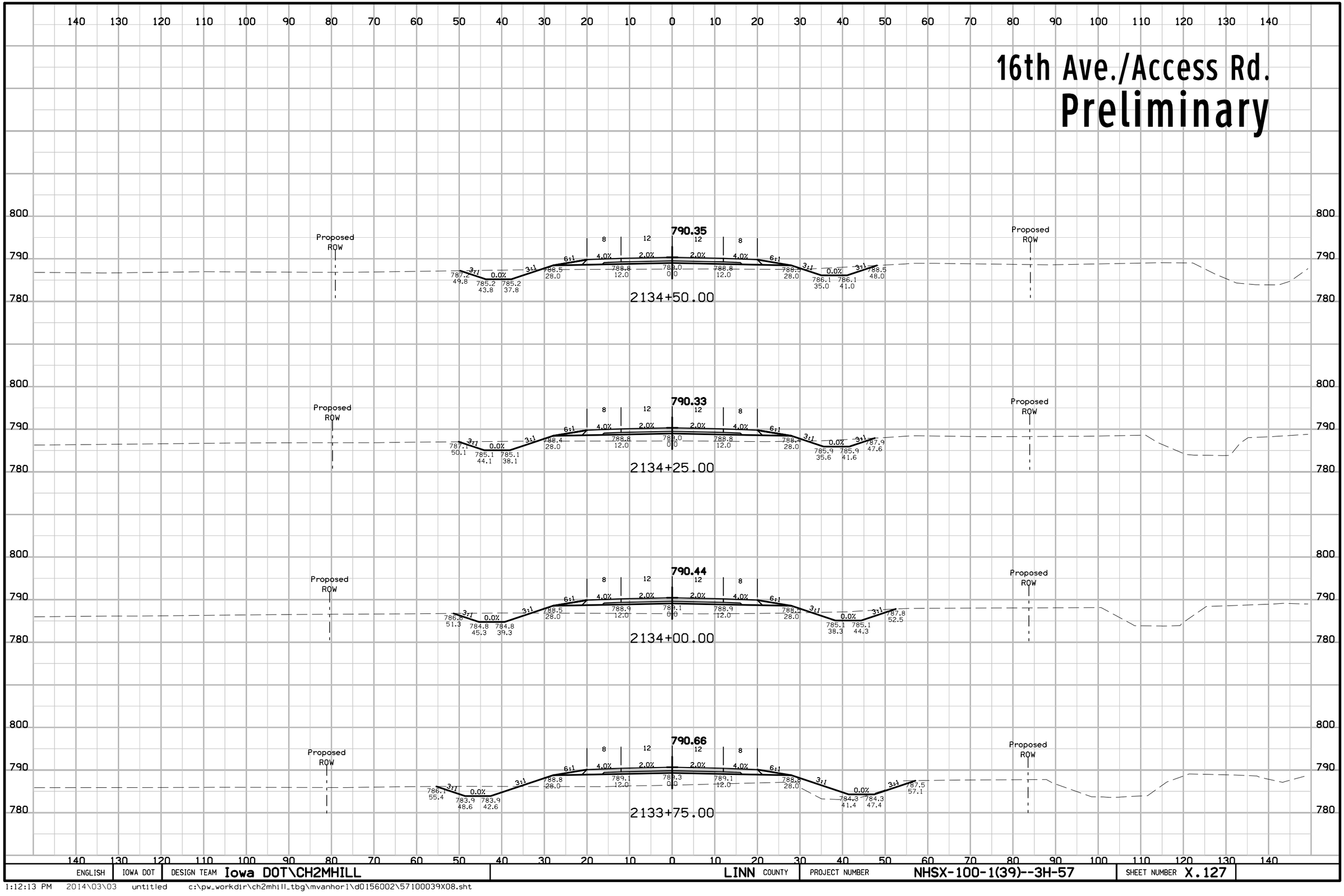
Preliminary



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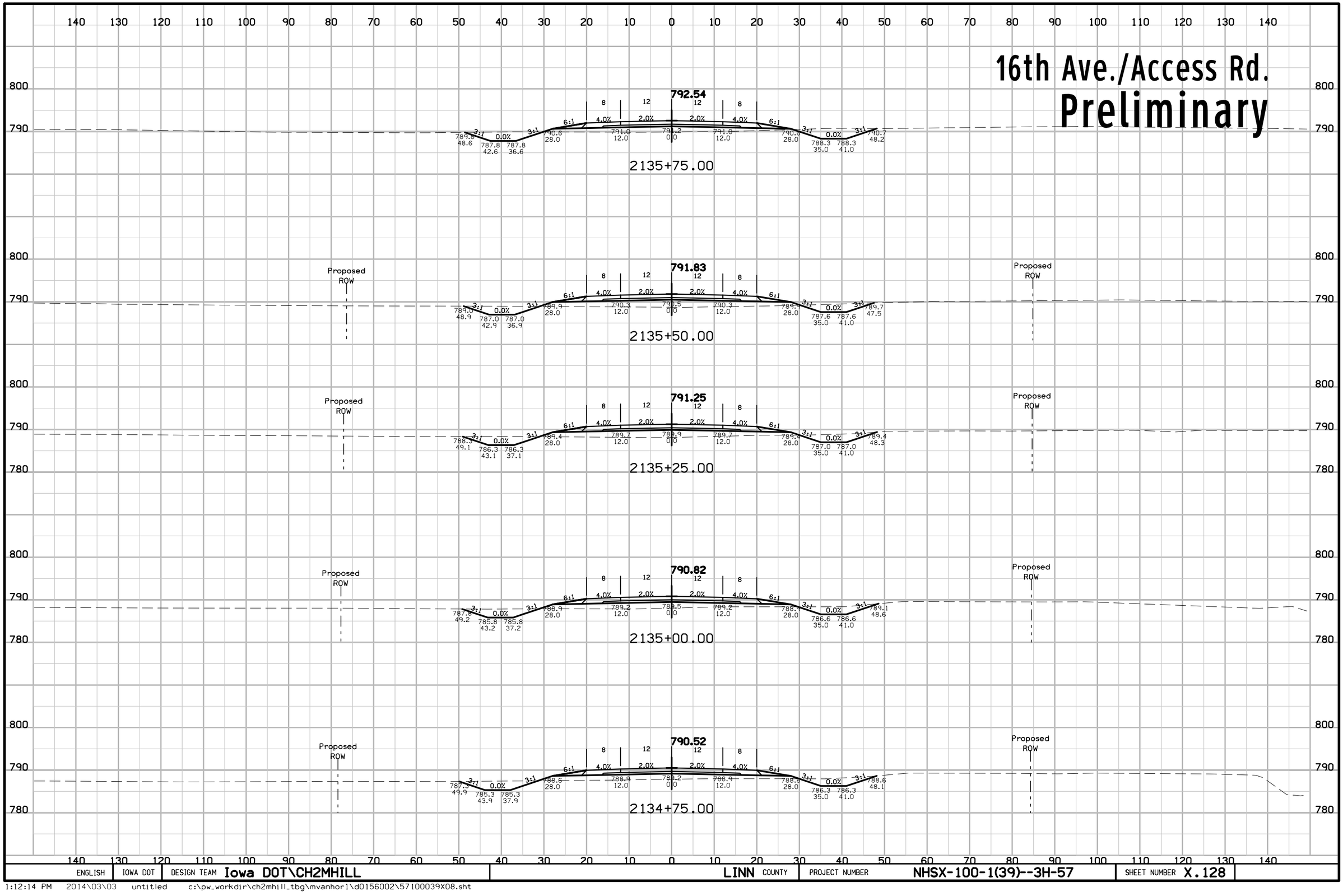
16th Ave./Access Rd.

Preliminary



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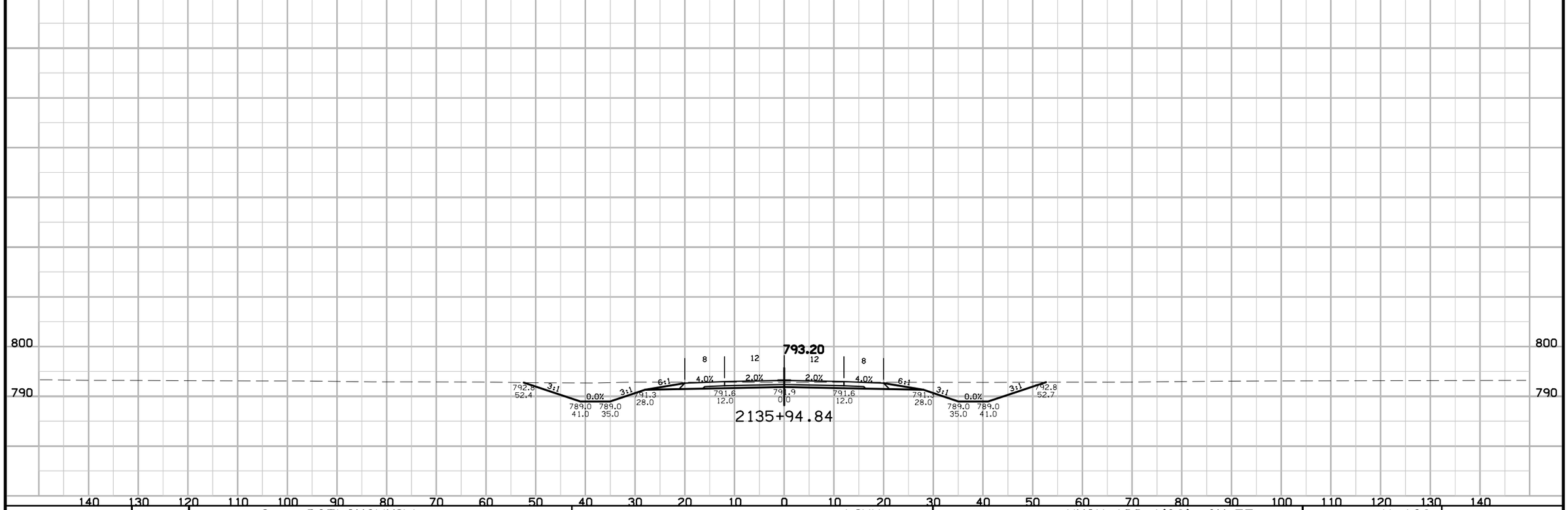
16th Ave./Access Rd.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.129

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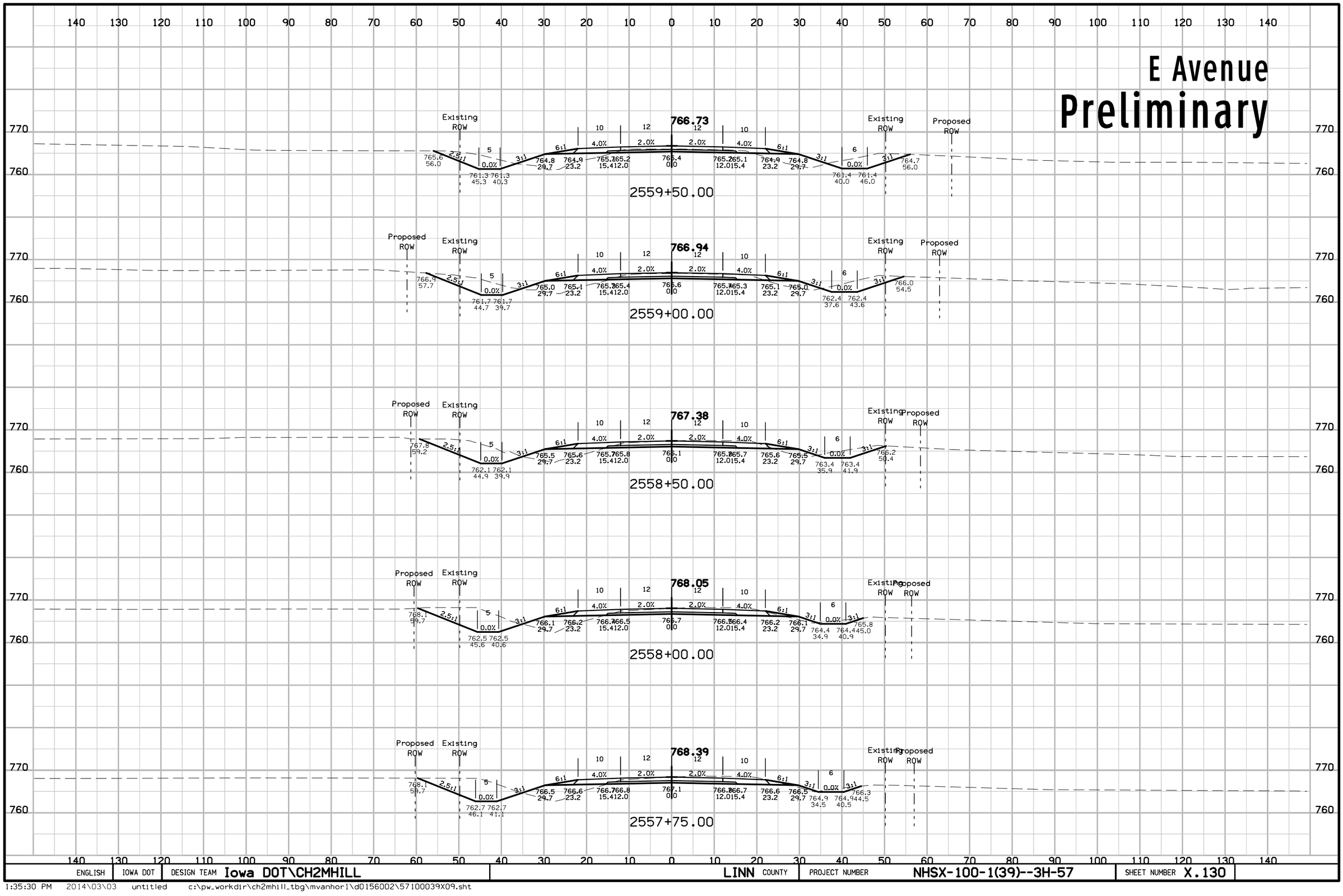
E Avenue

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.130

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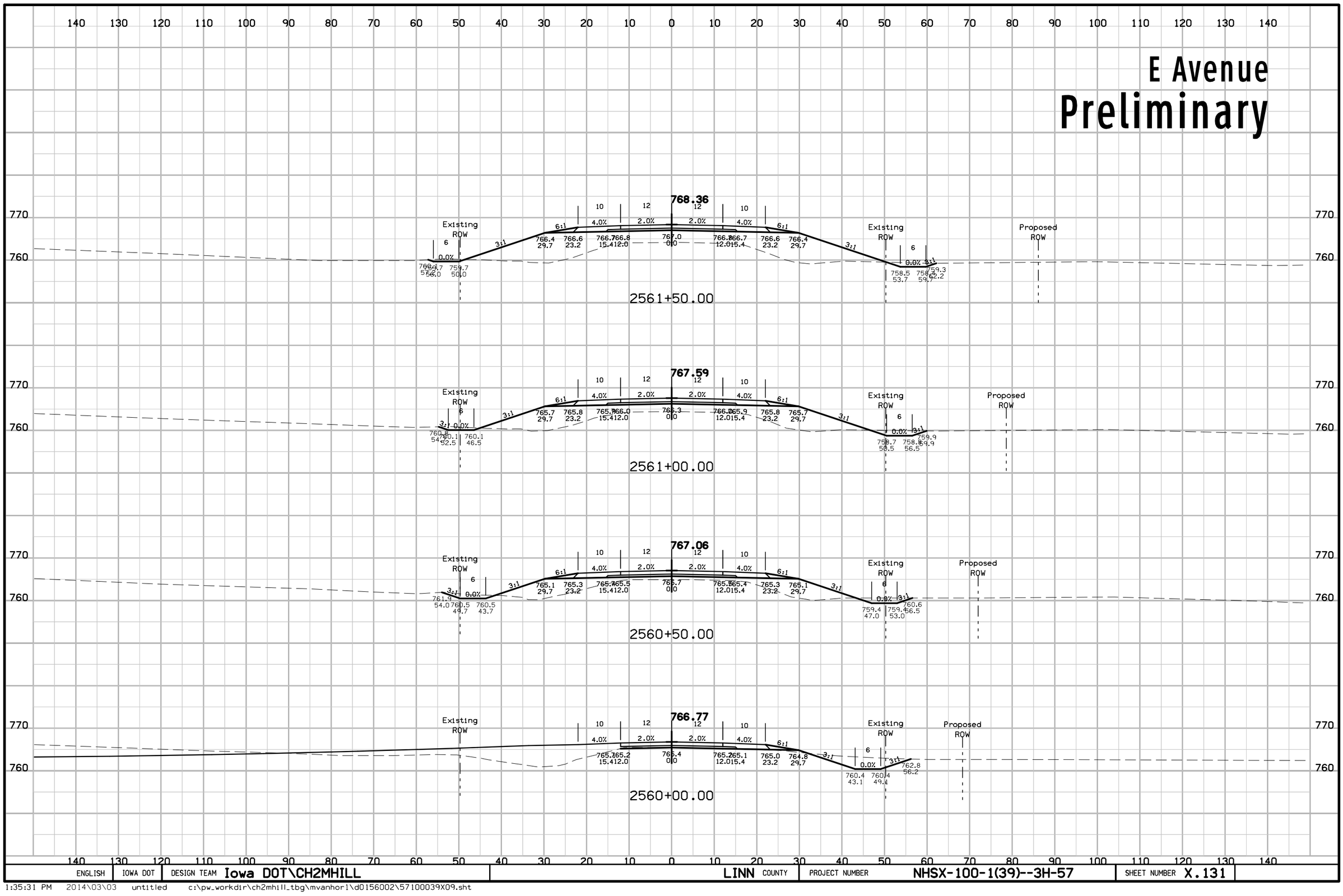
E Avenue
Preliminary



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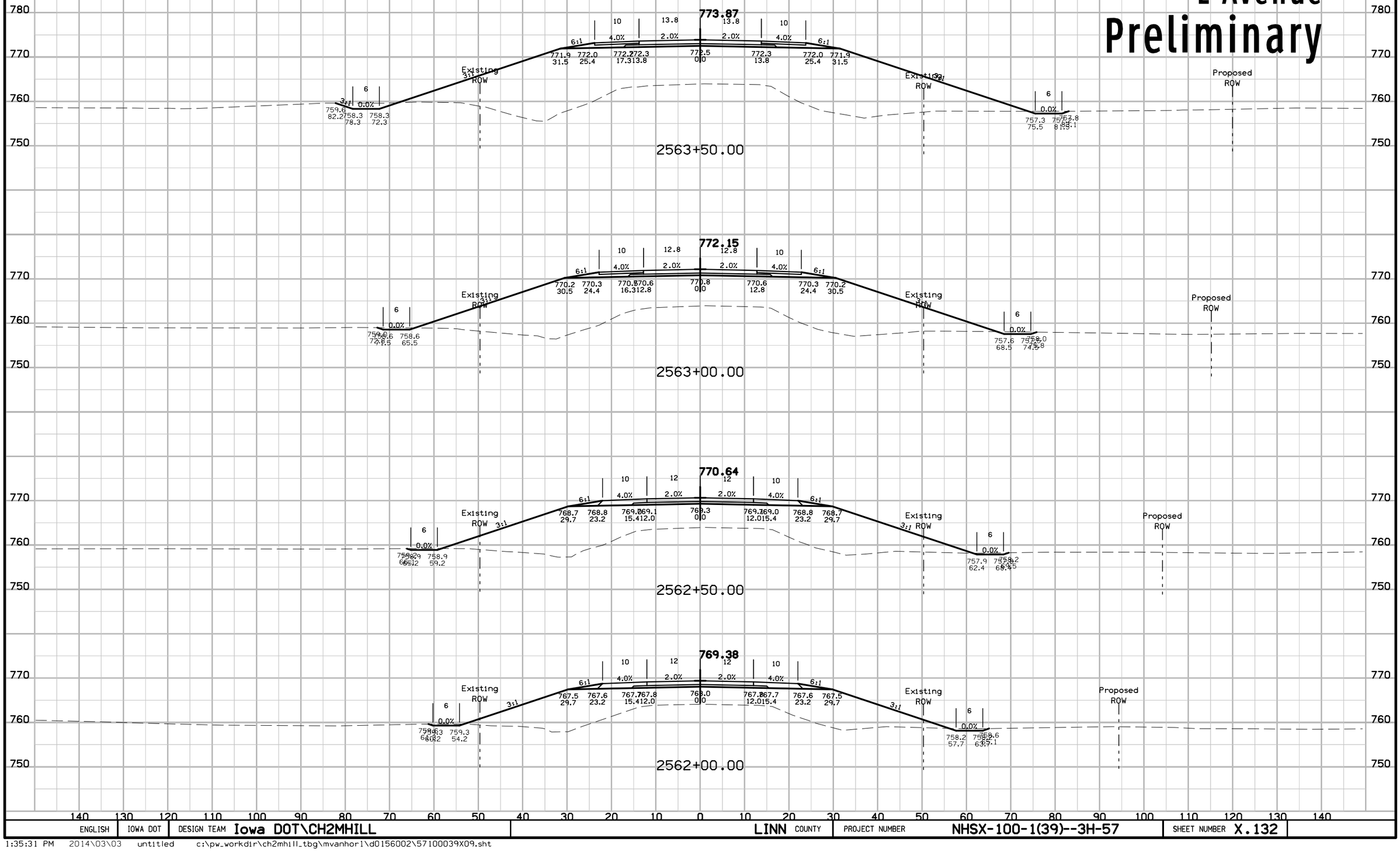
E Avenue

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.132

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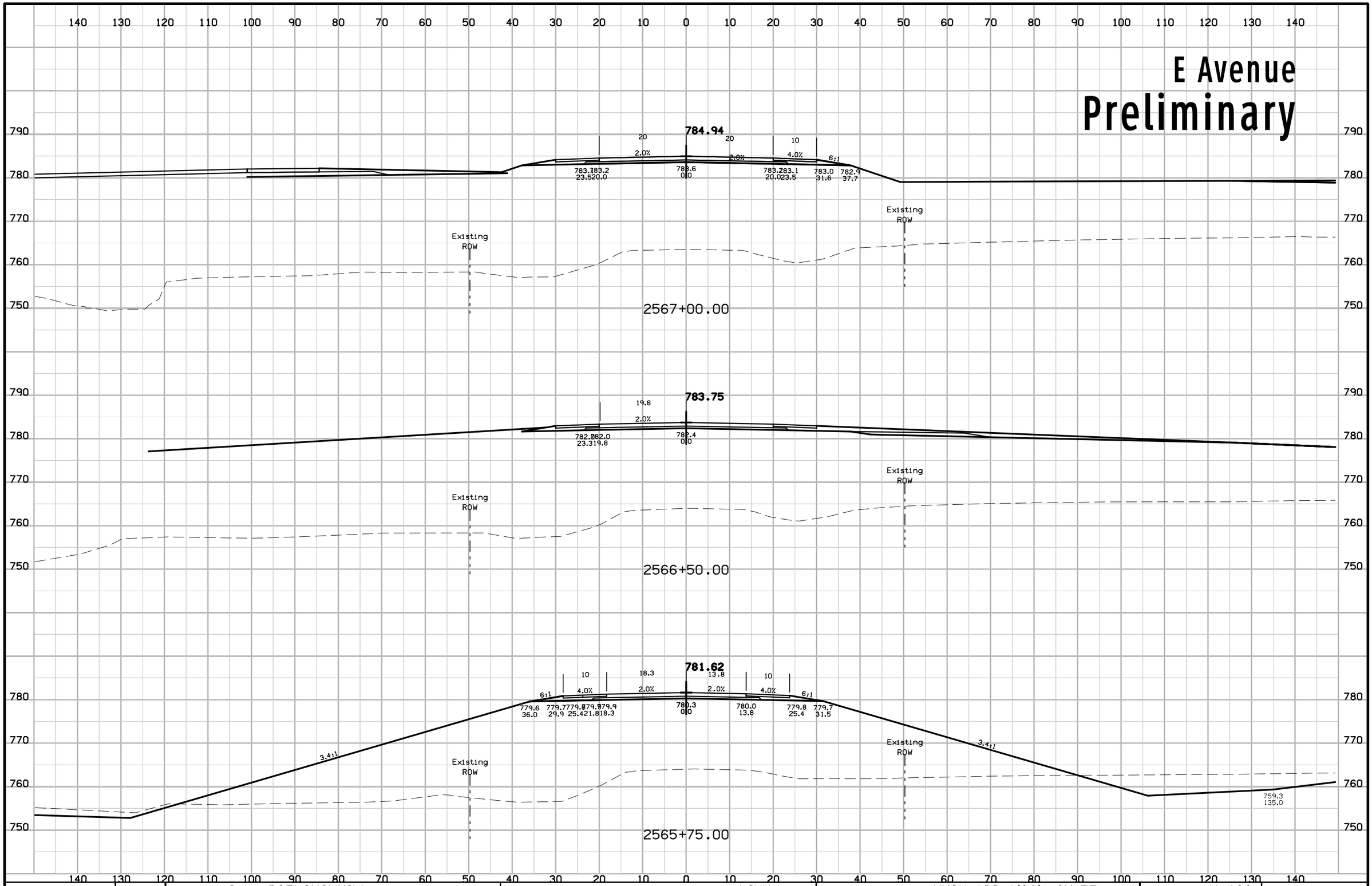
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.133

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E Avenue

Preliminary

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

787.48

7.6 | 20 | 20 | 9.6

4.0% | 2.0% | 2.0% | 4.0%

Existing ROW

Existing ROW

2568+50.00

786.81

10 | 20 | 20 | 10

6:1 | 4.0% | 2.0% | 2.0% | 4.0% | 6:1

784.7 37.7 | 784.8 31.6 | 785.0 23.5 | 785.1 20.0 | 786.5 0.0 | 785.1 20.0 | 785.0 23.5 | 784.8 31.6 | 784.7 37.7

3:1

3:1

Existing ROW

Existing ROW

756.1
123.7

761.5
107.3

2568+00.00

785.97

10 | 20 | 20 | 10

6:1 | 4.0% | 2.0% | 2.0% | 4.0% | 6:1

783.9 37.7 | 784.0 31.6 | 784.2 23.5 | 784.2 20.0 | 784.6 0.0 | 784.2 20.0 | 784.2 23.5 | 784.0 31.6 | 783.9 37.7

3:1

3:1

Existing ROW

Existing ROW

769.8
79.9

2567+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

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.134

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E Avenue
Preliminary

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

788.43

7.6 | 20 | 20 | 9.6

4.0% | 2.0% | 2.0% | 4.0%

Existing ROW

Existing ROW

2570+00.00

788.29

7.6 | 20 | 20 | 9.6

4.0% | 2.0% | 2.0% | 4.0%

Existing ROW

Existing ROW

2569+50.00

787.97

7.6 | 20 | 20 | 9.6

4.0% | 2.0% | 2.0% | 4.0%

Existing ROW

Existing ROW

2569+00.00

750

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.135

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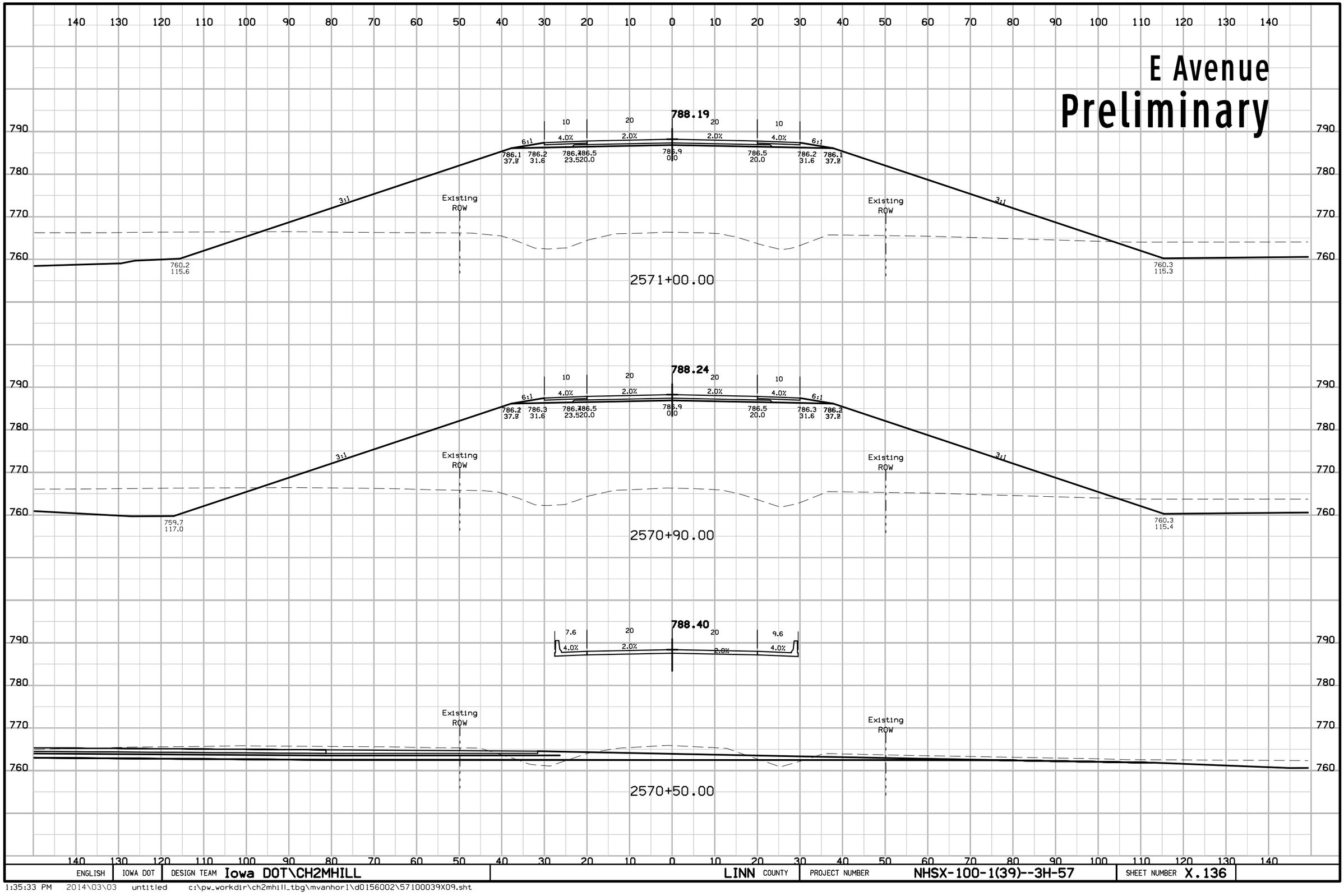
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.136

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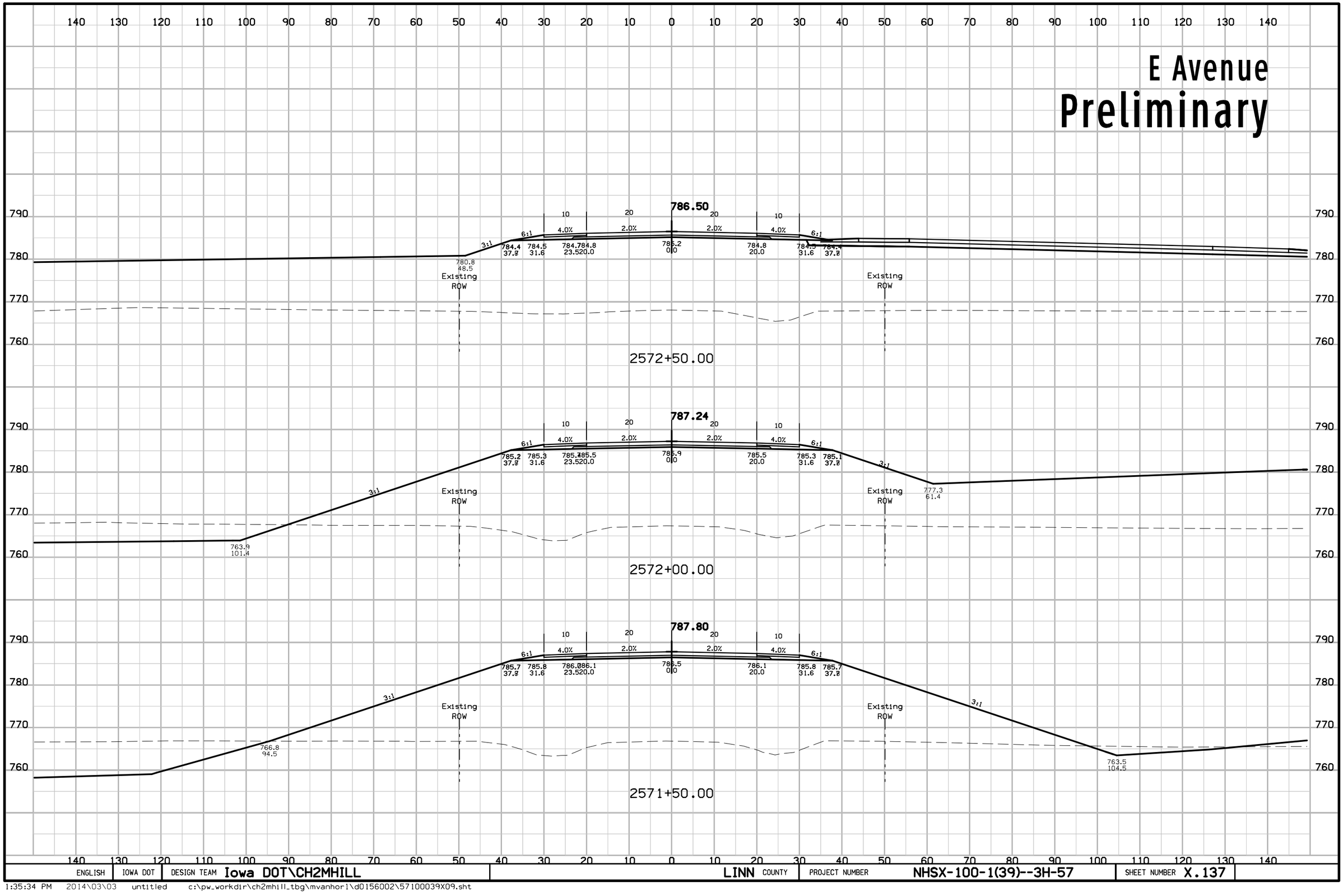
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.137

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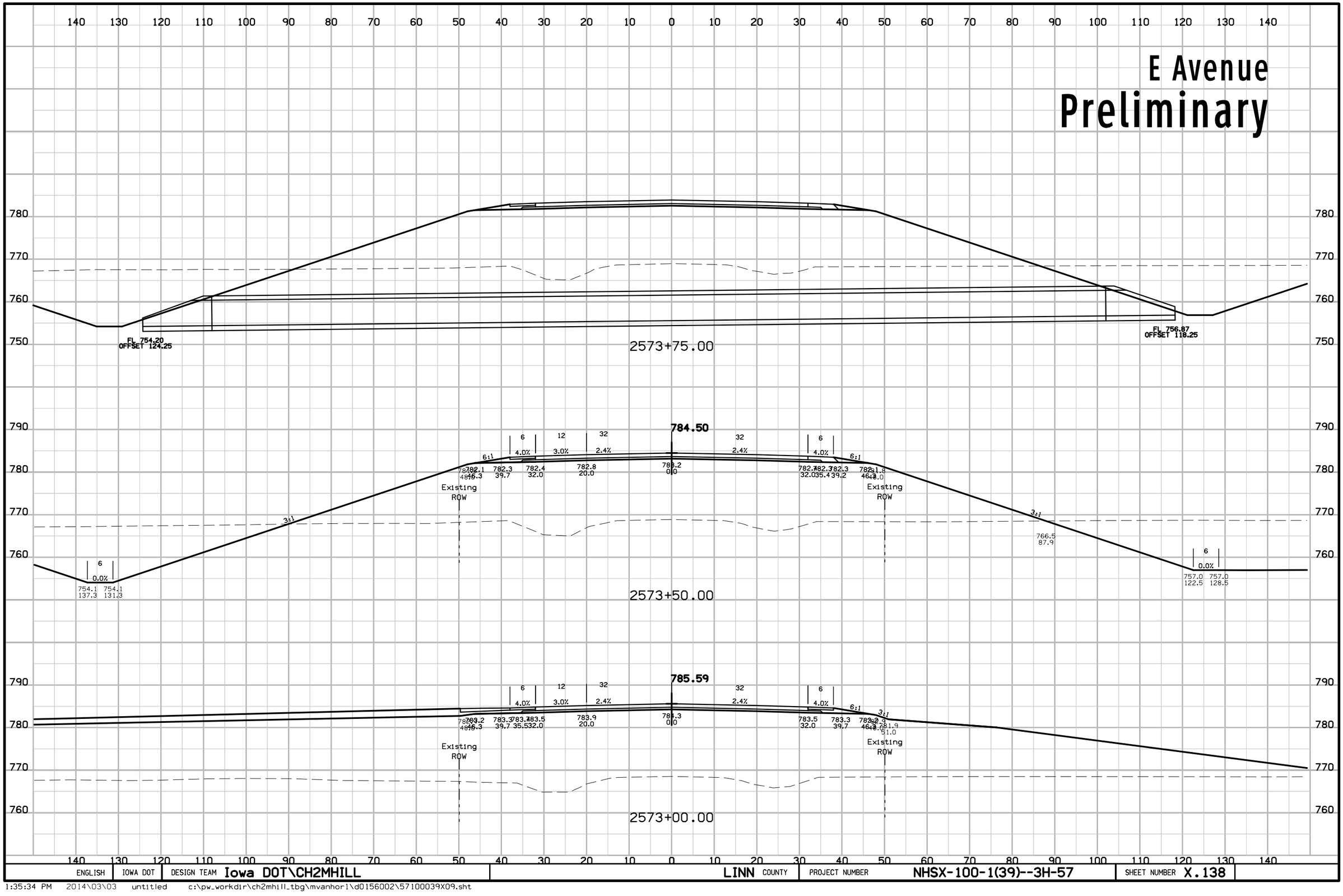
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.138

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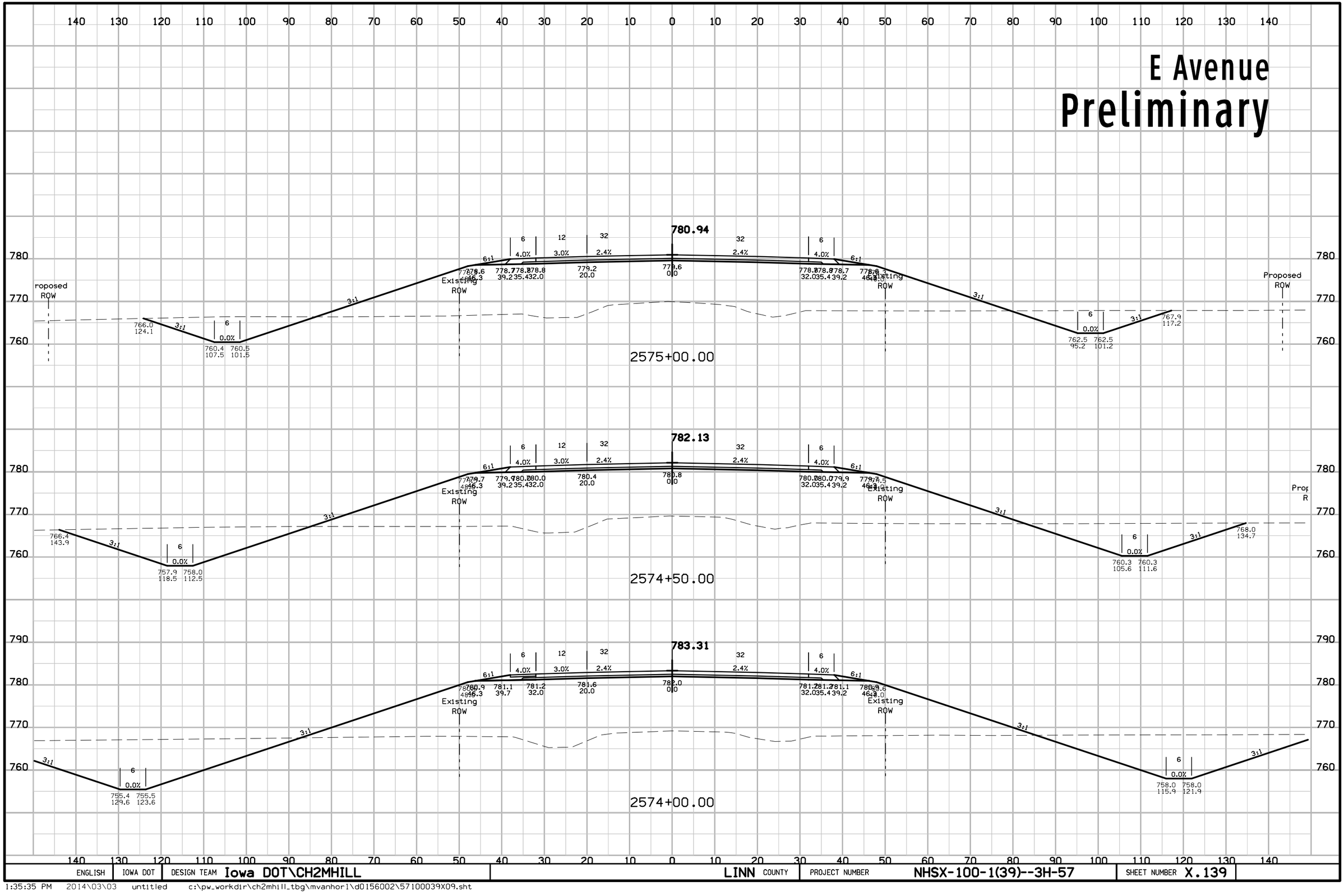
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.139

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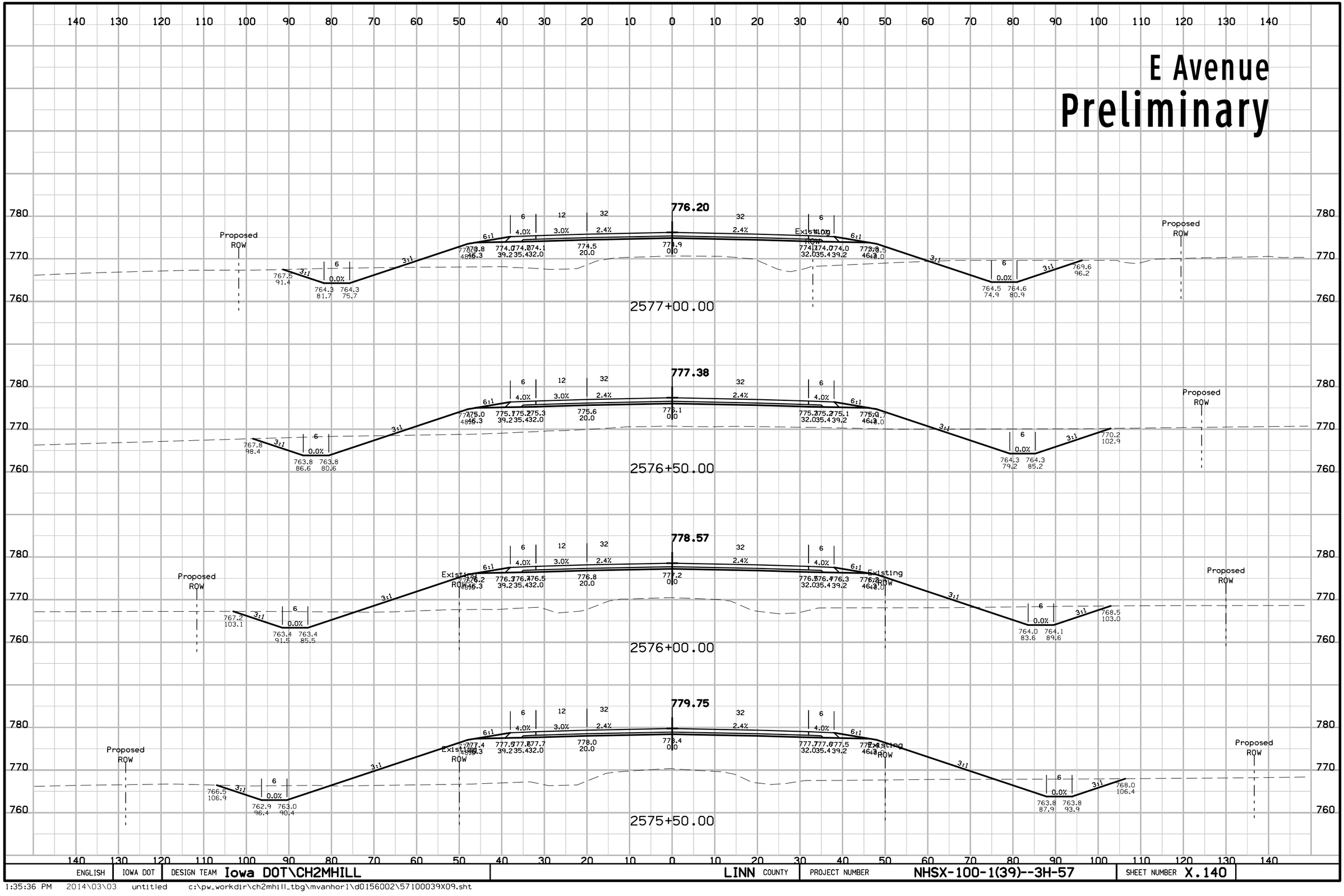
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.140	

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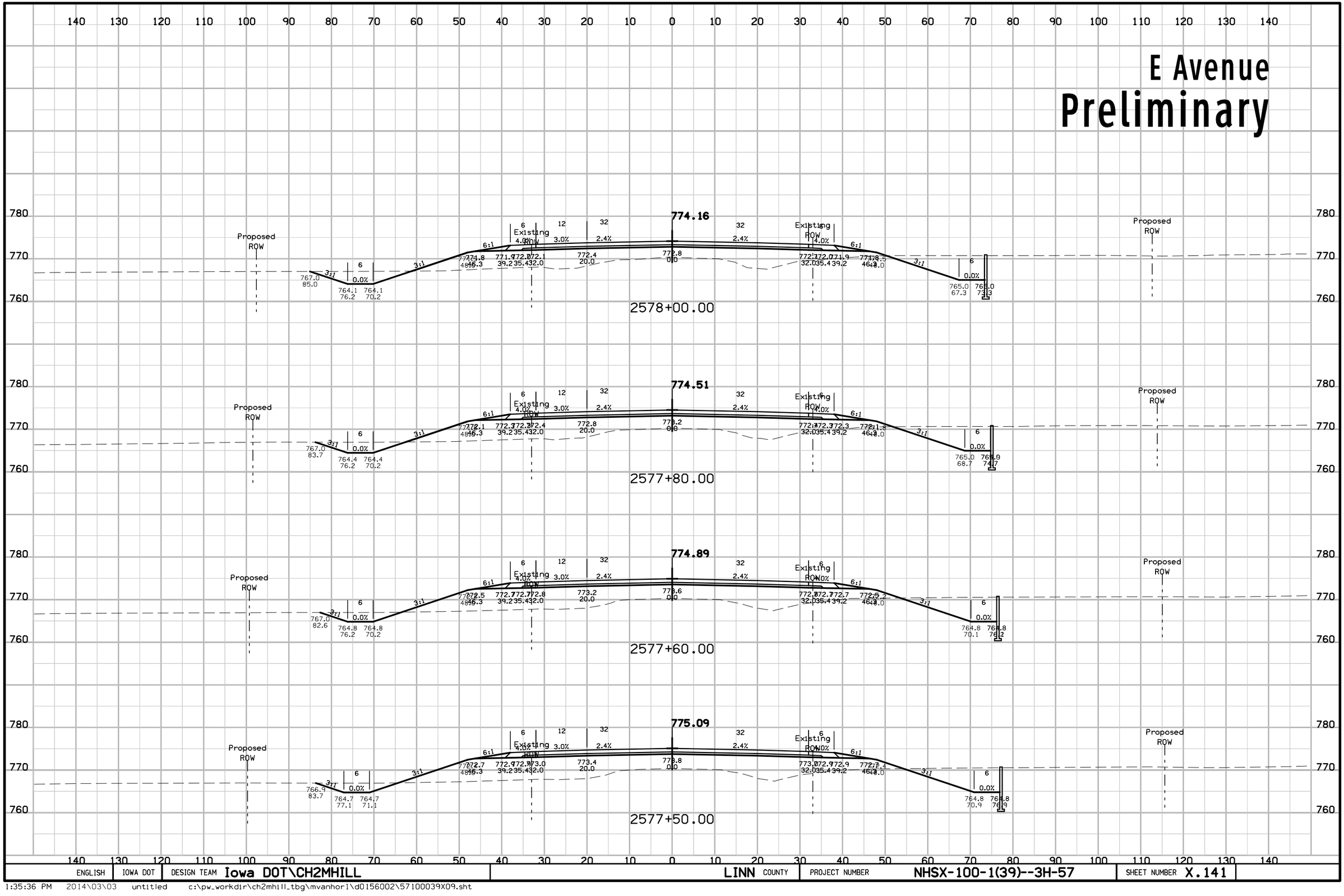
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.141	

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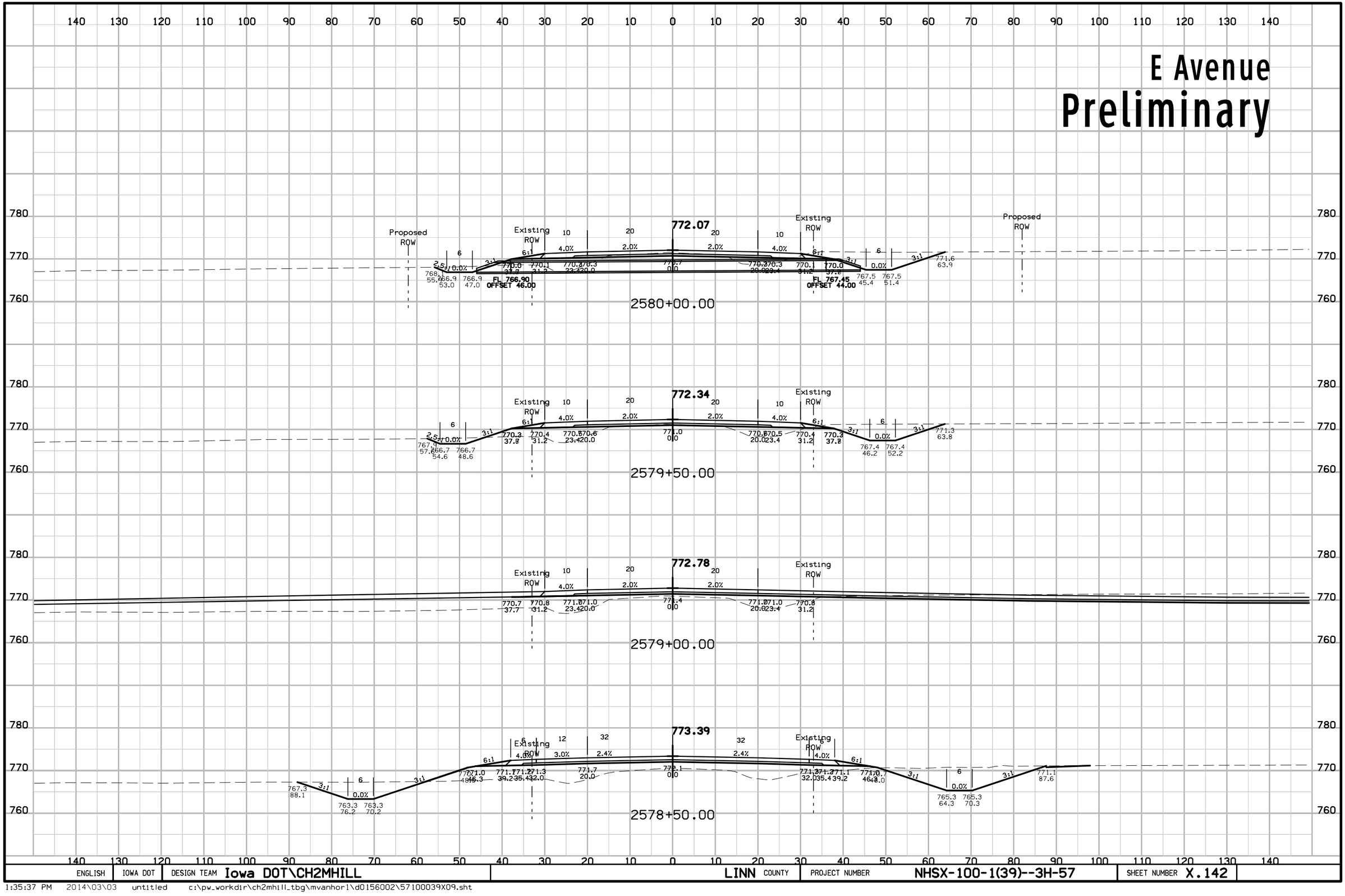
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.142

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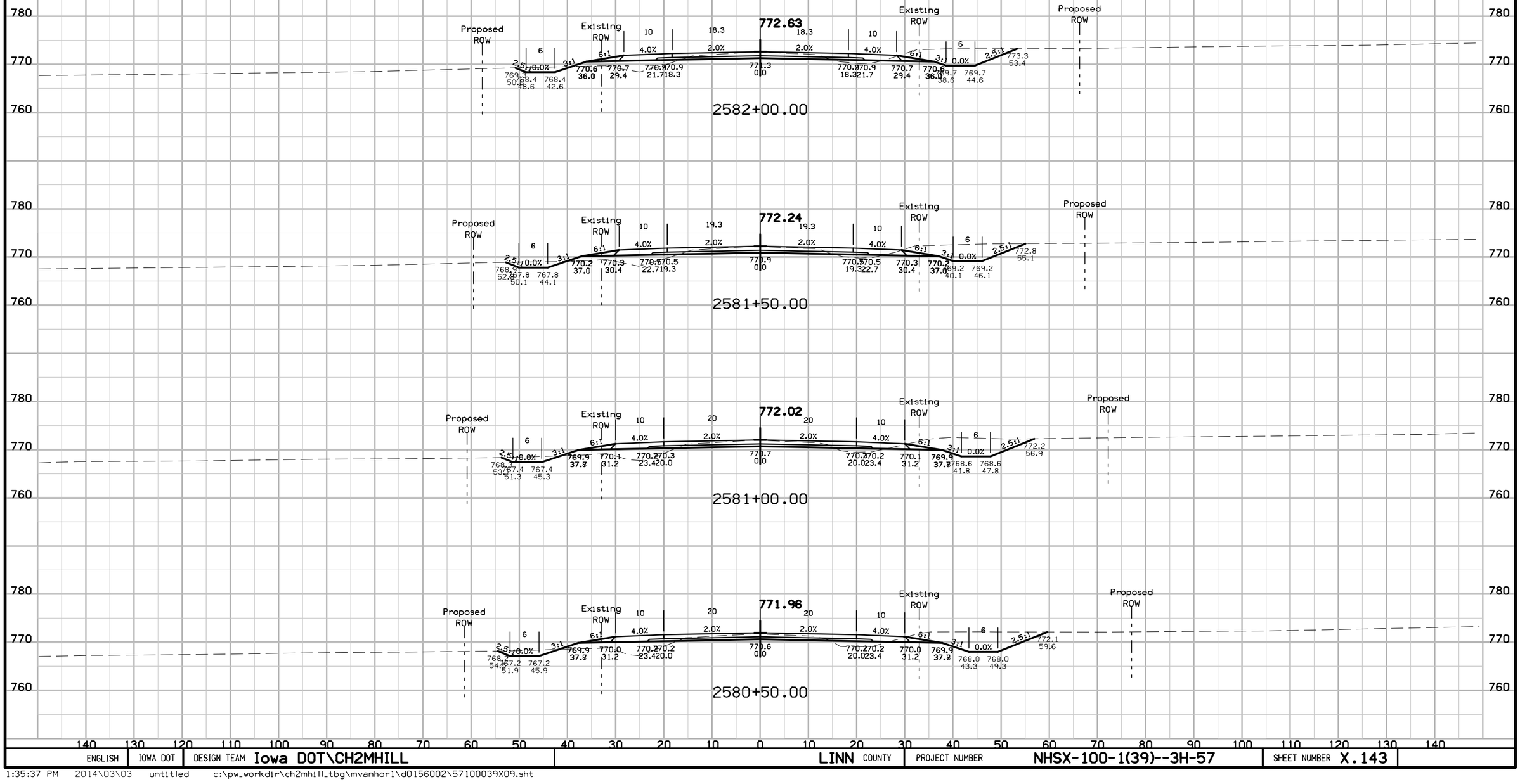
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.143

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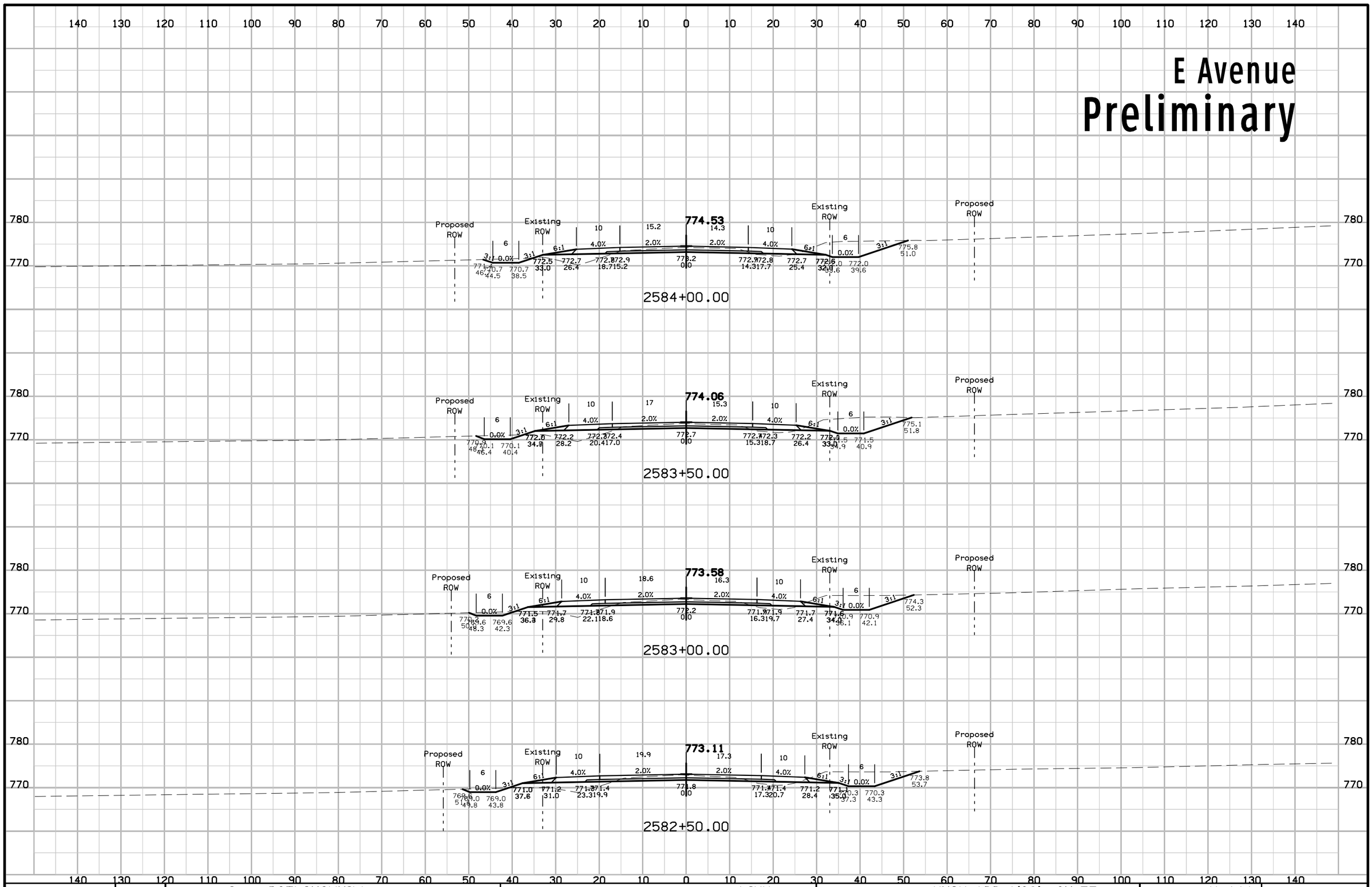
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.144

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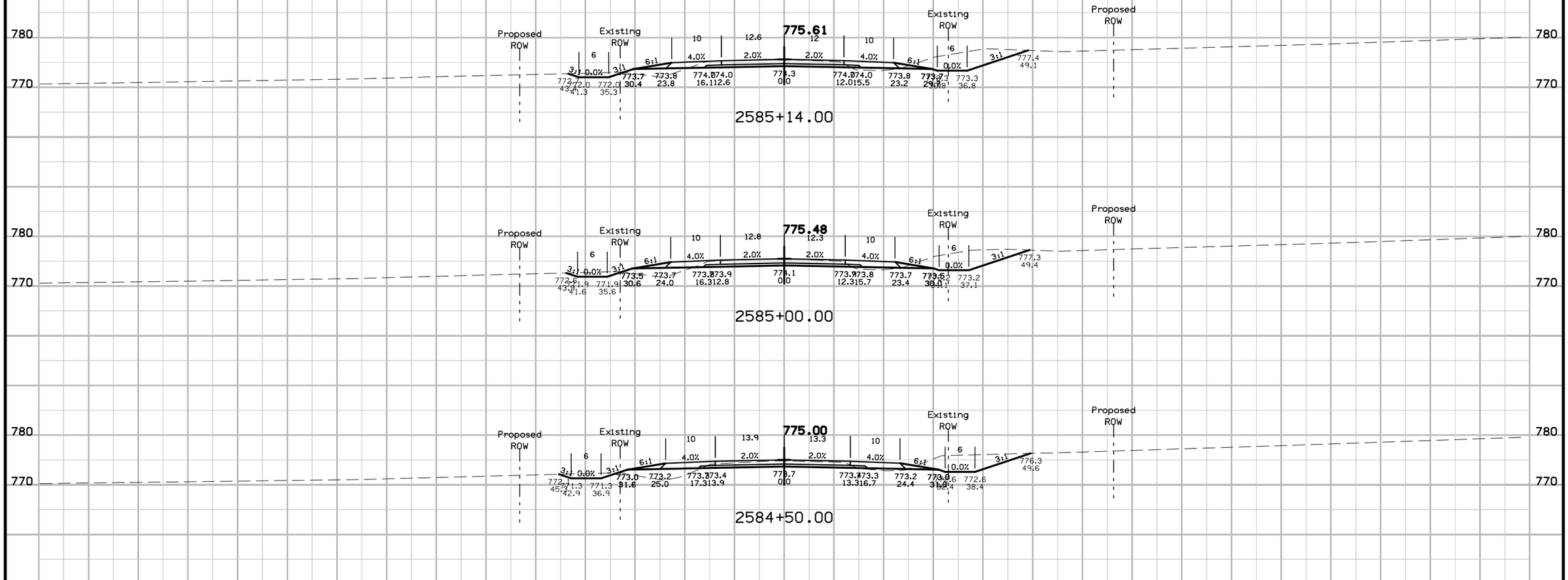
E Avenue
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.145	

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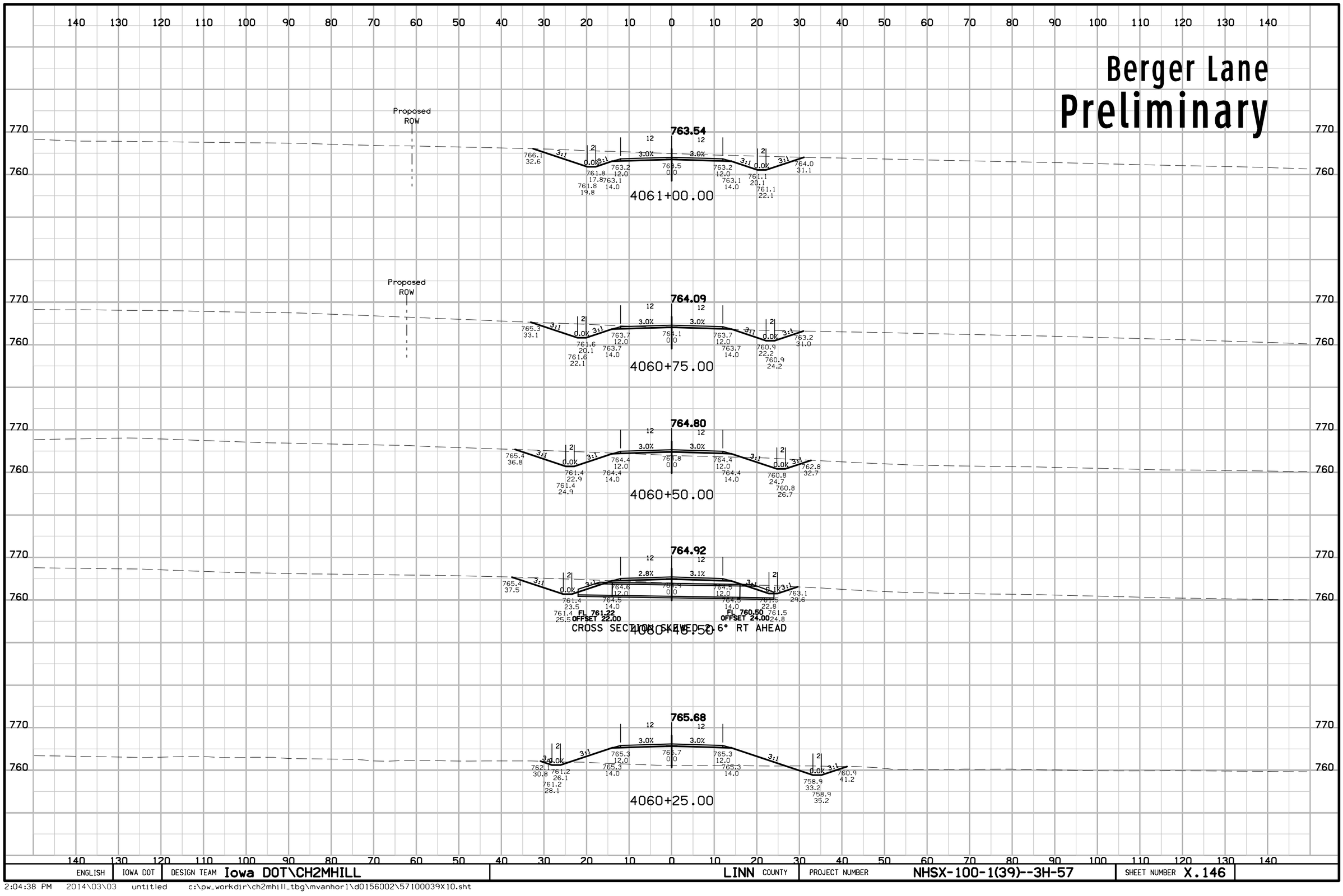
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.146

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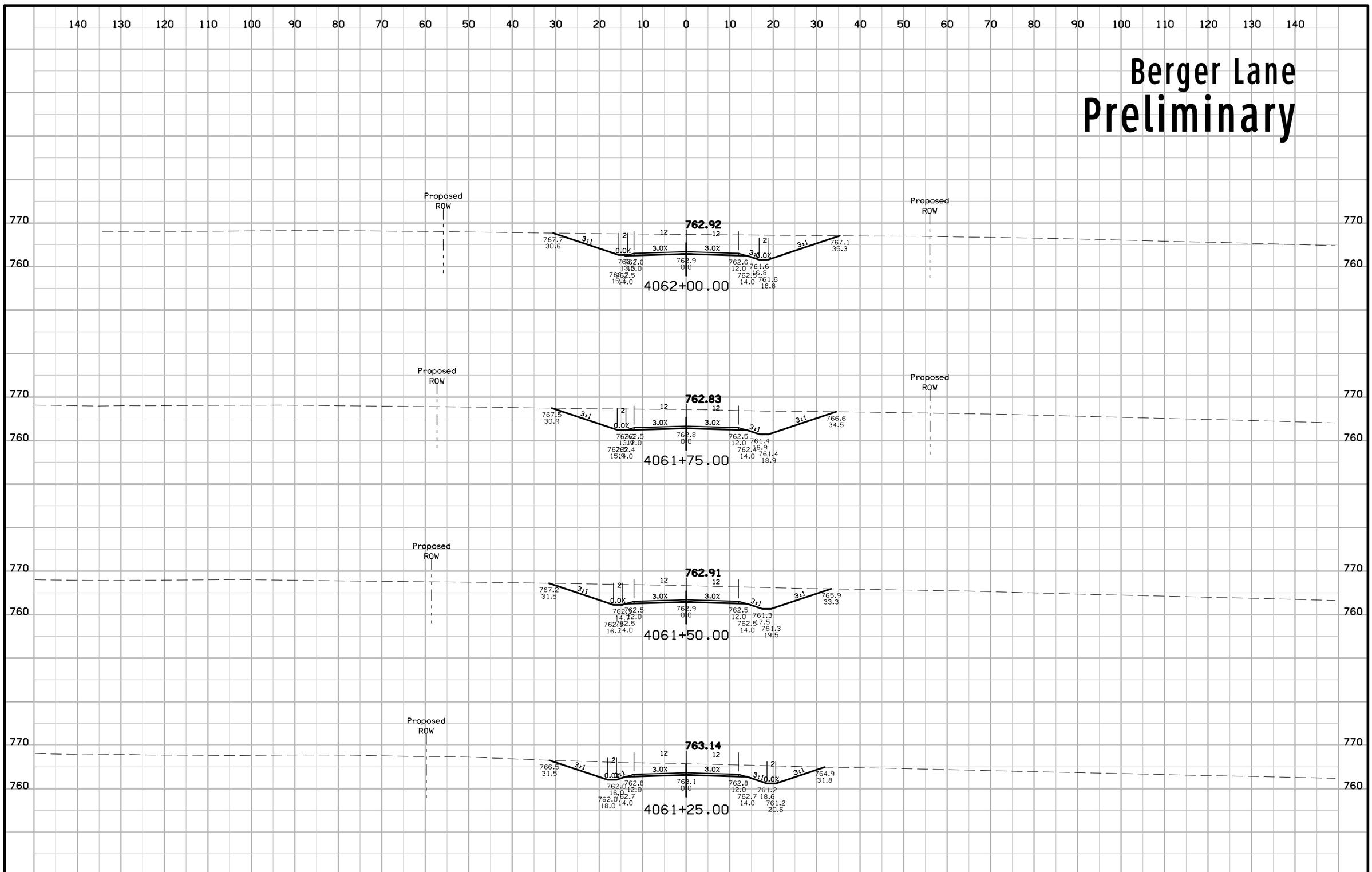
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.147

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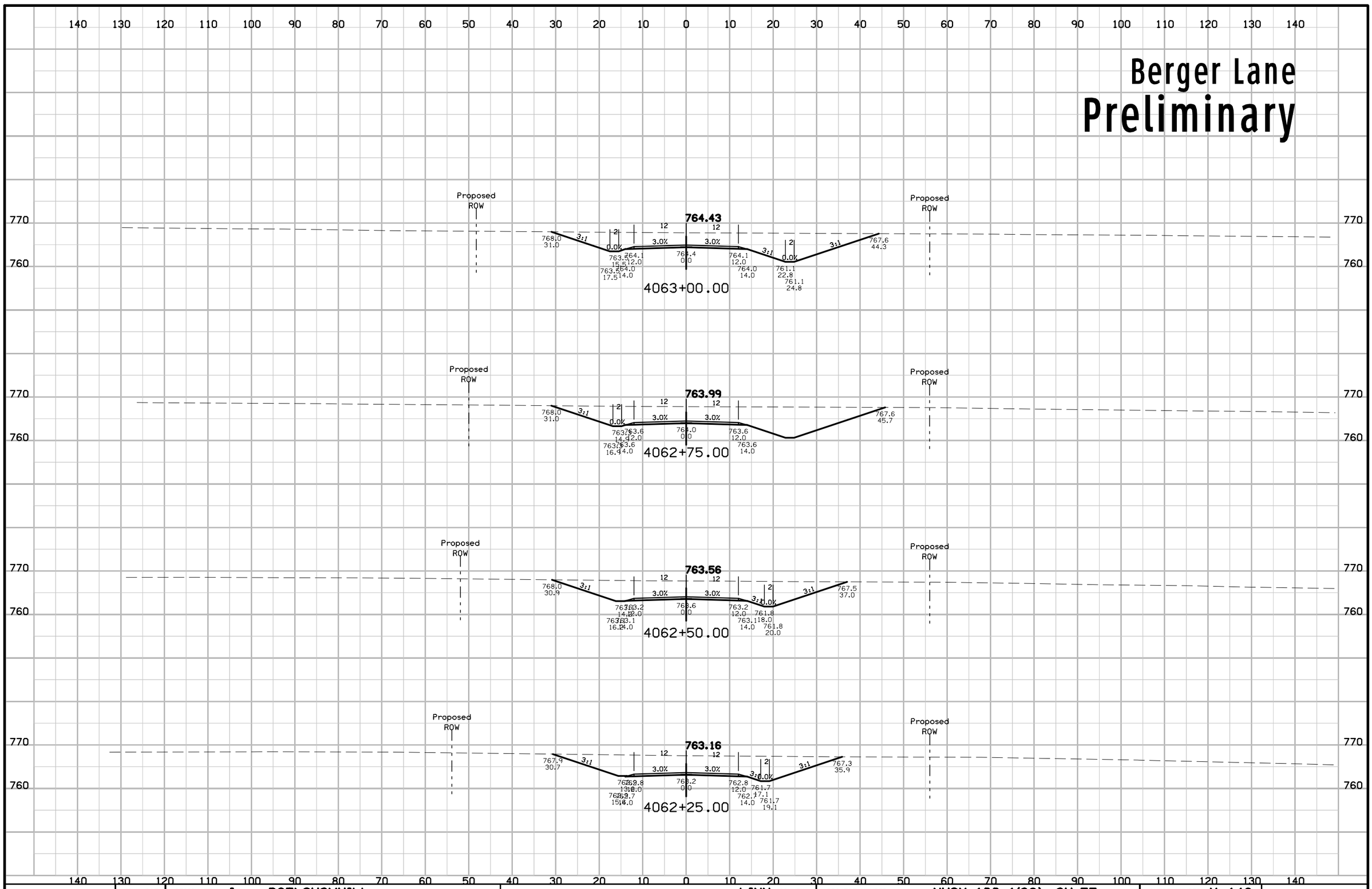
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.148

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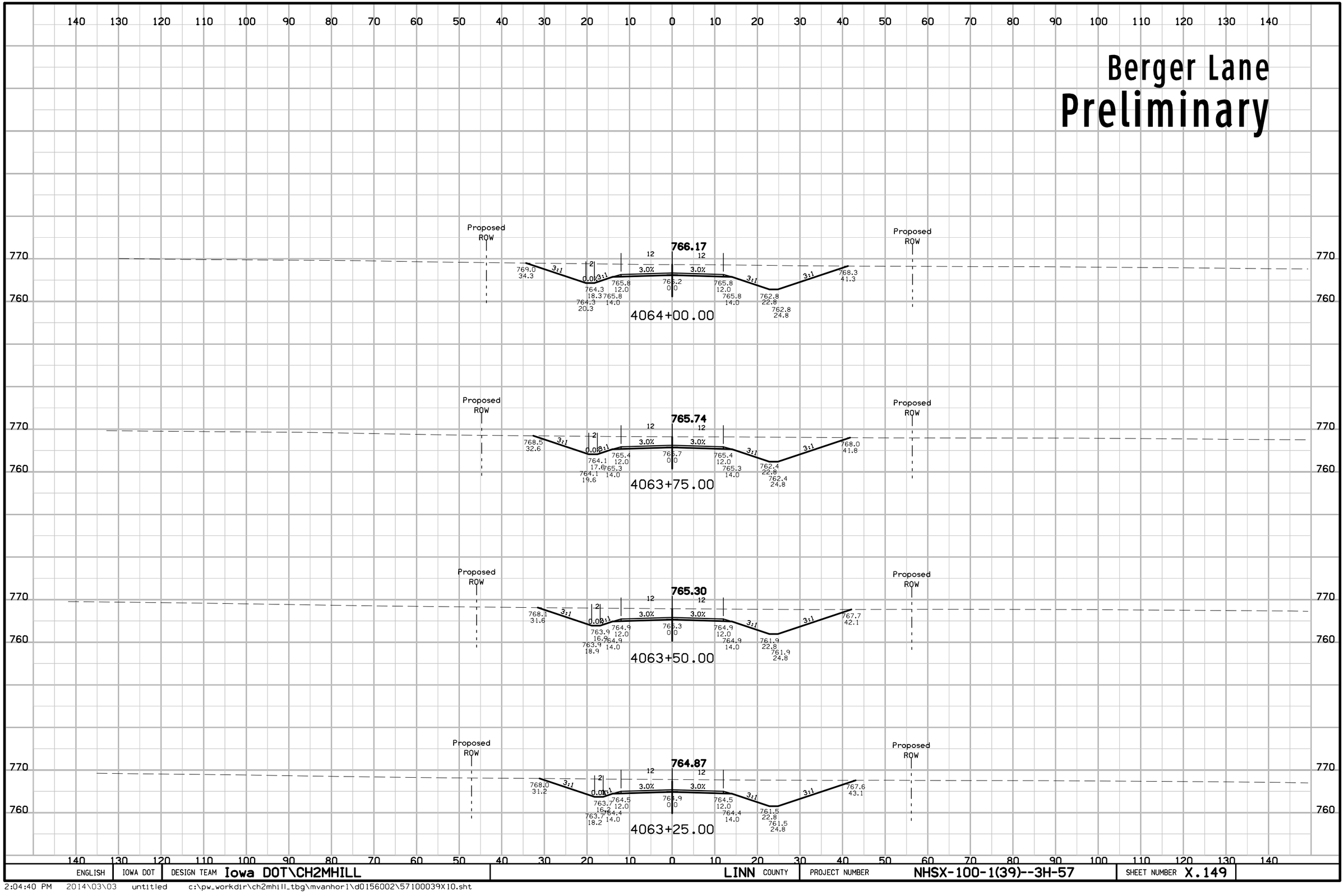
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.149

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Berger Lane
Preliminary

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

780 / 770 / 760

Proposed ROW

767.91
12 12
3.0% 3.0%
3:1 3:1 3:1 3:1
770.5 31.4
766.4 12.0 767.6 12.0 767.9 0.0 767.6 12.0 767.5 14.0 764.6 22.8 769.3 39.2
766.4 17.7 767.5
766.4 19.1
764.6 24.8

4065+00.00

Proposed ROW

770 / 760

Proposed ROW

767.48
12 12
2
3.0% 3.0%
3:1 0.0% 3:1 3:1 3:1
770.3 33.1
765.8 12.0 767.1 12.0 767.5 0.0 767.1 12.0 767.1 14.0 764.1 22.8 769.1 39.8
765.8 17.7 767.1
765.8 19.7
764.1 24.8

4064+75.00

Proposed ROW

770 / 760

Proposed ROW

767.04
12 12
2
3.0% 3.0%
3:1 0.0% 3:1 3:1 3:1
770.0 34.9
765.2 12.0 766.7 12.0 767.0 0.0 766.7 12.0 766.6 14.0 763.7 22.8 768.9 40.5
765.2 18.3 766.6
765.2 20.3
763.7 24.8

4064+50.00

Proposed ROW

770 / 760

Proposed ROW

766.61
12 12
2
3.0% 3.0%
3:1 0.0% 3:1 3:1 3:1
769.6 36.1
764.5 12.0 766.2 12.0 766.6 0.0 766.2 12.0 766.2 14.0 763.2 22.8 768.6 40.8
764.5 19.0 766.2
764.5 21.0
763.2 24.8

4064+25.00

Proposed 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

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.150

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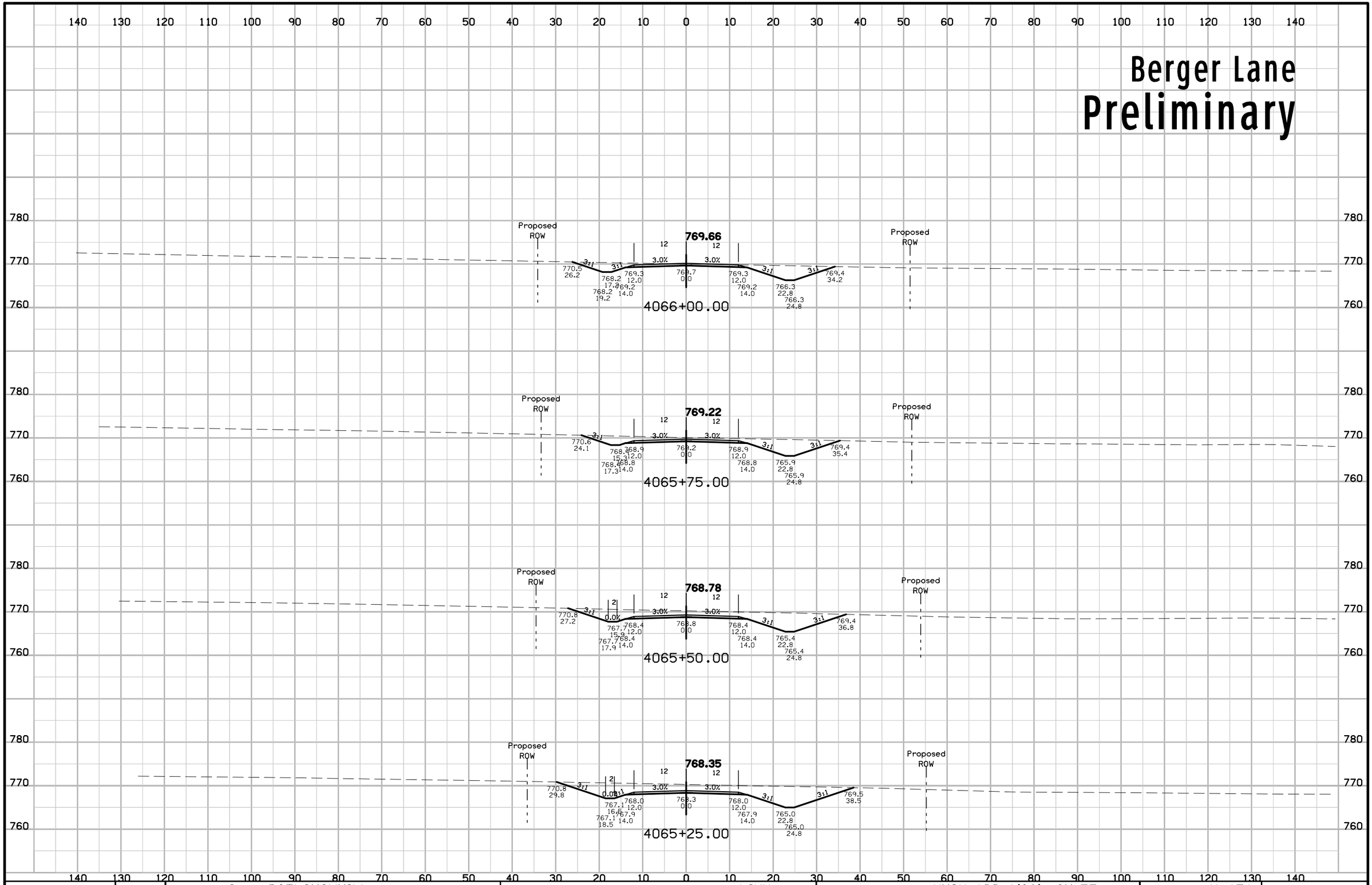
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.151

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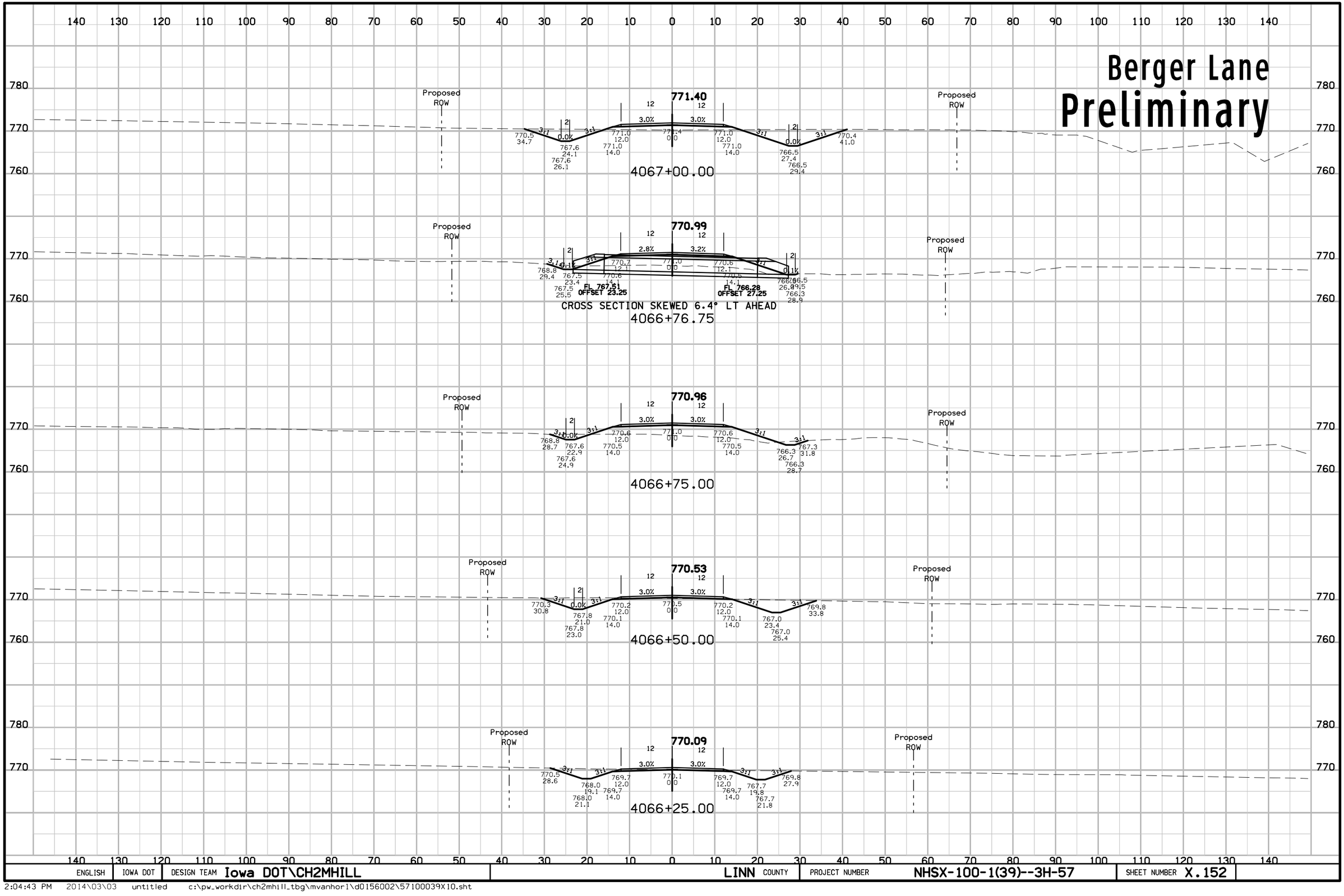
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.152

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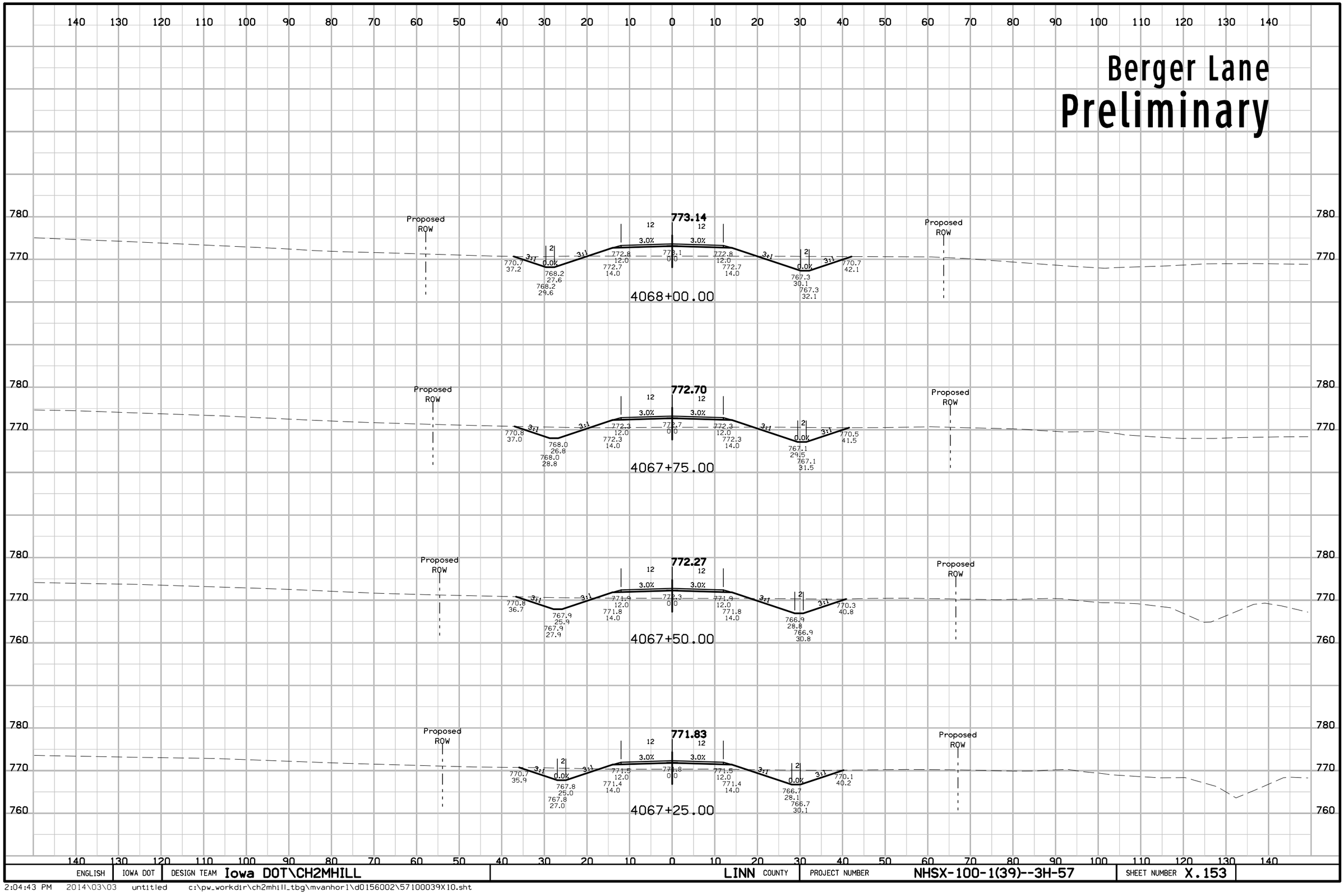
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.153

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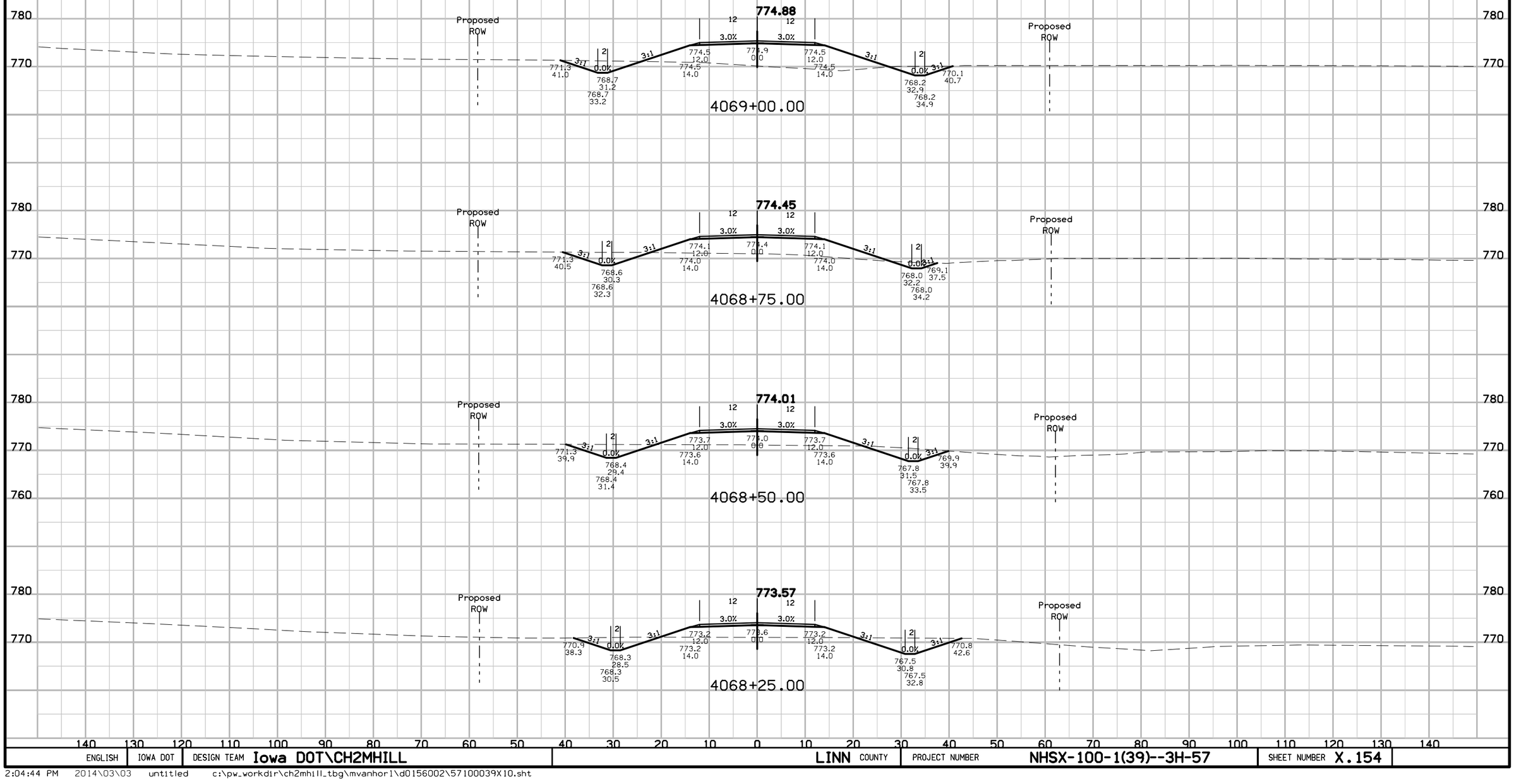
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.154

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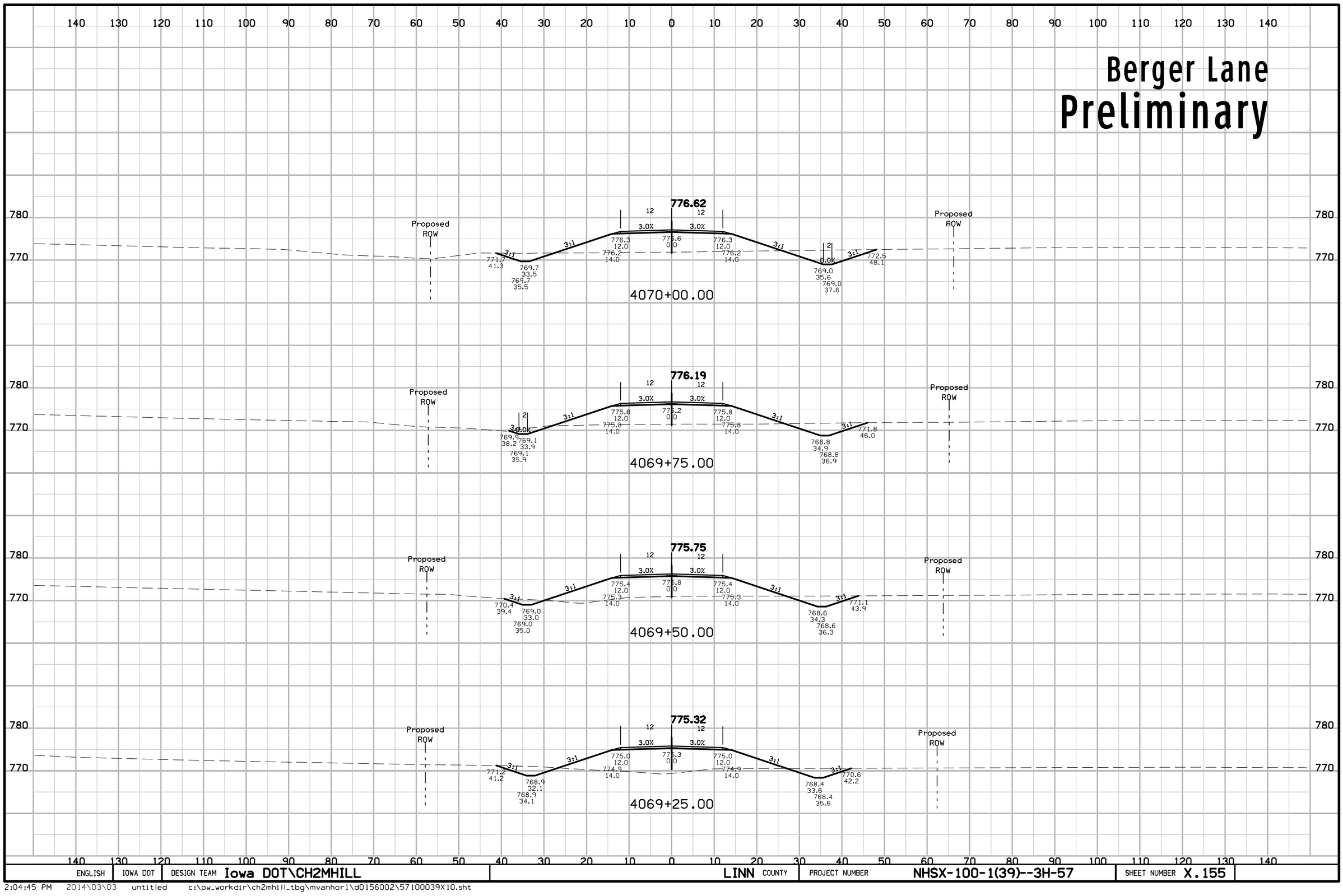
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.155

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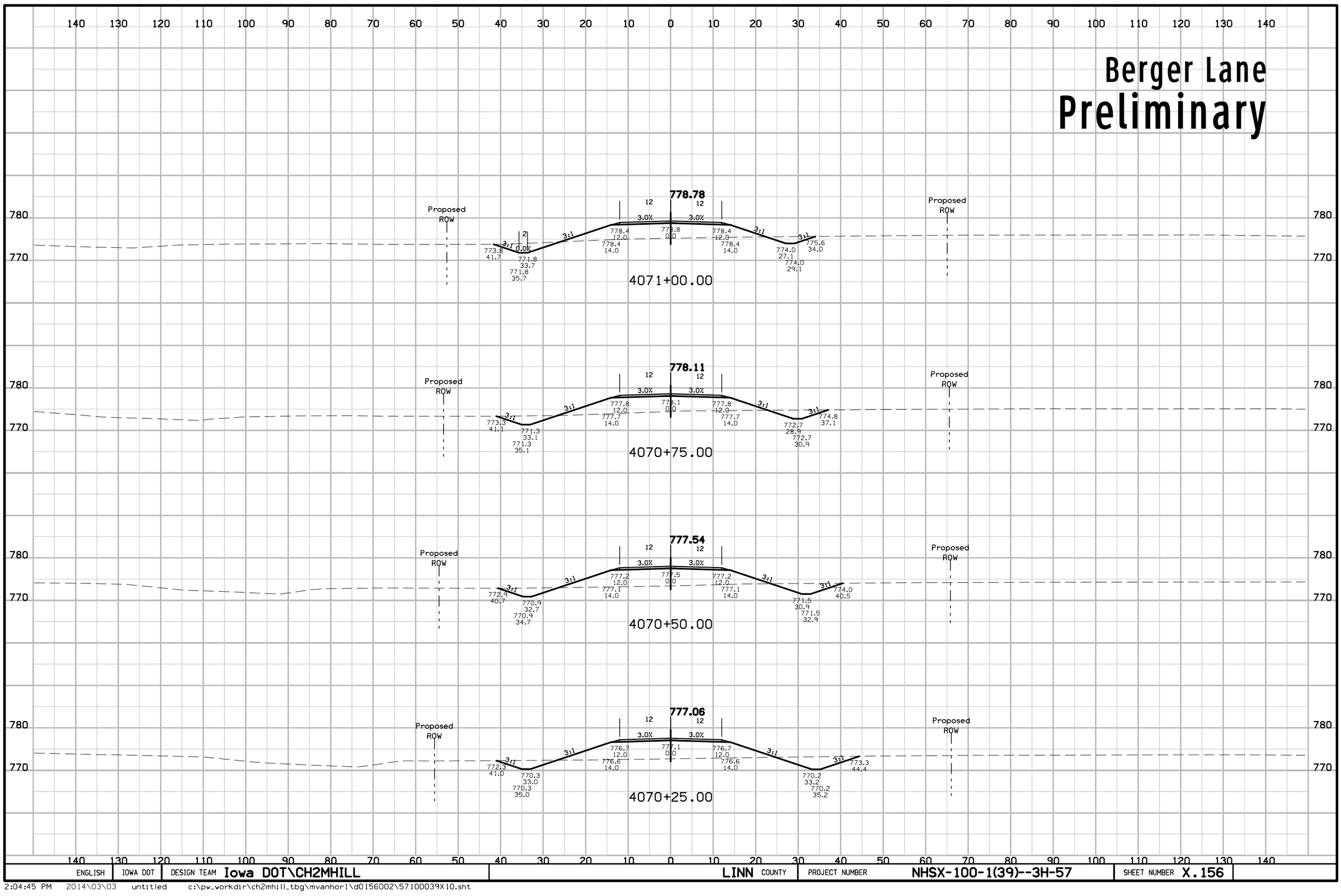
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.156

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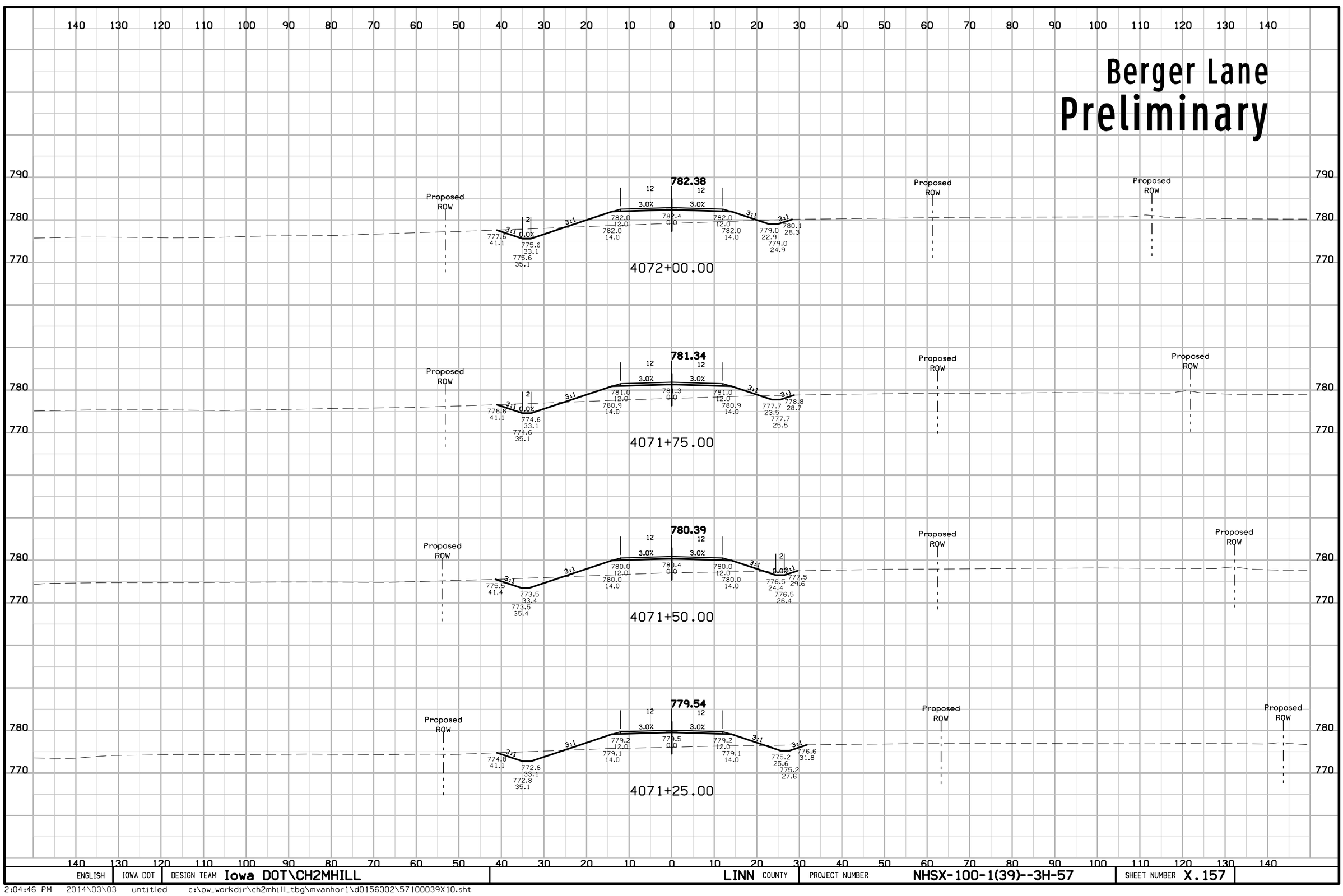
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.157

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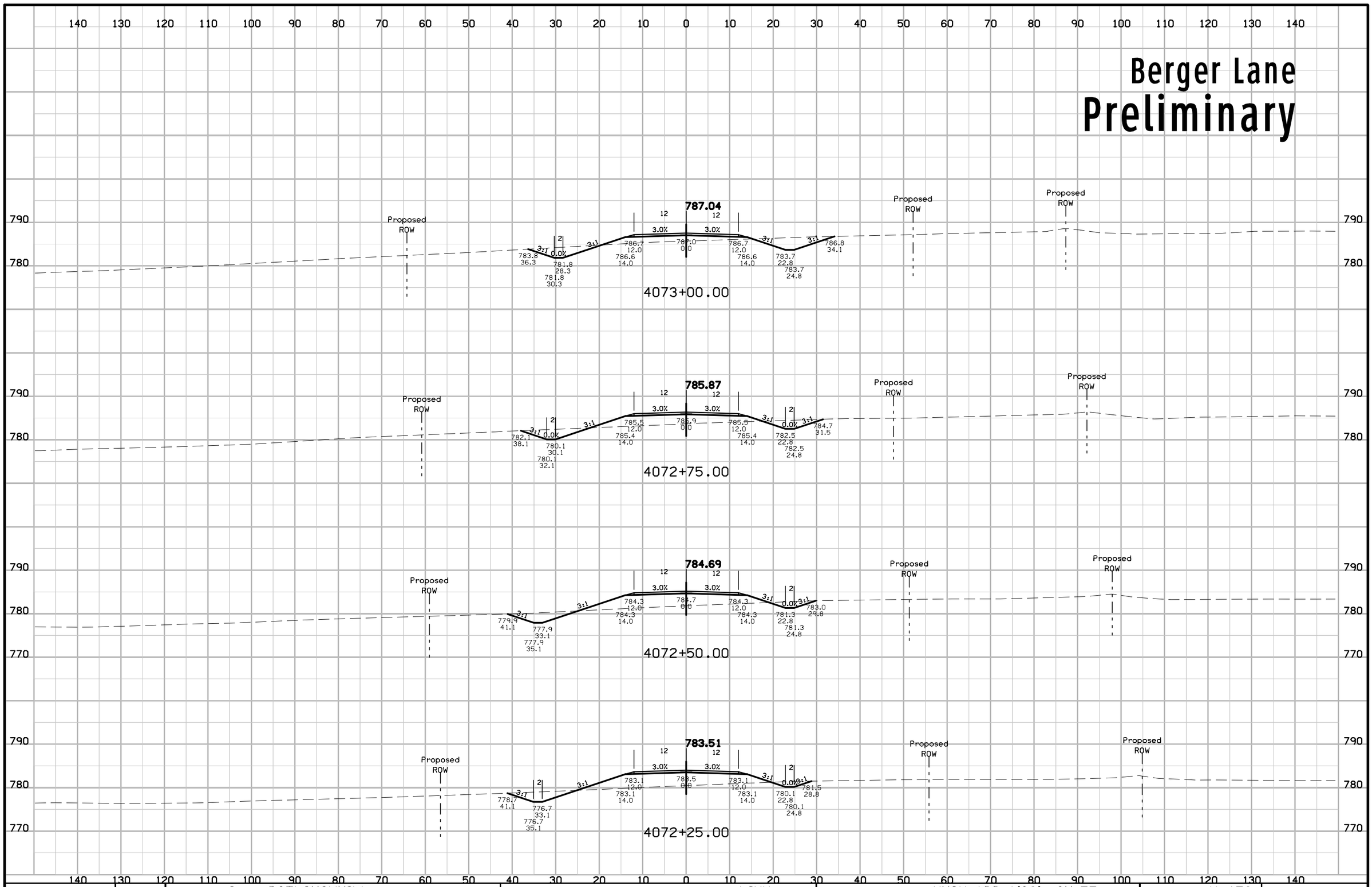
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.158

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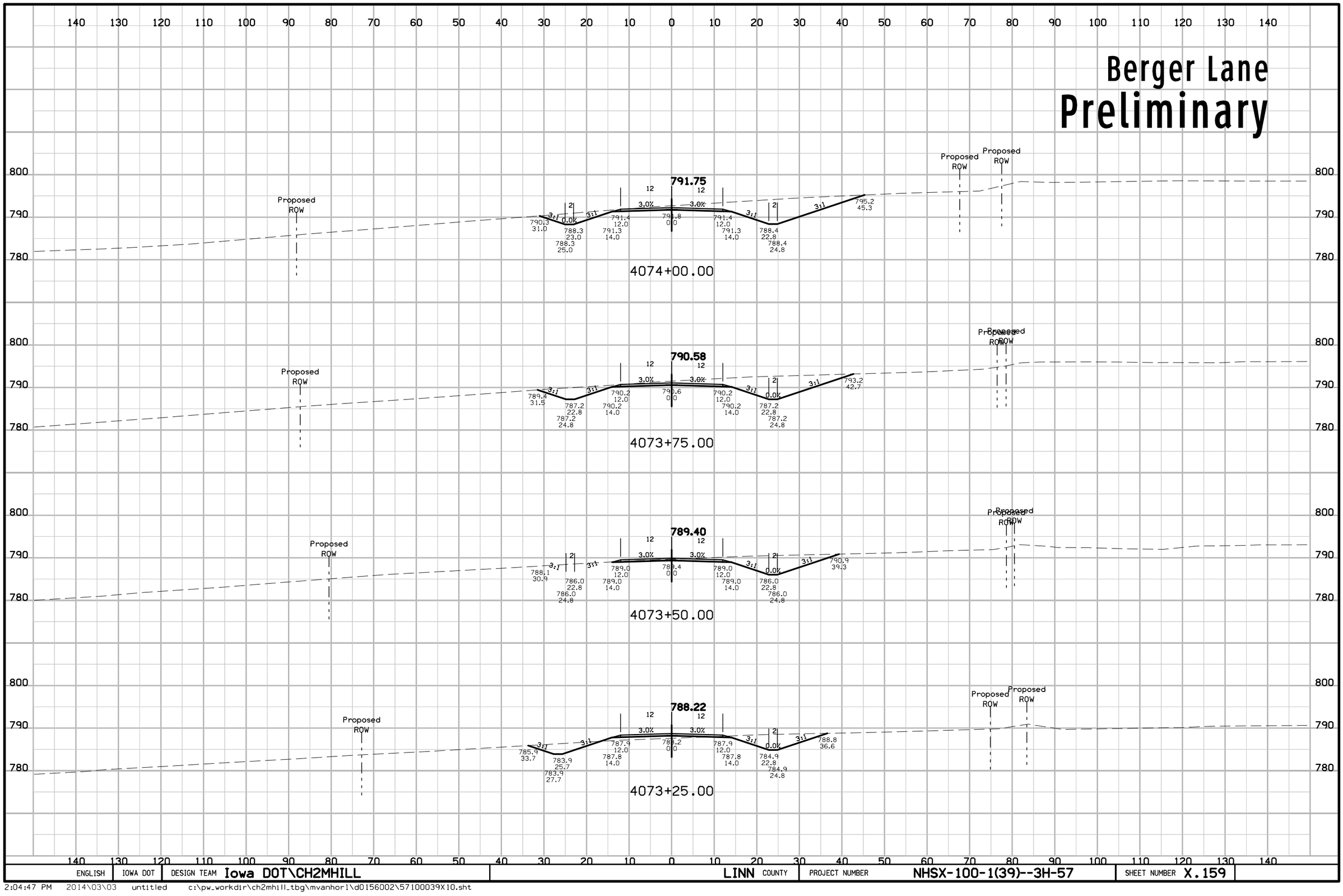
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.159

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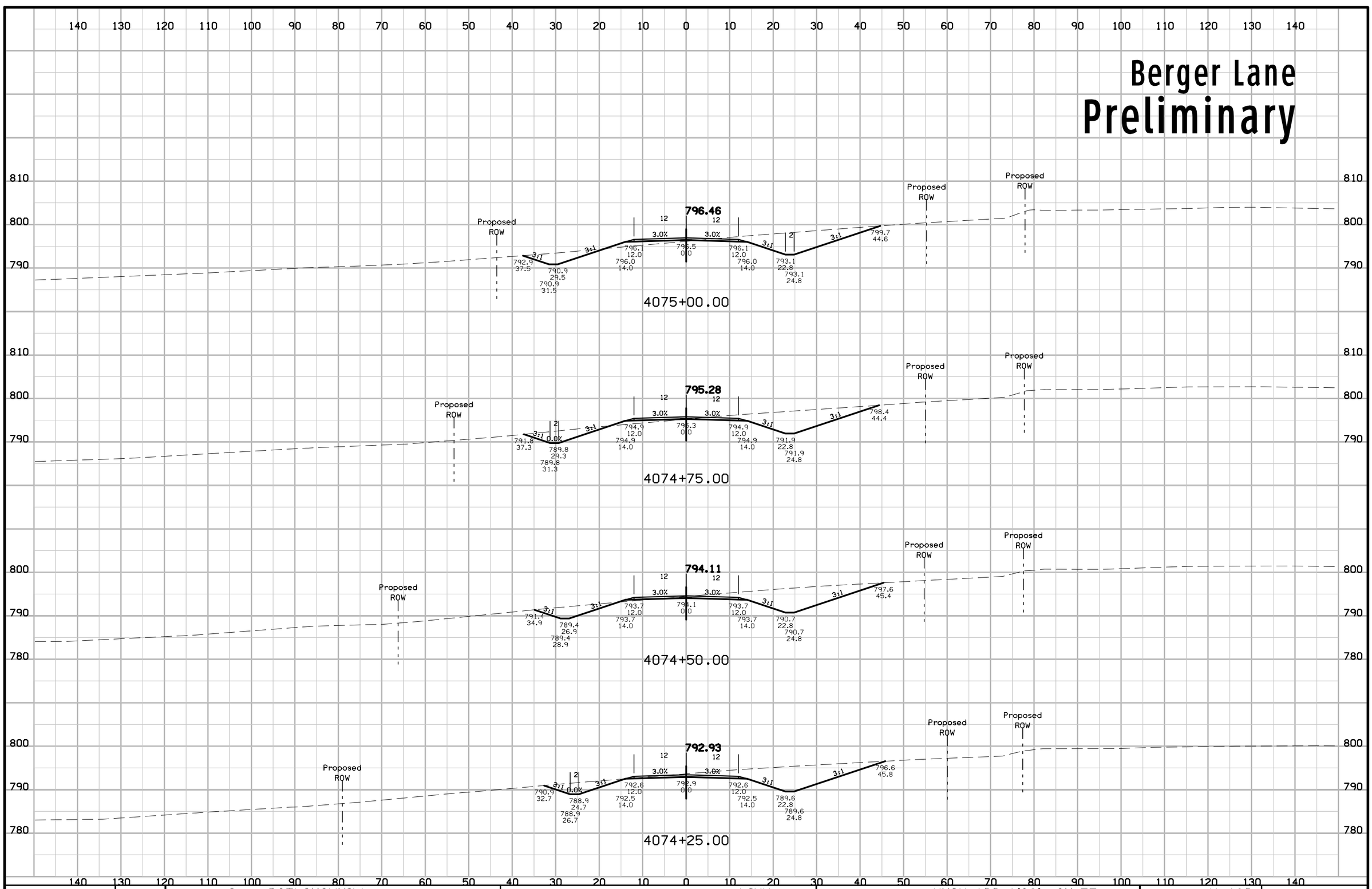
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.160

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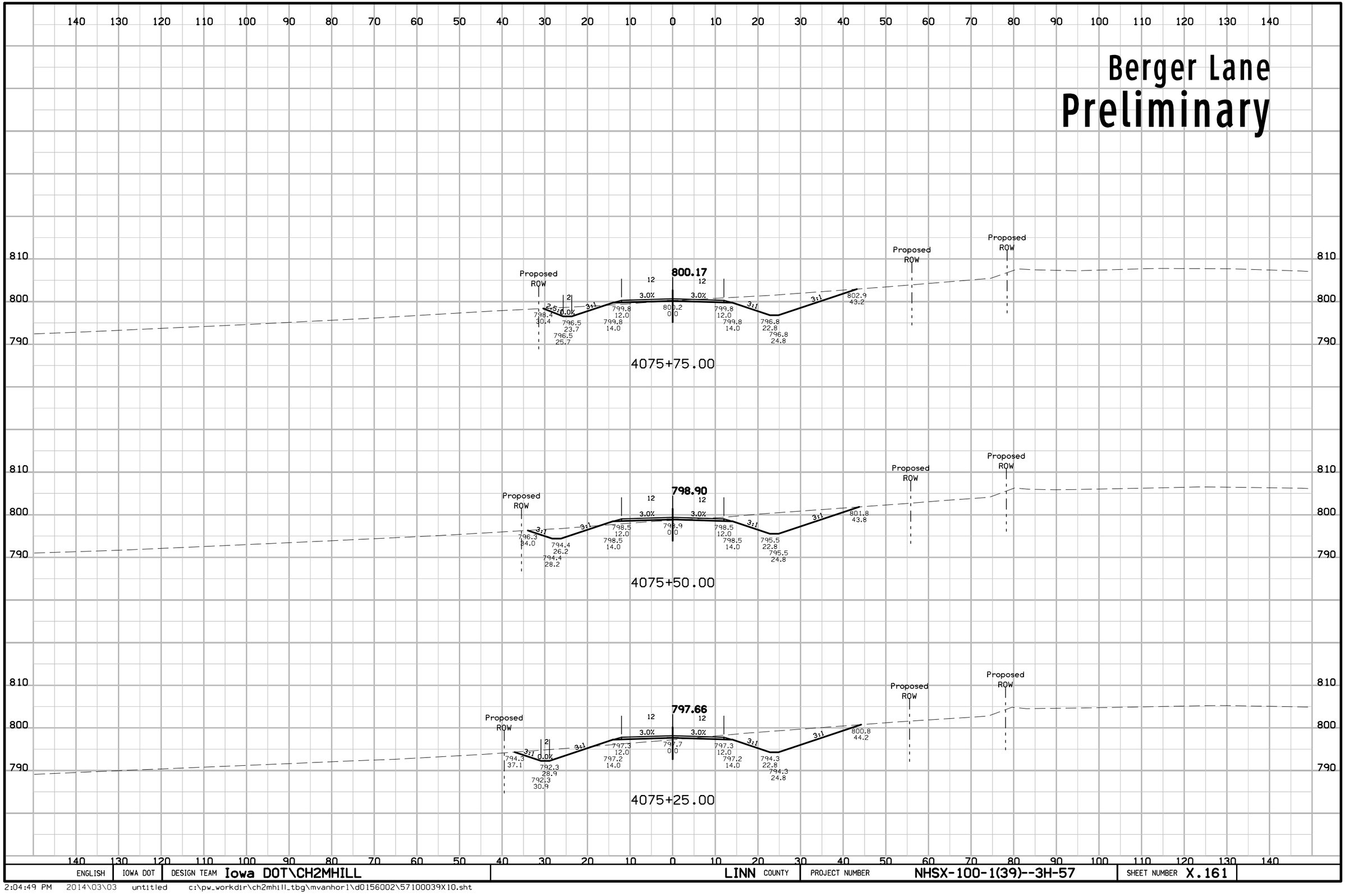
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.161

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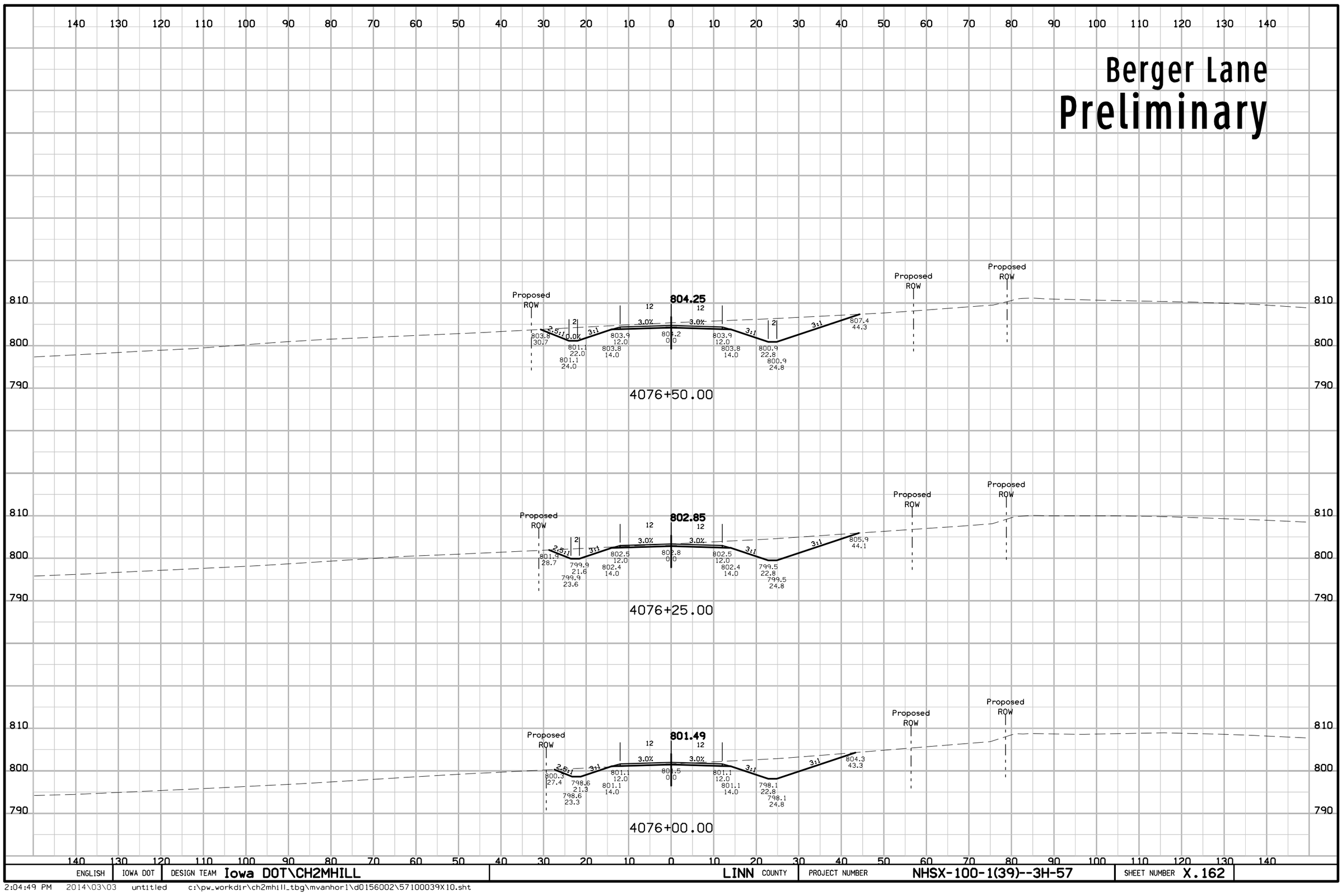
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.162

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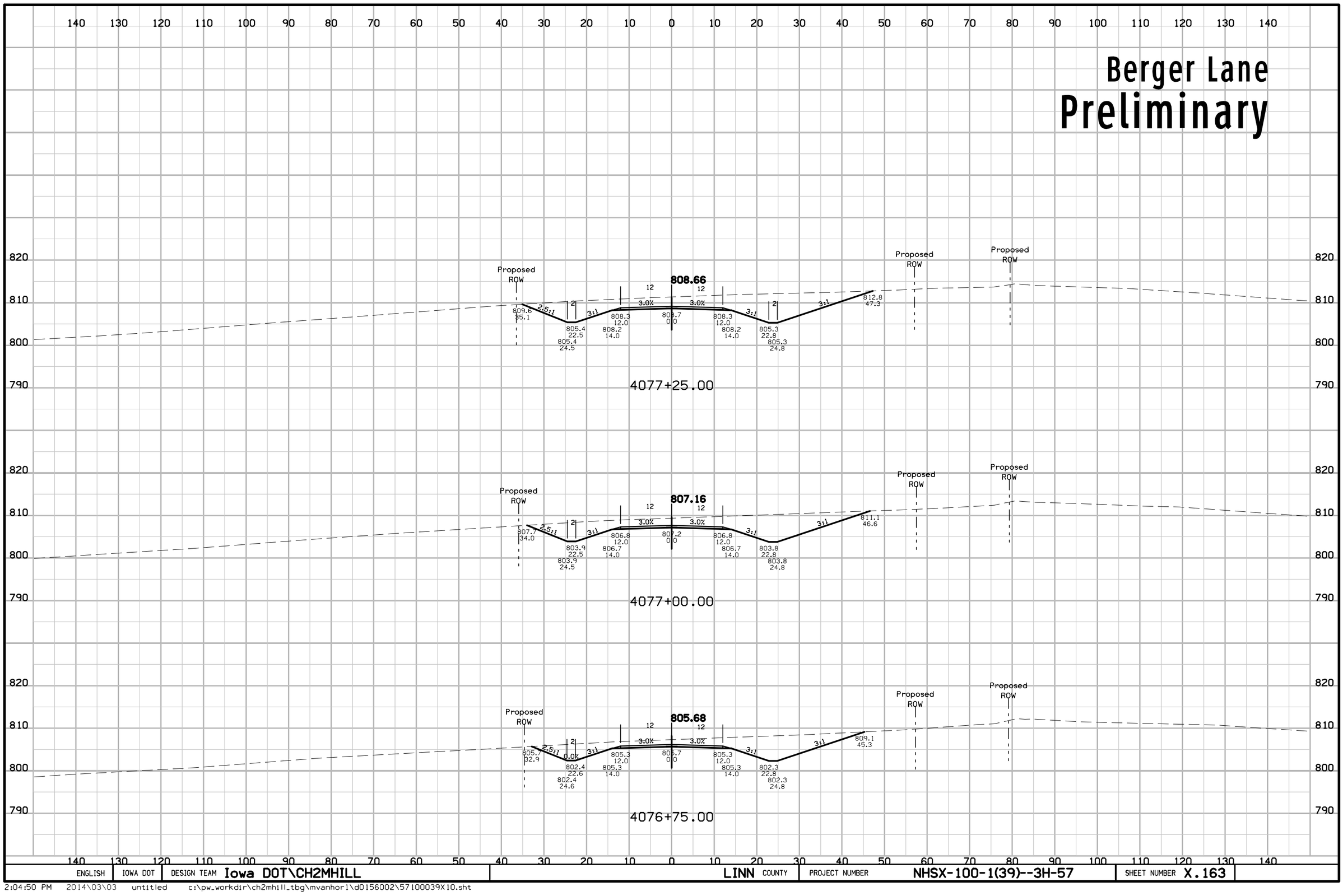
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.163

