MAD | APR 2015

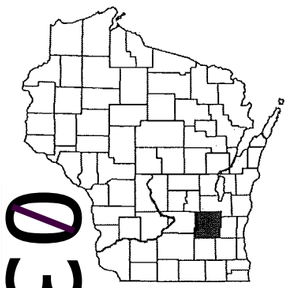
PROJECT ID: 1107-00-74
WITH: N/A

COUNTY: DODGE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right of Way Plat~~
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
~~Section No.~~	~~8~~	~~Structure Plans~~
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 486



03

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ALLENTON - FOND DU LAC

SOUTH CNTY LINE TO NORTH CNTY LINE

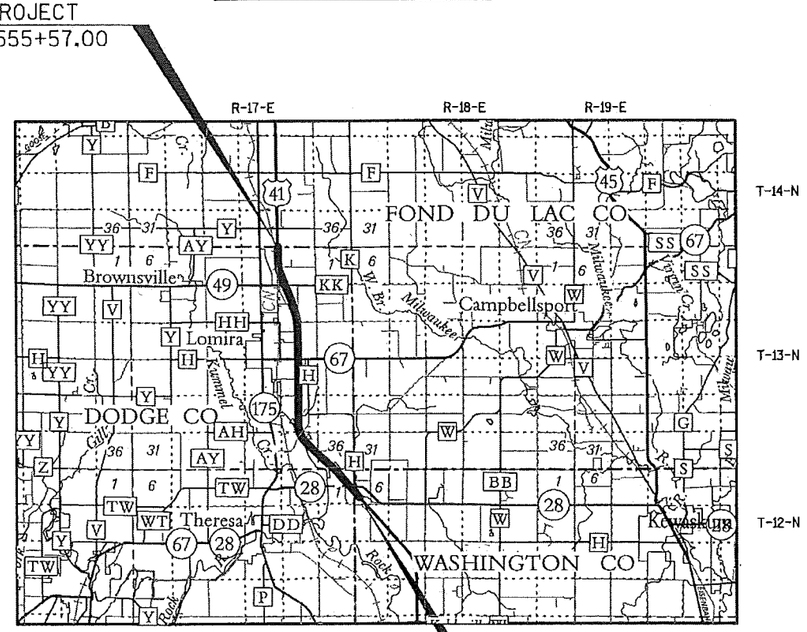
USH 41

DODGE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1107-00-74	WISC 2015175	1

STATE PROJECT NUMBER
1107-00-74

END PROJECT
STA. 1555+57.00



BEGIN PROJECT
STA. 1168+12.29
Y = 751,968.08
X = 963,330.77

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 7.338 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), DODGE COUNTY, NAD 1983 (2007).

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 1988 (2007)

DESIGN DESIGNATION

		CTH D - STH 28	STH 28 - STH 67	STH 67 - STH 49	STH 49 - CTH B
A.A.D.T.	(2015) =	29,800	31,200	32,800	34,300
A.A.D.T.	(2035) =	38,200	40,300	42,550	42,100
D.H.V.	(2035) =	4,087	4,312	4,553	4,505
D.D.	=	60/40	60/40	60/40	60/40
T.	=	13.4%	13.4%	13.4%	13.4%
DESIGN SPEED	=	70 MPH	70 MPH	70 MPH	70 MPH
ESALS	=	13,424,700	13,424,700	13,424,700	13,424,700

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 (955.36)
- 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

ORIGINAL PLANS PREPARED BY

benesch
engineers · scientists · planners
Alfred Benesch & Company
1300 West Canal Street, Suite 150
Milwaukee, Wisconsin 53233
414-308-1310 Job No. 20155.00

WISCONSIN
AMANDA E. ZACHARIAS
E-35716
MILWAUKEE, WI
PROFESSIONAL ENGINEER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	WISDOT
Designer	ALFRED BENESCH & CO
Project Manager	LALITHA BALACHANDRAN
Regional Examiner	
Regional Supervisor	WILLIAM STROBEL
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 10/16/14 William Strobel (Signature)

E

UTILITY CONTACTS

ALLIANT ENERGY
(GAS/PETROLEUM)

883 WEST SCOTT STREET
FOND DU LAC, WI 54937
MR. STEVEN G. PAUTZ
(920) 322-6683
(920) 979-0135 (MOBILE)
STEVEPAUTZ@ALLIANTENERGY.COM

ATC MANAGEMENT, INC
(ELECTRICITY)

P.O. BOX 47
WAUKESHA, WI 53187
MR. TONY MARCINIAK
(262) 506-6814
AMARCINIAK@ATCLLC.COM

FRONTIER
COMMMUNICATIONS OF WI

118 DIVISION STREET
PLYMOUTH, WI 53073
MR. RYAN OSNESS
(920) 893-7455
(920) 246-3530 (MOBILE)
RYAN.D.OSNESS@FTR.COM

VILLAGE OF LOMIRA
DEPARTMENT OF PUBLIC WORKS

423 WATER ST
LOMIRA, WI 53048
MR. BRIAN KOLL
(920) 269-8155
BRIANKOLL@LOMIRAGOV.COM

WE ENERGIES
(ELECTRICITY)

245 SAND DRIVE
WEST BEND, WI 53095
MR. AL SCHMITT
(262) 338-7662
(414) 322-1824 (MOBILE)
ALAN.SCHMITT@WE-ENERGIES.COM

OTHER AGENCIES

VILLAGE OF LOMIRA

425 WATER ST
LOMIRA, WI 53048
(920) 269-4712

TOWN OF LOMIRA

N11392 COUNTY ROAD AY
BROWNSVILLE, WI 53006
MS. LAURI BETZ, CLERK
(920) 583-2600

TOWN OF THERESA

W783 WEST BEND ROAD
THERESA, WI 53091
MS. DIANE STEGER, CLERK
(920) 488-2033

CANADIAN NATIONAL
RAILROAD

1625 DEPOT STREET
STEVENS PONIT, WI
MS. JACKIE MACEWICZ
DIRECTOR OF PUBLIC WORKS
(715) 345-2503

DNR

DNR SOUTH CENTRAL REGION
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
MR. ERIC HEGGELUND
(608) 275-3301

DESIGN

ALFRED BENESCH & COMPANY
1300 W CANAL ST, SUITE 150
MILWAUKEE WI, 53233
MS. AMANDA ZACHARIAS
(414) 308-1320

DOT

WISCONSIN DOT, SOUTHWEST REGION
2101 WRIGHT ST
MADISON, WI 53704
MS. LALITHA BALACHANDRAN
(608) 243-3382

GENERAL NOTES

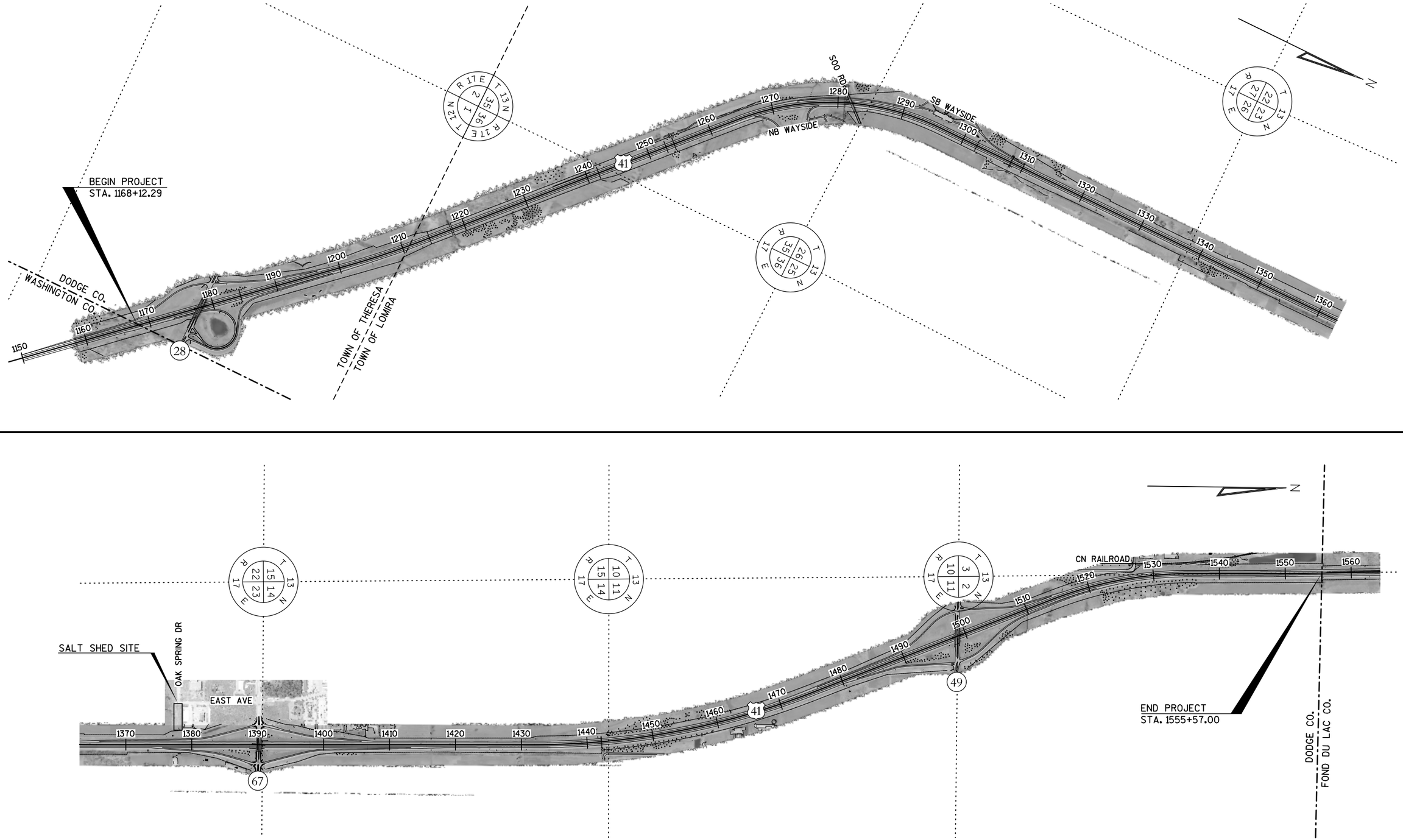
1. NO TREES OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
2. DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED.
3. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
4. CROSS SECTIONS ARE REFERENCED TO THE USH 41 ℄.
5. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
6. CONTRACTORS PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

PAVEMENT LOCATION	TOTAL PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
USH 41 (SOUTH OF CONCRETE SECTION)	3 1/2"	HMA PAVEMENT TYPE E-30 1.75" UPPER 1.75" LOWER	12.5 MM	PG 64-28 UPPER PG 58-28 LOWER
USH 41 (CONCRETE SECTION SHOULDERS ONLY)	3 1/2"	HMA PAVEMENT TYPE E-0.3 3.5" LIFT	12.5 MM	PG 58-28
USH 41 (NORTH OF CONCRETE SECTION)	3 1/2"	HMA PAVEMENT TYPE E-30 1.75" UPPER 1.75" LOWER	12.5 MM	PG 64-28 UPPER PG 58-28 LOWER
STH 28 NORTHBOUND ON-RAMP (WIDENING)	5 1/4"	HMA PAVEMENT TYPE E-30 1.75" UPPER 1.75" LOWER 1.75" LOWER	12.5 MM UPPER 19.0 MM LOWER	PG 64-28 UPPER PG 58-28 LOWER
STH 28 NORTHBOUND ON-RAMP (WIDENING SHOULDER)	3 1/2"	HMA PAVEMENT TYPE E-30 1.75" UPPER 1.75" LOWER	12.5 MM	PG 64-28 UPPER PG 58-28 LOWER
STH 28 NORTHBOUND ON-RAMP	2 1/2"	HMA PAVEMENT TYPE E-30 2.5" UPPER	12.5 MM	PG 64-28 UPPER
NORTHBOUND WAYSIDE ON-RAMP (WIDENING)	5 1/4"	HMA PAVEMENT TYPE E-30 1.75" UPPER 1.75" LOWER 1.75" LOWER	12.5 MM UPPER 19.0 MM LOWER	PG 64-28 UPPER PG 58-28 LOWER
NORTHBOUND WAYSIDE ON-RAMP AND SHOULDER WIDENING	3 1/2"	HMA PAVEMENT TYPE E-30 1.75" UPPER 1.75" LOWER	12.5 MM	PG 64-28 UPPER PG 58-28 LOWER
SALT SHED	5"	HMA PAVEMENT TYPE E-30 2.0" UPPER 3.0" LOWER	12.5 MM UPPER 19.0 MM LOWER	PG 64-28

ORDER OF SECTION 2 SHEETS

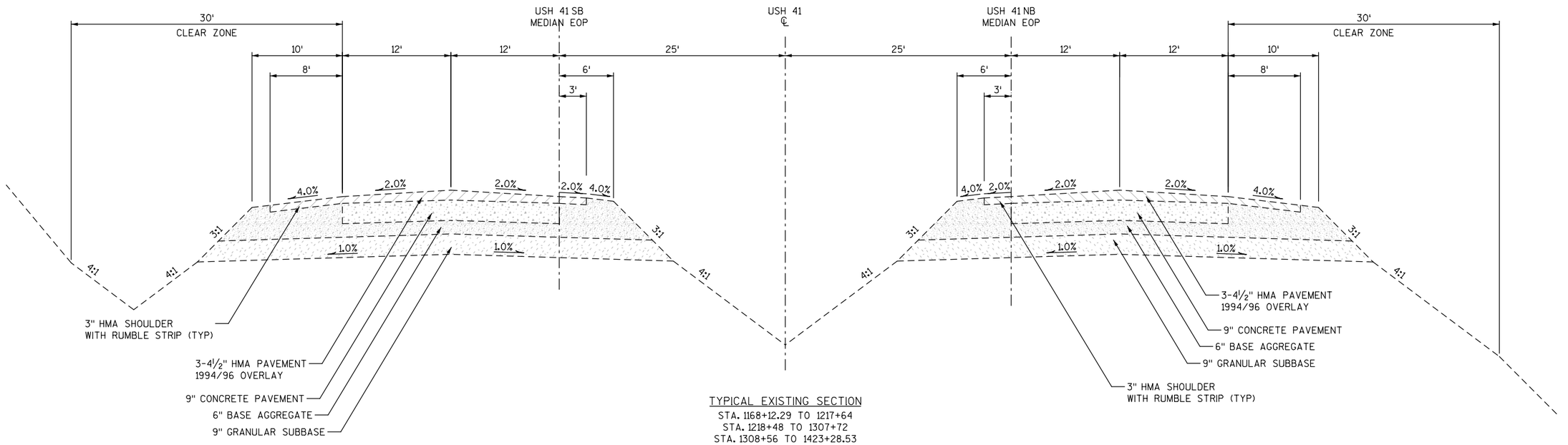
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
PLAN DETAILS
STORM SEWER & EROSION CONTROL
PERMANENT SIGNING
PERMANENT PAVEMENT MARKING
TRAFFIC CONTROL
ALIGNMENT DETAIL

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



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PROJECT OVERVIEW	SHEET 3	E

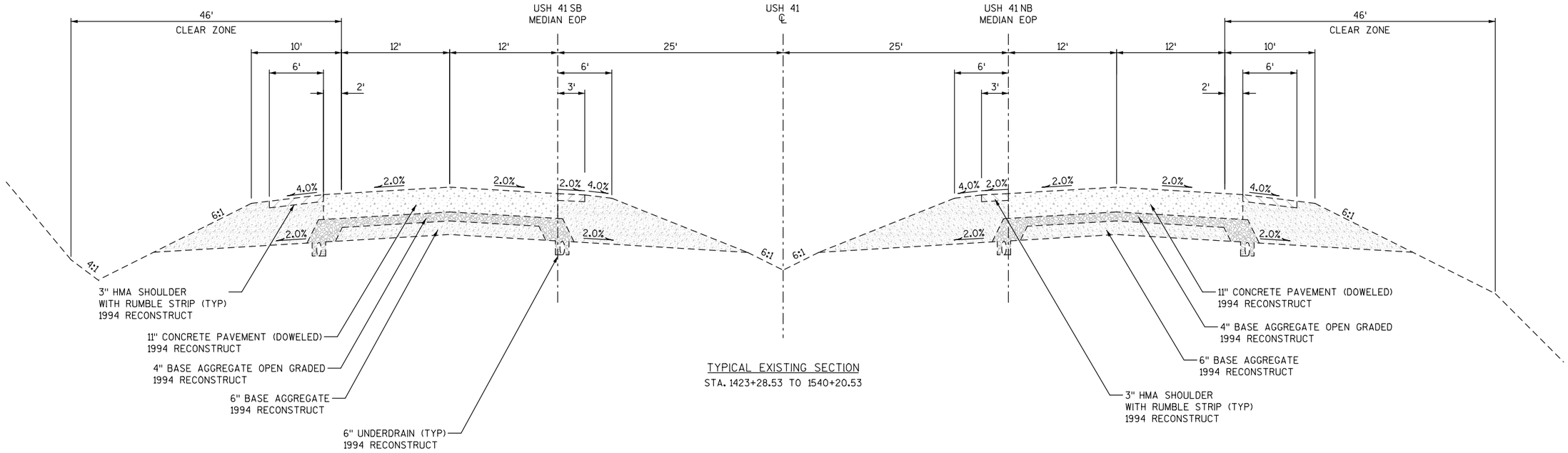
2



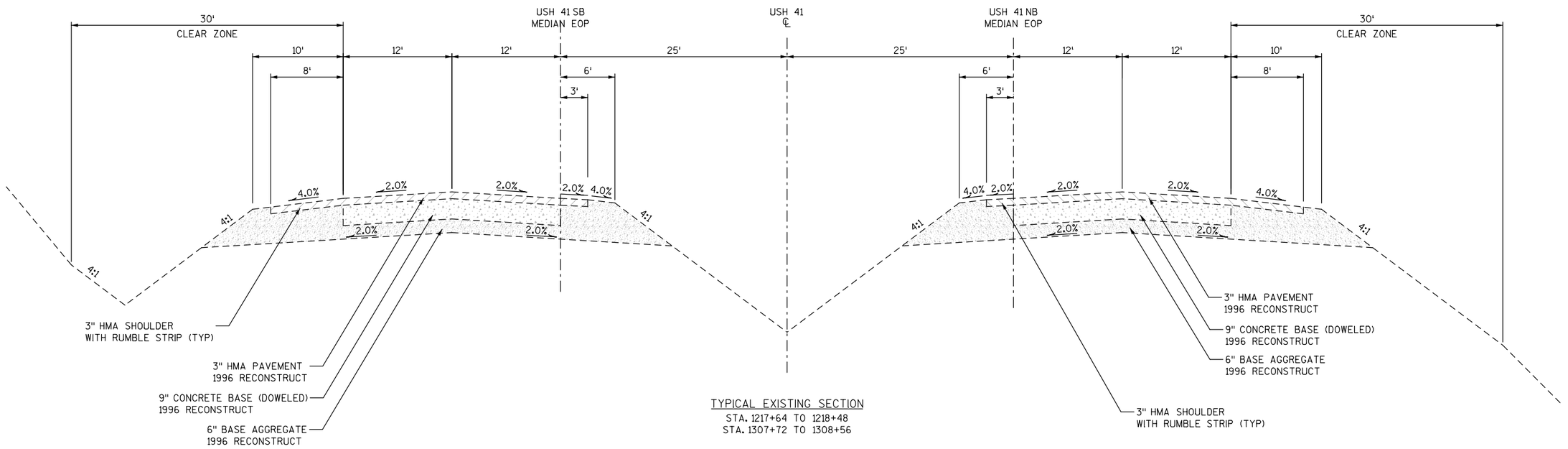
TYPICAL EXISTING SECTION

STA. 1168+12.29 TO 1217+64
STA. 1218+48 TO 1307+72
STA. 1308+56 TO 1423+28.53
STA. 1540+20.53 TO 1555+57

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 4	E

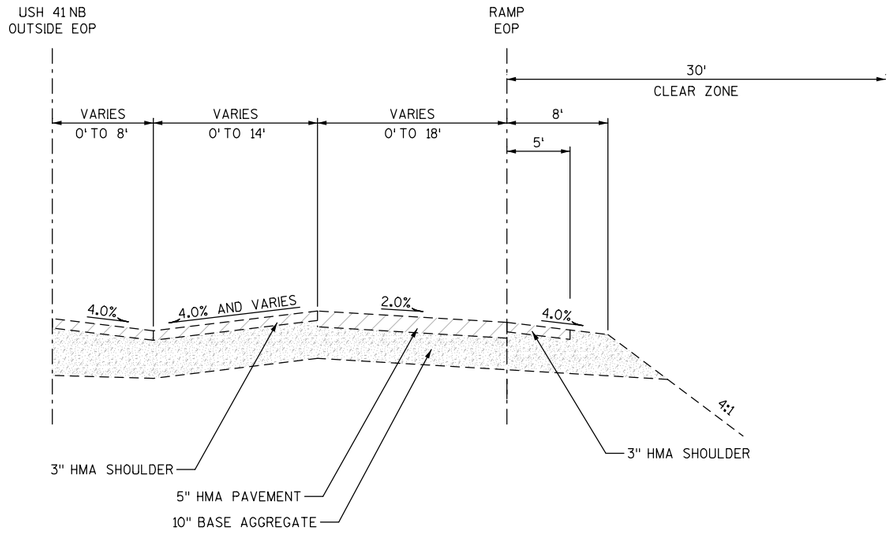


TYPICAL EXISTING SECTION
STA. 1423+28.53 TO 1540+20.53

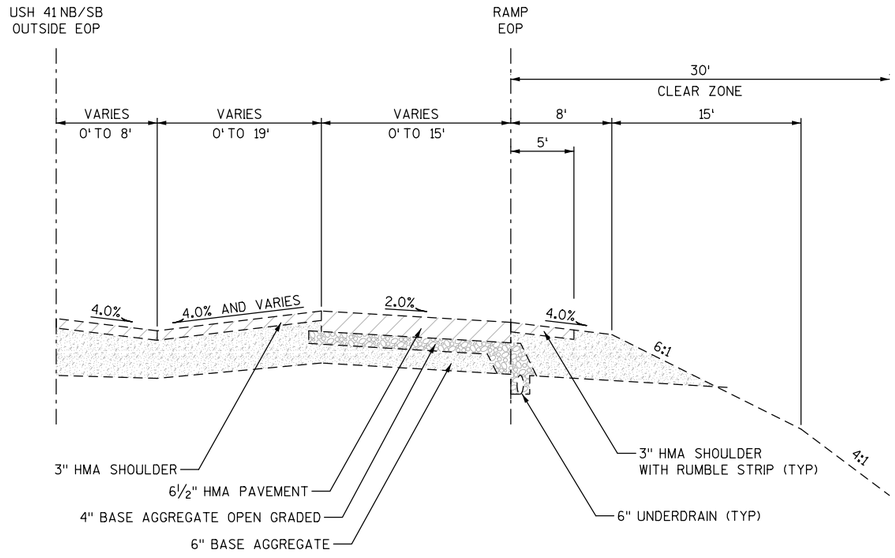


TYPICAL EXISTING SECTION
STA. 1217+64 TO 1218+48
STA. 1307+72 TO 1308+56

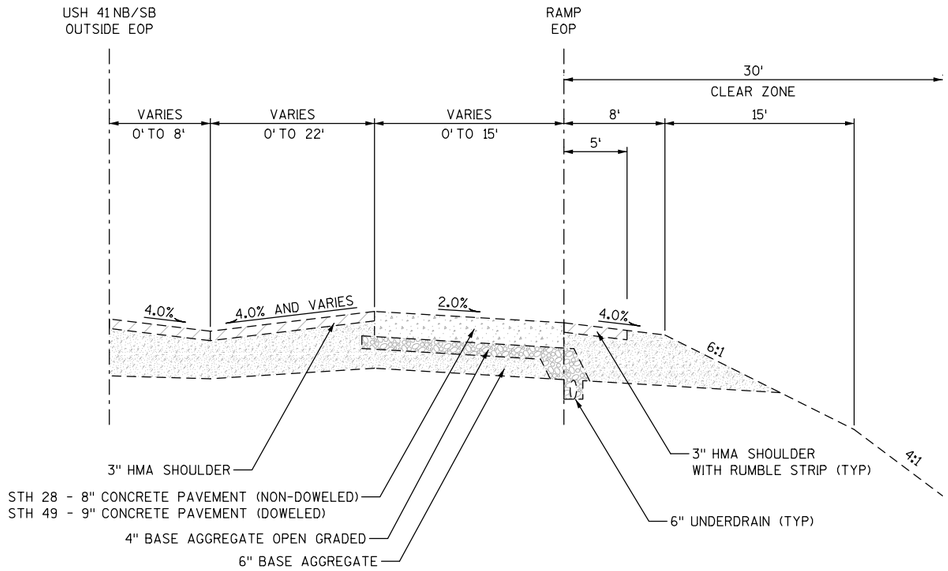
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 5	E



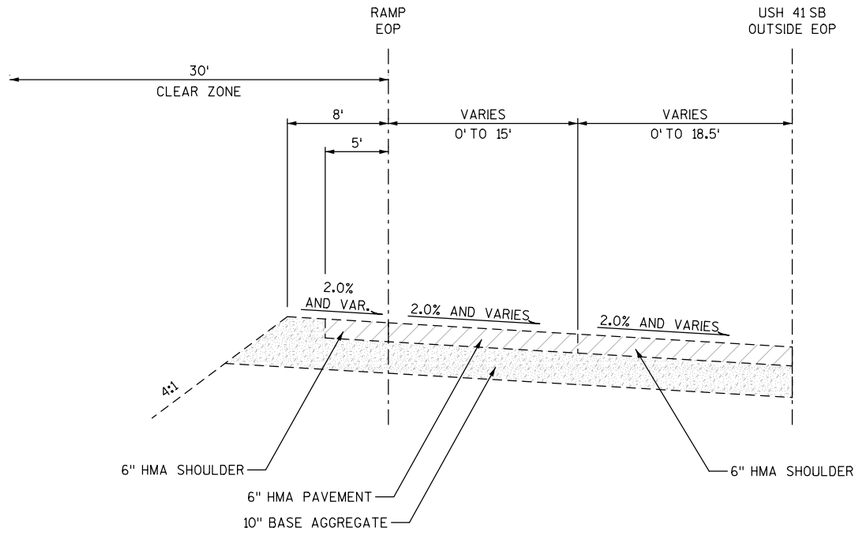
TYPICAL EXISTING SECTION
NORTHBOUND WAYSIDE RAMPS



TYPICAL EXISTING SECTION
STH 67 RAMPS



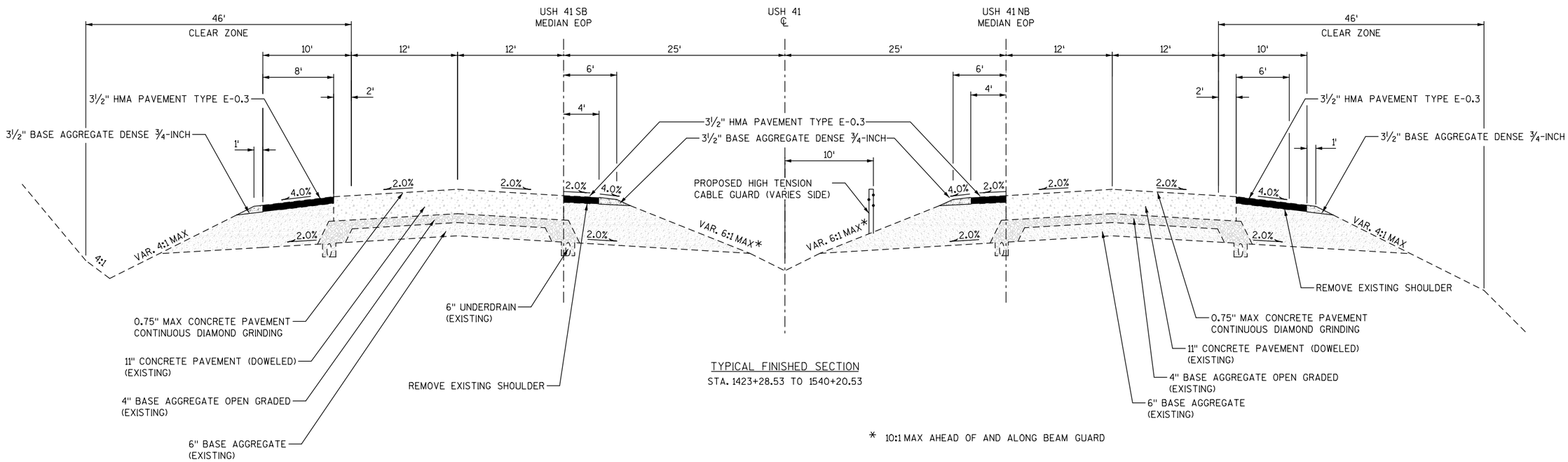
TYPICAL EXISTING SECTION
STH 28 RAMPS
STH 49 RAMPS



TYPICAL EXISTING SECTION
SOUTHBOUND WAYSIDE RAMPS

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 6	E

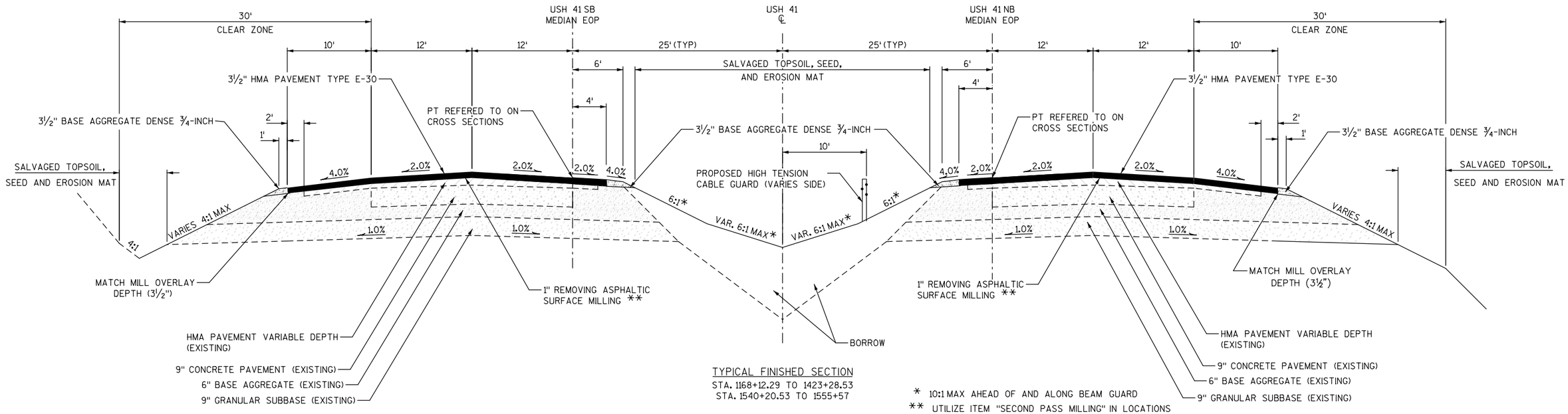
FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\020302_ts.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:12



TYPICAL FINISHED SECTION

STA. 1423+28.53 TO 1540+20.53

* 10:1 MAX AHEAD OF AND ALONG BEAM GUARD



TYPICAL FINISHED SECTION

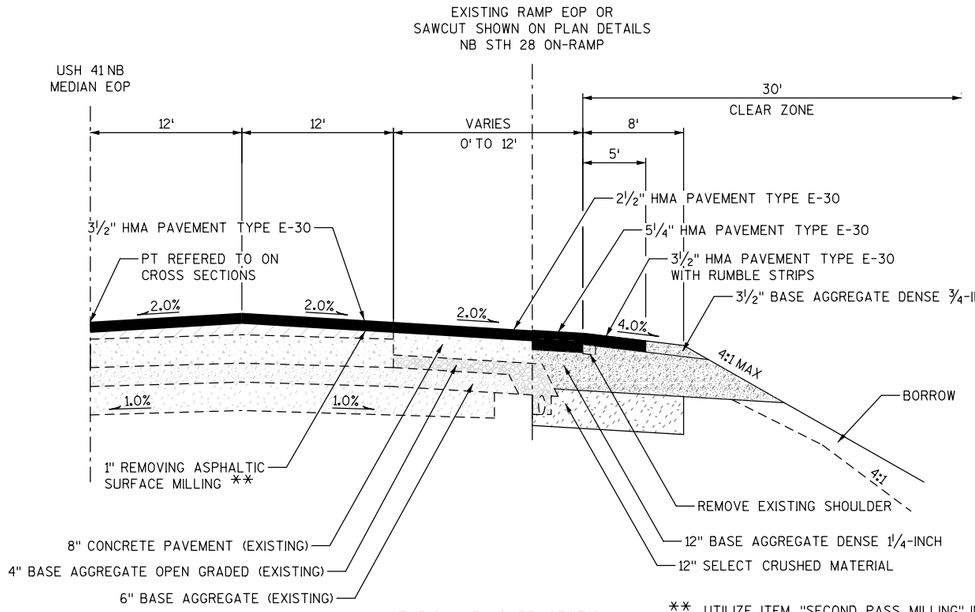
STA. 1168+12.29 TO 1423+28.53

STA. 1540+20.53 TO 1555+57

* 10:1 MAX AHEAD OF AND ALONG BEAM GUARD

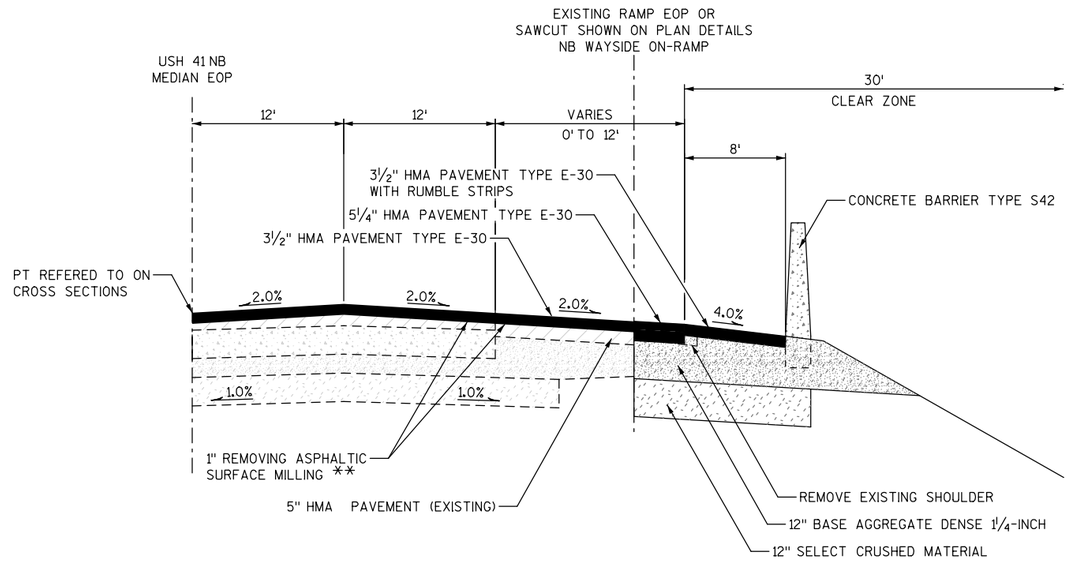
** UTILIZE ITEM "SECOND PASS MILLING" IN LOCATIONS WHERE THE ENGINEER IN THE FIELD DETERMINES THAT 1" REMOVING ASPHALTIC SURFACE MILLING TO BE INSUFFICIANT FOR THE EXISTING PAVEMENT CONDITIONS.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 7	E



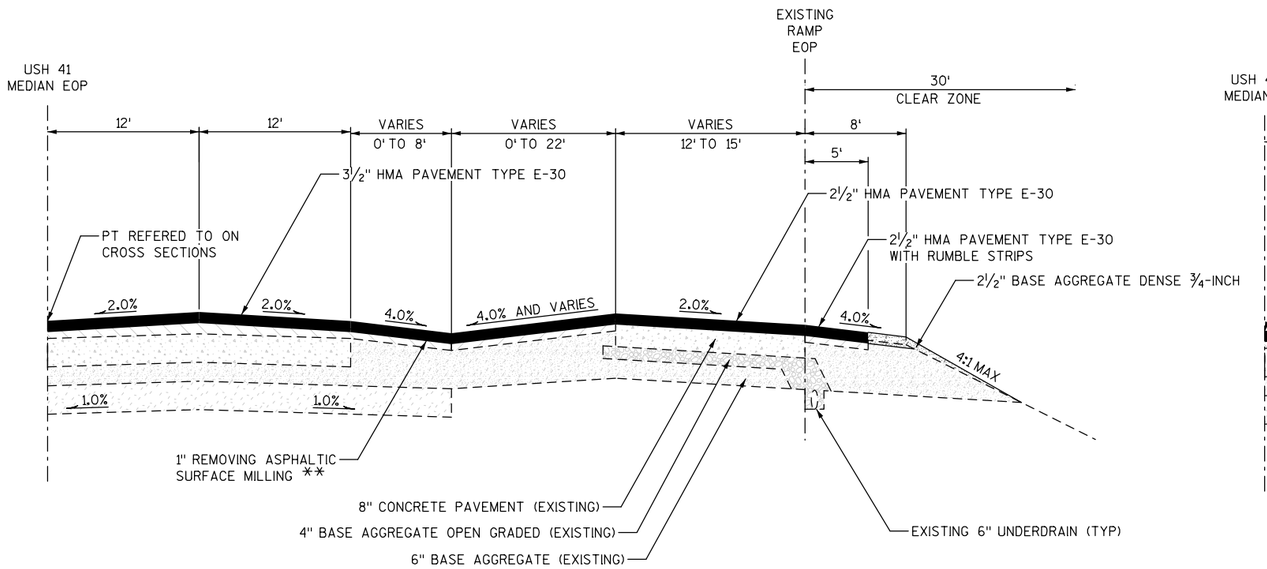
TYPICAL FINISHED SECTION
NORTHBOUND STH 28 ON-RAMP WIDENING

** UTILIZE ITEM "SECOND PASS MILLING" IN LOCATIONS WHERE THE ENGINEER IN THE FIELD DETERMINES THAT 1" REMOVING ASPHALTIC SURFACE MILLING TO BE INSUFFICIANT FOR THE EXISTING PAVEMENT CONDITIONS.



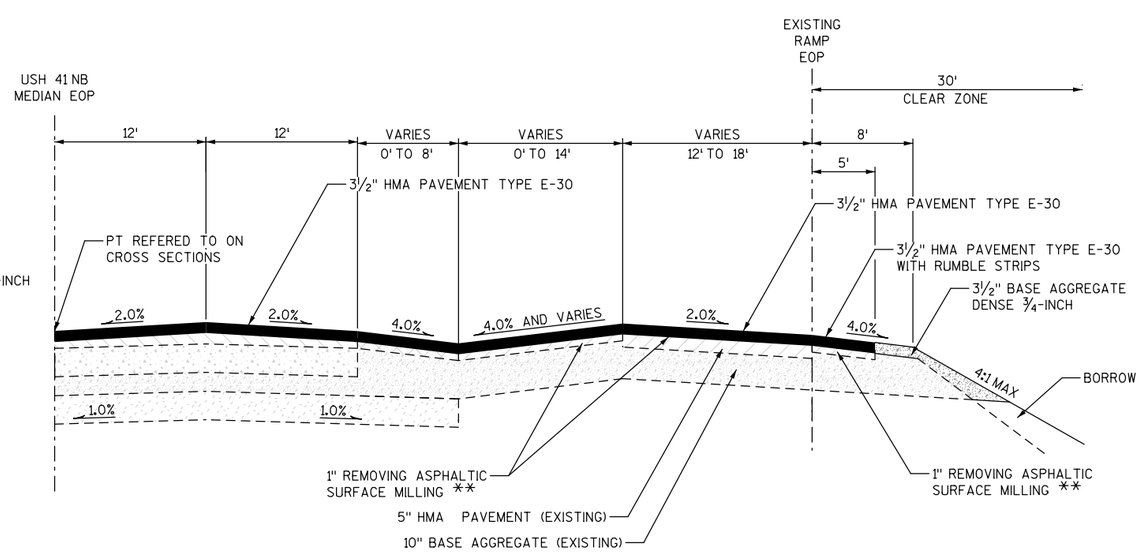
TYPICAL FINISHED SECTION
NORTHBOUND WAYSIDE ON-RAMP WIDENING

** UTILIZE ITEM "SECOND PASS MILLING" IN LOCATIONS WHERE THE ENGINEER IN THE FIELD DETERMINES THAT 1" REMOVING ASPHALTIC SURFACE MILLING TO BE INSUFFICIANT FOR THE EXISTING PAVEMENT CONDITIONS.



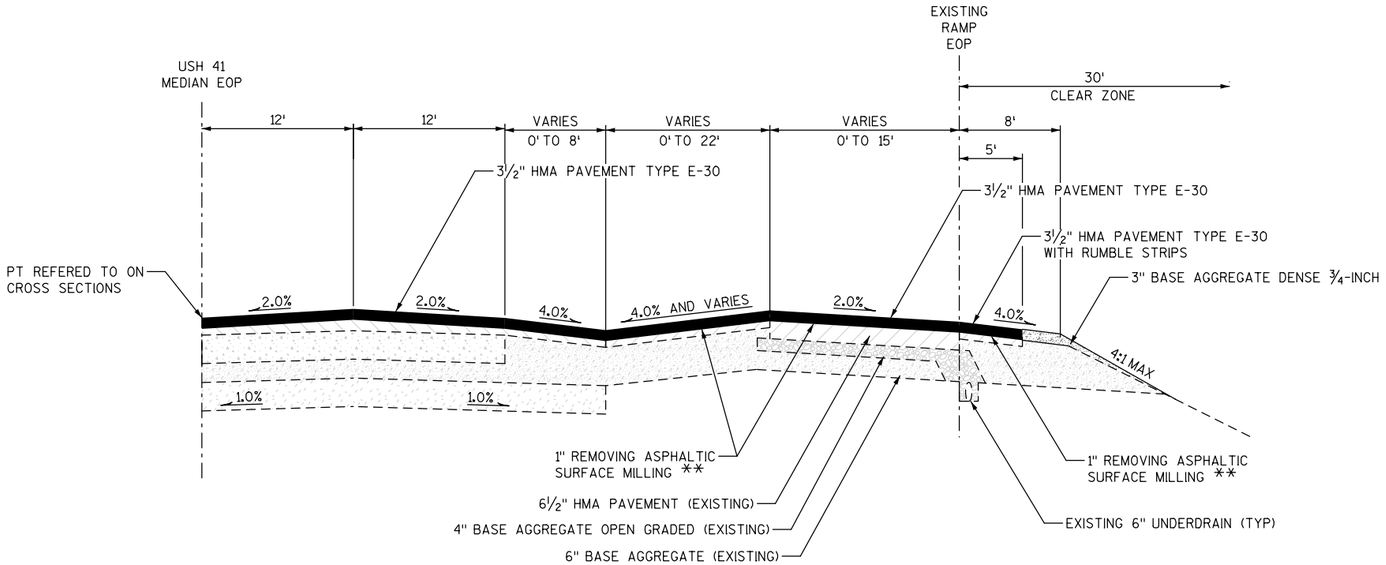
TYPICAL FINISHED SECTION
STH 28 RAMPS

** UTILIZE ITEM "SECOND PASS MILLING" IN LOCATIONS WHERE THE ENGINEER IN THE FIELD DETERMINES THAT 1" REMOVING ASPHALTIC SURFACE MILLING TO BE INSUFFICIANT FOR THE EXISTING PAVEMENT CONDITIONS.



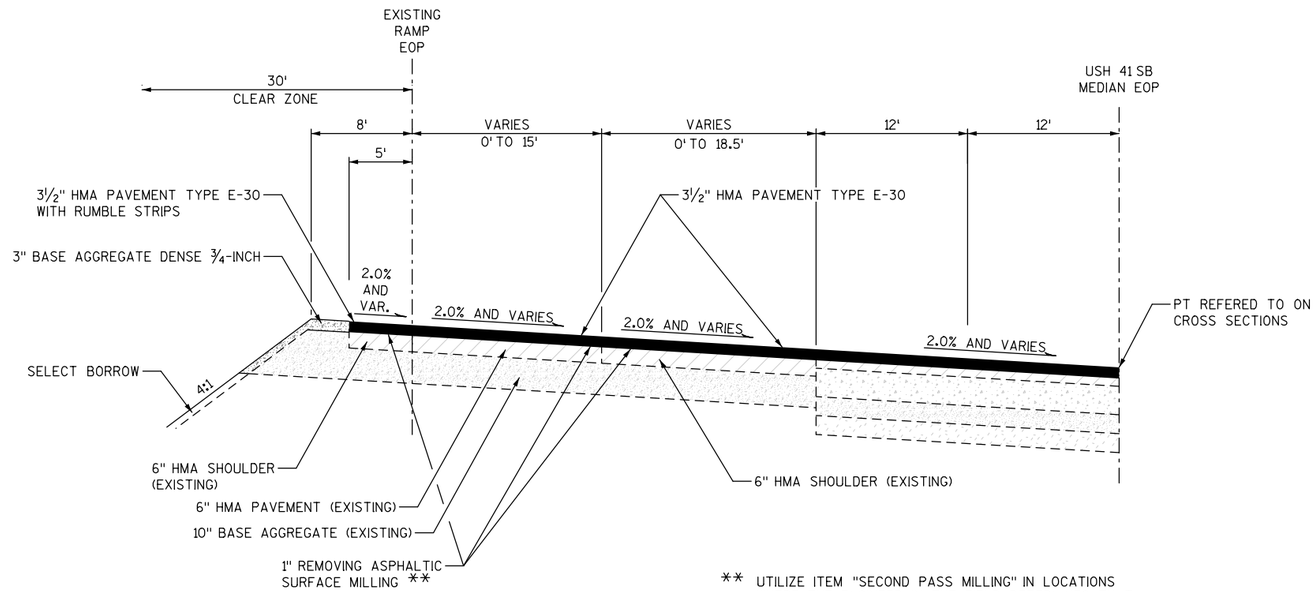
TYPICAL FINISHED SECTION
NORTHBOUND WAYSIDE RAMPS

** UTILIZE ITEM "SECOND PASS MILLING" IN LOCATIONS WHERE THE ENGINEER IN THE FIELD DETERMINES THAT 1" REMOVING ASPHALTIC SURFACE MILLING TO BE INSUFFICIANT FOR THE EXISTING PAVEMENT CONDITIONS.



TYPICAL FINISHED SECTION
STH 67 RAMPS

** UTILIZE ITEM "SECOND PASS MILLING" IN LOCATIONS WHERE THE ENGINEER IN THE FIELD DETERMINES THAT 1" REMOVING ASPHALTIC SURFACE MILLING TO BE INSUFFICIANT FOR THE EXISTING PAVEMENT CONDITIONS.

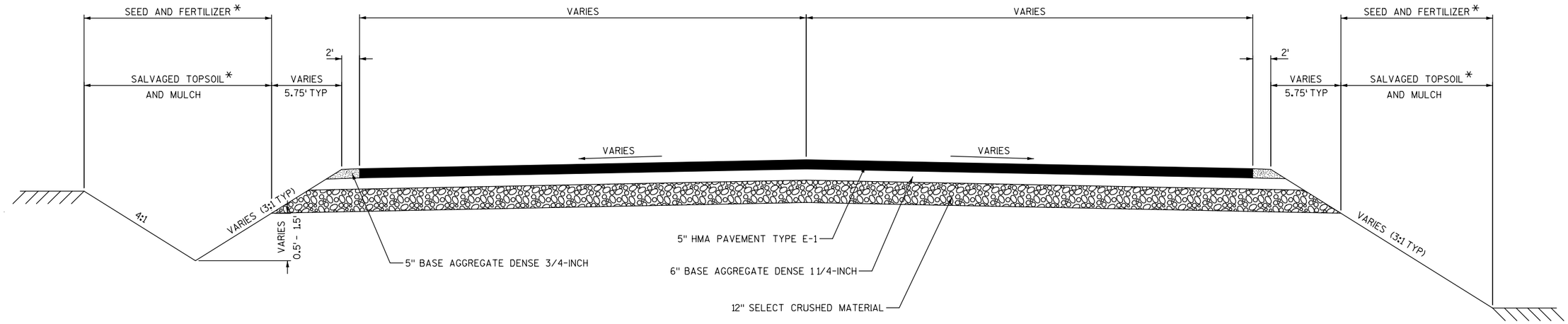


TYPICAL FINISHED SECTION
SOUTHBOUND WAYSIDE RAMPS

** UTILIZE ITEM "SECOND PASS MILLING" IN LOCATIONS WHERE THE ENGINEER IN THE FIELD DETERMINES THAT 1" REMOVING ASPHALTIC SURFACE MILLING TO BE INSUFFICIANT FOR THE EXISTING PAVEMENT CONDITIONS.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 9	E

2

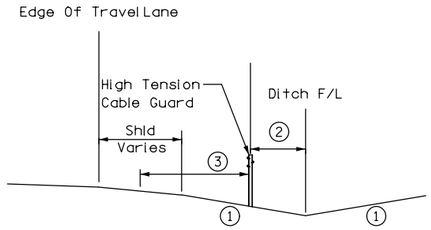


SALT SHED LOT TYPICAL FINISHED SECTION

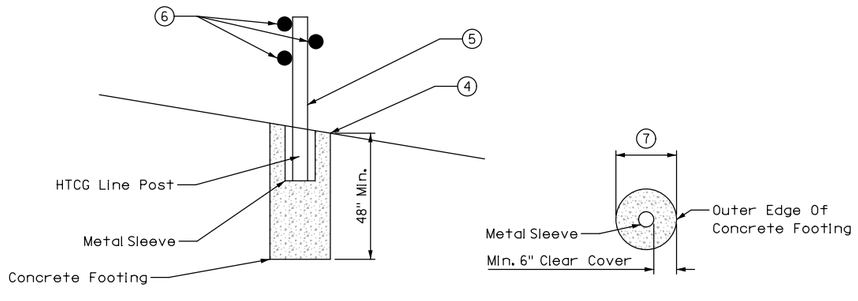
* SEE SALT SHED DETAIL FOR LIMITS OF FILTER STRIP

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	TYPICAL SECTIONS	SHEET 10	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\020305_ts.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:12



High-Tension Cable Guard (HTCG) Line Post Placement



Cross Section View (7)
Line Post Detail

Plan View (7)
Line Post Detail
(Cables Omitted For Clarity)

Note: It is desirable to have the HTCG installed as far away from edge of lane as possible.

(1) Do not install high-tension cable guard on slopes steeper than 6:1

(2) Offset of HTCG:
desirable: 10'
minimum: 8'

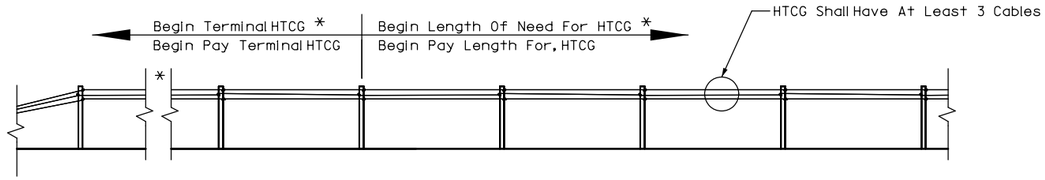
(3) Deflection is measured from midpoint of shoulder to line post. For deflection criteria see Special Provisions

(4) Concrete footing for HTCG line post shall be flush with finish surface ±¾" tolerance

(5) Line post for HTCG shall be plumb, easily removed from steel sleeve, and maintain cables at the correct elevation

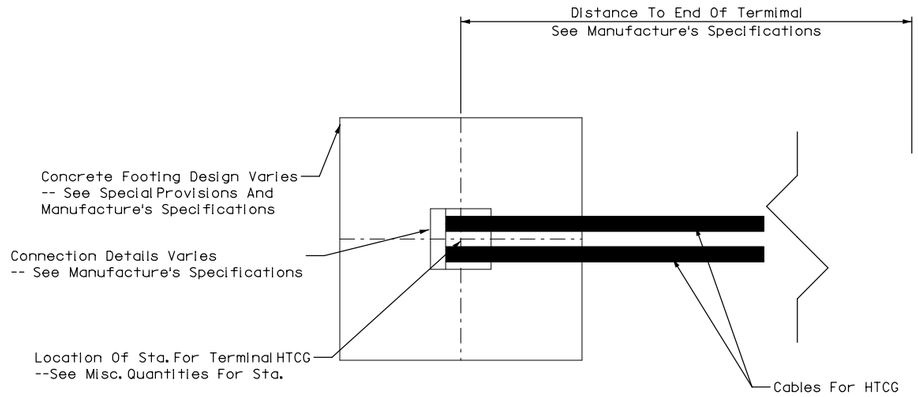
(6) HTCG shall have a minimum of 3 cables. Cables shall hold desired tension per manufacture's specifications. See manufacture's specification for correct height of cables and cable configuration.

(7) See manufacture's details and specifications for line post footing design



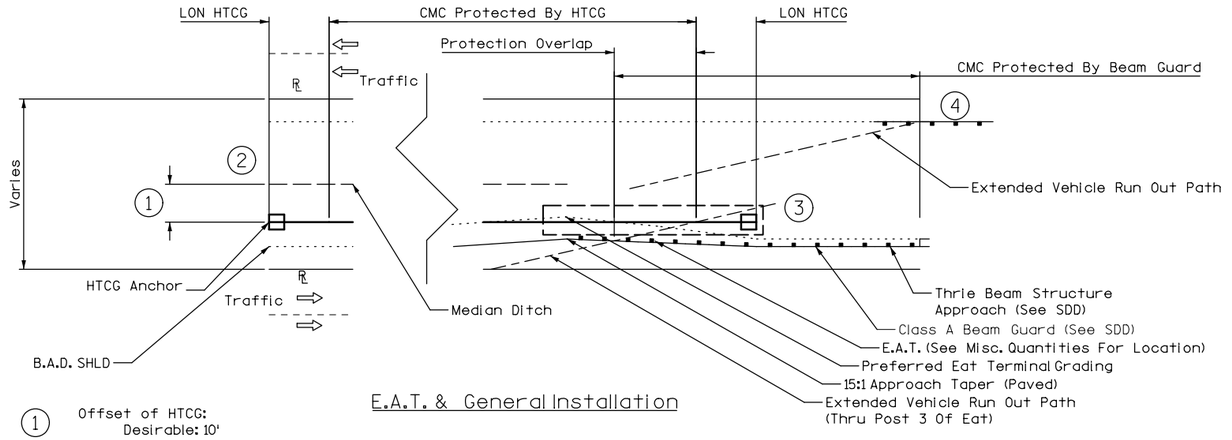
* As Determined By Manufacturer

Terminal, High Tension Cable Guard, Pay Limit Detail
And
High Tension Cable Guard (HTCG), Pay Limit Detail



Plan View Of Concrete Anchor

Concrete anchors for terminal for HTCG shall be flush with finished Surface ±¾" tolerance



E.A.T. & General Installation

1. Offset of HTCG:
   Desirable: 10'
   Minimum: 8'

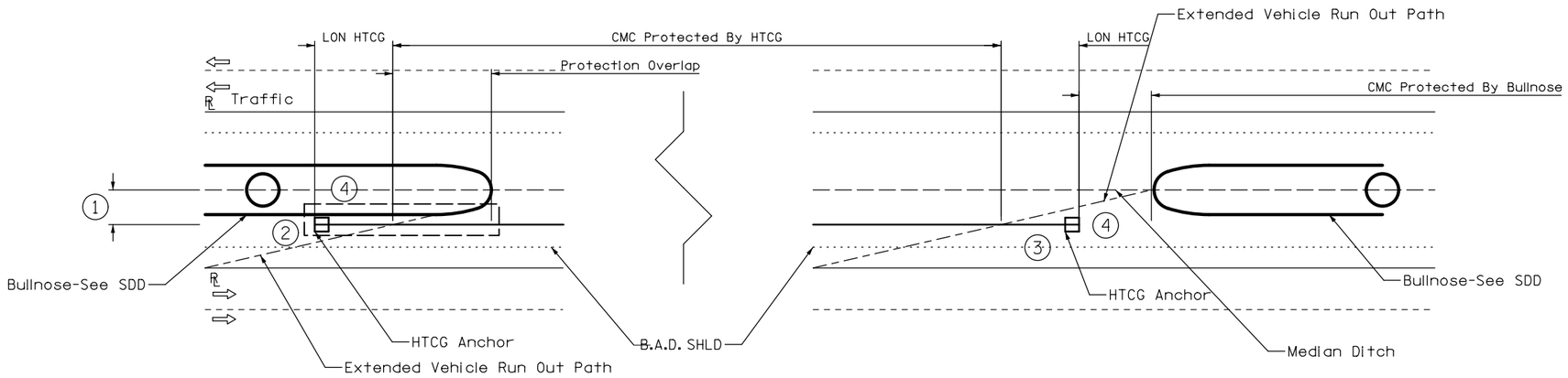
2. Begin station for HTCG may be adjusted in field --See project engineer

3. End station for HTCG may be adjusted in field --See project engineer

4. It is preferred that terminal for HTCG is installed in a location that protect it from being struck from opposite direction of travel.

