MAD AUGUST 2013

PROJECT ID: 5845-01-75
WITH: N/A

~~0~~4

COUNTY: DANE

ORDER OF SHEETS

TOTAL SHEETS = 176

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STOUGHTON - MADISON

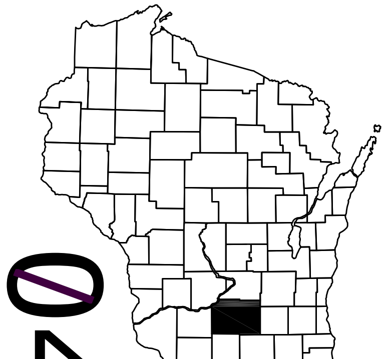
QUAM DRIVE TO CTH B

USH 51

DANE COUNTY

STATE PROJECT NUMBER
5845-01-75

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5845-01-75	———	—



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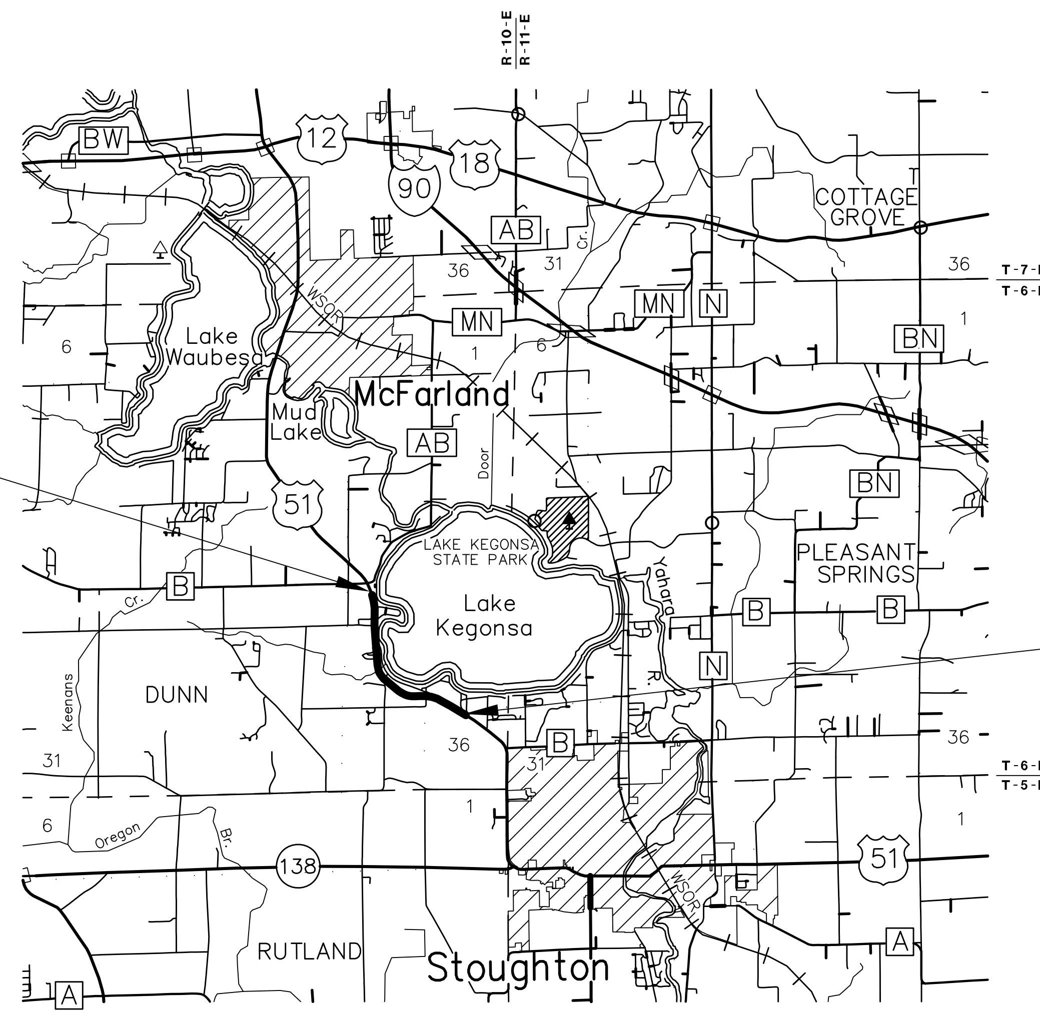


END PROJECT
STA. 300+80

BEGIN PROJECT
STA. 183+50
Y=443873.24
X=848324.85

LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 2.221 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD 83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NGVD 29.

DESIGN DESIGNATION

A.A.D.T. (2012)	=	10,900
A.A.D.T. (2034)	=	14,000
D.H.V. (2034)	=	11.1%
D.D.	=	60/40
T.	=	5.3%
DESIGN SPEED	=	60 MPH
ESALS	=	1,598,700

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS
PROPERTY LINE
LOT LINE
LIMITED HIGHWAY EASEMENT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE
SLOPE INTERCEPT
REFERENCE LINE
EXISTING CULVERT
PROPOSED CULVERT (Box or Pipe)
COMBUSTIBLE FLUIDS — CAUTION
MARSH AREA
WOODED OR SHRUB AREA

PROFILE

GRADE LINE
ORIGINAL GROUND
MARSH OR ROCK PROFILE (To be noted as such) — ROCK
SPECIAL DITCH — LABEL
GRADE ELEVATION — 95.36
CULVERT (Profile View)

UTILITIES

ELECTRIC — E
FIBER OPTIC — FO
GAS — G
SANITARY SEWER — SAN
STORM SEWER — SS
TELEPHONE — T
WATER — W
UTILITY PEDESTAL
POWER POLE
TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	
Designer	SCOTT SYRON
Project Manager	DAVID LAYTON
Regional Examiner	
Regional Supervisor	BRENDA SCHOENFELD
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 4-30-13 Brenda Schoenfeld (Signature)

E

GENERAL NOTES

NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT OF WAY SHALL BE RESTORED AS DIRECTED BY THE ENGINEER.

NO EQUIPMENT OR MATERIALS SHALL BE STORED OR IMPACT ANY WATERWAYS.

WHEN THE QUANTITY OF BASE AGGREGATE DENSE IS MEASURED FOR PAYMENT IN TONS, THE DEPTH OR THICKNESS AS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND UPON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

EROSION CONTROL FEATURES WILL BE DETERMINED BY THE EROSION CONTROL IMPLEMENTATION PLAN (ECIP). ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

LIMITS AND LOCATIONS OF BEAM GUARD REPLACEMENTS AND ADJUSTMENTS MAY BE ADJUSTED BY THE ENGINEER. COORDINATE EXACT LOCATIONS WITH THE ENGINEER IN THE FIELD.

EXACT LOCATIONS OF DRIVEWAYS AND PRIVATE FIELD ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. COORDINATE CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

ADJUST THE LOCATIONS OF CONTRACT ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH THE EXISTING UTILITY FACILITIES, UNLESS OTHERWISE SPECIFIED IN THE CONTRACT SPECIAL PROVISIONS.

ALL EXISTING SIGNS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION OPERATIONS REQUIRE THEIR REMOVAL OR UNLESS THE ENGINEER APPROVES THEIR REMOVAL.

THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTUCTED TO PREVENT PAVEMENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING,TURNING, PASSING OR PARKING LANE.

ASPHALTIC PAVING TABLES

USH 51 MAINLINE PAVING, 2 LANES

	THICKNESS	HMA TYPE	ASPHALTIC MATERIAL	GRADATION
UPPER LAYER	1-3/4"	E-3	PG58-28	12.5 MM
LEVELING LAYER	1"	E-3	PG58-28	9.5 MM
LOWER LAYER	*VARIES 3-1/4" TO 2-1/2"	E-3	PG58-28	19.0 MM

* TANGENT SECTIONS: VARIABLE DEPTH LIFT, 3-1/4" AT CENTERLINE AND 2-1/2" AT EDGE OF 12' LANE, 2% CROWN
SUPERELEVATED SECTIONS: 2-1/2"

USH 51 SHOULDERS

	THICKNESS	HMA TYPE	ASPHALTIC MATERIAL	GRADATION
UPPER LAYER	1-3/4"	E-0.3	PG58-28	12.5 MM
LOWER LAYER	3-1/2"	E-0.3	PG58-28	19.0 MM

SIDEROADS

	THICKNESS	HMA TYPE	ASPHALTIC MATERIAL	GRADATION
UPPER LAYER	1-3/4"	E-3	PG58-28	12.5 MM
LOWER LAYER	1-3/4"	E-3	PG58-28	12.5 MM

ORDER OF SECTION 2 SHEETS

ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC
AECP	APRON ENDWALL FOR CULVERT PIPE
ASPH	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
B.	BARN
B.P.	BREAK POINT
BAD	BASE AGGREGATE DENSE
BOC	BACK OF CURB
C.E.	COMMERCIAL ENTRANCE
COR.	CORNER
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED PIPE
C.S.C.P.	CORRUGATED STEEL CULVERT PIPE
C.S.P.A.	CORRUGATED STEEL PIPE ARCH
D.H.V.	DESIGN HOURLY VOLUME
V.	DESIGN SPEED
Da	DEGREE OF CURVE
DIA.	DIAMETER
DIM.	DIMENTION
e.	EXTERNAL DISTANCE
E.	EAST
E.A.T.	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
EL. OR ELEV.	ELEVATION
E.S.A.L.	EQUIVALENT SINGLE AXLE LOAD
E.O.P.	EDGE OF PAVEMENT
EXIST.	EXISTING
F.E.	FIELD ENTRANCE
G.	GARAGE
H.	HOUSE
H.P.	HIGH POINT
H.E.S.	HIGH EARLY STRENGTH
I.P.	IRON PIN
L.	LENGTH (OF CURVE)
L.H.F.	LEFT HAND FORWARD
L.C.	LONG CHORD
L.P.	LOW POINT
LT.	LEFT HAND FORWARD
LPOL	LIGHT POLE
MAX.	MAXIMUM
MIN.	MINIMUM
NOR.	NORMAL
N.	NORTH
T.	PERCENT TRUCKS
P.E.	PRIVATE ENTRANCE
P.L.	PROPERTY LINE
R.C.A.P.	REINFORCED CONCRETE ARCH PIPE
R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
R.C.P.	REINFORCED CONCRETE PIPE
R.H.F.	RIGHT HAND FORWARD
RD.	ROAD
RT.	RIGHT
R/W	RIGHT OF WAY
S.	SHED
S.D.D.	STANDARD DETAIL DRAWING
SHR.	SHRINKAGE
S.E.	SUPERELEVATION
S.P.B.G.	STEEL PLATE BEAM GUARD
TEL.	TELEPHONE
TN.	TOWN
T.O.C.	TOP OF CURB
TRANS.	TRANSITION
VOL.	VOLUME
W.	WEST

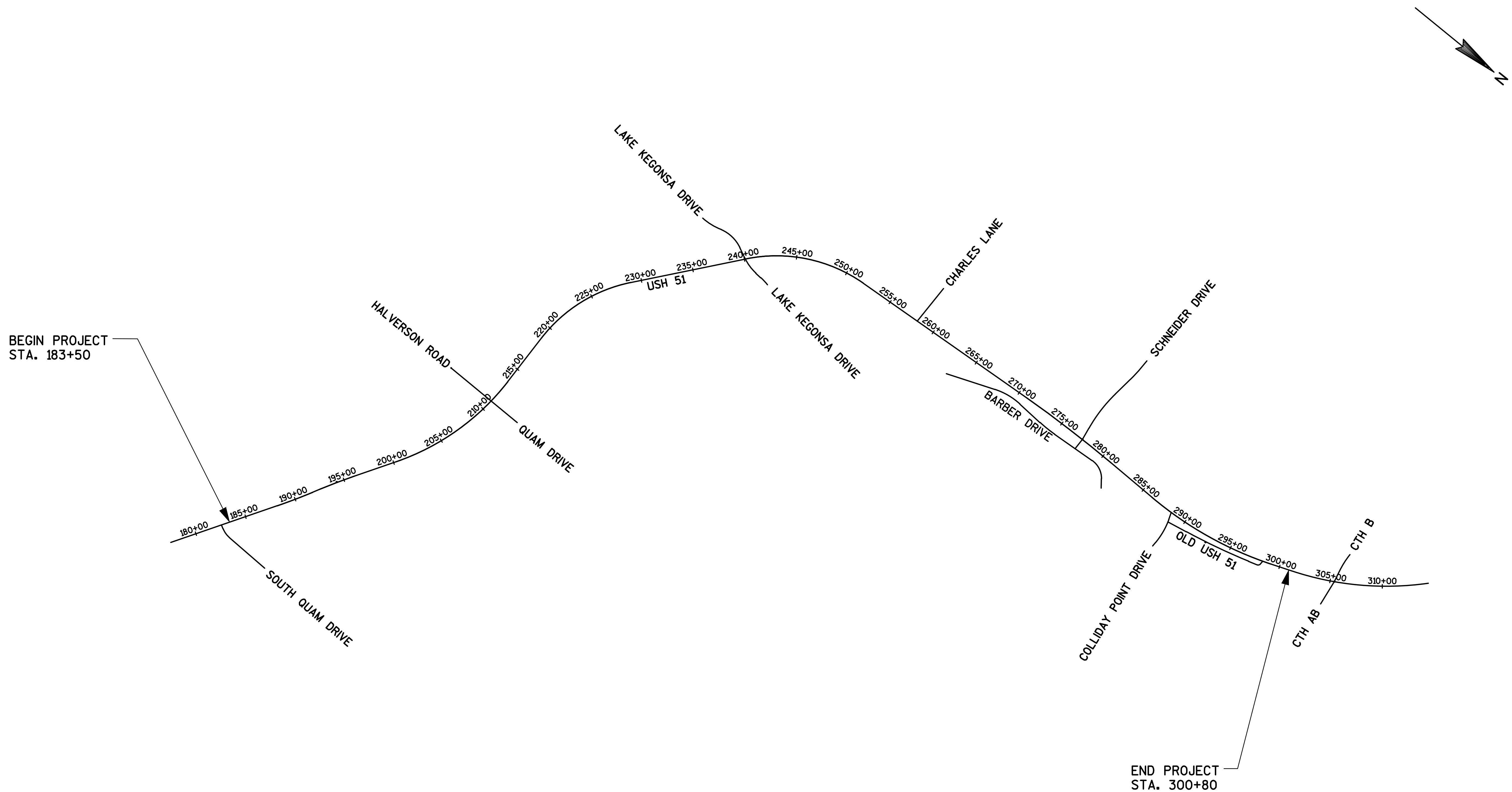
DIGGERS HOTLINE
Dial 811 or (800) 242-8511
www.DiggersHotline.com

UTILITY CONTACTS

UTILITY OR MUNICIPALITY	ADDRESS	CONTACT	UTILITY TYPE
ALLIANT ENERGY	4902 N BILTMORE LANE SUITE 1000 MADISON, WI 53718 (608) 458-4871 (OFFICE) (608) 395-7395 (MOBILE)	JASON HOGAN	ELECTRICITY GAS/PETROLEUM
AT&T WISCONSIN	316 W WASHINGTON AVE MADISON, WI 53703 (608) 252-2385 (OFFICE)	CAROL ANASON	COMMUNICATION LINE
CHARTER COMMUNICATIONS	1348 PLAINFIELD AVE. JANESVILLE, WI 53546 (608) 373-7539 (OFFICE) (608) 209-8655 (MOBILE)	NICK FISCHER	COMMUNICATION LINE
CITY OF STOUGHTON UTILITIES	600 S 4TH ST P.O. BOX 383 STOUGHTON, WI 53589-0383 (608) 873-3379 (OFFICE)	SEAN GRADY	ELECTRICITY SEWER WATER
FRONTIER COMMUNICATIONS OF WI LLC	100 COMMUNICATIONS DR. SUN PRAIRIE, WI 53590 (608) 837-1605 (OFFICE) (608) 512-2389 (MOBILE)	DANA GILLOTT	COMMUNICATION LINE
KEGONSA SANITARY DISTRICT	2240 US HWY 51 P.O. BOX 486 STOUGHTON, WI 53589 (608) 873-0230 (OFFICE)	WILLIAM SKINNER	SEWER

DNR LIAISON
ERIC HEGGELUND
DEPT OF NATURAL RESOURCES
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
608-275-3283
eric.heggelund@wisconsin.gov

DESIGN CONTACT
SCOTT SYRON
DEPT OF TRANSPORTATION
2101 WRIGHT STREET
MADISON, WI 53704
608-245-2635
scott.syron@dot.wi.gov


N
BEGIN PROJECT
STA. 183+50
END PROJECT
STA. 300+80
USH 51
SOUTH QUAM DRIVE
HALVERSON ROAD
QUAM DRIVE
LAKE KEGONSA DRIVE
LAKE KEGONSA DRIVE
CHARLES LANE
SCHNEIDER DRIVE
BARBER DRIVE
COLLIDAY POINT DRIVE
OLD USH 51
CTH B
CTH AB
180+00
185+00
190+00
195+00
200+00
205+00
210+00
215+00
220+00
225+00
230+00
235+00
240+00
245+00
250+00
255+00
260+00
265+00
270+00
275+00
280+00
285+00
290+00
295+00
300+00
305+00
310+00

2

ROADWAY SOIL BORING SUMMARY TABLE

BORING #	STA.	OFFSET (FT)	BITUMINOUS (IN)	CONCRETE (IN)	BASE COURSE (IN)	SUBGRADE
1	297+35	8 LT	- - -	8	11	SAND BR, F-M, TRACE GRAVEL
2	282+49	16 LT	- - -	- - -	13	SILTY SAND BR, FINE
3	255+83	6 LT	- - -	8	10	SILTY SAND BR, F-M, TRACE GRAVEL
4	246+59	10 LT	- - -	10	12	SILTY SAND BR, F-M, TRACE GRAVEL
5	227+59	17 LT	- - -	- - -	17	SAND BR, F-M, TRACE GRAVEL
6	207+98	19 LT	- - -	- - -	11	SANDY SILT BR, FINE, FEW GRAVEL, TRACE CLAY
6B	207+98	13 LT	- - -	- - -	12	SANDY SILT BR, FINE, TRACE GRAVEL, CLAY BR, TRACE GRAVEL
7	194+73	5 LT	3	7	11	SILTY SAND BR, FINE, TRACE GRAVEL, CLAY DRK BR, TRACE GRAVEL
8	188+00	18 LT	- - -	- - -	15	SILTY SAND BR, TRACE GRAVEL, CLAY DRK BR, TRACE GRAVEL
9	201+31	7 RT	2.5	9	11	SILTY SAND BR, F-M, TRACE GRAVEL, CLAY DRK BR, TRACE GRAVEL
10	220+50	7 RT	2	9	13	SANDY SILT BR, FINE, FEW GRAVEL
11	242+88	9 RT	- - -	8	12	SANDY SILT BR, F-M, FEW GRAVEL
12	251+99	17 RT	- - -	- - -	12.5	SANDY SILT BR, FINE, FEW GRAVEL
13	274+03	6 RT	2	9	10	SAND BR, F-C , TRACE SILT & CLAY, LITTLE GRAVEL
14	288+11	9 RT	2.5	7	9	SANDY SILT BR, FINE, FEW GRAVEL
15	231+25	11 RT	- - -	8	11	SILTY SAND BR, F-M, TRACE GRAVEL
16	249+00	10 RT	- - -	8.5	10	SAND DRK BR, F-C, TRACE CLAY, SOME GRAVEL

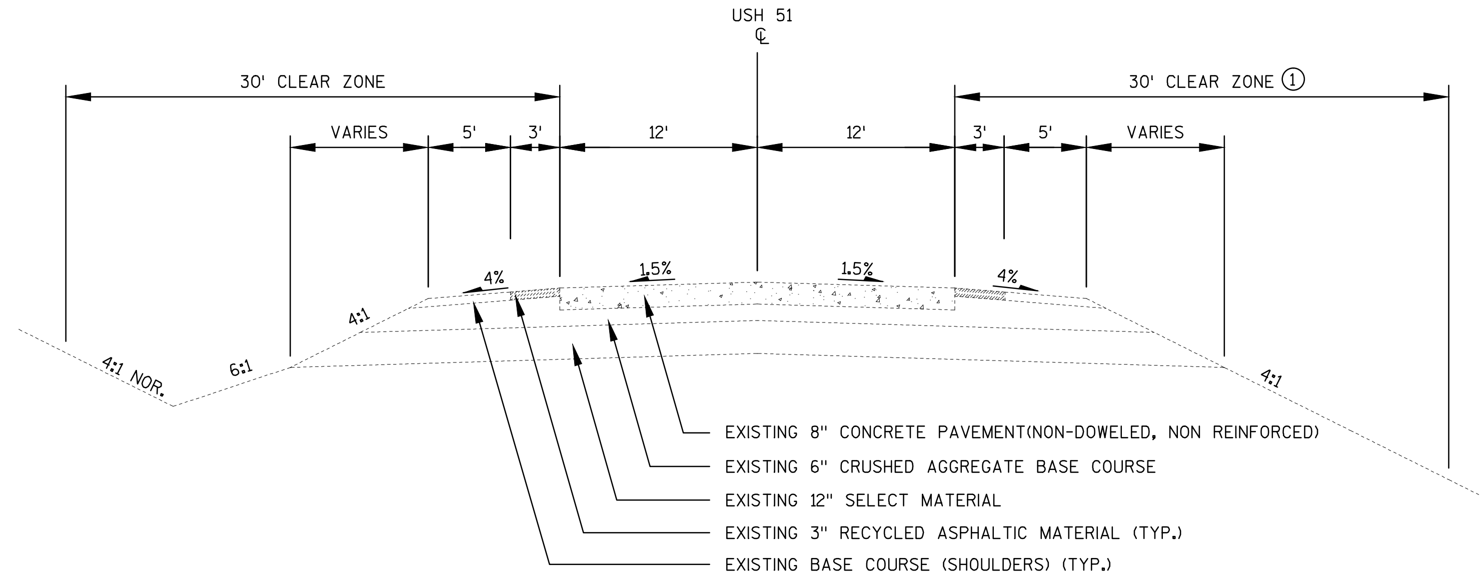
NOTES:

ALL DEPTHS ARE IN INCHES

FOR REFERENCE PURPOSES ONLY

BORINGS TAKEN 8/27/12 - 8/28/12

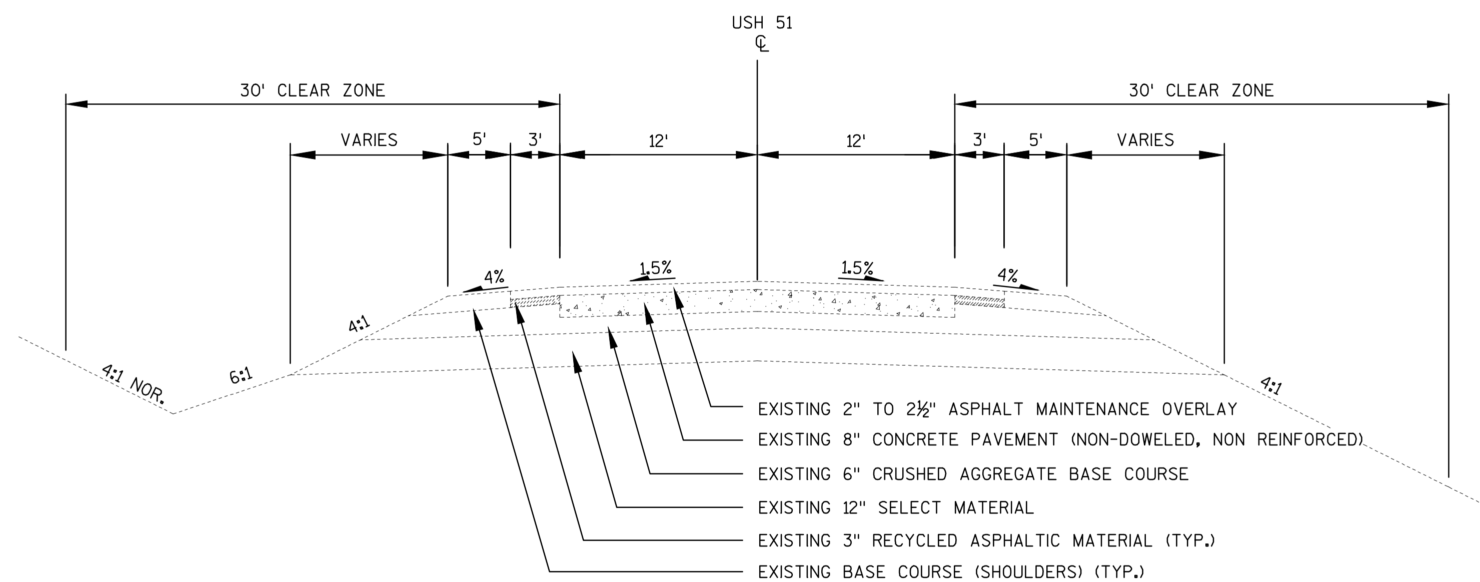
ALL OFFSETS ARE FROM EXISTING CENTERLINE



① 18' CLEAR ZONE STA. 297+00 RT TO STA. 299+30 RT

EXISTING TYPICAL SECTION

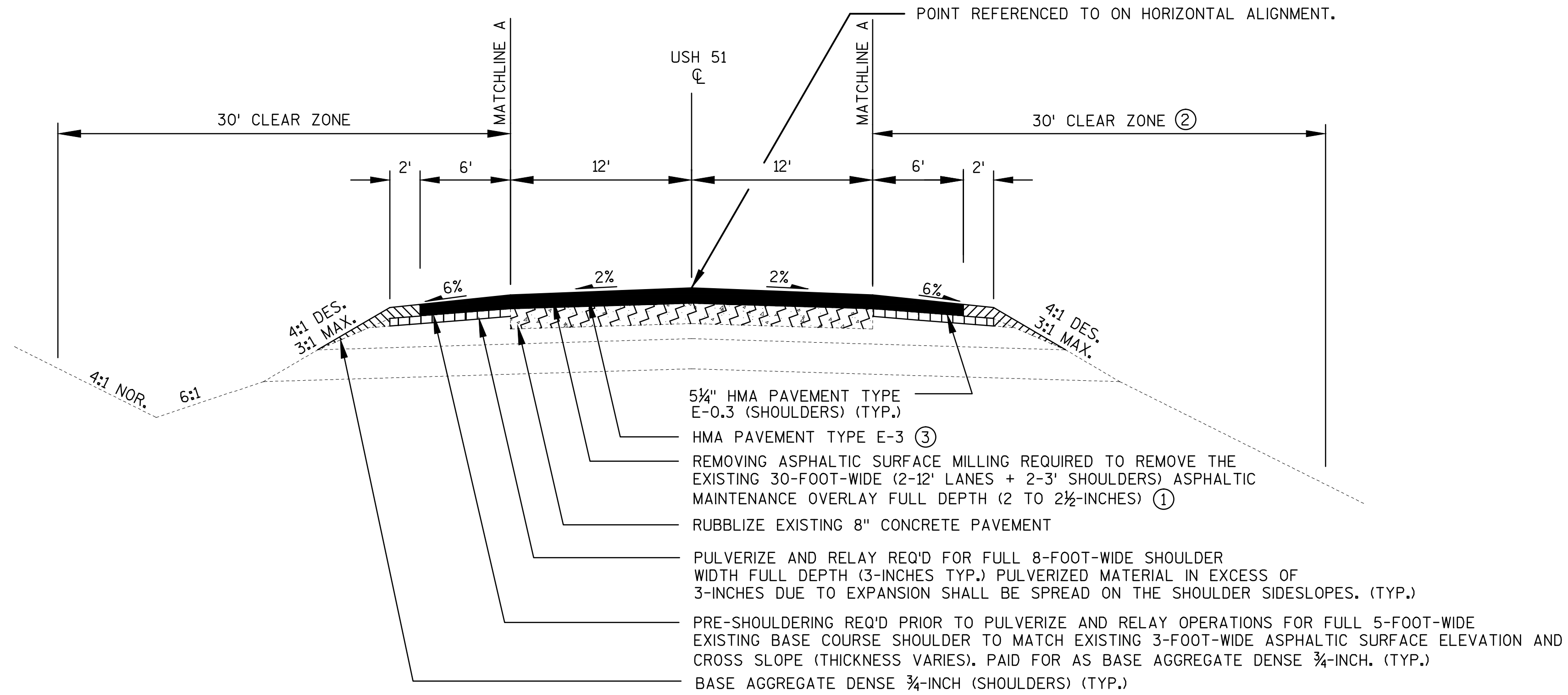
STA. 185+00 TO STA. 189+22
STA. 207+70 TO STA. 214+57
STA. 223+02 TO STA. 270+45
STA. 290+60 TO STA. 299+30



EXISTING TYPICAL SECTION

STA. 189+22 TO STA. 207+70
STA. 214+57 TO STA. 223+02
STA. 270+45 TO STA. 290+60

2



PROPOSED TYPICAL SECTION

STA. 185+00 TO STA. 266+04
STA. 271+87 TO STA. 299+30

① STA. 189+22 TO STA. 207+70
STA. 214+57 TO STA. 223+02
STA. 271+87 TO STA. 290+60

② 18' CLEAR ZONE STA. 297+00 RT TO STA. 299+30 RT

③ VARIES 6" TO 5¼". REFER TO GENERAL NOTES FOR HMA PAVEMENT LAYER THICKNESSES.

④ STATION LT SECTION SHOWN. STATION RT SECTION IS A MIRROR IMAGE.

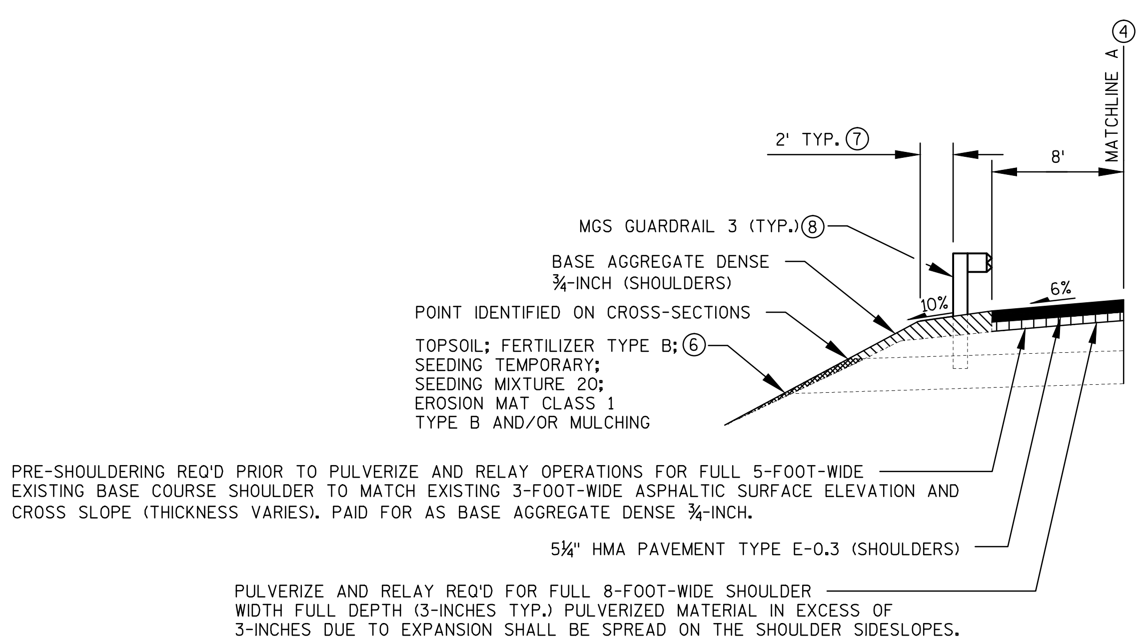
⑤ STATION RT SECTION SHOWN. STATION LT SECTION IS A MIRROR IMAGE.

⑥ REFER TO EROSION CONTROL SHEETS FOR EROSION MAT CLASS 1 TYPE B AND/OR MULCHING LOCATIONS.

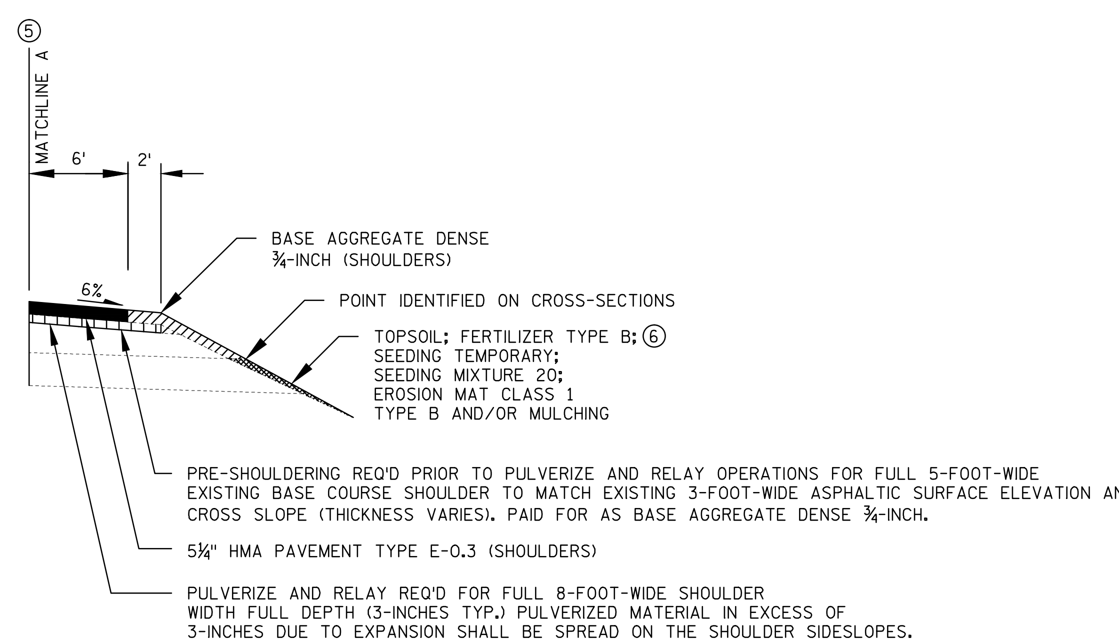
⑦ REFER TO CONSTRUCTION DETAILS-GUARDRAIL DETAIL FOR REDUCED GRADING BEHIND MGS GUARDRAIL POST LOCATIONS.

⑧ REFER TO CONSTRUCTION DETAILS-GUARDRAIL DETAIL FOR MGS GUARDRAIL TYPES AND LOCATIONS.

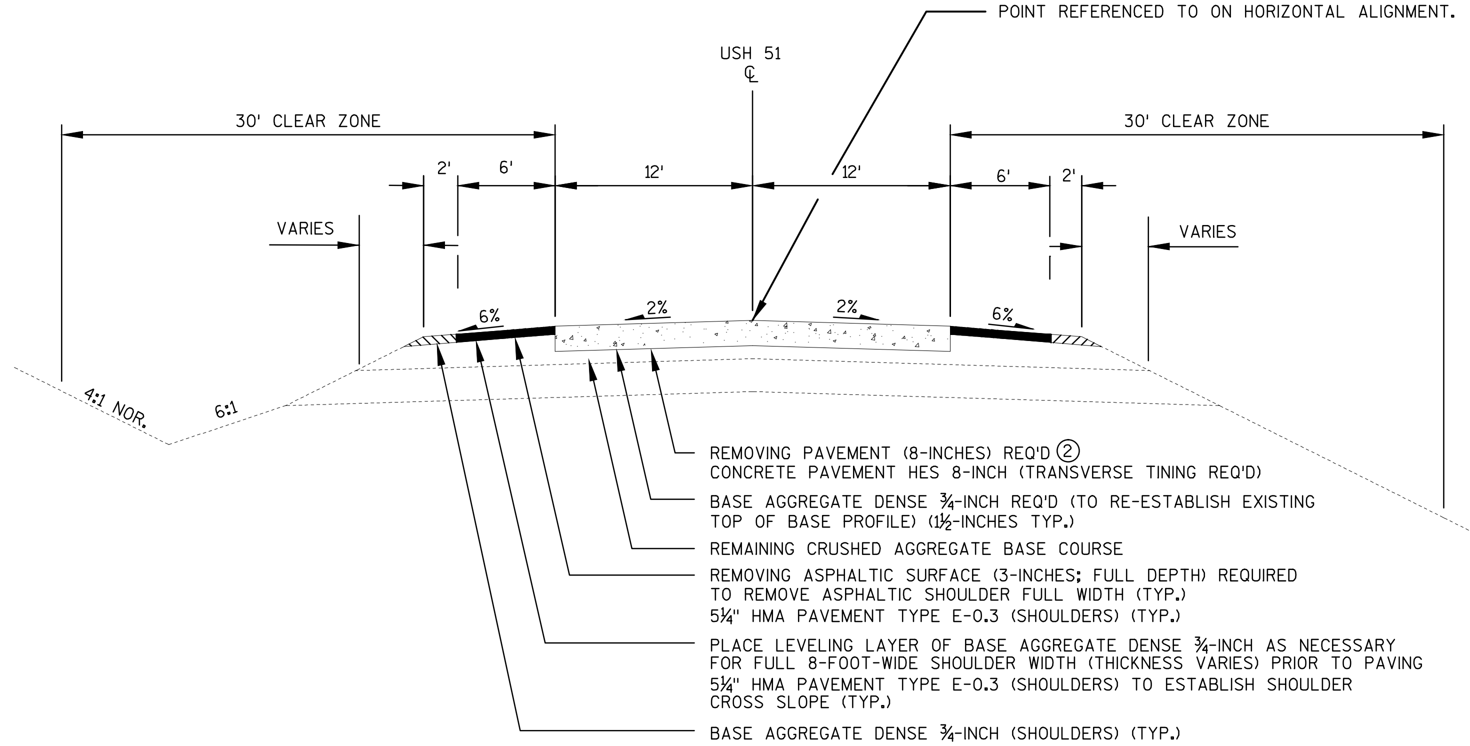
2



GUARDRAIL TYPICAL SECTION ④



SIDE SLOPE SLIVER GRADING SECTION ⑤



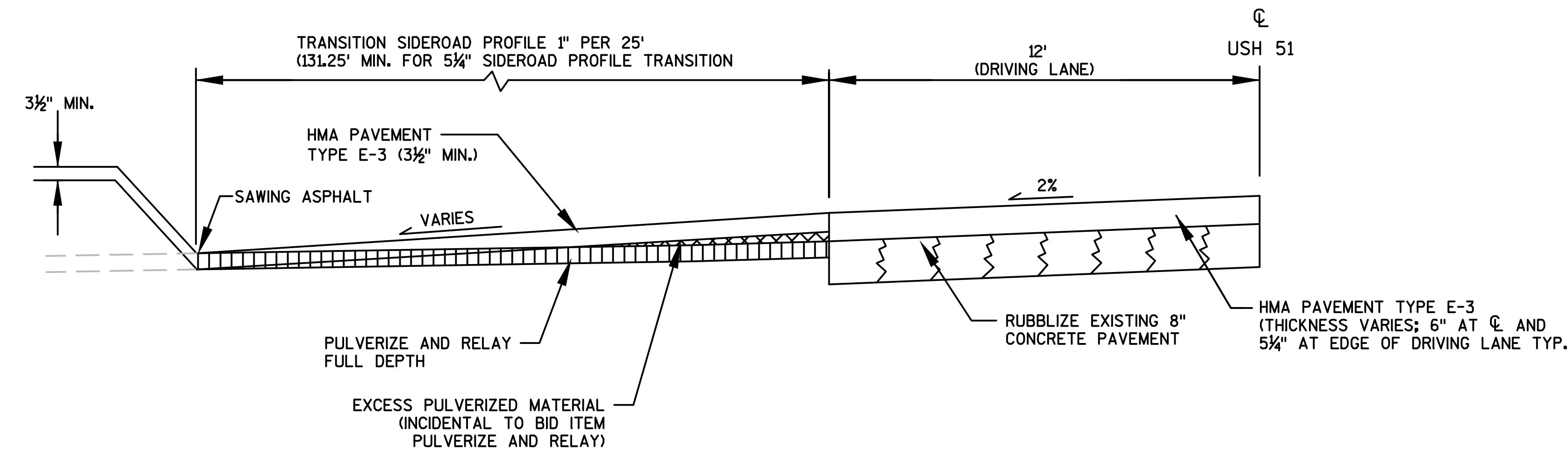
PROPOSED TYPICAL SECTION ①

STA. 266+04 TO STA. 268+29
STA. 268+62 TO STA. 271+87

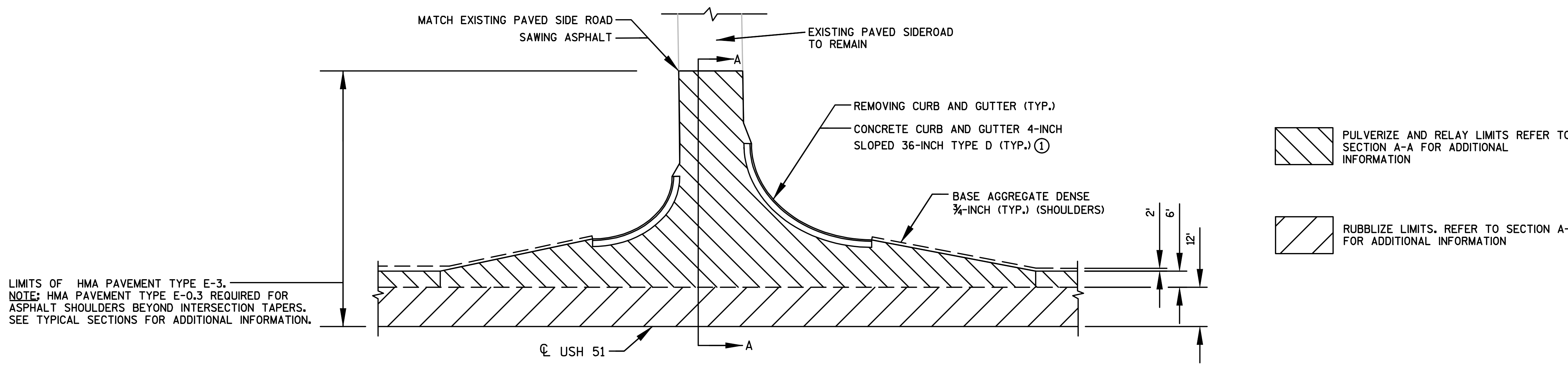
① STA. 268+28.70 TO 268+61.86
EXISTING PAVEMENT TO REMAIN.

② STA. 268+95 TO 271+87
EXISTING 2" TO 2½" ASPHALTIC MAINTENANCE OVERLAY TO BE REMOVED WITH REMOVING PAVEMENT OPERATIONS. (INCIDENTAL TO BID ITEM REMOVING PAVEMENT)

2



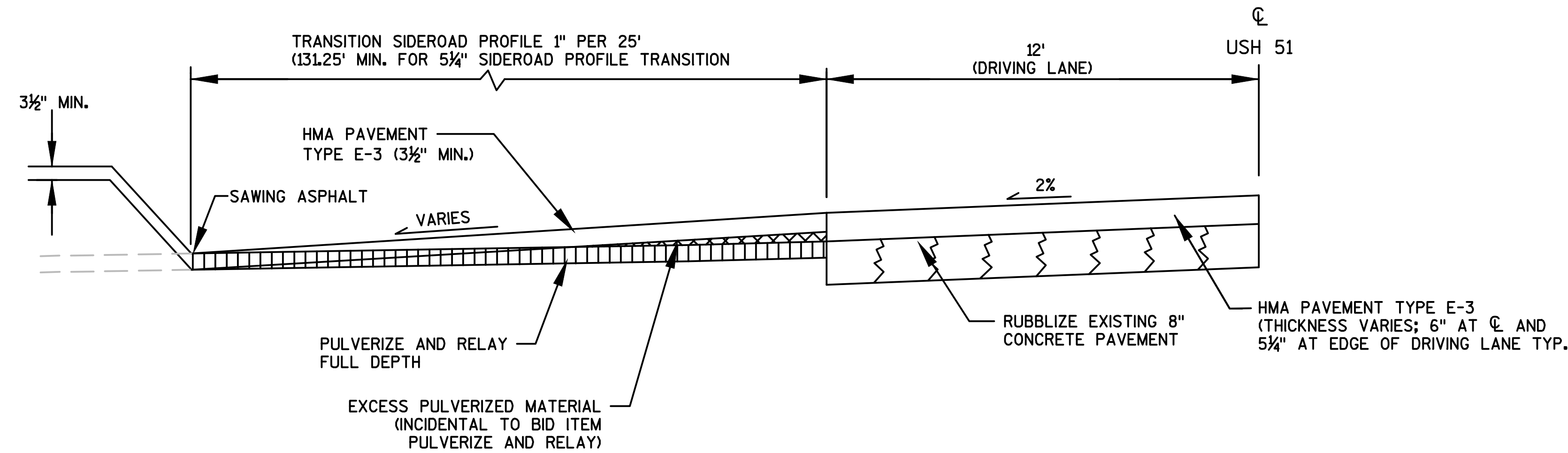
SECTION A - A



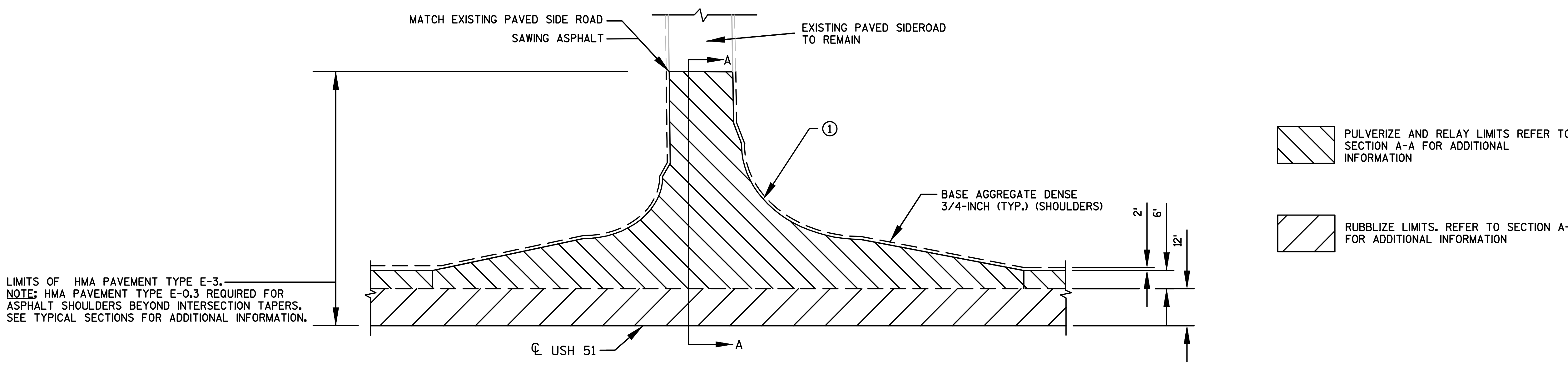
1 MATCH THE EXISTING CURB AND GUTTER RADIUS, REFER TO PLAN SHEETS - MAINLINE FOR ADDITIONAL CURB AND GUTTER LAYOUT INFORMATION. THE ITEM "CONSTRUCTION STAKING CURB AND GUTTER INTERSECTION RADIUS" HAS BEEN INCLUDED TO REESTABLISH THE EXISTING RADIUS LOCATION AND COMPUTE REVISED VERTICAL CURB AND GUTTER GRADES. REFER TO CONSTRUCTION DETAIL- INTERSECTION CURB AND GUTTER REPLACEMENT FOR ADDITIONAL INFORMATION.

DETAIL FOR RURAL PAVED SIDE ROAD WITH CONCRETE CURB AND GUTTER

HALVERSON ROAD (STA. 211+07, LT)	CHARLES LANE (STA. 258+14, LT)
QUAM DRIVE (STA. 211+07, RT)	SCHNEIDER DRIVE (STA. 277+49, LT)
LAKE KEGONSA ROAD (STA. 240+08, LT)	SCHNEIDER DRIVE (STA. 277+59, RT)
LAKE KEGONSA ROAD (STA. 240+18, RT)	COLLIDAY POINT DRIVE (STA. 288+43, RT)



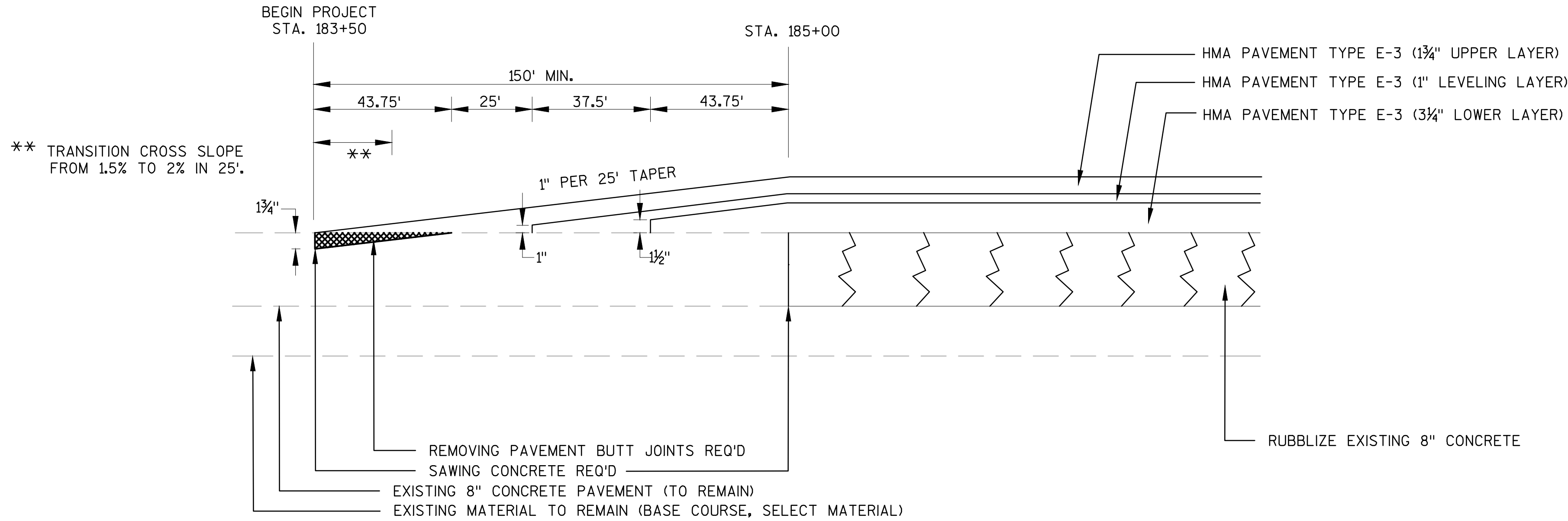
SECTION A - A



① MATCH THE EXISTING EDGE-OF-PAVEMENT RADIUS, BEGIN LOCATION, AND END LOCATION.

DETAIL FOR RURAL PAVED SIDE ROAD
WITHOUT CONCRETE CURB AND GUTTER

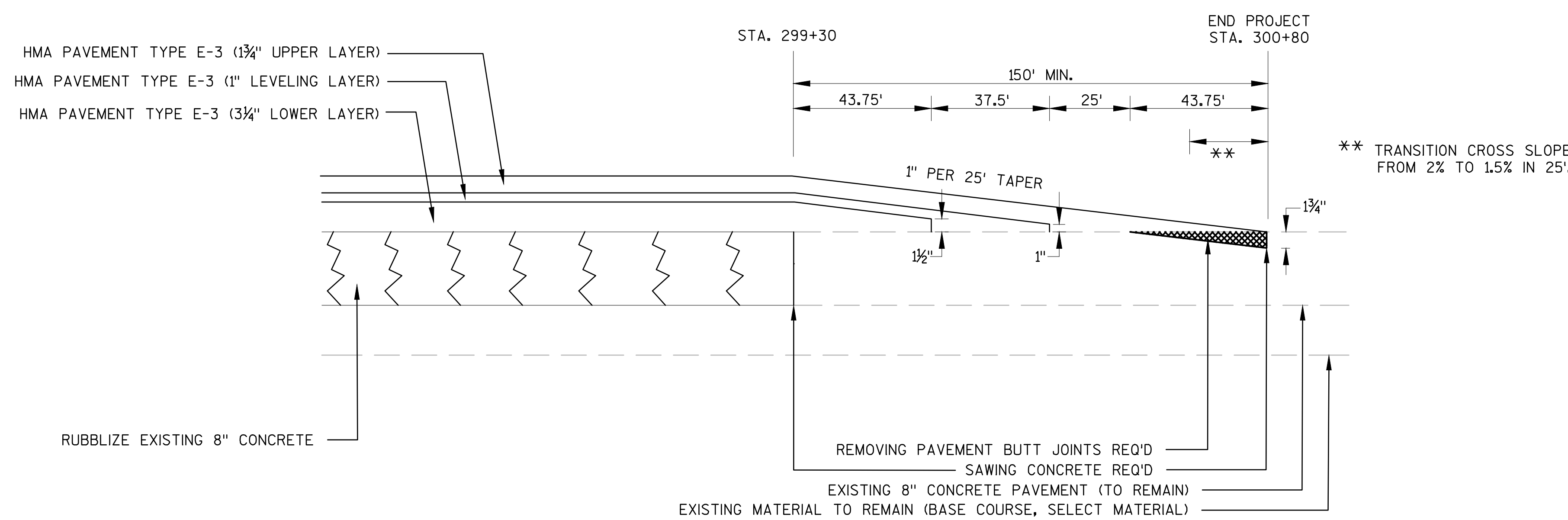
OLD USH 51 (STA. 298+32, RT)



DETAIL FOR BEGIN PROJECT

BEGIN PROJECT: STA. 183+50

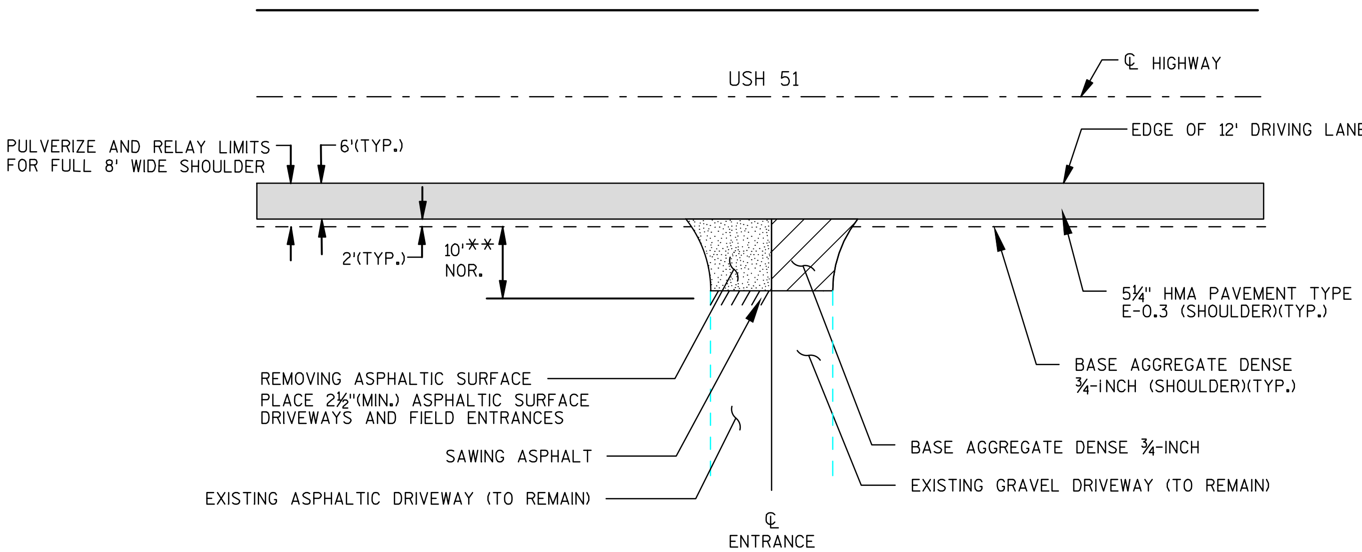
NOTE: PAVEMENT THICKNESS SHOWN AT ℄



DETAIL FOR END PROJECT

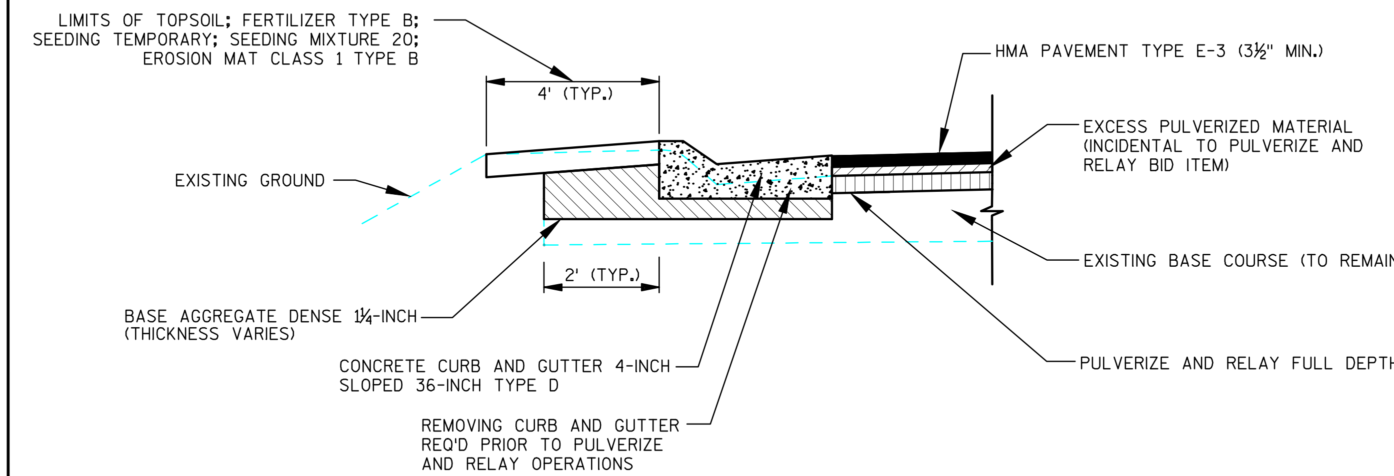
END PROJECT: STA. 300+80

NOTE: PAVEMENT THICKNESS SHOWN AT ℄

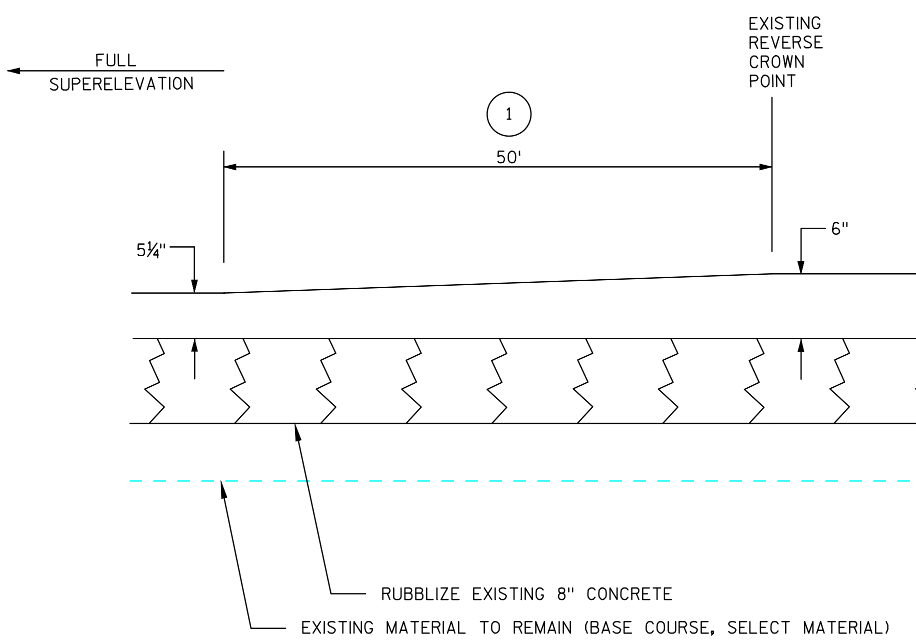


** ADJUST TO FIT FIELD CONDITIONS

RURAL DRIVEWAY DETAIL



INTERSECTION CURB AND GUTTER REPLACEMENT

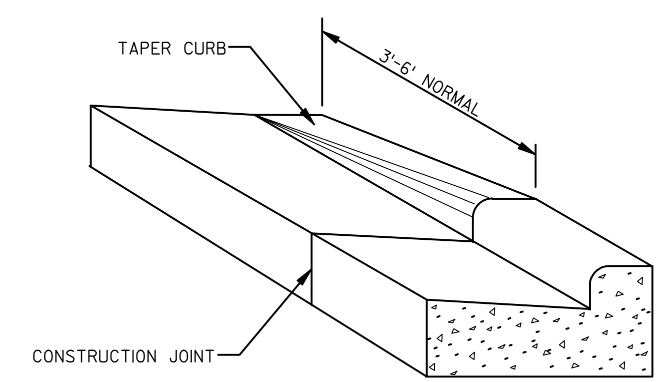


1 TRANSITION LOWER HMA PAVEMENT LAYER FROM 3¼" AT ℄ (EXISTING REVERSE CROWN POINT) TO 2½" AT ℄ IN 50' (MIN).

SUPERELEVATION HMA PAVEMENT THICKNESS TRANSITION DETAIL

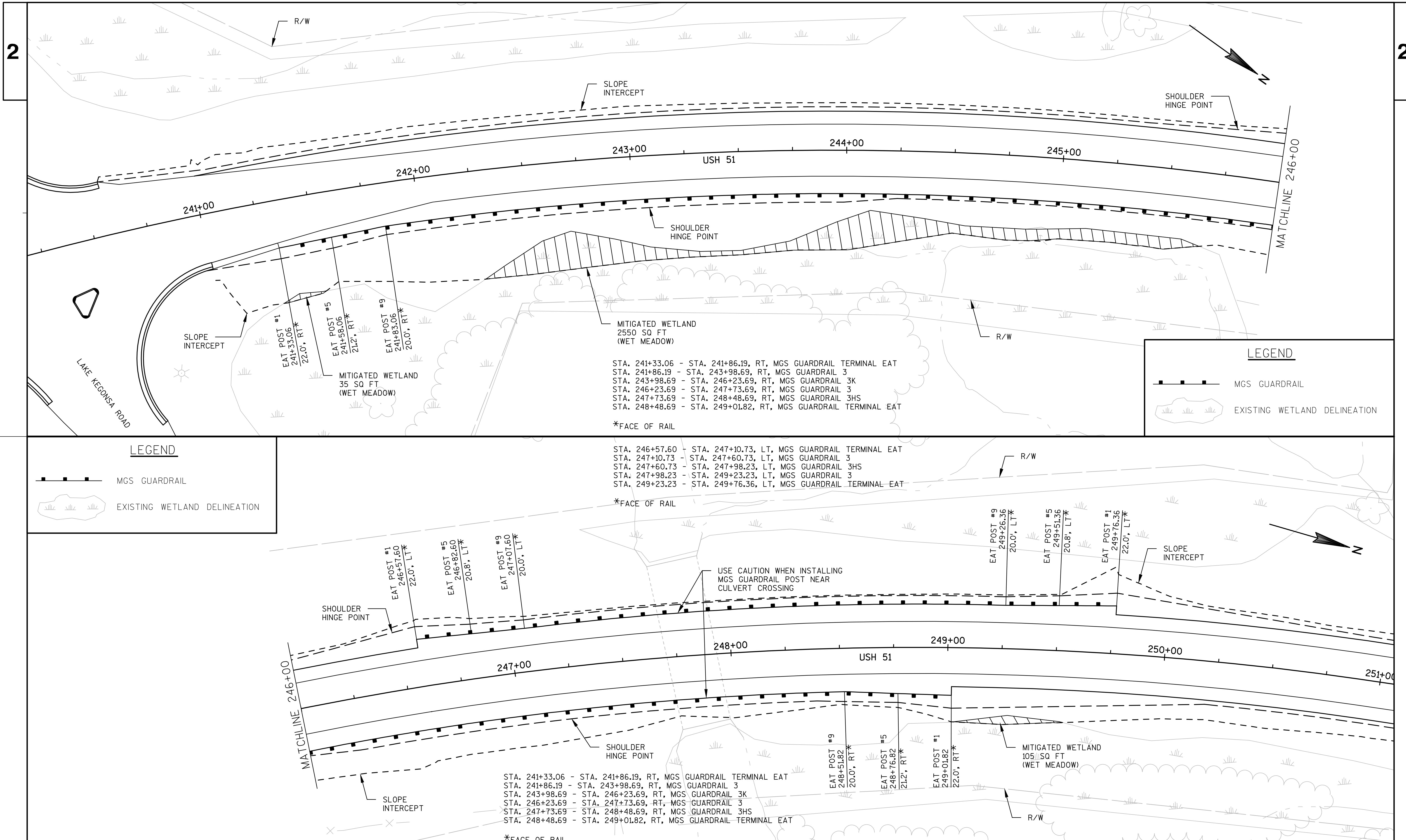
REFER TO PLAN DETAILS & PERMANENT SIGNING SHEETS FOR HORIZONTAL CURVE AND SUPERELEVATION INFORMATION

NOTE: PAVEMENT THICKNESS SHOWN AT ℄

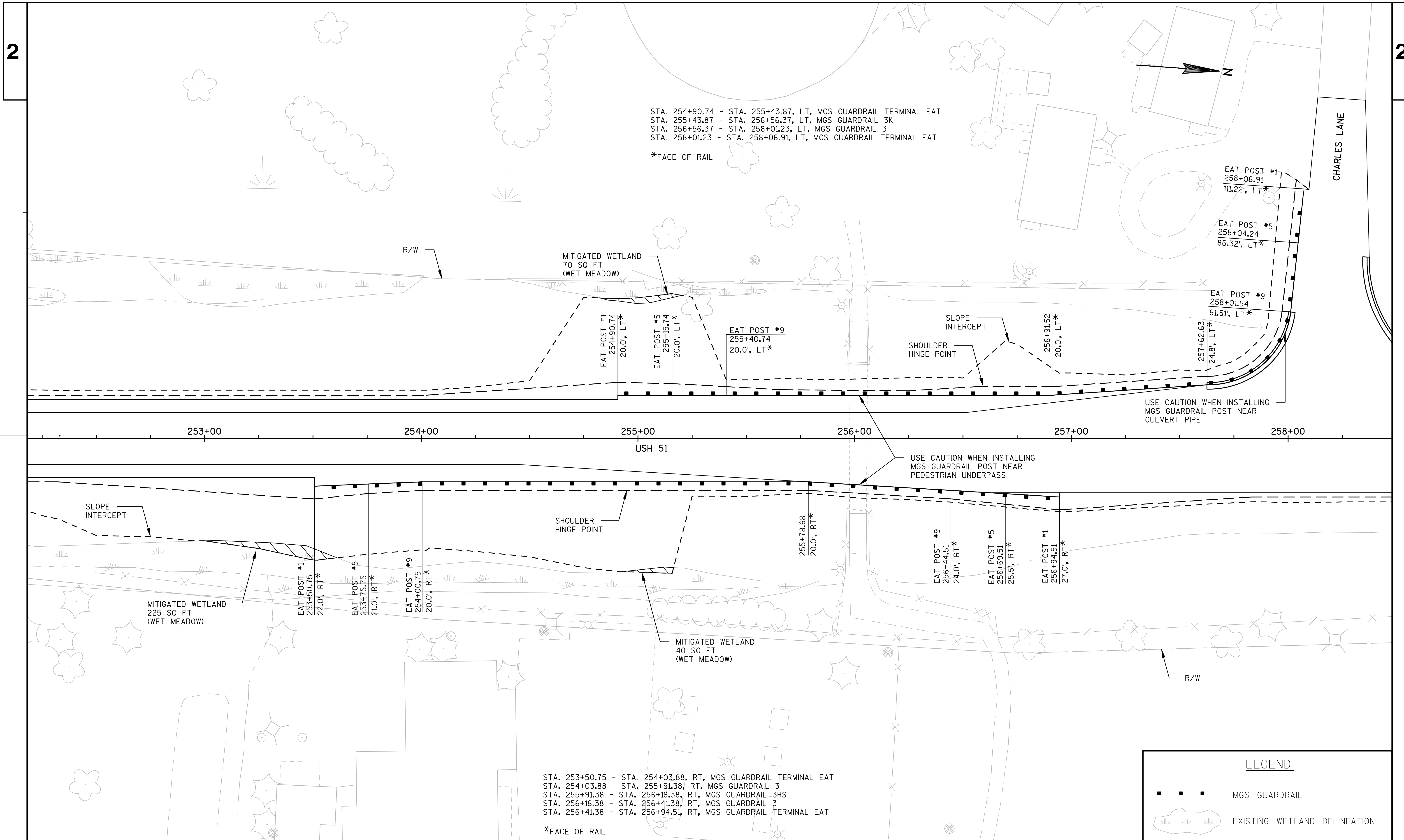


DETAIL OF CURB & GUTTER TERMINI

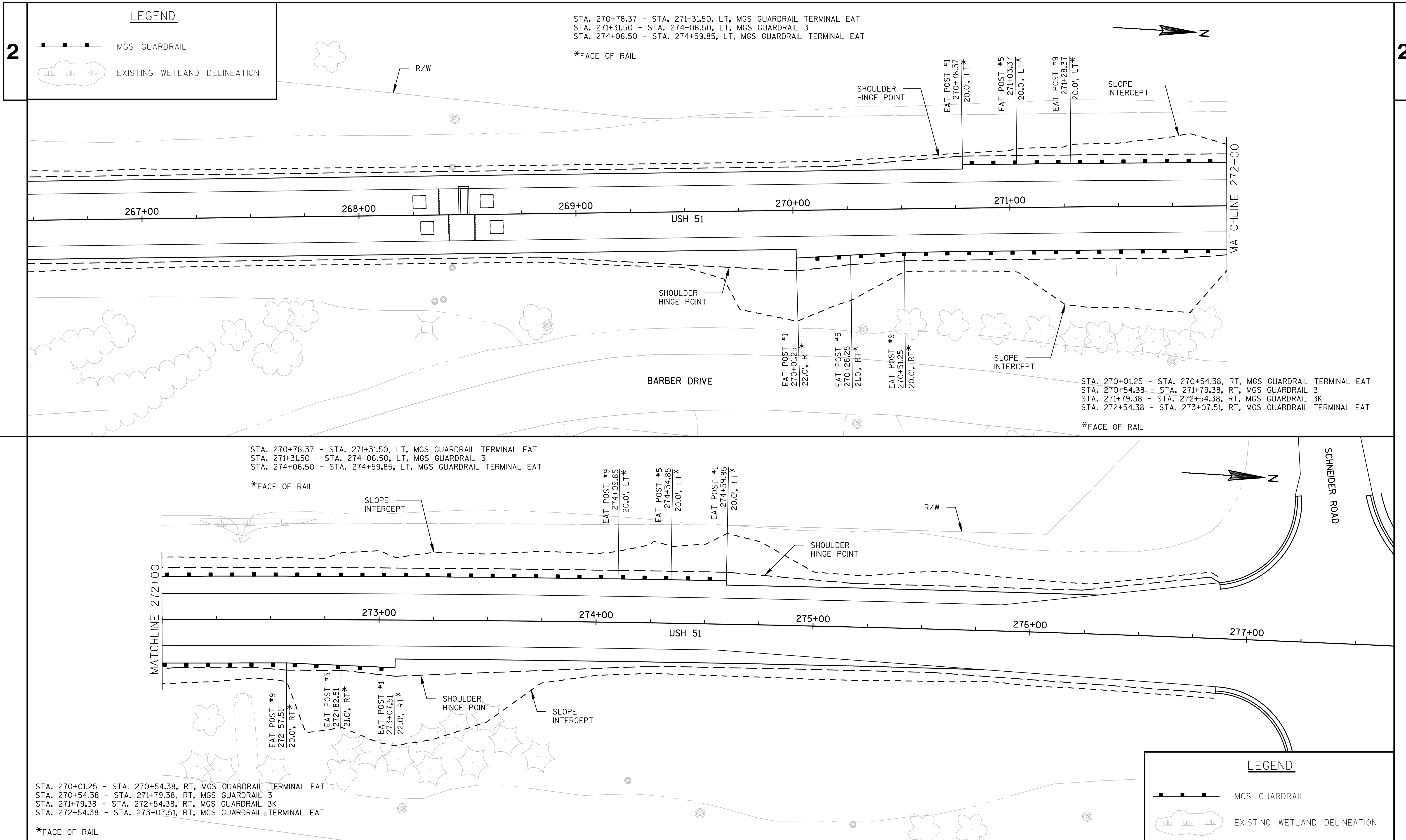
(CONCRETE CURB AND GUTTER 30-INCH TYPE D SHOWN)



PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	GUARDRAIL LAYOUT DETAIL	SHEET 12	E



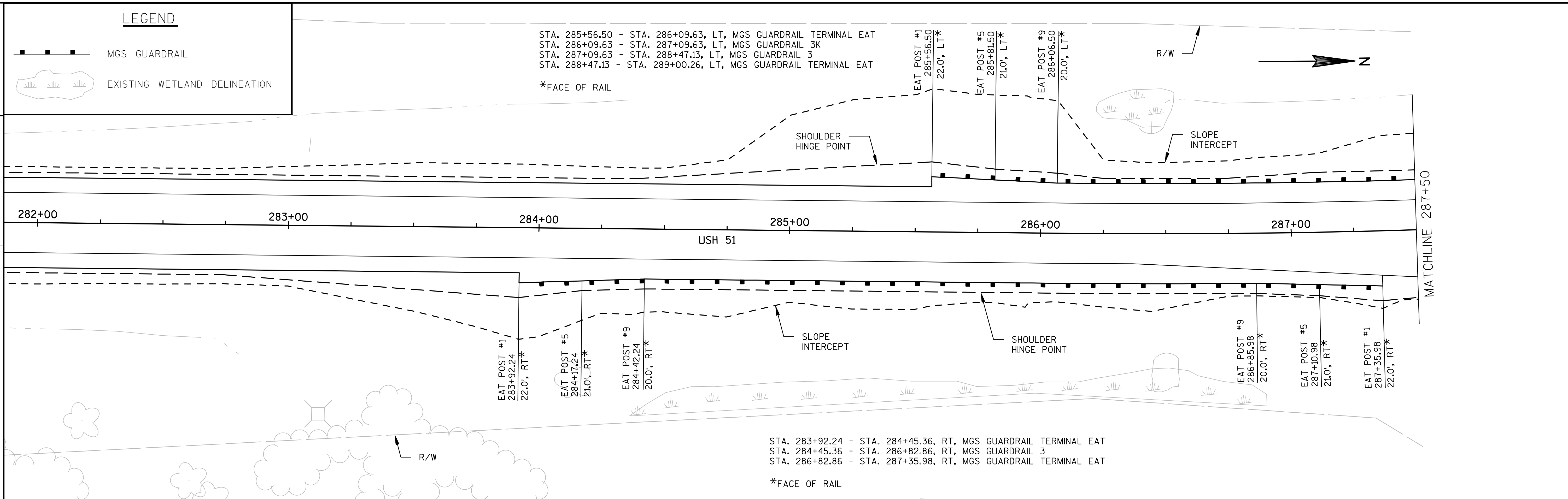
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	GUARDRAIL LAYOUT DETAIL	SHEET 13	E

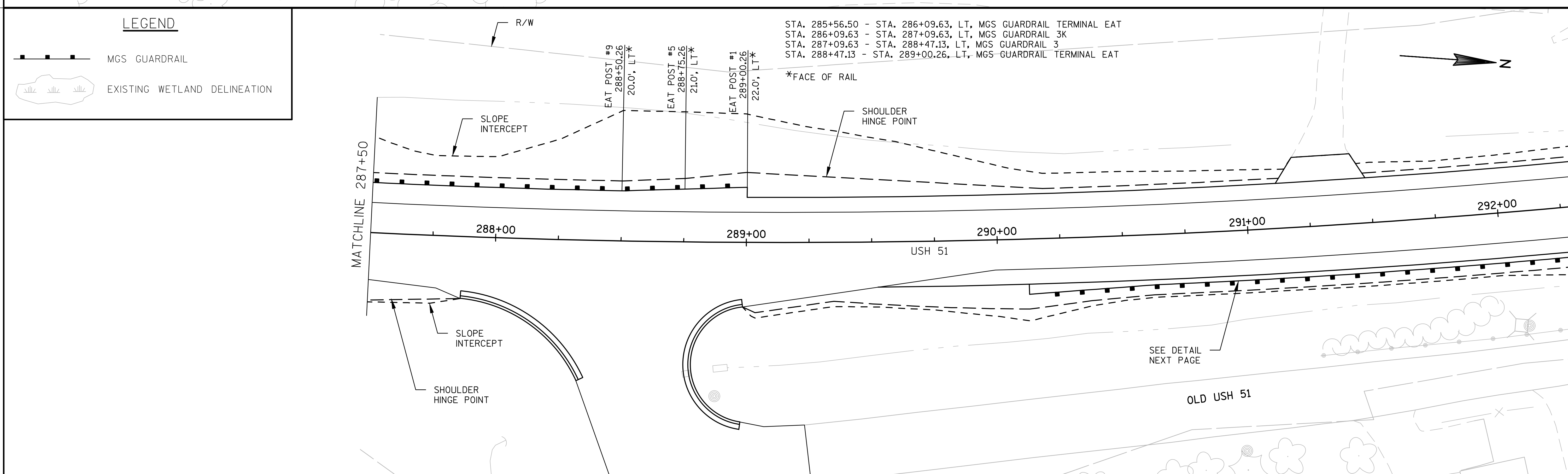


PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	GUARDRAIL LAYOUT DETAIL	SHEET 14	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\GUARDRAIL DETAILS.DWG PLOT DATE : 5/1/2013 1:11 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:40_XREF

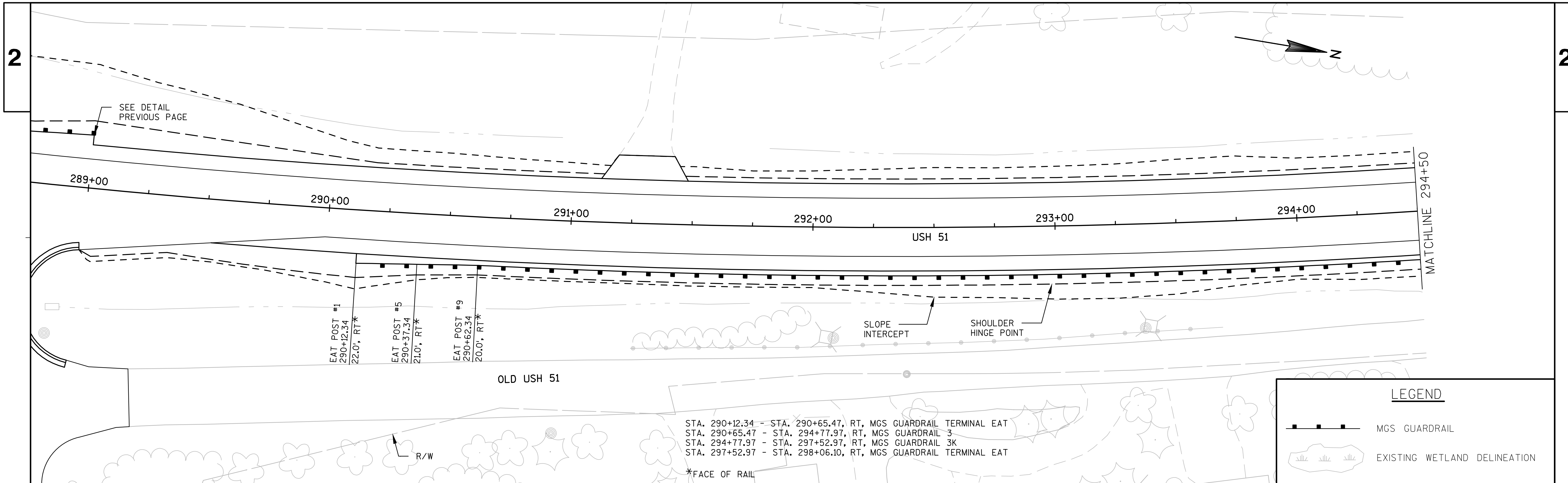
2

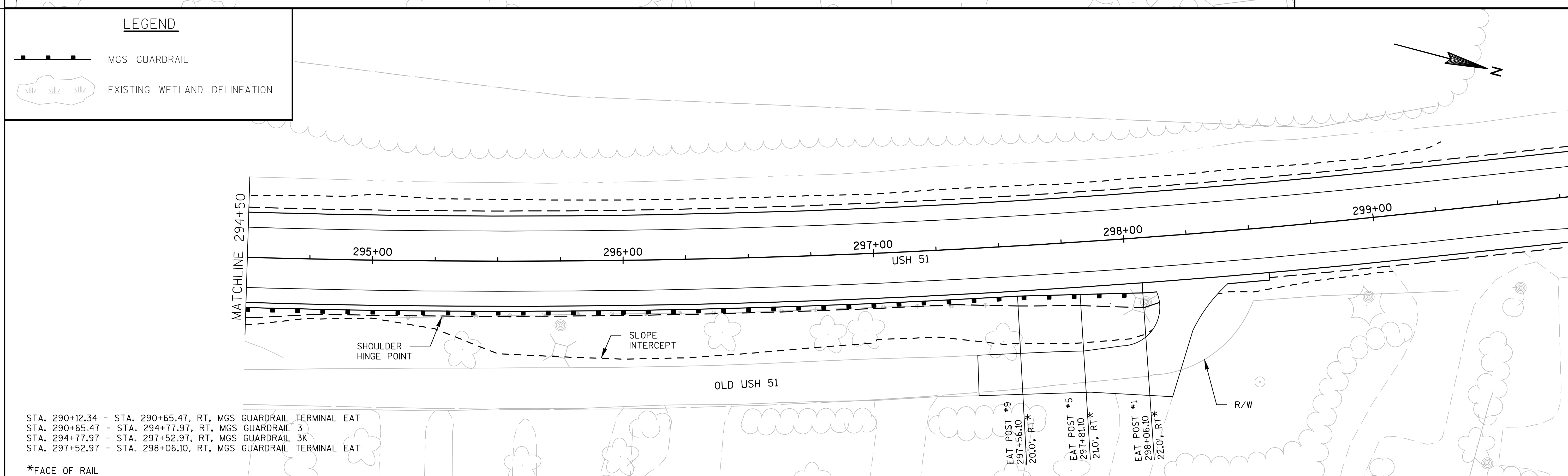




2

PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	GUARDRAIL LAYOUT DETAIL	SHEET 15	E





PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	GUARDRAIL LAYOUT DETAIL	SHEET 16	E

CURVE 1

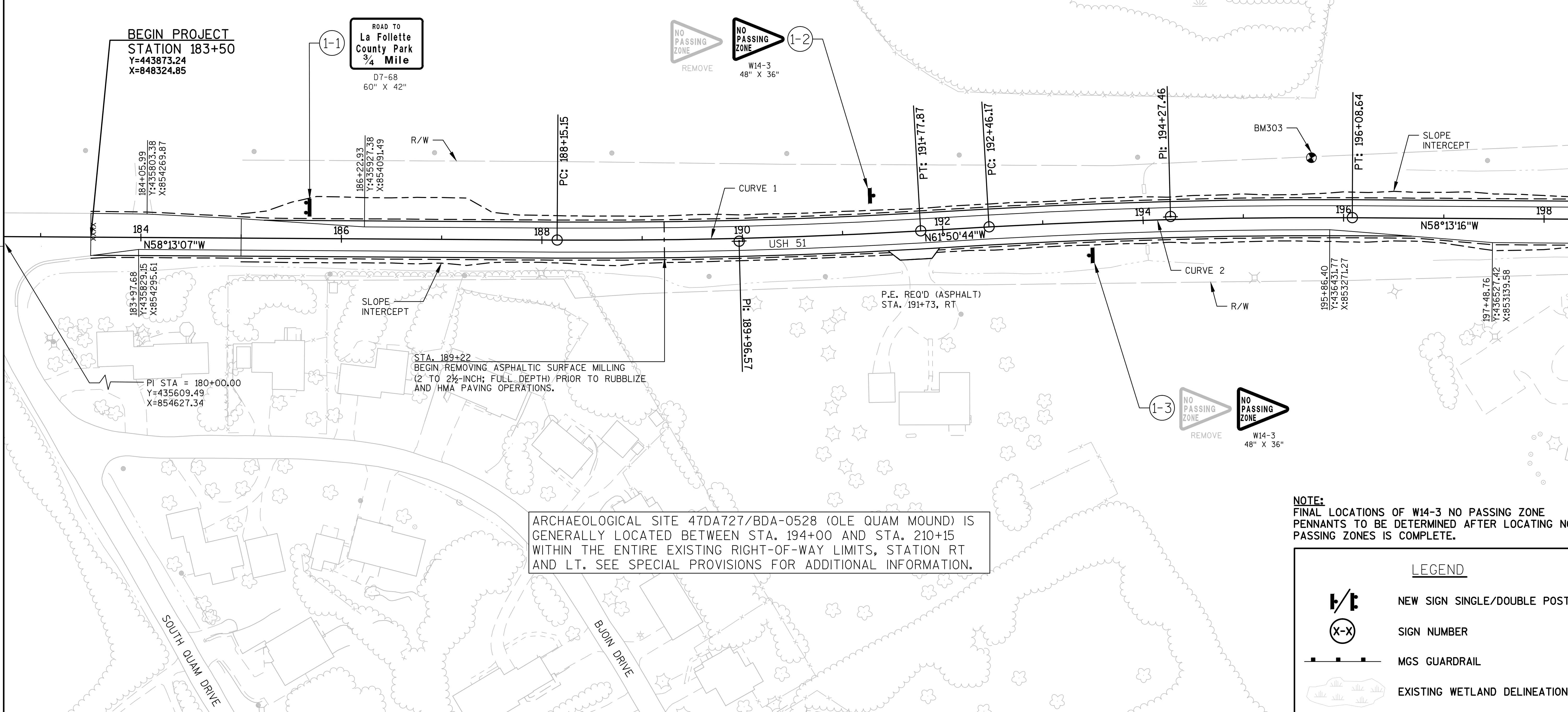
PI STA = 189+96.57
Y = 436134.37
X = 853780.19
DELTA = 3°37'37"
D = 1°00'00"
T = 181.42
L = 362.72
R = 5730.00
PC STA = 188+15.15
Y = 436038.82
X = 853934.41
PT STA = 191+77.87
Y = 436219.97
X = 853620.24
e = NC
MATCH EXISTING SUPERELEVATION AND SUPERELEVATION TRANSITION RATES

CURVE 2

PI STA = 194+27.46
Y = 436337.74
X = 853400.18
DELTA = 3°37'28"
D = 1°00'00"
T = 181.29
L = 362.47
R = 5730.00
PC STA = 192+46.17
Y = 436252.20
X = 853560.02
PT STA = 196+08.64
Y = 436433.22
X = 853246.06
e = NC
MATCH EXISTING SUPERELEVATION AND SUPERELEVATION TRANSITION RATES

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
302	181+33, RT	RR SPIKE PPOL 3EE 33/54	885.58
303	195+68, LT	RR SPIKE PPOL 3EE 17/60	873.14



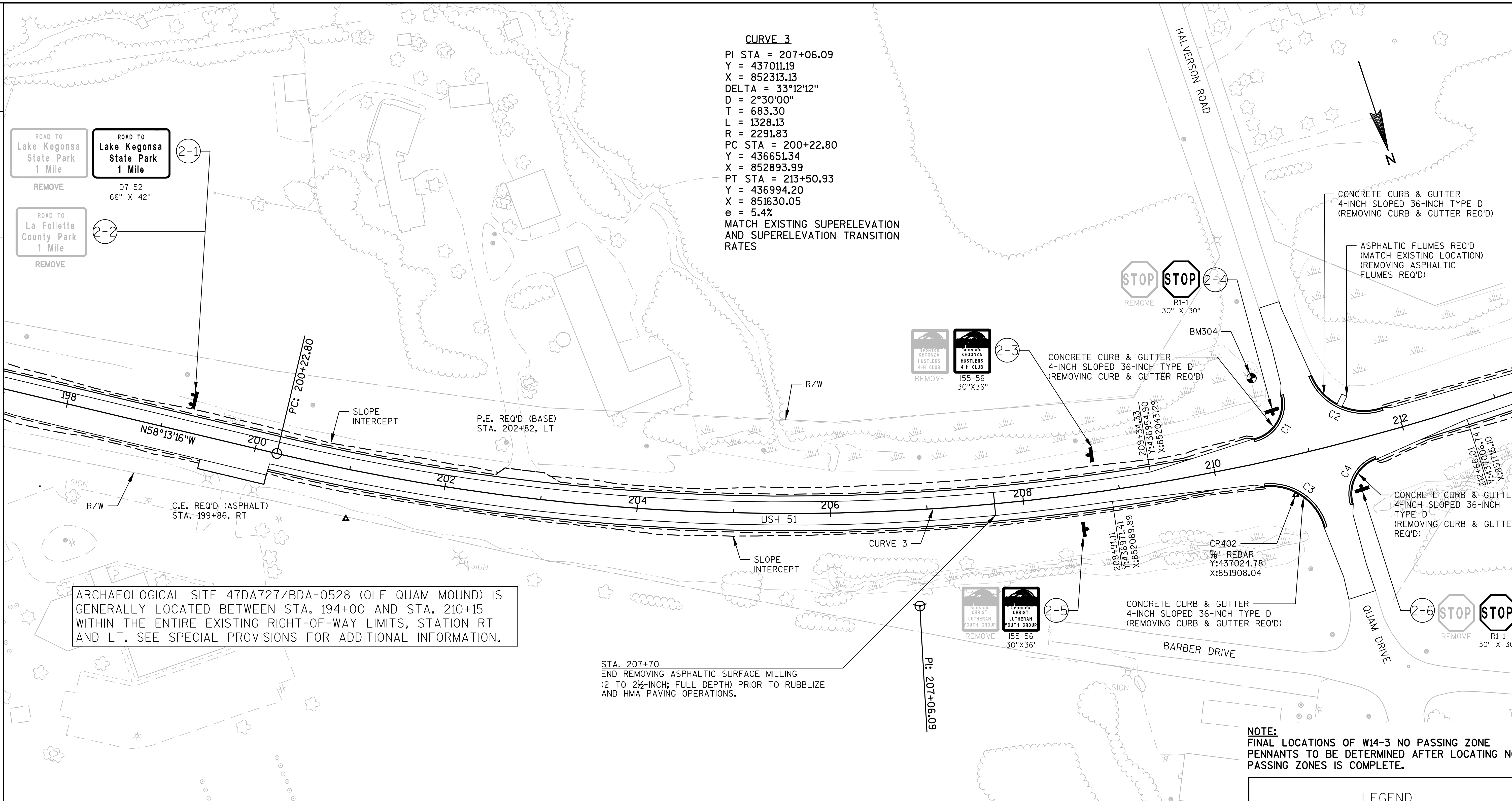
ARCHAEOLOGICAL SITE 47DA727/BDA-0528 (OLE QUAM MOUND) IS GENERALLY LOCATED BETWEEN STA. 194+00 AND STA. 210+15 WITHIN THE ENTIRE EXISTING RIGHT-OF-WAY LIMITS, STATION RT AND LT. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

NOTE:
FINAL LOCATIONS OF W14-3 NO PASSING ZONE PENNANTS TO BE DETERMINED AFTER LOCATING NO PASSING ZONES IS COMPLETE.

LEGEND

- NEW SIGN SINGLE/DOUBLE POST
- X-X SIGN NUMBER
- MGS GUARDRAIL
- EXISTING WETLAND DELINEATION

PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	PLAN DETAILS & PERMANENT SIGNING	SHEET 17	E



NOTE:
FINAL LOCATIONS OF W14-3 NO PASSING ZONE PENNANTS TO BE DETERMINED AFTER LOCATING NO PASSING ZONES IS COMPLETE.

LEGEND

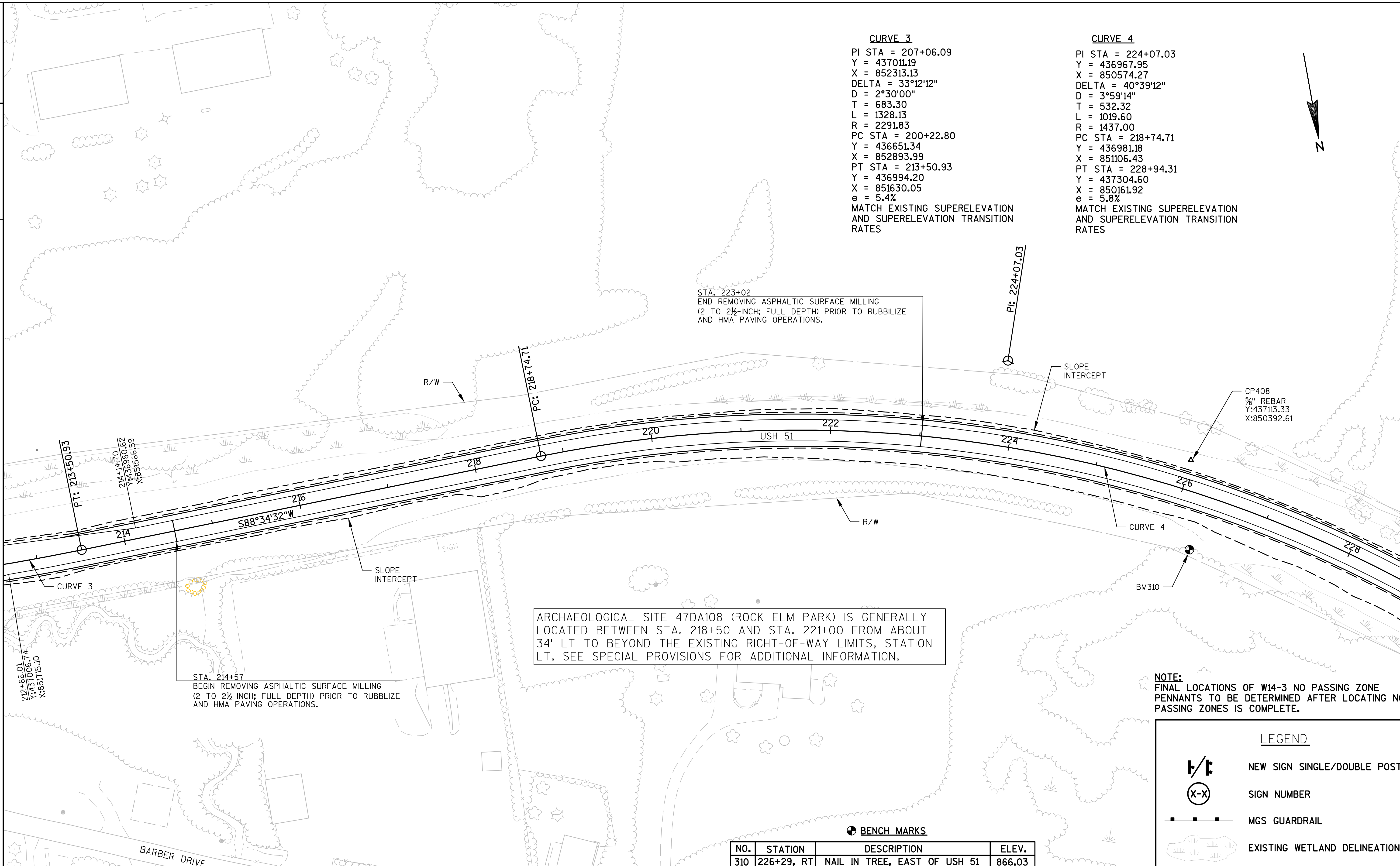
- NEW SIGN SINGLE/DOUBLE POST
- (X-X) SIGN NUMBER
- MGS GUARDRAIL
- EXISTING WETLAND DELINEATION

HALVERSON ROAD CURB & GUTTER DETAILS (MATCH EXISTING LOCATION)

QUADRANT	END CURB RADIUS (FLANGE LINE)	BEGIN CURB RADIUS (FLANGE LINE)	RADIUS (FT)	RADIUS POINT (FLANGE LINE)
C1	Y=436922.56, X=851887.33	Y=436959.24, X=851931.16	39.9	Y=436919.52, X=851927.14
C2	Y=436913.09, X=851856.52	Y=436970.51, X=851794.78	61.3	Y=436909.19, X=851795.32
C3	Y=437004.05, X=851935.20	Y=437066.23, X=851887.89	60.5	Y=437063.14, X=851948.34
C4	Y=437052.52, X=851857.54	Y=437013.23, X=851817.60	41.2	Y=437054.38, X=851816.42

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
304	210+58, LT	RR SPIKE PPOL 2EE 3/6	862.14



NOTE:
FINAL LOCATIONS OF W14-3 NO PASSING ZONE PENNANTS TO BE DETERMINED AFTER LOCATING NO PASSING ZONES IS COMPLETE.

LEGEND

NEW SIGN SINGLE/DOUBLE POST
X-X SIGN NUMBER
MGS GUARDRAIL
EXISTING WETLAND DELINEATION

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
310	226+29, RT	NAIL IN TREE, EAST OF USH 51	866.03

PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	PLAN DETAILS & PERMANENT SIGNING	SHEET 19	E

2

LAKE KEGONSA ROAD CURB & GUTTER DETAILS (MATCH EXISTING LOCATION)

QUADRANT	END CURB RADIUS (FLANGE LINE)	BEGIN CURB RADIUS (FLANGE LINE)	RADIUS (FT)	RADIUS POINT (FLANGE LINE)
C5	Y=437929.94, X=849277.00	Y=437940.52, X=849347.47	50.2	Y=437900.24, X=849317.49
C6	Y=437961.18, X=849256.39	Y=438023.95, X=849246.83	45.7	Y=437987.61, X=849219.10
C7	Y=437986.37, X=849362.42	Y=438063.95, X=849339.10	76.9	Y=438043.98, X=849413.37
C8	Y=438086.08, X=849244.32	Y=438111.73, X=849318.05	45.3	Y=438120.70, X=849273.60

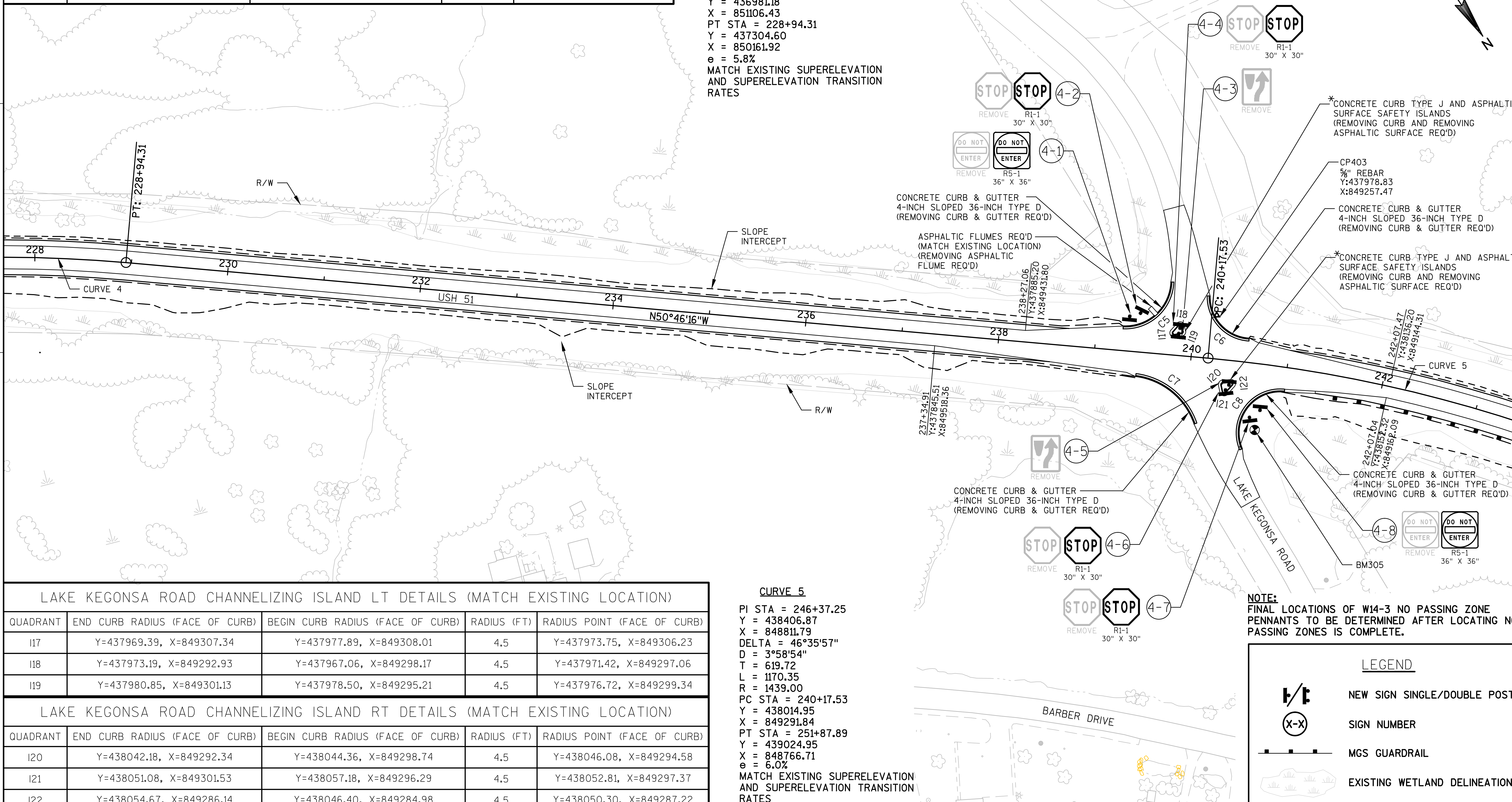
CURVE 4

PI STA = 224+07.03
Y = 436967.95
X = 850574.27
DELTA = 40°39'12"
D = 3°59'14"
T = 532.32
L = 1019.60
R = 1437.00
PC STA = 218+74.71
Y = 436981.18
X = 851106.43
PT STA = 228+94.31
Y = 437304.60
X = 850161.92
e = 5.8%
MATCH EXISTING SUPERELEVATION AND SUPERELEVATION TRANSITION RATES

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
305	240+75, RT	RR SPIKE PPOL 2DD 33/20	853.03

* CONCRETE MEDIAN SLOPED NOSE REQUIRED AT ALL ISLAND NOSE LOCATIONS



LAKE KEGONSA ROAD CHANNELIZING ISLAND LT DETAILS (MATCH EXISTING LOCATION)

QUADRANT	END CURB RADIUS (FACE OF CURB)	BEGIN CURB RADIUS (FACE OF CURB)	RADIUS (FT)	RADIUS POINT (FACE OF CURB)
I17	Y=437969.39, X=849307.34	Y=437977.89, X=849308.01	4.5	Y=437973.75, X=849306.23
I18	Y=437973.19, X=849292.93	Y=437967.06, X=849298.17	4.5	Y=437971.42, X=849297.06
I19	Y=437980.85, X=849301.13	Y=437978.50, X=849295.21	4.5	Y=437976.72, X=849299.34

LAKE KEGONSA ROAD CHANNELIZING ISLAND RT DETAILS (MATCH EXISTING LOCATION)

QUADRANT	END CURB RADIUS (FACE OF CURB)	BEGIN CURB RADIUS (FACE OF CURB)	RADIUS (FT)	RADIUS POINT (FACE OF CURB)
I20	Y=438042.18, X=849292.34	Y=438044.36, X=849298.74	4.5	Y=438046.08, X=849294.58
I21	Y=438051.08, X=849301.53	Y=438057.18, X=849296.29	4.5	Y=438052.81, X=849297.37
I22	Y=438054.67, X=849286.14	Y=438046.40, X=849284.98	4.5	Y=438050.30, X=849287.22

CURVE 5

PI STA = 246+37.25
Y = 438406.87
X = 848811.79
DELTA = 46°35'57"
D = 3°58'54"
T = 619.72
L = 1170.35
R = 1439.00
PC STA = 240+17.53
Y = 438014.95
X = 849291.84
PT STA = 251+87.89
Y = 439024.95
X = 848766.71
e = 6.0%
MATCH EXISTING SUPERELEVATION AND SUPERELEVATION TRANSITION RATES

NOTE:
FINAL LOCATIONS OF W14-3 NO PASSING ZONE PENNANTS TO BE DETERMINED AFTER LOCATING NO PASSING ZONES IS COMPLETE.

