IOWA DEPARTMENT OF TRANSPORTATION

TO OFFICE: Right of Way

DATE: October 24, 2012

ATTENTION: M. J. Sankey

REF. : Benton Co.
BRFN-030-6(128)--39-06
NHSN-030-6(164)--2R-06
01-06-030-010

FROM: Paul Flattery

OFFICE: Design

SUBJECT: Right of Way Submittal (D5)

This project involves the replacement of the U.S. Highway 30 reinforced concrete box culvert (Maint. No 0630.5B030) over a small stream, 1.5 miles east of County Road V-66.

Traffic will be maintained via staging. This would include shoulder strengthening in the West bound lane during the first stage and the use of a runaround during the second stage.

No access rights are to be acquired on this project.

The project directory is W:\Projects\0603001001\Design.... No printed plan sheets are included with this submittal. PDF files of the sheets can be found on the network in Projects\0603001001\Design\Benton(128)\PDFsWorking folder. Plans and cross section files have been sheeted for batch plotting. The file, 06030128_project_documentation.xlsm has a description of the MicroStation and GEOPAK files, chains and profiles. It also specifies the scale and number of sheets in each file.

Construction need lines required for this project are at the catch (intercept) point and have been added to the design file. The Office of ROW is advised to attach the following design models:

File	Model	Level	Need Type
06030128.dsn	Road_Design_Line_Work	dsnGroundlineIntercept	Permanent

Culverts were completed (B2) on 10/03/2012. It is shown on “dsnCulvertStrucProp” in plan view and referenced in to the design file as 06030128.str from the “BRPrelim” folder and also drawn on the cross sections.

No borrow areas required.

No special mitigation areas required.

Utilities on this project are as follows:

East -Central Iowa REC
Steve Marlow
2400 Bing Miller Lane
Urbana, IA 52345-0248
319-443-4343

Centurylink / Lightcore
Robert Sampson
1151 CenruryTel Drive, Building A
Wentzville, MO 63385
636-887-5367 (Office)

Coon Creek Telephone Company
Duane Andrew
P.O. Box 150
Blairstown, Ia. 52209
319-454-6234

Poweshiek Water Association
Chad Coburn
125 Industrial Drive
Brooklyn, Ia. 52211
641-522-7416

Van Horne Cablevision
Ron Schnor
204 Main Street
Van Horne, Ia. 52346
319-228-8791

The current letting date is 2/18/2014
You may indicate your acceptance or request additional information by e-mail.

PWF:RR:mk

Attach.

cc:
M. J. Kennerly
K. D. Nicholson
D. L. Maifield
R. L. Stanley
S. C. Marler
E. J. Ranney
D. A. Widick
S. J. Gent
T. Crouch
E. C. Wright
J. N. McCollough
J. Vortherms
J. Schnoebelen
S. Flockhart
N. L. McDonald
G. A. Novey
D. R. Claman
J. P. Rost
B. Hofer
L. C. Funnell
T. L. Gettings
M. A. Swenson
J. W. Smith
D. A. Popp
B. Bradley
W. Sorenson
K. Yanna
R. Ringgenberg

D-5 Checklist

__x__ D-5 shell letter completed
__x__ Complete x-sections available
__x__ Plans and cross section files have been sheeted for batch plotting.
__x__ Culverts and structures complete
_na__ Overhead signs and signals preliminary location identified.
__x__ Structure TS+L for all 4’ and larger, pipes or culverts.
_na__ Entrance (PDA) locations match access control letter
__x__ Entrance profile(s) on the plans and x-sections
__x__ Stability berms completed
__x__ Final ditching done
__x__ Borrows identified
__x__ Wetland ROW requirements identified
__x__ Plan sheets checked for Township Range, scale, and other details
__x__ Plan sheets PDFs created and check printed
_na__ Tab sheet for special needs included
__x__ Utility Legend

LETTING DATE 02/18/2014

PIPE CULVERTS

BRFN-030-6(128)--39-06

BENTON Co.

Iowa Department of Transportation

Highway Division

PLANS OF PROPOSED IMPROVEMENT ON THE

PRIMARY ROAD SYSTEM

BENTON COUNTY

PIPE CULVERTS

US 30, 1.5 MILES E. OF CO. RD. V-66

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

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

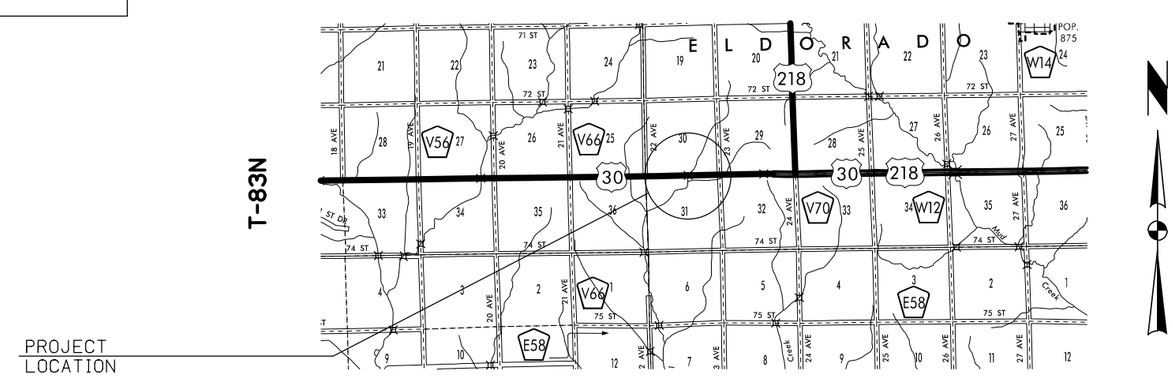
NO MILEAGE SUMMARY

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

REVISIONS

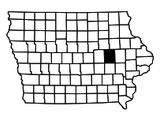
	TOTAL
	XX
PROJECT IDENTIFICATION NUMBER	
01-06-030-010	
PROJECT NUMBER	
BRFN-030-6(128)--39-06	
R.O.W. PROJECT NUMBER	
NHSN-030-6(164)--2R-06	

INDEX OF SHEETS



PRELIMINARY EARTHWORK				
	Cut (Cu Yds)	Fill (Cu Yds)	Balance (Cu Yds)	Area (Sq Yds)
STAGE 1	27	133	-105.8	2227.2
STAGE 2	4.1	5591	-5586.8	7416.6
ML030	4003.4	959.9	3043.5	14144.3
Totals	4034.5	6683.9	-2649.1	23788.1

PRODUCTION DATES	
Event	Date
D2	April 2012
D3	May 2012
D5	September 2012
Letting	2/18/2014



LOCATION MAP SCALE
0 01.1 02.2 03.3 Miles

DESIGN DATA RURAL

2014 AADT	6,806	V.P.D.
2034 AADT	10,089	V.P.D.
2034 DHV	1,042	V.P.H.
TRUCKS	16	%
Total Design ESALs	--	

INDEX OF SEALS

SHEET NO.	NAME	TYPE
A.1	Paul W. Flattery	Primary Signature Block

PRELIMINARY PLANS

Subject to change by final design.

D5 PLAN – Date: 10/18/2012

ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER A.1

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LOCATION			DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION		(L) Feet	(R) Feet	(X) Inches	(BW) Feet
U.S. 30 - Mainline	626+86.50	630+75.00		34.50	*	
	630+75.00	634+19.53		34.50	*	16.69
	634+19.53	634+68.00		(1)	*	(A)
	634+68.00	635+73.00		38.25	22	20.94
	635+73.00	636+24.00		(2)	22	(B)
	636+24.00	641+25.00		34.50	*	16.69
	641+25.00	643+47.00		34.50	*	
	632+65.35	633+75.30	27.0		*	
	633+75.30	634+14.53	(3)		*	
	634+14.53	637+29.50	28.96		22	
	637+29.50	637+76.00	(4)		*	
U.S. 30 - Stage 2 Detour Pvmt	628+00	634+55	-	(5)	14	
	634+55	635+75	-	54.92	14	
	635+75	642+00	-	(6)	14	

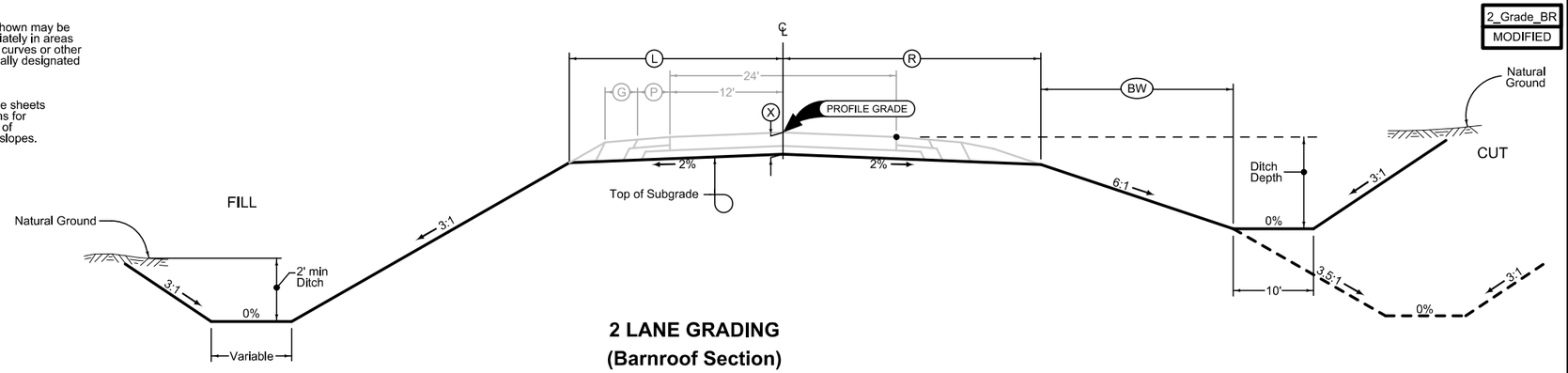
(1) 34.50 - 38.25 (5) 27.06 - 54.92 (A) 16.69 - 20.94
(2) 38.25 - 34.50 (6) 54.92 - 26.55 (B) 20.94 - 16.69
(3) 27.0 - 28.96
(4) 28.96 - 27.00

* - Shoulder and Ditching only to Existing Pavement

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

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

2_Grade_BR
MODIFIED



2 LANE GRADING
(Barnroof Section)

See Tab 100-24 for pavement quantities.
See Tab 112-9 for shoulder quantities.

U.S. 30 / Benton Co.

ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER B.1	X

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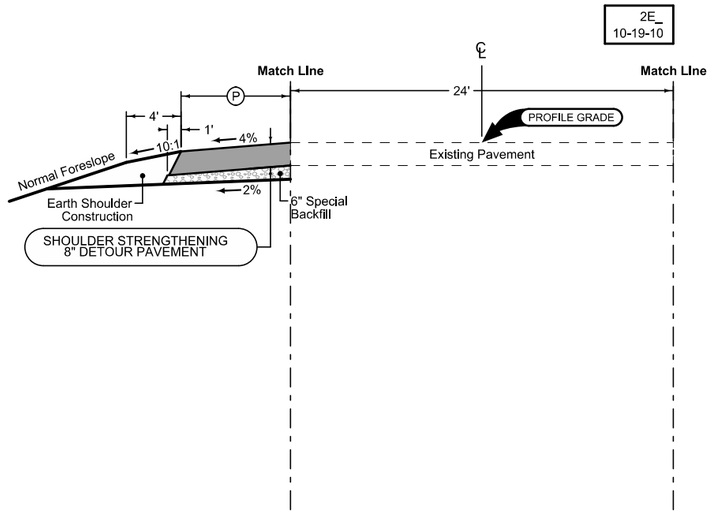
STAGE 1 TYPICAL

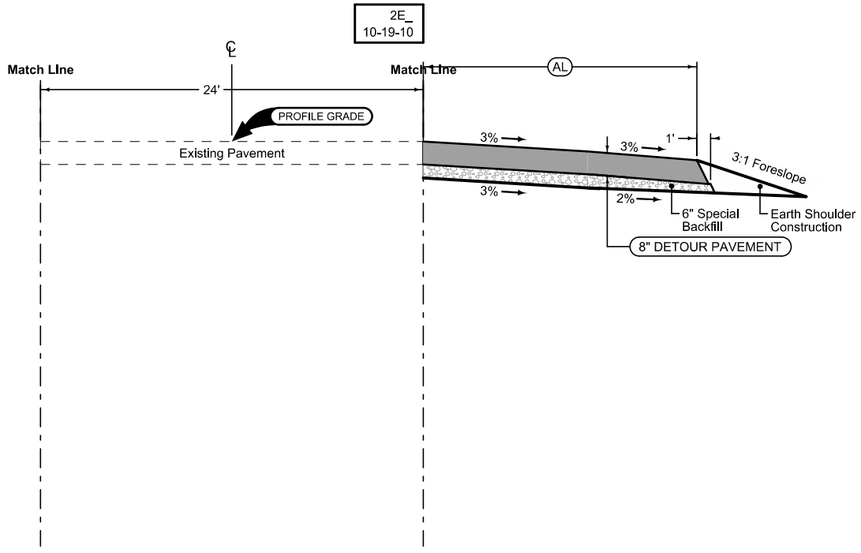


Full Depth HMA Shoulder

Shoulder Jointing:
Longitudinal joint: B

2_P_FullHMA_ 10-19-10		
STATION TO STATION		(P) Feet
632+64.65	634+00.00	5.0
634+00.00	636+50.00	10.0
636+50.00	637+76.00	5.0

STAGE 2 TYPICAL



Auxiliary Lane

Longitudinal joint: B

2_AuxLane_HMA_ 10-19-10		
STATION TO STATION		(AL) Feet
626+35.70	632+91.00	0 - 26.5
632+91.00	634+52.93	26.5
634+52.93	635+78.81	30.0
635+78.81	637+24.60	26.5
637+24.60	643+95.87	26.5 - 0

See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

U.S. 30 / Benton Co.

Combination Shoulder

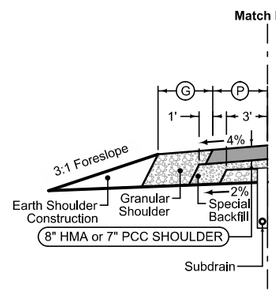
Shoulder Jointing:
Longitudinal joint: B

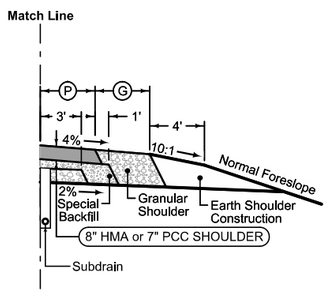
		2_C_ 10-19-10	
STATION TO STATION		(P) Feet	(G) Feet
632+65.3	633+75.3	4	6
633+75.3	634+14.53	4	6 - 9
637+29.5	637+76.0	4	9 - 6

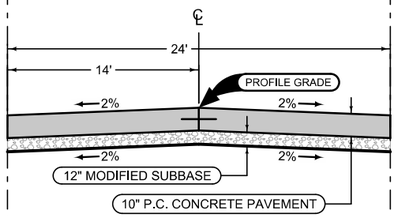
Paved Shoulder at Cable Guardrail

Shoulder Jointing:
Longitudinal joint: B

		2_P_Guard_ 10-19-10
STATION TO STATION		(P) Feet
634+14.53	637+29.50	13.0

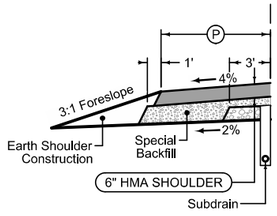






Mainline Jointing:
Transverse joints: CD at 20' spacing
Longitudinal joint: L-2

	2P_ 10-19-10
STATION TO STATION	
634+53.0	635+79.0



Combination Shoulder

Shoulder Jointing:
Longitudinal joint: B

		2_C_ 10-19-10	
STATION TO STATION		(P) Feet	(G) Feet
626+86.5	643+47.0	4	6

See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

U.S. 30 / Benton Co.

SURVEY SYMBOLS

- SIGN — SI Sign
- MIS — MIS Miscellaneous
- PPA — PPA Power Pole Co. 1
- FW — FW Wire Fence
- TIL — TIL Tile Line
- OUT — OUT Tile Outlet
- D — D Centerline Draw or Stream (Down)
- DIK — DIK Centerline of Dike or Dam
- SNP — SNP Unpaved Shoulder
- ENU — ENU Edge Unpaved Entrance & Parking
- DU — DU Centerline Draw or Stream (Up)
- RIP — RIP Rip-Rap
- FO — FOA Underground Fiber Optic Co. 1
- W — WLA Underground Water Line Co. 1
- FO2 — FOB Underground Fiber Optic Co. 2

UTILITY LEGEND

East-Central Iowa Rural Electric Cooperative
Steve Marlow
2400 Bing Miller Lane
Urban, IA. 52345-0248
319-443-4343
steve.marlow@ecirec.coop

CenturyLink
Robert Sampson
1151 Century Drive
Wentzville, MO. 63385
636-887-5367
robert.sampson@centurylink.com

Coon Creek Telephone Company
Duane Andrew
P.O. Box 150
Blairstown, IA. 52209
319-454-6234
cooncreek@netins.net

Poweshiek Water Association
Chad Coburn
125 Industrial Drive
Brooklyn, IA. 52211
641-522-7416
chad@poweshiekwater.com

Van Horne Cablevision
Ron Schnor
204 Main Street
Van Horne, IA. 52346
319-228-8791

- Alliant
- FO — Lightcore
- FO2 — Atkins Telephone
- W — Poweshiek Water Association

PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

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

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

RIGHT-OF-WAY LEGEND

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

PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

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

ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER D.1

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EL DORADO TWP.
T-83N R-10W
SEC. 30

Sta. 632+65.35
Begin Shoulder
Construction

(ROAD) +26 Residential Ent.

Sta. 634+14.53
Begin Paved
Shoulder

STA. 635+28.45
154" x 97" x 90'-0 1101 LOW CLEARANCE
(REINFORCED CONCRETE ARCH) PIPE
DA = 834 AC H
SKEW=8° LA
FL. LT.=863.70
FL. RT.=862.00

STAGED CONSTRUCTION
FIRST STAGE=48.0' + OUTLET APRON
SECOND STAGE=42.0' + INLET APRON

Sta. 637+76.00
End Shoulder
Construction

625 630 635 640

PI Sta 630+42.50

PC Sta 627+42.50

+42.12
59.14' Rt.

Sta. 626+86.50
Begin Shoulder Construction

Proposed +43 Jt. C Field Ent.

Curve Data
Δ = 0° 42' 54.80" (RT)
T = 300.00
L = 600.00
R = 48,065.36
E = 0.94

PT Sta 633+42.50

+42.90
60.05' Rt.

Sta. 634+53.00
Begin Mainline Construction

Proposed +43 Type 0 Field Ent.

Sta. 635+79.00
End Mainline Construction

EL DORADO TWP.
T-83N R-10W
SEC. 31

0 50
FEET

Sta. 633+81.6 Rt. 44.2'
24" X 40.5' CMP
DA = Side Ditch Only

Sta. 635+18.5
12' X 5' X 34.4' RCB
w/Extensions on Both Ends
DA = 803 AC R-F
w/14.6' X 6.5' Tapered Inlet
w/12' X 5' Outlet Extension

Sta. 637+42.2 Rt. 45.4'
18" X 30' CMP
DA = Side Ditch Only

890 885 880 875 870 865

882.20
-11.997%
877.35

VPI +23.204
Elv 872.70
875.03
-4.000%
871.88
-8.000%
875.54

631+77.850
881.746

TIE IN AT
STA. 634+53
876.0043

VPI +87.032
Elv 874.57

TIE IN AT
STA. 635+79
875.1001

-2.400%
+0.300%

Jt. C Ent. +43

Type C Ent. +43

638+07.920
875.537

+25 Rt.
878.00

+00 Rt.
873.00

+1.54% Rt. Ditch Grade

+50 Rt.
878.00

-2.00% Rt. Ditch Grade

+08 Rt.
868.84

+0.88% Ditch Grade

+25
866.00

Right Ditch Grade

Jt. C Ent.

Right Ditch Grade

Left Ditch Grade

875.90
875.78
875.66
875.56
875.46
875.37
875.29
875.22
875.16
875.10
875.06
875.03

625 +50 626 +50 627 +50 628 +50 629 +50 630 +50 631 +50 632 +50 633 +50 634 +50 635 +50 636 +50 637 +50 638 +50 639 +50 640

C	ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER D.2	

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640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655

Sta. 643+47.00
End Shoulder
Construction

EL DORADO TWP.
T-83N R-10W
SEC. 31

0 50
FEET

890 885 880 875 870 865

+25
873.00

+0.88% Ditch Grade

Lt

Rt

Left Ditch Grade

640 +50 641 +50 642 +50 643 +50 644 +50 645 +50 646 +50 647 +50 648 +50 649 +50 650 +50 651 +50 652 +50 653 +50 654 +50 655

C	ENGLISH	IOWA DOT	DESIGN TEAM	FLATTERY\RINGGENBERG	BENTON	COUNTY	PROJECT NUMBER	BRFN-030-6(128)--39-06	SHEET NUMBER D.3

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Benton County
SAP 0620
BRF-30-6(128)--38-06
Pin 01-06-030-010

US 30 - RCB 1.6 miles East of Co. Rd. V-66 (Ia 82 to South)

General Information:

Note: The horizontal coordinates on this project are state plane project feet minus 2 million/2 million. These coordinates are the same as previous IDOT surveys in the area. IDOT GPS Control network monuments & IDOT benchmarks found in the SAP 0149 & SAP 0150 projects were held fixed in the Horizontal & Vertical Calibration of this project.

6 points [61-65,67] were held in Horizontal RTK Calibration of this project,
3 points [324,325,326] were held in the Horizontal and Vertical RTK Calibration of this project.
7 points [662,664,667,669,670,672,674] were held in the Vertical RTK Calibration of this project.

Vertical Datum:

This survey is relative to NAVD 88 vertical datum. NGS datasheets show a vertical difference of 0.02' (88 Higher than 29) between NAVD88 to NGVD29.

The benchmarks at this site were established along an IDOT 3-wire level run that originated at 3rd order BM 613 (UE 13 B). That level run terminated at BM 677 (Young PID MH0453).

This survey datum is 3.61 feet +/- Lower than the elevations shown on the F-270 AB plan along US 30 at this site.

Vertical Equations:

BM # 669 this survey	Elev. = 874.48 (NAVD 88 datum)
=BM # 669	Elev. = 874.48 1999 IDOT Planning DTM Survey NHS-30-6(87)--19-06
=BM # 669	Elev. = 874.48 2001 SAP 0388 Survey
=BM # 63A	Elev. = 878.09 F-270 AB Plans

Horizontal Datum & Project Coordinate Transformation:

The coordinate system for this survey is the same as the Tama Benton US 30 Planning DTM Surveys. Tama SAP 0149, NHS-30-6(88)--19-86 & Benton SAP 0150 NHS-30-6(87)--19-06. Note ** ALL Metric GPS Coordinates in the IDOT GPS Network were converted to English units then 2,000,000 was subtracted from Local Project Plane Y & X Coordinates.

Iowa State Plane North Zone coordinates found in the IDOT GPS Network in feet were transformed to project ground coordinates using a 1/combined scale factor broadcast about a held point (G040) near the center of the US 30 Tama Benton GPS Network. The held State Plane coordinate and project coordinate at
Control Point # 40 are N=1452526.454 E= 3257114.226

COMBINED FACTOR (GRID) = 0.999975361
1 / GRID = 1.00024640
VERTICAL DATUM = NAVD 88 HORIZONTAL DATUM = NAD 83 (1996)

Local Project Plane Coordinate Conversion Equation:
a. Local Project Coord y = [(State Plane y - hold point y) 1/grid factor] + hold point y
b. Local Project Coord x = [(State Plane x - hold point x) 1/grid factor] + hold point x

POINT	Feet STATE PLANE COORD(Y)	Feet STATE PLANE COORD(X)	POINT SCALE FACTOR	Feet LOCAL PROJECT PLANE COORD(Y)	Feet LOCAL PROJECT PLANE COORD(X)	ESTIMATED GPS DERIVED ORTHOMETRIC HEIGHT
G040	1452526.454	3257114.226	1.00002013	1452526.454	3257114.226	948.013
G061	1453030.754	3308468.520	1.00002031	1453030.767	3308469.786	908.965
G062	1453119.586	3311851.118	1.00002029	1453119.599	3311852.466	893.755
G063	1453085.505	3313675.150	1.00002033	1453085.518	3313676.544	879.152
G064	1453142.539	3316335.305	1.00002032	1453142.555	3316336.765	884.313
G065	1453271.781	3318684.930	1.00002027	1453271.800	3318686.445	912.564
G066	1453098.733	3319609.364	1.00002038	1453098.746	3319610.902	901.642
G067	1453094.829	3321751.718	1.00002041	1453094.842	3321753.309	923.174

Alignment:

The mainline alignment is a retrace of the existing alignment found on the F-270 AB plans. Stationing was backed up & carried forward from PI Sta 630+42.50.