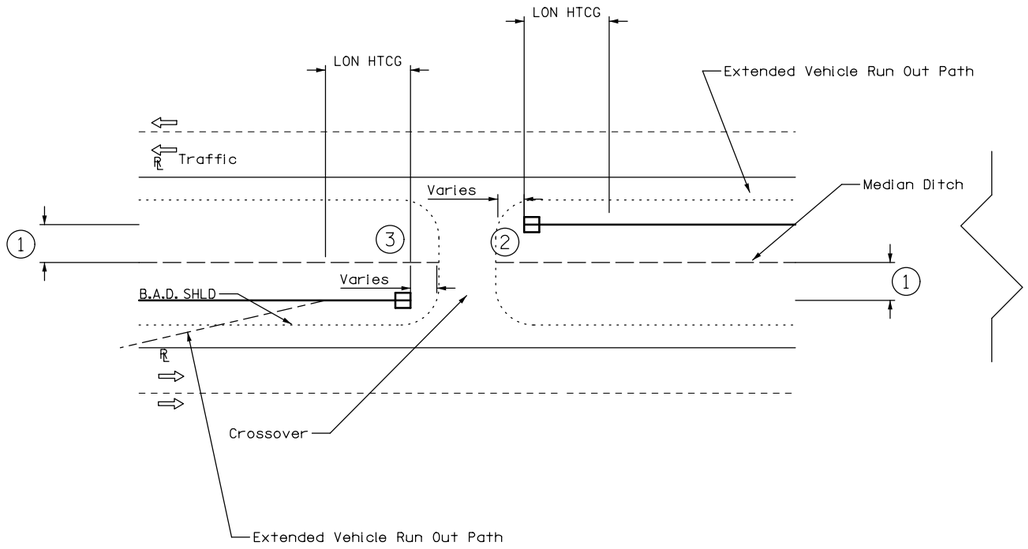
Note: complete runs of HTCG (terminal to terminal) can be on either side of median. However, a run of htcg (terminal to terminal) may not traverse from one side of the median to the other

The dashed box indicates where post space should decrease, so that HTCG cable deflections do not interfere with other roadside safety devices.

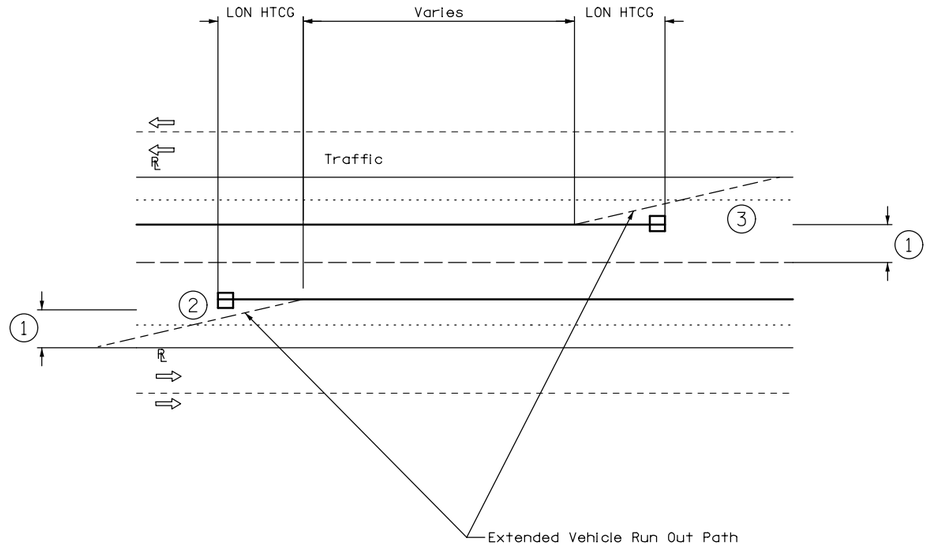


Bullnose Installation

Note: HTCG does not need to terminate at bullnose location, unless there is no room for the HTCG to extend beyond the bullnose



Crossover Installation A



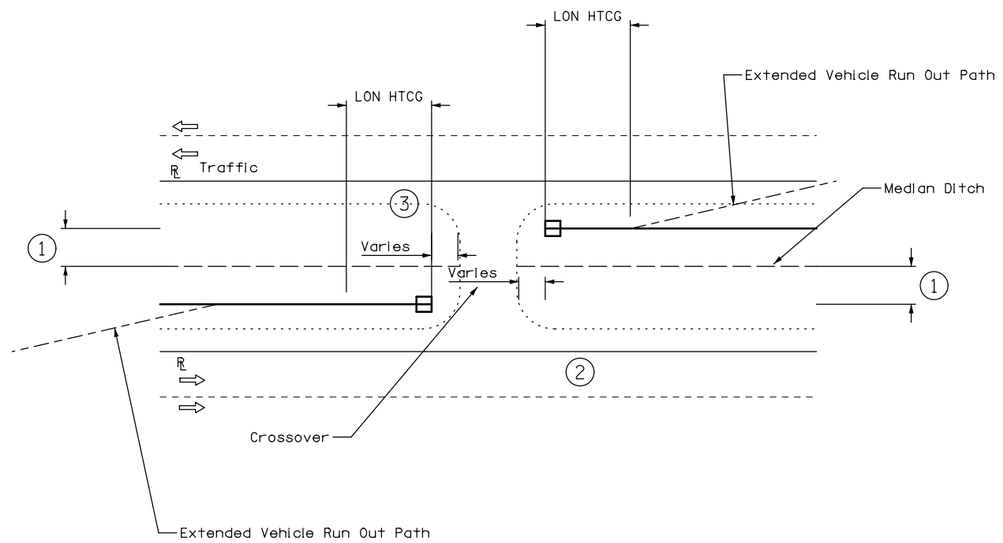
Intermediate Terminal Installation*

(1) Offset of HTCG:
Desirable: 10'
Minimum: 8'

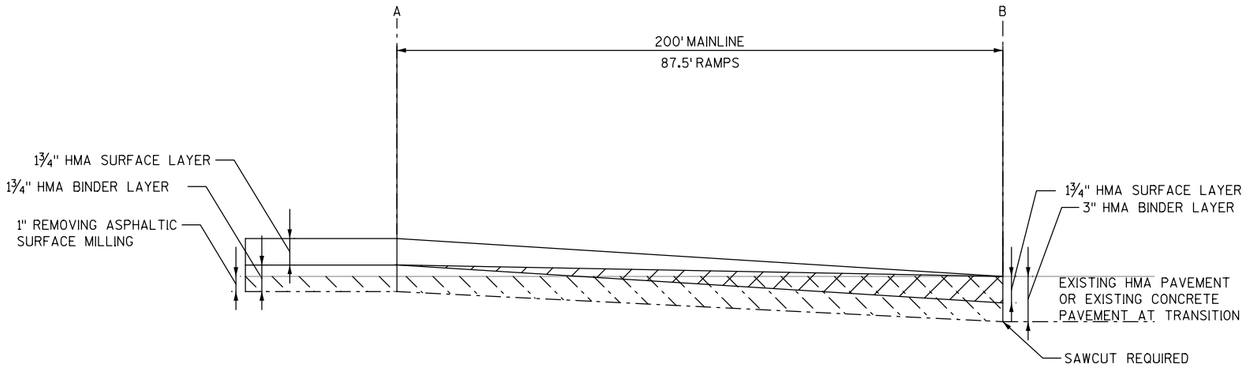
(2) Begin station for HTCG may be adjusted in field --See project engineer

(3) End station for HTCG may be adjusted in field --See project engineer

* The preferred alternative is to install HTCG terminals in areas where HTCG terminals are protected by other roadside barriers. If not possible install two terminals as shown.



Crossover Installation B



NOTES:

REMOVING ASPHALTIC SURFACE MILLING FROM 1" AT POINT A TO 3" AT POINT B.

PAVE BINDER LAYER HMA PAVEMENT FROM 1.75" AT POINT A TO 3" AT POINT B.

REMOVING ASPHALTIC SURFACE BUTT JOINTS (BINDER LAYER) FROM 0" AT POINT A TO 1.75" AT POINT B.

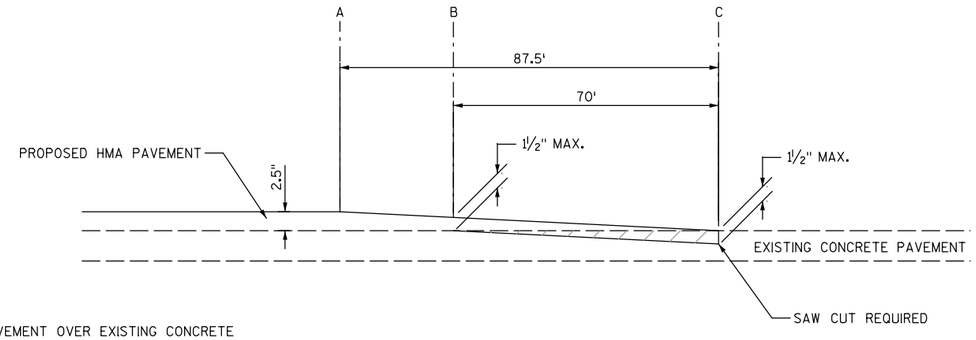
PAVE SURFACE LAYER FROM 1.75" AT POINT A TO 1.75" AT POINTS B.

REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS

OVERLAP JOINT, BUTTED DETAIL

US 41 BEGIN AND END PROJECT
US 41 ASPHALT/CONCRETE TRANSITION
NB WAYSIDE RAMPS
SB WAYSIDE RAMPS
STH 67 RAMPS



NOTES:

PAVEMENT 2.5" HMA PAVEMENT OVER EXISTING CONCRETE AT POINT A.

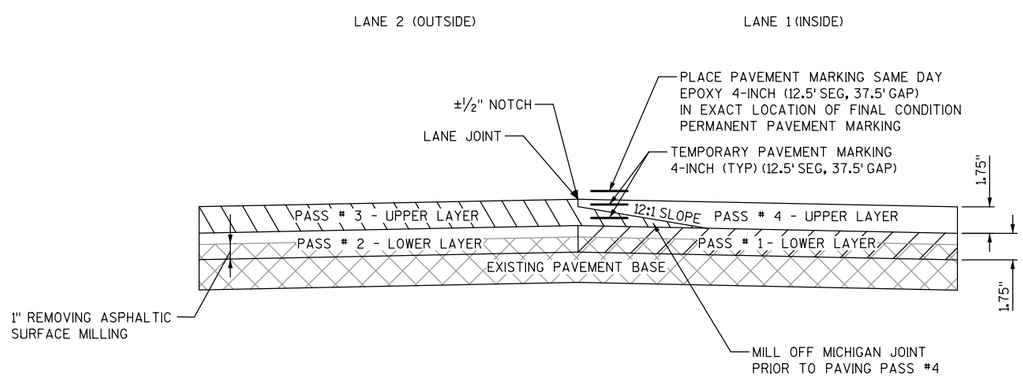
TRANSITION FROM 2.5" HMA PAVEMENT TO 1.5" MAX HMA PAVEMENT FROM POINT A TO POINT B.

FROM POINT B BEGIN REMOVING PAVEMENT BUTT JOINTS TO A MAXIMUM DEPTH OF 1.5" AT POINT C.

REMOVING PAVEMENT BUTT JOINTS

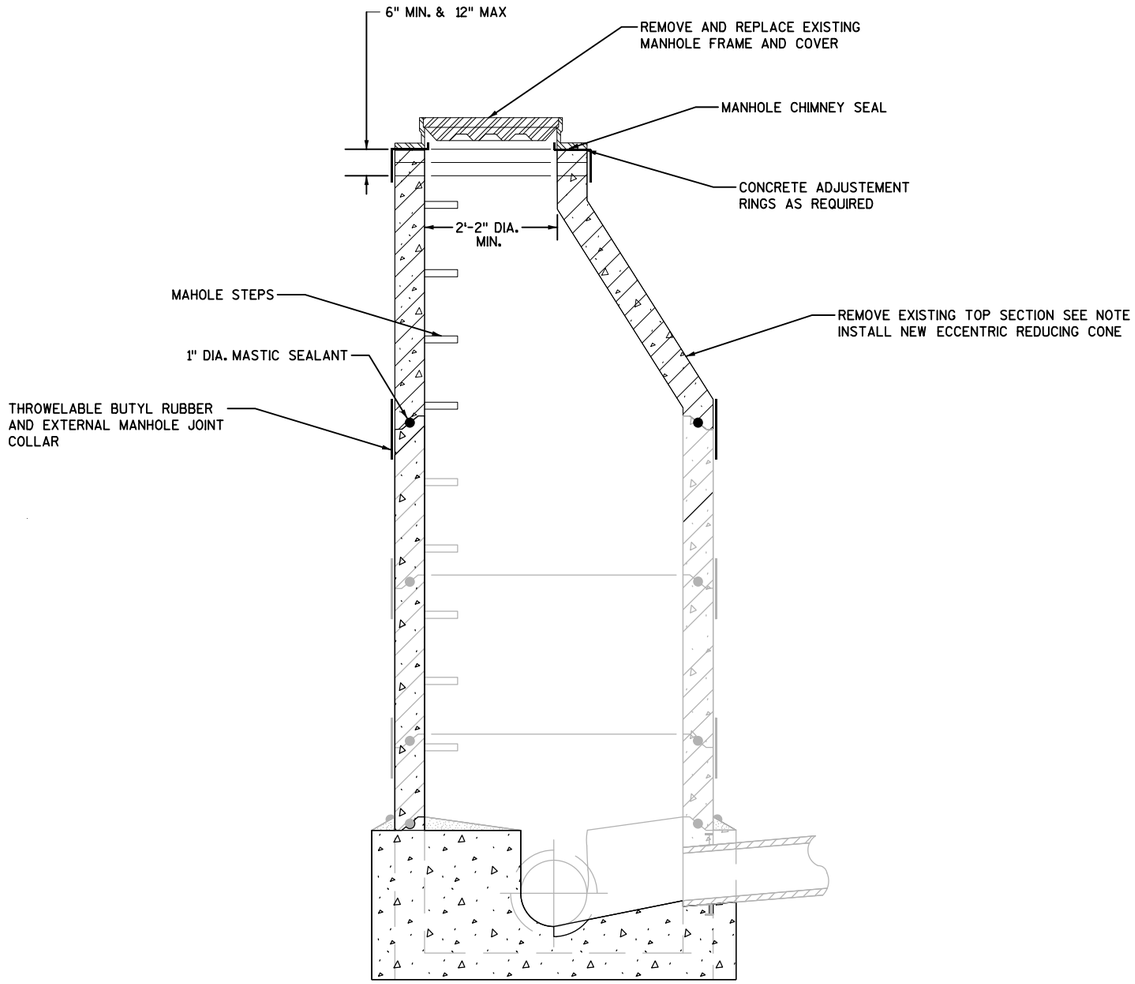
OVERLAP JOINT, BUTTED DETAIL

STH 28 RAMPS



TYPICAL PAVEMENT SECTION OF TAPERED AND NOTCHED LONGITUDINAL JOINT

2



MANHOLE RECONSTRUCT

NOTE:
1. CONTRACTOR TO DETERMINE EXACT DIMENSIONS OF EXISTING STRUCTURE AND SIZE CONE SECTION ACCORDINGLY.

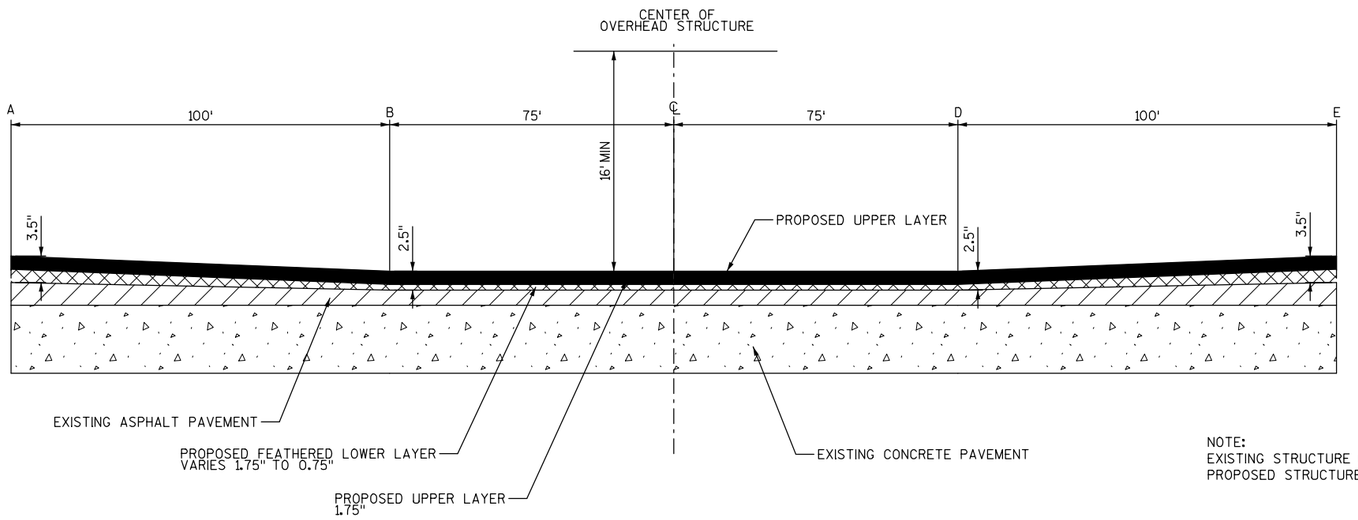
2

CONSTRUCTION NOTES:

1) TRANSITION MILL DEPTH FROM 1" AT LINE A TO 2" AT LINE B. MILL 2" FROM LINE B TO LINE D. TRANSITION MILL DEPTH FROM 2" AT LINE D TO 1" AT LINE E.

2) PLACE 1.75" LOWER LAYER HMA PAVEMENT TYPE E-30 AT LINE A. TRANSITION FROM 1.75" TO 0.75" LOWER LAYER HMA PAVEMENT TYPE E-30 FROM LINE A TO LINE B. PLACE 0.75" LOWER LAYER HMA PAVEMENT TYPE E-30 FROM LINE B TO LINE C. TRANSITION FROM 0.75" TO 1.75" LOWER LAYER HMA PAVEMENT TYPE E-30 FROM LINE C TO LINE D. AT LINE D CONTINUE PAVING 1.75" LOWER LAYER HMA PAVEMENT TYPE E-30.

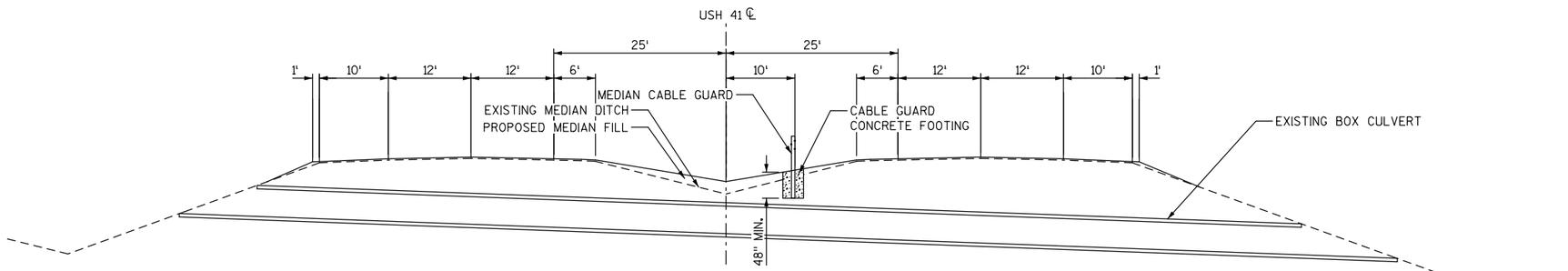
4) PLAVE 1.75" UPPER LAYER HMA PAVEMENT TYPE E-30.



NOTE:
EXISTING STRUCTURE CLEARANCE = 16.09'
PROPOSED STRUCTURE CLEARANCE = 16.05'

USH 41 PAVING DETAIL AT OVERHEAD STRUCTURE

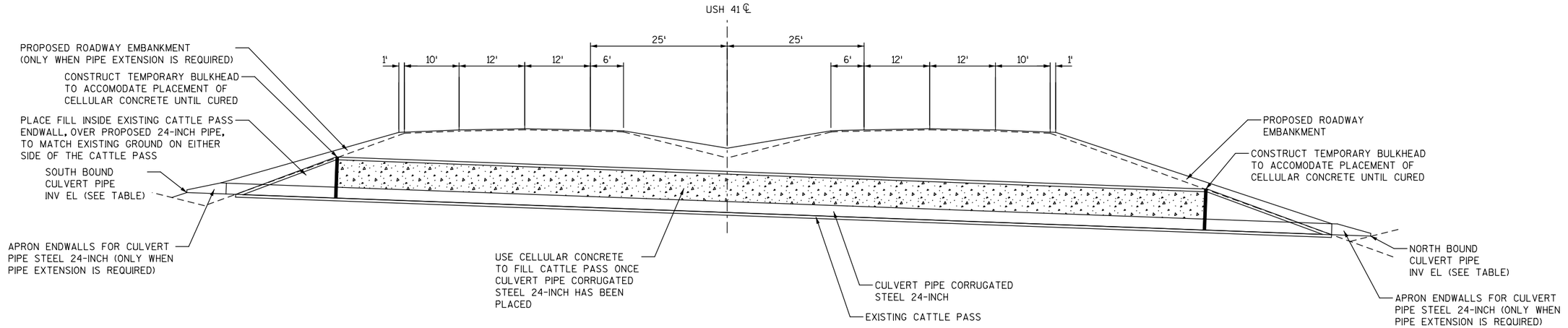
B-14-110 (STH 28)



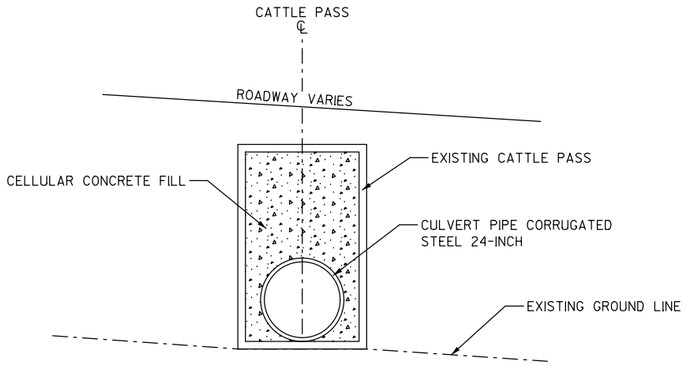
NOTE:
1) PLACE FILL OVER BOX CULVERT IF REQUIRED TO ACHEIVE MINIMUM 48 INCHES CLEARANCE FROM TOP OF BOX CULVERT TO TOP OF PROPOSED FILL. 48 INCHES MINIMUM REQUIRED FOR CABLE GUARD CONCRETE FOOTING.

EXISTING BOX CULVERT B-14-126
MEDIAN DITCH MINIMUM FILL REQUIRED

STA 1218+00 USH 41 ℄



CROSS SECTION VIEW



NOTE: STABILIZE CULVERT PIPE CORRUGATED STEEL 24-INCH INSIDE THE CATTLE PASS UTILIZING BRICK OR ANOTHER FIELD ENGINEER APPROVED METHOD TO SECURE THE PIPE DURING CELLULAR CONCRETE FILL AND CURING.

PROFILE VIEW

ABANDON CATTLE PASS INFORMATION TABLE

LOCATION (USH 41 ℄)	CATTLE PASS NUMBER	CULVERT PIPE EXTENSION REQ'D	24-INCH ENDWALLS OR NO ENDWALLS	24-INCH CULVERT PIPE INVERT ELEV		PIPE OR ENDWALL OFFSET (USH 41 ℄)		PROPOSED 24-INCH CULVERT PIPE LENGTH
				NORTH BOUND	SOUTH BOUND	NORTH BOUND	SOUTH BOUND	
STA 1184+37	C-14-4	YES	ENDWALLS REQ'D	958.84*	959.41*	91.0' RT	89.0' LT	180'**
STA 1214+35	C-14-5	NO	NO ENDWALLS	949.25*	947.44*	78.0' RT	94.0' LT	172'**
STA 1241+84	C-14-6	NO	NO ENDWALLS	950.57*	949.75*	81.0' RT	83.0' LT	164'**
STA 1252+80	C-14-12	NO	NO ENDWALLS	956.03*	955.25*	78.0' RT	78.0' LT	156'**
STA 1254+11	C-14-13	NO	NO ENDWALLS	952.55*	951.76*	86.0' RT	86.0' LT	172'**
STA 1302+29	C-14-7	YES	ENDWALLS REQ'D	944.41*	943.94*	90.0' RT	90.0' LT	180'**

NOTES:

REMOVED EXISTING CATTLE PASS METAL SAFETY SHEILDS COVERING THE CATTLE PASS ENTRANCES.

PLACE PROPOSED CULVERT PIPE CORRUGATED STEEL 24-INCH FLUSH WITH THE BOTTOM OF THE EXISTING CATTLE PASS.

REQUIRED CULVERT PIPE EXTENSION AND OFFSETS WERE DETERMINED BASED ON EXISTING TOPO ALONG WITH PROPOSED CROSS SECTIONS AND SHOULD BE VERIFIED IN THE FIELD.

* PROPOSED 24-INCH CULVERT PIPE INVERT ELEVATIONS ARE BASED ON EXISTING TOPO AND ARE CONSIDERED APPROXIMATE. ACTUAL INVERT ELEVATIONS SHOULD BE VERIFIED IN THE FIELD.

** PROPOSED 24-INCH CULVERT PIPE LENGTH INCLUDES SIX FOOT LENGTH OF PROPOSED 24-INCH ENDWALL IF ENDWALL IS REQUIRED.

ABANDON CATTLE PASS

USH 41 NB (CURVE 1) SUPERELEVATION TABLE					
SUPER ELEVATION DESCRIPTION	STATION	INSIDE SHOULDER	LANE 1	LANE 2	OUTSIDE SHOULDER
END NORMAL CROWN	1201+46	-0.040	-0.020	-0.020	-0.040
ZERO SUPER	1201+66	-0.040	-0.020	0.000	0.000
BEGIN FULL SUPER	1202+26	-0.040	-0.020	0.020	0.020
END FULL SUPER	1212+11	-0.040	-0.020	0.020	0.020
ZERO SUPER	1212+71	-0.040	-0.020	0.000	0.000
BEGIN NORMAL CROWN	1213+31	-0.040	-0.020	-0.020	-0.040

NOTE: ALL STATIONS ARE BASED ON THE USH 41 ℄ ALIGNMENT

USH 41 SB (CURVE 1) SUPERELEVATION TABLE					
SUPER ELEVATION DESCRIPTION	STATION	OUTSIDE SHOULDER	LANE 2	LANE 1	INSIDE SHOULDER
END NORMAL CROWN	1201+46	-0.040	-0.020	-0.020	-0.040
ZERO SUPER	1201+66	-0.040	-0.020	0.000	0.000
BEGIN FULL SUPER	1202+26	-0.040	-0.020	0.020	0.020
END FULL SUPER	1212+11	-0.040	-0.020	0.020	0.020
ZERO SUPER	1212+71	-0.040	-0.020	0.000	0.000
BEGIN NORMAL CROWN	1213+31	-0.040	-0.020	-0.020	-0.040

NOTE: ALL STATIONS ARE BASED ON THE USH 41 ℄ ALIGNMENT

USH 41 NB (CURVE 2) SUPERELEVATION TABLE					
SUPER ELEVATION DESCRIPTION	STATION	INSIDE SHOULDER	LANE 1	LANE 2	OUTSIDE SHOULDER
END NORMAL CROWN	1263+20	-0.040	-0.020	-0.020	-0.040
ZERO SUPER	1263+80	0.000	0.000	-0.020	-0.040
BEGIN FULL SUPER	1265+18	0.046	0.046	-0.046	-0.046
END FULL SUPER	1295+52	0.046	0.046	-0.046	-0.046
ZERO SUPER	1296+91	0.000	0.000	-0.020	-0.040
BEGIN NORMAL CROWN	1297+51	-0.040	-0.020	-0.020	-0.040

NOTE: ALL STATIONS ARE BASED ON THE USH 41 ℄ ALIGNMENT

USH 41 SB (CURVE 2) SUPERELEVATION TABLE					
SUPER ELEVATION DESCRIPTION	STATION	OUTSIDE SHOULDER	LANE 2	LANE 1	INSIDE SHOULDER
END NORMAL CROWN	1263+20	-0.040	-0.020	-0.020	-0.040
ZERO SUPER	1263+80	0.000	0.000	-0.020	-0.040
BEGIN FULL SUPER	1265+18	0.046	0.046	-0.046	-0.046
END FULL SUPER	1295+52	0.046	0.046	-0.046	-0.046
ZERO SUPER	1297+91	0.000	0.000	-0.020	-0.040
BEGIN NORMAL CROWN	1297+51	-0.040	-0.020	-0.020	-0.040

NOTE: ALL STATIONS ARE BASED ON THE USH 41 ℄ ALIGNMENT

USH 41 NB (CURVE 3) SUPERELEVATION TABLE					
SUPER ELEVATION DESCRIPTION	STATION	INSIDE SHOULDER	LANE 1	LANE 2	OUTSIDE SHOULDER
END NORMAL CROWN	1431+40	-0.040	-0.020	-0.020	-0.040
ZERO SUPER	1432+00	-0.040	-0.020	0.000	0.000
BEGIN FULL SUPER	1432+60	-0.040	-0.020	0.020	0.020
END FULL SUPER	1474+53	-0.040	-0.020	0.020	0.020
ZERO SUPER	1475+13	-0.040	-0.020	0.000	0.000
BEGIN NORMAL CROWN	1475+73	-0.040	-0.020	-0.020	-0.040

NOTE: ALL STATIONS ARE BASED ON THE USH 41 ℄ ALIGNMENT

USH 41 SB (CURVE 3) SUPERELEVATION TABLE					
SUPER ELEVATION DESCRIPTION	STATION	OUTSIDE SHOULDER	LANE 2	LANE 1	INSIDE SHOULDER
END NORMAL CROWN	1431+40	-0.040	-0.020	-0.020	-0.040
ZERO SUPER	1432+00	-0.040	-0.020	0.000	0.000
BEGIN FULL SUPER	1432+60	-0.040	-0.020	0.020	0.020
END FULL SUPER	1474+53	-0.040	-0.020	0.020	0.020
ZERO SUPER	1475+13	-0.040	-0.020	0.000	0.000
BEGIN NORMAL CROWN	1475+73	-0.040	-0.020	-0.020	-0.040

NOTE: ALL STATIONS ARE BASED ON THE USH 41 ℄ ALIGNMENT

2

ARCHITECTURAL SITE PLAN – SYMBOLS LEGEND

CONCRETE PAVING

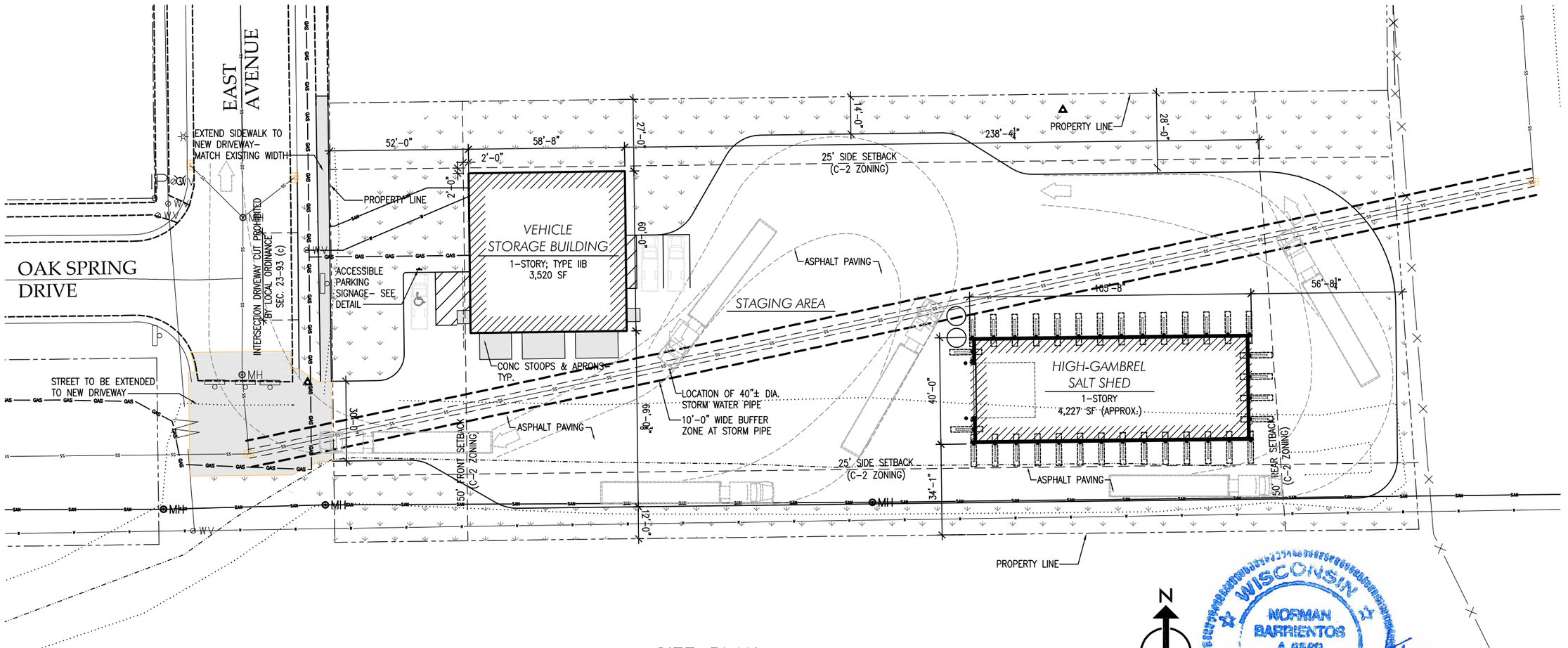
HEAVY DUTY ASPHALT

SEEDED GRASS AREA

ARCHITECTURAL SITE PLAN – GENERAL NOTES

A. FIELD VERIFY DIMENSIONS AND CONDITIONS AT JOB SITE.
B. REFER TO SITE SURVEY, GRADING PLAN, SITE UTILITIES PLAN, STORMWATER MANAGEMENT PLAN, EROSION CONTROL PLAN, LANDSCAPE PLAN, PLUMBING PLAN, HVAC PLAN AND ELECTRICAL PLAN FOR ADDITIONAL INFORMATION PERTAINING TO SITE PLANNING.
C. MARK ALL UTILITIES. ALL DAMAGED UTILITY OR SERVICES ARE TO BE IMMEDIATELY REPAIRED AT NO ADDITIONAL COST TO THE OWNER.

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



SITE PLAN
1" = 40'-0"

NORMAN BARRIENTOS
A 8589
MADISON, WI

PROJECT NO: 1107–00–74	HWY: USH 41	COUNTY: DODGE	ARCHITECTURAL SITE PLAN	SHEET 19	E

2

ARCHITECTURAL SITE PLAN – SYMBOLS LEGEND

CONCRETE PAVING

HEAVY DUTY ASPHALT

SEEDED GRASS AREA

ARCHITECTURAL SITE PLAN – GENERAL NOTES

A. FIELD VERIFY DIMENSIONS AND CONDITIONS AT JOB SITE.
B. REFER TO SITE SURVEY, GRADING PLAN, SITE UTILITIES PLAN, STORMWATER MANAGEMENT PLAN, EROSION CONTROL PLAN, LANDSCAPE PLAN, PLUMBING PLAN, HVAC PLAN AND ELECTRICAL PLAN FOR ADDITIONAL INFORMATION PERTAINING TO SITE PLANNING.
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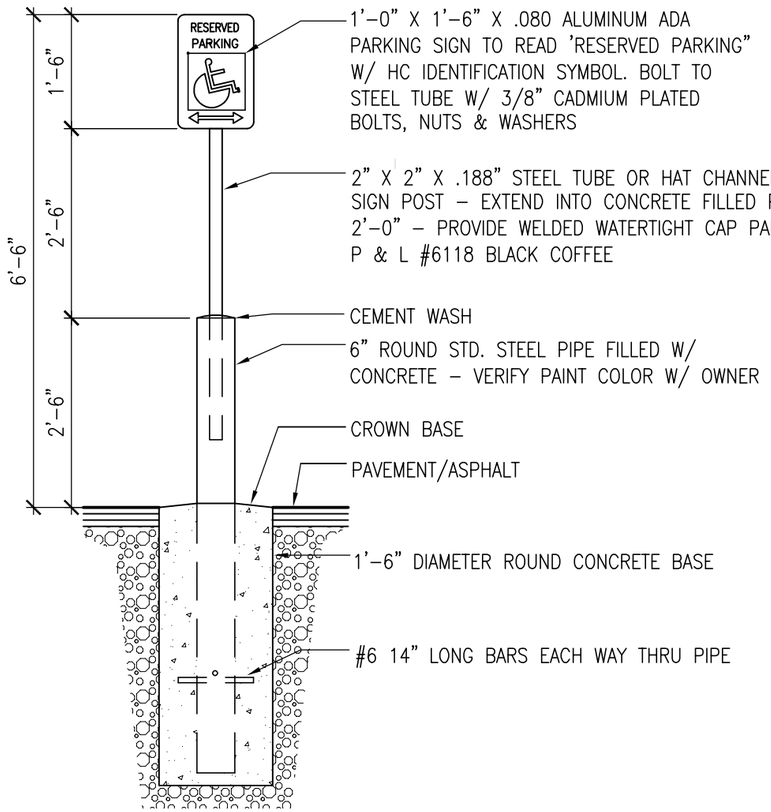
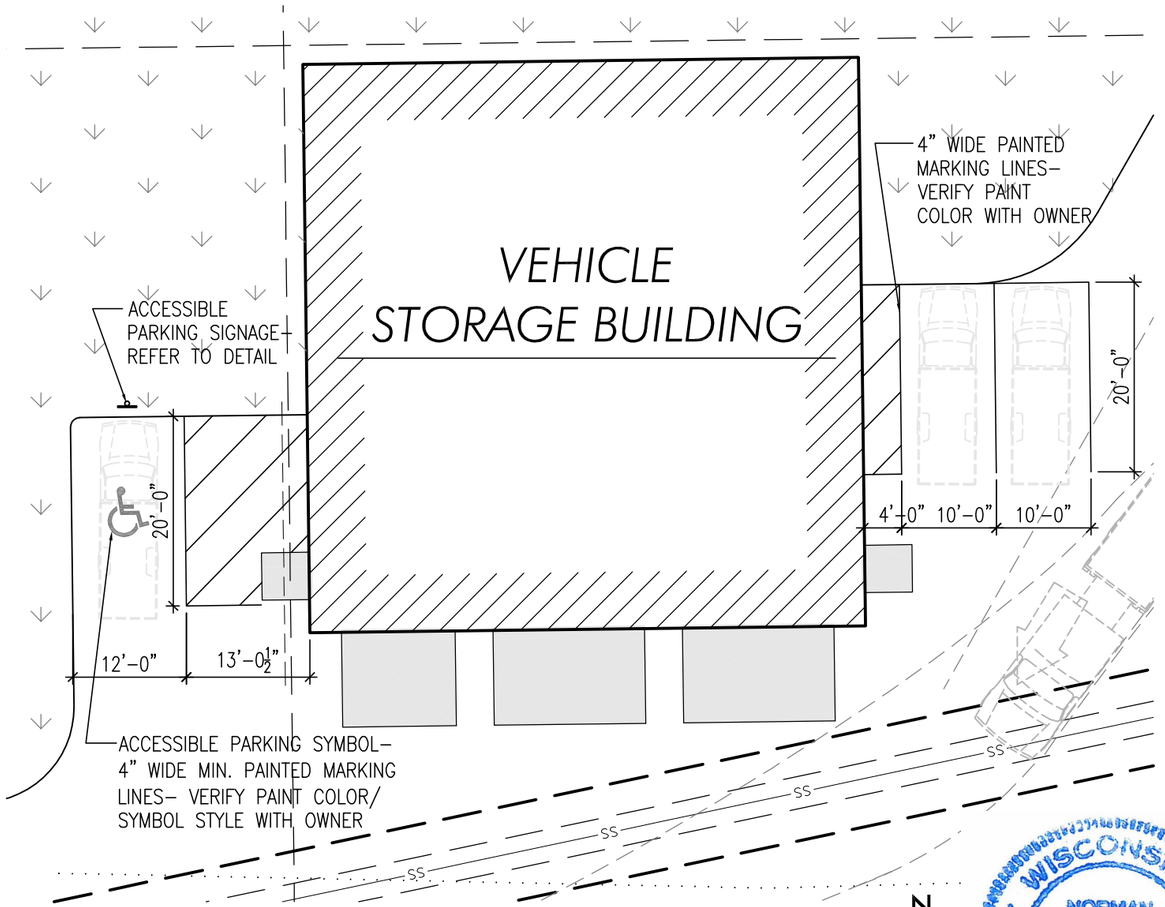


ACCESSIBLE PARKING SIGN DETAIL
1/2" = 1'-0"

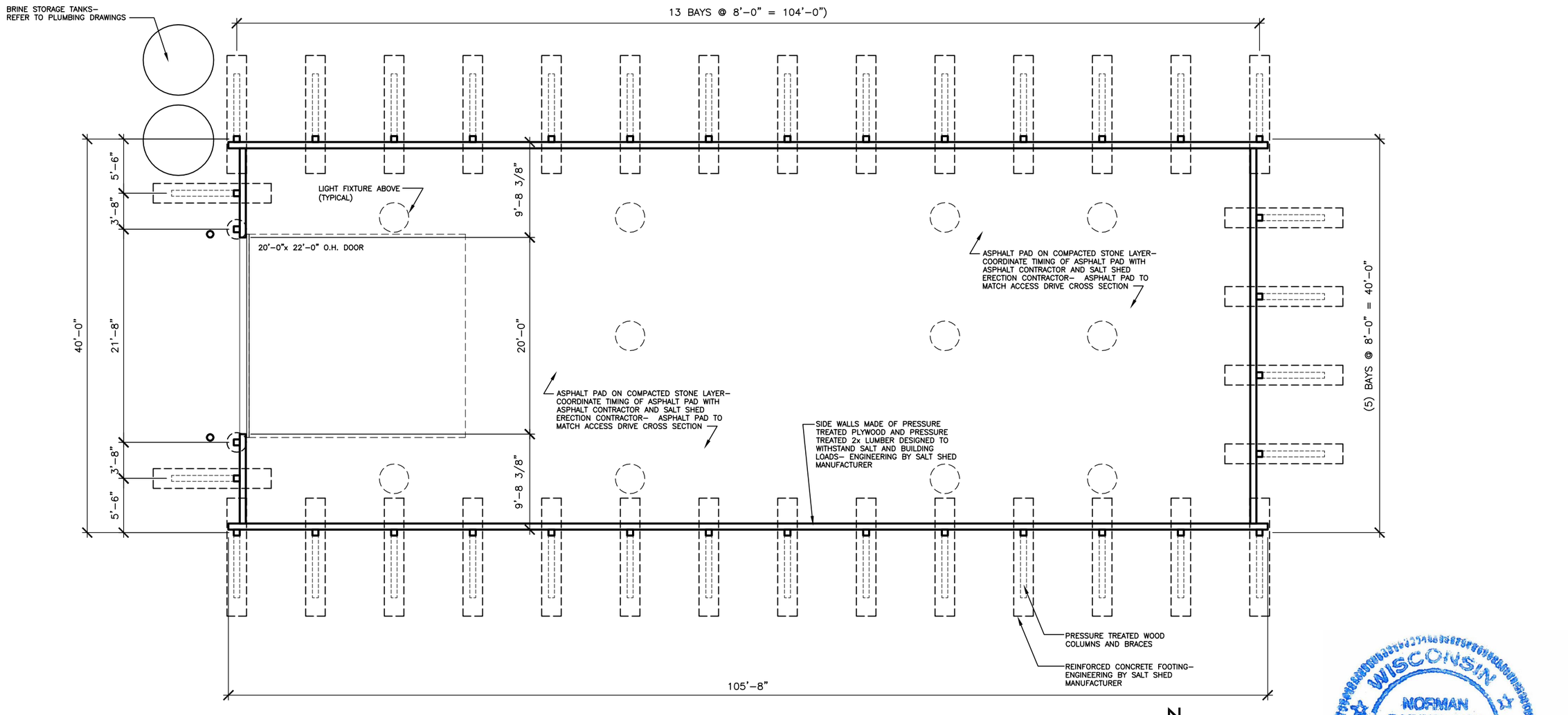


SITE PLAN DETAIL
1/16" = 1'-0"

WISCONSIN NORMAN BARRIENTOS A-6582 ARCHITECT

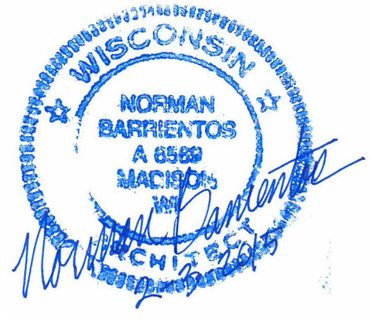
PROJECT NO: 1107–00–74	HWY: USH 41	COUNTY: DODGE	ARCHITECTURAL SITE PLAN DETAILS	SHEET 20	E

2



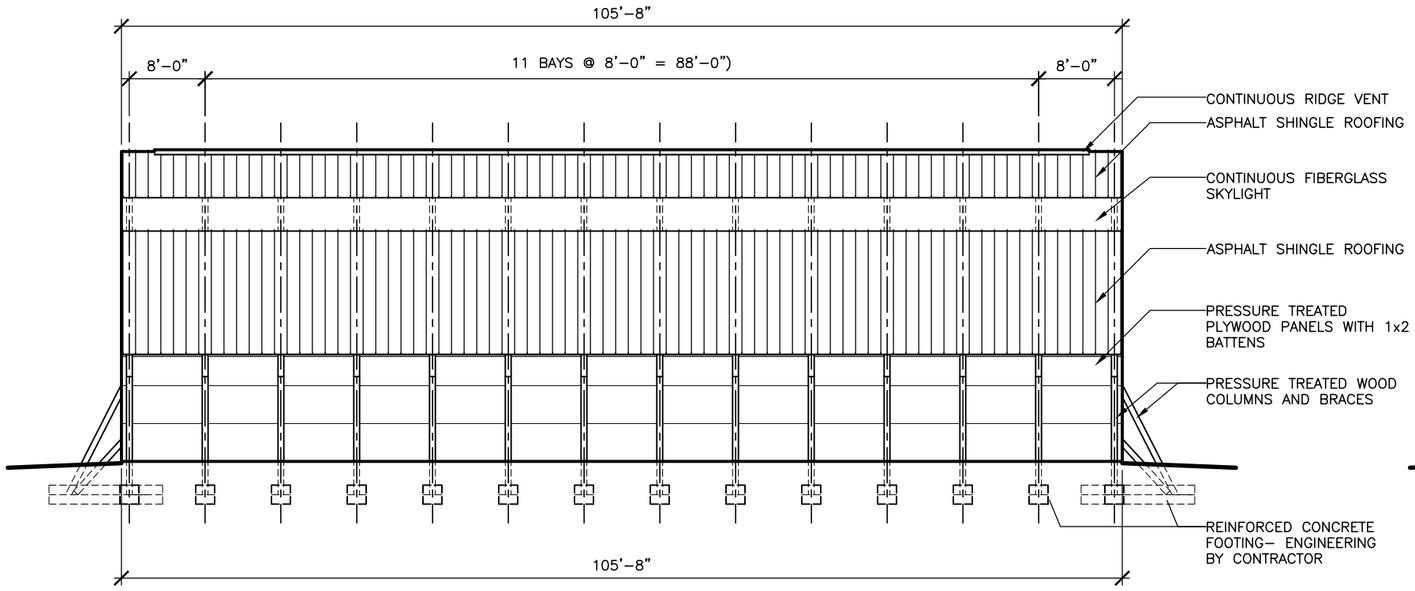
FLOOR PLAN

3/32" = 1'–0"



PROJECT NO: 1107–00–74	HWY: USH 41	COUNTY: DODGE	SALT STORAGE SHED PLAN	SHEET 21	E

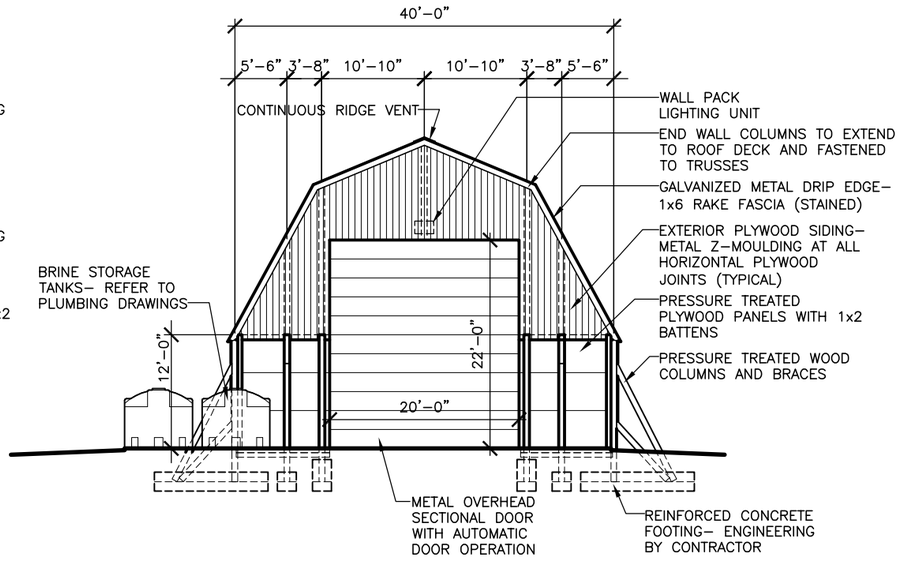
2



NORTH ELEVATION

1/16" = 1'–0"

SOUTH ELEVATION SIMILAR

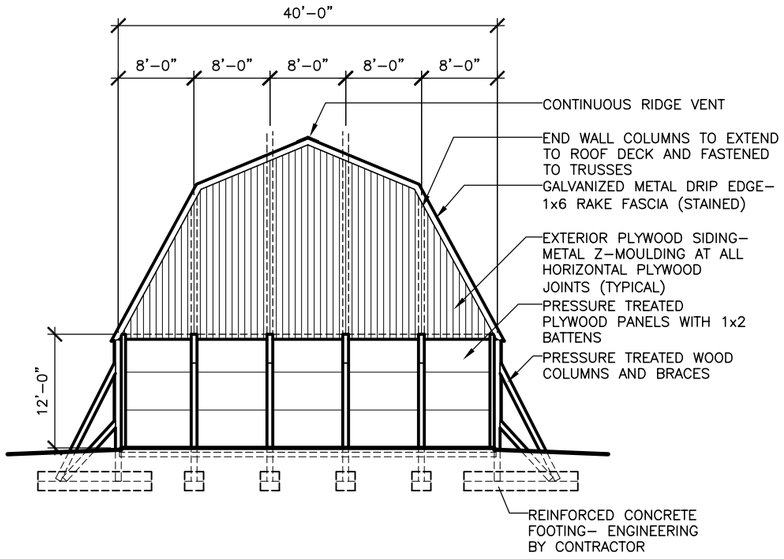


EAST ELEVATION

1/16" = 1'–0"

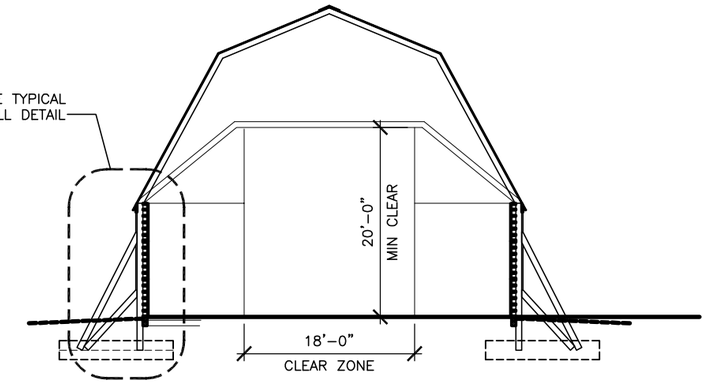
PROJECT NO: 1107–00–74	HWY: USH 41	COUNTY: DODGE	SALT STORAGE SHED – ELEVATIONS	SHEET 22	E

2



WEST ELEVATION

1/16" = 1'–0"

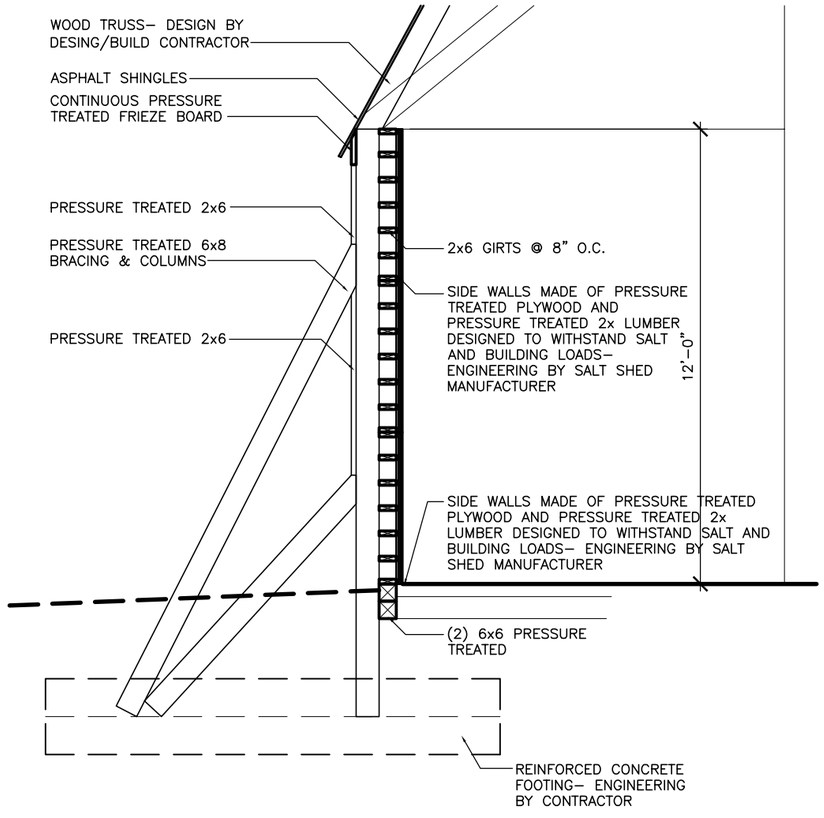


TYPICAL SECTION

1/16" = 1'–0"

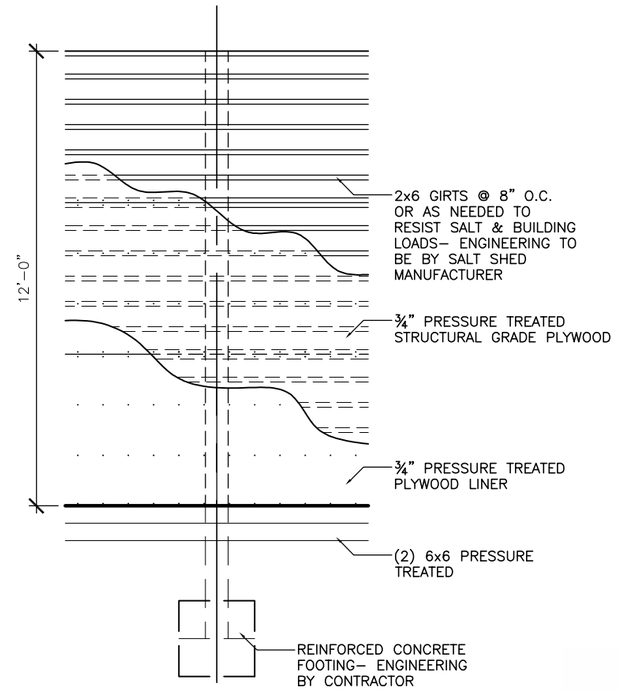
PROJECT NO: 1107–00–74	HWY: USH 41	COUNTY: DODGE	SALT STORAGE SHED ELEVATION & SECTION	SHEET 23	E

2



TYPICAL SIDE WALL SECTION

1/4" = 1'–0"

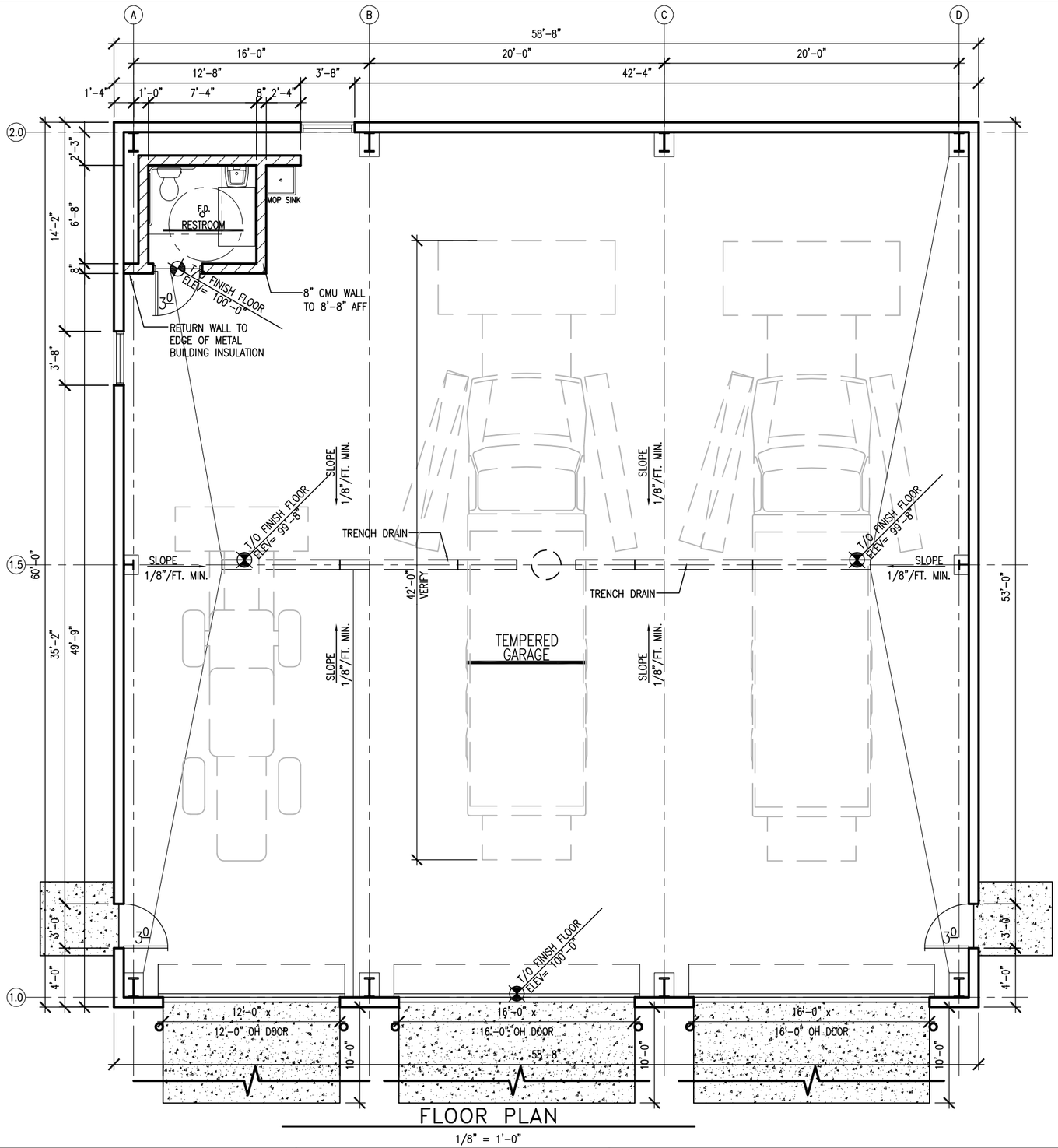


TYPICAL SIDE WALL ELEVATION

1/4" = 1'–0"