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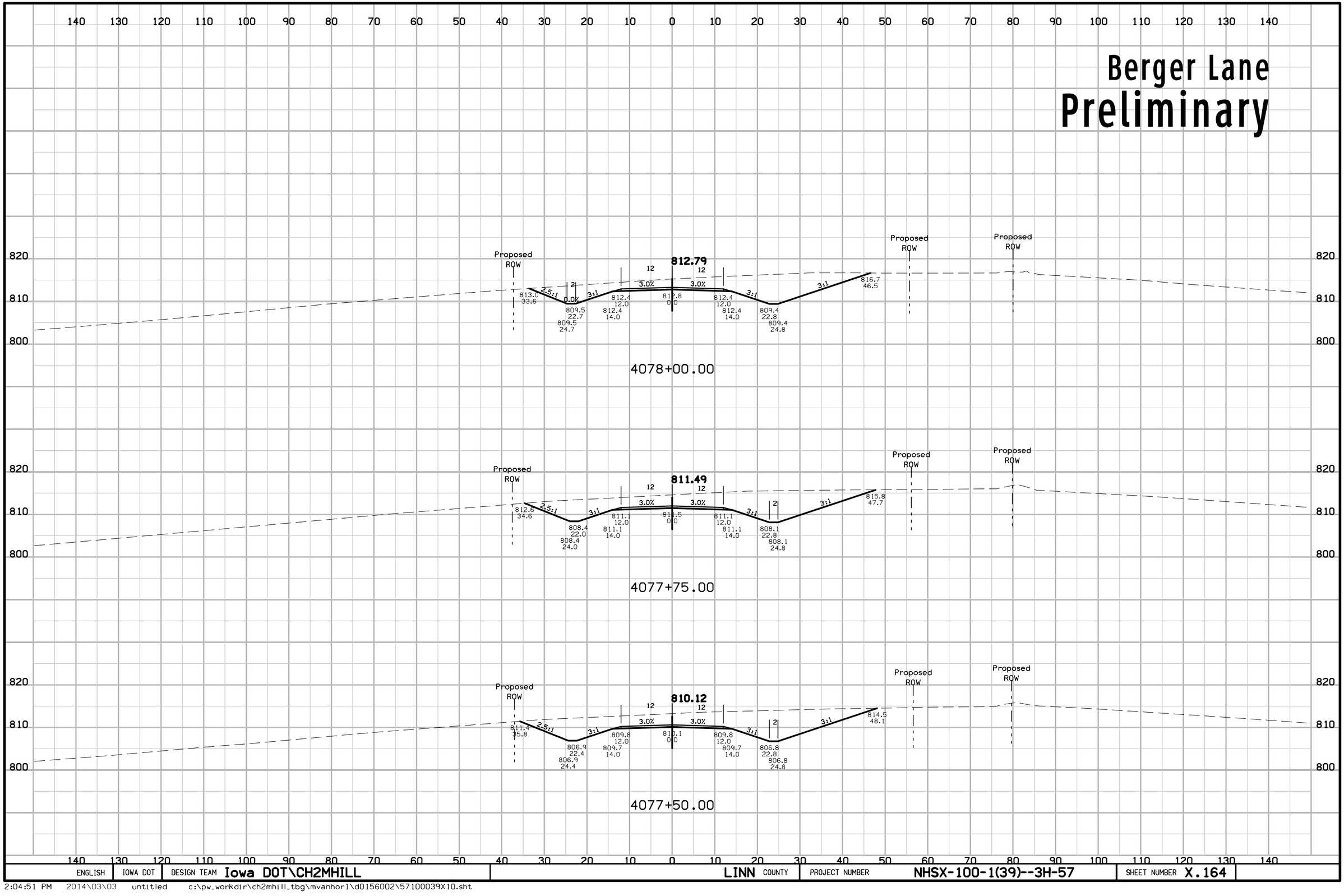
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.164

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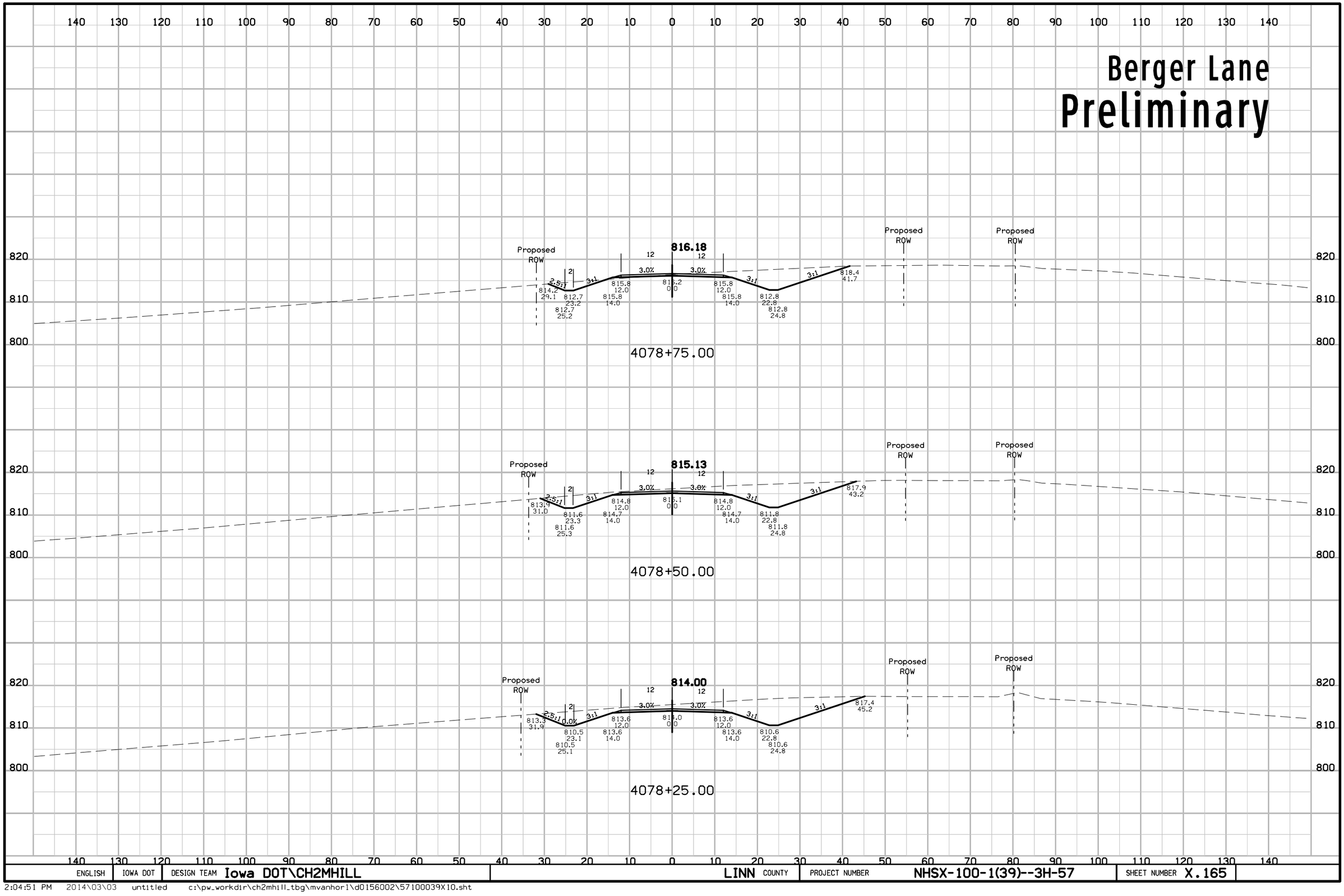
Berger Lane
Preliminary



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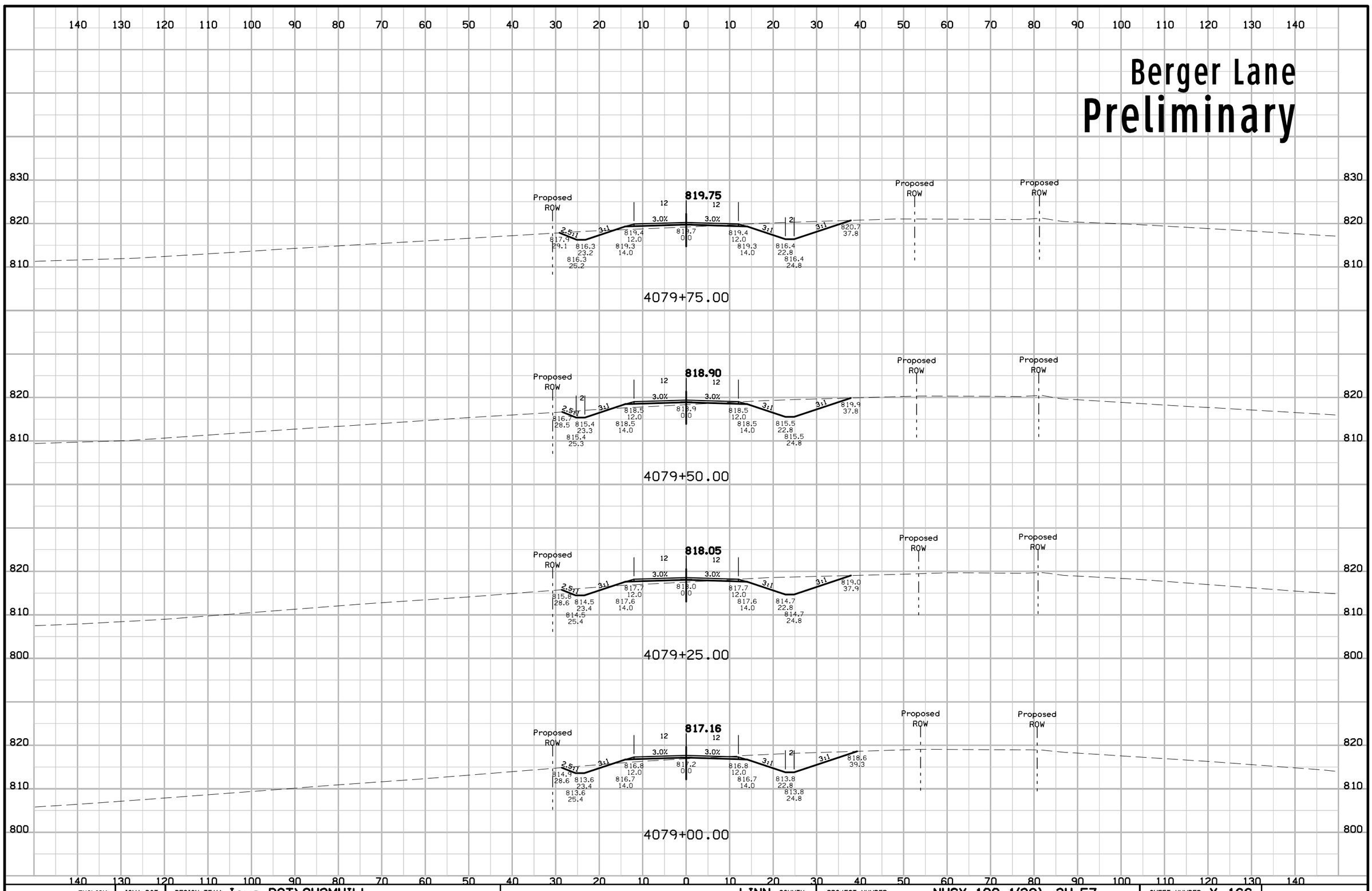
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.166

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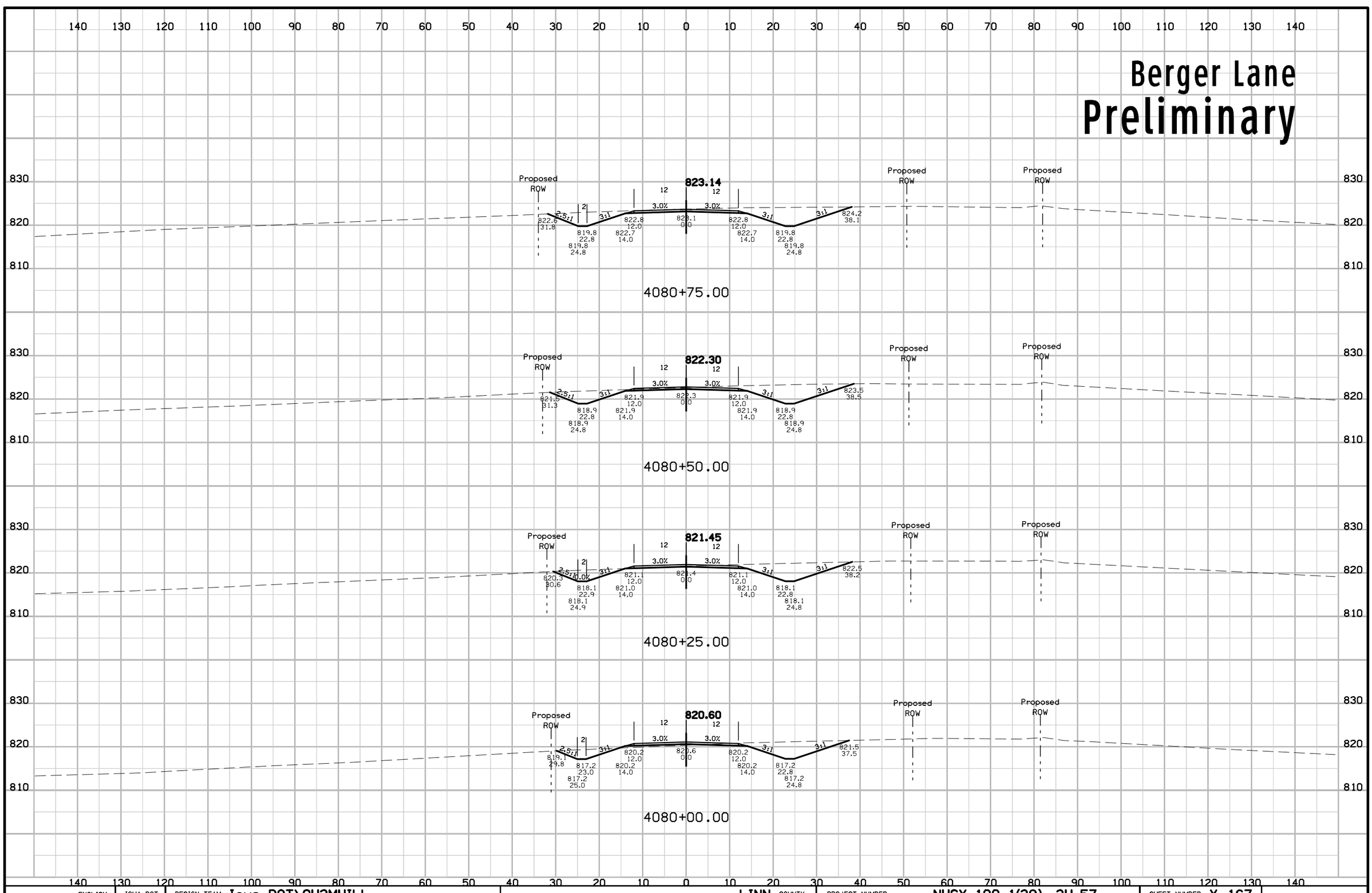
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.167

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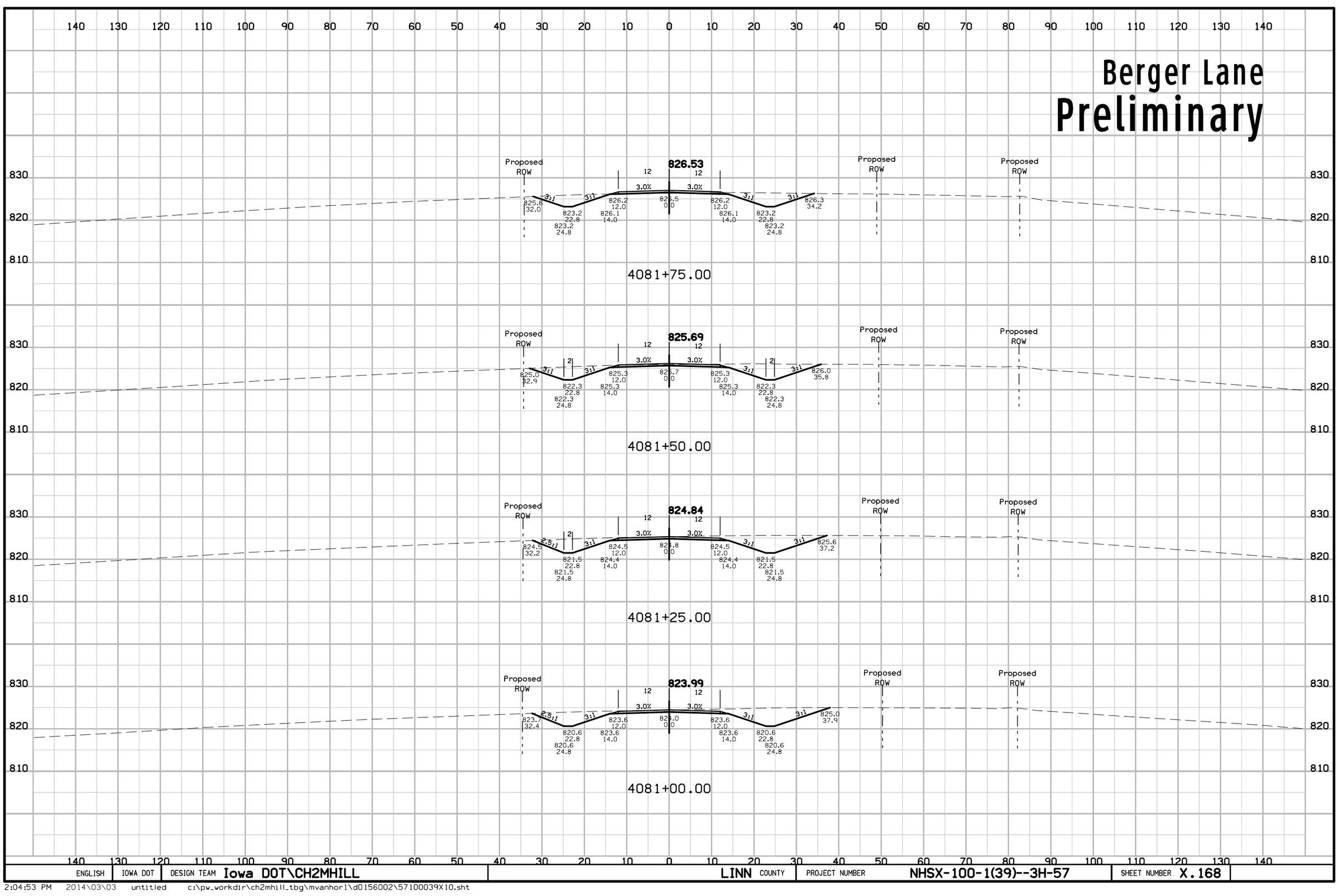
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.168

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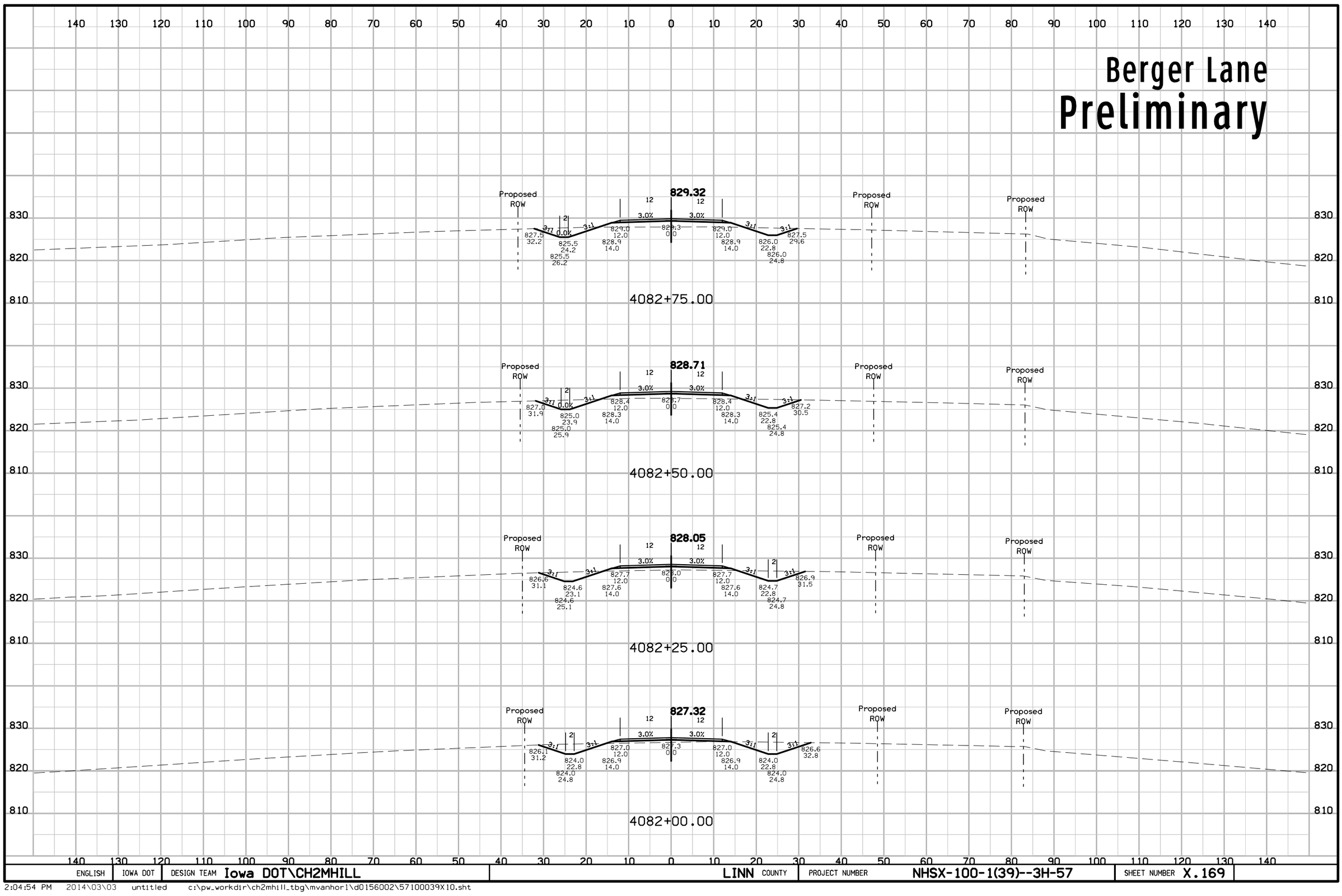
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.169

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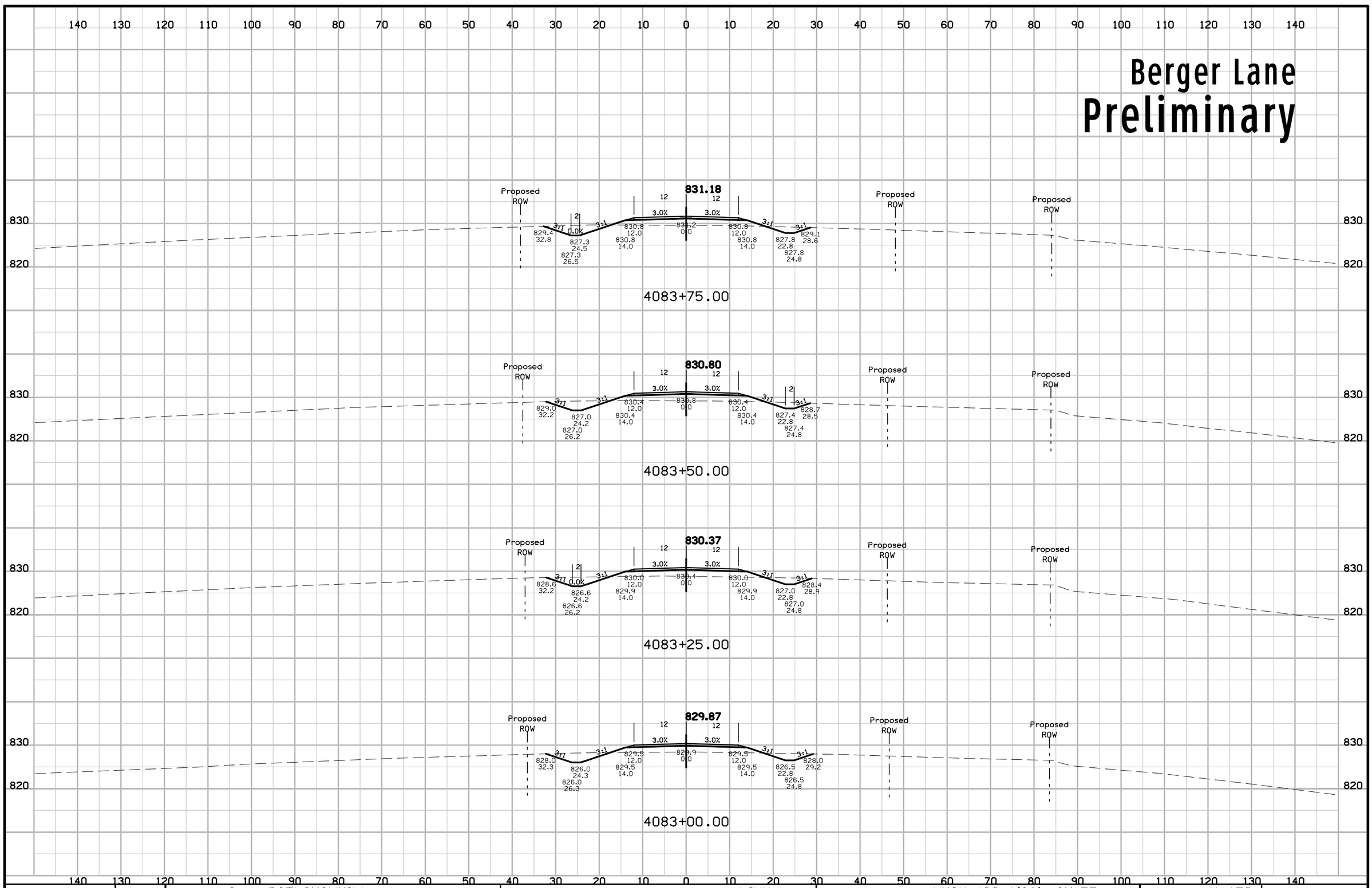
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.170

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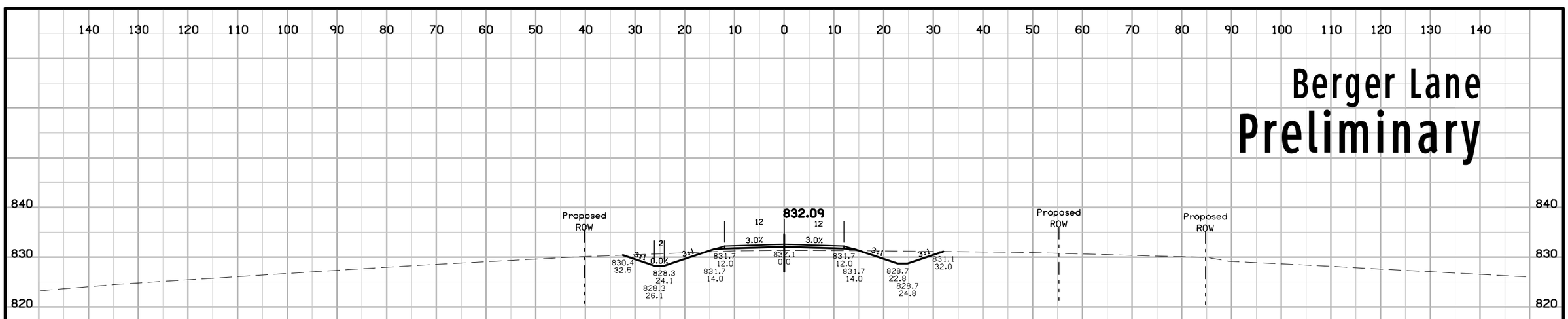
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.171

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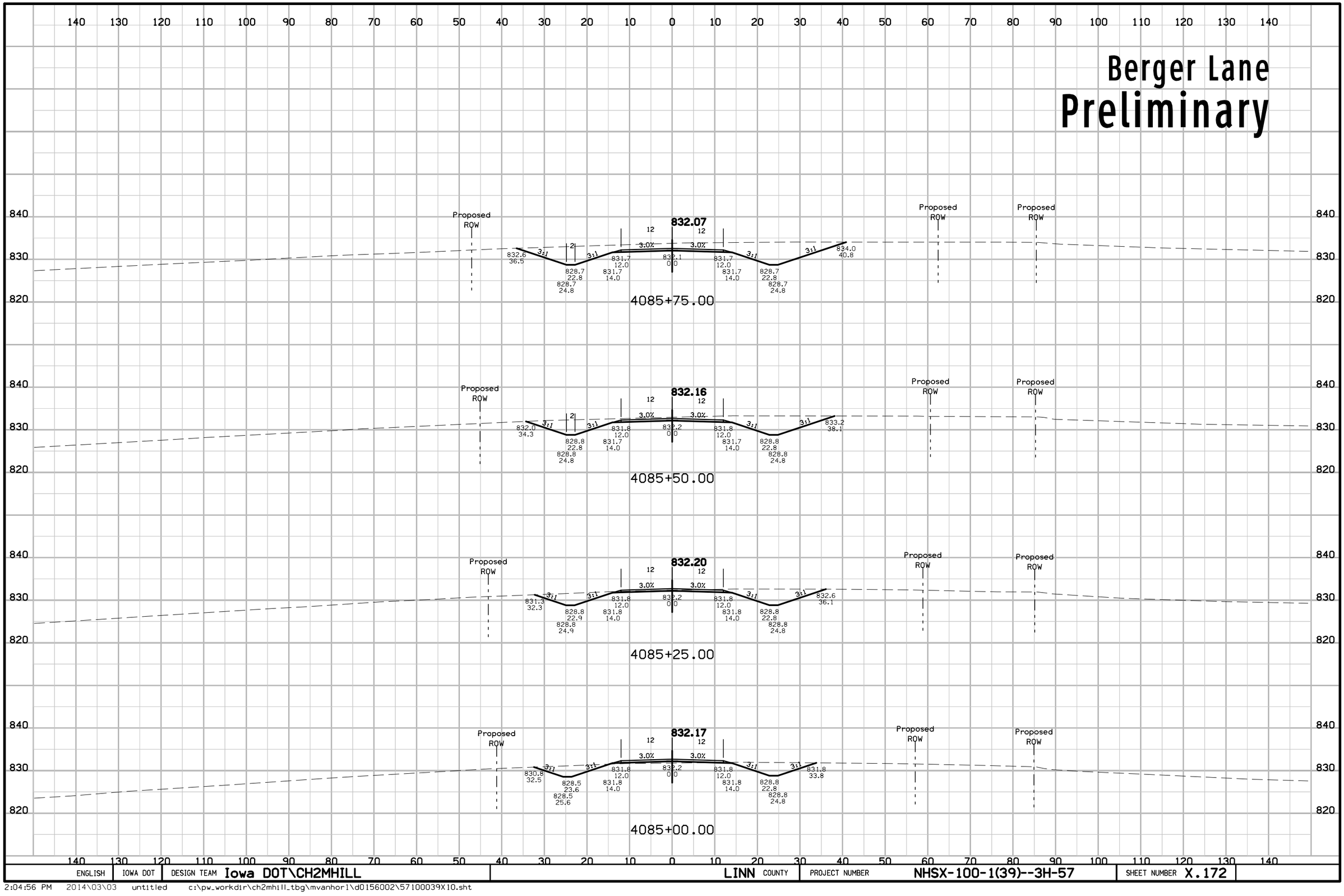
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.172

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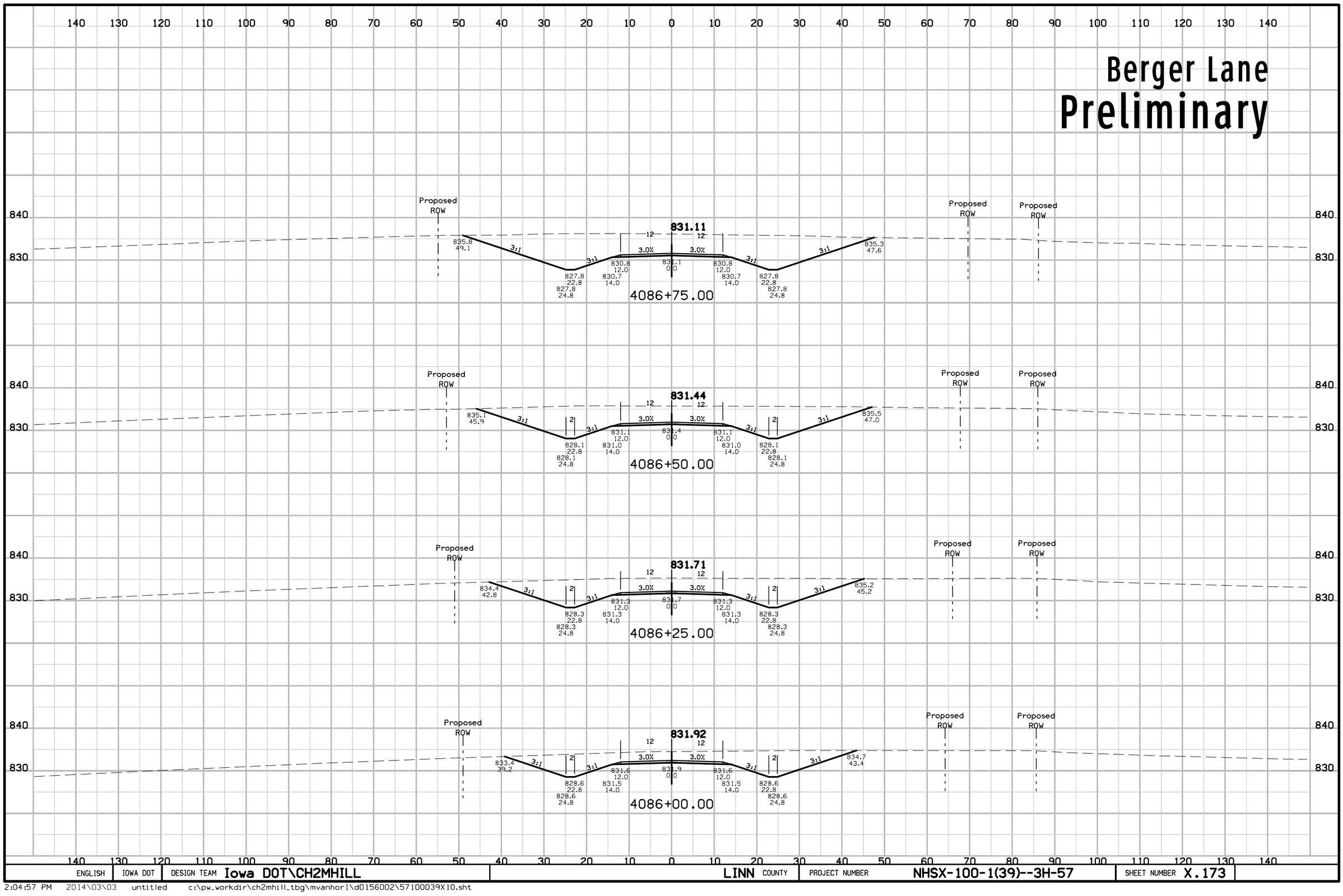
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.173

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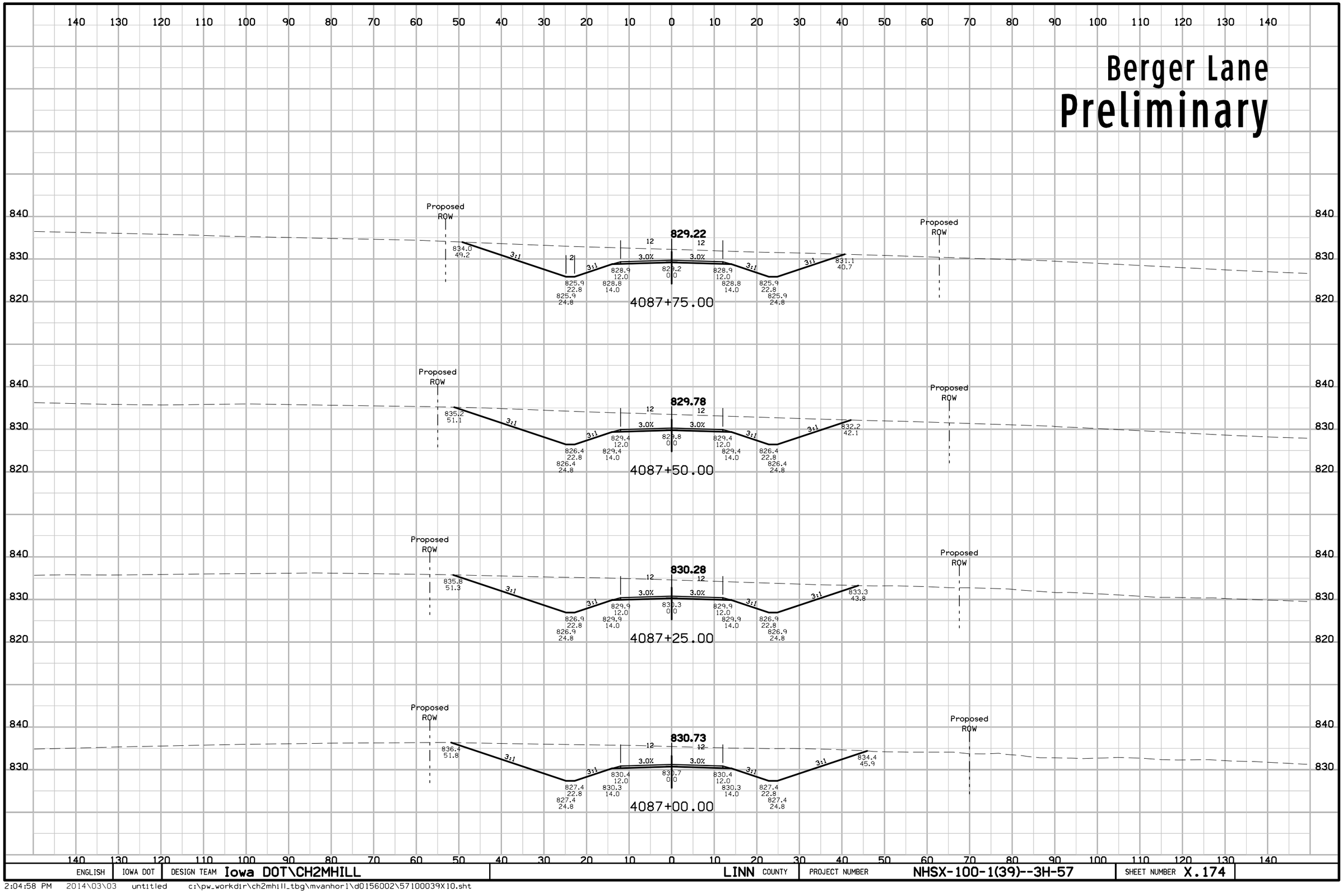
Berger Lane
Preliminary



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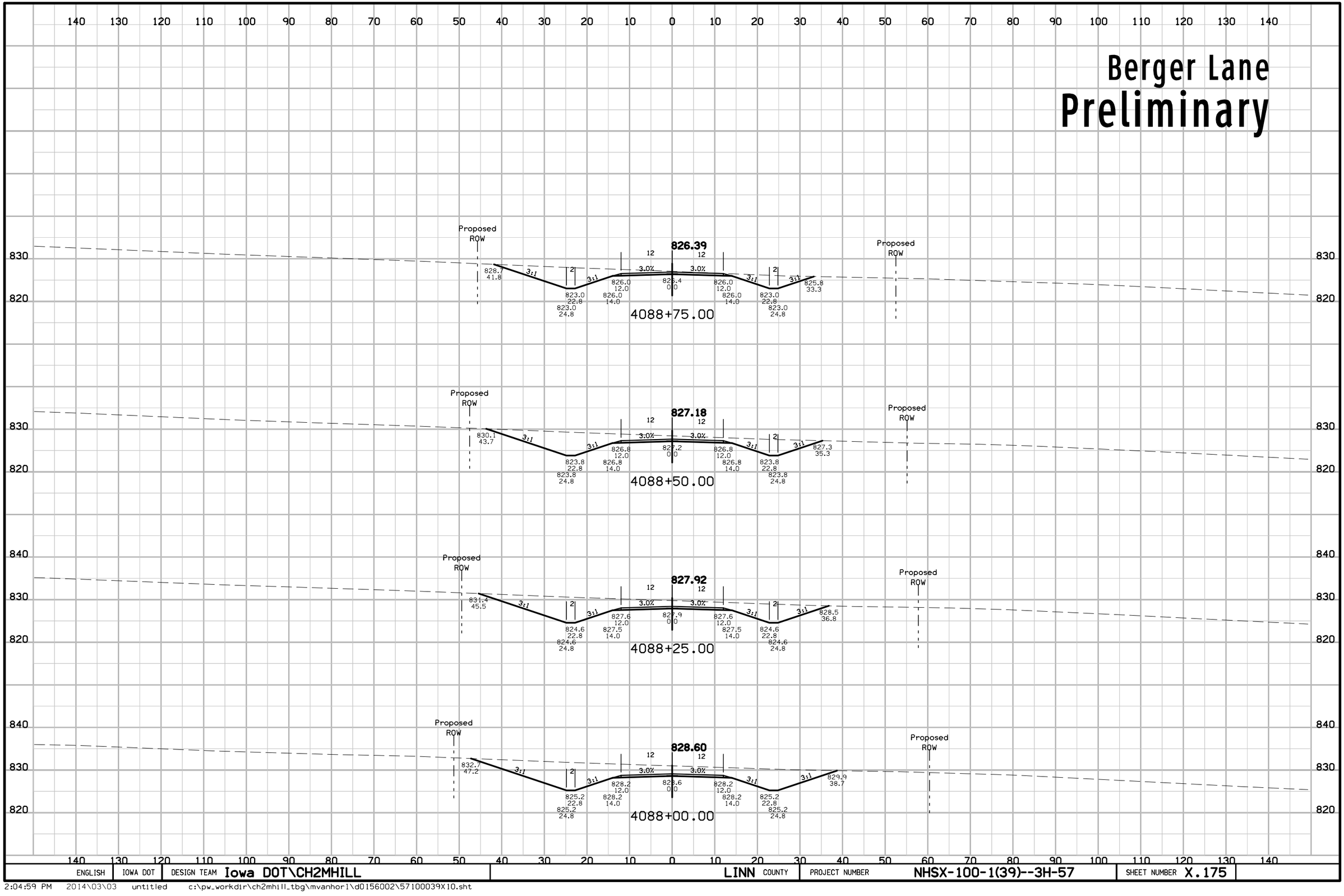
Berger Lane
Preliminary



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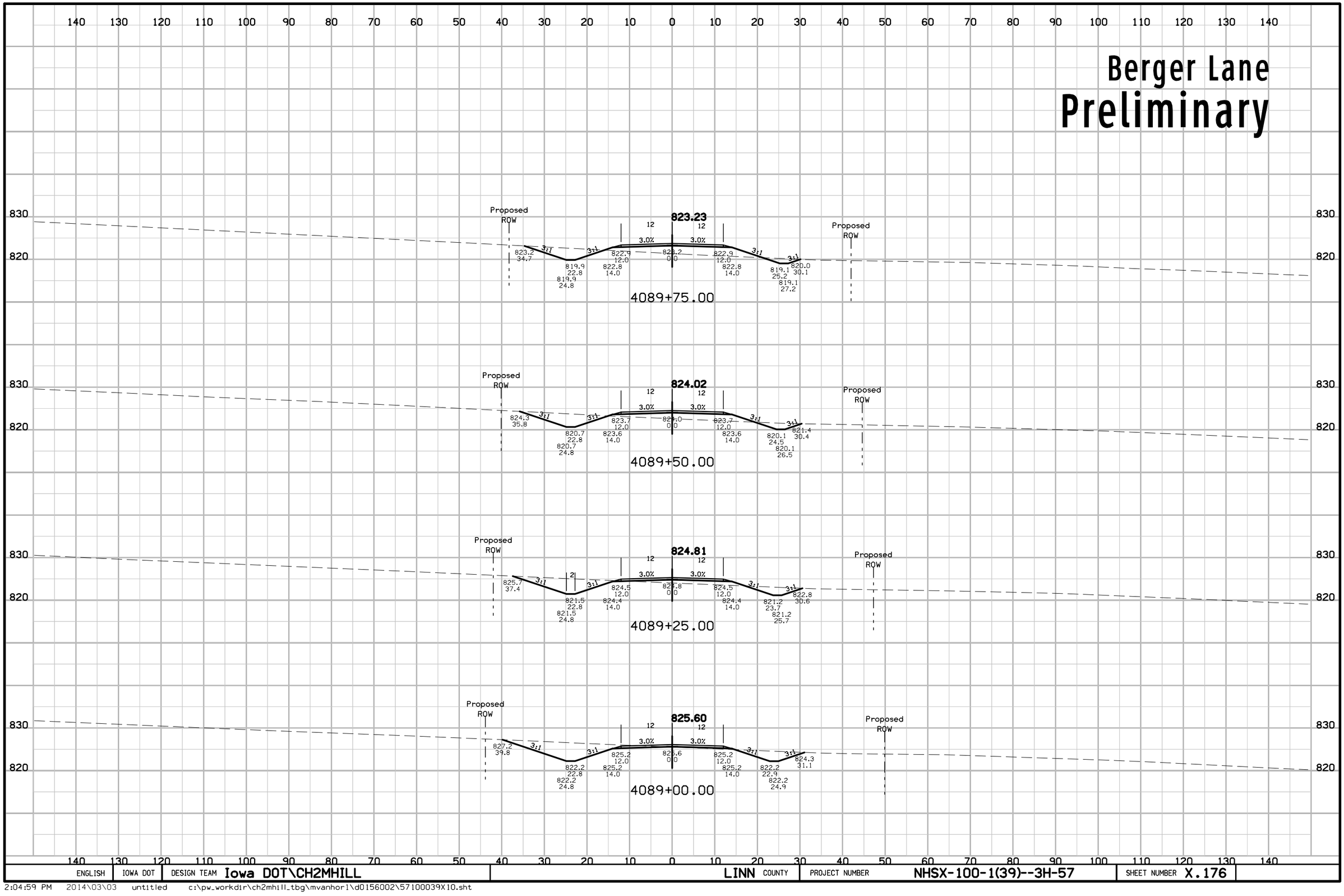
Berger Lane
Preliminary



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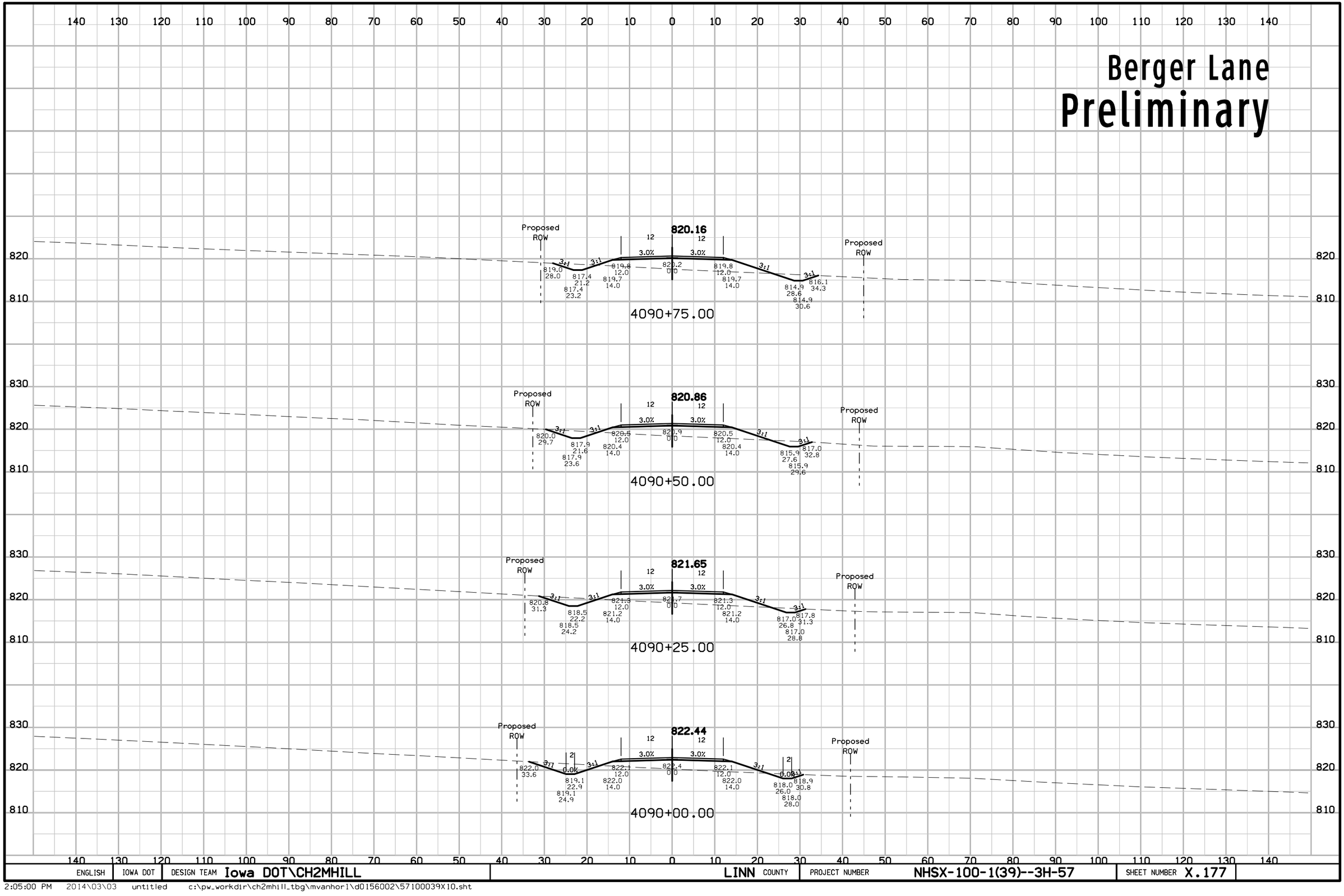
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.177

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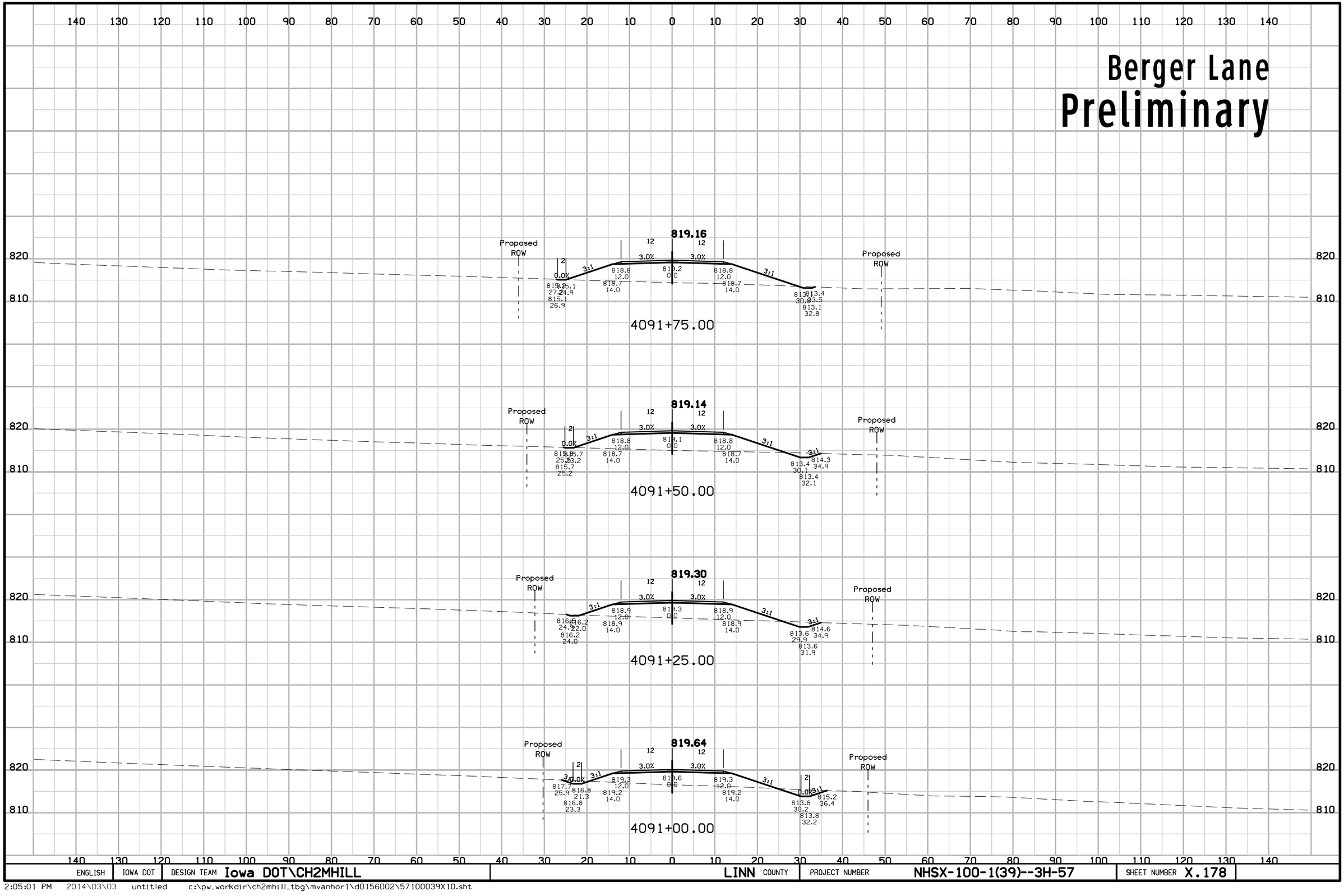
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.178

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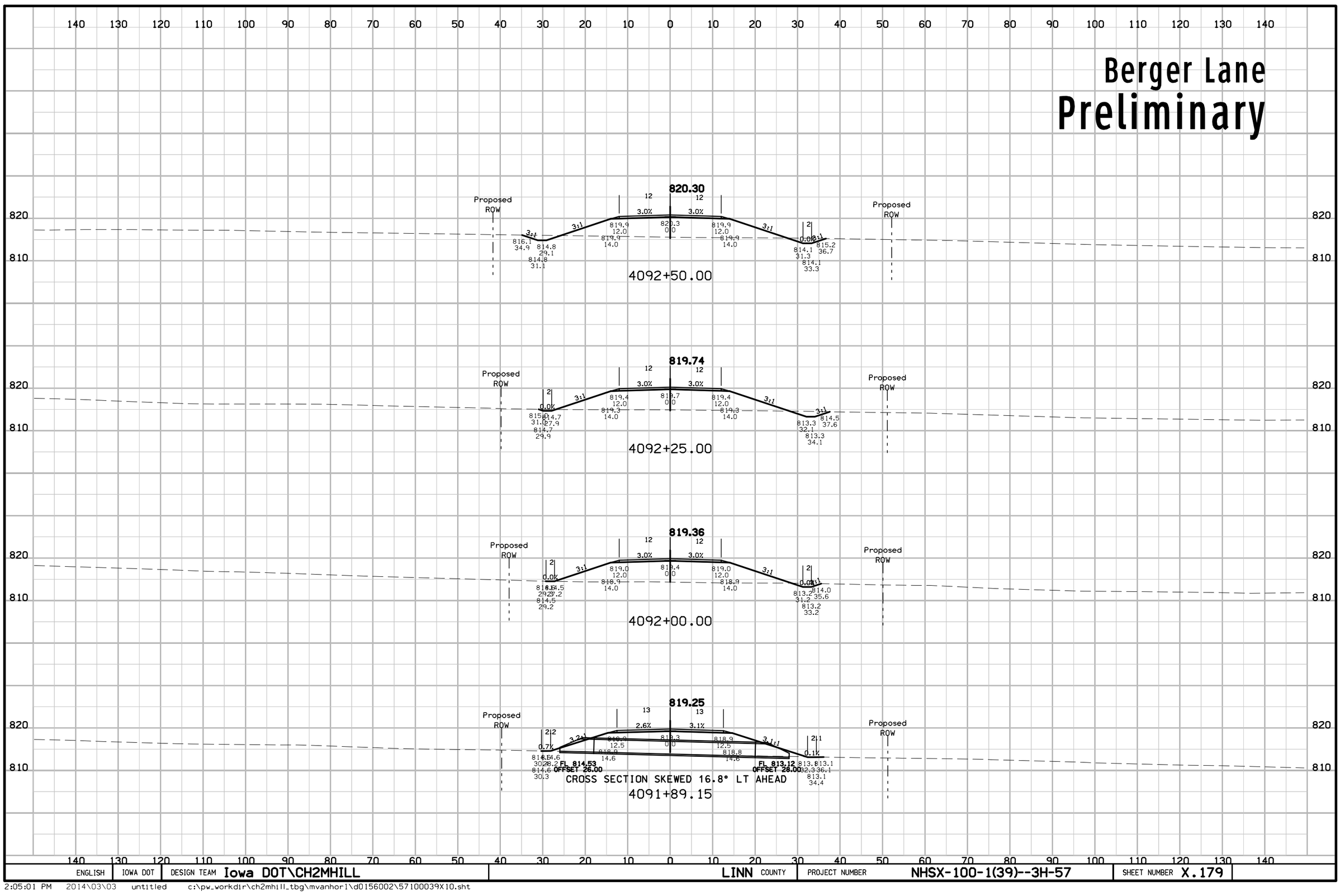
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.179

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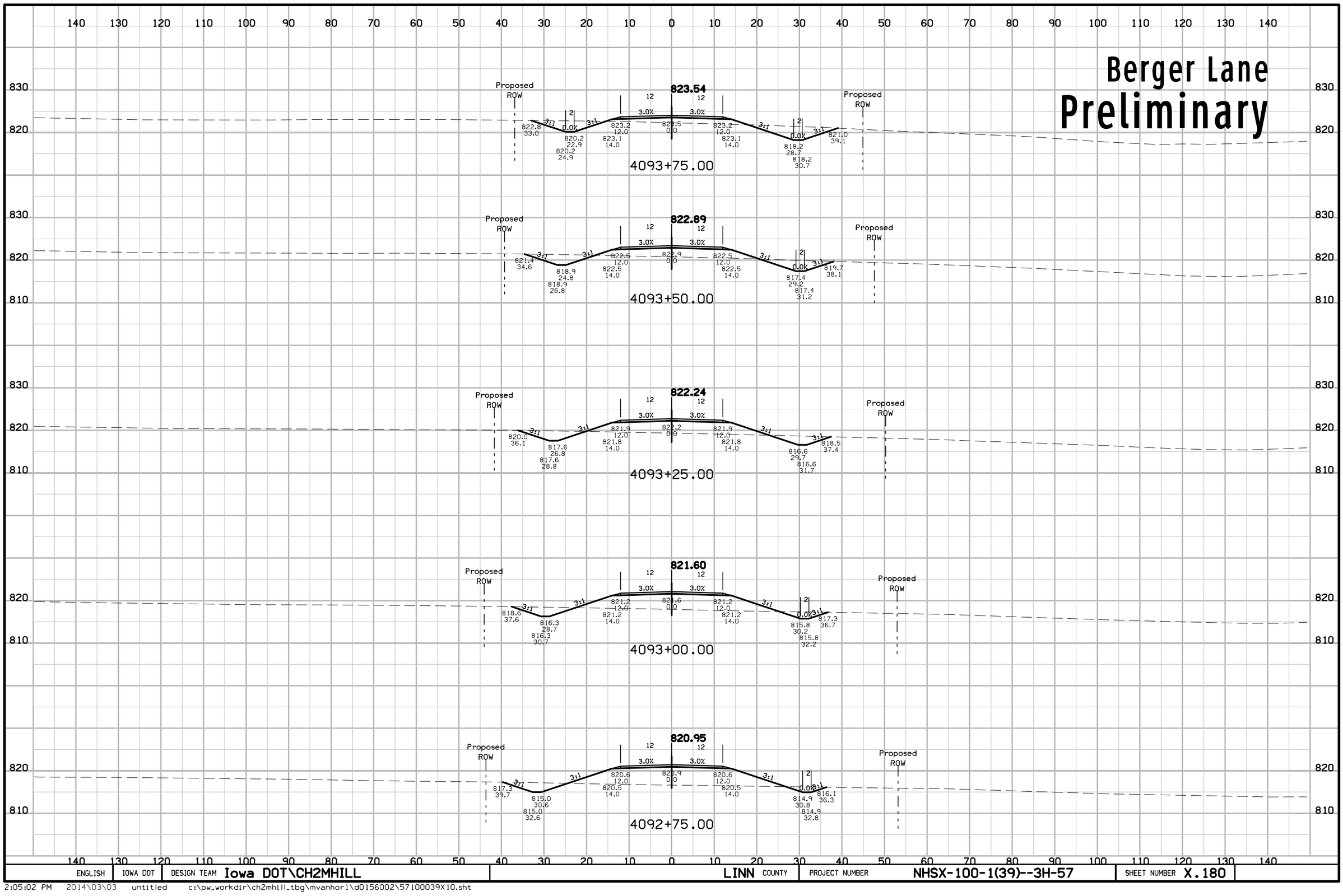
Berger Lane
Preliminary



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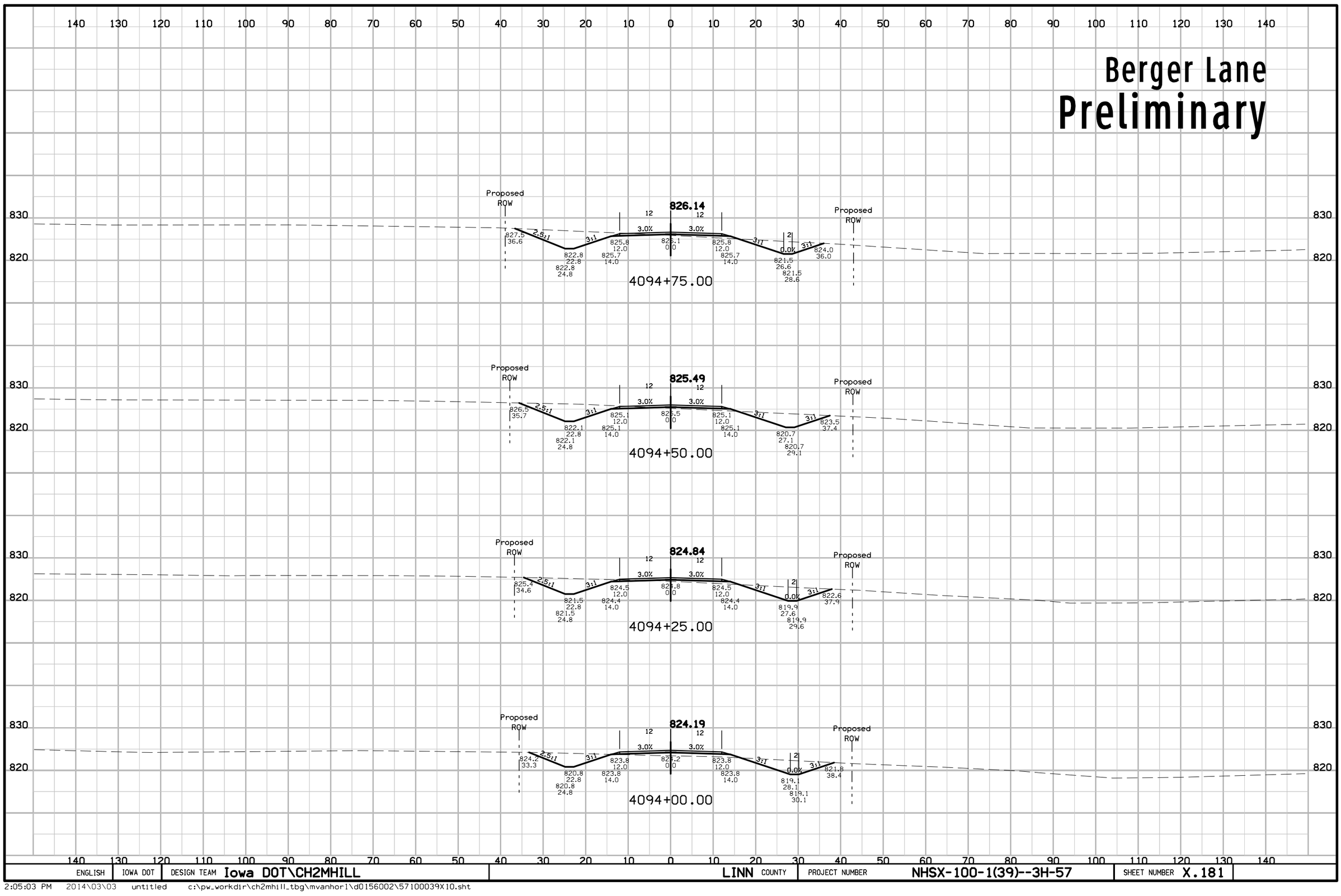
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.181

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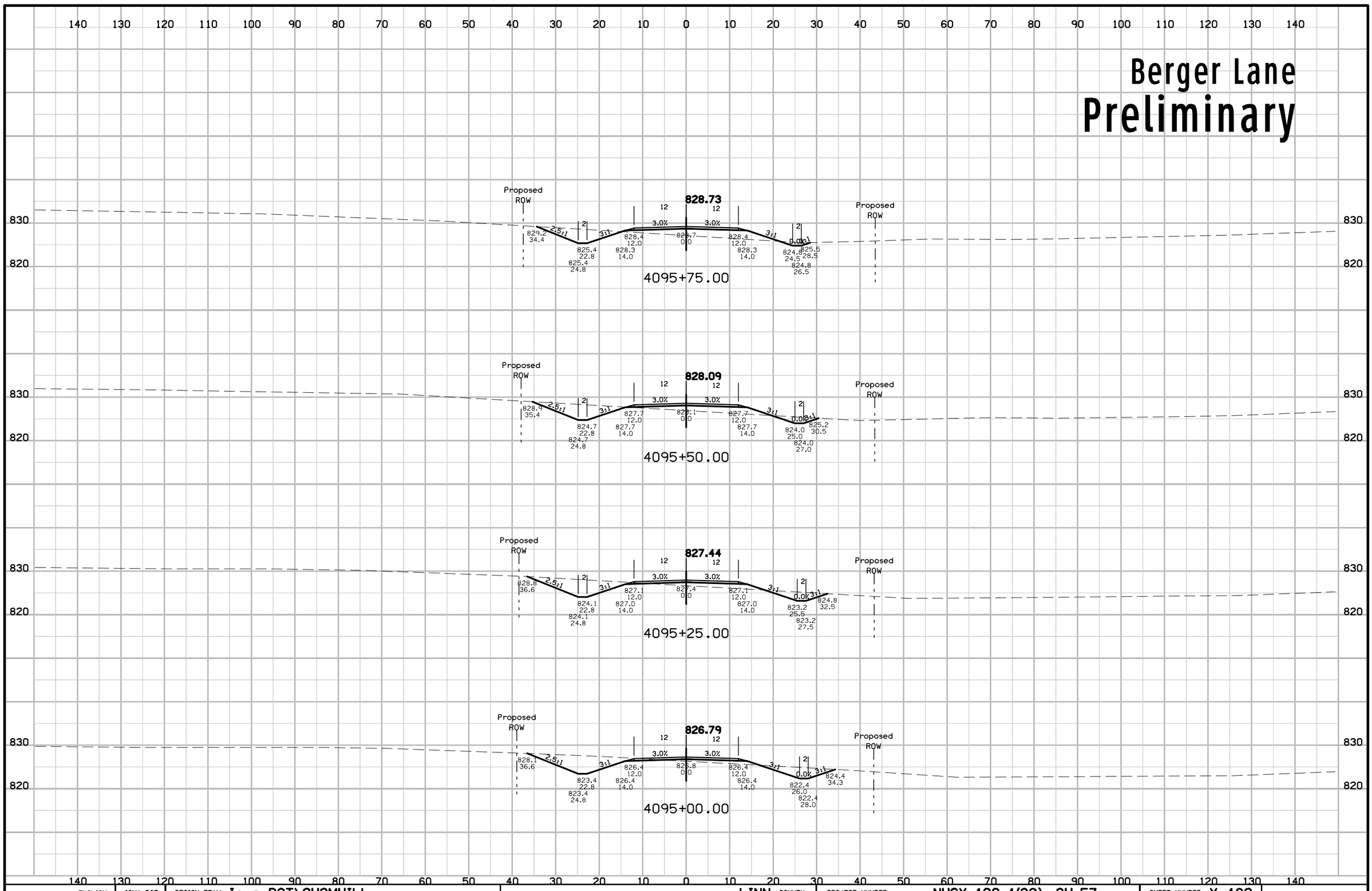
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.182

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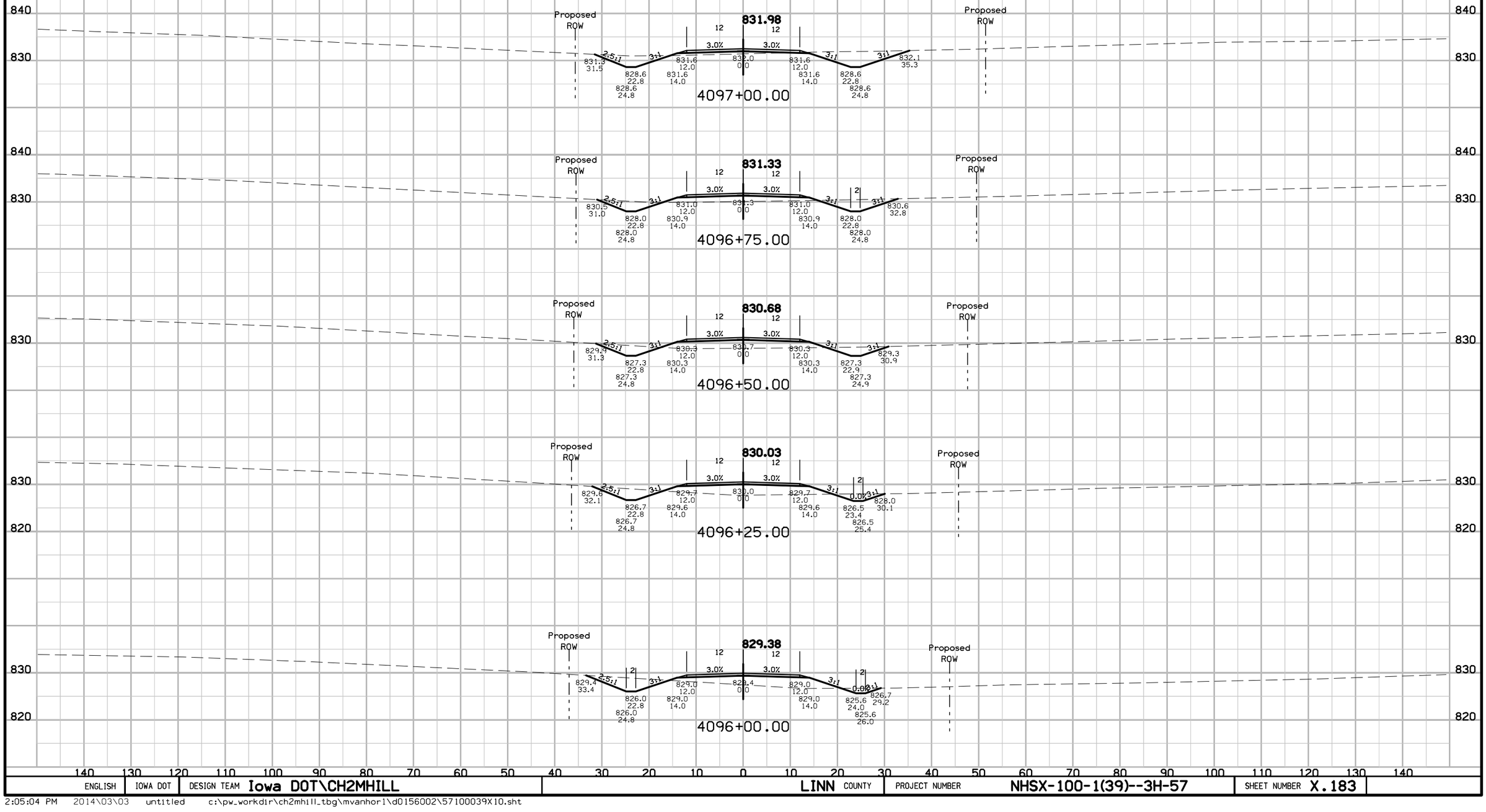
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.183

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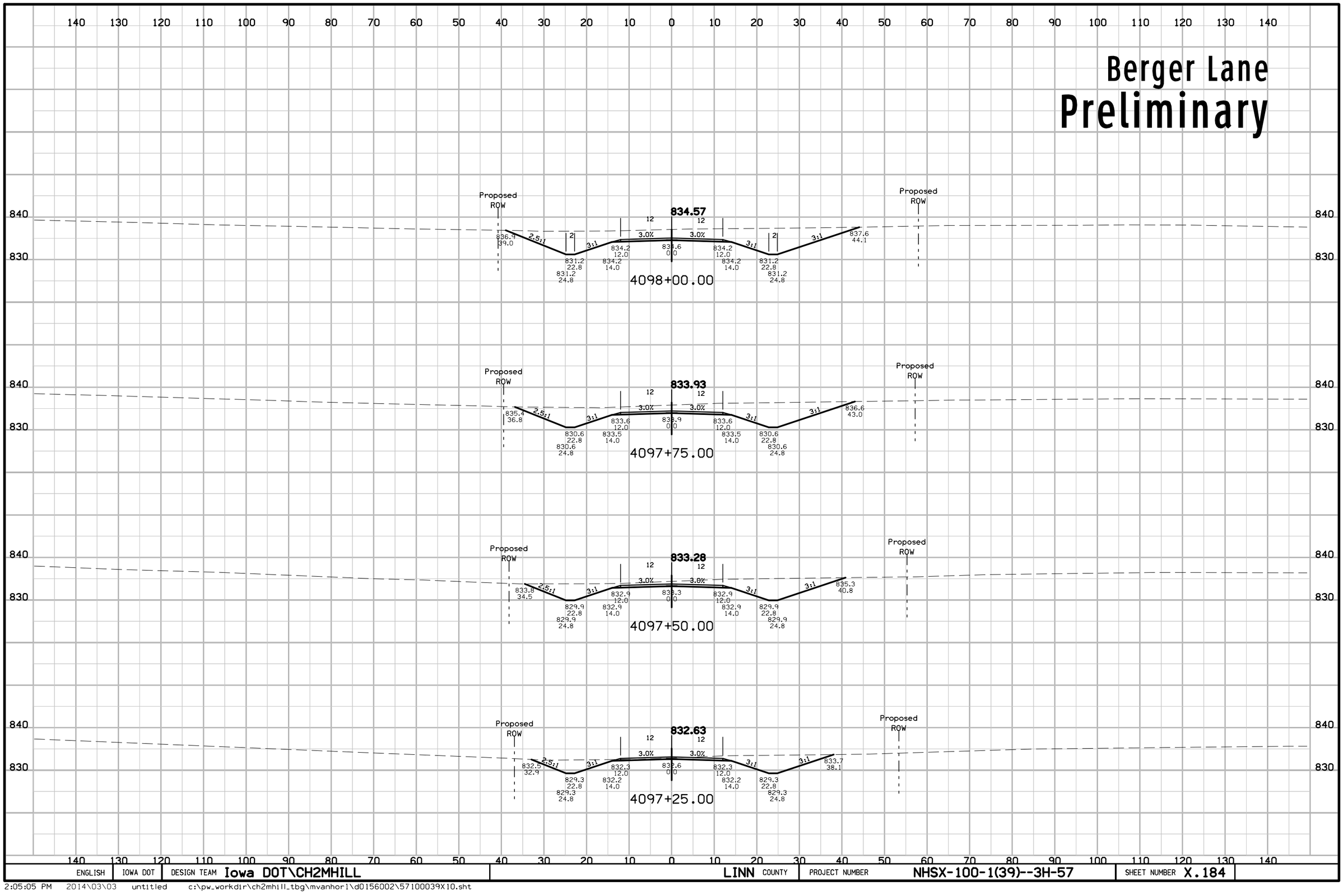
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.184

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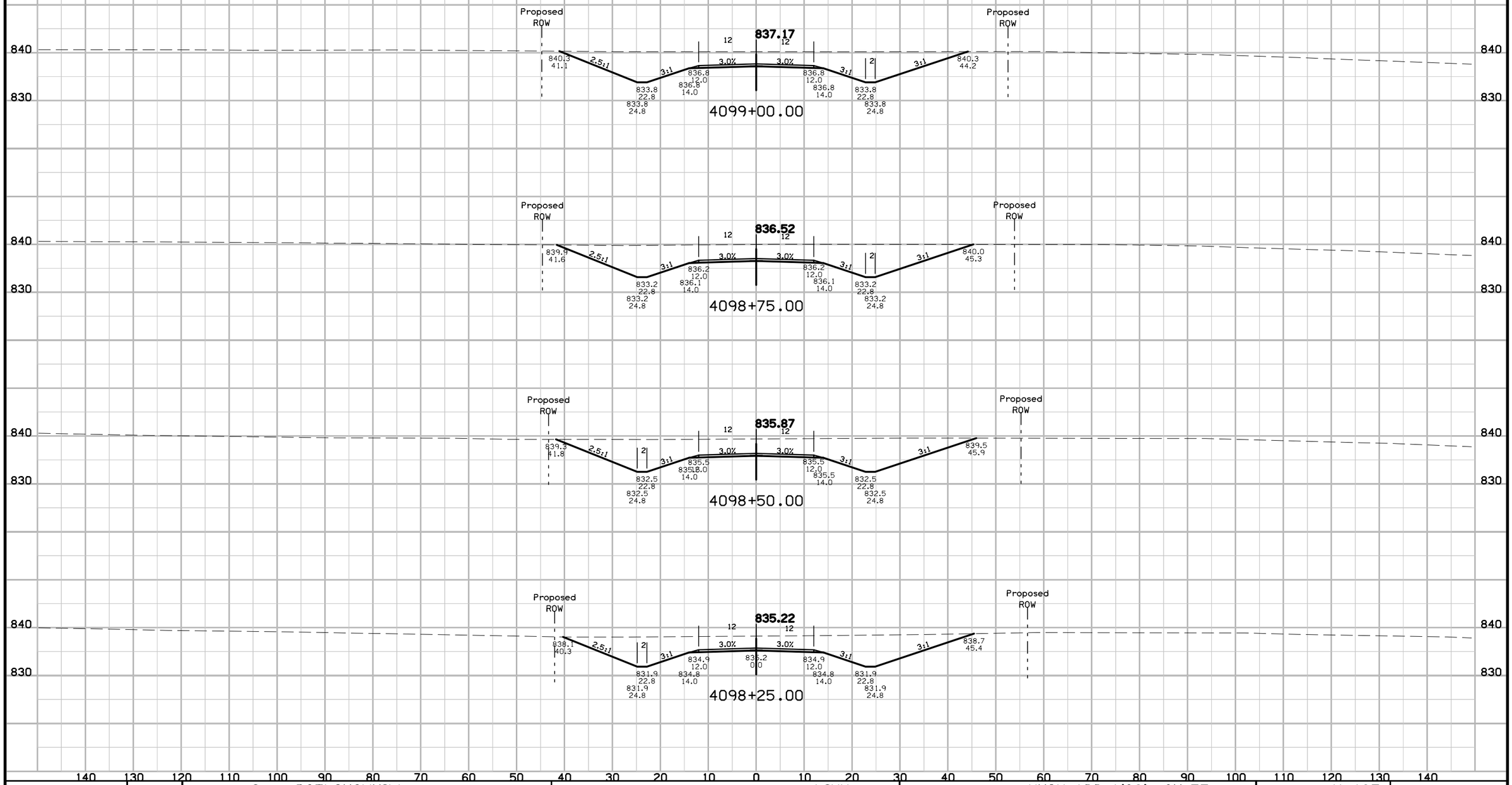
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.185

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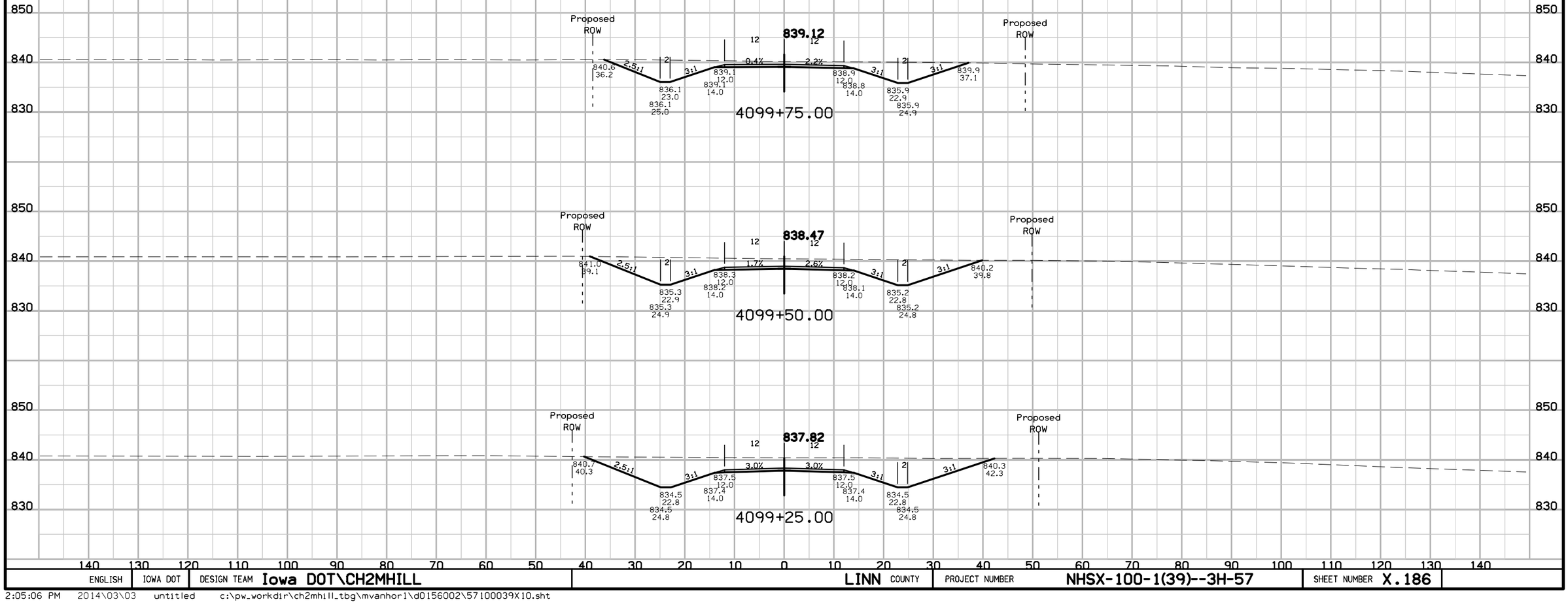
Berger Lane
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.186

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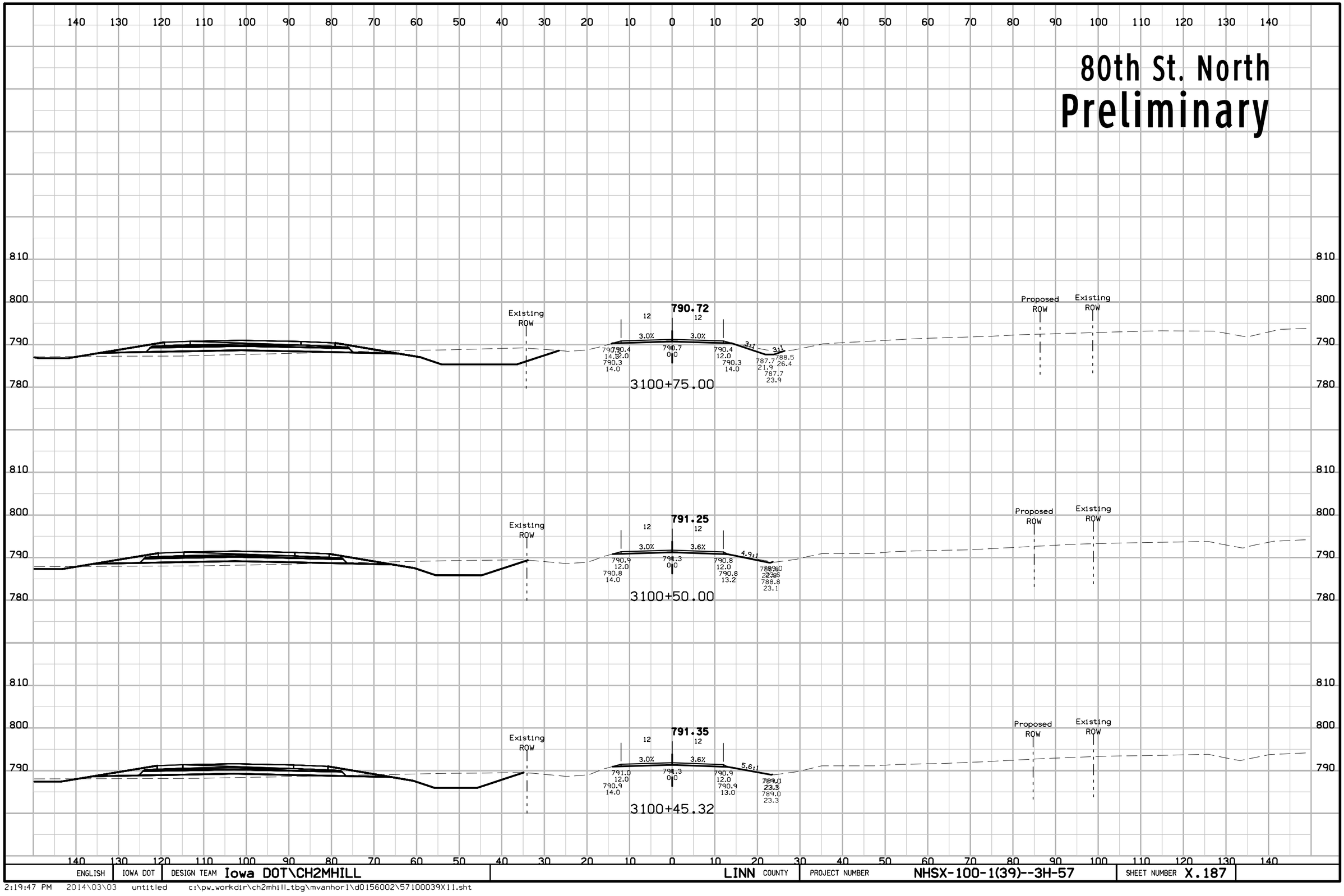
80th St. North

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.187

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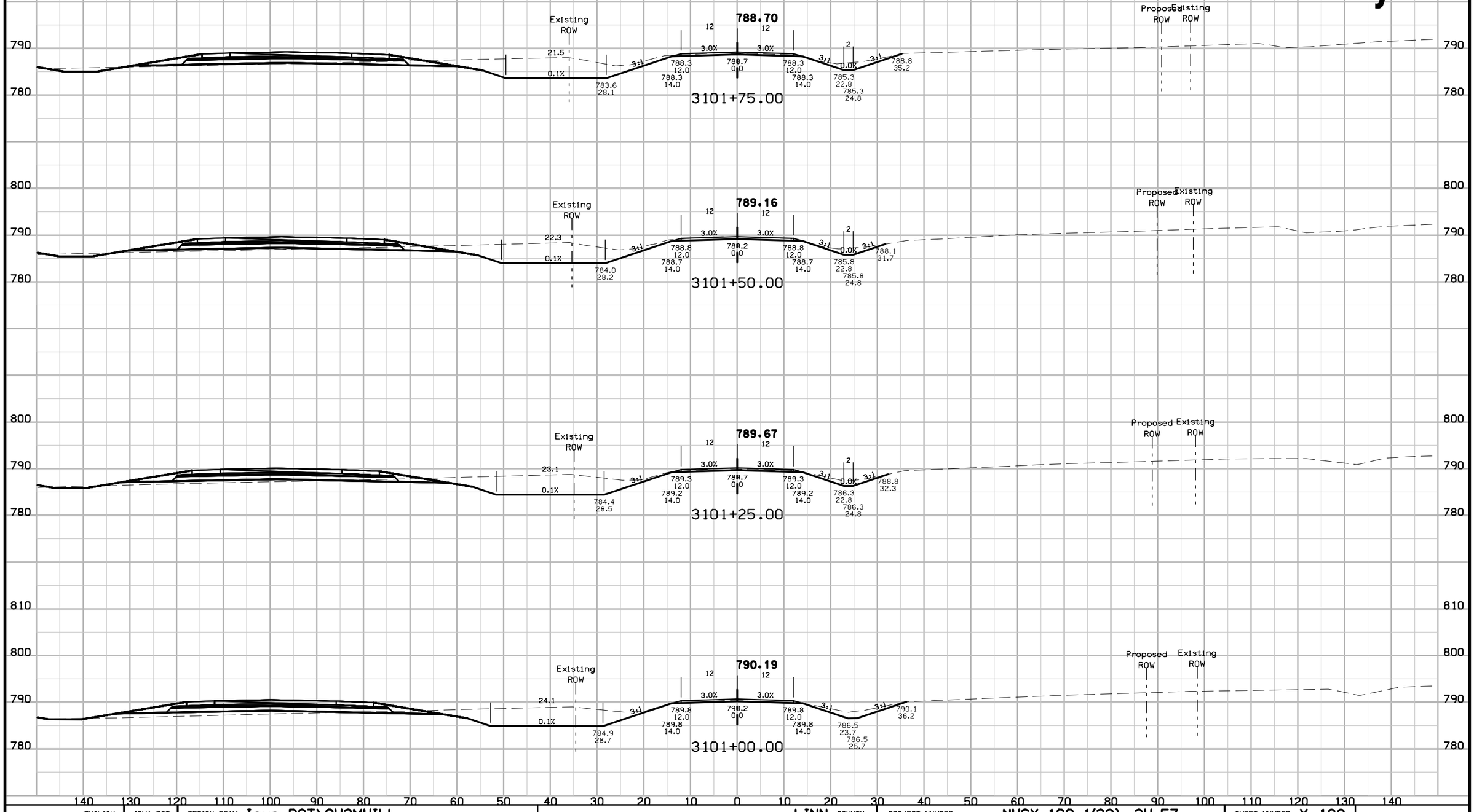
80th St. North

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.188

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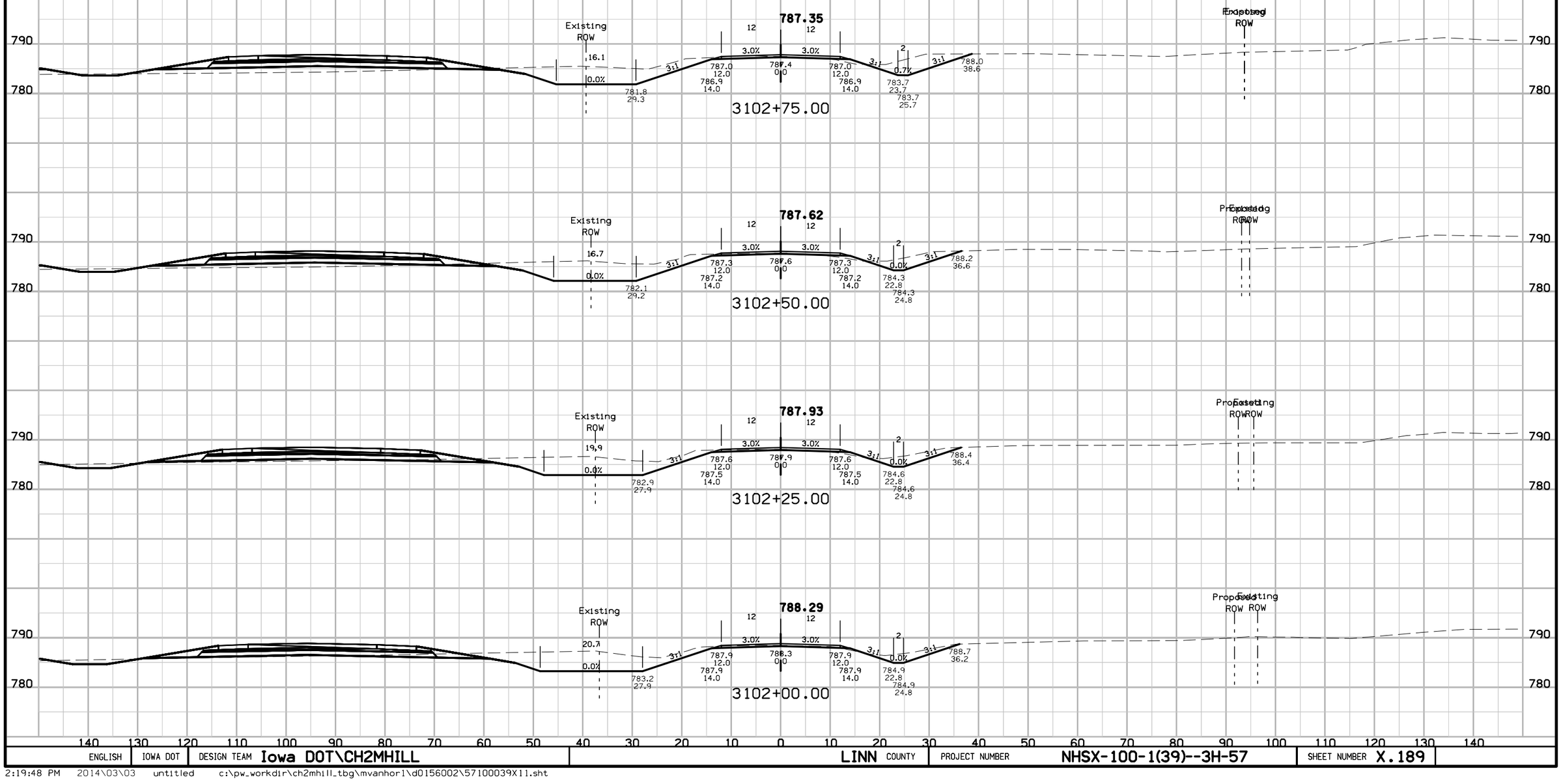
80th St. North

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.189

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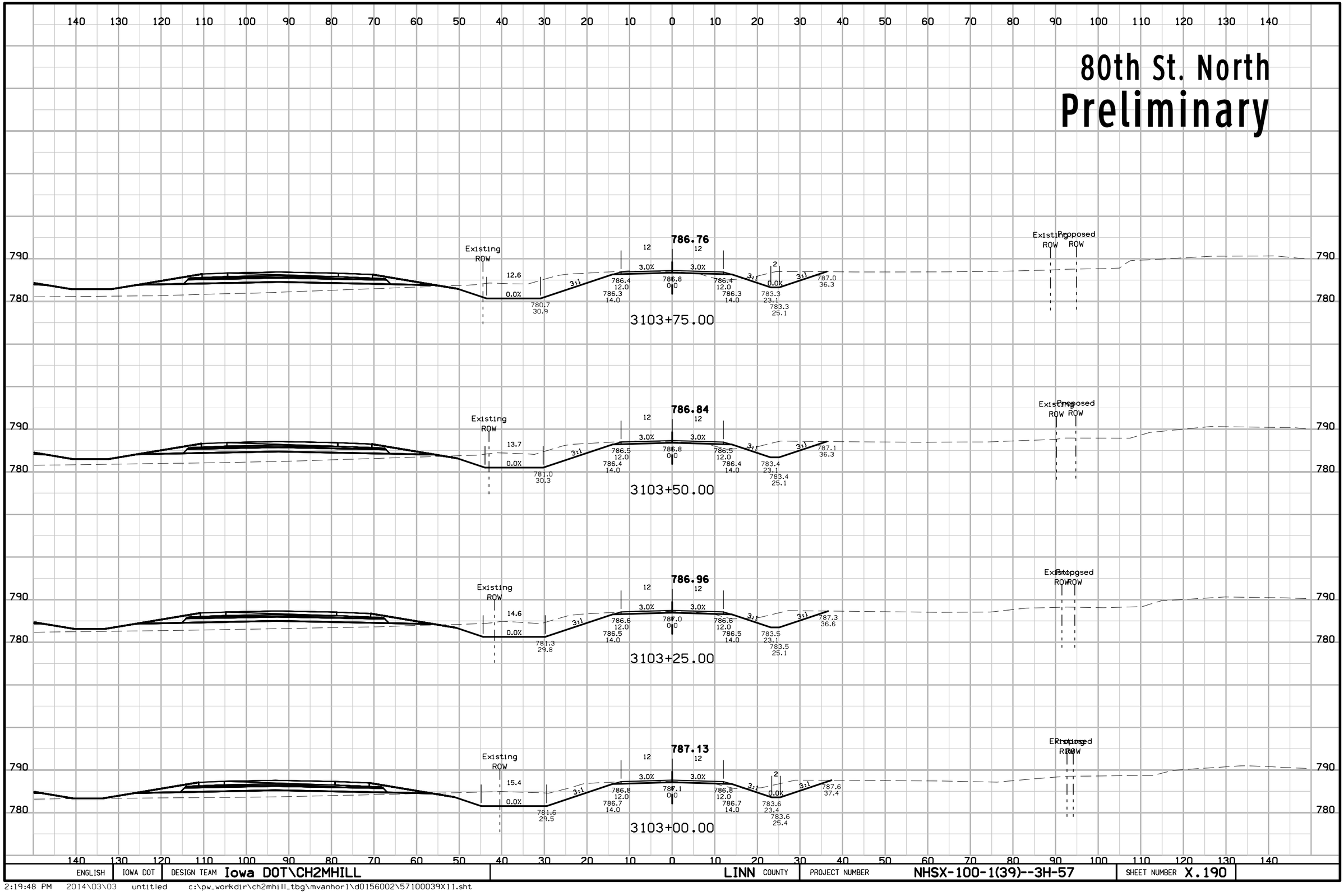
80th St. North

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.190

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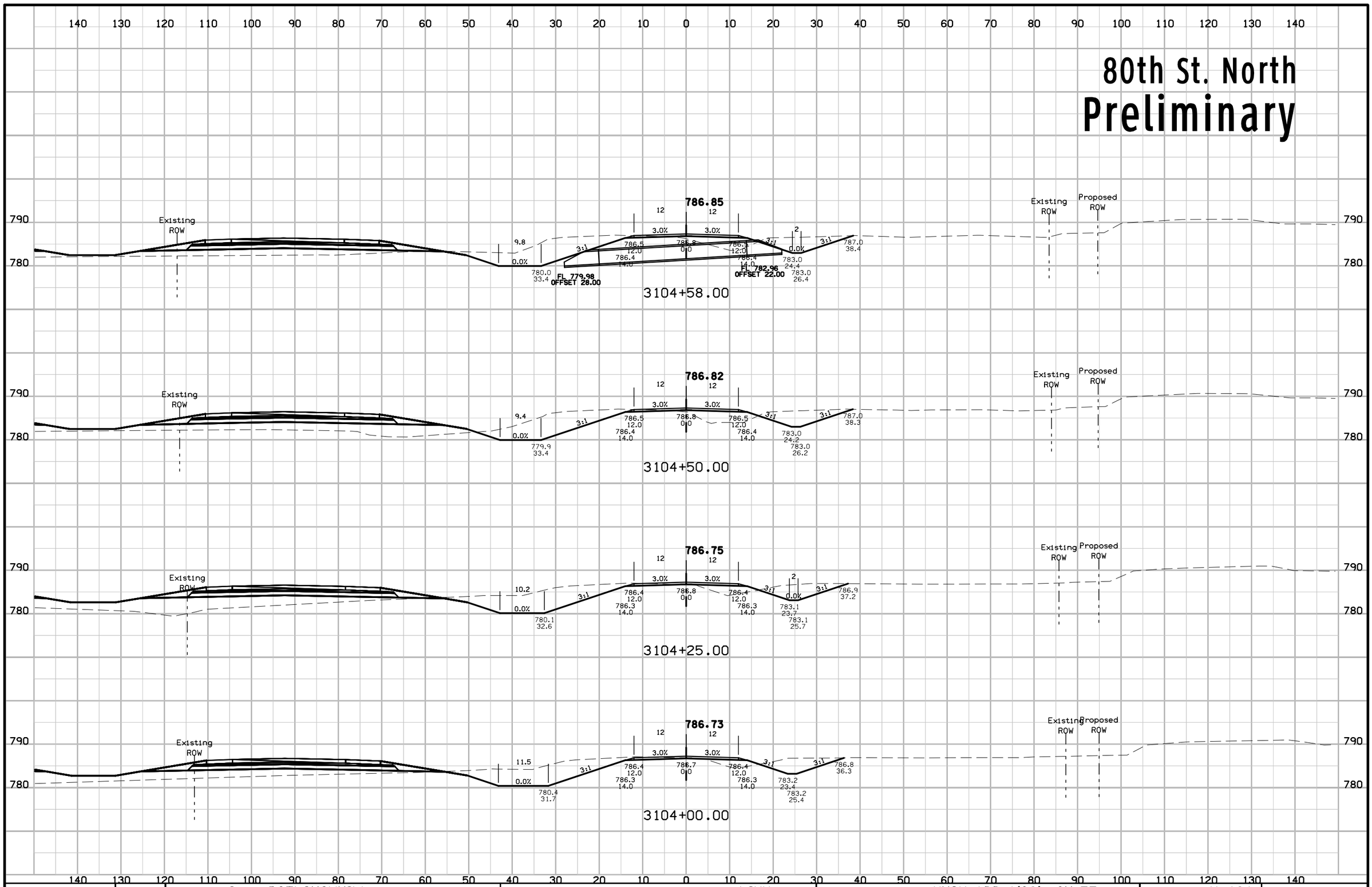
80th St. North
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.191

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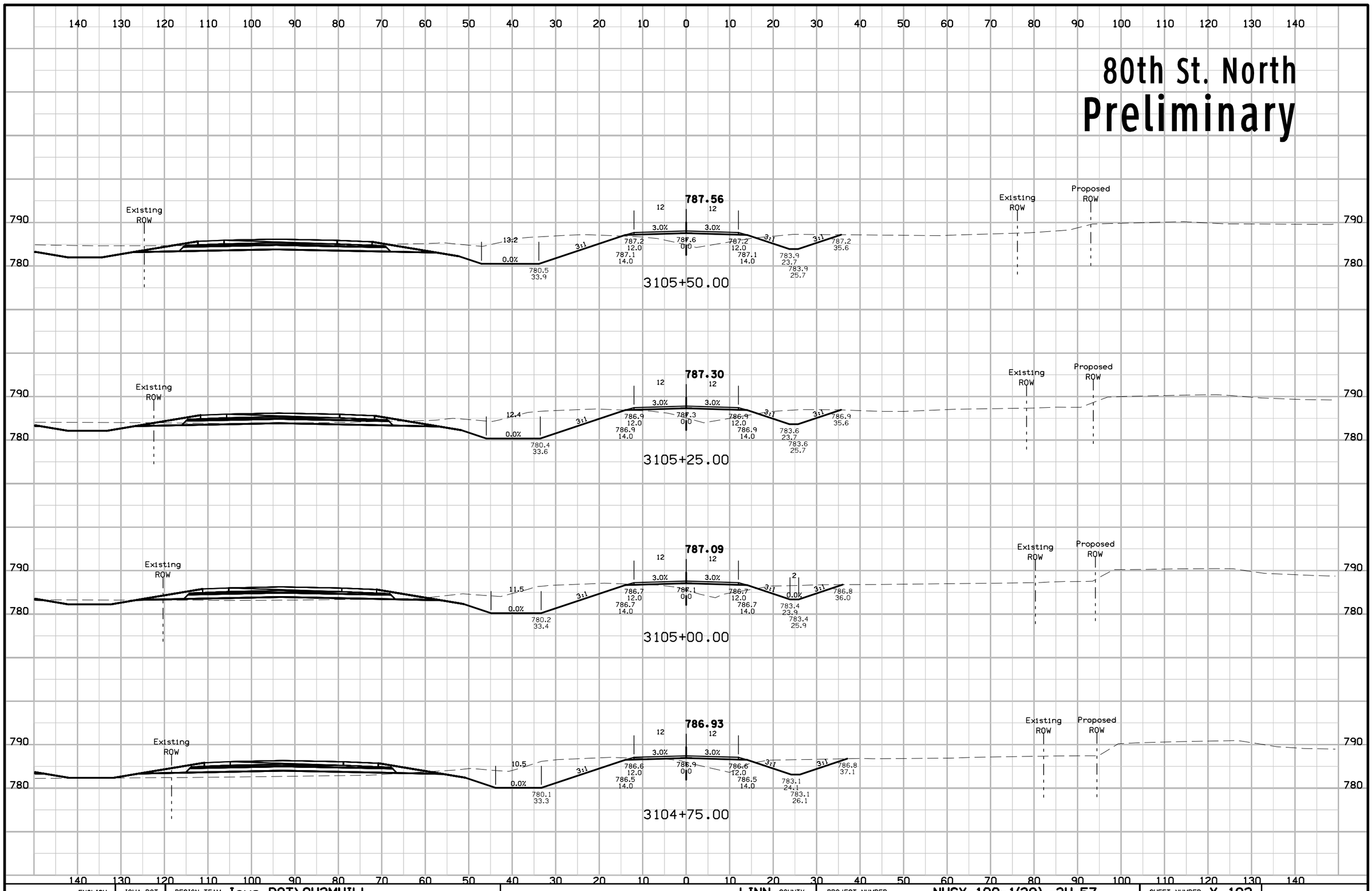
80th St. North

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.192

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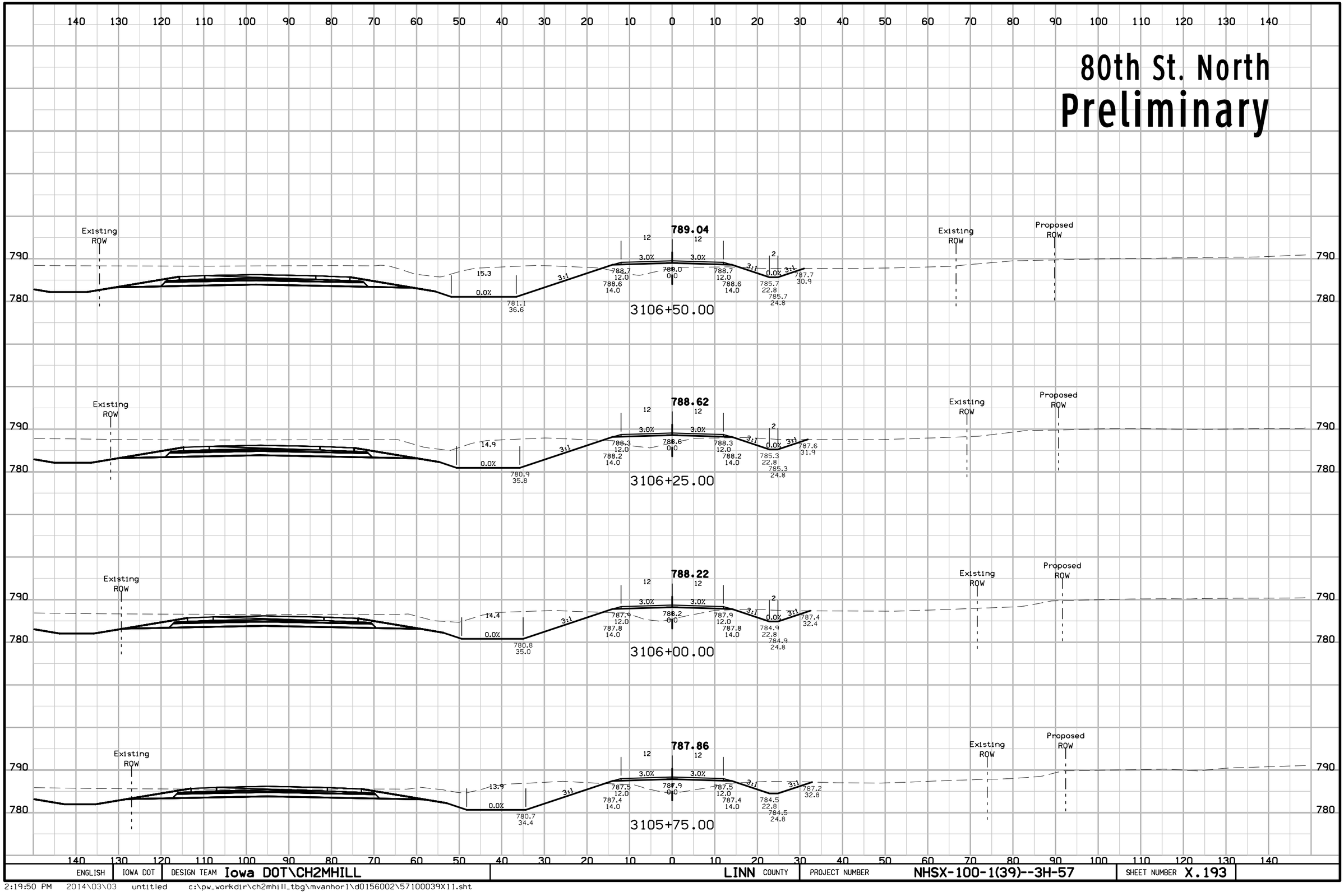
80th St. North

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.193

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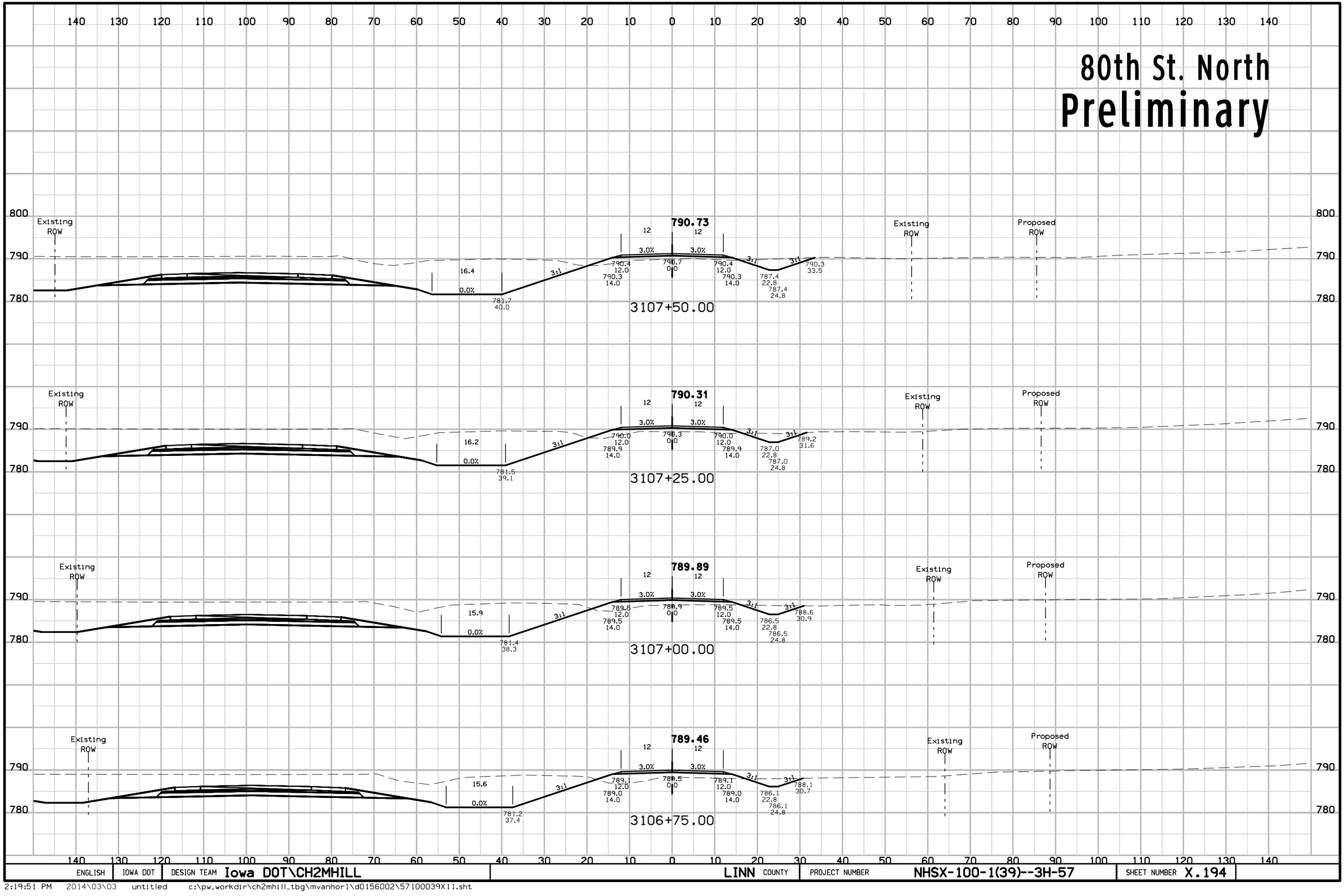
80th St. North

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.194

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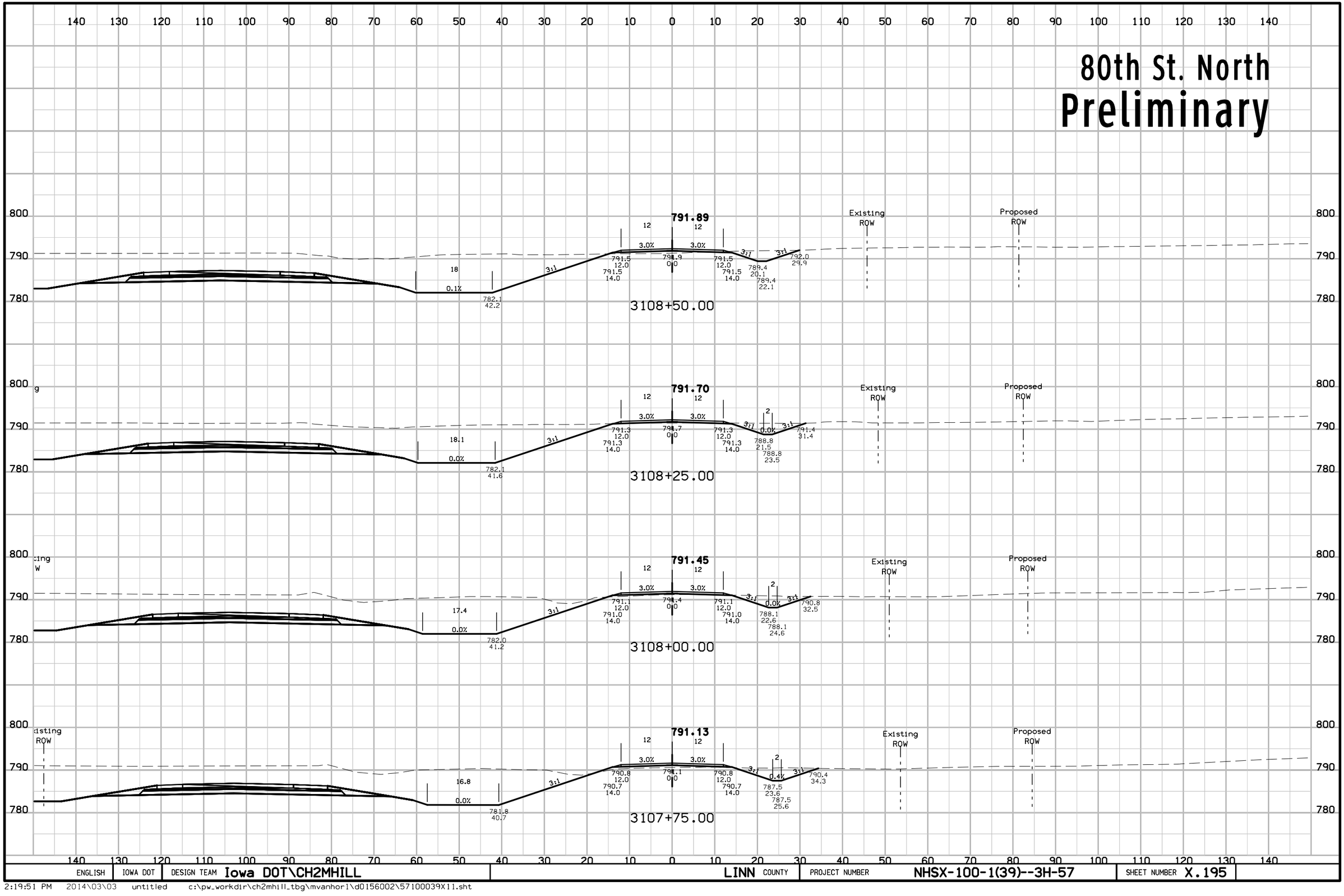
80th St. North

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER X.195

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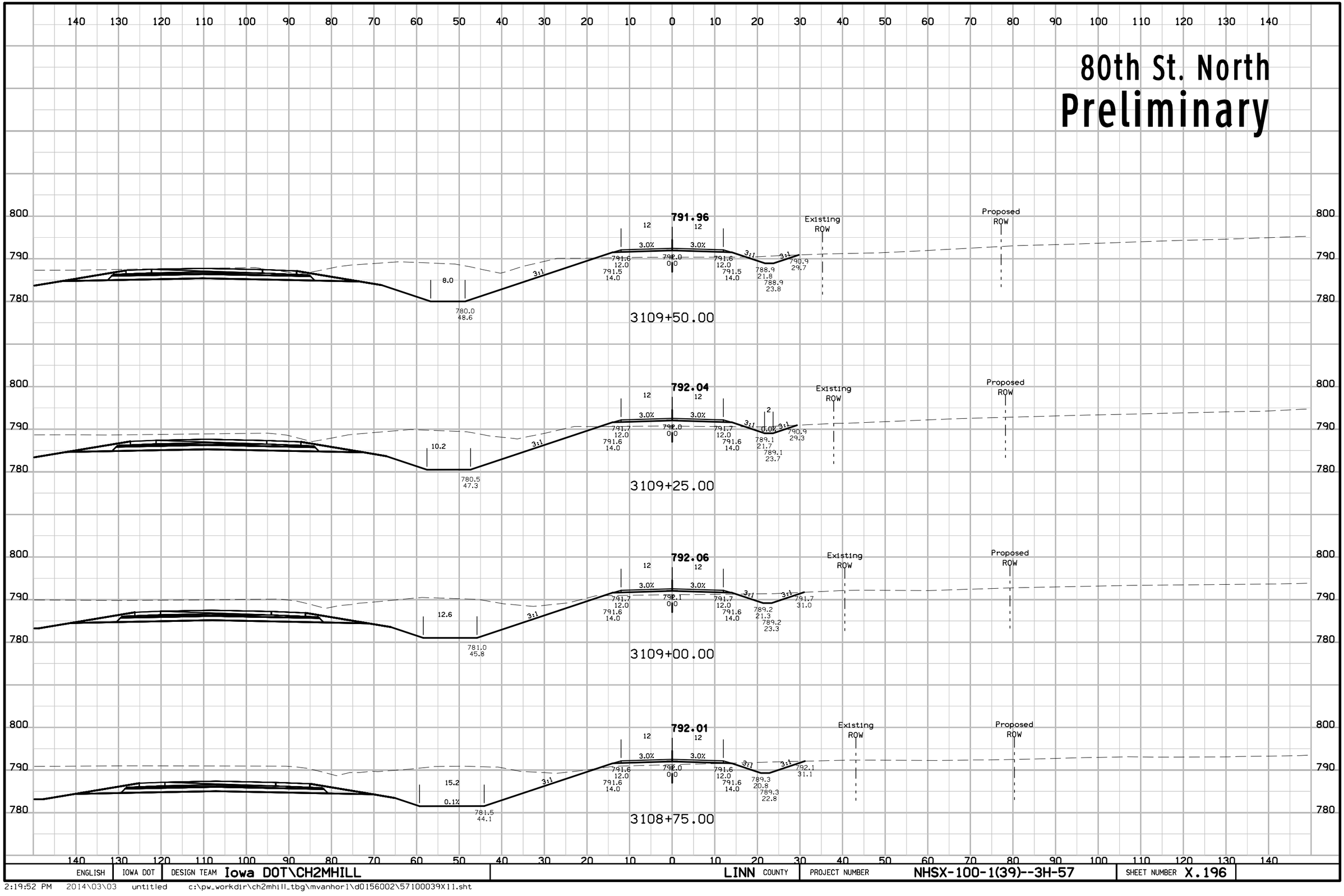
80th St. North

Preliminary



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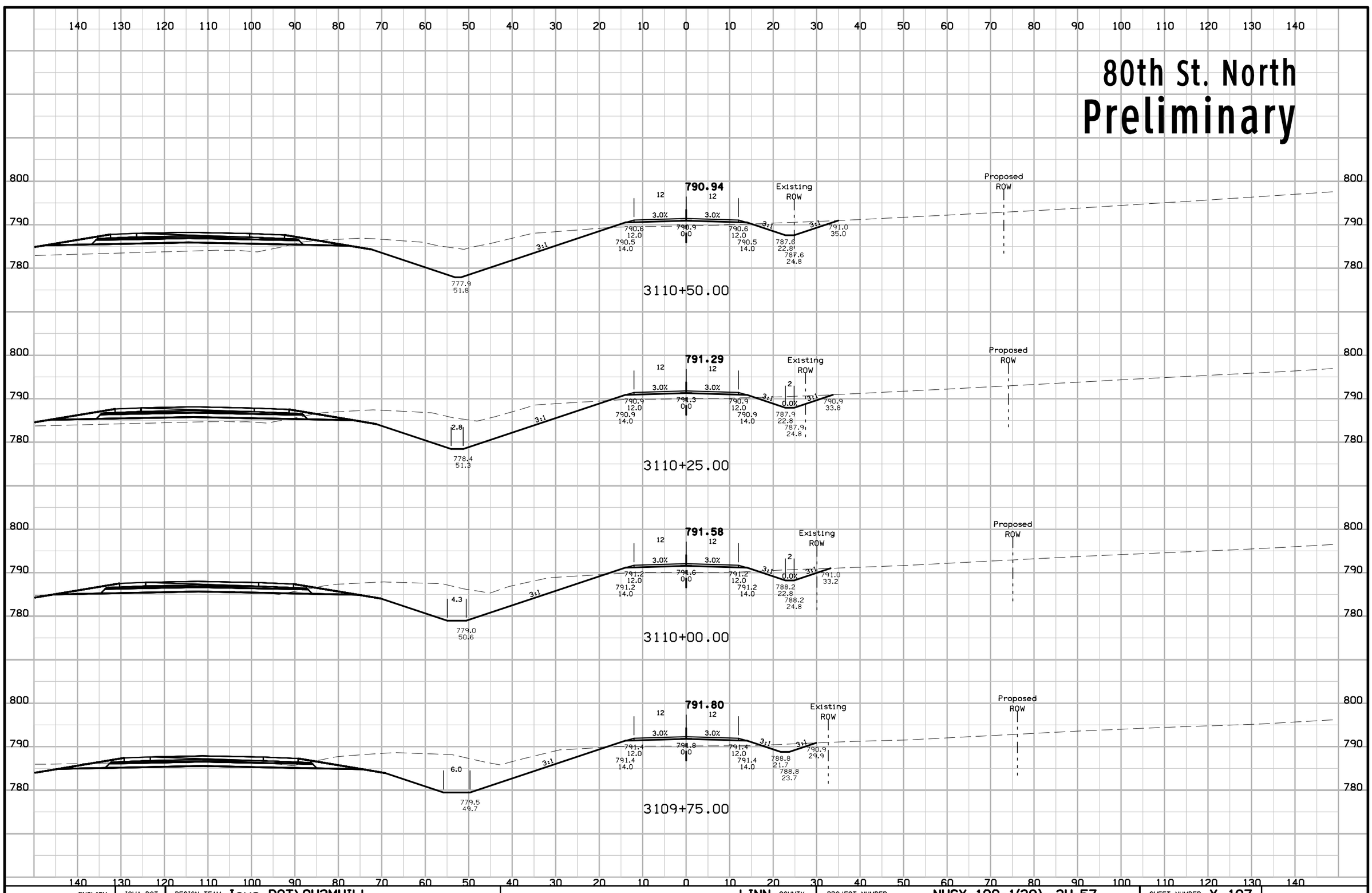
80th St. North

Preliminary



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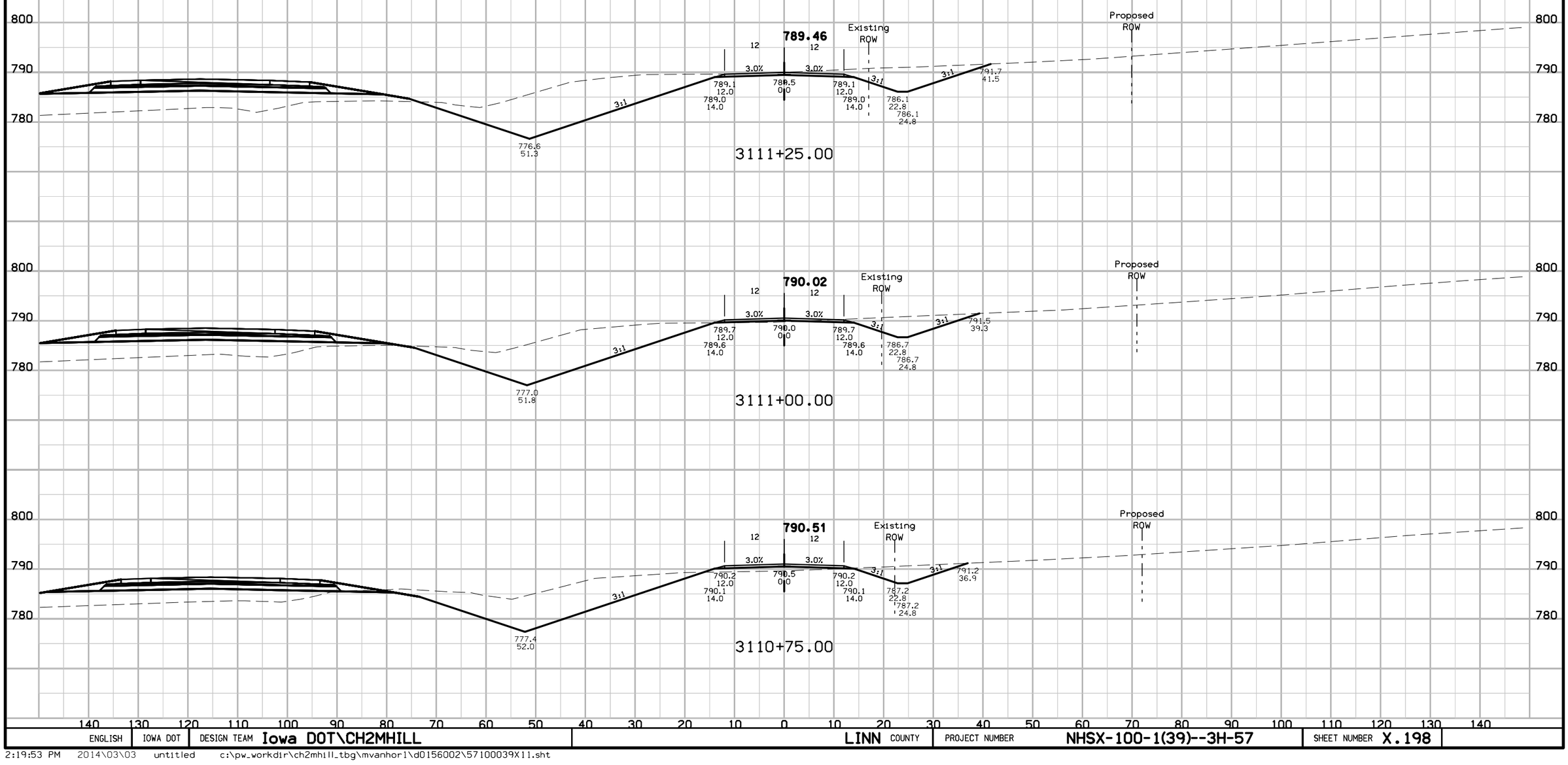

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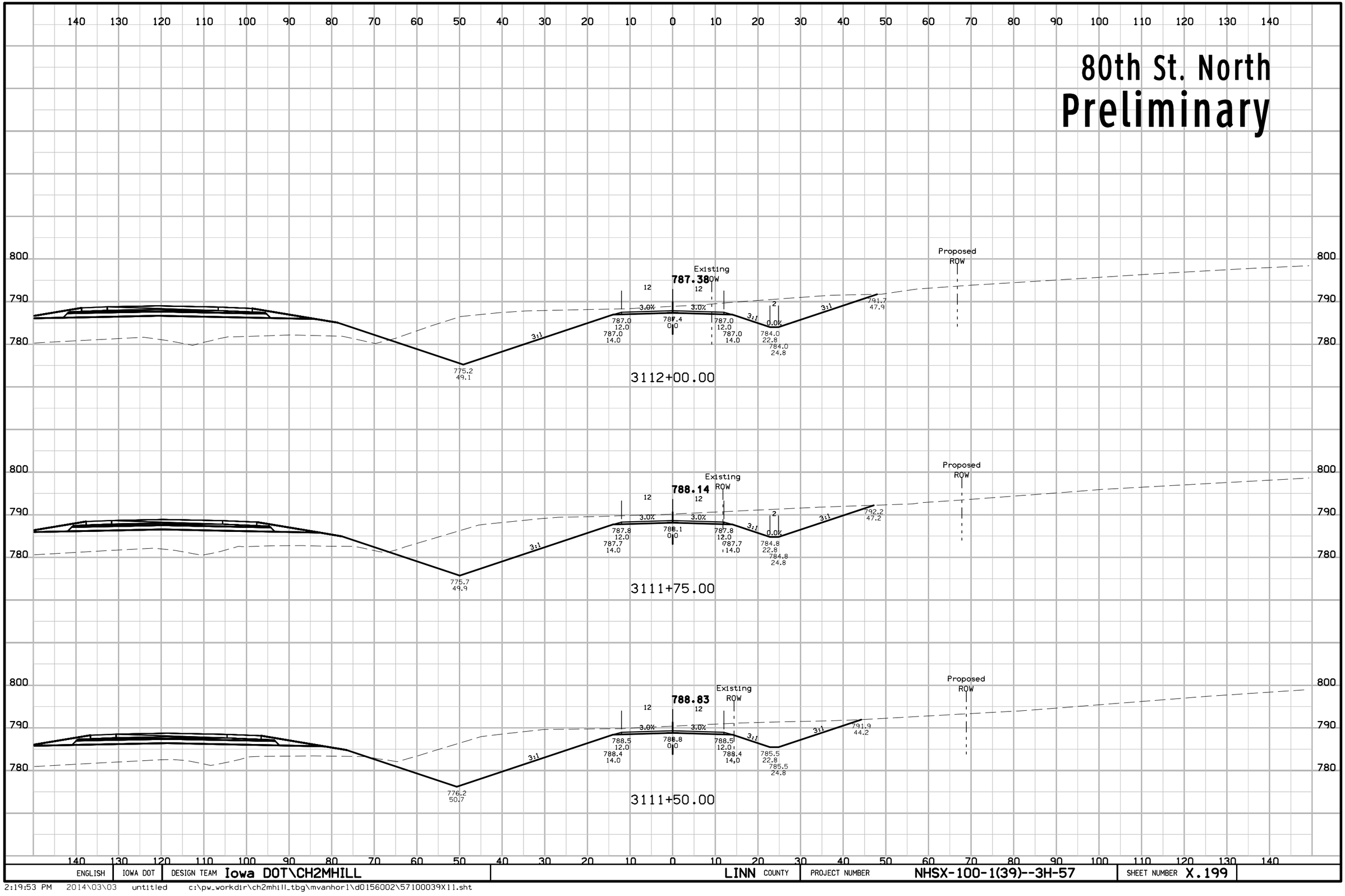
Preliminary