LEGEND

	NEW SIGN SINGLE/DOUBLE POST
(X-X)	SIGN NUMBER
	MGS GUARDRAIL
	EXISTING WETLAND DELINEATION

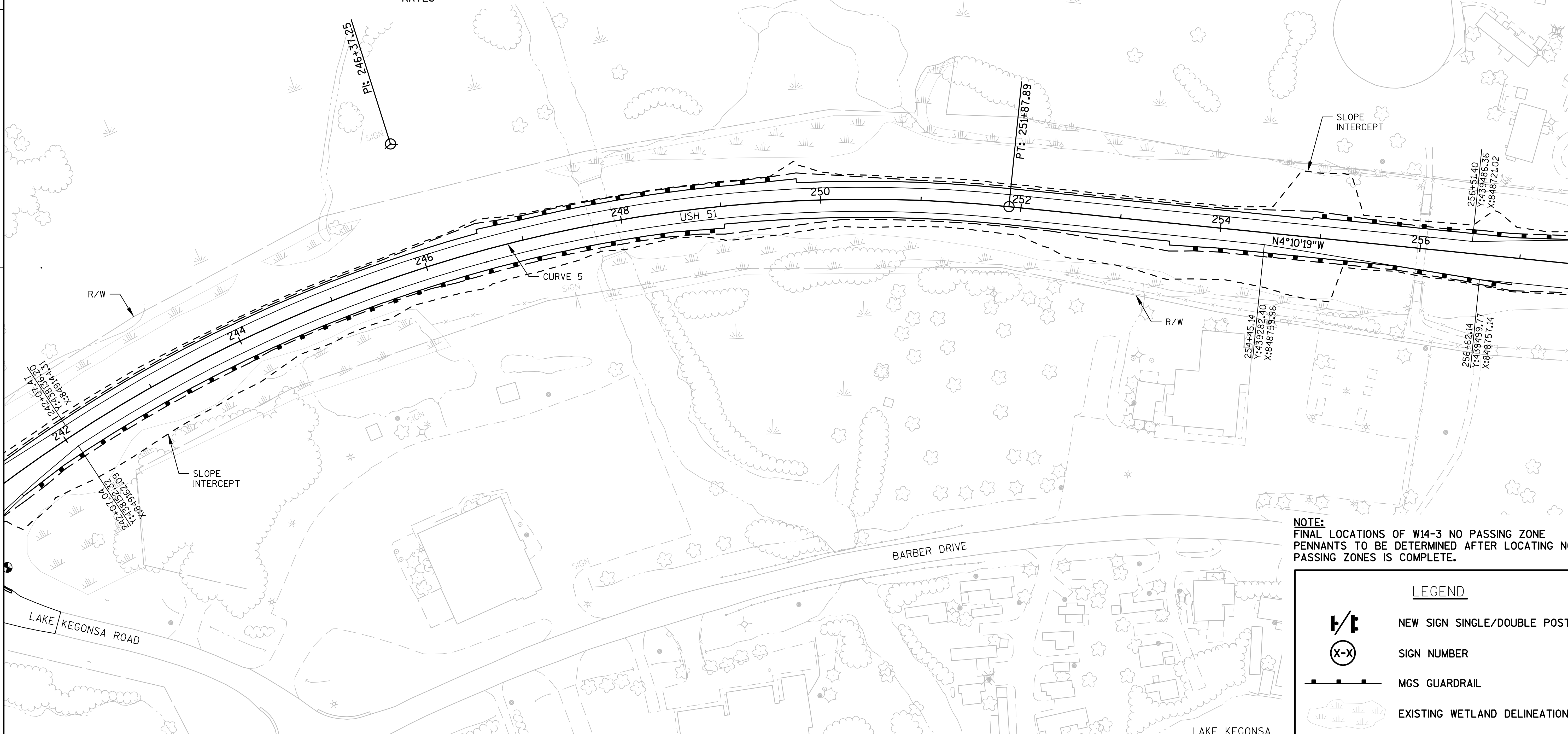
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	PLAN DETAILS & PERMANENT SIGNING	SHEET 20	E

CURVE 5

PI STA = 246+37.25
Y = 438406.87
X = 848811.79
DELTA = 46°35'57"
D = 3°58'54"
T = 619.72
L = 1170.35
R = 1439.00
PC STA = 240+17.53
Y = 438014.95
X = 849291.84
PT STA = 251+87.89
Y = 439024.95
X = 848766.71
e = 6.0%
MATCH EXISTING SUPERELEVATION AND SUPERELEVATION TRANSITION RATES

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
305	240+75, RT	RR SPIKE PPOL 2DD 33/20	853.03



NOTE:
FINAL LOCATIONS OF W14-3 NO PASSING ZONE PENNANTS TO BE DETERMINED AFTER LOCATING NO PASSING ZONES IS COMPLETE.

LEGEND

(symbol)	NEW SIGN SINGLE/DOUBLE POST
(X-X)	SIGN NUMBER
(symbol)	MGS GUARDRAIL
(symbol)	EXISTING WETLAND DELINEATION

PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	PLAN DETAILS & PERMANENT SIGNING	SHEET 21	E

2

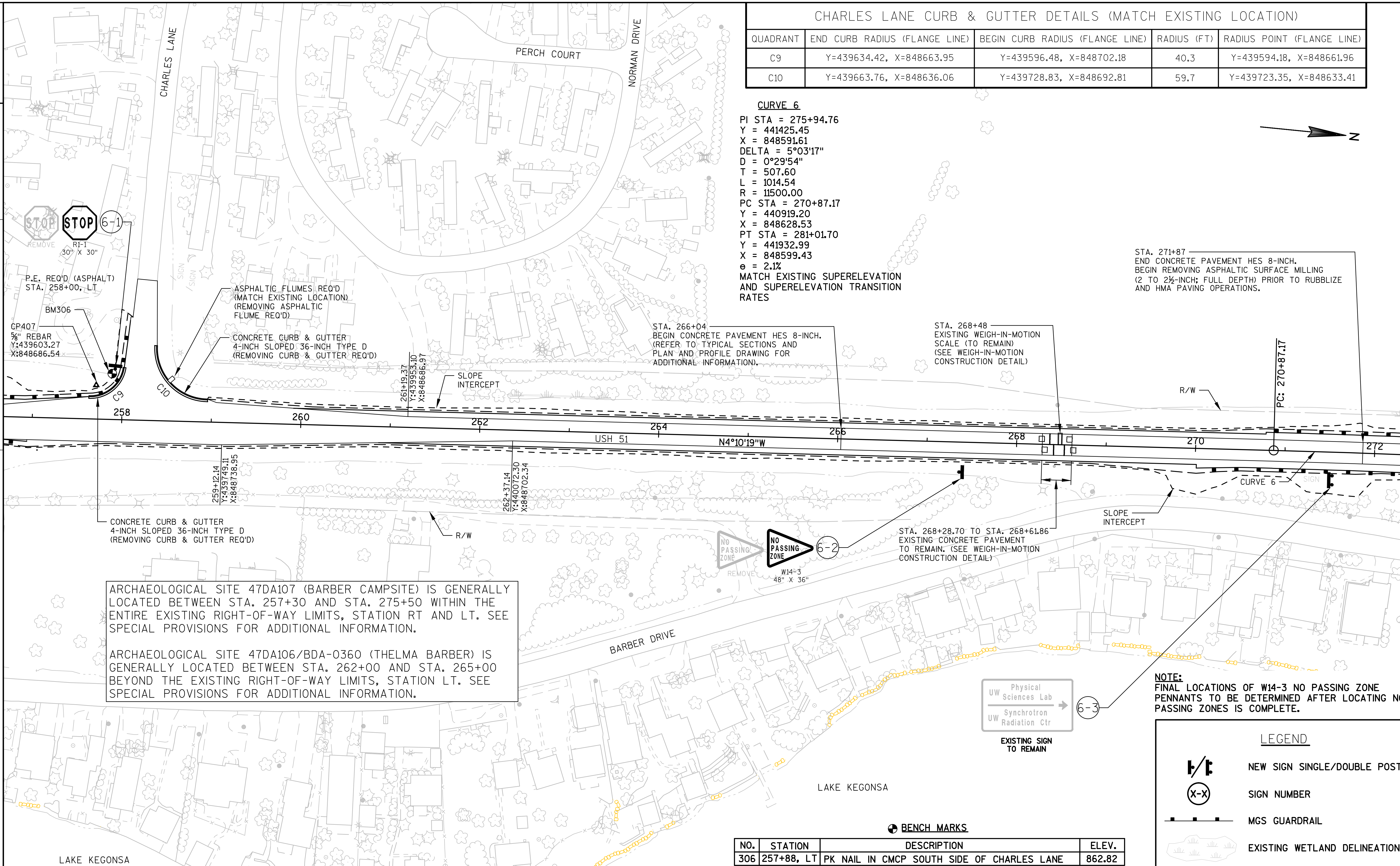
2

CHARLES LANE CURB & GUTTER DETAILS (MATCH EXISTING LOCATION)

QUADRANT	END CURB RADIUS (FLANGE LINE)	BEGIN CURB RADIUS (FLANGE LINE)	RADIUS (FT)	RADIUS POINT (FLANGE LINE)
C9	Y=439634.42, X=848663.95	Y=439596.48, X=848702.18	40.3	Y=439594.18, X=848661.96
C10	Y=439663.76, X=848636.06	Y=439728.83, X=848692.81	59.7	Y=439723.35, X=848633.41

CURVE 6

PI STA = 275+94.76
Y = 441425.45
X = 848591.61
DELTA = 5°03'17"
D = 0°29'54"
T = 507.60
L = 1014.54
R = 11500.00
PC STA = 270+87.17
Y = 440919.20
X = 848628.53
PT STA = 281+01.70
Y = 441932.99
X = 848599.43
e = 2.1%
MATCH EXISTING SUPERELEVATION AND SUPERELEVATION TRANSITION RATES



ARCHAEOLOGICAL SITE 47DA107 (BARBER CAMPSITE) IS GENERALLY LOCATED BETWEEN STA. 257+30 AND STA. 275+50 WITHIN THE ENTIRE EXISTING RIGHT-OF-WAY LIMITS, STATION RT AND LT. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

ARCHAEOLOGICAL SITE 47DA106/BDA-0360 (THELMA BARBER) IS GENERALLY LOCATED BETWEEN STA. 262+00 AND STA. 265+00 BEYOND THE EXISTING RIGHT-OF-WAY LIMITS, STATION LT. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

NOTE:
FINAL LOCATIONS OF W14-3 NO PASSING ZONE PENNANTS TO BE DETERMINED AFTER LOCATING NO PASSING ZONES IS COMPLETE.

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
306	257+88, LT	PK NAIL IN CMCP SOUTH SIDE OF CHARLES LANE	862.82

LEGEND

- NEW SIGN SINGLE/DOUBLE POST
- (X-X) SIGN NUMBER
- MGS GUARDRAIL
- EXISTING WETLAND DELINEATION

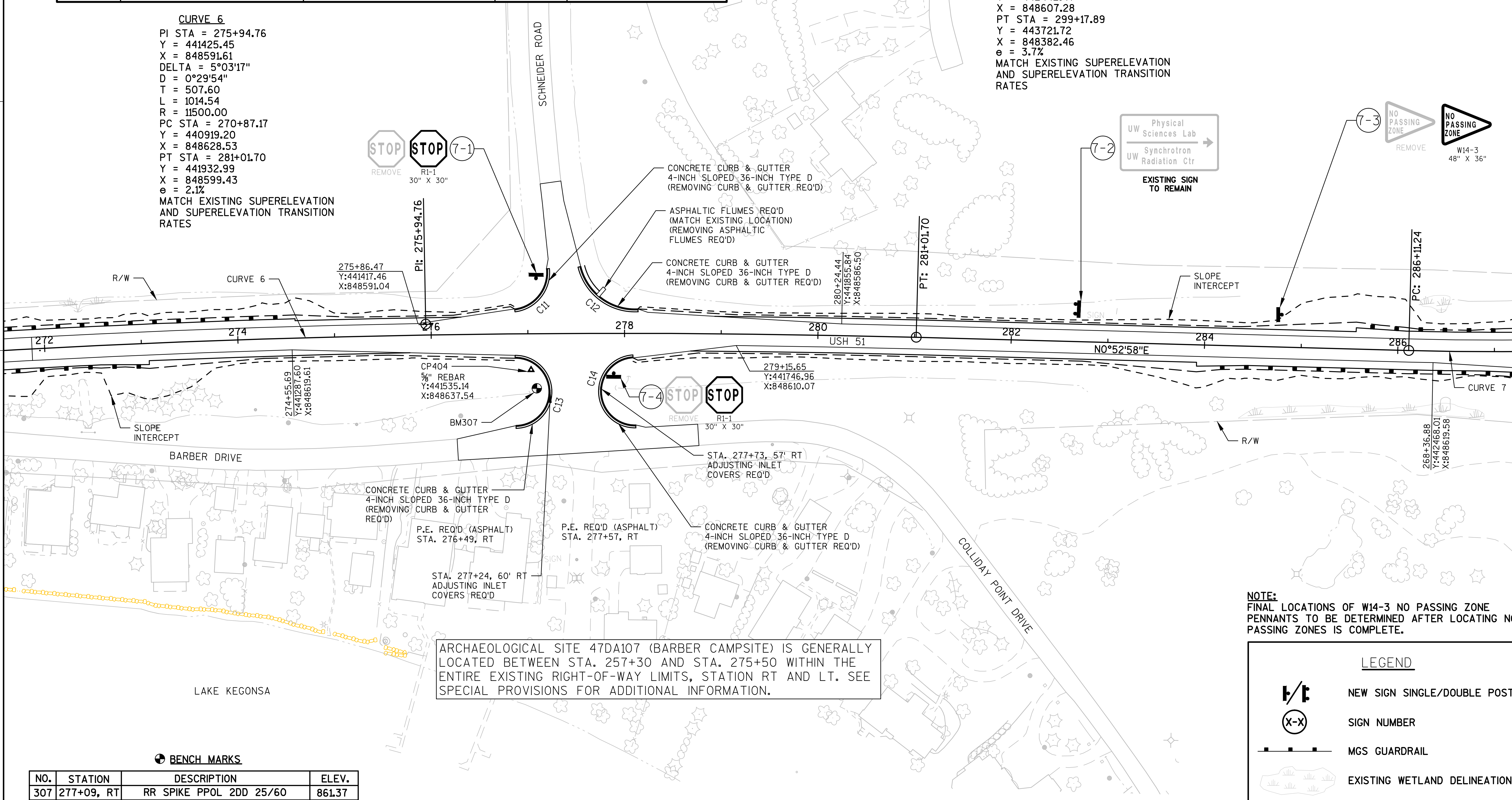
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	PLAN DETAILS & PERMANENT SIGNING	SHEET 22	E

SCHNEIDER ROAD CURB & GUTTER DETAILS (MATCH EXISTING LOCATION)

QUADRANT	END CURB RADIUS (FLANGE LINE)	BEGIN CURB RADIUS (FLANGE LINE)	RADIUS (FT)	RADIUS POINT (FLANGE LINE)
C11	Y=441552.62, X=848532.62	Y=441517.77, X=848577.78	40.8	Y=441512.04, X=848537.33
C12	Y=441582.33, X=848530.90	Y=441645.10, X=848576.25	60.5	Y=441640.98, X=848515.84
C13	Y=441518.38, X=848622.77	Y=441520.26, X=848698.32	37.8	Y=441518.99, X=848660.55
C14	Y=441640.15, X=848620.97	Y=441644.12, X=848696.27	37.7	Y=441642.81, X=848658.58

CURVE 6
PI STA = 275+94.76
Y = 441425.45
X = 848591.61
DELTA = 5°03'17"
D = 0°29'54"
T = 507.60
L = 1014.54
R = 11500.00
PC STA = 270+87.17
Y = 440919.20
X = 848628.53
PT STA = 281+01.70
Y = 441932.99
X = 848599.43
e = 2.1%
MATCH EXISTING SUPERELEVATION AND SUPERELEVATION TRANSITION RATES

CURVE 7
PI STA = 292+72.49
Y = 443103.64
X = 848617.47
DELTA = 21°42'01"
D = 1°39'39"
T = 661.25
L = 1306.65
R = 3450.00
PC STA = 286+11.24
Y = 442442.47
X = 848607.28
PT STA = 299+17.89
Y = 443721.72
X = 848382.46
e = 3.7%
MATCH EXISTING SUPERELEVATION AND SUPERELEVATION TRANSITION RATES



ARCHAEOLOGICAL SITE 47DA107 (BARBER CAMPSITE) IS GENERALLY LOCATED BETWEEN STA. 257+30 AND STA. 275+50 WITHIN THE ENTIRE EXISTING RIGHT-OF-WAY LIMITS, STATION RT AND LT. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

NOTE:
FINAL LOCATIONS OF W14-3 NO PASSING ZONE PENNANTS TO BE DETERMINED AFTER LOCATING NO PASSING ZONES IS COMPLETE.

LEGEND
- NEW SIGN SINGLE/DOUBLE POST
- (X-X) SIGN NUMBER
- MGS GUARDRAIL
- EXISTING WETLAND DELINEATION

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
307	277+09, RT	RR SPIKE PPOL 2DD 25/60	861.37

PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	PLAN DETAILS & PERMANENT SIGNING	SHEET 23	E

CURVE 7

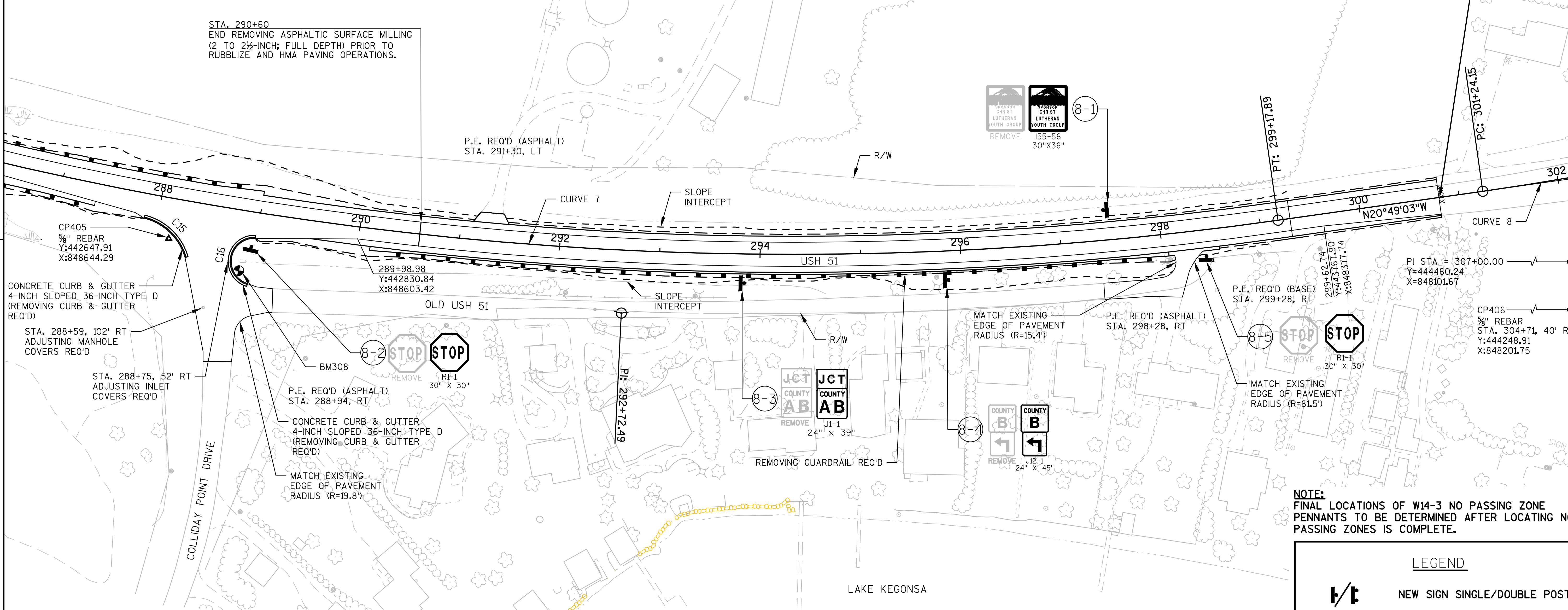
PI STA = 292+72.49
Y = 443103.64
X = 848617.47
DELTA = 21°42'01"
D = 1°39'39"
T = 661.25
L = 1306.65
R = 3450.00
PC STA = 286+11.24
Y = 442442.47
X = 848607.28
PT STA = 299+17.89
Y = 443721.72
X = 848382.46
e = 3.7%
MATCH EXISTING SUPERELEVATION AND SUPERELEVATION TRANSITION RATES

CURVE 8

PI STA = 307+93.67
Y = 444540.33
X = 848071.22
DELTA = 26°29'07"
D = 2°00'50"
T = 669.52
L = 1315.12
R = 2845.00
PC STA = 301+24.15
Y = 443914.51
X = 848309.16
PT STA = 314+39.27
Y = 444994.35
X = 847579.15
e = 3.7%
MATCH EXISTING SUPERELEVATION AND SUPERELEVATION TRANSITION RATES

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
308	288.87, RT	RR SPIKE PPOL # IS MISSING	870.74
309	304+57, RT	CHISELED ☐ RCCP SE QUAD	855.85



NOTE:
FINAL LOCATIONS OF W14-3 NO PASSING ZONE PENNANTS TO BE DETERMINED AFTER LOCATING NO PASSING ZONES IS COMPLETE.

LEGEND

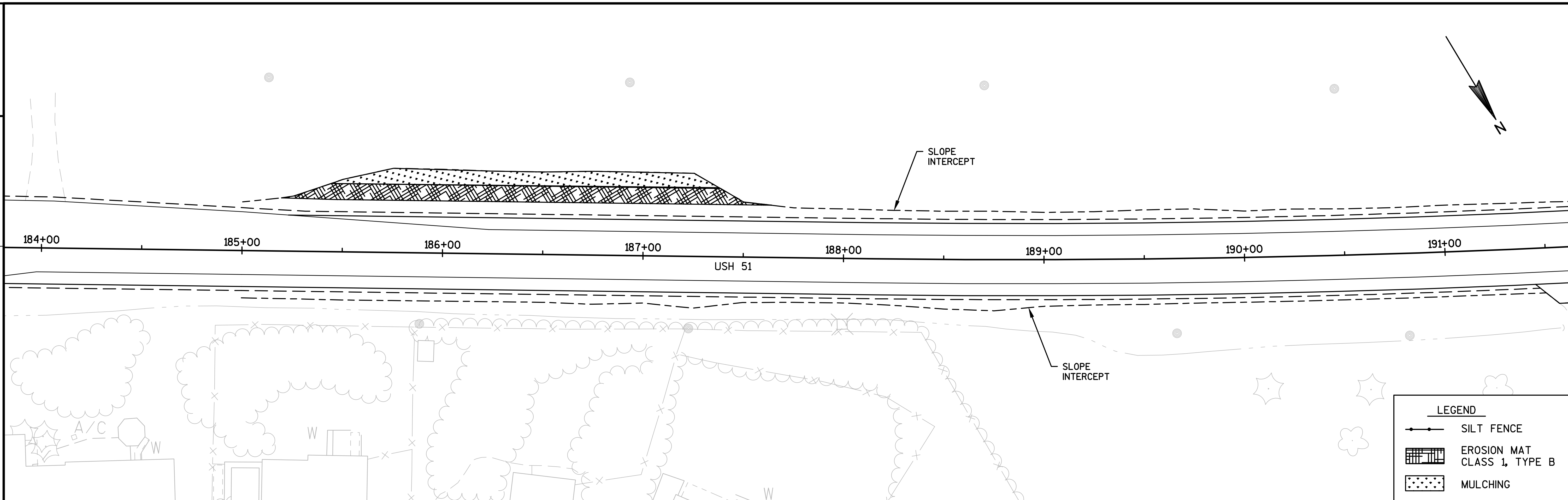
⊢/⊏	NEW SIGN SINGLE/DOUBLE POST
(X-X)	SIGN NUMBER
─•─•─	MGS GUARDRAIL
	EXISTING WETLAND DELINEATION

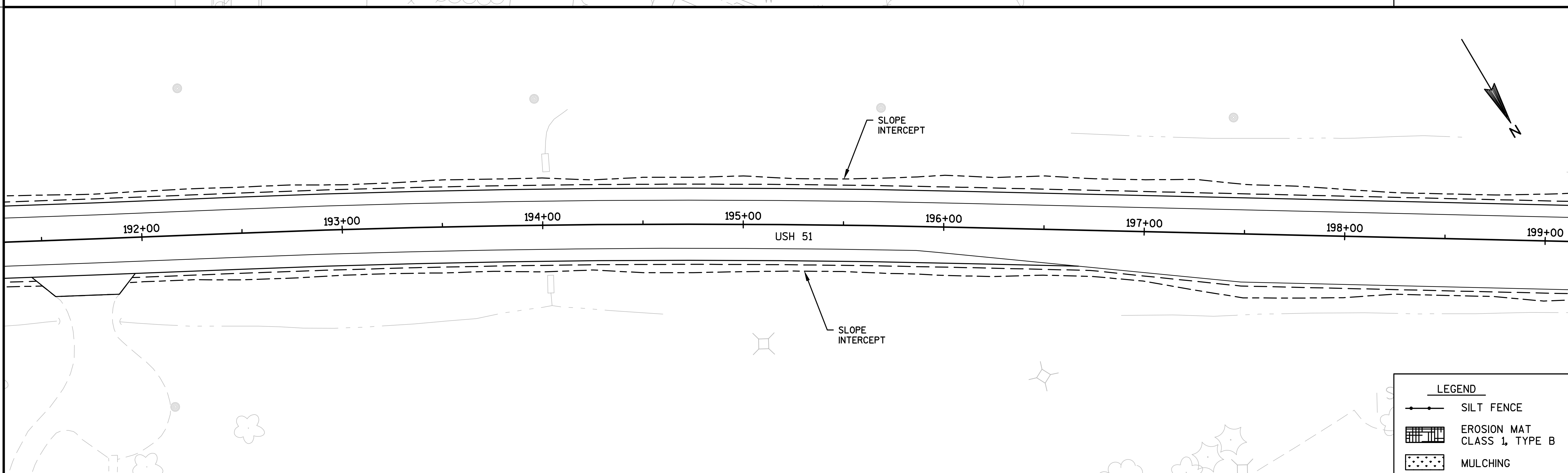
COLLIDAY POINT DRIVE CURB & GUTTER DETAILS (MATCH EXISTING LOCATION)

QUADRANT	END CURB RADIUS (FLANGE LINE)	BEGIN CURB RADIUS (FLANGE LINE)	RADIUS (FT)	RADIUS POINT (FLANGE LINE)
C15	Y=442618.85, X=848627.25	Y=442669.87, X=848658.13	59.9	Y=442617.45, X=848687.15
C16	Y=442730.84, X=848622.46	Y=442733.43, X=848674.25	26.1	Y=442735.32, X=848648.20

ARCHAEOLOGICAL SITE 47DA105/BDA-0359 (C.M. COLLADAY 1) IS GENERALLY LOCATED BETWEEN STA. 294+50 AND STA. 297+50 FROM ABOUT 32' LT TO BEYOND THE EXISTING RIGHT-OF-WAY LIMITS, STATION LT. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

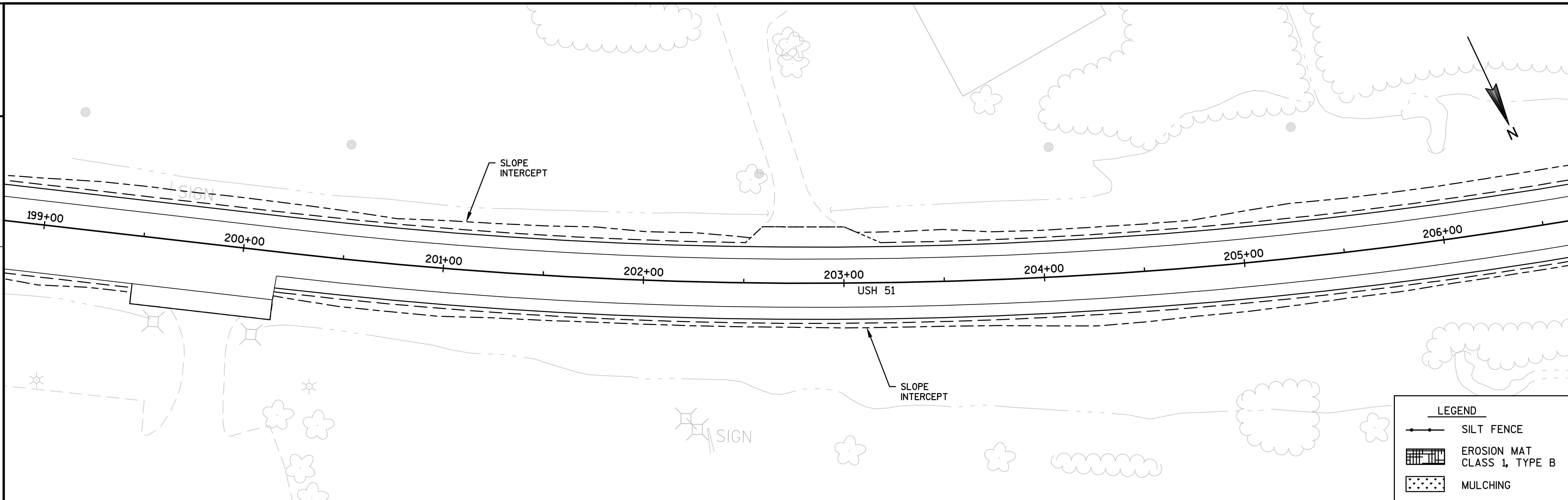
2

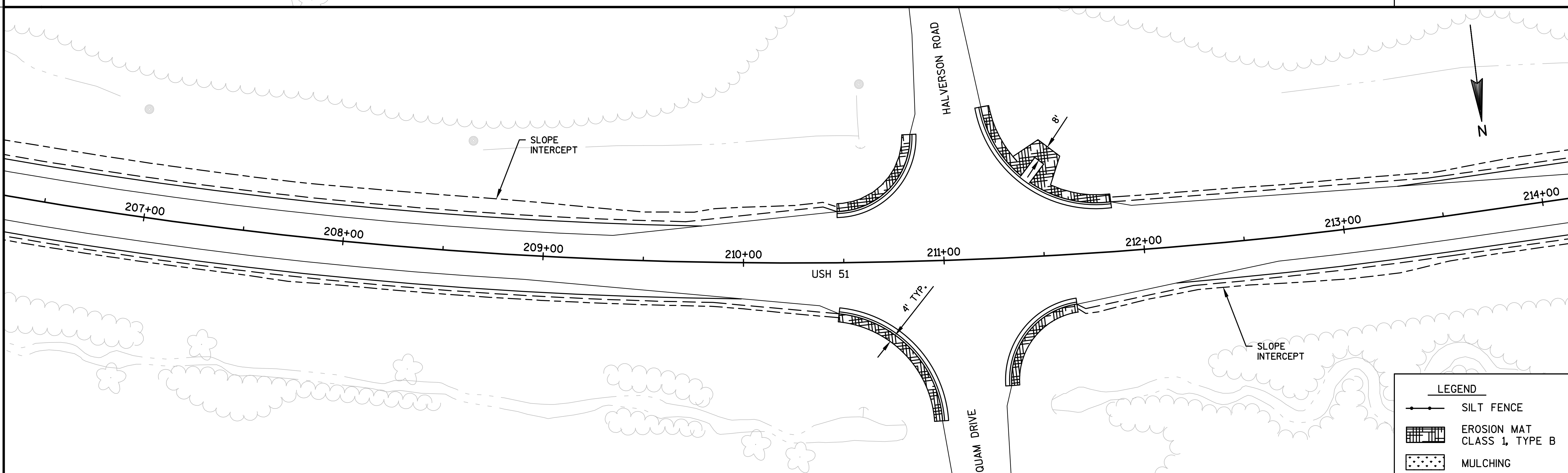




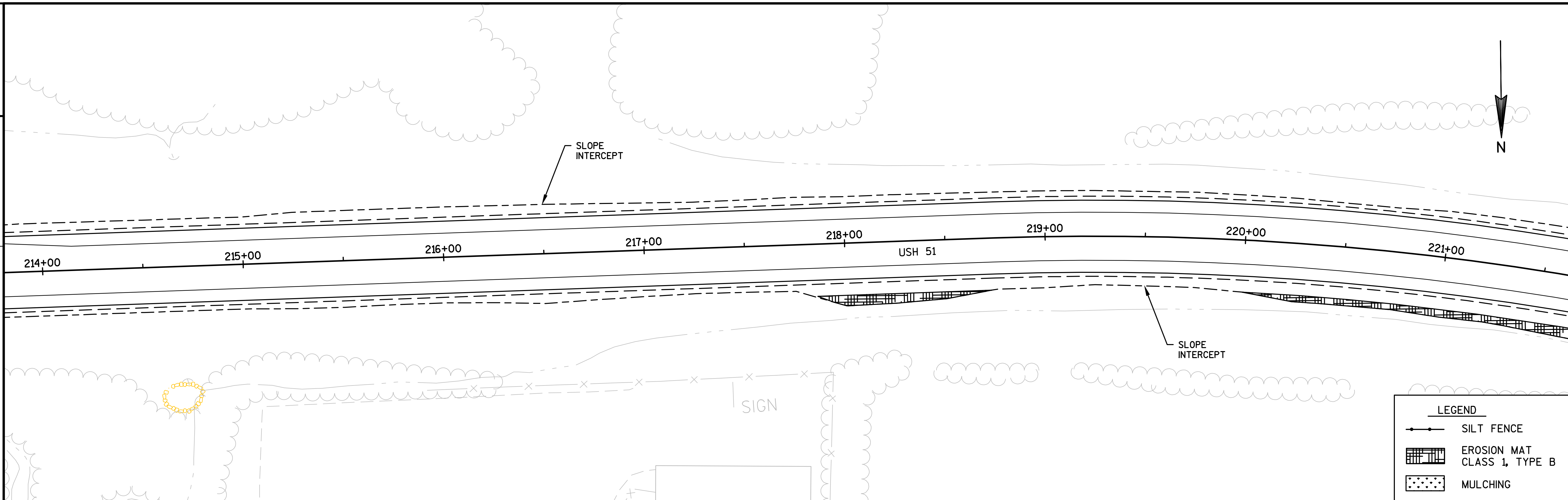
PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	EROSION CONTROL	SHEET 25	E

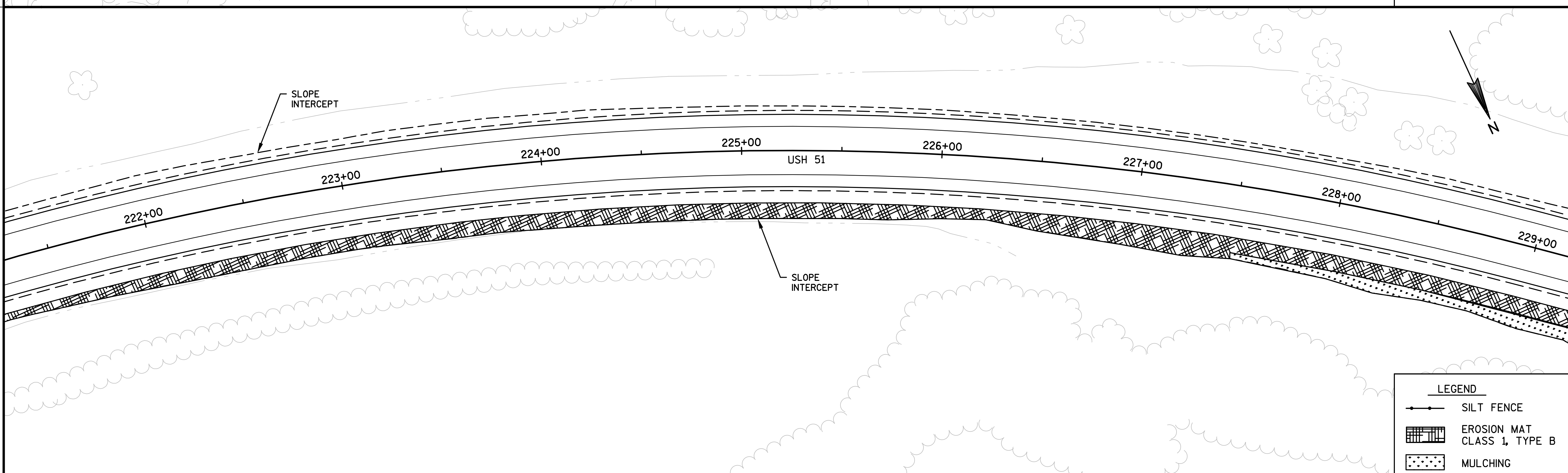
2





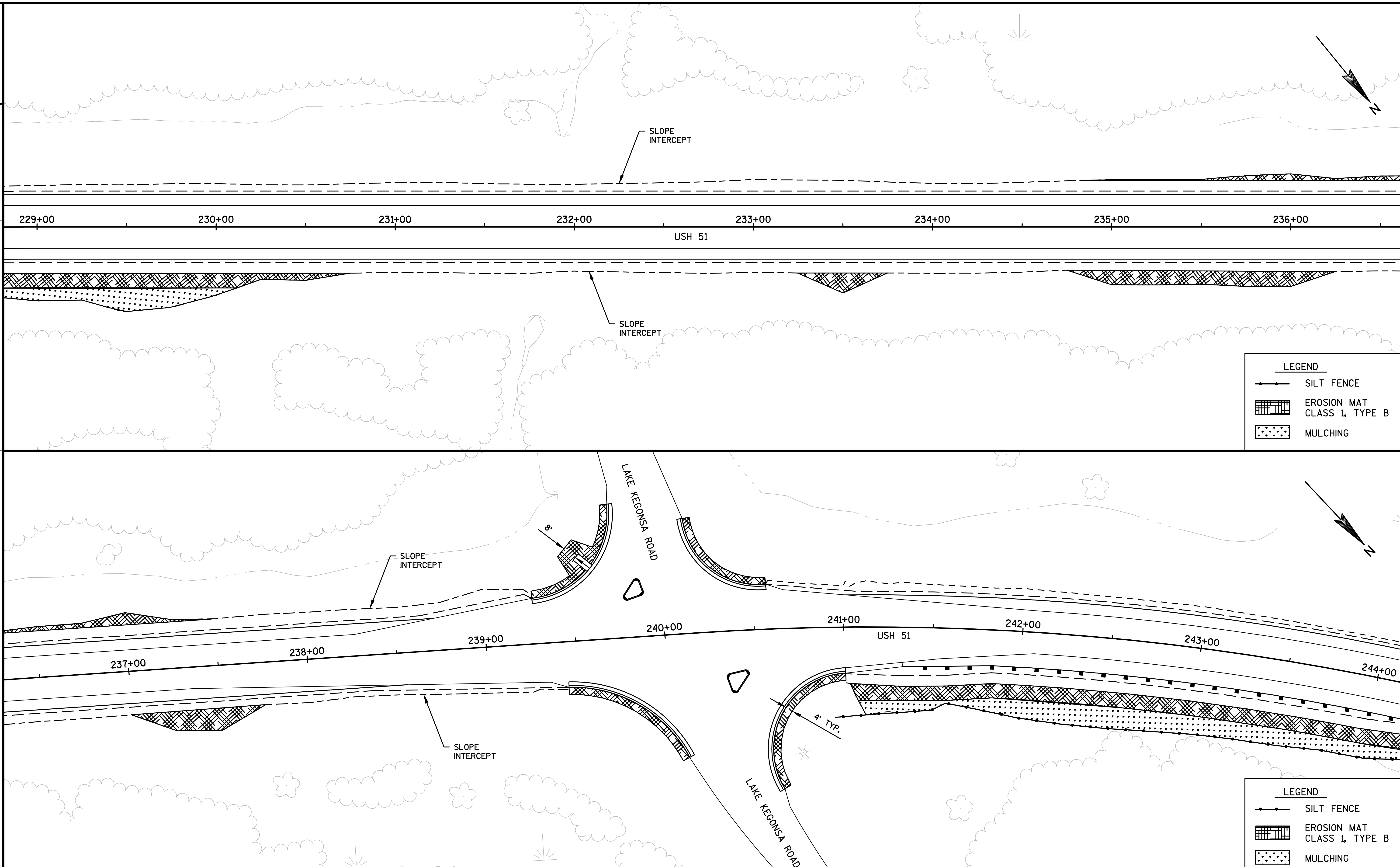
PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	EROSION CONTROL	SHEET 26	E





PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	EROSION CONTROL	SHEET 27	E

2

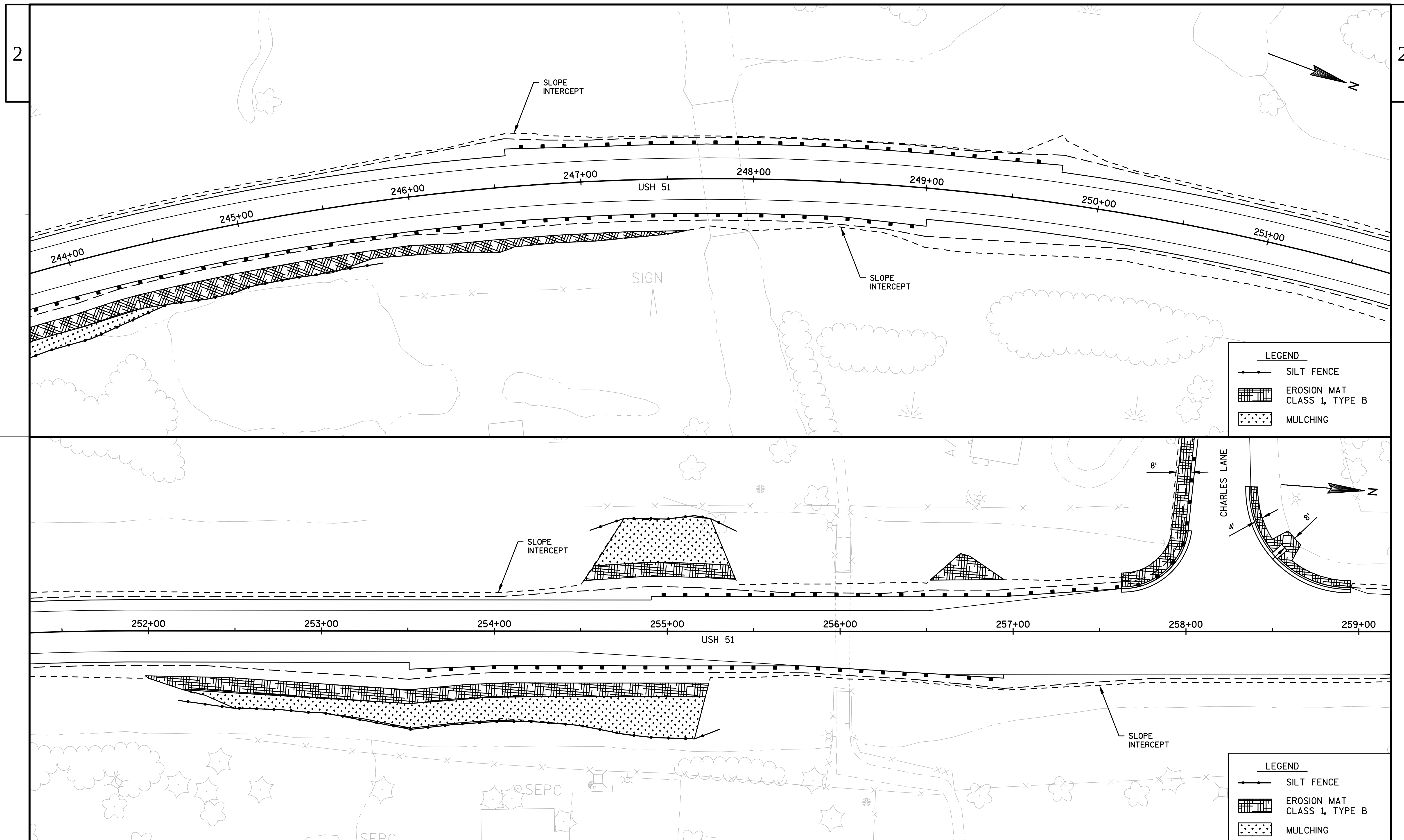


2

PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	EROSION CONTROL	SHEET 28	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\EROSION CONTROL.DWG PLOT DATE : 5/1/2013 1:20 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:50_XREF

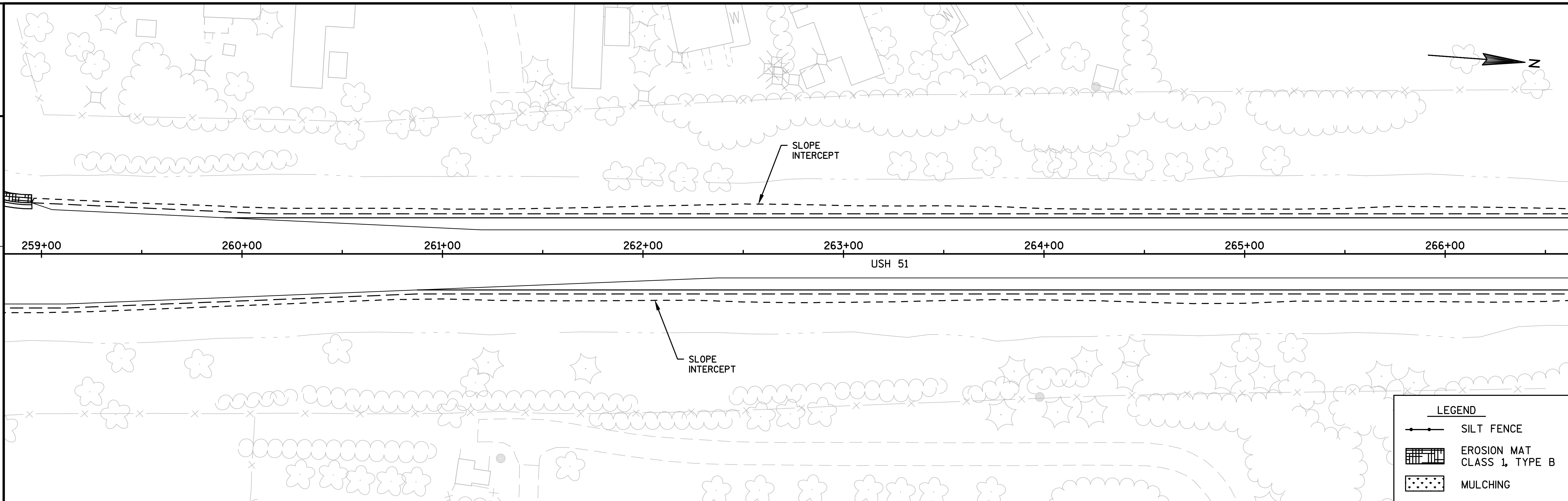
WISDOT/CADDS SHEET 44

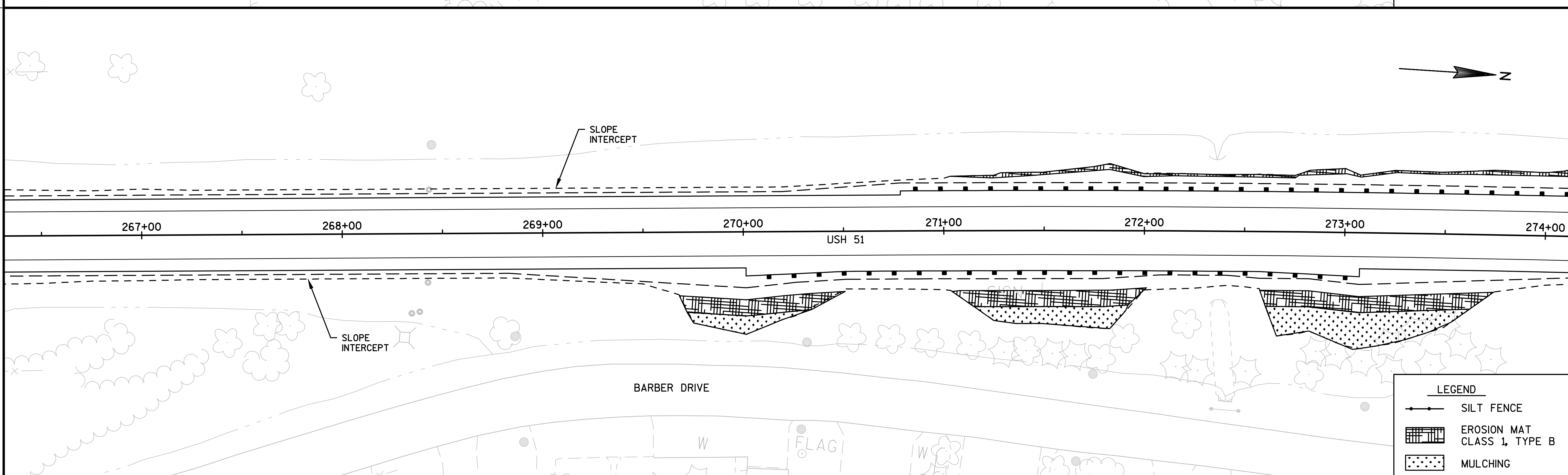


PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	EROSION CONTROL	SHEET 29	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\EROSION CONTROL.DWG PLOT DATE : 5/1/2013 1:20 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:50_XREF

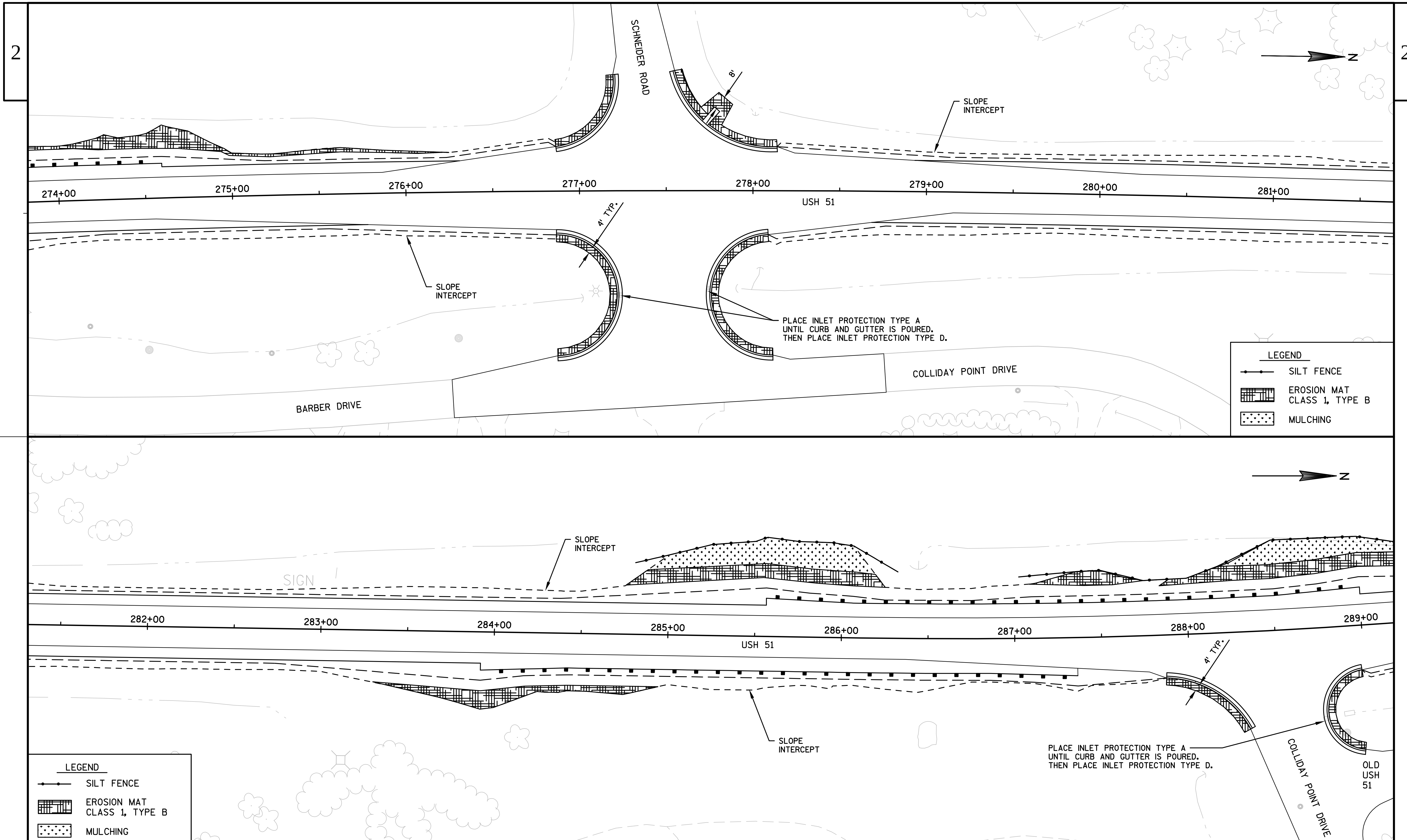
2





2

PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	EROSION CONTROL	SHEET 30	E



PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	EROSION CONTROL	SHEET 31	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\EROSION CONTROL.DWG PLOT DATE : 5/1/2013 1:21 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:50_XREF

WISDOT/CADDS SHEET 44

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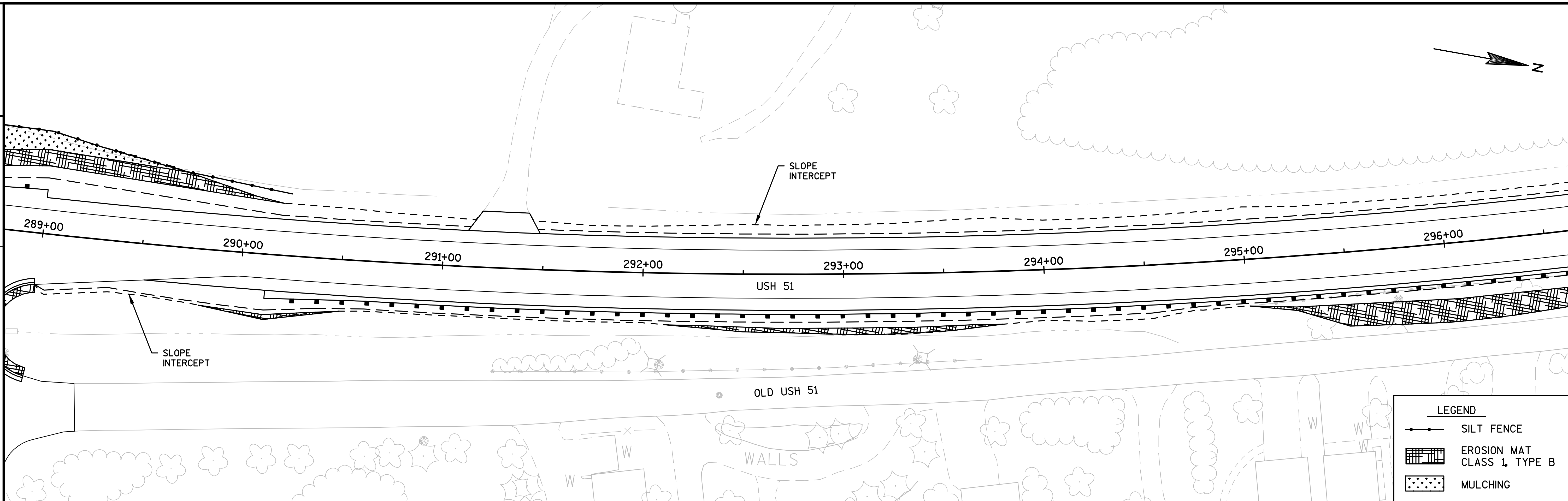
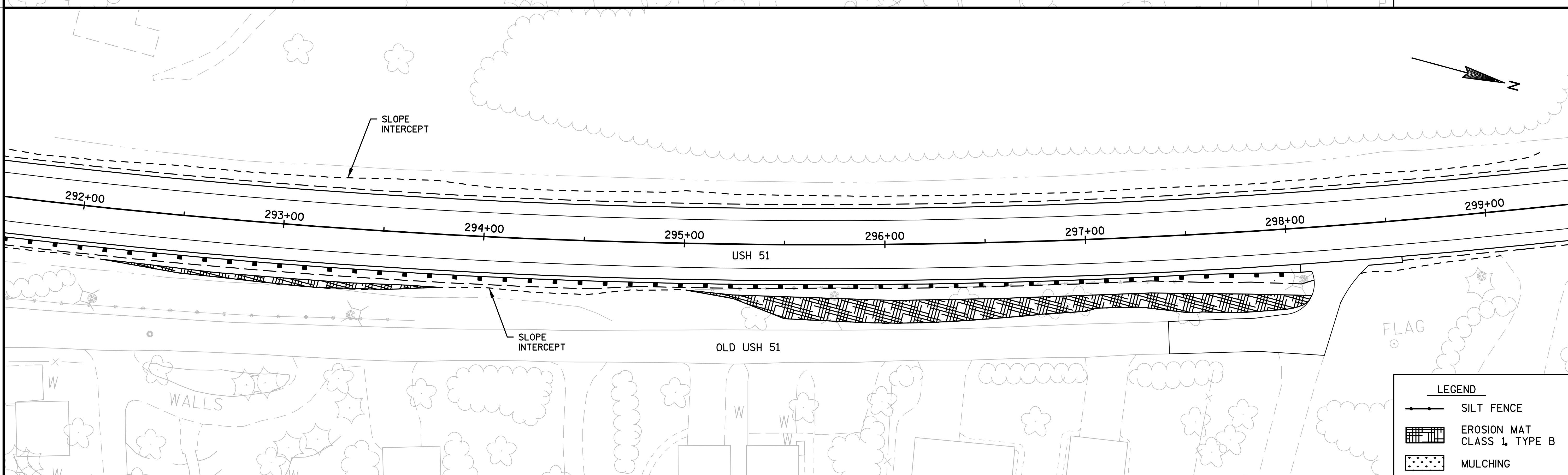
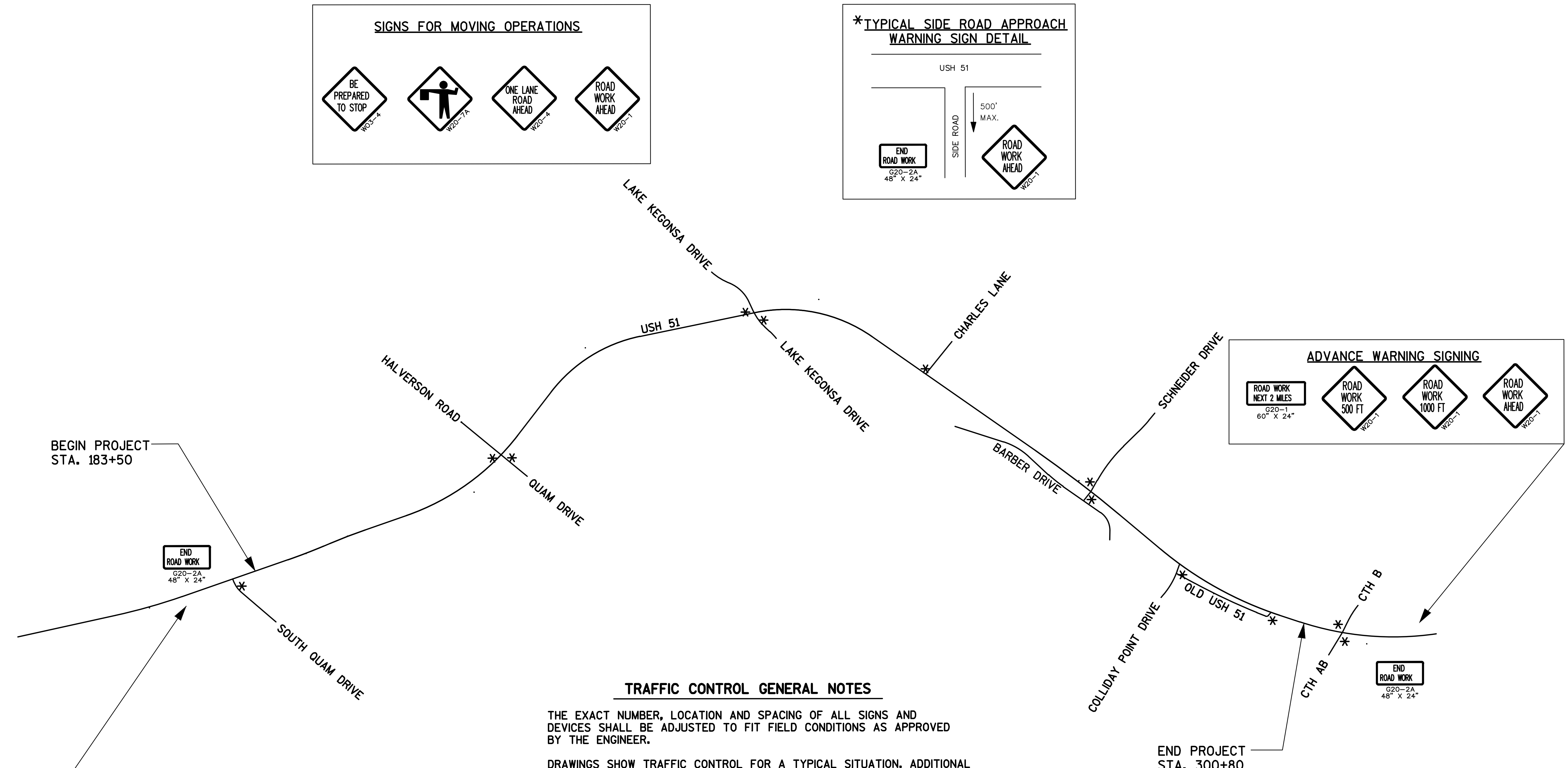




PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	EROSION CONTROL	SHEET 32	E



TRAFFIC CONTROL GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTORS METHODS OR SEQUENCES OF OPERATION.

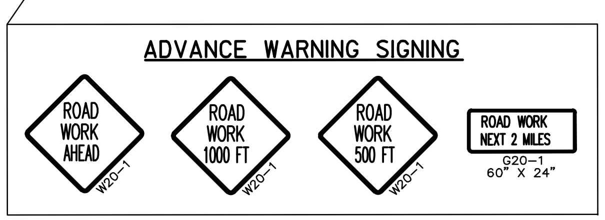
"WO" SERIES SIGNS ARE "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

DETAILS FOR MAINTENANCE OF THE TRAFFIC THROUGH MINOR INTERSECTIONS ARE NOT SHOWN.

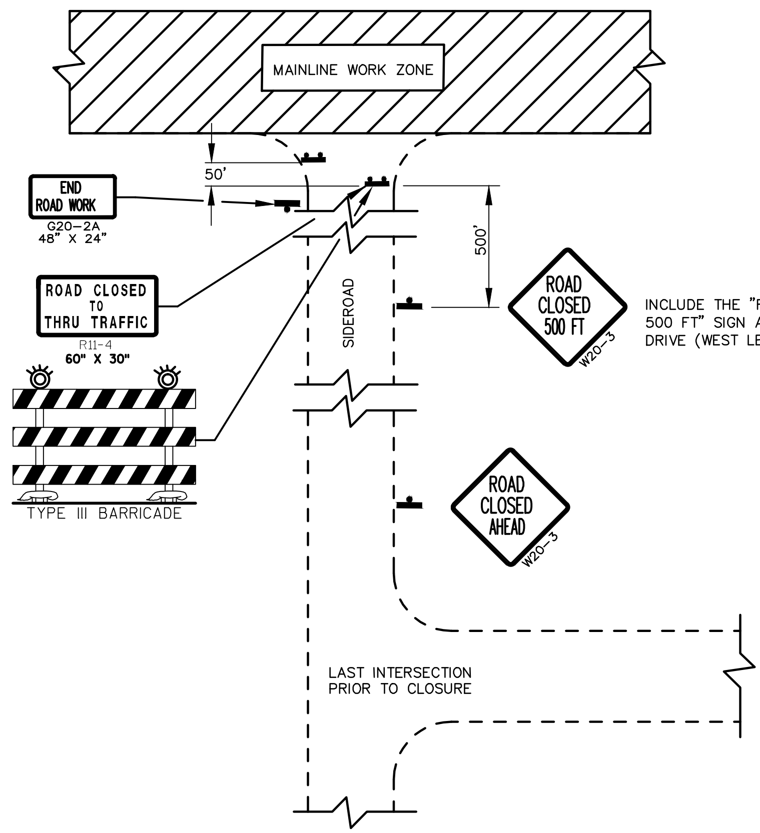
DETAILS OF TRAFFIC CONTROL NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SEE S.D.D. - TRAFFIC CONTROL, ADVANCE WARNING SIGNS, 45 MPH OR GREATER, 2-WAY UNDIVIDED ROAD, OPEN TO TRAFFIC.

SEE S.D.D. - TRAFFIC CONTROL WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY.



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	TRAFFIC CONTROL - ADVANCE WARNING	SHEET 33	E



*TYPICAL SIDE ROAD APPROACH FOR SIDEROAD CLOSURES

TRAFFIC CONTROL GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

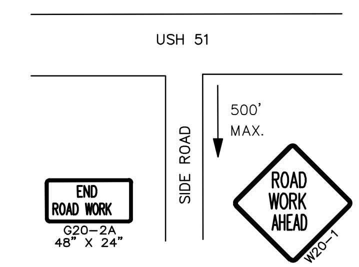
DRAWINGS SHOW TRAFFIC CONTROL FOR A TYPICAL SITUATION. ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED AND/OR LAYOUT DETAILS MODIFIED DEPENDING ON CONTRACTORS METHODS OR SEQUENCES OF OPERATION.

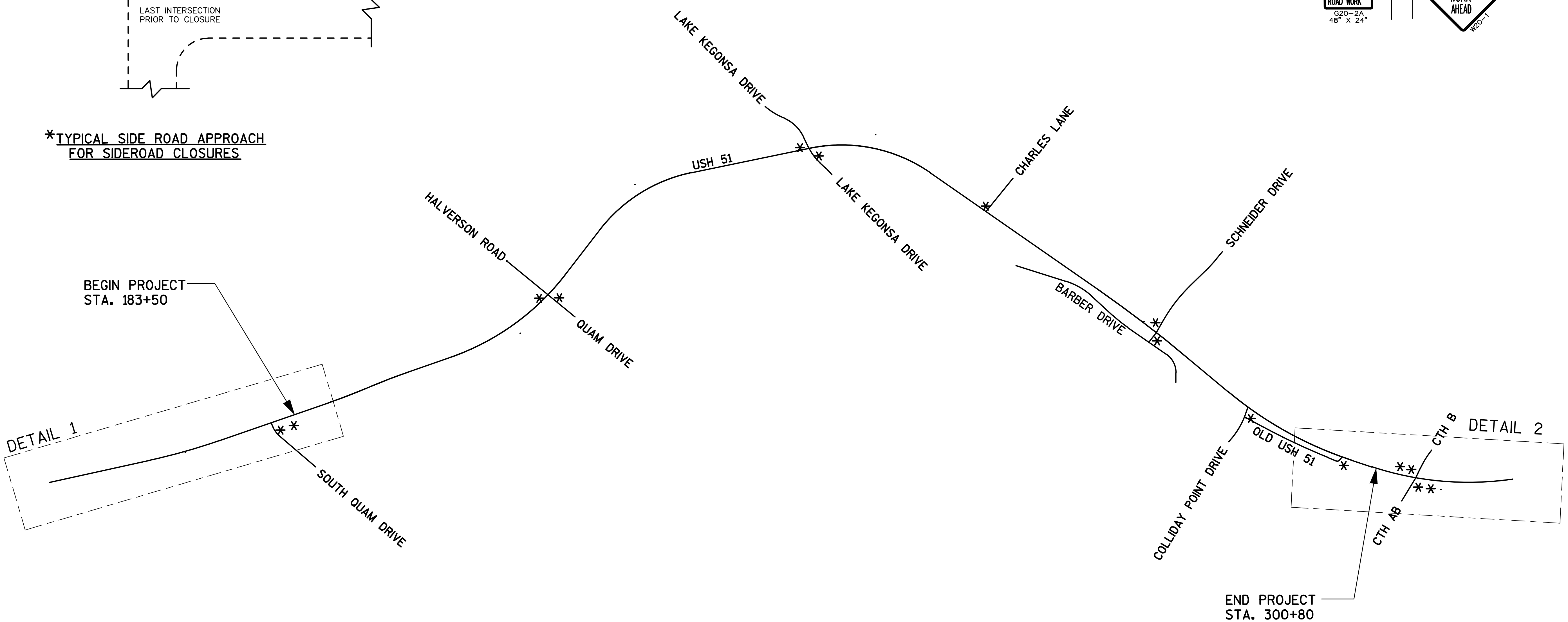
"WO" SERIES SIGNS ARE "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

DETAILS FOR MAINTENANCE OF THE TRAFFIC THROUGH MINOR INTERSECTIONS ARE NOT SHOWN.

DETAILS OF TRAFFIC CONTROL NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

**TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL





PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	TRAFFIC CONTROL - MAINLINE CLOSURE ADVANCE WARNING	SHEET 34	E

PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	TRAFFIC CONTROL - MAINLINE CLOSURE ADVANCE WARNING	SHEET 35	E

FILE NAME : P:\state\USH_051\5845-01-05\Cad\027006_dt.dgn PLOT DATE : 01-MAY-2013 14:18 PLOT BY : dotd31 PLOT NAME : PLOT SCALE : 200.000000:1.000000 WISDOT/CADDS SHEET 42

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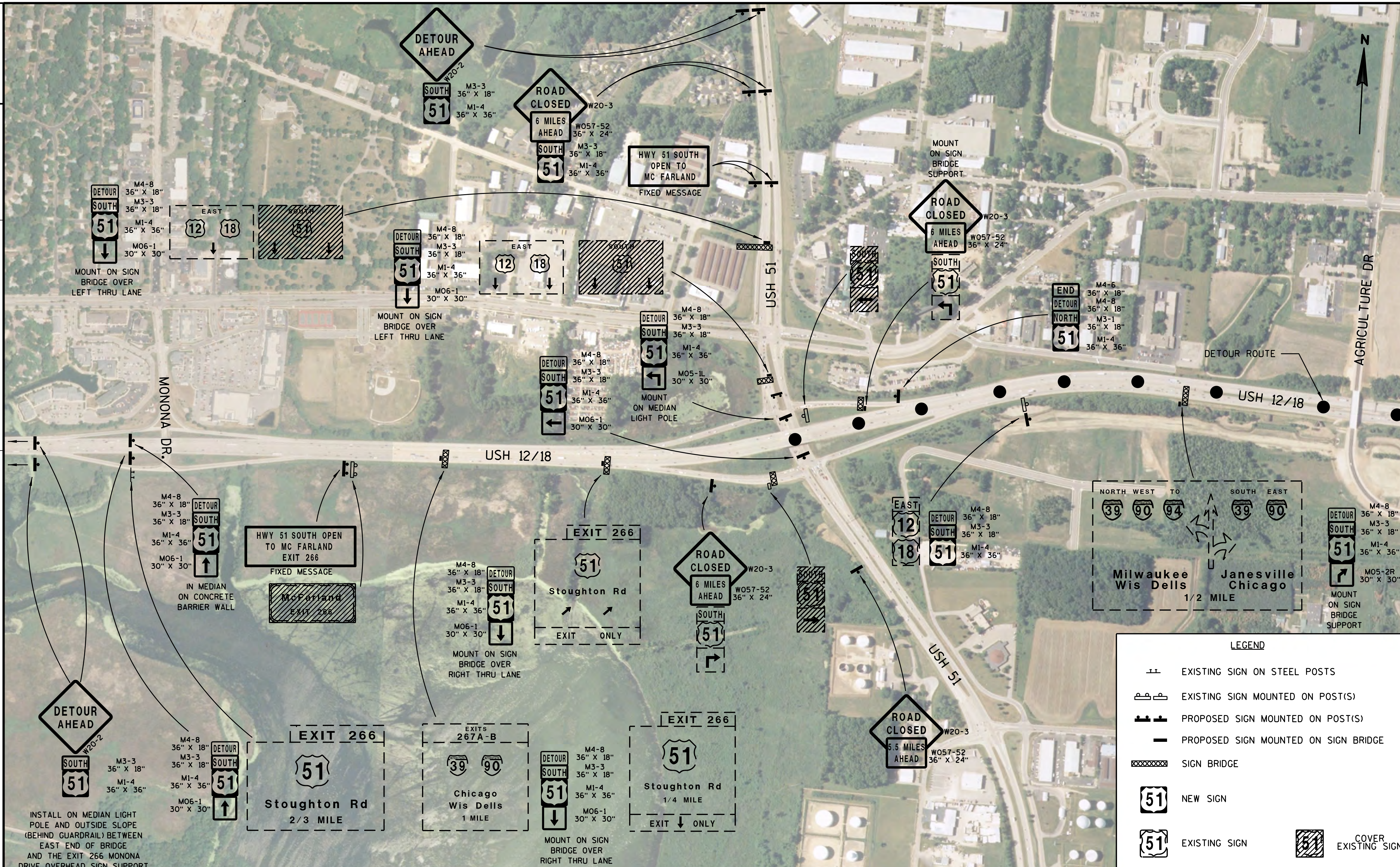
PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	TRAFFIC CONTROL DETOUR PLAN (USH 51)	SHEET 36	E

FILE NAME : P:\state\USH_051\5845-01-05\Cad\027001_dt.dgn PLOT DATE : 01-MAY-2013 14:12 PLOT BY : dotd31 PLOT NAME : PLOT SCALE : 2000.000000:1.000000 WISDOT/CADDS SHEET 42



PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	DETOUR - DETAIL A	SHEET 37	E

FILE NAME : P:\state\USH_051\5845-01-05\Cad\027002_dt.dgn PLOT DATE : 01-MAY-2013 14:15 PLOT BY : dotd31 PLOT NAME : PLOT SCALE : 200.000000:1.000000 WISDOT/CADDS SHEET 42

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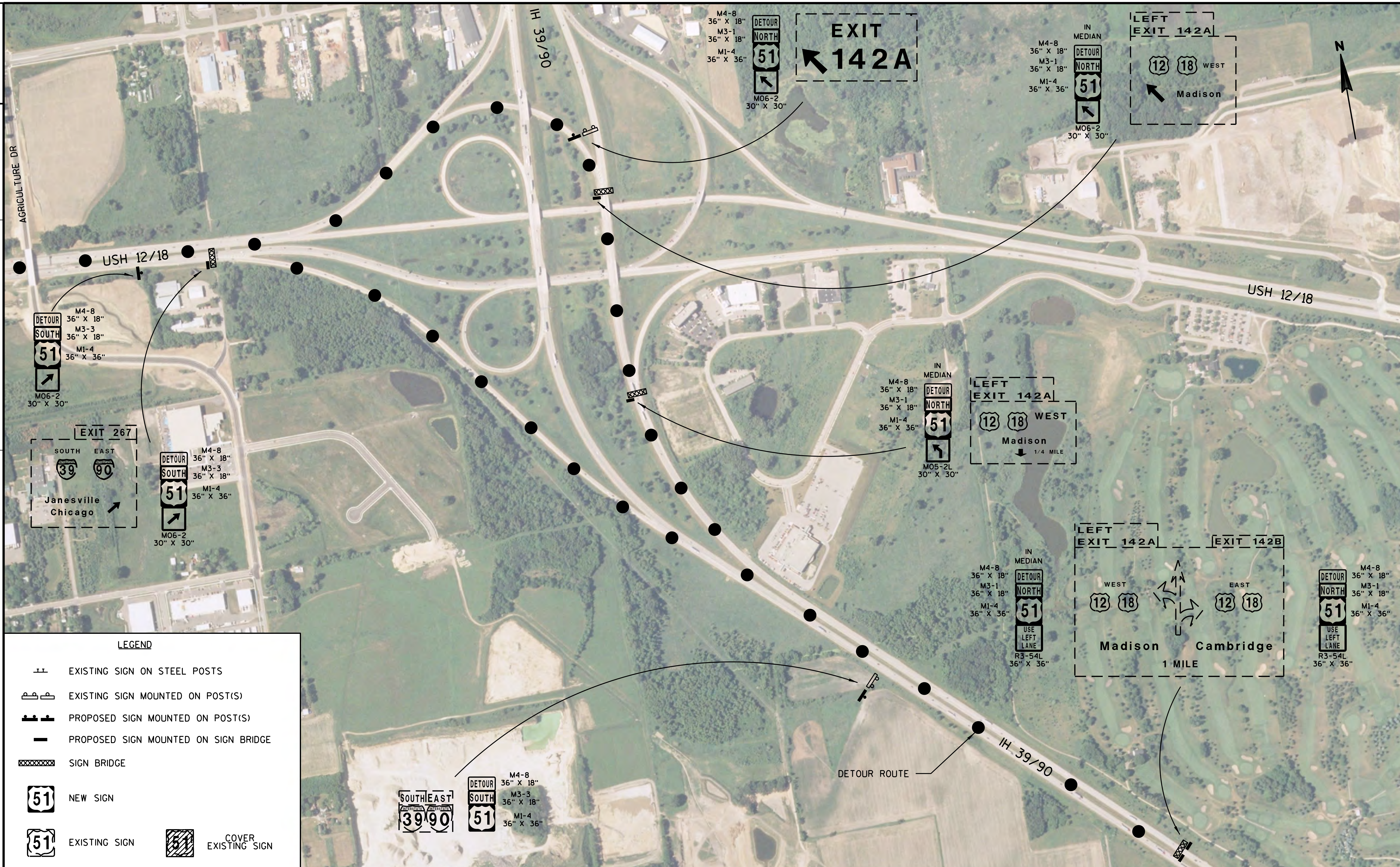

PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	DETOUR - DETAIL B	SHEET 38	E

FILE NAME : P:\state\USH_051\5845-01-05\Cad\027003_dt.dgn PLOT DATE : 01-MAY-2013 14:15 PLOT BY : dotd31 PLOT NAME : PLOT SCALE : 200.000000:1.000000 WISDOT/CADDS SHEET 42

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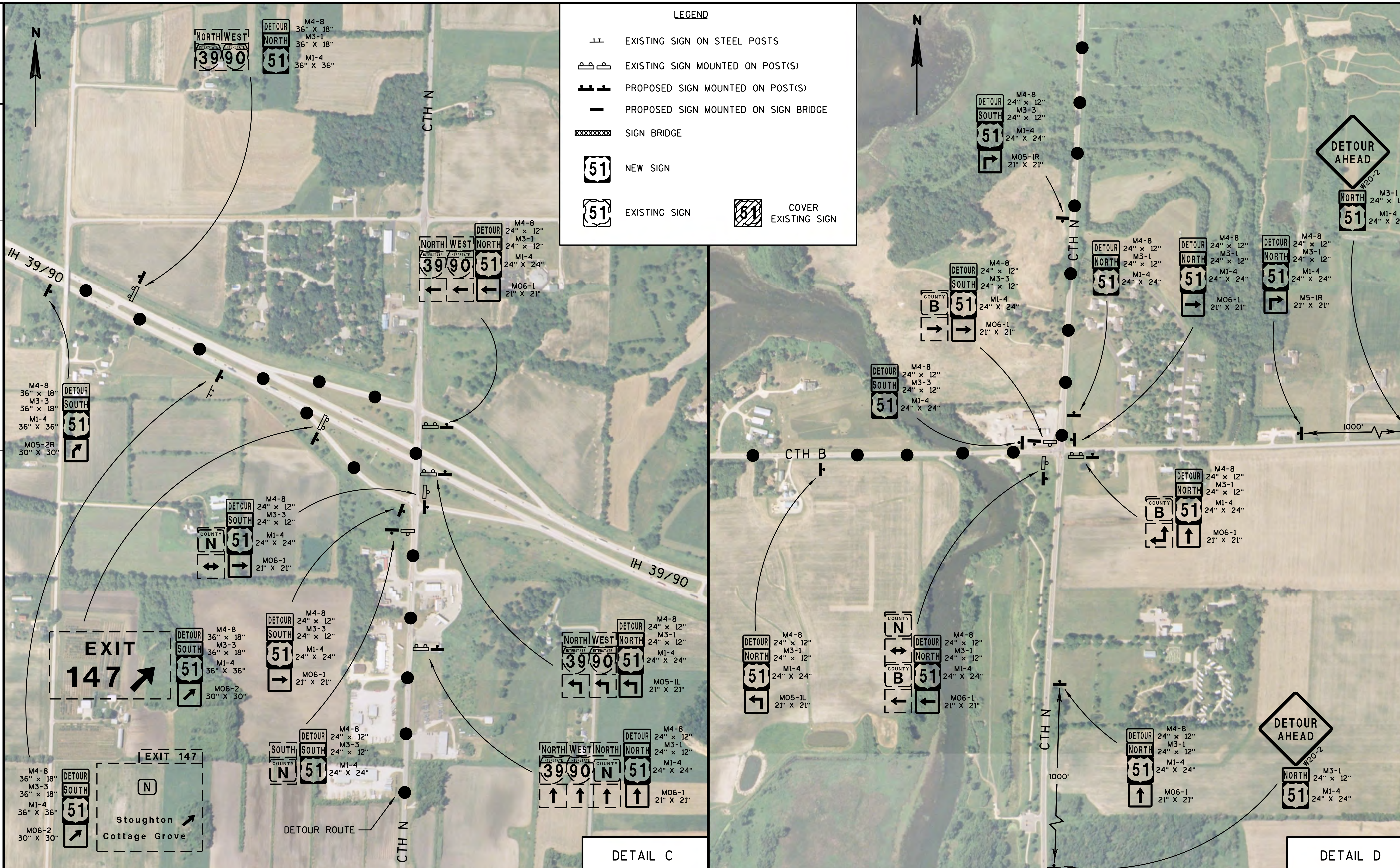

PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	DETOUR - DETAIL C AND D	SHEET 39	E

FILE NAME : P:\state\USH_051\5845-01-05\Cad\027004_dt.dgn PLOT DATE : 01-MAY-2013 14:16 PLOT BY : dotd31 PLOT NAME : PLOT SCALE : 200.000000:1.000000

WISDOT/CADDS SHEET 42

PROJECT NO:5845-01-75	HWY:USH 51	COUNTY:DANE	DETOUR - DETAIL E	SHEET 40	E

FILE NAME : P:\state\USH_051\5845-01-05\Cad\027005_dt.dgn PLOT DATE : 01-MAY-2013 14:16 PLOT BY : dotd31 PLOT NAME : PLOT SCALE : 200.000000:1.000000

WISDOT/CADDS SHEET 42

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DATE 30MAY13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5845-01-75 QUANTITY
0010	204.0100	REMOVING PAVEMENT	SY	2,995.000	2,995.000
0020	204.0105	REMOVING PAVEMENT BUTT JOINTS	SY	234.000	234.000
0030	204.0110	REMOVING ASPHALTIC SURFACE	SY	328.000	328.000
0040	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	15,158.000	15,158.000
0050	204.0130	REMOVING CURB	LF	80.000	80.000
0060	204.0150	REMOVING CURB & GUTTER	LF	1,251.000	1,251.000
0070	204.0165	REMOVING GUARDRAIL	LF	240.000	240.000
0080	204.9060.S	REMOVING (ITEM DESCRIPTION) 01. ASPHALTIC FLUMES	EACH	2.000	2.000
0090	205.0100	EXCAVATION COMMON	CY	1,025.000	1,025.000
0100	213.0100	FINISHING ROADWAY (PROJECT) 01. 5845-01-75	EACH	1.000	1.000
0110	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	7,895.000	7,895.000
0120	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	250.000	250.000
0130	312.0110	SELECT CRUSHED MATERIAL	TON	2,050.000	2,050.000
0140	325.0100	PULVERIZE AND RELAY	SY	16,090.000	16,090.000
0150	335.0100	RUBBLIZING	SY	28,930.000	28,930.000
0160	415.1080	CONCRETE PAVEMENT HES 8-INCH	SY	1,470.000	1,470.000
0170	416.0620	DRILLED DOWEL BARS	EACH	44.000	44.000
0180	440.4410.S	INCENTIVE IRI RIDE	DOL	8,660.000	8,660.000
0190	455.0105	ASPHALTIC MATERIAL PG58-28	TON	829.350	829.350
0200	455.0605	TACK COAT	GAL	2,133.000	2,133.000
0210	460.1100	HMA PAVEMENT TYPE E-0.3	TON	4,140.000	4,140.000
0220	460.1103	HMA PAVEMENT TYPE E-3	TON	10,940.000	10,940.000
0230	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	9,640.000	9,640.000
0240	460.4110.S	REHEATING HMA LONGITUDINAL JOINTS	LF	80,403.000	80,403.000
0250	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	50.000	50.000
0260	465.0305	ASPHALTIC SURFACE SAFETY ISLANDS	TON	2.000	2.000
0270	465.0315	ASPHALTIC FLUMES	SY	22.000	22.000
0280	601.0120	CONCRETE CURB TYPE J	LF	52.000	52.000
0290	601.0553	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	LF	1,251.000	1,251.000
0300	611.8110	ADJUSTING MANHOLE COVERS	EACH	1.000	1.000
0310	611.8115	ADJUSTING INLET COVERS	EACH	3.000	3.000
0320	614.2300	MGS GUARDRAIL 3	LF	2,100.000	2,100.000
0330	614.2310	MGS GUARDRAIL 3 HS	LF	137.500	137.500
0340	614.2330	MGS GUARDRAIL 3 K	LF	787.500	787.500
0350	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	18.000	18.000
0360	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 5845-01-75	EACH	1.000	1.000
0370	619.1000	MOBILIZATION	EACH	1.000	1.000
0380	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	16.000	16.000
0390	625.0100	TOPSOIL	SY	7,928.000	7,928.000
0400	627.0200	MULCHING	SY	2,415.000	2,415.000
0410	628.1504	SILT FENCE	LF	1,662.000	1,662.000
0420	628.1520	SILT FENCE MAINTENANCE	LF	3,324.000	3,324.000
0430	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	1.000	1.000
0440	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	1.000	1.000
0450	628.2004	EROSION MAT CLASS I TYPE B	SY	5,700.000	5,700.000
0460	628.7005	INLET PROTECTION TYPE A	EACH	3.000	3.000
0470	628.7020	INLET PROTECTION TYPE D	EACH	3.000	3.000
0480	628.7504	TEMPORARY DITCH CHECKS	LF	120.000	120.000
0490	629.0210	FERTILIZER TYPE B	CWT	6.490	6.490
0500	630.0120	SEEDING MIXTURE NO. 20	LB	279.000	279.000

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DATE 30MAY13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	5845-01-75 QUANTITY
0510	630.0200	SEEDING TEMPORARY	LB	279.000	279.000
0520	633.5200	MARKERS CULVERT END	EACH	6.000	6.000
0530	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	24.000	24.000
0540	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	2.000	2.000
0550	637.0202	SIGNS REFLECTIVE TYPE II	SF	158.230	158.230
0560	638.2602	REMOVING SIGNS TYPE II	EACH	26.000	26.000
0570	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	26.000	26.000
0580	638.3620	ERECTING STATE OWNED SIGNS TYPE II	EACH	2.000	2.000
0590	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0600	643.0100	TRAFFIC CONTROL (PROJECT) 01. 5845-01-75	EACH	1.000	1.000
0610	643.0300	TRAFFIC CONTROL DRUMS	DAY	8,648.000	8,648.000
0620	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	1,250.000	1,250.000
0630	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	1,700.000	1,700.000
0640	643.0900	TRAFFIC CONTROL SIGNS	DAY	3,473.000	3,473.000
0650	643.0910	TRAFFIC CONTROL COVERING SIGNS TYPE I	EACH	3.000	3.000
0660	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	10.000	10.000
0670	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	76.000	76.000
0680	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	28.000	28.000
0690	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 01. 5845-01-75	EACH	1.000	1.000
0700	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	5,125.000	5,125.000
0710	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	41,415.000	41,415.000
0720	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	315.000	315.000
0730	647.0456	PAVEMENT MARKING CURB EPOXY	LF	52.000	52.000
0740	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	6.000	6.000
0750	648.0100	LOCATING NO-PASSING ZONES	MI	2.200	2.200
0760	650.7000	CONSTRUCTION STAKING CONCRETE PAVEMENT	LF	550.000	550.000
0770	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	11,730.000	11,730.000
0780	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 5845-01-75	LS	1.000	1.000
0790	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	6,450.000	6,450.000
0800	653.0900	ADJUSTING PULL BOXES	EACH	2.000	2.000
0810	690.0150	SAWING ASPHALT	LF	402.000	402.000
0820	690.0250	SAWING CONCRETE	LF	225.000	225.000
0830	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	500.000	500.000
0840	SPV.0060	SPECIAL 01.CONSTRUCTION STAKING CURB & GUTTER INTERSECTION RADIUS	EACH	18.000	18.000
0850	SPV.0180	SPECIAL 01. CONCRETE PAVEMENT CONTINUOUS DIAMOND GRINDING-WIM	SY	1,510.000	1,510.000
0860	SPV.0180	SPECIAL 02. GEOGRID REINFORCEMENT	SY	1,525.000	1,525.000

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REMOVING PAVEMENT BUTT JOINTS

STATION	TO	STATION	LOCATION	204.0105 SY
183+50	-	185+00	MAINLINE	117
299+30	-	300+80	MAINLINE	117
			TOTAL	234

ASPHALTIC FLUMES

STATION	LOCATION	204.9060.S.01 REMOVING ASPHALTIC FLUMES EACH	465.0315 ASPHALTIC FLUMES SY
211+50	LT	-	8
239+60	LT	1	5
258+50	LT	-	4
277+80	LT	1	5
	TOTAL	2	22

CONCRETE PAVEMENT

STATION	TO	STATION	204.0100 REMOVING PAVEMENT SY	335.0100 RUBBLIZING SY	415.1080 CONCRETE PAVEMENT HES 8-INCH SY	416.0620 DRILLED DOWEL BARS EACH	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT LF	SPV.0180.01 CONCRETE PAVEMENT CONTINUOUS DIAMOND GRINDING-WIM SY
185+00	-	266+04	-	21,615	-	-	-	-
266+04	-	268+29	600	-	600	22	225	-
266+04	-	268+37	-	-	-	-	-	620
268+54	-	271+87	-	-	-	22	-	890
268+62	-	271+87	870	-	870	-	325	-
271+87	-	299+30	-	7,315	-	-	-	-
UNDISTRIBUTED			1,525	-	-	-	-	-
		TOTAL	2,995	28,930	1,470	44	550	1,510

ASPHALT REMOVALS

STATION	TO	STATION	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	325.0100 PULVERIZE AND RELAY SY	690.0150 SAWING ASPHALT LF	REMARKS
189+22	-	207+70	12' LT - 12' RT	-	6,160	-	-	-
195+90	-	200+10	12' LT - 24' RT	-	473	489	-	TURN LANE
214+57	-	223+02	12' LT - 12' RT	-	2,817	-	-	-
254+40	-	262+25	12' LT - 24' RT	-	402	736	-	PASSING LANE
271+70	-	290+60	12' LT - 12' RT	-	5,306	-	-	-
183+50	-	300+80	-	312	-	-	150	DRIVEWAYS
239+75	-	239+90	-	7	-	-	-	SAFETY ISLAND
250+30	-	240+50	-	9	-	-	-	SAFETY ISLAND
QUAM DRIVE RT			-	-	-	881	22	-
HALVERSON RD. LT			-	-	-	999	29	-
LAKE KEGONSA RD. RT			-	-	-	1,091	22	-
LAKE KEGONSA RD. LT			-	-	-	904	22	-
CHARLES LANE			-	-	-	980	22	-
SCHNEIDER DR. RT			-	-	-	1,653	44	-
SCHNEIDER DR. LT			-	-	-	912	22	-
COLLADAY POINT DR. RT			-	-	-	1,072	52	-
OLD USH 51 RT			-	-	-	246	17	-
183+50		300+80	12'-18' LT & RT	-	-	6,127	-	SHOULDERS
			TOTAL	328	15,158	16,090	402	

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CURB

STATION	TO	STATION	LOCATION	204.0130 REMOVING CURB LF	204.0150 REMOVING CURB & GUTTER LF	601.0120 CONCRETE CURB TYPE J LF	601.0553 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE D LF	620.0300 CONCRETE MEDIAN SLOPED NOSE (TYPE 2) SF	SPV.0060.01 CONSTRUCTION STAKING CURB & GUTTER INTERSECTION RADIUS EACH	REMARKS
210+50	-	210+95	RT	-	82	-	82	-	1	QUAM DRIVE
210+50	-	210+90	LT	-	61	-	61	-	1	HALVERSON ROAD
211+30	-	211+60	RT	-	59	-	59	-	1	QUAM DRIVE
211+15	-	211+90	LT	-	90	-	90	-	1	HALVERSON ROAD
239+20	-	239+60	LT	-	76	-	76	-	1	LAKE KEGONSA ROAD
239+75	-	239+90	LT	38	-	26	-	8	1	LAKE KEGONSA ROAD (CHANNELIZING ISLAND)
239+50	-	240+15	RT	-	83	-	83	-	1	LAKE KEGONSA ROAD
240+00	-	240+40	LT	-	67	-	67	-	1	LAKE KEGONSA ROAD
240+40	-	240+55	RT	42	-	26	-	8	1	LAKE KEGONSA ROAD (CHANNELIZING ISLAND)
240+60	-	241+00	RT	-	90	-	90	-	1	LAKE KEGONSA ROAD
257+70	-	258+00	LT	-	56	-	56	-	1	CHARLES LANE
258+95	-	258+45	LT	-	93	-	93	-	1	CHARLES LANE
276+90	-	276+15	RT	-	112	-	112	-	1	SCHNEIDER ROAD
276+90	-	277+15	LT	-	60	-	60	-	1	SCHNEIDER ROAD
277+75	-	278+05	RT	-	111	-	111	-	1	SCHNEIDER ROAD
277+60	-	278+10	LT	-	81	-	81	-	1	SCHNEIDER ROAD
287+90	-	288+30	RT	-	60	-	60	-	1	COLLIDAY POINT DRIVE
288+75	-	289+00	RT	-	70	-	70	-	1	COLLIDAY POINT DRIVE
			TOTAL	80	1,251	52	1,251	16	18	

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GUARDRAIL

STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF	614.2300 MGS GUARDRAIL 3 LF	614.2310 MGS GUARDRAIL 3 HS LF	614.2330 MGS GUARDRAIL 3 K LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
241+33	-	249+02	RT	-	362.5	75.0	225.0	2
246+58	-	249+76	LT	-	175.0	37.5	-	2
254+91	-	258+07	LT	-	162.5	-	112.5	2
253+50	-	256+94	RT	-	212.5	25.0	-	2
270+01	-	273+07	RT	-	125.0	-	75.0	2
270+78	-	274+60	LT	-	275.0	-	-	2
283+92	-	287+36	RT	-	237.5	-	-	2
285+57	-	289+00	LT	-	137.5	-	100.0	2
289+99	-	297+92	RT	240	412.5	-	275.0	2
			TOTAL	240	2,100.0	137.5	787.5	18

EARTHWORK

STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT CY	205.0100 EXCAVATION COMMON (1) EBS EXCAVATION (2) CY	312.0110 SELECT CRUSHED MATERIAL TON
UNDISTRIBUTED	MAINLINE	-	1,025	2,050
	TOTAL		1,025	2,050

(1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. EXCESS MATERIAL IS TO BE REMOVED FROM THE SITE.

(2) EBS EXCAVATION TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL. ESTIMATED TO BE 5% OF TOTAL PAVEMENT SURFACE AREA BY A DEPTH OF 2 FEET BELOW THE BOTTOM OF EXISTING PAVEMENT ELEVATION.