Alignment Equations:

PI Sta 617+35.35 This Survey
= PI Sta 617+35.0 F-270 AB plan
= PI Sta 1408+37.738 SAP 0150 Planning DTM Survey NHS-30-6(87)--19-06

PI Sta 630+42.50 This Survey
= PI Sta 630+42.5 F-270 AB plan
= PI Sta 1421+44.898 SAP 0150 Planning DTM Survey NHS-30-6(87)--19-06

PI Sta 657+01.68 This Survey
= PI Sta 657+03.2 F-270 AB plan
= PI Sta 1448+04.078 SAP 0150 Planning DTM Survey NHS-30-6(87)--19-06

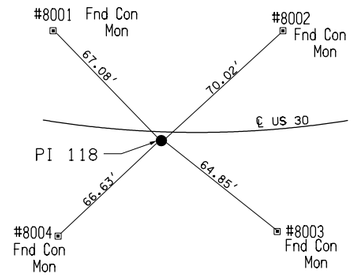
BENCHMARKS

					ELEVATION
No. 667 Sta.	622+33.379	26.34 Lt.	Y:1453144.039 X:3312922.359	Fd IHC BM on Inlet Hdwl Twin 3 x 3 RCB =F-270 AB Plan BM #61A EL879.03--------	875.369
No. 668 Sta.	629+92.419	58.348 Lt.	Y:1453201.116 X:3313680.202	Fd RR Spk S Side PP----------	884.675
No. 669 Sta.	635+19.454	23.476 Lt.	Y:1453178.824 X:3314208.258	Fd IHC BM on Inlet Hdwl 12 x 5 RCB =F-270 AB Plan BM #63A EL878.09--------	874.482
No. 670 Sta.	645+80.776	58.762 Lt.	Y:1453236.832 X:3315268.580	Fd RR Spk S Side PP----------	881.582
No. 671 Sta.	657+33.514	60.409 Lt.	Y:1453263.096 X:3316421.158	Fd RR Spk S Side PP----------	887.129
No. 672 Sta.	659+62.944	23.438 Lt.	Y:1453230.521 X:3316651.254	Fd IHC BM on Inlet Hdwl 6 x 5 RCB------	886.659
No. 674 Sta.	686+94.163	30.255 Lt.	Y:1453289.584 X:3319381.842	Fd IHC BM on Inlet Hdwl 2 x 2 RCB------	906.749

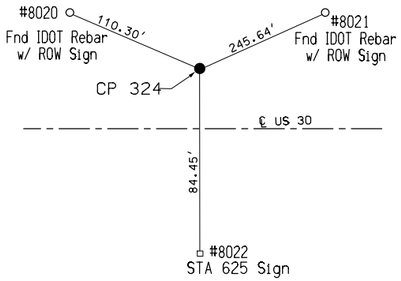
MISCELLANEOUS LOCATIONS

No. 662	Y:1453076.231 X:3308108.158	Fd IHC BM on Inlet Hdwl 2 x 2 RCB------	911.392
No. 664	Y:1453098.943 X:3310236.274	Fd IHC BM on Inlet Hdwl 12 x 6 RCB-----	874.865

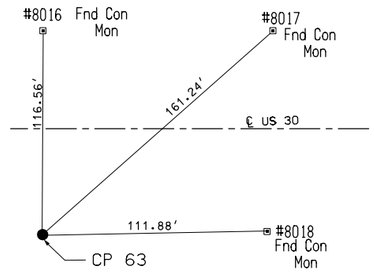
STA. 617+35.35 1.55 RT
PI 118 — Fnd Hinge Nail
XC= 3312425.485 YC= 1453100.833



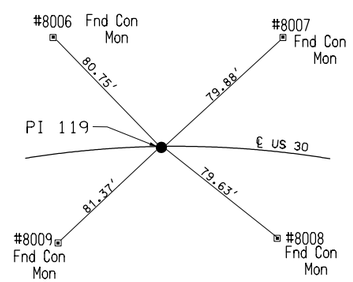
STA. 625+00.43 26.29 LT
CP 324 — Placed Rebar 6" Deep
XC= 3313189.260 YC= 1453153.042



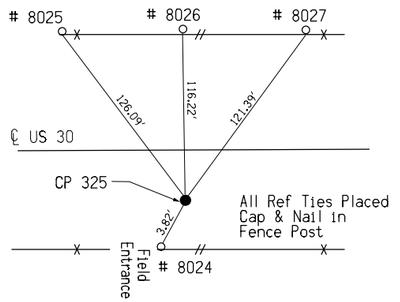
STA. 629+85.44 57.10 RT
CP 63 — Fnd Con Mon
XC= 3313676.544 YC= 1453085.519



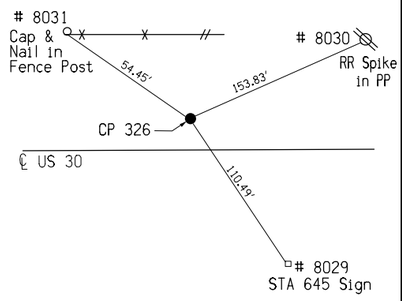
STA. 630+42.50 0.94 LT
PI 119 — Fnd Hinge Nail
XC= 3313731.908 YC= 1453145.139



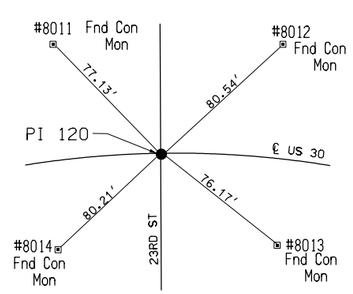
STA. 637+55.57 56.34 RT
C.P. 325 — Placed Rebar 6" Deep
XC= 3314446.029 YC= 1453104.079



STA. 644+30.12 27.70 LT
C.P. 326 — Placed Rebar 6" Deep
XC= 3315118.619 YC= 1453202.549

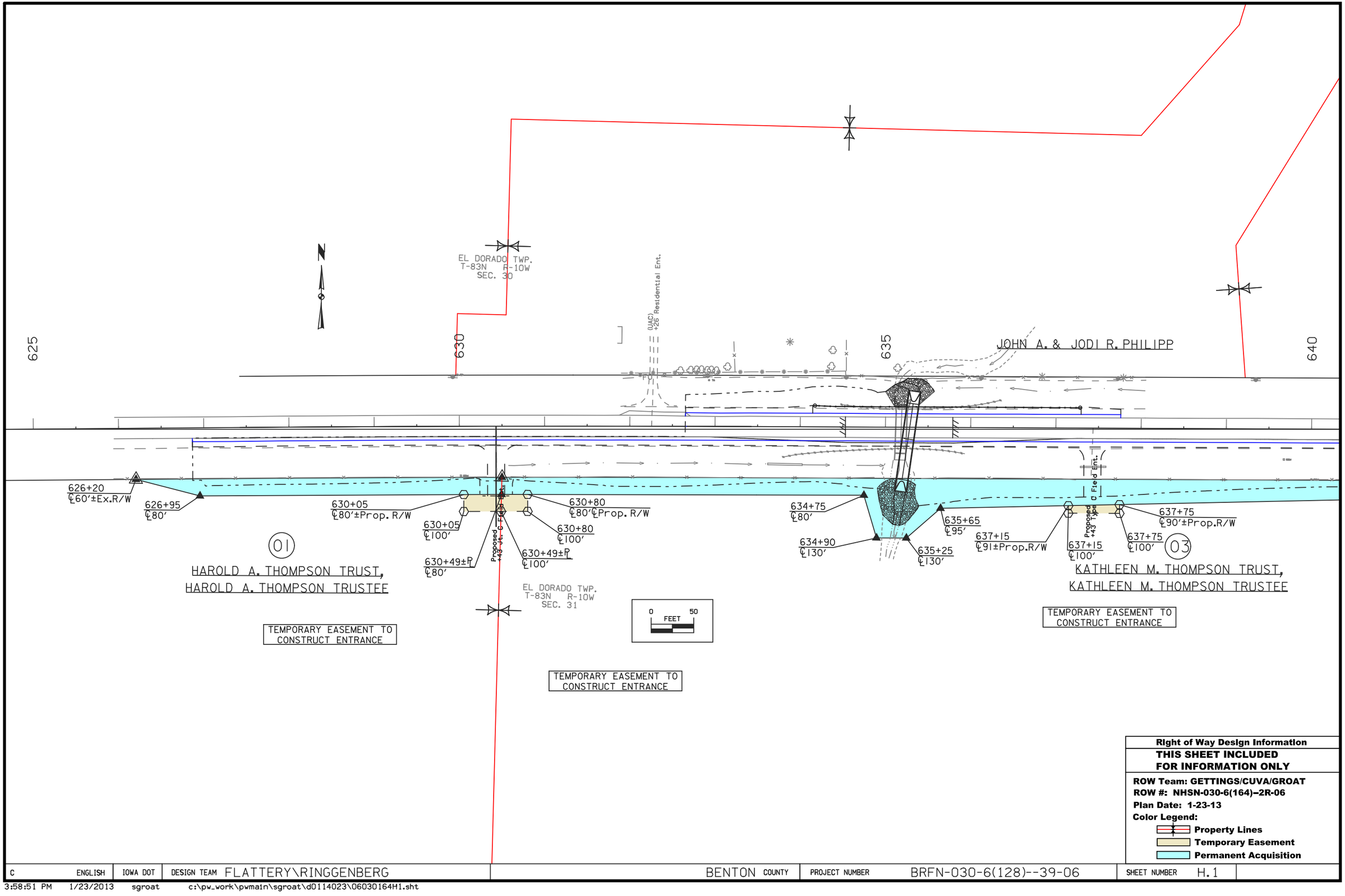


STA. 657+01.68
PI 120 — Fnd PK Nail
XC= 3316390.482 YC= 1453202.089



ENGLISH	IOWA DOT	DESIGN TEAM	WHKS & Co.	BENTON	COUNTY	PROJECT NUMBER	BRF-30-6(128)--38-06	SHEET NUMBER	G.1

3:20:16 PM 10/17/2012 rringge W:\Projects\0603001001\Design\Benton(128)\06030128g01.sht



Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/CUVA/GROAT
ROW #: NHSN-030-6(164)–2R-06
Plan Date: 1-23-13
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER H.1

3:58:51 PM 1/23/2013 sgroat c:\pw_work\pwmain\sgroat\d0114023\D6030164H1.sht

640 645 650 655

643+50
℄75'

644+20
℄60'±Ex.R/W

EL DORADO TWP.
T-83N R-10W
SEC. 31

03

KATHLEEN M. THOMPSON TRUST,
KATHLEEN M. THOMPSON TRUSTEE

0 FEET 50

Right of Way Design Information

THIS SHEET INCLUDED FOR INFORMATION ONLY

ROW Team: GETTINGS/CUVA/GROAT
ROW #: NHSN-030-6(164)--2R-06
Plan Date: 1-23-13
Color Legend:
Property Lines
Temporary Easement
Permanent Acquisition

C	ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER H.2

1:45:35 PM 1/23/2013 sgroat c:\pw_work\pwmain\sgroat\d0114023\06030164H2.sht

PARCEL CHECK LIST

01/23/13 14:21 HSL PRINT FOR S J GROAT PAGES: 1 - 1 GEN: 1

PARCEL CHECK BY PROJ UPDATED 01/23/13 14:20 PAGE: 1

R2360003 PARCEL CHECK LIST BY PROJECT NUMBER

COUNTY : BENTON PROJECT NO. :NHSN-030-6(164)--2R-06 PIN: 01-06-030010-00

CONSTRUCTION NO.:BRFN-030-6(128)--39-06 ASSIGNED TO: NLC

DESCRIPTION : US 30, 1.5 miles E. of Co. Rd. V-66

PARCEL	KEY	OWNER	TYPE	R/W W.D OR EASE.	BORROW W.D OR EASE.	HOUSE OR
0001	26684	HAROLD A. THOMPSON TRUST	FEE STATE OF IOWA	0.18 WD ACRE		
0002	26685	PARCEL R. DELETED UNKNOWN	FEE			
0003	26686	KATHLEEN M. THOMPSON TRUST	FEE STATE OF IOWA	0.78 WD ACRE		

2 TOTAL PARCELS ON PROJECT

	ENGLISH/METRIC	IOWA DOT - OFFICE OF ROW	BENTON	COUNTY	PROJECT NUMBER	NHSN-030-6(164)--2R-06	PCL

102-15
08-01-08

TABULATION OF SPECIAL EVENTS

Event	Location	Date
NONE PROVIDED		

108-23A
08-01-08

TRAFFIC CONTROL PLAN

1. U.S. 30 traffic will be maintained at all times.

108-26A
08-01-08

STAGING NOTES

Maintain Traffic on U.S. 30

Stage 1:
A - Strengthen WBL Shoulder, Place temporary pavement from Station 632+71.3 to 637+76.
B - Shift Traffic
C - Remove a portion of the Old RCB. (Sheet piling will be required)
D - Construct approximately 48' and outlet apron of the new arch pipe.

Stage 2:
A - Grade and place Temporary Pavement over newly installed pipe.
B - Shift Traffic
C - Remove existing pavement and remainder of the existing RCB
D - Install 42' and inlet apron end of new arch pipe.
E - Pave mainline from Station 634+53 to 635+79. Construct shoulders on Westbound lanes.
F - Shift traffic

Final Stage

A - Remove Temporary pavement
B - Construct HMA and Granular Shoulders on Eastbound lanes

111-01
04-17-12

COORDINATED OPERATIONS

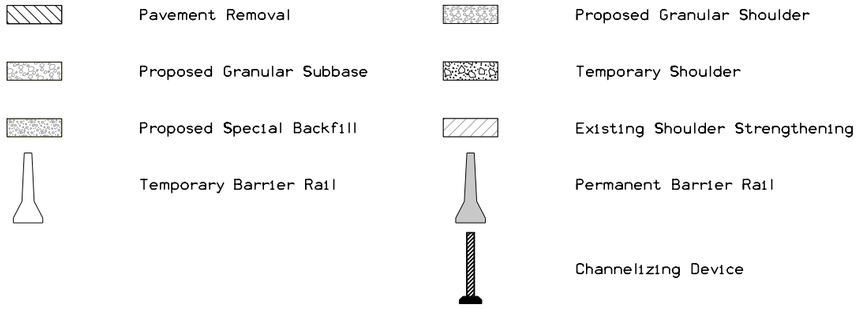
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
NONE PROVIDED	

CROSS SECTION VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Med	(237)	Future Proposed Pavement Shading

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

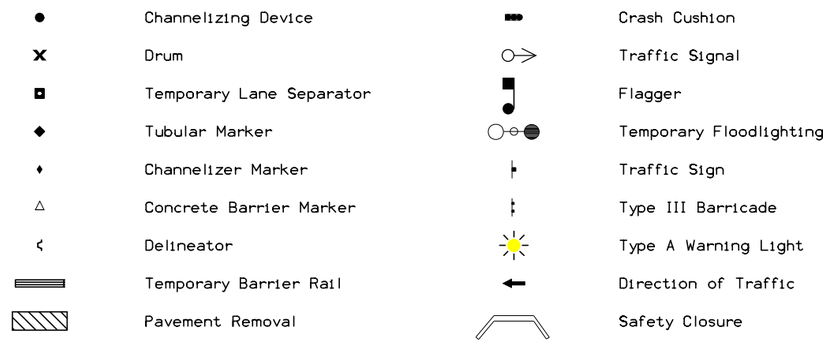


PLAN VIEW COLOR LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS

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

SHADING	Design Color No.	
Green, Light	(225)	Existing Pavement Shading
Gray, Light	(48)	Previously Constructed Pavement Shading
Gray, Med	(80)	Proposed Granular Surface Shading
Gray, Med	(80)	Previously Constructed Granular Surface Shading
Blue, Light	(230)	Proposed Pavement Shading
Lavender	(9)	Temporary Pavement Shading
Brown, Light	(236)	Proposed Grading Limits Shading
Pink, Dark	(13)	Proposed MSE or CIP Wall Shading
Red	(3)	Proposed Bridge Shading and Sign Trusses
Black w/Gray, Light Fill	(0,48)	Previously Constructed Structure

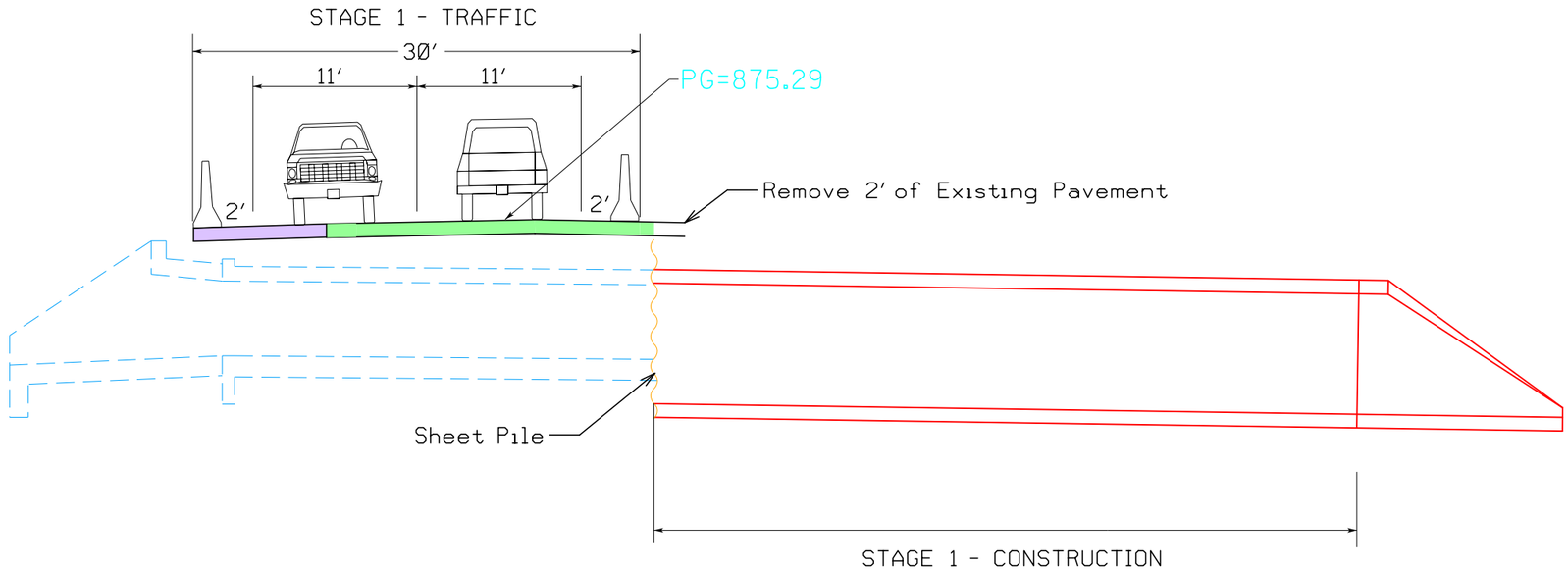
PLAN VIEW PATTERN AND SYMBOL LEGEND OF TRAFFIC CONTROL AND STAGING SHEETS



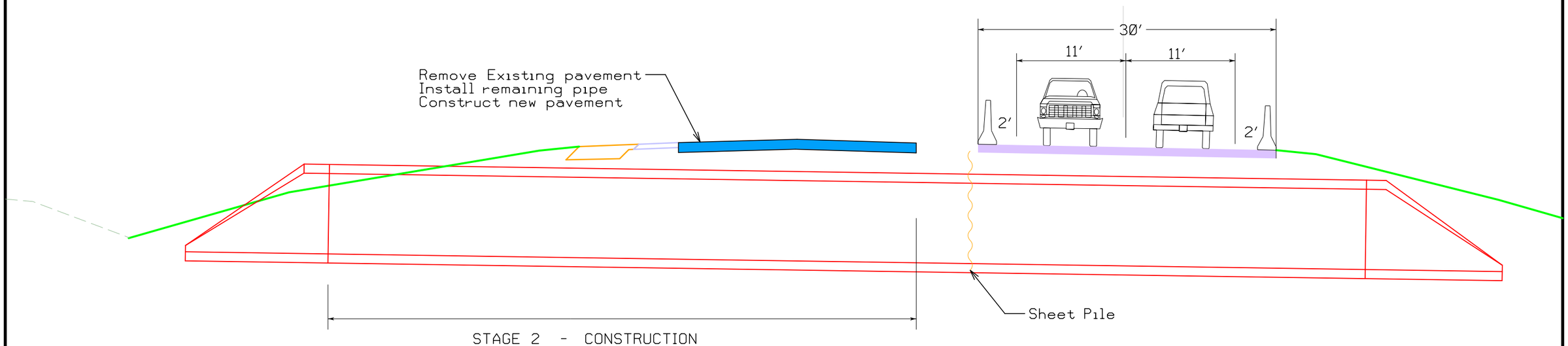
NOTE: Device spacing according to Standard Road Plans unless specifically dimensioned.

TRAFFIC CONTROL AND STAGING LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES J)



U.S. 30 - STAGE 1



U.S. 30 - STAGE 2

ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER J.3

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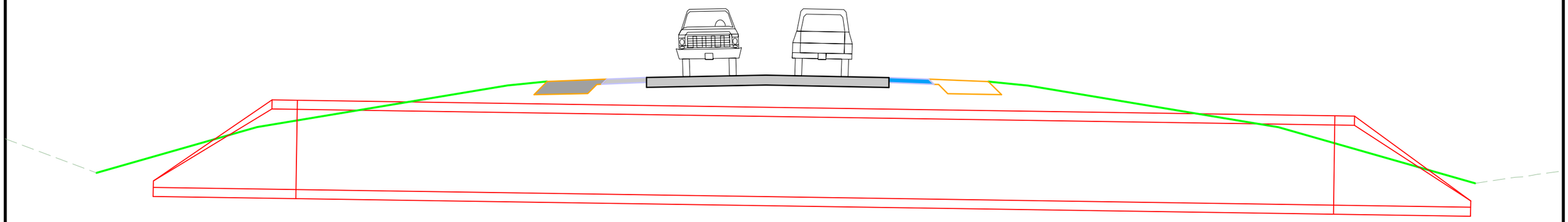

U.S. 30 - STAGE 3

ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER	BRFN-030-6(128)--39-06	SHEET NUMBER	J.4

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Sta. 632+64.66
Begin Shoulder Construction

Sta. 637+76.00
End Shoulder Construction

633
634
635
636
637
638

PT Sta 633+42.50

Sheet Pile

Build 48' plus Outlet Apron
of Reinforced Concrete Arch

0 20
FEET

U.S. 30 STAGING LAYOUT
STAGE 1
(SHEET 1 of 1)

C ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER	BRFN-030-6(128)--39-06	SHEET NUMBER J.5	

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EL DORADO TWP.
T-83N R-10W
SEC. 30

630

TP

Sta. 626+35.70
Begin Construction
Stage 2 Detour Lane

EL DORADO TWP.
T-83N R-10W
SEC. 31

0 FEET 20

U.S. 30 STAGING LAYOUT
STAGE 2
(SHEET 1 of 3)

C	ENGLISH	IOWA DOT	DESIGN TEAM **FLATTERY\RINGGENBERG**	**BENTON** COUNTY	PROJECT NUMBER	**BRFN-030-6(128)--39-06**	SHEET NUMBER **J.6**

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EL DORADO TWP.
T-83N R-10W
SEC. 30

635

Construct 42' plus Inlet Apron
of Reinforced Concrete Arch

TA

48' Concrete Arch
installed in Stage 1

EL DORADO TWP.
T-83N R-10W
SEC. 31

0 FEET 20

U.S. 30 STAGING LAYOUT
STAGE 2
(SHEET 2 of 3)

C	ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER J.7

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640

N

30

Sta. 643+95.87
End Construction
Stage 2 Detour Lane

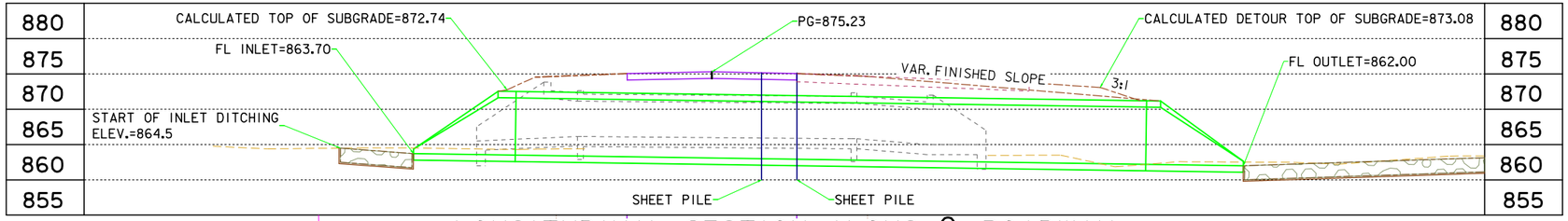
0 FEET 20

U.S. 30 STAGING LAYOUT
STAGE 2
(SHEET 3 of 3)

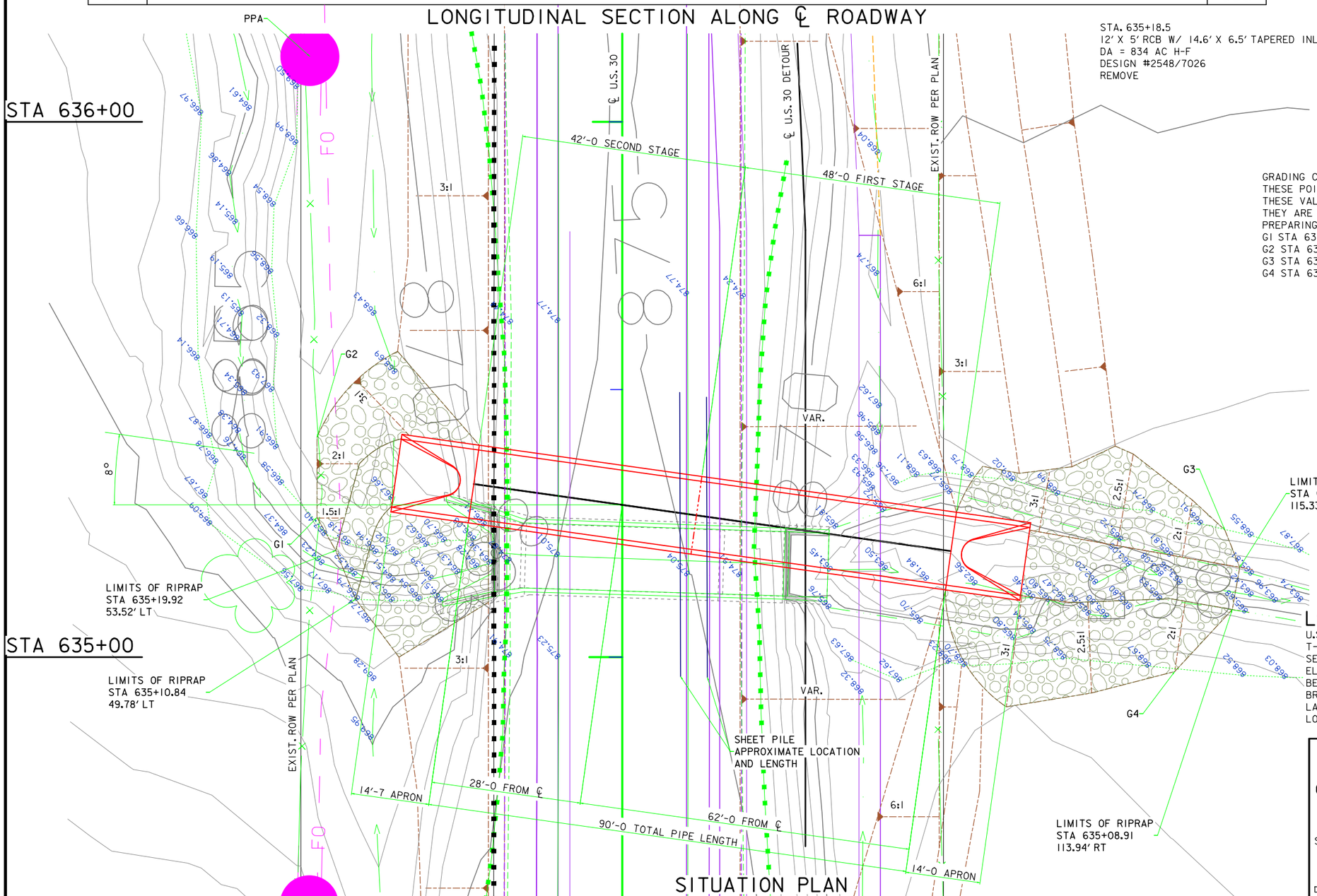
C	ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER	BRFN-030-6(128)--39-06	SHEET NUMBER J.8

4:08:59 PM 10/17/2012 rringge W:\Projects\0603001001\Design\Benton(128)\06030128J8.sht

BENCH MARK NO. 669 - STA 635+19.4, 23.5' LT., FD IHC BM ON INLET HDWL OF 12X5 RCB - ELEV.=874.48

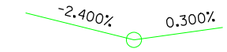


LONGITUDINAL SECTION ALONG ℄ ROADWAY



SITUATION PLAN

STA. 635+18.5
12' X 5' RCB W/ 14.6' X 6.5' TAPERED INLET
DA = 834 AC H-F
DESIGN #2548/7026
REMOVE



PI STA 634+87.03 VC = 300'
PI ELEV 874.57

PROPOSED PROFILE GRADE ON U.S. 30

PROFILE GRADE LINE (PGL) IS AT ℄.

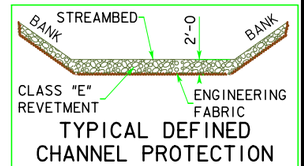
UTILITIES LEGEND:

PPA R.E.C. VINTON
FO LIGHT CORE

TRAFFIC ESTIMATE

A.A.D.T. = 6,806 VPD (2014)
A.A.D.T. = 10,089 VPD (2034)
D.H.V. = 1,042 VPH (2034)
16% TRUCKS
TOTAL DESIGN ESAL's= ?

GRADING CONTROL POINTS
THESE POINTS REPRESENT THE TOP AND TOE OF BANK IN SOME LOCATIONS.
THESE VALUES ARE APPROXIMATIONS, BASED ON THE DESIGN AS SHOWN.
THEY ARE TO BE CONSIDERED ONLY AS AIDS IN ESTIMATING QUANTITIES OR PREPARING CROSS SECTIONS. OFFSETS ARE FROM U.S. 30 ℄.
G1 STA 635+26.10, 57.00' LT
G2 STA 635+41.10, 57.00' LT
G3 STA 635+23.76, 112.54' RT
G4 STA 634+97.31, 103.17' RT



TYPICAL DEFINED CHANNEL PROTECTION

QUANTITIES	
CLASS 'E' REVETMENT	400 TONS
ENGINEERING FABRIC	350 SY

HYDRAULIC DATA

DRAINAGE AREA= 1.3 MI^2 H
STREAM SLOPE= 22.3 FT./MI.

Q_5= 468 CFS
HEADWATER= 869.98

Q_{50}= 937 CFS
HEADWATER= 873.09

Q_{100}= 1124 CFS
HEADWATER= 874.89

Q_{500}= 1518 CFS
Q OVERTOPPING= 1133 CFS, STA 636+00

LOCATION

U.S. 30 OVER WEASEL CREEK
T-83N R-10W
SECTION 30/31
EL DORADO TOWNSHIP
BENTON COUNTY
BRIDGE MAINT. NO. 0630.5B030
LATITUDE 41.963645° N
LONGITUDE 92.055088° W

PRELIMINARY

0 ENGLISH 20
SCALE IN FEET

DESIGN FOR 8° SKEW LA

154" x 97" x 90' LOW CLEARANCE (REINFORCED CONCRETE ARCH) PIPE

SITUATION PLAN

STATION: 635+28.45 ?

BENTON COUNTY

IOWA DEPARTMENT OF TRANSPORTATION - HIGHWAY DIVISION
DESIGN SHEET NO. ___ OF ___ FILE NO. 30822 DESIGN NO. _____

DESIGN TEAM	BENTON COUNTY	PROJECT NUMBER BRFN-30-6(128)--39-06	SHEET NUMBER

10/2/2012 11:50:56 AM cking W:\Projects\0603001001\BRPrelim\06030128.str TSL_06_ARCH 11x17_pdf.pltcfg

LINE STYLE LEGEND OF CROSS SECTION SHEETS (ROAD)

- Existing Ground Line
- Proposed Template
- Proposed Topsoil Placement
- Additional Topsoil Removal
- Subgrade Treatment
- Granular Shoulder
- Pavement
- Existing Pipe\RCB
- Proposed Pipe\RCB
- Proposed Dike
- All Elements Associated with Proposed Entrances

LINE STYLE LEGEND OF CROSS SECTION SHEETS (SOILS)

- TS — Topsoil (Class 10)
- TS A — Topsoil (Type A Disposal)
- TS B — Topsoil (Type B Disposal)
- TS C — Topsoil (Type C Disposal)
- CL 10 — Class 10 Materials
- SEL LO — Select Loams And Clay-Loams
- SEL SA — Select Sand
- UNS A — Unsuitable Type A Disposal
- UNS B — Unsuitable Type B Disposal
- UNS C — Unsuitable Type C Disposal
- SHALE — Shale
- WASTE — Waste
- B&W LS — Broken and Weathered Rock
- ROCK — Solid Rock
- BLDRS — Boulders

Note: All layer lines and descriptions identify layers above the line.

Note: Vertical or near vertical lines connecting soil layers at edges of cross sections are only for the purpose of calculating template quantities and do not depict soil stratification.