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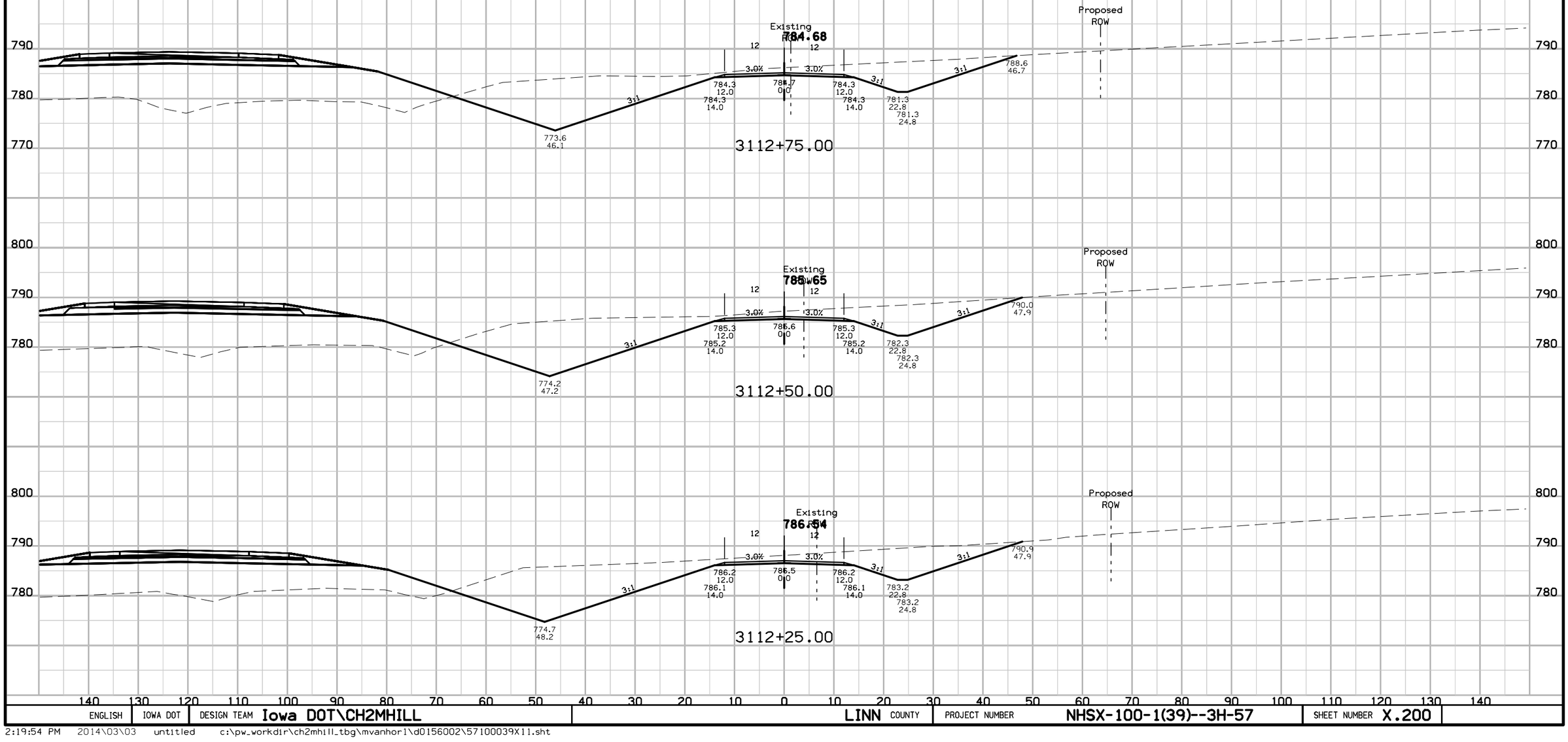
Preliminary



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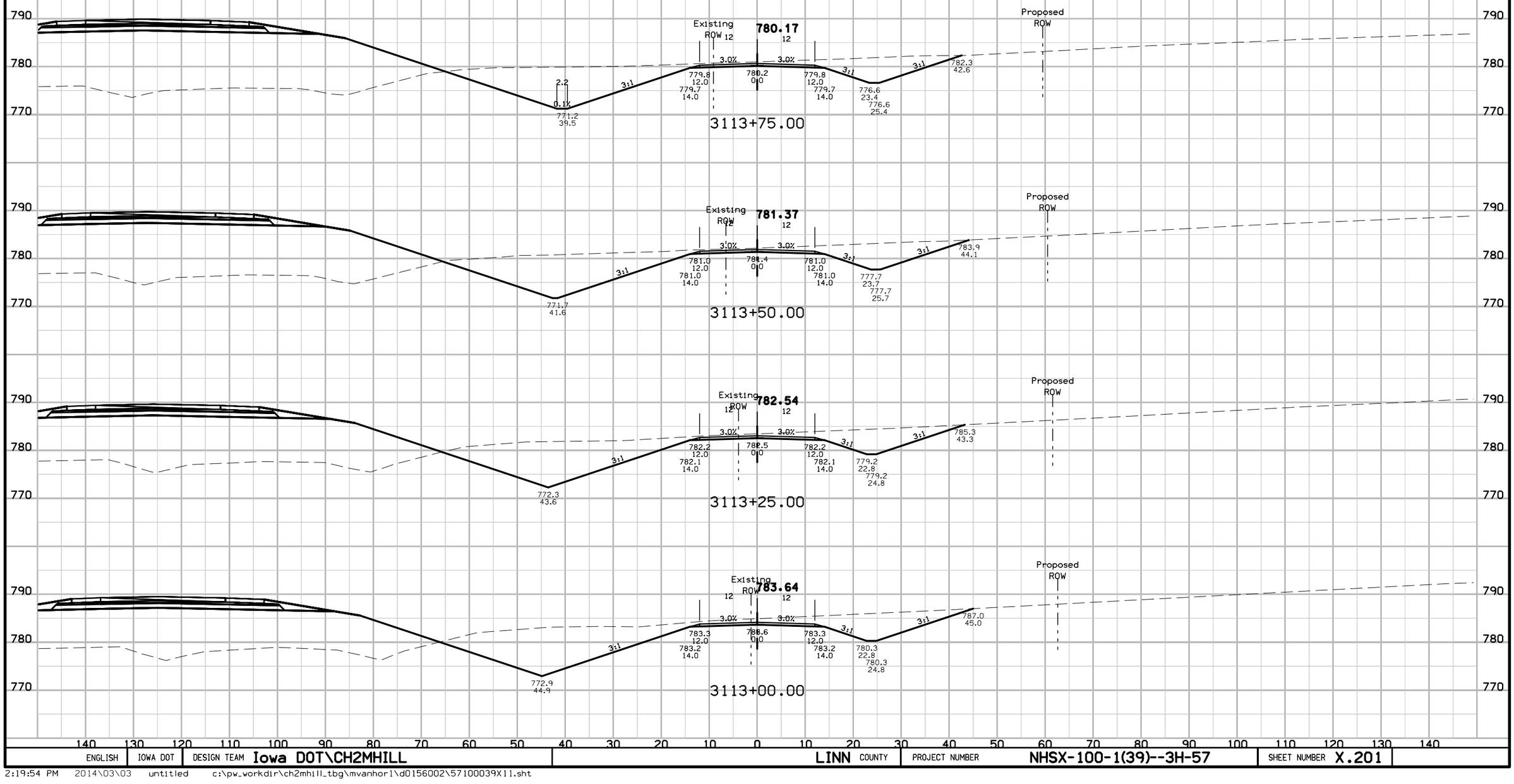
80th St. North

Preliminary



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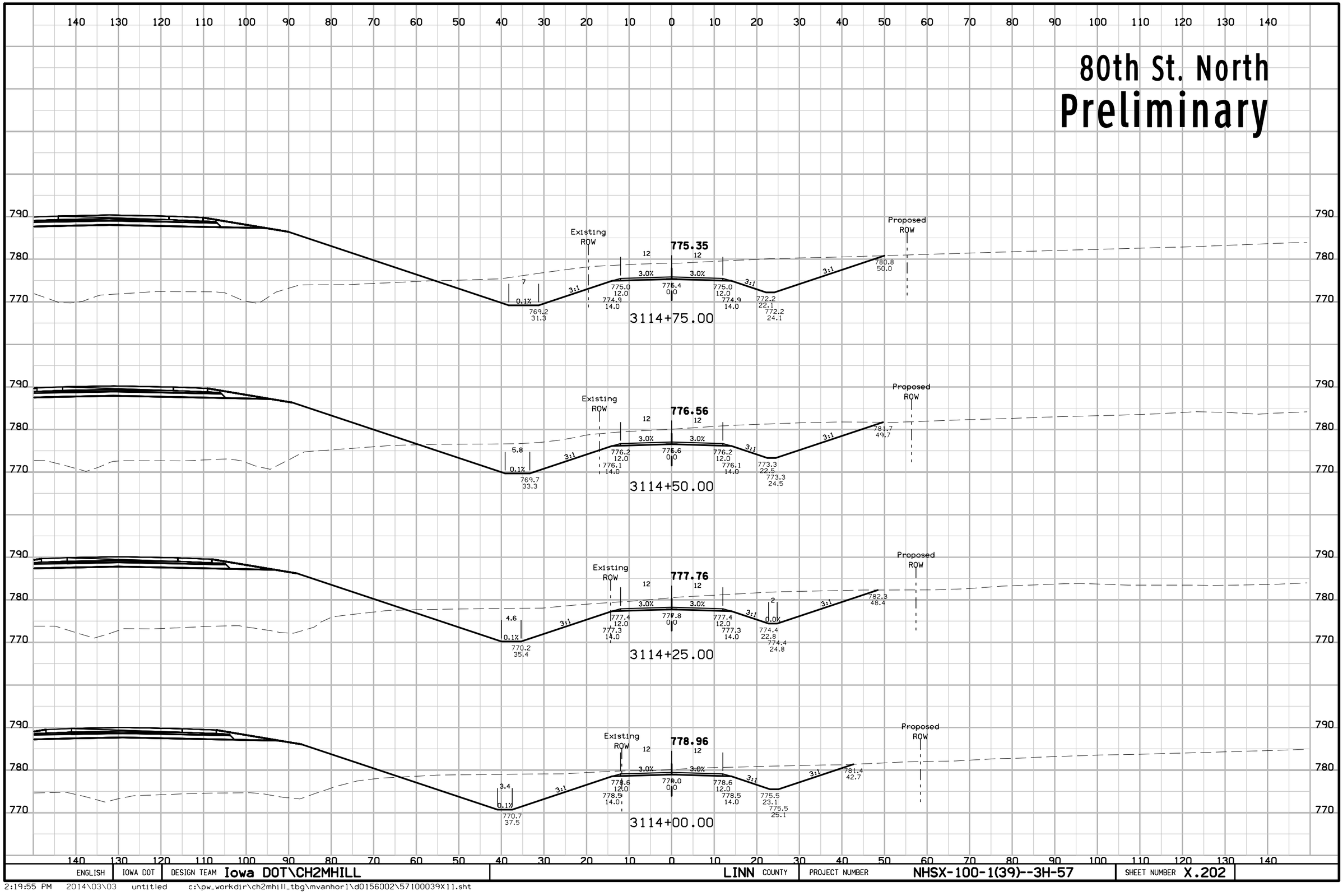

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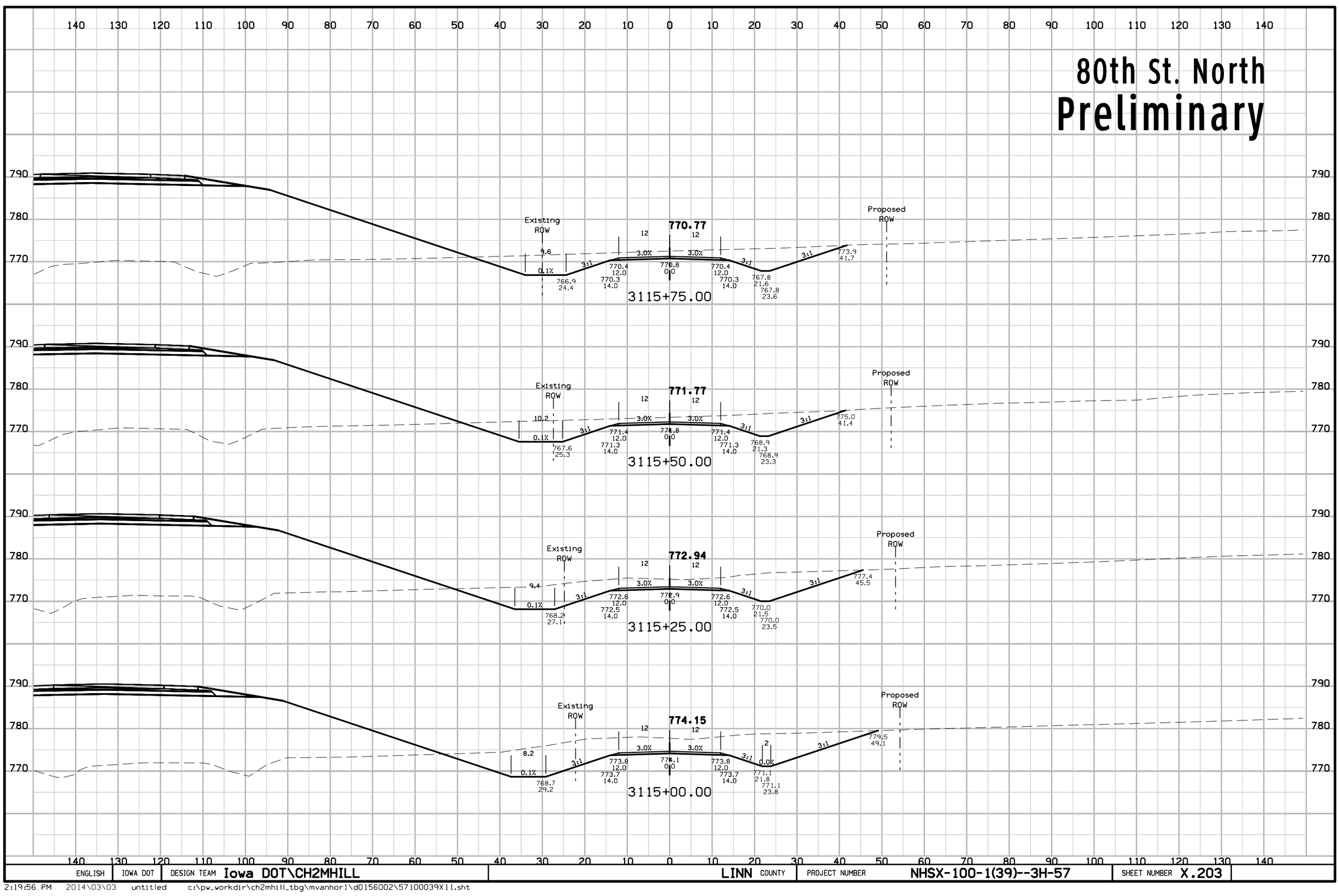

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80th St. North
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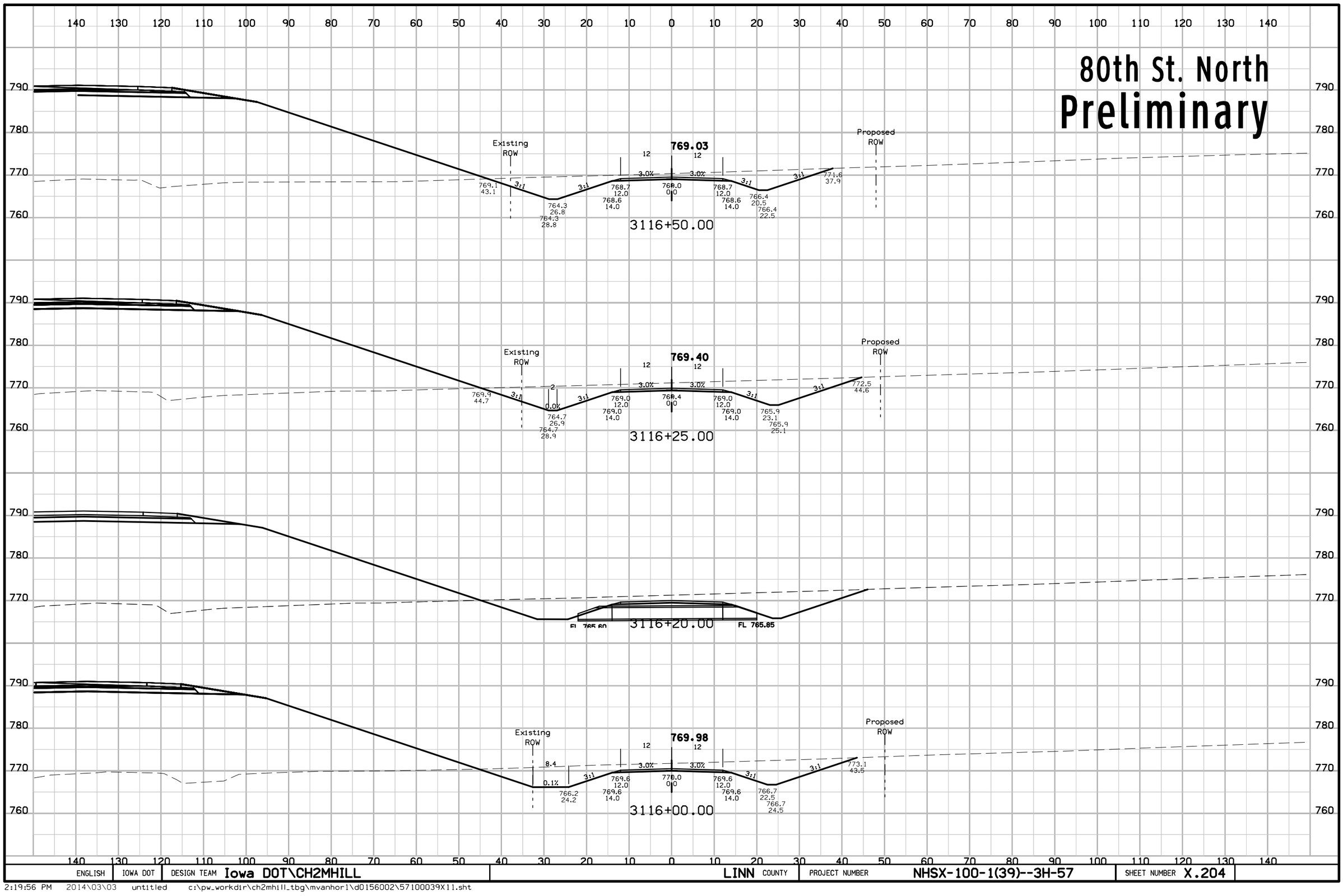

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80th St. North

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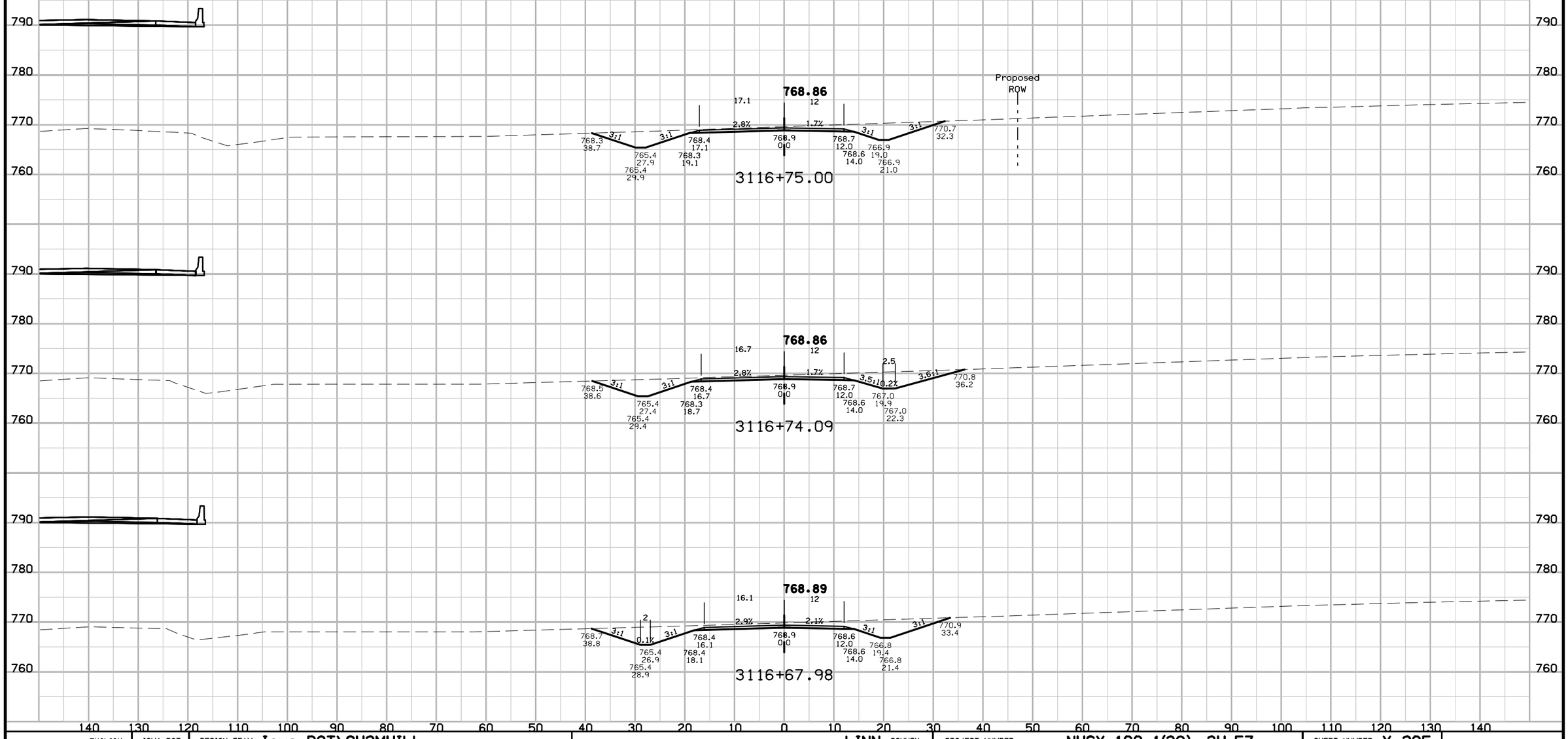

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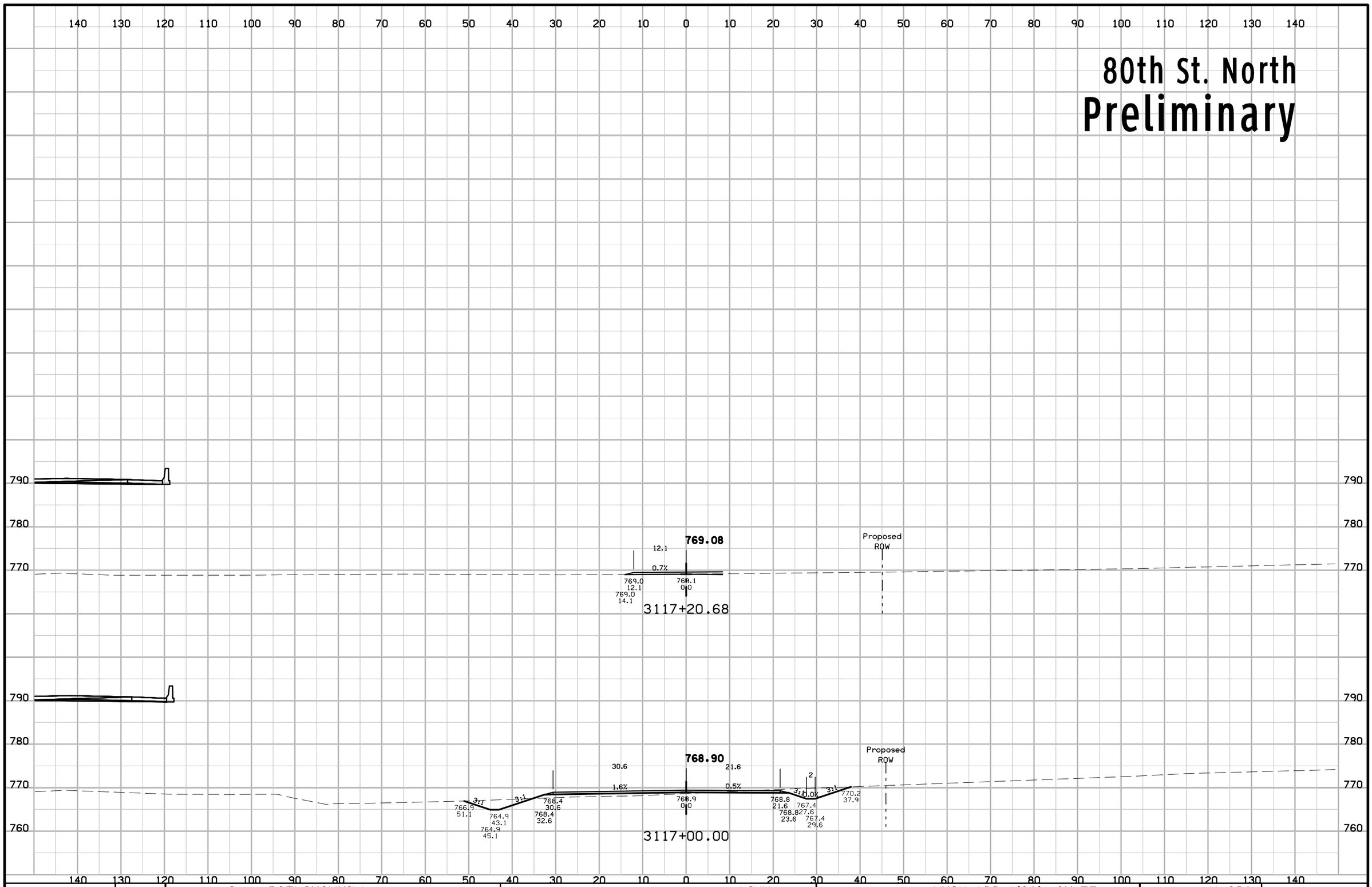
80th St. North

Preliminary



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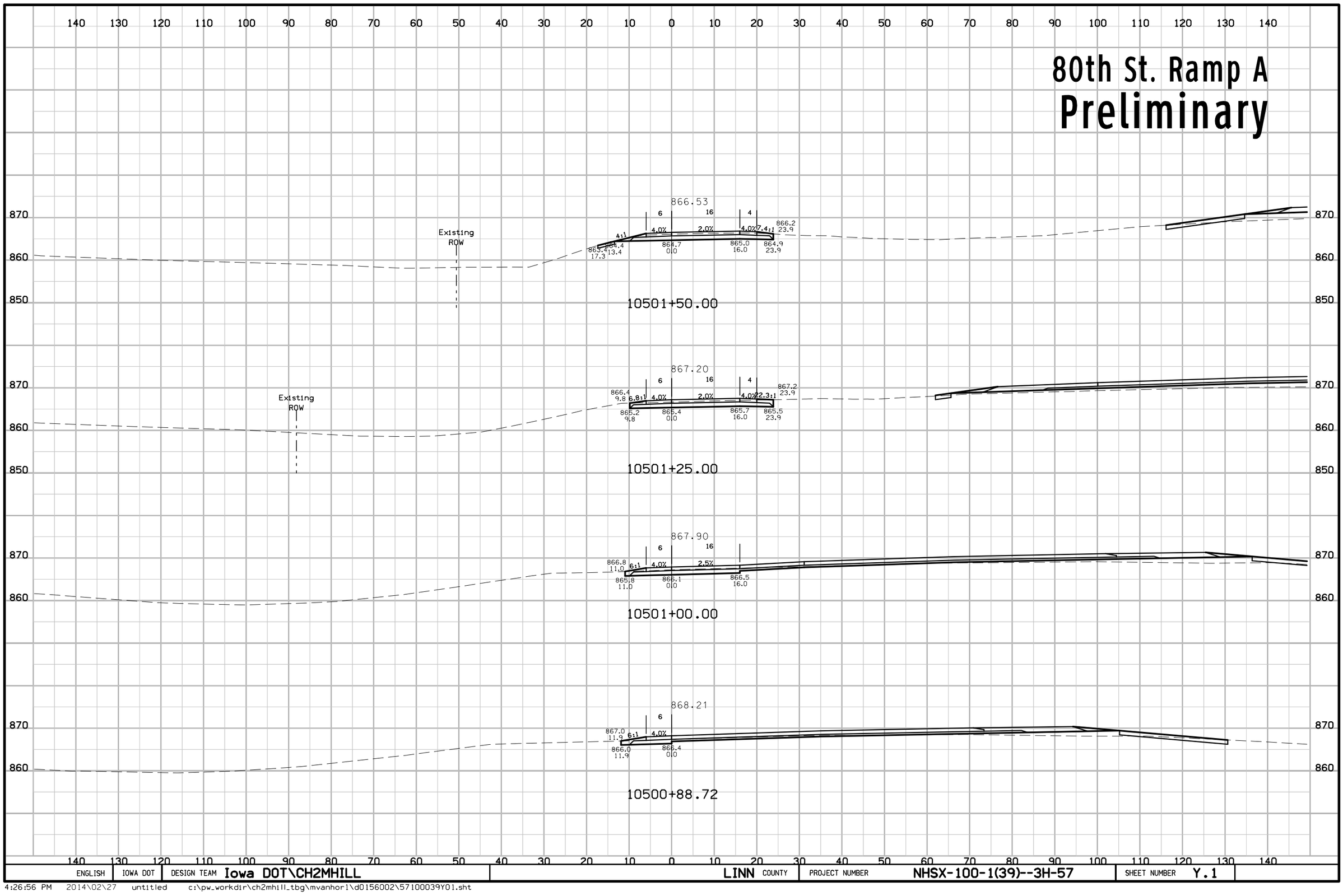
80th St. Ramp A
Preliminary



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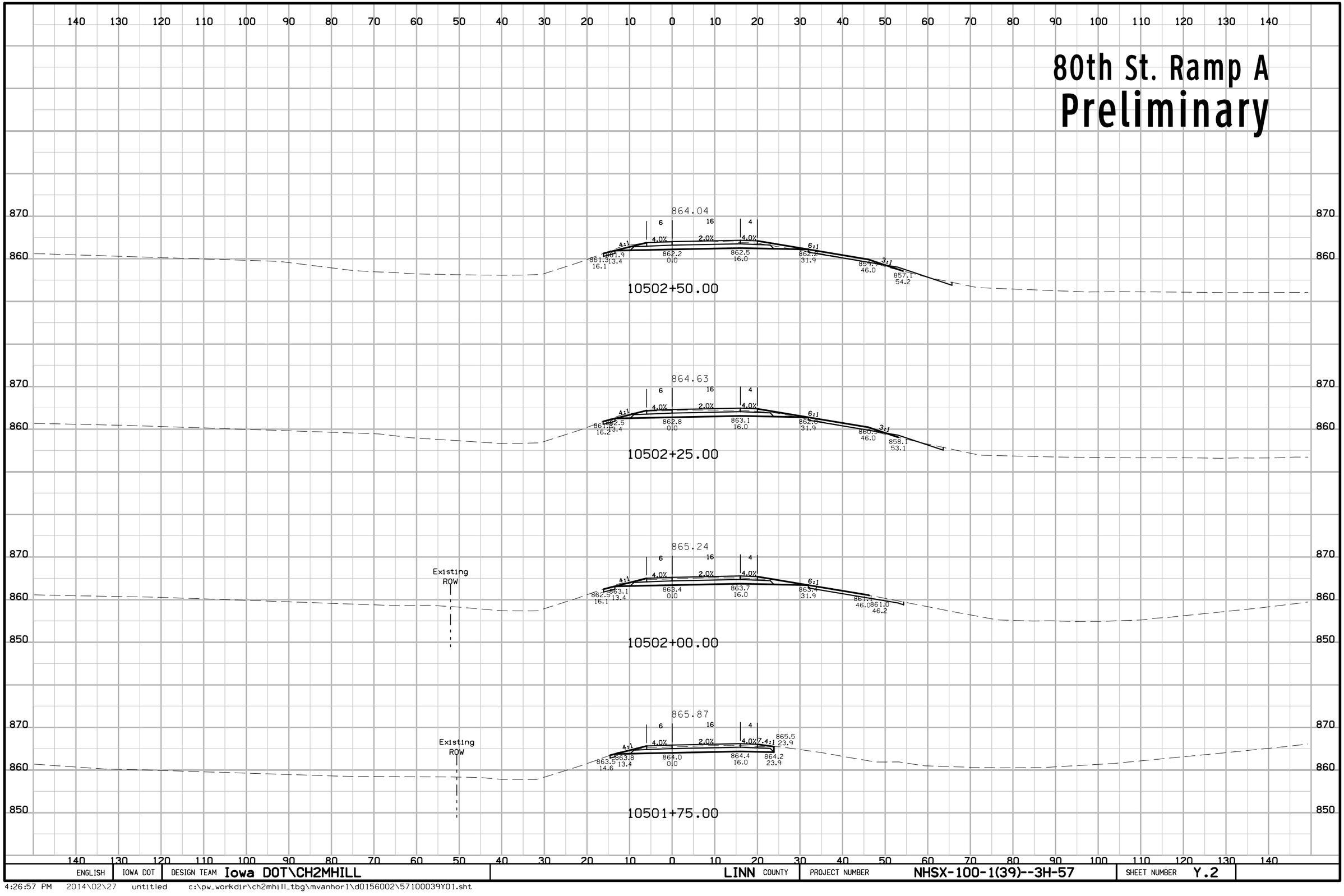
80th St. Ramp A
Preliminary



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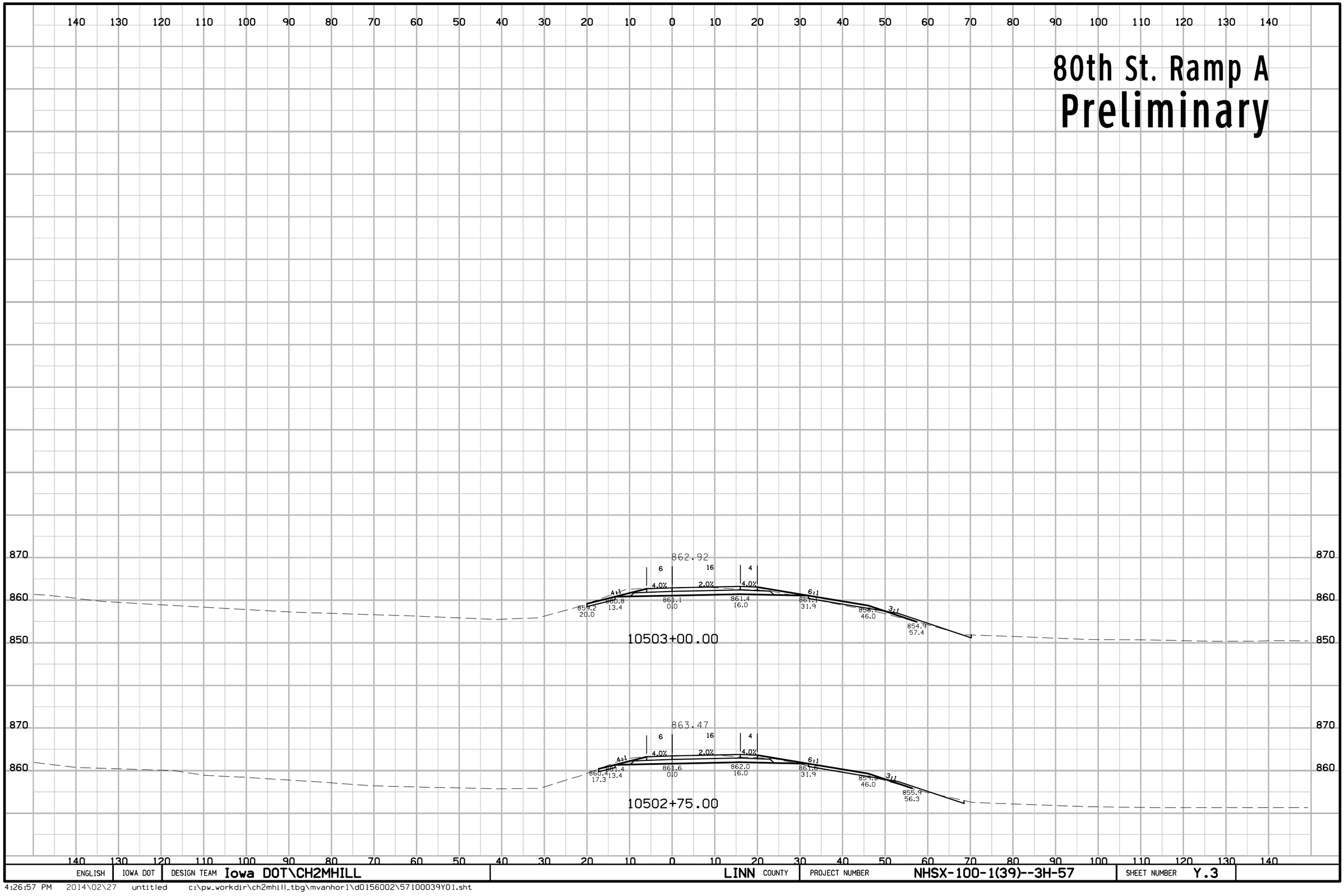
80th St. Ramp A

Preliminary



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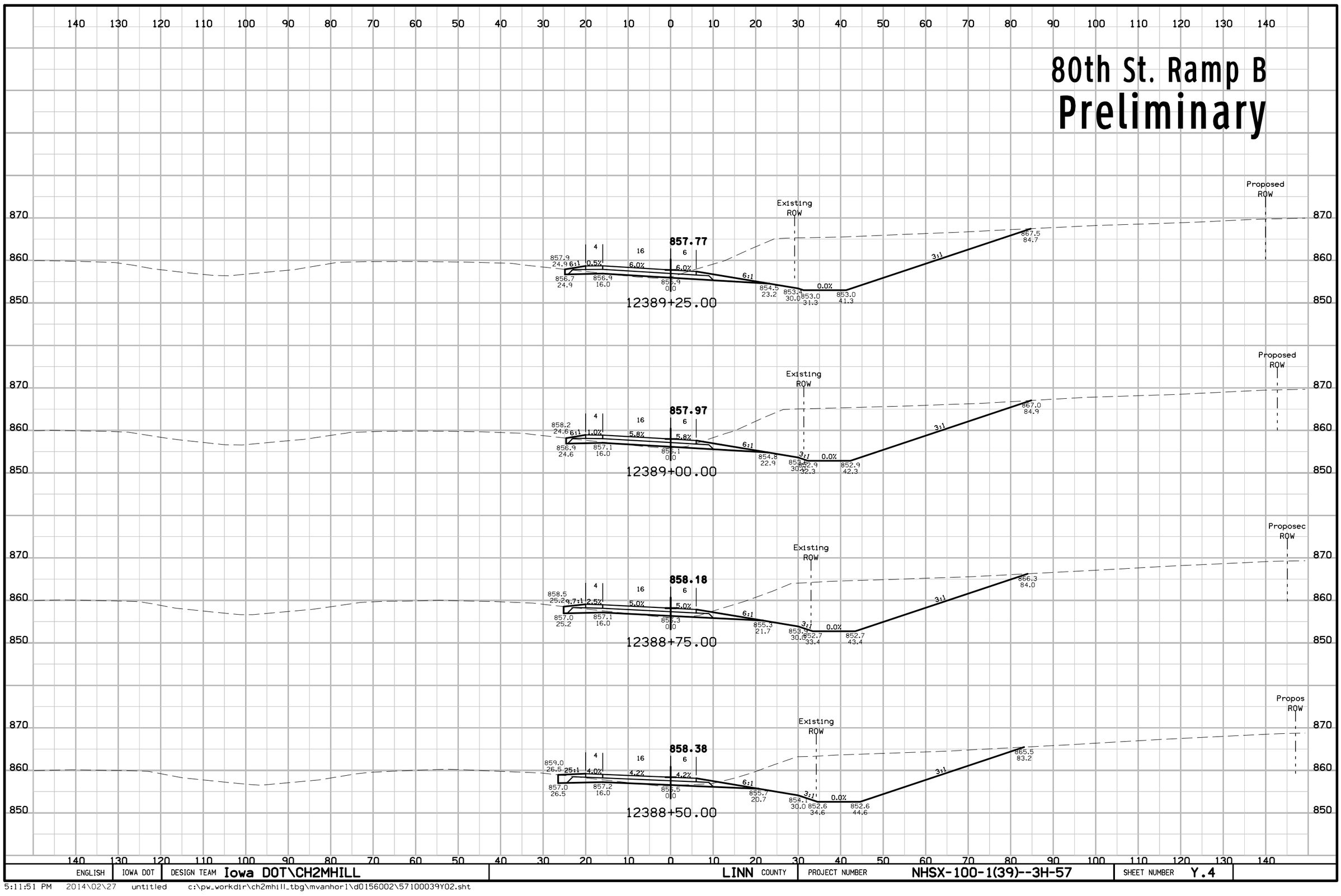
80th St. Ramp B
Preliminary



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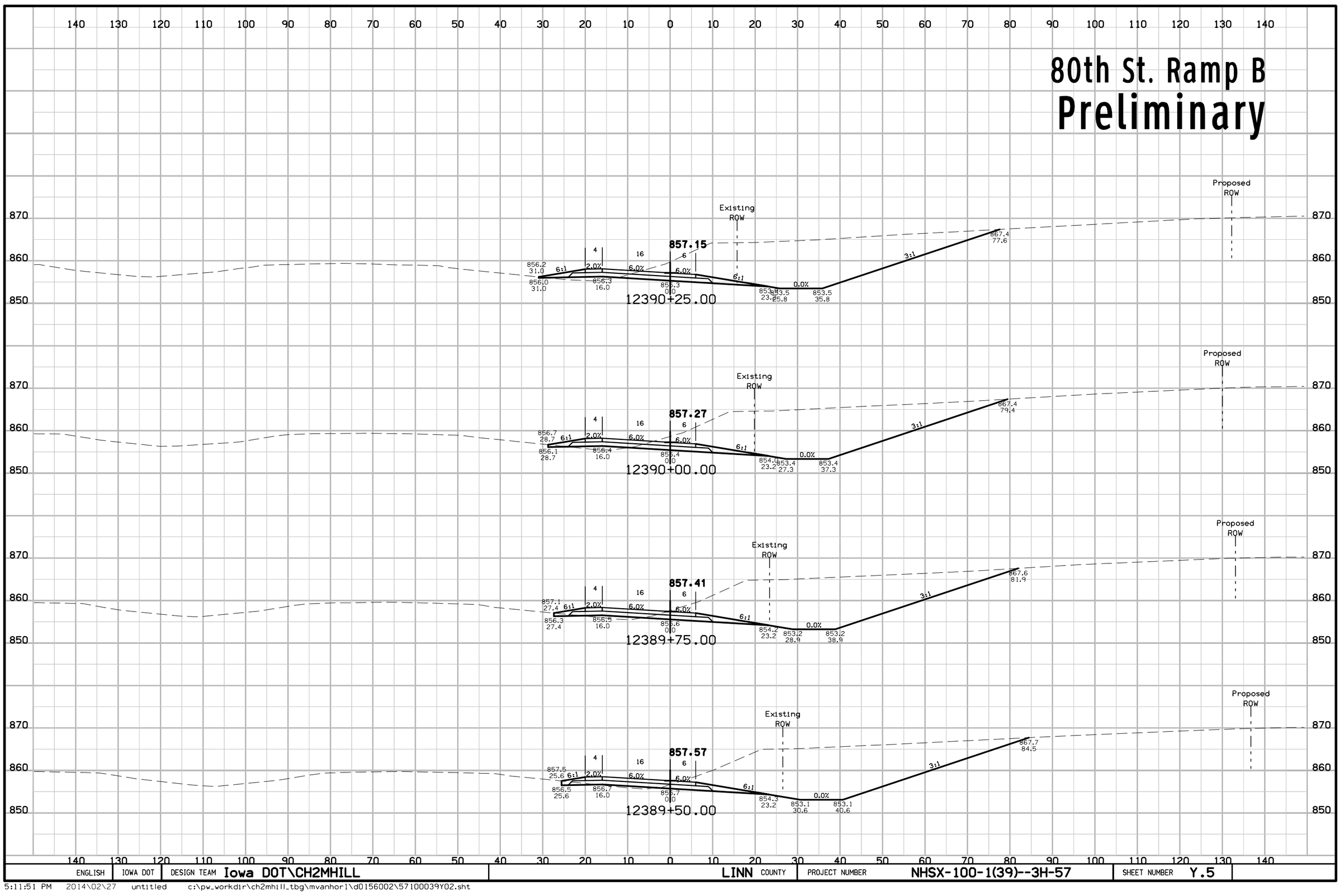
80th St. Ramp B
Preliminary



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80th St. Ramp B
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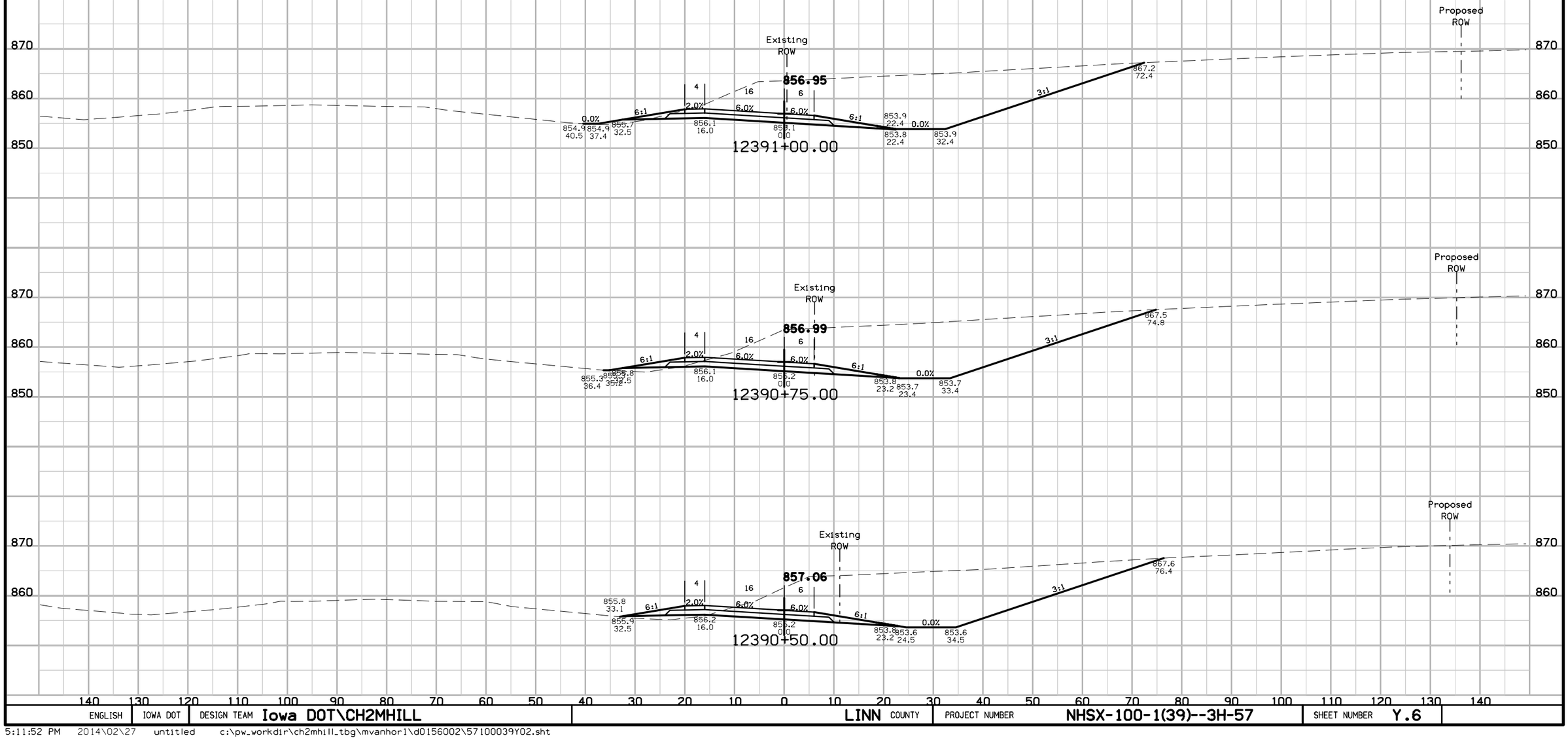

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80th St. Ramp B
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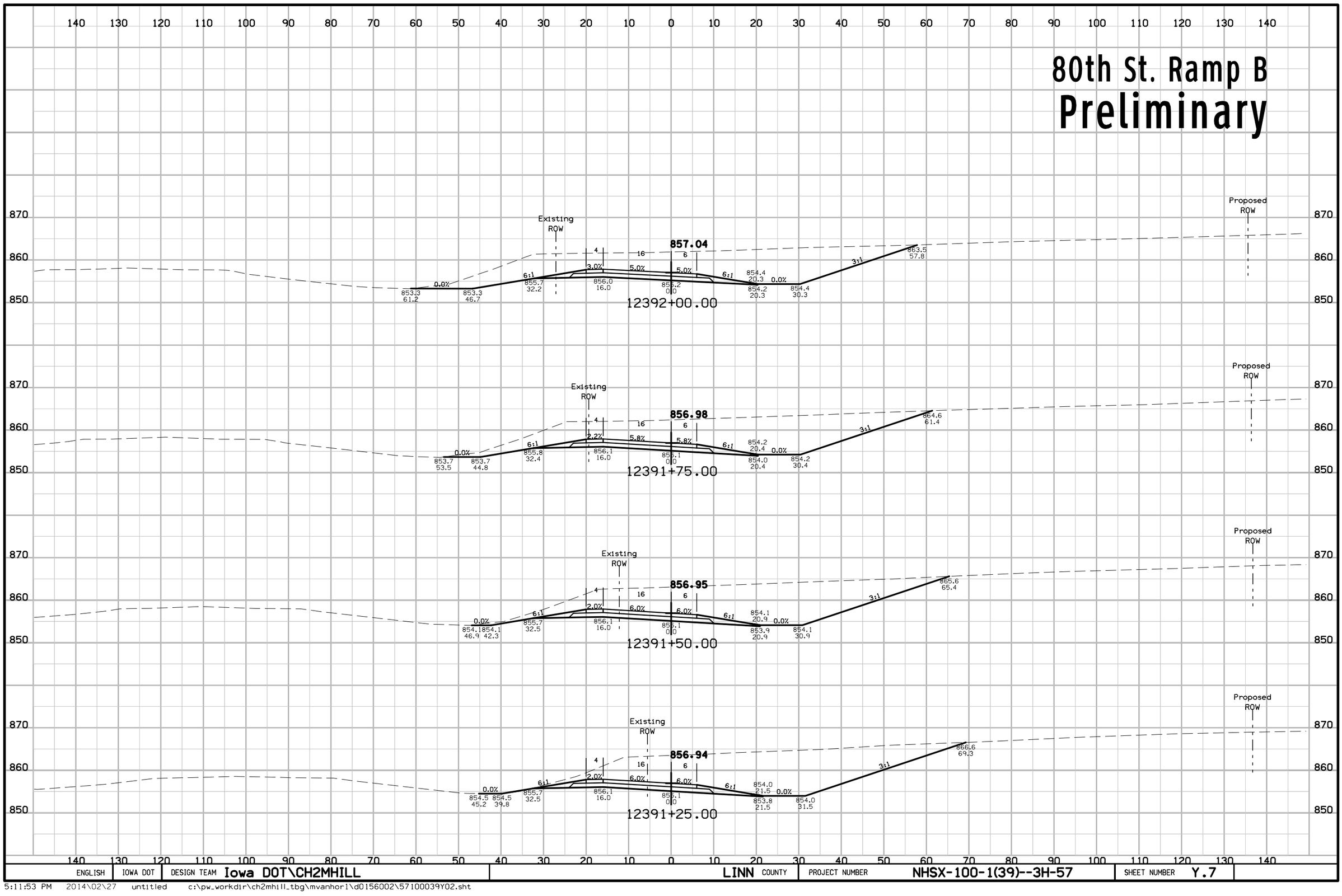

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80th St. Ramp B
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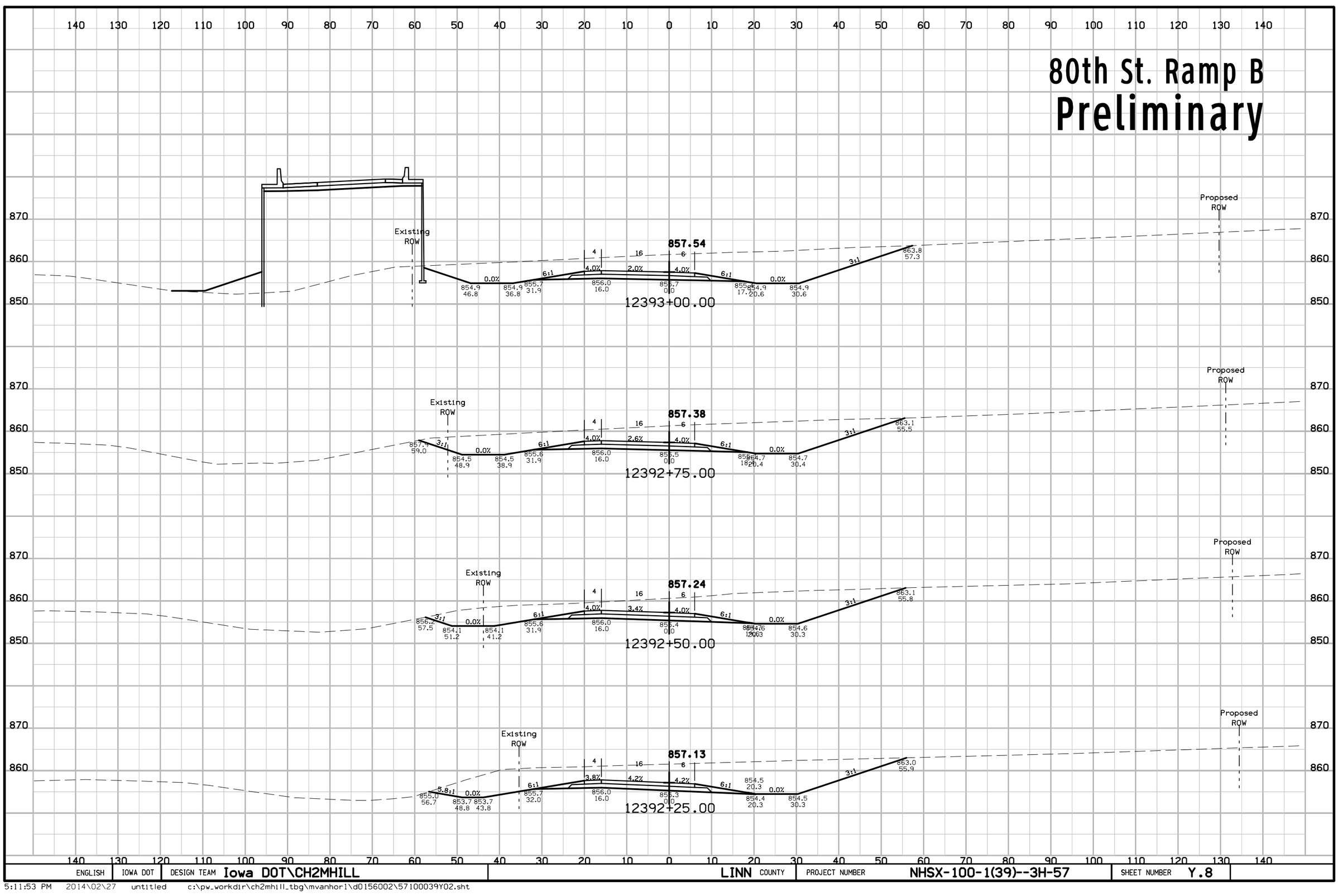

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80th St. Ramp B
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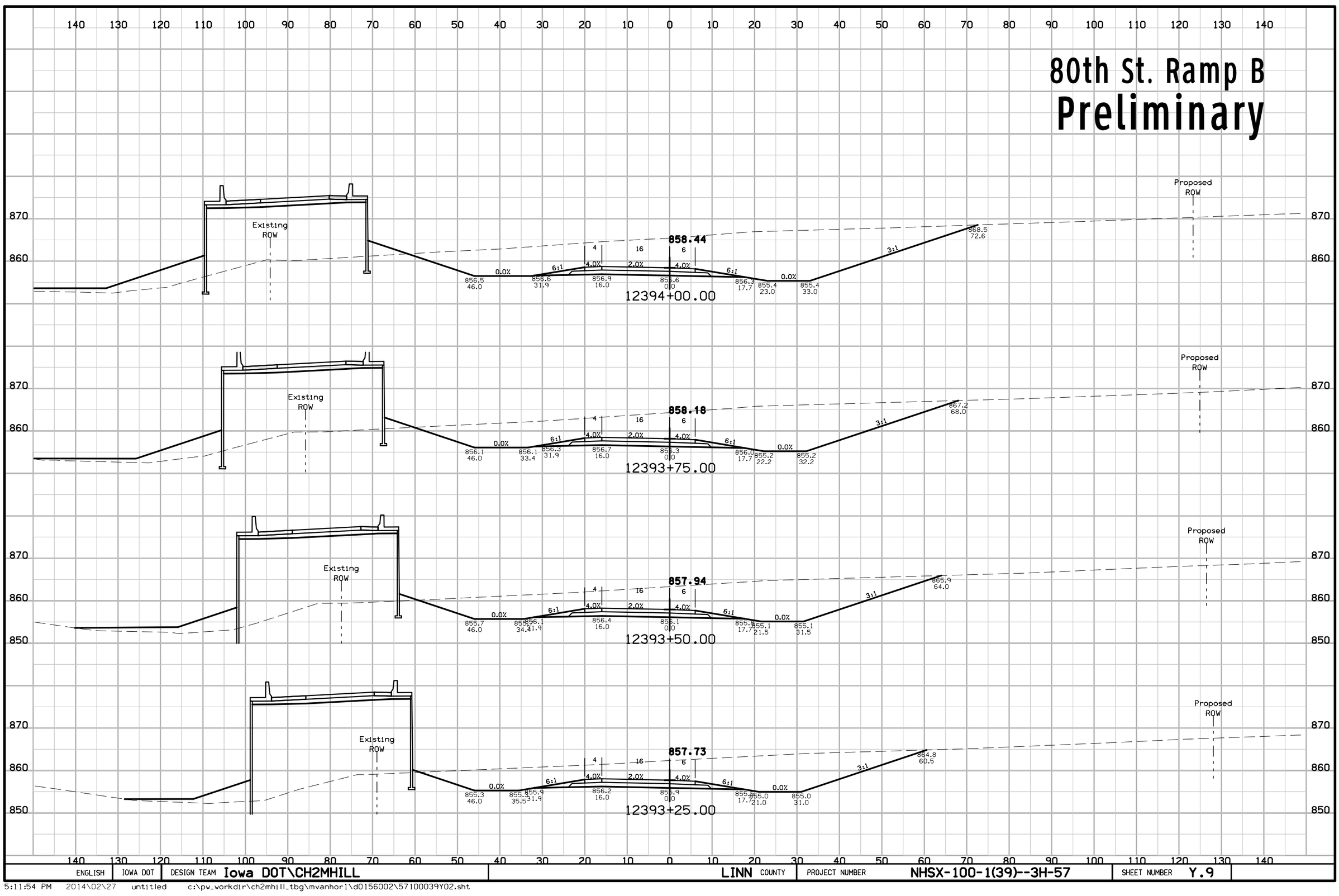

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80th St. Ramp B
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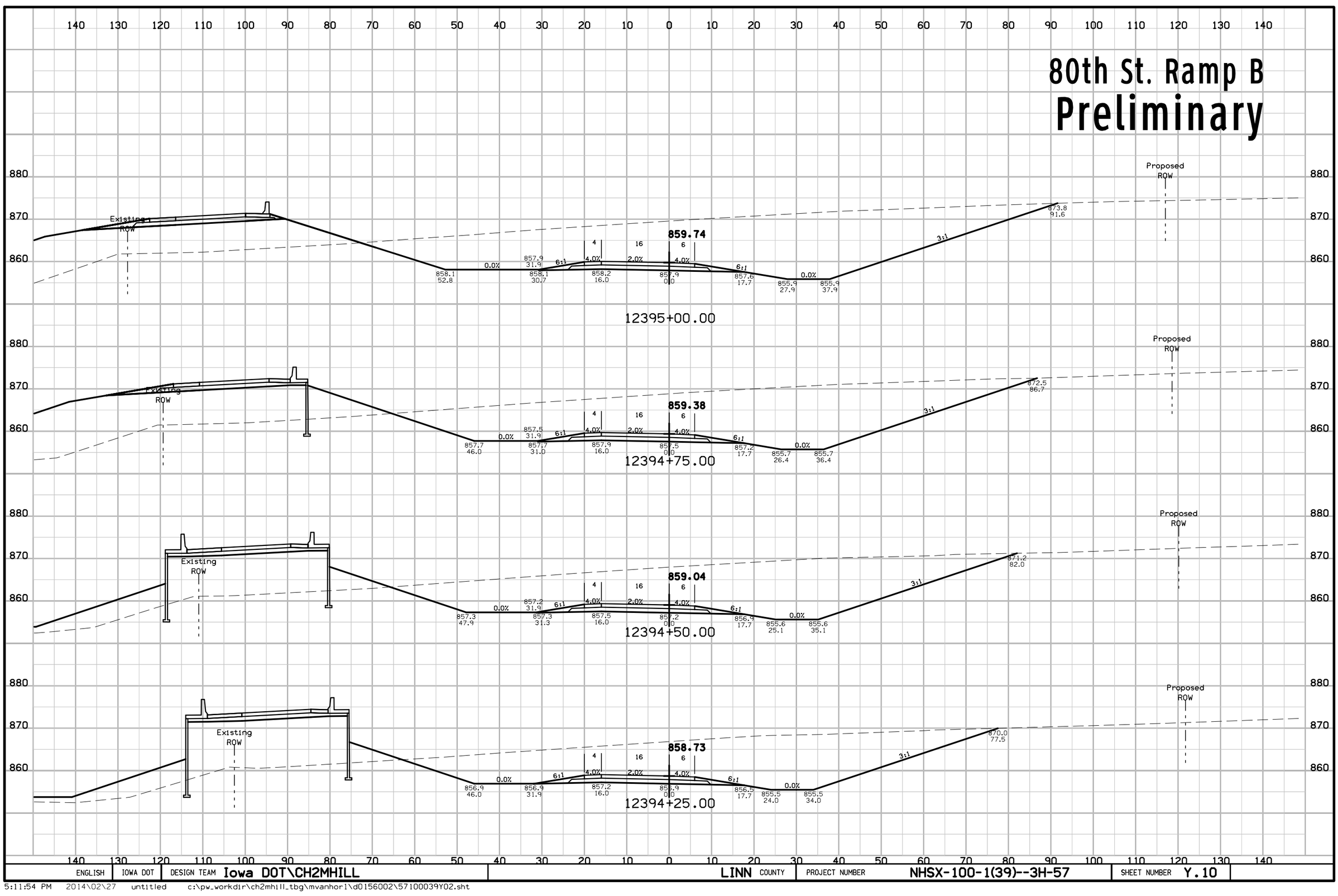

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80th St. Ramp B
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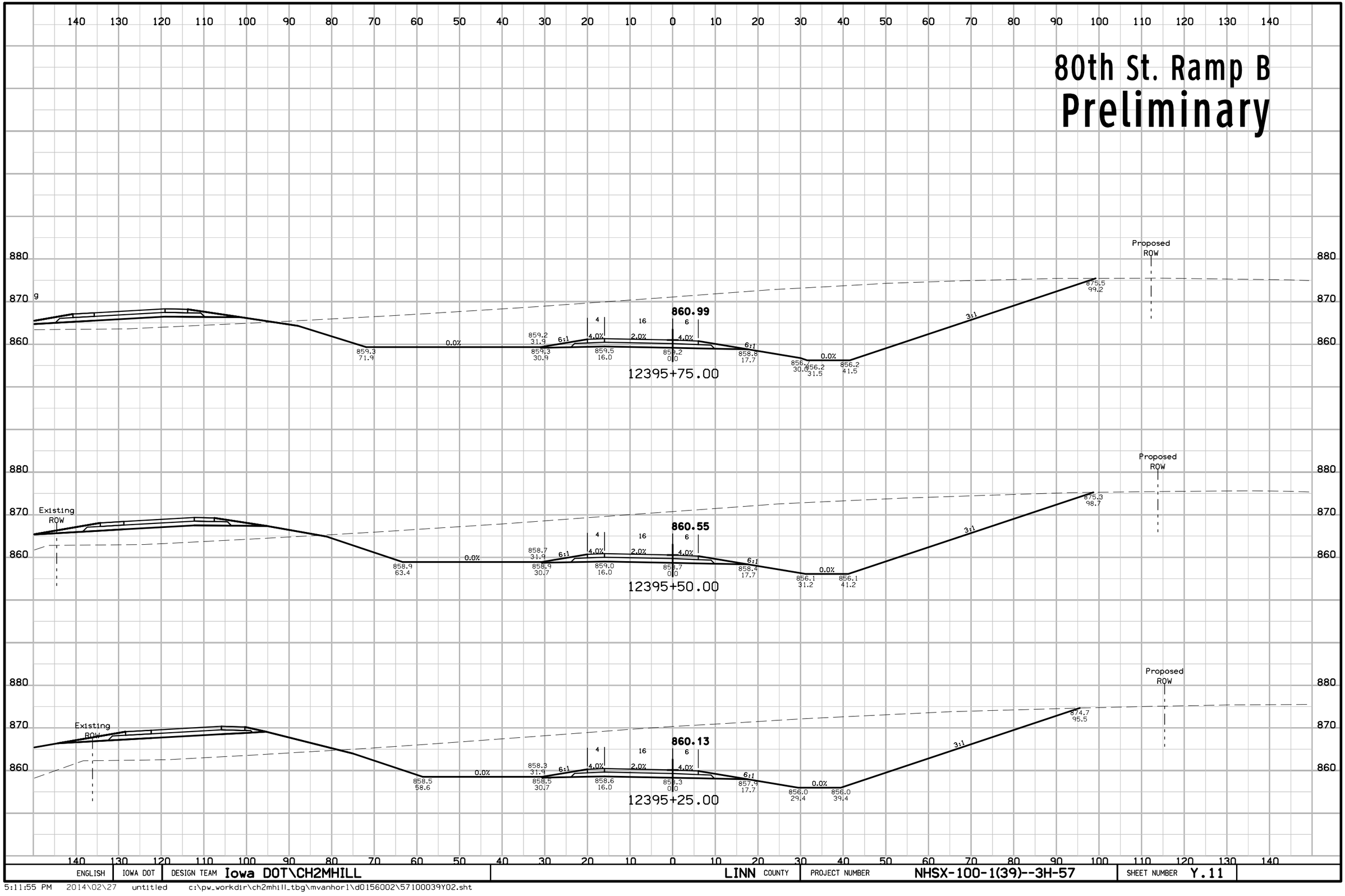

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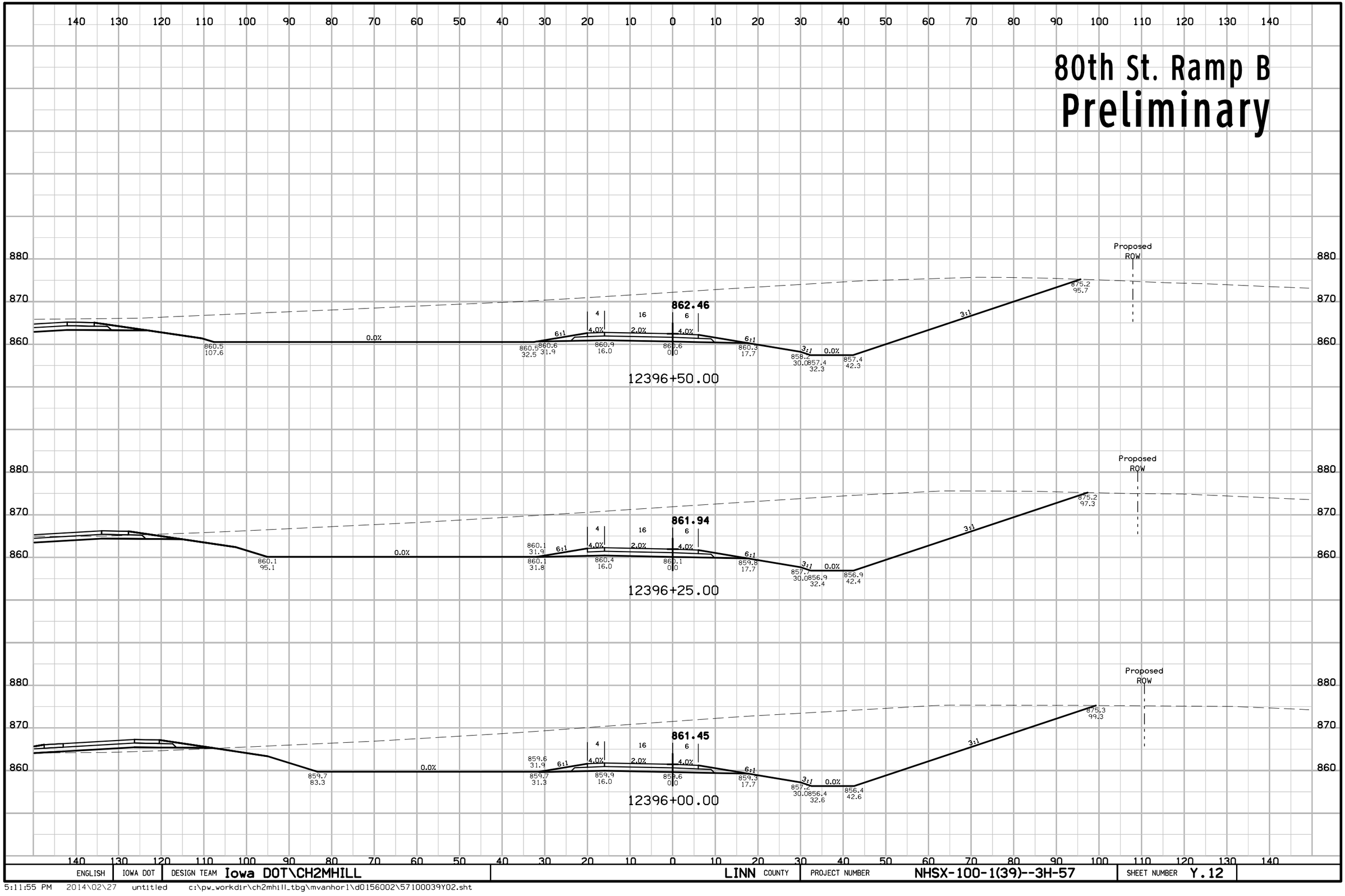
80th St. Ramp B
Preliminary



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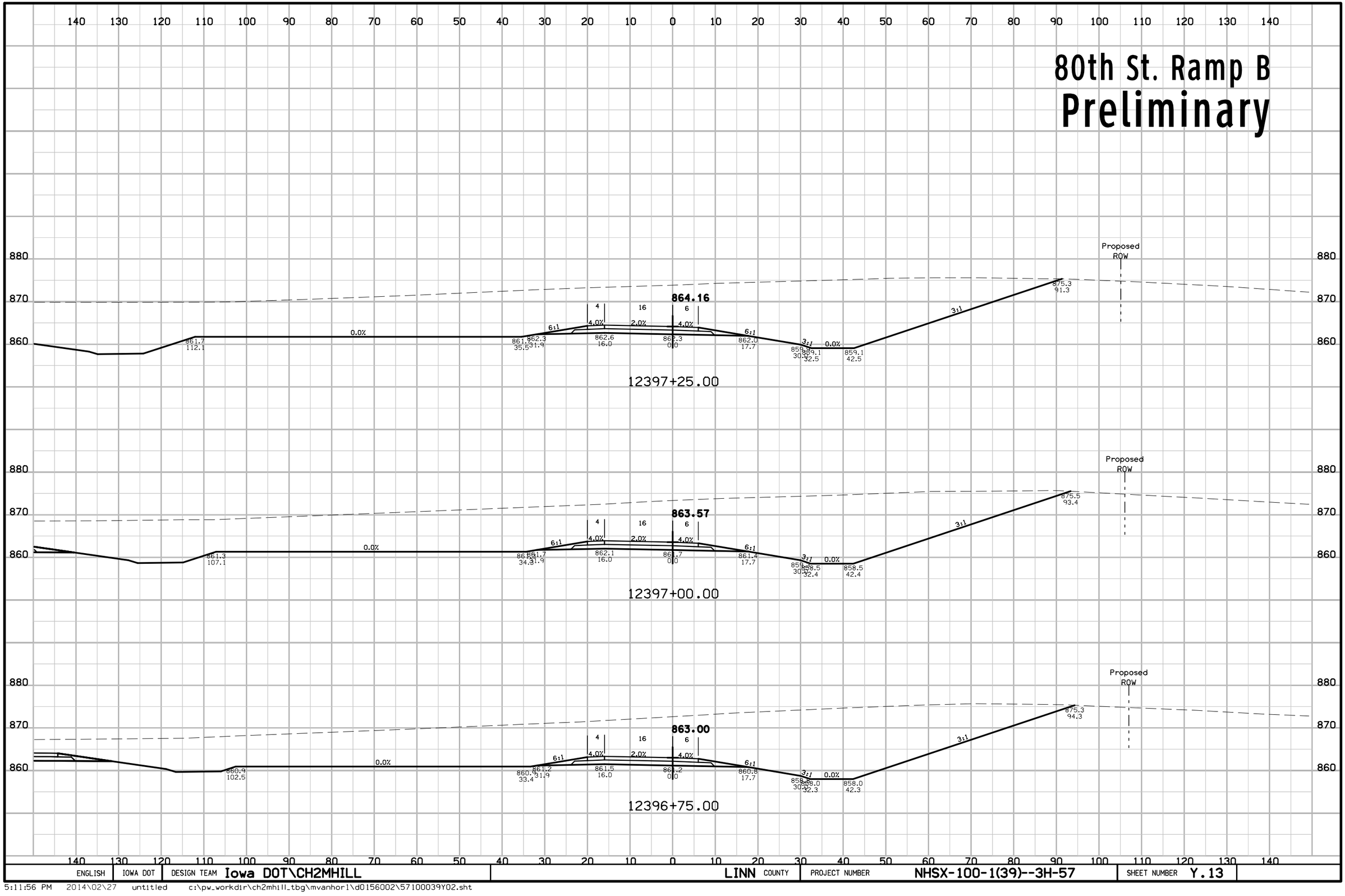
80th St. Ramp B
Preliminary



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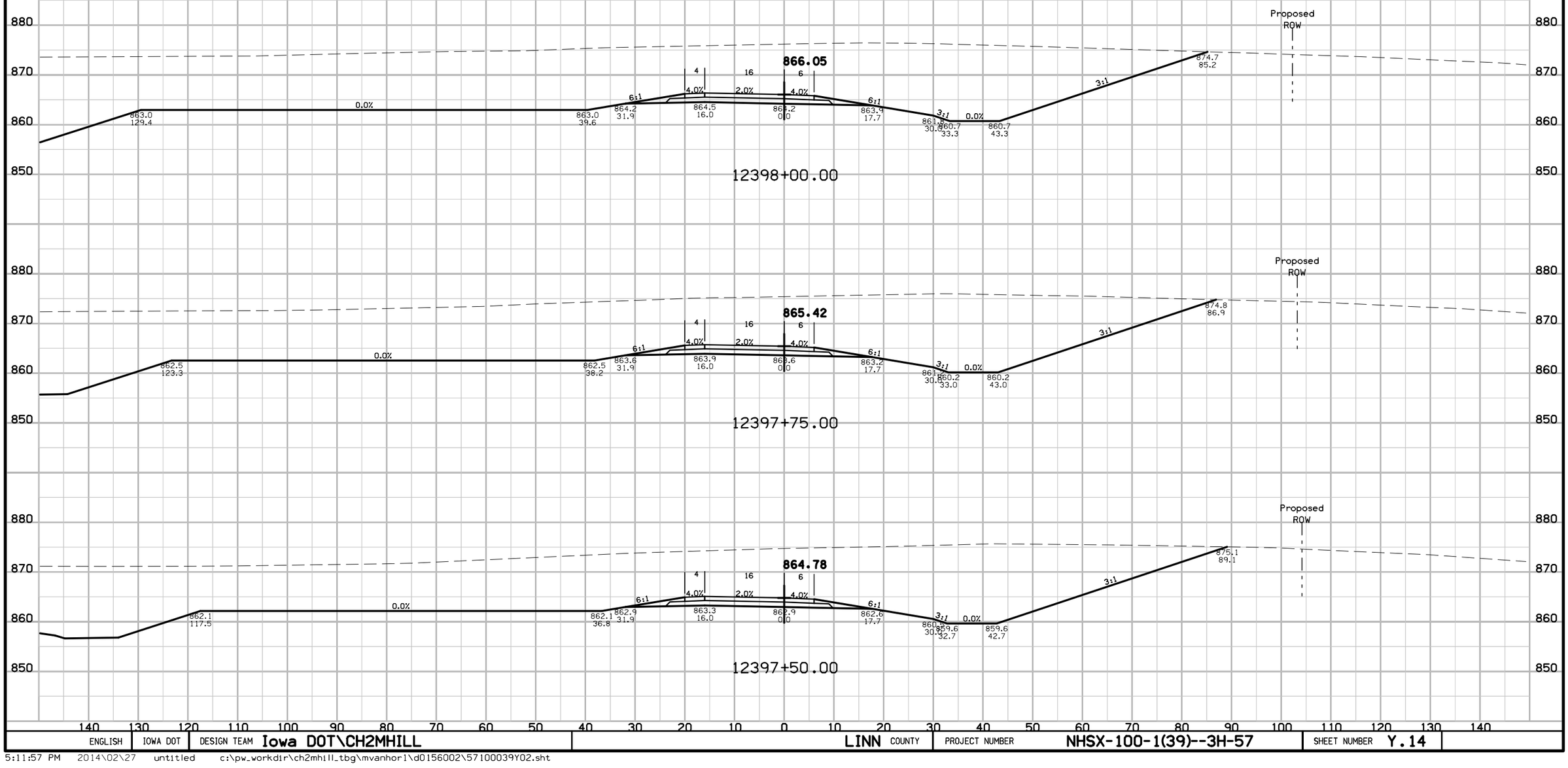
80th St. Ramp B
Preliminary



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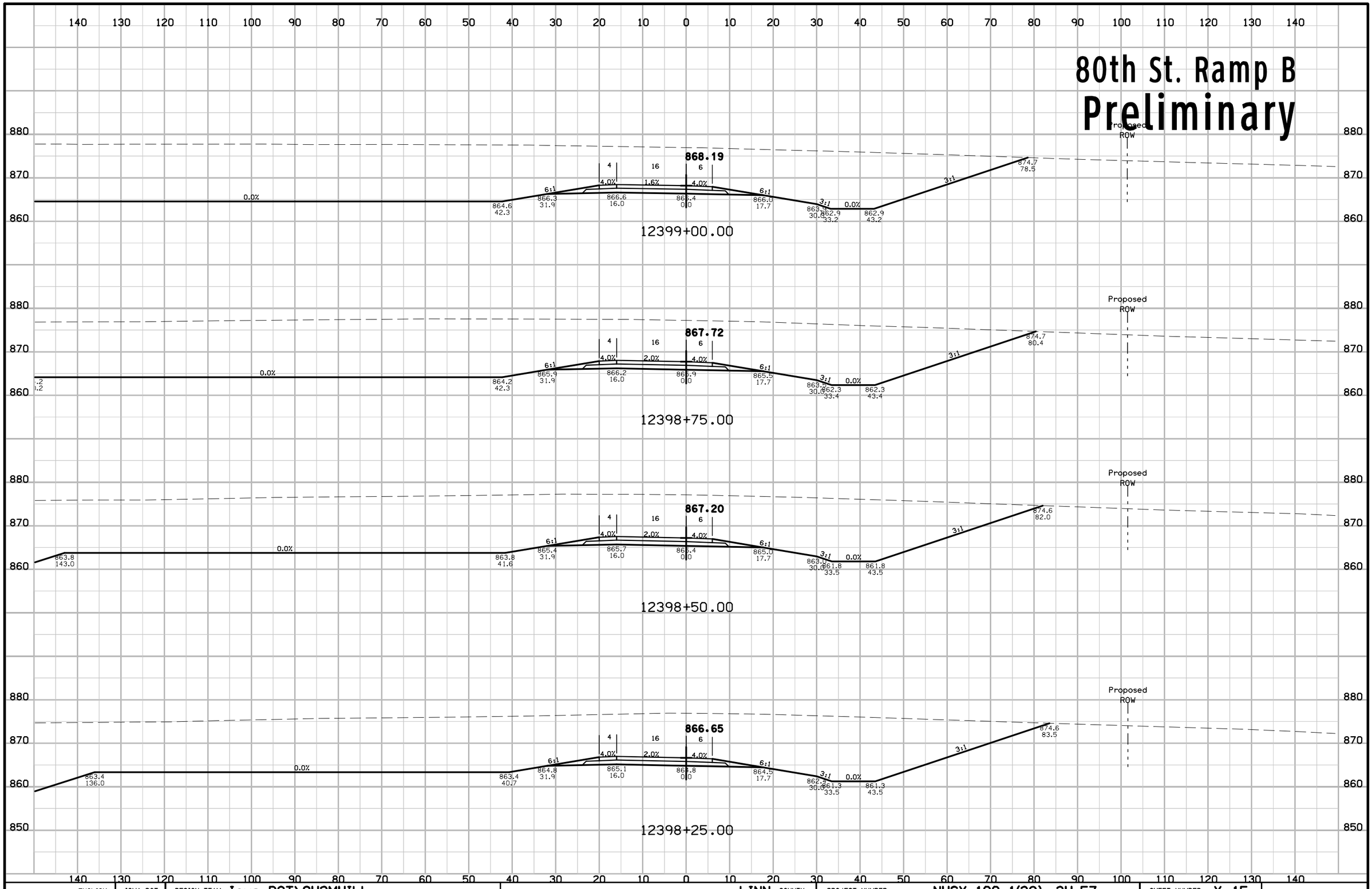
80th St. Ramp B

Preliminary



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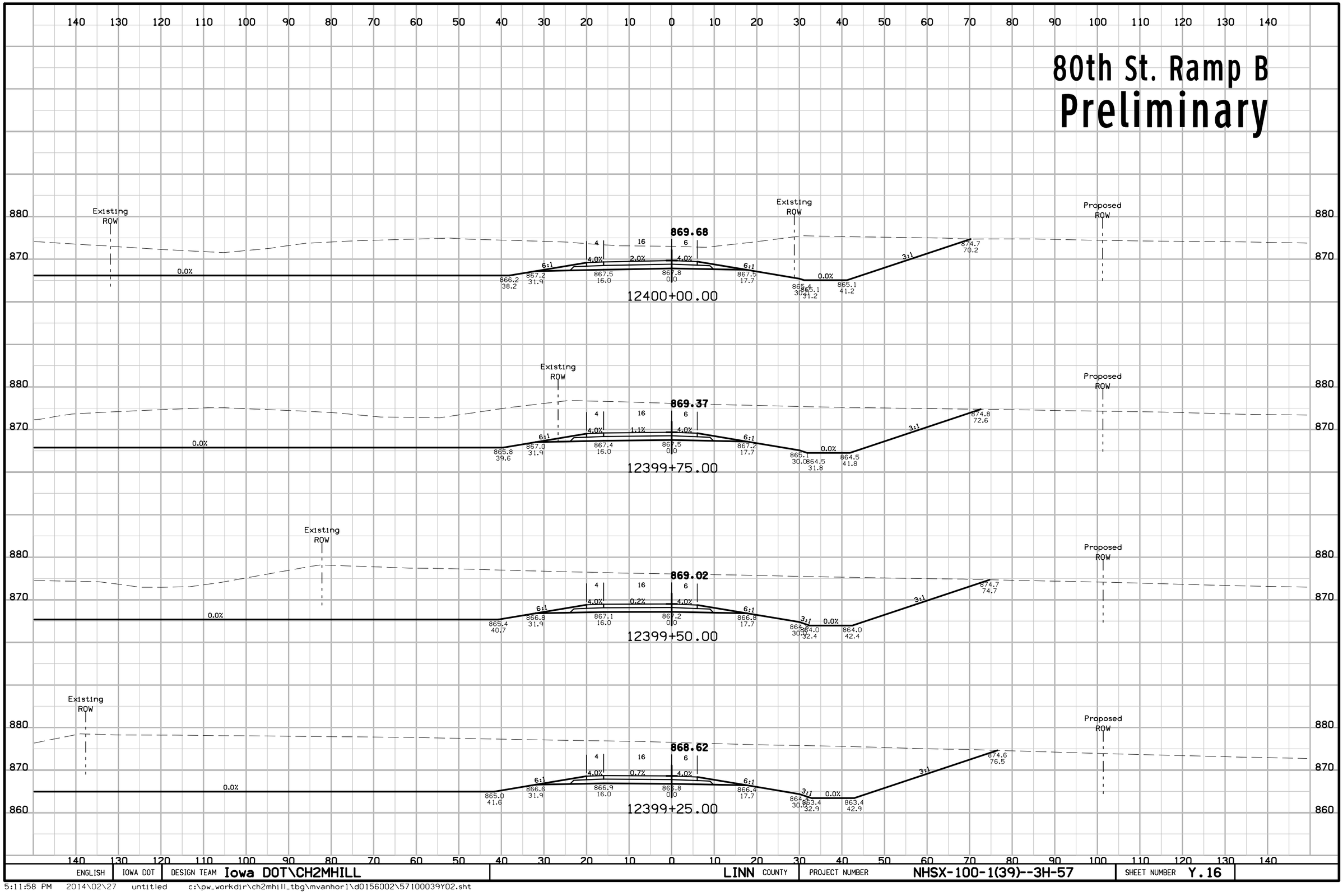
80th St. Ramp B
Preliminary



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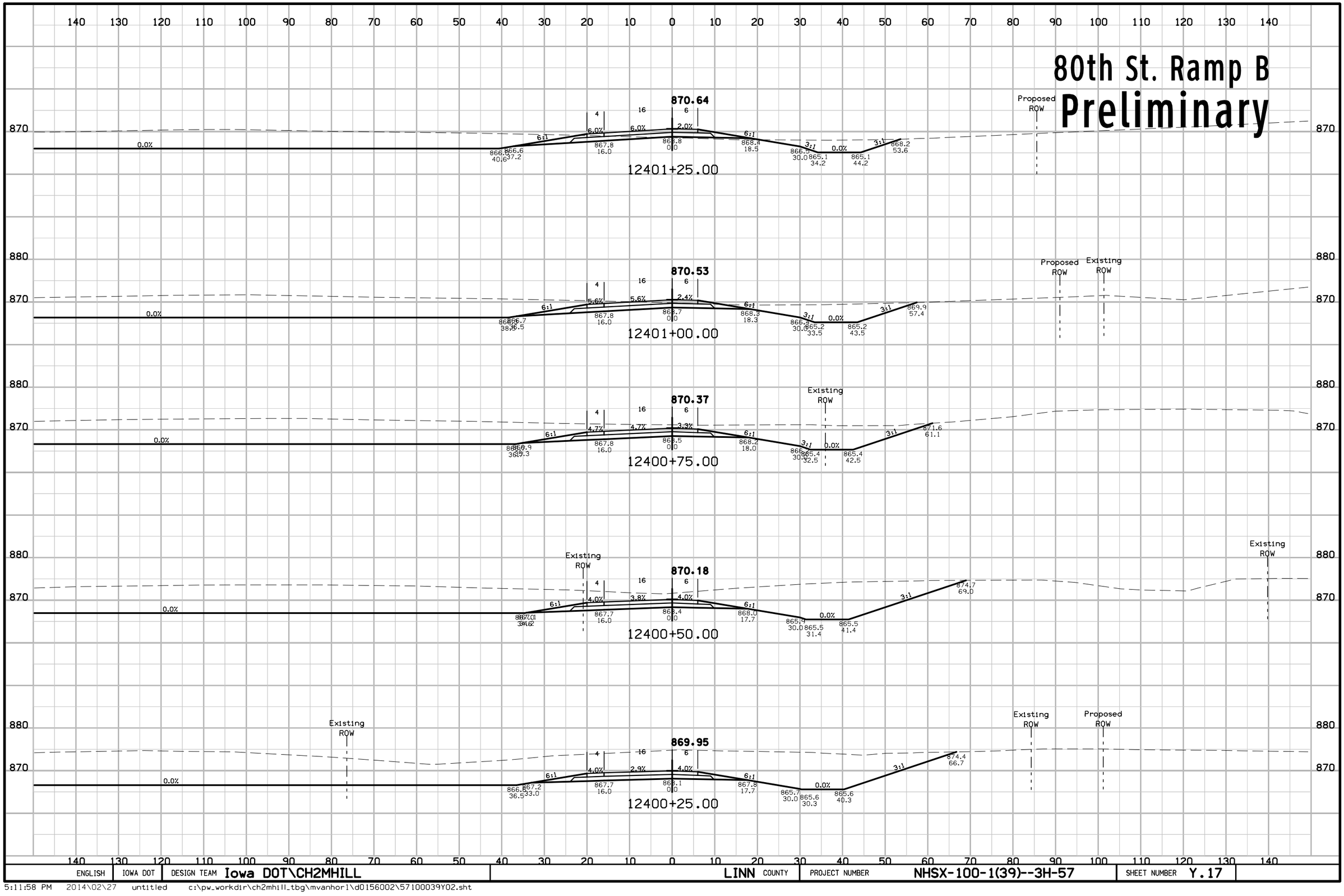
80th St. Ramp B

Preliminary



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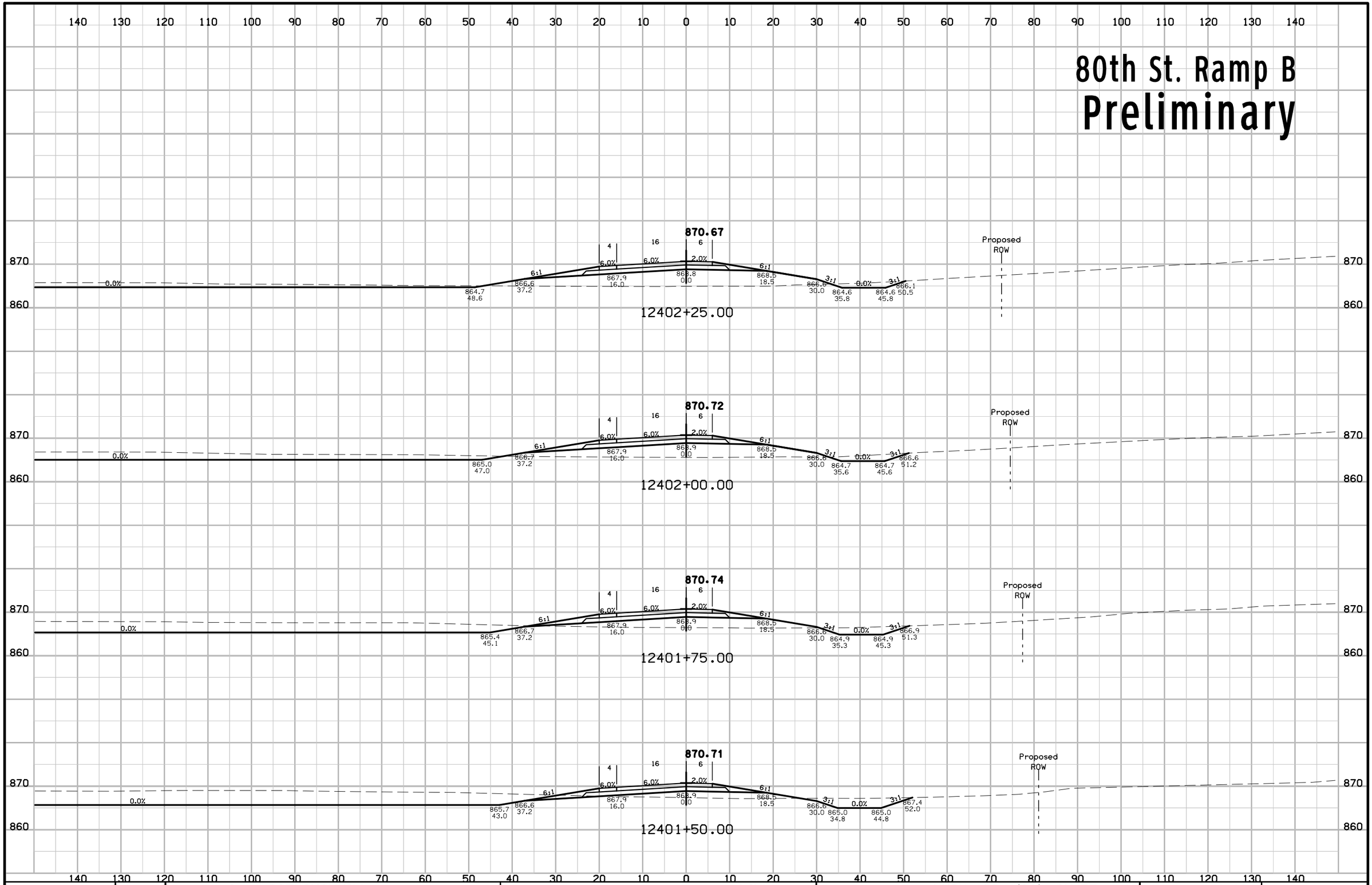
80th St. Ramp B
Preliminary



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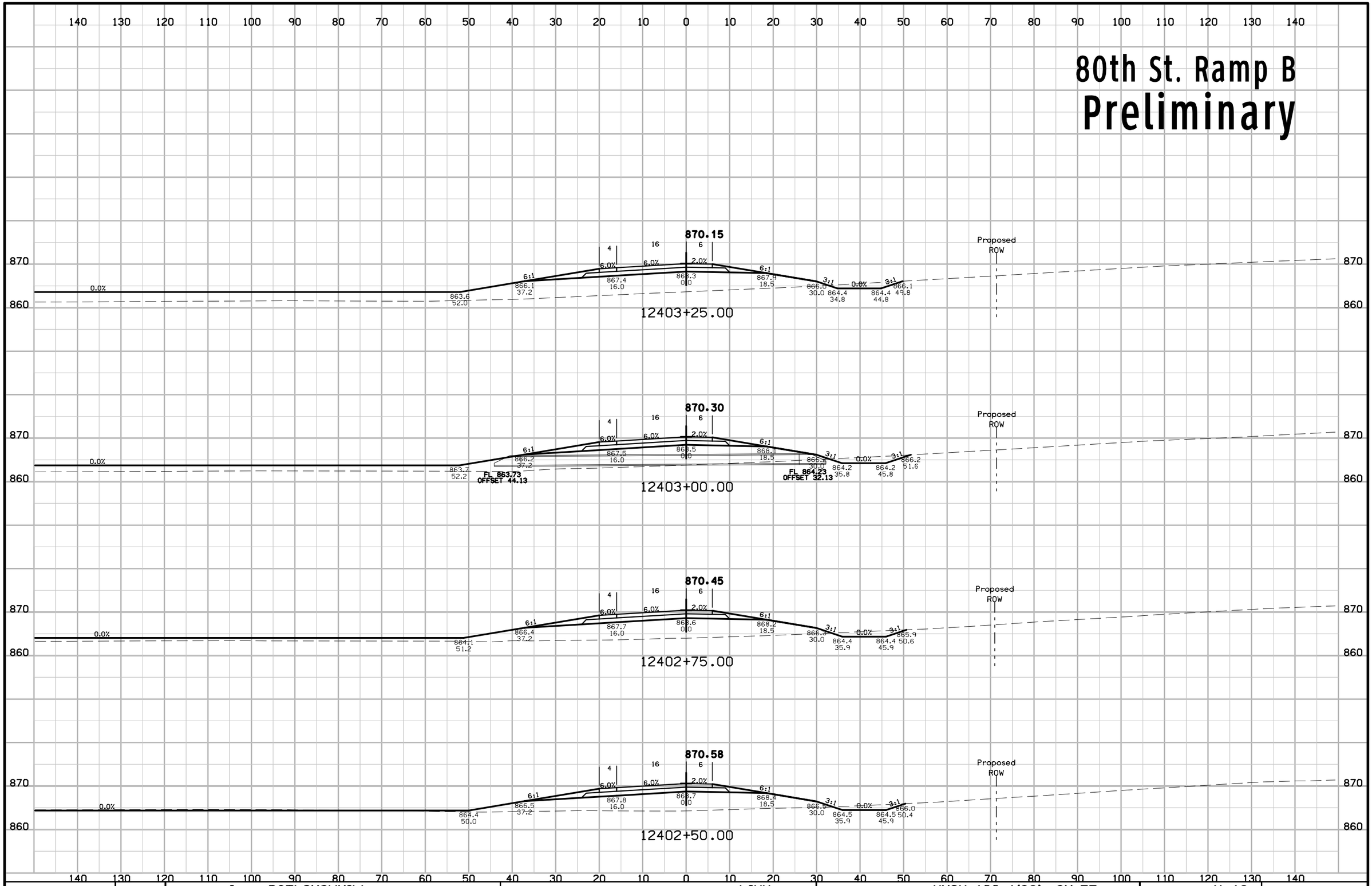
80th St. Ramp B
Preliminary



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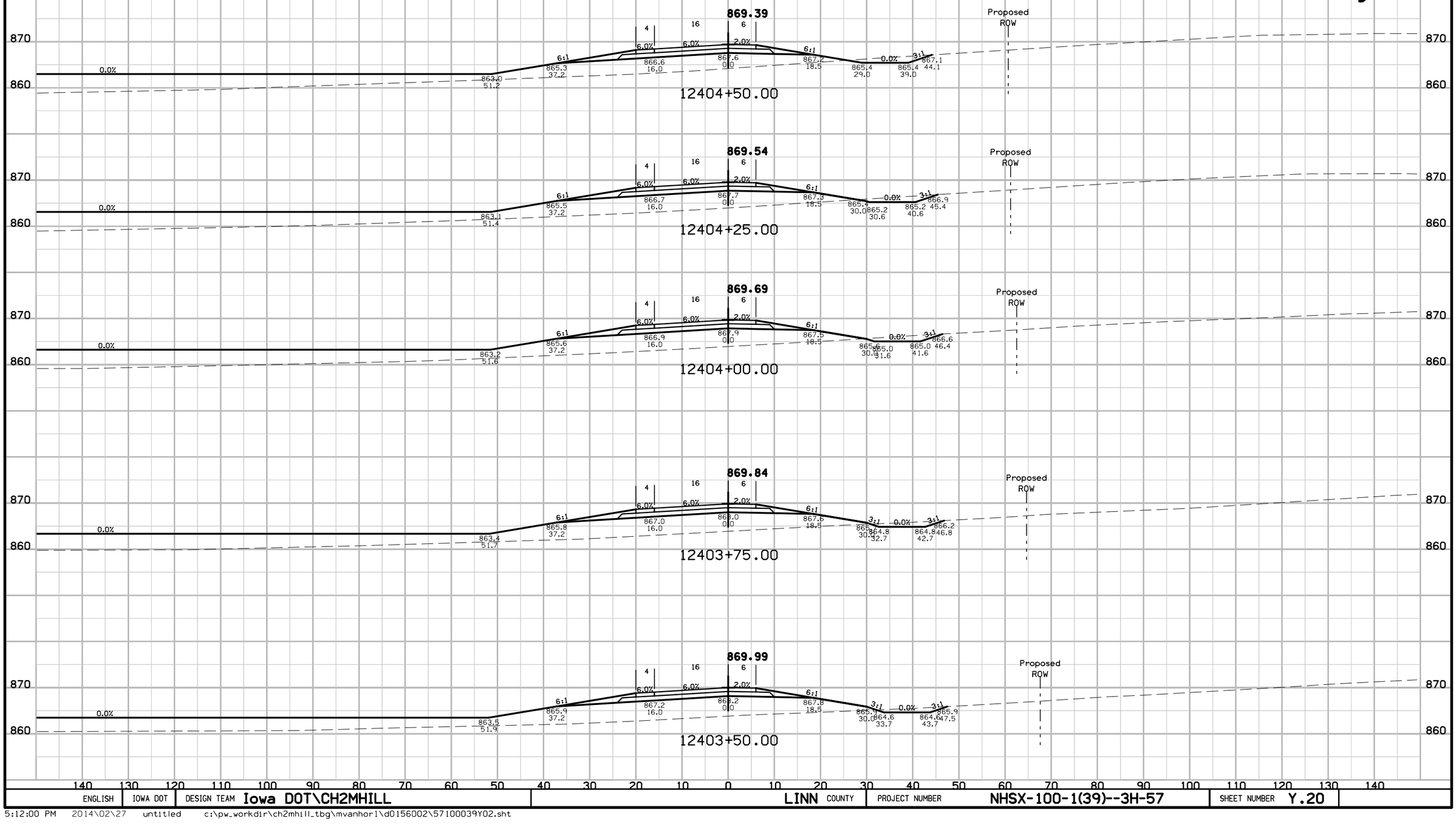
80th St. Ramp B
Preliminary



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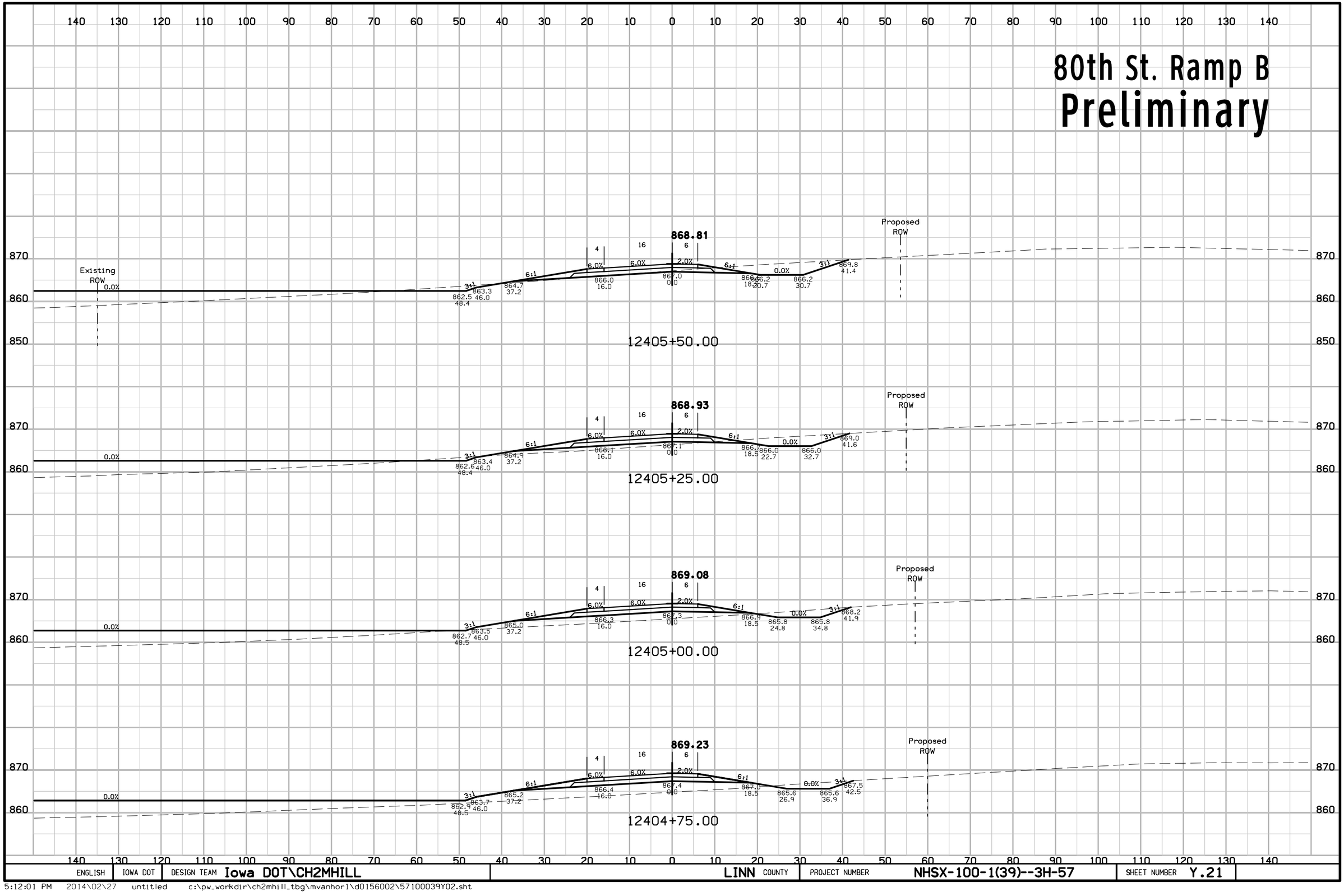
80th St. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.21

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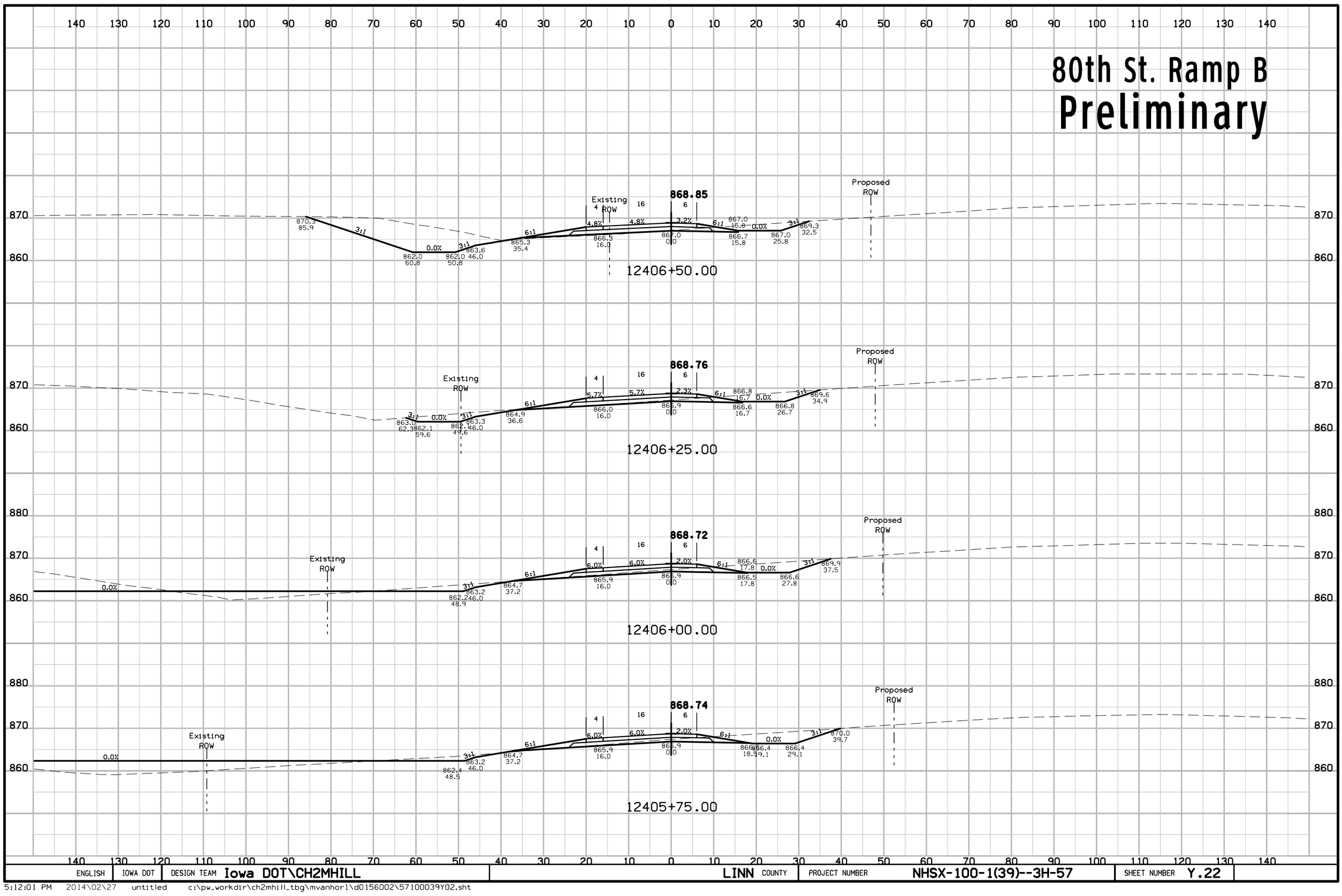
80th St. Ramp B
Preliminary



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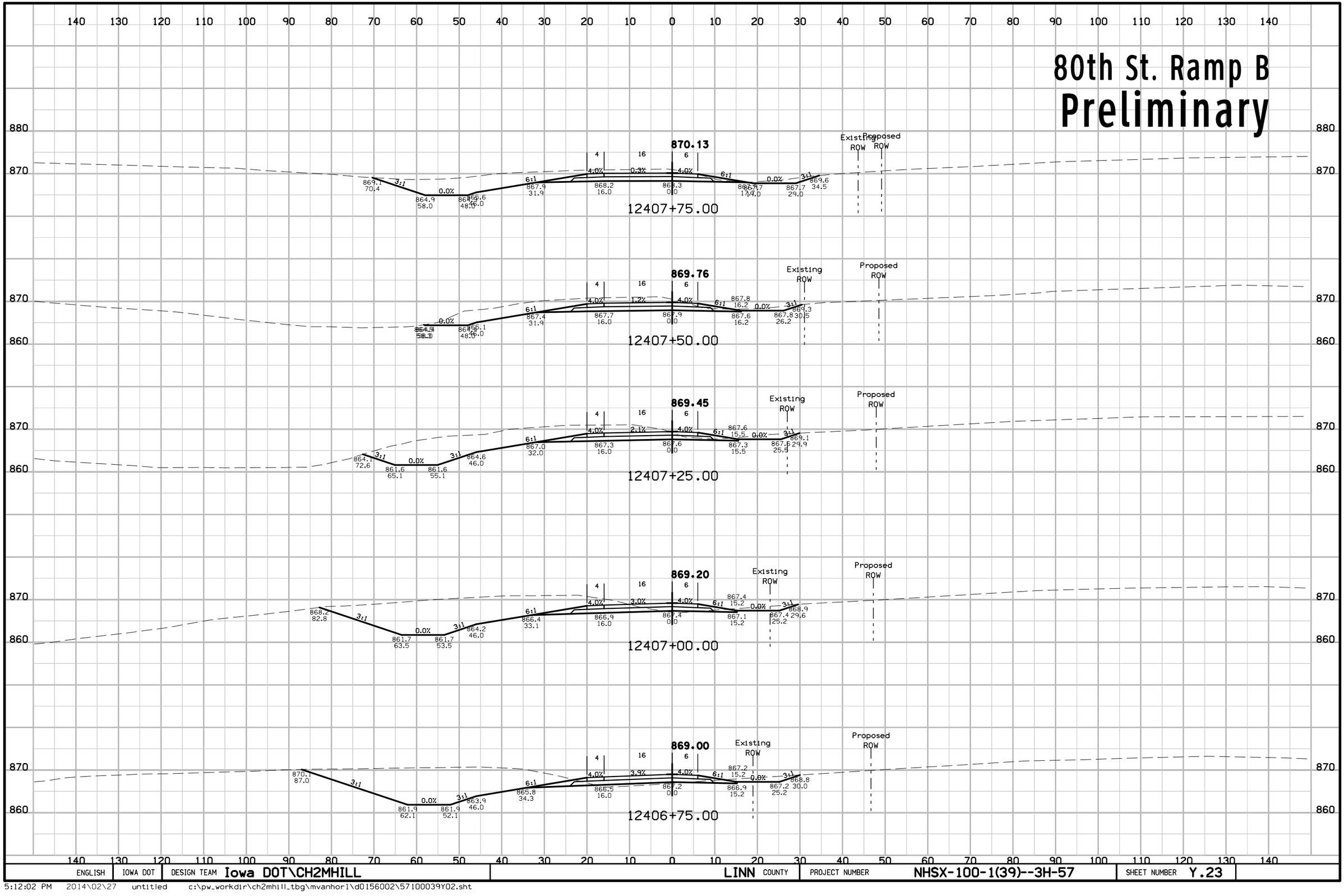
80th St. Ramp B
Preliminary



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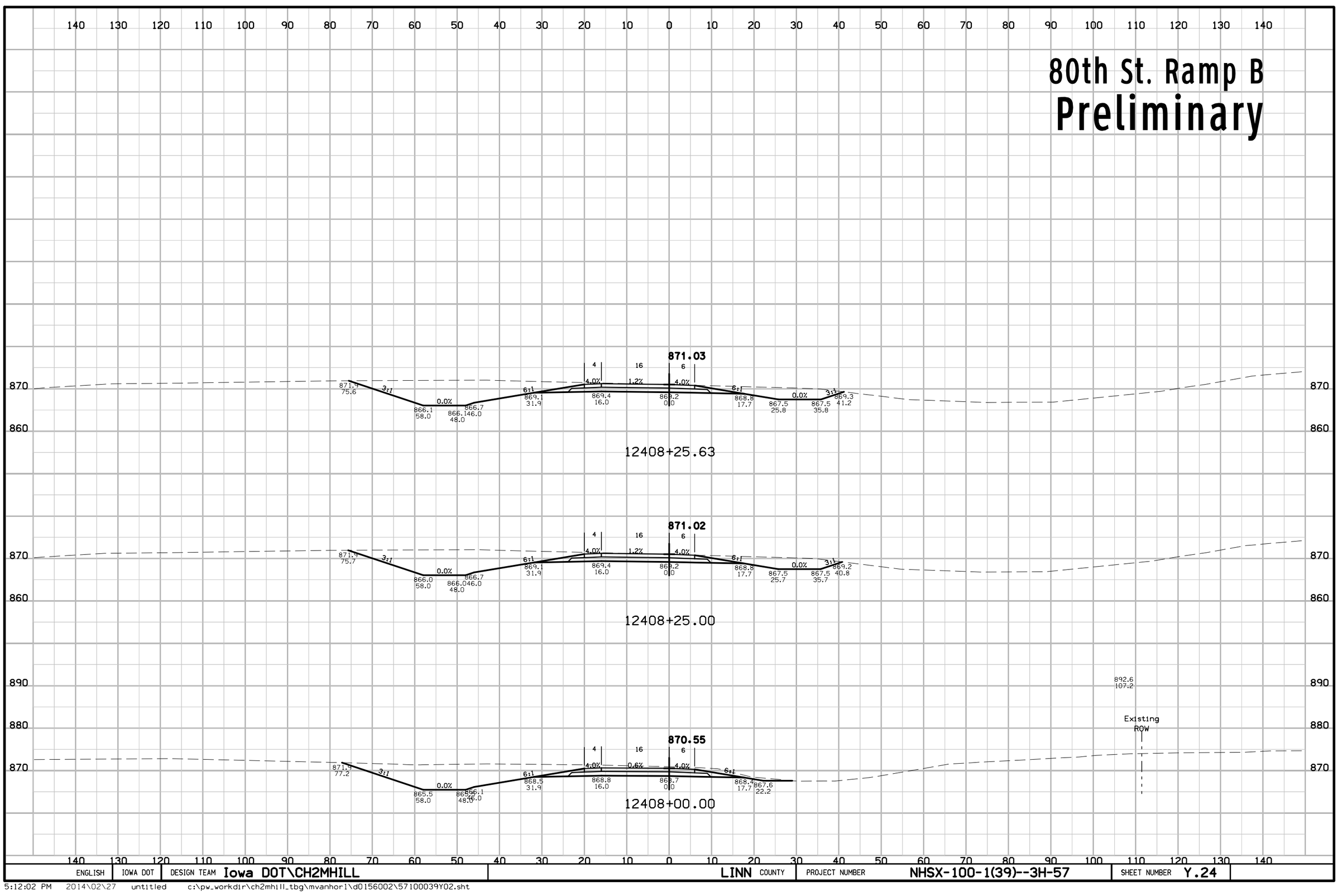
80th St. Ramp B
Preliminary



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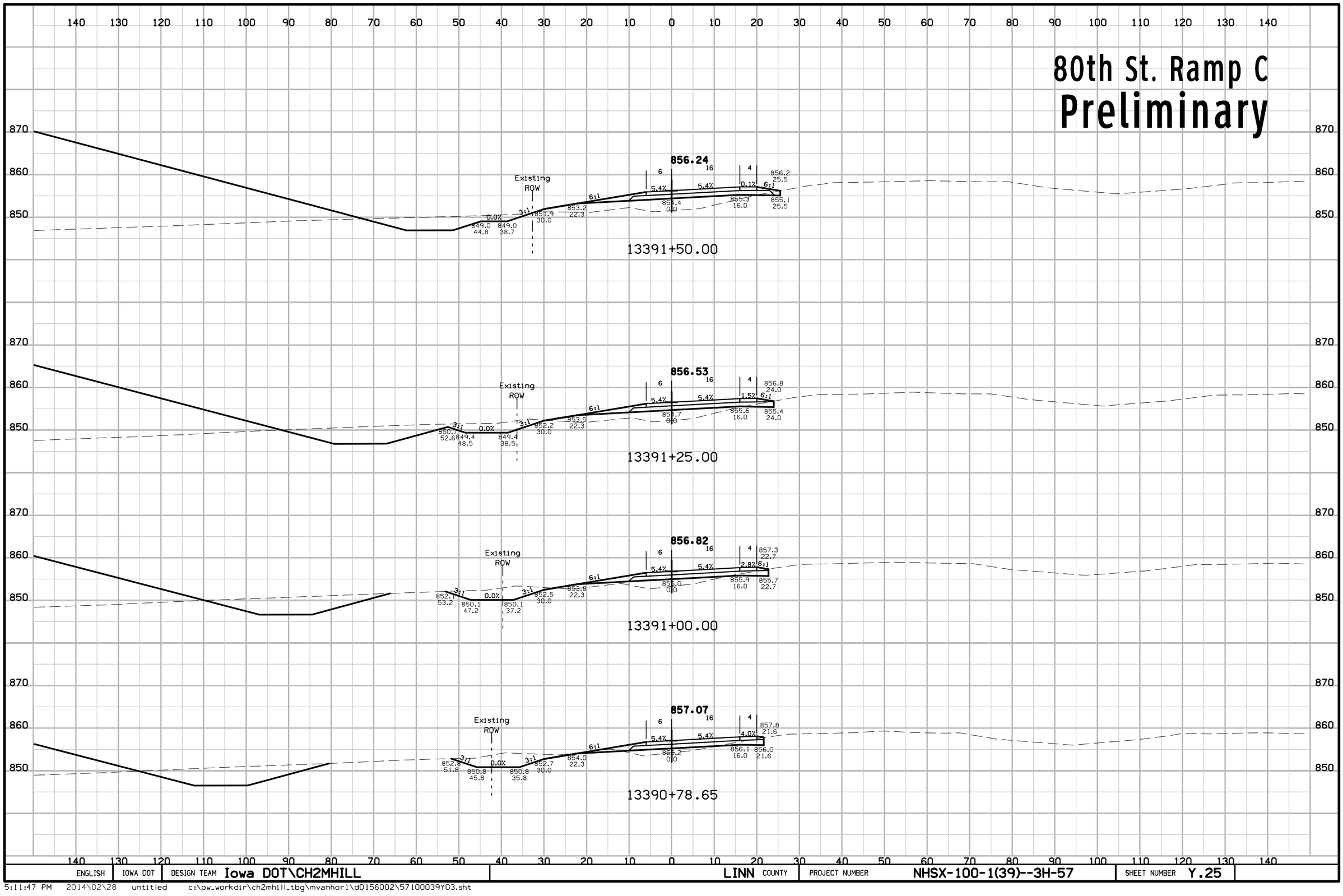
80th St. Ramp C

Preliminary



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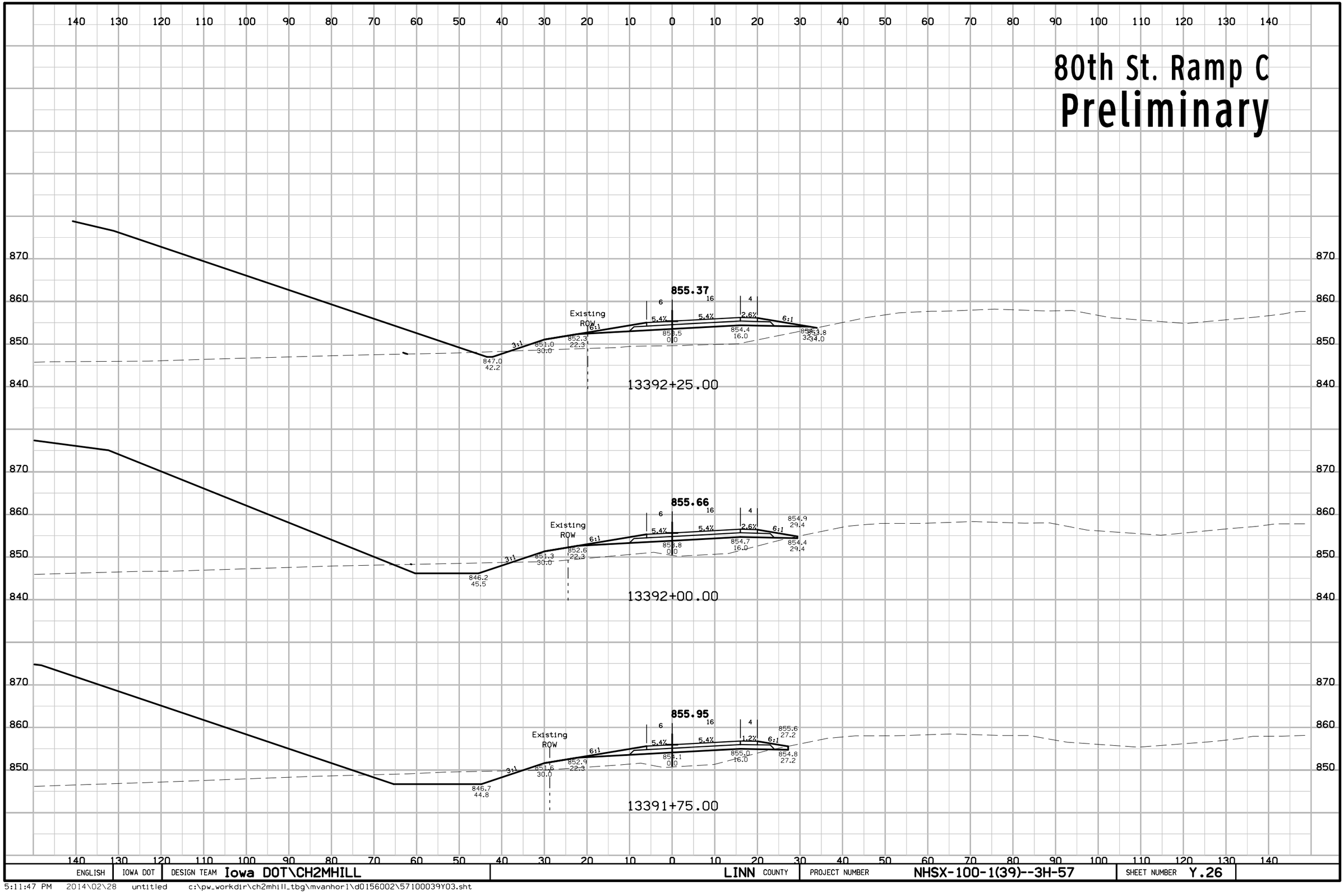
80th St. Ramp C

Preliminary



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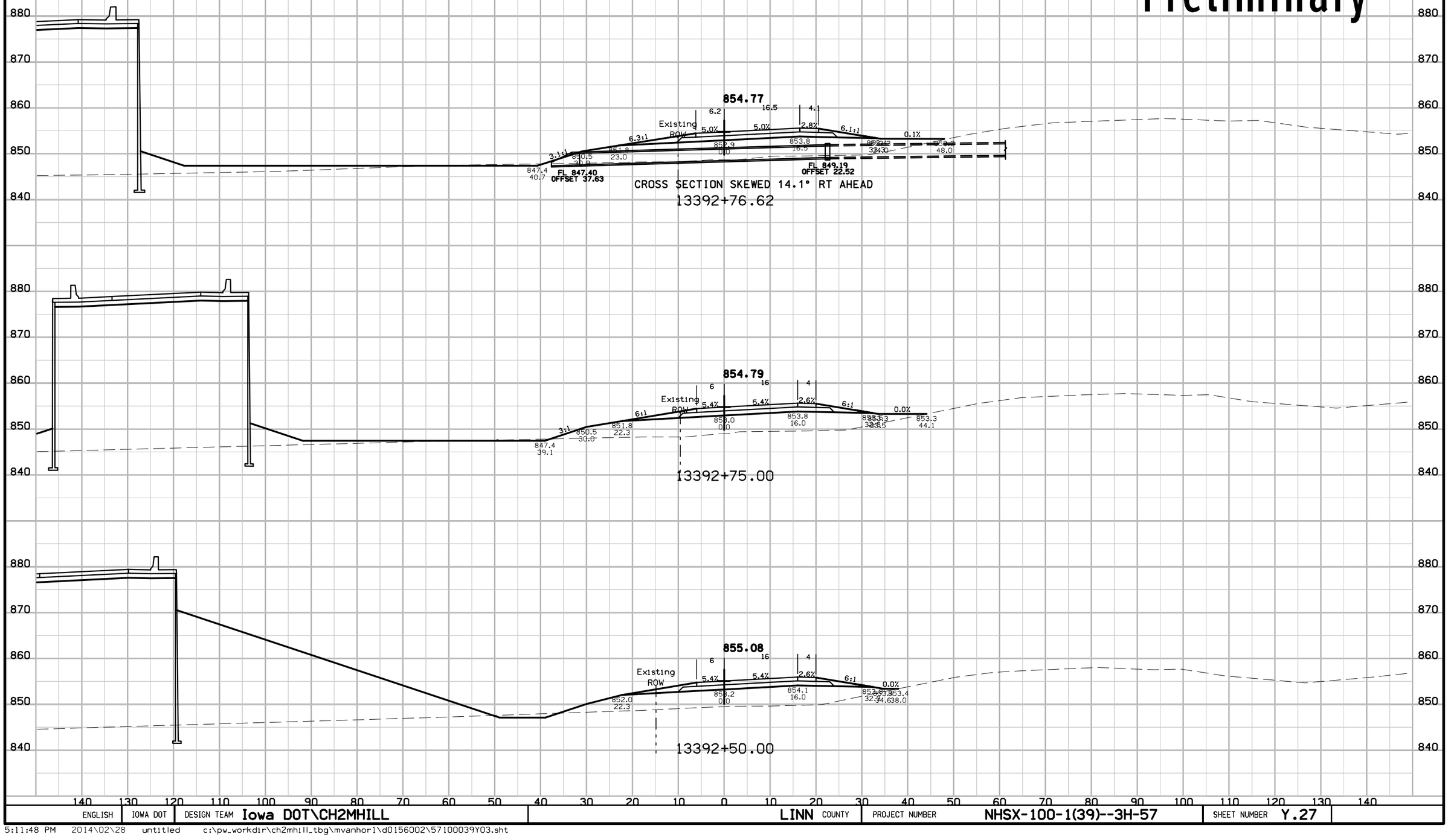
80th St. Ramp C

Preliminary



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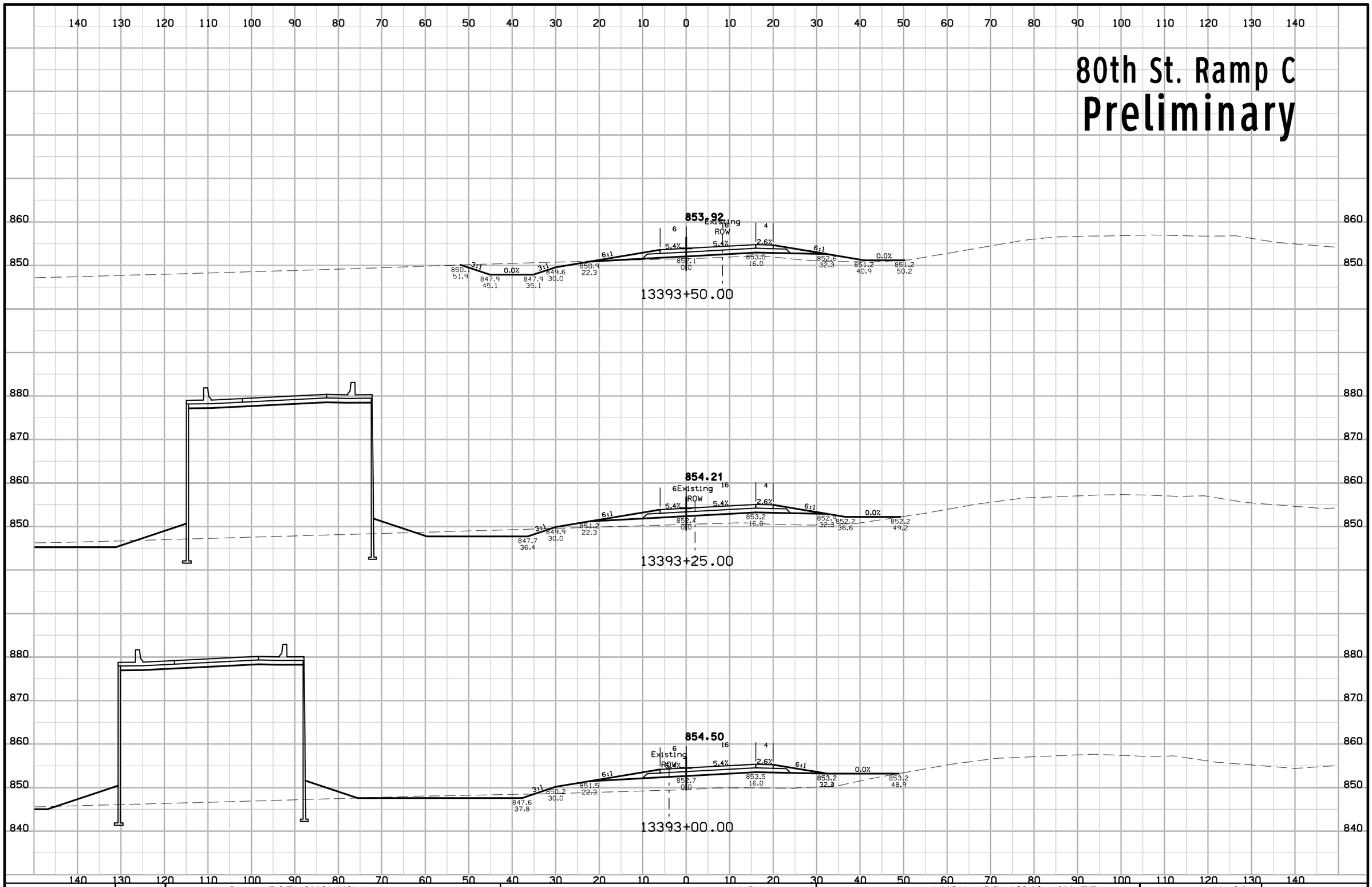
80th St. Ramp C

