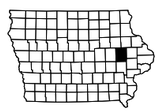
PRELIMINARY ENGINEERING
IM-380-6(224)25--13-57
LETTING DATE

LINN Co.

INDEX OF SHEETS



IOWA DOT

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

LINN COUNTY

PRELIMINARY ENGINEERING

I-380 WIDENING
TOWER TERRACE INTERCHANGE
BOYSON ROAD INTERCHANGE

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

For Project Location Map refer to sheet A.2

NO MILEAGE SUMMARY

REVISIONS

TOTAL 273
PROJECT IDENTIFICATION NUMBERS
96-57-380-050
96-57-380-050-01
14-57-380-060
PROJECT NUMBERS
IM-380-6(224)25--13-57
IM-380-6(200)25--13-57
IM-380-6(310)25--13-57

PRELIMINARY EARTHWORK CALCULATIONS

INTERSTATE 380 WIDENING
CUT: 388,000 CY
FILL+30%: 234,000 CY
WASTE: 154,000 CY

BOYSON ROAD INTERCHANGE
CUT: 40,000 CY
FILL+30%: 115,000 CY
BORROW: 75,000 CY

TOWER TERRACE ROAD INTERCHANGE
CUT: 132,000 CY
FILL+30%: 199,000 CY
BORROW: 67,000 CY

SCHEDULE

FIELD EXAM PLANS (D2) - 7/16/18
FIELD EXAM (D2) - 8/13/18
PLANS FOR PRELIMINARY BRIDGE (D3) - 9/17/18
BRIDGES AND STRUCTURES LAYOUT (B1) - 12/17/18
DRAINAGE DESIGN AND MISCELLANEOUS LAYOUT (B2) - 12/17/18
IDENTIFICATION OF SOILS RELATED ROW ISSUES (S2) - 3/18/19

I-380 DESIGN DATA URBAN

2016	AADT	44,600	V.P.D.
2040	AADT	75,500	V.P.D.
20--	DHV	--	V.P.H.
TRUCKS		--	%
Total Design ESALs		--	

BOYSON ROAD DESIGN DATA URBAN

2016	AADT	16,500	V.P.D.
2040	AADT	22,500	V.P.D.
20--	DHV	--	V.P.H.
TRUCKS		--	%
Total Design ESALs		--	

TOWER TERRACE ROAD DESIGN DATA URBAN

2016	AADT	3100	V.P.D.
2040	AADT	29,000	V.P.D.
20--	DHV	--	V.P.H.
TRUCKS		--	%
Total Design ESALs		--	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	GREGORY D. CABALKA	Primary Signature Block
X	X	X

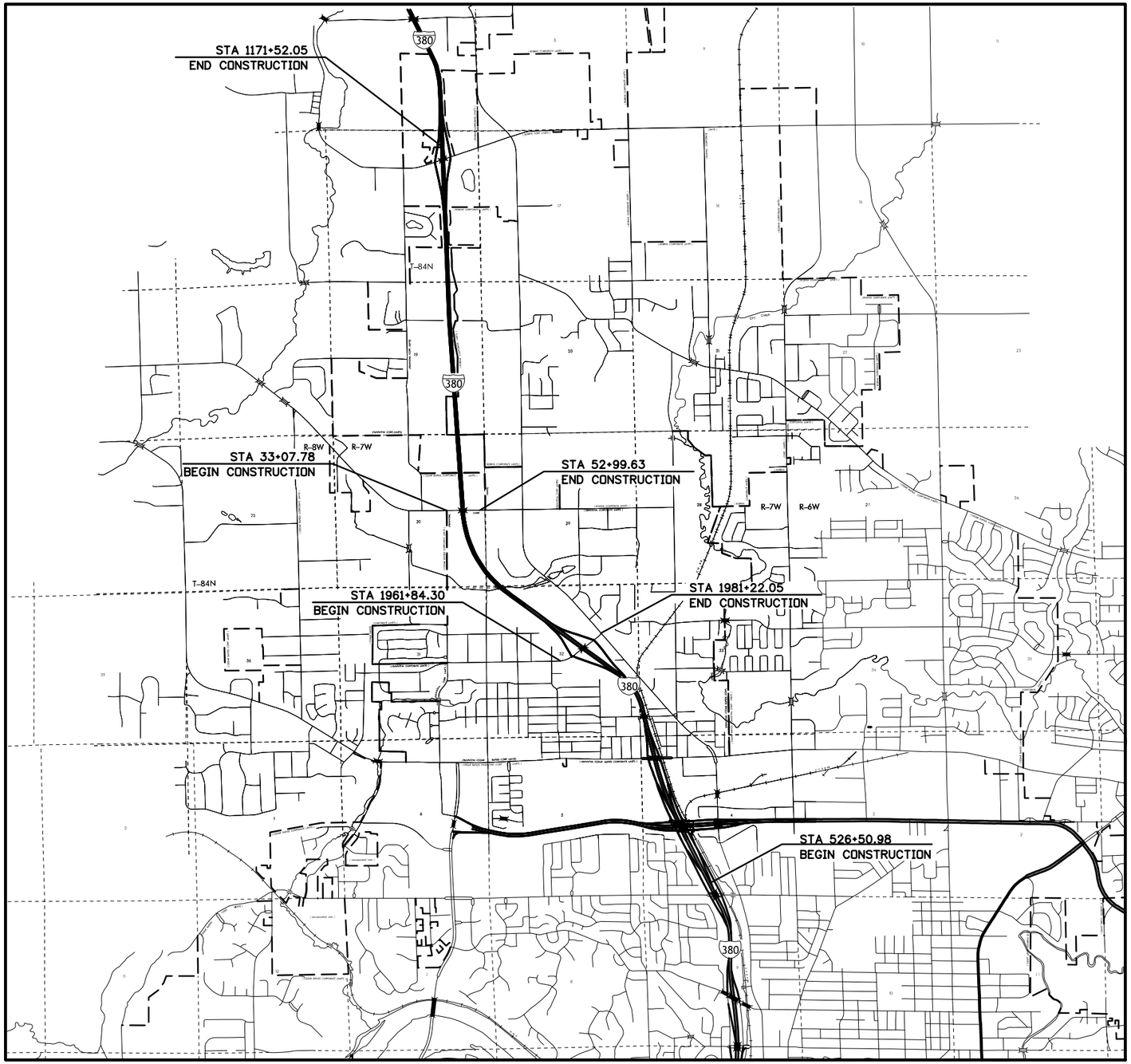
PRELIMINARY PLANS

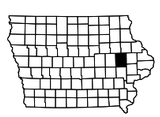
Subject to change by final design.

D2 PLAN – Date: 7/16/2018

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER A.1

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC





LOCATION MAP SCALE
0 0.4 0.8 1.2
Miles

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER A.2

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Roadway	I-380 Mainline			
PIN Number			**Submittal Date**	02/10/17
Project Number	IM-380-6(224)25--13-57			**Approval Date**
District	District 6	**Assistant District Engineer**	Ken Yanna	
County	Linn (57)	**or**		
Route	I-380	**Office Director**		
Location	I-380 (Collins Road/Highway 100 to County Home Road)			
Work Type	Reconstruction/Widening			
Segment Manager				
Designer	HNTB / Iowa DOT			
Design Manual Section 1C-1 last update: 05-06-14	**Urban Interstates (Urban Freeways)**			

Design Element		Preferred	Acceptable	Project Values
Design speed (mph)		5 miles above the anticipated posted speed limit	50	60 (S. of T) / 45 (N. of T)
Maximum superelevation rate (%) (Refer to Section 2A-2)		6	8	8 (per existing)
Design lane width (ft)		12	12	12
Full depth paved width (ft)	Outside lane	12	12	12
	Inside lane(s)	12	12	12
Auxiliary-lane width (ft)		12	12	12
Pavement cross-slope	Through lanes	2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%	1.5% minimum, 3 % maximum	2% min. - 3% max.
	Auxiliary lanes	3%	3% maximum	3%
	Crown break at centerline	4%	4% maximum	4%
Shoulder cross-slope	Interstates	4%	6% max, but not less than the cross slope of the adjacent lane	4%
	Freeways	4%	6% max, but not less than the cross slope of the adjacent lane	N/A
Curb type (Refer to Section 3C-2)	Interstates	4-inch sloped	4-inch sloped	N/A
	Freeways	4-inch sloped	4-inch sloped	N/A
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	4:1 for Interstates, * 3:1 for Freeways	4:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	3.5:1
	Curbed roadways	2%	4:1 for Interstates, * 3:1 for Freeways	N/A
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)		3:1	2.5:1	3:1
Transverse Slopes	w/ drainage structures	8:1	6:1	8:1
	w/o drainage structures	10:1	6:1	10:1
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	--	5 x 10
	Median ditch depth (ft)	4	--	4 (where possible)
Median width (ft) (Refer to Section 3E-1)	Interstates	36	10	10
	Freeways	36	10	N/A
Bridge width—new	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	Preferred
	Bridge length > 200 ft	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane widths	Preferred
Bridge width—existing	Bridge length ≤ 200 ft	design lane widths + no less than 10' right and 3.5' left	design lane widths + 10' right shoulder and 3.5' left shoulder	Preferred
	Bridge length > 200 ft	design lane widths + no less than 3.5' left and right	design lane widths + 3.5' right and left of the design lane widths	Preferred
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks))	Over primary	16.5	16	16.5
	Over non-primary	16.5 at interchange locations, 15 ft at all other locations	14	Preferred
	Over railroad	23.3	23.3	N/A
	Sign trusses and pedestrian crossings	17.5	17	17.5
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	N/A
Level of Service	Freeway segments	C	**C	C
	Auxiliary Facilities	C	**C	C

*Design Exception not required for Freeways
**LOS D may be acceptable in spot locations with FHWA approval

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Roadway Design Speed (mph) =			65 (S. of TT) / 75 (N. of)												
Design Manual Section 1C-1 last update: 05-06-14			**Design Criteria for High Speed Roadways**												
Design Element			Preferred Criteria Design Speed, mph						Acceptable Criteria Design Speed, mph						Project Values
			50	55	60	65	70	75	50	55	60	65	70	75	
Stopping sight distance (ft) (Refer to Section 6D-1)			425	495	570	645	730	820	425	495	570	645	730	820	645 / 820
Minimum horizontal curve radius (ft) (Refer to Sections 2A-2 and 2A-3)	Method 5 superelevation and side friction distribution	e_{max} = 6%	833	1060	1330	1660	2040	2500	833	1060	1330	1660	2040	2500	1660/2500
		e_{max} = 8%	--	--	--	--	--	--	758	960	1200	1480	1810	2210	N/A
Minimum vertical curve length (ft) (Refer to Section 2B-1)			150	165	180	195	210	225	150	165	180	195	210	225	195 / 225
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	crest vertical curves		84	114	151	193	247	312	84	114	151	193	247	312	193 / 312
	sag vertical curves	roadways without fixed-source lighting	96	115	136	157	181	206	96	115	136	157	181	206	157 / 206
		roadways with fixed-source lighting	96	115	136	157	181	206	54	66	78	91	106	121	157 / 206
Minimum gradient (%)	(Refer to Section 2B-1)		0.5						0.3% with a curb, 0.0% without a curb						0.5
Maximum gradient (%)	(Refer to Section 2B-1)	Urban roadways	4		3				7	6	6	--	--	--	3
		Rural roadways							5	5	4	4	4	4	3
		Interstates							5	5	4	4	4	4	3
Clear zone			See "Preferred Clear Zone" table in Section 8A-2						See "Acceptable Clear Zone" table in Section 8A-2						34

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER A.4

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Directional Design Hourly Volume (DDHV) for Trucks =		

Design Manual Section 1C-1
last update: 05-06-14

Effective Shoulder Width and Type for Interstates (Freeways)

Auxiliary Lanes	Preferred (values shown in feet)		Acceptable (values shown in feet)		Project Values
	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
	6	6	6	6	6

4-Lane Sections

Design Year Traffic	Outside		Median Side		Outside		Median Side		Project Values
	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
Less than or equal to 250 DDHV	10	10	6	6	10	10	4	4	N/A
Greater than 250 DDHV	12	12	6	6	12	12	4	4	N/A

Sections with 6 or more lanes

Design Year Traffic	Outside		Median Side		Outside		Median Side		Project Values
	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
Less than or equal to 250 DDHV	10	10	10	10	10	10	10	10	N/A
Greater than 250 DDHV	12	12	12	12	12	12	12	12	12' Outside, 12' Median

Curbs should be located beyond the outer edge of the paved shoulder

Notes:

Roadway	Boyson Road (N. 12th Ave to N. Center Point Rd)			
PIN Number			**Submittal Date**	02/10/17
Project Number	IM-380-6(224)25--13-57			**Approval Date**
District	District 6	**Assistant District Engineer**	Ken Yanna	
County	Linn (57)	**or**		
Route	I-380 at Boyson Road	**Office Director**		
Location	Boyson Road (N. 12th Ave to N. Center Point Rd)			
Work Type	Interchange Conversion to DDI (Accomodate 6 Lanes on I-380)			
Segment Manager				
Designer	HNTB / Iowa DOT			

Design Manual Section 1C-1
last update: 05-06-14

Urban Multilane Roadways (Urban Arterials)

Design Element		Preferred	Acceptable Criteria	Project Values
Design speed (mph)		The anticipated posted speed limit	30	35 (30 thru DDI)
Maximum superelevation rate (Refer to Section 2A-2)		4%	8%	4
Design lane width (ft)		12	11	12
Full depth paved width (ft)	Outside lane	Design lane width + curb and gutter unit or 14 feet for roadways with shoulders, 12' if using full depth shoulders	Match design lane width	Preferred
	Inside lane(s)	Design lane width + curb and gutter unit. 12' for roadways without a curb and gutter unit	Match design lane width	Preferred
Right turn lane or an auxiliary lane (ft)		12	10	12
Left turn lane (ft)	With raised or painted median	12 ft + median	10 ft + median	12 ft + median
	With depressed median	12	10	12
Two-way left turn lane (ft)		14	11	N/A
Parking lane width (ft)		10	7	N/A
Pavement cross-slope (on tangent sections)	Through lanes	2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%	1.5% minimum, 3% maximum	2%
	Auxiliary and turn lanes	3%	3% maximum	3%
	Crown break at centerline	4%	4% maximum	4%
Shoulder cross-slope (on tangent sections)	Shoulders	4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4%
	Curb and gutter units	Match pavement cross-slope	6% maximum	Preferred
	Parking lanes	1% greater than pavement cross-slope	6% maximum	N/A
Curb type (Refer to Section 3C-2)	Design speed ≤ 45 mph	6-inch standard	any shape	6-inch standard
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1	10:1 for 4' then 6:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	3.5:1
	Curbed roadways	2%	not steeper than 3:1	2%
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)		3:1	2.5:1	3:1
Transverse Slopes	w/ drainage structures	8:1	6:1	8:1
	w/o drainage structures	10:1	6:1	10:1
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	--	N/A
Median width (ft) (Refer to Section 3E-1)		See Section 3E-1	0	TBD for DDI
Bridge width—new	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths or curb-to-curb width	design lane widths + effective shoulder widths or curb-to-curb width	Preferred
	Bridge length > 200 ft	design lane widths + effective shoulder widths or curb-to-curb width	Curb-to-curb width or design lane widths + 4 ft offset each side for roadways with shoulders	Preferred
Bridge width—existing		design lane widths + no less than 2 ft left and right	design lane widths + 2 ft left and right of the design widths	Preferred
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16	16.5
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14	N/A
	Over railroad	23.3	23.3	N/A
	Sign truss and pedestrian crossings	17.5	17	17.5
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	Preferred
Level of Service		C	D	C

Roadway Design Speed (mph) =			35 (30 thru DDI)										
Design Manual Section 1C-1 last update: 05-06-14			**Design Criteria for Low Speed Roadways**										
Design Element			Preferred Criteria					Acceptable Criteria					Project Values
			Design Speed, mph					Design Speed, mph					
			25	30	35	40	45	25	30	35	40	45	
Stopping sight distance (ft) (Refer to Section 6D-1)			155	200	250	305	360	155	200	250	305	360	250
Minimum horizontal curve radius (ft) and superelevation rate (Refer to Sections 2A-2 and 2A-3)	Method 2 superelevation and side friction distribution	e = 4% max	See Table 10 in Section 2A-3					--					371
	Method 5 superelevation and side friction distribution	e_{max} = 6%	144	231	340	485	643	144	231	340	485	643	340
		e_{max} = 8%	--	--	--	--	--	134	214	314	444	587	314
Minimum vertical curve length (ft) (Refer to Section 2B-1)			75	90	105	120	135	75	90	105	120	135	105
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	crest vertical curves		12	19	29	44	61	12	19	29	44	61	29
	sag vertical curves	roadways without fixed-source lighting	26	37	49	64	79	26	37	49	64	79	49
		roadways with fixed-source lighting	26	37	49	64	79	14	20	27	35	44	49
Minimum gradient (%)	(Refer to Section 2B-1)		0.5					0.3% with a curb, 0.0% without a curb					0.5
Maximum gradient (%)	(Refer to Section 2B-1)	Urban roadways	5					--	9	8	8	7	5
		Rural roadways						--	--	--	6	6	5
Clear zone			See "Preferred Clear Zone" table in Section 8A-2					See "Acceptable Clear Zone" table in Section 8A-2					16

Design year ADT =	TBD	
Design Manual Section 1C-1 last update: 05-06-14	**Effective Shoulder Width and Type for Multilane Arterials**	

Preferred (Values shown in feet)					Acceptable (Values shown in feet)					Project Values
	Rural Roadways		Urban Roadways			Rural Roadways		Urban Roadways		
Auxiliary lanes or turn lanes with shoulders	6		6		Auxiliary lanes or turn lanes with shoulders	6		0		0
Turn lanes with curbs	6		See Section 3C-2		Turn lanes with curbs	6		0		0
Expressways	Outside		Median Side		Expressways	Outside		Median Side		N/A
	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width		Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
Routes where bicycles are to be accommodated	10	10	6	6	Routes where bicycles are to be accommodated	8	4	4	4	N/A
On roadways approaching urban areas (due to increased bike traffic)	10	10	6	6						
On all curves with a superelevation rate of 7.0% or greater	10	10	6	6	On all other Expressways (Multilane Arterials)	8	2*	4	4	
On roadways with design year ADT > 6500 vpd	10	6	6	6						
On all other Expressways (Multilane Arterials)	10	4	6	4						

*Requires safety edge-See Section 3C-6
Curbs should be located beyond the outer edge of the effective shoulder width in rural areas
Refer to Section 3C-2 for curb offsets in urban areas

Notes:

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER A.8

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Roadway	Tower Terrace Road (Miller Rd to N. Center Point Rd)			
PIN Number			**Submittal Date**	08/29/16
Project Number	IM-380-6(224)25--13-57			**Approval Date**
District	District 6	**Assistant District Engineer**	Ken Yanna	
County	Linn (57)	**or**		
Route	I-380 at Tower Terrace	**Office Director**		
Location	Tower Terrace Road (Miller Rd to N. Center Point Rd)			
Work Type	Widening / Reconstruction for New Interchange			
Segment Manager				
Designer	HNTB / Iowa DOT			

Design Manual Section 1C-1
last update: 05-06-14

Urban Multilane Roadways (Urban Arterials)

Design Element		Preferred	Acceptable Criteria	Project Values
Design speed (mph)		The anticipated posted speed limit	30	45 (30 thru DDI)
Maximum superelevation rate (Refer to Section 2A-2)		4%	8%	4%
Design lane width (ft)		12	11	12
Full depth paved width (ft)	Outside lane	Design lane width + curb and gutter unit or 14 feet for roadways with shoulders, 12' if using full depth shoulders	Match design lane width	Preferred
	Inside lane(s)	Design lane width + curb and gutter unit. 12' for roadways without a curb and gutter unit	Match design lane width	Preferred
Right turn lane or an auxiliary lane (ft)		12	10	12
Left turn lane (ft)	With raised or painted median	12 ft + median	10 ft + median	12 ft + median
	With depressed median	12	10	N/A
Two-way left turn lane (ft)		14	11	N/A
Parking lane width (ft)		10	7	N/A
Pavement cross-slope (on tangent sections)	Through lanes	2%, However, when adjacent lanes slope in the same direction, increase slope by 0.5% per lane up to 3%	1.5% minimum, 3% maximum	2%
	Auxiliary and turn lanes	3%	3% maximum	3%
	Crown break at centerline	4%	4% maximum	4%
Shoulder cross-slope (on tangent sections)	Shoulders	4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4%
	Curb and gutter units	Match pavement cross-slope	6% maximum	Preferred
	Parking lanes	1% greater than pavement cross-slope	6% maximum	N/A
Curb type (Refer to Section 3C-2)	Design speed ≤ 45 mph	6-inch standard	any shape	6-inch standard
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1	10:1 for 4' then 6:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	3.5:1
	Curbed roadways	2%	not steeper than 3:1	2%
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)		3:1	2.5:1	3:1
Transverse Slopes	w/ drainage structures	8:1	6:1	8:1
	w/o drainage structures	10:1	6:1	10:1
Ditches (Refer to Section 3G-1)	Outside ditch (depth x width) (ft)	5 x 10	--	N/A
Median width (ft) (Refer to Section 3E-1)		See Section 3E-1	0	N/A
Bridge width—new	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths or curb-to-curb width	design lane widths + effective shoulder widths or curb-to-curb width	Preferred
	Bridge length > 200 ft	design lane widths + effective shoulder widths or curb-to-curb width	Curb-to-curb width or design lane widths + 4 ft offset each side for roadways with shoulders	Preferred
Bridge width—existing		design lane widths + no less than 2 ft left and right	design lane widths + 2 ft left and right of the design widths	Preferred
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16	16.5
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14	N/A
	Over railroad	23.3	23.3	N/A
	Sign truss and pedestrian crossings	17.5	17	17.5
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	Preferred
Level of Service		C	D	C

Roadway Design Speed (mph) =			45									
Design Manual Section 1C-1 last update: 05-06-14			**Design Criteria for Low Speed Roadways**									
Design Element			Preferred Criteria					Acceptable Criteria					Project Values
			Design Speed, mph					Design Speed, mph					
			25	30	35	40	45	25	30	35	40	45	
Stopping sight distance (ft) (Refer to Section 6D-1)			155	200	250	305	360	155	200	250	305	360	360
Minimum horizontal curve radius (ft) and superelevation rate (Refer to Sections 2A-2 and 2A-3)	Method 2 superelevation and side friction distribution	e = 4% max	See Table 10 in Section 2A-3					--					711
	Method 5 superelevation and side friction distribution	e_{max} = 6%	144	231	340	485	643	144	231	340	485	643	643
		e_{max} = 8%	--	--	--	--	--	134	214	314	444	587	--
Minimum vertical curve length (ft) (Refer to Section 2B-1)			75	90	105	120	135	75	90	105	120	135	135
Minimum rate of vertical curvature (K) (Refer to Section 2B-1)	crest vertical curves		12	19	29	44	61	12	19	29	44	61	61
	sag vertical curves	roadways without fixed-source lighting	26	37	49	64	79	26	37	49	64	79	79
		roadways with fixed-source lighting	26	37	49	64	79	14	20	27	35	44	79
Minimum gradient (%)	(Refer to Section 2B-1)		0.5					0.3% with a curb, 0.0% without a curb					0.5
Maximum gradient (%)	(Refer to Section 2B-1)	Urban roadways	5					--	9	8	8	7	5
		Rural roadways						--	--	--	6	6	5
Clear zone			See "Preferred Clear Zone" table in Section 8A-2					See "Acceptable Clear Zone" table in Section 8A-2					22

Design year ADT =	TBD	
Design Manual Section 1C-1 last update: 05-06-14	**Effective Shoulder Width and Type for Multilane Arterials**	

Preferred (Values shown in feet)					Acceptable (Values shown in feet)					Project Values
	Rural Roadways		Urban Roadways			Rural Roadways		Urban Roadways		
Auxiliary lanes or turn lanes with shoulders	6		6		Auxiliary lanes or turn lanes with shoulders	6		0		0
Turn lanes with curbs	6		See Section 3C-2		Turn lanes with curbs	6		0		0
Expressways	Outside		Median Side		Expressways	Outside		Median Side		N/A
	Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width		Effective Shoulder Width	Paved Width	Effective Shoulder Width	Paved Width	
Routes where bicycles are to be accommodated	10	10	6	6	Routes where bicycles are to be accommodated	8	4	4	4	N/A
On roadways approaching urban areas (due to increased bike traffic)	10	10	6	6						
On all curves with a superelevation rate of 7.0% or greater	10	10	6	6	On all other Expressways (Multilane Arterials)	8	2*	4	4	
On roadways with design year ADT > 6500 vpd	10	6	6	6						
On all other Expressways (Multilane Arterials)	10	4	6	4						

*Requires safety edge-See Section 3C-6
Curbs should be located beyond the outer edge of the effective shoulder width in rural areas
Refer to Section 3C-2 for curb offsets in urban areas

Notes:

Roadway	Service Ramps at I-380 and Blairs Ferry, Boyson, Tower Terrace, and County Home			
PIN Number			**Submittal Date**	02/10/17
Project Number	IM-380-6(224)25--13-57			**Approval Date**
District	District 6	**Assistant District Engineer**	Ken Yanna	
County	Linn (57)	**or**		
Route	I-380	**Office Director**		
Location	I-380 (Collins Road/Highway 100 to County Home Road)			
Work Type	Interchange Reconstruction at Blairs Ferry + County Home for I-380 Widening, Interchange Conversion to DDI at Boyson, Interchange Addition at Tower Terrace			
Segment Manager				
Designer	HNTB / Iowa DOT			
Design Manual Section 1C-1 last update: 05-06-14	**Ramps**		*Design Exception required for ramps on the Interstate system only	

Design Element		Preferred Values	Acceptable Values	Project Values
Design speed (mph)		See Design Speed for Ramps Table Below	See Design Speed for Ramps Table Below	60 or 30 (Loop)
Design lane width (ft)				
Turn-lane width (ft)	Interstate ramps	12	12	12
	Non-Interstate ramps	12	10	N/A
Pavement cross-slope (on tangent sections)		2%	1.5% minimum, 2% maximum	2%
Shoulder cross-slope (on tangent sections)		4	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders	4
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	*4:1 for interstates, 3:1 for other roadways	10:1 for 4' then 6:1
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	3.5:1
	Curbed roadways	2%	not steeper than 3:1	2%
Bridge width—new		design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	Preferred
Bridge width—existing		design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	Preferred
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16	16.5
	over non-primary	16.5 at interchange locations, 15 at all other locations	14	16.5
	over railroad	23.3	23.3	N/A
	sign truss and pedestrian bridges	17.5	17	17.5
Structural Capacity		Contact Office of Bridges and Structures	Contact Office of Bridges and Structures	N/A

Ramp Design Speed (mph) =	60										
Design Manual Section 1C-1 last update: 05-06-14	Design Speed for Ramps										
Design Element	Ramp Type										Project Values
	Preferred					Acceptable					
	All curves near free flow terminals	Diagonal: Curves near at-grade terminals	Loop	Semi-Directional	Directional	All curves near free flow terminals	Diagonal: Curves near at-grade terminals	Loop	Semi-Directional	Directional	
Design speed (mph)	60	40	30	50	60	50	35	25	40	40	60
Maximum superelevation rate (Refer to Section 2A-2 for details)	6%	4%	6%			8%					6%

Ramp Design Speed (mph) =			60																
Design Manual Section 1C-1 last update: 05-06-14			**Design Criteria for Ramps Based Upon Design Speed**																
Design Element			Preferred Criteria Design Speed, mph								Acceptable Criteria Design Speed, mph								Project Values
			25	30	35	40	45	50	55	60	25	30	35	40	45	50	55	60	
Stopping sight distance (ft) (Refer to Section 6D-1)			155	200	250	305	360	425	495	570	155	200	250	305	360	425	495	570	570
Minimum horizontal curve radius (ft) and superelevation rate (Refer to Sections 2A-2 and 2A-3)	Method 2 superelevation and side friction distribution	e = 4% max	See Table 10 in Section 2A-3					--	--	--	--								--
	Method 5 superelevation and side friction distribution	e_{max} = 6%	144	231	340	485	643	833	1060	1330	144	231	340	485	643	833	1060	1330	1330
		e_{max} = 8%	--	--	--	--	--	--	--	--	134	214	314	444	587	758	960	1200	--
Minimum vertical curve length (ft) (Refer to Section 2B-1)			75	90	105	120	135	150	165	180	75	90	105	120	135	150	165	180	180
Design Manual Section 1C-1 last update: 07-08-13 (Refer to Section 2B-1)	crest vertical curves		12	19	29	44	61	84	114	151	12	19	29	44	61	84	114	151	151
	sag vertical curves	roadways without fixed-source lighting	26	37	49	64	79	96	115	136	26	37	49	64	79	96	115	136	136
		roadways with fixed-source lighting	26	37	49	64	79	96	115	136	14	20	27	35	44	54	66	78	136
Minimum gradient (%)	(Refer to Section 2B-1)		0.5								0.3% with a curb, 0.0% without a curb								0.5
Maximum gradient (%) on ramps	(Refer to Sections 2B-1)	Upgrades	4								8	7	6	6	5	5	5	5	4
		Downgrades									Equal to the maximum upgrade gradient. In special cases, may be 2% greater but in no case greater than 8%								4
Clear zone			See "Preferred Clear Zone" table in Section 8A-2								See "Acceptable Clear Zone" table in Section 8A-2								32

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER A.14

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Design Manual Section 1C-1
last update: 05-06-14

Effective Shoulder Width and Type for Ramps

Design Element		Ramp Type: Preferred – Diagonal – one lane	Preferred – Diagonal – two lane	Preferred – Loop	Preferred – Semi-Directional – one lane	Preferred – Semi-Directional – two lane	Preferred – Directional – one lane	Preferred – Directional – two lane	Acceptable – Diagonal – *Radius > 500 feet – one lane	Acceptable – Diagonal – *Radius > 500 feet – two lane	Acceptable – Loop	Acceptable – Semi-Directional – *Radius > 500 feet – one lane	Acceptable – Semi-Directional – *Radius > 500 feet – two lane	Acceptable – Directional – Radius > 500 feet – one lane	Acceptable – Directional – Radius > 500 feet – two lane	Project Values
Full depth paved width (ft)		16	24	18	16	24	16	24	14	22	17	14	22	14	22	Diagonal
Design lane width (ft)		16	12	18	16	12	16	12	14	11	17	14	11	14	11	Diagonal
**Paved shoulder width (ft) (in the direction of travel)	Left	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	Right	6	6	6	6	6	8	8	6	6	6	6	6	8	8	6
***Granular shoulder width (ft) (in the direction of travel)	Left	4	-	-	-	-	-	-	4	-	-	-	-	-	-	N/A
	Right	6	-	-	-	-	-	-	6	-	-	-	-	-	-	N/A
Curb type	Interstate	4-inch sloped							4-inch sloped							4-inch sloped
	Non-Interstate	4-inch sloped							6-inch sloped							N/A

*For radii less than 500 feet, refer to design widths of pavement for turning roadways in A Policy on Geometric Design of Highways and Streets
**Left and right shoulders widths may be reversed if needed to provide additional sight distance
***Non-Interstate interchanges only

Notes:

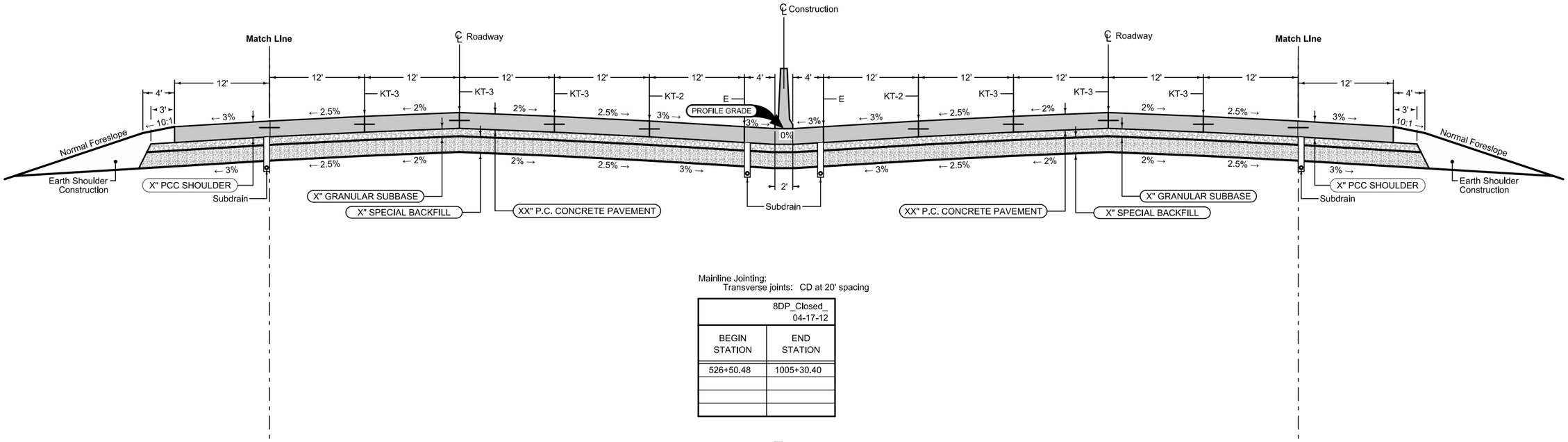
FIELD EXAM QUESTIONS:

ML380

-Is there an existing inlet at station 1161+00 approx. 120' RT?

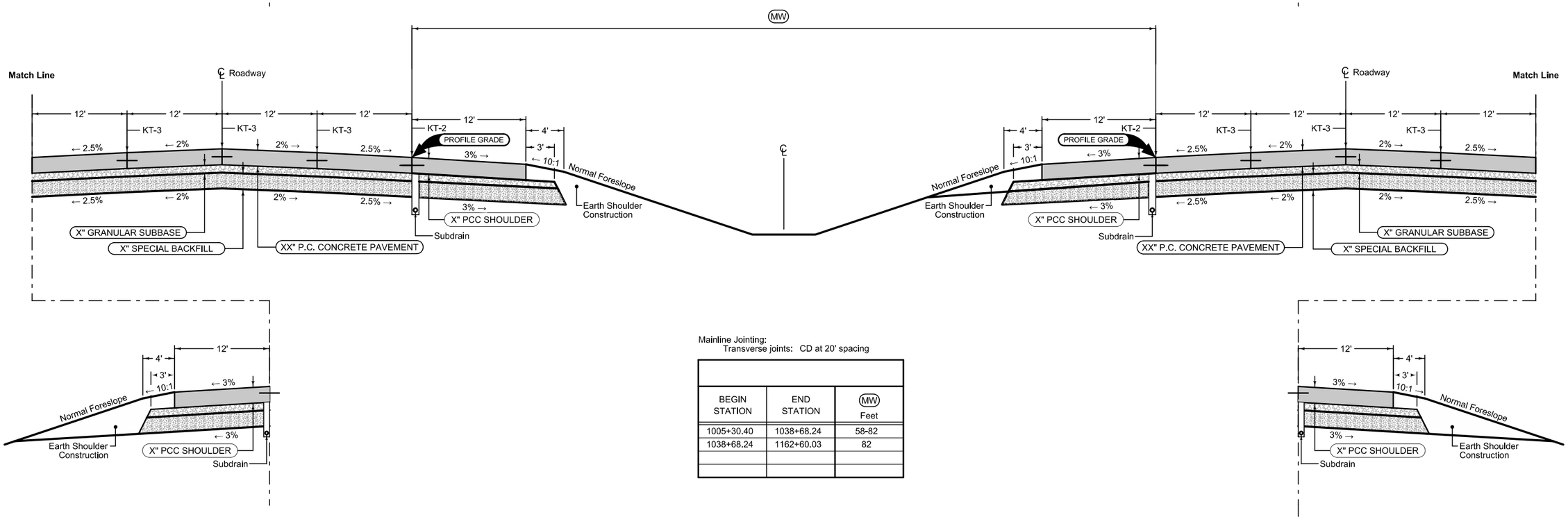
-Drainage between BOP and 537+00 is collected by various inlets/FES. Where do these pipes carry water to?

-The storm sewer manhole at 951+00 90.5' RT has a pipe feeding into it from the east. Where does this come from and what is the area that drains to it?



Mainline Jointing:
Transverse joints: CD at 20' spacing

	8DP_Closed_ 04-17-12
BEGIN STATION	END STATION
526+50.48	1005+30.40



Mainline Jointing:
Transverse joints: CD at 20' spacing

		MW
BEGIN STATION	END STATION	Feet
1005+30.40	1038+68.24	58-82
1038+68.24	1162+60.03	82

INTERSTATE 380
ULTIMATE BUILD - 8 LANES
****FOR REFERENCE ONLY****

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER B.1

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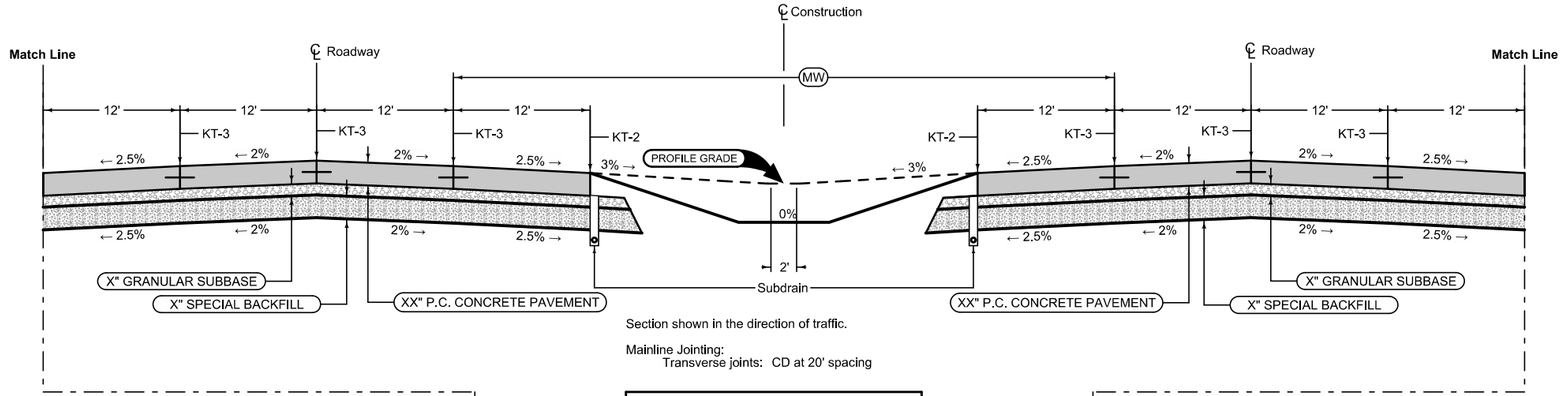


Section shown in the direction of traffic.

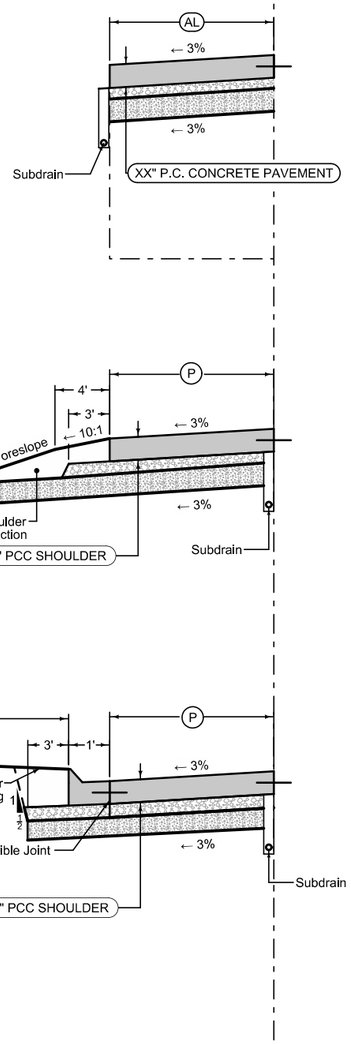
Mainline Jointing:
Transverse joints: CD at 20' spacing

Direction of Travel	BEGIN STATION	END STATION	(MW) Feet
NB	526+50.98	534+30.98	40-58
NB	534+30.98	1005+30.40	58

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

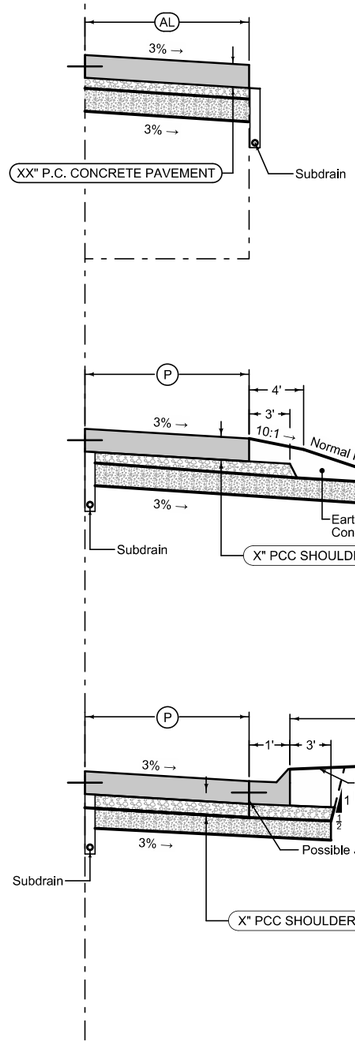
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
NB	528+13.94	538+31.22	0-12
NB	538+31.22	543+78.78	0-12



Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

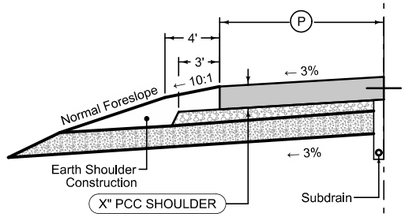
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
NB	532+37.33	534+88.39	0-12
NB	534+88.39	543+41.15	12
NB	934+03.19	936+41.00	12
NB	936+41.00	939+41.00	12-0
NB	950+45.00	958+74.82	12



Full Depth PCC Shoulder

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

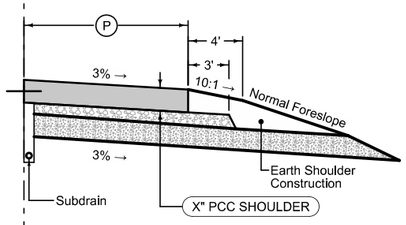
Direction of Travel	BEGIN STATION	END STATION	(P) Feet
NB	546+73.59	552+06.80	6
NB	960+73.82	971+95.12	12
NB	981+48.99	986+59.19	6
NB	986+59.19	987+48.99	6-12
NB	987+48.99	1005+30.40	12



Full Depth PCC Shoulder

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

Direction of Travel	BEGIN STATION	END STATION	(P) Feet
NB	526+50.98	530+03.10	12
NB	545+84.46	550+46.02	6
NB	550+46.02	563+87.07	12
NB	973+94.60	983+16.47	12
NB	983+16.47	992+46.53	6
NB	992+46.53	995+46.59	6-12
NB	995+46.59	1005+30.40	12

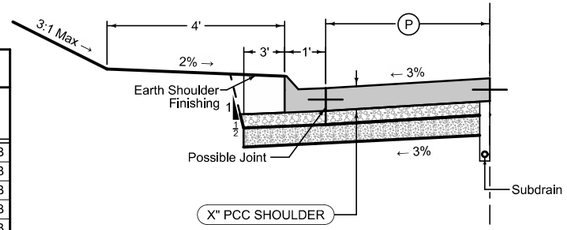


Curbed Shoulder

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

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
526+50.98	530+78.04	12-8	4" SLOPED CURB
530+78.04	538+78.00	8	4" SLOPED CURB
545+04.87	545+62.84	6.95-6	4" SLOPED CURB
545+62.84	546+63.62	6	4" SLOPED CURB
927+48.41	933+70.00	12	4" SLOPED CURB
933+70.00	939+10.70	6	4" SLOPED CURB
942+12.93	954+47.73	12	4" SLOPED CURB
954+47.73	954+98.41	12-6	4" SLOPED CURB
954+98.41	960+73.82	6	4" SLOPED CURB
972+05.12	981+48.99	12	4" SLOPED CURB

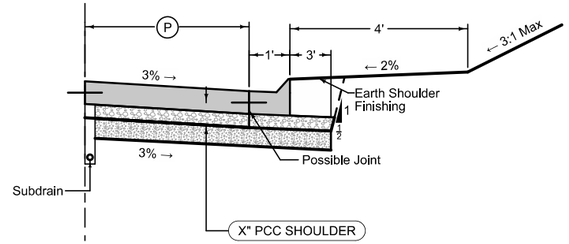


Curbed Shoulder

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

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

STATION TO STATION		(P) Feet	Curb Type See PV-102
530+13.10	532+38.07	12	4" SLOPED CURB
532+38.07	533+20.49	12-8	4" SLOPED CURB
533+20.49	534+30.98	8	4" SLOPED CURB
543+16.13	544+19.54	8	4" SLOPED CURB
544+19.54	545+13.58	8-6	4" SLOPED CURB
545+13.58	545+74.46	6	4" SLOPED CURB
925+92.60	930+79.85	12	4" SLOPED CURB
930+79.85	937+55.69	6	4" SLOPED CURB
940+60.16	950+35.00	12	4" SLOPED CURB
958+74.82	973+84.60	12	4" SLOPED CURB



INTERSTATE 380

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER B.2

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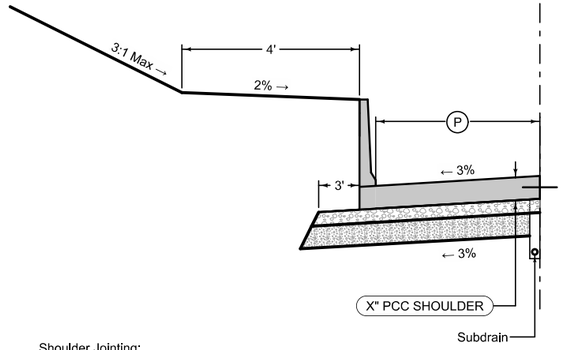
44" Concrete Barrier (Half Section)



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

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

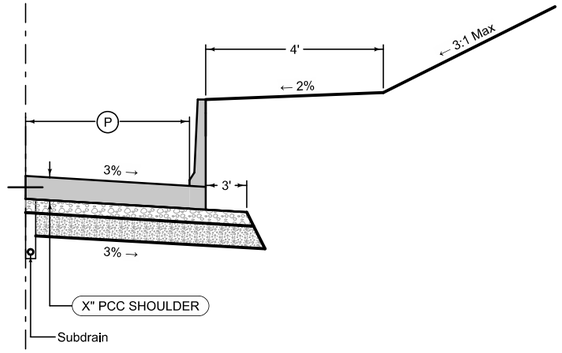
			2_Curb_ 10-17-17
STATION TO STATION		(P) Feet	Barrier Type See SRPs
538+95.00	543+69.94	8	BA-102
543+69.94	544+82.00	8-7.16	BA-102
565+60.18	927+31.41	12	BA-102
939+27.70	939+70.00	7.16-10	BA-102
939+70.00	940+30.98	10	BA-102
940+30.98	940+50.98	10-12	BA-102
940+50.98	941+95.93	12	BA-102

44" Concrete Barrier (Half Section)

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

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

			2_Curb_ 10-17-17
STATION TO STATION		(P) Feet	Barrier Type See SRPs
538+40.00	542+99.00	8	BA-102
564+04.19	925+75.60	12	BA-102
937+72.69	939+93.86	6	BA-102
939+93.86	940+43.05	6-10.93	BA-102

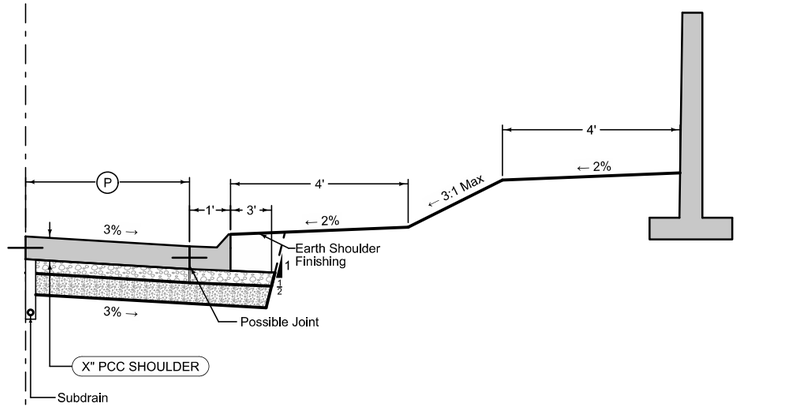


Curbed Shoulder with Retaining Wall

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

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

2_Curb_ 10-17-17			
Curb Type See SRPs	(P) Feet	STATION TO STATION	
4" SLOPED CURB	8	534+30.98	536+82.00
4" SLOPED CURB	12	940+60.16	950+35.00

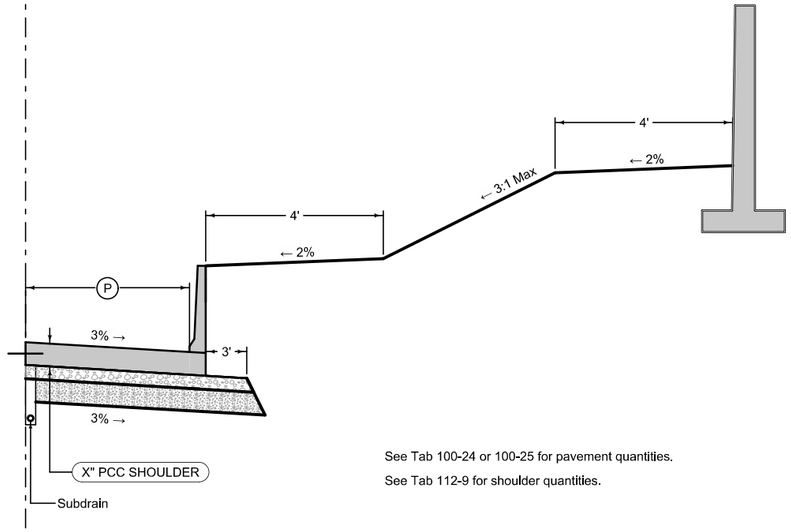


44" Concrete Barrier (Half Section) with Retaining Wall

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

Single pour: L-2
Staged : KT-2
Transverse:C at 20' spacing

			2_Curb_ 10-17-17
STATION TO STATION		(P) Feet	Barrier Type See SRPs
536+99.00	538+40.00	8	BA-102



See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

INTERSTATE 380

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER B.3

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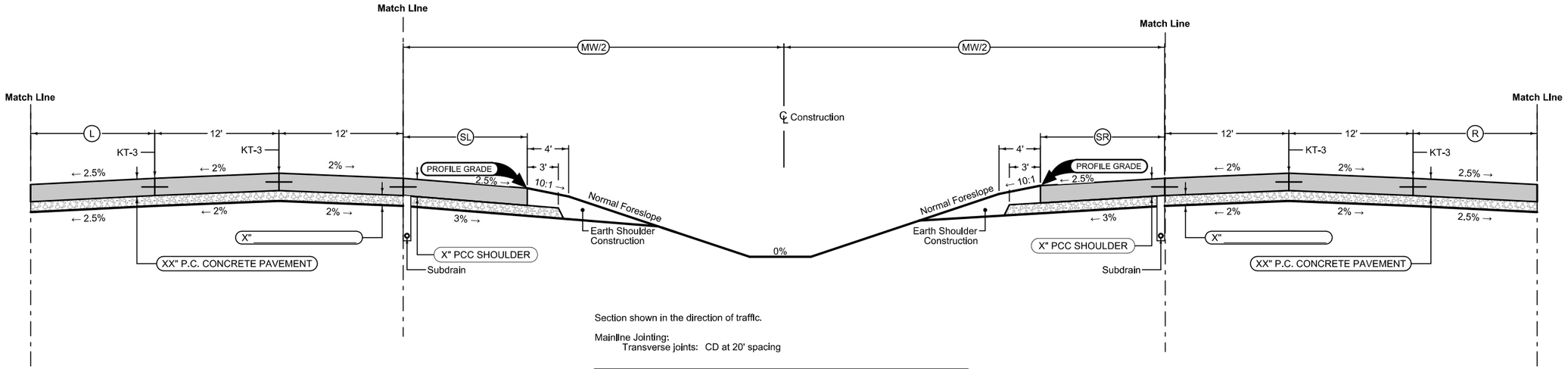


Section shown in the direction of traffic.

Mainline Jointing:
Transverse joints: CD at 20' spacing

6DP_Dprs_
04-19-11

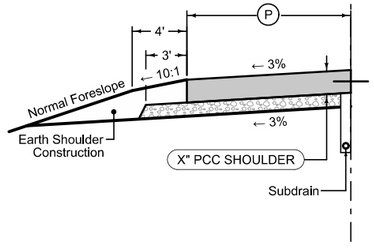
Direction of Travel	BEGIN STATION	END STATION	MW Feet	SL Feet	SR Feet	L Feet	R Feet
NB	1005+30.40	1038+68.24	58-82	12	12	12	12
NB	1038+68.24	1155+98.03	82	12	12	12	12
NB	1155+98.03	1162+60.02	82-65	12	12	12	12
NB	1162+60.02	1170+62.05	65	12	12	12-0.37	12-0.37
NB	1170+62.05	1171+52.05	65	12-7	12-6	0.37-0	0.37-0

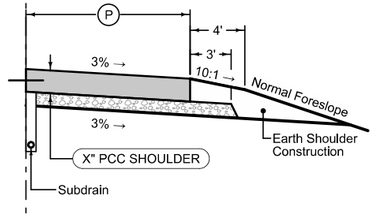
Full Depth PCC Shoulder

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

6D_Dprs_P_FullPCC_
04-19-11

Direction of Travel	BEGIN STATION	END STATION	P Feet
NB	1005+30.40	1018+86.13	12
NB	1018+86.13	1021+29.17	12-6
NB	1021+29.17	1029+76.23	6
NB	1029+76.23	1049+81.37	12
NB	1049+81.37	1054+80.40	6
NB	1054+80.40	1055+80.40	6-12
NB	1055+80.40	1138+98.95	12
NB	1138+98.95	1142+00.00	12-6
NB	1142+00.00	1151+28.95	6
NB	1151+28.95	1171+52.05	12





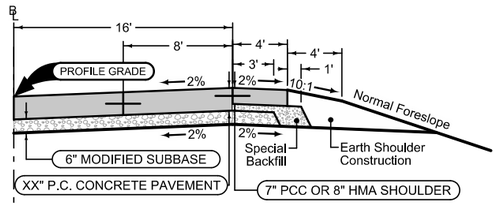
Full Depth PCC Shoulder

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

6D_Dprs_P_FullPCC_
04-19-11

Direction of Travel	BEGIN STATION	END STATION	P Feet
NB	1005+30.40	1020+53.07	12
NB	1020+53.07	1021+45.27	12-6
NB	1021+45.27	1026+71.10	6
NB	1026+71.10	1052+92.36	12
NB	1052+92.36	1062+40.00	6
NB	1062+40.00	1065+42.51	6-12
NB	1065+42.51	1144+86.44	12
NB	1144+86.44	1145+60.00	12-6
NB	1145+60.00	1150+86.44	6
NB	1150+86.44	1171+52.05	12

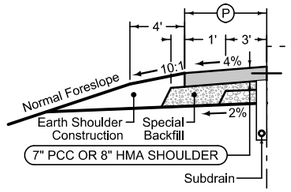
INTERSTATE 380



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

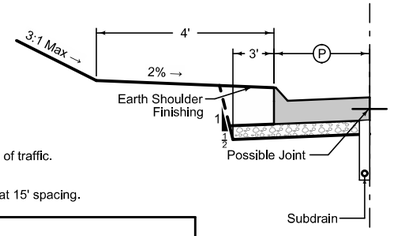
1RP_ 10-17-17		
RAMP IDENTIFICATION	BEGIN STATION	END STATION
BLAIRS FERRY RAMP A	3925+91.53	3933+71.06



Paved Shoulder Alternates

PCC Shoulder Jointing:
Longitudinal joint: BT-1 or BT-5
Transverse joints: C at 15' spacing
HMA Shoulder Jointing:
Longitudinal joint: B

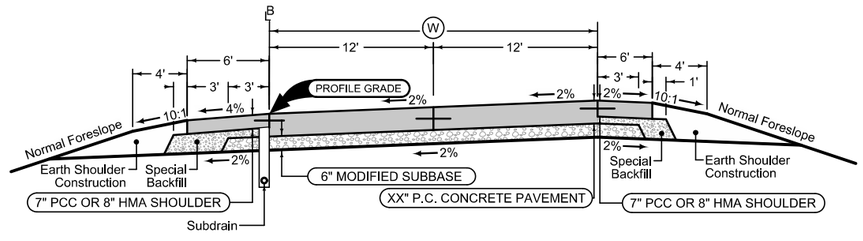
1R_P_ALT_ 10-16-18			
RAMP IDENTIFICATION	BEGIN STATION	END STATION	Ⓟ Feet
BLAIRS FERRY RAMP A	3925+91.53	3933+61.06	6



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

RAMP IDENTIFICATION	BEGIN STATION	END STATION	Ⓟ Feet	Curb Type See PV-102
BLAIRS FERRY RAMP A	3932+50.81	3933+71.06	7	4" SLOPED CURB

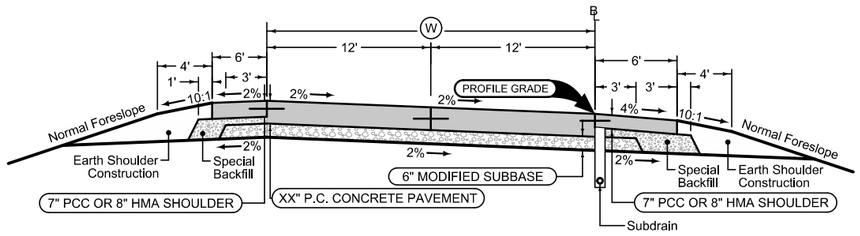


Section shown in the direction of traffic.

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

2RP_ 04-16-13			
RAMP IDENTIFICATION	BEGIN STATION	END STATION	Ⓦ Feet
BLAIRS FERRY RAMP B	4552+05.06	4556+10.70	17.24-24

RAMPS - BLAIRS FERRY ROAD

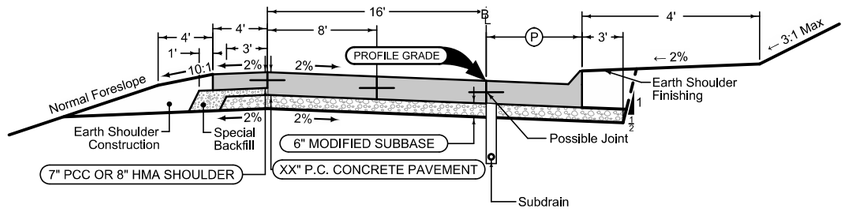


Section shown in the direction of traffic.

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

2RP_
04-16-13

RAMP IDENTIFICATION	BEGIN STATION	END STATION	(W) Feet
BLAIRS FERRY RAMP C	5550+43.28	5554+44.93	24



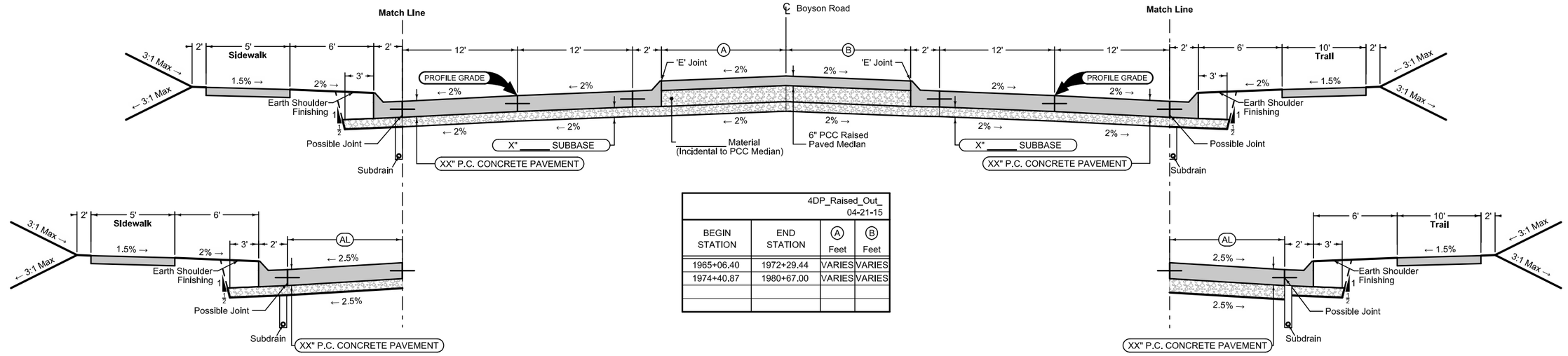
Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

1RP_
10-17-17

RAMP IDENTIFICATION	BEGIN STATION	END STATION	(P) Feet	Curb Type See PV-102
BLAIRS FERRY RAMP D	6925+18.98	6930+82.05	7	4" SLOPED CURB

RAMPS - BLAIRS FERRY ROAD



4DP_Raised_Out_ 04-21-15			
BEGIN STATION	END STATION	(A) Feet	(B) Feet
1965+06.40	1972+29.44	VARIES	VARIES
1974+40.87	1980+67.00	VARIES	VARIES

Auxiliary Lane

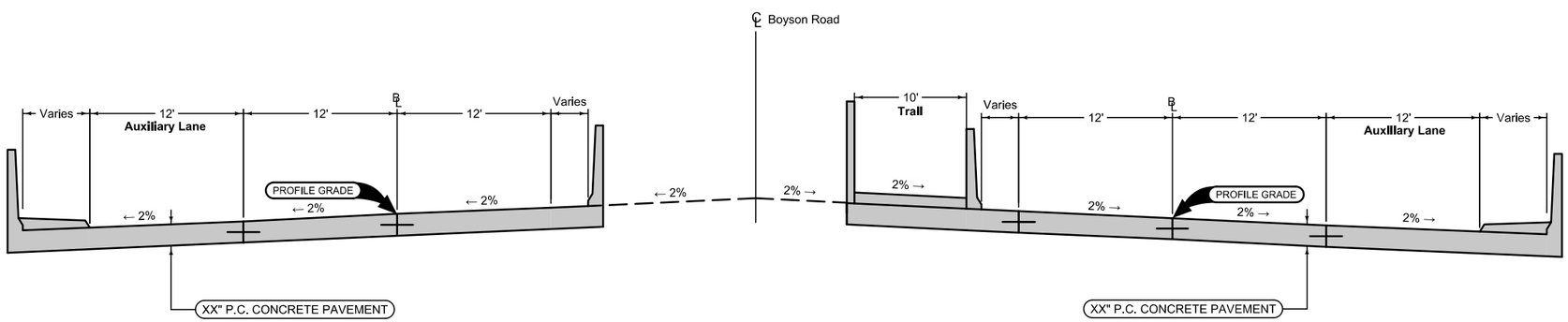
Longitudinal joint: L or KT
Transverse joint: Match Mainline

Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
WB	1977+20.34	1978+86.19	12

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
EB	1967+77.87	1968+92.52	12



BEGIN STATION	END STATION
1972+29.44	1974+40.87

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

BOYSON ROAD

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER B.7

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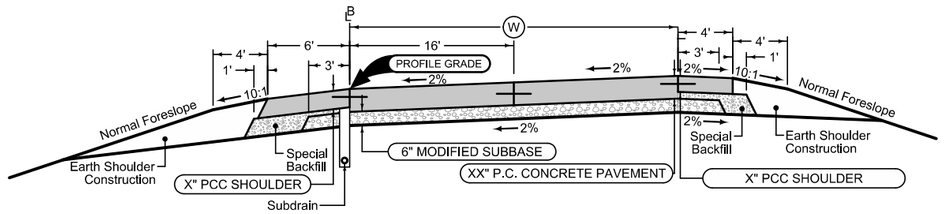
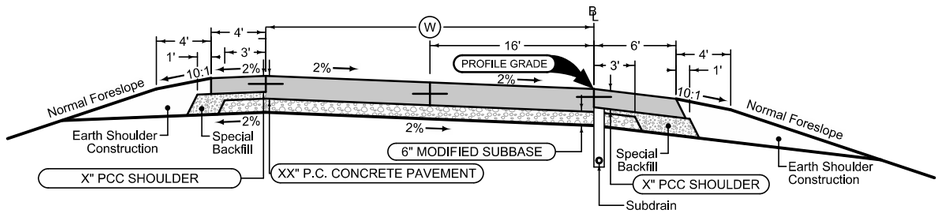


Section shown in the direction of traffic.

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

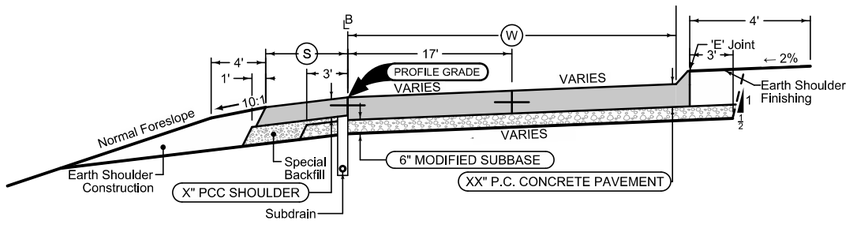
INTERCHANGE PAVEMENT			
ROADWAY	BEGIN STATION	END STATION	(W) Feet
RAMP A - SB	3976+04.04	3980+06.57	16
RAMP A - SB	3980+06.57	3981+50.00	51-16
RAMP B - SB	4960+71.63	4966+03.04	16
RAMP B - SB	4966+03.04	4970+64.77	16-34



Section shown in the direction of traffic.

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

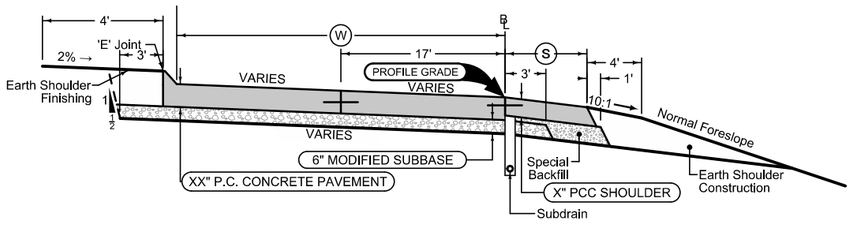
INTERCHANGE PAVEMENT			
ROADWAY	BEGIN STATION	END STATION	(W) Feet
RAMP C - NB	5958+72.82	5964+76.67	16
RAMP C - NB	5964+76.67	5967+25.52	16-51
RAMP C - NB	5967+25.52	5969+49.83	51
RAMP D - NB	6974+68.31	6979+95.79	34-16
RAMP D - NB	6979+95.79	6983+18.56	16



Section shown in the direction of traffic.

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

INTERCHANGE PAVEMENT				
ROADWAY	BEGIN STATION	END STATION	(W) Feet	(S) Feet
RAMP A - WB	23973+82.55	23975+50.37	17	6
RAMP B - EB	4971+23.42	4972+91.03	17	6
RAMP B - EB	14972+91.03	14974+15.22	17	6
RAMP C - WB	15970+18.25	15971+92.15	17	4
RAMP D - EB	26972+26.09	26974+08.96	17	4



Section shown in the direction of traffic.

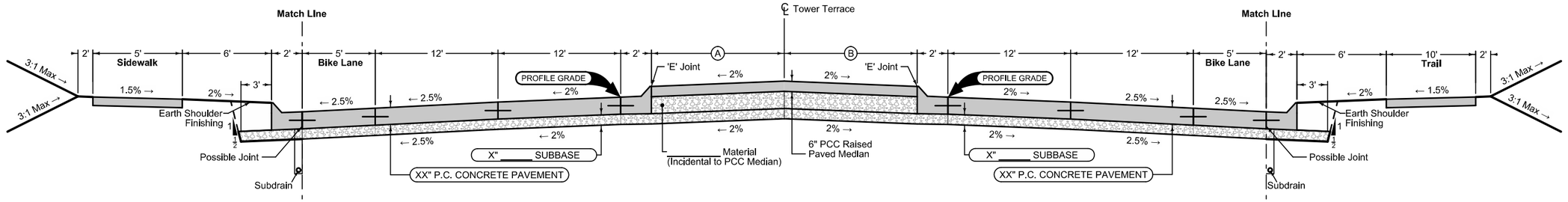
Ramp Jointing:
Transverse joints: See L Sheets.
Longitudinal joint: L-2

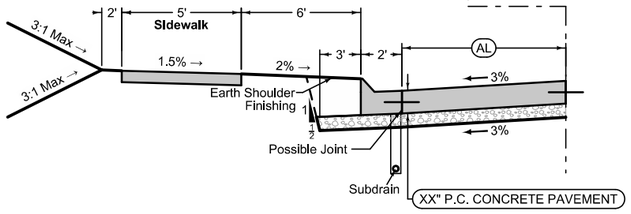
INTERCHANGE PAVEMENT				
ROADWAY	BEGIN STATION	END STATION	(W) Feet	(S) Feet
RAMP A - EB	13974+17.63	13975+50.76	34	4
RAMP B - WB	24971+17.12	24973+35.17	17	4
RAMP C - EB	25970+07.89	25971+48.85	34	6
RAMP D - WB	16972+03.76	16973+52.34	17	6
RAMP D - WB	6973+52.34	6974+00.23	17	6

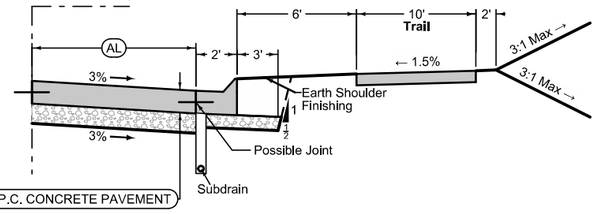
See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

RAMPS - BOYSON ROAD







4DP_Raised_Out_ 04-21-15			
BEGIN STATION	END STATION	(A) Feet	(B) Feet
33+07.78	36+62.04	VARIES	VARIES
46+40.44	52+99.63	VARIES	VARIES

Auxiliary Lane

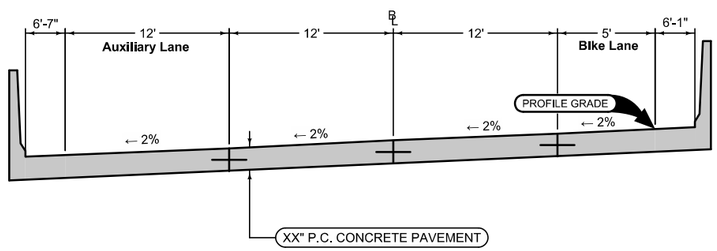
Longitudinal joint: L or KT
Transverse joint: Match Mainline

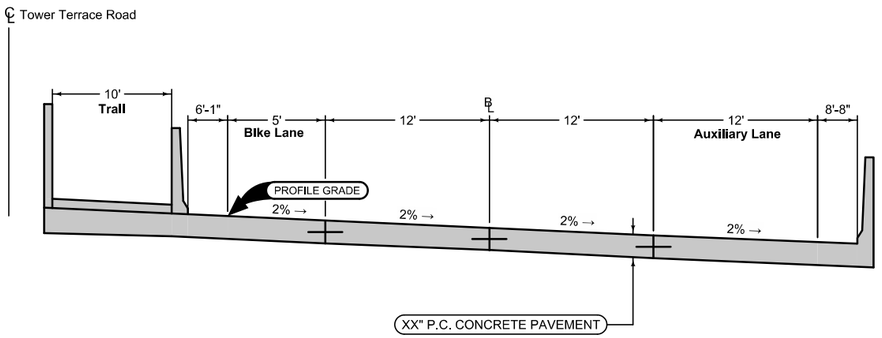
Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
WB	47+67.69	49+02.24	12

Auxiliary Lane

Longitudinal joint: L or KT
Transverse joint: Match Mainline

Direction of Travel	BEGIN STATION	END STATION	(AL) Feet
EB	36+76.46	38+18.92	12



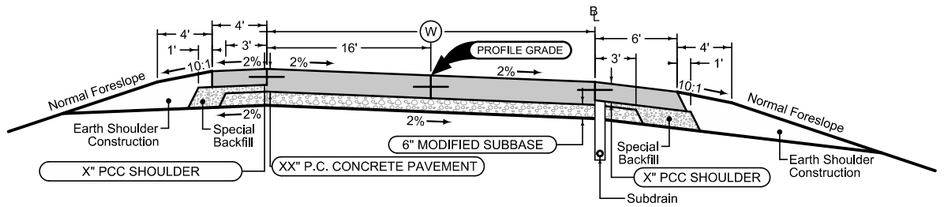


BEGIN STATION	END STATION
41+79.79	44+24.79

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

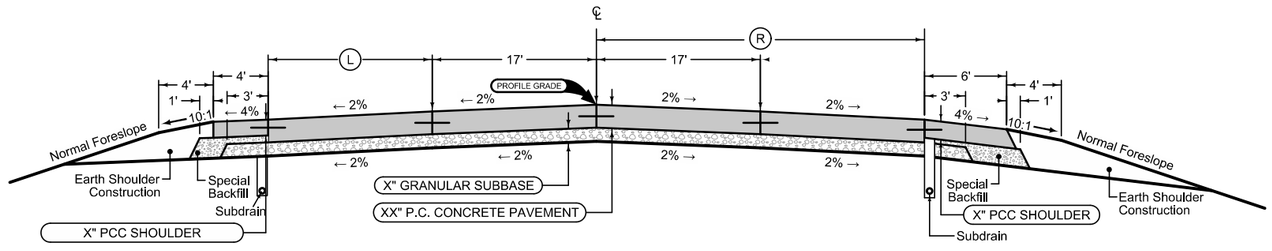
TOWER TERRACE ROAD



Section shown in the direction of traffic.

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

INTERCHANGE PAVEMENT			
ROADWAY	BEGIN STATION	END STATION	(W) Feet
RAMP A - SB	3044+25.58	3049+81.50	16
RAMP B - SB	4029+74.10	4030+34.83	16
RAMP B - SB	4030+34.83	4037+26.21	16-32
RAMP C - NB	5026+69.93	5033+71.96	16
RAMP D - NB	6041+64.78	6049+34.66	32-16
RAMP D - NB	6049+34.66	6052+94.31	16



Section shown in the direction of traffic.

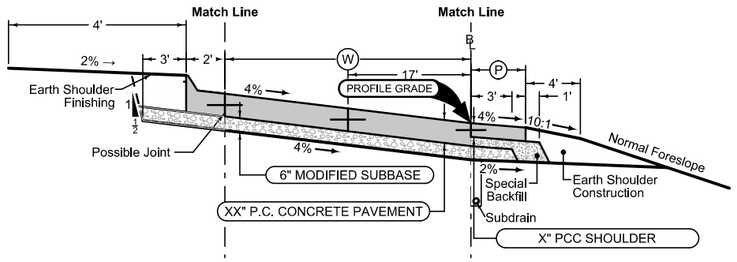
Ramp Jointing:
Transverse joints: See L Sheets.
Longitudinal joint: L-2

INTERCHANGE PAVEMENT				
ROADWAY	BEGIN STATION	END STATION	(L) Feet	(R) Feet
RAMP A - SB	3043+27.22	3044+25.58	17-0	17-0
RAMP A - SB	3041+77.22	3043+27.22	17	17
RAMP C - NB	5033+71.96	5034+70.33	0-17	0-34
RAMP C - NB	5034+70.33	5036+20.33	17	34

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

RAMPS - TOWER TERRACE ROAD

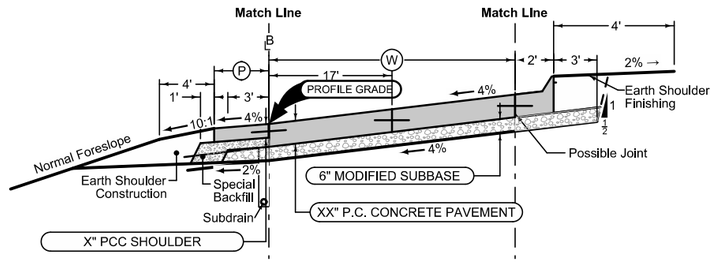


Shoulder jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':

Section shown in the direction of traffic.

Loop Jointing:
Transverse joints: See L Sheets.
Longitudinal joint: L-2

LOOP PAVEMENT					
ROADWAY	BEGIN STATION	END STATION	(W) Feet	(P) Feet	Curb Type See PV-102
RAMP A - WEST	13039+02.76	13041+16.52	17	6	4" SLOPED CURB
RAMP B - WEST	14038+84.66	14040+59.44	17	6	4" SLOPED CURB
RAMP C - EAST	25036+20.33	25039+17.39	34	6	4" SLOPED CURB
RAMP D - EAST	26038+78.73	26040+84.83	17	6	4" SLOPED CURB



Shoulder jointing:
Longitudinal joint not required when distance from back of curb to nearest joint is less than 16':

Section shown in the direction of traffic.

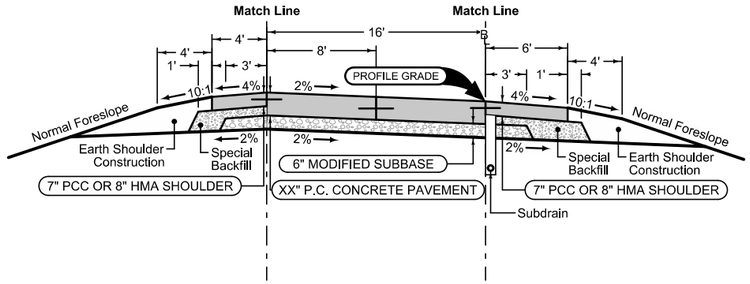
Loop Jointing:
Transverse joints: See L Sheets.
Longitudinal joint: L-2

LOOP PAVEMENT					
ROADWAY	BEGIN STATION	END STATION	(W) Feet	(P) Feet	Curb Type See PV-102
RAMP A - EAST	23039+31.71	23041+77.22	34	4	4" SLOPED CURB
RAMP B - EAST	24037+26.49	24040+35.51	17	4	4" SLOPED CURB
RAMP C - WEST	15036+56.42	15038+77.5	34	4	4" SLOPED CURB
RAMP D - WEST	16038+87.07	16041+64.78	17	4	4" SLOPED CURB

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

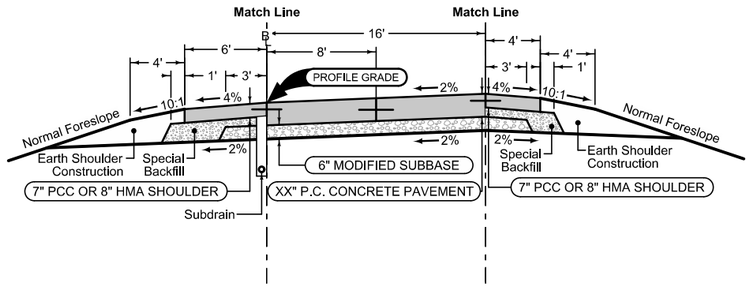
LOOPS - TOWER TERRACE ROAD



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

		1RP_ 10-17-17
RAMP IDENTIFICATION	BEGIN STATION	END STATION
COUNTY HOME ROAD RAMP C	41151+27.08	41156+48.94



Section shown in the direction of traffic.

Ramp Jointing:
Transverse joints: CD at 15' spacing.
Longitudinal joints: L-2

		1RP_ 10-17-17
RAMP IDENTIFICATION	BEGIN STATION	END STATION
COUNTY HOME ROAD RAMP B	51150+86.44	51158+86.44

See Tab 100-24 or 100-25 for pavement quantities.

See Tab 112-9 for shoulder quantities.

RAMPS - COUNTY HOME ROAD

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER B.12

SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Earth Dam or Dike (Proposed)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Proposed Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Proposed Intake
- Existing Utility Access (Manhole)
- Proposed Utility Access (Manhole)
- Fire Hydrant
- WH Water Hydrant (Rural)
- Septic Tank
- C Cistern
- LP L.P. Gas Tank (No Footing)
- UST Underground Storage Tank
- Latrine
- Luminaire
- Traffic Signal
- Traffic Signal with Luminaire
- TP Telephone Pedestal
- TVP Television Pedestal
- Telephone Pole
- Telephone Pole (Second Company)
- Telephone Pole (Third Company)
- Telephone Pole (Fourth Company)
- Telephone Pole (Fifth Company)
- Power Pole
- Power Pole (Second Company)
- Power Pole (Third Company)
- Power Pole (Fourth Company)
- Power Pole (Fifth Company)
- Electrical Highline Tower (Metal or Concrete)
- Telephone Riser Pole
- Power Riser Pole
- Telegraph Pole
- Satellite TV Dish
- WHU Water Hook Up
- RT Radio Tower
- TA Tower Anchor

UTILITY LEGEND

- E1 Iowa Department of Transportation
- E2 City of Hiawatha
- E3 Unidentified Electric
- FO Aureon Fiber
- FO2 Unknown Fiber
- FO3 Iowa Communications Network
- FO4 Unite Private Networks, LLC
- FO5 Aureon Network Services
- FO6 Iowa Health System
- GHP MidAmerican
- T1 IMON Buried Cable
- T2 Century Link
- T3 Windstream
- TV Mediacom
- W City of Hiawatha

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

UTILITY CONTACTS

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IOWA COMMUNICATIONS NETWORK
Shannon Marlow
6268365503
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- Reference Point
- Station
- Survey Line
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

RIGHT-OF-WAY LEGEND

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, & K)

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.1

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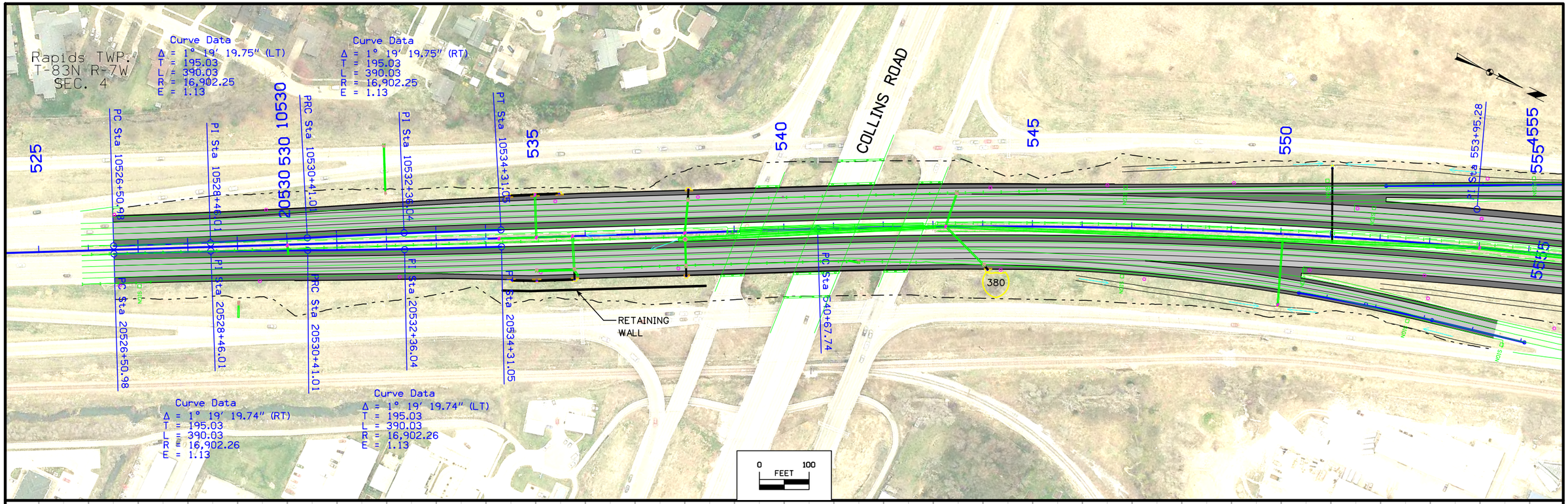

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.2

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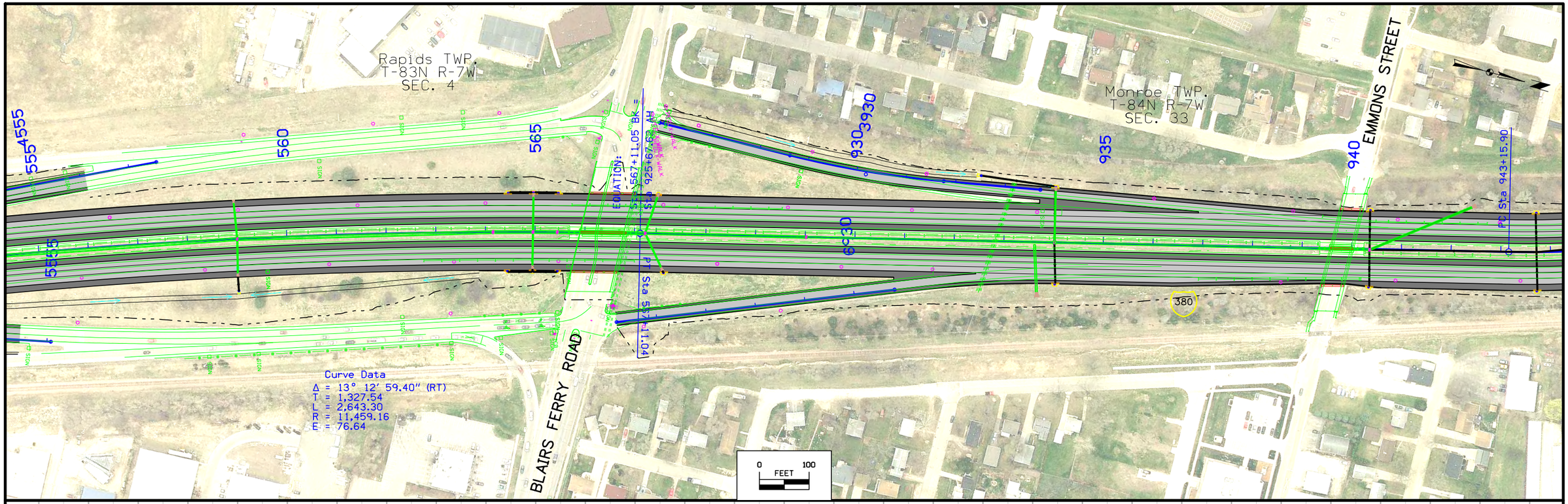
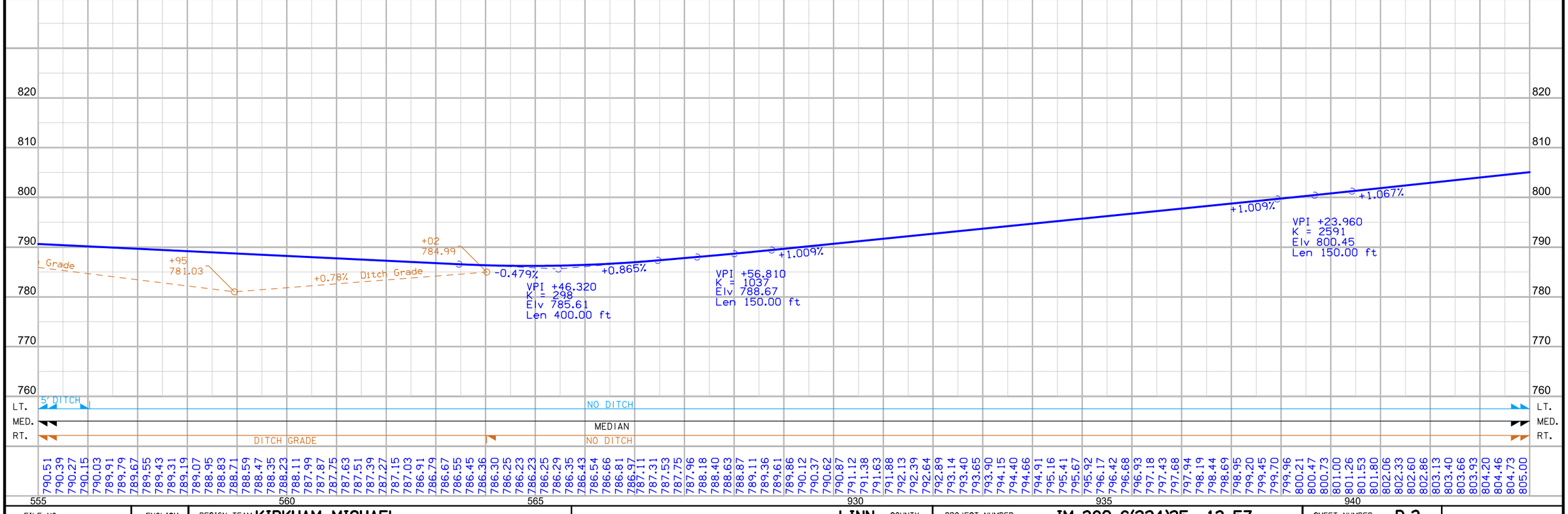
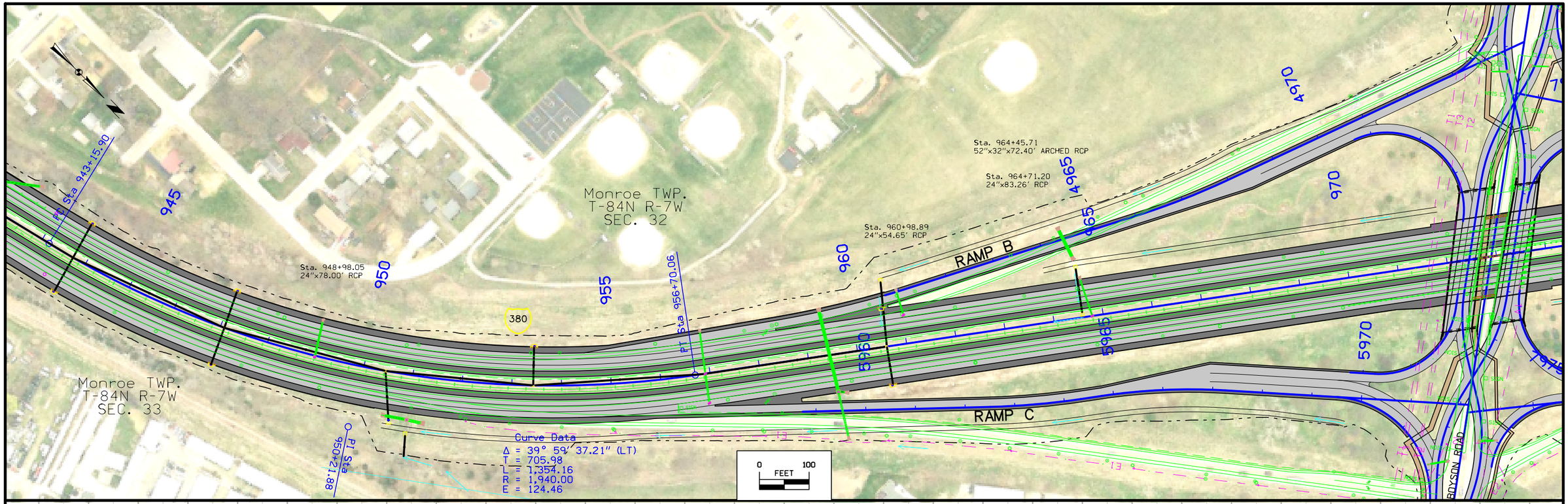
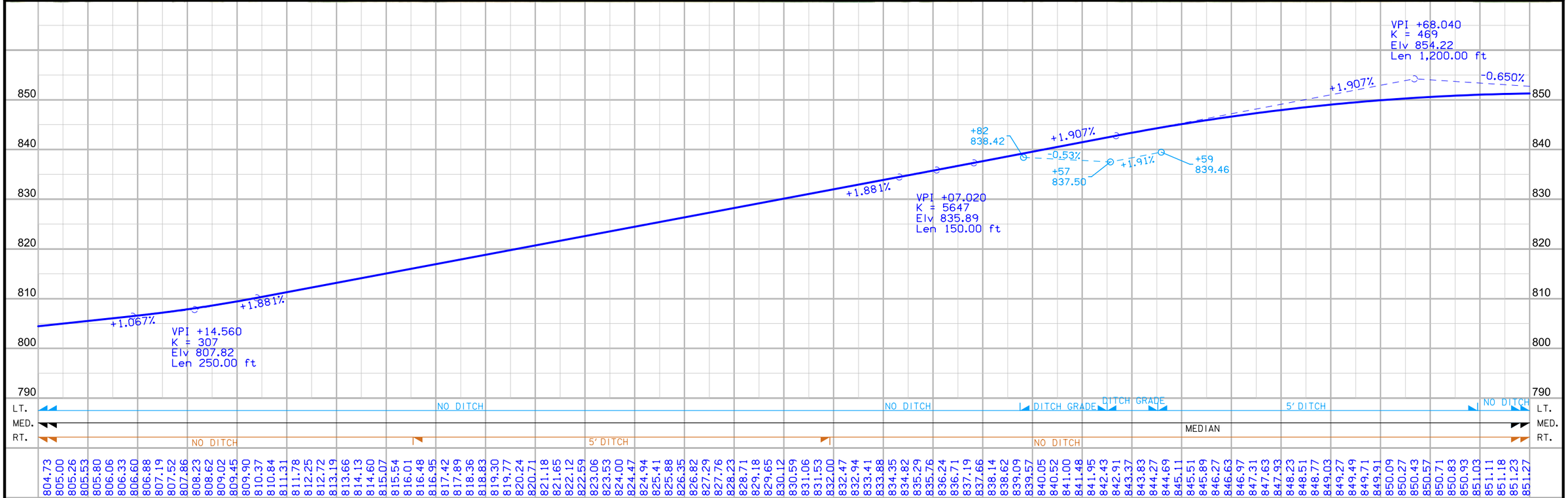




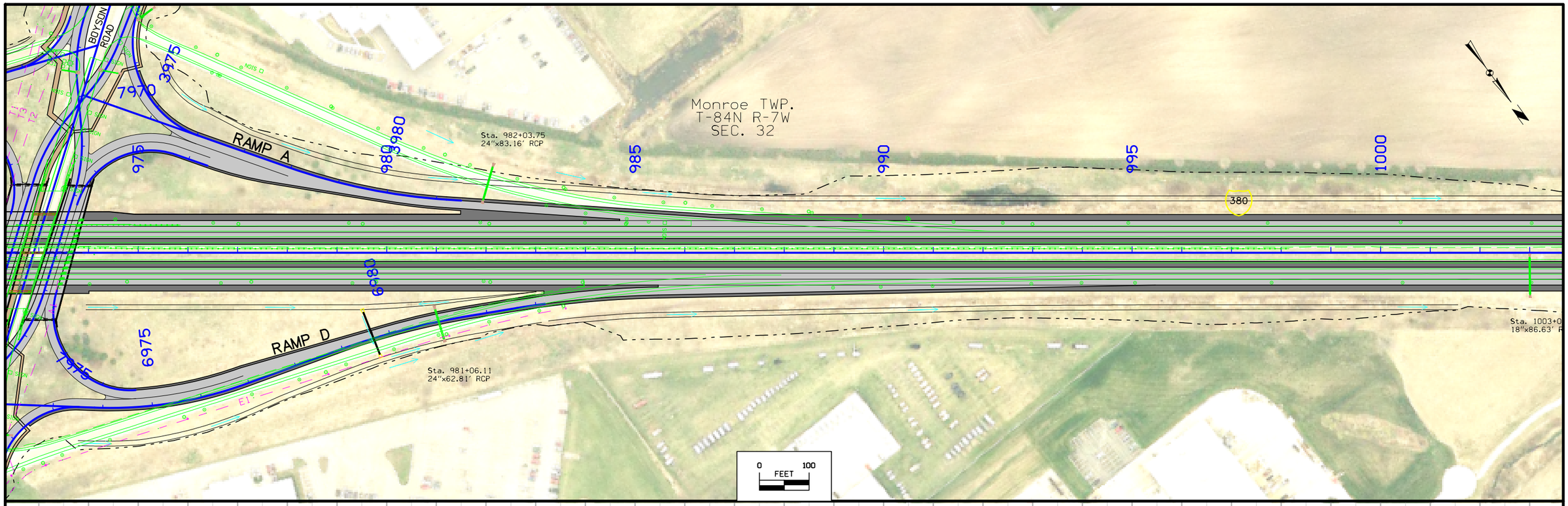
FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.3

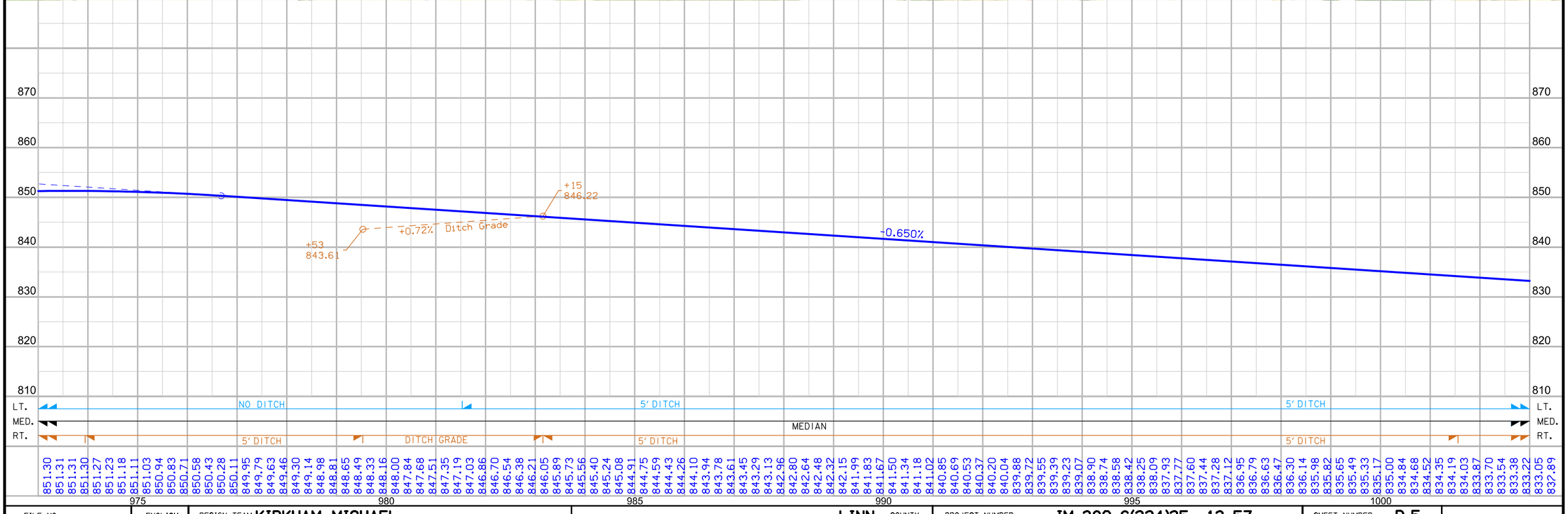




FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.4

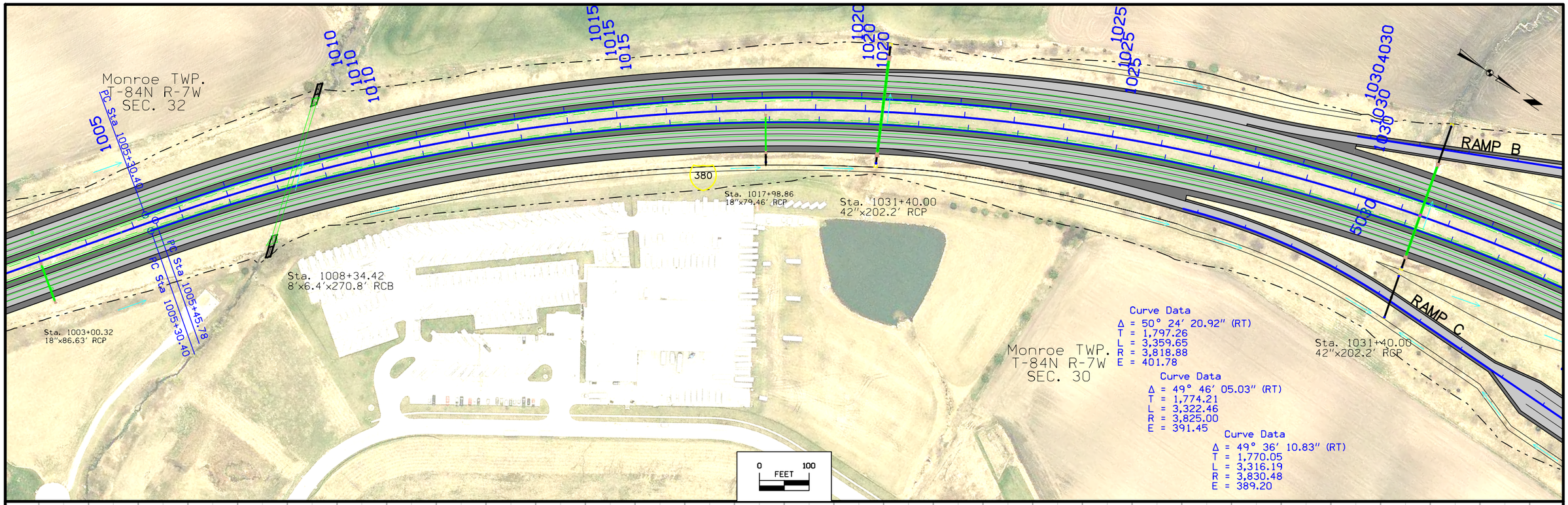
4:38:58 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design__Field Check\57380224_D

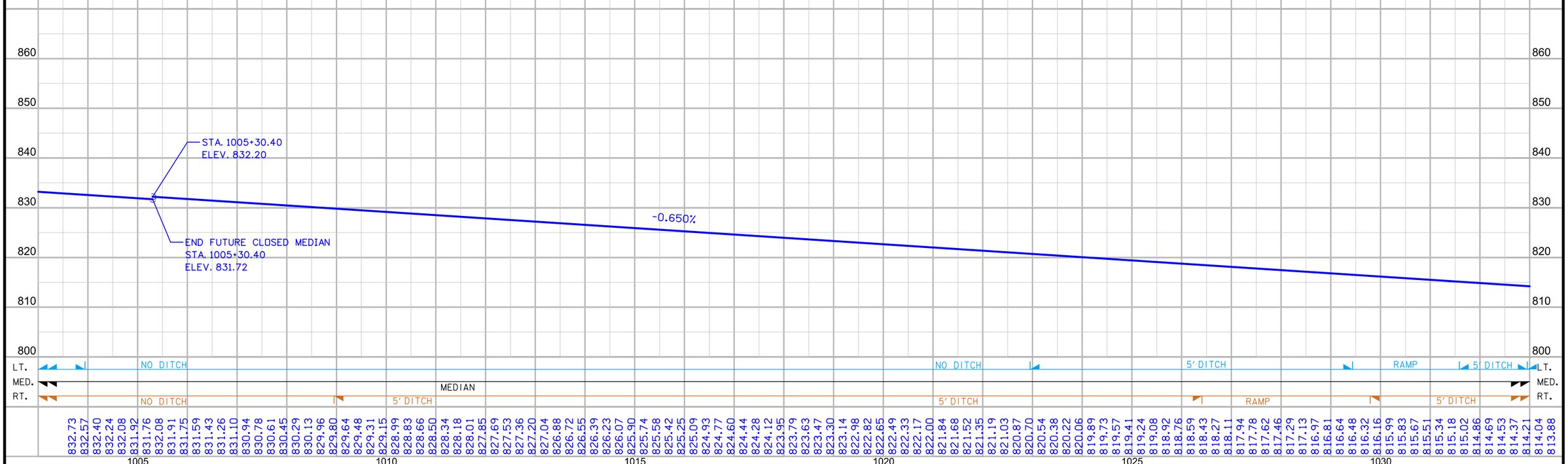




FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.5

4:38:11 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design__Field Check\57380224_D





FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.6

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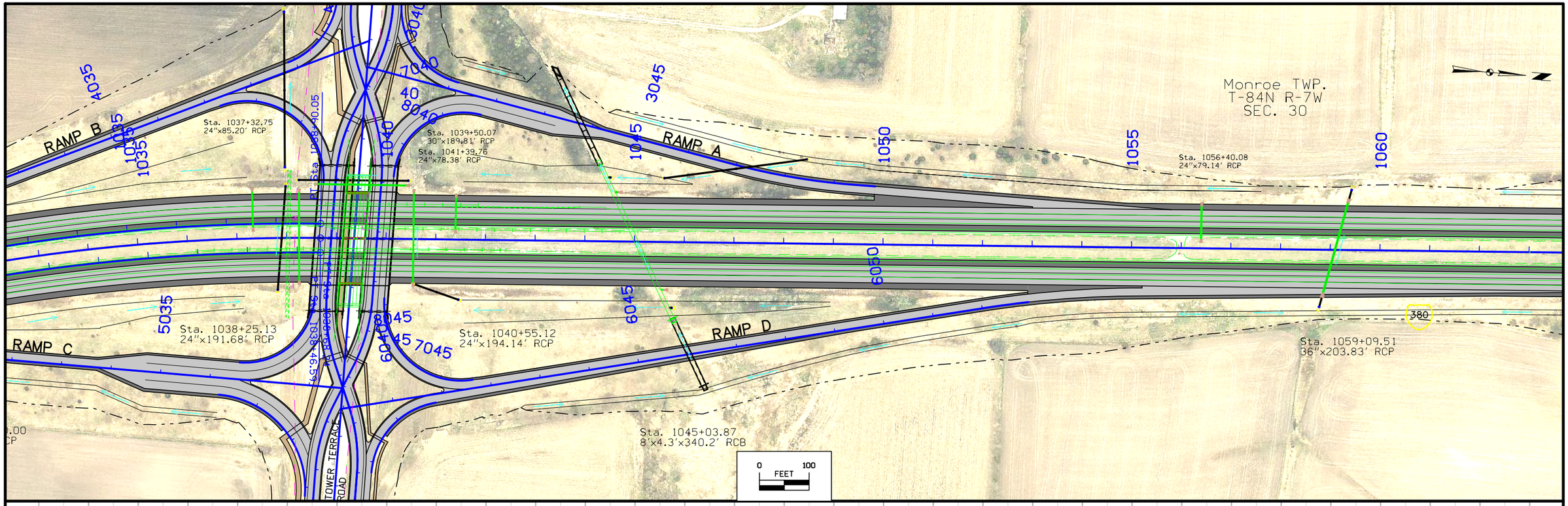
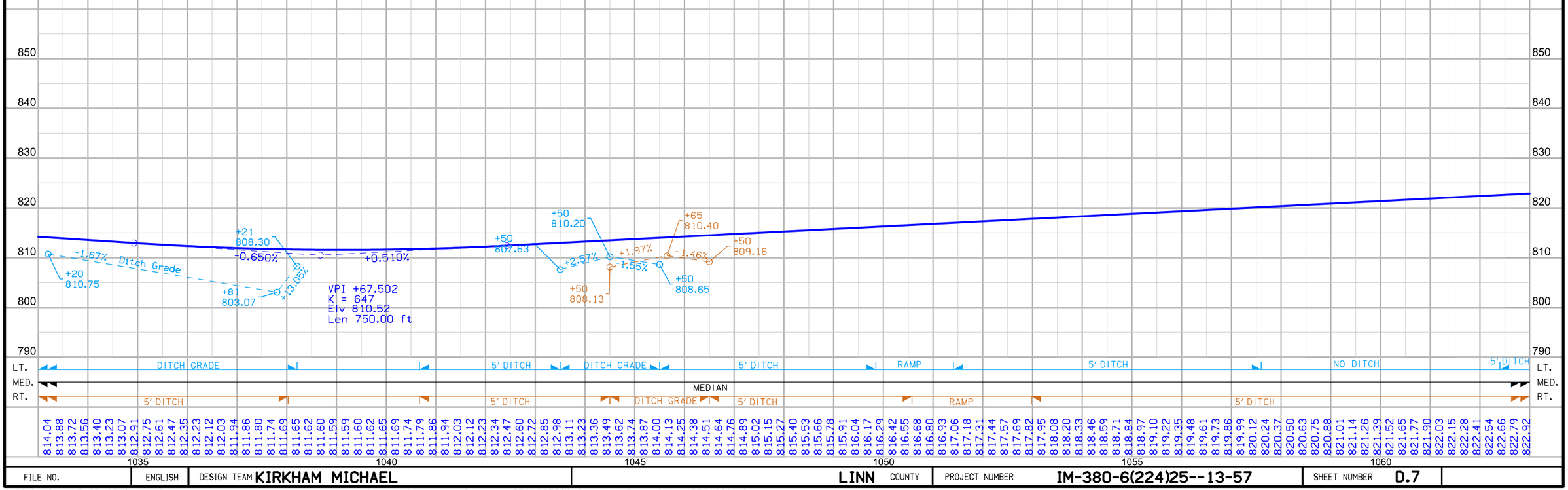
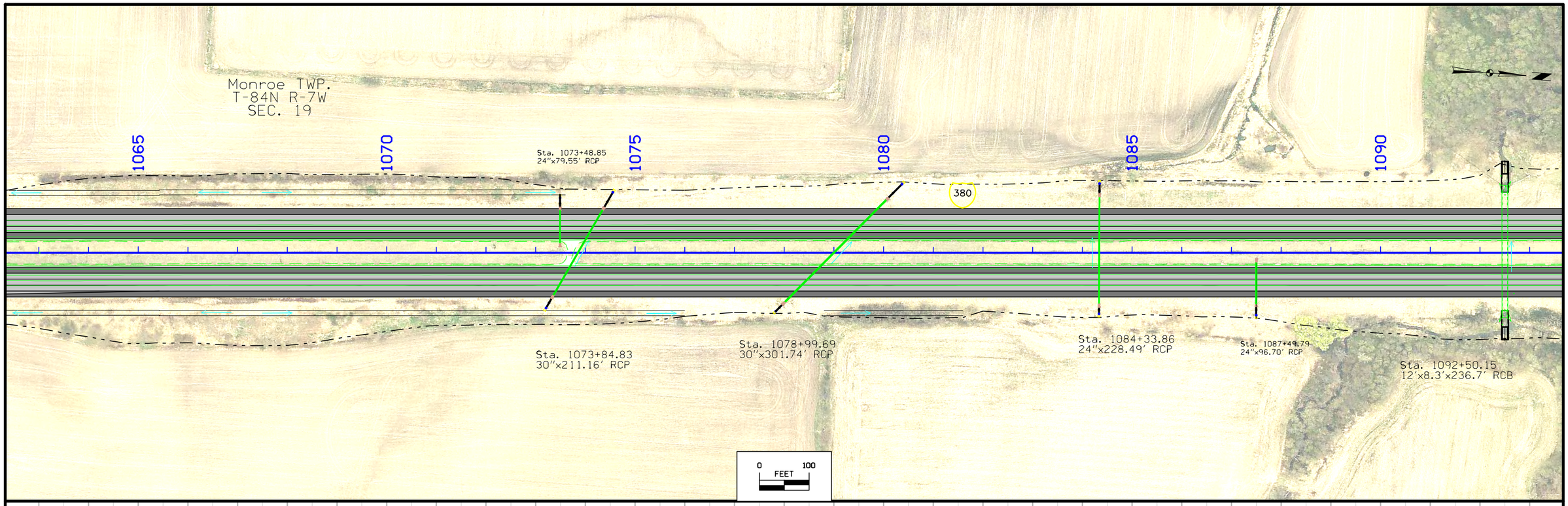
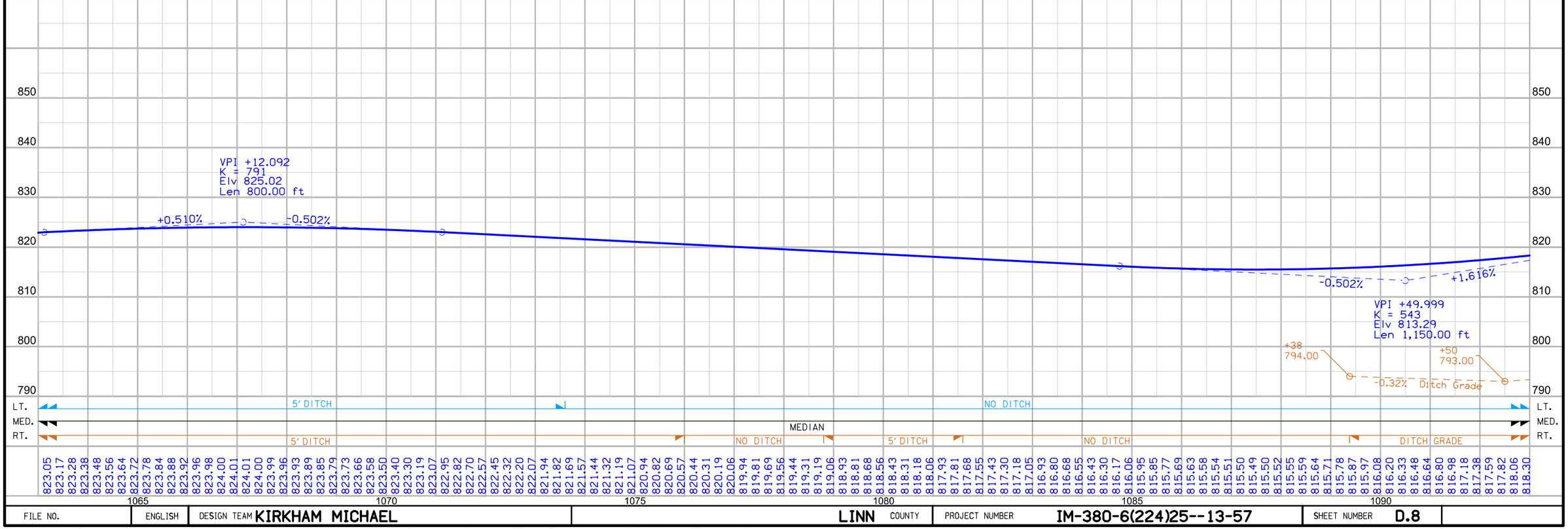




FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.7

3:33:08 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design__Field Check\57380224_D





FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.8

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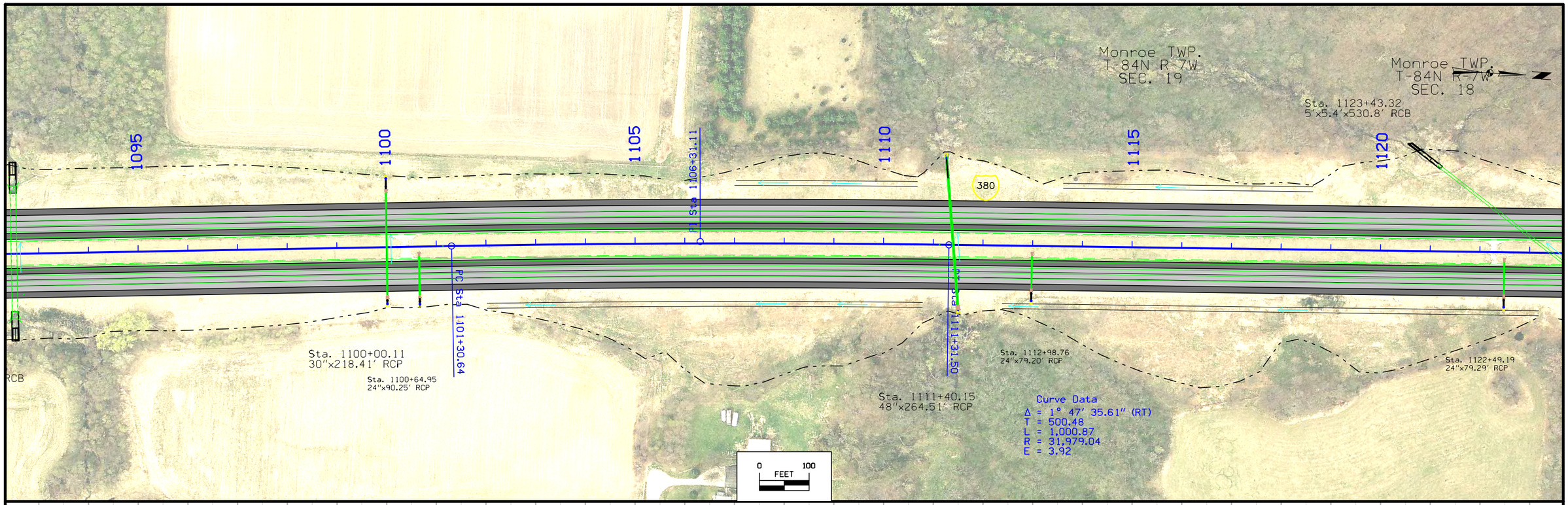
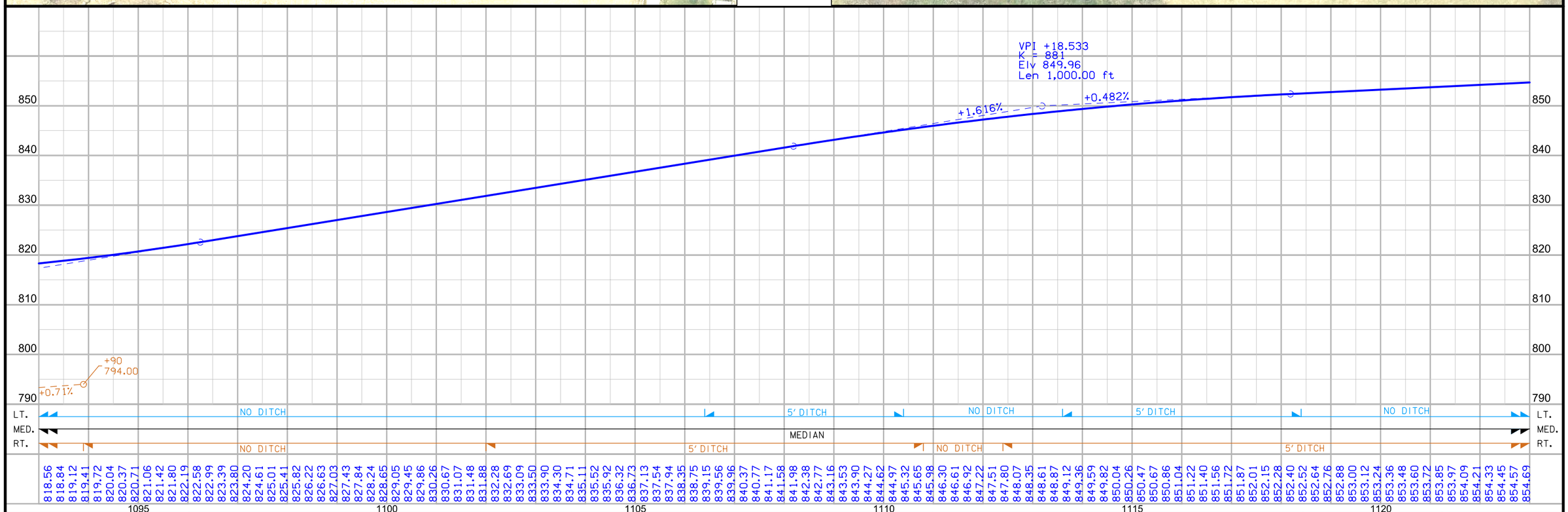
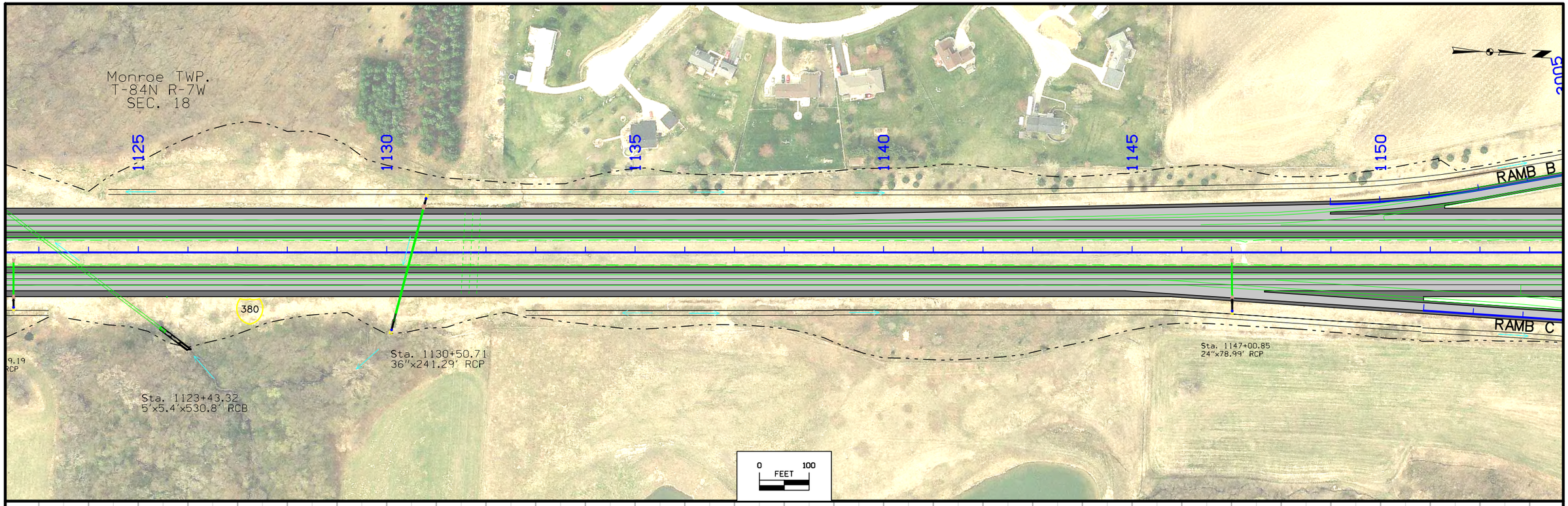
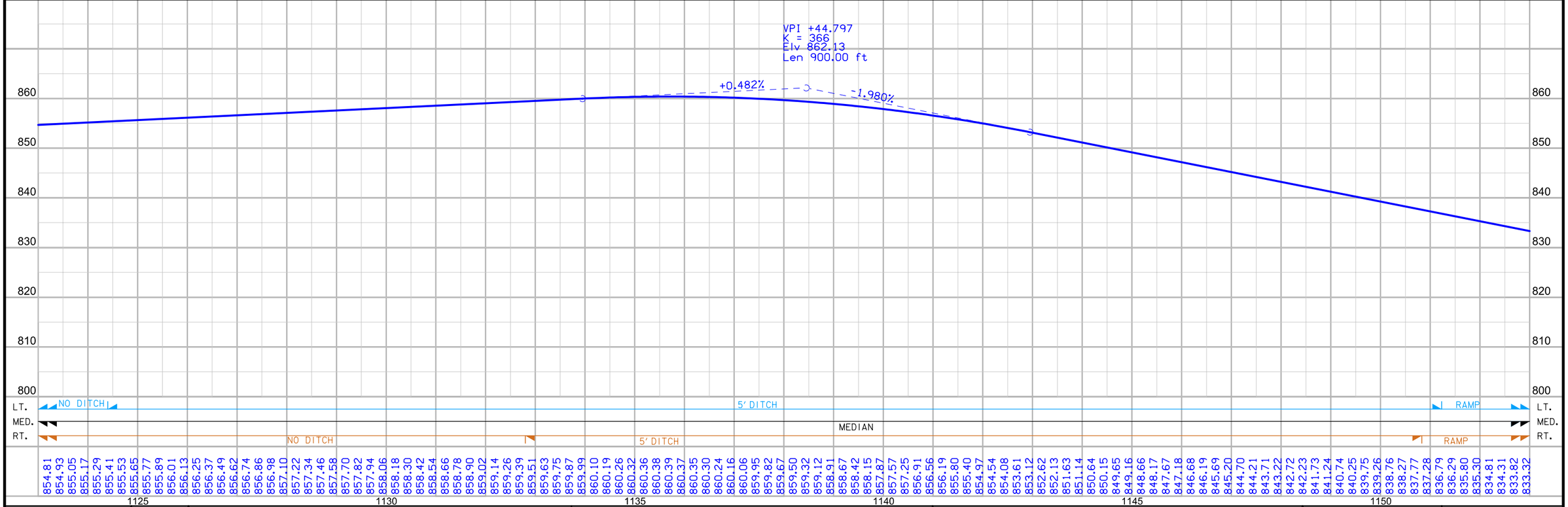




FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.9

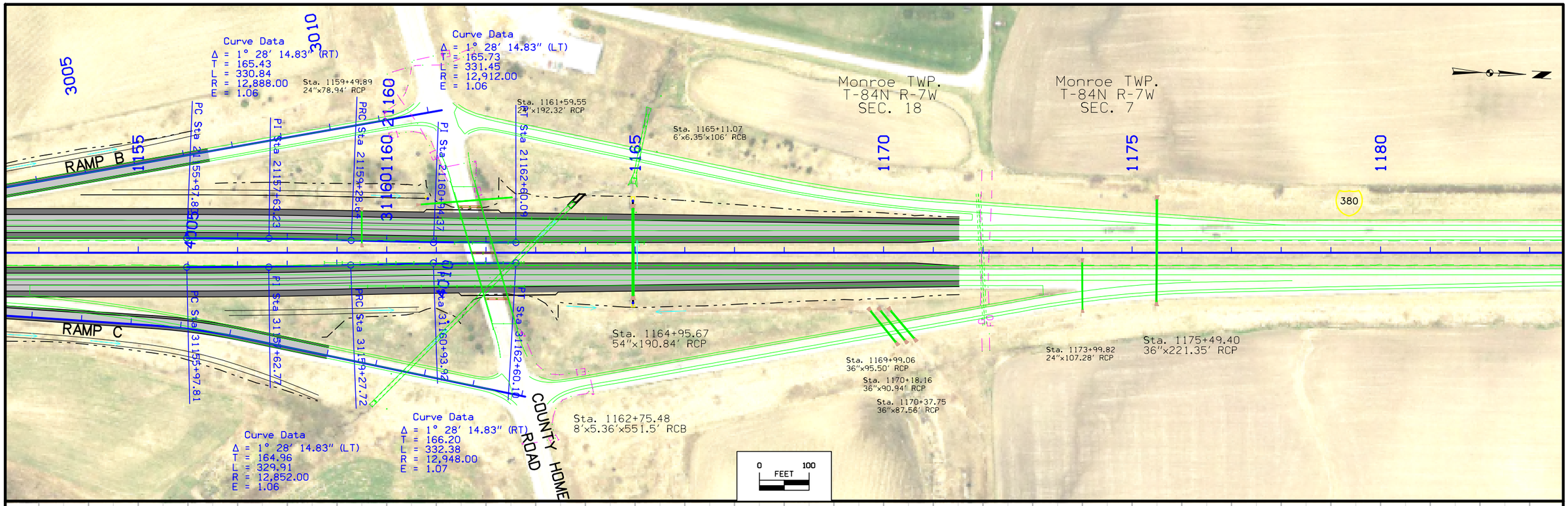
3:33:37 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design__Field Check\57380224_D

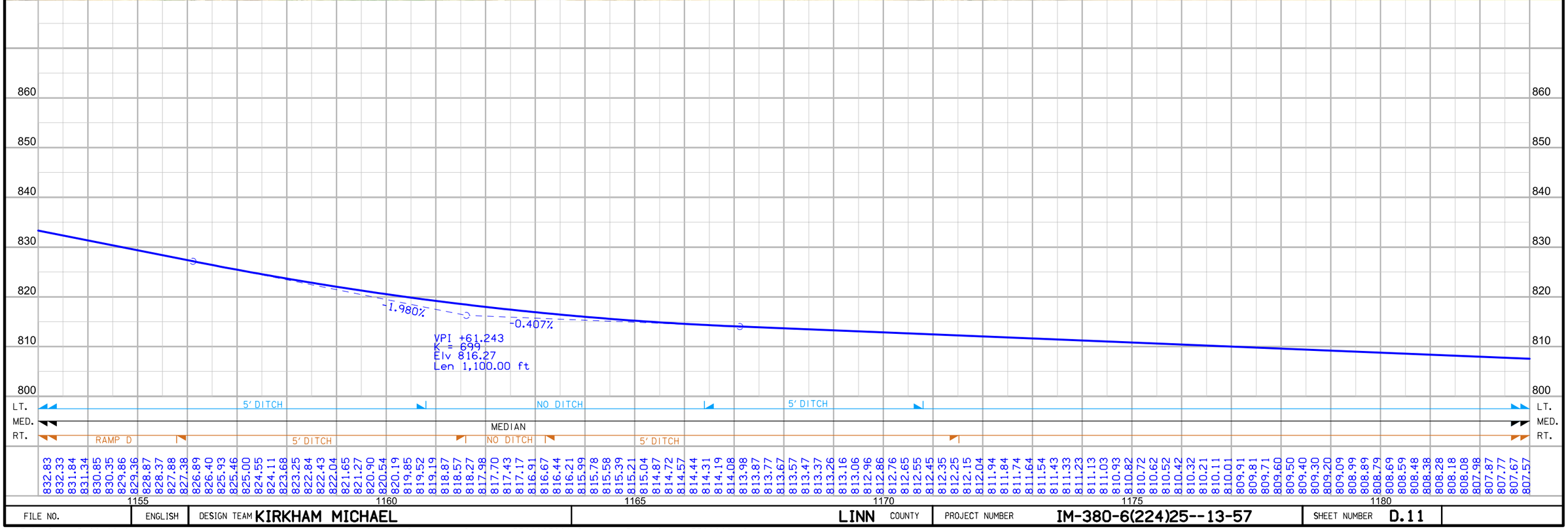




FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.10

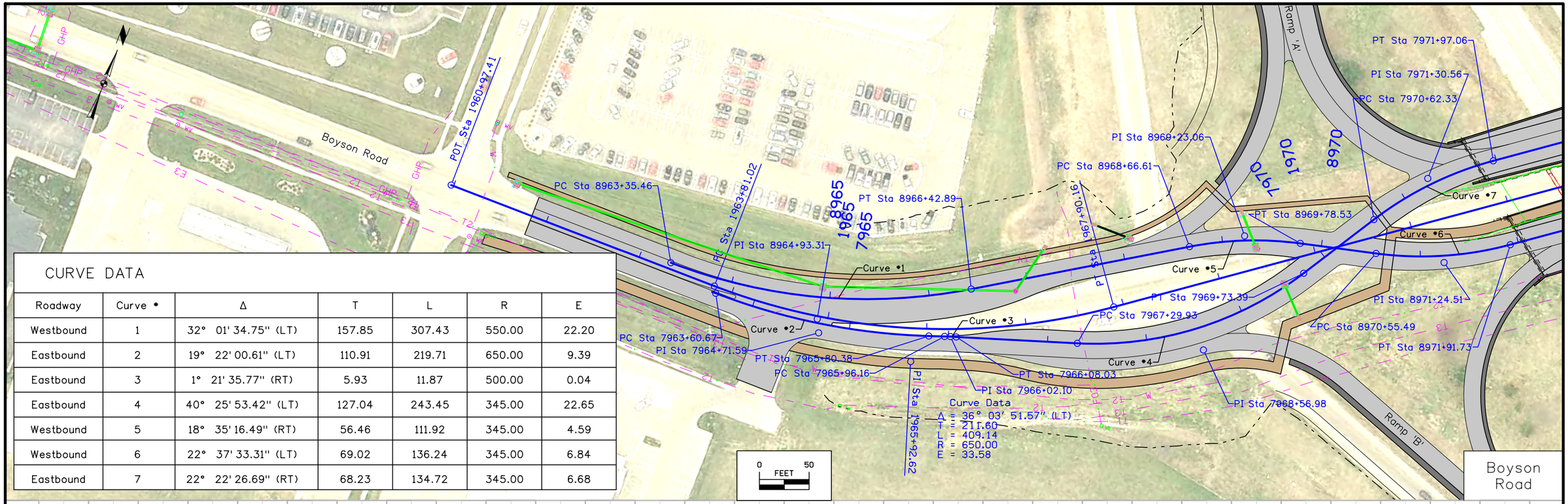
3:33:51 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design__Field Check\57380224_D





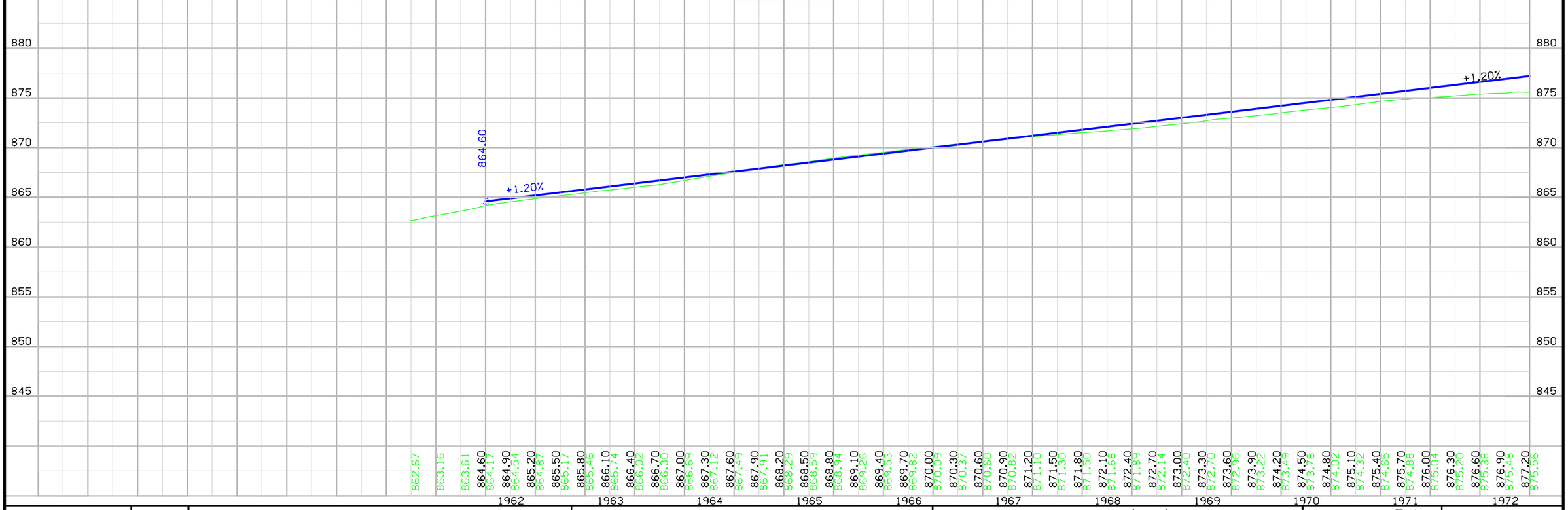
FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER D.11	

4:37:29 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design__Field Check\57380224_D



CURVE DATA

Roadway	Curve #	Δ	T	L	R	E
Westbound	1	32° 01' 34.75" (LT)	157.85	307.43	550.00	22.20
Eastbound	2	19° 22' 00.61" (LT)	110.91	219.71	650.00	9.39
Eastbound	3	1° 21' 35.77" (RT)	5.93	11.87	500.00	0.04
Eastbound	4	40° 25' 53.42" (LT)	127.04	243.45	345.00	22.65
Westbound	5	18° 35' 16.49" (RT)	56.46	111.92	345.00	4.59
Westbound	6	22° 37' 33.31" (LT)	69.02	136.24	345.00	6.84
Eastbound	7	22° 22' 26.69" (RT)	68.23	134.72	345.00	6.68

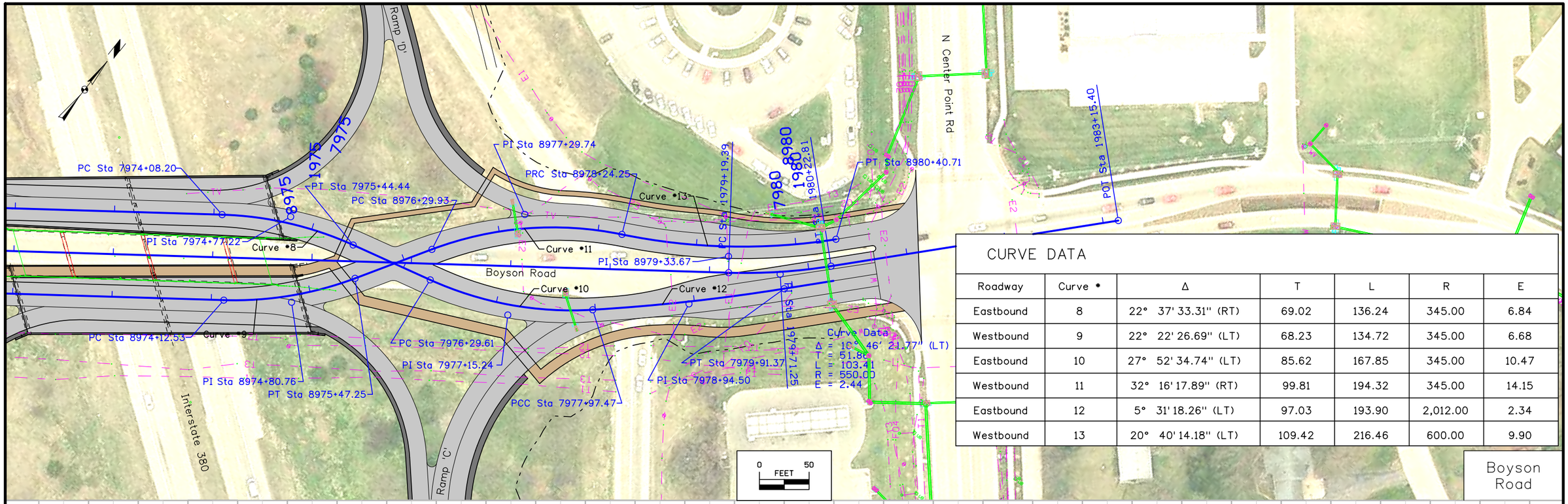


FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER E.1

2:47:37 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380224E1.dgn

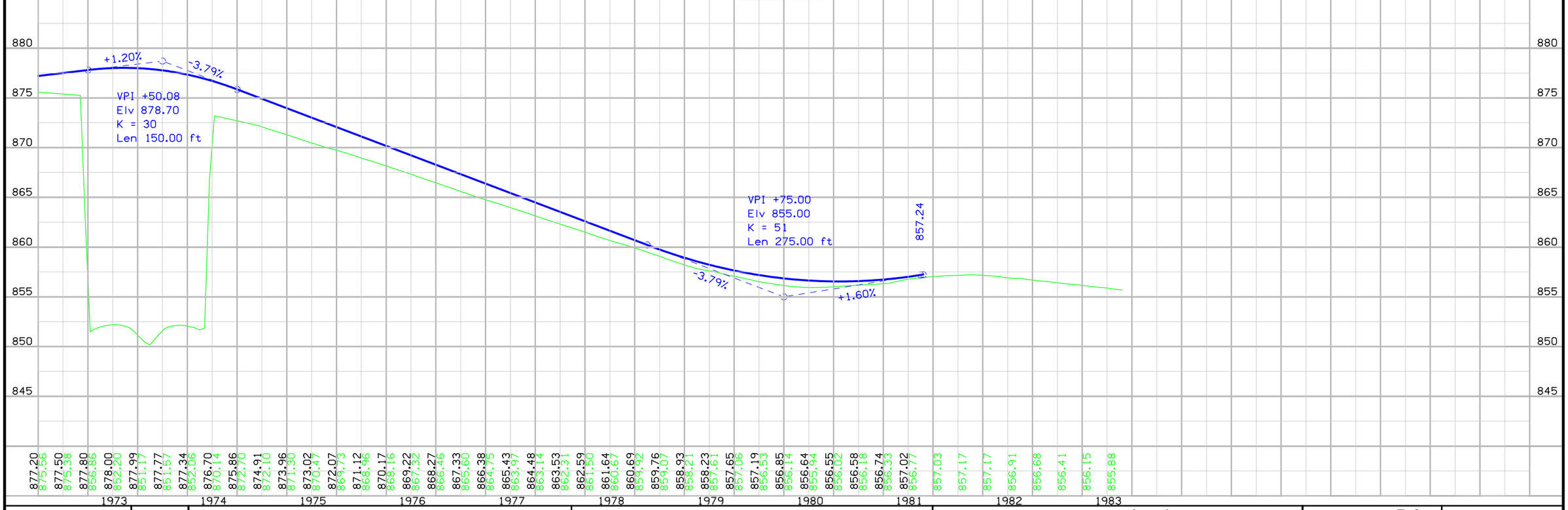
FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER E.2

2:47:38 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380224E1.dgn



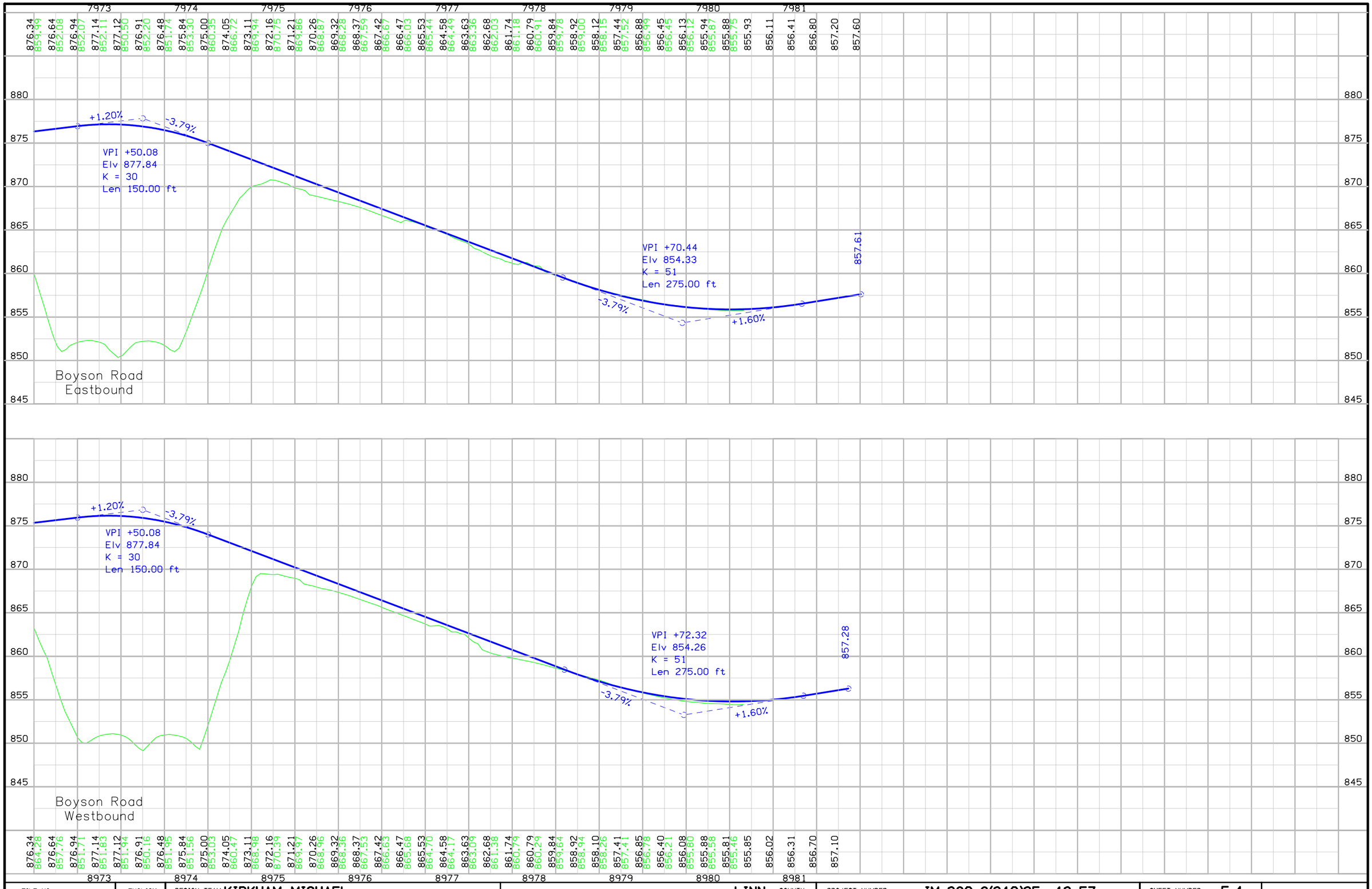
CURVE DATA						
Roadway	Curve #	Δ	T	L	R	E
Eastbound	8	22° 37' 33.31" (RT)	69.02	136.24	345.00	6.84
Westbound	9	22° 22' 26.69" (LT)	68.23	134.72	345.00	6.68
Eastbound	10	27° 52' 34.74" (LT)	85.62	167.85	345.00	10.47
Westbound	11	32° 16' 17.89" (RT)	99.81	194.32	345.00	14.15
Eastbound	12	5° 31' 18.26" (LT)	97.03	193.90	2,012.00	2.34
Westbound	13	20° 40' 14.18" (LT)	109.42	216.46	600.00	9.90

Boyson Road



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER E.3

2:47:44 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380224E1.dgn



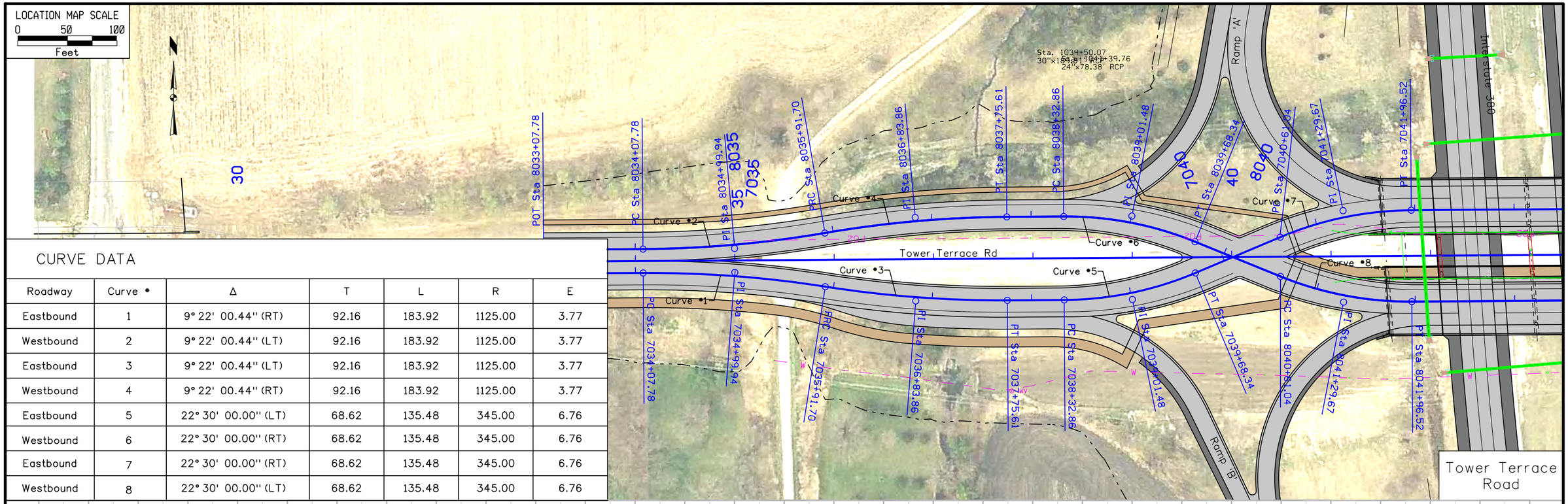
FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER E.4

2:47:45 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380224E1.dgn

LOCATION MAP SCALE
0 50 100
Feet

CURVE DATA

Roadway	Curve #	Δ	T	L	R	E
Eastbound	1	9° 22' 00.44" (RT)	92.16	183.92	1125.00	3.77
Westbound	2	9° 22' 00.44" (LT)	92.16	183.92	1125.00	3.77
Eastbound	3	9° 22' 00.44" (LT)	92.16	183.92	1125.00	3.77
Westbound	4	9° 22' 00.44" (RT)	92.16	183.92	1125.00	3.77
Eastbound	5	22° 30' 00.00" (LT)	68.62	135.48	345.00	6.76
Westbound	6	22° 30' 00.00" (RT)	68.62	135.48	345.00	6.76
Eastbound	7	22° 30' 00.00" (RT)	68.62	135.48	345.00	6.76
Westbound	8	22° 30' 00.00" (LT)	68.62	135.48	345.00	6.76



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER E.5

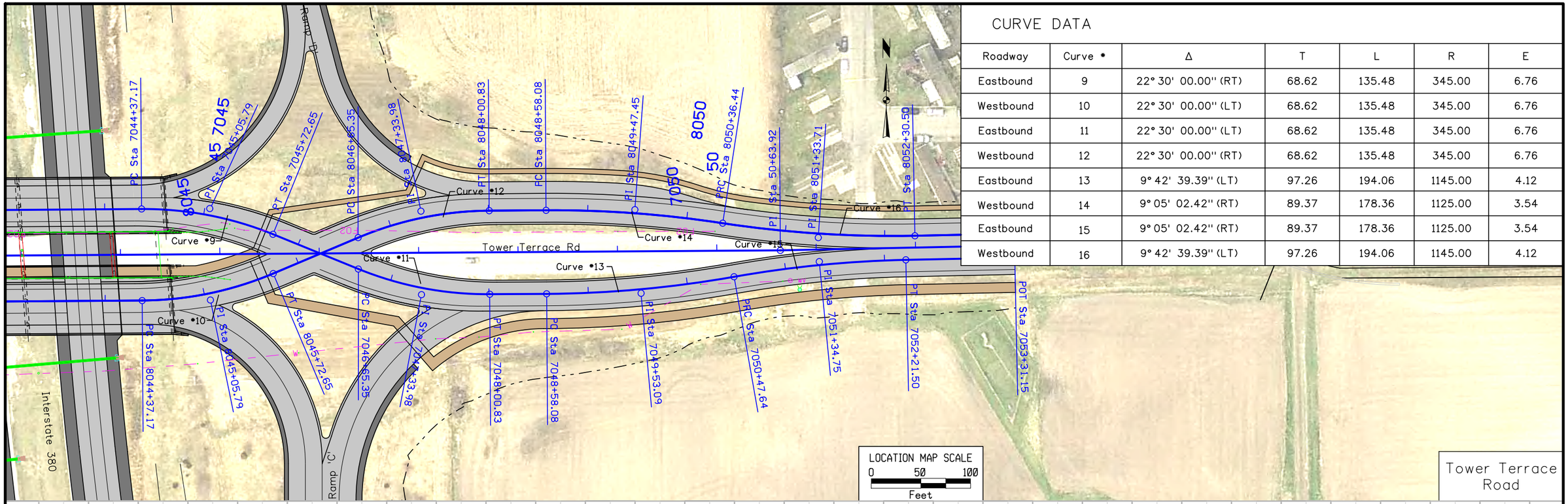
2:49:06 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200E5.dgn

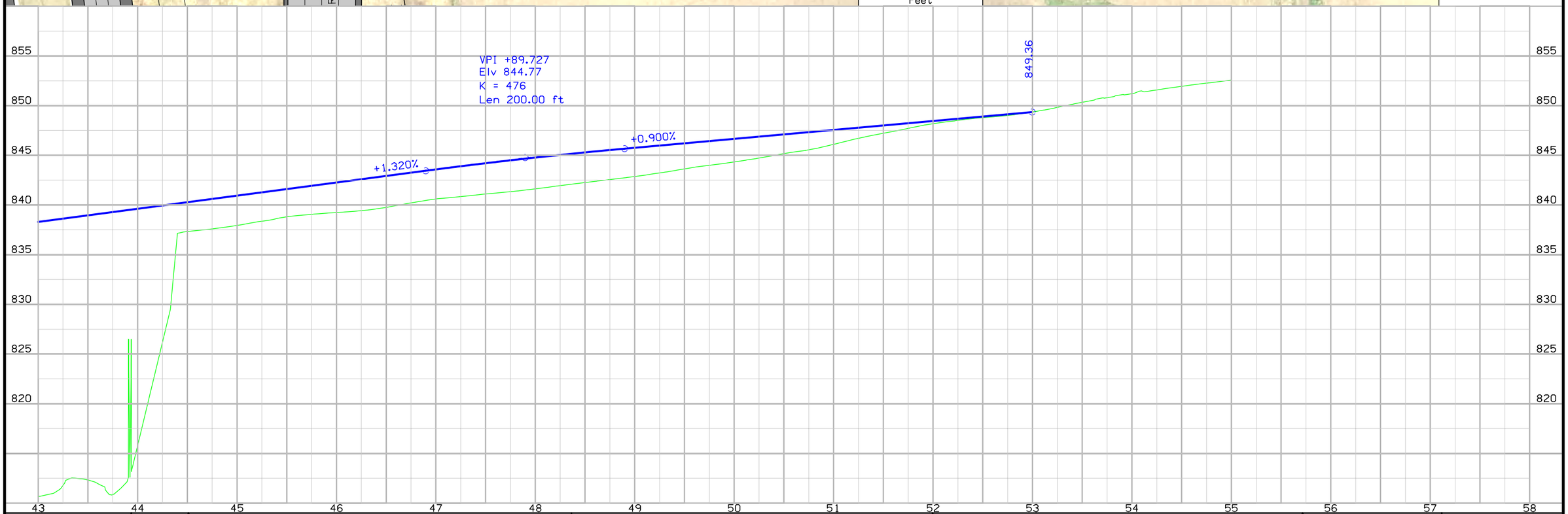
FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER E.6

2:49:07 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200E5.dgn

CURVE DATA

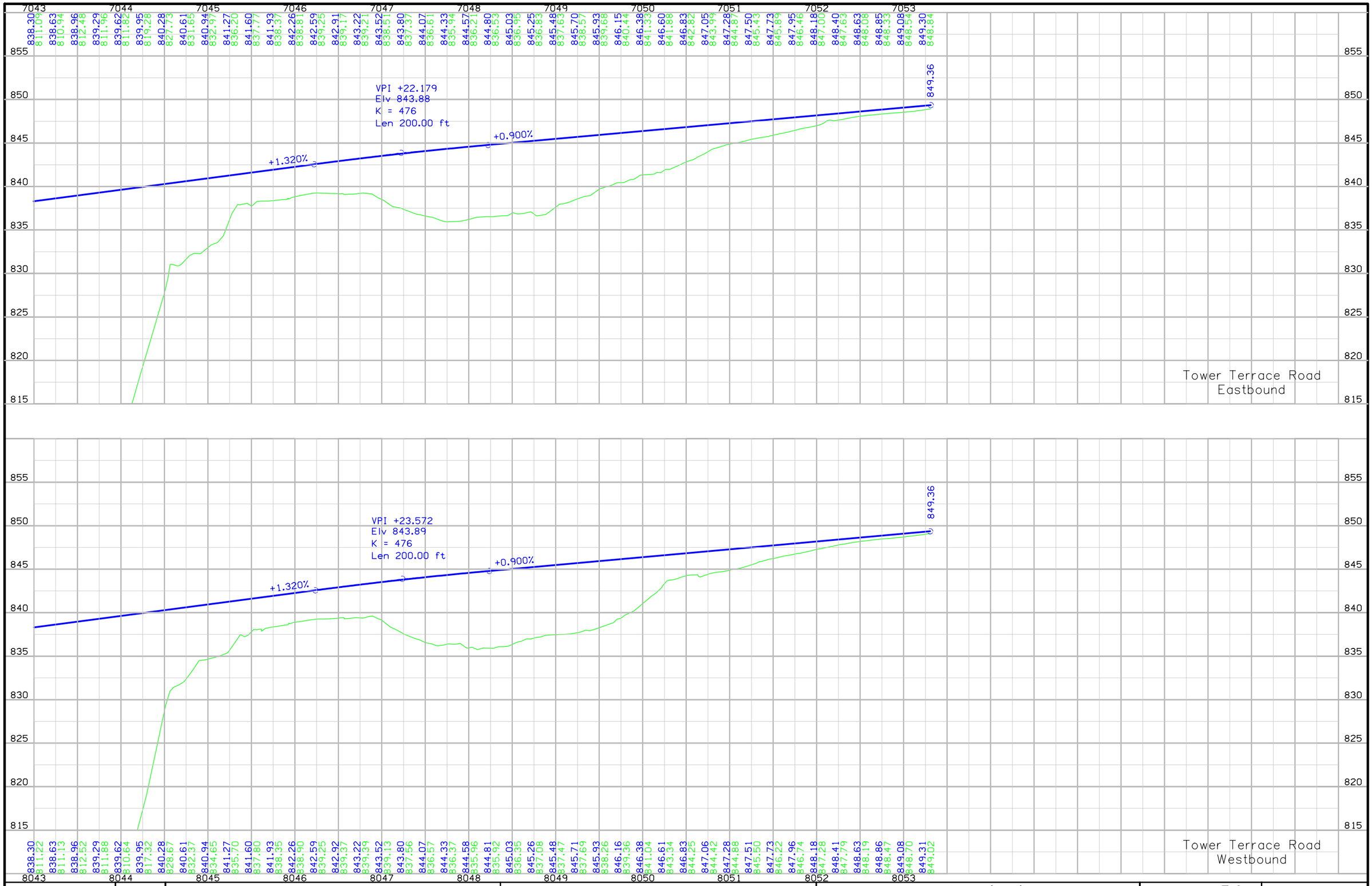
Roadway	Curve #	Δ	T	L	R	E
Eastbound	9	22° 30' 00.00" (RT)	68.62	135.48	345.00	6.76
Westbound	10	22° 30' 00.00" (LT)	68.62	135.48	345.00	6.76
Eastbound	11	22° 30' 00.00" (LT)	68.62	135.48	345.00	6.76
Westbound	12	22° 30' 00.00" (RT)	68.62	135.48	345.00	6.76
Eastbound	13	9° 42' 39.39" (LT)	97.26	194.06	1145.00	4.12
Westbound	14	9° 05' 02.42" (RT)	89.37	178.36	1125.00	3.54
Eastbound	15	9° 05' 02.42" (RT)	89.37	178.36	1125.00	3.54
Westbound	16	9° 42' 39.39" (LT)	97.26	194.06	1145.00	4.12





FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER E.7

2:49:13 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200E5.dgn



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER E.8

2:49:14 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200E5.dgn

BENCHMARKS				ELEVATION
NO. 500	STA. 595+66.24	133.823 LT.	IHC DISC EASTBOUND COLLINS ROAD BRIDGE	814.683
NO. 501	STA. 542+79.26	121.100 LT.	IHC DISC WESTBOUND COLLINS ROAD BRIDGE	816.405
NO. 502	STA. 554+05.15	139.076 LT.	CHISELED "X" LIGHT POLE BASE	791.845
NO. 503	STA. 565+62.63	121.855 RT.	IHC DISC BLAIRS FERRY ROAD BRIDGE	809.502
NO. 504	STA. 940+23.40	111.247 LT.	IHC DISC EMMONS STREET BRIDGE	826.548
NO. 505	STA. 936+08.14	75.044 RT.	CHISELED "X" LIGHT POLE BASE	795.879
NO. 506	STA. 945+85.45	57.024 RT.	CHISELED "X" LIGHT POLE BASE	809.563
NO. 507	STA. 957+30.66	58.251 RT.	CHISELED "X" LIGHT POLE BASE	829.037
NO. 508	STA. 969+79.96	57.959 RT.	CHISELED "X" LIGHT POLE BASE	849.838
NO. 509	STA. 973+01.91	123.341 LT.	IHC DISC BOYSON ROAD BRIDGE	877.997
NO. 510	STA. 983+54.88	106.486 RT.	CHISELED "X" LIGHT POLE BASE	843.242
NO. 511	STA. 995+78.58	148.474 RT.	80D SPIKE IN FENCE POST	841.843
NO. 512	STA. 1007+68.45	102.313 RT.	IHC DISC ON TOP OF RBC INLET	818.153
NO. 513	STA. 1018+61.15	138.189 RT.	80D SPIKE IN FENCE POST	823.926
NO. 514	STA. 1031+39.76	82.414 RT.	CHISELED "X" ON TOP OF 42" RCP	812.116
NO. 515	STA. 1039+03.19	143.255 RT.	IHC DISC TOWER TERRACE ROAD BRIDGE	839.653
NO. 516	STA. 1050+08.47	188.679 RT.	80D SPIKE IN FENCE POST	825.970
NO. 517	STA. 1061+90.81	138.424 RT.	80D SPIKE IN FENCE POST	823.369
NO. 518	STA. 1075+27.65	138.053 RT.	80D SPIKE IN FENCE POST	820.183
NO. 519	STA. 1084+34.28	114.966 LT.	CHISELED "X" ON TOP OF 24" RCP	805.071
NO. 520	STA. 1092+50.27	116.062 RT.	IHC DISC ON TOP OF RCB INLET	802.924
NO. 521	STA. 1102+41.28	138.285 RT.	80D SPIKE IN FENCE POST	830.719
NO. 522	STA. 1112+98.28	87.328 RT.	CHISELED "X" ON TOP OF 24" RCP	846.098
NO. 523	STA. 1125+44.28	151.958 RT.	IHC DISC ON TOP OF RCB INLET	831.650
NO. 524	STA. 1138+00.67	149.051 RT.	80D SPIKE IN FENCE POST	864.108
NO. 525	STA. 1147+00.90	87.891 RT.	CHISELED "X" ON TOP OF 24" RCP	842.401
NO. 526	STA. 1162+14.40	153.431 RT.	IHC DISC COUNTY HOME ROAD BRIDGE	845.818
NO. 527	STA. 1173+99.77	178.462 RT.	80D SPIKE IN FENCE POST	808.537
NO. 528	STA. 1184+76.37	138.260 RT.	80D SPIKE IN FENCE POST	802.932
NO. 529	STA. 529+46.31	99.023 LT.	CHISELED "X" LIGHT POLE BASE	792.203
NO. 530	STA. 519+16.74	83.947 LT.	CHISELED "X" LIGHT POLE BASE	797.614

CP100
IDOT Monument
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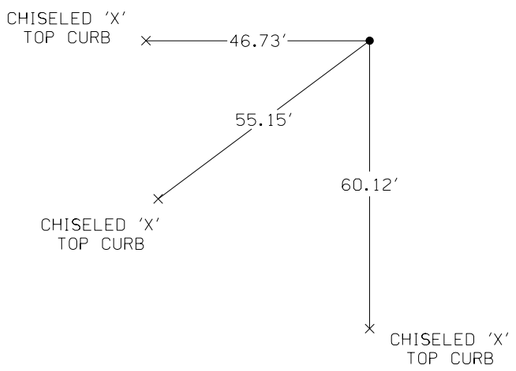

CP101
Chiseled 'X'
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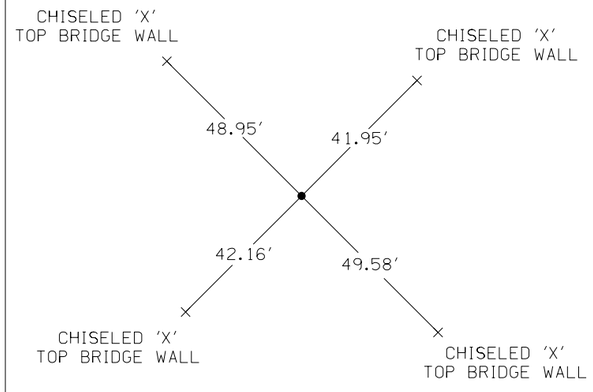
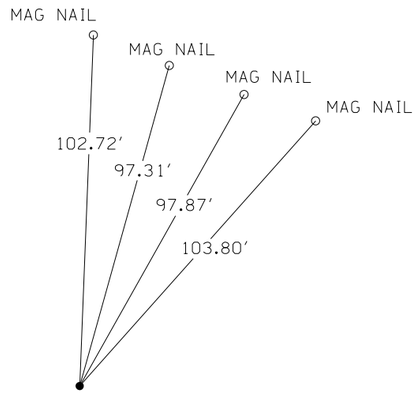


CP102
5/8" Rebar
XC=5407726.429, YC=3489674.421



CP103
FENO Monument
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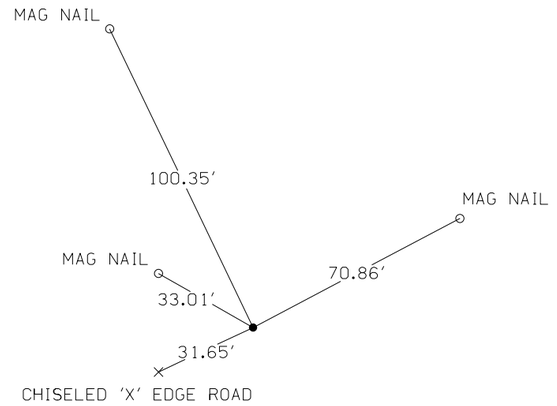

CP104
FENO Monument
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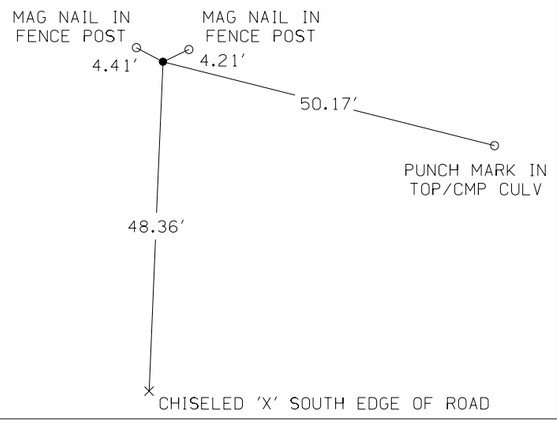

CP105
IDOT Monument
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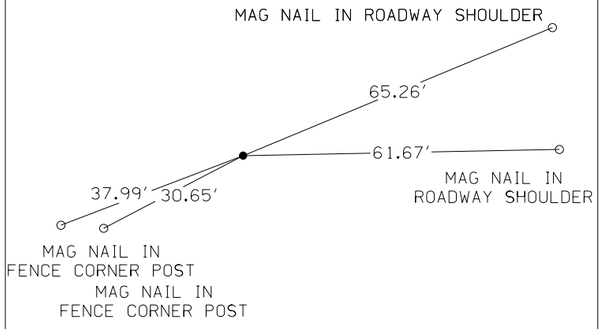

CP106
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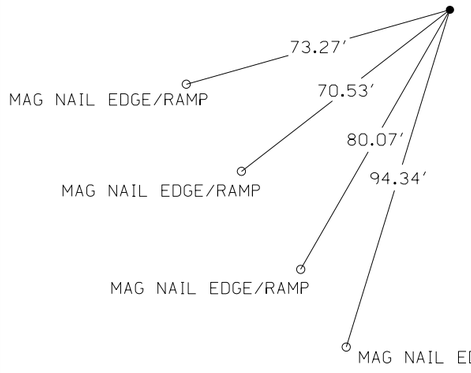

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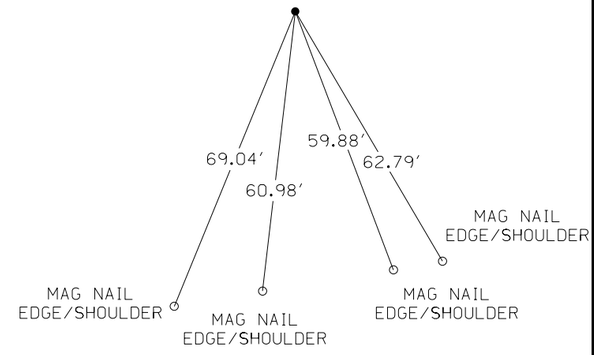

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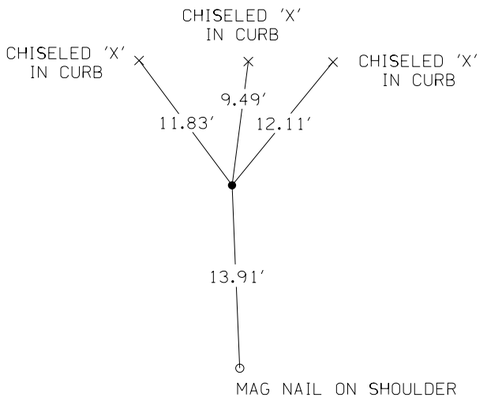

CP109
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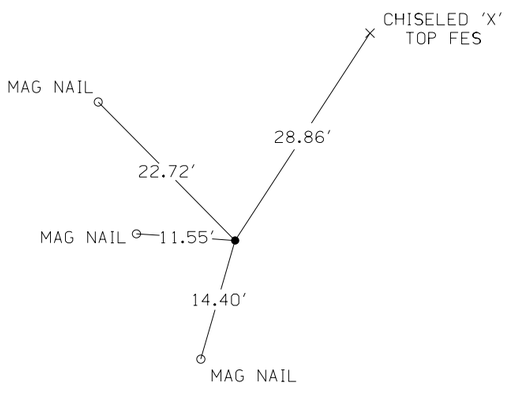

CP110
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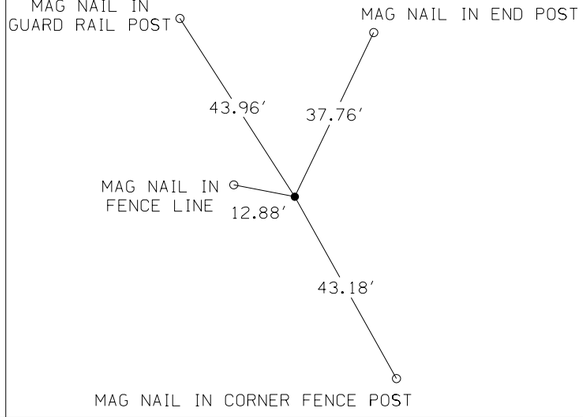


FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL		LINN COUNTY	PROJECT NUMBER	IM-380-6(224)25--13-57	SHEET NUMBER G.2

SYSTEMTIME SYSTEMDATE USERNAME DGNSPEC

ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
ML380																			
		509+55.28	3475894.00	5419068.35															
C1								540+67.74	3478664.56	5417650.12	553+95.28	3479846.27	5417045.20	567+11.04	3481134.99	5416726.49			
C2								943+15.90	3482832.14	5416306.76	950+21.88	3483517.48	5416137.27	956+70.06	3483933.59	5415566.96			
C3								1005+45.78	3486807.39	5411628.19	1023+19.99	3487853.13	5410194.92	1038+68.24	3489622.76	5410067.55			
C4								1101+30.64	3495869.00	5409617.98	1106+31.11	3496368.18	5409582.05	1111+31.50	3496868.25	5409561.76			
C5					1185+81.62	3504312.23	5409259.72												
C6								1187+81.62	3504511.95	5409249.29	1192+90.21	3505019.09	5409210.94	1197+88.31	3505482.05	5409000.38			
C7																	1199+88.31	3505662.11	5408913.37
Median Width Transition Northbound Lanes																			
C8								20526+50.98	3477407.07	5418302.80	20528+46.01	3477580.67	5418213.94	20530+41.01	3477756.28	5418129.10			
C9								20530+41.01	3477756.28	5418129.10	20532+36.04	3477931.89	5418044.26	20534+31.05	3478105.49	5417955.40			
C10								31005+30.40	3486812.06	5411650.63	31023+00.45	3487859.37	5410223.66	31038+46.59	3489624.84	5410096.47			
C11								31155+97.81	3501332.05	5409409.55	31157+62.77	3501496.87	5409402.86	31159+27.72	3501661.48	5409391.94			
C12								31159+27.72	3501661.48	5409391.94	31160+93.92	3501827.31	5409380.94	31162+60.10	3501993.37	5409374.19			
Median Width Transition Southbound Lanes																			
C13								10526+50.98	3477399.78	5418288.56	10528+46.01	3477573.38	5418199.69	10530+41.01	3477744.89	5418106.85			
C14								10530+41.01	3477744.89	5418106.85	10532+36.04	3477916.40	5418014.00	10534+31.05	3478090.00	5417925.13			
C15								21005+30.40	3486784.59	5411630.59	21023+27.66	3487828.02	5410167.24	21038+90.05	3489620.68	5410038.62			
C16								21155+97.80	3501329.69	5409351.60	21157+63.23	3501494.98	5409344.89	21159+28.64	3501660.39	5409342.42			
C17								21159+28.64	3501660.39	5409342.42	21160+94.37	3501826.11	5409339.95	21162+60.09	3501991.71	5409333.23			
Blairs Ferry Rd Ramp A																			
		3925+91.53	3481115.09	5416501.47															
C18								3928+61.79	3481385.30	5416496.38	3930+19.17	3481542.66	5416493.42	3931+75.91	3481697.61	5416465.88			
		3933+71.06	3481889.75	5416431.74															
Blairs Ferry Rd Ramp B																			
		4552+05.06	3479661.08	5417081.20															
		4557+56.34	3480157.80	5416842.10															
Blairs Ferry Rd Ramp C																			
C19								5550+43.28	3479594.86	5417350.90	5551+79.96	3479726.42	5417313.82	5553+16.53	3479860.19	5417285.80			
		5555+07.81	3480047.40	5417246.60															
Blairs Ferry Rd Ramp D																			
		6925+18.98	3481136.11	5416911.38															
		6930+82.05	3481658.97	5416702.39															
County Home Rd Ramp B																			
C20								41148+98.95	3500628.66	5409312.01	41150+54.27	3500783.70	5409302.60	41152+08.97	3500935.42	5409269.38			
		41161+26.82	3501832.02	5409073.03															
County Home Rd Ramp C																			
		51150+86.44	3500824.67	5409518.22															
C21								51155+28.16	3501266.24	5409529.70	51156+20.66	3501358.71	5409532.11	51157+12.86	3501449.96	5409547.29			
		51162+93.76	3502022.97	5409642.63															
Tower Terrace Rd Westbound																			
		8033+07.78	3489695.46	5409069.18															
C22								8034+07.78	3489696.12	5409169.18	8034+99.94	3489696.74	5409261.34	8035+91.70	3489712.34	5409352.18			
C23								8035+91.70	3489712.34	5409352.18	8036+83.86	3489727.95	5409443.01	8037+75.61	3489728.56	5409535.17			
C24								8038+32.86	3489728.95	5409592.41	8039+01.48	3489729.40	5409661.04	8039+68.34	3489703.57	5409724.61			
C25								8040+61.04	3489668.66	5409810.49	8041+29.67	3489642.82	5409874.07	8041+96.52	3489643.28	5409942.69			
C26								8044+37.17	3489644.88	5410183.33	8045+05.79	3489645.34	5410251.95	8045+72.65	3489672.03	5410315.18			
C27								8046+65.35	3489708.07	5410400.59	8047+33.98	3489734.76	5410463.81	8048+00.83	3489735.22	5410532.43			
C28								8048+58.08	3489735.60	5410589.68	8049+47.45	3489736.19	5410679.04	8050+36.44	3489722.67	5410767.38			
C29								8050+36.44	3489722.67	5410767.38	8051+33.71	3489708.10	5410863.55	8052+30.50	3489709.96	5410960.80			
		8053+30.50	3489712.02	5411060.78															
Tower Terrace Rd Eastbound																			
		7033+07.78	3489671.46	5409069.34															
C30								7034+07.78	3489672.12	5409169.34	7034+99.94	3489672.74	5409261.50	7035+91.70	3489658.34	5409352.54			
C31								7035+91.70	3489658.34	5409352.54	7036+83.86	3489643.95	5409443.57	7037+75.61	3489644.57	5409535.73			
C32								7038+32.86	3489644.95	5409592.97	7039+01.48	3489645.41	5409661.60	7039+68.34	3489672.09	5409724.82			
C33								7040+61.04	3489708.14	5409810.23	7041+29.67	3489734.82	5409873.45	7041+96.52	3489735.28	5409942.08			
C34								7044+37.17	3489736.88	5410182.72	7045+05.79	3489737.34	5410251.34	7045+72.65	3489711.50	5410314.91			
C35								7046+65.35	3489676.60	5410400.80	7047+33.98	3489650.76	5410464.37	7048+00.83	3489651.22	5410532.99			
C36								7048+58.08	3489651.60	5410590.24	7049+53.09	3489652.23	5410685.24	7050+47.64	3489668.79	5410778.80			
C37								7050+47.64	3489668.79	5410778.80	7051+34.75	3489683.97	5410864.57	7052+21.50	3489685.77	5410951.65			
		7053+31.15	3489688.03	5411061.27															
Tower Terrace Rd Ramp A																			
		3039+31.56	3489687.82	5409717.10															

ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
C38								3046+94.58	3490439.05	5409850.73	3048+15.50	3490558.10	5409871.91	3049+35.75	3490679.01	5409871.27			
		3049+83.06	3490726.32	5409871.02															
Tower Terrace Rd Ramp A West Loop																			
C39								13039+02.76	3489745.88	5409582.16	13040+30.91	3489746.73	5409710.31	13041+16.52	3489872.90	5409732.75			
Tower Terrace Rd Ramp A East Loop																			
C40								23039+31.73	3489759.21	5409932.37	23040+99.97	3489758.09	5409764.13	23041+77.22	3489923.73	5409793.60			
Tower Terrace Rd Ramp B																			
		4029+74.10	3488712.24	5410126.34															
		4040+53.28	3489687.47	5409664.23															
Tower Terrace Rd Ramp B West Loop																			
C41								14038+84.66	3489527.81	5409721.07	14039+82.82	3489616.52	5409679.03	14040+59.44	3489615.87	5409580.87			
Tower Terrace Rd Ramp B East Loop																			
C42								24037+26.49	3489399.44	5409819.52	24039+68.09	3489617.77	5409716.07	24040+35.51	3489619.38	5409957.66			
Tower Terrace Rd Ramp C																			
		5026+69.93	3488503.72	5410444.83															
C43								5027+01.15	3488533.29	5410434.79	5029+21.29	3488741.73	5410364.00	5031+37.47	3488961.86	5410364.14			
		5038+67.78	3489692.18	5410364.60															
Tower Terrace Rd Ramp C West Loop																			
C44								15036+56.42	3489480.84	5410330.47	15037+97.45	3489621.87	5410330.56	15038+77.35	3489620.93	5410189.54			
Tower Terrace Rd Ramp C East Loop																			
C45								25036+20.33	3489444.70	5410398.45	25038+08.95	3489633.32	5410398.57	25039+17.39	3489634.58	5410587.18			
Tower Terrace Rd Ramp D																			
		6038+93.94	3489692.23	5410406.73															
C46								6052+01.82	3490962.88	5410096.91	6052+48.07	3491007.82	5410085.95	6052+94.31	3491053.21	5410077.04			
Tower Terrace Rd Ramp D West Loop																			
C47								16038+87.07	3489760.85	5410177.47	16040+81.79	3489762.15	5410372.18	16041+64.78	3489951.33	5410326.05			
Tower Terrace Rd Ramp D East Loop																			
C48								26038+78.73	3489764.19	5410528.67	26040+00.52	3489763.38	5410406.88	26040+84.83	3489881.71	5410378.03			
Boyson Rd CL																			
		1960+97.41	3484430.47	5413156.81															
C49								1963+81.02	3484433.64	5413440.40	1965+92.62	3484436.00	5413651.99	1967+90.16	3484562.47	5413821.64			
C50								1979+19.39	3485237.39	5414726.99	1979+71.25	3485268.39	5414768.57	1980+22.81	3485306.61	5414803.62			
		1983+15.40	3485522.25	5415001.38															
Boyson Rd Eastbound																			
		7963+56.77	3484427.39	5413440.47															
C51								7963+60.67	3484427.43	5413444.38	7964+71.59	3484428.67	5413555.29	7965+80.38	3484466.62	5413659.51			
C52								7965+96.16	3484472.02	5413674.33	7966+02.10	3484474.05	5413679.91	7966+08.03	3484475.94	5413685.53			
C53								7967+29.93	3484514.92	5413801.04	7968+56.98	3484555.54	5413921.41	7969+73.39	3484664.52	5413986.69			
C54								7970+62.33	3484740.83	5414032.40	7971+30.56	3484799.36	5414067.46	7971+97.06	3484840.14	5414122.17			
C55								7974+08.20	3484966.34	5414291.45	7974+77.22	3485007.59	5414346.79	7975+44.44	3485024.38	5414413.73			
C56								7976+29.61	3485045.10	5414496.34	7977+15.24	3485065.92	5414579.40	7977+97.47	3485123.16	5414643.07			
C57								7977+97.47	3485123.17	5414643.07	7978+94.49	3485188.03	5413297.96	7979+91.37	3485259.54	5414780.81			
		7980+41.47	3485296.47	5414814.67															
Boyson Rd Westbound																			
C58								8963+35.46	3484439.34	5413391.03	8964+93.31	3484441.10	5413548.87	8966+42.89	3484526.30	5413681.75			
C59								8968+66.61	3484647.04	5413870.08	8969+23.06	3484677.51	5413917.61	8969+78.53	3484691.25	5413972.37			
C60								8970+55.49	3484709.97	5414047.01	8971+24.51	3484726.75	5414113.96	8971+91.73	3484768.01	5414169.29			
C61								8974+12.53	3484899.98	5414346.32	8974+80.76	3484940.76	5414401.02	8975+47.25	3484999.29	5414436.09			
C62								8976+29.93	3485070.22	5414478.57	8977+29.74	3485155.84	5414529.86	8978+24.25	3485200.85	5414618.95			
C63								8978+24.25	3485200.85	5414618.95	8979+33.67	3485250.20	5414716.61	8980+40.71	3485330.84	5414790.57			
Boyson Rd Ramp A																			
		3973+55.34	3484689.40	5413991.91															
C64								3977+94.65	3485051.36	5413742.94	3979+58.49	3485186.35	5143650.09	3981+20.31	3485291.50	5413524.45			
		3981+50.00	3485310.56	5413501.69															
Boyson Rd Ramp A West Loop																			
		23972+50.00	3484594.57	5413766.01															
C65								23972+83.40	3484612.60	5413794.13	23974+89.99	3484724.10	5413968.04	23976+04.04	3484894.31	5413850.96			
Boyson Rd Ramp A East Loop																			
C66								13973+23.96	3484861.49	5414130.73	13974+84.98	3484765.25	5414001.63	13975+73.34	3484897.92	5413910.38			
		13975+73.34	3484897.92	5413910.38															
Boyson Rd Ramp B																			
C67								4960+71.63	3484087.41	5415182.03	4960+97.14	3484099.55	5415159.60	4961+22.65	3484111.12	5415136.86			
C68								4966+03.04	3484328.89	5414708.66	4966+99.70	3484372.71	5414622.51	4967+96.08	3484405.10	5414531.44			

ALIGNMENT COORDINATES

Name	Location	Point on Tangent			Begin Spiral			Begin Curve			Simple Curve PI or Master PI of SCS			End Curve			End Spiral		
		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates		Station	Coordinates	
			Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)		Y (Northing)	X (Easting)
		4974+57.76	3484626.88	5413908.04															
Boyson Rd Ramp B West Loop																			
C69								24970+64.77	3484527.19	5414289.70	24973+54.53	3484624.31	5414016.70	24973+99.45	3484797.50	5414249.01			
		24974+25.00	3484812.77	5414269.50															
Boyson Rd Ramp B East Loop																			
C70								14972+91.03	3484571.00	5414065.13	14973+75.73	3484599.39	5413985.33	14974+46.06	3484547.57	5413918.34			
C71								14974+46.06	3484547.57	5413918.34	14974+60.54	3484538.71	5413906.89	14974+75.00	3484530.77	5413894.78			
Boyson Rd Ramp C																			
		5958+72.82	3484137.86	5415464.93															
C72								5962+50.56	3484395.99	5415189.14	5963+42.18	3484458.59	5415122.26	5964+33.56	3484512.59	5415048.25			
C73								5964+76.67	3484537.99	5415013.43	5966+01.54	3484611.59	5414912.55	5967+25.52	3484704.39	5414828.99			
		5972+15.90	3485068.80	5414500.84															
Boyson Rd Ramp C West Loop																			
		15969+74.35	3484855.17	5414624.58															
C74								15970+24.12	3484892.15	5414591.28	15971+65.40	3484997.14	5414496.73	15972+53.25	3484912.69	5414383.46			
		15972+83.34	3484894.71	5414359.34															
Boyson Rd Ramp C East Loop																			
		25969+25.00	3484852.63	5414695.50															
C75								25969+49.83	3484871.08	5414678.88	25971+44.84	3485015.99	5414548.39	25972+58.93	3485150.10	5414689.95			
Boyson Rd Ramp D																			
		6971+66.72	3485078.06	5414513.26															
C76								6973+83.33	3485212.30	5414343.26	6975+40.72	3485309.84	5414219.74	6976+94.14	3485353.33	5414068.48			
C77								6978+87.06	3485406.62	5413883.07	6980+28.21	3485445.62	5413747.41	6981+68.53	3485509.23	5413621.41			
C78								6982+61.66	3485551.21	5413538.28	6982+90.11	3485564.03	5413512.88	6983+18.56	3485577.57	5413487.85			
Boyson Rd Ramp D West Loop																			
C79								16971+25.00	3485204.26	5414576.46	16971+37.65	3485197.47	5414565.79	16971+50.29	3485189.97	5414555.61			
C80								16971+50.29	3485189.97	5414555.61	16972+68.56	3484119.80	5414460.40	16973+52.34	3485193.10	5414367.59			
Boyson Rd Ramp D East Loop																			
		26971+50.00	3484966.51	5414251.53															
C81								26971+67.80	3484977.15	5414265.80	26973+93.68	3485112.16	5414446.90	26974+68.31	3485232.56	5414255.78			

SPIRAL OR CIRCULAR CURVE DATA

Name	Location	ΔSCS	Horizontal Alignment Data												Remarks
			Spiral Data							Curve Data					
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R	E	
ML380																
C1											13° 12' 59.40" (RT)	1,327.5417	2,643.3000	11,459.1560	76.6415	
C2											39° 59' 37.21" (LT)	705.9809	1,354.1611	1,940.0000	124.4634	
C3											49° 46' 05.03" (RT)	1,774.2104	3,322.4584	3,825.0000	391.4496	
C4											1° 47' 35.61" (RT)	500.4758	1,000.8698	31,979.0400	3.9160	
C5			° 00' 00.00" (LT)	200.0001	66.6744		199.9757	2.3269	133.3419	66.6744						
C6											20° 08' 01.58" (LT)	508.5888	1,006.6890	2,864.7900	44.7949	
C7			° 00' 00.00" (LT)	200.0001	66.6744		199.9757	2.3269	133.3419	66.6744						
Median Width Transition Northbound Lanes																
C8											1° 19' 19.74" (RT)	195.0260	390.0346	16,902.2560	1.1251	
C9											1° 19' 19.74" (LT)	195.0260	390.0346	16,902.2560	1.1251	
C10											49° 36' 10.83" (RT)	1,770.0545	3,316.1878	3,830.4847	389.1961	
C11											1° 28' 14.83" (LT)	164.9647	329.9113	12,852.0000	1.0587	
C12											1° 28' 14.83" (RT)	166.1970	332.3757	12,948.0000	1.0666	
Median Width Transition Southbound Lanes																
C13											1° 19' 19.75" (LT)	195.0260	390.0346	16,902.2499	1.1251	
C14											1° 19' 19.75" (RT)	195.0260	390.0347	16,902.2499	1.1251	
C15											50° 24' 20.92" (RT)	1,797.2634	3,359.6465	3,818.8764	401.7838	
C16											1° 28' 14.83" (RT)	165.4268	330.8355	12,888.0000	1.0616	
C17											1° 28' 14.83" (LT)	165.7349	331.4515	12,912.0000	1.0636	
Blairs Ferry Rd Ramp A																
C18											8° 59' 55.58" (LT)	157.3819	314.1164	2,000.0000	6.1827	
Blairs Ferry Rd Ramp C																
C19											3° 54' 50.63" (RT)	136.6797	273.2532	4,000.0000	2.3345	
County Home Rd Ramp B																
C20											8° 52' 53.22" (LT)	155.3217	310.0211	2,000.0000	6.0221	
County Home Rd Ramp C																
C21											7° 57' 24.86" (RT)	92.5001	184.7027	1,330.0000	3.2128	
Tower Terrace Rd Westbound																
C22											9° 22' 00.4" (LT)	92.1636	183.9165	T1903xt	3.7689	
C23											9 °22' 00.4" (RT)	92.1636	183.9165	T1903xt	3.7689	
C24											22° 30' 00.0" (RT)	68.6248	135.4812	T1900xt	6.7589	
C25											22° 30' 00.0" (LT)	68.6248	135.4812	T1900xt	6.7589	
C26											22° 30' 00.0" (LT)	68.6248	135.4812	T1900xt	6.7589	
C27											22° 30' 00.0" (RT)	68.6248	135.4812	T1900xt	6.7589	
C28											9° 05' 02.4" (RT)	89.3693	178.3640	T1903xt	3.5441	
C29											9° 42' 39.4" (LT)	97.2648	194.0636	T1903xt	4.1238	
Tower Terrace Rd Eastbound																
C30											9° 22' 00.4" (RT)	92.1636	183.9165	1125.0000	3.7689	
C31											9° 22' 00.4" (LT)	92.1636	183.9165	1125.0000	3.7689	
C32											22° 30' 00.0" (LT)	68.6248	135.4812	345.0000	6.7589	
C33											22° 30' 00.0" (RT)	68.6248	135.4812	345.0000	6.7589	
C34											22° 30' 00.0" (RT)	68.6248	135.4812	345.0000	6.7589	
C35											22° 30' 00.0" (LT)	68.6248	135.4812	345.0000	6.7589	
C36											9° 39' 16.5" (LT)	95.0085	189.5671	1125.0000	4.0047	
C37											8° 51' 16.5" (RT)	87.1030	173.8592	1125.0000	3.3669	
Tower Terrace Rd Ramp A																
C38											10°23'22.1" (LT)	120.9162	241.1694	1330.0000	5.4852	
Tower Terrace Rd Ramp A West Loop																
C39											79°31'51.8" (LT)	128.1511	213.7642	154.0000	46.3465	
Tower Terrace Rd Ramp A East Loop																
C40											100°28'08.2" (RT)	168.2389	245.4919	140.0000	78.8706	
Tower Terrace Rd Ramp B West Loop																
C41											65°01'40.5" (LT)	98.1616	174.7825	154.0000	28.6245	
Tower Terrace Rd Ramp B East Loop																
C42											114°58'19.5" (RT)	241.6017	309.0228	154.0000	132.5090	
Tower Terrace Rd Ramp C																
C43											18°47'46.0" (RT)	220.1337	436.3118	1330.0000	18.0945	
Tower Terrace Rd Ramp C West Loop																
C44											90°25'07.7" (LT)	141.0271	220.9348	140.0000	58.7175	
Tower Terrace Rd Ramp C East Loop																
C45											89°34'52.3" (RT)	188.6163	297.0625	190.0000	77.7239	

SPIRAL OR CIRCULAR CURVE DATA

Name	Location	ΔSCS	Horizontal Alignment Data												Remarks
			Spiral Data							Curve Data					
			θS	Ls	Ts	Es	Xc	Yc	L.T.	S.T.	ΔC	T	L	R	E	
Tower Terrace Rd Ramp D																
C46											2°35'52.0" (RT)	46.2547	92.4935	2040.0000	0.5243	
Tower Terrace Rd Ramp D West Loop																
C47											103°19'15.1" (LT)	194.7212	277.7065	154.0000	94.2586	
Tower Terrace Rd Ramp D East Loop																
C48											76°40'44.9" (RT)	121.7947	206.0987	154.0000	42.3414	
Boyson Rd CL																
C49											36° 3' 51.48" (LT)	211.6013	409.1368	650.0000	33.5752	
C50											10° 46' 21.72" (LT)	51.8582	103.4106	550.0000	2.4394	
Boyson Rd Eastbound																
C51											19° 22' 0.48" (LT)	110.9129	219.7098	650.0000	9.3949	
C52											1° 21' 35.64" (RT)	5.9341	11.8677	500.0000	0.0352	
C53											40° 25' 53.4" (LT)	127.0430	243.4537	345.0000	22.6478	
C54											22° 22' 26.76" (RT)	68.2308	134.7230	345.0000	6.6823	
C55											22° 37' 33.24" (RT)	69.0190	136.2394	345.0000	6.8361	
C56											27° 52' 34.68" (LT)	85.6227	167.8541	345.0000	10.4662	
C57											5° 31' 18.12" (LT)	97.0259	193.9016	2012.0000	2.3381	
Boyson Rd Westbound																
C58											32° 1' 34.68" (LT)	157.8467	307.4306	550.0000	22.2024	
C59											18° 35' 16.44" (RT)	56.4586	111.9250	345.0000	4.5891	
C60											22° 37' 33.24" (LT)	69.0190	136.2394	345.0000	6.8361	
C61											22° 22' 26.76" (LT)	68.2308	134.7230	345.0000	6.6823	
C62											32° 16' 17.76" (RT)	99.8128	194.3200	345.0000	14.1484	
C63											20° 40' 14.16" (LT)	109.4204	216.4621	600.0000	9.8958	
Boyson Rd Ramp A																
C64											15° 32' 57.48" (LT)	163.8383	325.6629	1200.0000	11.1329	
Boyson Rd Ramp A West Loop																
C65											91° 51' 20.52" (LT)	206.5847	320.6368	200.0000	87.5365	
Boyson Rd Ramp A East Loop																
C66											92° 10' 56.28" (RT)	161.0191	249.3772	155.0000	68.4998	
Boyson Rd Ramp B																
C67											1° 27' 41.76" (LT)	25.5118	51.0208	2000.0000	0.1627	
C68											7° 22' 25.68" (LT)	96.6564	193.0459	1500.0000	3.1109	
Boyson Rd Ramp B East Loop																
C69											123° 42' 46.08" (RT)	289.7583	334.6753	155.0000	173.6105	
Boyson Rd Ramp B West Loop																
C70											57° 18' 24.12" (LT)	84.6960	155.0294	155.0000	21.6307	
C71											4° 27' 26.64" (RT)	14.4773	28.9400	372.0000	0.2816	
Boyson Rd Ramp C																
C72											6° 59' 24" (LT)	91.6126	182.9980	1500.0000	2.7950	
C73											11° 52' 53.76" (RT)	124.8720	248.8483	1200.0000	6.4796	
Boyson Rd Ramp C West Loop																
C74											84° 42' 2.16" (LT)	141.2882	229.1373	155.0000	54.7316	
Boyson Rd Ramp C East Loop																
C75											88° 33' 5.4" (RT)	195.0066	309.1030	200.0000	79.3341	
Boyson Rd Ramp D																
C76											22° 15' 36.36" (LT)	157.3897	310.8099	800.0000	15.3352	
C77											10° 45' 4.68" (RT)	141.1486	281.4684	1500.0000	6.6263	
C78											1° 37' 48.36" (RT)	28.4531	56.9024	2000.0000	0.2024	
Boyson Rd Ramp D East Loop																
C79											3° 55' 35.04" (LT)	12.6486	25.2872	369.0000	0.2167	
C80											74° 41' 20.04" (RT)	118.2684	202.0528	155.0000	39.9678	
Boyson Rd Ramp D West Loop																
C81											111° 5' 5.64" (LT)	225.8849	300.5136	155.0000	118.9507	

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
		FT	%	FT	FT														
I-380	C1	11459.156	2.0	140	175	PV-306	551+22.28	551+57.28	552+97.28	554+37.28	554+37.28	554+37.28			553+95.28				PV-306 to be modified for
							569+84.04	569+49.04	568+09.04	566+69.04	566+69.04	566+69.04			567+11.04				6-lane construction
I-380	C2	1,940.0000	6.0	419	174.59	PV-306	938+48.01	938+82.93	940+22.60	941+62.27	941+97.19	944+41.60	943+15.90			942+32.10	943+71.77		PV-306 to be modified for
							961+37.95	961+03.03	959+63.36	958+23.69	957+88.77	955+44.36	956+70.06			957+53.86	956+14.19		6-lane construction
I-380	C3	3,825.0000	4.2	294	175	PV-307	1001+64.98	1001+99.90	1003+39.98	1004+80.06	1005+14.98	1006+33.98	1005+45.78			1005+49.98			PV-307 to be modified for
							1042+49.04	1042+14.04	1040+74.04	1041+09.04	1040+74.04	1037+80.04	1038+68.24			1038+64.04			6-lane construction
BF Ramp A	C18	2,000.0000	5.4	168	62.22	PV-303	3928+06.41		3928+61.79	3929+12.19						3928+37.52	3928+99.75		
							3932+31.29		3931+75.91	3931+25.51						3932+00.18	3931+37.95		
BF Ramp C	C19	4,000.0000	3.6	56.89	71.11	PV-303	5550+74.57		5550+43.28	5550+60.35						5550+50.87			
							5552+85.24		5553+16.53	5552+99.46						5553+08.94			
Boyson Ramp A	C64	1200	6.0	204	68	PV-303	3977+19.85		3977+94.65	3978+55.85						3977+53.85	3978+21.85		
							3981+95.11		3981+20.31	3980+59.11						3981+61.11	3980+93.11		
Boyson Ramp A WB	C65	200	4.0	70	35	PV-303	23972+69.40		23972+83.40	23973+04.40						23972+86.90			
							23976+18.04		23976+04.04	23975+83.04						23976+00.54			
Boyson Ramp A EB	C66	155	4.0	80	40	PV-303	13972+27.96	13972+67.96	13973+23.96	13973+47.96						13973+27.96			
							13976+69.34	13976+29.34	13975+73.34	13975+49.34						13975+69.34			
Boyson Ramp B	C68	1500	4.0	140	70	PV-303	4965+75.04		4966+03.04	4966+45.04						4966+10.04			
							4968+24.08		4967+96.08	4967+54.08						4967+89.08			
Boyson Ramp B EB	C69	155	4.0	60	30	PV-303	24970+52.77		24970+64.77	24970+82.77						24970+67.77			
							24974+11.45		24973+99.45	24973+81.45						24973+96.45			
Boyson Ramp B WB	C70	155	4.0	60	30	PV-303	14972+19.03	14972+49.03	14972+91.03	14973+09.03						14972+94.03			
							14975+18.06	14974+88.06	14974+46.06	14974+28.06						14974+43.06			
Boyson Ramp C	C72	1500	2.0	65	65	PV-303	5961+40.06	5962+05.06	5962+50.56	5962+70.06									
							5965+44.06	5964+79.06	5964+33.56	5964+14.06									
Boyson Ramp C WB	C74	155	4.0	60	30	PV-303	15969+52.12	15969+82.12	15970+24.12	15970+42.12						15970+27.12			
							15973+25.25	15972+95.25	15972+53.25	15972+35.25						15972+50.25			
Boyson Ramp C EB	C75	200	4.0	80	40	PV-303	25969+33.83		25969+49.83	25969+73.83						25969+53.83			
							25972+74.93		25972+58.93	25972+34.93						25972+54.93			
Boyson Ramp D	C77	1500	4.0	140	70	PV-303	6978+59.06		6978+87.06	6979+29.06						6978+94.06			
							6981+96.53		6981+68.53	6981+26.53						6981+61.53			
Boyson Ramp D WB	C80	155	4.0	60	30	PV-303	16971+38.29		16971+50.29	16971+68.29						16971+53.29			
							16973+64.34		16973+52.34	16973+34.34						16973+49.34			
Boyson Ramp D EB	C81	155	4.0	60	30	PV-303	26970+95.80	26971+25.80	26971+67.80	26971+85.80						26971+70.80			
							26975+40.31	26975+10.31	26974+68.31	26974+50.31						26974+65.31			
TTR Ramp A	C38	1330.0000	6.0	186	62	PV-303	3046+26.38		3046+94.58	3047+50.38						3046+88.38	3046+88.38		
							3050+03.95		3049+35.75	3048+79.95						3049+41.95	3049+41.95		
TTR Ramp A WB	C39	154.0000	4.0	60	30	PV-303	13038+90.76		13039+02.76	13039+20.76						13039+20.76	13039+20.76		
							13041+28.52		13041+16.52	13040+98.52						13040+98.52	13040+98.52		
TTR Ramp A EB	C40	140.0000	4.0	70	35	PV-303	23038+47.73	23038+82.73	23039+31.73	23039+52.73						23039+52.73	23039+52.73		
							23042+61.22	23042+26.22	23041+77.22	23041+56.22						23041+56.22	23041+56.22		
TTR Ramp B WB	C41	154.0000	4.0	60	30	PV-303	14038+12.66	14038+42.66	14038+84.66	14039+02.66						14039+02.66	14039+02.66		
							14041+31.44	14041+01.44	14040+59.44	14040+41.44						14040+41.44	14040+41.44		
TTR Ramp B EB	C42	154.0000	4.0	60	30	PV-303	24037+14.49		24037+26.49	24037+44.49						24037+44.49	24037+44.49		
							24040+47.51		24040+35.51	24040+17.51						24040+17.51	24040+17.51		
TTR Ramp C	C43	1330.0000	6.0	186	62	PV-303	5026+32.95		5027+01.15	5027+56.95						5026+94.95	5026+94.95		
							5032+05.67		5031+37.47	5030+81.67						5031+43.67	5031+43.67		
TTR Ramp C WB	C44	140.0000	4.0	70	35	PV-301	15035+72.42	15036+07.42	15036+42.42	15036+77.42			15036+56.42			15036+77.42	15036+77.42		
							15039+61.35	15039+26.35	15038+91.35	15038+56.35			15038+77.35			15038+56.35	15038+56.35		
TTR Ramp C EB	C45	190.0000	4.0	70	35	PV-301	25035+36.33	25035+71.33	25036+06.33	25036+41.33			25036+20.33			25036+41.33	25036+41.33		
							25040+01.39	25039+66.39	25039+31.39	25038+96.39			25039+17.39			25038+96.39	25038+96.39		
TTR Ramp D	C46	2040.0000	5.4	168	#######	PV-303	6051+46.44		6052+01.82	6052+52.22						6052+08.66	6052+08.66		
							6053+49.69		6052+94.31	6052+43.91						6052+87.47	6052+87.47		
TTR Ramp D WB	C47	154.0000	4.0	60	30	PV-301	16038+15.07	16038+45.07	16038+75.07	16039+05.07			16038+87.07			16039+05.07	16039+05.07		
							16042+36.78	16042+06.78	16041+76.78	16041+46.78			16041+64.78			16041+46.78	16041+46.78		
TTR Ramp D EB	C48	154.0000	4.0	60	30	PV-301	26038+06.73	26038+36.73	26038+66.73	26038+96.73			26038+78.73			26038+96.73	26038+96.73		
							26041+56.83	26041+26.83	26040+96.83	26040+66.83			26040+84.83			26040+66.83	26040+66.83		

SUPERELEVATION DATA

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
		FT	%	FT	FT														
County Home Ramp B	C20	2,000.0000	5.4	168	78	PV-303	41148+59.35		41148+98.95	41149+49.35						41149+05.79	41149+05.79		
							41152+48.57		41152+08.97	41151+58.57						41152+02.13	41152+02.13		
County Home Ramp C	C21	1,330.0000	6.0	187	78	PV-303	51154+75.26		51155+28.16	51155+84.26						51155+21.93	51155+21.93		
							51157+65.76		51157+12.86	51156+56.76						51157+19.09	51157+19.09		

108-23A
08-01-08

TRAFFIC CONTROL PLAN

Traffic Control Plan to be developed at a later date.

108-26A
08-01-08

STAGING NOTES

Stage 1 Traffic
Traffic on I-380 will be shifted approximately 1/2 lane width towards inside of roadway, partially onto the median shoulder. Temporary barrier rail will be placed adjacent to both northbound and southbound traffic. Access points at the four interchanges within the project limits will remain open.

Stage 1 Construction
Temporary pavement will be placed adjacent to existing outside shoulders for both northbound and southbound traffic. The width of the temporary pavement varies, and is to be accommodate traffic in Stage 2.

Stage 2 Traffic
Traffic on I-380 will be shifted onto the temporary pavement constructed in Stage 1. Access points at the four interchanges within the project limits will remain open.

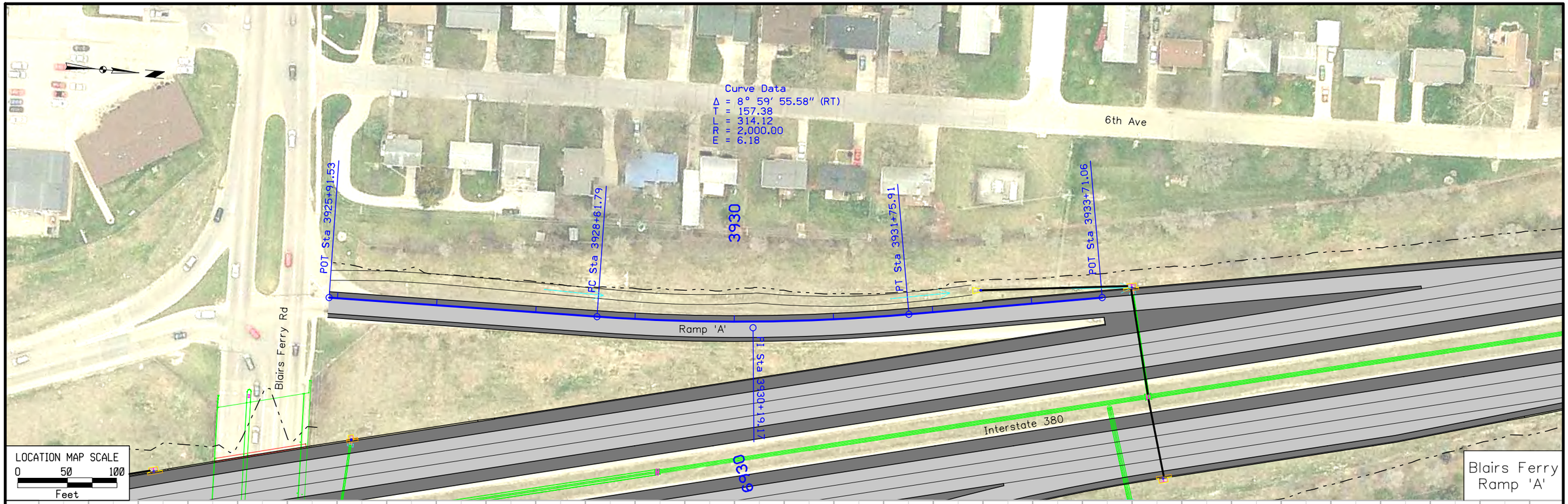
Stage 2 Construction
Stage 2 includes removal of pavement, construction of NB Lane 1, the NB median shoulder, SB Lane 1, the SB median shoulder, and approximatley 6' of temporary pavement adjacent to newly constructed median shoulder. Stage 2 also includes construction of drainage structures within the median, and construction of storm sewer pipes beyond the pavement constructed with this stage.

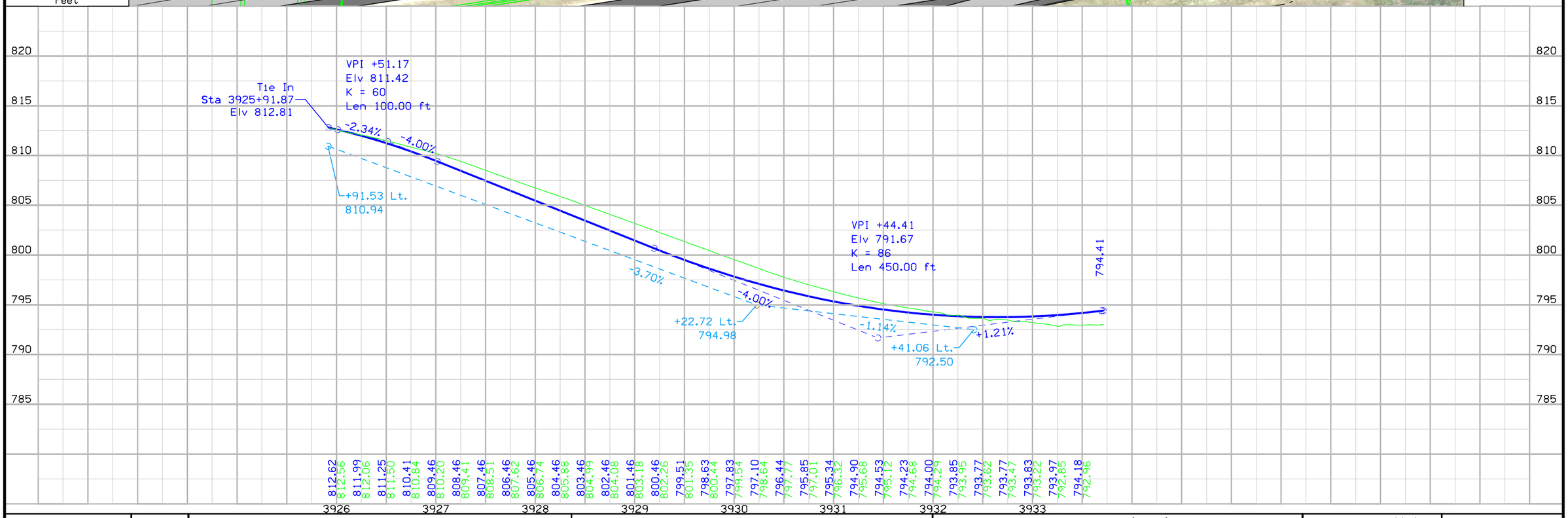
Stage 3 Traffic
Traffic on I-380 will shift towards the median, partially using the temporary pavement constructed in Stage 2. A tempoaray barrier rail will be placed adjacent to both NB and SB traffic. Access points at the four interchanges within the project limits will remain open.

Stage 3 Construction
Stage 3 includes removal of remaining pavement, construction of NB Lanes 2-3, the NB outside shoulder, SB Lanes 2-3 and the SB outside shoulder, and grading outside of the roadway. Extension of pipes/culverts beneath the roadway and construction of storm sewer structures will be completed prior to paving. Paving includes NB and SB Lanes 2-3, auxillary lanes, and outside shoulders. Segments at interchange ramps will be skipped to limit ramp closure durations.

Stage 4 Traffic
Traffic on I-380 will remain shifted towards the median. Closure of ramps at the four interchanges within the project will be alternated to allow for roadway and ramp construction skipped during Stage 3.

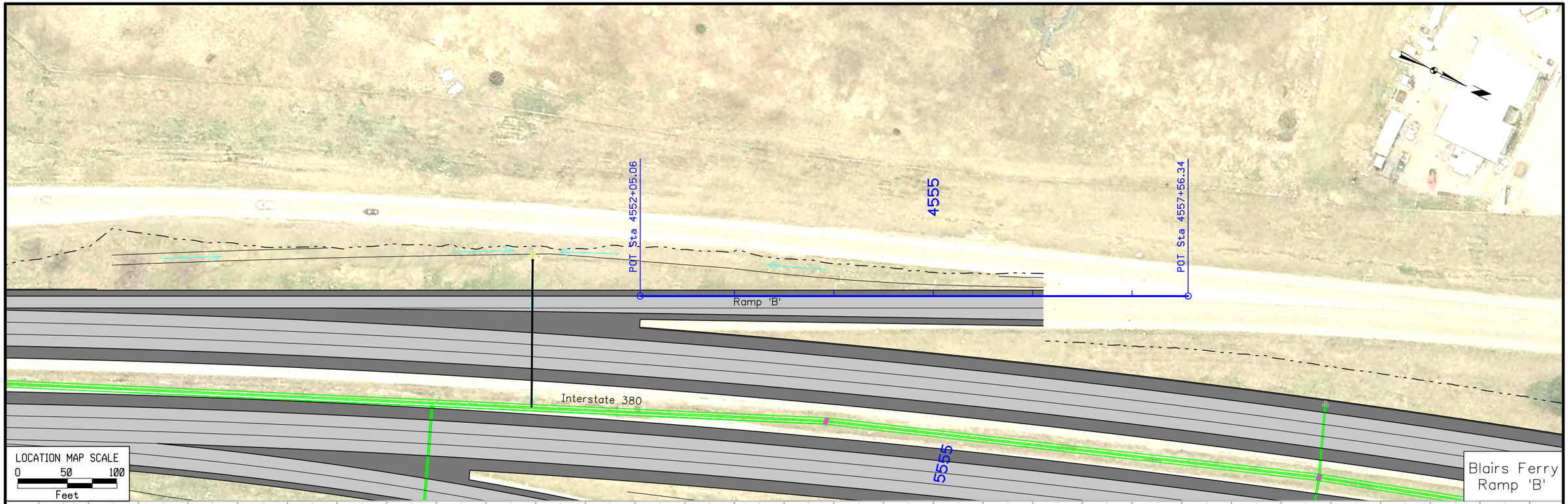
Stage 4 Construction
Segments of roadway construction skipped during Stage 3 will be be completed during Stage 4.