SYMBOL LEGEND OF CROSS SECTION SHEETS

Existing ROW — Existing Right-of-Way Limit

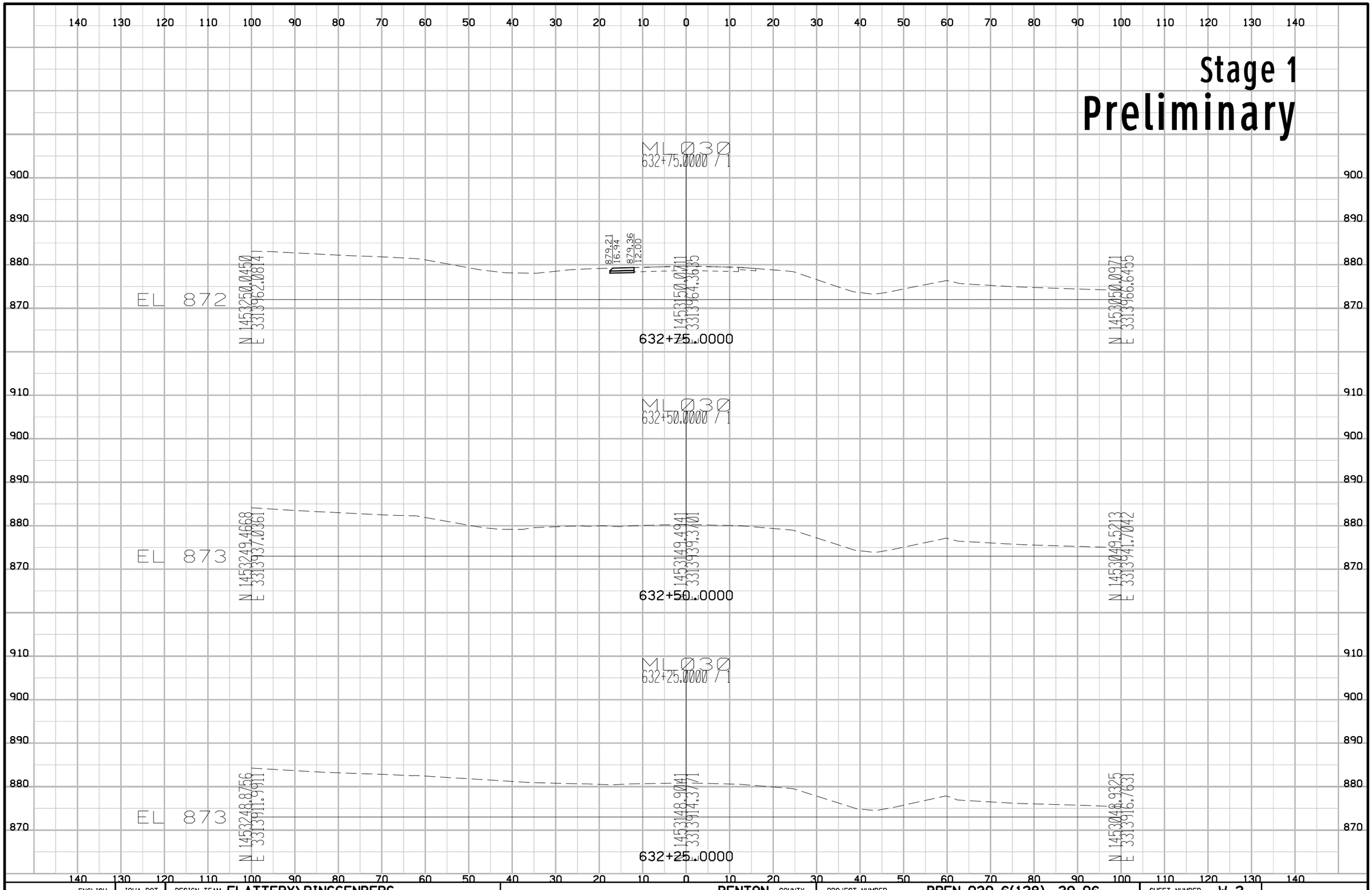
Proposed ROW — Proposed Right-of-Way Limit

Temporary ROW — Temporary Right-of-Way Limit

CROSS SECTION LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES W, X, Y, & Z)

Stage 1
Preliminary



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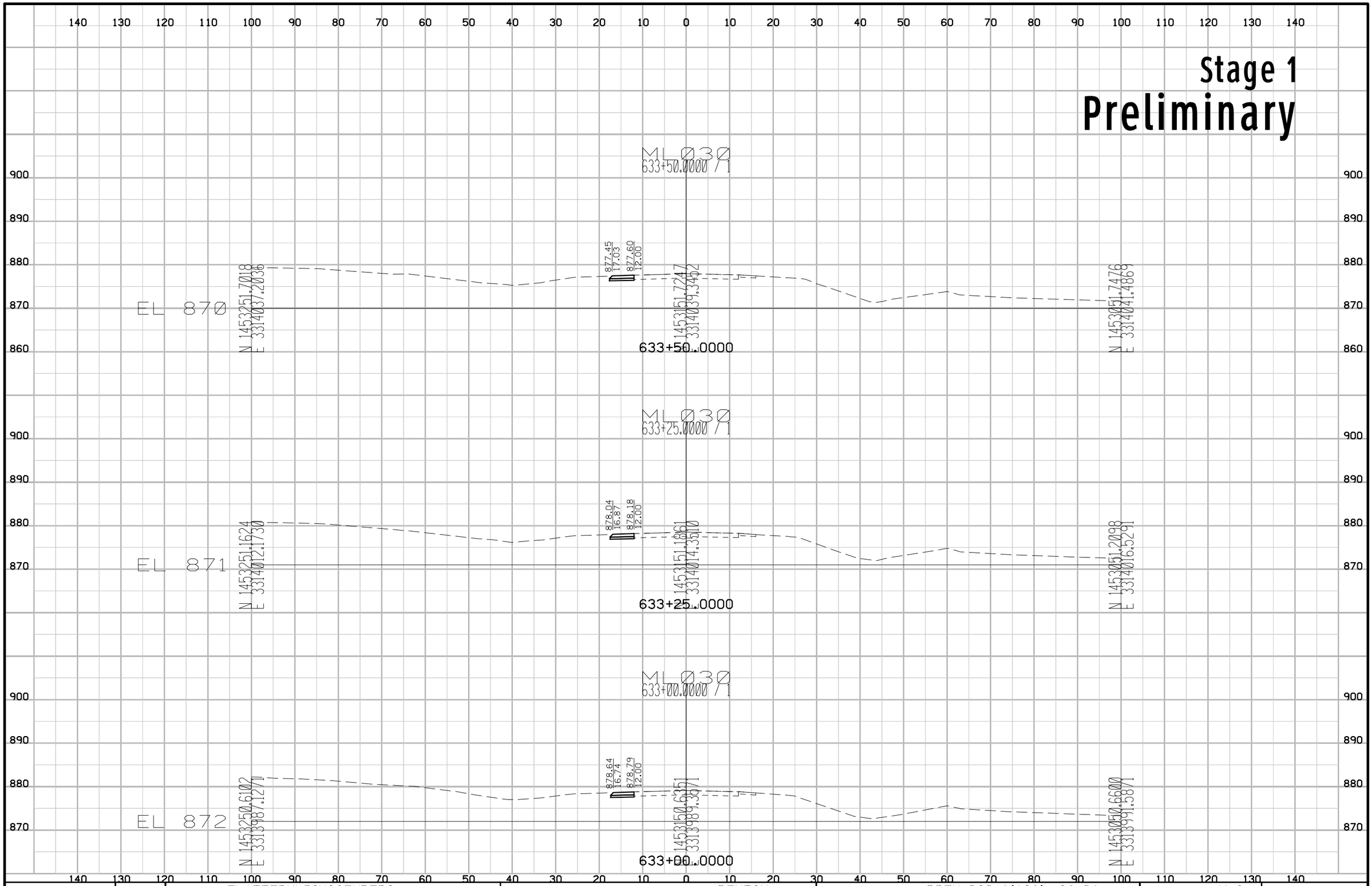
Stage 1
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.3

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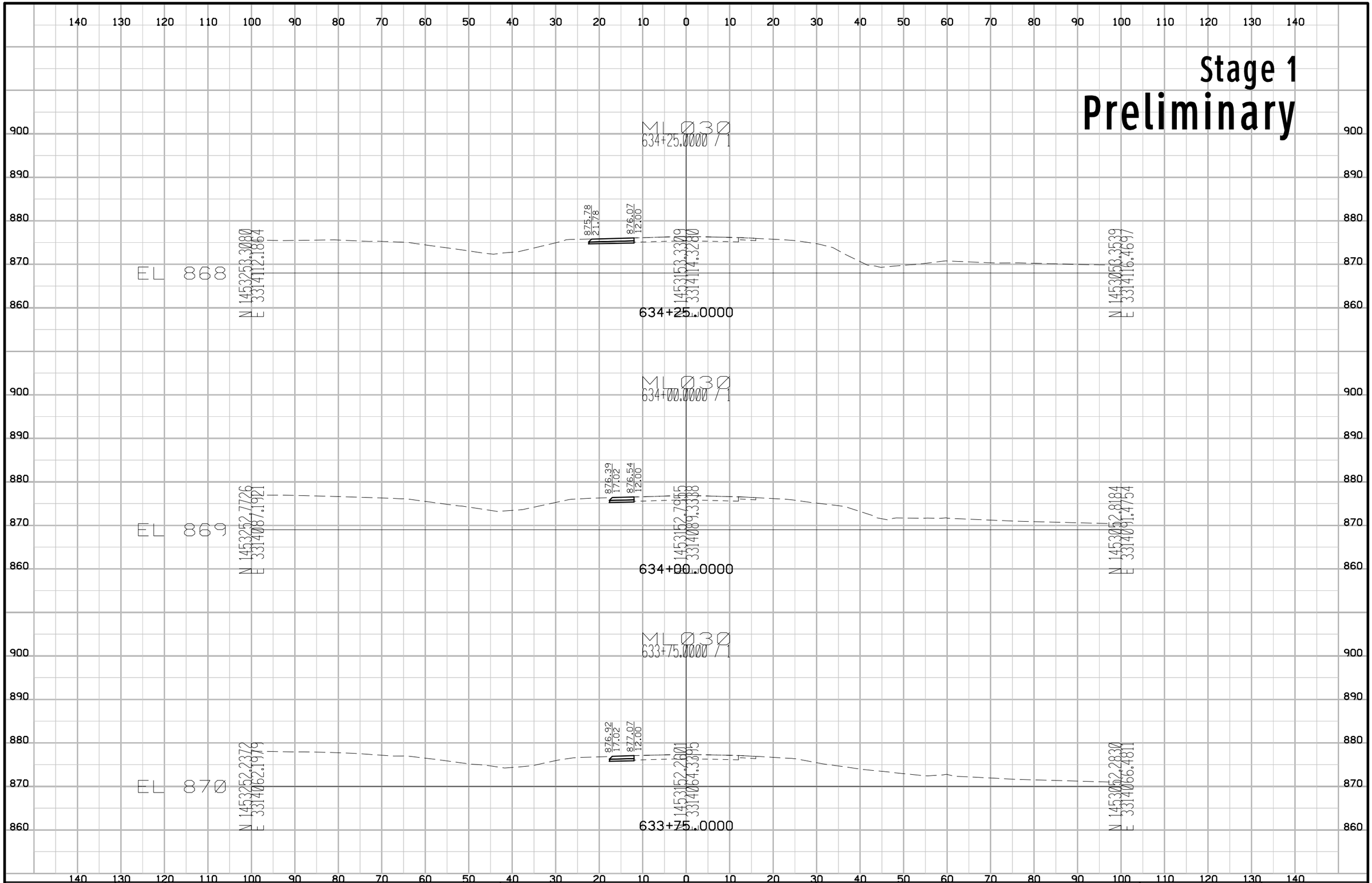
Stage 1
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.4

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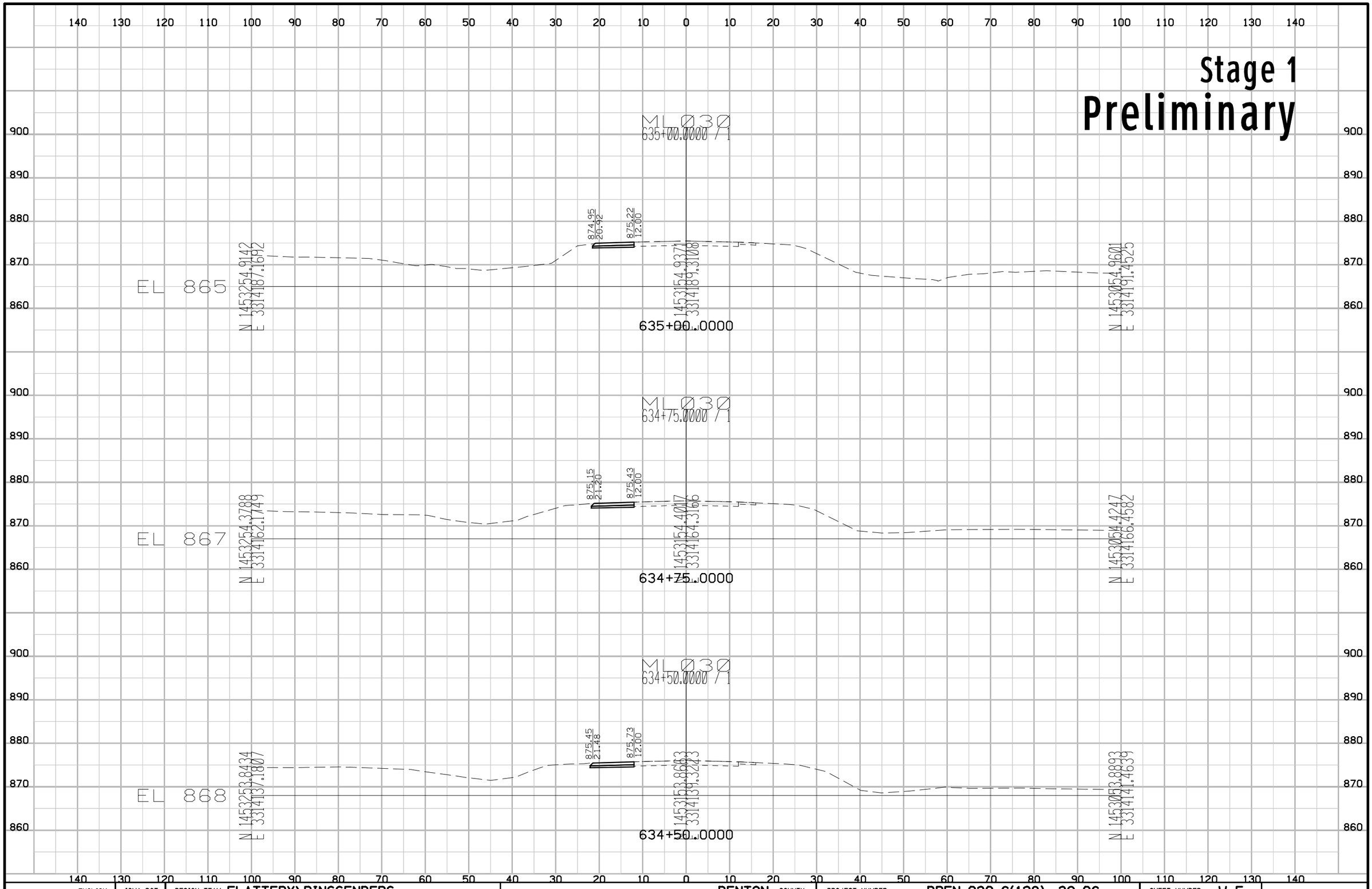
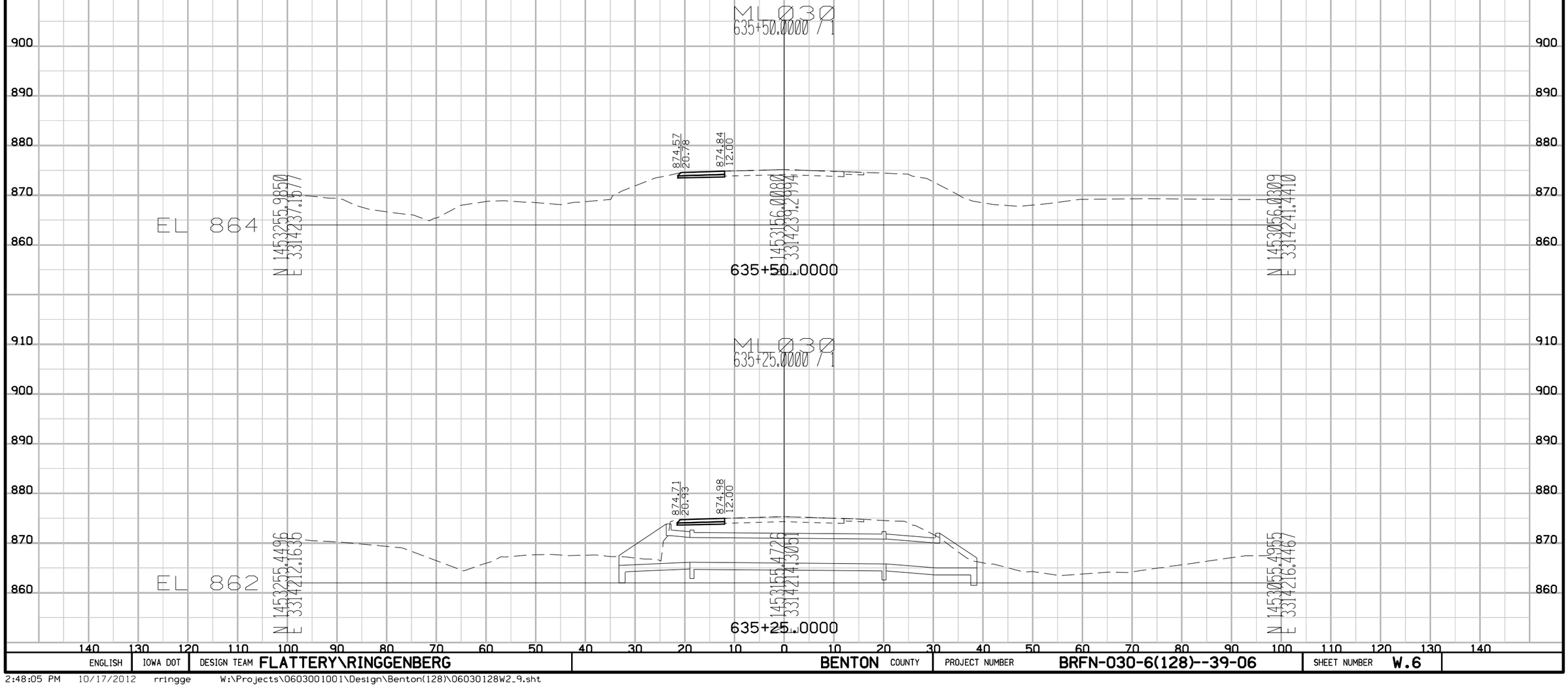
Stage 1

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.5

Stage 1
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.6

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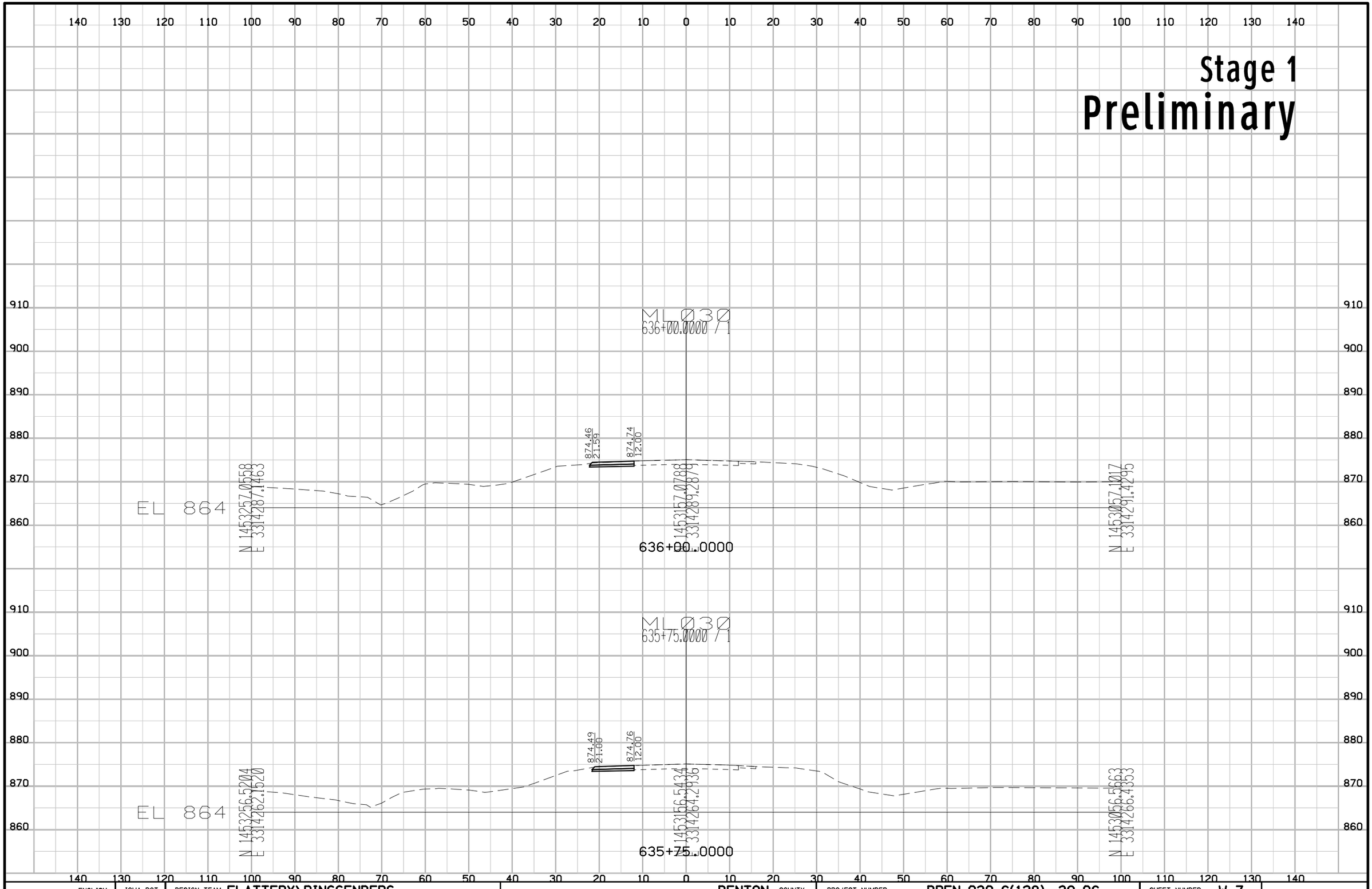
Stage 1
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.7

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Stage 1
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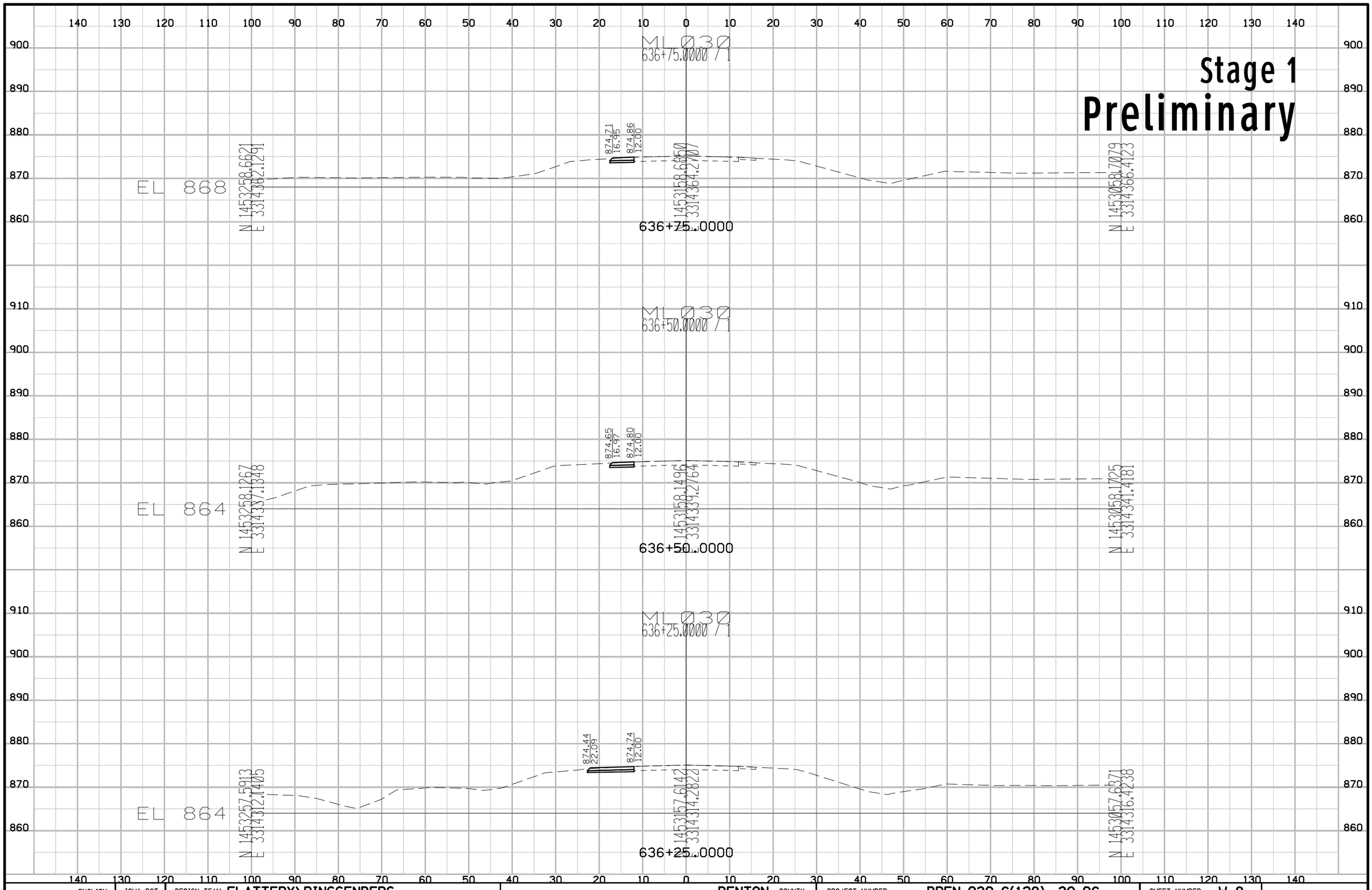

ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.8

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Stage 1
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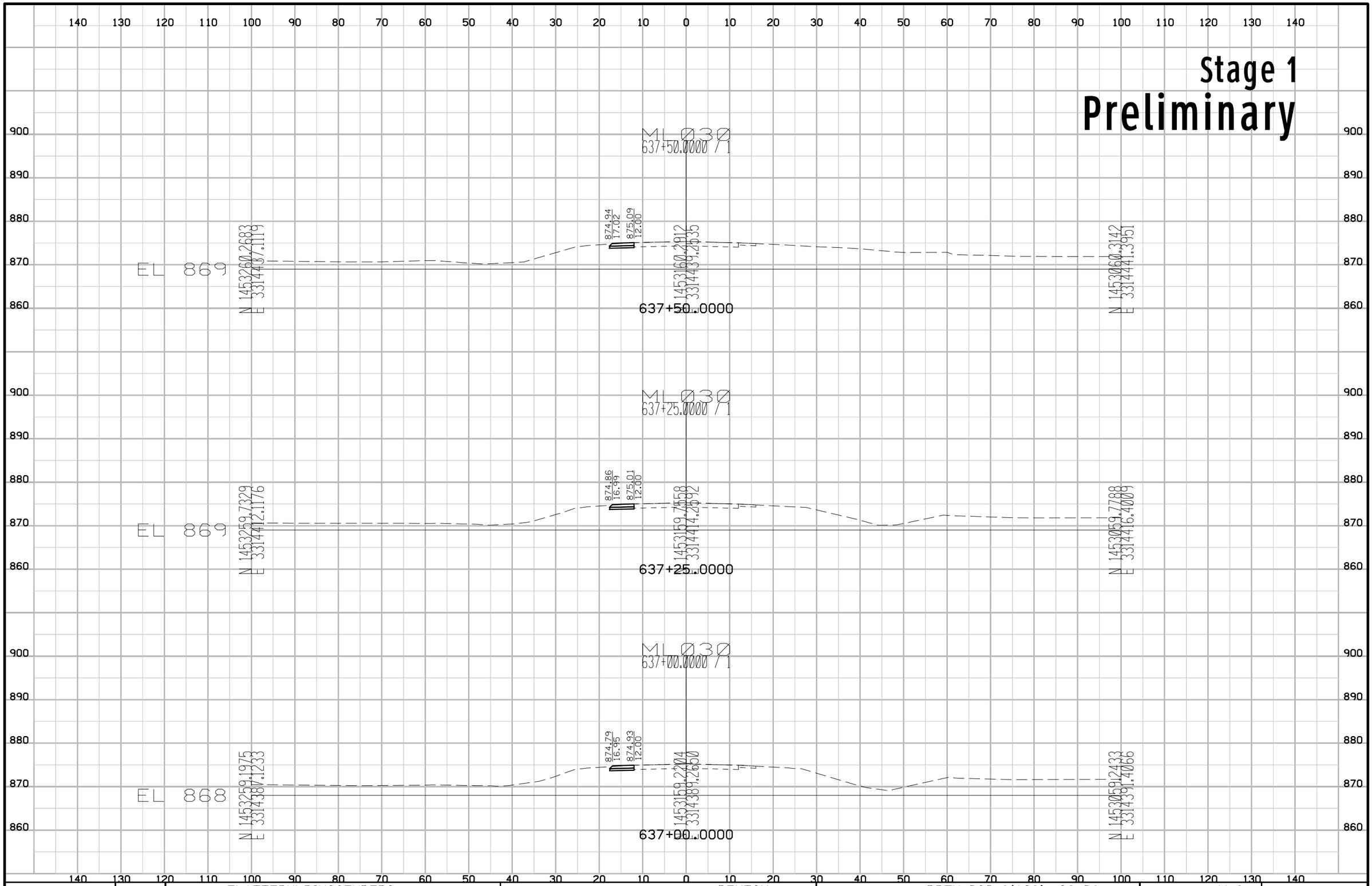

ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.9

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Stage 1
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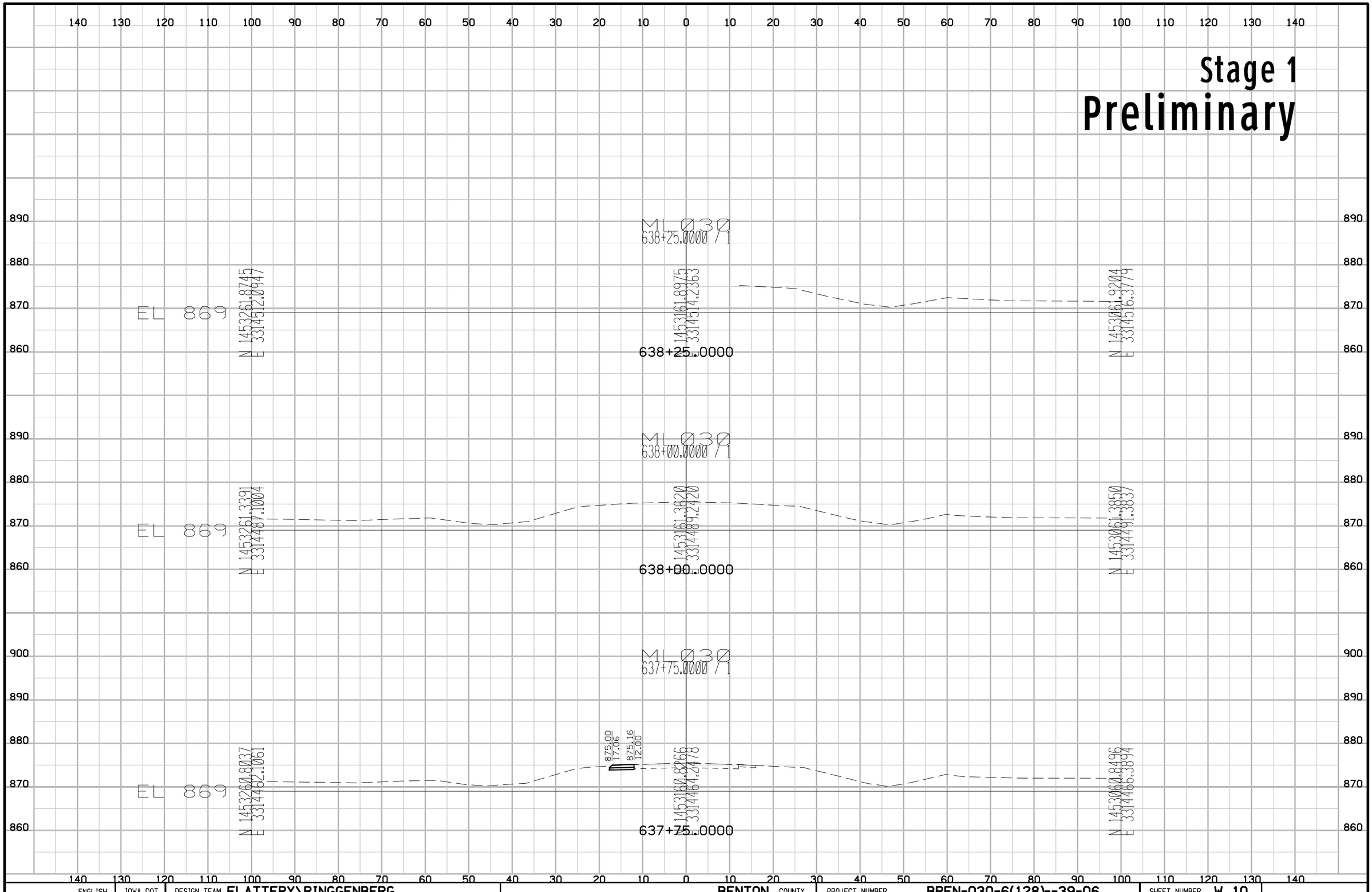

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Stage 2

Preliminary

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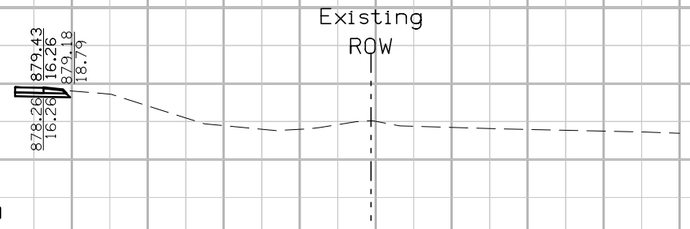
900
890
880
870



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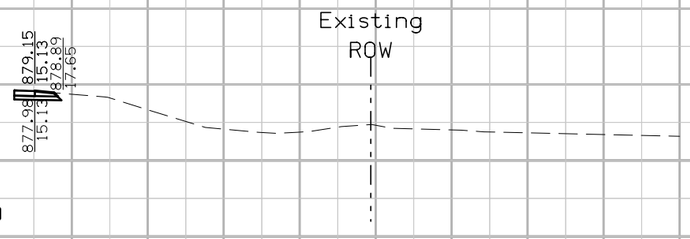

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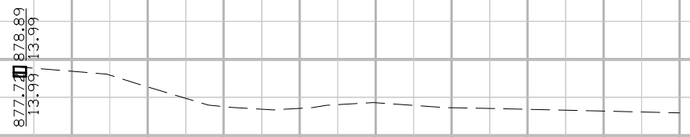

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ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.11

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Stage 2
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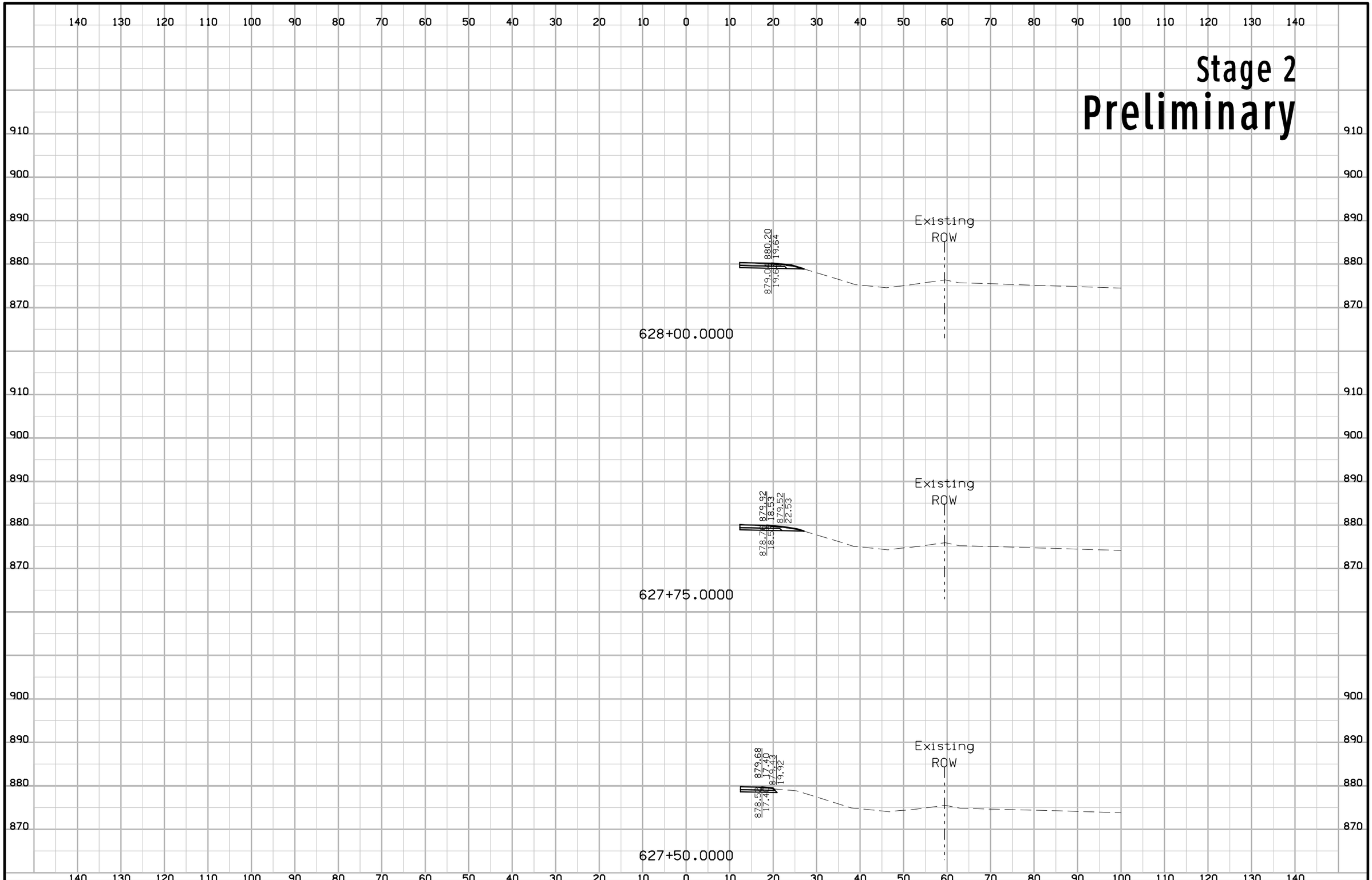

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Stage 2
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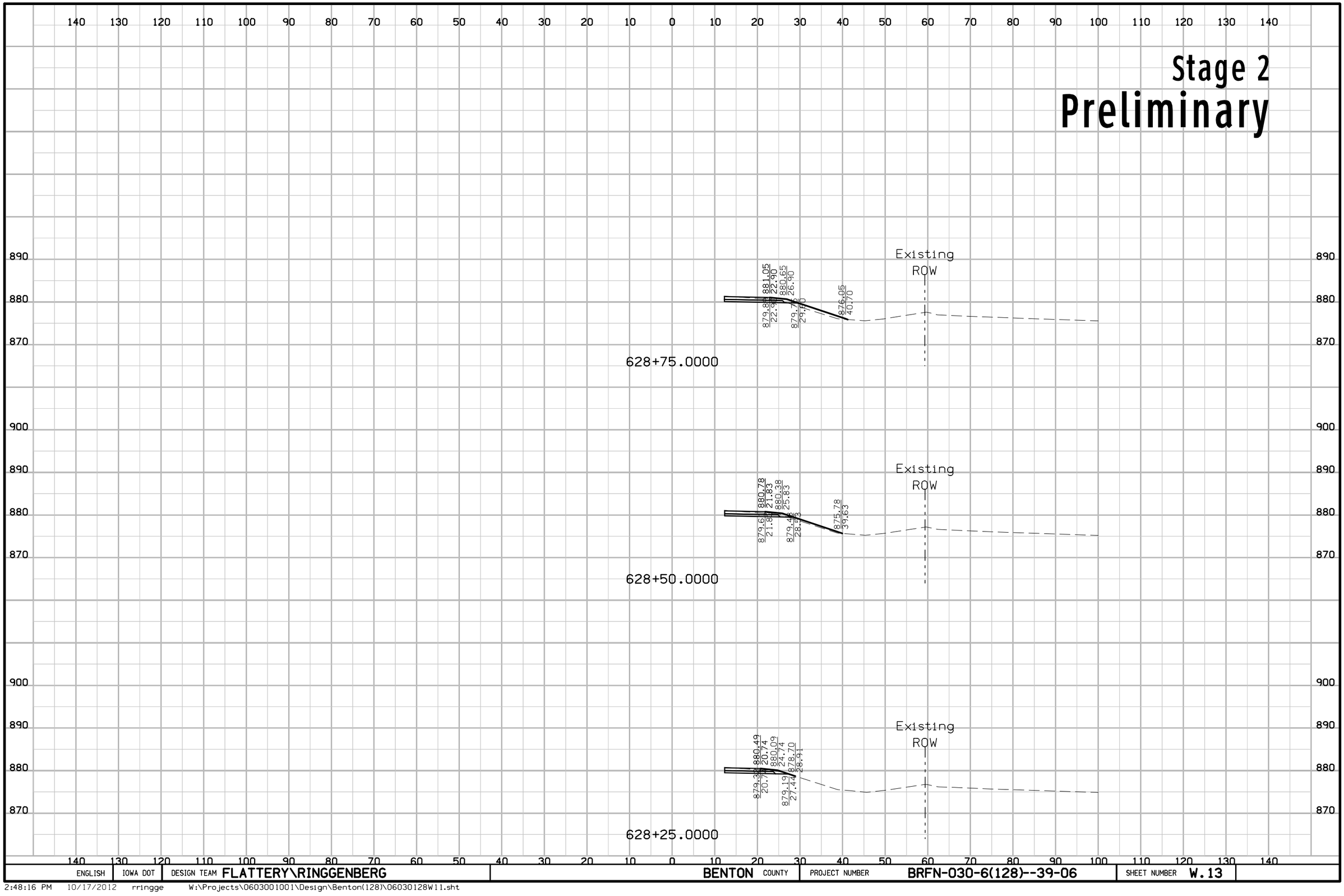
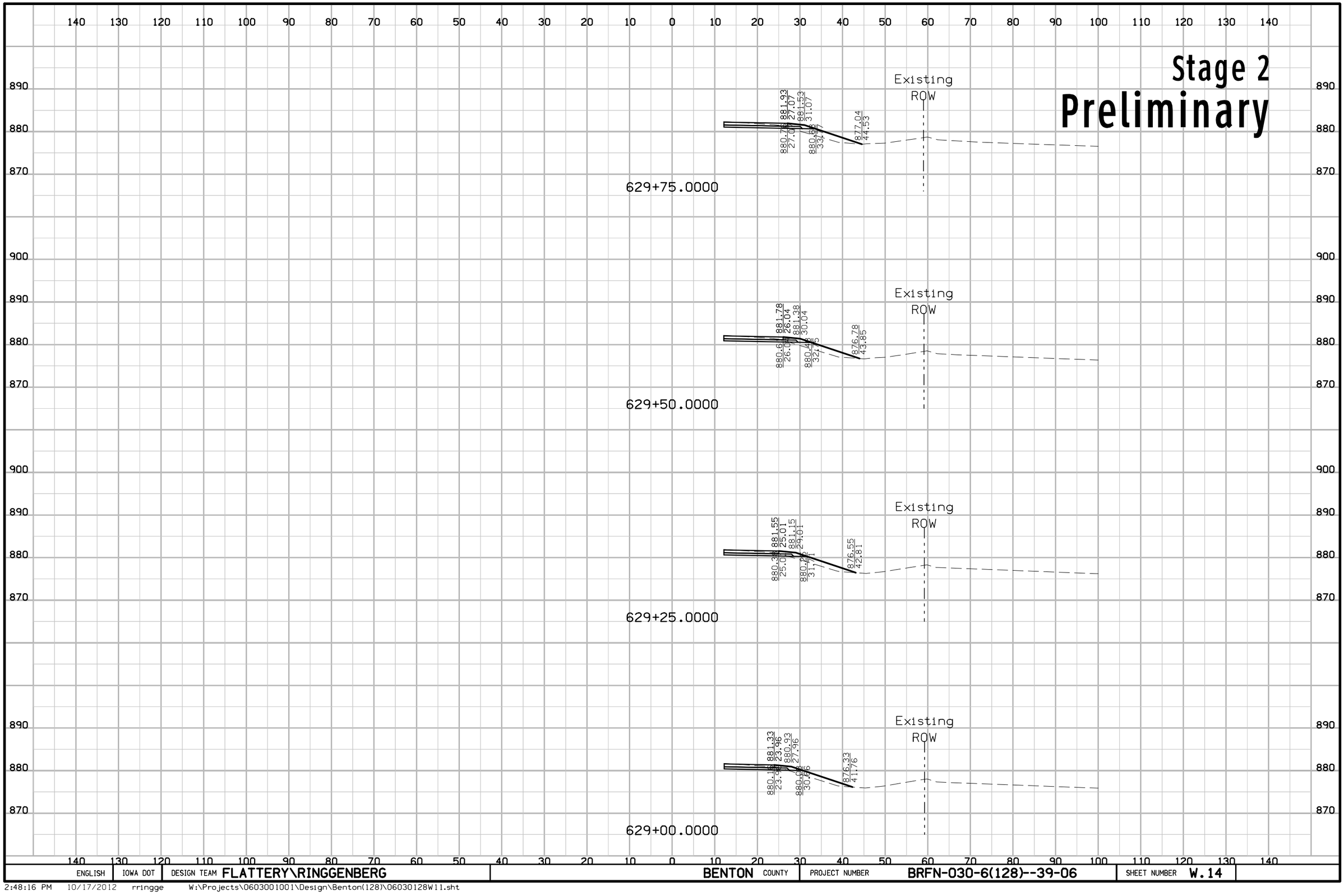


ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.13

Stage 2
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.14

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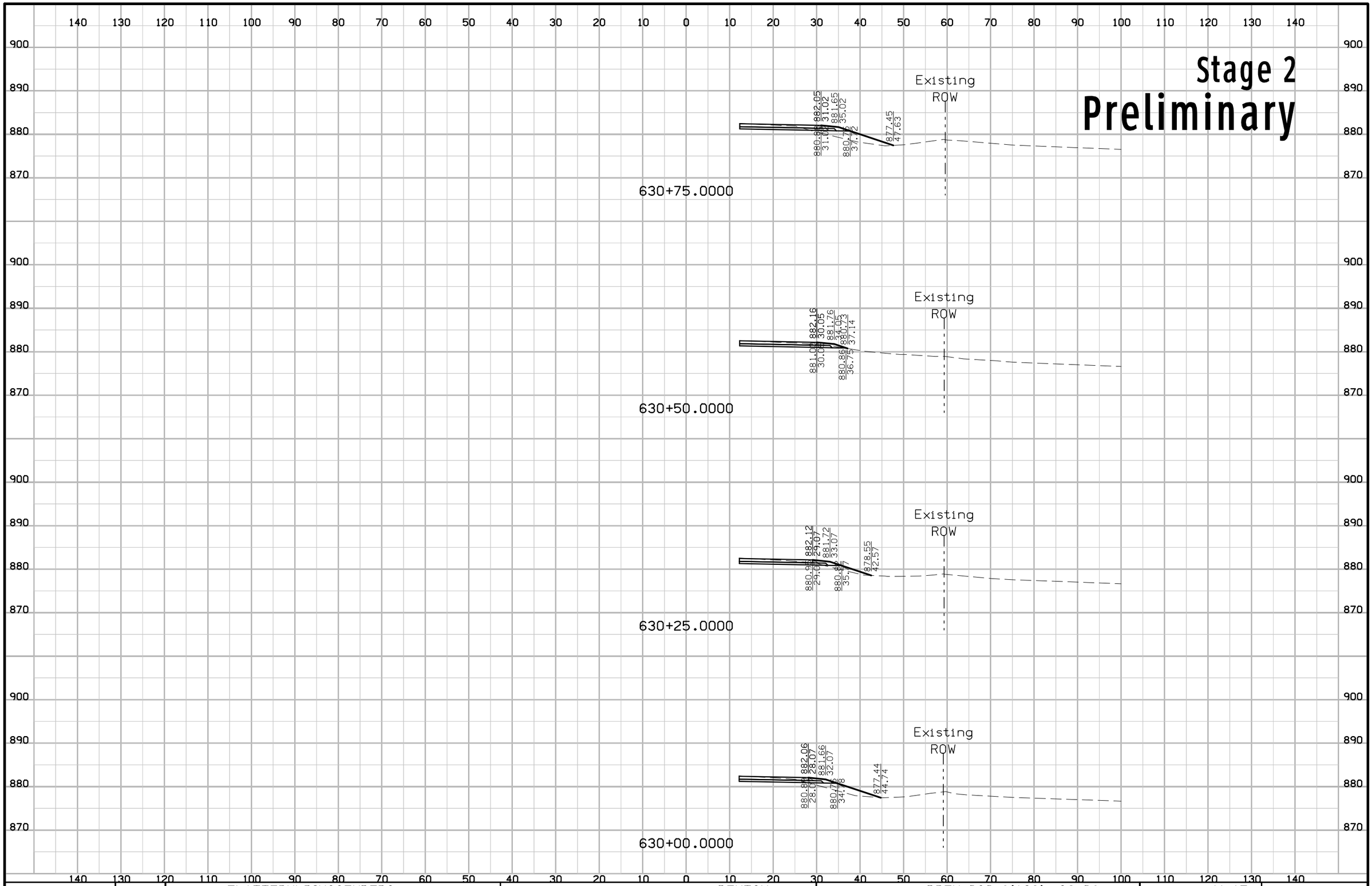
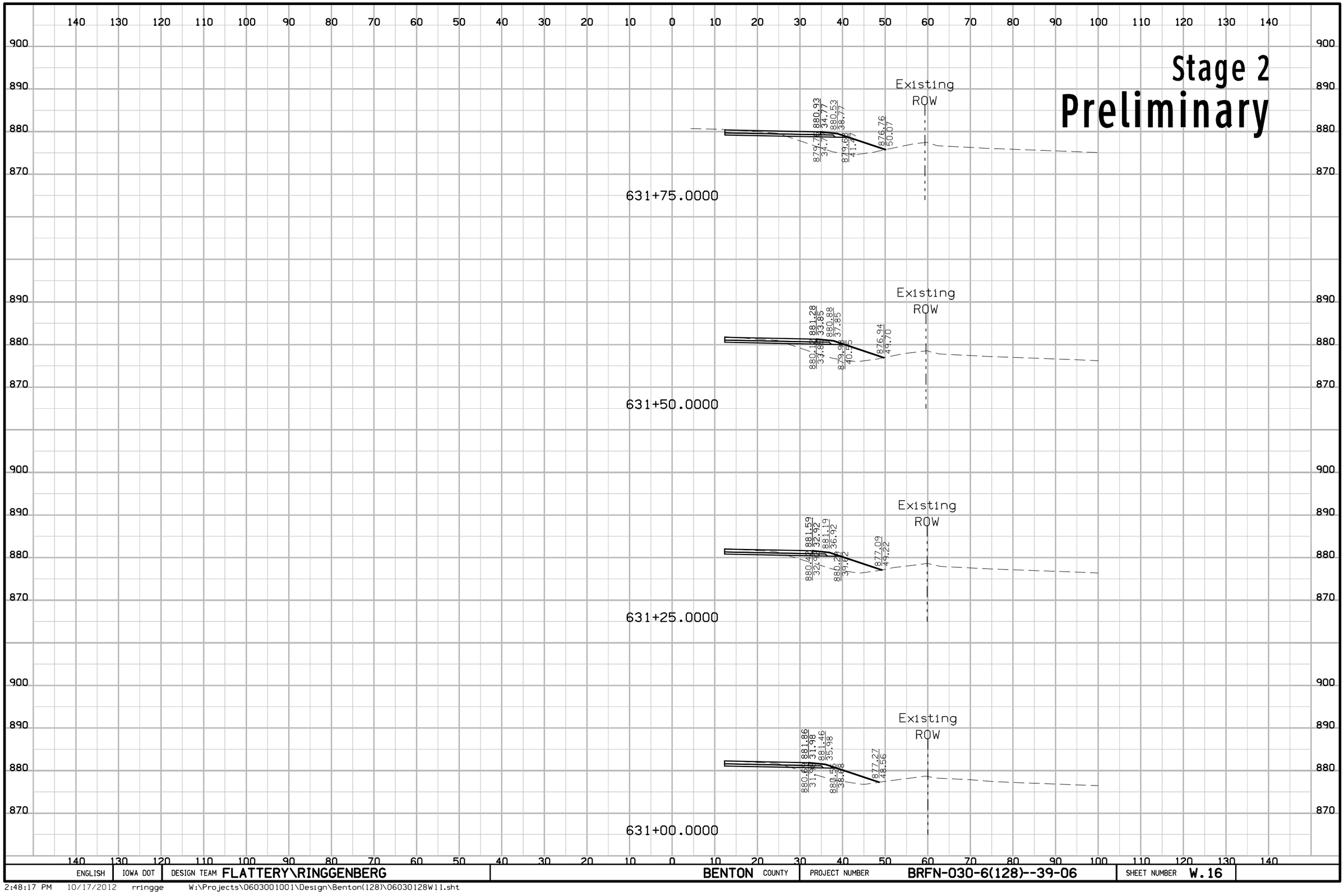
Stage 2
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.15

Stage 2
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.16

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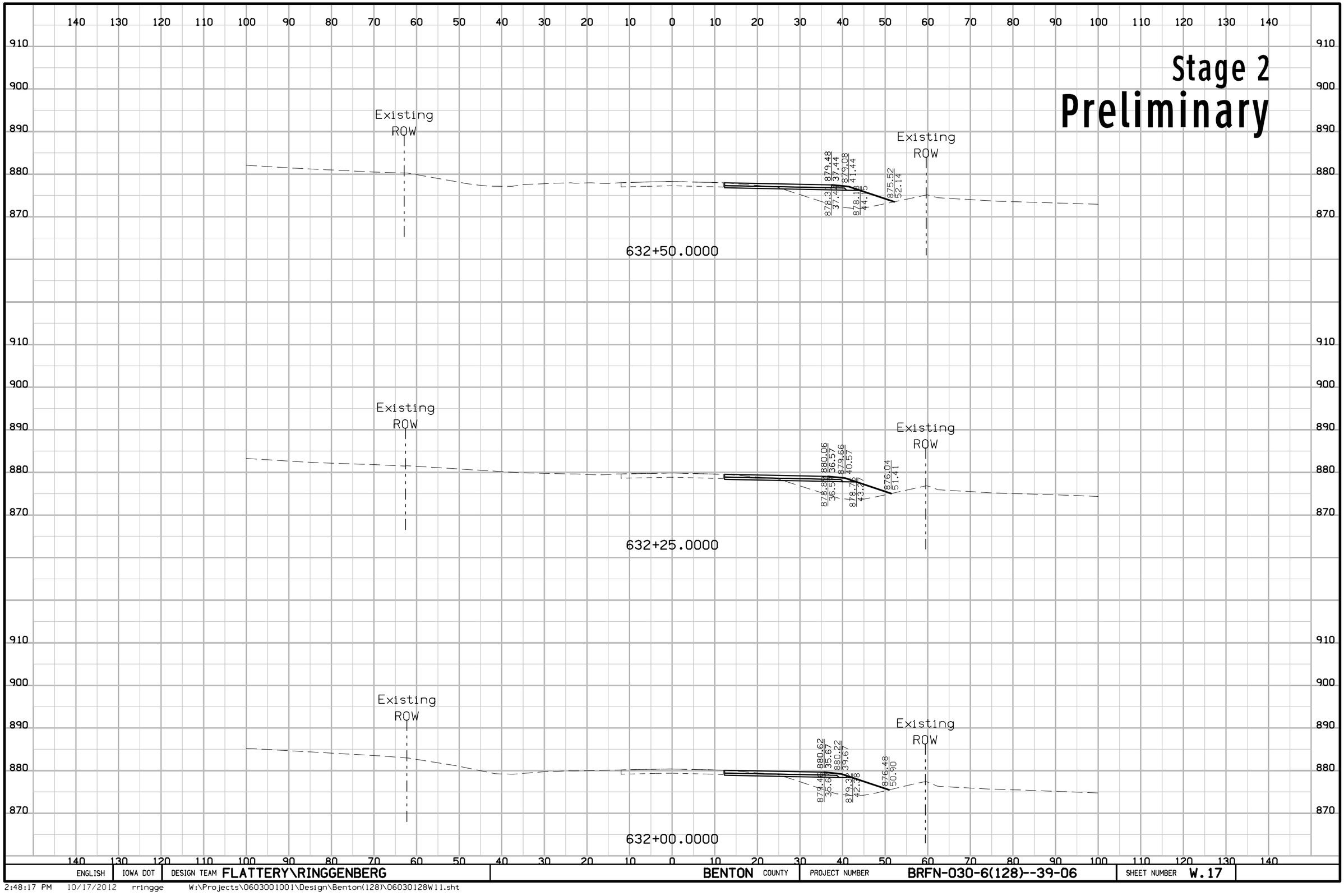
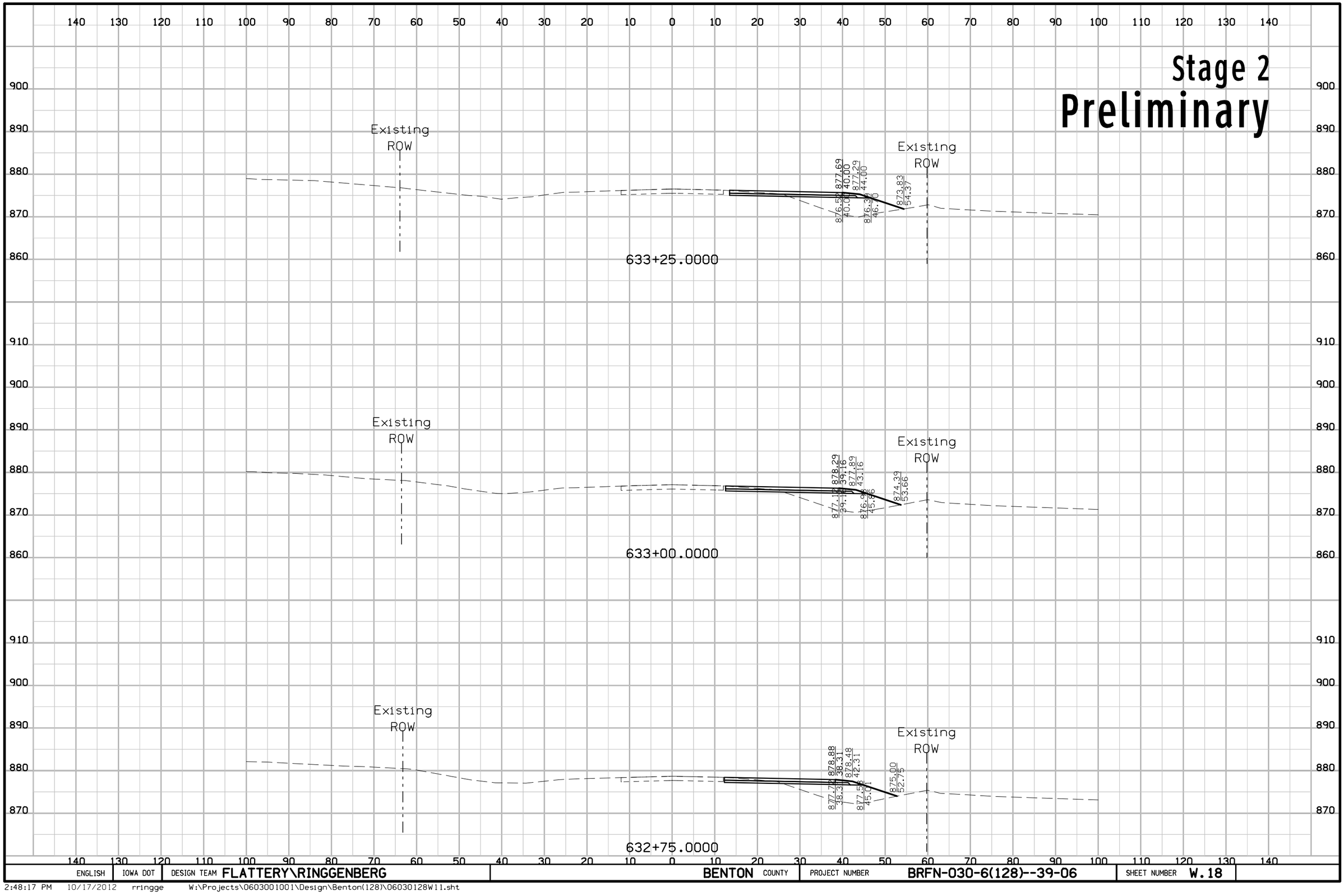
Stage 2
Preliminary