Preliminary



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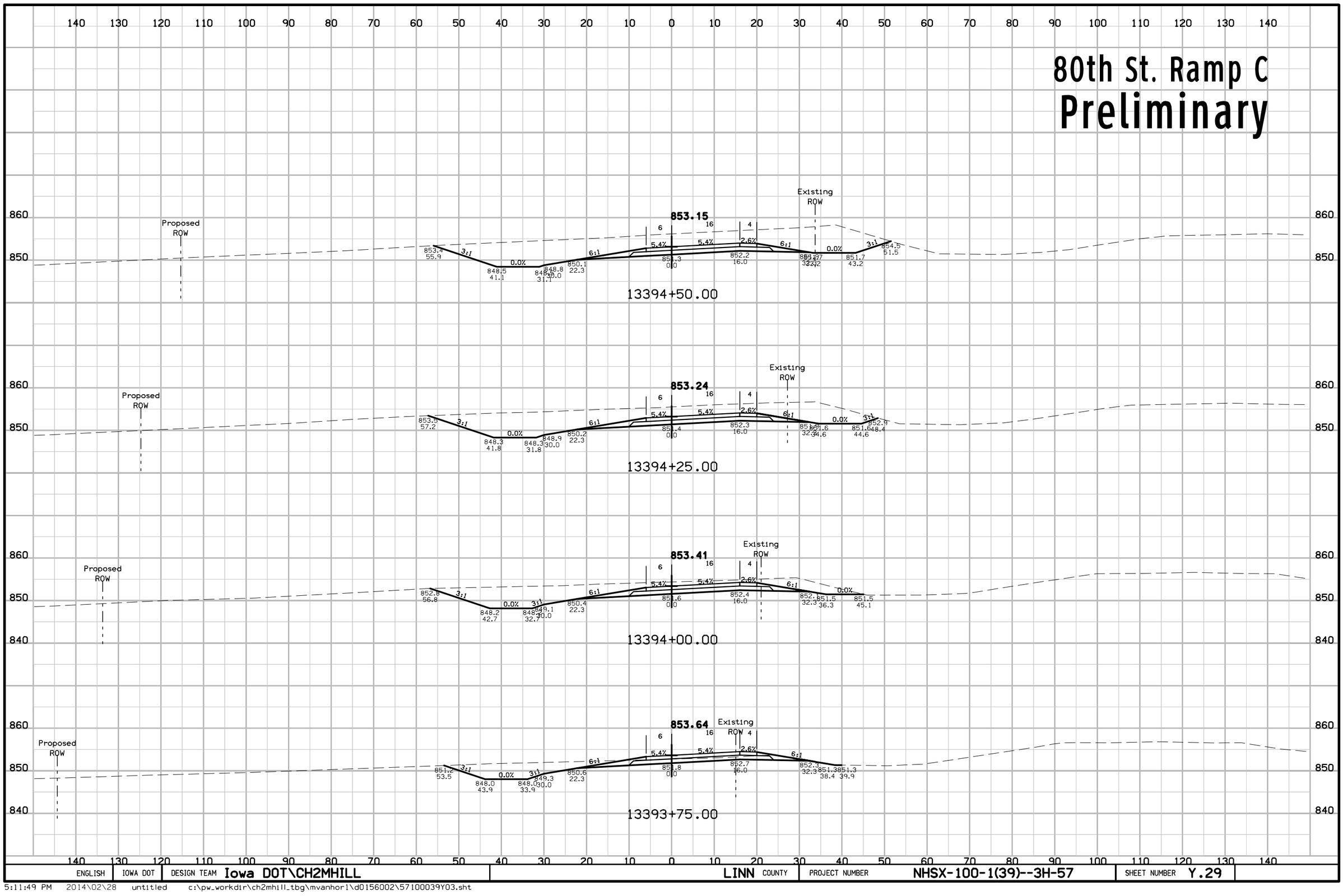
80th St. Ramp C

Preliminary



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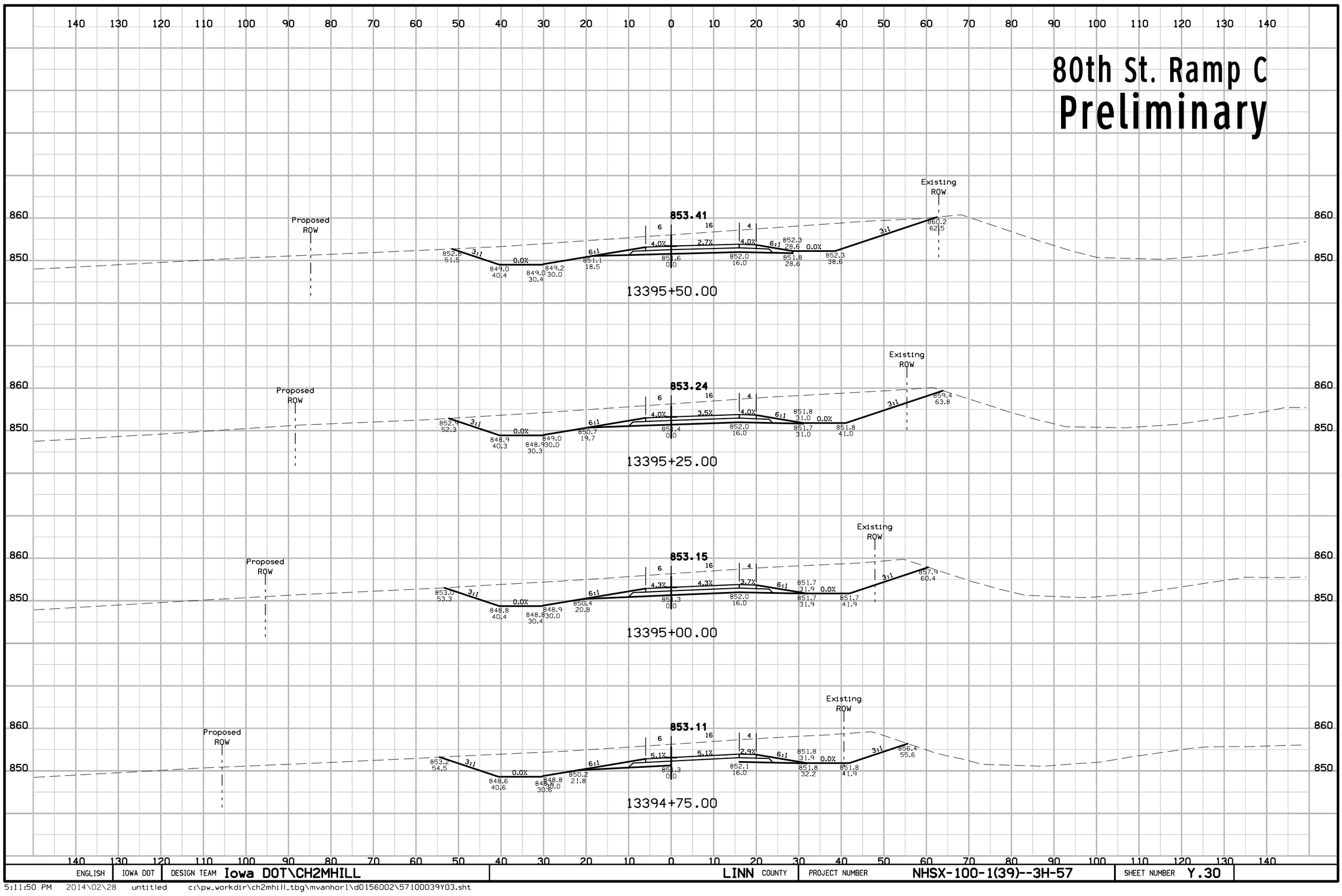
80th St. Ramp C

Preliminary



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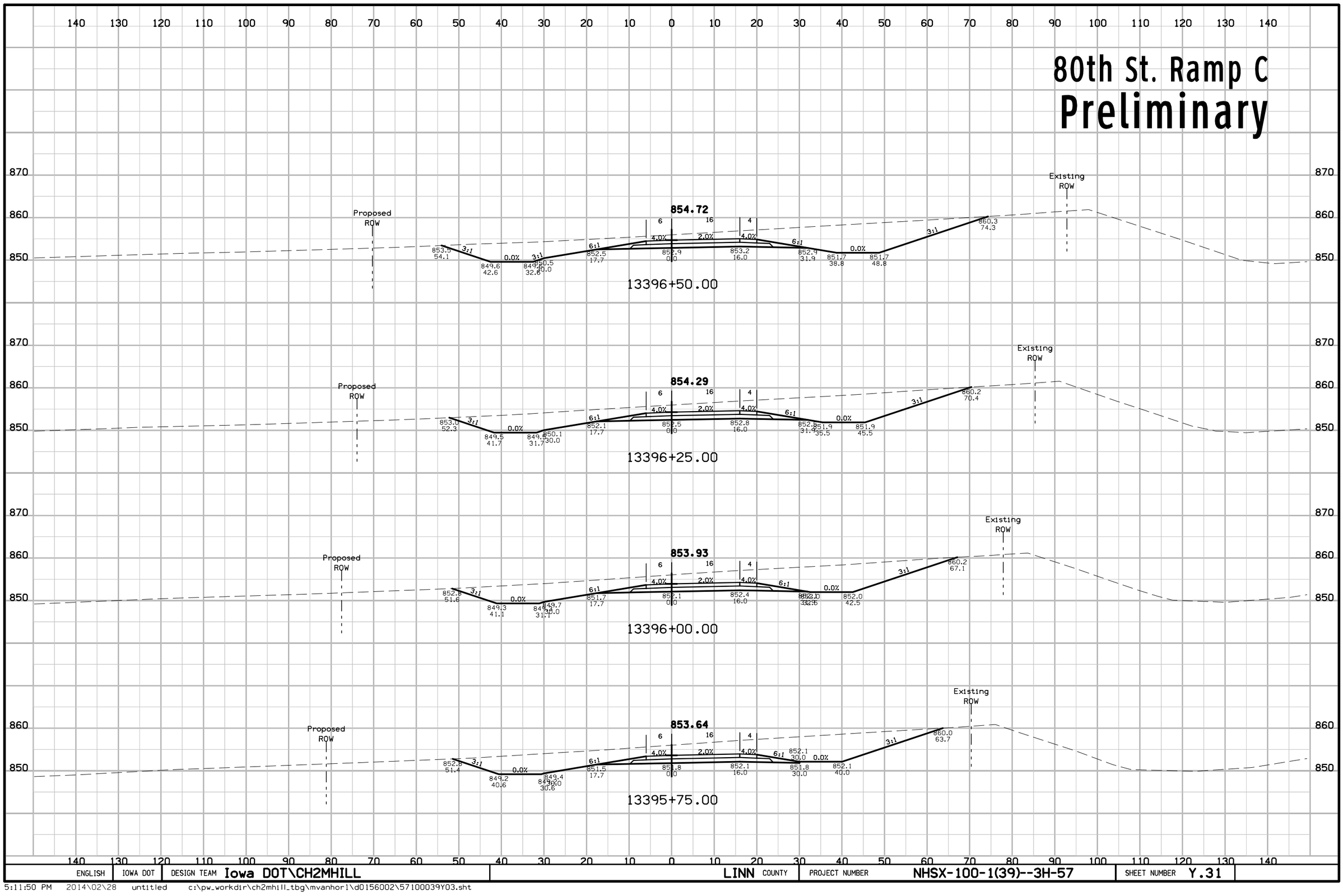
80th St. Ramp C

Preliminary



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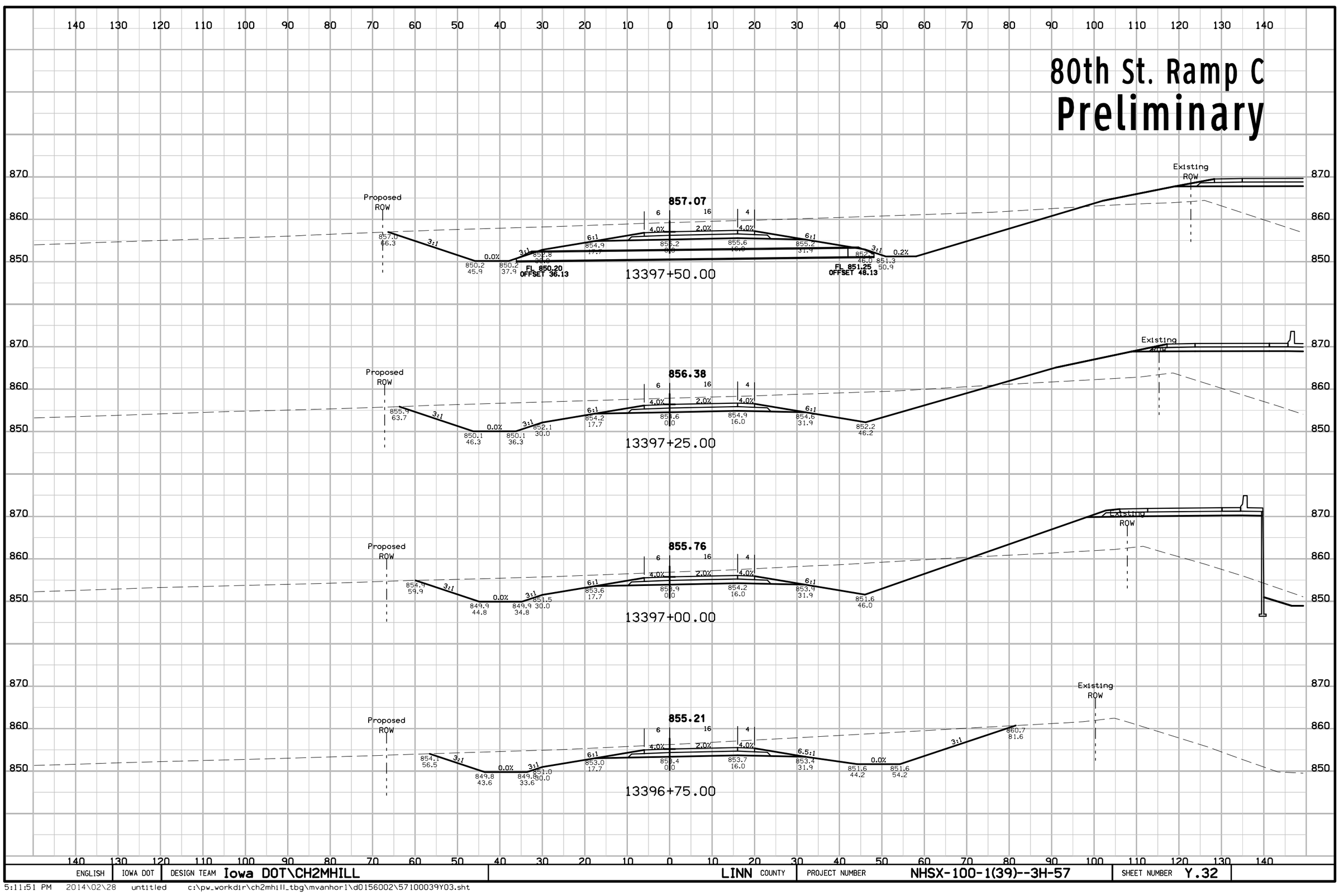
80th St. Ramp C

Preliminary



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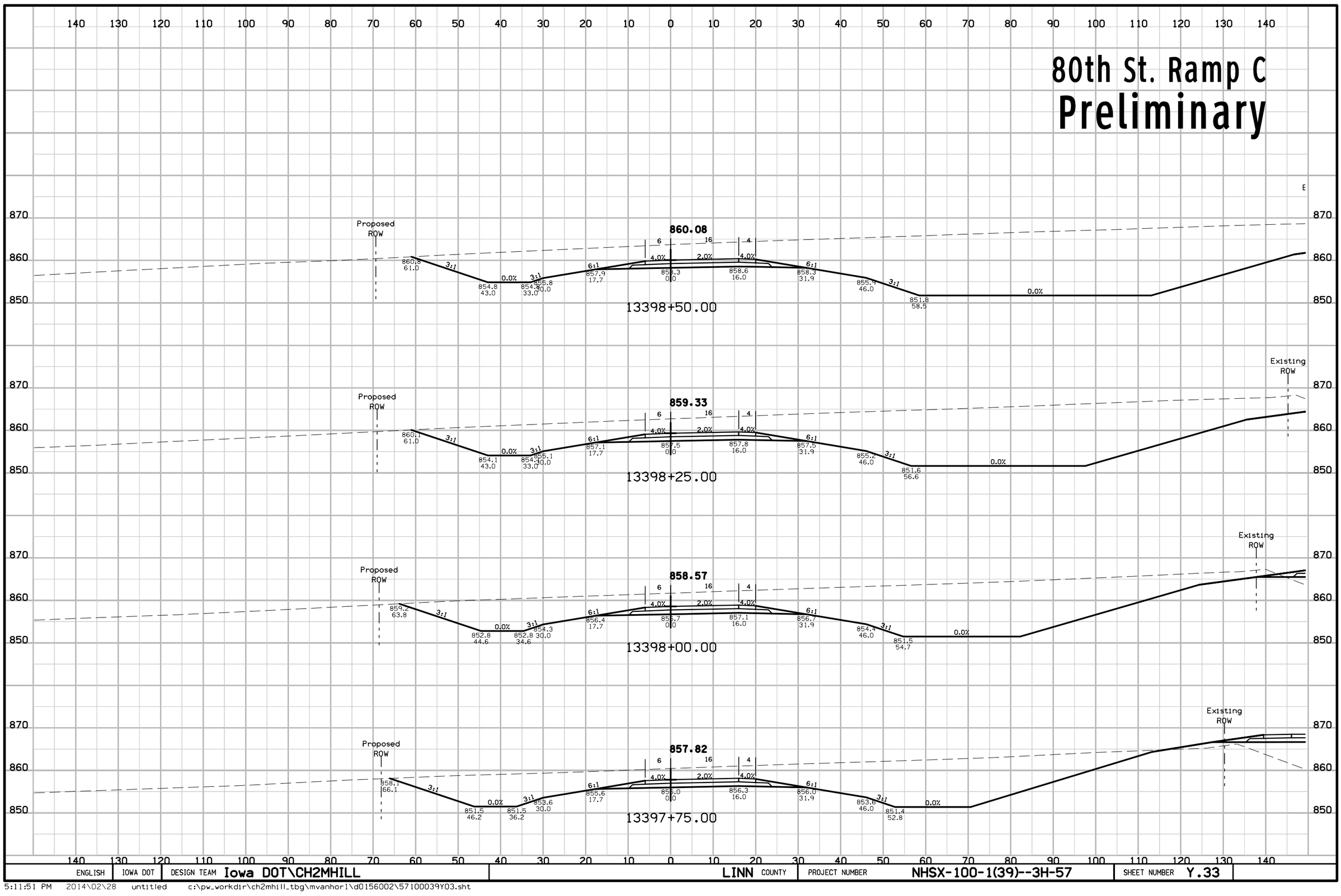
80th St. Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.33

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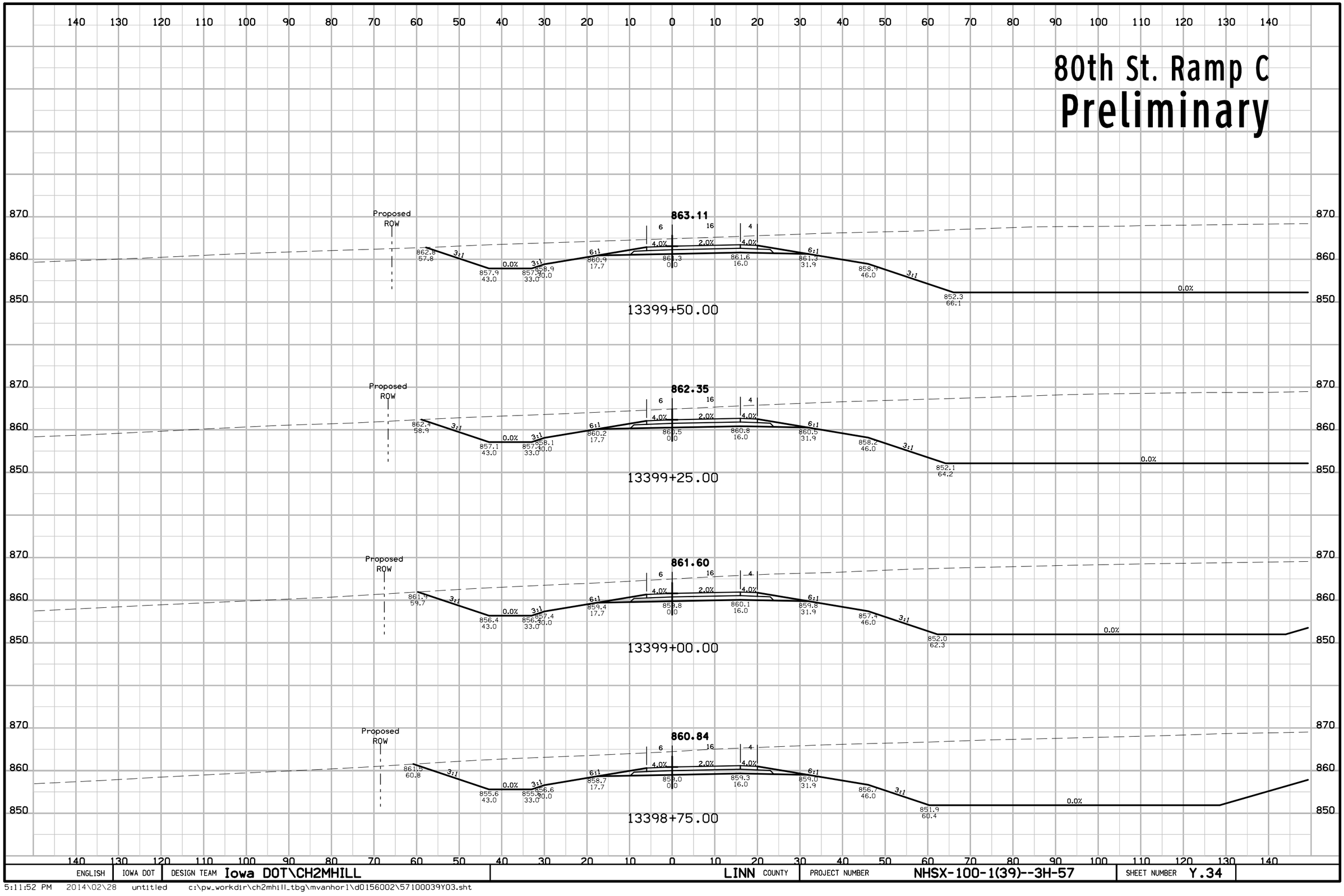
80th St. Ramp C

Preliminary



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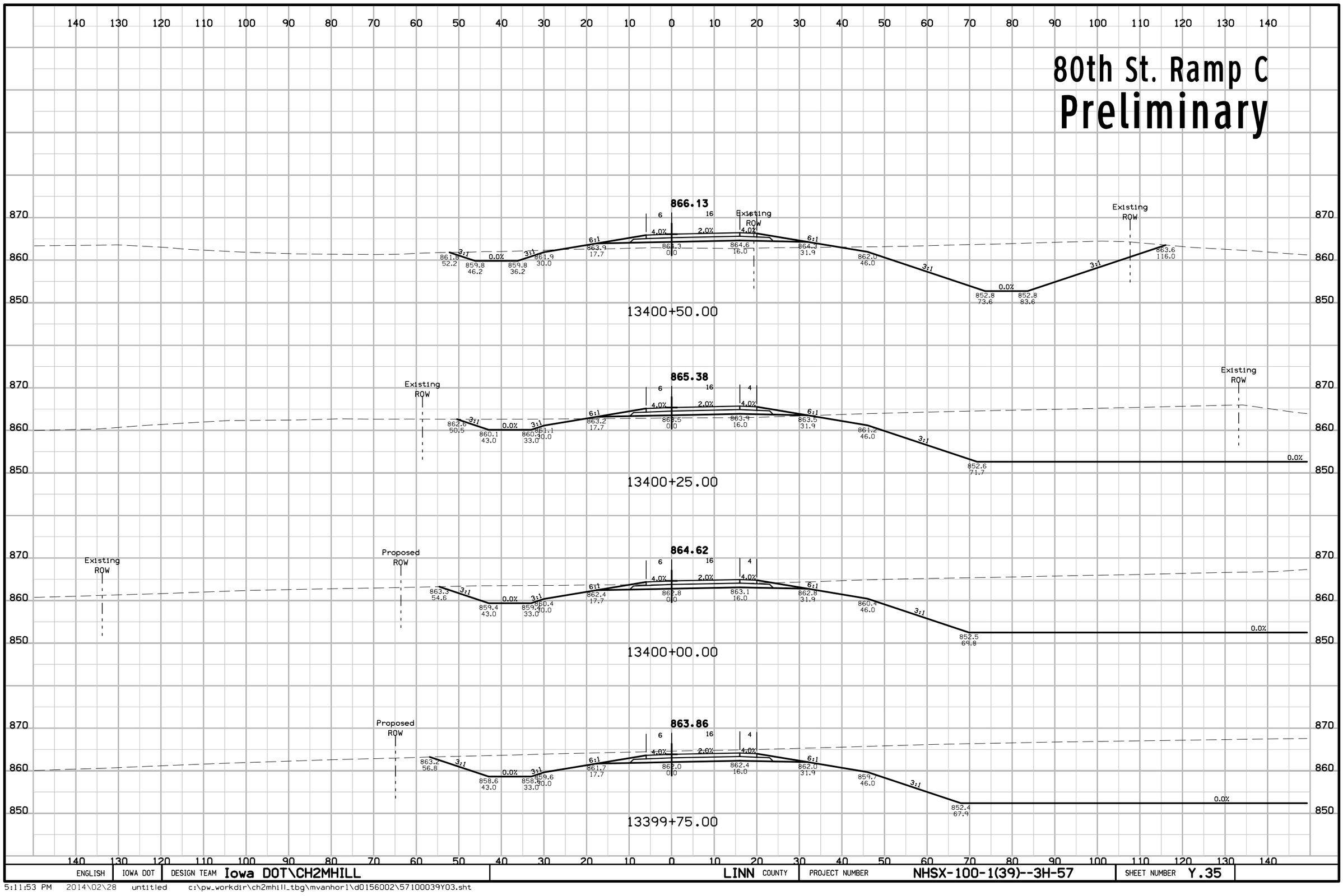
80th St. Ramp C

Preliminary



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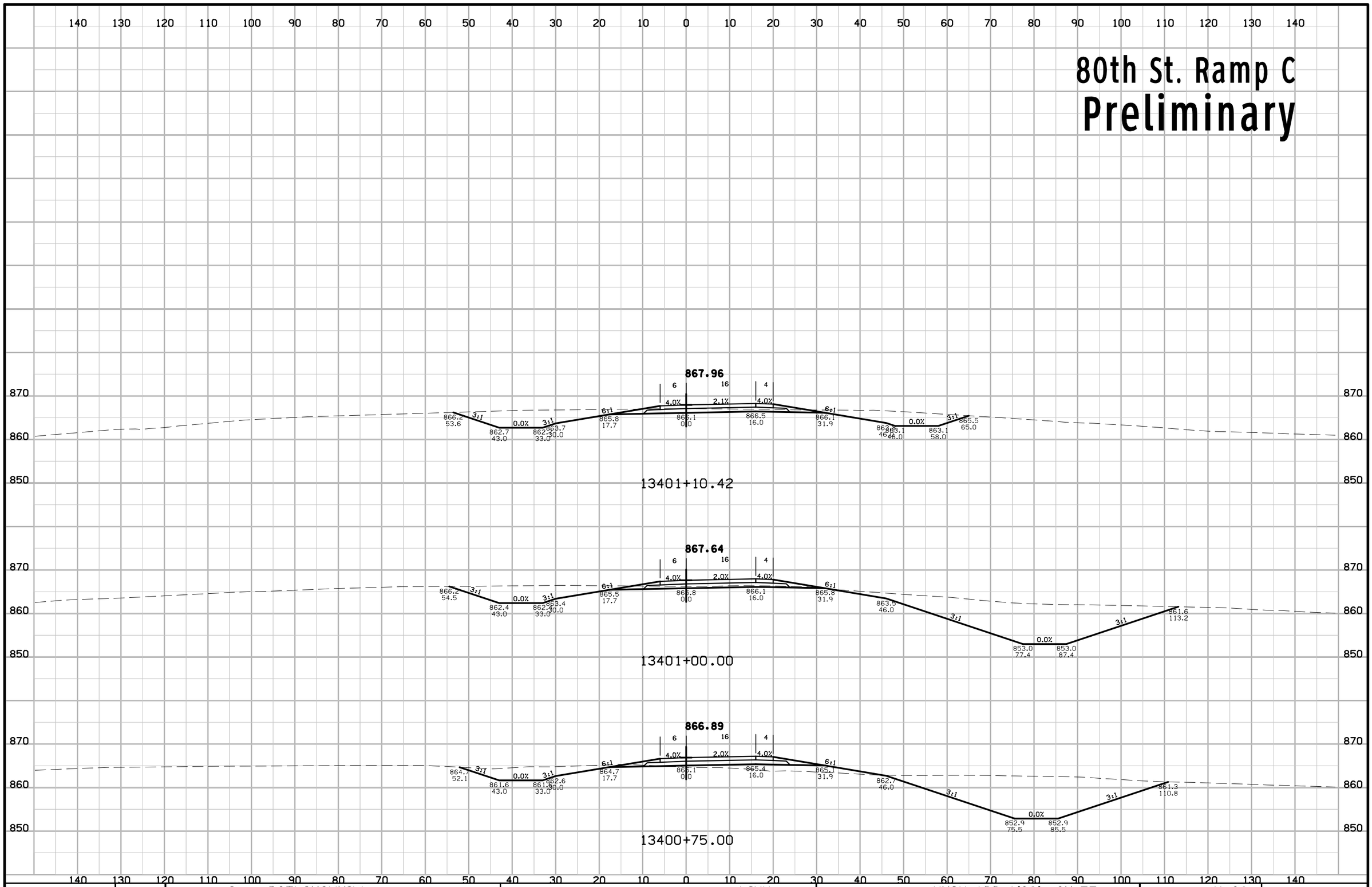
80th St. Ramp C

Preliminary



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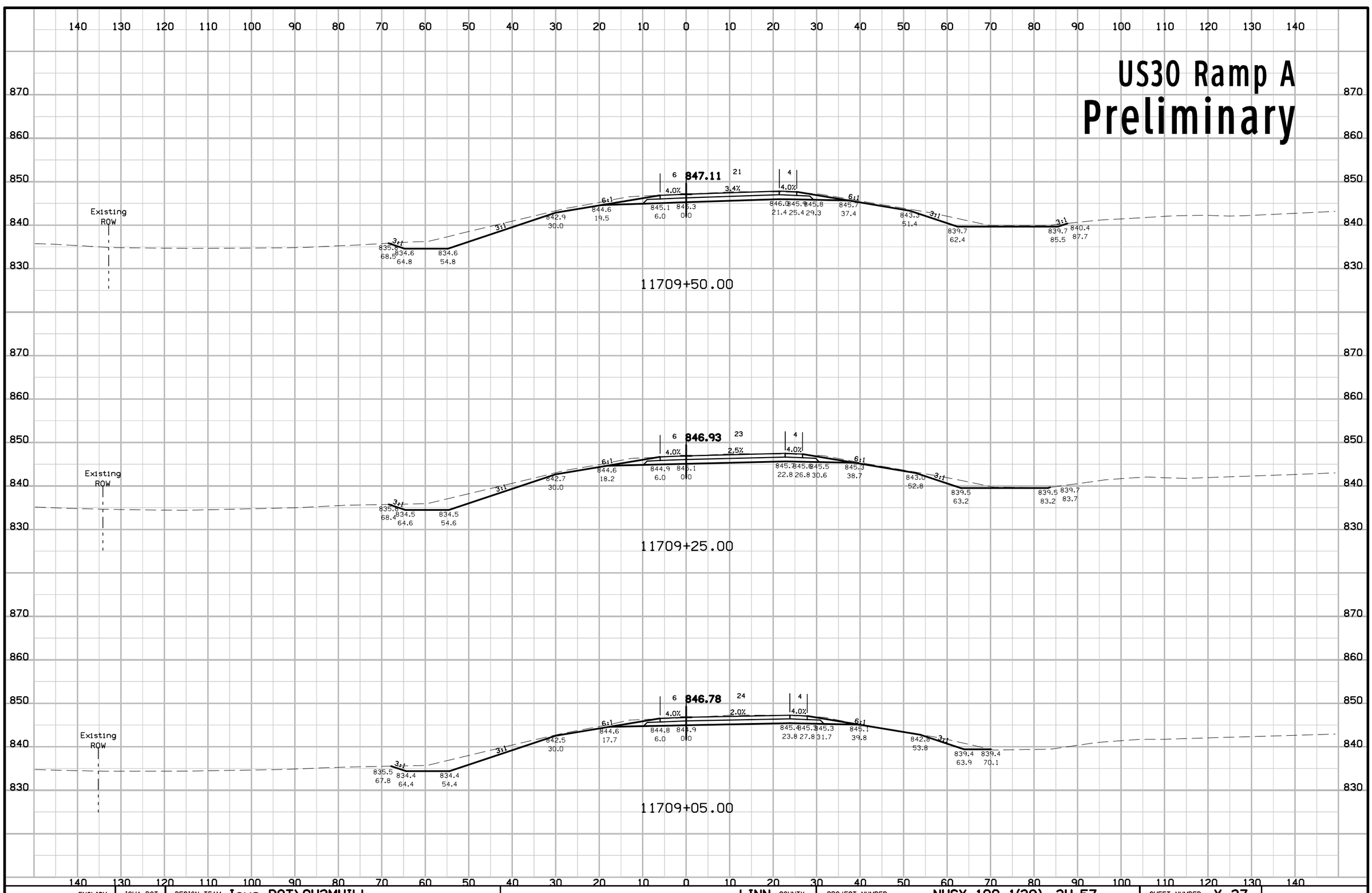
US30 Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.37

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US30 Ramp A
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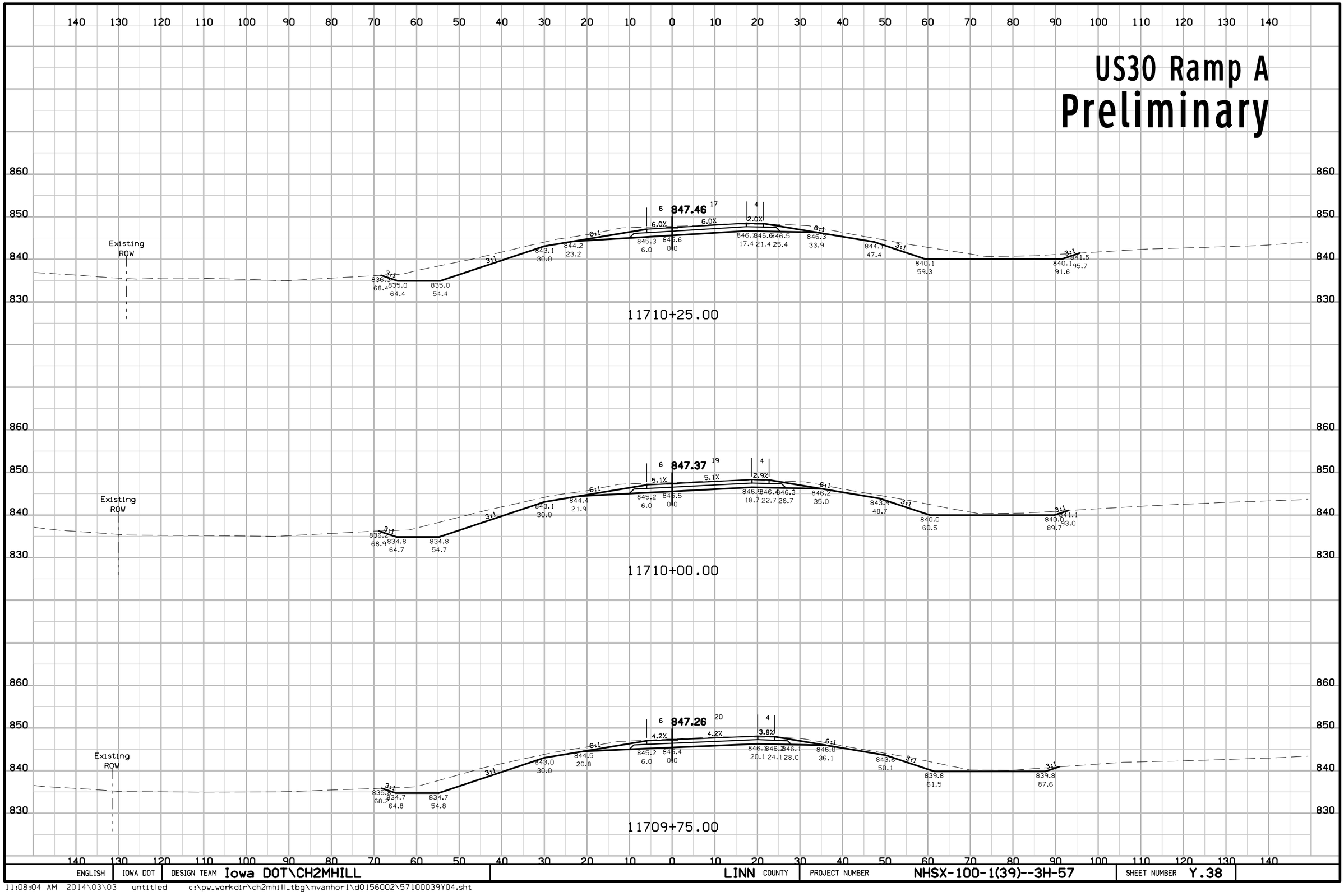

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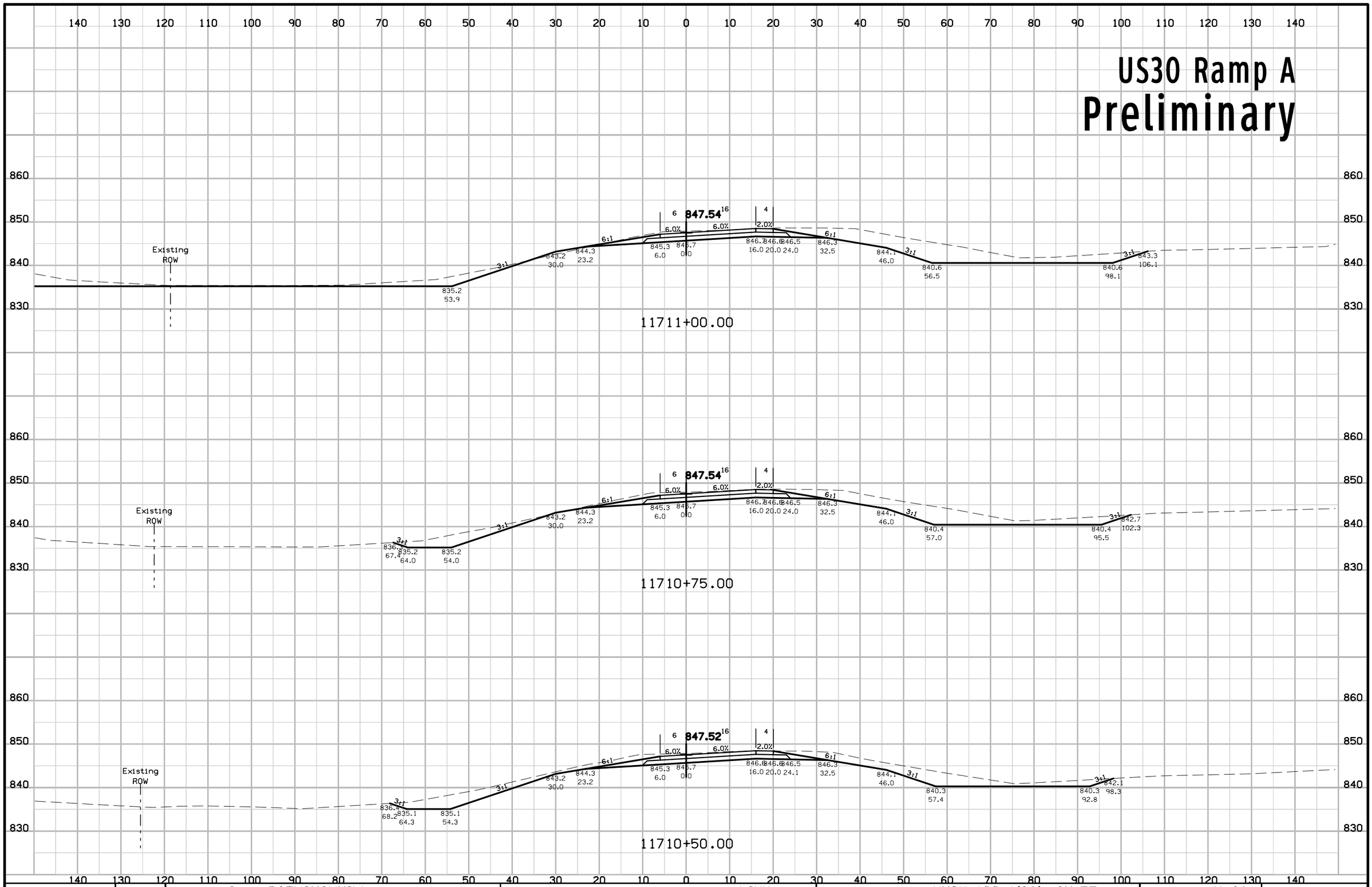
US30 Ramp A
Preliminary



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US30 Ramp A
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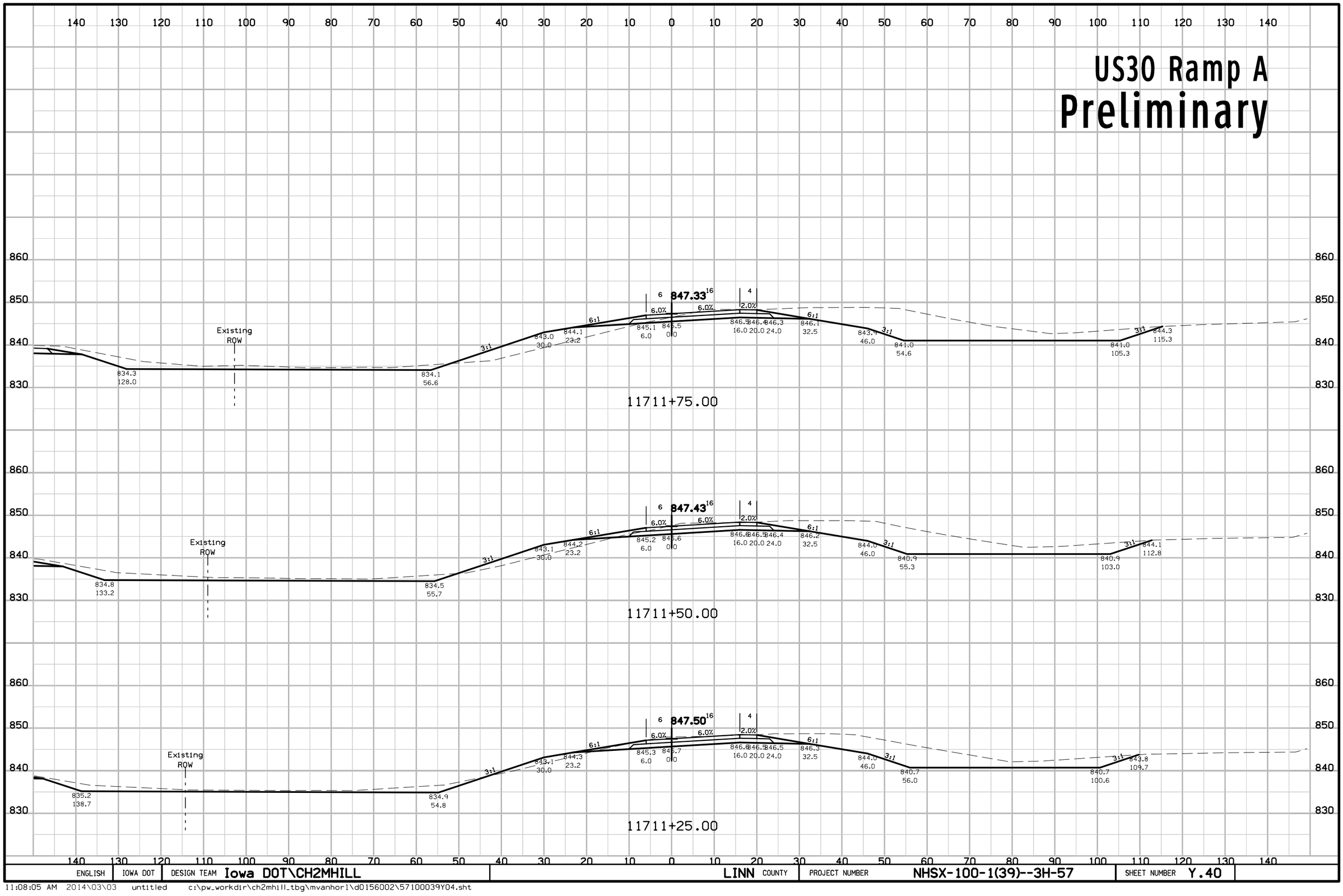

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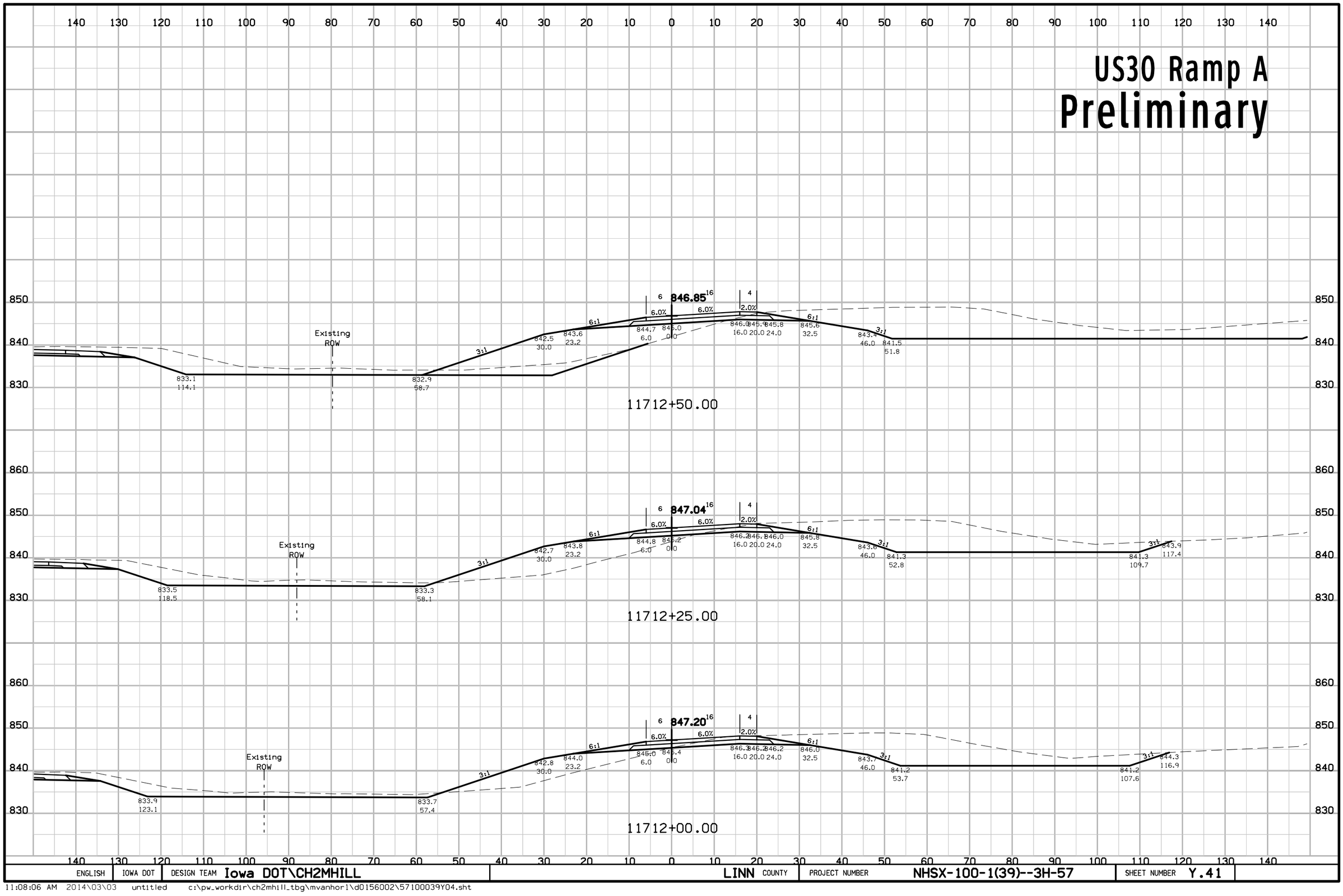
US30 Ramp A
Preliminary



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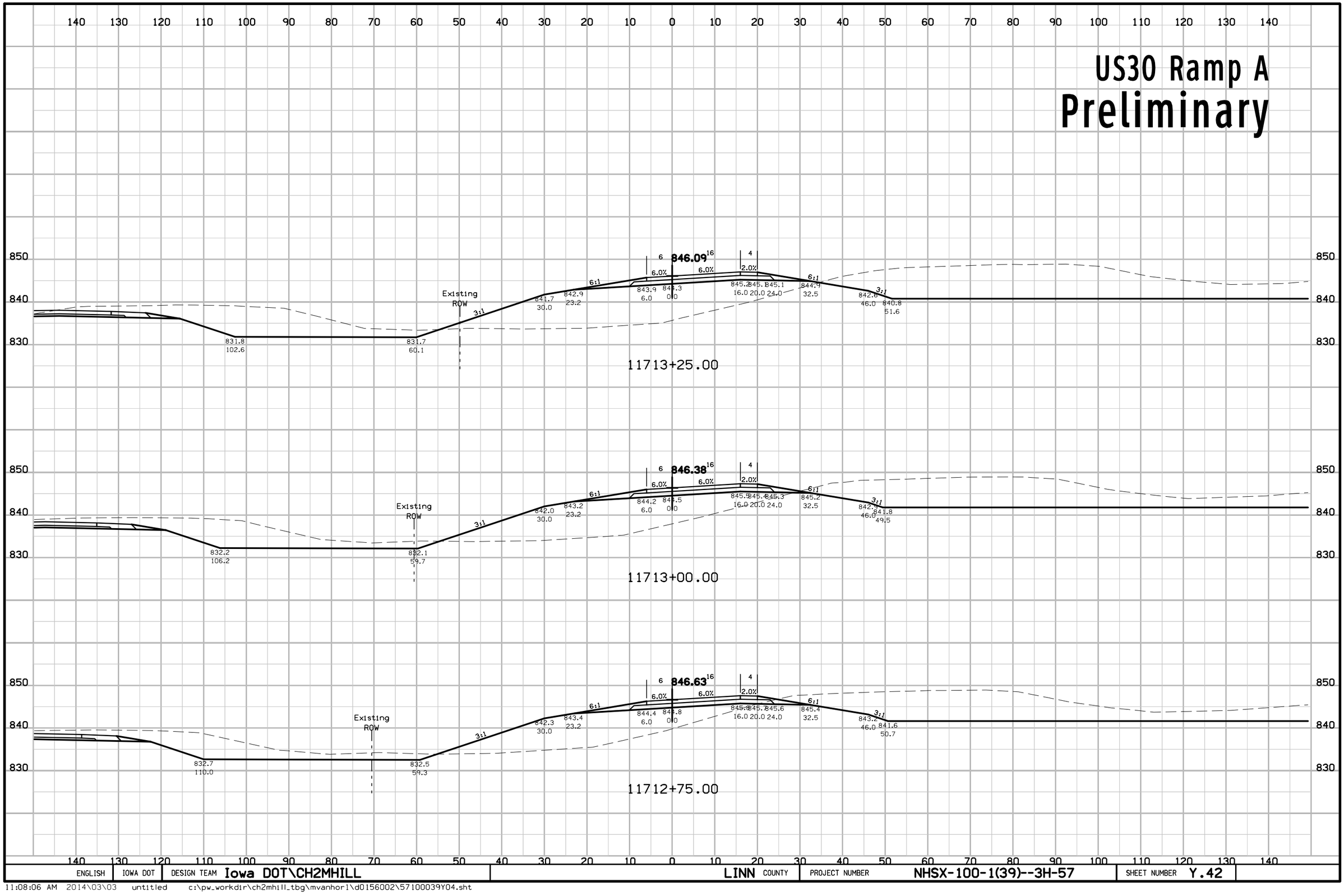
US30 Ramp A
Preliminary



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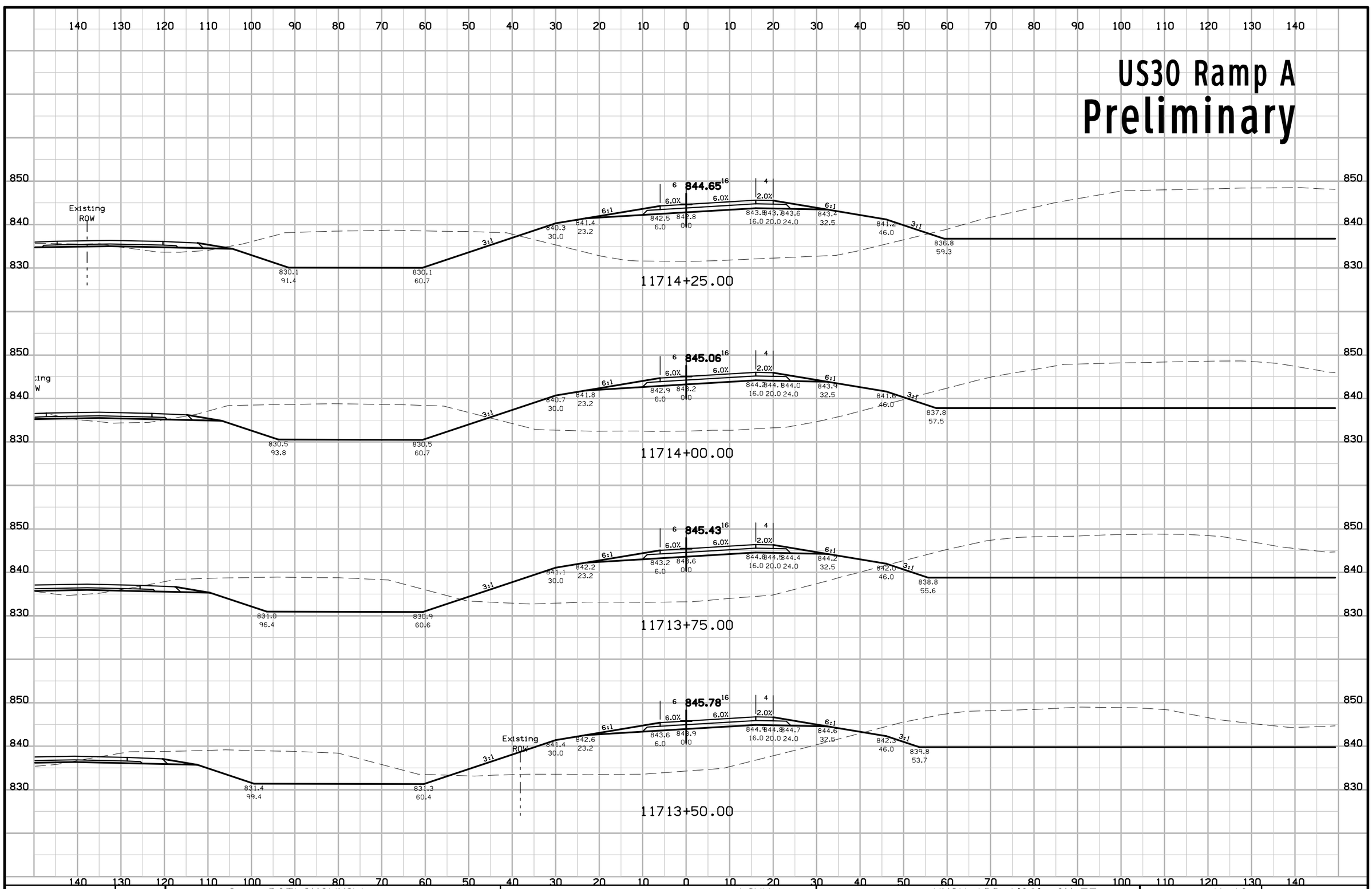
US30 Ramp A
Preliminary



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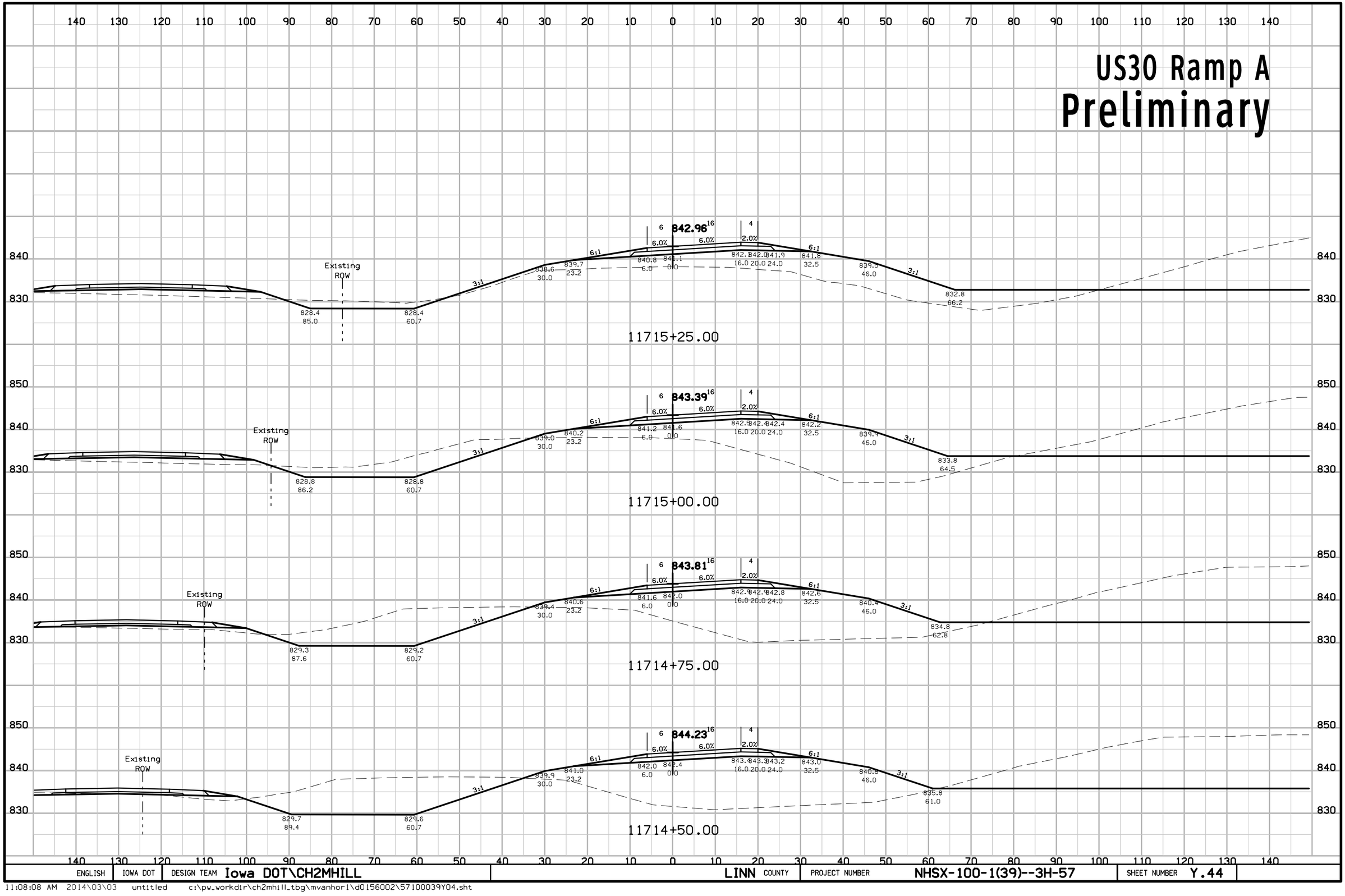
US30 Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.44

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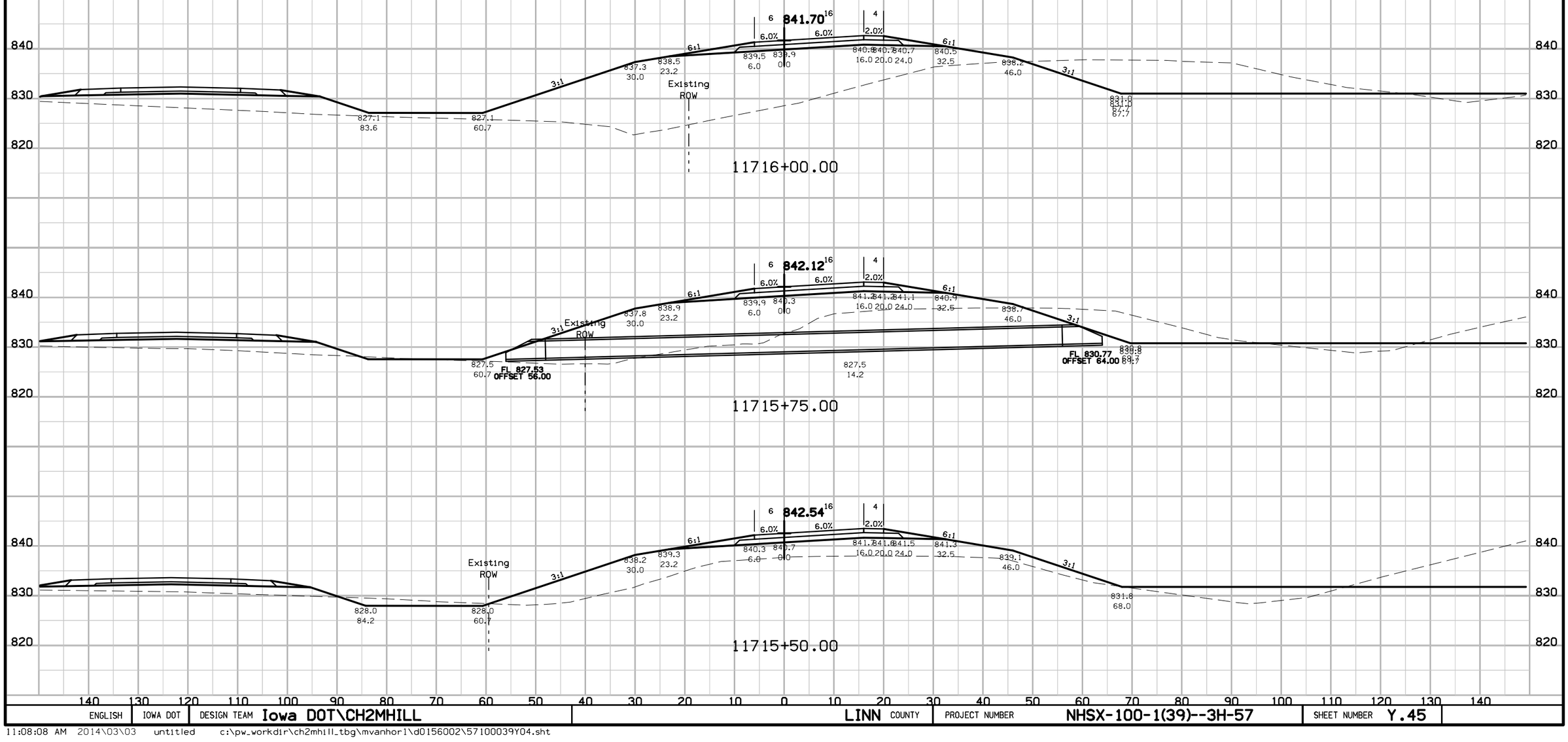
US30 Ramp A

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.45

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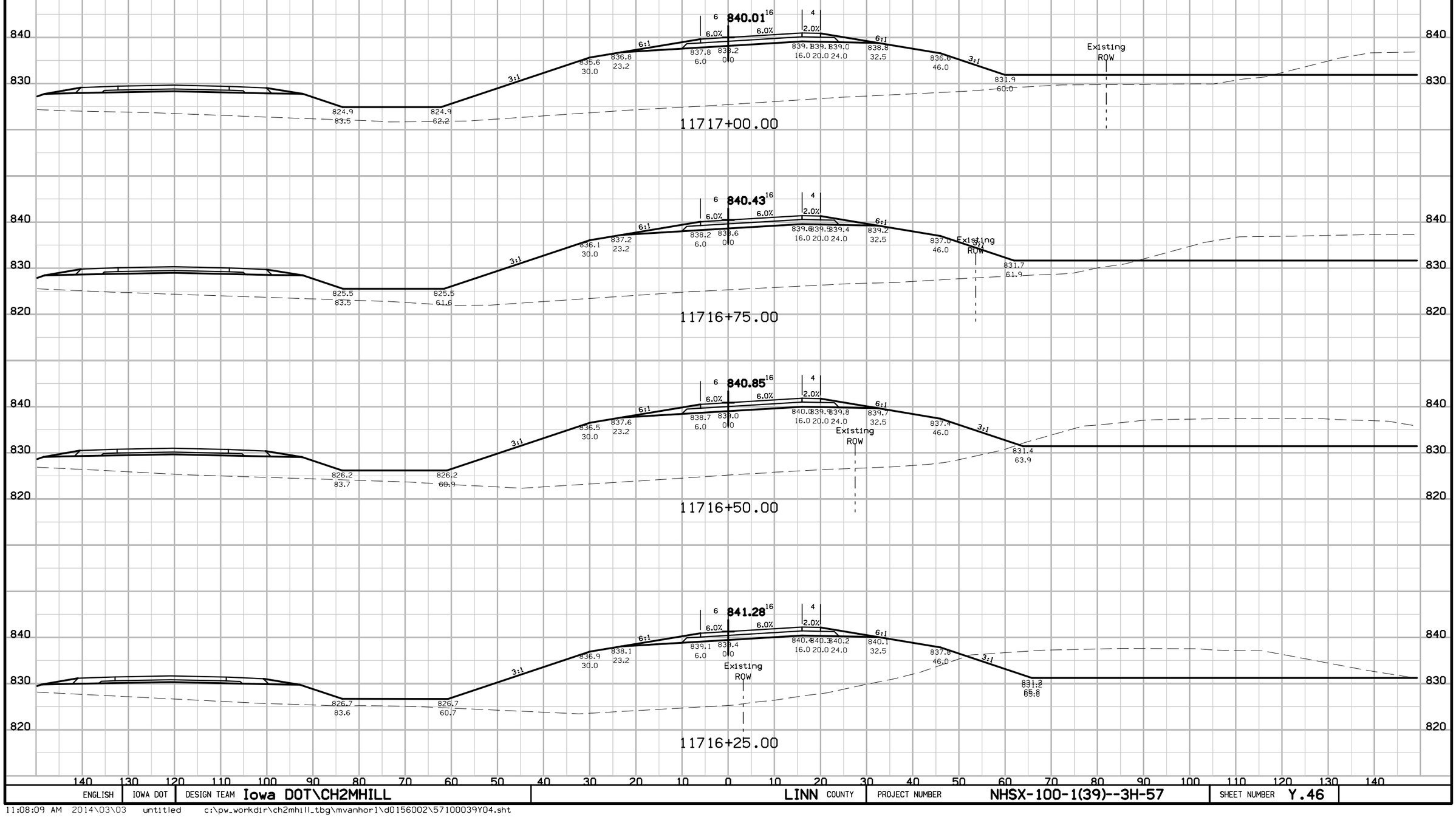
US30 Ramp A
Preliminary



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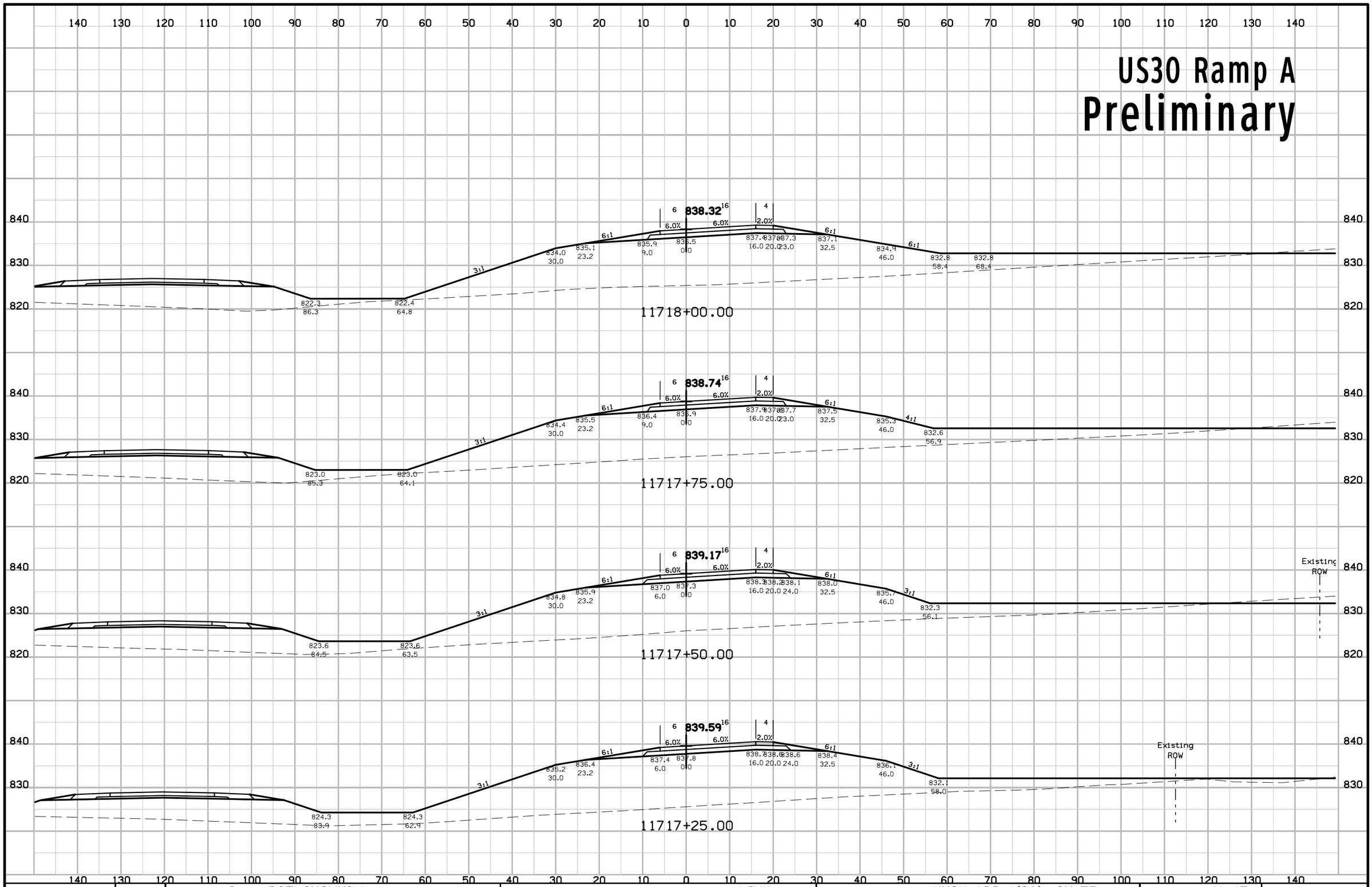
US30 Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.47

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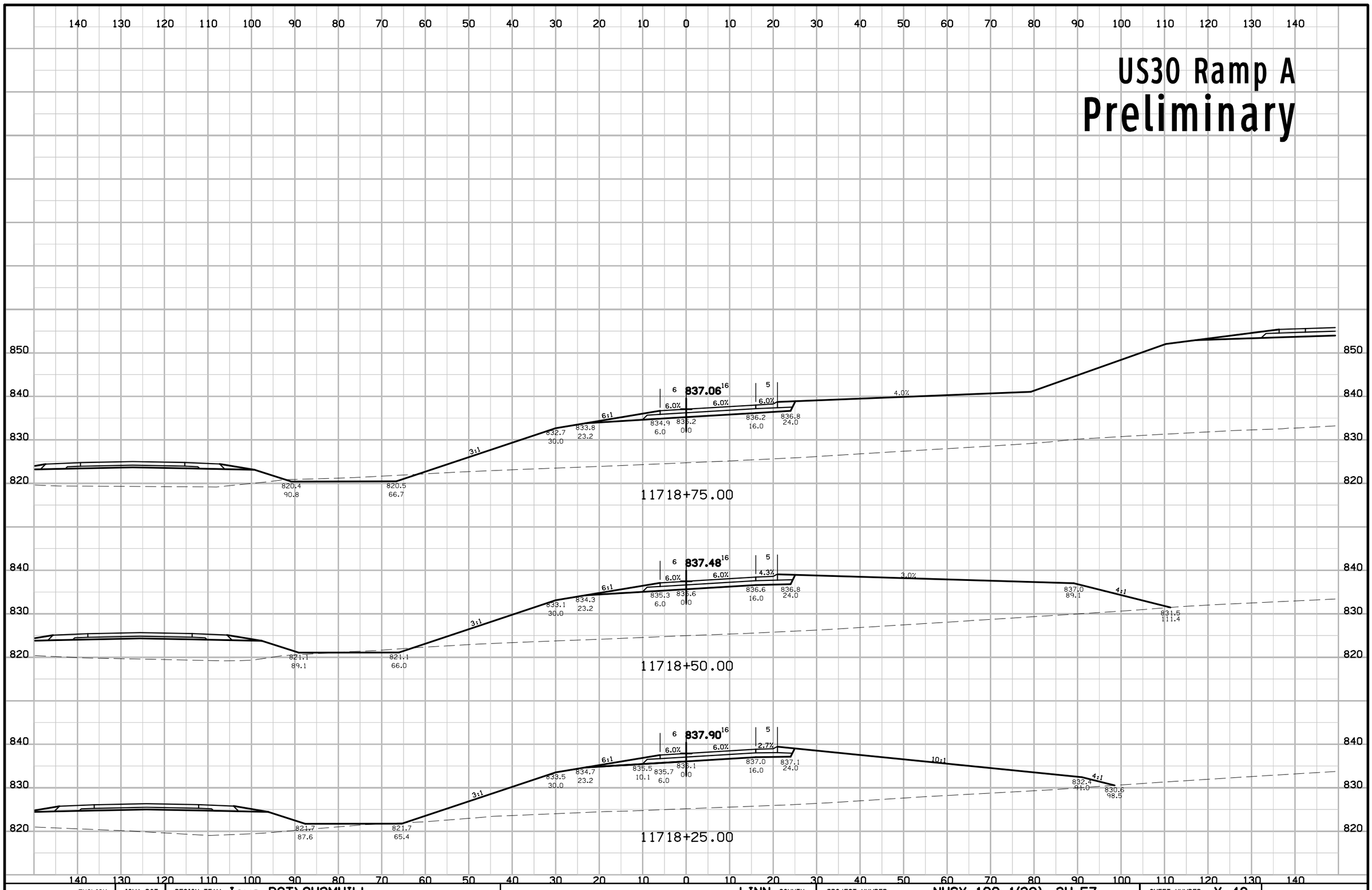
US30 Ramp A

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.48

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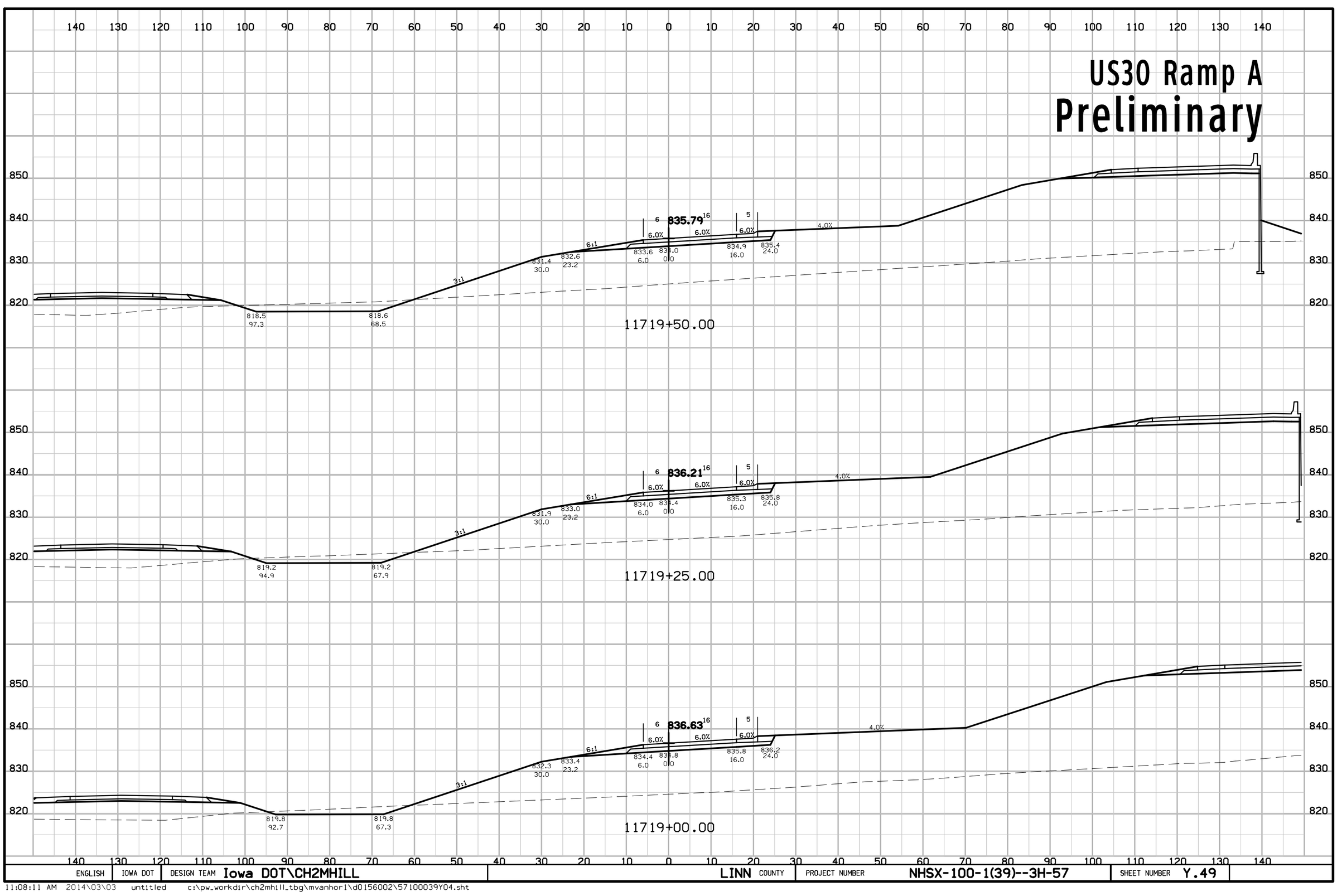
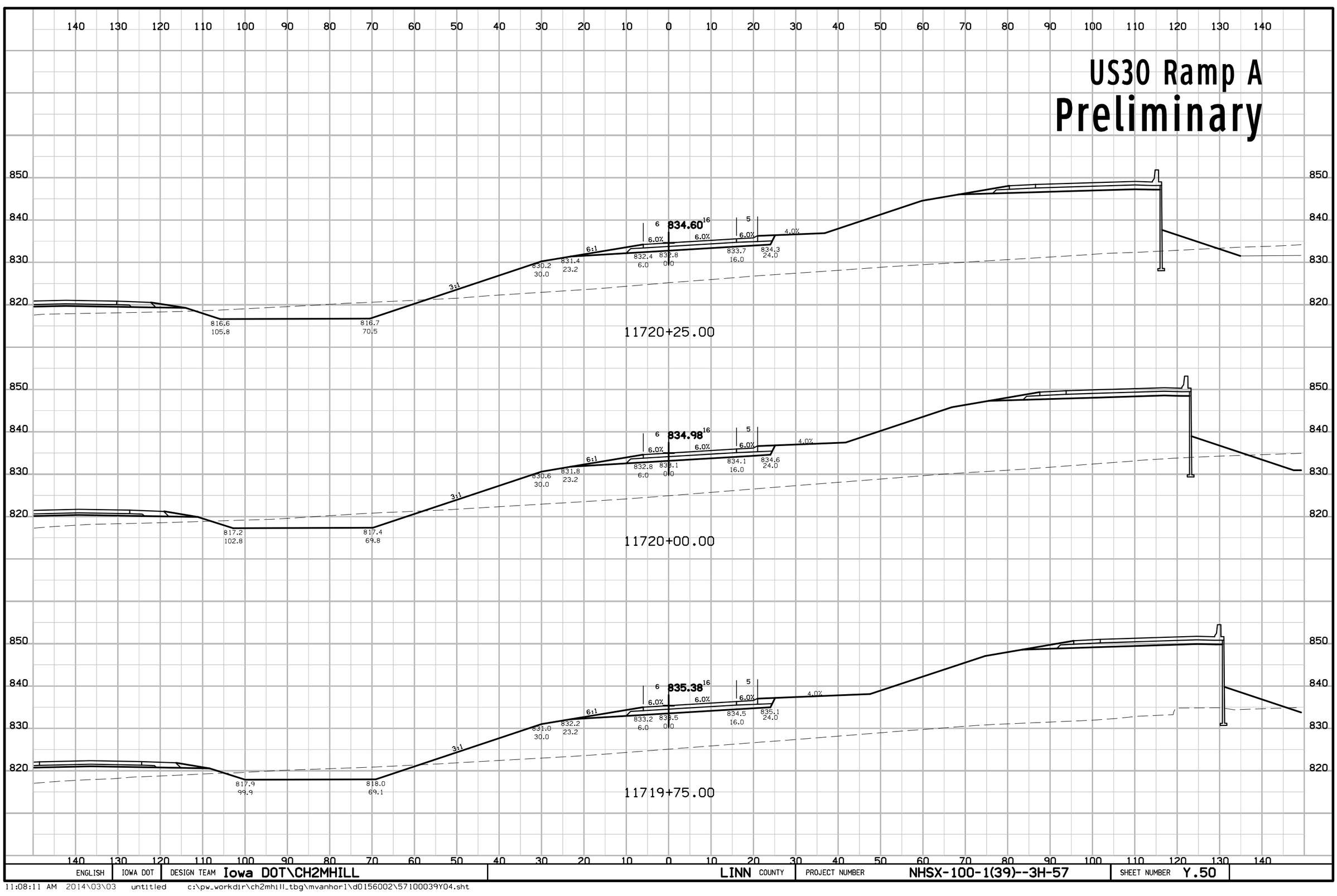
US30 Ramp A

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.49

US30 Ramp A
Preliminary



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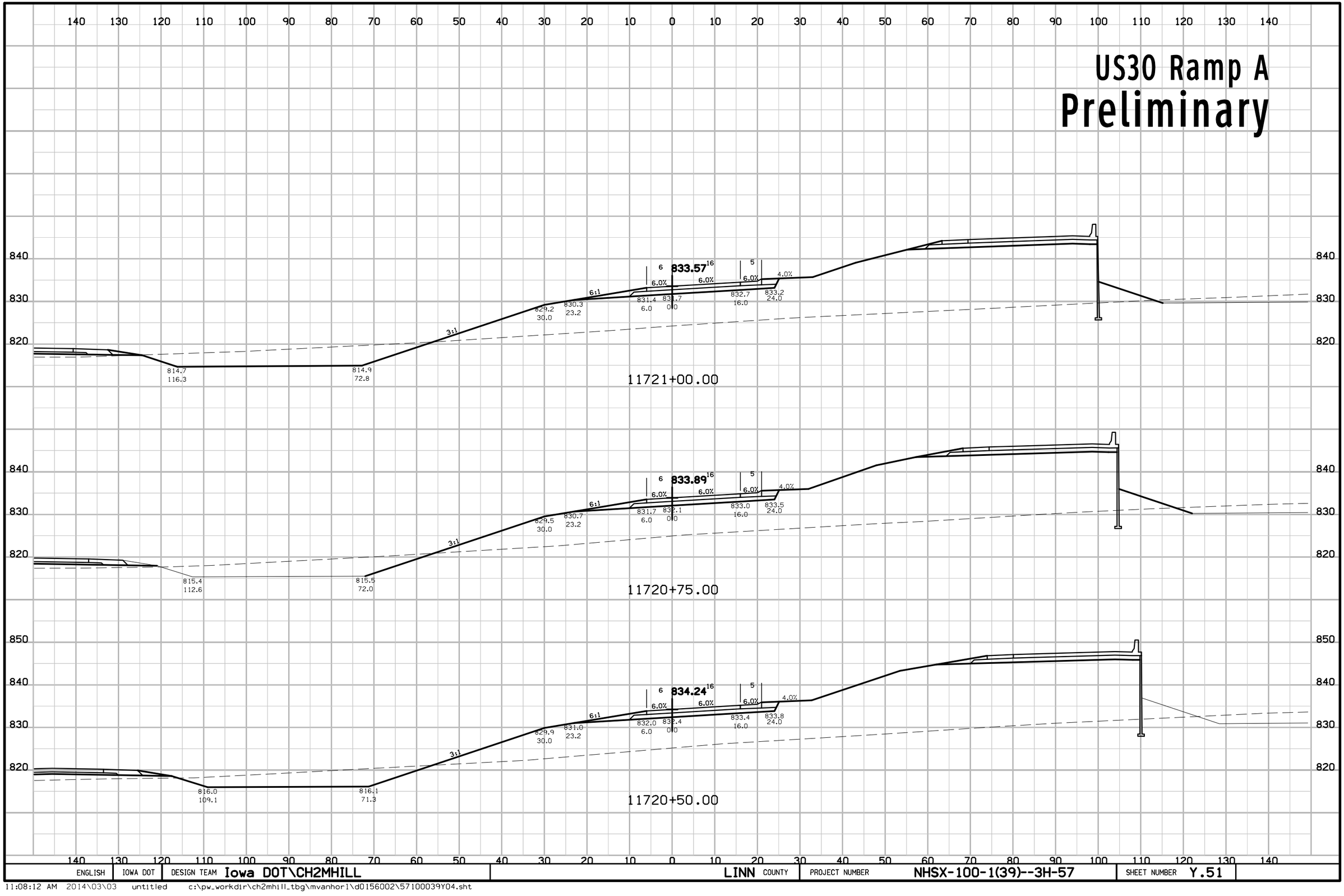
US30 Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.51

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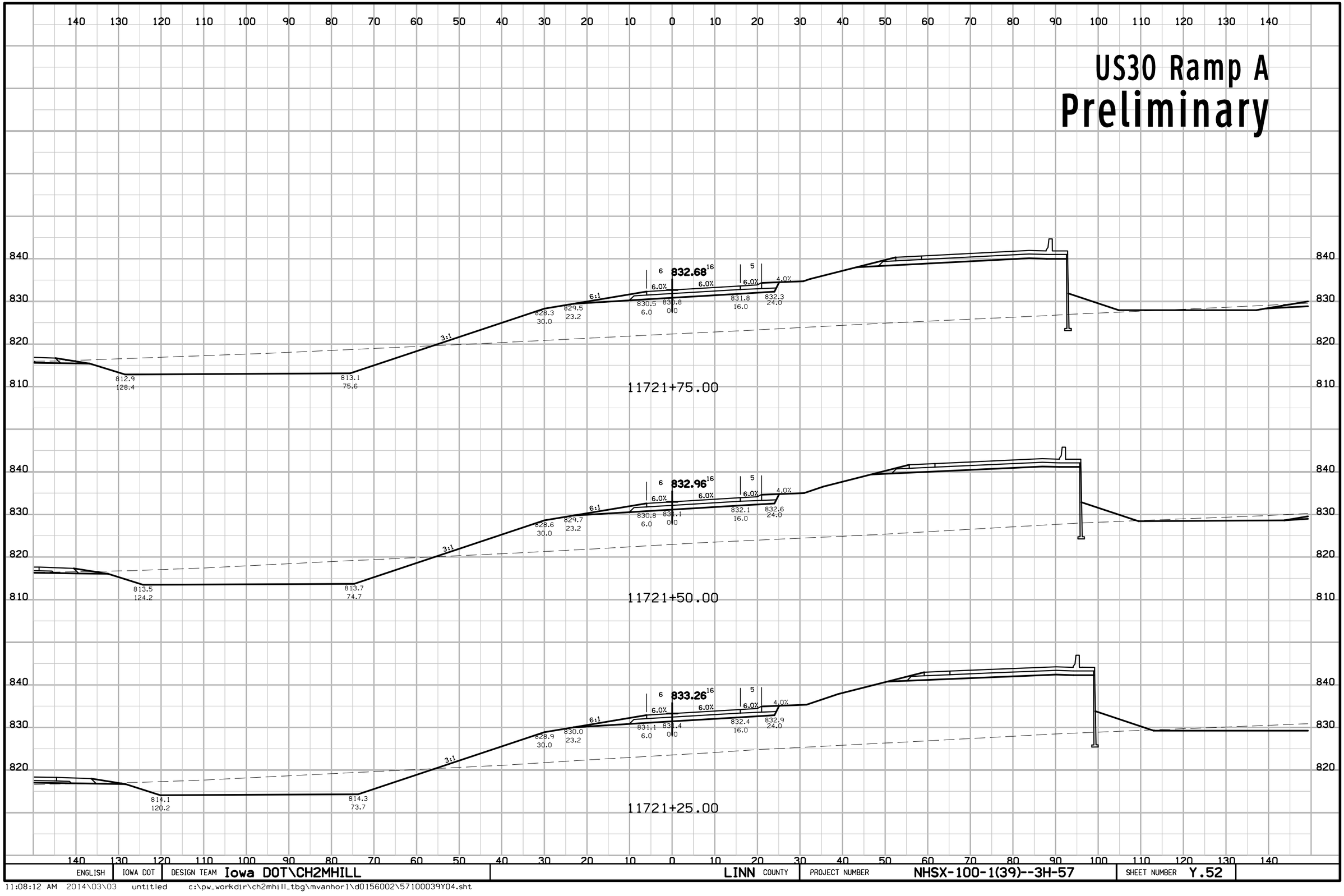
US30 Ramp A
Preliminary



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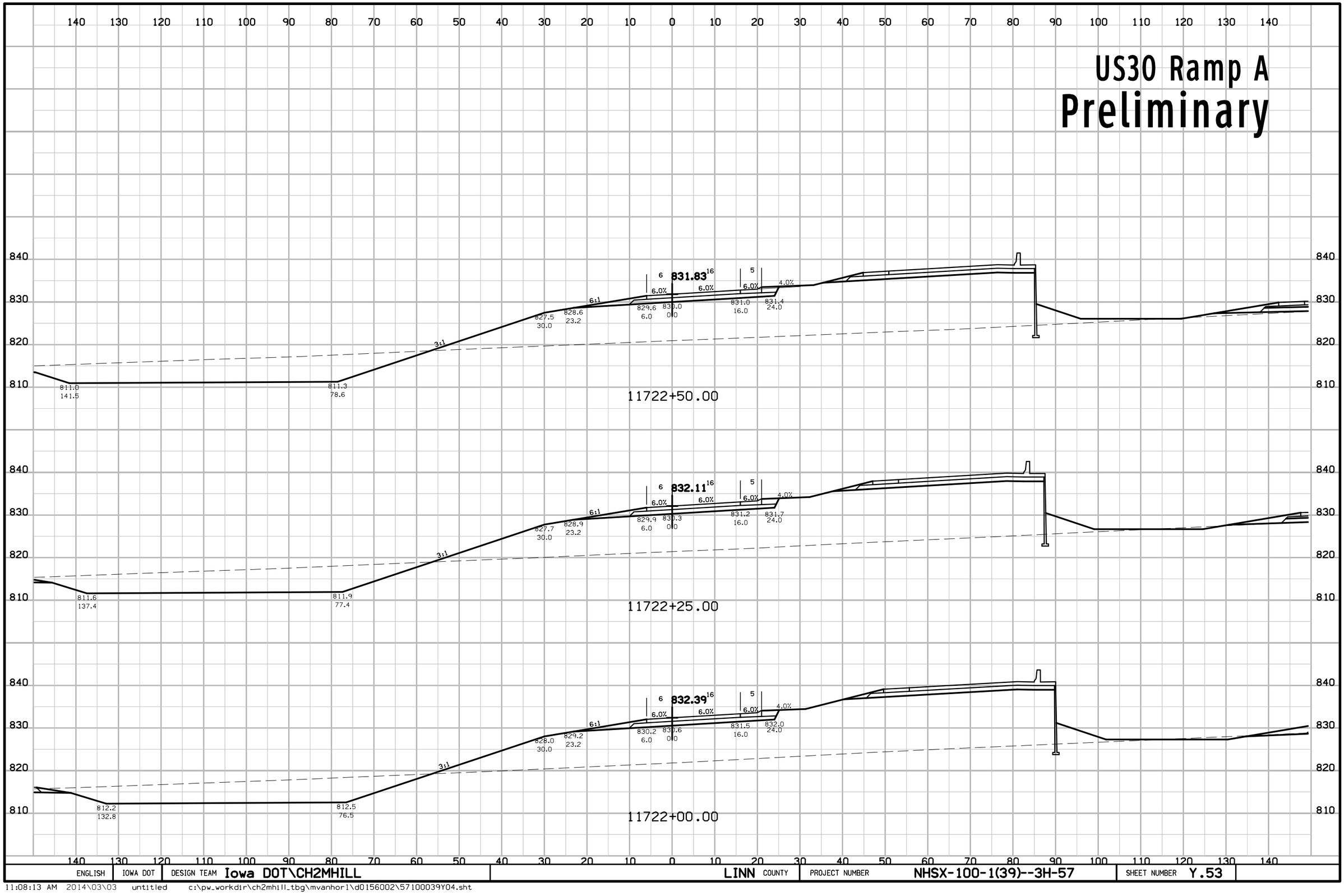
US30 Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.53

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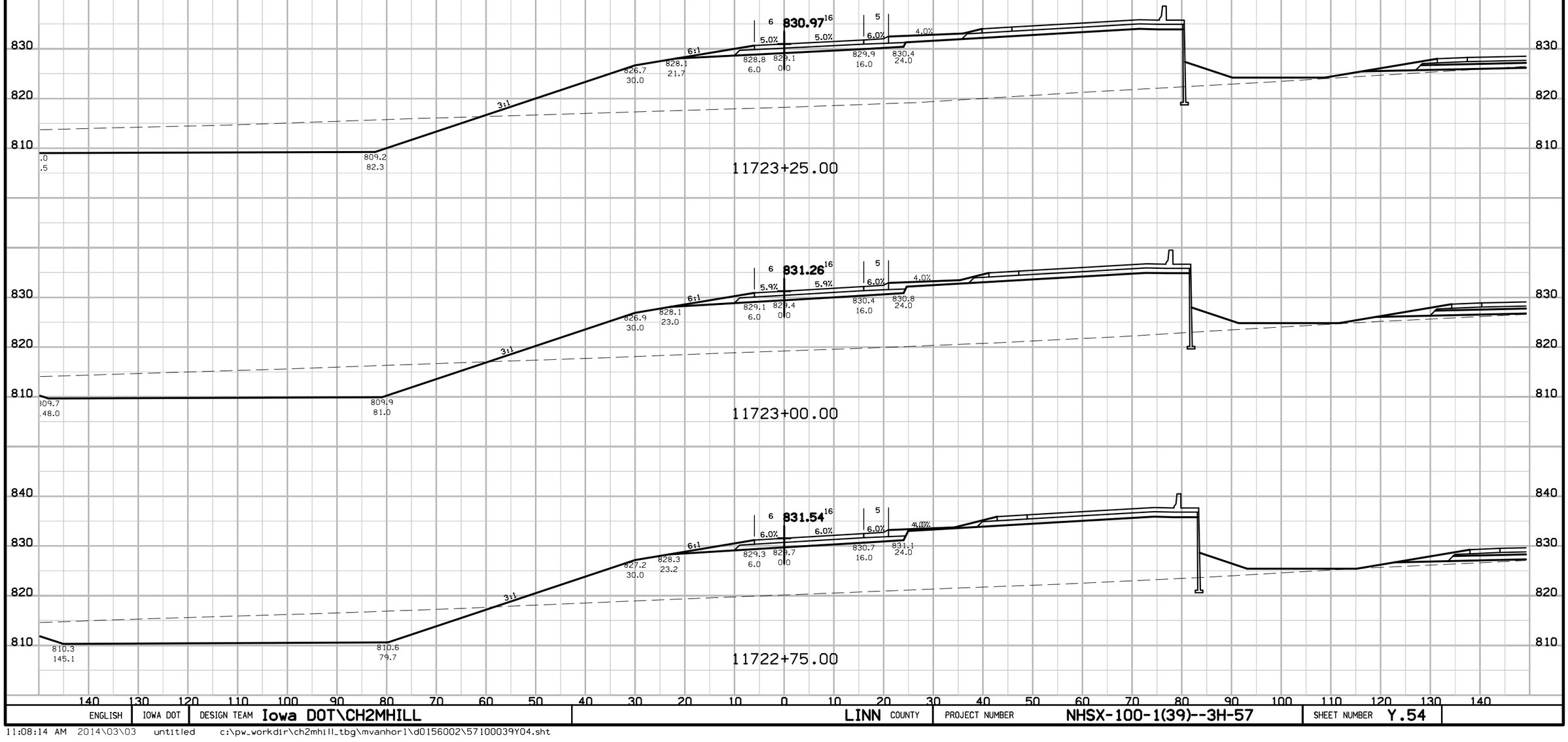
US30 Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.54

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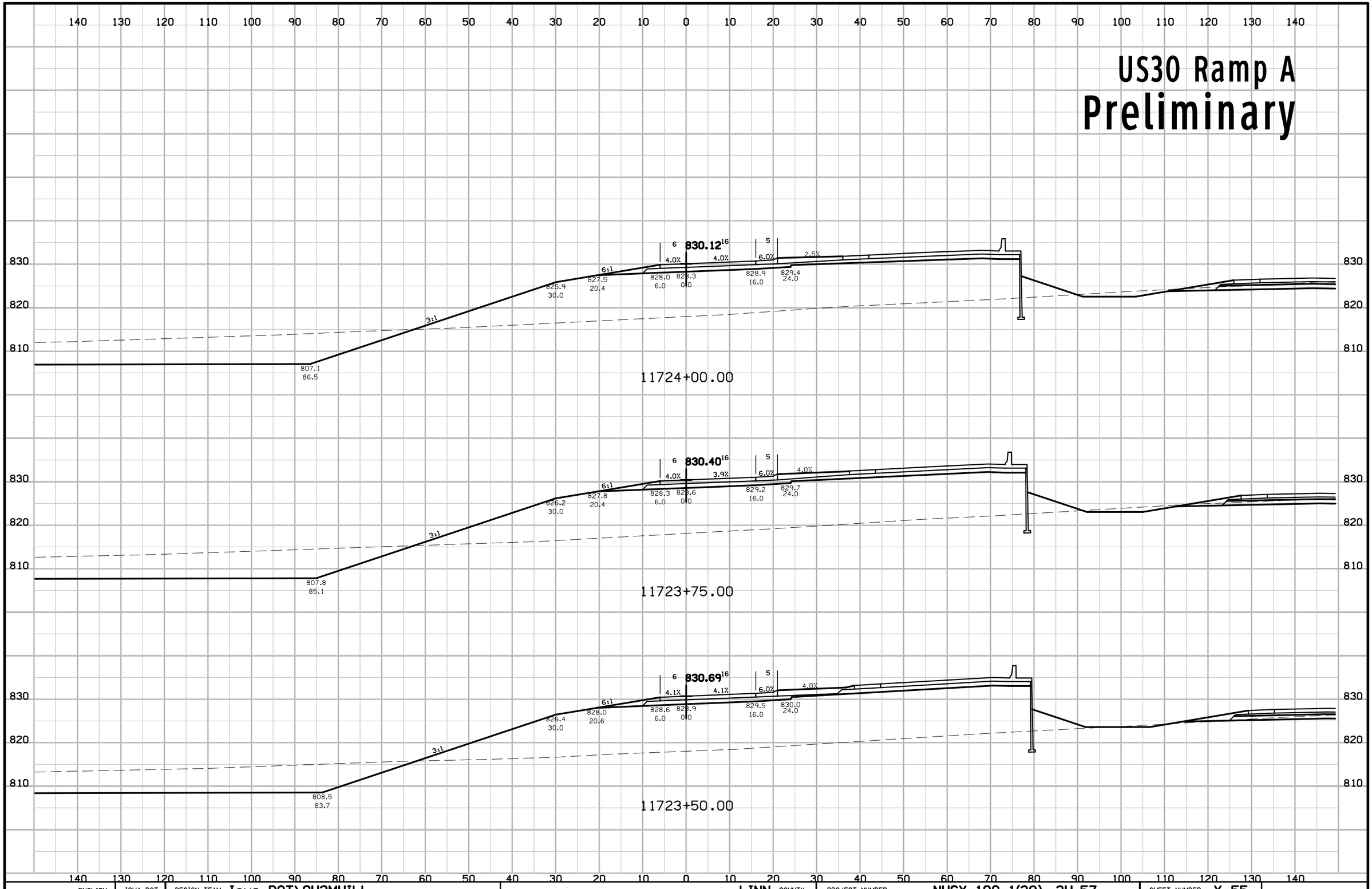
US30 Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.55

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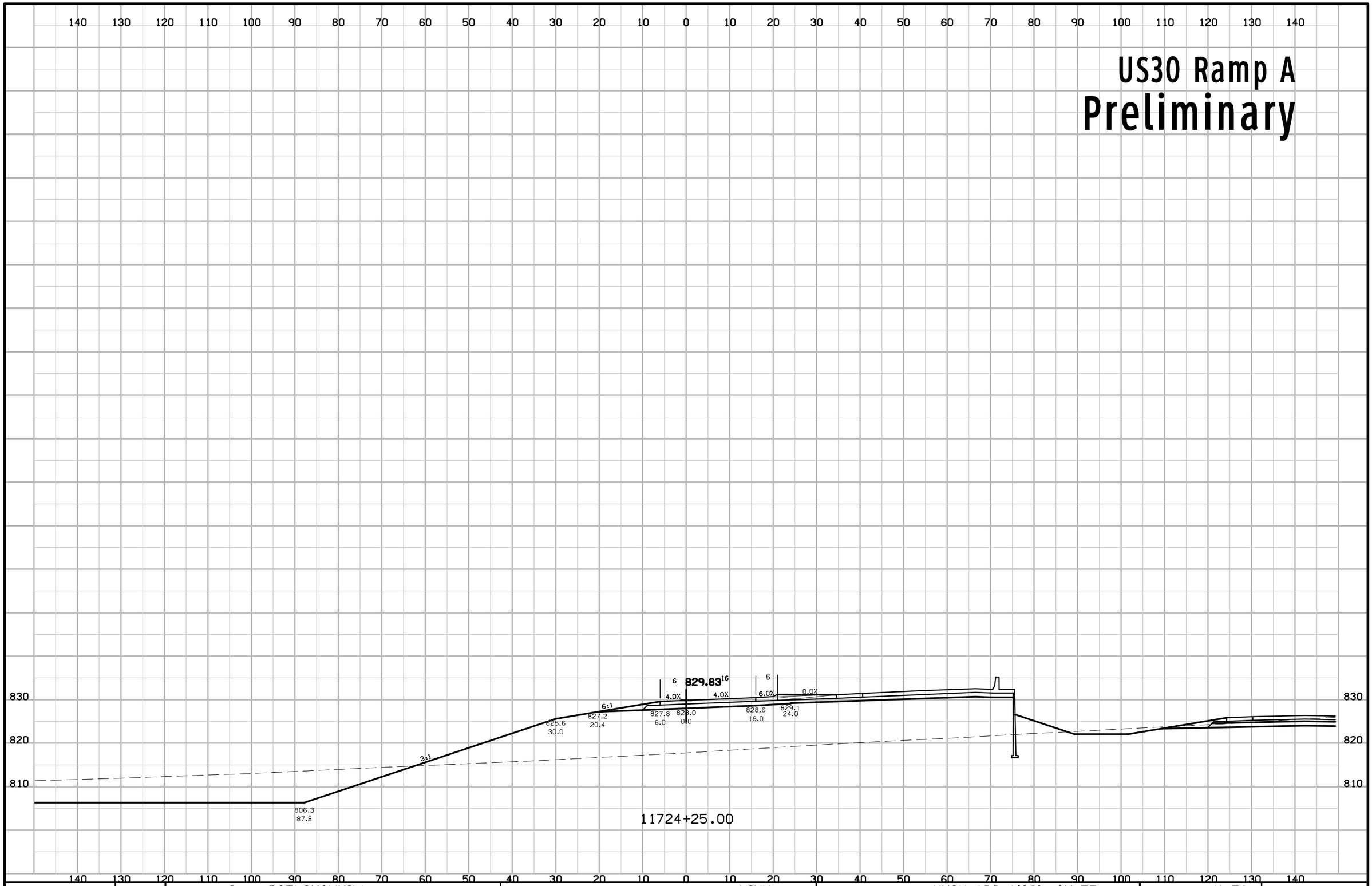
US30 Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.56

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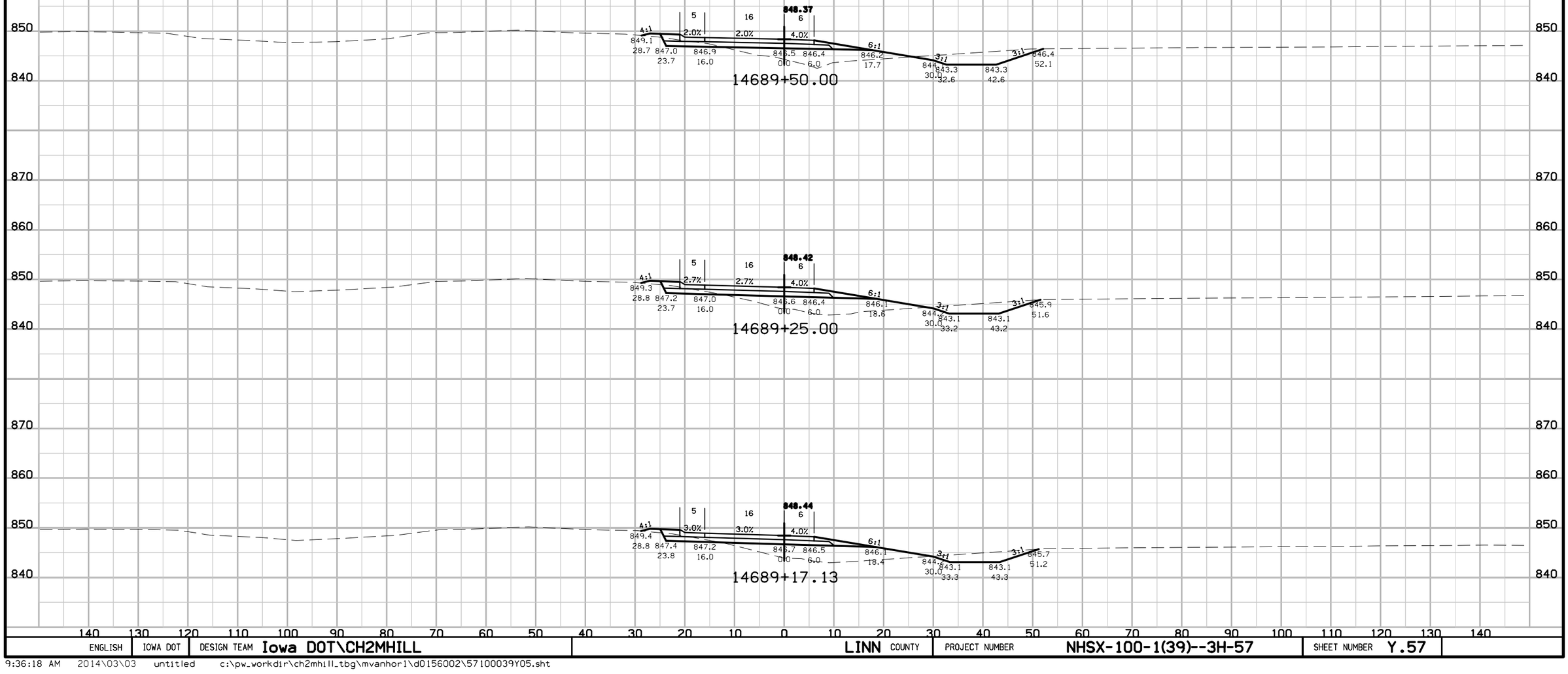
US30 Ramp D

Preliminary



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

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US30 Ramp D

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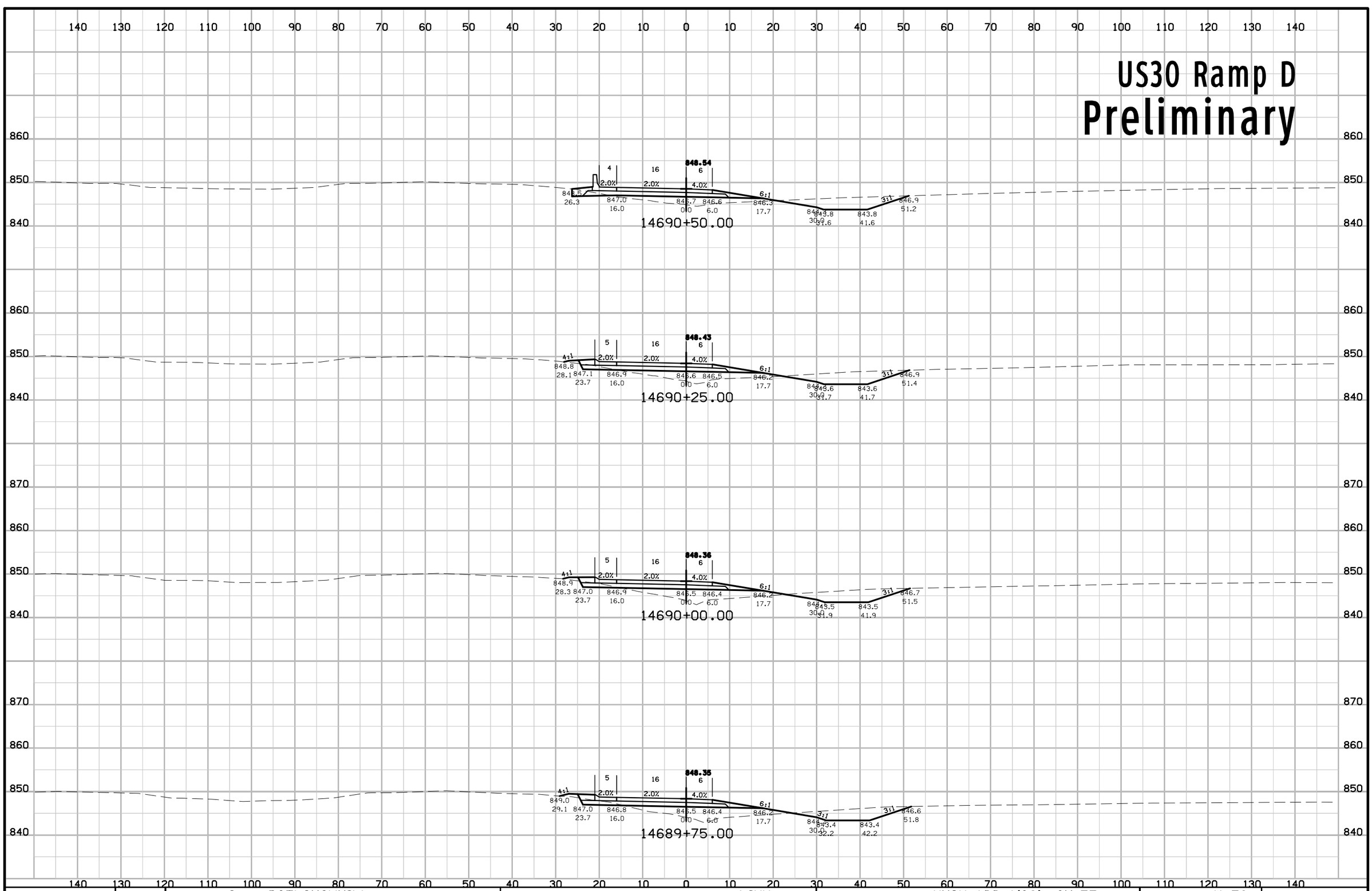

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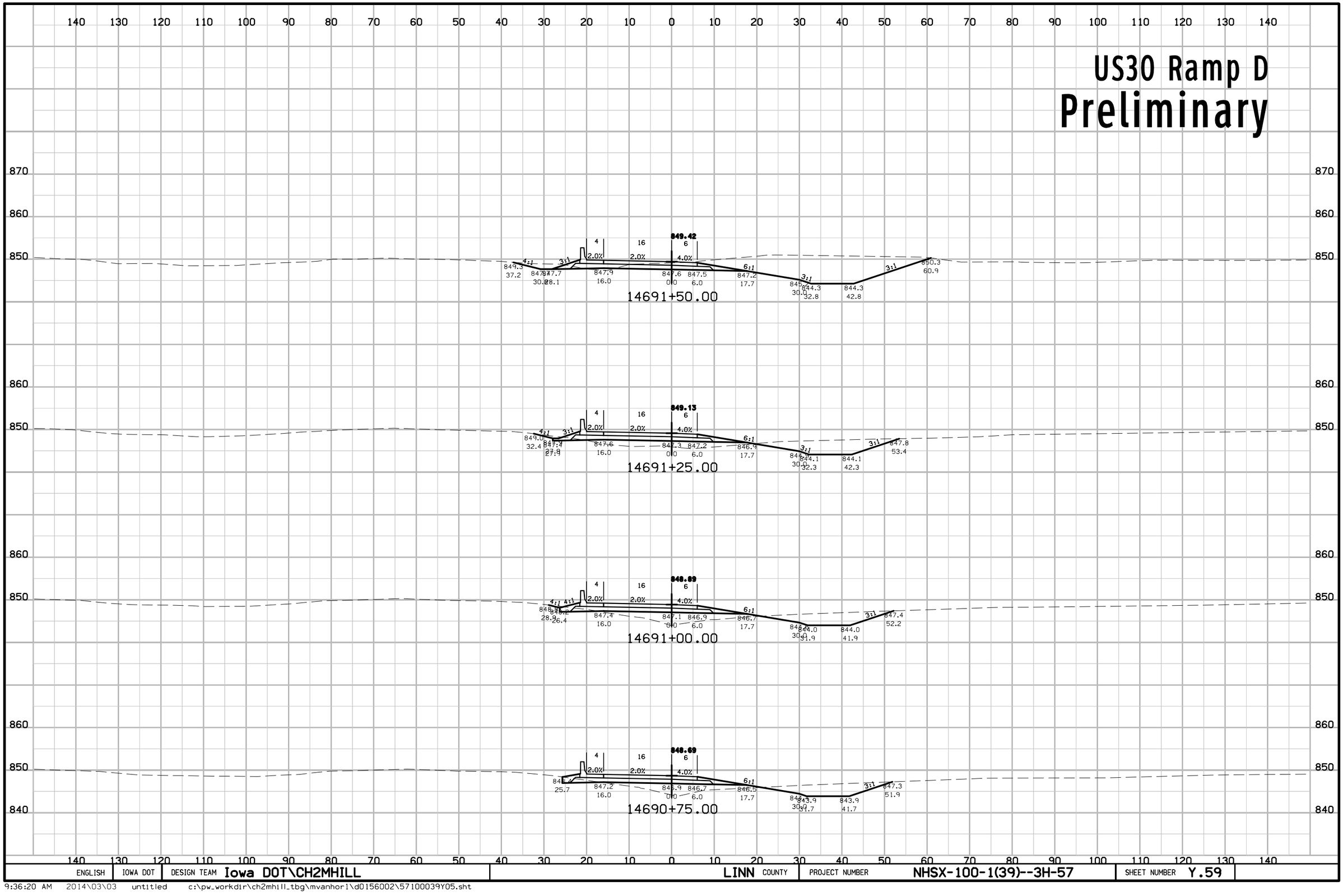
US30 Ramp D

Preliminary



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US30 Ramp D
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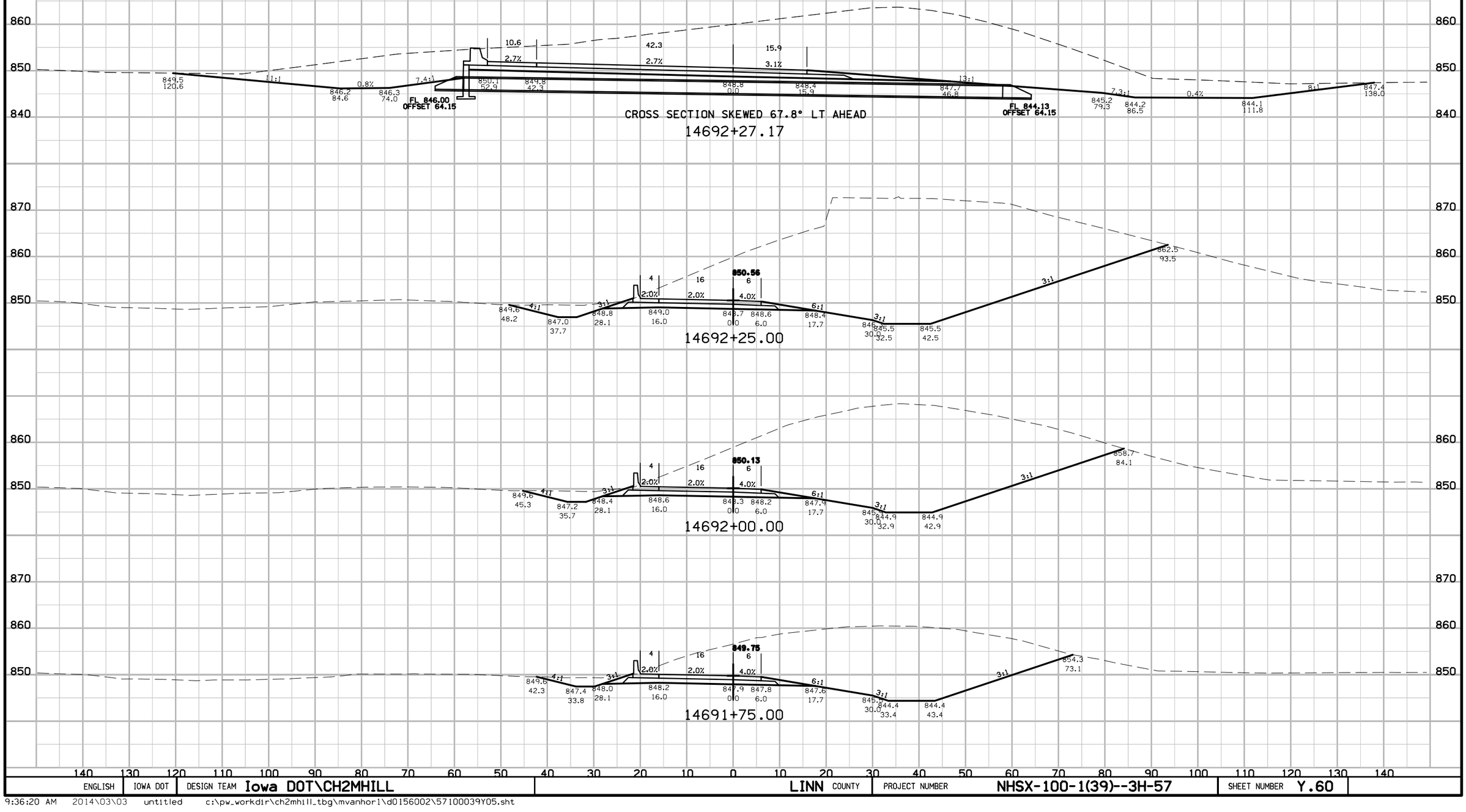

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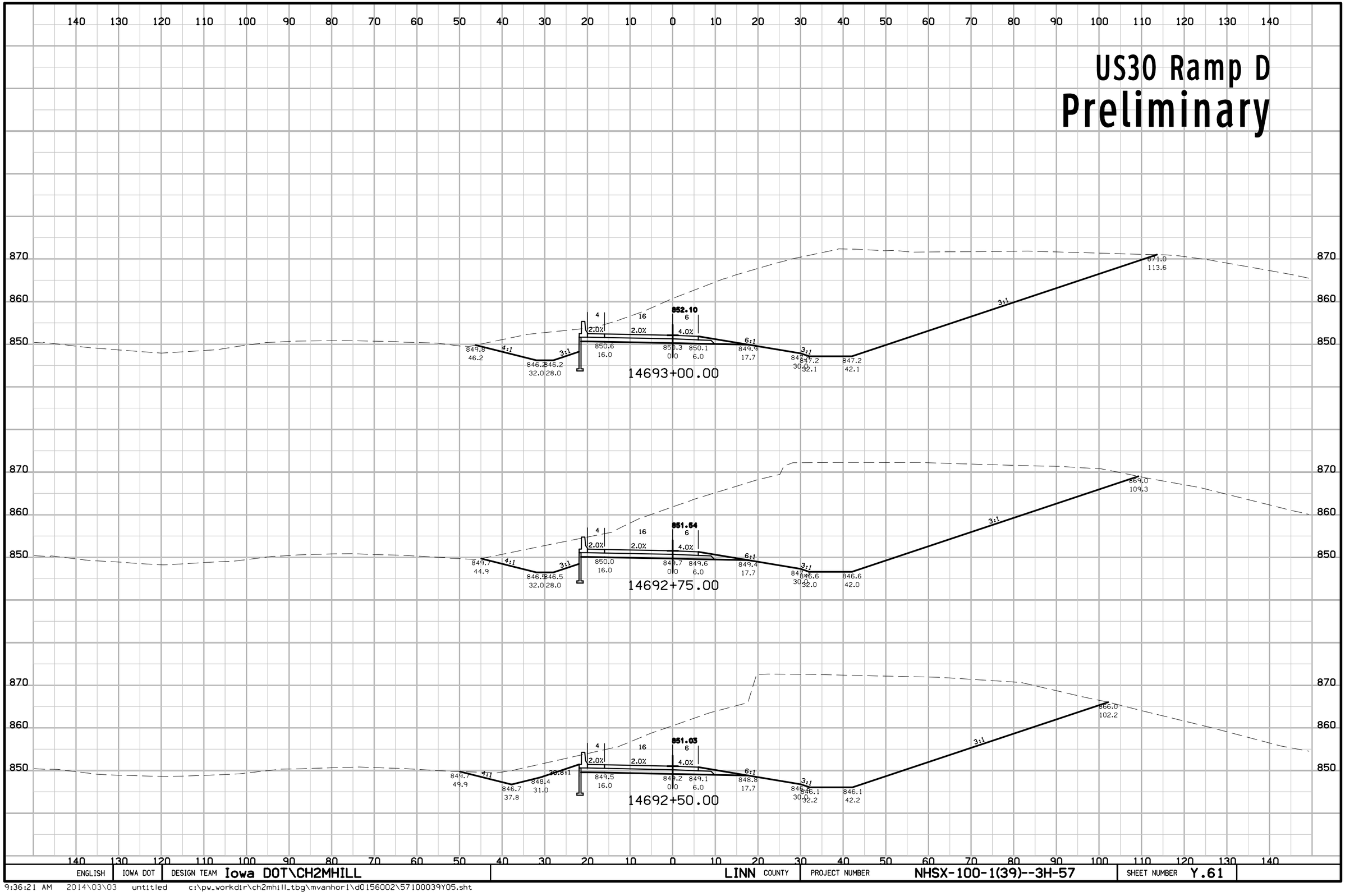

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US30 Ramp D
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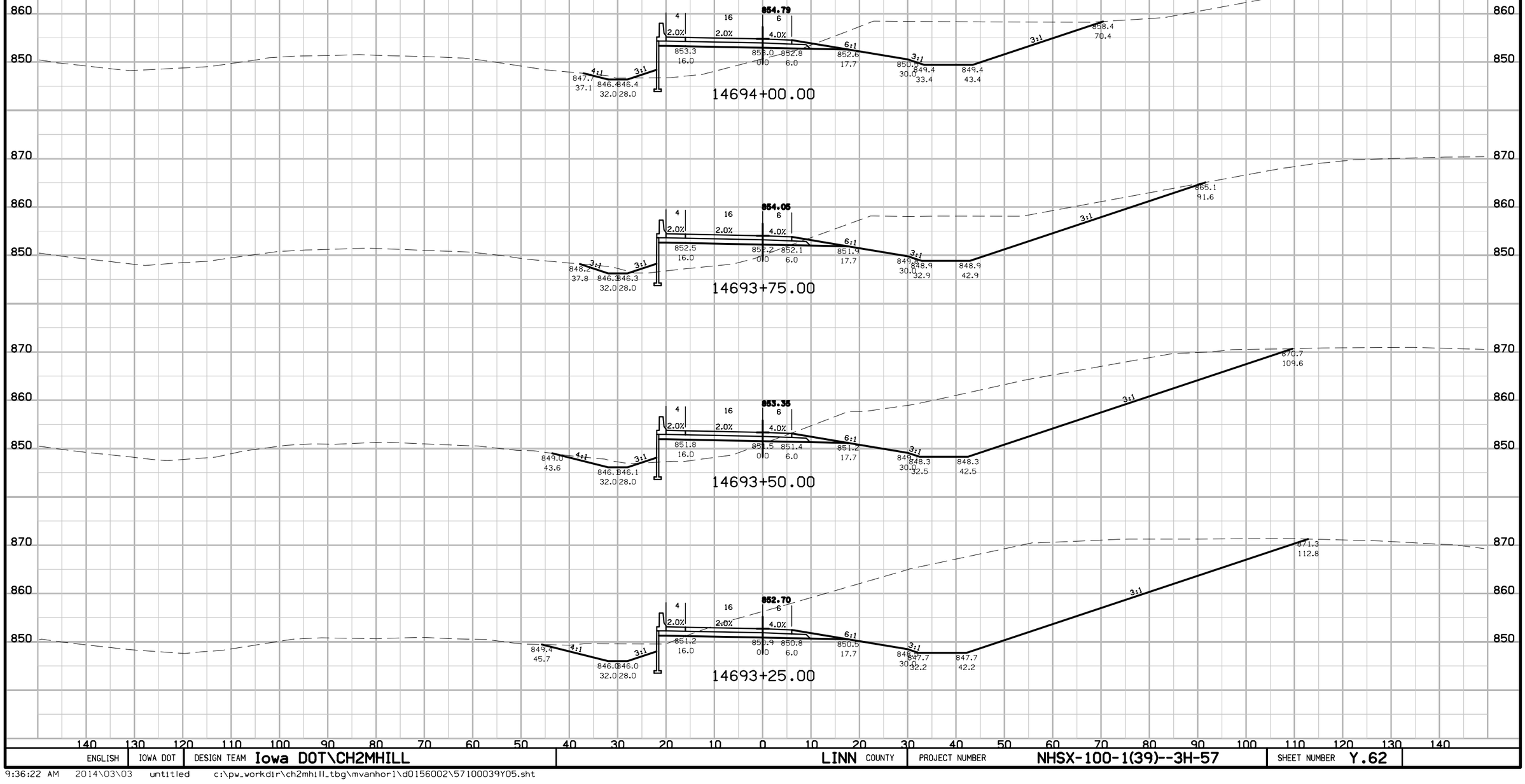