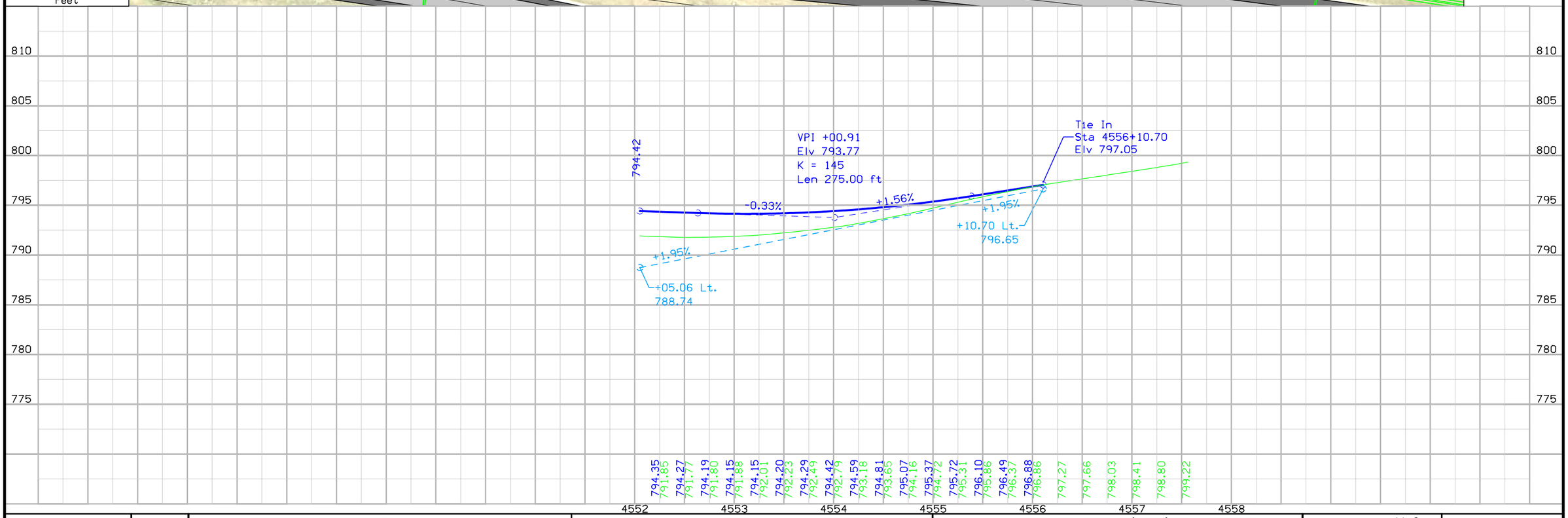




FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER K.1

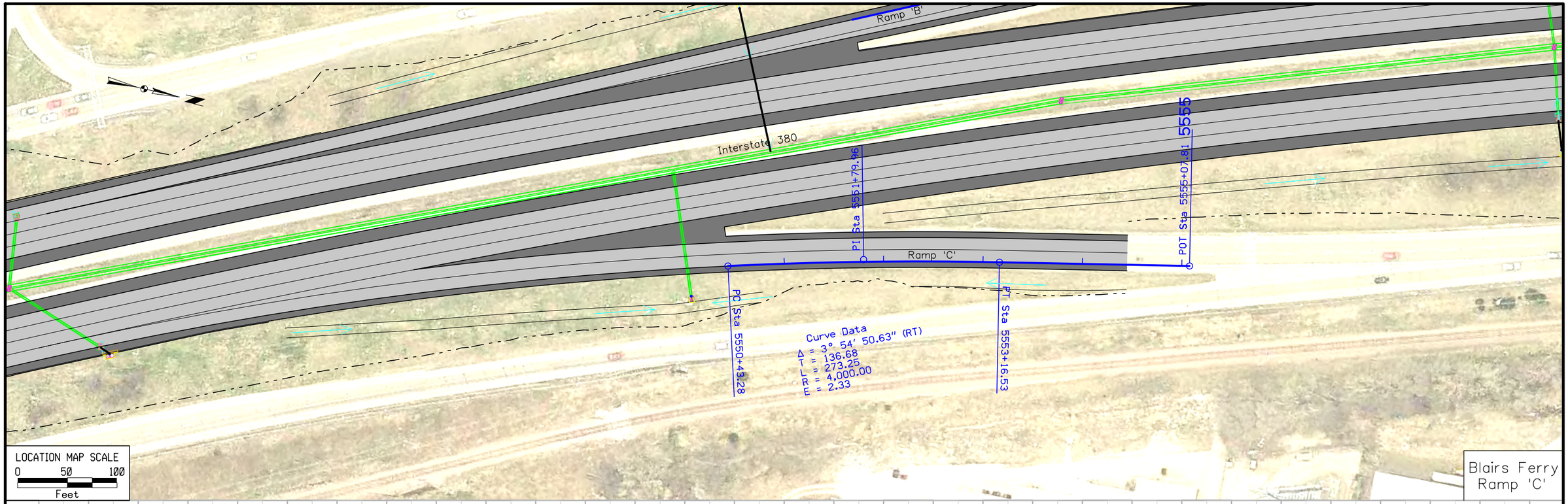
2:51:03 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224K10.dgn

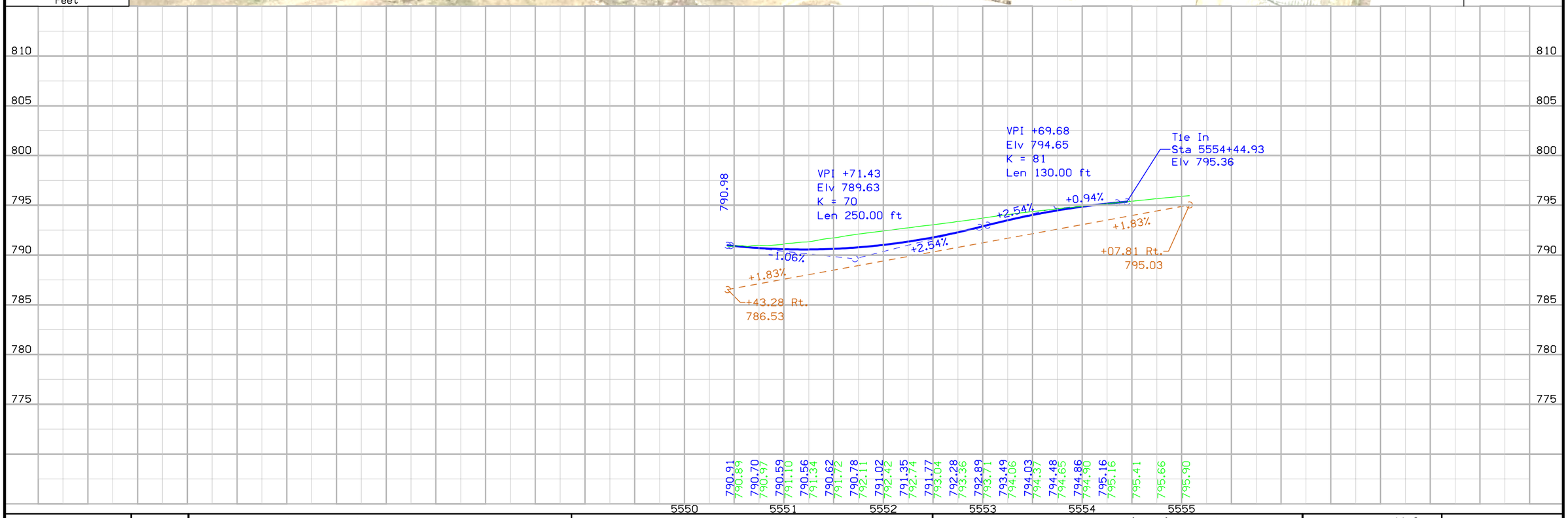




FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER K.2

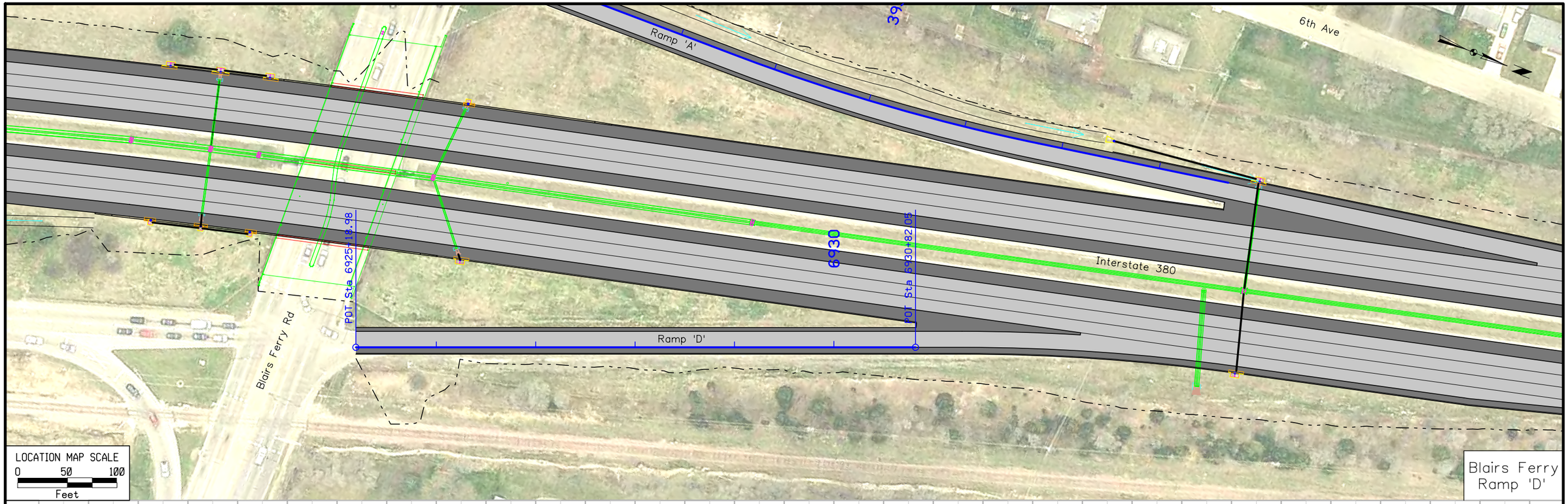
2:51:15 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224K10.dgn

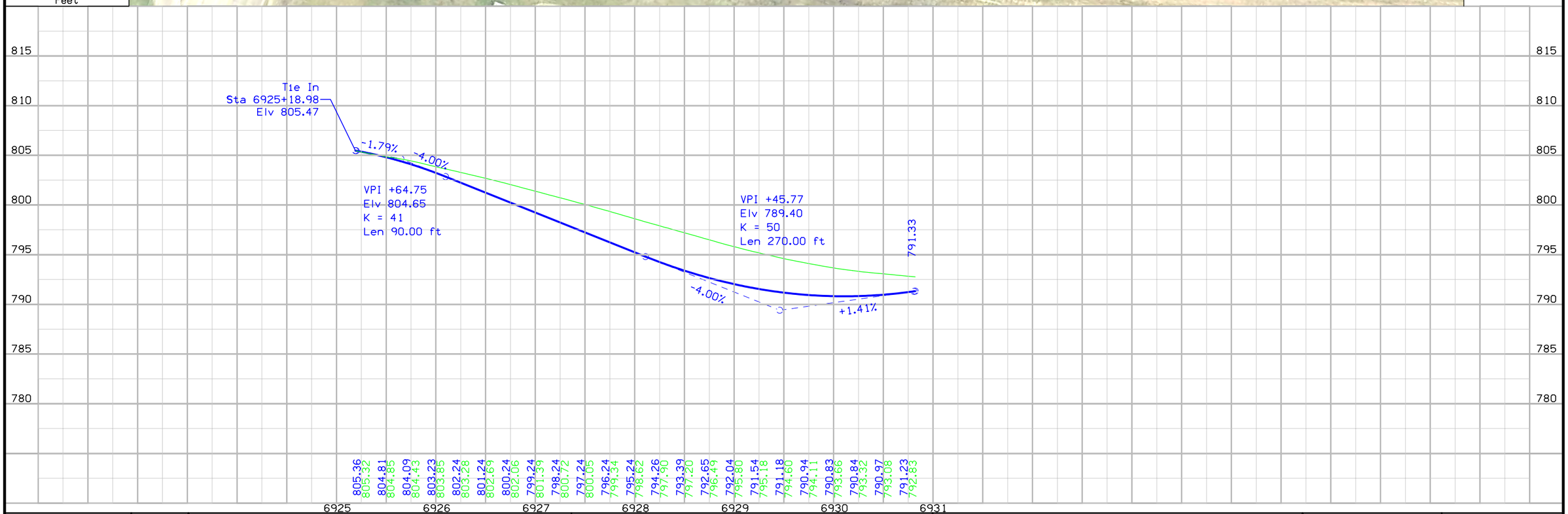




FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER K.3

2:51:25 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224K10.dgn





FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER K.4

2:51:35 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224K10.dgn

Monroe TWP.
T-84N R-7W
SEC. 32

Sta. 981+06.11
24"x62.81' RCP

Sta. 982+03.75
24"x83.16' RCP

Sta. 964+71.20
24"x83.26' RCP

Sta. 964+45.71
52"x32"x72.40' ARCHED RCP

Sta. 960+98.89
24"x54.65' RCP

BOYSON ROAD

N. 12TH AVENUE

N. CENTER POINT ROAD

LOCATION MAP SCALE
0 100 200
Feet

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER K.5

2:52:50 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design__Field Check\57380224_K05.dgn

Boyson Ramp 'A'

FILE NO.	ENGLISH	DESIGN TEAM **KIRKHAM MICHAEL**	**LINN** COUNTY	PROJECT NUMBER **IM-380-6(310)25--13-57**	SHEET NUMBER **K.6**

2:54:13 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380224K1.dgn

Curve Data
Δ = 1° 27′ 41.90″ (LT)
T = 25.51
L = 51.02
R = 2,000.00
E = 0.16

Sta. 964+45.71
52″x32″x72.40′ ARCHED RCP

Sta. 960+98.89
24″x54.65′ RCP

Sta. 964+71.20
24″x83.26′ RCP

PC Sta 4960+71.63

PT Sta 4961+22.65

PC Sta 4960+97.14

4965

PC Sta 4966+03.04

Curve Data
Δ = 7° 22′ 25.72″ (LT)
T = 96.66
L = 193.05
R = 1,500.00
E = 3.11

PT Sta 4967+96.08

PC Sta 4966+99.69

4970

Curve Data
Δ = 57° 18′ 23.95″ (LT)
T = 84.70
L = 155.03
R = 155.00
E = 21.63

PC Sta 14972+91.03

PT Sta 14974+46.06

PT Sta 14974+57.76

PC Sta 14973+54.30

PT Sta 14973+75.13

Boyson Road

13975

Ramp 'B'

PC Sta 24970+64.77

Curve Data
Δ = 123° 42′ 46.06″ (RT)
T = 289.76
L = 334.68
R = 155.00
E = 173.61

PT Sta 24973+99.45

5965

Interstate 380

Ramp 'C'

5970 15970
25970

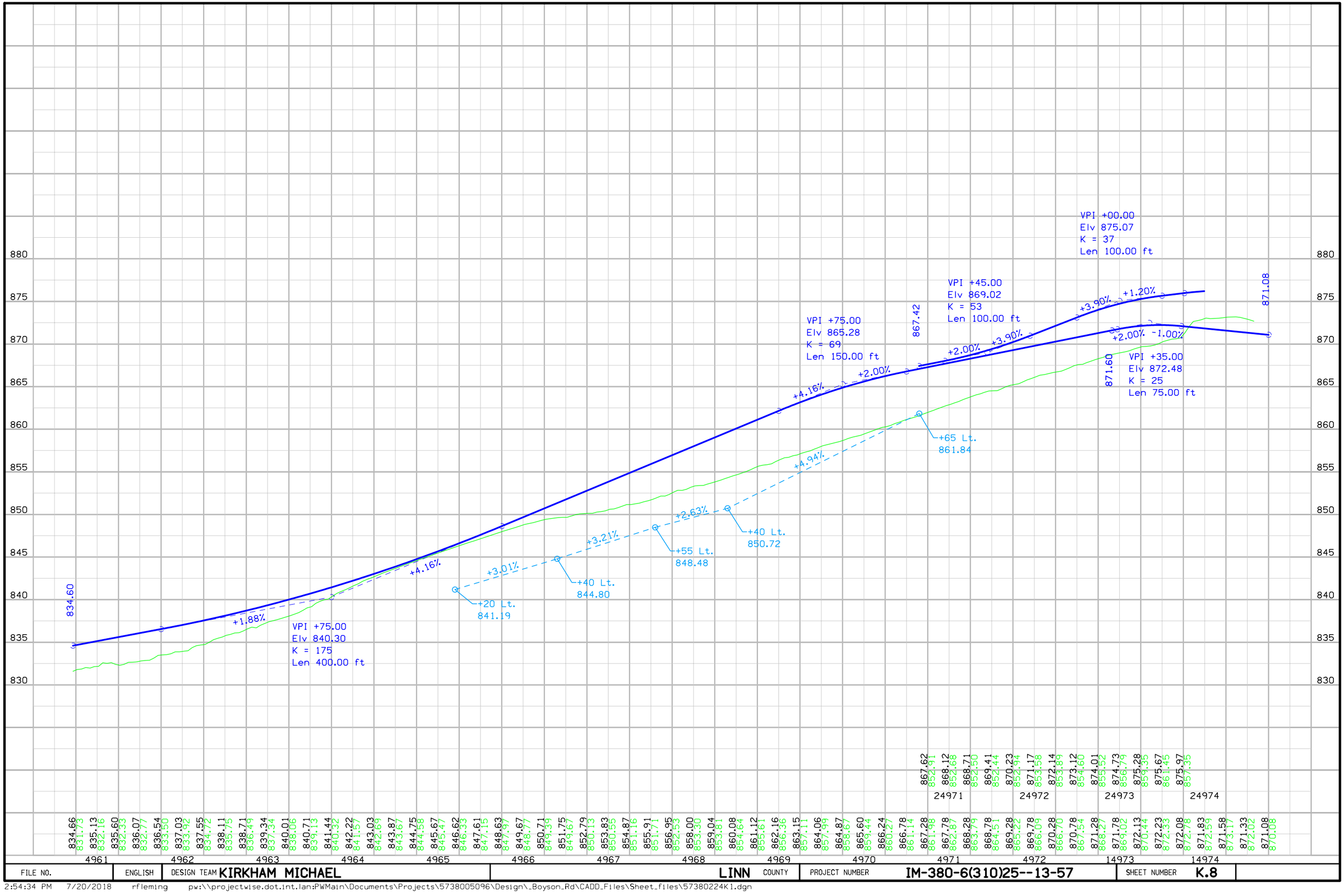
6975

0 FEET 50

Boyson
Ramp 'B'

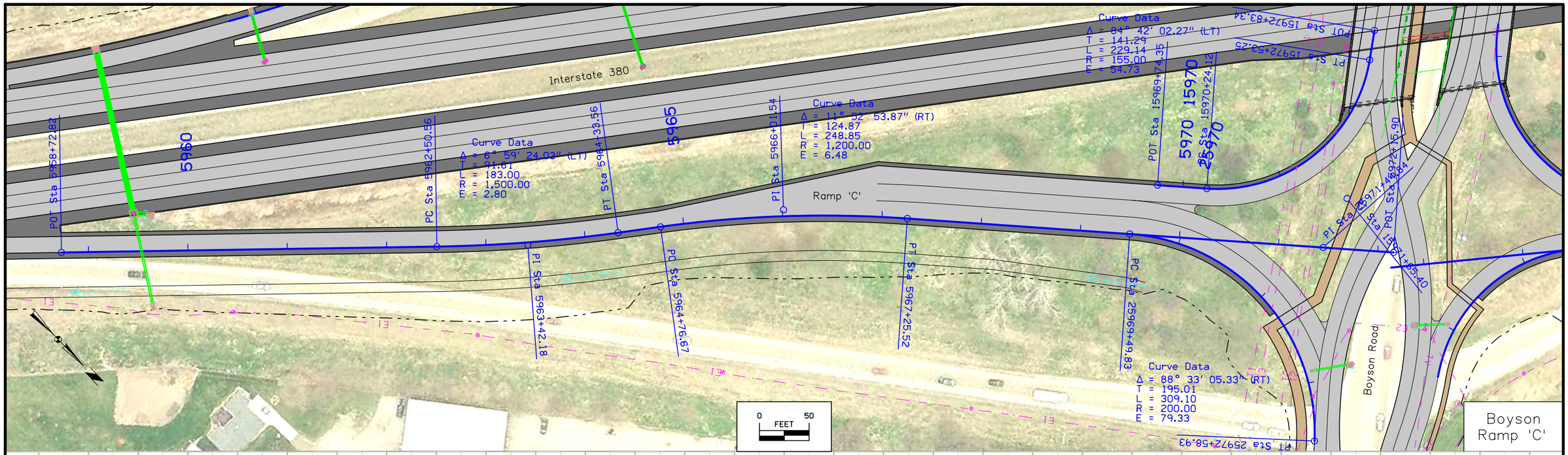
FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER K.7

2:54:26 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380224K1.dgn



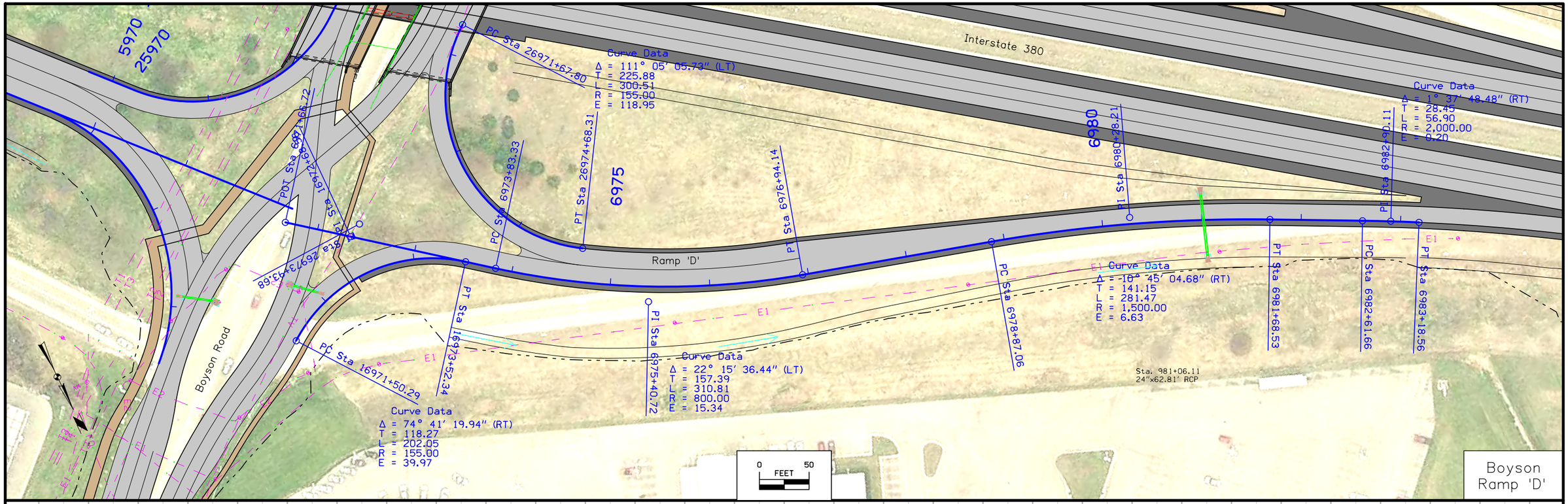
FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER K.8

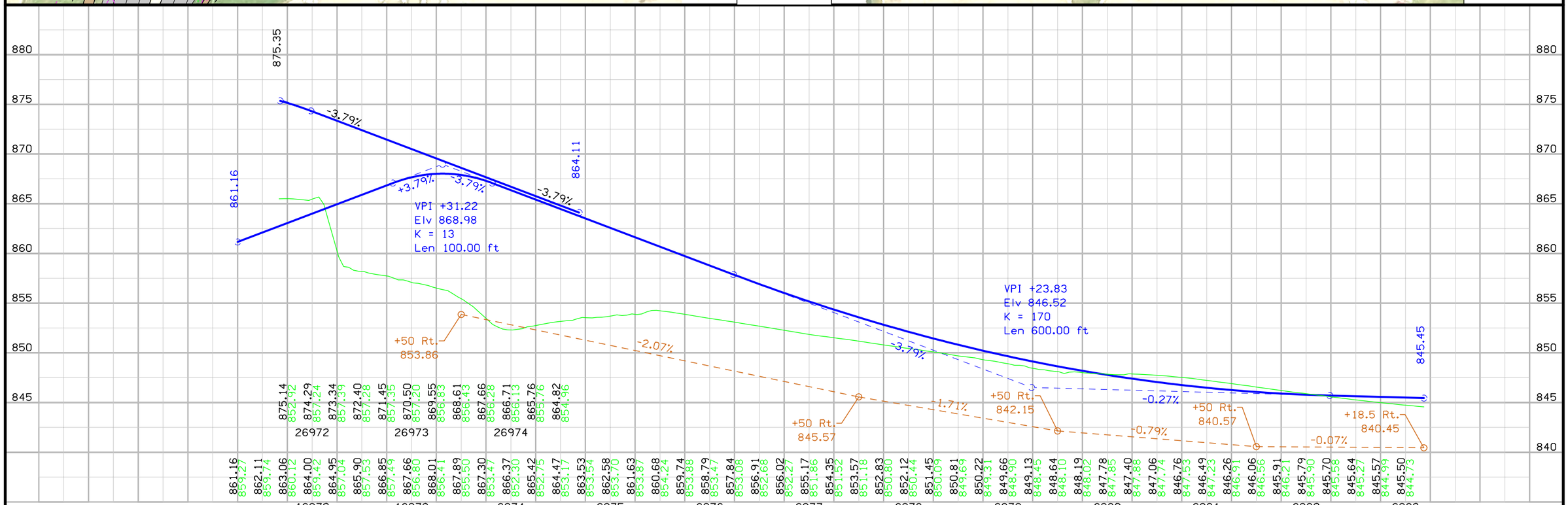
2:54:34 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380224K1.dgn



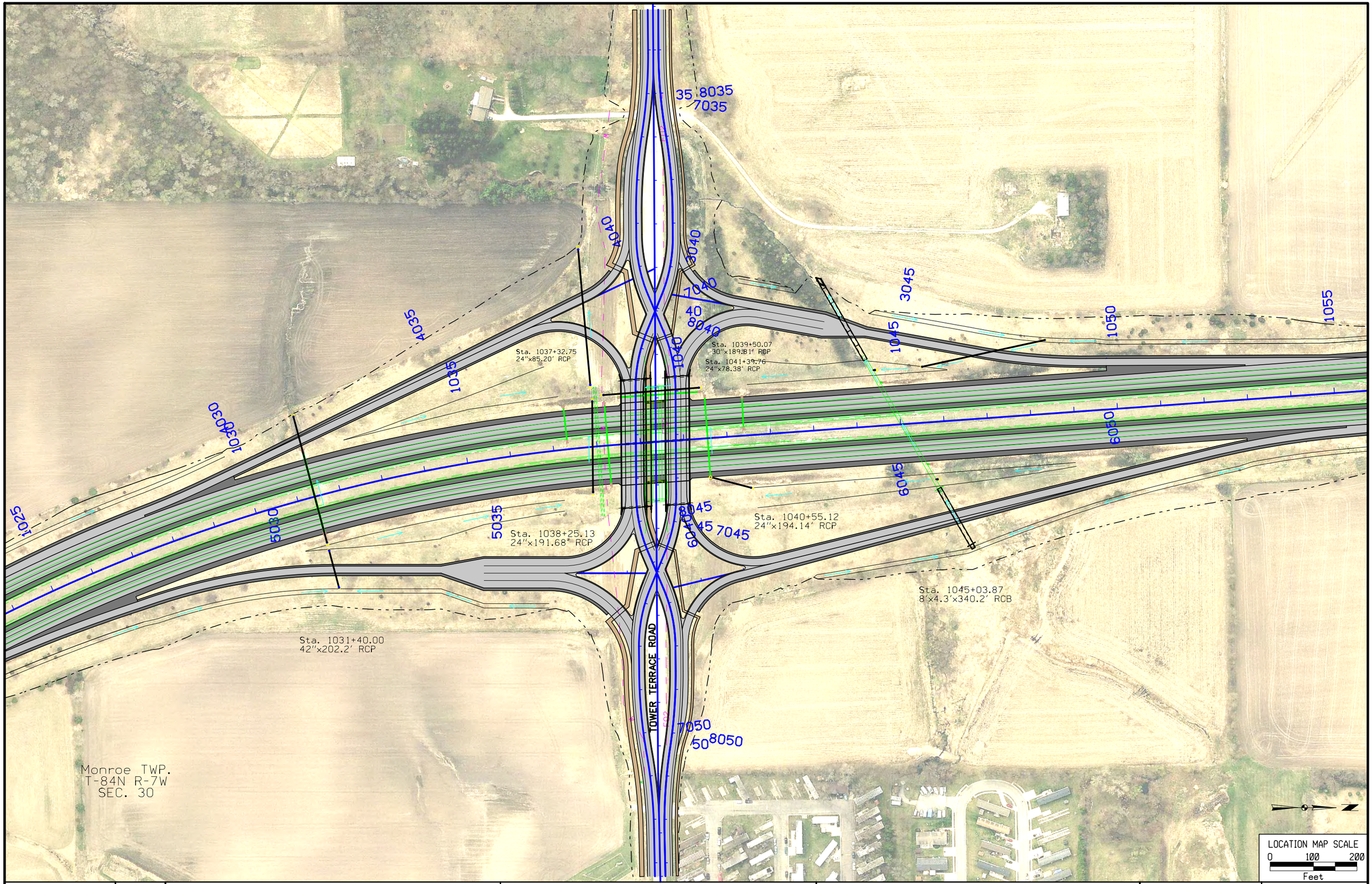
FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER K.9

2:54:57 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380224K1.dgn



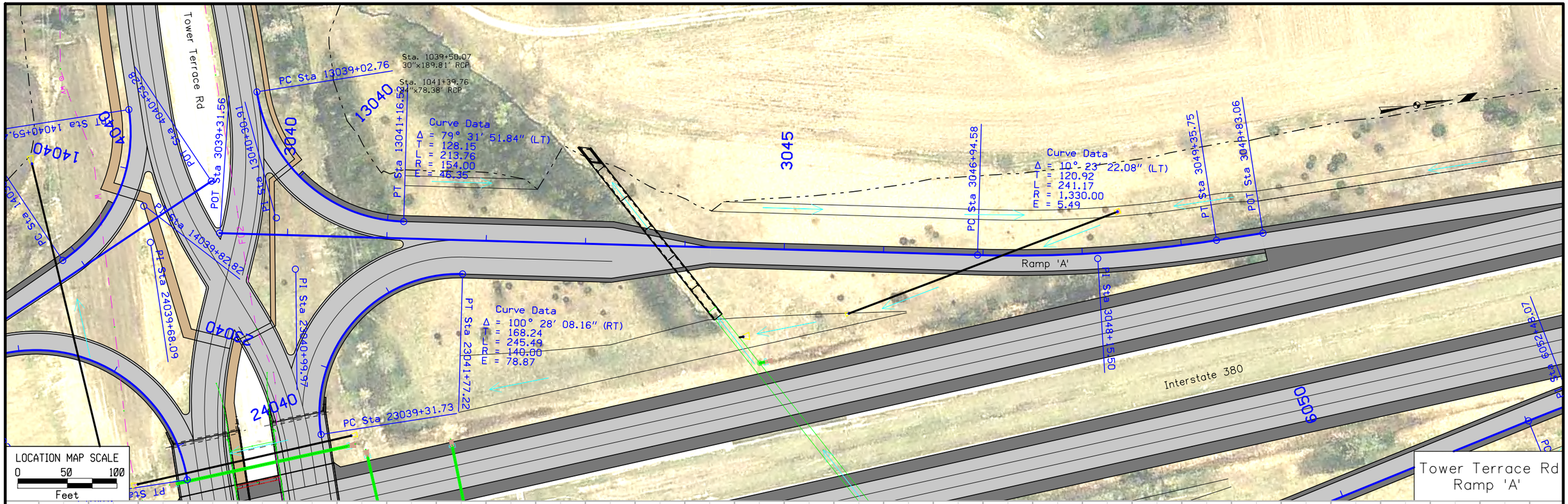


FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER K.10



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER K.11

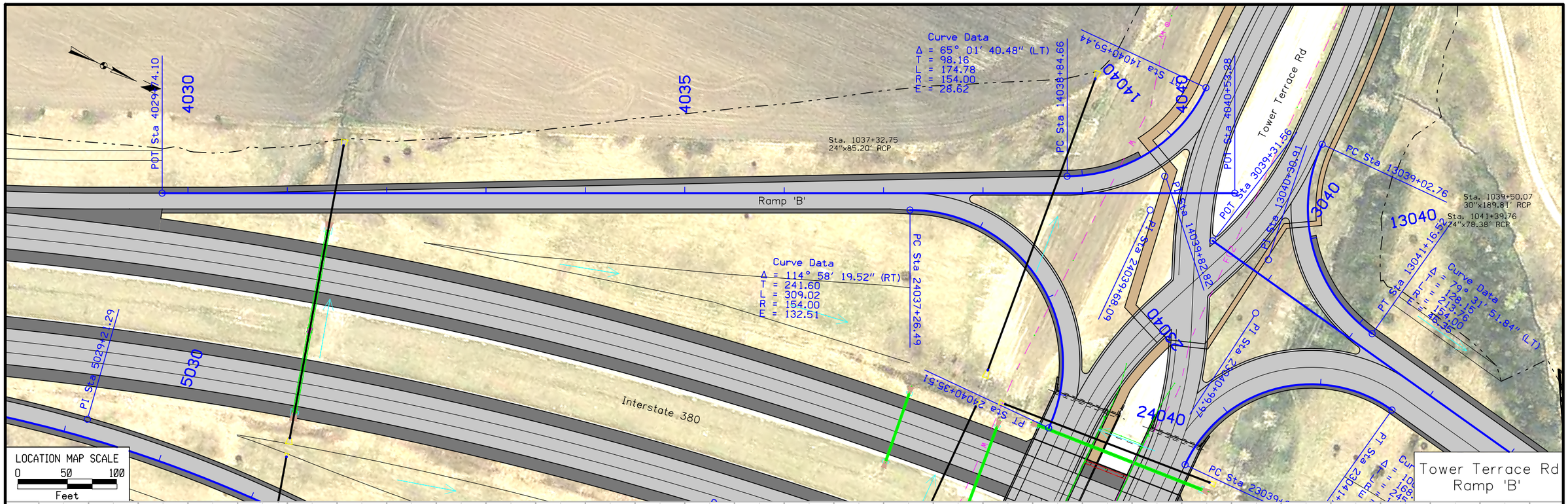
2:56:20 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design__Field Check\57380224_K05.dgn

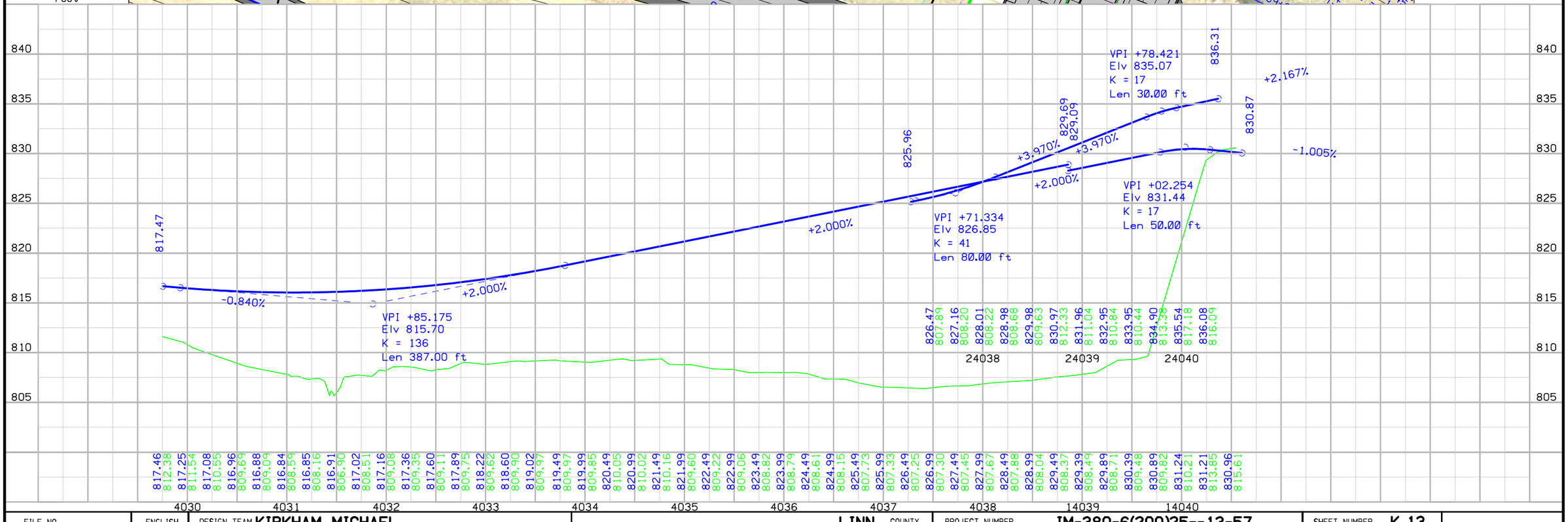


Tower Terrace Rd
Ramp 'A'

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER K.12

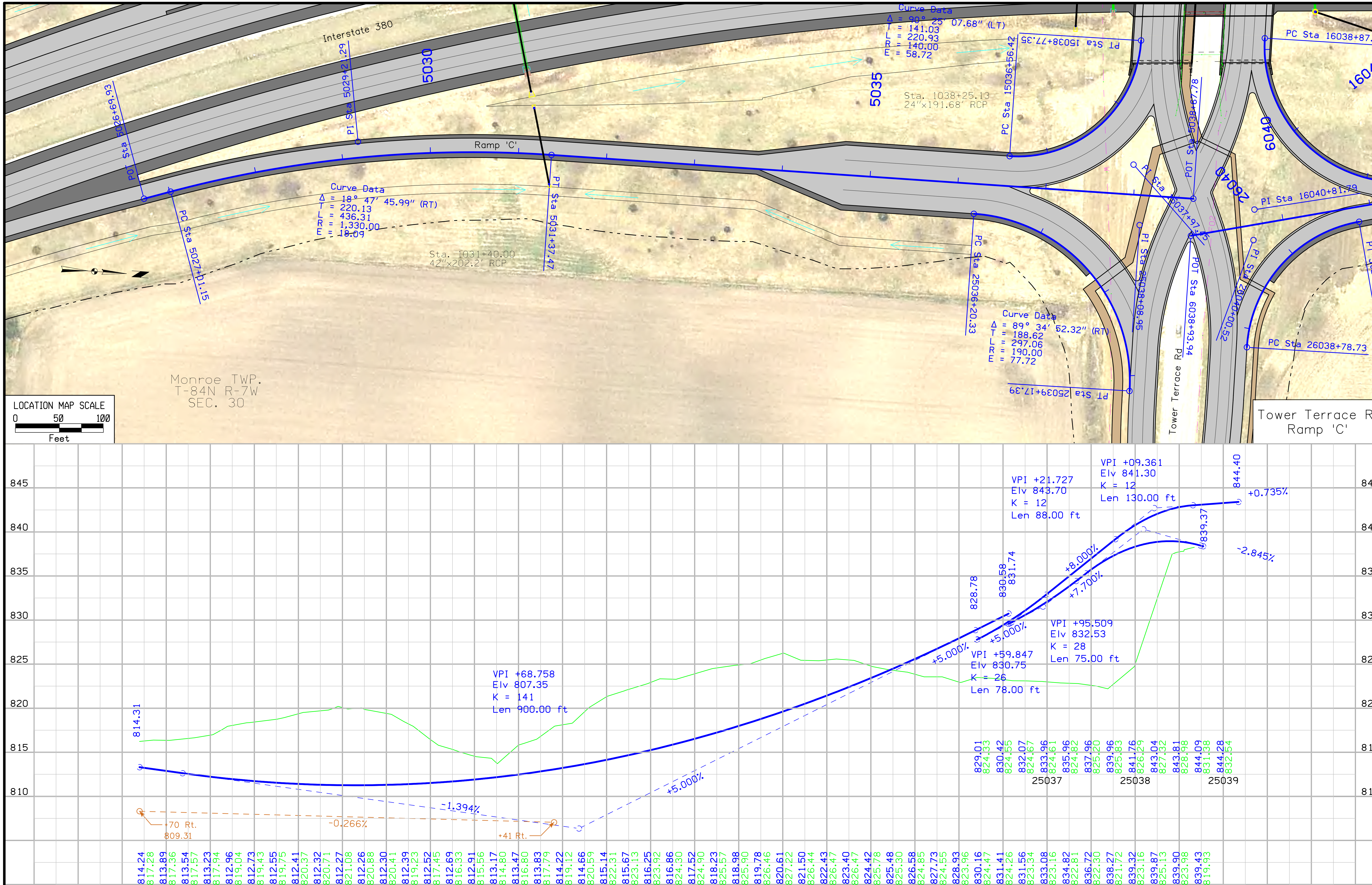
2:57:22 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200K10.dgn





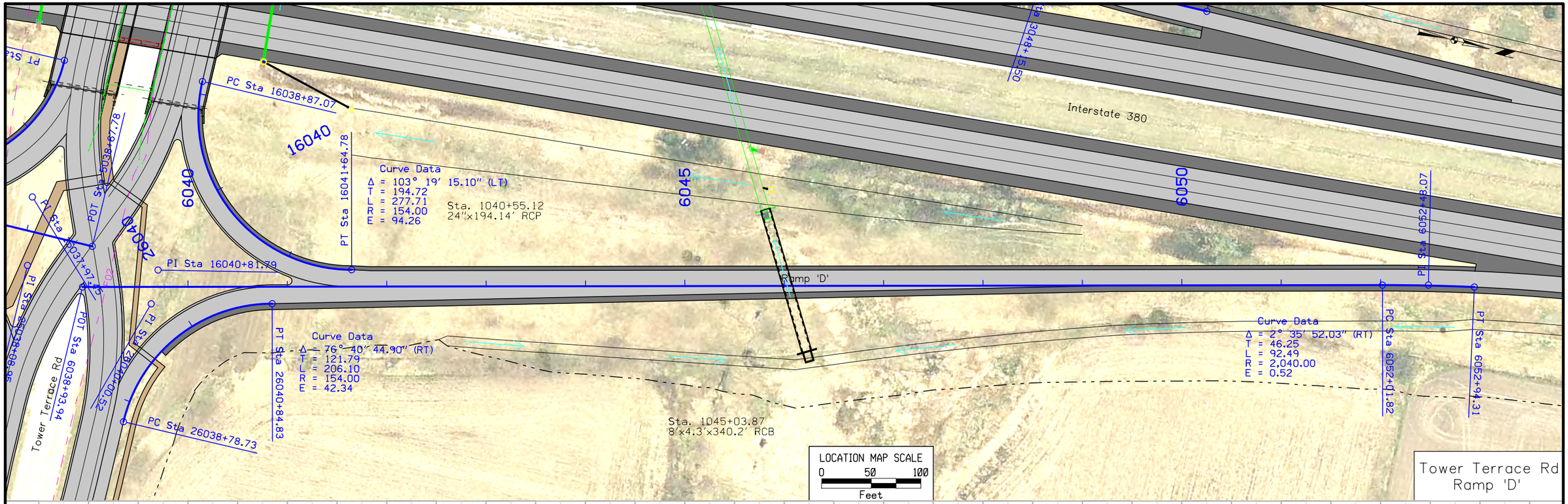
FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER K.13

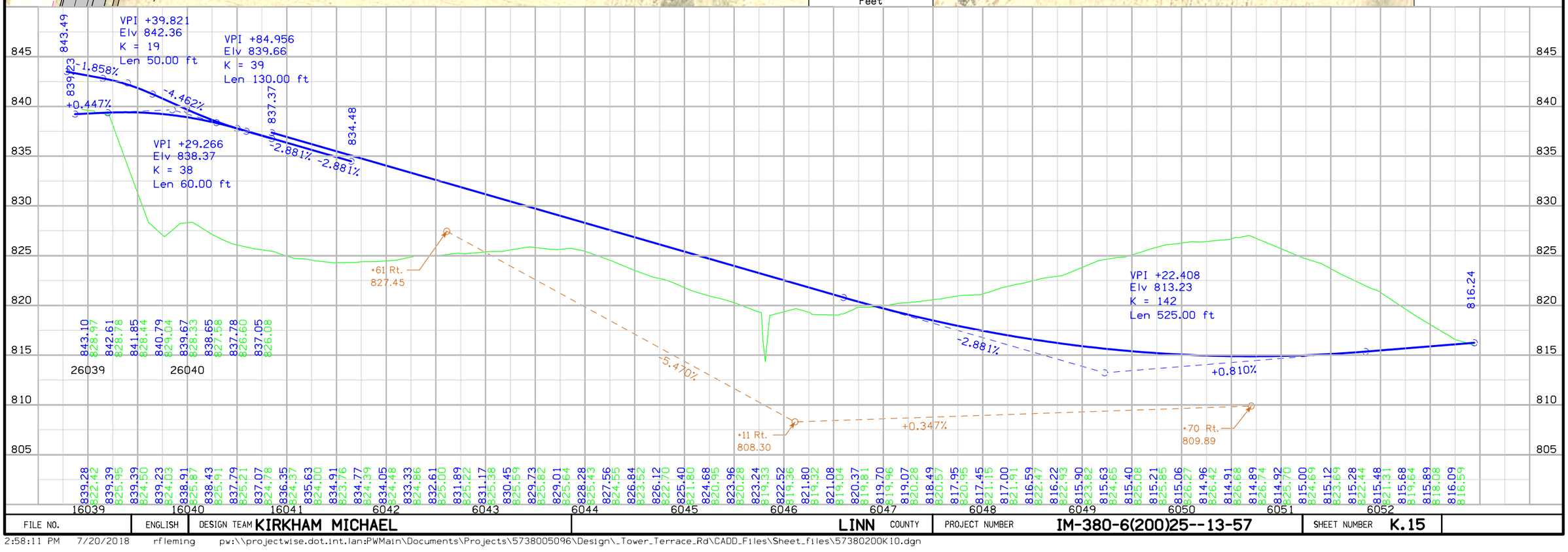
2:57:36 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200K10.dgn


Interstate 380
Ramp 'C'
5030
5035
6040
16040
26040
PI Sta 5029+21.29
POT Sta 5026+69.93
PC Sta 5027+01.15
PT Sta 5031+37.47
Curve Data
Δ = 18° 47' 45.99" (RT)
T = 220.13
L = 436.31
R = 1,330.00
E = 18.09
Sta. 1031+40.00
42"x202.2' RCP
Curve Data
Δ = 90° 25' 07.68" (LT)
T = 141.03
L = 220.93
R = 140.00
E = 58.72
PT Sta 15038+77.35
PC Sta 15036+56.42
Sta. 1038+25.13
24"x191.68' RCP
PC Sta 16038+87.07
PI Sta 16040+81.79
PC Sta 25036+20.33
Curve Data
Δ = 89° 34' 52.32" (RT)
T = 188.62
L = 297.06
R = 190.00
E = 77.72
PT Sta 25039+17.39
PC Sta 26038+78.73
POT Sta 6038+93.94
Tower Terrace Rd
Monroe TWP.
T-84N R-7W
SEC. 30
LOCATION MAP SCALE
0 50 100
Feet
Tower Terrace Rd
Ramp 'C'
VPI +68.758
Elv 807.35
K = 141
Len 900.00 ft
VPI +59.847
Elv 830.75
K = 26
Len 78.00 ft
VPI +21.727
Elv 843.70
K = 12
Len 88.00 ft
VPI +09.361
Elv 841.30
K = 12
Len 130.00 ft
VPI +95.509
Elv 832.53
K = 28
Len 75.00 ft
-1.394%
+5.000%
+8.000%
+7.700%
+0.735%
-2.845%
-0.266%
+70 Rt.
809.31
+41 Rt.
814.31
828.78
830.58
831.74
839.37
844.40
810
815
820
825
830
835
840
845
5027
5028
5029
5030
5031
5032
5033
5034
5035
5036
15037
15038
25037
25038
25039

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER K.14

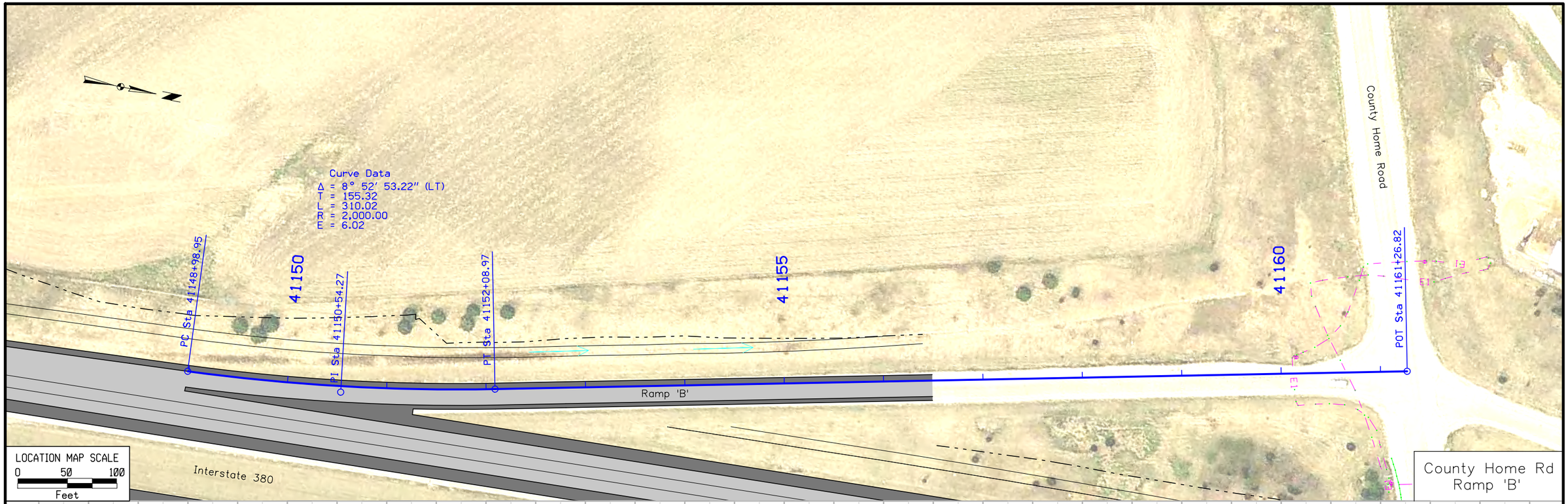
2:57:48 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200K10.dgn

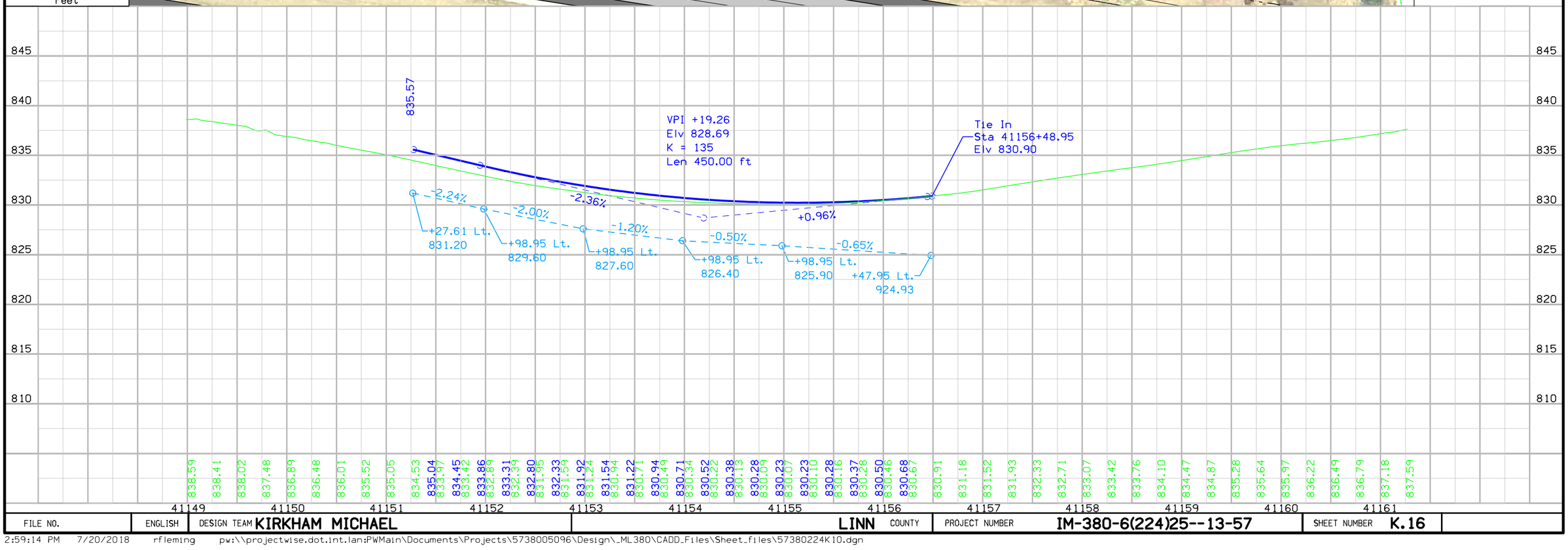




FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER K.15

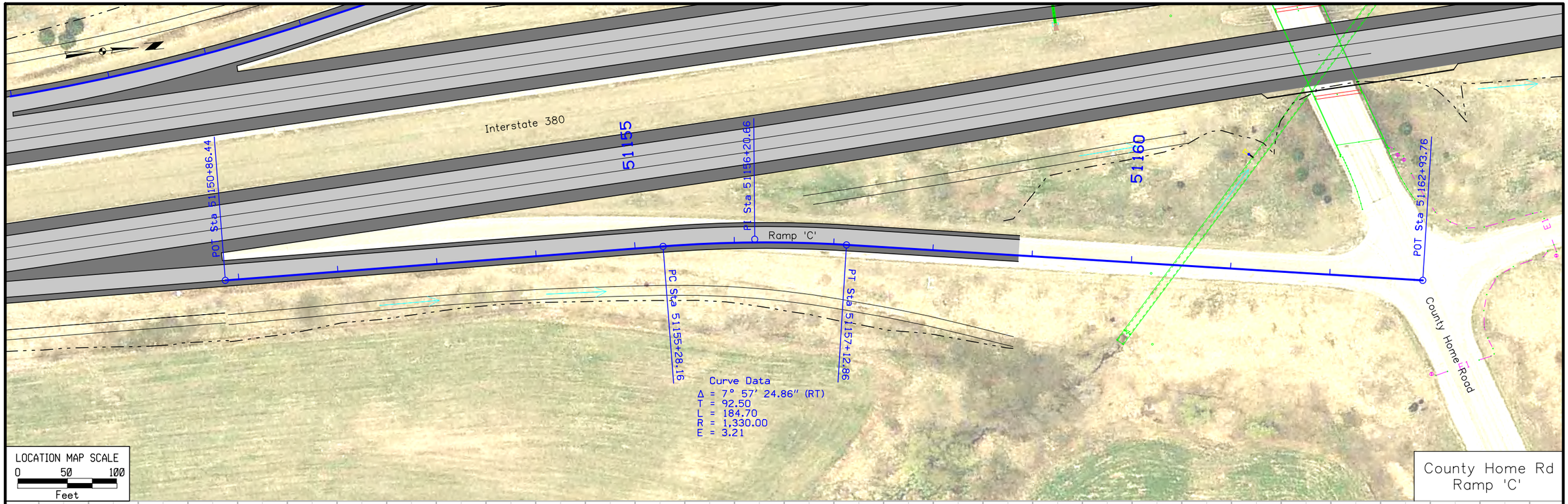
2:58:11 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200K10.dgn

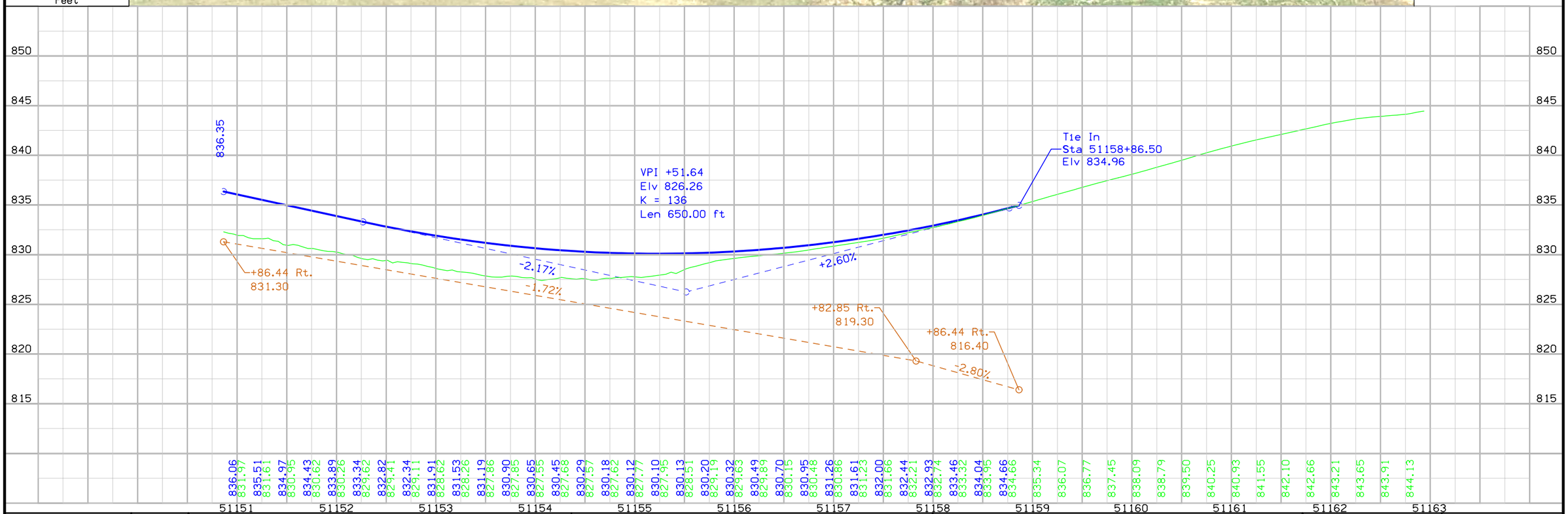




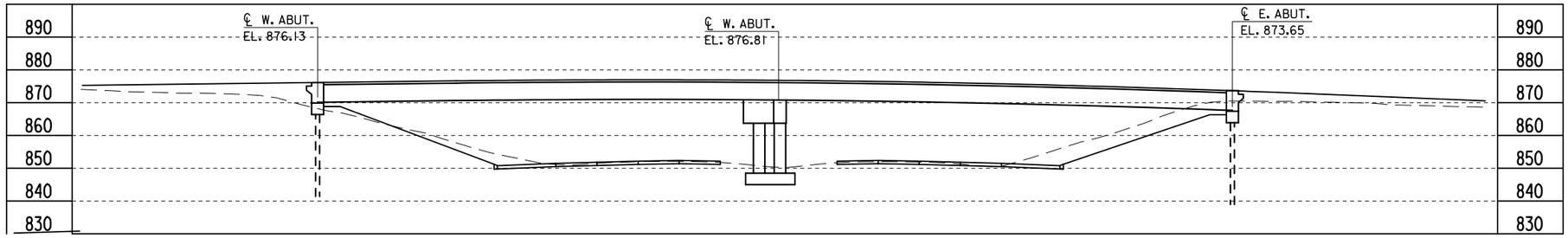
FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER K.16

2:59:14 PM 7/20/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224K10.dgn

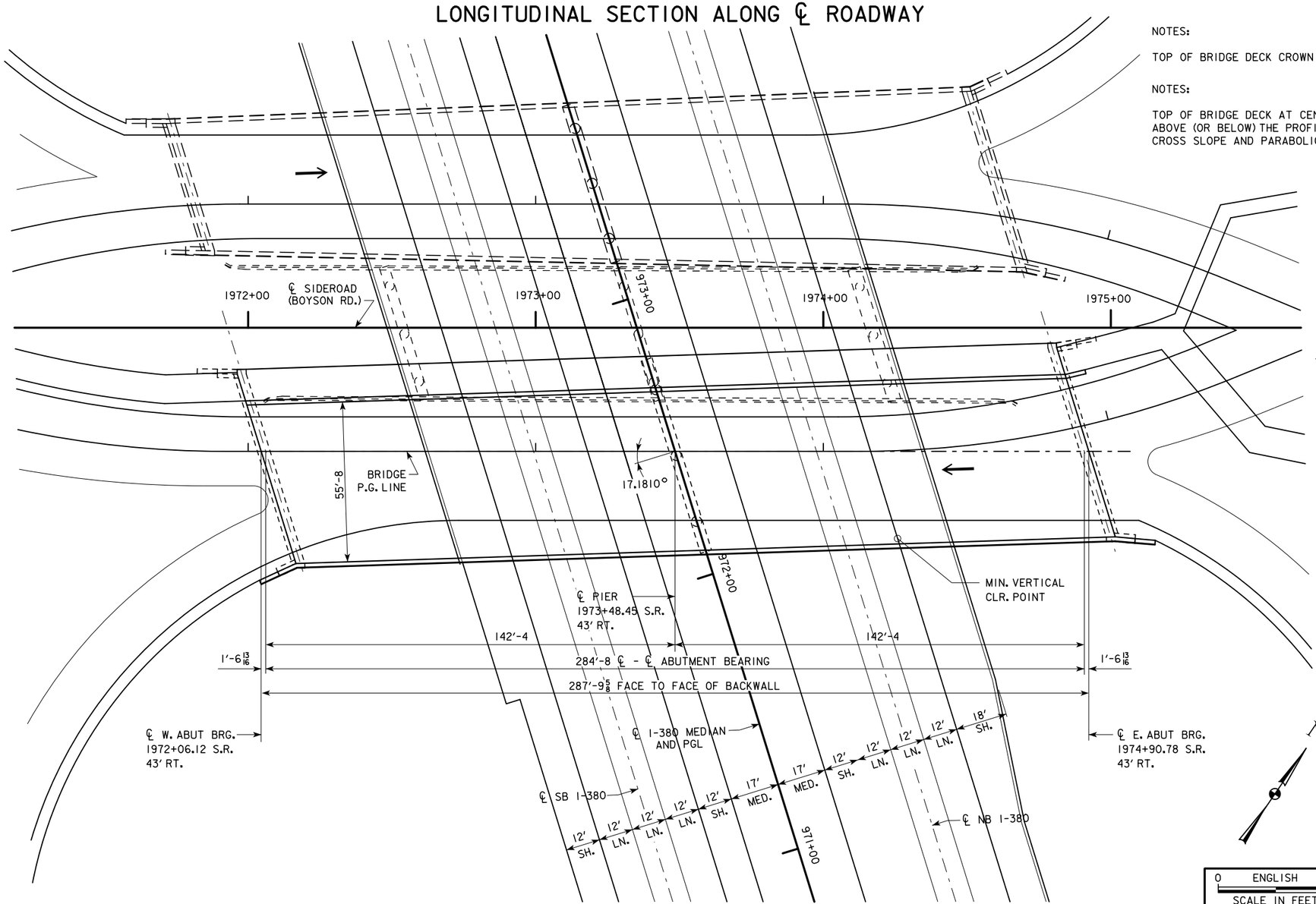




FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER K.17



LONGITUDINAL SECTION ALONG ℄ ROADWAY



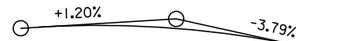
SITUATION PLAN

NOTES:

TOP OF BRIDGE DECK CROWN 'X' BELOW PROFILE GRADE.

NOTES:

TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 'X' ABOVE (OR BELOW) THE PROFILE GRADE TO ACCOUNT FOR DECK CROSS SLOPE AND PARABOLIC CROWN.

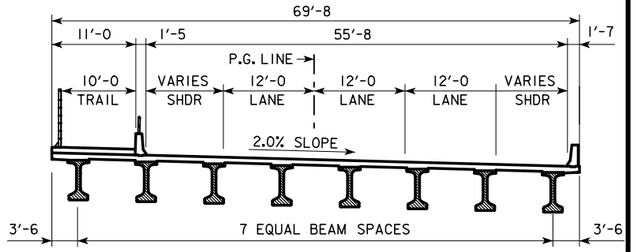


PVI STA 1973+50.08
PVI EL. 878.70
LVC = 150.00 FT.

PROPOSED GRADE
ON BOYSON RD.

PVI STA 970+68.04
PVI EL. 854.22
LVC = 1200.00 FT.

PROPOSED GRADE
ON I-380



TYPICAL BRIDGE SECTION

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 1974+24.78, OFFSET 73.55' RT.
OVERHEAD ELEVATION = 874.40
DEPTH OF SUPERSTRUCTURE = 5.92'
UNDERPASS STATION = 971+92.83, OFFSET 65.00' RT.
UNDERPASS ELEVATION = 851.96
MINIMUM VERTICAL CLEARANCE = 16.52'

LOCATION

WESTBOUND BOYSON ROAD OVER I-380
T-84N R-7W
SECTION 32
MONROE TOWNSHIP
LINN COUNTY
FHWA NO. ?
BRIDGE MAINT. NO. ?
LATITUDE ??.123456°
LONGITUDE -??.123456°

DESIGN FOR 17.1810° SKEW (L.A.)

284'-8 X 55'-8 PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE

140'-0 SPANS LXE BEAMS

SITUATION PLAN

STATION: 1973+48.45 S.R. JULY 2018

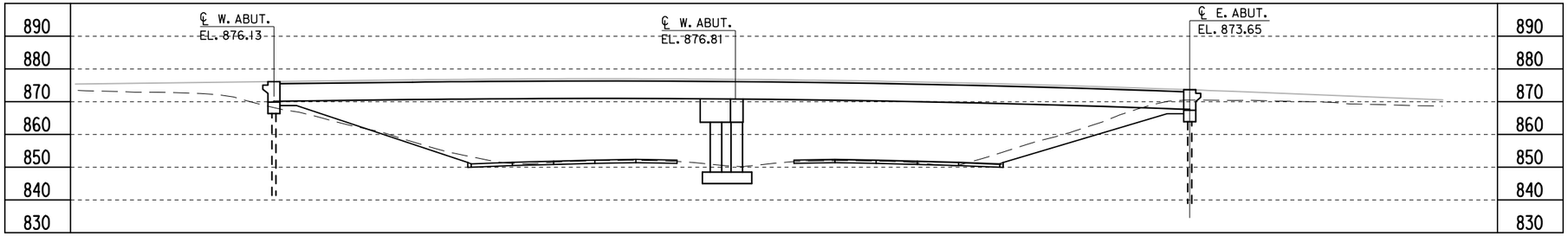
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

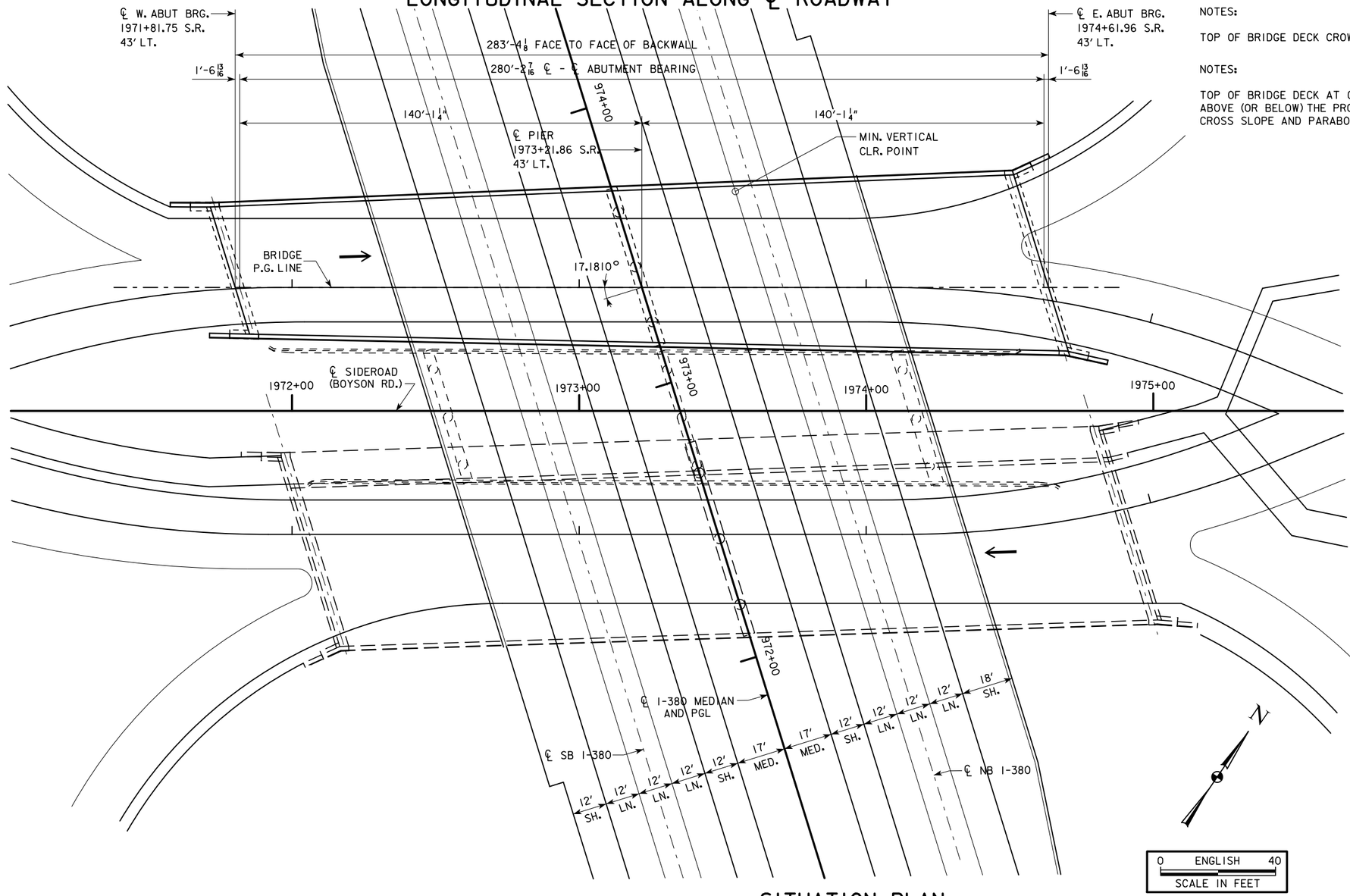
DESIGN SHEET NO. ____ OF ? FILE NO. ? DESIGN NO. ?

DESIGN TEAM KIRKHAM MICHAEL | LINN COUNTY | PROJECT NUMBER IM-380-6(224)25--13-57 | SHEET NUMBER V.01

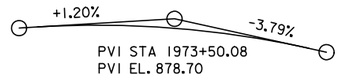
7/18/2018 Rlemke P:\1708601\cadd\design\RAL work\PRELIM BRIDGE FIELD CHECK.dgn



LONGITUDINAL SECTION ALONG ℄ ROADWAY

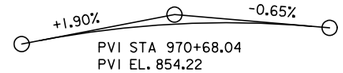


SITUATION PLAN



PVI STA 1973+50.08
PVI EL. 878.70
LVC = 150.00 FT.

PROPOSED GRADE ON BOYSON RD.



PVI STA 970+68.04
PVI EL. 854.22
LVC = 1200.00 FT.

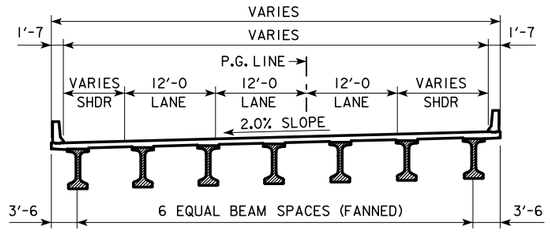
PROPOSED GRADE ON I-380

NOTES:

TOP OF BRIDGE DECK CROWN 'X' BELOW PROFILE GRADE.

NOTES:

TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 'X' ABOVE (OR BELOW) THE PROFILE GRADE TO ACCOUNT FOR DECK CROSS SLOPE AND PARABOLIC CROWN.



TYPICAL BRIDGE SECTION

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 1973+54.43, OFFSET 76.46' LT.
OVERHEAD ELEVATION = 876.17
DEPTH OF SUPERSTRUCTURE = 5.92'
UNDERPASS STATION = 973+57.02, OFFSET 41.00' RT.
UNDERPASS ELEVATION = 852.81
MINIMUM VERTICAL CLEARANCE = 17.44'

LOCATION

EASTBOUND BOYSON ROAD OVER I-380
T-84N R-7W
SECTION 32
MONROE TOWNSHIP
LINN COUNTY
FHWA NO. ?
BRIDGE MAINT. NO. ?
LATITUDE ??.123456°
LONGITUDE -??.123456°

DESIGN FOR 17.1810° SKEW (L.A.)

280'-2 7/16 X (VARIES) PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE

140'-0 SPANS LXE BEAMS

SITUATION PLAN

STATION: 1973+21.86 S.R. JULY 2018

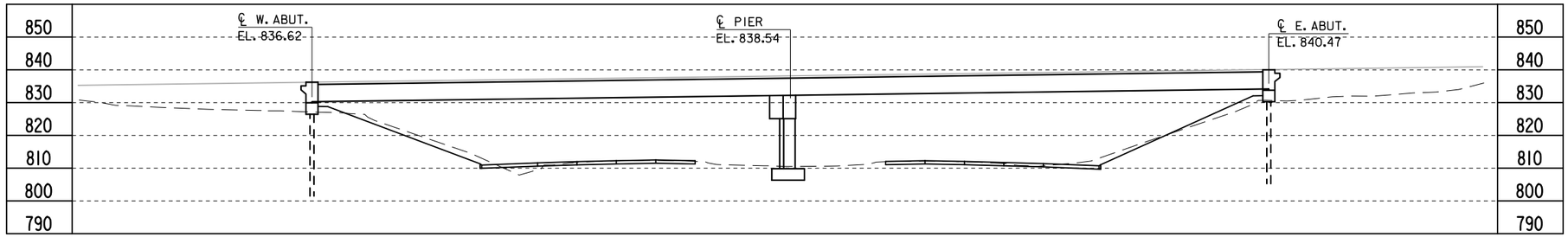
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

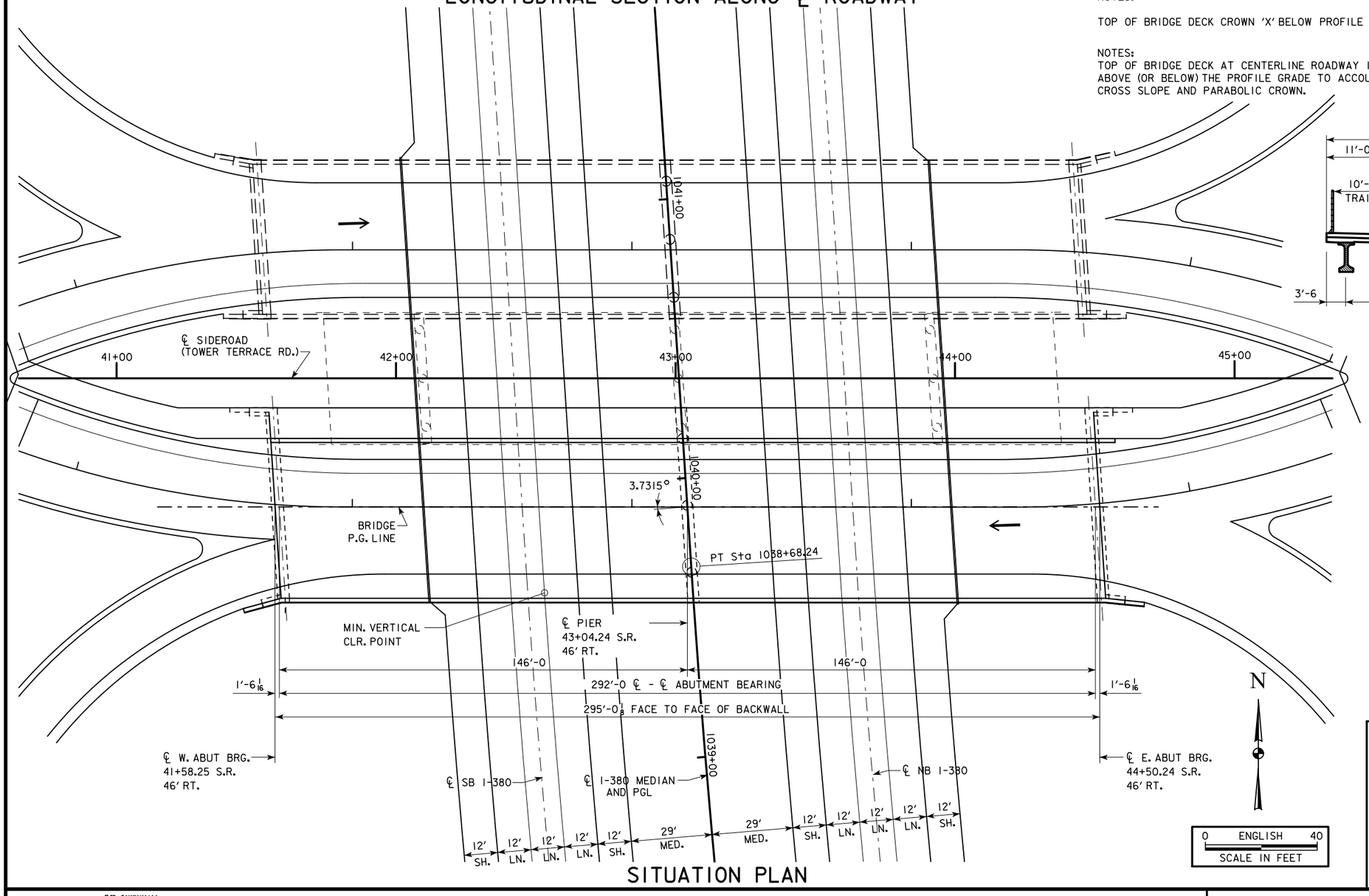
DESIGN SHEET NO. ____ OF ? FILE NO. ? DESIGN NO. ?

DESIGN TEAM KIRKHAM MICHAEL | LINN COUNTY | PROJECT NUMBER IM-380-6(224)25--13-57 | SHEET NUMBER V.02

7/18/2018 Rlemke P:\1708601\cadd\design\RAL work\PRELIM BRIDGE FIELD CHECK.dgn



LONGITUDINAL SECTION ALONG ℄ ROADWAY

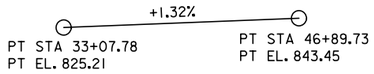


SITUATION PLAN

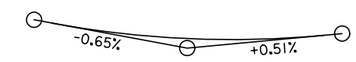
NOTES:

TOP OF BRIDGE DECK CROWN 'X' BELOW PROFILE GRADE.

NOTES:
TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 'X'
ABOVE (OR BELOW) THE PROFILE GRADE TO ACCOUNT FOR DECK
CROSS SLOPE AND PARABOLIC CROWN.

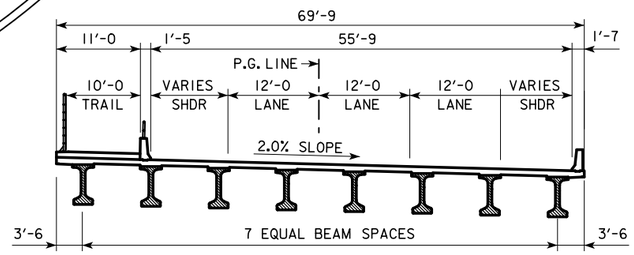


PROPOSED GRADE ON TOWER TERRACE RD.



PVI STA 1038+67.50
PVI EL. 810.52
LVC = 750.00 FT.

PROPOSED GRADE ON I-380



TYPICAL BRIDGE SECTION

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 43+53.14, OFFSET 76.75' RT.
OVERHEAD ELEVATION = 836.94
DEPTH OF SUPERSTRUCTURE = 5.92'
UNDERPASS STATION = 1038+62.36, OFFSET 53.00' LT.
UNDERPASS ELEVATION = 812.80
MINIMUM VERTICAL CLEARANCE = 18.22'

LOCATION

WESTBOUND TOWER TERRACE ROAD OVER I-380
T-84N R-7W
SECTION 30
MONROE TOWNSHIP
LINN COUNTY
FHWA NO. ?
BRIDGE MAINT. NO. ?
LATITUDE ??.123456°
LONGITUDE -??.123456°

DESIGN FOR 3.7315° SKEW (L.A.)

292'-0 X 55'-9 PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE

145'-0 SPANS LXE BEAMS

SITUATION PLAN

STATION: 43+04.34 M.L. JULY 2018

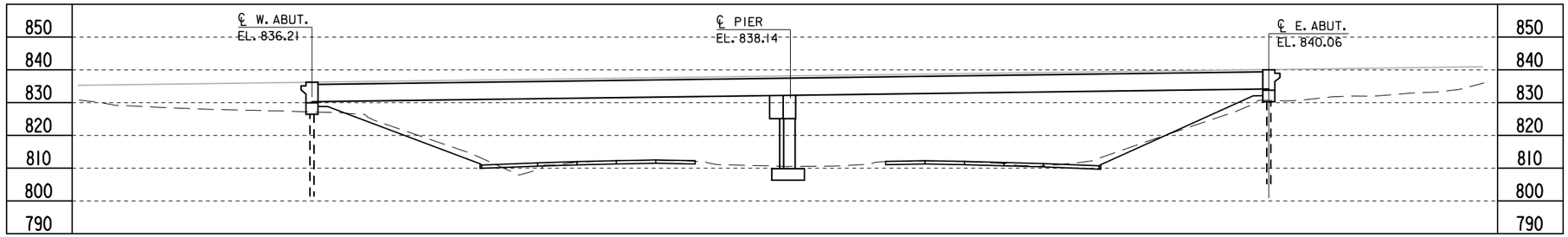
LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ___ OF ? FILE NO. ? DESIGN NO. ?

DESIGN TEAM KIRKHAM MICHAEL | LINN COUNTY | PROJECT NUMBER IM-380-6(224)25--13-57 | SHEET NUMBER V.03

7/18/2018 Rlemke P:\1708601\cadd\design\RAL work\PRELIM BRIDGE FIELD CHECK.dgn

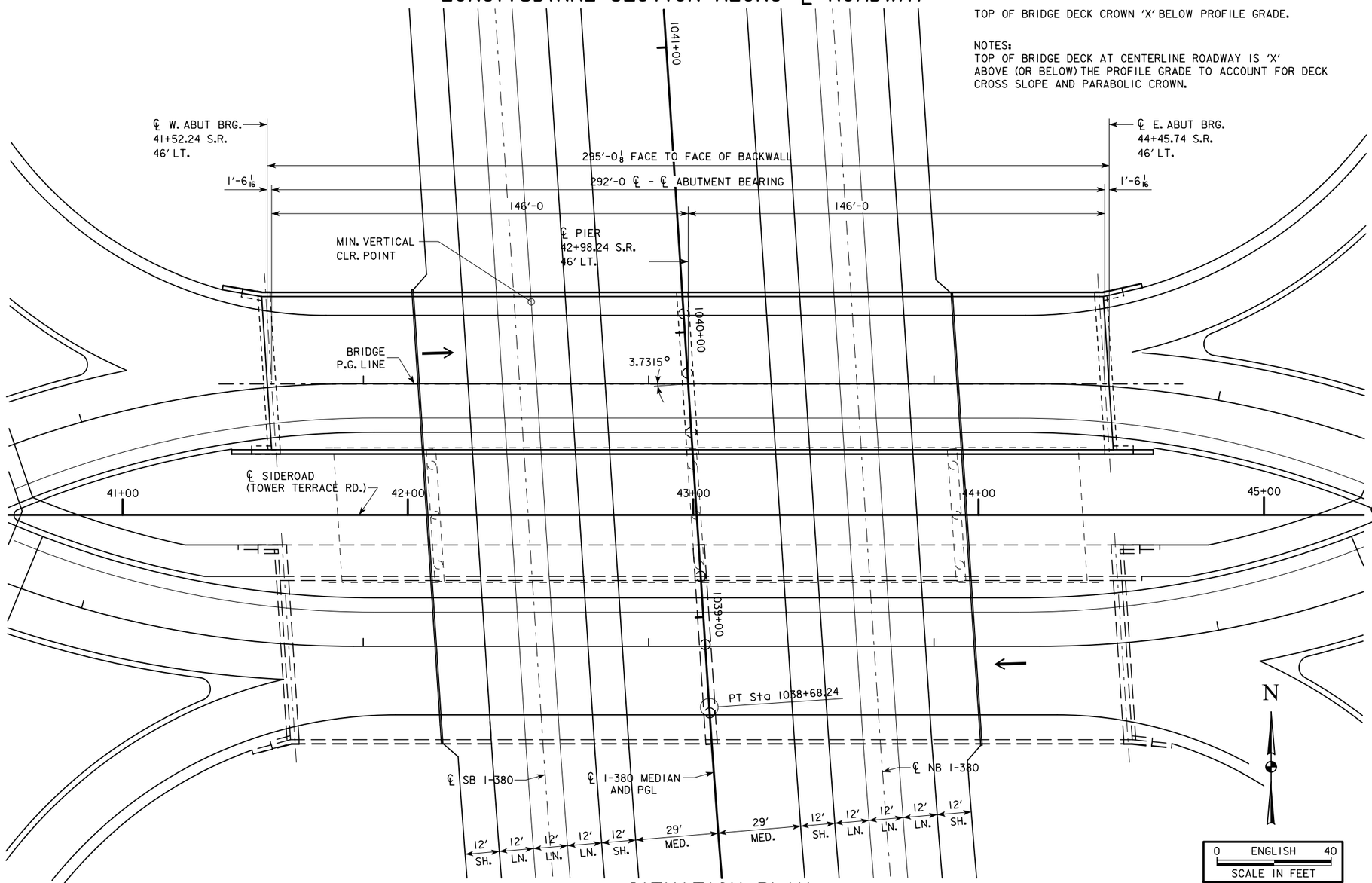


LONGITUDINAL SECTION ALONG ℄ ROADWAY

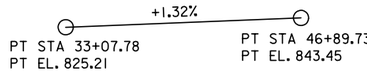
NOTES:

TOP OF BRIDGE DECK CROWN 'X' BELOW PROFILE GRADE.

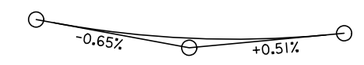
NOTES:
TOP OF BRIDGE DECK AT CENTERLINE ROADWAY IS 'X' ABOVE (OR BELOW) THE PROFILE GRADE TO ACCOUNT FOR DECK CROSS SLOPE AND PARABOLIC CROWN.



SITUATION PLAN

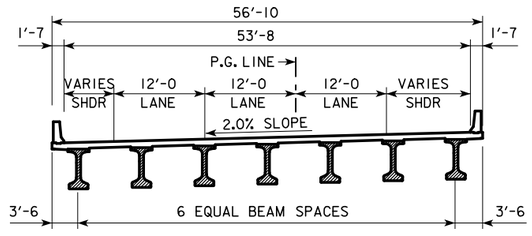


PROPOSED GRADE ON TOWER TERRACE RD.



PVI STA 1038+67.50
PVI EL. 810.52
LVC = 750.00 FT.

PROPOSED GRADE ON I-380



TYPICAL BRIDGE SECTION

MINIMUM VERTICAL CLEARANCE

OVERHEAD STATION = 42+43.25, OFFSET 74.67' LT.
OVERHEAD ELEVATION = 836.85
DEPTH OF SUPERSTRUCTURE = 5.92'
UNDERPASS STATION = 1040+14.02, OFFSET 53.00' LT.
UNDERPASS ELEVATION = 812.80
MINIMUM VERTICAL CLEARANCE = 18.13'

LOCATION

EASTBOUND TOWER TERRACE ROAD OVER I-380
T-84N R-7W
SECTION 30
MONROE TOWNSHIP
LINN COUNTY
FHWA NO. ?
BRIDGE MAINT. NO. ?
LATITUDE ??.123456°
LONGITUDE -??.123456°

DESIGN FOR 3.7315° SKEW (L.A.)

292'-0 X 53'-8 PRETENSIONED PRESTRESSED CONC. BEAM BRIDGE

145'-0 SPANS LXE BEAMS

SITUATION PLAN

STATION: 42+98.24 M.L. JULY 2018

LINN COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. ___ OF ? FILE NO. ? DESIGN NO. ?

DESIGN TEAM KIRKHAM MICHAEL | LINN COUNTY | PROJECT NUMBER IM-380-6(224)25--13-57 | SHEET NUMBER V.04

7/18/2018 Rlemke P:\1708601\cadd\design\RAL work\PRELIM BRIDGE FIELD CHECK.dgn

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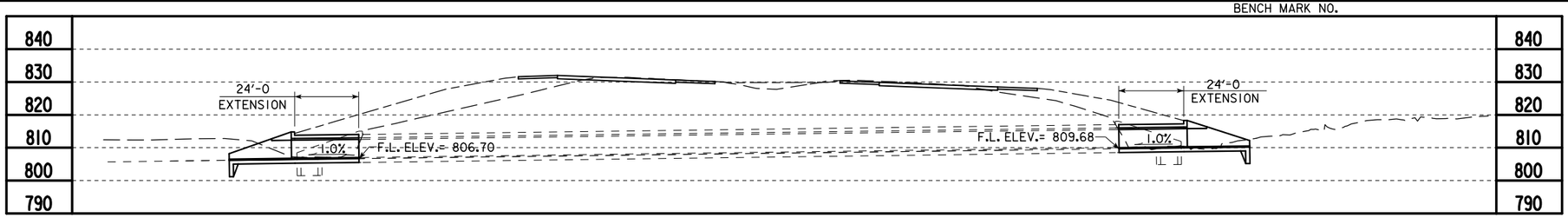
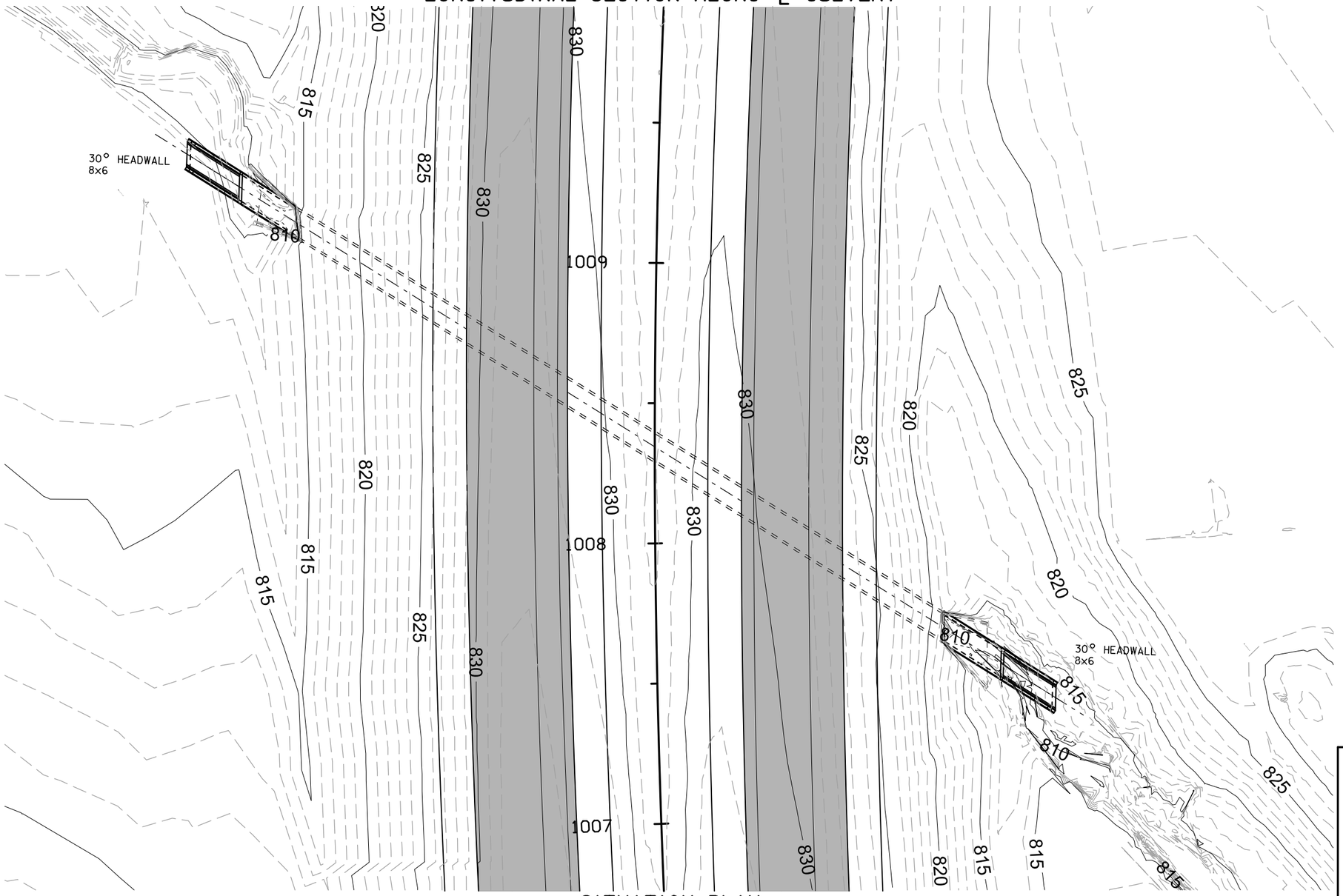


LONGITUDINAL SECTION ALONG ℄ CULVERT



SITUATION PLAN

DESIGN FOR 32° SKEW LT AHEAD

SINGLE 8' x 6' EXTENSIONS REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN

STA. 1008+34.50

JULY, 2018

I-380 WIDENING

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM KIRKHAM MICHAEL

LINN COUNTY

PROJECT NUMBER IM-380-6(224)25--13-57

SHEET NUMBER V.05

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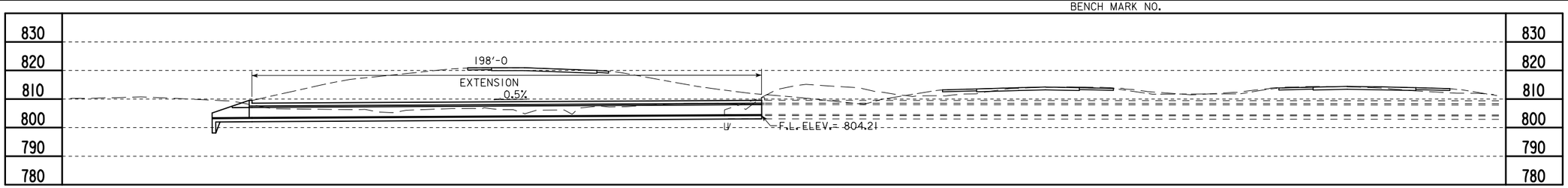
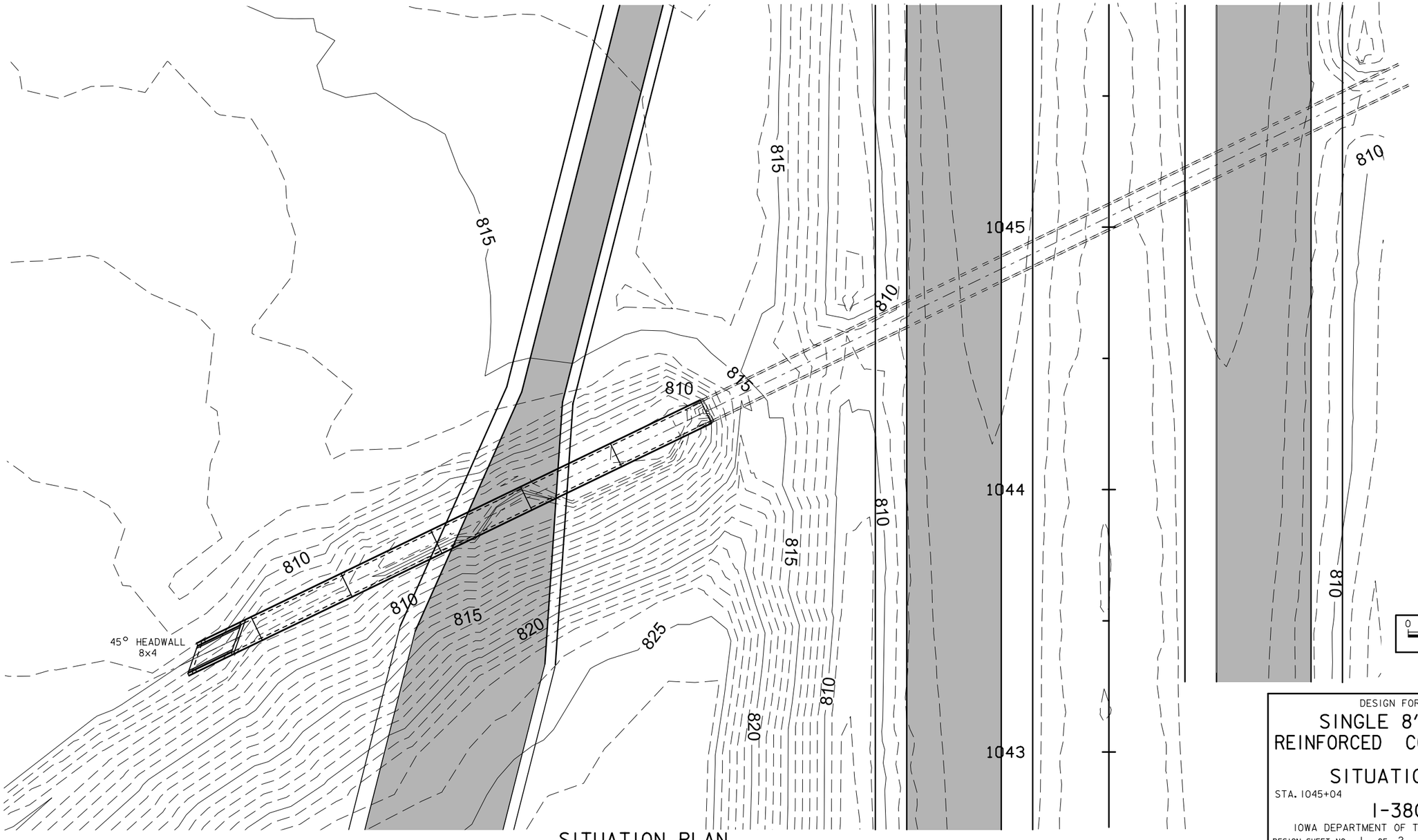


LONGITUDINAL SECTION ALONG ℄ CULVERT



SITUATION PLAN

DESIGN FOR 25.8° SKEW RT AHEAD

SINGLE 8' x 4' EXTENSION REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN (1 OF 2)

STA. 1045+04 JULY, 2018

I-380 WIDENING

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 2 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM KIRKHAM MICHAEL | LINN COUNTY | PROJECT NUMBER IM-380-6(224)25--13-57 | SHEET NUMBER V.06

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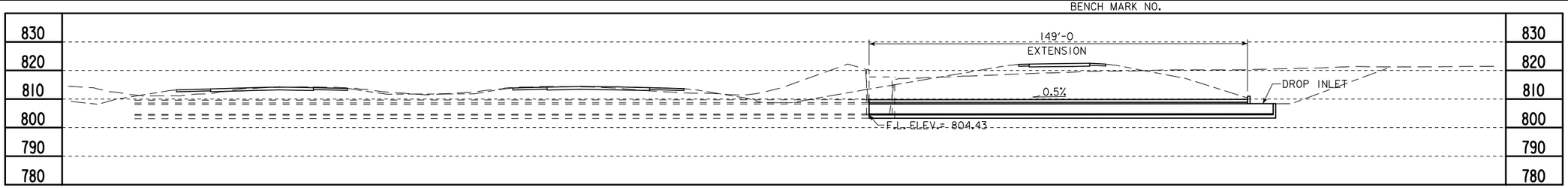
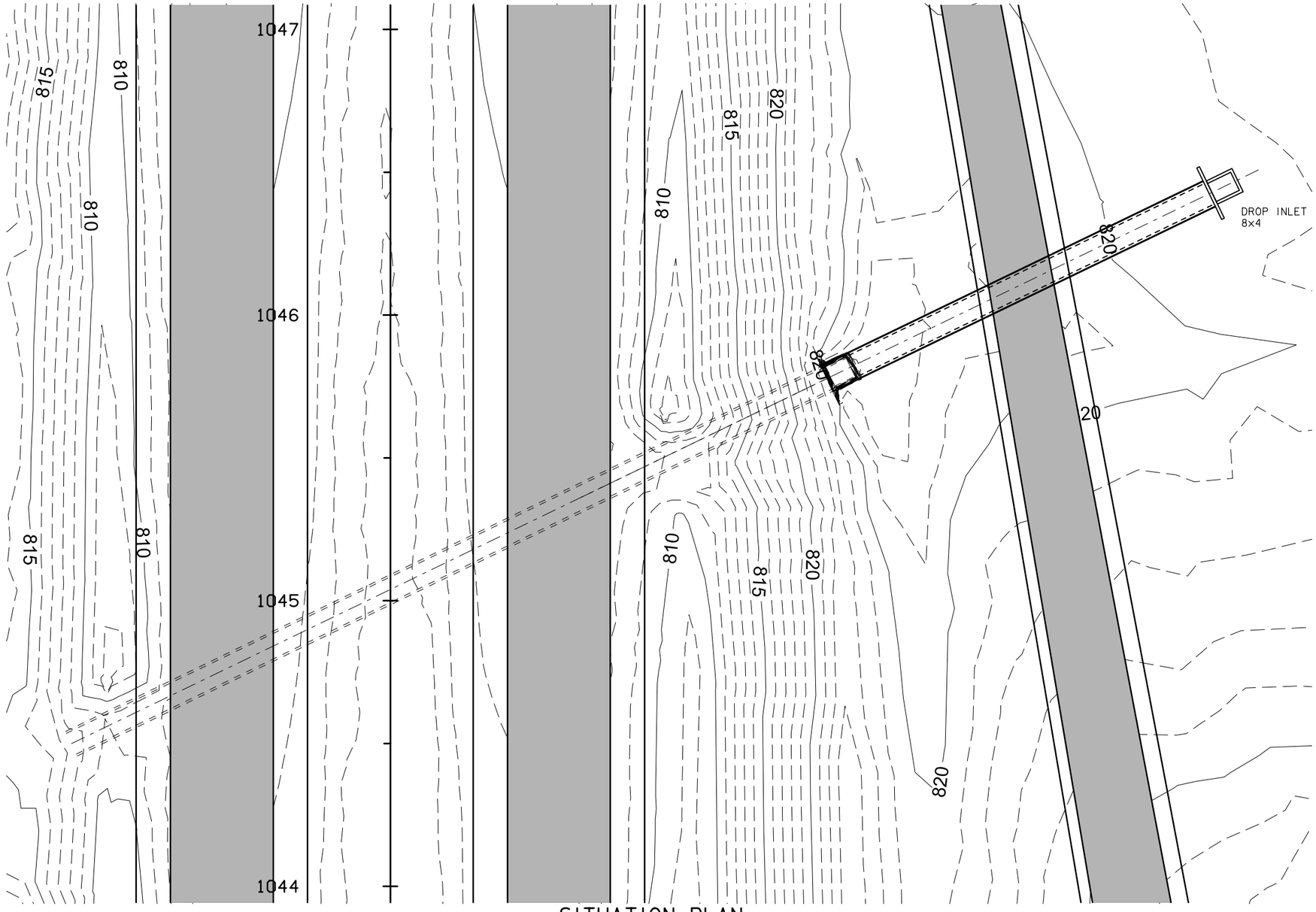
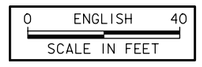


LONGITUDINAL SECTION ALONG ℄ CULVERT



SITUATION PLAN



DESIGN FOR 25.8° SKEW RT AHEAD

SINGLE 8' × 4' EXT. W/DROP INLET REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN (2 OF 2)

STA. 1045+04 JULY, 2018

I-380 WIDENING

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 2 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM KIRKHAM MICHAEL | LINN COUNTY | PROJECT NUMBER IM-380-6(224)25--13-57 | SHEET NUMBER V.07

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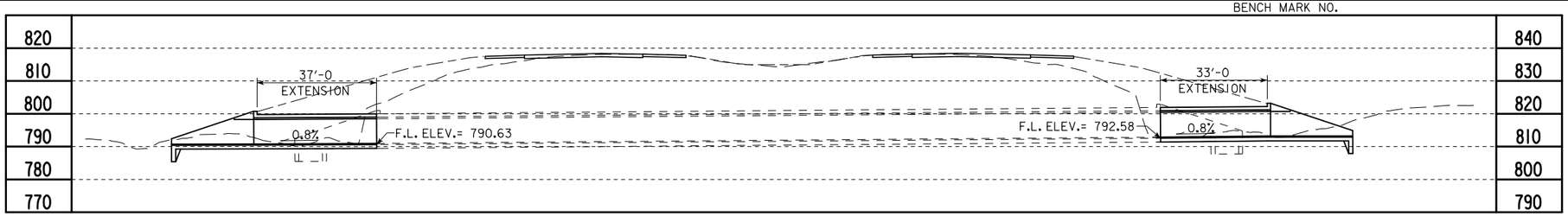
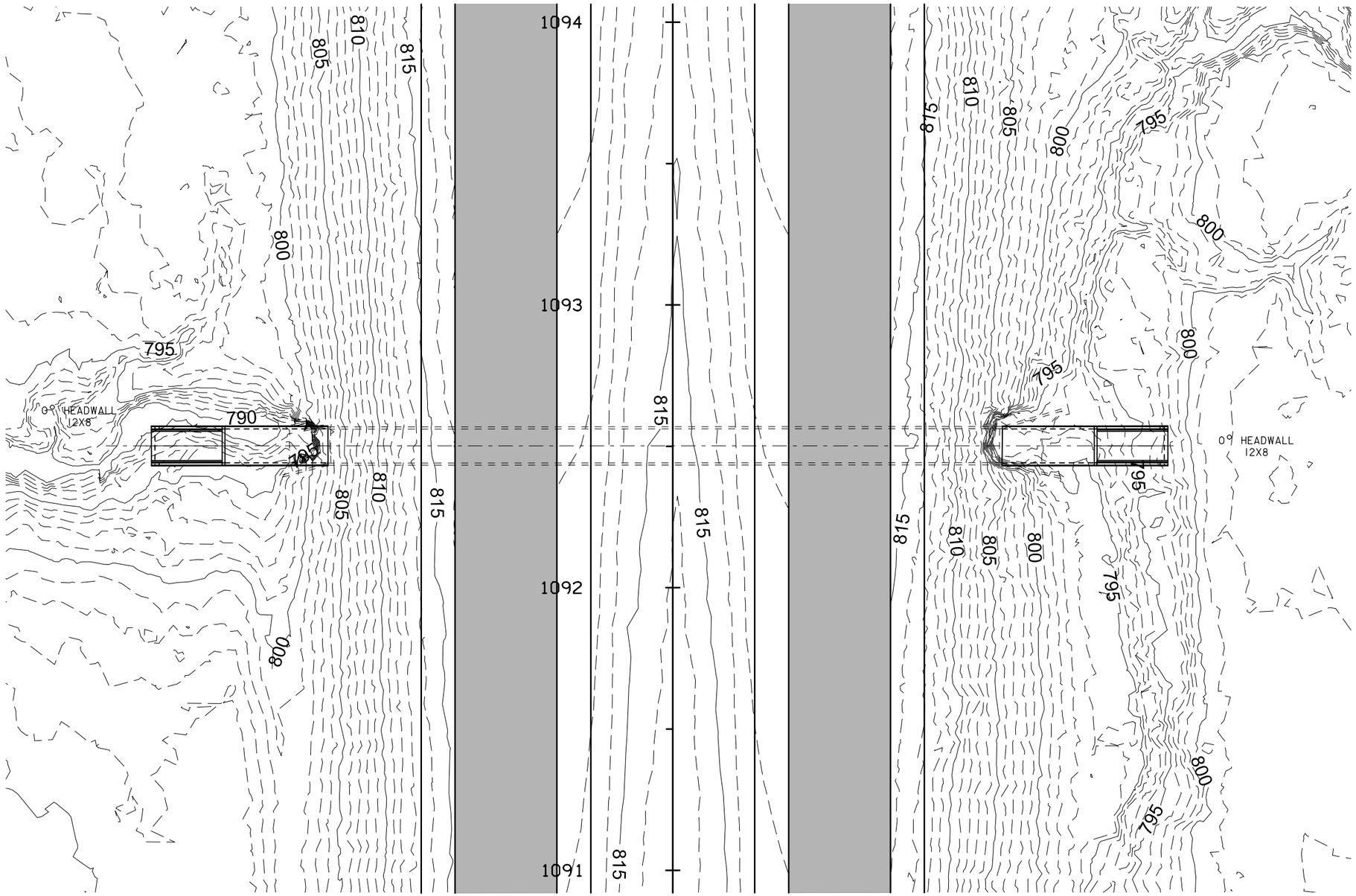
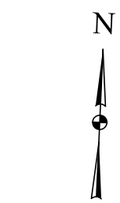


LONGITUDINAL SECTION ALONG ℄ CULVERT



SITUATION PLAN



DESIGN FOR 0° SKEW

SINGLE 12' x 8' EXTENSIONS REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN

STA. 1092+50 JULY, 2018

I-380 WIDENING

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM KIRKHAM MICHAEL | LINN COUNTY | PROJECT NUMBER IM-380-6(224)25--13-57 | SHEET NUMBER V.08

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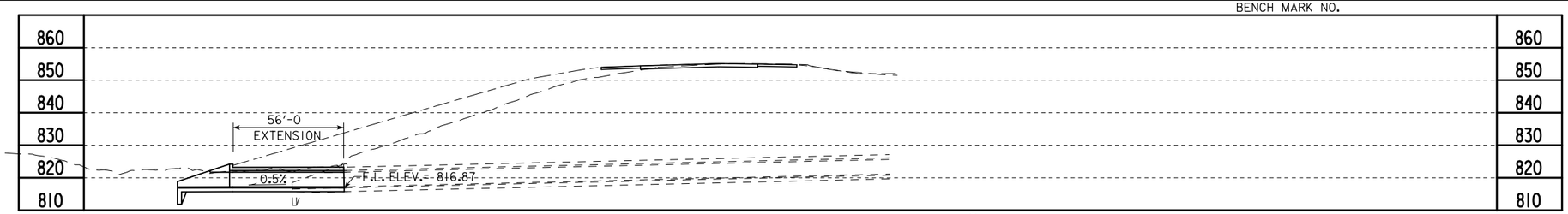
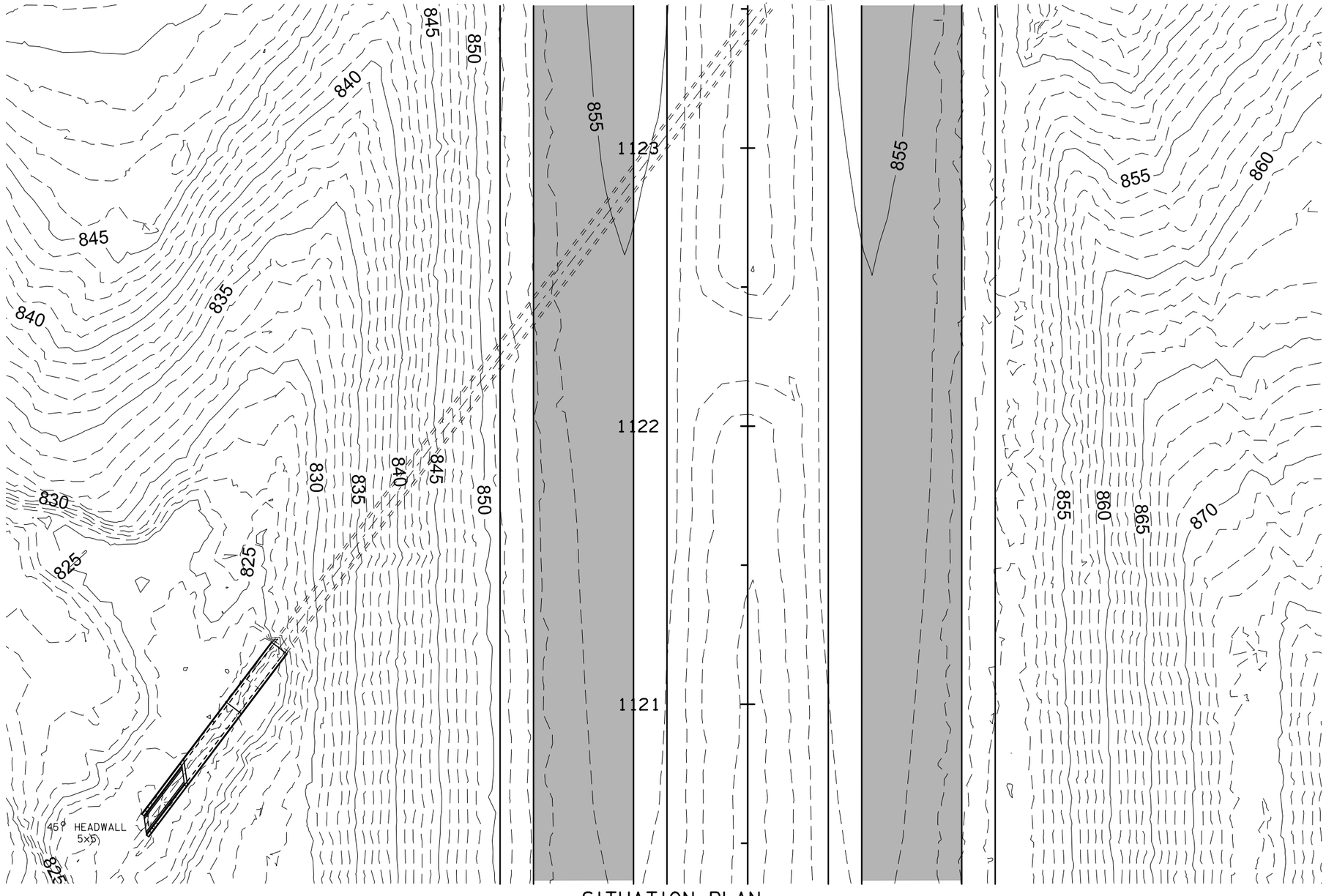


LONGITUDINAL SECTION ALONG ℄ CULVERT



SITUATION PLAN

N

0 ENGLISH 40
SCALE IN FEET

DESIGN FOR 53° SKEW RT AHEAD

SINGLE 5′ x 5′ EXTENSIONS REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN (1 OF 2)

STA. 1123+43.33 JULY, 2018

I-380 WIDENING

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 2 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM KIRKHAM MICHAEL | LINN COUNTY | PROJECT NUMBER IM-380-6(224)25--13-57 | SHEET NUMBER V.09

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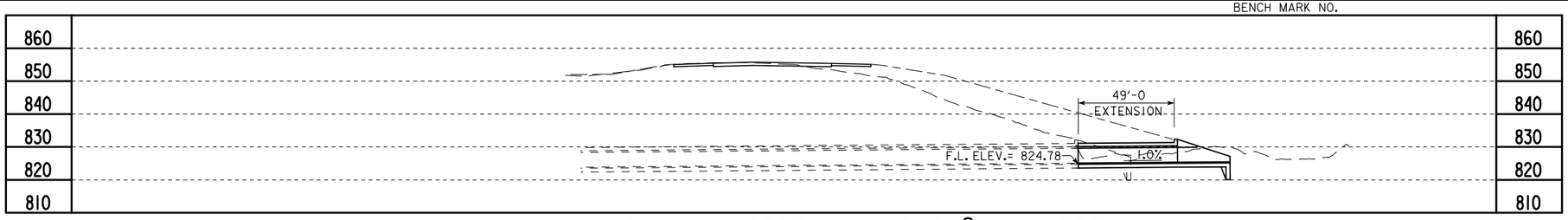

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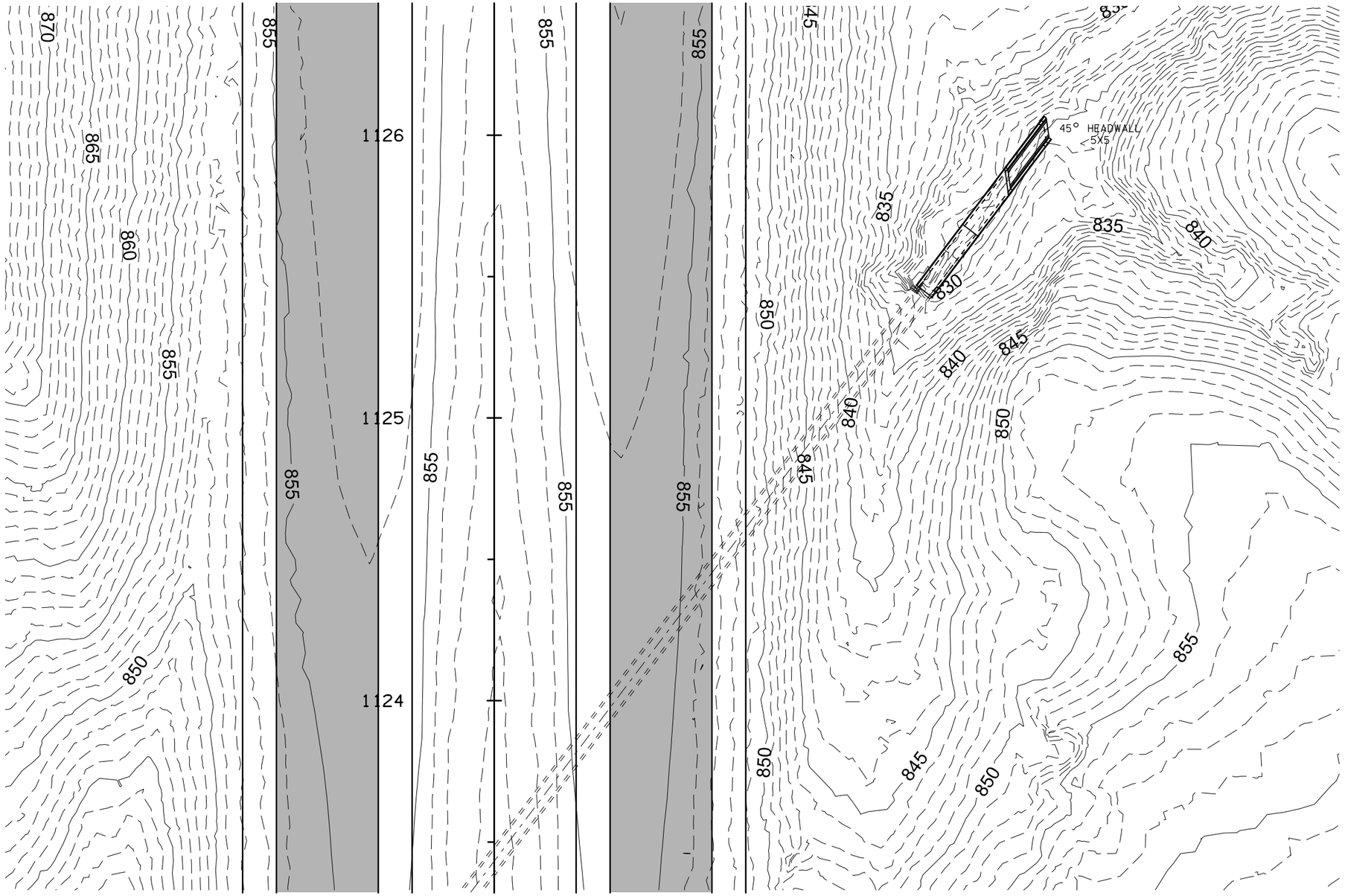

SITUATION PLAN

N

0 ENGLISH 40
SCALE IN FEET

DESIGN FOR 53° SKEW RT AHEAD

SINGLE 5' x 5' EXTENSIONS REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN (2 OF 2)

STA. 1123+43.33 JULY, 2018

I-380 WIDENING

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 2 OF 2 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM KIRKHAM MICHAEL | LINN COUNTY | PROJECT NUMBER IM-380-6(224)25--13-57 | SHEET NUMBER V.10

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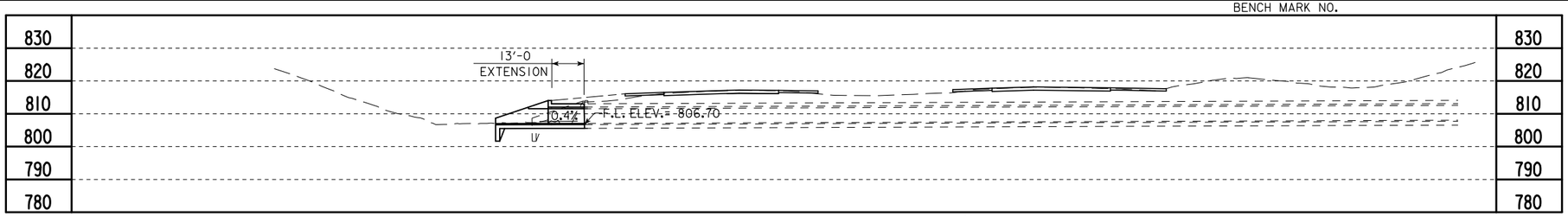