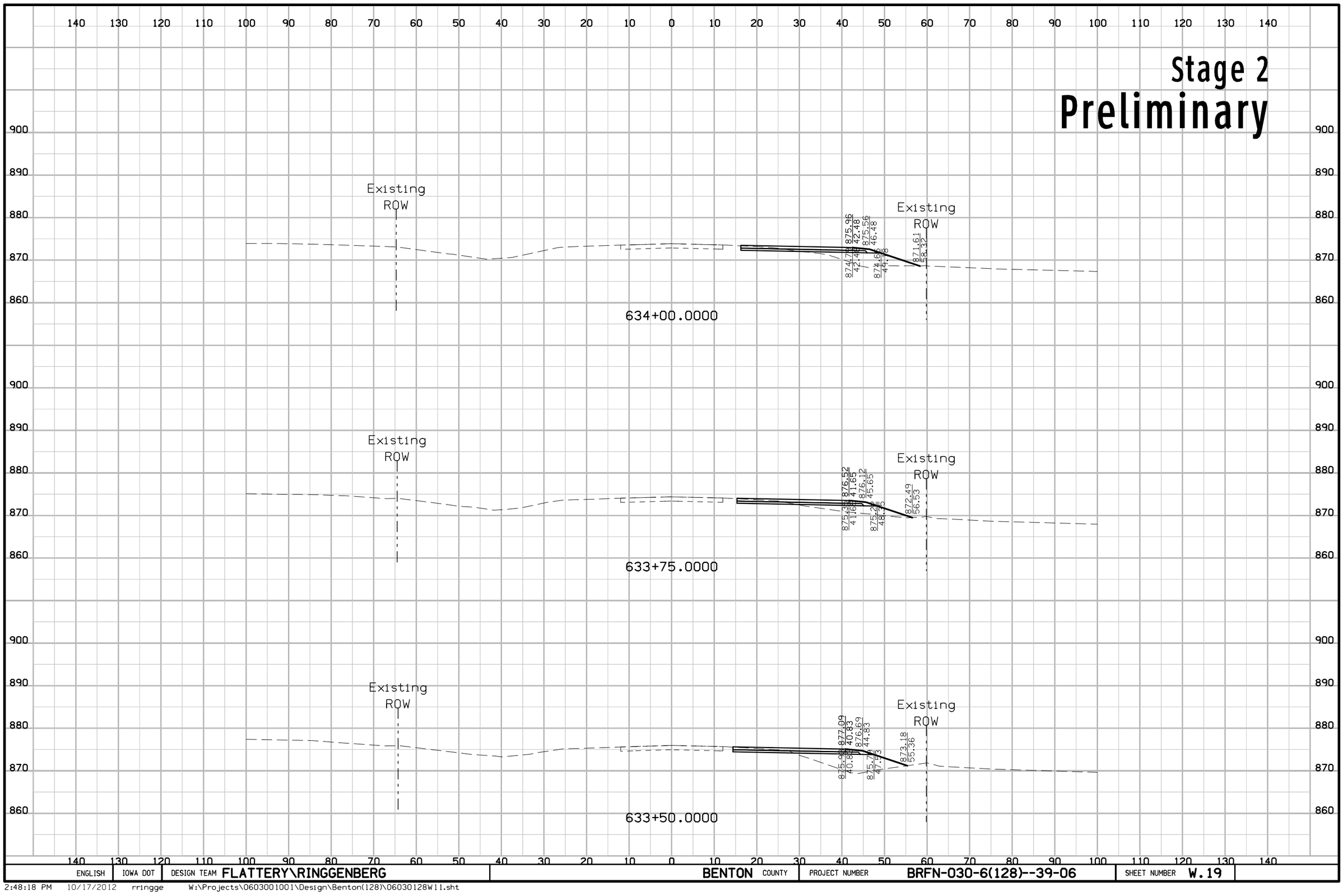
ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.17

Stage 2
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.18

Stage 2
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.19

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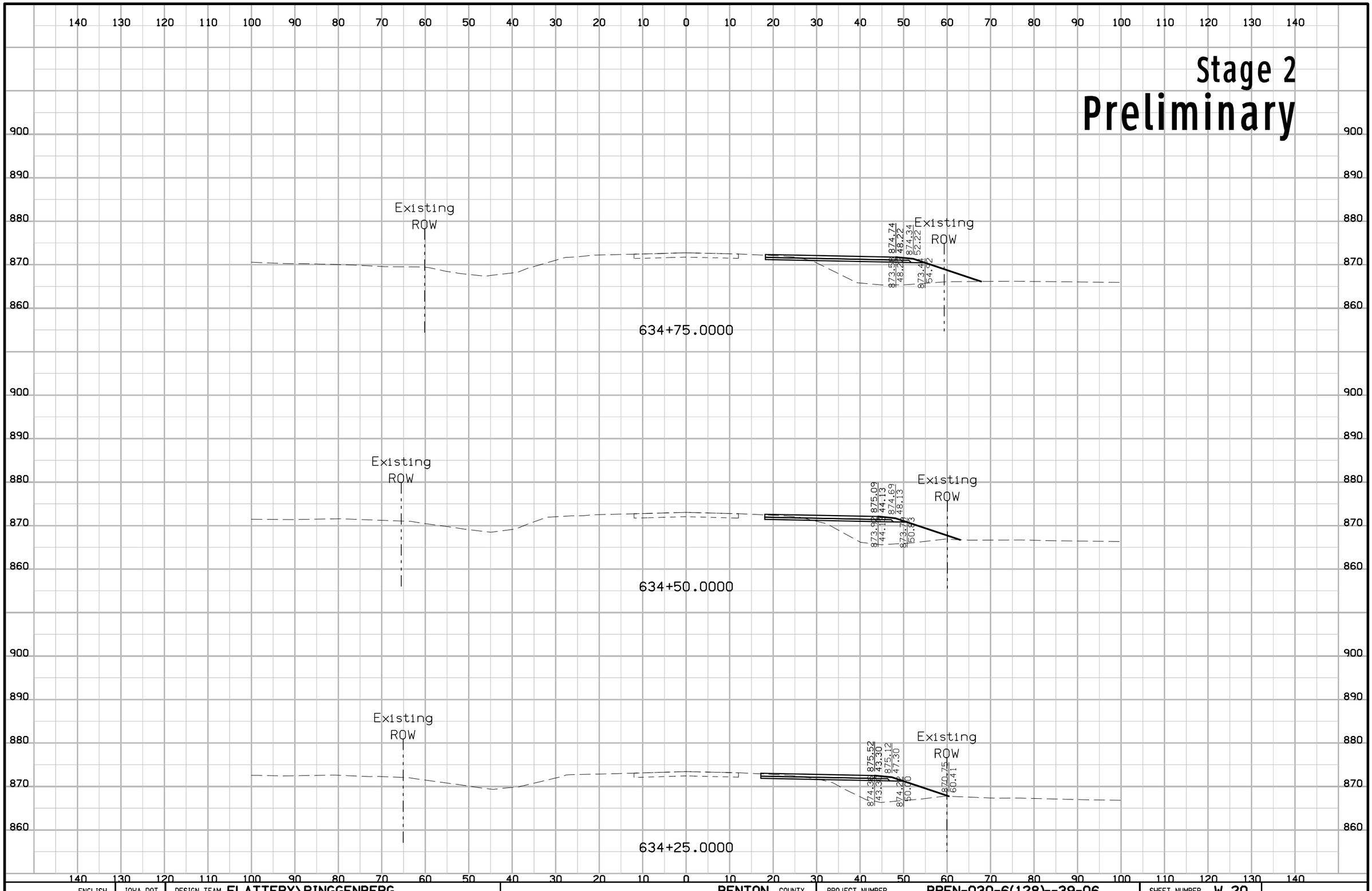
Stage 2

Preliminary



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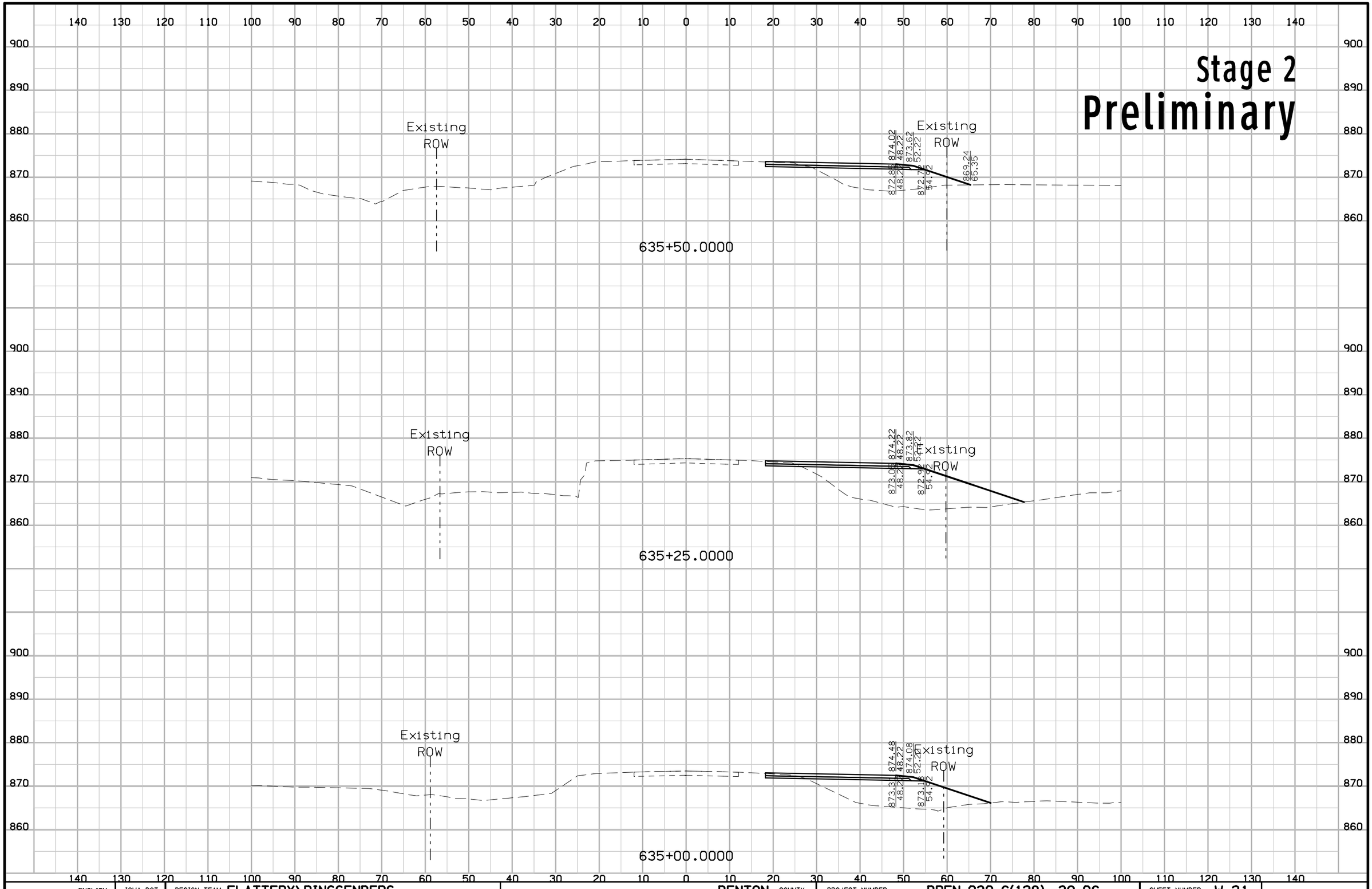
Stage 2
Preliminary



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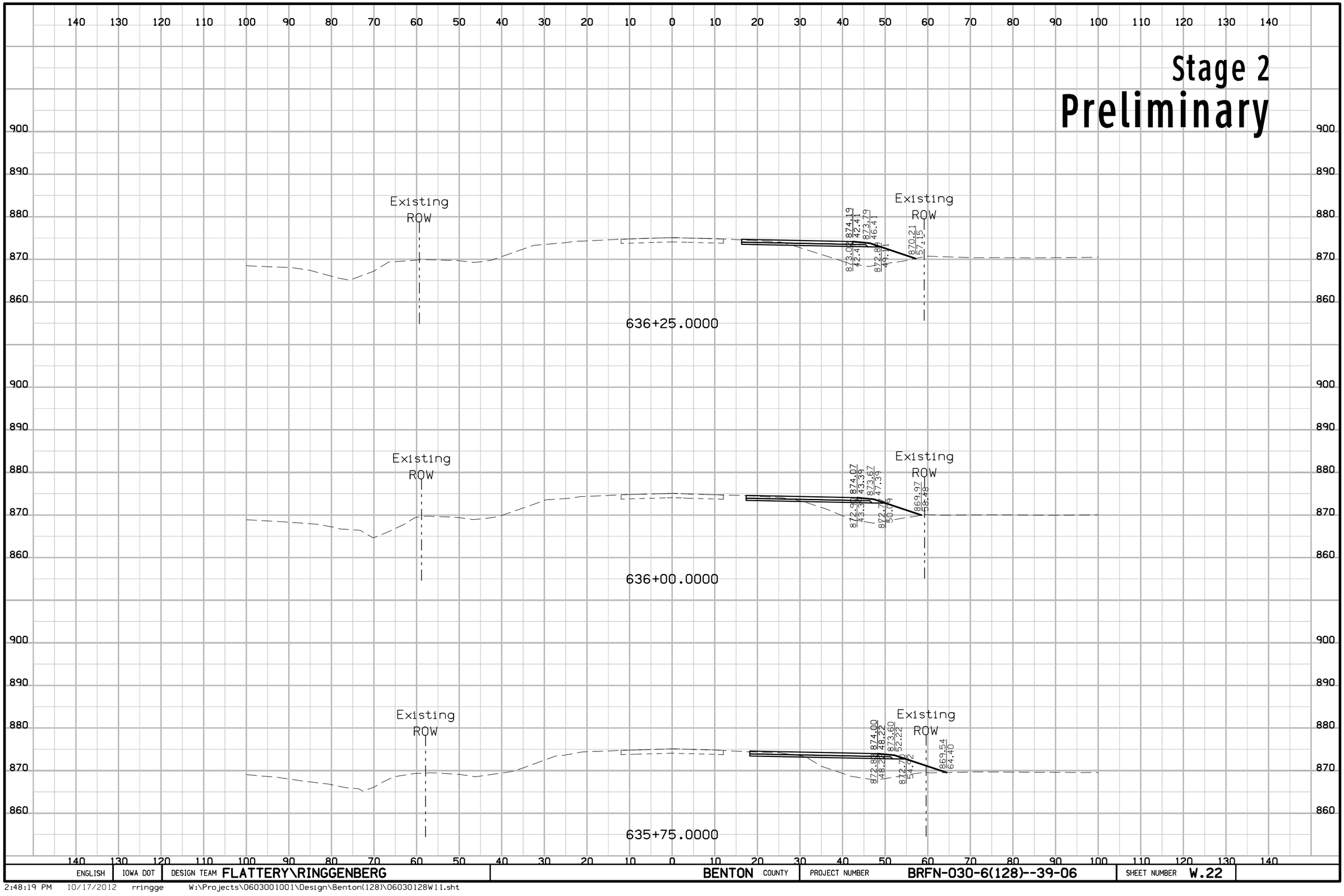
Stage 2
Preliminary



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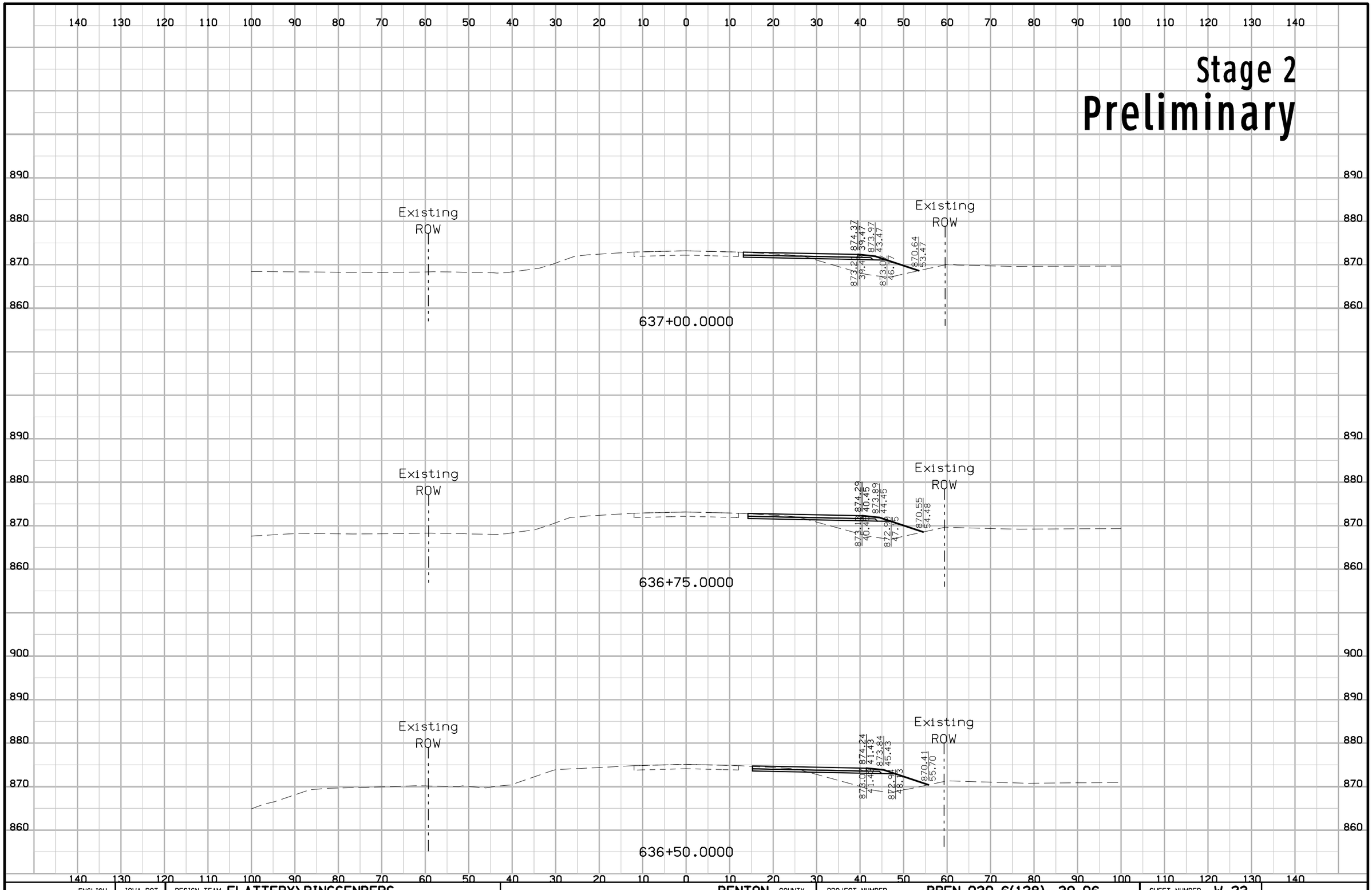
Stage 2
Preliminary



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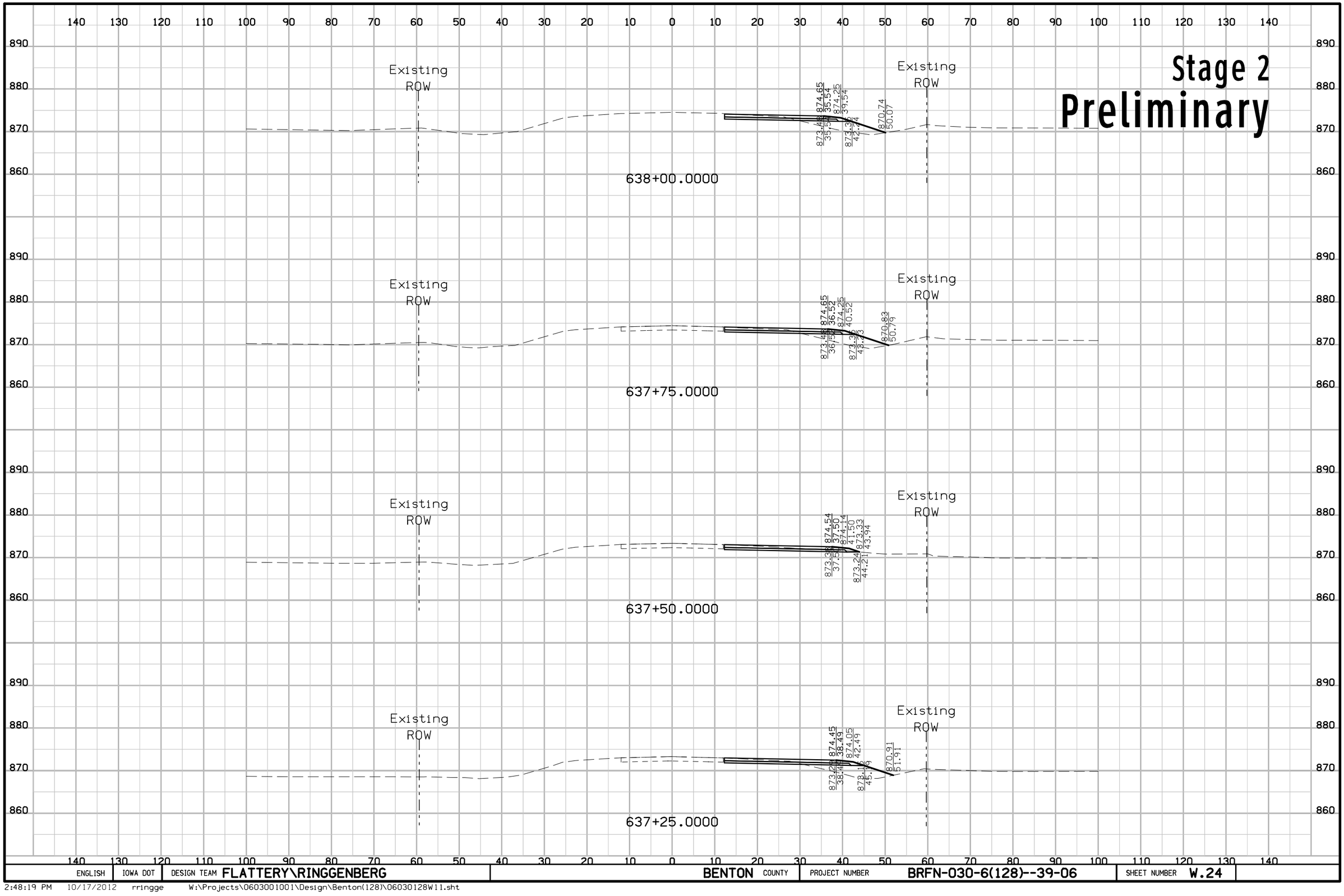
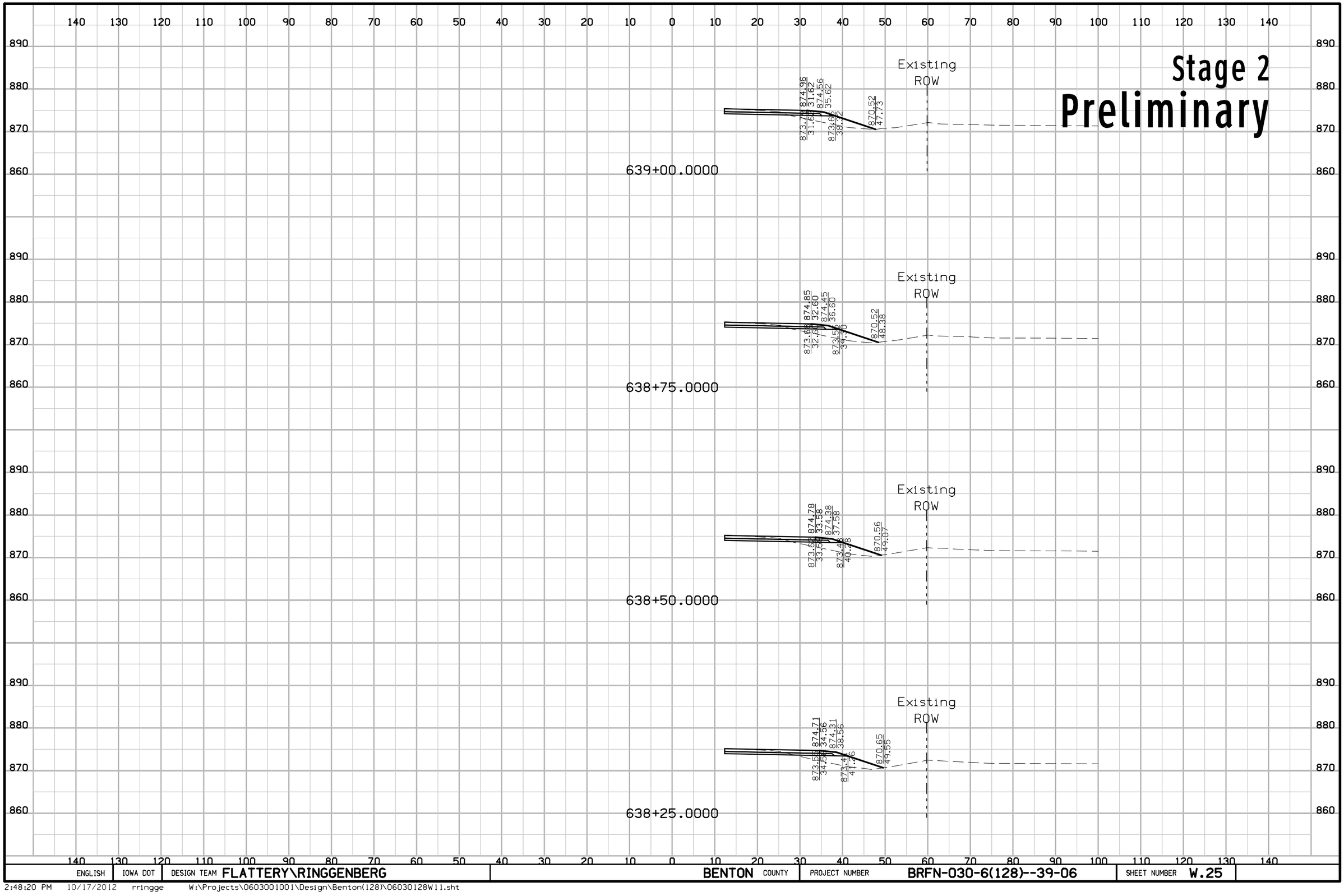
Stage 2
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.24