AGGREGATE BASES

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
183+50	-	300+80	SHOULDERS LT/RT	6,750	-
266+04	-	271+87	MAINLINE	125	-
183+50	-	300+80	CURB AND GUTTER	-	250
UNDISTRIBUTED			UNEVEN RUBBLIZED PAVEMENT AREAS	340	-
UNDISTRIBUTED			FOR PAVEMENT REMOVAL IN EBS AREAS	680	-
			TOTAL	7,895	250

HMA PAVING

STATION	TO	STATION	LOCATION	455.0105 ASPHALTIC MATERIAL PG58-28* TON	455.0605 TACK COAT** GAL	460.1100 HMA PAVEMENT TYPE E-0.3*** TON	460.1103 HMA PAVEMENT TYPE E-3*** TON	460.4110.S REHEATING HMA LONGITUDINAL JOINTS LF	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0305 ASPHALTIC SURFACE SAFETY ISLANDS TON	REMARKS
183+50	-	185+00	18' LT - 18' RT	7	33	15	109	750	-	-	BUTT JOINT
185+00	-	266+04	12' LT - 12' RT	364	1,080	-	6,610	24,312	-	-	MAINLINE
185+00	-	266+04	12' - 18' LT & RT	154	270	2,795	-	31,468	-	-	SHOULDER
195+90		200+20	12' RT - 24' RT	8	23	-	141	1,290	-	-	TURN LANE
266+04	-	271+87	12' - 18' LT & RT	14	19	250	-	2,332	-	-	SHOULDER
271+87	-	299+30	12' LT - 12' RT	120	367	-	2,180	8,229	-	-	MAINLINE
271+87	-	299+30	12' - 18' LT & RT	58	91	1,055	-	10,972	-	-	SHOULDER
299+30	-	300+80	18' LT - 18' RT	6	36	25	75	1,050	-	-	BUTT JOINT
254+40	-	262+50	RT	12	51	-	215	-	-	-	PASSING LANE
QUAM DRIVE			RT	9	18	-	160	-	-	-	
HALVERSON RD.			LT	10	17	-	190	-	-	-	
LAKE KEGONSA RD.			ISLAND RT	-	-	-	-	-	-	1	
LAKE KEGONSA RD.			ISLAND LT	-	-	-	-	-	-	1	
LAKE KEGONSA RD.			RT	10	17	-	190	-	-	-	
LAKE KEGONSA RD.			LT	9	17	-	160	-	-	-	
CHARLES LN.			LT	10	17	-	190	-	-	-	
SCHNEIDER DR.			RT	17	34	-	310	-	-	-	
SCHNEIDER DR.			LT	9	16	-	160	-	-	-	
COLLADAY POINT DR. S.			RT	11	22	-	200	-	-	-	
OLD USH 51 RT			RT	3	6	-	50	-	-	-	
185+00	-	299+30	-	-	-	-	-	-	50	-	
			TOTAL	829.35	2,133	4,140	10,940	80,403	50	2	

*BASED ON 5.5% ASPHALT CONTENT
**BASED ON 2.5% GAL/SY APPLICATION RATE
***BASED ON 112 LB/SY/IN

ADJUSTING MANHOLE COVERS

STATION	LOCATION	611.8110 EACH
288+59	102' RT	1
	TOTAL	1

ADJUSTING INLET COVERS

STATION	LOCATION	611.8115 EACH
277+24	60' RT	1
277+73	57' RT	1
288+75	52' RT	1
	TOTAL	3

INLET PROTECTION

STATION	LOCATION	628.7005 INLET PROTECTION TYPE A EACH	628.7020 INLET PROTECTION TYPE D EACH
277+24	60' RT	1	1
277+73	57' RT	1	1
288+75	52' RT	1	1
	TOTAL	3	3

3

EROSION CONTROL

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS I TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF
185+30	-	187+60	LT	347	147	-	-	200	-
217+80	-	218+80	RT	37	-	-	-	37	-
220+00	-	231+00	RT	1,045	189	-	-	856	-
232+00	-	234+00	RT	37	-	-	-	37	-
234+30	-	236+50	RT	121	-	-	-	121	-
235+50	-	237+50	LT	63	-	-	-	63	-
236+80	-	238+20	RT	68	-	-	-	68	-
241+10	-	247+60	RT	877	326	500	1,000	551	-
252+00	-	255+25	RT	788	483	330	660	305	-
254+50	-	255+50	LT	279	200	100	200	79	-
256+50	-	257+00	LT	42	-	-	-	42	-
269+75	-	270+50	RT	110	42	-	-	68	-
271+00	-	272+00	RT	158	74	-	-	84	-
271+00	-	276+50	LT	158	-	-	-	158	-
272+50	-	273+80	RT	263	158	-	-	105	-
283+30	-	284+90	RT	95	-	-	-	95	-
284+80	-	286+20	LT	315	184	180	360	131	-
287+10	-	290+10	LT	346	131	335	670	215	-
289+50	-	291+00	RT	11	-	-	-	11	-
292+00	-	294+00	RT	47	-	-	-	47	-
295+30	-	298+00	RT	305	-	-	-	305	-
QUAM DRIVE INT.			RT	137	-	-	-	137	-
HALVERSON RD. INT.			LT	173	-	-	-	173	-
LAKE KEGONSA RD. INT.			RT	163	-	-	-	163	-
LAKE KEGONSA RD. INT.			LT	147	-	-	-	147	-
CHARLES LANE INT.			LT	184	-	-	-	184	-
SCHNEIDER RD. INT.			RT	231	-	-	-	231	-
SCHNEIDER RD. INT.			LT	131	-	-	-	131	-
COLLIDAY POINT DRIVE INT.			RT	142	-	-	-	142	-
OLD USH 51 INT.			RT	74	-	-	-	74	-
UNDISTRIBUTED			-	1,034	483	217	434	744	120
			TOTAL	7,928	2,415	1,662	3,324	5,700	120

3

SEED AND FERTILIZER

STATION	TO	STATION	LOCATION	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB
183+50	-	300+80	LT & RT	4.99	214	214
UNDISTRIBUTED			-	1.50	65	65
			TOTAL	6.49	279	279

MARKERS CULVERT END

STATION	LOCATION	633.5200 EACH
210+59	LT	1
211+50	RT	1
240+23	LT	1
257+88	LT	1
258+57	LT	1
288+07	RT	1
	TOTAL	6

3

SIGNING

SIGN NO.	LOCATION	SIGN CODE	SIGN SIZE (IN X IN)	SIGN MESSAGE	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	637.0202 SIGNS REFLECTIVE TYPE II SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.3620 ERECTING STATE OWNED SIGNS TYPE II* EACH
1-1	LT	D7-68	60X42	RD TO CTY PARK	1	1	17.50	-	-	-
1-2	LT	W14-3	48X36	NO PASSING ZONE	1	-	6.00	1	1	-
1-3	RT	W14-3	48X36	NO PASSING ZONE	1	-	6.00	1	1	-
2-1	LT	D7-52	66X42	RD TO STATE PARK	1	1	19.25	1	2	-
2-2	LT	D7-68	-	RD TO CTY PARK	-	-	-	1	-	-
2-3	LT	I55-56	30X36	ADOPT A HIGHWAY	1	-	7.50	1	1	-
2-4	LT	R1-1	30X30	STOP	1	-	5.18	1	1	-
2-5	RT	I55-56	30X36	ADOPT A HIGHWAY	1	-	7.50	1	1	-
2-6	RT	R1-1	30X30	STOP	1	-	5.18	1	1	-
4-1	LT	R5-1	36X36	DO NOT ENTER	1	-	9.00	1	1	-
4-2	LT	R1-1	30X30	STOP	1	-	5.18	1	1	-
4-3	LT	R4-7	-	MEDIAN ARROW	-	-	-	1	1	-
4-4	LT	R1-1	30X30	STOP	1	-	5.18	1	1	-
4-5	RT	R4-7	-	MEDIAN ARROW	-	-	-	1	1	-
4-6	RT	R1-1	30X30	STOP	1	-	5.18	1	1	-
4-7	RT	R1-1	30X30	STOP	1	-	5.18	1	1	-
4-8	RT	R5-1	36X36	DO NOT ENTER	1	-	9.00	1	1	-
6-1	LT	R1-1	30X30	STOP	1	-	5.18	1	1	-
6-2	RT	W14-3	48X36	NO PASSING ZONE	1	-	6.00	1	1	-
7-1	LT	R1-1	30X30	STOP	1	-	5.18	1	1	-
7-3	LT	W14-3	48X36	NO PASSING ZONE	1	-	6.00	1	1	-
7-4	RT	R1-1	30X30	STOP	1	-	5.18	1	1	-
8-1	LT	I55-56	30X36	ADOPT A HIGHWAY	1	-	7.50	1	1	-
8-2	RT	R1-1	30X30	STOP	1	-	5.18	1	1	-
8-3	RT	J1-1	24X39	JCT CTY AB	1	-	-	1	1	1
8-4	RT	J12-1	24X45	COUNTY B ARROW	1	-	-	1	1	1
8-5	RT	R1-1	30X30	STOP	1	-	5.18	1	1	-
				TOTAL	24	2	158.23	26	26	2

*CONTACT JEFF HOLLOWAY AT 608-516-6437 TO ARRANGE DELIVERY

PAVEMENT MARKING

STATION	TO	STATION	LOCATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH LF	647.0456 PAVEMENT MARKING CURB EPOXY LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY EACH
183+50	-	300+80	LT & RT EDGELINES	23,560	-	-	-
183+50	-	300+80	CENTERLINE	17,855	-	-	-
197+67	-	199+78	RT TURN CHANNELIZING	-	215	-	-
239+75	-	240+75	LT & RT ISLANDS	-	100	52	6
			TOTAL	41,415	315	52	6

TRAFFIC CONTROL

TRAFFIC CONTROL OPERATIONS	DURATION (DAYS)	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 DAY	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 DAY	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 DAY	643.3000 TRAFFIC CONTROL DETOUR SIGNS EACH	643.3000 DAY
PROJECT PRE-WARNING	14	-	-	-	-	-	-	-	-	-	-	-	2	28	-	-
USH 51 DETOUR	25	-	-	2	50	4	100	20	500	3	6	76	-	-	205	5,125
MAINLINE CLOSURE - ADVANCE WARNING	25	-	-	32	800	64	1,600	47	1,175	-	-	-	-	-	-	-
TRAFFIC CONTROL - ADVANCE WARNING	29	-	-	-	-	-	-	34	986	-	-	-	-	-	-	-
MOVING LANE CLOSURE	29	-	-	-	-	-	-	16	464	-	-	-	-	-	-	-
SHOULDER CLOSURE	29	112	3,248	-	-	-	-	12	348	-	-	-	-	-	-	-
UNDISTRIBUTED	54	100	5,400	4	400	-	-	-	-	-	4	-	-	-	-	-
	TOTAL		8,648		1,250		1,700		3,473	3	10	76		28		5,125

CONSTRUCTION STAKING RESURFACING REFERENCE

STATION	TO	STATION	650.8000 LF
183+50	-	300+80	11,730
		TOTAL	11,730

CONSTRUCTION STAKING SLOPE STAKES

STATION	TO	STATION	650.9920 LF
184+50	-	188+00	350
217+00	-	248+00	3,100
251+50	-	258+00	650
269+00	-	276+50	750
282+50	-	298+50	1,600
		TOTAL	6,450

ADJUSTING PULL BOXES

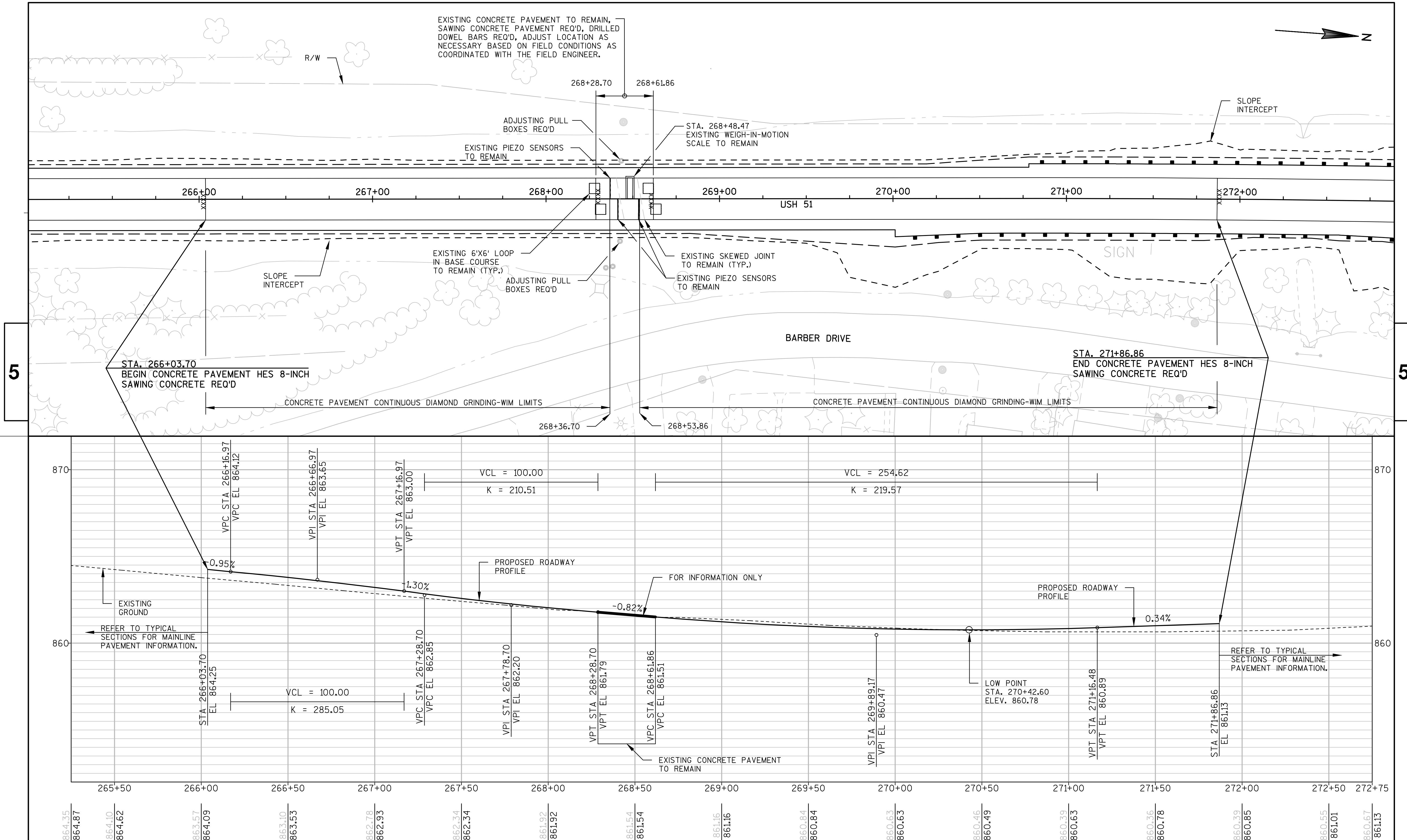
STATION	LOCATION	653.0900 EACH
268+50	20' RT	1
268+52	20' LT	1
	TOTAL	2

SAWING CONCRETE

STATION	690.0250 LF
183+50	44
185+00	32
266+04	24
268+29	24
268+62	24
271+87	24
299+30	24
300+80	29
TOTAL	225

GEOGRID REINFORCEMENT

STATION TO STATION	LOCATION	SPV.0180.02 SY
UNDISTRIBUTED	EBS AREAS	1,525
	TOTAL	1,525



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	PLAN AND PROFILE: WEIGH-IN-MOTION CONCRETE PAVEMENT	SHEET 49	E

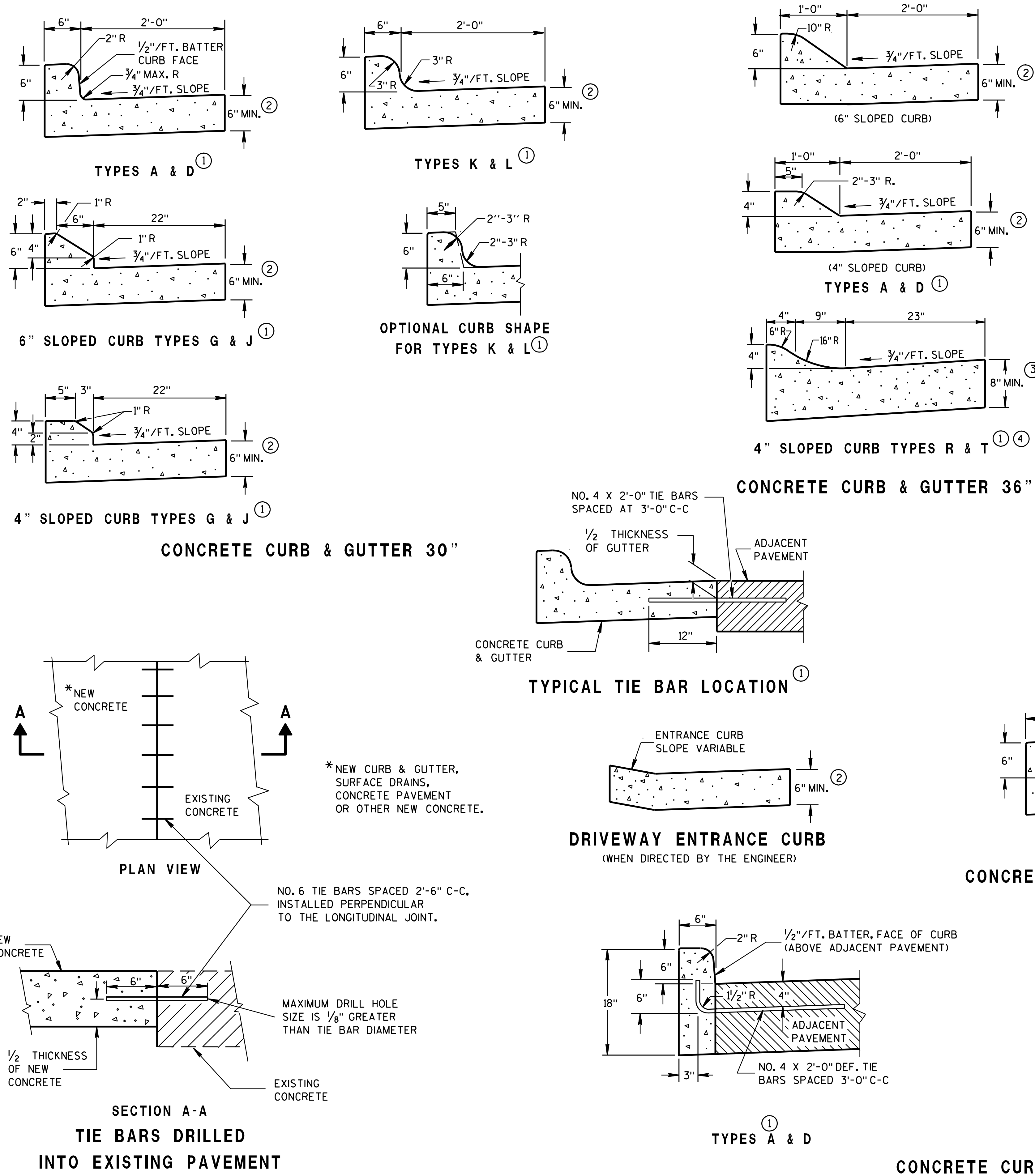
FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\PLANPROFILE.DWG PLOT DATE : 5/1/2013 2:33 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:50_XREF

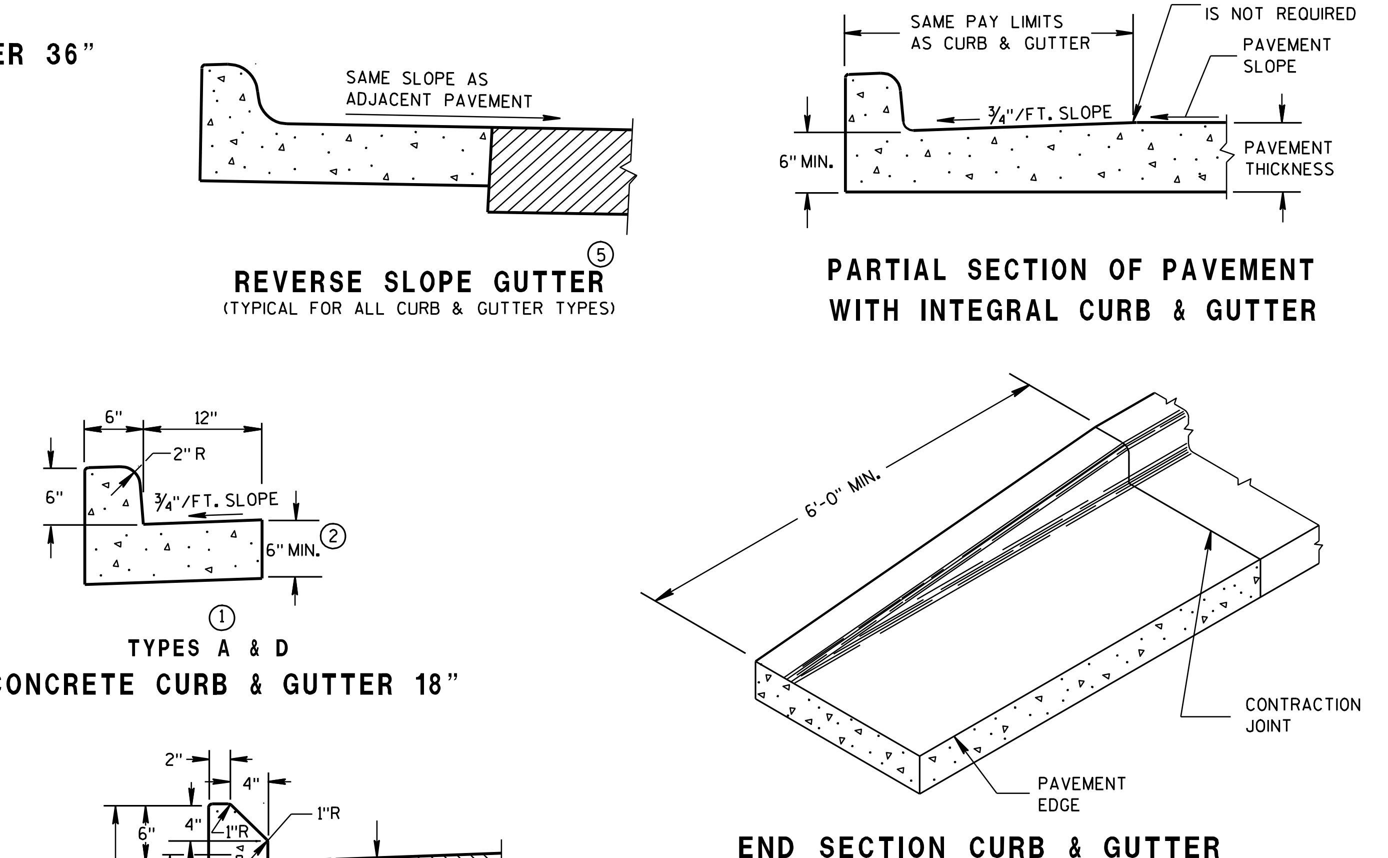
Standard Detail Drawing List

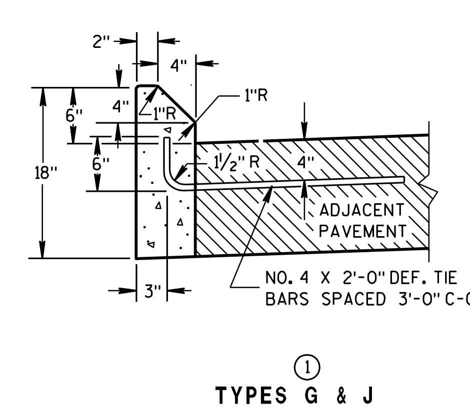
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
11B02-02	CONCRETE MEDIAN NOSE
13C01-15	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C11-10A	RURAL DOWELED CONCRETE PAVEMENT
13C11-10B	RURAL DOWELED CONCRETE PAVEMENT
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-01	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-15A	PAVEMENT MARKING (MAINLINE)
15C08-15B	PAVEMENT MARKING (INTERSECTIONS)
15C08-15F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15D28-01	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

6

6







GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

6

6

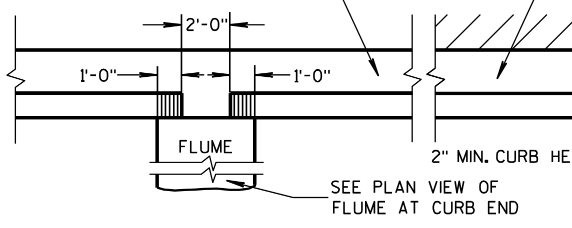
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

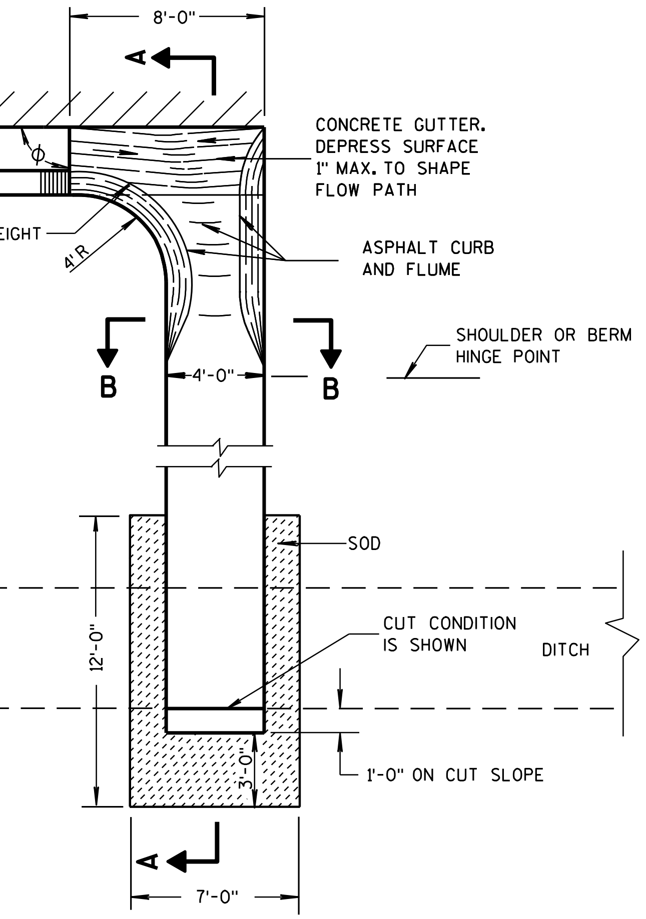
APPROVED
9/4/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

ASPHALTIC FLUME

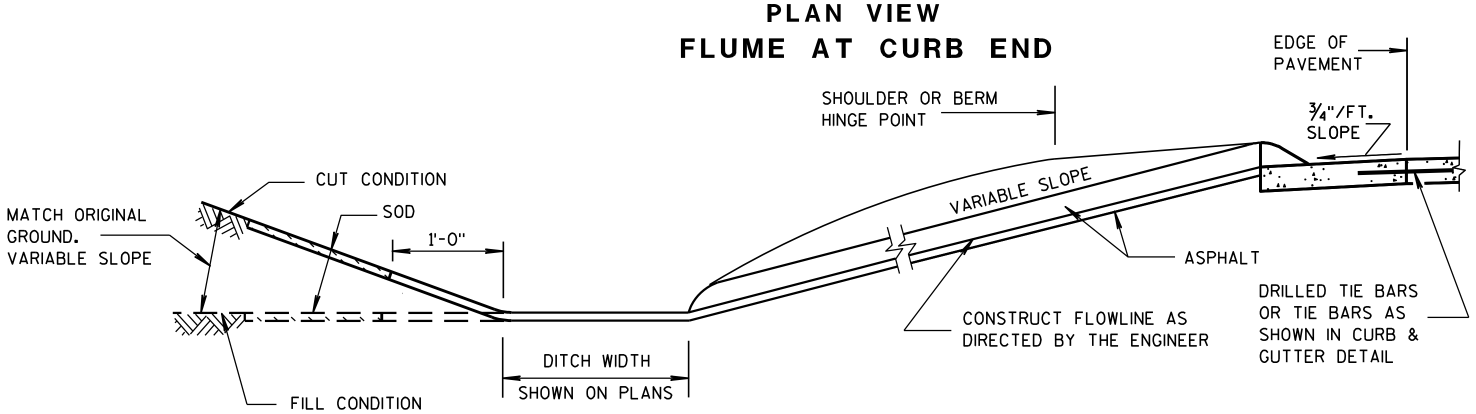
NOTE: TAPER CURB ENDS TO GUTTER IN 1'-0"



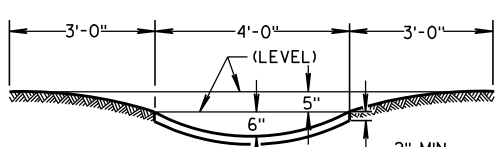
PLAN VIEW
CURB OPENING FOR FLUME



PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

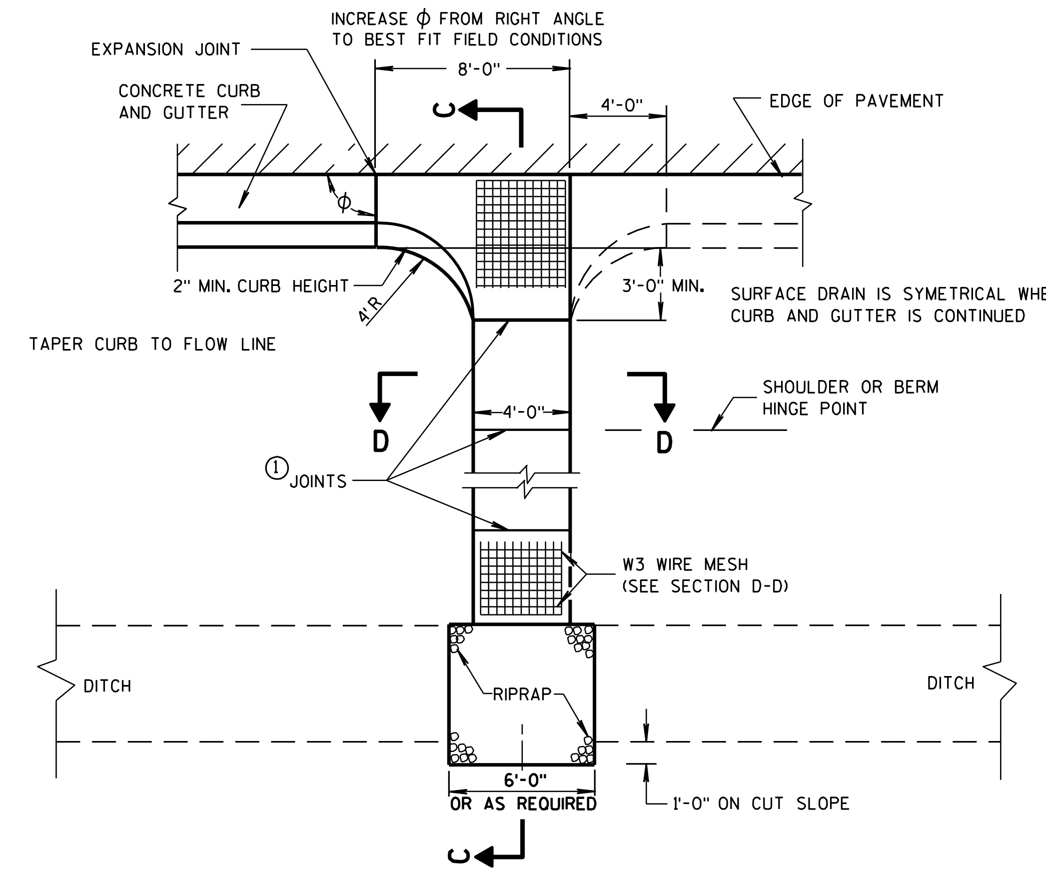
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

(1) JOINTS SHALL BE 1/8 TO 1/4 INCH WIDE BY 1 1/2 INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

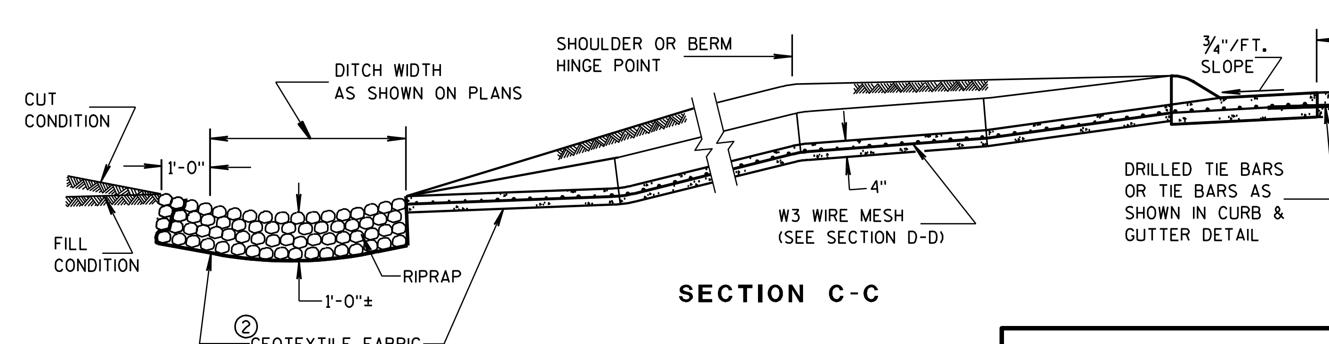
(2) GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

(3) CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

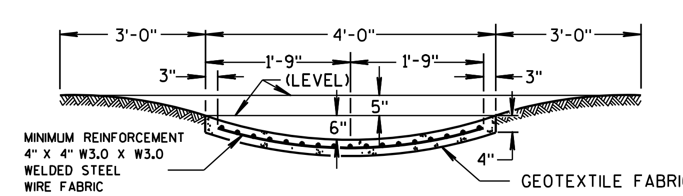
(3) CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



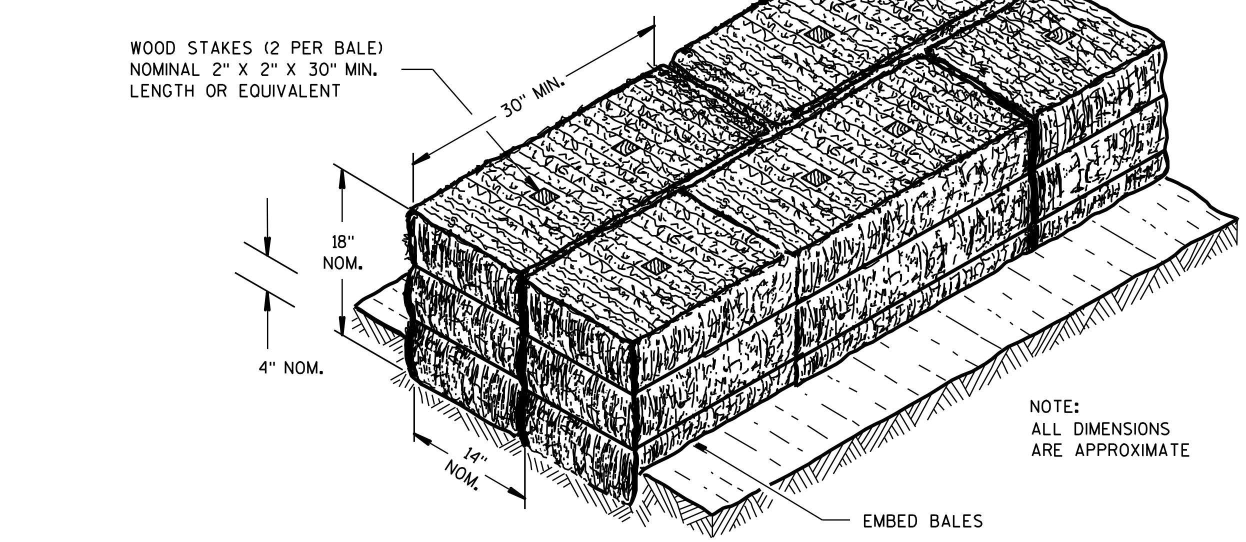
SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED		
9-4-08 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER	FHWA

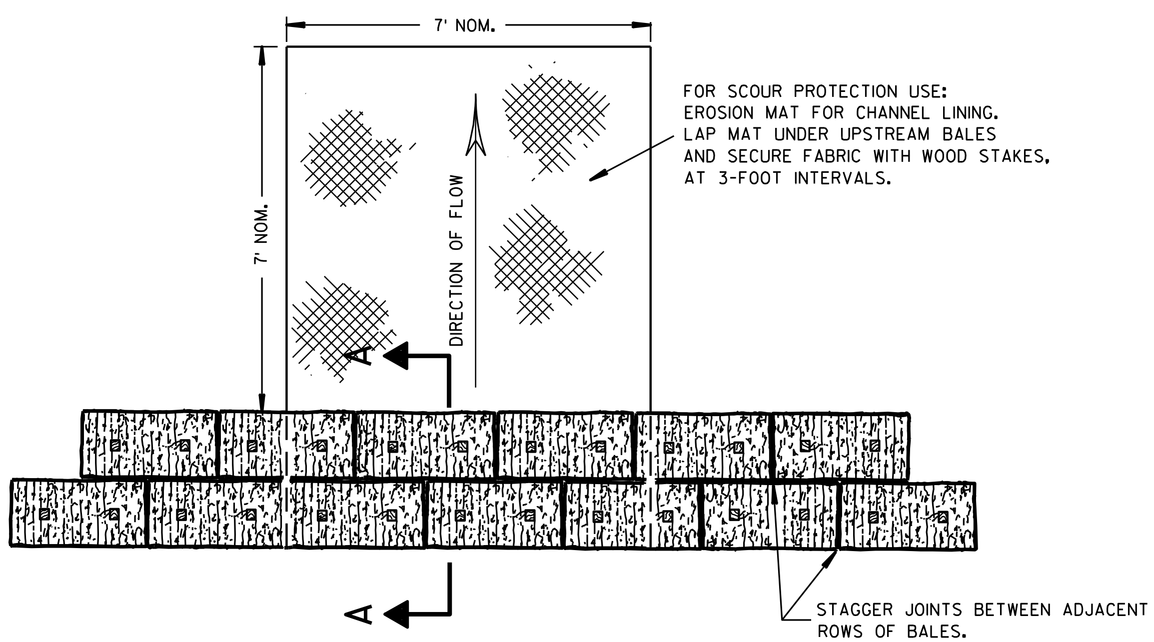
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

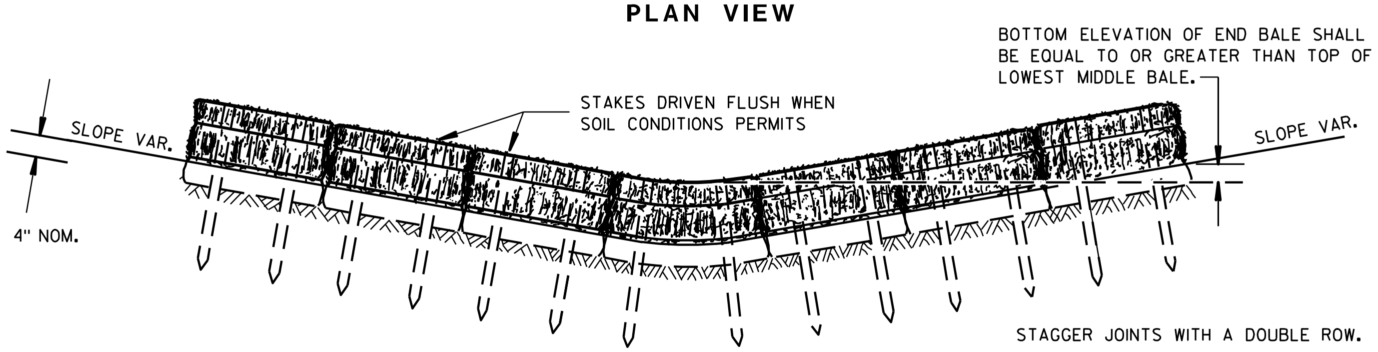
(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.



SECTION A-A

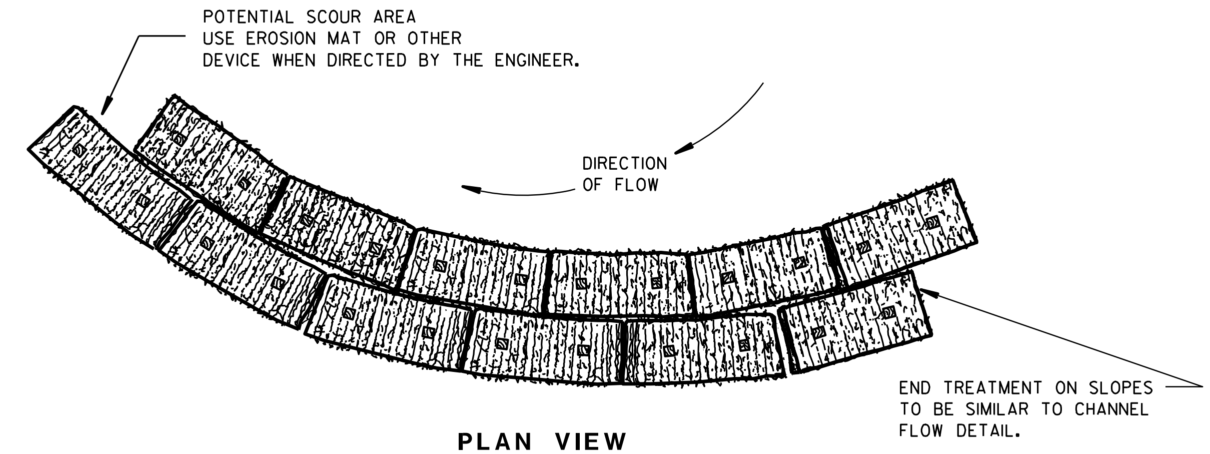


PLAN VIEW



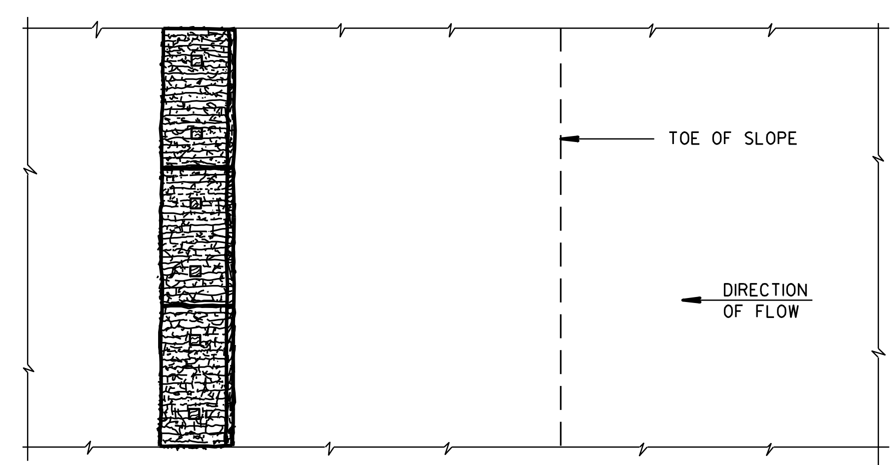
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

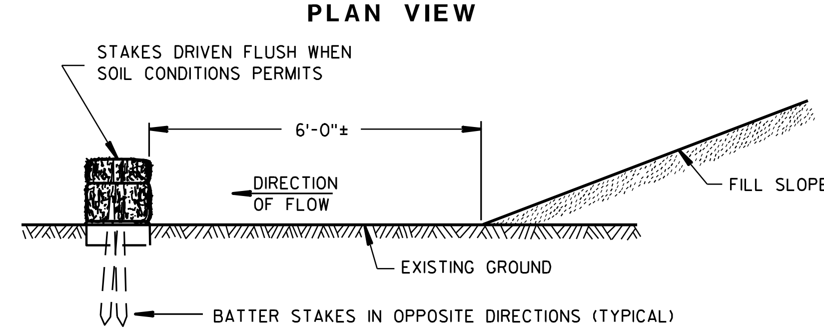


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cann — CHIEF ROADWAY DEVELOP 53 INEER

FHWA

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S.D.D. 8 E 8-3

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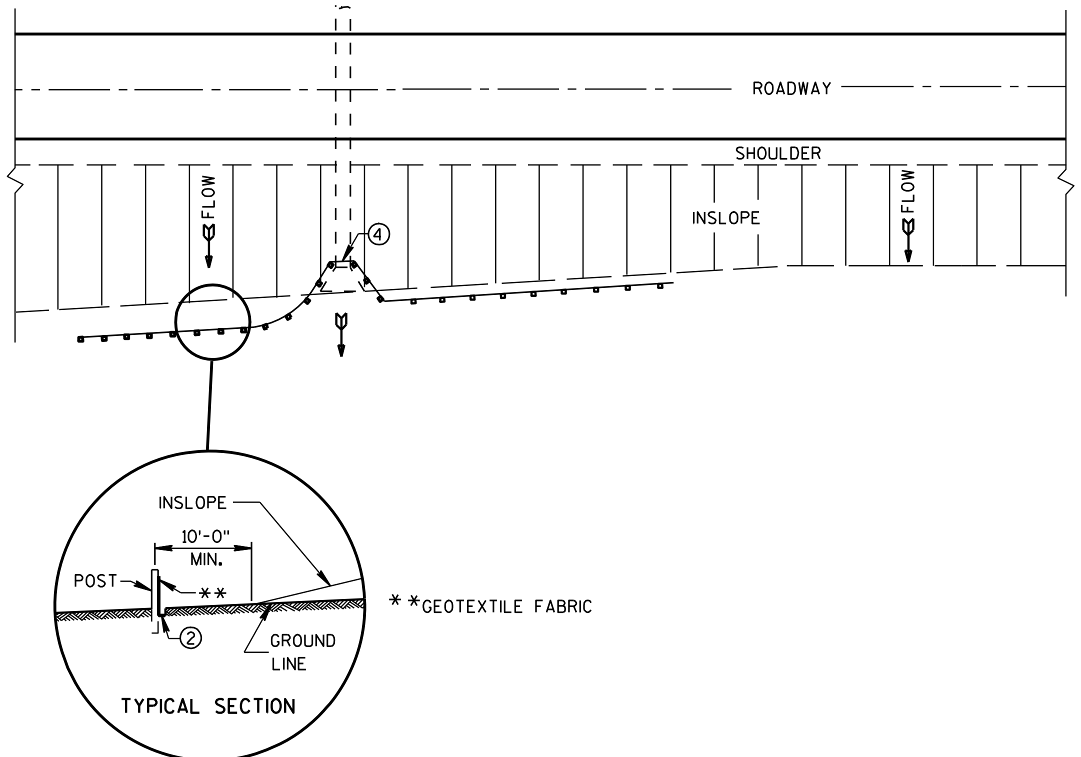
GENERAL NOTES

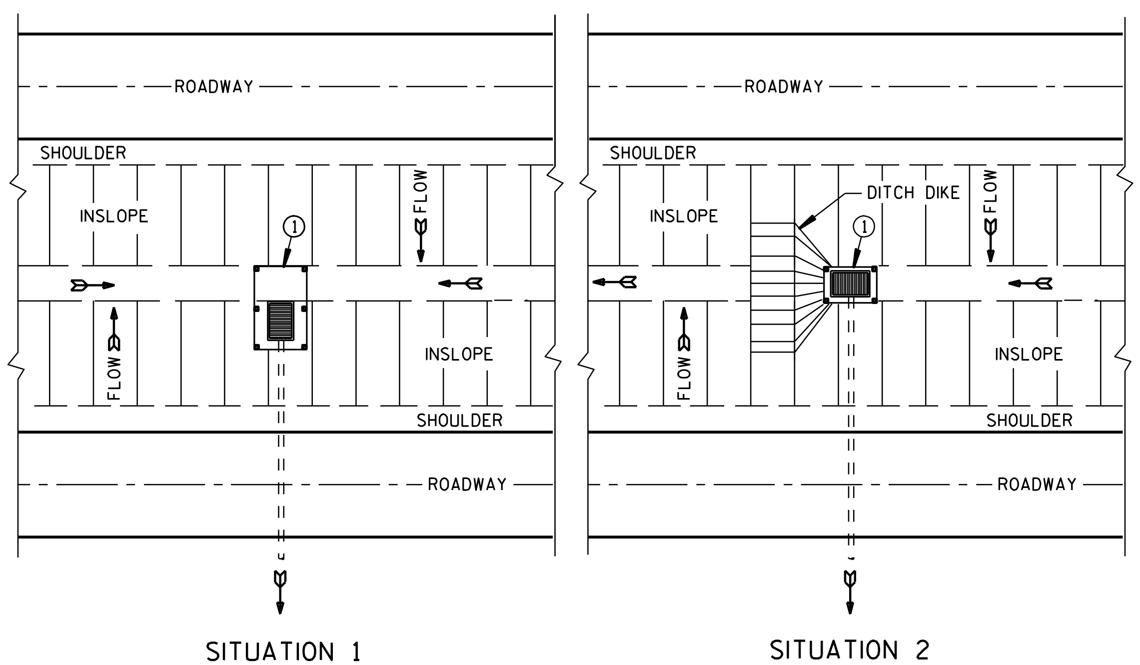
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



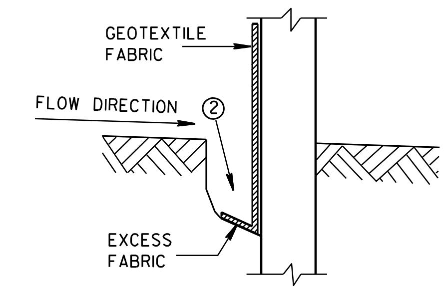
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



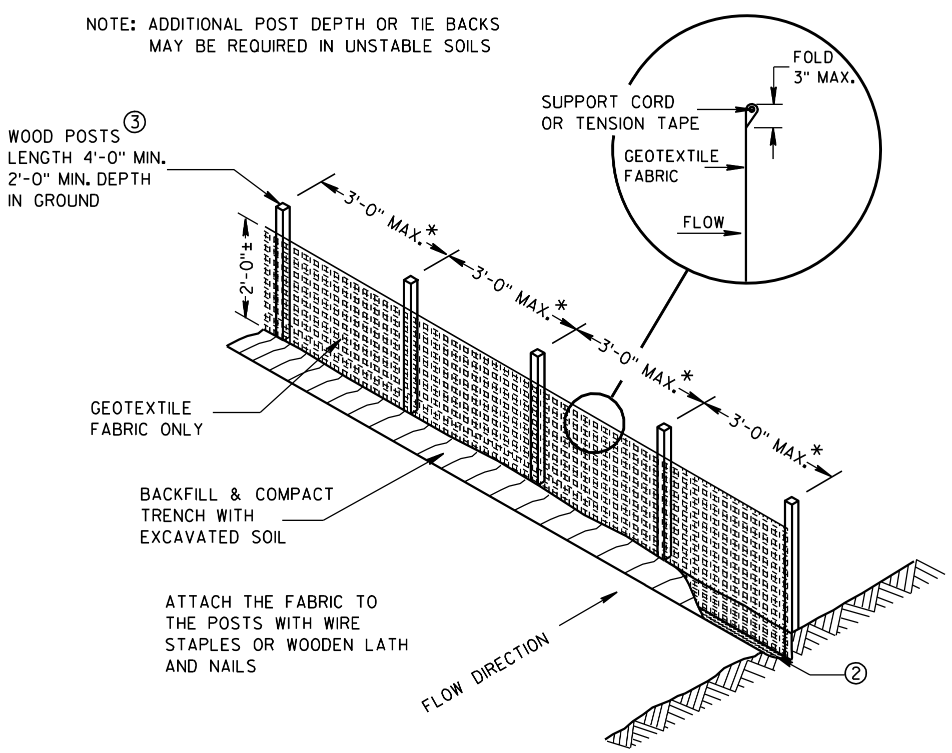
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



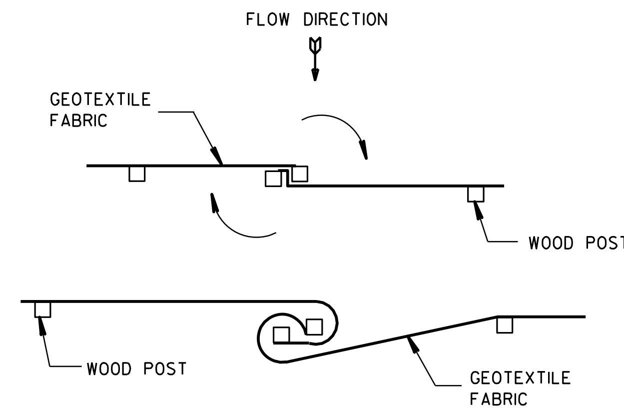
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

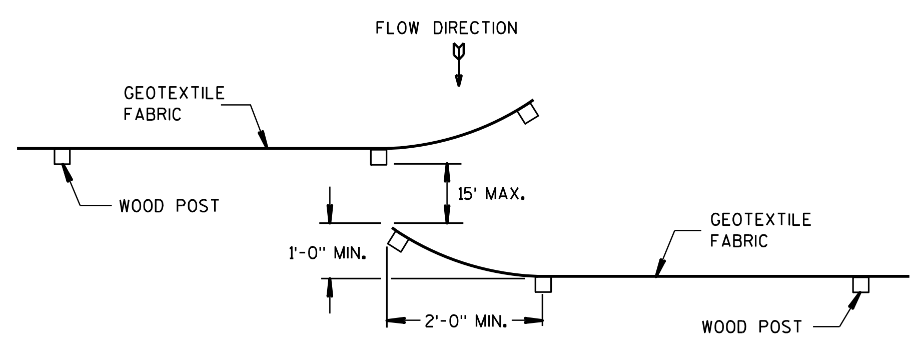


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

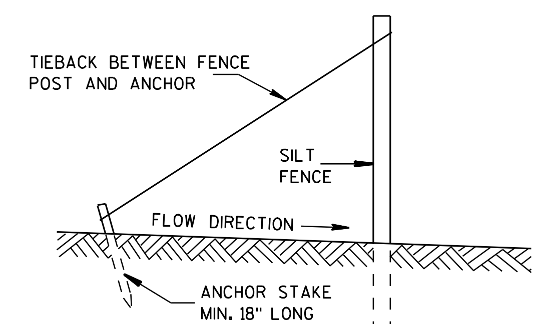


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 4-29-05 DATE /S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER FHWA

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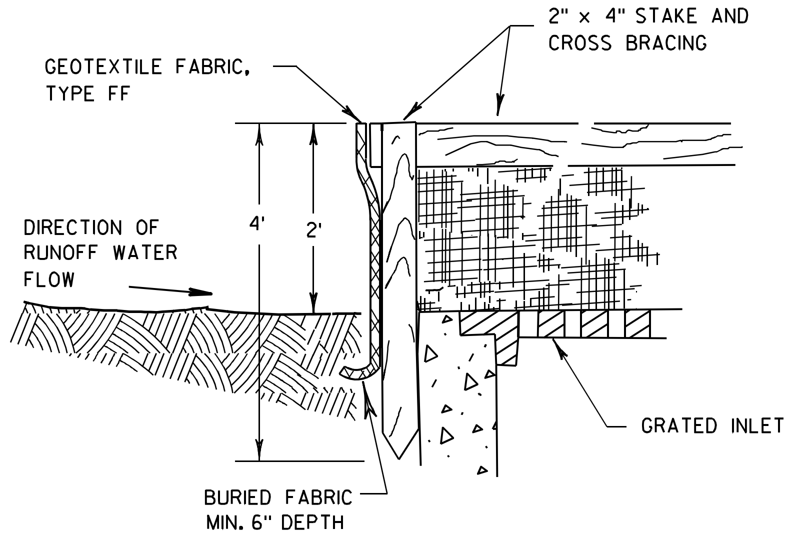
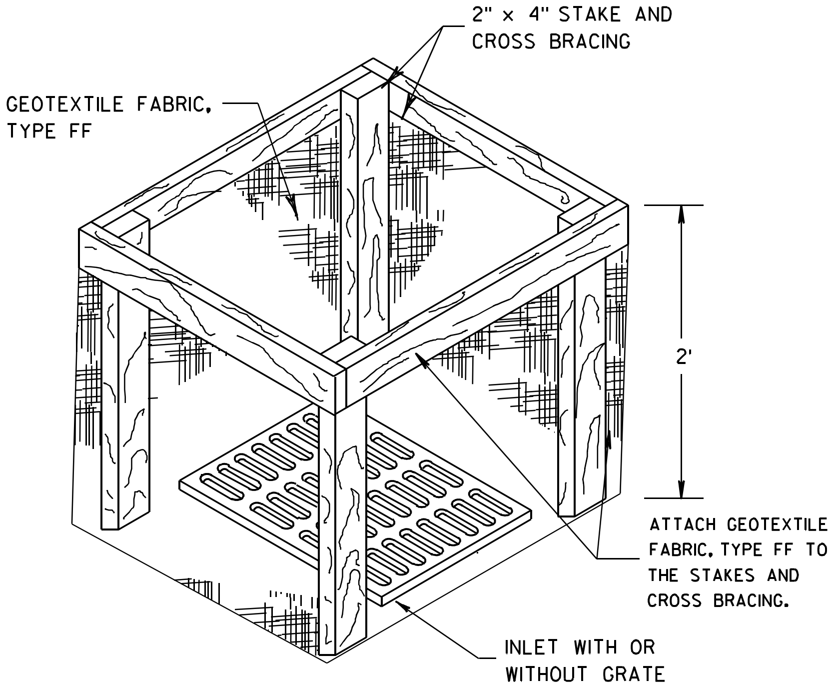
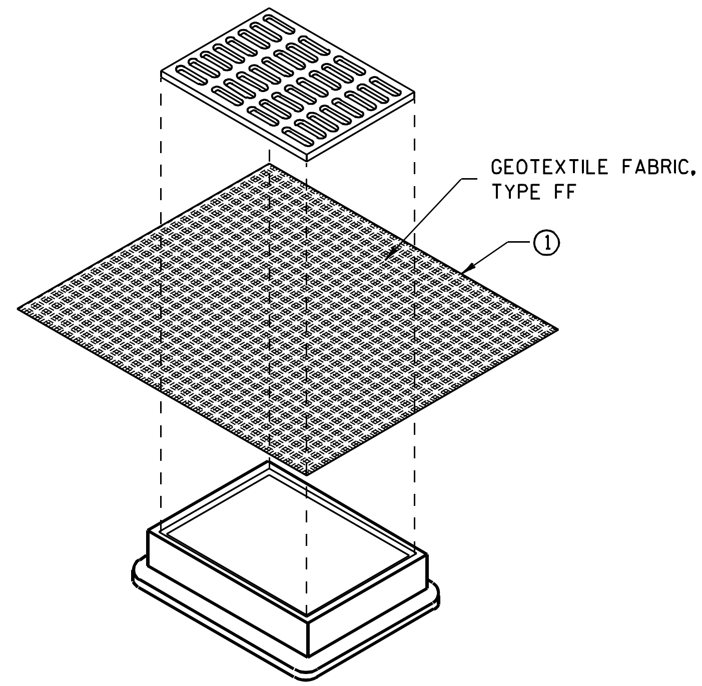
S.D.D. 8 E 9-6

S.D.D. 8 E 9-6



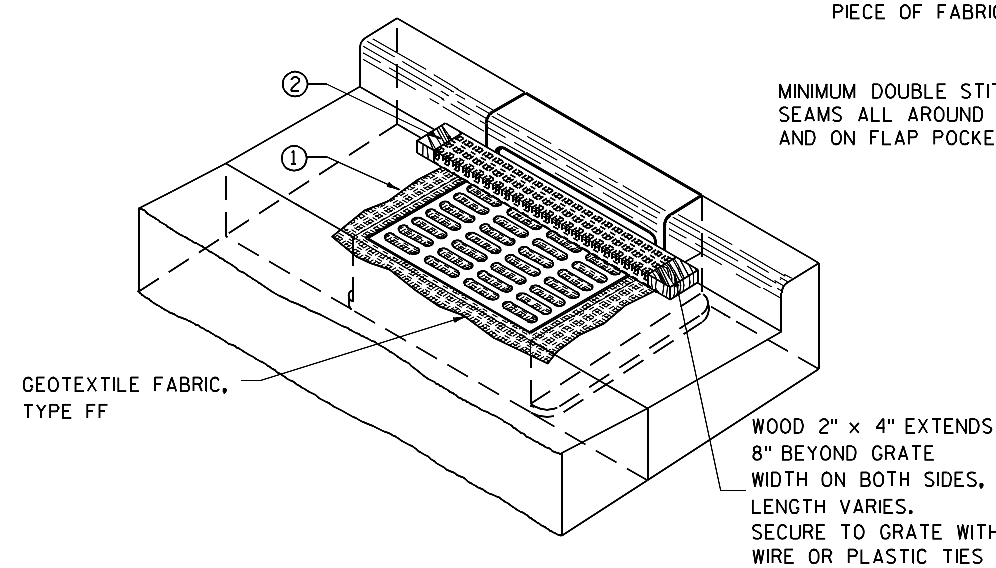


INLET PROTECTION, TYPE A

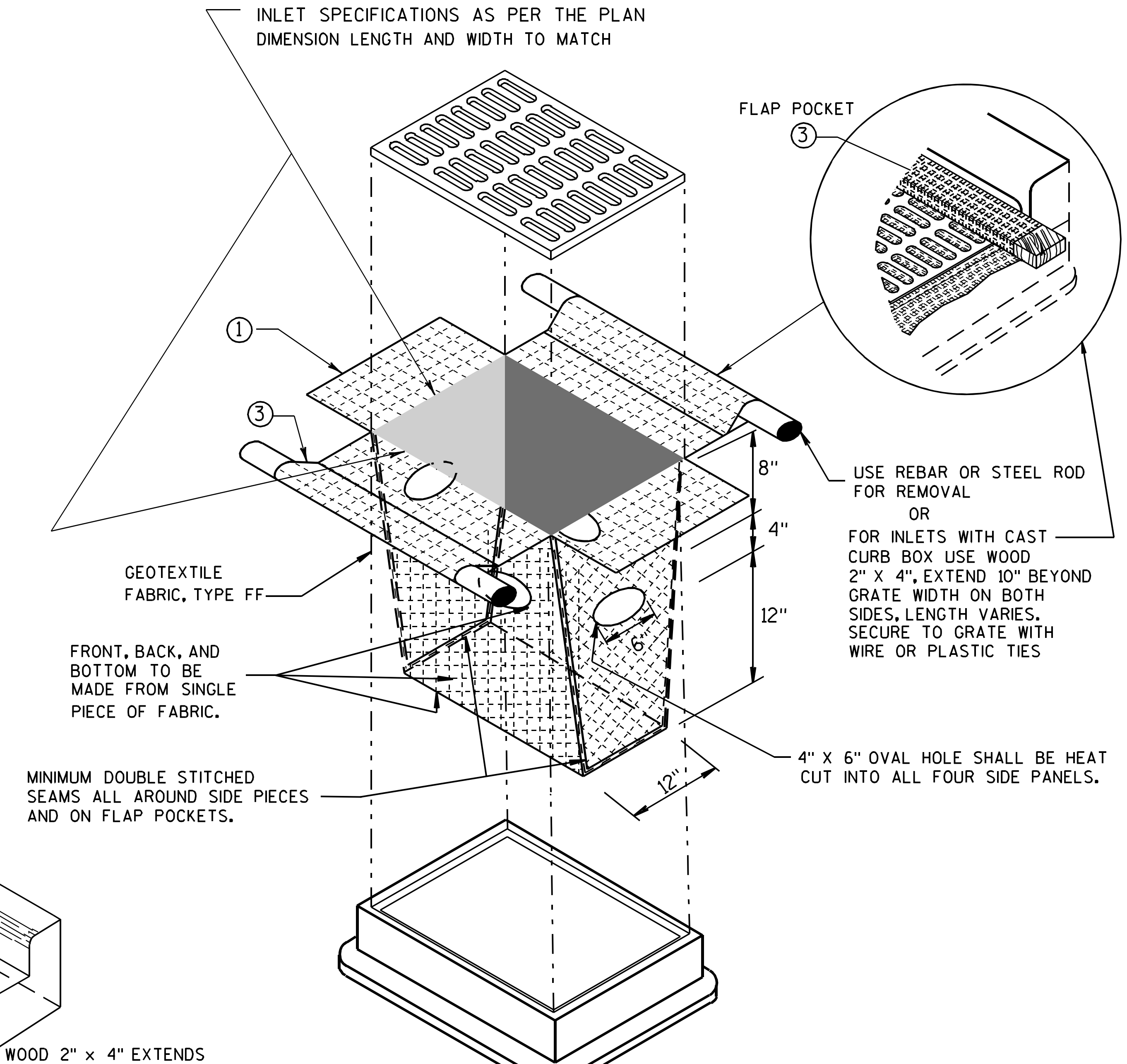


INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

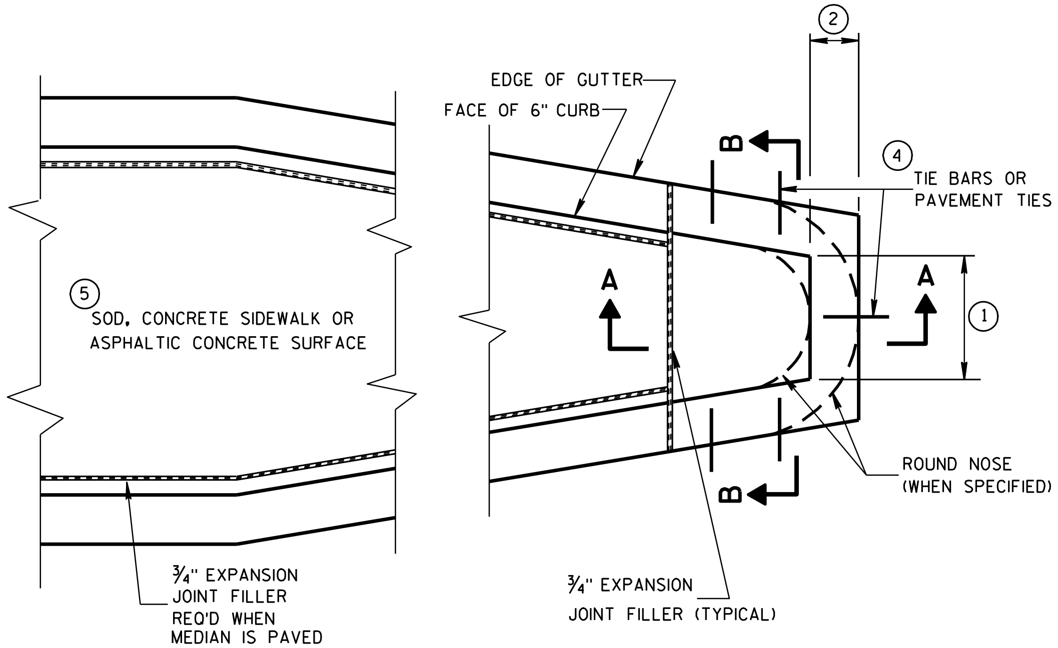
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

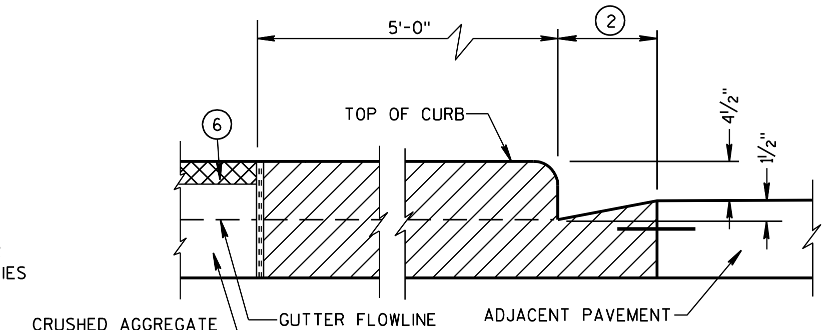
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION TYPE A, B, C, AND D

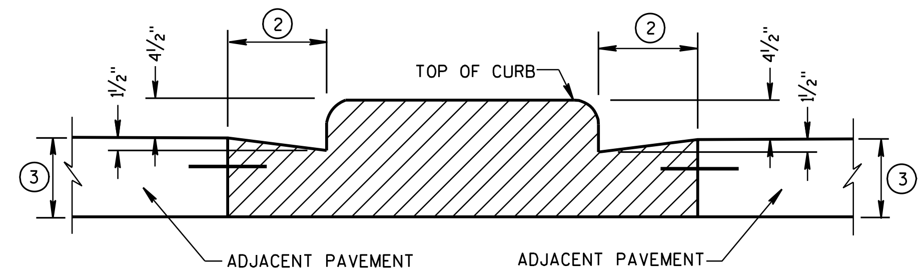
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 DATE
/S/ Beth Cann
CHIEF ROADWAY DEVELOPM ENGINEER
FHWA





SECTION A-A



SECTION B-B

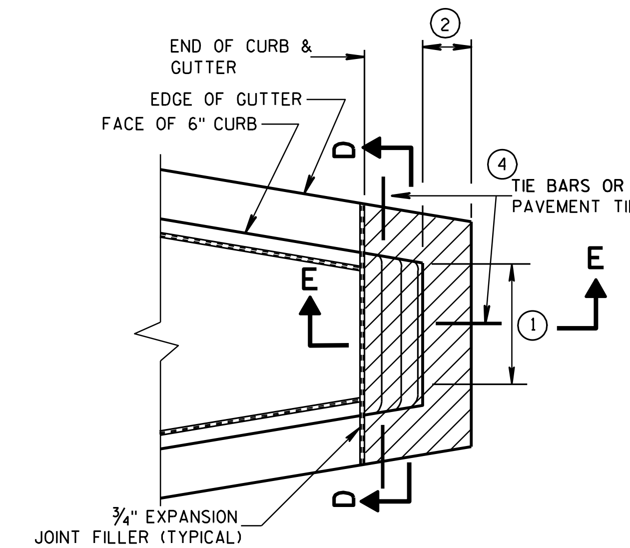
CONCRETE MEDIAN BLUNT NOSE DETAIL

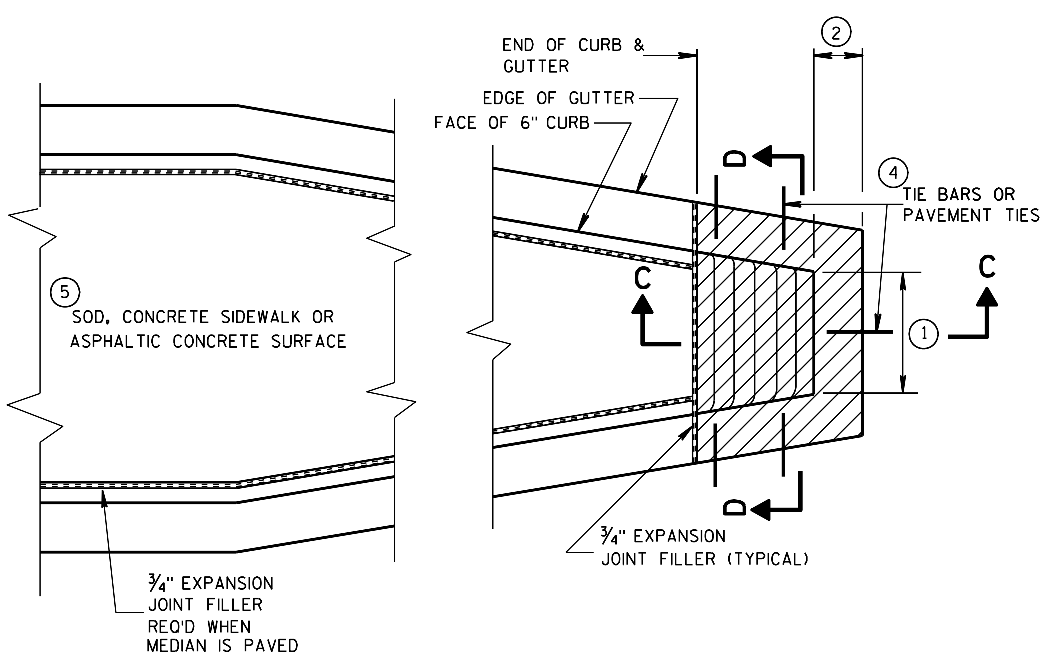
GENERAL NOTES

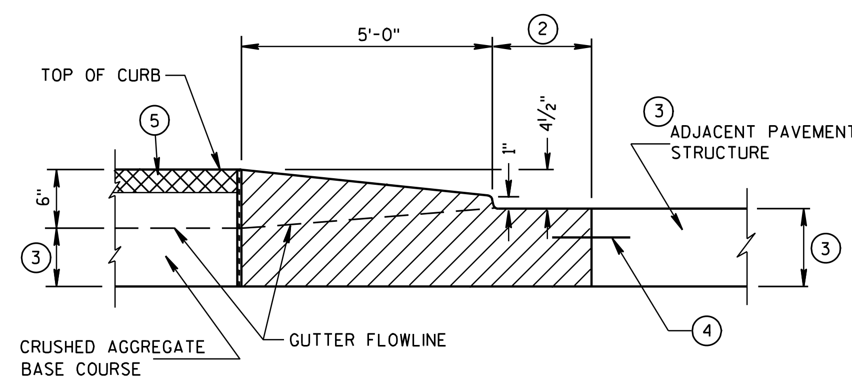
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

1. SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
2. WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
3. DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
   (1) NEW OR EXISTING CONCRETE PAVEMENT.
   (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
   (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.
4. TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

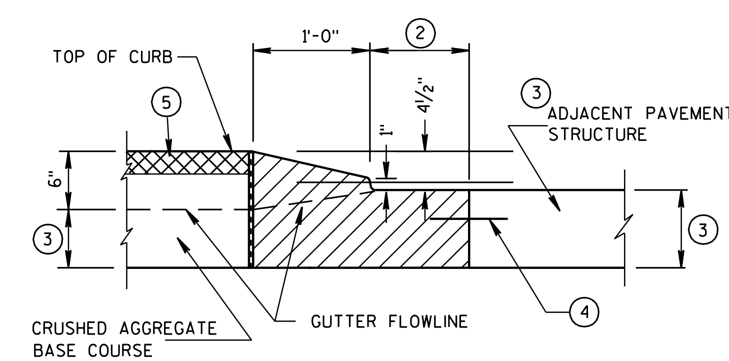
   PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.
5. SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.







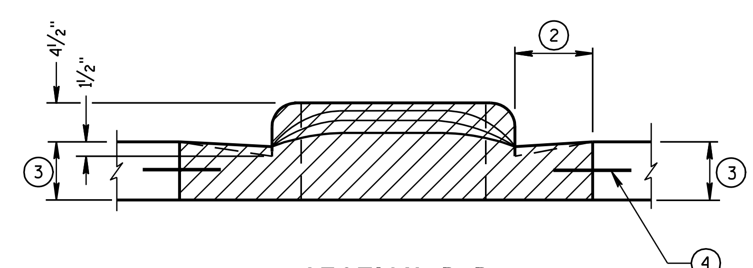
SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

CONCRETE MEDIAN NOSE
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 6/8/2006 DATE /S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER NT FHWA

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S.D.D. 11 B 2-2

S.D.D. 11 B 2-2

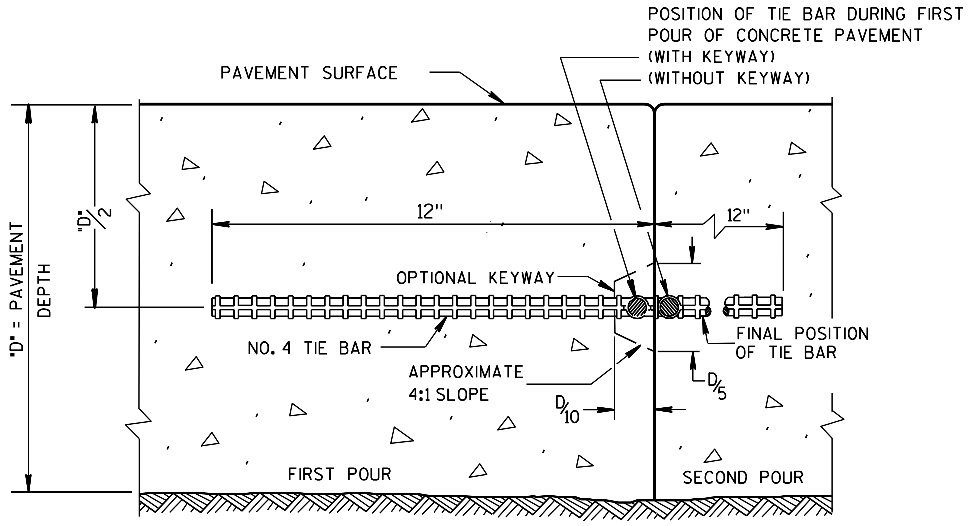
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

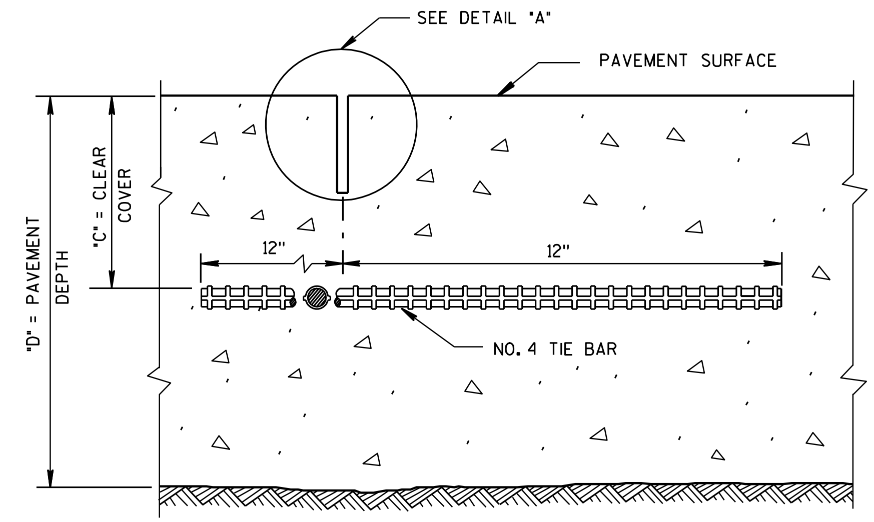
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

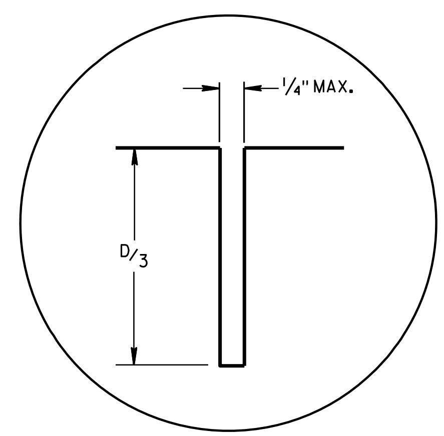
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



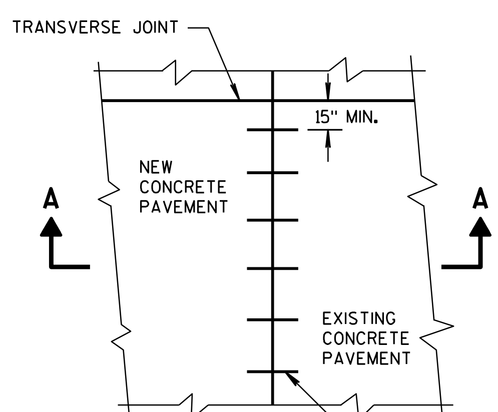
CONSTRUCTION JOINT



SAWED JOINT

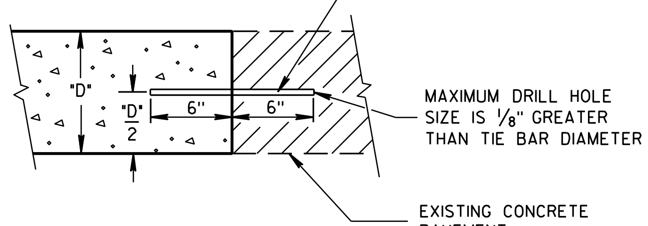


DETAIL "A"



PLAN VIEW

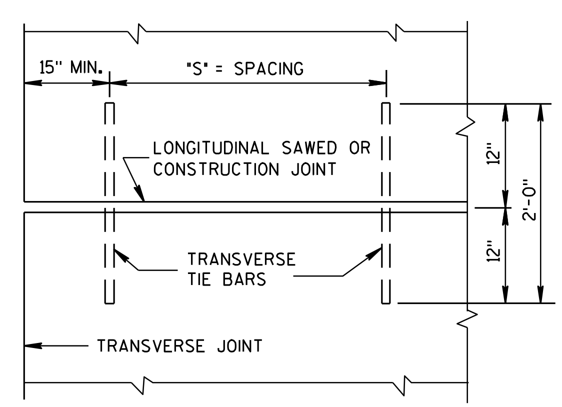
NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. (1)



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

PAVEMENT DEPTH "D"	CLEAR COVER "C"	MAXIMUM TIE BAR SPACING "S" PAVEMENT WIDTH	
		24' OR 26'	≥ 30'
6, 6 1/2"	3"±1/2"	48"	42"
7, 7 1/2"	3 1/4"±1"	45"	36"
8, 8 1/2"	3 3/4"±1"	39"	30"
9, 9 1/2"	4 1/4"±1"	33"	27"
10, 10 1/2"	4 3/4"±1"	30"	24"
11, 11 1/2"	5 1/4"±1"	27"	21"
12"	5 3/4"±1"	24"	21"

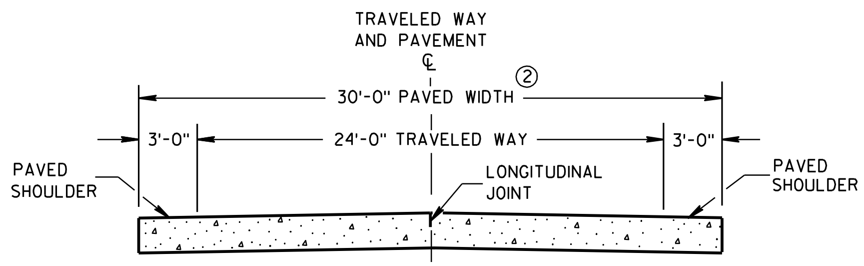


PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

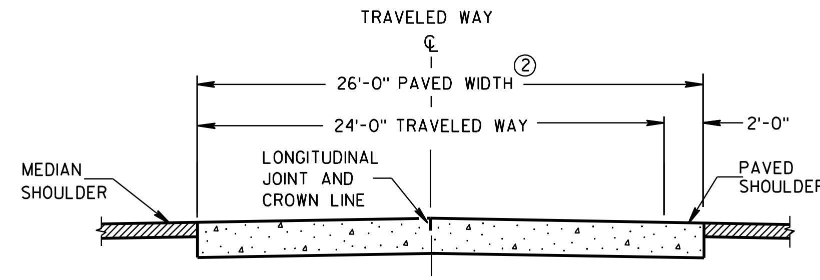
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED
10-5-2010 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE... ENGINEER
FHWA

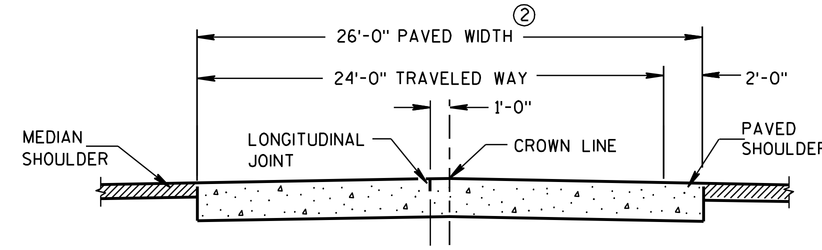


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B

①

DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, CENTER THE DOWEL ASSEMBLY ACROSS THE LANES. LOCATE THE INNER AND OUTER MOST DOWEL BARS SO THAT THE CENTER OF THE BARS ARE A MINIMUM OF 6 INCHES AND A MAXIMUM OF 12 INCHES FROM THE LONGITUDINAL JOINT AND THE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

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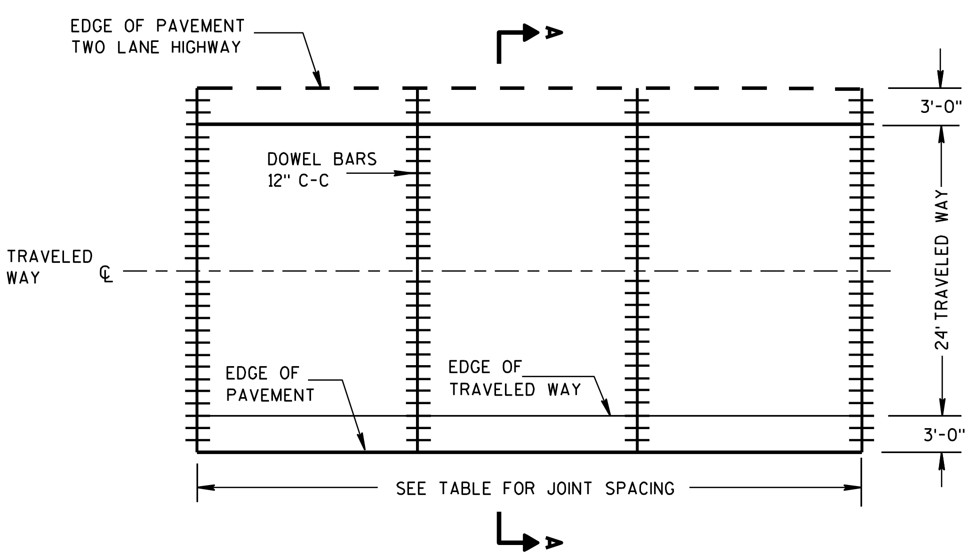
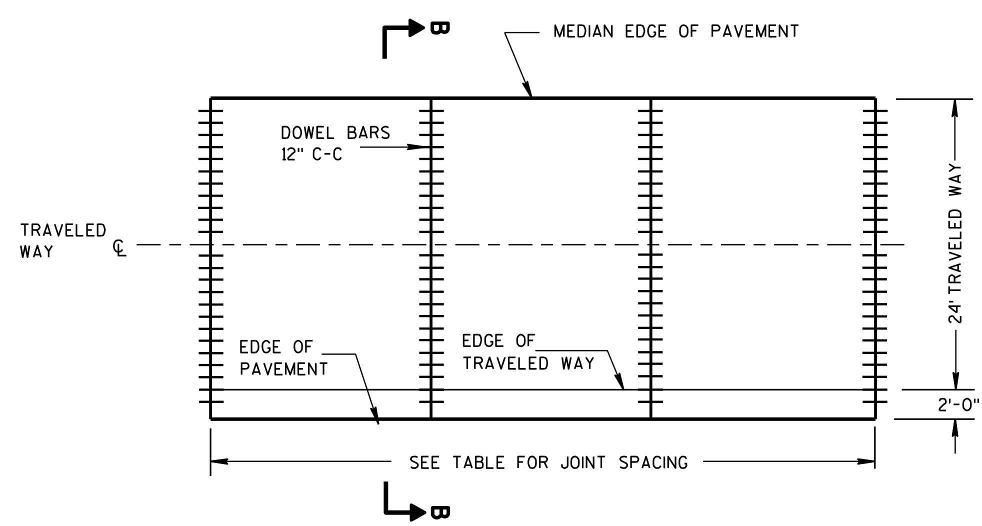


CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED
CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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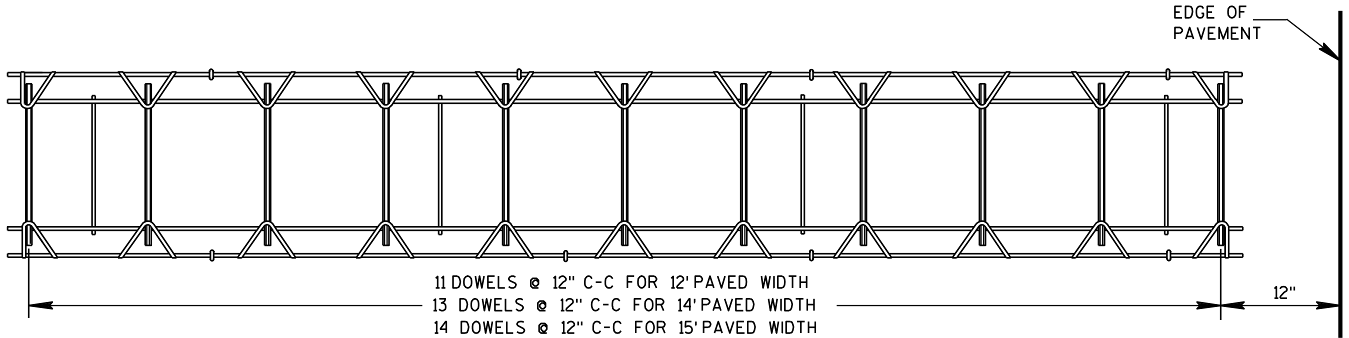
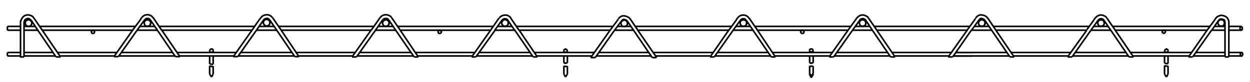


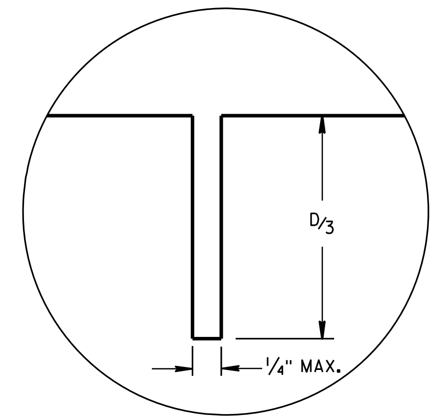
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① THE ENGINEER MAY APPROVE THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. THE CONTRACTOR MAY USE MECHANICAL DOWEL BAR INSERTERS INSTEAD OF DOWEL ASSEMBLIES.

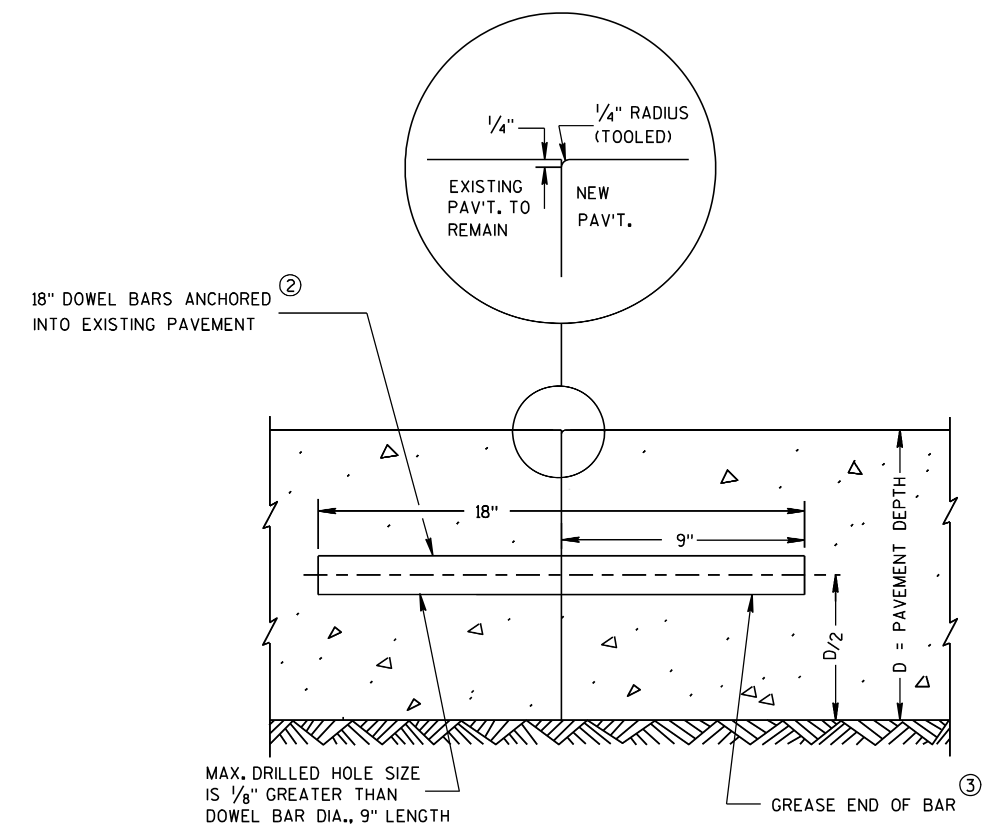
② ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

③ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

④ SPACE DOWEL BARS INSTALLED BY DRILLING 1'-3" ON CENTER. CENTER THE GROUPING OF DOWEL BARS INSIDE THE SLAB BASED ON ALL THE FOLLOWING SITUATIONS:

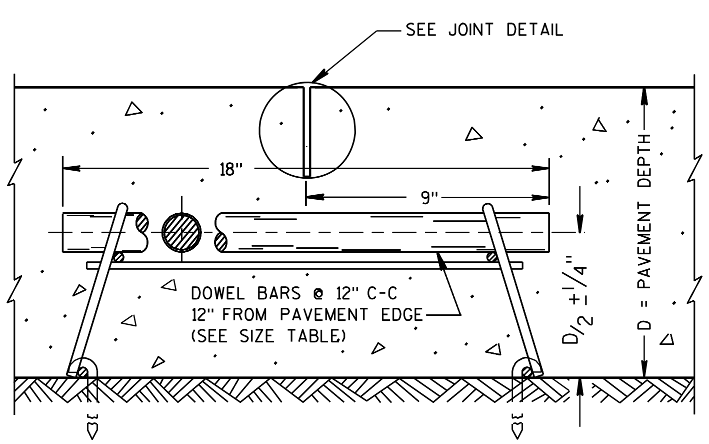
BETWEEN THE EDGES OF PAVEMENTS WITHOUT LONGITUDINAL JOINTS OR BETWEEN THE EDGE OF PAVEMENT AND NEAREST LONGITUDINAL JOINT OR BETWEEN TWO ADJACENT LONGITUDINAL JOINTS.

⑤ SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

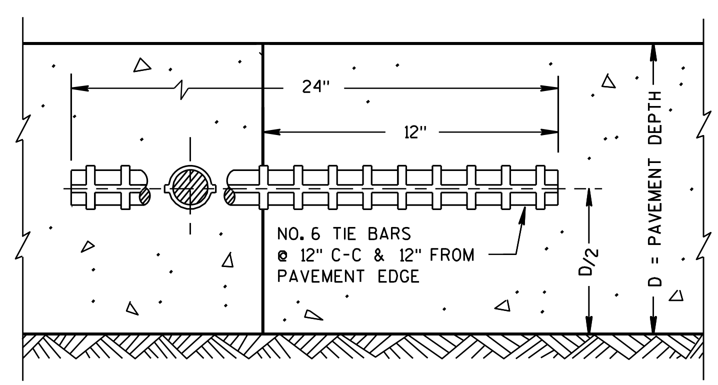


TRANSVERSE CONTRACTION JOINTS ABUTTING EXISTING PAVEMENT

④ DOWEL BAR DETAIL



DOWELED CONTRACTION JOINT



CONSTRUCTION JOINT

RIRAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/11/09 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE 59 NEER
FHWA

6

GENERAL NOTES

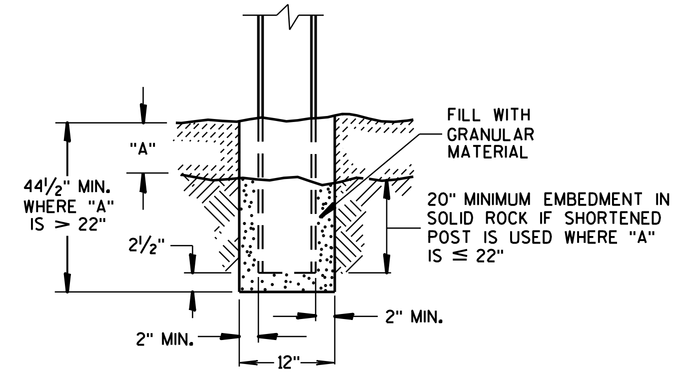
1. WOOD OR STEEL POSTS (W6X9 OR W6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

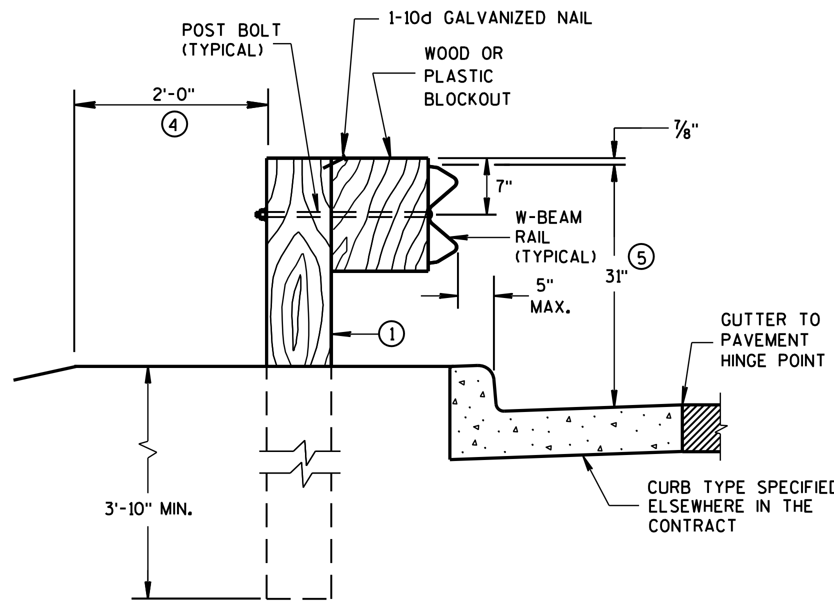
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

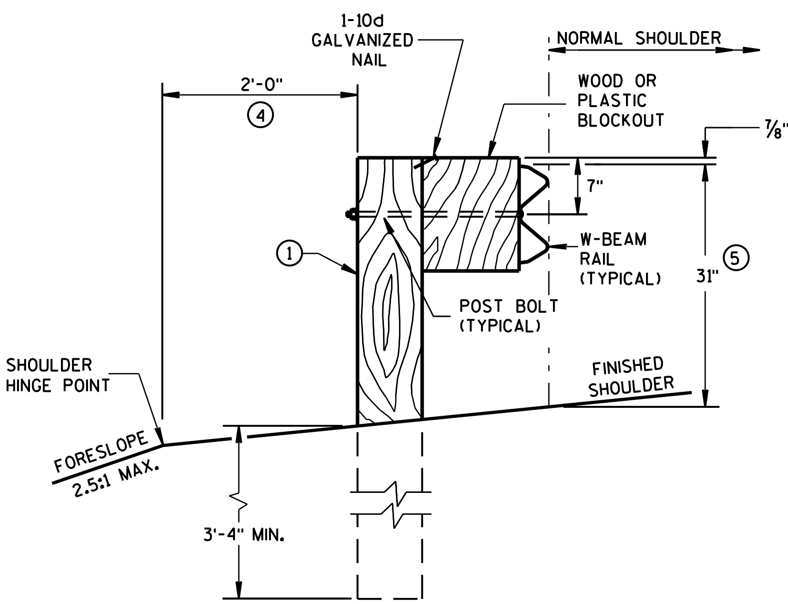
5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".