PROJECT NO: 1107–00–74	HWY: USH 41	COUNTY: DODGE	SALT STORAGE SHED DETAILS	SHEET 24	E

2



FLOOR PLAN

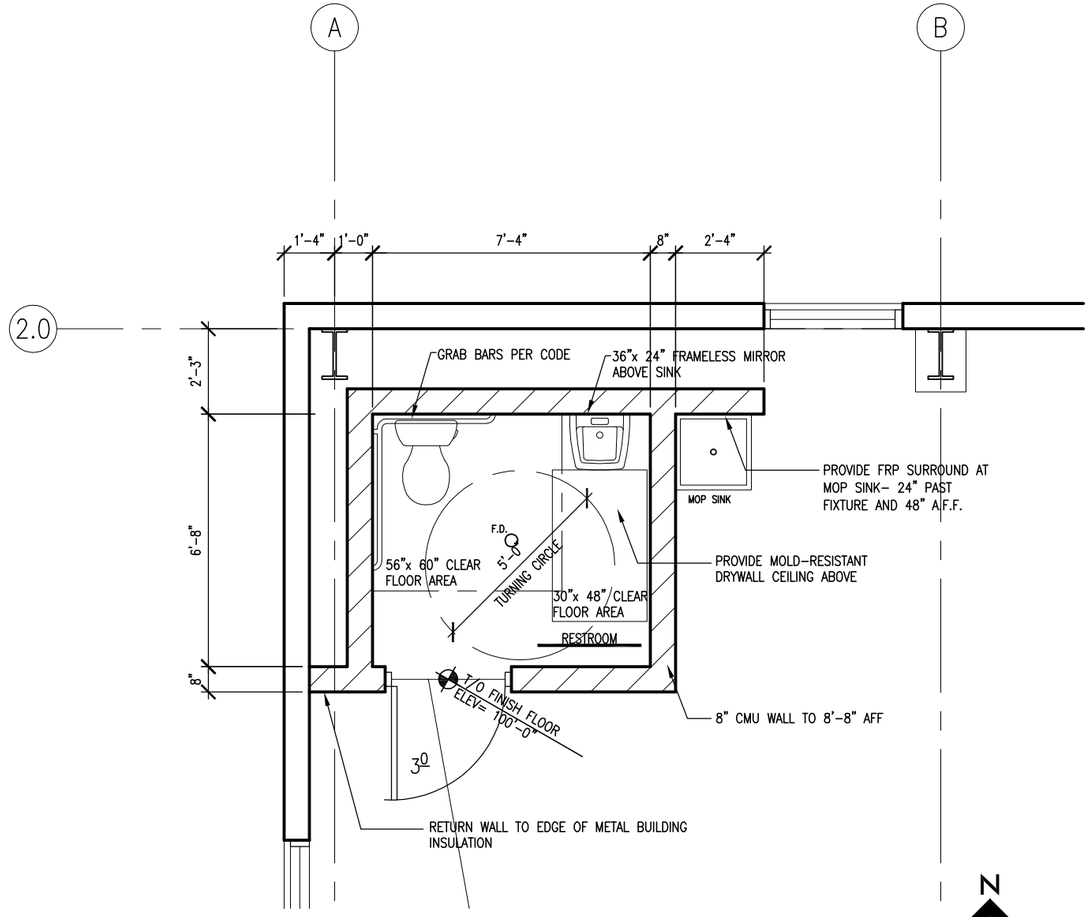
1/8" = 1'-0"

N

WISCONSIN
NORMAN
BARRIENTOS
A 6569
MADISON
WI
ARCHITECT

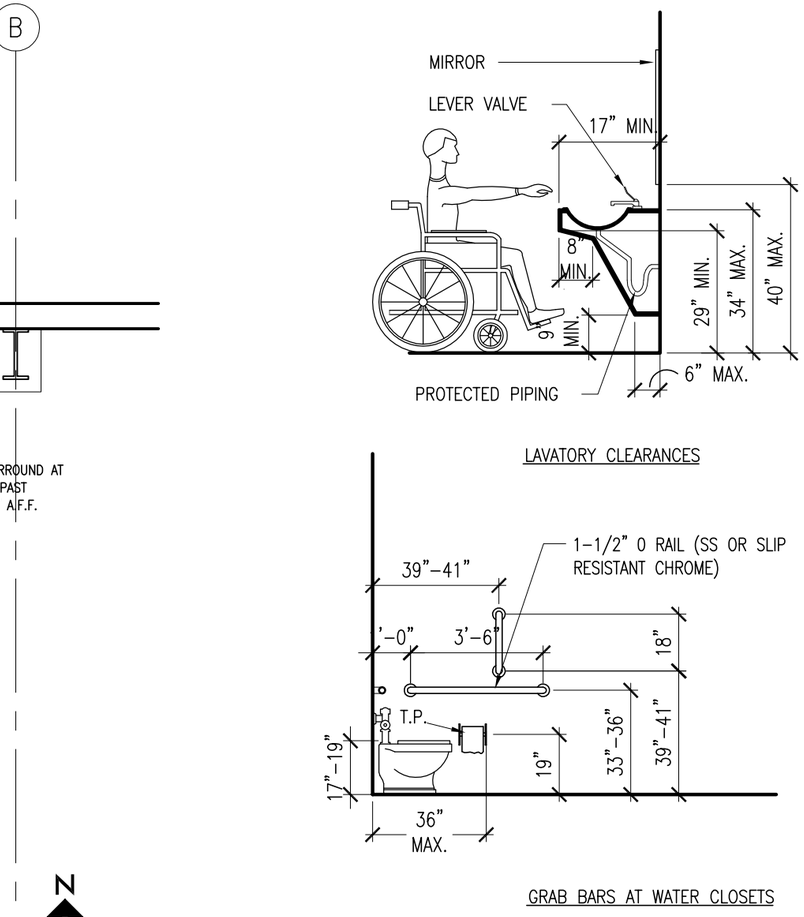
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE FLOOR PLAN	SHEET 25	E

2



FLOOR PLAN DETAIL

1/4" = 1'-0"



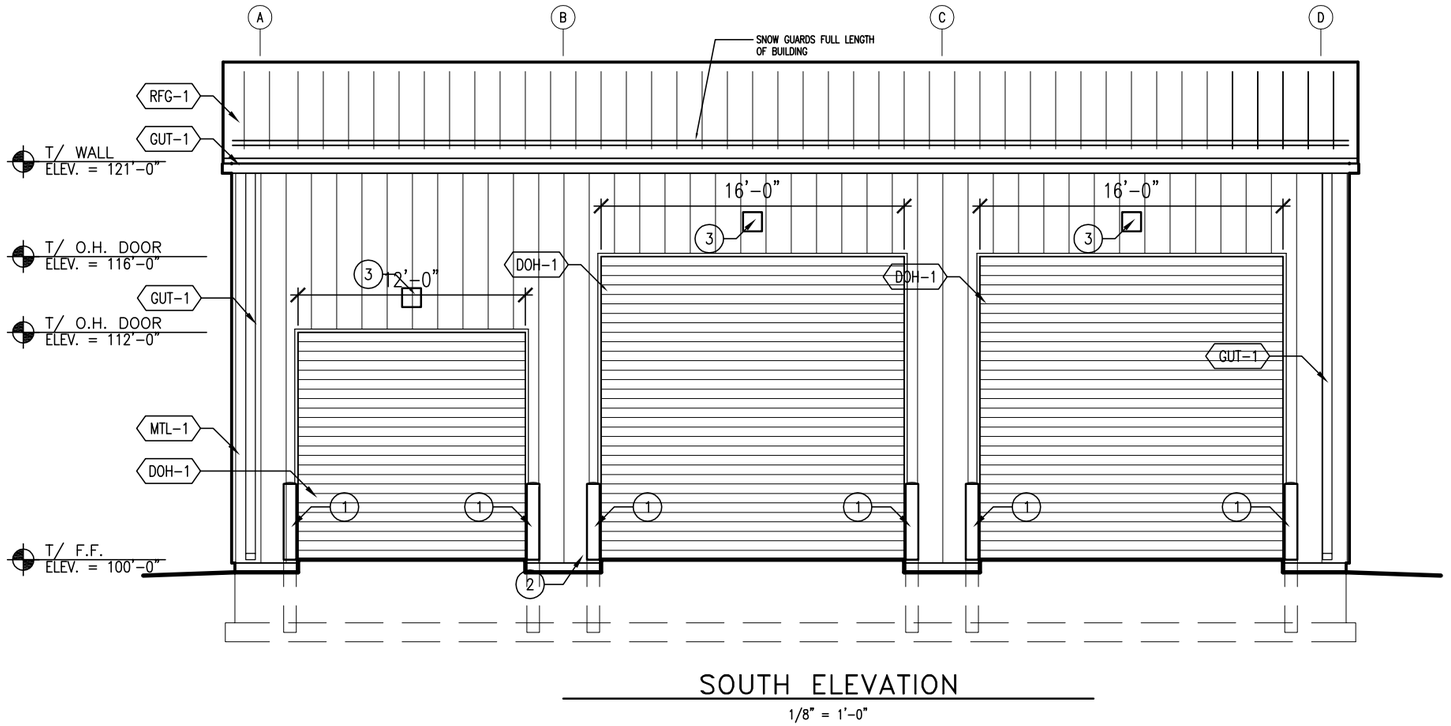
LAVATORY CLEARANCES

GRAB BARS AT WATER CLOSETS

TOILET ROOM CLERANCES

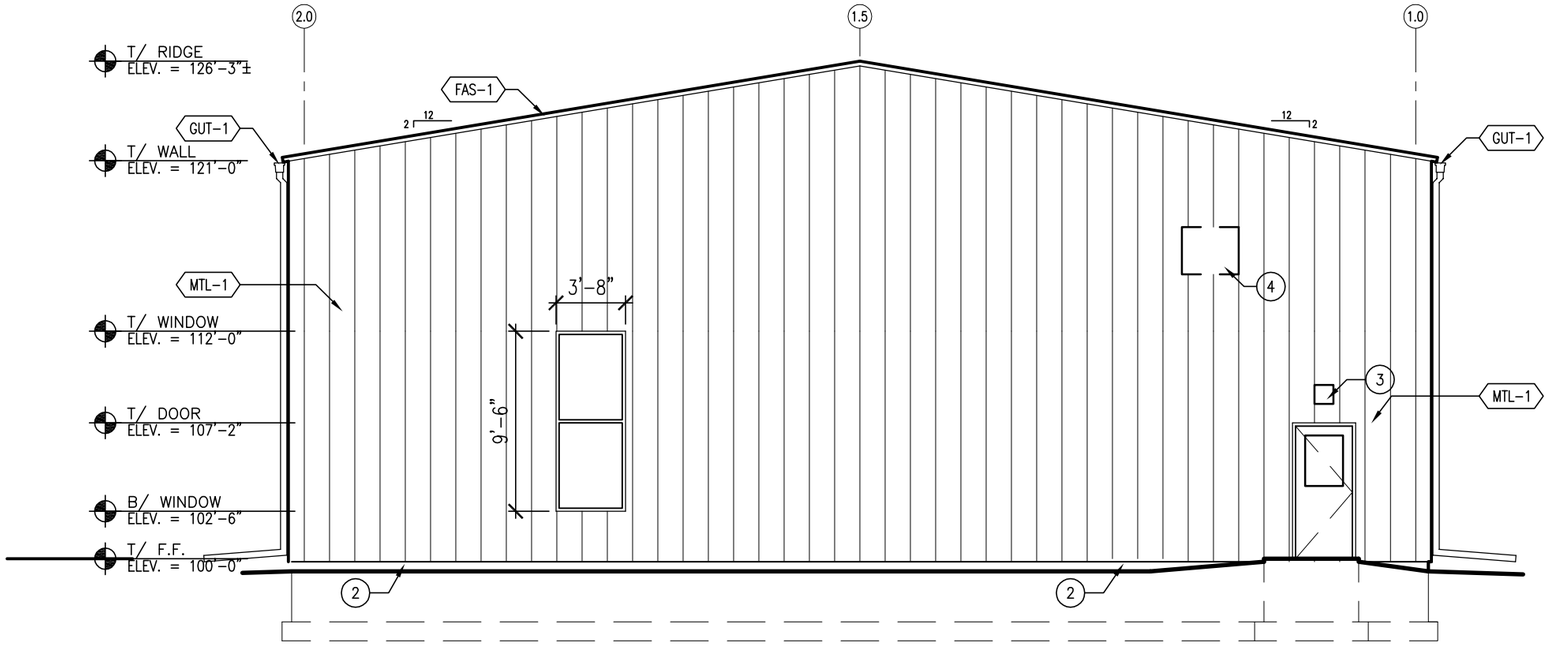
1/4" = 1'-0"

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE FLOOR DETAIL PLAN	SHEET 26	E



SOUTH ELEVATION

1/8" = 1'-0"



WEST ELEVATION

1/8" = 1'-0"

EXTERIOR ELEVATIONS – MATERIAL IDENTIFICATION KEYNOTES

CODE

MATERIAL <description of material>	CODE <code>	MANUFACTURER <manufacturer>	DESCRIPTION AND COLOR <general description>
PRE-ENGINEERED METAL PANEL	MTL-1	basis of design: BUTLER BUILDINGS	STYLE WALL II COLOR = ARCHITECT TO SELECT FROM MANUF.'S STANDARD COLORS
PRE-ENGINEERED METAL ROOFING PANEL	RGF-1	basis of design: BUTLER BUILDINGS	BUTLER MR-24 COLOR = ARCHITECT TO SELECT FROM MANUF.'S STANDARD COLORS
METAL FASCIA	FAS-1	basis of design: BUTLER BUILDINGS	PRE-FINISHED COLOR = ARCHITECT TO SELECT FROM MANUF.'S STANDARD COLORS
INSULATED SECTIONAL OVERHEAD DOOR	DOH-1	basis of design: OVERHEAD DOOR CO	625 SERIES COLOR = GREY
MTL GUTTERS & DOWN SPOUTS	GUT-1	BY BUILDING MANUF.	PRE-FINISHED

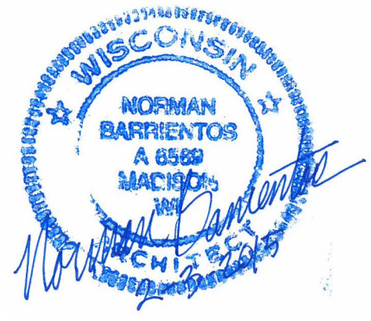
EXTERIOR ELEVATIONS – GENERAL NOTES

A. MATERIALS LISTED ABOVE ARE BASIS-OF-DESIGN MATERIALS. REFER TO SPECIFICATIONS FOR MORE DETAILED MANUFACTURER INFORMATION.

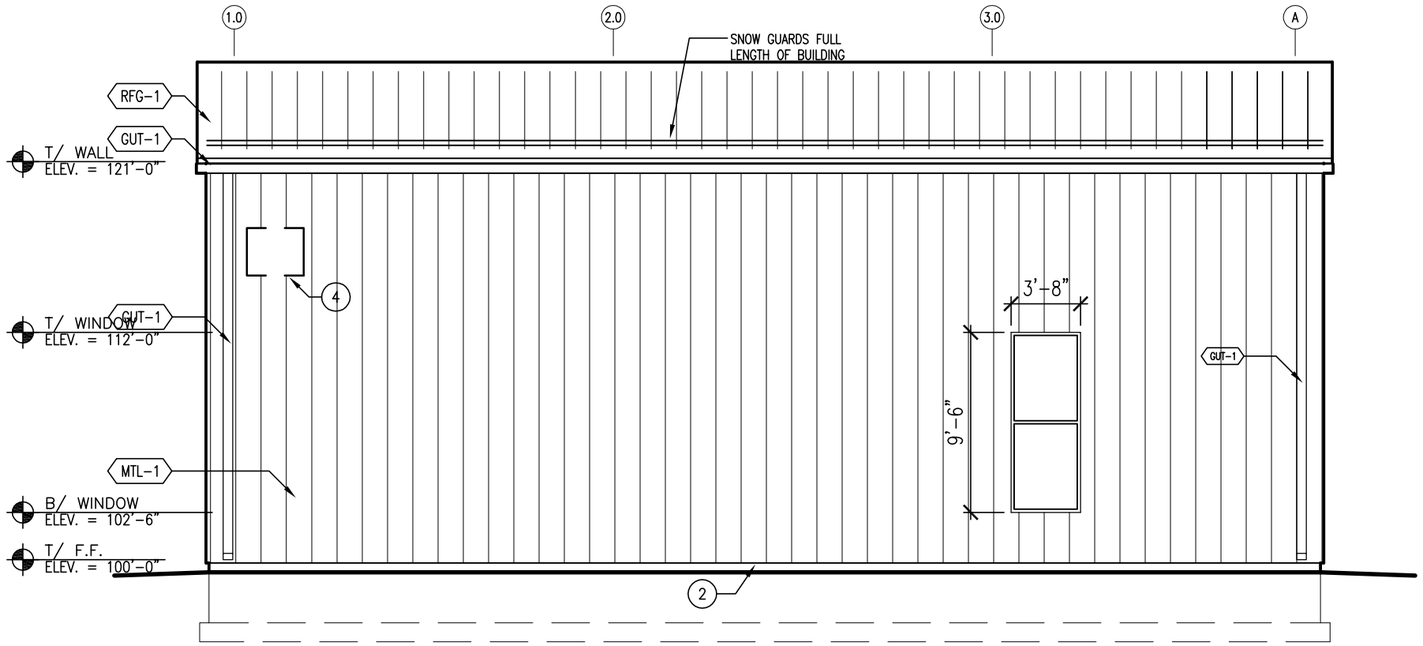
EXTERIOR ELEVATIONS – KEYED NOTES

NO

1. STEEL PIPE BOLLARD, REFER TO STRUCTURAL DRAWINGS.
2. EXPOSED CONCRETE FOUNDATION WALL.
3. DUSK TO DAWN EXTERIOR LIGHT FIXTURE.
4. VENTILATION LOUVER.

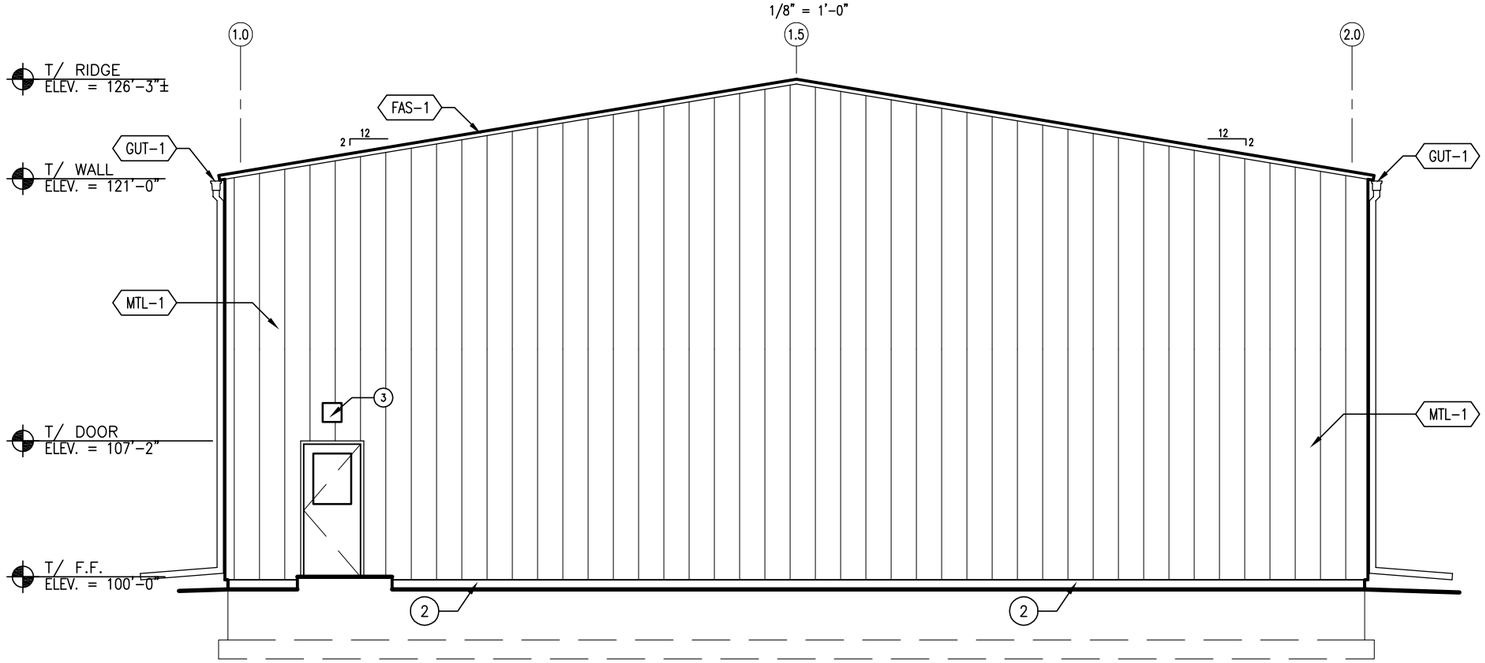


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE - ELEVATIONS	SHEET 27	E



NORTH ELEVATION

1/8" = 1'-0"



EAST ELEVATION

1/8" = 1'-0"

EXTERIOR ELEVATIONS – MATERIAL IDENTIFICATION KEYNOTES (CODE)

MATERIAL <description of material>	CODE <code>	MANUFACTURER <manufacturer>	DESCRIPTION AND COLOR <general description>
PRE-ENGINEERED METAL PANEL	MTL-1	basis of design: BUTLER BUILDINGS	STYLE WALL II COLOR = ARCHITECT TO SELECT FROM MANUF.'S STANDARD COLORS
PRE-ENGINEERED METAL ROOFING PANEL	RGF-1	basis of design: BUTLER BUILDINGS	BUTLER MR-24 COLOR = ARCHITECT TO SELECT FROM MANUF.'S STANDARD COLORS
METAL FASCIA	FAS-1	basis of design: BUTLER BUILDINGS	PRE-FINISHED COLOR = ARCHITECT TO SELECT FROM MANUF.'S STANDARD COLORS
INSULATED SECTIONAL OVERHEAD DOOR	DOH-1	basis of design: OVERHEAD DOOR CO	625 SERIES COLOR = GREY
MTL GUTTERS & DOWN SPOUTS	GUT-1	BY BUILDING MANUF.	PRE-FINISHED

EXTERIOR ELEVATIONS – GENERAL NOTES

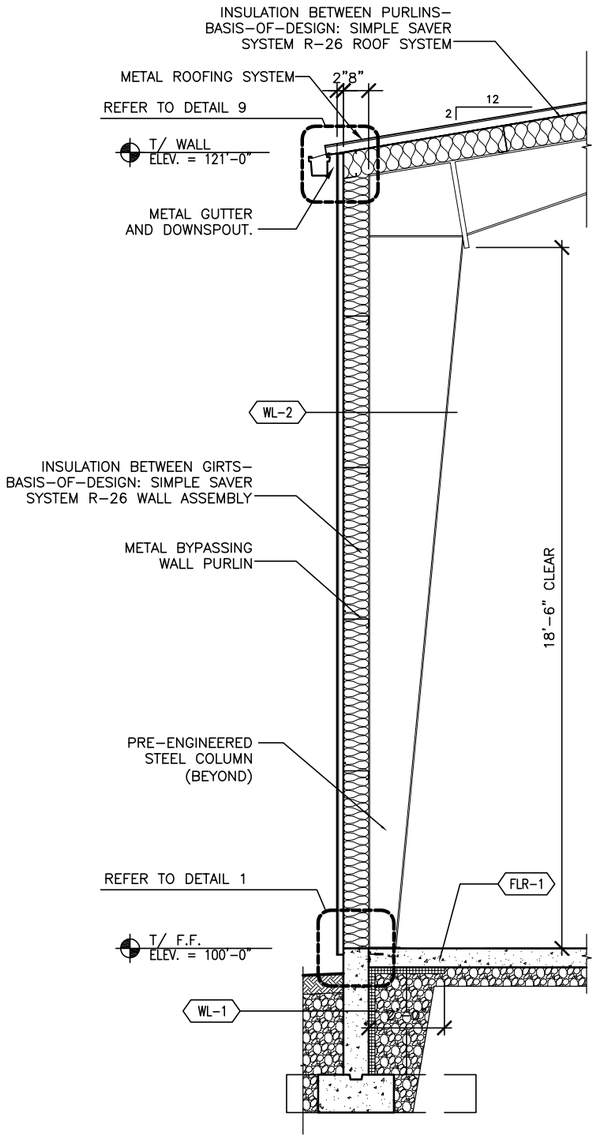
A. MATERIALS LISTED ABOVE ARE BASIS-OF-DESIGN MATERIALS. REFER TO SPECIFICATIONS FOR MORE DETAILED MANUFACTURER INFORMATION.

EXTERIOR ELEVATIONS – KEYED NOTES (NO)

1. STEEL PIPE BOLLARD, REFER TO STRUCTURAL DRAWINGS.
2. EXPOSED CONCRETE FOUNDATION WALL.
3. DUSK TO DAWN EXTERIOR LIGHT FIXTURE.
4. VENTILATION LOUVER.

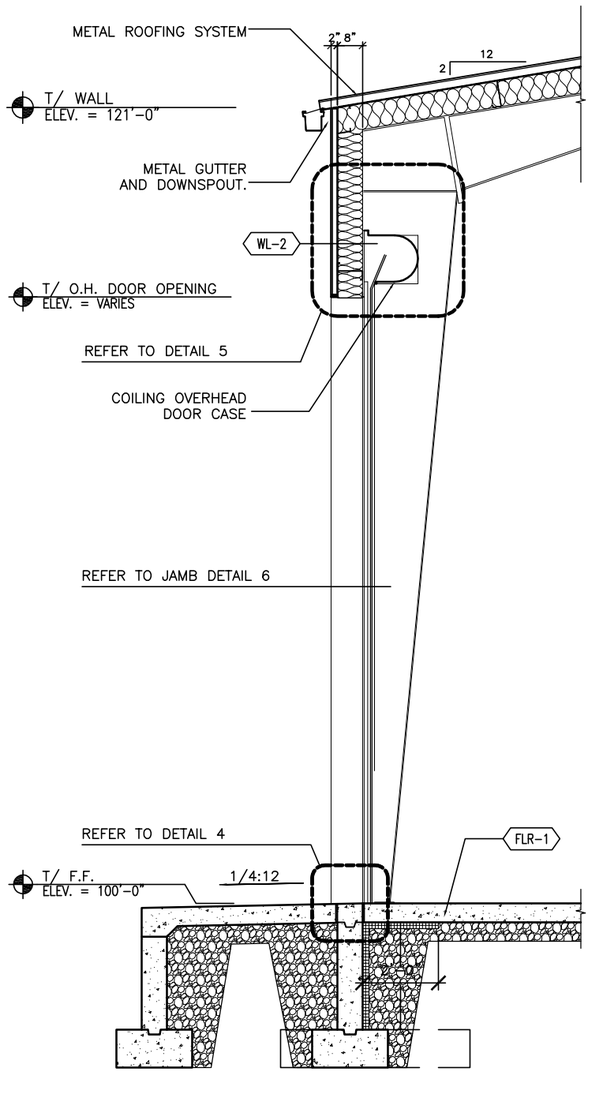
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE - ELEVATIONS	SHEET 28	E

2



TYPICAL WALL SECTION

1/4" = 1'–0"

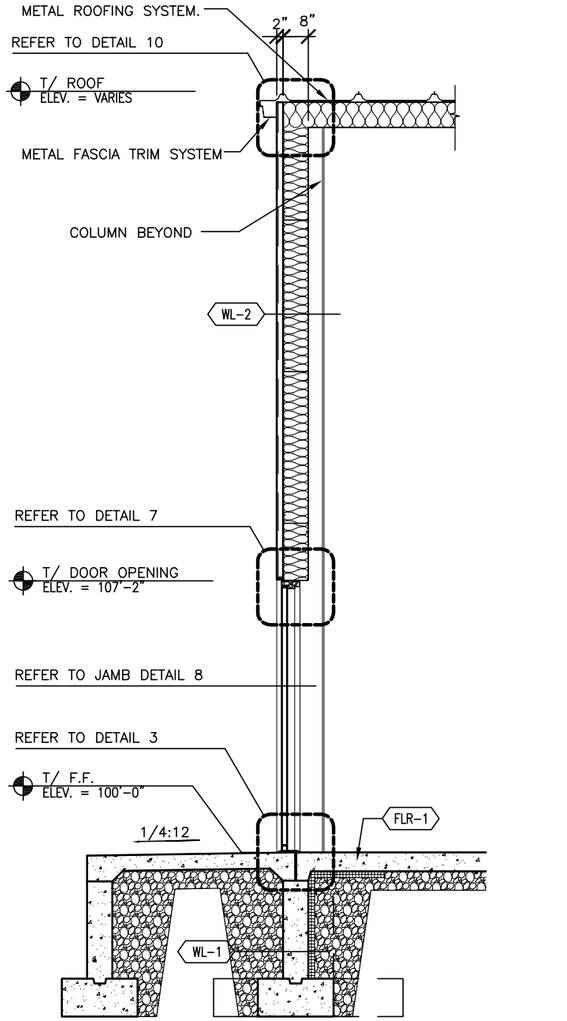


WALL SECTION AT OVERHEAD DOOR

1/4" = 1'–0"

PROJECT NO: 1107–00–74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE - SECTIONS	SHEET 29	E

2



WALL SECTION AT SERVICE DOOR

1/4" = 1'-0"

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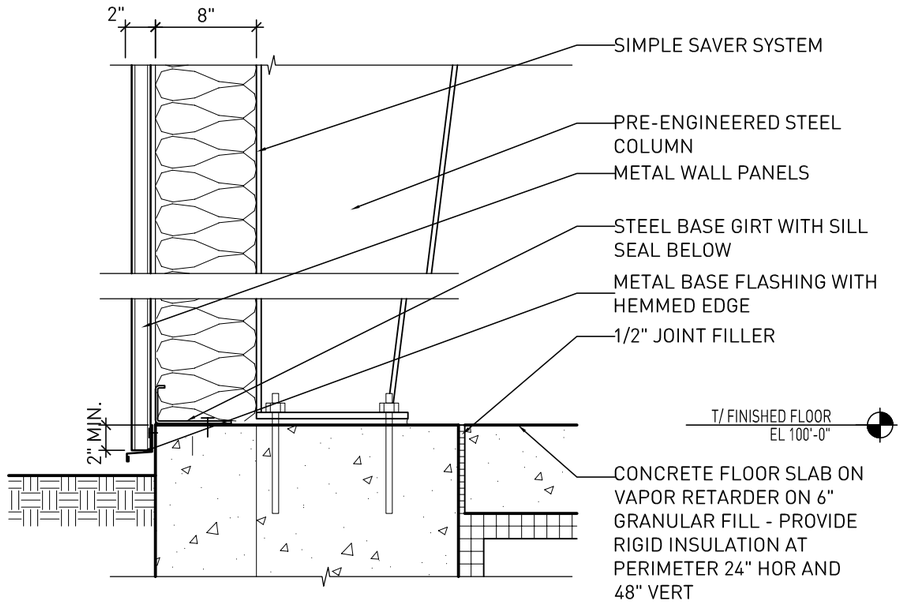
NORMAN BARRIENTOS
A 6589
MADISON
WI
ARCHITECT

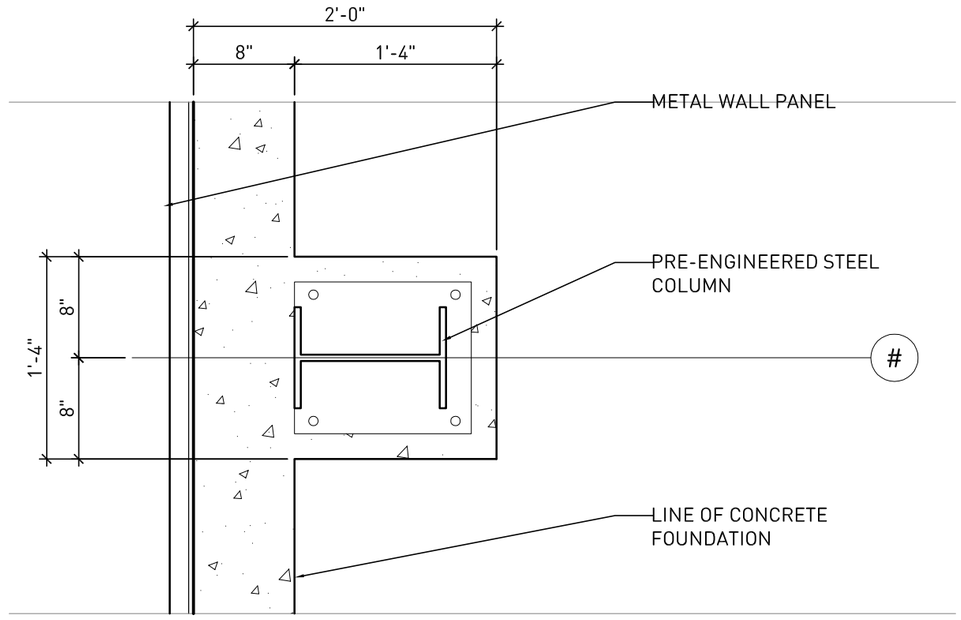
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE - SECTIONS	SHEET 30	E

2



1 TYPICAL FOUNDATION DETAIL

AT COLUMNS 1" = 1'-0"

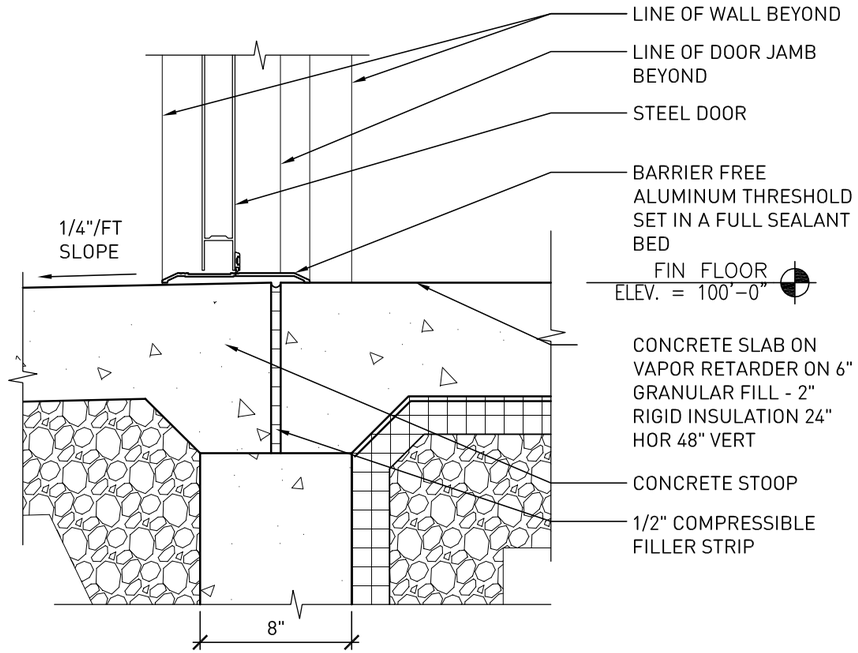


2 FOUNDATION PLAN DETAIL

AT COLUMNS 1" = 1'-0"

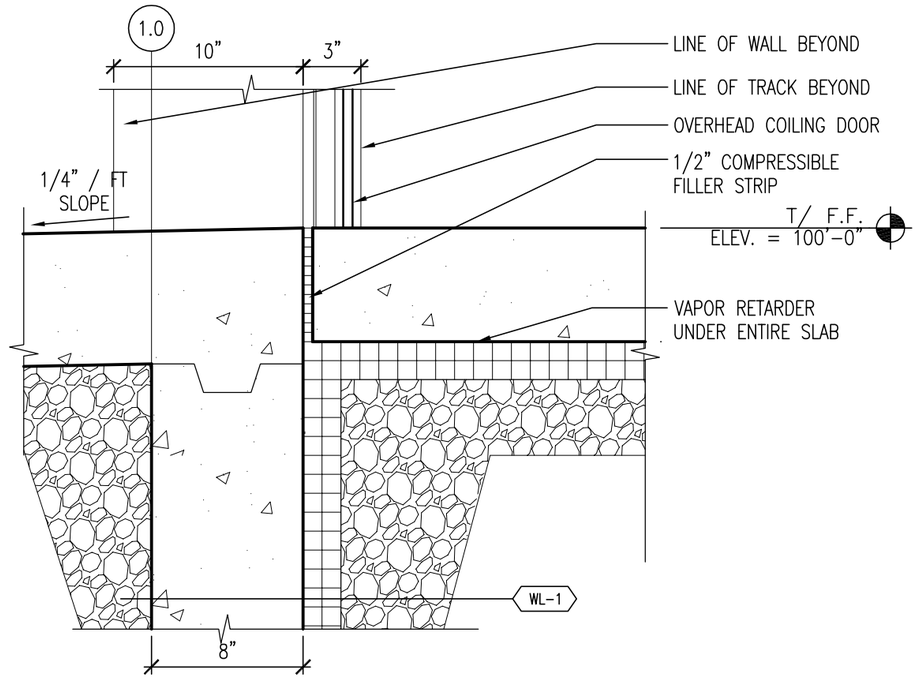
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE - DETAILS	SHEET 31	E

2



3 STEEL DOOR THRESHOLD

1-1/2" = 1'-0"



4 OH DOOR THRESHOLD

1-1/2" = 1'-0"

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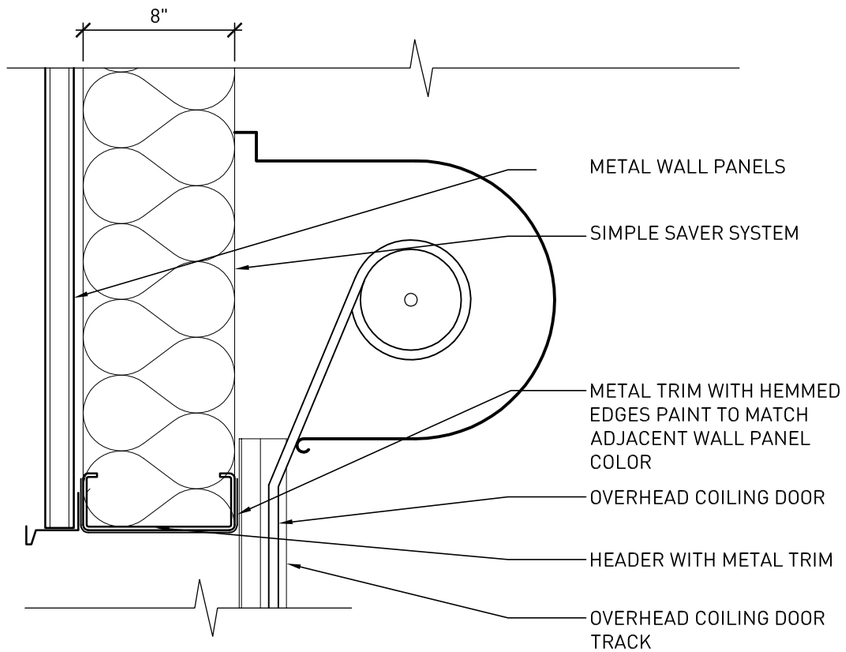
MADISON
WI

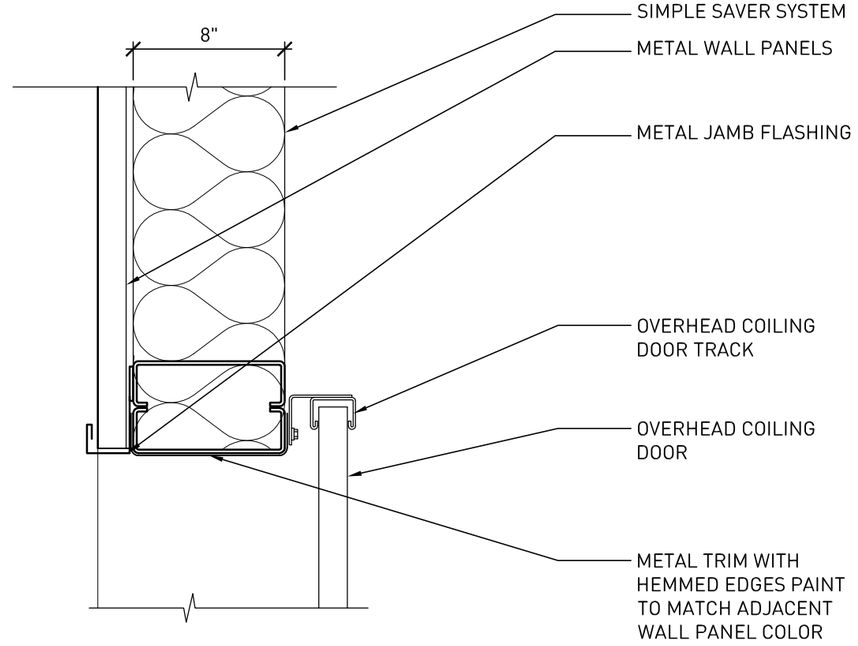
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE - DETAILS	SHEET 32	E

2



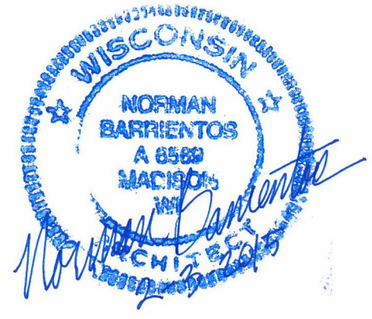
5 OH COILING DOOR HEAD @ MTL PANEL

1-1/2" = 1'-0"



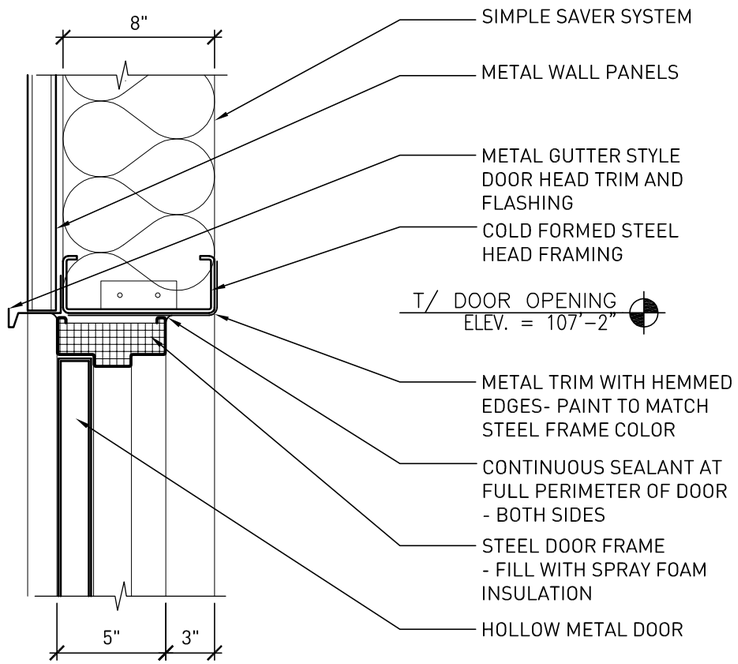
6 OH COILING DOOR JAMB @ METAL PANEL

1-1/2" = 1'-0"



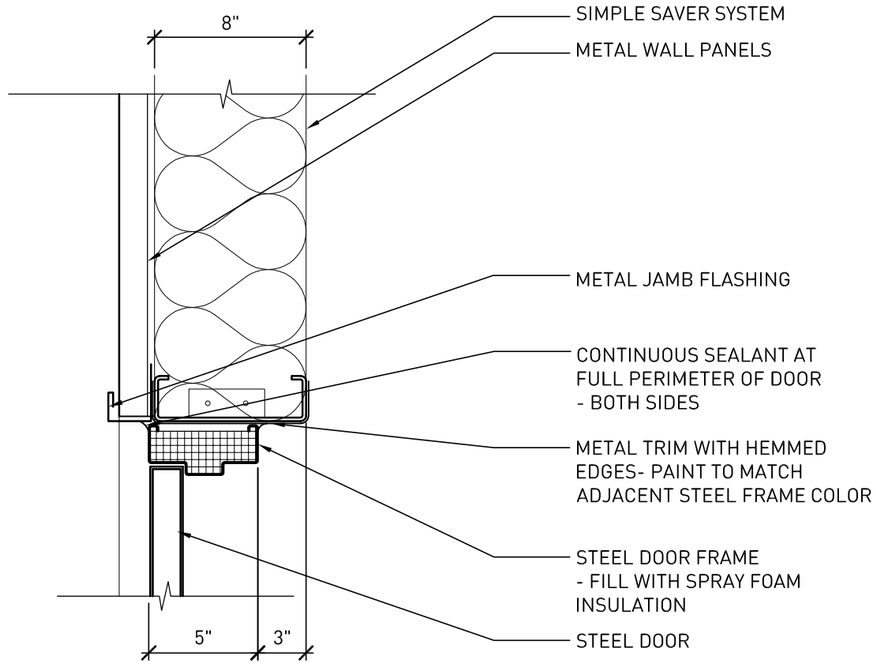
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE - DETAILS	SHEET 33	E

2



7 STEEL FRAME HEAD @ METAL PANEL

1-1/2" = 1'-0"



8 STEEL FRAME JAMB @ METAL PANEL

1-1/2" = 1'-0"

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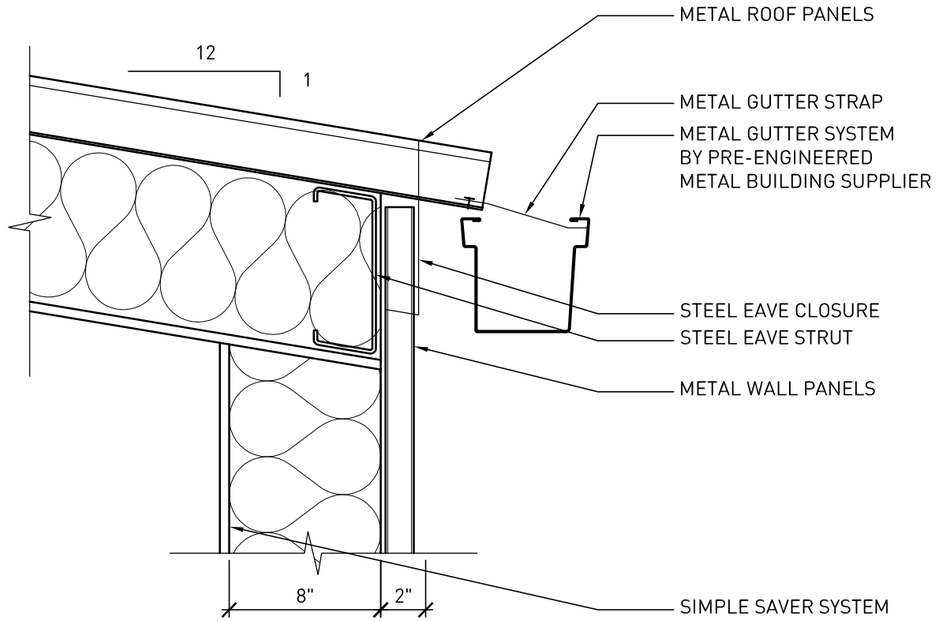
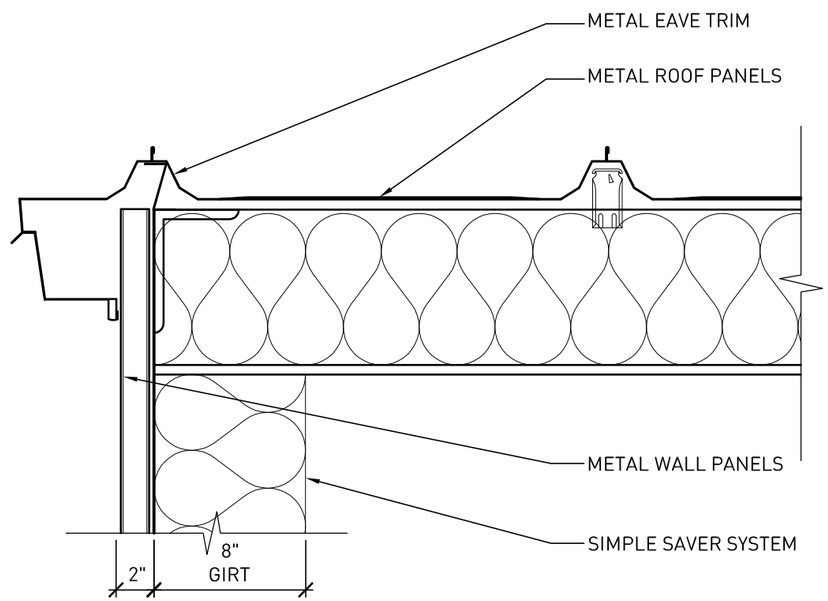
ARCHITECT

2



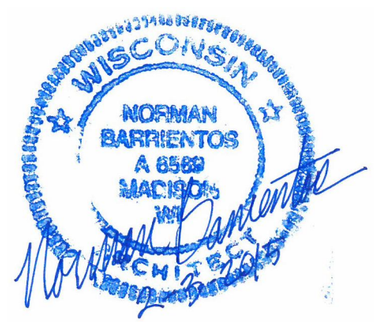
9 ROOF EDGE DETAIL @ GUTTER

1-1/2" = 1'-0"



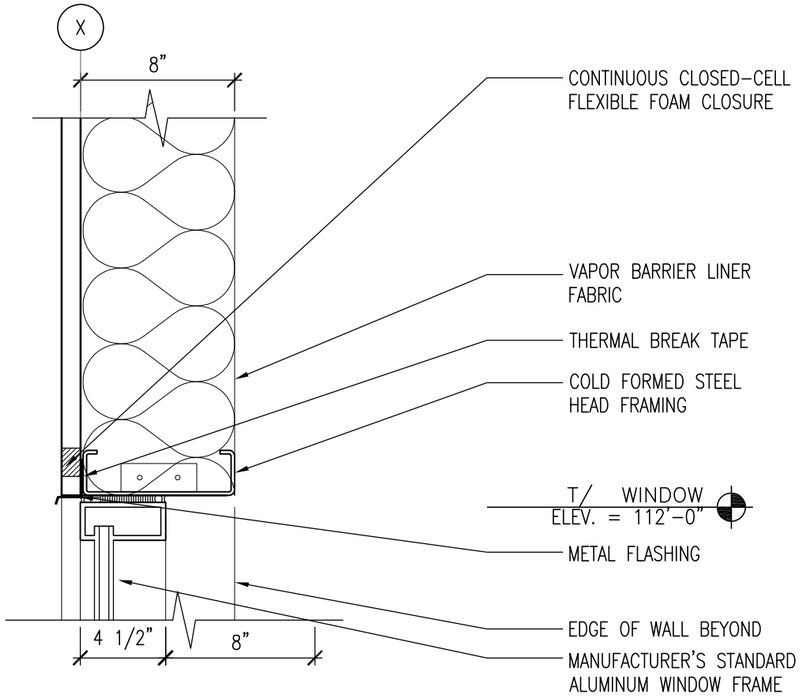
10 TYPICAL ROOF EDGE DETAIL

1-1/2" = 1'-0"



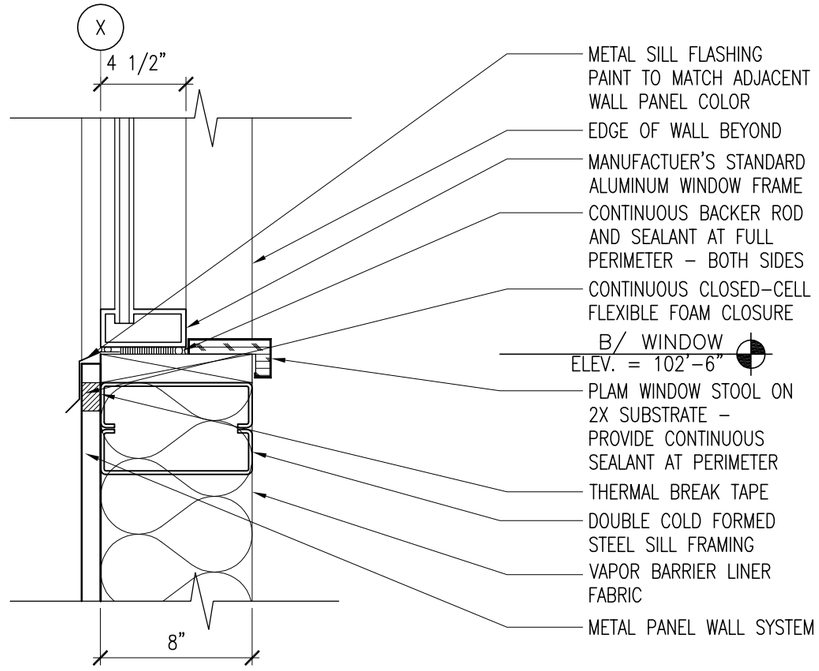
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE - DETAILS	SHEET 35	E

2



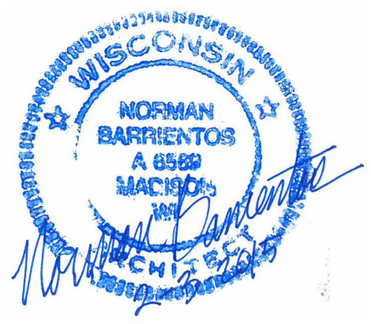
11 WINDOW HEAD @ METAL PANEL

SCALE: 1 1/2" = 1'-0"



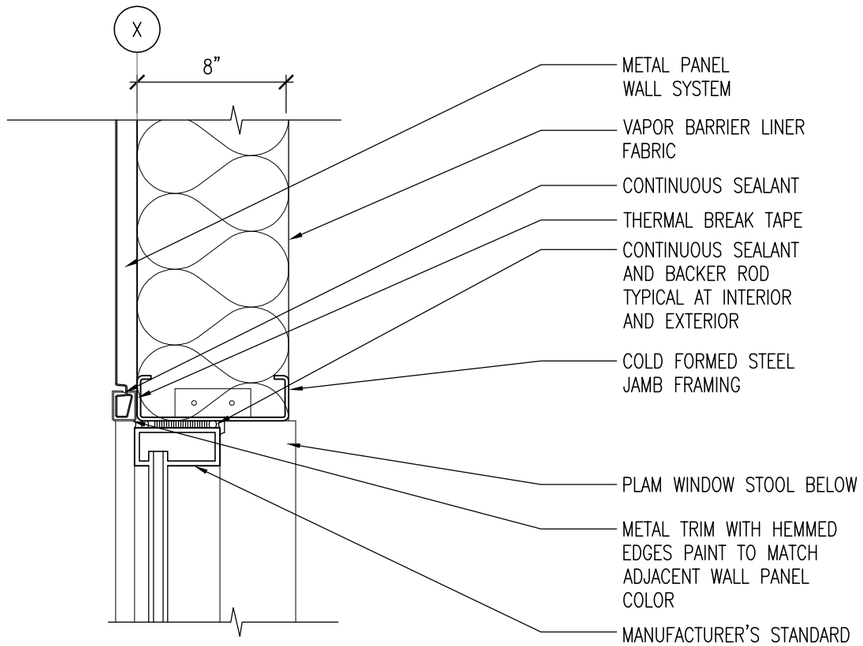
12 WINDOW SILL @ METAL PANEL

SCALE: 1 1/2" = 1'-0"



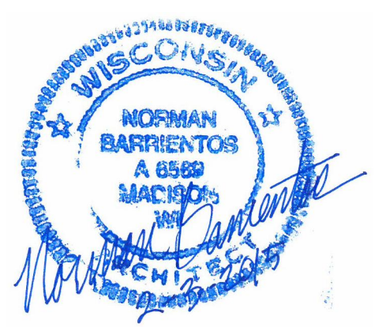
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE - DETAILS	SHEET 36	E

2



13 WINDOW JAMB @ METAL PANEL

SCALE: 1 1/2" = 1'-0"



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	VEHICLE STORAGE - DETAILS	SHEET 37	E

GENERAL REQUIREMENTS

SPECIFIC NOTES & DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER THESE GENERAL NOTES.

ALL MATERIALS AND WORK PERFORMED SHALL CONFORM TO THE REQUIREMENTS OF THE 2009 INTERNATIONAL BUILDING CODE (IBC) INCLUDING LOCAL OR STATE OF WISCONSIN ORDINANCES AND AMENDMENTS.

ALL MATERIAL SHALL BE FURNISHED AS SHOWN HEREIN UNLESS THE OWNER OR ENGINEER APPROVES EQUAL ALTERNATIVES.

NO CHANGES ARE TO BE MADE TO THESE PLANS WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE ENGINEER.

OPENINGS NOT INDICATED ON STRUCTURAL DRAWINGS BUT REQUIRED FOR MECHANICAL, ELECTRICAL, AND PLUMBING WORK SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW.

THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, INCLUDING, BUT NOT LIMITED TO BRACING AND SHORING. OBSERVATION VISITS TO THE SITE BY THE ENGINEER AND/OR THE ENGINEER'S REPRESENTATIVE(S) SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES.