Stage 2
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.25

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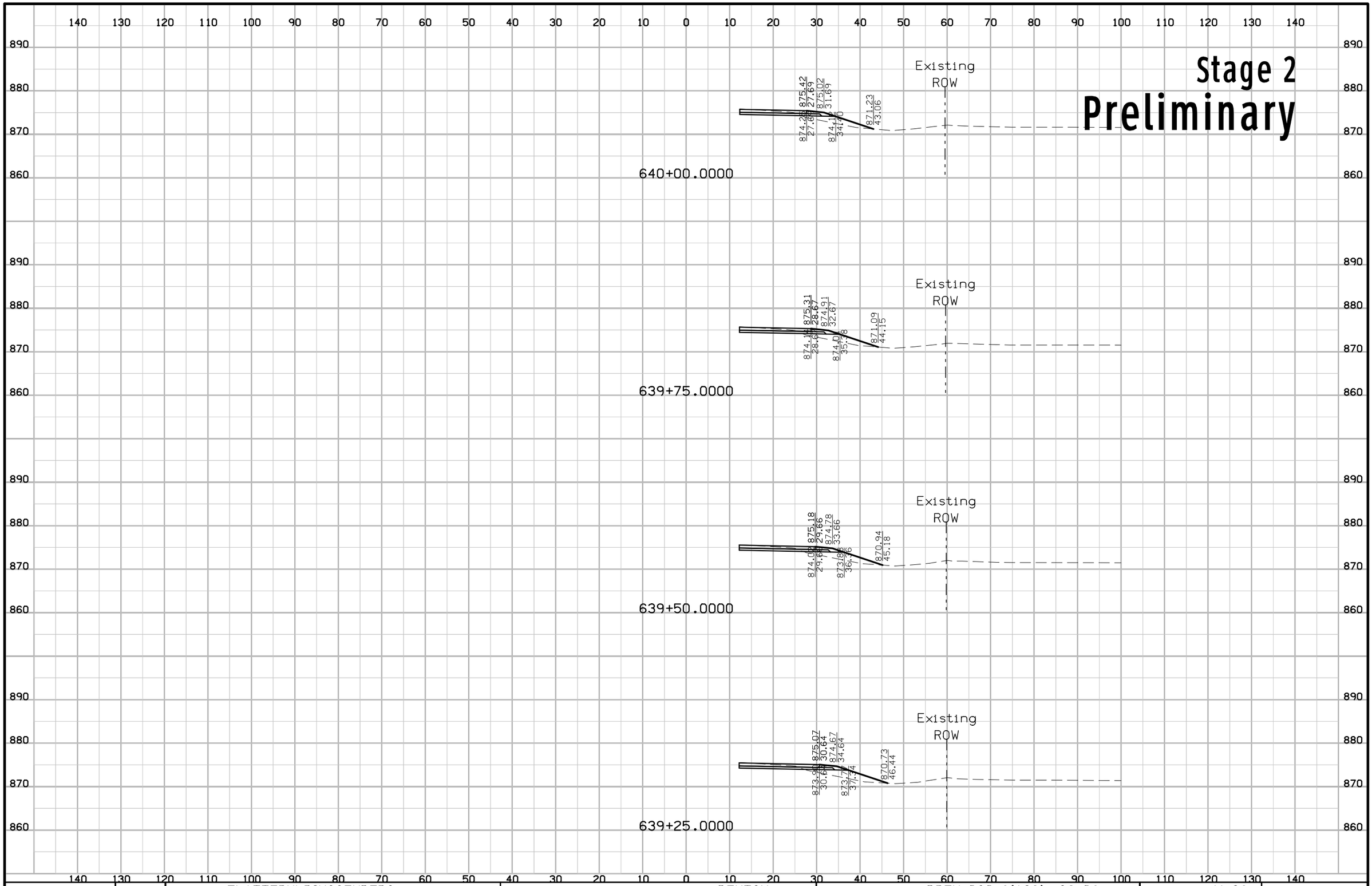
Stage 2
Preliminary



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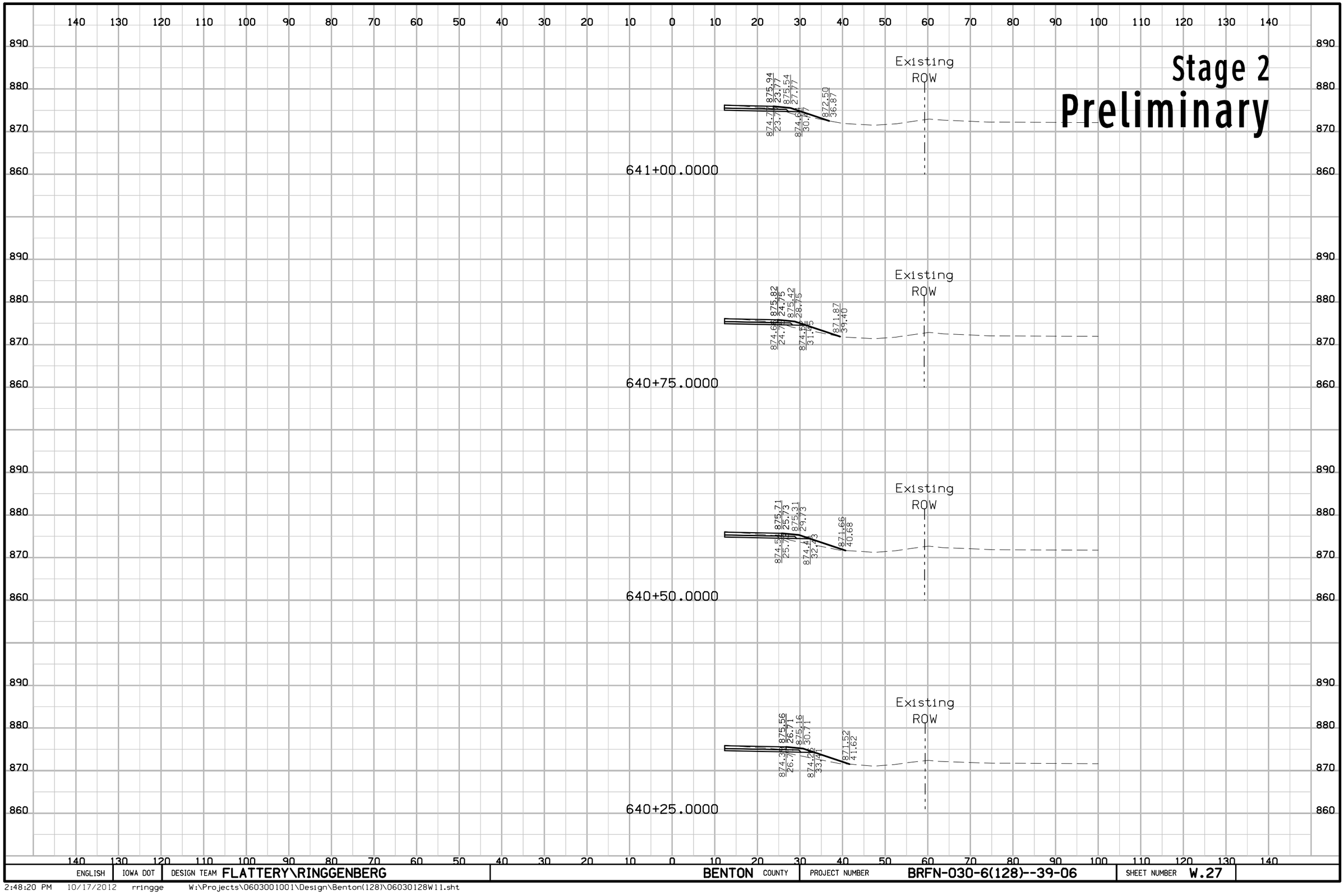
Stage 2
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.27

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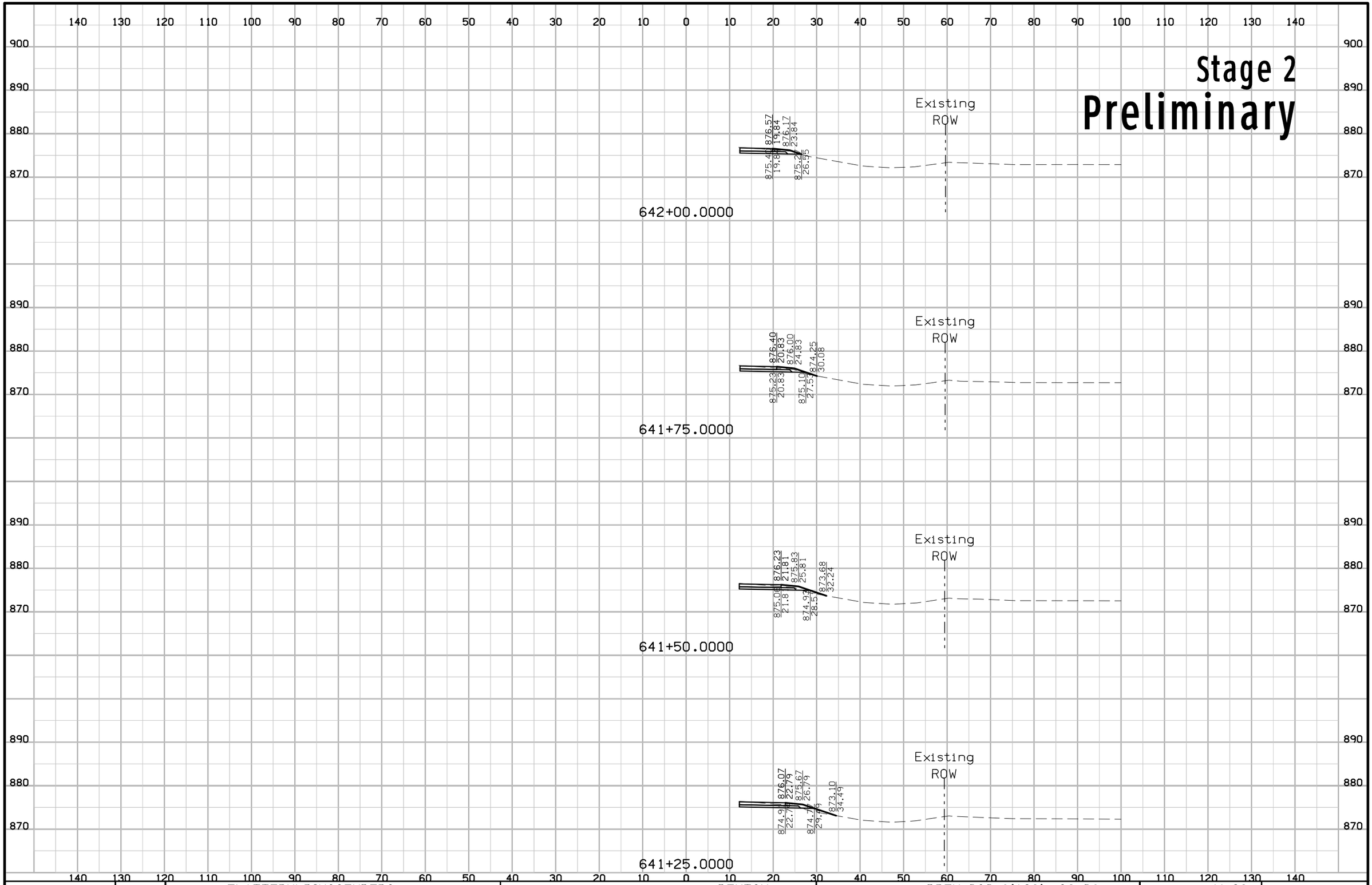
Stage 2
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.28

Stage 2
Preliminary

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900
890
880
870

Existing
ROW

876.08
16.90
877.20
16.90
876.93
19.60

642+75.0000

Existing
ROW

875.8
17.88
876.97
17.88
876.52
21.88
875.67
24.58

642+50.0000

Existing
ROW

875.57
18.86
876.74
18.86

642+25.0000

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 FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.29

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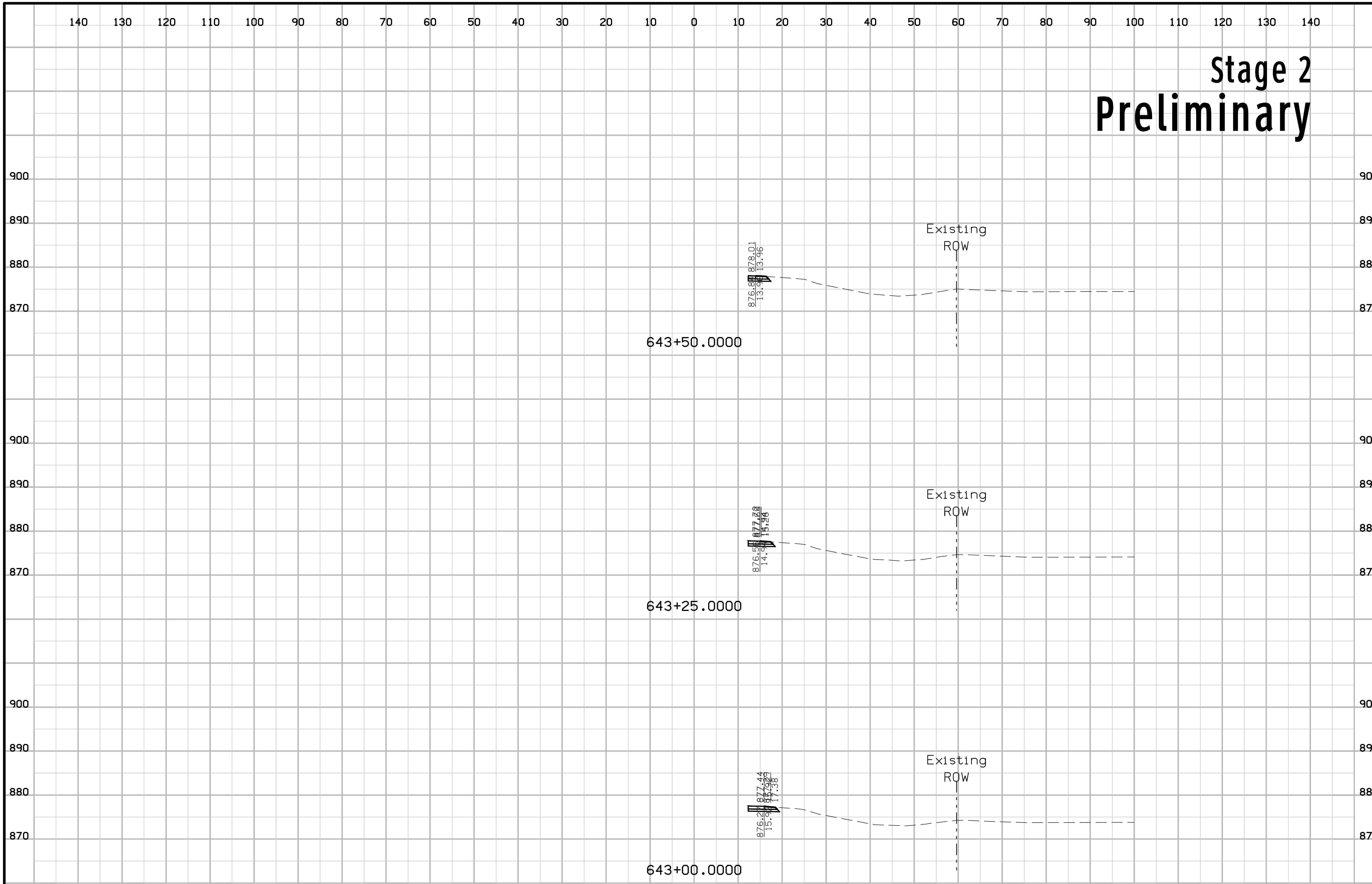

ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG		BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.30

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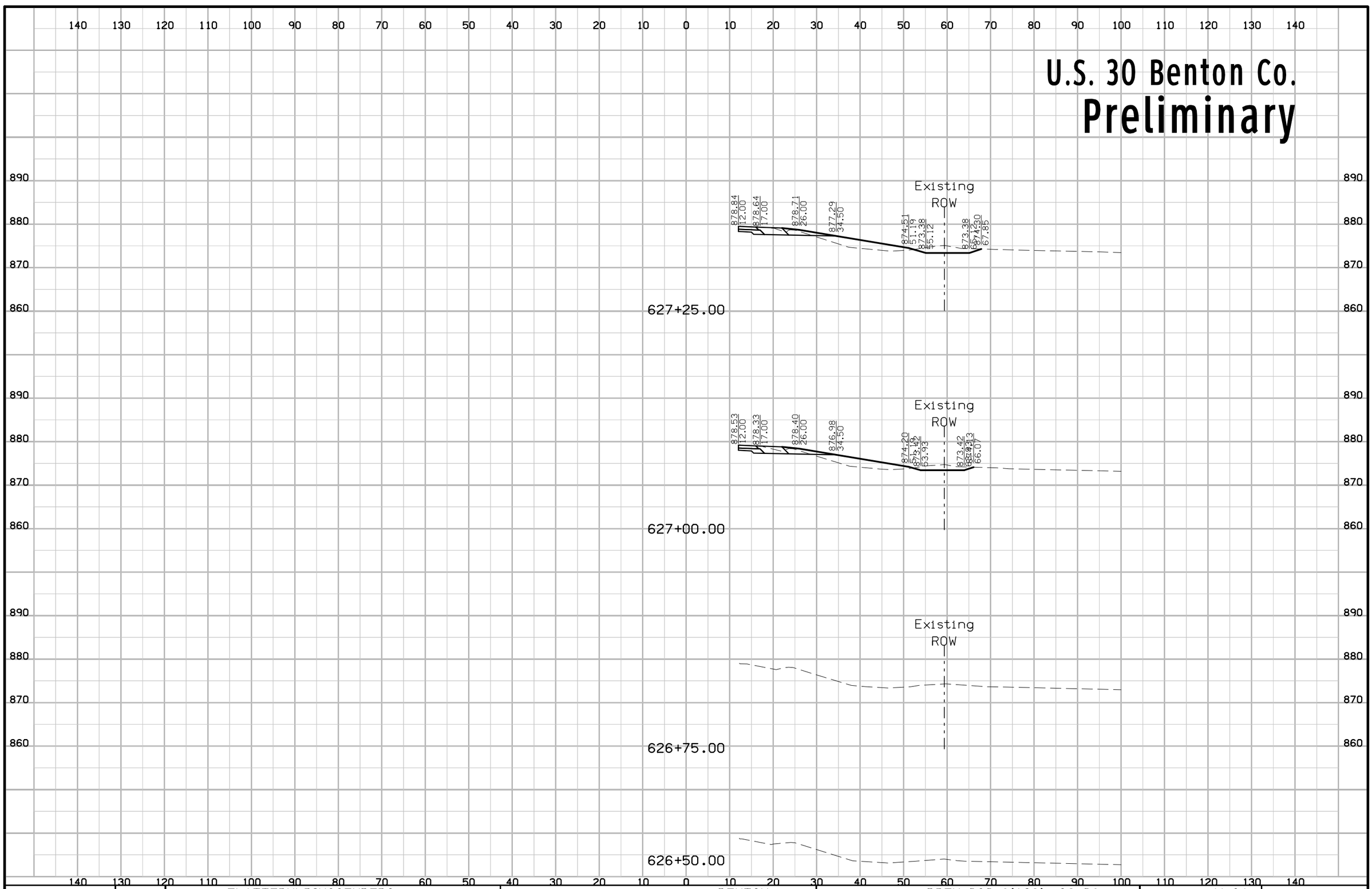
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.31

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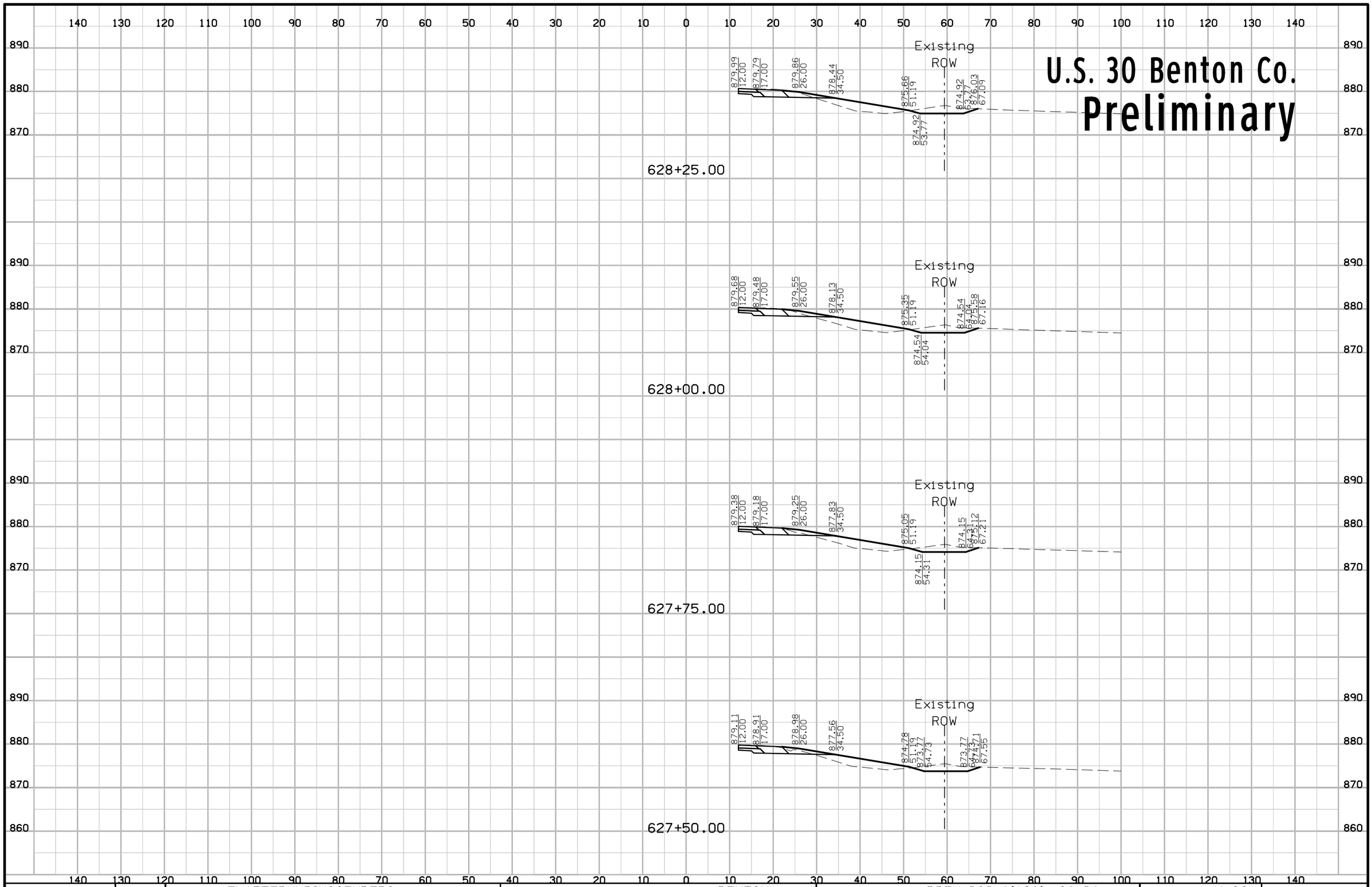
U.S. 30 Benton Co.

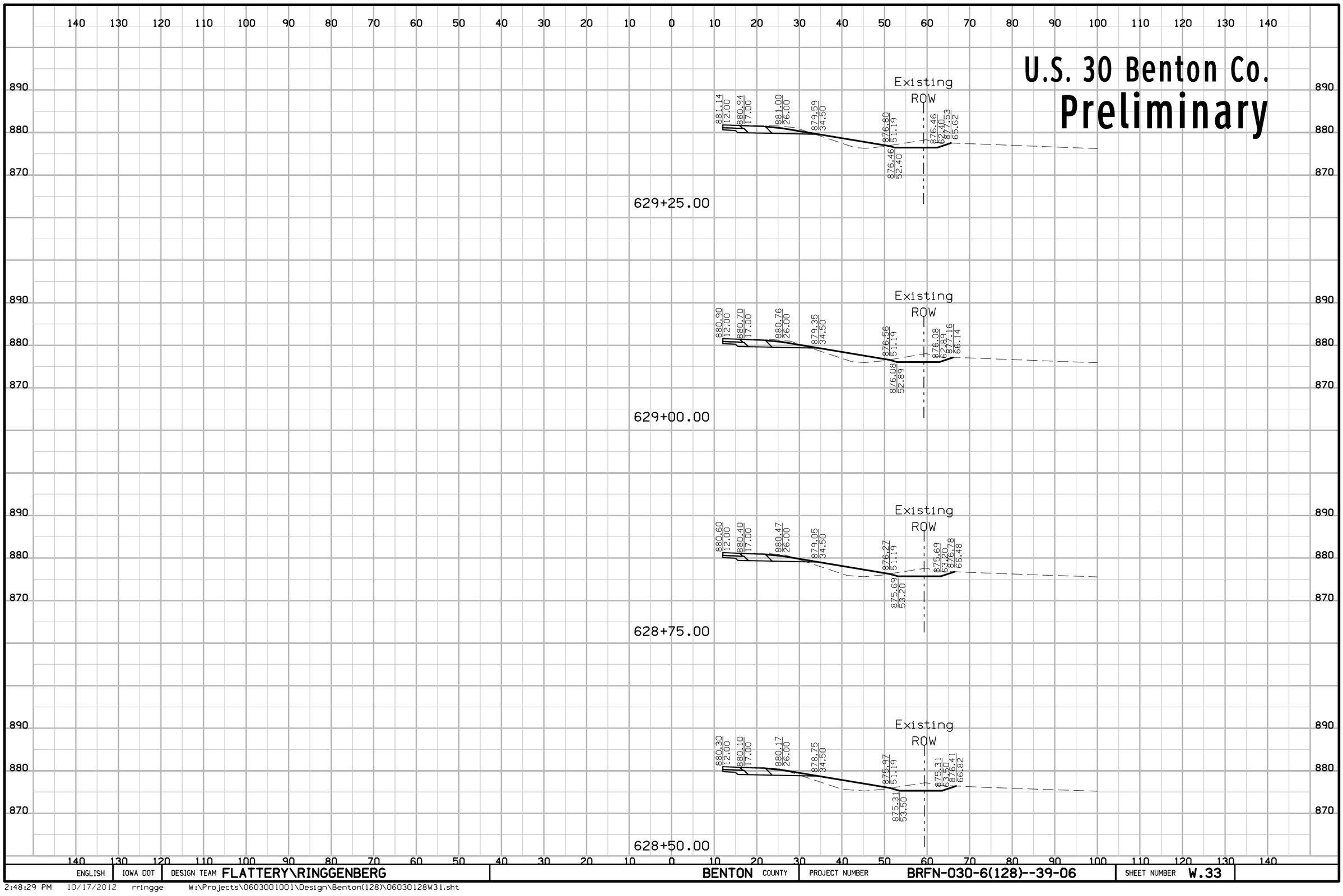
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.32