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US30 Ramp D

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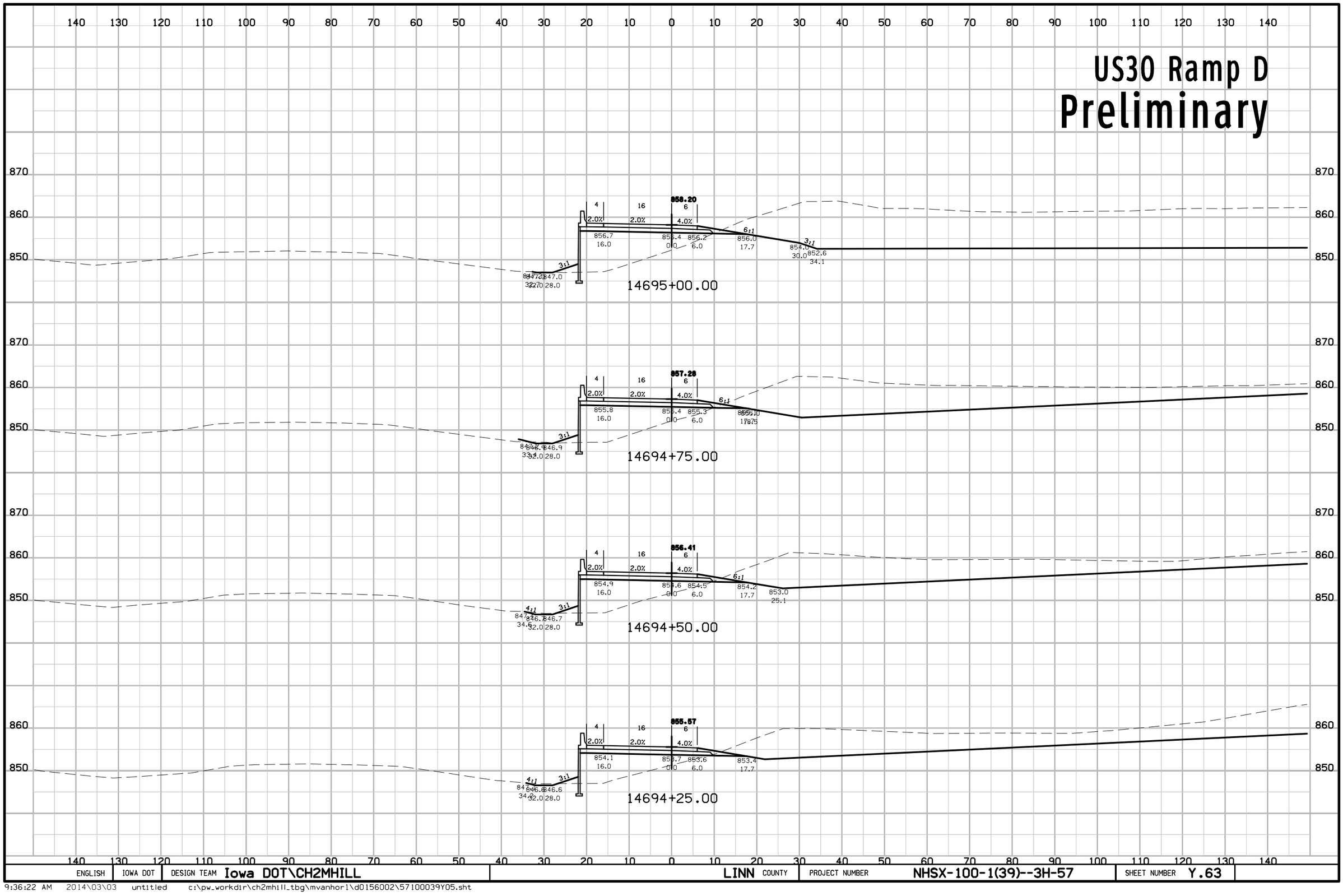

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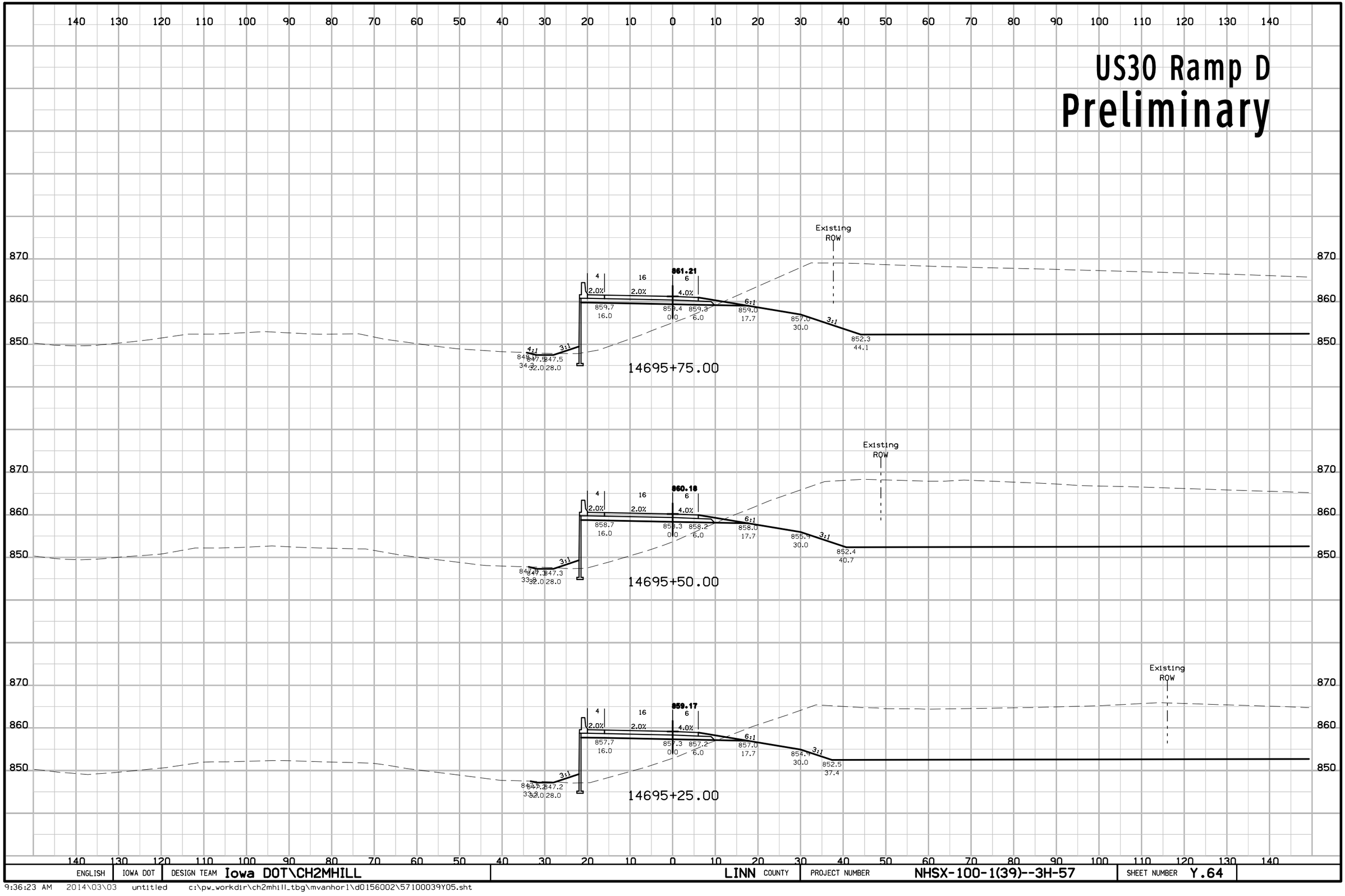

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US30 Ramp D
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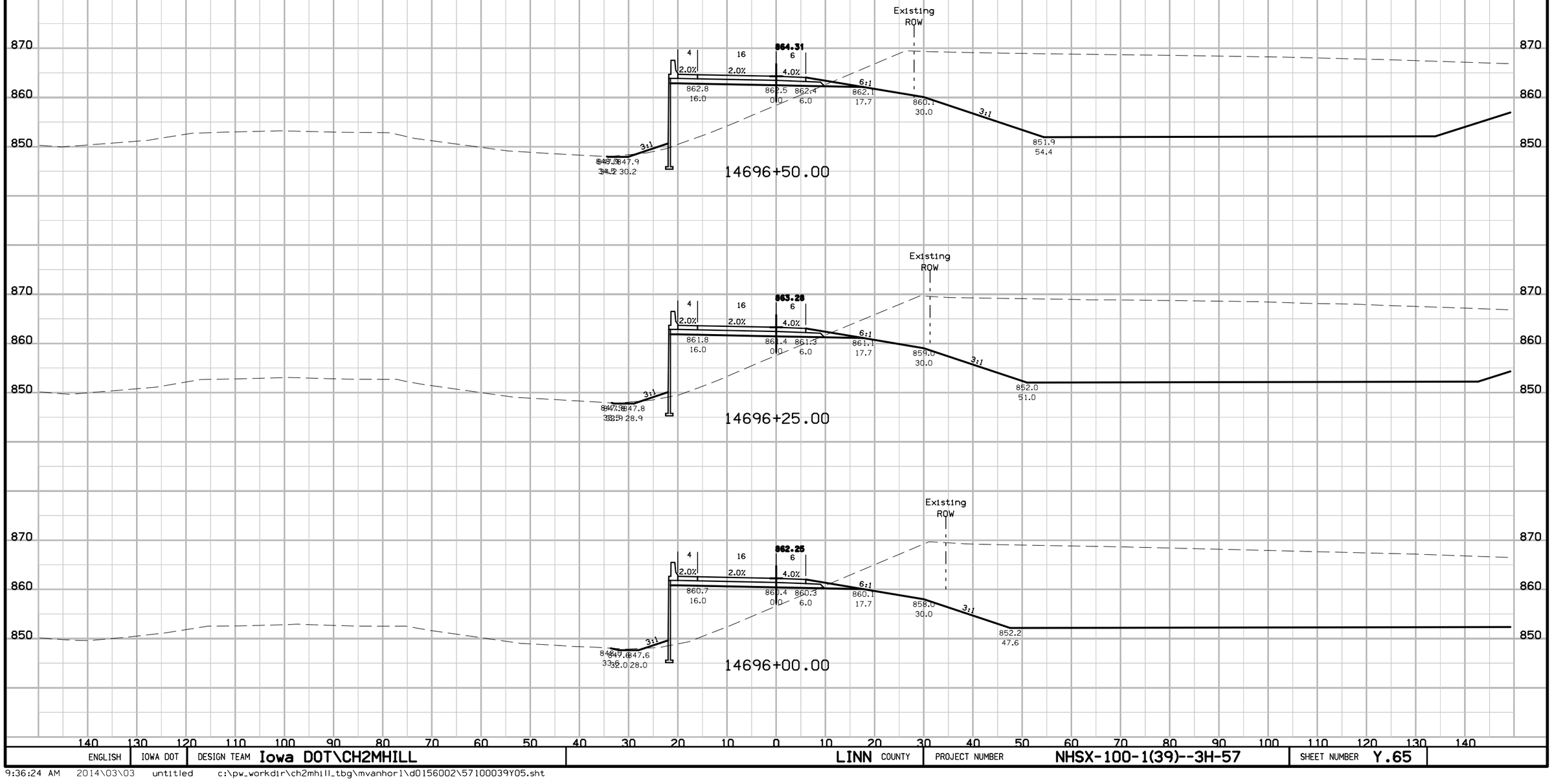

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US30 Ramp D
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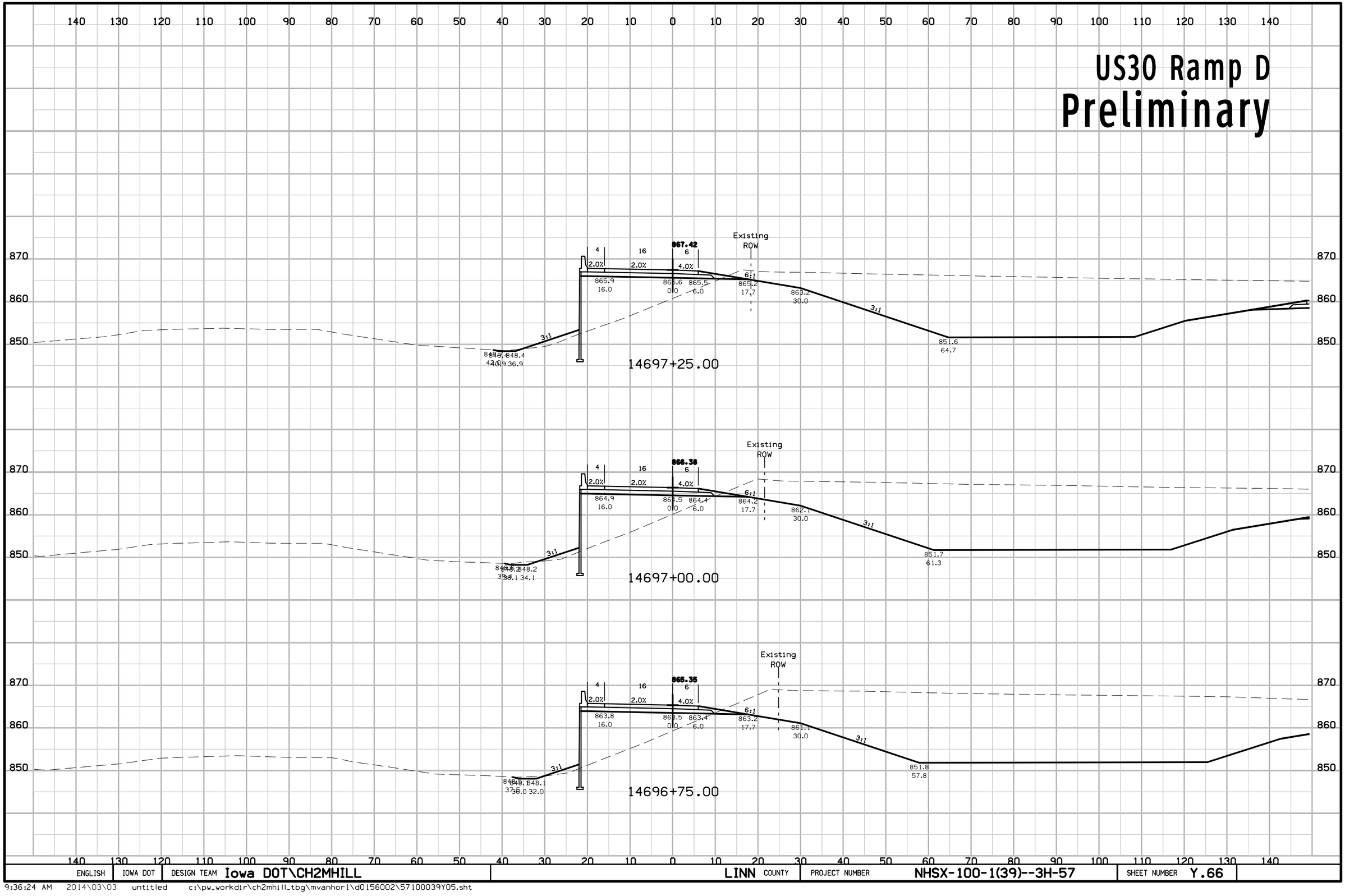

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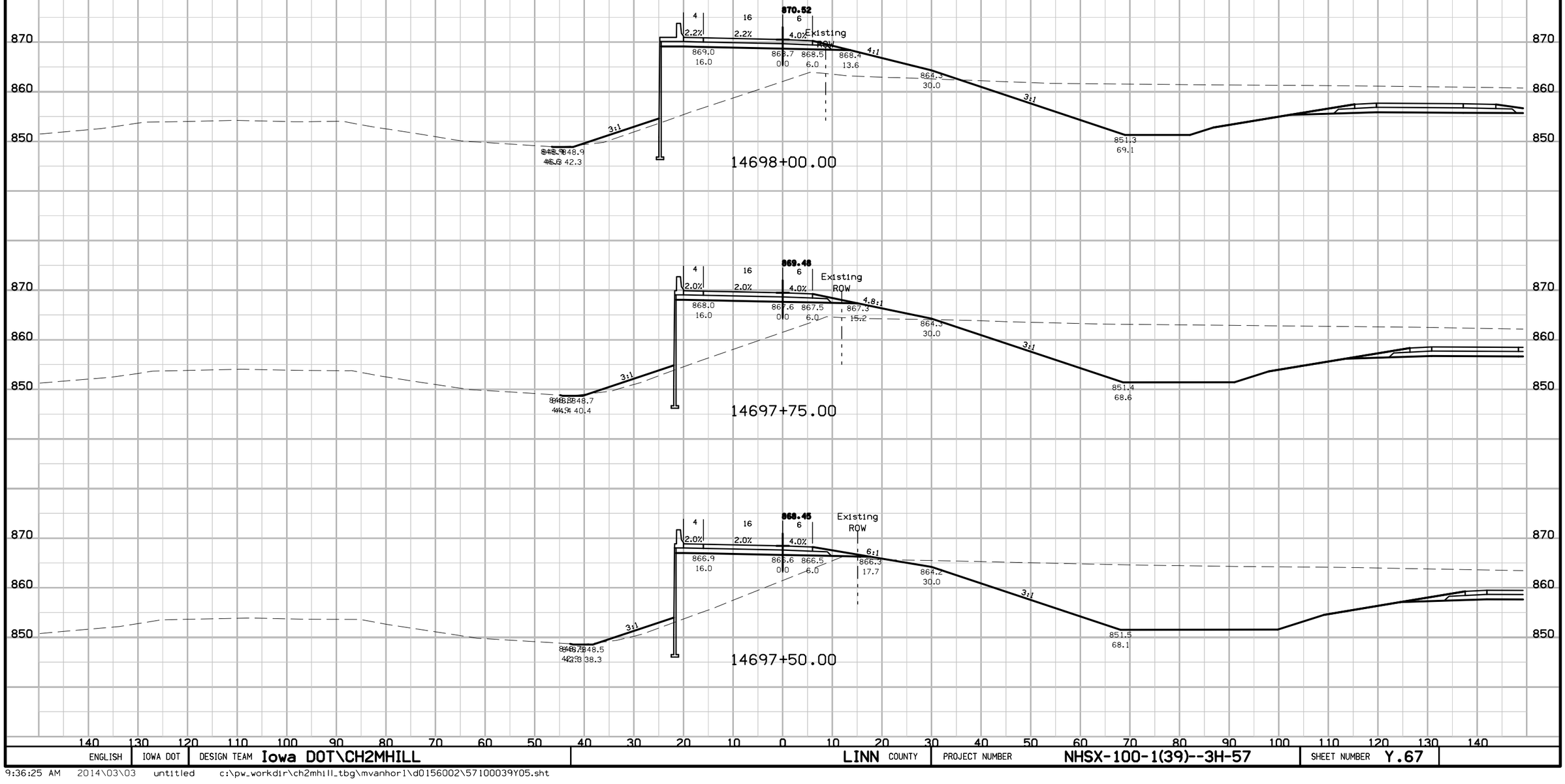
US30 Ramp D
Preliminary



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US30 Ramp D
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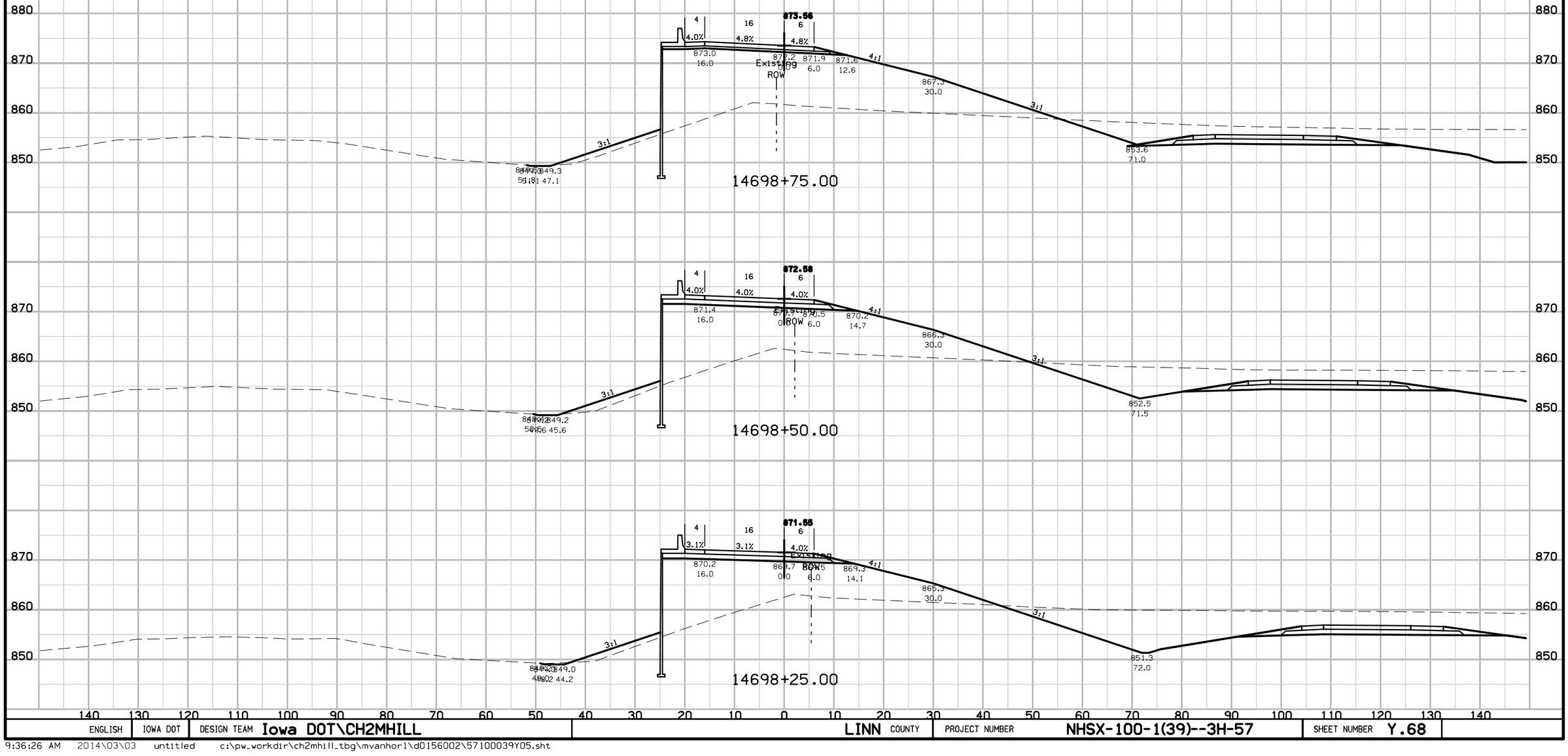

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US30 Ramp D
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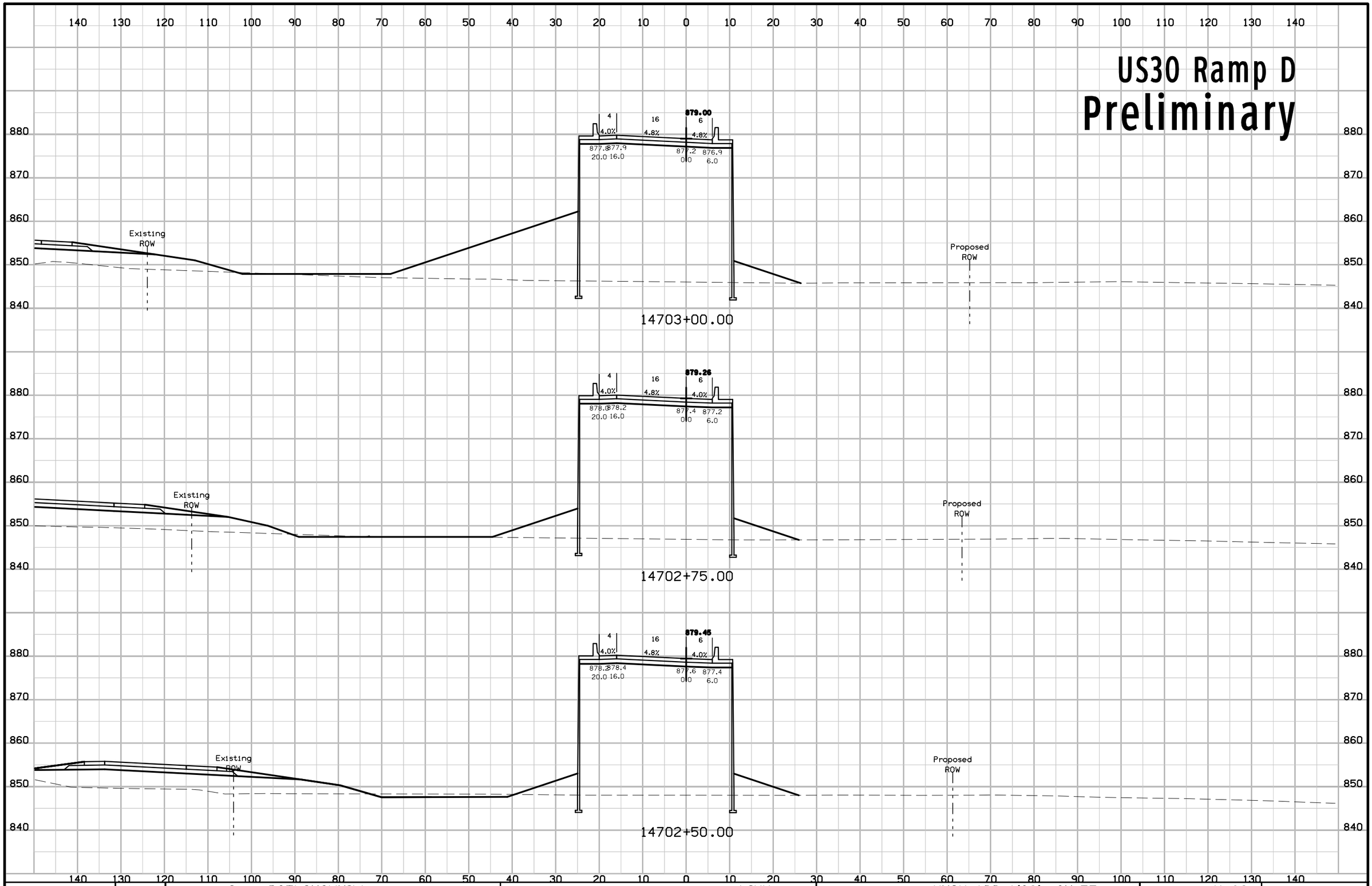

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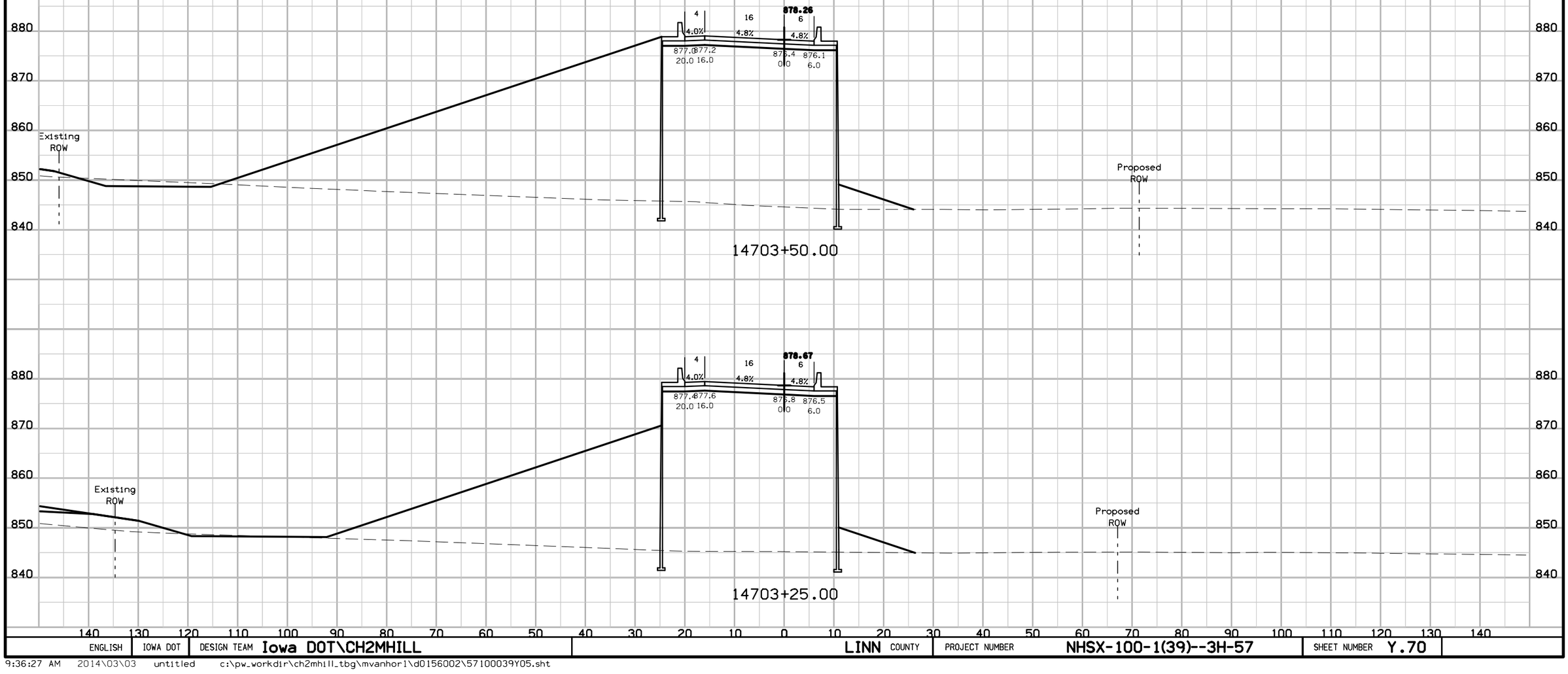
US30 Ramp D
Preliminary



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US30 Ramp D
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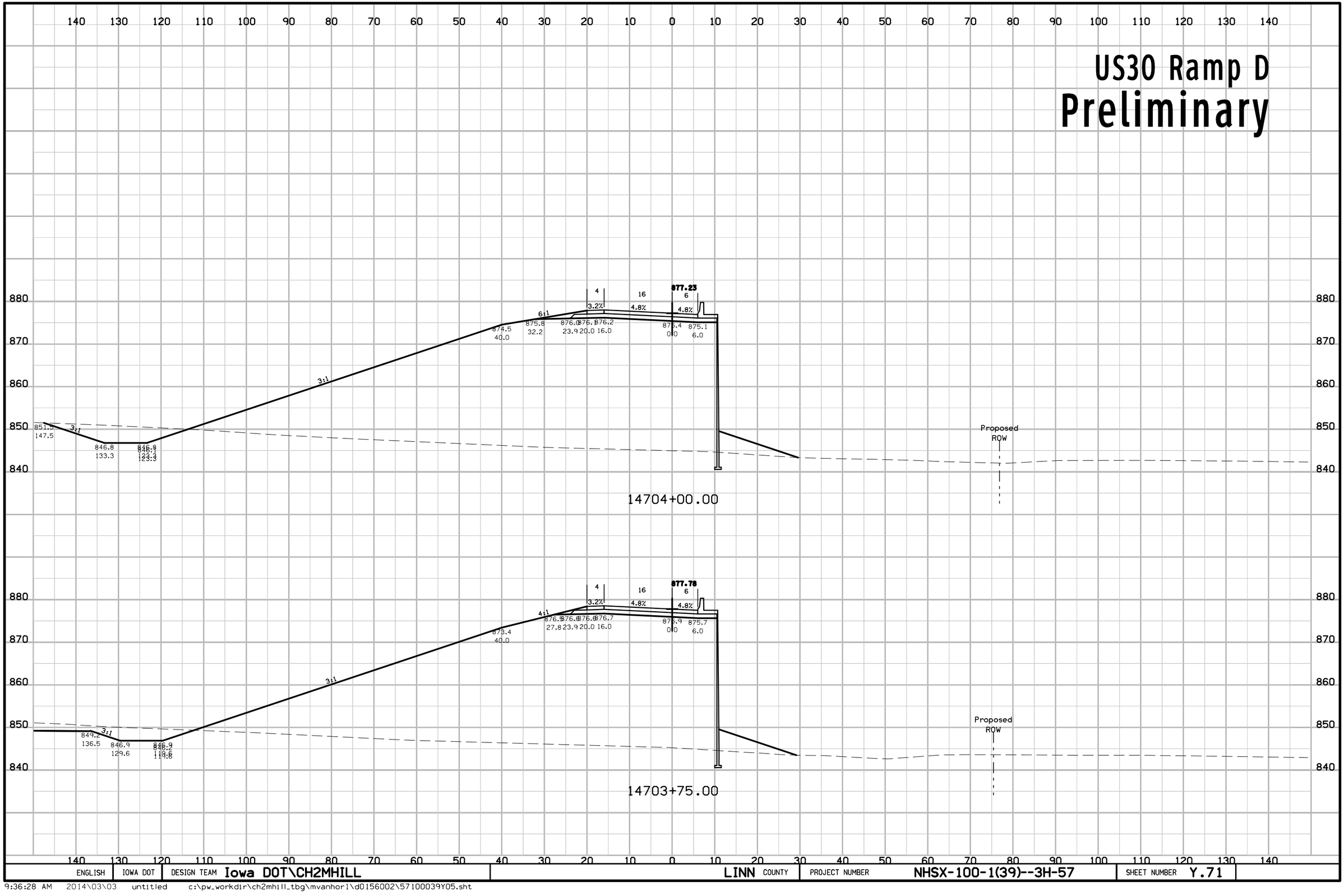

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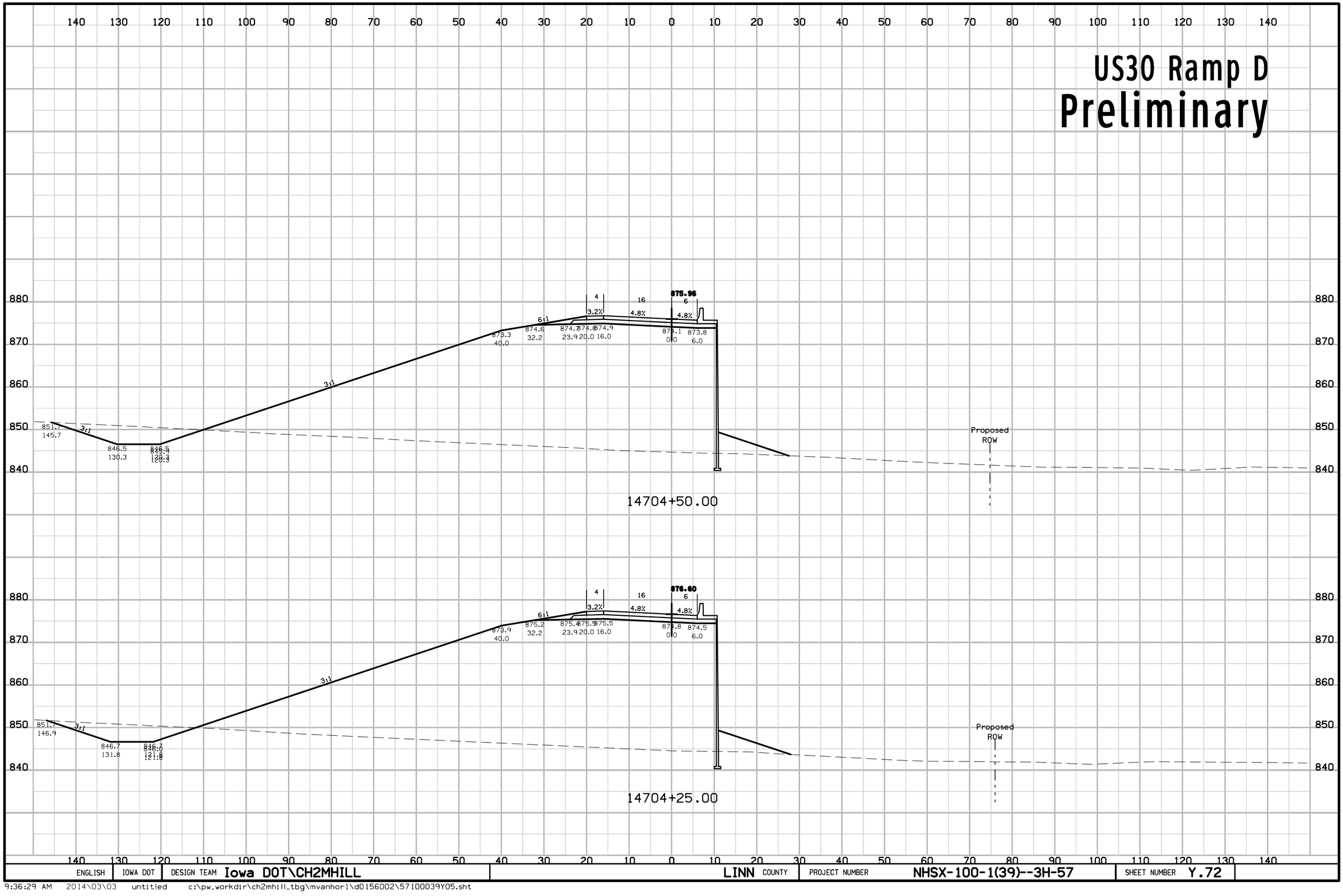
US30 Ramp D
Preliminary



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US30 Ramp D
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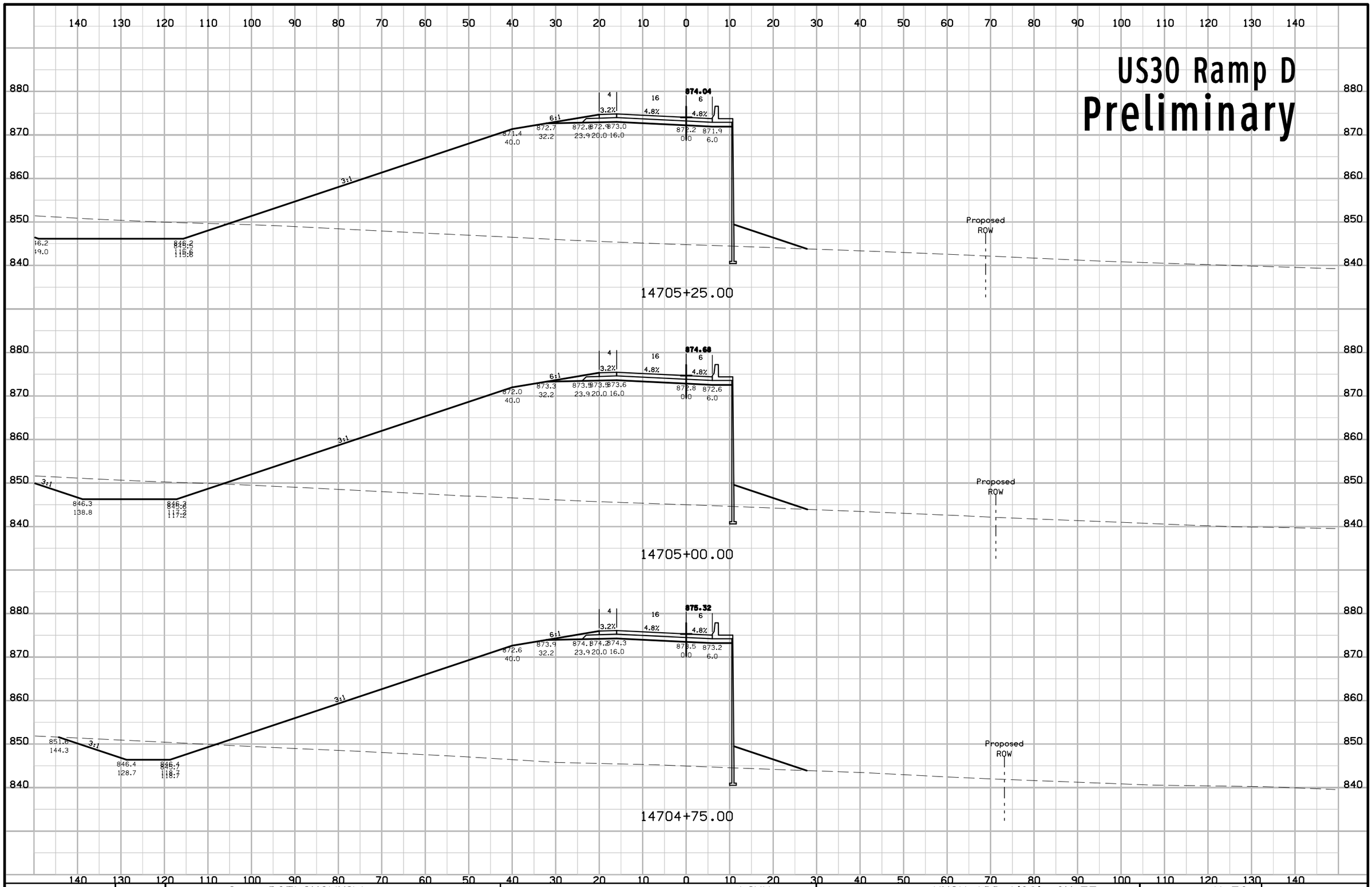

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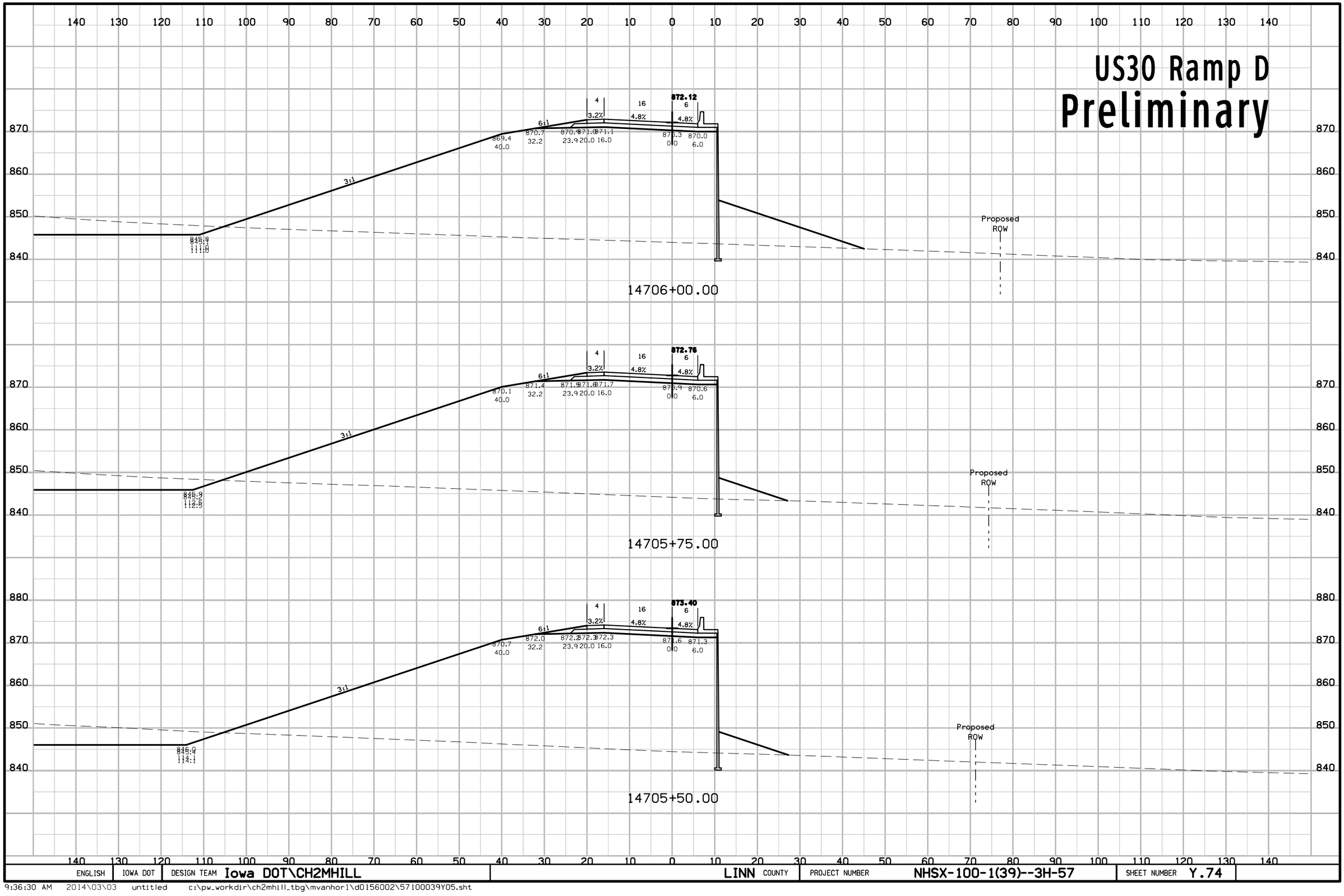

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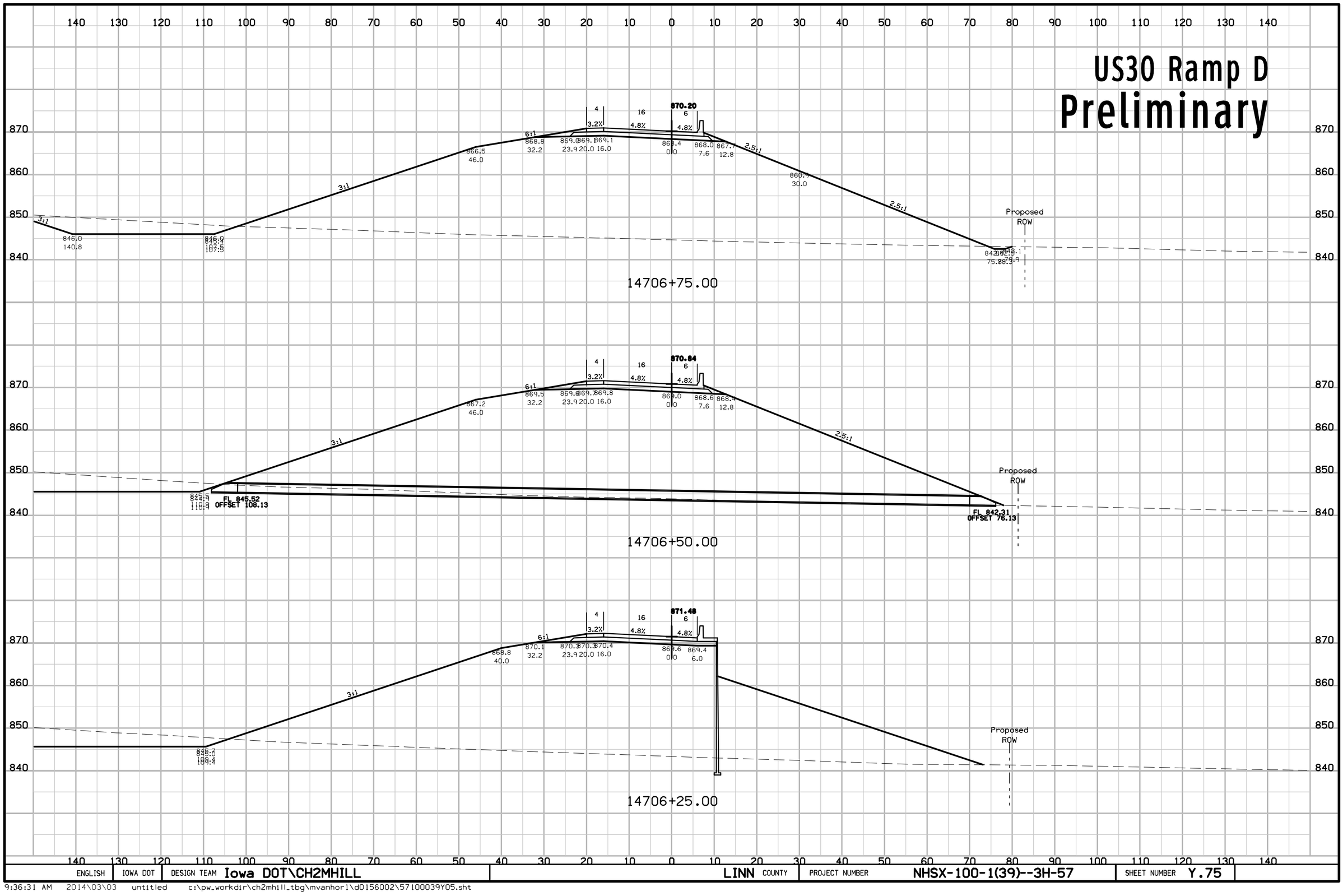
US30 Ramp D

Preliminary



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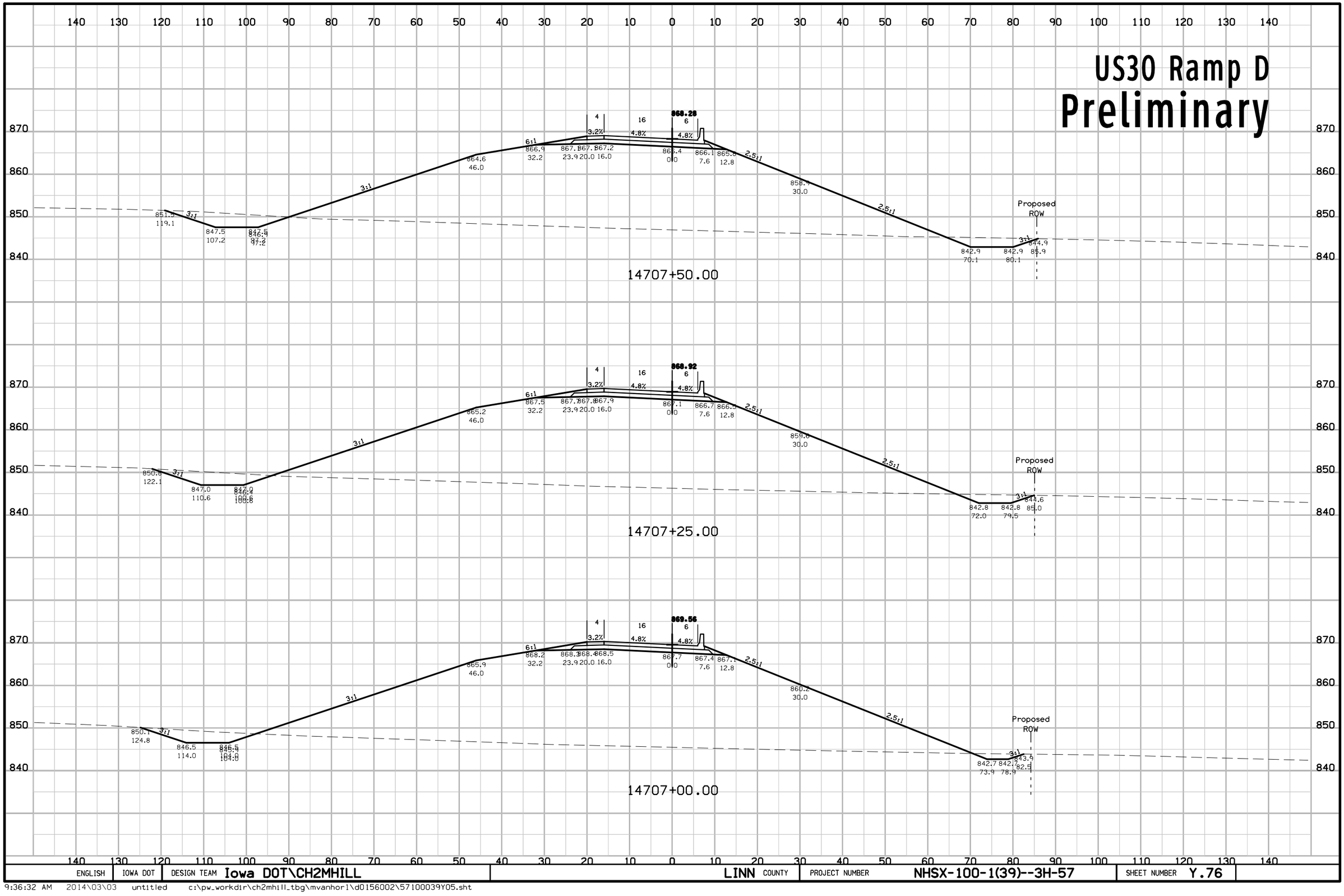
US30 Ramp D

Preliminary



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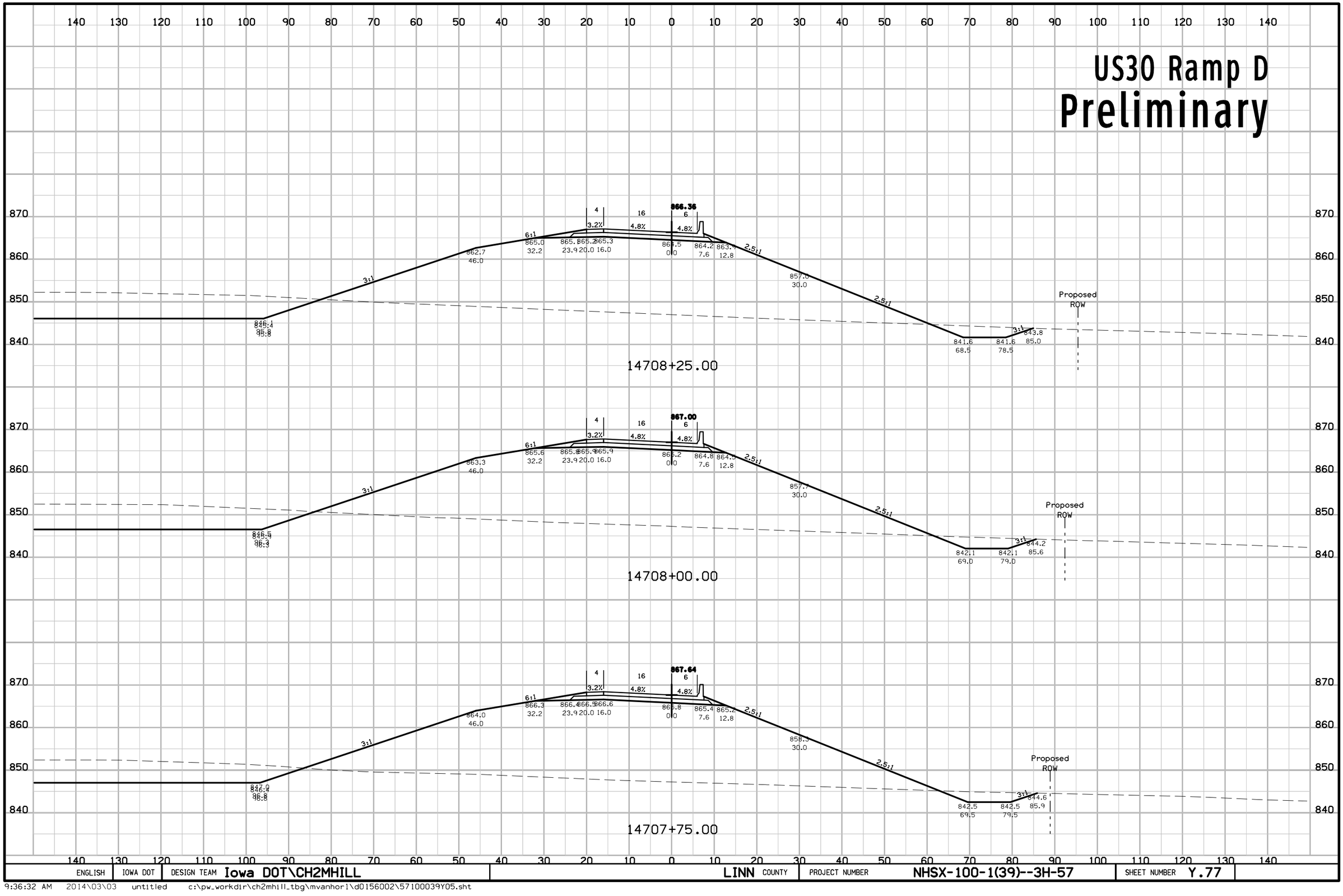
Preliminary



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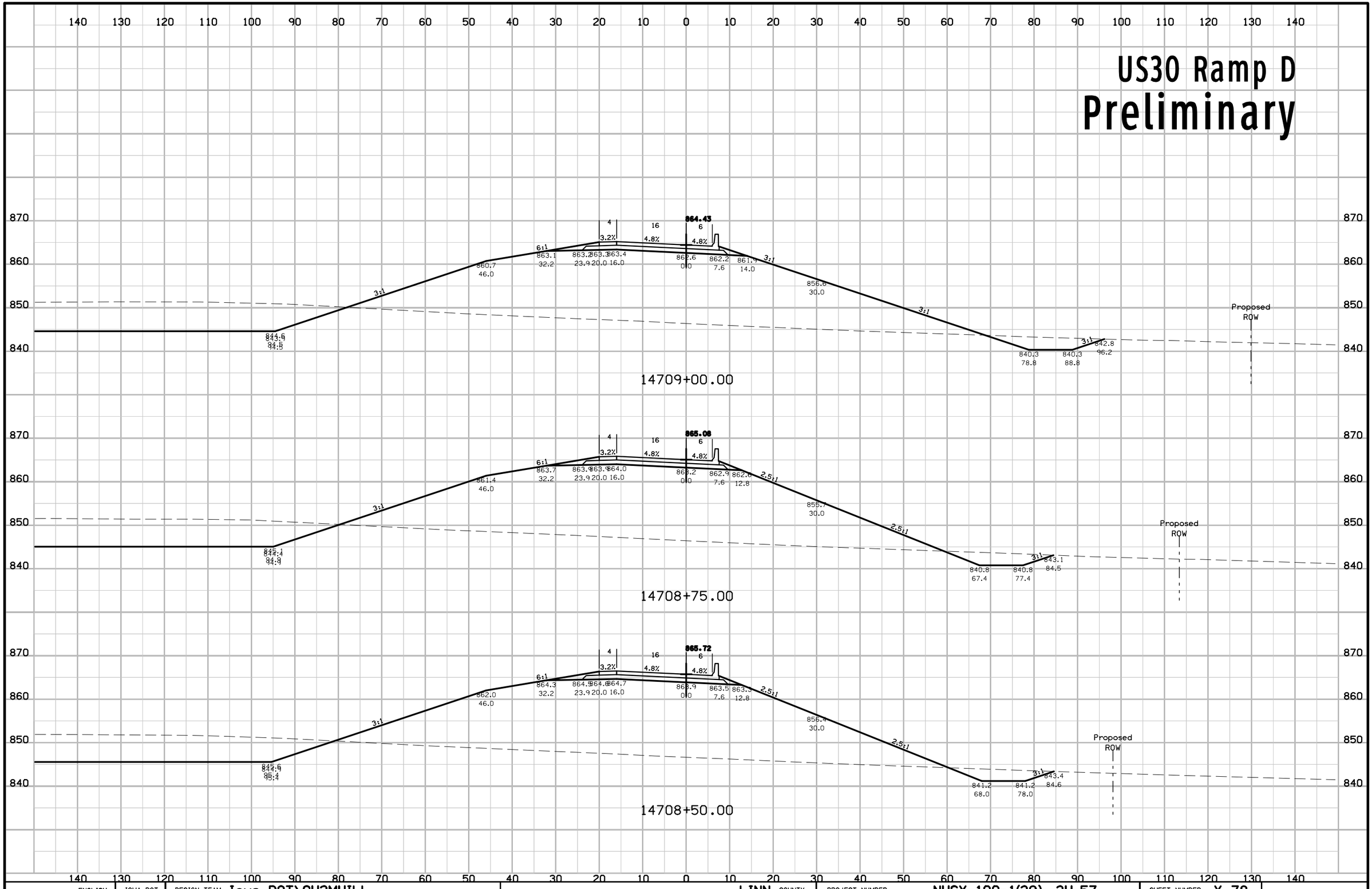
US30 Ramp D
Preliminary



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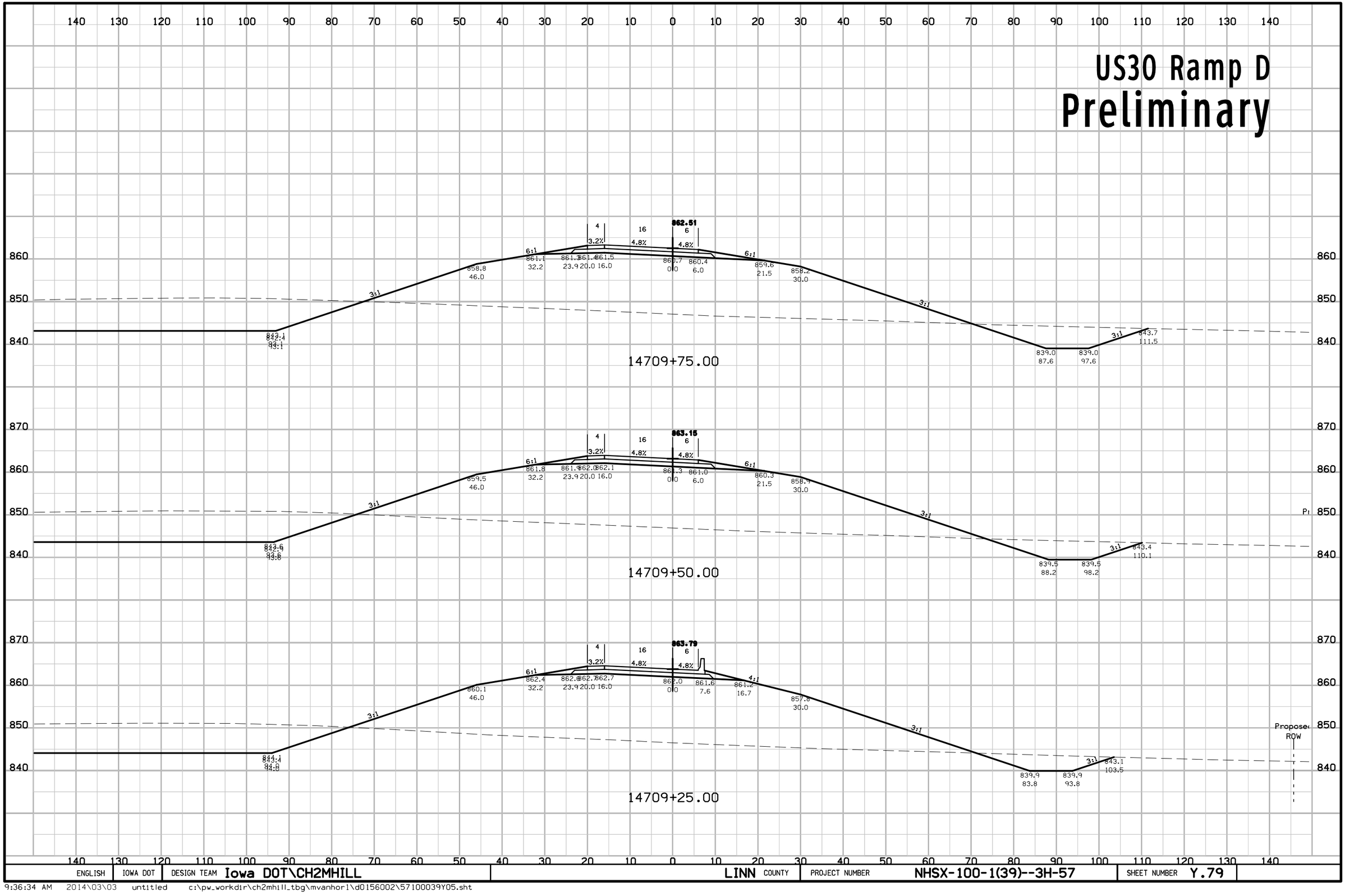
US30 Ramp D

Preliminary



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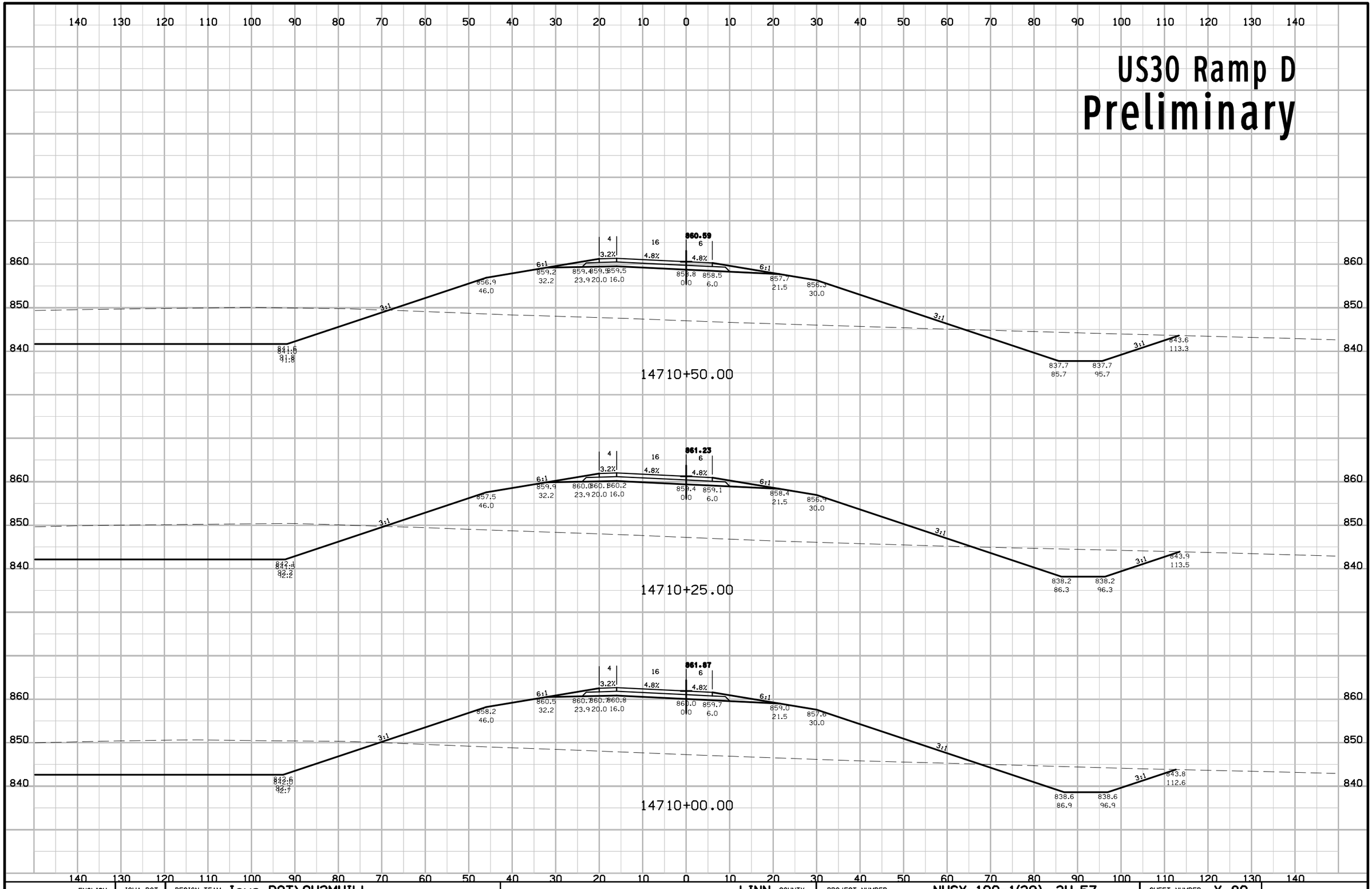
US30 Ramp D
Preliminary



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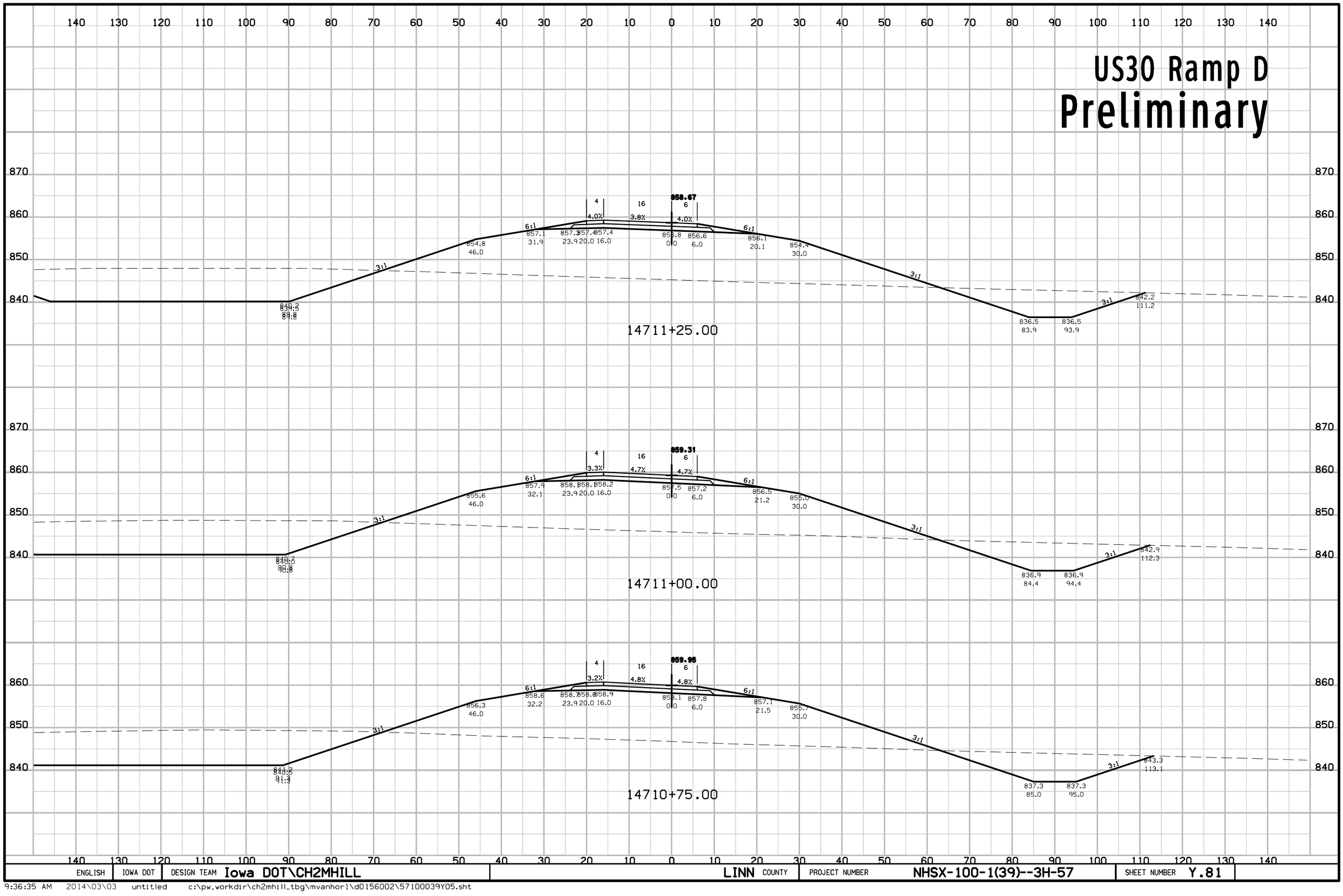
US30 Ramp D

Preliminary



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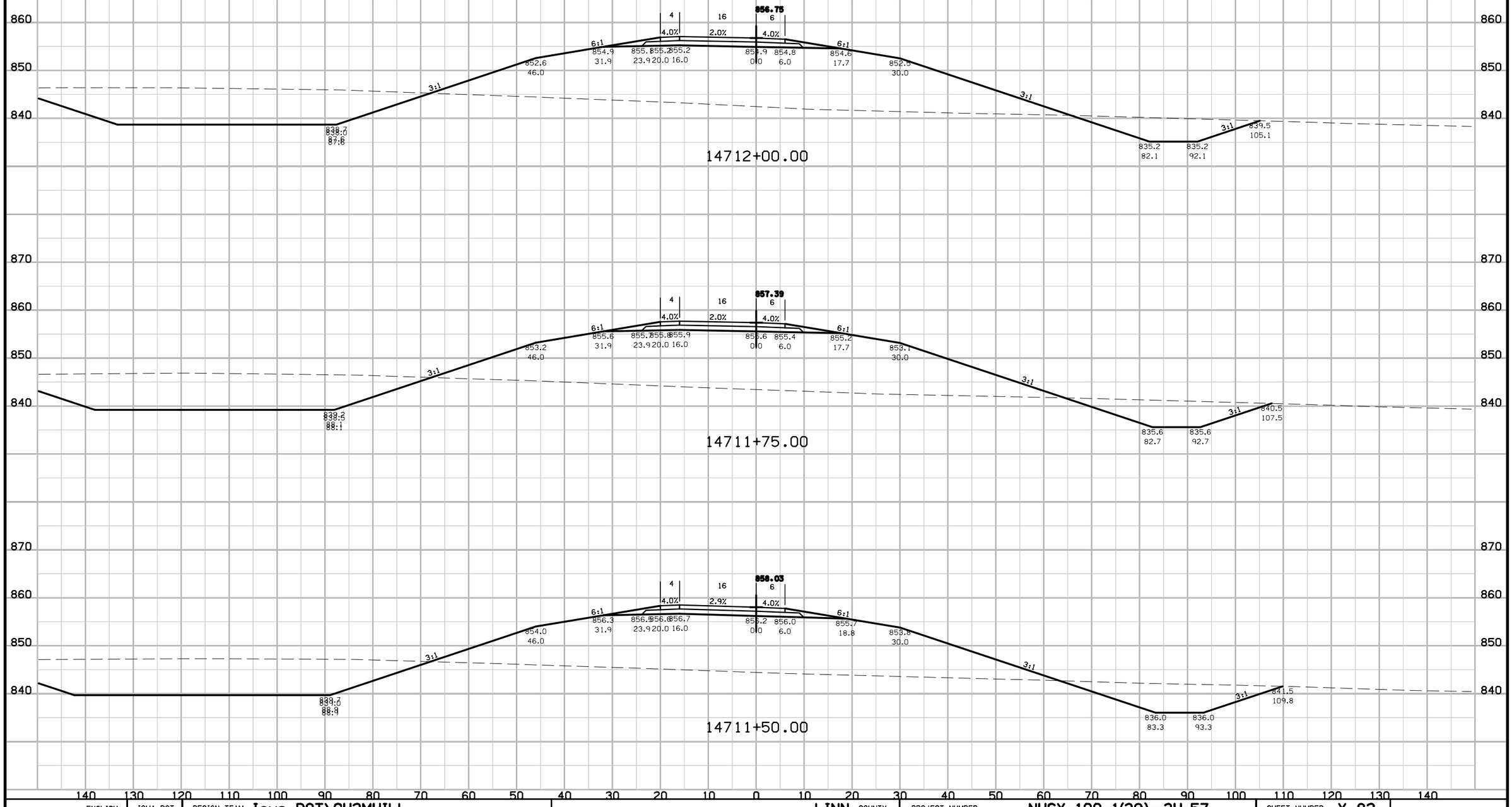
US30 Ramp D
Preliminary



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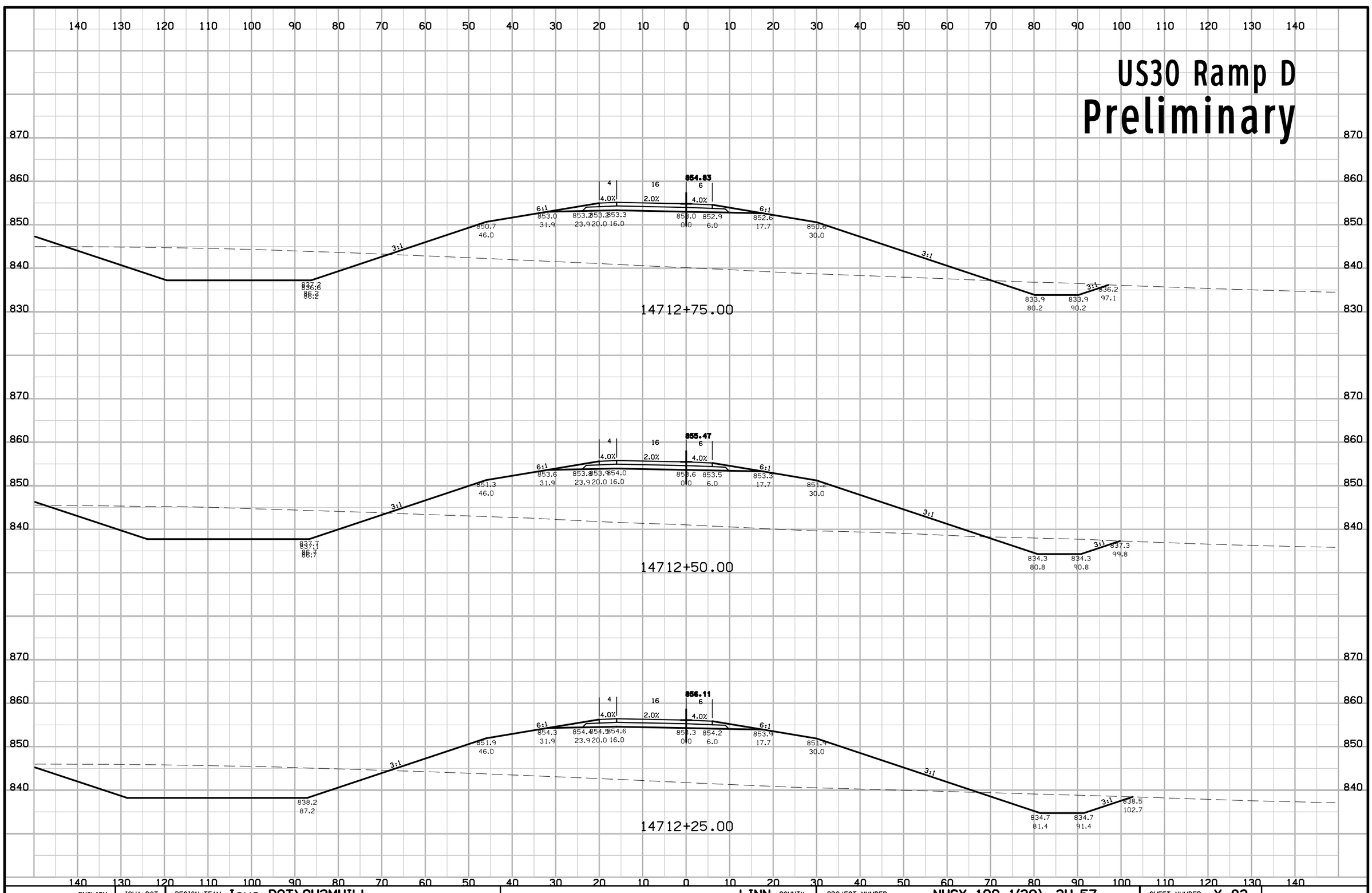
US30 Ramp D
Preliminary



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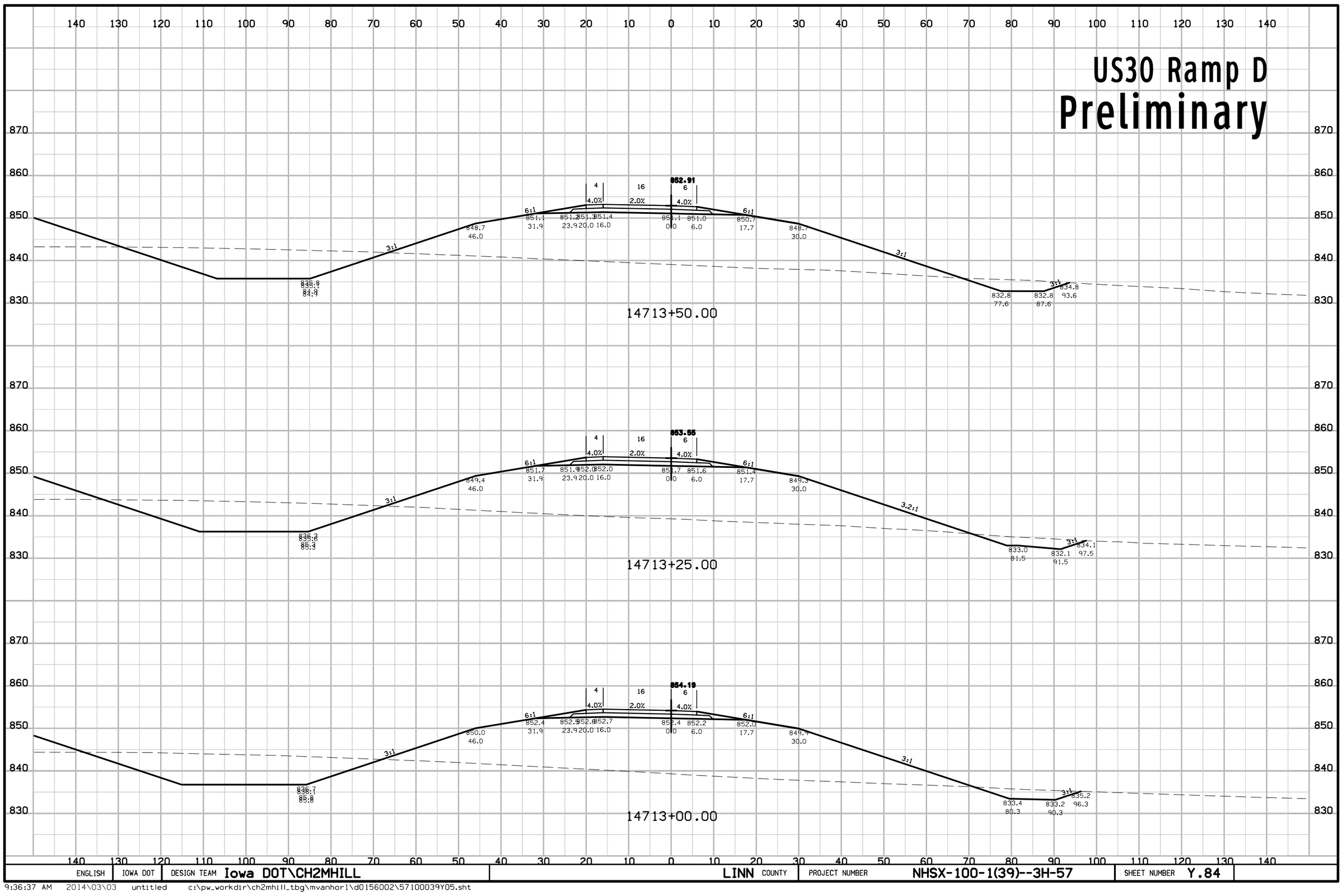
US30 Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.84

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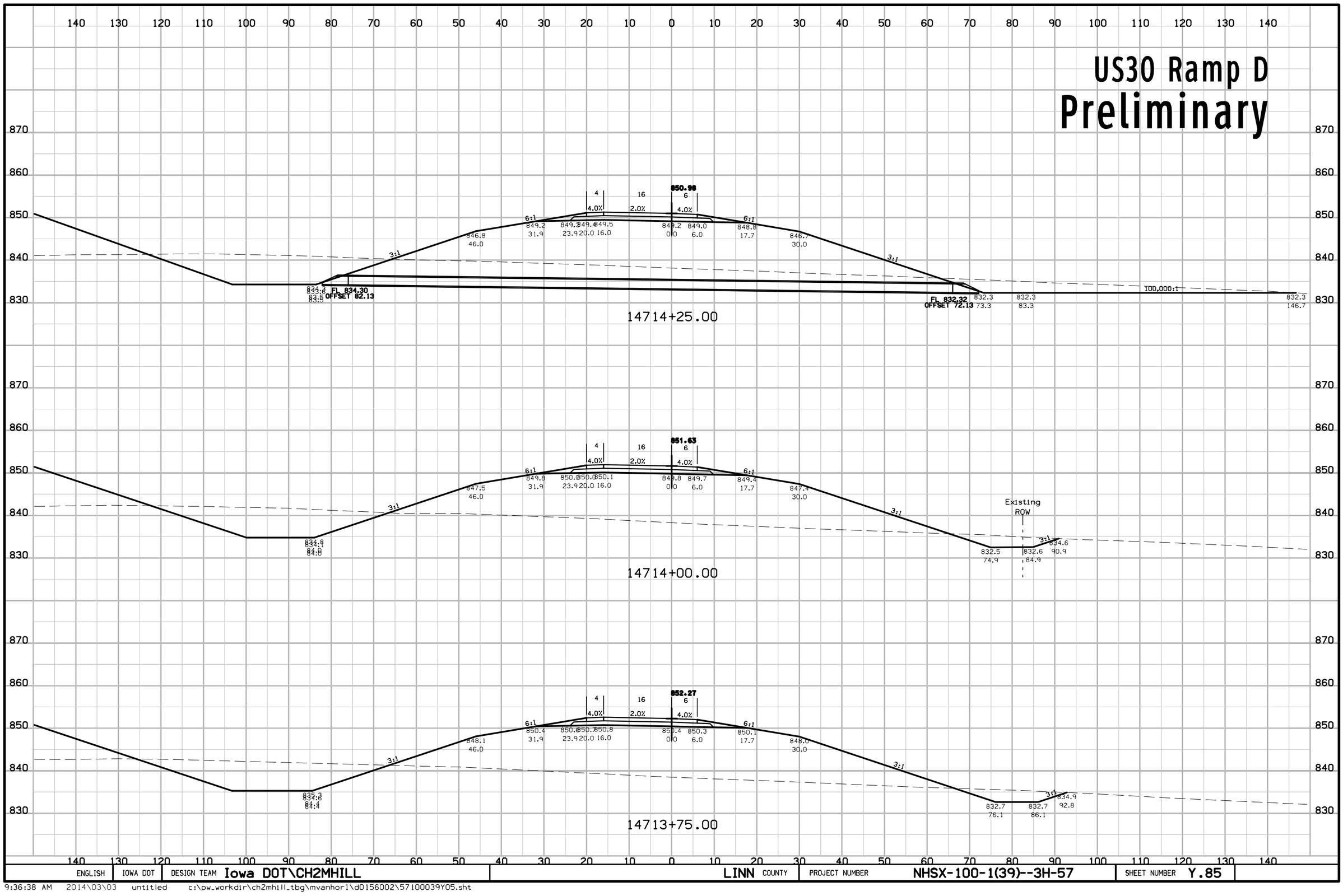
US30 Ramp D

Preliminary



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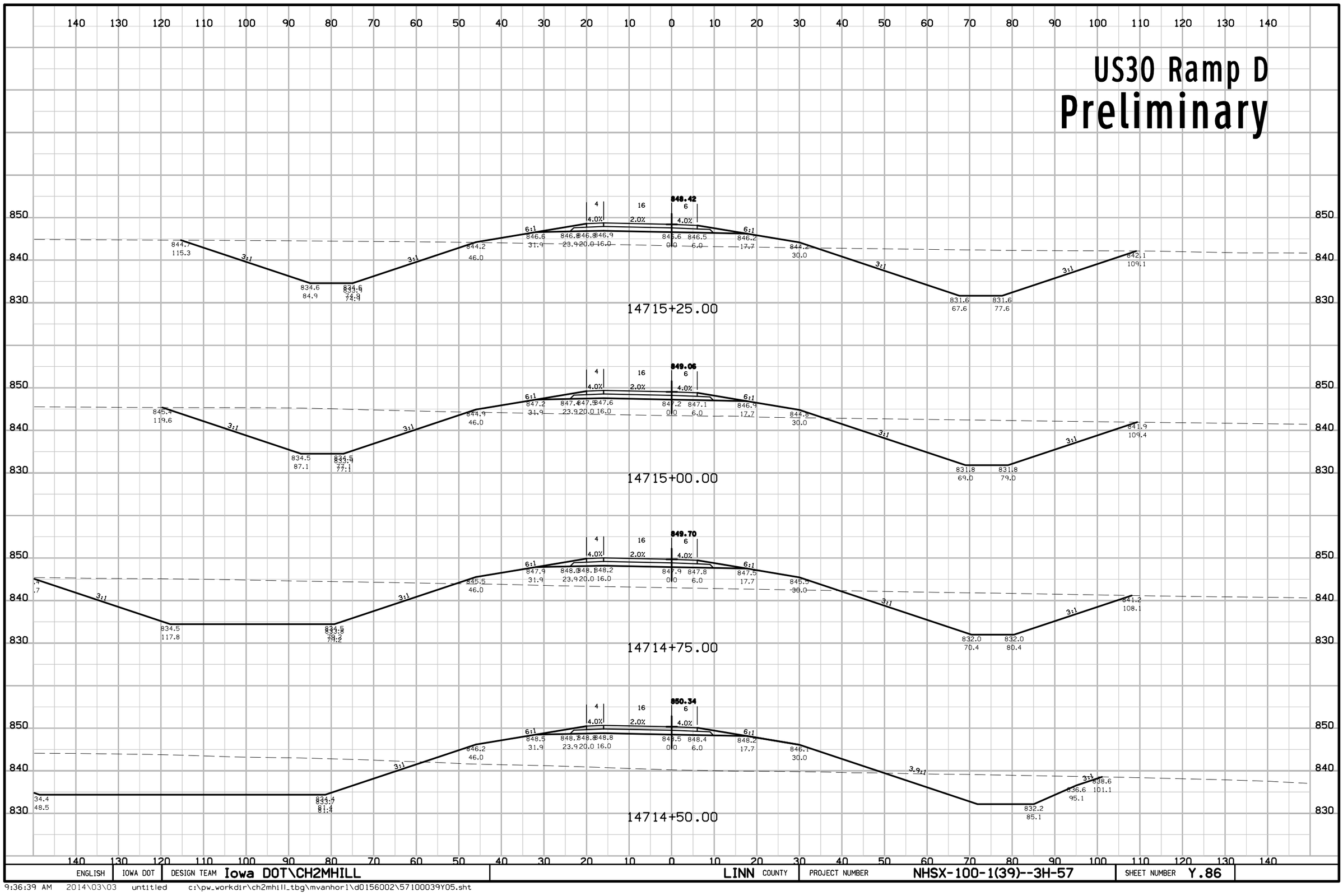
US30 Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.86

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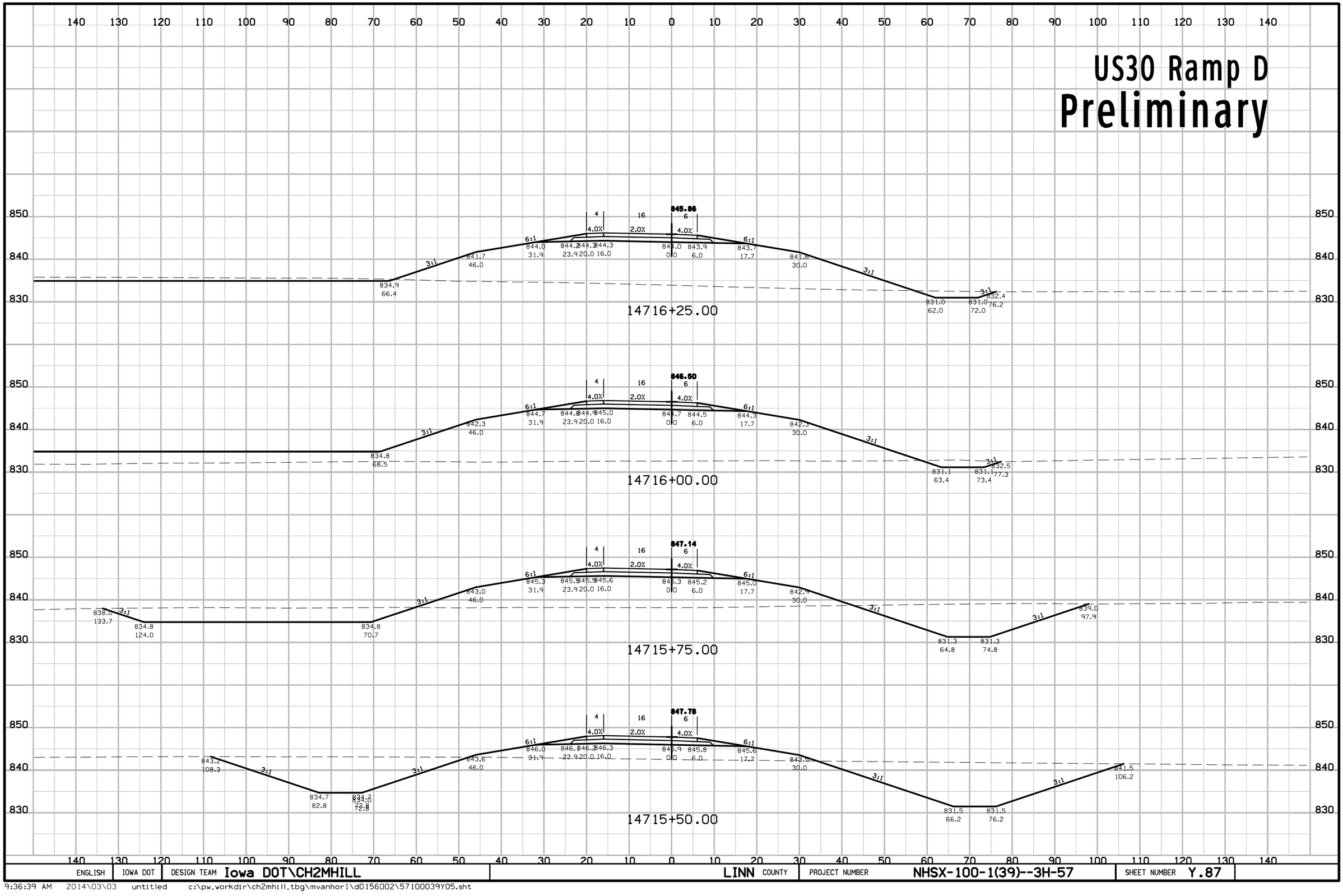
US30 Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.87

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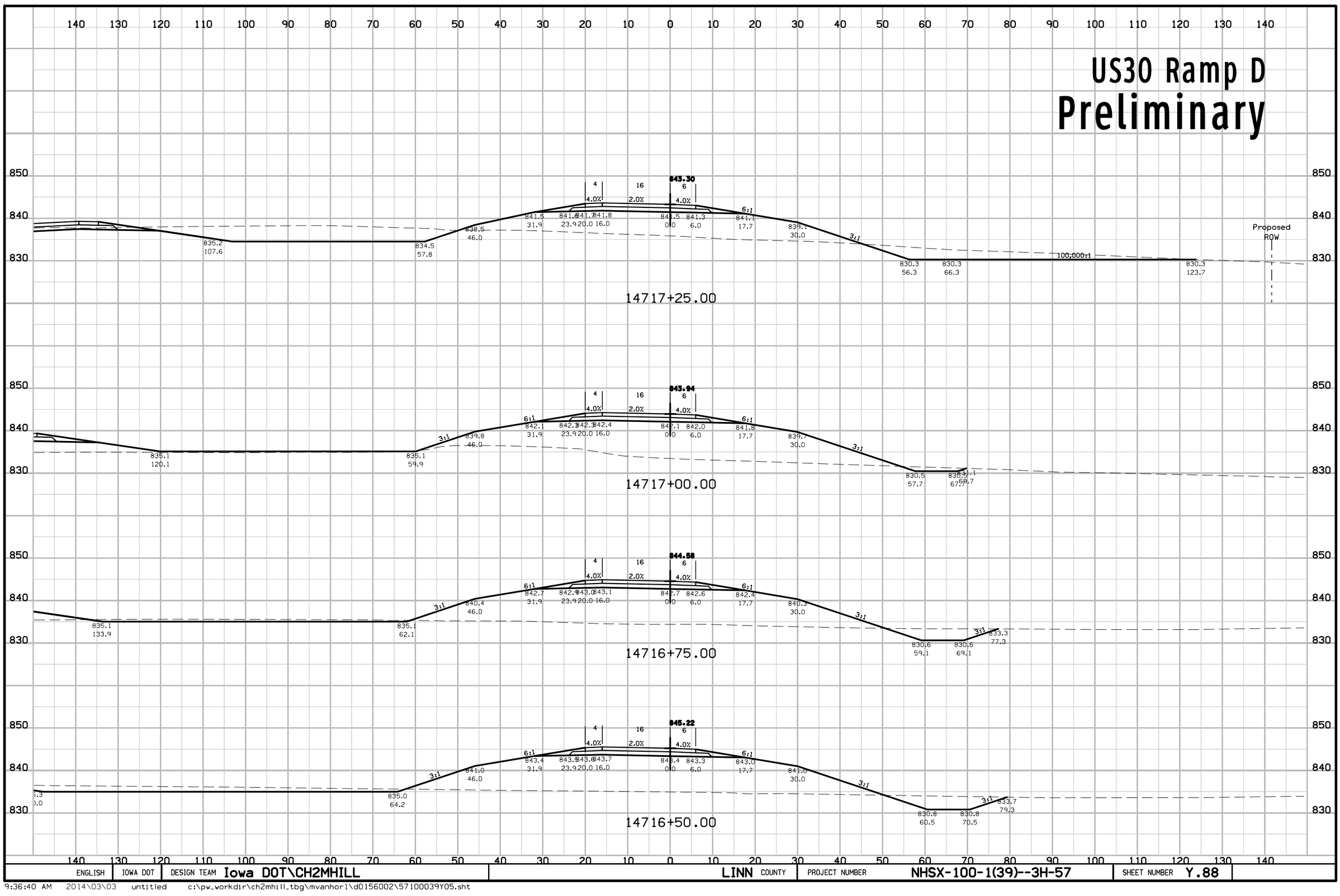
US30 Ramp D
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.88

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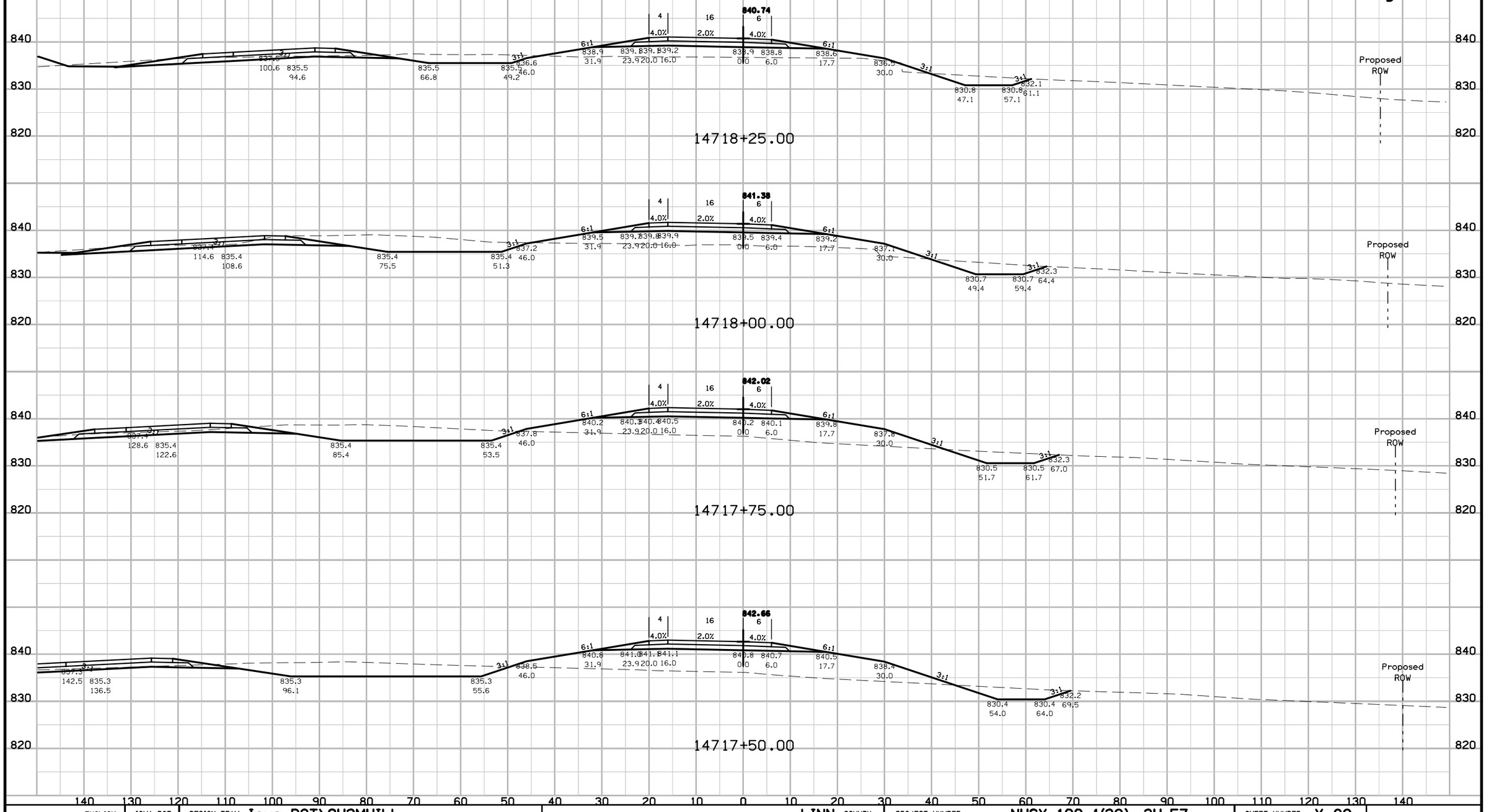
US30 Ramp D
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.89

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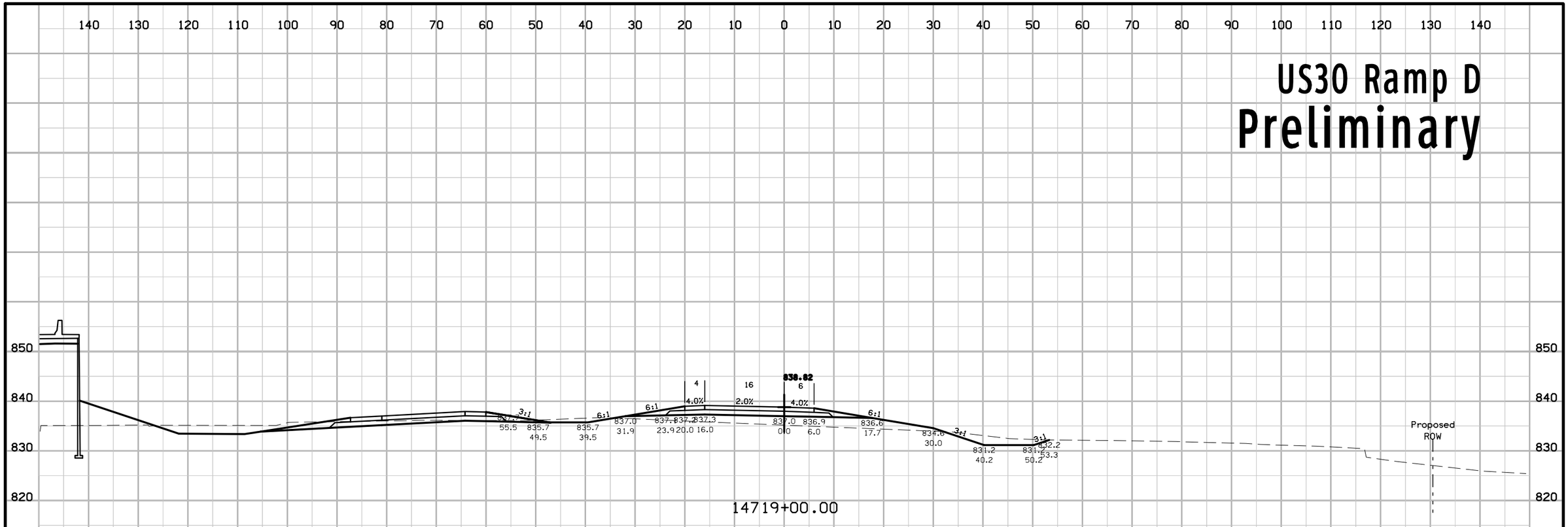
Preliminary



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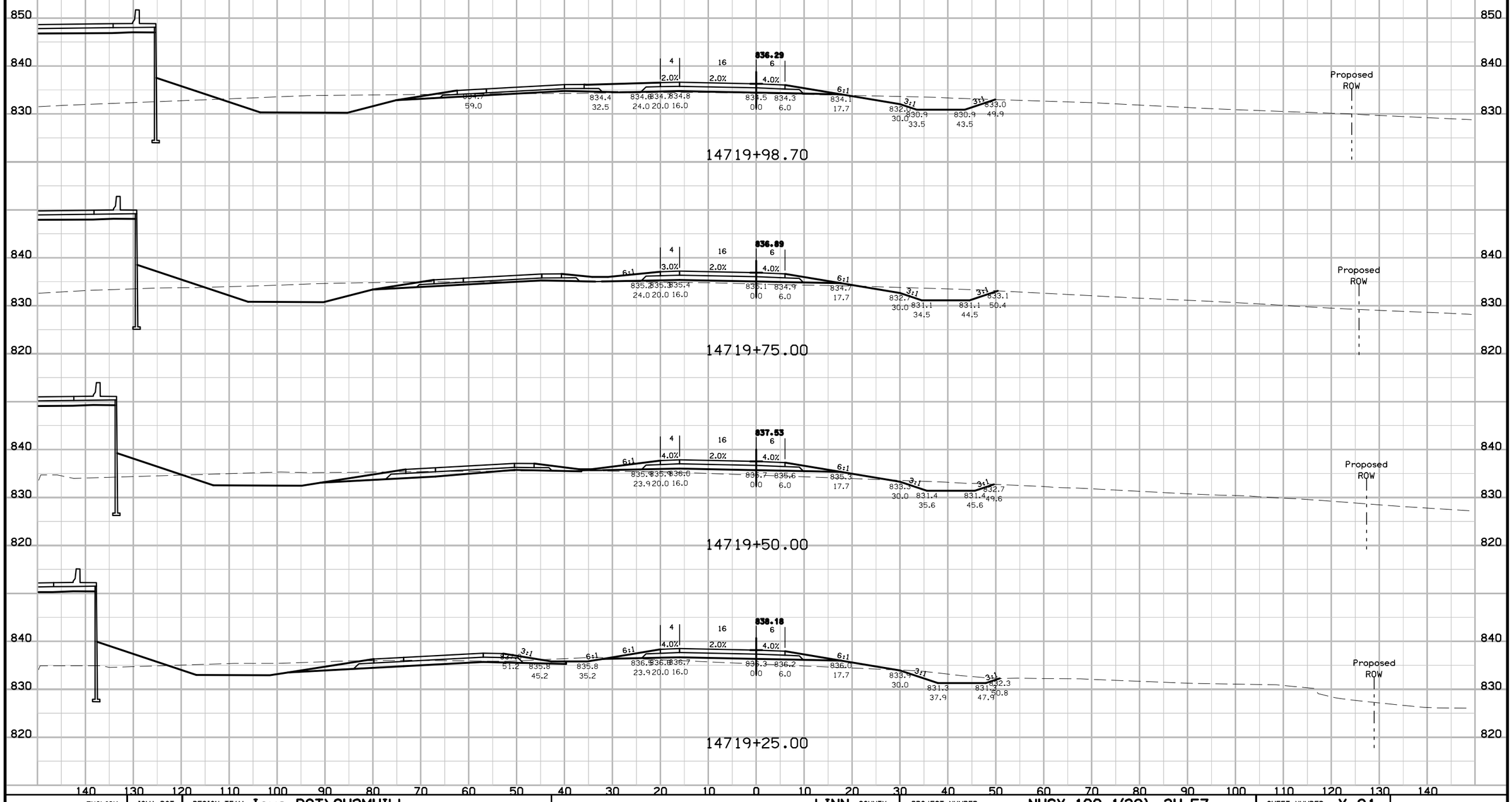
US30 Ramp D
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.91

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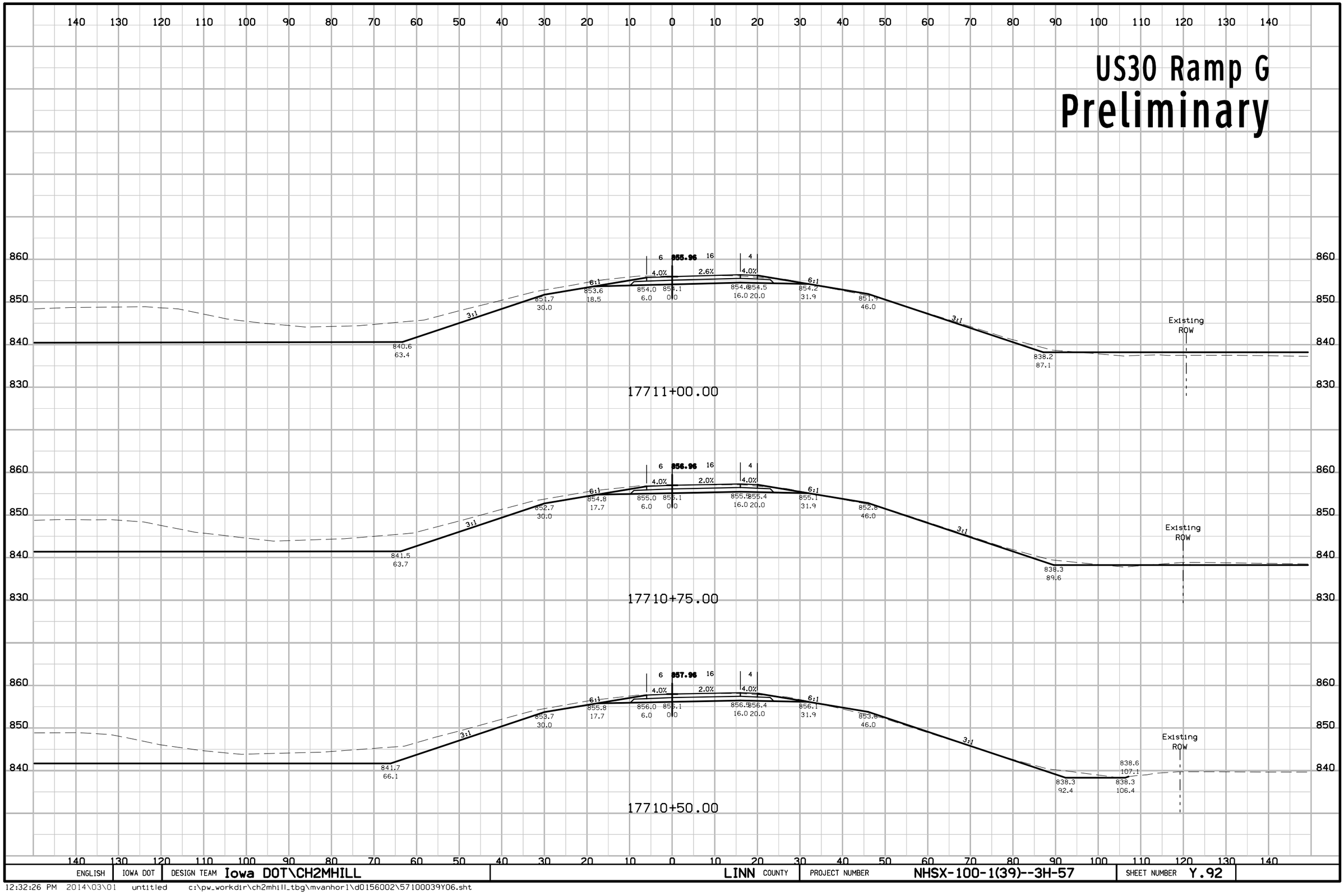
US30 Ramp G
Preliminary



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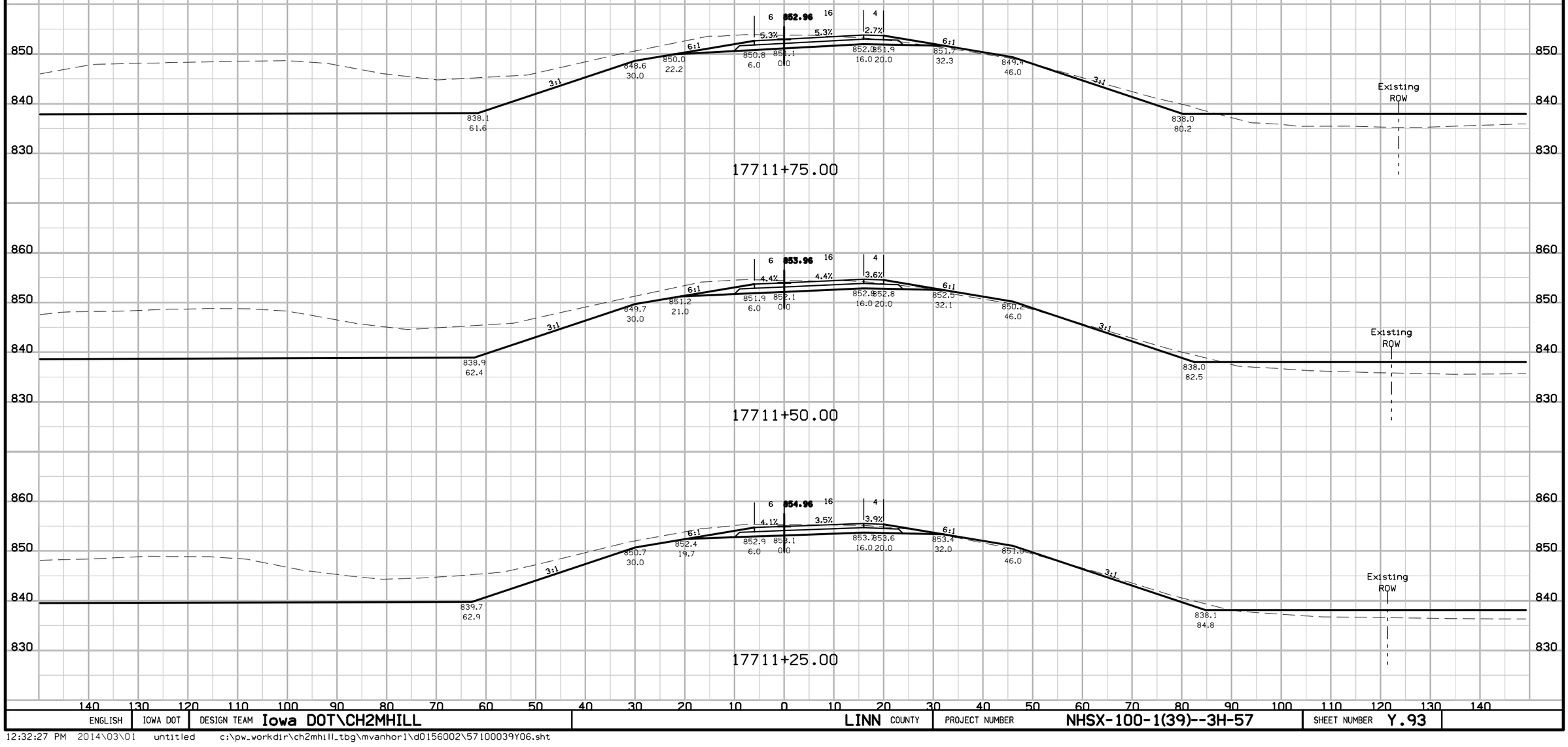

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US30 Ramp G
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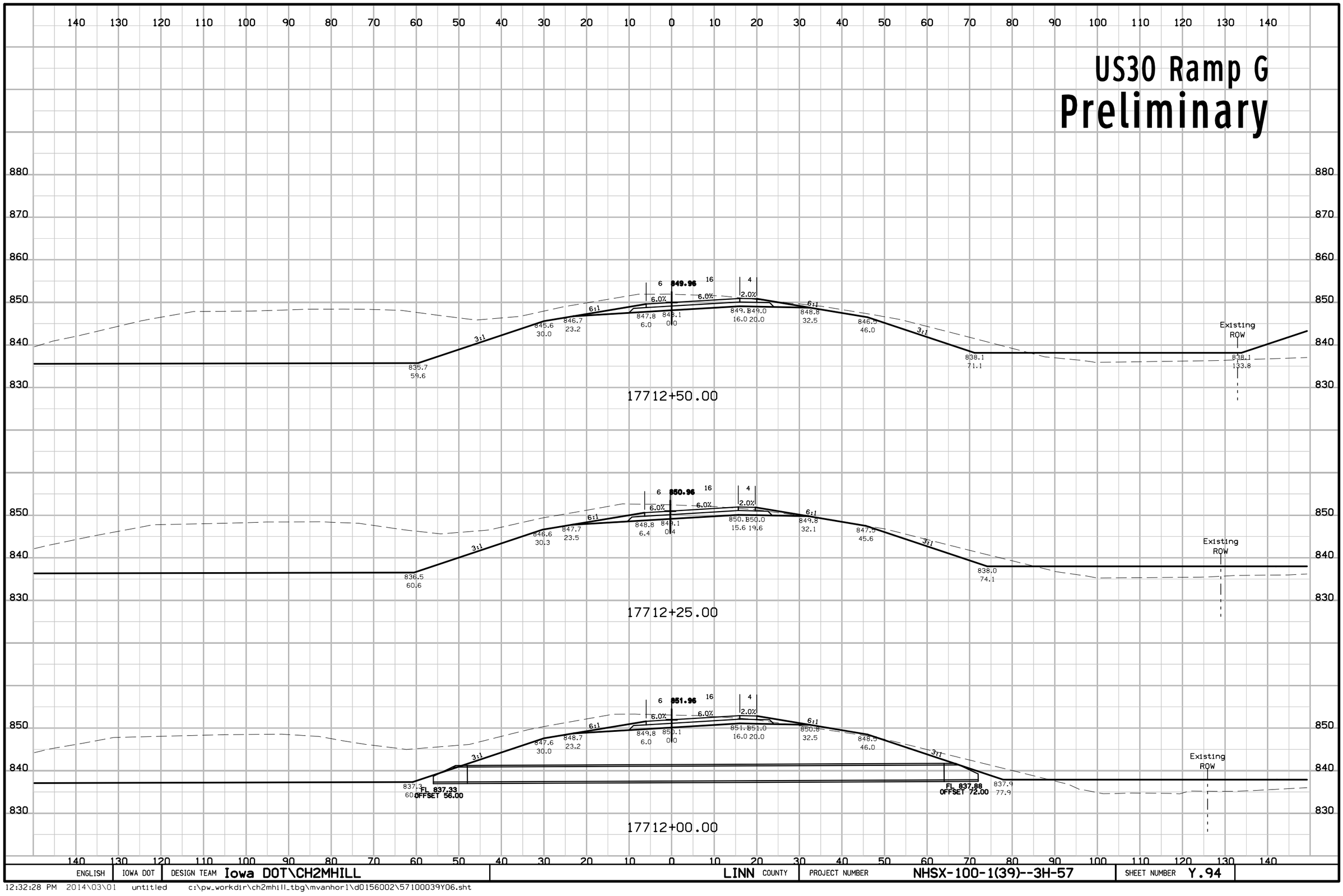

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.94

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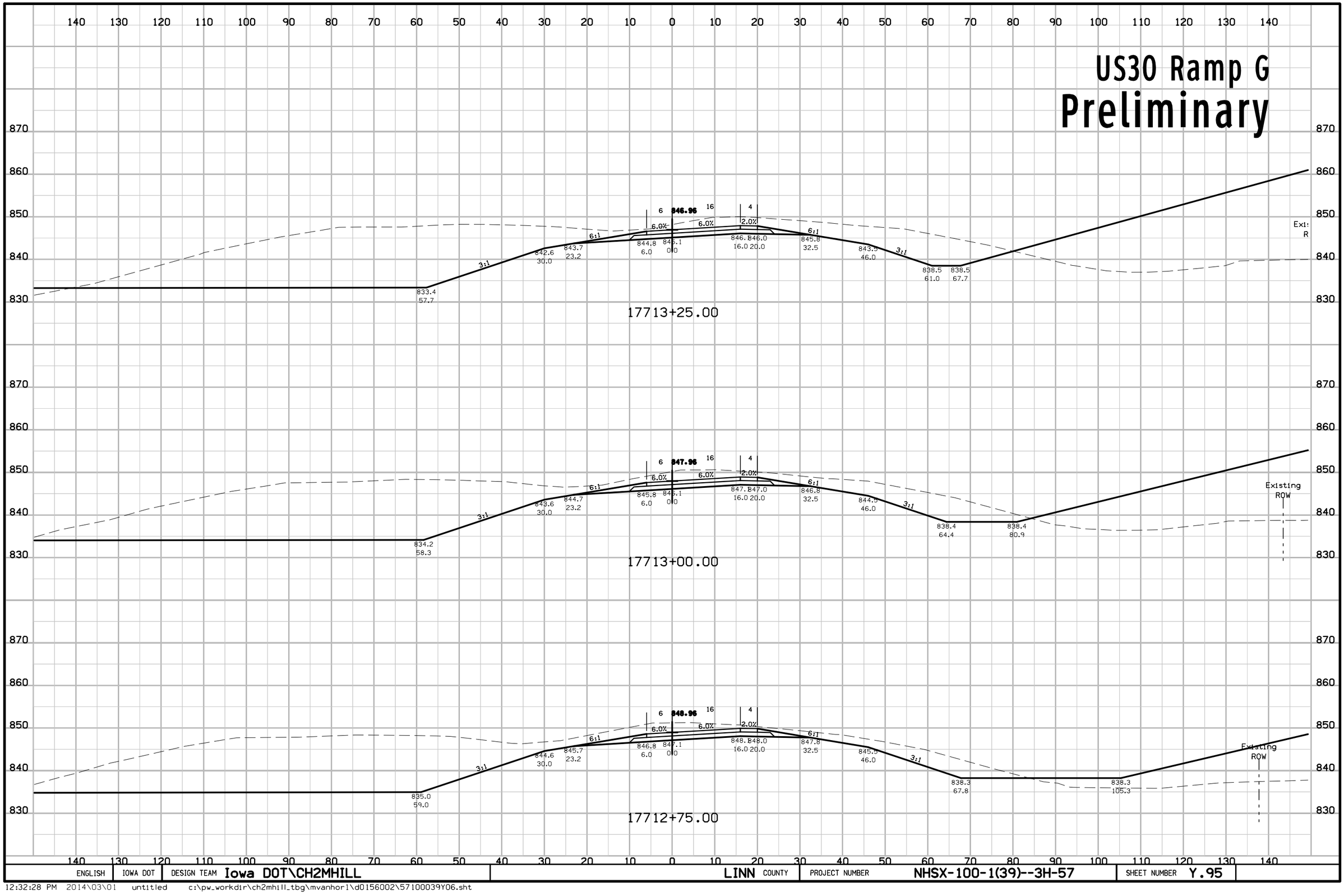
US30 Ramp G

Preliminary



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US30 Ramp G

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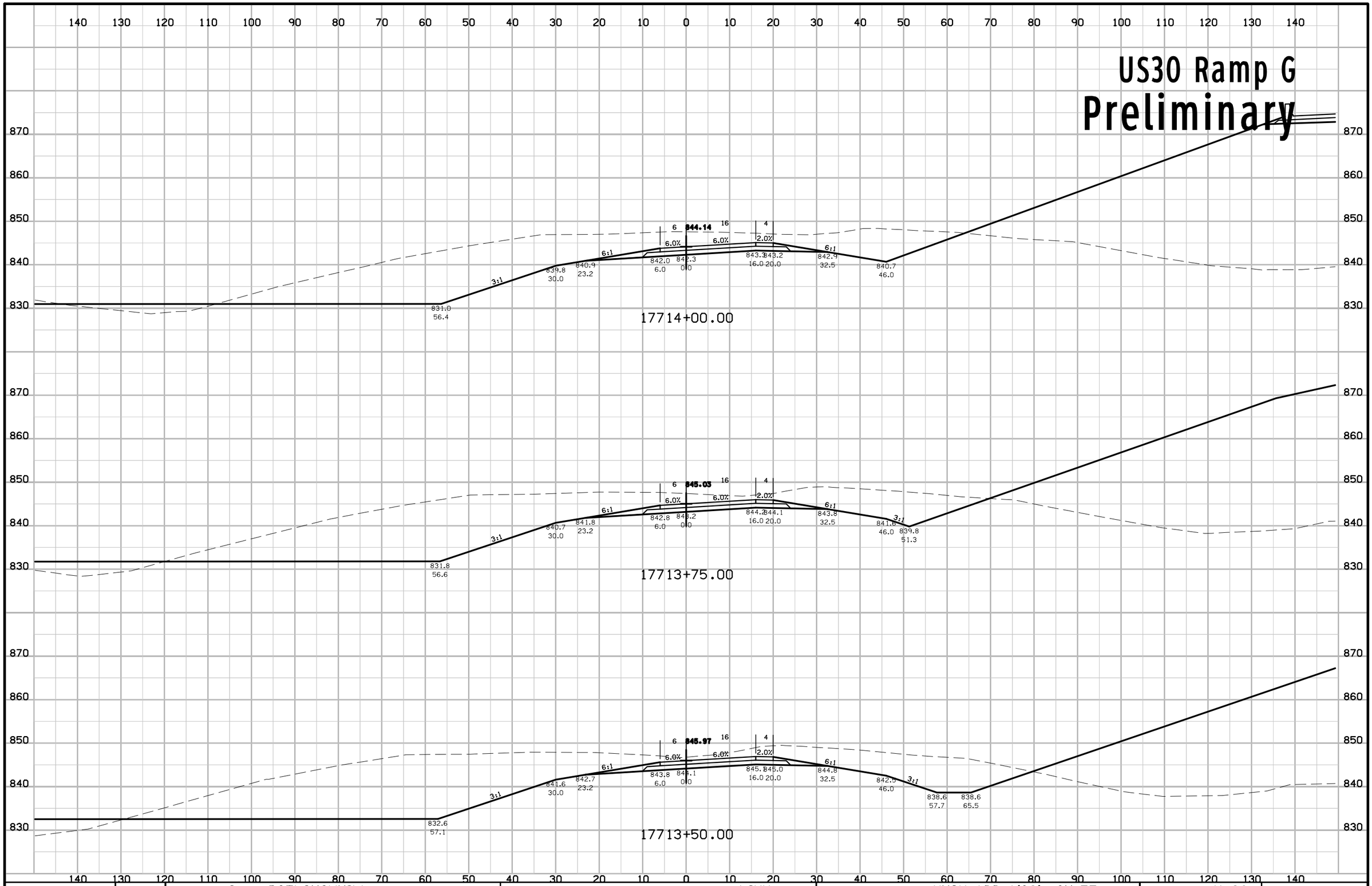

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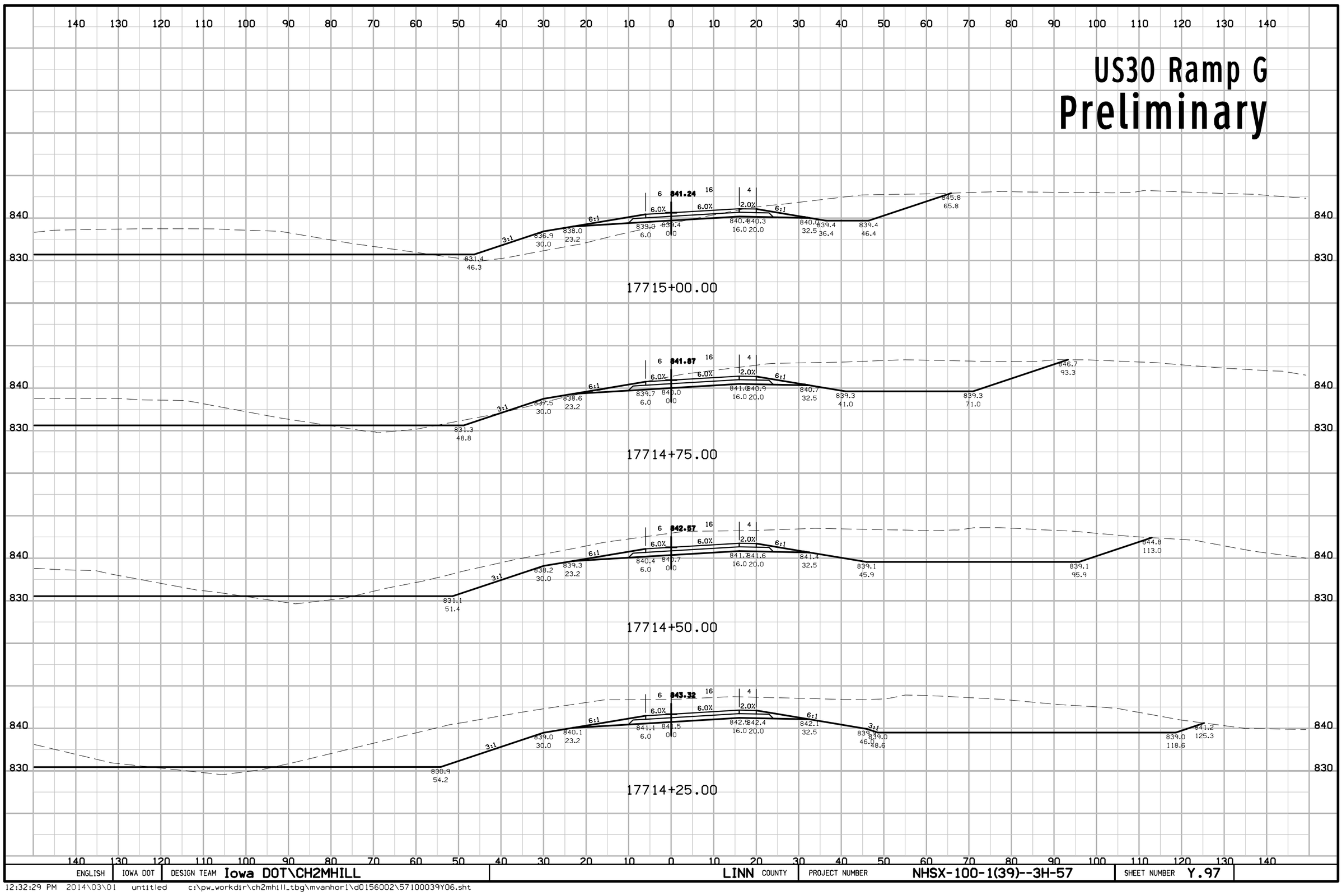