DESIGN CRITERIA

THE MINIMUM COMPRESSIVE STRENGTH OF CONCRETE (f'c) AT 28 DAYS SHALL BE:

SLAB-ON-GRADE	4,000 PSI
FOUNDATION	3,000 PSI
WALLS	4,000 PSI
DRYPACK OR GROUT FOR BASE PLATES	4,000 PSI

REINFORCING STEEL — Fy=60,000 PSI (ASTM A615, GRADE 60)

STRUCTURAL STEEL

WF SHAPES	Fy=50,000 PSI (ASTM A992)
PLATES AND MISC SHAPES	Fy=36,000 PSI (ASTM A36)
STRUCTURAL TUBING	Fy=46,000 PSI (ASTM 500, GRADE B)
STRUCTURAL PIPES	Fy=35,000 PSI (ASTM A53, GRADE B)
WELDING ELECTRODES	E70XX (AWS D1.1-86) W/LOW HYDROGEN PROCEDURES

COMPRESSIVE STRENGTH OF CONCRETE MASONRY:
f'm=1,500 PSI USING TYPE "M" OR "S" MORTAR.

DESIGN METHOD

BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-08).

MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN (AISC THIRTEENTH EDITION).

COLD FORMED STEEL DESIGN MANUAL (AISI 1996).

BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURE (ACI-530-92/ASCE S-95/TMS 402-95/NCMA).

STEEL JOIST INSTITUTE (SJI), STANDARD SPECIFICATIONS AND LOAD TABLES FOR STEEL JOIST AND JOIST GIRDERS, LATEST EDITION.

STEEL DECK INSTITUTE (SDI), SPECIFICATIONS FOR ROOF & FLOOR DECK, LATEST EDITION.

NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS-LATEST EDITION).

STRUCTURAL PLYWOOD, PLYWOOD DESIGN SPECIFICATION, AMERICAN PLYWOOD ASSOCIATION, LATEST EDITION.

DESIGN LOADS

SNOW: GROUND SNOW LOAD (Pg) = 35 PSF
SNOW IMPORTANCE FACTOR (Is) = 1.0
SNOW LOAD EXPOSURE FACTOR (Ce) = 1.0
SLOPED ROOF/FLAT ROOF FACTOR (Pf) = 27 PSF
ROOF THERMAL FACTOR (Ct) = 1.1
DRIFT LOADS - NOT APPLICABLE

DEAD: ROOF: DEAD LOAD = AS REQUIRED FOR BUILDING SYSTEM
ROOF: COLLATERAL LOAD = 3 PSF (IN ADDITION TO DEAD LOAD)

LIVE: ROOF: LIVE LOAD = 20 PSF

WIND: WIND SPEED = 90 MPH, EXPOSURE = C
WIND IMPORTANCE FACTOR (I) = 1.0
INTERNAL PRESSURE COEFFICIENT (GCpi) = ±.18

SEISMIC: SEISMIC USE GROUP = I
SEISMIC SITE CLASS = D
SEISMIC DESIGN CATEGORY = A
SPECTRA RESPONSE COEFF. Sds = .094, Sd1 = .062
FORCE RESISTING SYSTEM = STEEL ORDINARY CONCENTRICALLY BRACED FRAMES
DESIGN BASE SHEAR (V) = 0.029W (WHERE W=EFFECTIVE SEISMIC WEIGHT)
ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE

FOUNDATION

THE DESIGN NET ALLOWABLE SOIL BEARING CAPACITY IS 3000 PSF, BASED ON THE GEO-TECHNICAL REPORT BY GESTRA ENGINEERING.

COMPLETE NORMAL CLEARING AND GRUBBING OPERATION OVER THE ENTIRE BUILDING PAD AREA. THE BUILDING PAD AREA IS DEFINED AS AN AREA EXTENDING A MINIMUM OF 5 FEET BEYOND THE PROPOSED BUILDING LINES.

REMOVE UNSUITABLE MATERIAL BELOW FOUNDATION. THE DEPTH OF THE REMOVAL IS DICTATED BY THE UNSUITABLE SOILS ENCOUNTERED SUCH AS SILT, ORGANIC MATTER, ROOTS AND VEGETATION AND RANDOM FILL MATERIALS LIKE WOOD, TINS, ASPHALT AND MUCK.

FILL MATERIALS REQUIRED SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES AND COMPACTED TO 95% MODIFIED PROCTOR (ASTM D1557, LATEST EDITION) AT OPTIMUM MOISTURE CONTENT WITHIN A DISTANCE OF 5 FEET BEYOND ALL FOOTING EDGES.

SIX INCHES MINIMUM GRANULAR MATERIAL TO BE PLACED UNDER THE FLOOR SLAB.

REINFORCED CONCRETE

REINFORCING SHALL HAVE THE MINIMUM COVER REQUIREMENTS AS INDICATED IN ACI-318, LATEST EDITION WITH THE FOLLOWING MINIMUM VALUES:
CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
PERMANENTLY EXPOSED TO EARTH OR WEATHER:
#5 AND SMALLER 1 1/2"
#6 AND LARGER 2"

PROVIDE DOWELS IN WALL FOOTINGS WITH EQUAL SIZE AND SPACING AS VERTICAL WALL STEEL, UNLESS NOTED OTHERWISE.

ALL CONCRETE SLABS SHALL BE REINFORCED AS INDICATED ON THE DRAWINGS. PERMISSION MUST BE REQUESTED TO SUBSTITUTE FIBER REINFORCED CONCRETE FOR NON-STRUCTURAL SLABS, PROPORTIONING TO BE IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

USE NON-SHRINK, NON-METALLIC GROUT UNDER BASE PLATES AS INDICATED ON THE DRAWINGS.

THE CONCRETE CONTRACTOR SHALL COORDINATE ALL OTHER TRADES FOR SIZE AND LOCATION OF ALL OPENINGS IN CONCRETE WALLS AND FLOORS. HE SHALL INSTALL ALL EMBEDDED ITEMS PROVIDED BY OTHER TRADES UNLESS NOTED OTHERWISE. ALL OPENINGS IN STRUCTURAL CONCRETE SHALL BE DETAILED OR APPROVED BY THE ENGINEER.

MASONRY

MASONRY UNITS FOR HOLLOW UNIT MASONRY CONSTRUCTION SHALL CONFORM TO ASTM C90.

MORTAR SHALL BE TYPE "M" OR "S", FRESHLY PREPARED AND UNIFORMLY MIXED, CONFORMING TO ASTM 270.

GROUT AND MORTAR FOR REINFORCED MASONRY SHALL CONFORM TO ASTM 476.

CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL NOT BE USED IN MORTAR OR GROUT IN WHICH REINFORCEMENT, METAL TIES OR ANCHORS ARE EMBEDDED.

HORIZONTAL REINFORCEMENT, TRUSS TYPE 9GA GALVANIZED, SHALL BE PLACED 16" ON CENTER MINIMUM.

IN ALL WALLS, PROVIDE #5 BAR @ 48" O.C. MINIMUM, AS WELL AS AT ALL CORNERS OR JAMBS. ALL VERTICAL STEEL TO BE FULLY GROUTED SOLID.

GROUTING THE CELLS OF MASONRY UNITS SHALL BE PERFORMED IN LIFTS NO GREATER THAN 5 FEET.

BOND BEAM AT TOP OF WALL TO CONTAIN (2) #5 BARS AND IS TO BE CONTINUOUS WITH CONTINUOUS STEEL.

PROVIDE AN 8" BOND BEAM LINTEL WITH (2) #5 BARS OVER ALL OPENINGS UNLESS NOTED OTHERWISE.

INTERMEDIATE BOND BEAMS ARE TO BE DISCONTINUOUS WITH STEEL JOINT AT CONTROL JOINT.

METAL BUILDING SYSTEM

THE METAL BUILDING SHALL BE FABRICATED BY AN AUTHORIZED METAL BUILDING MANUFACTURER IN ACCORDANCE WITH THE DESIGN(S).

ENGINEERING DRAWINGS, SHOWING CONFORMANCE TO THE DESIGN LOADS AND DEFLECTION CRITERIA AND INDICATING MEMBER SIZES SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR DESIGN CONCEPT APPROVAL. DESIGN CALCULATIONS AND DRAWINGS ARE TO BE PREPARED BY AND BEAR THE SEAL AND SIGNATURE OF A LICENSED PROFESSIONAL ENGINEER REGISTERED IN THE STATE IN WHICH THE PROJECT IS LOCATED.

DESIGN STANDARDS SHALL CONFORM TO STATE AND/OR LOCAL BUILDING CODES AND THE MBMA, LATEST EDITION.

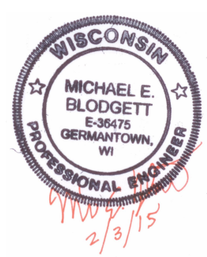
THE METAL BUILDING FABRICATOR/SUPPLIER SHALL BE RESPONSIBLE FOR ANY ADDTIONAL HOLES, STABLIZER PLATES, STIFFENERS, ETC., NOT SHOWN ON THE DRAWINGS, TO ENSURE COMPLAINCE TO ALL FEDERAL, STATE AND LOCAL ERECTION REGULATIONS.

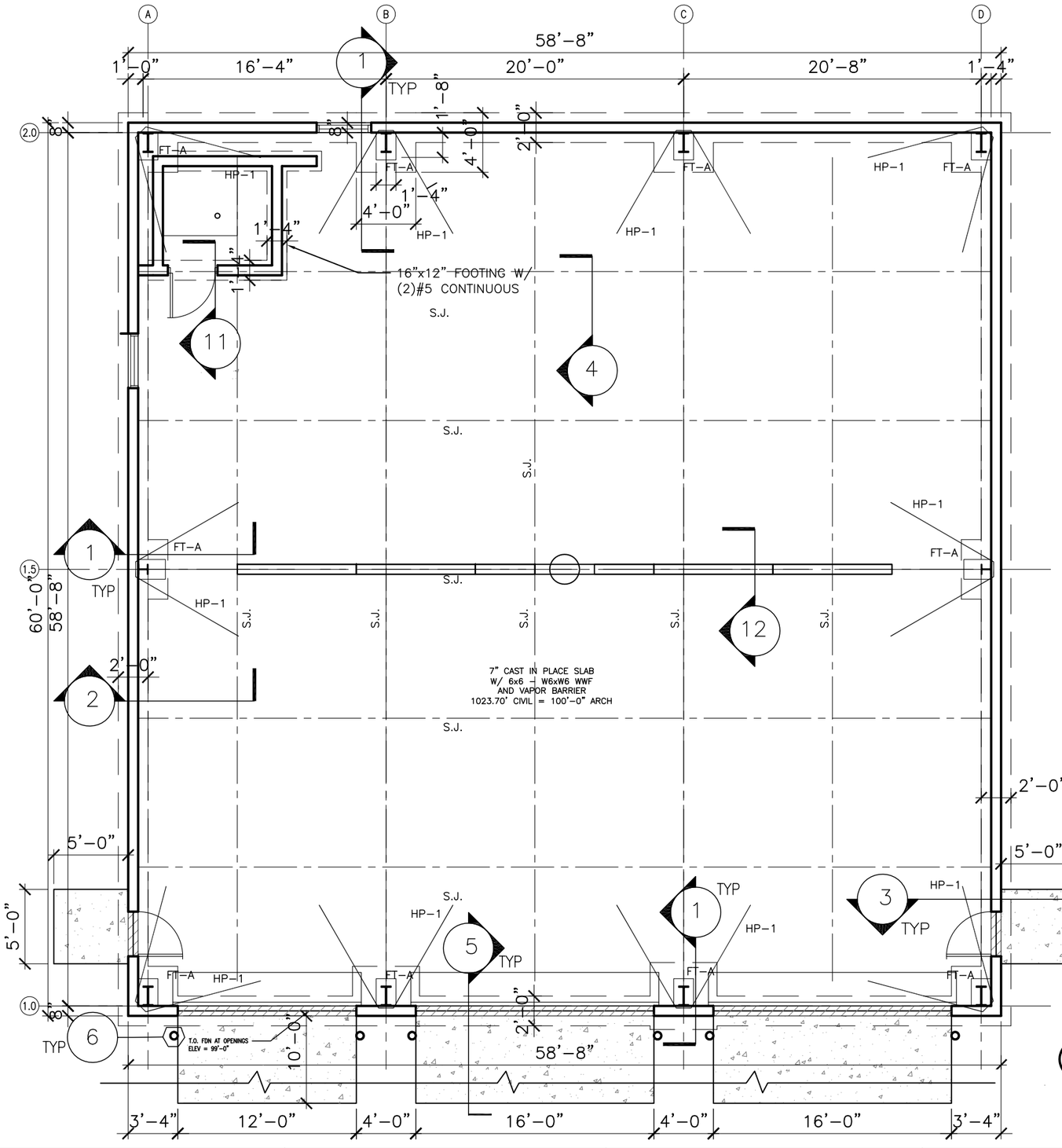
THE FOUNDATION FOR THE PRE-ENGINEERED BUILDING WAS DESIGN USING PRESUMED REACTIONS THAT REQUIRE VERIFICTION ONCE COMPONENT REACTIONS ARE MADE AVAILABLE. THEREFORE SUBMIT METAL BUILDING SHOP DRAWINGS, PRIOR TO DESIRED APPROVAL OF REINFORCING FOR THE FOUNDATION. ALL FOOTINGS, PIERS AND/OR ANCHOR ROD SIZES MUST BE CONFIRMED BY THE ENGINEER OF RECORD.

CONCRETE SLAB

PROVIDE PREFORMED JOINT FILLER BETWEEN SLAB AND FOUNDATION WALLS, HOLD DOWN TOP EDGE OF FILLER AND PROVIDE A JOINT SEALANT OVER TOP.
BASIS OF DESIGN PRODUCT = DYMONIC FC, BY TREMCO

PROVIDE JOINT FILLER TO FILL SAWCUT JOINTS IN THE CONCRETE SLAB OR WHERE TRAFFIC PASSES OVER JOINTS.
BASIS OF DESIGN PRODUCT = MM80 BY METZGER/MCGUIRE





FOOTING SCHEDULE				
NO.	SIZE	BP	REINFORCING	PIER SIZE
FT-A	4'-0" SQUARE X 12" THICK	1	(4) #5 BARS BOTH WAYS	1'-4" x 1'-10" CAST W/ FDN WALL
-	-	-	-	-
-	-	-	-	-

PEDESTALS: SEE PLAN (LOWER LEFT) FOR TYPICAL SIZES, PROVIDE (8) #5 BARS VERT. W/ #3 STIRRUPS @ 10" O.C. AT ALL LOCATIONS (ADDITIONAL TIES AT TOP OF PIER – ANCHOR REINFORCING)

METAL BUILDING FABRICATOR SHALL PROVIDE A SUBMITTAL THAT CONTAINS ALL REQUIRED BRACING FOR REVIEW OF BRACING LOCATIONS BY ARCHITECT. SUBMITTAL SHALL INCLUDE REACTIONS FOR REVIEW OF THE FOUNDATION AND LATERAL RESTRAINT DESIGN. ANY SIZE VARIATIONS FOR BASEPLATES, ANCHORS, OR FROM THE PLANS SHALL BE NOTED WITH RED CLOUDS. THE SUBMITTALS SHALL BE PROVIDED TO ALLOW CHECKING OF FOUNDATION PRIOR TO THE APPROVAL OF REINFORCING STEEL IN THE FOUNDATION.

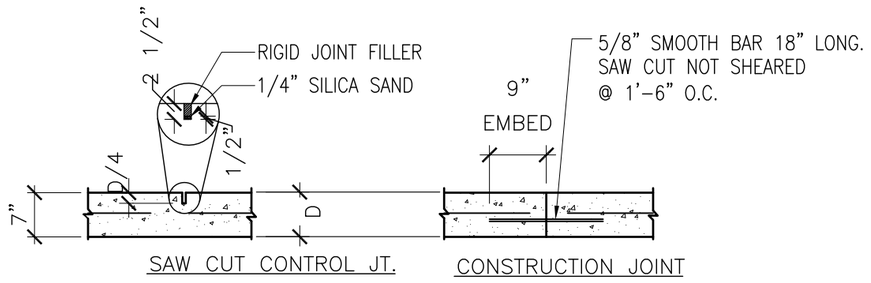
S.J. = SAWCUT CONTROL JOINT, SEE DETAIL 4

1 FOUNDATION PLAN
SCALE: 1/8" = 1'-0"

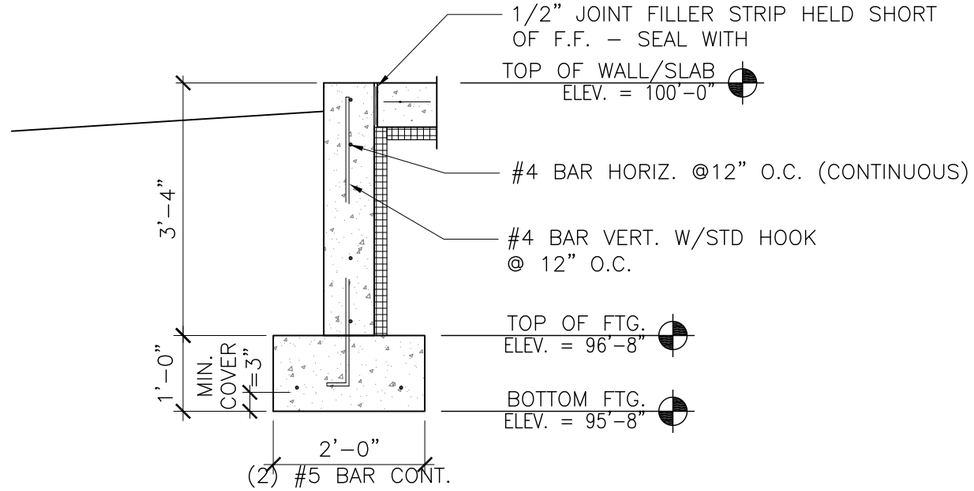
WISCONSIN
MICHAEL E. BLODGETT
E-36475
GERMANTOWN, WI
PROFESSIONAL ENGINEER
2/3/15

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	FOUNDATION PLAN AND FOOTING SCHEDULE	SHEET 39	E

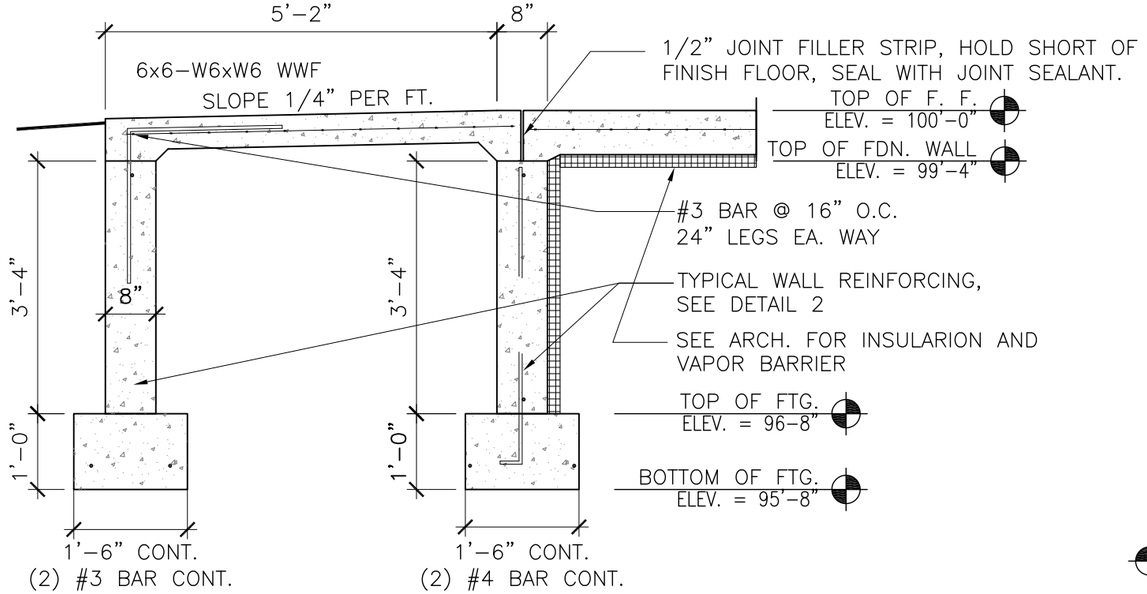
CONCRETE CONTROL JOINTS
1. MAXIMUM DISTANCE BETWEEN JOINTS IS 15"–0"
(ATTEMPT TO AVOID AREAS LARGER THAN 160 S.F.)
2. KEEP ALL AREAS SQUARE AS POSSIBLE
(MAXIMUM 1.5:1 LENGTH TO WIDTH RATIO)



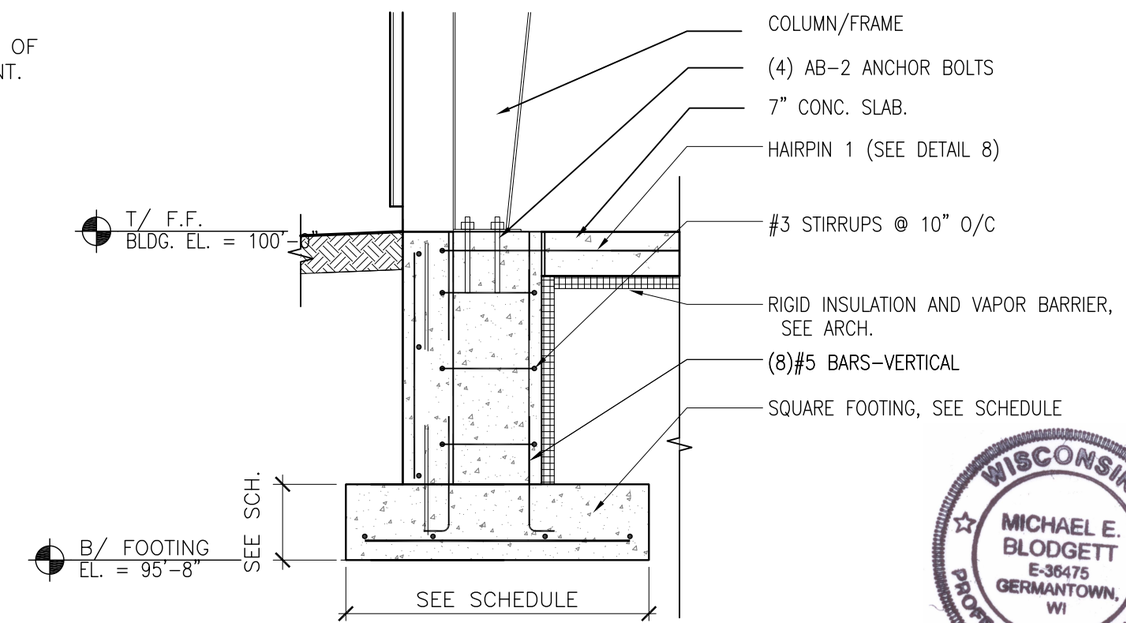
4 TYP. SLAB DETAIL
SCALE: 1/2" = 1'–0"



2 TYP. WALL DETAIL
SCALE: 1/2" = 1'–0"



3 TYP. STOOP DETAIL
SCALE: 1/2" = 1'–0"



1 TYP. FOOTING DETAIL
SCALE: 1/2" = 1'–0"

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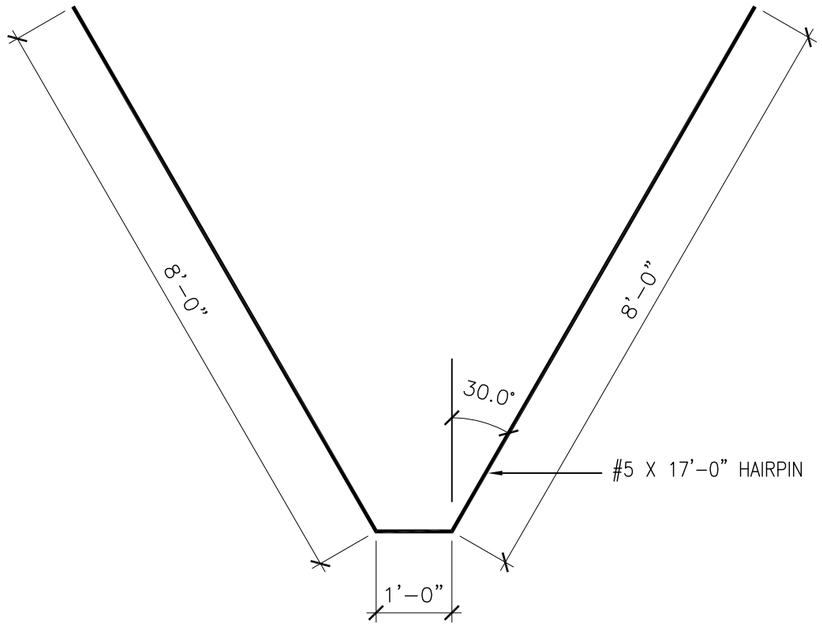
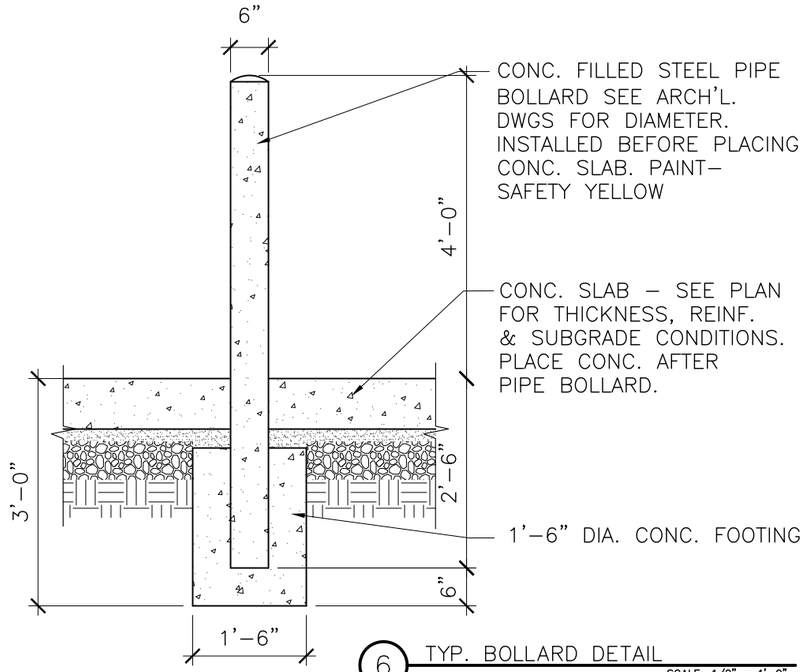
PROJECT NO: 1107–00–74	HWY: USH 41	COUNTY: DODGE	FOUNDATION SECTIONS	SHEET 40	E

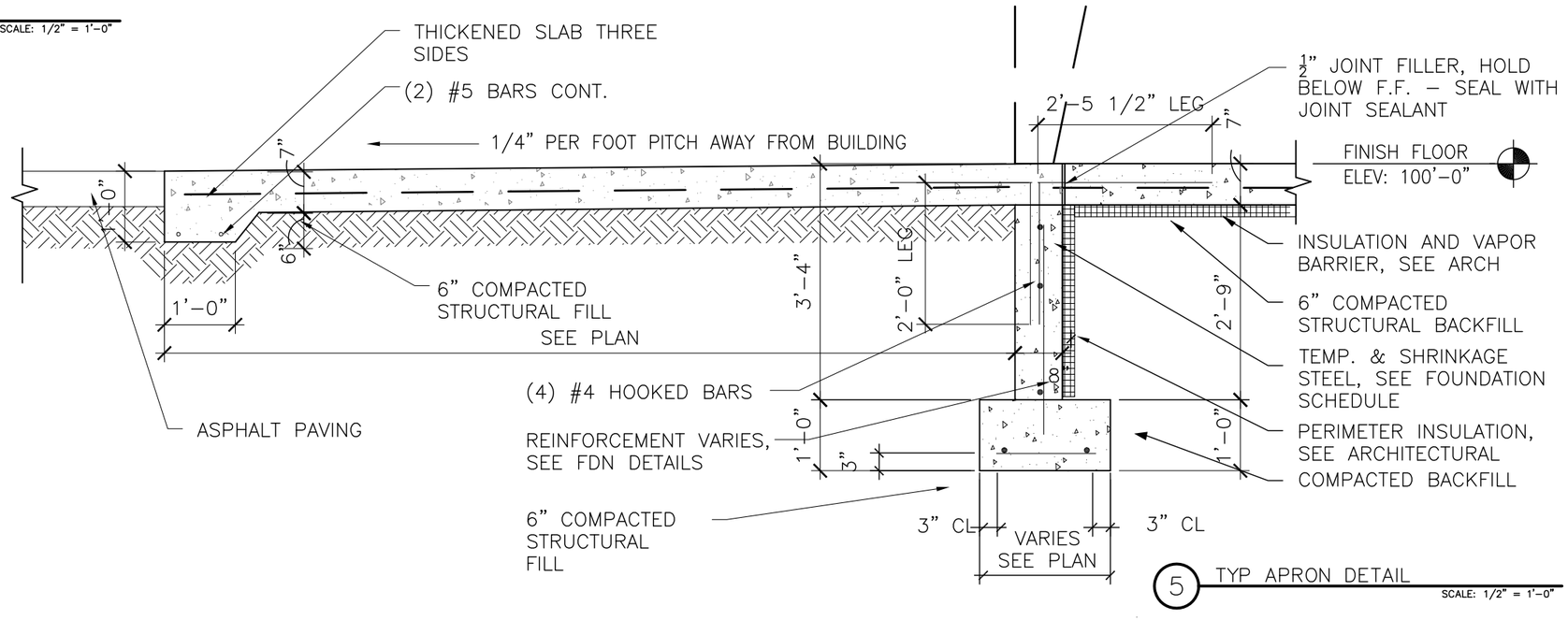
FILE NAME : C:\BLODGETT ENGINEERING\PROJECTS\13119 – BARRIENTOS – LOMIRA SALT\50699 – S SHEETS.DWG PLOT DATE : 10.13.2014 PLOT BY : MEB PLOT NAME : _____ WISDOT/CADDS SHEET 42



8 HAIRPIN 1 (HP-1)
SCALE: 1/2" = 1'-0"



6 TYP. BOLLARD DETAIL
SCALE: 1/2" = 1'-0"



5 TYP APRON DETAIL
SCALE: 1/2" = 1'-0"

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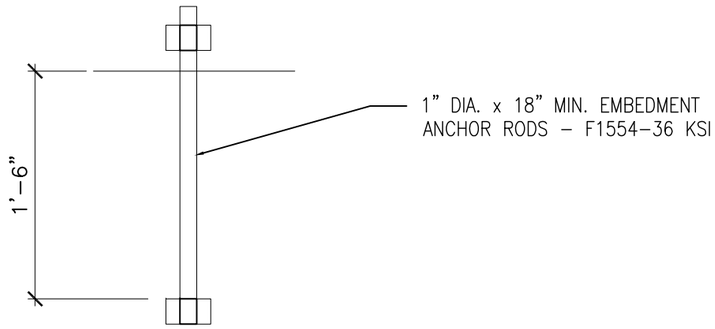
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	FOUNDATION DETAILS	SHEET 41	E

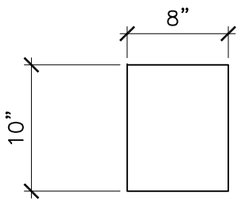
2

ANCHOR BOLT SCHEDULE

MARK	DIAMETER	GRADE	DETAIL
AB1	1"	F1554-36	10
–	–	–	–

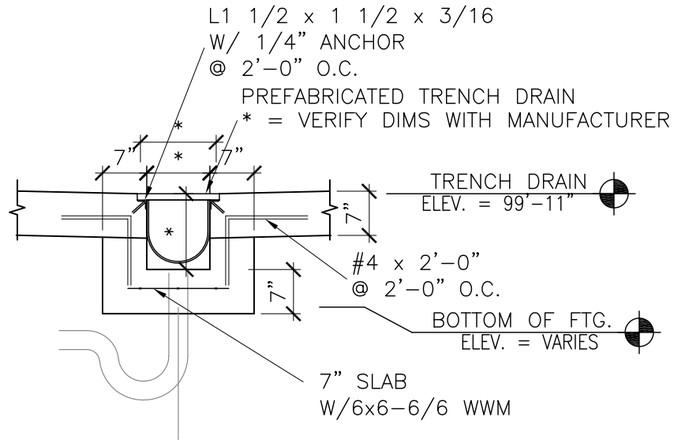


10 ANCHOR ROD (AB-1)
1" = 1'-0"

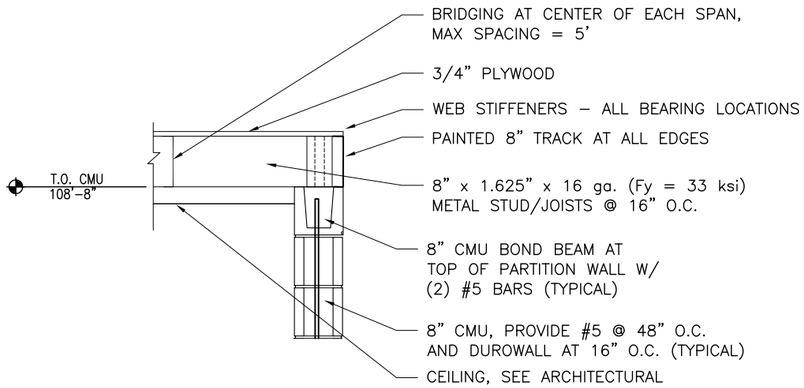


BP 1 W/
(4) AB-1

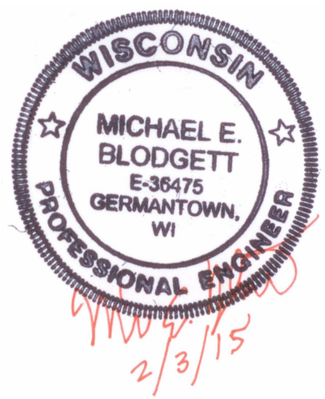
9 BASEPLATE DIMENSIONS
SCALE: 1" = 1'-0"



12 TRENCH DRAIN DETAIL
SCALE: 1/2" = 1'-0"

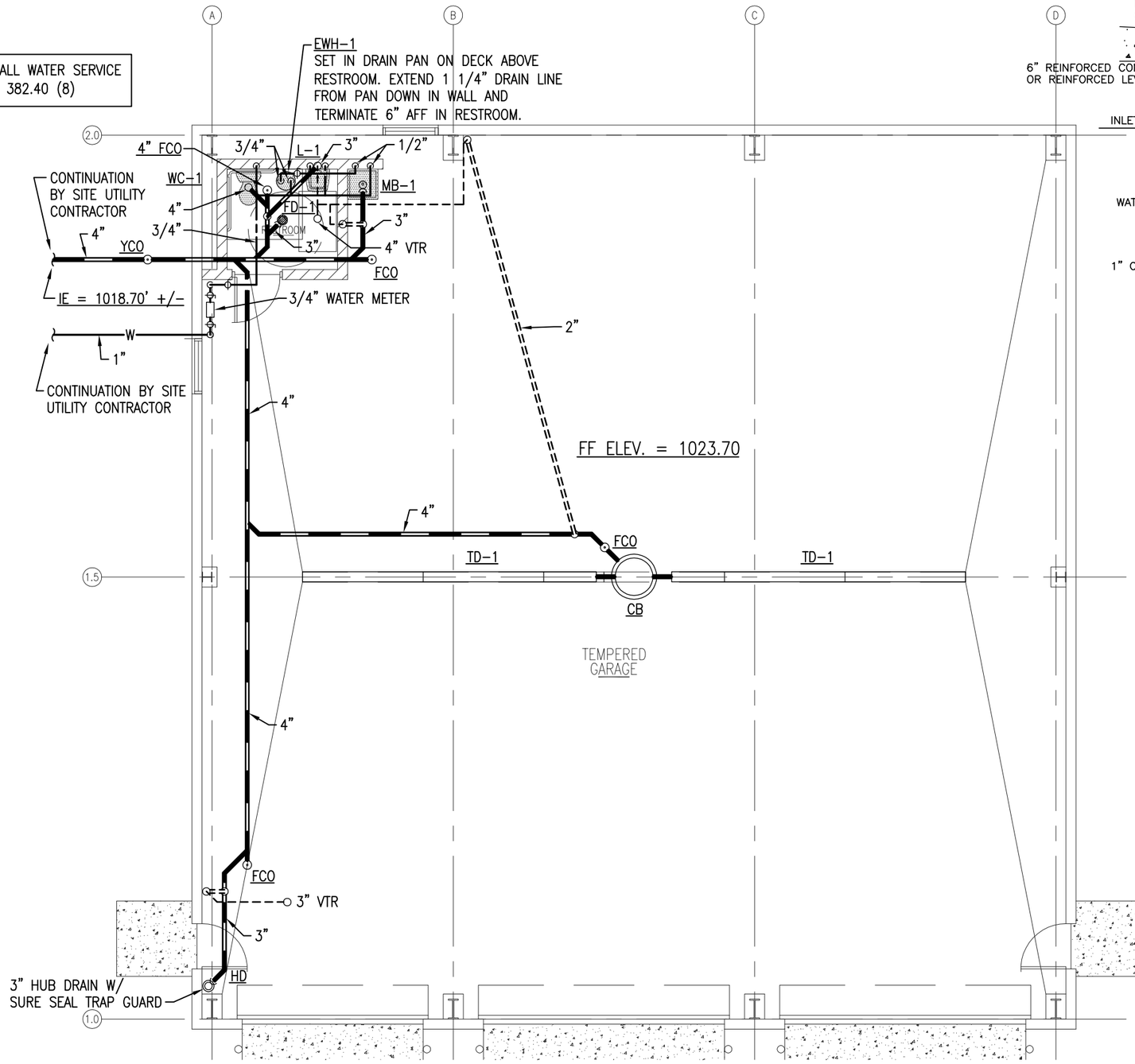


11 RESTROOM CEILING STRUCTURE
1" = 1'-0"



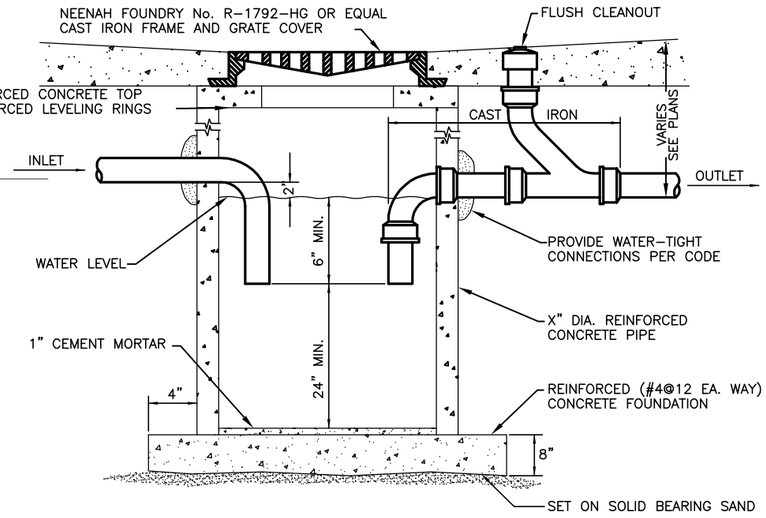
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	BASE PLATE, ANCHOR, AND CEILING DETAILS	SHEET 42	E

NOTE: INSTALL WATER SERVICE PER COMM 382.40 (8)



1 FIRST FLOOR PLUMBING PLAN

1/8" = 1'-0"



2 GARAGE CATCH BASIN DETAIL

NTS

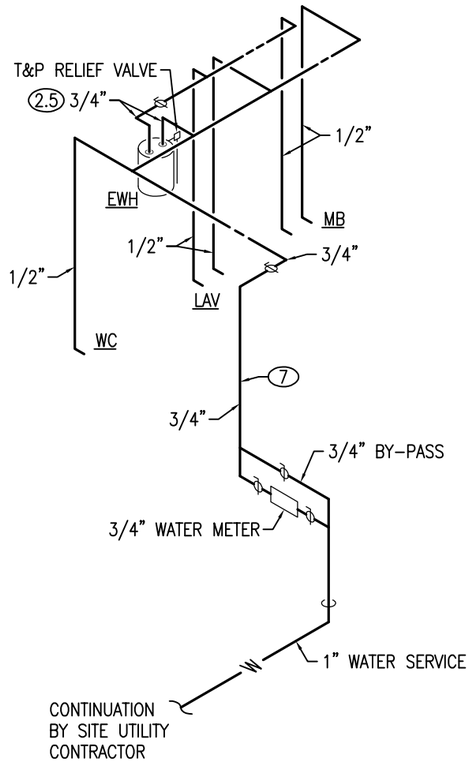
PLUMBING LEGEND

SYMBOL	ABBR.	DESCRIPTION
	CW	COLD WATER PIPING
	HW	HOT WATER PIPING
	W	SANITARY PIPING BELOW GROUND
	V	SANITARY VENT PIPING ABOVE GROUND
	V	SANITARY VENT PIPING BELOW GROUND
	UP	PIPING UP
	DN	PIPING DOWN
	C.O.	CLEANOUT
	FCO	FLOOR CLEANOUT
		BALL VALVE
	FD	FLOOR DRAIN
I.E.=00.00'	I.E.	INVERT ELEVATION
	EWH	ELECTRIC WATER HEATER
	WC	WATER CLOSET
	LAV / L-	LAVATORY
	MB	MOP BASIN
	CB	CATCH BASIN
	TD	TRENCH DRAIN

FOR PLUMBING ONLY PROCESS PIPING AND BRINE SYSTEM BY OTHERS.

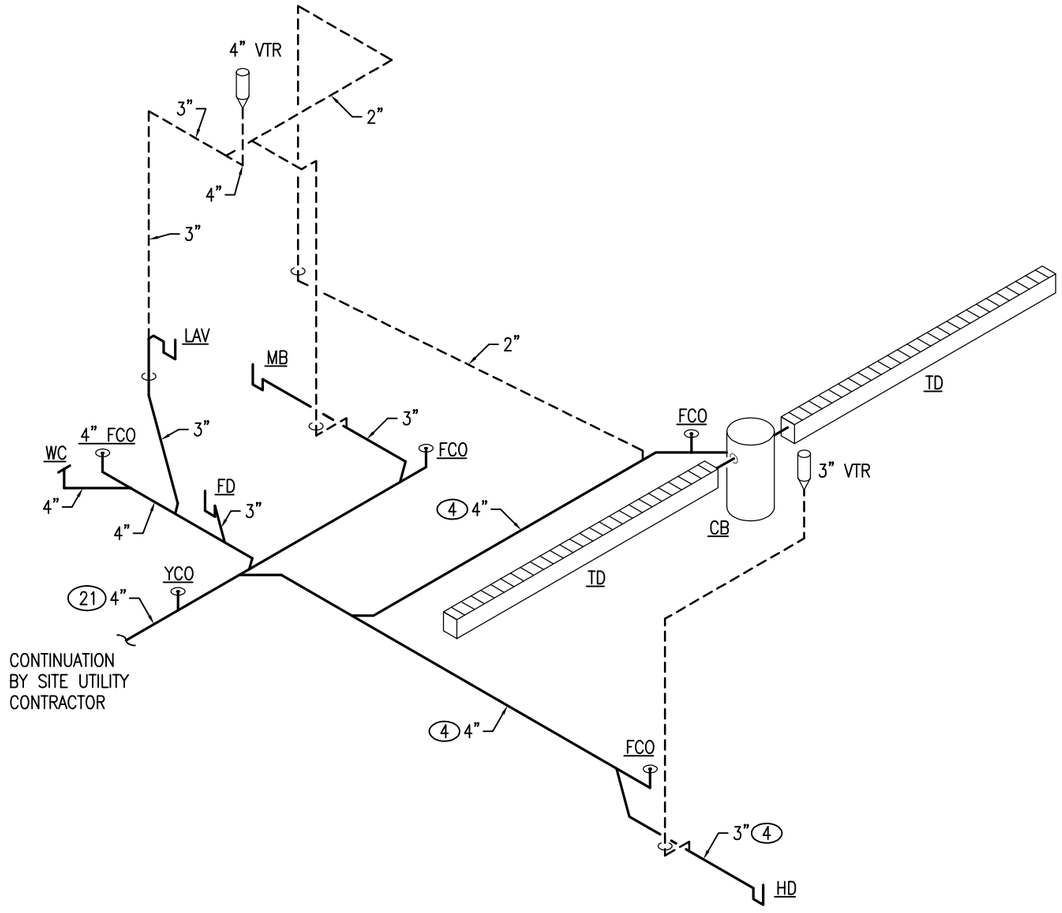
PROJECT NO:1107-00-74	HWY: USH 41	COUNTY: DODGE	GARAGE PLUMBING PLAN	SHEET 43	E

2



1 WATER PIPING ISOMETRIC

NTS



2 WASTE & VENT PIPING ISOMETRIC

NTS

FOR PLUMBING ONLY PROCESS PIPING
AND BRINE SYSTEM BY OTHERS.

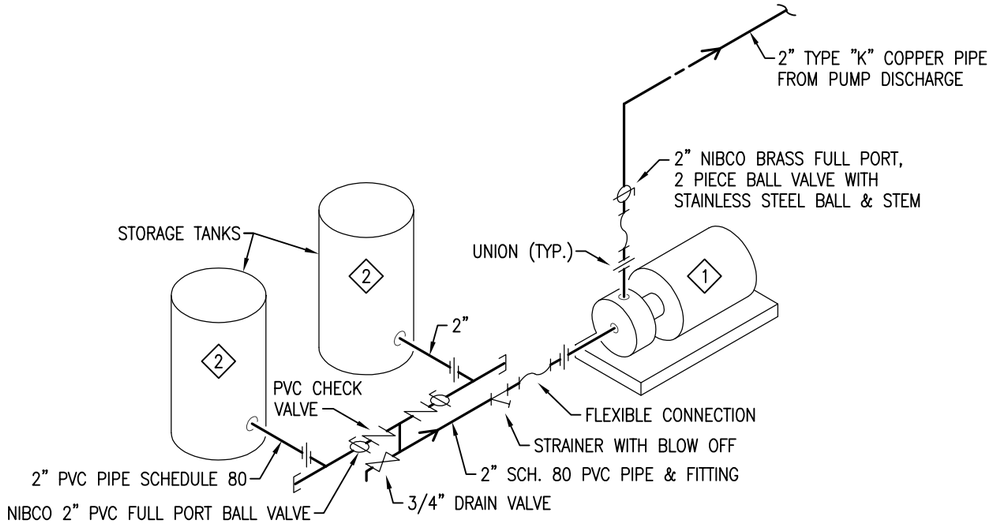
PROJECT NO:1107-00-74	HWY: USH 41	COUNTY: DODGE	PLUMBING ISOMETRICS	SHEET 44	E

GENERAL NOTES:

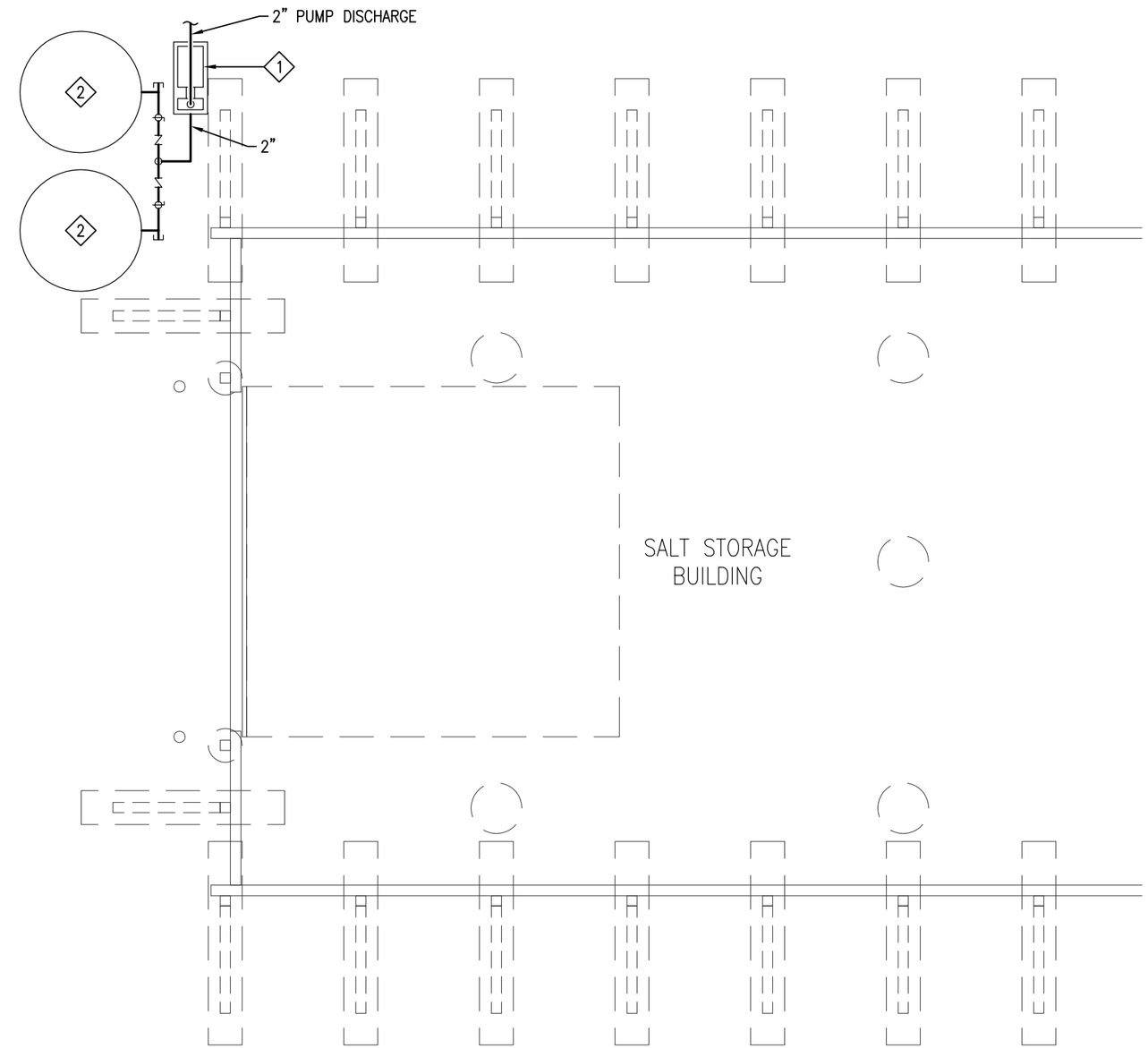
1. COORDINATE EXACT EQUIPMENT LOCATIONS WITH OWNER.
2. COORDINATE ALL SYSTEM COMPONENTS INCLUDING BUT NOT LIMITED TO TANKS, PUMPS, VALVES, PIPE MATERIAL AND PIPE SIZES WITH OWNER PRIOR TO ORDERING.

◇ KEYED NOTES:

1. PROVIDE VARITECH IND. OR EQUAL LIQUID TRANSFER PUMP STATION WITH S/S PUMP, 316 S/S HEAVY DUTY PUMP SHAFT, (TEFC) MOTOR, THERMALLY PROTECTED. INCLUDE GALVANIZED STEEL MOUNTING FRAME WITH INTEGRAL HOSE RACK. SYSTEM TO BE PRE-WIRED WITH REMOTE HAND CARRIED PUMP START/STOP CONTROL. PROVIDE 50'-0" OF 1 1/2" EPDM WIRE REINFORCED HOSE.
   PUMP: 1/2 HP, 115 VOLT, 1 PHASE, 1750 RPM. 316 STAINLESS STEEL CONSTRUCTION. PROVIDE MOUNTING BRACKET & ALL COMPONENTS FOR COMPLETE OPERATION.
2. ACA ASSMANN, POLYETHYLENE TANK, MODEL ACT 1500 GALLON, WITH OPENING FOR A 2" FILL LINE @ 58" AFF, AND 2" DRAIN OFF CONNECTION @ 12" AFF.