U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.33

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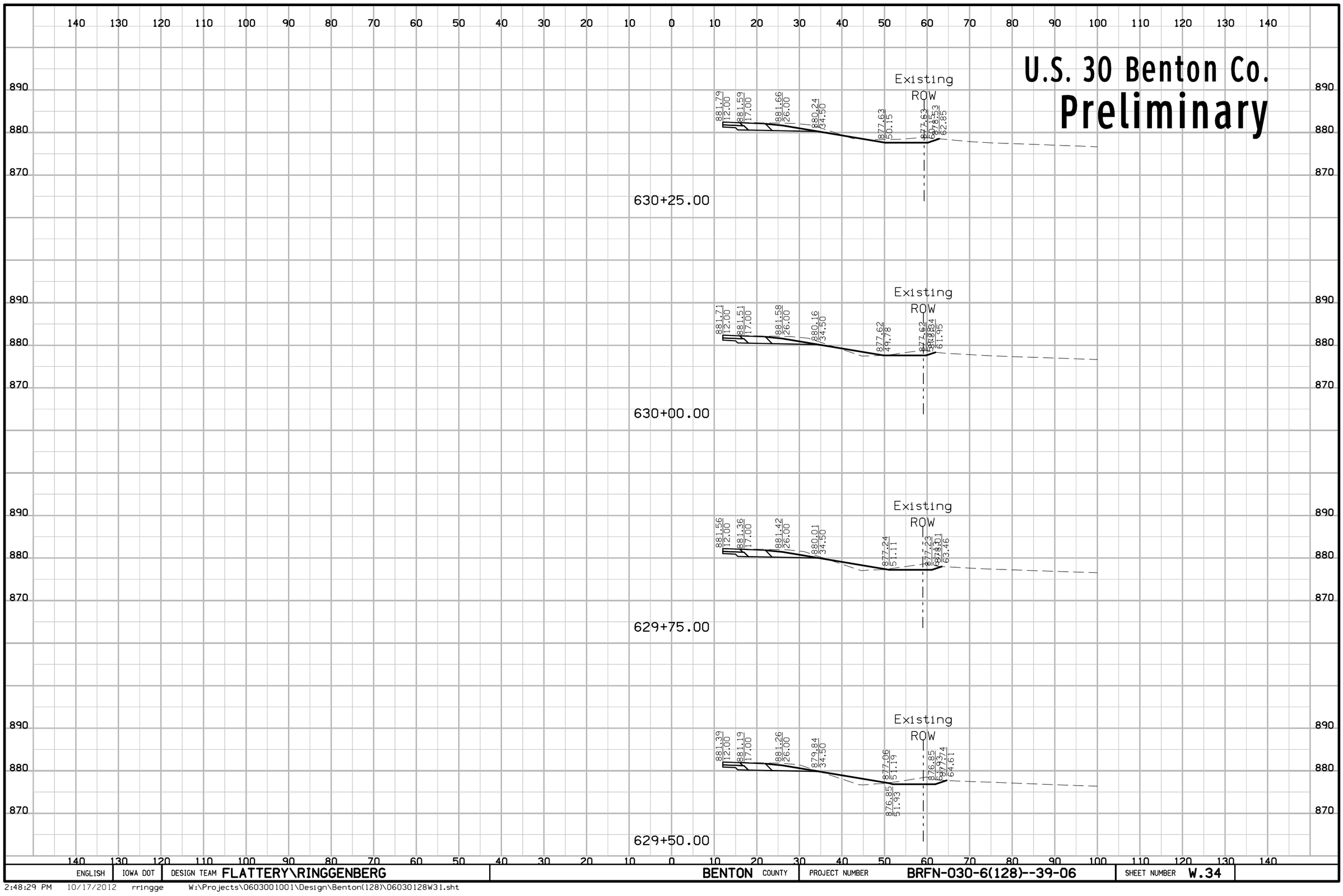
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.34

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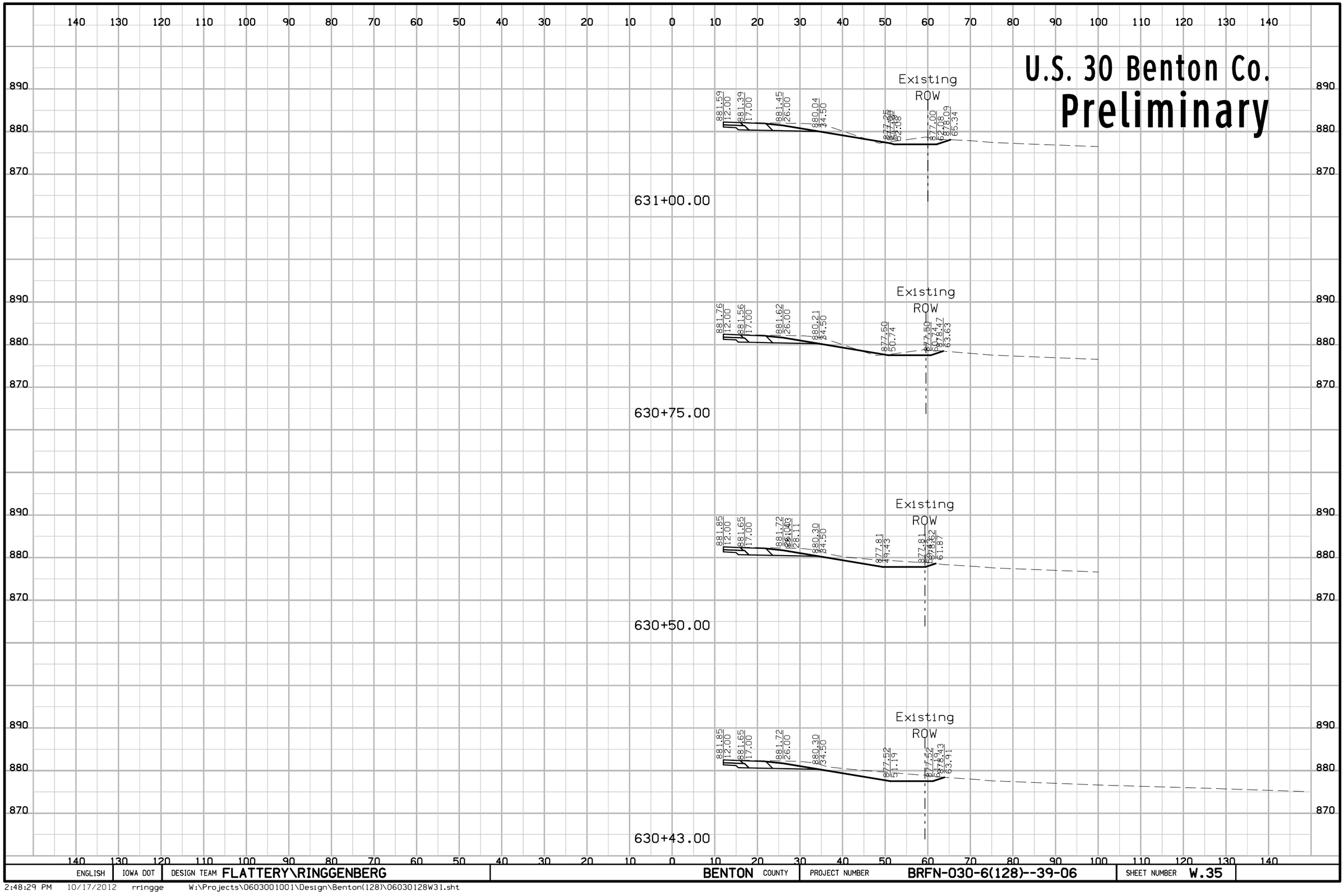
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.35

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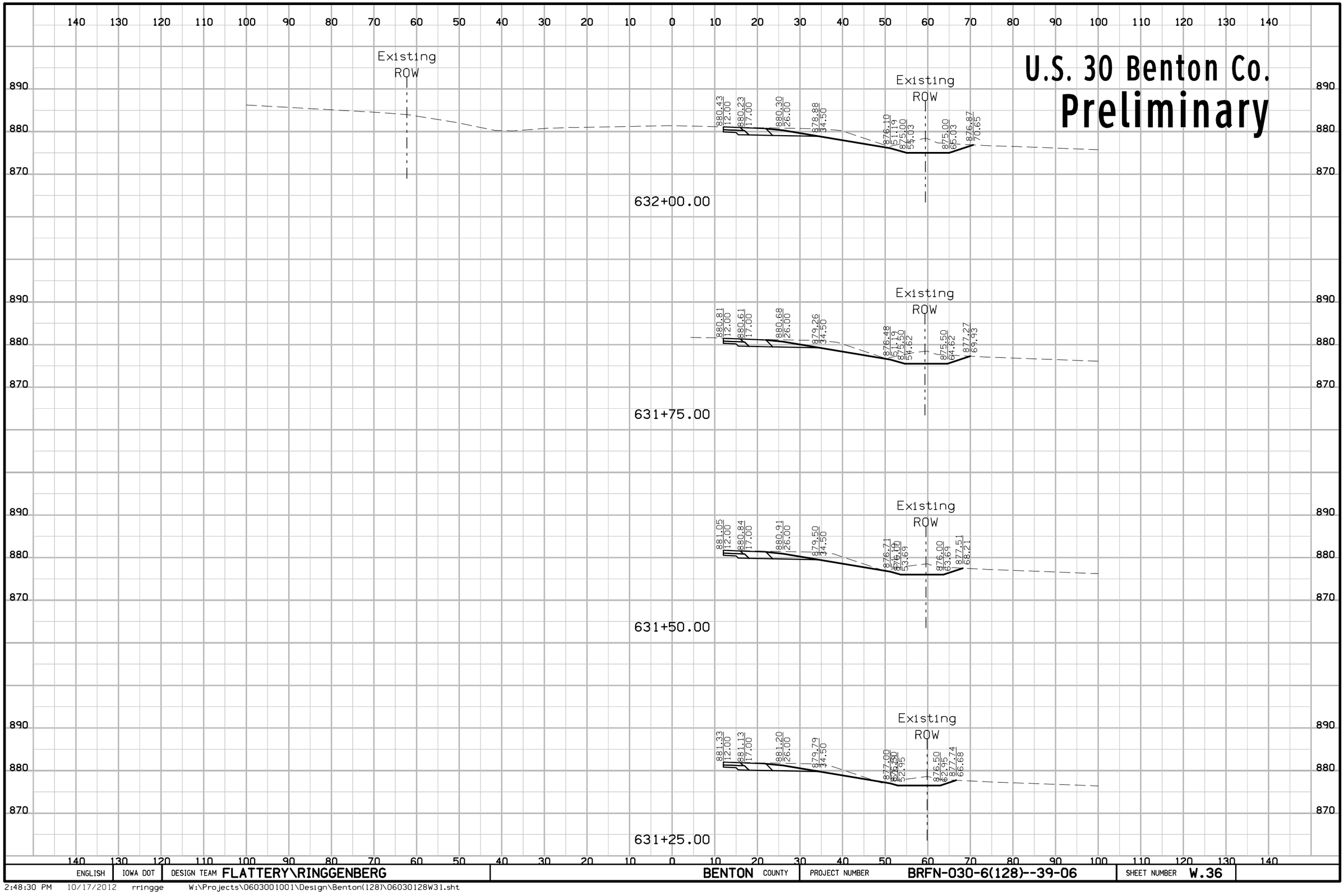
U.S. 30 Benton Co.

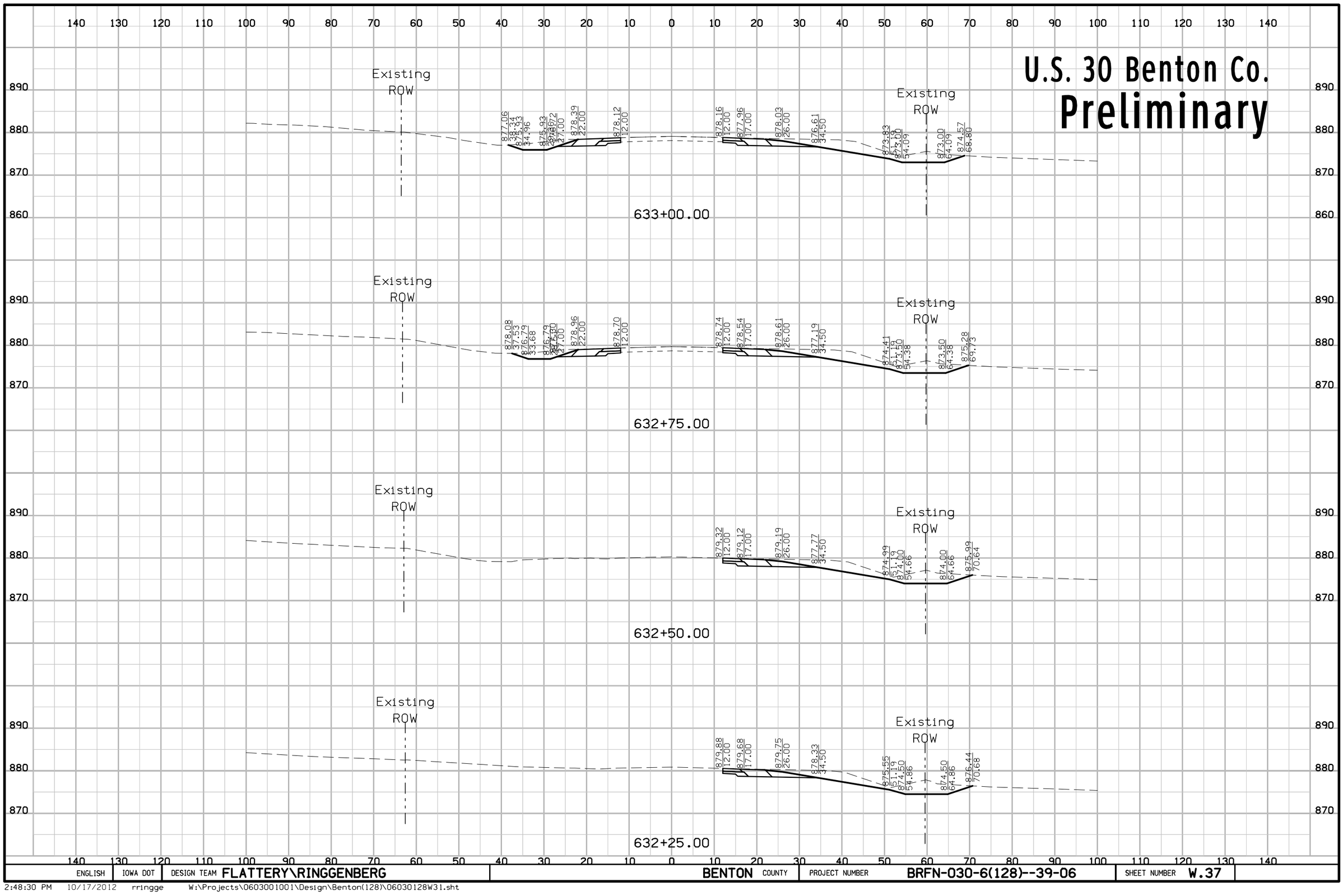
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.36

U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.37

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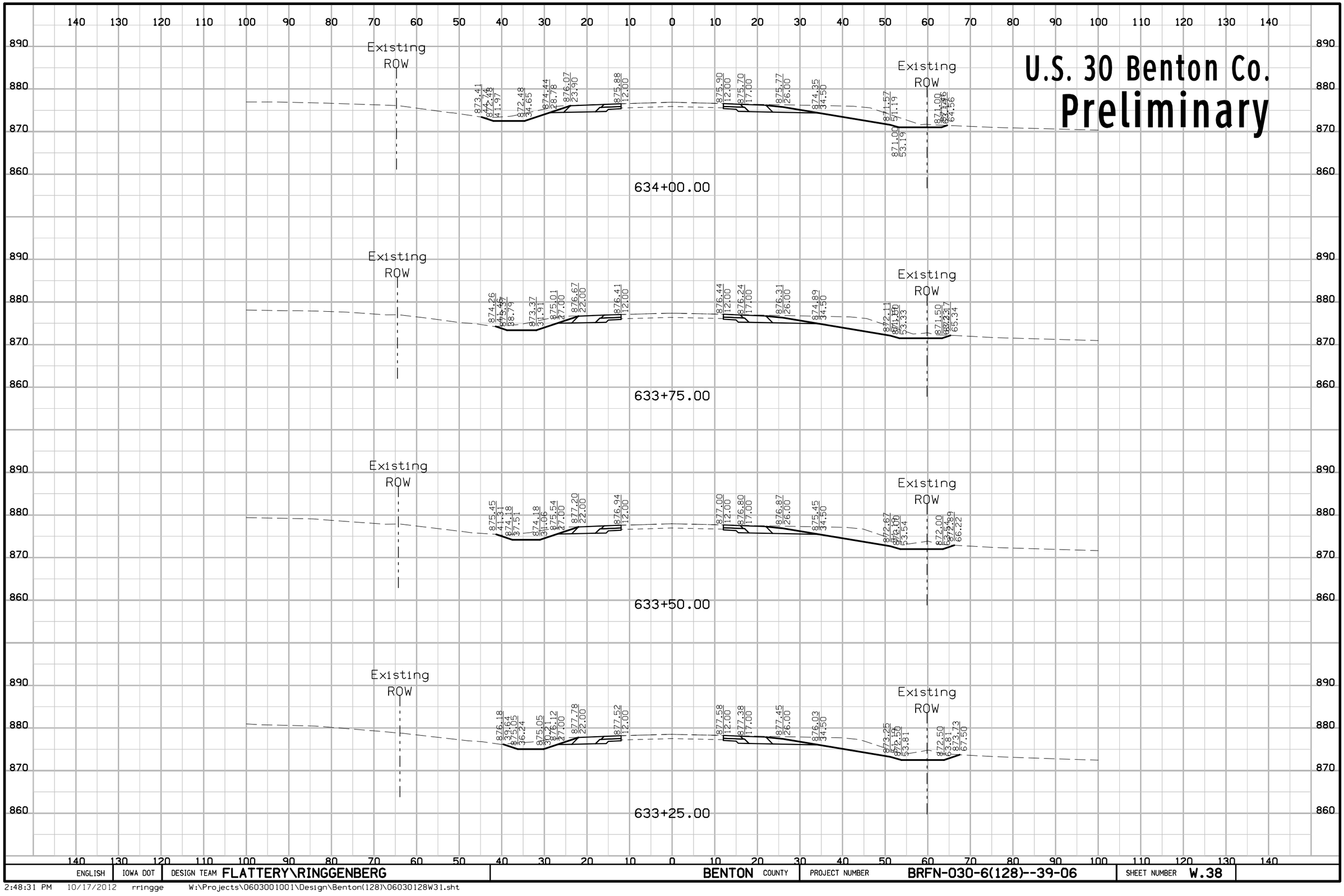
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.38

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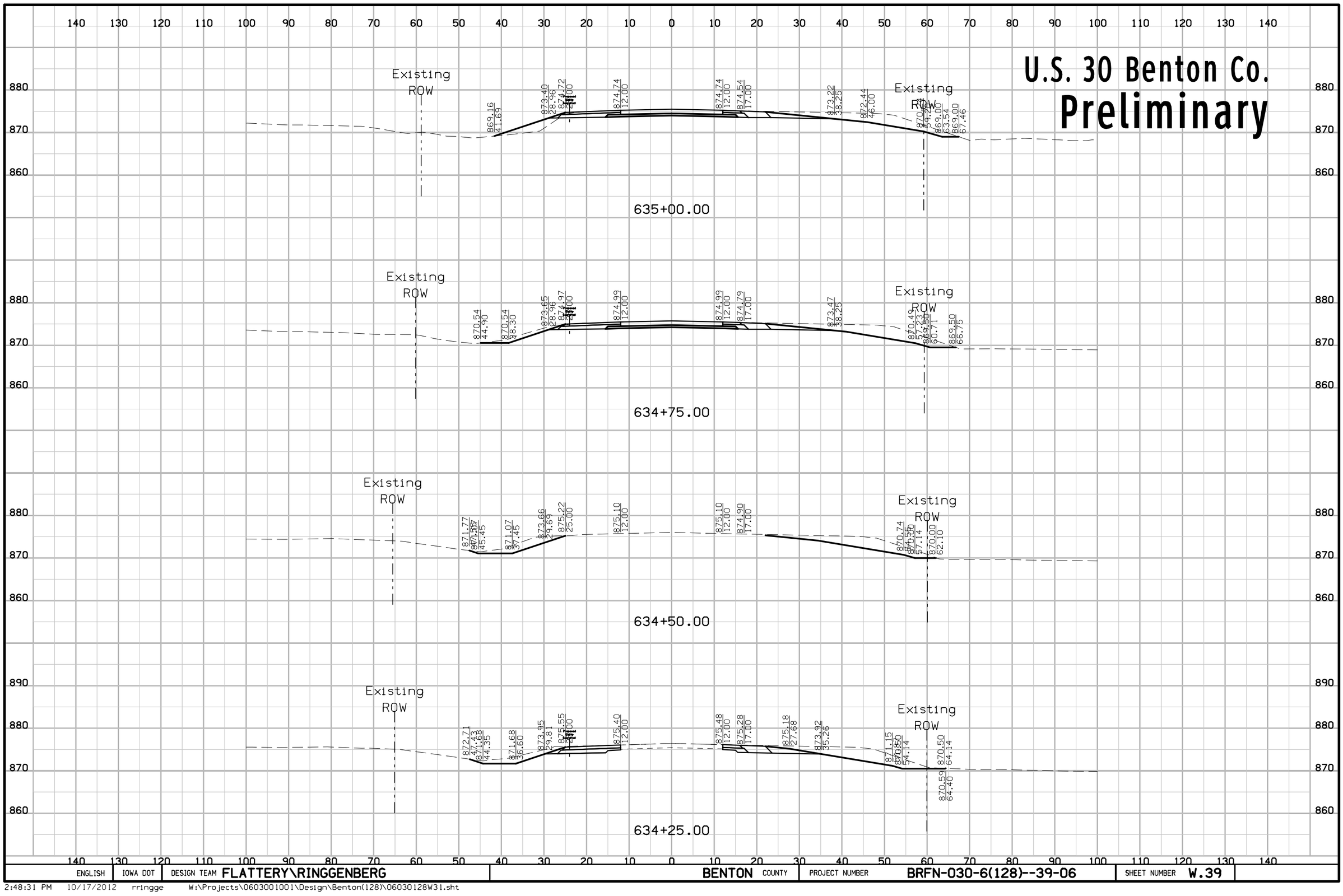
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.39

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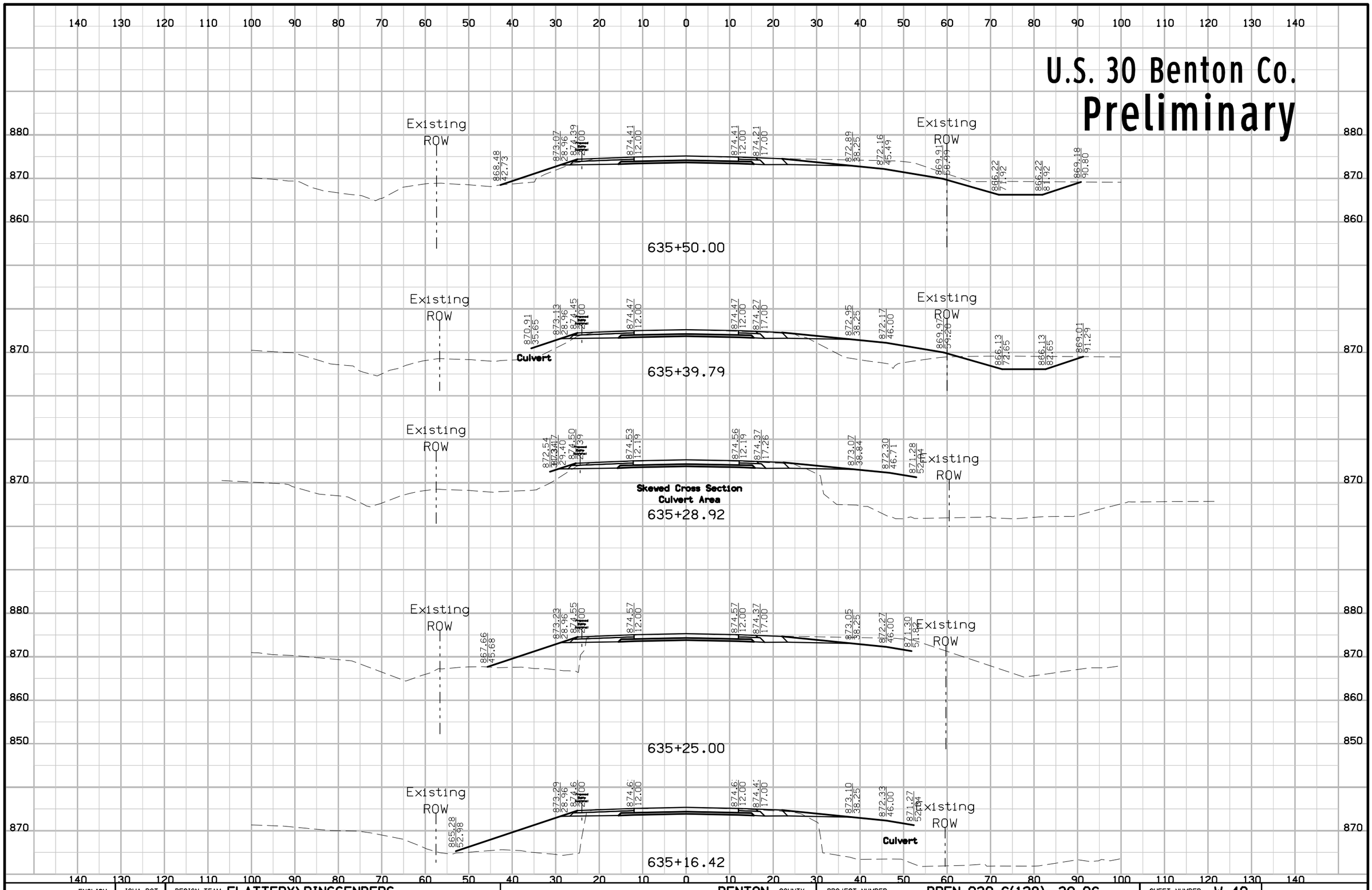
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.40

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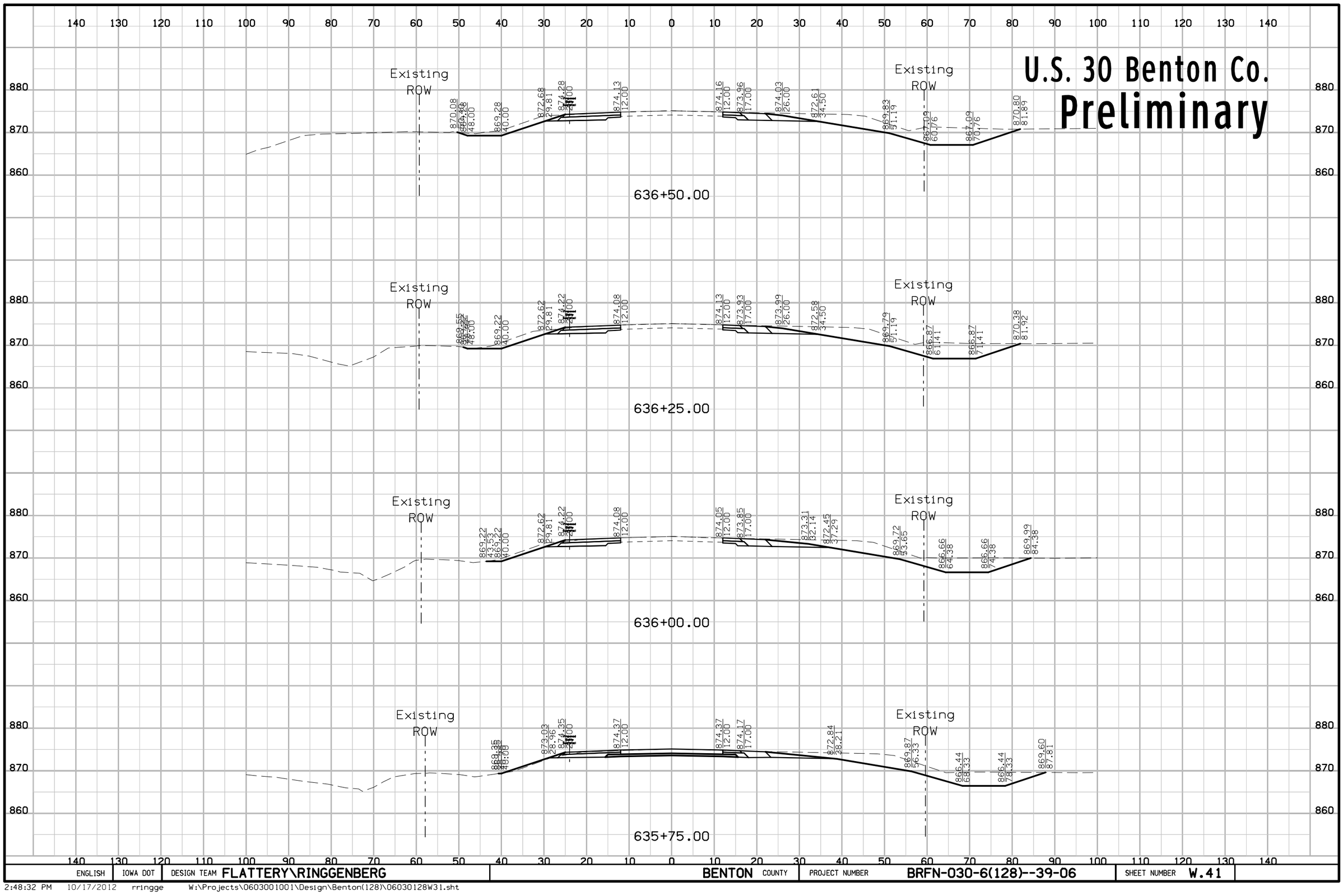
U.S. 30 Benton Co.