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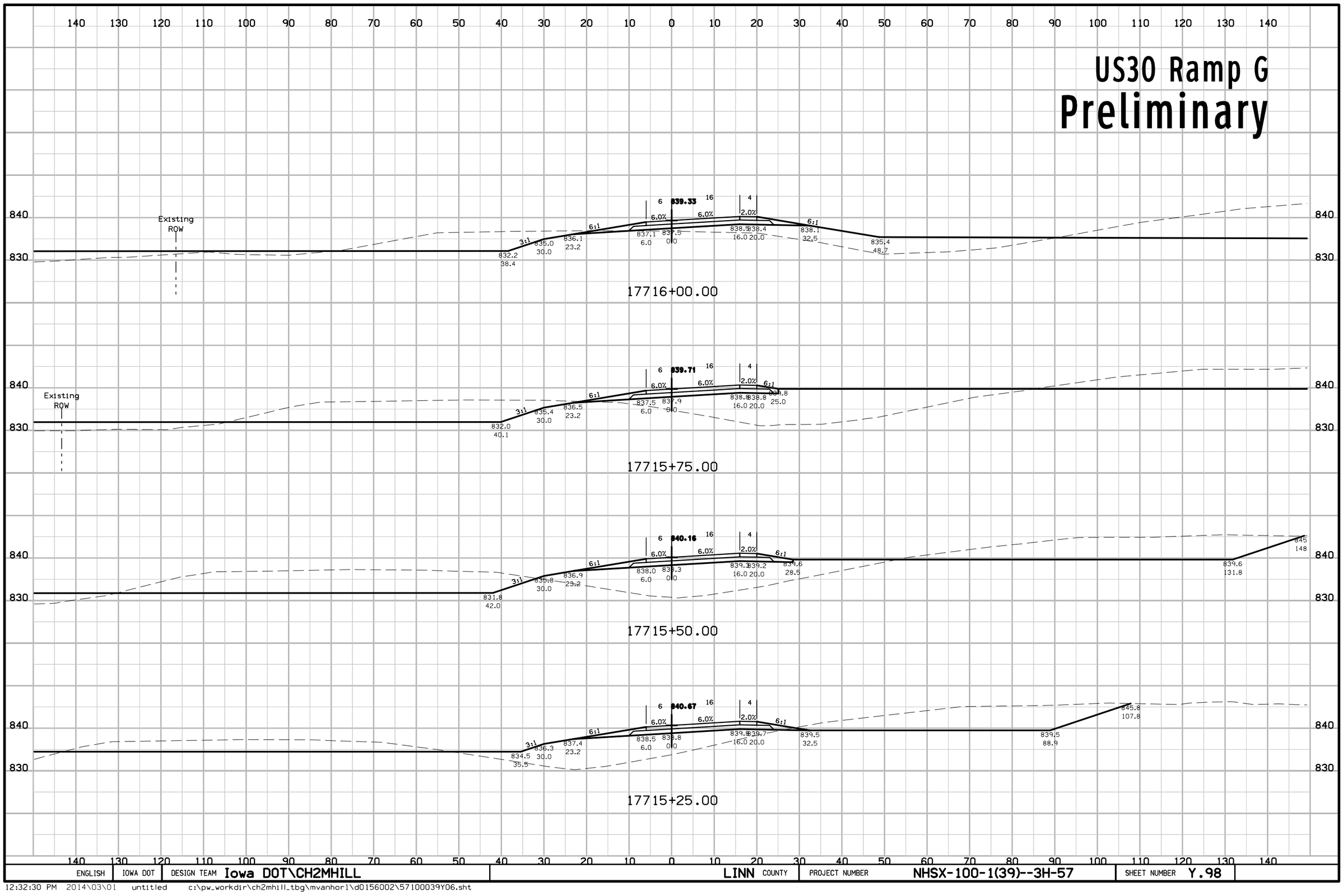

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US30 Ramp G
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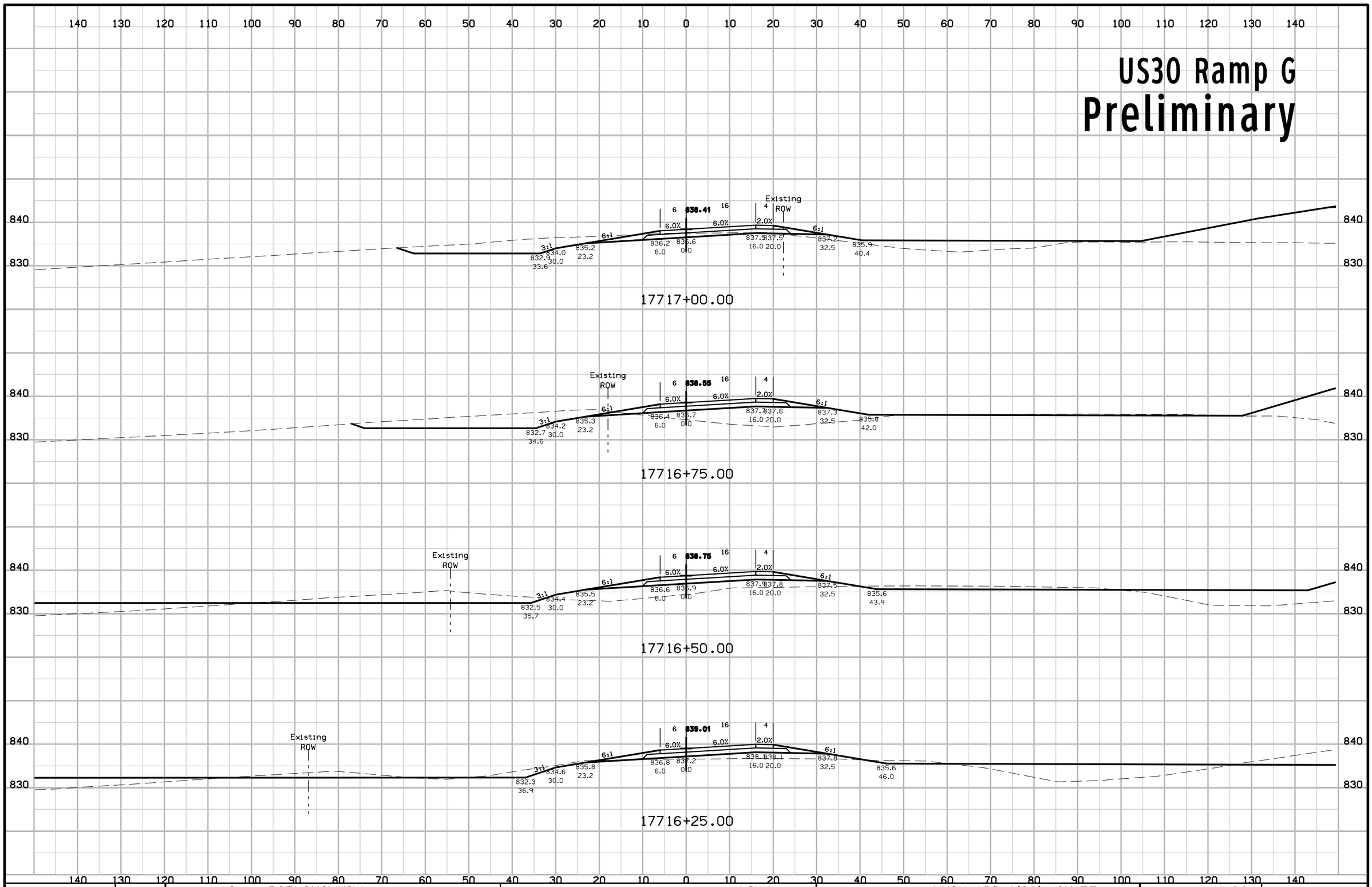

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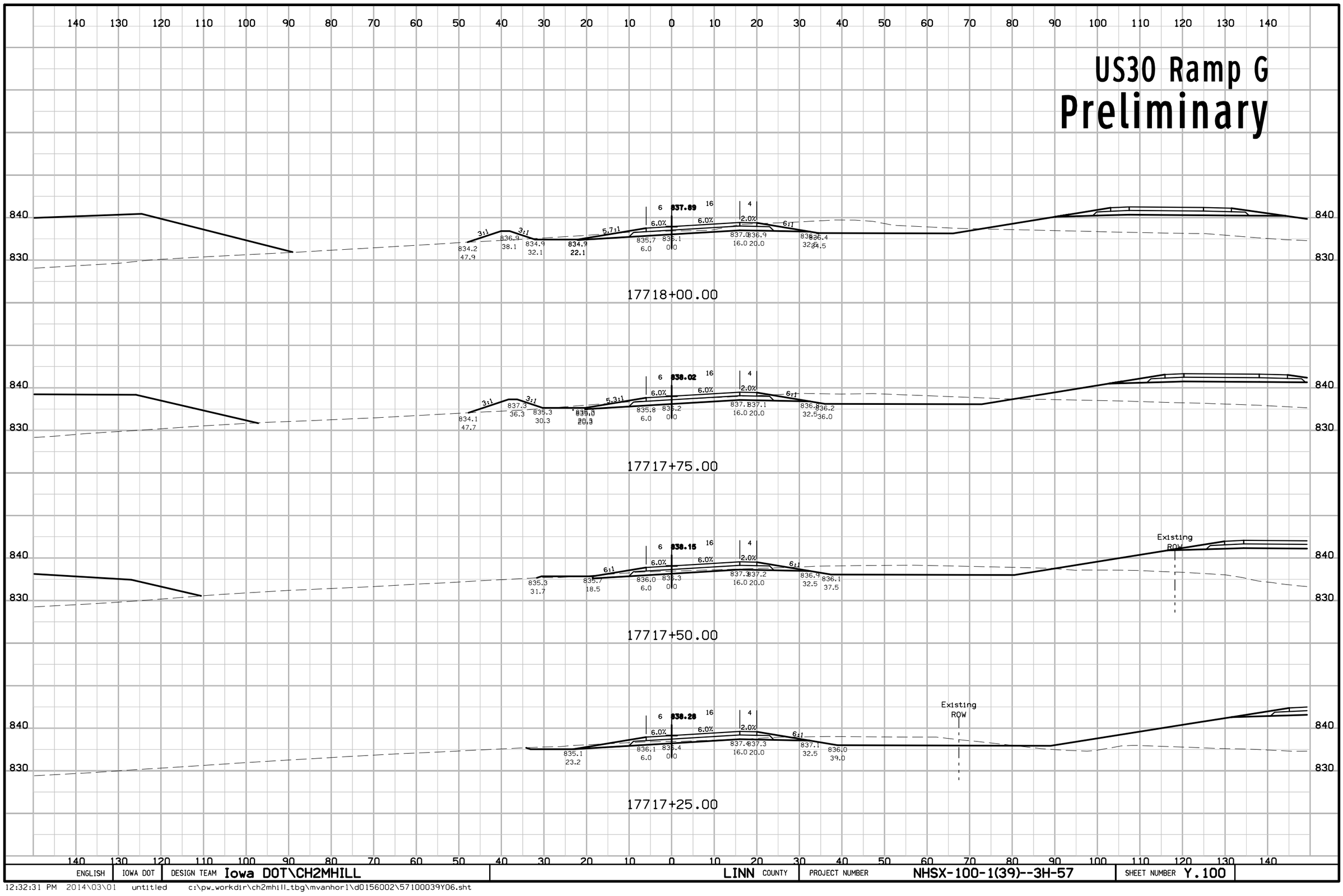
US30 Ramp G
Preliminary



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US30 Ramp G
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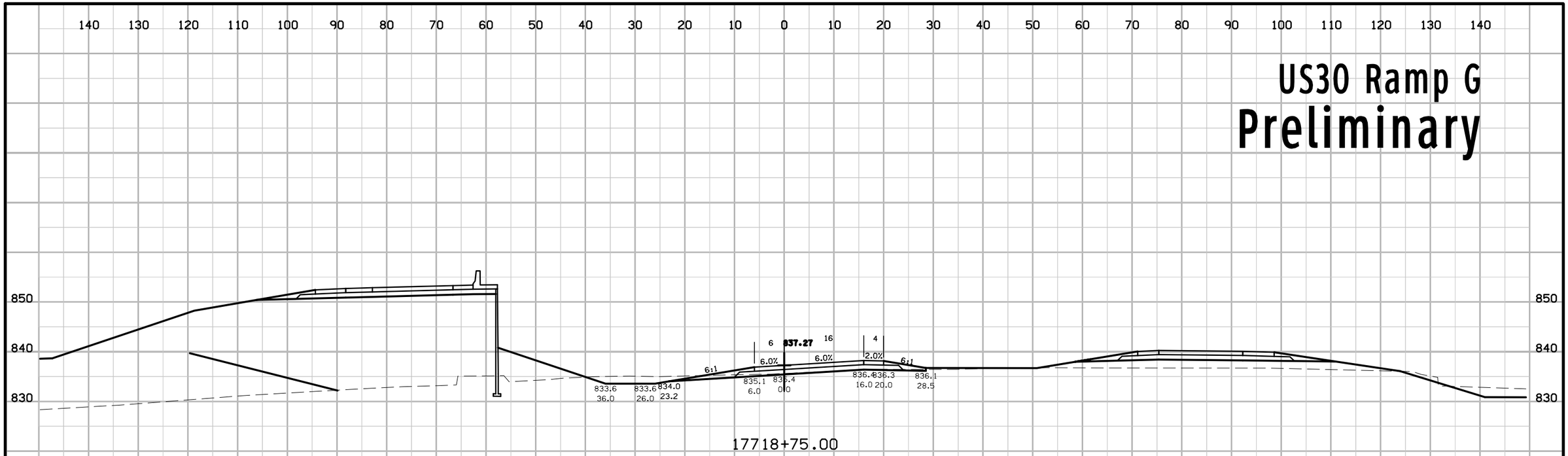

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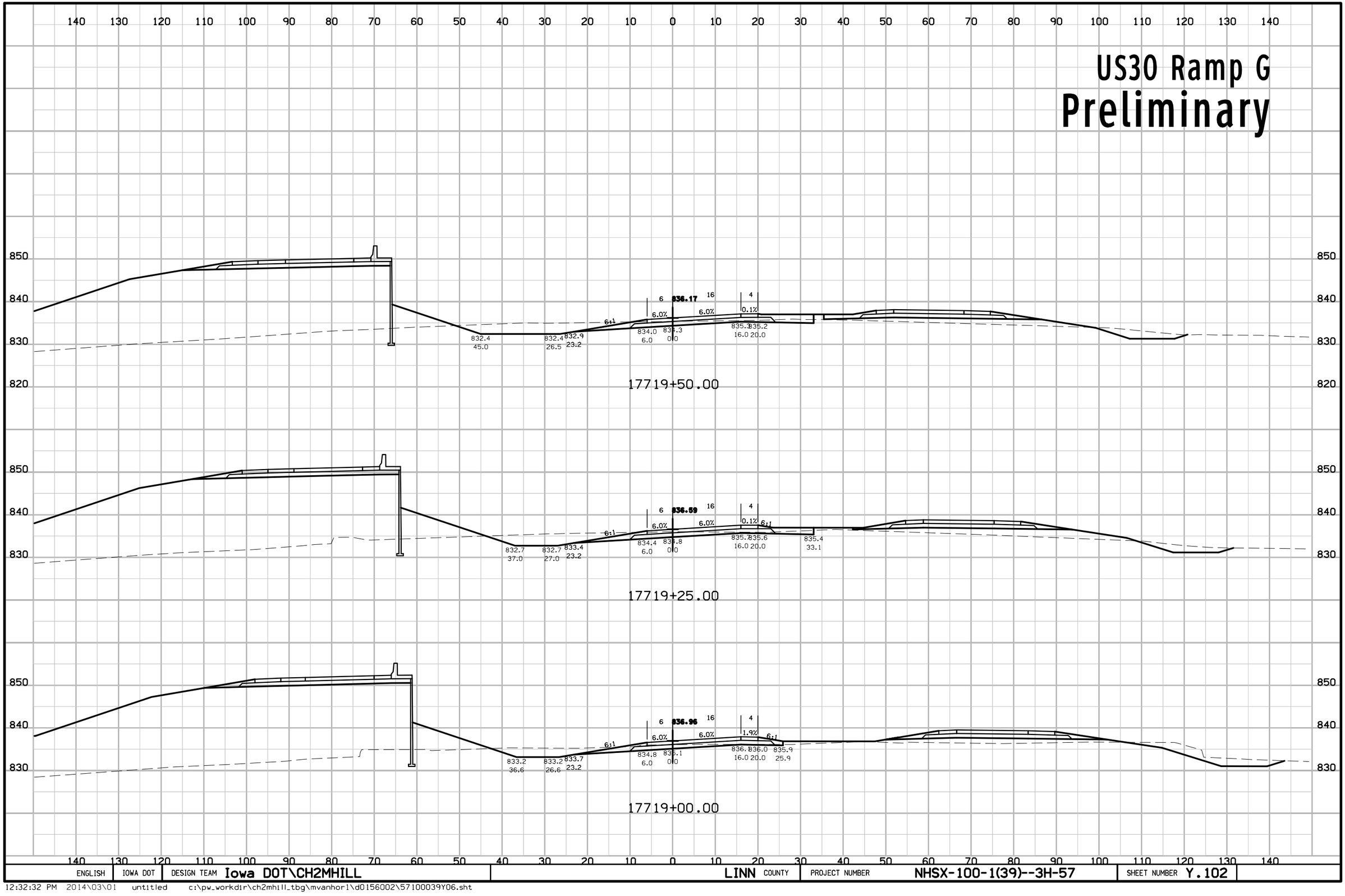

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US30 Ramp G
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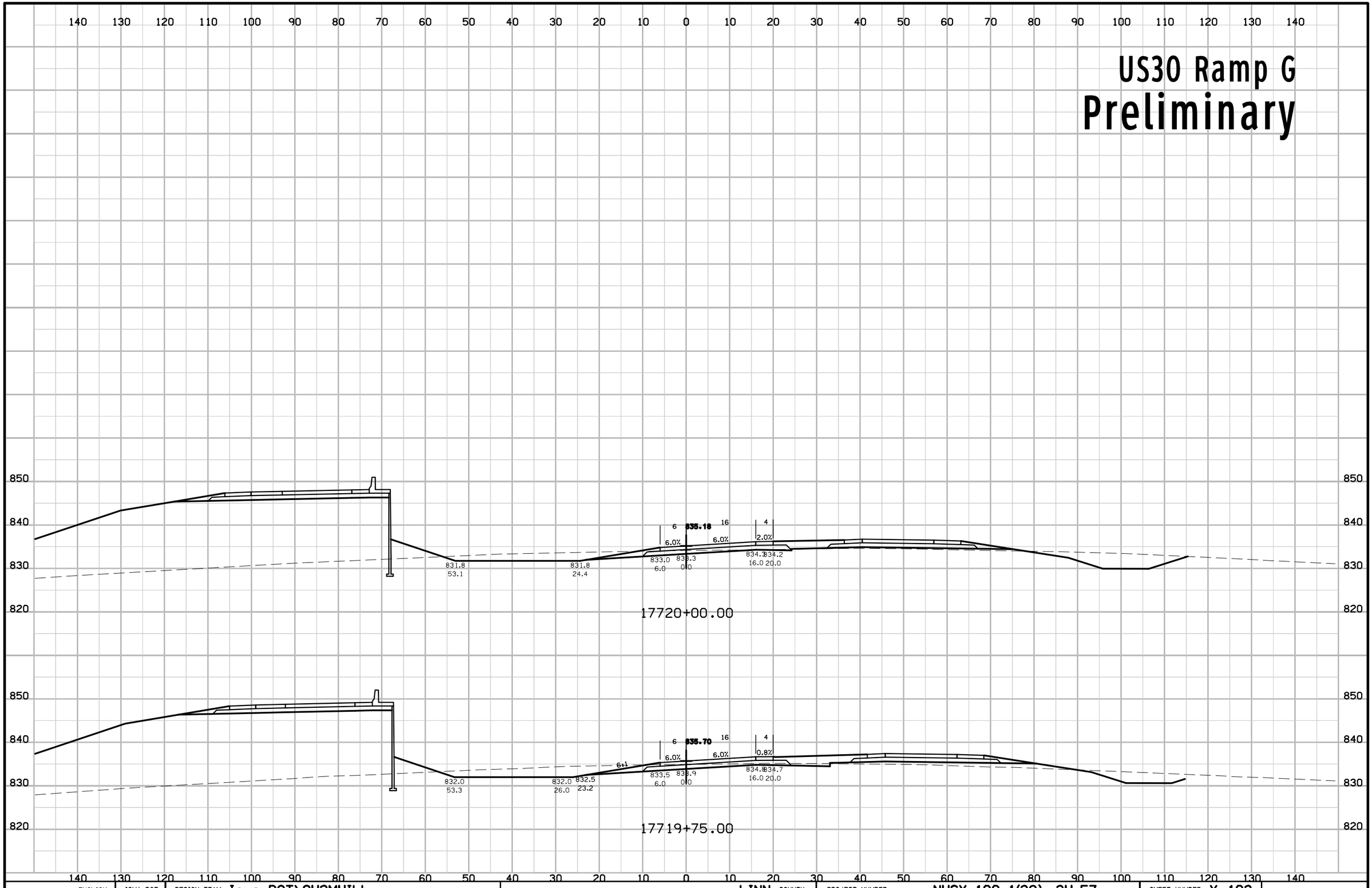

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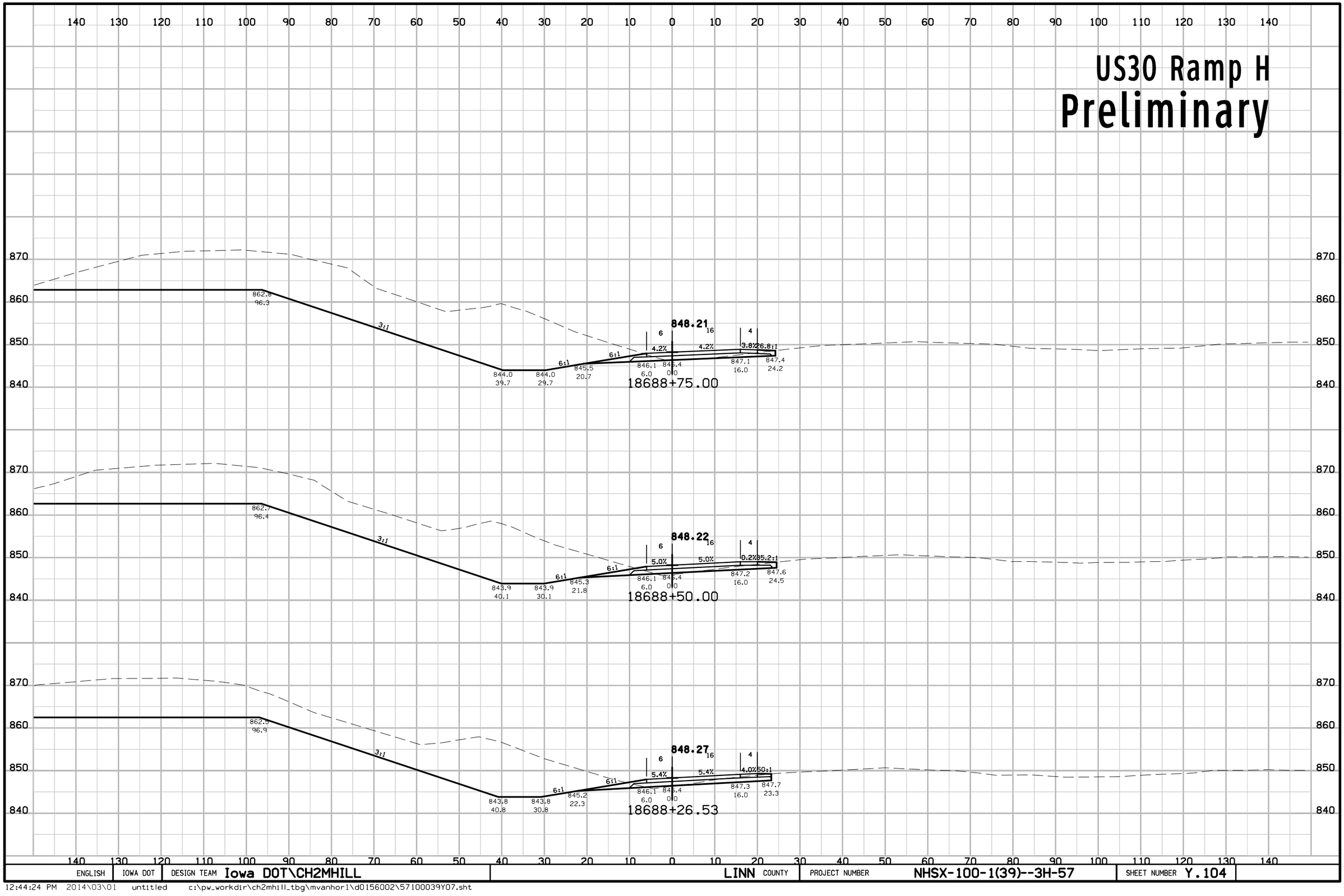
US30 Ramp H

Preliminary



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US30 Ramp H

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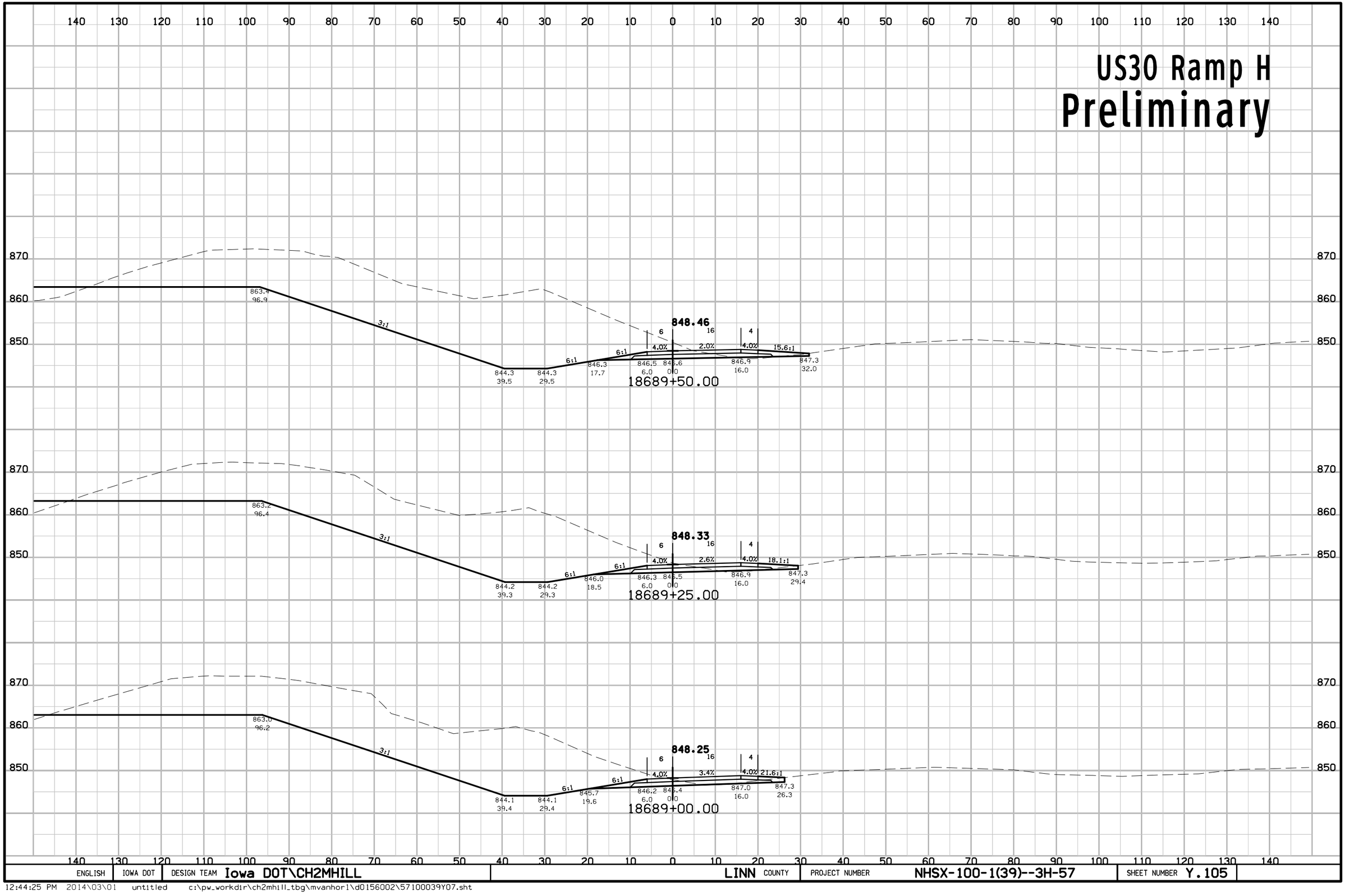

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US30 Ramp H

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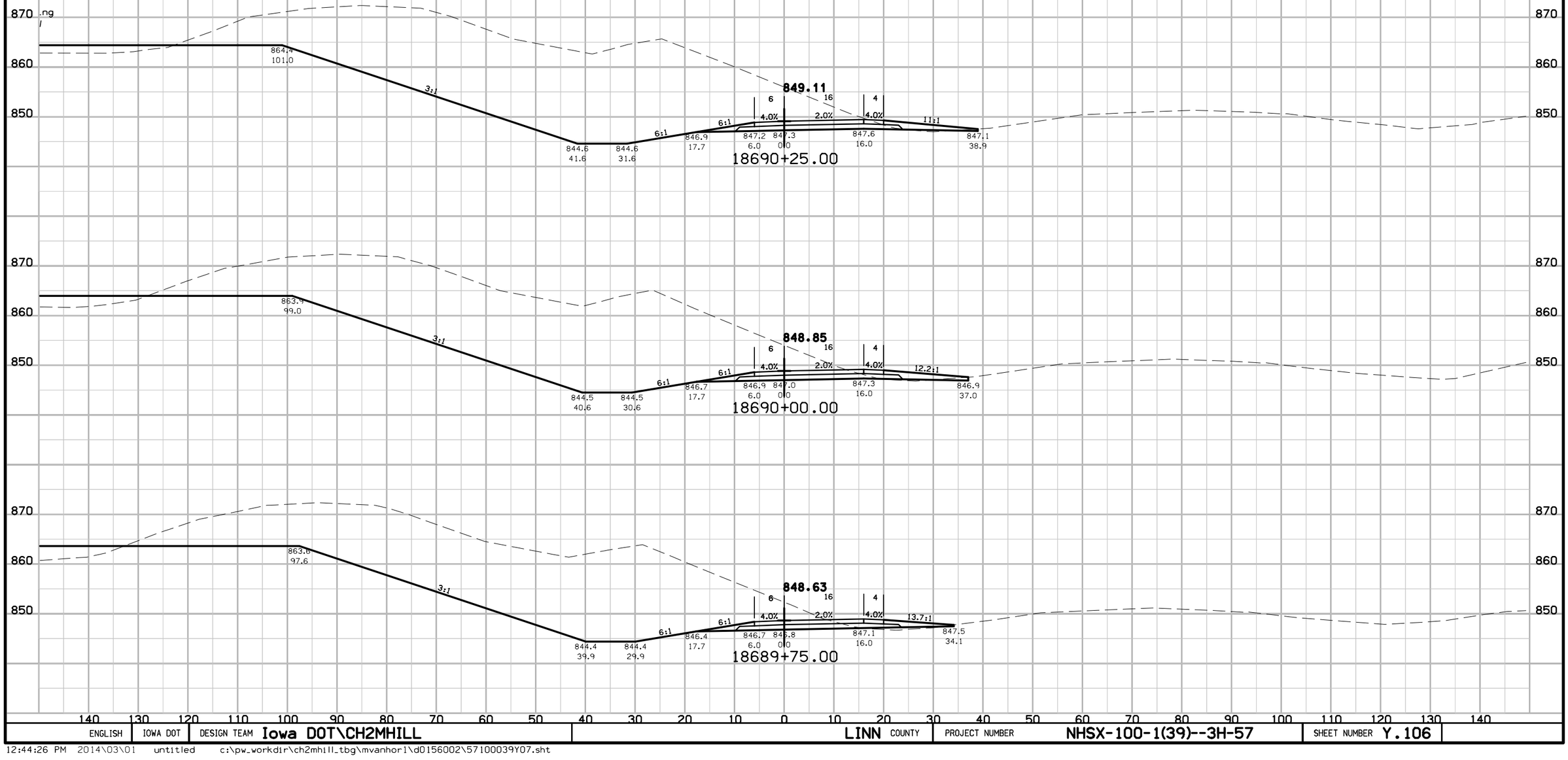

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.106

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US30 Ramp H

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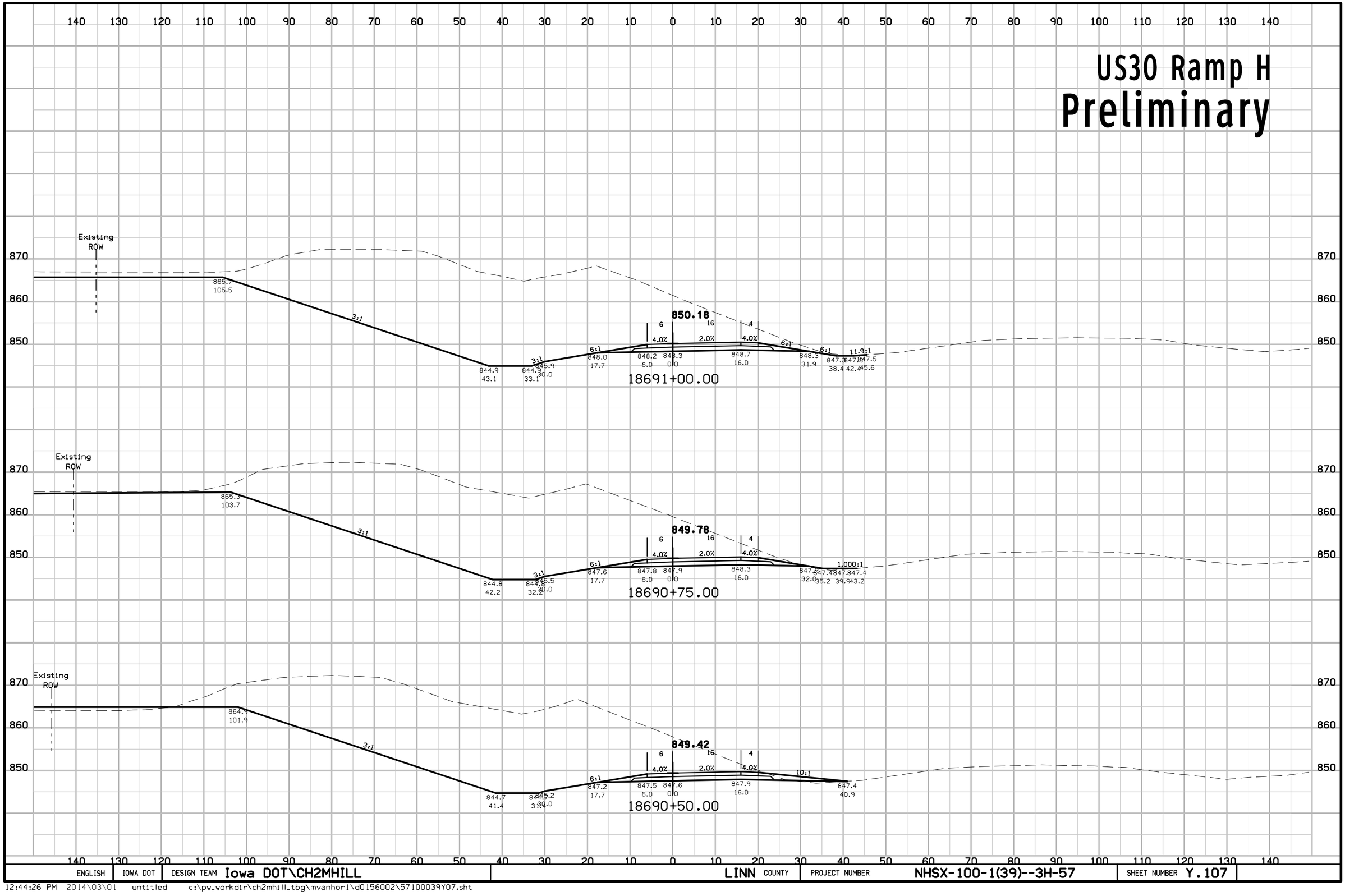

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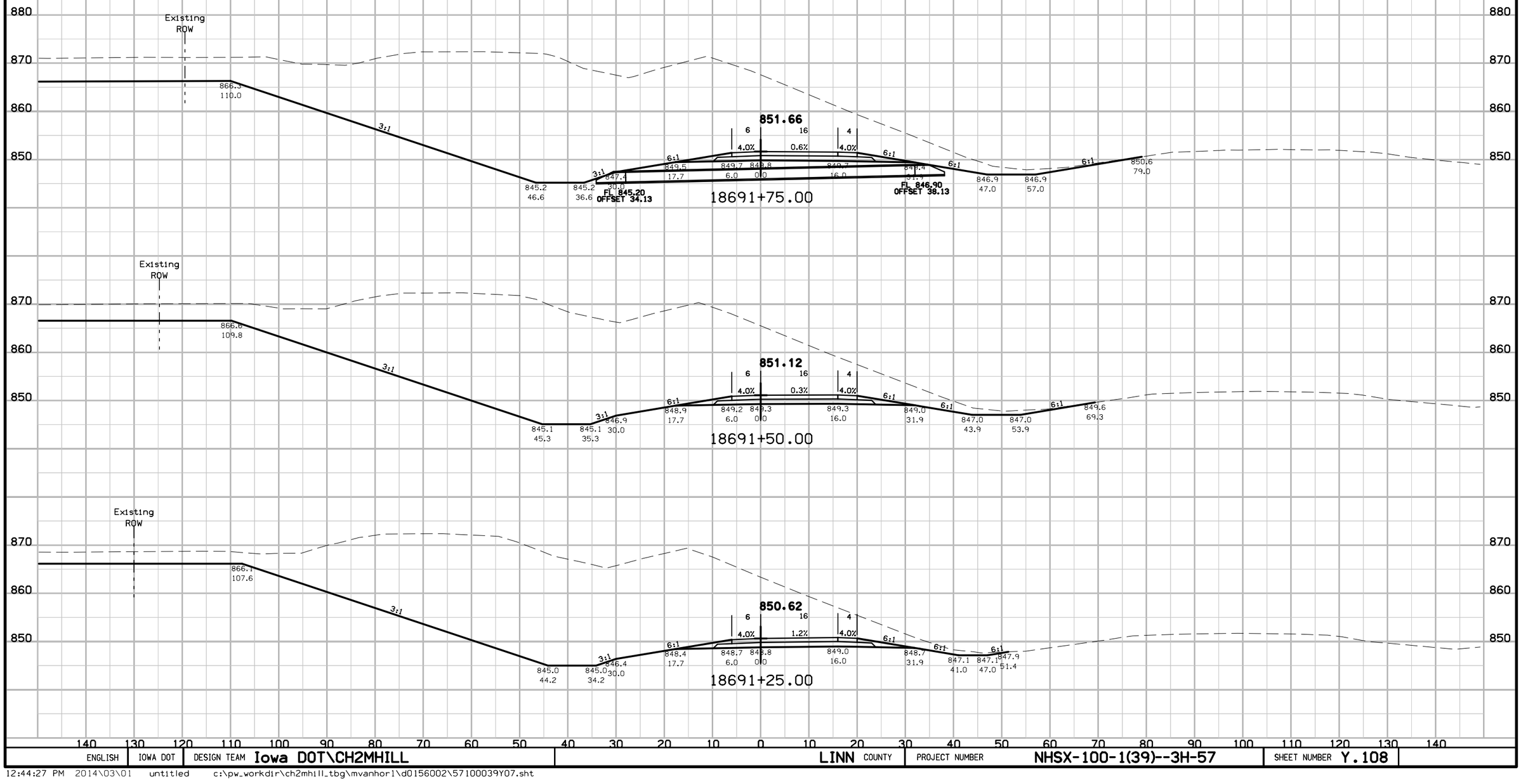
US30 Ramp H

Preliminary



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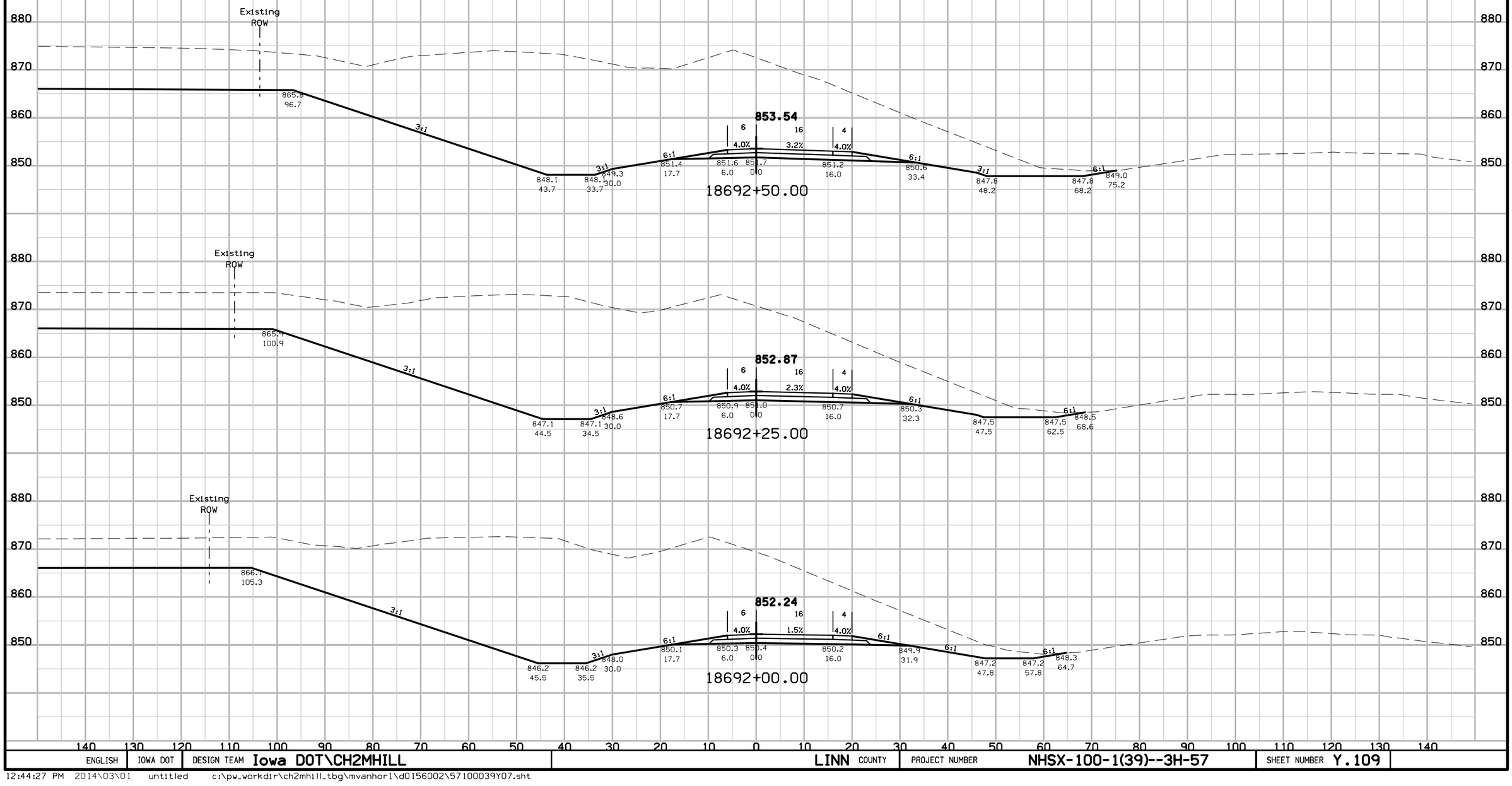
US30 Ramp H
Preliminary



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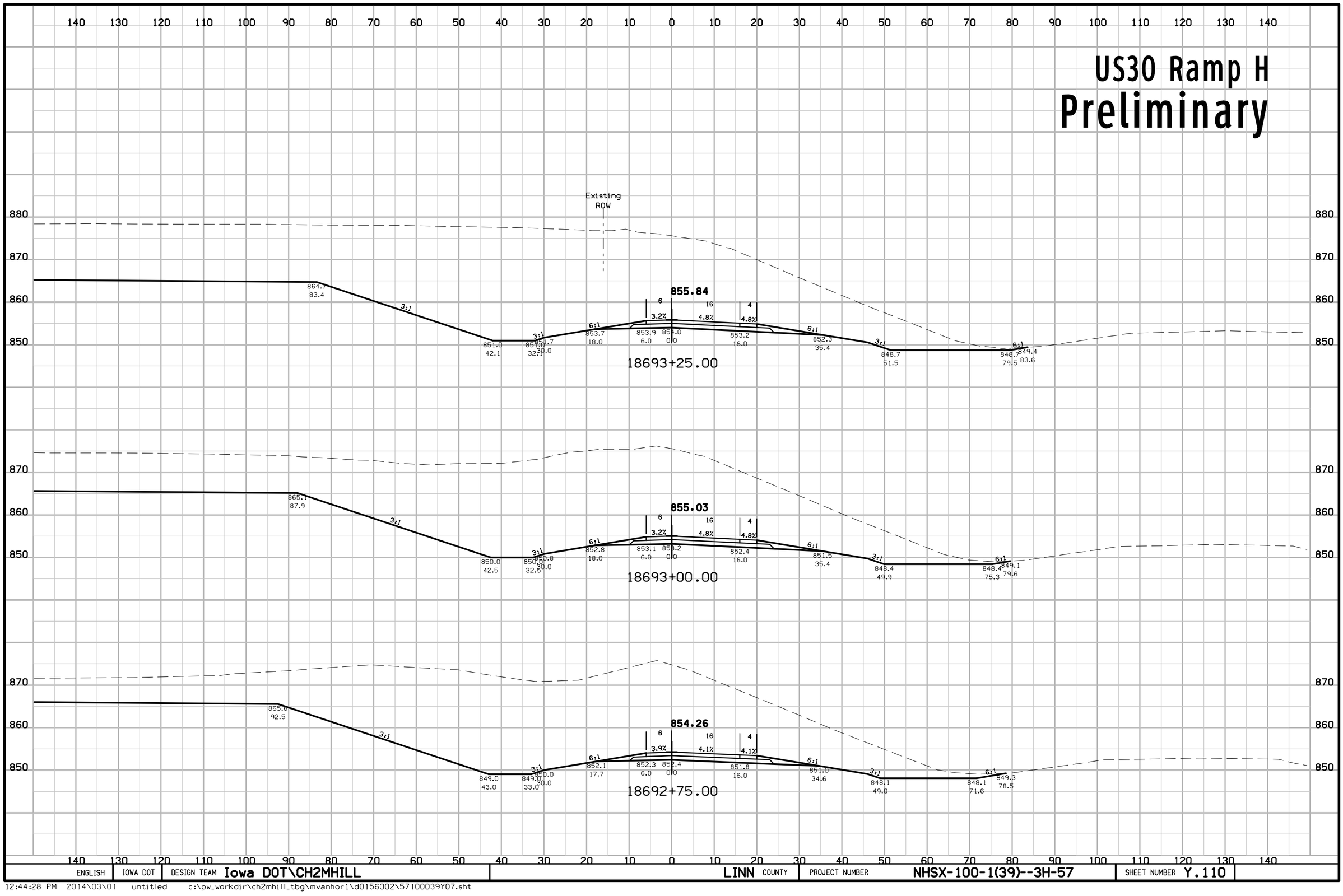
US30 Ramp H

Preliminary



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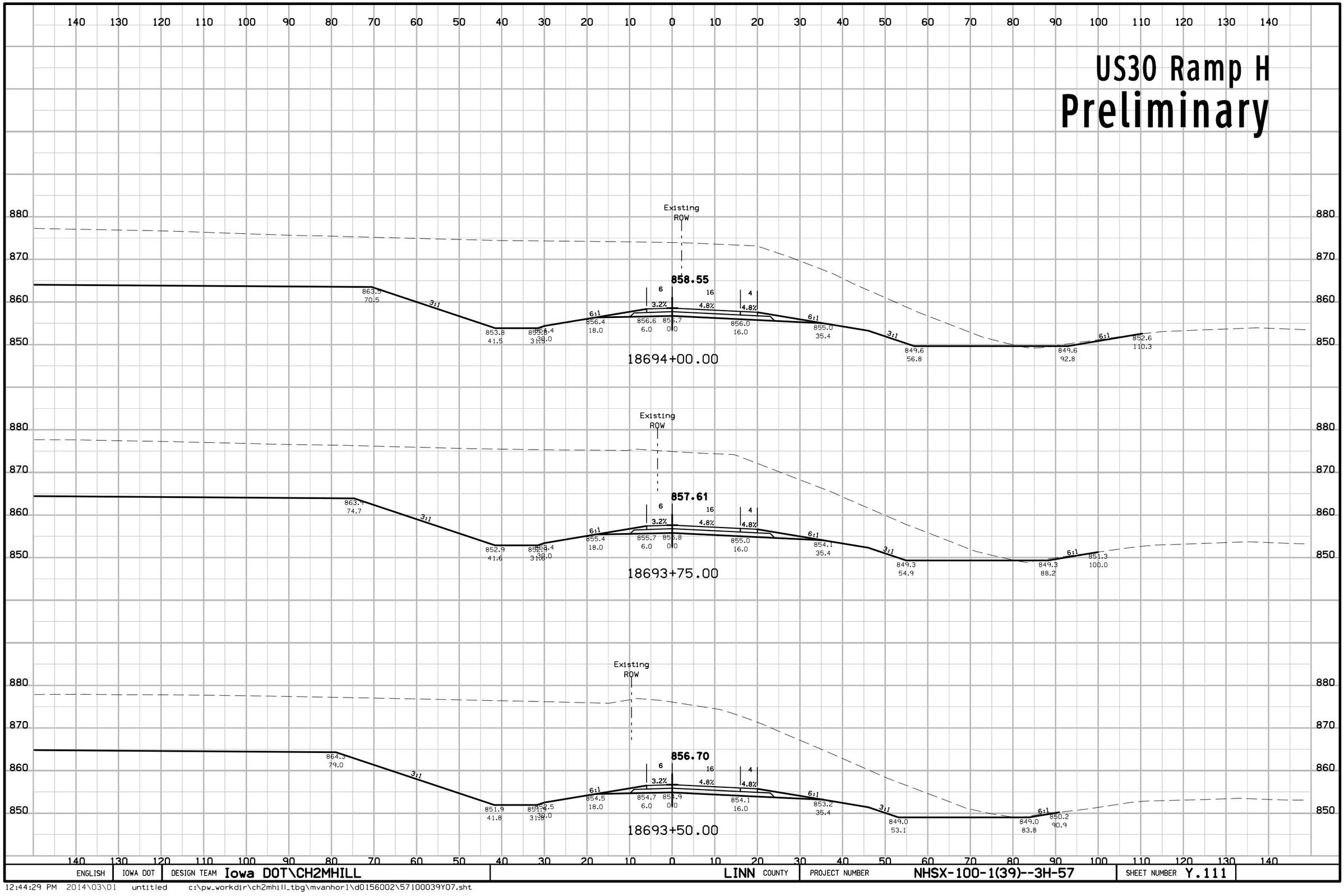
US30 Ramp H

Preliminary



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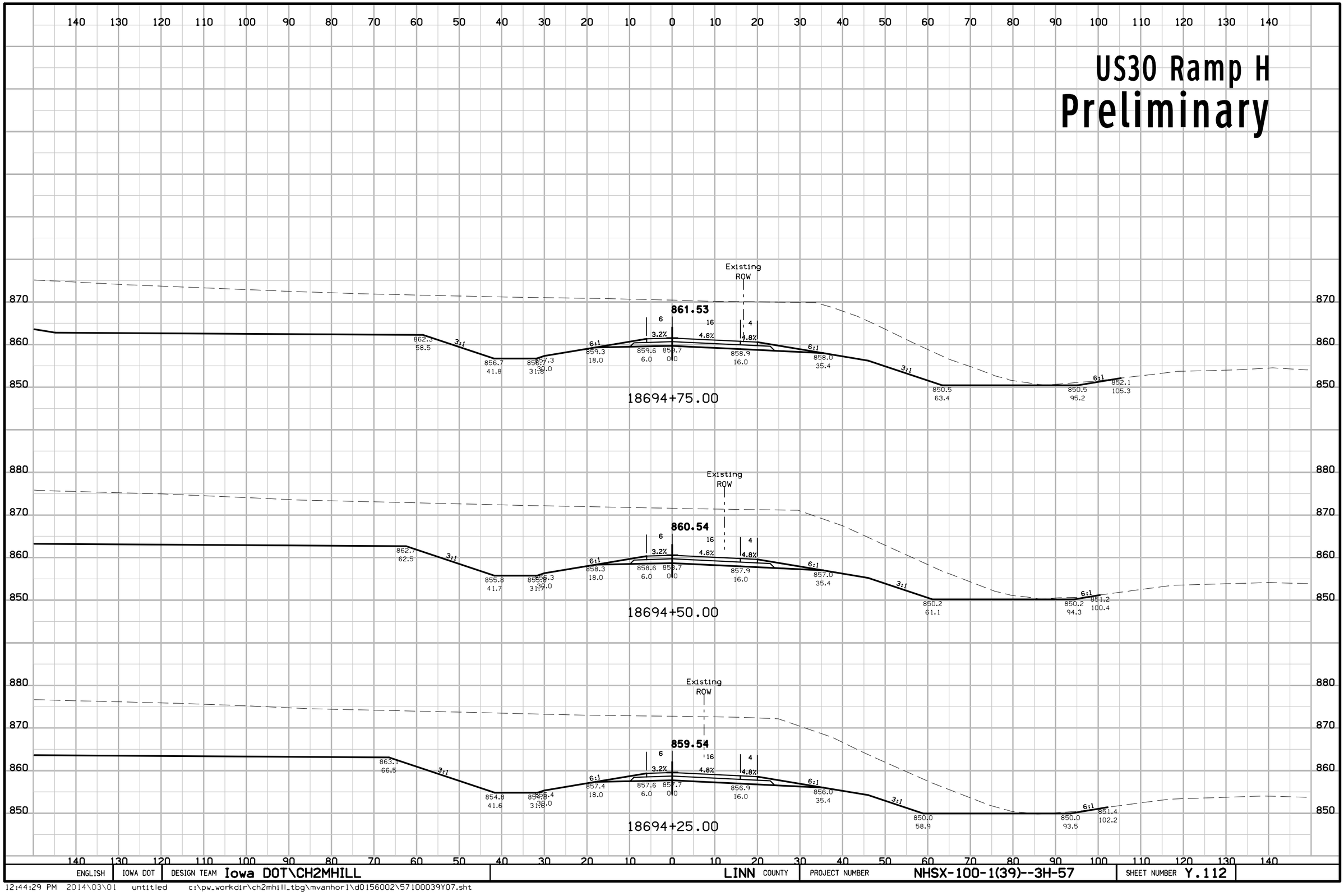
US30 Ramp H
Preliminary



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US30 Ramp H
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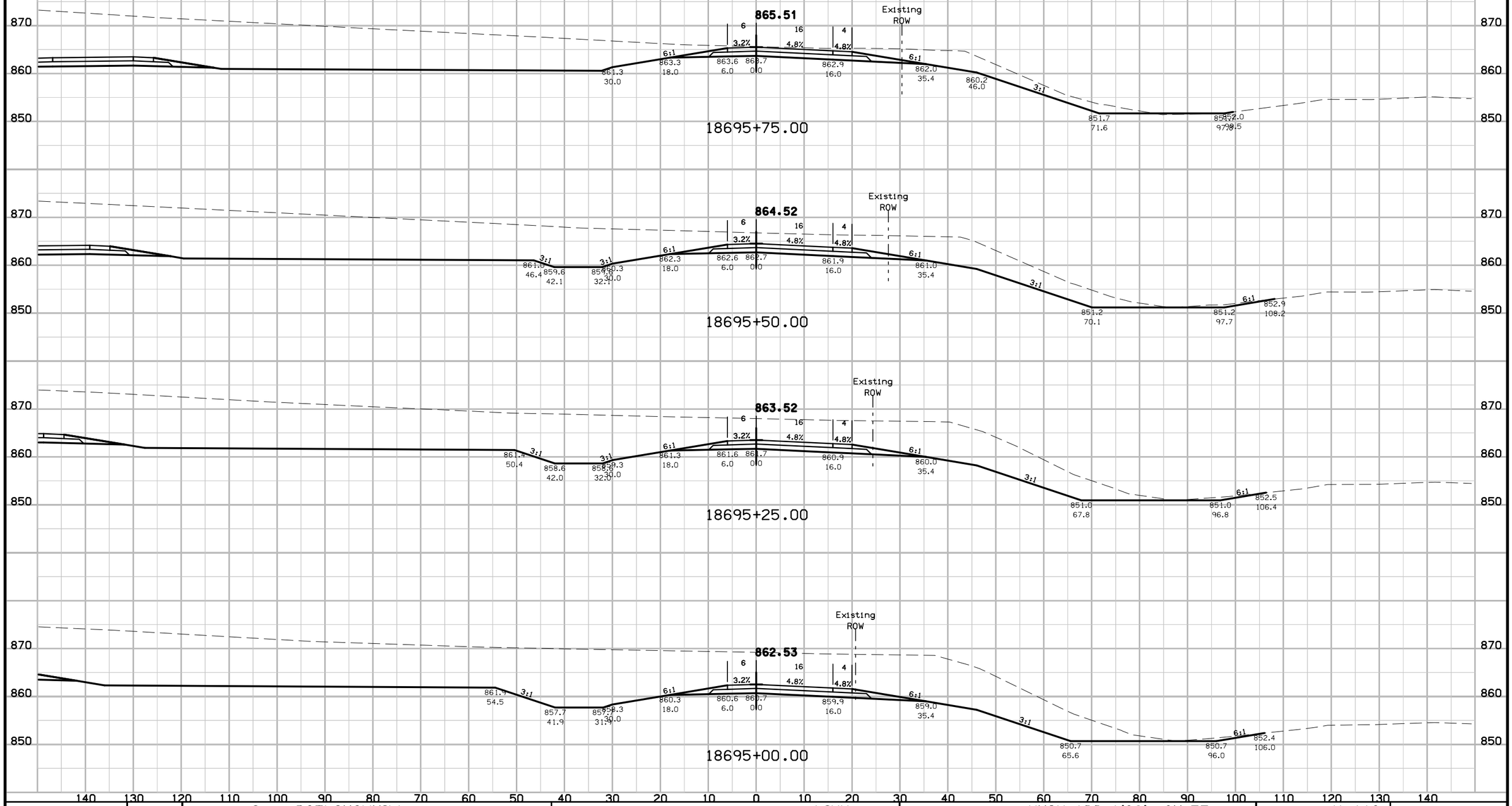

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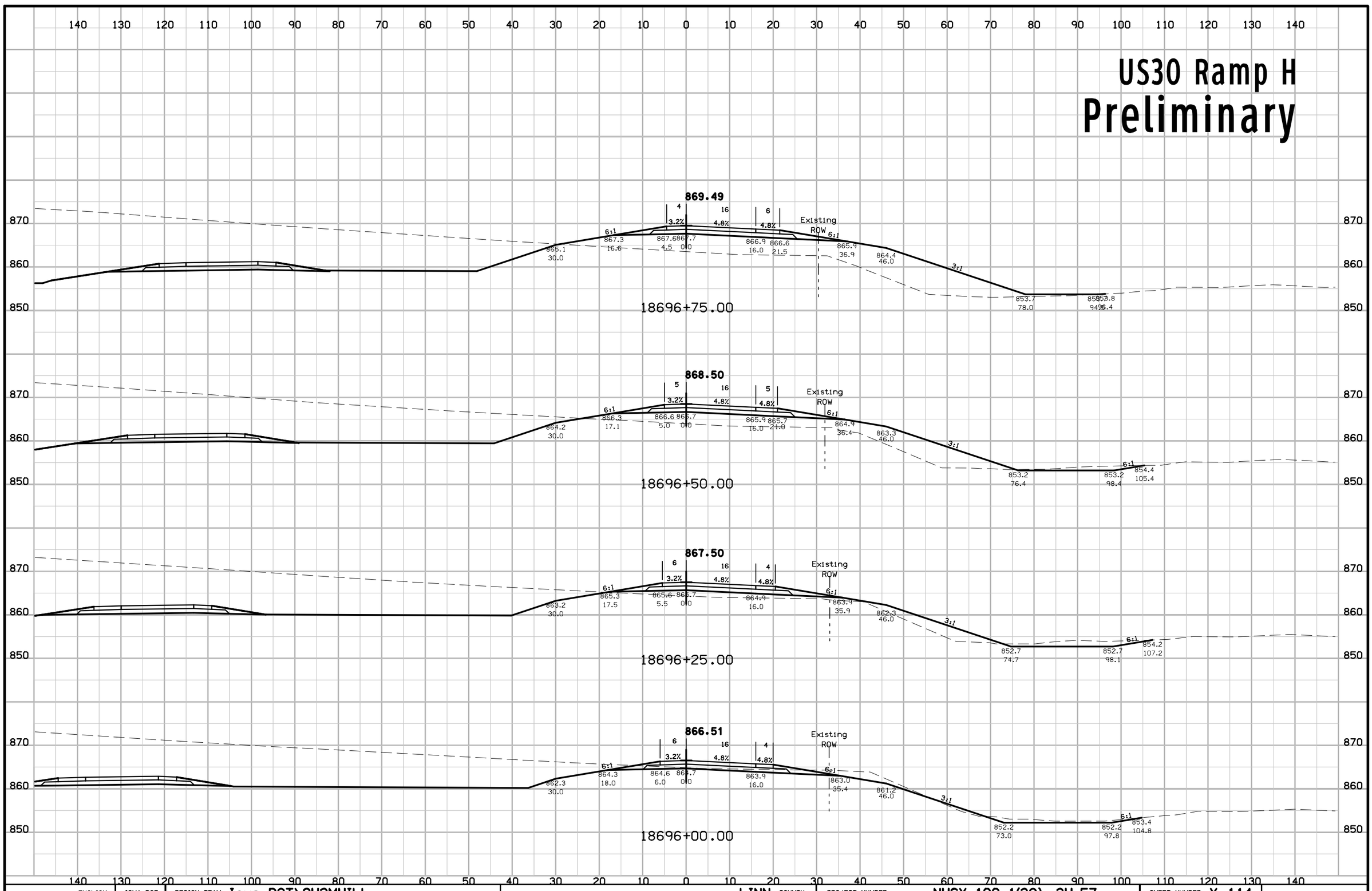
US30 Ramp H

Preliminary



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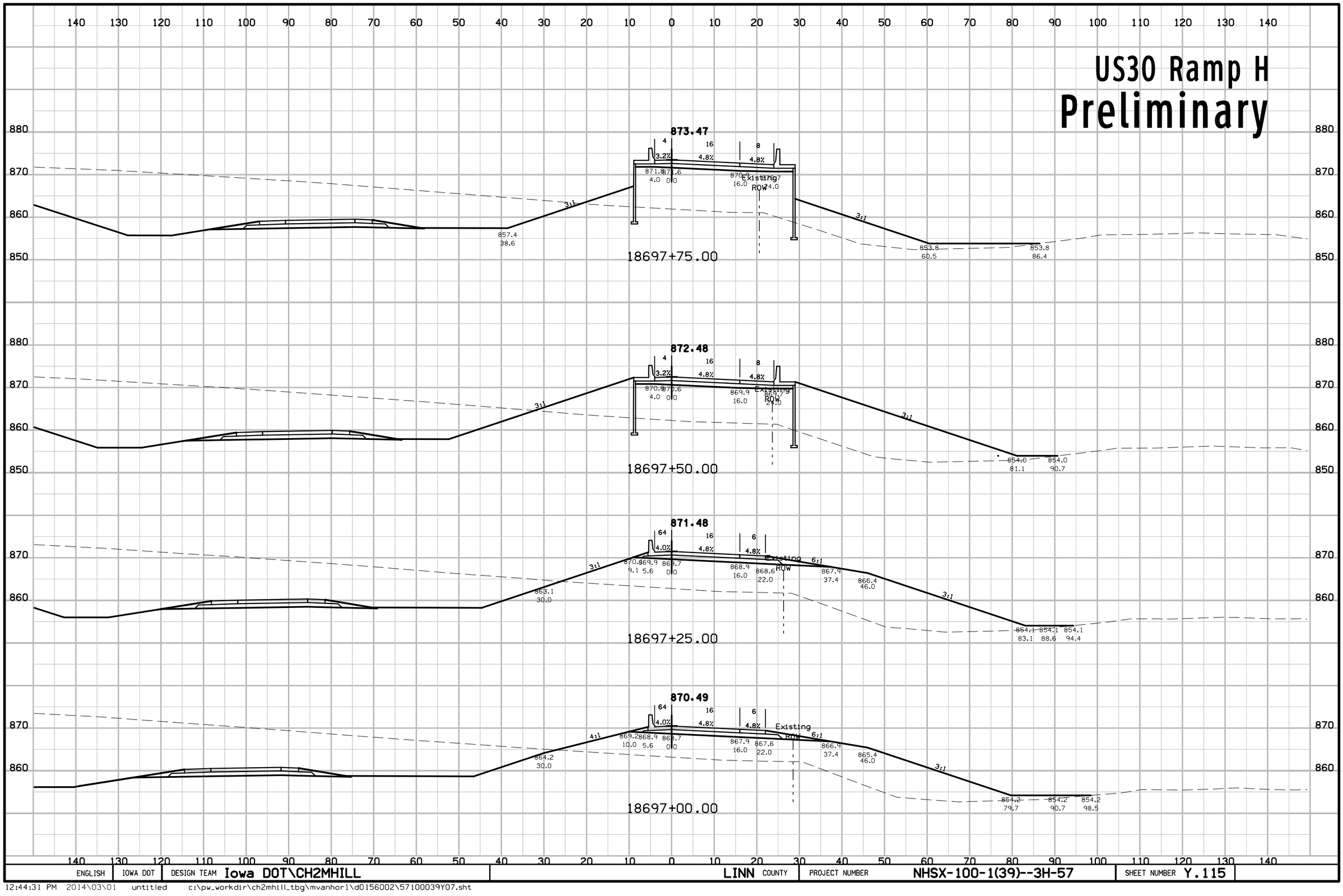
US30 Ramp H

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.115

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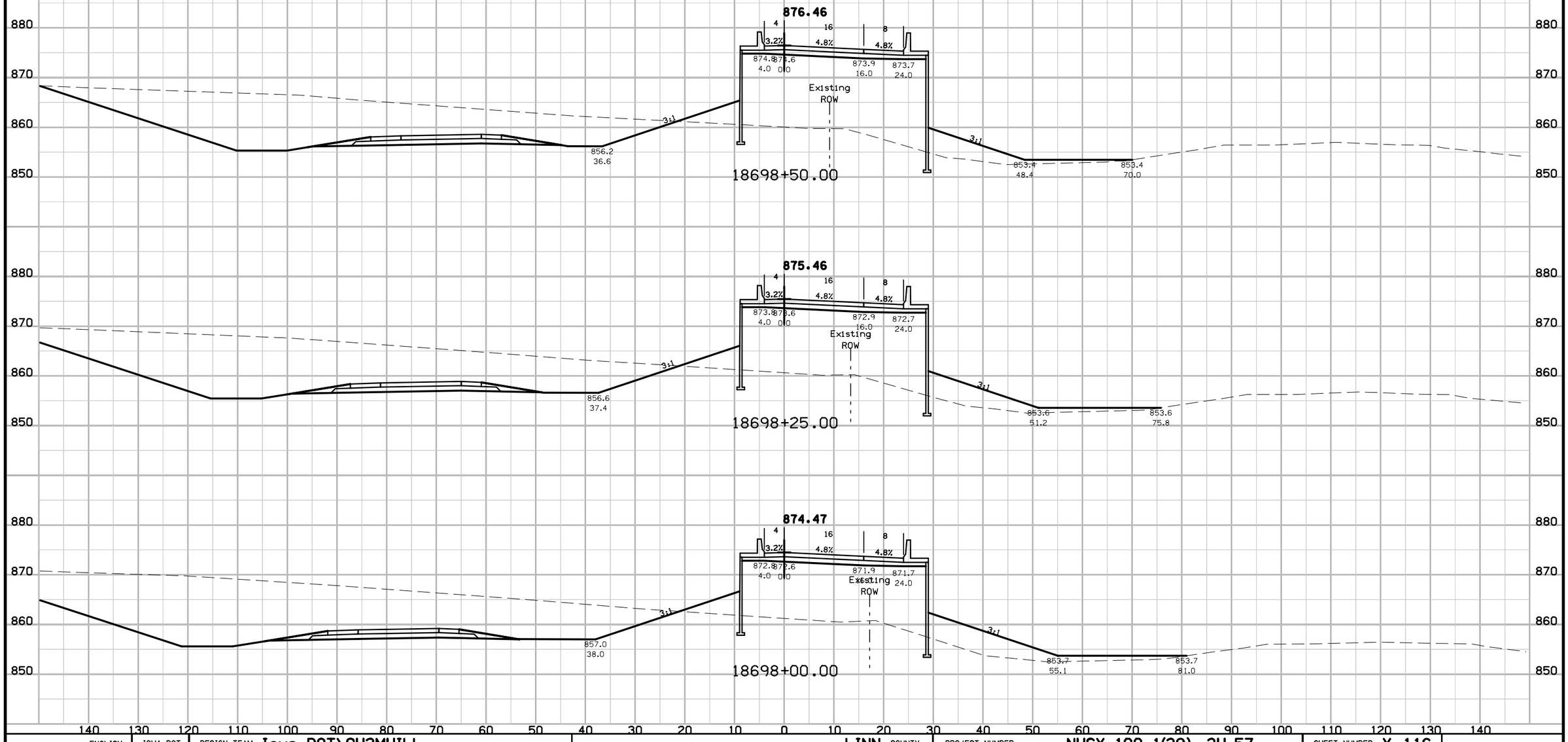
US30 Ramp H
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.116

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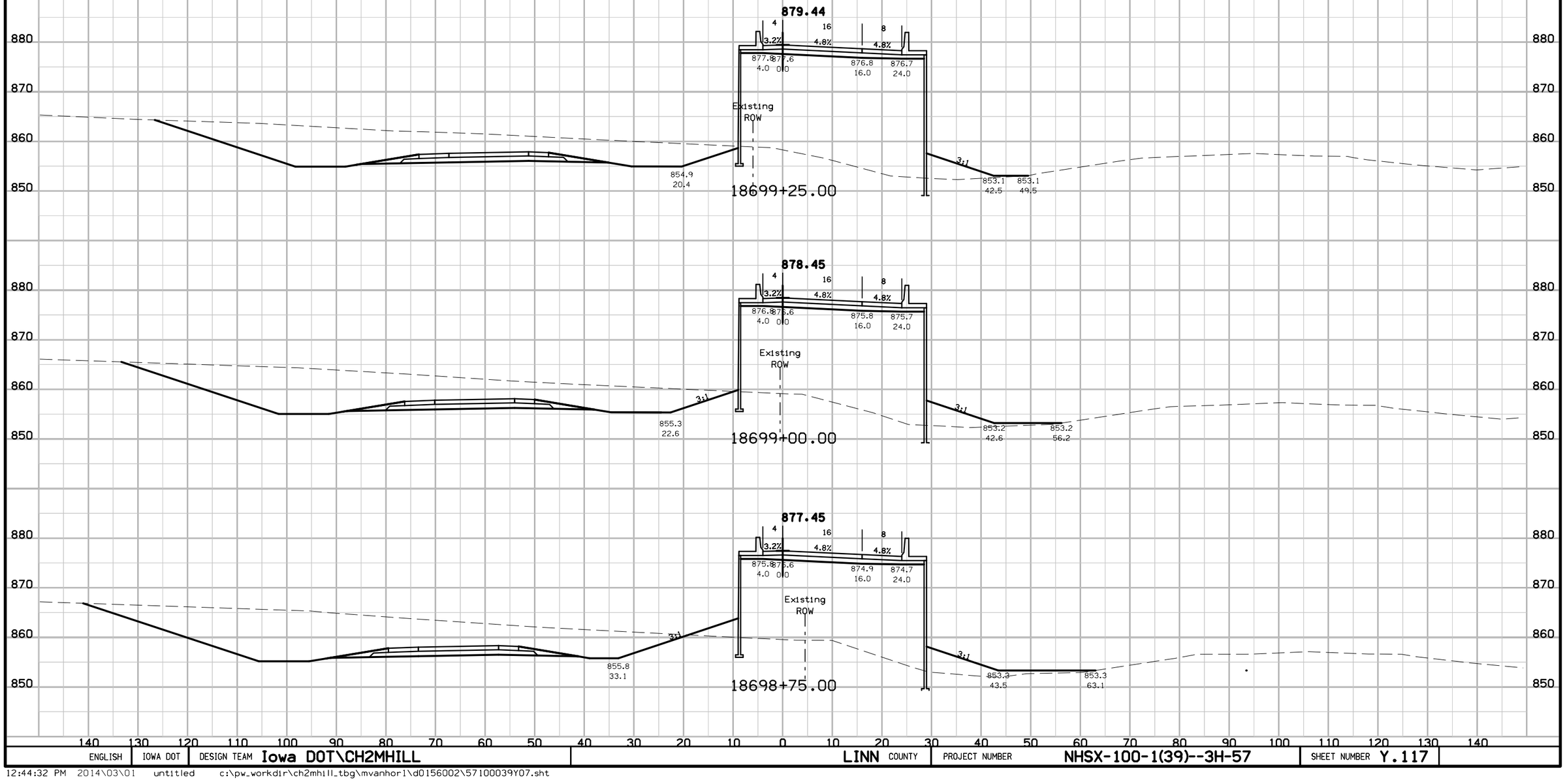
US30 Ramp H
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.117

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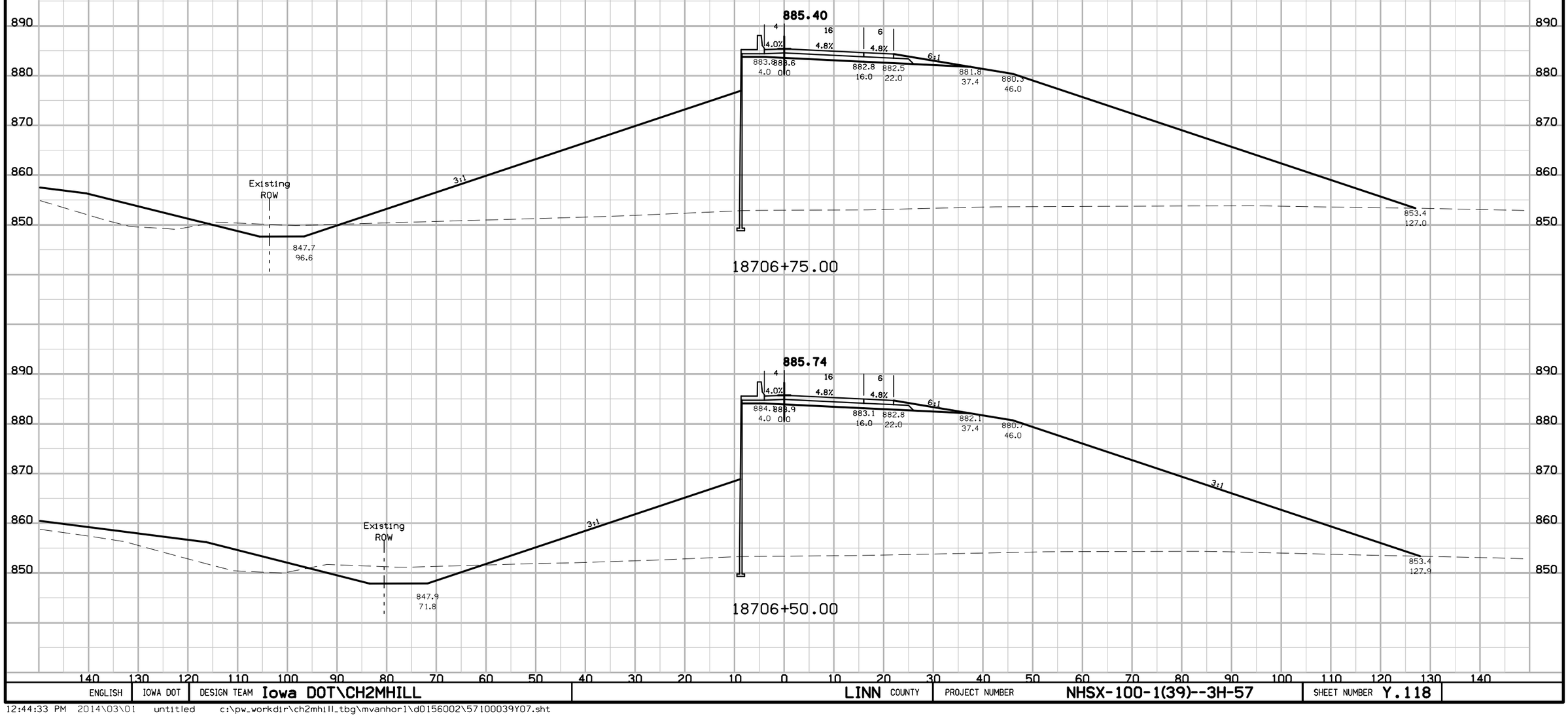
US30 Ramp H

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.118

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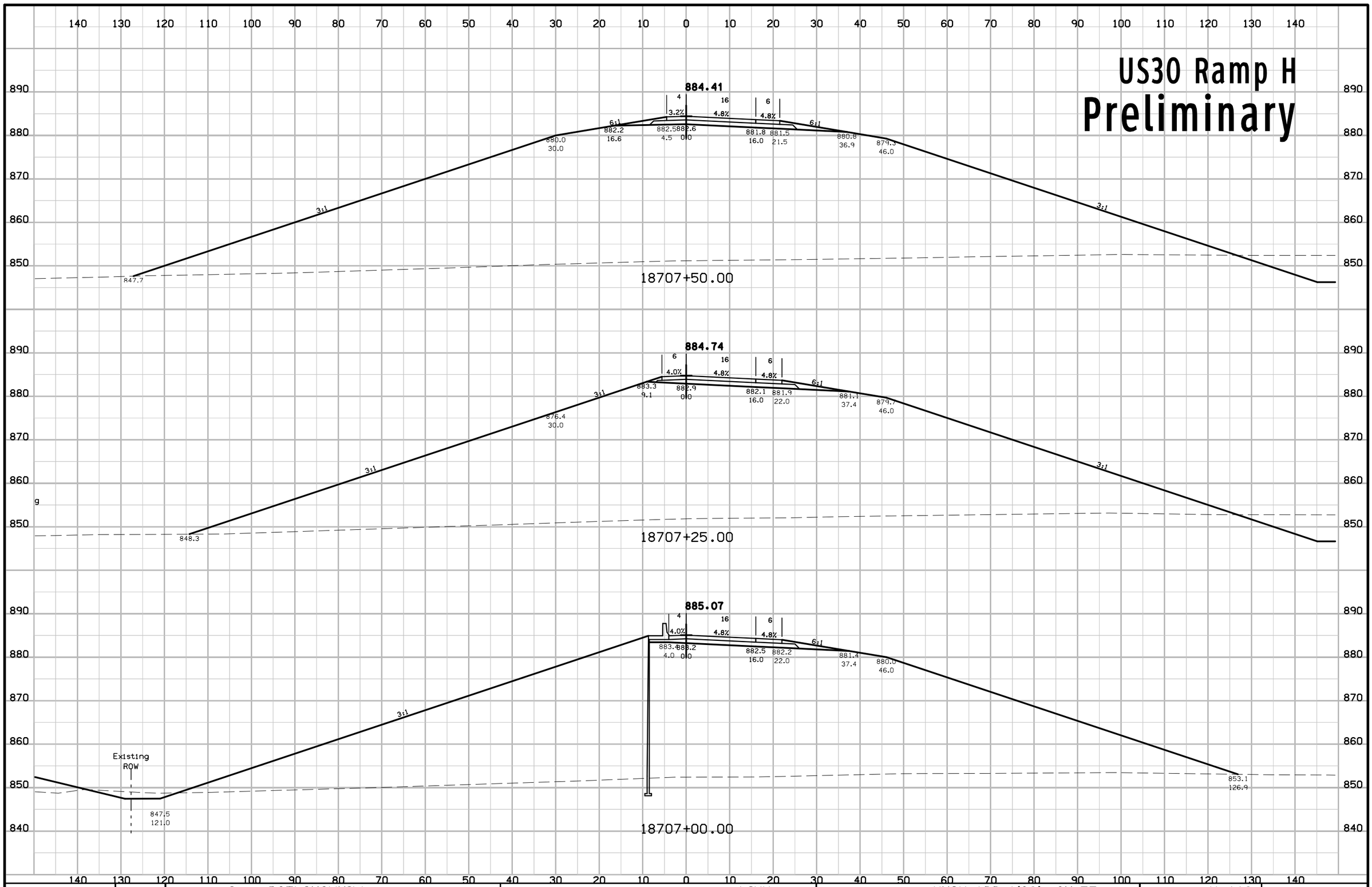
US30 Ramp H
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.119

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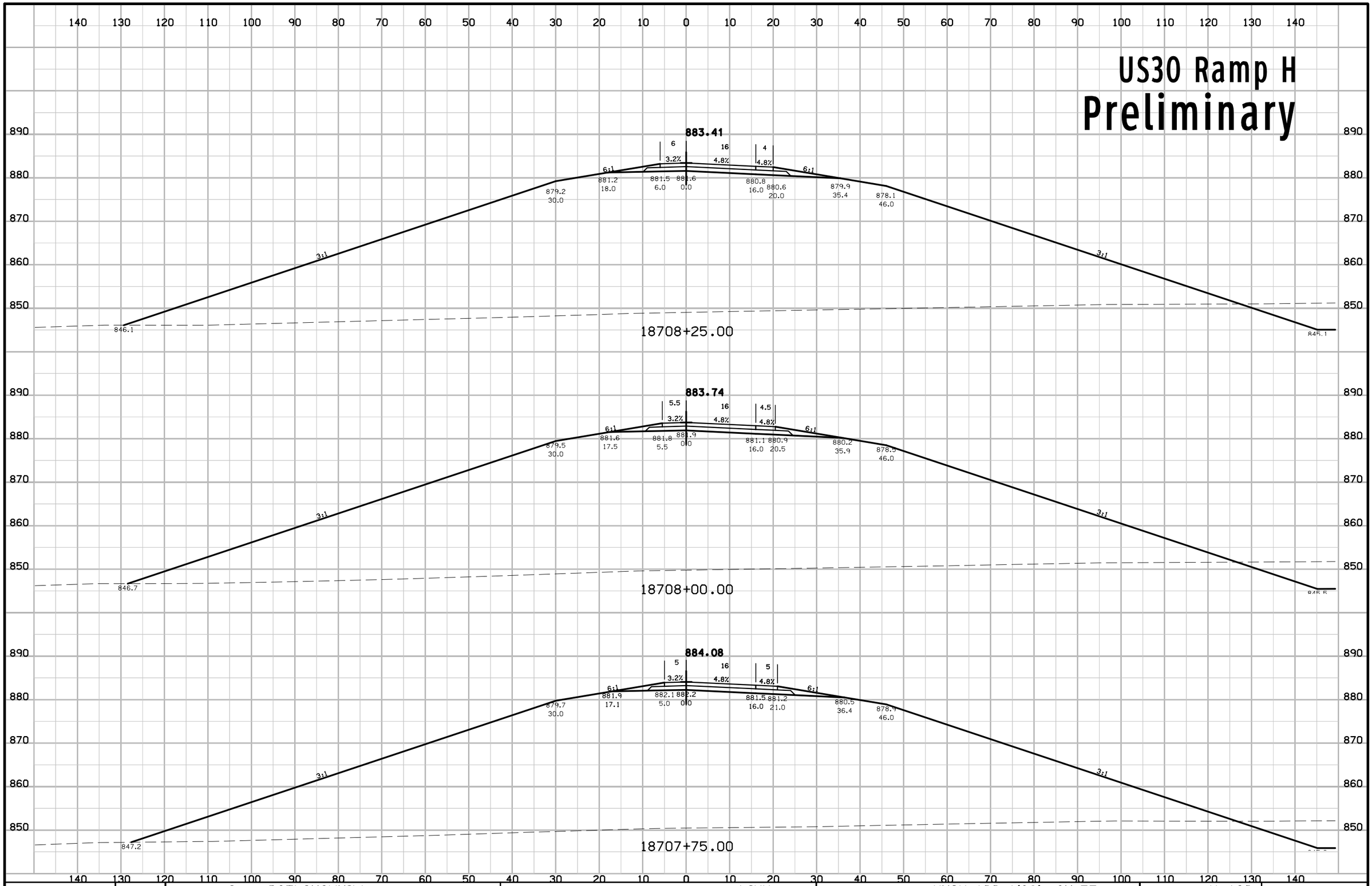
US30 Ramp H

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.120

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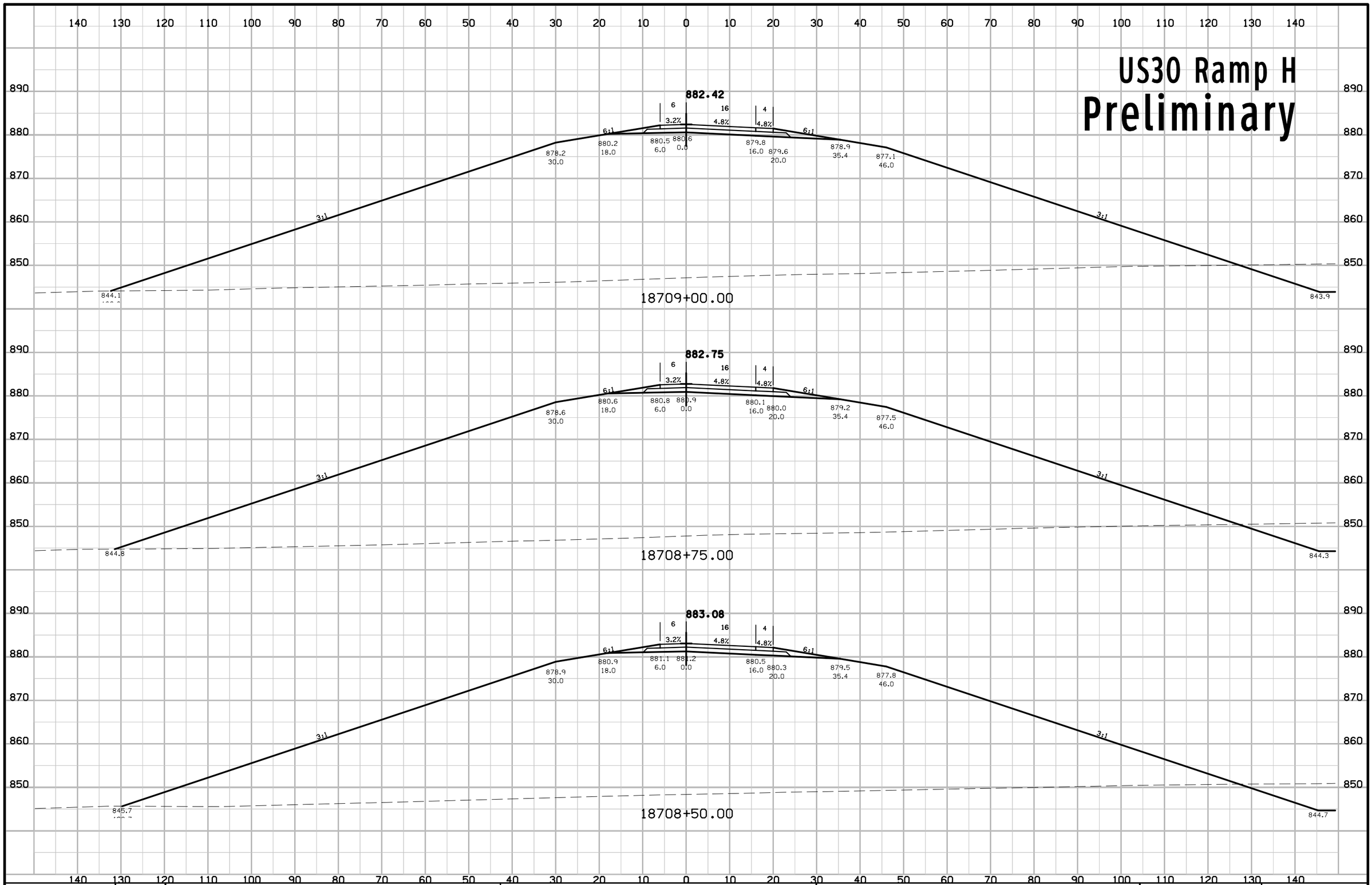
US30 Ramp H

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.121

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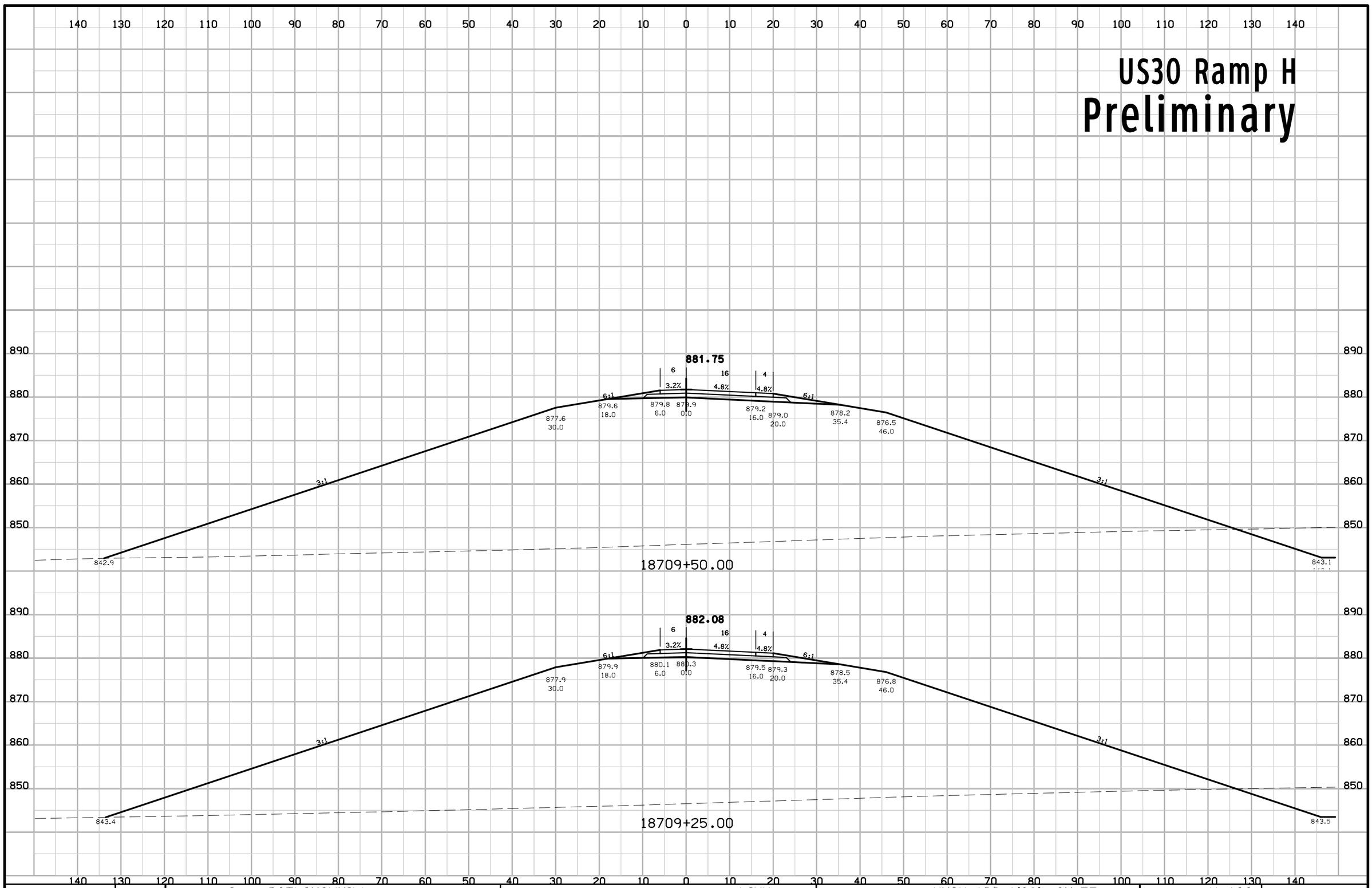
US30 Ramp H

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.122

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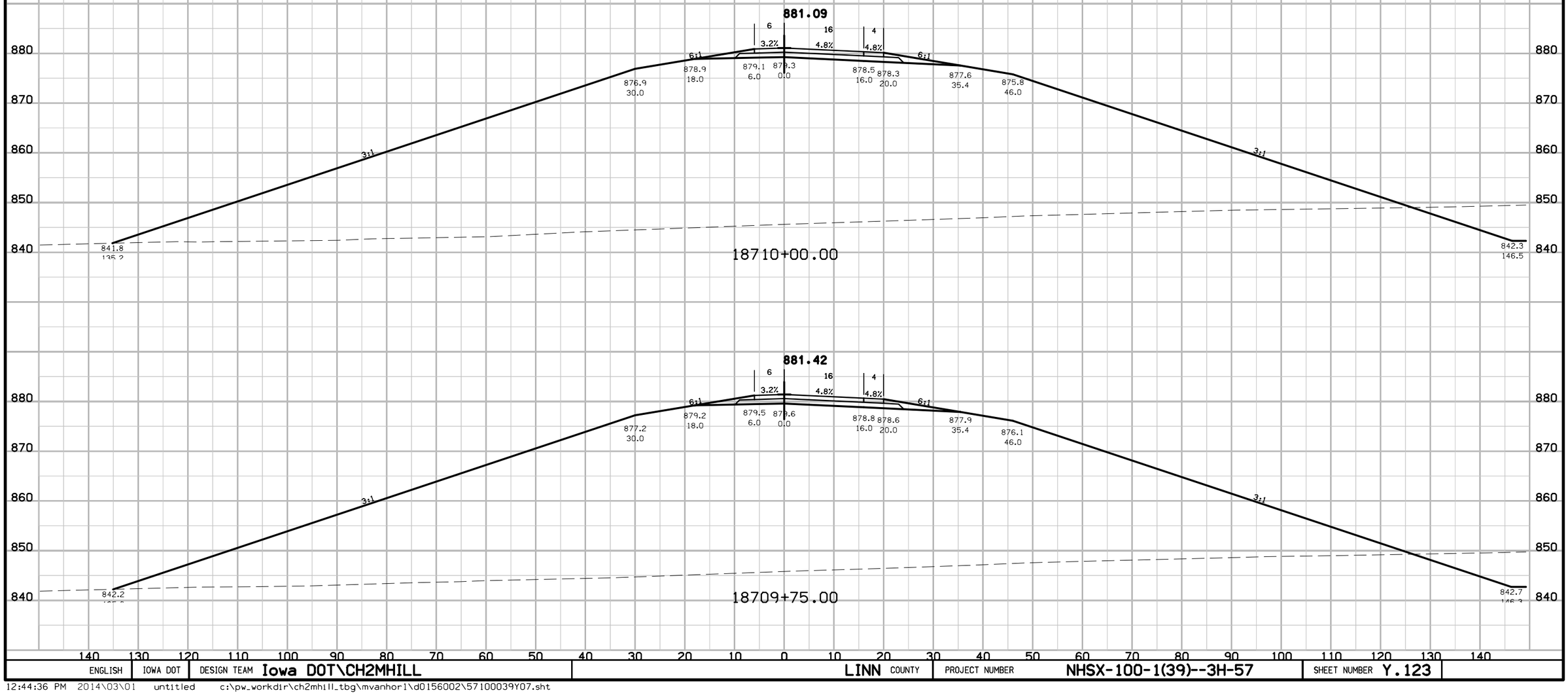
US30 Ramp H

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.123

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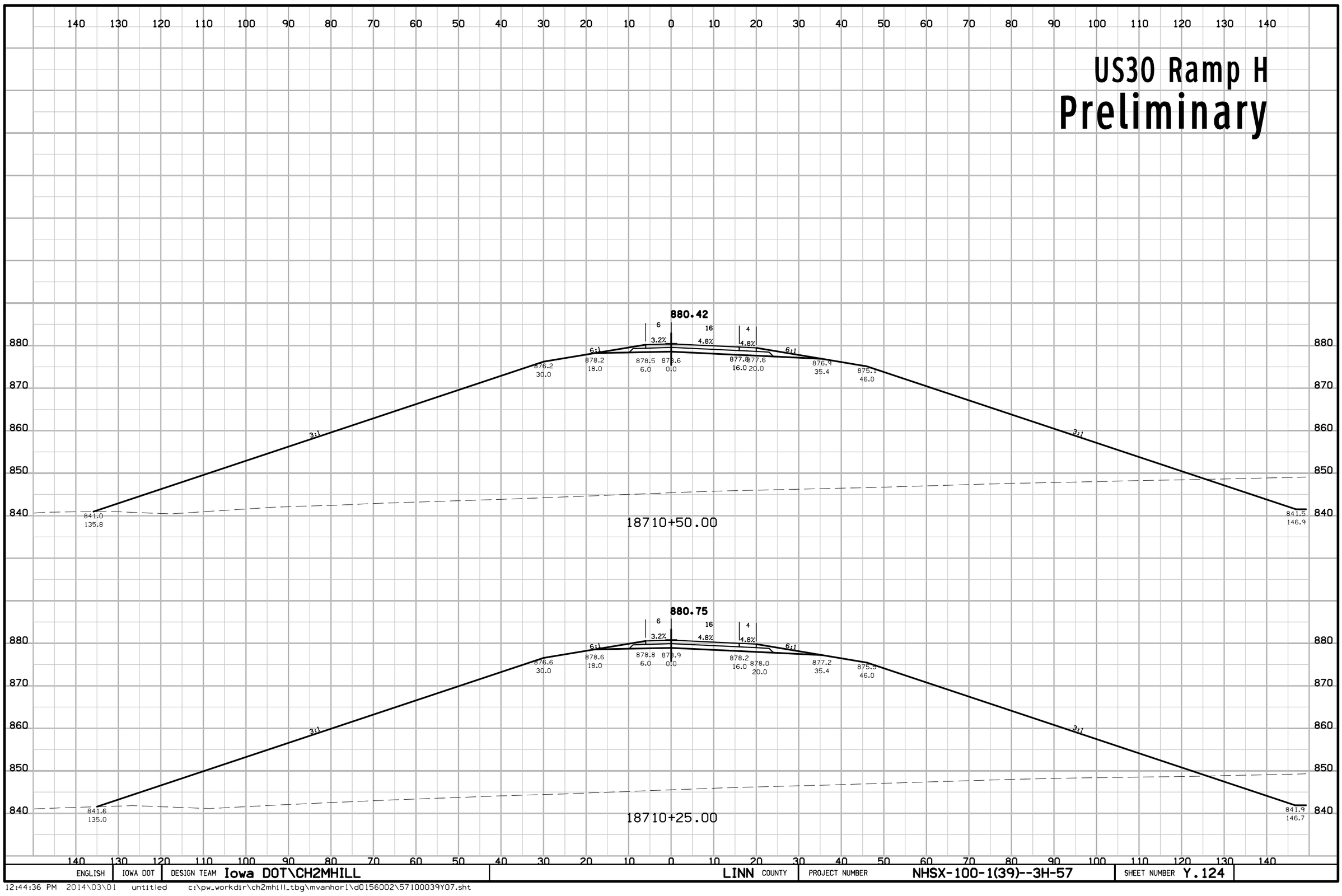
US30 Ramp H

Preliminary



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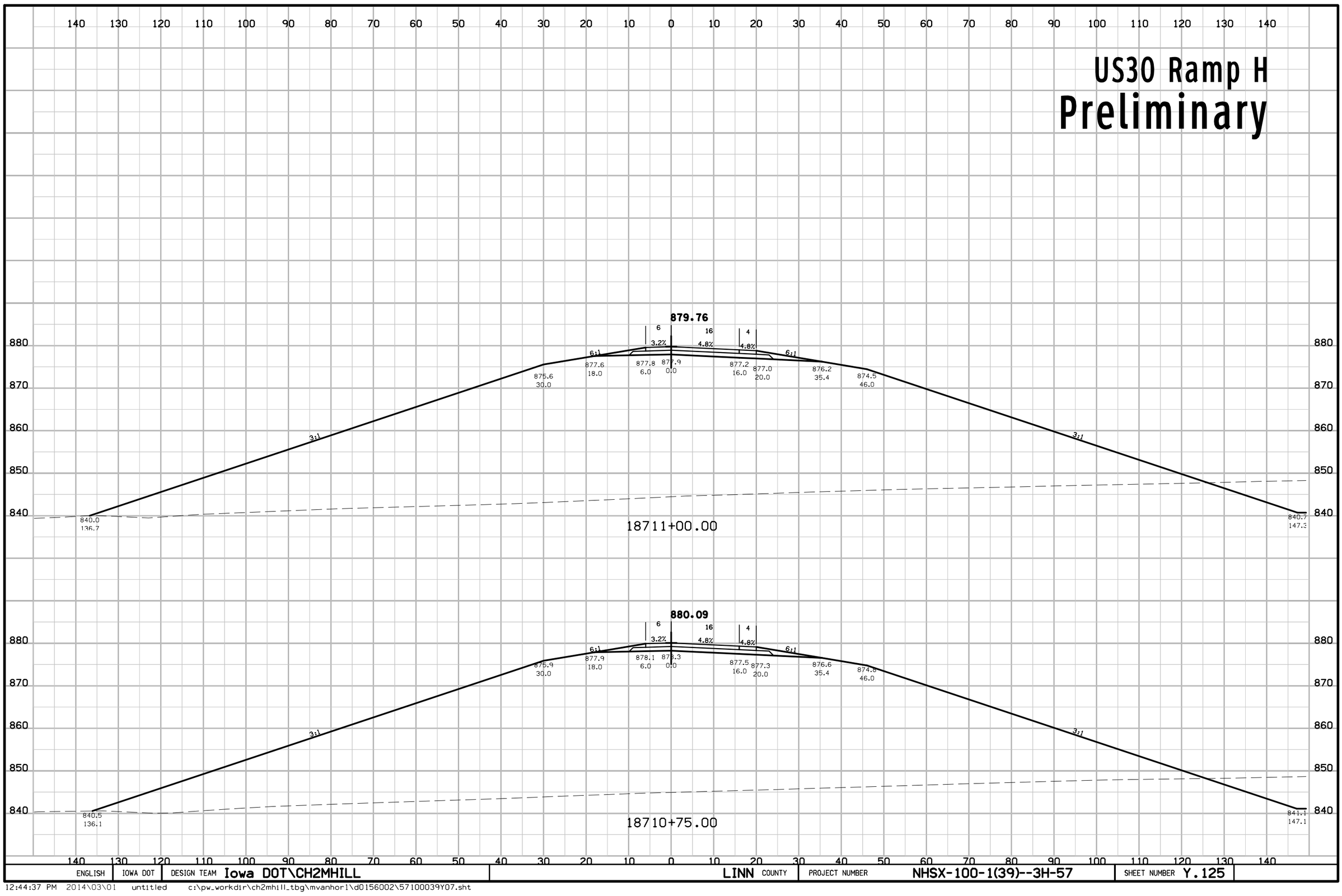
US30 Ramp H

Preliminary



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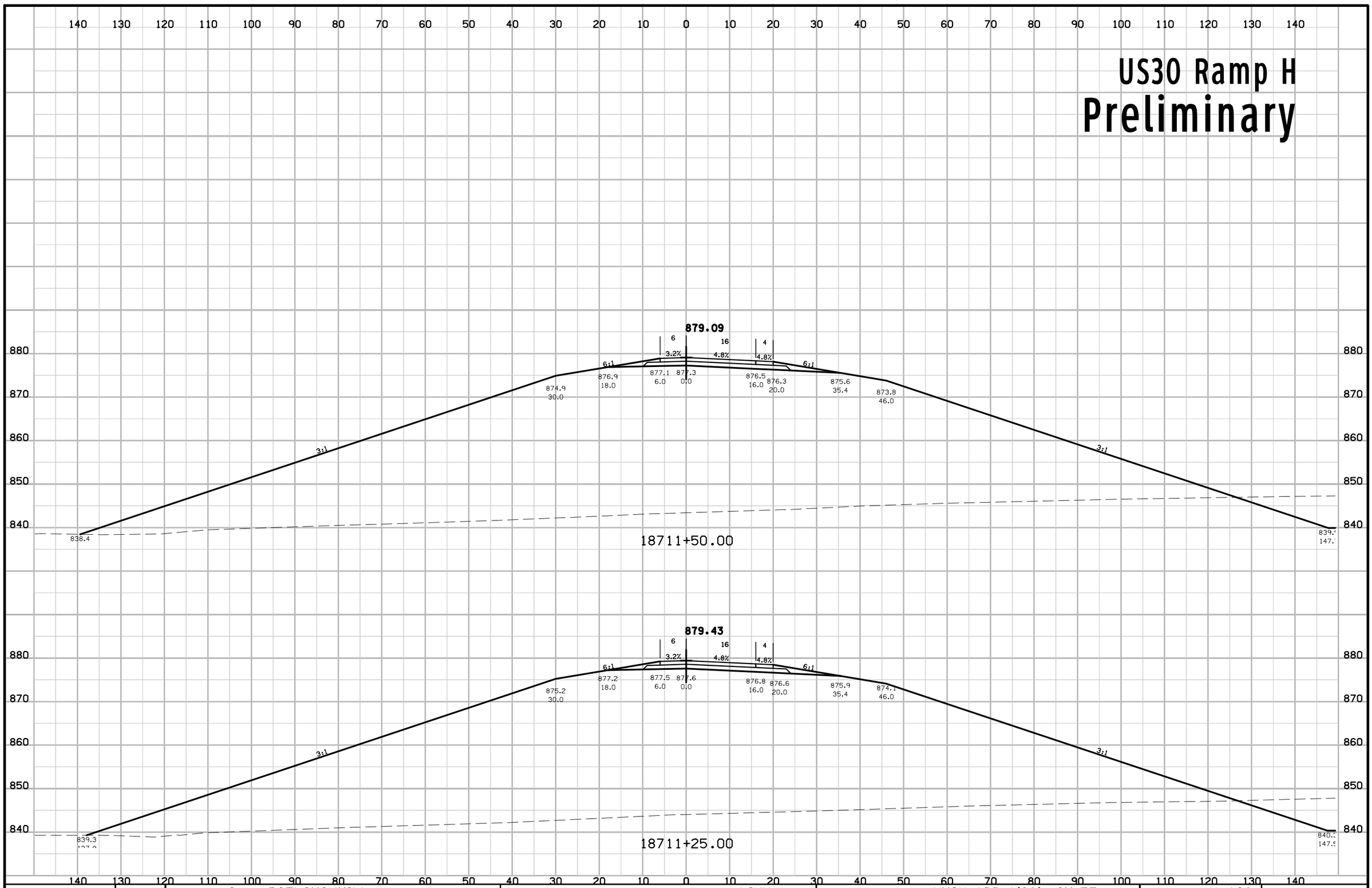
US30 Ramp H

Preliminary



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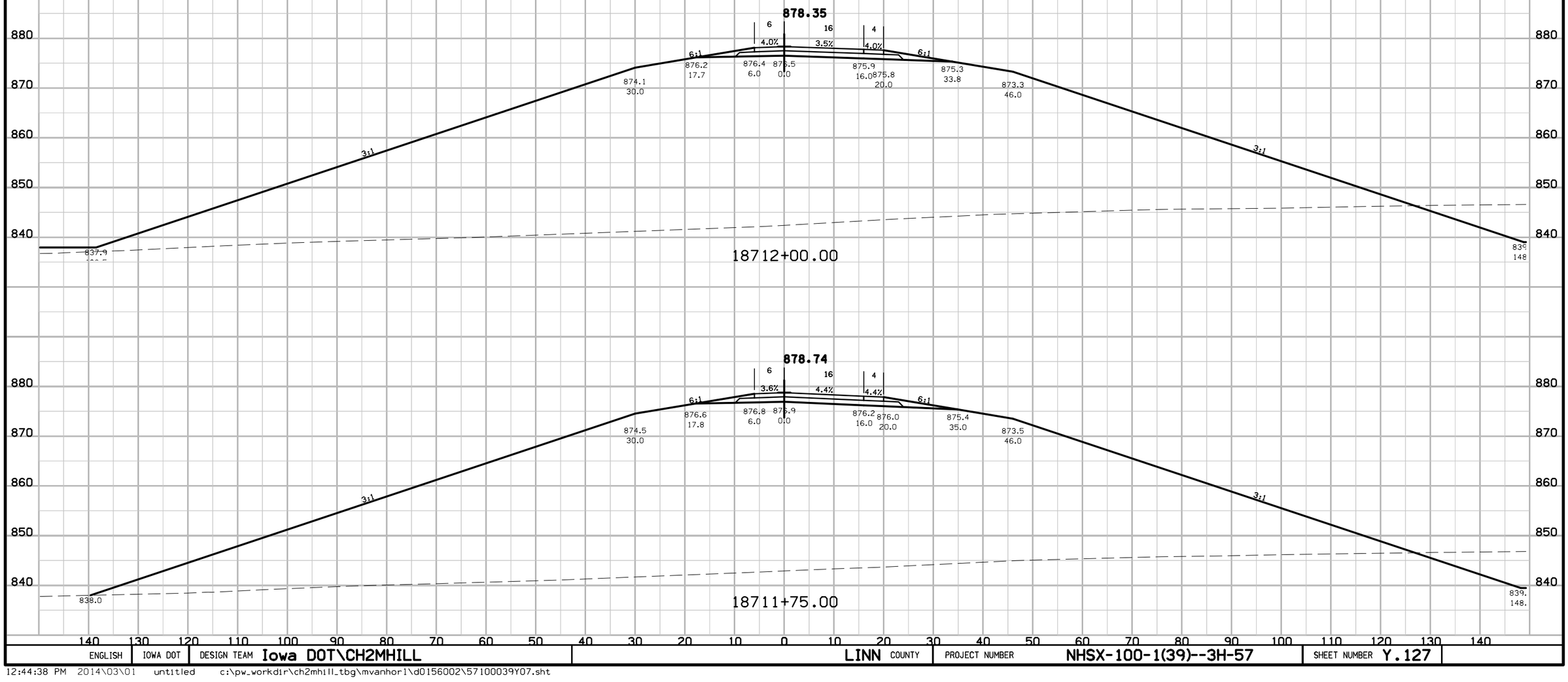
US30 Ramp H

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.127

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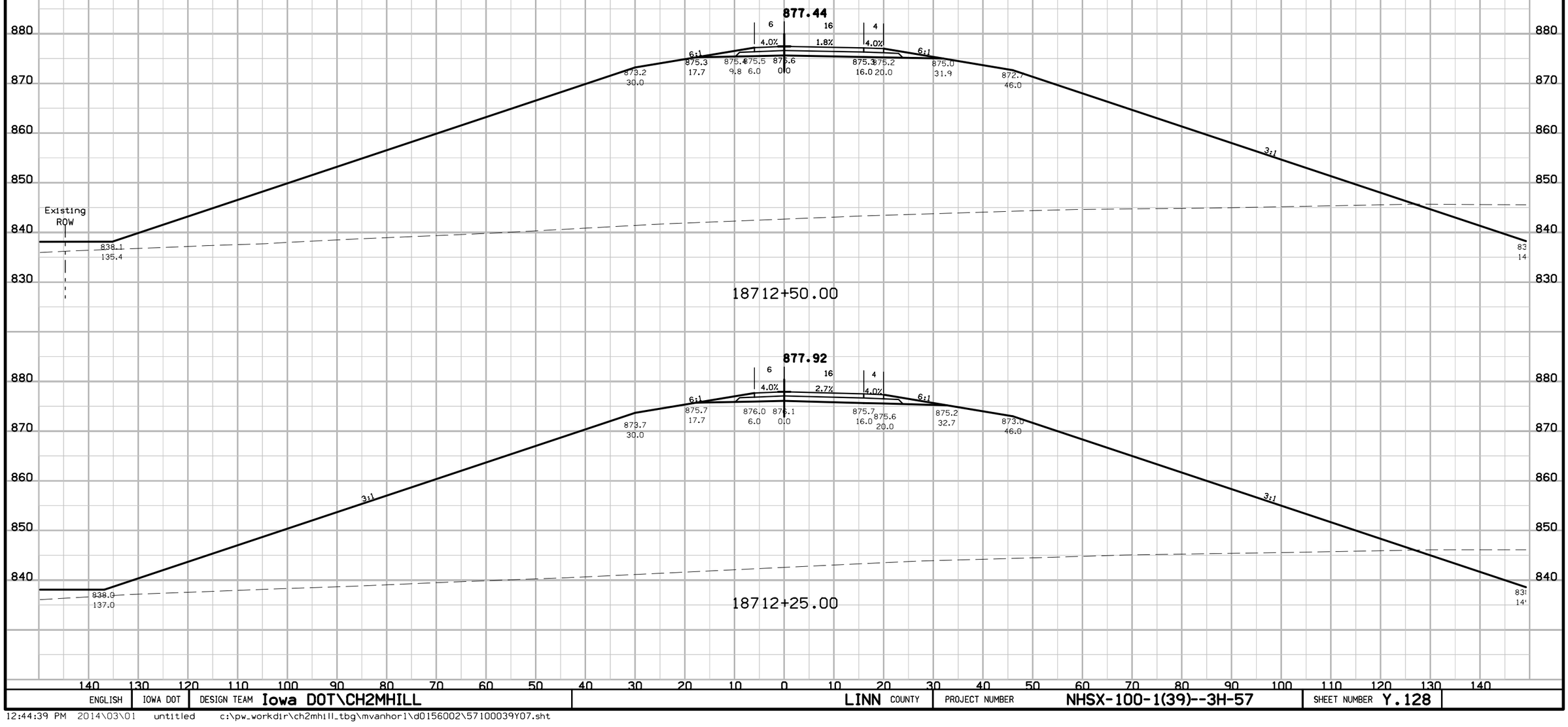
US30 Ramp H

Preliminary



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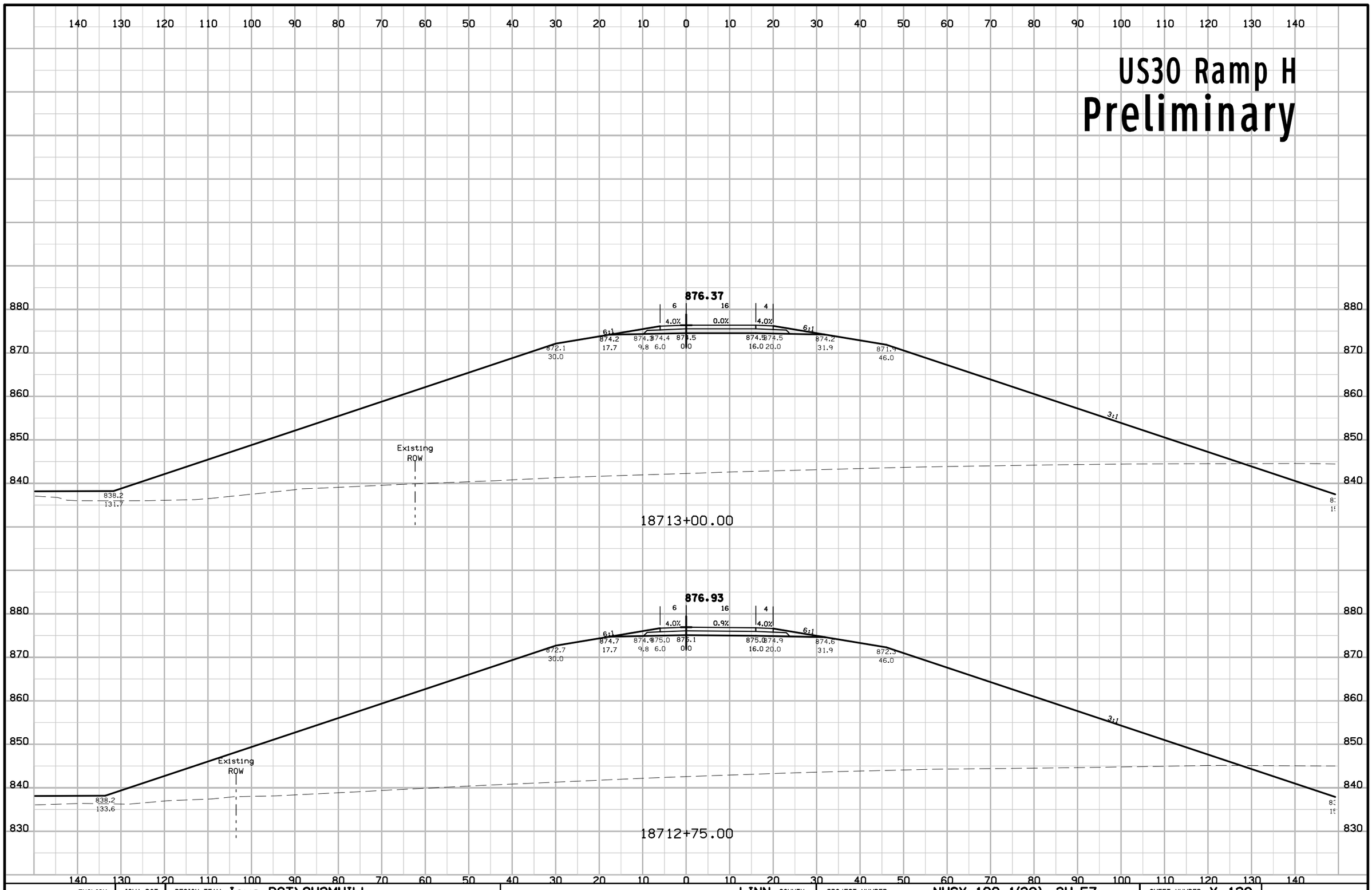
US30 Ramp H

Preliminary



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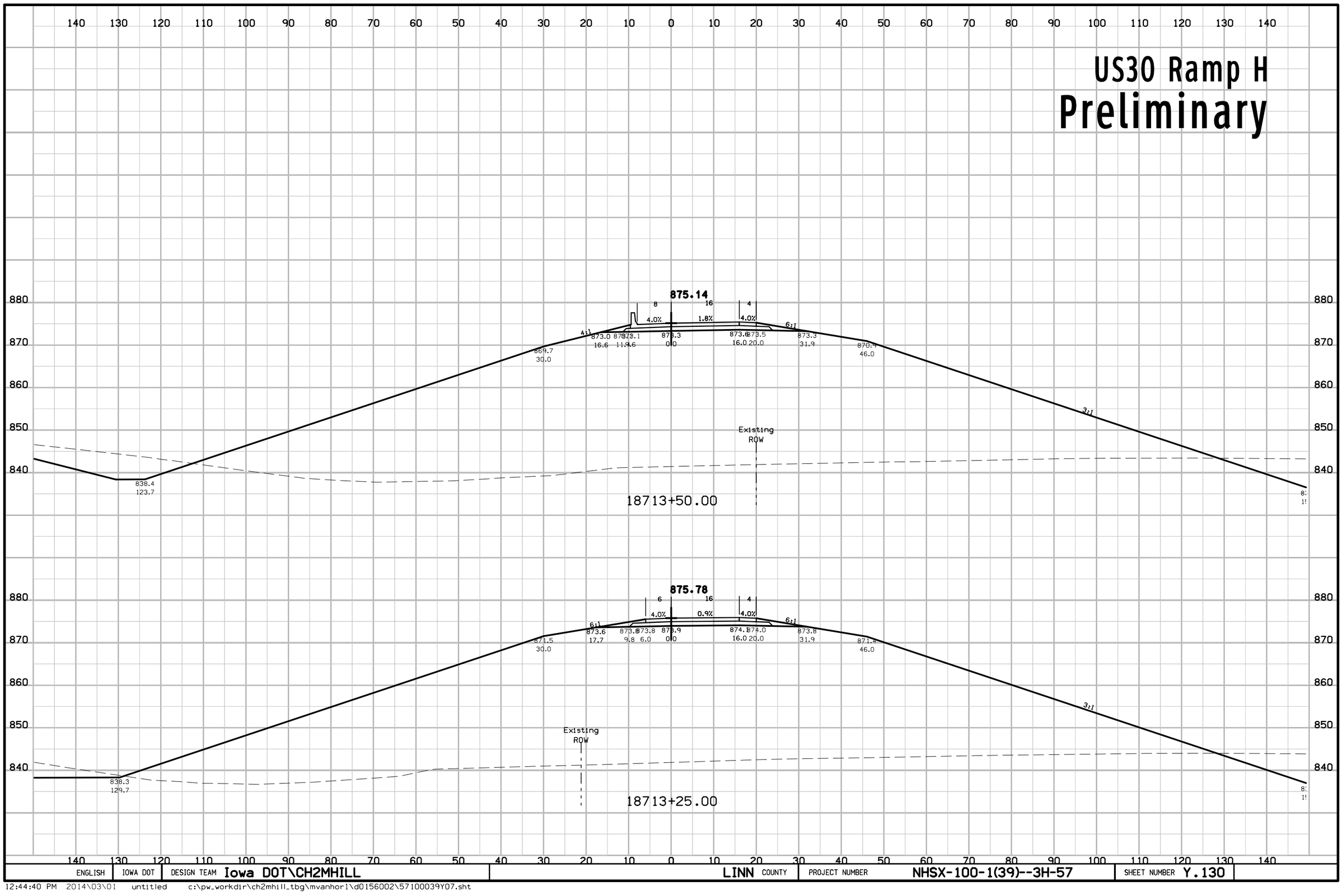
US30 Ramp H

Preliminary



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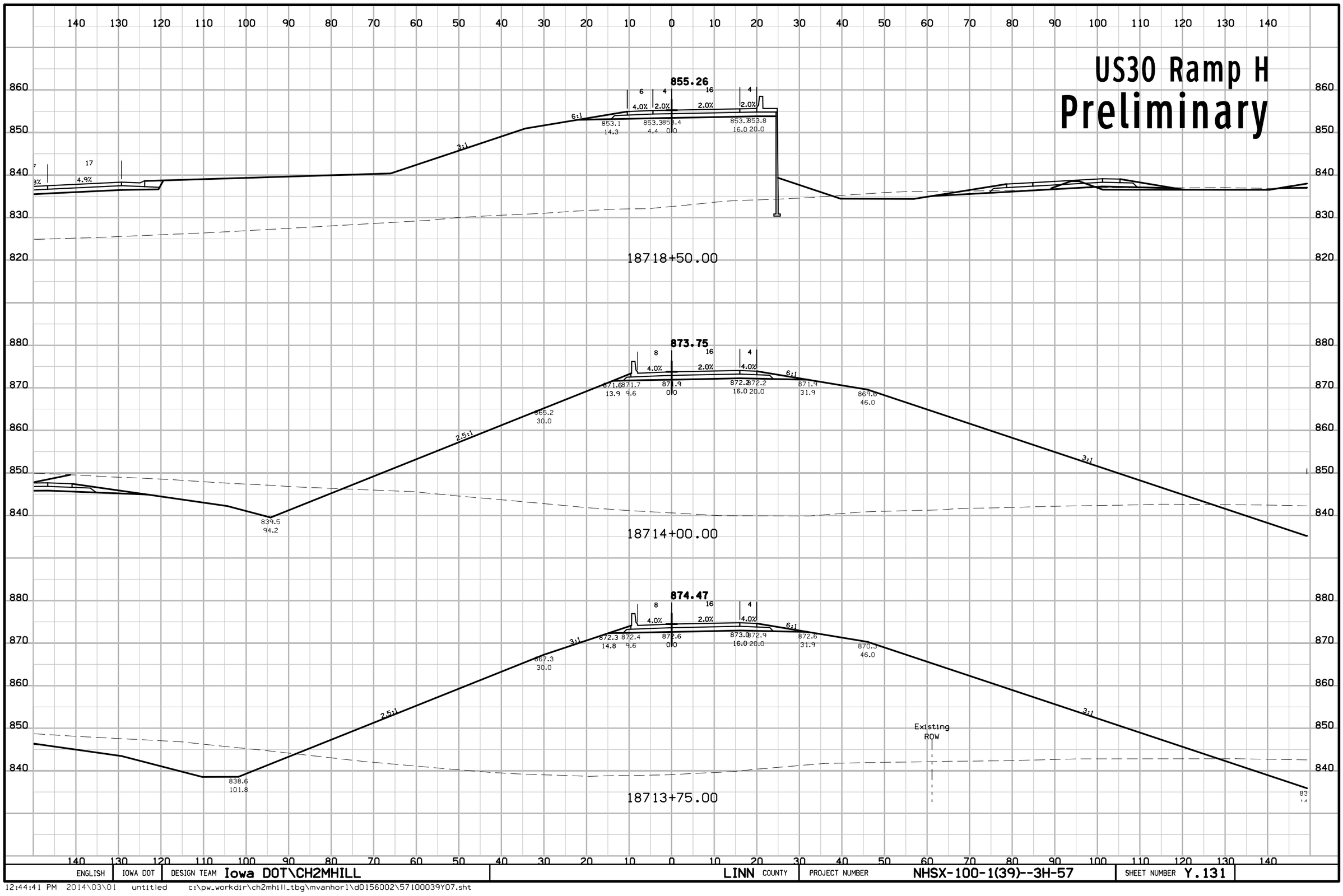
US30 Ramp H
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.131

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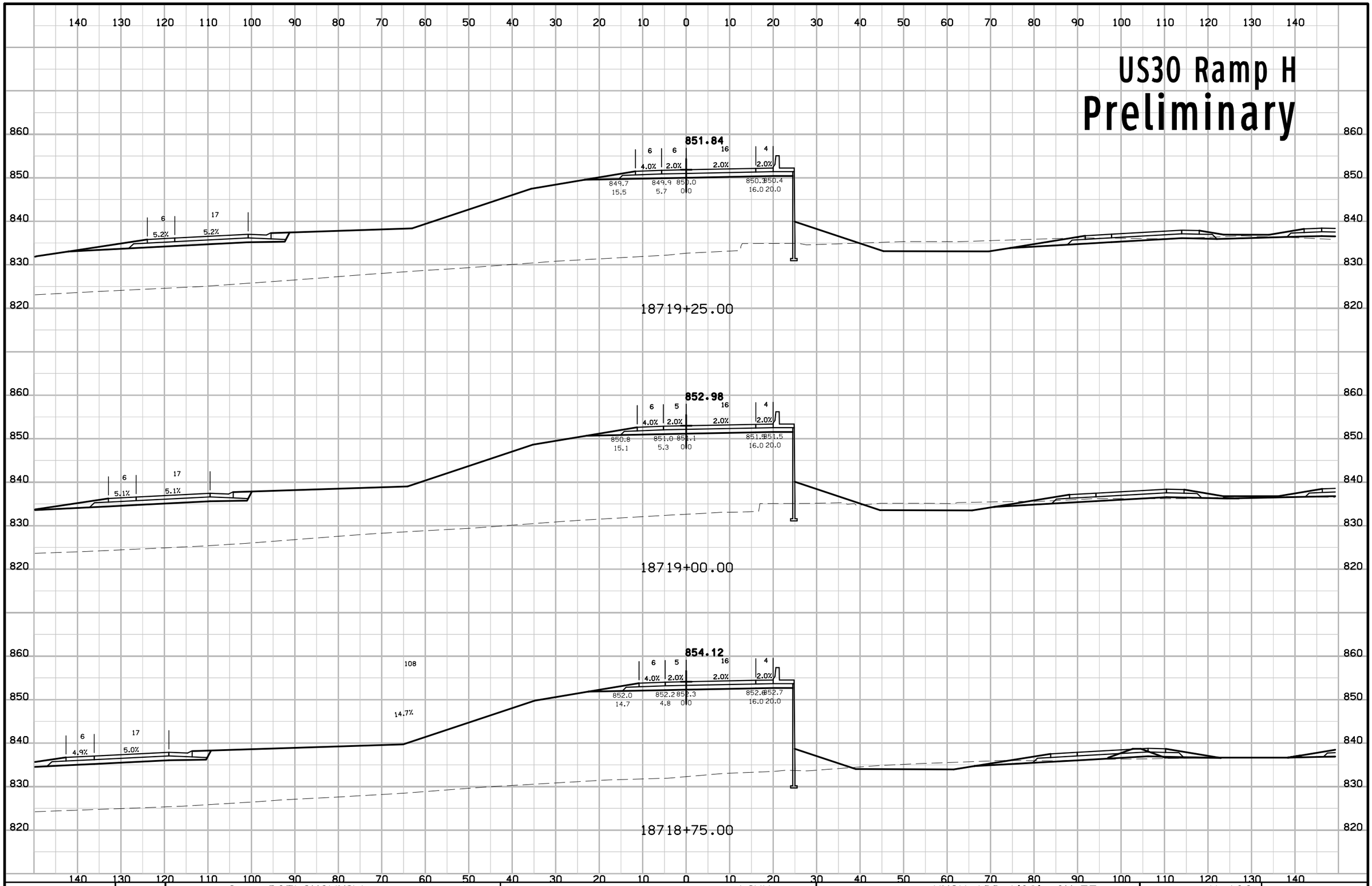
US30 Ramp H