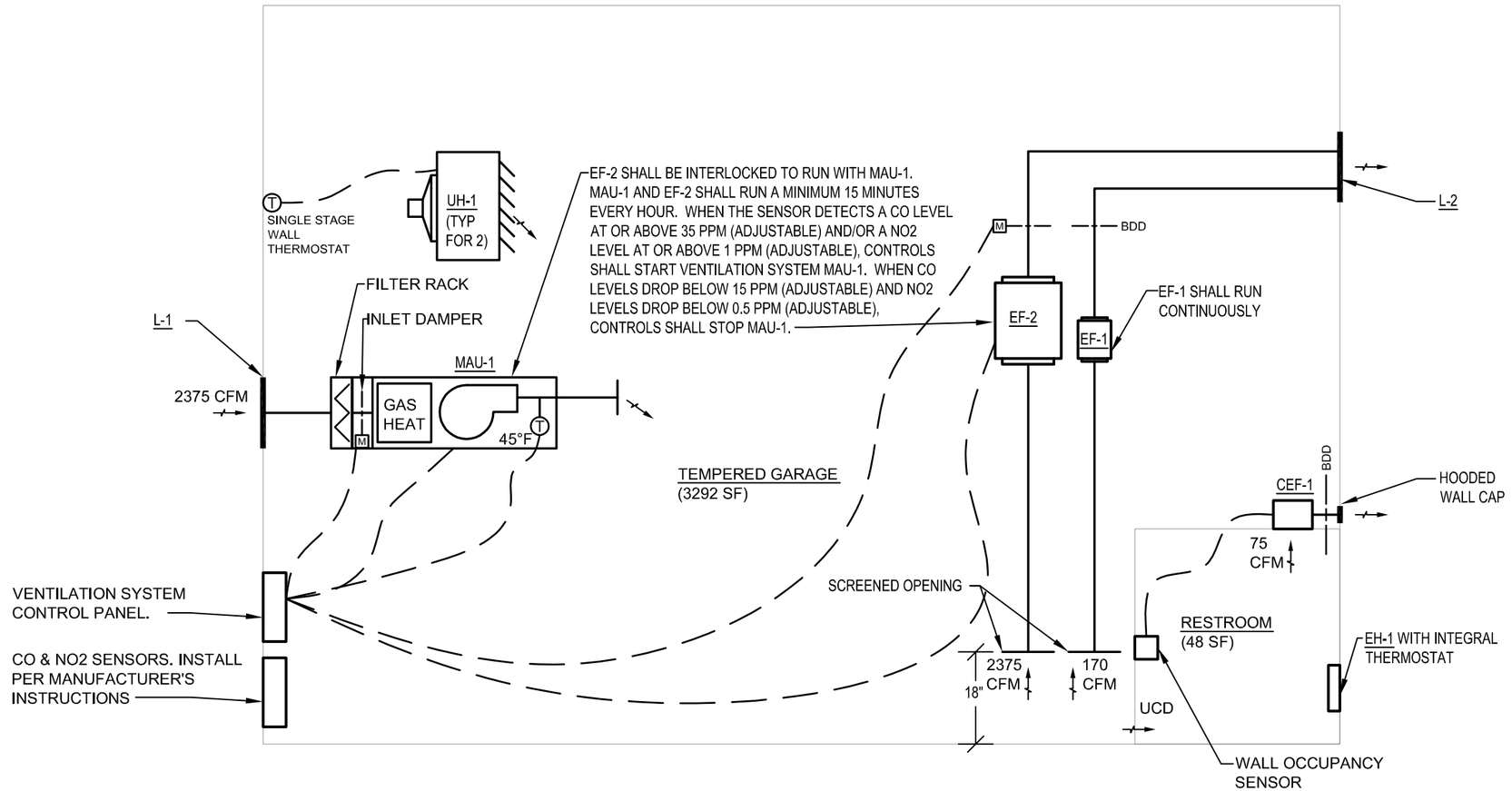
2 PIPING ISOMETRIC
NTS



1 PARTIAL PROCESS PIPING PLAN
1/8" = 1'-0"

PROJECT NO:1107-00-74	HWY: USH 41	COUNTY: DODGE	SALT BUILDING PLUMBING PLAN	SHEET 45	E

2



1 MECHANICAL FLOW DIAGRAM
NO SCALE

LEGEND

- MANUAL VOLUME DAMPER
- AUTOMATIC DAMPER
- BACKDRAFT DAMPER
- THERMOSTAT
- GAS SHUT-OFF VALVE
- G — GAS (LOW PRESSURE, 0.25 PSIG OR LESS)
- D — DRAIN

HVAC BASIS OF DESIGN

WINTER - RESTROOM	DB	WB
OUTDOOR	-15	-
INDOOR	68	-
WINTER - GARAGE		
OUTDOOR	-15	-
INDOOR	40	-

GARAGE VENTILATION SYSTEM IS DESIGNED PER WISCONSIN SBS 364.0404.
GARAGE FLOOR AREA: 3292 SQ. FT.
CONTINUOUS EXHAUST REQ'D: 0.05 CFM/SQ.FT. * 3292 = 165 CFM
VARIABLE EXHAUST REQ'D: 0.70 CFM/SQ.FT. * 3292 = 2305 CFM
TOTAL EXHAUST REQUIRED = 2470 CFM
TOTAL EXHAUST PROVIDED = 2545 CFM

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CHRISTOPHER J. STAAB
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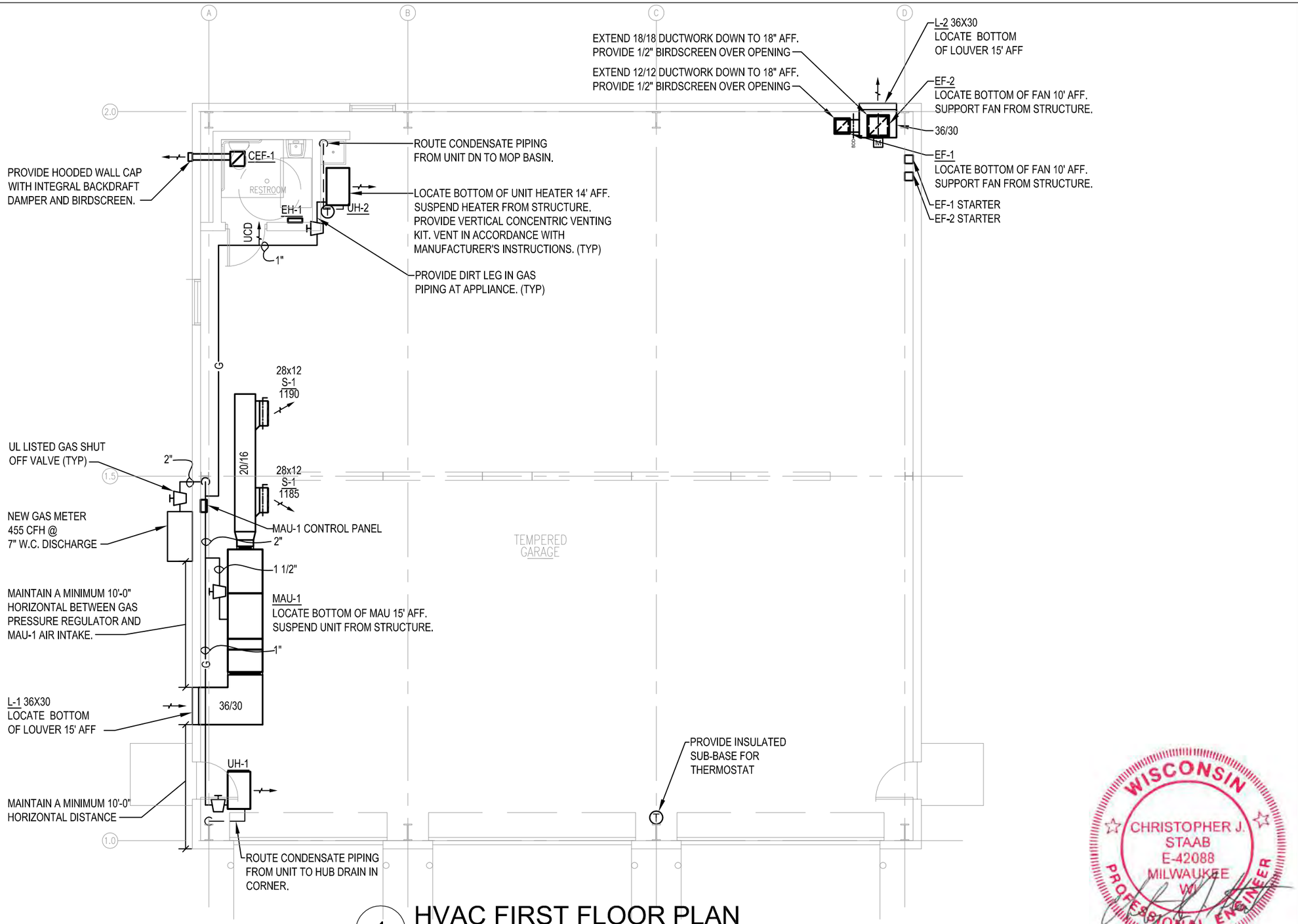
MILWAUKEE
WI
PROFESSIONAL ENGINEER
11-19-2014



1 HVAC FIRST FLOOR PLAN

1/8" = 1' - 0"

WISCONSIN
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MILWAUKEE
WI
PROFESSIONAL ENGINEER
11-19-2014

PROJECT NO:1107-00-74	HWY: USH 41	COUNTY: DODGE	MECHANICAL FIRST FLOOR PLAN	SHEET 47	E

MAKE UP AIR UNIT-GAS FIRED SCHEDULE

PLAN MARK MAU-	LOCATION	SERVES	MANUFACTURER	MODEL NO.	WEIGHT (LBS)	TYPE	CFM	EXTERNAL SP	FUEL TYPE	INLET HOOD (Y/N)	INLET DAMPER (Y/N)	MODULATION PERCENTAGE (RA/OA)					EAT/LAT	INPUT/ OUTPUT (MBH)	STARTER DESCRIPTION										ELECTRICAL DATA								EMERGENCY POWER (YES/NO)	HARDWIRE INTERLOCK WITH PLAN MARK NO.	COMMENTS
												100% OA (Y/N)	80/20 (Y/N)	70/30 (Y/N)	60/40 (Y/N)	50/50 (Y/N)			FURNISHED BY	INSTALLED BY	LOCATION	TYPE	COVER MODIFICATION							VOLTS/ PHASE	SCCR (KAIC)	HP	AMPS		DISCONNECT SWITCH					
																							NEMA RATING	COMB.	BLANK	S/S P.B.	H.O.A.	P.L.	CONTL TFMR (24V/120V)				MCA	MOCP	FURN BY	INST. BY	FUSES			
1	GARAGE	GARAGE	GREENHECK	DG-112-H20	736	HORIZONTAL	2375	0.5	NATURAL GAS	N	Y	Y	N	N	N	N	-15/55	195.2/179.6	MFR	MFR	GARAGE	MAGNETIC	1			X		X		208/3		1 1/2	8.9	15	MFR	MFR	YES	NO	EF-2	

EXHAUST FAN SCHEDULE

PLAN MARK	LOCATION	SERVES	MANUFACTURER	MODEL	AIRFLOW (CFM)	STATIC PRESSURE (IN. W.G.)	FAN				MOTOR HP	STARTER DESCRIPTION										CONTROLLED BY	ELECTRICAL DATA									EMERGENCY POWER (YES/NO)	HARDWIRE INTERLOCK WITH PLAN MARK NO.	COMMENTS
							TYPE	DRIVE	FAN SPEED (RPM)	FAN POWER (BHP)		FURNISHED BY	INSTALLED BY	LOCATION	TYPE	COVER MODIFICATION								VOLTS/ PHASE	SCCR (KAIC)	AMPS		DISCONNECT SWITCH					
																NEMA RATING	COMB.	BLANK	S/S PB	H.O.A.	P.L.	CONTL TFMR (24V OR 120V)				FLA	MOCP	FURN BY	INST. BY	FUSES			
EF-1	GARAGE	GARAGE	GREENHECK	SQ-80-D	170	0.45	INLINE	DIRECT	1460	0.04	1/12	M.C.	E.C.	GARAGE	MANUAL	1				X	X		RUN CONTINUOUSLY	115/1		1.1		M.C.	E.C.	YES	NO		
EF-2	GARAGE	GARAGE	GREENHECK	BSQ-140-10	2375	0.65	INLINE	BELT	1493	0.72	1	M.C.	E.C.	GARAGE	MAGNETIC	1				X	X		MAU-1	208/3		4.6		M.C.	E.C.	YES	NO	MAU-1	
CEF-1	RESTROOM	RESTROOM	GREENHECK	SP-B110	75	0.35	CEILING	DIRECT			110W	MFR	MFR	INTEGRAL	INTEGRAL								OCC. SENSOR	115/1		1.0		MFR	MFR	NO	NO		

ELECTRIC HEATER SCHEDULE

PLAN MARK EH-	LOCATION	SERVES	MANUFACTURER	MODEL	WATTS	MBH	CONTROLS			ELECTRICAL DATA							EMERGENCY POWER (YES/NO)	HARDWIRE INTERLOCK WITH PLAN MARK NO.	COMMENTS
							LINE VOLT WALL THERMOSTAT	INTEGRAL THERMOSTAT	TRANSFORMER/ RELAY LOW VOLTAGE MODULE	VOLTS/ PHASE	SCCR (KAIC)	AMPS		DISCONNECT SWITCH					
												FLA	MOCP	FURN BY	INST. BY	FUSES			
1	RESTROOM	RESTROOM	BERKO	FRC4824	3600	12.3		X		208/1	-	17.3		MFR	MFR	NO	NO		

LOUVER SCHEDULE

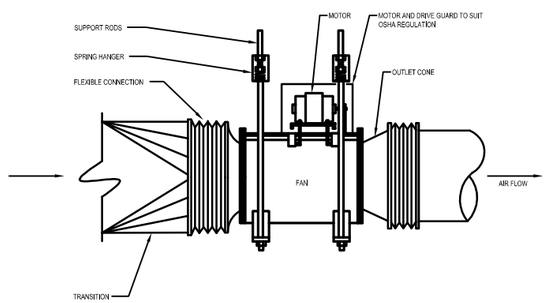
PLAN MARK L-	SERVES	SIZE (W" x H" x D")	FREE AREA (SF)	CFM	MATERIAL	FINISH	COLOR	MANUFACTURER	MODEL NO.	COMMENTS
1	MAU-1	36X30X6	3.45	2375	ALUMINUM	KYNAR	BY ARCH	GREENHECK	ESD603	
2	EF-1,2	36X30X6	3.45	2545	ALUMINUM	KYNAR	BY ARCH	GREENHECK	ESD603	

SUPPLY, RETURN, EXHAUST & TRANSFER GRILLE SCHEDULE

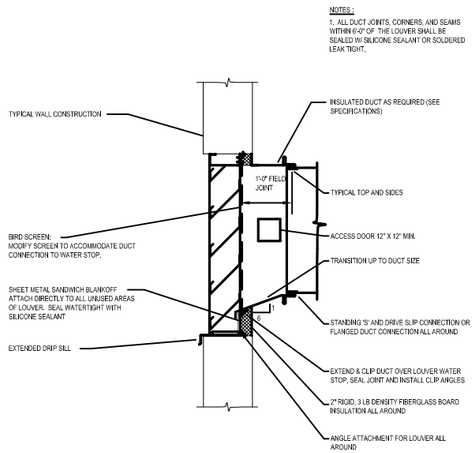
MARK NO.	GRILLE SIZE	MANUFACTURER	MODEL	FINISH	NECK VOLUME DAMPER	COMMENTS
1	28X12	PRICE	520	WHITE	NO	STEEL, SIDE WALL, DOUBLE DEFLECTION

GAS FIRED UNIT HEATER SCHEDULE

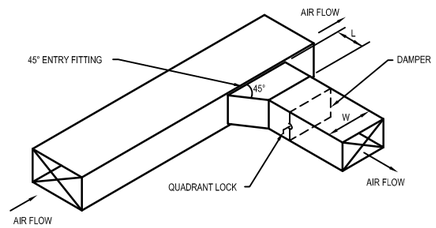
PLAN MARK (UH-)	LOCATION	SERVES	MANUFACTURER	MODEL	CFM	BTUH INPUT MBH	BTUH OUTPUT	COMB. AIR INLET SIZE	VENT OUTLET SIZE	HP	STARTER DESCRIPTION		ELECTRICAL DATA							EMERGENCY POWER (YES/NO)	COMMENTS
											FURNISHED BY	INSTALLED BY	VOLTS/ PHASE	SCCR (KAIC)	AMPS		DISCONNECT SWITCH				
															MCA	MOCP	FURN BY	INST. BY	FUSES		
1	GARAGE	GARAGE	MODINE	PTC135	2160	135	125	3	3	3/8	MFR	MFR	120/1		6.9	15	MFR	MFR	NO	NO	
2	GARAGE	GARAGE	MODINE	PTC135	2160	135	125	3	3	3/8	MFR	MFR	120/1		6.9	15	MFR	MFR	NO	NO	



3 TYPICAL INLINE FAN DETAIL
NO SCALE



2 LOUVER INSTALLATION DETAIL
NO SCALE



NOTE: L = 1/4W (4" MIN) (REVERSE FLOW ARROWS FOR EXHAUST AND RETURN)

1 BRANCH DUCT TAKEOFF DETAIL
NO SCALE

PROJECT NO:1107-00-74	HWY: USH 41	COUNTY: DODGE	MECHANICAL SCHEDULES AND DETAILS	SHEET 48	E

GENERAL NEW CONSTRUCTION NOTES:

1. CIRCUITS INDICATED ARE INTENDED TO DENOTE WHICH DEVICES/FIXTURES ARE TO BE WIRED TO A COMMON CIRCUIT BREAKER, AND NOT ITS POSITION IN THE PANEL. REBALANCE LOADS BETWEEN PHASES (MAX. 7.5%) UPON COMPLETION OF WIRING.

2. BRANCH CIRCUITS FOR RECEPTACLES MOUNTED ON ROOF TOP EQUIPMENT MAY BE ROUTED UP THROUGH UNIT CURB OR UNIT ITSELF IF RECOMMENDED BY ROOF TOP EQUIPMENT MANUFACTURER.

3. NEW EXIT LIGHTS SHALL BE WIRED TO THE NEAREST AVAILABLE UNSWITCHED LIGHTING CIRCUIT SERVING THE AREA THAT EXIT LIGHT IS INSTALLED.

4. ELECTRICAL RACEWAYS SHALL BE CONCEALED IN CEILING CAVITY OR IN WALLS WHERE POSSIBLE, OTHERWISE RACEWAY SHALL BE EXPOSED WIREMOLD TYPE, 200, 500 OR 700 AS NECESSARY TO ACCOMMODATE WIRES.

5. ELECTRICAL RACEWAYS SHALL BE CONCEALED IN CEILING CAVITY OR IN WALLS. EXPOSED RACEWAYS ARE NOT ACCEPTABLE UNLESS SPECIFICALLY INDICATED AND/OR APPROVED BY A/E.

6. EXACT LOCATION OF SPECIAL PURPOSE OUTLETS SHALL BE VERIFIED IN FIELD. VERIFY SPECIFIC WIRING REQUIREMENTS WITH VENDORS' DRAWINGS/INSTRUCTION, COORDINATING ELECTRICAL WORK WITH WORK OF VENDOR AND OTHER TRADES.

7. INCLUDE FISH WIRE IN ALL NON-POWER CONDUITS.

8. VERIFY EXACT LOCATION OF LIGHTING FIXTURES IN THE FIELD TO AVOID CONFLICT WITH MECHANICAL EQUIPMENT, DUCT WORK, AND PIPES.

9. PAINT ALL EXPOSED CONDUIT TO MATCH ADJACENT AREAS WHEN THE CONDUIT IS IN A FINISHED AREA.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING AND AIMING ALL FIXTURES TO THE OPTIMUM DISTRIBUTION AND OWNER'S SATISFACTION.

11. COORDINATE CABLE TYPES AND INSTALLATIONS FOR WORK ABOVE CEILING WITH HVAC FOR PLENUM VS. NON-PLENUM RATING OF CEILING SPACE. INSTALLATION SHALL FOLLOW GUIDELINES FOR RATINGS OF CEILING CAVITY.

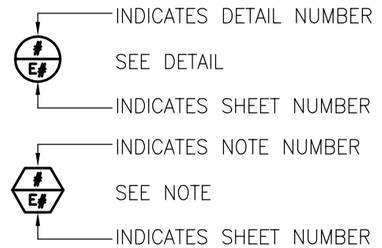
12. JUNCTION BOXES INSTALLED IN EXTERIOR WALLS SHALL NOT PENETRATE THE VAPOR BARRIER. IF THE INTEGRITY IS SACRIFICED THEN THE BARRIER SHALL BE REPAIRED TO ORIGINAL RATING.

13. PLASTIC TIE WRAPS SHALL NOT BE USED TO SUPPORT ANY RACEWAYS OR OPEN AIR WIRING.

SYMBOLS

ANY SYMBOLS UTILIZED ON THE FLOOR PLANS NOT OTHERWISE ON THE SYMBOLS LIST SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEERS PRIOR TO BIDDING FOR CLARIFICATION.

- FLUORESCENT LIGHTING FIXTURE – SEE SCHEDULE
- EMERGENCY BATTERY UNIT LIGHT FIXTURE – SURFACE MOUNTED
- WALL MOUNTED LIGHTING FIXTURE.
- OCCUPANCY SENSOR SWITCH – MOUNTED 48" AFF
- LOCAL SWITCH, SINGLE POLE – 3-WAY.
- DUPLEX RECEPTACLE – MOUNTED 18" AFF.
- $\oplus_{C}$ DUPLEX RECEPTACLE – MOUNTED VERTICALLY 6" ABOVE COUNTER OR HORIZONTALLY 4" ABOVE BACKSPLASH.
- $\oplus_{GFI}$ DUPLEX RECEPTACLE – GROUND FAULT CIRCUIT INTERRUPTER TYPE.
- $\oplus_{WP}$ DUPLEX RECEPTACLE – WEATHER PROOF. GFI WEATHER RESISTANT WITH METAL WHILE-IN-USE. COVER AS SPECIFIED
- SPECIAL PURPOSE OUTLET – SEE SCHEDULE.
- 6 MOTOR – SEE SCHEDULE. SEE MECHANICAL/ELECTRICAL SHEETS FOR ELECTRICAL INFORMATION OF HVAC EQUIPMENT INDICATED ON DRAWINGS.
- DISCONNECT SWITCH.
- JUNCTION BOX
- PUSH BUTTON



ABBREVIATIONS

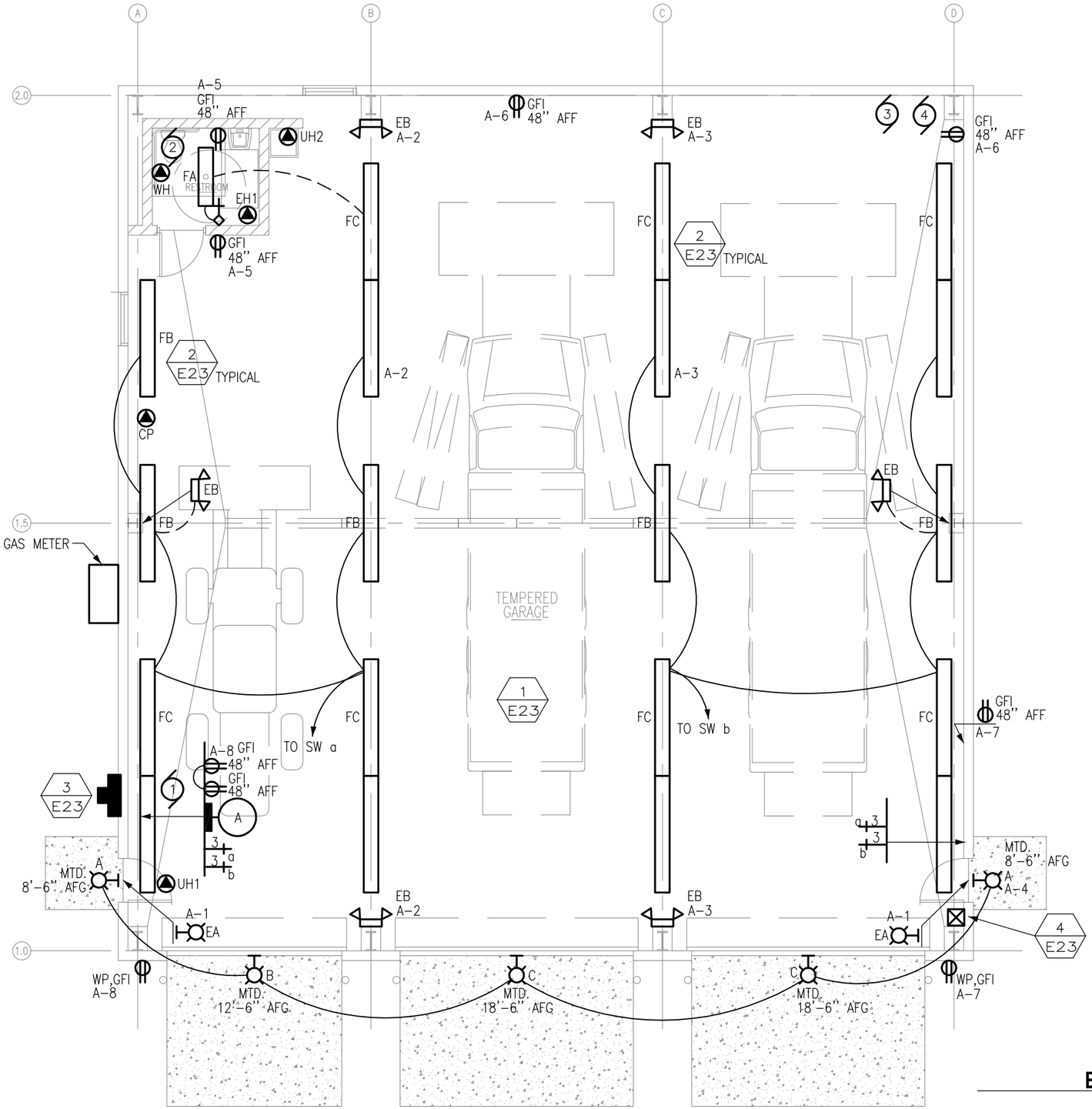
A/E	ARCHITECT/ENGINEER
AFF	ABOVE FINISHED FLOOR
ARCH	ARCHITECT
AFG	ABOVE FINAL GRADE
BKR	BREAKER
C	MOUNTED 6" ABOVE COUNTER
CB	CIRCUIT BREAKER
CS	COMBINATION MAGNETIC STARTER/ DISCONNECT SWITCH
CKT	CIRCUIT
E.C	ELECTRICAL CONTRACTOR
FBO	FURNISHED BY OTHER
G.C.	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPTING
JB	JUNCTION BOX
KW	KILOWATT
LOC	LOCATION
LTG	LIGHTING
MAG	MAGNETIC STARTER
MAN	MANUAL STARTER
MLO	MAIN LUGS ONLY
MSB	MAIN SWITCHBOARD
MTD	MOUNTED
NU	NEAR UNIT (WITHIN SIGHT OR ON UNIT)
REC	RECESSED
SURF	SURFACE
TYP	TYPICAL
V	VENDOR
VER	VERIFY
VFD	VARIABLE FREQUENCY DRIVE
W	WIRED
WP	WEATHERPROOF
XFMR	TRANSFORMER

SHEET INDEX

(E1) SYMBOLS, ABBREVIATIONS, AND NOTES
(E2) ELECTRICAL FLOOR PLAN
(E3) MOTOR WIRING AND SPECIAL OUTLET SCHEDULES
(E4) LIGHTING FIXTURE SCHEDULE
(E5) ELECTRICAL DISTRIBUTION DIAGRAM AND PANEL SCHEDULES

WISCONSIN
DANNY HO
E-22321
GERMANTOWN
WI
PROFESSIONAL ENGINEER
11/19/14

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	SYMBOLS, ABBREVIATIONS, AND NOTES (E1)	SHEET 49	E



E23 PLAN NOTES:

1. ALL PULL BOXES AND JUNCTION BOXES INSIDE STRUCTURE SHALL BE PVC, WEATHER PROOF AND CORROSION RESISTANT.

2. PROVIDE UNISTRUT CHANNEL SPANNING ENTIRE LENGTH OF FIXTURE. SUSPEND WITH CHAINS FROM STRUCTURE TO 22 FT. A.F.F.

3. UTILITY APPROVED 400 AMP 208Y/120 VOLT TRANSOCKET.

4. (4) #1/0 AND (1) #6 GND. IN 2 INCH SCH. 40 PVC CONDUIT TO PANEL "B" IN SALT STORAGE BUILDING.

ELECTRICAL PLAN

1/8" = 1'-0"

N

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	ELECTRICAL FLOOR PLAN (E2)	SHEET 50	E

2

MOTOR WIRING SCHEDULE

NOTE: VERIFY ALL INFORMATION EXPRESSED BELOW FROM THE RESPECTIVE ARCHITECTURAL, MECHANICAL (HVAC) AND PLUMBING DRAWINGS AND SPECIFICATIONS. FOR ADDITIONAL INFORMATION ON HVAC WIRING. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THIS ENGINEER.

NO	HP	VOLTS	Ø	LOC	DRIVING	FED FROM		BKR		BR. WIRING				STARTER					SEE NOTE
						PNL.	NO.	SIZE	POLE	NO	SIZE	GND	COND	TYPE	F	I	W	LOC	
1	8.9 MCA	208	3	AS SHOWN	MAKE-UP AIR UNIT MAU-1	A	27,29,31	20	3	3	12	12	1/2	CS				ADJ. UNIT	2
2	FRAC	120	1	AS SHOWN	CLG EXH FAN CEF-1	A	2	20	1	2	12	12	1/2						1
3	1/12	120	1	AS SHOWN	EXHAUST FAN EF-1	A	11	20	1	2	12	12	1/2	MAN				ADJ. UNIT	
4	1	208	3	AS SHOWN	EXHAUST FAN EF-2	A	20,22,24	20	3	3	12	12	1/2	CS				ADJ. UNIT	
5	3/4	208	3	AS SHOWN	OVERHEAD DOOR	A	19,21,23	20	3	4	12	12	1/2	CS	V	V	EC	N.U.	3
6	3/4	208	3	AS SHOWN	OVERHEAD DOOR	A	27,29,31	20	3	4	12	12	1/2	CS	V	V	EC	N.U.	3
7	3/4	208	3	AS SHOWN	OVERHEAD DOOR	A	28,30,32	20	3	4	12	12	1/2	CS	V	V	EC	N.U.	3

MW NOTES:

1. CONTROL BY LIGHT SWITCH.
2. WIRE TO CONTROL PANEL. REFER TO MECHANICAL DRAWINGS.
3. WIRE UP/DOWN/STOP CONTROLLER PUSH BUTTON IN LOCATIONS SHOWN ON DRAWING. CONTROLLERS FURNISHED WITH UNIT.

SPECIAL OUTLET SCHEDULE ▲

R – RECEPTACLE
D – DISCONNECT
B – JUNCTION BOX

NO.	TO FEED	LOC.	FEED FROM		BREAKER		WIRING				TERMINAL			VOLT	Ø	LOAD (KW)	SEE NOTE
			PANEL	CKT.	SIZE	POLE	NO.	SIZE	GND	COND.	R	D	B				
CP	MAU-1 CONTROL PANEL	AS SHOWN	A	25	20	1	2	12	12	1/2			X	120	1		
EH1	ELECTRIC HEATER #1	AS SHOWN	A	10,12	25	2	3	10	10	3/4			X	208	1	17.3 FLA	
UH1	UNIT HEATER #1	AS SHOWN	A	13	20	1	2	12	12	1/2		X		120	1	6.9 MCA	
UH2	UNIT HEATER #2	AS SHOWN	A	14	20	1	2	12	12	1/2		X		120	1	6.9 MCA	
WH	WATER HEATER	AS SHOWN	A	9	25	2	3	10	12	1/2		X		208	1	2	

LIGHTING FIXTURE SCHEDULE

HARWOOD ENGINEERING CONSULTANTS
255 North 21st Street Milwaukee, Wisconsin 53233
414-475-5564 414-773-9999 fax harwood@HECI.COM

DES.	DESCRIPTION	LAMP DATA		VOLT	DEPTH	LIGHTING FIXTURE			BALLAST TYPE	MTG.	MTG. SURF	SEE NOTE LF___
		NO.	TYPE			MFR.	SERIES	OPTIONS/ACCESSORIES				
A	EXT. WALL BRKT	–	LED (INCLUDED)	120		DUAL – LITE	PGN–B		DRV	SURF	WALL	1
B	EXT. WALL BRKT W/ INTEGRAL PHOTOCELL	2 BARS	LED (INCLUDED)	120		MCGRAW EDISON	IST–C02–BL4 BK–P		DRV	SURF	WALL	
C	EXT. WALL BRKT W/ INTEGRAL PHOTOCELL	2 BARS	LED (INCLUDED)	120		MCGRAW EDISON	IST–B02–BL4 BK–P		DRV	SURF	WALL	
EA	LED EXIT – WALL MTD. 12" ABV. DOOR		LED (INCLUDED)	120		SURELITE	LPX SERIES	20, 22, 29, 14	DRV	SURF	WALL	
EB	DUAL LIGHT BATTERY UNIT	2	INCLUDED	120		SURELITE	CC4–BK–SQ–SD	14, 22, 29		SURF	WALL	
FA	1 x 4 WRAPAROUND	2	F32T8	120		METALUX	WSC SERIES	03, 06, 23, 18	E	PEND	EXP	3
FB	1 x 8 INDUSTRIAL WITH VANDEL RESISTANT DMR LEN	4	F32T8	120		METALUX	VT3 SERIES	03, 06, 23, 18	E	PEND	EXP	3
FC	(2) TYPE "F8"	8	F32T8	120		METALUX	VT3 SERIES	03, 06, 23, 18	E	PEND	EXP	2,3

ABBREVIATIONS:

AR	AS REQUIRED	GRD	GROUND	NA	NOT APPLICABLE	S	STANDARD (HID)
CONC. BASE	CONCRETE BASE	GYP.	GYPSUM BOARD	PS	PULSE START BALLAST	SPEC	SPECIAL
E	ELECTRONIC	LAS	LENGTH AS SHOWN	PEND	PENDANT	STAN	STANTION
EXP	EXPOSED STRUCTURE	LIG	LAY–IN GRID	REC	RECESSED	SURF	SURFACE

VAR	VARIES
LAS	LENGTH AS SHOWN
DRV	LED DRIVER
DDRV	LED DIMMABLE DRIVER

OPTIONS/ACCESSORIES CODE LISTING:

01. 0.125" PATTERN 12 ACRYLIC LENS
02. HOLOPHANE 8246 LENS
03. PAINT AFTER FABRICATION
04. SPRING LOADED LATCHES
05. FLUSH ALUMINUM DOOR FRAME
06. ELECTRONIC BALLAST, TOTAL HARMONIC DISTORTION ≤ 10%
07. FLUORESCENT DIMMING BALLAST
08. WHITE TRIM RING
09. SEMI–DIFFUSE, LOW–IRIDESCENT CLEAR ALZAK REFLECTOR
10. CUSTOM COLOR
11. PENDANT MOUNT
12. SAFETY CHAIN
13. NEMA HOOK, CORD AND PLUG
14. WIRE GUARD
15. EMERGENCY BALLAST
16. TOP AND BOTTOM LENSING
17. TIME DELAY
18. WET LOCATION LABEL
19. DAMP LOCATION CONSTRUCTION
20. FURNISH WITH UNIVERSAL ARROWS AND RED STENCIL FACE
21. QUARTZ RESTRIKE
22. EMERGENCY OPERATION– INTEGRAL NICAD BATTERY
23. LOCKING TYPE SOCKETS
24. SLOPE ADAPTER
25. TWO BALLAST COVERS
26. STANDARD FINISH TO BE SELECTED BY ARCHITECT
27. 277/24 VOLT TRANSFORMER
28. LEAD–CALCIUM BATTERY
29. INCLUDE SELF–DIAGNOSTICS

NOTES:

1. WITH REMOTE EMERGENCY BATTERY UNIT TO BE INSTALLED INSIDE ABOVE DOOR. CONTROL SHALL BE FROM INTEGRAL PHOTOCELL IN ADJACENT FIXTURES.

2. PROVIDE UNISTRUT CHANNEL SPANNING ENTIRE LENGTH FOR SUPPORT. PROVIDE CHAINS TO HANG FROM EXPOSED STRUCTURE ABOVE.

3. PROVIDE WITH COLD WEATHER BALLAST.

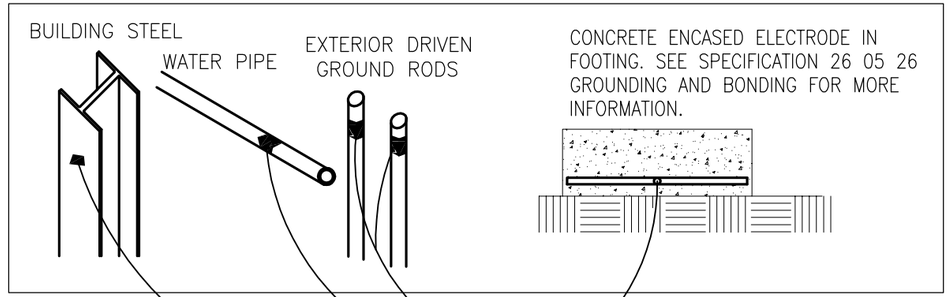
PANEL SCHEDULE

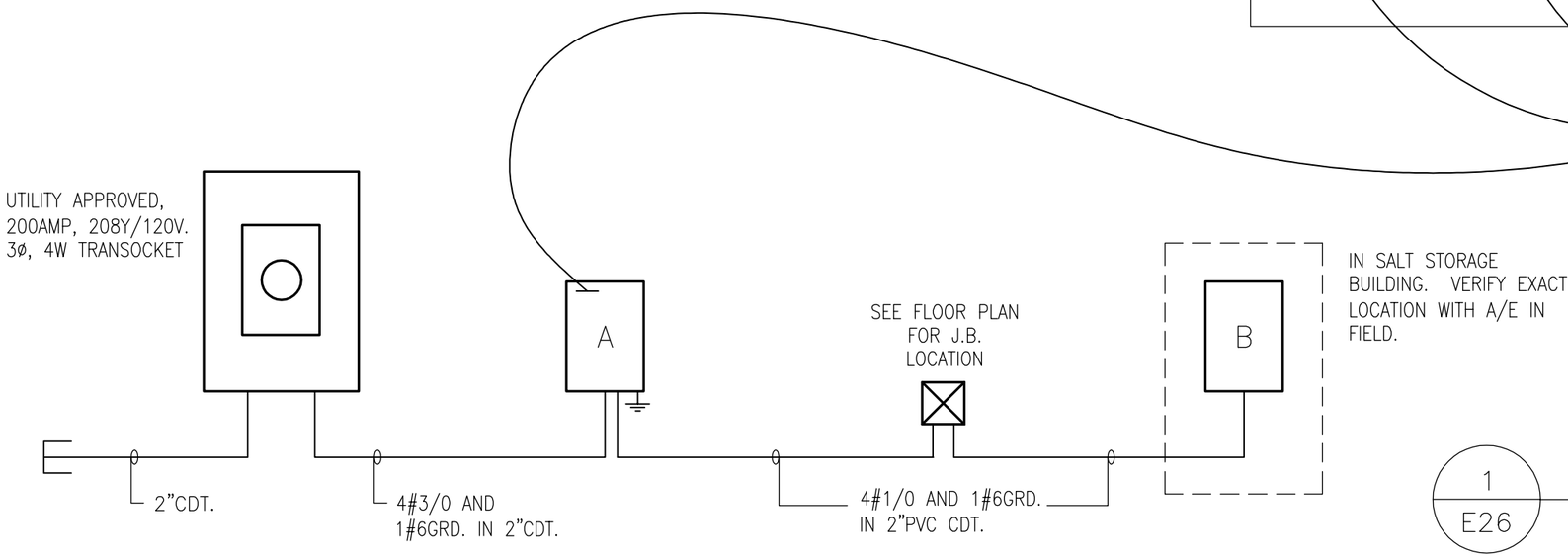
NO.	CIRCUIT BREAKERS QTY.	POLE	AMP.	QTY.	POLE	AMP.	1 POLE SPACES	MAINS BUSING	VOLTS	AIC	LOCATION	CABINET	REMARKS	SEE NOTE
A	17	1	20	5	3	20	(4)	200A 3P. MC/B (BOT)	208Y/120V 3ø, 4W	42K	SEE DWG	SURFACE NEMA 3R		
	1	1	25											
	1	2	25	1	3	100								
B	7	1	20				(10)	100A 3P. MC/B	208Y/120V 3ø, 4W	10K	SALT STORAGE BUILDING	SURFACE NEMA 3R		2,3
	1	2	30											

PANEL SCHEDULE NOTES:

1. NOT USED.
2. EXACT LOCATION WITHIN SALT STORAGE BUILDING TO BE VERIFIED.
3. 30A/2P BREAKER TO FEED BRINE PUMP. VERIFY SIZE WITH PUMP SUPPLIER.
4. FAULT CURRENT INDICATED IS PROVIDED FOR BID PURPOSES ONLY. ALL EQUIPMENT INCLUDING CIRCUIT BREAKERS SHALL BE FULLY RATED, SERIES RATING NOT ACCEPTABLE. THE CONTRACTOR SHALL VERIFY WITH A WRITTEN STATEMENT FROM THE UTILITY THE MAXIMUM SHORT CIRCUIT CAPACITY. USING THE MAXIMUM FAULT, PREPARE A SHORT CIRCUIT ANALYSIS, COORDINATION STUDY AND ARC FLASH STUDY OF THE ELECTRICAL DISTRIBUTION SYSTEM. THIS STUDY WITH THE UTILITY LETTER SHALL BE SUBMITTED WITH THE ELECTRICAL DISTRIBUTION SHOP DRAWINGS.
5. PROVIDE TERMINATION LUGS COMPATIBLE WITH FEEDER SIZE.

GROUND TO STREET SIDE OF SERVICE ENTRANCE WATER METER IN ACCORDANCE WITH ARTICLE 250 OF THE CURRENT NEC. ANSI 70. SIZE GROUNDING ELECTRODE CONDUCTOR FOR SERVICE AND TRANSFORMER IN ACCORDANCE WITH THE CURRENT NEC. AND LOCAL REQUIREMENTS.



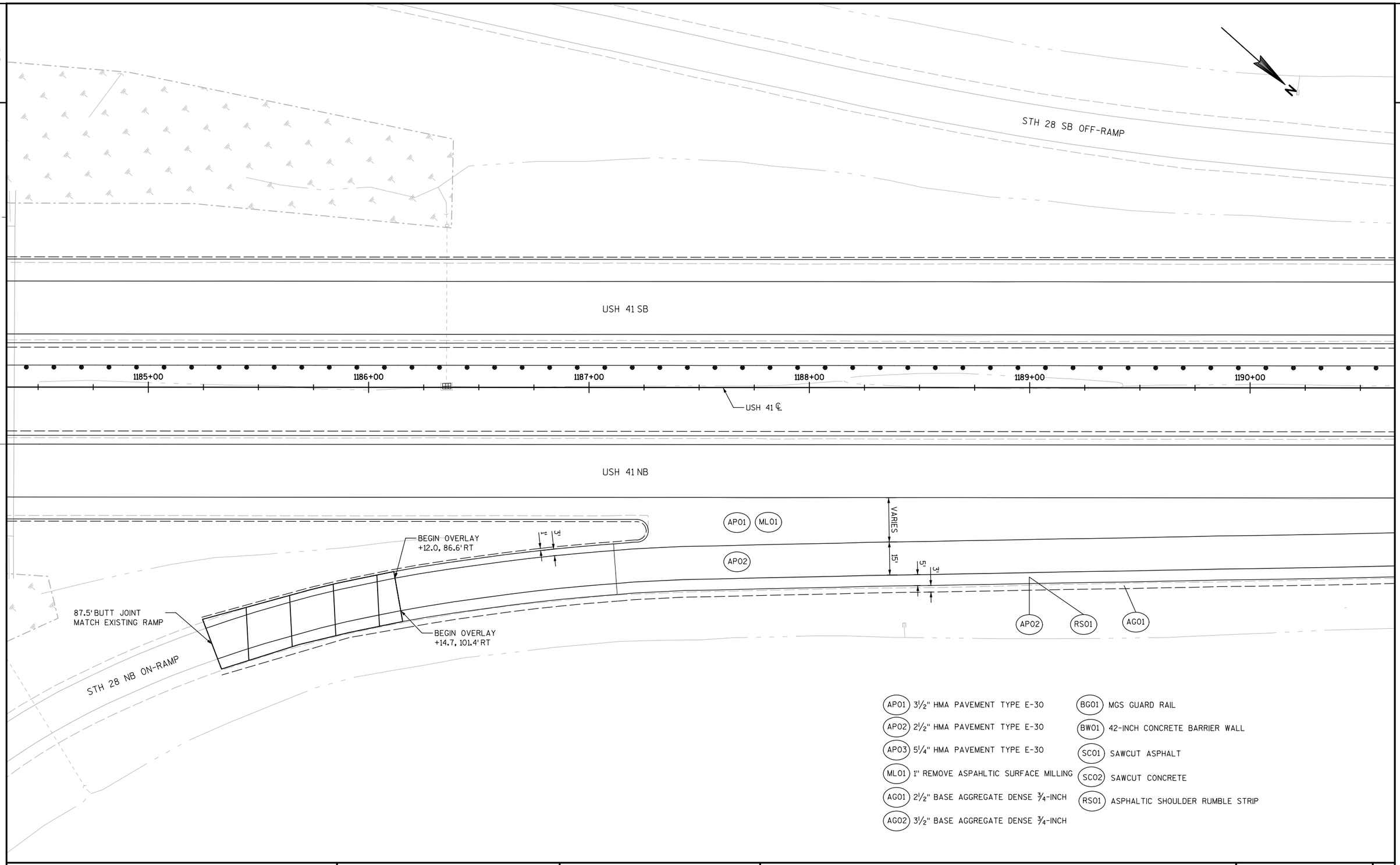


1 / E26 **ELECTRICAL DISTRIBUTION DIAGRAM**

NO SCALE

2

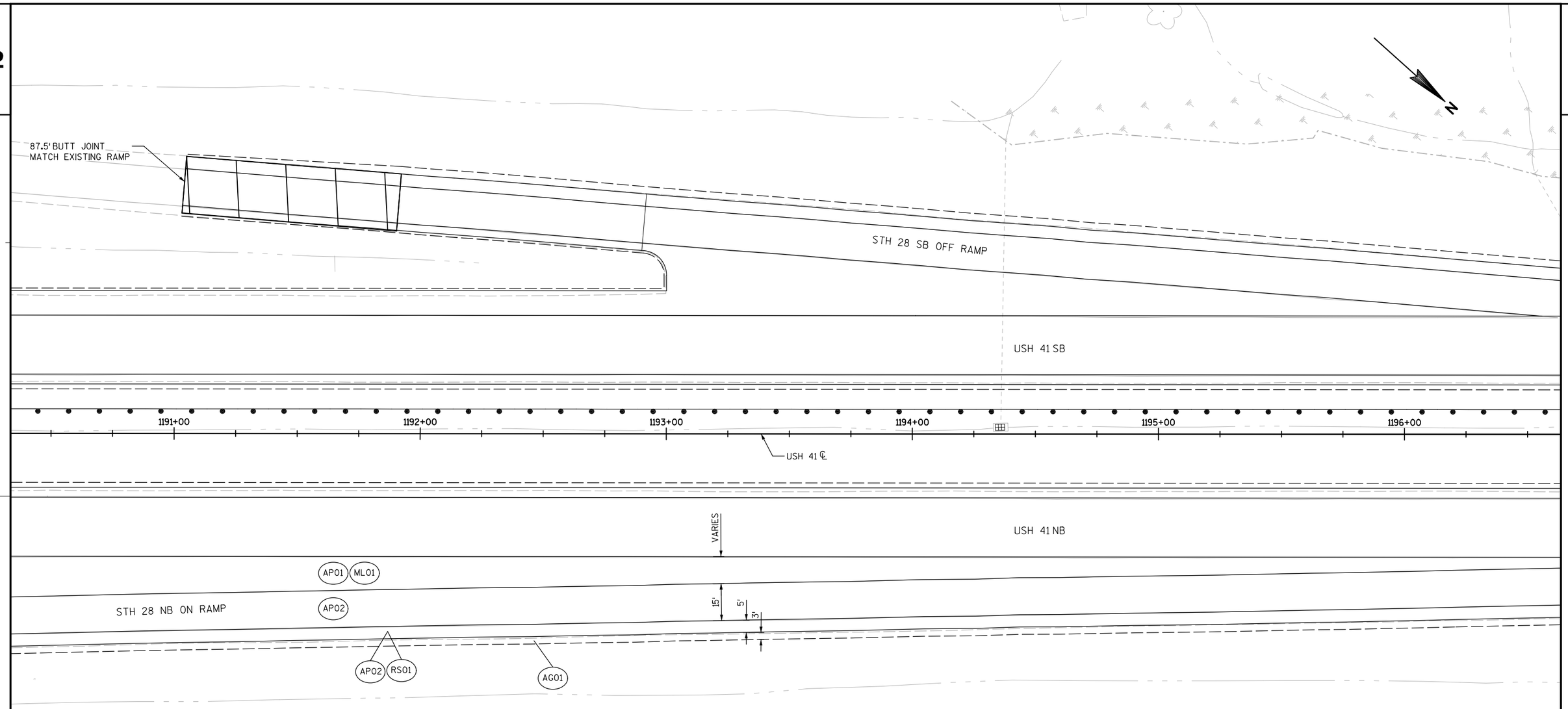
2



AP01	3½" HMA PAVEMENT TYPE E-30
AP02	2½" HMA PAVEMENT TYPE E-30
AP03	5¼" HMA PAVEMENT TYPE E-30
ML01	1" REMOVE ASPAHLTIC SURFACE MILLING
AG01	2½" BASE AGGREGATE DENSE ¾-INCH
AG02	3½" BASE AGGREGATE DENSE ¾-INCH
BG01	MGS GUARD RAIL
BW01	42-INCH CONCRETE BARRIER WALL
SC01	SAWCUT ASPHALT
SC02	SAWCUT CONCRETE
RS01	ASPHALTIC SHOULDER RUMBLE STRIP

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN DETAILS NB STH 28 ON-RAMP	SHEET 54	E

2



(AP01) 3½" HMA PAVEMENT TYPE E-30
(AP02) 2½" HMA PAVEMENT TYPE E-30
(AP03) 5¼" HMA PAVEMENT TYPE E-30
(ML01) 1" REMOVE ASPAHLTIC SURFACE MILLING
(AG01) 2½" BASE AGGREGATE DENSE ¾-INCH
(AG02) 3½" BASE AGGREGATE DENSE ¾-INCH
(BG01) MGS GUARD RAIL
(BW01) 42-INCH CONCRETE BARRIER WALL
(SC01) SAWCUT ASPHALT
(SC02) SAWCUT CONCRETE
(RS01) ASPHALTIC SHOULDER RUMBLE STRIP

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN DETAILS NB STH 28 ON-RAMP	SHEET 55	E

2

STH 28 SB OFF RAMP

USH 41 SB

1197+00 1198+00 1199+00 1200+00 1201+00 1202+00

USH 41 ℄

USH 41 NB

STH 28 NB ON RAMP

AP01 ML01 VARIES

15'

5'

3'

2'

AP02 RS01

SC02

BEGIN SAW CUT
+70.3, 65.6' RT

BEGIN REMOVE EXISTING SHOULDER
+70.3, 72.6' RT

AP01

AP03

END GORE
+03.3, 50.0' RT

AP01 RS01

BEGIN 15' TO 12' RAMP TAPER
+03.3, 65.0' RT

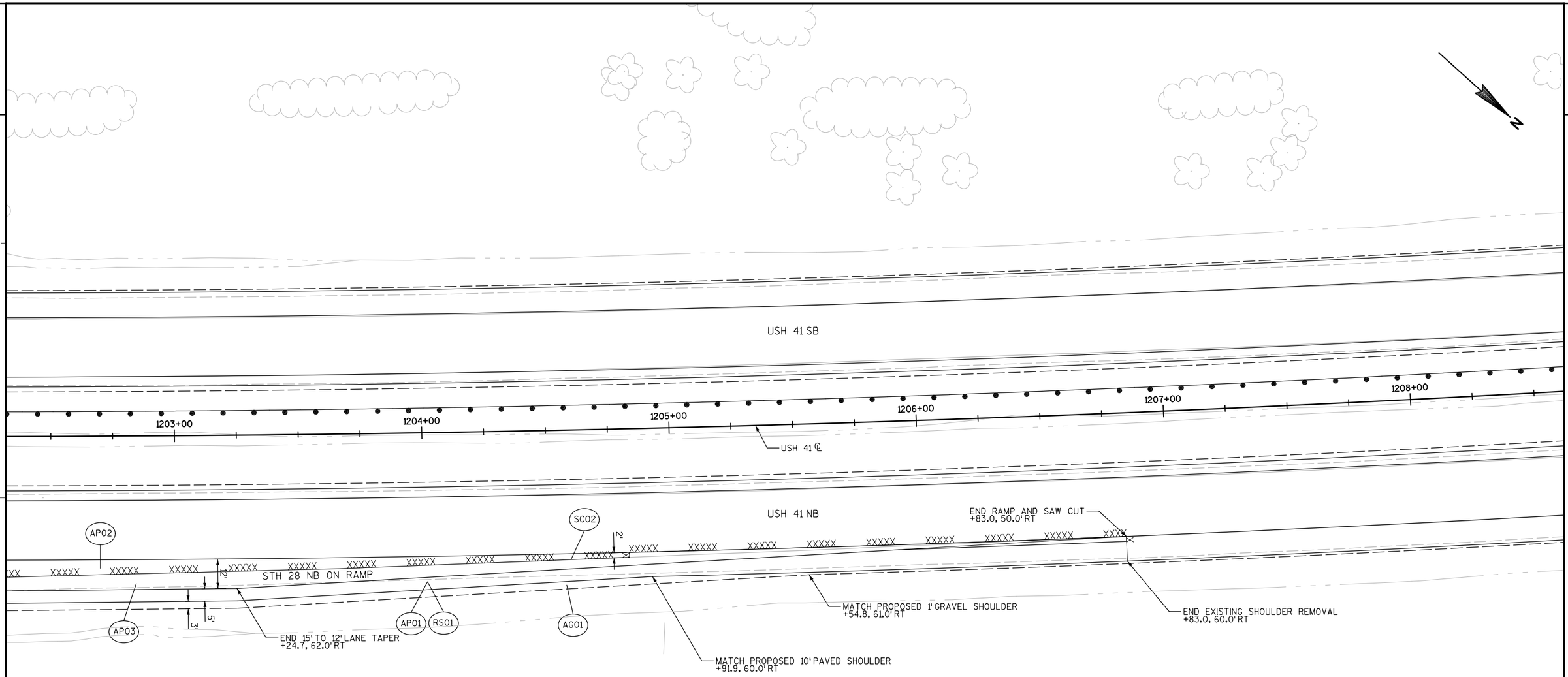
AG01

VARIES

AP01	3½" HMA PAVEMENT TYPE E-30	BG01	MGS GUARD RAIL
AP02	2½" HMA PAVEMENT TYPE E-30	BW01	42-INCH CONCRETE BARRIER WALL
AP03	5¼" HMA PAVEMENT TYPE E-30	SC01	SAWCUT ASPHALT
ML01	1" REMOVE ASPAHLTIC SURFACE MILLING	SC02	SAWCUT CONCRETE
AG01	2½" BASE AGGREGATE DENSE ¾-INCH	RS01	ASPHALTIC SHOULDER RUMBLE STRIP
AG02	3½" BASE AGGREGATE DENSE ¾-INCH		

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN DETAILS NB STH 28 ON-RAMP	SHEET 56	E

2



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SC01	SAWCUT ASPHALT
SC02	SAWCUT CONCRETE
RS01	ASPHALTIC SHOULDER RUMBLE STRIP

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN DETAILS NB STH 28 ON-RAMP	SHEET 57	E

2

N

SB WAYSIDE ON RAMP

USH 41 SB

1275+00

1276+00

1277+00

1278+00

1279+00

1280+00

USH 41 ℄

USH 41 NB

AP01 ML01

15'

5'

3'

AP01 ML01

BEGIN 15' TO 12' RAMP TAPER
+35.6, 64.0' RT

AP01 ML01 RS01

AG01

BEGIN MGS TERMINAL EAT
+91.2, 73.0' RT

BG01

BEGIN MGS GUARDRAIL 3
+44.2, 71.0' RT

5'

1'

NB WAYSIDE ON RAMP

BEGIN MILL AND OVERLAY
+32.1, 138.2' RT

BEGIN MILL AND OVERLAY
+54.4, 151.0' RT

87.5' BUTT JOINT
MATCH EXISTING RAMP

WITHIN THE BUTT JOINT LIMITS,
WIDEN PAVING OPERATION TO MATCH
EXISTING PAVEMENT WIDTH

AP01	3½" HMA PAVEMENT TYPE E-30
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AP03	5¼" HMA PAVEMENT TYPE E-30
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SC02	SAWCUT CONCRETE
RS01	ASPHALTIC SHOULDER RUMBLE STRIP

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN DETAILS NB WAYSIDE ON-RAMP	SHEET 58	E

2

2

N

SB WAYSIDE ON RAMP

USH 41 SB

1281+00

1282+00

1283+00

1284+00

1285+00

1286+00

USH 41 ℄

USH 41 NB

SC01

BEGIN SAW CUT
+00.0, 49.4' RT

AP01 ML01

NB WAYSIDE ON RAMP

AP03

VARIES 6.5'

BEGIN CONCRETE BARRIER S42
+00.0, 69.5' RT FACE OF BARRIER

AG01 BG01 AP01 ML01 RS01

AP01 RS01

BW01

STA 1282+04 TO 1282+76
CONCRETE BARRIER TYPE S42C

AP01	3½" HMA PAVEMENT TYPE E-30	BG01	MGS GUARD RAIL
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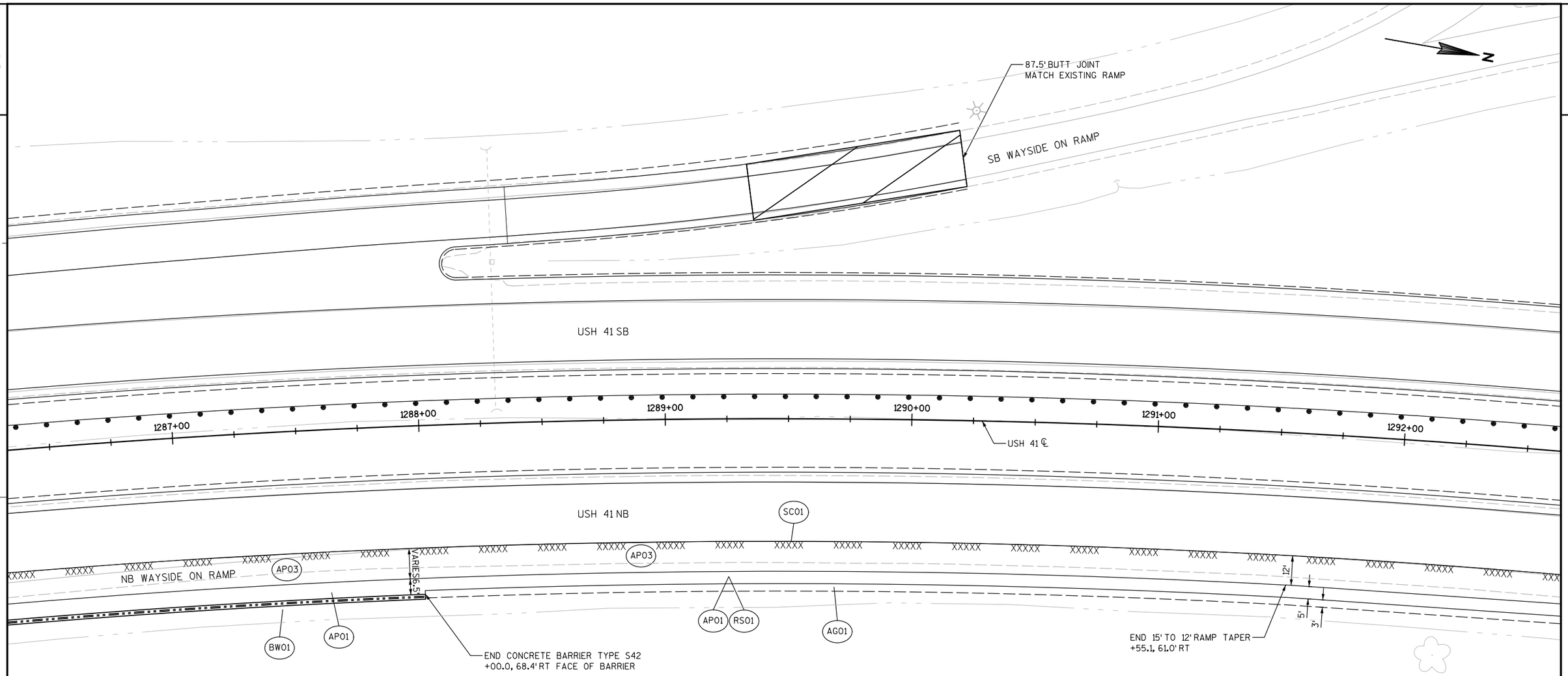
AG01	2½" BASE AGGREGATE DENSE ¾-INCH	RS01	ASPHALTIC SHOULDER RUMBLE STRIP
AG02	3½" BASE AGGREGATE DENSE ¾-INCH		

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN DETAILS NB WAYSIDE ON-RAMP	SHEET 59	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\021206_pd.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2



BW01

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SC02	SAWCUT CONCRETE
RS01	ASPHALTIC SHOULDER RUMBLE STRIP

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN DETAILS NB WAYSIDE ON-RAMP	SHEET 60	E

2

N

USH 41 SB

1293+00 1294+00 1295+00 1296+00 1297+00 1298+00

USH 41 ℄

AP03 SC01

END RAMP AND SAW CUT
+15.1, 50.0' RT

END EXISTING SHOULDER REMOVAL
+15.1, 60.0' RT

USH 41 NB

XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX XXXXX

NB WAYSIDE ON RAMP

VARIES

5'

3"

10'

1"

AP01 RS01 AG01

MATCH PROPOSED 1' GRAVEL SHOULDER
+75.4, 61.0' RT

MATCH PROPOSED 10' PAVED SHOULDER
+44.7, 60.0' RT

AP01	3½" HMA PAVEMENT TYPE E-30
AP02	2½" HMA PAVEMENT TYPE E-30
AP03	5¼" HMA PAVEMENT TYPE E-30
ML01	1" REMOVE ASPAHLTIC SURFACE MILLING
AG01	2½" BASE AGGREGATE DENSE ¾-INCH
AG02	3½" BASE AGGREGATE DENSE ¾-INCH
BG01	MGS GUARD RAIL
BW01	42-INCH CONCRETE BARRIER WALL
SC01	SAWCUT ASPHALT
SC02	SAWCUT CONCRETE
RS01	ASPHALTIC SHOULDER RUMBLE STRIP

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PLAN DETAILS NB WAYSIDE ON-RAMP	SHEET 61	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\021208_pd.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:40

NAME	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP1	769,727.57	954,624.25	--	3/8" REBAR
CP2	769,829.85	954,907.87	--	3/8" REBAR
BM1	--	--	1023.72	SW FLANGE BOLT IN HYDRANT
BM2	--	--	1025.91	NW FLANGE BOLT IN HYDRANT

BM2

100+54.98
-50.00
1021.96

1.50%
(TYP)

4.00%
AND
VARIES

100+64.49
-26.50
1022.28

100+69.49
-26.50
1022.35

CONCRETE
DRIVEWAY
8-INCH

C&G 30-INCH,
TYPE D

5-INCHES E-1
6-INCHES BASE AGGREGATE 1-¼"
12-INCHES SELECT CRUSHED

100+69.50
3.50
1022.65

100+82.50
-11.50
1023.00

100+25

100+50

100+19.00
8.50
1022.30

100+38.19
0.47
1022.55

100+55.00
8.50
1022.58

100+64.50
3.50
1022.58

100+64.43
-131.50
1022.61

100+64.95
-133.51
1022.66

100+69.44
-133.51
1022.70

100+82.10
-111.10
1020.00

SANITARY CONNECTION

CONCRETE SIDEWALK 4"

REDUCER & WATER
SERVICE CONNECTION

100+69.43
-131.50
1022.68

101+10.00
-117.50
1021.00

SWALE HIGH POINT
2.00'X2.20'
102+20.00
-120.85
1021.70

2.00'

102+34.00
-121.10
1021.50

103+33.00
-121.70
1021.00

CP2

1022 FT

1021 FT

1024 FT

1023 FT

BM1

REMOVING SIGNS TYPE II
& REMOVING SMALL
SIGN SUPPORTS

EXISTING
6-INCH
LATERAL

99+96.59
-52.01
1022.21

CONNECT TO
EXISTING
SERVICE

R 20'

R 15'

101+22.50
-104.00'RT

101+81.17
-104.00'RT

101+02.50
-62.00'RT

GARAGE
FFE 1023.70

CONCRETE SIDEWALK 4"

101+22.50
-44.00'RT

101+81.17
-44.00'

100+87.50
-36.50'
1023.25

1023.30

1022.70

CP1

MOVING SIGNS
TYPE II

101+22.50
-34.00
1023.55

101+50.00
-34.00
1023.60

101+81.17
-34.00
1022.70

100+87.50
-11.50
1023.00

101+50.00
-11.50
1024.00

CONCRETE
DRIVEWAY
8-INCH (TYP)

102+33.00
0.00
1024.00

102+33.00
-40.00
1023.35

R 15'

1023.10

101+93.30
-95.00'

1023.44

102+33.00
-75.00
1023.00

1022.30

102+31.99
-101.57'

1022.30

1022.10

103+01.39
-101.50'

1022.22

1022.50

1022.50

5-INCHES E-1
6-INCHES BASE AGGREGATE 1-¼"
12-INCHES SELECT CRUSHED (TYP)

LEVEL SPREADER,
BASE AGGREGATE
DENSE ¾" (TYP)

103+34.39
-116.00'

103+00.00
-75.00
1023.00

5-INCHES BASE AGGREGATE
DENSE ¾" (TYP)

104+20.00
-51.00'

R 50'

104+96.70
-48.94
1019.50

EXISTING STORM INLET

EXISTING CONTOURS (TYP)

PROPOSED CONTOURS (TYP)

103+10.50
-40.00
1024.00

103+10.50
0.00
1024.00

SALT SHED
FFE 1024.00

104+14.50
-40.00
1024.00

104+14.50
0.00
1024.00

104+70.00
7.00
1022.50

END C&G
1022.50

100

101

102

S89°18'25"W

103

104

105

4.30'

104+55.10
7.00'

R 15'

1022.75

104+95.50
6.00
1020.00

101+18.70
21.50
1021.00

101+39.08
7.00'
1023.00

BEGIN C&G
101+50.00
22.00
1023.00

RECONSTRUCT SANITARY
MANHOLE
EX RIM 1022.81
PR RIM 1023.62

103+10.50
22.00
1023.67

CONCRETE CURB & GUTTER
30-INCH TYPE D

2.00'

1023.00

100+99.47
18.50'

GRADE AROUND
STRUCTURE
ONLY

EXISTING R/W

SLOPE INTERCEPT (TYP)

5.00' (TYP)

104+19.50
29.07
1022.48

104+55.00
27.25
1022.20

104+74.62
12.00
1022.00

STA: 105+50.00
Y: 769,707.34
X: 955,113.99

STA: 99+85.00
Y: 769,700.51
X: 954,549.03

NOTES

'CULVERT PIPE REINFORCED CONCRETE CLASS III' IS ABBREVIATED AS 'RCP', UNLESS OTHERWISE NOTED.
'APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE' IS ABBREVIATED AS 'APRON ENDWALL', UNLESS OTHERWISE NOTED.