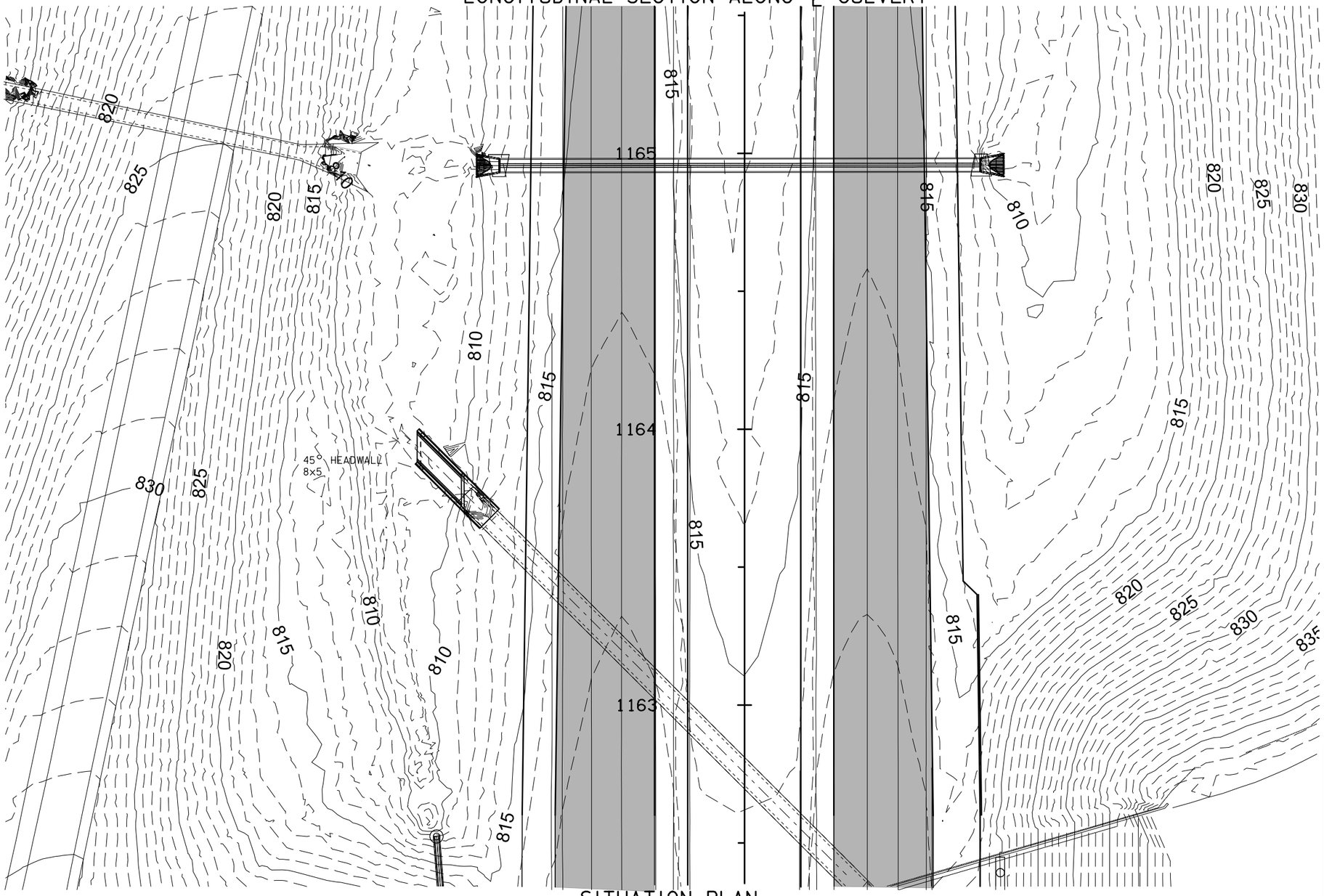

N

0 ENGLISH 40
SCALE IN FEET

DESIGN FOR 45° SKEW LT AHEAD

SINGLE 8' x 5' EXTENSION REINFORCED CONCRETE BOX CULVERT

SITUATION PLAN

STA. 1162+75.34

JULY, 2018

I-380 WIDENING

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION

DESIGN SHEET NO. 1 OF 1 FILE NO. _____ DESIGN NO. _____

DESIGN TEAM KIRKHAM MICHAEL | LINN COUNTY | PROJECT NUMBER IM-380-6(224)25--13-57 | SHEET NUMBER V.11

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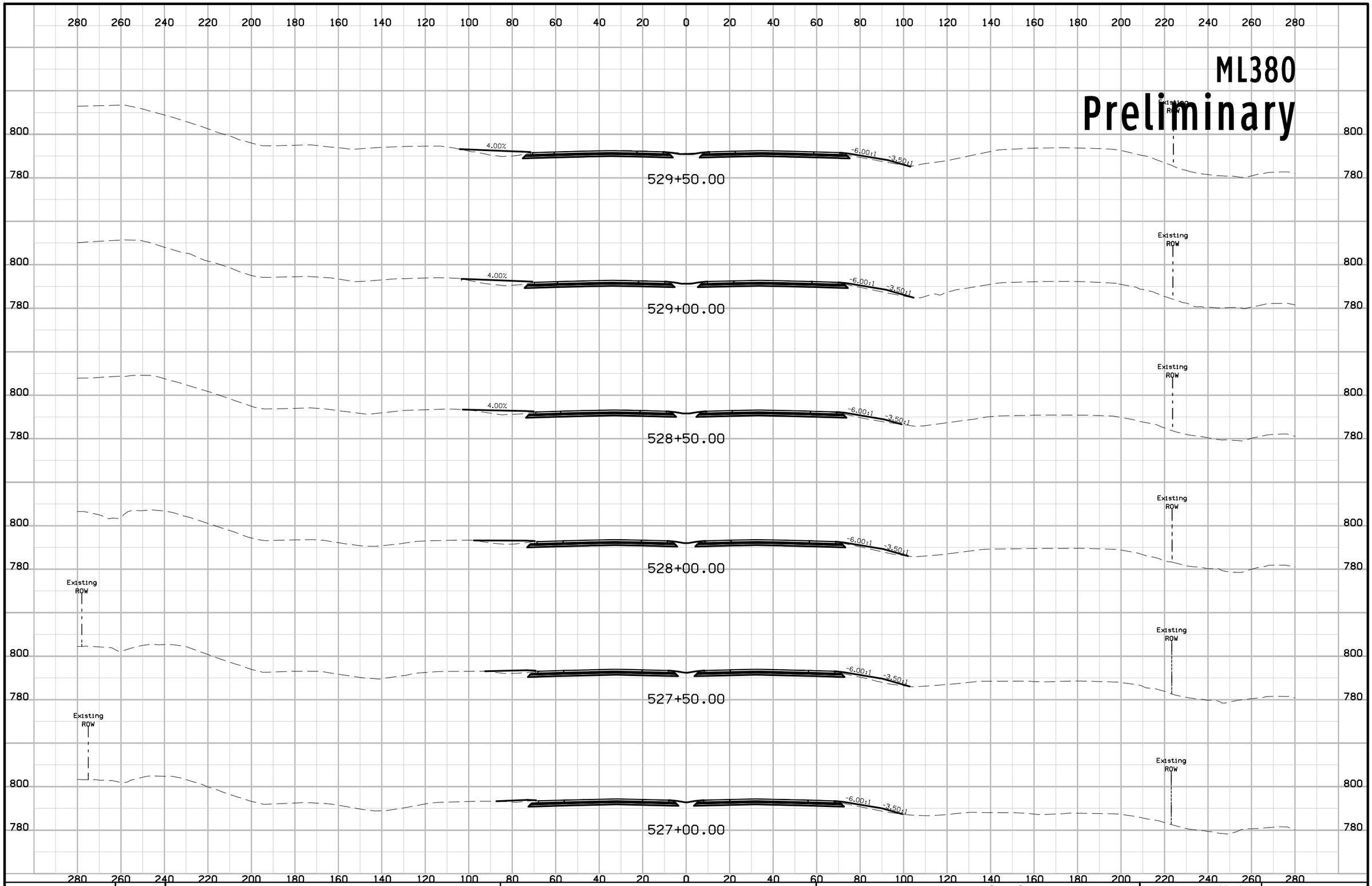
ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM	KIRKHAM MICHAEL		LINN	COUNTY	PROJECT NUMBER	IM-380-6(224)25--13-57	SHEET NUMBER W.1

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ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

800
780

Existing ROW

4.00%

532+50.00

532+00.00

531+50.00

531+00.00

530+50.00

530+00.00

-6.00:1

-3.50:1

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.2

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

800
780

Existing ROW

4.00%

3.00:1

3.00:1

535+00.00

534+50.00

534+00.00

533+50.00

533+00.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.3

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

800
780

Existing ROW

3.00:1

538+00.00

537+50.00

4.00%

4.00:1

537+00.00

536+50.00

536+00.00

535+50.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.4

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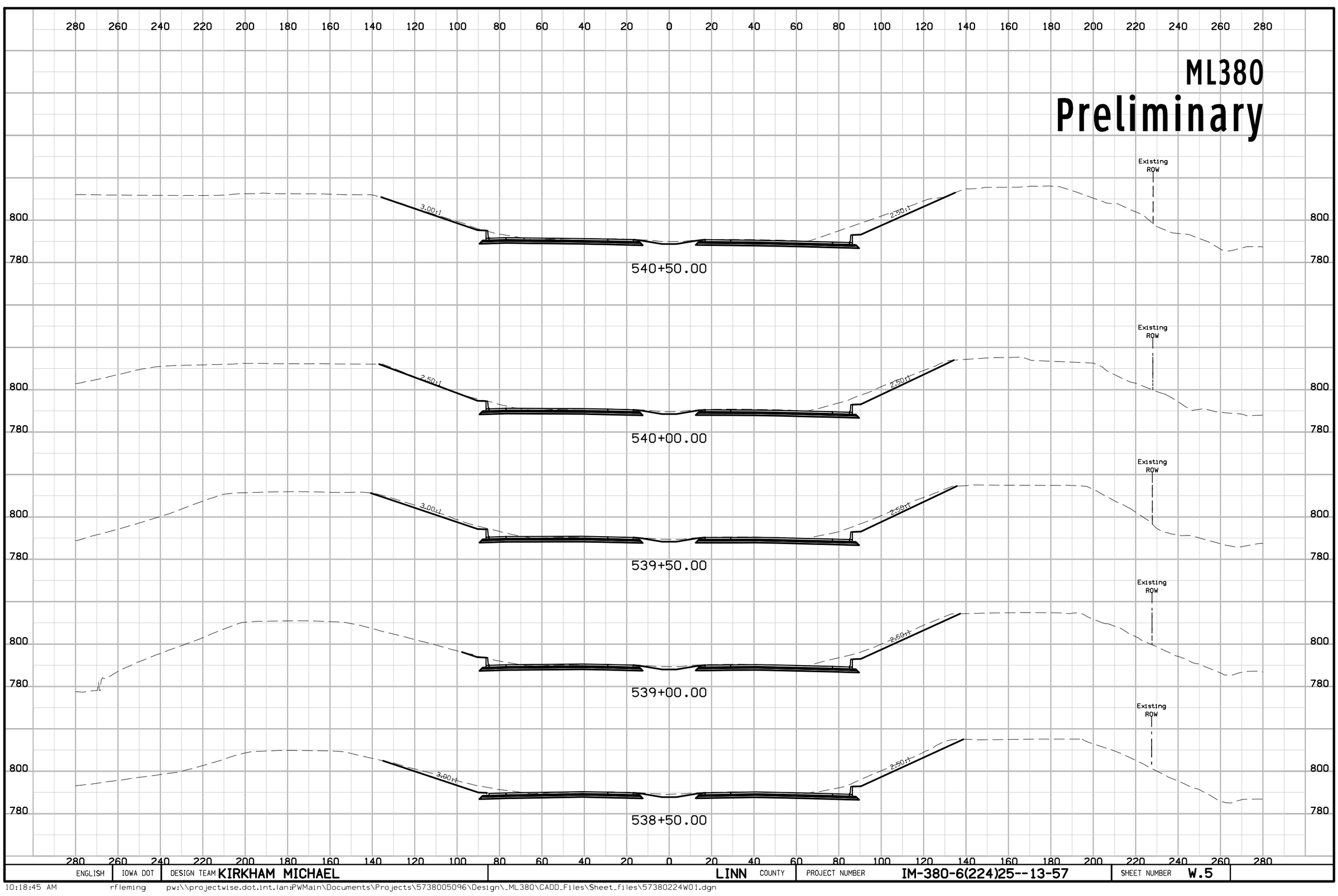
ML380
Preliminary



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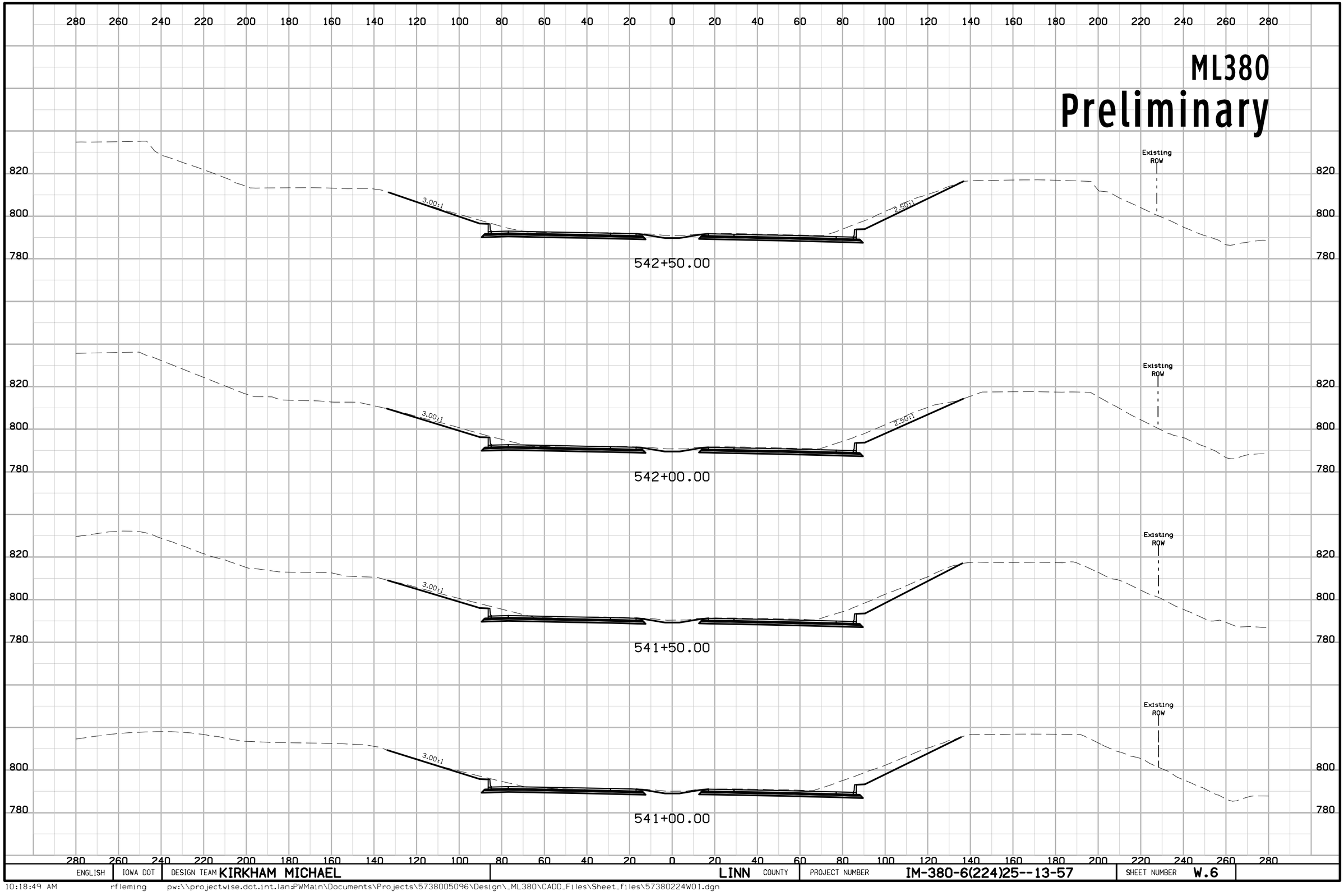
ML380
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.6

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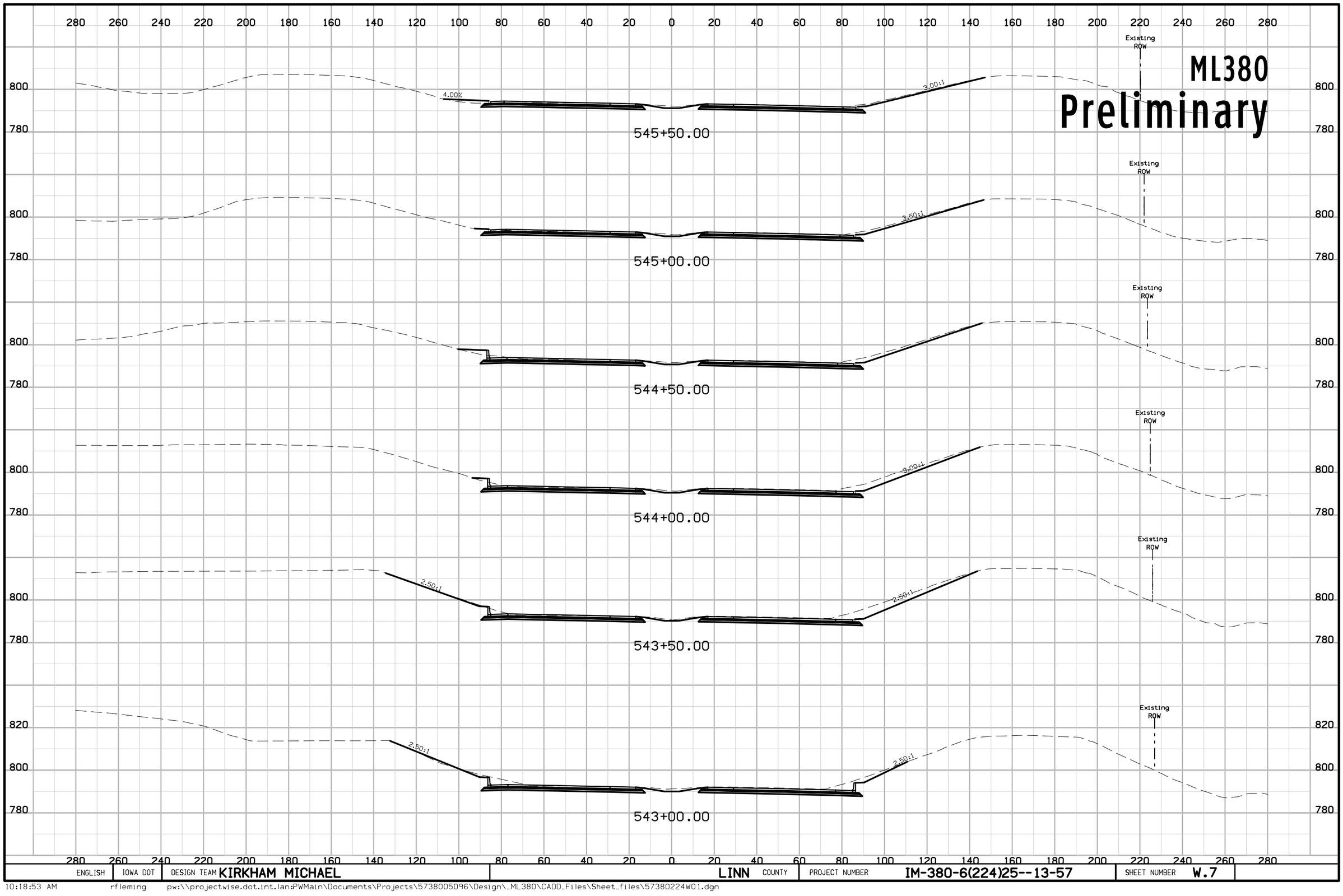
ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.7

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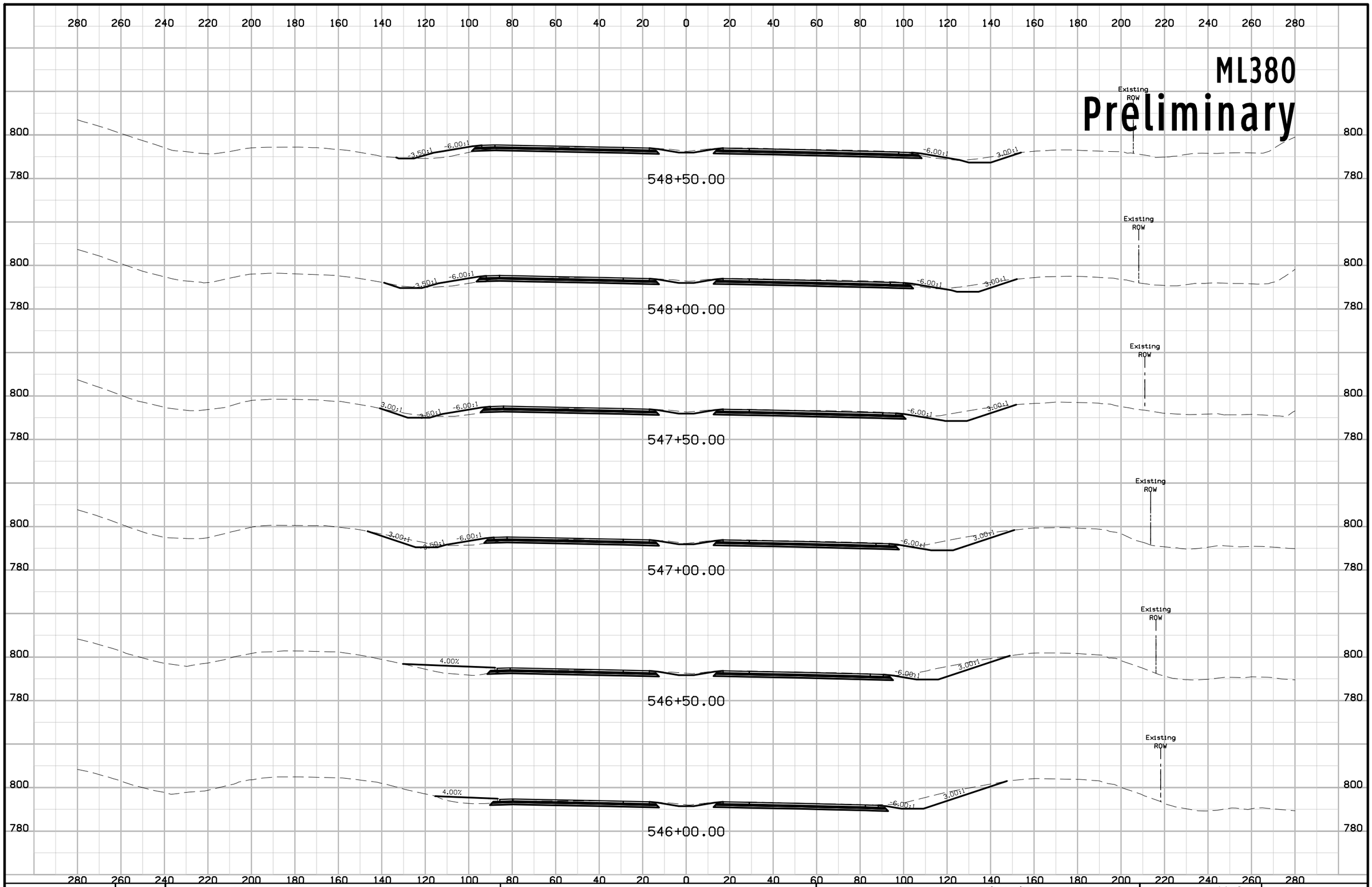
ML380

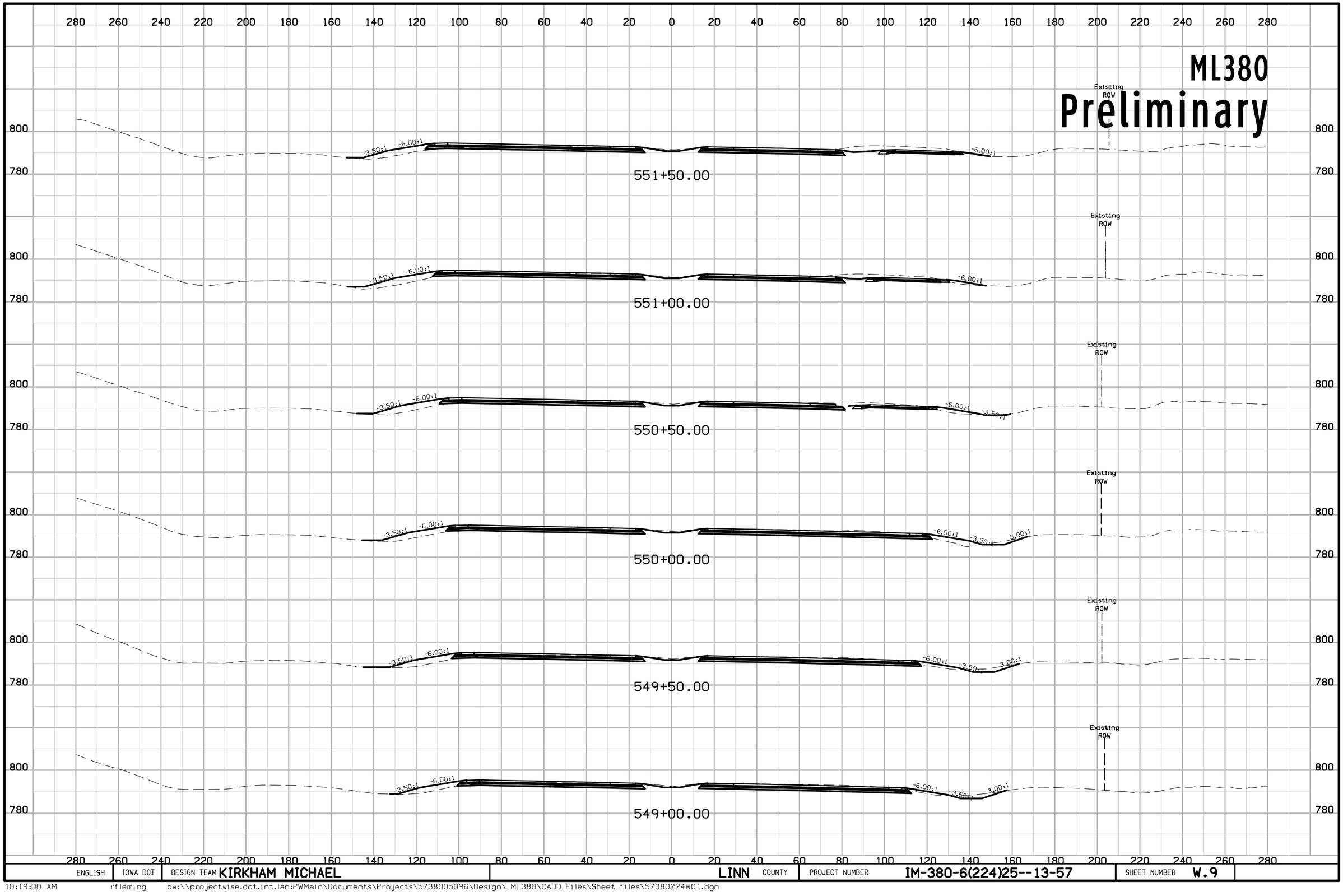
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.8

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.9

10:19:00 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

800
780

Existing ROW

-6.00:1 -3.00:1

554+50.00

554+00.00

553+50.00

553+00.00

-3.50:1 -6.00:1

552+50.00

552+00.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.10

10:19:04 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

800
780

Existing ROW

4.00%

-6.00:1 -3.50:1 3.00:1

557+50.00

557+00.00

556+50.00

556+00.00

555+50.00

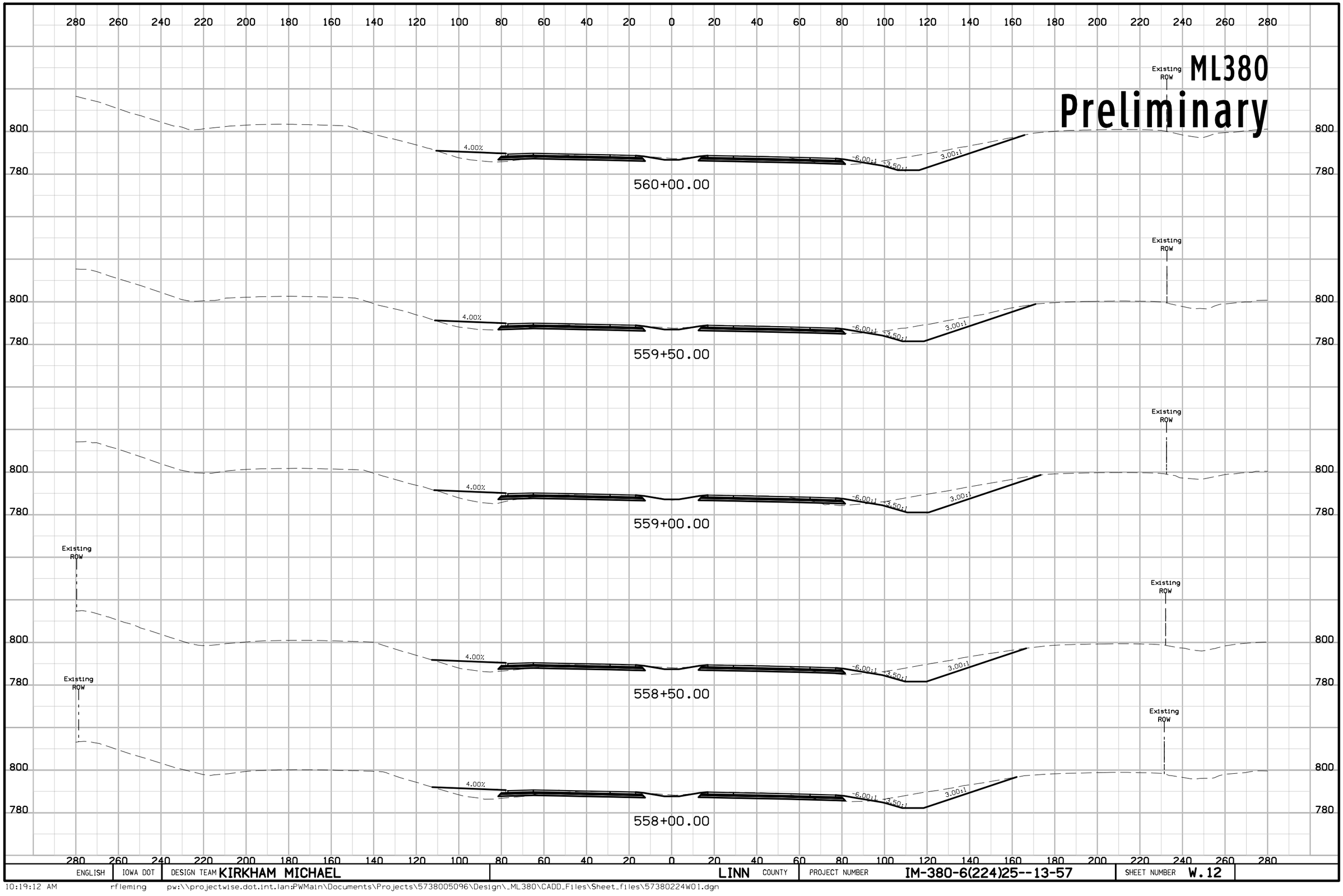
555+00.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.11

10:19:08 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

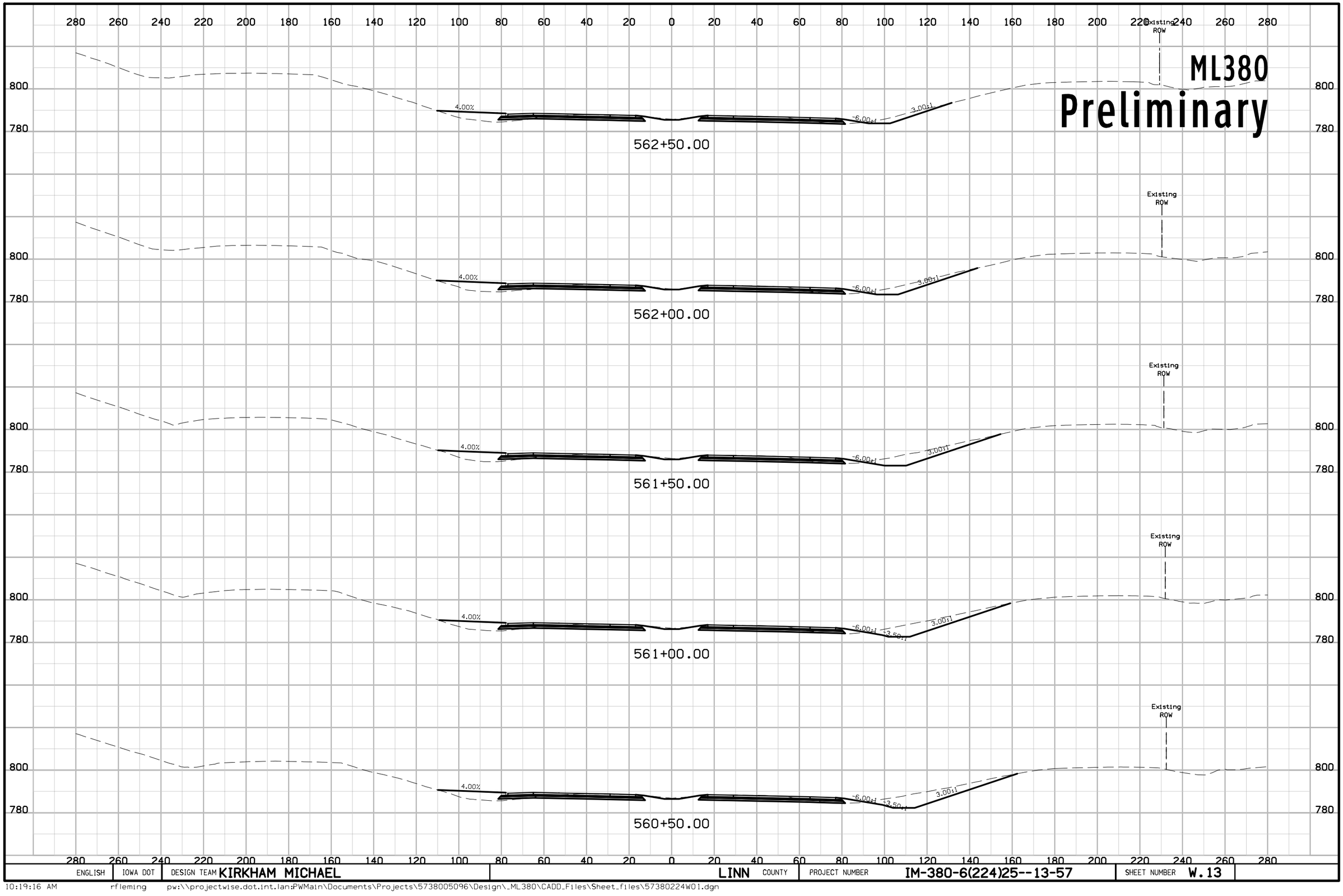


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.12

10:19:12 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

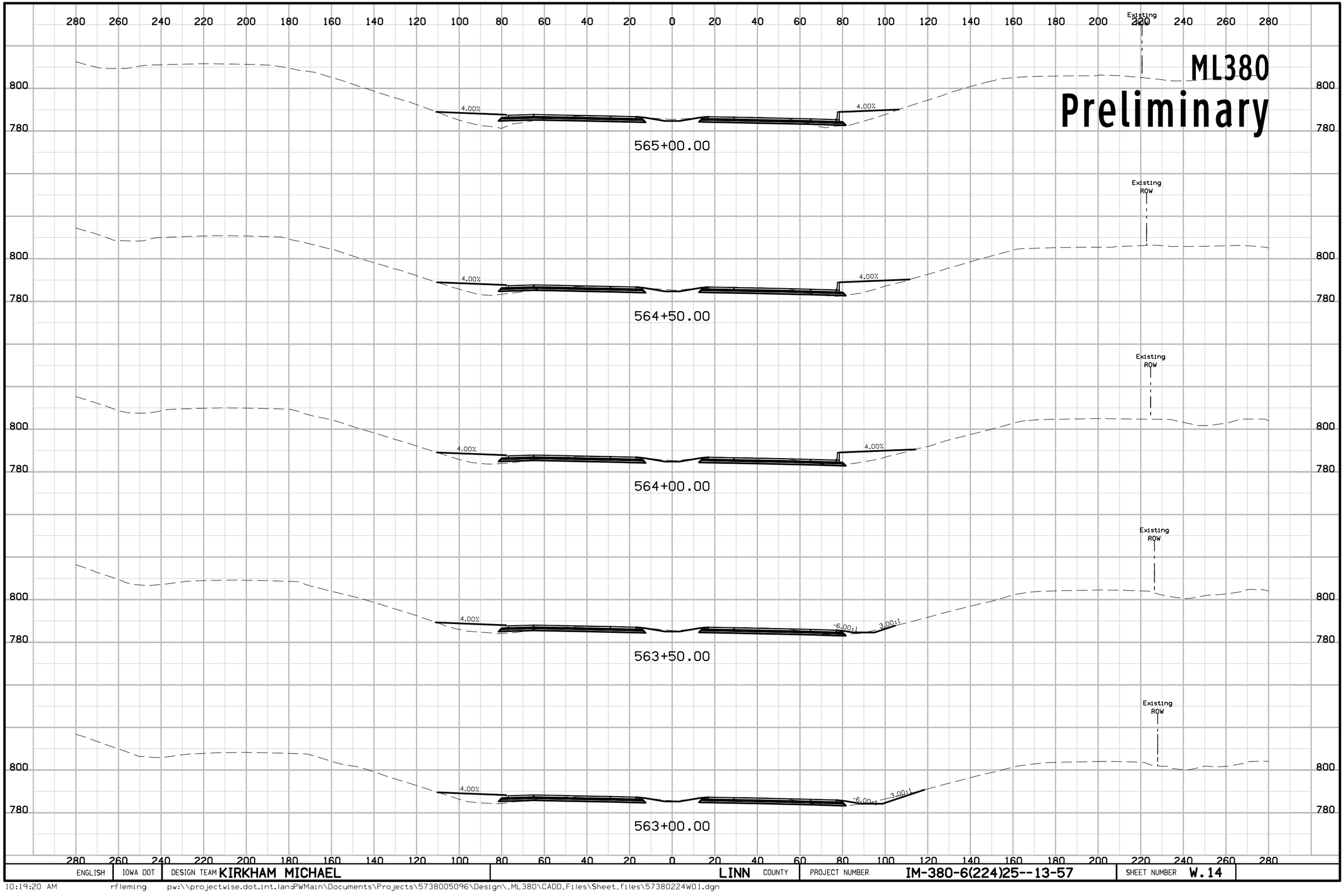


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.13

10:19:16 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

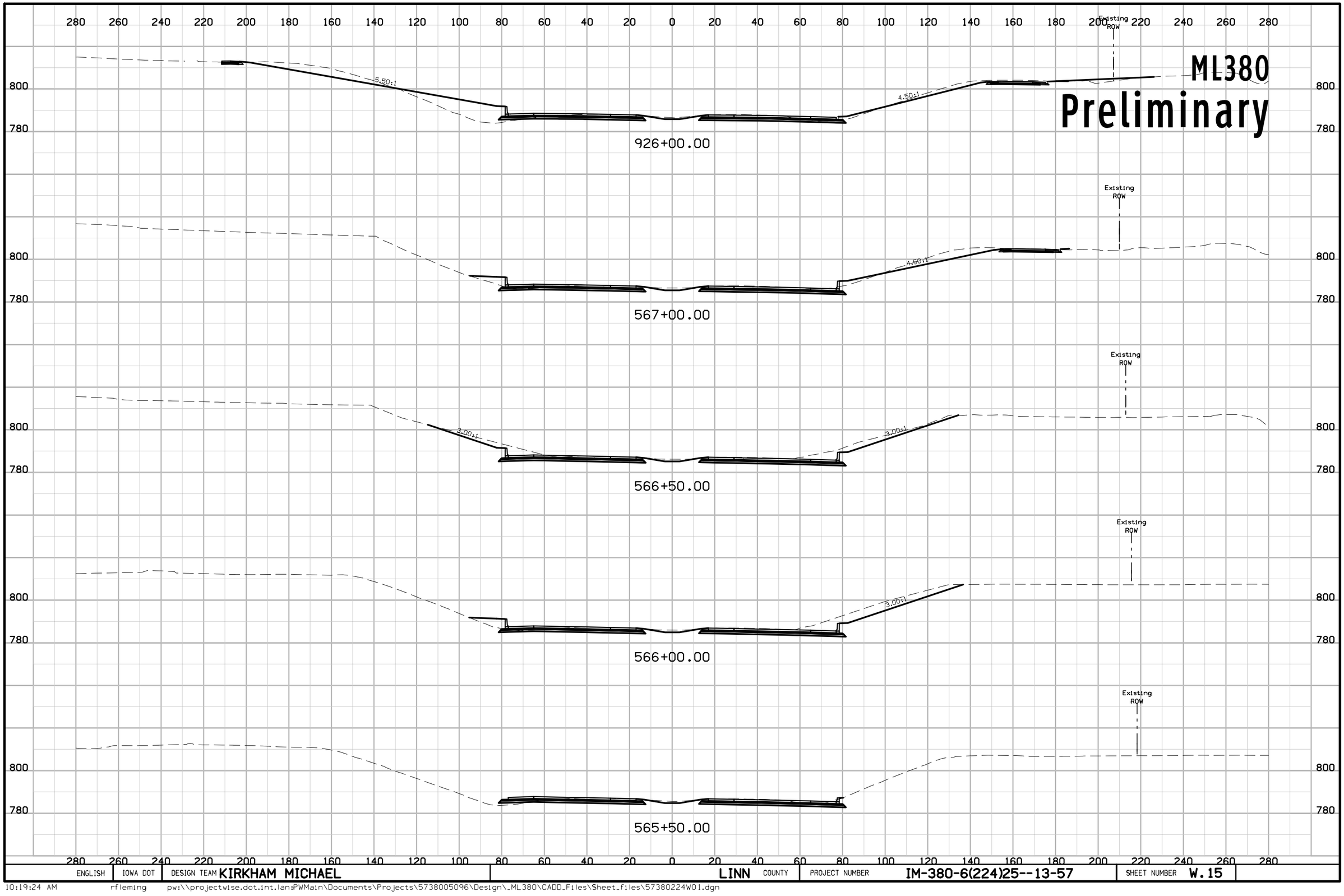


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.14

10:19:20 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

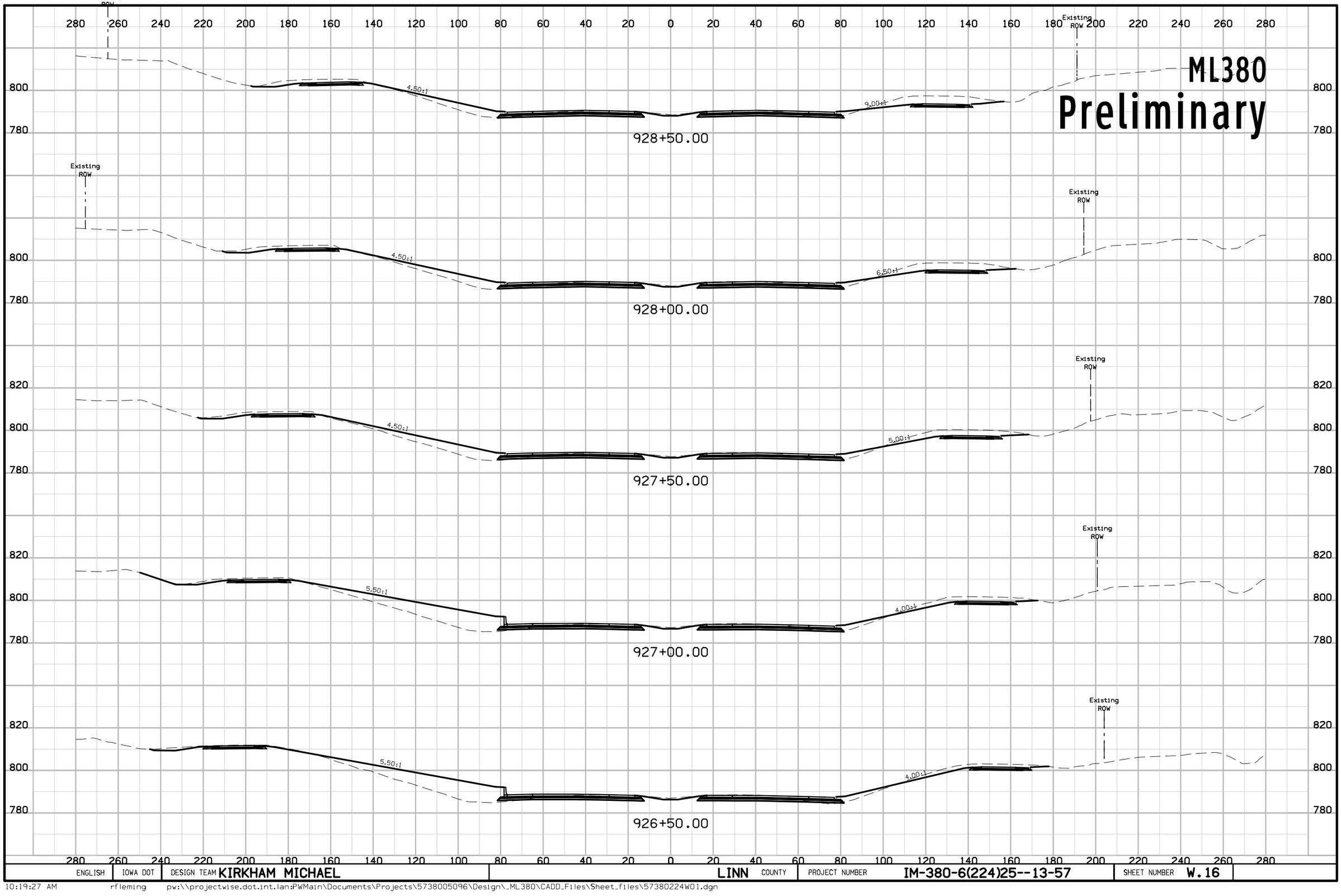
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.15

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.16

10:19:27 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

800
780

Existing ROW

4.00%

931+50.00

Existing ROW

Existing ROW

-6.00:1

4.00%

931+00.00

Existing ROW

Existing ROW

5.00:1

930+50.00

Existing ROW

Existing ROW

4.50:1

930+00.00

Existing ROW

Existing ROW

4.50:1

929+50.00

Existing ROW

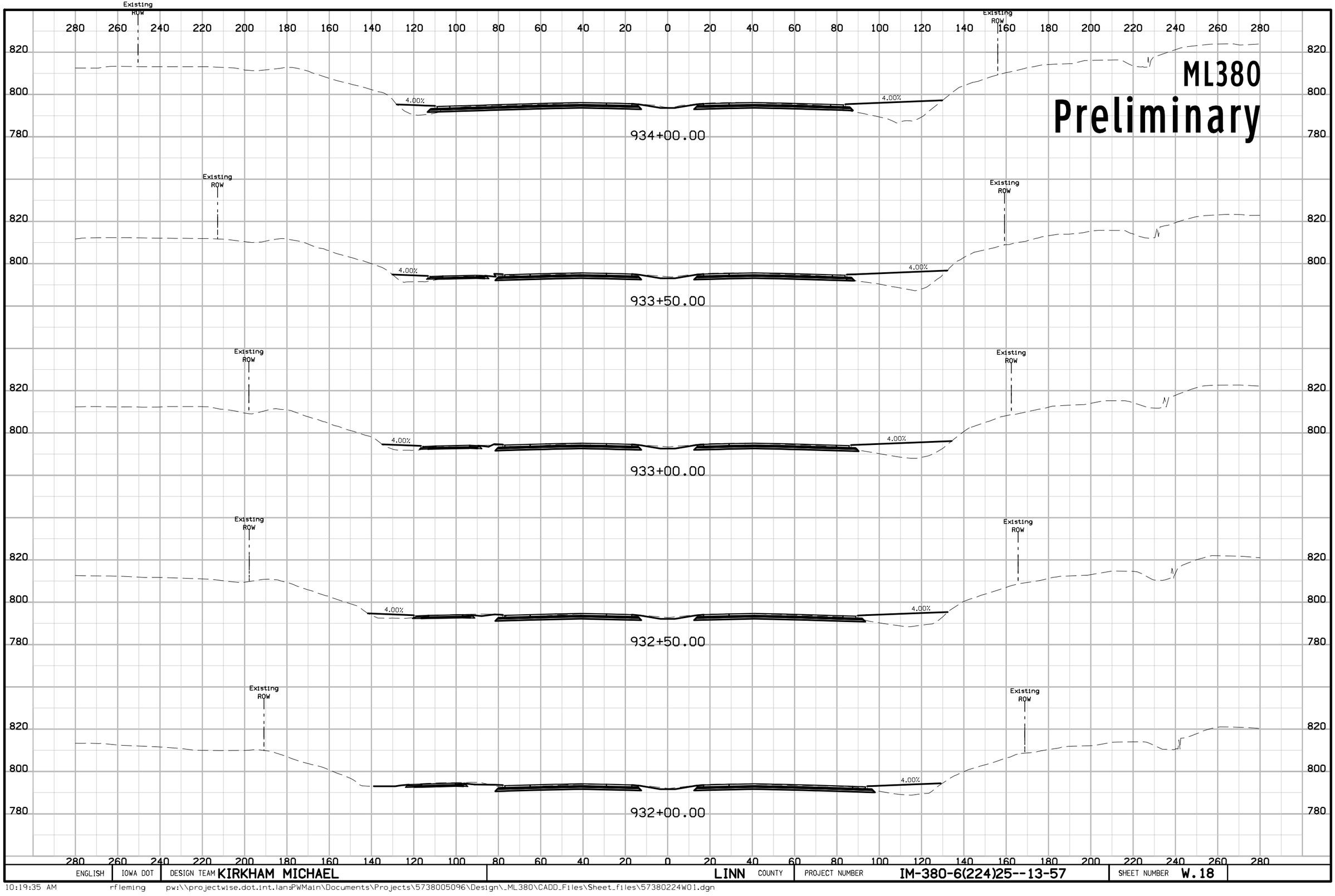
Existing ROW

4.50:1

929+00.00

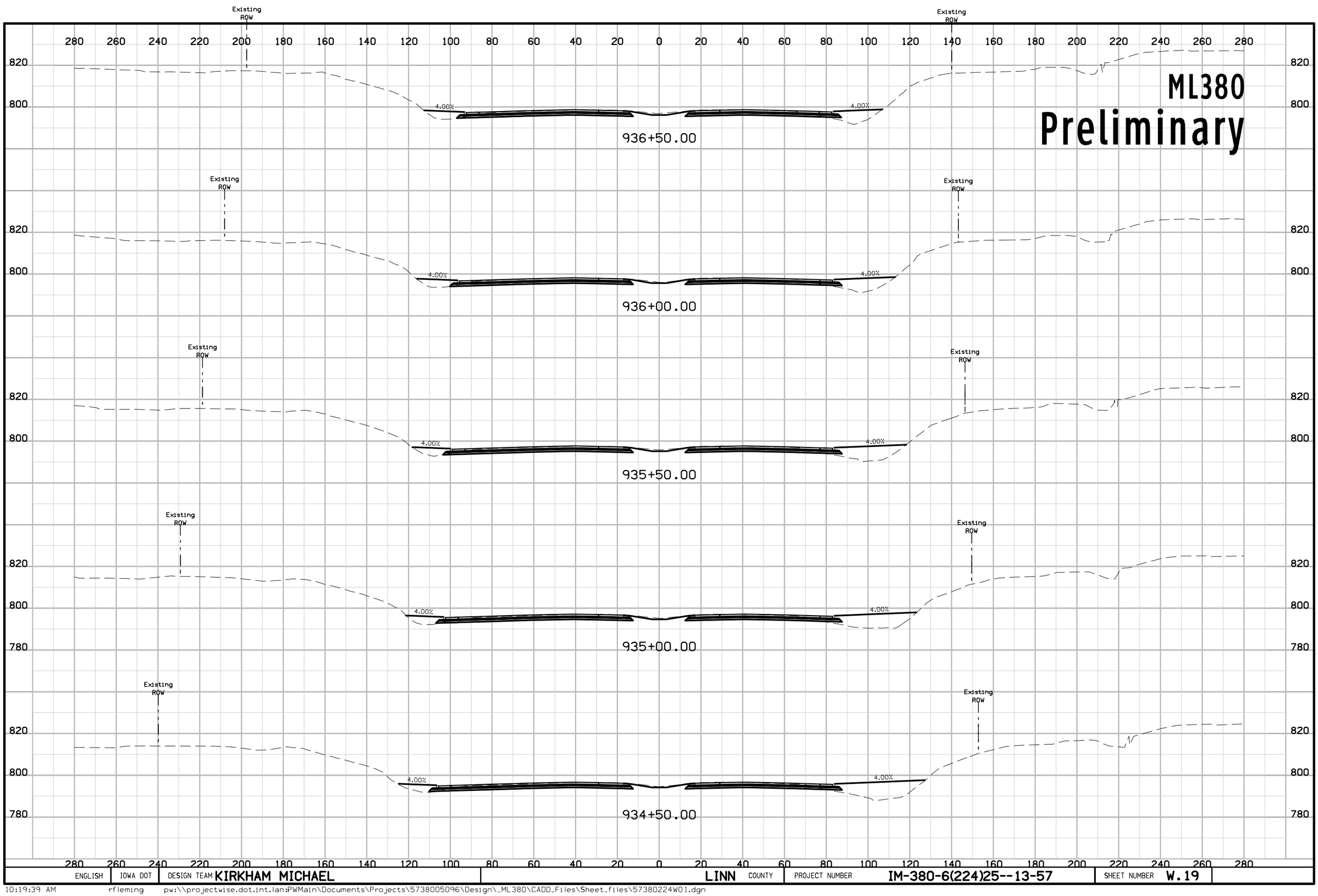
ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.17

10:19:31 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.18

10:19:35 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn



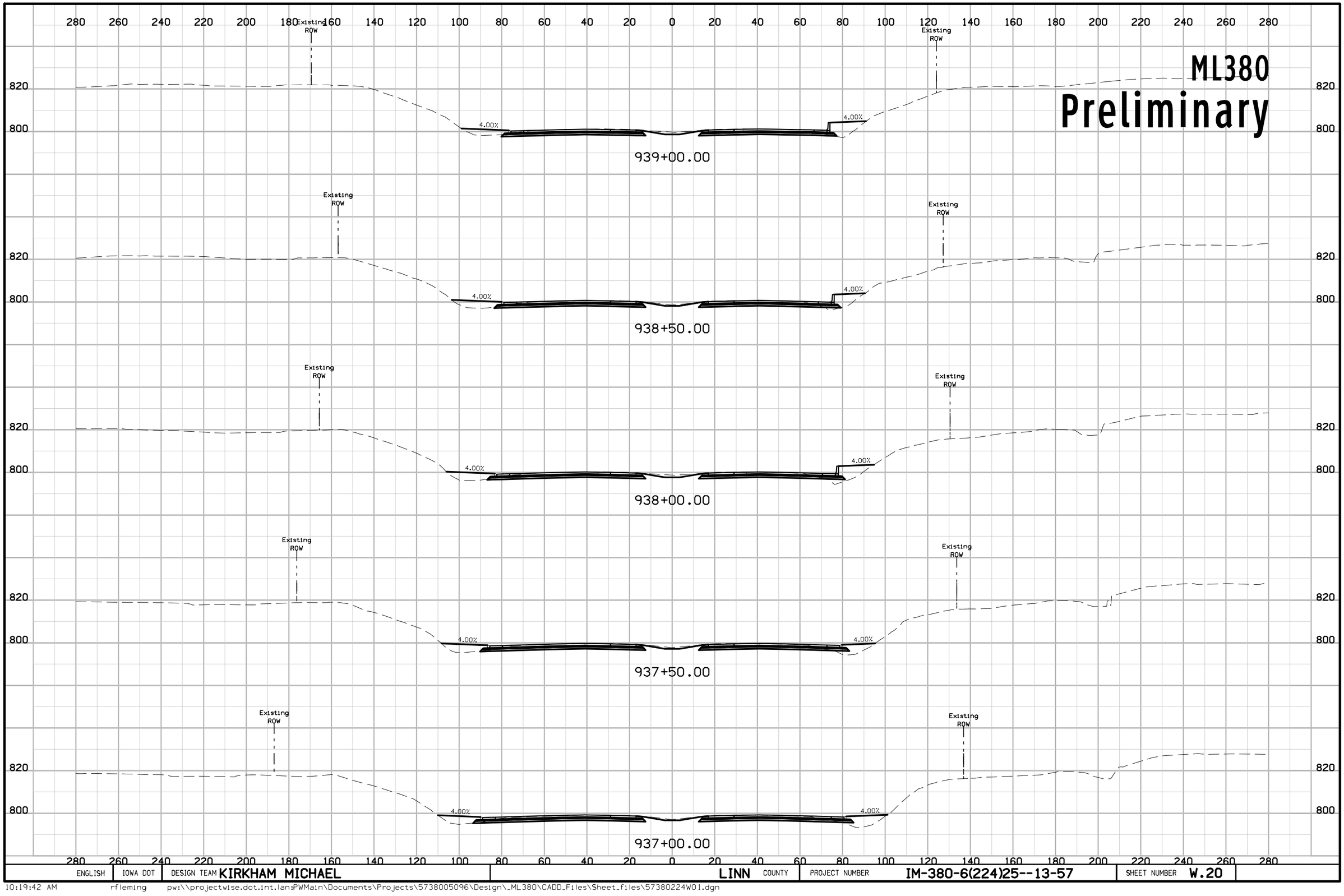
ML380

Preliminary

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.19

10:19:39 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

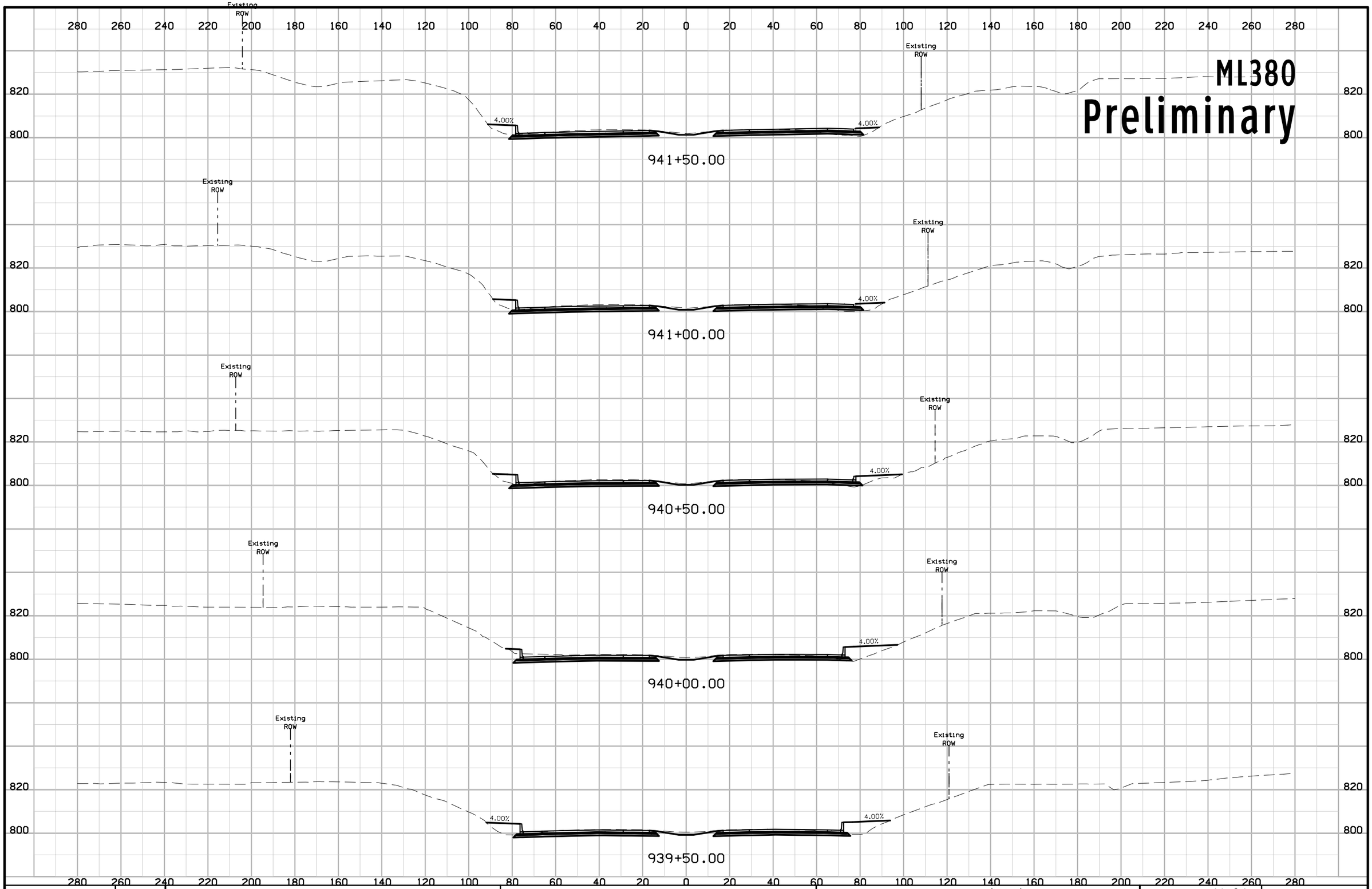
ML380
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN	COUNTY	PROJECT NUMBER	IM-380-6(224)25--13-57	SHEET NUMBER W.20

ML380

Preliminary

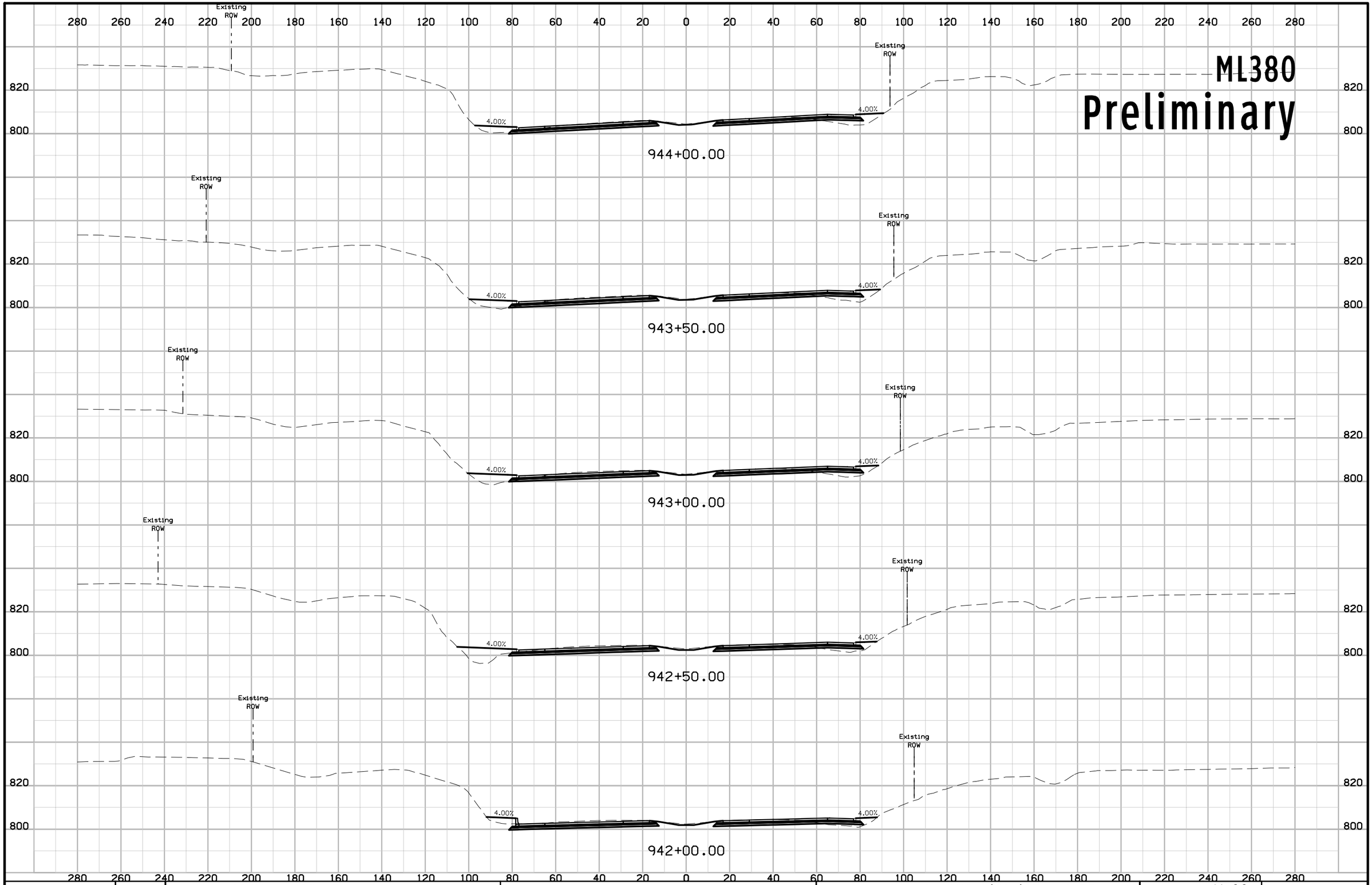


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN	COUNTY	PROJECT NUMBER	IM-380-6(224)25--13-57	SHEET NUMBER W.21

10:19:46 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

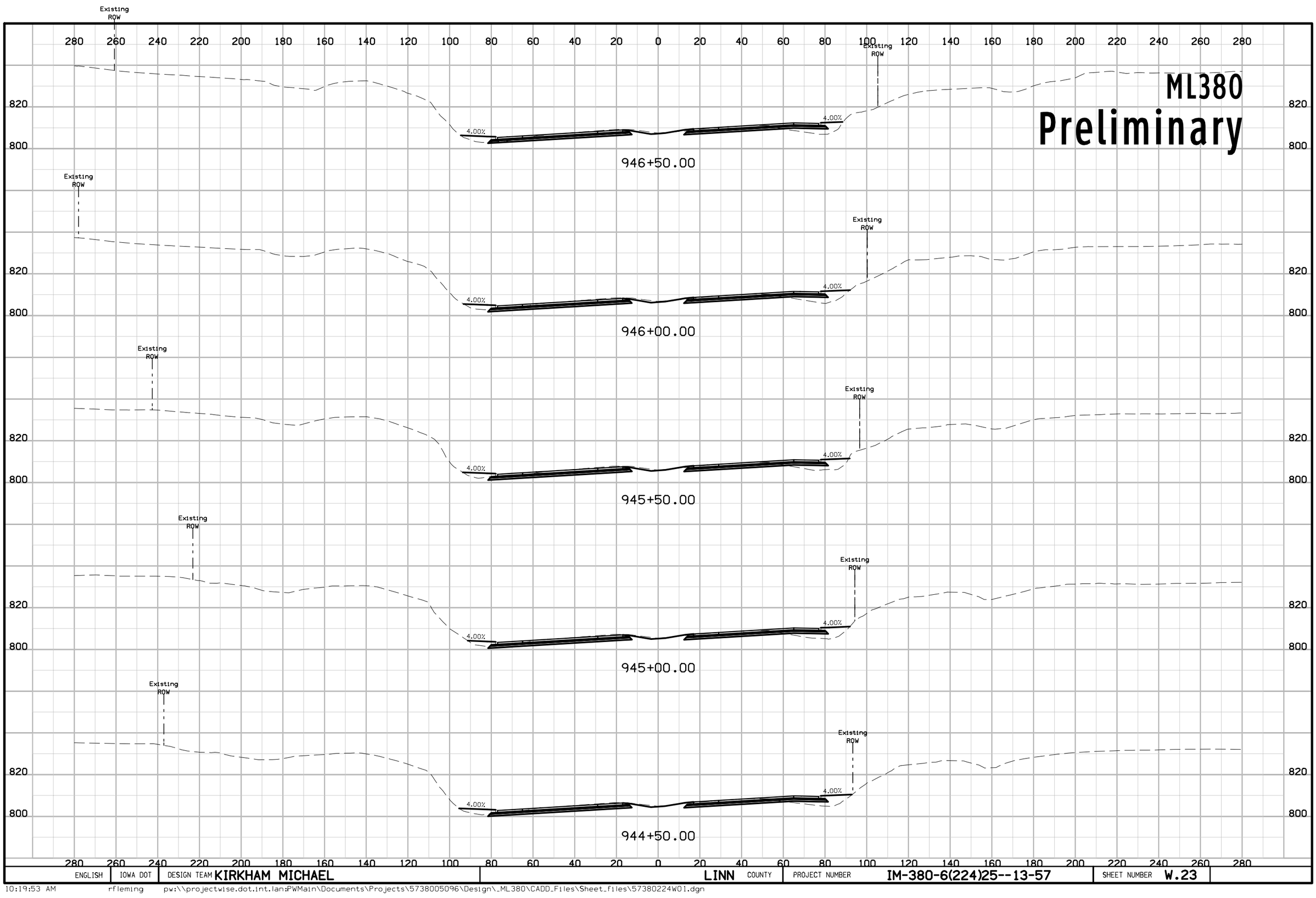
ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.22

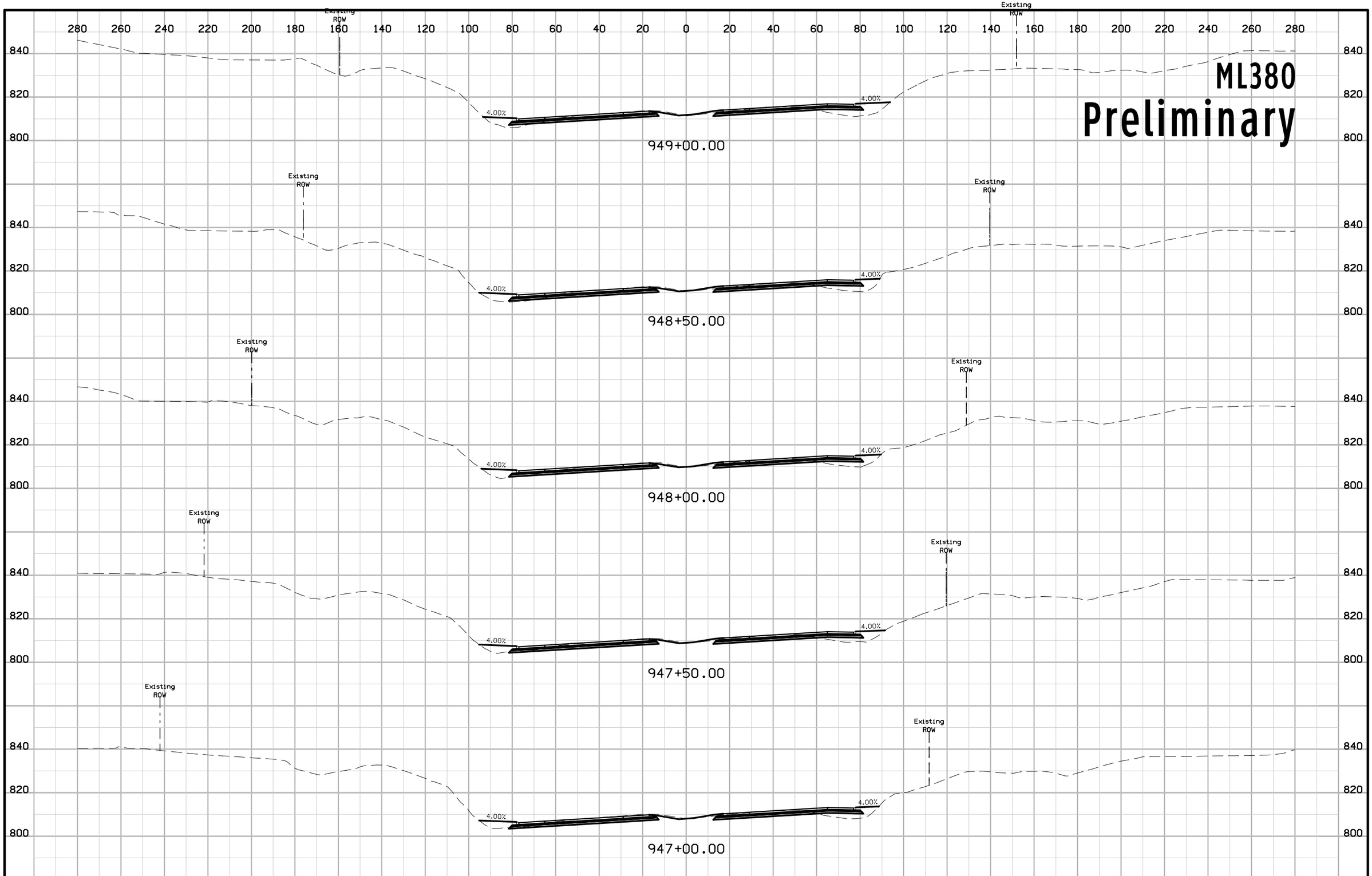
ML380
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.23

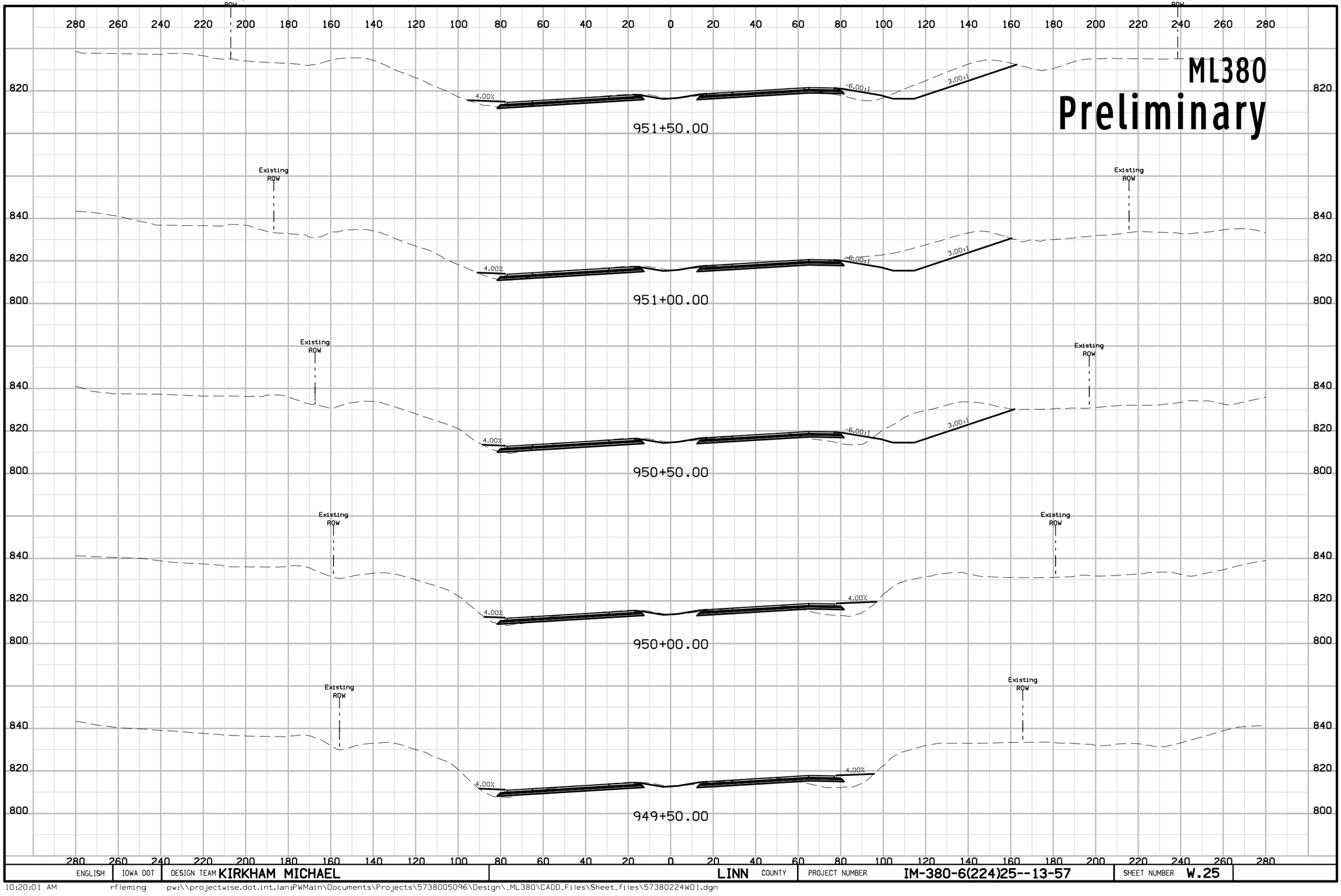
10:19:53 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL		LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.24	

10:19:57 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

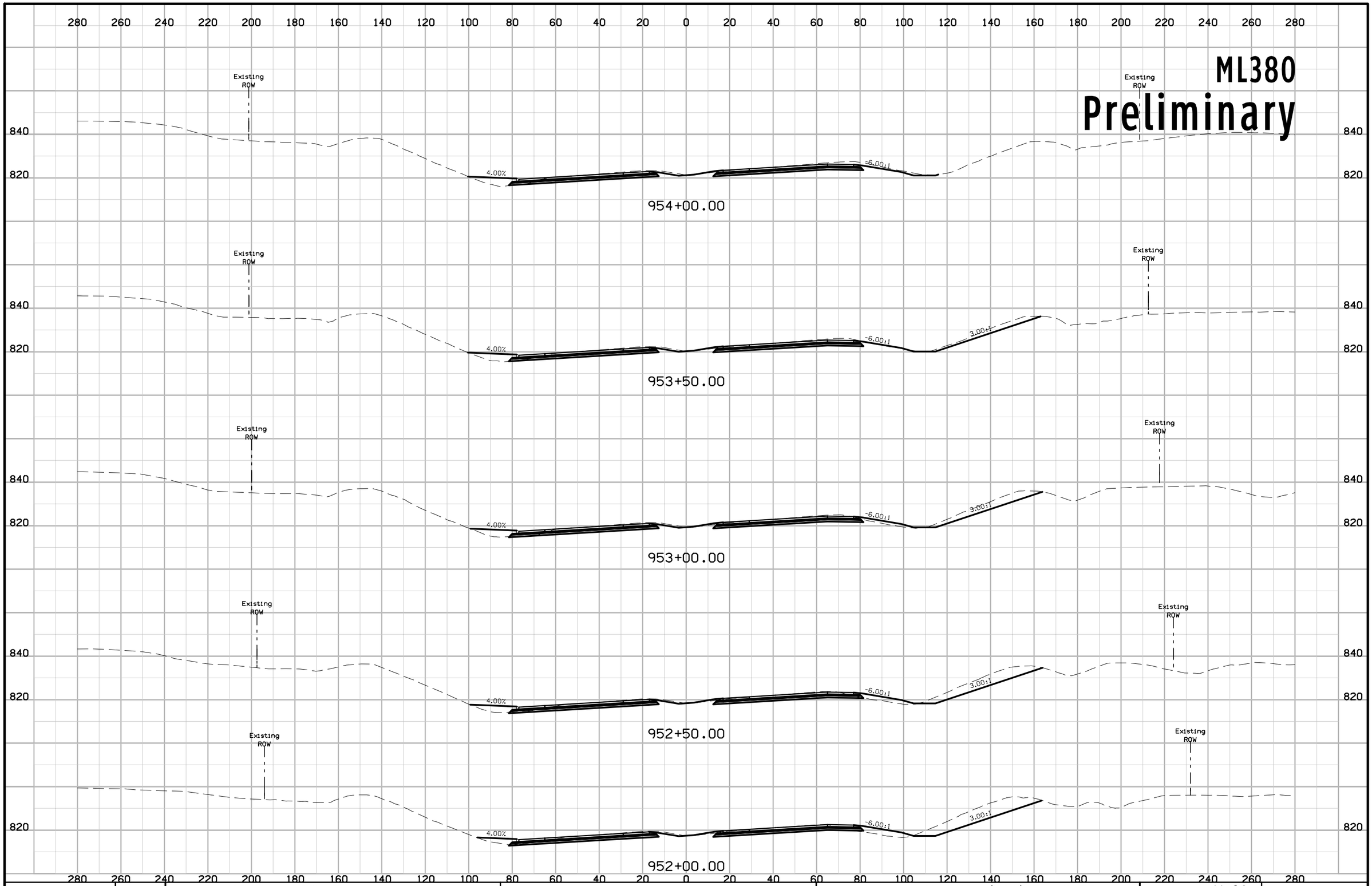


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.25

10:20:01 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.26

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840
820

Existing ROW

4.00%

6.00:1

3.00:1

957+00.00

956+50.00

3.50:1

956+00.00

955+50.00

955+00.00

954+50.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.27

10:20:08 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840
820

Existing ROW

4.00%

-6.00:1

3.00:1

960+00.00

959+50.00

959+00.00

958+50.00

958+00.00

957+50.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.28

10:20:12 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840

Existing ROW

-3.50:1 -6.00:1 -6.00:1 3.00:1

963+00.00

840

Existing ROW

-3.50:1 -6.00:1 -6.00:1 3.00:1

962+50.00

840

Existing ROW

-3.50:1 -6.00:1 -6.00:1 3.00:1

962+00.00

840

Existing ROW

-3.50:1 -6.00:1 -6.00:1 3.00:1

961+50.00

840

Existing ROW

-6.00:1 -6.00:1 3.00:1

961+00.00

840

820

Existing ROW

4.00% -6.00:1 3.00:1

Existing ROW

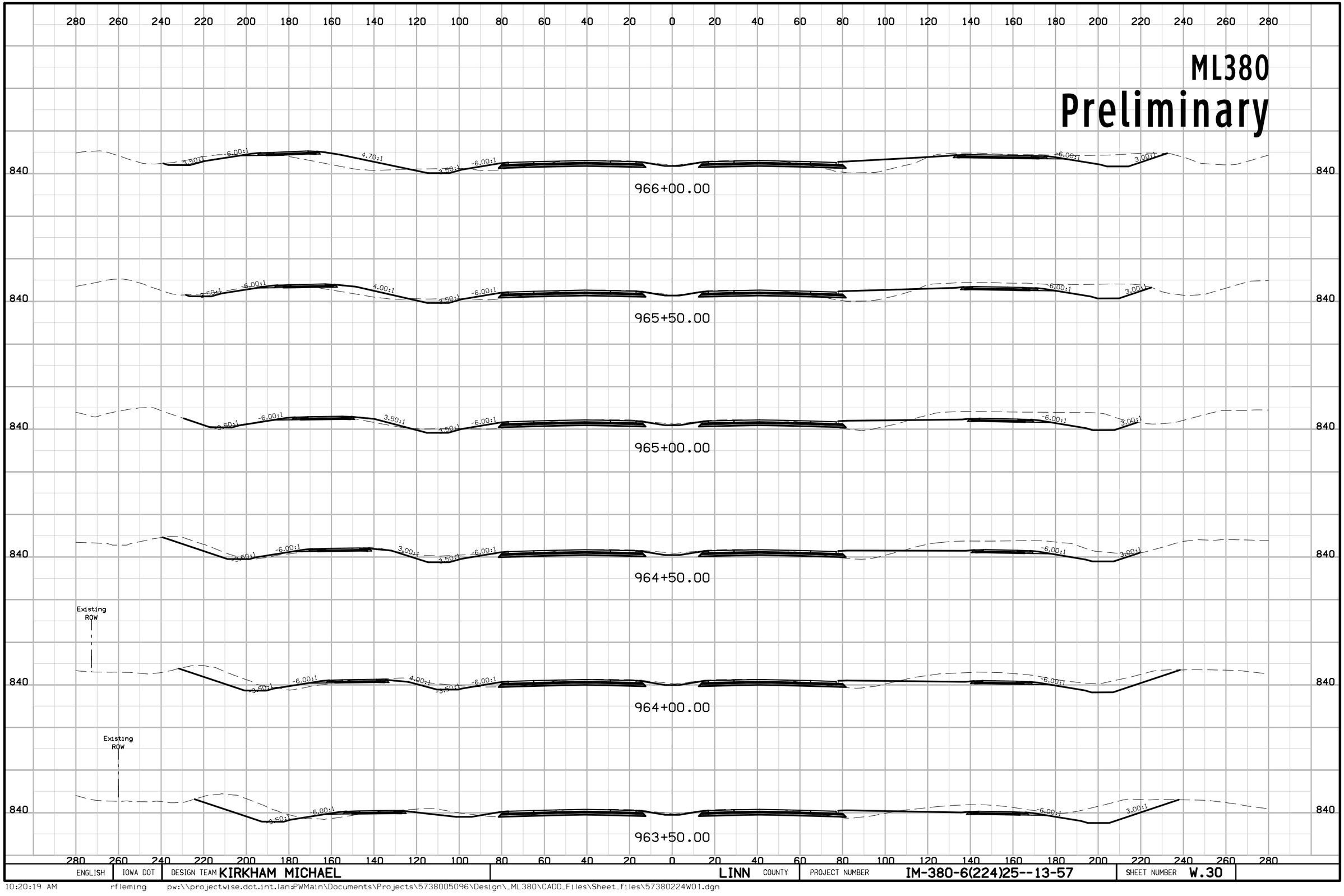
960+50.00

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.29

10:20:16 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary

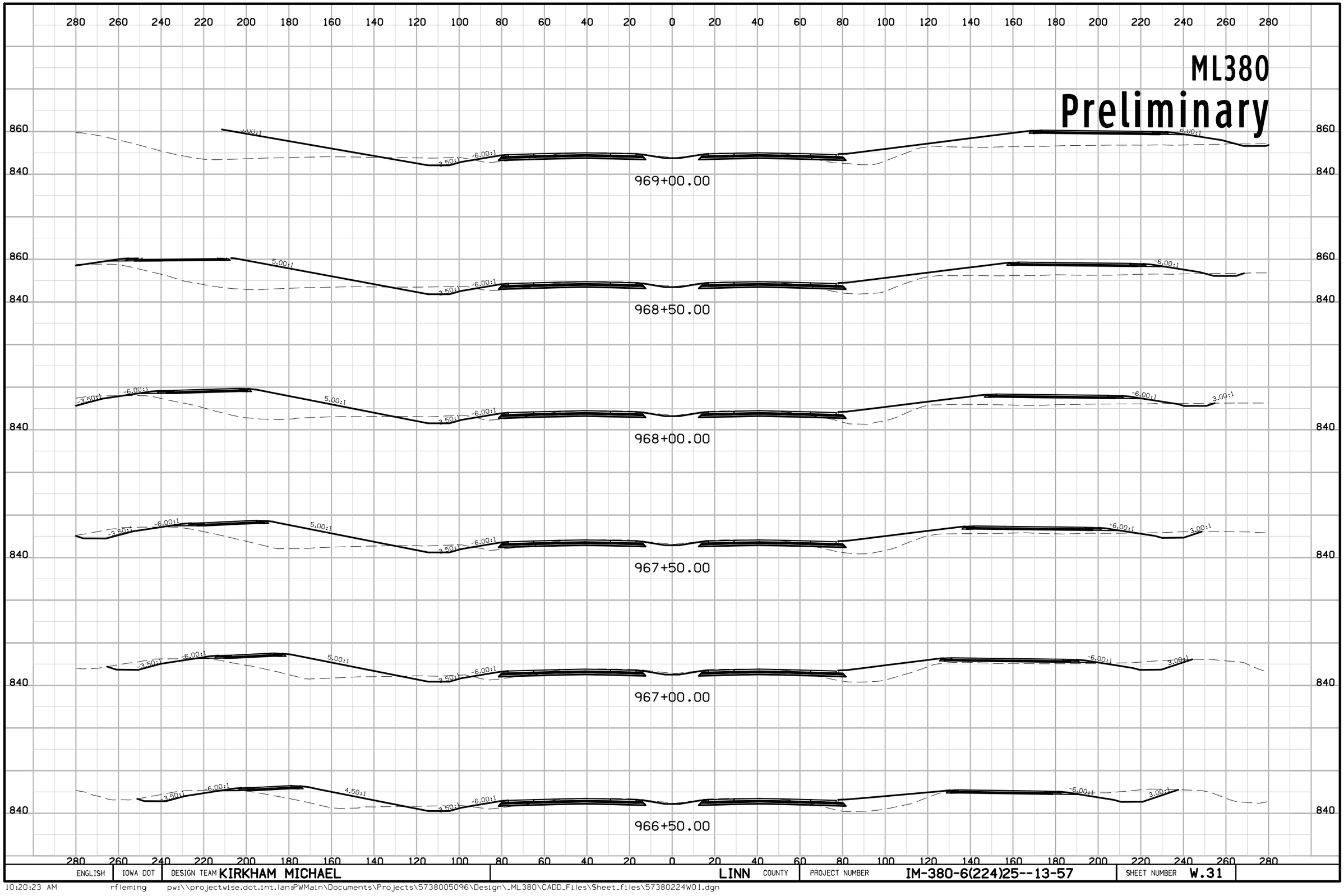


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.30

10:20:19 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

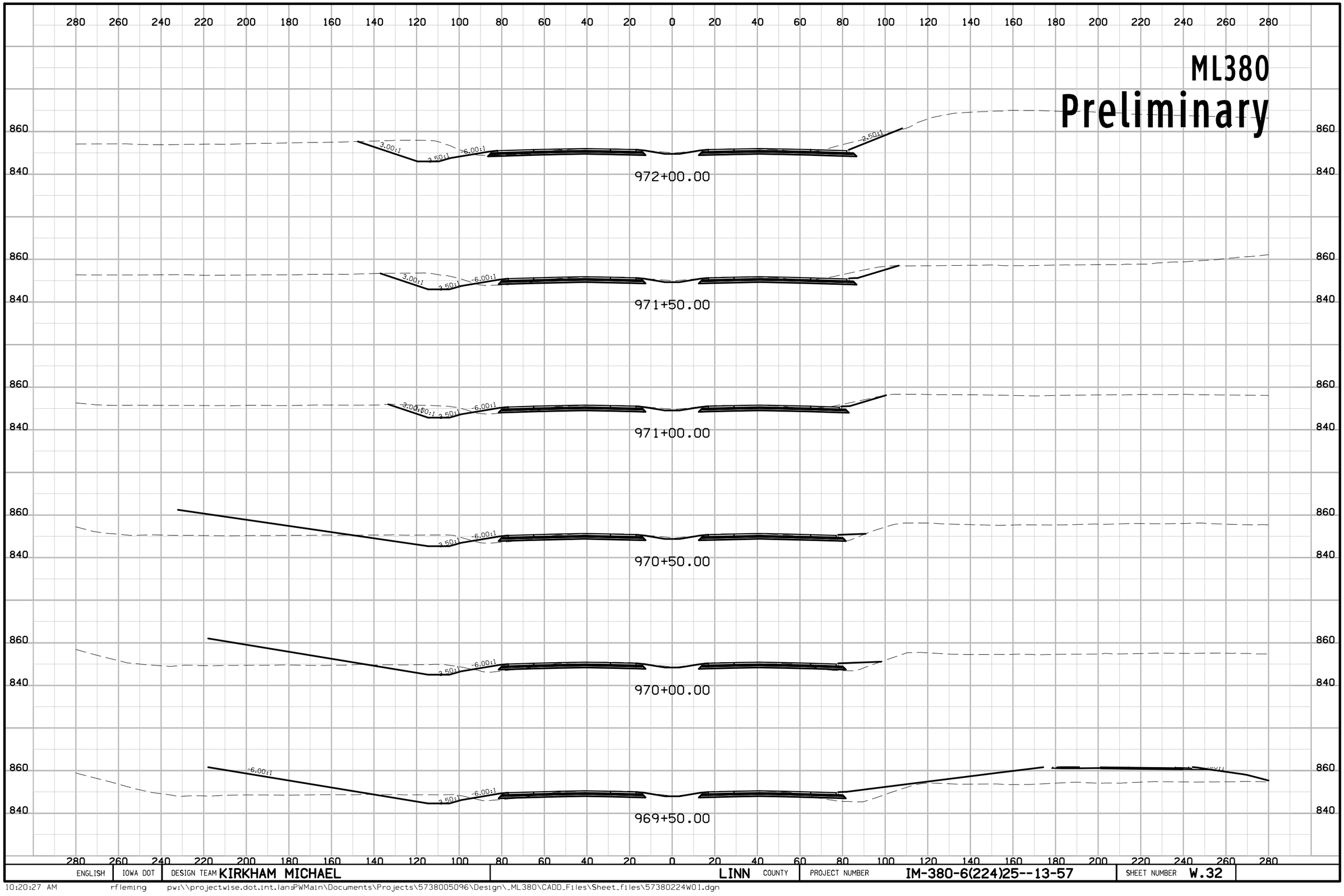


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.31

10:20:23 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

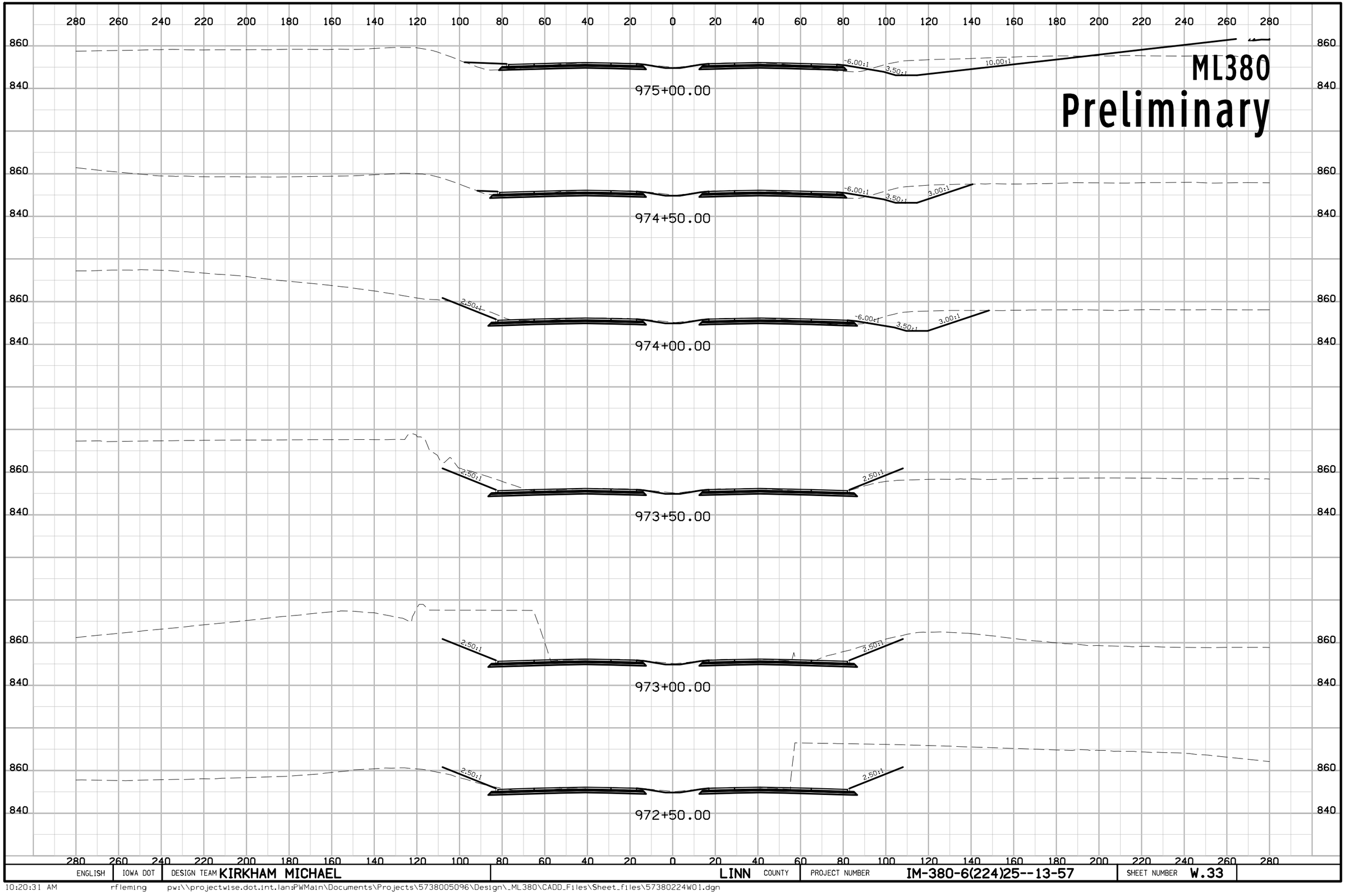
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.32

10:20:27 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.33

10:20:31 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

860
840

978+00.00

-6.00:1 9.00:1 -6.00:1 3.50:1 10.00:1

977+50.00

-6.00:1 8.00:1 -6.00:1 3.50:1 10.00:1

977+00.00

8.00:1 -6.00:1 3.50:1 10.00:1

976+50.00

7.20:1 -6.00:1 3.50:1 10.00:1

976+00.00

7.40:1 -6.00:1 3.50:1 10.00:1

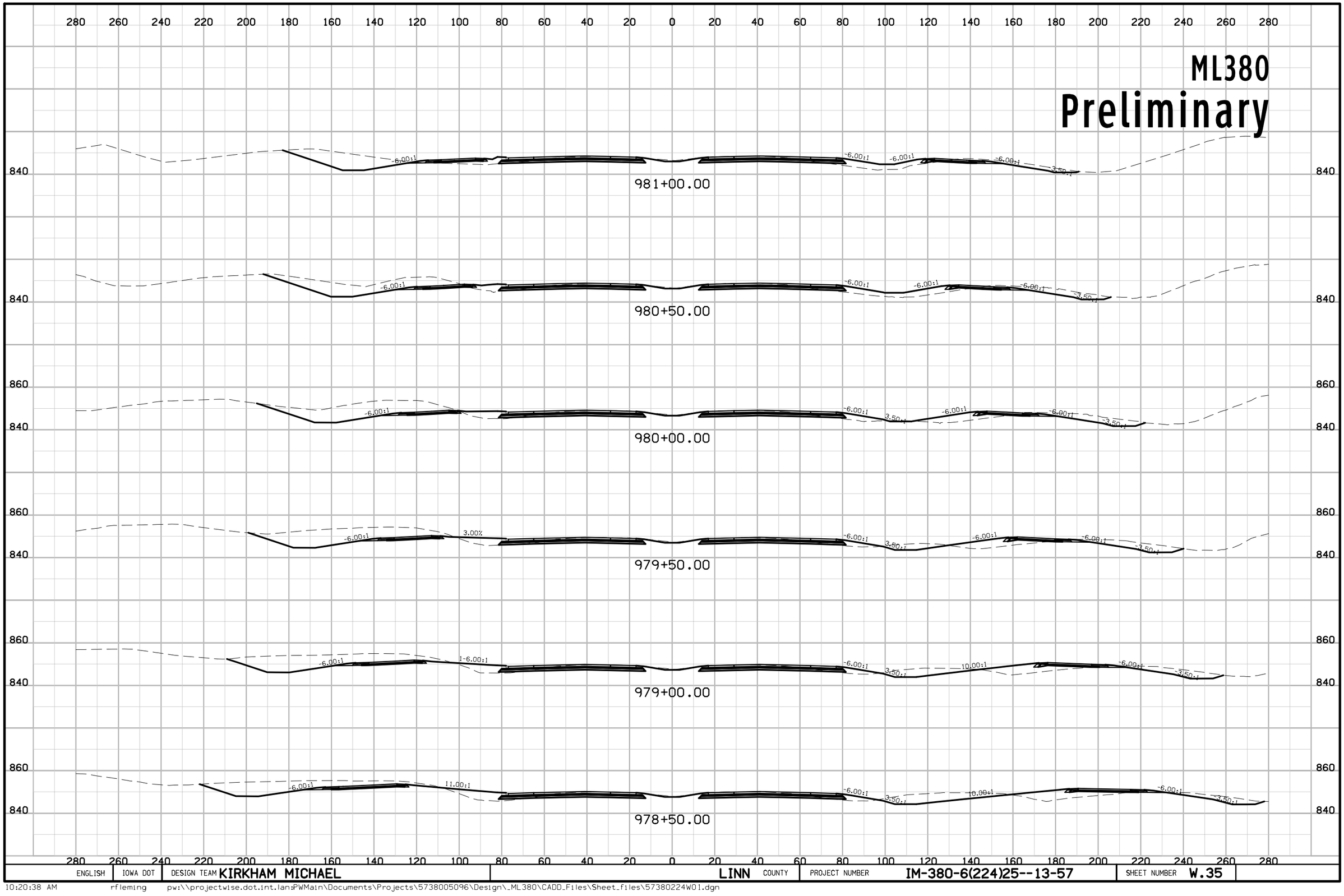
975+50.00

4.00% -6.00:1 3.50:1 10.00:1

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.34

ML380

Preliminary

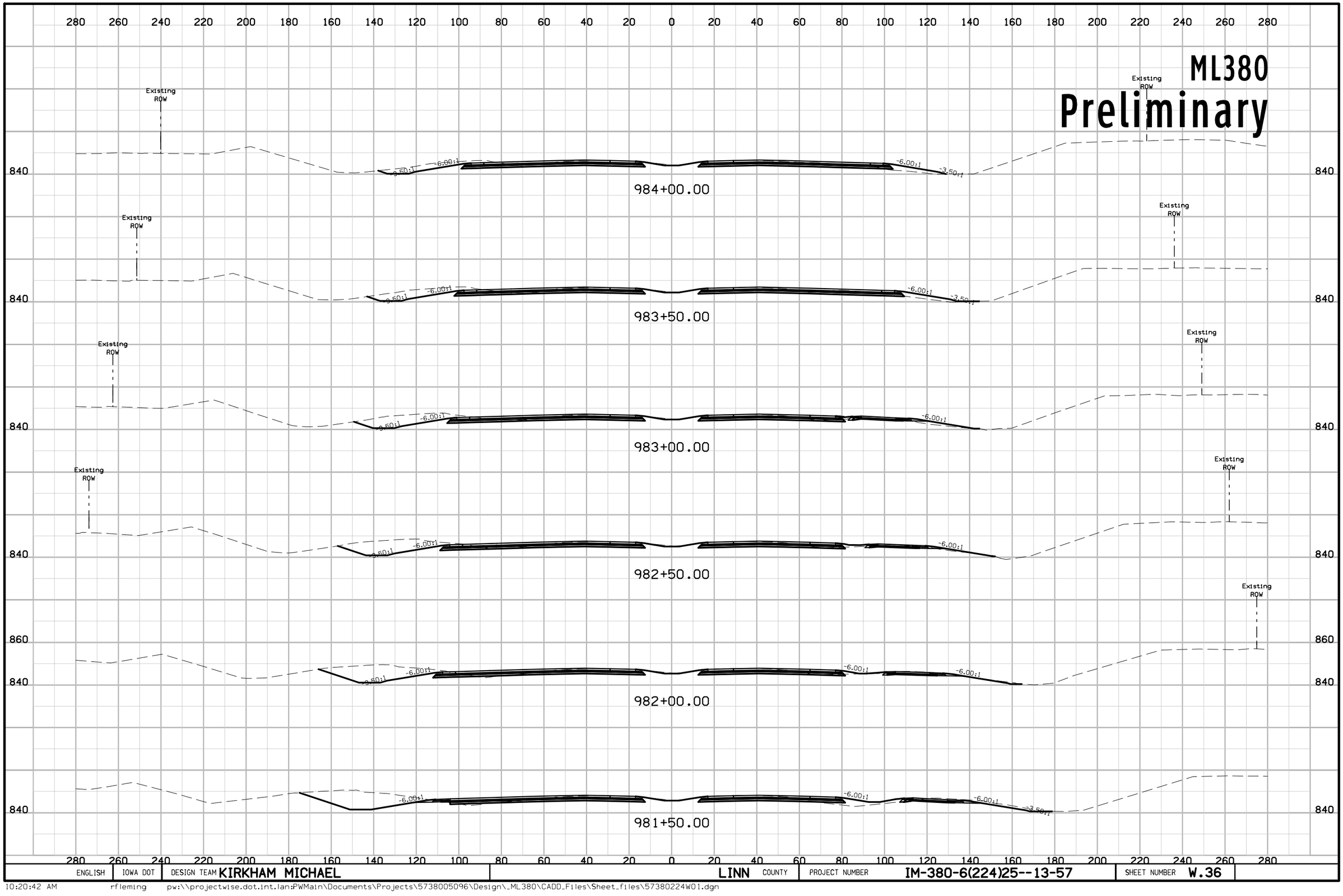


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.35

10:20:38 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

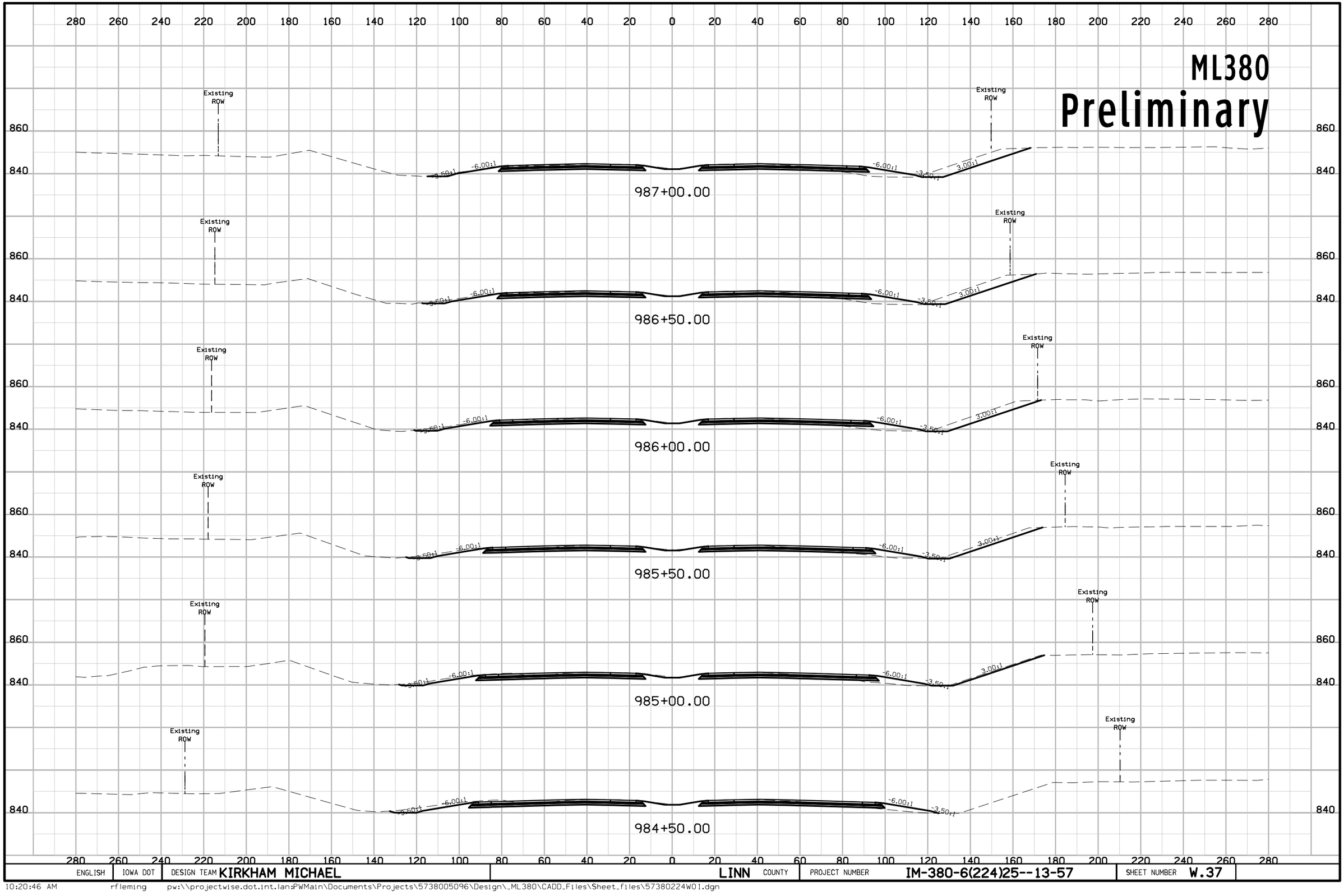


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.36

10:20:42 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

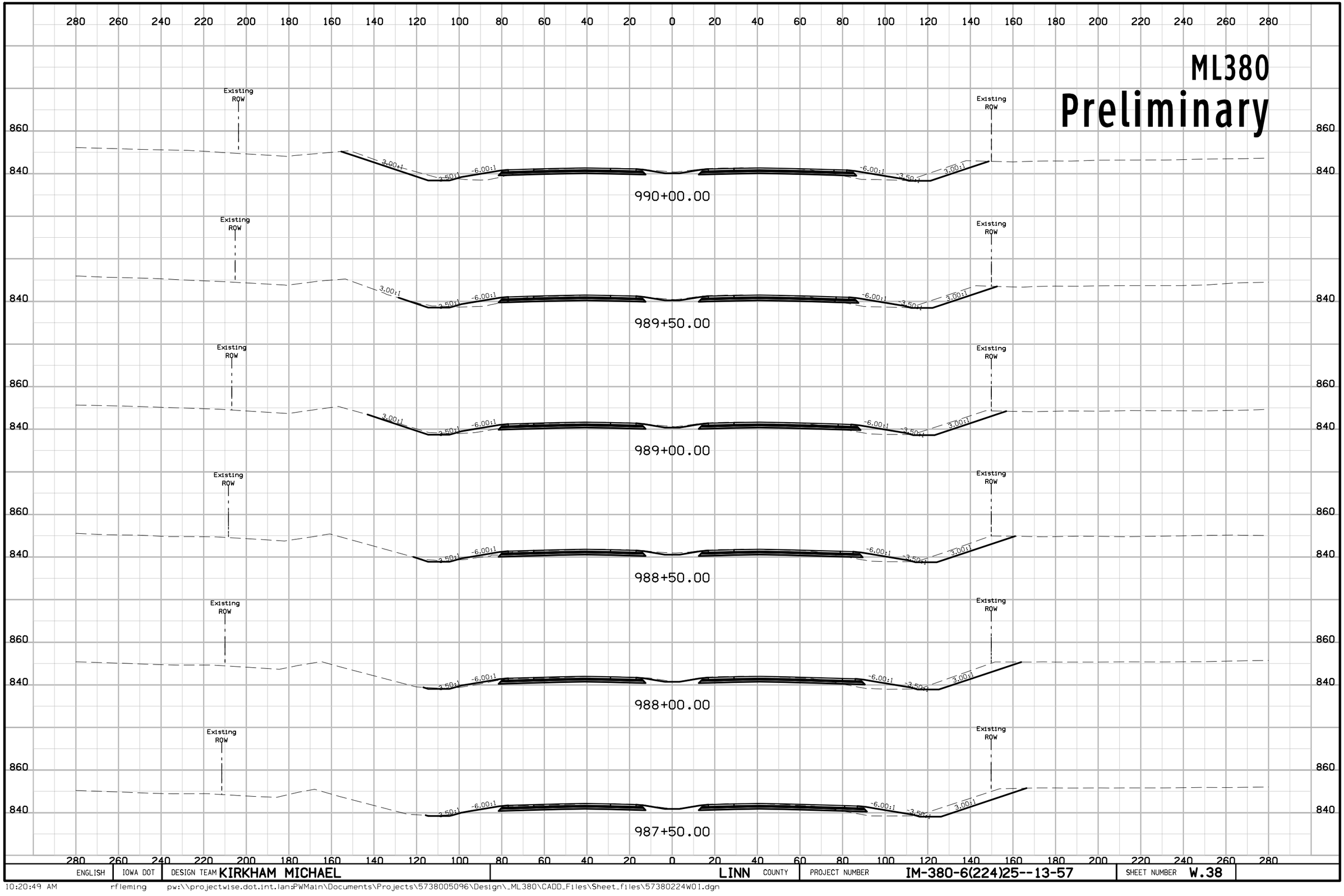


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.37	

10:20:46 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.38	

ML380
Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

860
840

Existing ROW

3.00:1 3.50:1 -6.00:1 -6.00:1 -3.50:1 3.00:1

993+00.00

992+50.00

992+00.00

991+50.00

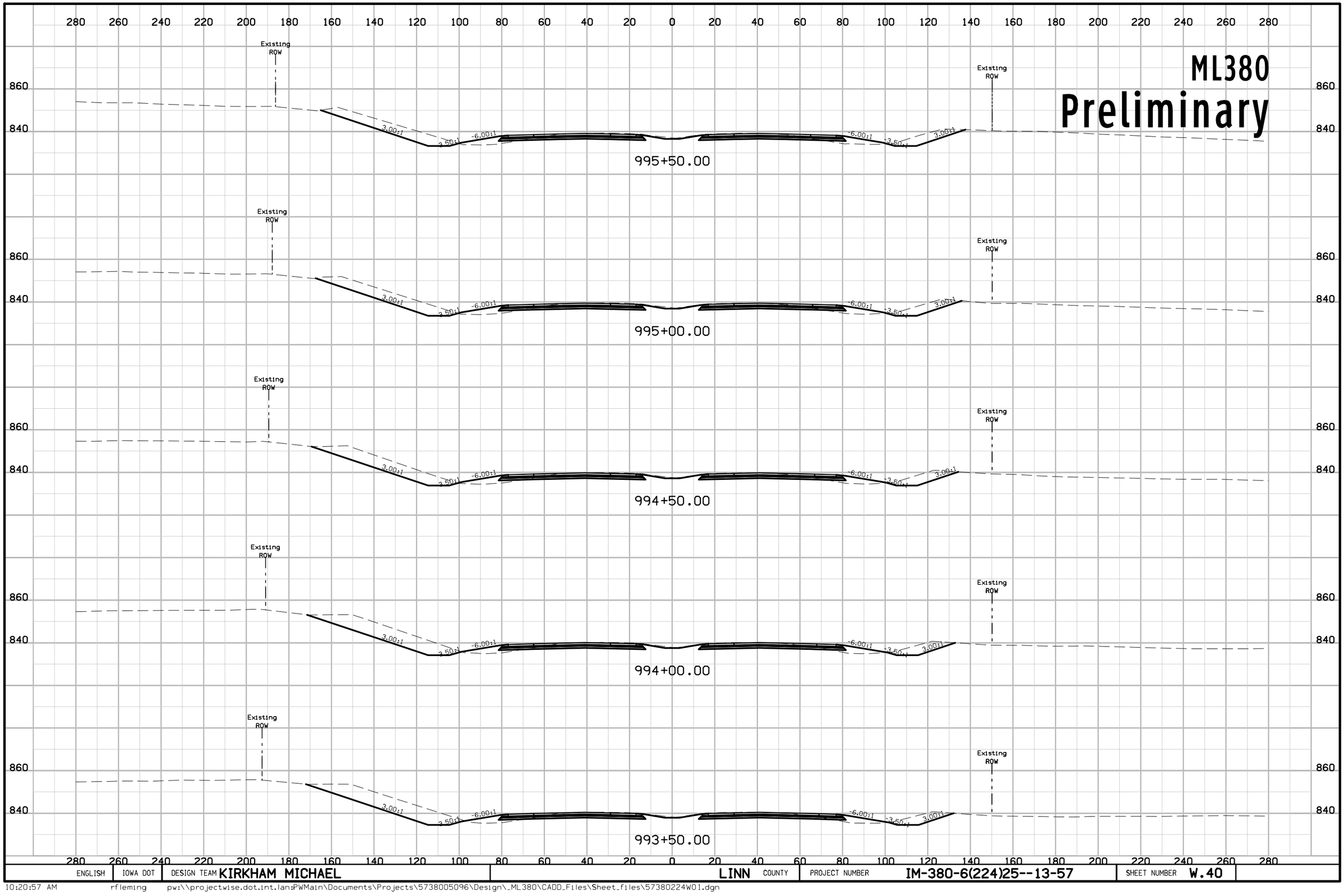
991+00.00

990+50.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.39

10:20:53 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

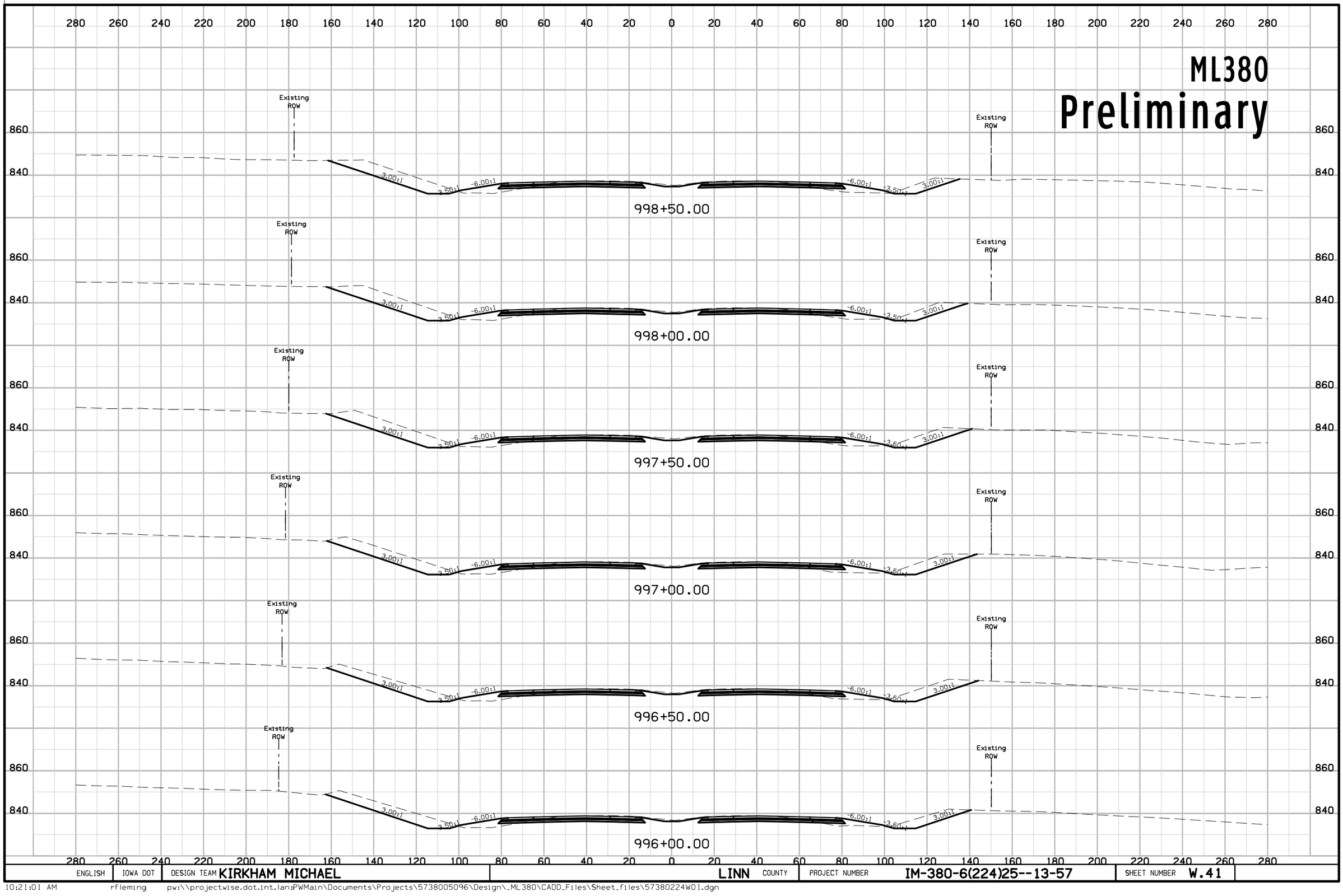
ML380
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.40