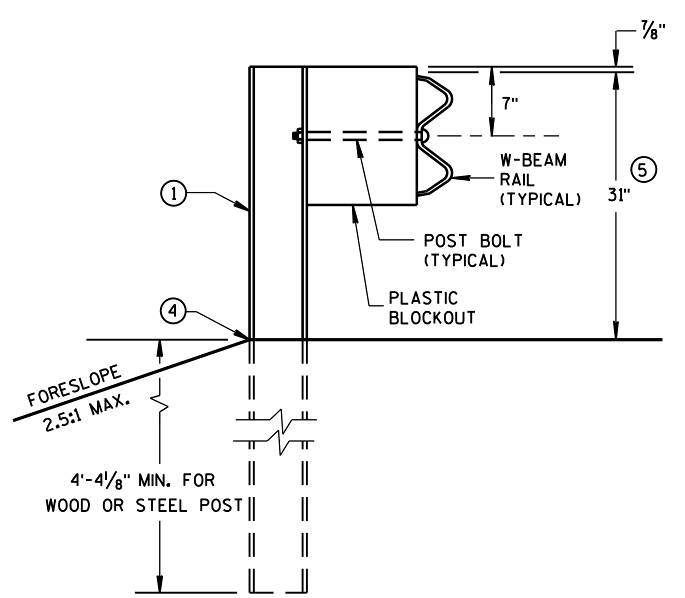
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



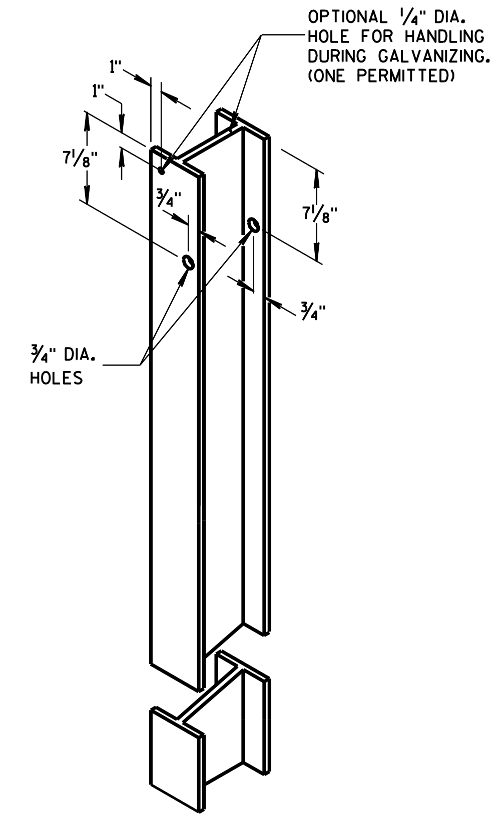
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION

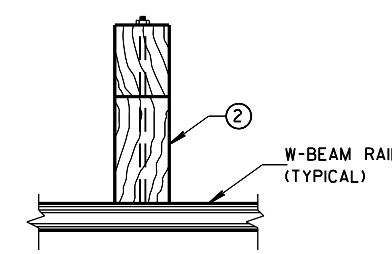


END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)

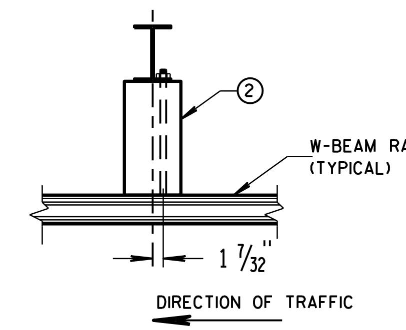


STEEL POST & HOLE PUNCHING DETAIL (W6X9) (1)

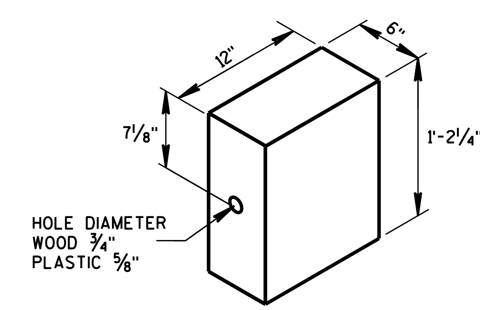
WOOD POST (6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

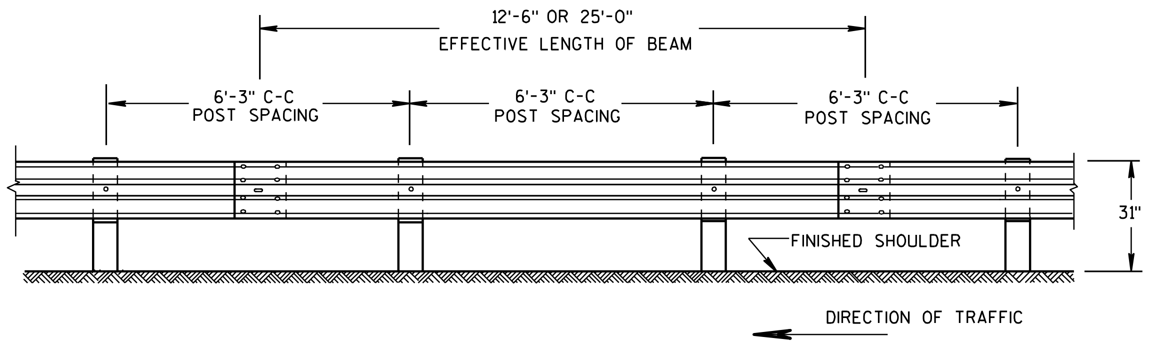
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

S.D.D. 14 B 42-2a

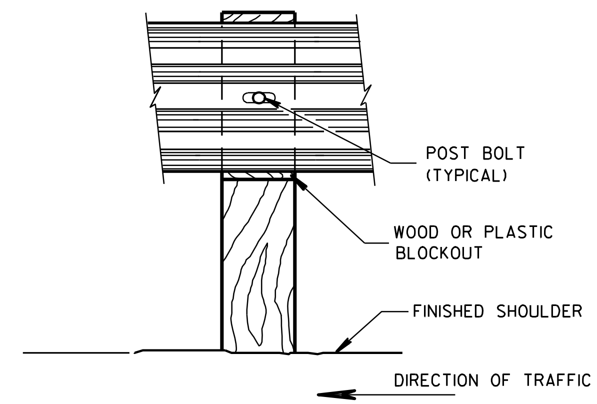
6

S.D.D. 14 B 42-2a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



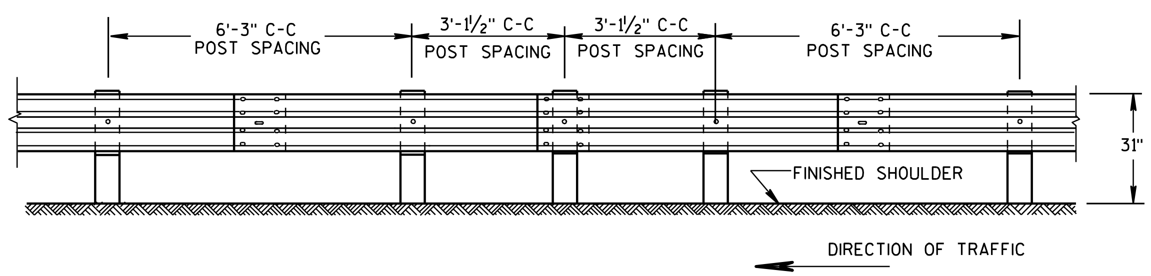
FRONT VIEW AT WOOD POST

GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

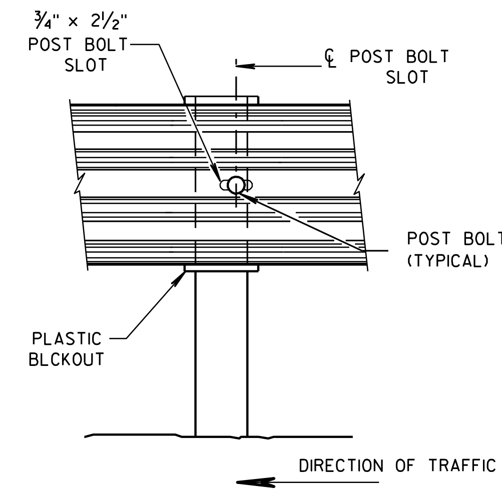
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

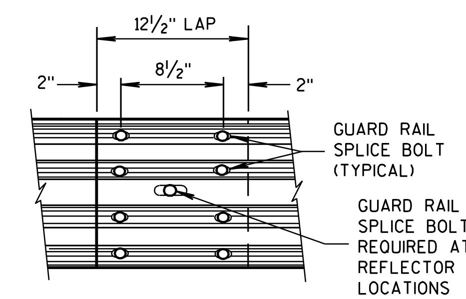


FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

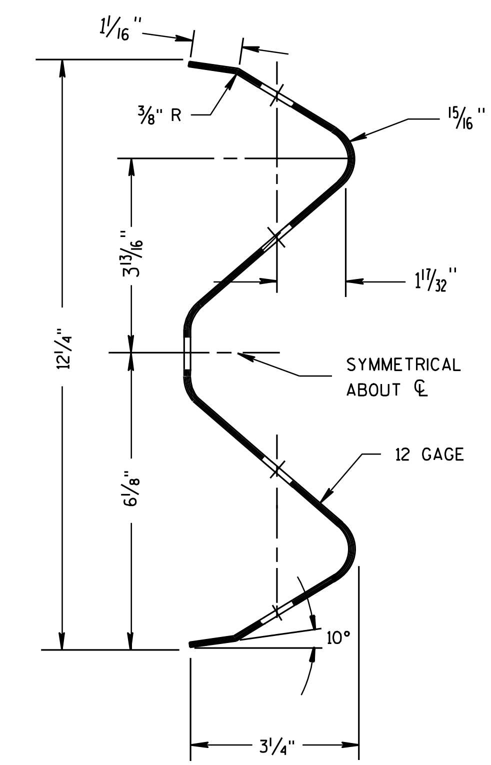


FRONT VIEW AT STEEL POST

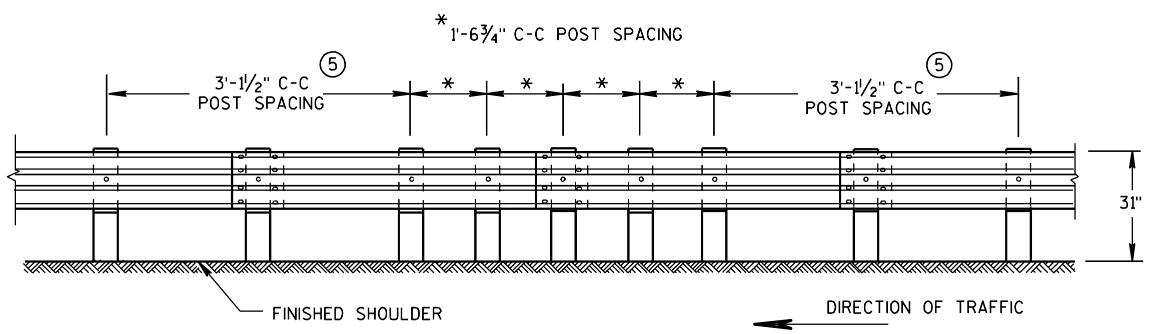


FRONT VIEW

MID-SPAN BEAM SPLICE

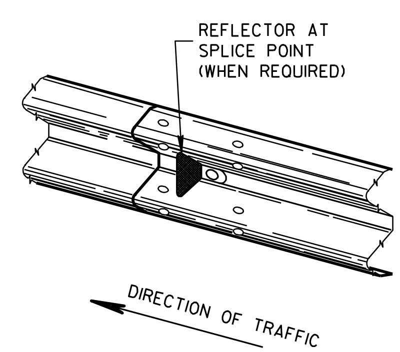


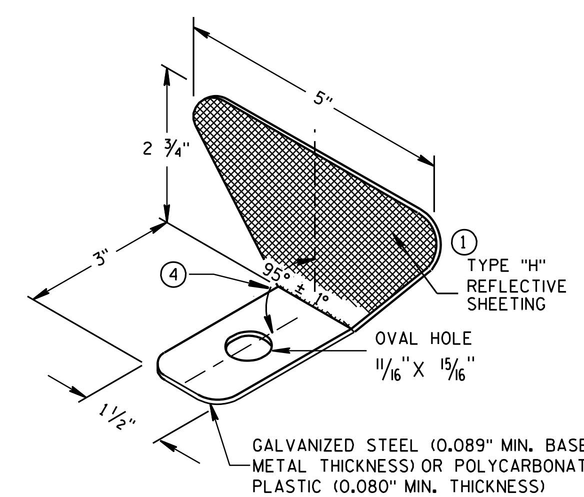
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





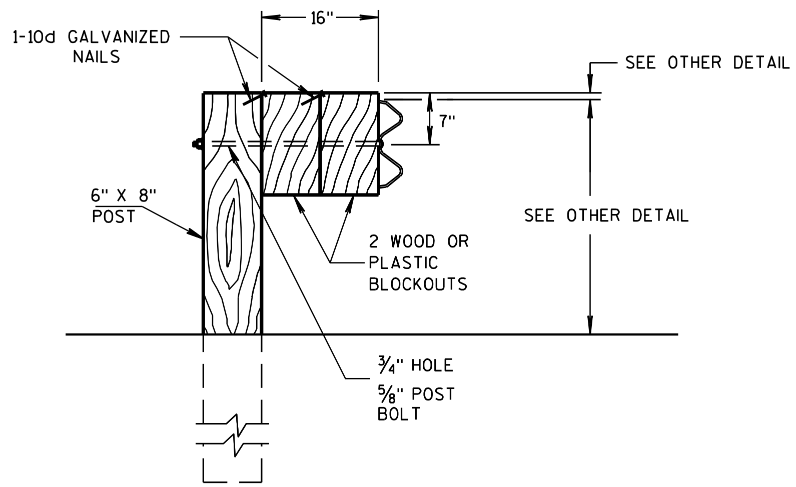
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

REFLECTOR SPACING (2)

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 (3) 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 (4) 2	3

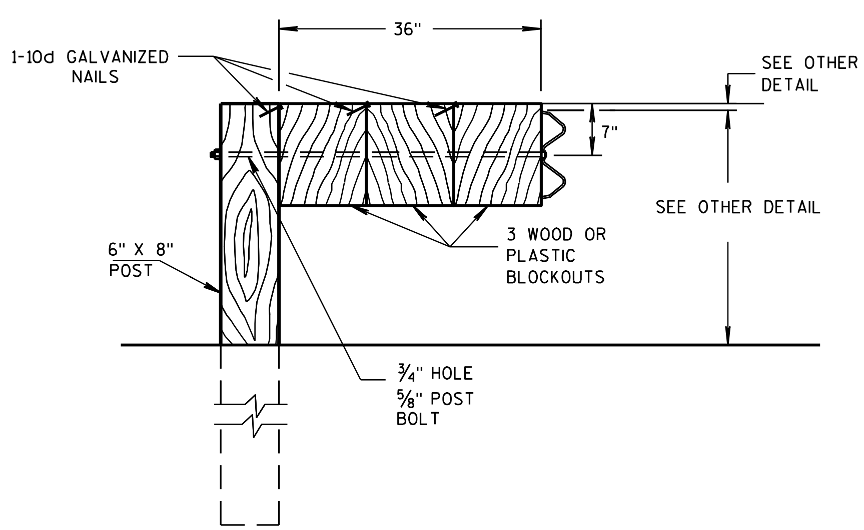
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

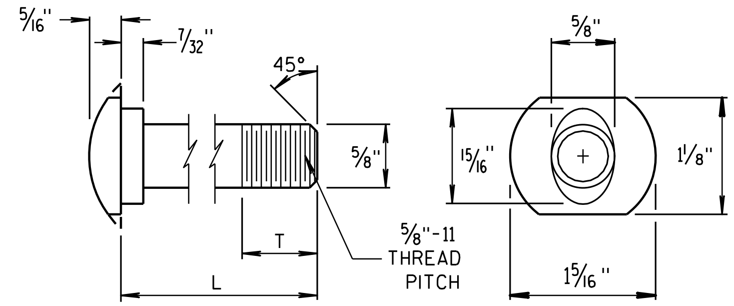


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

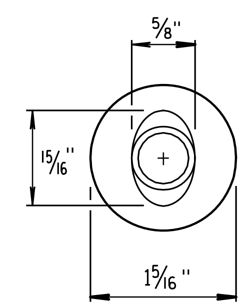
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

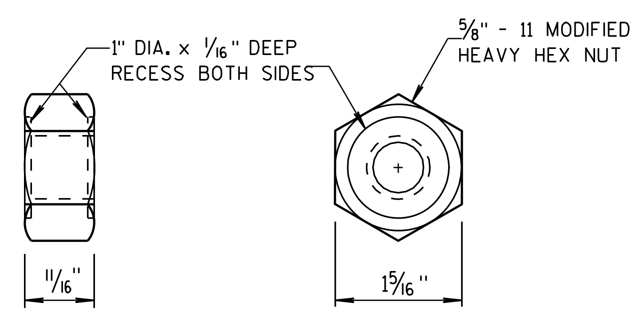


POST BOLT TABLE

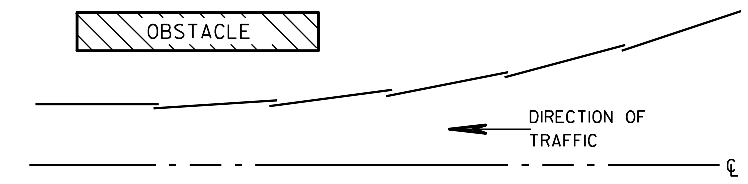
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

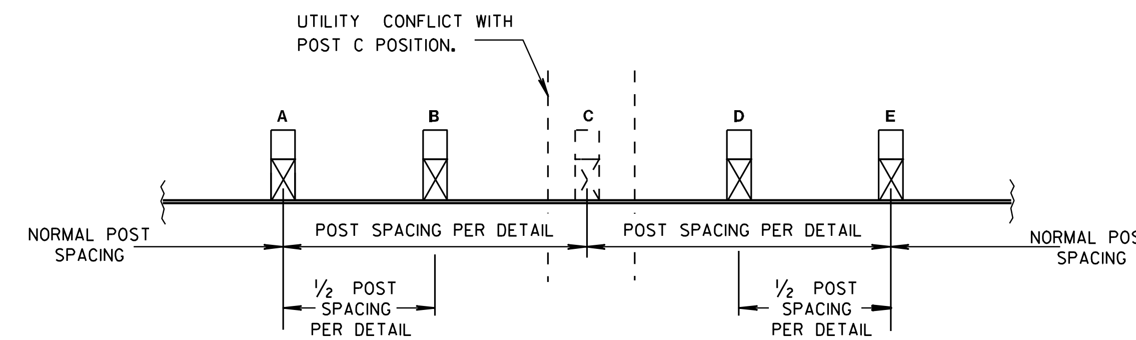


POST BOLT AND RECESS NUT

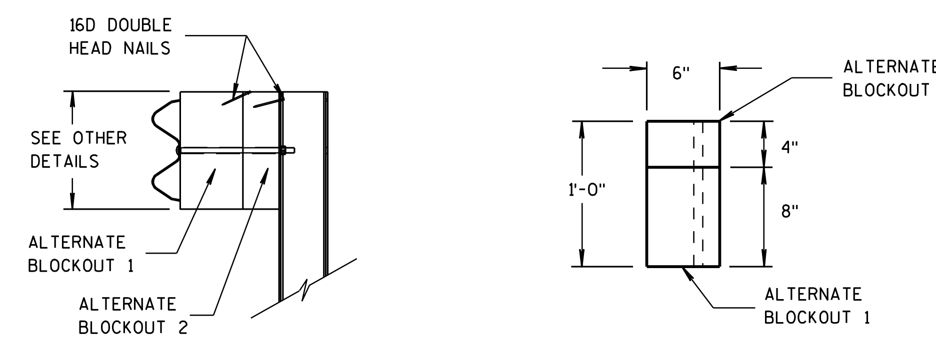


PLAN VIEW

BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW **TOP VIEW**

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/15/2011 DATE FHWA	/S/ Jerry H. Zogg ROADWAY STANDARDS ENGINEER

6

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S.D.D. 14 B 42-2c

S.D.D. 14 B 42-2c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL),AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.

(G) 1/2" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

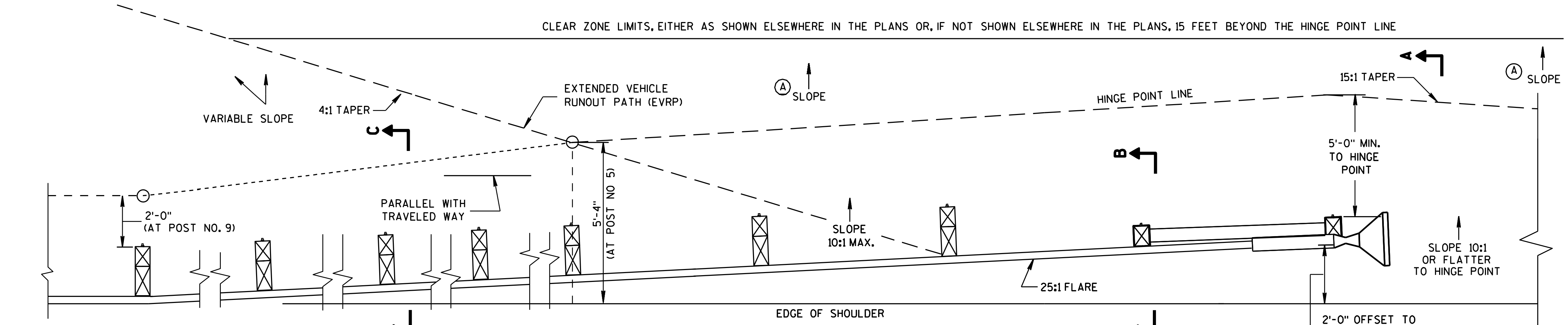
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

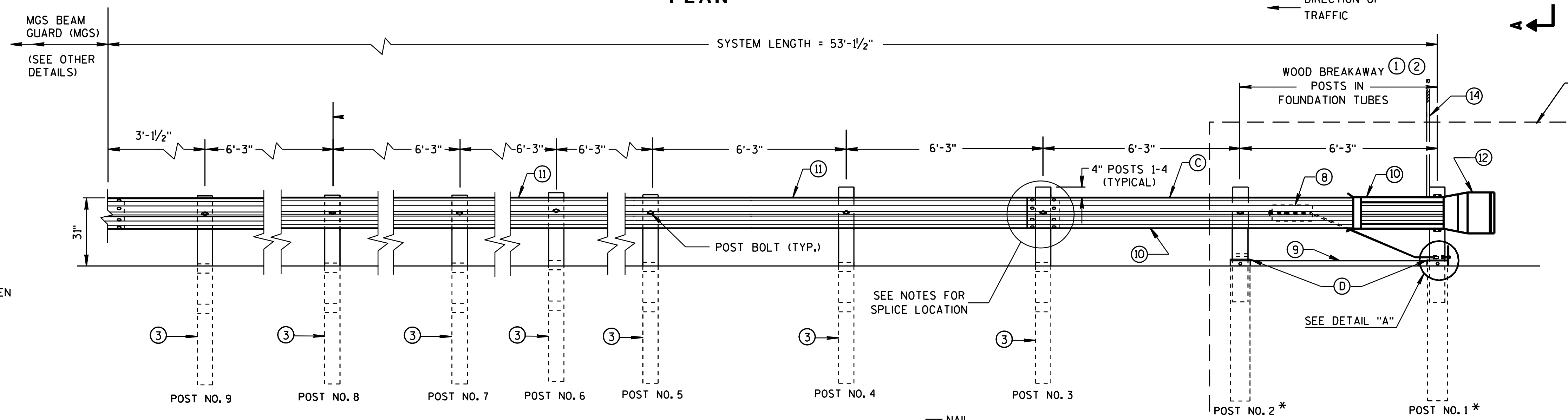
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

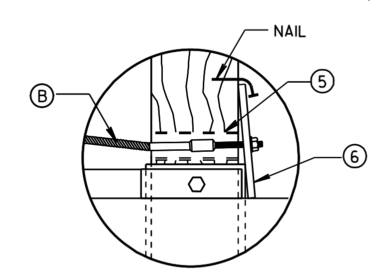
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± 3/4")



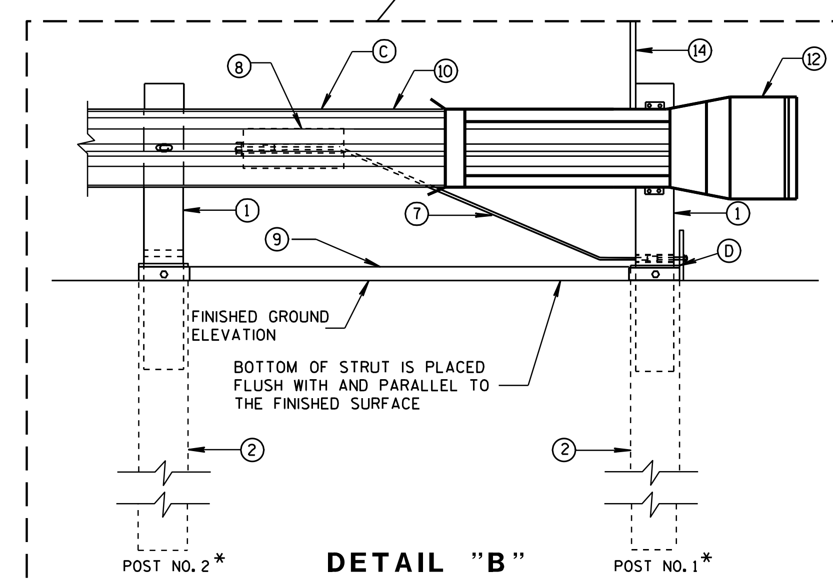
PLAN



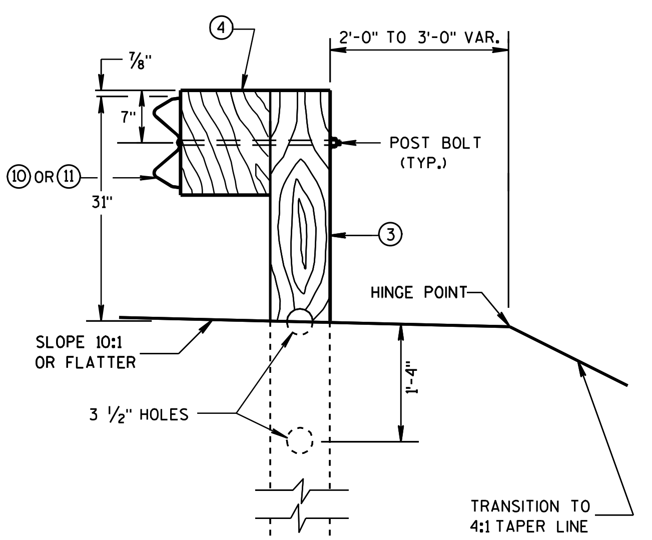
ELEVATION



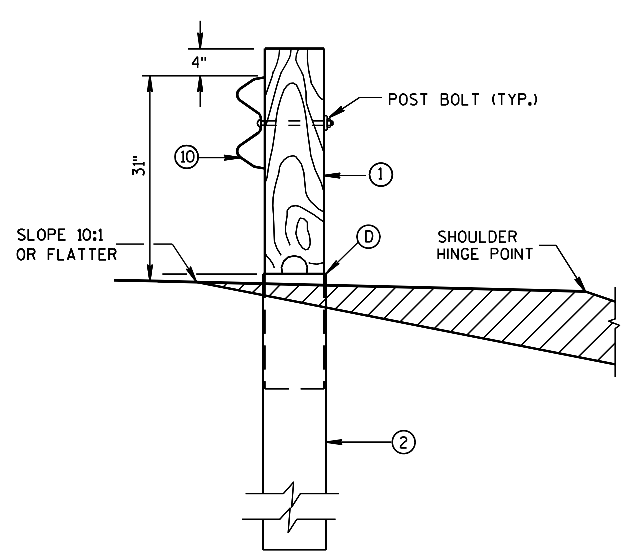
DETAIL "A"



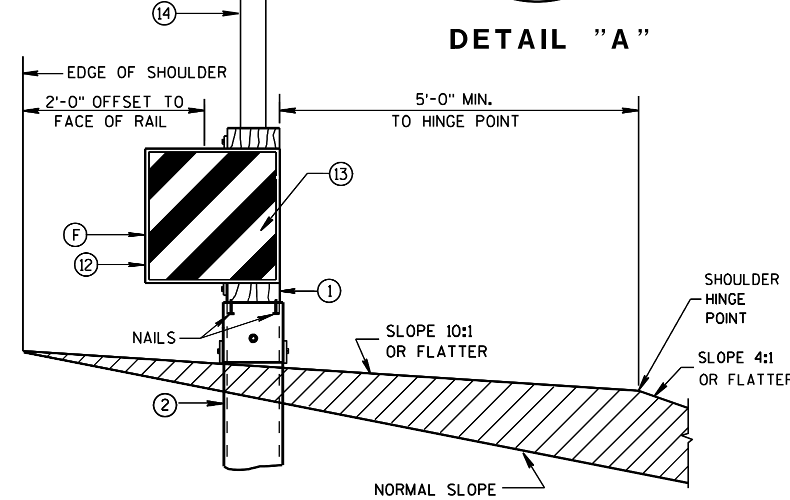
DETAIL "B"



SECTION C-C
TYPICAL AT POST NOS. 3-9



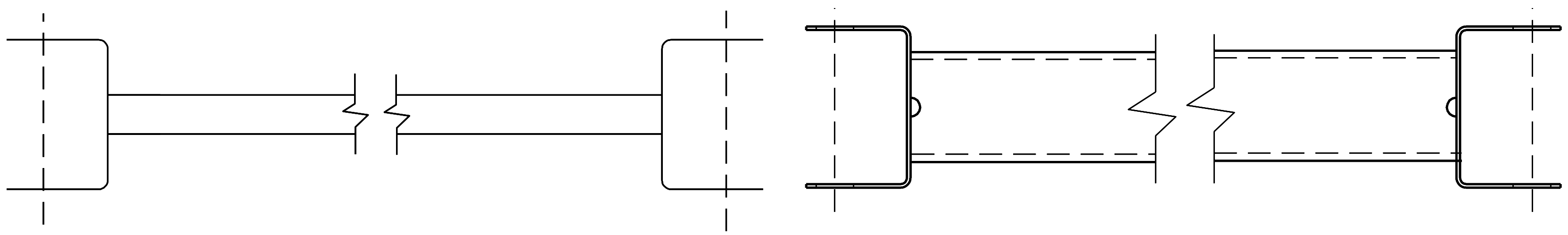
SECTION B-B
TYPICAL AT POST NO. 2*



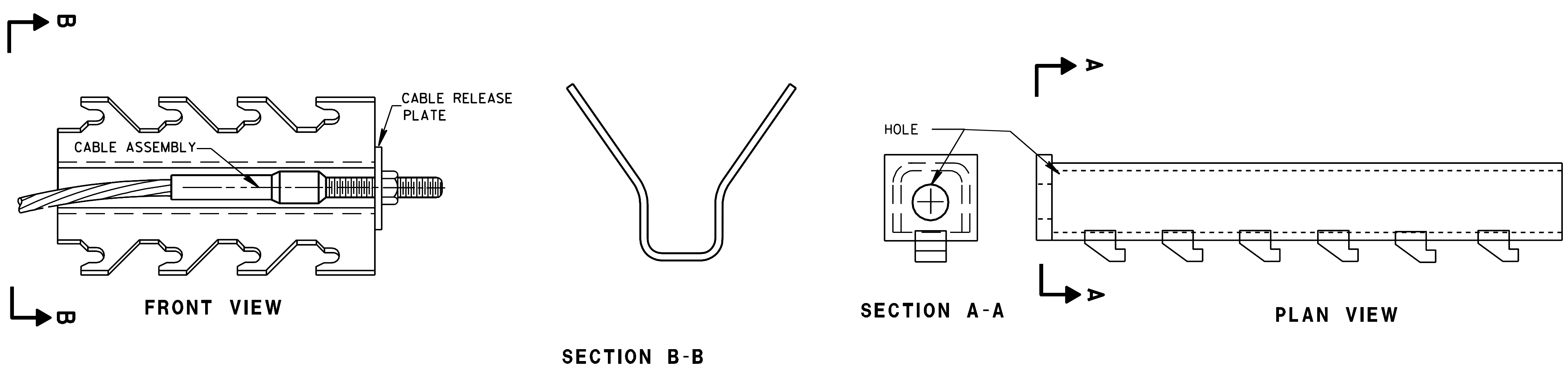
SECTION A-A
TYPICAL AT POST NO. 1*

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



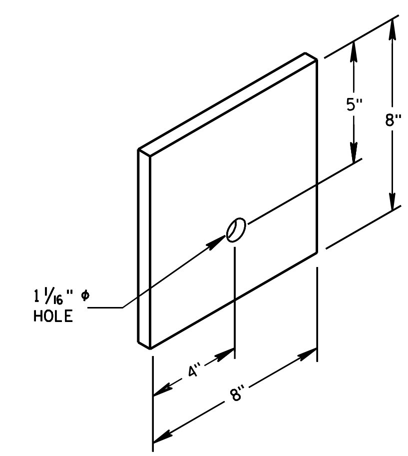
GENERIC GROUND STRUT (9) (H)



GENERIC ANCHOR CABLE BOX (8) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
1	WOOD BREAKAWAY POST
2	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
3	WOOD CRT
4	WOOD BLOCKOUT
5	PIPE SLEEVE
6	BEARING PLATE
7	BCT CABLE ASSEMBLY
8	ANCHOR CABLE BOX
9	GROUND STRUT
10	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
11	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
12	END SECTION EAT
13	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
14	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



BEARING PLATE (6)

6

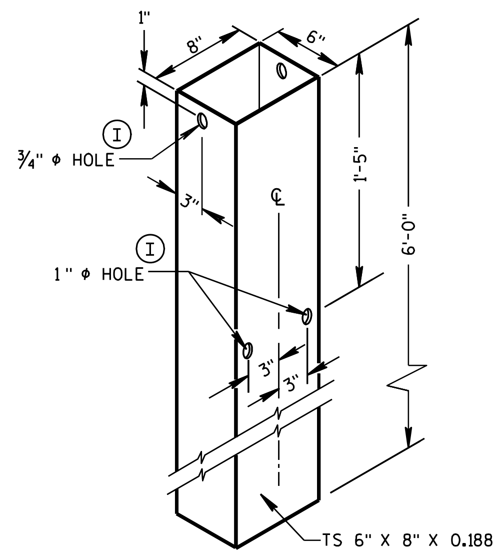
6

S.D.D. 14 B 44-1b

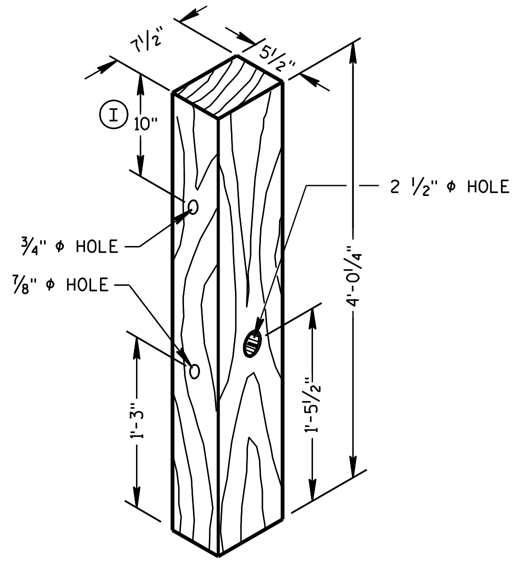
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

S.D.D. 14 B 44-1b

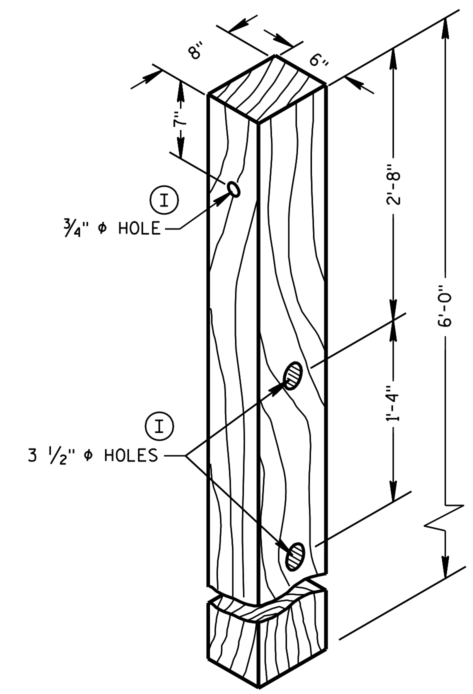


FOUNDATION TUBE (2)



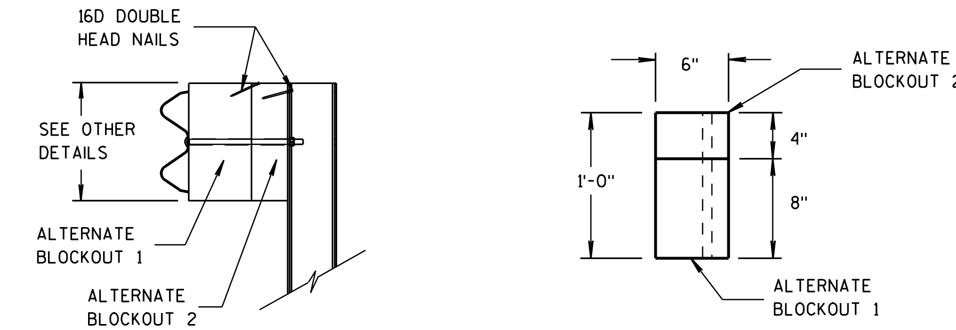
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

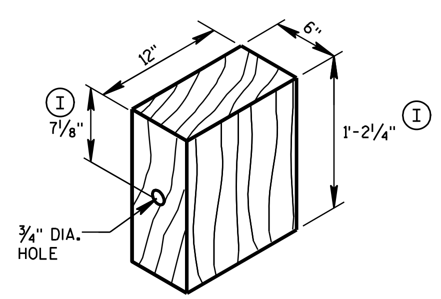


POSTS NUMBER 3-9

WOOD CRT POST (3)

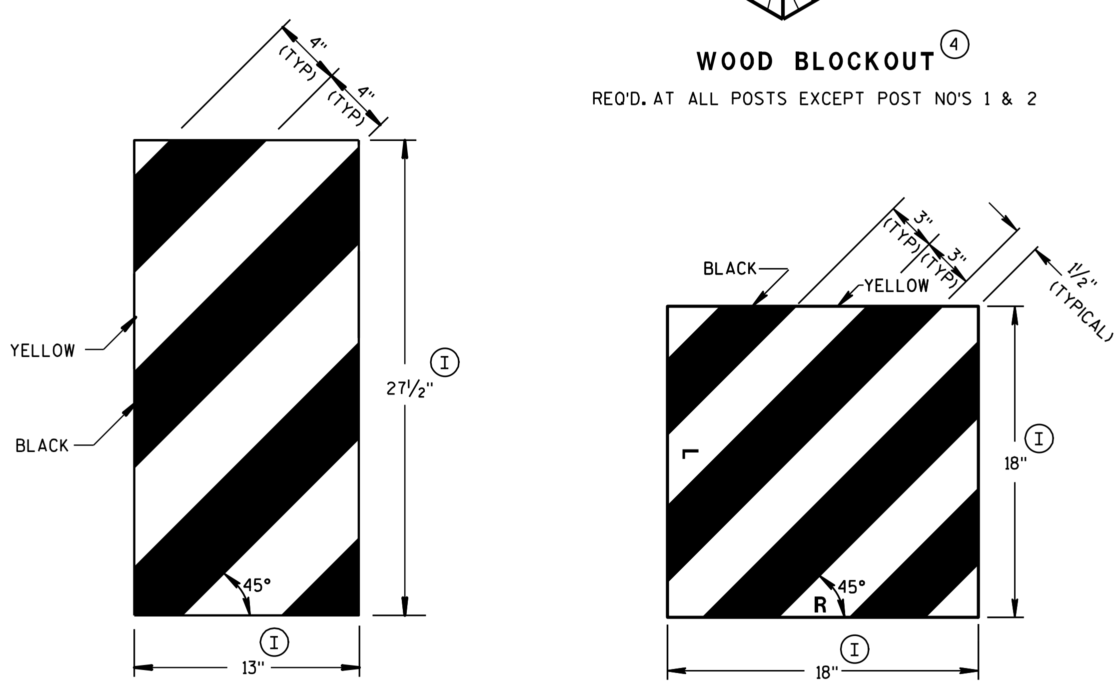


ALTERNATE WOOD BLOCKOUT DETAIL

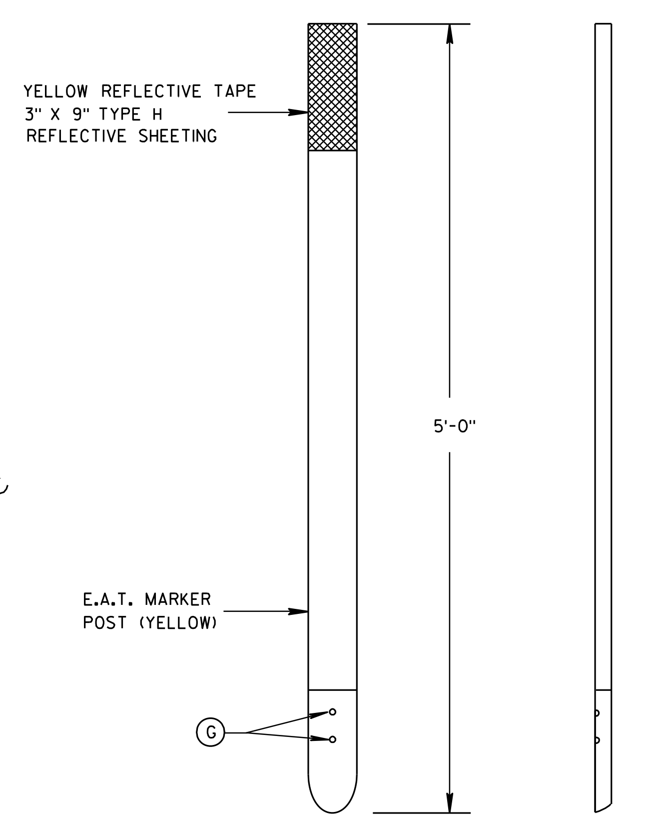


WOOD BLOCKOUT (4)

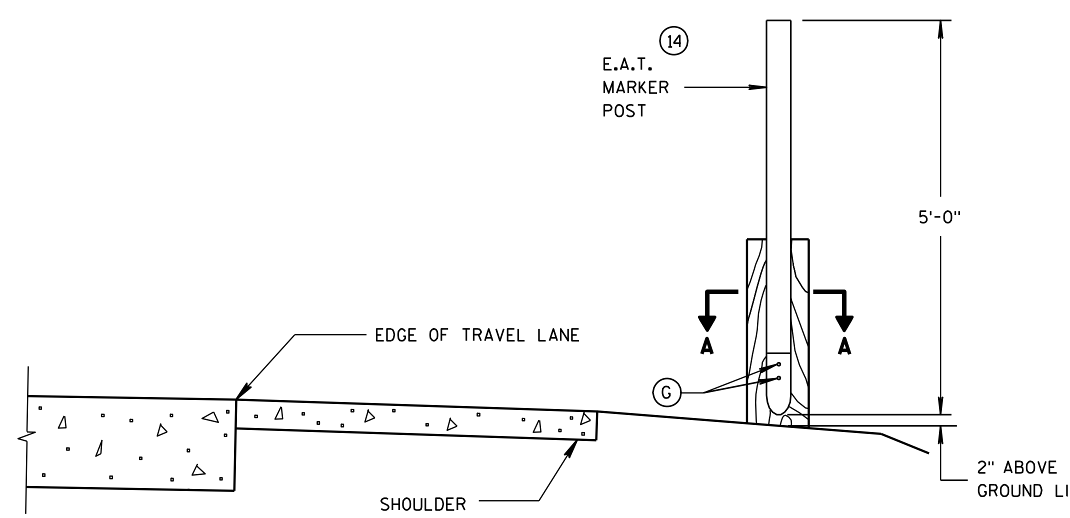
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



GENERIC REFLECTIVE SHEETING (13) (H)

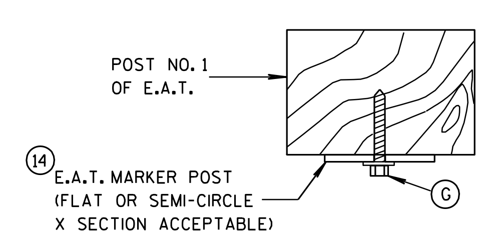


E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED 5/23/2011 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER	FHWA

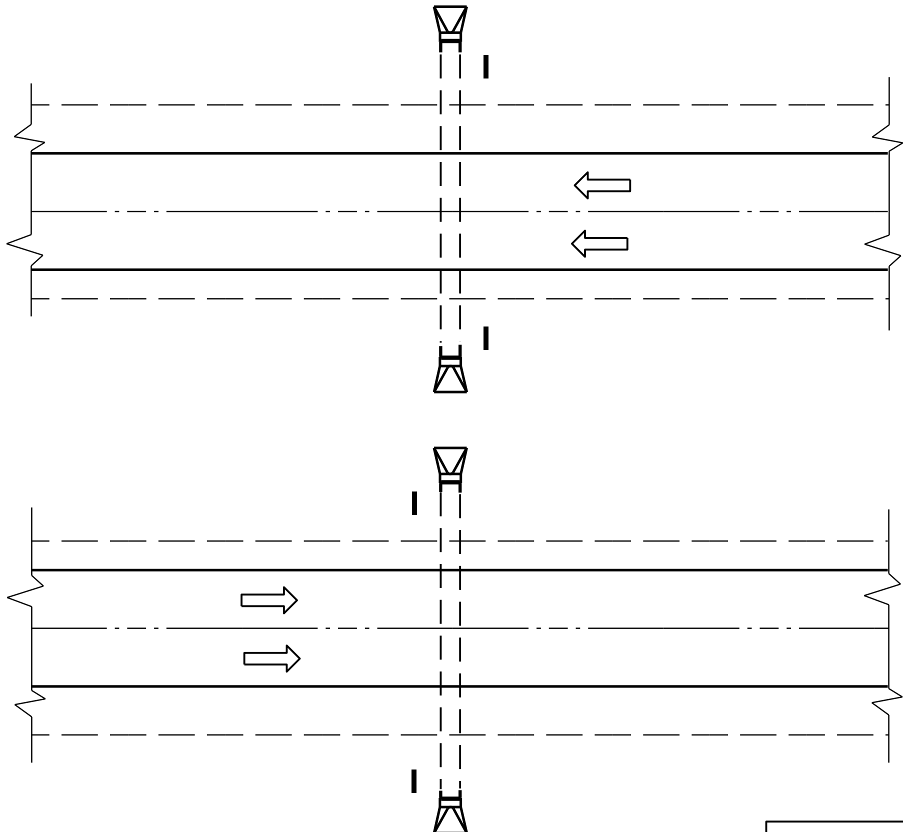
S.D.D. 14 B 44-1c

6

6

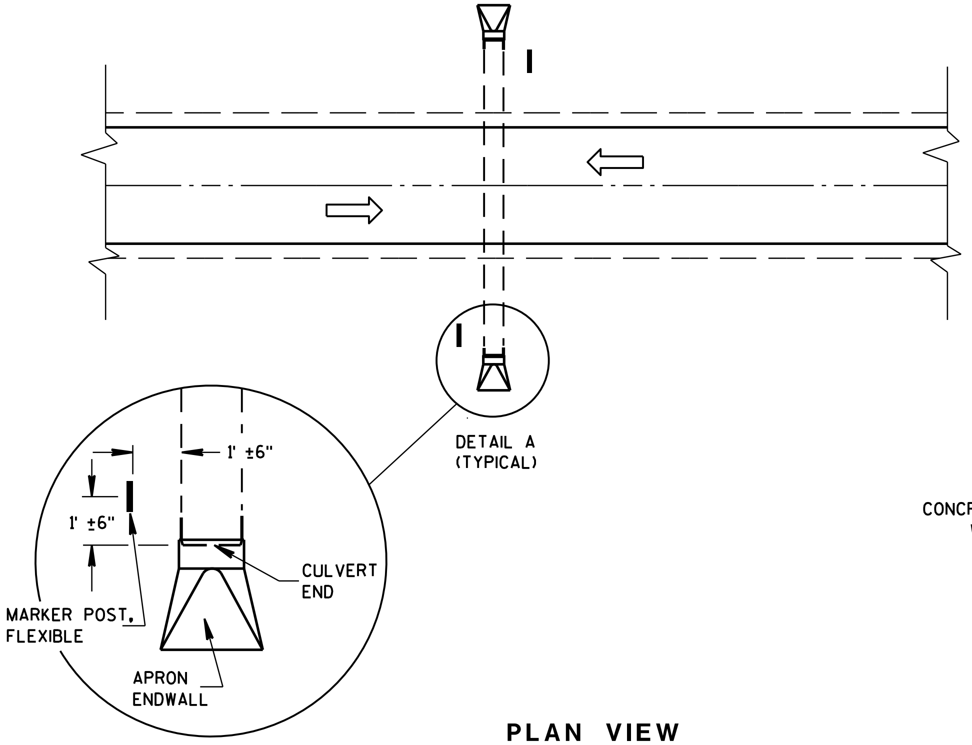
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

DIVIDED HIGHWAY

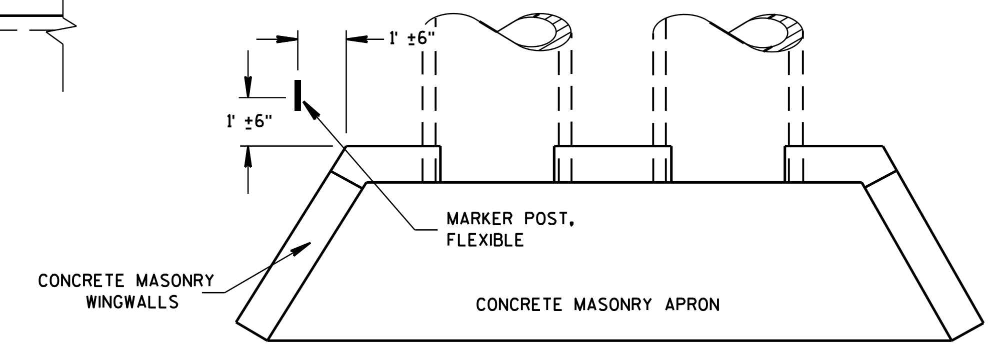


DETAIL A
(TYPICAL)

PLAN VIEW

UNDIVIDED HIGHWAY

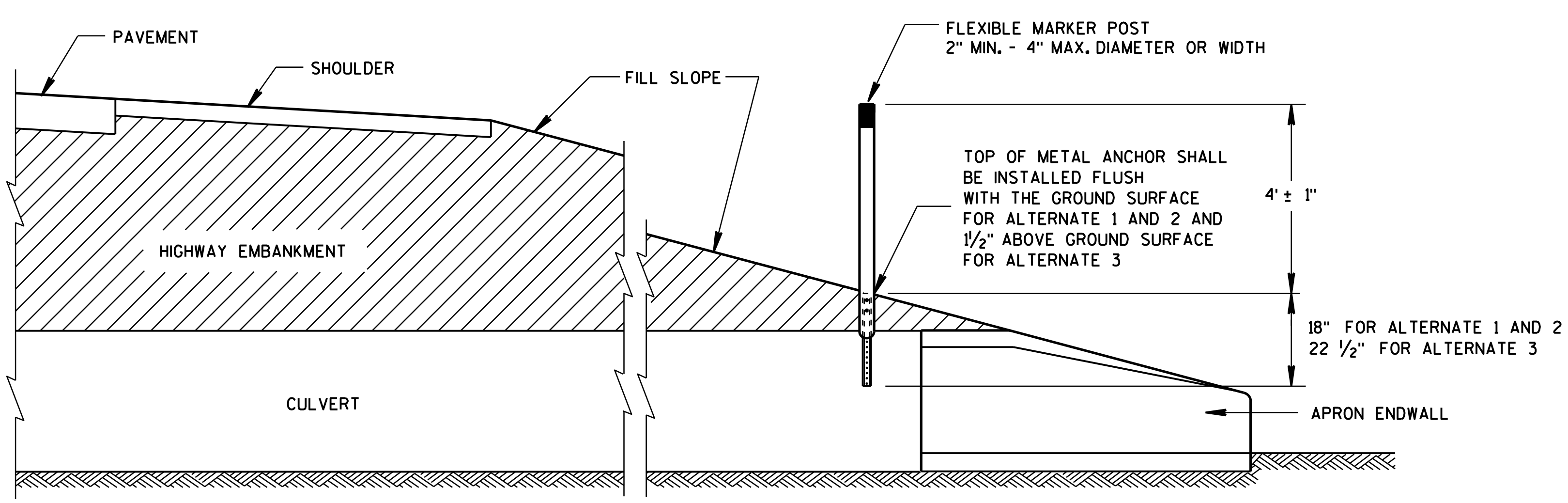
I	MARKER POST, FLEXIBLE
⇨	DIRECTION OF TRAFFIC FLOW



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION

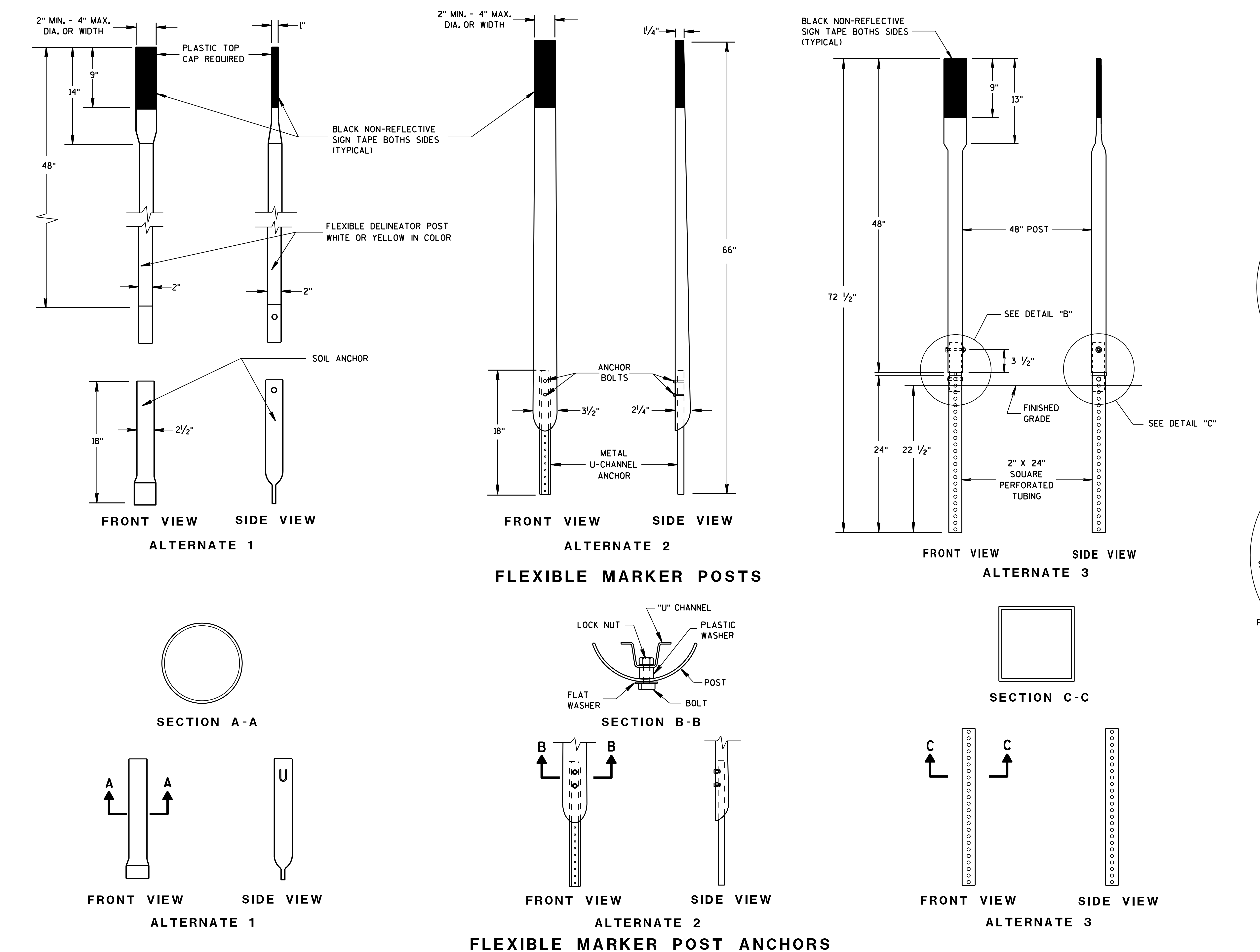


CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END
STATE OF WISCONSIN DEPARTMENT OF TRANSPO

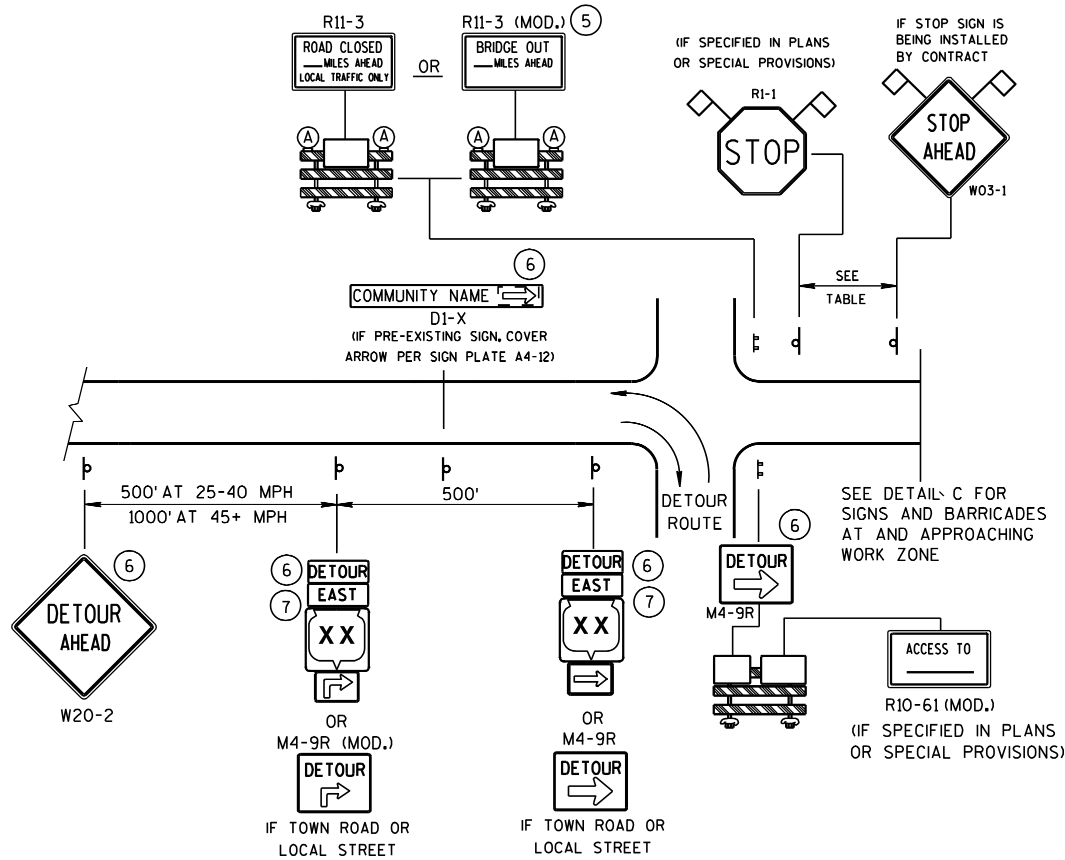
S.D.D. 15 A 3-2a



FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

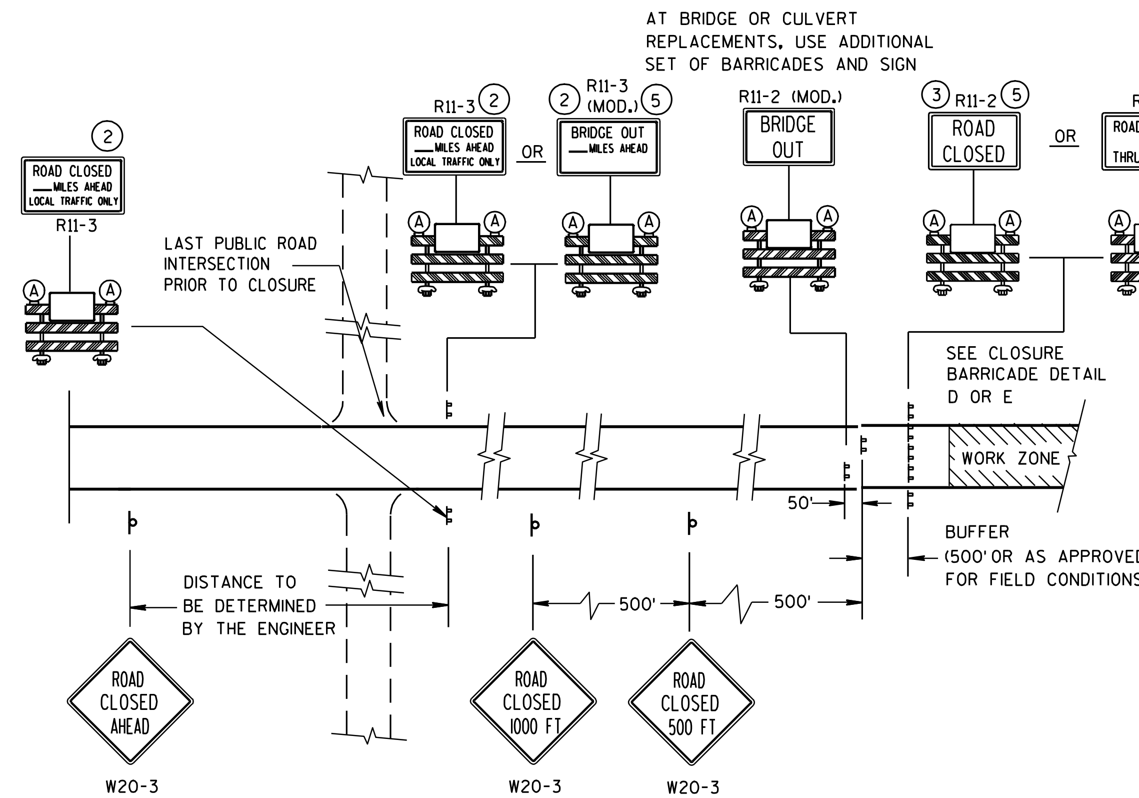
APPROVED		
10/1/2012	/S/ Travis Feltes	
DATE	STATE TRAFFIC ENGINEER	IGN
FHWA		



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

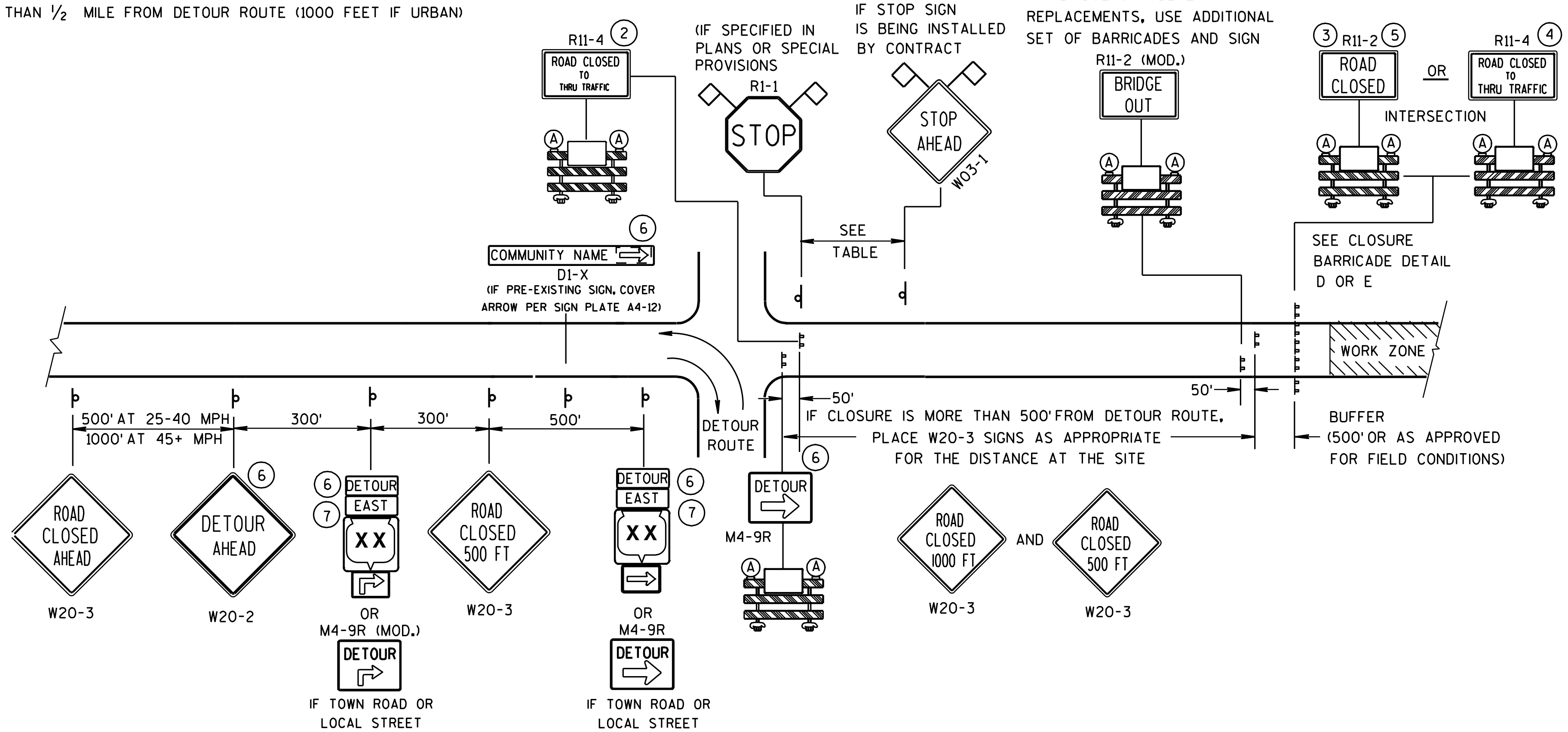


DETAIL C

MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

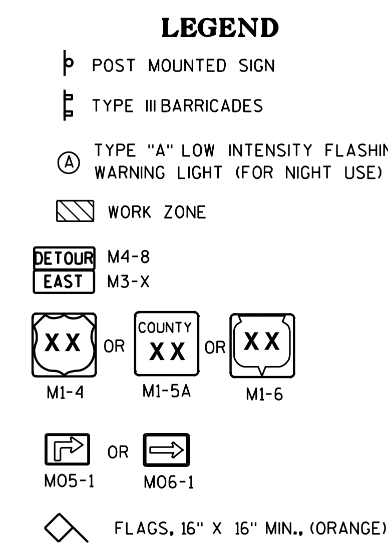
SEE SDD 15C2-4b FOR GENERAL NOTES AND FOOTNOTES 1 THROUGH 7



DETAIL B

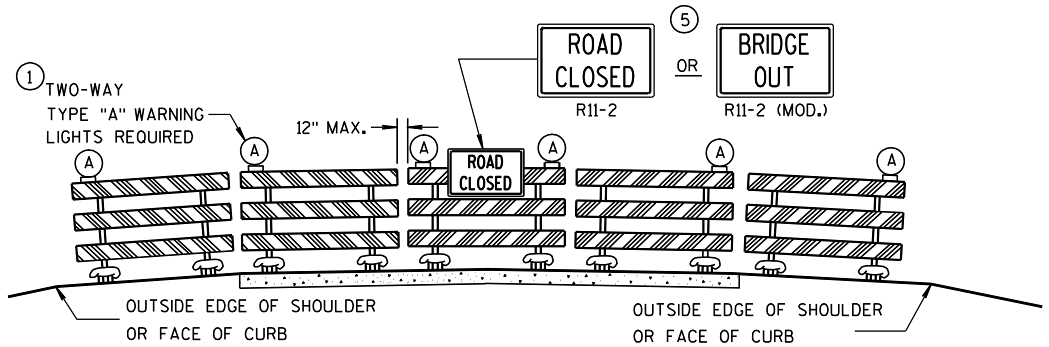
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



BARRICADES AND SIGNS FOR MAINLINE CLOSURES

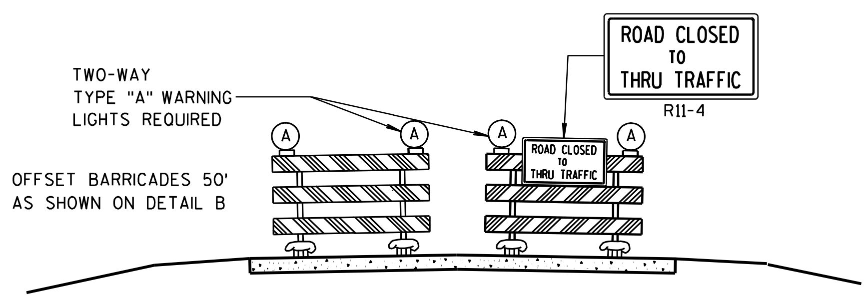
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- MO5-1 AND MO6-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

1. TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
2. THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
3. FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
4. FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
5. FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
6. INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
7. "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

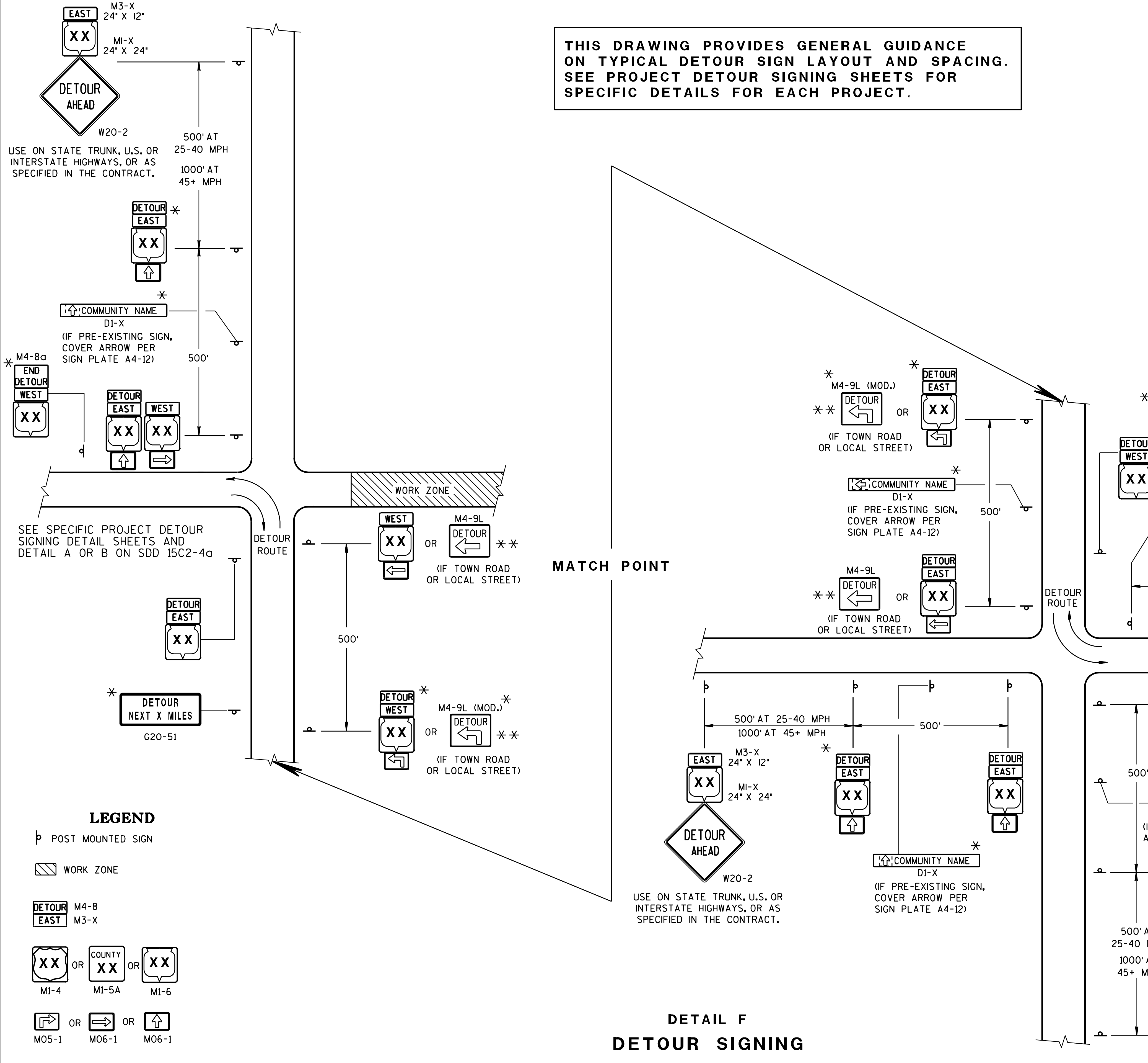
APPROVED

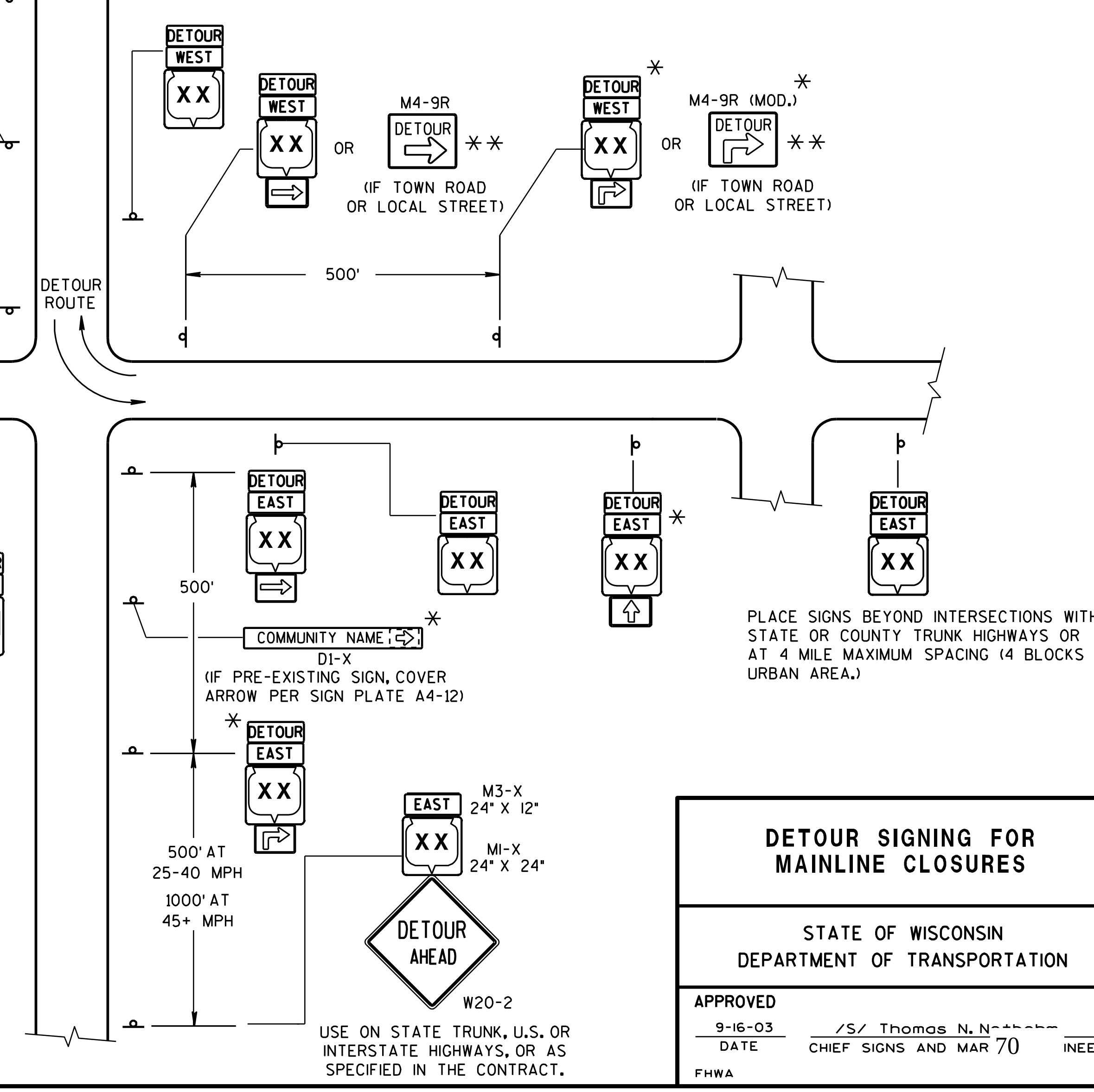
9/16/03 — DATE

/S/ Thomas N. N — CHIEF SIGNS AND MAR INEER

FHWA

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.





GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

DETAIL F

DETOUR SIGNING

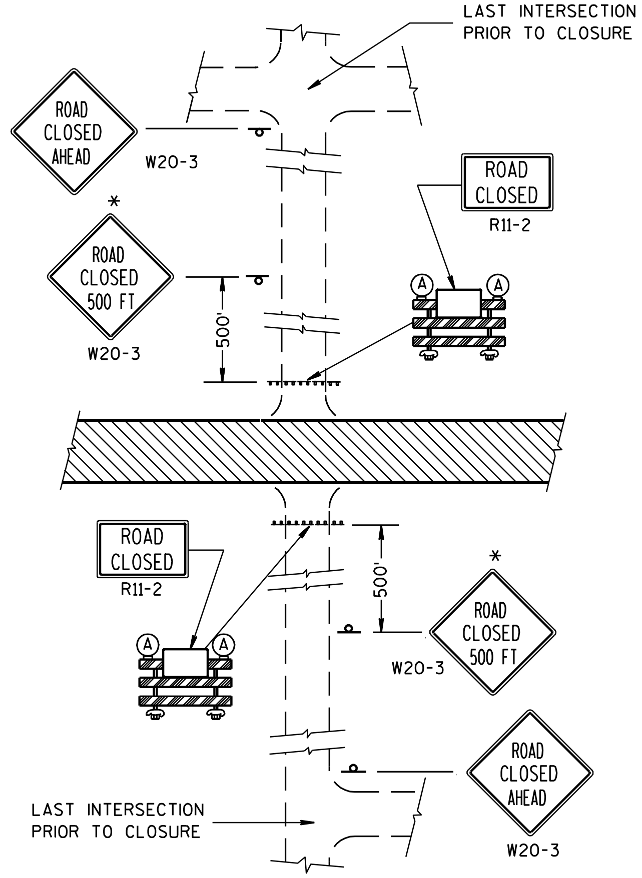
DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-16-03 /S/ Thomas N. Notbohm
DATE CHIEF SIGNS AND MARKINGS ENGINEER
FHWA

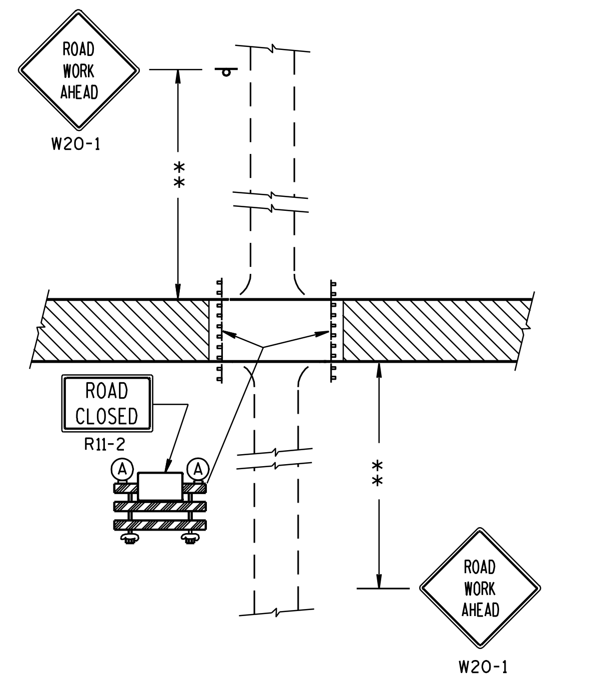
6

S.D.D. 15 C 2-4c



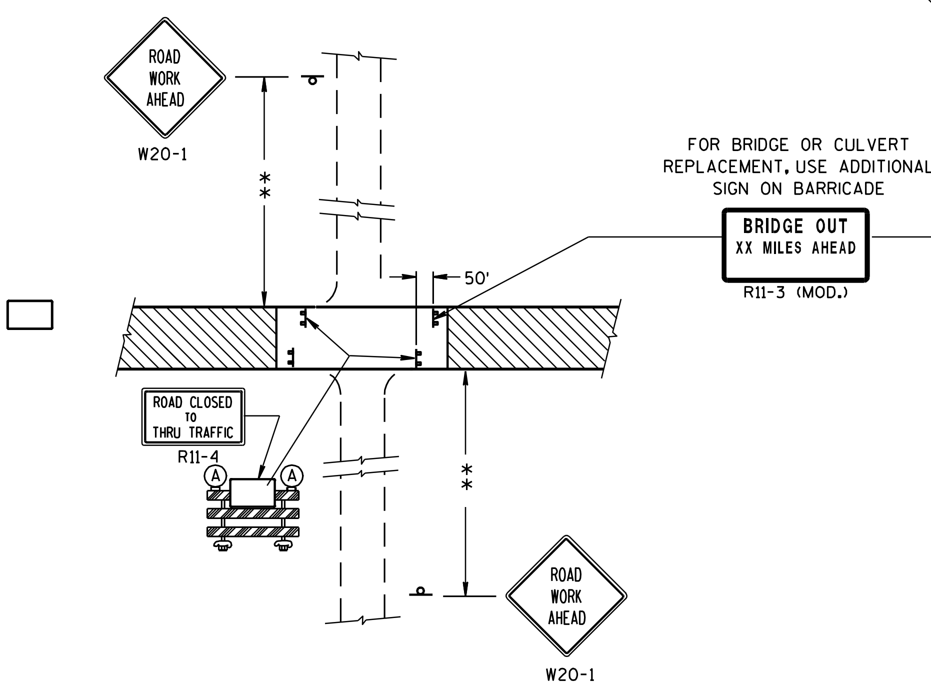
DETAIL 1

(NO ACCESS TO PROJECT)



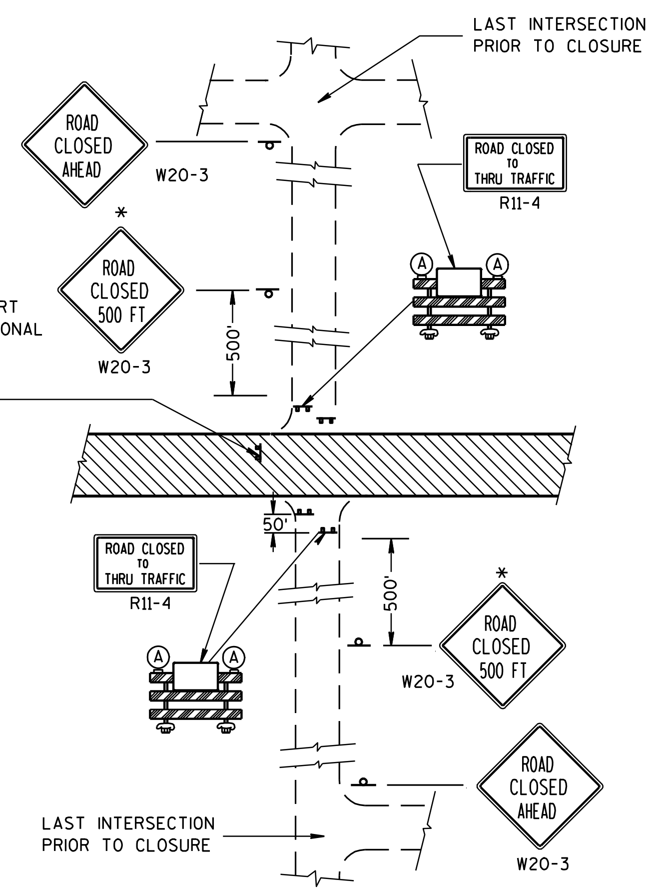
DETAIL 2

(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).



DETAIL 3

(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR,
LOCAL BUSINESS AND RESIDENT ACCESS).



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3 AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

*OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

LEGEND

POST MOUNTED WARNING SIGN

TYPE III BARRICADES

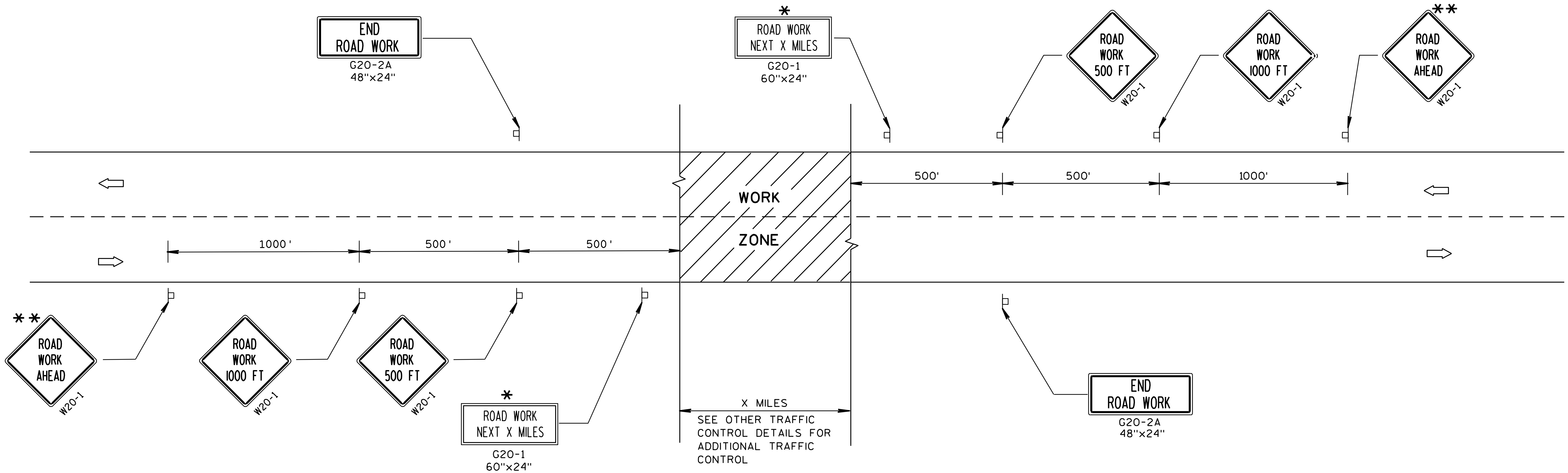
Ⓐ TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)

WORK AREA

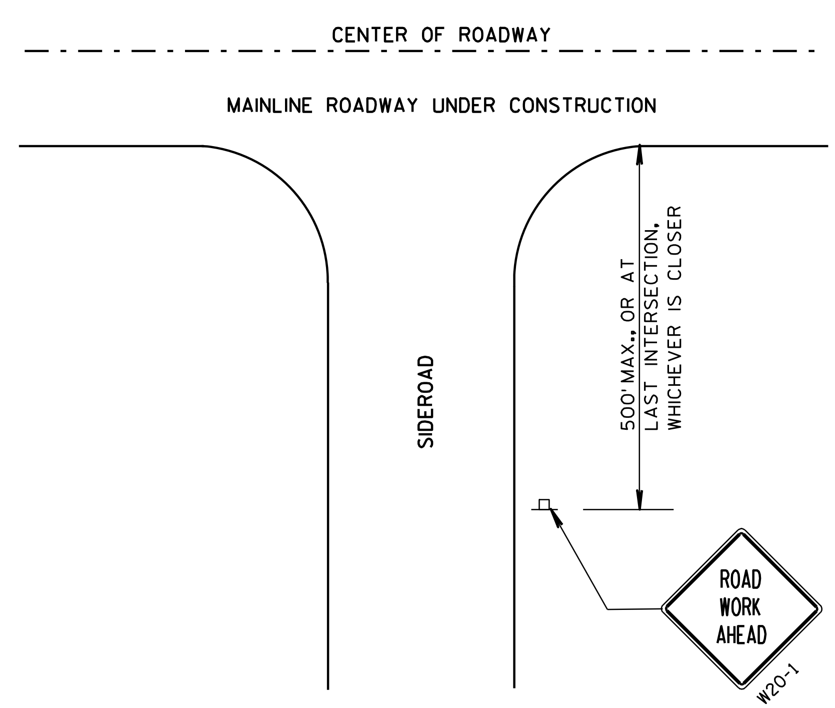
BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-16-03
DATE
/S/ Thomas N. N[illegible]
CHIEF SIGNS AND MAR[illegible]INEER
FHWA



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING.

LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

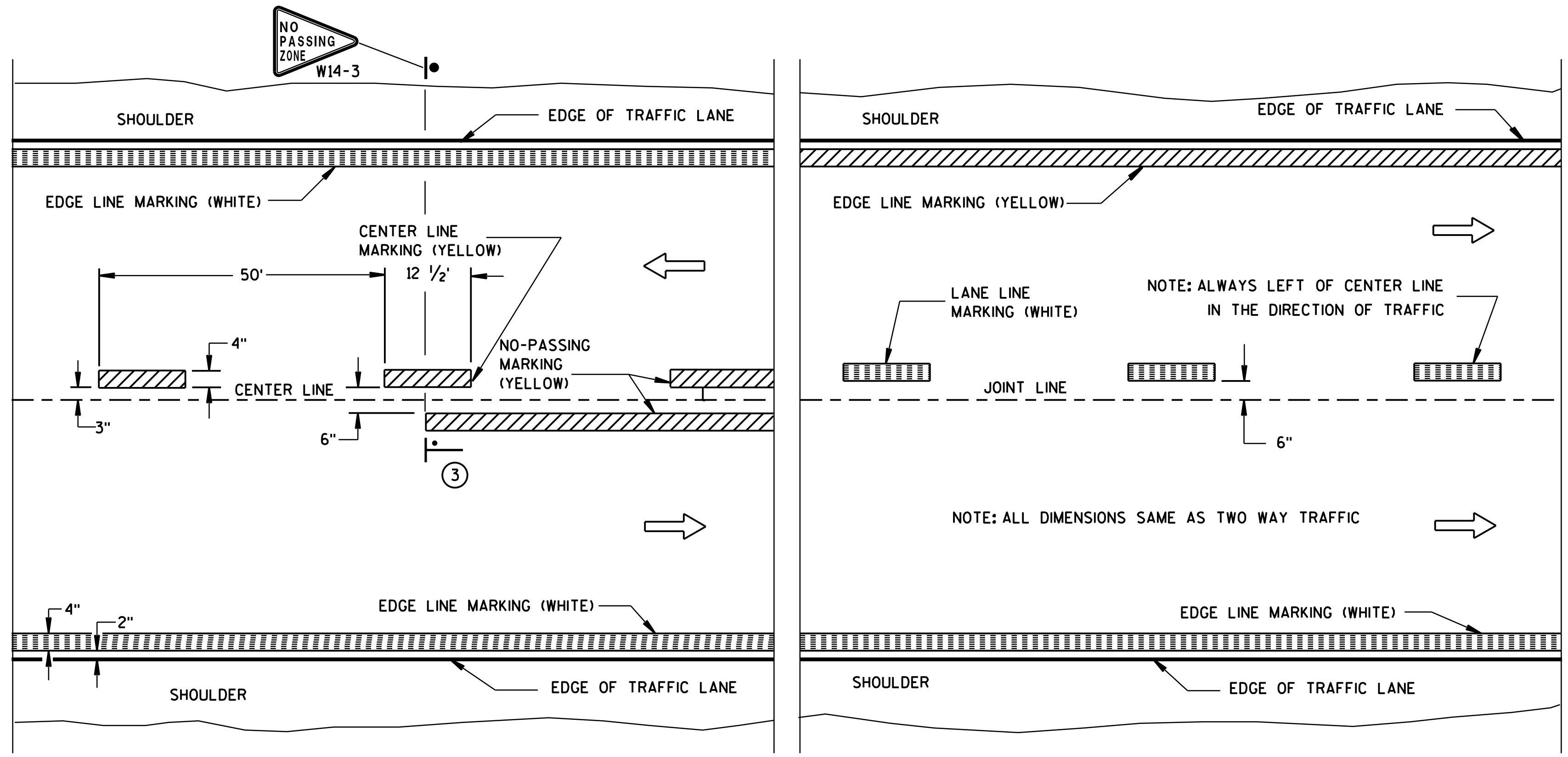
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 — DATE
/S/ Chester J. — CHIEF SIGNS AND MARKINGS ENGINEER
FHWA

6

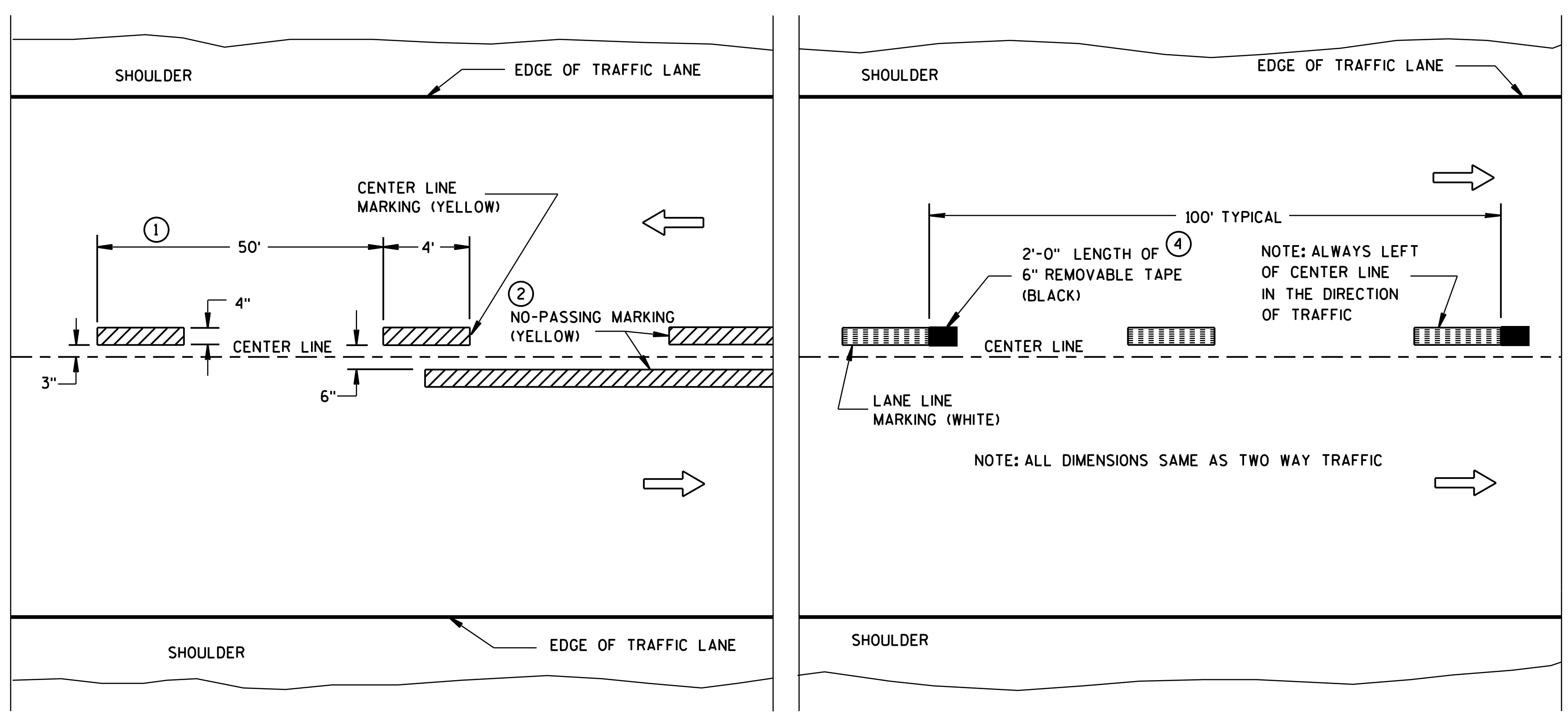
S.D.D. 15 C 4-1



TWO WAY TRAFFIC

ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC

ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

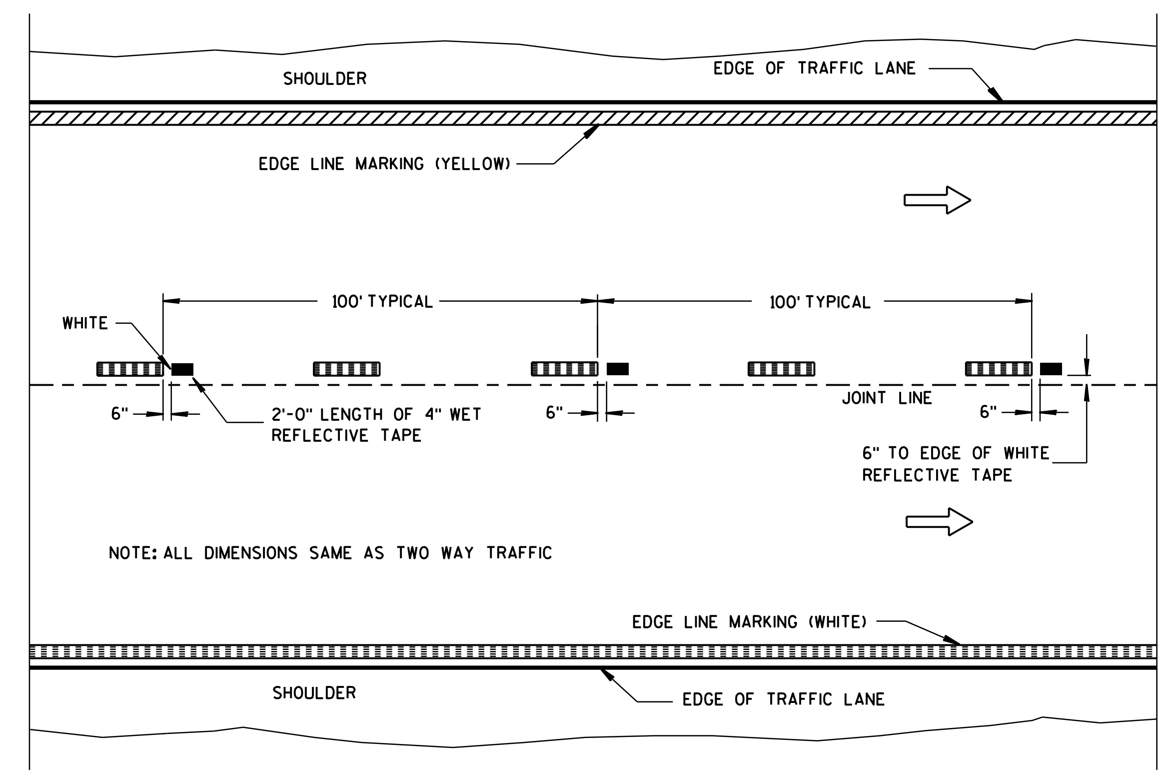
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

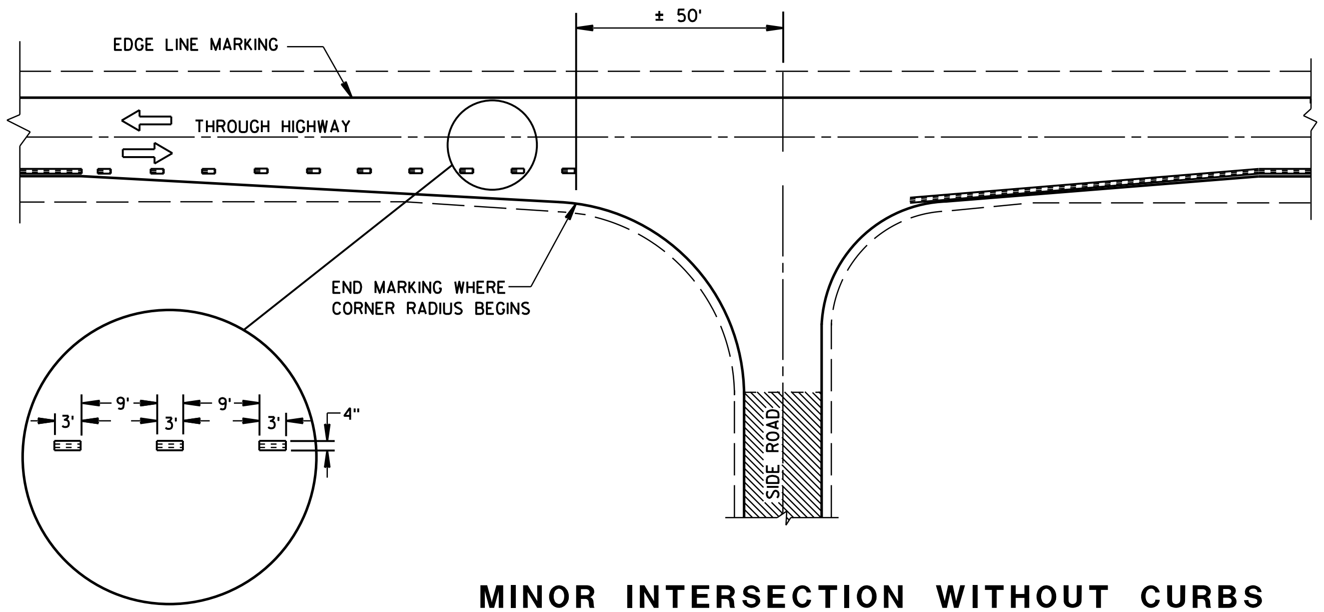
"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 10-1-2012 DATE /S/ Travis Feltes STATE TRAFFIC ENGINEER DESIGN FHWA

6

S.D.D. 15 C 8-15a



MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

(1) WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.

(2) WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.

(3) ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.

(4) THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.

(5) BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.

(6) BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.

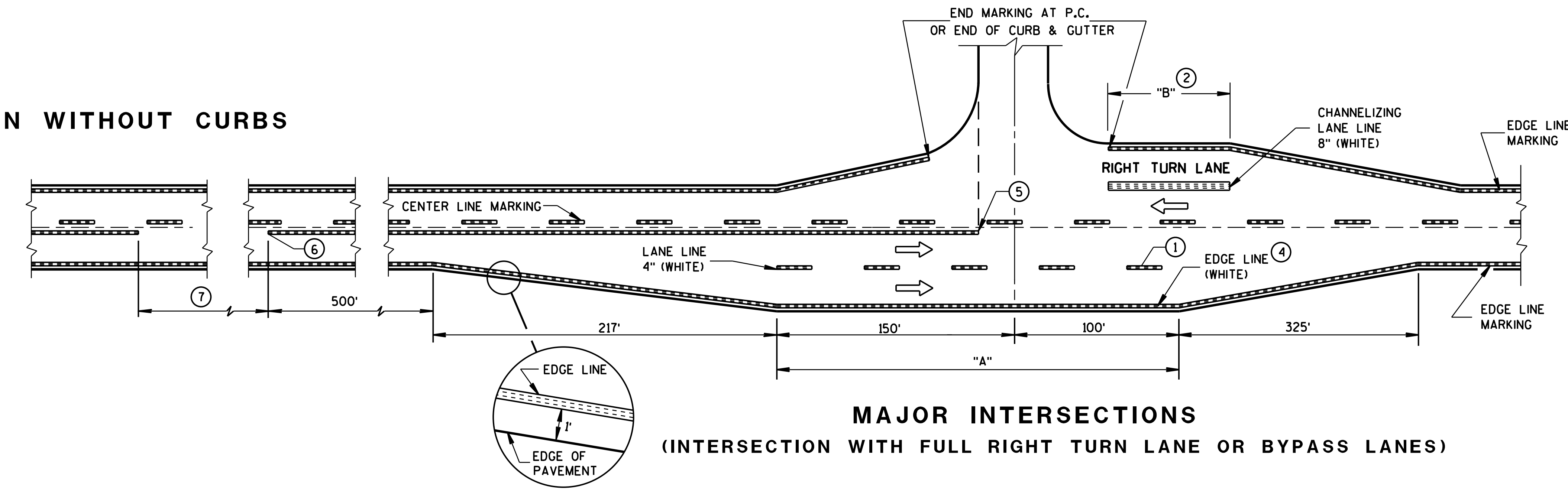
(7) IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.