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.132

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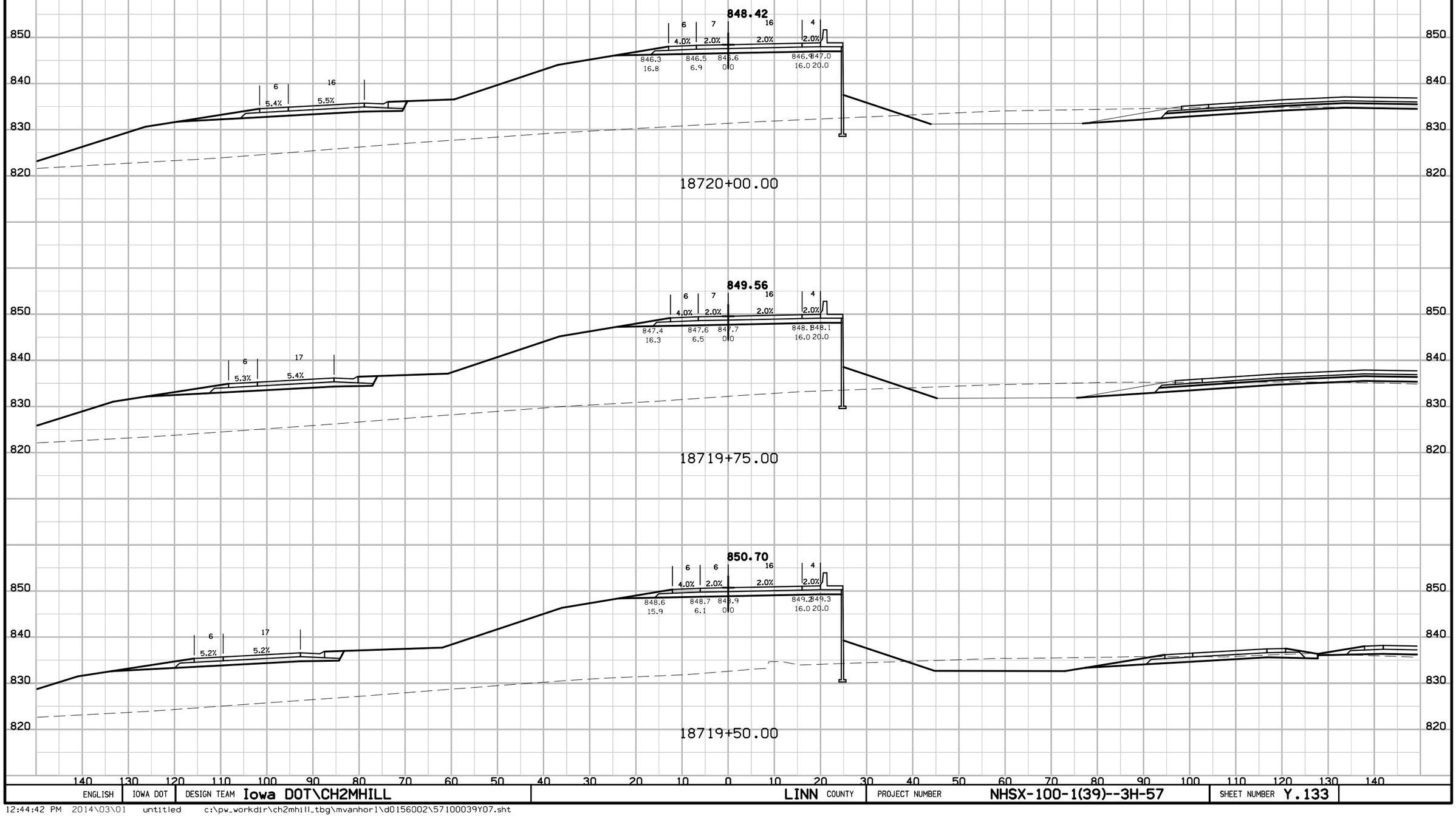
US30 Ramp H

Preliminary



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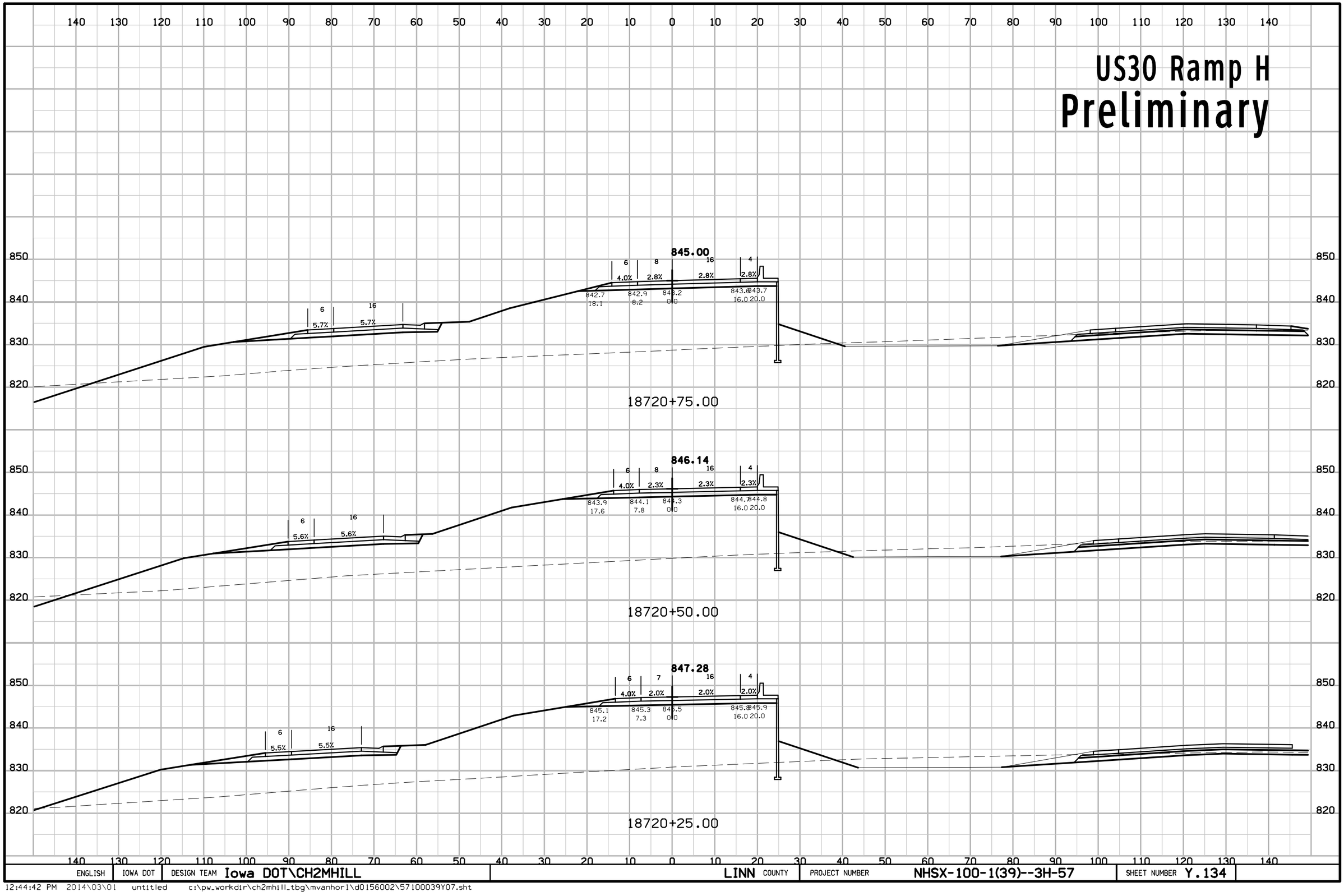
US30 Ramp H

Preliminary



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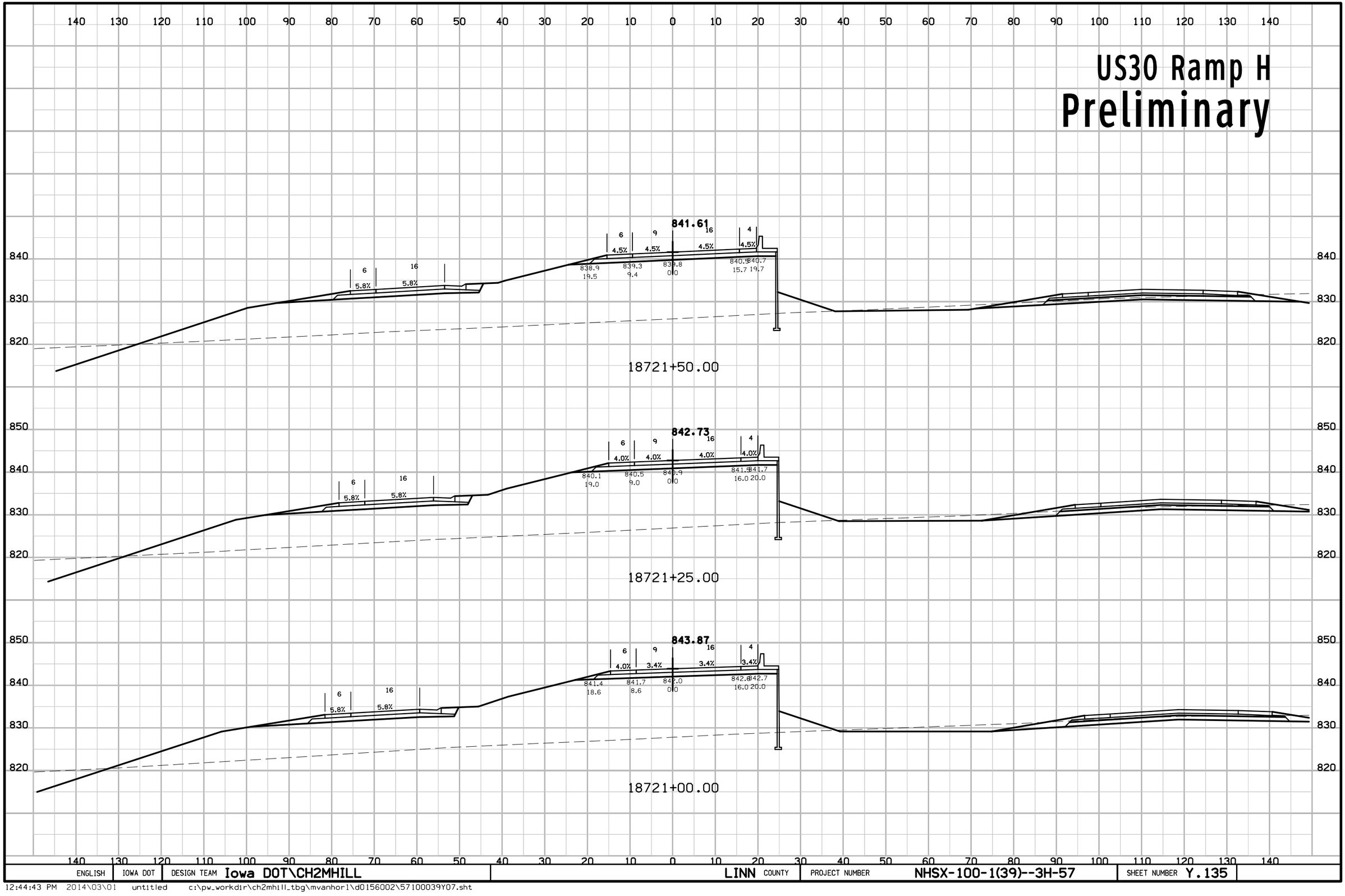
US30 Ramp H

Preliminary



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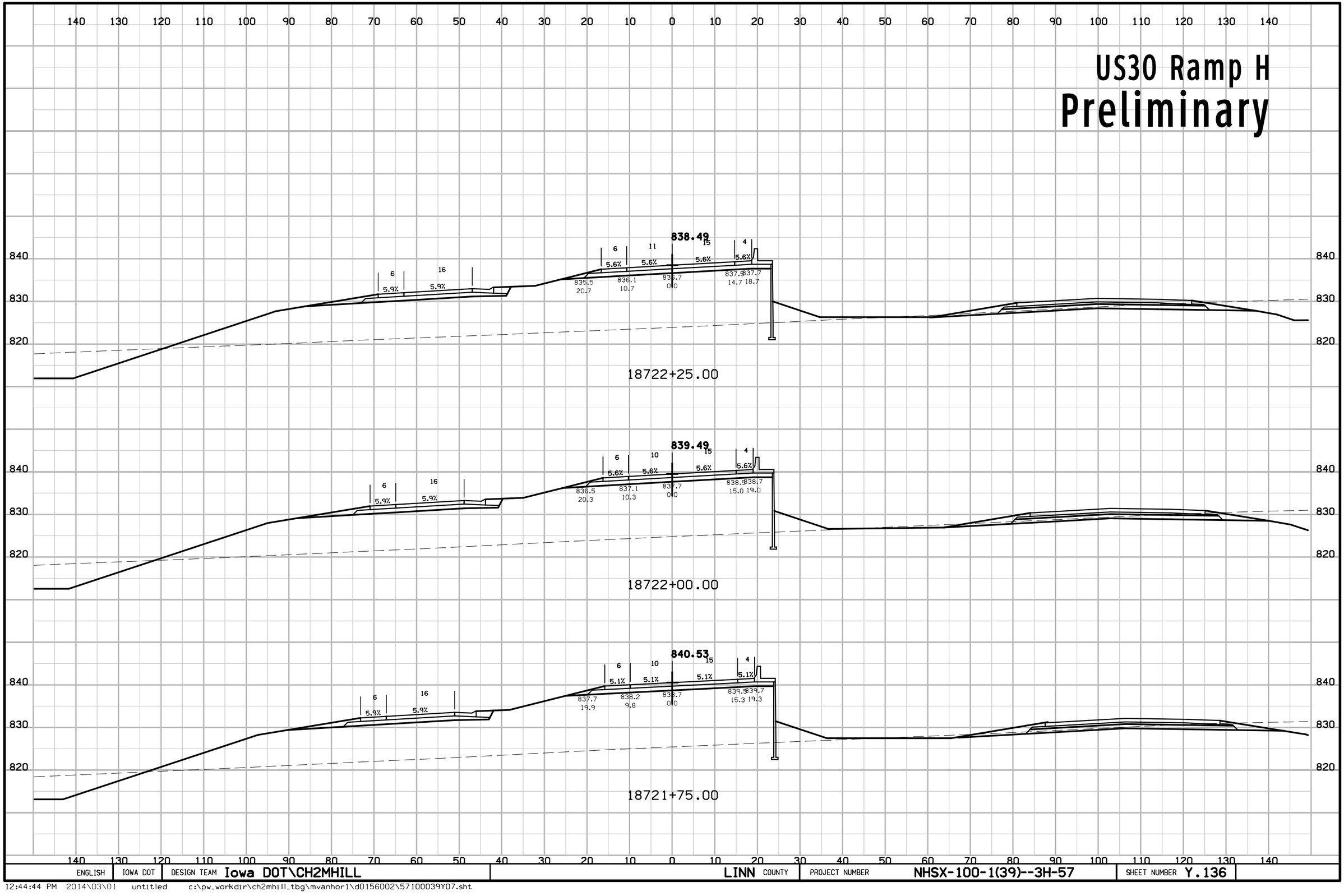
US30 Ramp H

Preliminary



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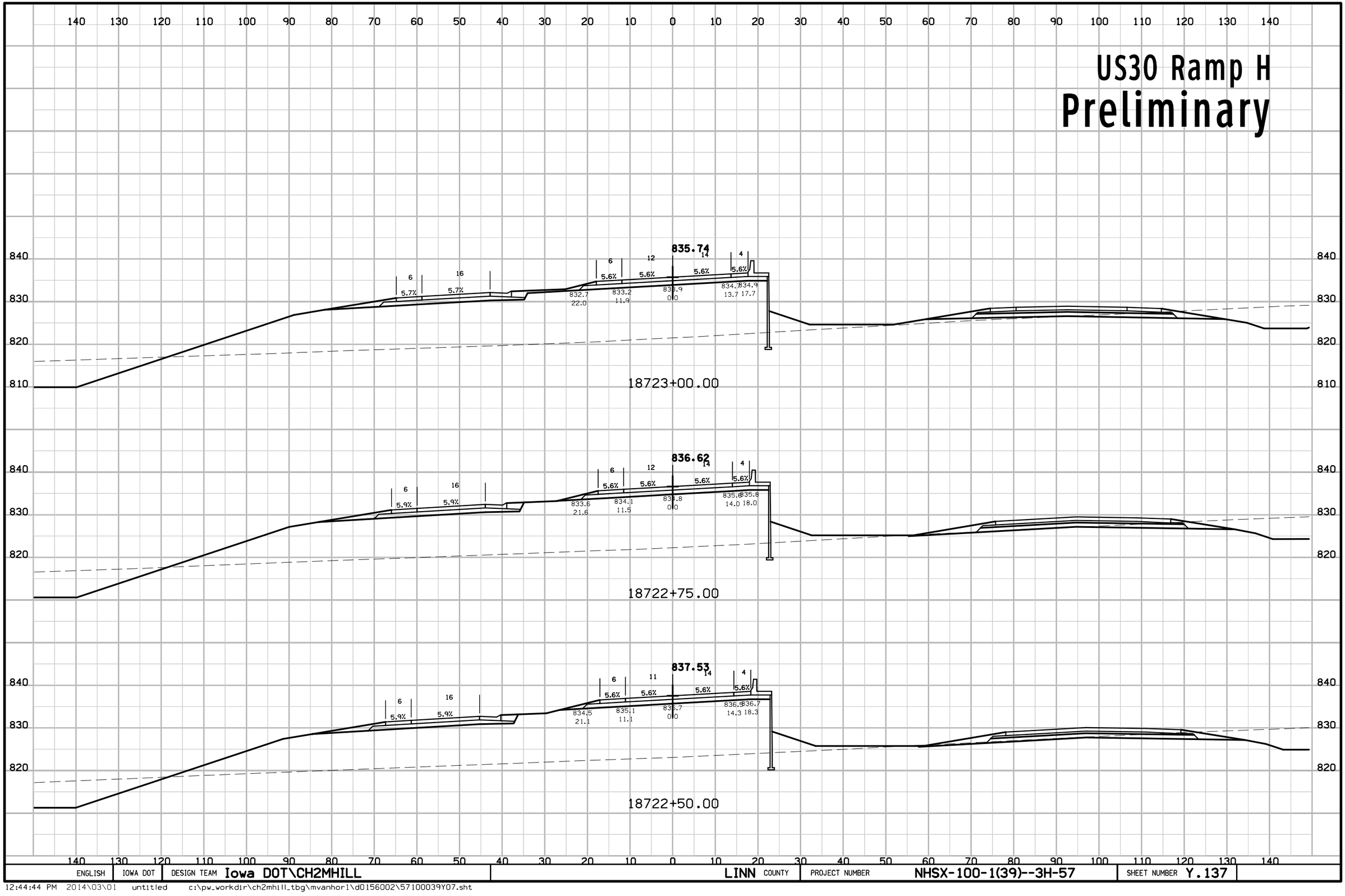
US30 Ramp H
Preliminary



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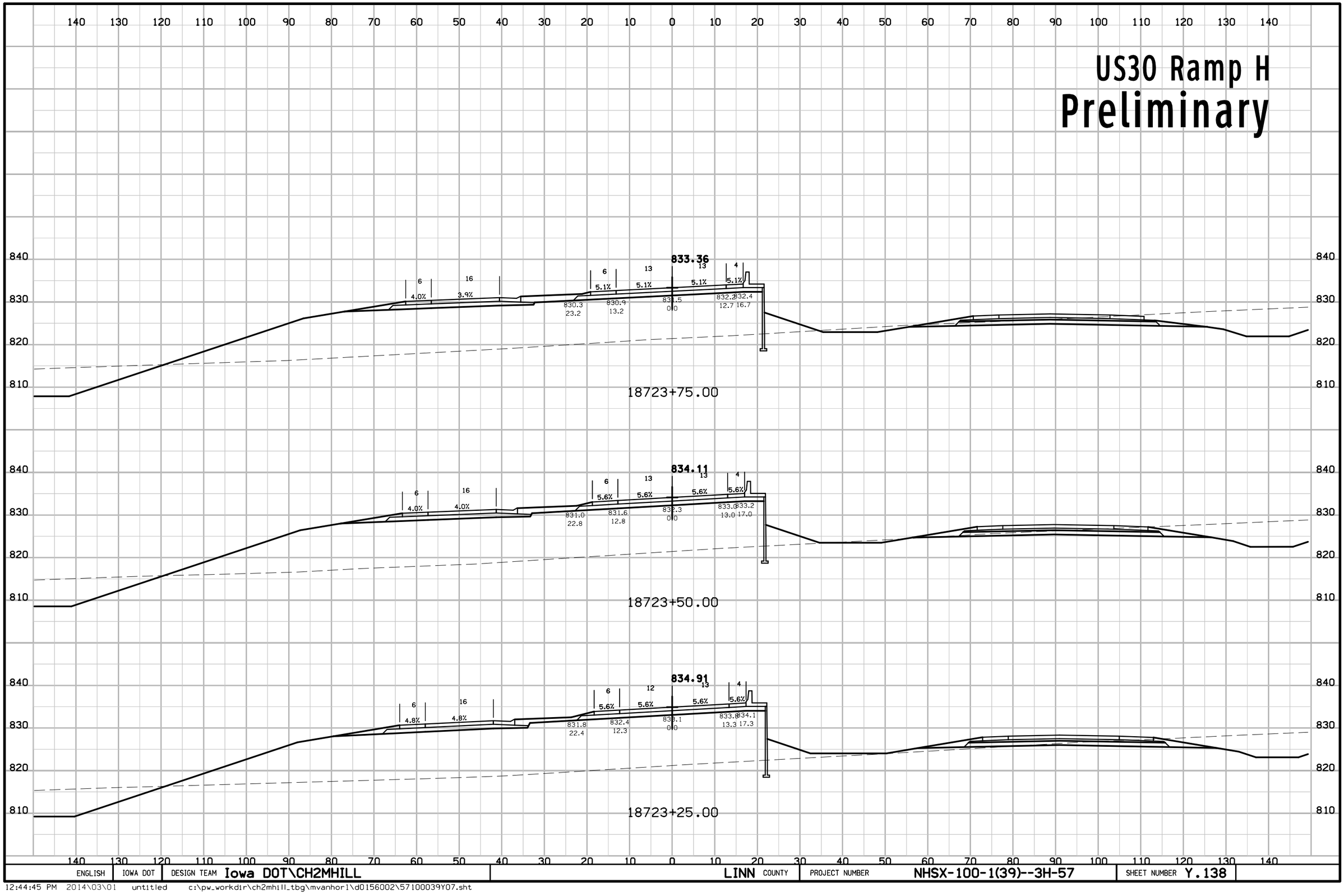
US30 Ramp H

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.138

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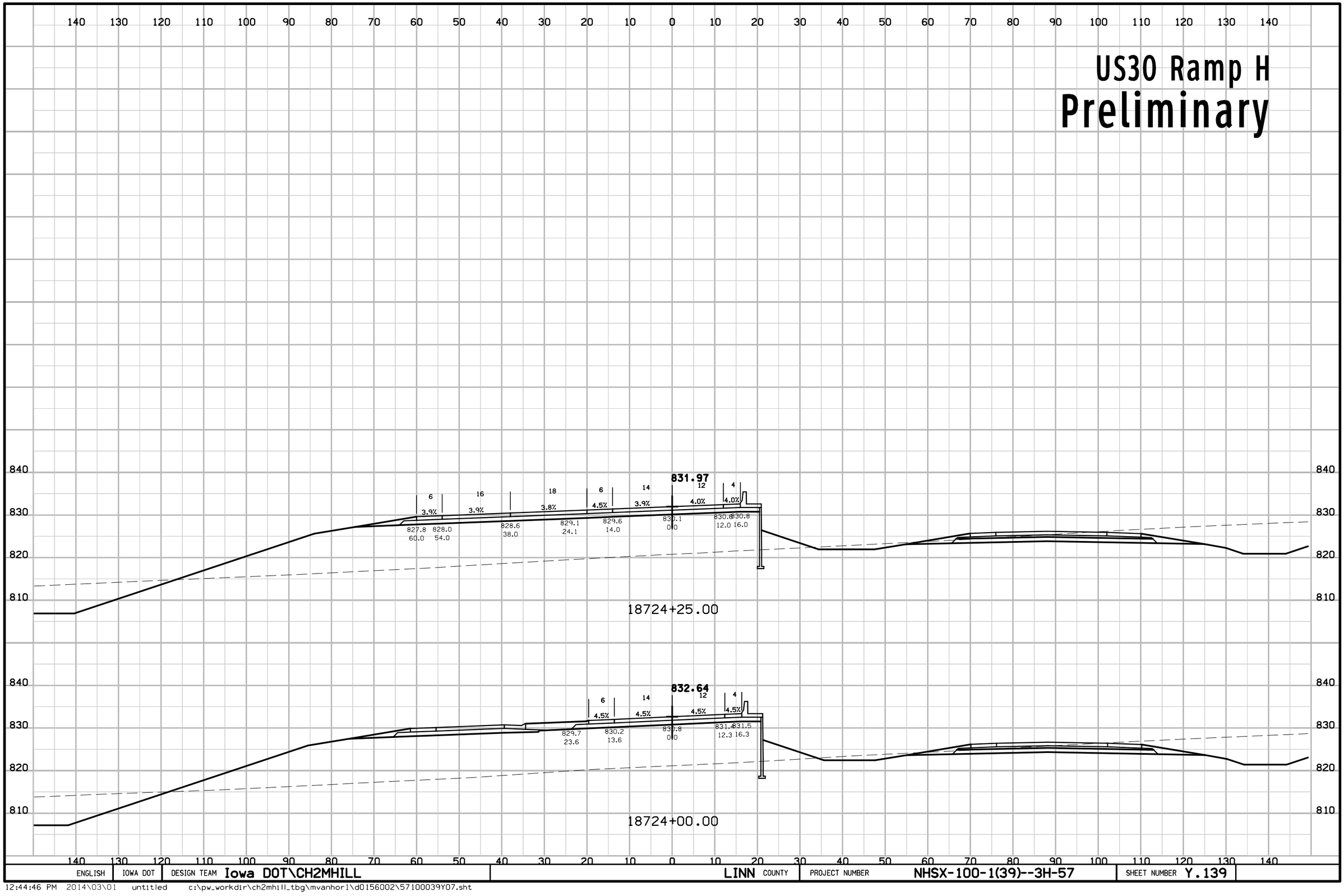
US30 Ramp H

Preliminary



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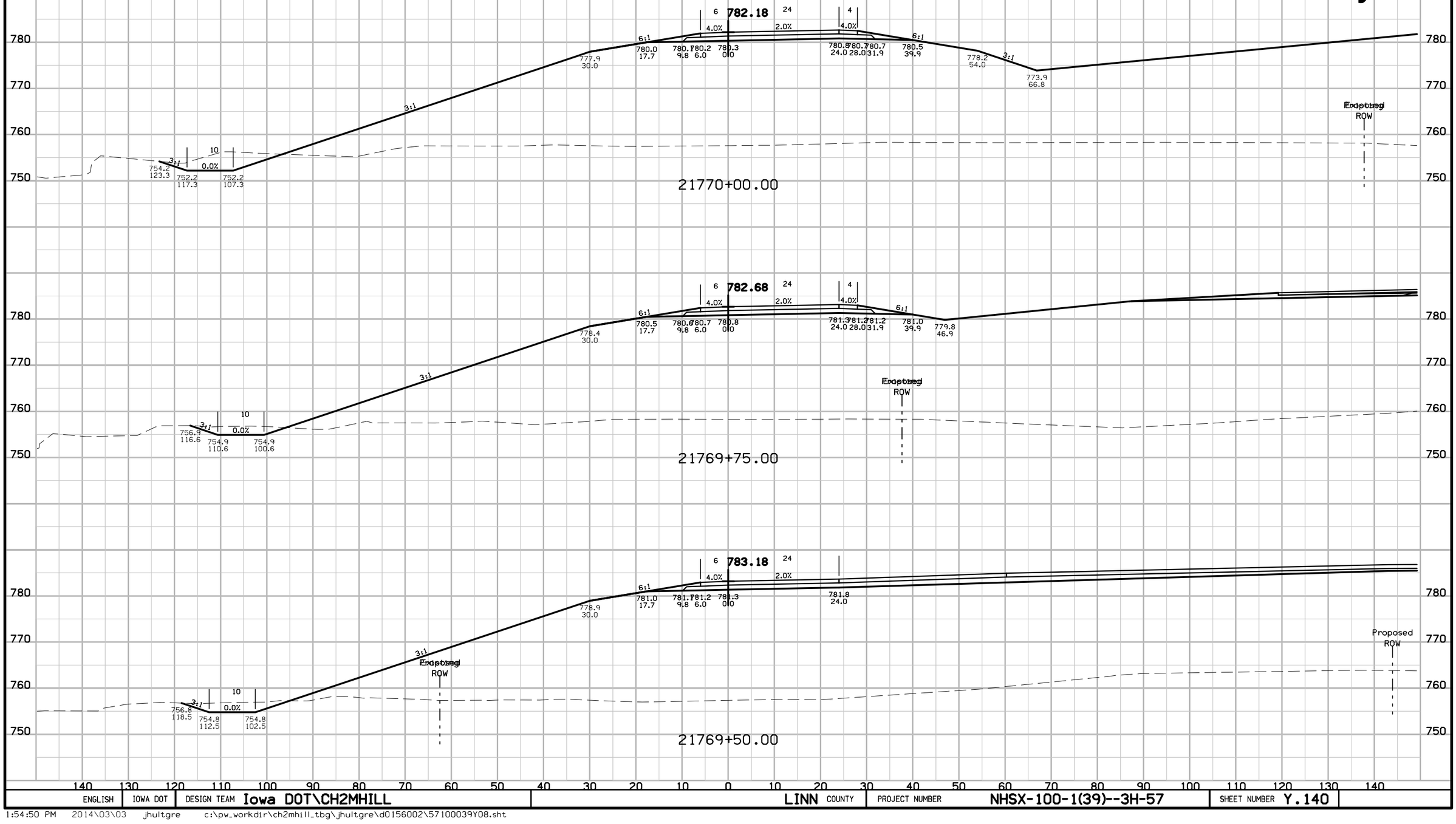
E Ave. Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.140

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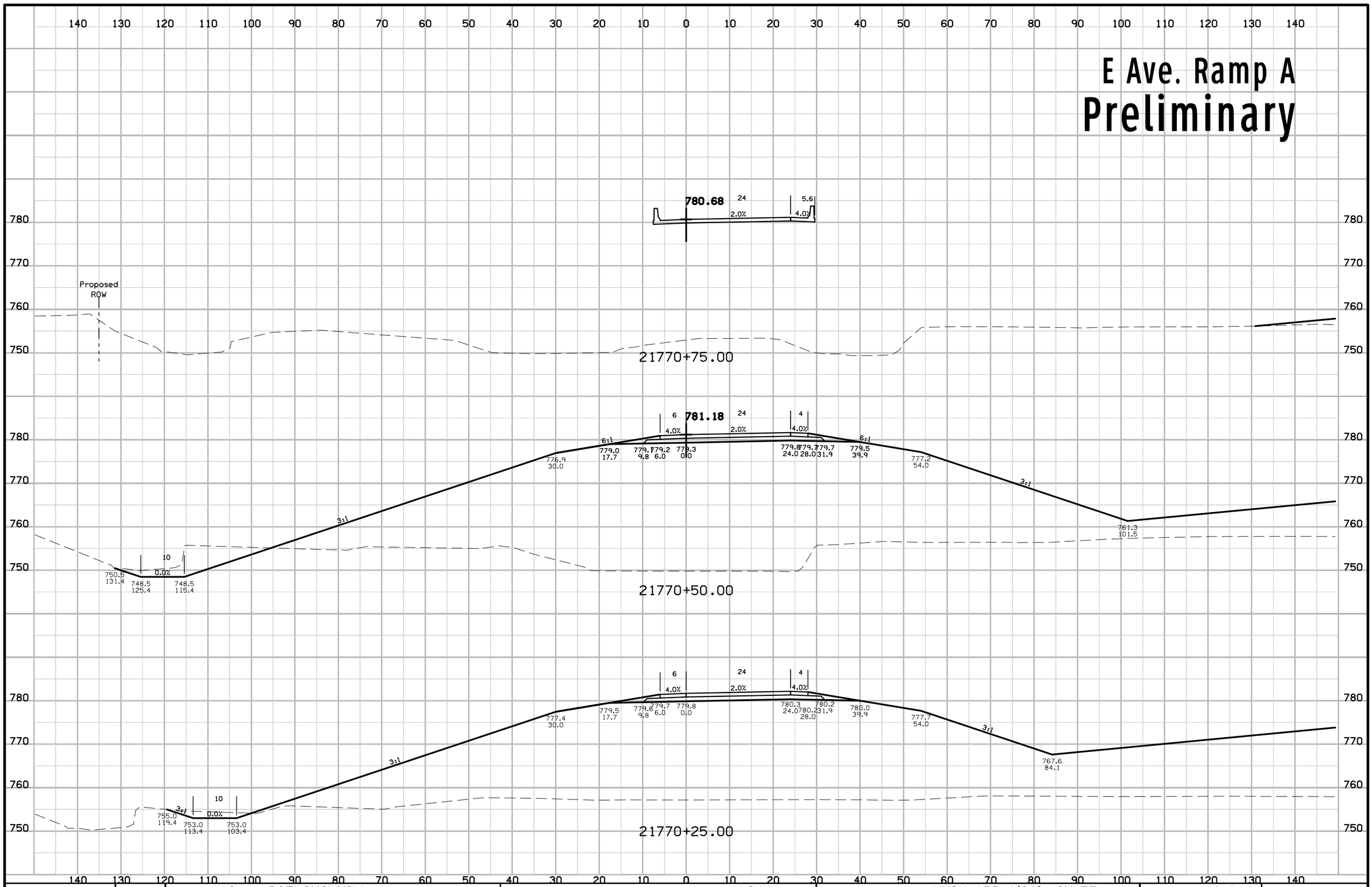
E Ave. Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.141

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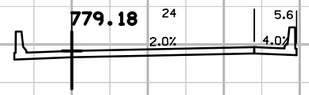
E Ave. Ramp A
Preliminary

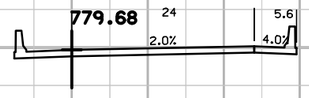
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

780
770
760
750



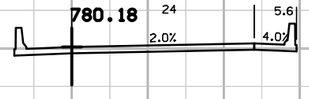
dProposed ROW

21771+50.00



oposed Proposed ROW ROW

21771+25.00



Proposed ROW

21771+00.00

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.142

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E Ave. Ramp A
Preliminary

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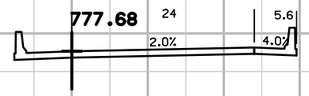
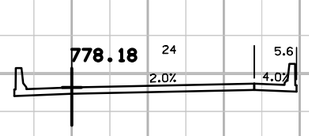
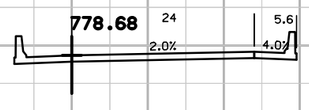
780
770
760
750



21772+25.00



21772+00.00



sed

21771+75.00

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.143

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E Ave. Ramp A
Preliminary

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

780
770
760
750

776.18 23.4 5.6
2.0% 4.0%

21773+00.00

776.68 24 5.6
2.0% 4.0%

21772+75.00

777.18 24 5.6
2.0% 4.0%

21772+50.00

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.144

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E Ave. Ramp A
Preliminary

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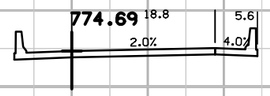
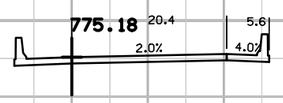
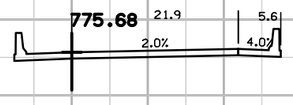
780
770
760
750



21773+75.00



21773+50.00



21773+25.00

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.145

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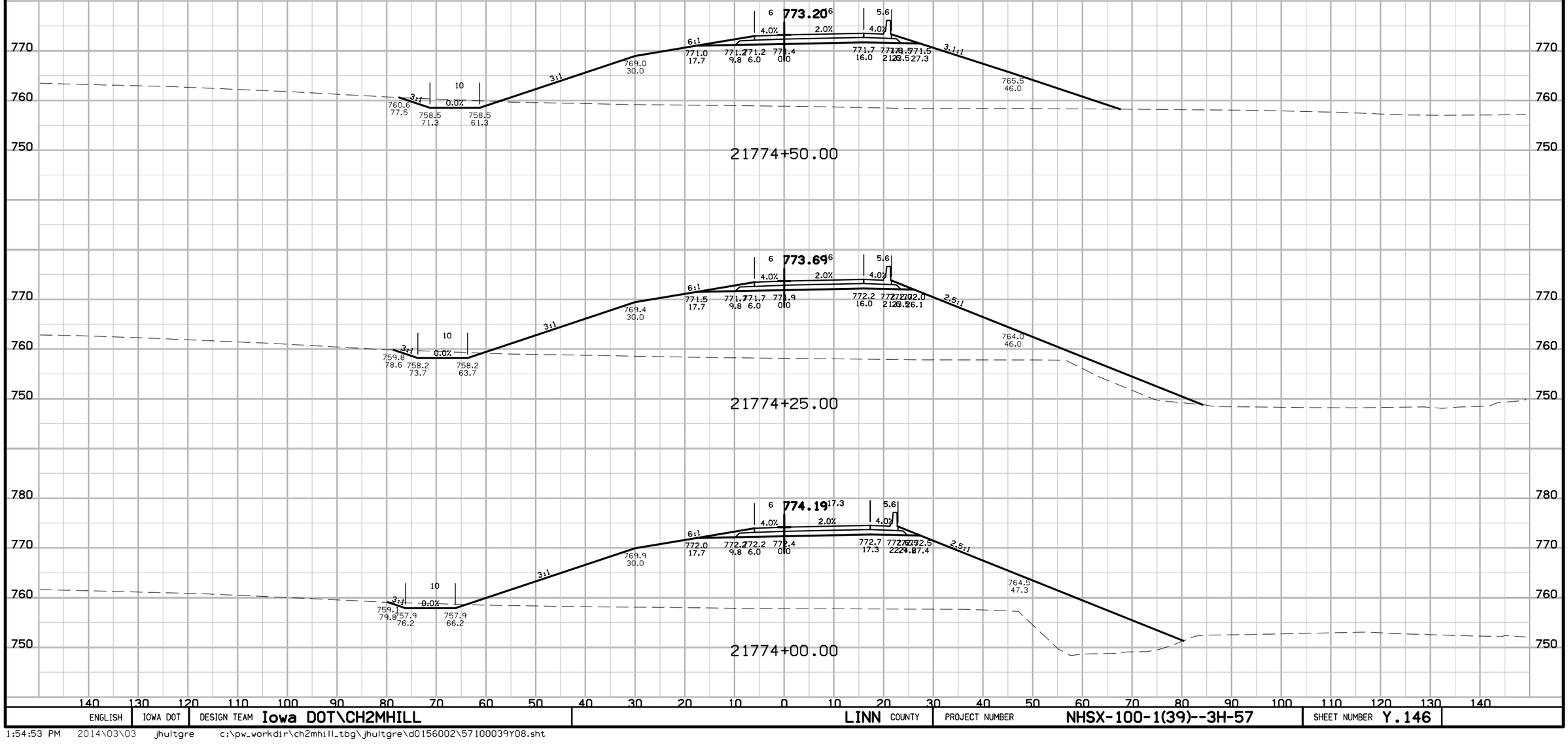
E Ave. Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.146

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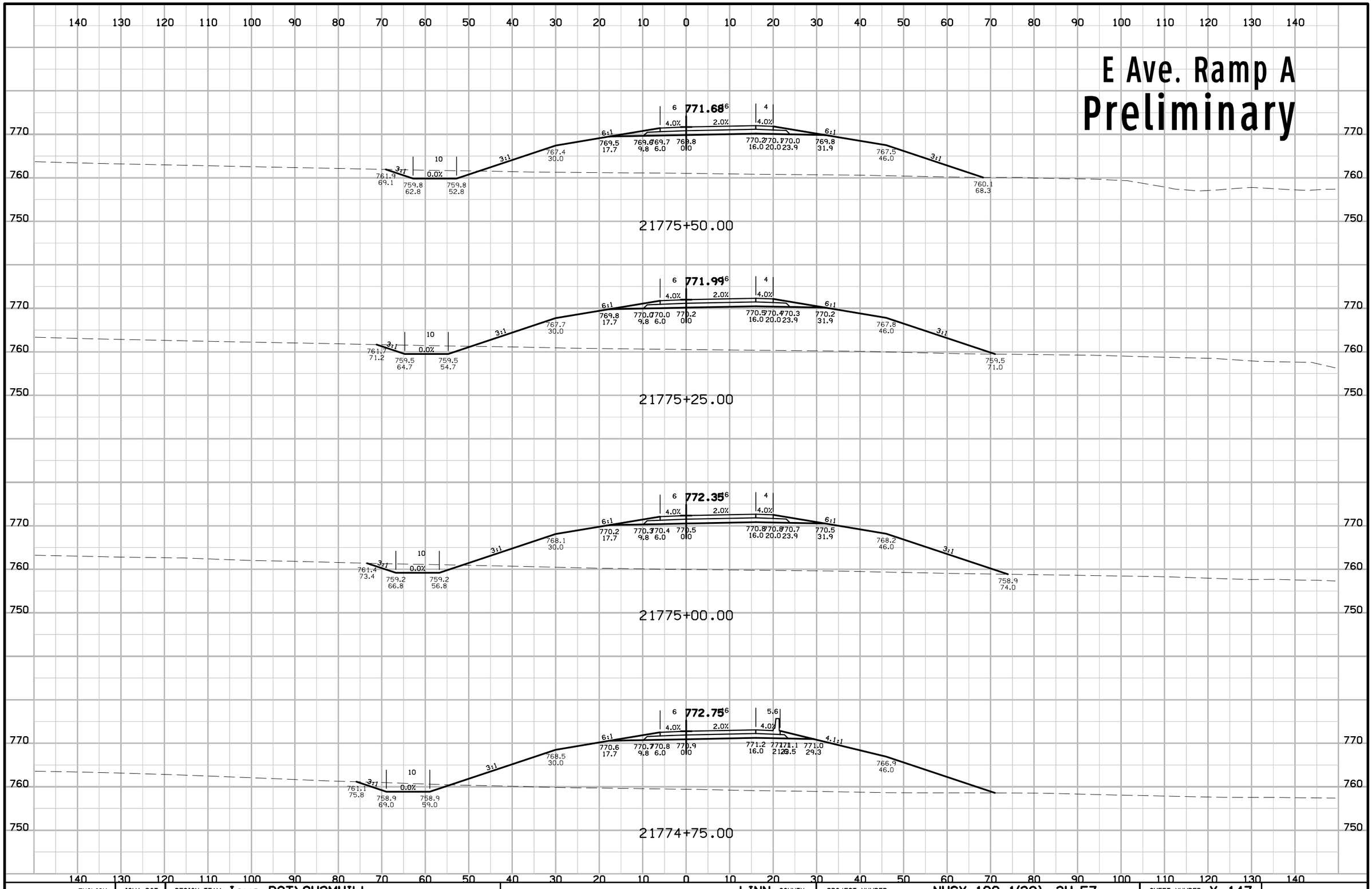
E Ave. Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.147

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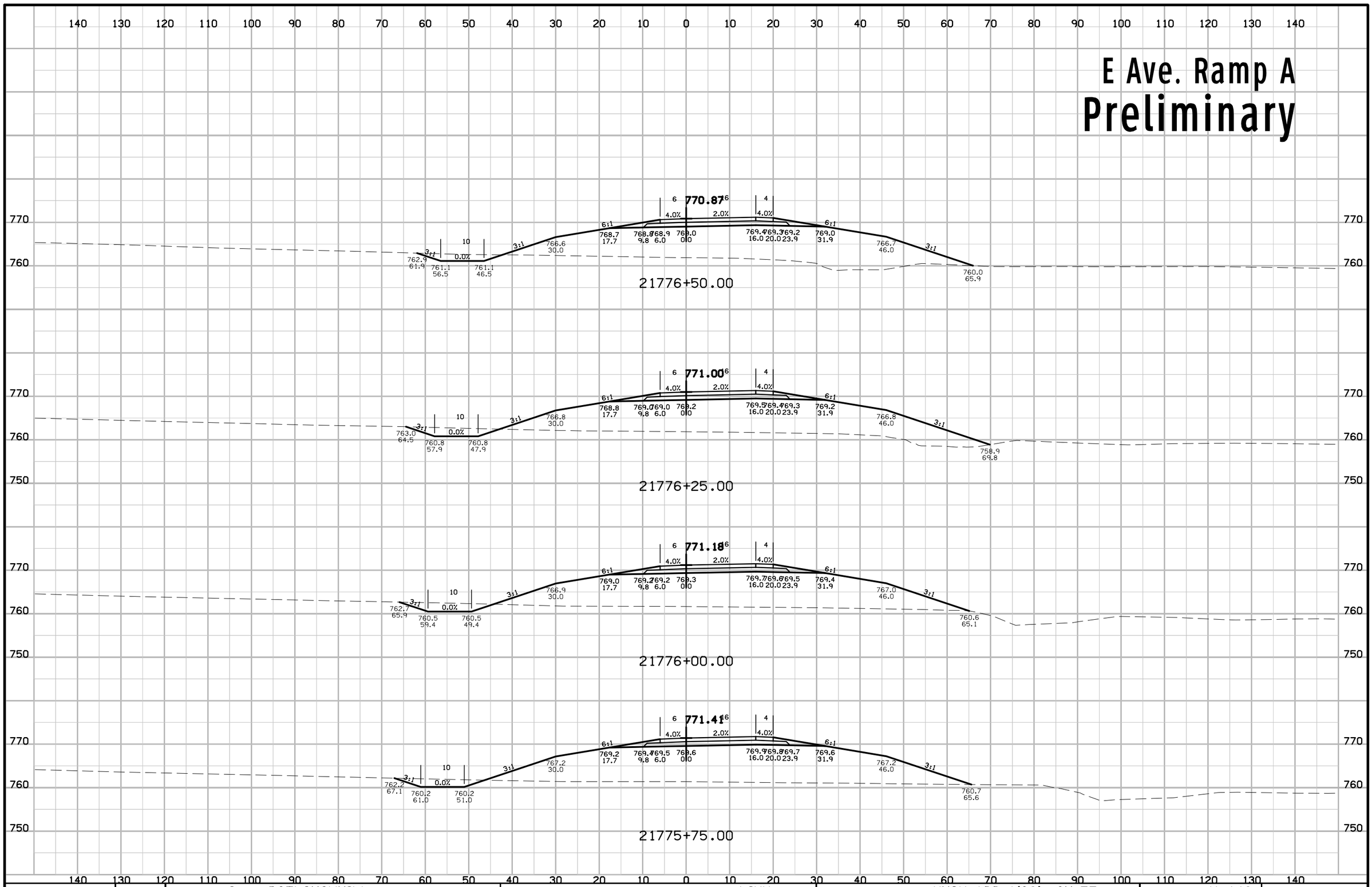
E Ave. Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.148

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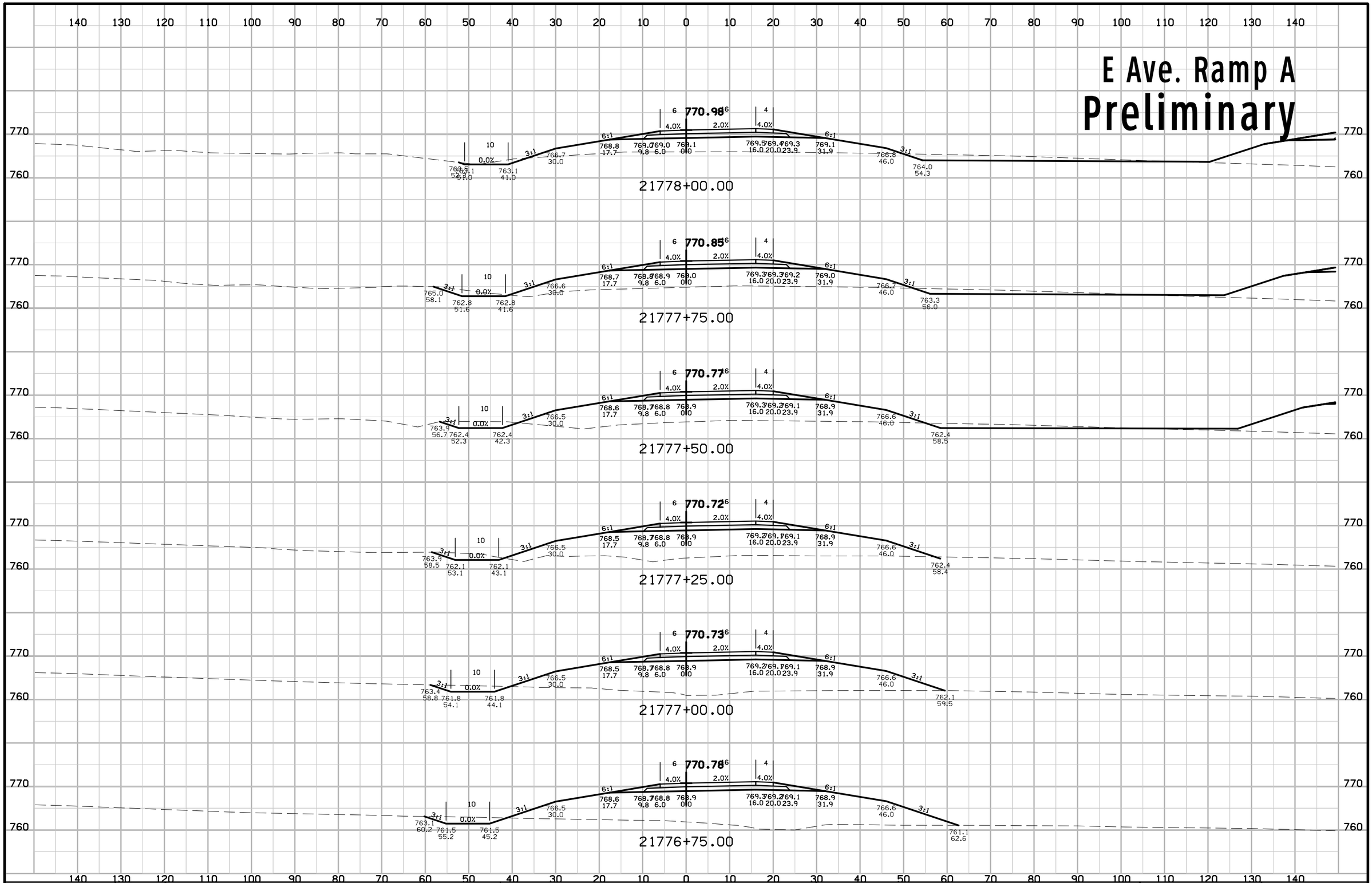
E Ave. Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.149

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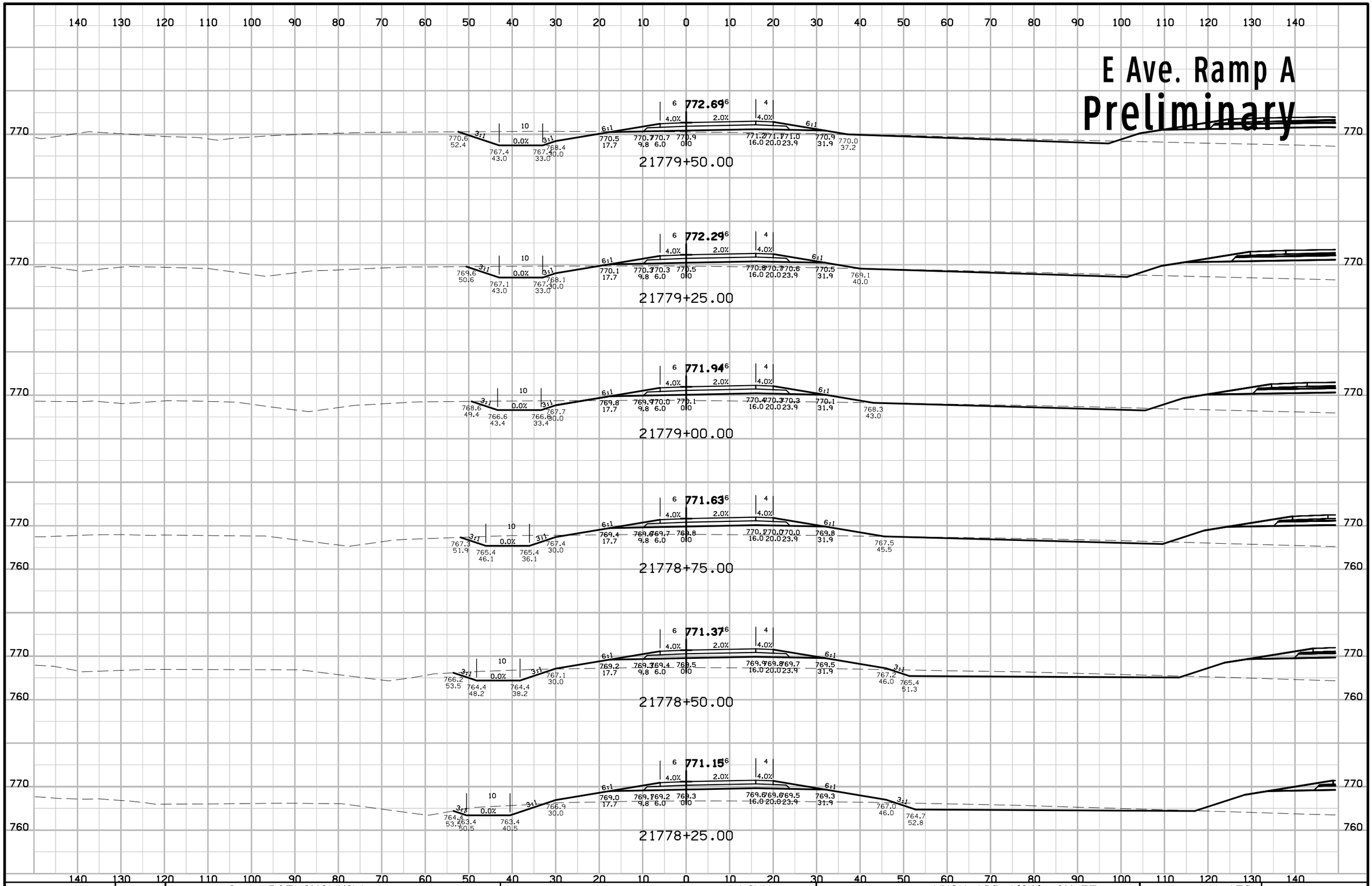
E Ave. Ramp A

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.150

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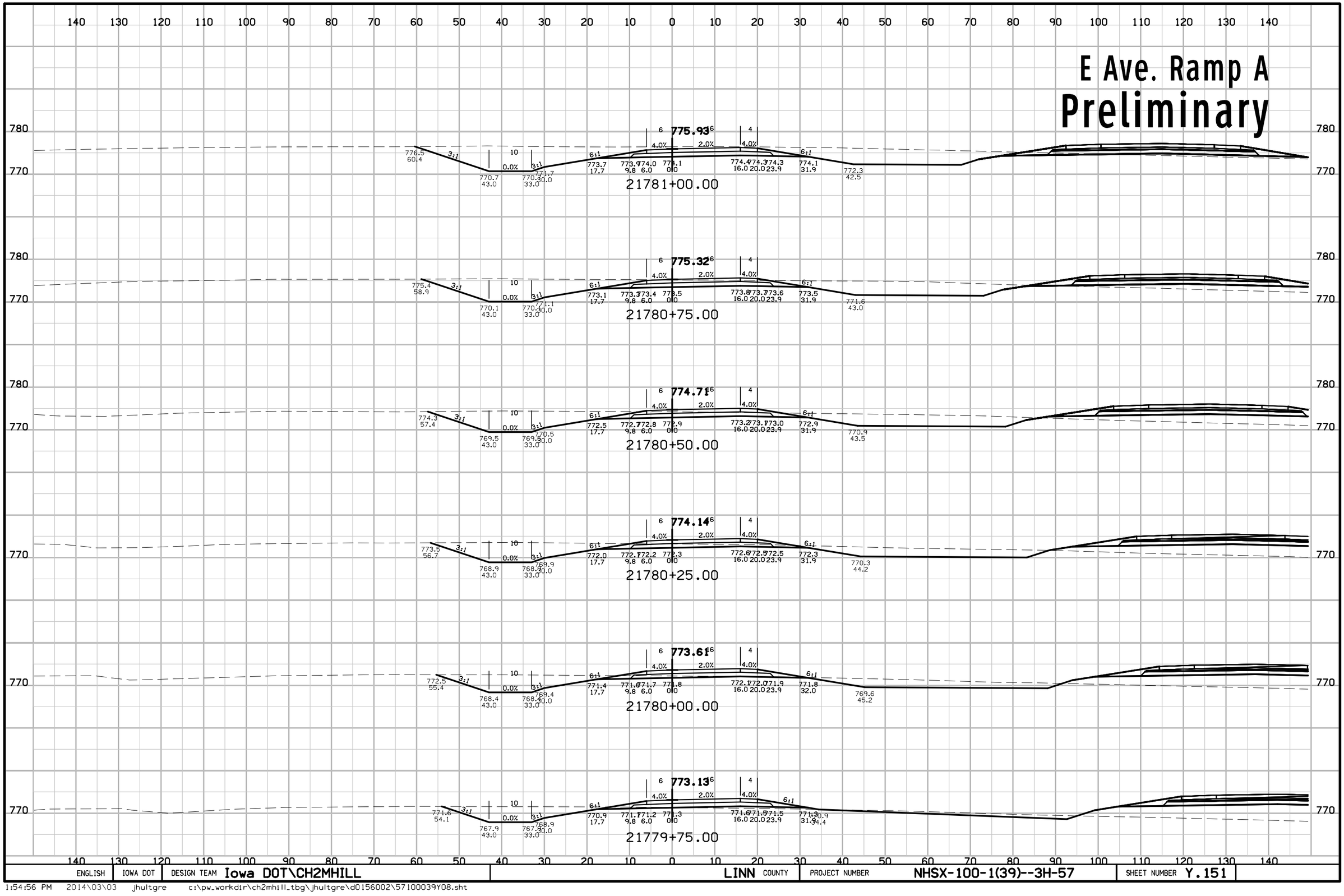
E Ave. Ramp A

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.151

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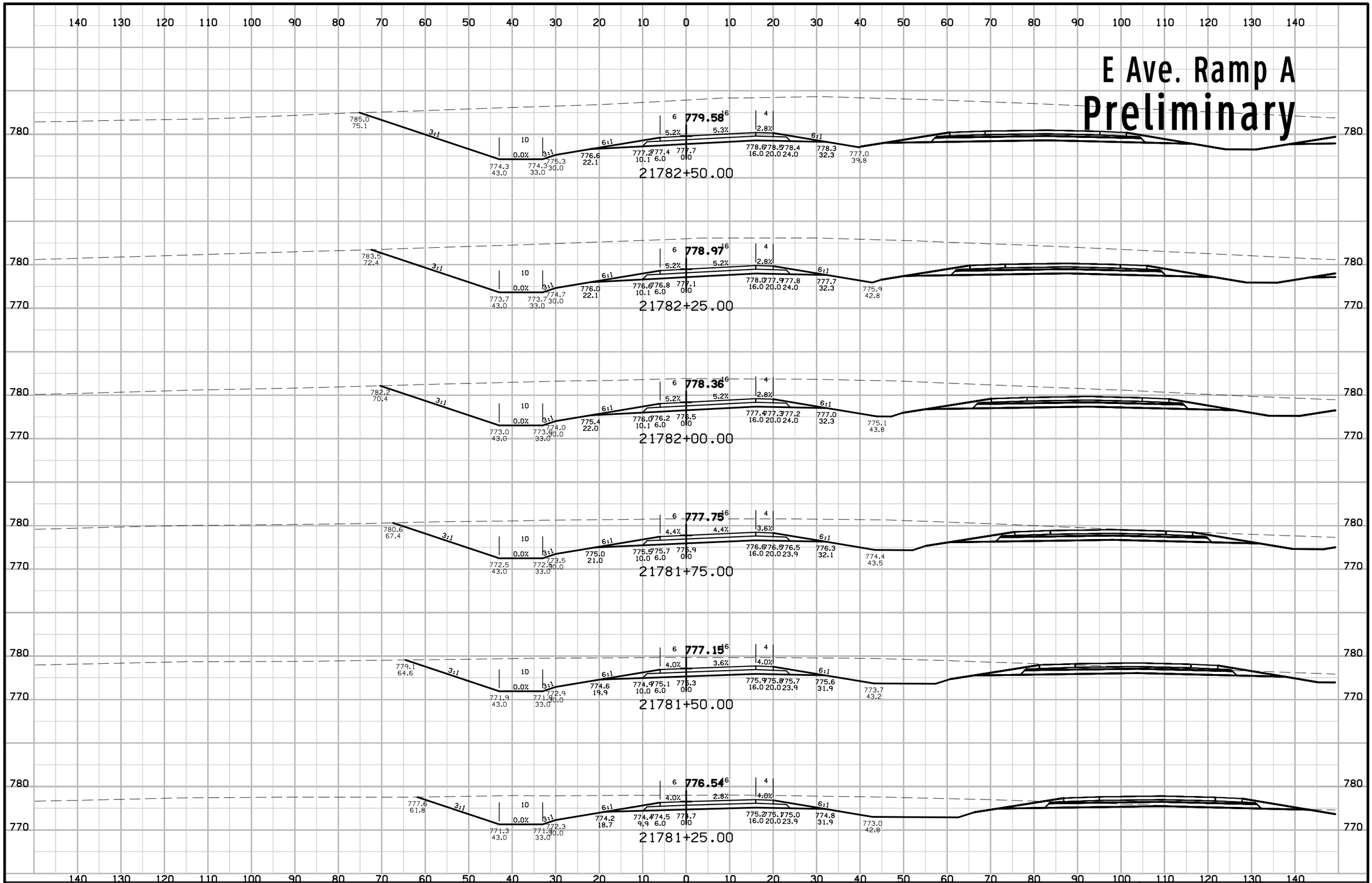
E Ave. Ramp A

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.152

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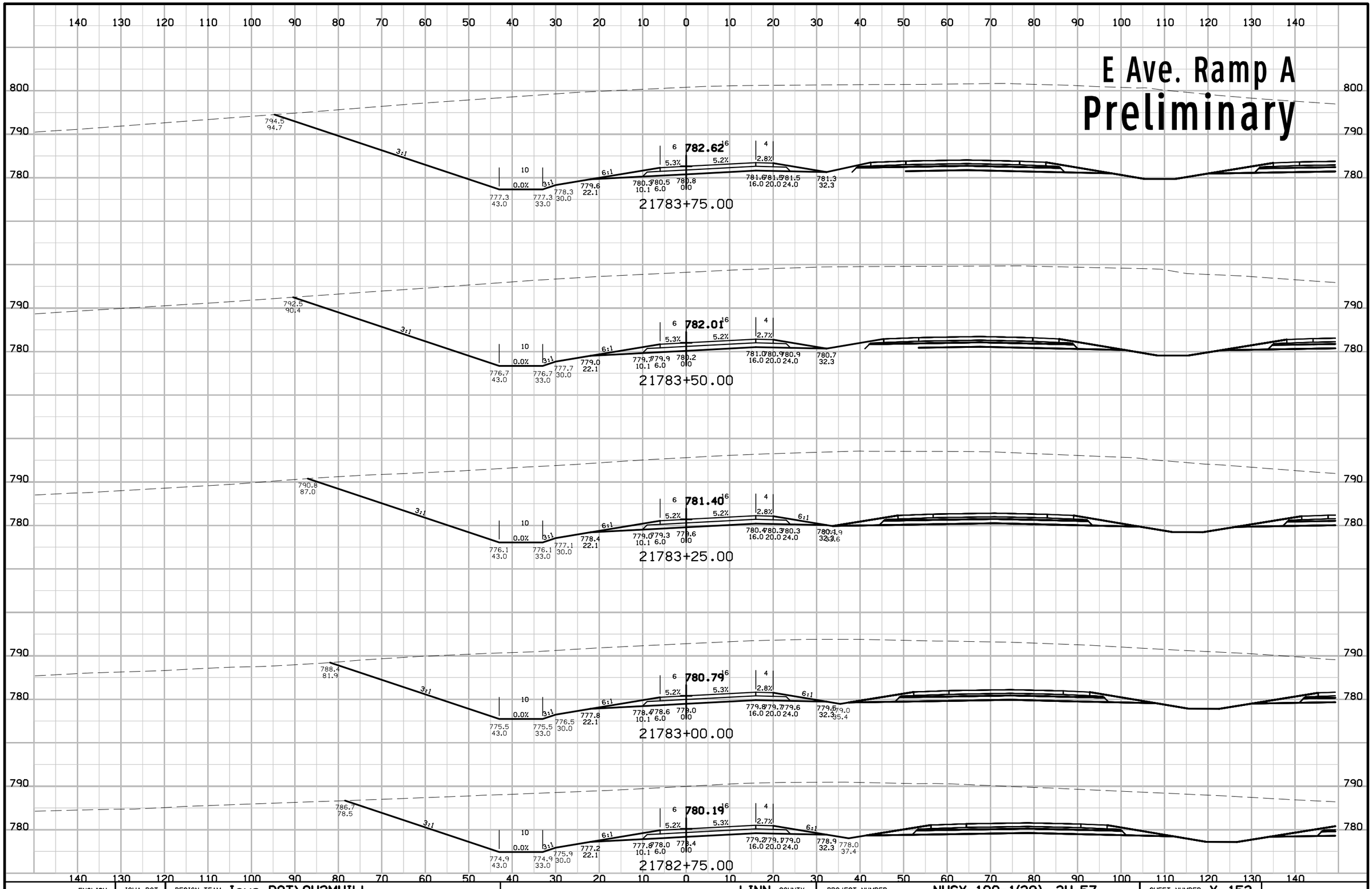
E Ave. Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.153

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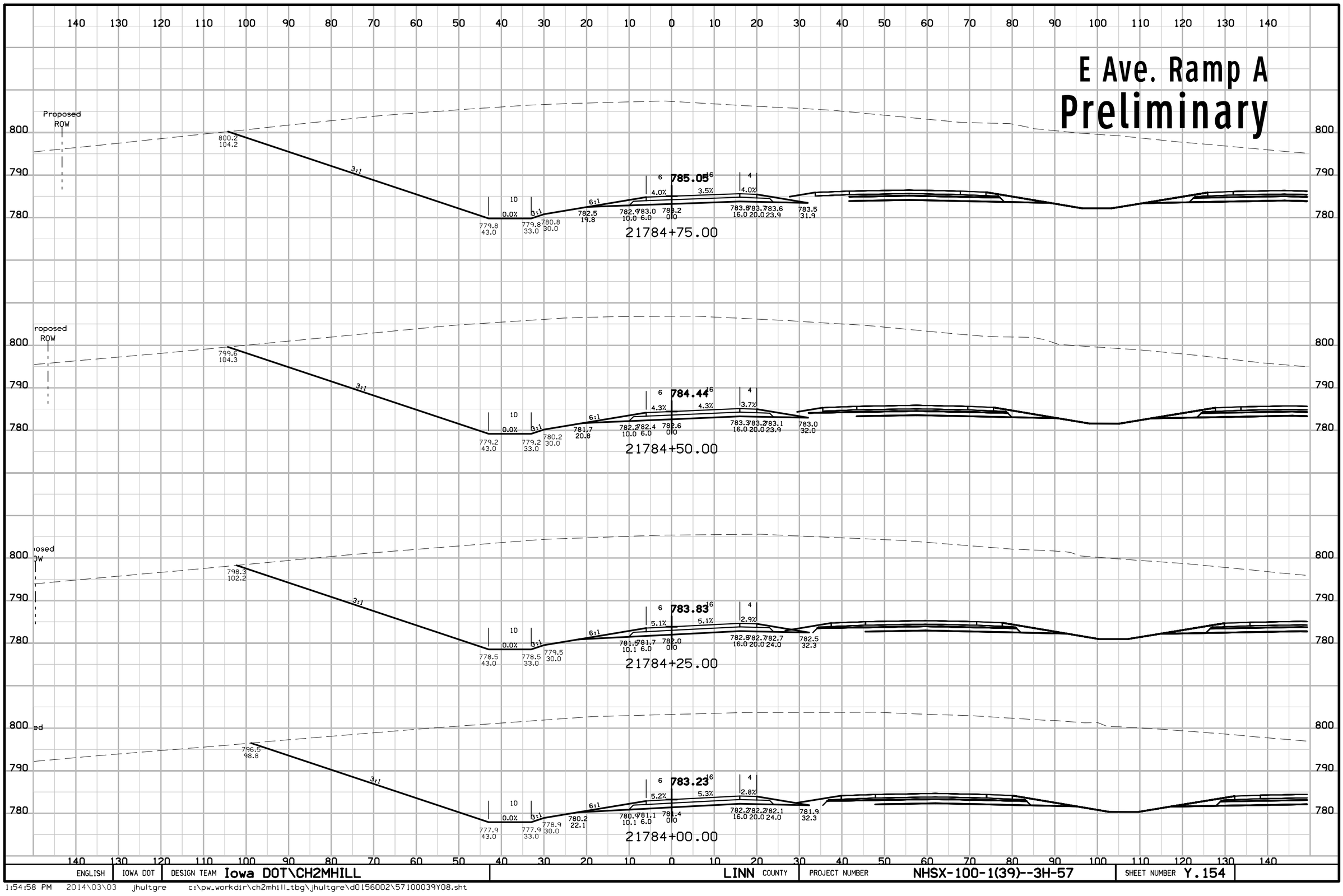
E Ave. Ramp A

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER Y.154	

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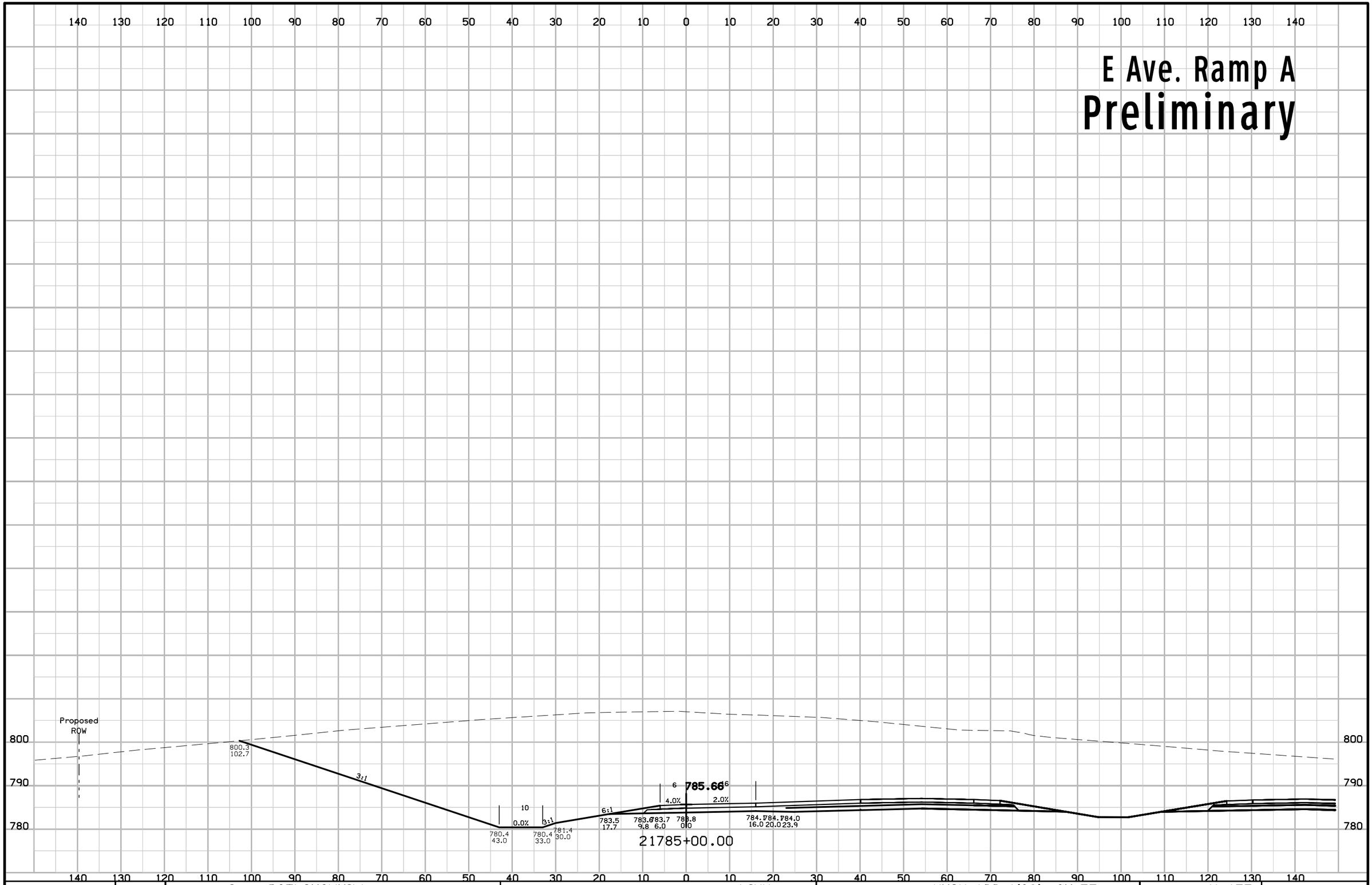
E Ave. Ramp A
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.155

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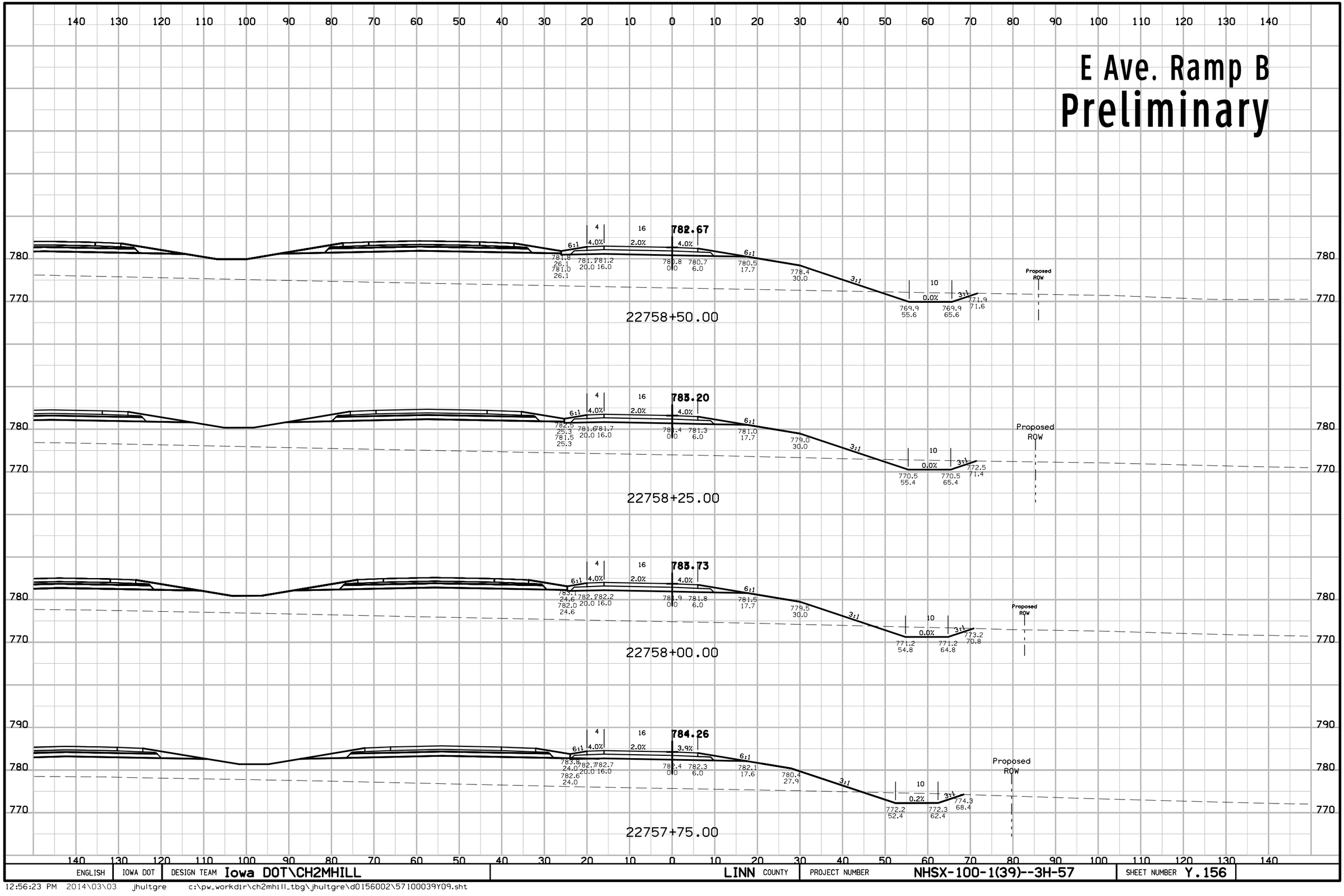
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.156

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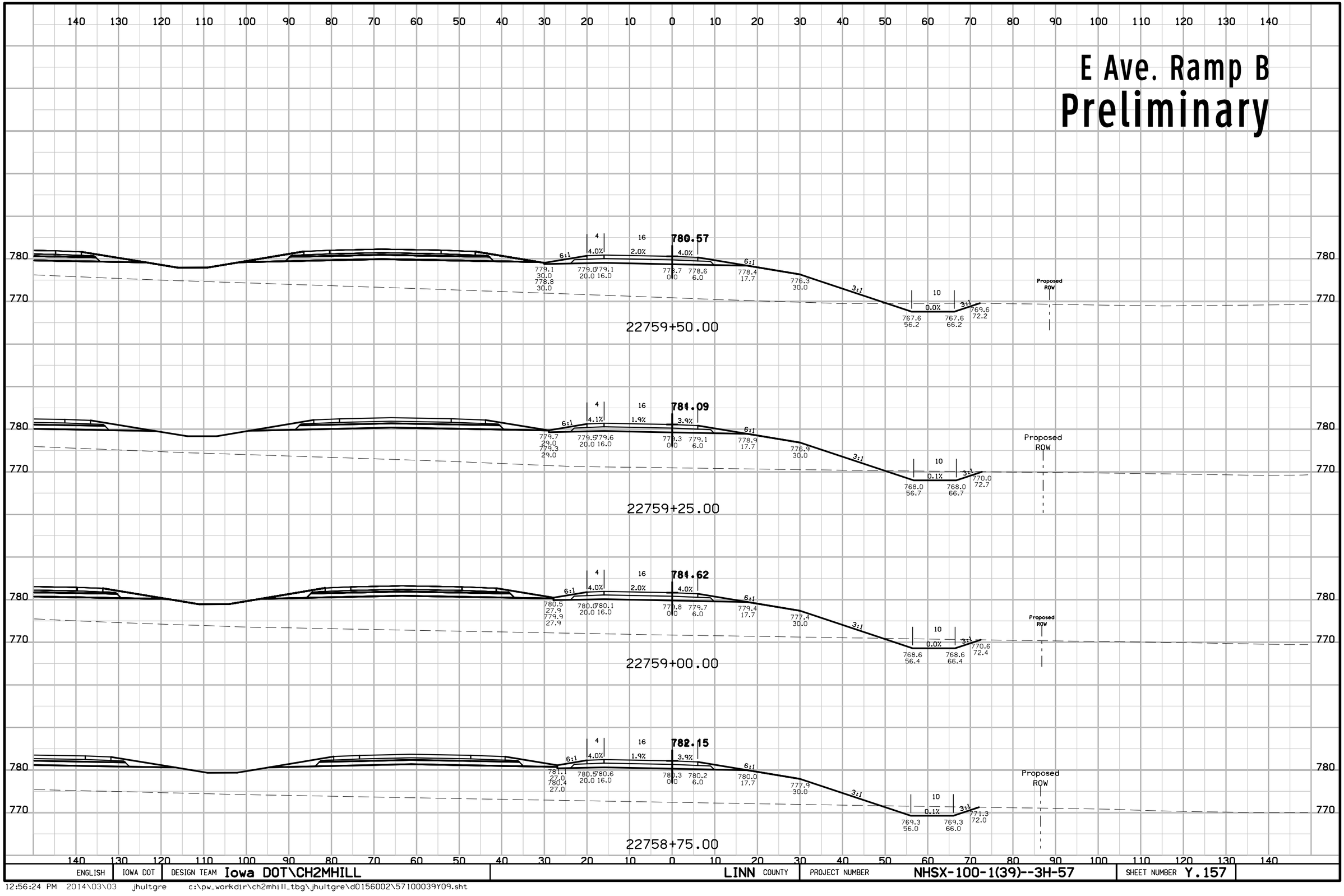
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.157

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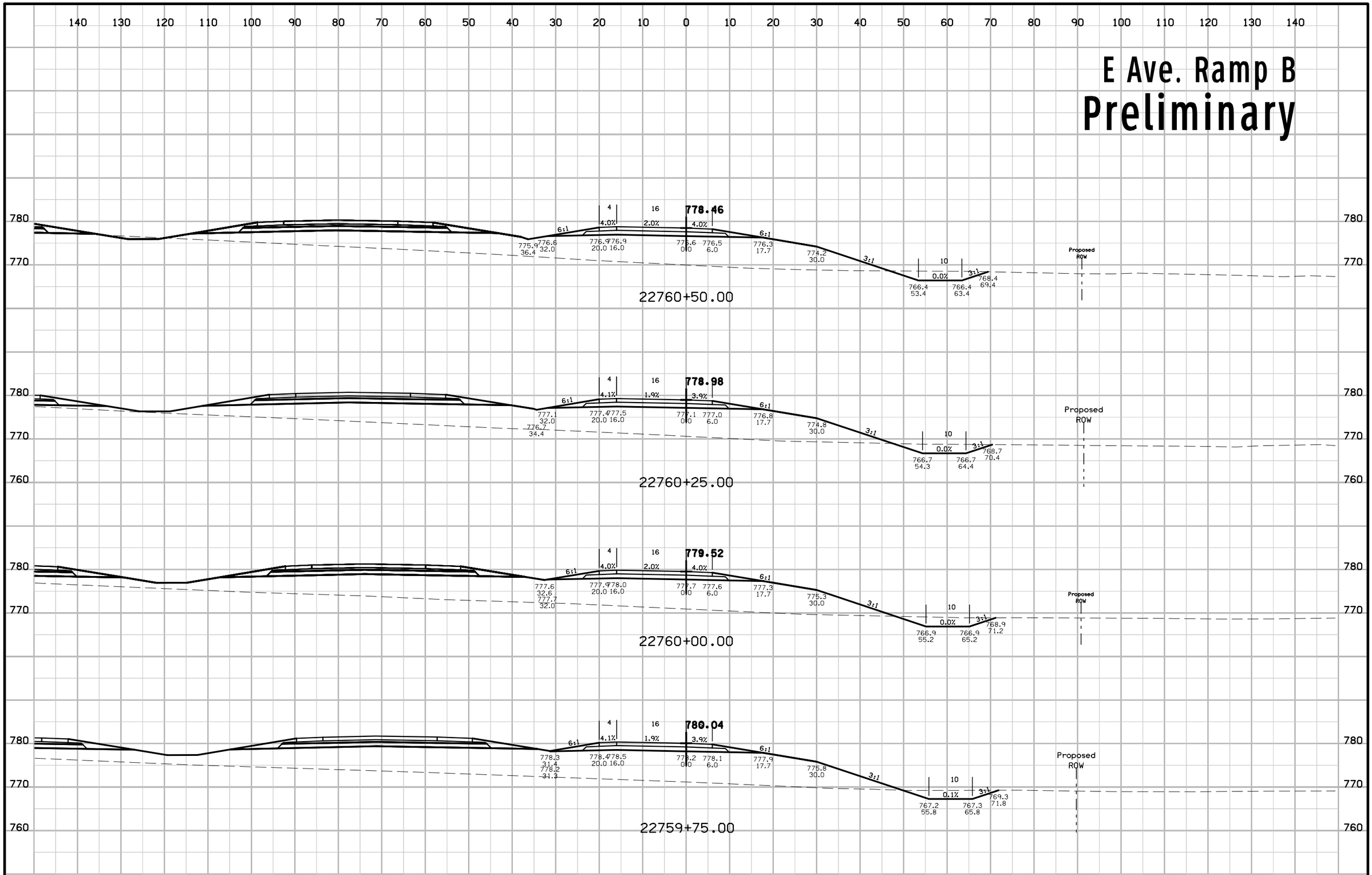
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.158

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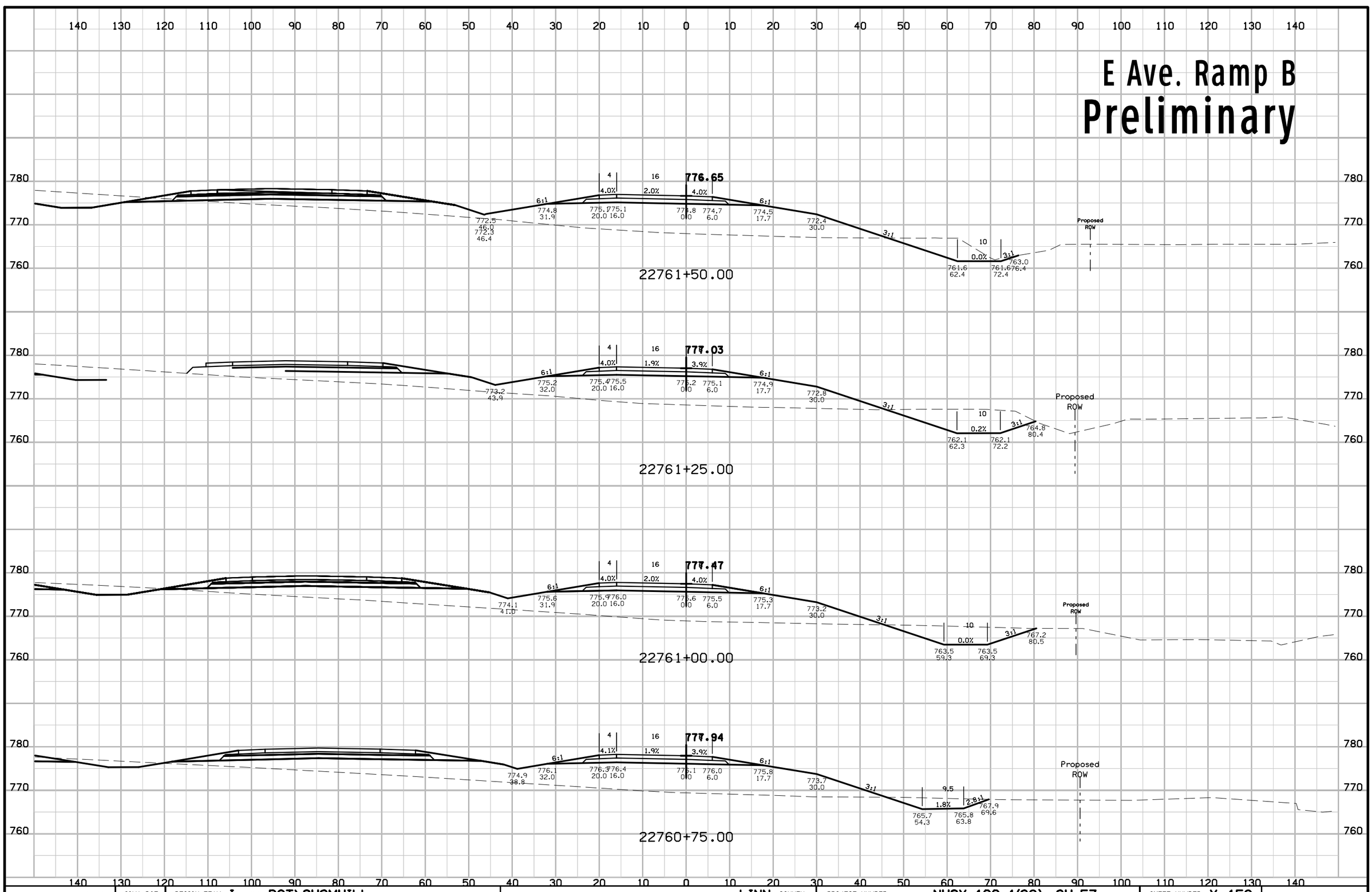
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.159

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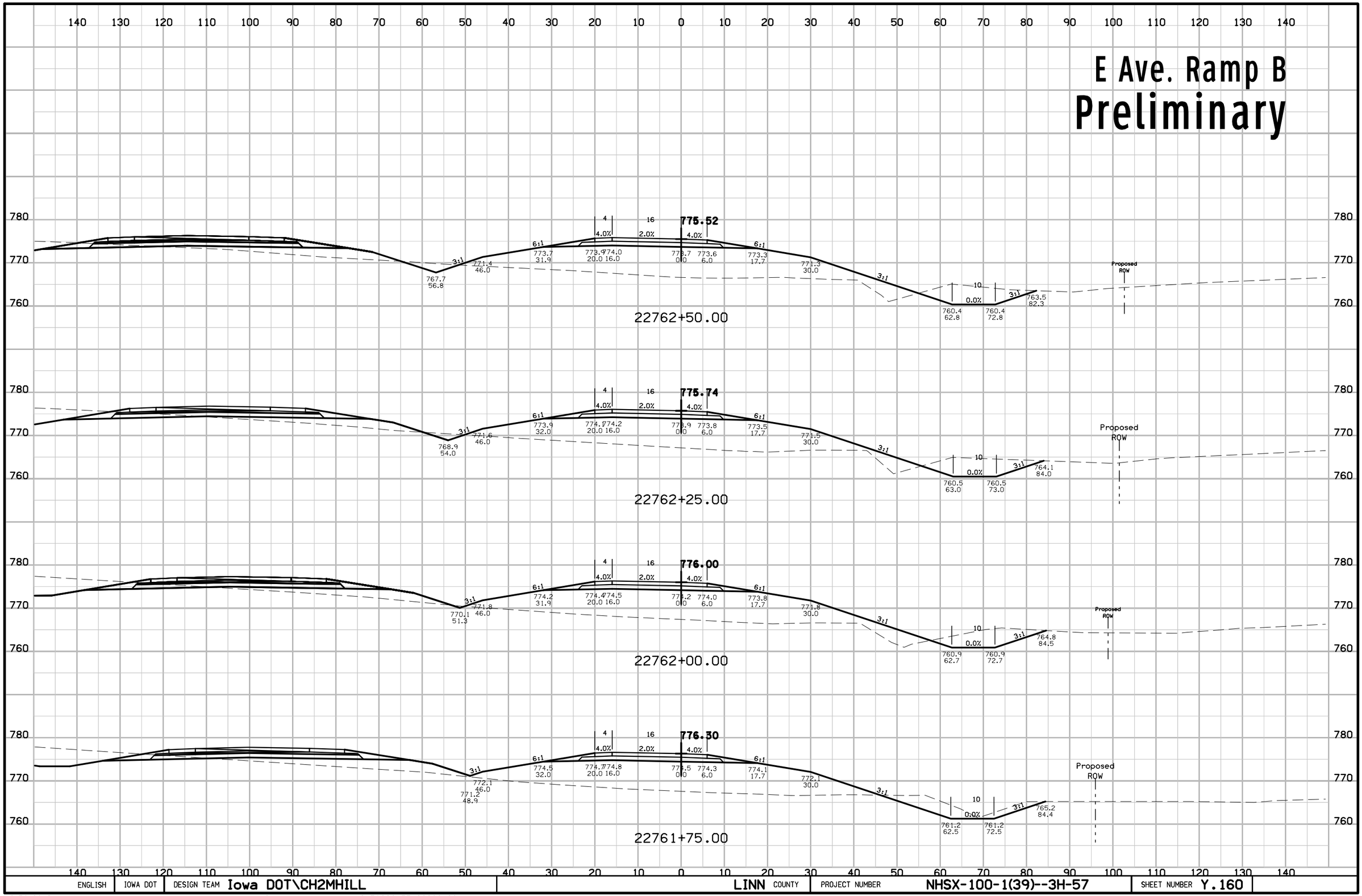
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.160

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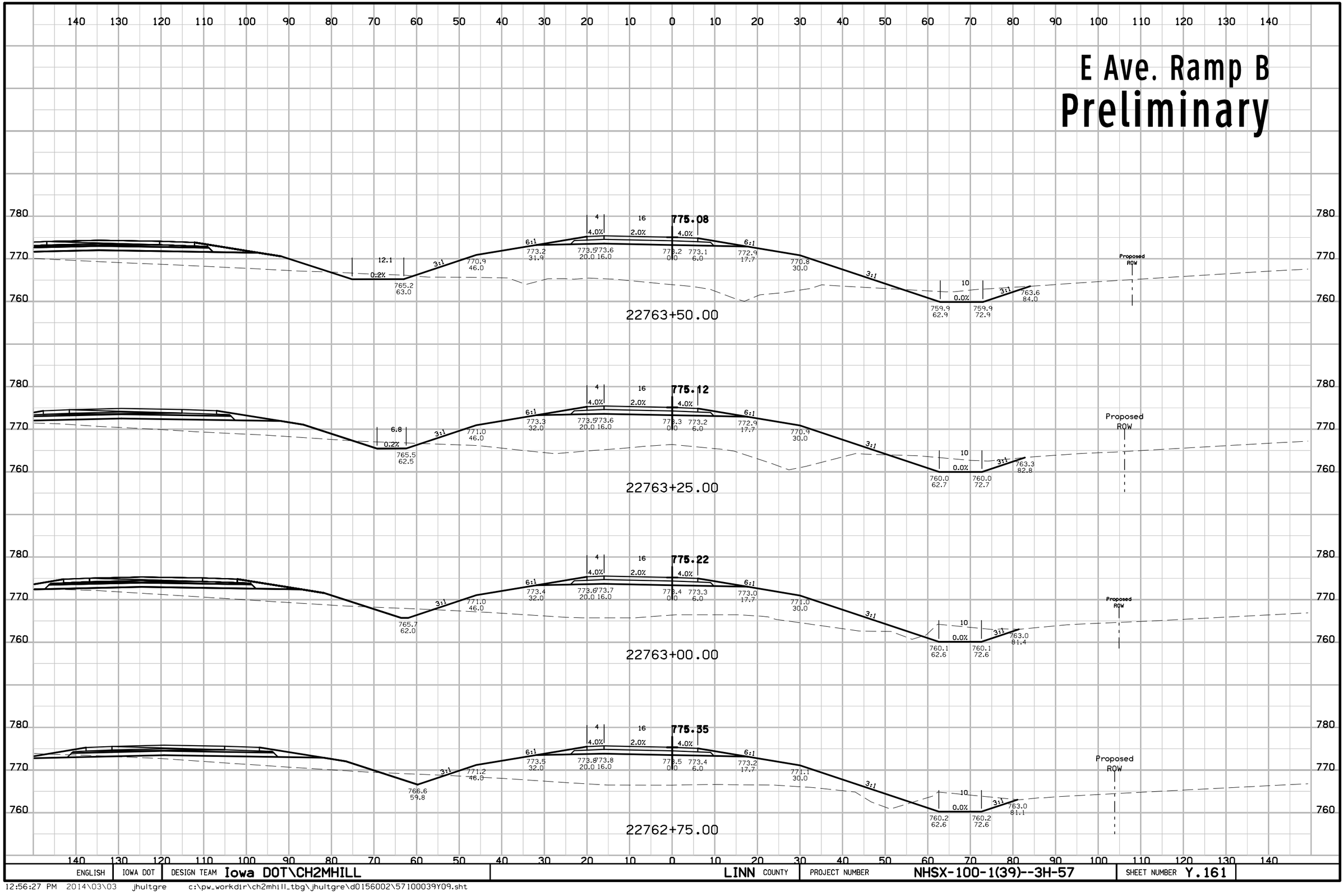
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.161

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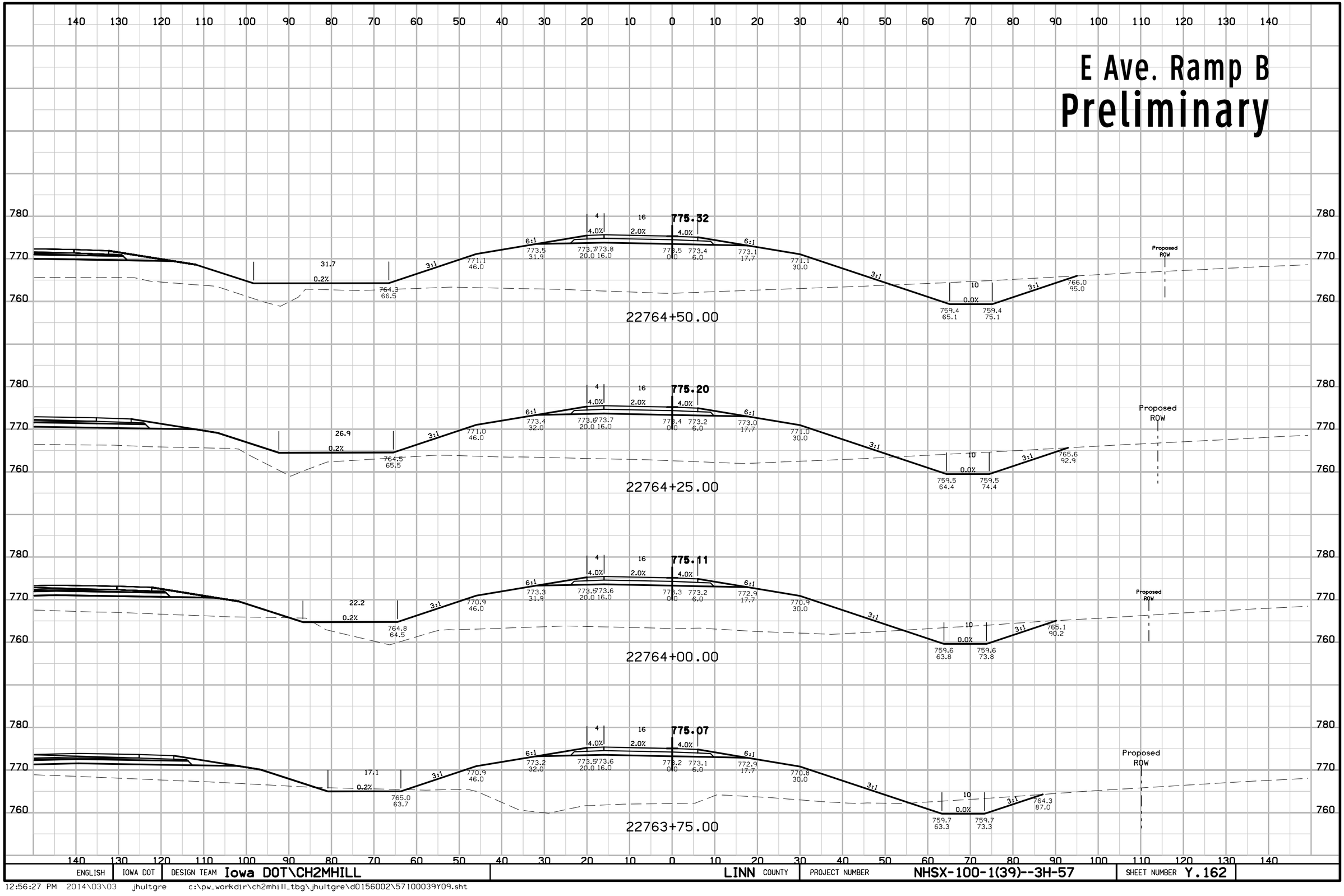
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.162

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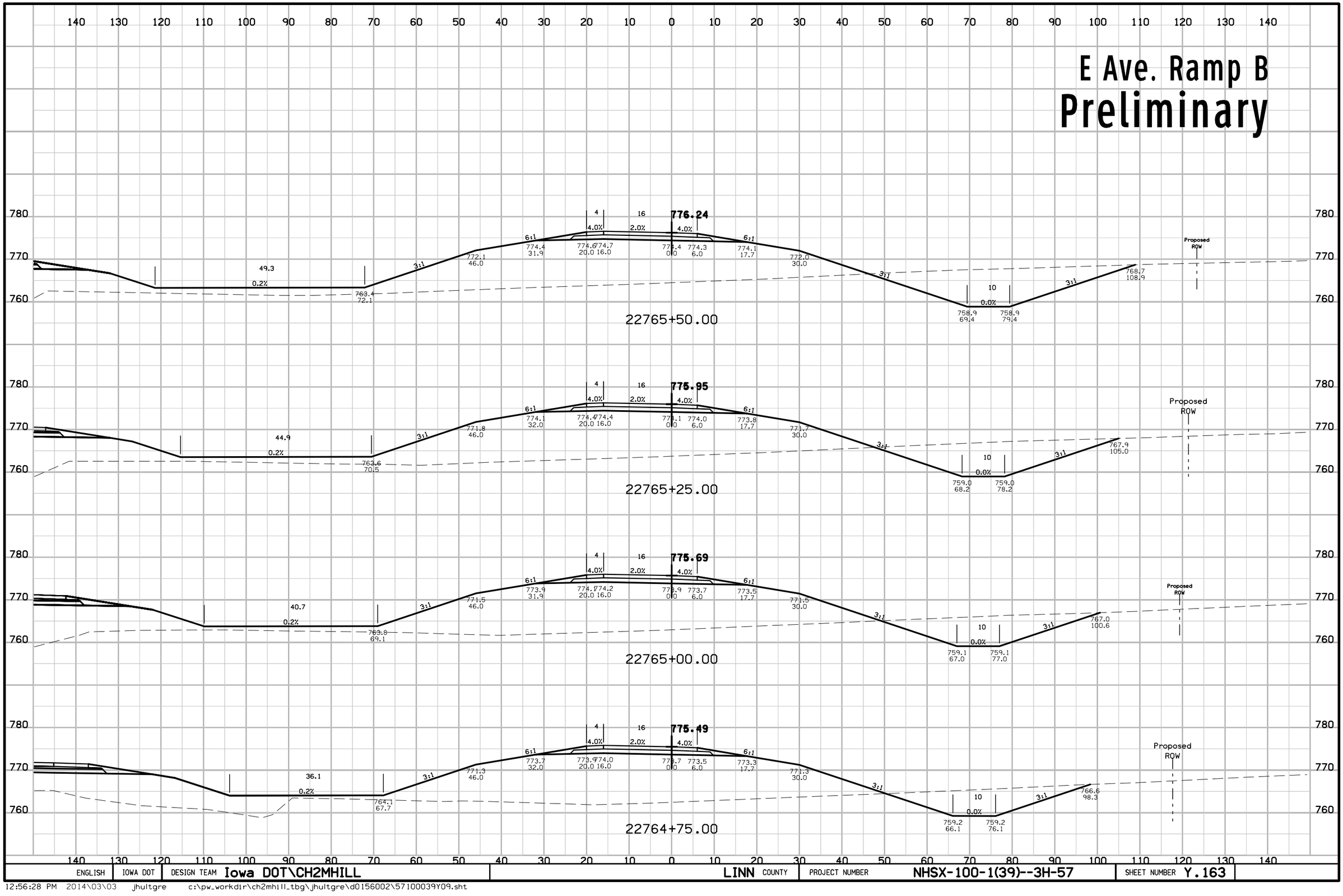
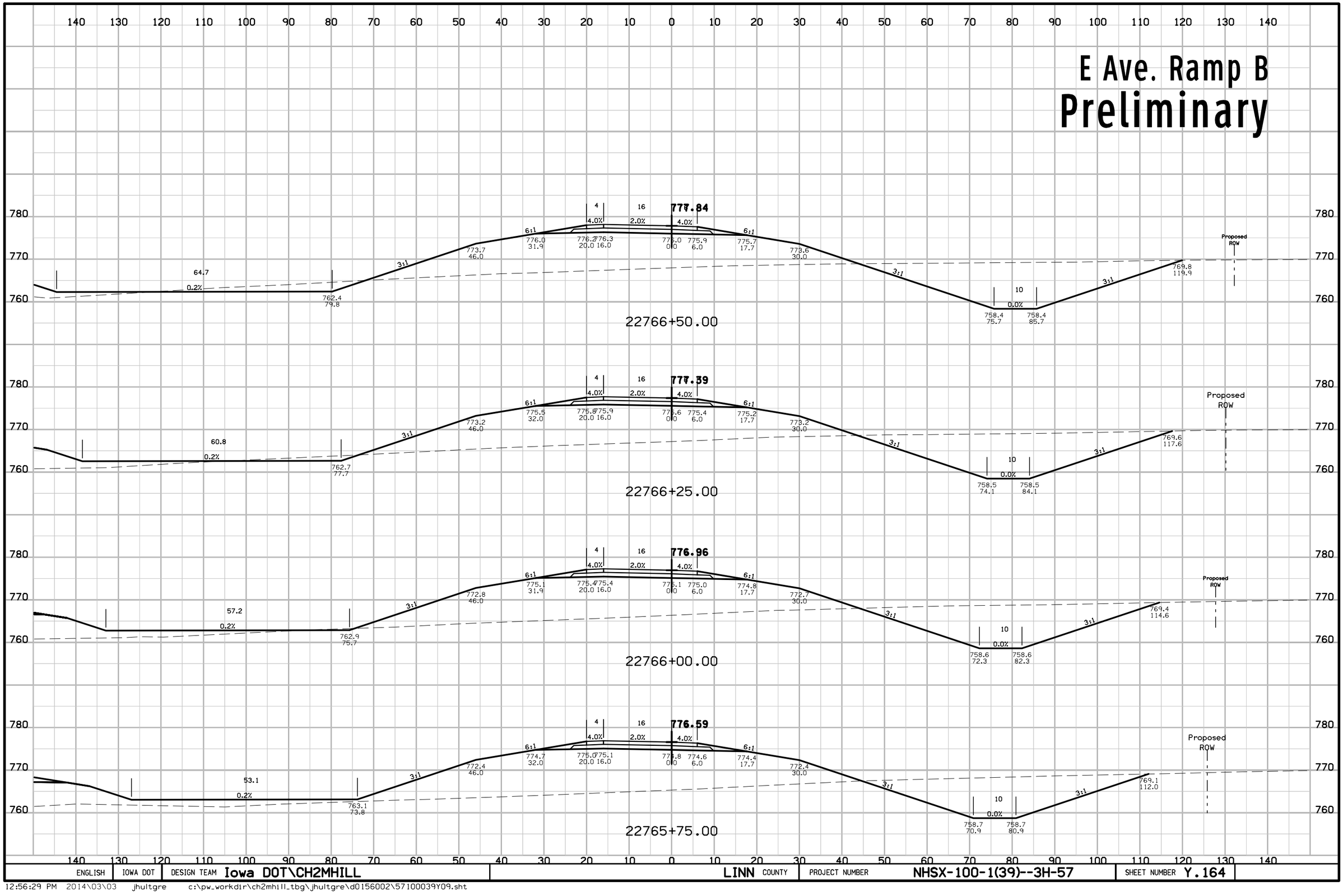
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.163

12:56:28 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039Y09.sht

E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.164

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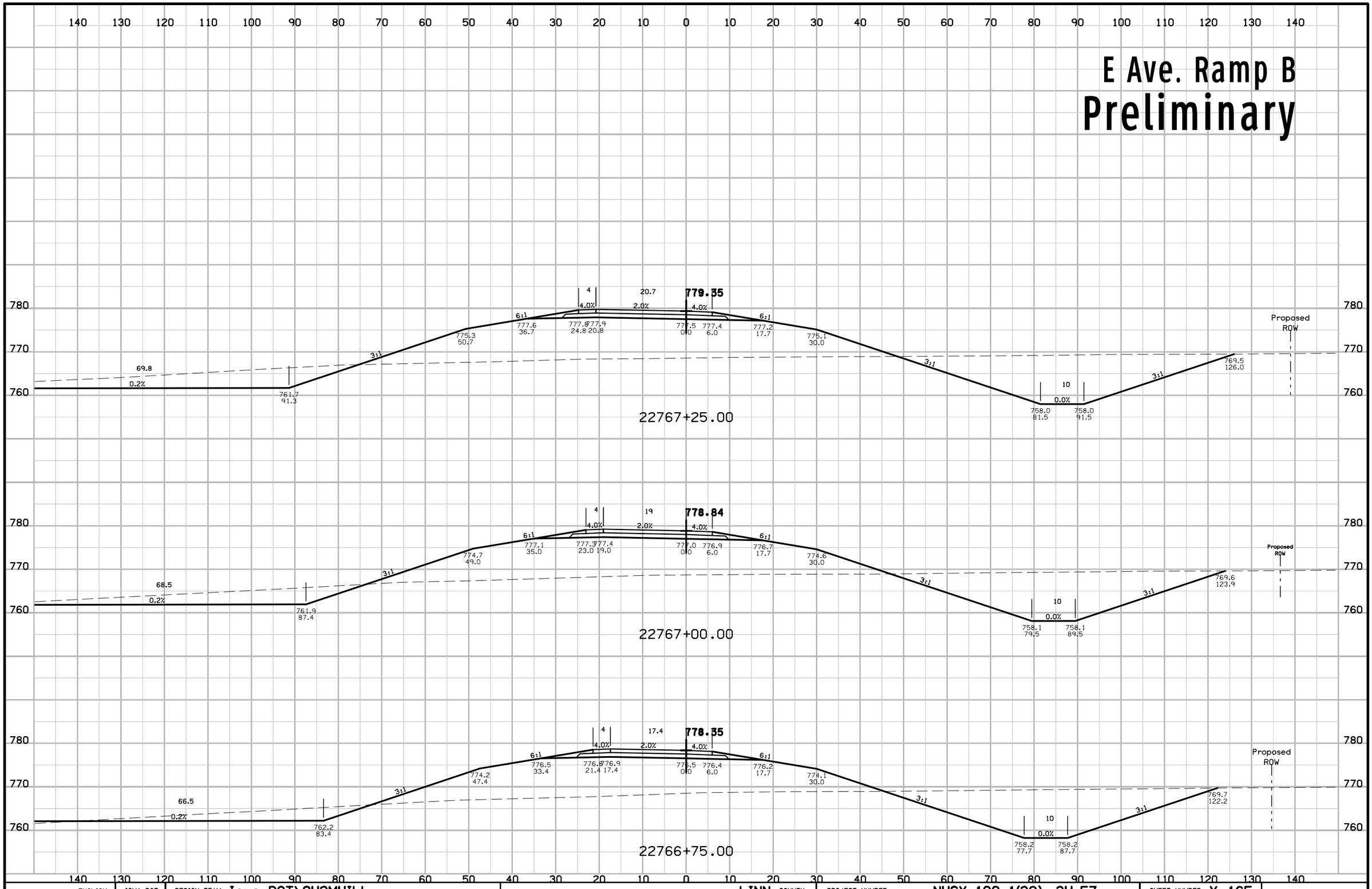
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.165

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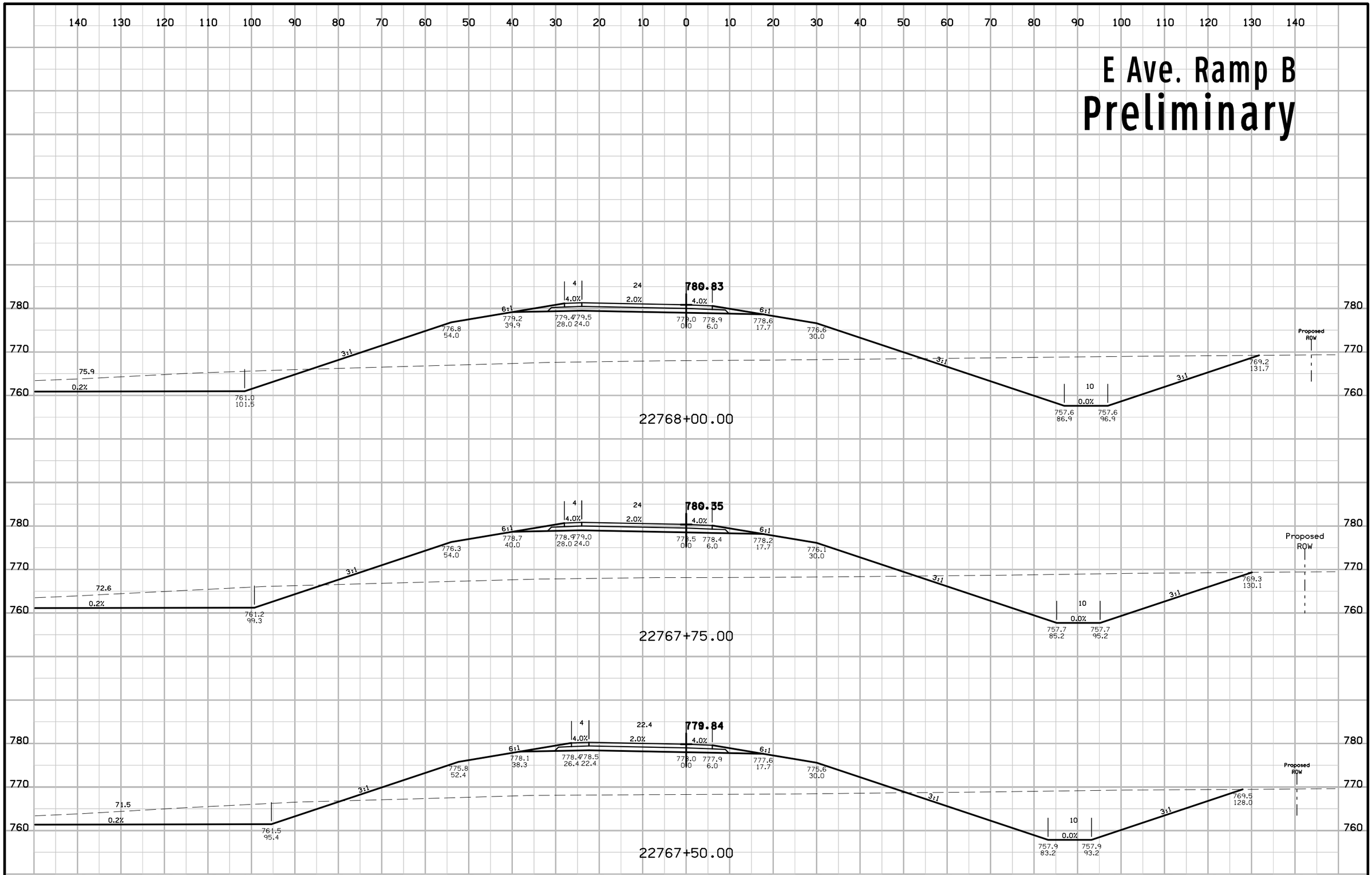
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.166

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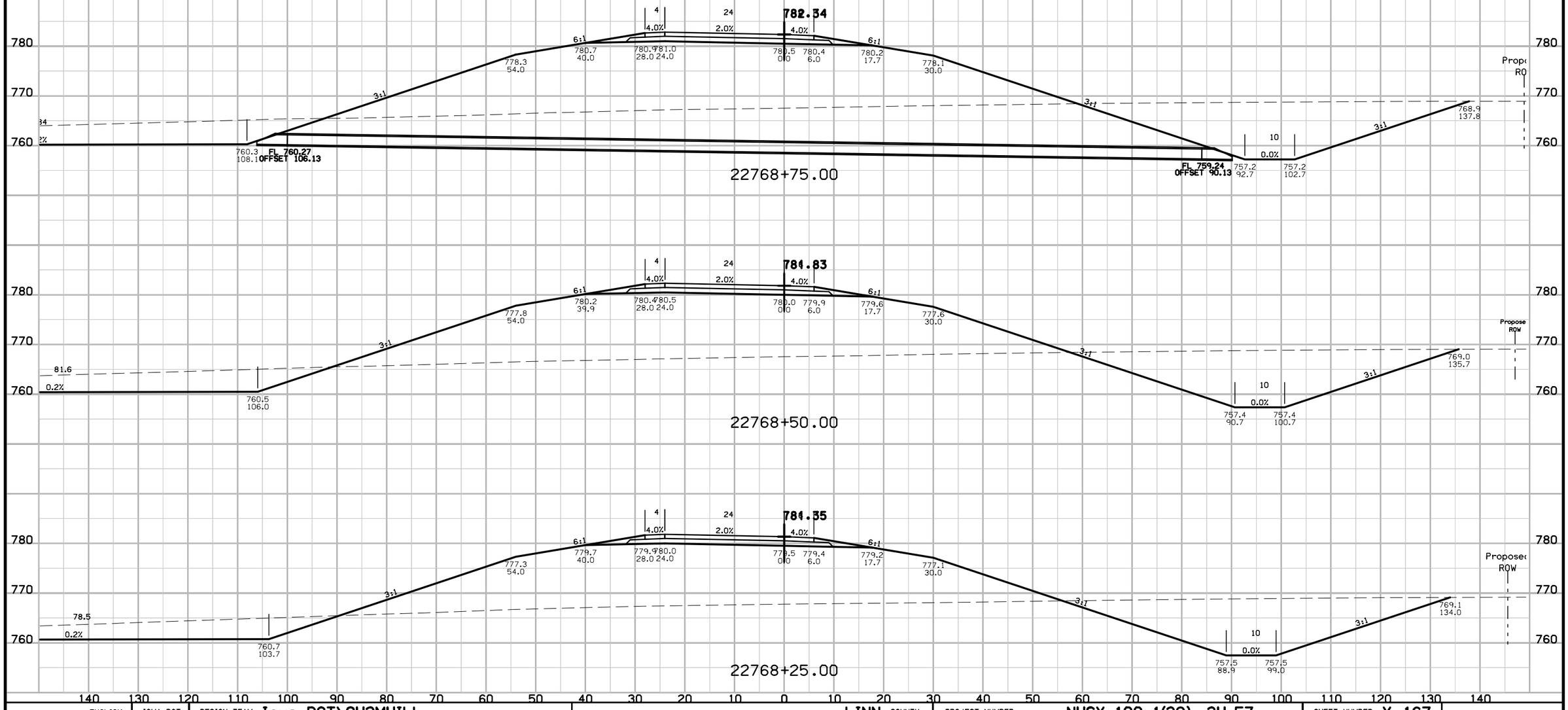
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.167

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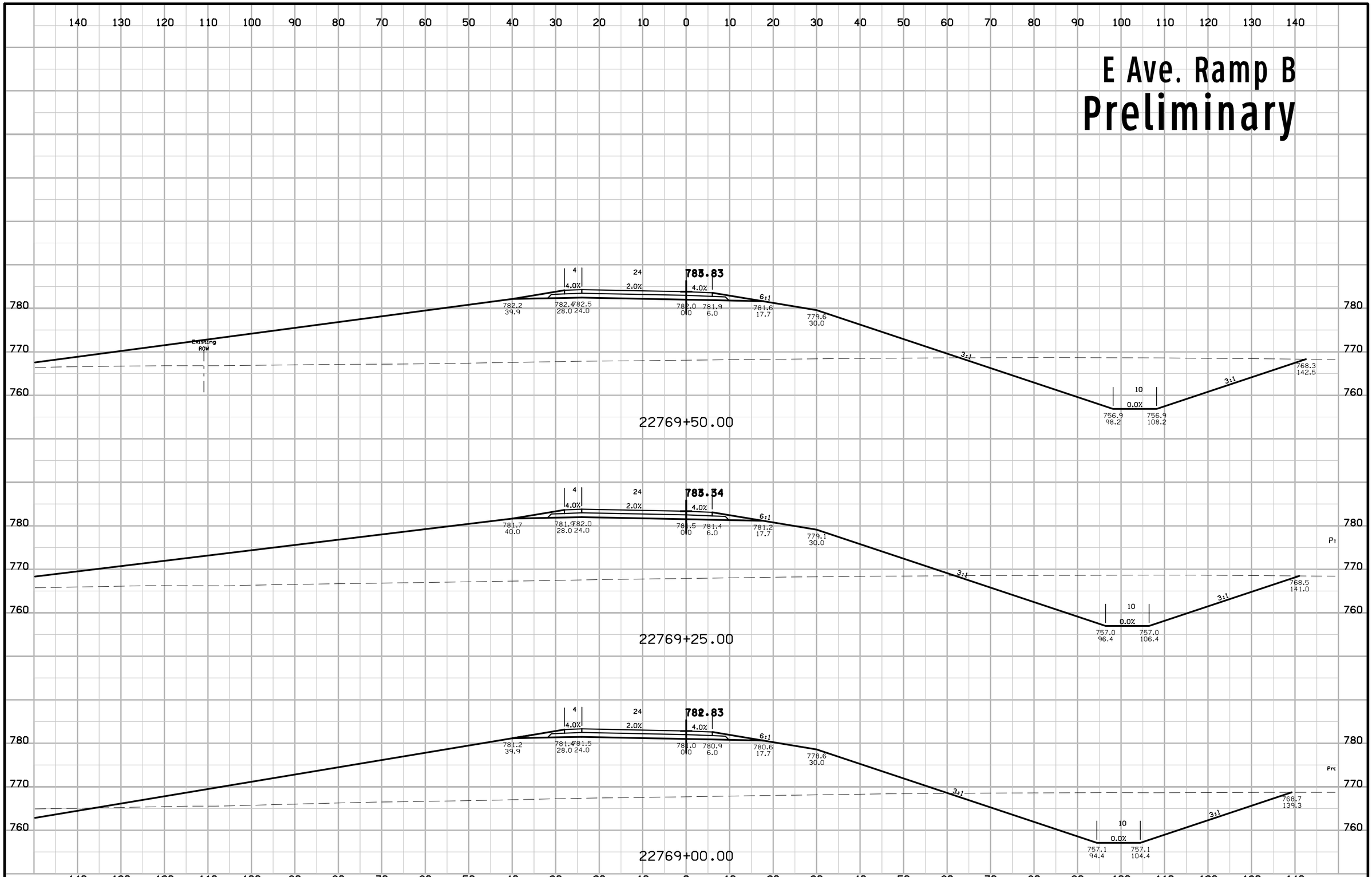
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.168

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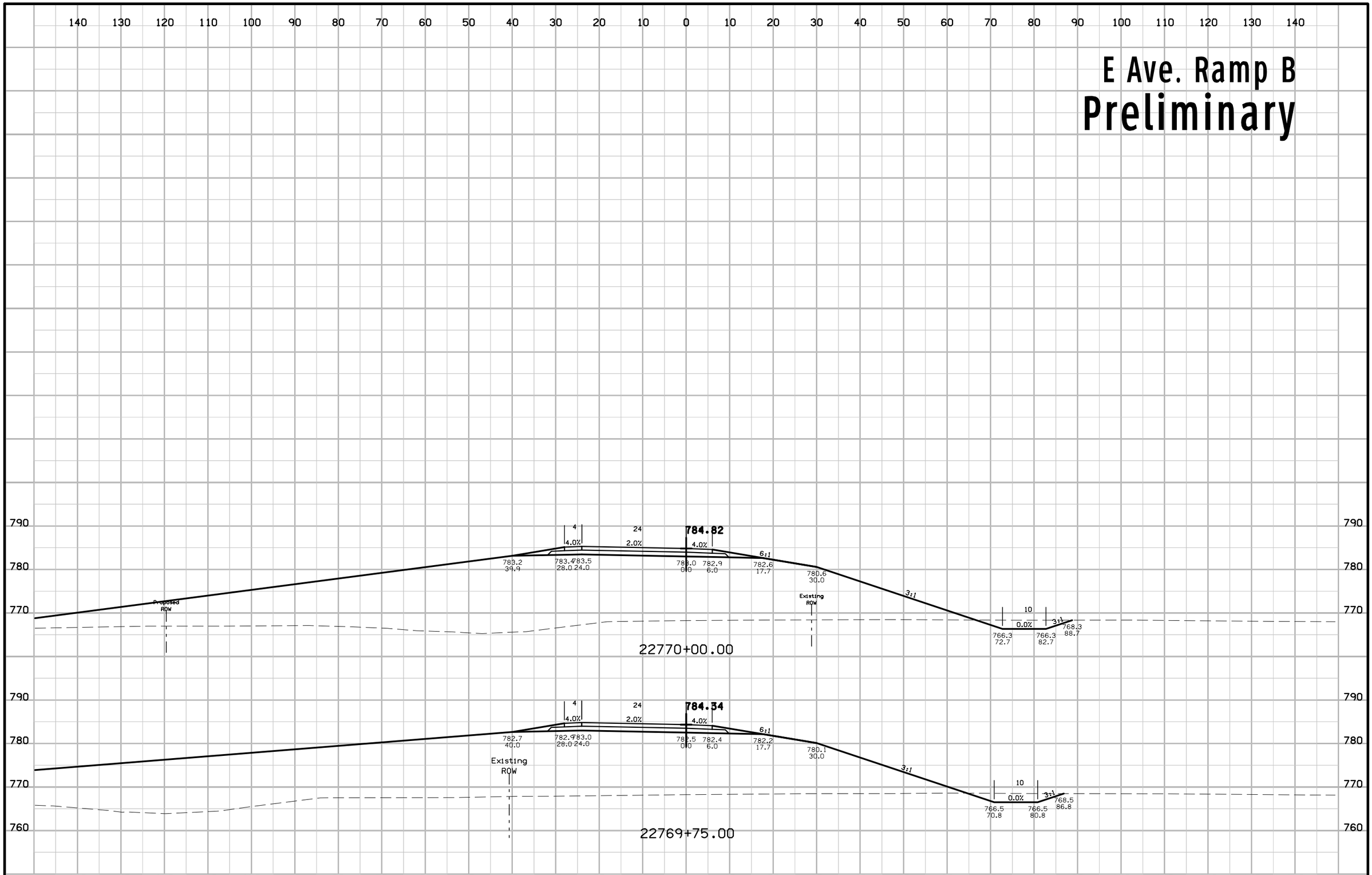
E Ave. Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.169

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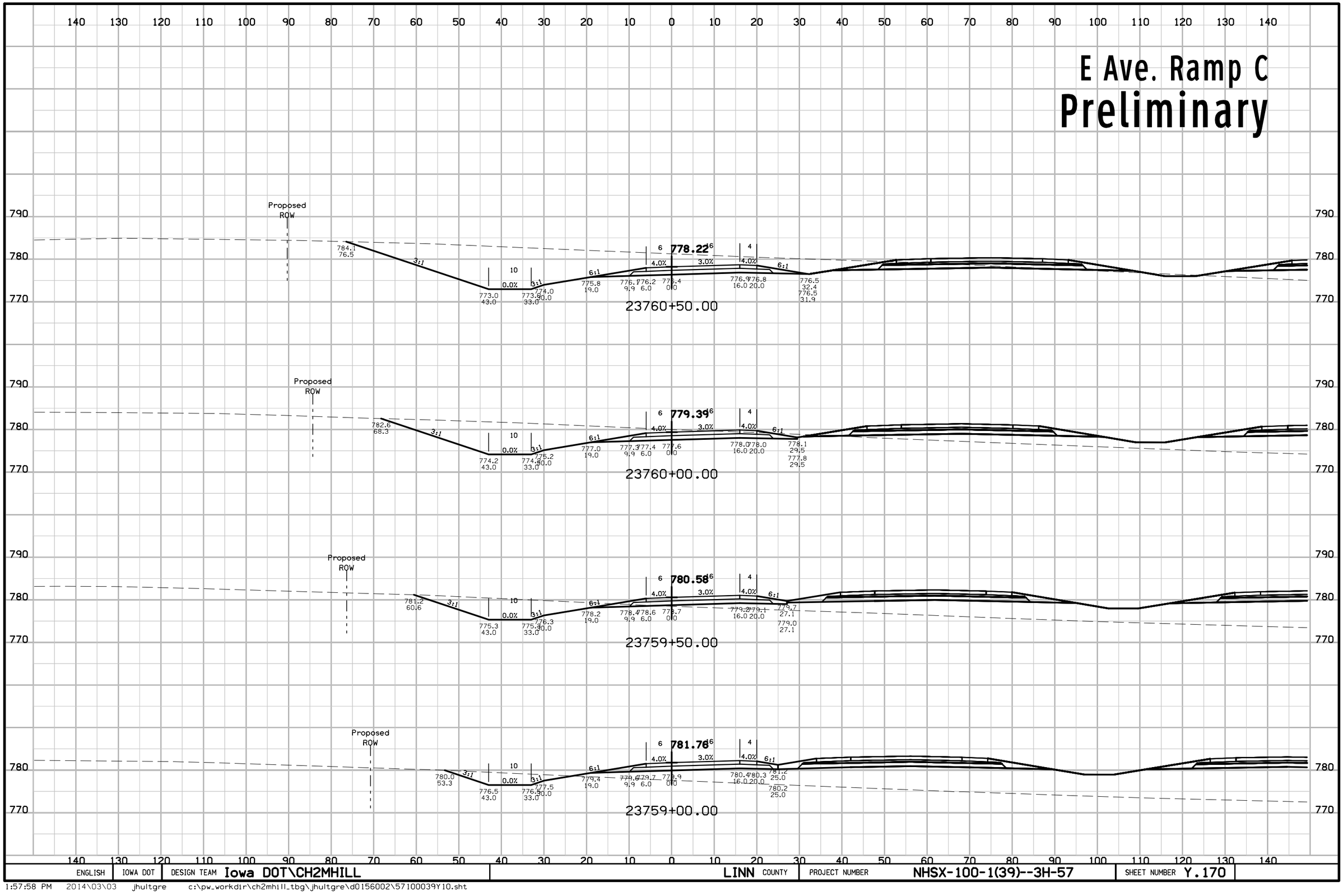
E Ave. Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.170

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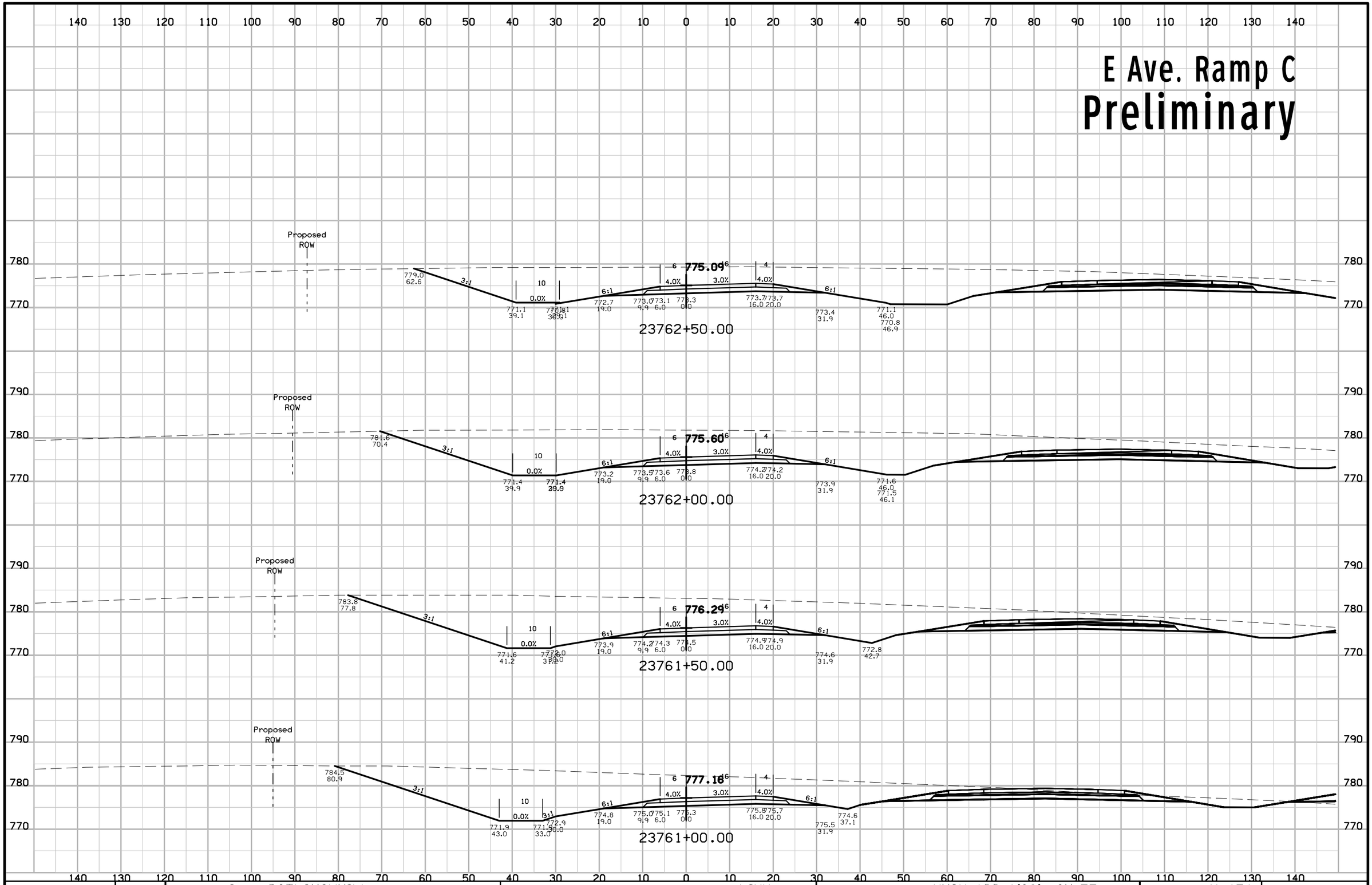
E Ave. Ramp C
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.171