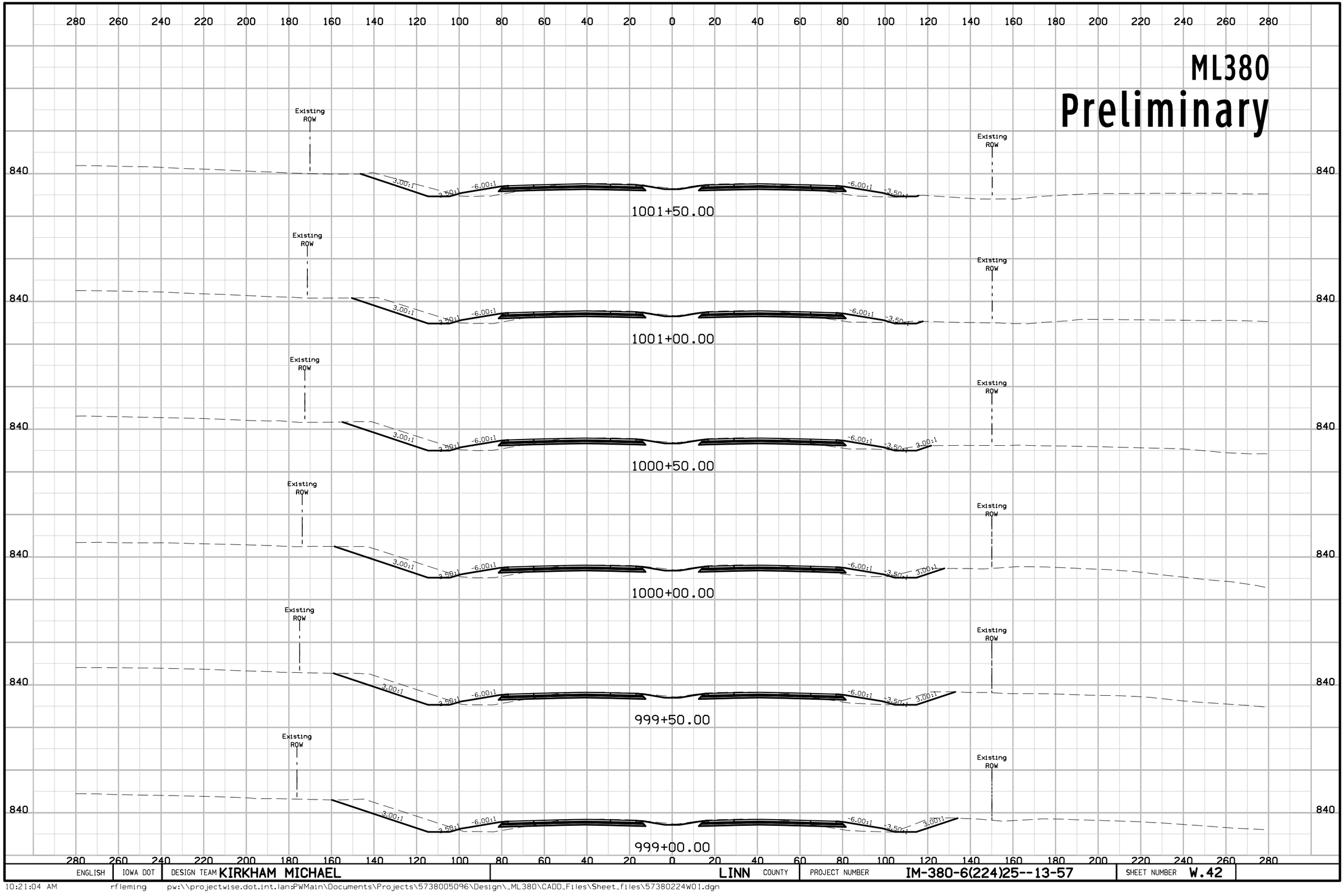
10:20:57 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER	IM-380-6(224)25--13-57	SHEET NUMBER	W.41

ML380
Preliminary

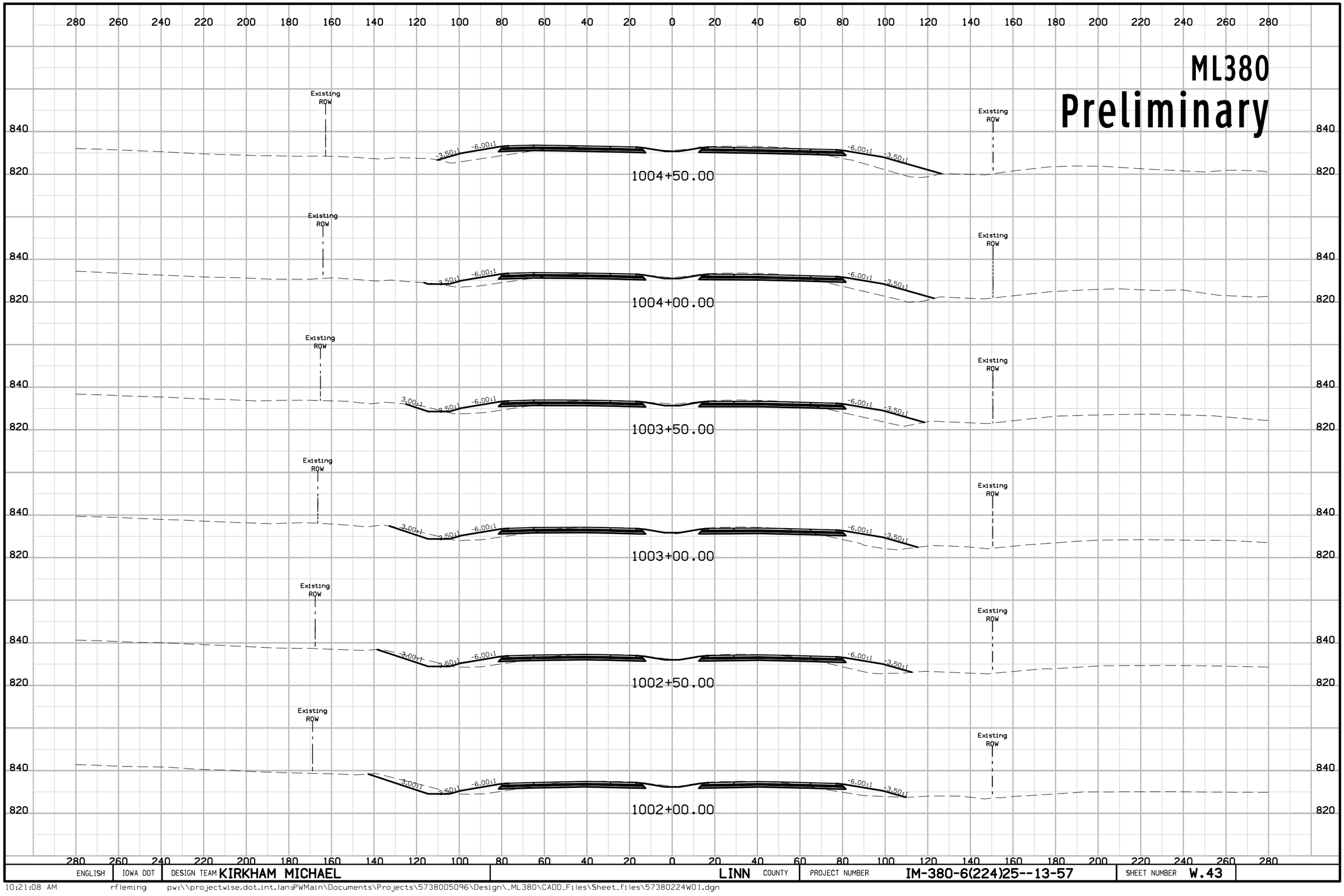


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.42

10:21:04 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

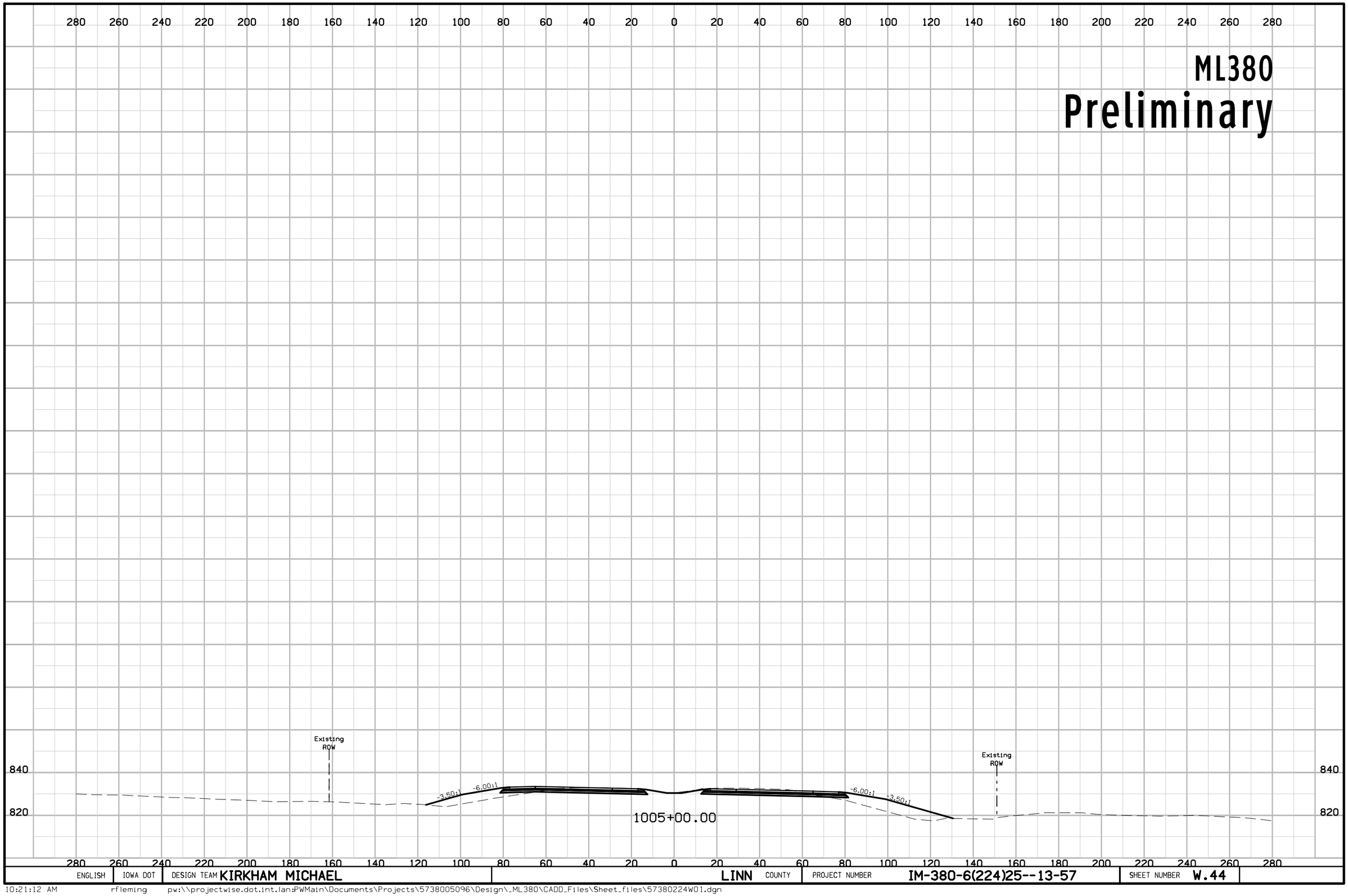


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN	COUNTY	PROJECT NUMBER	IM-380-6(224)25--13-57	SHEET NUMBER W.43

10:21:08 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

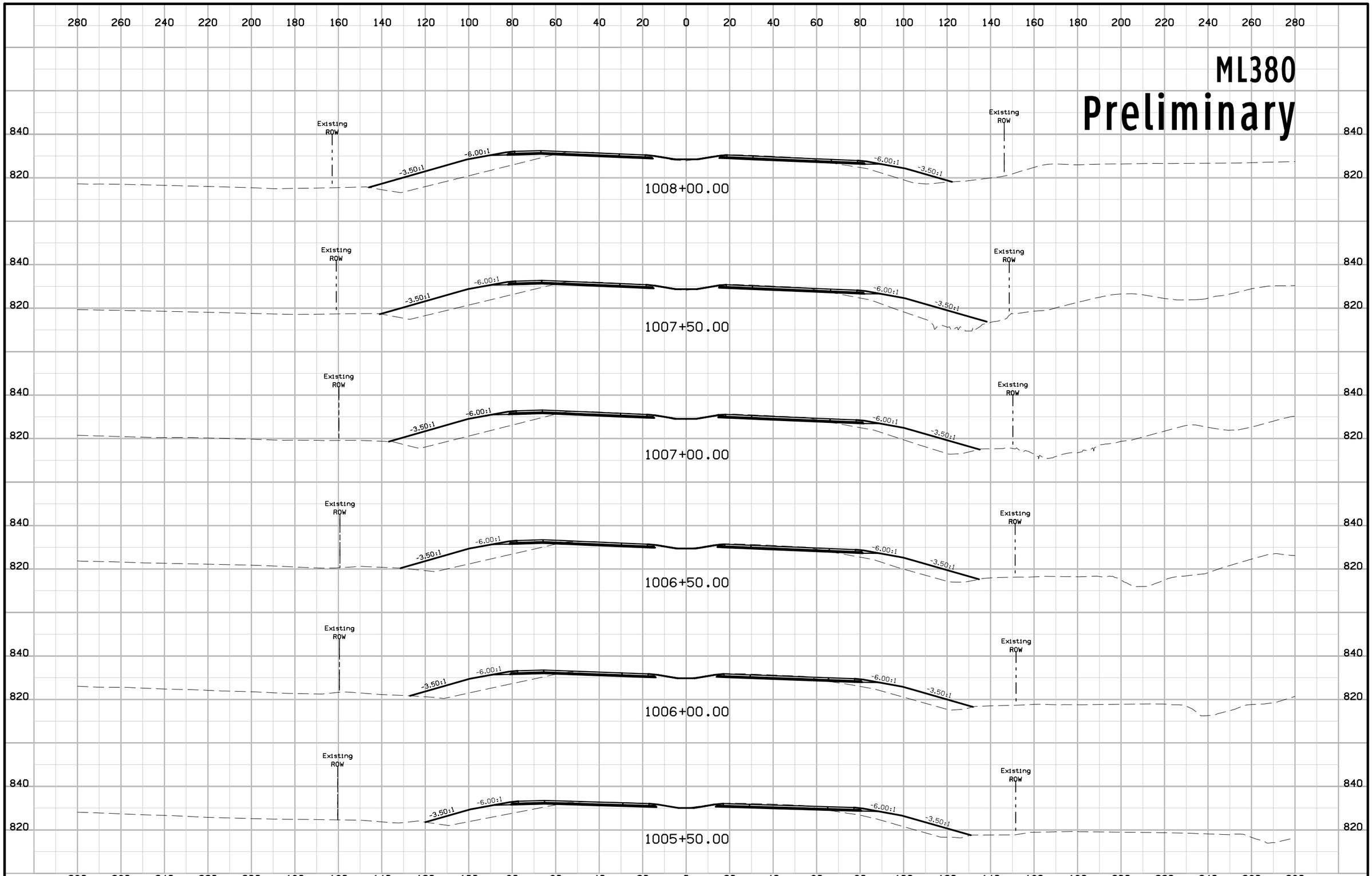
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.44

ML380

Preliminary

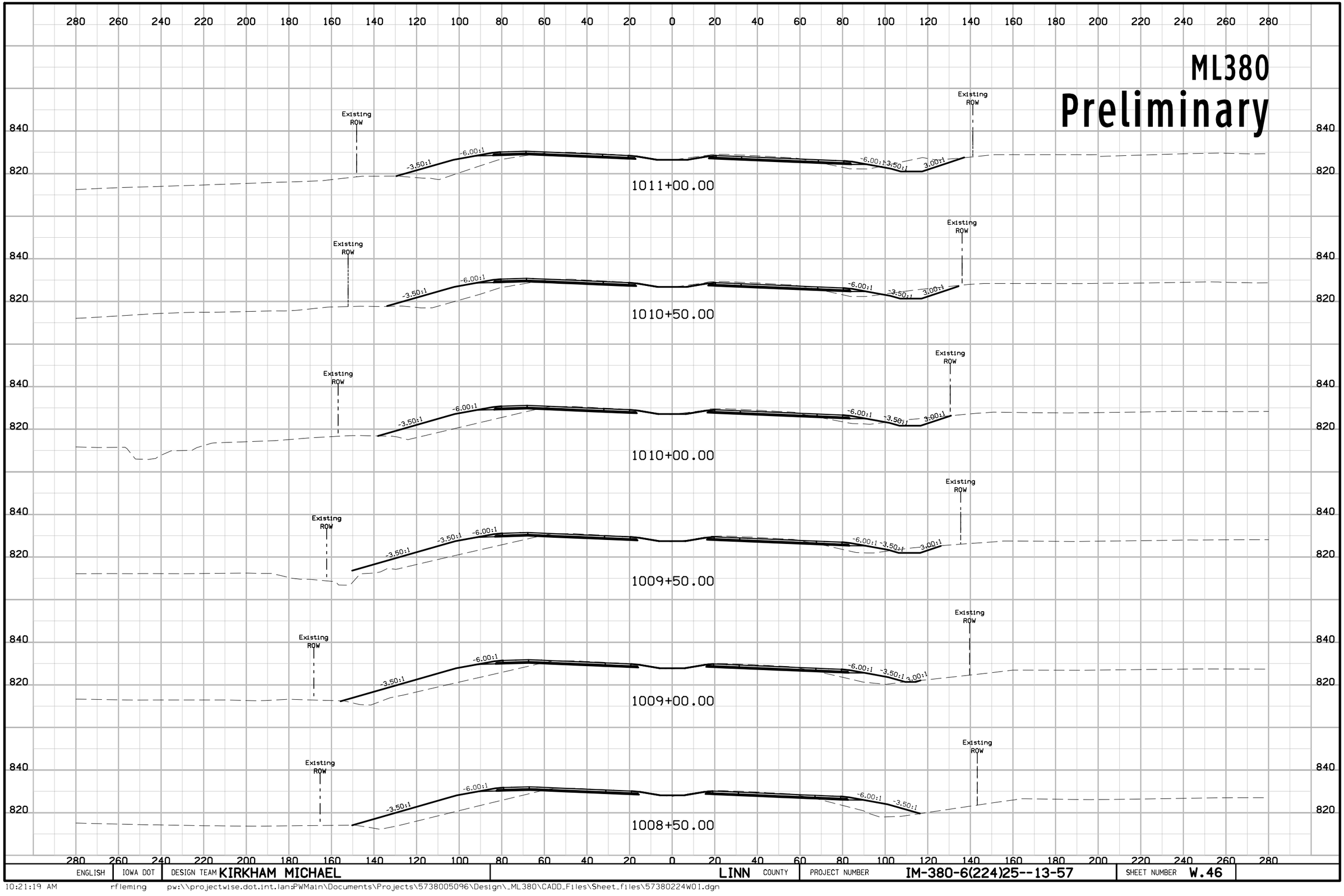


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN	COUNTY	PROJECT NUMBER	IM-380-6(224)25--13-57	SHEET NUMBER W.45

10:21:16 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

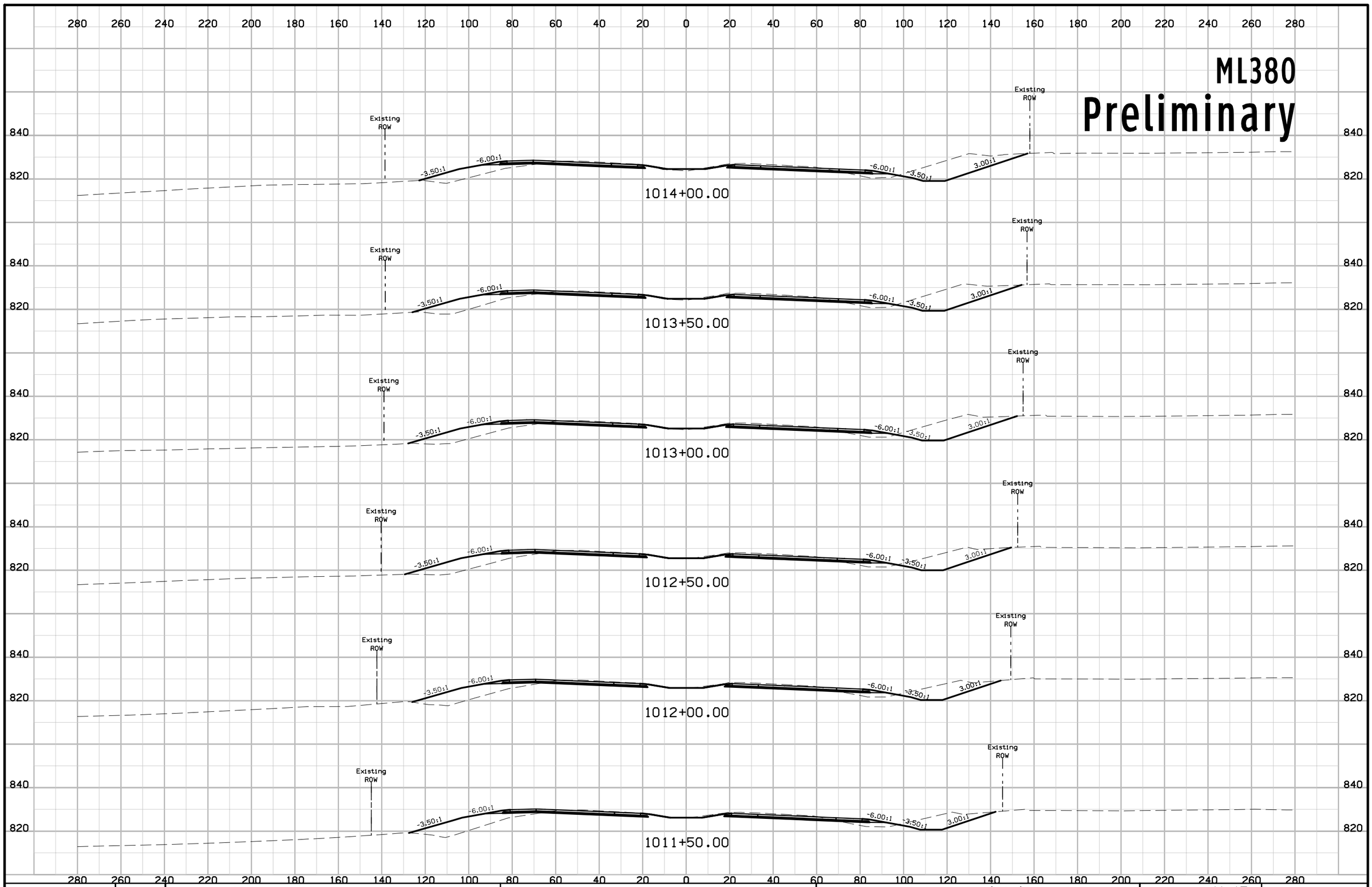
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.46

ML380

Preliminary

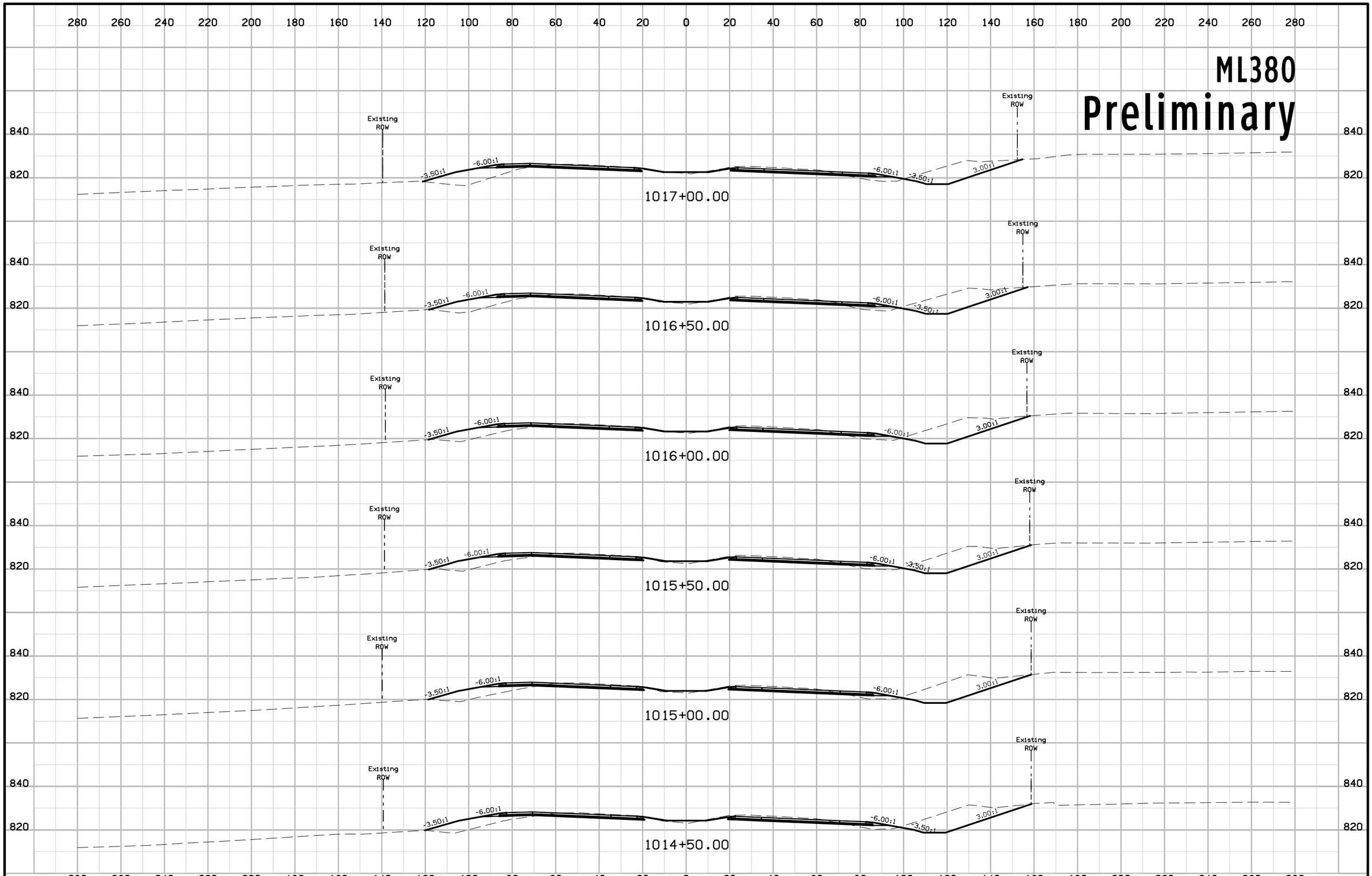


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL		LINN COUNTY	PROJECT NUMBER	IM-380-6(224)25--13-57	SHEET NUMBER W.47

10:21:23 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.48

10:21:27 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

820

Existing ROW

-3.50:1 -6.00:1 -6.00:1 -3.50:1 3.00:1

1020+00.00

1019+50.00

1019+00.00

1018+50.00

1018+00.00

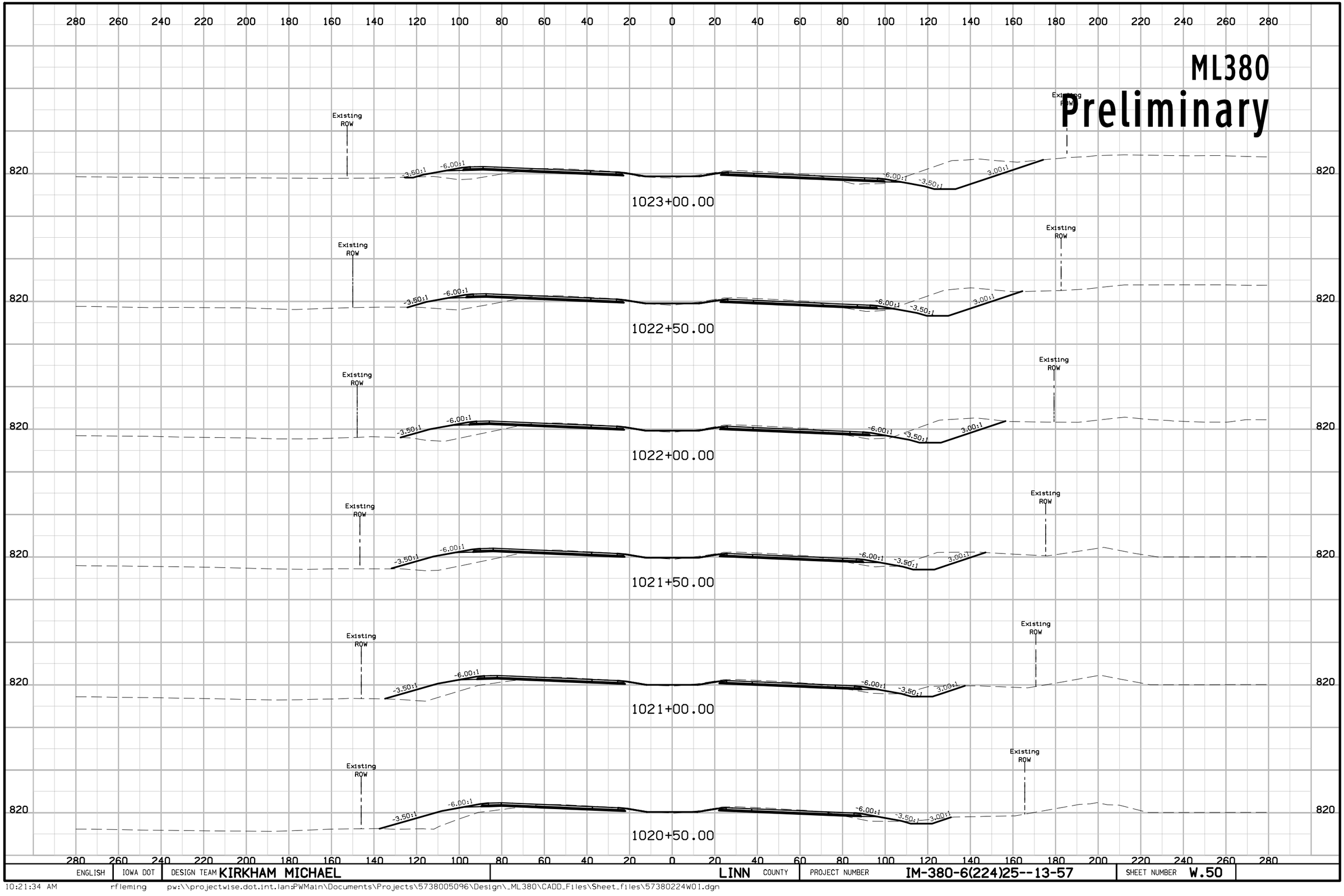
1017+50.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.49

10:21:31 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.50	

10:21:34 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

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820

Existing ROW

3.00:1 -3.50:1 -6.00:1

-6.00:1 -3.50:1 3.01:1

1026+00.00

1025+50.00

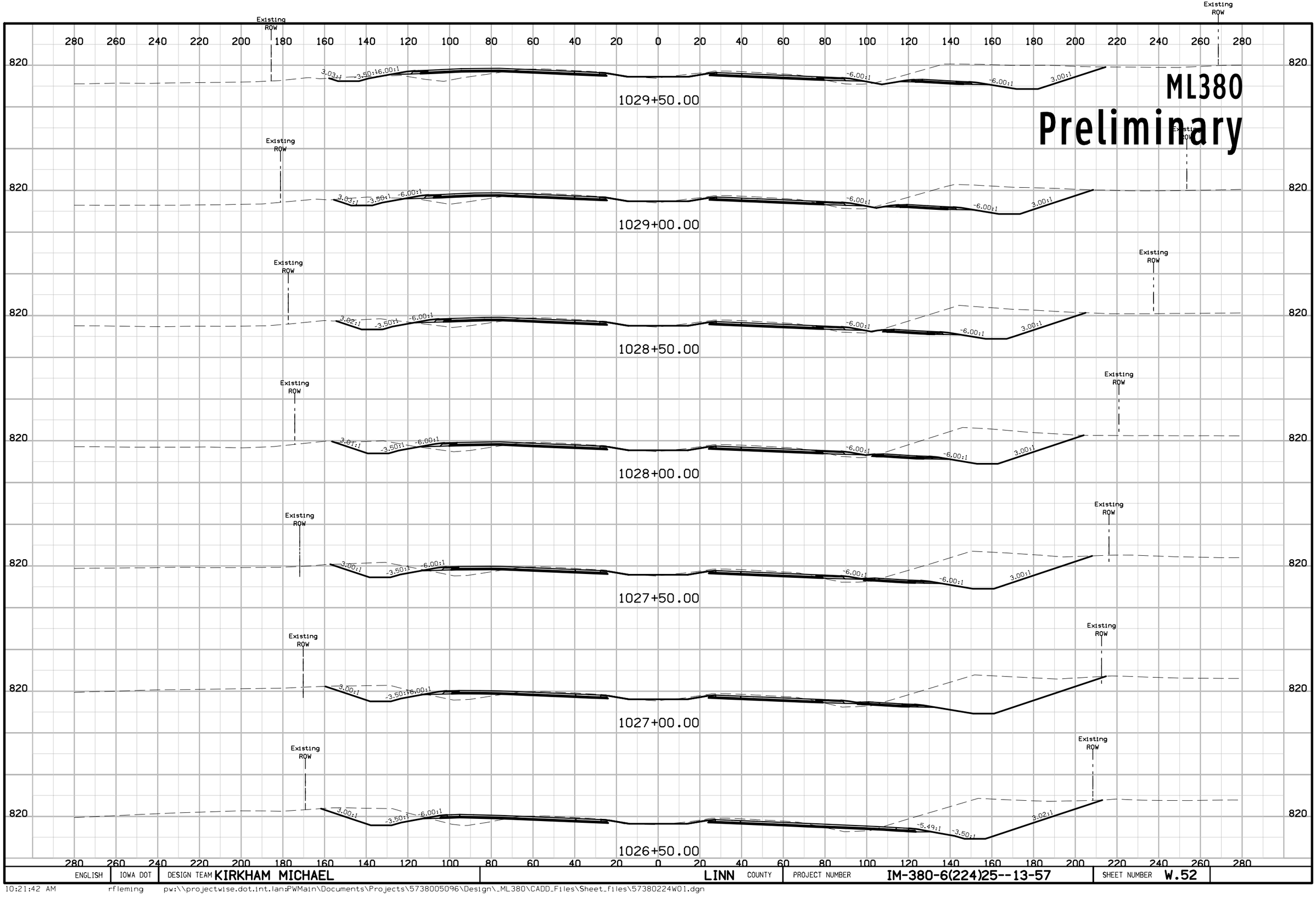
1025+00.00

1024+50.00

1024+00.00

1023+50.00

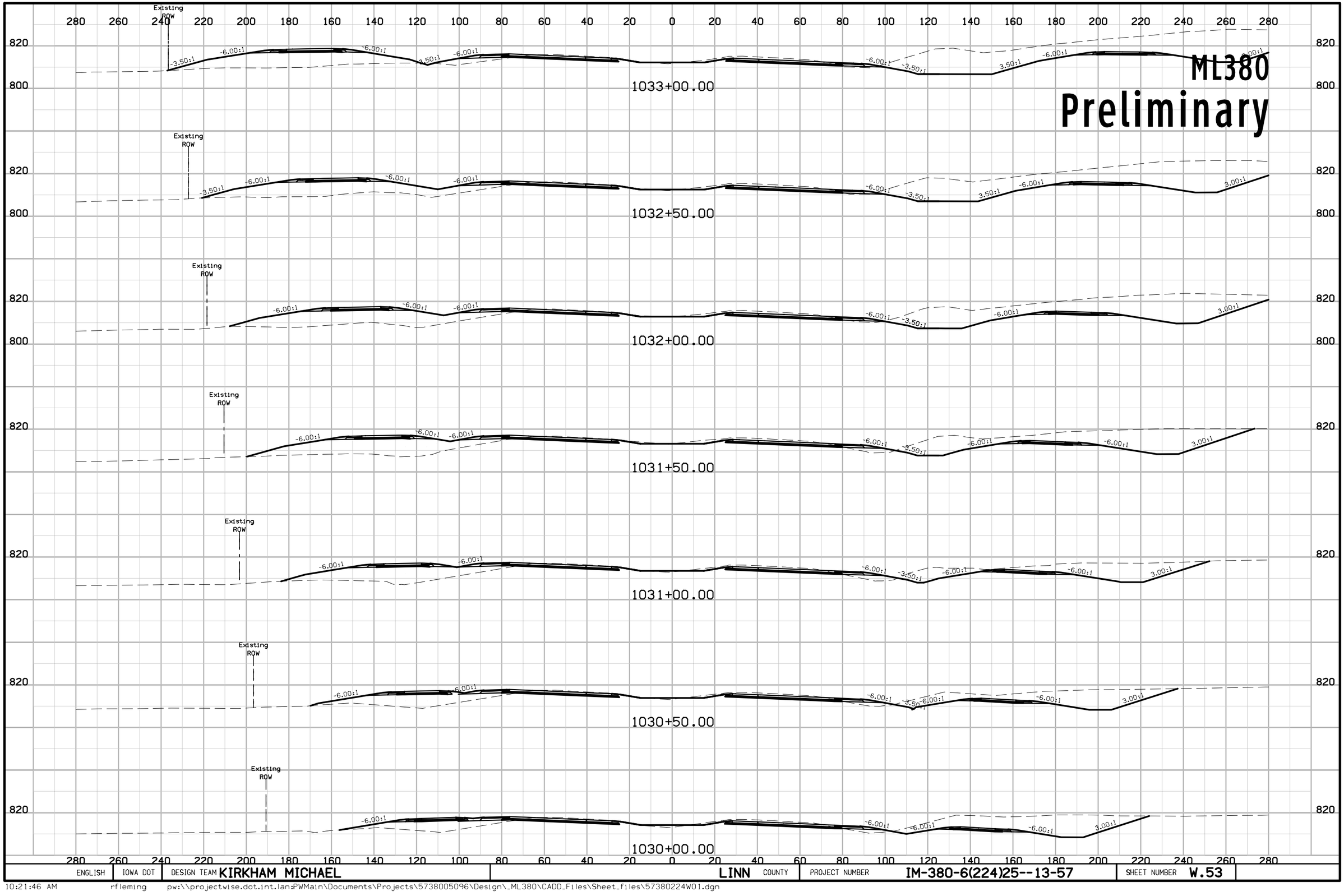
ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.51



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.52

10:21:42 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary

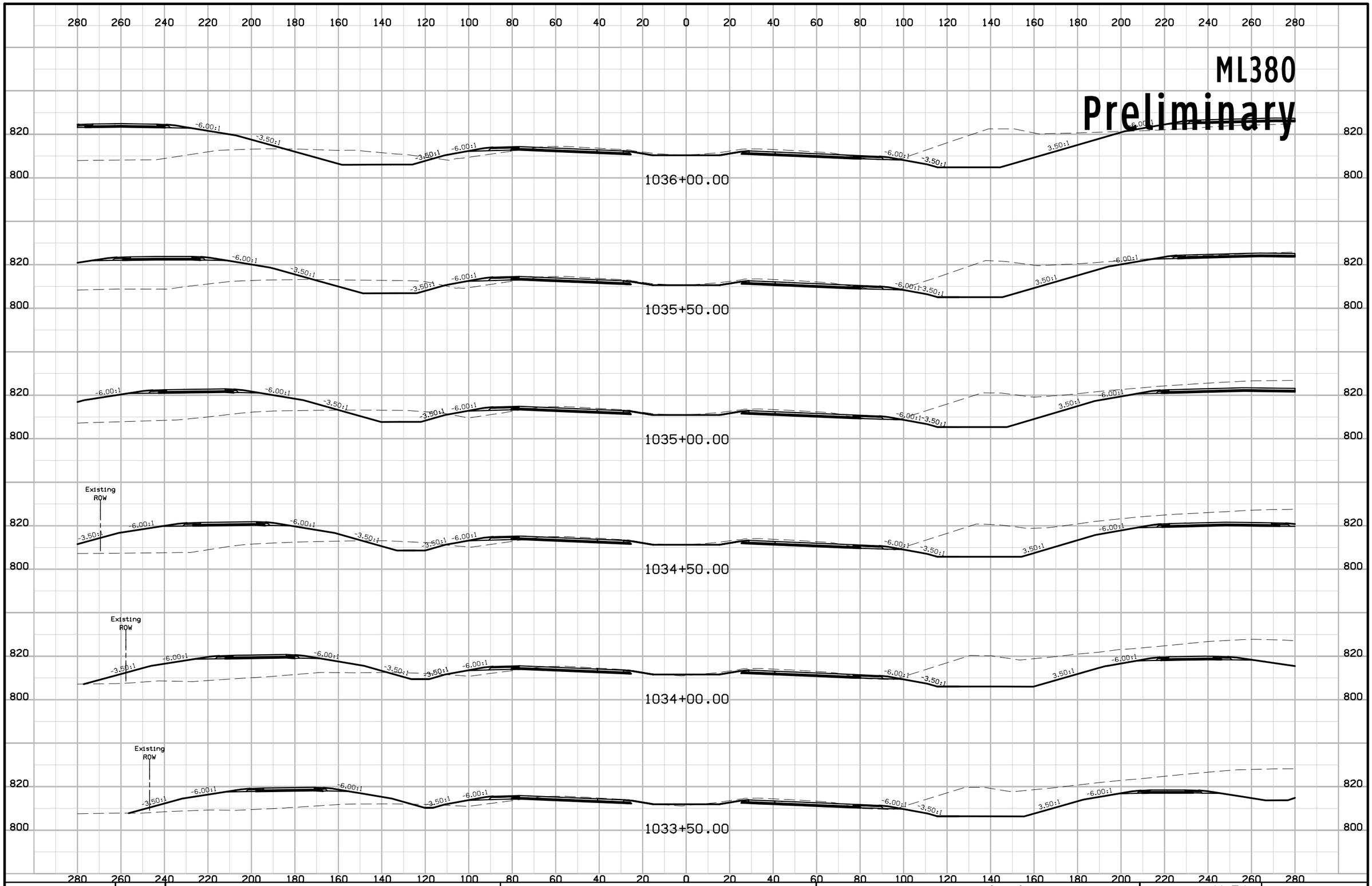


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.53

10:21:46 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.54

10:21:49 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

820
800

1038+50.00

-3.08:1

1038+00.00

-3.50:1 -6.00:1 -6.00:1 -3.50:1

1037+50.00

-6.00:1 -3.50:1 -3.50:1 -6.00:1 -6.00:1 -3.50:1

1037+00.00

-6.00:1 -3.50:1 -3.50:1 -6.00:1 -6.00:1 3.50:1 3.50:1 -6.00:1

1036+50.00

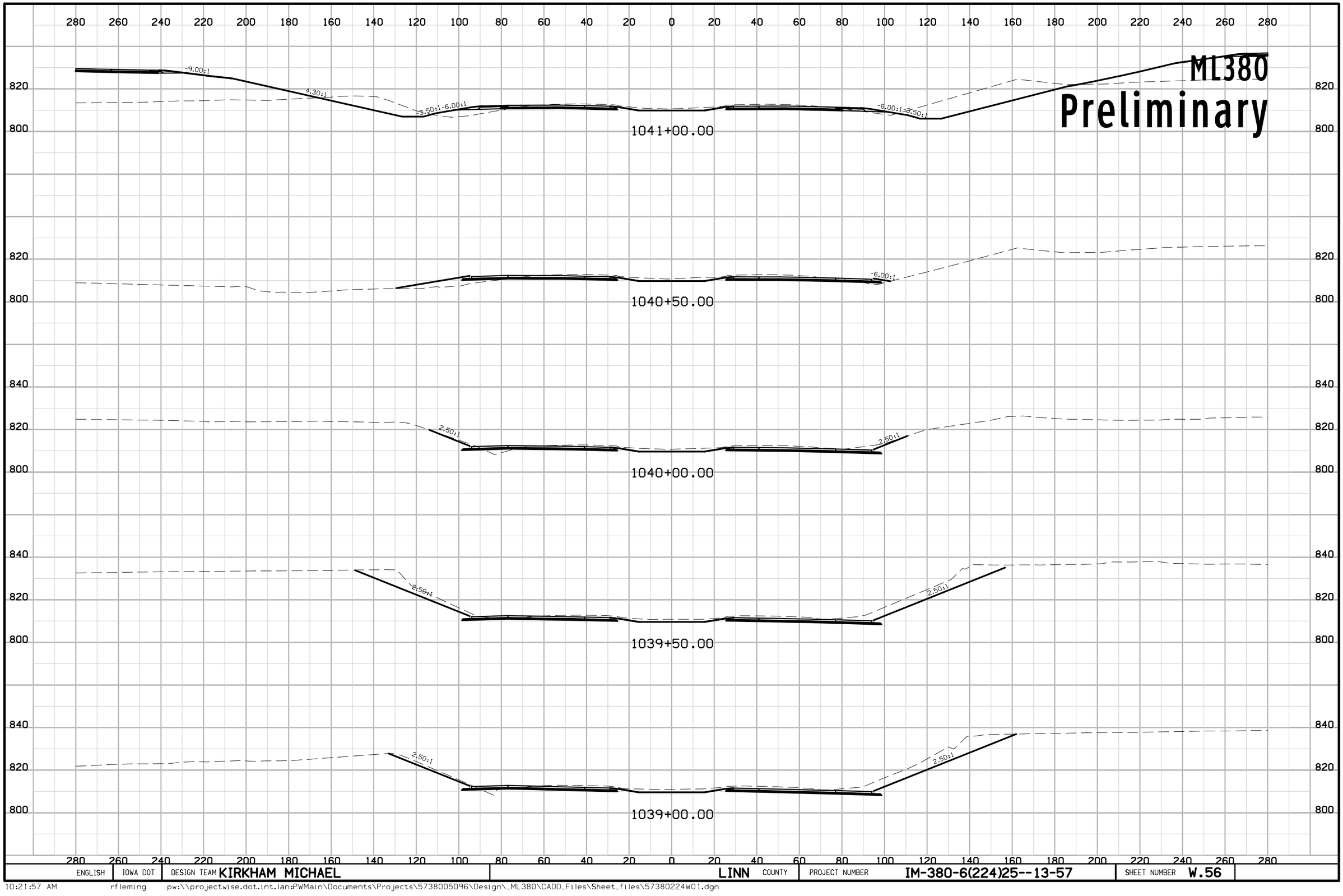
-6.00:1 -3.50:1 -3.50:1 -6.00:1 -6.00:1 3.50:1 3.50:1 -6.00:1

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.55

10:21:53 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

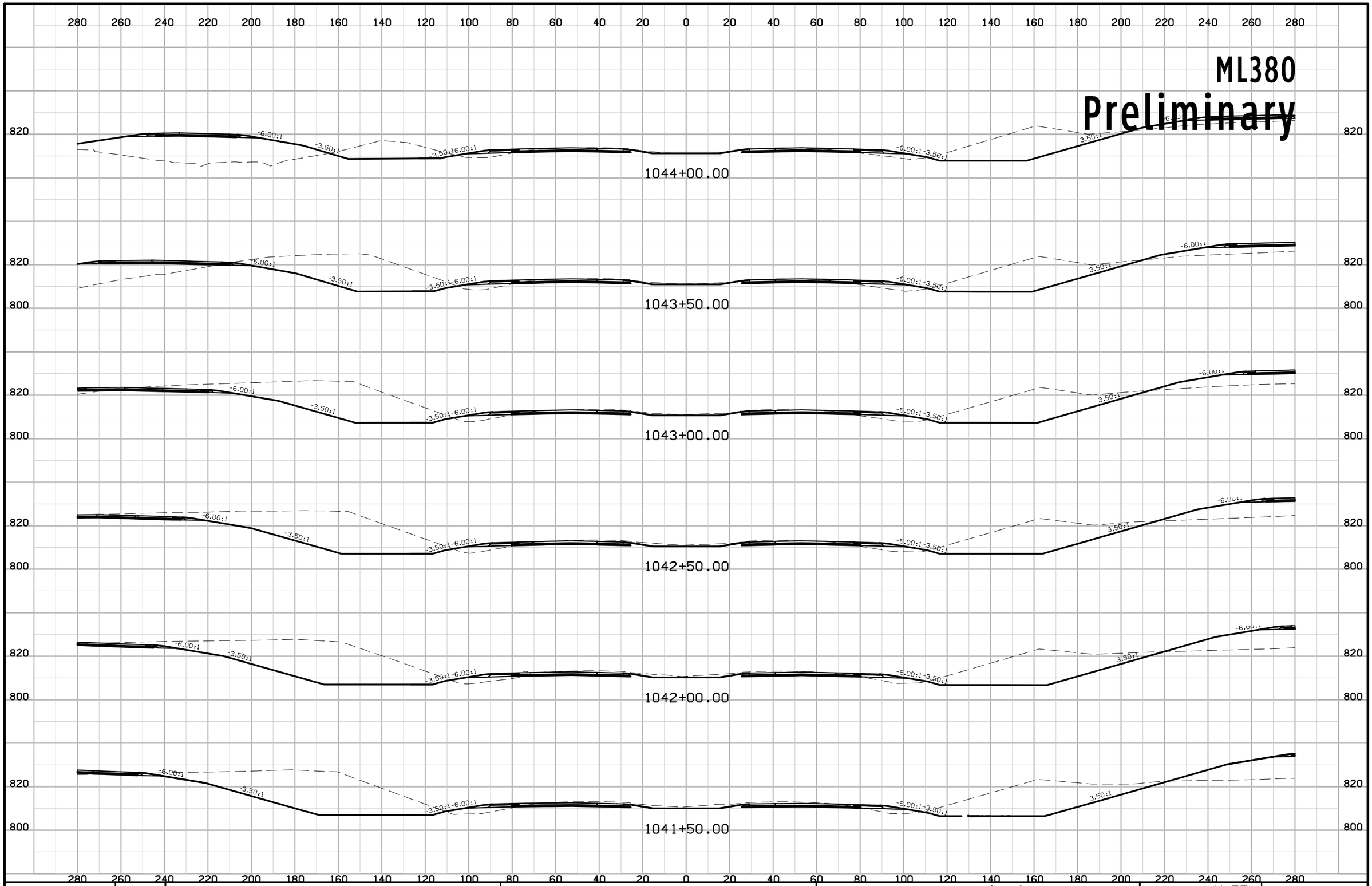
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.56

ML380

Preliminary

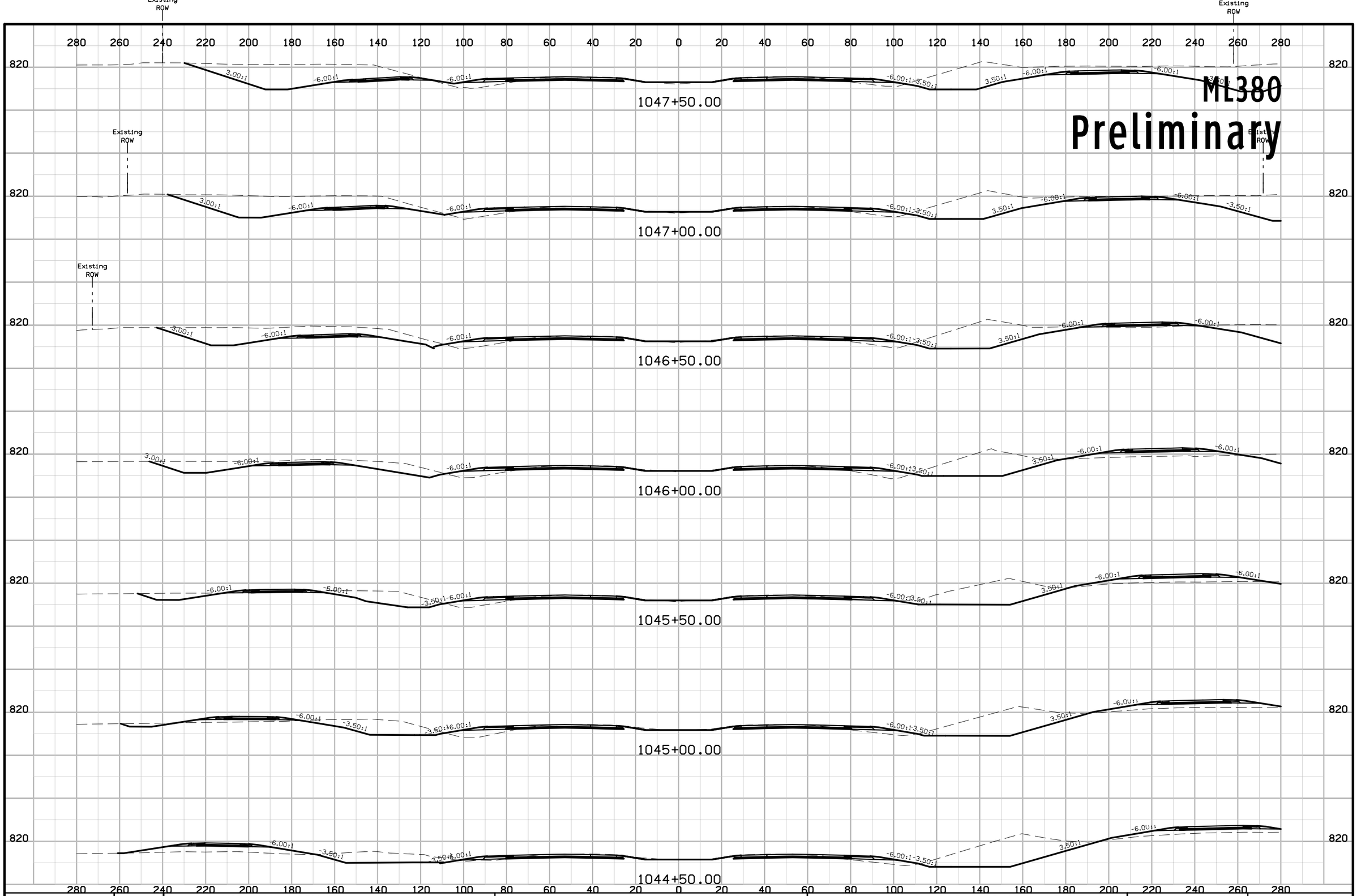


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.57

10:22:01 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

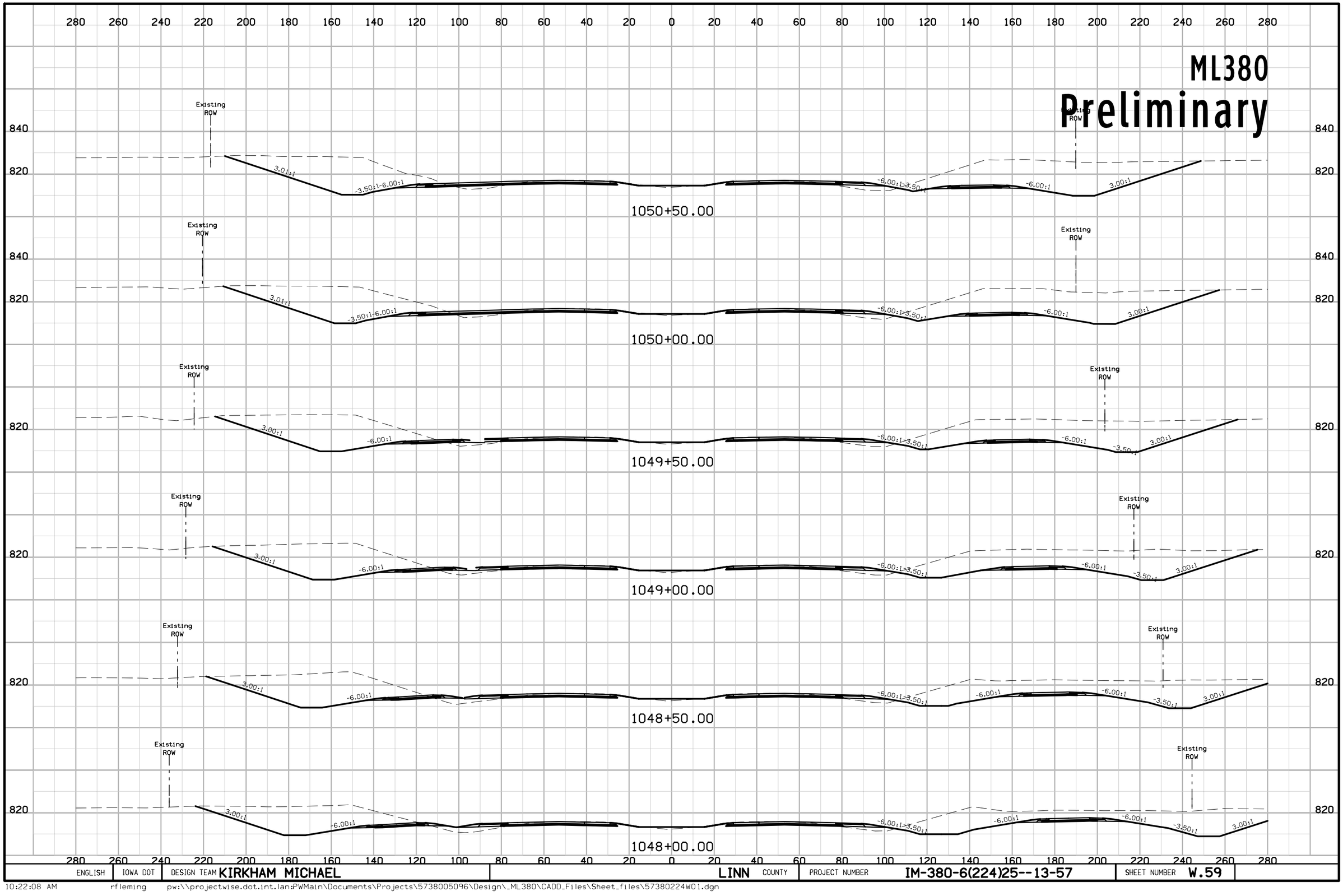


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.58

10:22:04 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

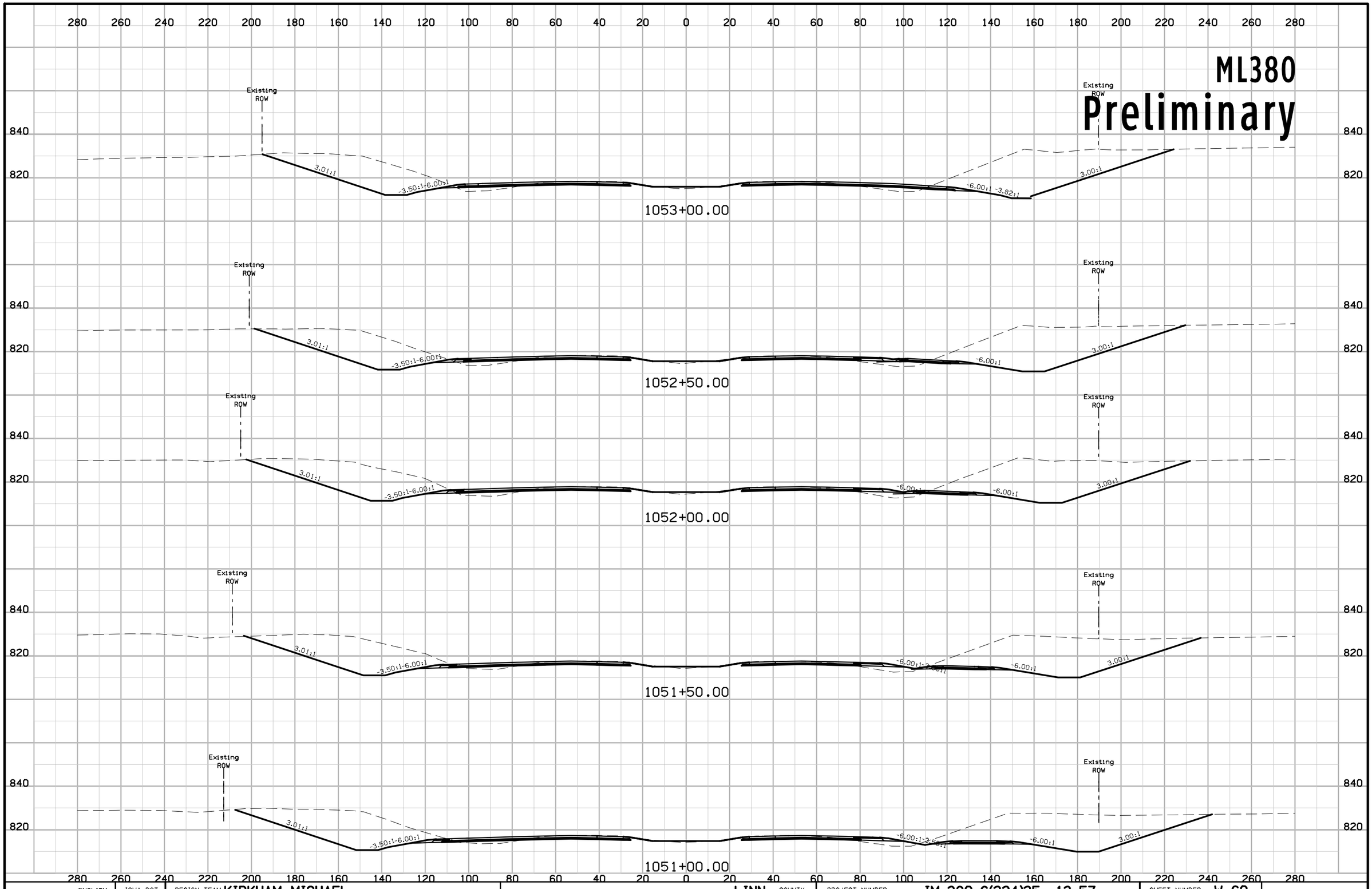


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.59

10:22:08 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

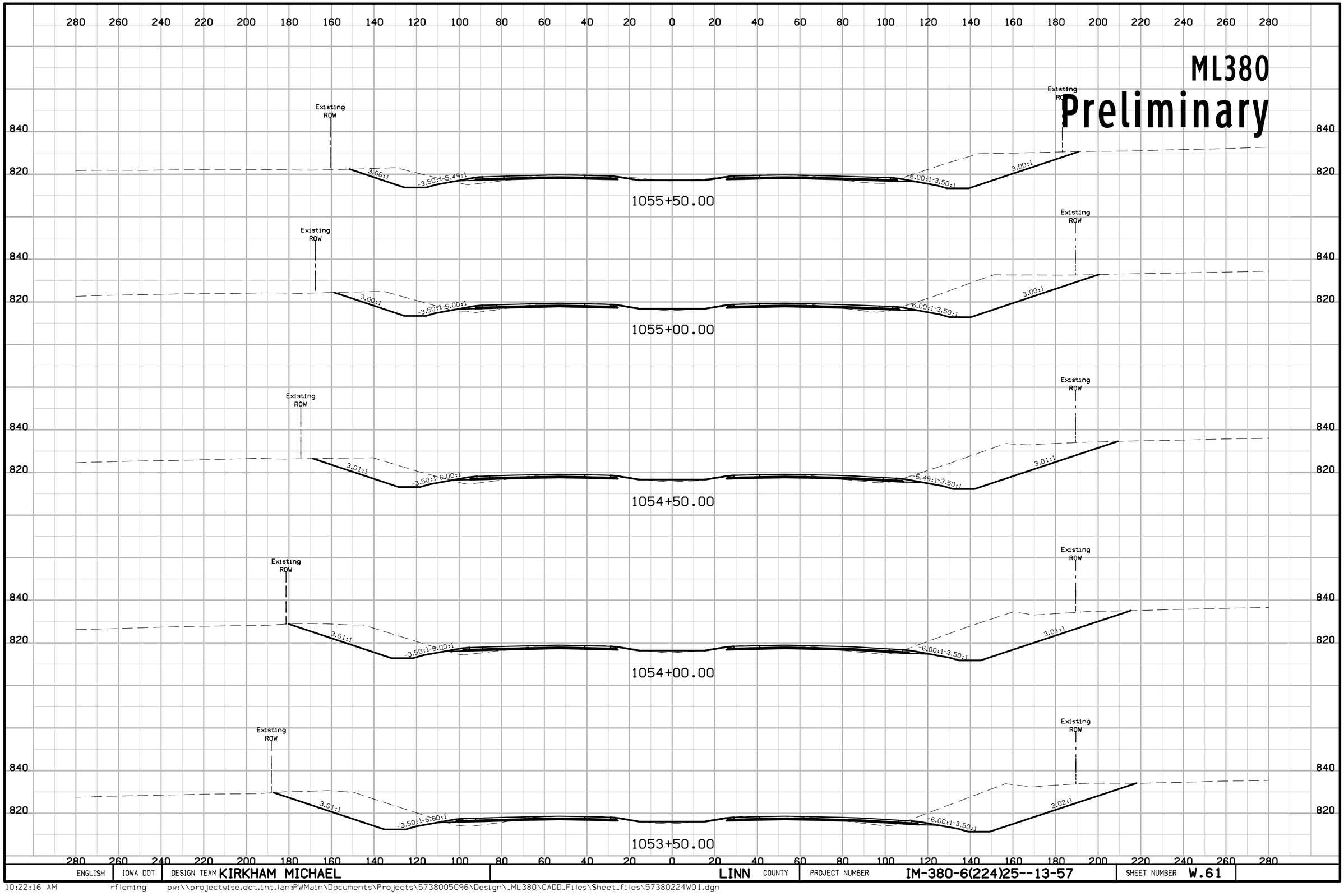


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.60

10:22:12 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

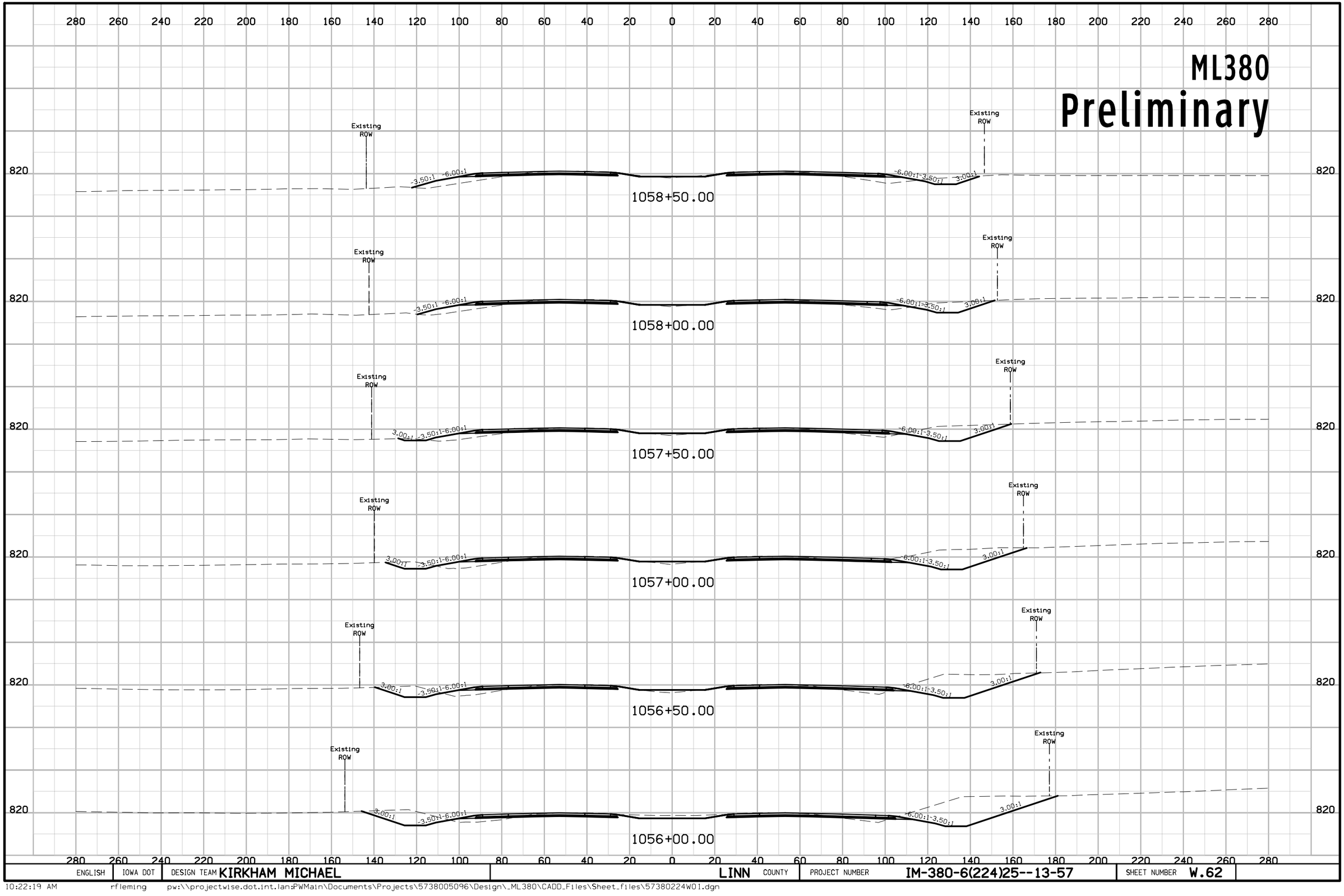


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.61

10:22:16 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

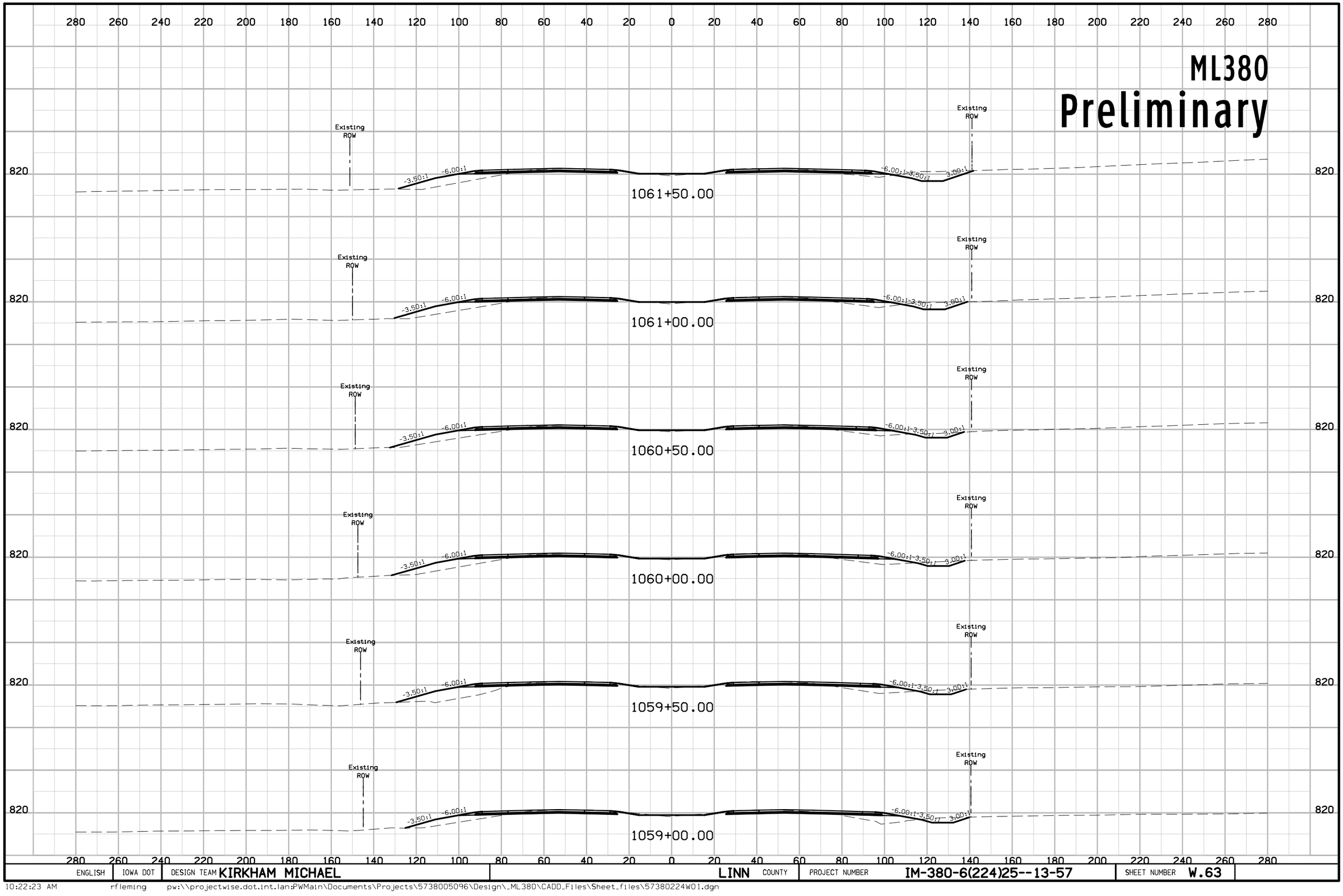


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.62

10:22:19 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

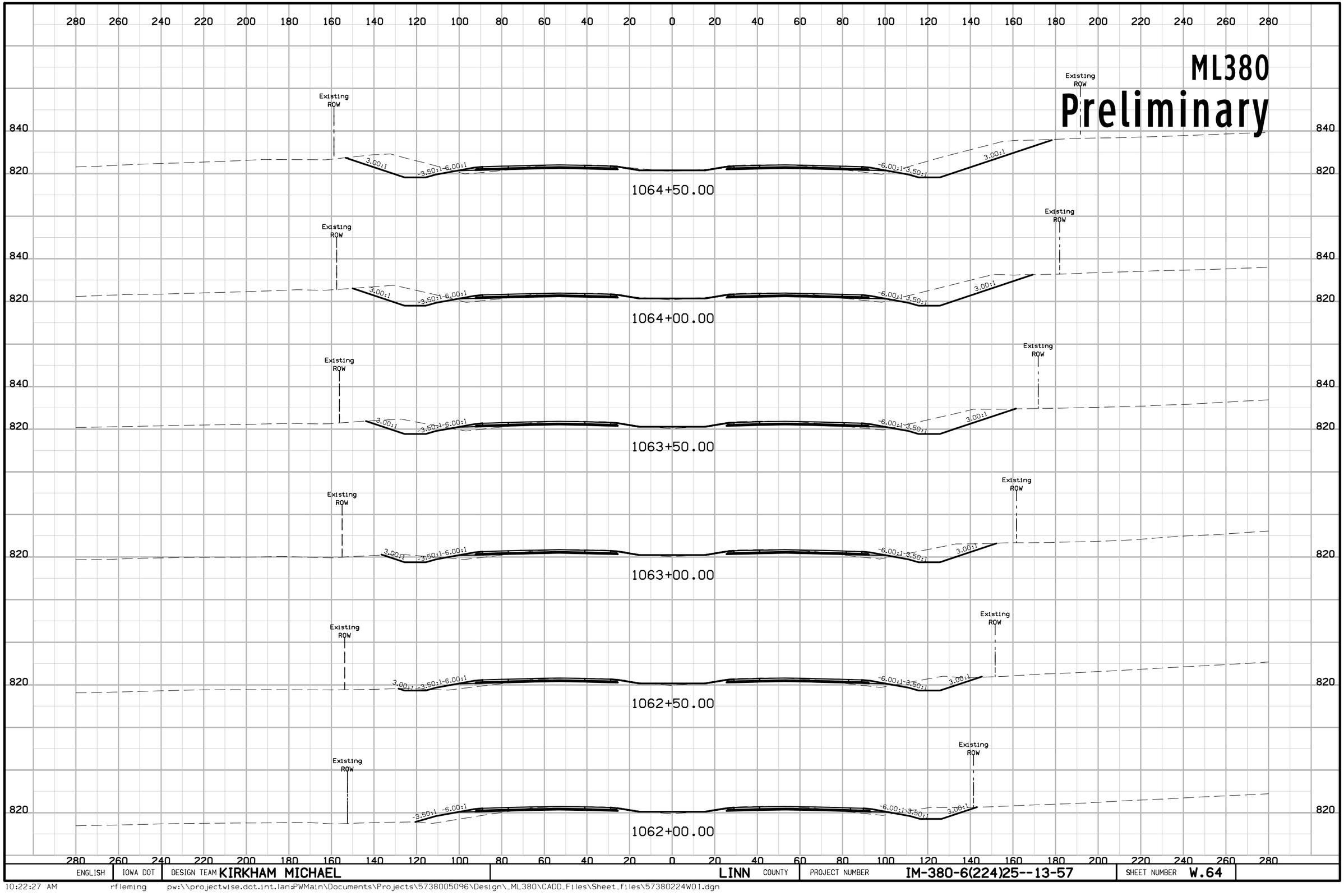


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.63

10:22:23 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

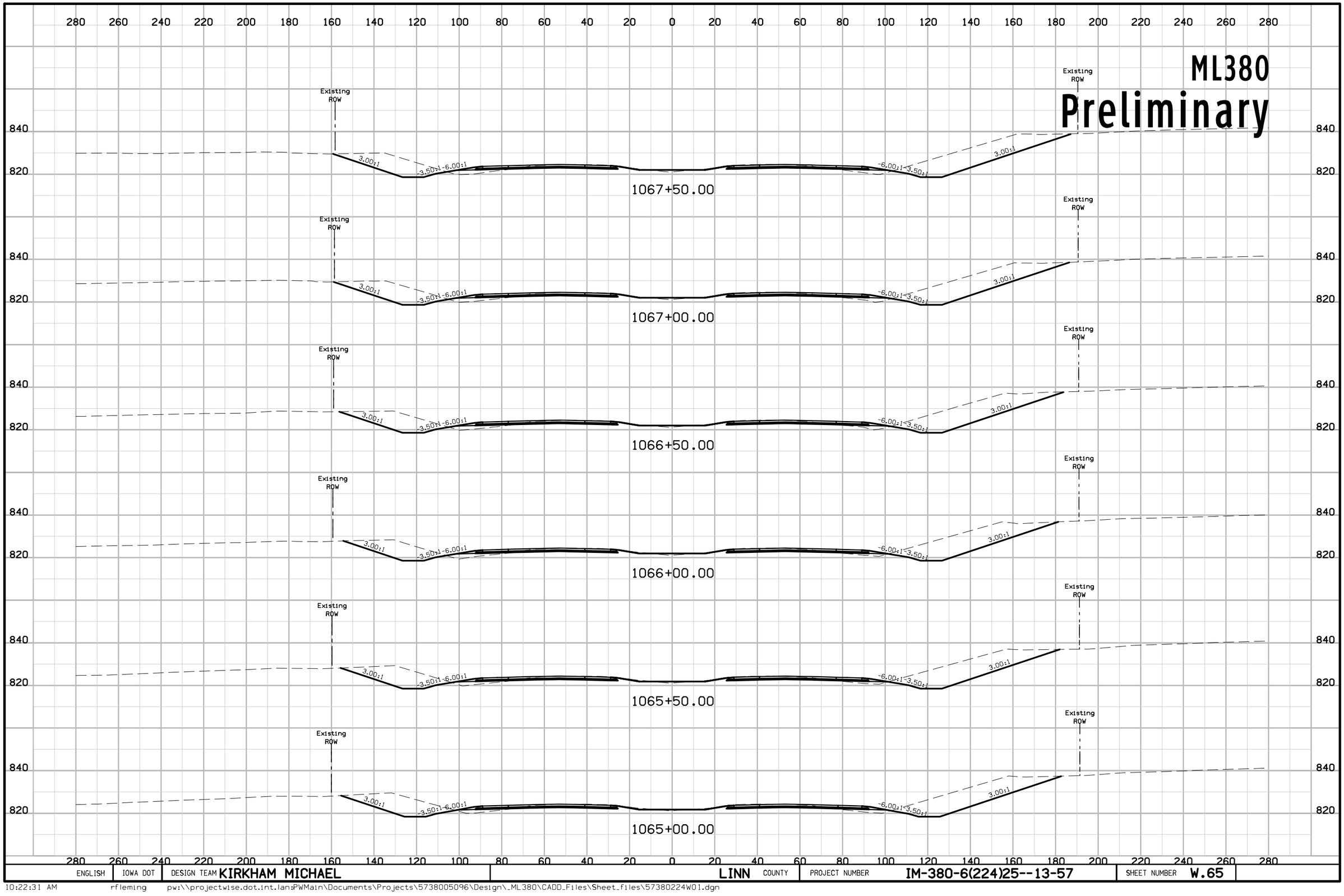


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.64

10:22:27 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

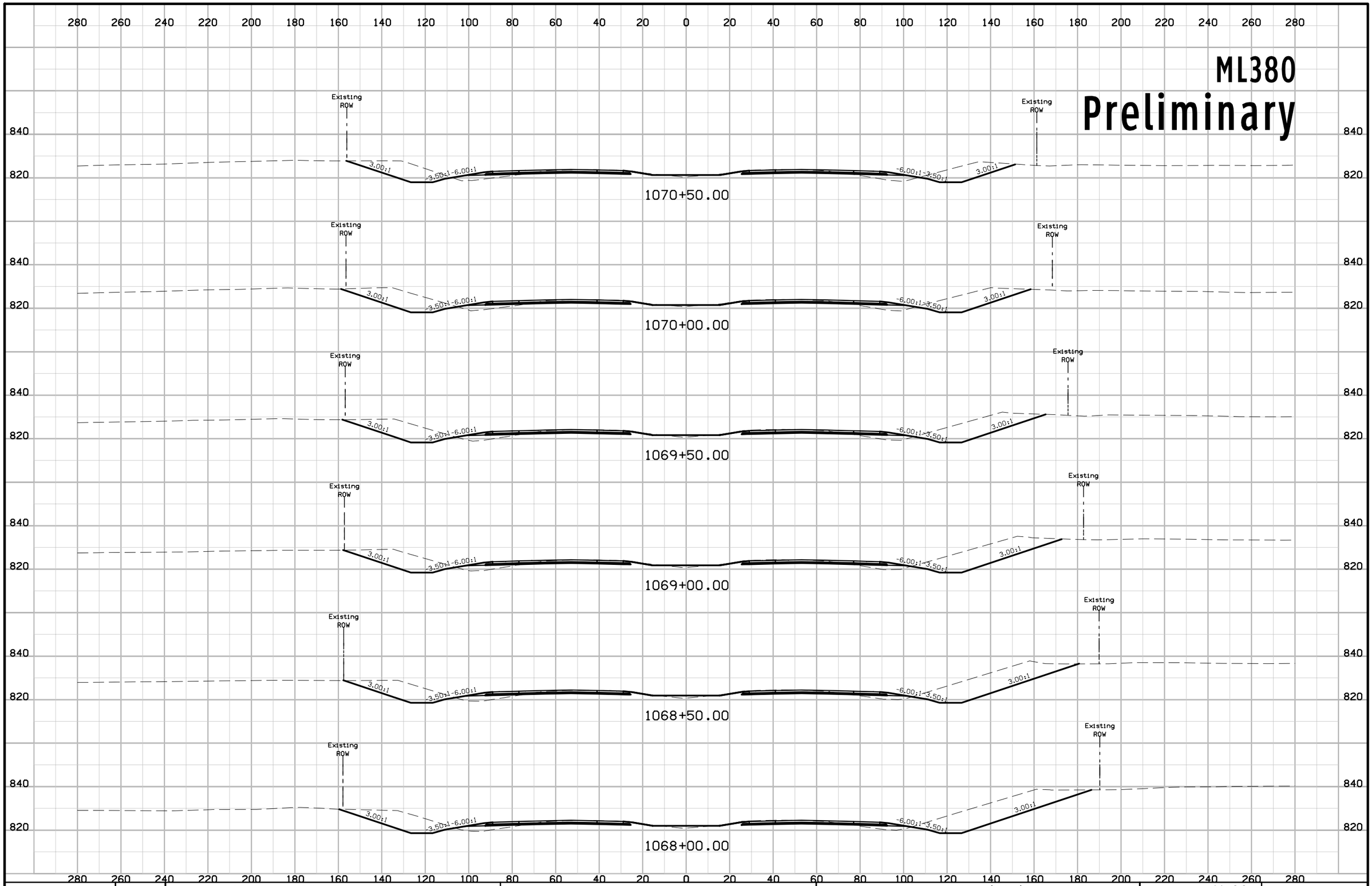


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.65

10:22:31 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

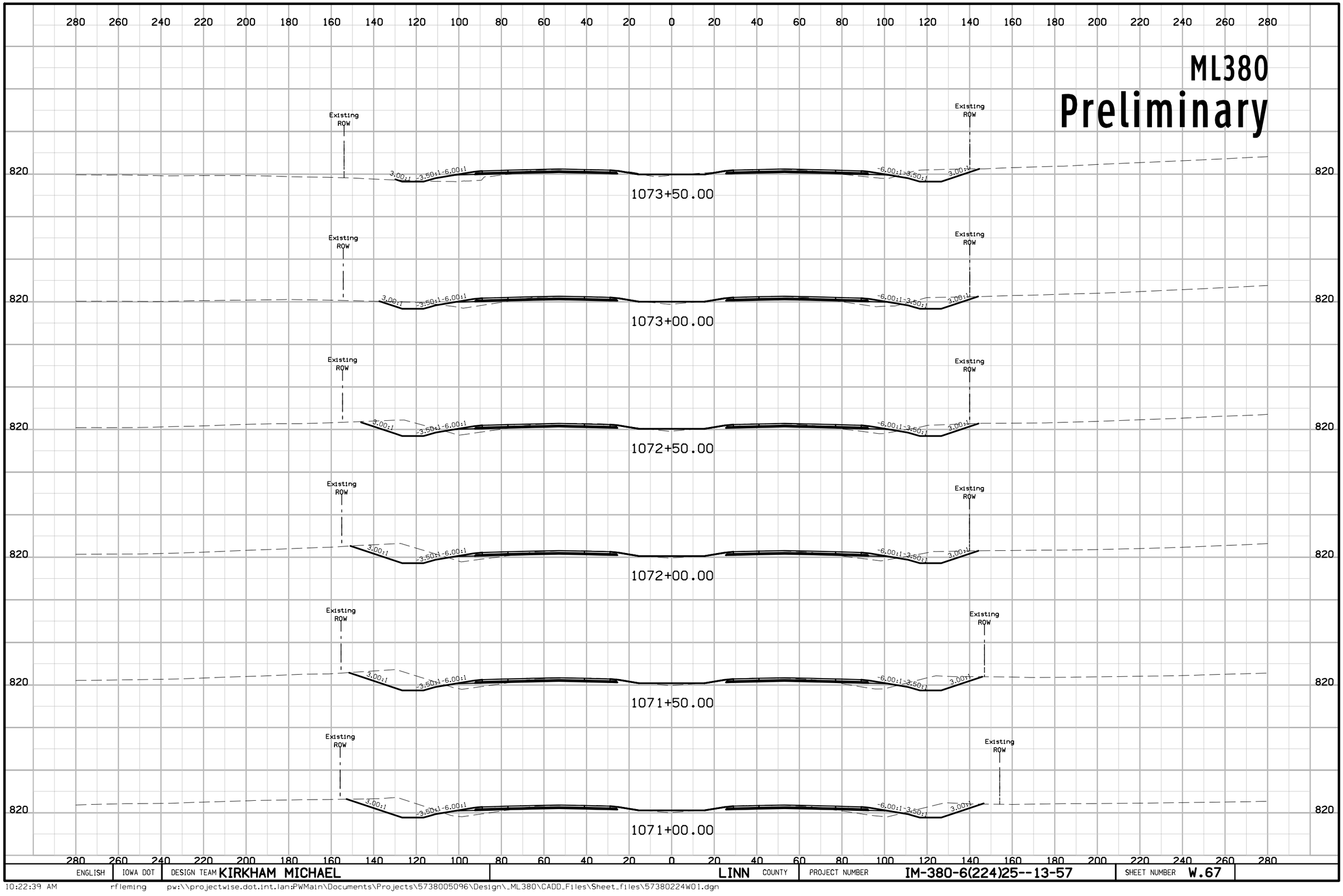


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.66

10:22:35 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

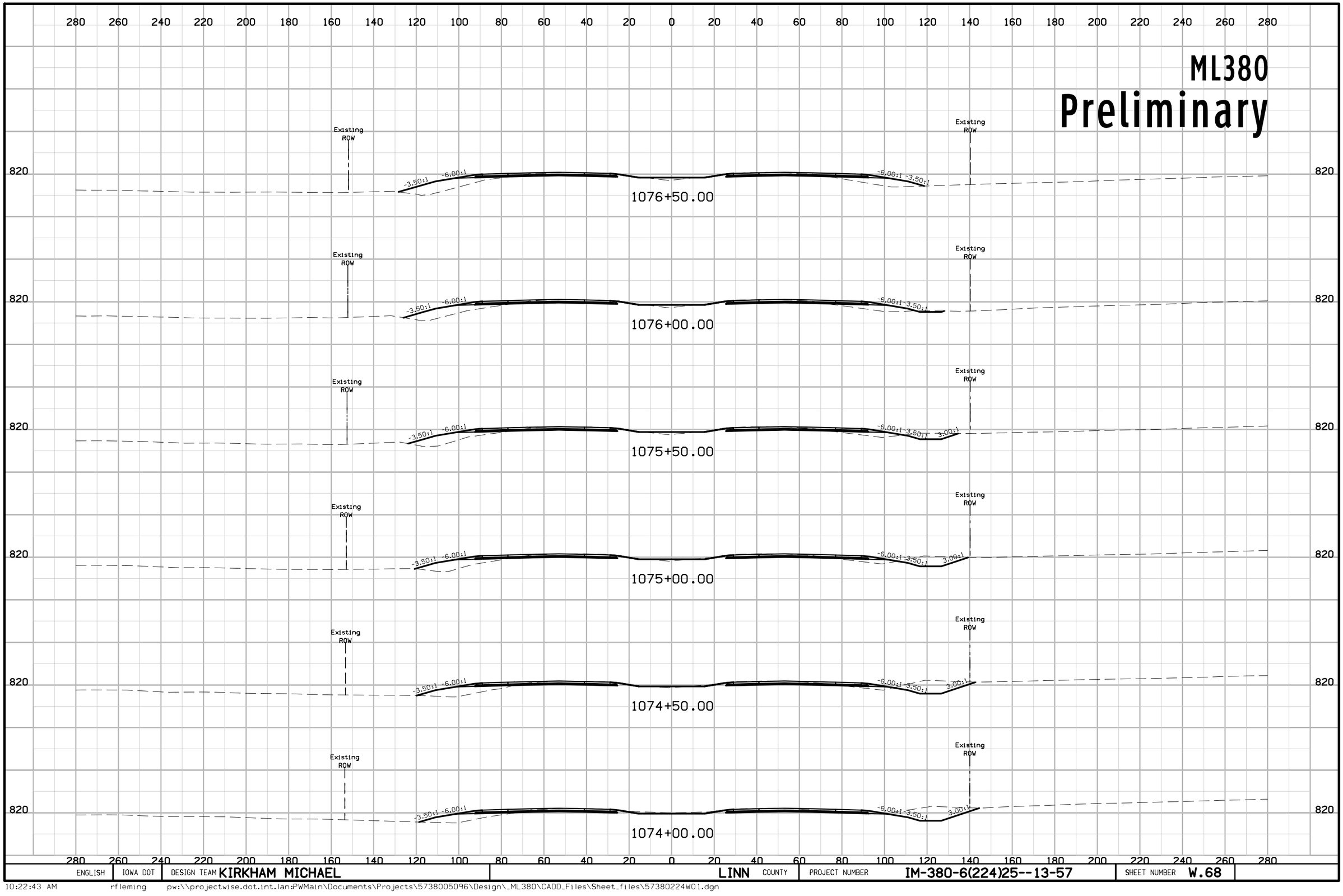


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.67

10:22:39 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

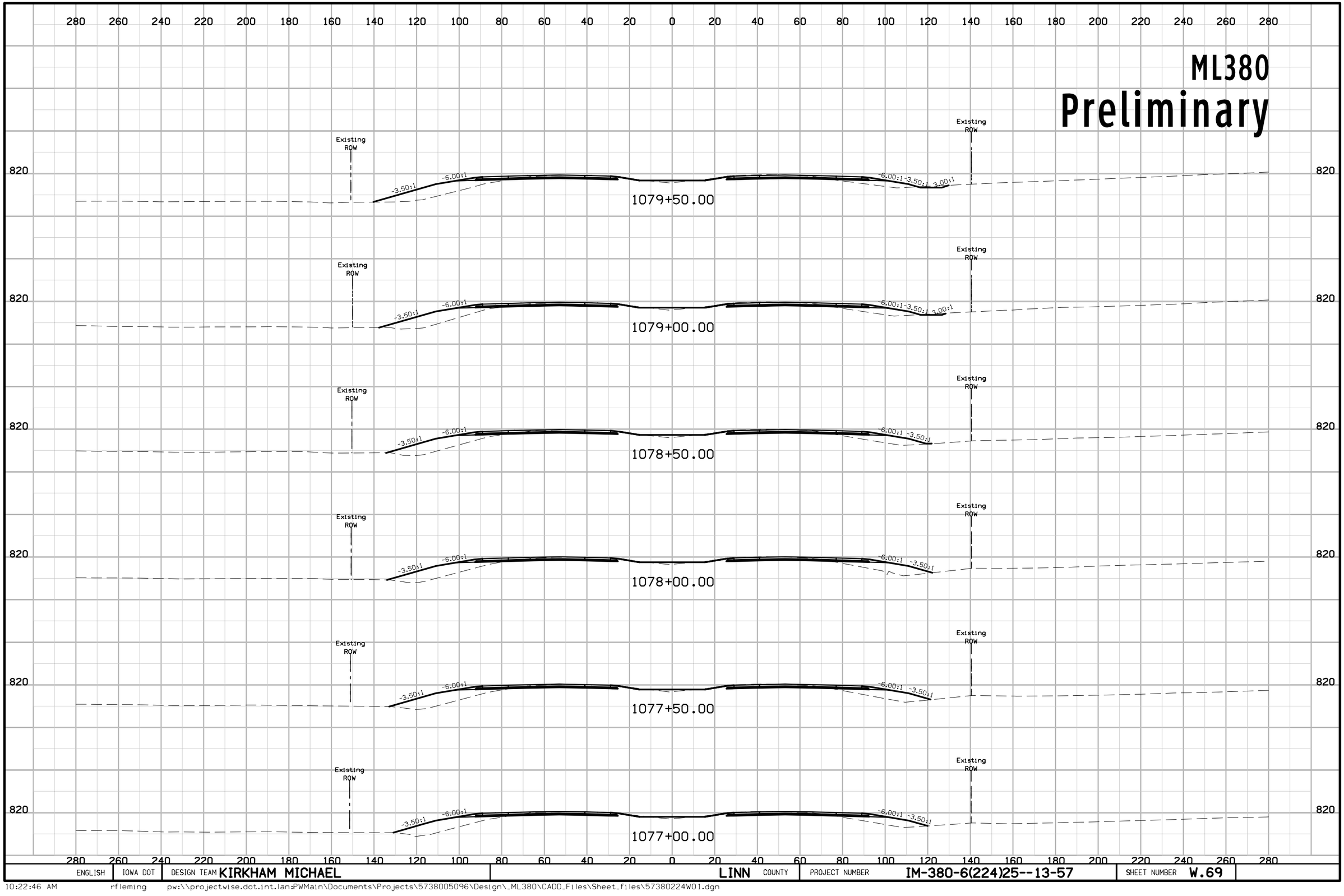


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.68

10:22:43 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

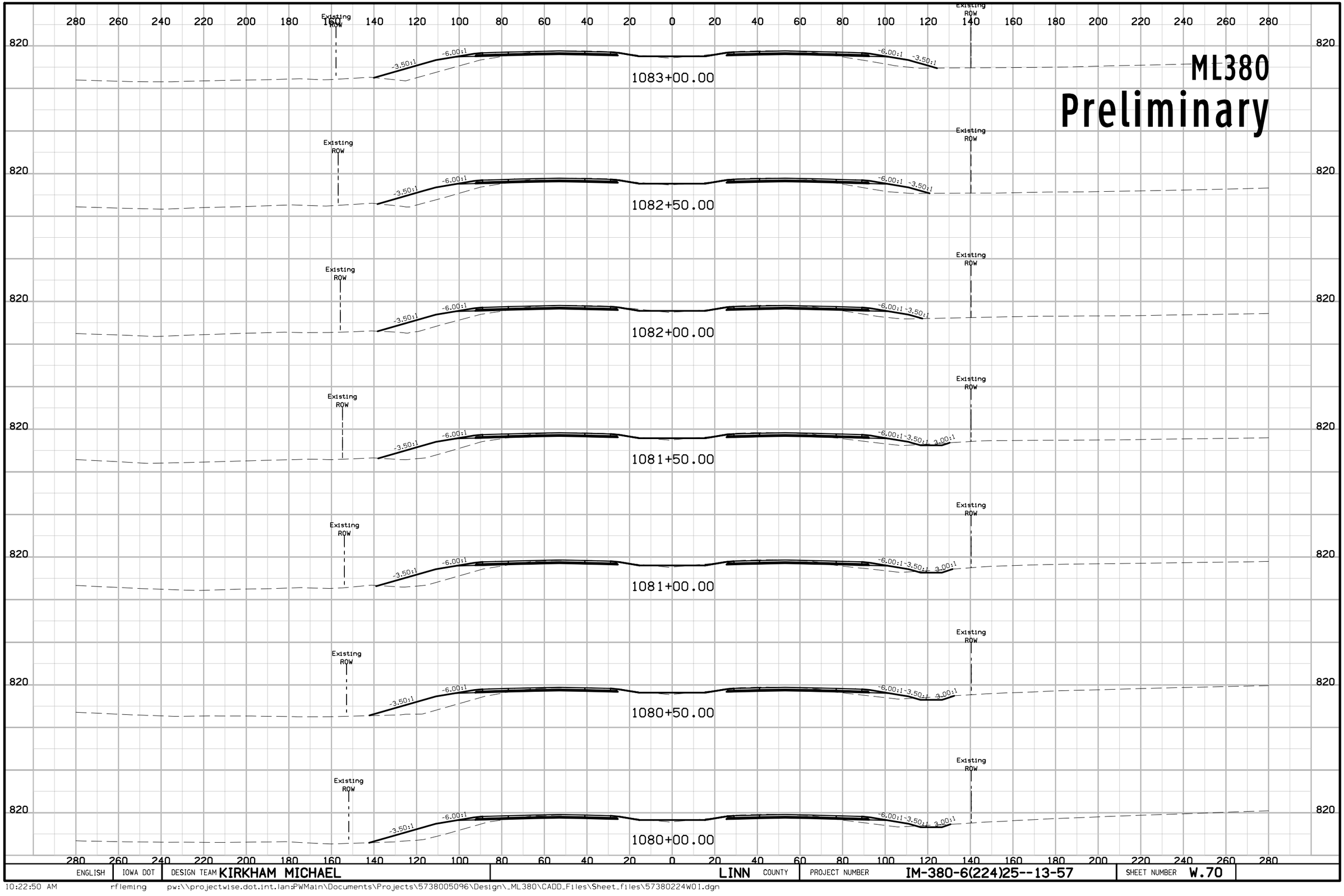
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.69

10:22:46 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary

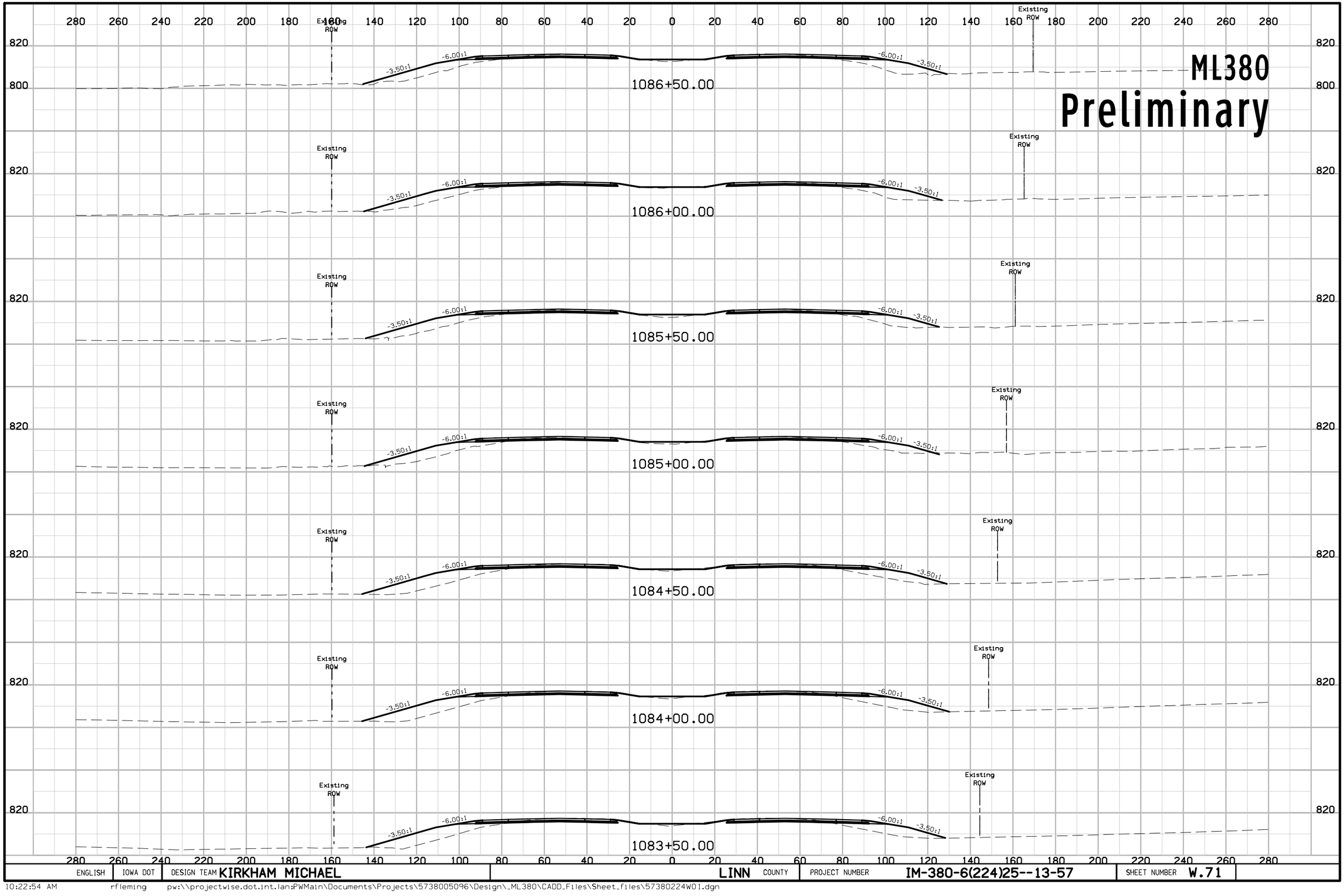


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.70	

10:22:50 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.71	

10:22:54 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

820
800

Existing ROW

-3.50:1 -6.00:1 -6.00:1 -3.50:1 3.00:1

1089+50.00

820
800

Existing ROW

-3.50:1 -6.00:1 -6.00:1 -3.50:1

1089+00.00

820

Existing ROW

-3.50:1 -6.00:1 -6.00:1 -3.50:1

1088+50.00

820
800

Existing ROW

-3.50:1 -6.00:1 -6.00:1 -3.50:1

1088+00.00

820
800

Existing ROW

-3.50:1 -6.00:1 -6.00:1 -3.50:1

1087+50.00

820
800

Existing ROW

-3.50:1 -6.00:1 -6.00:1 -3.50:1

1087+00.00

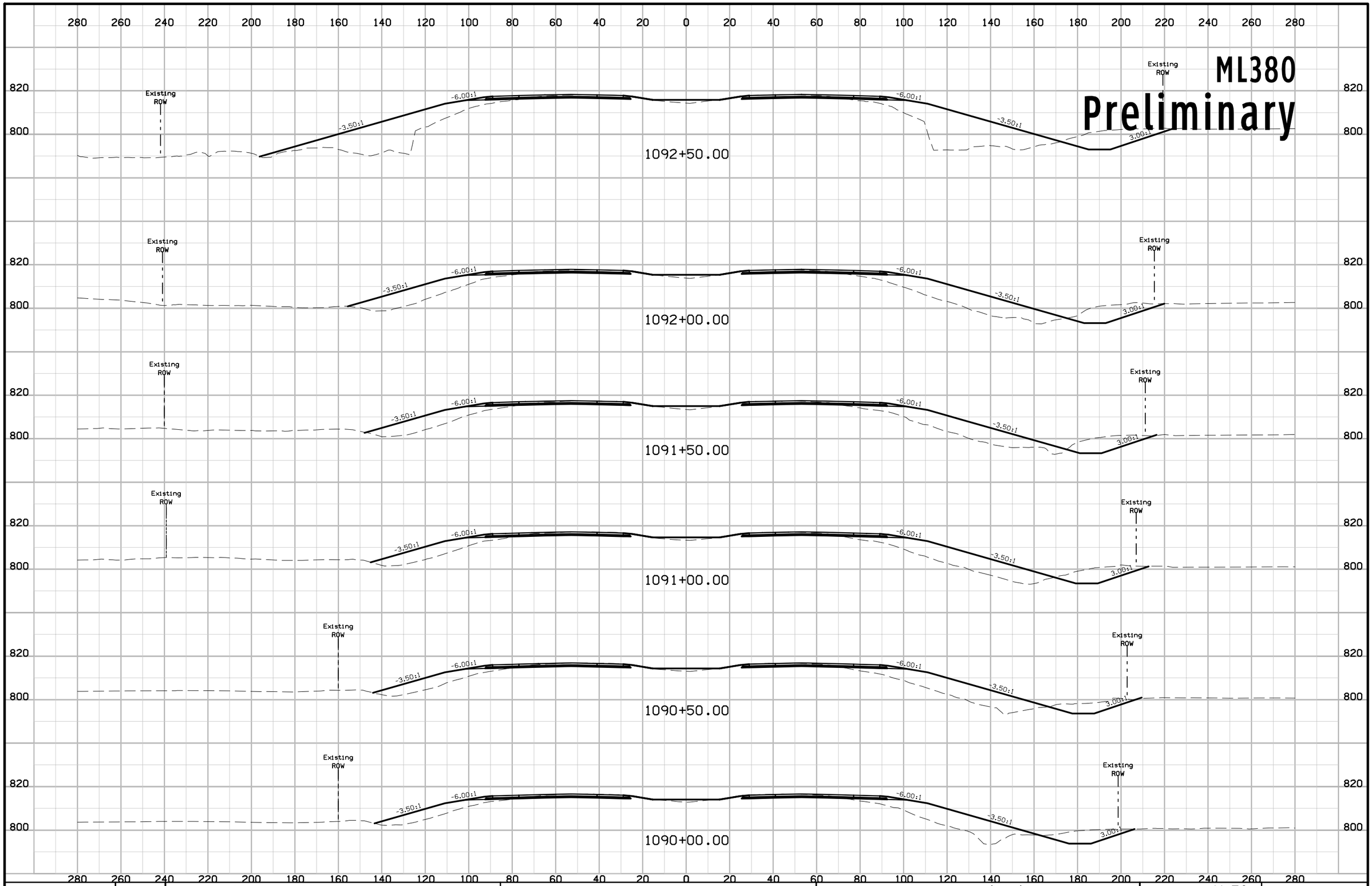
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.72	