(8) 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

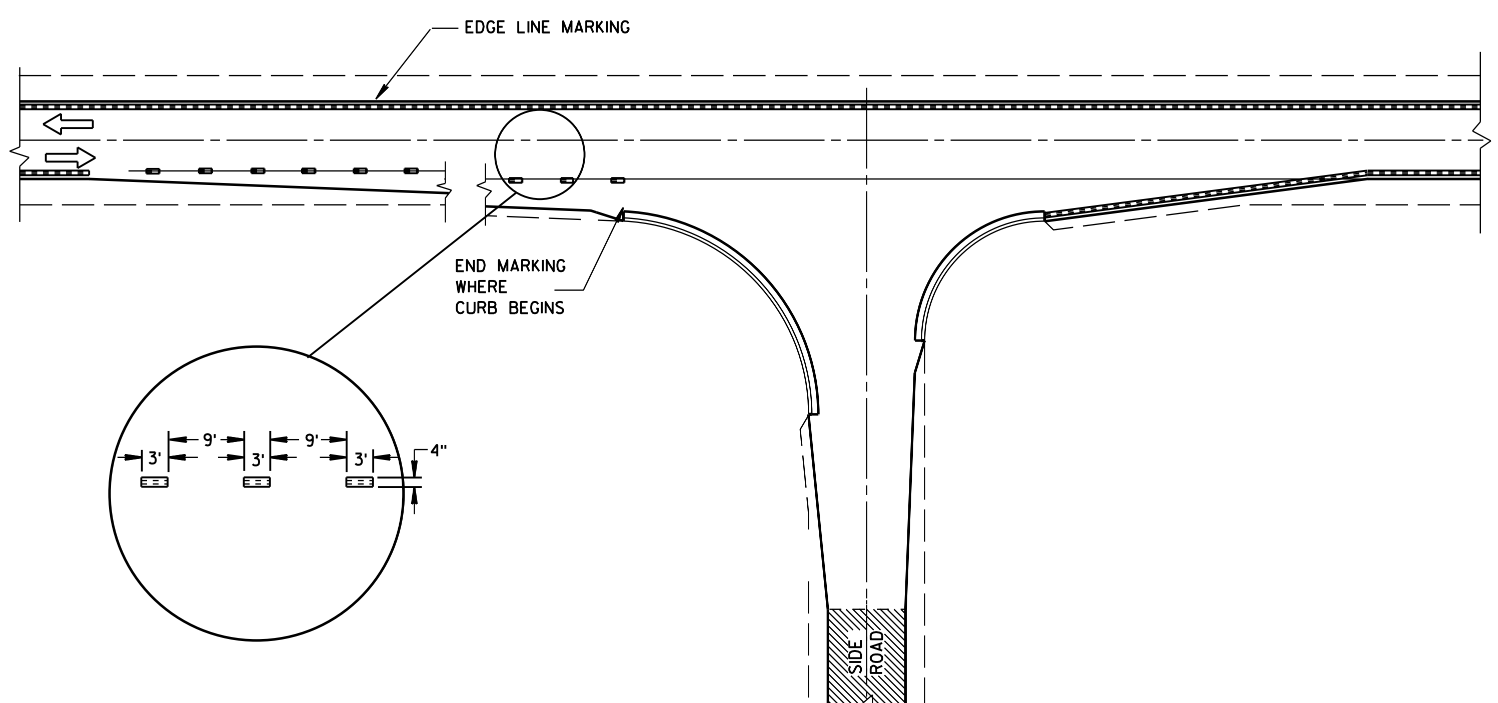
(7)

POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



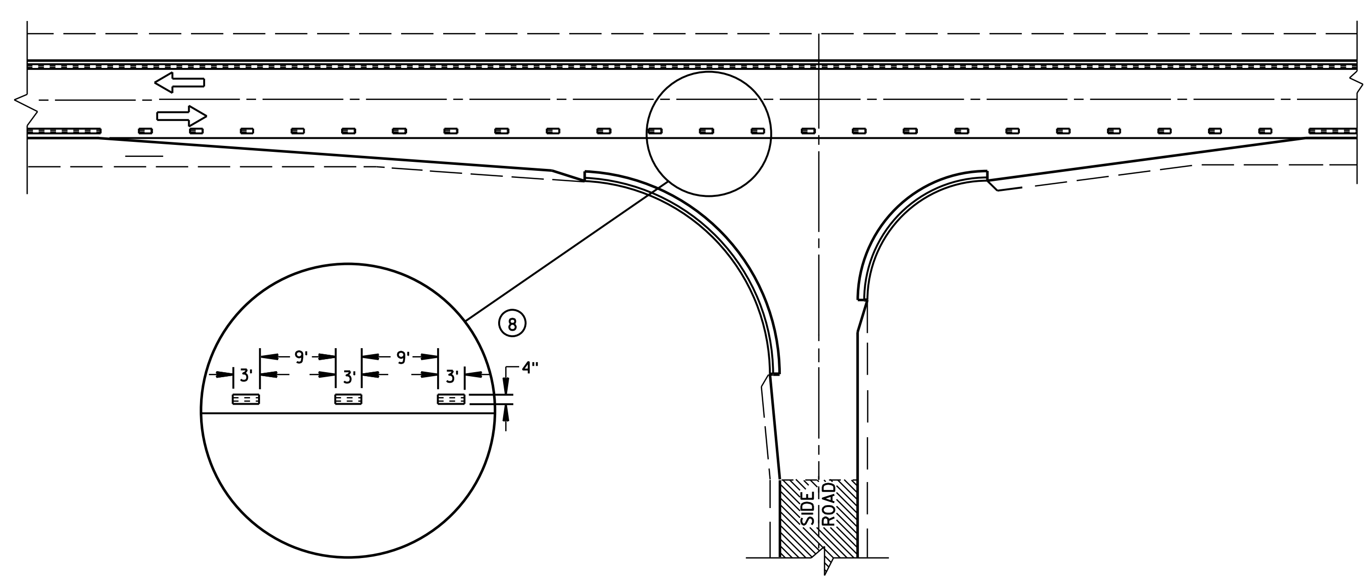
MAJOR INTERSECTIONS

(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



MINOR INTERSECTION WITH CURBS

(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS

(3) (FOR SPECIAL CONDITIONS AS SPECIFIED)

6

6

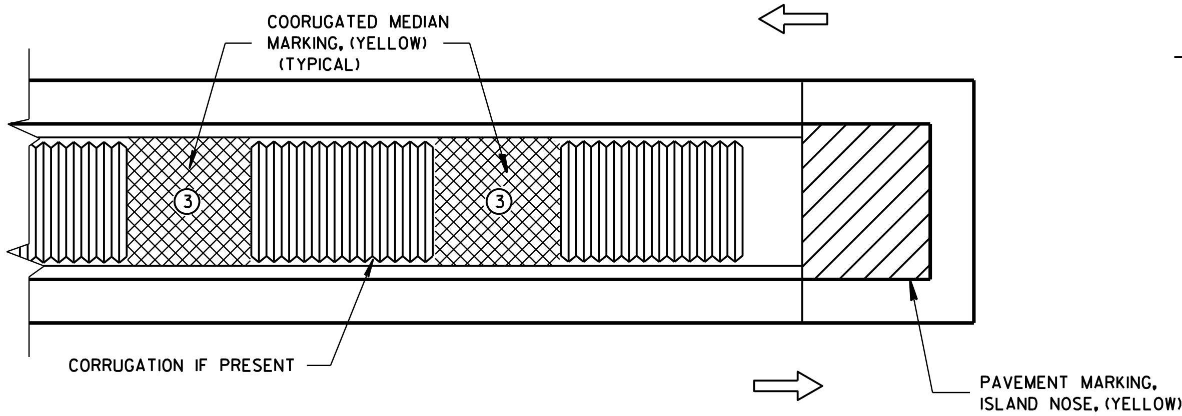
PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

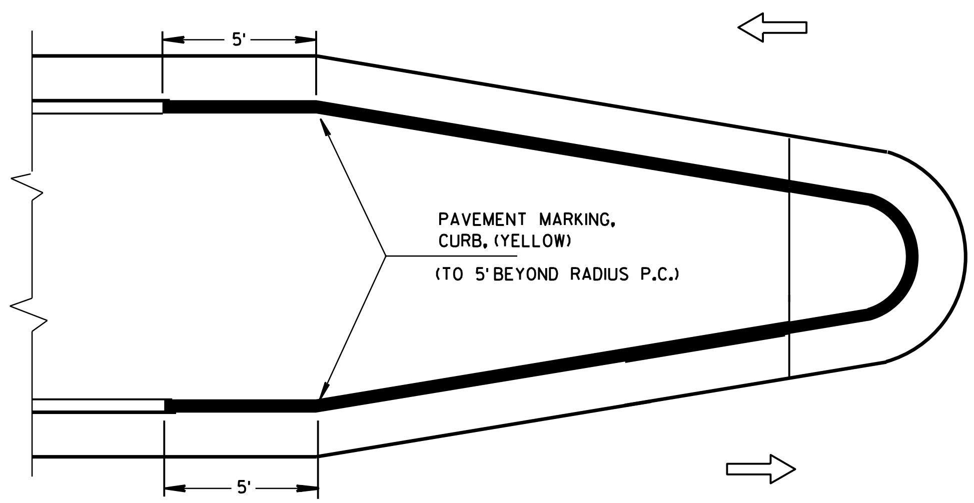
S.D.D. 15 C 8-15b

S.D.D. 15 C 8-15b

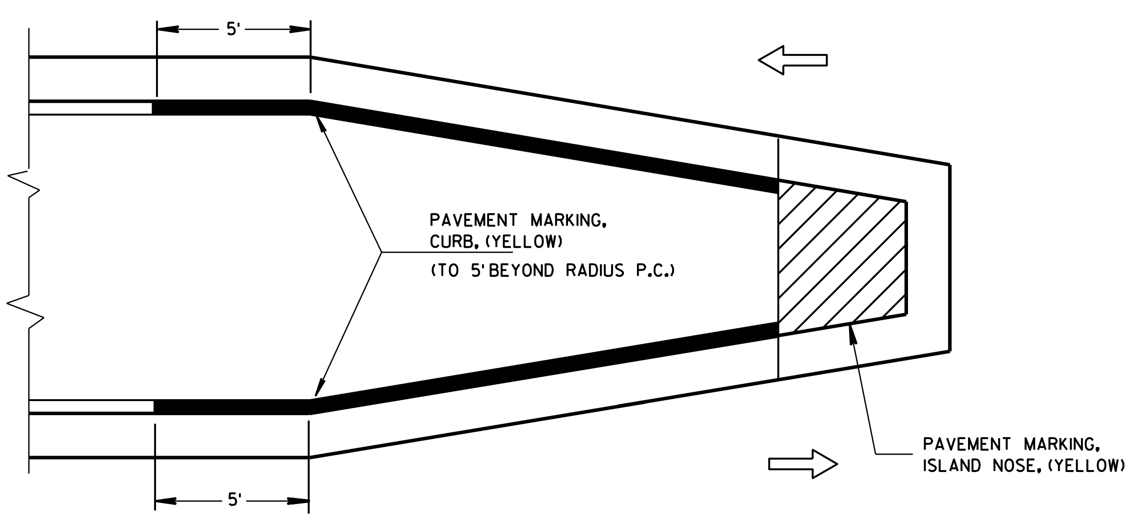
6



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

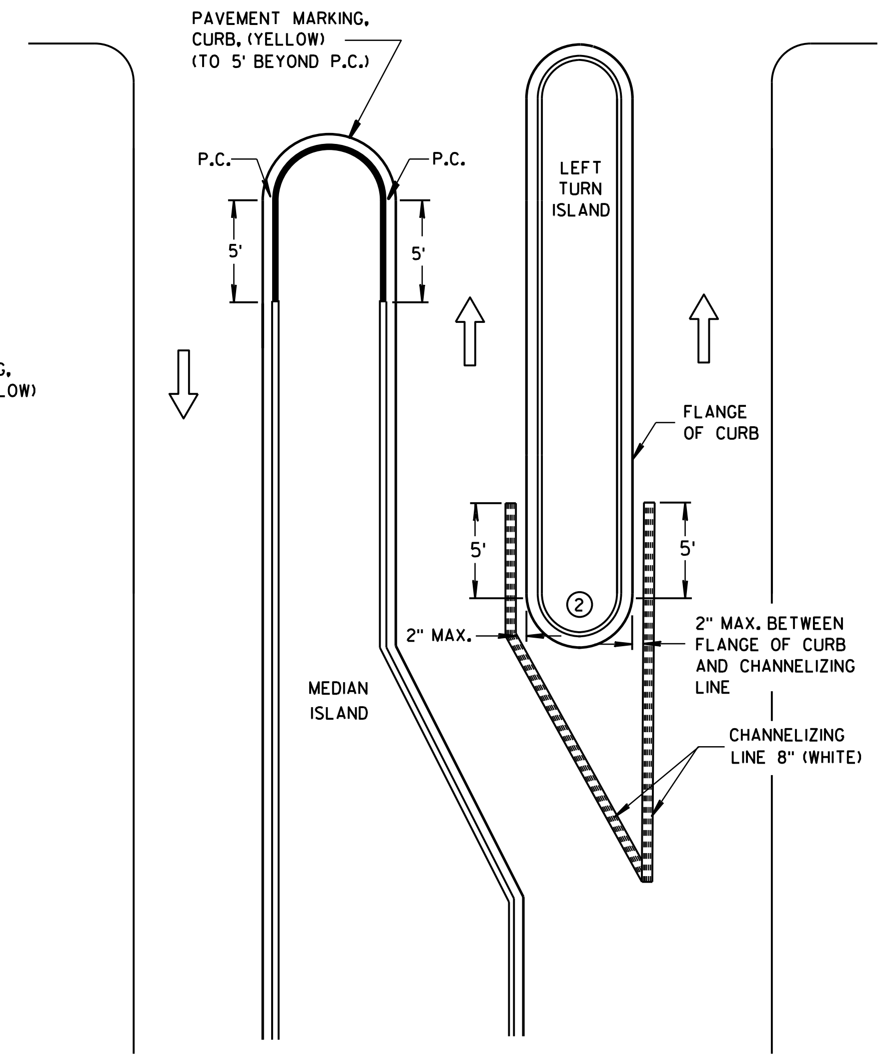


MEDIAN ISLAND WITH ROUND BLUNT NOSE

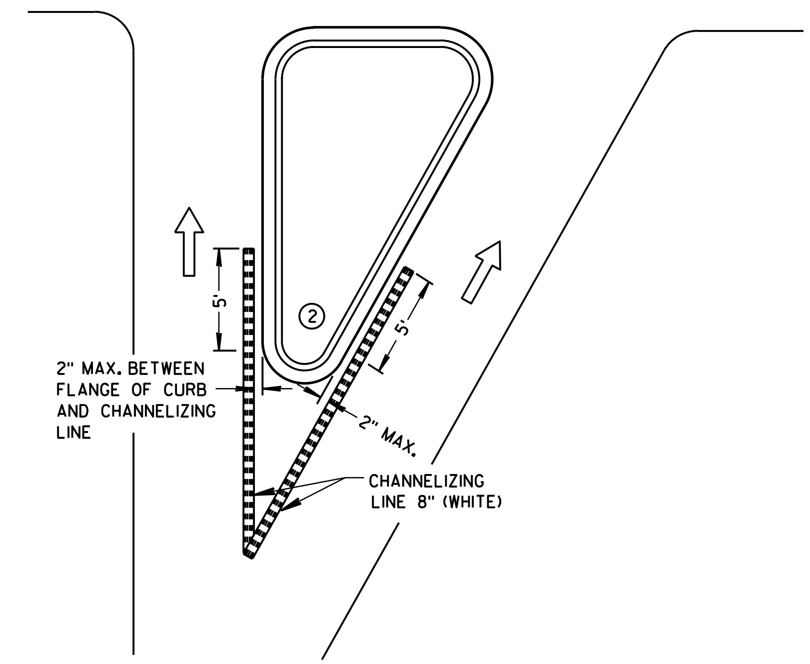


MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



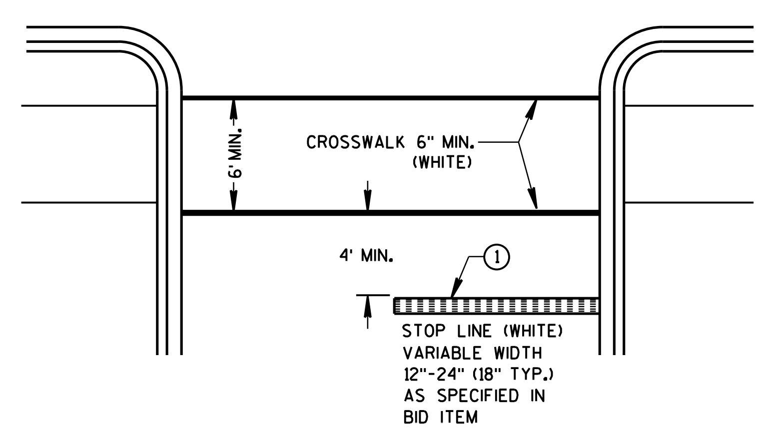
LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND

GENERAL NOTES

1. STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
3. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



STOP LINE AND CROSSWALK

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)

STATE OF WISCONSIN DEPARTMENT OF TRANSPOI

6

S.D.D. 15 C 8-15f

S.D.D. 15 C 8-15f

TWO-LANE ROADWAY

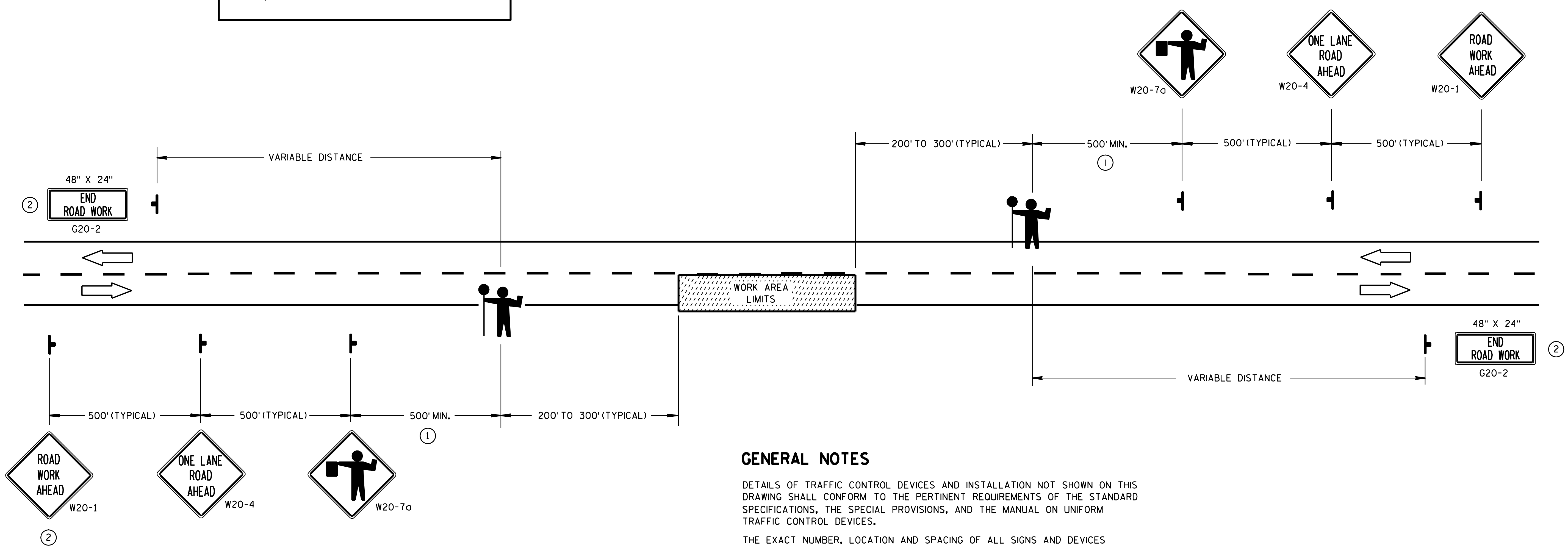
SYMBOLS

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN ON PORTABLE OR PERMANENT SUPPORT

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



① FOR A MOVING WORK OPERATION,
SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/5/06 DATE
/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER 76 DESIGN
FHWA

GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

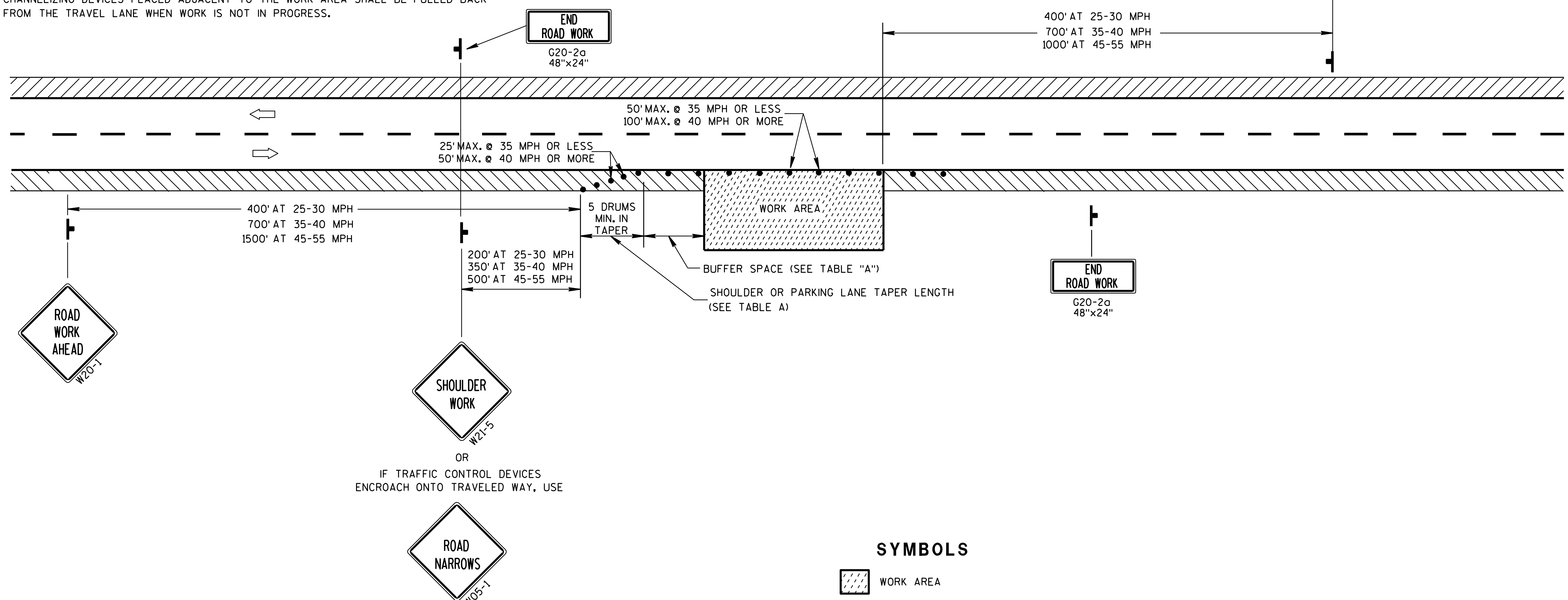
S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

SHOULDER TAPER LENGTH

$= \frac{WS}{3}$ AT 45 MPH OR GREATER

$= \frac{WS^2}{180}$ AT 40 MPH OR LESS



SYMBOLS

- WORK AREA
- DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/00 — DATE

/S/ Chester J. — CHIEF SIGNS AND MARK 77 NEER

FHWA

6

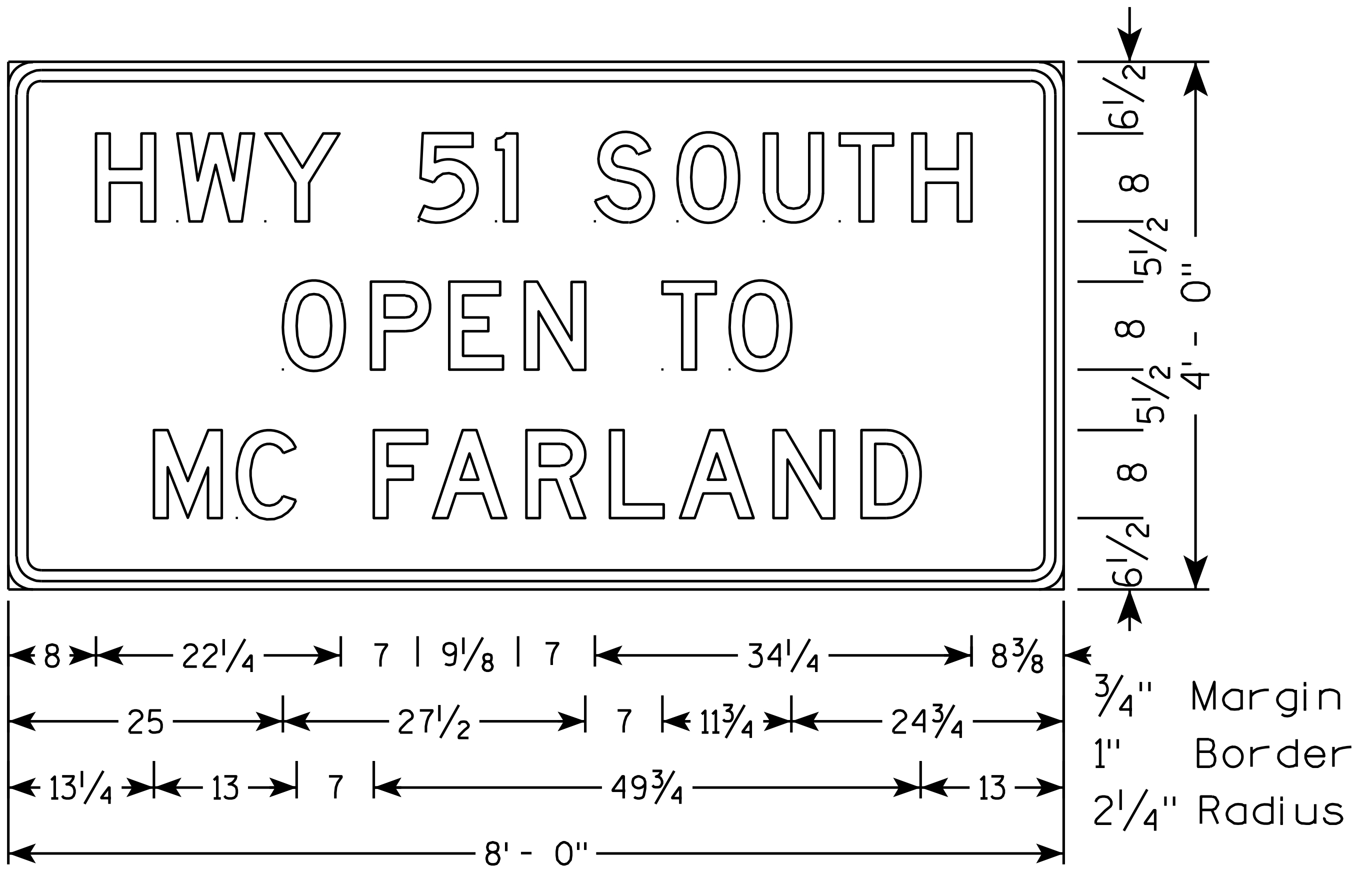
6

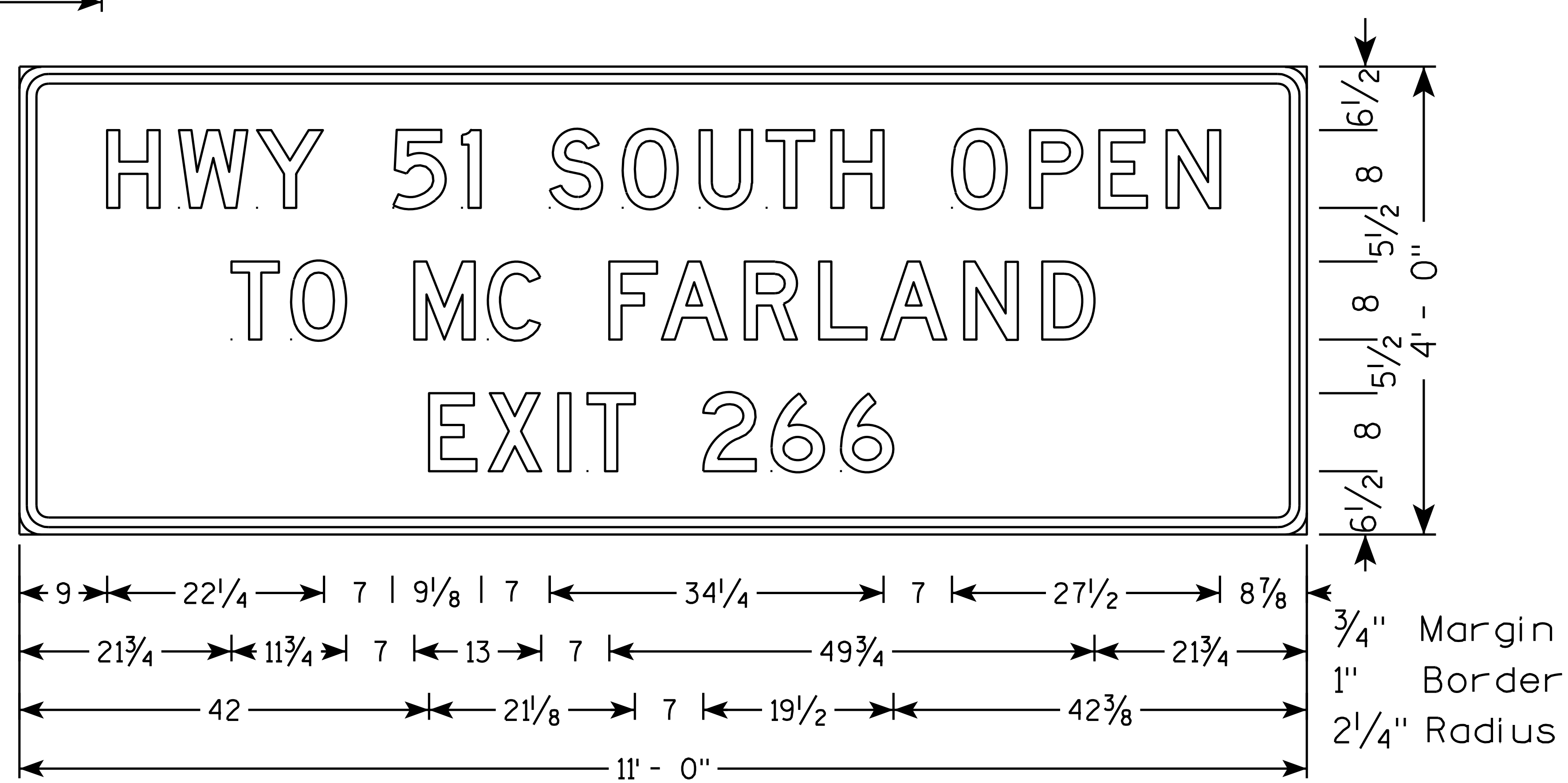
S.D.D. 15 D 28-1

S.D.D. 15 D 28-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - ORANGE
   Message - BLACK
3. Message Series - D





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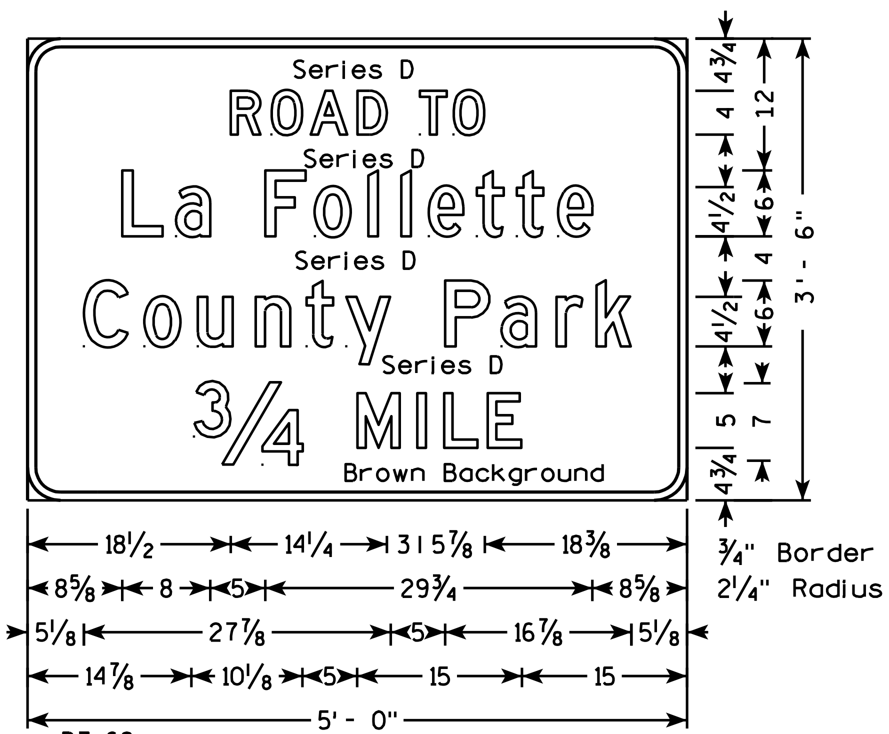
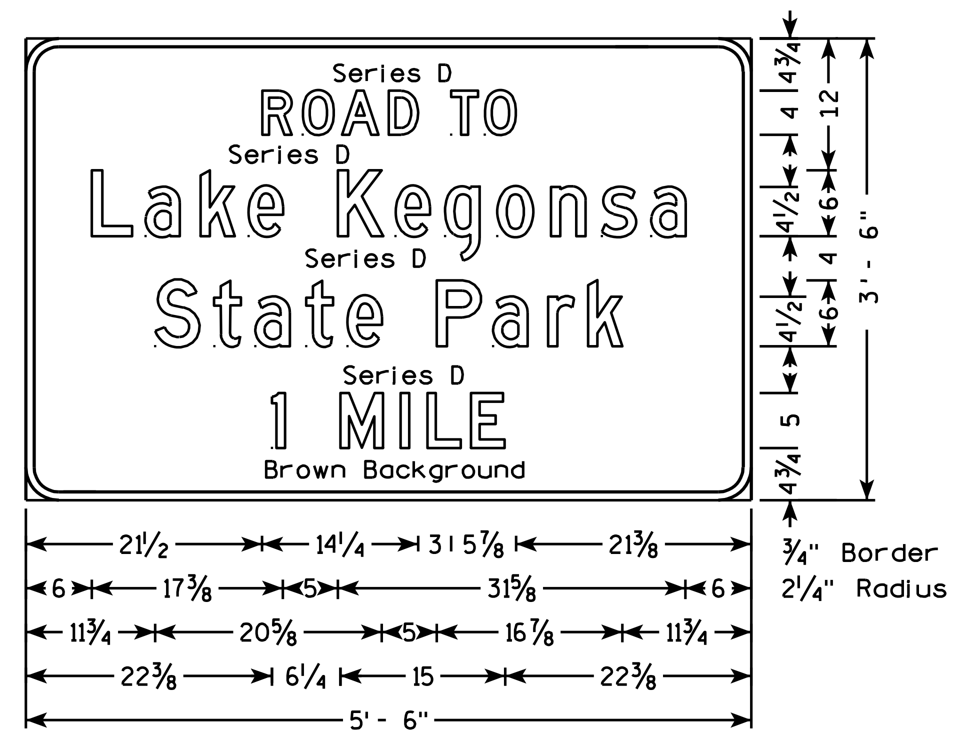
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	TEMPORARY SIGNING	SHEET NO: 78	E

NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E except as noted

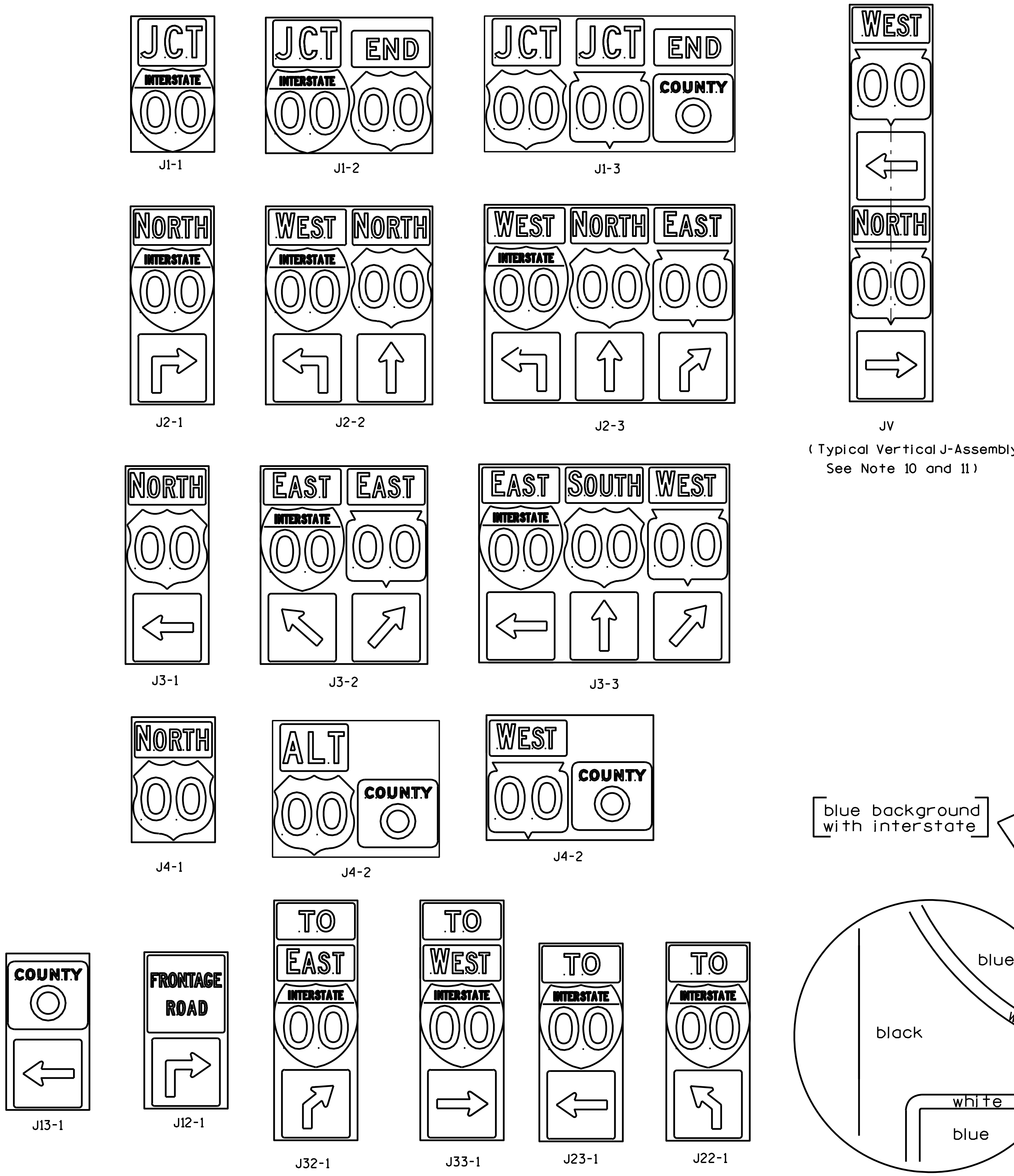


D7-68



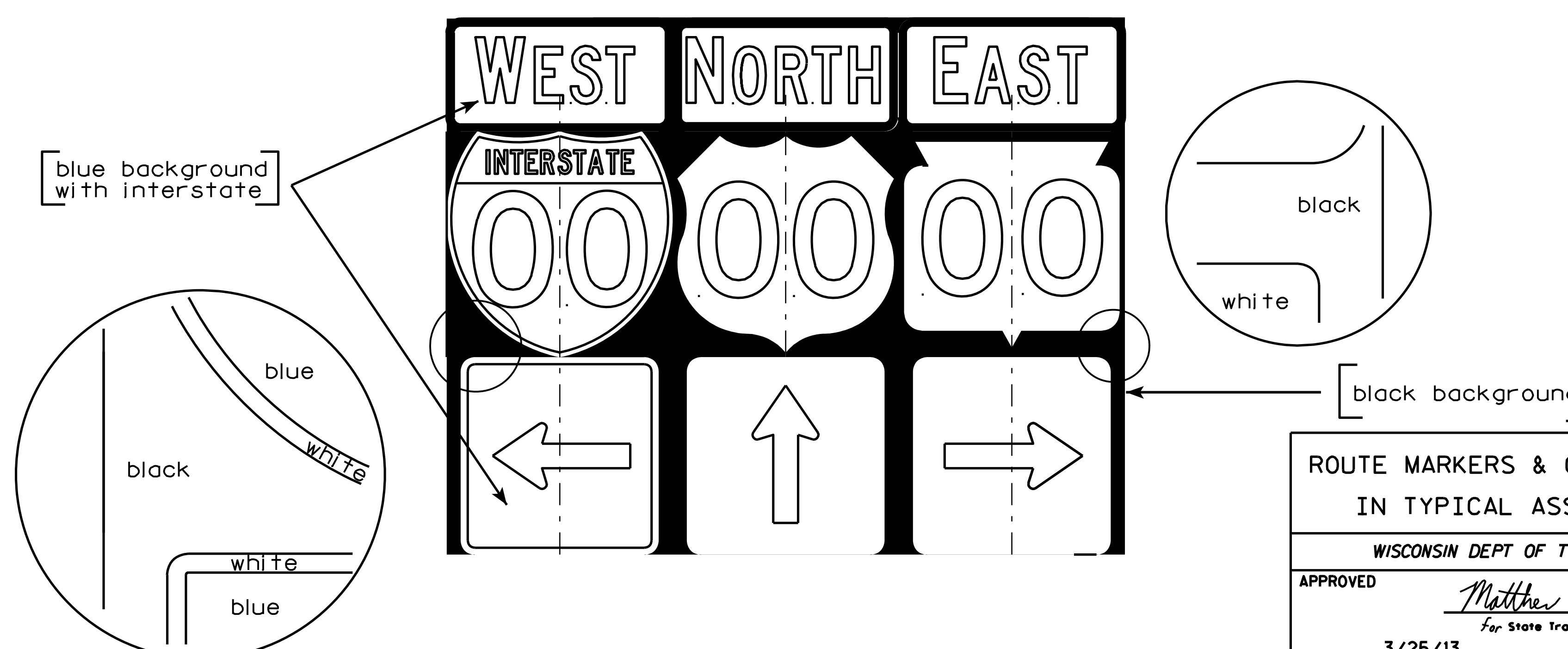
D7-52

TYPICAL ASSEMBLIES



NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel J-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.



ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/13 PLATE NO. A2-1S.7

7

7

PROJECT NO:

SHEET NO: 80

E

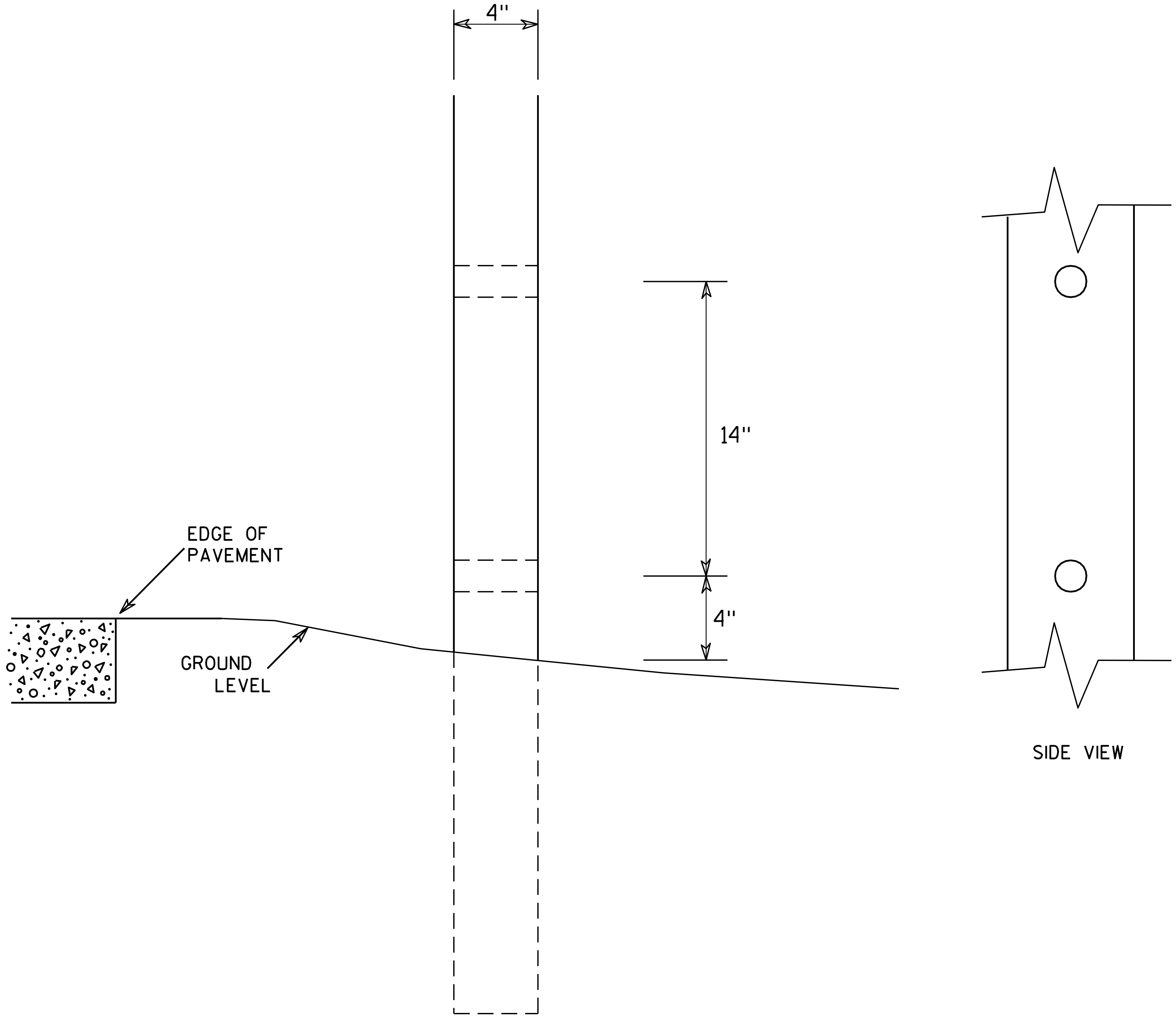
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN

PLOT DATE : 25-MAR-2013 11:33

PLOT BY : mscsja

PLOT NAME :

WISDOT/CADDS SHEET 42



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two $1\frac{1}{2}$" diameter holes drilled perpendicular to the roadway centerline.

7

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4 X 6 WOOD POST MODIFICATIONS

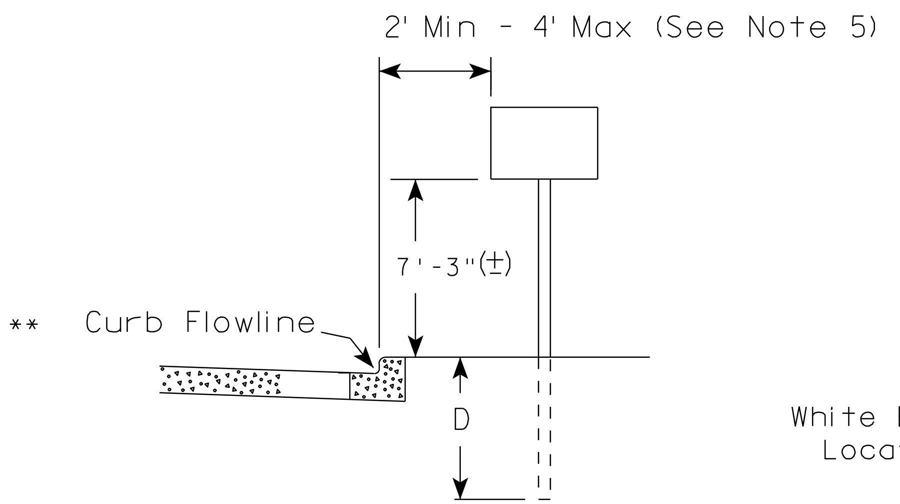
WISCONSIN DEPT OF TRANSPORTATION

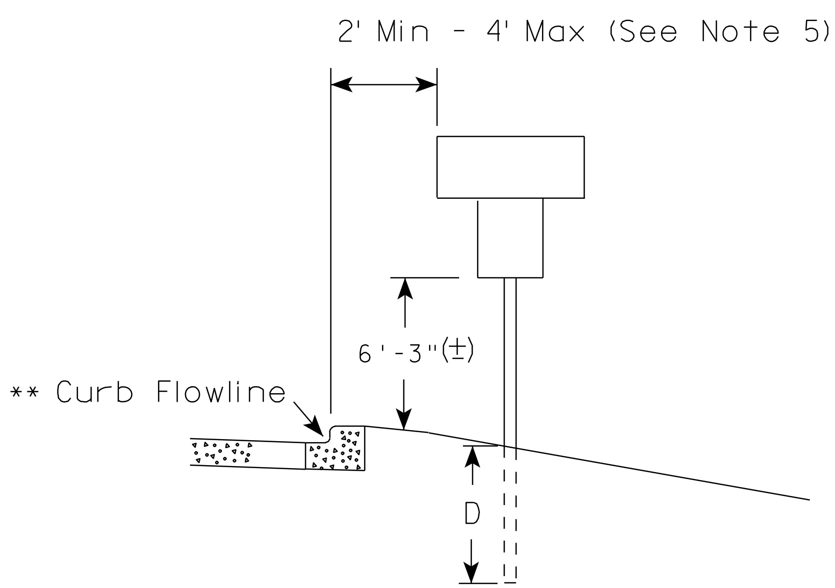
APPROVED Chester J Spang
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

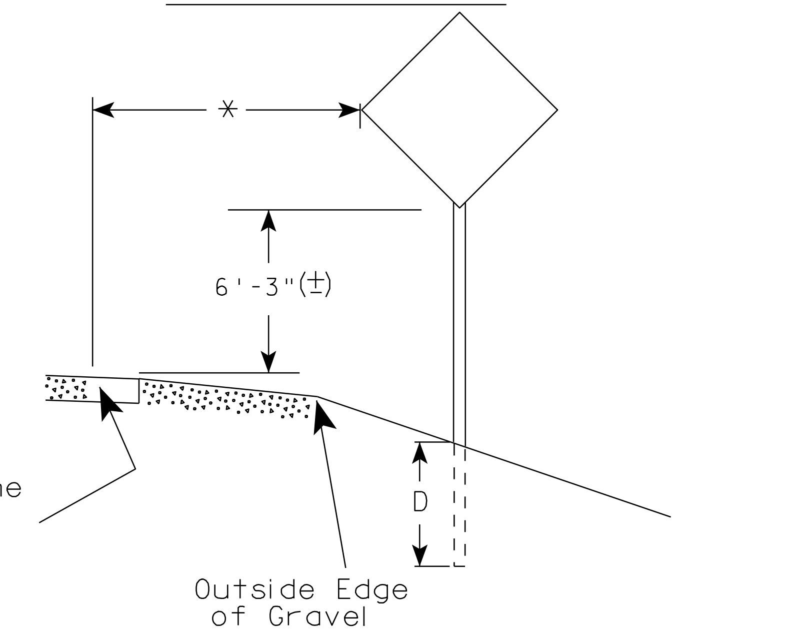
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 81	E

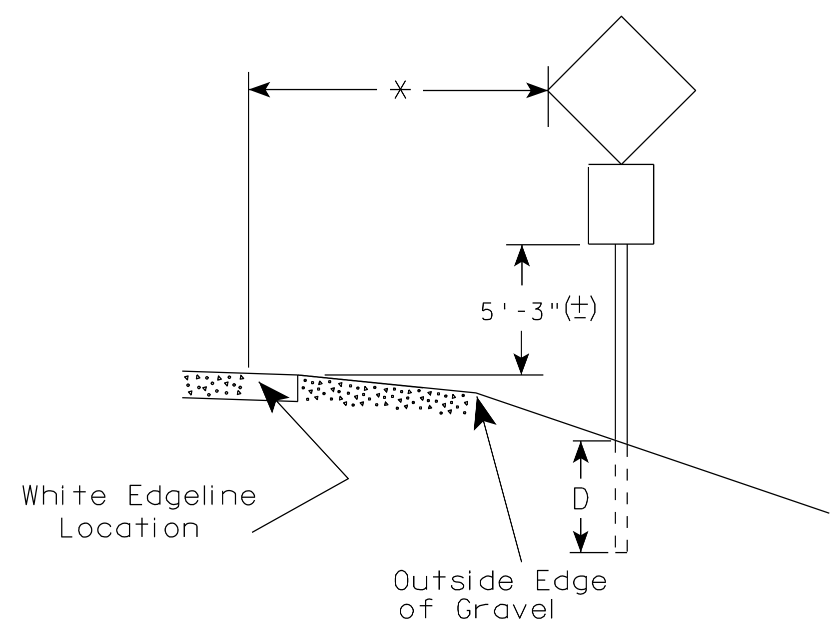
URBAN AREA





RURAL AREA (See Note 2)





GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

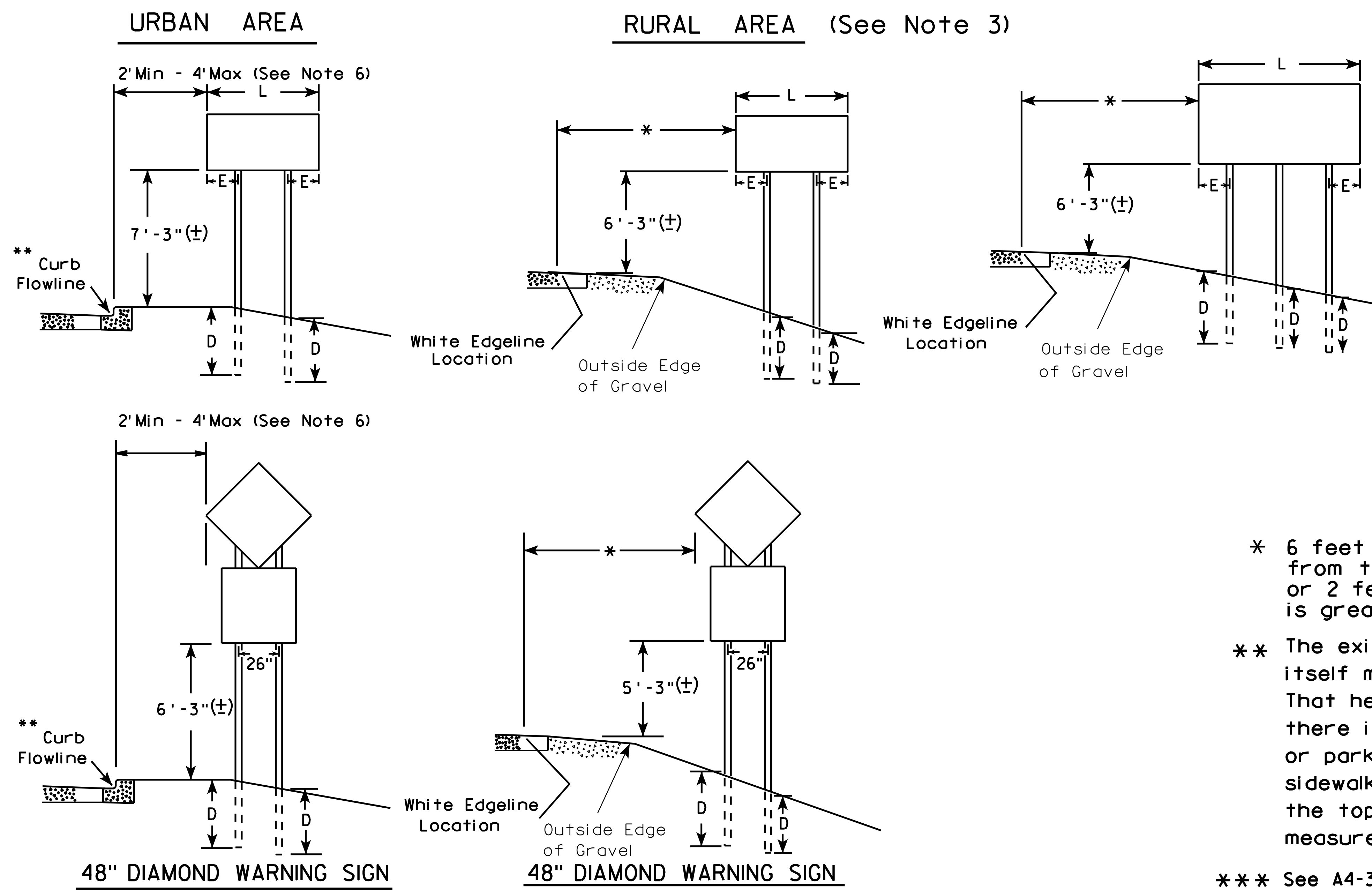
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-3.16

7 7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 82	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\A43.DGN PLOT DATE : 21-SEP-2011 13:33 PLOT BY : mscsjo PLOT NAME : PLOT SCALE : 101.303739:1.000000 WISDOT/CADDS SHEET 42



GENERAL NOTES

1. For multiple post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)

	L	E
***	Greater than 48" Less than 60"	12"
	60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)

L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)

L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

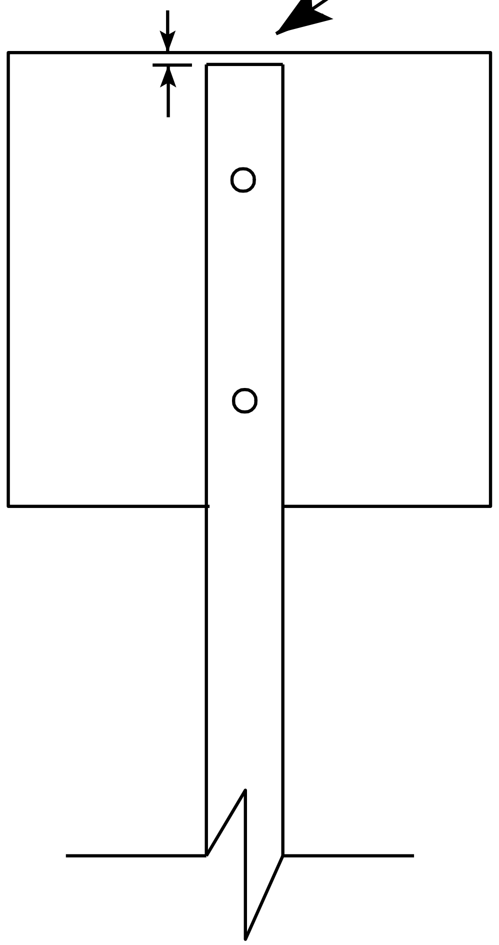
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

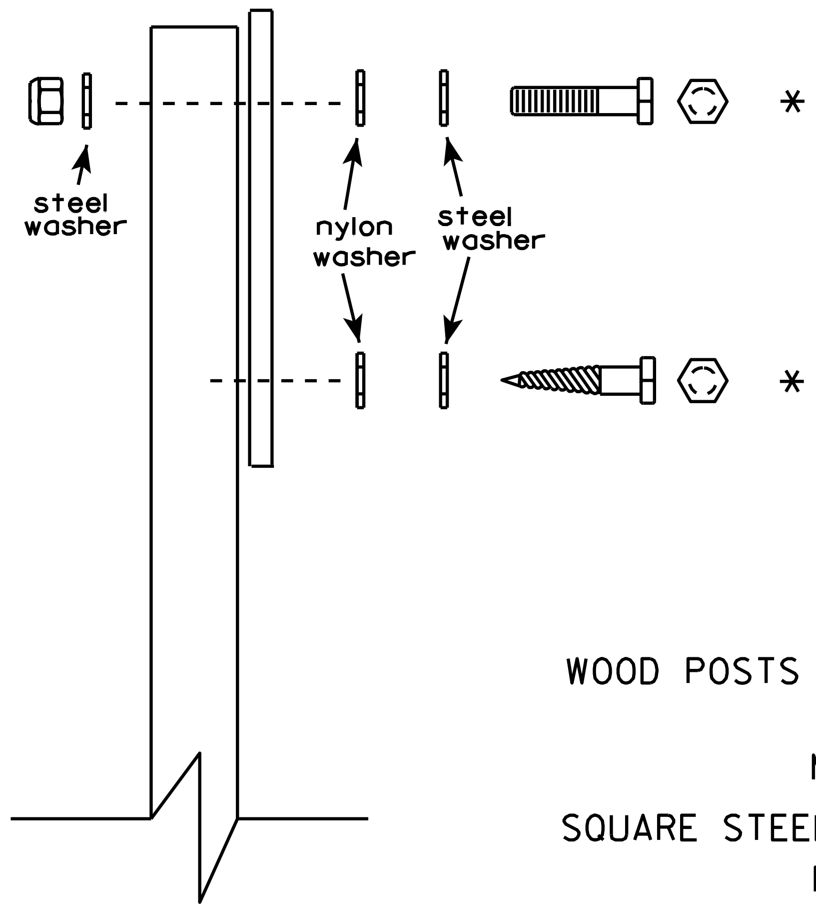
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-4.11

SIGN SHALL BE MOUNTED TO PROJECT
ABOVE THE TOP OF THE POST





Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

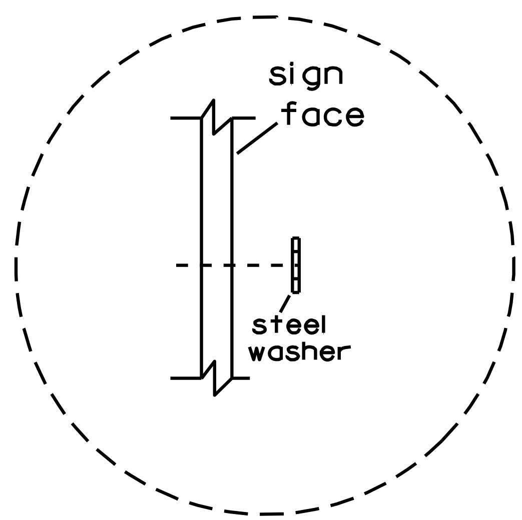
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3"
- MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
- RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
- 1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

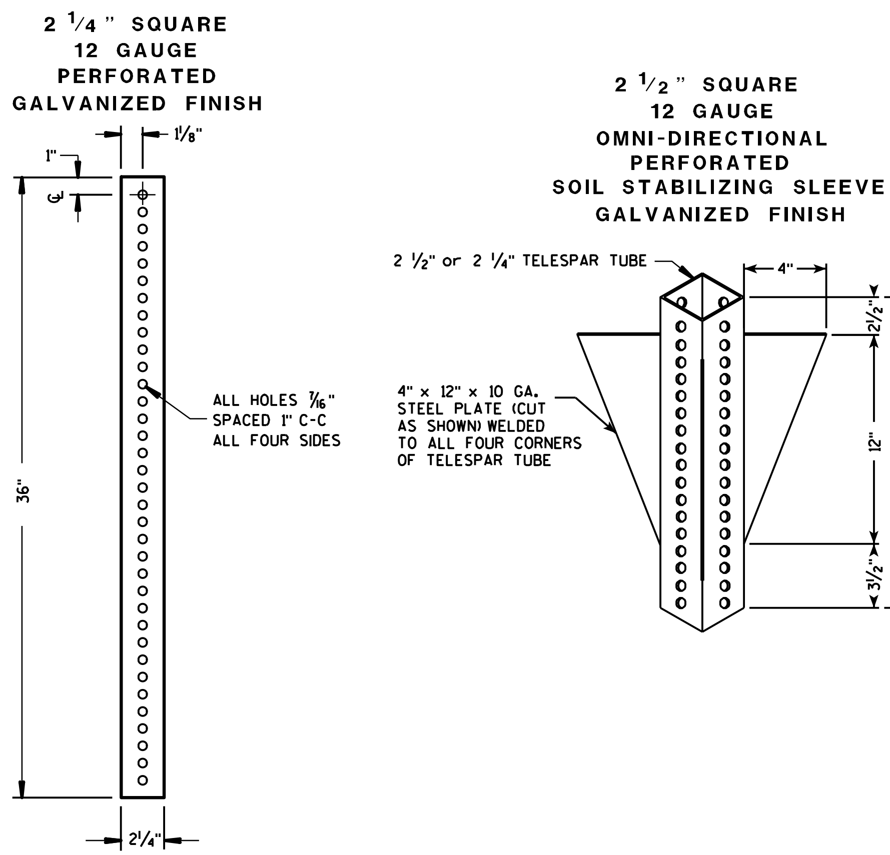
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

7

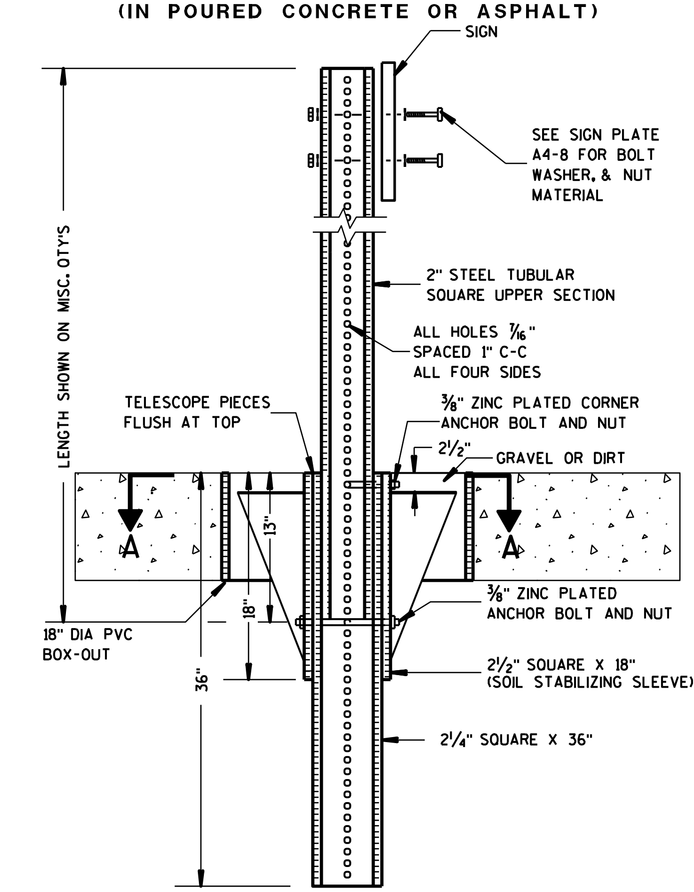
7

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED Matthew R Rauch	for State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7

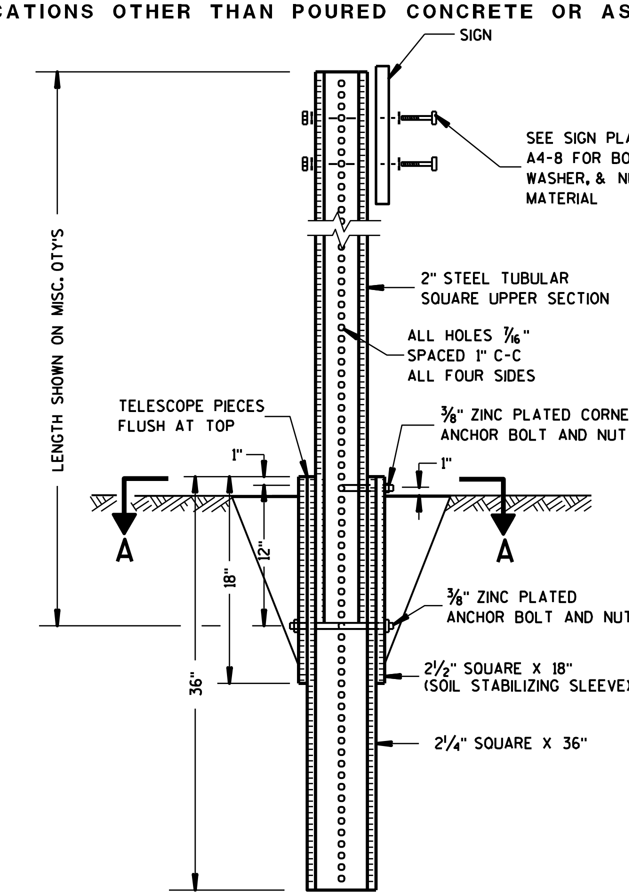
TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

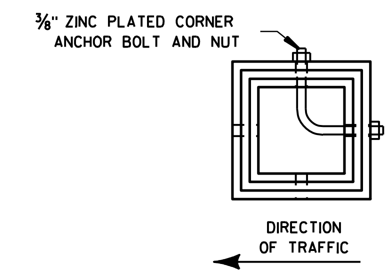


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/30/12 PLATE NO. A4-9.7

7

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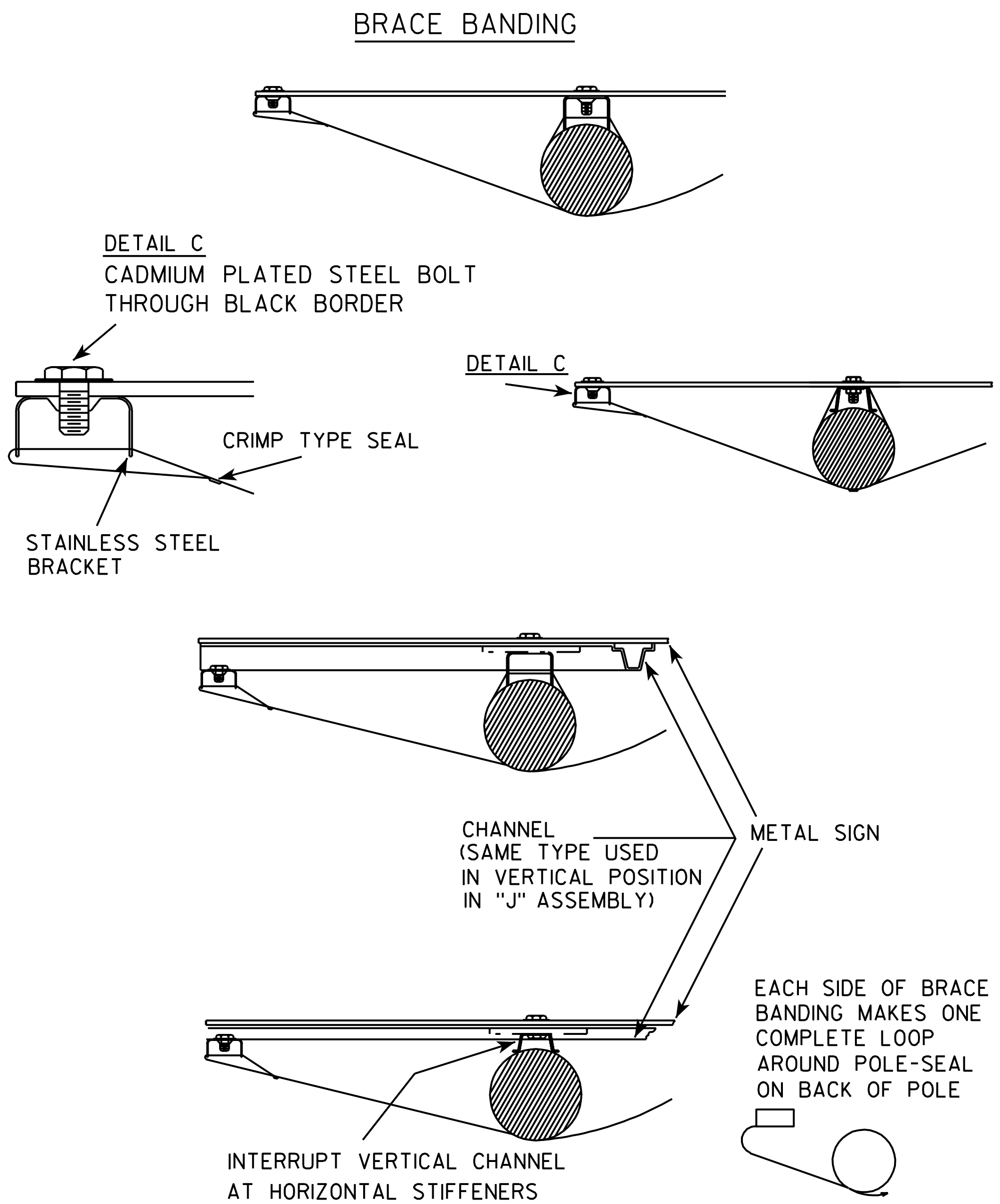
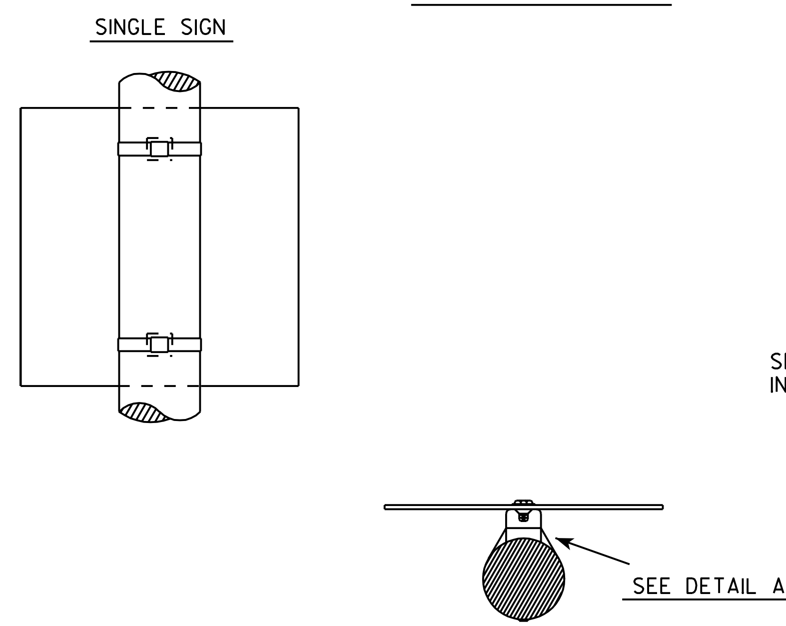
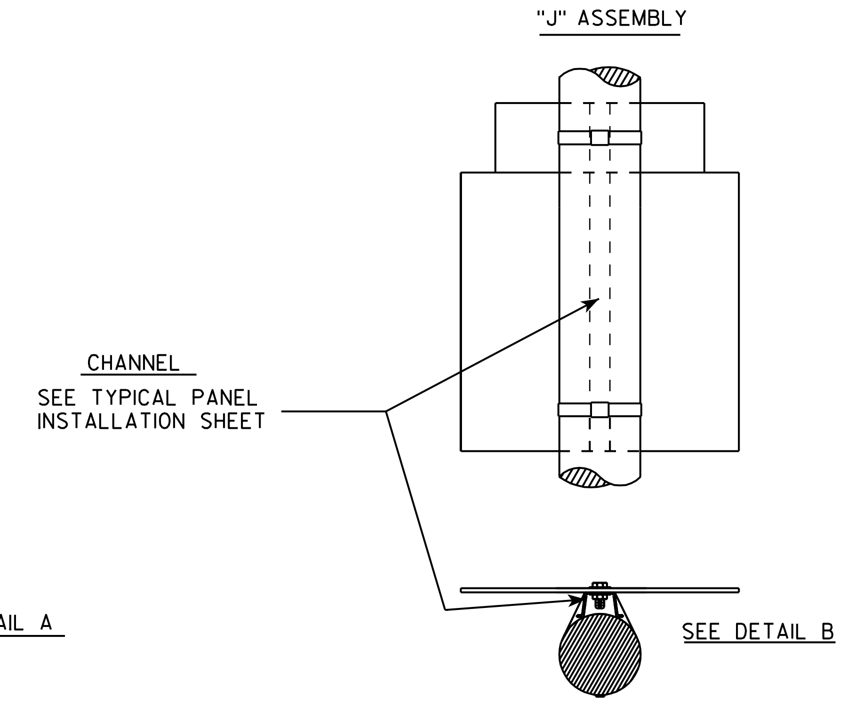
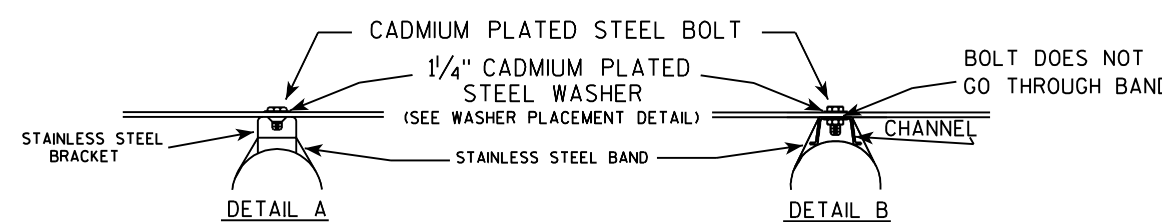
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 85 | E



BRACKET BANDING



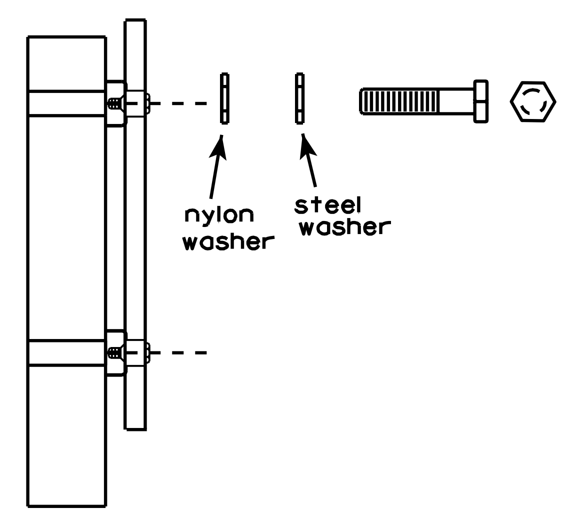


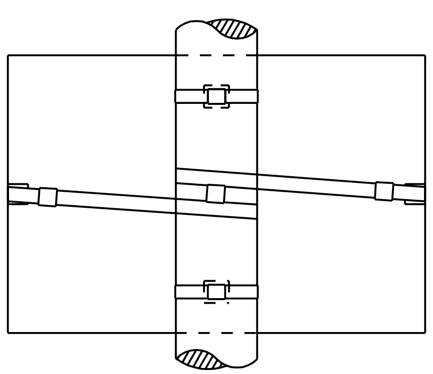


GENERAL NOTES

1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

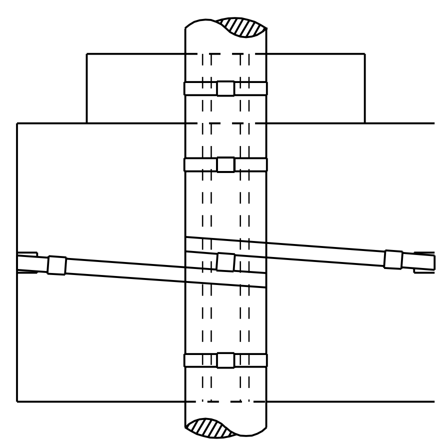
WASHER PLACEMENT





BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY BUT NOT SO TIGHT AS TO APPRECIABLY CURVE FACE OF SIGN.



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN SIGN BANDING DETAILS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED Matthew R Rauch for State Traffic Engineer	
DATE 11/08/05	PLATE NO. A5-9.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 86	E

7

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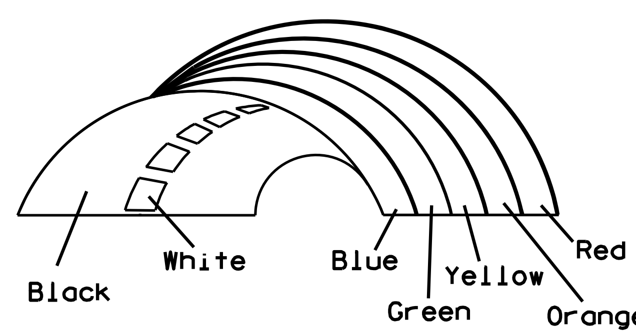
* VARIES

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - (See Note 5)
3. Message Series - (See Note 6)
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Border - Blue
   Line 1 - Red
   Line 2 - Black
   Line 3-5 - Blue
6. Line 1 - Dutch 8011L
   Line 2 - Series E
   Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

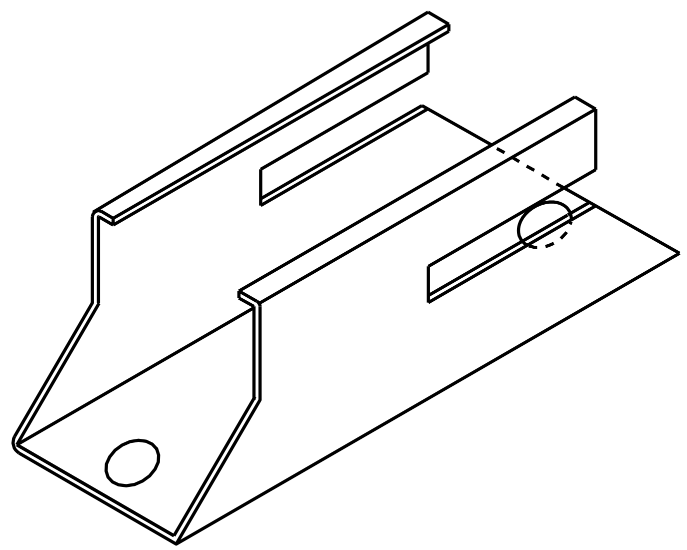
DATE 4/27/11 PLATE NO. I55-56.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 87 | E

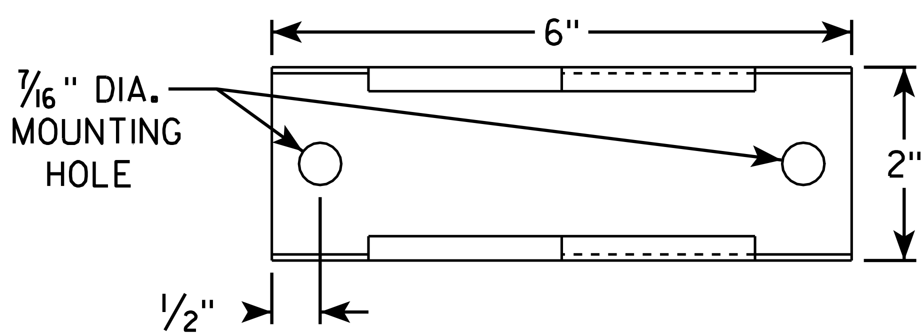
7

7

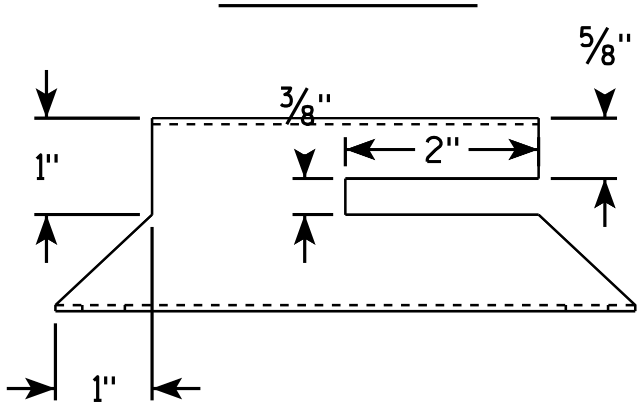
ISOMETRIC VIEW



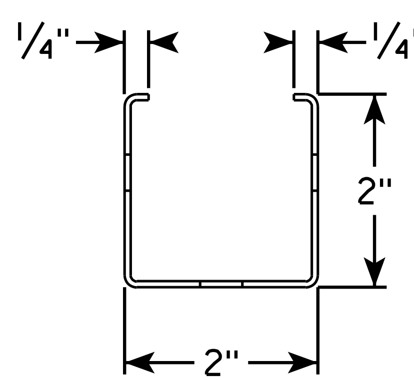
TOP VIEW



SIDE VIEW



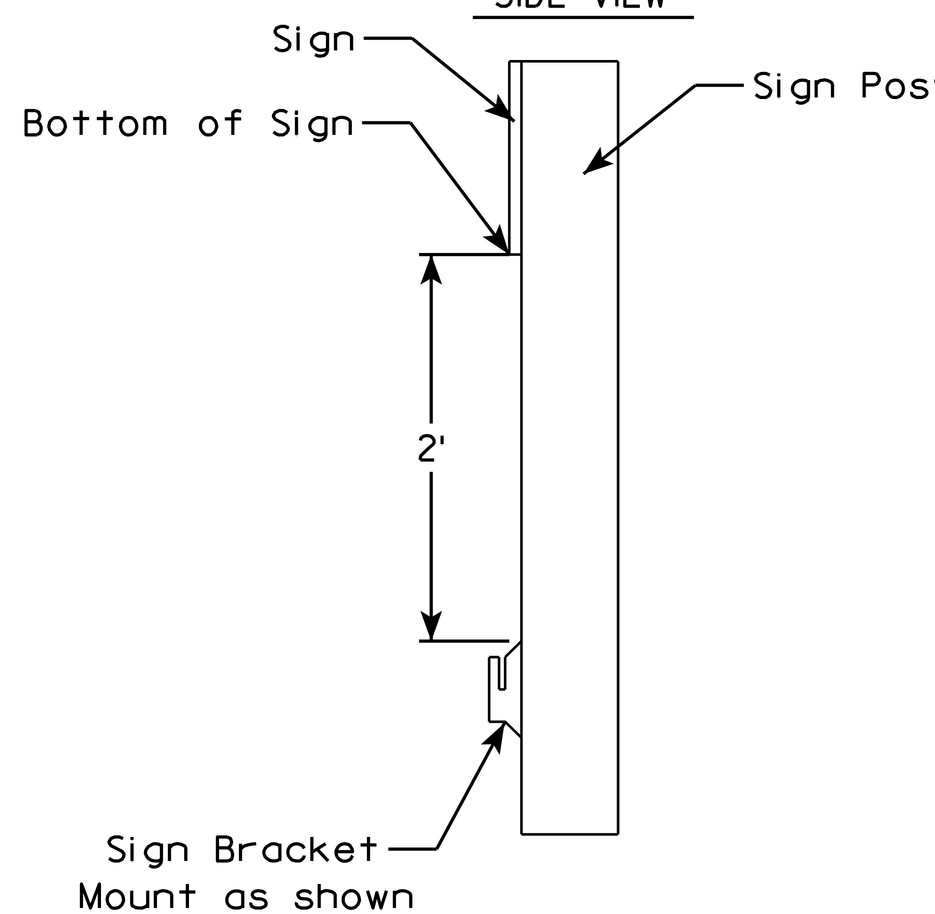
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



7

7

ROLLUP SIGN BRACKET
I55-56B

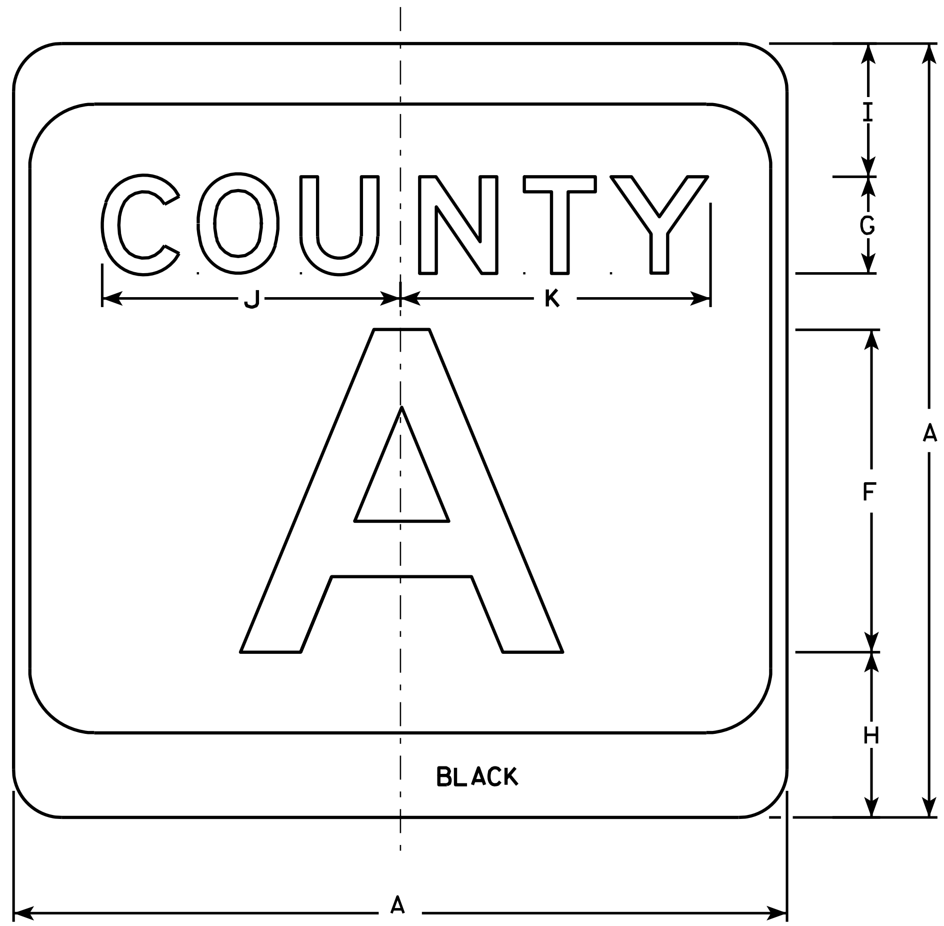
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

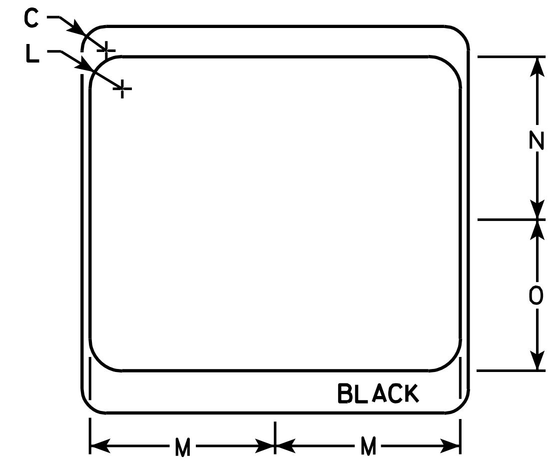
DATE 2/5/10 PLATE NO. I55-56B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 88	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\I5556B.DGN PLOT DATE : 01-MAR-2010 15:34 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 1.986348:1.000000 WISDOT/CADDS SHEET 42

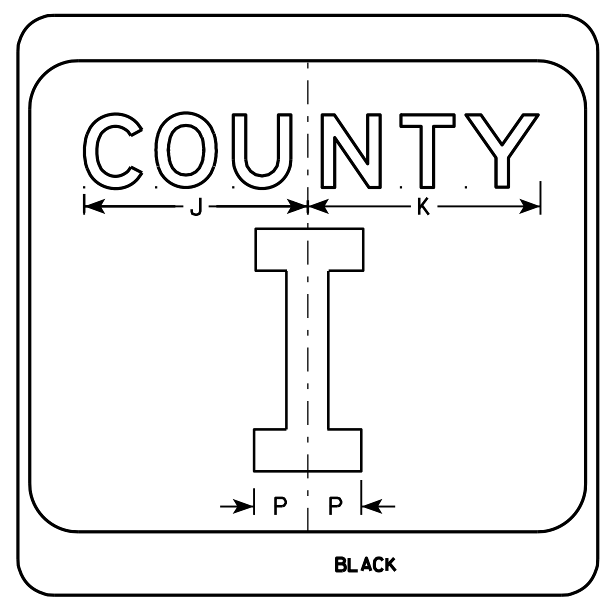


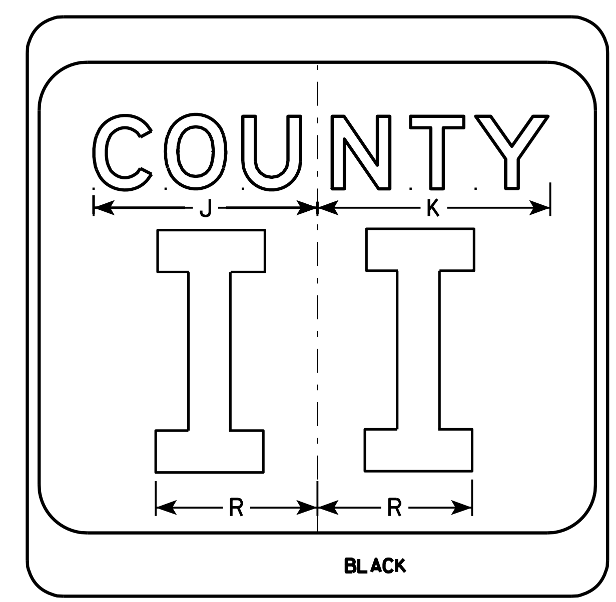
M1-5A



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 7
   Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective





7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER

M1-5A FOR ASSEMBLIES

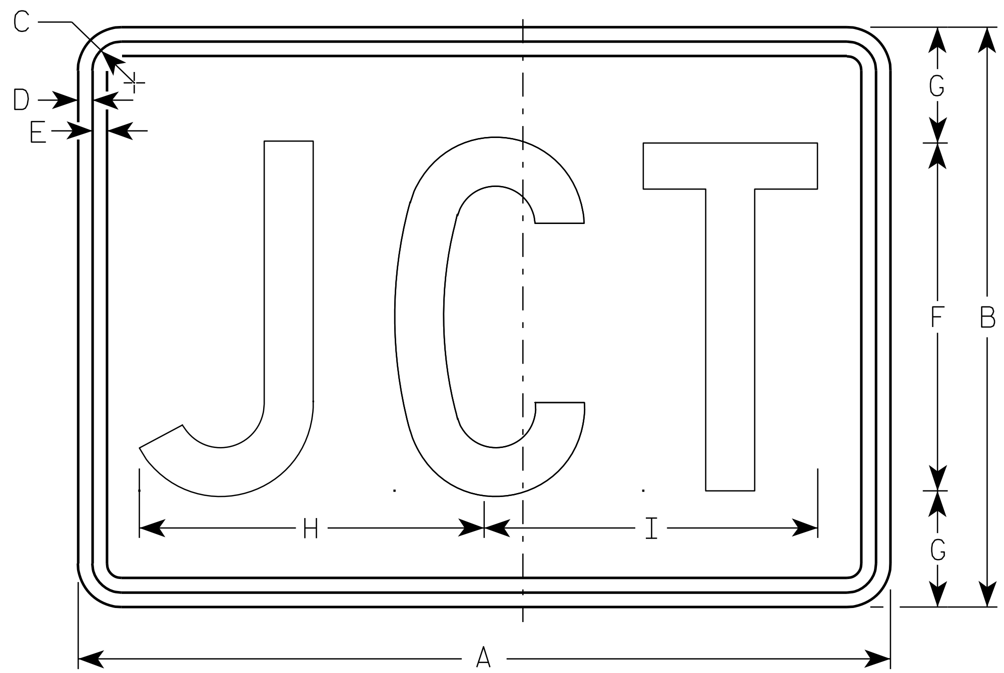
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

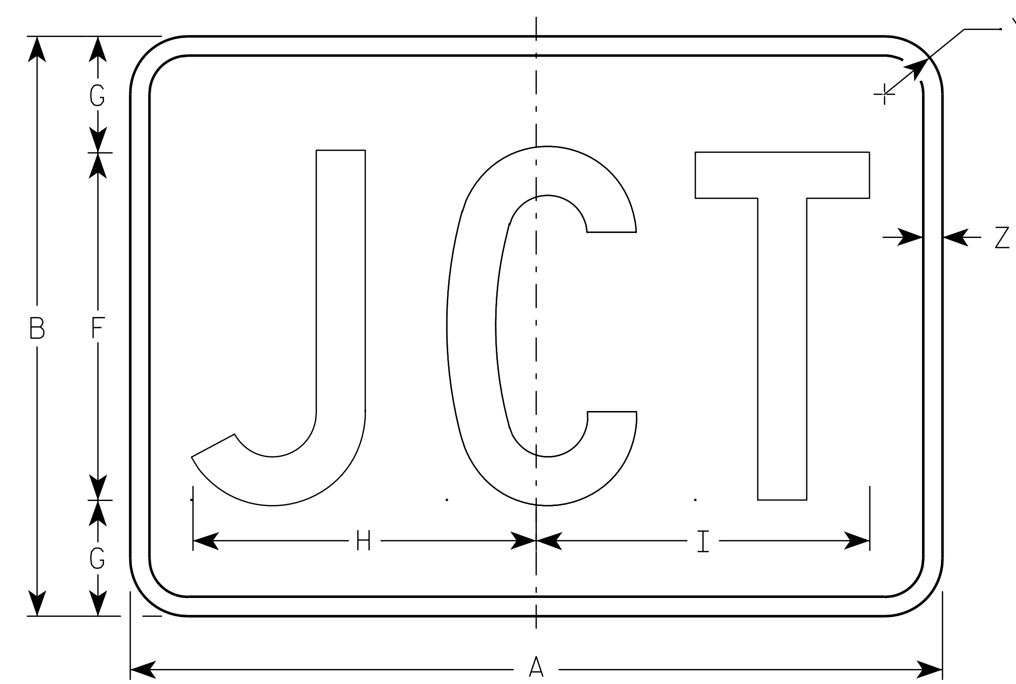
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 89 | E



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   Message - Black
   MB2-1 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary Signs - Reflective)
   MG2-1 Background - Green
   Message - White - Type H Reflective
   MK2-1 Background - Green
   Message - White - Type H Reflective
   MM2-1 Background - White - Type H Reflective
   Message - Green
   MN2-1 Background - Brown
   Message - White - Type H Reflective
   MR2-1 Background - Brown
   Message - Yellow - Type H Reflective

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

STANDARD SIGN
M2-1

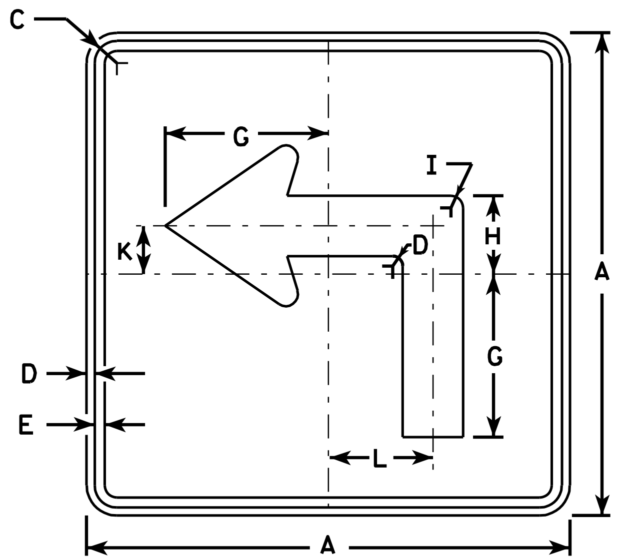
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

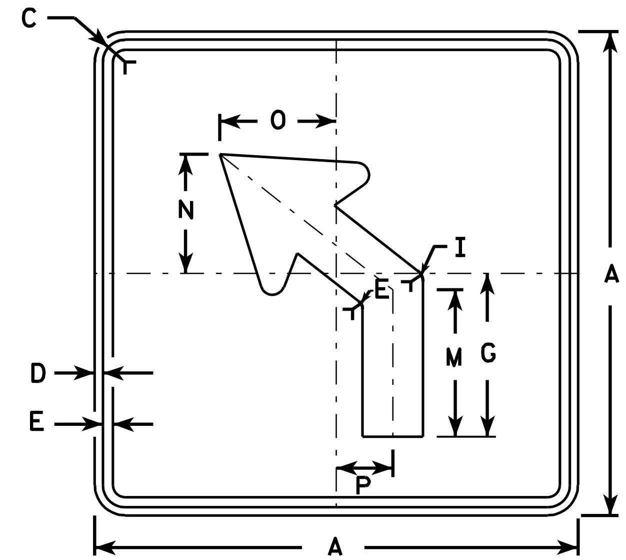
DATE 3/16/10 PLATE NO. M2-1.10

7

7



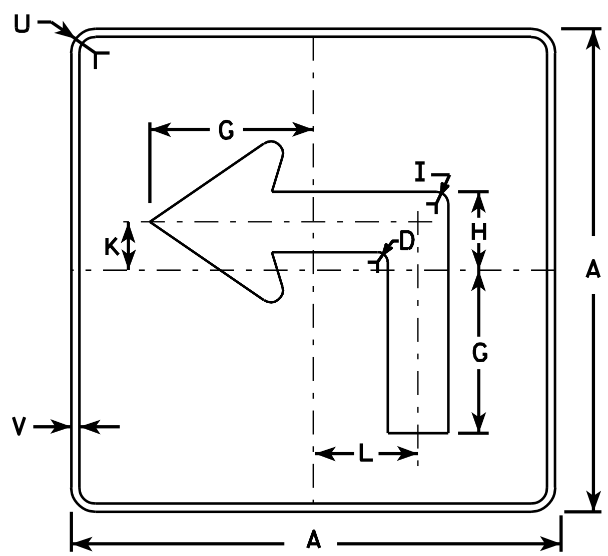
M5-1L
MK5-1L
MM5-1L
MO5-1L
MR5-1L



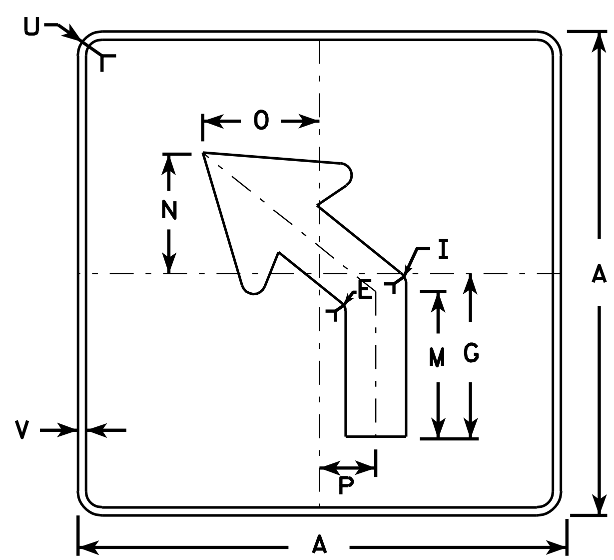
M5-2L
MK5-2L
MM5-2L
MO5-2L
MR5-2L

NOTES

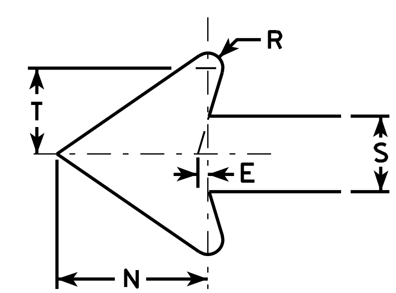
1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 — Background - White - Type H Reflective (Detour or temporary Signs - Reflective); Message - Black
   MB5-1 and MB5-2 — Background - Blue; Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
   MG5-1 and MG5-2 — Background - Green; Message - White - Type H Reflective
   MK5-1 and MK5-2 — Background - Green; Message - White Type H Reflective
   MM5-1 and MM5-2 — Background - White - Type H Reflective; Message - Green
   MN5-1 and MN5-2 — Background - Brown; Message - White - Type H Reflective
   MO5-1 and MO5-2 — Background - Orange - Reflective; Message - Black
   MR5-1 and MR5-2 — Background - Brown; Message - Yellow - Type H Reflective
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06	0.28
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56

STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

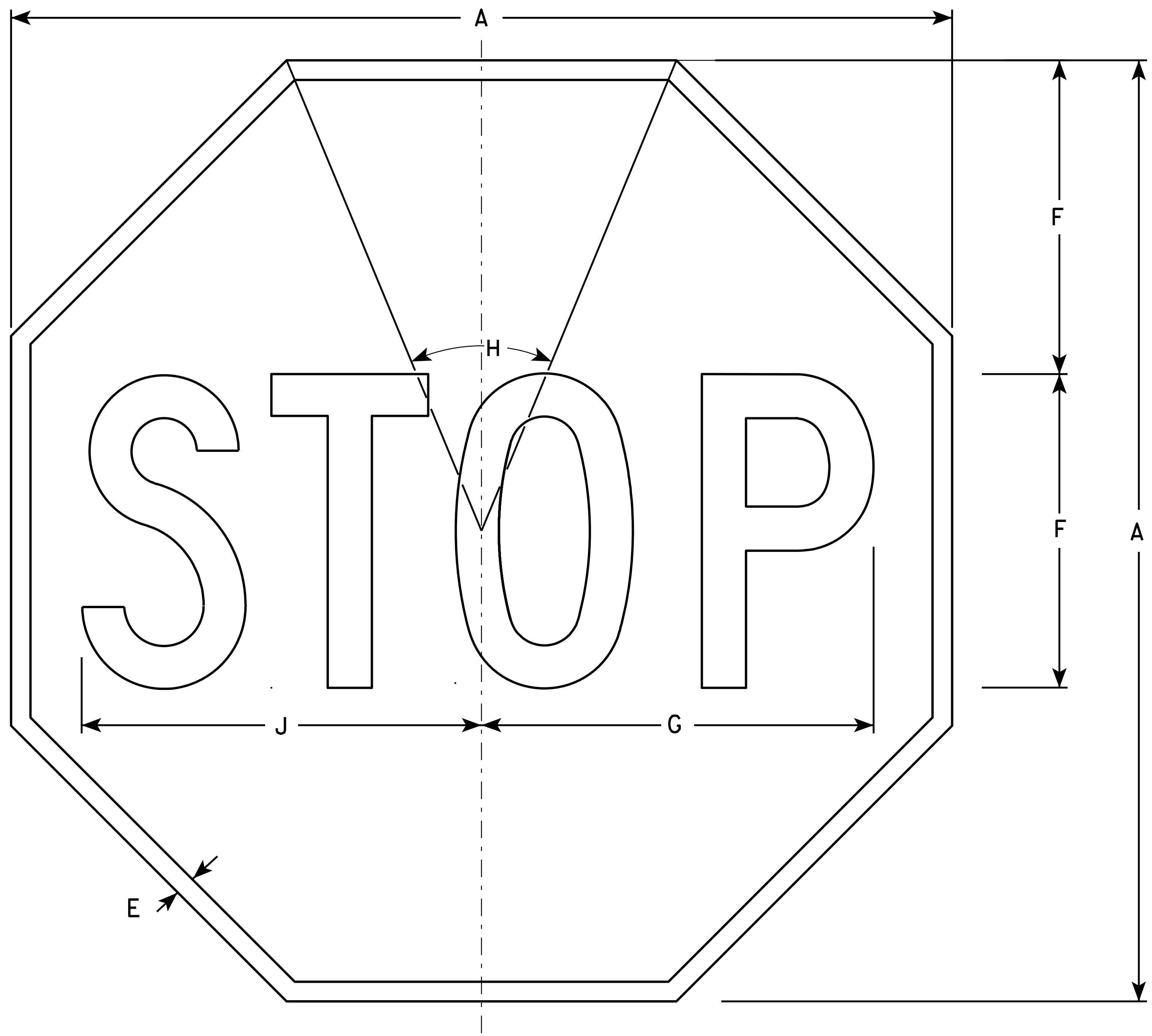
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M5-1.11

7

7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 91 | E



R1-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1-1

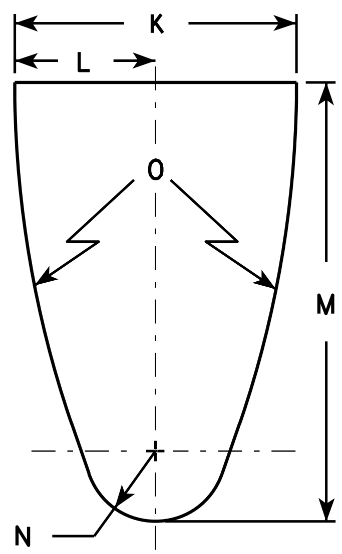
WISCONSIN DEPT OF TRANSPORTATION

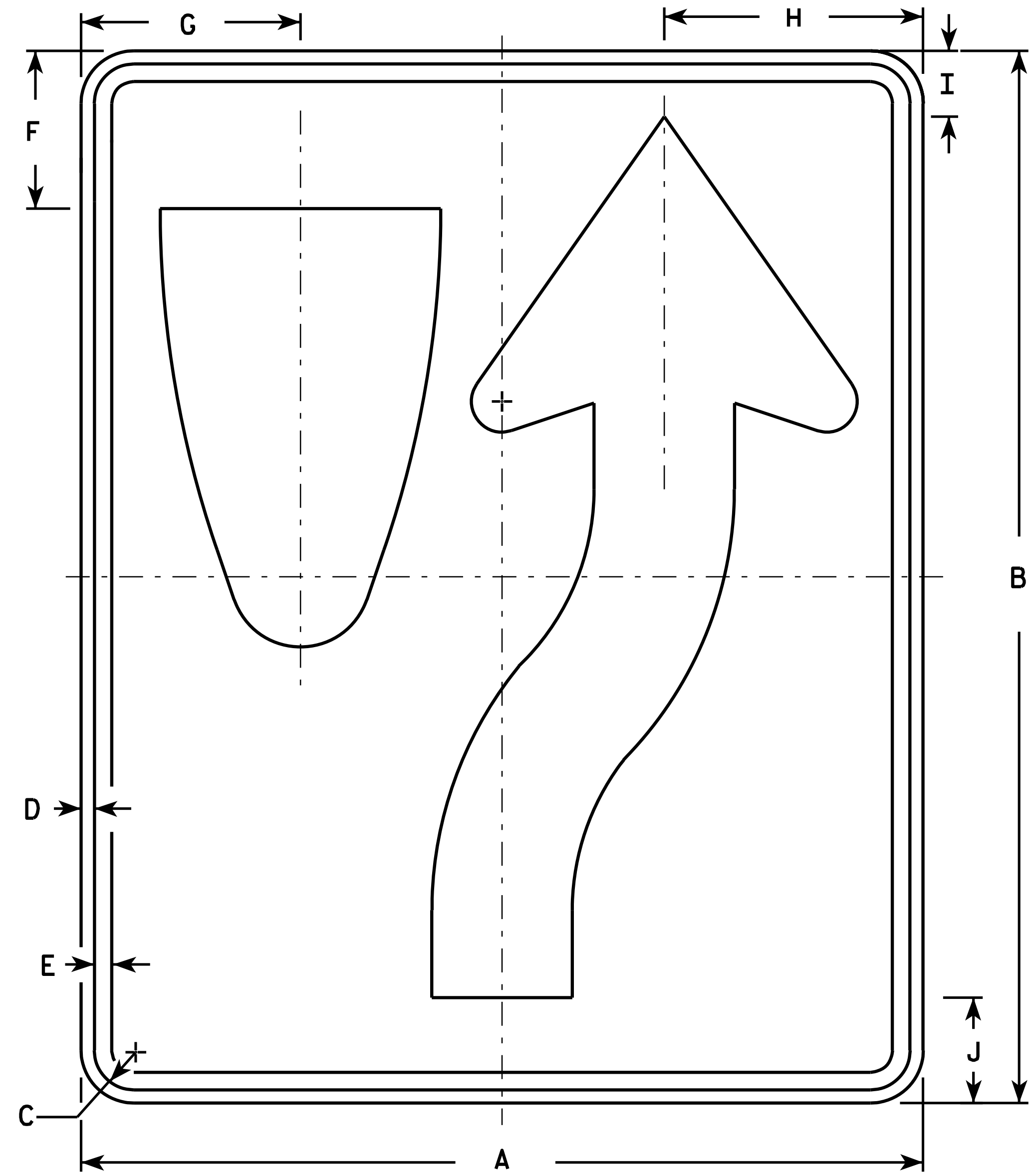
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

PROJECT NO: HWY: COUNTY: SHEET NO: 92 E

7 7

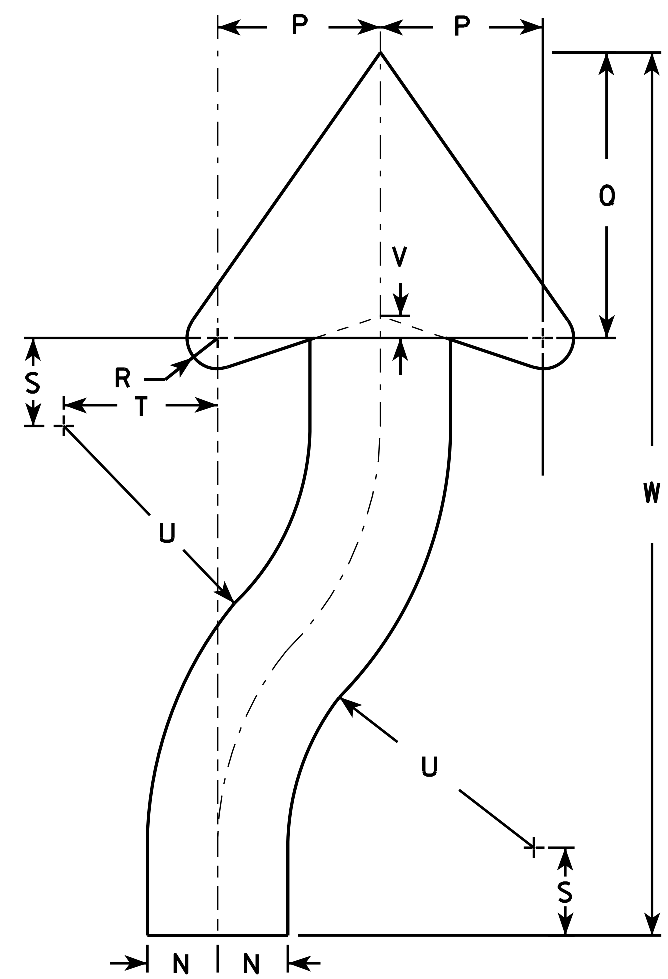




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN
R4-7 & R4-8

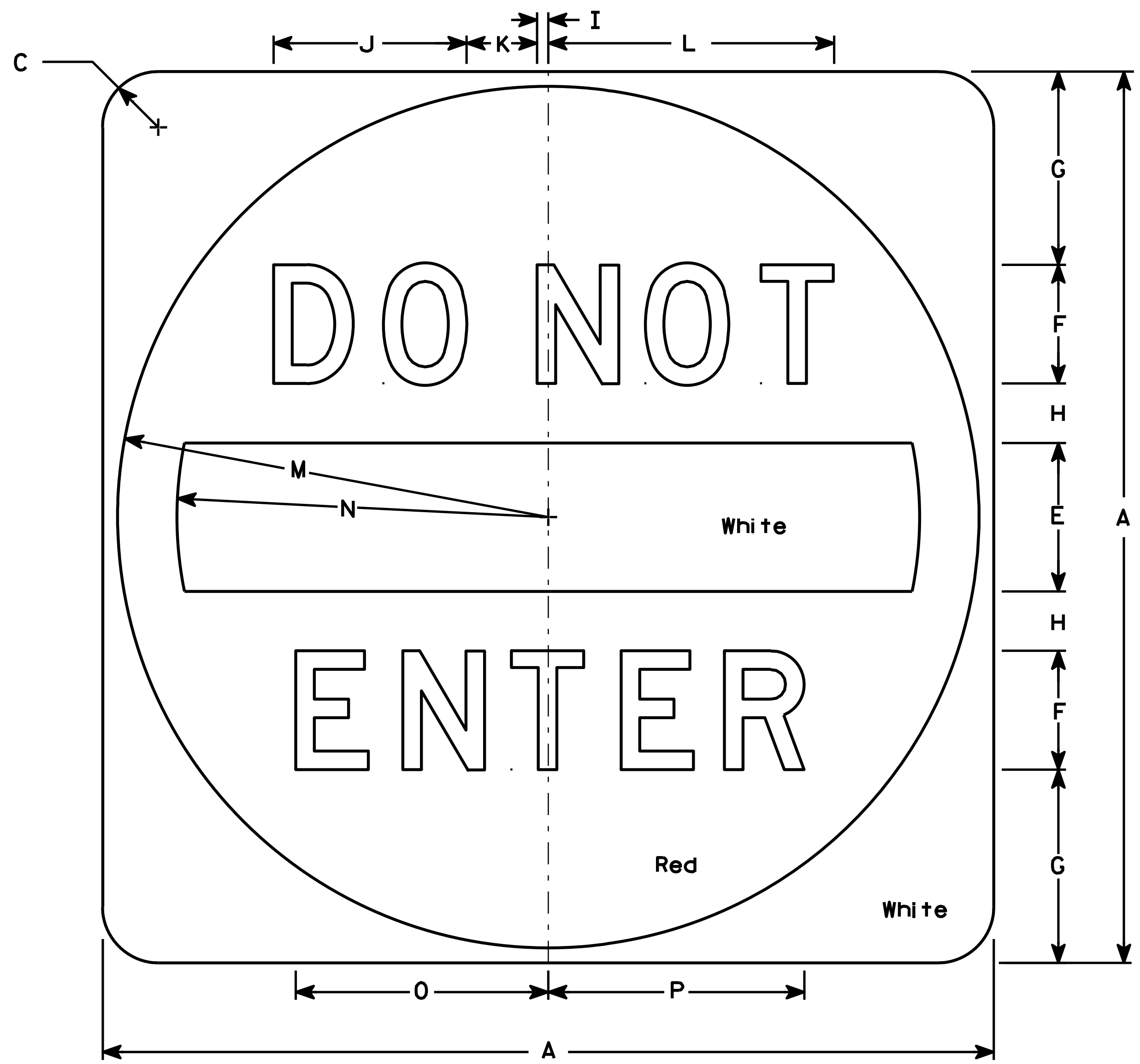
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO: HWY: COUNTY: SHEET NO: 93 E

7



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

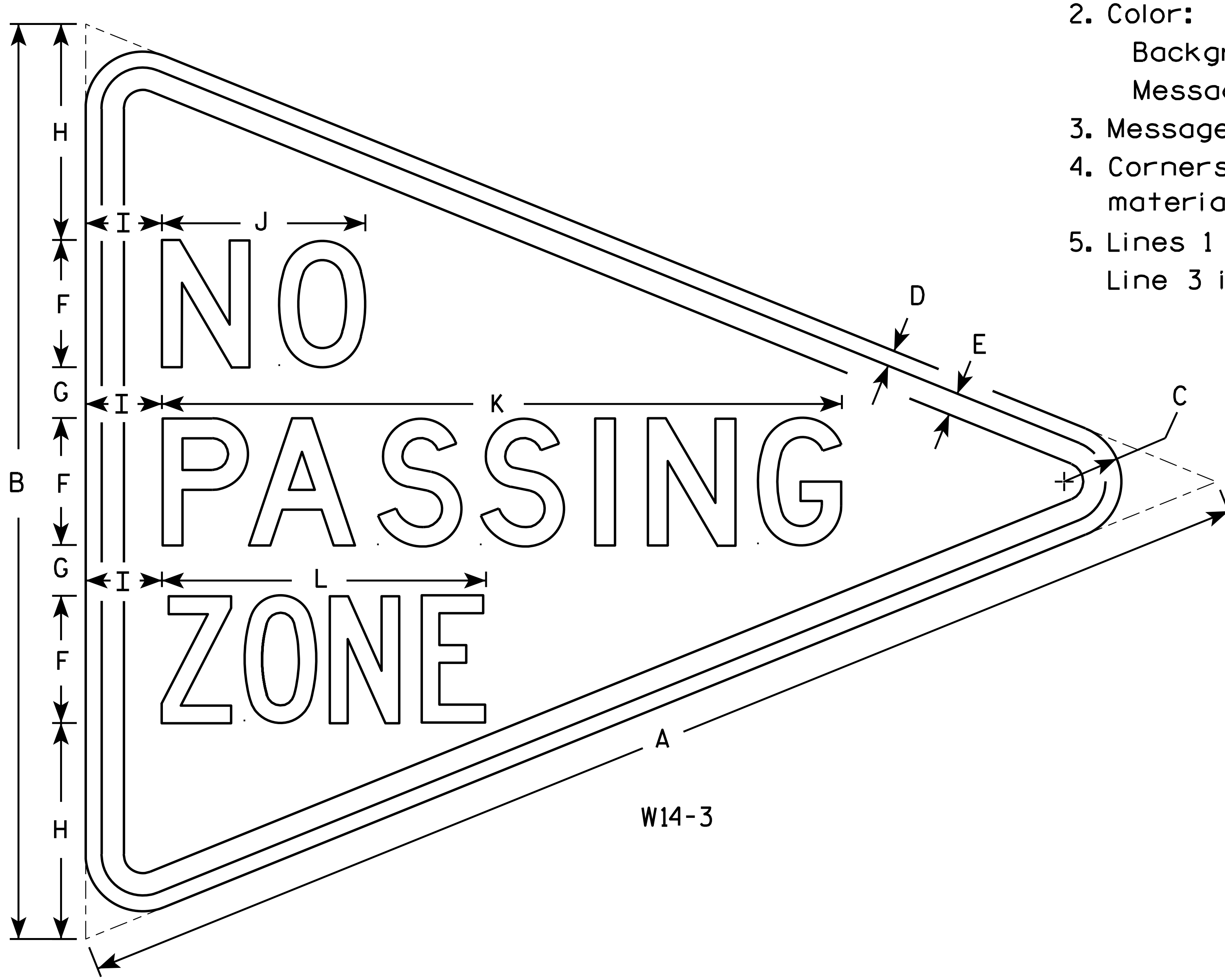
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 94 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R51.DGN PLOT DATE : 17-DEC-2010 12:11 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42



W14-3

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See note 5
4. Corners and borders shall be rounded on all base materials for this sign.
5. Lines 1 and 2 are Series D.
   Line 3 is series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 95 | E

7 7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W143.DGN PLOT DATE : 07-JUN-2010 13:11 PLOT BY : ditjph PLOT NAME : PLOT SCALE : 5.710749:1.000000 WISDOT/CADDS SHEET 42

FOR INFORMATION ONLY

STATION 185+00 TO STATION 187+50 - STATION LT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL FACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
185+00		LT				
185+50	50	LT	2	5	11	11
186+00	50	LT	3	6	14	25
186+50	50	LT	2	3	6	32
187+00	50	LT	3	3	6	38
187+50	50	LT	0.0	1	3	41
				TOTAL =	41	

STATION 236+50 TO STATION 239+50 - STATION LT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL FACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
236+50		LT				
237+00	50	LT	1	1	1	1
237+50	50	LT	0.0	1	1	2
238+00	50	LT	1	1	1	3
238+50	50	LT	0.0	1	1	5
239+00	50	LT	1	0.3	1	5
239+50	50	LT	0.0	0.3	1	6
				TOTAL =	6	

STATION 254+50 TO STATION 257+50 - STATION LT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL FACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
254+50		LT				
255+00	50	LT	25	12	29	29
255+50	50	LT	0.0	12	29	57
256+00	50	LT	0.0	0.0	0.0	57
256+50	50	LT	0.2	0.1	0.2	57
257+00	50	LT	0.4	0.3	1	58
257+50	50	LT	0.0	0.2	0.5	59
				TOTAL =	59	

STATION 271+00 TO STATION 276+00 - STATION LT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL FACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
271+00		LT				
271+50	50	LT	0.2	0.1	0.2	0
272+00	50	LT	0.1	0.2	0.3	1
272+50	50	LT	0.1	0.1	0.2	1
273+00	50	LT	0.3	0.2	0.5	1
273+50	50	LT	0.4	0.4	1	2
274+00	50	LT	1	1	1	3
274+50	50	LT	3	2	4	8
275+00	50	LT	0.0	1	3	11
275+50	50	LT	0.1	0.0	0.1	11
276+00	50	LT	3	2	4	15
				TOTAL =	15	

STATION 284+50 TO STATION 290+00 - STATION LT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL FACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
284+50		LT				
285+00	50	LT	3	2	3	3
285+50	50	LT	28	15	35	39
286+00	50	LT	12	20	45	84
286+50	50	LT	0.2	6	14	97
287+00	50	LT	1	0.4	1	98
287+50	50	LT	1	1	2	100
288+00	50	LT	0.3	1	2	102
288+50	50	LT	5	3	6	108
289+00	50	LT	24	14	33	141
289+50	50	LT	5	14	33	174
290+00	50	LT	0.0	3	6	181
				TOTAL =	181	

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STATION 217+50 TO STATION 238+00 - STATION RT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL ACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
217+50		RT				
218+00	50	RT	4	2	5	5
218+50	50	RT	1	2	5	10
219+00	50	RT	0.0	0.4	1	11
219+50	50	RT	0.0	0.0	0.0	11
220+00	50	RT	0.0	0.0	0.0	11
220+50	50	RT	0.0	0.0	0.0	11
221+00	50	RT	0.4	0.2	0.5	11
221+50	50	RT	1	1	2	13
222+00	50	RT	5	3	6	19
222+50	50	RT	2	3	8	27
223+00	50	RT	1	2	4	30
223+50	50	RT	2	2	4	34
224+00	50	RT	2	2	5	39
224+50	50	RT	5	3	8	46
225+00	50	RT	2	3	7	54
225+50	50	RT	1	1	3	56
226+00	50	RT	1	1	1	58
226+50	50	RT	1	1	2	59
227+00	50	RT	4	2	5	65
227+50	50	RT	2	3	6	71
228+00	50	RT	4	3	7	78
228+50	50	RT	3	4	8	86
229+00	50	RT	5	4	10	96
229+50	50	RT	7	6	14	111
230+00	50	RT	1	4	9	120
230+50	50	RT	0.2	1	1	122
231+00	50	RT	0.0	0.1	0.2	122
231+50	50	RT	0.0	0.0	0.0	122
232+00	50	RT	0.0	0.0	0.0	122
232+50	50	RT	0.0	0.0	0.0	122
233+00	50	RT	0.0	0.0	0.0	122
233+50	50	RT	1	1	1	123
234+00	50	RT	0.0	1	1	124
234+50	50	RT	0.0	0.0	0.0	124
235+00	50	RT	0.4	0.2	0.5	125
235+50	50	RT	1	1	2	126
236+00	50	RT	1	1	2	129
236+50	50	RT	0.0	1	1	130
237+00	50	RT	0.0	0.0	0.0	130
237+50	50	RT	3	1	3	133
238+00	50	RT	0.0	1	3	136
				TOTAL =	136	

STATION 241+00 TO STATION 247+50 - STATION RT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL FACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
241+00		RT				
241+50	50	RT	8	4	9	9
242+00	50	RT	11	10	22	31
242+50	50	RT	29	20	46	78
243+00	50	RT	21	25	58	135
243+50	50	RT	14	18	41	177
244+00	50	RT	16	15	35	212
244+50	50	RT	5	10	24	236
245+00	50	RT	7	6	13	249
245+50	50	RT	4	5	12	260
246+00	50	RT	1	2	5	265
246+50	50	RT	1	1	2	267
247+00	50	RT	0.2	0.4	1	268
247+50	50	RT	0.0	0.1	0.2	268
				TOTAL =	268	

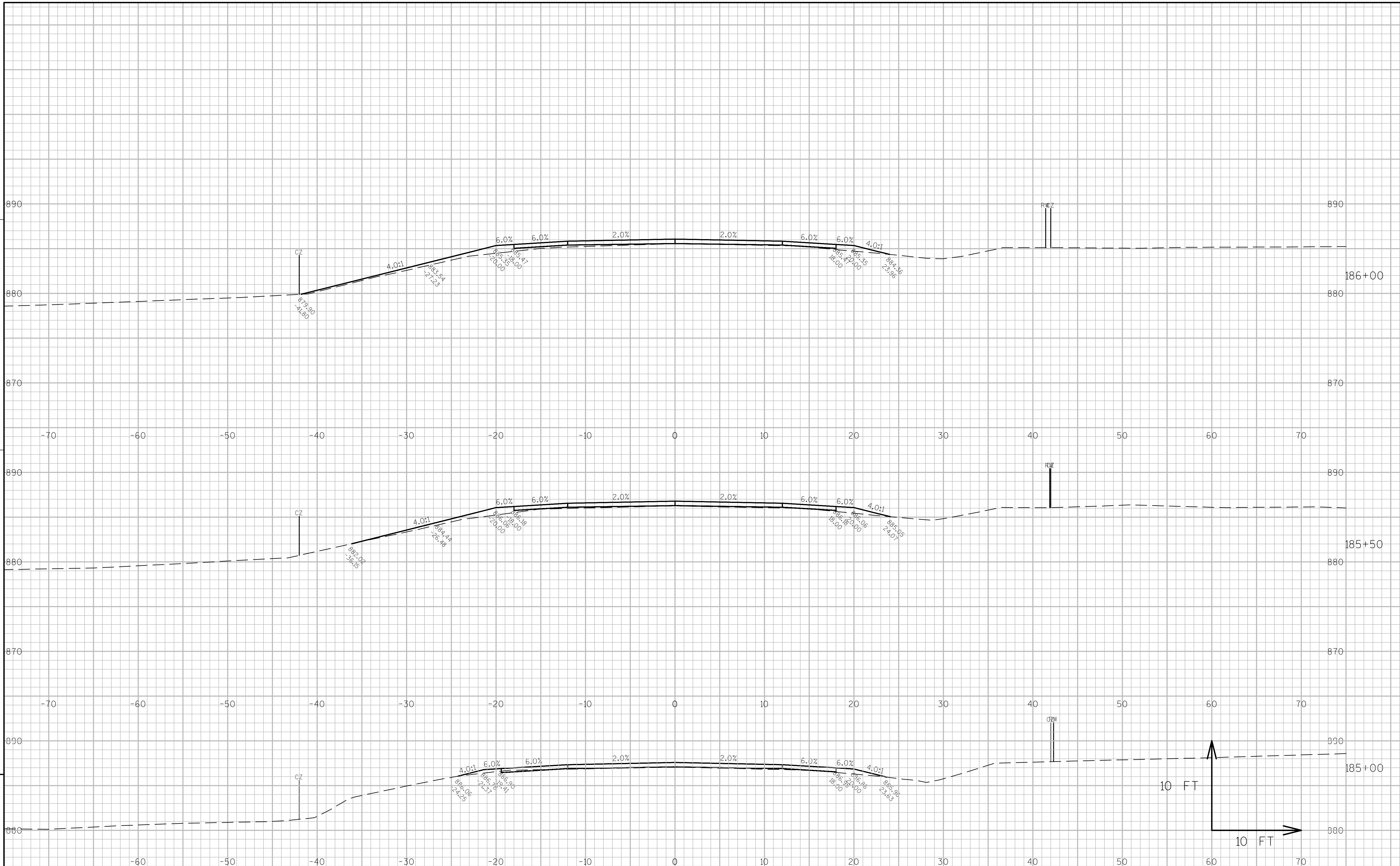
STATION 252+00 TO STATION 255+50 - STATION RT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL FACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
252+00		RT				
252+50	50	RT	7	3	8	8
253+00	50	RT	16	11	27	34
253+50	50	RT	37	26	61	96
254+00	50	RT	20	28	65	161
254+50	50	RT	14	17	39	200
255+00	50	RT	22	18	41	241
255+50	50	RT	0.0	11	25	266
				TOTAL =	266	

FOR INFORMATION ONLY

STATION 269+50 TO STATION 274+00 - STATION RT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL FACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
269+50		RT				
270+00	50	RT	7	4	8	8
270+50	50	RT	0.1	4	8	17
271+00	50	RT	0.1	0.1	0.2	17
271+50	50	RT	3	2	4	21
272+00	50	RT	0.0	2	4	25
272+50	50	RT	0.0	0.0	0.0	25
273+00	50	RT	14	7	17	41
273+50	50	RT	4	9	21	63
274+00	50	RT	0.0	2	5	67
				TOTAL =	67	

STATION 283+00 TO STATION 287+00 - STATION RT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL FACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
283+00		RT				
283+50	50	RT	0.2	0.1	0.2	0
284+00	50	RT	3	1	3	4
284+50	50	RT	0.1	1	3	7
285+00	50	RT	0.0	0.1	0.1	7
285+50	50	RT	0.1	0.1	0.1	7
286+00	50	RT	0.0	0.1	0.1	7
286+50	50	RT	0.1	0.1	0.1	7
287+00	50	RT	0.0	0.1	0.1	7
				TOTAL =	7	

STATION 289+50 TO STATION 298+12 - STATION RT						
					** FOR INFORMATION ONLY **	
STATION	DISTANCE (FT)	LOCATION	TOPSOIL FILL AREA (SF)	AVERAGE TOPSOIL FILL AREA (SF)	INCREMENTAL EXPANDED TOPSOIL FILL VOLUME (CY) (1.25 FILL FACTOR)	CUMULATIVE EXPANDED TOPSOIL FILL VOLUME (CY)
289+50		RT				
290+00	50	RT	0.3	0.2	0.3	0
290+50	50	RT	0.0	0.2	0.3	1
291+00	50	RT	0.0	0.0	0.0	1
291+50	50	RT	0.0	0.0	0.0	1
292+00	50	RT	0.0	0.0	0.0	1
292+50	50	RT	0.3	0.2	0.3	1
293+00	50	RT	1	1	2	3
293+50	50	RT	1	1	2	5
294+00	50	RT	0.0	0.3	1	6
294+50	50	RT	0.1	0.1	0.1	6
295+00	50	RT	0.0	0.1	0.1	6
295+50	50	RT	5	2	5	11
296+00	50	RT	17	11	25	36
296+50	50	RT	14	16	36	72
297+00	50	RT	3	8	20	92
297+50	50	RT	12	8	17	109
298+00	50	RT	15	13	31	140
298+12	12	RT	0.0	7	4	144
				TOTAL =	144	



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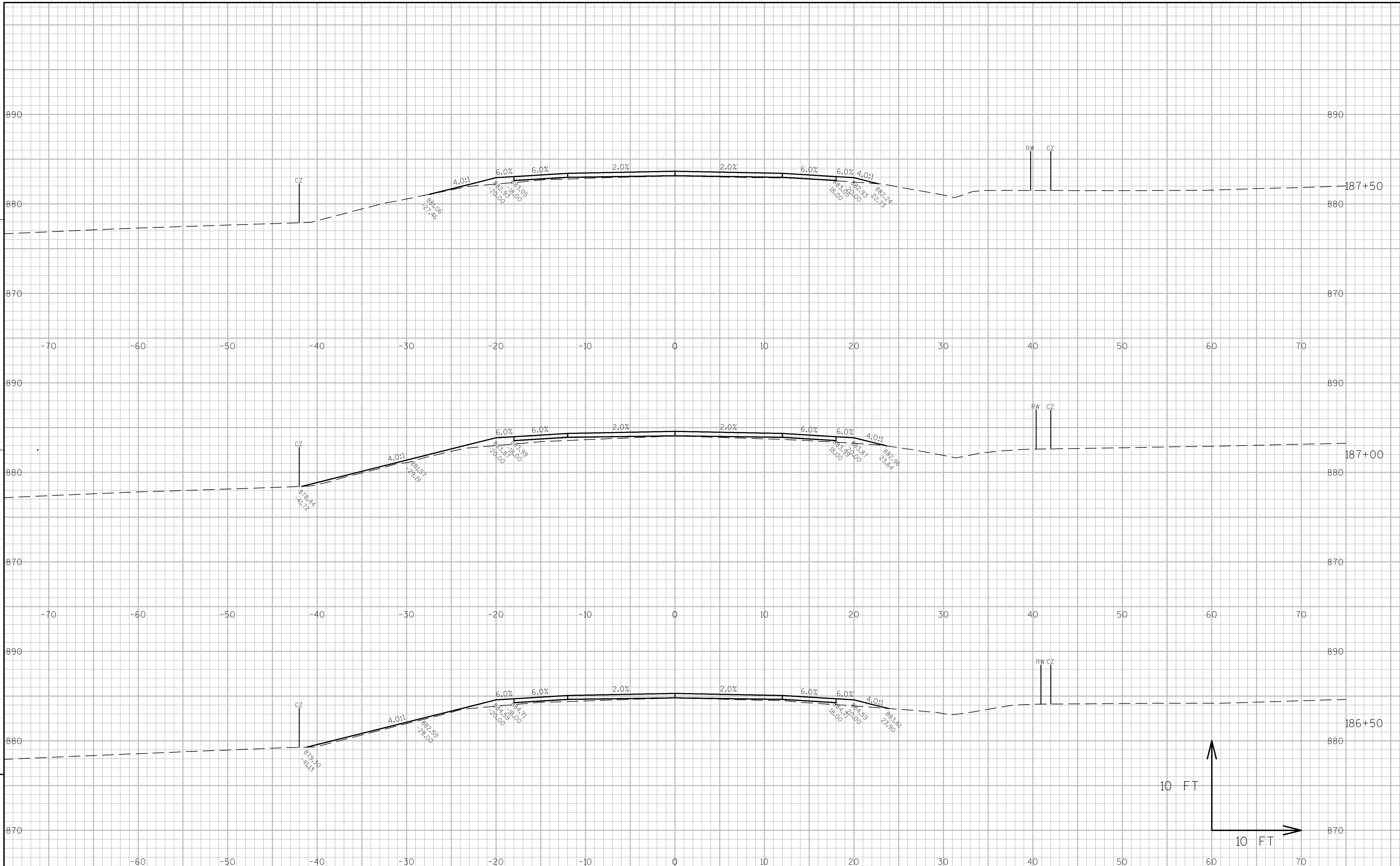
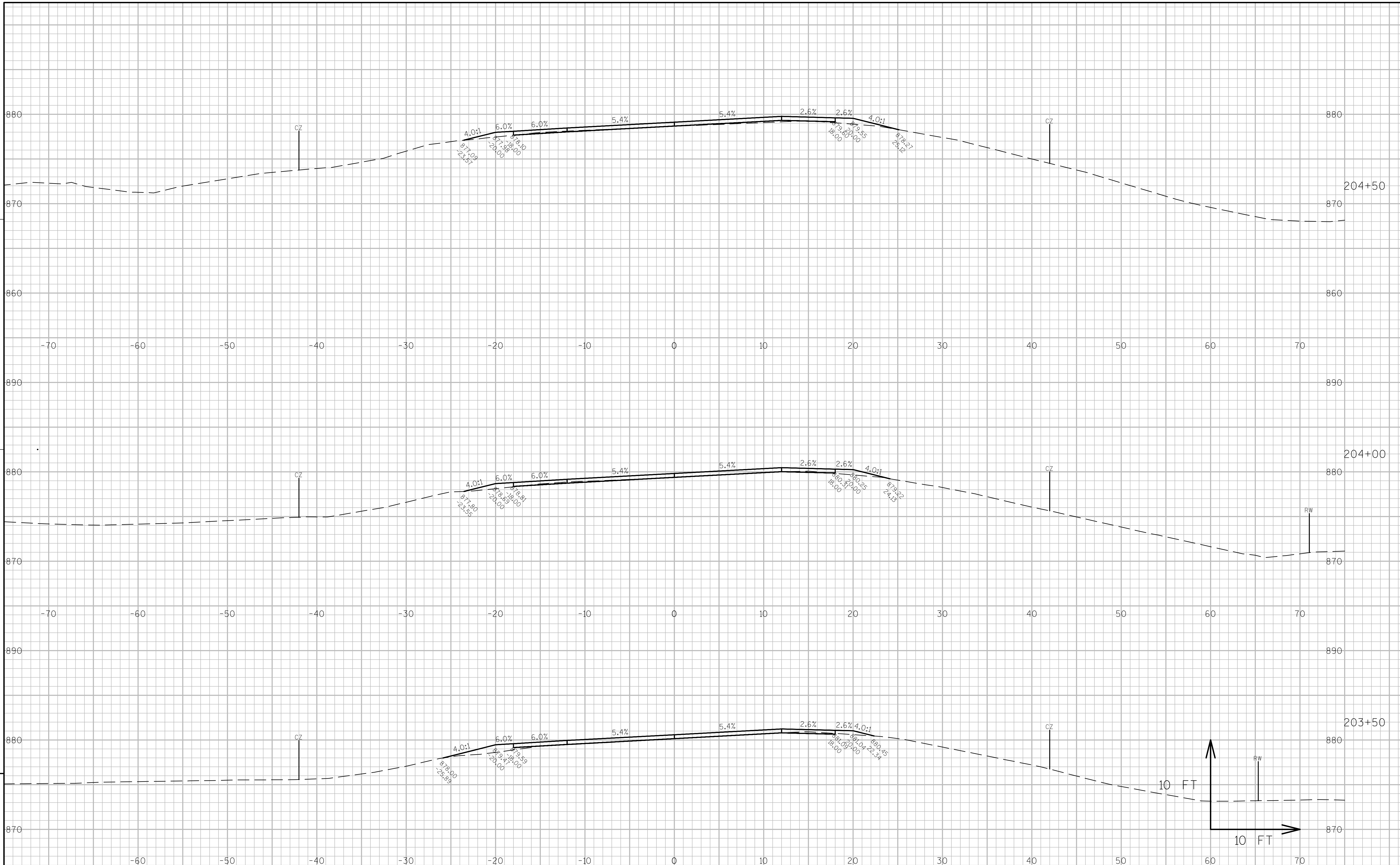
PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 99	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:24 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF WISDOT/CADDS SHEET 49



PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 100	E



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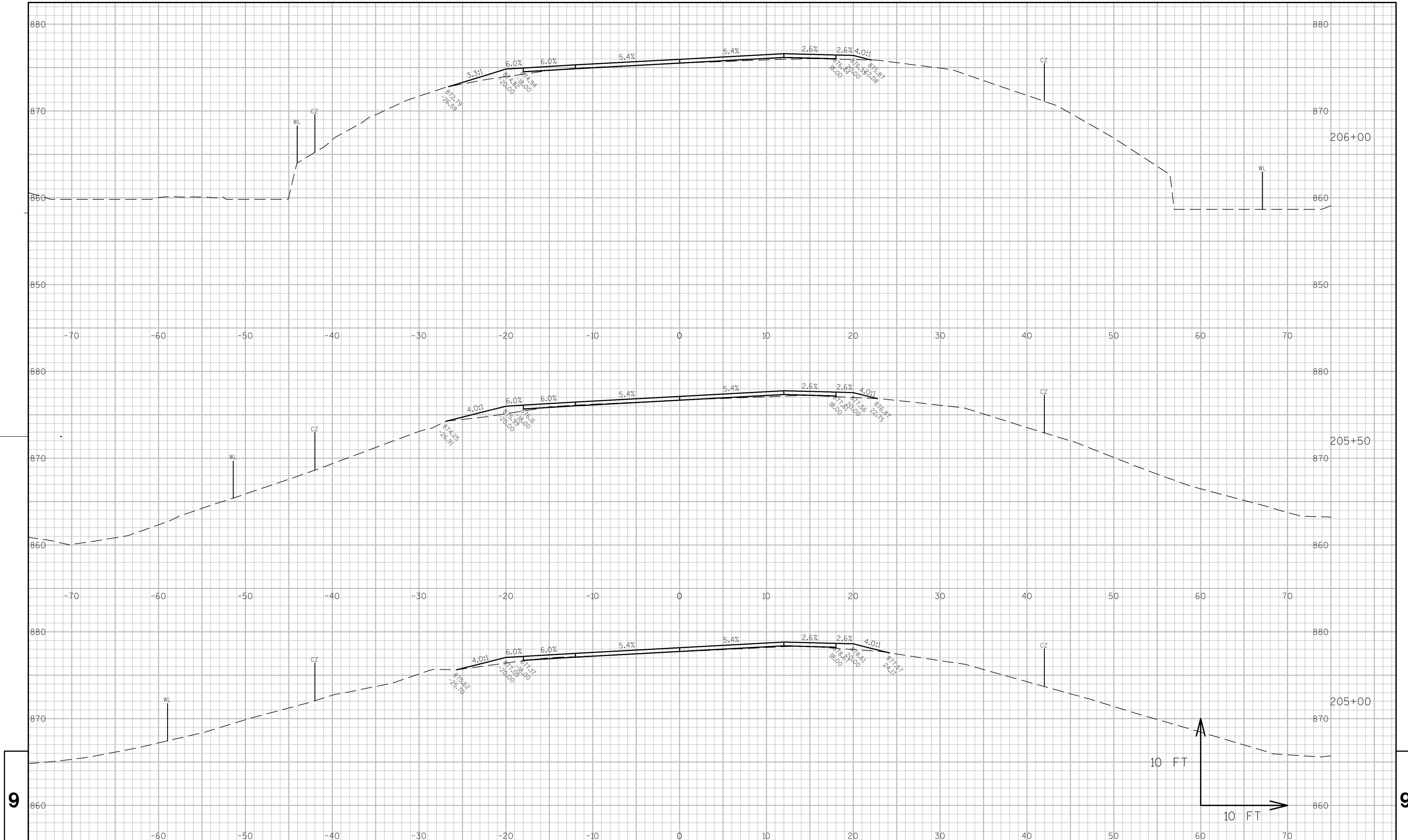
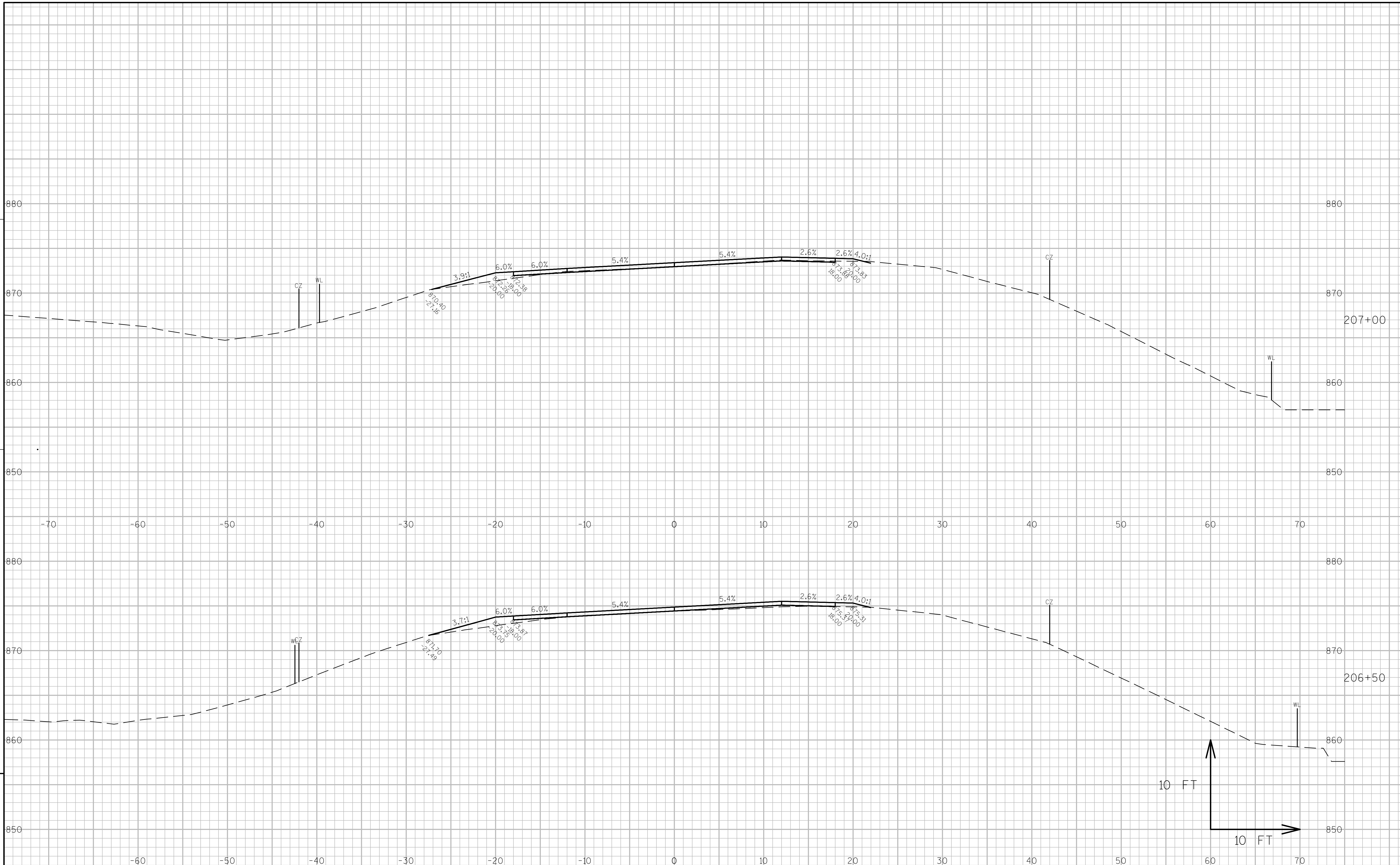
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 101	E



PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 102	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:26 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



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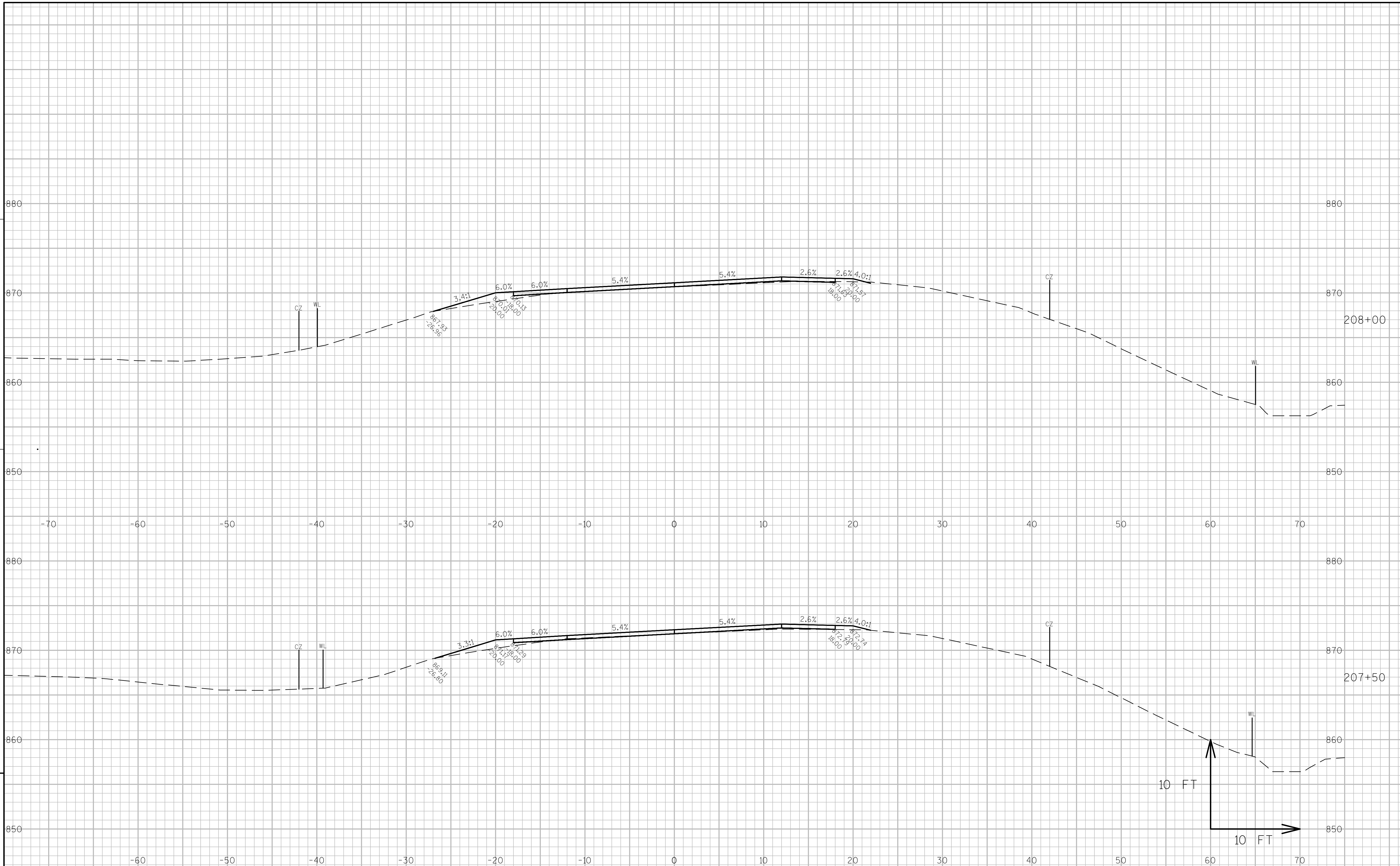
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 103	E



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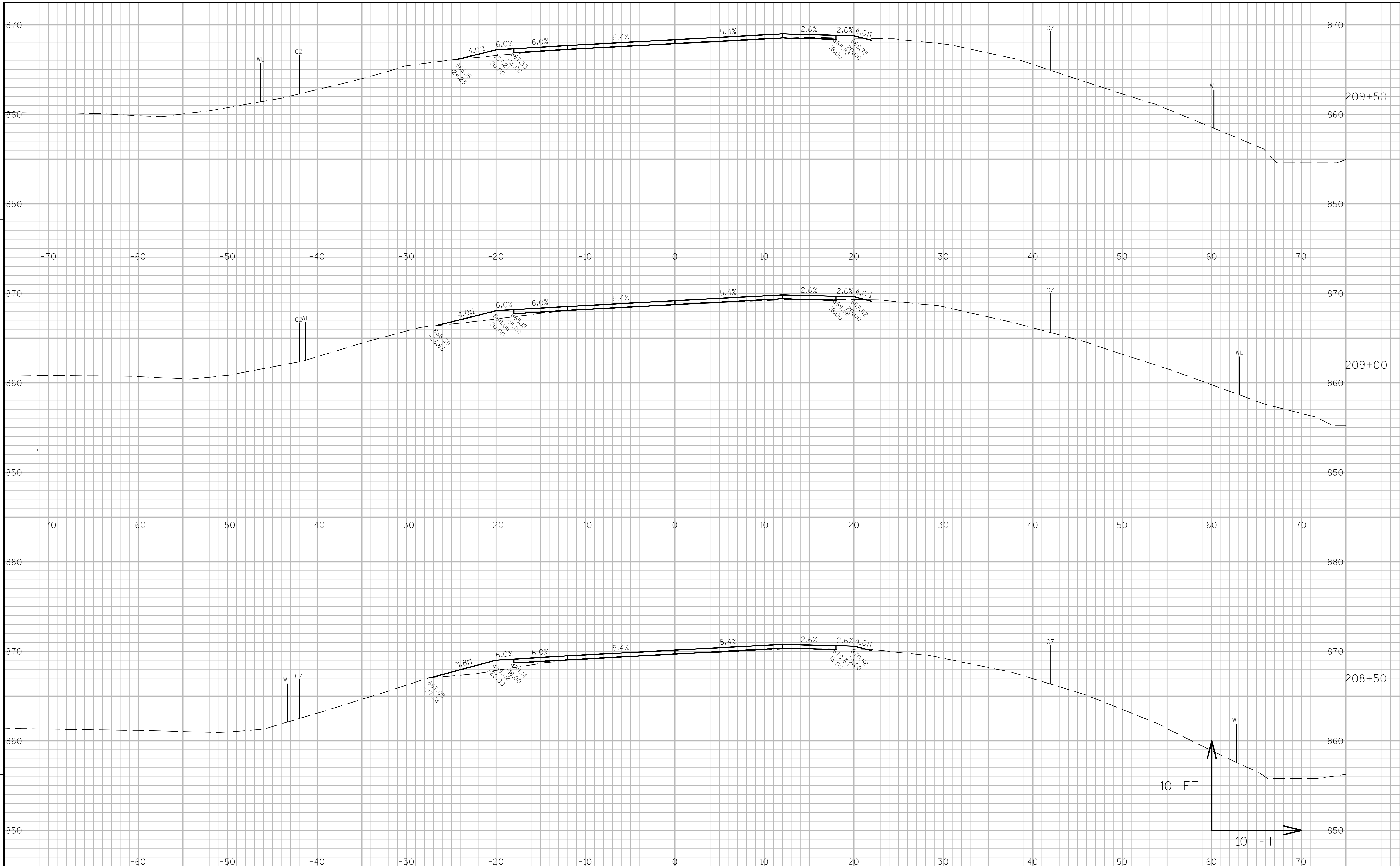
PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 104	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG   PLOT DATE : 5/3/2013 1:26 PM   PLOT BY : SYRON, SCOTT A   PLOT NAME :   PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



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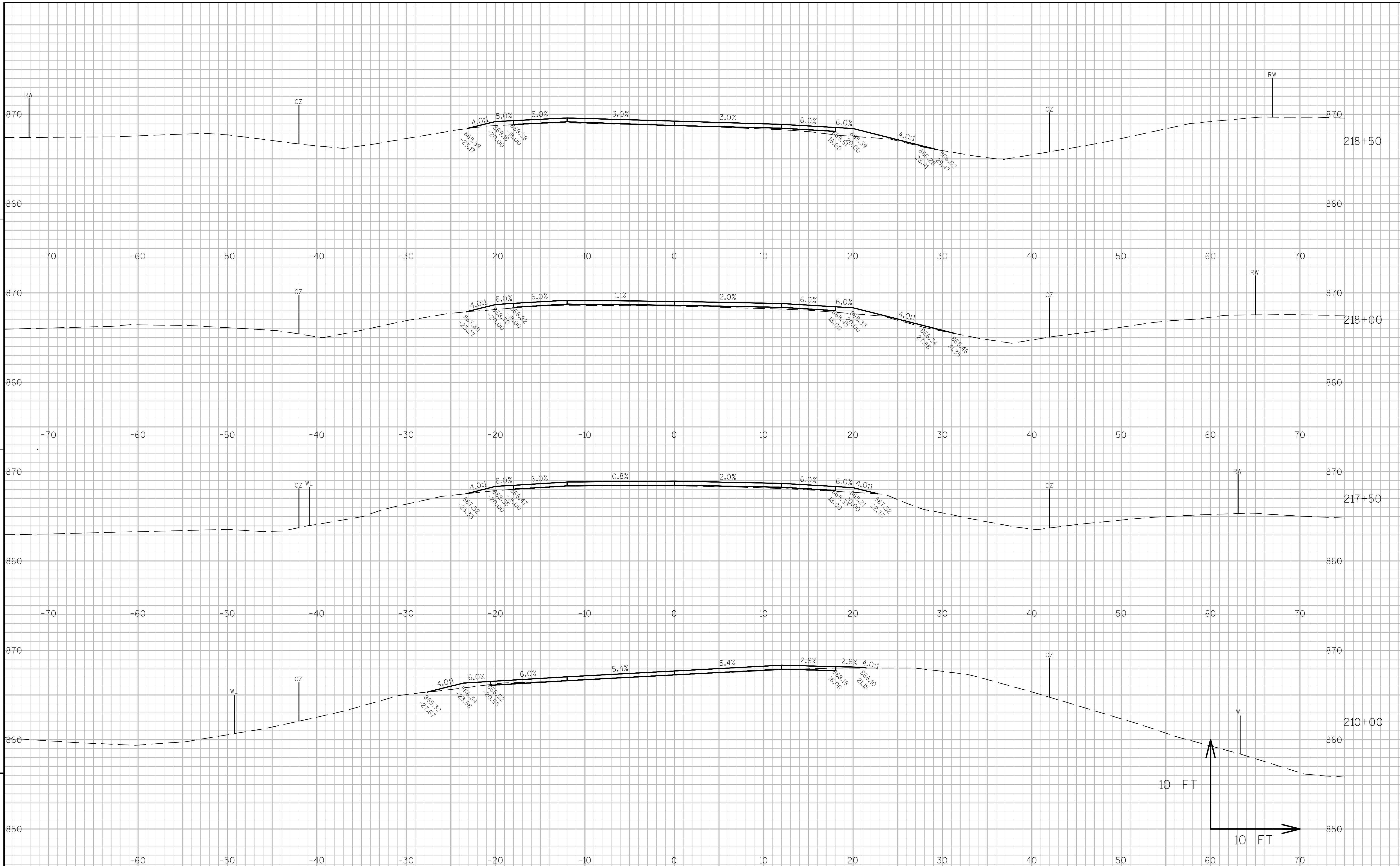
PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:27 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



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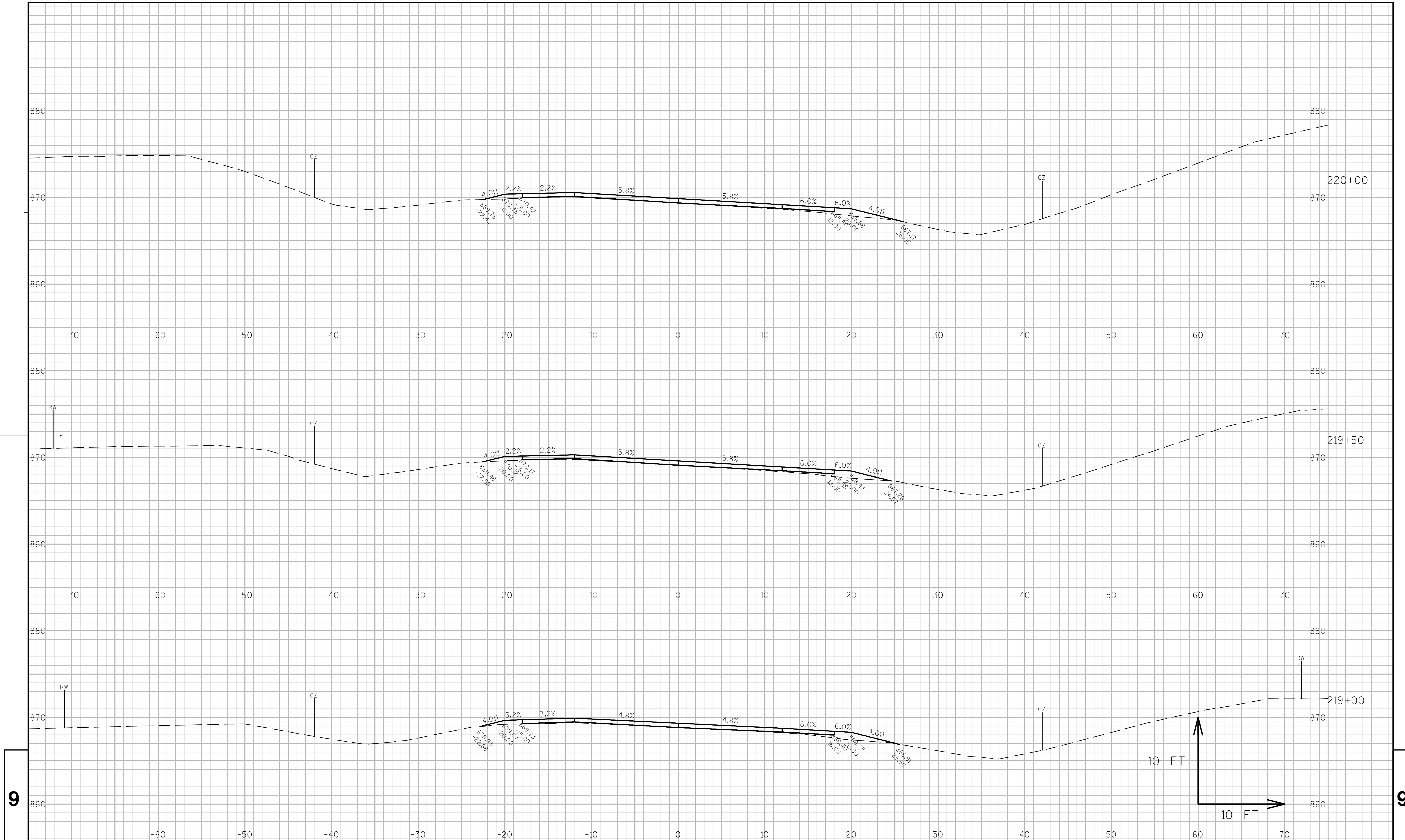
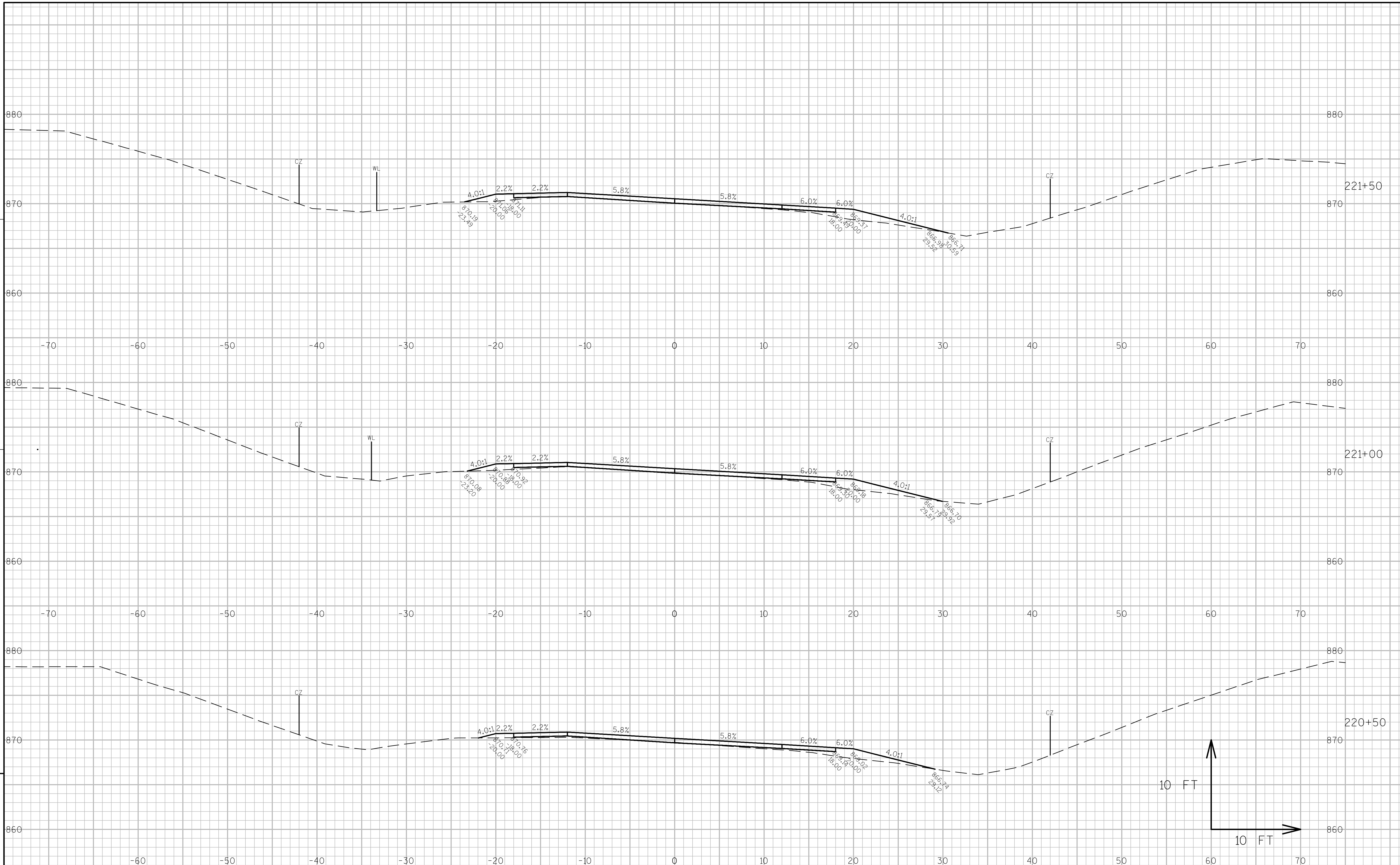
PROJECT NO: 5845-01-75 | HWY: USH 51 | COUNTY: DANE | CROSS SECTIONS: CROSS SECTION | SHEET 106 | E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG

PLOT DATE : 5/3/2013 1:27 PM   PLOT BY : SYRON, SCOTT A   PLOT NAME :   PLOT SCALE : 1:10_XREF



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 107	E



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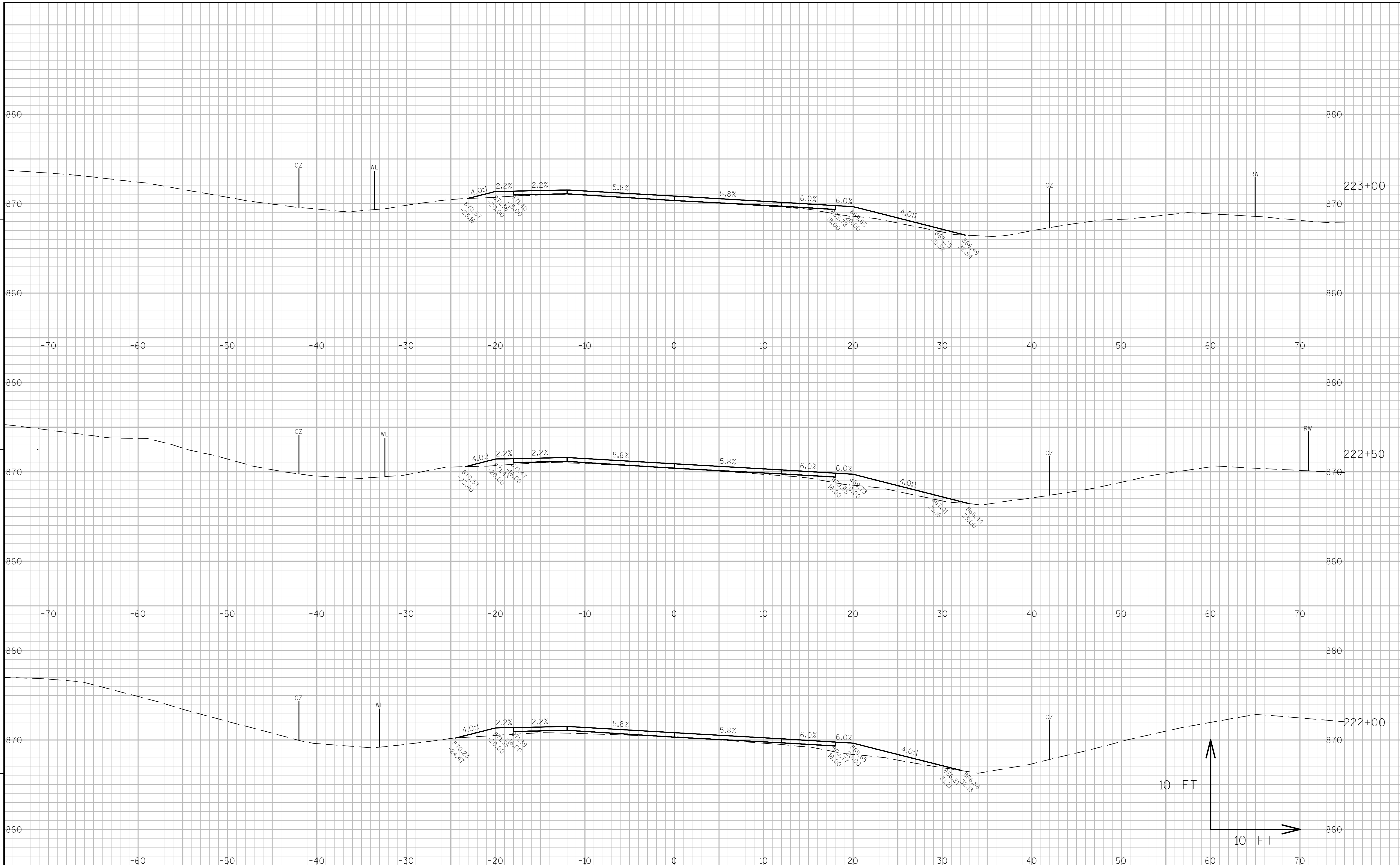
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 108	E



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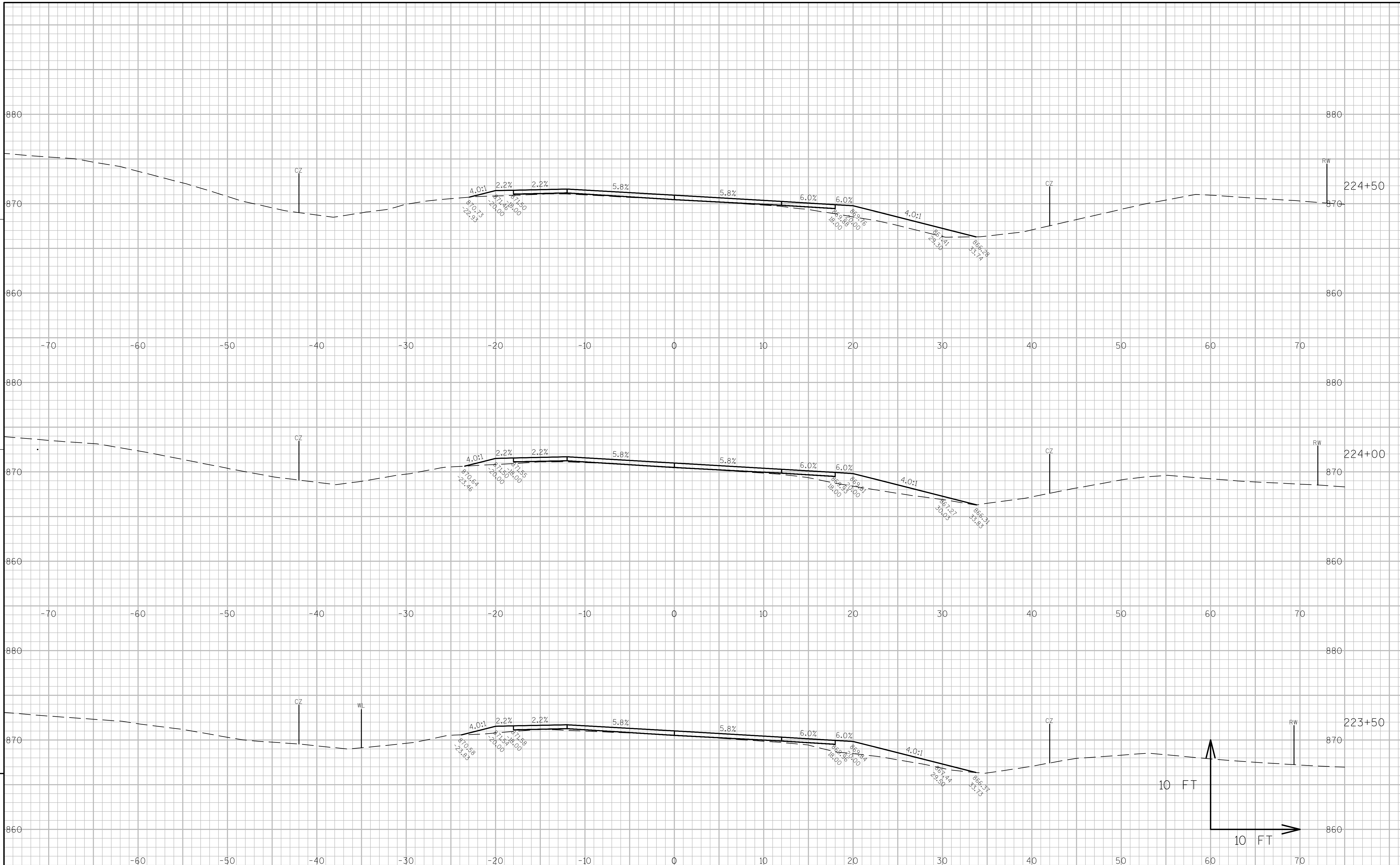
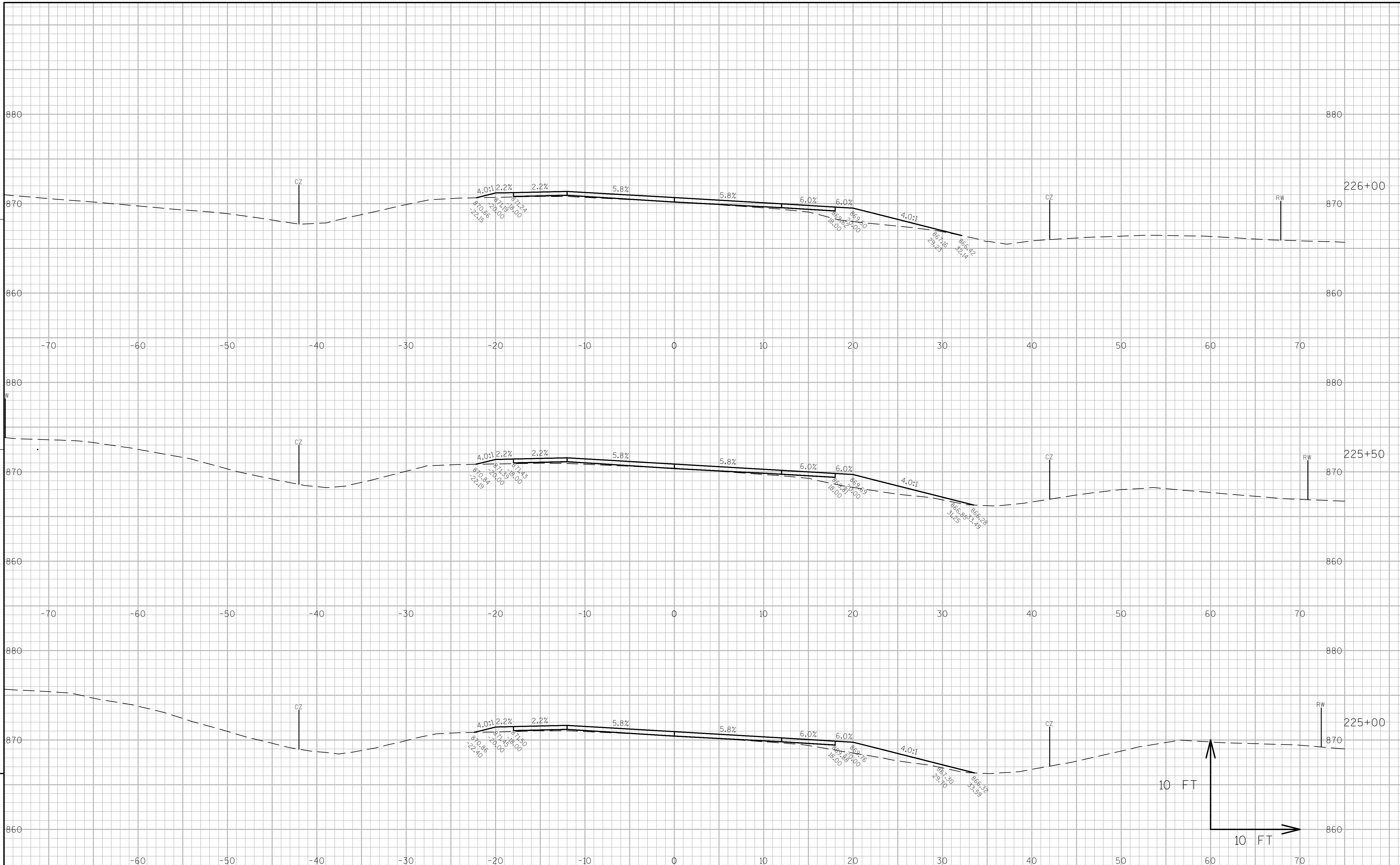
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 109	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:28 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



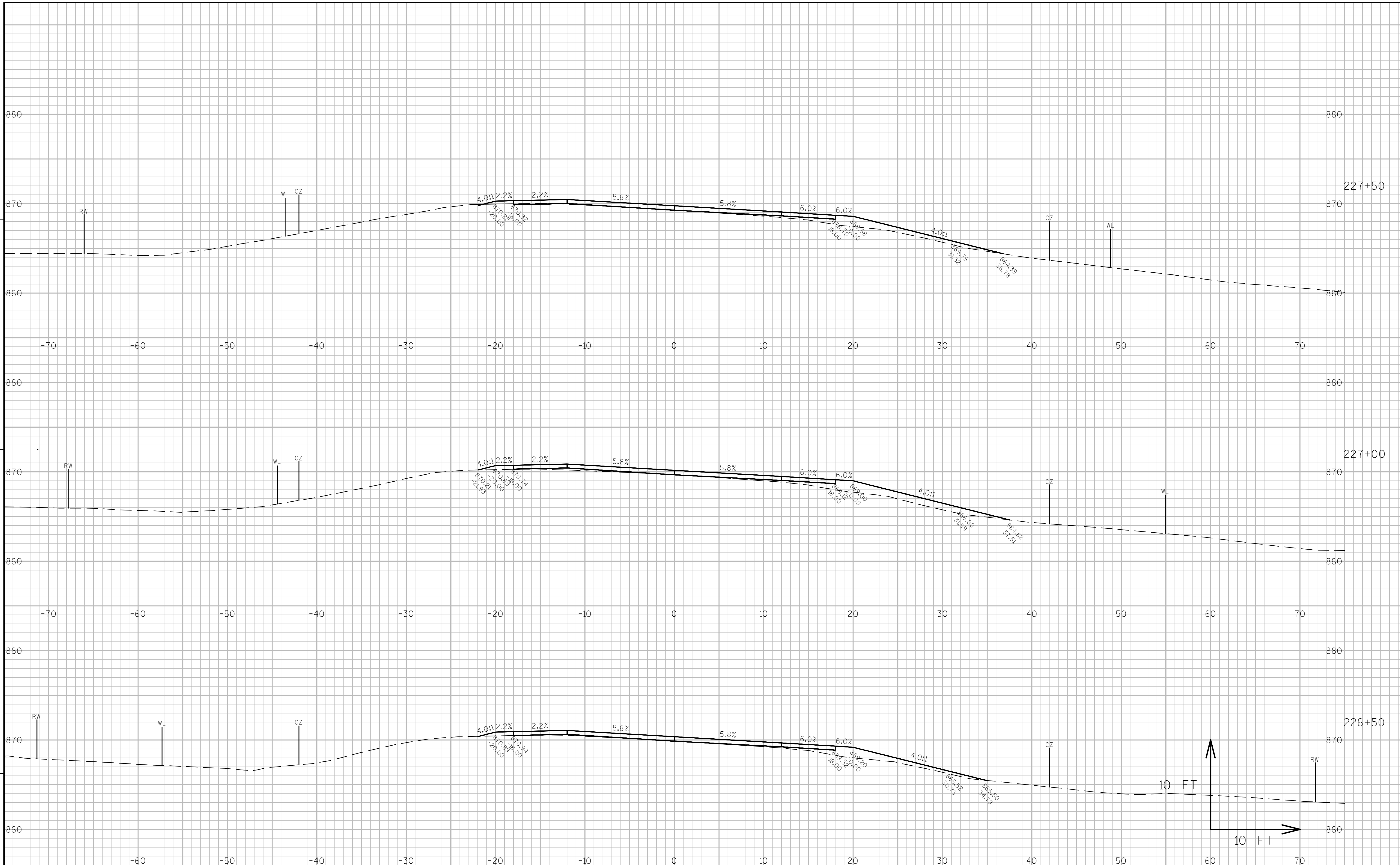
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 110	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:29 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 111	E

9



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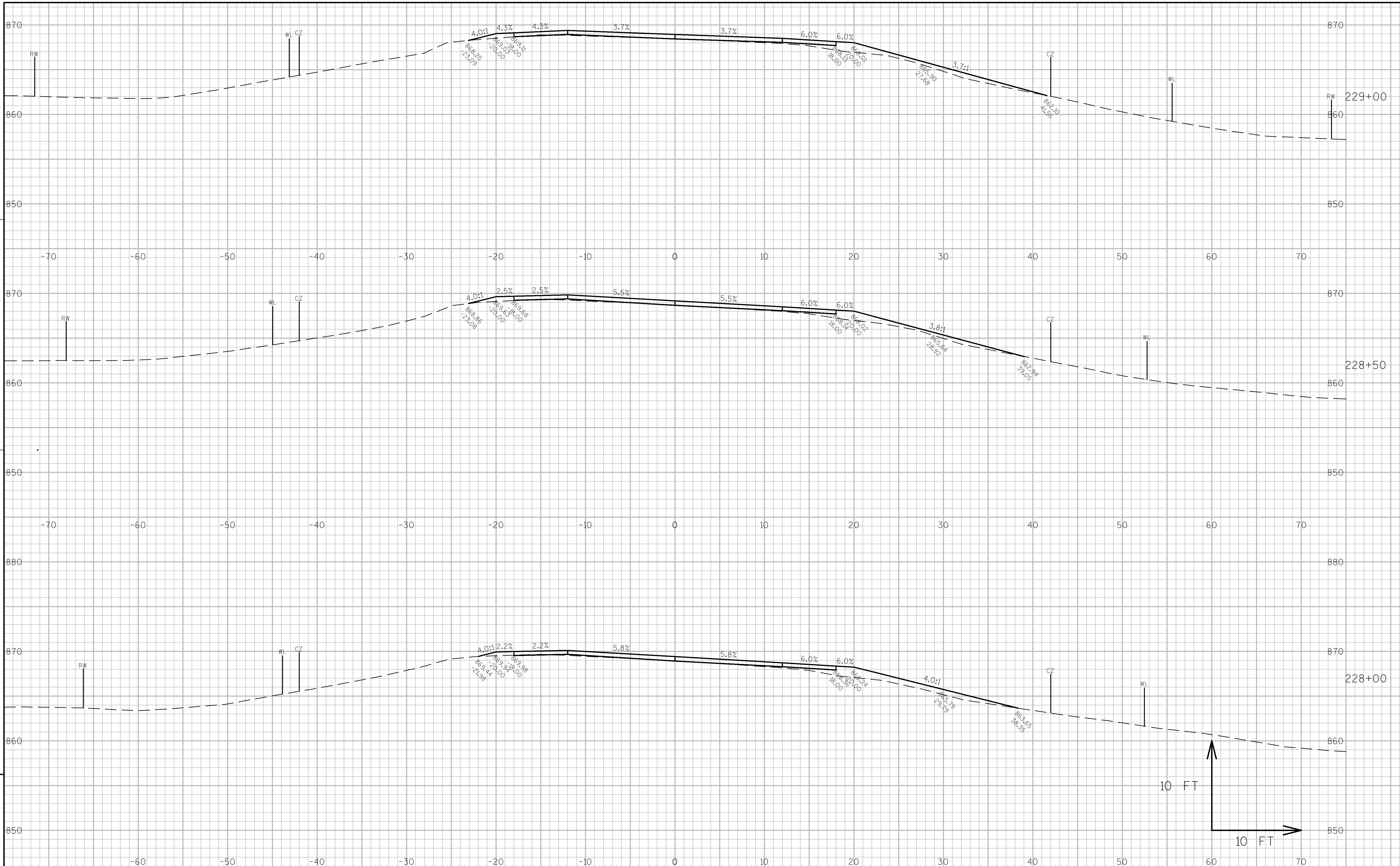
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 112	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG   PLOT DATE : 5/3/2013 1:29 PM   PLOT BY : SYRON, SCOTT A   PLOT NAME : ___________   PLOT SCALE : 1:10_XREF   WISDOT/CADDS SHEET 49



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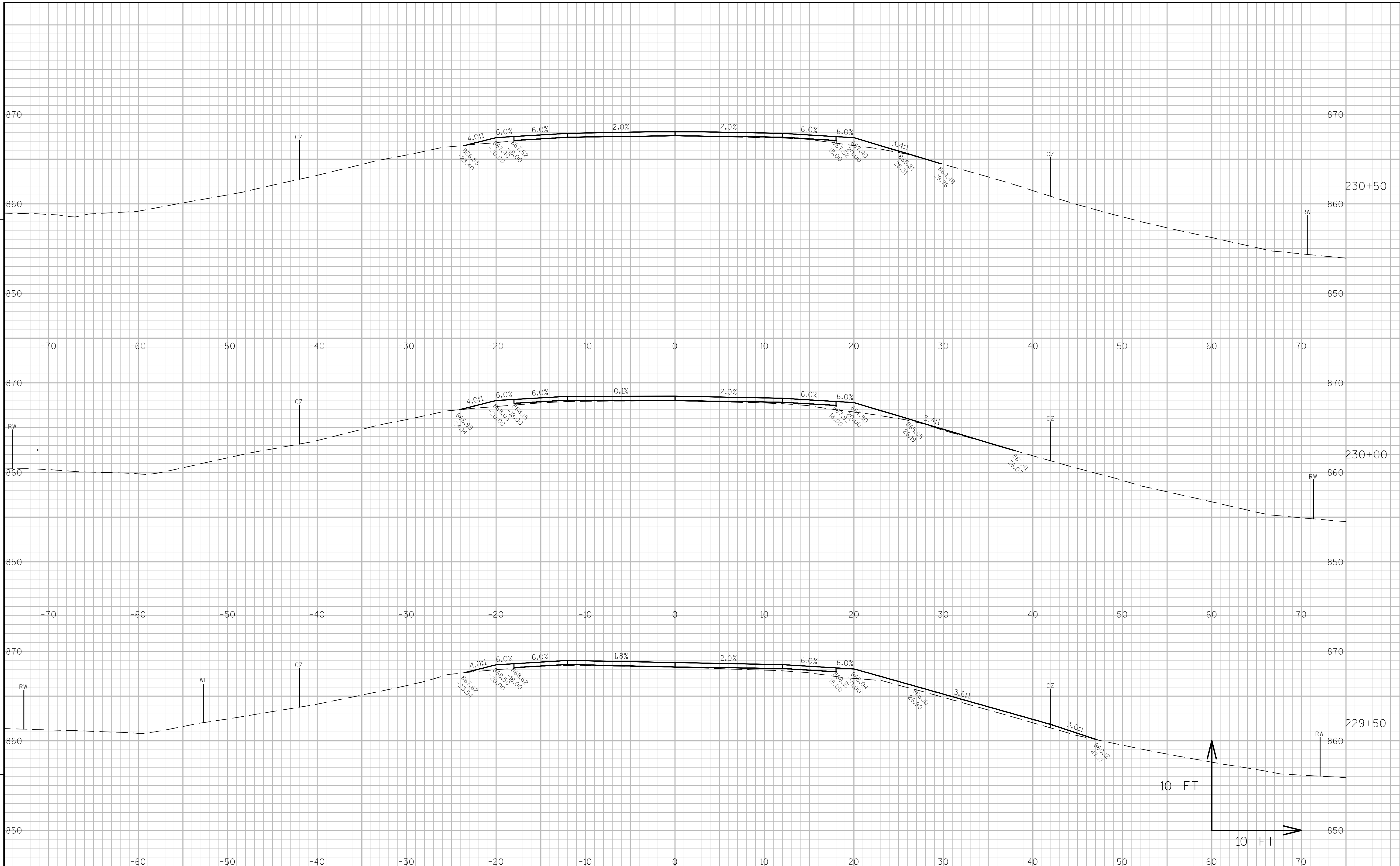
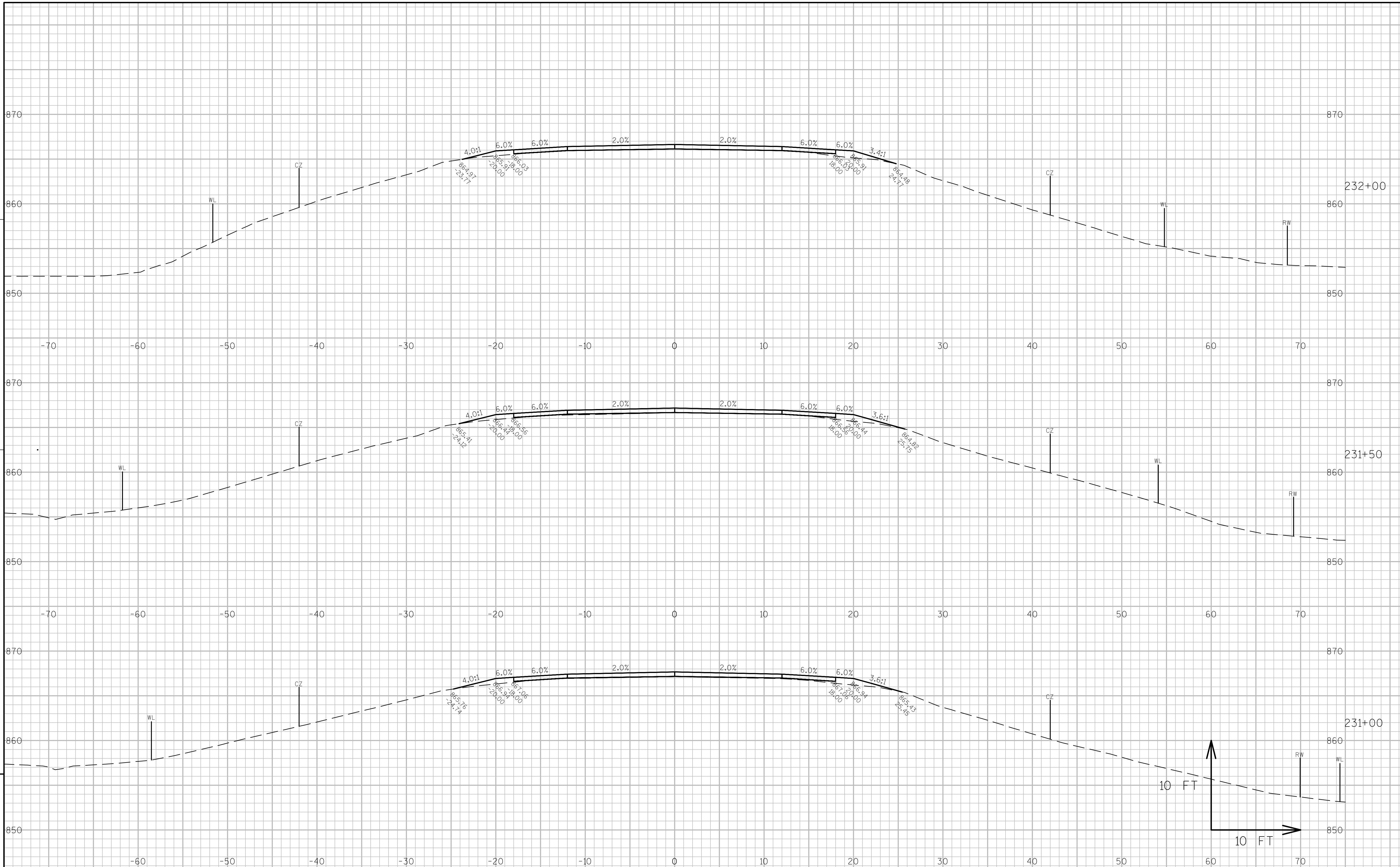
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 113	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:30 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



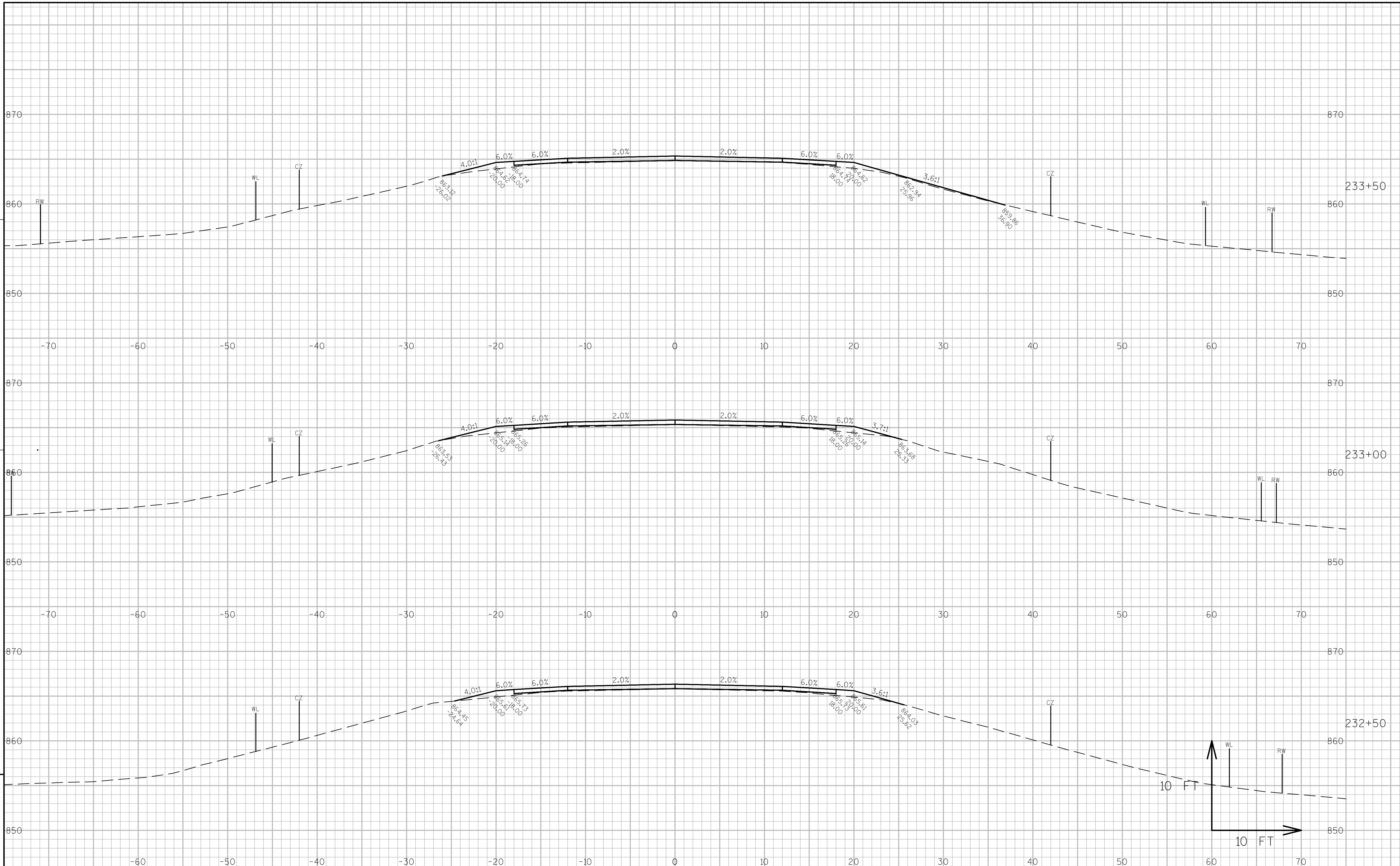
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 114	E



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 115	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:30 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



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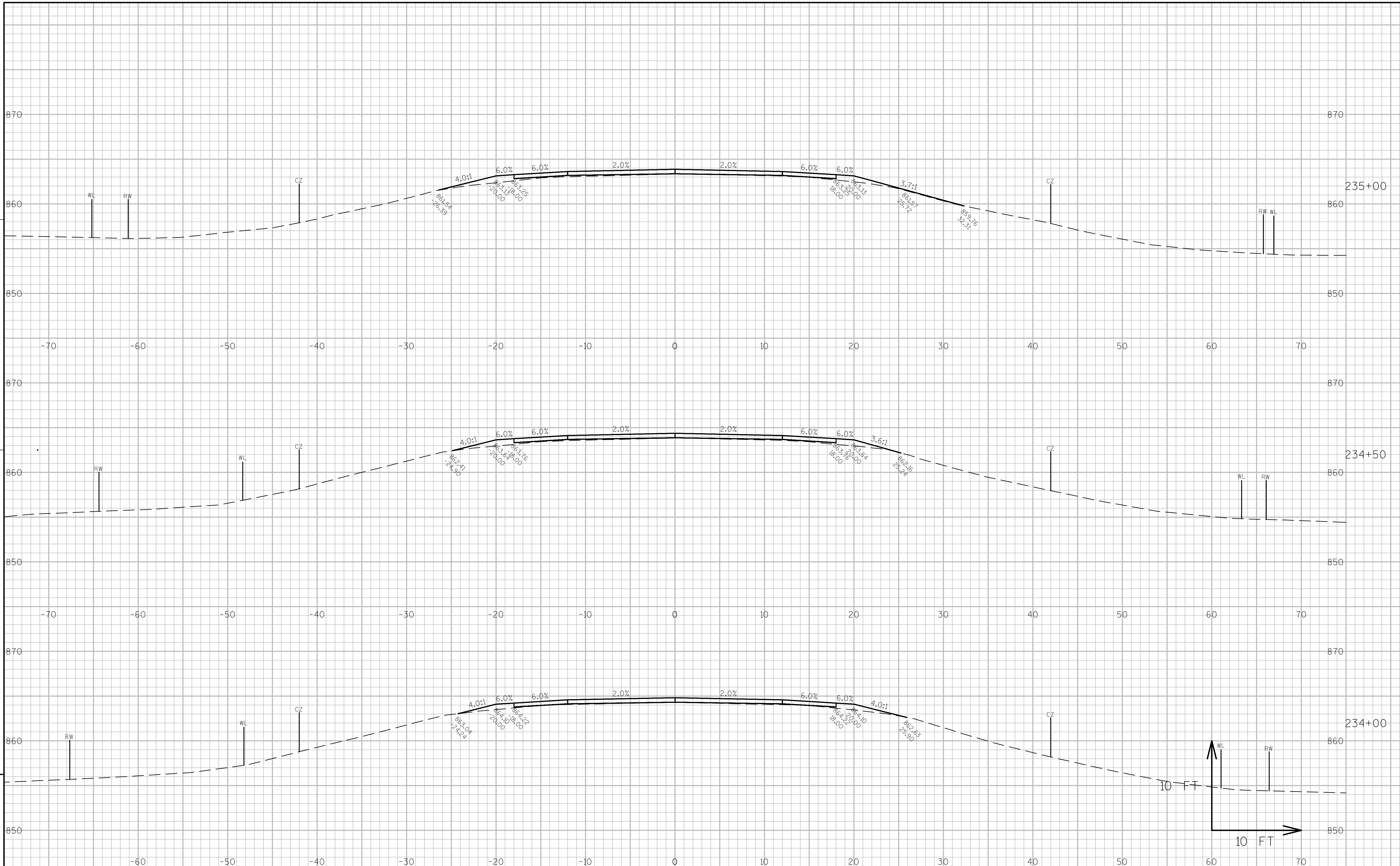
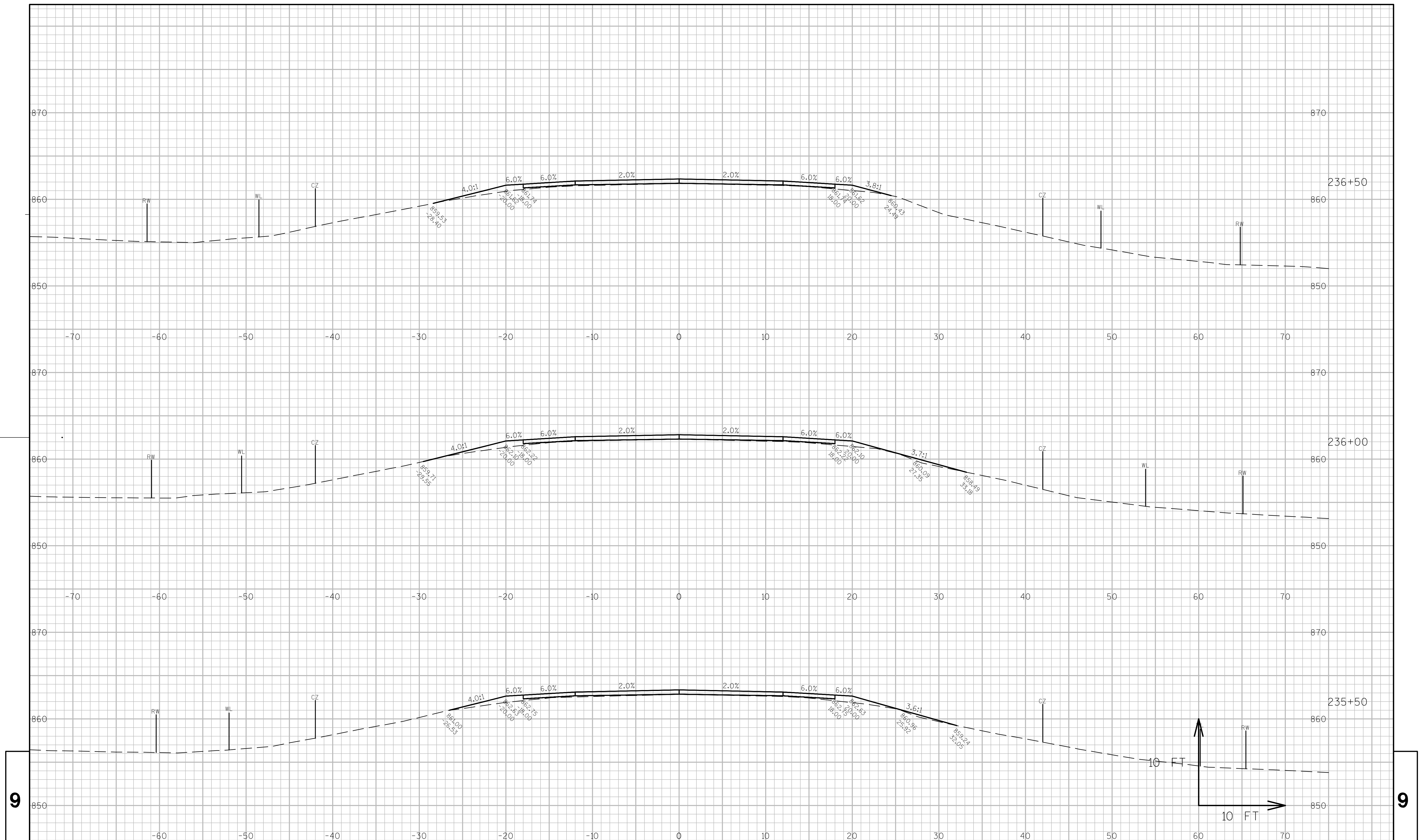
PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 116	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:31 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF

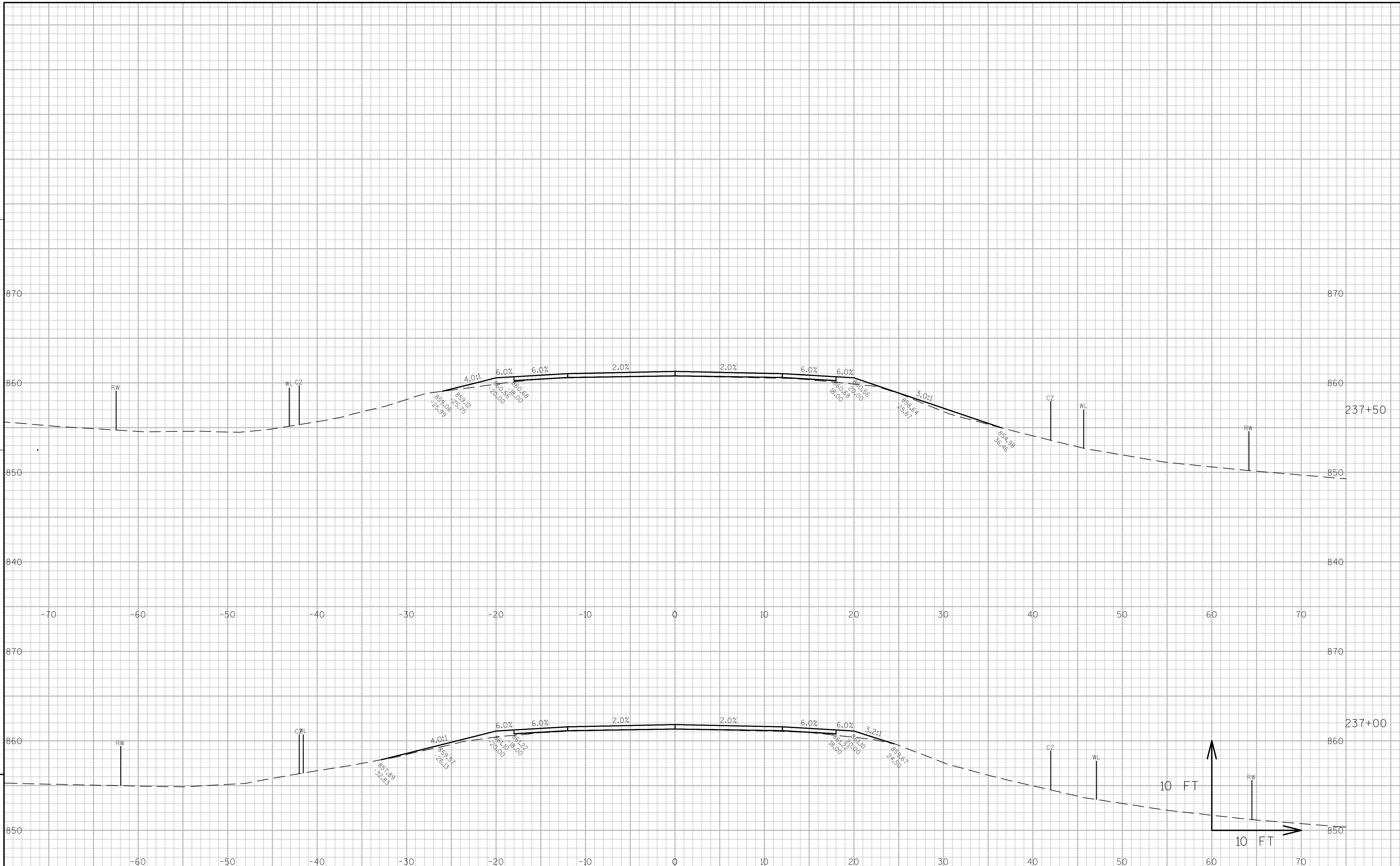


PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 117	E



PROJECT NO: 5845-01-75 | HWY: USH 51 | COUNTY: DANE | CROSS SECTIONS: CROSS SECTION | SHEET 118 | E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:32 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



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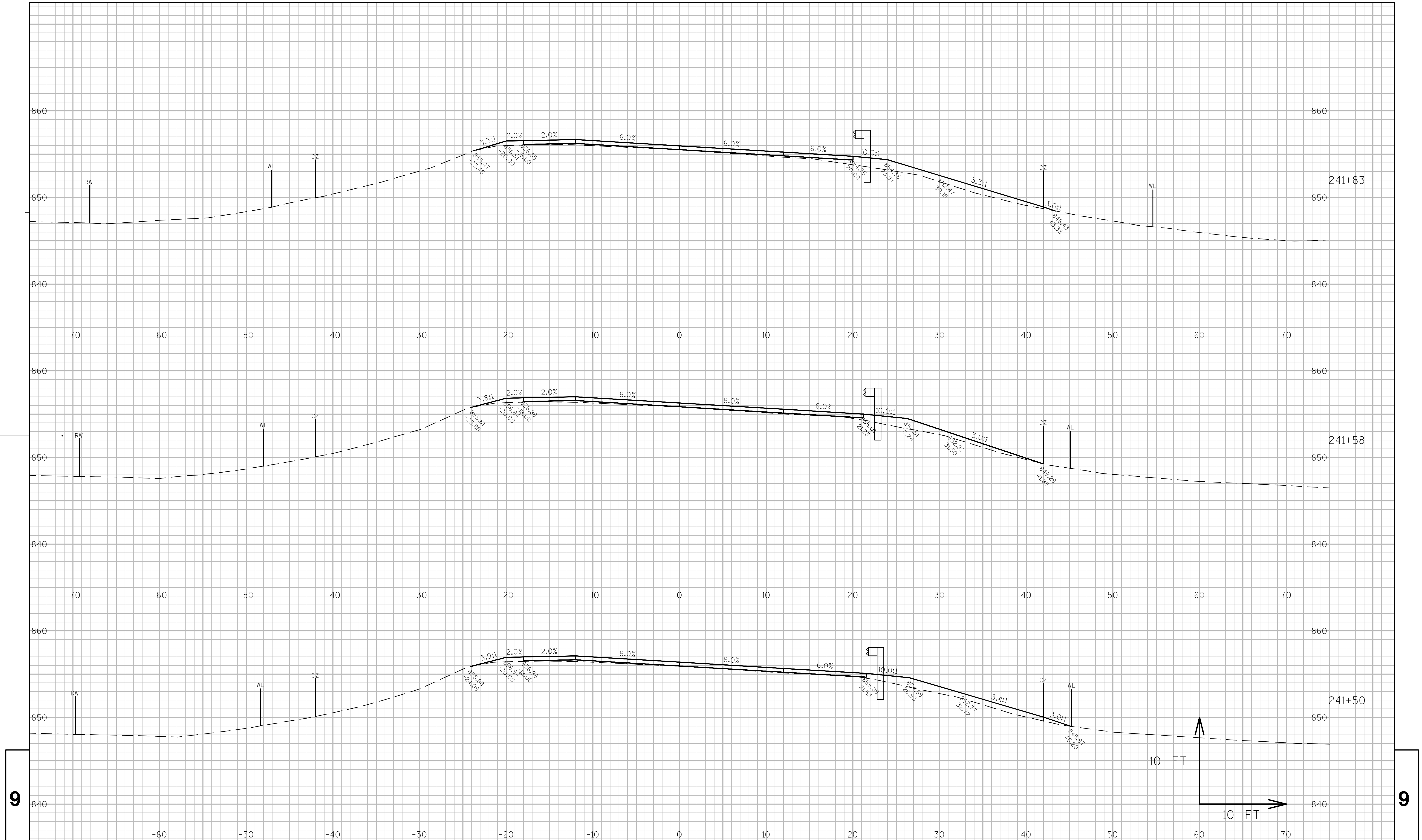
9

PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 119	E

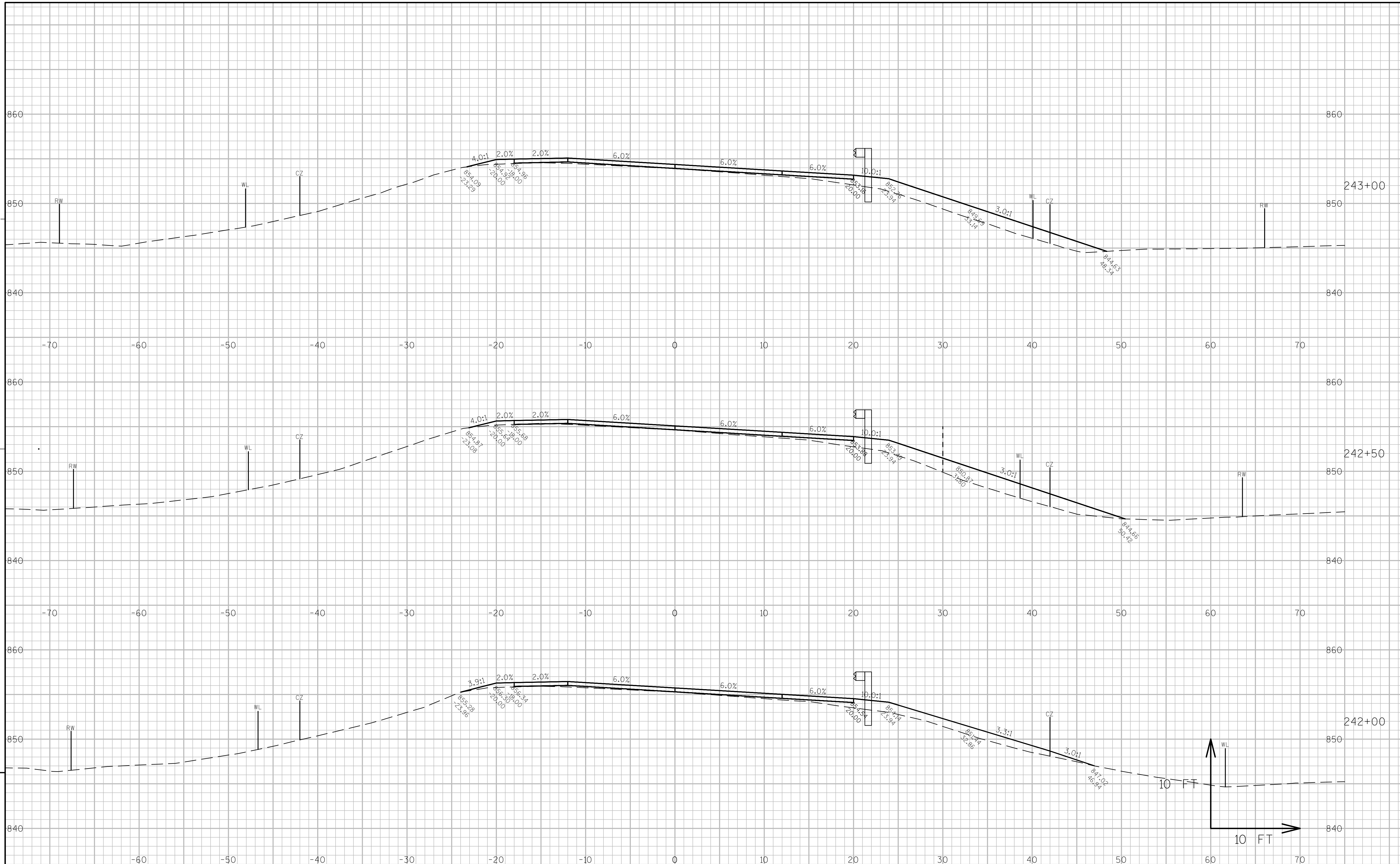
FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:32 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF

PROJECT NO:5845-01-75 | HWY:USH 51 | COUNTY:DANE | CROSS SECTIONS:CROSS SECTION | SHEET 120 | E

FILE NAME :N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE :5/3/2013 1:32 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF WISDOT/CADDS SHEET 49

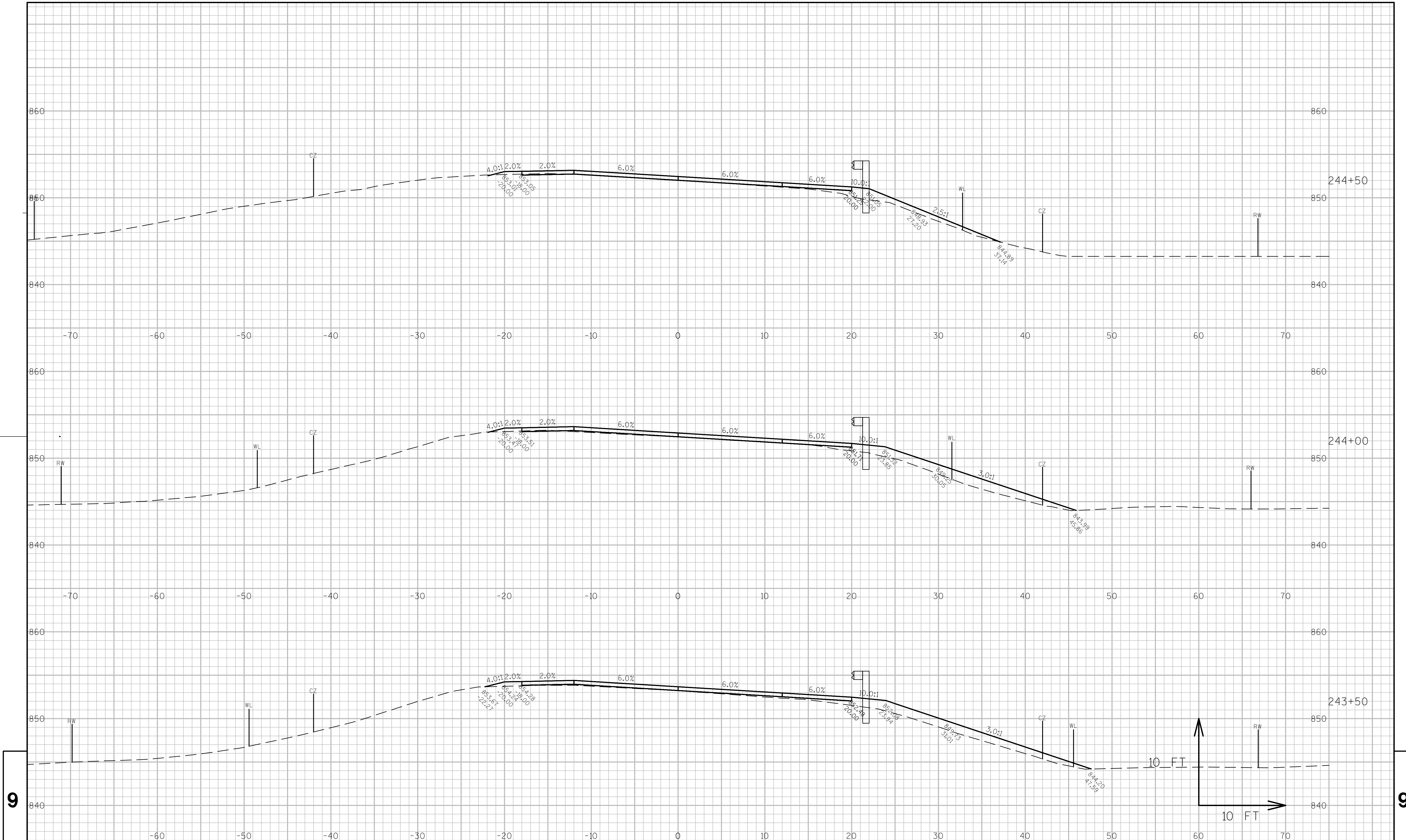


PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 121 E



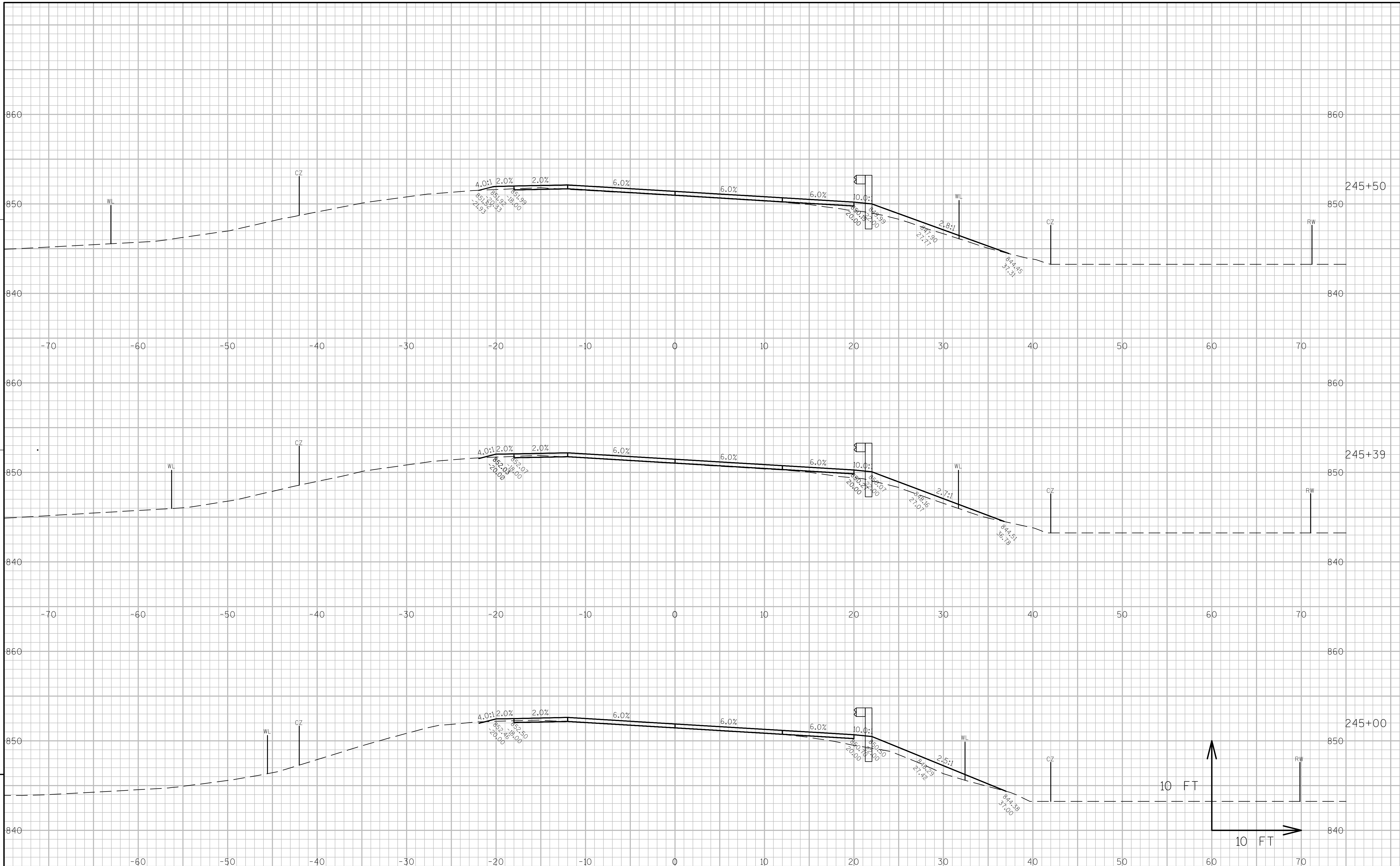
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 122	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:33 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 123	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:33 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF


245+50
245+39
245+00
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10 FT
6.0%
2.0%
10.0:

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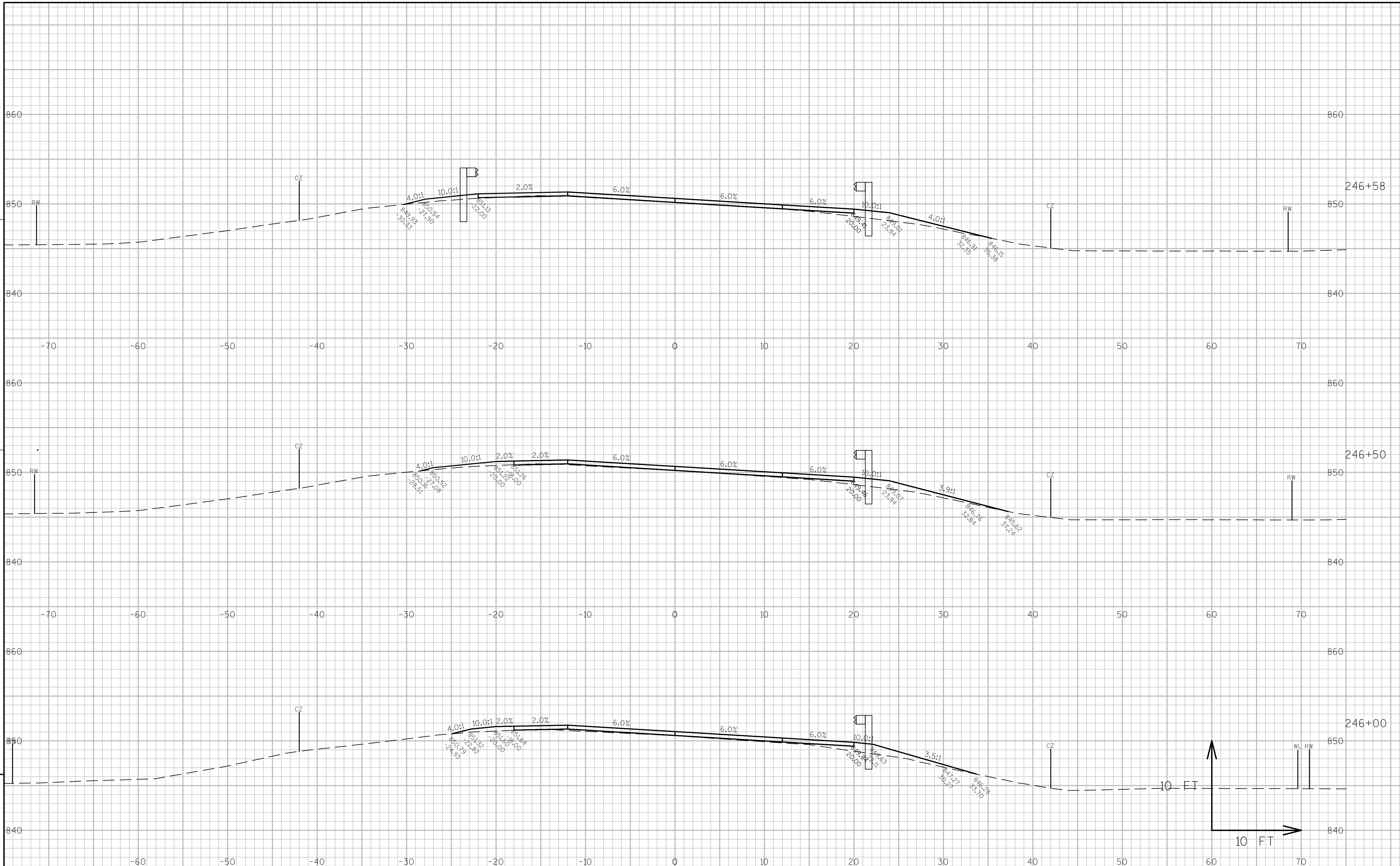

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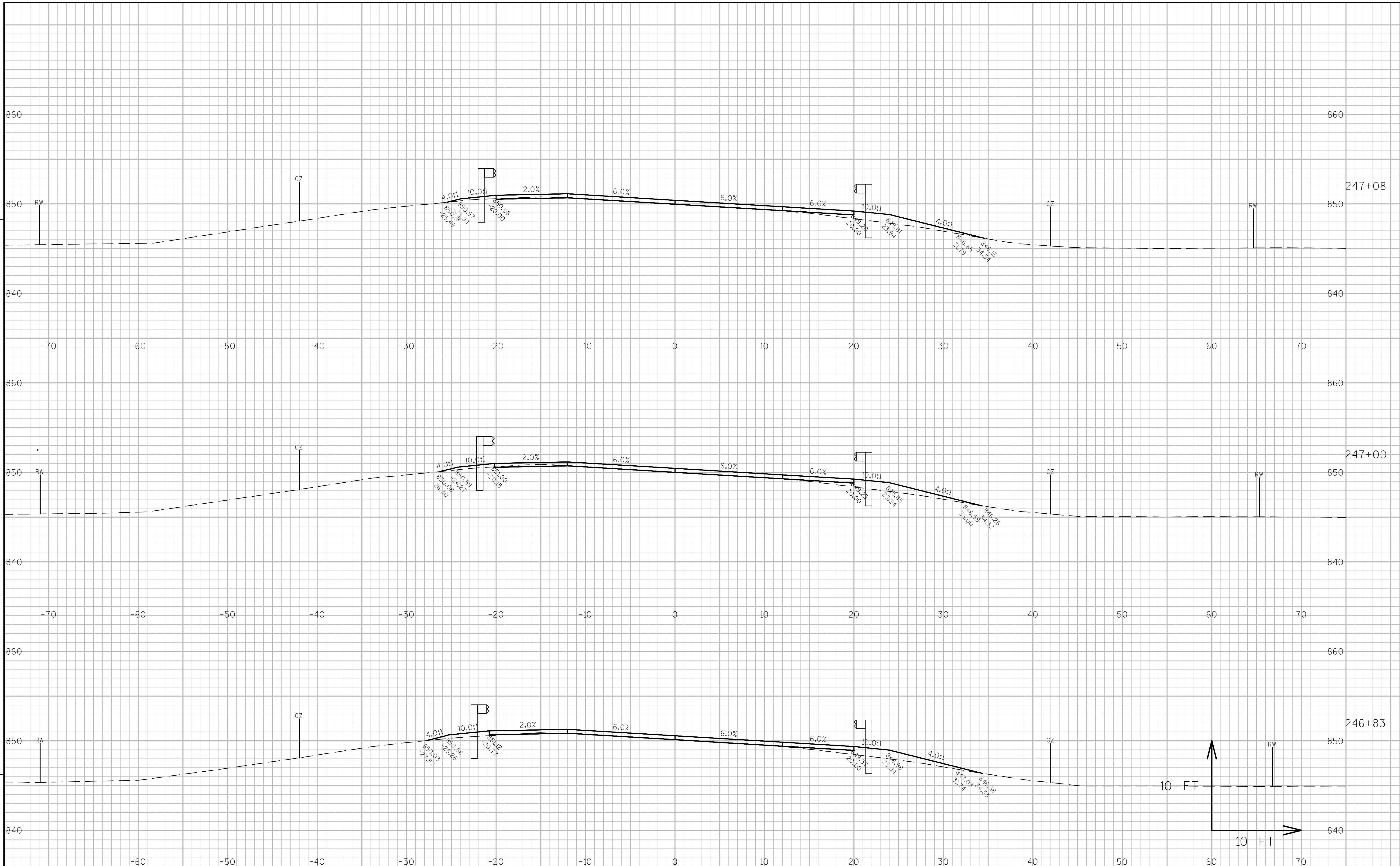
PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 125	E



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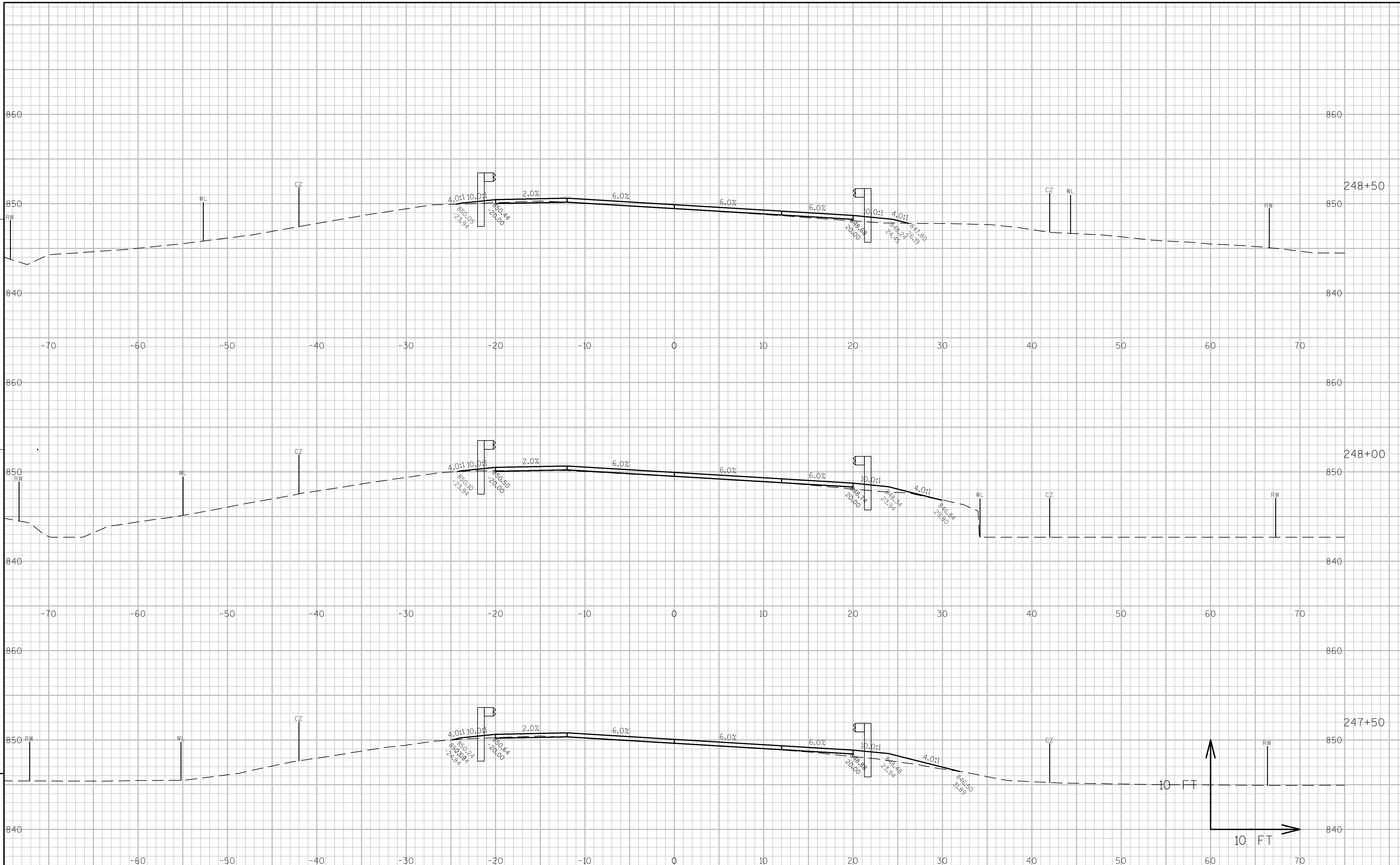
PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 126	E



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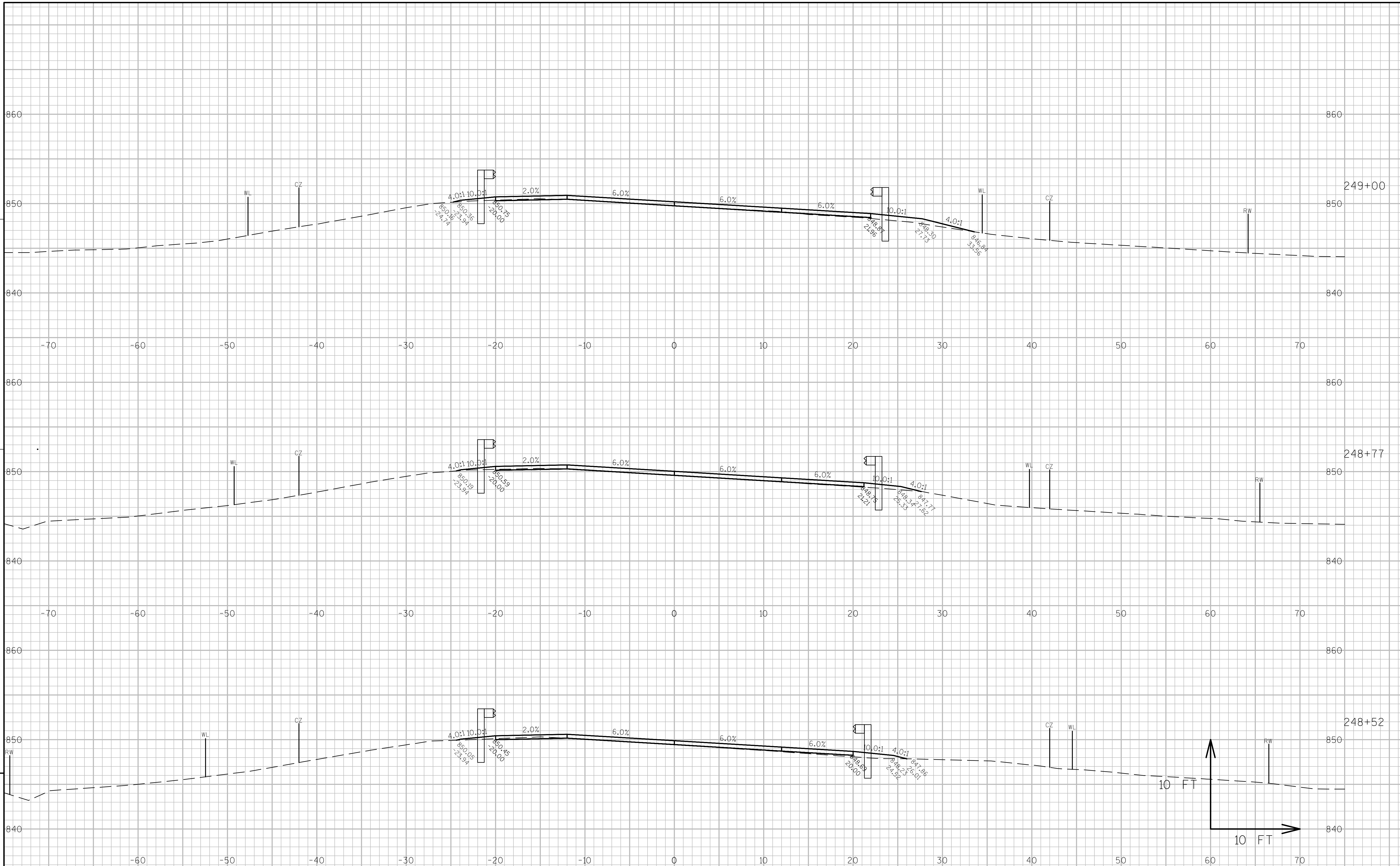
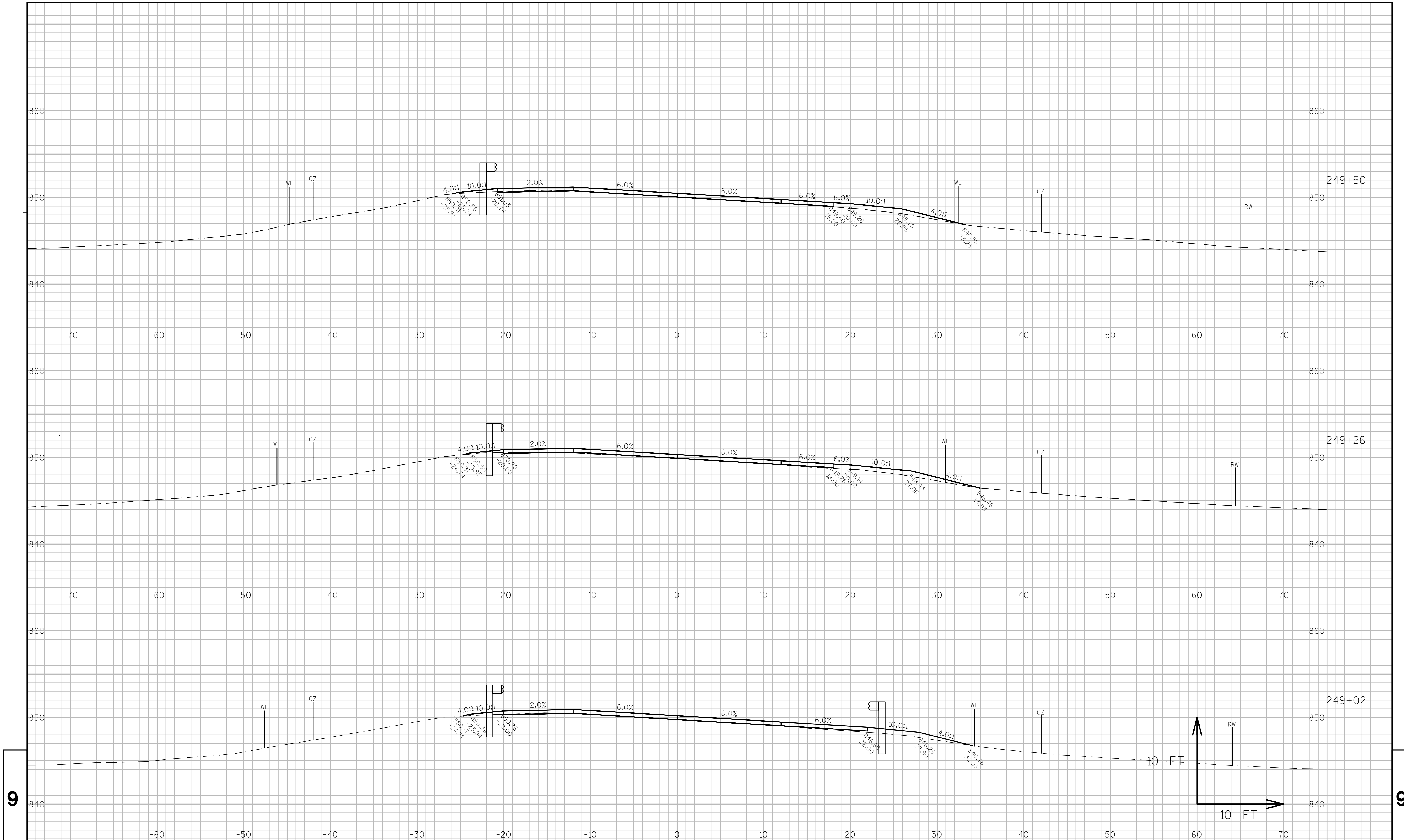
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 127	E

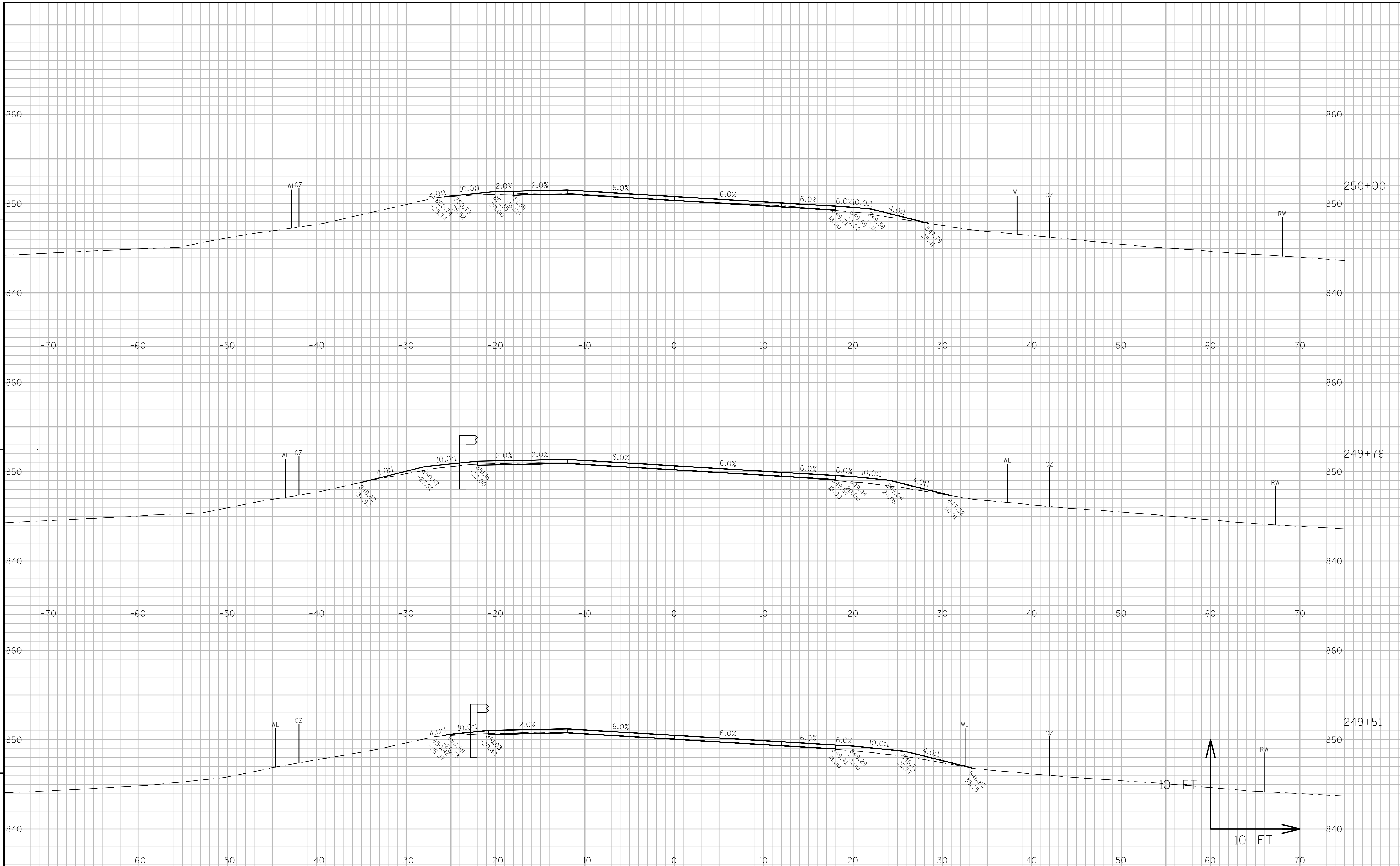


PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 128	E



PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 129	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:36 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



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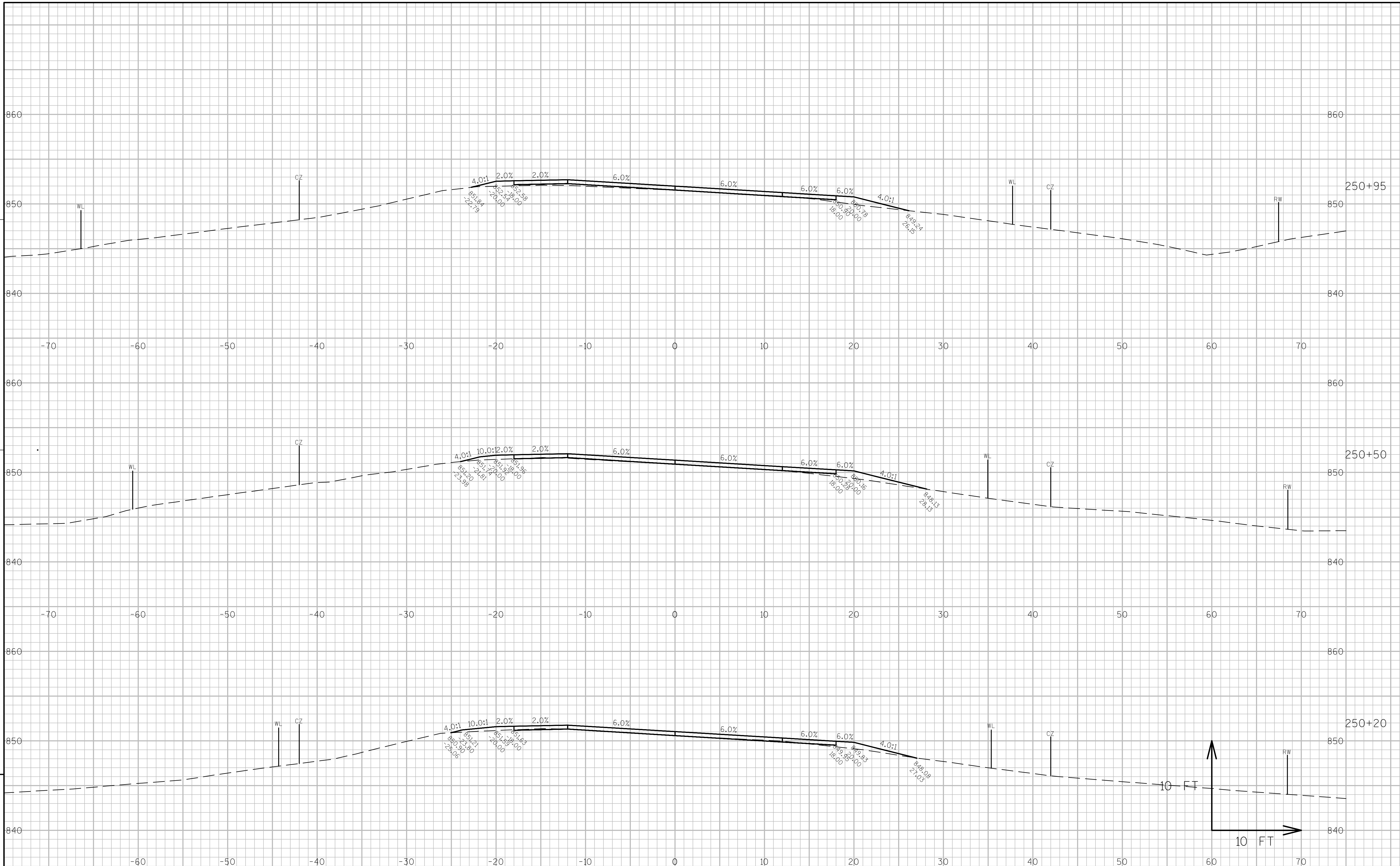
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 130	E



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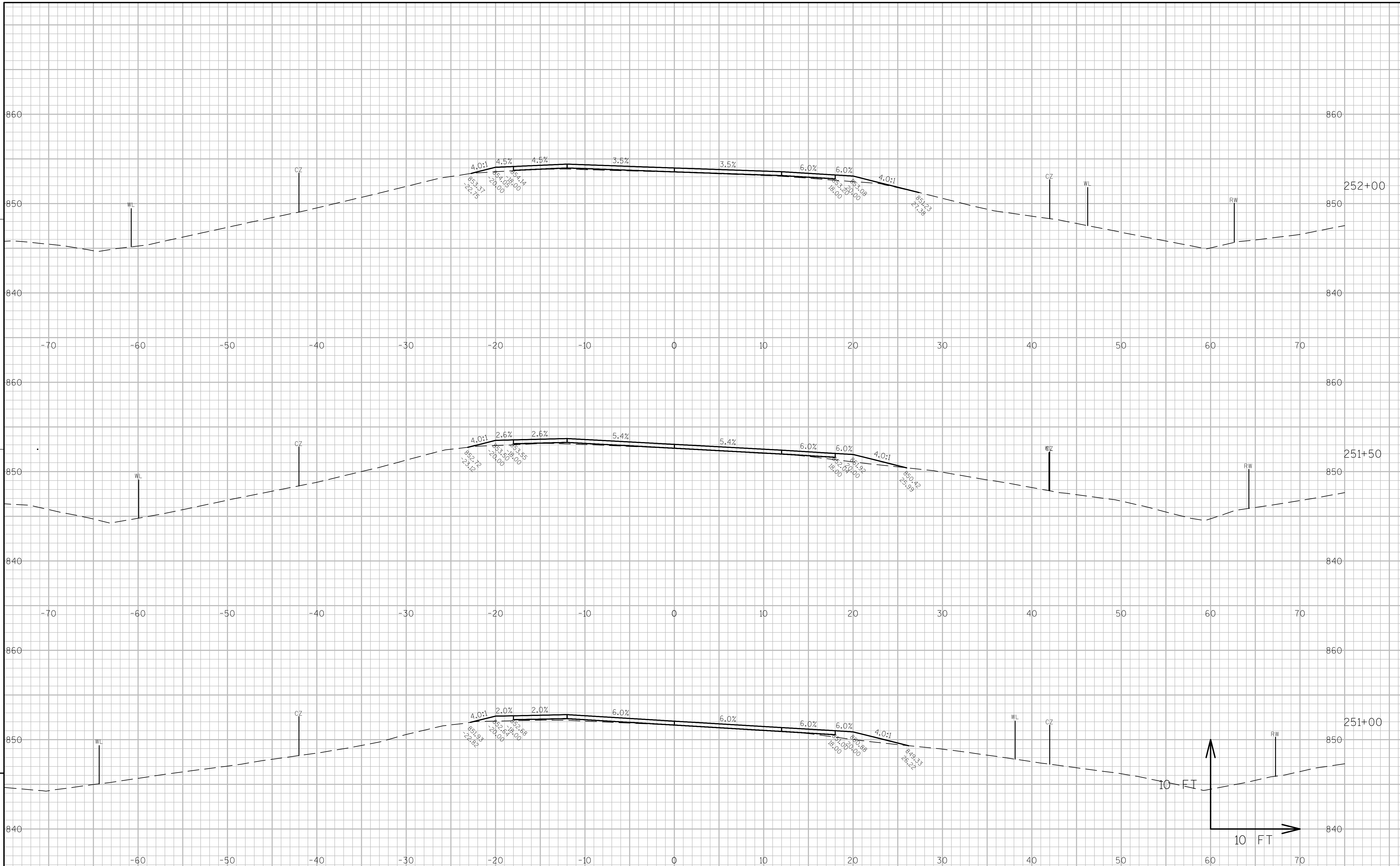
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 131	E



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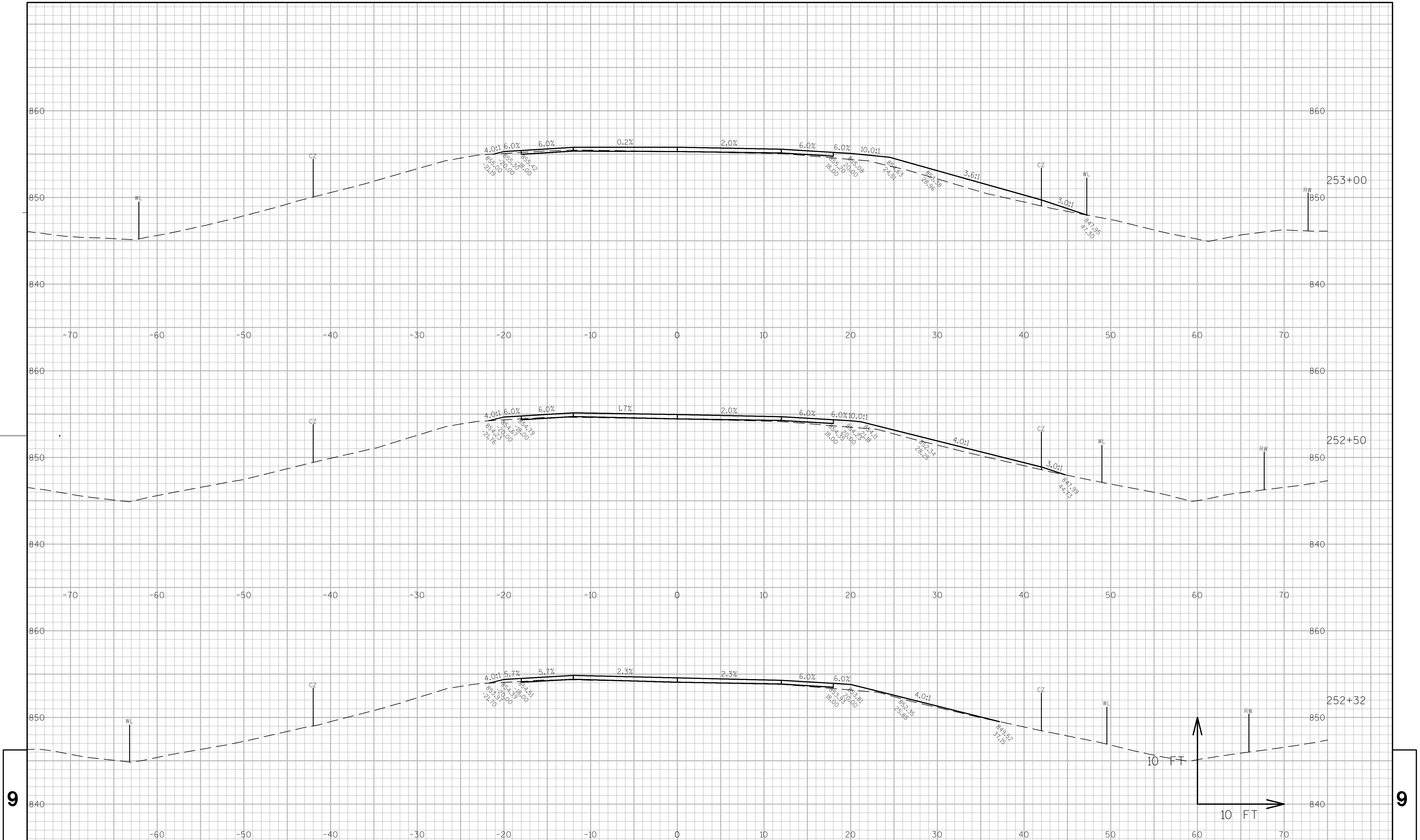
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 132	E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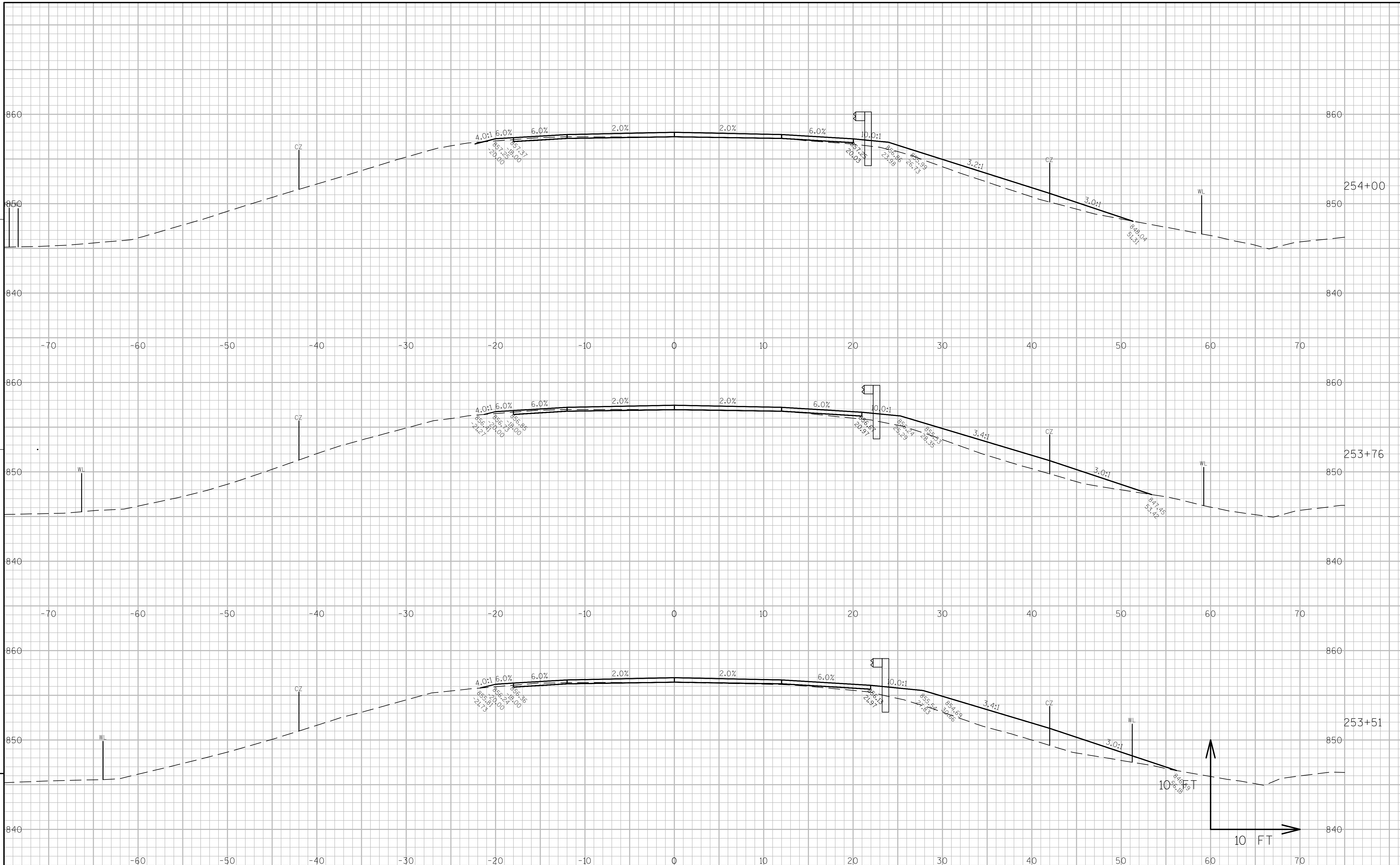
252+50
252+32
10 FT
10 FT



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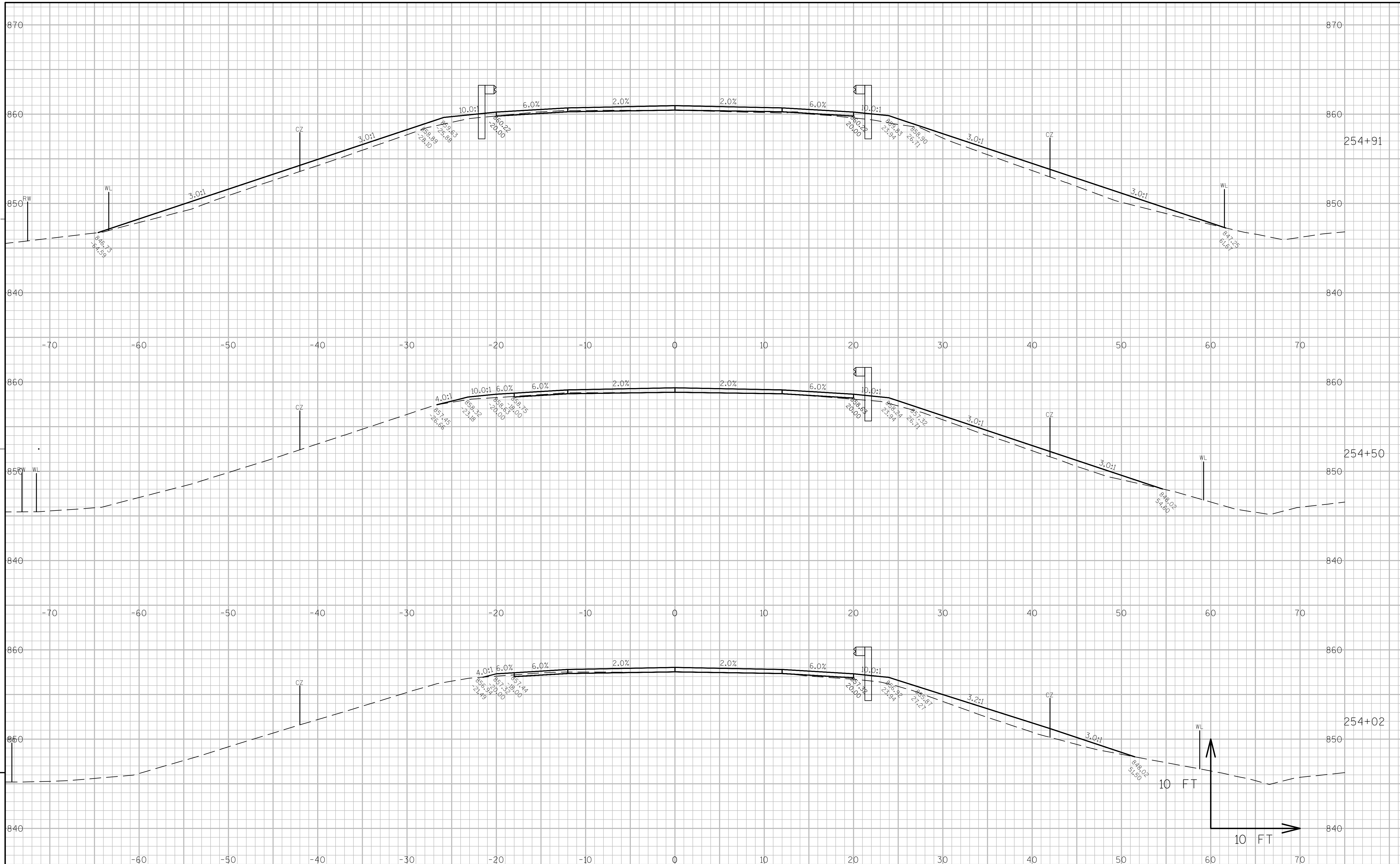
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 134	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:37 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF WISDOT/CADDS SHEET 49



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 135 E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:38 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF

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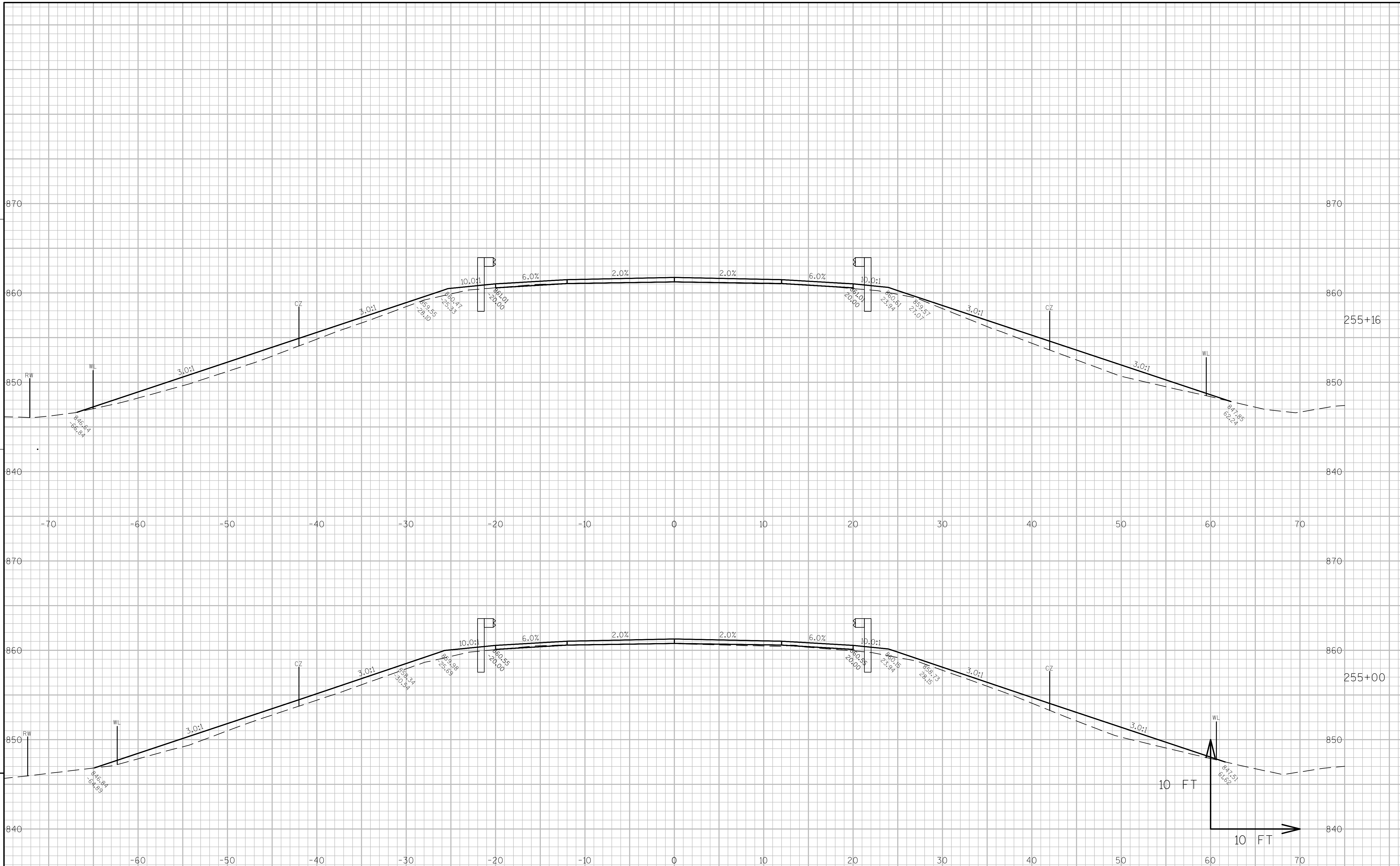

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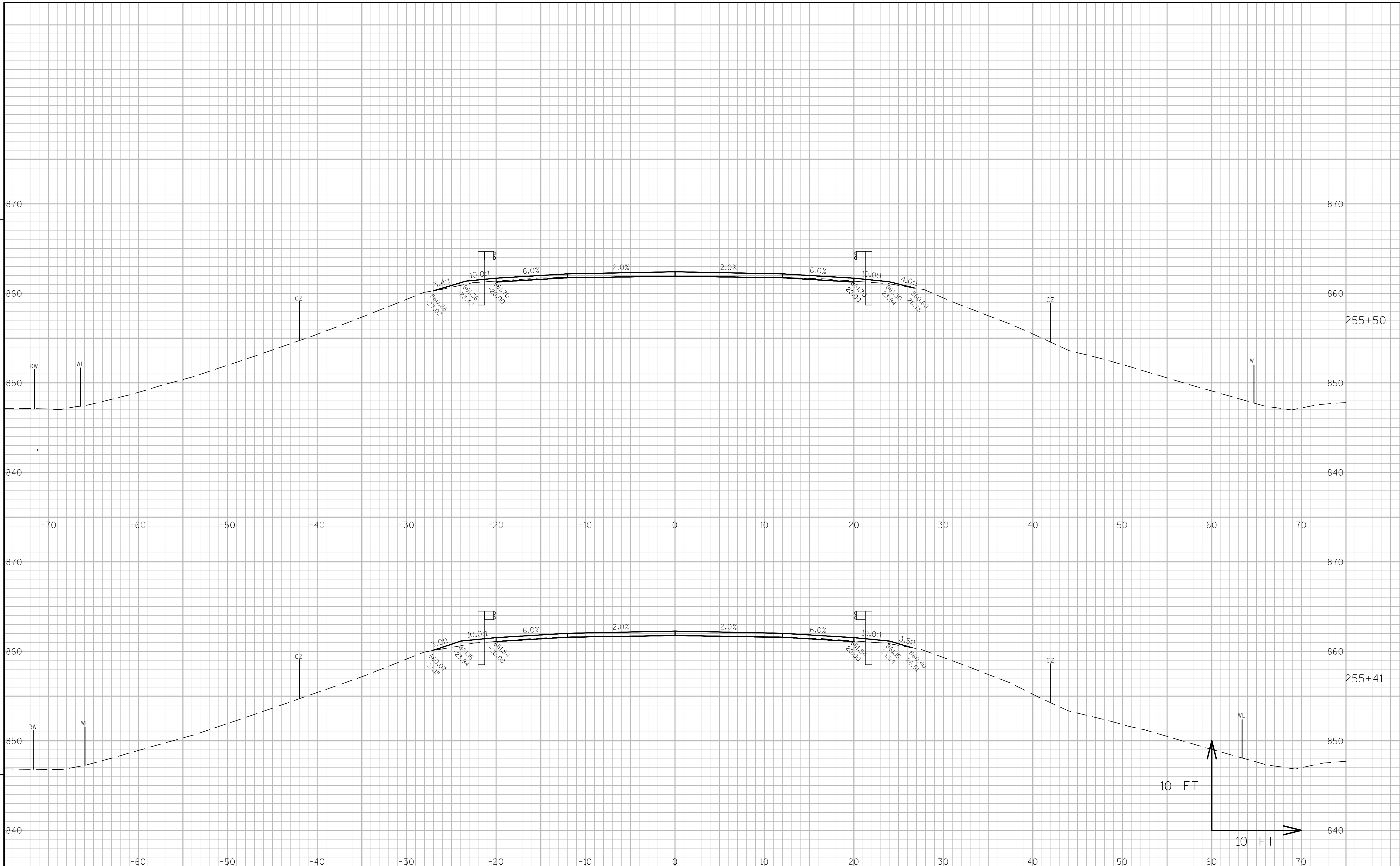
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 136 E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:38 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



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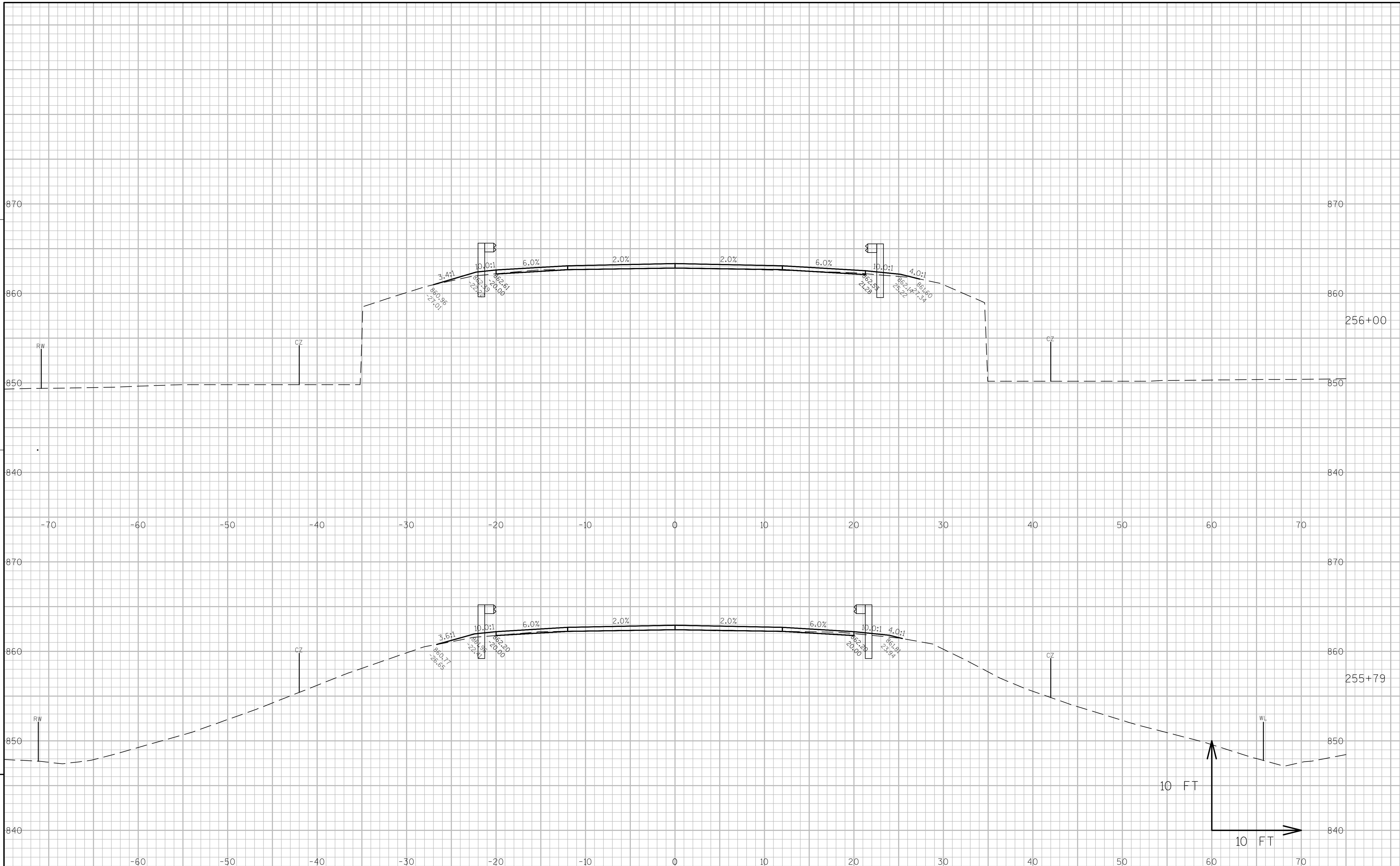
PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 137	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:38 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF WISDOT/CADDS SHEET 49



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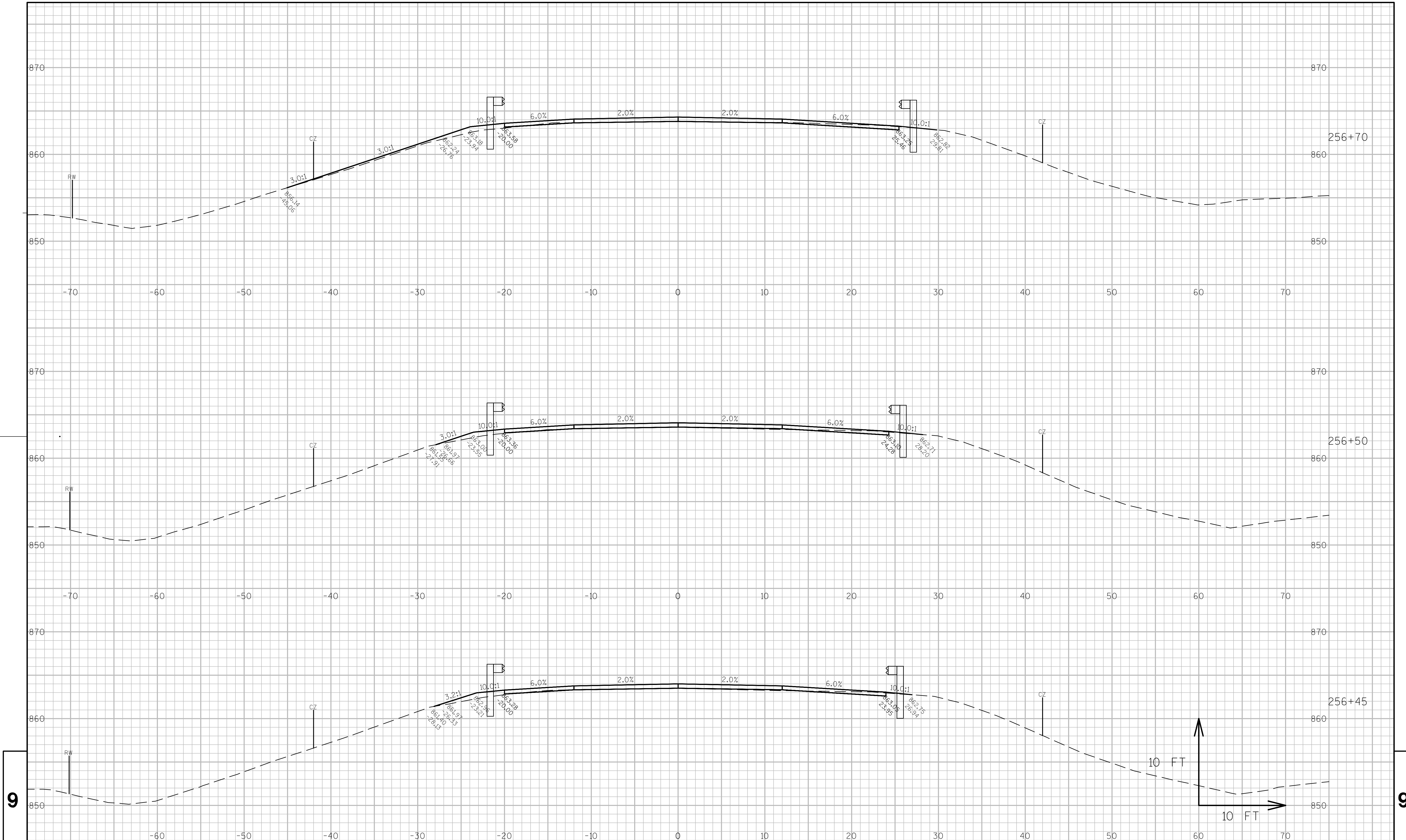
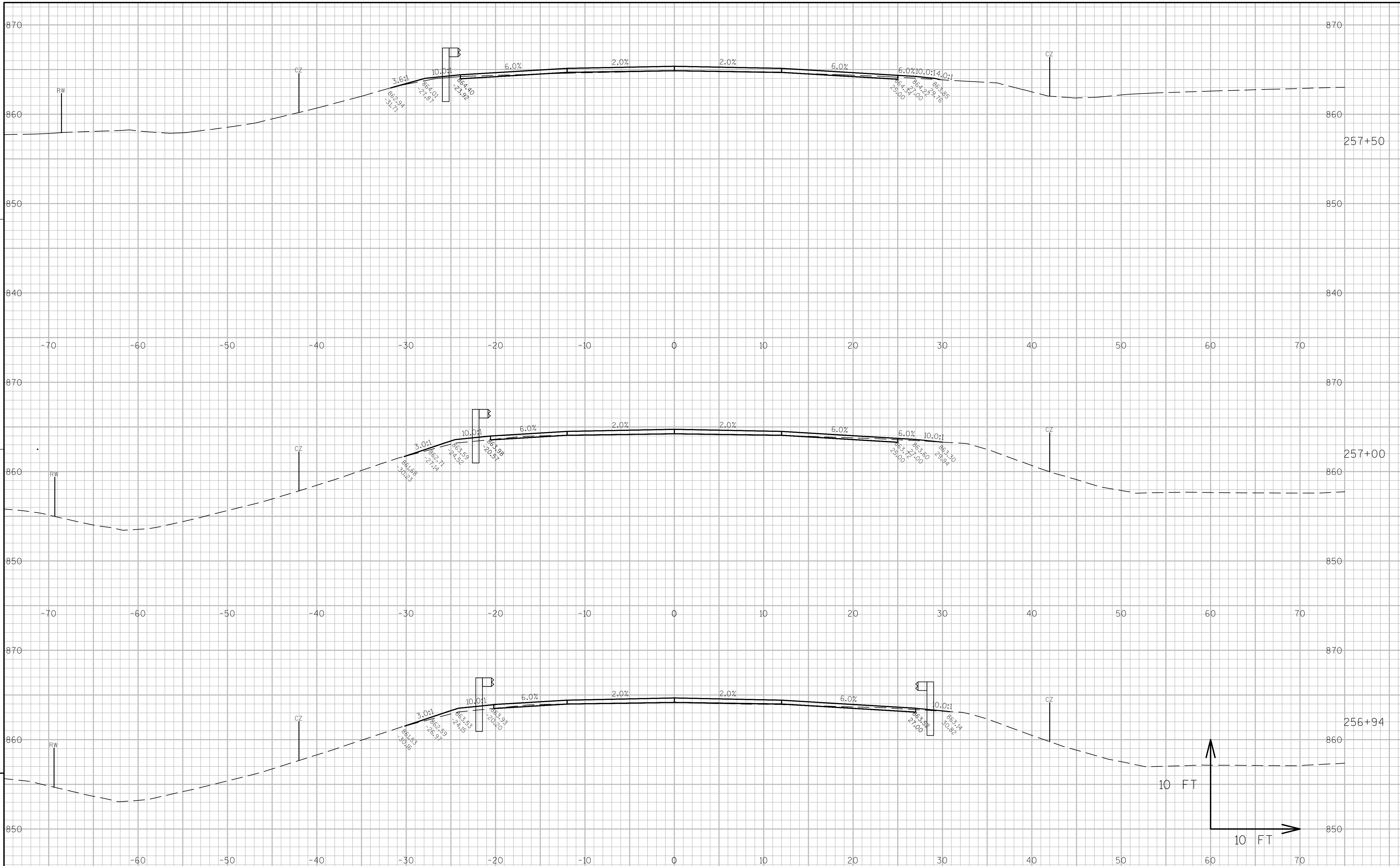
PROJECT NO:5845-01-75 | HWY: USH 51 | COUNTY: DANE | CROSS SECTIONS: CROSS SECTION | SHEET 138 | E

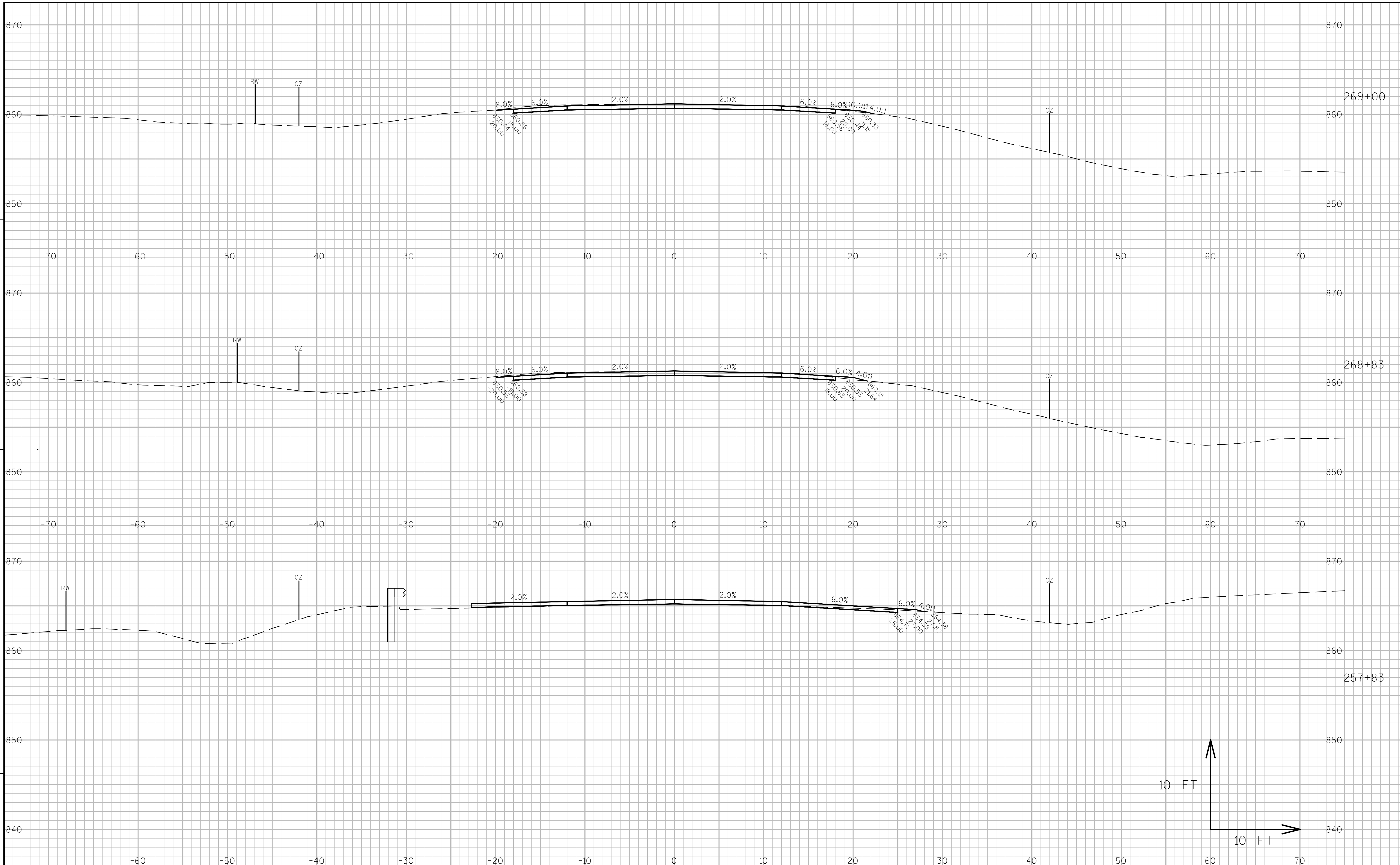


PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 139 E

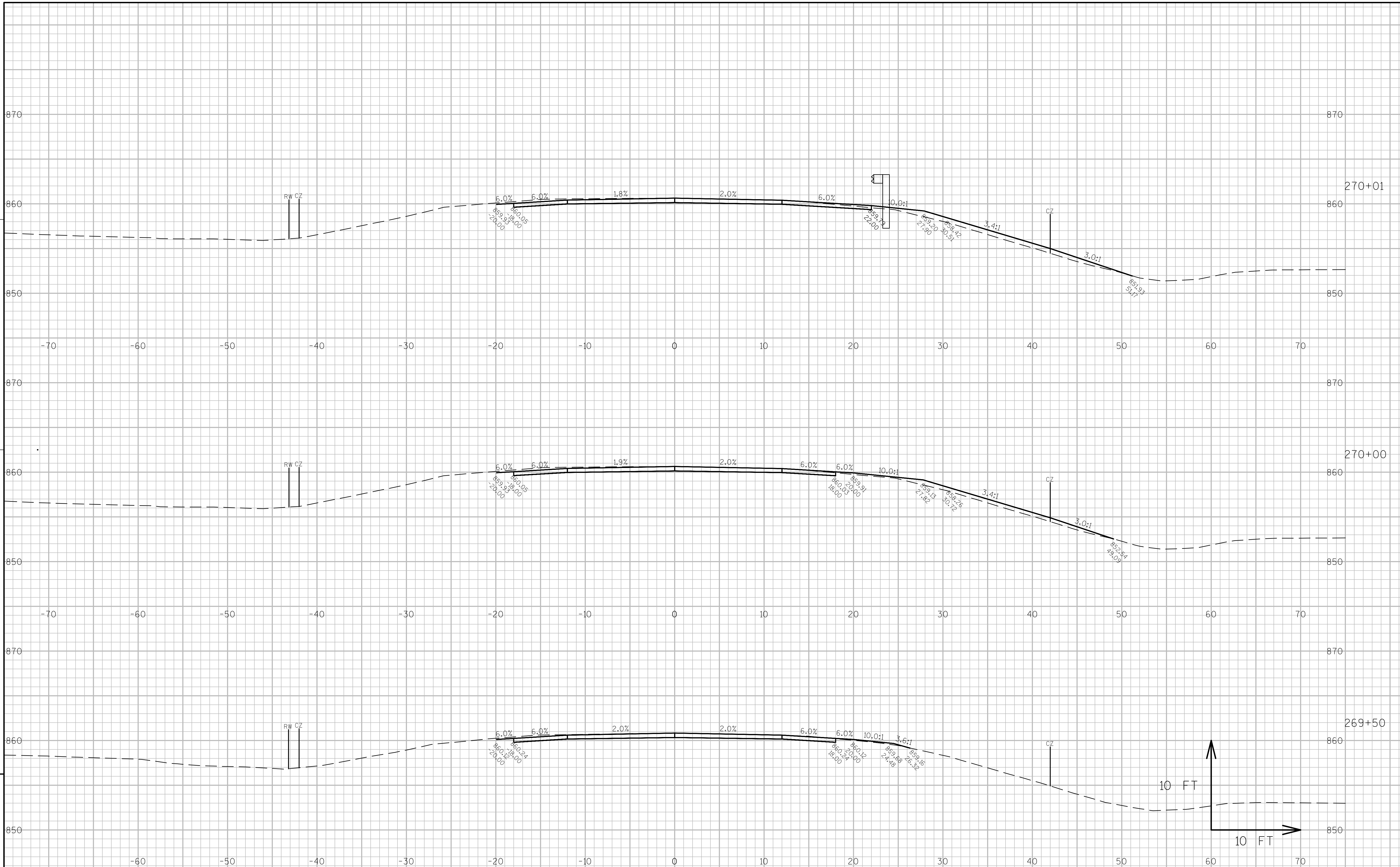


PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 140	E

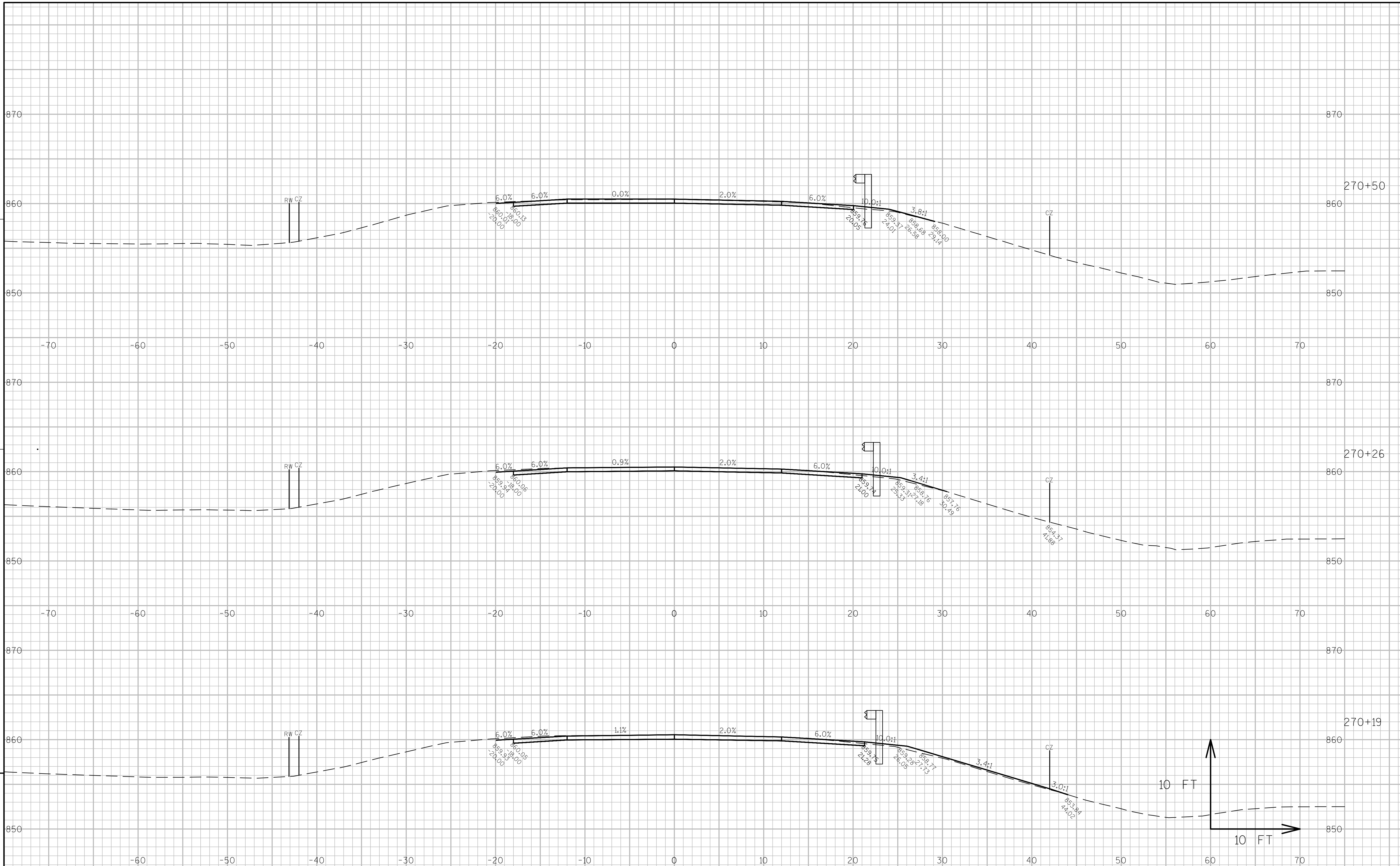
FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:39 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 141 E



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 142 E



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 143	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG   PLOT DATE : 5/3/2013 1:40 PM   PLOT BY : SYRON, SCOTT A   PLOT NAME :   PLOT SCALE : 1:10_XREF

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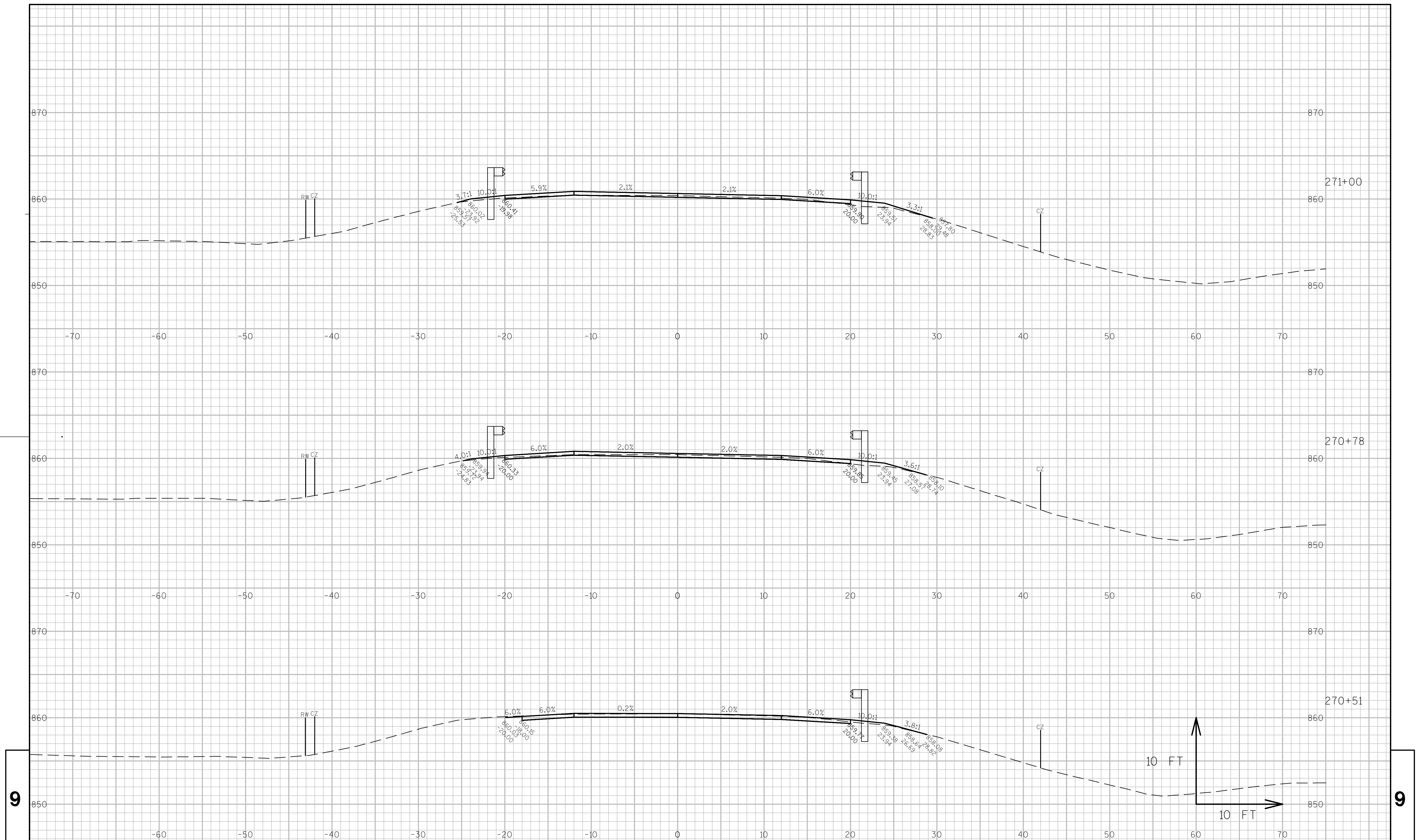
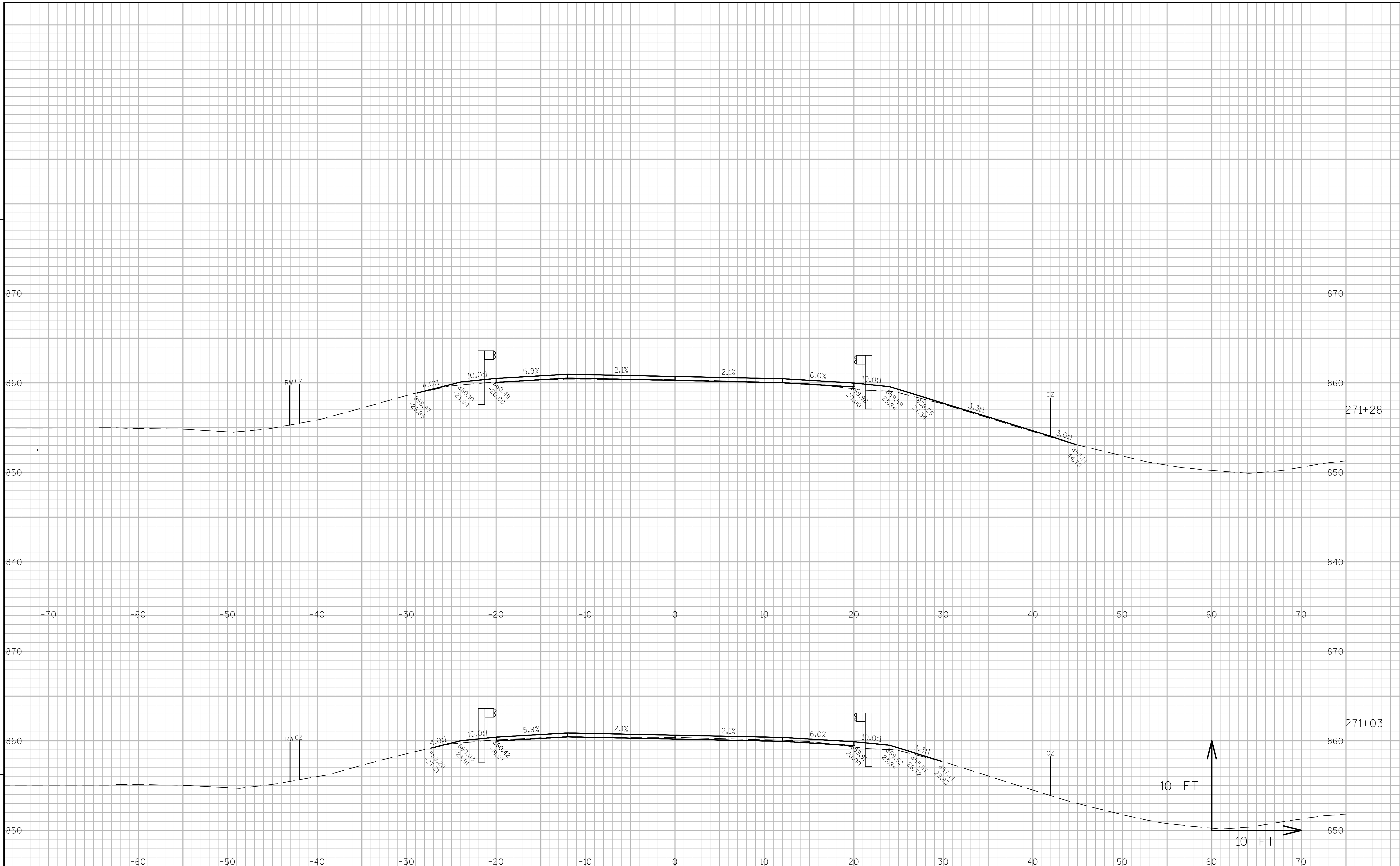


PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 144	E



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PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 145	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:41 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF

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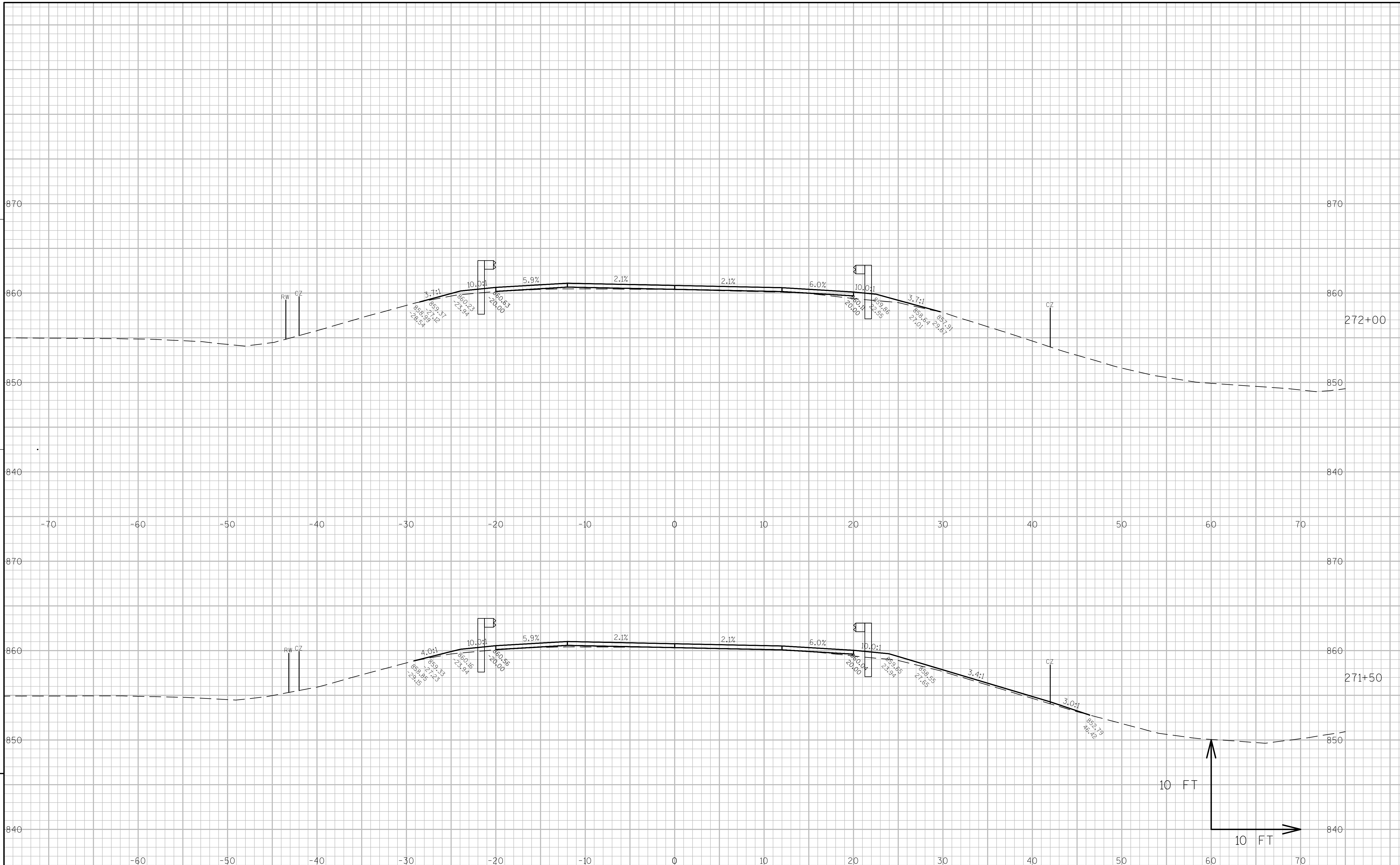