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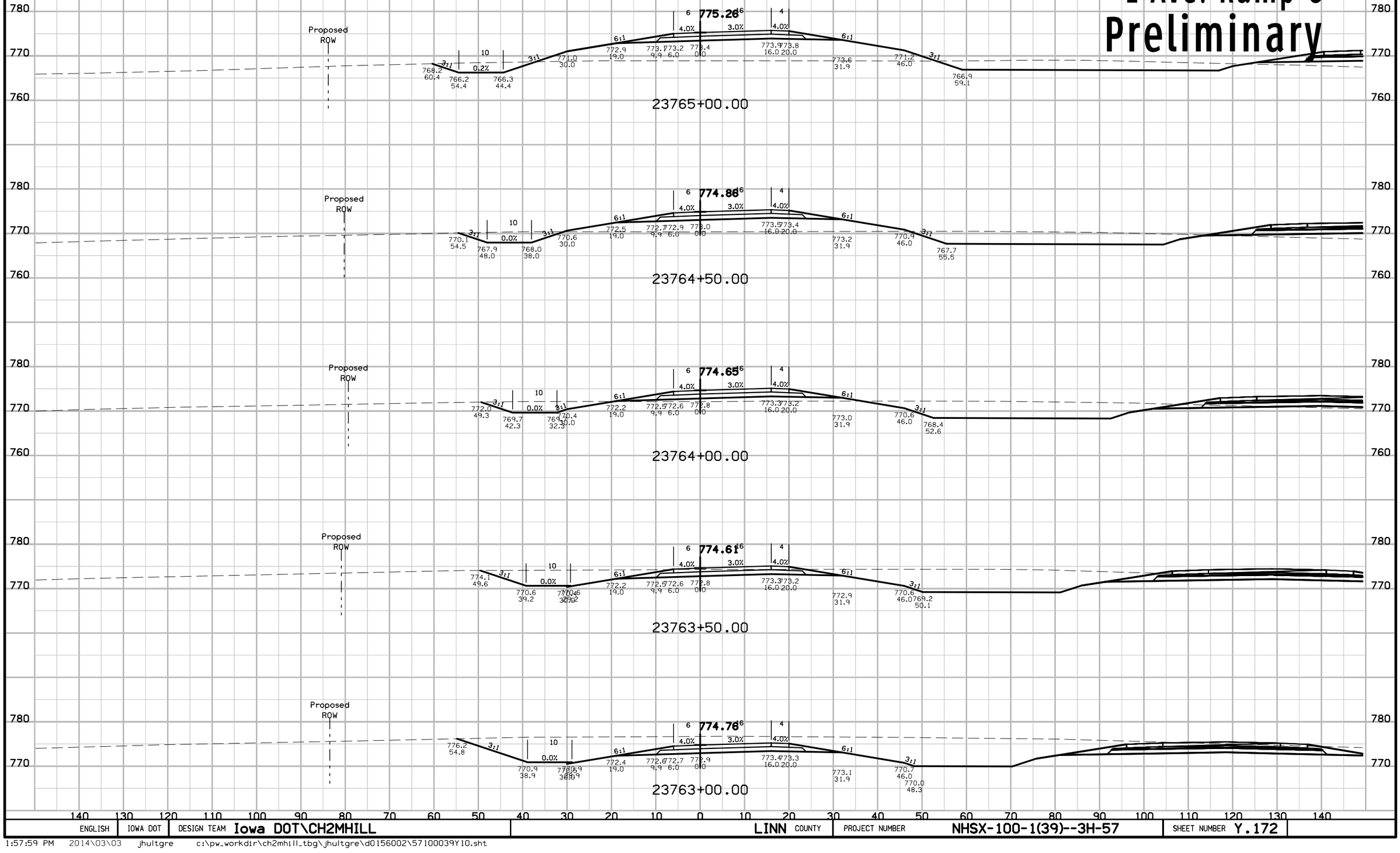
E Ave. Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.172

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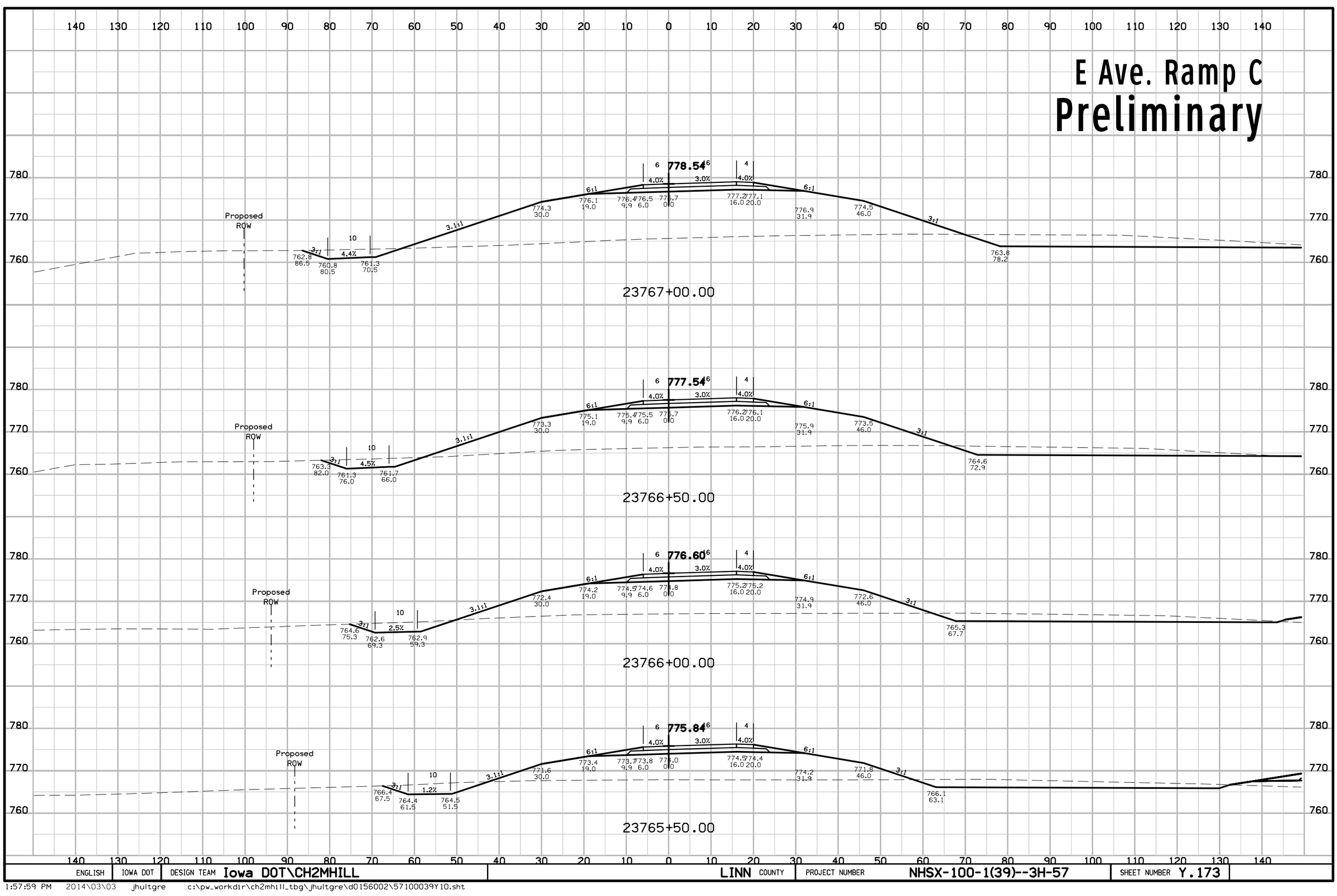
E Ave. Ramp C

Preliminary

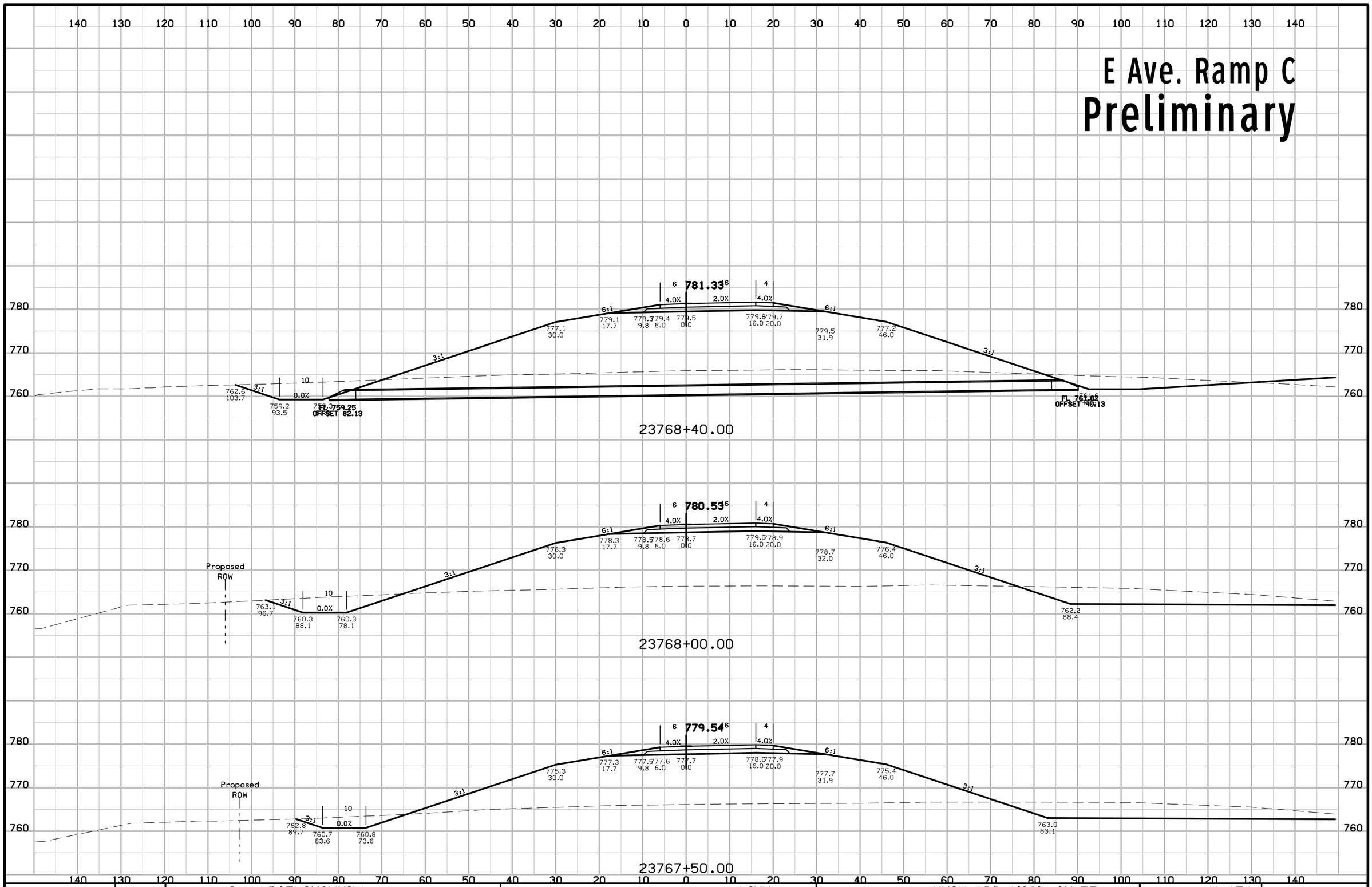


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.173

1:57:59 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039Y10.sht

E Ave. Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER	NHSX-100-1(39)--3H-57	SHEET NUMBER Y.174	

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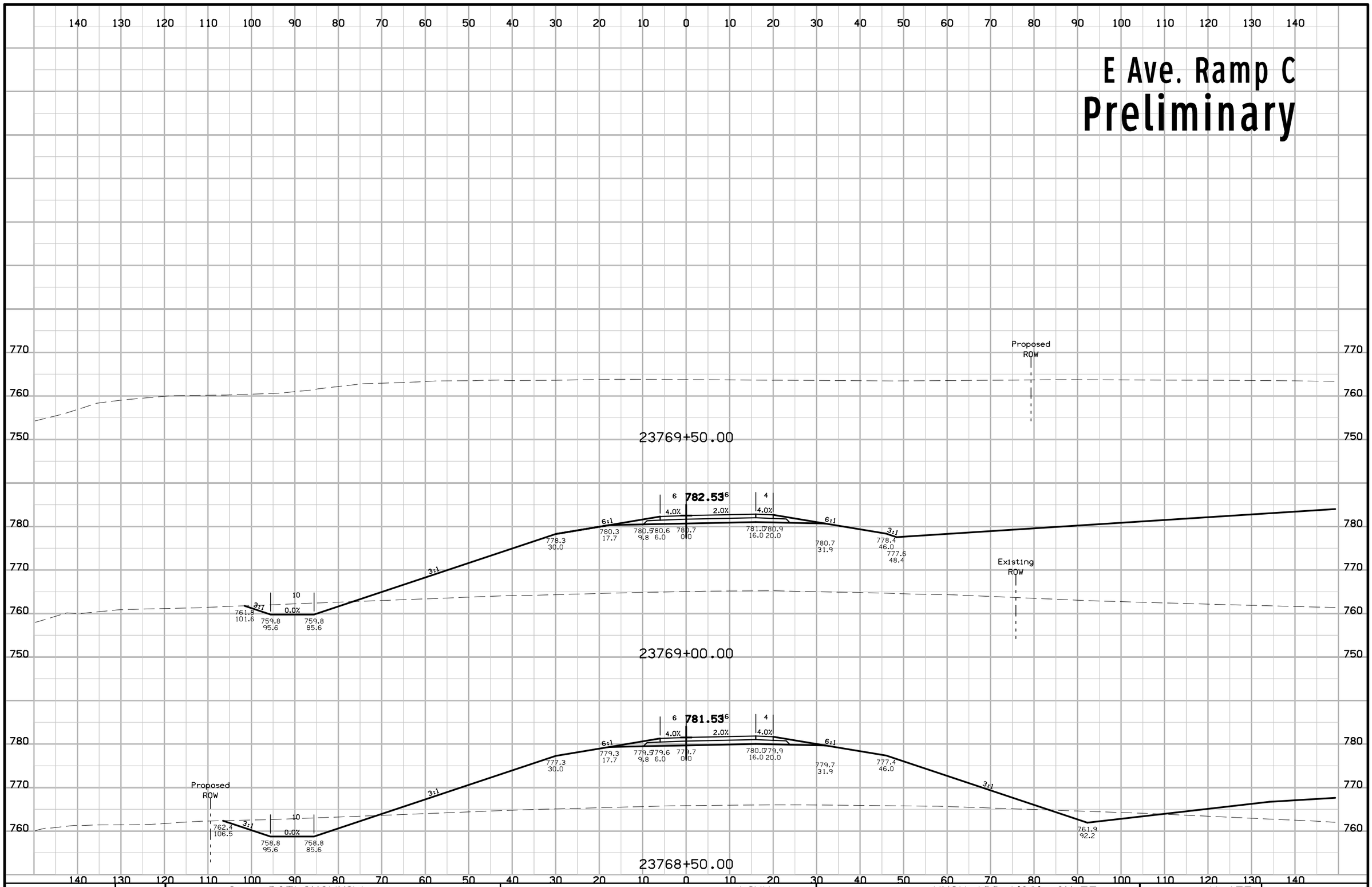
E Ave. Ramp C
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.175

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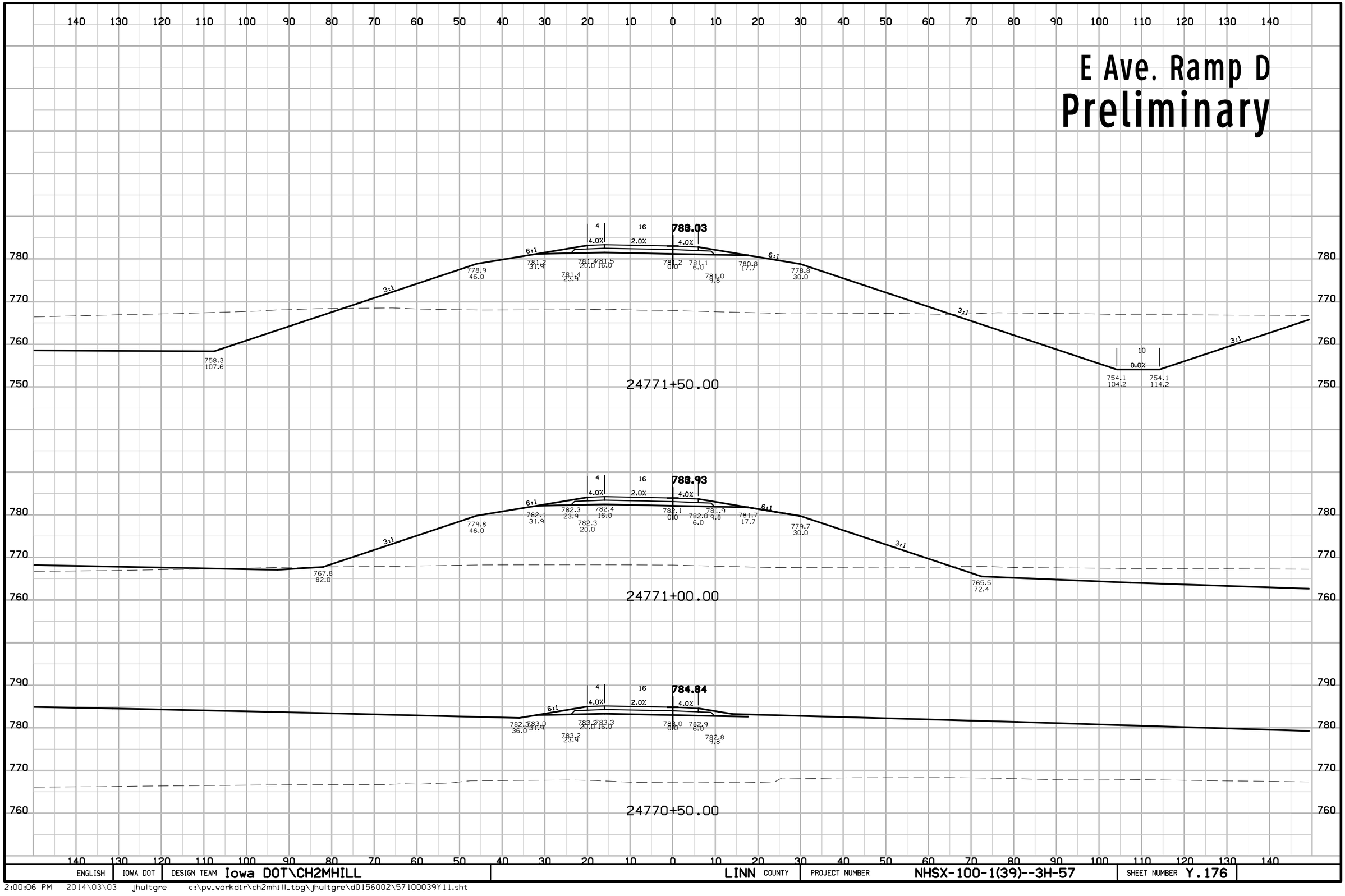
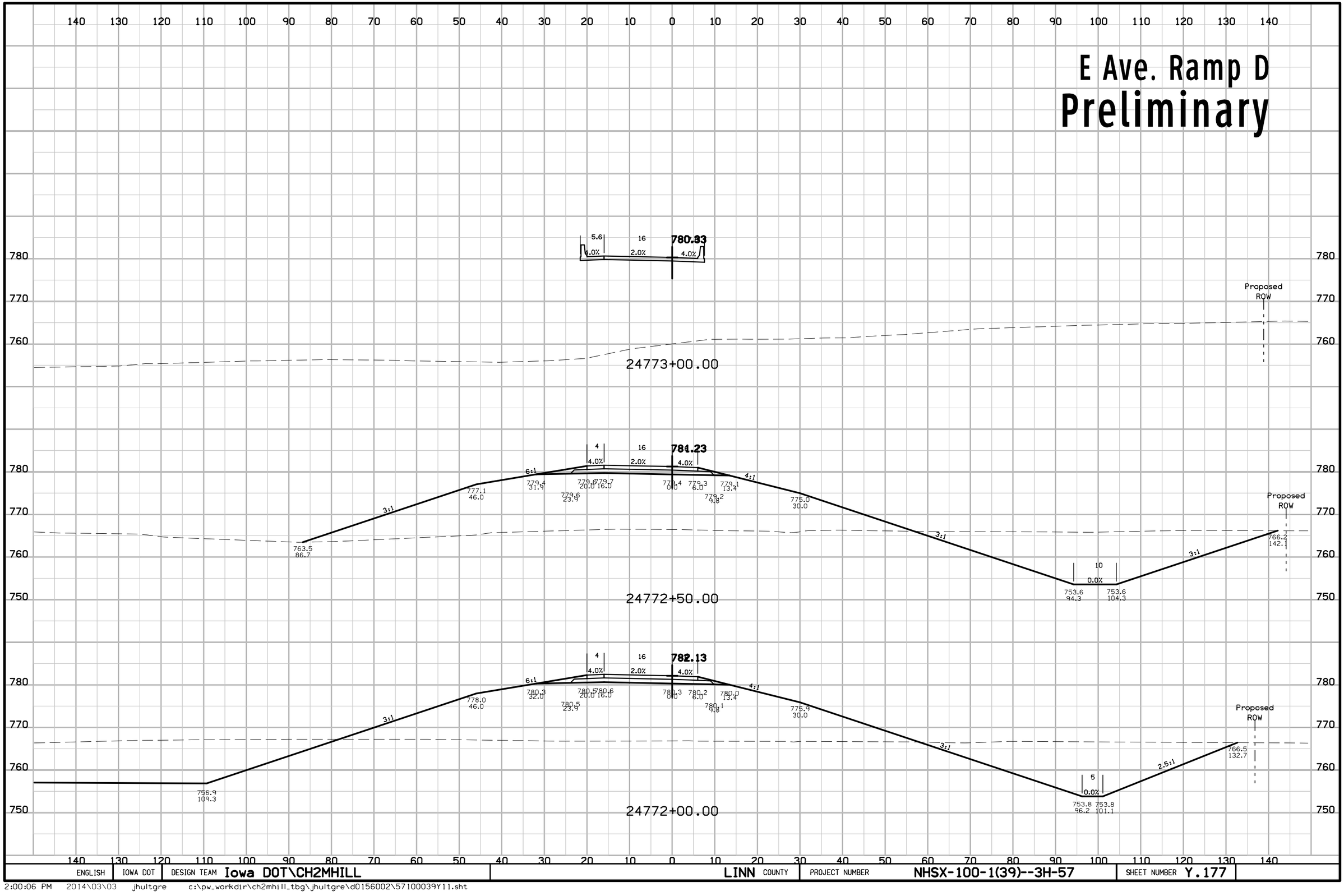
E Ave. Ramp D
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.176

2:00:06 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039Y11.sht

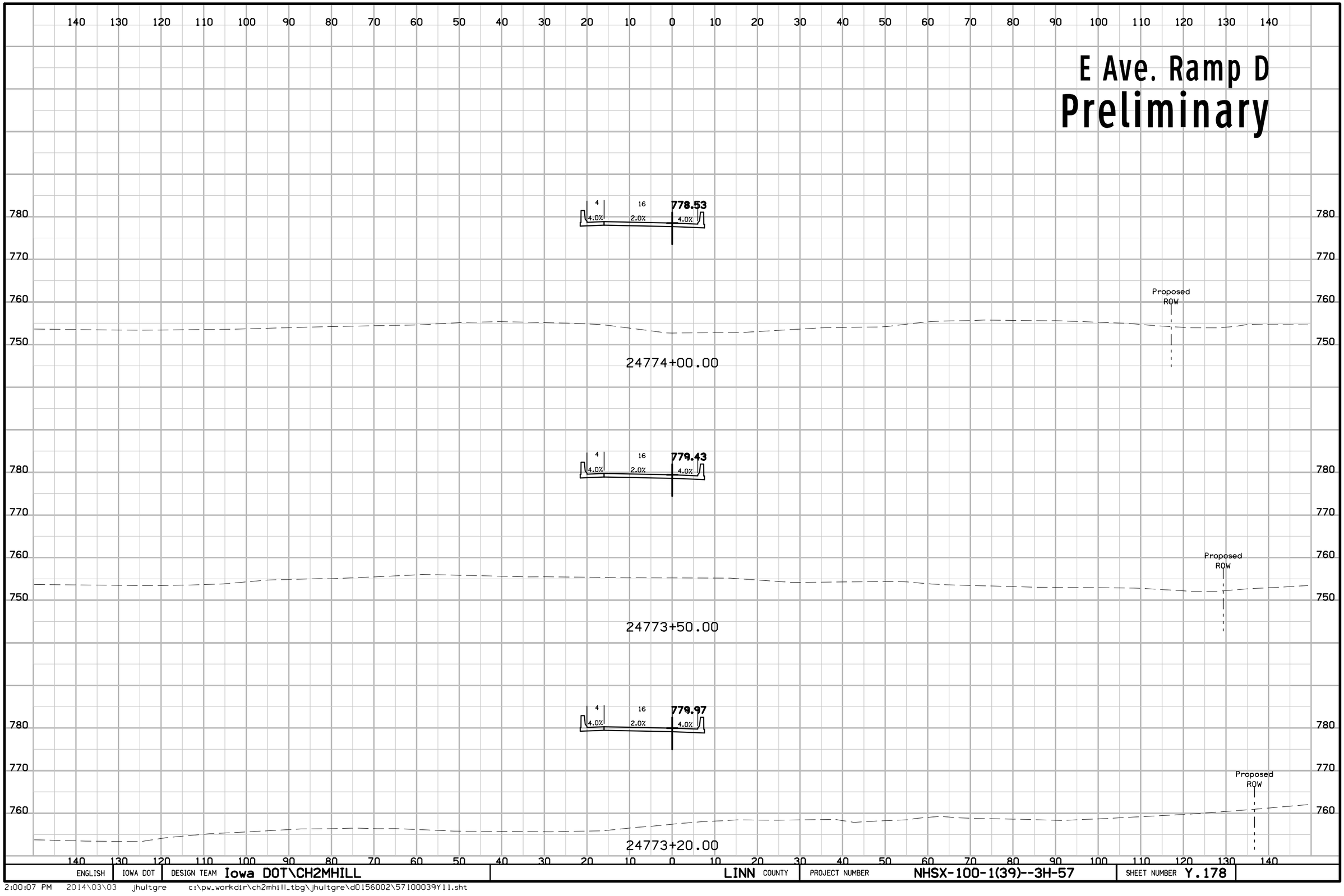
E Ave. Ramp D
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.177

2:00:06 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039Y11.sht

E Ave. Ramp D
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.178

2:00:07 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039Y11.sht

E Ave. Ramp D
Preliminary

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

780 770 760 750

4 16 4.0% 2.0% 4.0% **774.97**

Proposed ROW

24776+00.00

4 16 4.0% 2.0% 4.0% **775.83**

Proposed ROW

24775+50.00

4 16 4.0% 2.0% 4.0% **776.73**

Proposed ROW

24775+00.00

4 16 4.0% 2.0% 4.0% **777.63**

Proposed ROW

24774+50.00

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.179

2:00:07 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039Y11.sht

E Ave. Ramp D
Preliminary

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

4 16 4 — 4.0% 2.0% 4.0% — 773.30

Proposed ROW

24777+65.00

4 16 4 — 4.0% 2.0% 4.0% — 773.37

Proposed ROW

24777+50.00

4 16 4 — 4.0% 2.0% 4.0% — 773.73

Proposed ROW

24777+00.00

780
770
760
750

4 16 4 — 4.0% 2.0% 4.0% — 774.27

Proposed ROW

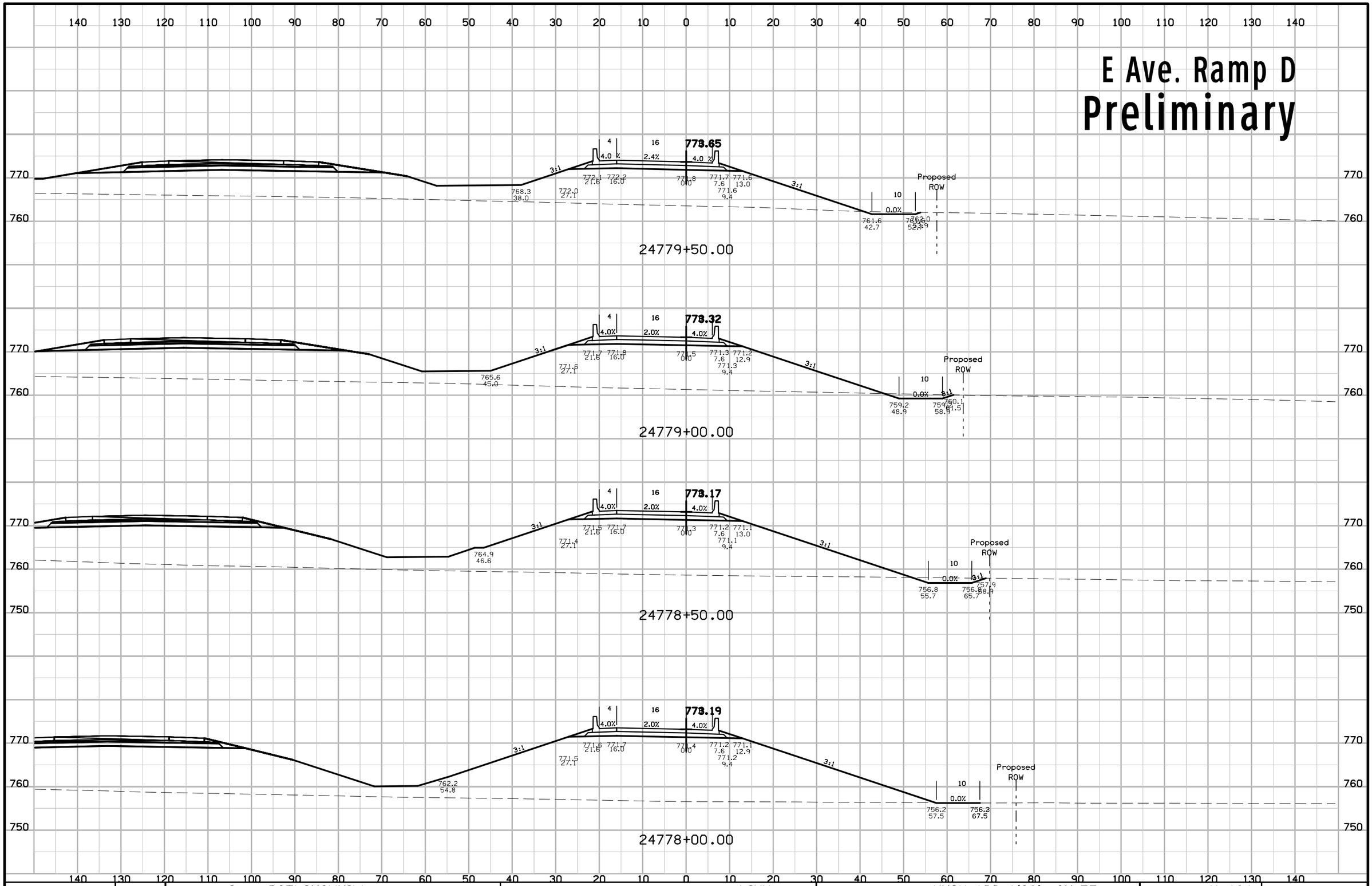
24776+50.00

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

ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.180

2:00:08 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039Y11.sht

E Ave. Ramp D
Preliminary

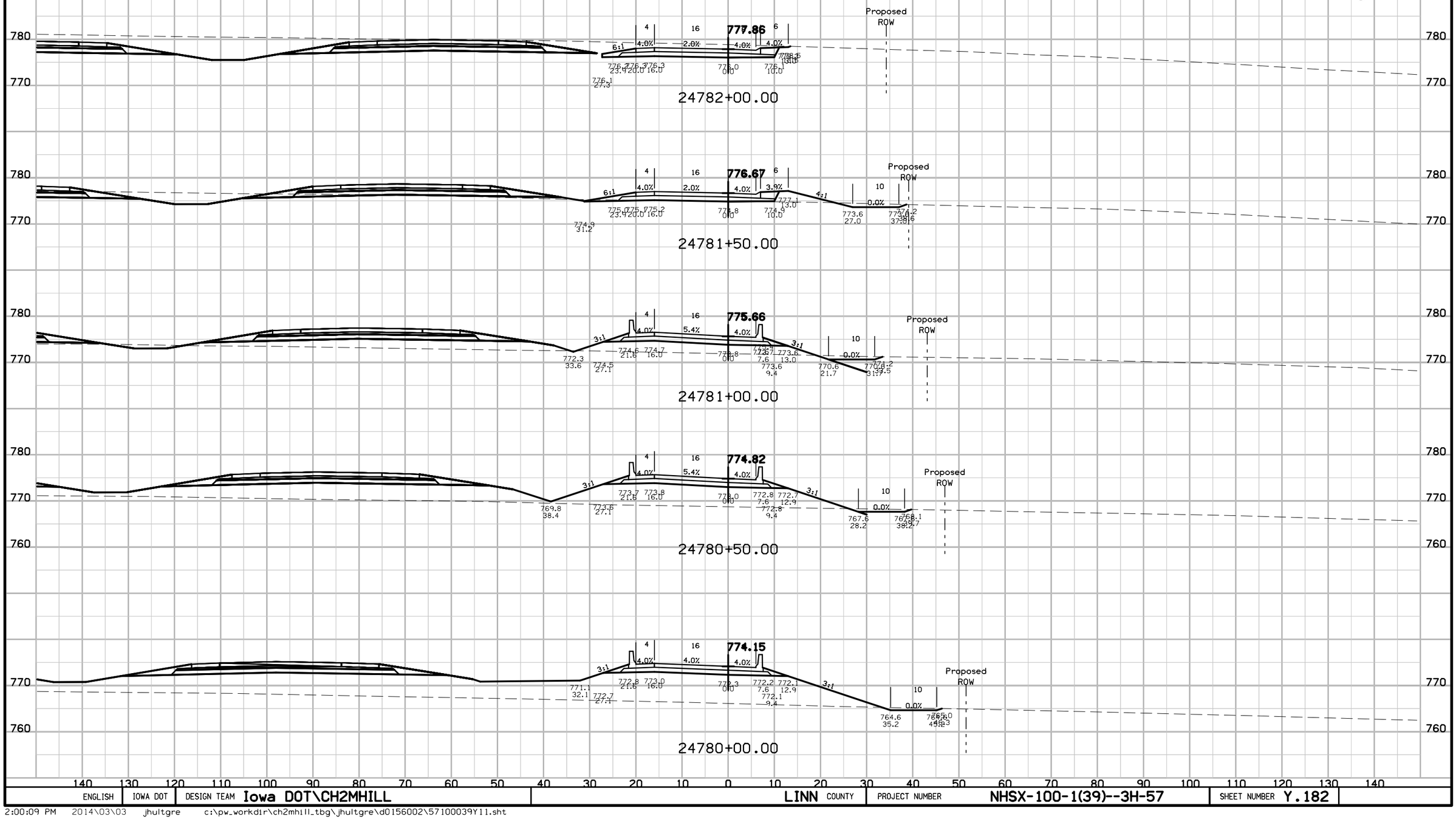


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.181

2:00:08 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039Y11.sht

E Ave. Ramp D

Preliminary

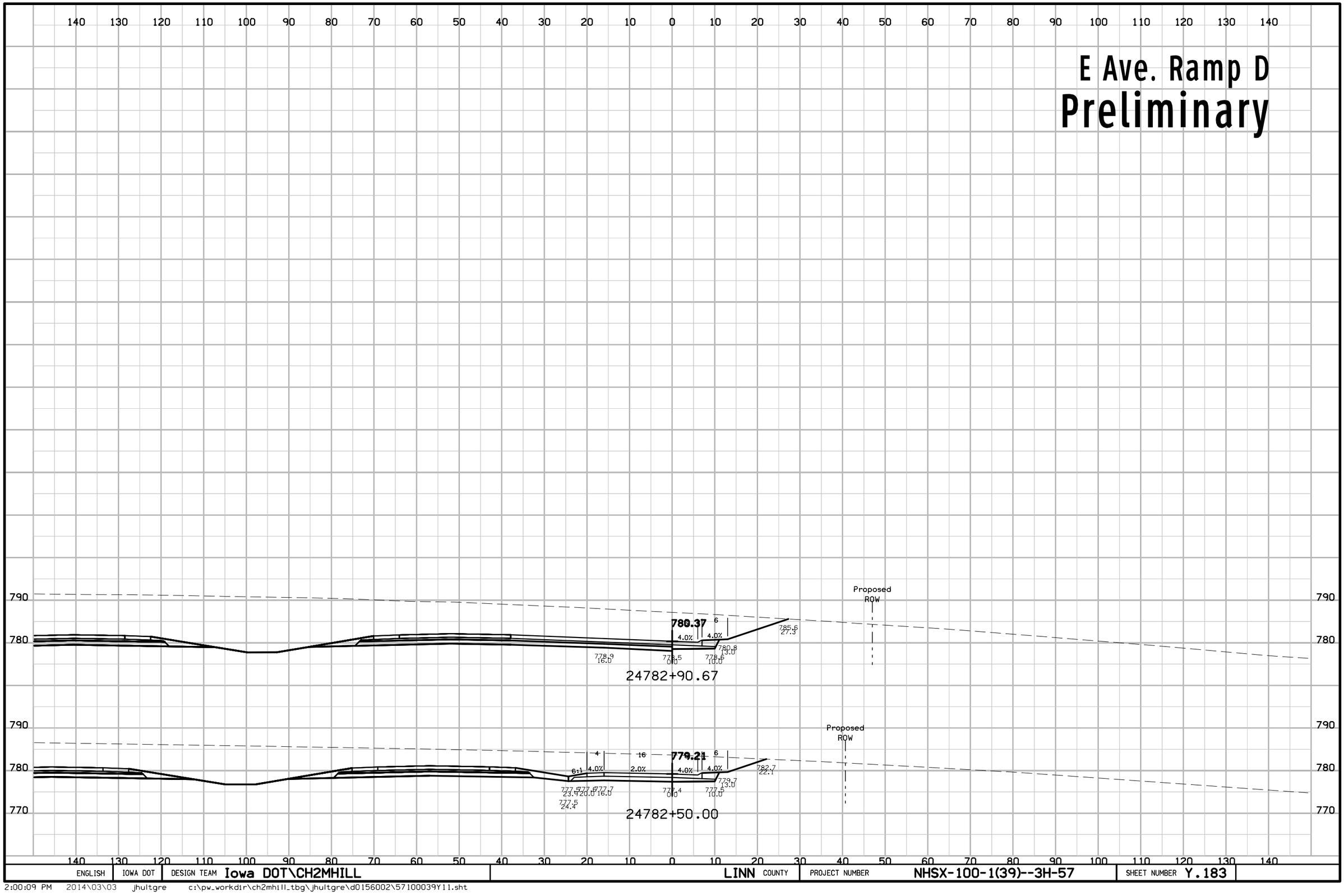


ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.182

2:00:09 PM 2014\03\03 jhultgre c:\pw_workdir\ch2mhill_tbg\jhultgre\d0156002\57100039Y11.sht

E Ave. Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.183

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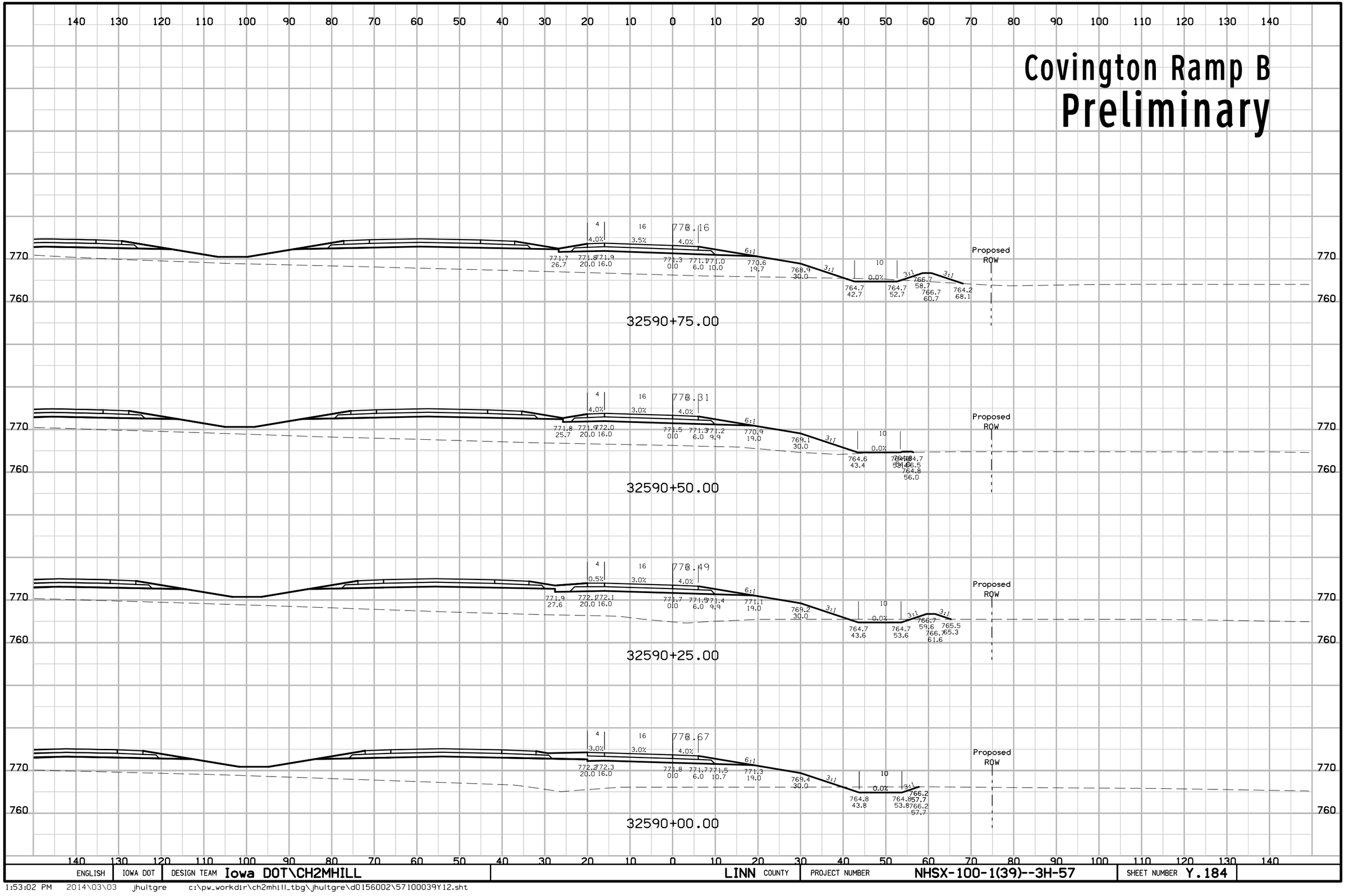
Covington Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.184

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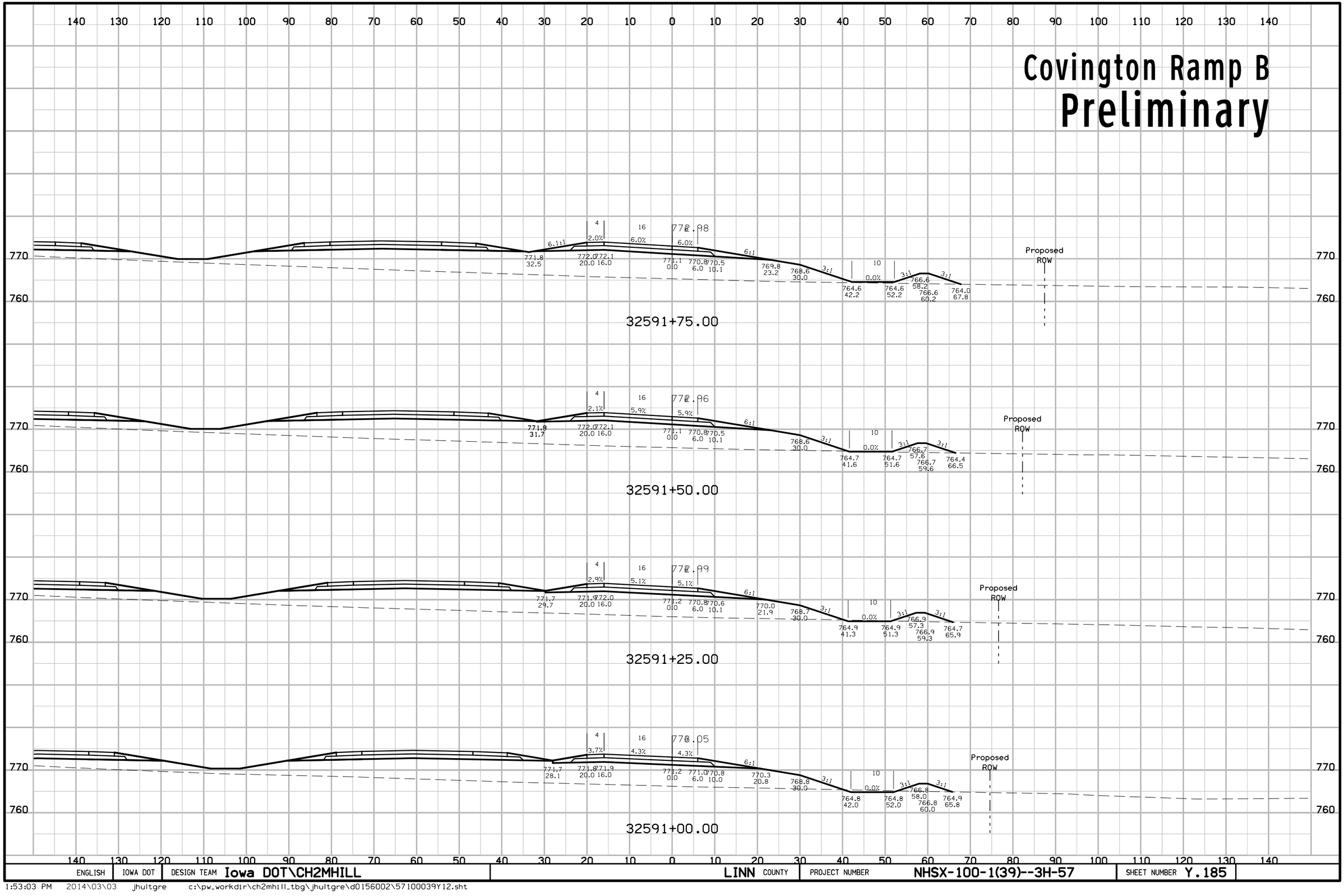
Covington Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.185

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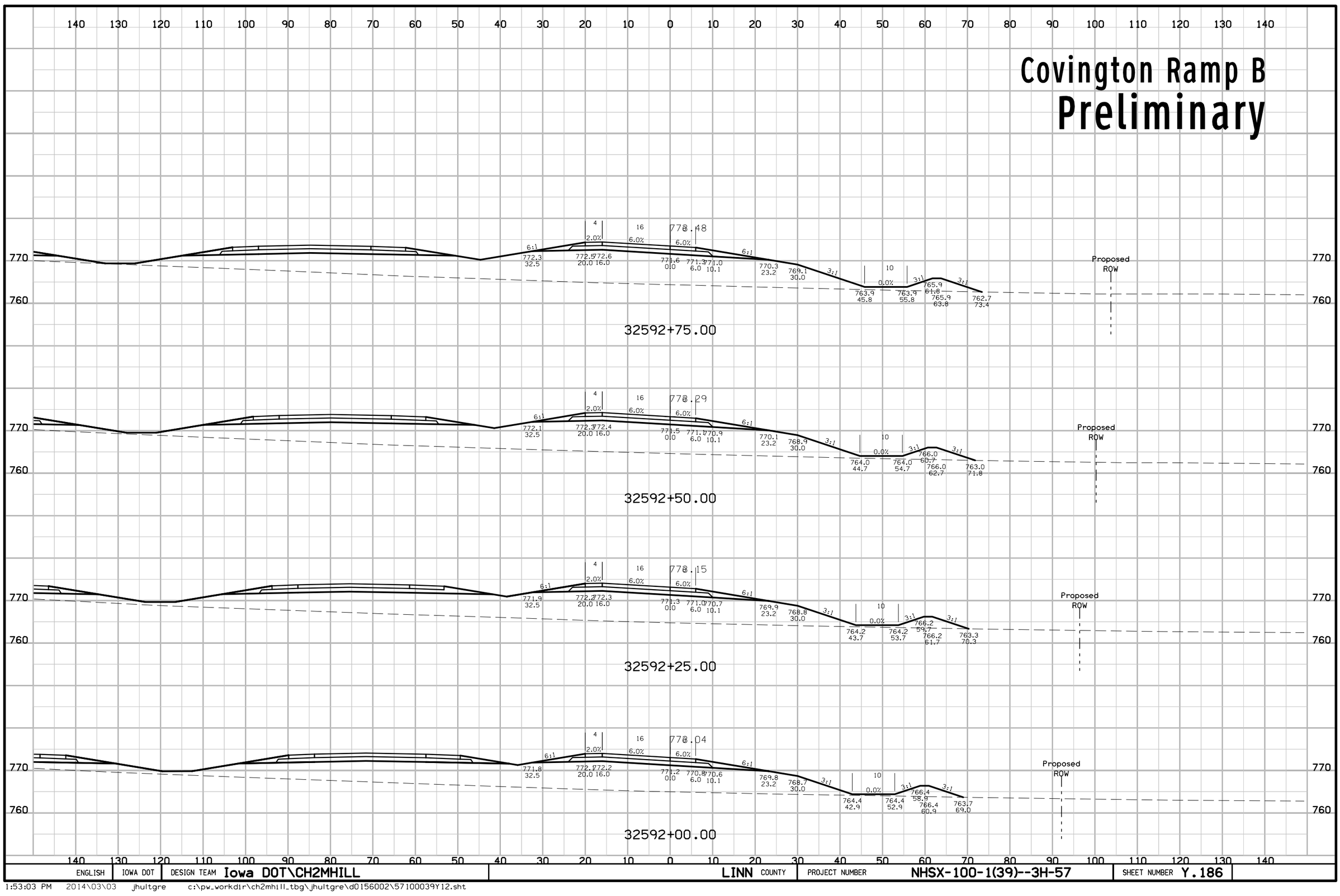
Covington Ramp B

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.186

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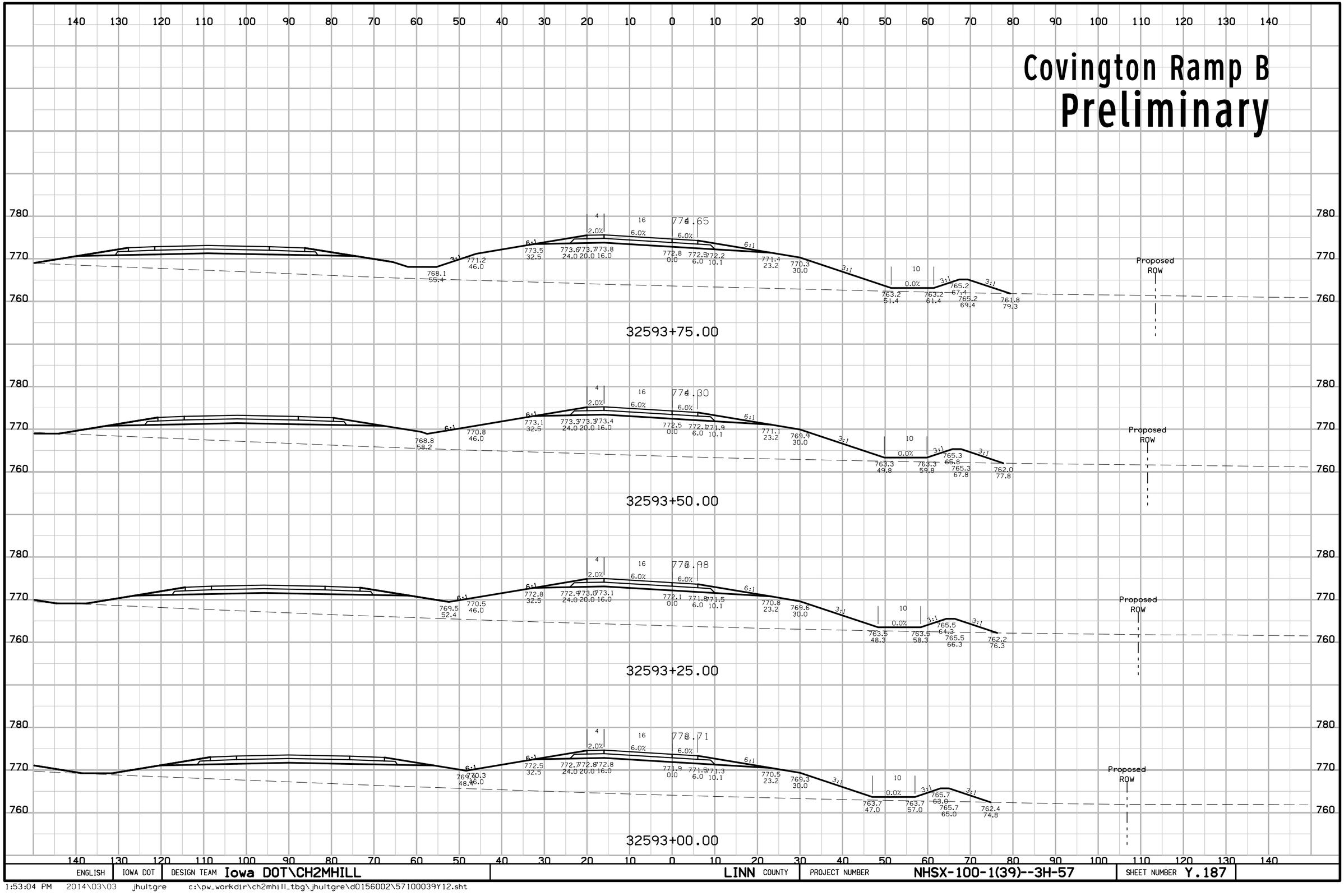
Covington Ramp B

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.187

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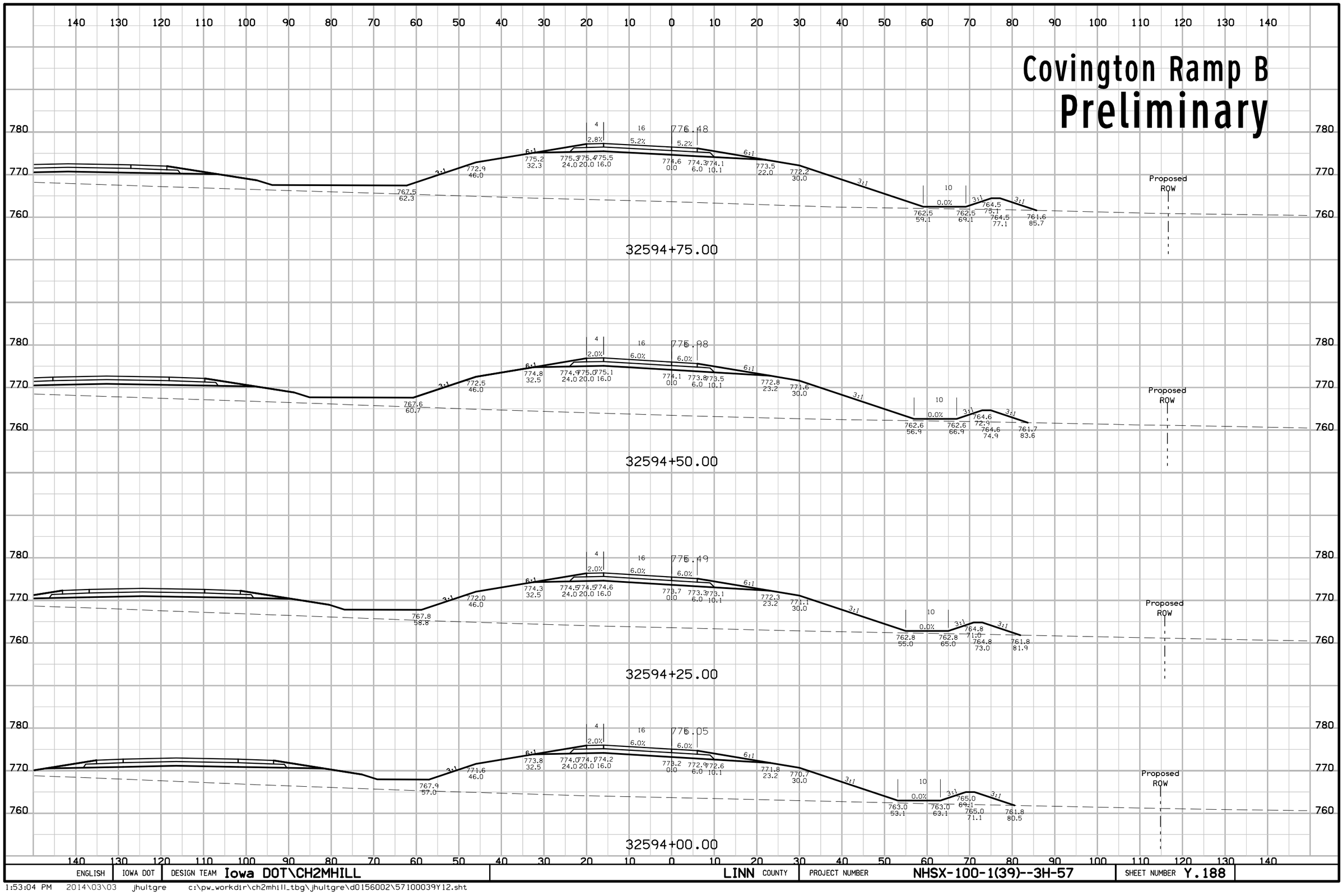
Covington Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.188

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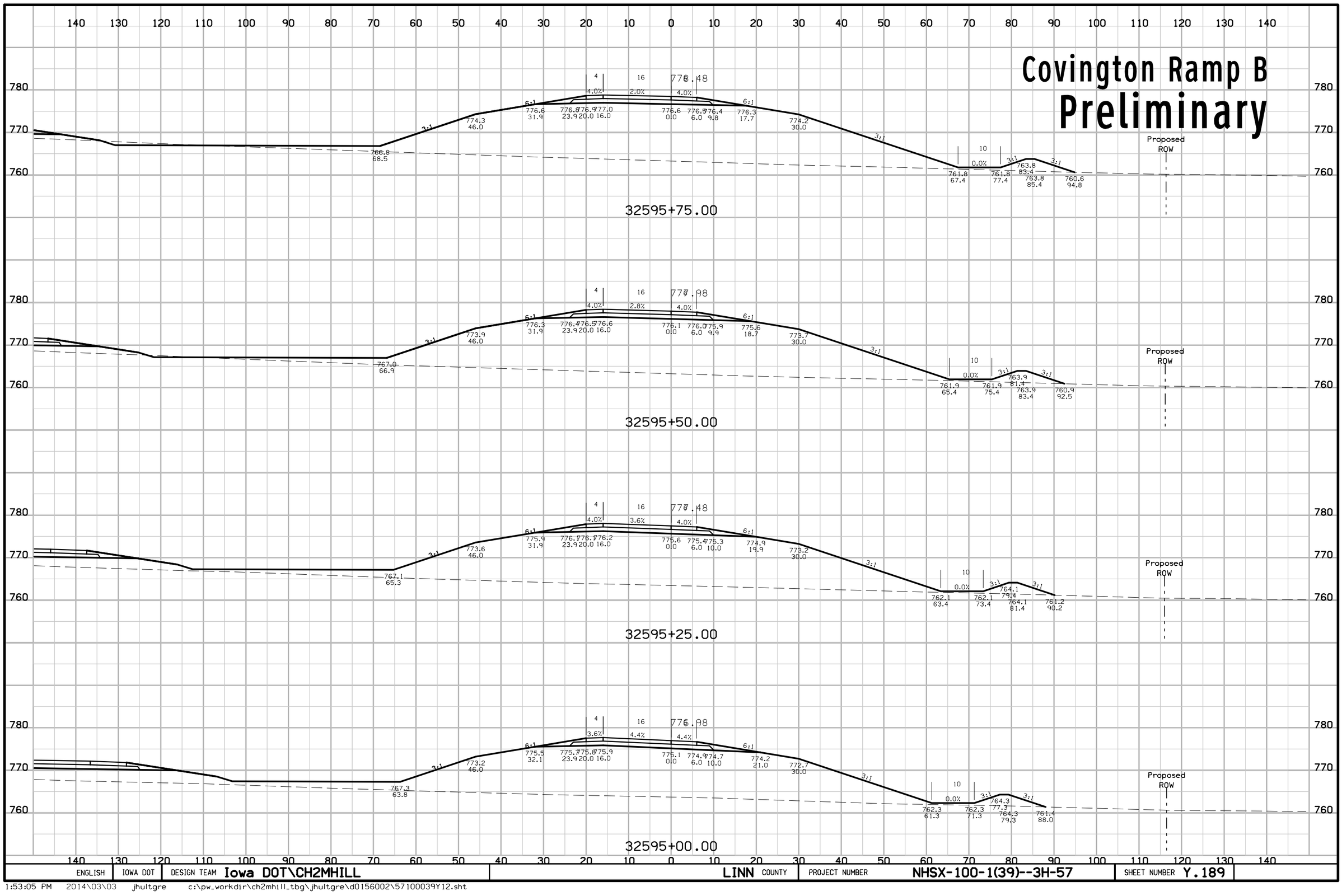
Covington Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.189

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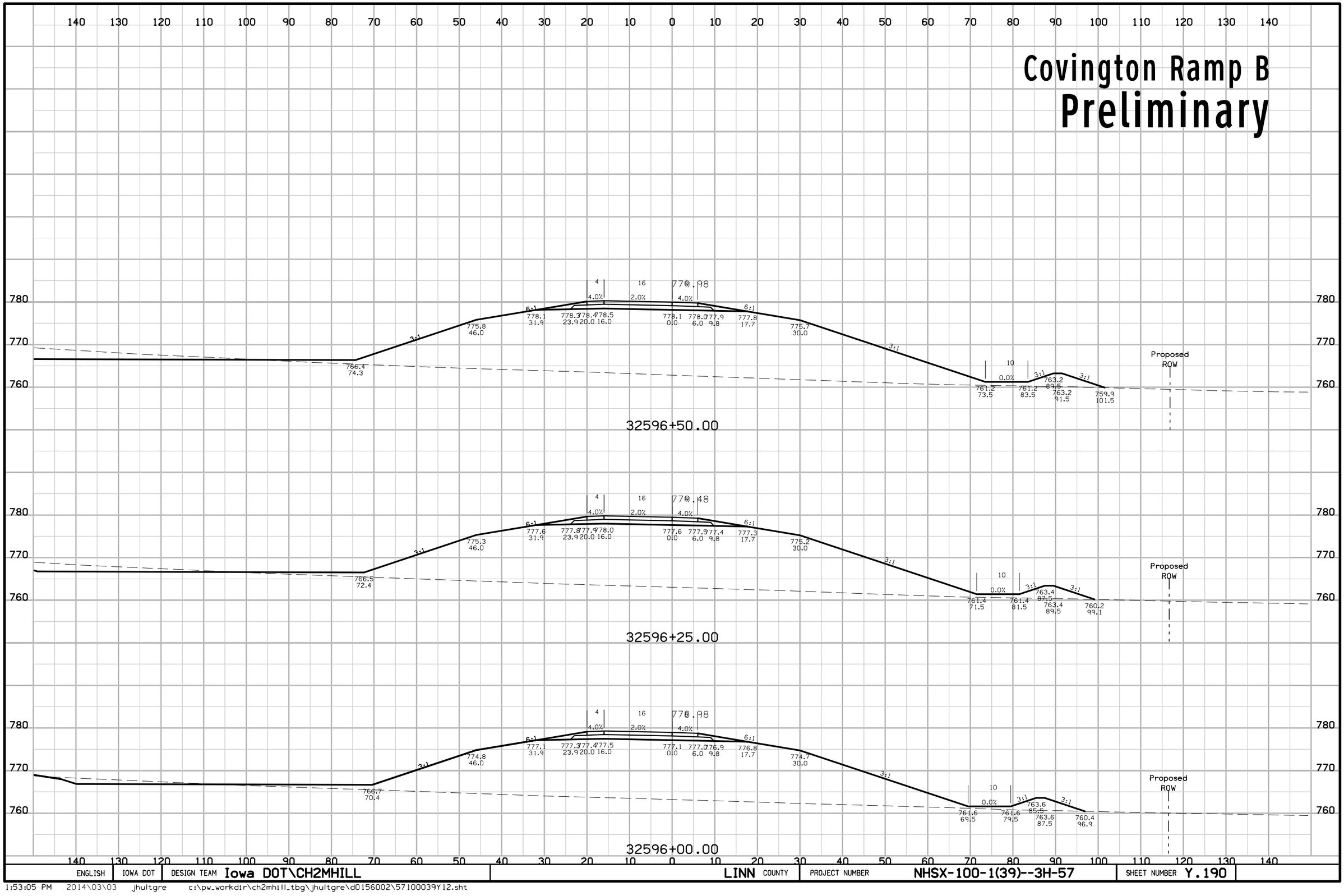
Covington Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.190

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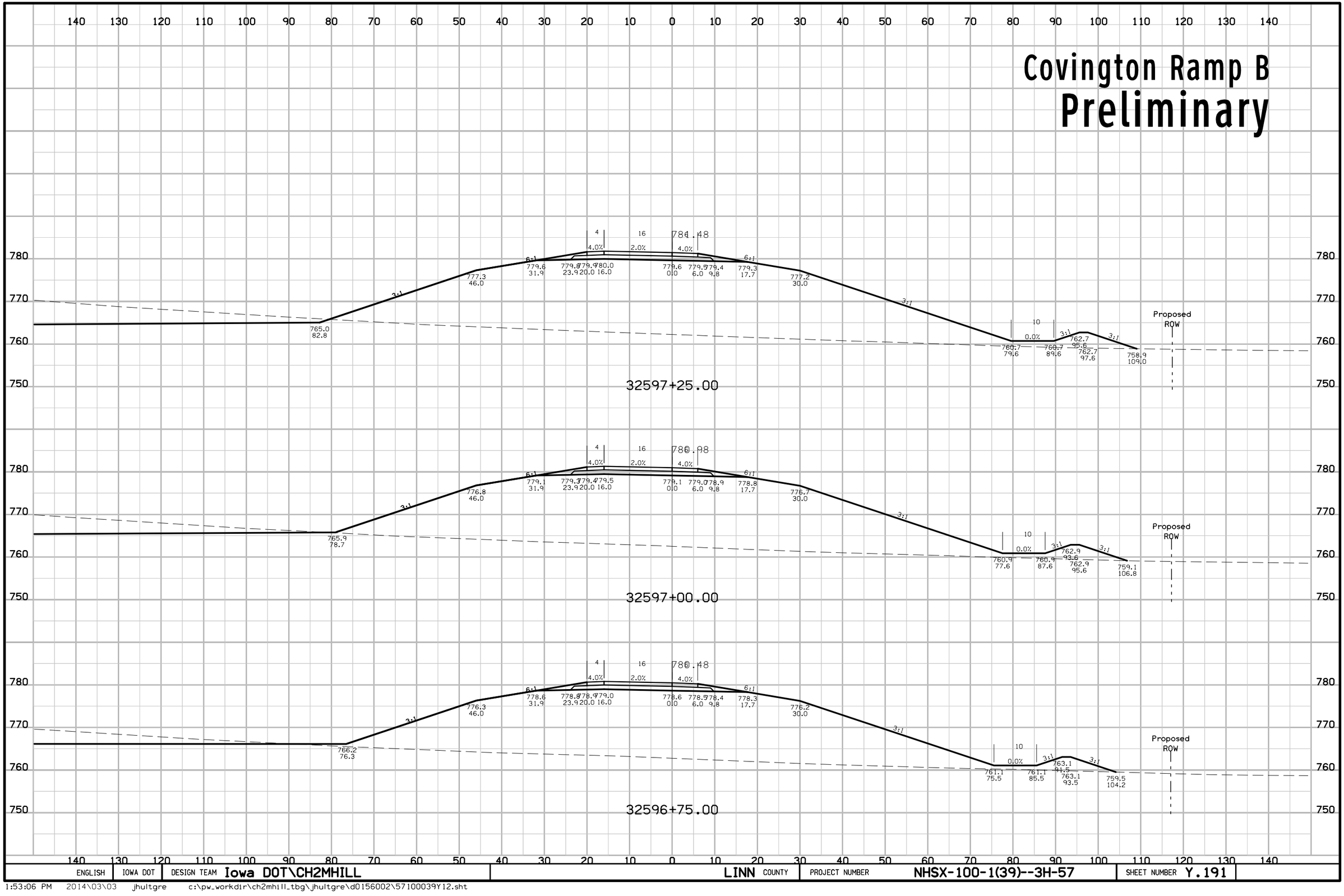
Covington Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.191

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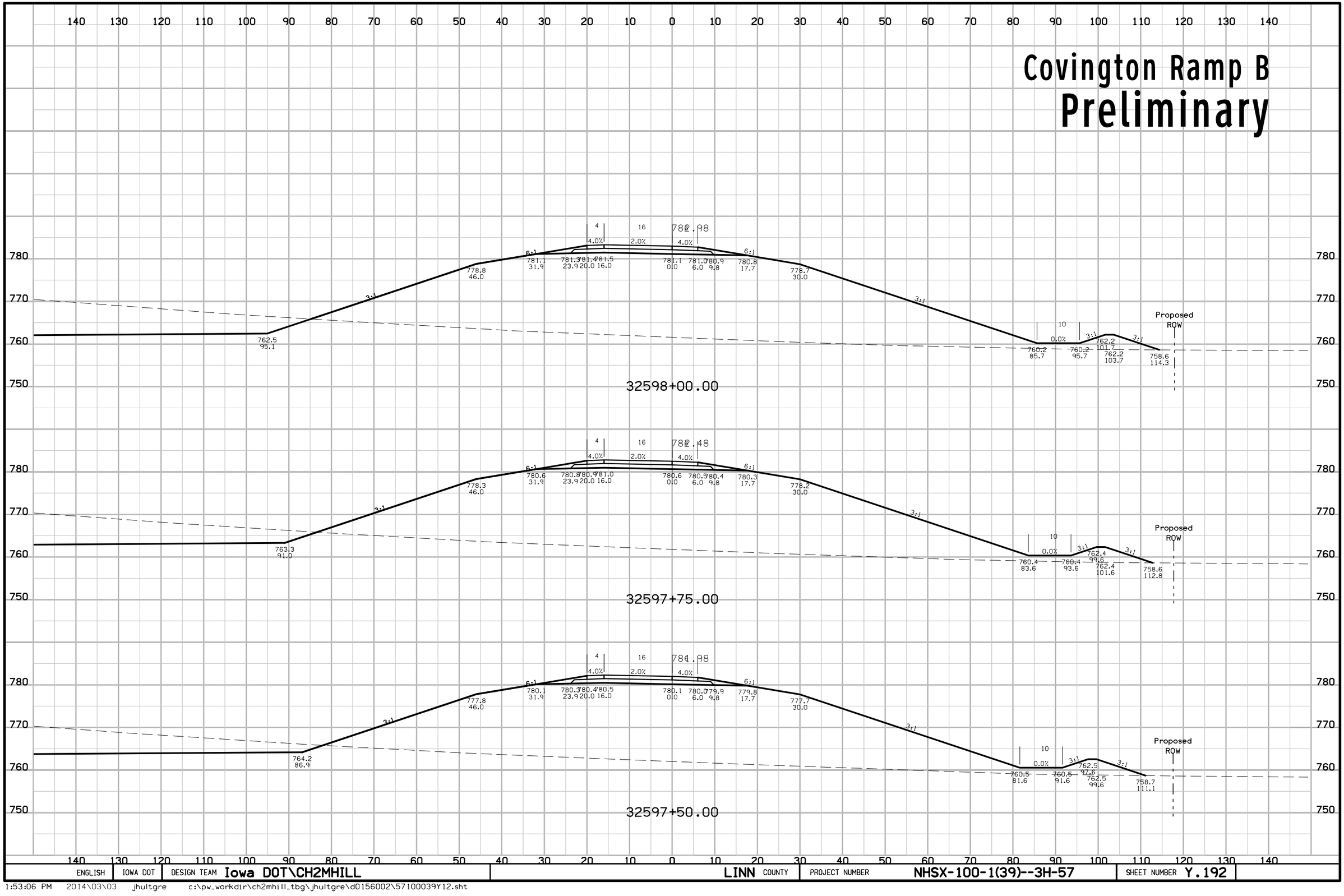
Covington Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.192

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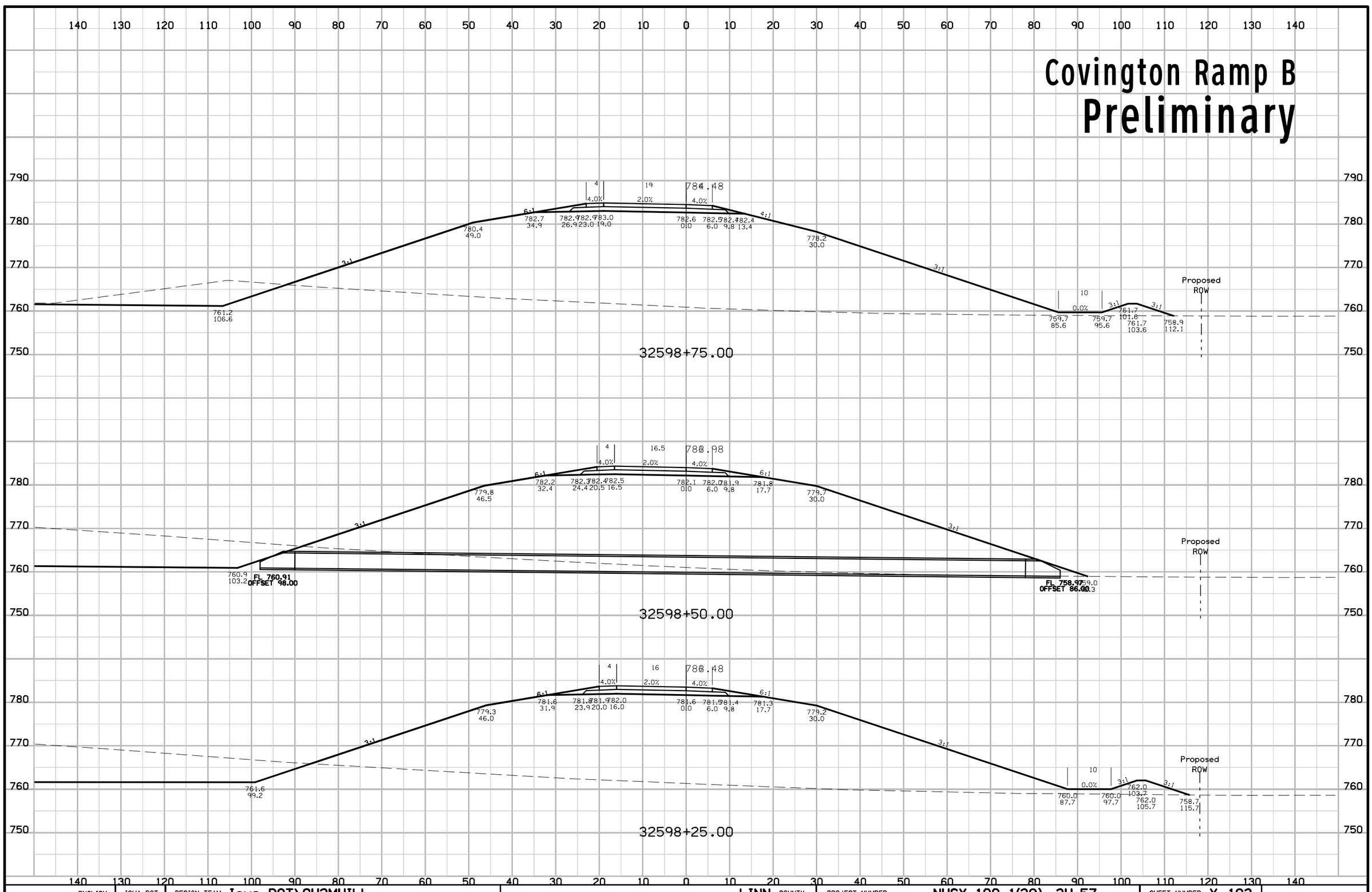
Covington Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.193

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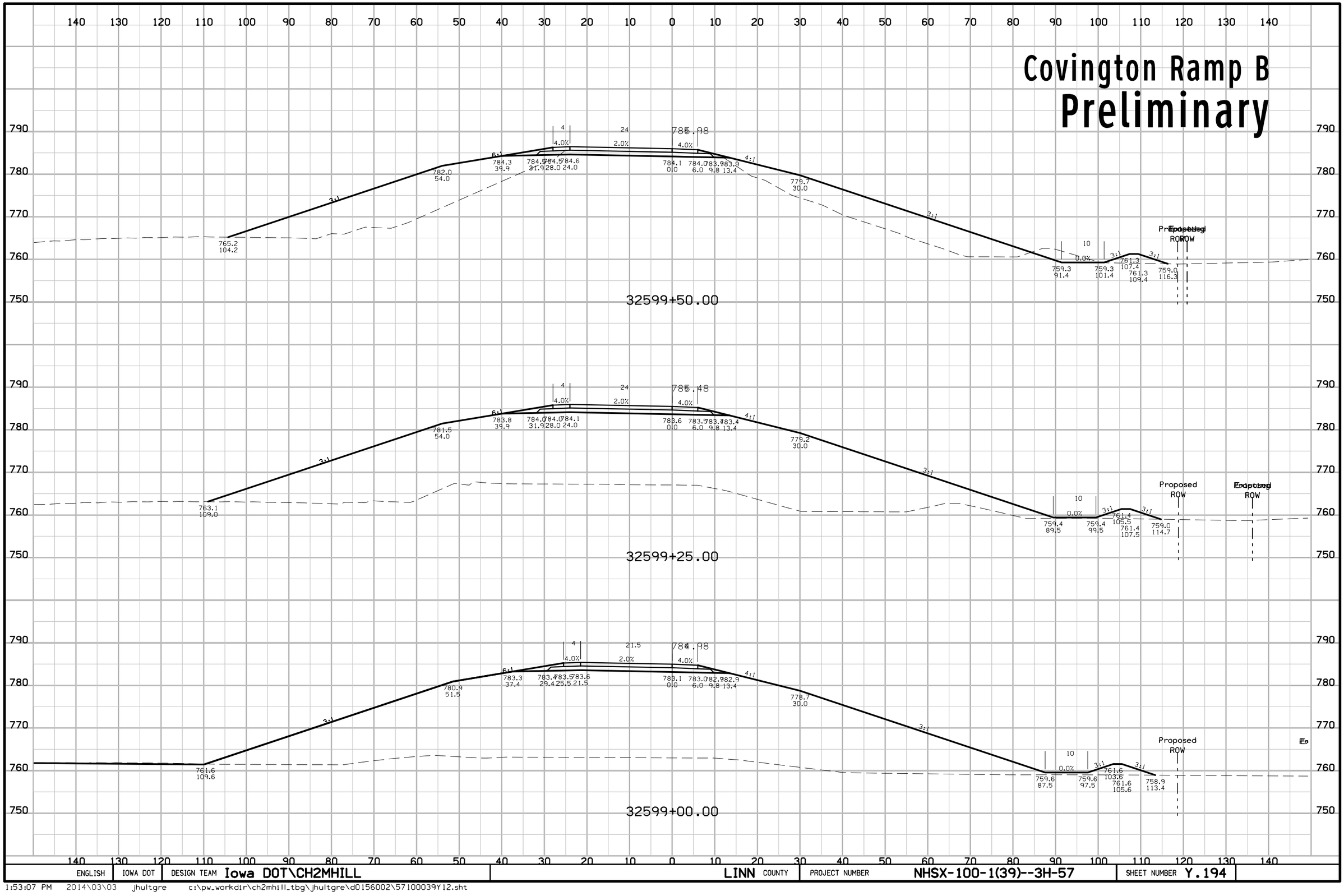
Covington Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.194

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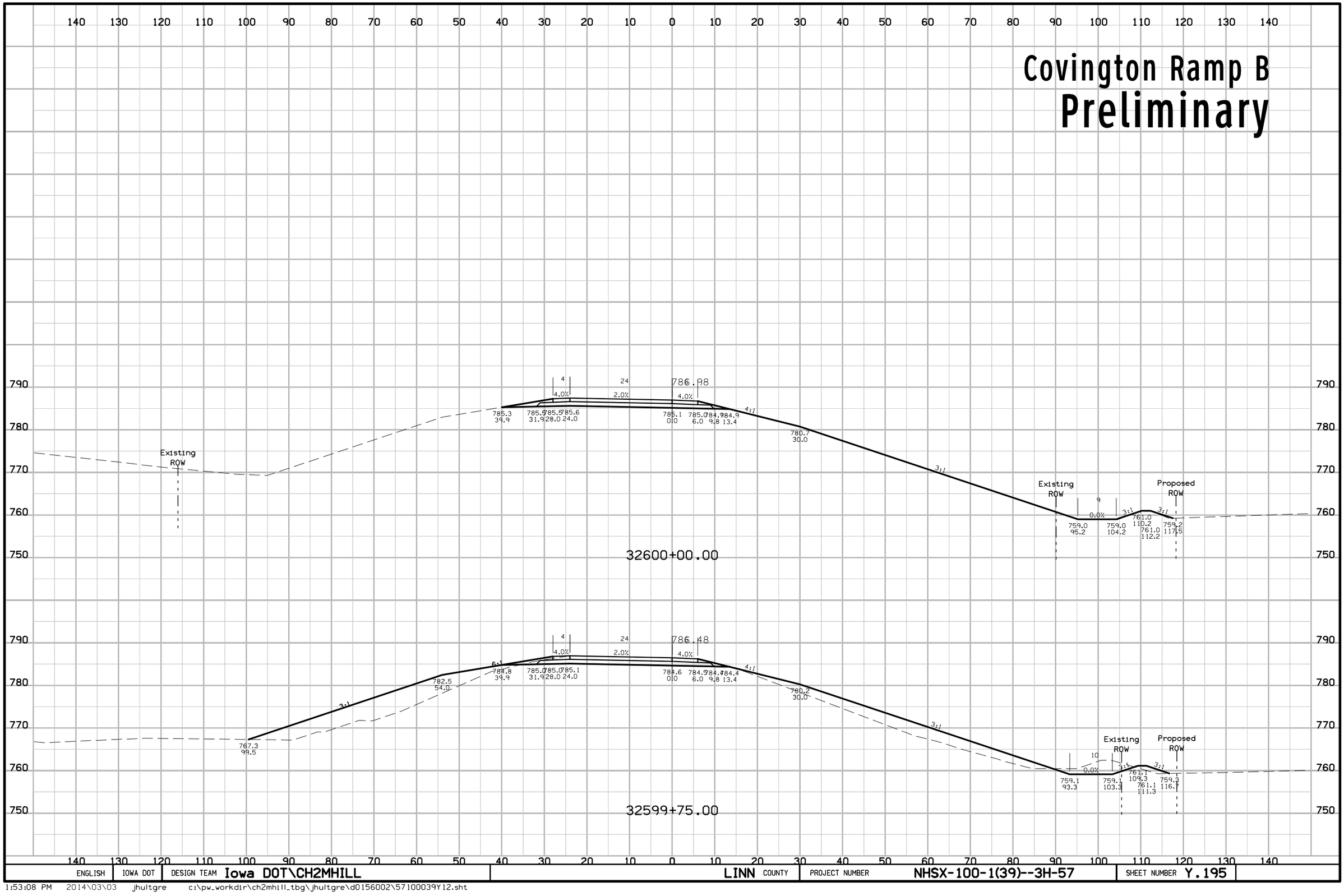
Covington Ramp B
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.195

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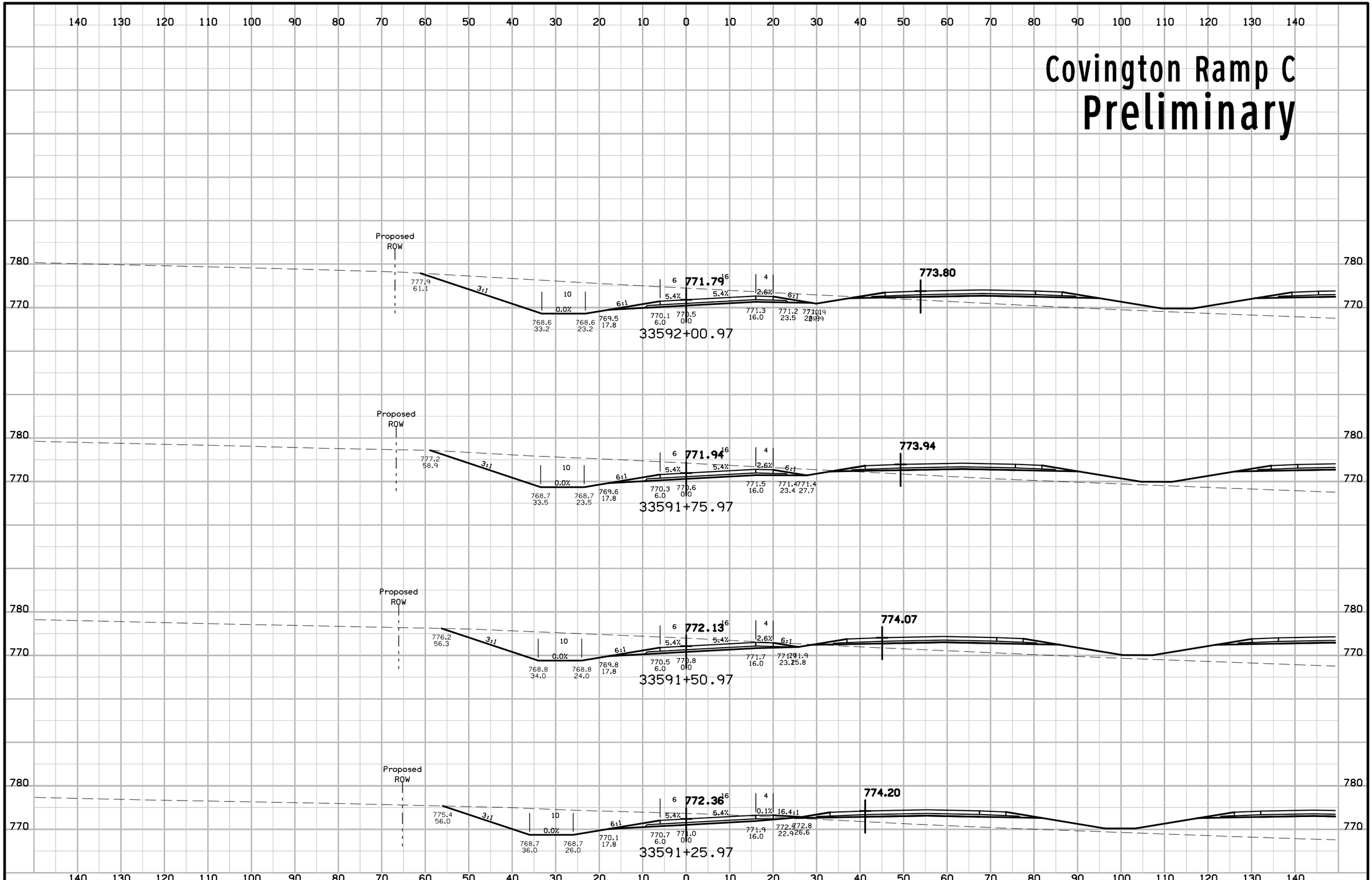
Covington Ramp C
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.196

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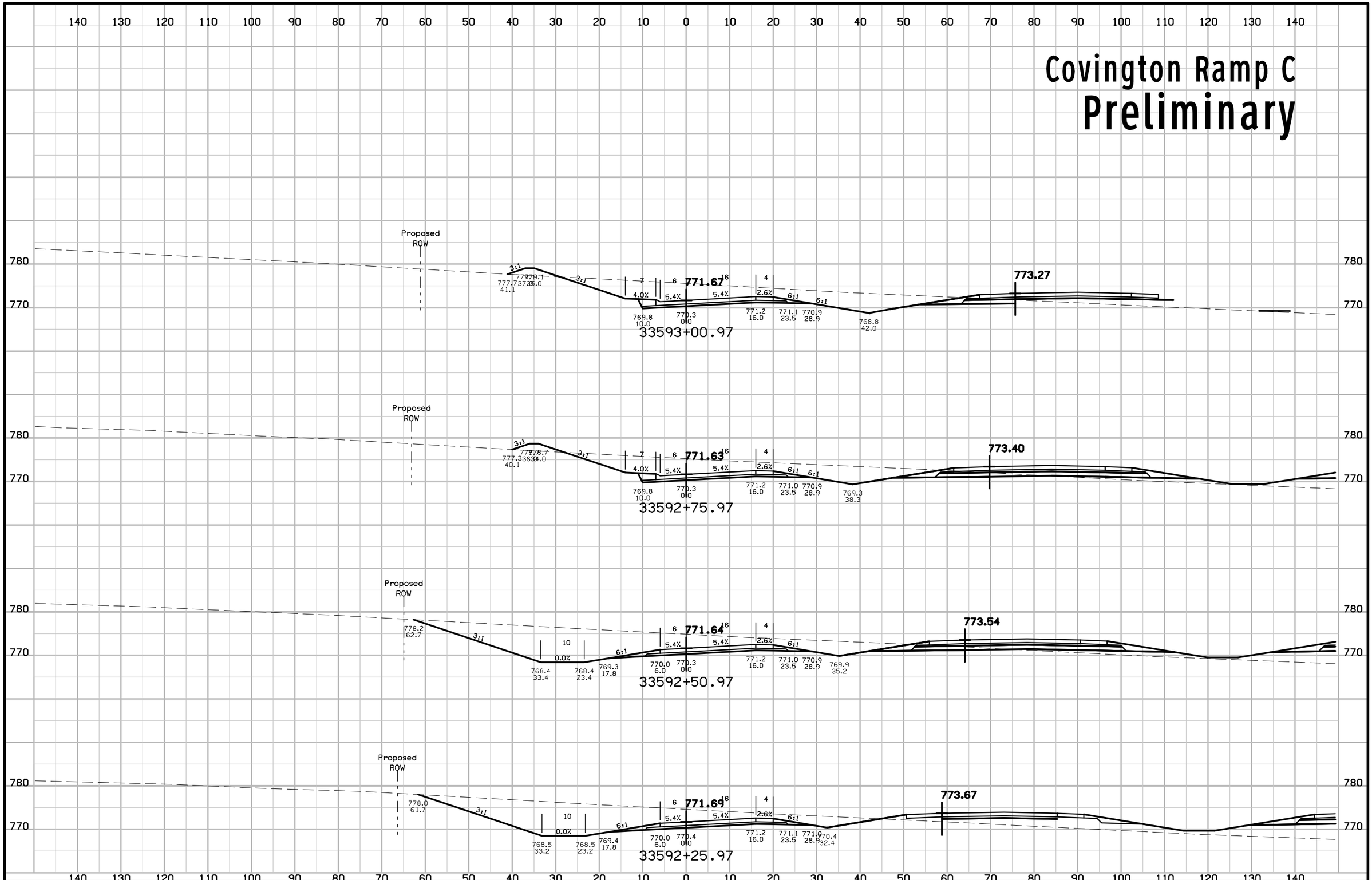
Covington Ramp C
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.197

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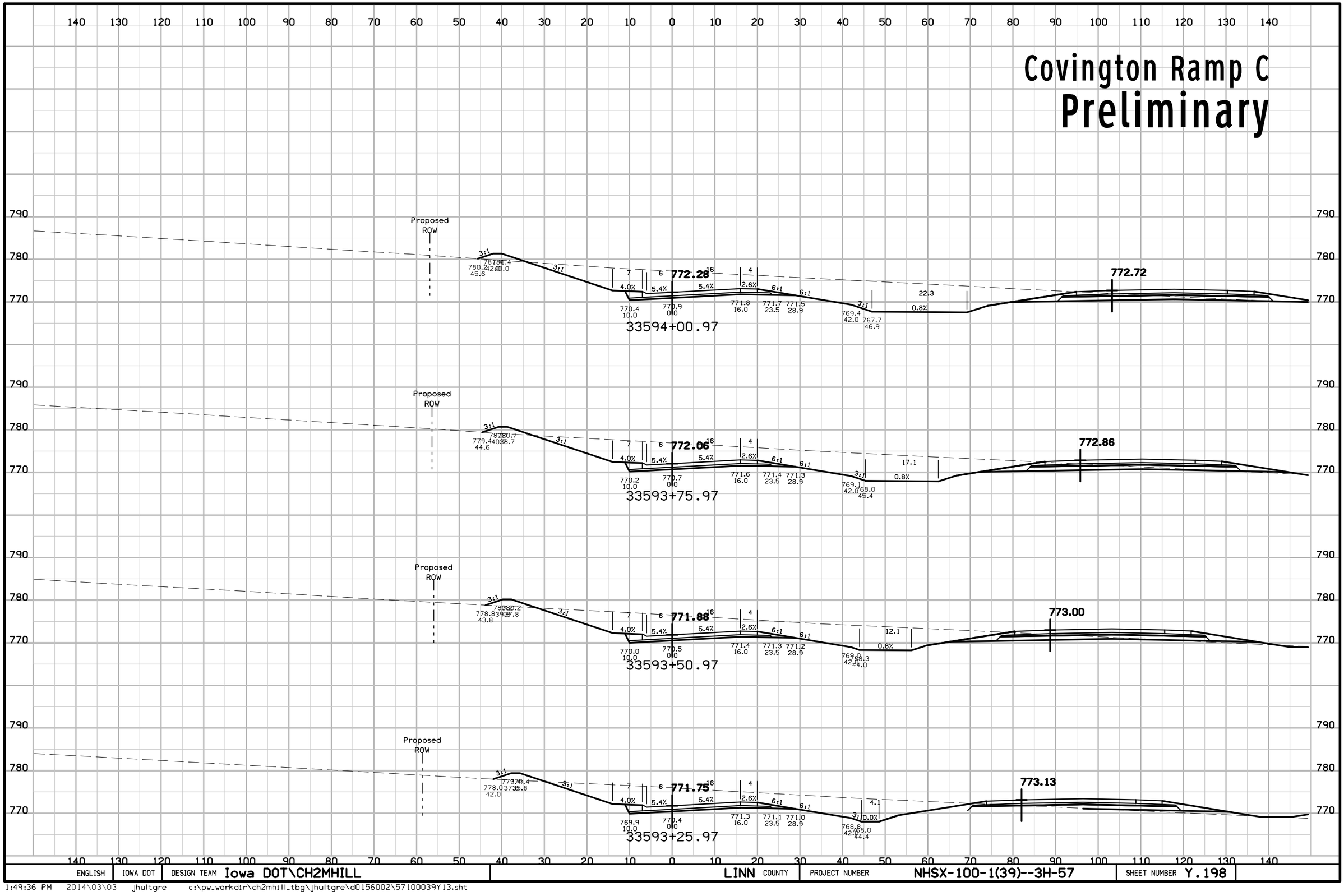
Covington Ramp C
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.198

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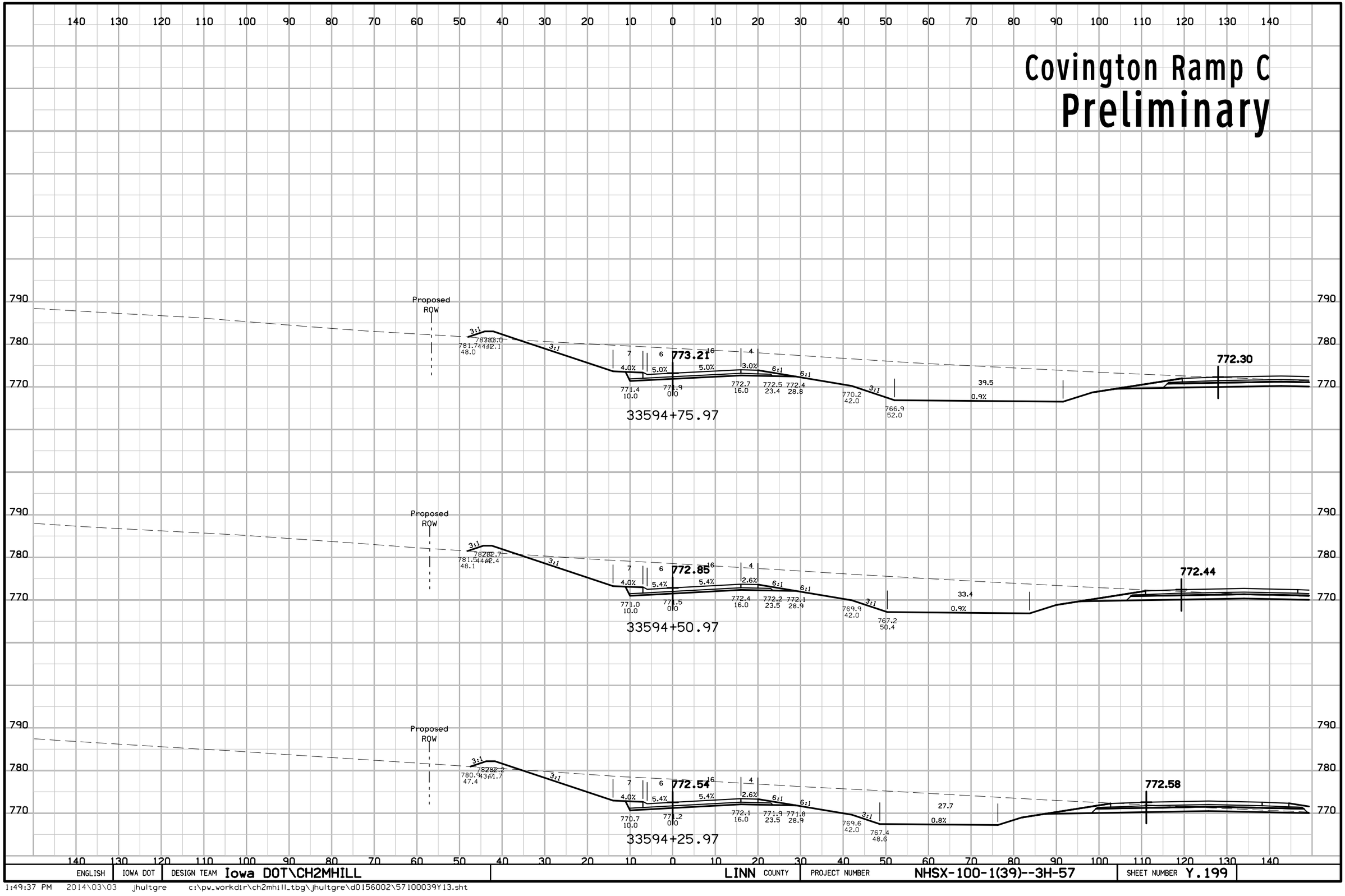
Covington Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.199

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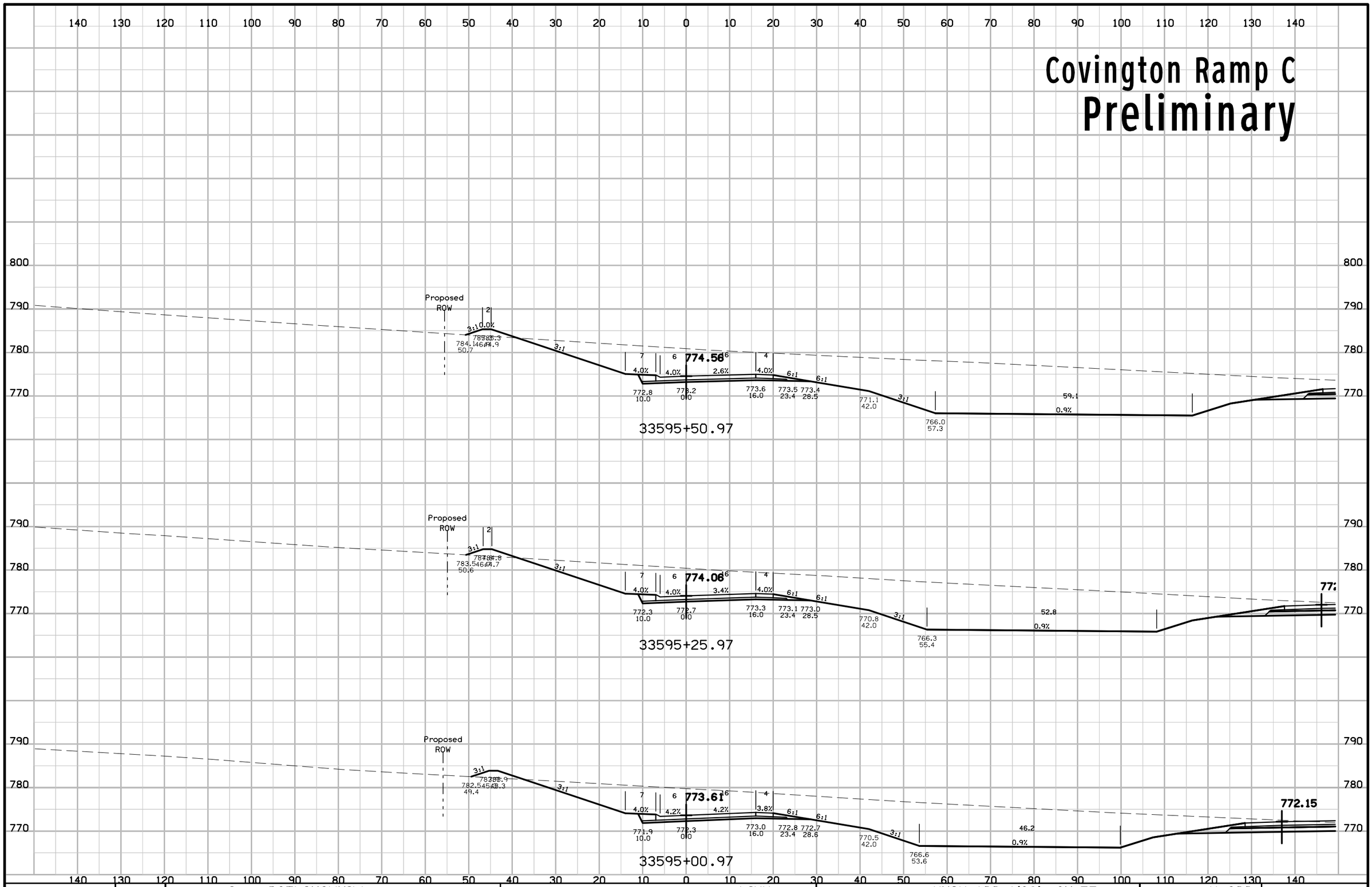
Covington Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.200

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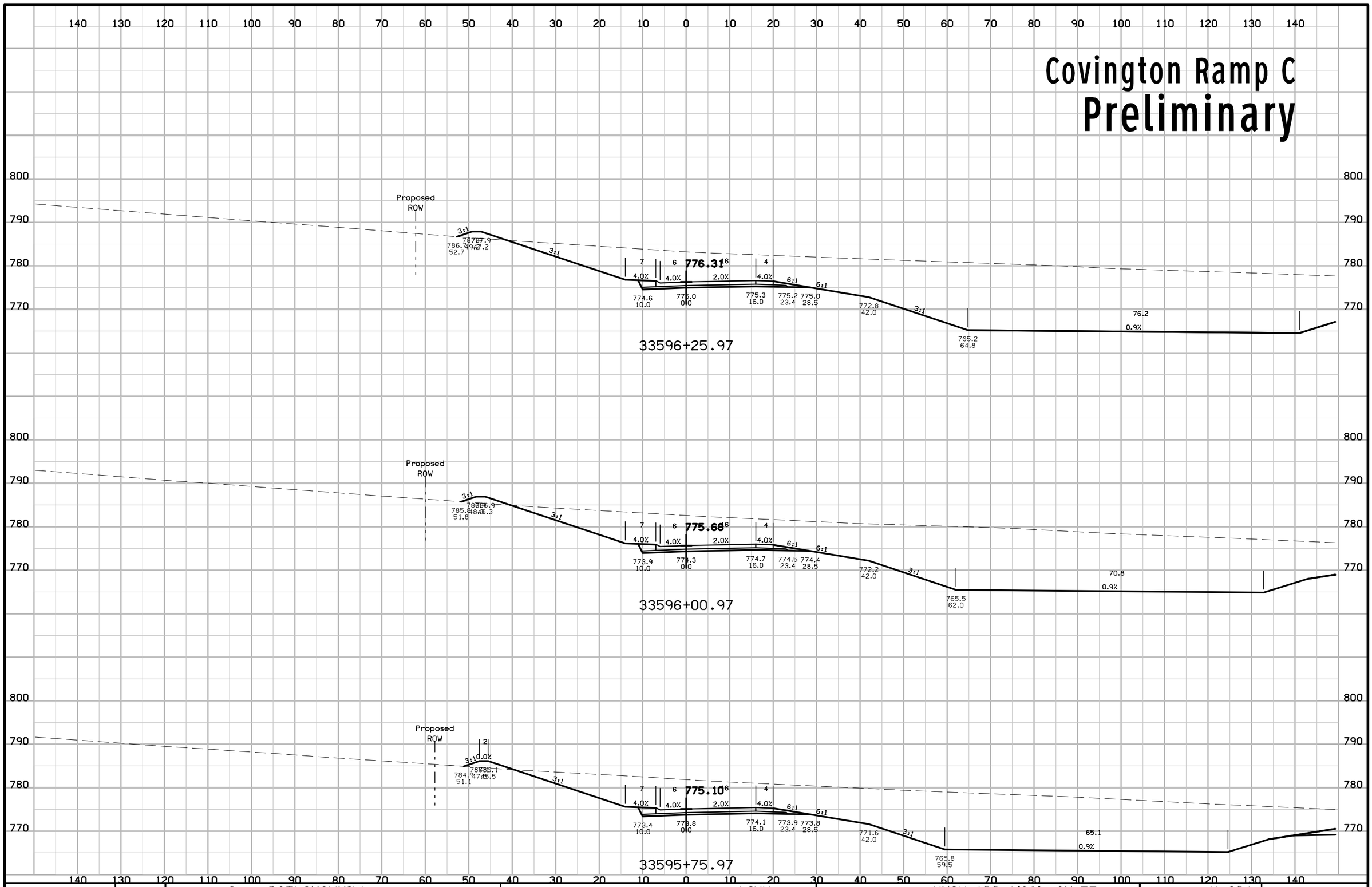
Covington Ramp C
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.201

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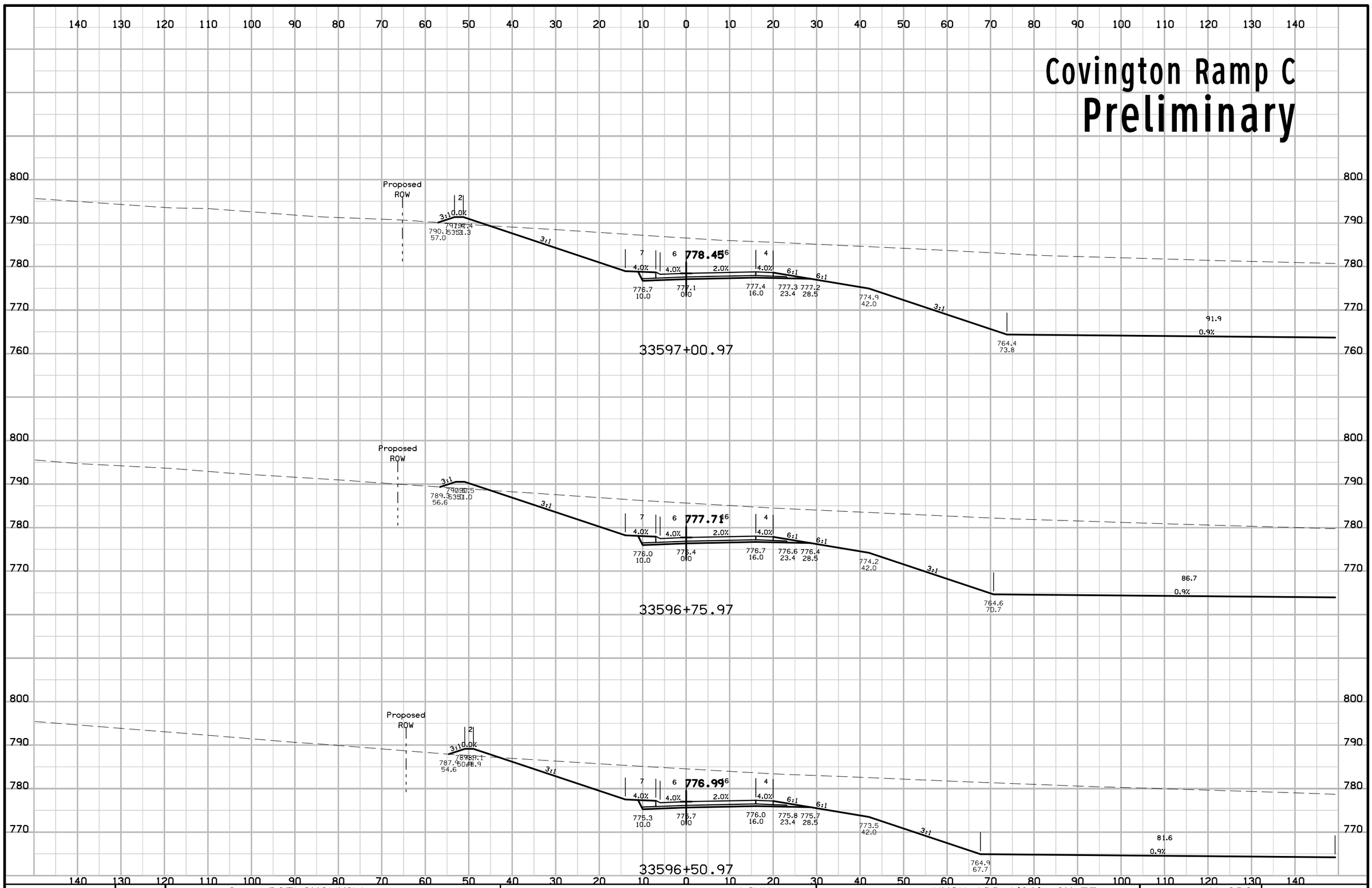
Covington Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.202

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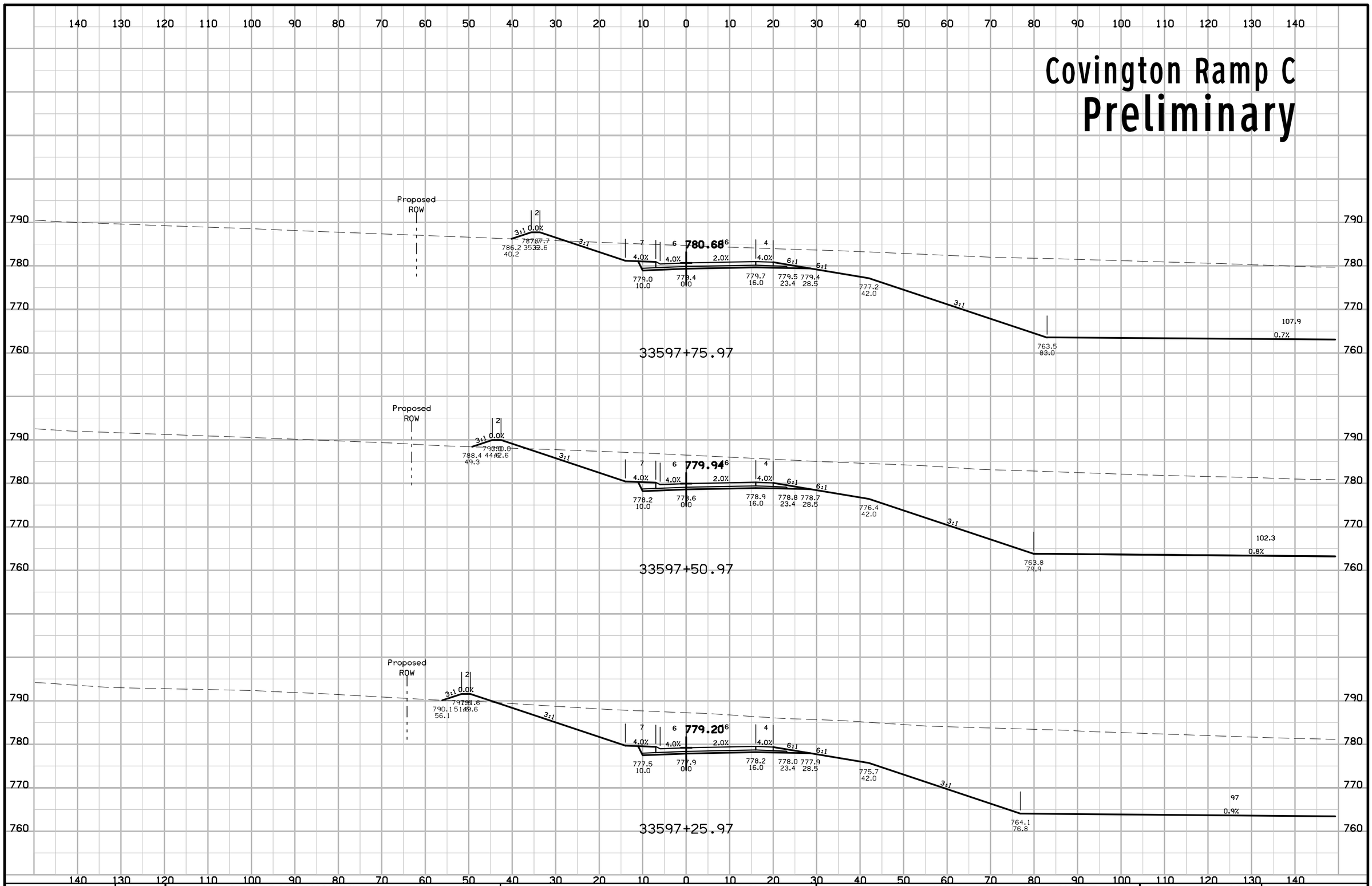
Covington Ramp C
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.203

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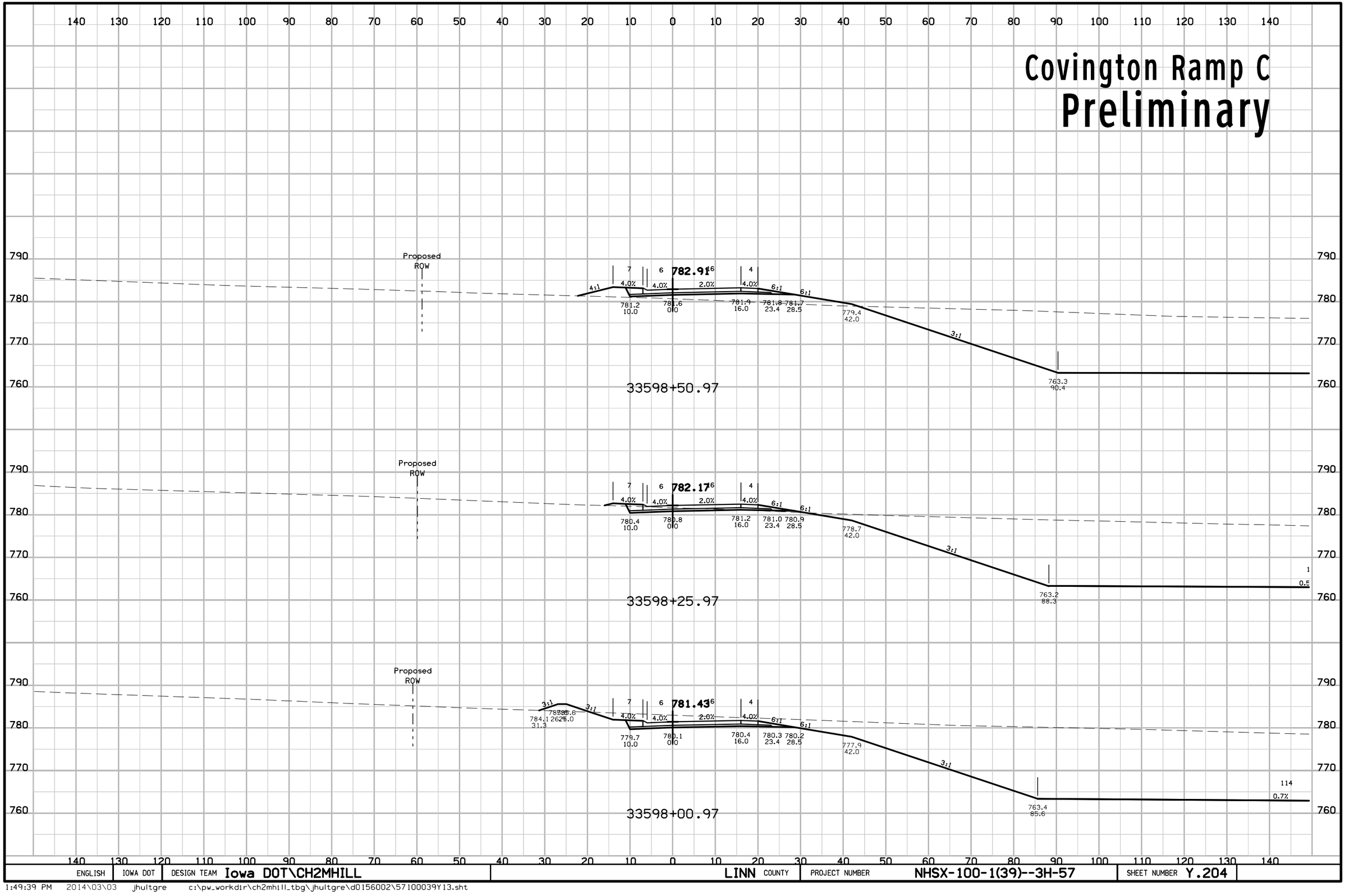
Covington Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.204

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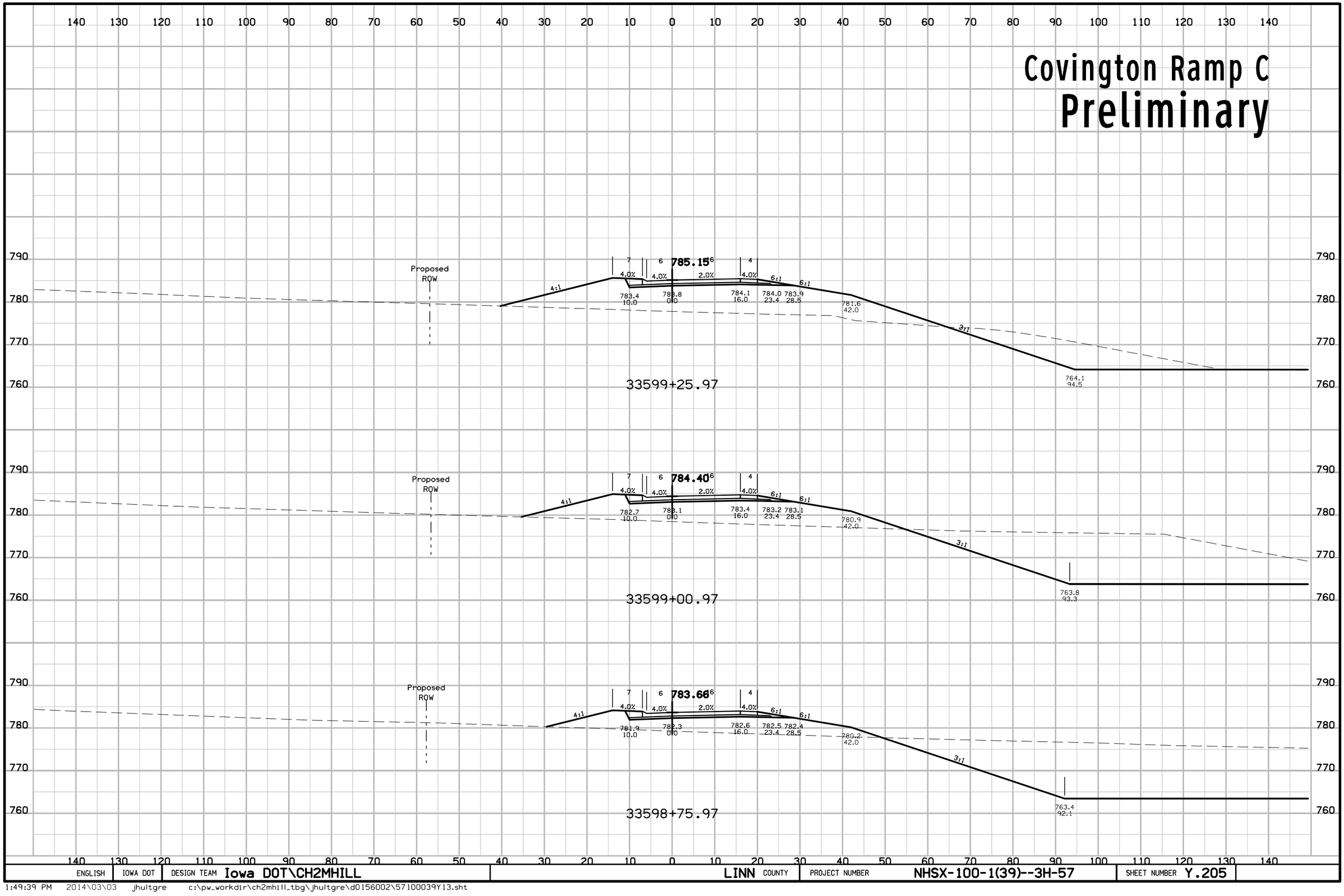
Covington Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.205

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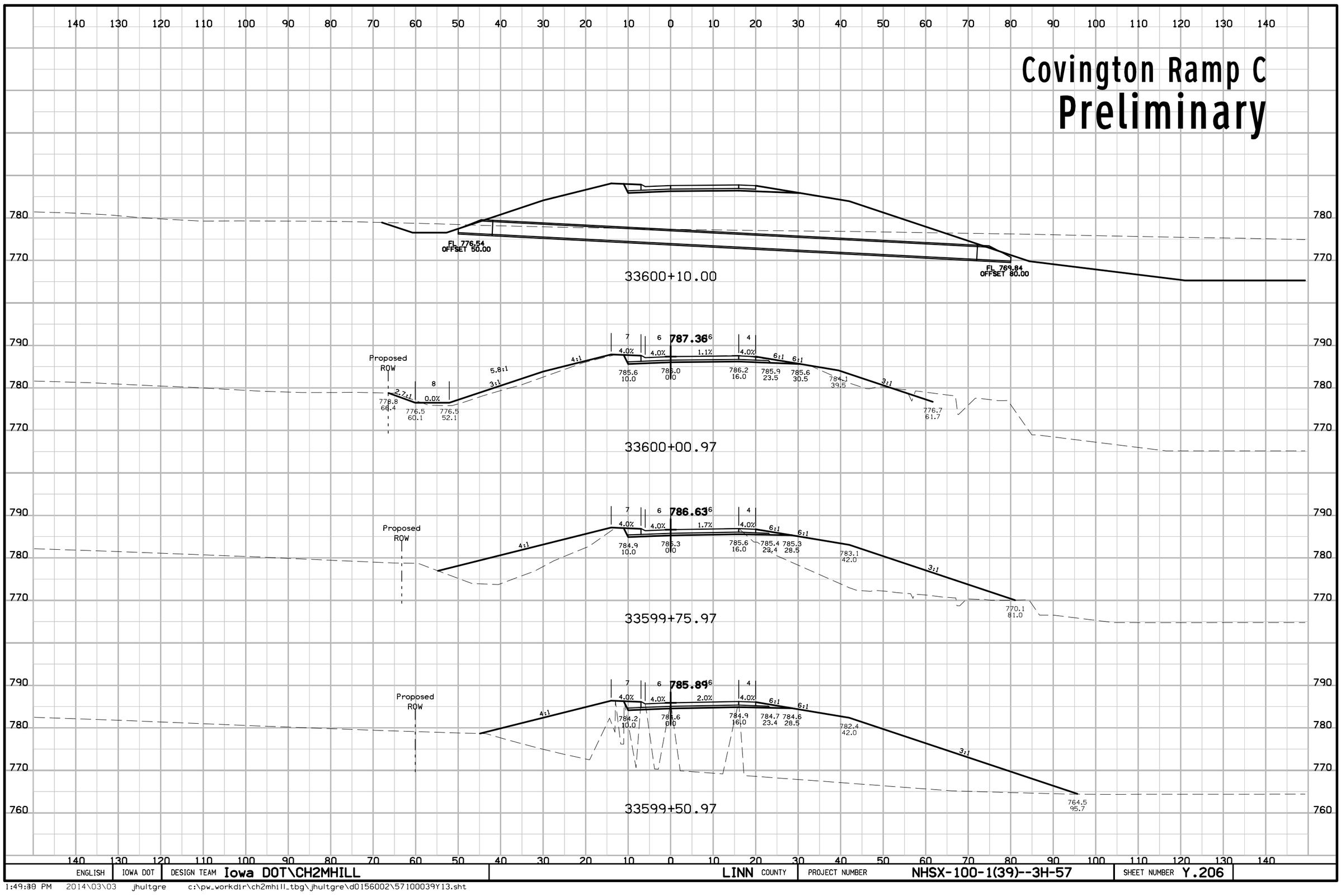
Covington Ramp C
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.206

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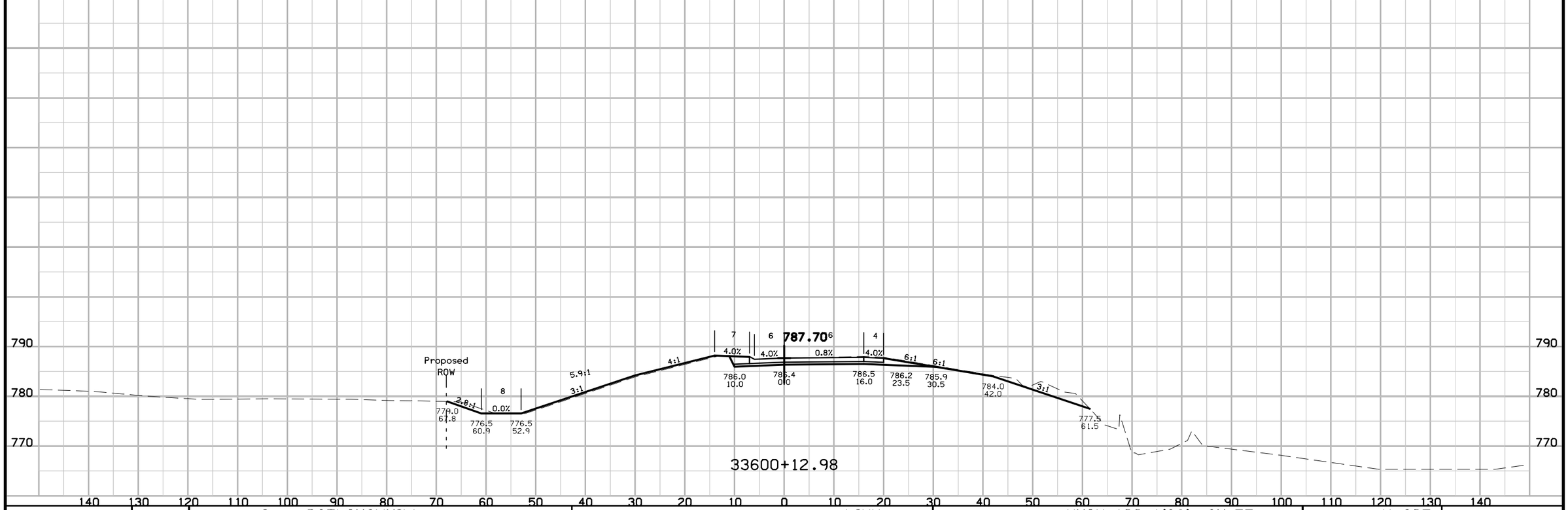
Covington Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM Iowa DOT\CH2MHILL	LINN COUNTY	PROJECT NUMBER NHSX-100-1(39)--3H-57	SHEET NUMBER Y.207

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