10:22:58 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

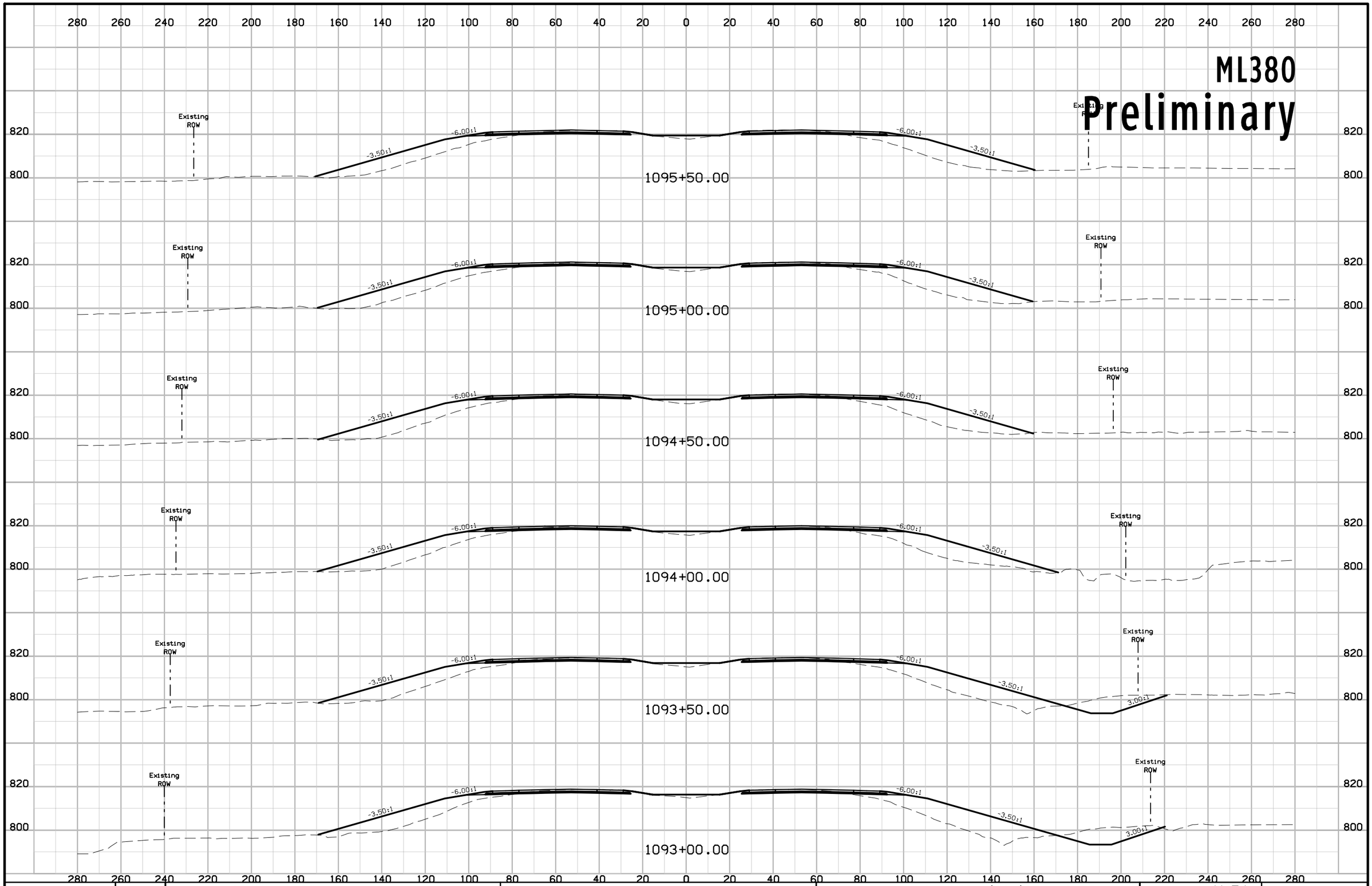
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.73

ML380

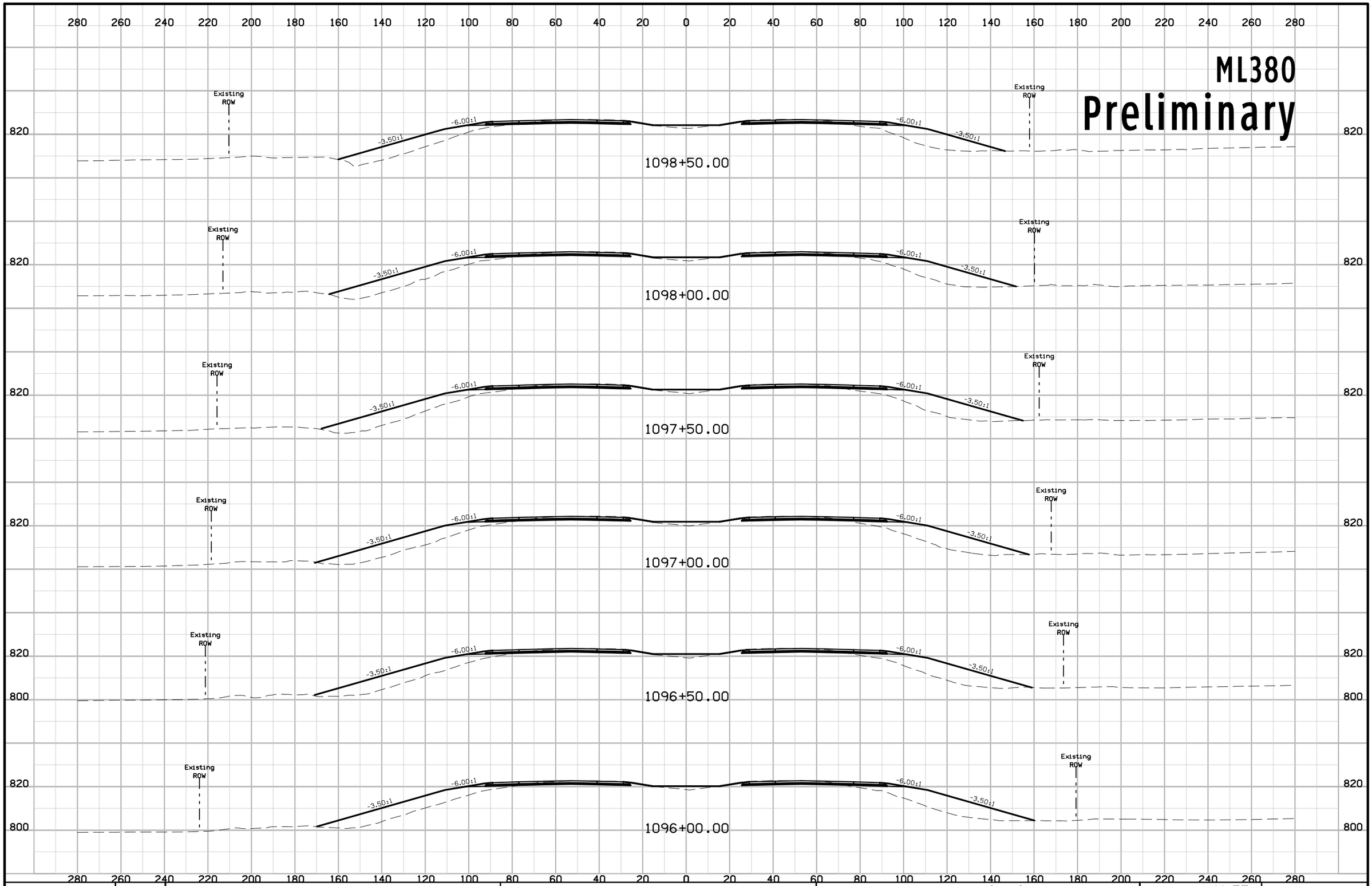
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.74

10:23:05 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.75

10:23:09 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840
820

Existing ROW

-3.50:1 -6.00:1 -6.00:1 -3.50:1

1101+50.00

1101+00.00

1100+50.00

1100+00.00

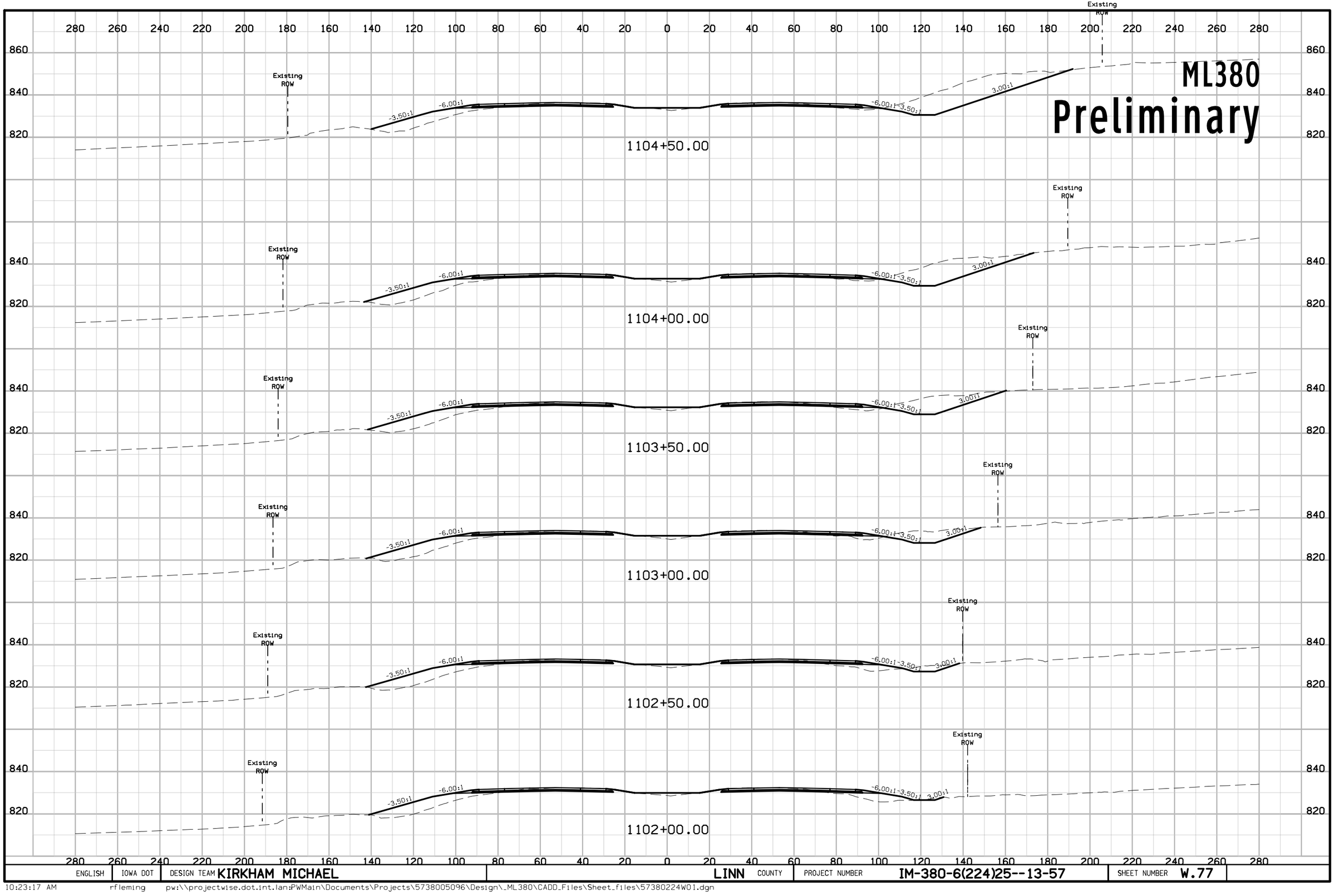
1099+50.00

1099+00.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.76

10:23:13 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary

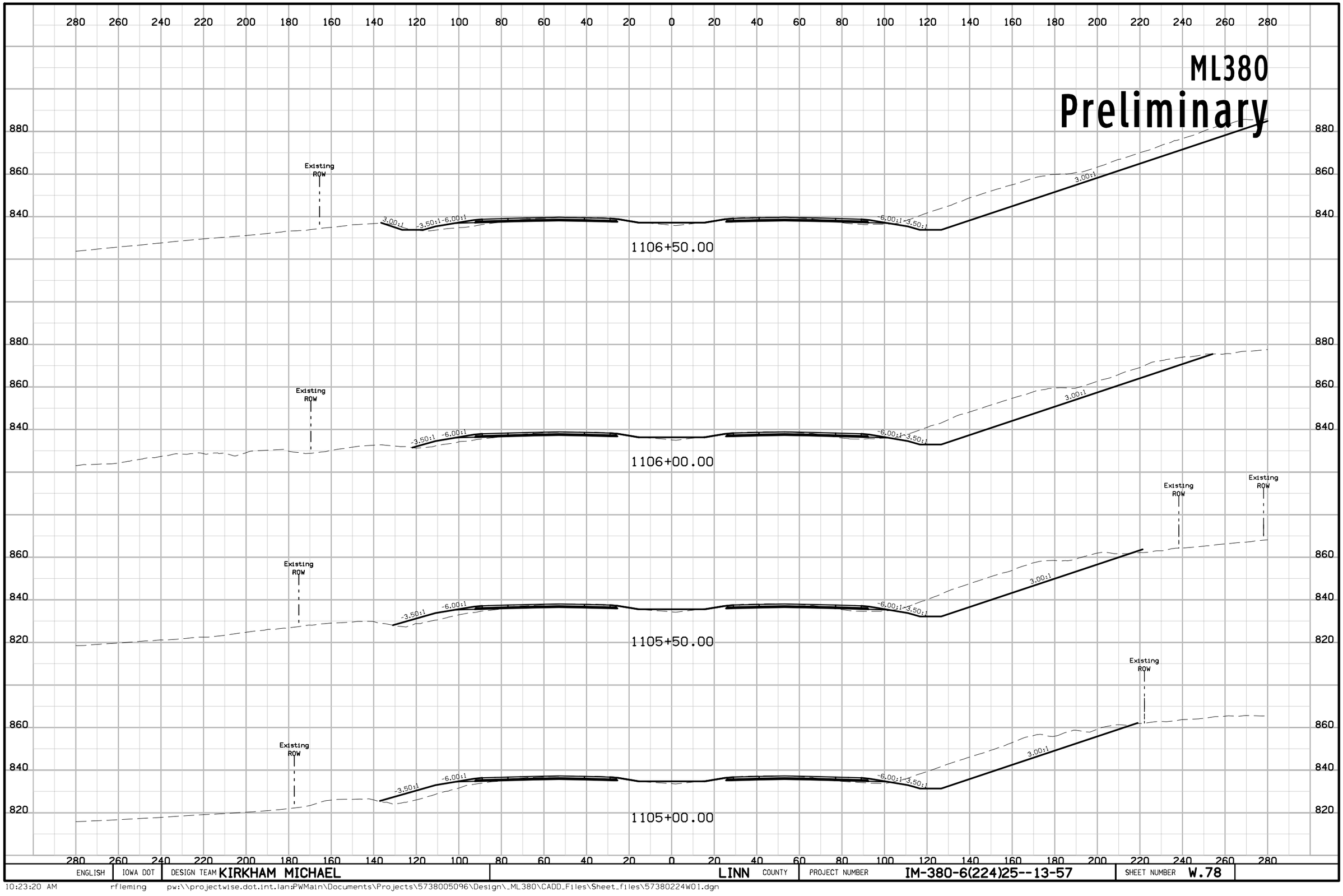


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.77

10:23:17 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

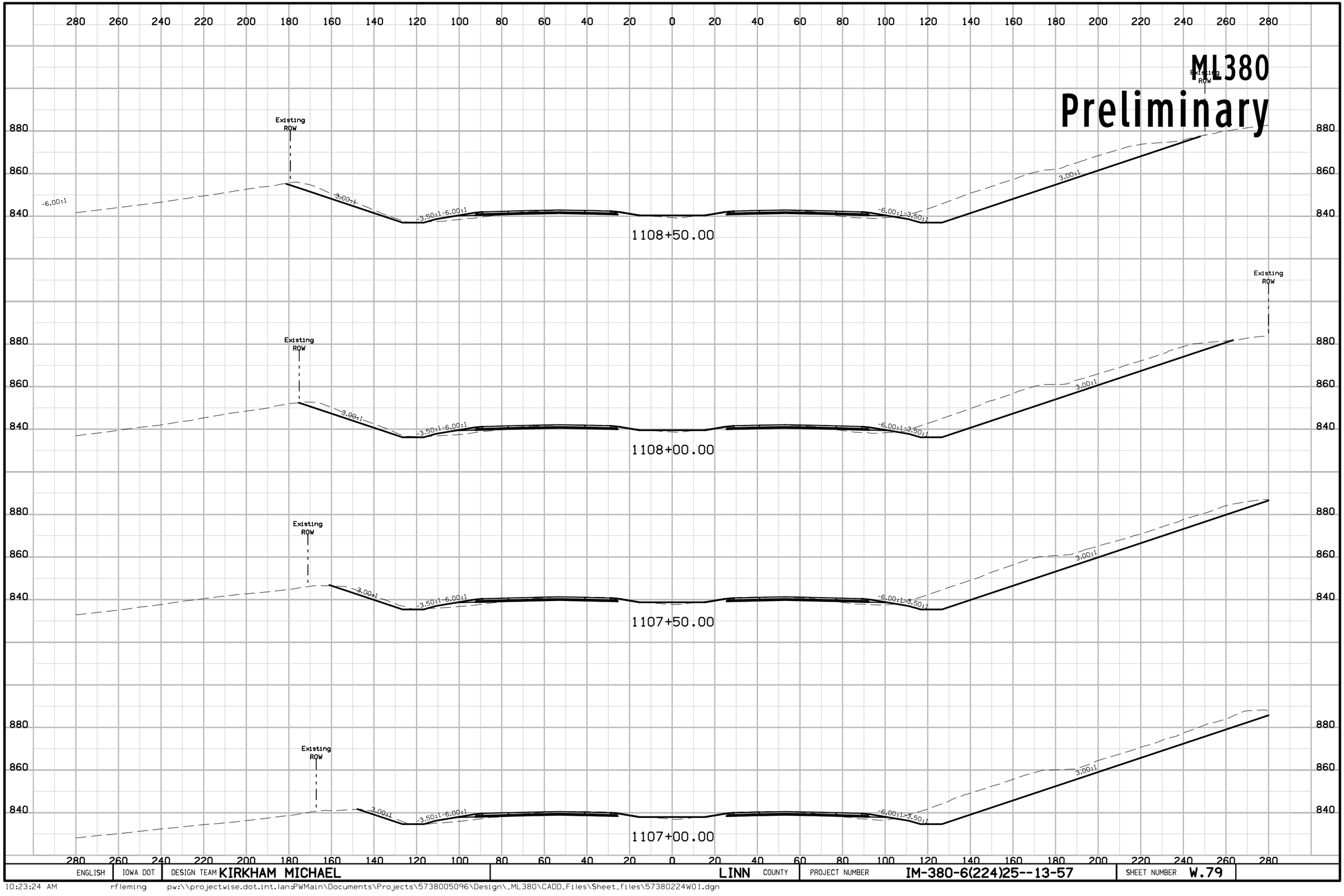
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.78

ML380

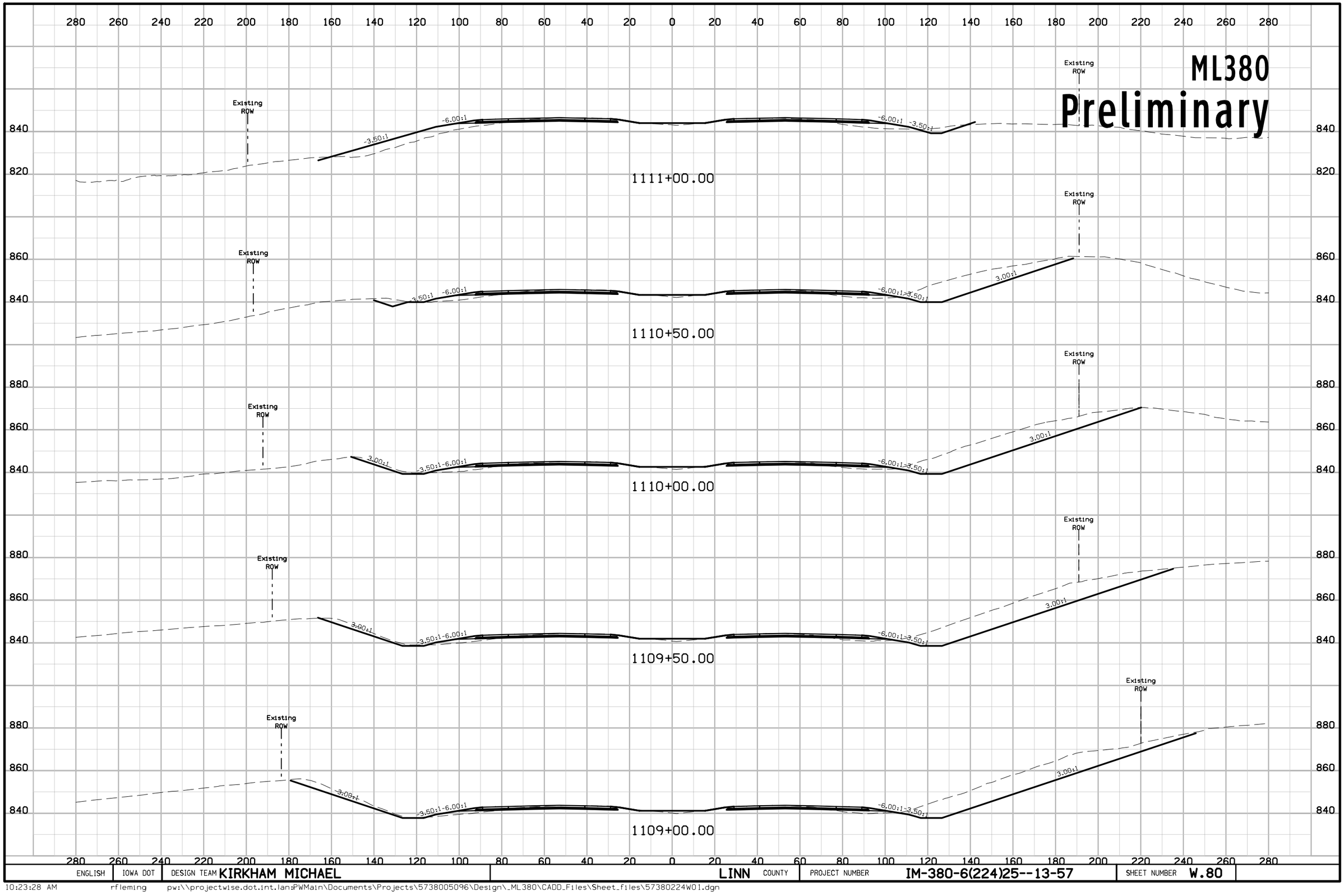
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.79

ML380

Preliminary

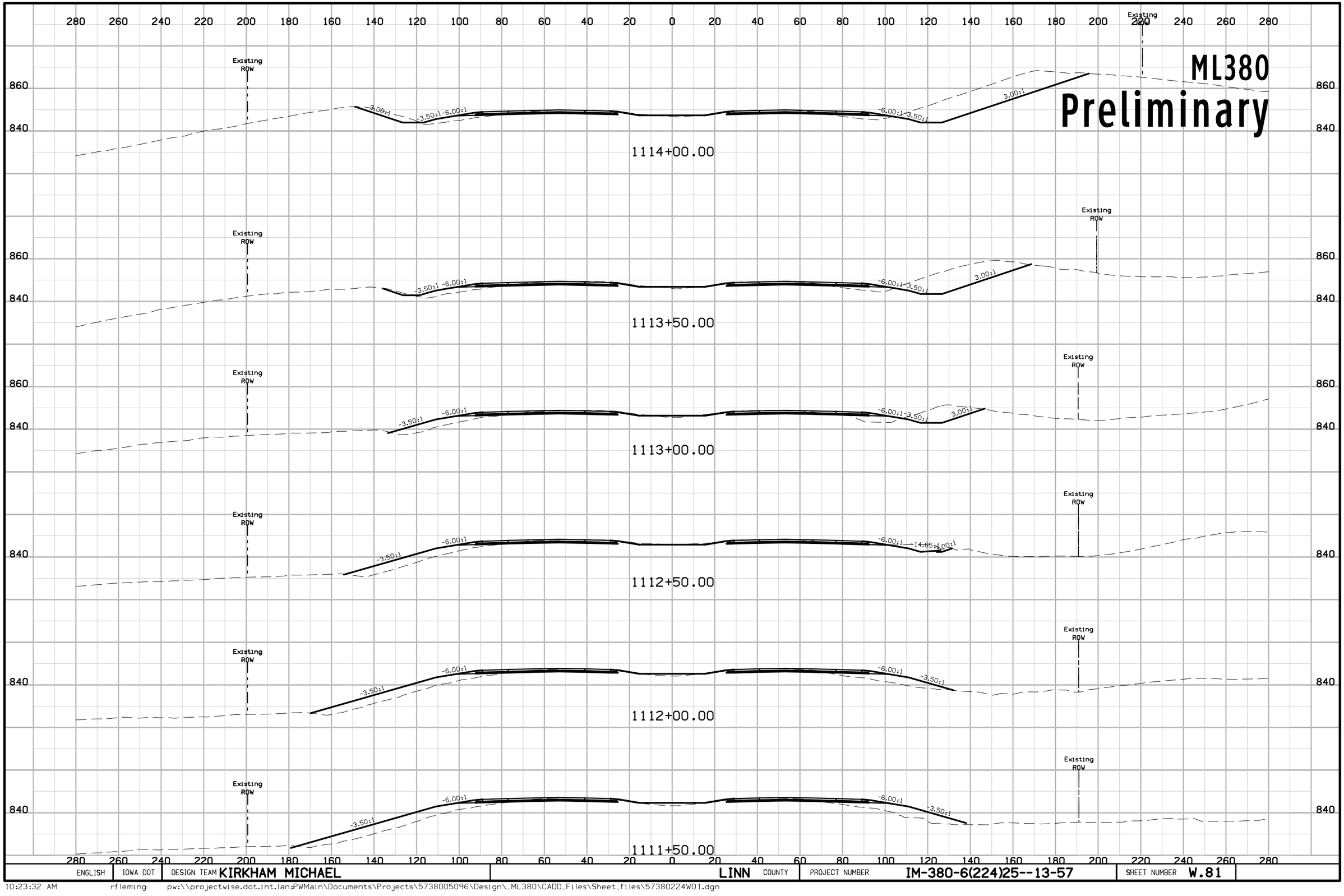


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.80

10:23:28 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

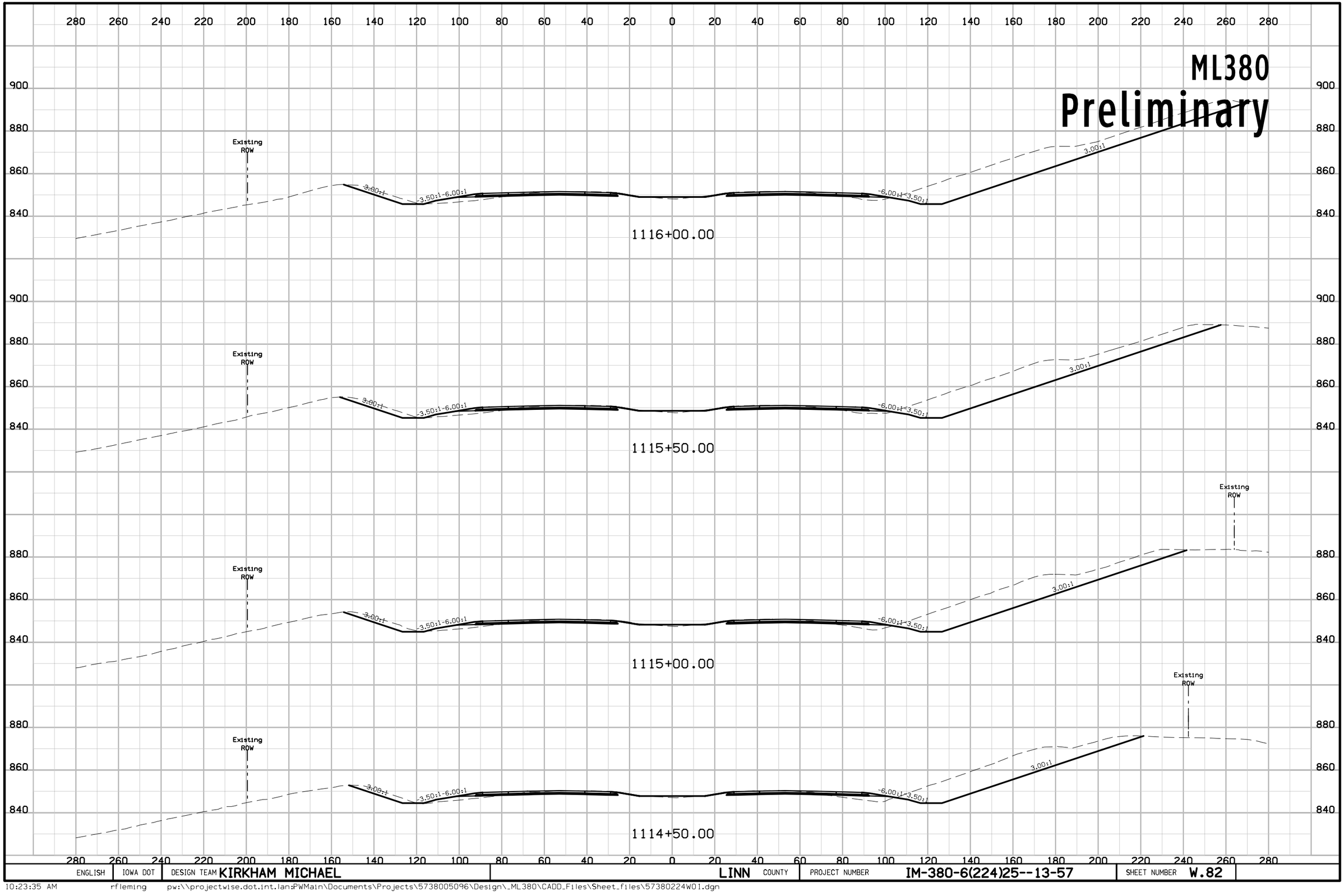


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.81	

10:23:32 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

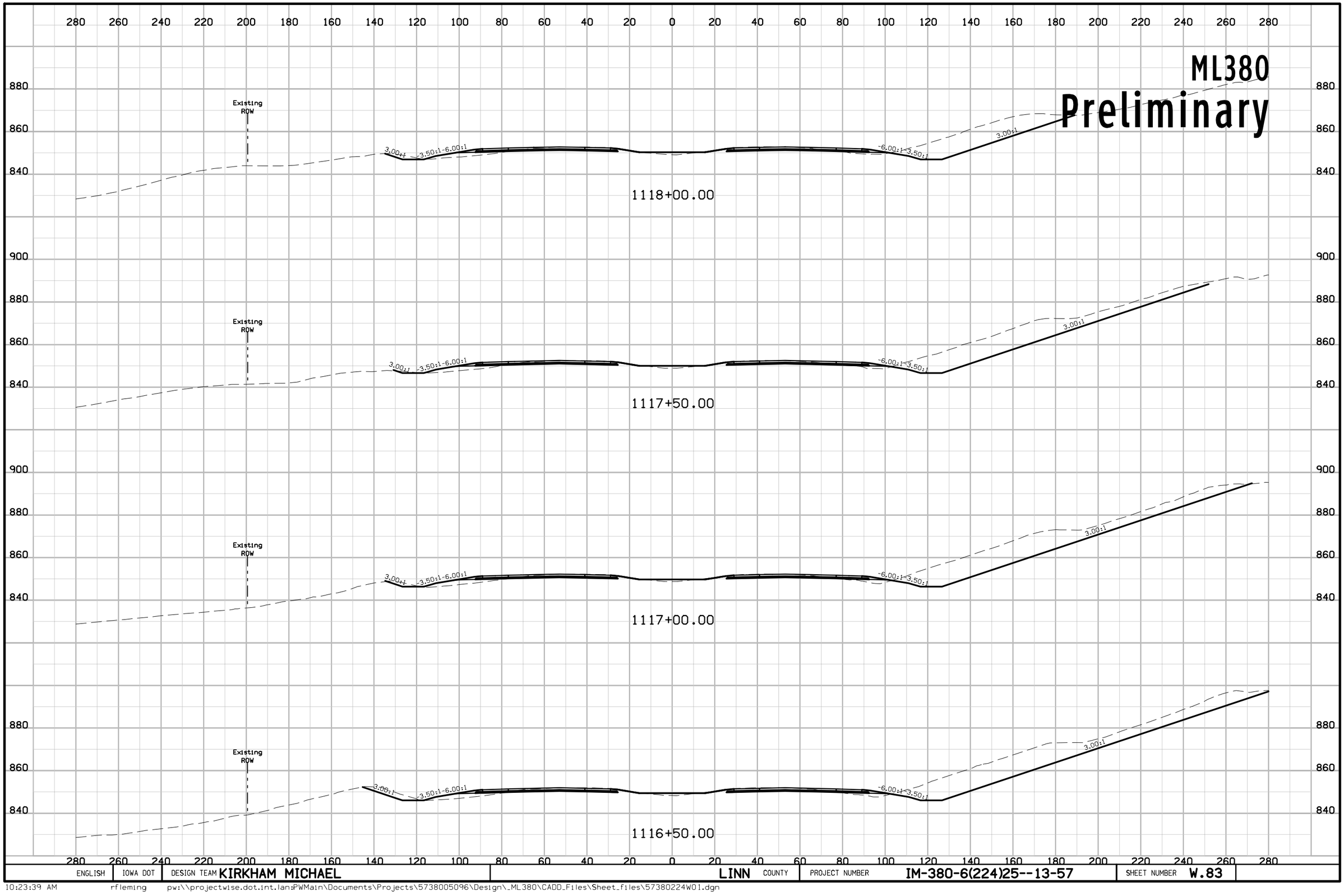


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.82	

10:23:35 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

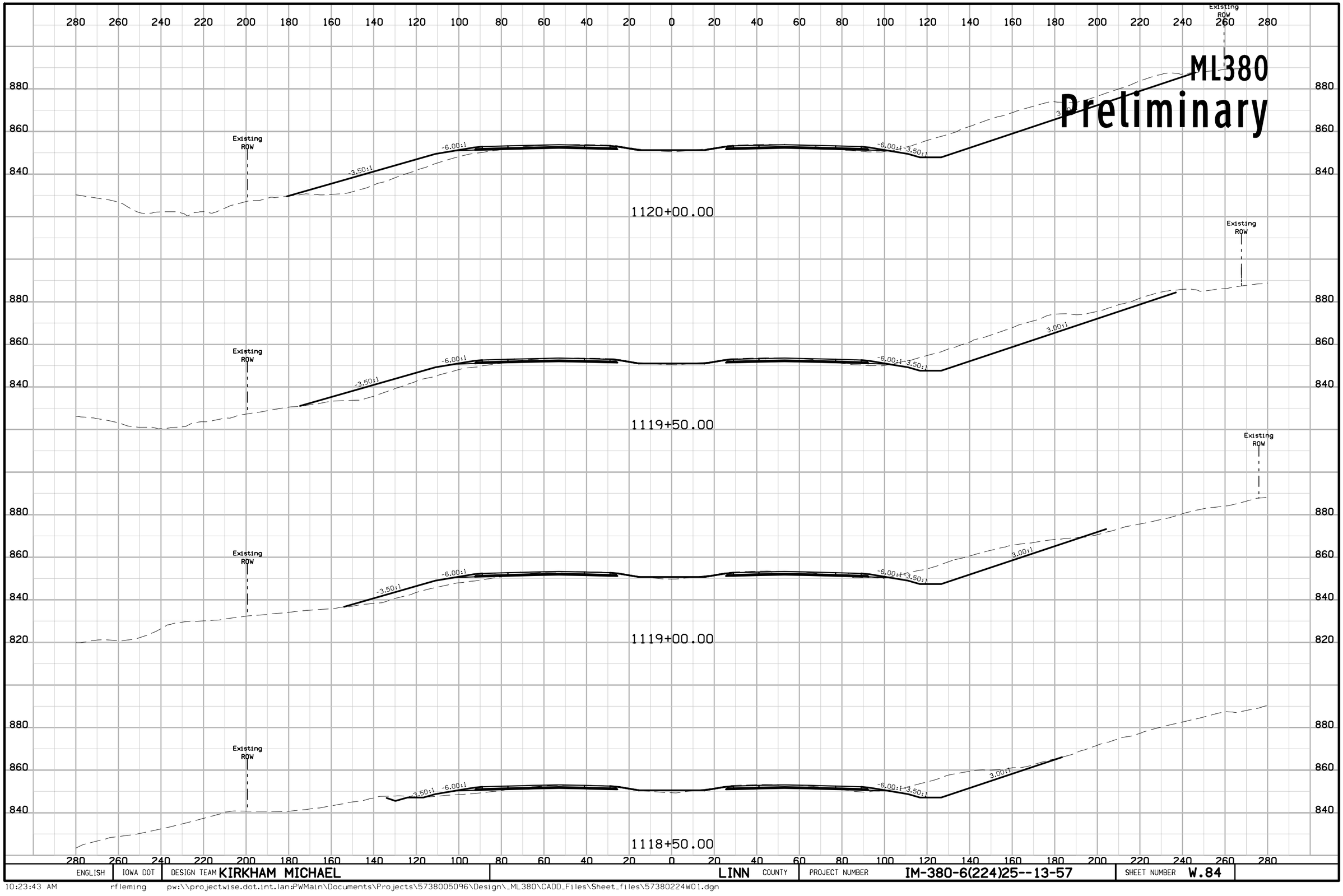


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.83

10:23:39 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

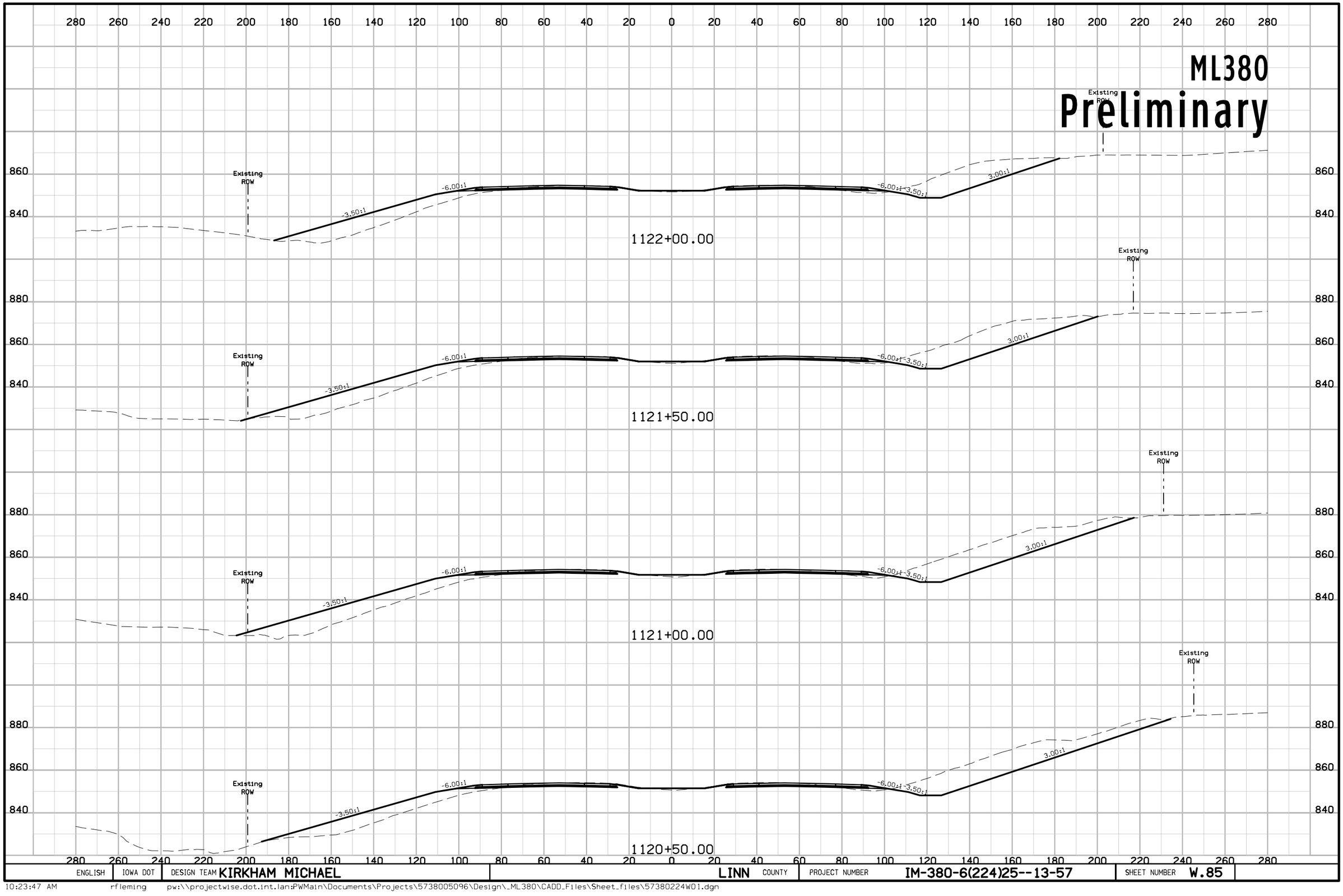


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.84

10:23:43 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

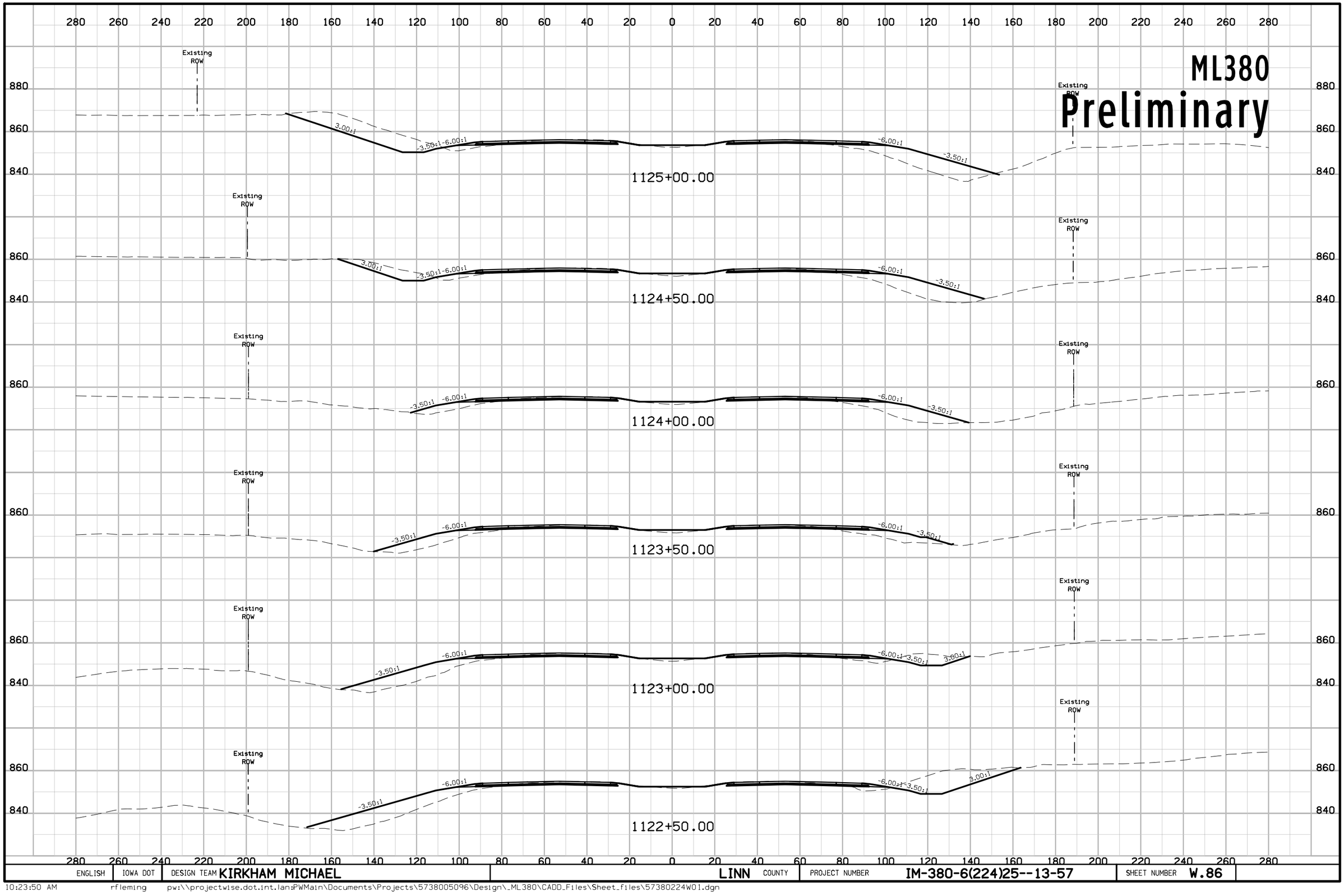


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.85

10:23:47 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

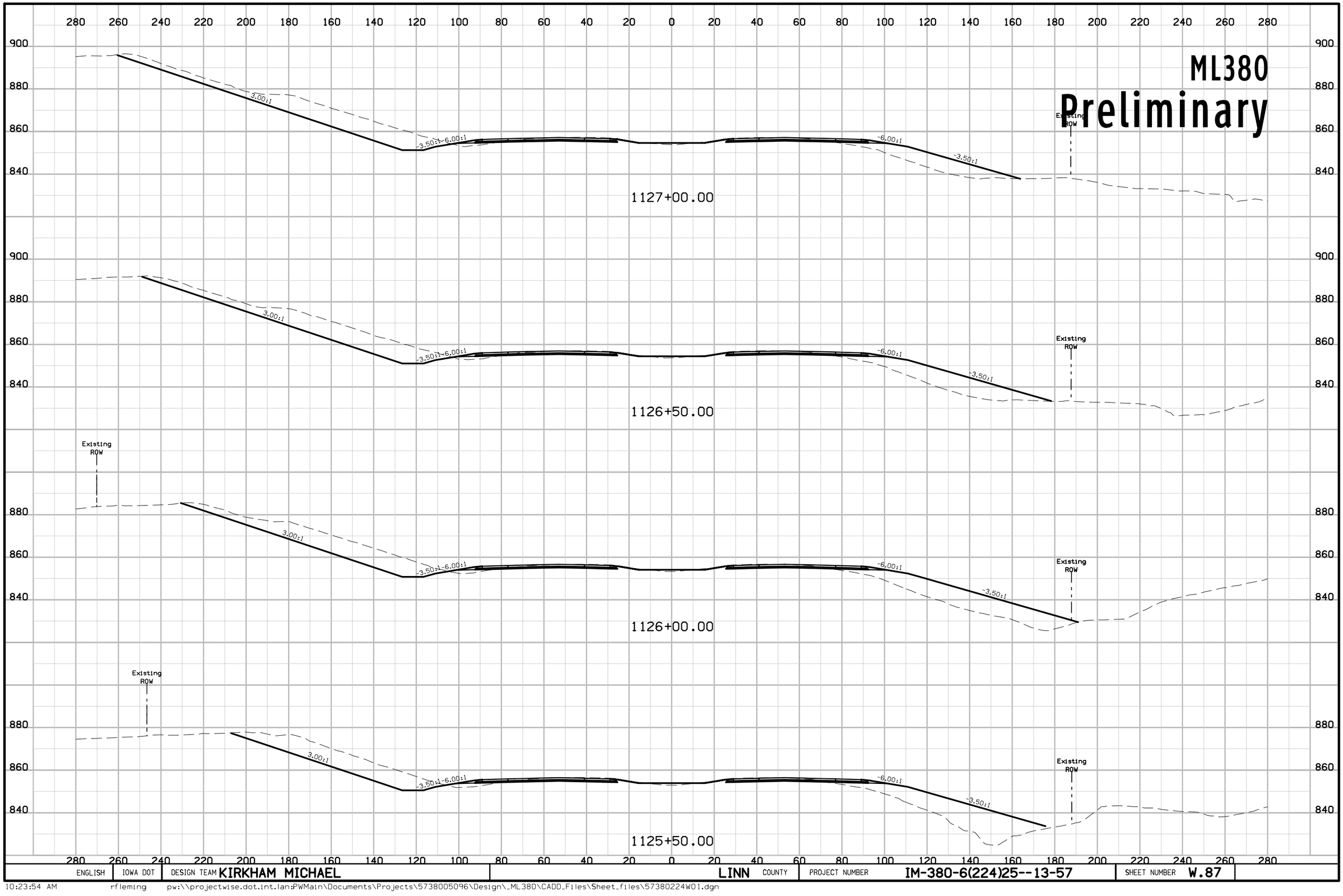


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.86

10:23:50 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

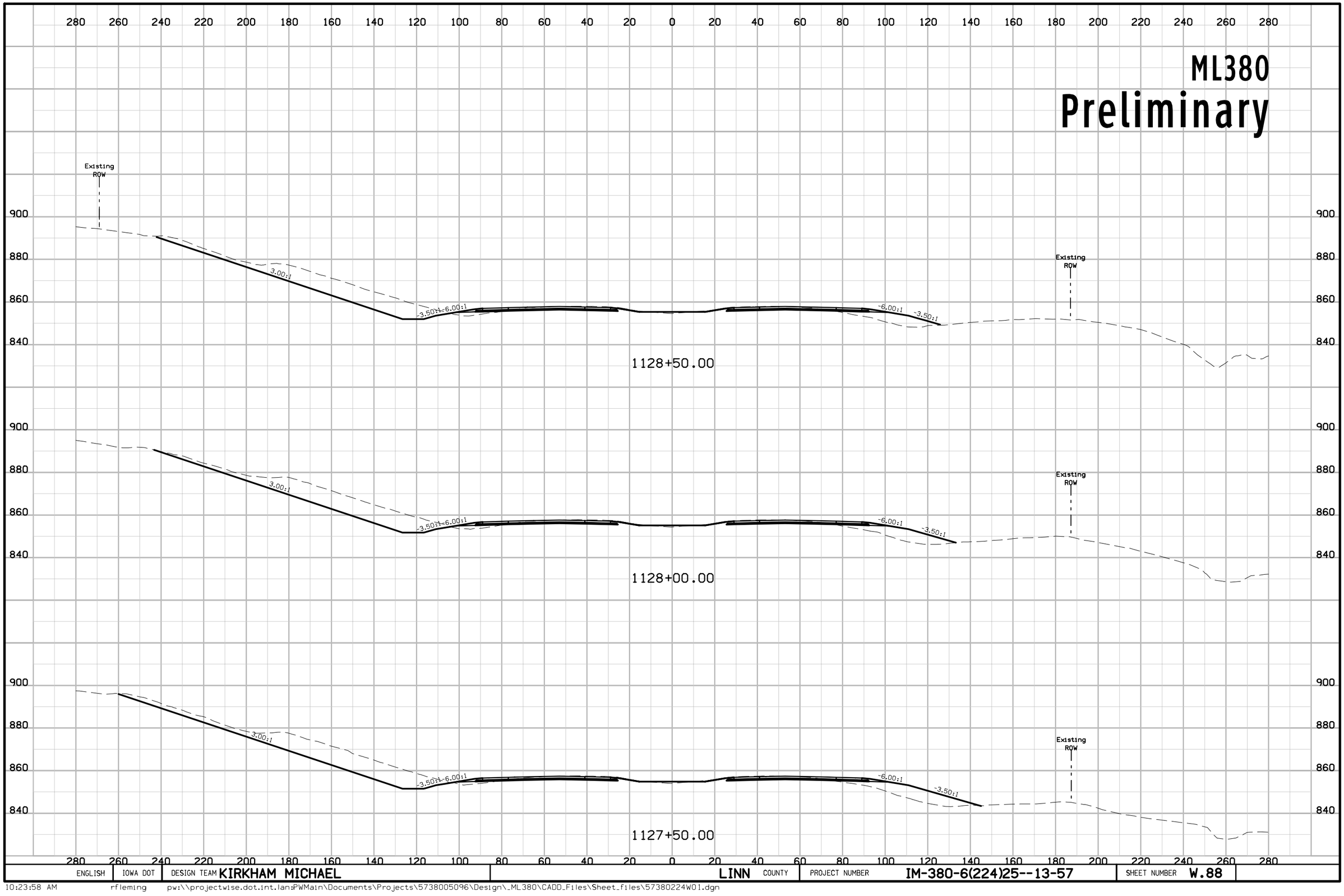


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.87

10:23:54 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

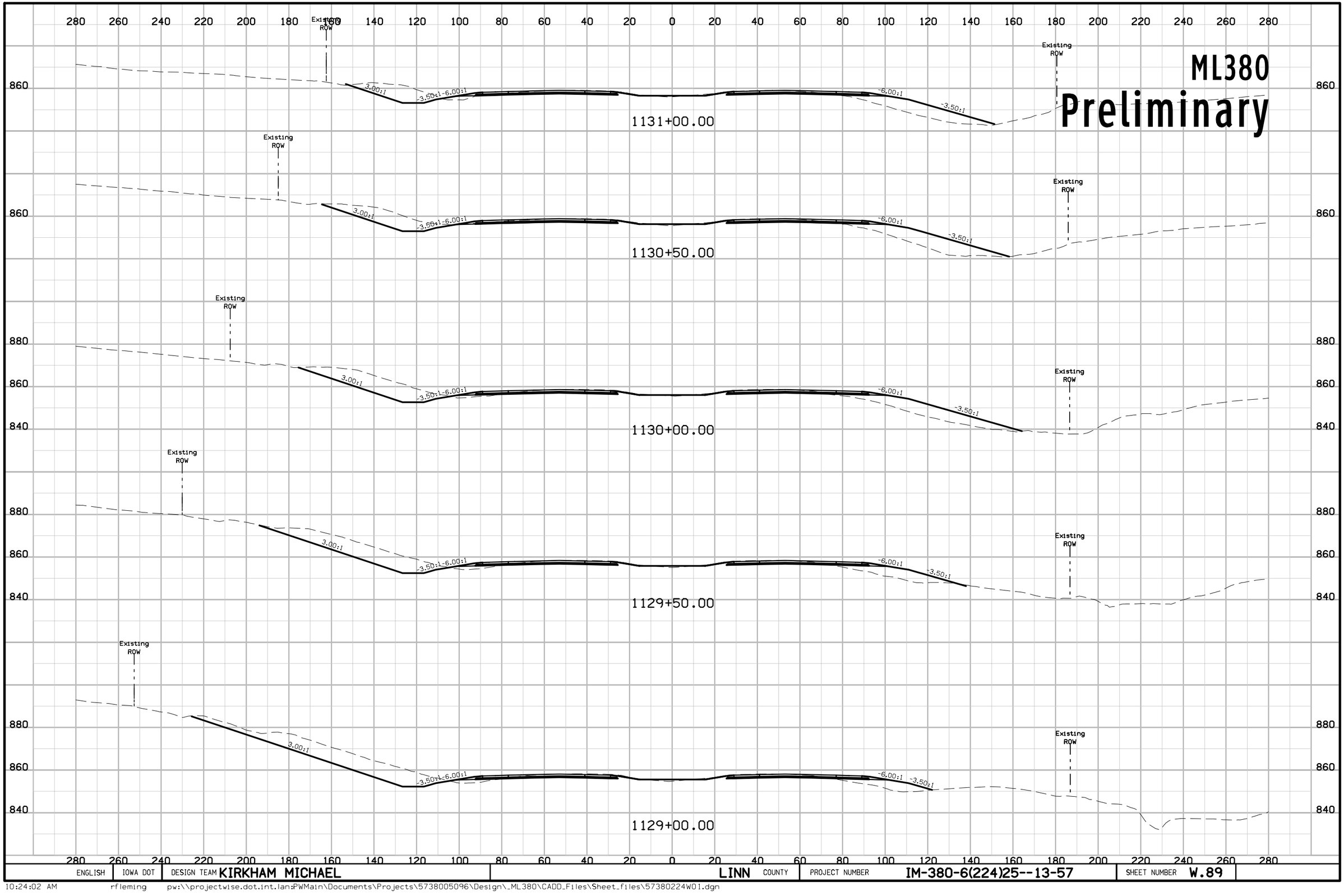


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.88

10:23:58 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

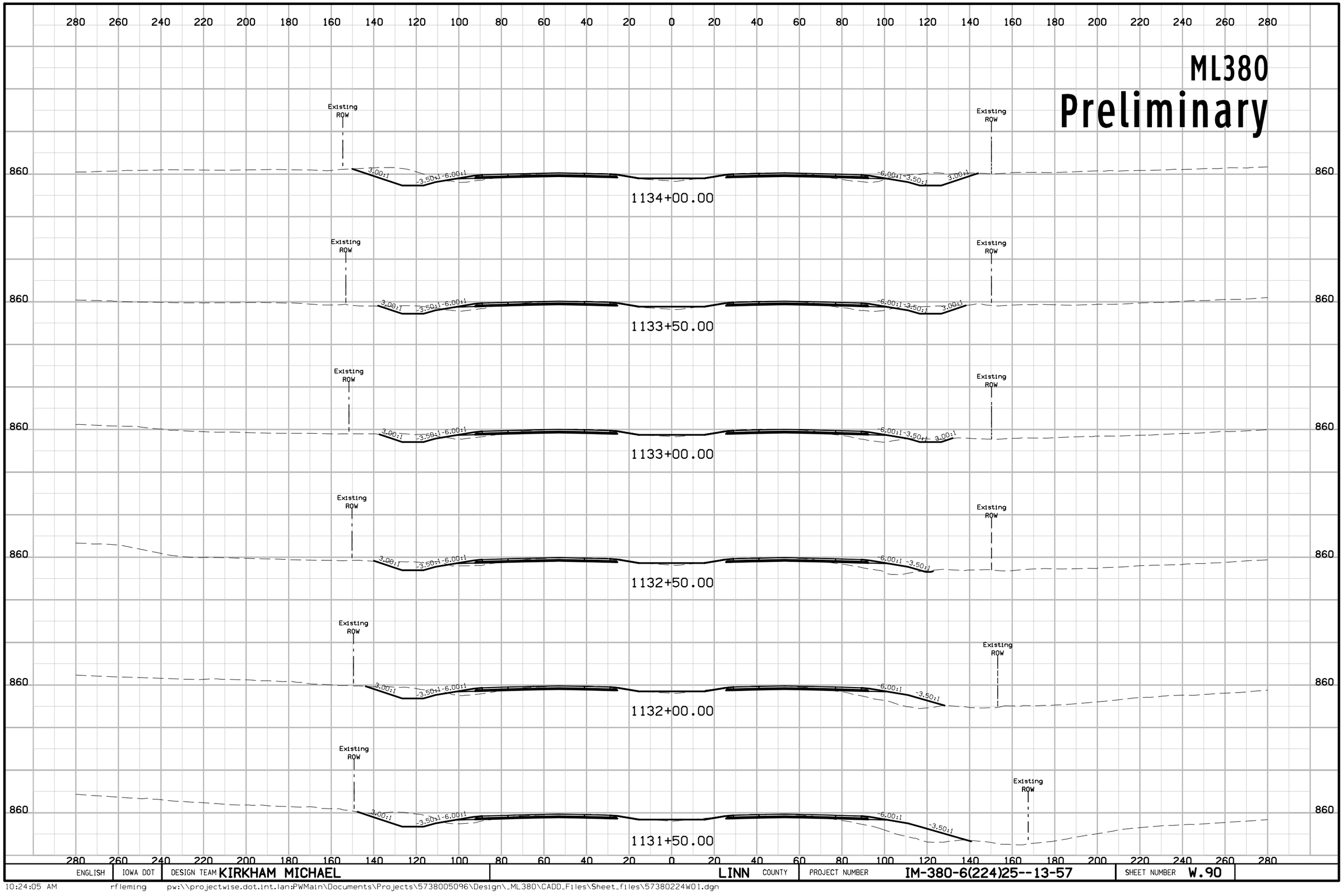


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.89	

10:24:02 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.90	

10:24:05 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

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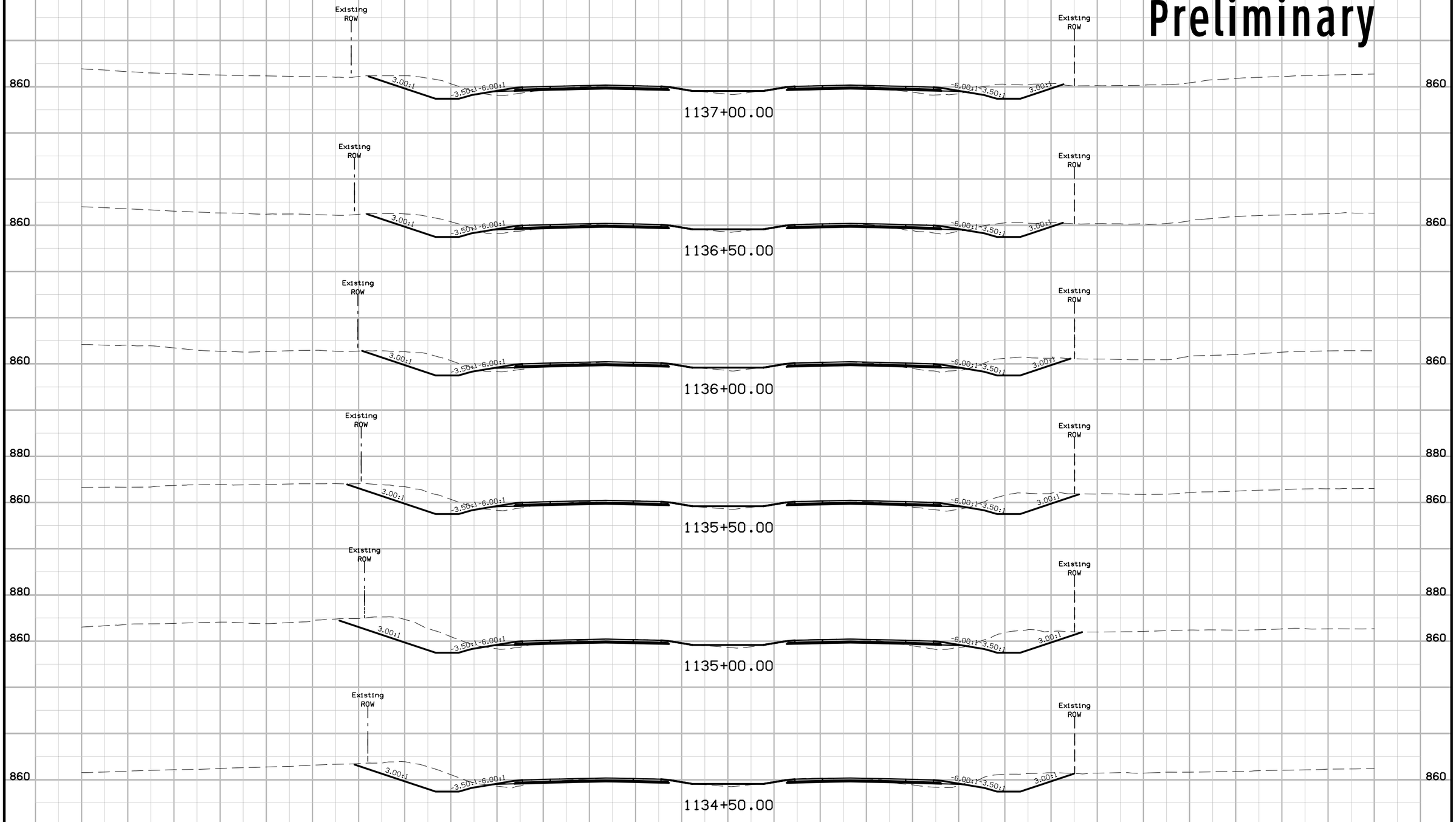


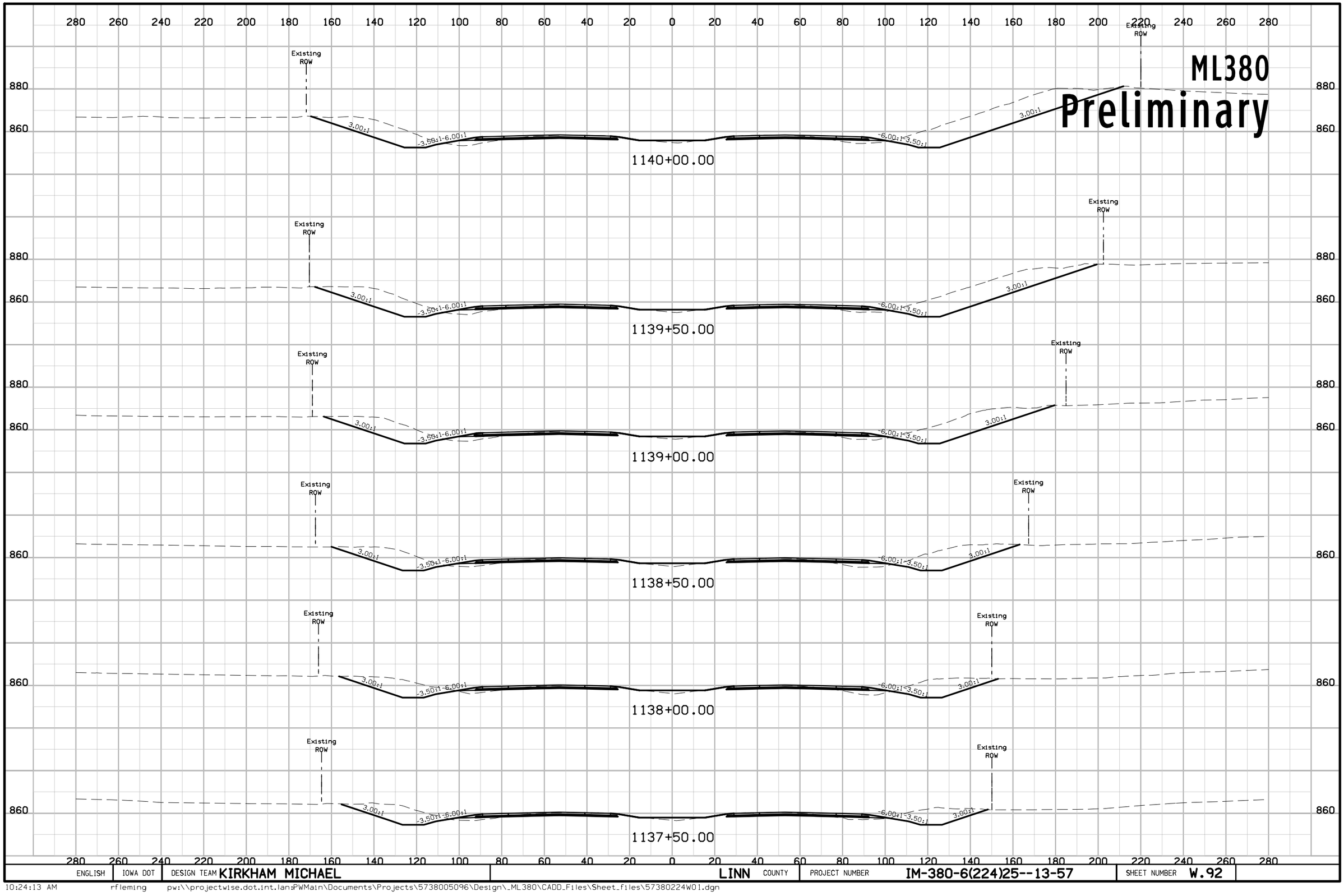
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.91

10:24:09 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

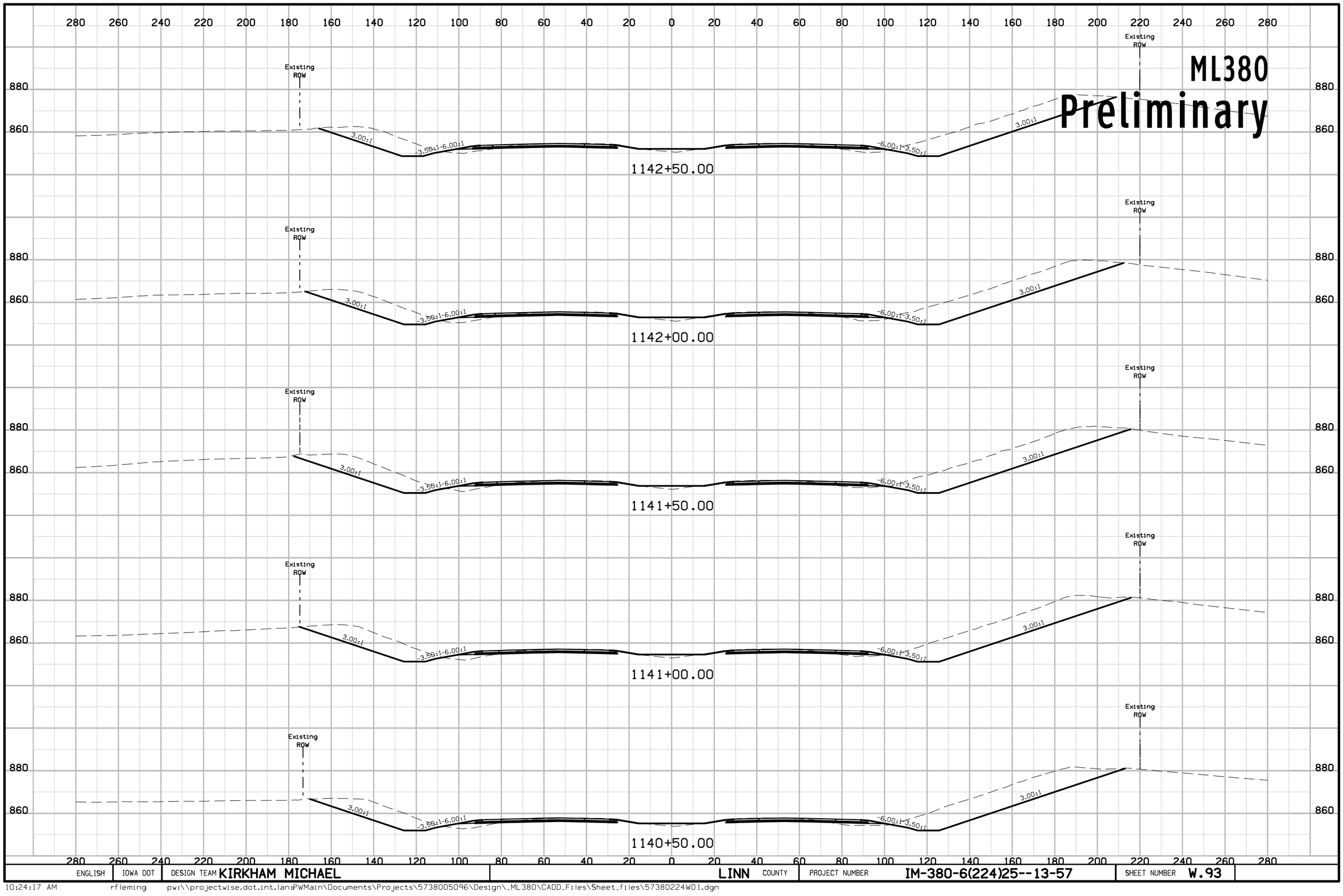


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.92

10:24:13 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

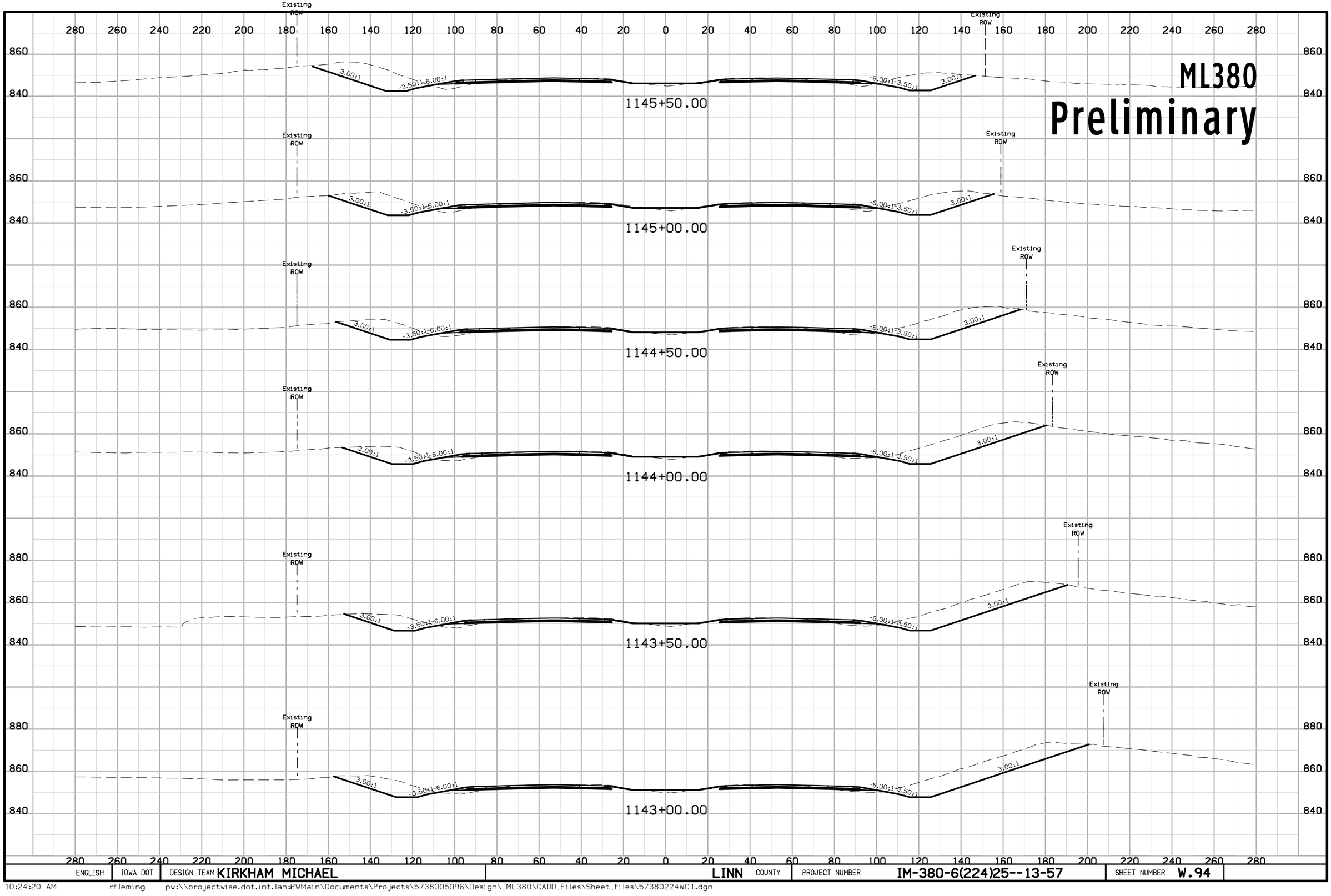


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.93

10:24:17 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER	IM-380-6(224)25--13-57	SHEET NUMBER	W.94

10:24:20 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840

Existing ROW

3.00:1 -3.50:1 -6.00:1

-5.48:1 -3.50:1 3.02:1

Existing ROW

840

1148+50.00

840

Existing ROW

3.00:1 -3.50:1 -6.00:1

-5.48:1 -3.50:1 3.02:1

Existing ROW

840

1148+00.00

840

Existing ROW

3.00:1 -3.50:1 -6.00:1

-6.00:1 -3.50:1 3.00:1

Existing ROW

840

1147+50.00

840

860

Existing ROW

3.00:1 -3.50:1 -6.00:1

-6.00:1 -3.50:1 3.00:1

Existing ROW

840

1147+00.00

840

860

Existing ROW

3.00:1 -3.50:1 -6.00:1

-6.00:1 -3.50:1 3.00:1

Existing ROW

840

1146+50.00

840

860

Existing ROW

3.00:1 -3.50:1 -6.00:1

-6.00:1 -3.50:1 3.00:1

Existing ROW

840

1146+00.00

840

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.95

10:24:24 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840

Existing ROW

1152+00.00

1151+50.00

3.65:1 -3.50:1-5.46:1

1151+00.00

3.04:1 -3.50:1-5.47:1 -5.48:1-3.50:1 3.02:1

1150+50.00

3.02:1 -3.50:1-5.48:1 -5.48:1-3.50:1 3.02:1

1150+00.00

3.01:1 -3.50:1-5.49:1 -5.48:1-3.50:1 3.02:1

1149+50.00

3.00:1 -3.50:1-5.49:1 -5.48:1-3.50:1 3.02:1

1149+00.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.96

10:24:28 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840
820

Existing ROW

3.00:1 3.50:1 6.00:1 6.00:1

1155+50.00

1155+00.00

1154+50.00

1154+00.00

1153+50.00

1153+00.00

1152+50.00

ML380

Preliminary

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.97

10:24:45 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

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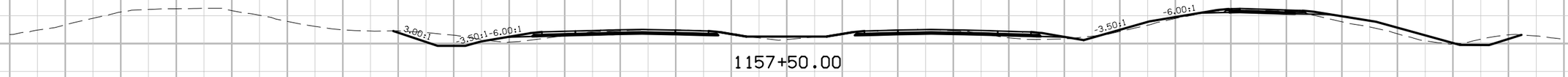
820

1158+50.00

820

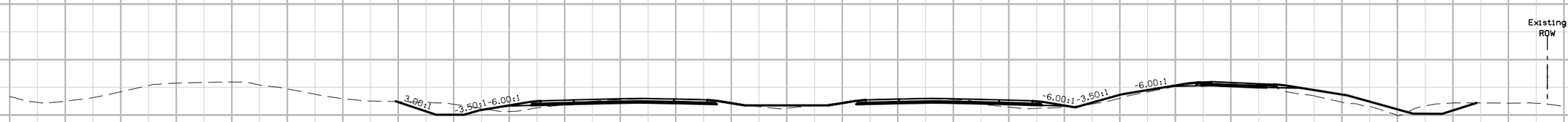
1158+00.00

820



1157+50.00

820

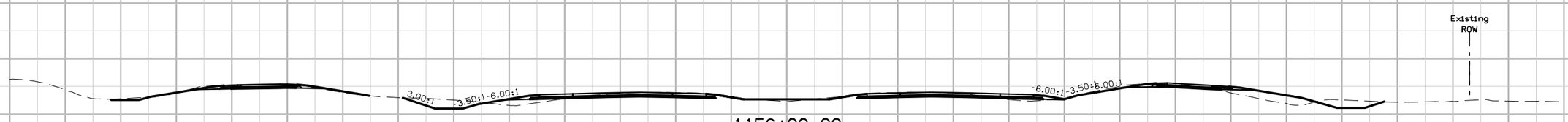


1157+00.00

820

1156+50.00

820



1156+00.00

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ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.98

10:24:49 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary

280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

840
820

1161+50.00

840
820

1161+00.00

-6.00:1-3.50:1

820

3.00:1 -3.50:1-6.00:1 -6.00:1-3.50:1 3.00:1

1160+50.00

820

3.00:1 -3.50:1-6.00:1 -6.00:1-3.50:1 3.00:1

1160+00.00

820

3.00:1 -3.50:1-6.00:1 -6.00:1-3.50:1 3.00:1

1159+50.00

820

3.00:1 -3.50:1-6.00:1 -6.00:1-3.50:1 3.00:1

1159+00.00

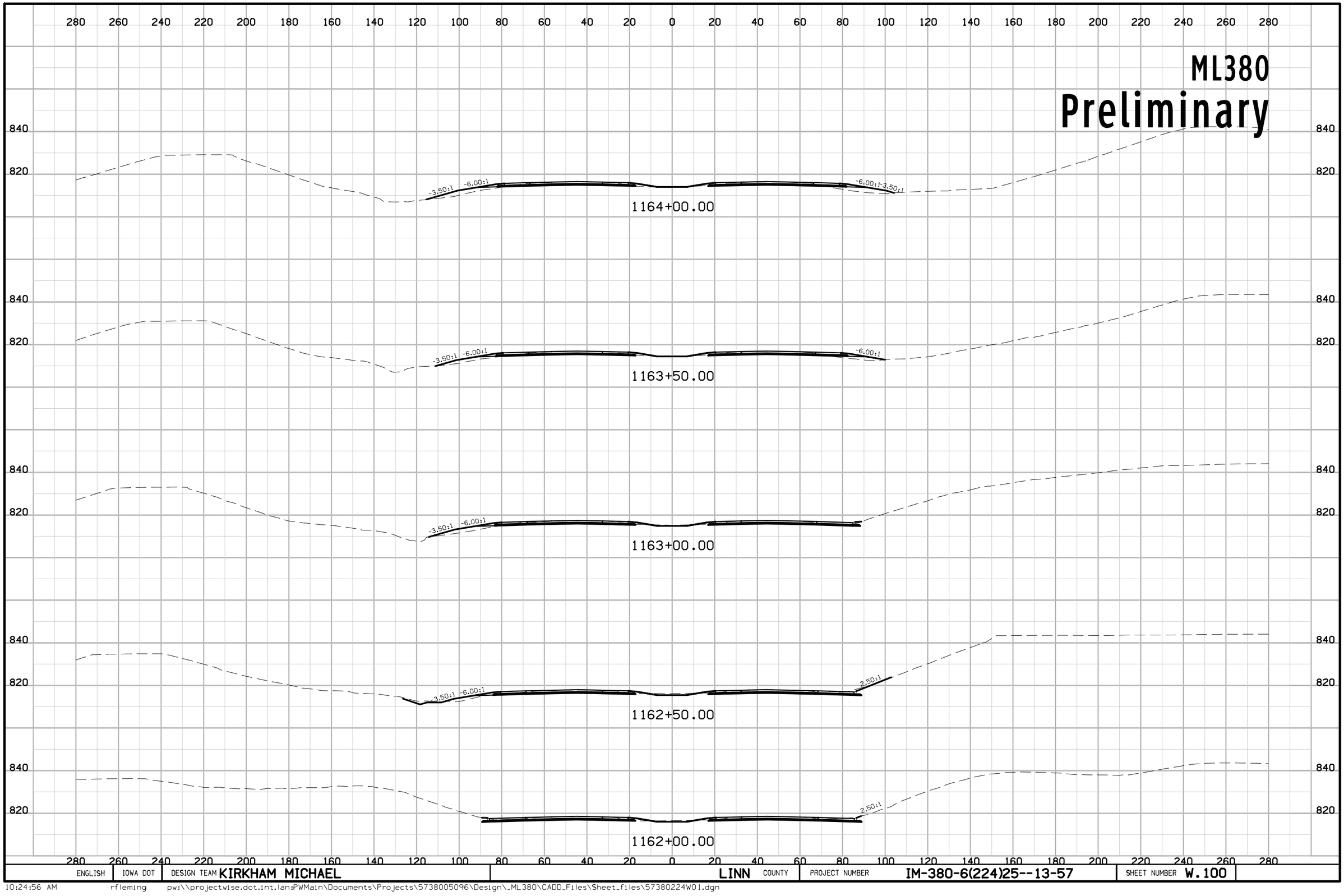
280 260 240 220 200 180 160 140 120 100 80 60 40 20 0 20 40 60 80 100 120 140 160 180 200 220 240 260 280

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.99

10:24:52 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

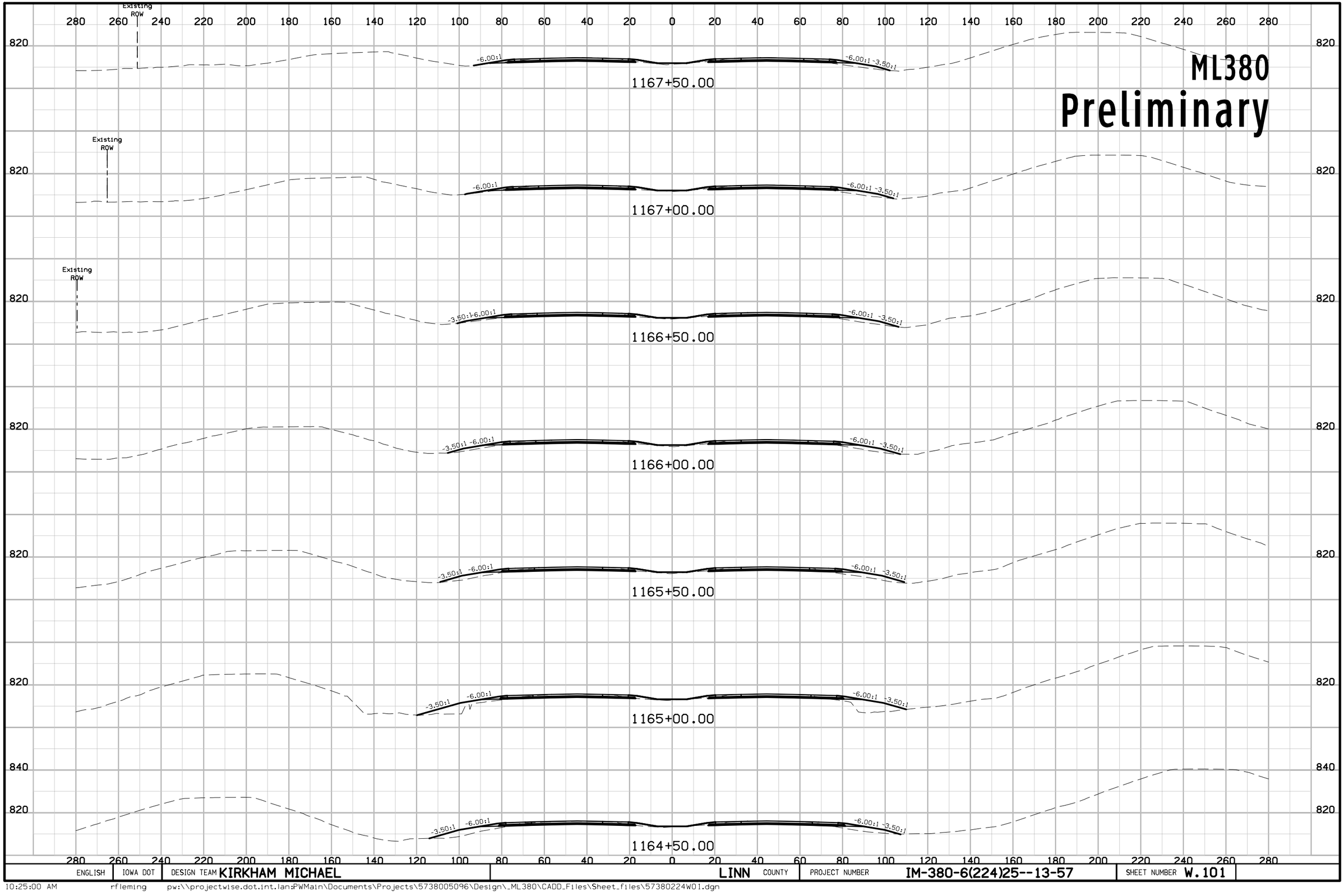
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.100

10:24:56 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.101

10:25:00 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380
Preliminary

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820
800

Existing ROW

-6.00:1

1171+00.00

Existing ROW

-6.00:1

-6.00:1

1170+50.00

Existing ROW

-6.00:1

-6.00:1

1170+00.00

Existing ROW

-6.00:1

-6.00:1 3.50:1

1169+50.00

Existing ROW

-6.00:1

-6.00:1 3.50:1

1169+00.00

Existing ROW

-6.00:1

-6.00:1 3.50:1

1168+50.00

Existing ROW

-6.00:1

-6.00:1 3.50:1

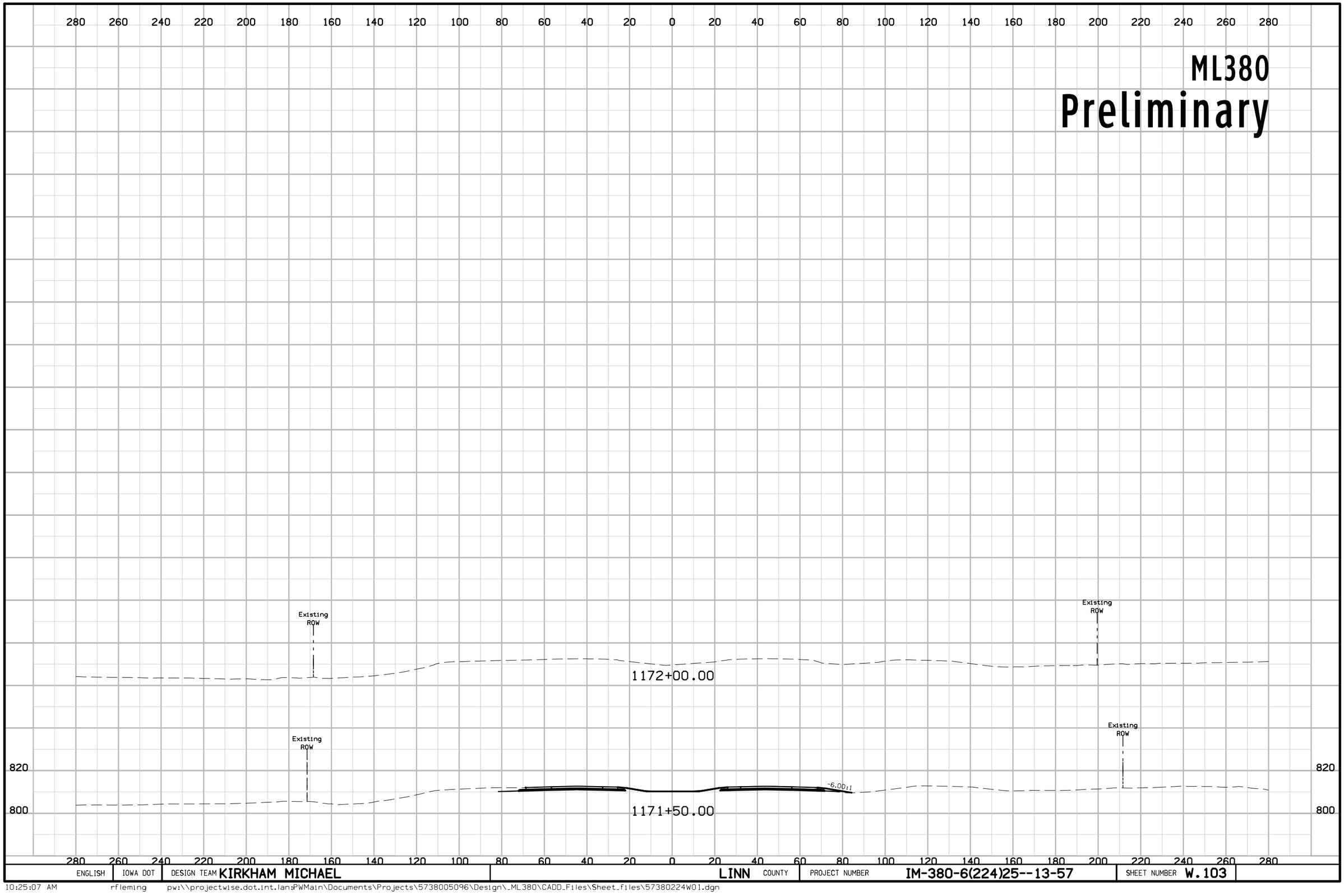
1168+00.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.102

10:25:03 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

ML380

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER W.103

10:25:07 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\57380224W01.dgn

BOYSON ROAD
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

870
860

Existing ROW
4.02:1
1967+00.00
4.21:1
Existing ROW

Existing ROW
4.07:1
1966+50.00
4.05:1
Existing ROW

Existing ROW
4.08:1
1966+00.00
4.00:1
Existing ROW

Existing ROW
4.07:1
1965+50.00
4.00:1
Existing ROW

Existing ROW
1965+00.00
Existing ROW

Existing ROW
1964+50.00
Existing ROW

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER X.1

10:26:06 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310X01.dgn

BOYSON ROAD

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

870
860

1970+00.00

870
860

-7.17:1

-7.70:1

1969+50.00

870

-4.16:1

-4.32:1

1969+00.00

870
860

-4.10:1

-4.00:1

1968+50.00

870
860

-4.02:1

-4.05:1

1968+00.00

870
860

Existing ROW

-4.00:1

-4.12:1

Existing ROW

1967+50.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER X.2

10:26:06 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310X01.dgn

BOYSON ROAD
Preliminary

1972+50.00

1972+00.00

1971+50.00

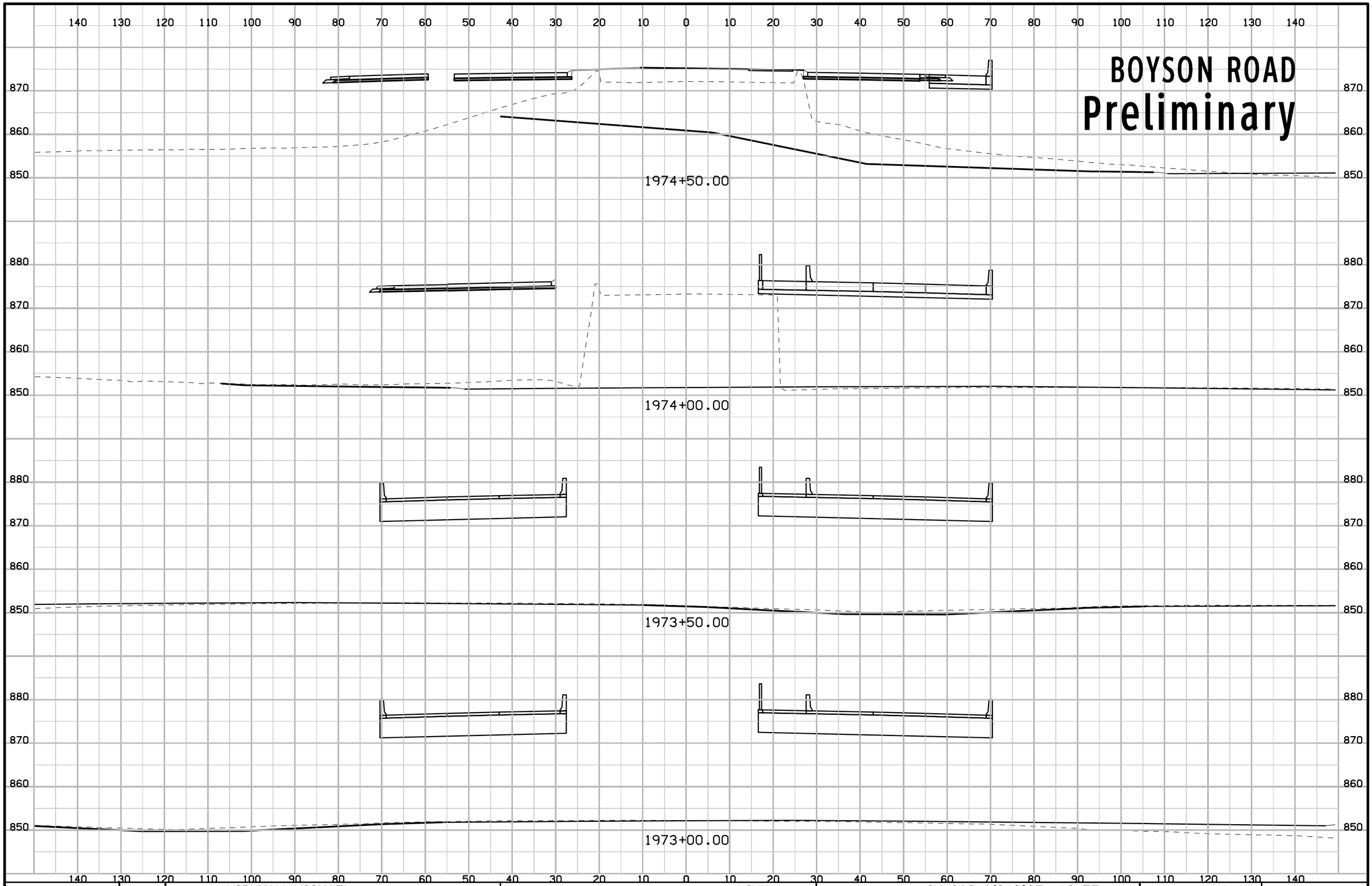
1971+00.00

1970+50.00

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER X.3

10:26:07 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310X01.dgn

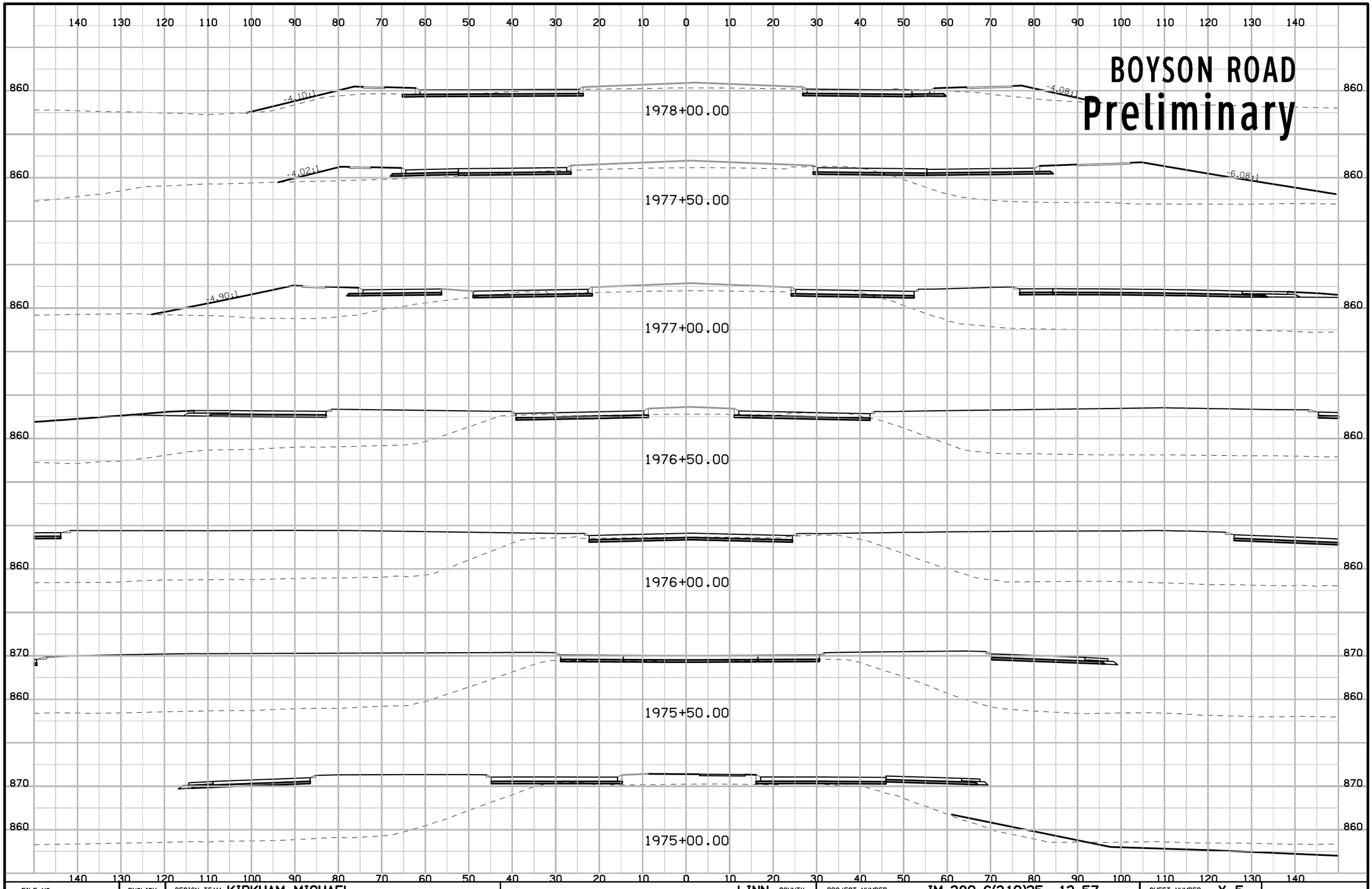
BOYSON ROAD
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER X.4

10:26:08 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310X01.dgn

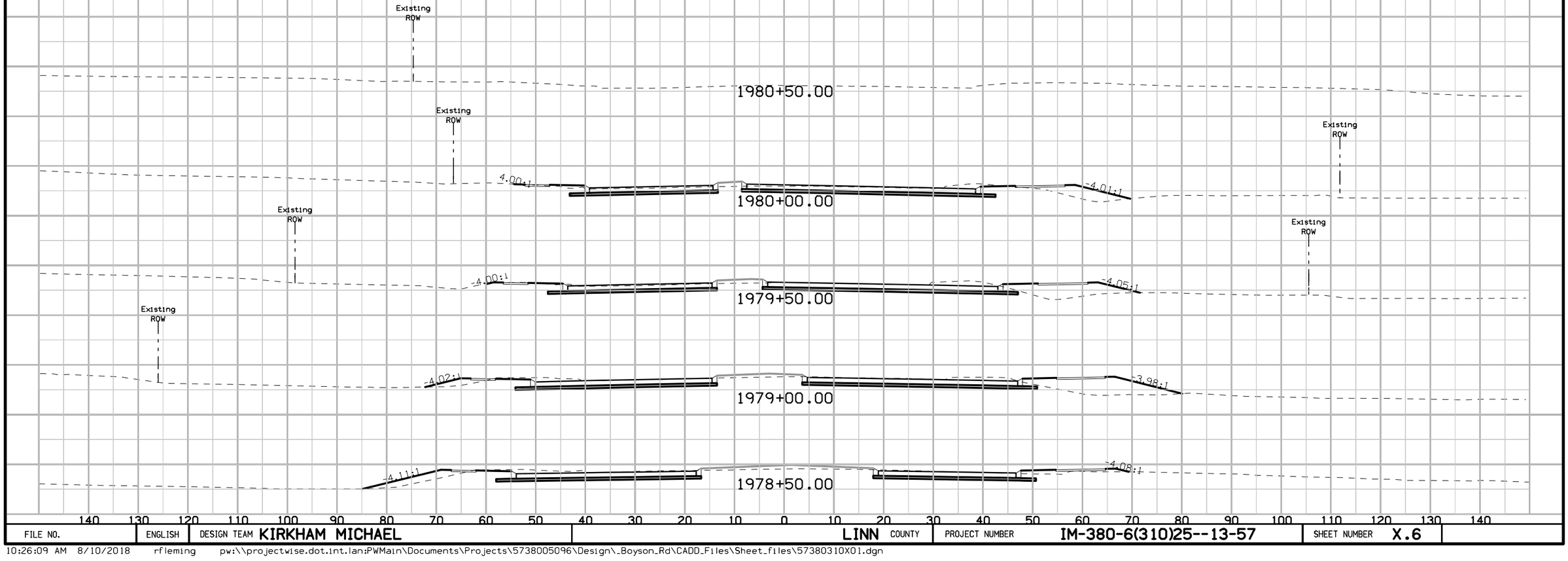
BOYSON ROAD
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER X.5

10:26:08 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310X01.dgn

BOYSON ROAD
Preliminary

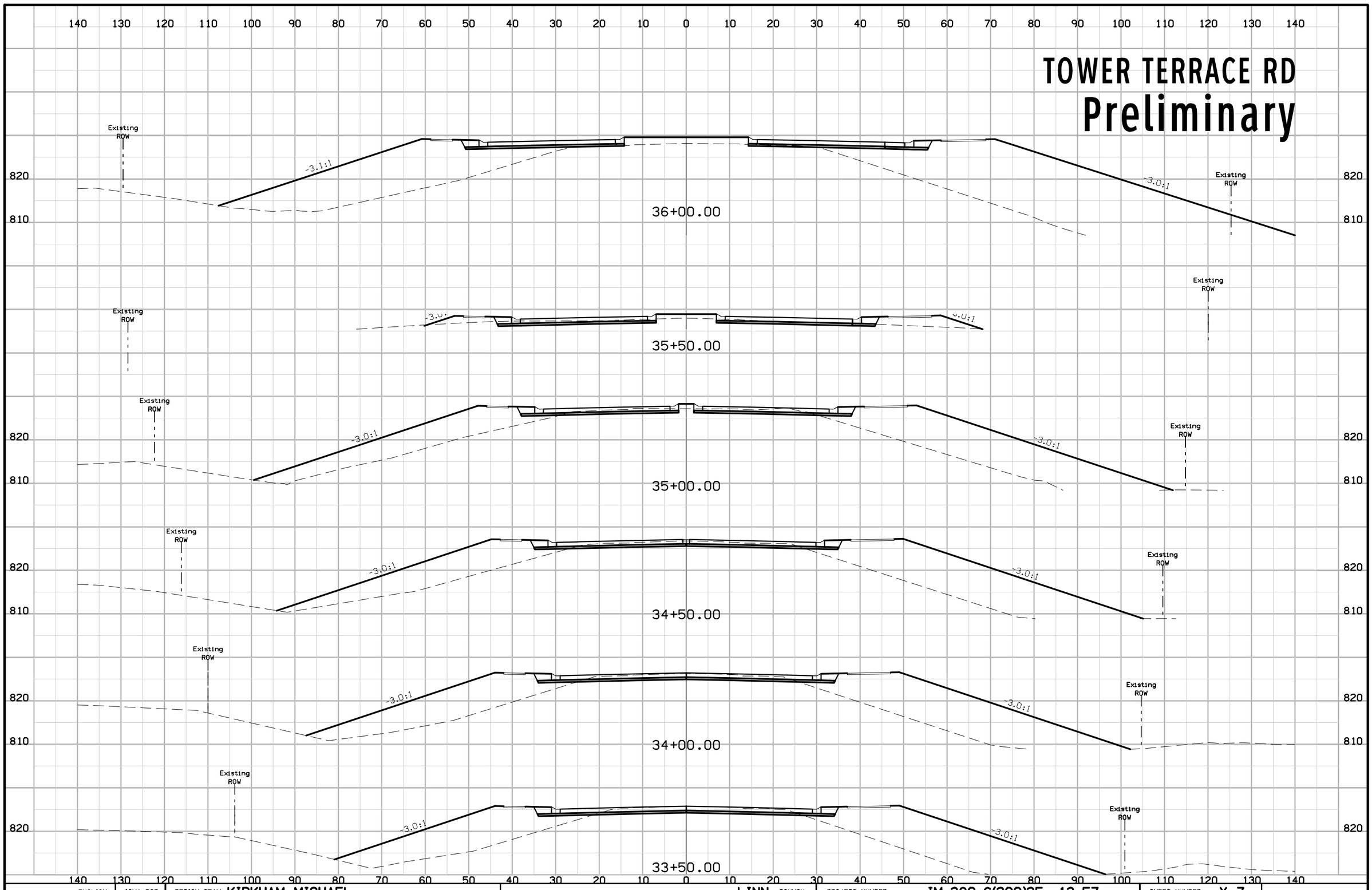


FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER X.6

10:26:09 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310X01.dgn

TOWER TERRACE RD

Preliminary

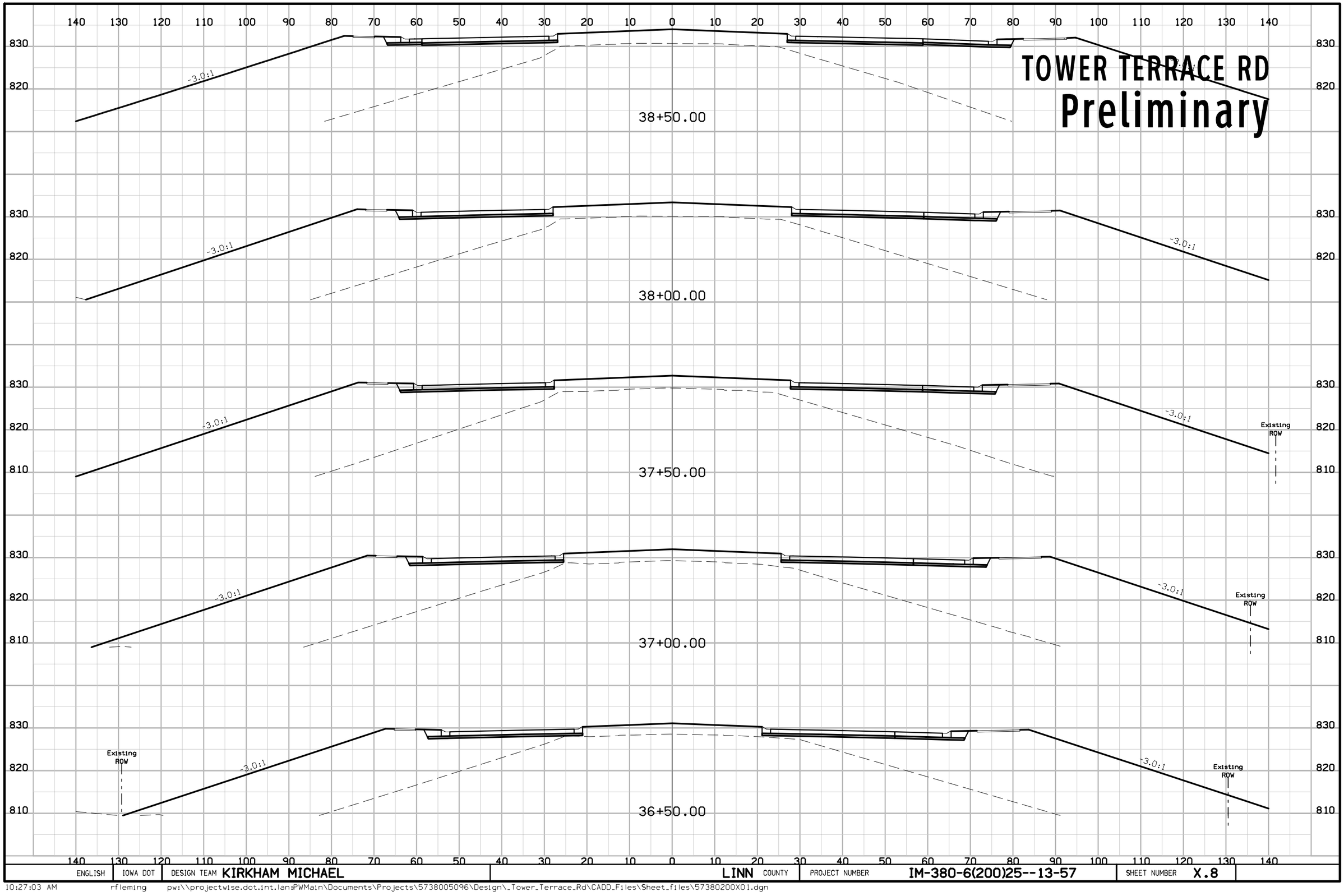


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER	IM-380-6(200)25--13-57	SHEET NUMBER	X.7

10:27:03 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200X01.dgn

TOWER TERRACE RD

Preliminary

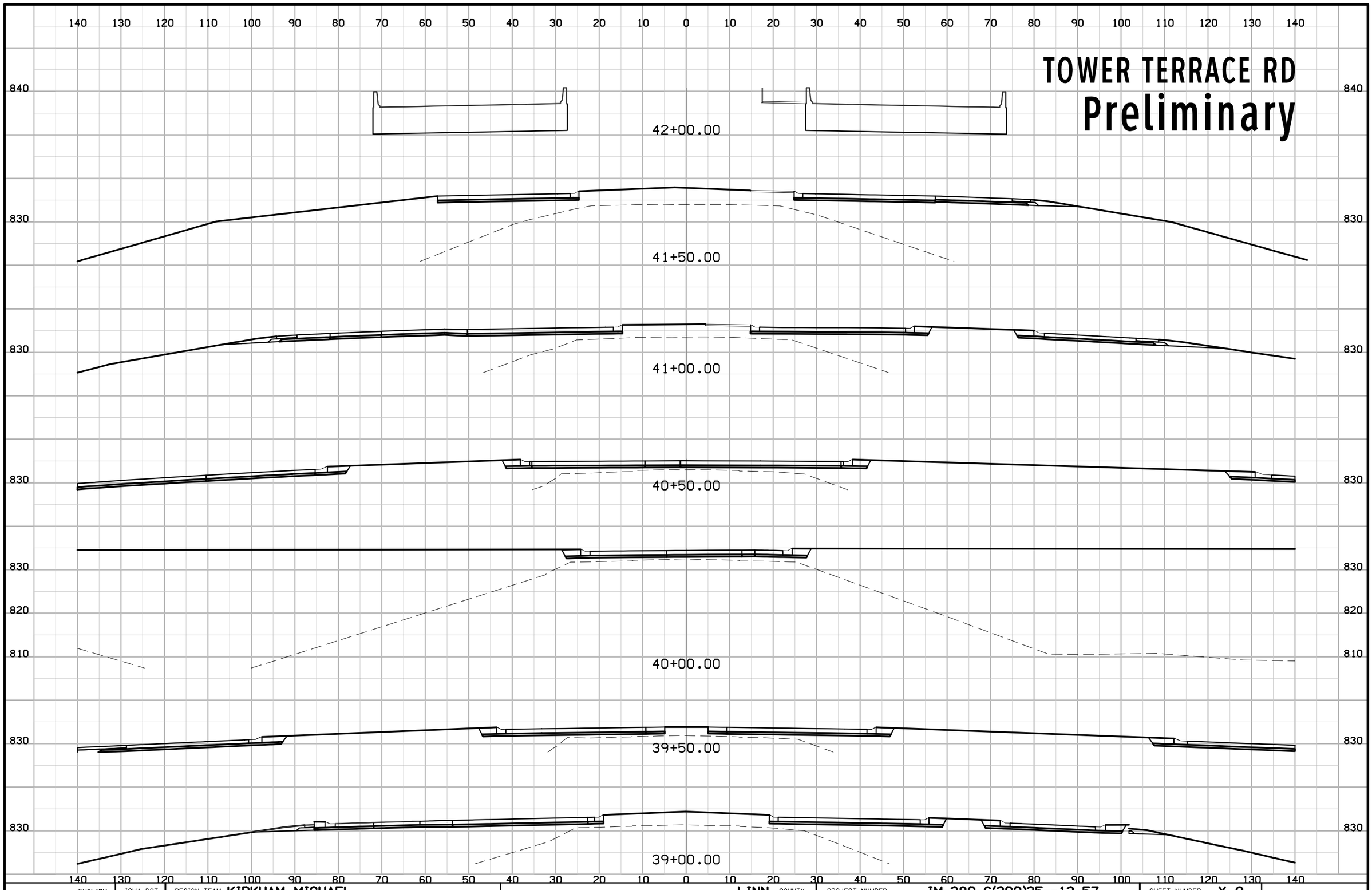


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL		LINN COUNTY	PROJECT NUMBER	IM-380-6(200)25--13-57	SHEET NUMBER X.8