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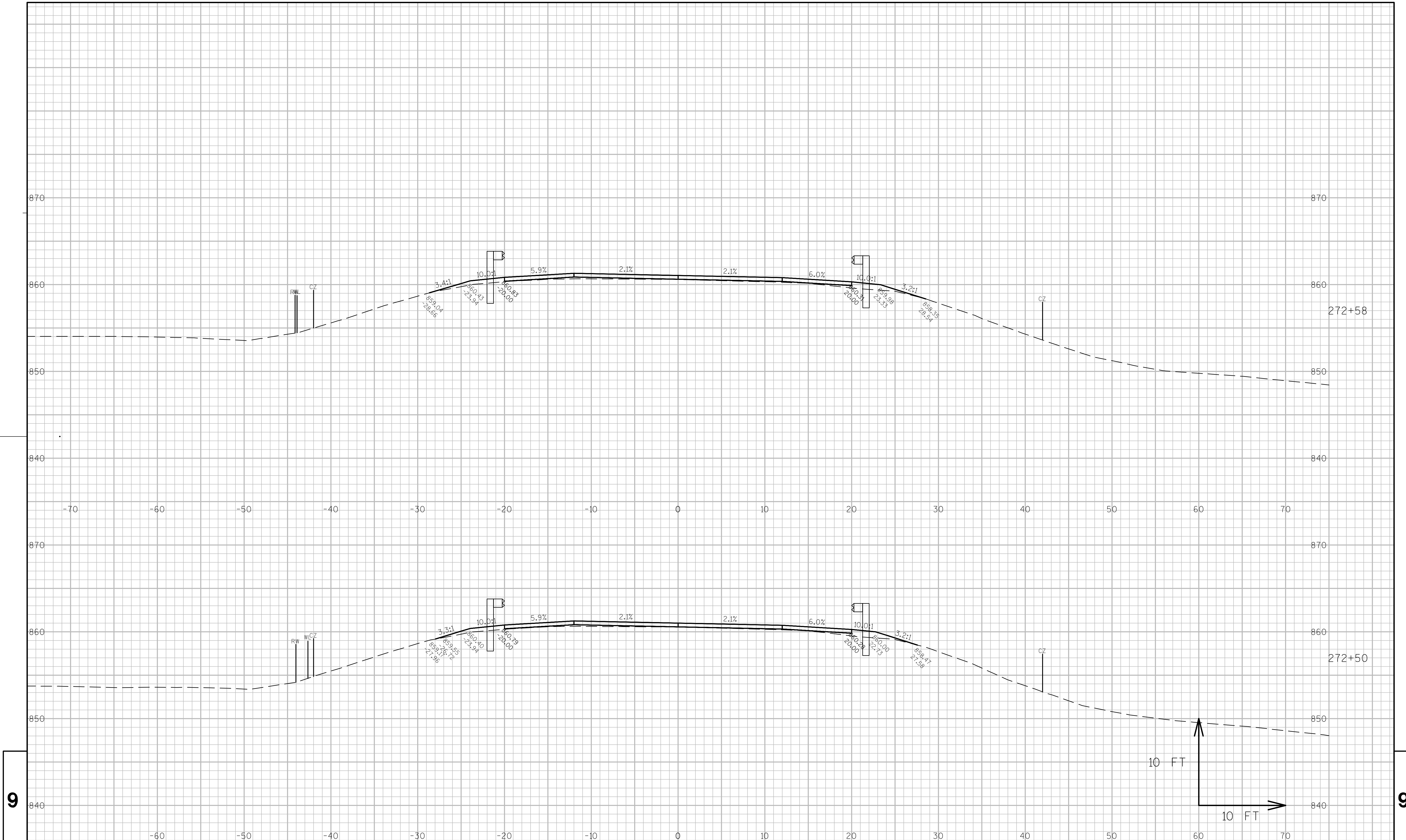
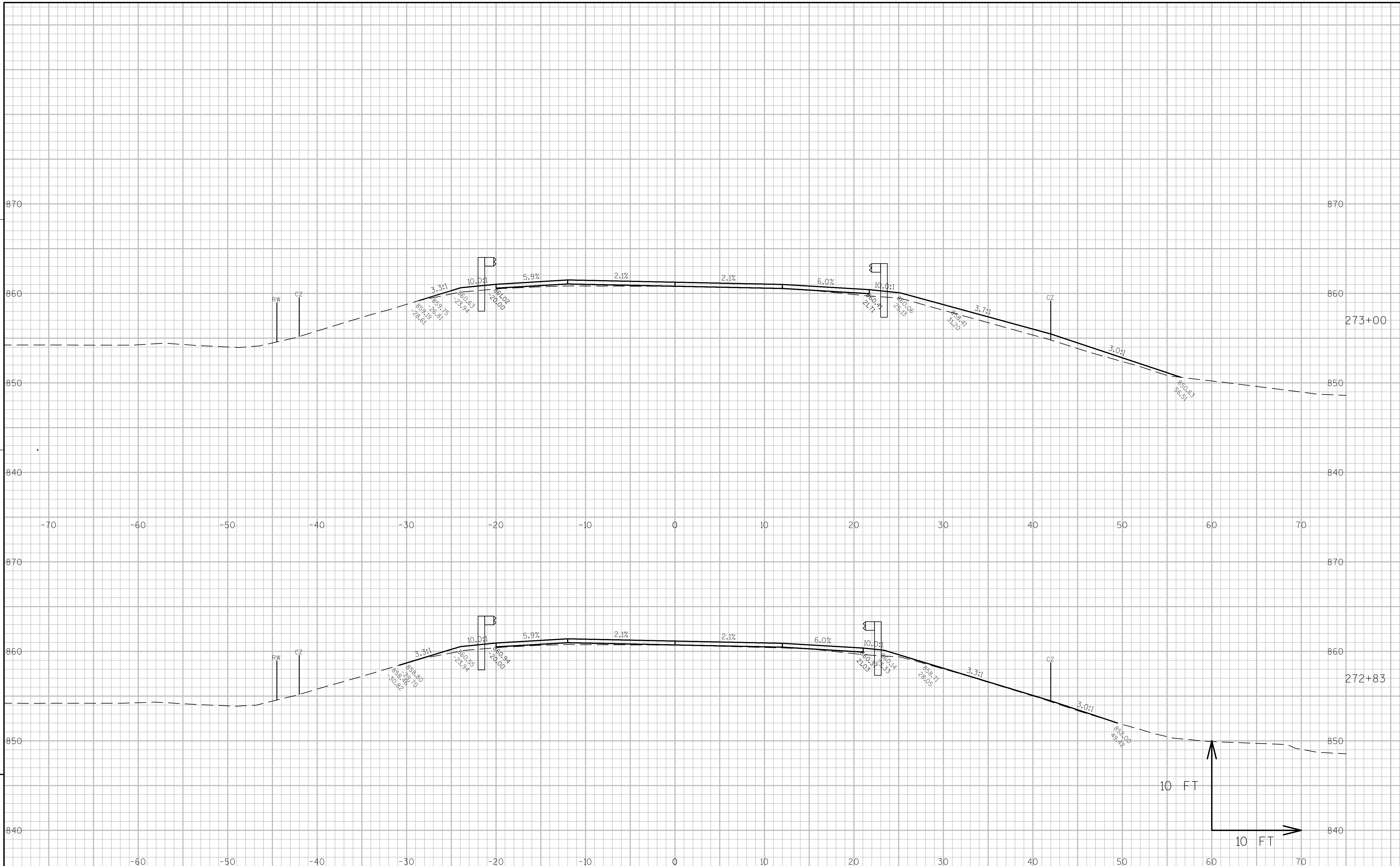
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 146	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:41 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF

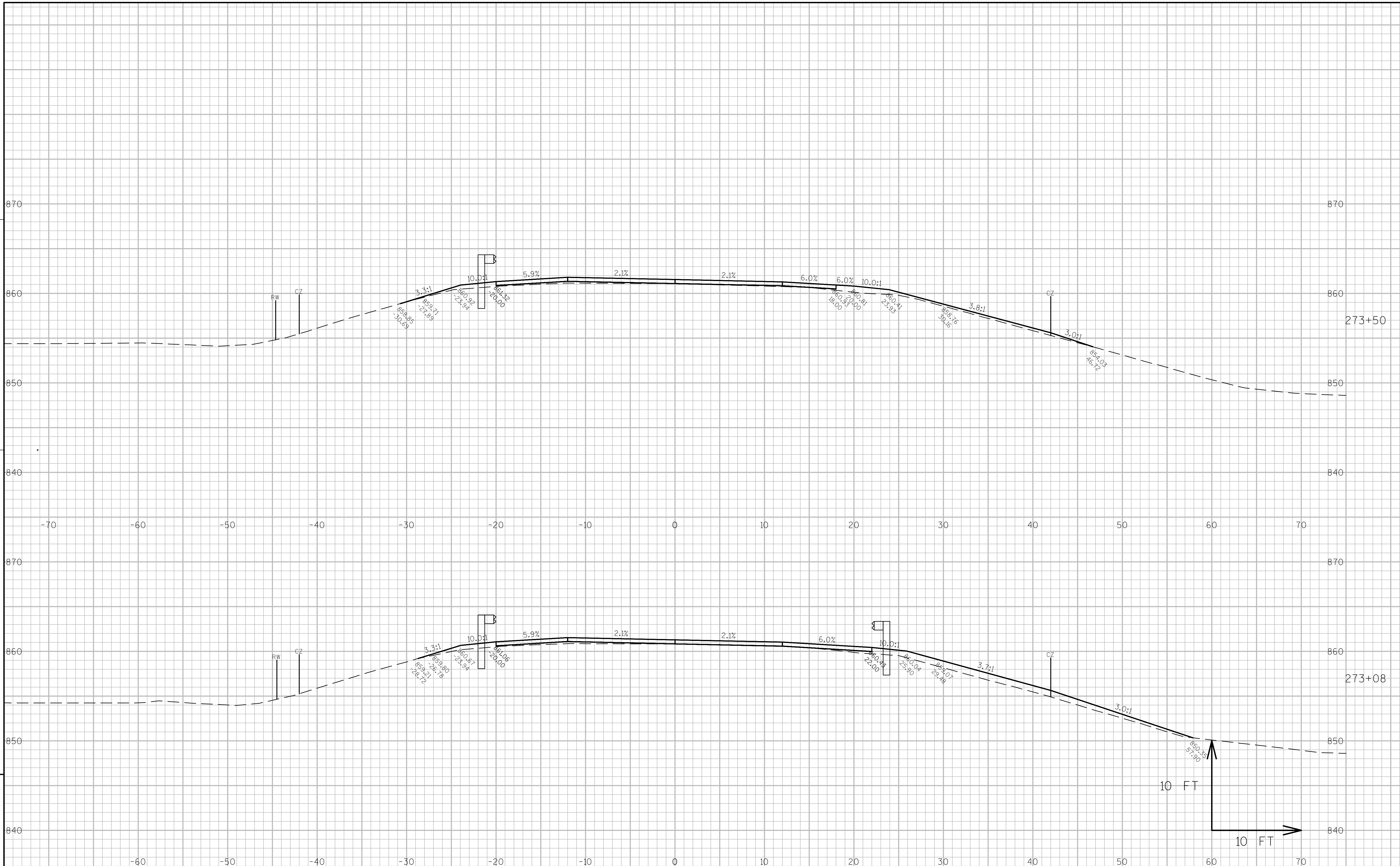


PROJECT NO:5845-01-75 | HWY: USH 51 | COUNTY: DANE | CROSS SECTIONS: CROSS SECTION | SHEET 147 | E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:42 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 148	E



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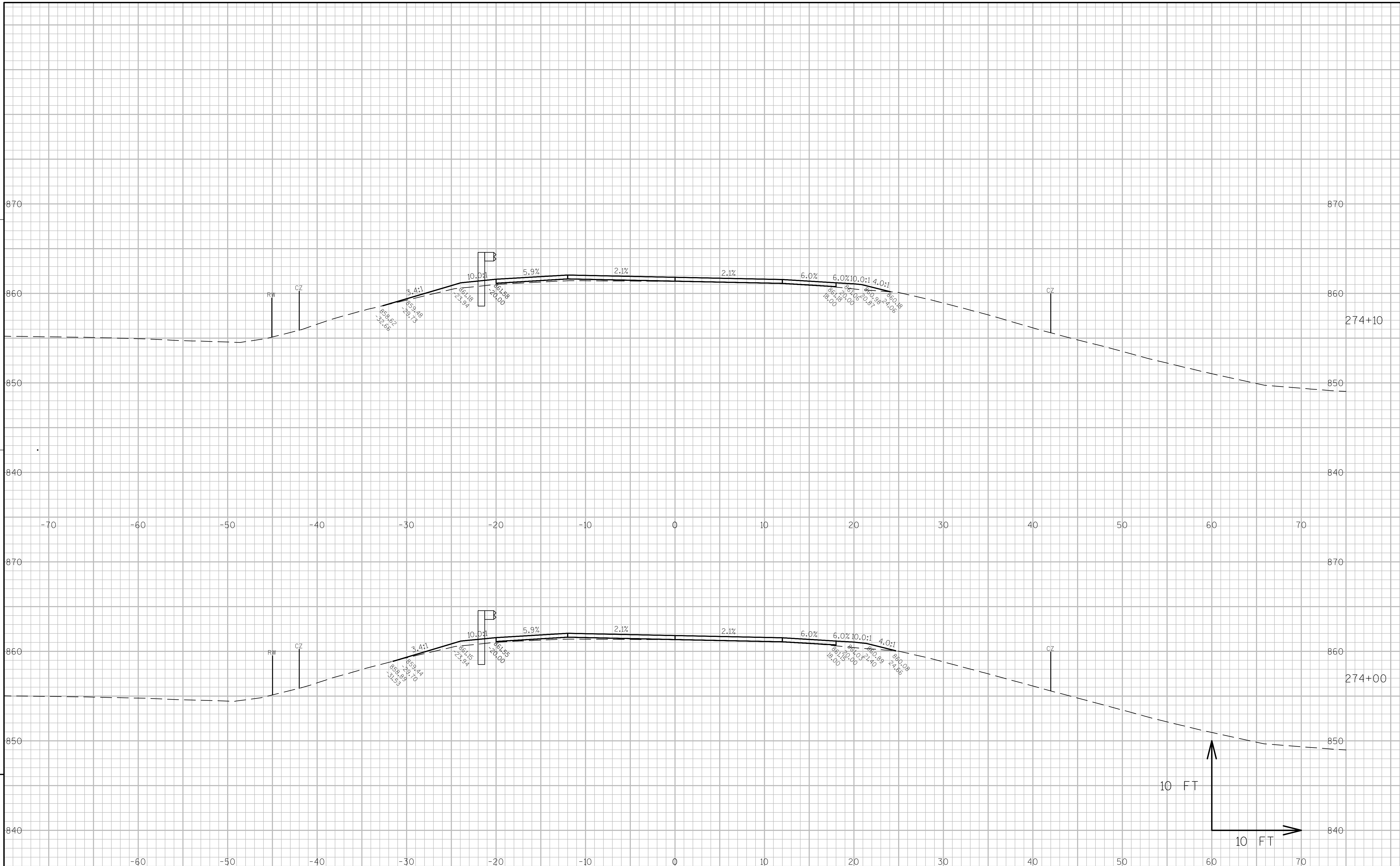
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 149	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:42 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



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PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 150 E

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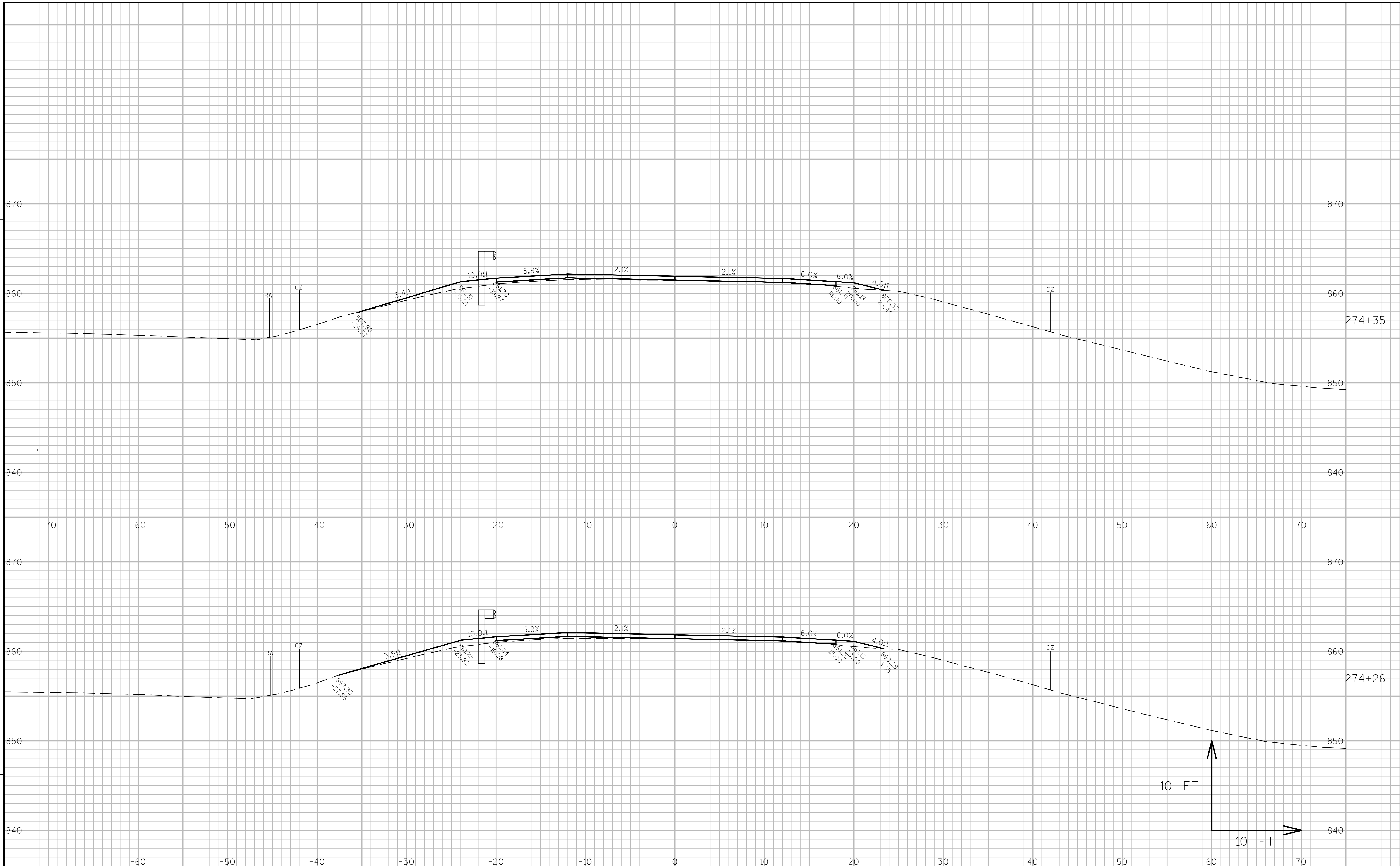

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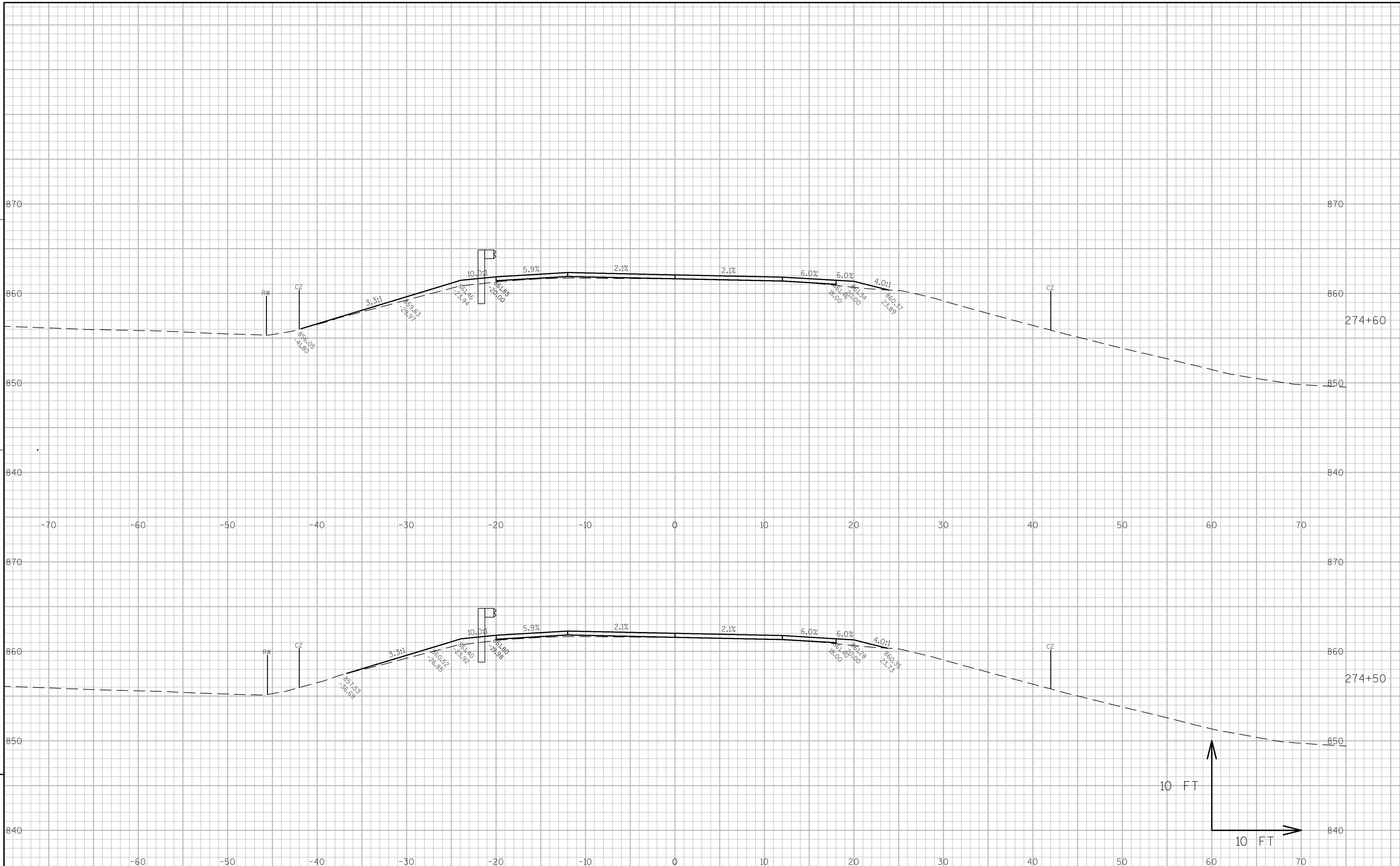
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 151	E



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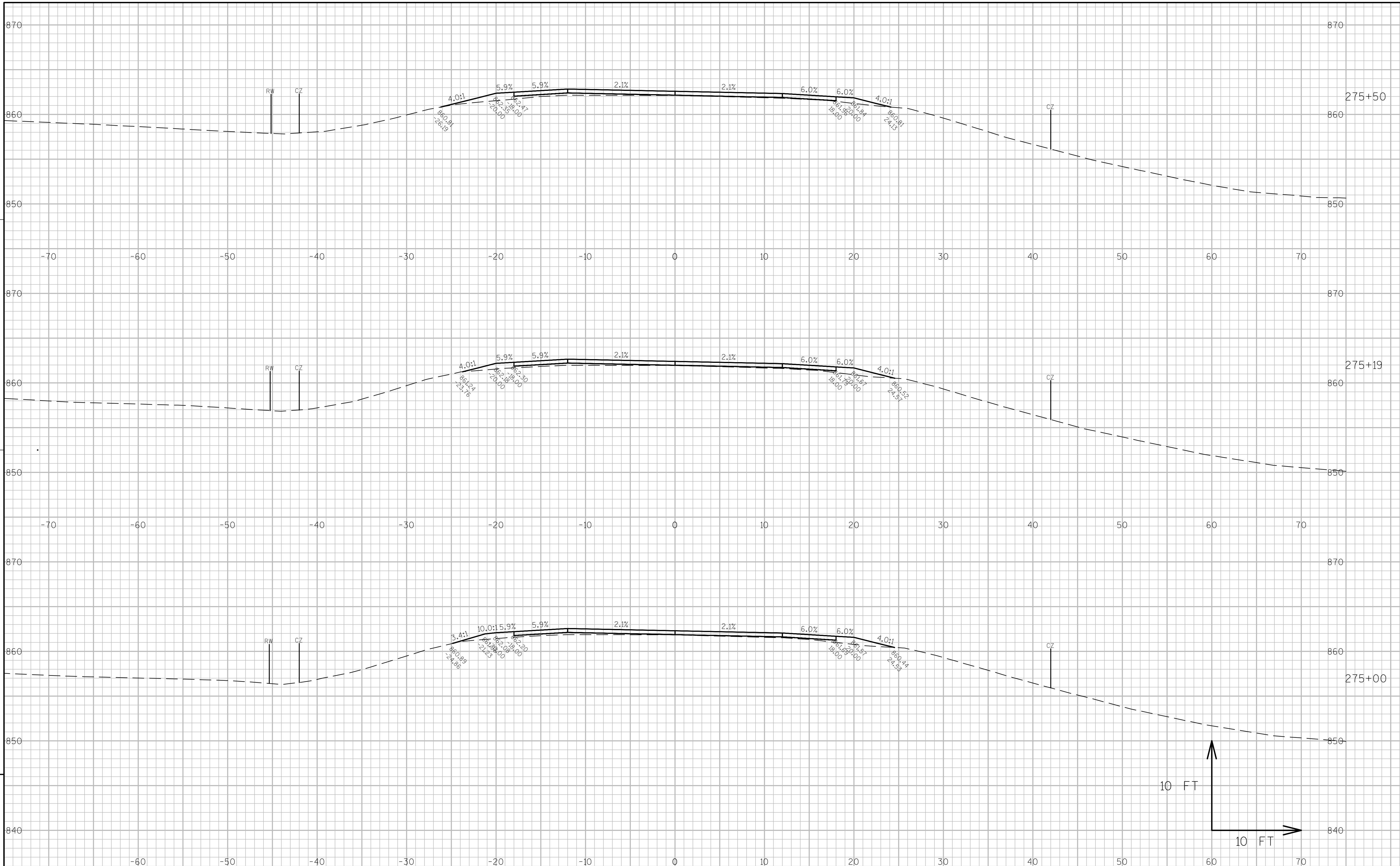
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 152	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:43 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 153	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:43 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF WISDOT/CADDS SHEET 49

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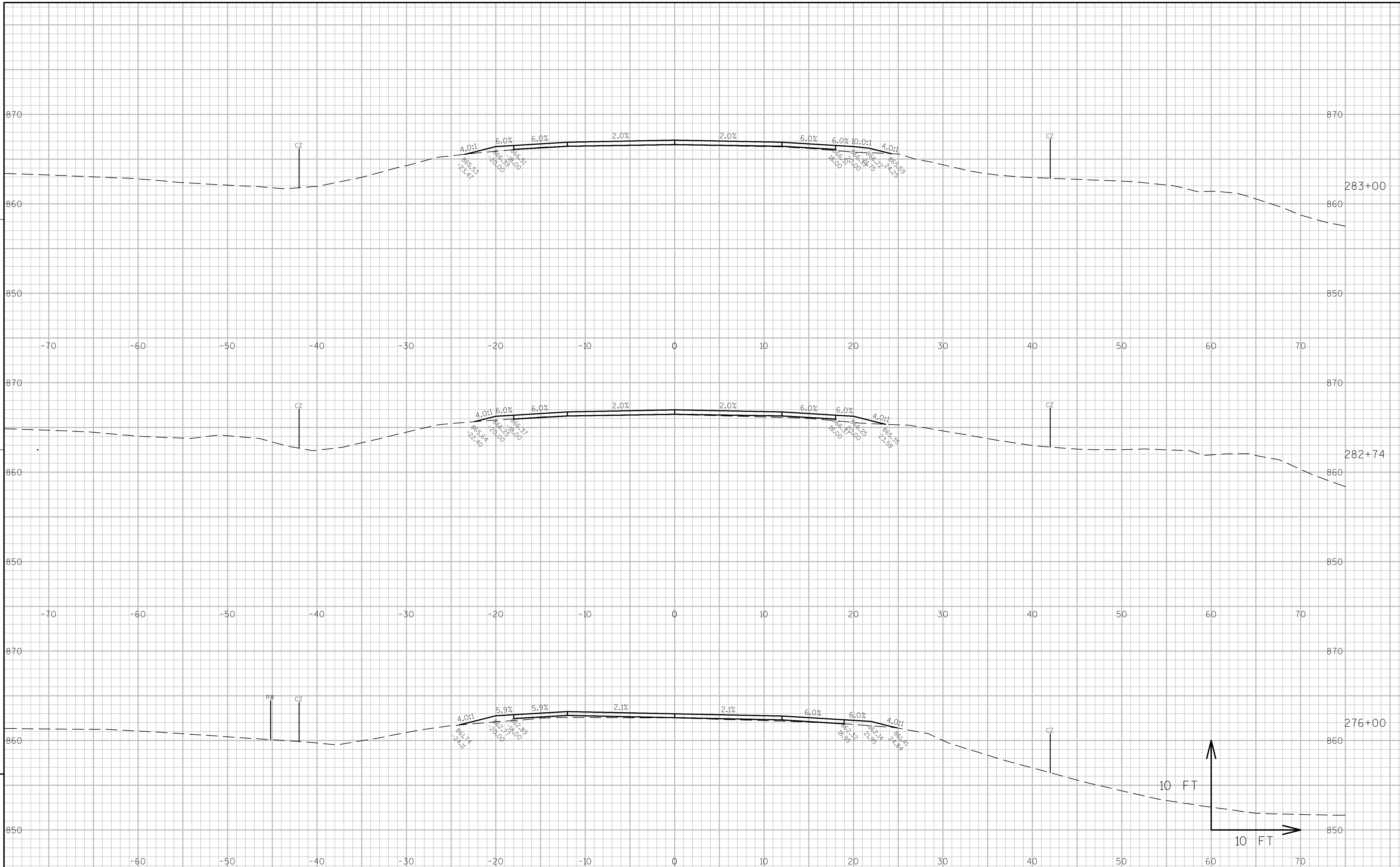

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PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 154	E

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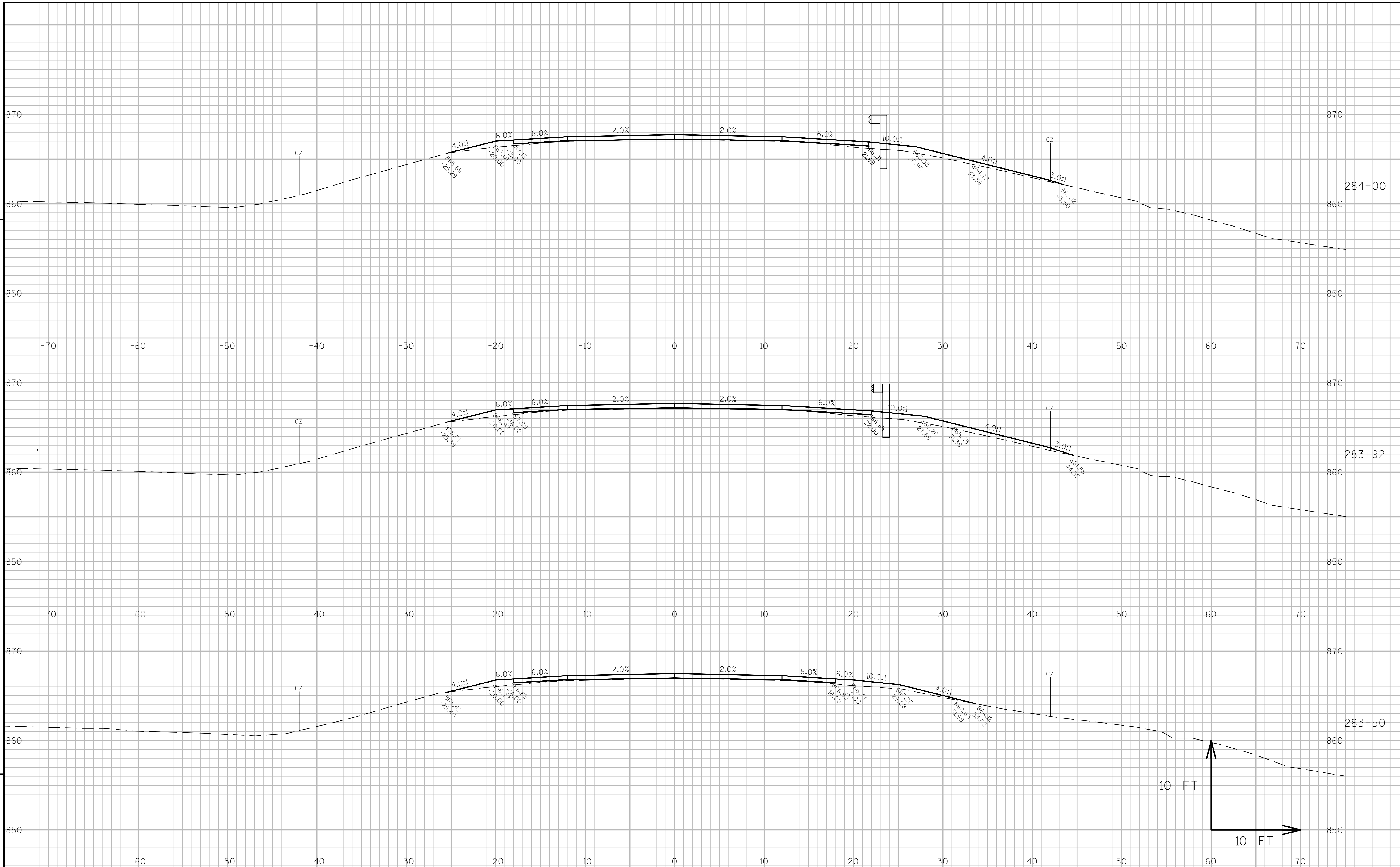
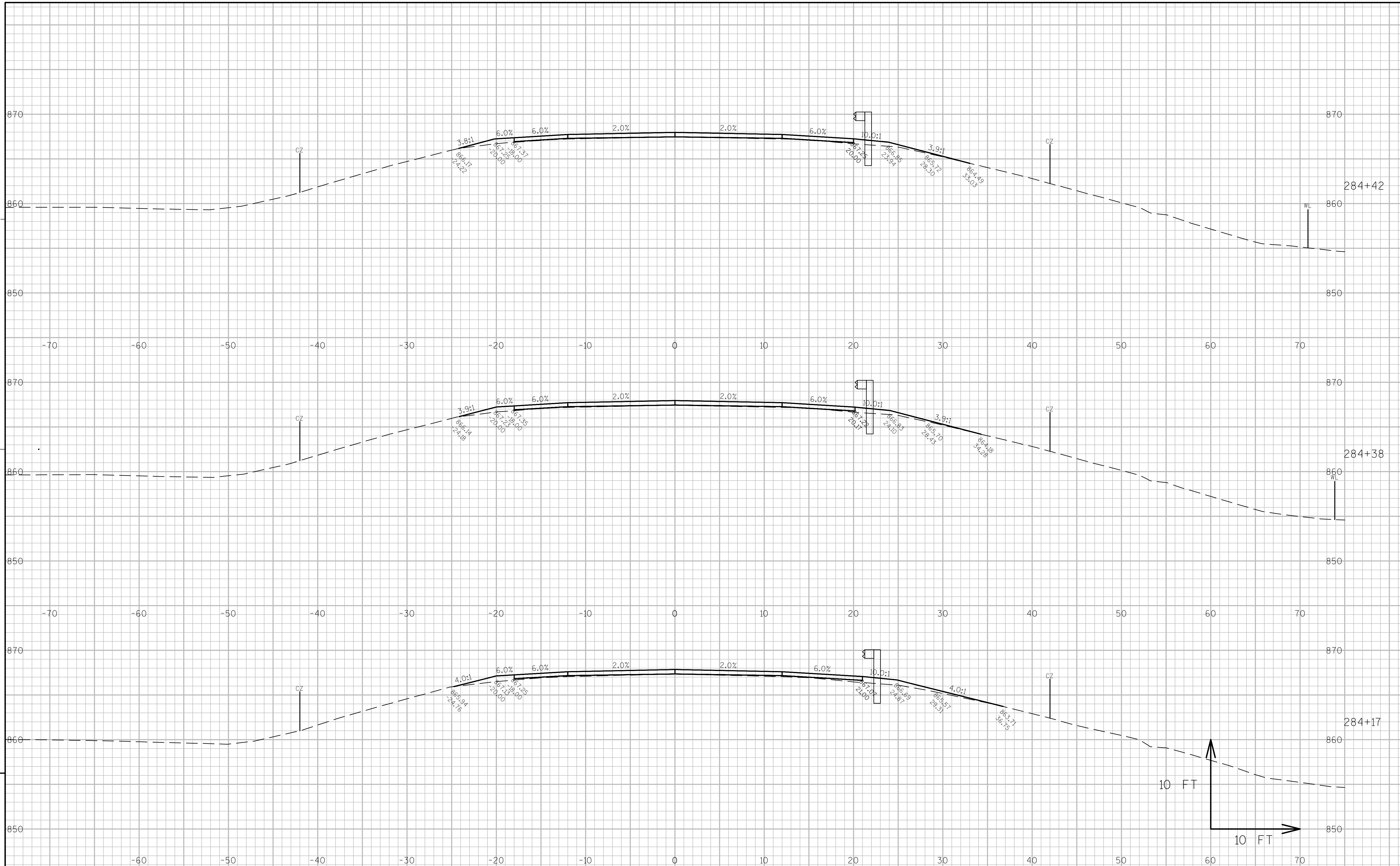


PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 155	E



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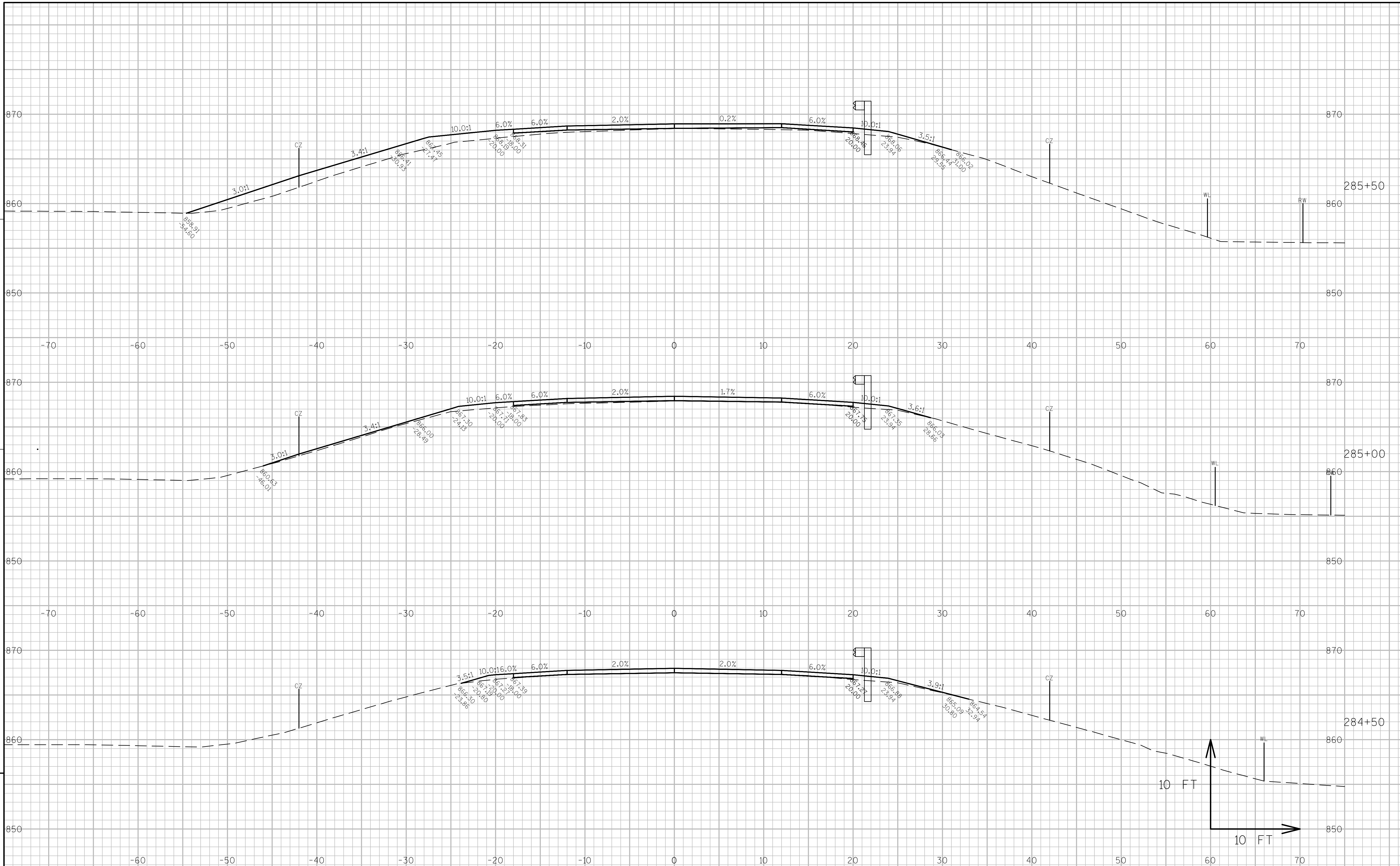
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 156	E



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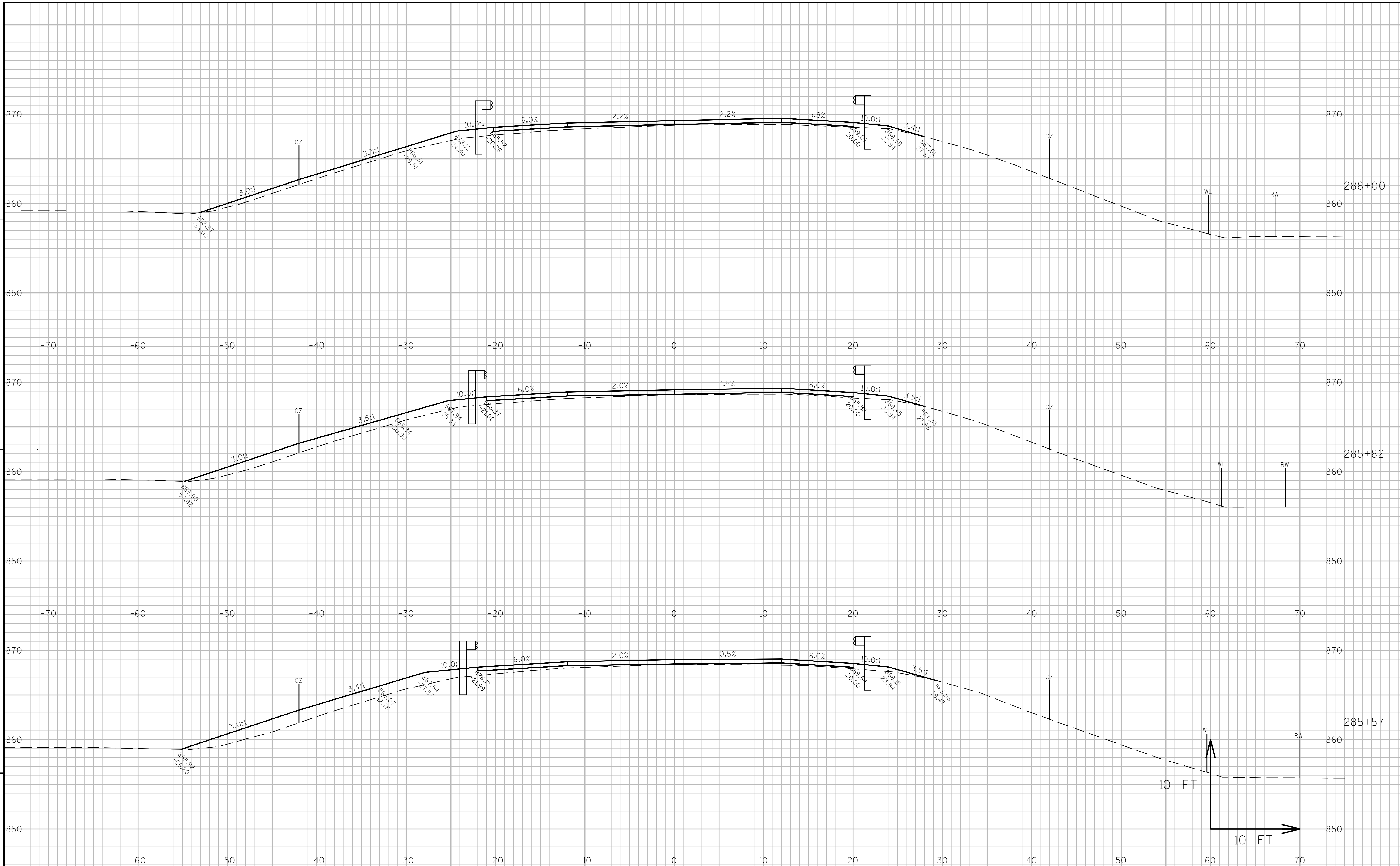
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 157 E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:45 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF WISDOT/CADDS SHEET 49



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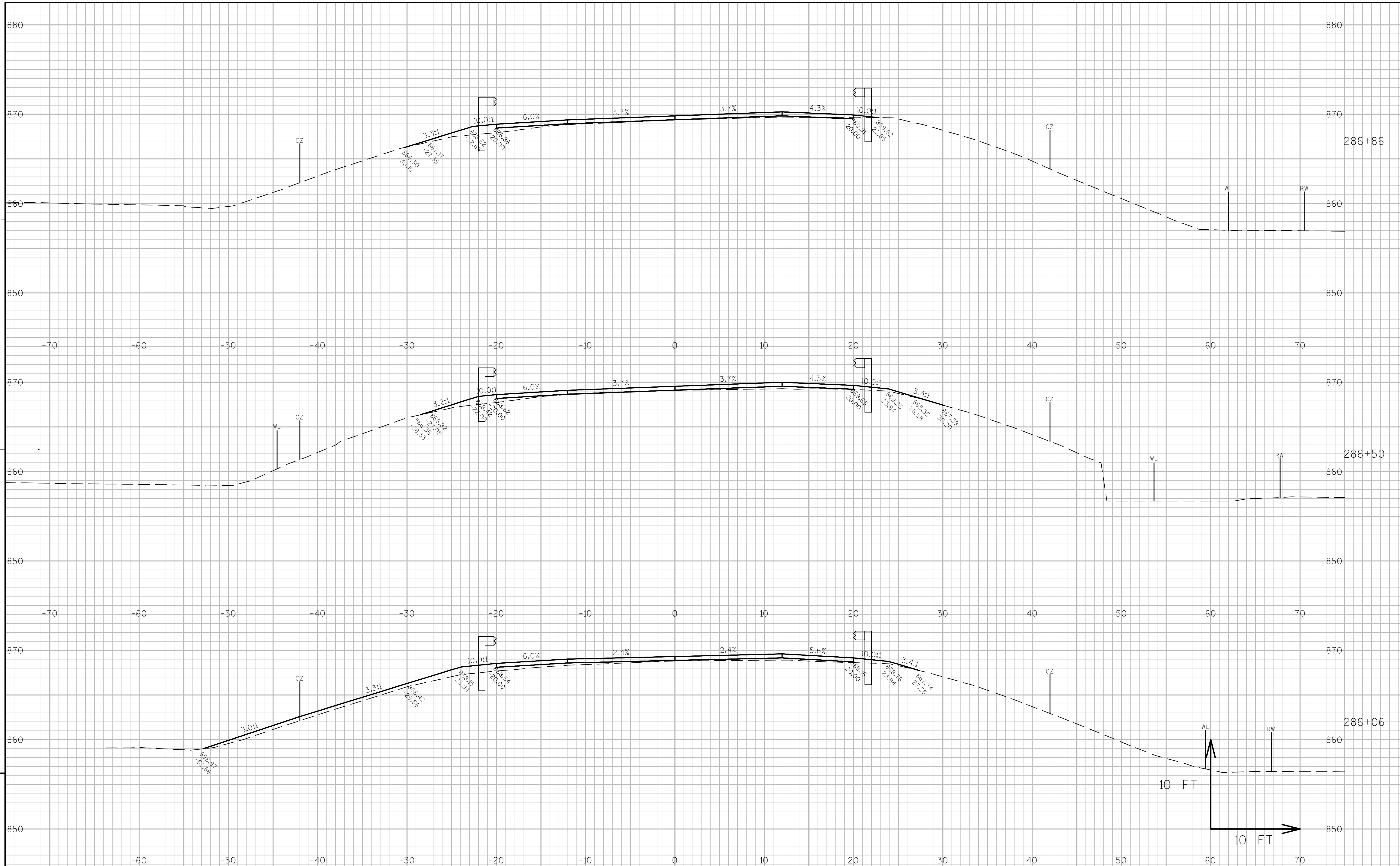
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 158 E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:45 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 159	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:45 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF

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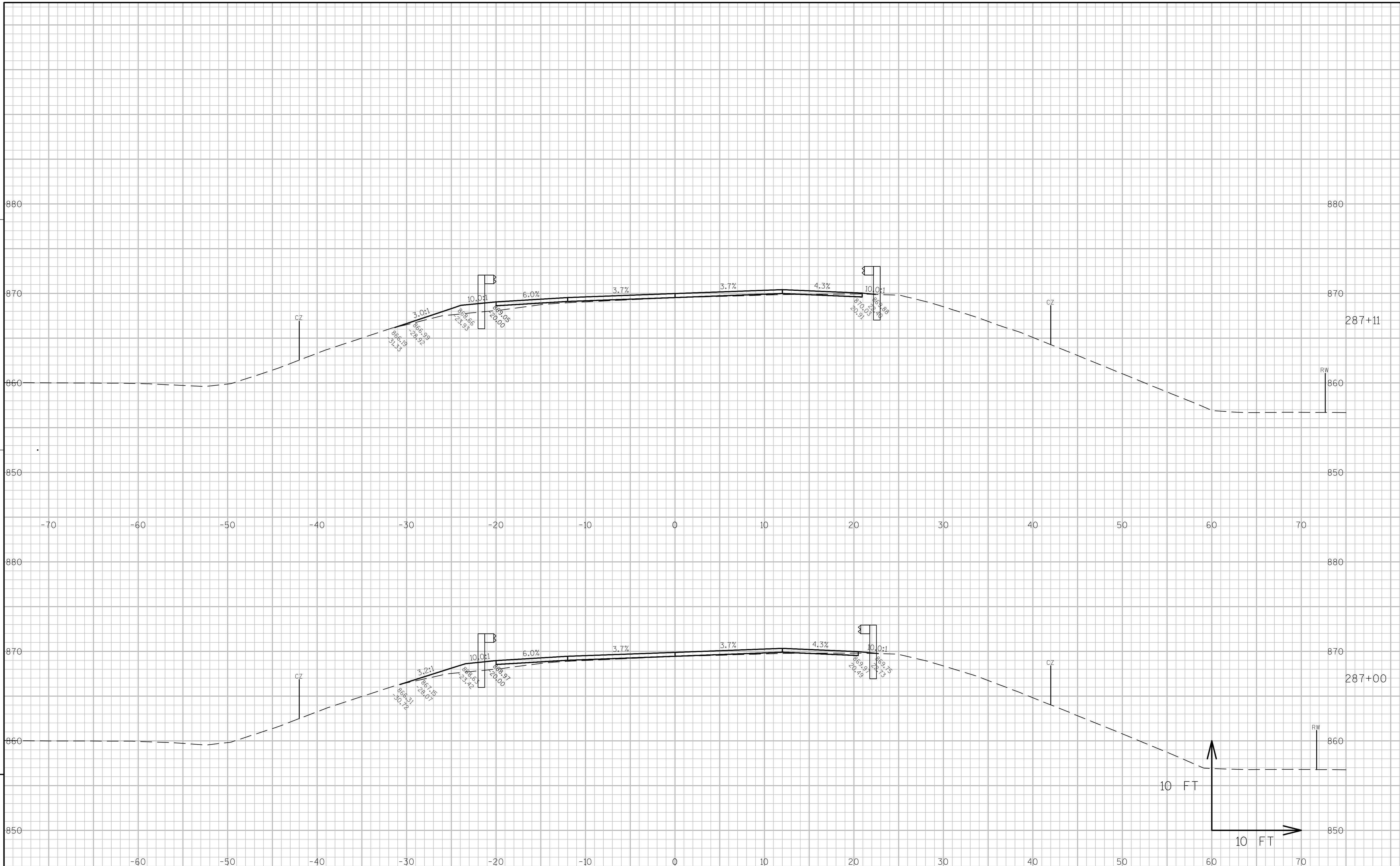

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PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 160	E

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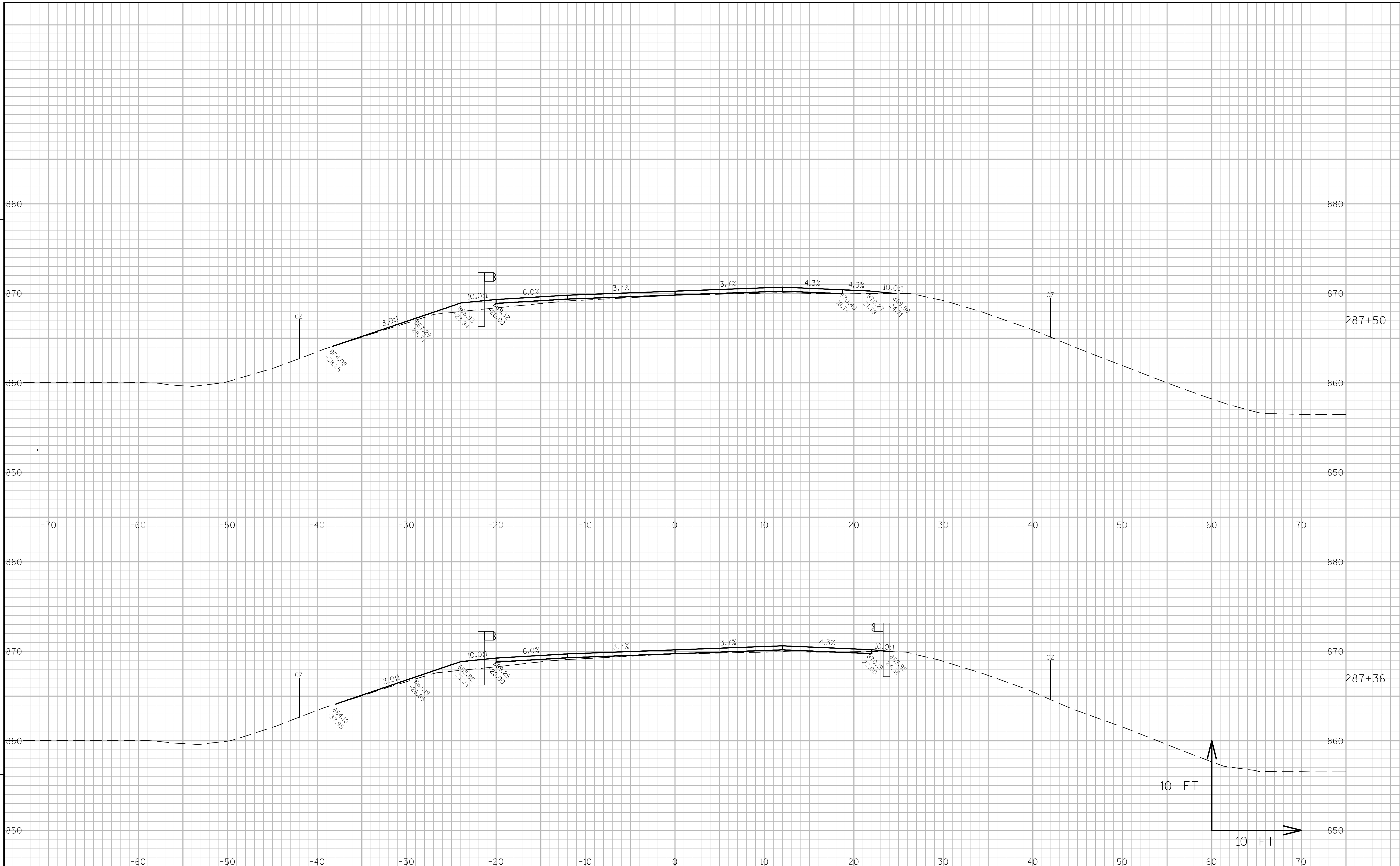
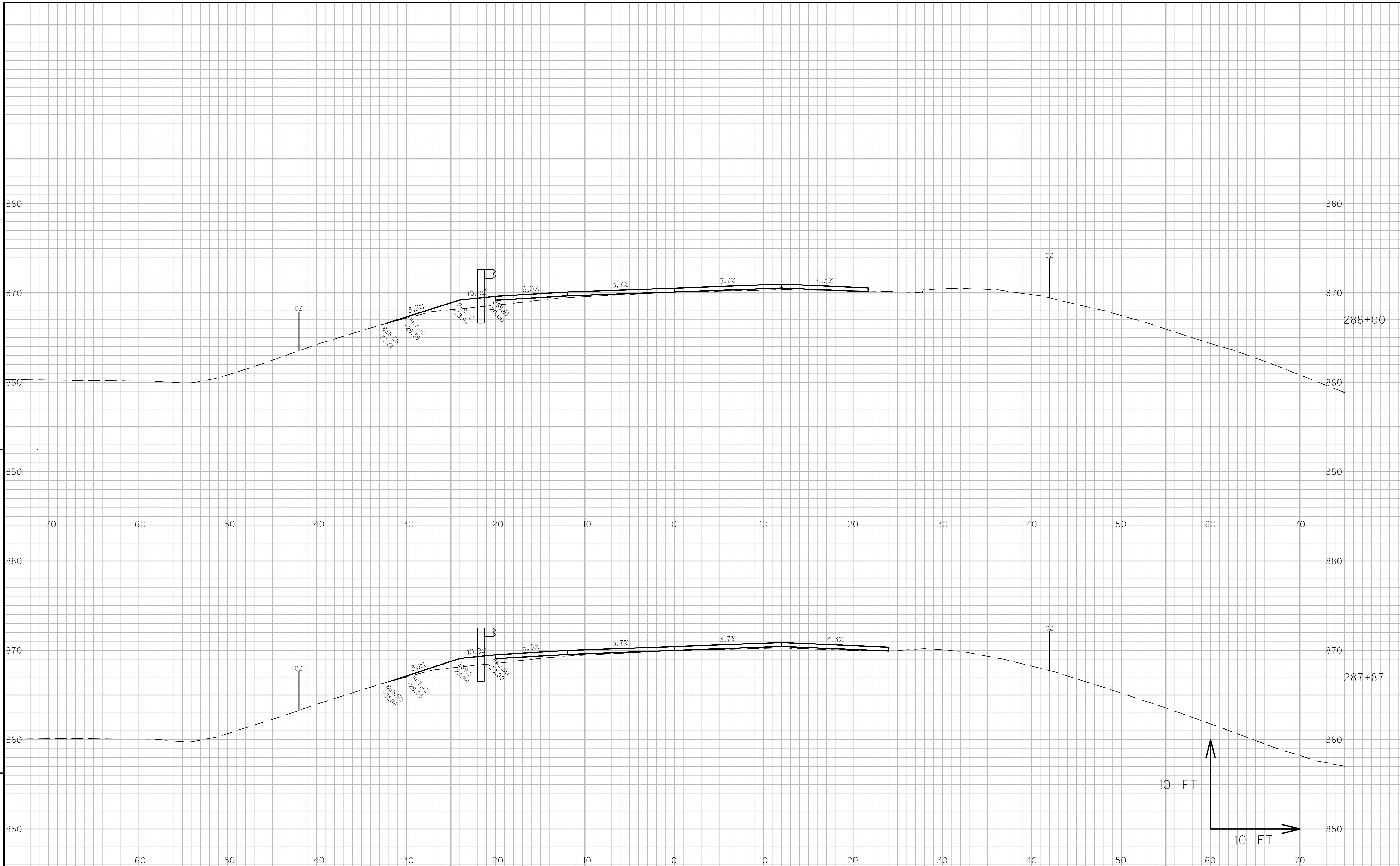


PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 161	E



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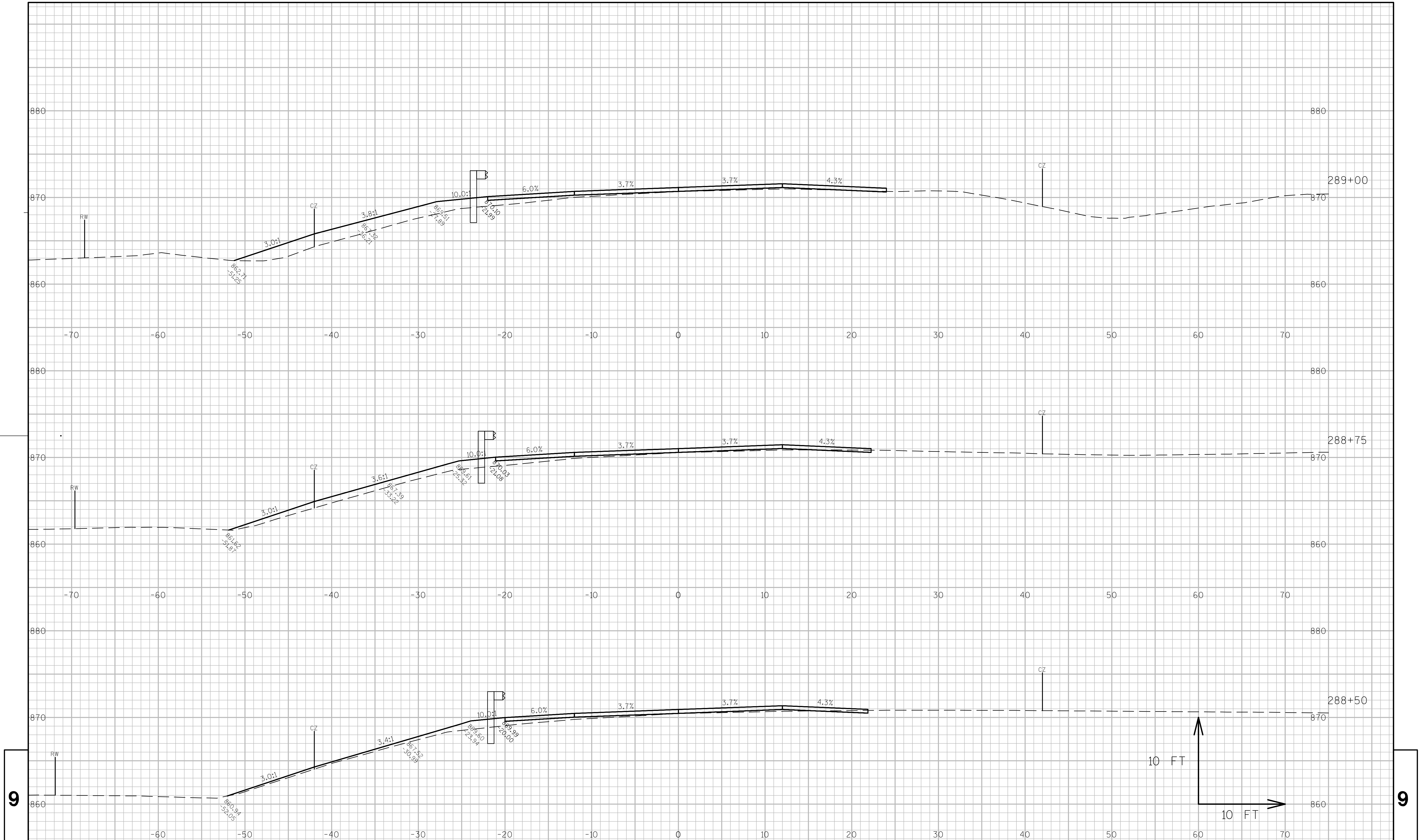
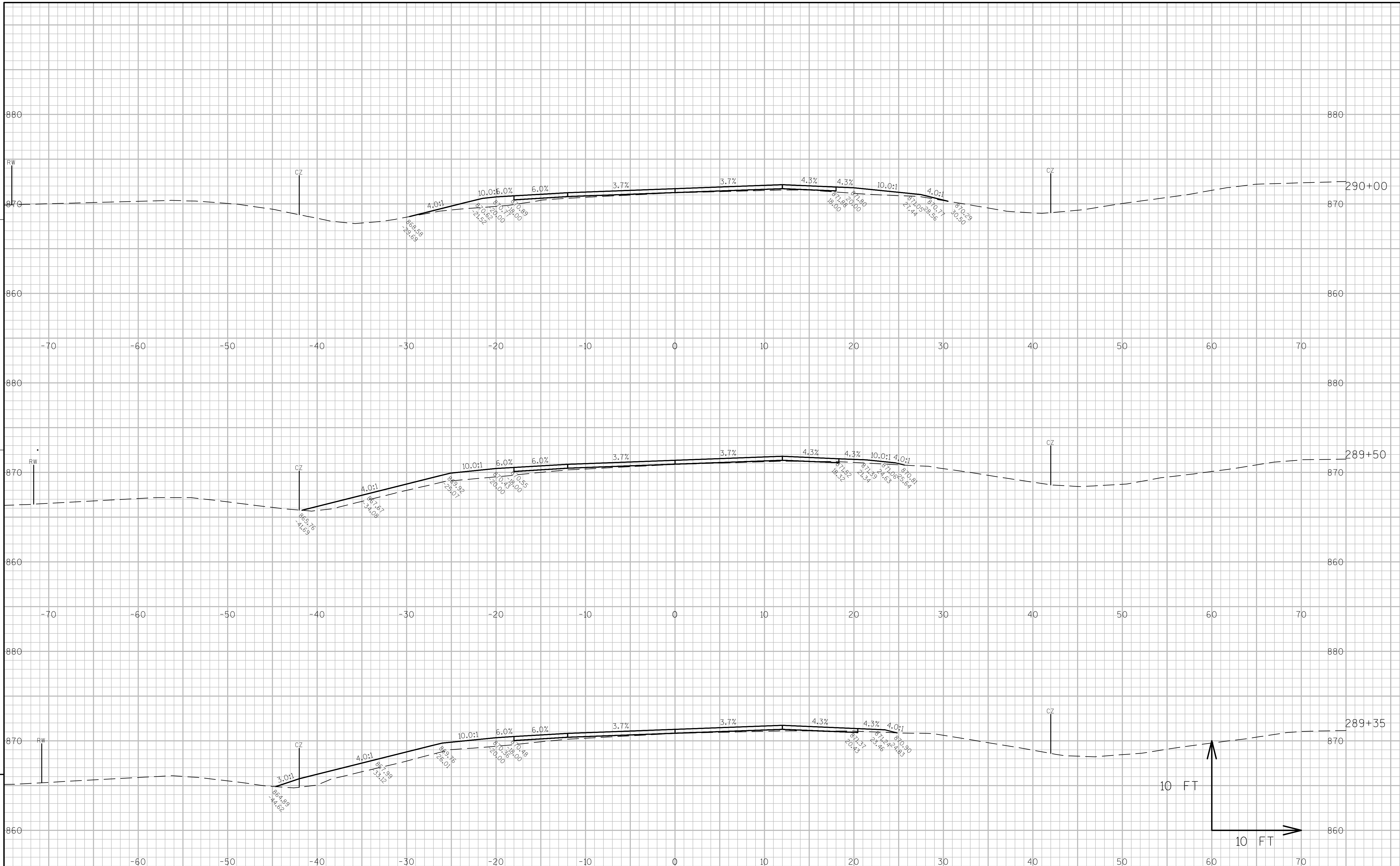
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:46 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF WISDOT/CADDS SHEET 49



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 163 E



PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 164	E

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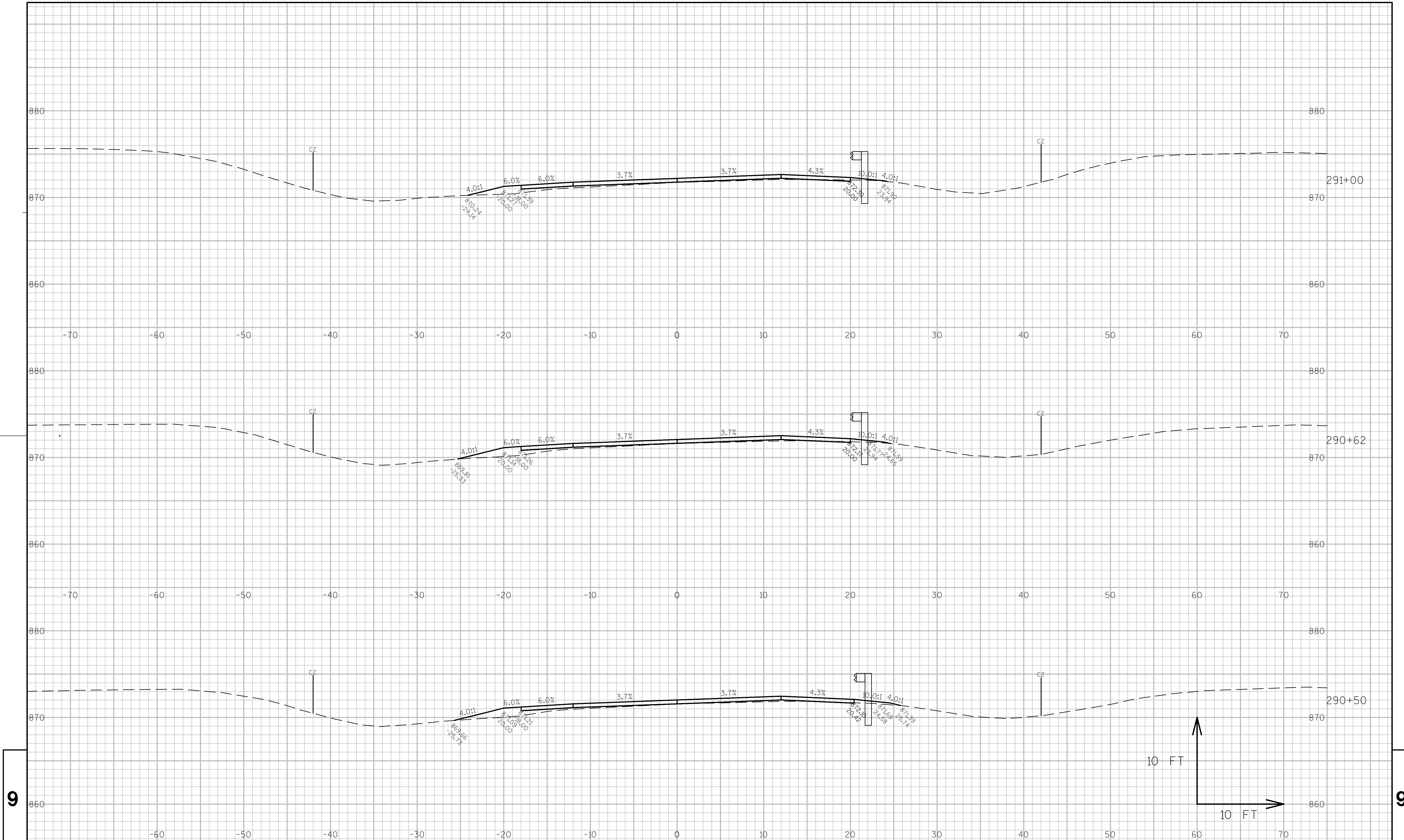
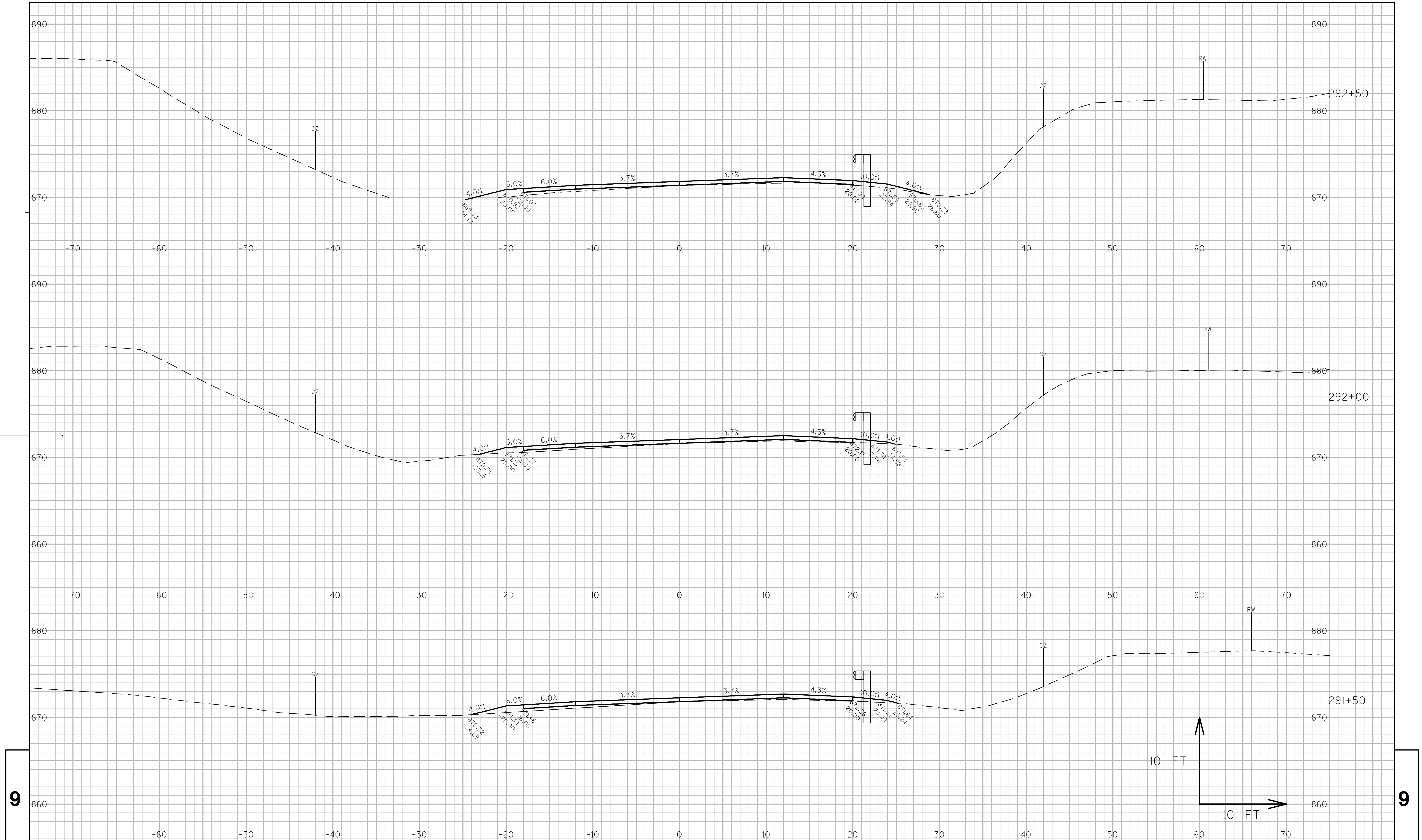
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 165	E

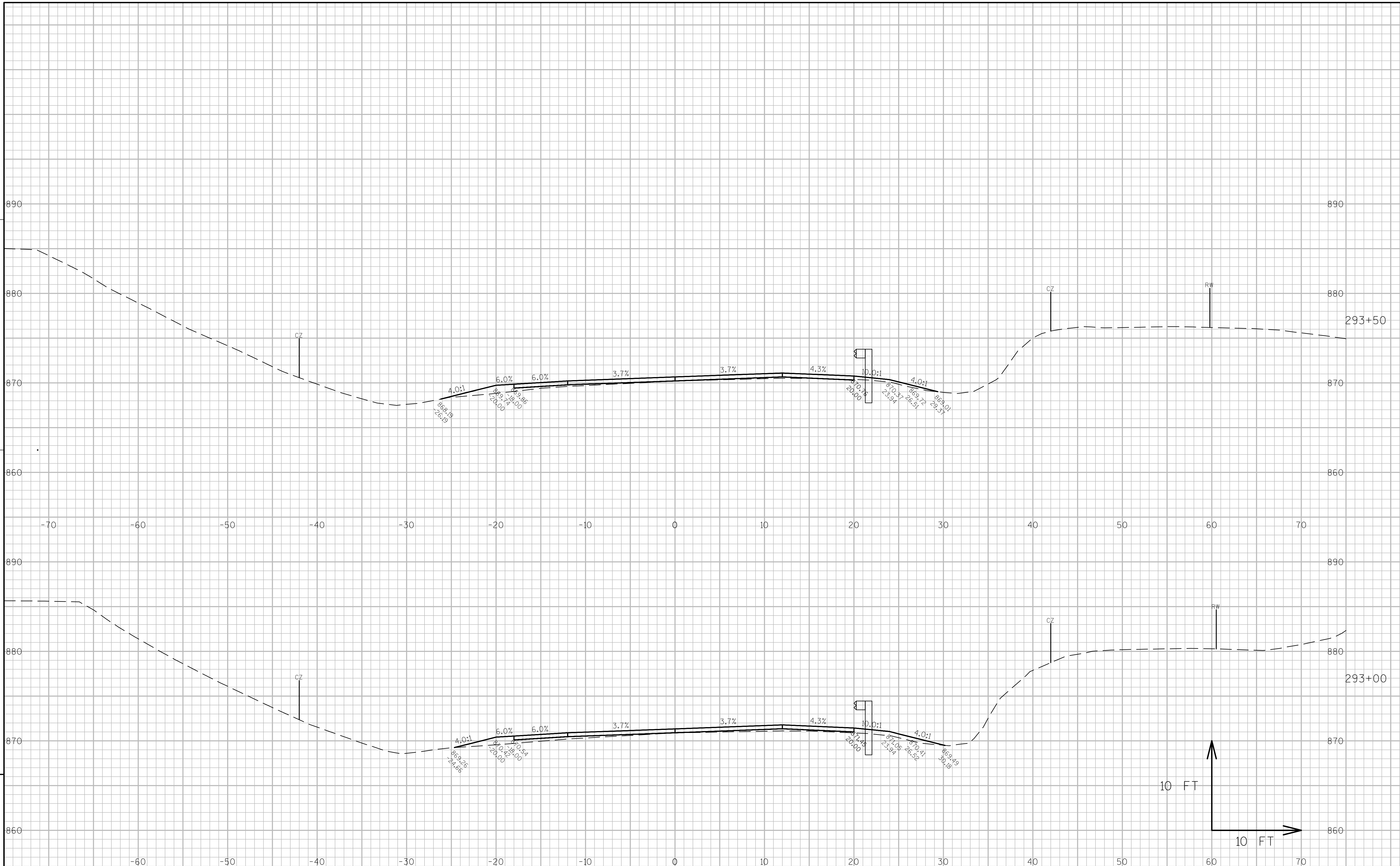
FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:47 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 166	E



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 167	E



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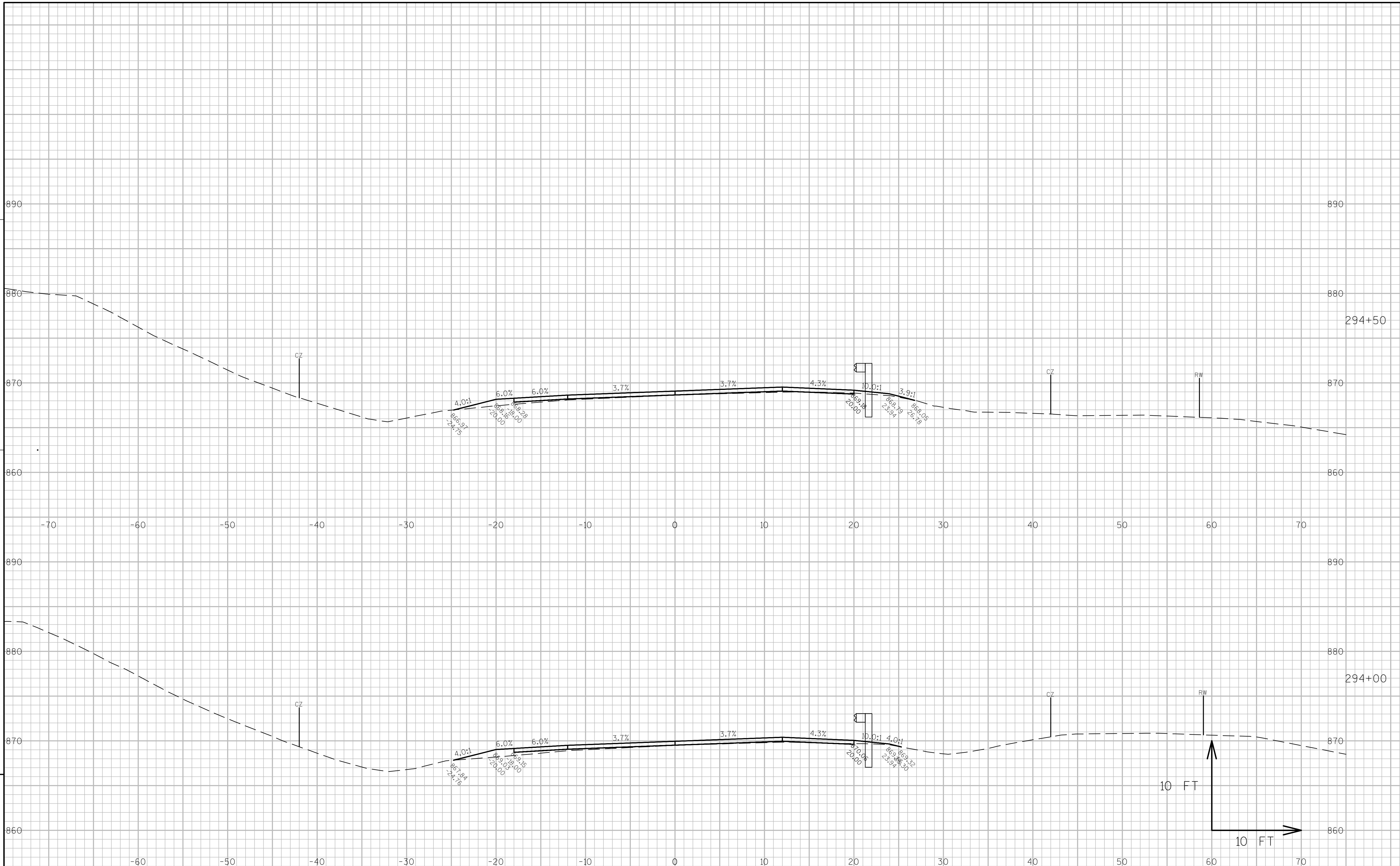
PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 168	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:48 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49



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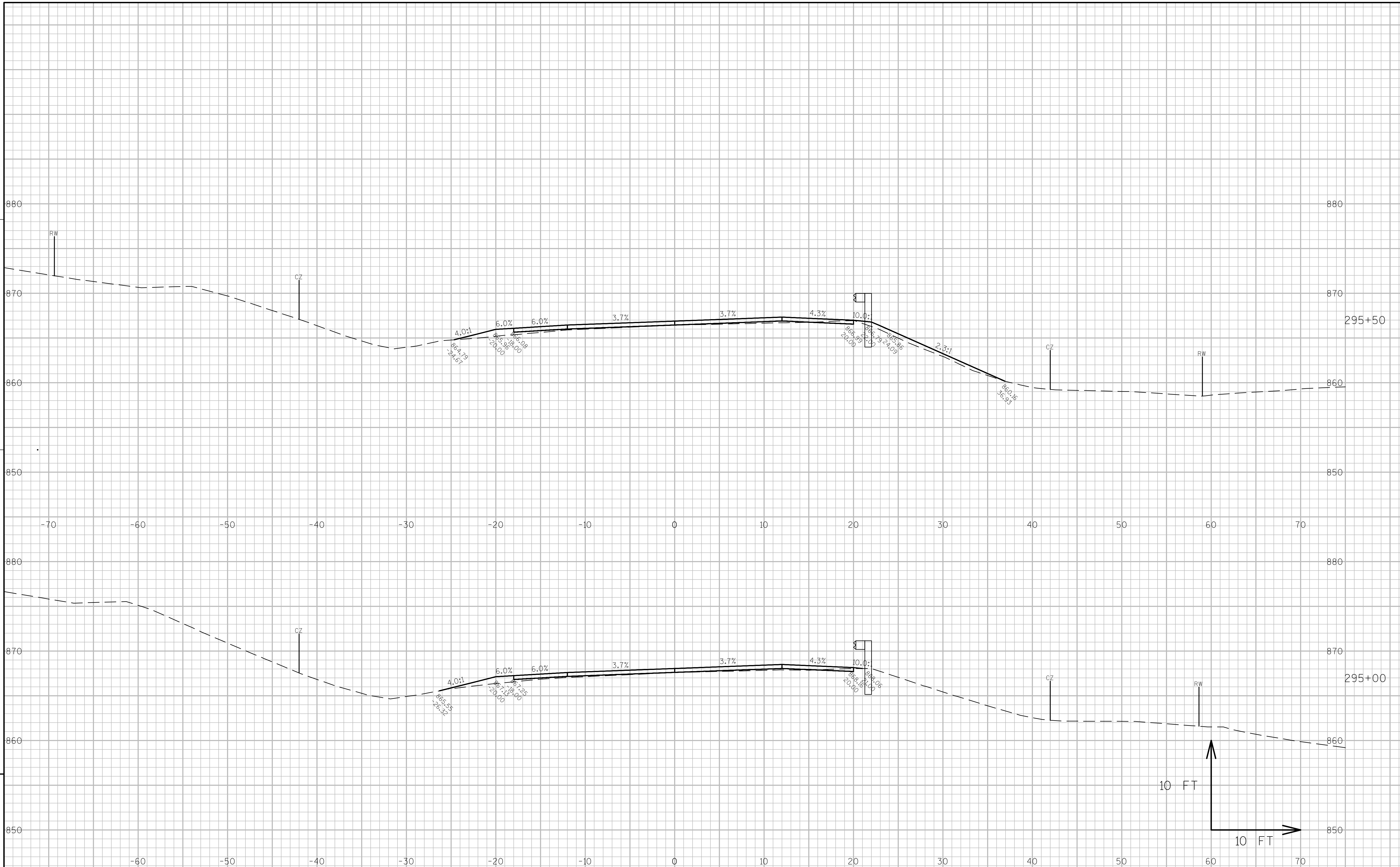
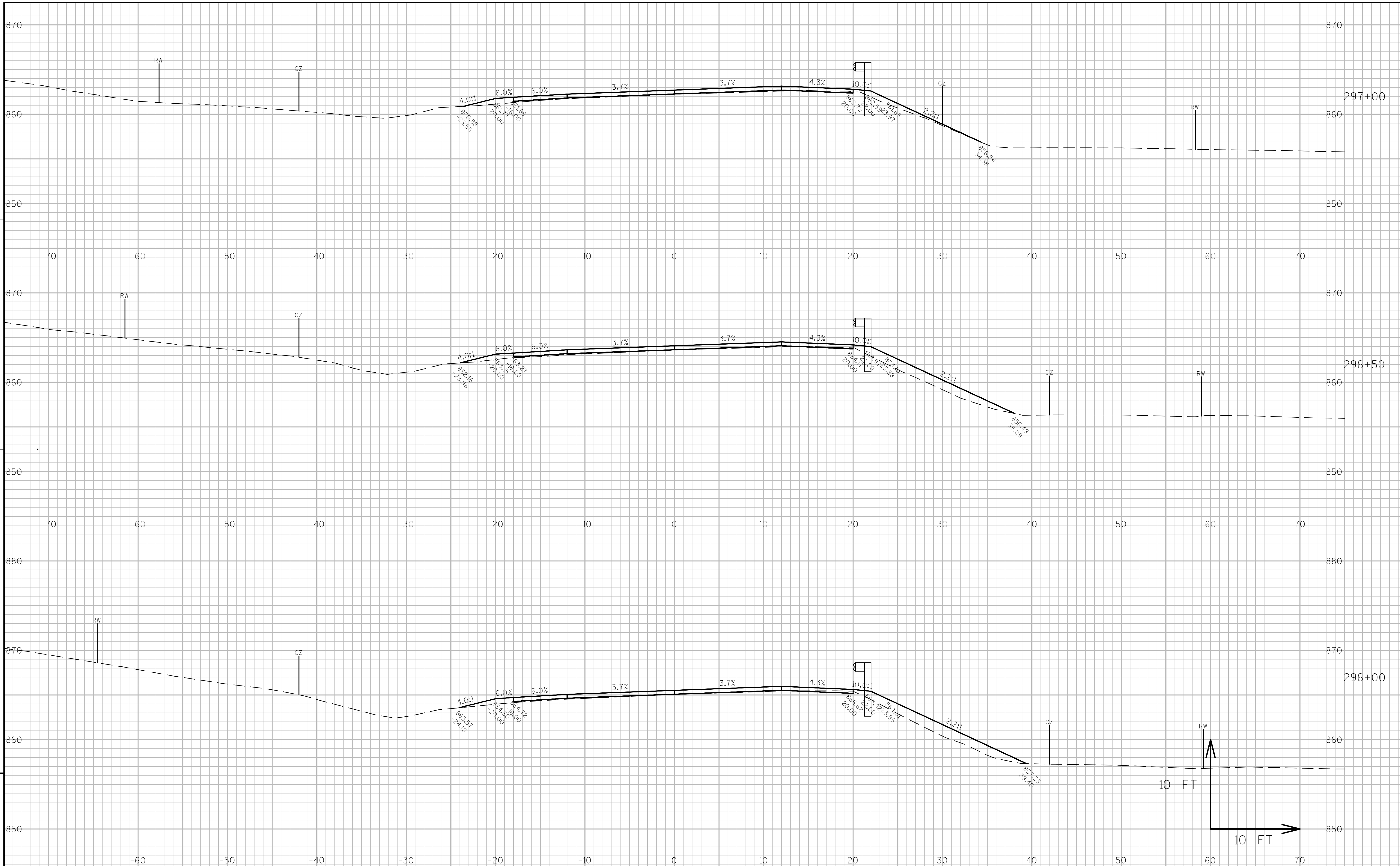
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 169	E



PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 170 E



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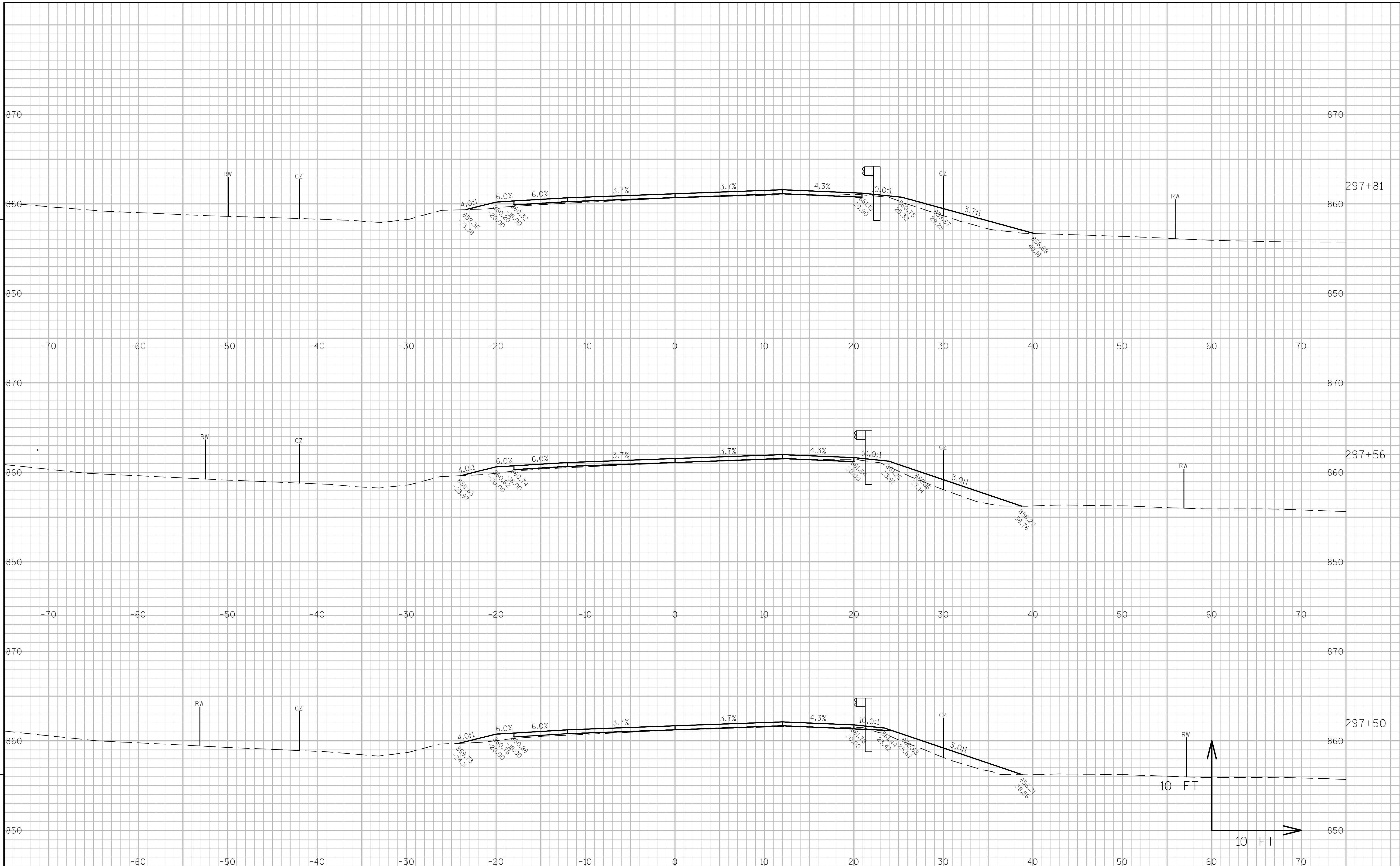
PROJECT NO: 5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 171	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:49 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF WISDOT/CADDS SHEET 49



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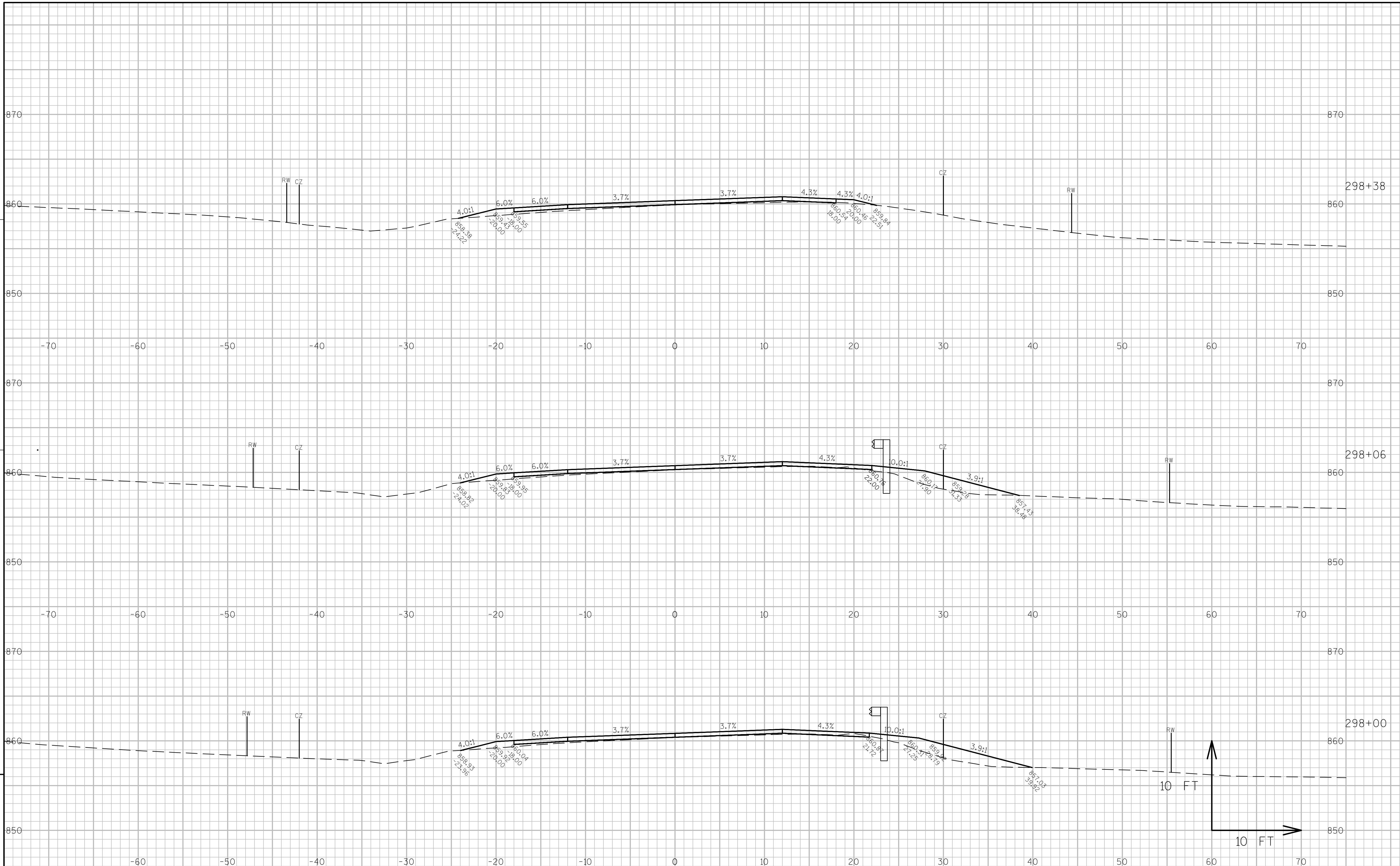

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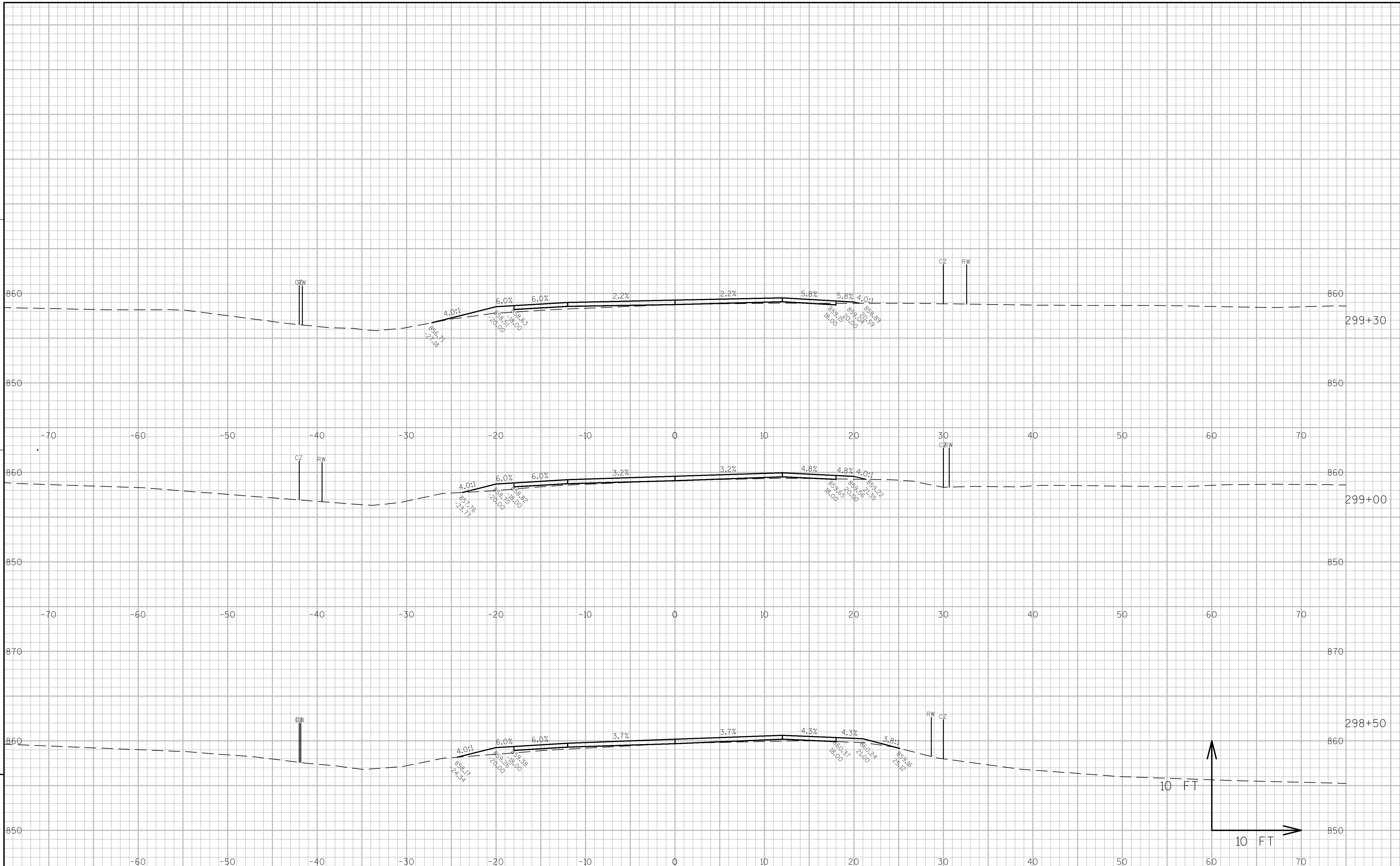

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PROJECT NO:5845-01-75	HWY: USH 51	COUNTY: DANE	CROSS SECTIONS: CROSS SECTION	SHEET 174	E

FILE NAME : N:\PDS\C3D\58450105\SHEETSPLAN\5845-01-75 X-SECTIONS 2013-04-29 X-PLODE.DWG PLOT DATE : 5/3/2013 1:50 PM PLOT BY : SYRON, SCOTT A PLOT NAME : PLOT SCALE : 1:10_XREF

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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