Preliminary



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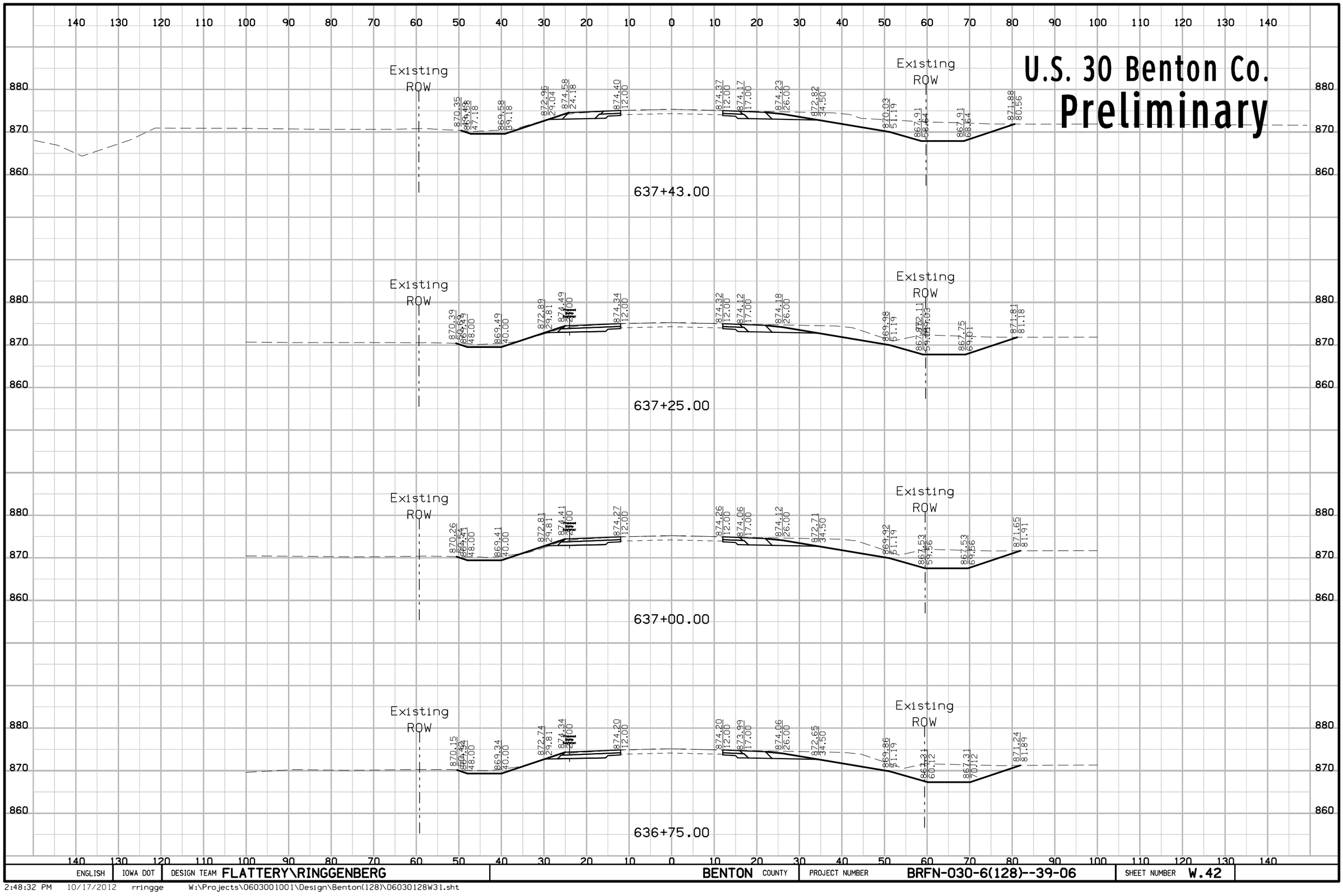
U.S. 30 Benton Co.

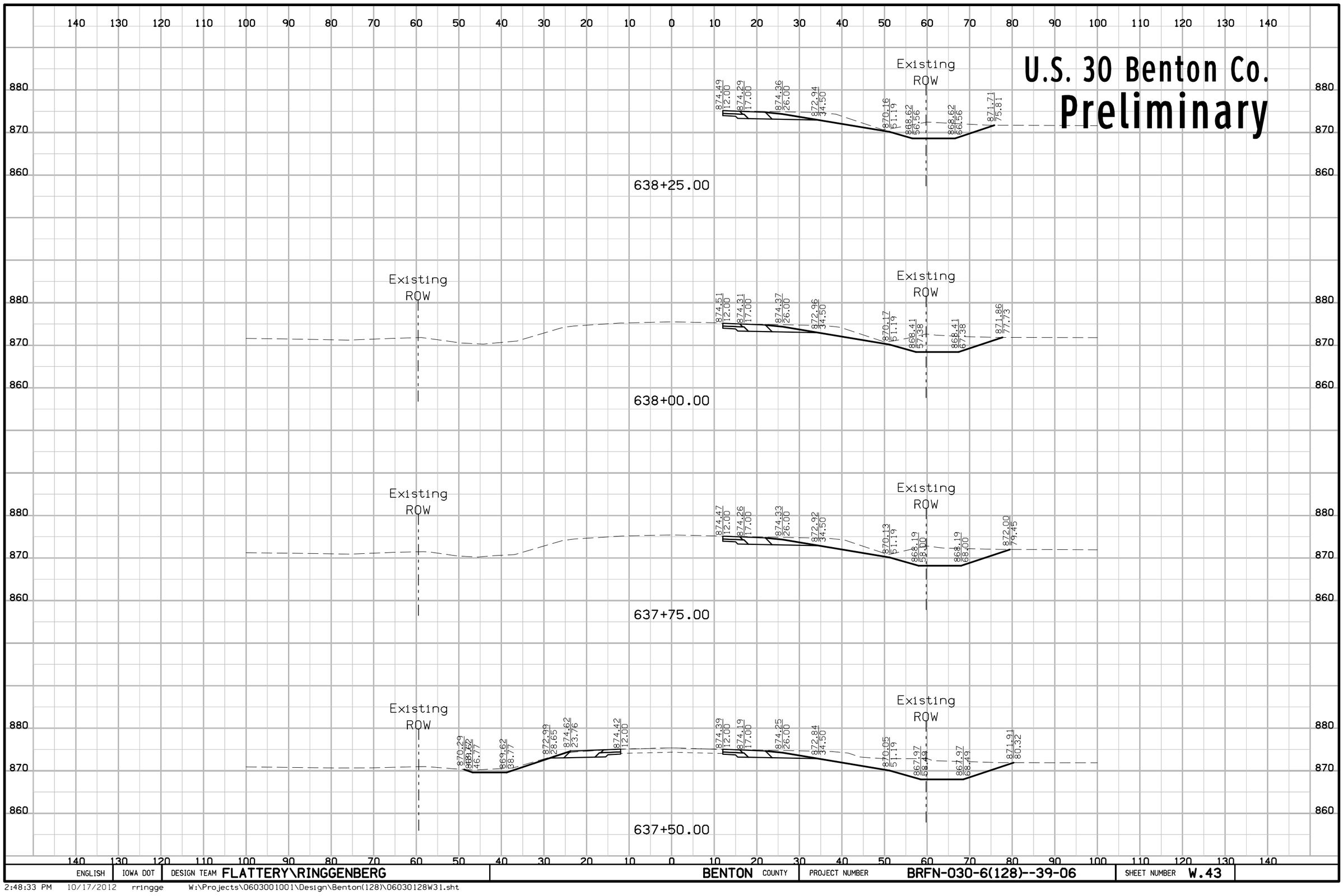
Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.42

U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.43

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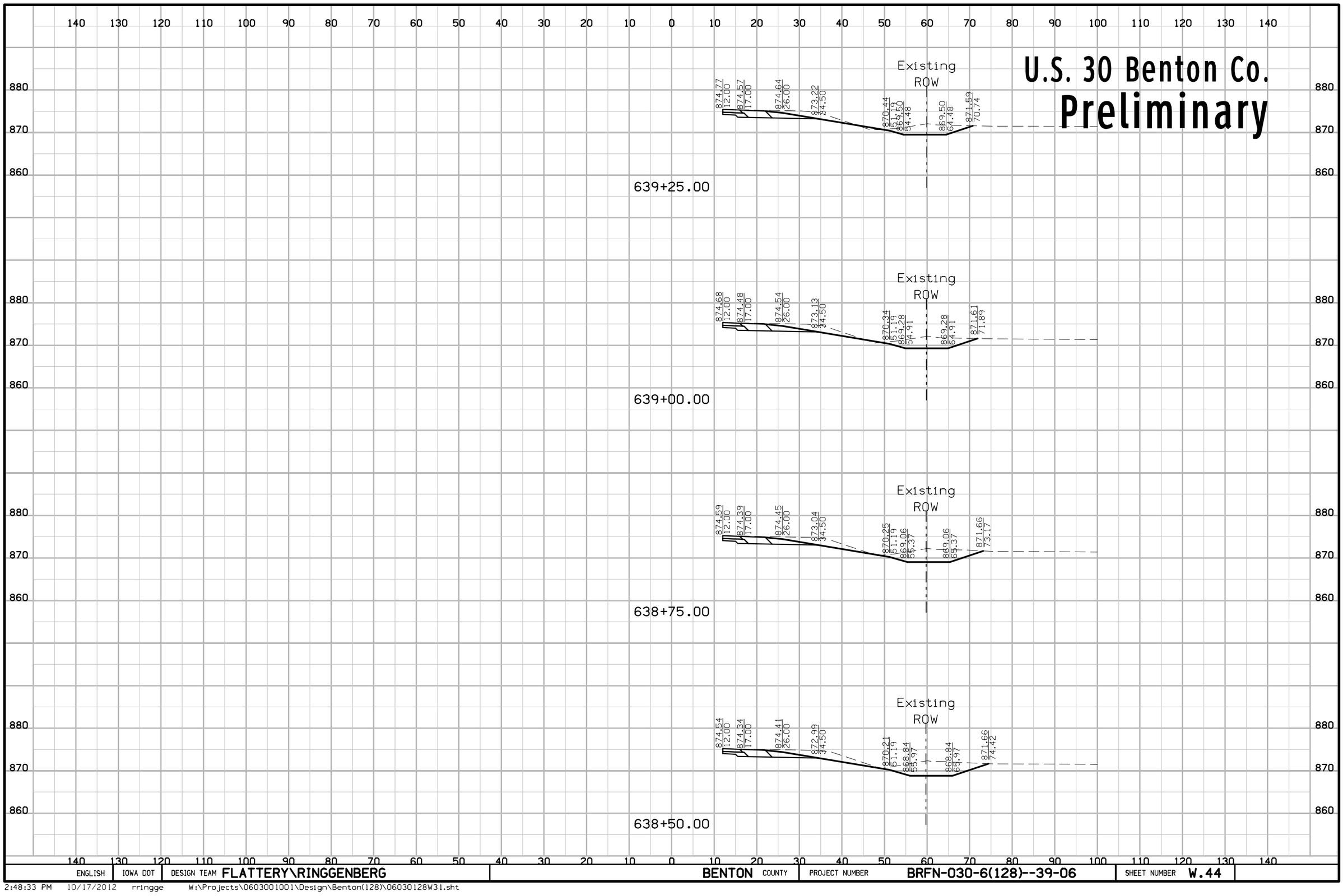
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.44

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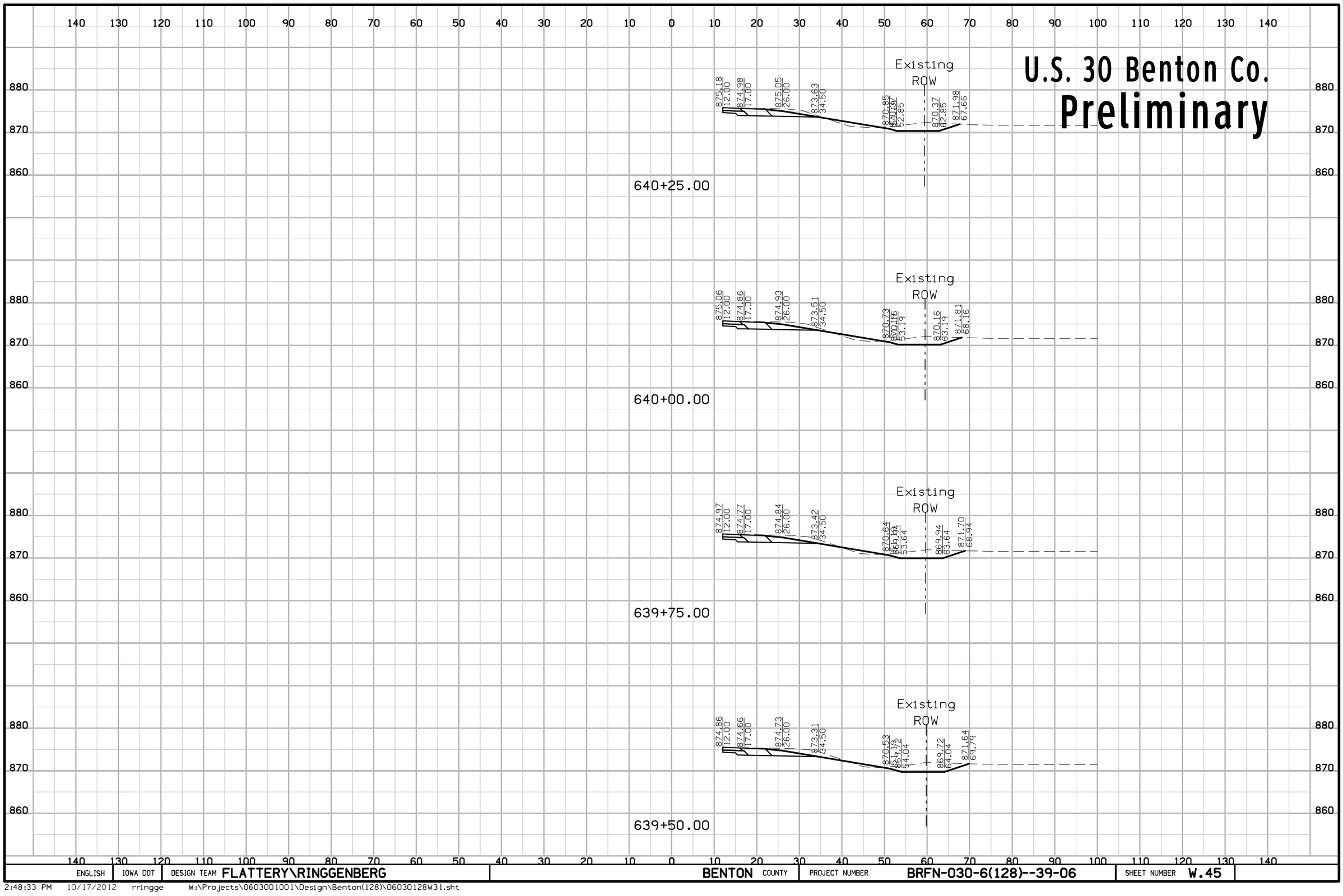
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.45

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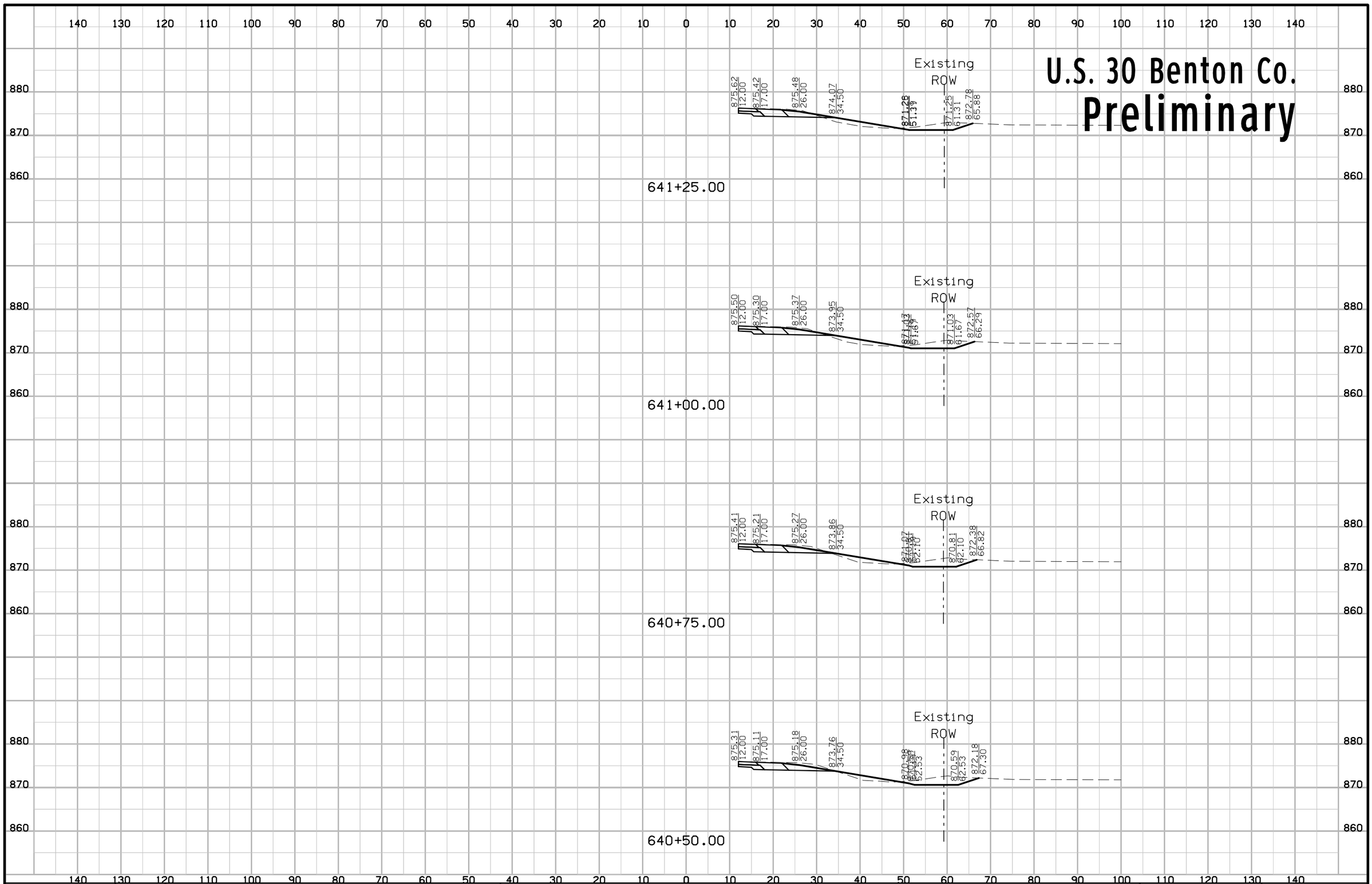
U.S. 30 Benton Co.

Preliminary



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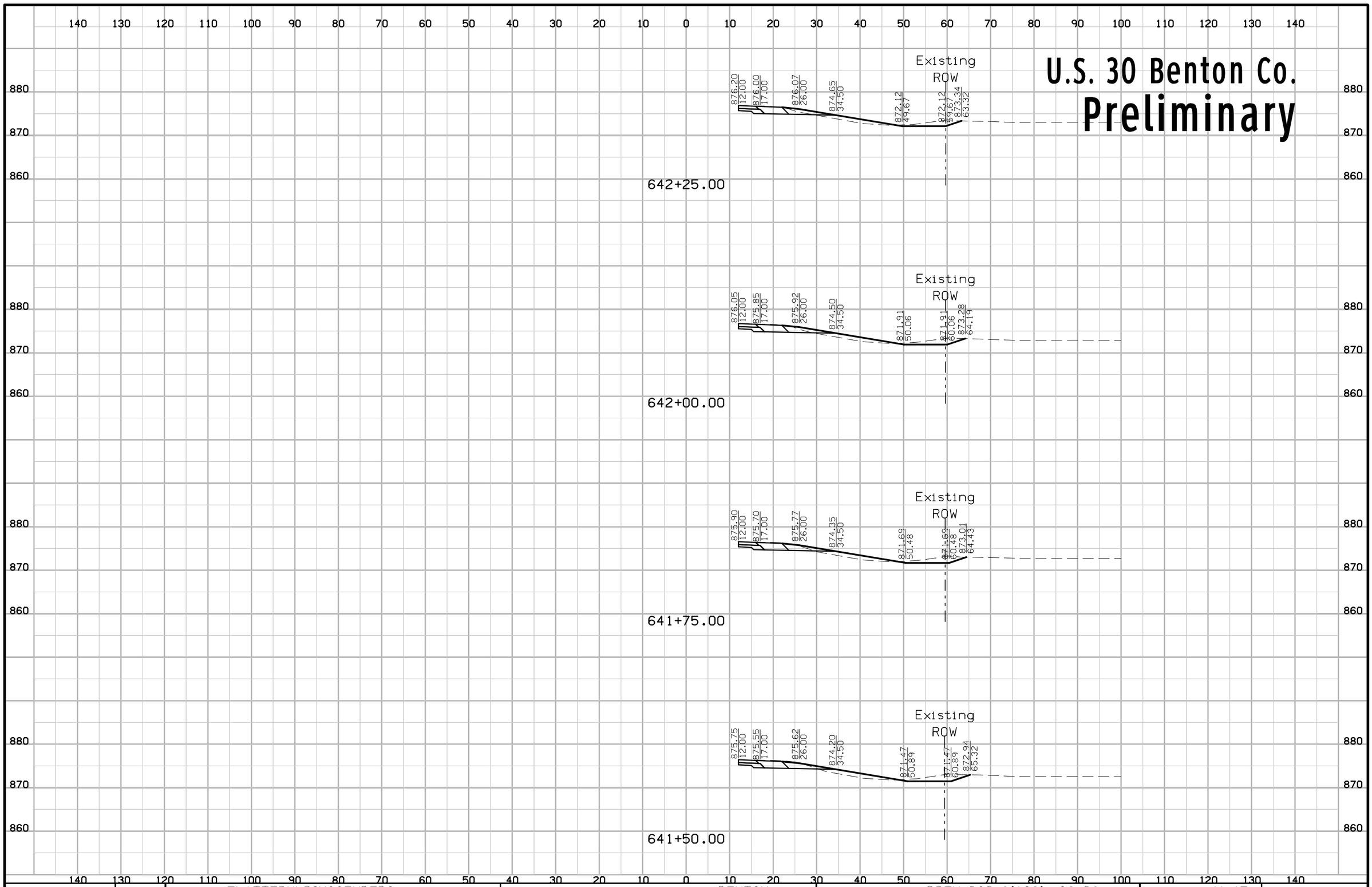
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.47

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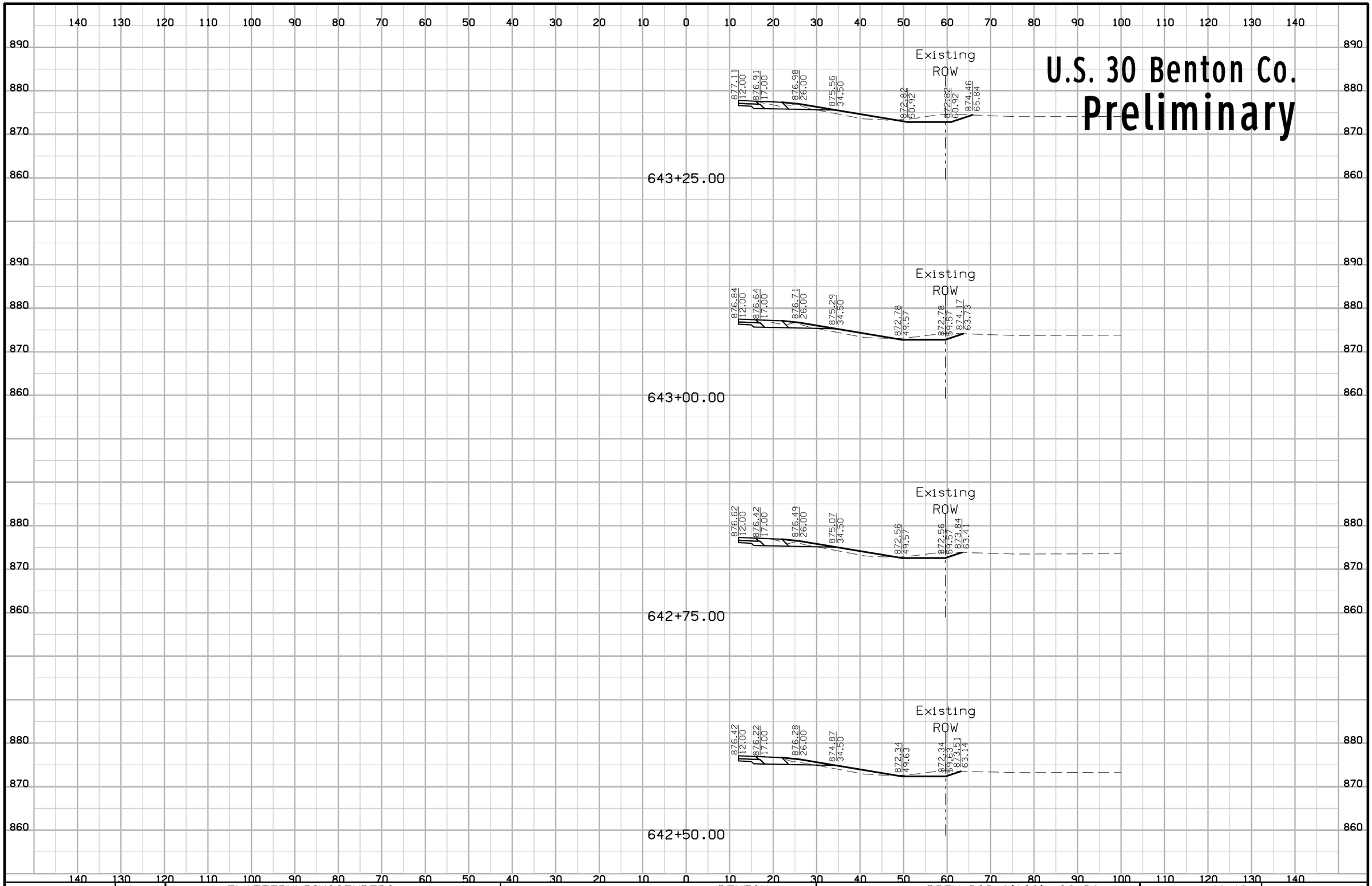
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.48

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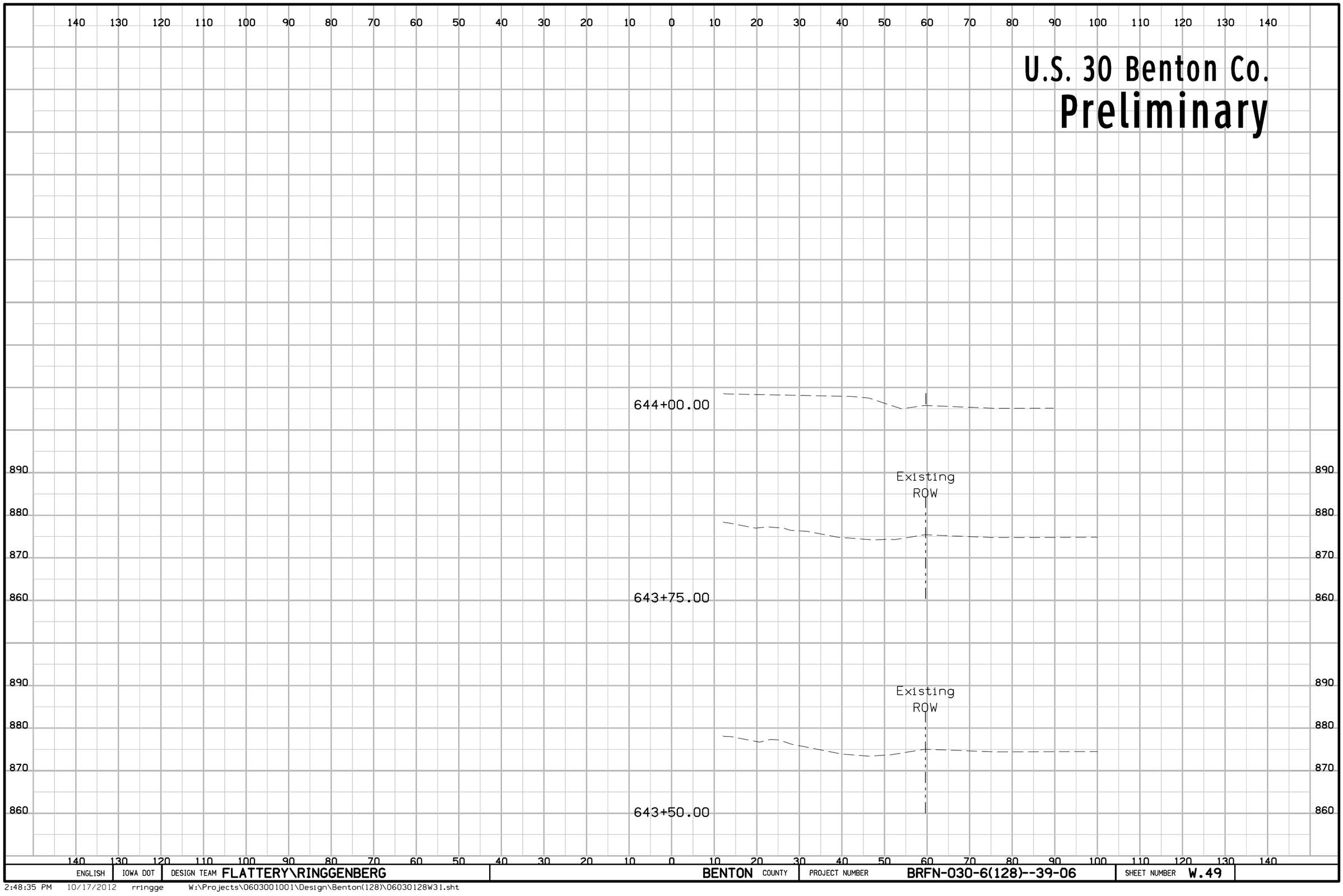
U.S. 30 Benton Co.

Preliminary



ENGLISH	IOWA DOT	DESIGN TEAM FLATTERY\RINGGENBERG	BENTON COUNTY	PROJECT NUMBER BRFN-030-6(128)--39-06	SHEET NUMBER W.49

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