10:27:03 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200X01.dgn

TOWER TERRACE RD

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER X.9

10:27:04 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200X01.dgn

TOWER TERRACE 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

45+50.00

840

45+00.00

840

830

44+50.00

840

44+00.00

840

43+50.00

840

43+00.00

840

42+50.00

840

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 KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER X.10

10:27:05 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200X01.dgn

TOWER TERRACE 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

Existing ROW

-3.0:1

48+50.00

Existing ROW

-3.0:1

840

840

830

Existing ROW

-3.0:1

48+00.00

Existing ROW

-3.0:1

840

830

840

Existing ROW

-3.0:1

47+50.00

Existing ROW

-3.0:1

840

840

47+00.00

840

840

840

830

46+50.00

840

840

830

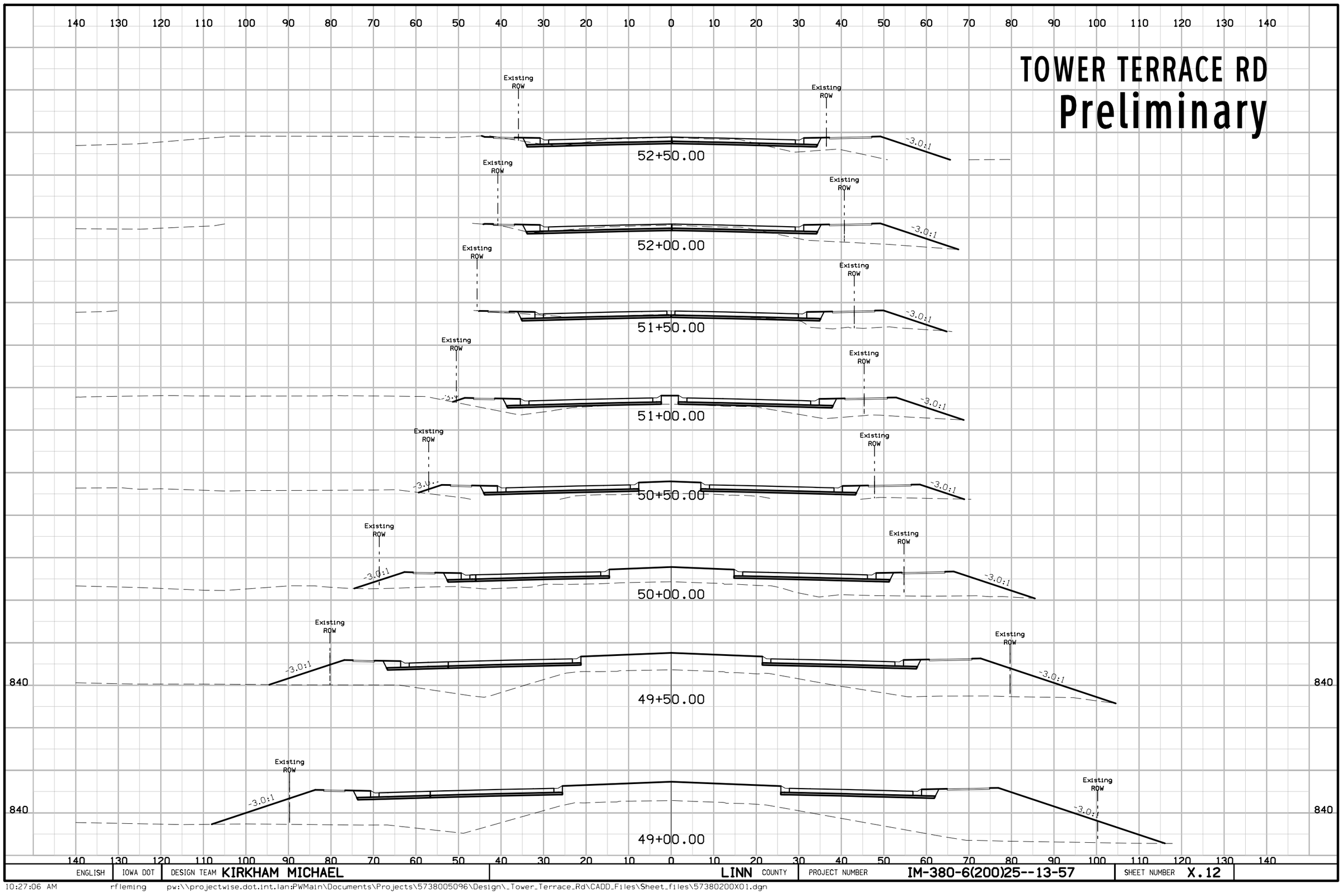
46+00.00

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 KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER X.11

10:27:06 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200X01.dgn

TOWER TERRACE RD
Preliminary

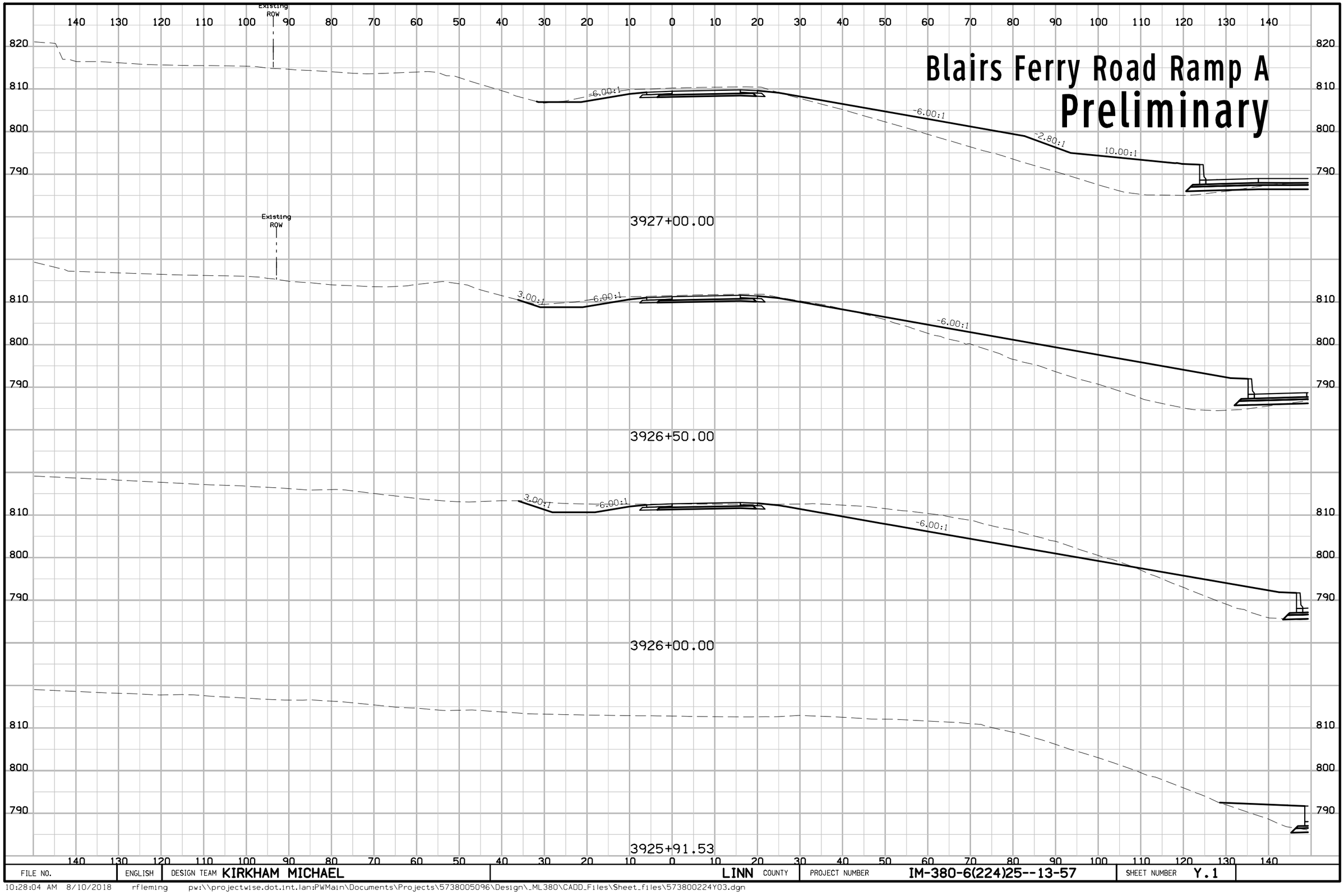


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER X.12

10:27:06 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200X01.dgn

Blairs Ferry Road Ramp A

Preliminary

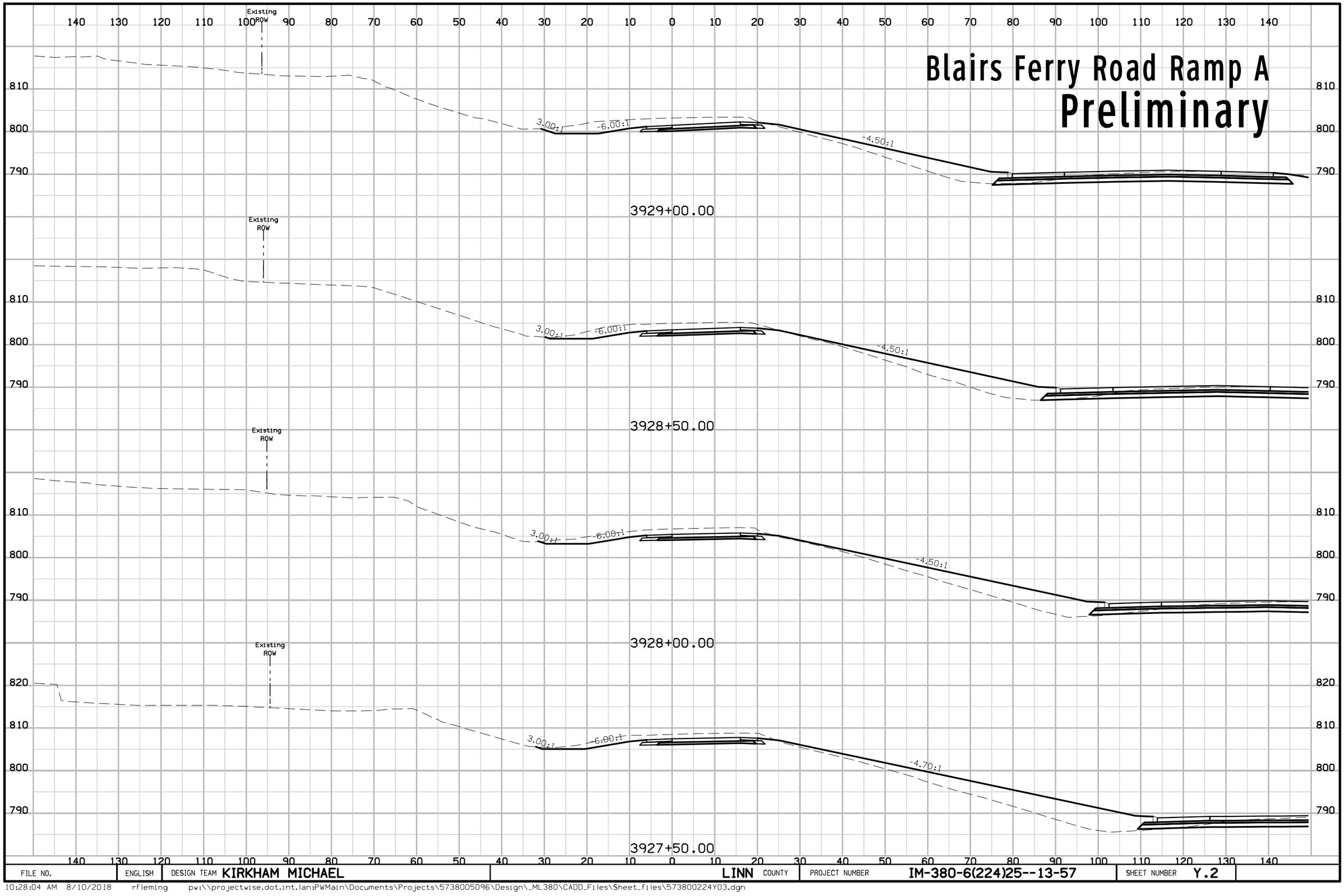


FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.1

10:28:04 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road Ramp A

Preliminary

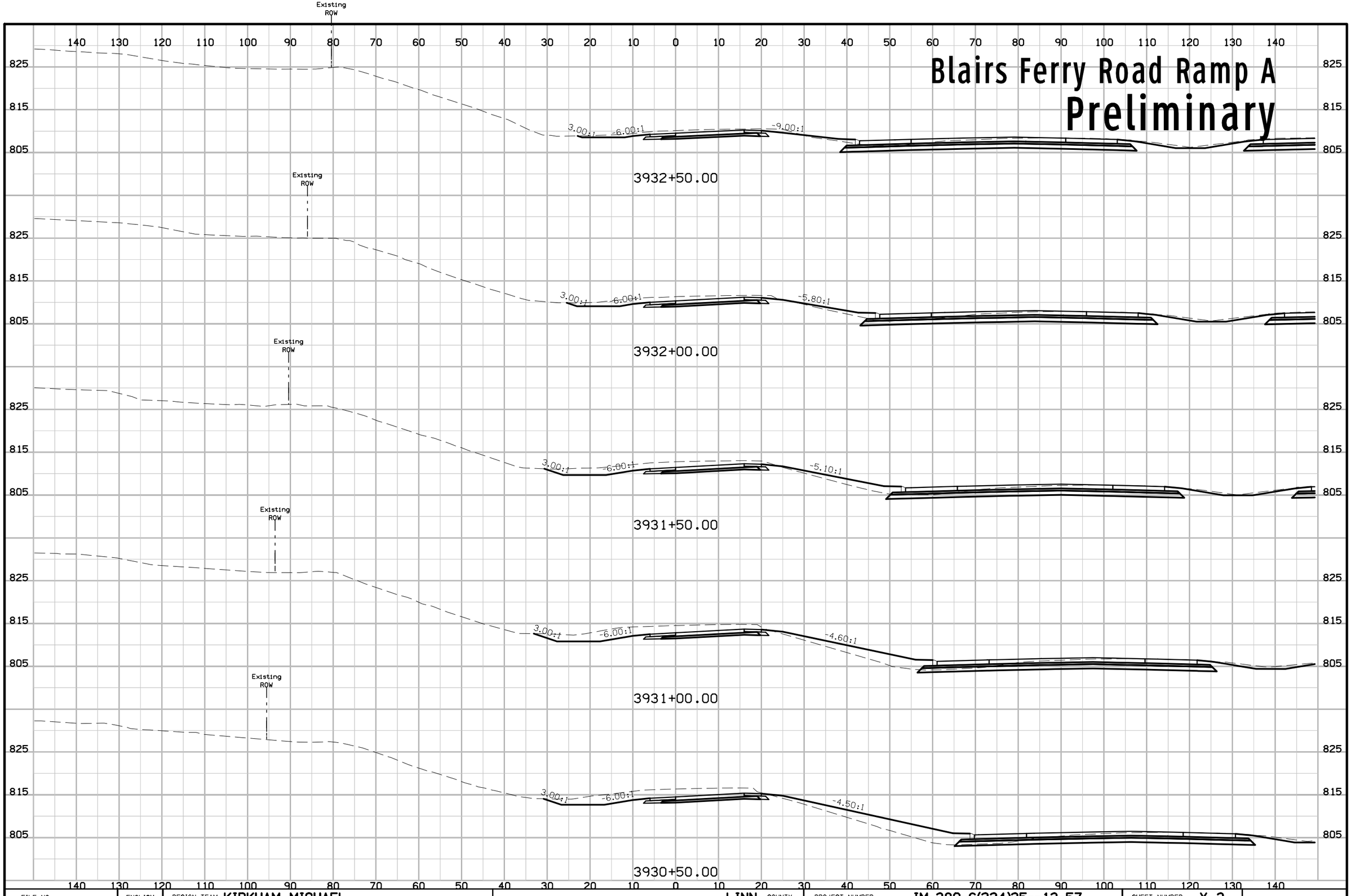


FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.2

10:28:04 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road Ramp A

Preliminary

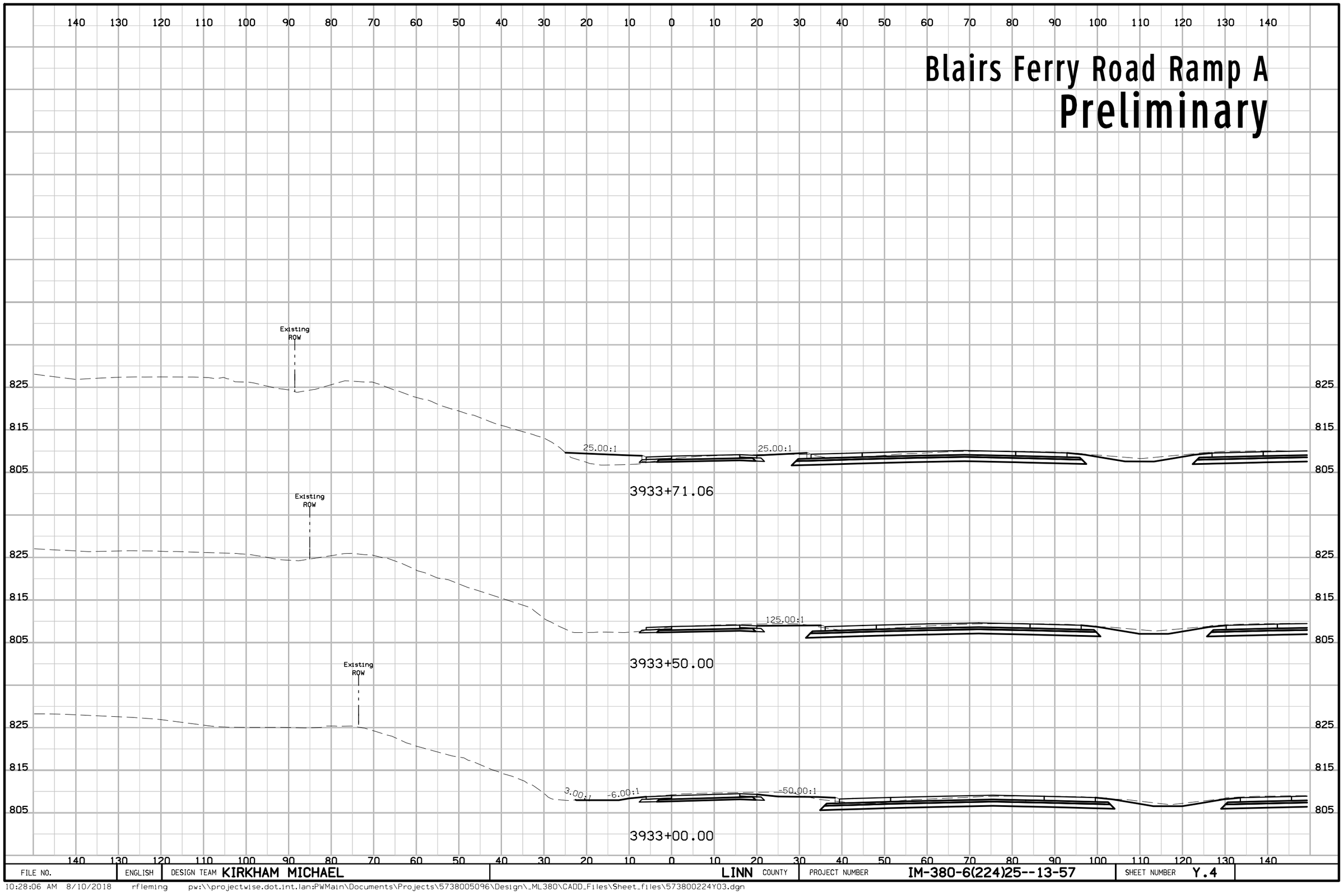


FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.3

10:28:05 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road Ramp A

Preliminary

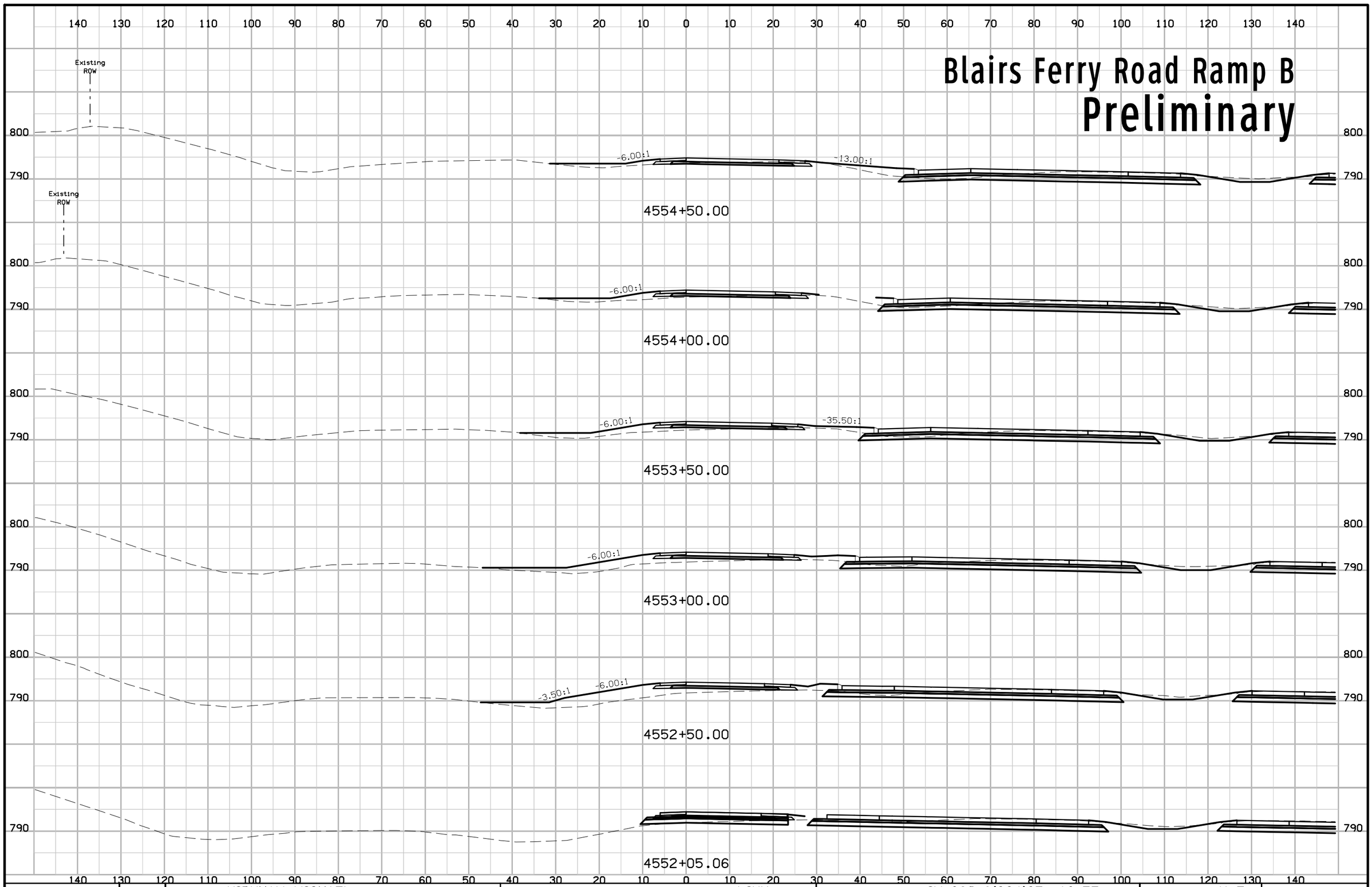


FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.4

10:28:06 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road Ramp B

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.5

10:28:06 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road Ramp B

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

810 800 790

Existing ROW

4557+50.00

Existing ROW

4557+00.00

Existing ROW

4556+50.00

-6.00:1 -7.50:1

Existing ROW

4556+00.00

-6.00:1 -8.50:1

Existing ROW

4555+50.00

-6.00:1 -10.00:1

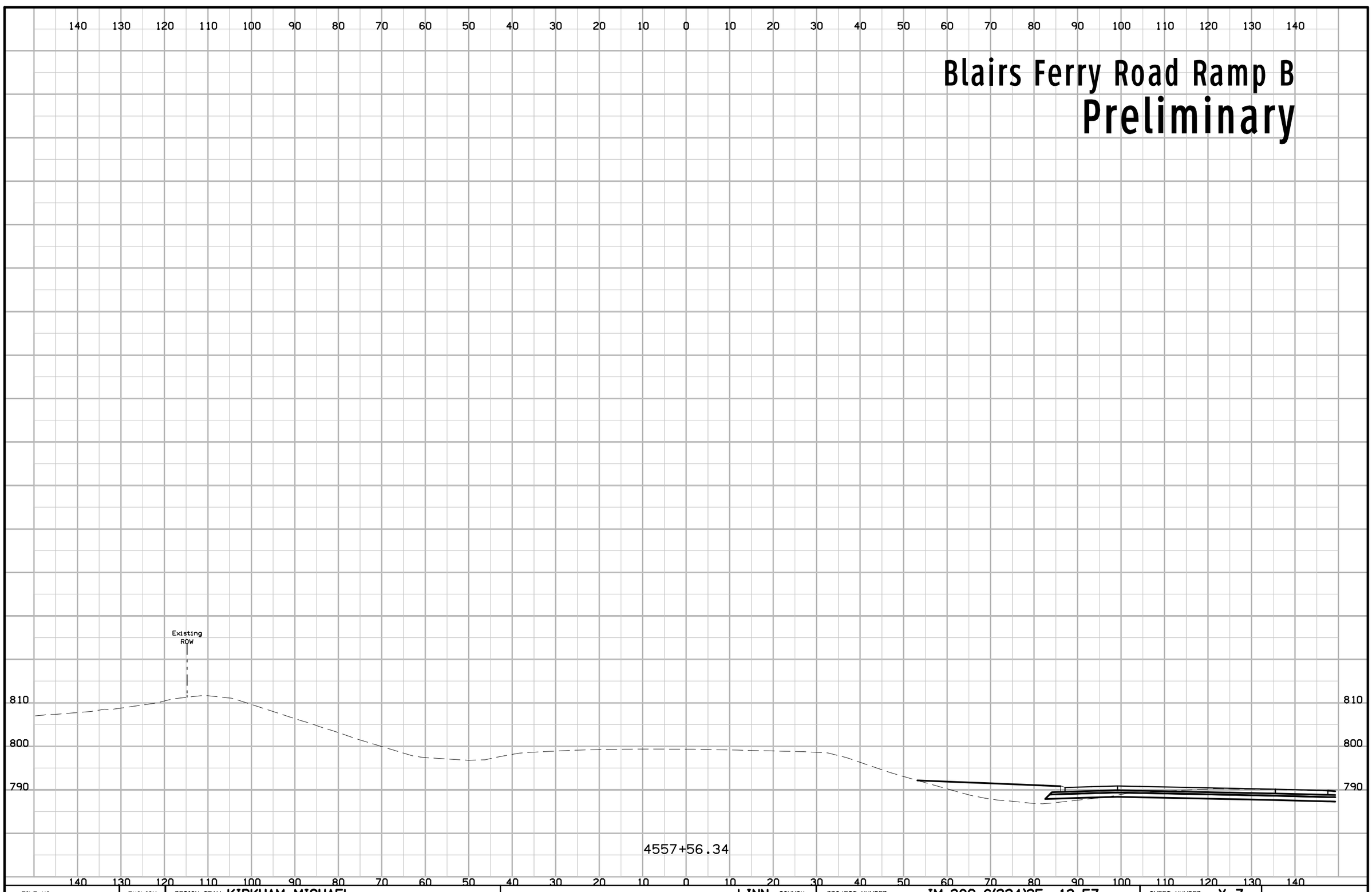
4555+00.00

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.6

10:28:07 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road Ramp B

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.7

10:28:08 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road Ramp C

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

Existing ROW

-3.35:1 -6.00:1 3.00:1

5554+00.00

-3.28:1 -6.00:1 3.00:1

5553+50.00

-3.18:1 -6.00:1 3.00:1

5553+00.00

-3.12:1 -6.00:1 3.00:1

5552+50.00

-8.70:1 -6.00:1

5552+00.00

-15.79:1 -6.00:1

5551+50.00

-256.40:1 -6.00:1

5551+00.00

-6.00:1

5550+50.00

-6.00:1 -3.50:1

5550+43.28

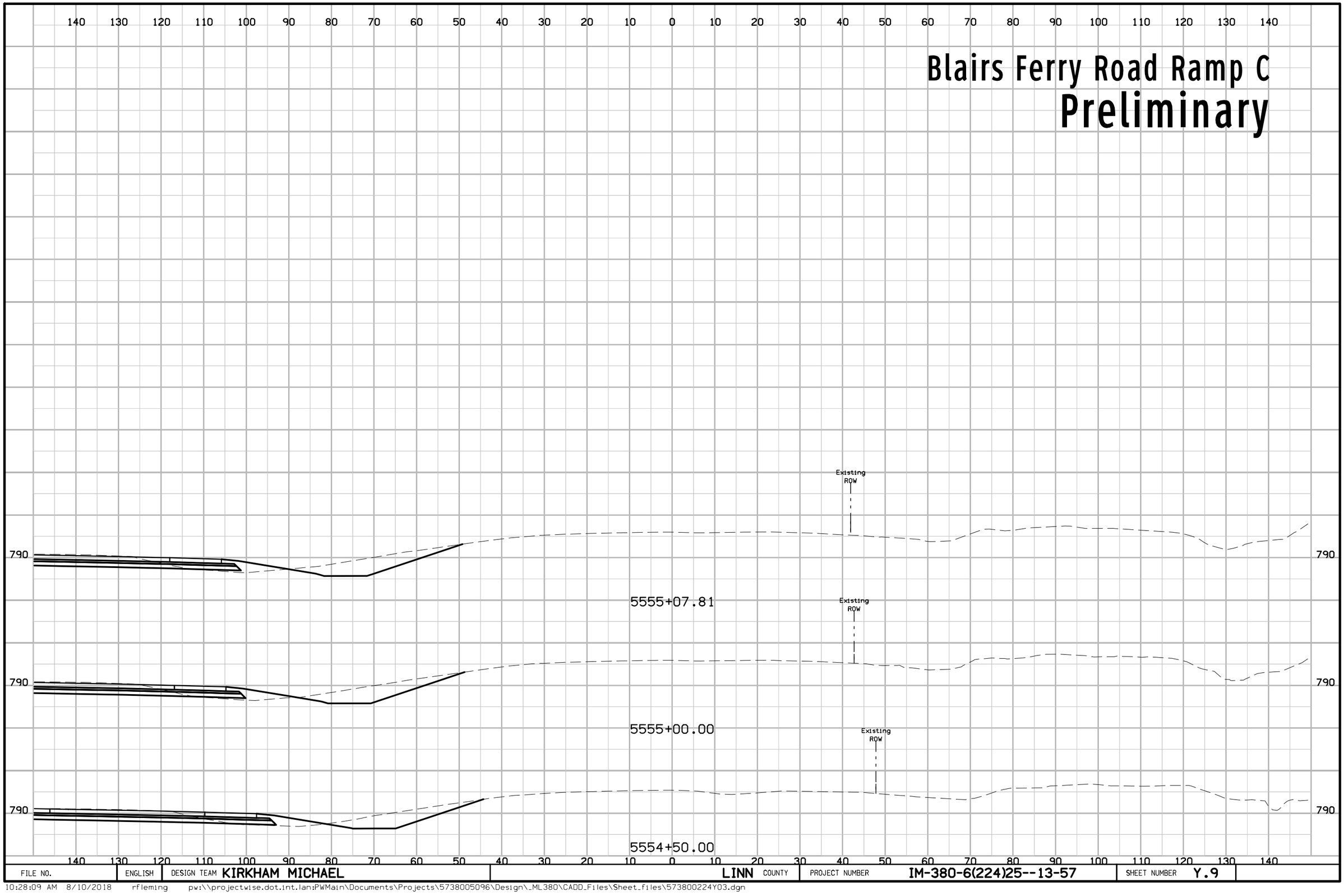
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.8

10:28:09 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road Ramp C

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.9

10:28:09 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road 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

810
800
790

Existing ROW

25.00:1

4.20:1

6926+50.00

Existing ROW

25.00:1

4.00:1

6926+00.00

Existing ROW

4.70:1

6925+50.00

Existing ROW

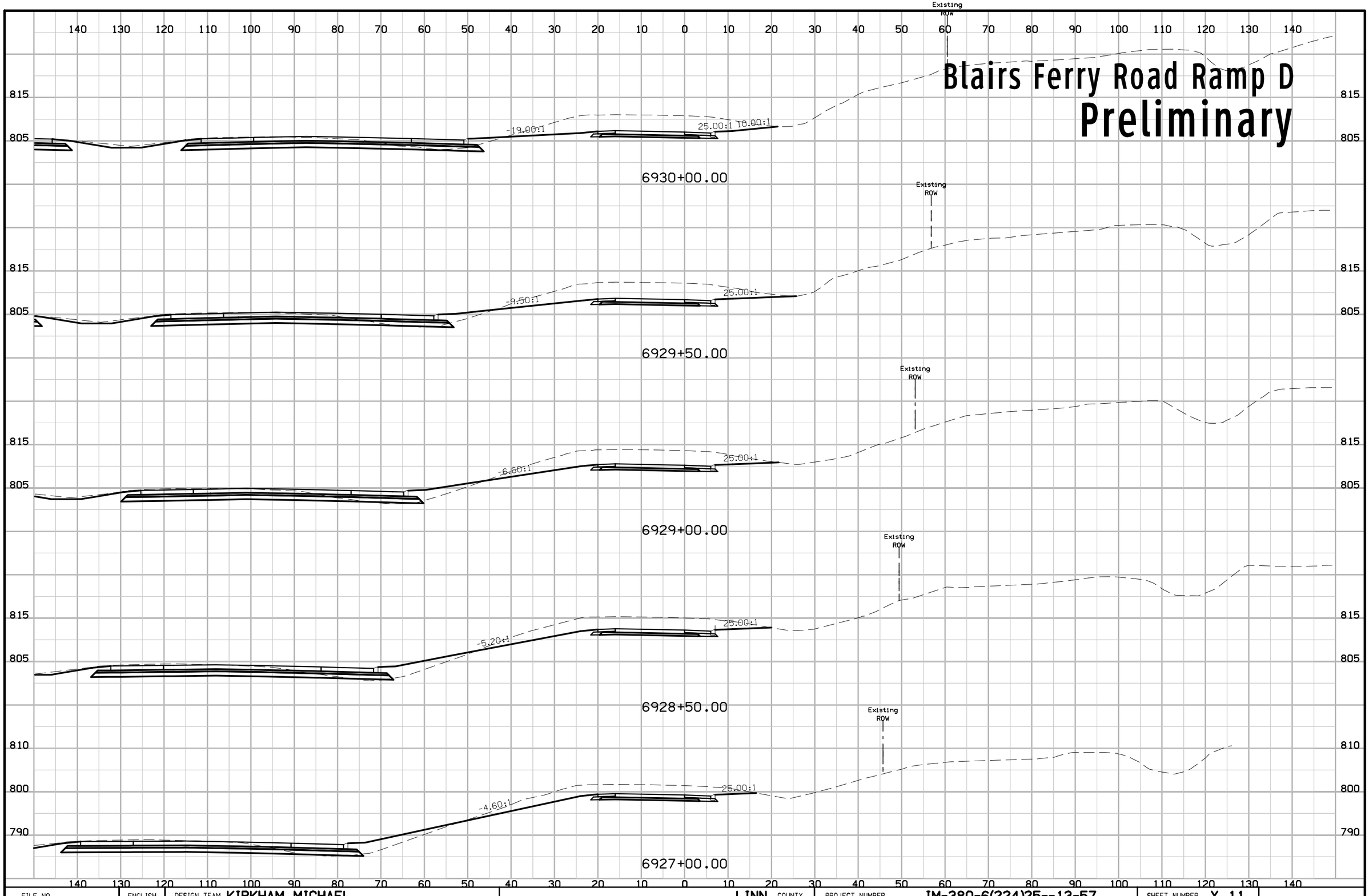
6925+18.98

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.10

10:28:10 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road Ramp D

Preliminary

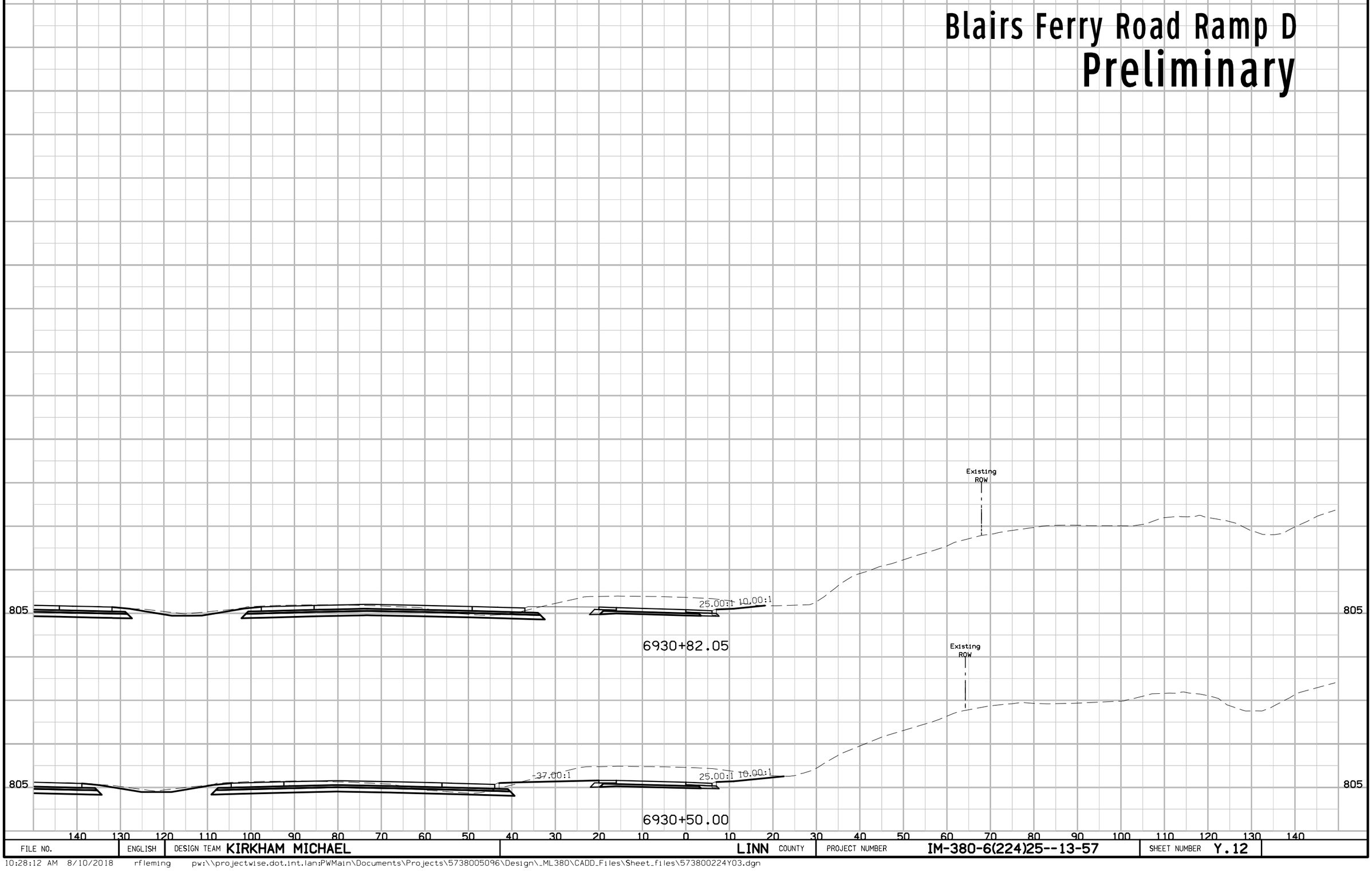


FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.11

10:28:11 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Blairs Ferry Road Ramp D

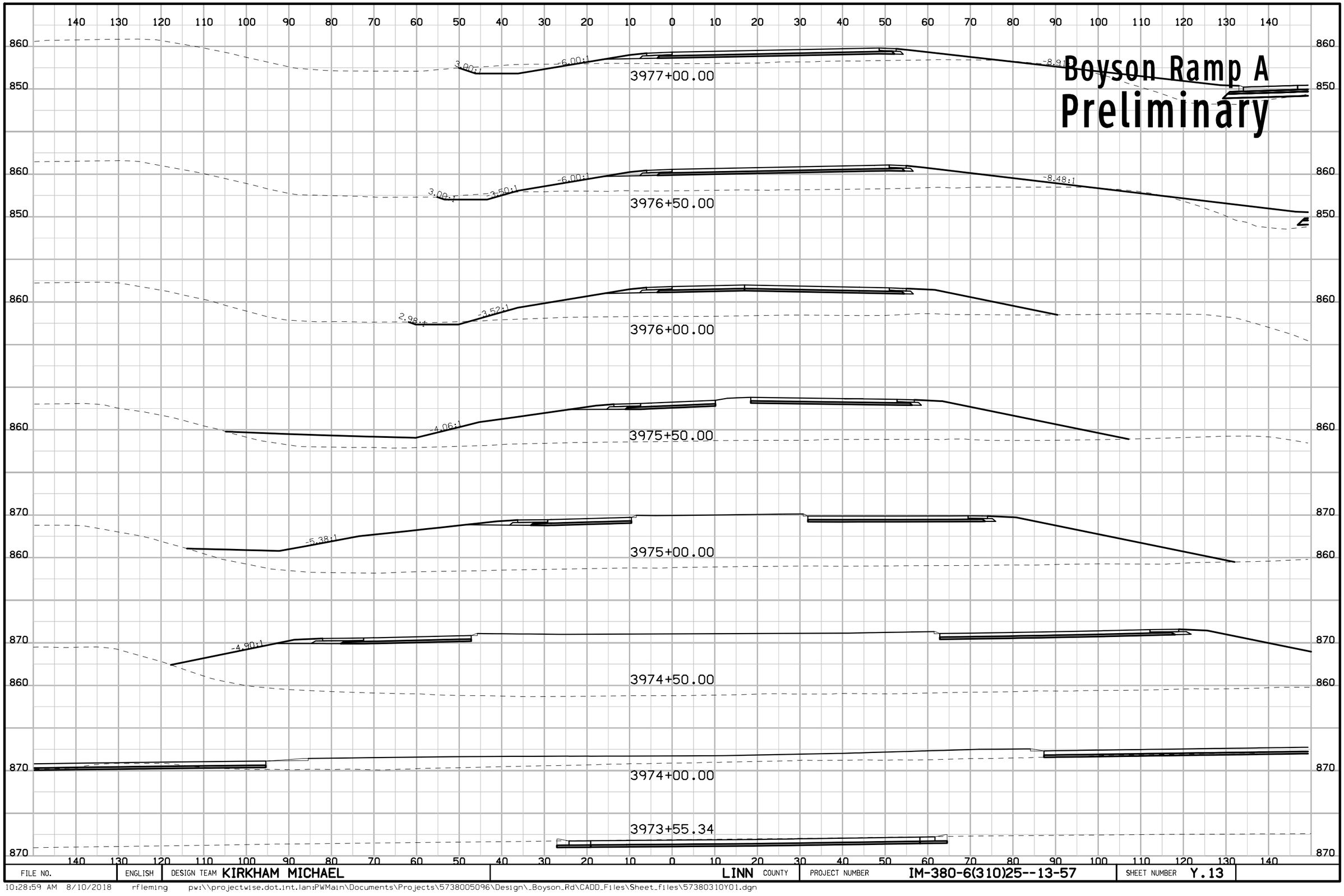
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.12

10:28:12 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y03.dgn

Boyson Ramp A
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.13

10:28:59 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y01.dgn

Boyson 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

850

3.00:1 -6.00:1

3981+00.00

850

3.00:1 -6.00:1 8.25%

3980+50.00

850

3.00:1 -6.00:1 0.86%

3980+00.00

850

3.00:1 -6.00:1 -2.9%

3979+50.00

850

3.00:1 -6.00:1 -5.8%

3979+00.00

850

3.00:1 -6.00:1 -11.77:1

3978+50.00

850

3.00:1 -6.00:1 -10.01:1

3978+00.00

860

850

3.00:1 -6.00:1 -9.46:1

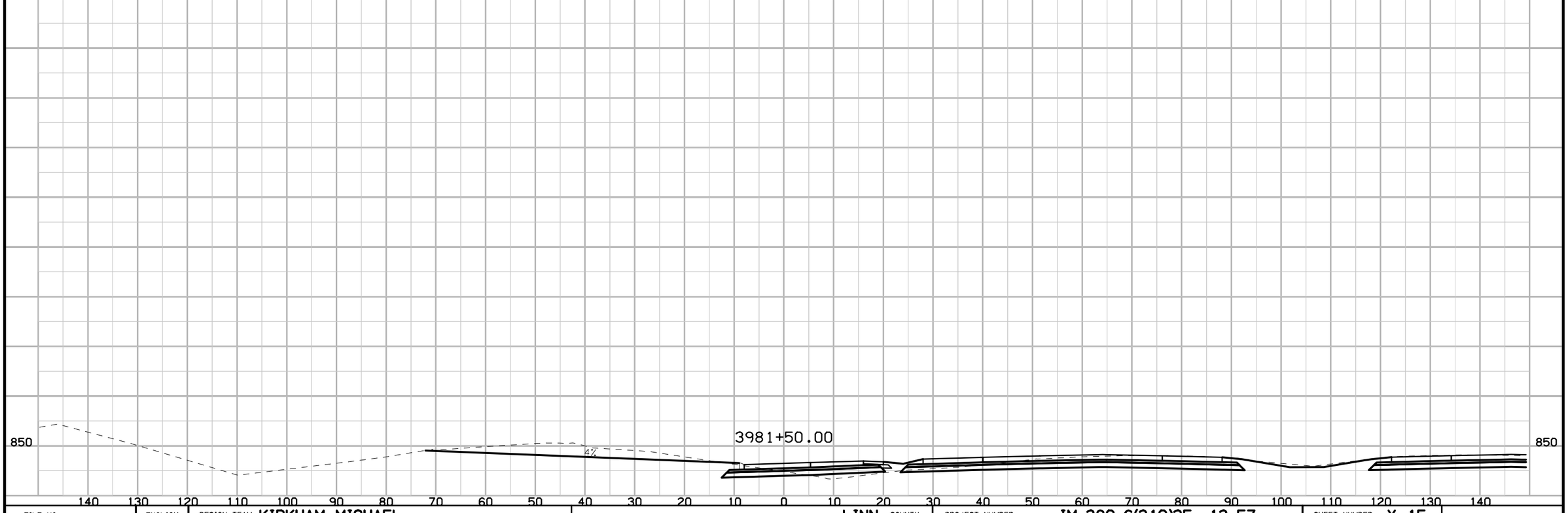
3977+50.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.14

10:29:00 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y01.dgn

Boyson Ramp A
Preliminary

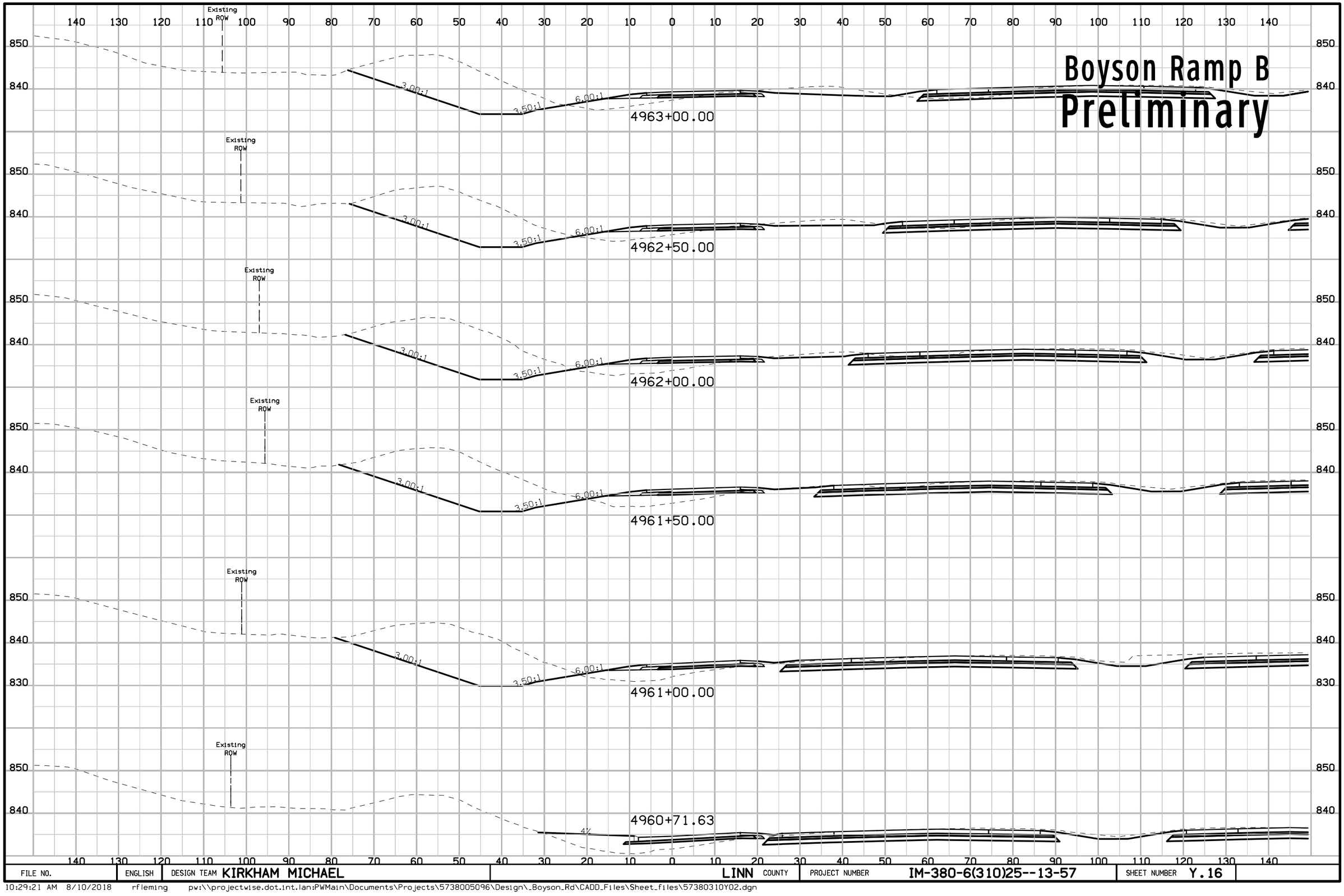


FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.15

10:29:00 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y01.dgn

Boyson Ramp B

Preliminary



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.16

10:29:21 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y02.dgn

Boyson Ramp B
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

Existing ROW

850

3.00:1 3.50:1 6.00:1 -5.07:1

4966+00.00

850

Existing ROW

850

840

3.00:1 3.50:1 6.00:1 -4.95:1

4965+50.00

850

840

Existing ROW

850

840

3.00:1 3.50:1 6.00:1 -4.51:1

4965+00.00

850

840

Existing ROW

850

840

3.00:1 3.50:1 6.00:1 -3.91:1

4964+50.00

850

840

Existing ROW

850

840

3.00:1 3.50:1 6.00:1 -4.80:1

4964+00.00

850

840

Existing ROW

850

840

3.00:1 3.50:1 6.00:1

4963+50.00

850

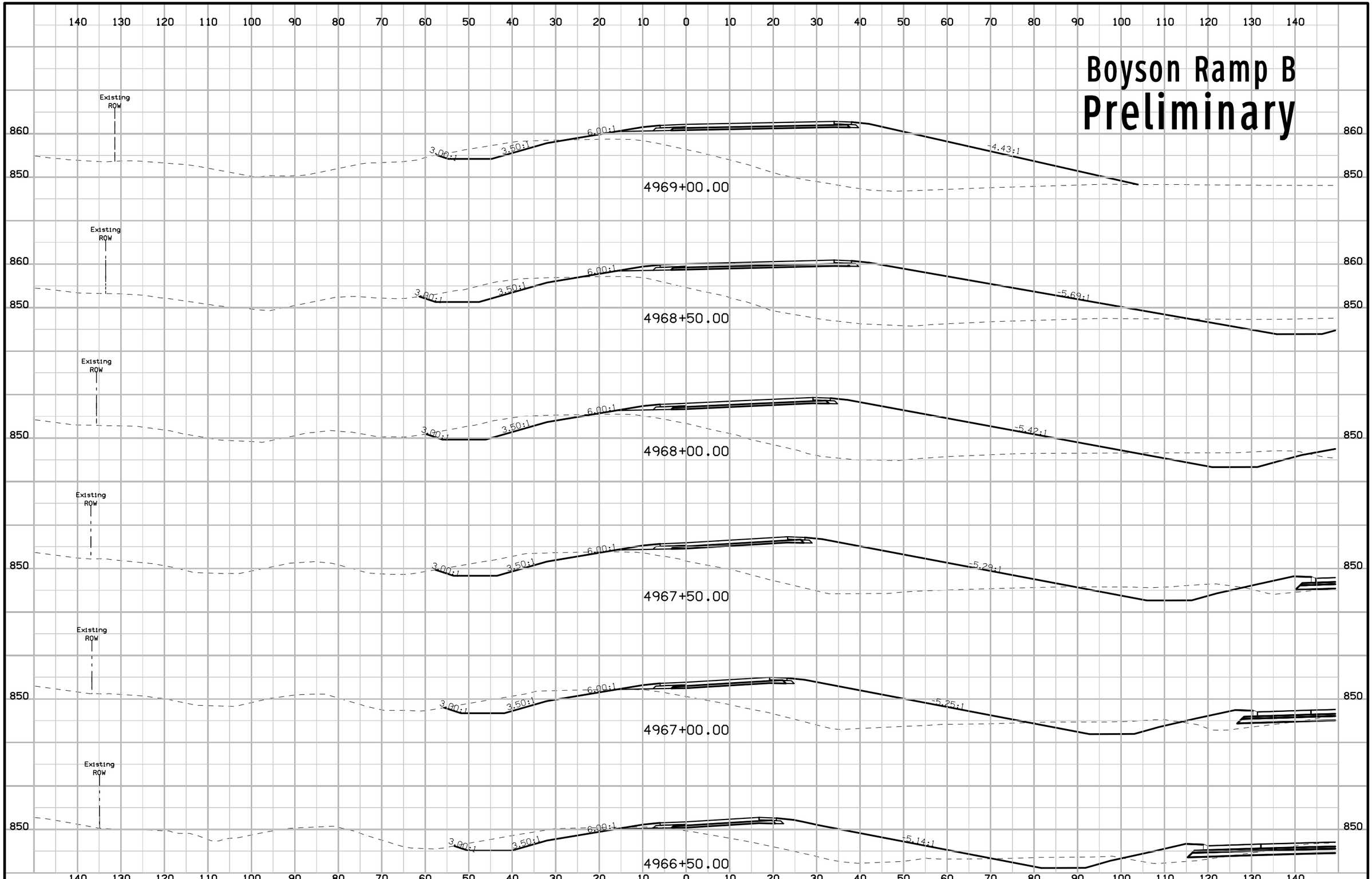
840

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.17

10:29:22 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y02.dgn

Boyson Ramp B
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.18

10:29:23 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y02.dgn

Boyson Ramp B
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

870
860

3.00:1 3.50:1 6.00:1

4972+00.00

870
860

3.00:1 3.50:1 6.00:1 -5.14:1

4971+50.00

Existing ROW

860

3.00:1 3.50:1 6.00:1 -4.46:1

4971+00.00

Existing ROW

860

3.00:1 3.50:1 6.00:1 -3.65:1

4970+50.00

Existing ROW

860
850

3.00:1 6.00:1 -3.15:1

4970+00.00

Existing ROW

860
850

3.00:1 3.50:1 6.00:1 -3.70:1

4969+50.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.19

10:29:23 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y02.dgn

Boyson Ramp B
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

870
860

4974+57.76

4974+50.00

4974+00.00

-5.13:1

4973+50.00

3.99:1
3.50:1
6.00:1

4973+00.00

3.00:1
3.50:1
6.00:1

4972+50.00

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.20

10:29:24 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y02.dgn

Boyson Ramp C
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 / 840

Existing ROW

6.00:1 3.50:1 3.00:1

5961+00.00

840 / 840

Existing ROW

6.00:1 3.50:1 3.00:1

5960+50.00

840 / 830

Existing ROW

6.00:1 3.50:1 3.00:1

5960+00.00

840 / 830

Existing ROW

6.00:1 3.50:1 3.00:1

5959+50.00

840 / 830

Existing ROW

6.00:1 3.50:1 3.00:1

5959+00.00

840 / 830

Existing ROW

6.00:1 3.50:1 3.00:1

5958+72.82

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.21

10:29:45 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y03.dgn

Boyson Ramp C
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

6.00:1 3.50:1 3.00:1

5964+50.00

5964+00.00

5963+50.00

5963+00.00

5962+50.00

5962+00.00

5961+50.00

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.22

10:29:45 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y03.dgn

Boyson Ramp C

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

850

8.56:1 6.00:1 3.50:1 3.00:1

5968+00.00

850

850

8.61:1 6.00:1 3.50:1 3.00:1

5967+50.00

850

850

8.48:1 6.00:1 3.50:1 8.00:1

5967+00.00

850

850

9% 6.00:1 3.50:1 3.00:1

5966+50.00

850

850

5% 6.00:1 3.50:1 3.00:1

5966+00.00

850

850

3% 6.00:1 3.50:1 3.00:1

5965+50.00

840

840

1% 6.00:1 3.50:1 3.00:1

5965+00.00

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.23

10:29:46 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y03.dgn

Boyson Ramp C

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

860

4.63:1

5971+00.00

6.00:1

860

860

6.61:1

5970+50.00

6.00:1

3.50:1

860

860

7.08:1

5970+00.00

6.00:1

3.50:1

860

860

8.29:1

5969+50.00

6.00:1

3.50:1

3.00:1

860

850

850

860

8.40:1

5969+00.00

6.00:1

3.50:1

3.00:1

860

850

850

8.47:1

5968+50.00

6.00:1

3.50:1

3.00:1

850

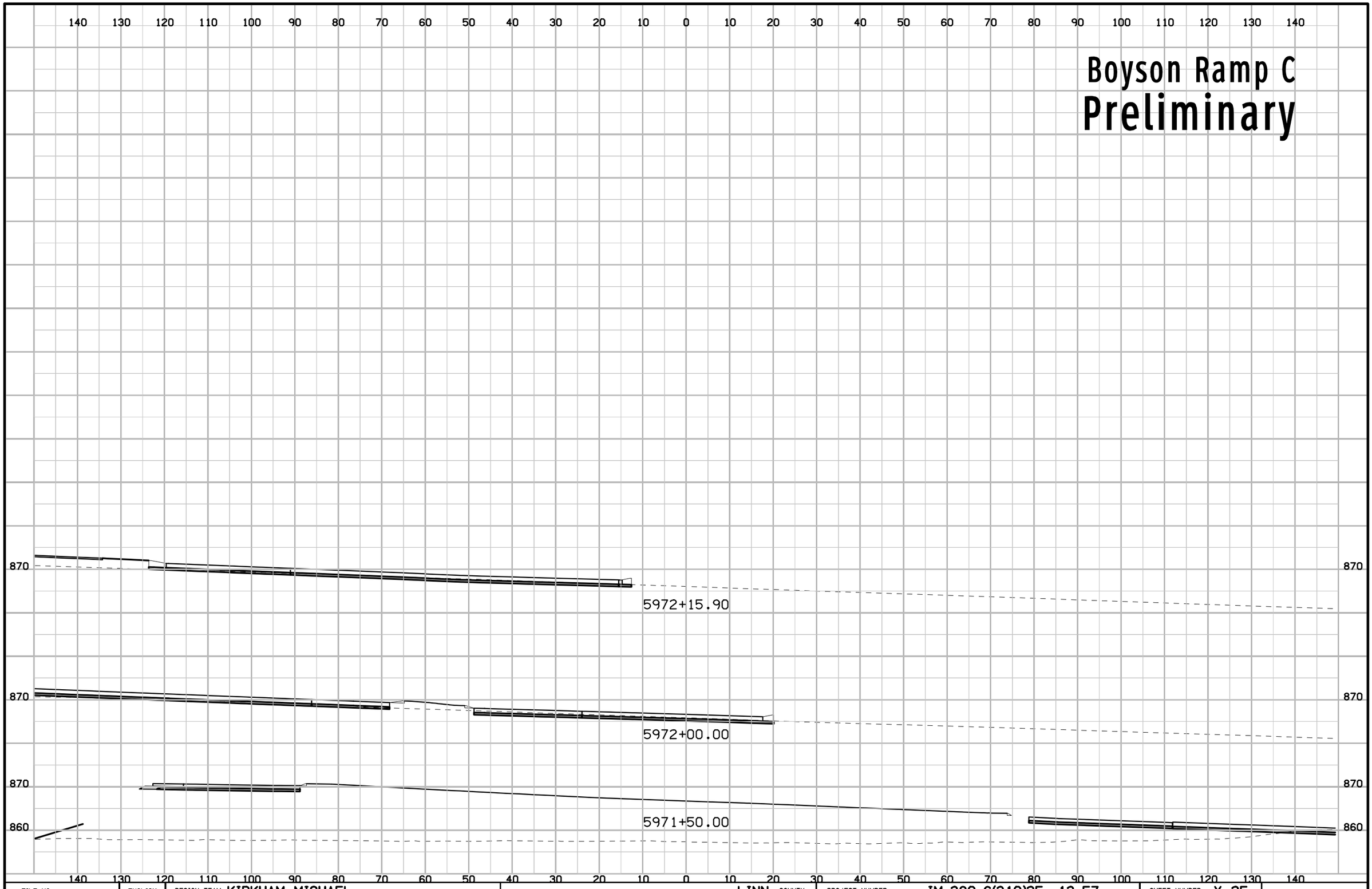
850

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.24

10:29:47 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y03.dgn

Boyson Ramp C
Preliminary



FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.25

10:29:47 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y03.dgn

Boyson 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

860

10%

6974+00.00

-6.00:1

-3.50:1

-3.00:1

860

860

11%

6973+50.00

-6.01:1

-3.51:1

860

870

860

6973+00.00

-5.95:1

-3.61:1

870

860

6972+50.00

-5.36:1

870

860

6972+00.00

870

860

6971+66.72

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.26

10:30:08 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y04.dgn

Boyson 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

850

11.70:1

6977+50.00

6.00:1 3.50:1 3.00:1

Existing ROW

850

9%

6977+00.00

6.00:1 3.50:1 3.00:1

Existing ROW

850

9%

6976+50.00

6.00:1 3.50:1 3.00:1

Existing ROW

850

9%

6976+00.00

6.00:1 3.50:1 3.00:1

Existing ROW

860

850

10%

6975+50.00

6.00:1 3.50:1 3.00:1

Existing ROW

860

850

11%

6975+00.00

6.00:1 3.50:1 3.00:1

Existing ROW

860

10%

6974+50.00

6.00:1 3.50:1 3.00:1

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.27

10:30:09 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y04.dgn

Boyson 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

850

-6.17:1 -6.00:1 -3.50:1 3.00:1

6980+50.00

850

850

-6.83:1 -6.00:1 -3.50:1 3.00:1

6980+00.00

850

850

-7.74:1 -6.00:1 -3.50:1 3.00:1

6979+50.00

850

850

-9.30:1 -6.00:1 -3.50:1 3.00:1

6979+00.00

850

850

-10.74:1 -6.00:1 -3.50:1 3.00:1

6978+50.00

850

850

-11.59:1 -6.00:1 -3.50:1 3.00:1

6978+00.00

850

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.28

10:30:10 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y04.dgn

Boyson 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

850
840

Existing ROW

6983+18.56

-6.00:1

Existing ROW

6983+00.00

-6.00:1

-3.50:1

6982+50.00

-6.00:1

-3.50:1

6982+00.00

-6.00:1

-3.50:1

6981+50.00

-6.00:1

-3.50:1

-5.58:1

6981+00.00

-6.00:1

-3.50:1

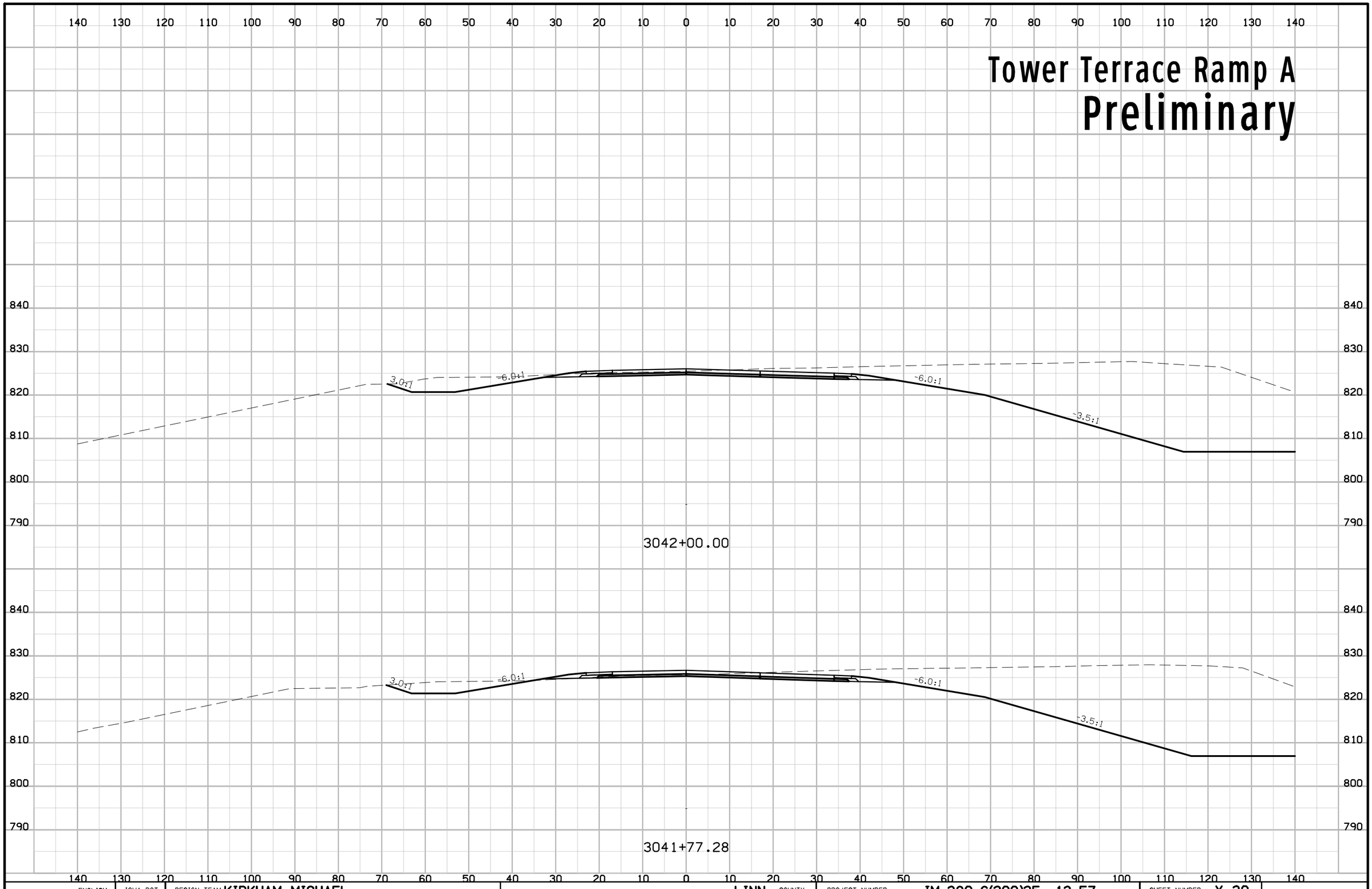
140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140

FILE NO.	ENGLISH	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(310)25--13-57	SHEET NUMBER Y.29

10:30:10 AM 8/10/2018 rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Boyson_Rd\CADD_Files\Sheet_files\57380310Y04.dgn

Tower Terrace Ramp A

Preliminary

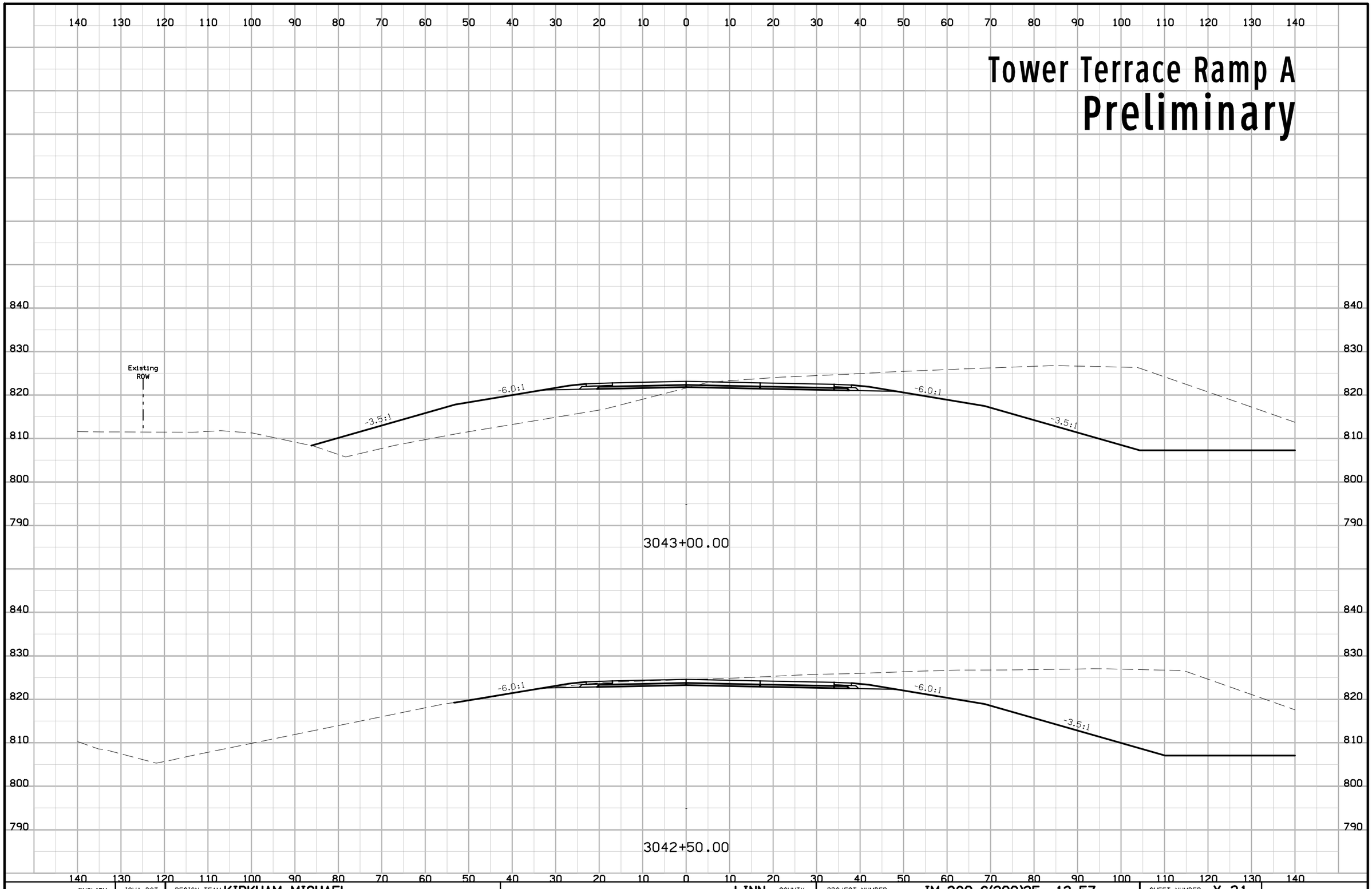


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.30

10:31:06 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y01.dgn

Tower Terrace Ramp A

Preliminary

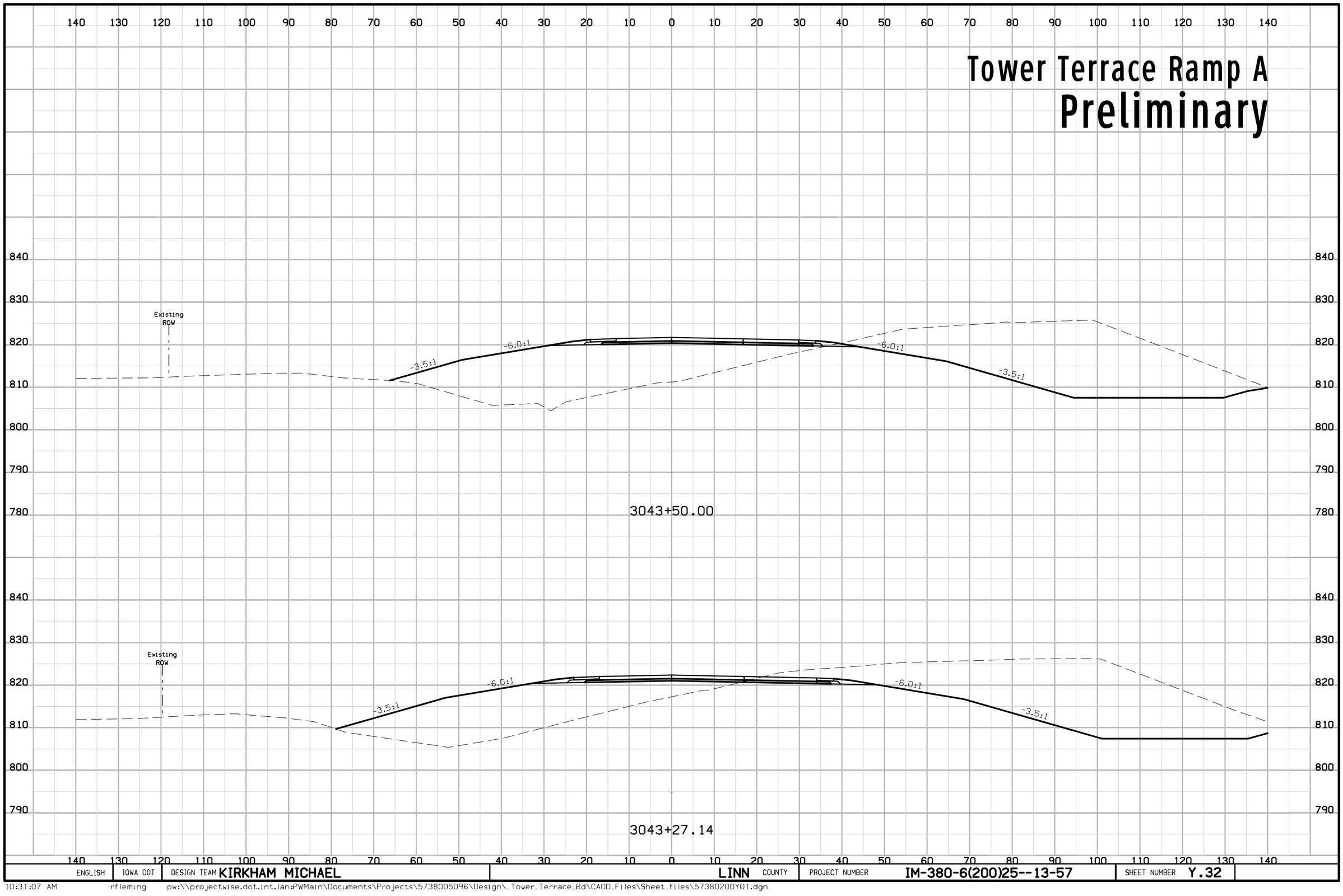


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.31

10:31:06 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y01.dgn

Tower Terrace Ramp A

Preliminary

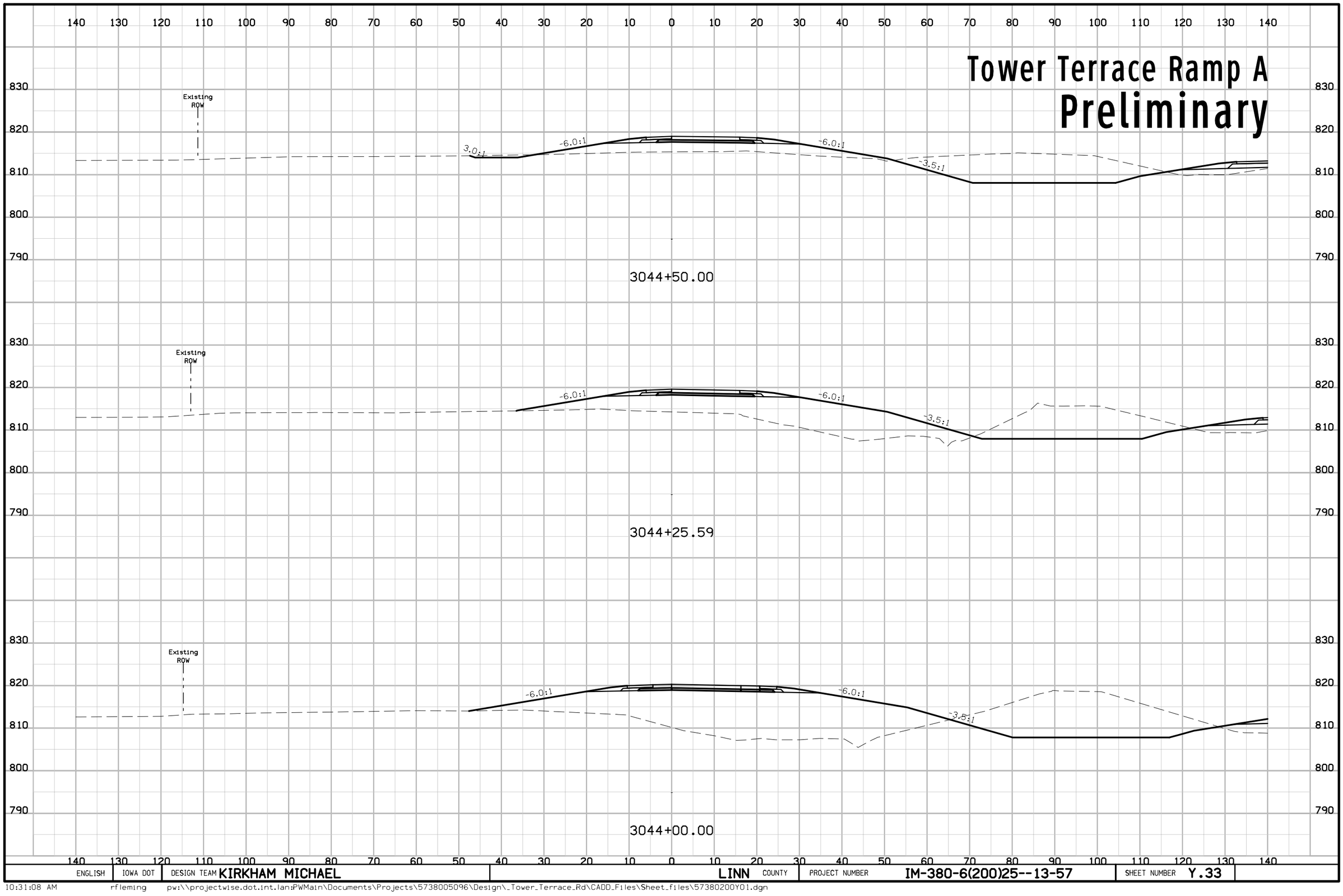


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.32

10:31:07 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y01.dgn

Tower Terrace Ramp A

Preliminary

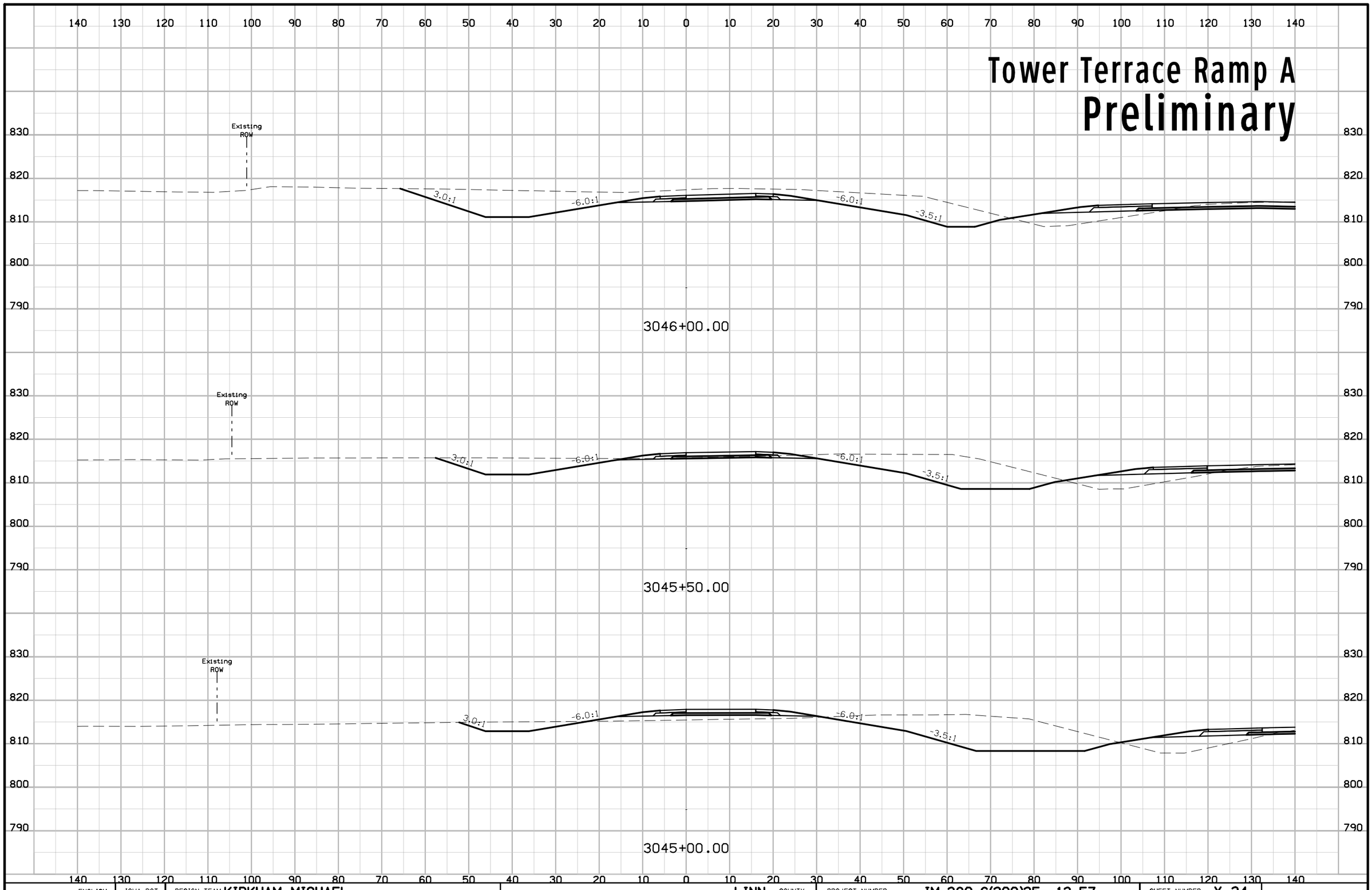


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.33

10:31:08 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y01.dgn

Tower Terrace Ramp A

Preliminary

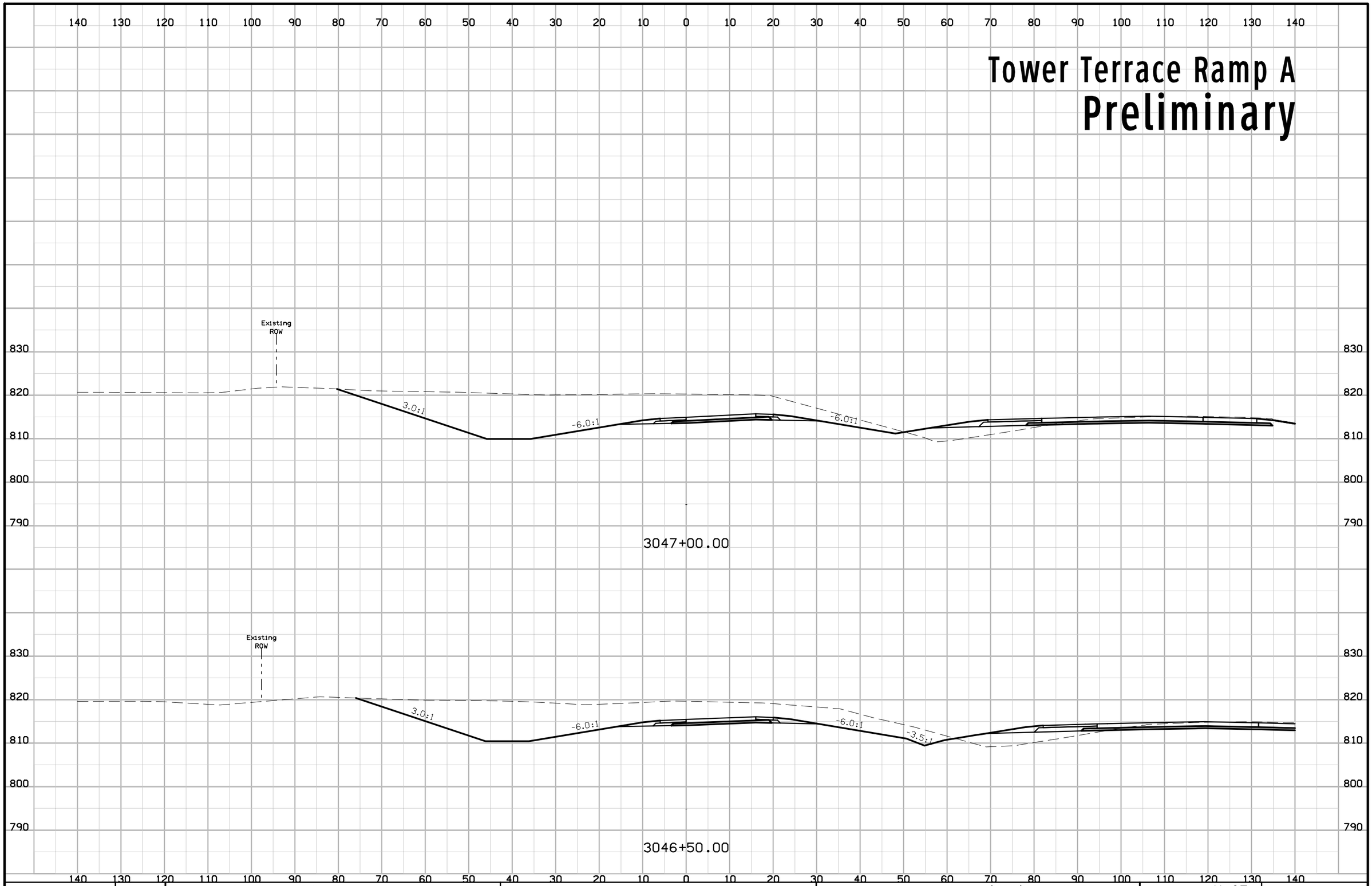


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.34

10:31:08 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y01.dgn

Tower Terrace Ramp A

Preliminary

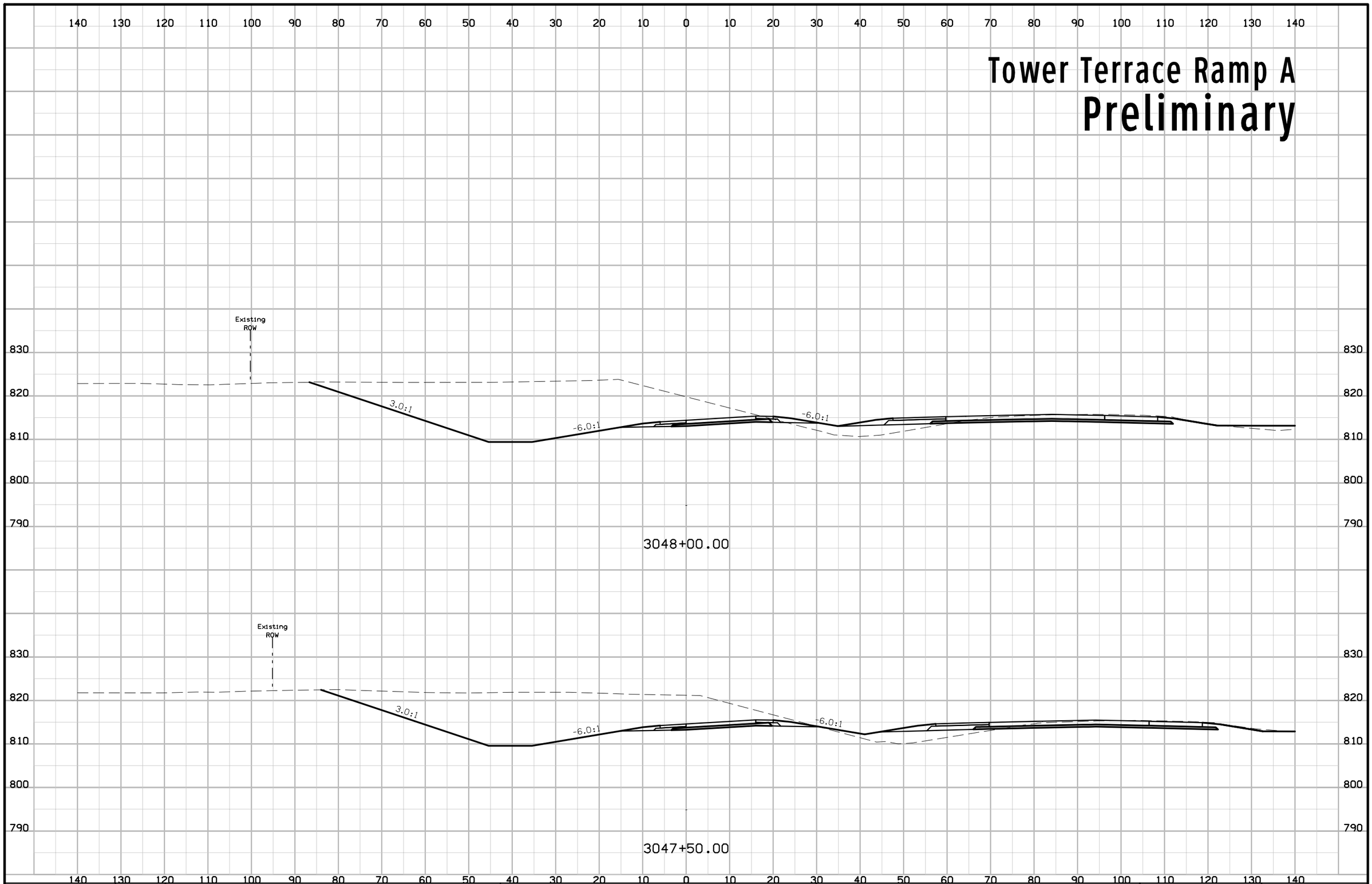


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.35

10:31:09 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y01.dgn

Tower Terrace Ramp A

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.36

10:31:10 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y01.dgn

Tower Terrace 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

840 830 820 810 800 790

Existing ROW

3.0:1

-6.0:1

-6.0:1

3049+00.00

Existing ROW

3.0:1

-6.0:1

-6.0:1

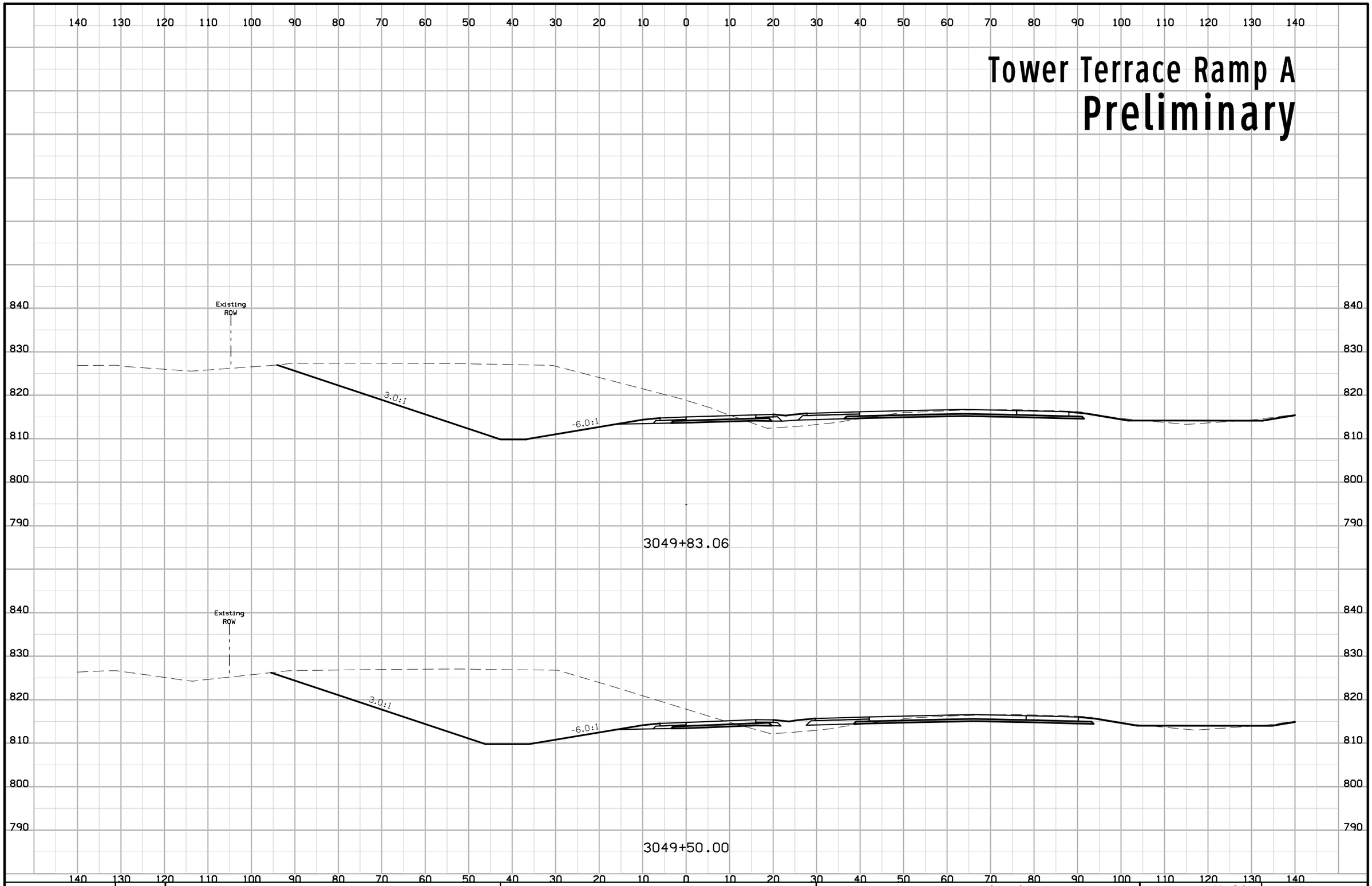
3048+50.00

ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.37

10:31:10 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y01.dgn

Tower Terrace Ramp A

Preliminary

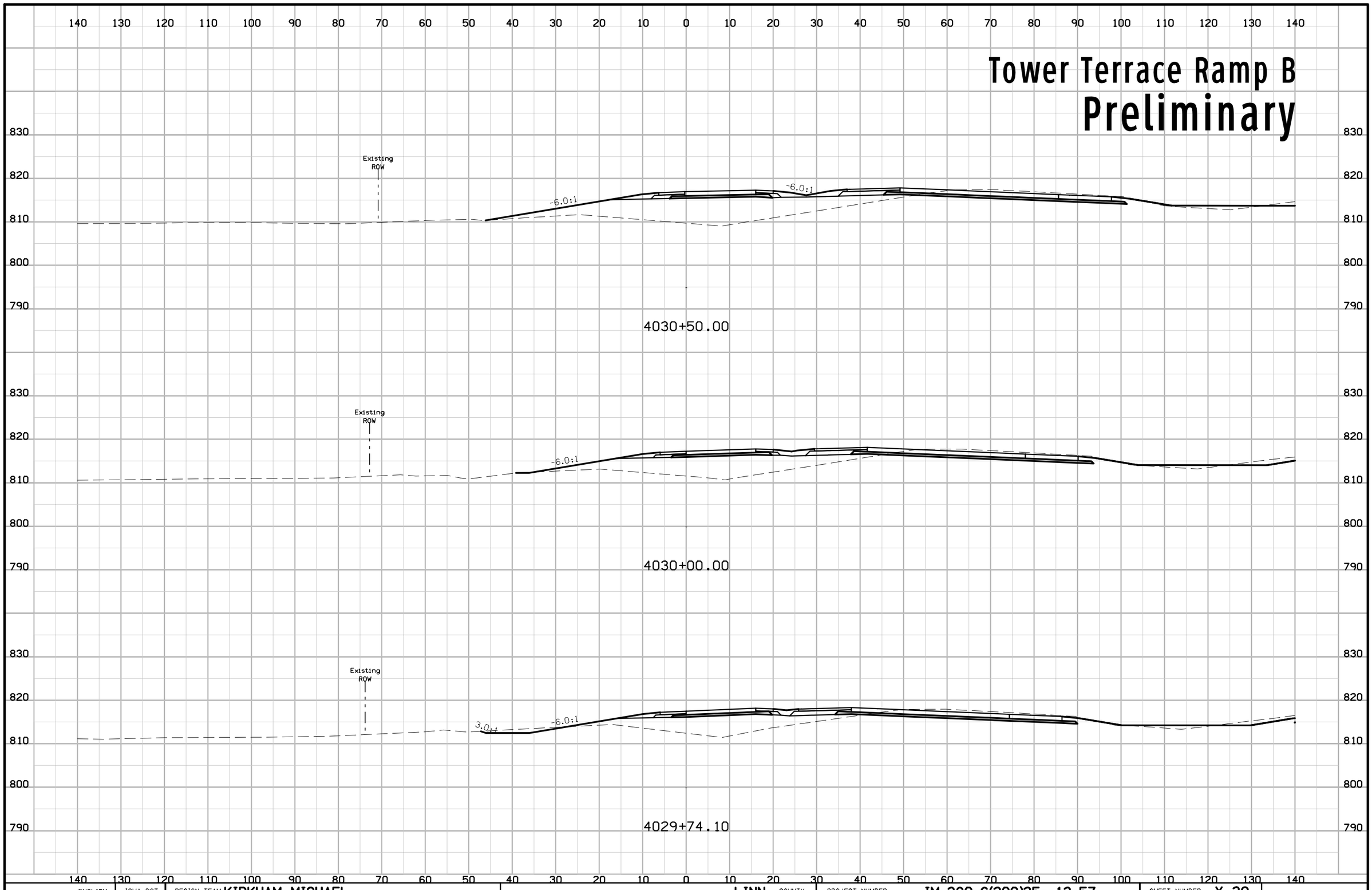


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.38

10:31:11 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y01.dgn

Tower Terrace Ramp B

Preliminary

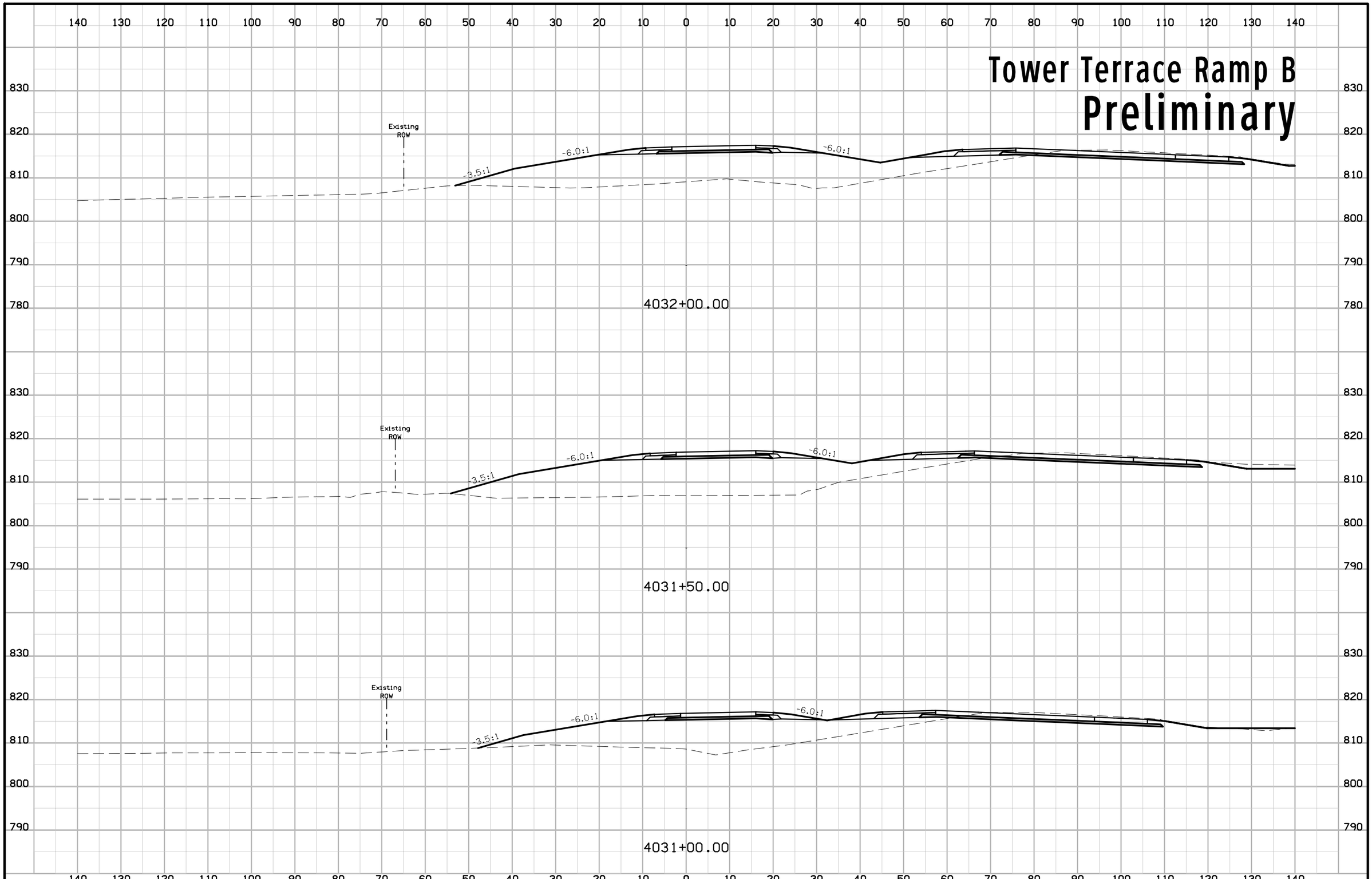


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.39

10:31:35 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y02.dgn

Tower Terrace Ramp B

Preliminary

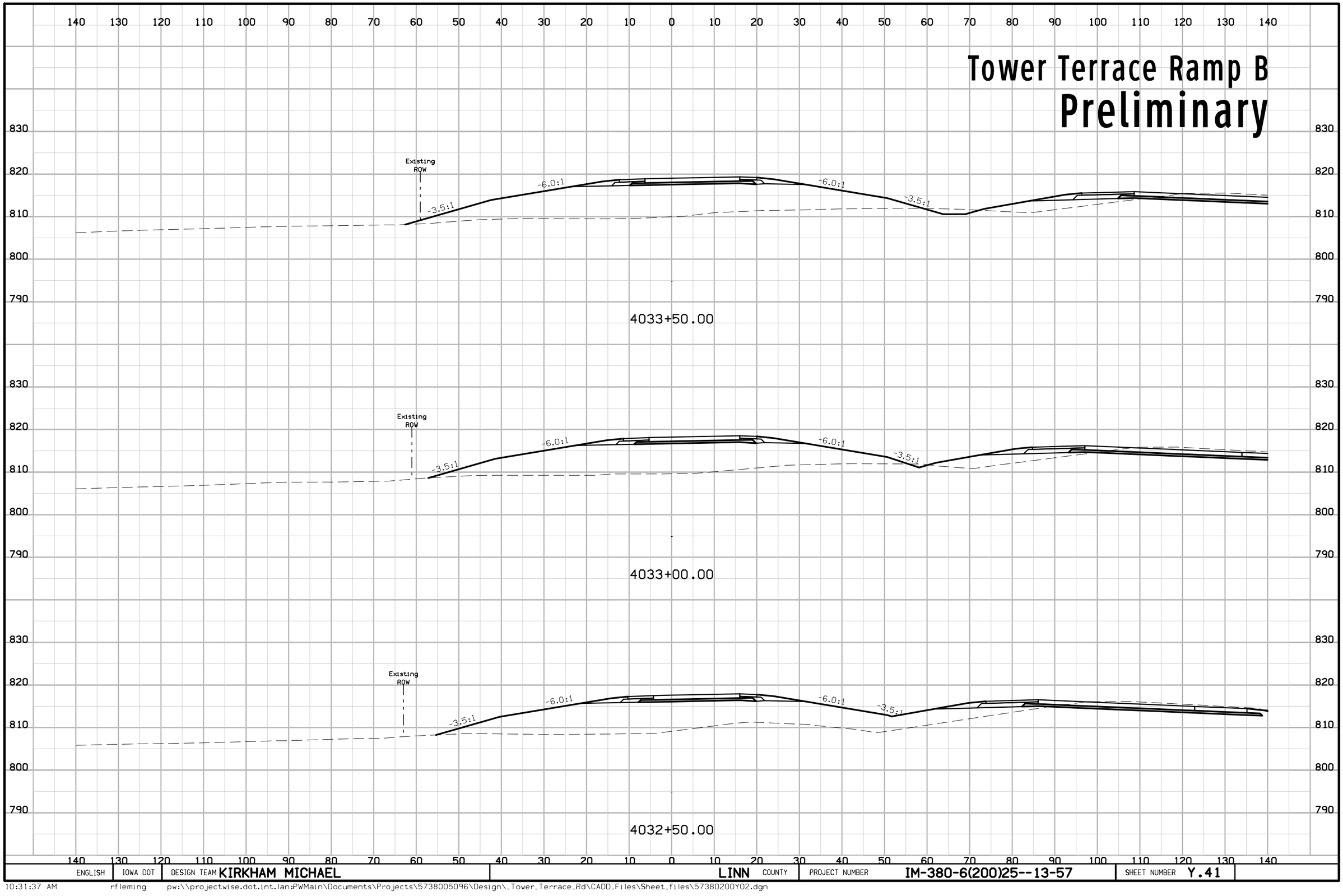


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.40

10:31:36 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y02.dgn

Tower Terrace Ramp B

Preliminary

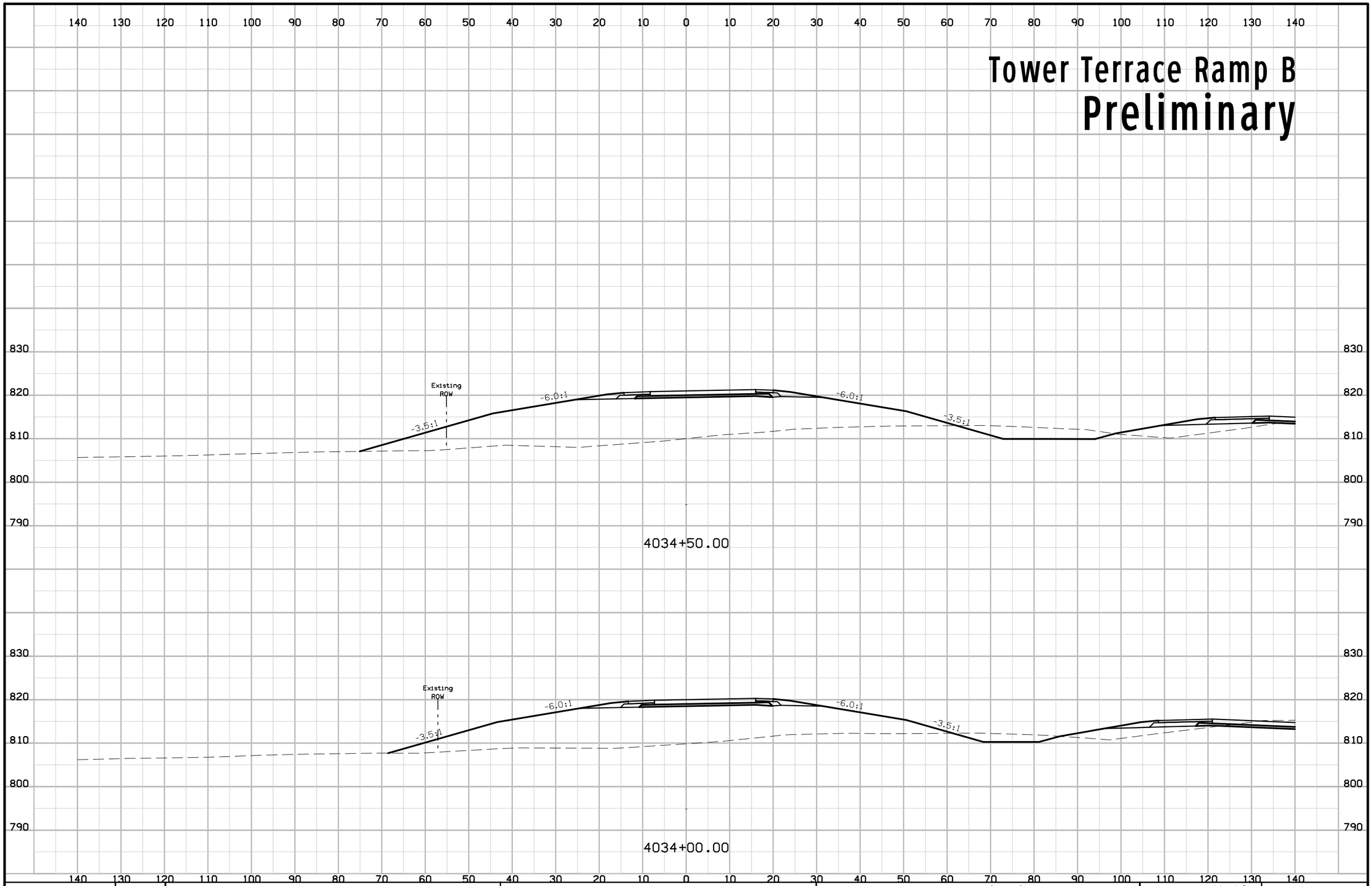


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.41

10:31:37 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y02.dgn

Tower Terrace Ramp B

Preliminary

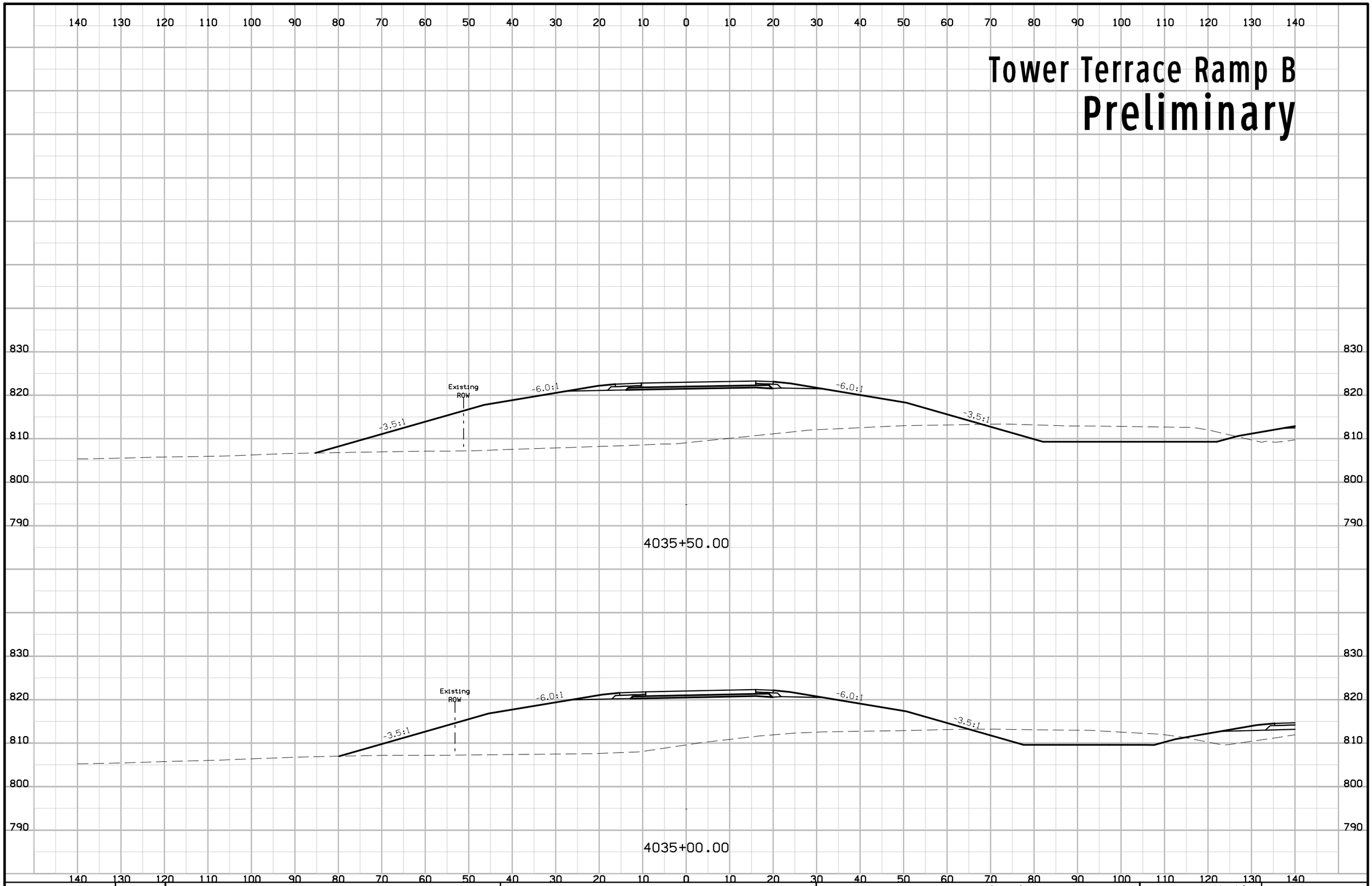


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.42

10:31:38 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y02.dgn

Tower Terrace Ramp B

Preliminary

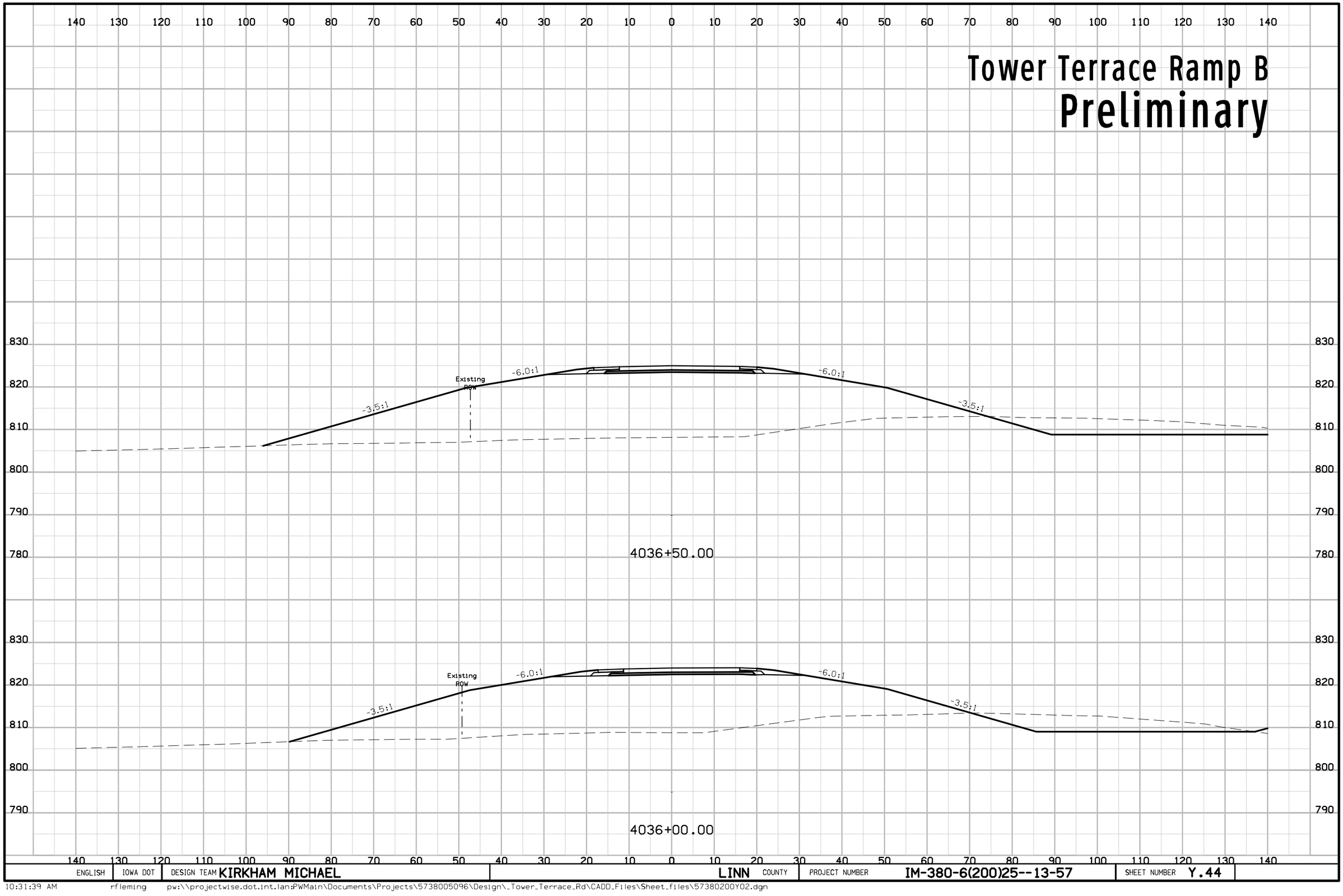


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.43

10:31:39 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y02.dgn

Tower Terrace Ramp B

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.44

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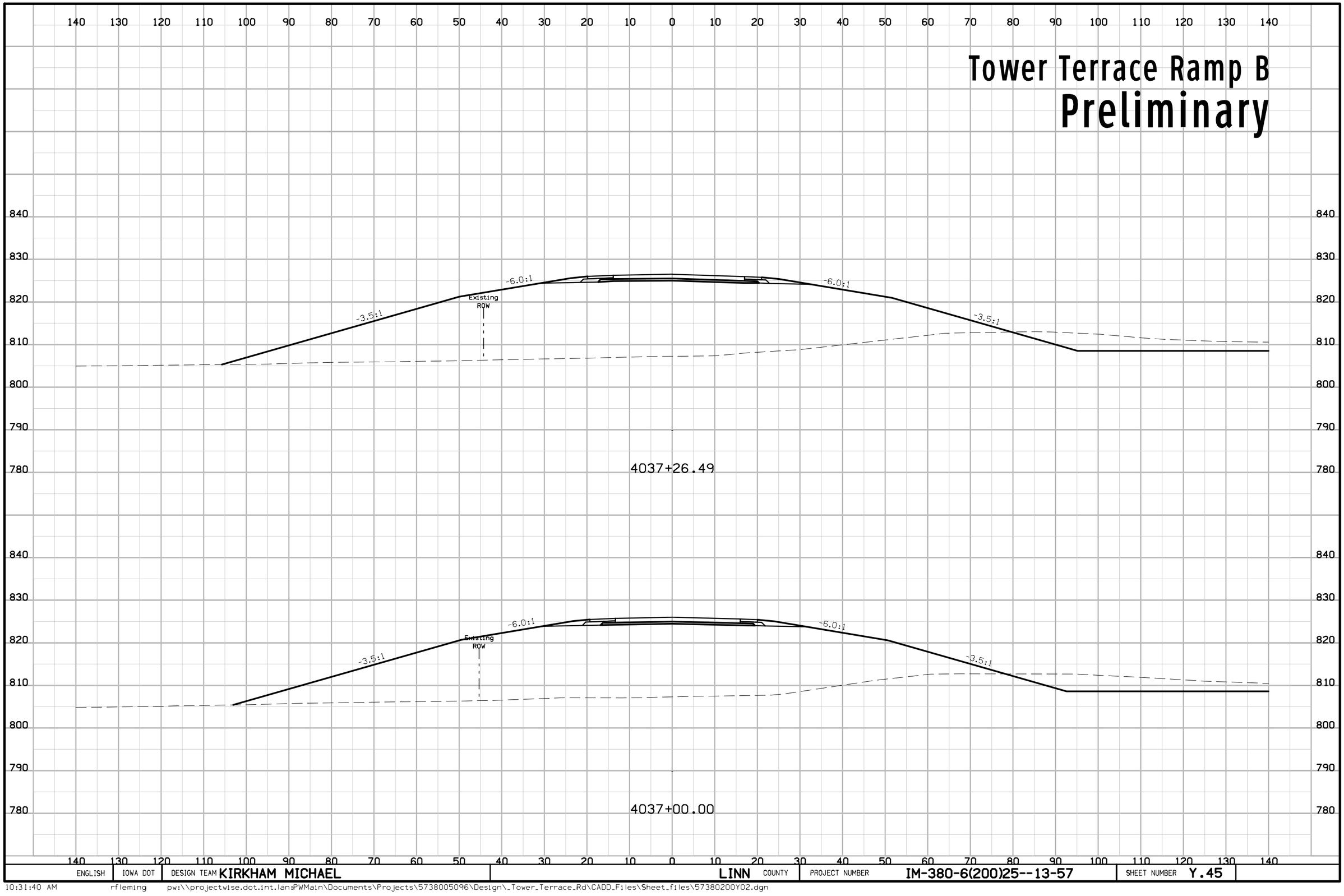
Tower Terrace Ramp B