MATCH LINE

104+75.00
-439.10
1022.00

104+87.00
-438.64
1018.00

EXISTING
POND
OUTFALL

3:1 (TYP)

1022 FT

1020 FT

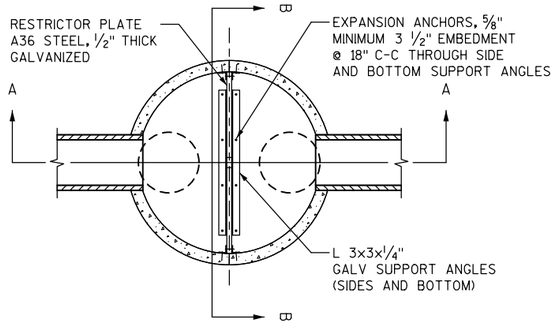
MATCH LINE

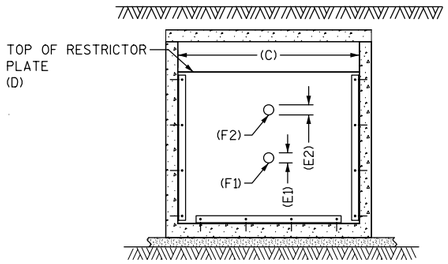
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	SALT SHED DETAIL	SHEET 62 E

NOTES

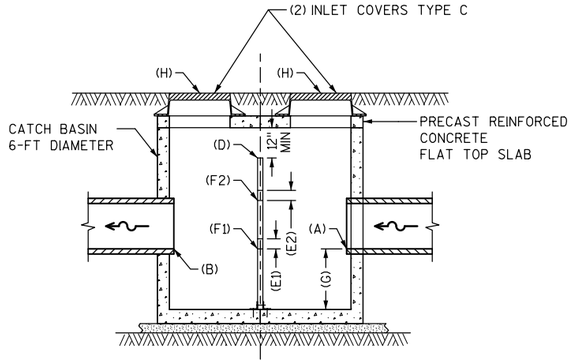
1. DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING, INCLUDING BUT NOT LIMITED TO REINFORCING STEEL, SHALL CONFORM TO THE WISDOT STANDARD DETAIL DRAWINGS FOR CATCH BASINS AND INLET COVERS AS WELL AS THE SPECIAL PROVISION FOR CONTROL STRUCTURES.

2. ALL MATERIAL AND CONSTRUCTION RELATED TO THIS DETAIL WILL BE PAID AS PART OF THE ITEM CONTROL STRUCTURES. NO SEPERATE PAYMENT WILL BE MADE FOR THE CATCH BASIN ITSELF NOR THE INLET COVERS.





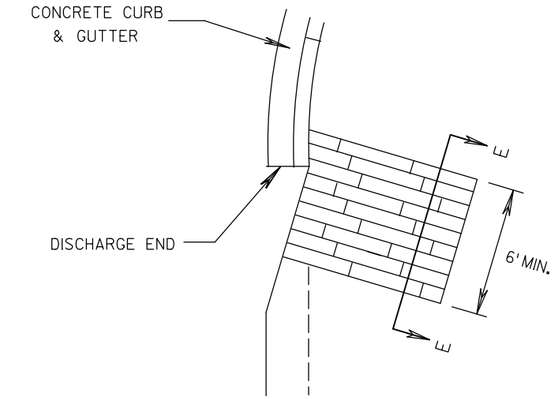
SECTION B-B

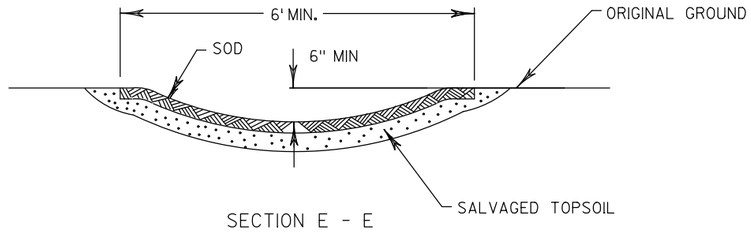


SECTION A-A

STRUCTURE NUMBER	INLET PIPE		OUTLET PIPE		WEIR PLATE		ORIFICE				MANHOLE	SUMP	RIM
	DIA. (IN.)	INV. ELEV.	DIA. (IN.)	INV. ELEV.	LENGTH (FT.)	ELEV.	DIA. (IN.)		ELEVATION		DIA. (FT.)	DEPTH (FT.)	ELEV.
	-	(A)	-	(B)	(C)	(D)	(E1)	(E2)	(F1)	(F2)	-	(G)	(H)
A	18	1019.30	18	1019.20	6	1021.05	5	-	1019.20	-	6	2	1023.50
C	18	1017.40	18	1017.40	6	1020.80	4	2.4	1017.40	1019.70	6	2	1023.30

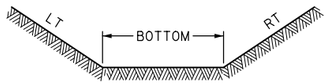
CONSTROL STRUCTURES
SALT SHED





SECTION E - E

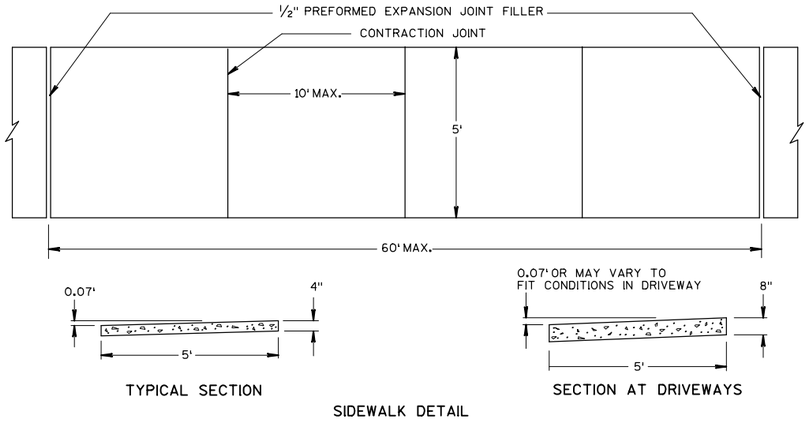
SOD FLUME DETAIL AT CURB ENDS



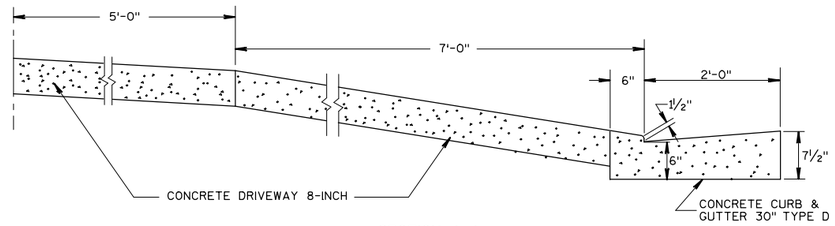
SECTION

VEGETATED SWALE	LEFT SLOPE	BOTTOM WIDTH	RIGHT SLOPE
	(H:V)	(FT)	(H:V)
A1 NORTH	3:1	4	3:1
A1 WEST	3:1	1	3:1
A2	3:1	1	3:1
A4	4:1	1	4:1
C2	3:1	1	3:1
C3	3:1	1	3:1
C4	3:1	4	3:1
C5	3:1	6	4:1

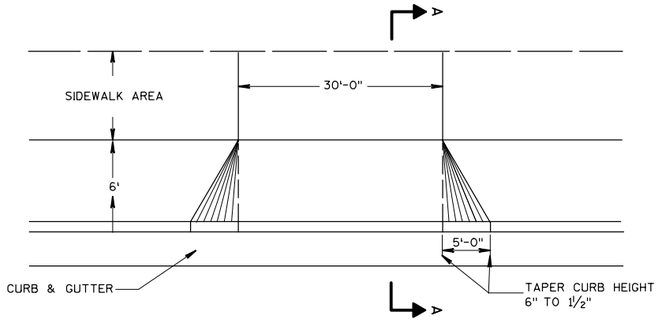
VEGETATED SWALE DETAIL
LOOKING DOWNSTREAM



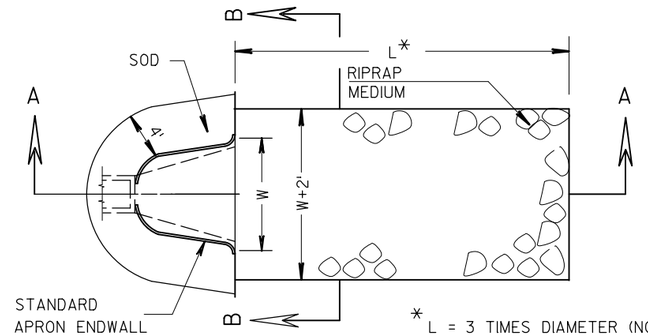
SIDEWALK DETAIL



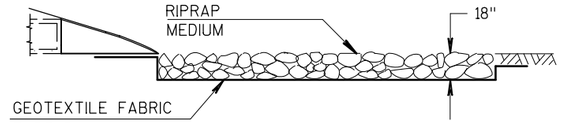
SECTION A-A



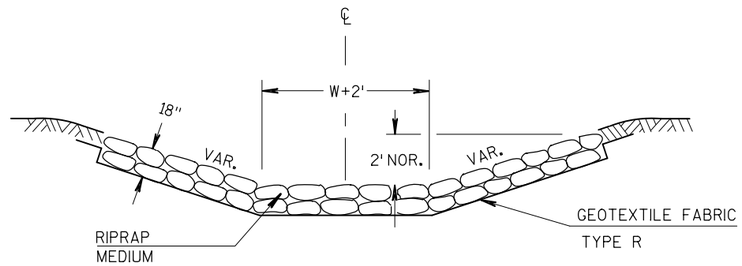
PRIVATE AND COMMERCIAL ENTRANCES



* L = 3 TIMES DIAMETER (NOR.) OR 10' MIN. OR AS DIRECTED BY THE ENGINEER



SECTION A-A



SECTION B-B

SOD, RIPRAP MEDIUM AND GEOTEXTILE FABRIC
DETAIL AT APRON ENDWALLS

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	SALT SHED DETAIL	SHEET 64	E

2

2

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

EXISTING WETLAND BOUNDARY

SIGN

USH 41 SB

1159+00 1160+00 1161+00 1162+00 1163+00 1164+00 1165+00 1166+00 USH 41 ℄ 1167+00 1168+00 1169+00 1170+00 1171+00 1172+00 1173+00 1174+00

USH 41 NB

SLOPE INTERCEPT

BEGIN PROJECT
STA. 1168+12.29
Y = 751,968.08
X = 963,330.77

SLOPE INTERCEPT

EXISTING WETLAND BOUNDARY

01-02
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

EXISTING WETLAND BOUNDARY

SLOPE INTERCEPT

STH 28

01-03
STA 1180+35
REMOVE INLET
INLET MEDIAN 1 GRATE
INLET COVERS TYPE MS

EXISTING WETLAND BOUNDARY

STH 28 SB OFF-RAMP

01-04
STA 1183+36
REMOVE INLET
INLET MEDIAN 1 GRATE
INLET COVERS TYPE MS

01-05
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

01-06
STA 1186+35
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

1174+00 1175+00 1176+00 1177+00 1178+00 1179+00 1180+00 1181+00 1182+00 1183+00 1184+00 1185+00 1186+00 1187+00 1188+00 1189+00

USH 41 SB

USH 41 NB

USH 41 ℄

01-01
STA 1175+36
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

EXISTING WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

SLOPE INTERCEPT

CATTLE PASS C-14-4
ABANDON CATTLE PASS
(EXTEND PROPOSED CULVERT
PIPE TO MATCH SLOPE
INTERCEPT SEE CONSTRUCTON
DETAIL ADANDON CATTLE PASS)

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 65	E

2

2

EXISTING WETLAND BOUNDARY

02-02
STA 1198+33
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

USH 41 SB

1189+00 1190+00 1191+00 1192+00 1193+00 1194+00 1195+00 1196+00 1197+00 1198+00 1199+00 1200+00 1201+00 1202+00 1203+00 1204+00

USH 41 NB

USH 41 ℄

02-01
STA 1194+36
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

02-04
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

STRUCTURE B-14-126

SLOPE INTERCEPT

USH 41 SB

1204+00 1205+00 1206+00 1207+00 1208+00 1209+00 1210+00 1211+00 1212+00 1213+00 1214+00 1215+00 1216+00 1217+00 1218+00 1219+00

USH 41 ℄

USH 41 NB

SLOPE INTERCEPT

02-03
STA 1213+33
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

EXISTING WETLAND BOUNDARY

CATTLE PASS C-14-5
ABANDON CATTLE PASS
(SEE CONSTRUCTON DETAIL
ADANDON CATTLE PASS)

EXISTING WETLAND BOUNDARY

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 66	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\022002_ec.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:100

2

2

03-01
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

EXISTING WETLAND
BOUNDARY

SLOPE INTERCEPT

03-03
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 24-INCH

03-06
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

EXISTING WETLAND
BOUNDARY

EXISTING WETLAND
BOUNDARY

USH 41 SB

1219+00 1220+00 1221+00 1222+00 1223+00 1224+00 1225+00 1226+00 1227+00 1228+00 1229+00 1230+00 1231+00 1232+00 1233+00 1234+00

USH 41 NB

USH 41 ℄

EXISTING WETLAND
BOUNDARY

03-02
STA 1224+33
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

03-04
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 24-INCH

03-05
STA 1227+81
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

EXISTING WETLAND
BOUNDARY

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

EXISTING WETLAND
BOUNDARY

SLOPE INTERCEPT

03-07
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 36-INCH

EXISTING WETLAND
BOUNDARY

03-10
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

03-09
STA 1242+29
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

USH 41 SB

1234+00 1235+00 1236+00 1237+00 1238+00 1239+00 1240+00 1241+00 1242+00 1243+00 1244+00 1245+00 1246+00 1247+00 1248+00 1249+00

USH 41 NB

USH 41 ℄

EXISTING WETLAND
BOUNDARY

03-08
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 36-INCH

EXISTING WETLAND
BOUNDARY

CATTLE PASS C-14-6
ABANDON CATTLE PASS
(SEE CONSTRUCTON DETAIL
ADANDON CATTLE PASS)

SLOPE INTERCEPT

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 67	E

2

2

CATTLE PASS C-14-12
ABANDON CATTLE PASS
(SEE CONSTRUCTON DETAIL
ADANDON CATTLE PASS)

DNR ACCESS ROAD

CATTLE PASS C-14-13
ABANDON CATTLE PASS
(SEE CONSTRUCTON DETAIL
ADANDON CATTLE PASS)

04-03
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

04-01
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

EXISTING WETLAND
BOUNDARY

SLOPE INTERCEPT

SIGN

USH 41 SB

1249+00 1250+00 1251+00 1252+00 1253+00 1254+00 1255+00 1256+00 1257+00 1258+00 1259+00 1260+00 1261+00 1262+00 1263+00 1264+00

USH 41 NB

USH 41 ℄

04-02
STA 1251+56
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

EXISTING WETLAND
BOUNDARY

04-04
STA 1257+06
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

WE ENERGIES (ELEC)

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

04-08
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 48-INCH

04-10
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

EXISTING WETLAND
BOUNDARY

DNR ACCESS ROAD

SLOPE INTERCEPT

04-06
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

04-09
STA 1276+30
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

1264+00 1265+00 1266+00 1267+00 1268+00 1269+00 1270+00 1271+00 1272+00 1273+00 1274+00 1275+00 1276+00 1277+00 1278+00 1279+00

USH 41 SB

USH 41 ℄

USH 41 NB

04-05
STA 1265+39
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

WE ENERGIES (ELEC)

04-07
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 48-INCH

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 68	E

2

2

SOO ROAD

EXISTING WETLAND BOUNDARY

05-01
STA 1283+29
REMOVE INLETS
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

05-02
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE STEEL 12-INCH

05-03
STA 1288+31
REMOVE ENDWALL
INLETS MEDIAN 4 GRATE
INLET COVERS TYPE MS

1279+00 1280+00 1281+00 1282+00 1283+00 1284+00 1285+00 1286+00 1287+00 1288+00 1289+00 1290+00 1291+00 1292+00 1293+00 1294+00

USH 41 SB

USH 41 NB

USH 41 ℄

EXISTING WETLAND BOUNDARY

SLOPE INTERCEPT

N

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

SB WAYSIDE

05-05
REMOVE ENDWALL
EXTEND PIPE 3.5' TO SLOPE
INTERCEPT, PLACE CULVERT PIPE
CORRUGATED STEEL 12-INCH;
PLACE APRON ENDWALL FOR
CULVERT PIPE STEEL 12-INCH

SLOPE INTERCEPT

1294+00 1295+00 1296+00 1297+00 1298+00 1299+00 1300+00 1301+00 1302+00 1303+00 1304+00 1305+00 1306+00 1307+00 1308+00 1309+00

USH 41 SB

USH 41 ℄

USH 41 NB

05-04
STA 1296+27
REMOVE ENDWALL
INLETS MEDIAN 4 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

LOMIRA 6" SANITARY FORCE MAIN

EXISTING WETLAND BOUNDARY

CATTLE PASS C-14-7
ABANDON CATTLE PASS
(EXTEND PROPOSED CULVERT
PIPE TO MATCH SLOPE
INTERCEPT SEE CONSTRUCTON
DETAIL ADANDON CATTLE PASS)

EXISTING WETLAND BOUNDARY

LOMIRA 6" SANITARY FORCE MAIN

FRONTIER BURIED CABLE

STRUCTURE C-14-41

EXISTING WETLAND BOUNDARY

05-06
STA 1305+06
REMOVE INLETS
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

EXISTING WETLAND BOUNDARY

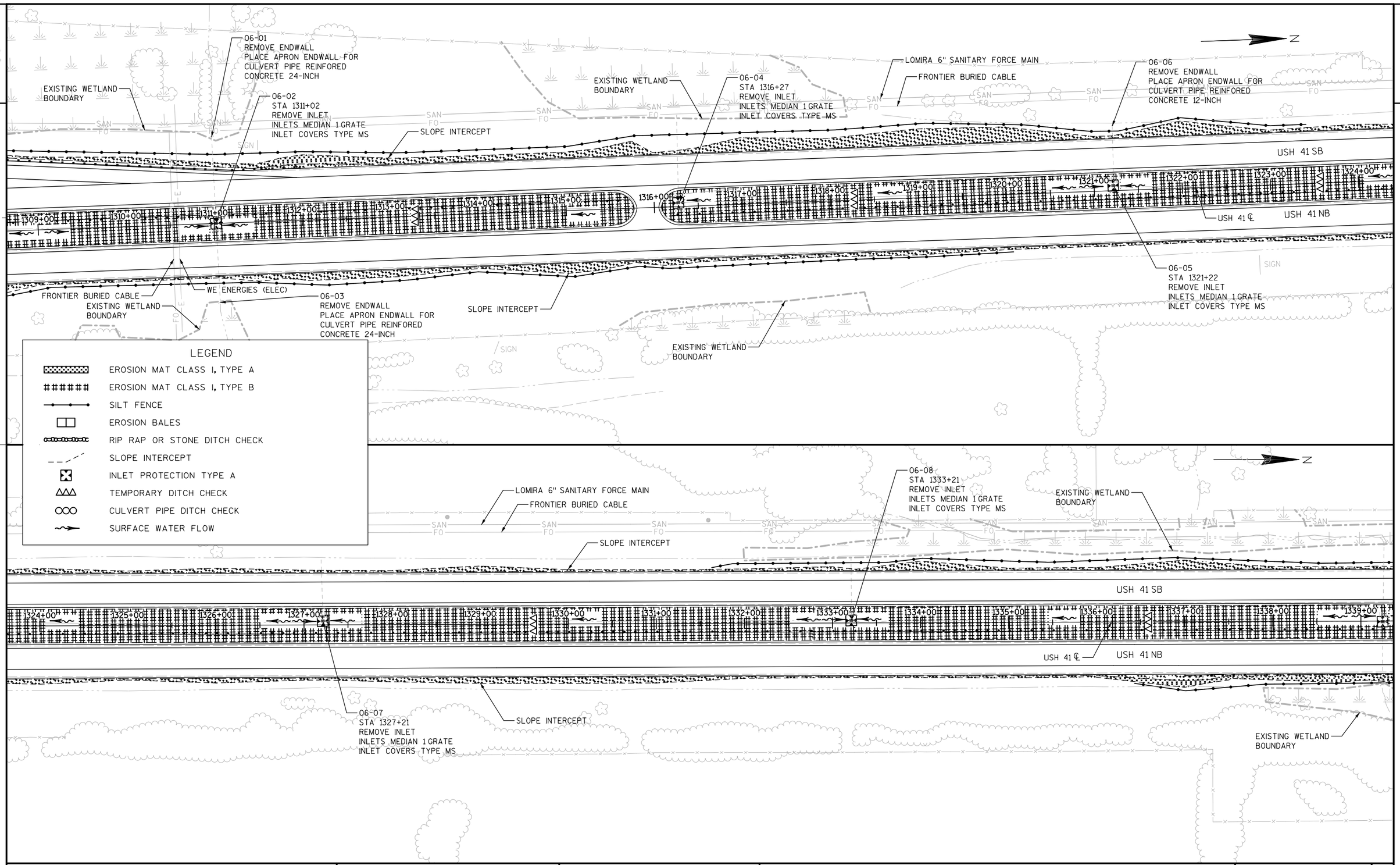
05-07
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 24-INCH

EXISTING WETLAND BOUNDARY

N

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 69	E

2



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 70	E

07-03
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 24-INCH

07-02
STA 1339+25
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

EXISTING WETLAND
BOUNDARY

07-05
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

LOMIRA 6" SANITARY FORCE MAIN

07-04
STA 1345+20
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

USH 41 SB

USH 41 ℄

USH 41 NB

07-01
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 24-INCH

EXISTING WETLAND
BOUNDARY

SLOPE INTERCEPT

07-06
STA 1351+18
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

LOMIRA 6" SANITARY FORCE MAIN

07-08
REMOVE ENDWALL
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 12-INCH

07-09
STA 1363+19
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

USH 41 SB

USH 41 ℄

USH 41 NB

07-07
STA 1357+21
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

2

2

LOMIRA 6" SANITARY FORCE MAIN

SLOPE INTERCEPT

LOMIRA 6" SANITARY FORCE MAIN

USH 41 SB

USH 41 NB

USH 41 ℄

1369+00 1370+00 1371+00 1372+00 1373+00 1374+00 1375+00 1376+00 1377+00 1378+00 1379+00 1380+00 1381+00 1382+00 1383+00 1384+00

08-01
STA 1369+19
REMOVE INLET
INLETS MEDIAN 4 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

08-02
STA 1376+18
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

08-03
STA 1382+18
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SAN SAN SAN SAN SAN SAN SAN SAN

SIGN SIGN SIGN

2

N

09-01
STA 1403+18
REMOVE INLET
INLETS MEDIAN 1 GRATE
INLET COVERS TYPE MS

SLOPE INTERCEPT

09-02
STA 1408+18
REMOVE INLET
INLETS MEDIAN 4 GRATE
INLET COVERS TYPE MS

09-03
STA 1413+69
REMOVE INLET
INLETS MEDIAN 4 GRATE
INLET COVERS TYPE MS

FRONTIER BURIED CABLE

USH 41 SB

1399+00 1400+00 1401+00 1402+00 1403+00 1404+00 1405+00 1406+00 1407+00 1408+00 1409+00 1410+00 1411+00 1412+00 1413+00 1414+00

USH 41 ℄

USH 41 NB

ALLIANT 4" PLASTIC MAIN (GAS)

FRONTIER BURIED CABLE

EXISTING WETLAND BOUNDARY

SLOPE INTERCEPT

ALLIANT 4" PLASTIC MAIN (GAS)

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

N

SLOPE INTERCEPT

ASPHALT OVERLAY → EXISTING CONCRETE

USH 41 SB

1414+00 1415+00 1416+00 1417+00 1418+00 1419+00 1420+00 1421+00 1422+00 1423+00 1424+00 1425+00 1426+00 1427+00 1428+00 1429+00

USH 41 ℄

ASPHALT OVERLAY → EXISTING CONCRETE

INLET TO REMAIN

USH 41 NB

SLOPE INTERCEPT

EXISTING WETLAND BOUNDARY

09-04
REMOVE ENDWALLS
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 24-INCH

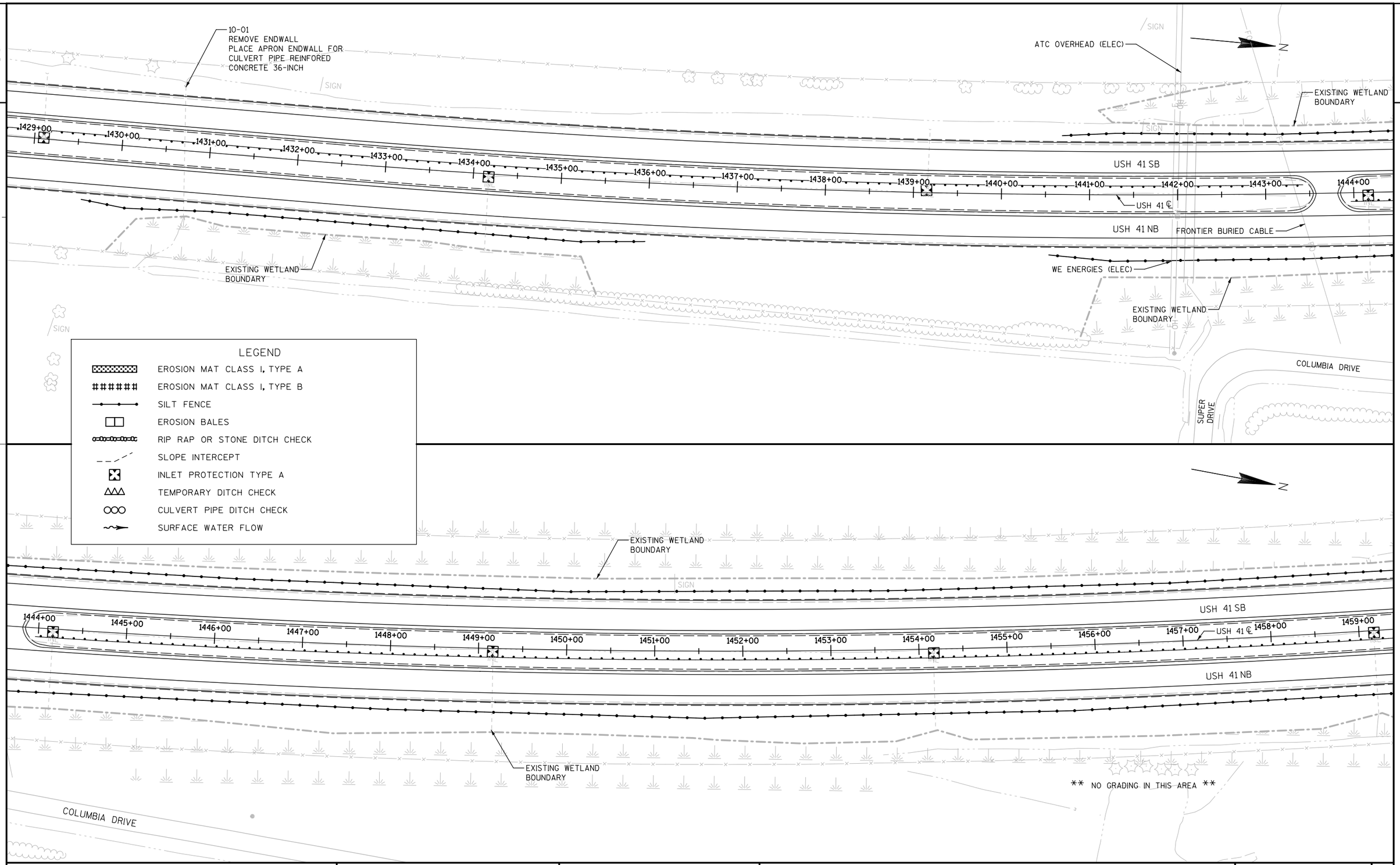
09-05
REMOVE ENDWALLS
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 24-INCH

09-07
REMOVE ENDWALLS
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 24-INCH

09-06
REMOVE ENDWALLS
PLACE APRON ENDWALL FOR
CULVERT PIPE REINFORED
CONCRETE 24-INCH

09-08
STA 1419+18
REMOVE INLET
INLETS MEDIAN 4 GRATE
INLET COVERS TYPE MS

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 73	E



2

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 74	E

2

EXISTING WETLAND BOUNDARY

USH 41 SB

USH 41 ℄

USH 41 NB

1459+00 1460+00 1461+00 1462+00 1463+00 1464+00 1465+00 1466+00 1467+00 1468+00 1469+00 1470+00 1471+00 1472+00 1473+00 1474+00

EXISTING WETLAND BOUNDARY

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

EXISTING WETLAND BOUNDARY

USH 41 SB

USH 41 ℄

USH 41 NB

1474+00 1475+00 1476+00 1477+00 1478+00 1479+00 1480+00 1481+00 1482+00 1483+00 1484+00 1485+00 1486+00 1487+00 1488+00 1489+00

SIGN

SIGN

SIGN

EXISTING WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 75	E

2

2

EXISTING WETLAND BOUNDARY

STH 49 SB ON-RAMP

USH 41 SB

1489+00 1490+00 1491+00 USH 41 ℄ 1492+00 1493+00 1494+00 1495+00 1496+00 1497+00 1498+00 1499+00 1500+00 1501+00 1502+00 1503+00 1504+00

USH 41 NB

STH 49 NB OFF-RAMP

EXISTING WETLAND BOUNDARY

STH 49

SIGN

INL

EXISTING WETLAND BOUNDARY

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

EXISTING WETLAND BOUNDARY

SIGN

EXISTING WETLAND BOUNDARY

USH 41 SB

1504+00 1505+00 1506+00 1507+00 1508+00 1509+00 1510+00 1511+00 1512+00 1513+00 1514+00 1515+00 1516+00 1517+00 1518+00 1519+00

USH 41 ℄

USH 41 NB

EXISTING WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 76	E

2

INDUSTRIAL DRIVE

SIGN

CANADIAN NATIONAL

SIGN

N

EXISTING WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

1519+00 1520+00 1521+00 1522+00 1523+00 1524+00 1525+00 1526+00 1527+00 1528+00 1529+00 1530+00 1531+00 1532+00 1533+00 1534+00

USH 41 SB

USH 41 ℄

USH 41 NB

EXISTING WETLAND BOUNDARY

LEGEND

- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

CANADIAN NATIONAL

N

SLOPE INTERCEPT

EXISTING WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

EXISTING CONCRETE

ASPHALT OVERLAY

1534+00 1535+00 1536+00 1537+00 1538+00 1539+00 1540+00 1541+00 1542+00 1543+00 1544+00 1545+00 1546+00 1547+00 1548+00 1549+00

USH 41 SB

EXISTING CONCRETE

ASPHALT OVERLAY

USH 41 ℄

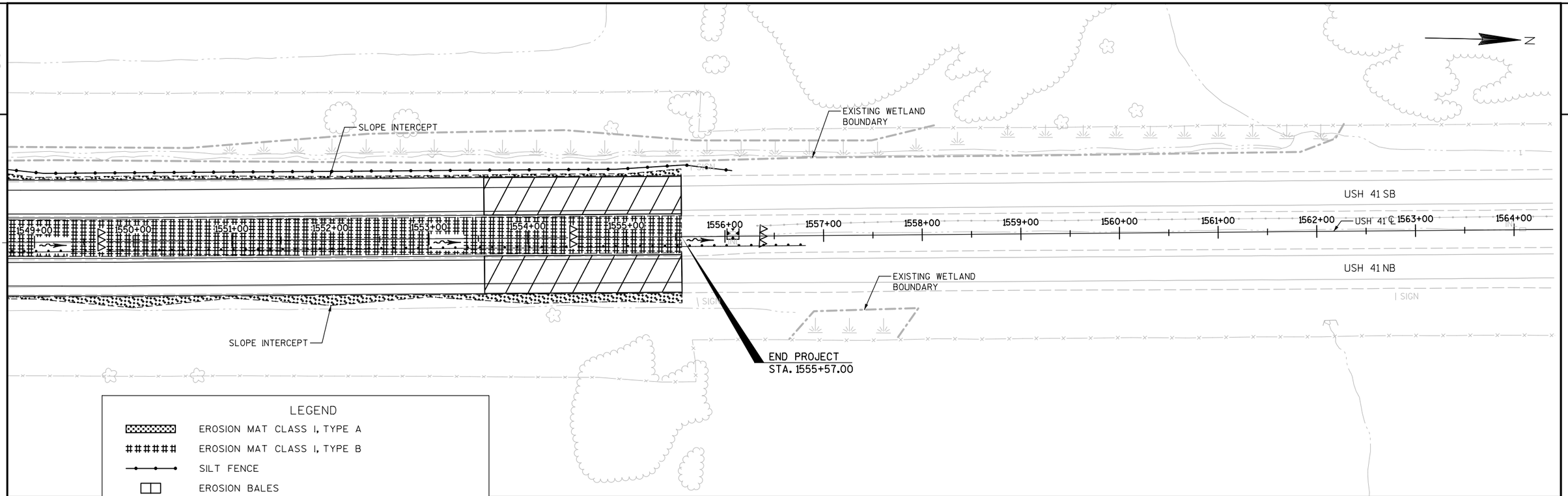
USH 41 NB

SIGN

EXISTING WETLAND BOUNDARY

SLOPE INTERCEPT

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	STORM SEWER & EROSION CONTROL	SHEET 77	E

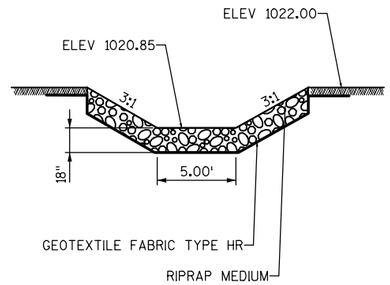


LEGEND

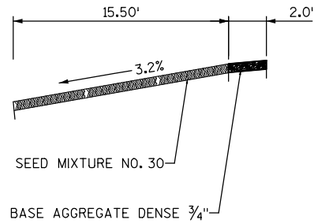
- EROSION MAT CLASS I, TYPE A
- EROSION MAT CLASS I, TYPE B
- SILT FENCE
- EROSION BALES
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- INLET PROTECTION TYPE A
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW

LEGEND

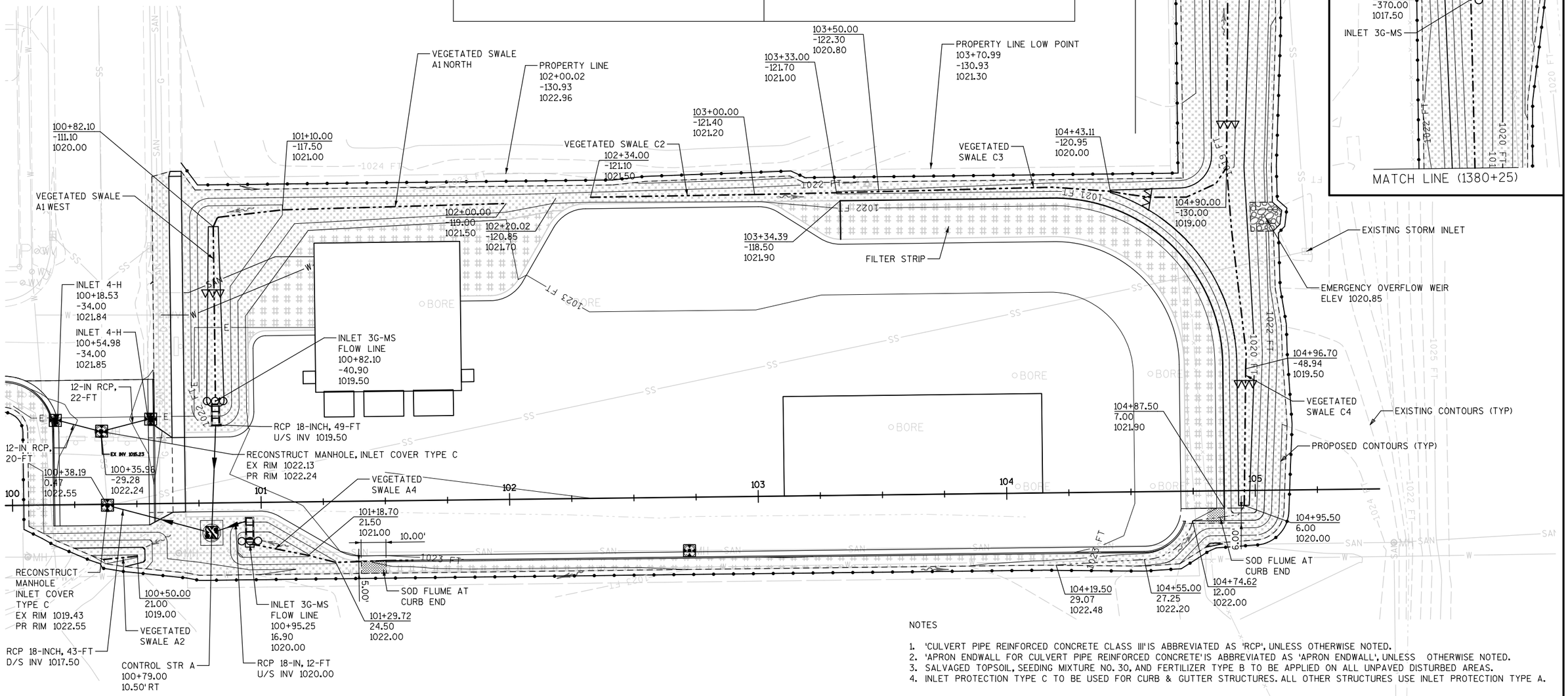
- EROSION MAT URBAN CLASS I, TYPE A
- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- EROSION BALE, BARRIER
- RIPRAP MEDIUM
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECK
- SURFACE WATER FLOW



EMERGENCY OVERFLOW WEIR
(NOT TO SCALE)



FILTER STRIP
(NOT TO SCALE)



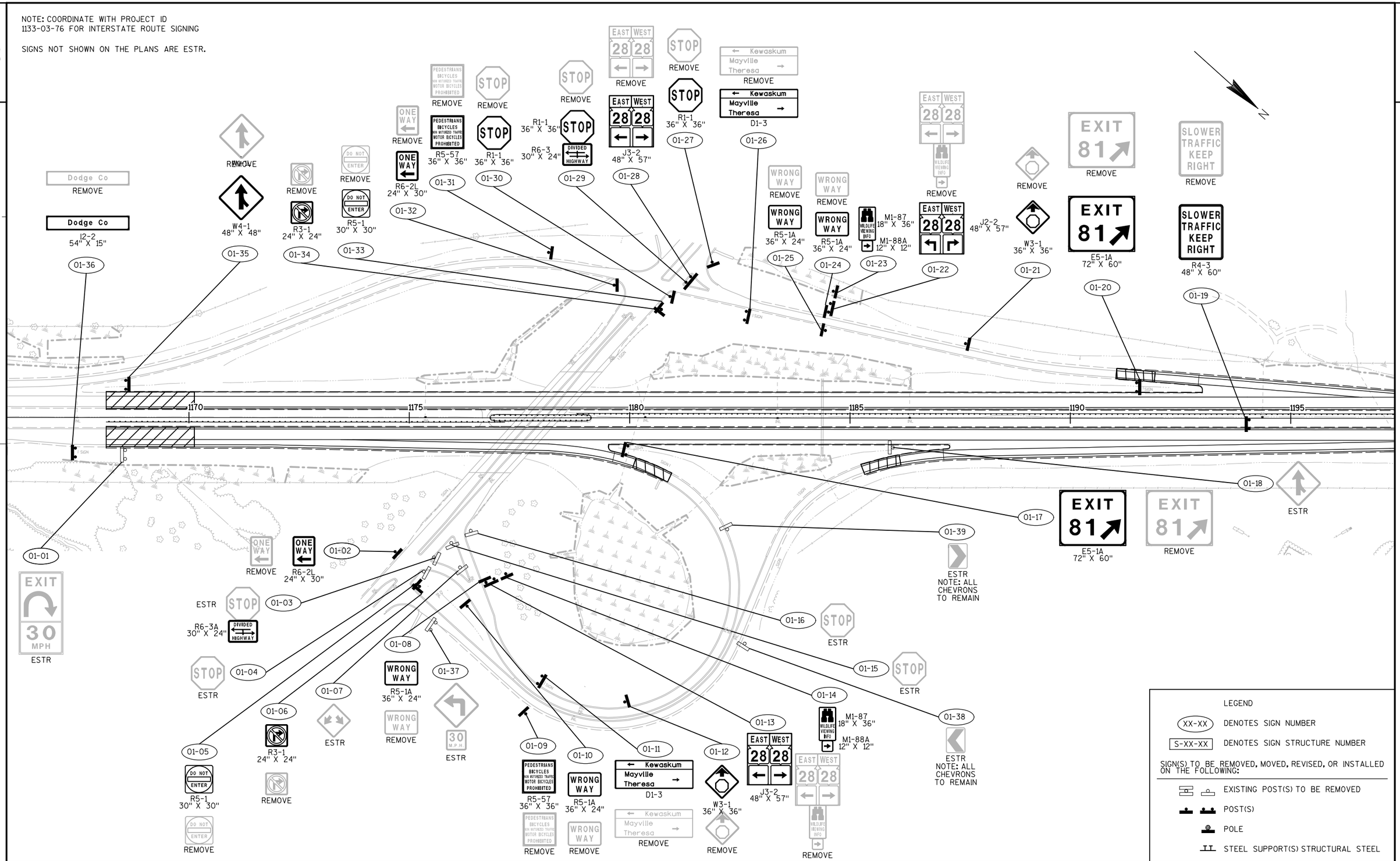
NOTES

1. 'CULVERT PIPE REINFORCED CONCRETE CLASS III' IS ABBREVIATED AS 'RCP', UNLESS OTHERWISE NOTED.
2. 'APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE' IS ABBREVIATED AS 'APRON ENDWALL', UNLESS OTHERWISE NOTED.
3. SALVAGED TOPSOIL, SEEDING MIXTURE NO. 30, AND FERTILIZER TYPE B TO BE APPLIED ON ALL UNPAVED DISTURBED AREAS.
4. INLET PROTECTION TYPE C TO BE USED FOR CURB & GUTTER STRUCTURES. ALL OTHER STRUCTURES USE INLET PROTECTION TYPE A.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	DRAINAGE & EROSION CONTROL SALT SHED	SHEET 79	E

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

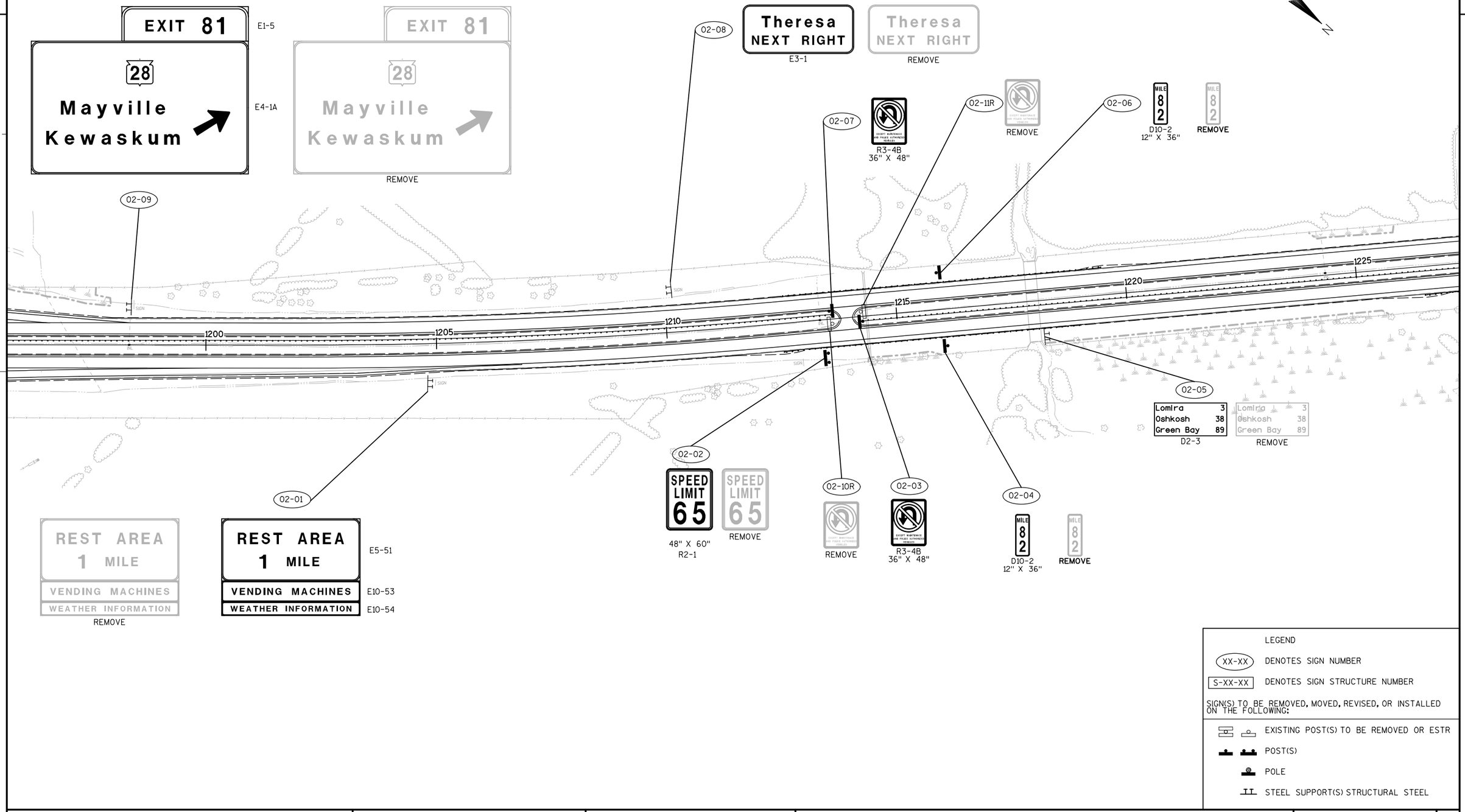
SIGNS NOT SHOWN ON THE PLANS ARE ESTR.



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 80	E

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.



LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

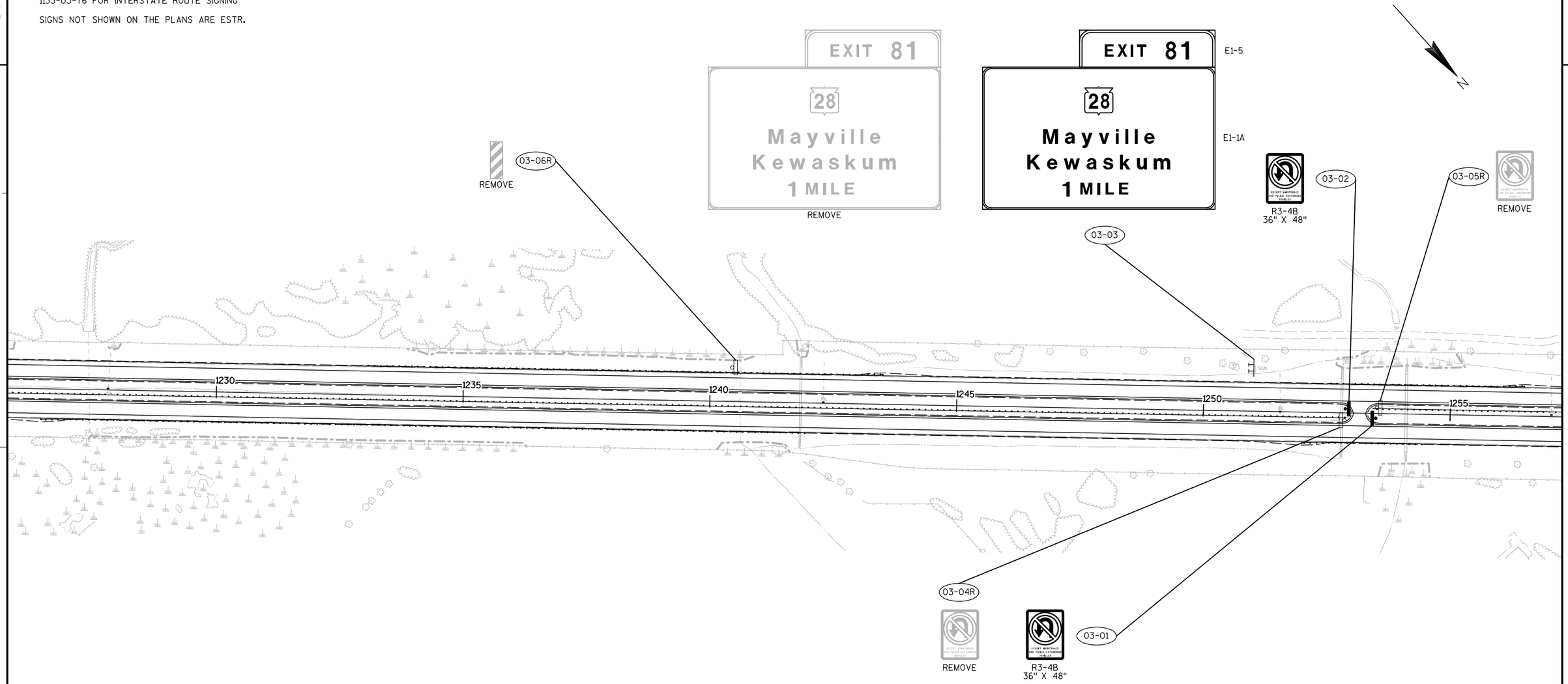
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 81	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023202_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.



LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

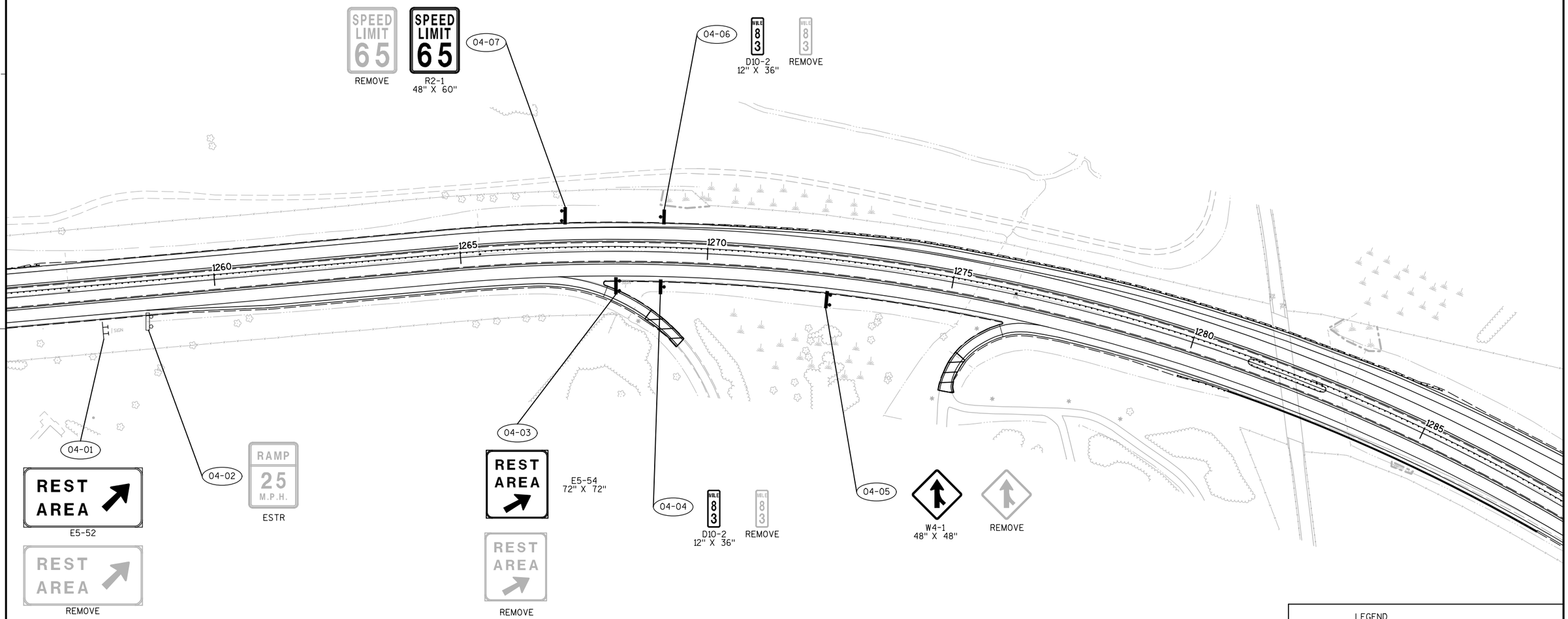
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 82	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023203_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.



LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 83	E

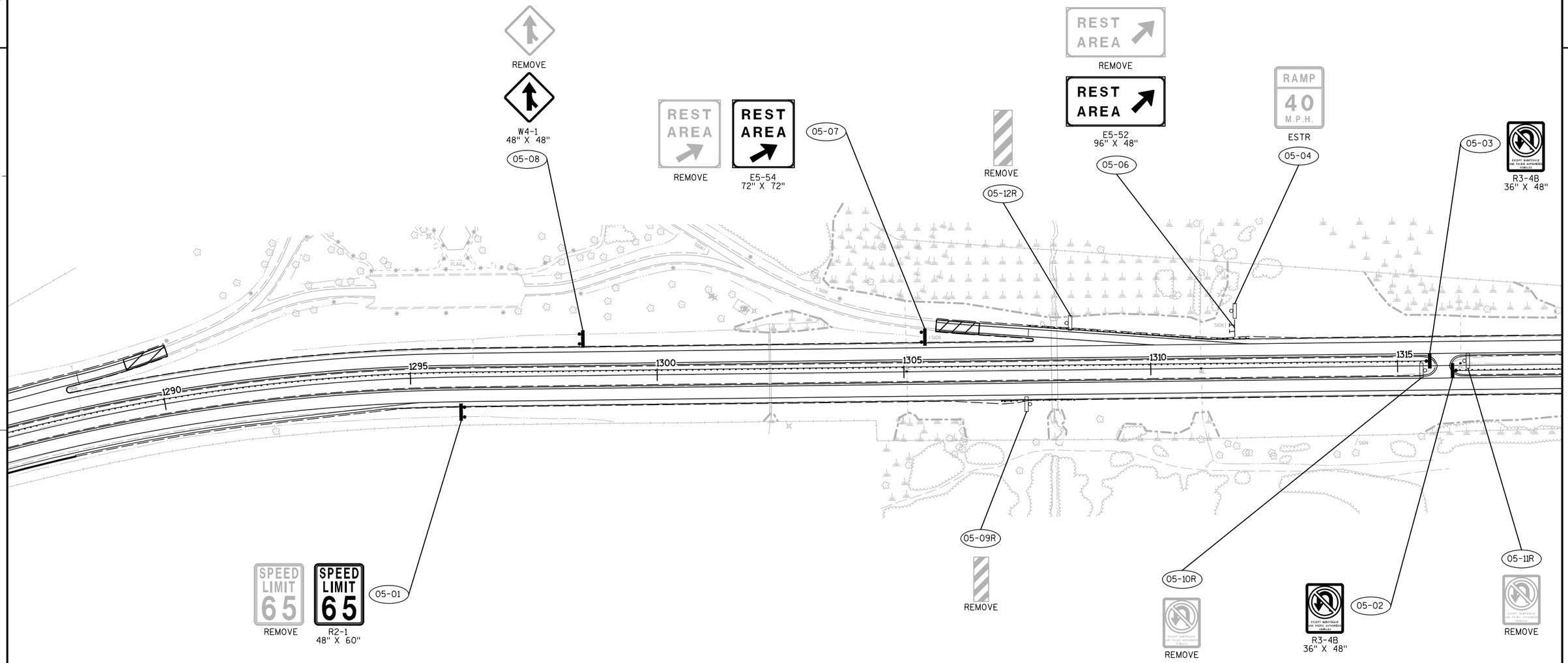
FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023204_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.