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.45

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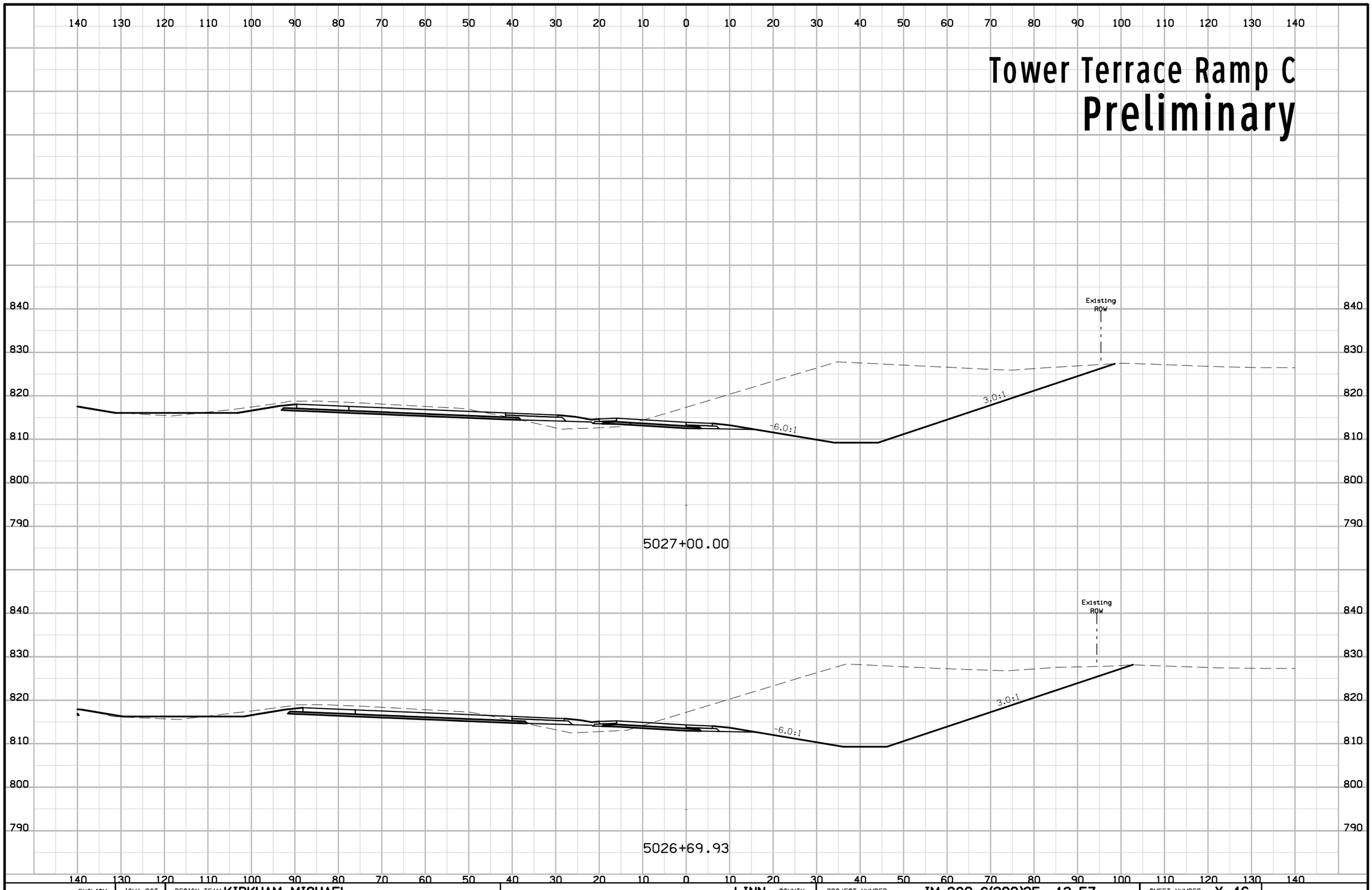
Tower Terrace Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.46

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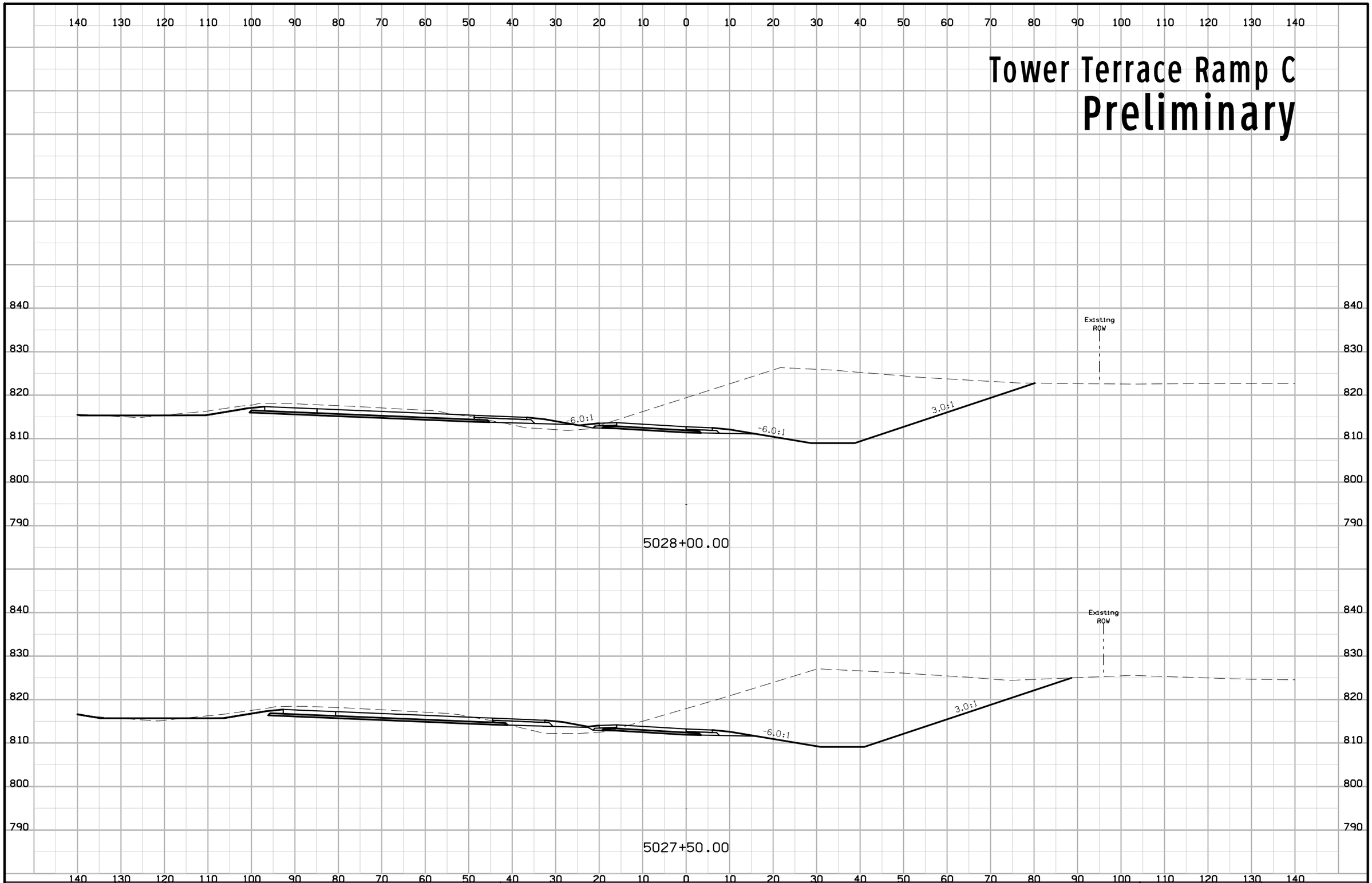
Tower Terrace Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.47

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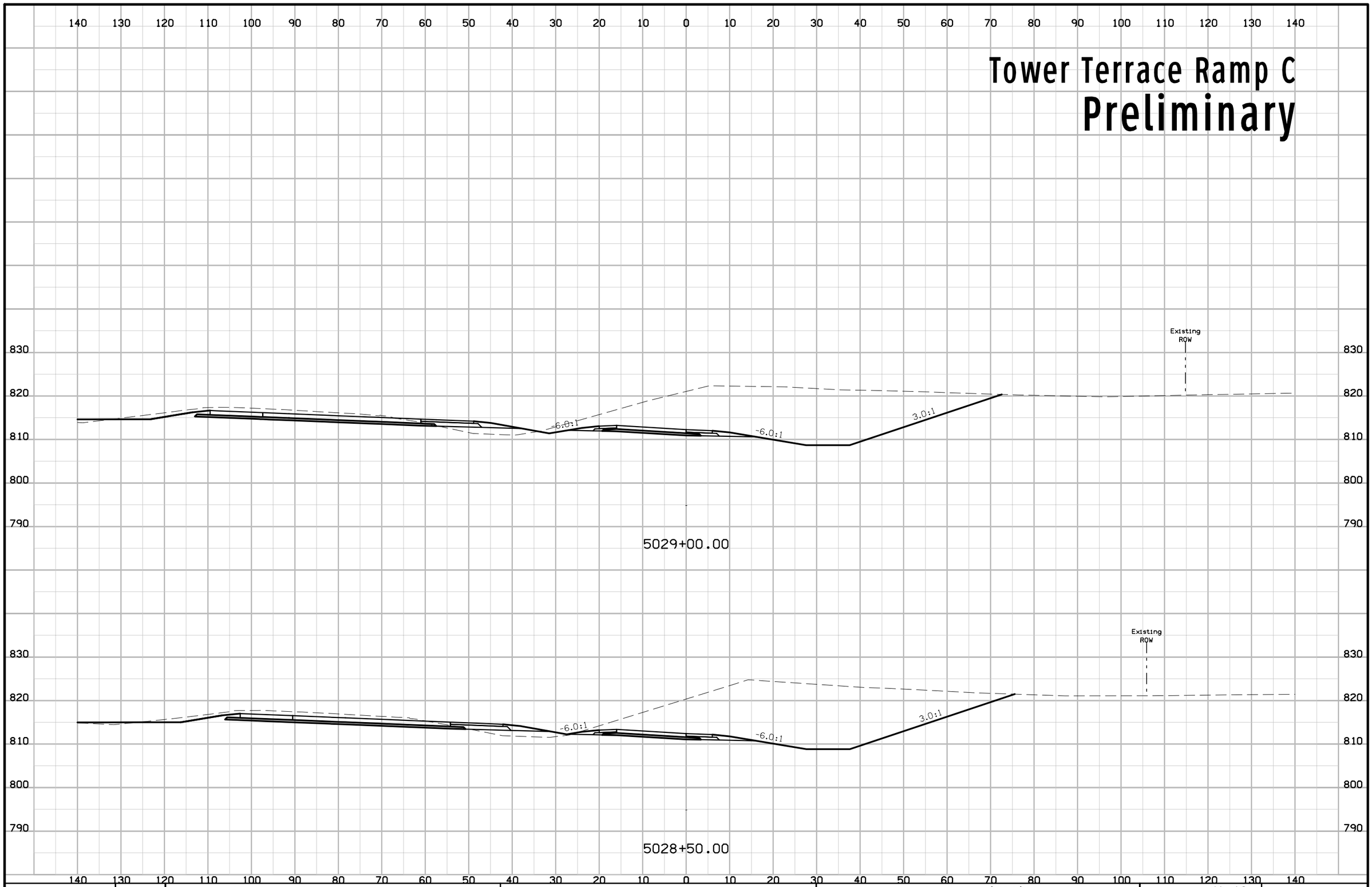
Tower Terrace Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.48

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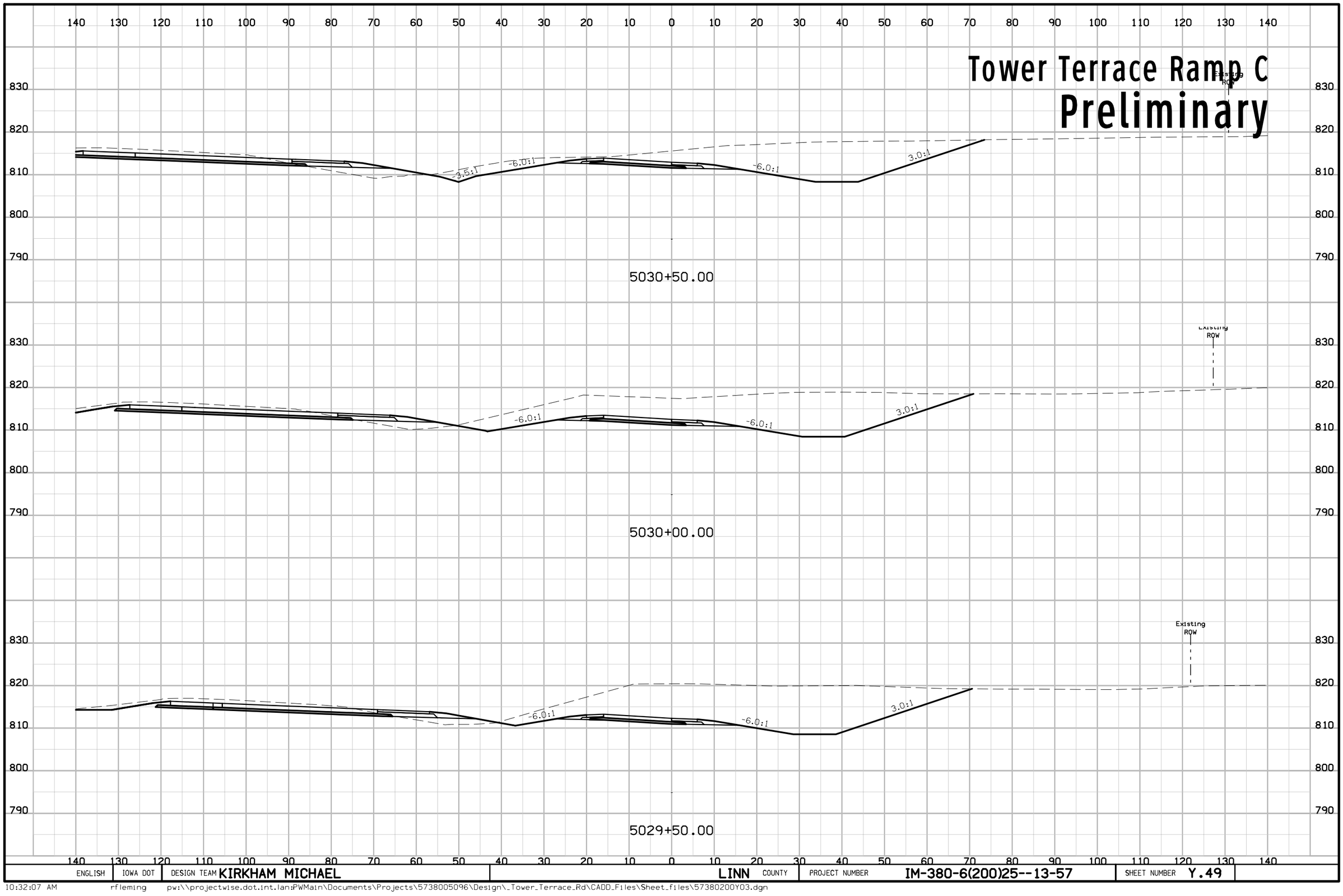
Tower Terrace Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.49

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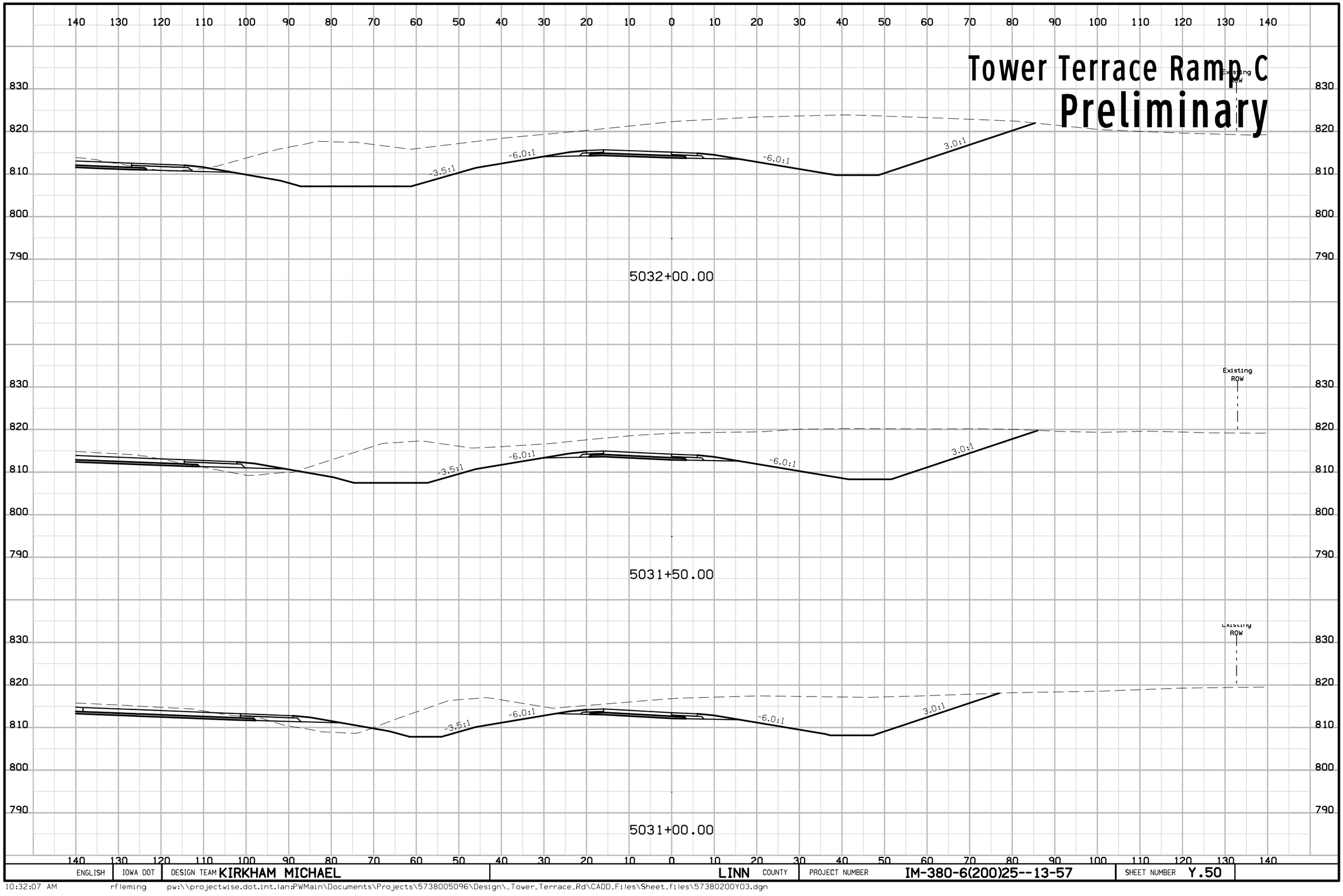
Tower Terrace Ramp C

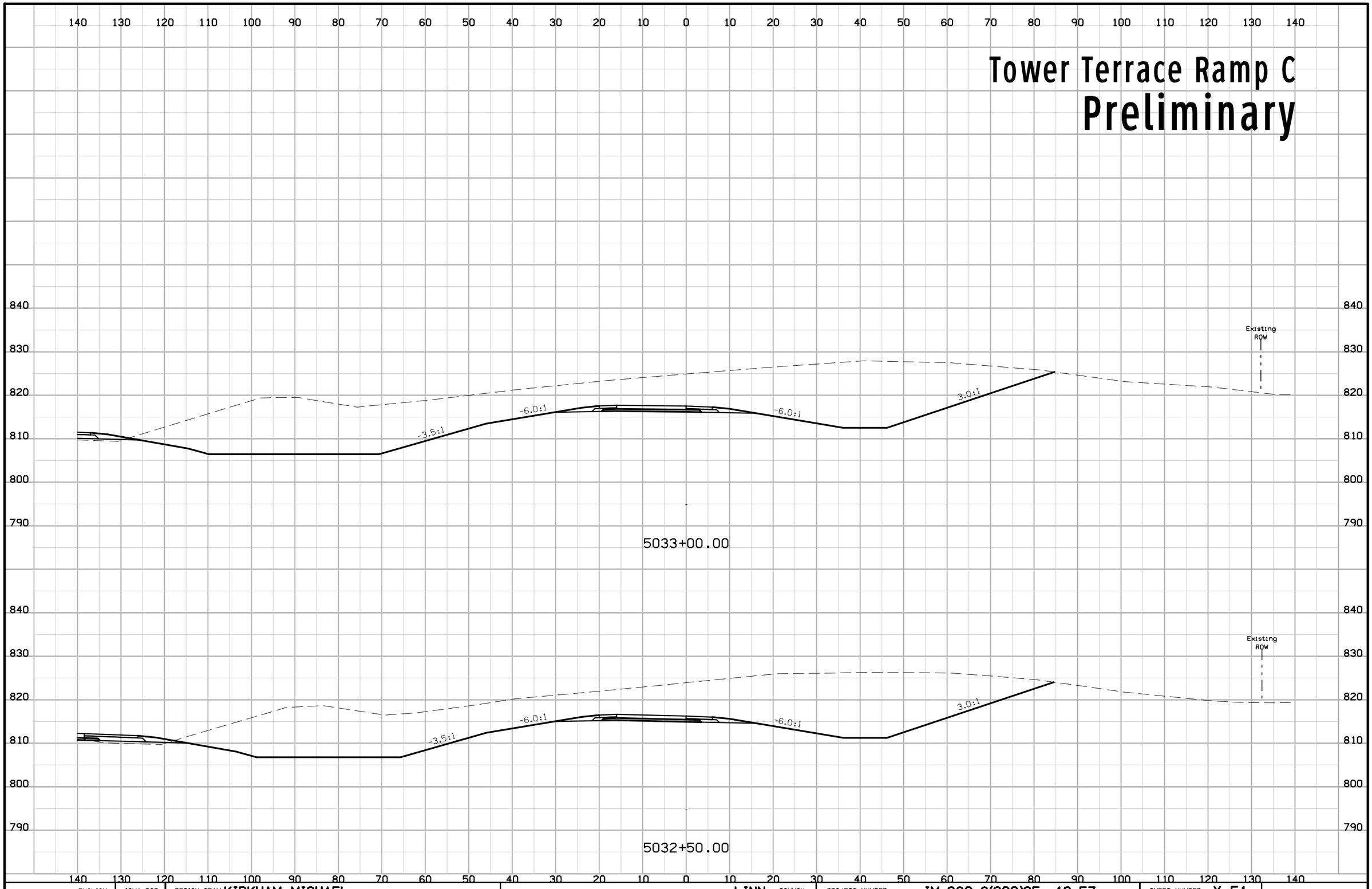
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.50

Tower Terrace Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.51

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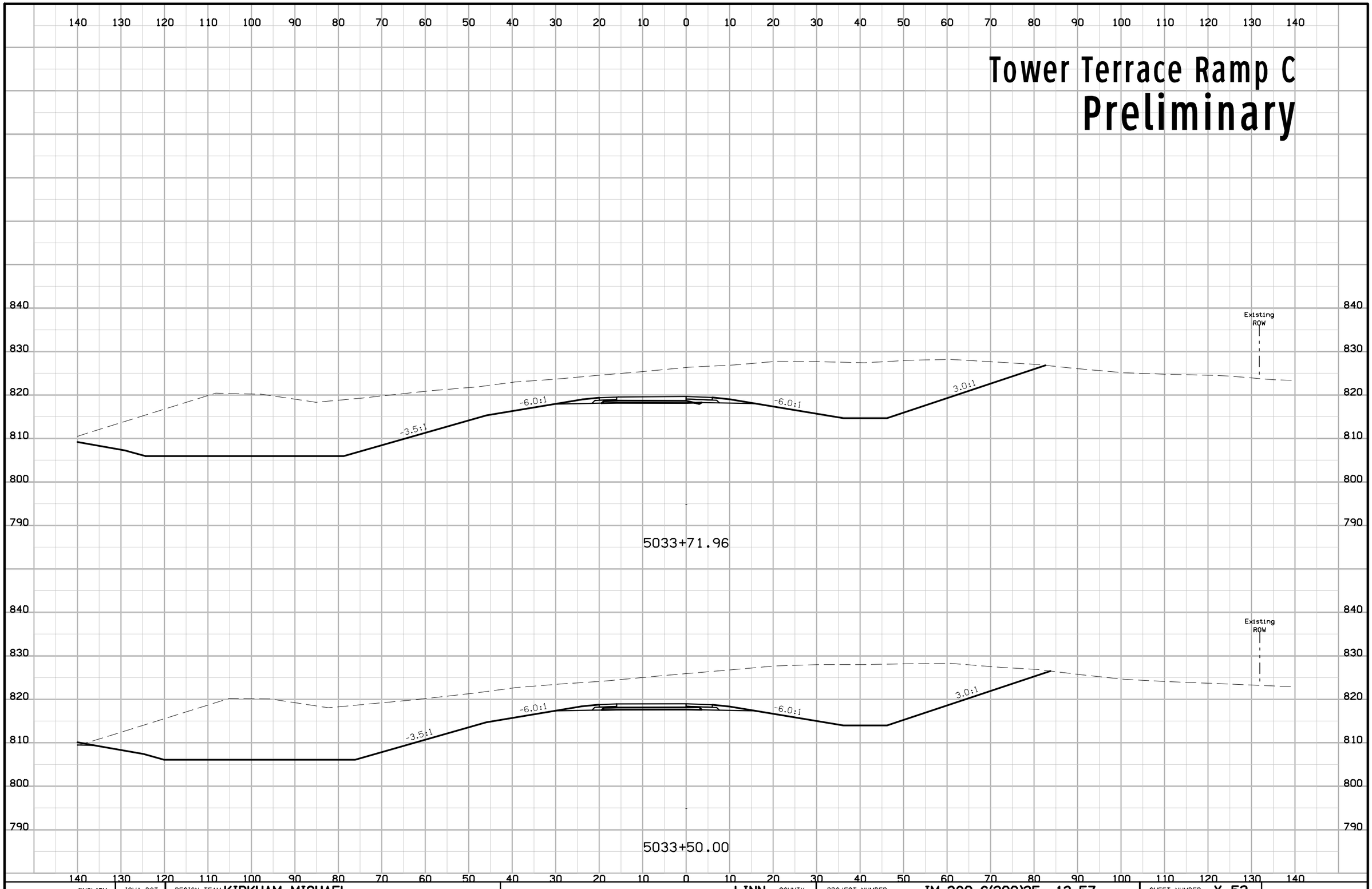
Tower Terrace Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.52

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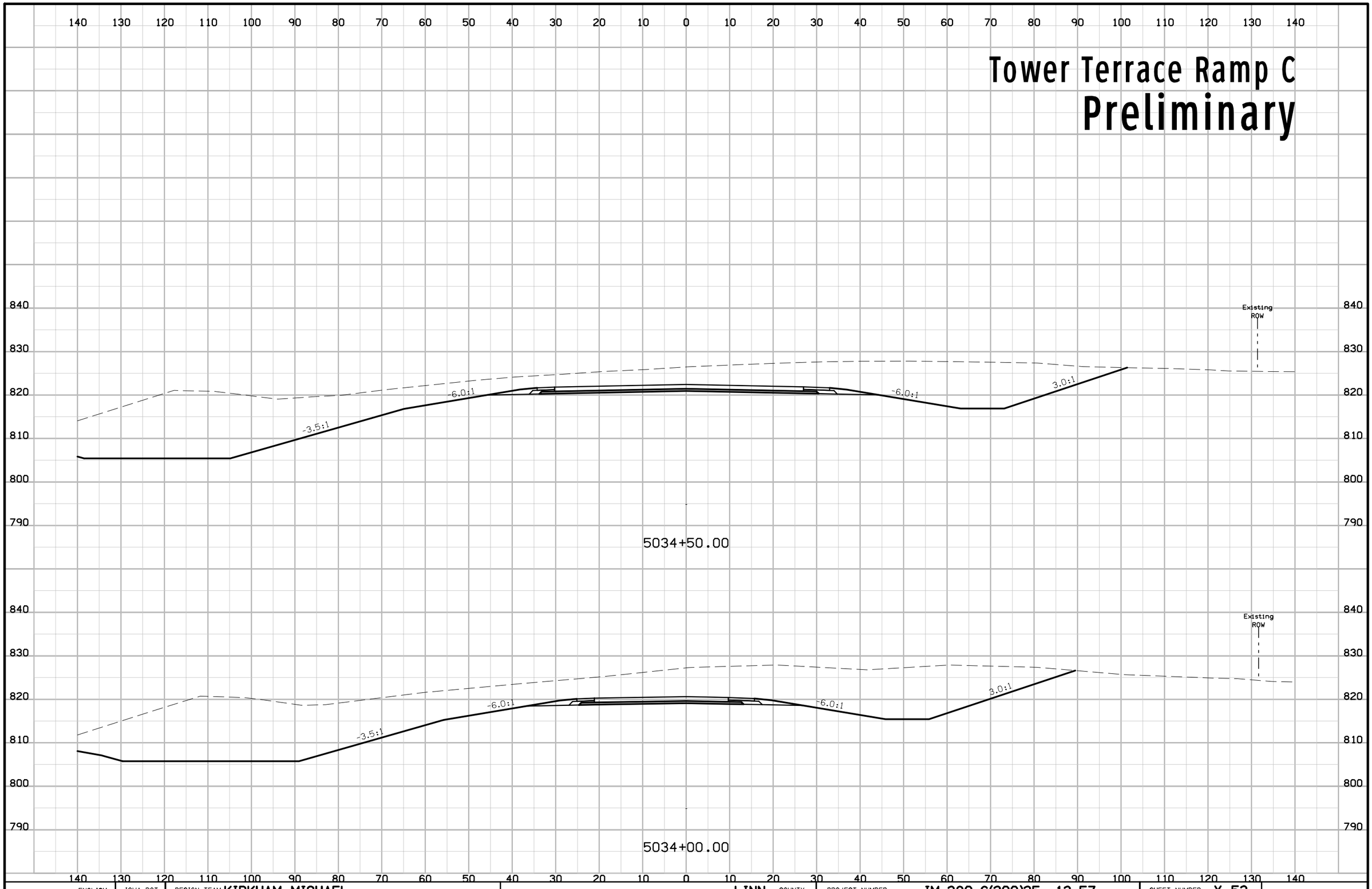
Tower Terrace Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.53

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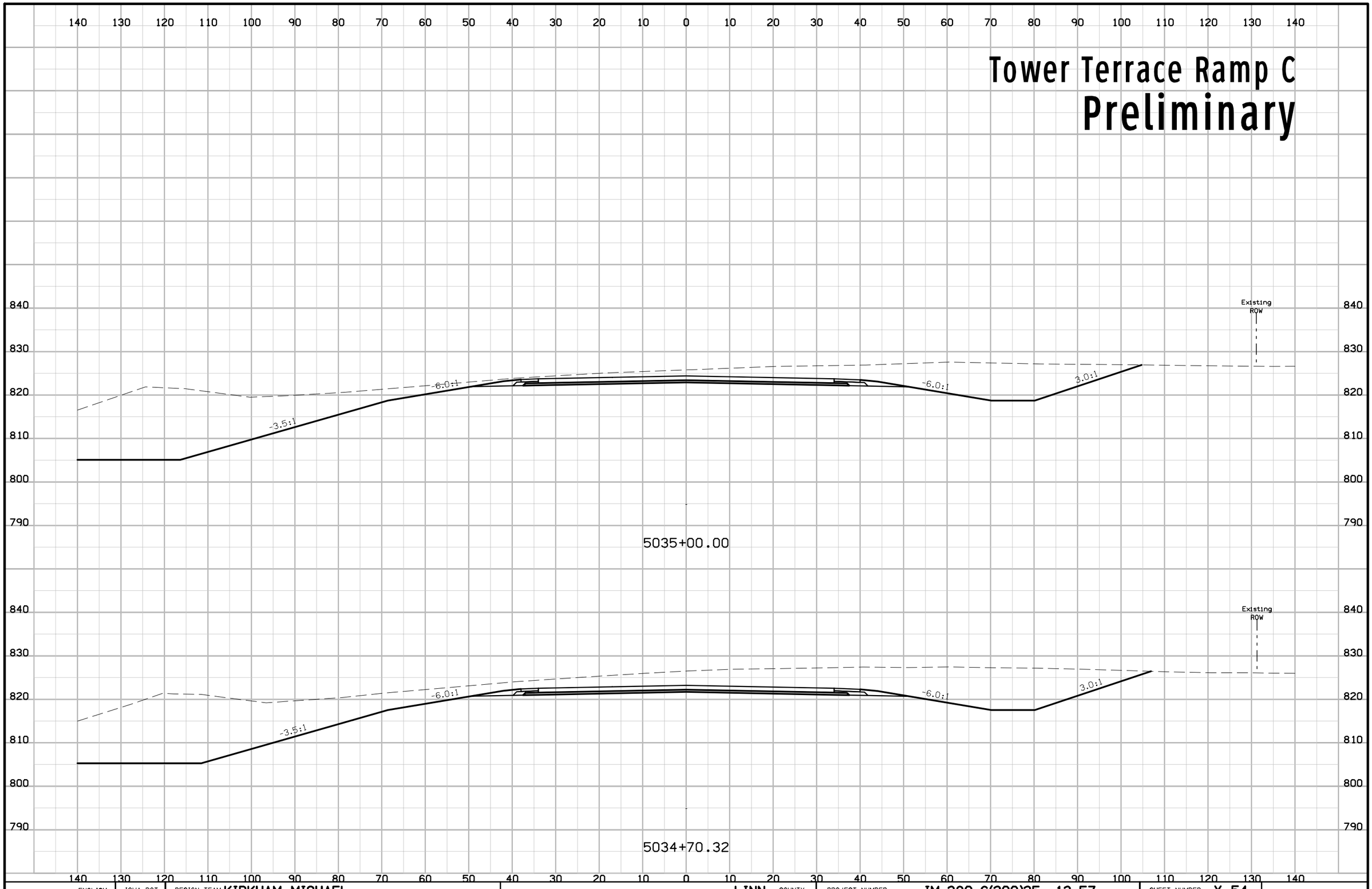
Tower Terrace Ramp C

Preliminary

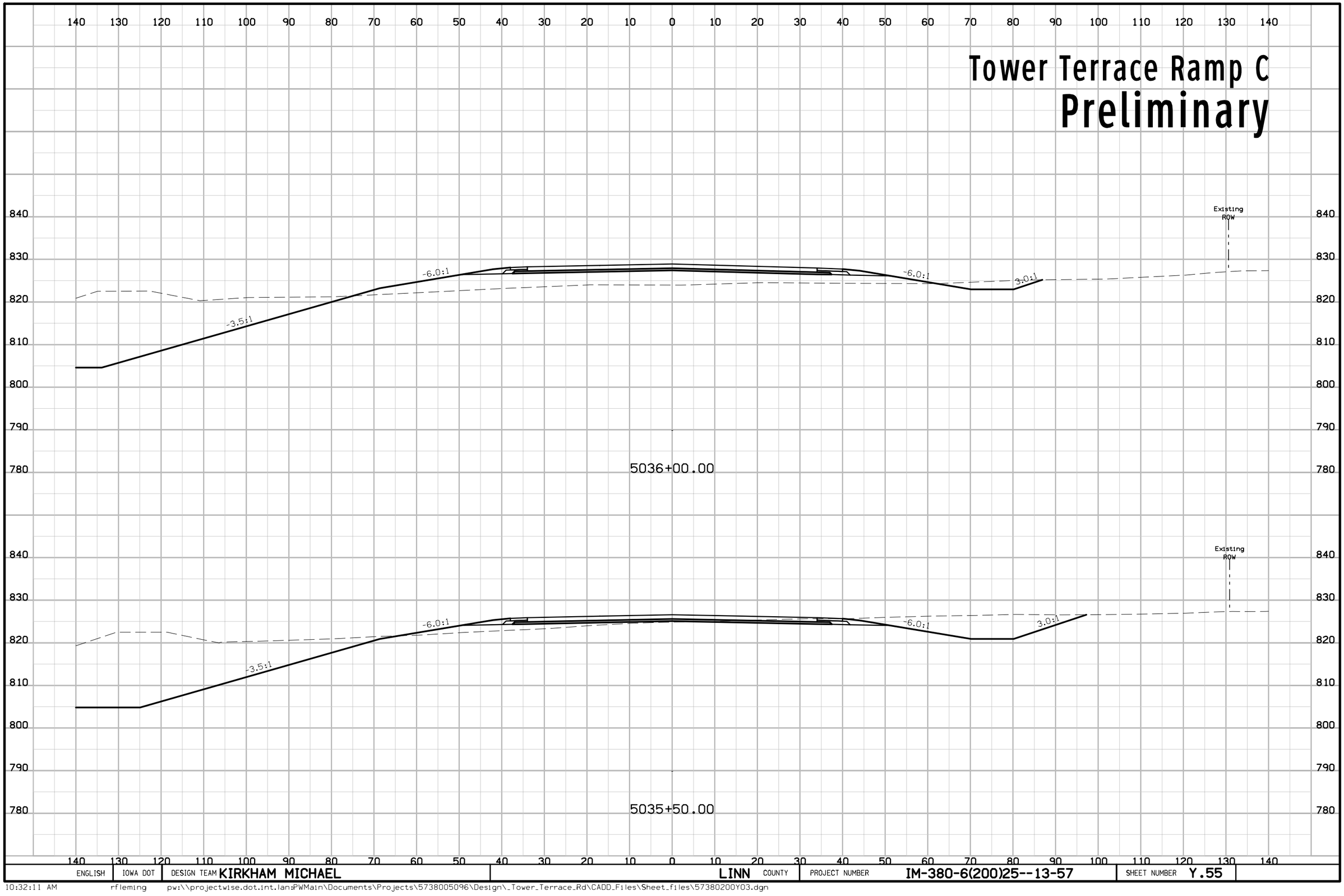


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.54

10:32:10 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y03.dgn

Tower Terrace Ramp C

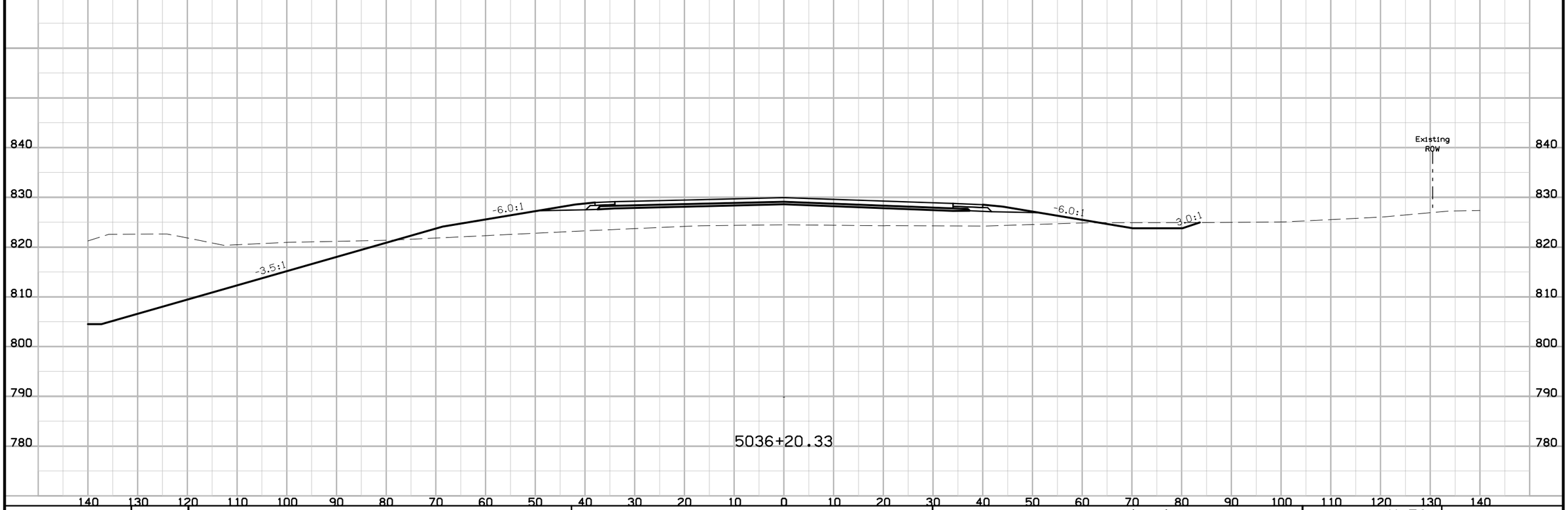
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.55

Tower Terrace Ramp C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.56

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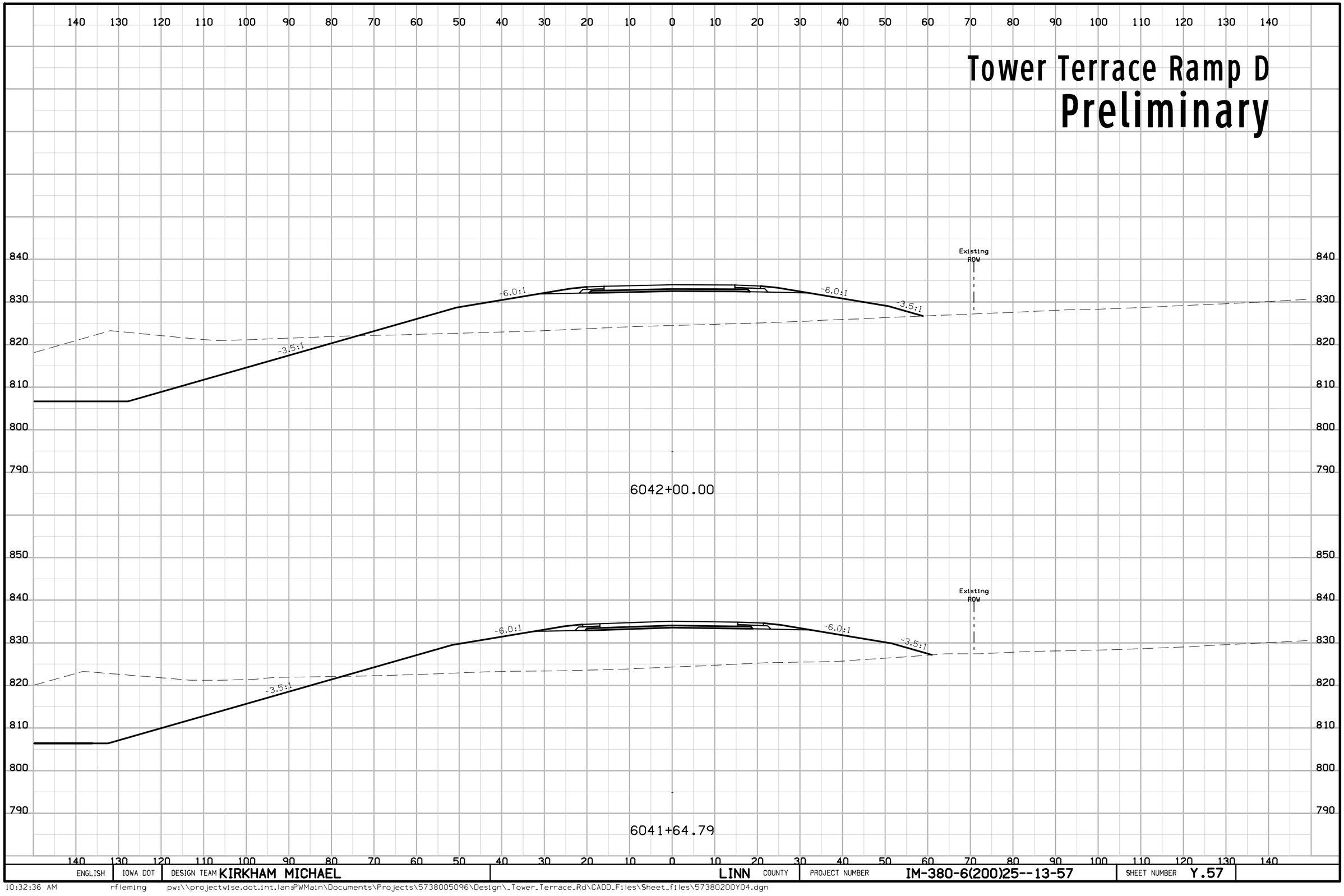
Tower Terrace Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.57

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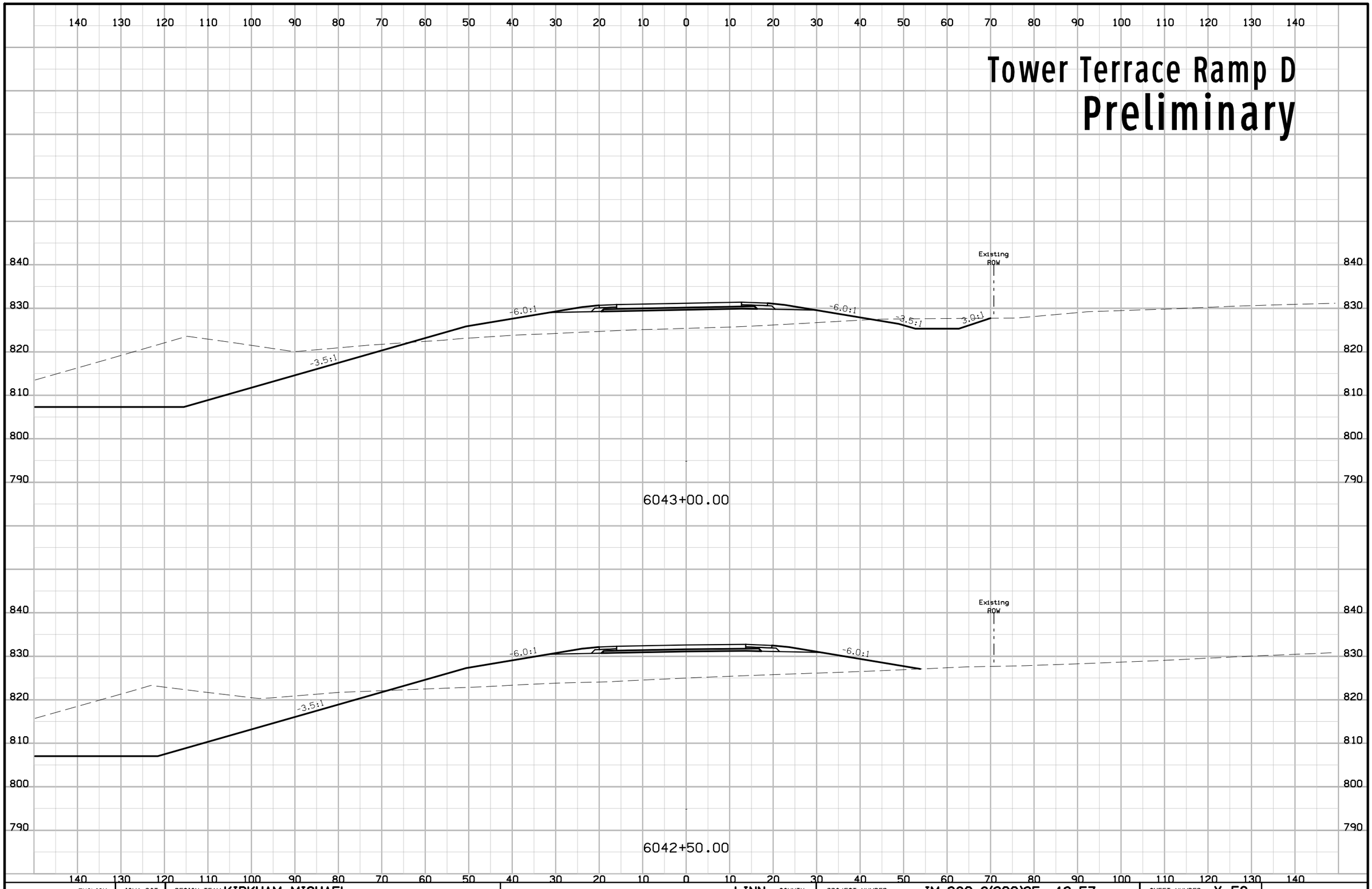
Tower Terrace Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.58

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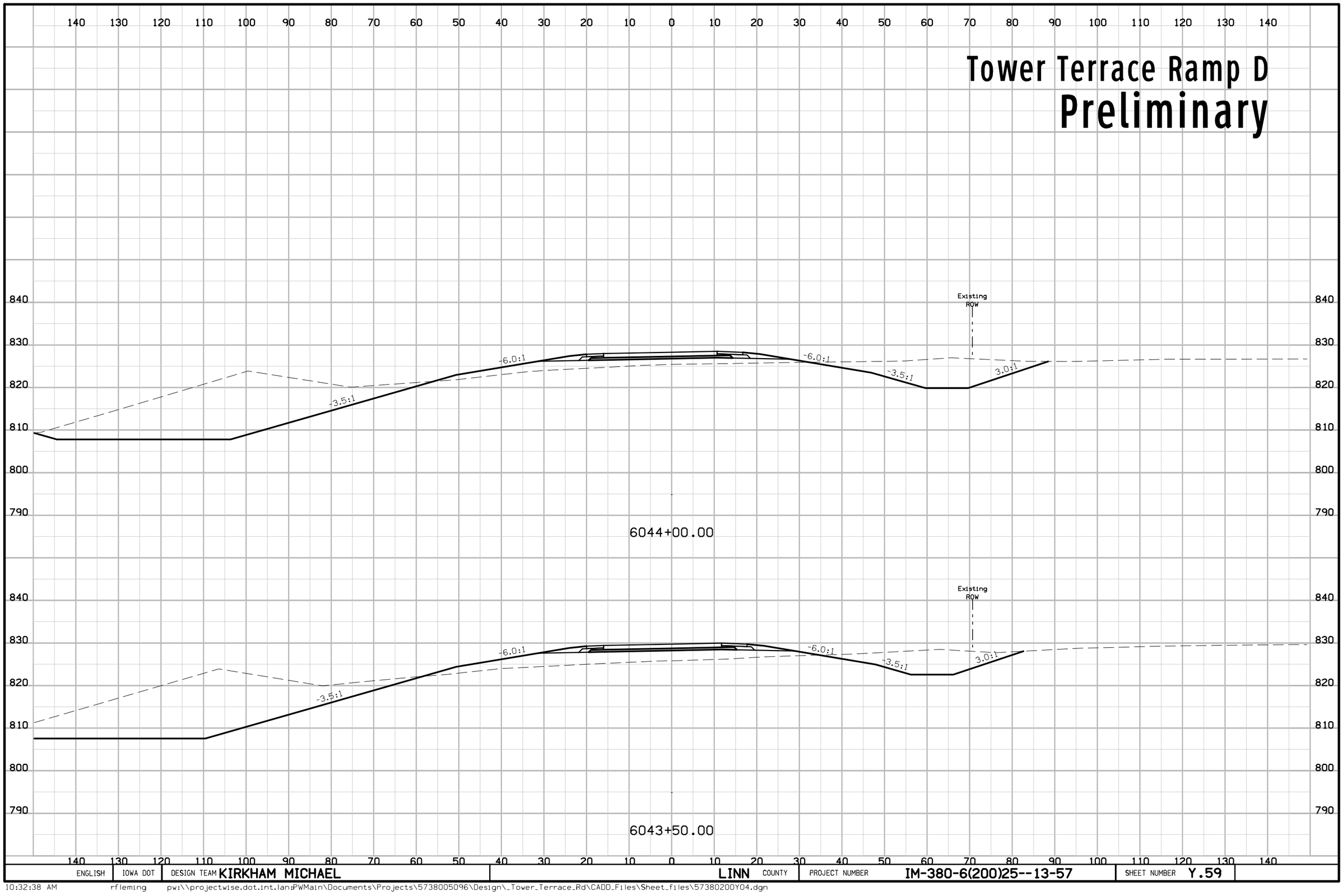
Tower Terrace Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.59

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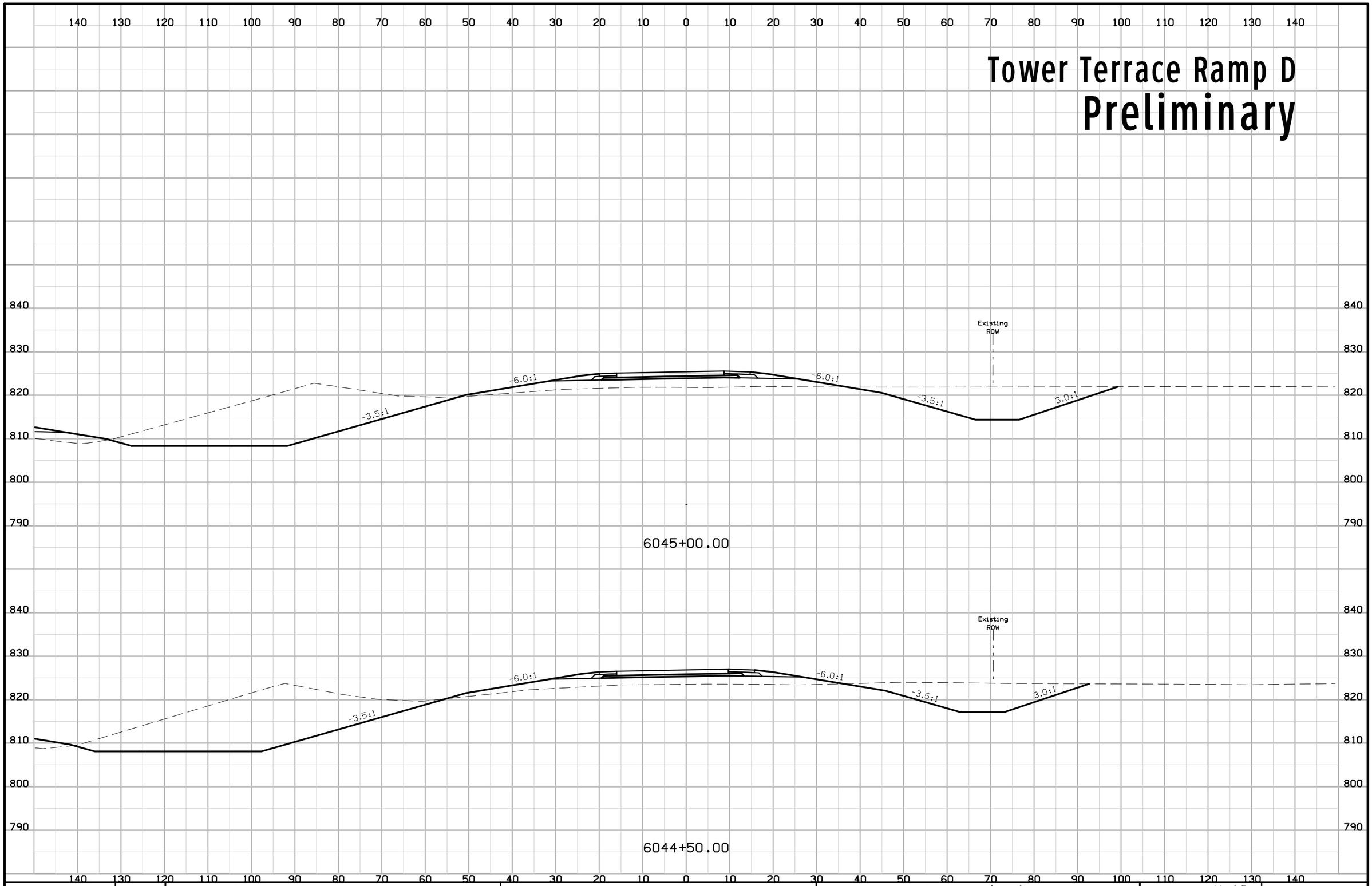
Tower Terrace Ramp D

Preliminary



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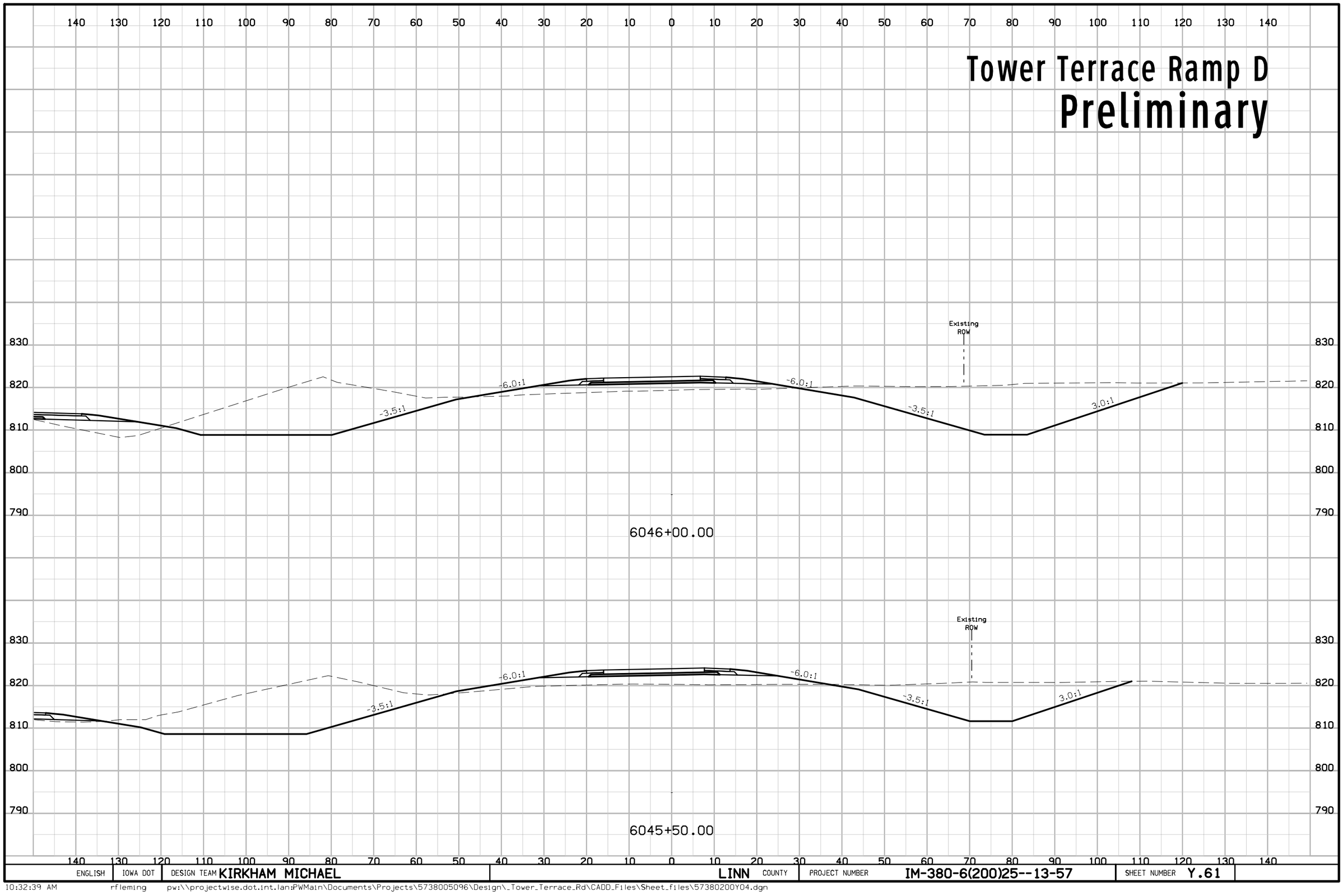
Tower Terrace Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.61

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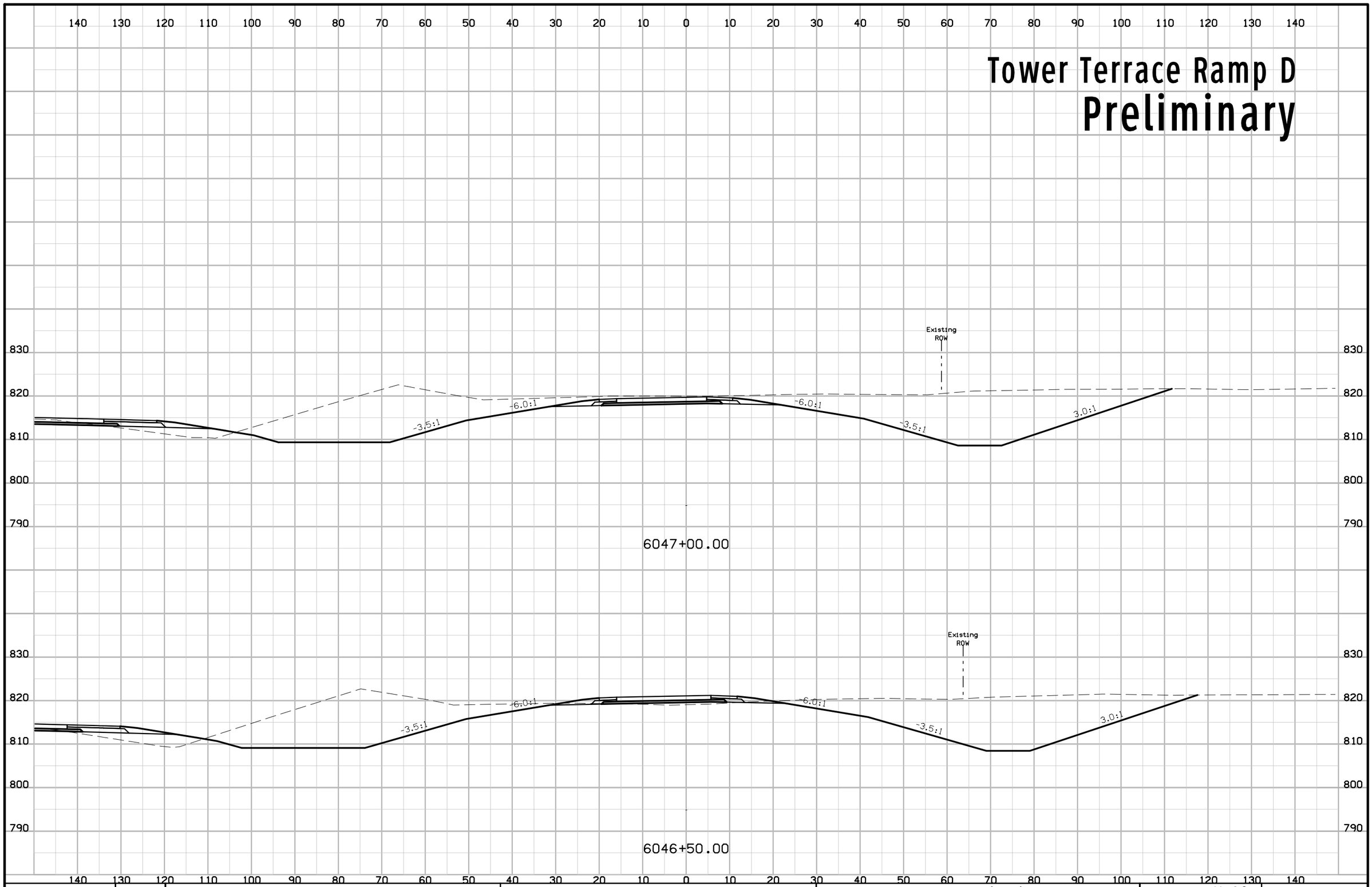
Tower Terrace Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.62

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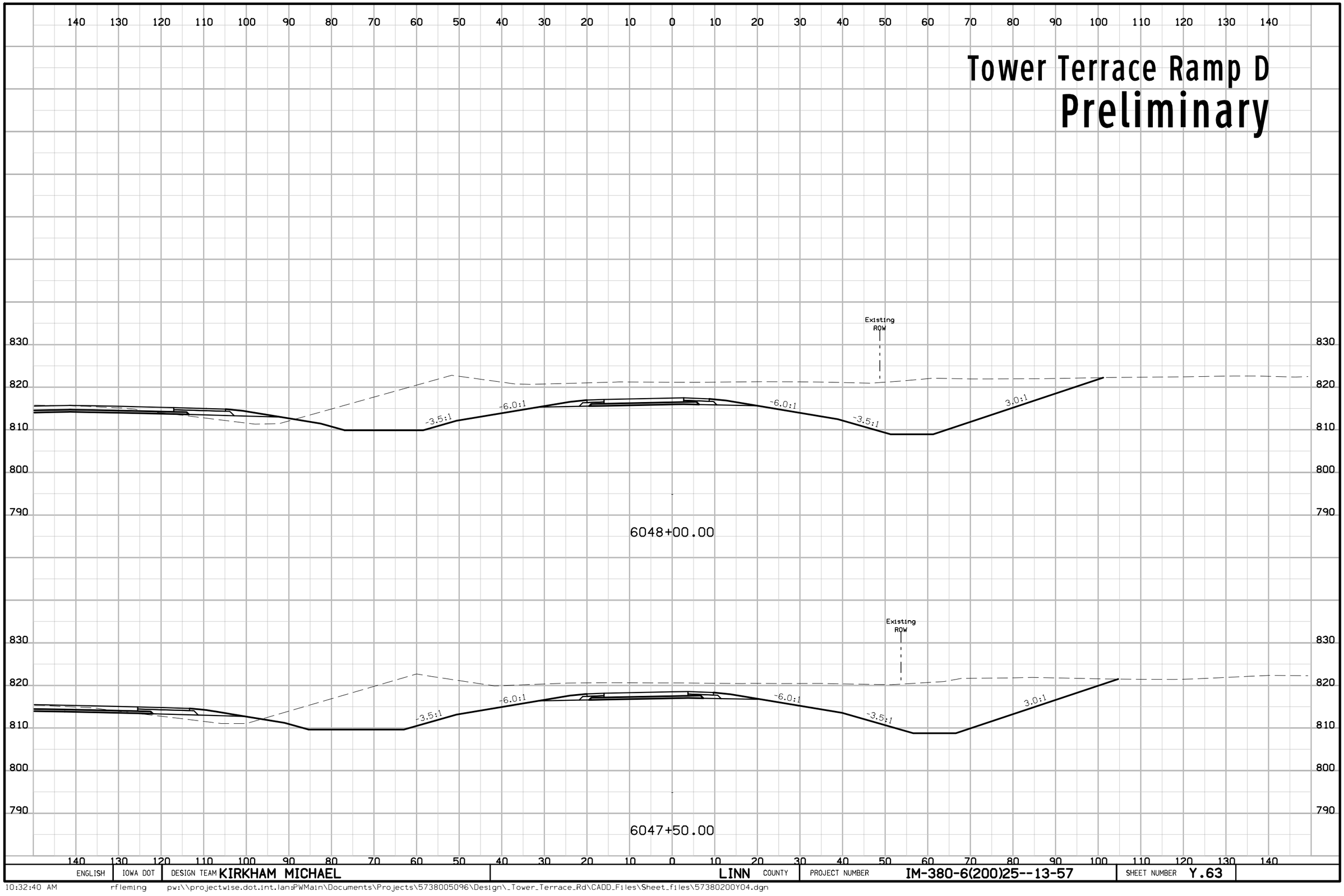
Tower Terrace Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER	IM-380-6(200)25--13-57	SHEET NUMBER Y.63

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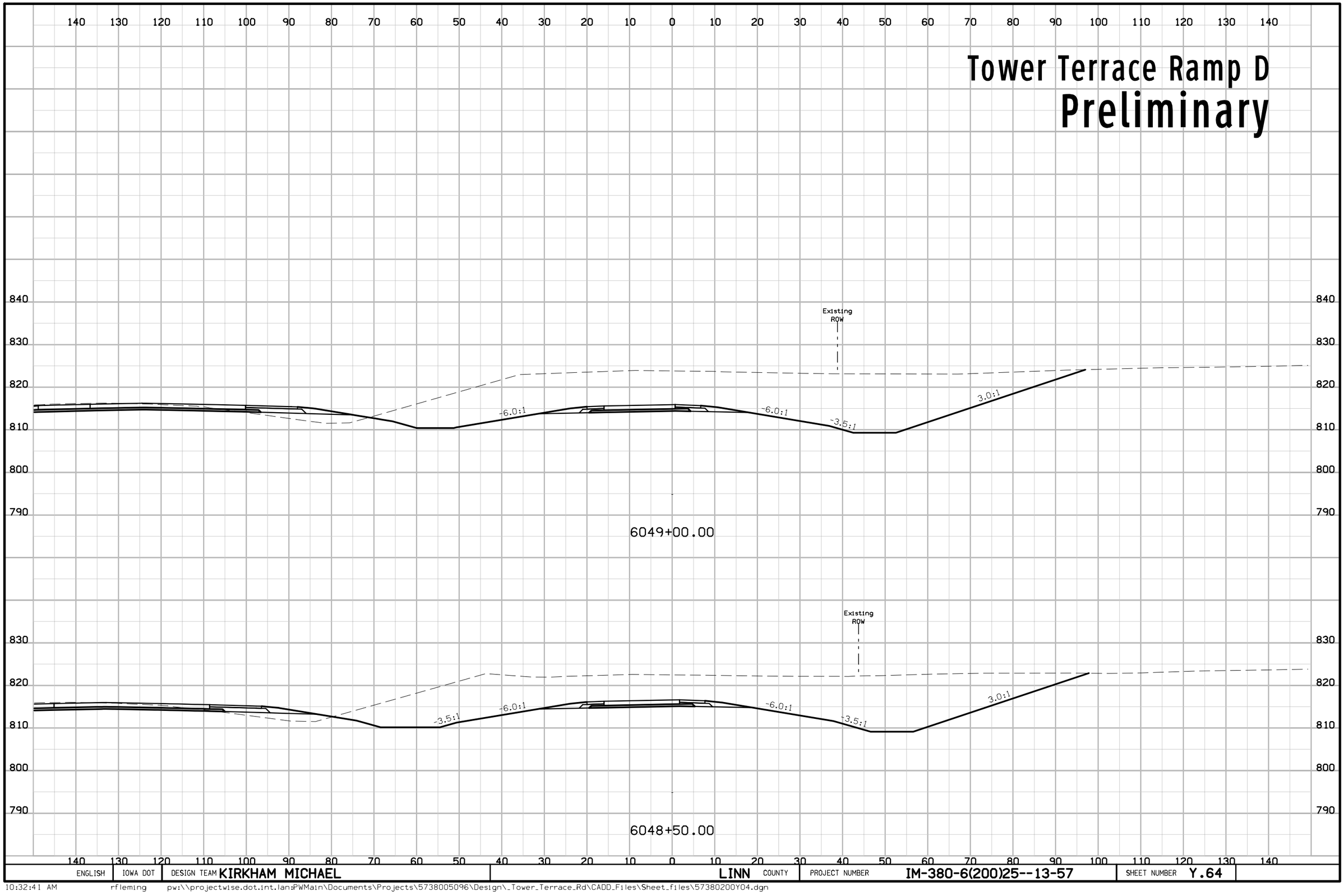
Tower Terrace Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.64

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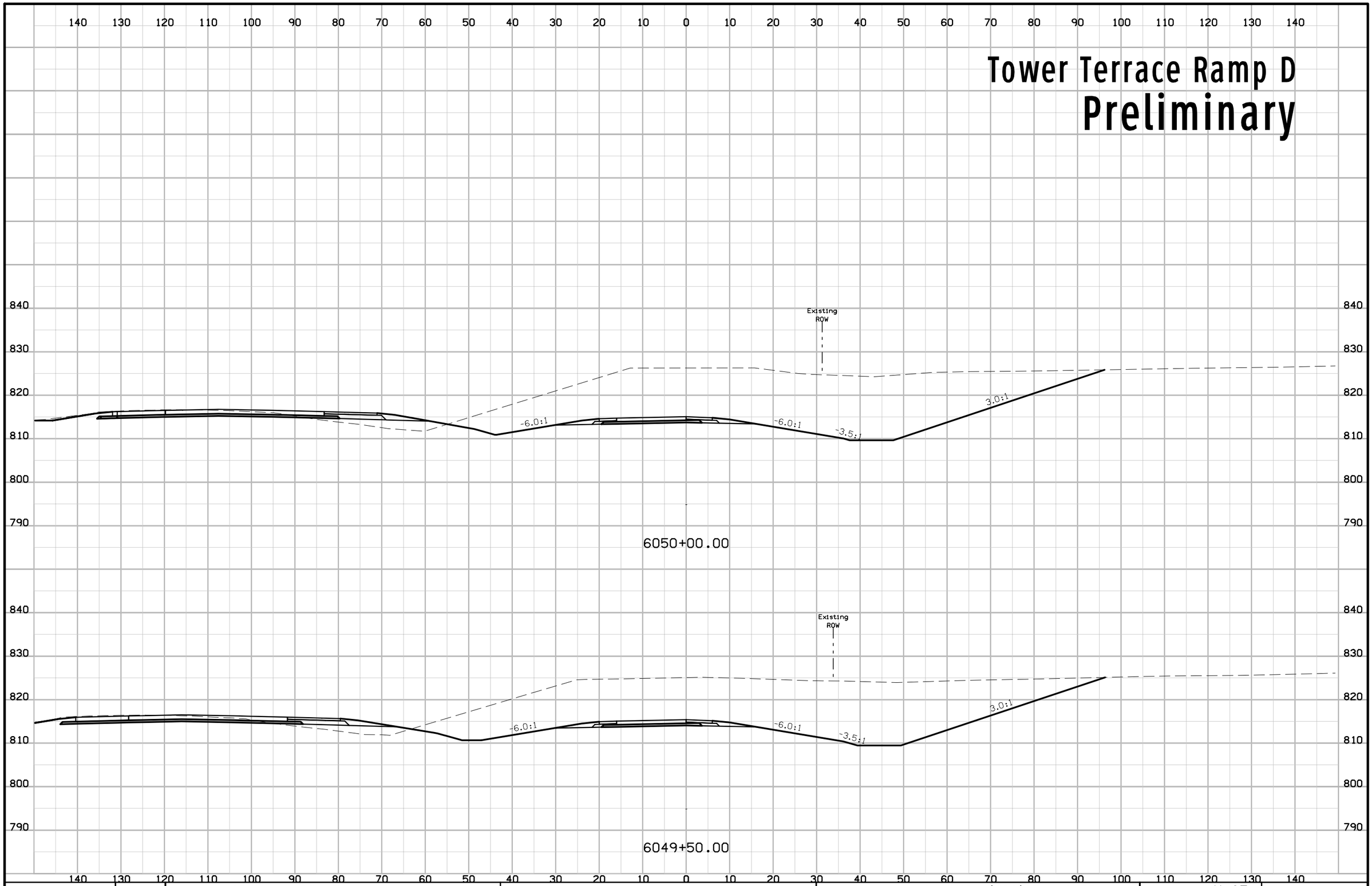
Tower Terrace Ramp D

Preliminary

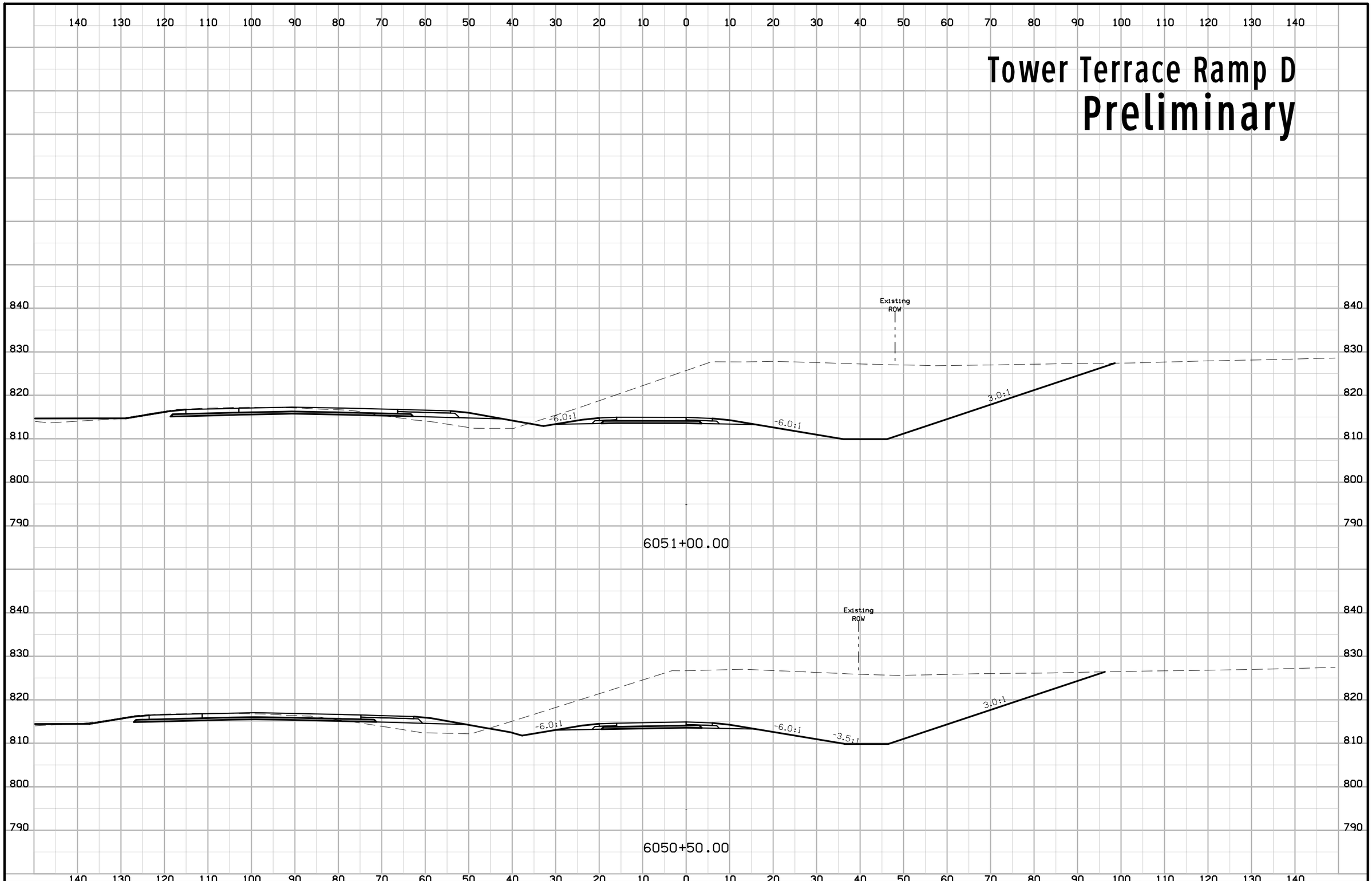


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.65

10:32:42 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y04.dgn

Tower Terrace Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.66

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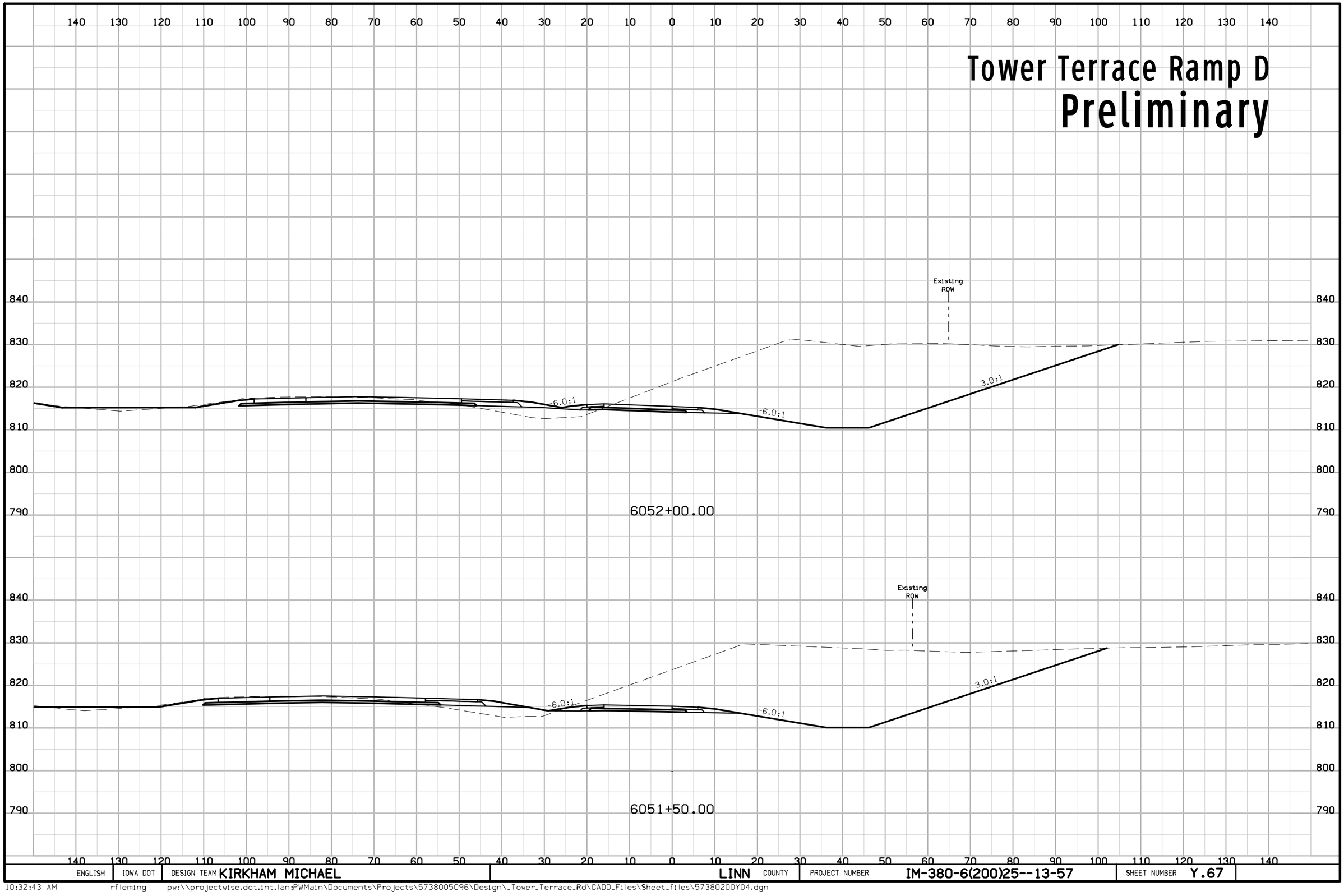
Tower Terrace Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.67

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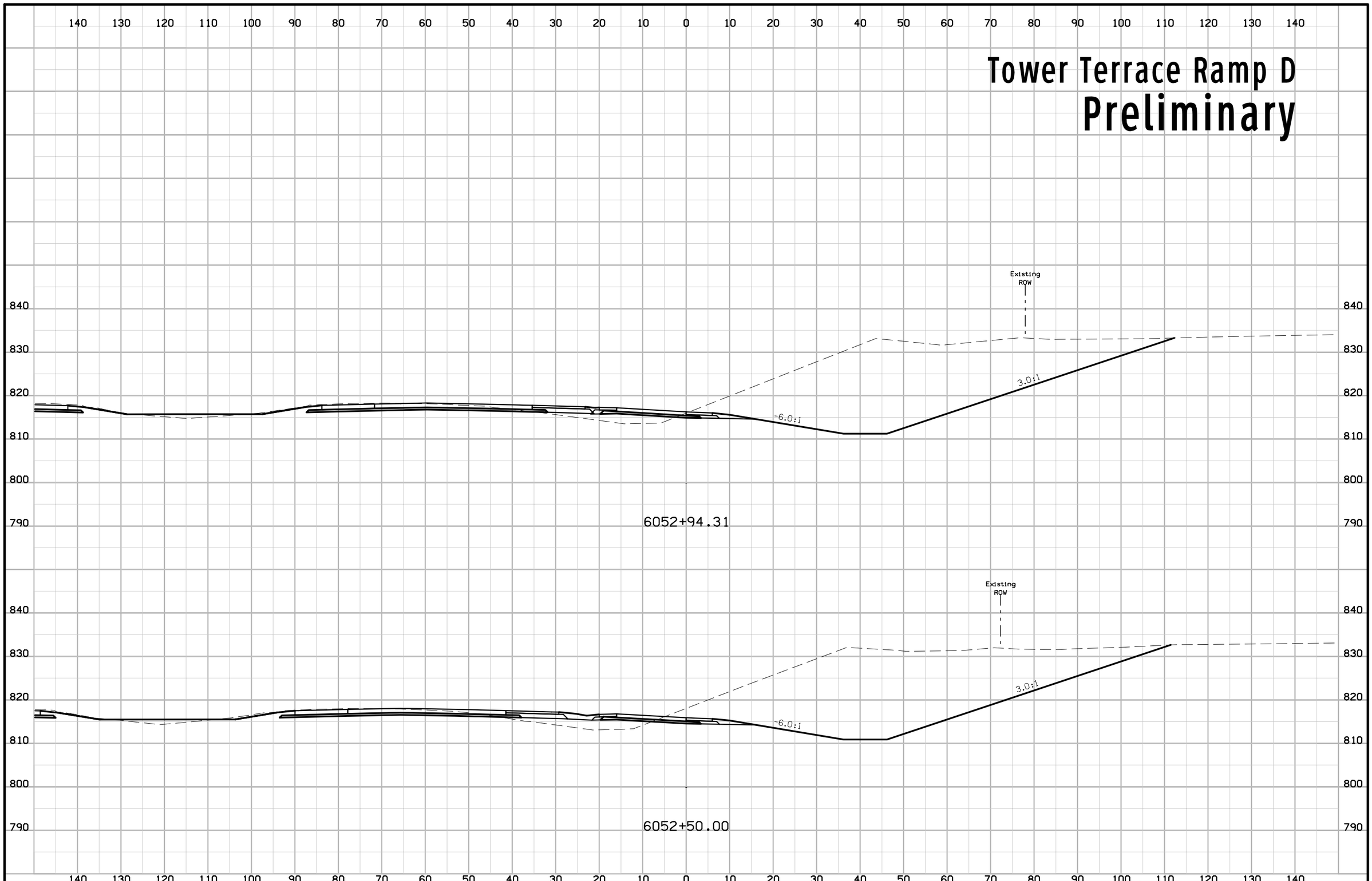
Tower Terrace Ramp D

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(200)25--13-57	SHEET NUMBER Y.68

10:32:44 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_Tower_Terrace_Rd\CADD_Files\Sheet_files\57380200Y04.dgn

COUNTY HOME ROAD RAMP B

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

Existing ROW

830

3.00:1 -6.00:1 -6.00:1

830

41154+00.00

Existing ROW

830

3.00:1 -6.00:1 -6.00:1

830

41153+50.00

Existing ROW

830

3.00:1 -6.00:1 -6.00:1

830

41153+00.00

Existing ROW

840

830

3.00:1 -6.00:1

840

830

41152+50.00

Existing ROW

840

830

3.00:1 -6.00:1

840

830

41152+00.00

Existing ROW

840

830

3.00:1 -6.00:1

840

830

41151+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 KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.69

10:33:32 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y01

COUNTY HOME ROAD RAMP B

Preliminary

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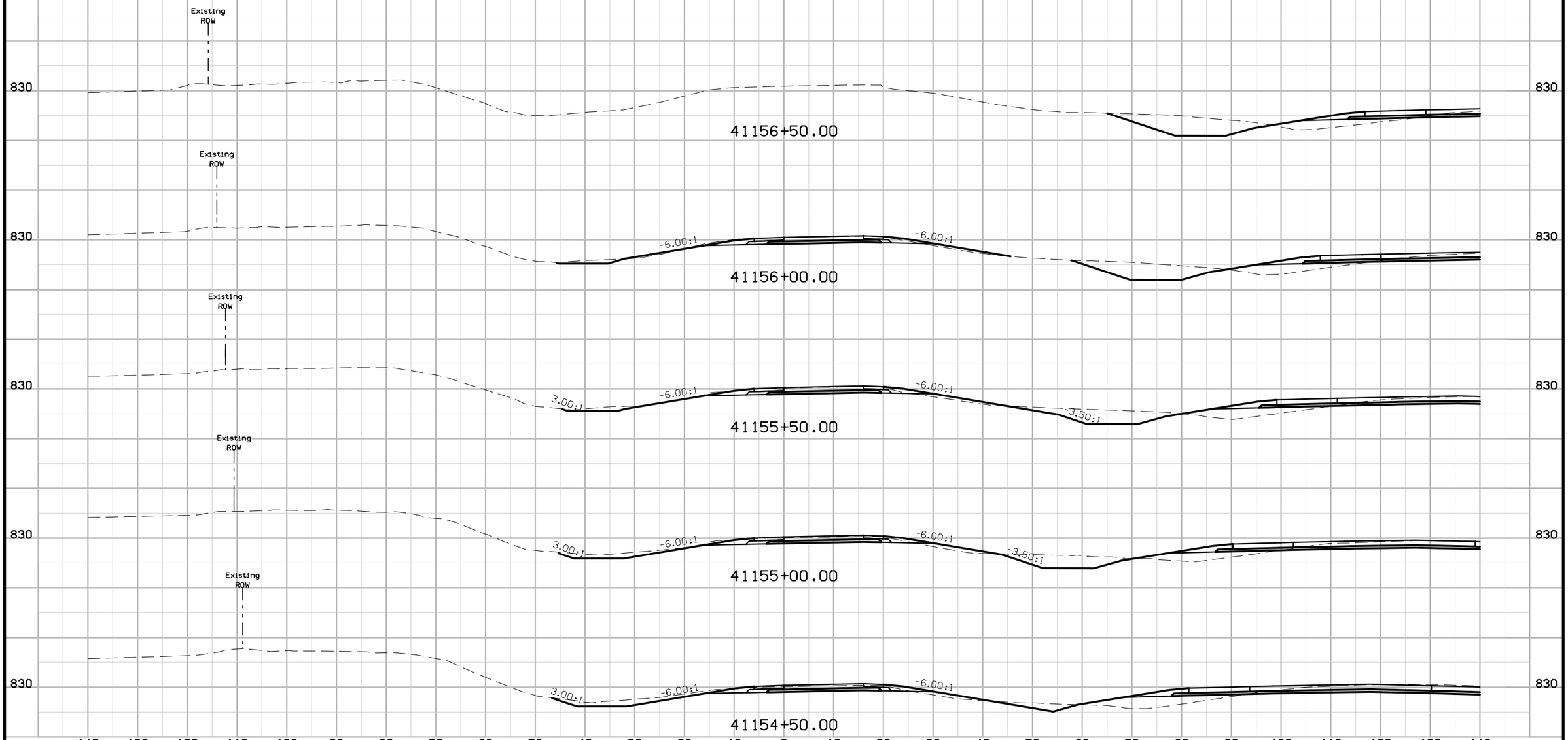

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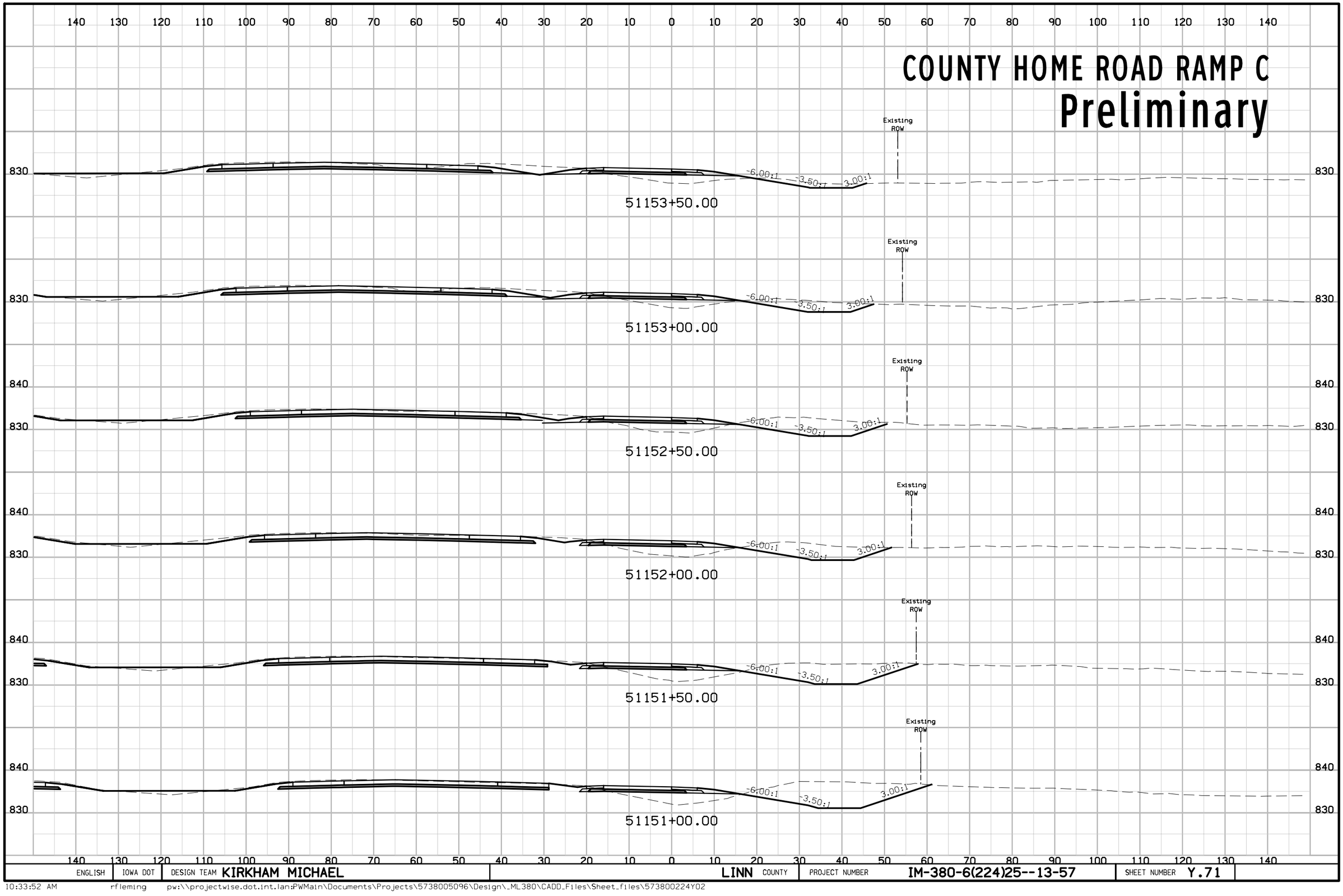
ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.70

10:33:33 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y01

COUNTY HOME ROAD RAMP C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.71

10:33:52 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y02

COUNTY HOME ROAD RAMP C

Preliminary

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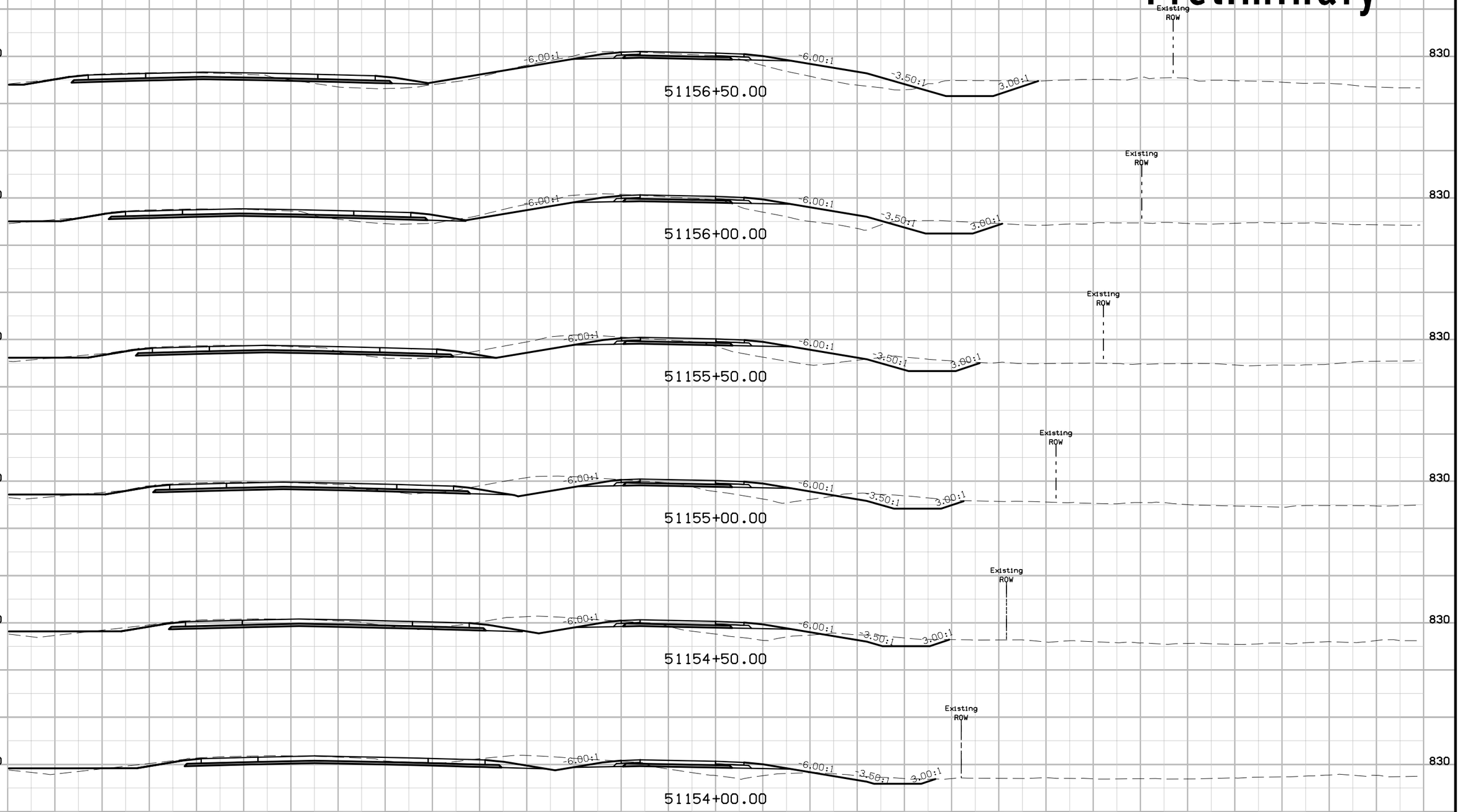
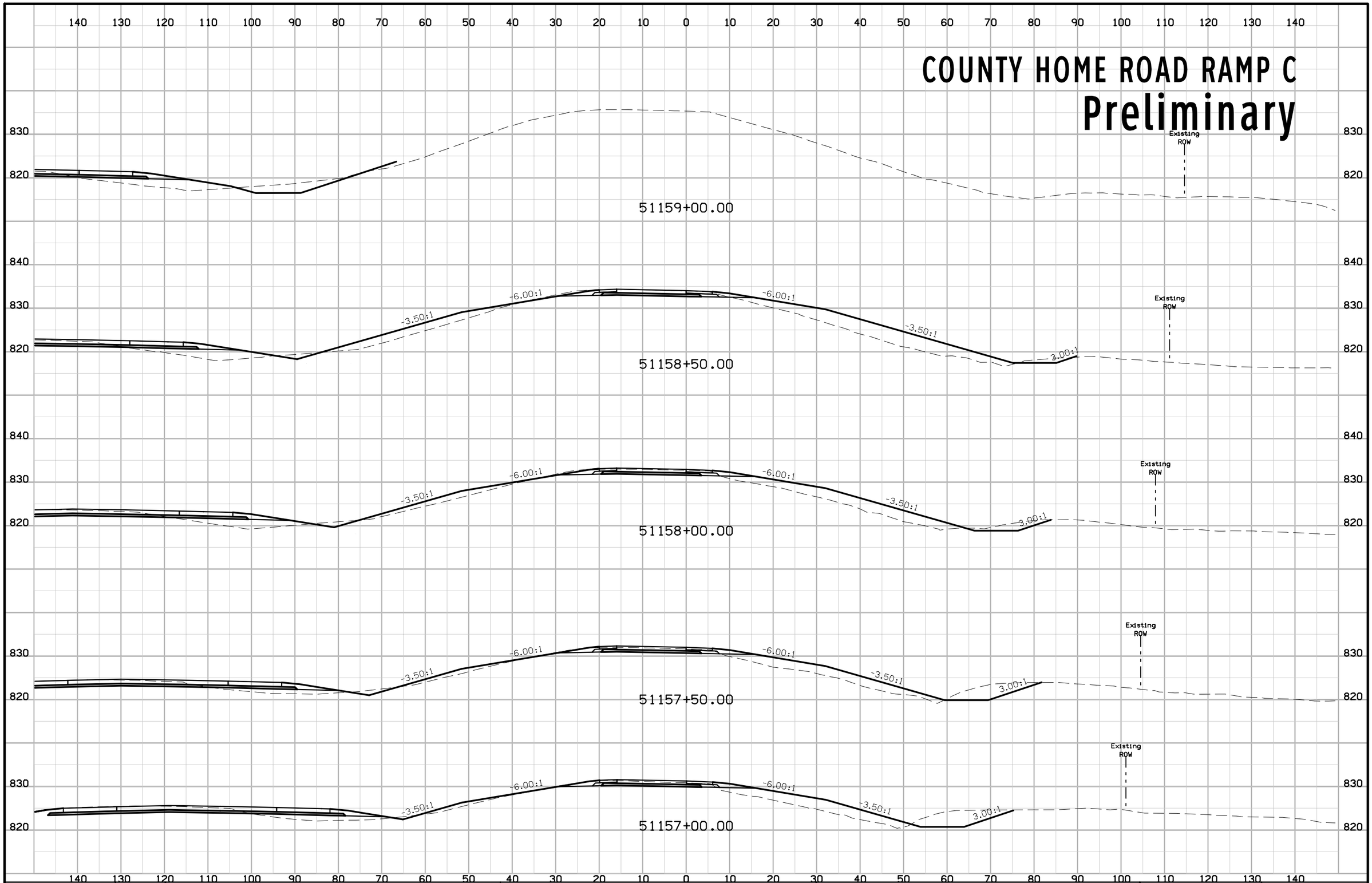


ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.72

10:33:53 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y02

COUNTY HOME ROAD RAMP C

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM KIRKHAM MICHAEL	LINN COUNTY	PROJECT NUMBER IM-380-6(224)25--13-57	SHEET NUMBER Y.73

10:33:53 AM rfleming pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\5738005096\Design_ML380\CADD_Files\Sheet_files\573800224Y02