N



LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 84	E

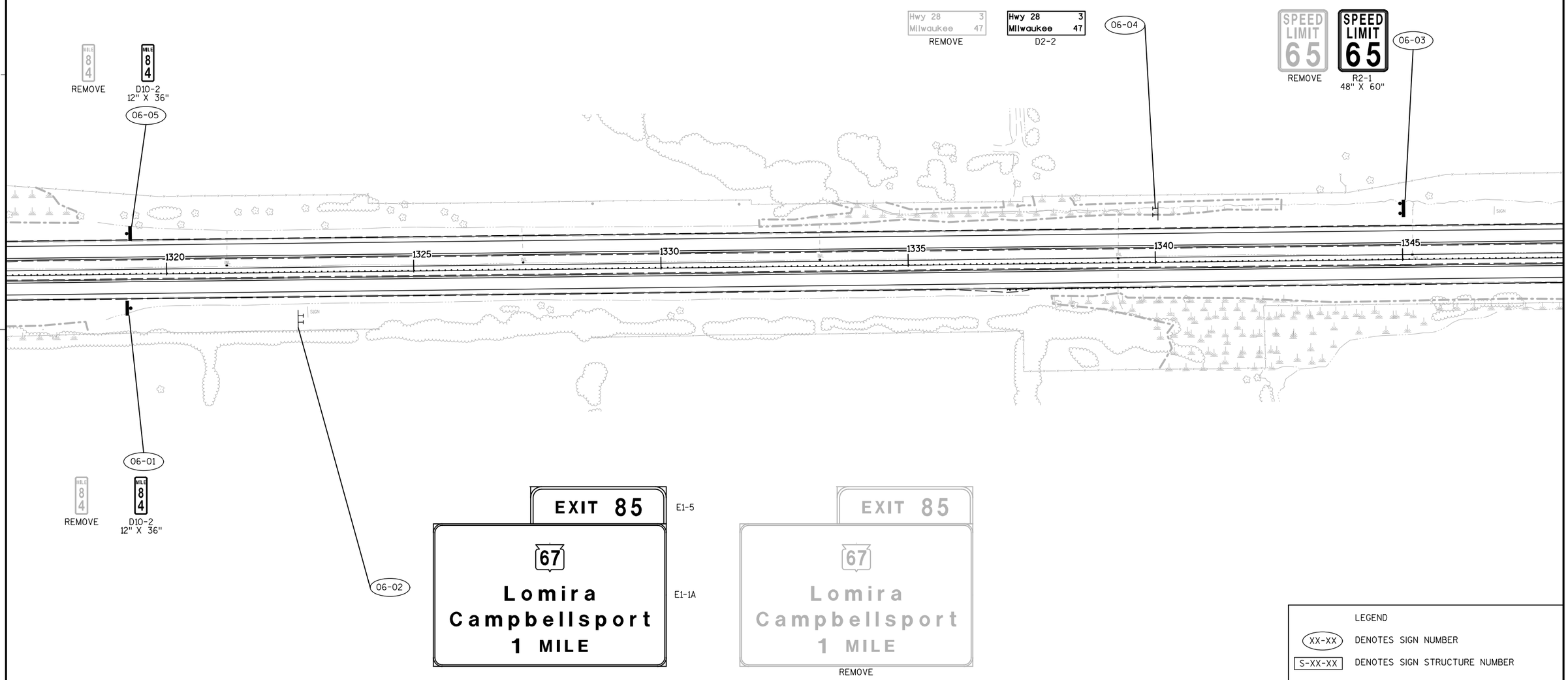
FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023205_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.

N



LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 85	E

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.

N

REST AREA
1 MILE
WEATHER INFORMATION
REMOVE

REST AREA
1 MILE
WEATHER INFORMATION
E5-51
E10-54

07-09

R3-4B
36" X 48"

07-08

REMOVE

07-11R

07-07

SLOWER TRAFFIC KEEP RIGHT
R4-3
48" X 60"

SLOWER TRAFFIC KEEP RIGHT
REMOVE

MILE 85
REMOVE

MILE 85
D10-2
12" X 36"

07-06

1350 1355 1360 1365 1370 1375

SIGN

P&D SLABS

MILE 85
REMOVE

MILE 85
D10-2
12" X 36"

07-04

07-10R

REMOVE

07-03

R3-4B
36" X 48"

07-01

Food - Exit 85
ESTR

07-02

Gas - Exit 85
Lodging- Exit 85
ESTR

07-05

EXIT 85
67
Lomira
Campbellsport
REMOVE

EXIT 85
67
Lomira
Campbellsport
E1-5
E4-1A

LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

EXISTING STEEL SUPPORTS STRUCTURAL STEEL

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 86	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023207_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

NOTE: COORDINATE WITH PROJECT ID 1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.

N

08-01: EXIT 85 — E5-1A 72" X 60"; EXIT 85 — REMOVE

08-02: W3-1 36" X 36"; REMOVE

08-03: SOUTH 67 67 NORTH — J2-2 48" X 57"; SOUTH 67 67 NORTH — REMOVE

08-04: Food / Lodging — ESTR

08-05: Gas — ESTR

08-06: ←Lomira / Campbellsport→ — D1-2; ←Lomira / Campbellsport→ — REMOVE

08-07: WRONG WAY — R5-1A 36" X 24"; WRONG WAY — REMOVE

08-08: WRONG WAY — R5-1A 36" X 24"; WRONG WAY — REMOVE

08-09: SOUTH 67 67 NORTH — J3-2 48" X 57"; SOUTH 67 67 NORTH — REMOVE

08-10: STOP — R1-1 36" X 36"

08-11: STOP — R1-1 36" X 36"; STOP CROSS TRAFFIC DOES NOT STOP — REMOVE

08-12: STOP — R1-1 36" X 36"; STOP DIVIDED HIGHWAY — R6-3 30" X 24"; STOP DIVIDED HIGHWAY — REMOVE

08-13: ONE WAY — R6-2L 24" X 30"; ONE WAY — REMOVE

08-14: DO NOT ENTER — R5-1 30" X 30"; DO NOT ENTER — REMOVE

08-15: PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — R5-57 36" X 36"; PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — REMOVE

08-16: ONE WAY — R6-2L 24" X 30"; ONE WAY — REMOVE

08-17: ESTR

08-18: W4-1 48" X 48"; REMOVE

08-19: EXIT 85 / 67 / Lomira / Campbellsport — E4-1A; EXIT 85 — E1-5

08-20: W3-1 36" X 36"; REMOVE

08-21: EXIT 85 — E5-1A 72" X 60"; EXIT 85 — REMOVE

08-22: SOUTH 67 67 NORTH — J2-2 48" X 57"; SOUTH 67 67 NORTH — REMOVE

08-23: Gas / Food / Lodging — ESTR

08-24: ←Campbellsport / Lomira→ — D1-2; ←Campbellsport / Lomira→ — REMOVE

08-25: NORTH 67 67 SOUTH — J3-2 48" X 57"; NORTH 67 67 SOUTH — REMOVE

08-26: WRONG WAY — R5-1A 36" X 24"; WRONG WAY — REMOVE

08-27: WRONG WAY — R5-1A 36" X 24"; WRONG WAY — REMOVE

08-28: STOP — R1-1 36" X 36"; STOP — REMOVE

08-29: STOP — R1-1 36" X 36"; STOP — REMOVE

08-30: STOP — R1-1 36" X 36"; STOP DIVIDED HIGHWAY — R6-3 30" X 24"; STOP CROSS TRAFFIC DOES NOT STOP — REMOVE

08-31: ONE WAY — R6-2L 24" X 30"; ONE WAY — REMOVE

08-32: STOP — R1-1 36" X 36"; STOP — REMOVE

08-33: DO NOT ENTER — R5-1 30" X 30"; DO NOT ENTER — REMOVE

08-34: PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — R5-57 36" X 36"; PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED — REMOVE

08-35: ONE WAY — R6-2L 24" X 30"; ONE WAY — REMOVE

08-36: W4-1 48" X 48"; REMOVE

08-37R: STOP DIVIDED HIGHWAY — REMOVE

1380 1385 1390 1395 1400 1405

LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 87	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023208_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.

N

Gas - Exit 85

Lodging- Exit 85

ESTR

09-04

REMOVE

D10-2
12" X 36"

09-05

1410 1415 1420 1425 1430 1435

09-02

REMOVE

D10-2
12" X 36"

09-01

SPEED LIMIT 65

REMOVE

R2-1
48" X 60"

09-03

EXIT 87

49 KK

Brownsville
Waupon
1 MILE

REMOVE

EXIT 87

49 KK

Brownsville
Waupon
1 MILE

E1-5

E4-1A

LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

EXISTING STEEL SUPPORTS STRUCTURAL STEEL

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 88	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023209_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.

EXIT 85
67
Lomira
Campbellsport
1 MILE
E1-5
E1-1

EXIT 85
67
Lomira
Campbellsport
1 MILE
REMOVE

Food - Exit 85
ESTR

10-04
R3-4B
36" X 48"

REMOVE

10-03

10-07R

SPEED LIMIT 65
REMOVE

SPEED LIMIT 65
R2-1
48" X 60"

10-02

10-05

1440
1445
1450
1455
1460
1465

10-06R
REMOVE

10-01
R3-4B
36" X 48"

LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

EXISTING STEEL SUPPORTS STRUCTURAL STEEL

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 89	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023210_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.

N

REMOVE

D10-2
12" X 36"

REMOVE

W4-1
48" X 48"

11-05

11-06

1465 1470 1475 1480 1485 1490 1495

11-01

REMOVE

D10-2
12" X 36"

11-02

11-03

EXIT
87

E5-1A
72" X 60"

REMOVE

11-04

W3-1
36" X 36"

STOP AHEAD

REMOVE

ALTERNATE

EXIT 87
49 KK
Brownsville
Waupon

REMOVE

EXIT 87
49 KK
Brownsville
Waupon

E1-5

E4-1A

LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 90	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023211_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

NOTE: COORDINATE WITH PROJECT ID 1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.

12-01: Brownsville Waupon D1-2; Brownsville Waupon REMOVE

12-02: WRONG WAY R5-1A 36" X 24"; WRONG WAY REMOVE

12-03: NORTH 49 KK J3-2 48" X 57"; NORTH 49 REMOVE; EAST KK REMOVE

12-04: STOP R1-1 36" X 36"; STOP REMOVE

12-05: ONE WAY R6-2L 24" X 30"; ONE WAY REMOVE

12-06: STOP R1-1 36" X 36"; DIVIDED HIGHWAY R6-3 30" X 24"; STOP DIVIDED HIGHWAY REMOVE

12-07: PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED R5-57 36" X 36"; REMOVE

12-08: STOP R1-1 36" X 36"; STOP REMOVE

12-09: ONE WAY R6-2L 24" X 30"; ONE WAY REMOVE

12-10: DO NOT ENTER R5-1 30" X 30"; DO NOT ENTER REMOVE

12-11: WRONG WAY R5-1A 36" X 24"; WRONG WAY REMOVE

12-12: W4-1 48" X 48"; REMOVE

12-13: EXIT 87 E1-5; 49 KK Brownsville Waupon E4-1A

12-14: EXIT 87 E5-1A 72" X 60"; REMOVE

12-15: STOP AHEAD W3-1 36" X 36"; REMOVE

12-16: WRONG WAY R5-1A 36" X 24"; WRONG WAY REMOVE

12-17: Brownsville Waupon D1-2; Brownsville Waupon REMOVE

12-18: WRONG WAY R5-1A 36" X 24"; WRONG WAY REMOVE

12-19: TO EAST KK; NORTH 49; J3-2 48" X 57"; REMOVE; REMOVE

12-20: STOP R1-1 36" X 36"; DIVIDED HIGHWAY R6-3 30" X 24"; REMOVE

12-21: STOP R1-1 36" X 36"; REMOVE

12-22: ONE WAY R6-2L 24" X 30"; ONE WAY REMOVE

12-23: STOP R1-1 36" X 36"; STOP REMOVE

12-24: DO NOT ENTER R5-1 30" X 30"; DO NOT ENTER REMOVE

12-25: PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED R5-57 36" X 36"; REMOVE

12-26: ONE WAY R6-2L 24" X 30"; ONE WAY REMOVE

12-27: ALT NORTH 41 J3-1 24" X 69"; ALT NORTH 41 REMOVE; ESTR

12-28

1500 1505 1510 1515 1520 1525

EXIT 87 — 49 KK — Brownsville Waupon

N

LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 91	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023212_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

NOTE: COORDINATE WITH PROJECT ID
1133-03-76 FOR INTERSTATE ROUTE SIGNING

SIGNS NOT SHOWN ON THE PLANS ARE ESTR.

N

REMOVE

D10-2
12" X 36"
13-07

R3-4B
36" X 48"
13-06

REMOVE
13-09R

Dodge Co
REMOVE

Dodge Co
I2-2
54" X 15"
13-05

1530 1535 1540 1545 1550 1555

REMOVE
13-01

D10-2
12" X 36"

SPEED LIMIT 65
REMOVE

SPEED LIMIT 65
R2-1
48" X 60"
13-02

13-03

Hwy B	4
Fond du Lac	10
Green Bay	82

D2-3

Hwy B	4
Fond du Lac	10
Green Bay	82

REMOVE

13-04

R3-4B
36" X 48"

13-08R

REMOVE

LEGEND

XX-XX DENOTES SIGN NUMBER

S-XX-XX DENOTES SIGN STRUCTURE NUMBER

SIGN(S) TO BE REMOVED, MOVED, REVISED, OR INSTALLED ON THE FOLLOWING:

EXISTING POST(S) TO BE REMOVED OR ESTR

POST(S)

POLE

STEEL SUPPORT(S) STRUCTURAL STEEL

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET 92	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\023213_ps.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

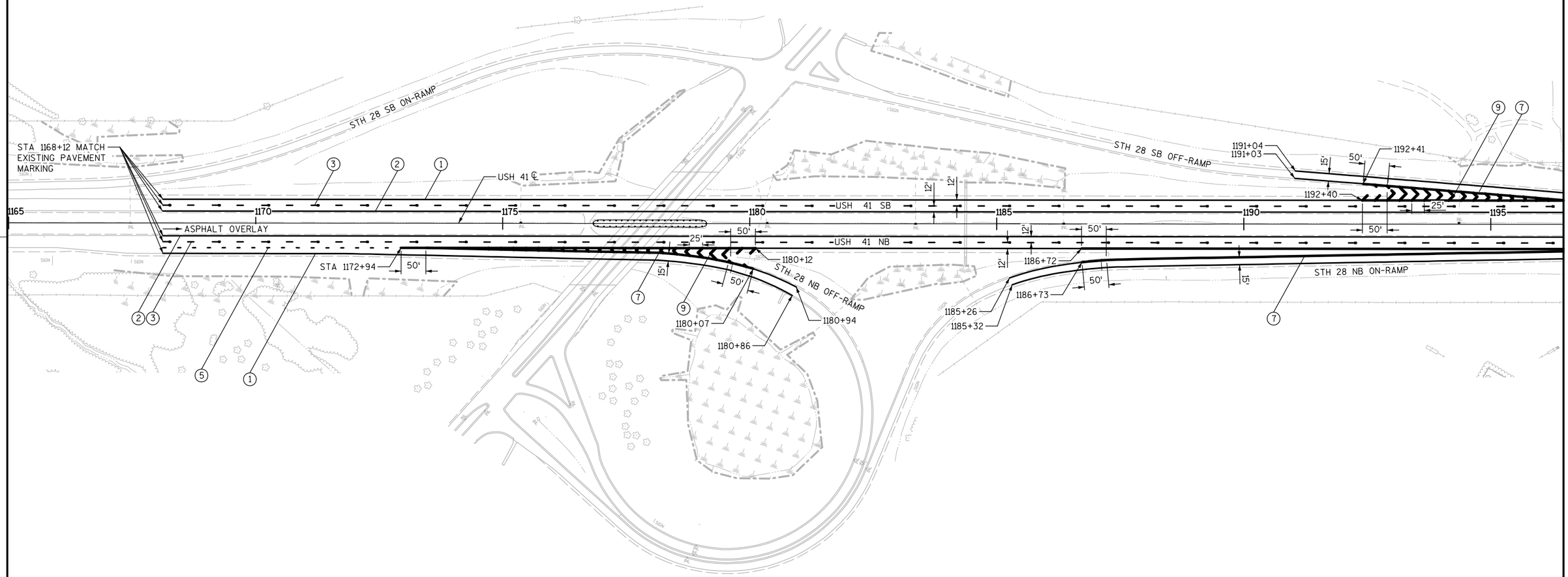
⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑥ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE CHANNELIZING)

⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



NOTE:
ALL DIAMOND GRINDING CONCRETE AREAS SHALL RECEIVE PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH AND PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH.
ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 93	E

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

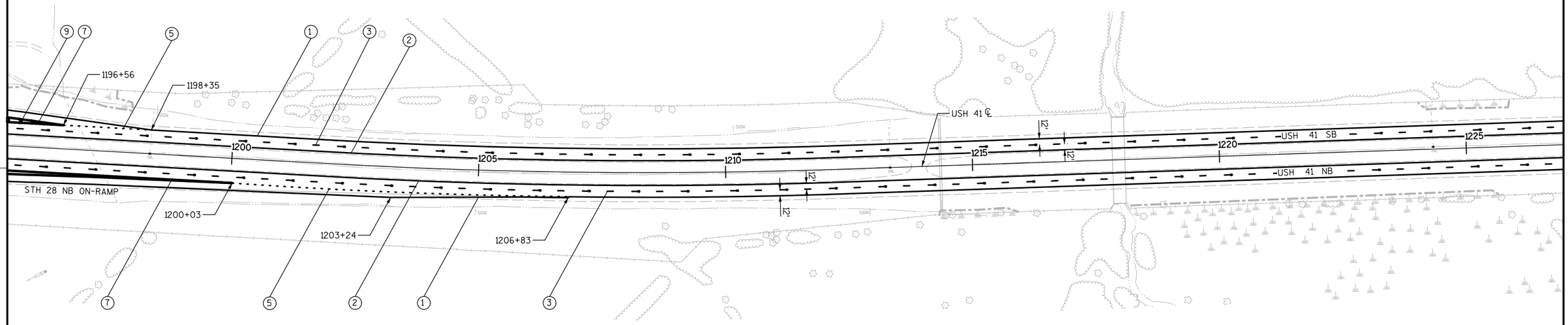
⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑥ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE CHANNELIZING)

⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



NOTE:
ALL DIAMOND GRINDING CONCRETE AREAS SHALL RECEIVE PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH AND PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH.
ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 94	E

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

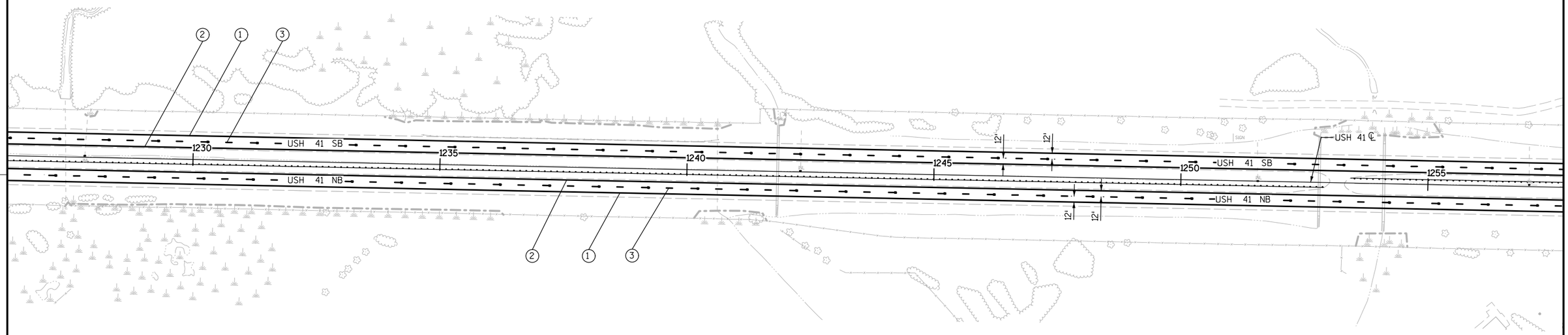
⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑥ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE CHANNELIZING)

⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)

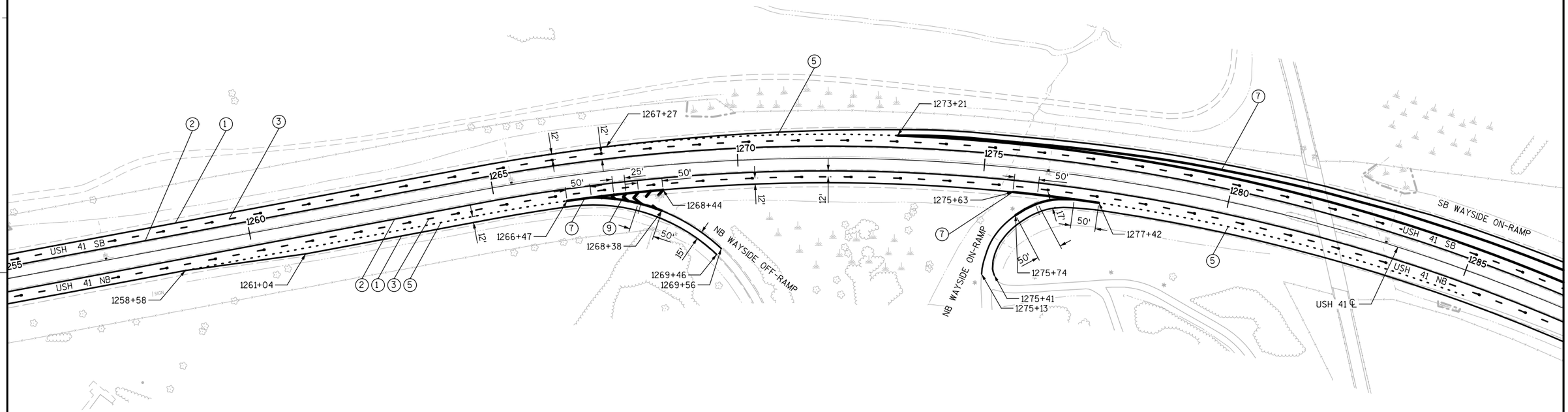


NOTE:
ALL DIAMOND GRINDING CONCRETE AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH.
ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 95	E

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)
② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)
③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)
④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)
⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)
⑥ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)
⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE CHANNELIZING)
⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)
⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



NOTE:
ALL DIAMOND GRINDING CONCRETE AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH.
ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 96	E

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

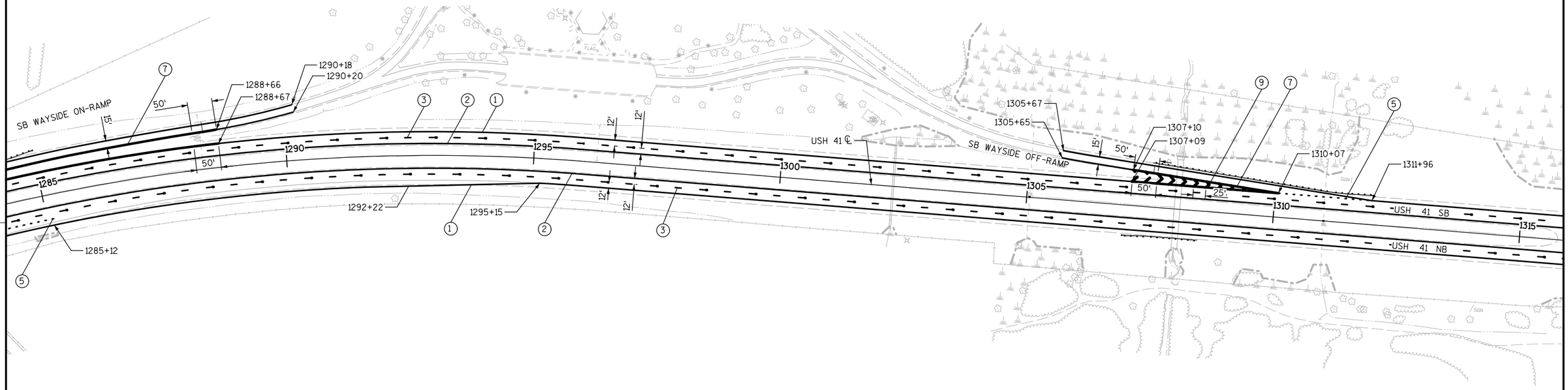
⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑥ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE CHANNELIZING)

⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



NOTE:
ALL DIAMOND GRINDING CONCRETE AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH.
ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 97	E

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

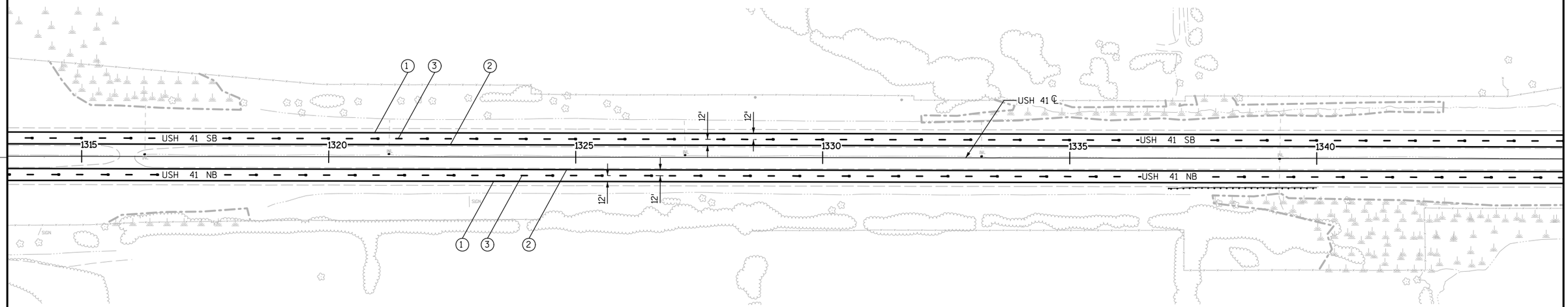
⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑥ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE CHANNELIZING)

⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



NOTE:
ALL DIAMOND GRINDING CONCRETE AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH.
ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 98	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\024506_pm.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

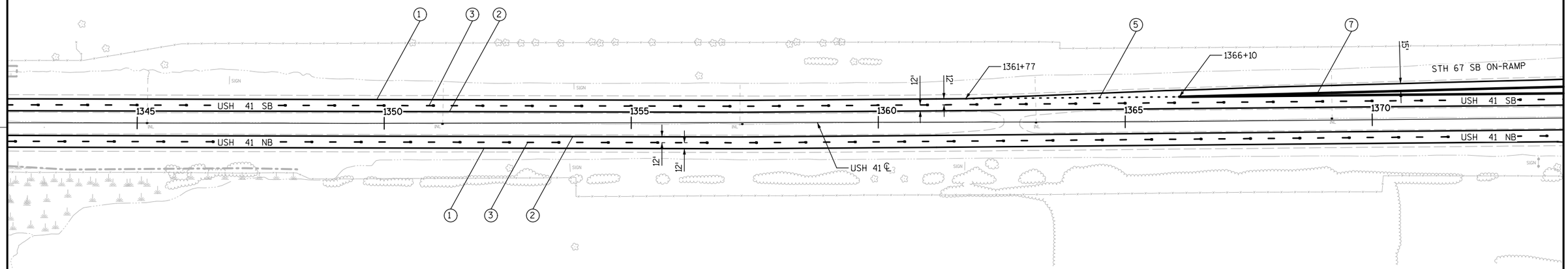
⑤ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑥ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE CHANNELIZING)

⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



NOTE:
ALL DIAMOND GRINDING CONCRETE AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH.
ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 99	E

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

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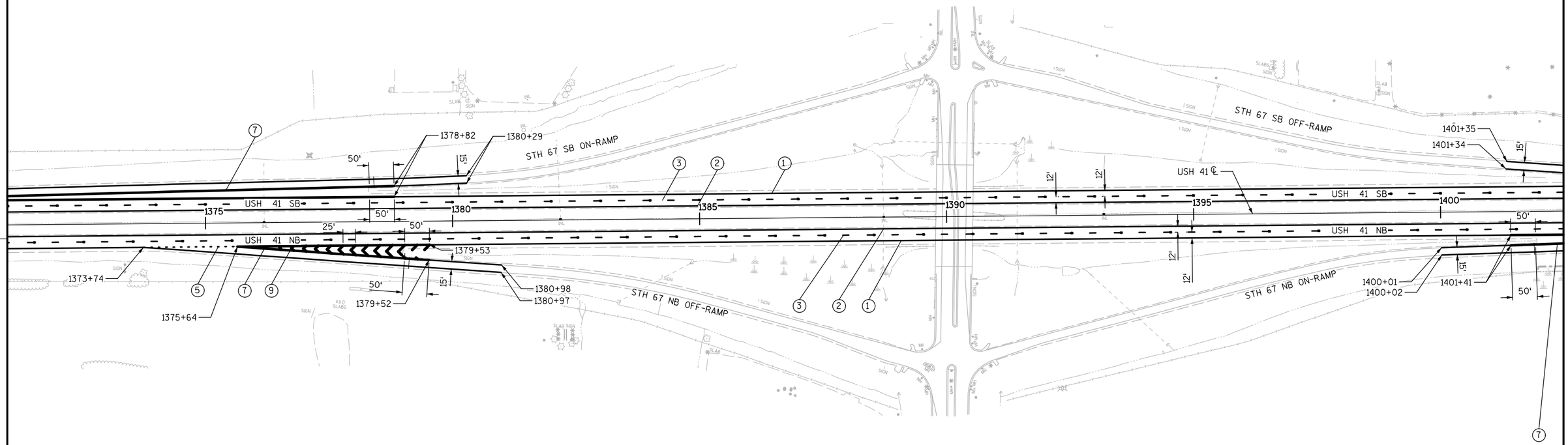
⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE CHANNELIZING)

⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



NOTE:
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ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 100	E

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

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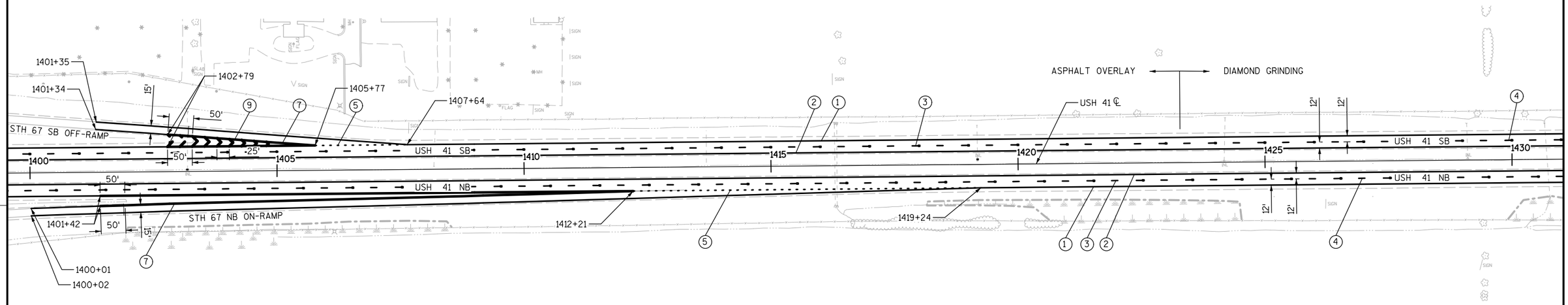
⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



NOTE:
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ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 101	E

2

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

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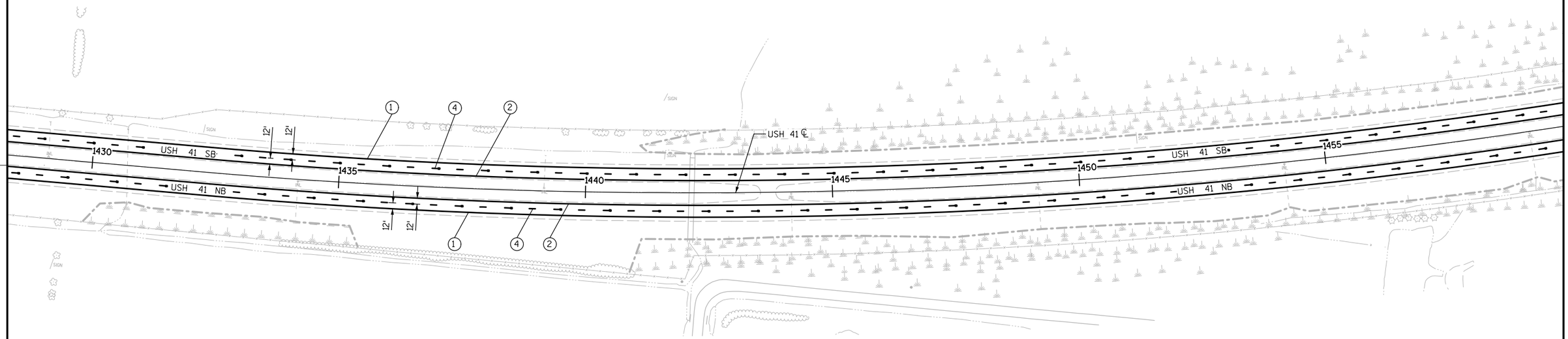
⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)

N



NOTE:
ALL DIAMOND GRINDING CONCRETE AREAS SHALL RECEIVE PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH AND PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH.
ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 102	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\024510_pm.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:200

WISDOT/CADDS SHEET 42

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

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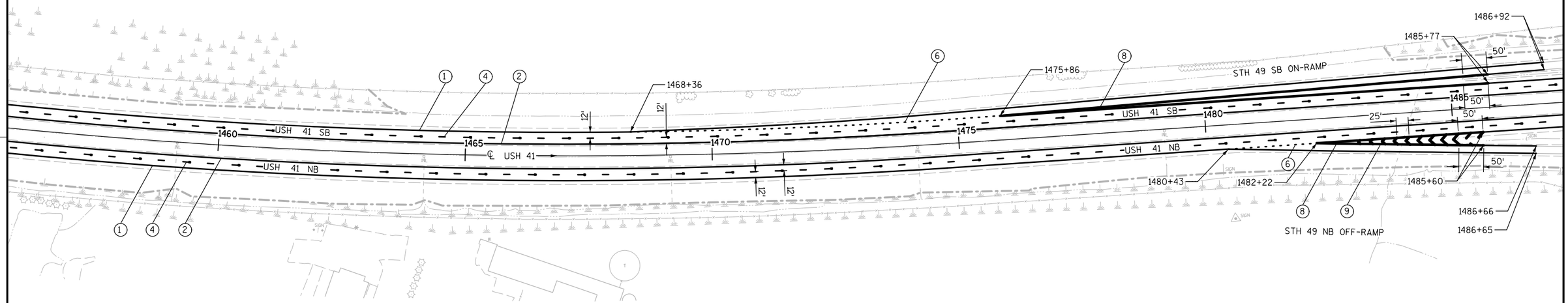
⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE CHANNELIZING)

⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



NOTE:
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ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 103	E

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

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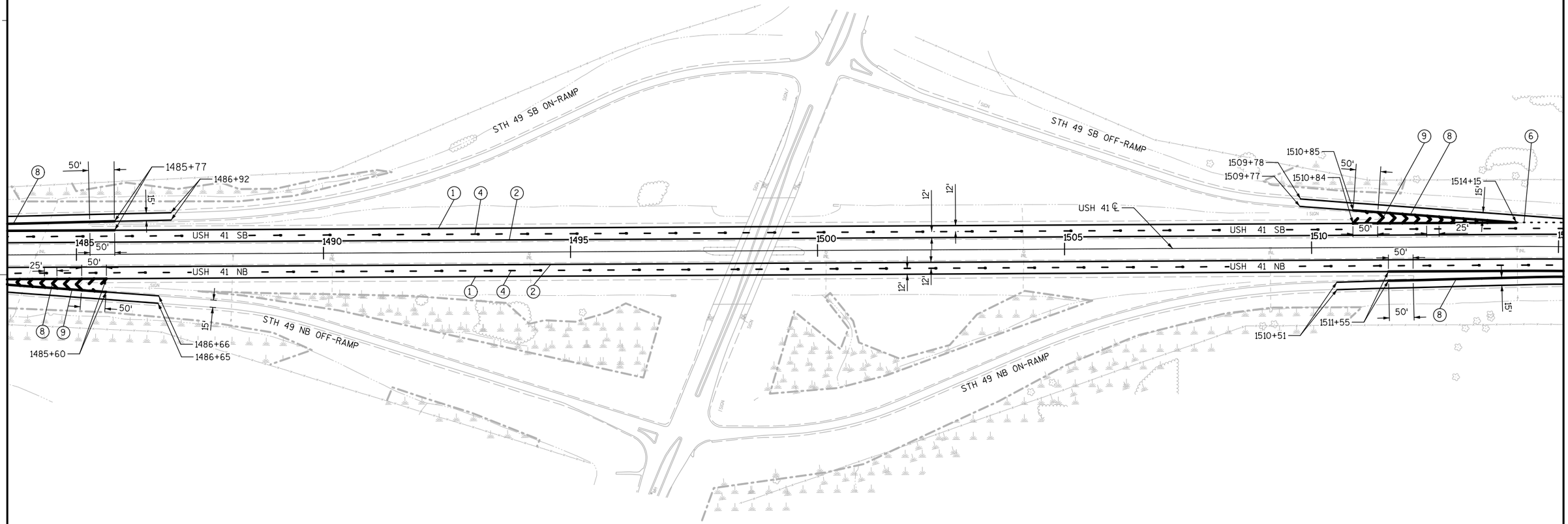
⑥ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 3' SEG., 9' GAP)

⑦ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH (WHITE CHANNELIZING)

⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



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ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 104	E

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)
② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)
③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)
④ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)
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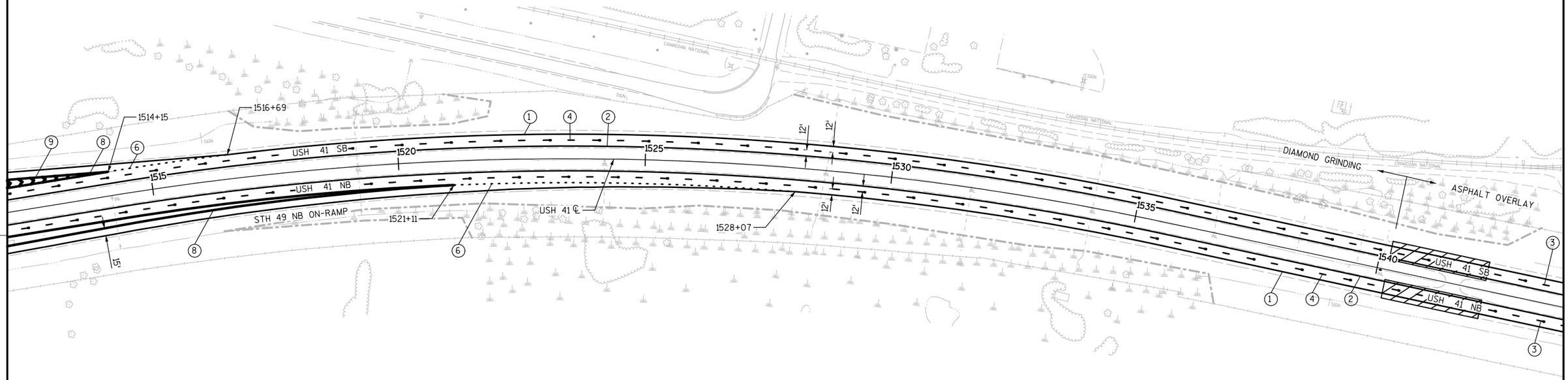
⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)
⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)



NOTE:
ALL DIAMOND GRINDING CONCRETE AREAS SHALL RECEIVE PAVEMENT MARKING
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GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 105	E

2

2

LEGEND

① PAVEMENT MARKING EPOXY 4-INCH (WHITE EDGE LINE)

② PAVEMENT MARKING EPOXY 4-INCH (YELLOW EDGE LINE)

③ PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH (WHITE SKIP: 12.5' SEG., 37.5' GAP)

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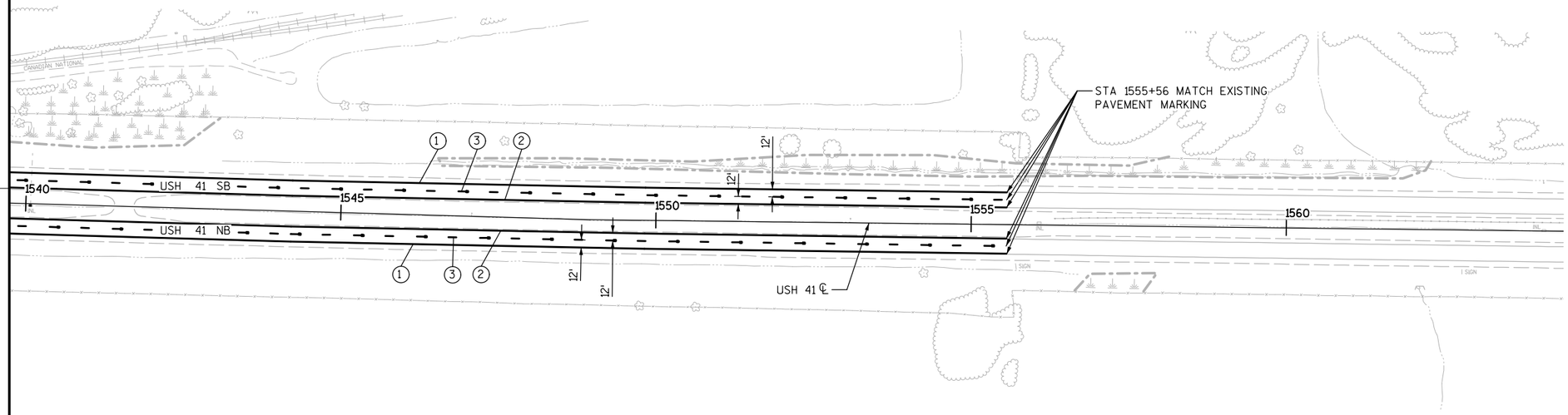
⑧ PAVEMENT MARKING GROOVED WET REFLECTIVE CONSTRAST TAPE 8-INCH (WHITE CHANNELIZING)

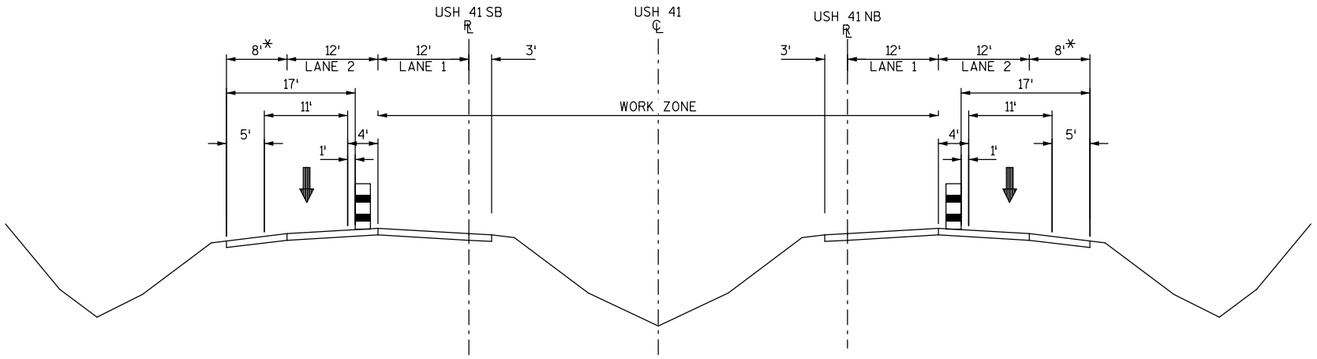
⑨ PAVEMENT MARKING EPOXY 24-INCH (WHITE DIAGONAL)

N



NOTE:
ALL DIAMOND GRINDING CONCRETE AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH.
ALL ASPHALT OVERLAY AREAS SHALL RECEIVE PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 4-INCH AND PAVEMENT MARKING
GROOVED WET REFLECTIVE TAPE 8-INCH.

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT PAVEMENT MARKING	SHEET 106	E



STAGE 1 & 4 : TYPICAL SECTION

TRAFFIC CONTROL GENERAL NOTES:

TO COMPLETE ALL WORK UTILIZE TRAFFIC CONTROL ON-RAMP RESUFACING CLOSURE DETAIL; SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION; TRAFFIC CONTROL, EXIST AND ENTRANCE RAMP WITHIN LANE CLOSURE; TRAFFIC CONTROL, EXIT RAMP CLOSURE; AND TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH.

THERE IS NO PROPOSED SPEED REDUCTION FOR THIS PROJECT. DO NOT USE ANY SPEED LIMIT REDUCTION SIGNS SHOWN ON SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION.

ADD TRAFFIC CONTROL SIGNS, APPROXIMATELY ONE PER MILE, TO INDICATE UNEVEN LANES DURING PAVING OPERATIONS AT THE DIRECTION OF THE ENGINEER.

LANE AND RAMP CLOSURE RESTRICTIONS ARE AS FOLLOWS:

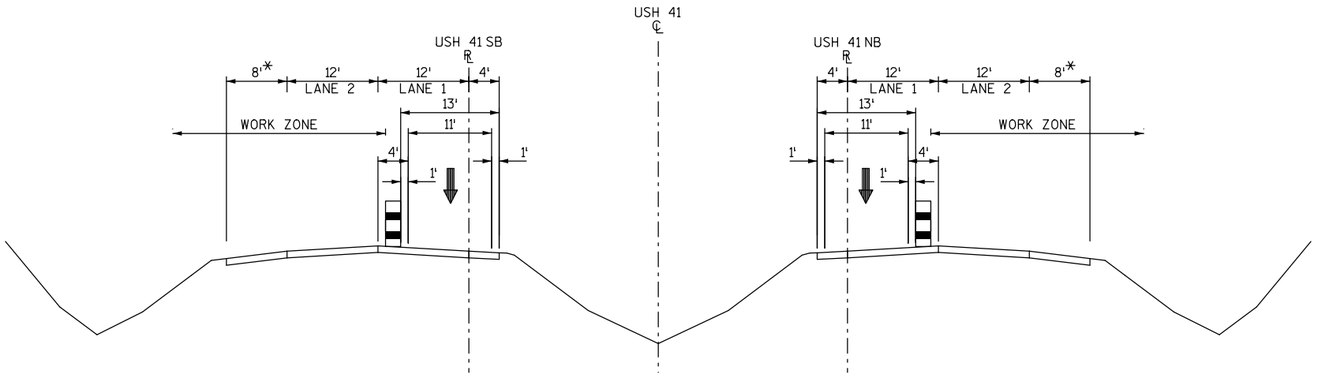
LANE AND RAMP CLOSURES ARE NOT ALLOWED ON WEEKENDS AND HOLIDAYS. NORTHBOUND LANE AND RAMP CLOSURES ARE PERMITTED FROM SUNDAY AT 6 PM TO FRIDAY AT 9 AM. SOUTHBOUND LANE AND RAMP CLOSURES ARE PERMITTED FROM SUNDAY AT 8 PM TO FRIDAY AT 12 PM.

LANE AND RAMP CLOSURES SHALL BE LIMITED TO LOCATIONS WHERE WORK IS BEING CONDUCTED.

STAGE 1:
1) REPAIR OUTSIDE SHOULDER FOR BOTH NB AND SB DIRECTIONS PRIOR TO SHIFTING TRAFFIC PER THE DISCRETION OF THE ENGINEER IN THE FIELD. UTILIZE UNDISTRIBUTED QUANTITIES OF REMOVING ASPHALTIC SURFACE MILLING AND HMA PAVEMENT TYPE E-30 TO COMPLETE WORK.
2) MILL EXISTING ASPHALT LANE 1, ADJACENT SHOULDER & REPAIR CONCRETE PAVEMENT.
3) CONSTRUCT PAVED MEDIAN SHOULDER WIDENING.
4) GRADE AND COMPLETE ALL MEDIAN WORK.
5) PAVE PROPOSED ASPHALT BINDER LANE 1 & ADJOINING SHOULDER.

STAGE 4:
1) COMPLETE FINISHING WORK IN MEDIAN.
2) PAVE PROPOSED ASPHALT FINAL SURFACE LANE 1 & ADJOINING SHOULDER.

* WIDTH OF OUTSIDE SHOULDER IS 10'IN STAGE 3 AND STAGE 4



STAGE 2 & 3 : TYPICAL SECTION

STAGE 2:
1) MILL EXISTING ASPHALT LANE 2, ADJACENT SHOULDER, RAMPS & REPAIR CONCRETE PAVEMENT.
2) CONSTRUCT OUTSIDE SHOULDER WIDENING.
3) GRADE AND COMPLETE ALL OUTSIDE SLOPE WORK.
4) CONSTRUCT PROPOSED RAMP EXTENSIONS AT STH 28 NORTHBOUND ON-RAMP AND NORTHBOUND WAYSIDE ON-RAMP.
5) PAVE PROPOSED ASPHALT BINDER LANE 2 , ADJOINING SHOULDER & RAMPS.

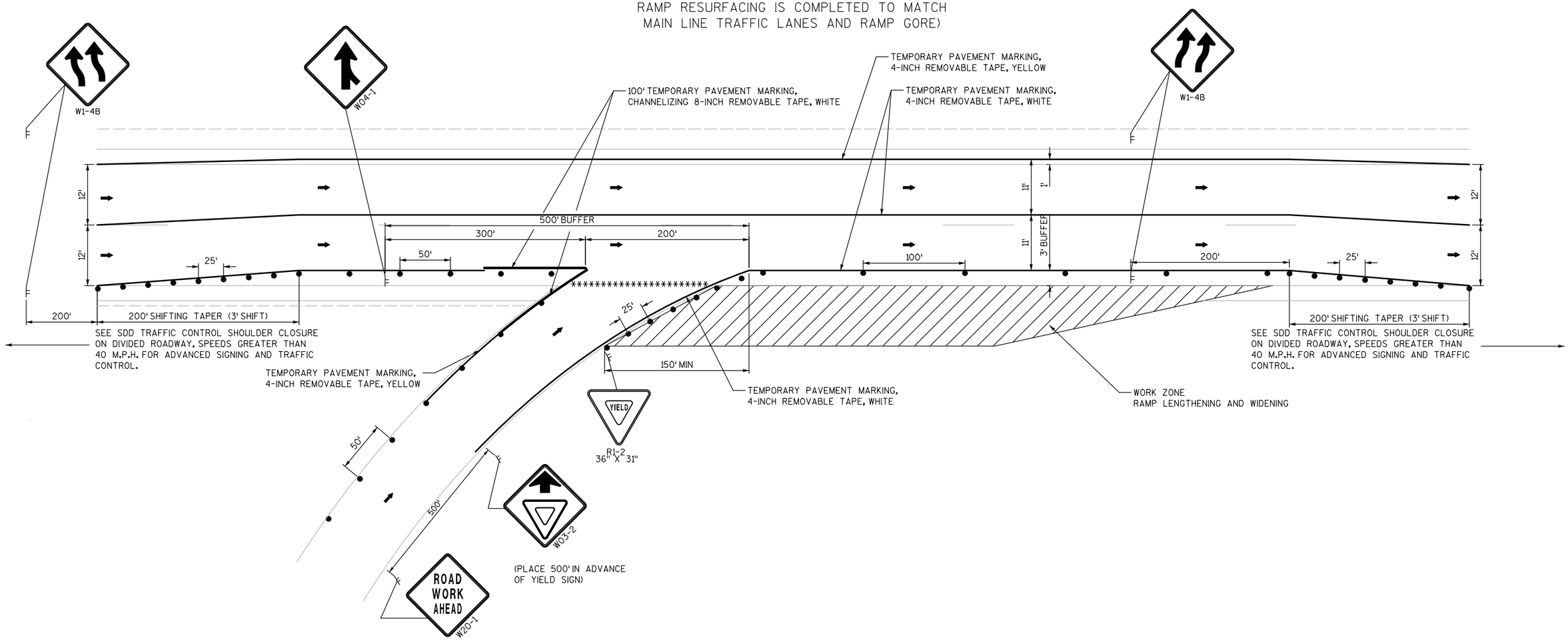
STAGE 3:
1) COMPLETE FINISHING WORK ON THE OUTSIDE SHOULDERS.
2) PAVE PROPOSED ASPHALT FINISHED SURFACE LANE 2, ADJOINING SHOULDER & RAMPS.

* WIDTH OF OUTSIDE SHOULDER IS 10'IN STAGE 3 AND STAGE 4

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	TRAFFIC CONTROL STAGING	SHEET 107	E

TRAFFIC CONTROL DETAIL FOR STH 28 ON-RAMP AND NORTH BOUND WAYSIDE ON RAMP LENGTHENING AND WIDENING

(UTILIZE TRAFFIC CONTROL SHOWN BELOW ONCE RAMP RESURFACING IS COMPLETED TO MATCH MAIN LINE TRAFFIC LANES AND RAMP GORE)



NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2 (MOD.) "LANE CLOSED" SIGNS.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, 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.

REMOVE OR USE BLACK TAPE ON ALL CONFLICTING PAVEMENT MARKINGS. PLACE TEMPORARY PAVEMENT MARKINGS, REMOVABLE TAPE IF CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

LEGEND

‡	TYPE III BARRICADE
‡	TYPE III BARRICADE WTH ATTACHED SIGN
●	TRAFFIC CONTROL DRUM
●	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
⊢	SIGN ON PERMANENT SUPPORT
⊢	SIGN ON TEMPORARY SUPPORT
➡	DIRECTION OF TRAFFIC
****	REMOVING PAVEMENT MARKINGS (SEE GENERAL NOTES)

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	TRAFFIC CONTROL – RAMP LENGTHING & WIDENING CONSTRUCTION	SHEET 108	E

UTILIZE TRAFFIC CONTROL ON-RAMP RESUFACING CLOSURE DETAIL AND SDD TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION (THERE IS NO PROPOSED SPEED REDUCTION FOR THIS PROJECT SO ELIMINATE ANY SPEED LIMIT REDUCTION SIGNS SHOWN ON THE TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION SDD) TO COMPLETE ON-RAMP RESURFACING WORK DURING OVER NIGHT HOURS.

RESURFACING OF EITHER WAYSIDE ON OR OFF RAMPS REQUIRE OFF-RAMP TO BE CLOSED. UTILIZE TRAFFIC CONTROL OFF-RAMP RESURFACING CLOSURE FOR MORE DETAILS.

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

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

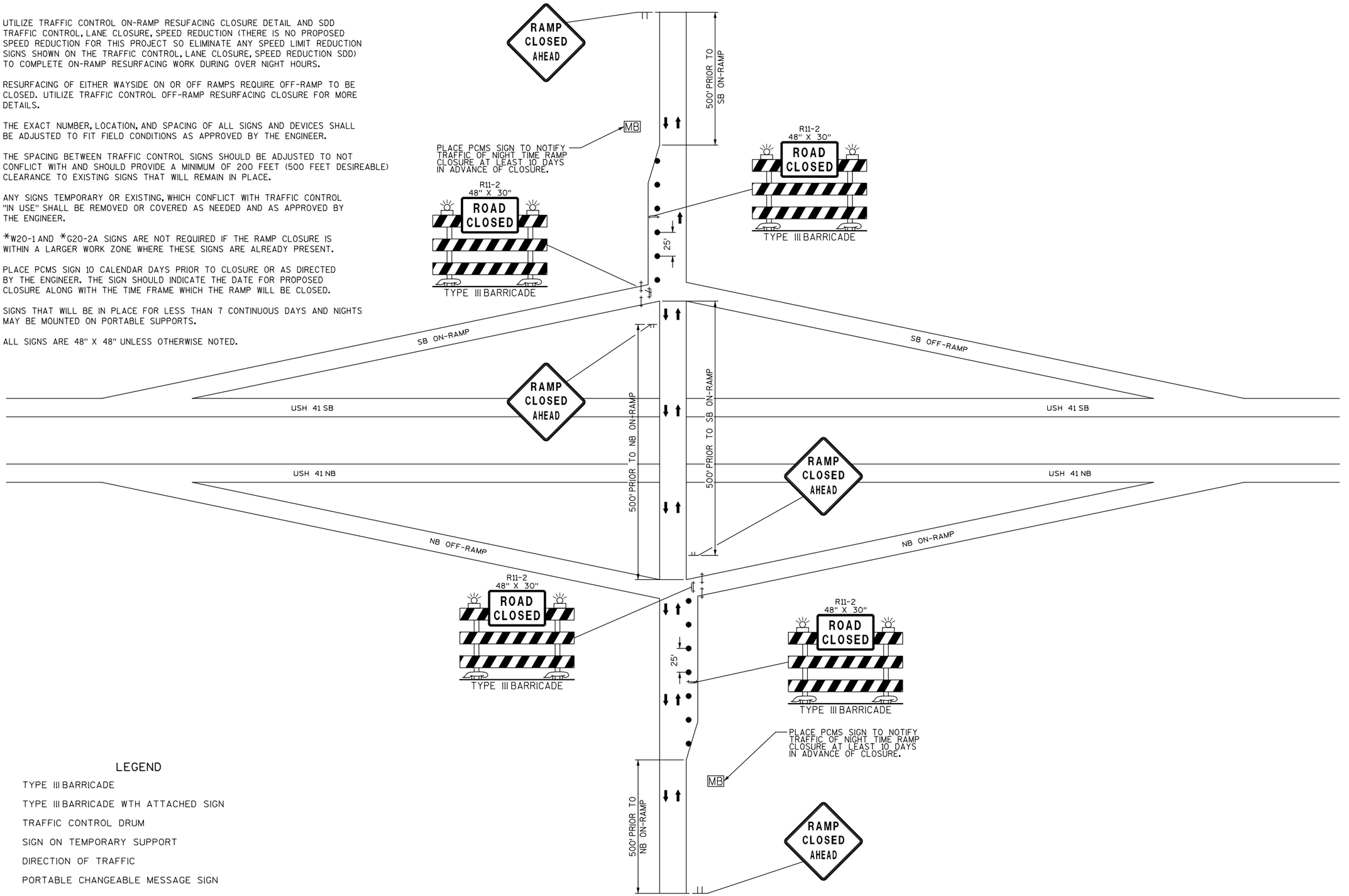
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

*W20-1 AND *G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

PLACE PCMS SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. THE SIGN SHOULD INDICATE THE DATE FOR PROPOSED CLOSURE ALONG WITH THE TIME FRAME WHICH THE RAMP WILL BE CLOSED.

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

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



LEGEND

‡	TYPE III BARRICADE
‡	TYPE III BARRICADE WTH ATTACHED SIGN
●	TRAFFIC CONTROL DRUM
⊢	SIGN ON TEMPORARY SUPPORT
➡	DIRECTION OF TRAFFIC
MB	PORTABLE CHANGEABLE MESSAGE SIGN

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	TRAFFIC CONTROL ON-RAMP RESURFACING CLOSURE	SHEET 109	E

UTILIZE TRAFFIC CONTROL OFF-RAMP RESUFACING DETAIL, SDD TRAFFIC CONTROL, EXIT RAMP CLOSURE, AND SDD TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. TO COMPLETE RAMP RESURFACING WORK DURING OVER NIGHT HOURS.

RESURFACING OF EITHER WAYSIDE ON OR OFF RAMPS REQUIRE OFF-RAMP TO BE CLOSED. UTILIZE THIS DETAIL FOR FULL WAYSIDE CLOSURE. ADD DRUMS AND BARRICADES TO WAYSIDE ON-RAMP TO PREVENT TRAFFIC FROM ENTERING ON-RAMP AS DIRECTED BY THE ENGINEER.

WORK ON WAYSIDE ON AND OFF RAMPS REQUIRE FULL CLOSURES, ADDITIONAL SIGN COVERINGS AND SIGN PLACEMENT AS SHOWN UNDER "FOR USE OF WAYSIDE ON-RAMP AND OFF-RAMP CLOSURE ONLY" SECTION ON THIS SHEET.

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIREABLE) 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.

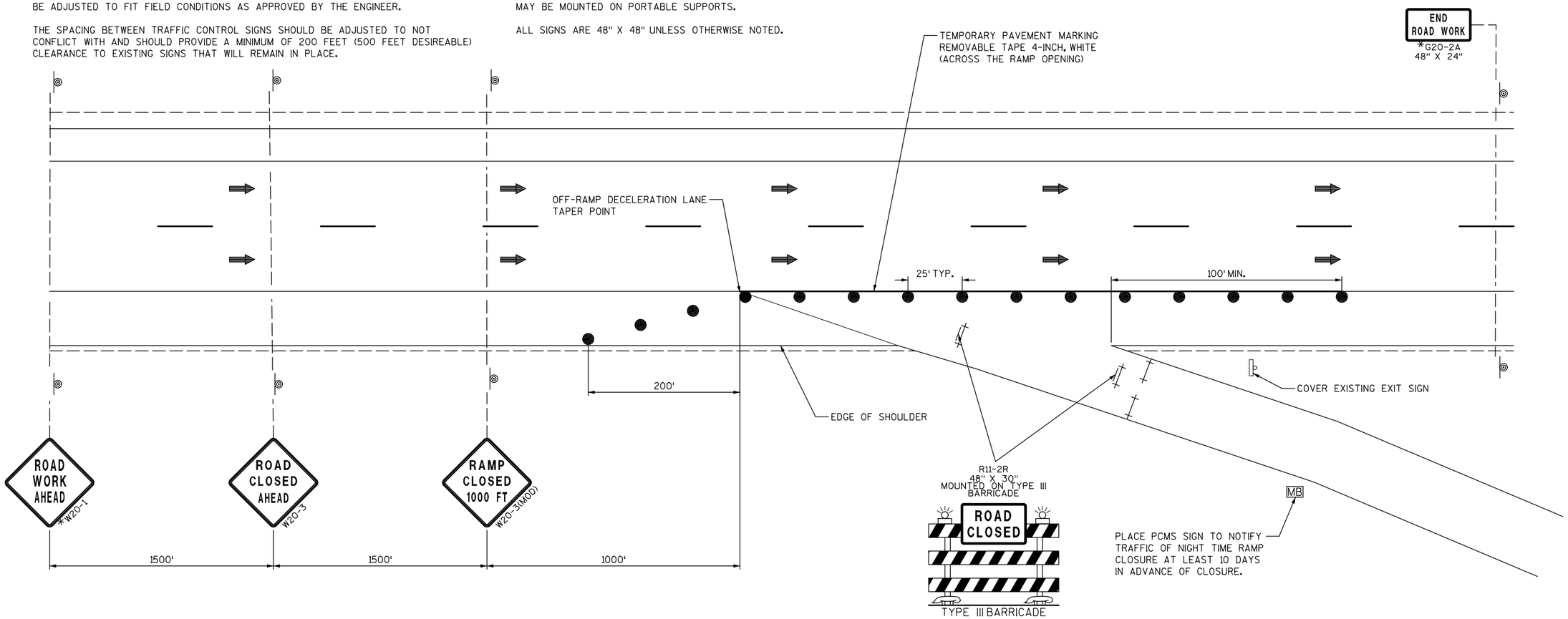
PLACE TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

*W20-1 AND *G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

PLACE PCMS SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. THE SIGN SHOULD INDICATE THE DATE FOR PROPOSED CLOSURE ALONG WITH THE TIME FRAME WHICH THE RAMP WILL BE CLOSED.

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

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



LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- MB PORTABLE CHANGEABLE MESSAGE SIGN

STA 1205+00 RT NORTH BOUND WAYSIDE &
STA 1354+00 LT SOUTH BOUND WAYSIDE
APPROXIMATE LOCATION OF EXISTING SIGN

WAYSIDE CLOSED
E5-51A (MOD)
96"X48"
(BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND)

REST AREA
X MILES
VENDING MACHINES
WEATHER INFORMATION
COVER SIGN WITH E5-51A (MOD) SIGN NOTIFYING TRAFFIC OF WAYSIDE CLOSURE

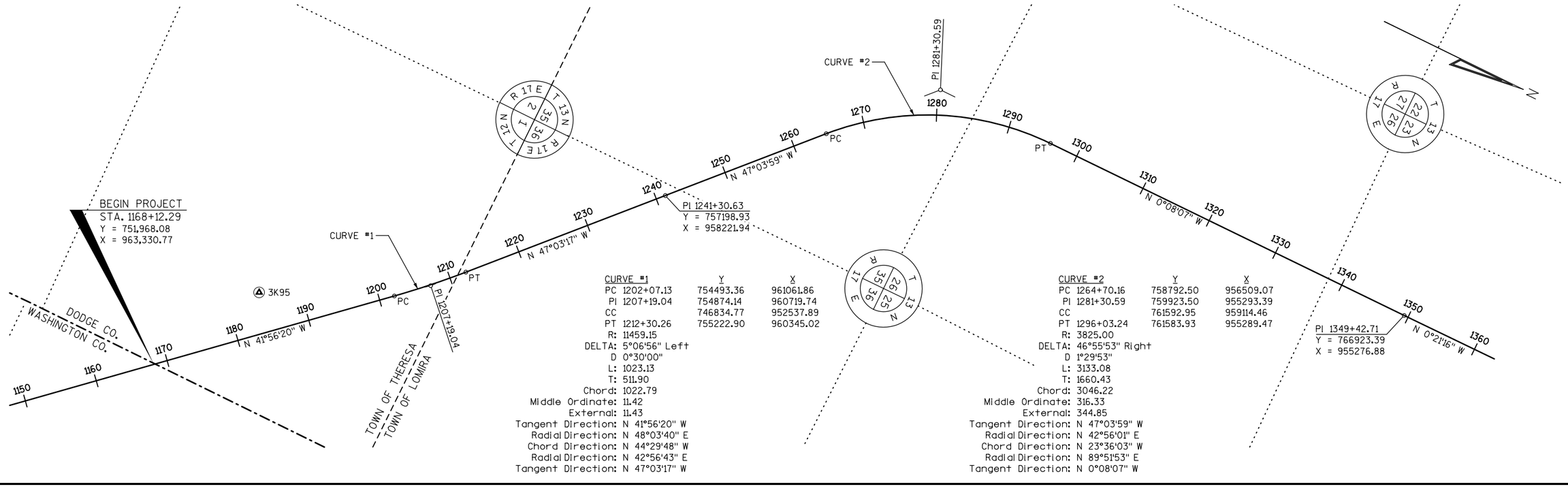
STA 1258+00 RT NORTH BOUND WAYSIDE &
STA 1311+50 LT SOUTH BOUND WAYSIDE
APPROXIMATE LOCATION OF EXISTING SIGN

REST AREA
COVER SIGN WITH E5-51A (MOD) SIGN NOTIFYING TRAFFIC OF WAYSIDE CLOSURE

REST AREA
COVER EXISTING EXIT SIGN AT OFF-RAMP GORE

FOR USE OF WAYSIDE ON-RAMP OR OFF-RAMP CLOSURE ONLY

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	TRAFFIC CONTROL OFF-RAMP RESURFACING CLOSURE	SHEET 110	E

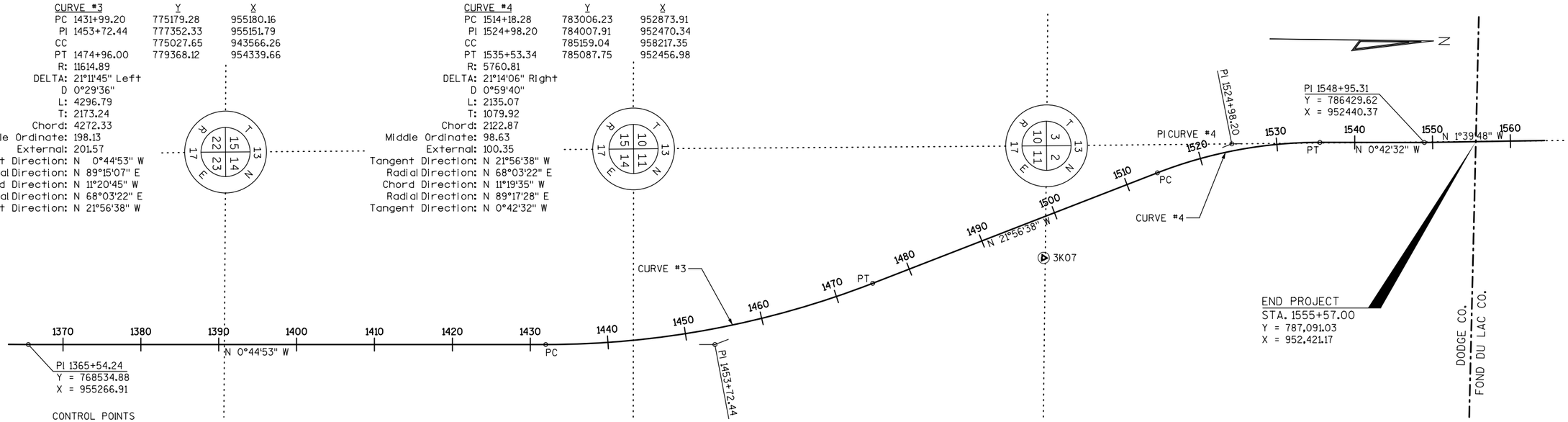


CURVE #1	Y	X
PC 1202+07.13	754493.36	96061.86
PI 1207+19.04	754874.14	960719.74
CC	746834.77	952537.89
PT 1212+30.26	755222.90	960345.02
R: 11459.15		
DELTA: 5°06'56" Left		
D 0°30'00"		
L: 1023.13		
T: 511.90		
Chord: 1022.79		
Middle Ordinate: 11.42		
External: 11.43		
Tangent Direction: N 41°56'20" W		
Radial Direction: N 48°03'40" E		
Chord Direction: N 44°29'48" W		
Radial Direction: N 42°56'43" E		
Tangent Direction: N 47°03'17" W		

CURVE #2	Y	X
PC 1264+70.16	758792.50	956509.07
PI 1281+30.59	759923.50	955293.39
CC	761592.95	959114.46
PT 1296+03.24	761583.93	955289.47
R: 3825.00		
DELTA: 46°55'53" Right		
D 1°29'53"		
L: 3133.08		
T: 1660.43		
Chord: 3046.22		
Middle Ordinate: 316.33		
External: 344.85		
Tangent Direction: N 47°03'59" W		
Radial Direction: N 42°56'01" E		
Chord Direction: N 23°36'03" W		
Radial Direction: N 89°51'53" E		
Tangent Direction: N 0°08'07" W		

CURVE #3	Y	X
PC 1431+99.20	775179.28	955180.16
PI 1453+72.44	777352.33	955151.79
CC	775027.65	943566.26
PT 1474+96.00	779368.12	954339.66
R: 11614.89		
DELTA: 21°11'45" Left		
D 0°29'36"		
L: 4296.79		
T: 2173.24		
Chord: 4272.33		
Middle Ordinate: 198.13		
External: 201.57		
Tangent Direction: N 0°44'53" W		
Radial Direction: N 89°15'07" E		
Chord Direction: N 11°20'45" W		
Radial Direction: N 68°03'22" E		
Tangent Direction: N 21°56'38" W		

CURVE #4	Y	X
PC 1514+18.28	783006.23	952873.91
PI 1524+98.20	784007.91	952470.34
CC	785159.04	958217.35
PT 1535+53.34	785087.75	952456.98
R: 5760.81		
DELTA: 21°14'06" Right		
D 0°59'40"		
L: 2135.07		
T: 1079.92		
Chord: 2122.87		
Middle Ordinate: 98.63		
External: 100.35		
Tangent Direction: N 21°56'38" W		
Radial Direction: N 68°03'22" E		
Chord Direction: N 11°19'35" W		
Radial Direction: N 89°17'28" E		
Tangent Direction: N 0°42'32" W		



CONTROL POINTS

NO.	STATION	DESCRIPTION	X	Y
3K95	1184+55		961825.00	752823.00
3K07	1496+62		953985.00	781560.00

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), DODGE COUNTY, NAD 1983 (2007).

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 1988 (2007)

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	ALIGNMENT DETAIL	SHEET 111	E

DATE 04FEB15 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	1107-00-74 QUANTITY
0010	201.0120	Clearing	ID	62.000	62.000
0020	201.0220	Grubbing	ID	62.000	62.000
0030	204.0100	Removing Pavement	SY	10,600.000	10,600.000
0040	204.0105	Removing Pavement Butt Joints	SY	410.000	410.000
0050	204.0115	Removing Asphaltic Surface Butt Joints	SY	8,920.000	8,920.000
0060	204.0120	Removing Asphaltic Surface Milling	SY	277,000.000	277,000.000
0070	204.0165	Removing Guardrail	LF	2,950.000	2,950.000
0080	204.0220	Removing Inlets	EACH	34.000	34.000
0090	204.9060.S	Removing (item description) 01. Endwall	EACH	31.000	31.000
0100	205.0100	Excavation Common **P**	CY	3,523.000	3,523.000
0110	208.0100	Borrow **P**	CY	26,192.000	26,192.000
0120	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1107-00-74	LS	1.000	1.000
0130	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	470.000	470.000
0140	213.0100	Finishing Roadway (project) 01. 1107-00-74	EACH	1.000	1.000
0150	305.0110	Base Aggregate Dense 3/4-Inch	TON	7,140.000	7,140.000
0160	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	5,300.000	5,300.000
0170	305.0500	Shaping Shoulders	STA	1,549.000	1,549.000
0180	312.0110	Select Crushed Material	TON	5,950.000	5,950.000
0190	390.0403	Base Patching Concrete Shes	SY	7,320.000	7,320.000
0200	416.0180	Concrete Driveway 8-Inch	SY	230.000	230.000
0210	416.0610	Drilled Tie Bars	EACH	4,830.000	4,830.000
0220	416.0620	Drilled Dowel Bars	EACH	24,140.000	24,140.000
0230	416.1715	Concrete Pavement Repair SHES	SY	1,660.000	1,660.000
0240	416.1725	Concrete Pavement Replacement SHES	SY	1,480.000	1,480.000
0250	420.1000.S	Concrete Pavement Continuous Diamond Grinding	SY	62,900.000	62,900.000
0260	440.4410.S	Incentive IRI Ride	DOL	40,990.000	40,990.000
0270	455.0105	Asphaltic Material PG58-28	TON	1,595.000	1,595.000
0280	455.0120	Asphaltic Material PG64-28	TON	1,618.000	1,618.000
0290	455.0605	Tack Coat	GAL	7,468.000	7,468.000
0300	460.1100	HMA Pavement Type E-0.3	TON	6,300.000	6,300.000
0310	460.1101	HMA Pavement Type E-1	TON	1,313.000	1,313.000
0320	460.1130	HMA Pavement Type E-30	TON	50,700.000	50,700.000
0330	460.2000	Incentive Density HMA Pavement	DOL	37,330.000	37,330.000
0340	460.4000	HMA Cold Weather Paving	TON	3,000.000	3,000.000
0350	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	54,600.000	54,600.000
0360	465.0400	Asphaltic Shoulder Rumble Strips	LF	151,000.000	151,000.000
0370	520.1012	Apron Endwalls for Culvert Pipe 12-Inch	EACH	2.000	2.000
0380	521.0112	Culvert Pipe Corrugated Steel 12-Inch	LF	3.500	3.500
0390	521.0124	Culvert Pipe Corrugated Steel 24-Inch	LF	1,000.000	1,000.000
0400	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	4.000	4.000
0410	522.0112	Culvert Pipe Reinforced Concrete Class III 12-Inch	LF	209.000	209.000
0420	522.0118	Culvert Pipe Reinforced Concrete Class III 18-Inch	LF	160.000	160.000
0430	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	15.000	15.000
0440	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0450	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	11.000	11.000

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DATE 04FEB15 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	1107-00-74 QUANTITY
0460	522.1036	Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	EACH	3.000	3.000
0470	522.1048	Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	EACH	2.000	2.000
0480	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	455.000	455.000
0490	602.0405	Concrete Sidewalk 4-Inch	SF	590.000	590.000
0500	603.1142	Concrete Barrier Type S42	LF	700.000	700.000
0510	606.0200	Riprap Medium	CY	20.000	20.000
0520	611.0420	Reconstructing Manholes	EACH	2.000	2.000
0530	611.0430	Reconstructing Inlets	EACH	3.000	3.000
0540	611.0612	Inlet Covers Type C	EACH	6.000	6.000
0550	611.0624	Inlet Covers Type H	EACH	2.000	2.000
0560	611.0642	Inlet Covers Type MS	EACH	64.000	64.000
0570	611.3004	Inlets 4-FT Diameter	EACH	2.000	2.000
0580	611.3901	Inlets Median 1 Grate	EACH	28.000	28.000
0590	611.3903	Inlets Median 3 Grate	EACH	3.000	3.000
0600	611.3904	Inlets Median 4 Grate	EACH	6.000	6.000
0610	614.0220	Steel Thrie Beam Bullnose Terminal	EACH	8.000	8.000
0620	614.0230	Steel Thrie Beam	LF	650.000	650.000
0630	614.2300	MGS Guardrail 3	LF	7,012.500	7,012.500
0640	614.2500	MGS Thrie Beam Transition	LF	39.000	39.000
0650	614.2610	MGS Guardrail Terminal EAT	EACH	13.000	13.000
0660	614.2620	MGS Guardrail Terminal Type 2	EACH	12.000	12.000
0670	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1107-00-74	EACH	1.000	1.000
0680	619.1000	Mobilization	EACH	1.000	1.000
0690	624.0100	Water	MGAL	25.000	25.000
0700	625.0500	Salvaged Topsoil	SY	105,700.000	105,700.000
0710	628.1104	Erosion Bales	EACH	10.000	10.000
0720	628.1504	Silt Fence	LF	36,310.000	36,310.000
0730	628.1520	Silt Fence Maintenance	LF	36,310.000	36,310.000
0740	628.1905	Mobilizations Erosion Control	EACH	10.000	10.000
0750	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0760	628.2002	Erosion Mat Class I Type A	SY	34,000.000	34,000.000
0770	628.2004	Erosion Mat Class I Type B	SY	116,000.000	116,000.000
0780	628.2006	Erosion Mat Urban Class I Type A	SY	3,055.000	3,055.000
0790	628.2008	Erosion Mat Urban Class I Type B	SY	992.000	992.000
0800	628.7005	Inlet Protection Type A	EACH	74.000	74.000
0810	628.7015	Inlet Protection Type C	EACH	2.000	2.000
0820	628.7504	Temporary Ditch Checks	LF	1,420.000	1,420.000
0830	628.7555	Culvert Pipe Checks	EACH	35.000	35.000
0840	628.7570	Rock Bags	EACH	9.000	9.000
0850	629.0210	Fertilizer Type B	CWT	100.000	100.000
0860	630.0120	Seeding Mixture No. 20	LB	4,027.000	4,027.000
0870	630.0130	Seeding Mixture No. 30	LB	75.000	75.000
0880	630.0200	Seeding Temporary	LB	4,120.000	4,120.000
0890	631.1100	Sod Erosion Control	SY	19.000	19.000
0900	633.5200	Markers Culvert End	EACH	30.000	30.000
0910	634.0410	Posts Wood 4x4-Inch X 10-FT	EACH	4.000	4.000
0920	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	145.000	145.000
0930	635.0200	Sign Supports Structural Steel HS	LB	13,578.700	13,578.700
0940	636.0100	Sign Supports Concrete Masonry	CY	25.600	25.600
0950	636.0500	Sign Supports Steel Reinforcement	LB	1,494.000	1,494.000

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DATE 04FEB15 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	1107-00-74 QUANTITY
0960	637.1210	Signs Type I Reflective H	SF	263.000	263.000
0970	637.1220	Signs Type I Reflective SH	SF	2,832.000	2,832.000
0980	637.2210	Signs Type II Reflective H	SF	1,287.150	1,287.150
0990	637.2230	Signs Type II Reflective F	SF	166.000	166.000
1000	638.2102	Moving Signs Type II	EACH	3.000	3.000
1010	638.2601	Removing Signs Type I	EACH	17.000	17.000
1020	638.2602	Removing Signs Type II	EACH	131.000	131.000
1030	638.3000	Removing Small Sign Supports	EACH	156.000	156.000
1040	638.3100	Removing Structural Steel Sign Supports	EACH	32.000	32.000
1050	642.5001	Field Office Type B	EACH	1.000	1.000
1060	643.0200	Traffic Control Surveillance and Maintenance (project) 01. 1107-00-74	DAY	100.000	100.000
1070	643.0300	Traffic Control Drums	DAY	80,500.000	80,500.000
1080	643.0420	Traffic Control Barricades Type III	DAY	1,580.000	1,580.000
1090	643.0705	Traffic Control Warning Lights Type A	DAY	2,220.000	2,220.000
1100	643.0715	Traffic Control Warning Lights Type C	DAY	5,200.000	5,200.000
1110	643.0800	Traffic Control Arrow Boards	DAY	600.000	600.000
1120	643.0900	Traffic Control Signs	DAY	3,630.000	3,630.000
1130	643.0910	Traffic Control Covering Signs Type I	EACH	30.000	30.000
1140	643.0920	Traffic Control Covering Signs Type II	EACH	65.000	65.000
1150	643.1050	Traffic Control Signs PCMS	DAY	170.000	170.000
1160	645.0120	Geotextile Fabric Type HR	SY	30.000	30.000
1170	646.0106	Pavement Marking Epoxy 4-Inch	LF	158,900.000	158,900.000
1180	646.0126	Pavement Marking Epoxy 8-Inch	LF	22,600.000	22,600.000
1190	646.0406	Pavement Marking Same Day Epoxy 4-Inch	LF	21,460.000	21,460.000
1200	646.0790.S	Removing Raised Pavement Markers	EACH	1,300.000	1,300.000
1210	646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF	6,410.000	6,410.000
1220	646.0843.S	Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	LF	7,150.000	7,150.000
1230	646.0881.S	Pavement Marking Grooved Wet Reflective Tape 4-Inch	LF	15,050.000	15,050.000
1240	646.0883.S	Pavement Marking Grooved Wet Reflective Tape 8-Inch	LF	15,450.000	15,450.000
1250	647.0746	Pavement Marking Diagonal Epoxy 24-Inch	LF	1,880.000	1,880.000
1260	649.0100	Temporary Pavement Marking 4-Inch	LF	35,000.000	35,000.000
1270	649.0300	Temporary Pavement Marking Reflective Tape 4-Inch	LF	22,000.000	22,000.000
1280	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	1,400.000	1,400.000
1290	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	500.000	500.000
1300	650.4000	Construction Staking Storm Sewer	EACH	79.000	79.000
1310	650.4500	Construction Staking Subgrade	LF	2,350.000	2,350.000
1320	650.5000	Construction Staking Base	LF	2,350.000	2,350.000
1330	650.6000	Construction Staking Pipe Culverts	EACH	6.000	6.000
1340	650.7500	Construction Staking Concrete Barrier	LF	700.000	700.000
1350	650.8000	Construction Staking Resurfacing Reference	LF	38,745.000	38,745.000
1360	650.9910	Construction Staking Supplemental Control (project) 01. 1107-00-74	LS	1.000	1.000
1370	650.9920	Construction Staking Slope Stakes	LF	27,075.000	27,075.000
1380	690.0150	Sawing Asphalt	LF	370.000	370.000
1390	690.0250	Sawing Concrete	LF	46,950.000	46,950.000
1400	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	700.000	700.000

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DATE 04FEB15 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	1107-00-74 QUANTITY
1410	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	475.000	475.000
1420	SPV.0060	Special 01. Terminal High-Tension Cable Guard Tl-4	EACH	24.000	24.000
1430	SPV.0060	Special 02. Abandon Cattle Pass	EACH	6.000	6.000
1440	SPV.0060	Special 03. Control Structure	EACH	2.000	2.000
1450	SPV.0060	Special 04. Reconstruct Sanitary Manhole	EACH	1.000	1.000
1460	SPV.0090	Special 01. High-Tension Cable Guard Tl-4 Socketed	LF	39,900.000	39,900.000
1470	SPV.0105	Special 01. Metal Vehicle Storage Building	LS	1.000	1.000
1480	SPV.0105	Special 02. Salt Storage Building	LS	1.000	1.000
1490	SPV.0105	Special 03. Survey Salt Storage Site	LS	1.000	1.000
1500	SPV.0105	Special 04. Grading Salt Storage Site	LS	1.000	1.000
1510	SPV.0105	Special 05. Brine Storage And Dispensing System	LS	1.000	1.000
1520	SPV.0105	Special 06. Utilities Salt Storage Site	LS	1.000	1.000
1530	SPV.0180	Special 01. Removing Asphaltic Surface Milling Second Pass	SY	14,700.000	14,700.000

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PAVEMENT REMOVAL ITEMS

CATEGORY 0010 LOCATION			ITEMS 204.0100 REMOVING PAVEMENT (SY)	ITEMS 204.0105 REMOVING PAVEMENT BUTT JOINTS (SY)	ITEMS 204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS (SY)	ITEMS 204.0120 REMOVING ASPHALTIC SURFACE MILLING (SY)	ITEMS 420.1000.S CONCRETE PAVEMENT CONTINUOUS DIAMOND GRINDING (SY)	ITEMS 646.0790.S REMOVING RAISED PAVEMENT MARKERS (EACH)	SPV.0180.01 REMOVING ASPHALTIC SURFACE MILLING SECOND PASS (SY)
ROADWAY									
1168+12	TO 1423+29	NB	3410	-	890	99000	-	380	6810
1168+12	TO 1423+29	SB	3410	-	850	101200	-	380	6810
1423+29	TO 1540+21	NB	1550	-	1700	15900	31200	170	-
1423+29	TO 1540+21	SB	1550	-	1700	15750	31200	170	-
1540+21	TO 1555+57	NB	210	-	850	5820	-	20	410
1540+21	TO 1555+57	SB	210	-	850	5650	-	20	410
RAMPS									
STH 28 NB OFF-RAMP			-	140	80	520	-	-	-
STH 28 NB ON-RAMP			-	117	80	1490	-	-	-
STH 28 SB OFF-RAMP			-	117	80	580	-	-	-
WAYSIDE NB OFF-RAMP			-	-	230	2160	-	-	-
WAYSIDE NB ON-RAMP			-	-	230	2770	-	-	-
WAYSIDE SB OFF-RAMP			-	-	230	1610	-	-	-
WAYSIDE SB ON-RAMP			-	-	230	6590	-	-	-
STH 67 NB OFF-RAMP			-	-	230	1810	-	-	-
STH 67 NB ON-RAMP			-	-	230	4830	-	-	-
STH 67 SB OFF-RAMP			-	-	230	1390	-	-	-
STH 67 SB ON-RAMP			-	-	230	5230	-	-	-
STH 49 NB OFF-RAMP			-	-	-	-	-	-	-
STH 49 NB ON-RAMP			-	-	-	-	-	-	-
STH 49 SB OFF-RAMP			-	-	-	-	-	-	-
STH 49 SB ON-RAMP			-	-	-	-	-	-	-
UNDISTRIBUTED									
OUTSIDE SHOULDER REPAIR			-	-	-	3000	-	-	-
OTHER			260	37	-	1700	500	160	260
TOTALS			10,600	410	8,920	277,000	62,900	1,300	14,700

MISC REMOVALS

CATEGORY 0010 LOCATION				ITEMS 204.0165 REMOVING GUARDRAIL (LF)	ITEMS 690.0150 SAWING ASPHALT (LF)	ITEMS 690.0250 SAWING CONCRETE (LF)
1176+75	TO	179+20	MEDIAN	245	-	-
1176+75	TO	1179+20	MEDIAN	245	-	-
1234+60	TO	1240+55	LT	595	-	-
1281+20	TO	1282+90	MEDIAN	170	-	-
1281+20	TO	1282+90	MEDIAN	170	-	-
1307+06	TO	1308+46	RT	140	-	-
1307+85	TO	1308+95	RAMP	110	-	-
1389+12	TO	1391+15	MEDIAN	203	-	-
1389+12	TO	1391+15	MEDIAN	203	-	-
1388+75	TO	1391+08	RT	233	-	-
1389+90	TO	1391+60	LT	170	-	-
1497+70	TO	1499+75	MEDIAN	205	-	-
1497+70	TO	1499+75	MEDIAN	205	-	-
BEGIN PROJECT 1168+12				-	70	-
END PROJECT 1555+57				-	70	-
STH 28 NB OFF-RAMP				-	8	18
STH 28 NB ON-RAMP				-	8	15
STH 28 SB OFF-RAMP				-	8	15
WAYSIDE NB OFF-RAMP				-	23	-
WAYSIDE NB ON-RAMP				-	23	-
WAYSIDE SB OFF-RAMP				-	23	-
WAYSIDE SB ON-RAMP				-	23	-
STH 67 NB OFF-RAMP				-	23	-
STH 67 NB ON-RAMP				-	23	-
STH 67 SB OFF-RAMP				-	23	-
STH 67 SB ON-RAMP				-	23	-
BASE PATCHES AND CONCRETE PAVEMENT REPAIR (SHES)				-	-	46800
UNDISTRIBUTED				56	22	102
TOTALS				2,950	370	46,950

REMOVING INLETS

CATEGORY 0010 LOCATION	ITEMS 204.0220 REMOVING INLETS (EACH)
1175+36	1
1180+35	1
1183+36	1
1186+36	1
1194+36	1
1198+36	1
1213+33	1
1224+34	1
1227+80	1
1242+28	1
1251+55	1
1257+05	1
1265+40	1
1276+30	1
1283+30	1
1305+05	1
1311+02	1
1316+27	1
1321+22	1
1327+21	1
1333+27	1
1339+25	1
1345+20	1
1357+21	1
1363+22	1
1369+18	1
1376+19	1
1382+18	1
1388+72	1
1393+18	1
1403+18	1
1408+18	1
1413+69	1
1419+18	1
TOTALS	34

REMOVING ENDWALLS

CATEGORY 0010 LOCATION		ITEMS 204.9060.S REMOVING ENDWALL (EACH)
1175+50	LT	1
1186+50	LT	1
1213+30	LT	1
1224+40	LT	1
1227+40	RT/LT	2
1227+80	LT	1
1240+60	RT/LT	2
1242+30	LT	1
1251+50	LT	1
1257+00	LT	1
1265+40	LT	1
1275+50	RT/LT	2
1276+30	LT	1
1288+31	LT	1
1296+28	LT	1
1305+10	RT	1
1311+00	RT/LT	2
1321+30	LT	1
1339+30	RT/LT	2
1345+20	LT	1
1363+20	LT	1
1416+30	RT/LT	4
1430+70	LT	1
TOTALS		31

CLEARING AND GRUBBING

CATEGORY 0010 LOCATION		ITEM 201.0120 CLEARING (ID)	ITEM 201.0220 GRUBBING (ID)
1260+20	RT	10	10
1260+50	RT	6	6
1260+90	RT	7	7
1275+00	RT	10	10
1491+80	RT	9	9
1491+90	RT	5	5
1492+00	RT	10	10
UNDISTRIBUTED		5	5
TOTALS		62	62

3

EARTHWORK SUMMARY

Stage	From/To Station	Location	Common Excavation (1) (Item # 205.0100) Cut (2)	EBS Excavation (3)	Pavement Material (4)	Available Material (5)	Reduced EBS In Fill (6) Factor 0.80	Expanded EBS Backfill (7) Factor 1.30	Unexpanded Fill	Expanded Fill (8) Factor 1.25	Mass Ordinate +/- (9)	Waste	Borrow (Item *208.0100)	Comment:
ROADWAY														
	1168+12 TO 1423+29	USH 41	9712	0	6300	3412	0	0	22790	28488	-25076	0	25076	
	1540+21 TO 1555+57	USH 41	490	0	379	111	0	0	981	1227	-1116	0	1116	
Grand Total			10203	0	6680	3523	0	0	23772	29715	-26192	0	26192	
			Total Common	3523										

1) Common Excavation is the sum of the Cut and EBS Excavation columns minus Pavement Material. Item number 205.0100
2) Pavement Material is included in Cut.
3) EBS Excavation to be backfilled with Select Borrow material. Note: this is designers choice, can be backfilled with Borrow, or Cut as well.
4) Pavement Material is Milling Volume and is paid for under item Removing Asphaltic Surface Milling
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
7) Expanded EBS Backfill - This is to be filled with Select Borrow material. EBS Backfill Factor = 1.3. Item number 208.11
8) Expanded Fill. Factor = 1.25

SALT SHED EARTHWORK

CATEGORY 0030 LOCATION	ITEM SPV.0105.04 GRADING SALT STORAGE SITE (LS)
SALT SHED	1
TOTALS	1

NOTE: CUT = 1525 CY, FILL = 2875 CY (FOR INFORMATION ONLY)

PREPARATION WORK

CATEGORY 0010 LOCATION	ITEMS 211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (1107-00-74) (LS)	ITEMS 211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS (STA)	ITEMS 213.0100 FINISHING ROADWAY (1107-00-74) (EACH)	ITEMS 305.0500 SHAPING SHOULDERS (STA)
MAINLINE	1	-	1	-
1168+12 to 1423+29	-	-	-	1021
1423+29 to 1540+21		470	-	468
1540+21 to 1555+57	-	-	-	61
TOTALS	1	470	1	1549

ABANDON CATTLE PASS

CATEGORY 0010 LOCATION	STRUCTURE NO.	ITEMS 521.0124 CULVERT PIPE CORRUGATED STEEL 24-INCH (0.079" THICKNESS) (LF)	ITEMS 521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH (EACH)	ITEMS SPV.0060.02 ABANDON CATTLE PASS (EACH)
STA 1184+37	C-14-4	168	2	1
STA 1214+35	C-14-5	172	-	1
STA 1241+84	C-14-6	164	-	1
STA 1252+80	C-14-12	156	-	1
STA 1254+11	C-14-13	172	-	1
STA 1302+29	C-14-7	168	2	1
TOTALS		1,000	4	6

AGGREGATE

LOCATION	ITEMS 305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	ITEMS 305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	ITEMS 312.0110 SELECT CRUSHED MATERIAL (TON)
MAINLINE (CATEGORY 0010)			
1168+12 to 1555+57 NB	2615	-	-
1168+12 to 1555+57 SB	2691	-	-
RAMPS (CATEGORY 0010)			
STH 28 NB OFF-RAMP	79	-	-
STH 28 NB ON-RAMP	129	1234	855
STH 28 SB OFF RAMP	35	-	-
WAYSIDE NB OFF-RAMP	62	-	-
WAYSIDE NB ON-RAMP	126	2339	1884
WAYSIDE SB OFF-RAMP	28	-	-
WAYSIDE SB ON-RAMP	140	-	-
STH 67 NB OFF-RAMP	34	-	-
STH 67 NB ON-RAMP	113	-	-
STH 67 SB OFF-RAMP	29	-	-
STH 67 SB ON-RAMP	109	-	-
SALT SHED (CATEGORY 0030)	40	1500	3000
UNDISTRIBUTED	910	227	211
CATEGORY 0010 SUBTOTAL	7100	3800	2950
CATEGORY 0030 SUBTOTAL	40	1500	3000
TOTALS	7140	5300	5950

BASE PATCHING AND CONCRETE REPAIR

CATEGORY 0010 LOCATION	ITEMS 390.0403 BASE PATCHING CONCRETE SHES (SY)	ITEMS 416.1715 CONCRETE PAVEMENT REPAIR SHES (SY)	ITEMS 416.1725 CONCRETE PAVEMENT REPLACEMENT SHES (SY)	ITEMS 416.0610 DRILLED TIE BARS (EACH)	ITEMS 416.0620 DOWEL BARS (EACH)
1168+12 to 1423+29 NB	1883	-	-	869	4345
1168+12 to 1423+29 SB	3520	-	-	1625	8123
1423+29 to 1540+21 NB	-	420	148	262	1311
1423+29 to 1540+21 SB	-	740	831	725	3625
1540+21 to 1555+57 NB	-	-	-	-	-
1540+21 to 1555+57 SB	217	-	-	100	501
UNDISTRIBUTED	1700	500	501	1249	6235
TOTALS	7,320	1,660	1,480	4,830	24,140

PAVEMENT

LOCATION	ITEM 416.0180 CONCRETE DRIVEWAY 8-INCH (SY)	ITEM 455.0105 ASPHALTIC MATERIAL PG58-28 (TON)	ITEM 455.0120 ASPHALTIC MATERIAL PG64-28 (TON)	ITEM 455.0605 TACK COAT (GALLON)	ITEM 460.1100 HMA PAVEMENT TYPE E-0.3 (TON)	ITEM 460.1101 HMA PAVEMENT TYPE E-1 (TON)	ITEM 460.1130 HMA PAVEMENT TYPE E-30 (TON)	ITEM 460.4000 HMA COLD WEATHER PAVING (TON)	ITEM 460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS * (LF)	ITEM 465.0400 ASPHALTIC SHOULDER RUMBLE STRIPS (LF)	ITEM 601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D (LF)	ITEM 602.0405 CONCRETE SIDEWALK 4-INCH (SF)
MAINLINE ROADWAY (CATEGORY 0010)												
1168+12 to 1423+29 NB	-	529	529	2451	-	-	19424	-	25516	42335	-	-
1168+12 to 1423+29 SB	-	545	545	2529	-	-	19826	-	25516	44315	-	-
1423+29 to 1540+21 NB	-	86	86	397	3115	-	-	-	-	20503	-	-
1423+29 to 1540+21 SB	-	85	85	394	3086	-	-	-	-	20377	-	-
1540+21 to 1555+57 NB	-	30	30	141	-	-	1106	-	1536	4293	-	-
1540+21 to 1555+57 SB	-	30	30	141	-	-	1150	-	1536	5433	-	-
SECOND PASS MILLING HM	-	50	-	368	-	-	830	-	-	-	-	-
MAINLINE BUTT JOINTS (CATEGORY 0010)												
1168+12 to 1170+12 NB	-	3	3	22	-	-	124	-	-	-	-	-
1168+12 to 1170+12 SB	-	3	3	21	-	-	118	-	-	-	-	-
1553+57 to 1555+57 NB	-	3	3	21	-	-	118	-	-	-	-	-
1553+57 to 1555+57 SB	-	3	3	21	-	-	118	-	-	-	-	-
MAINTENANCE TURN AROUNDS (CATEGORY 0010)												
1214+00	-	1	1	4	-	-	39	-	-	-	-	-
1253+00	-	1	1	4	-	-	38	-	-	-	-	-
1316+00	-	1	1	4	-	-	38	-	-	-	-	-
1362+70	-	1	1	4	-	-	38	-	-	-	-	-
1443+70	-	1	1	4	38	-	-	-	-	-	-	-
1541+50	-	1	1	4	-	-	38	-	-	-	-	-
RAMPS (BUTT JOINT INCLUDED) (CATEGORY 0010)												
STH 28 NB OFF-RAMP	-	2	3	11	-	-	92	-	-	1138	-	-
STH 28 NB ON-RAMP	-	7	7	30	-	-	255	-	-	1957	-	-
STH 28 SB OFF-RAMP	-	2	3	12	-	-	97	-	-	540	-	-
WAYSIDE NB OFF-RAMP	-	13	15	59	-	-	494	-	-	1034	-	-
WAYSIDE NB ON-RAMP	-	16	18	75	-	-	624	-	-	1903	-	-
WAYSIDE SB OFF-RAMP	-	9	11	46	-	-	378	-	-	429	-	-
WAYSIDE SB ON-RAMP	-	39	41	170	-	-	1440	-	-	2110	-	-
STH 67 NB OFF-RAMP	-	11	12	51	-	-	420	-	-	527	-	-
STH 67 NB ON-RAMP	-	28	30	126	-	-	1063	-	-	1735	-	-
STH 67 SB OFF-RAMP	-	8	10	40	-	-	330	-	-	430	-	-
STH 67 SB ON-RAMP	-	31	33	136	-	-	1149	-	-	1645	-	-
NB WAYSIDE ON-RAMP WIDENING	-	21	11	45	-	-	582	-	-	-	-	-
STH 28 NB ON-RAMP WIDENING	-	4	2	9	-	-	116	-	-	-	-	-
SALT SHED (CATEGORY 0030)												
ROADWAY EXTENSION	-	-	5	7	-	67	-	-	-	-	-	-
SALT SHED	230	-	65	105	-	1176	-	-	-	-	455	590
UNDISTRIBUTED												
OUTSIDE SHOULDER REPAIR	-	-	-	-	-	-	500	-	-	-	-	-
OTHER	-	29	28	12	61	70	154	3000	495	295	-	-
CATEGORY 0010 SUBTOTAL	-	1595	1548	7356	6300	-	50700	3000	54600	151000	-	-
CATEGORY 0030 SUBTOTAL	230	-	70	112	-	1313	-	-	-	-	455	590
TOTALS	230	1,595	1,618	7,468	6,300	1,313	50,700	3,000	54,600	151,000	455	590

* USE FOR CL JOINT SURFACE LIFT ONLY

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	MISCELLANEOUS QUANTITIES	SHEET 120	E

FILE NAME : _____ PLOT DATE : _____ PLOT BY : _____ PLOT NAME : _____ ORG DATE : _____ ORIGINATOR : DIST _ PLOT SCALE : 1:1

STORM WATER, PART I

CATEGORY	STR. NO.	STATION	(1) LOCATION	(2) DISCHARGE ELEVATION	ITEM 520.1012 APRON ENDWALLS FOR CULVERT PIPE 12-INCH (EA)	ITEM 521.0112 CULVERT PIPE CORRUGATED STEEL 12-INCH (0.064" THICK) (LF)	ITEM 522.0112 CULVERT PIPE REINFORCED CONCRETE CLASS III 12-INCH (LF)	ITEM 522.0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH (LF)	ITEM 522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH (EA)	ITEM 522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH (EA)	ITEM 522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH (EA)	ITEM 522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH (EA)	ITEM 522.1048 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH (EA)	COMMENTS
ROADWAY														
0010	01-02	1175+37.03	81.55 LT	959.82	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	01-05	1186+35.36	78.39 LT	959.82	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	02-04	1213+33.33	79.29 LT	951.10	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	03-01	1224+31.00	88.55 LT	937.96	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	03-03	1227+39.00	117.36 LT	936.10	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	03-04	1227+44.34	86.62 RT	937.14	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	03-06	1227+85.20	91.29 LT	938.69	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	03-07	1240+59.99	84.68 LT	947.59	-	-	-	-	-	-	-	1	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	03-08	1240+62.92	80.51 RT	949.09	-	-	-	-	-	-	-	1	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	03-10	1242+30.10	83.33 LT	951.96	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	04-01	1251+53.68	78.02 LT	957.26	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	04-03	1257+04.01	80.55 LT	953.71	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	04-06	1265+40.01	85.97 LT	946.07	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	04-07	1275+22.55	81.68 RT	942.65	-	-	-	-	-	-	-	-	1	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	04-08	1275+87.57	99.28 LT	940.17	-	-	-	-	-	-	-	-	1	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	04-10	1276+33.81	91.42 LT	941.28	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	05-02	1288+30.90	110.85 LT	947.39	1	-	-	-	-	-	-	-	-	
	05-05	1296+27.58	75.03 LT	947.79	1	3.5	-	-	-	-	-	-	-	
	05-07	1305+06.65	84.29 RT	943.13	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	06-01	1311+00.52	98.22 LT	942.33	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	06-03	1311+03.78	89.77 RT	942.99	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	06-06	1321+23.09	73.48 LT	958.97	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	07-01	1339+23.94	72.18 RT	984.24	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	07-03	1339+26.61	86.10 LT	983.44	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	07-05	1345+21.37	88.78 LT	989.56	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	07-08	1363+17.67	90.40 LT	1018.40	-	-	-	-	1	-	-	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	09-04	1416+28.97	83.19 LT	1024.67	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	09-05	1416+29.43	80.17 RT	1024.58	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	09-06	1416+33.24	80.17 RT	1024.57	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	09-07	1416+33.72	82.94 LT	1024.67	-	-	-	-	-	-	1	-	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
	10-01	1430+66.59	71.97 LT	1027.68	-	-	-	-	-	-	-	1	-	JOINT TIES REQUIRED FROM ENDWALL TO EXISTING PIPES
SALT SHED														
0030					-	-	209	160	2	1	-	-	-	
			CATEGORY 0010 SUBTOTAL		2	3.5	-	-	13	-	11	3	2	
			CATEGORY 0030 SUBTOTAL		-	-	209	160	2	1	-	-	-	
			TOTALS		2	3.5	209	160	15	1	11	3	2	

(1) INLET LOCATIONS ARE OFFSET FROM THE REFERENCE LINE TO THE FLANGE LINE. MANHOLE LOCATIONS ARE OFFSET FROM THE REFERENCE LINE TO THE CENTER OF STRUCTURE. APRON ENDWALL LOCATIONS ARE OFFSET FROM THE REFERENCE LINE TO THE END OF APRON ENDWALL.
(2) VERIFY DISCHARGE ELEVATIONS IN THE FIELD.
(3) EXISTING CONRETE PIPES MAY REQUIRE DRILLING TO INSTALL JOINT TIES. INSTALLING JOINT TIES AND ALL PROCESSES REQUIRED TO COMPLETE THE INSTALLATION ARE INCIDENTAL TO THE APRON ENDWALL ITEM.

STORM WATER, PART II

CATEGORY	STR. NO.	STATION	EXISTING LOCATION		(1) PROPOSED LOCATION		PROPOSED DITCH ELEVATION	(2)(4)(5) RIM ELEV.	INVERT	(3) PIPE DIAMETER (INCHES)	(6)(7) STR DEPTH (FT)	(8) BOTTOM OF STRUCTURE SLOPE FOR INLETS MEDIAN 4 GRATE	ITEM 611.0420 RECONSTRUCTING MANHOLES (EACH)	ITEM 611.0430 RECONSTRUCTING INLETS (EACH)	ITEM 611.0612 INLET COVERS TYPE C (EACH)	ITEM 611.0624 INLET COVERS TYPE H (EACH)	ITEM 611.0642 INLET COVERS TYPE MS (EACH)	ITEM 611.3004 INLETS 4-FT DIAMETER (EACH)	ITEM 611.3901 INLETS MEDIAN 1 GRATE (EACH)	ITEM 611.3903 INLETS MEDIAN 3 GRATE (EACH)	ITEM 611.3904 INLETS MEDIAN 4 GRATE (EACH)	SPV.0060.03 CONTROL STRUCTURE (EACH)
0010 ROADWAY	01-01	1175+36.40	1.00	LT	0.0	LT	963.10	963.10	960.00	12	3.35	-	-	-	-	-	1	-	1	-	-	-
	01-03	1180+35.35	1.70	LT	0.0	LT	963.20	963.20	958.40	12	5.05	-	-	-	-	-	1	-	1	-	-	-
	01-04	1183+35.88	1.00	RT	0.0	LT	963.35	963.35	959.77	12	3.83	-	-	-	-	-	1	-	1	-	-	-
	01-06	1186+35.49	0.30	LT	0.0	LT	963.39	963.39	960.51	12	3.13	-	-	-	-	-	1	-	1	-	-	-
	02-01	1194+36.00	2.70	LT	2.7	LT	962.70	962.70	959.80	12	3.15	-	-	-	-	-	1	-	1	-	-	-
	02-02	1198+36.20	0.80	LT	0.1	LT	963.00	963.00	960.40	12	2.85	-	-	-	-	-	1	-	1	-	-	-
	02-03	1213+33.00	0.30	LT	2.0	RT	955.4	955.42	952.54	12	3.13	-	-	-	-	-	1	-	1	-	-	-
	03-02	1224+33.03	4.30	LT	6.1	LT	944.66	944.66	939.84	12	5.07	-	-	-	-	-	1	-	1	-	-	-
	03-05	1227+80.84	1.80	LT	4.8	LT	944.63	944.63	940.50	12	4.38	-	-	-	-	-	1	-	1	-	-	-
	03-09	1248+28.38	1.50	LT	1.1	RT	956.53	956.53	952.89	12	3.89	-	-	-	-	-	1	-	1	-	-	-
	04-02	1251+55.53	0.20	LT	0.0	LT	960.51	960.51	957.80	12	2.96	-	-	-	-	-	1	-	1	-	-	-
	04-04	1257+05.00	3.30	LT	1.2	LT	957.39	957.39	954.59	12	3.05	-	-	-	-	-	1	-	1	-	-	-
	04-05	1265+39.49	3.90	LT	6.2	LT	949.69	949.69	946.49	12	3.45	-	-	-	-	-	1	-	1	-	-	-
	04-09	1276+29.69	2.20	LT	5.9	LT	946.60	946.60	942.24	12	4.61	-	-	-	-	-	1	-	1	-	-	-
	05-01	1283+29.43	2.90	LT	5.5	LT	949.74	949.74	945.93	12	4.06	-	-	-	-	-	1	-	1	-	-	-
	05-03	1288+31.39	5.70	LT	1.5	LT	949.89	950.14	948.45	12	3.94	11.1%	-	-	-	-	4	-	-	-	1	-
	05-04	1296+27.41	4.20	LT	1.5	LT	949.20	949.45	948.15	12	3.55	8.1%	-	-	-	-	4	-	-	-	1	-
	05-06	1305+05.85	1.04	LT	0.0	LT	948.91	948.91	942.80	24	6.36	-	-	1	-	-	1	-	-	-	-	-
	06-02	1311+02.02	0.10	RT	0.4	LT	949.54	949.54	942.66	24	7.13	-	-	1	-	-	1	-	-	-	-	-
	06-04	1316+27.43	4.00	LT	7.5	LT	954.55	954.55	945.00	12	9.80	-	-	-	-	-	1	-	1	-	-	-
	06-05	1321+21.58	5.50	LT	6.3	LT	962.20	962.20	959.00	12	3.45	-	-	-	-	-	1	-	1	-	-	-
	06-07	1327+21.19	4.30	LT	5.5	LT	970.87	970.87	968.20	12	2.92	-	-	-	-	-	1	-	1	-	-	-
	06-08	1333+27.29	2.80	LT	4.5	LT	980.03	980.03	977.00	12	3.28	-	-	-	-	-	1	-	1	-	-	-
	07-02	1339+24.69	0.50	RT	3.3	LT	989.00	989.00	983.80	24	5.45	-	-	-	-	-	1	-	1	-	-	-
	07-04	1345+19.73	0.50	RT	1.0	RT	997.24	997.24	990.00	12	7.49	-	-	-	-	-	1	-	1	-	-	-
	07-06	1351+17.96	1.60	RT	3.5	RT	1006.1	1006.10	1003.30	12	3.05	-	-	-	-	-	1	-	1	-	-	-
	07-07	1357+21.78	3.40	RT	4.6	RT	1014.70	1014.70	1012.00	12	2.95	-	-	-	-	-	1	-	1	-	-	-
	07-09	1363+22.19	1.30	RT	0.6	RT	1021.40	1021.40	1018.60	12	3.05	-	-	-	-	-	1	-	1	-	-	-
	08-01	1369+18.59	3.20	LT	0.4	RT	1025.85	1026.10	1023.48	12	4.87	18.2%	-	-	-	-	4	-	-	-	1	-
	08-02	1376+18.27	1.10	LT	1.9	LT	1026.98	1026.98	1022.70	12	4.53	-	-	-	-	-	1	-	1	-	-	-
	08-03	1382+18.33	1.30	LT	2.1	LT	1026.97	1026.97	1020.30	12	6.92	-	-	-	-	-	1	-	1	-	-	-
	08-04	1388+72.79	0.50	LT	2.6	LT	1028.00	1028.00	1020.00	36	8.42	-	-	1	-	-	1	-	-	-	-	-
	08-05	1393+18.31	1.90	LT	2.1	LT	1027.09	1027.09	1023.50	12	3.84	-	-	-	-	-	1	-	1	-	-	-
	09-01	1403+18.44	3.60	LT	1.8	LT	1027.12	1027.12	1024.00	12	3.37	-	-	-	-	-	1	-	1	-	-	-
	09-02	1408+18.36	6.10	LT	3.4	LT	1026.85	1027.10	1025.74	15	3.61	8.5%	-	-	-	-	4	-	-	-	1	-
	09-03	1413+69.94	8.90	LT	1.7	LT	1026.75	1027.00	1026.23	15	3.02	4.0%	-	-	-	-	4	-	-	-	1	-
	09-08	1419+17.91	9.90	LT	5.6	LT	1027.10	1027.35	1025.76	15	3.84	10.3%	-	-	-	-	4	-	-	-	1	-
030 SALT SHED													2	-	6	2	9	2	-	3	-	2
												CATEGORY 0010 SUBTOTAL	-	3	-	-	55	-	28	-	6	-
												CATEGORY 0030 SUBTOTAL	2	-	6	2	9	2	-	3	-	2
												TOTALS	2	3	6	2	64	2	28	3	6	2

(1) INLET MEDIAN 1 GRATE LOCATIONS ARE TO CENTER OF STRUCTURE, INLET MEDIAN 4 GRATE LOCATION ARE AT THE LOWEST POINT OF THE INLET GRATE.
MANHOLE LOCATIONS ARE OFFSET FROM THE REFERENCE LINE TO THE CENTER OF STRUCTURE. APRON ENDWALL LOCATIONS ARE OFFSET FROM THE REFERENCE LINE TO THE END OF APRON ENDWALL.
(2) VERIFY RIM ELEVATIONS IN THE FIELD.
(3) VERIFY PIPE DIAMETER IN THE FIELD.
(4) INLET MEDIAN 1 GATE RIM ELEVATIONS = PROPOSED DITCH ELEVATION
(5) INLET MEDIAN 4 GRATE RIM ELEVATIONS = PROPOSED DITCH ELEVATION + (1.5' / 6), PER SDD INLETS MEDIAN 3 AND 4 GRATE. RIM ELEVATION IS AT THE LOWEST POINT OF THE INLET GRATE
(6) INLET MEDIAN 1 GRATE DEPTHS WERE CALCULATED USING THE FOLLOWING FORMULA: (RIM ELEVATION - INVERT ELEVATION) + PIPE WALL THICKNESS
(7) INLET MEDIAN 4 GRATE DEPTHS WERE CALCULATED USING THE FOLLOWING FORMULA AND UTILIZING SDD INLETS MEDIAN 3 AND 4 GRATE: (PROPOSED DITCH ELEV. + (13.5' / 6)) - INVERT ELEV + PIPE WALL THICKNESS
(8) INLET MEDIAN 4 GRATE BOTTOM OF STRUCTURE SLOPE WAS CALCULATED USING THE FOLLOWING FORMULA: (PROPOSED DITCH ELEVATION - INVERT ELEVATION) / 13, PER SDD INLETS MEDIAN 3 AND 4 GRATE
NOTE: CUT EXISTING PIPE LENGTH AS NEEDED TO FIT PROPOSED MEDIAN STURCTURES. ANY REQUIRED PIPE CUTTING IS INCIDENTAL TO THE INSTALLATION OF PROPOSED MEDIAN STRUCTURE.

BARRIER

LOCATION		CATEGORY	ITEM 603.1142 CONCRETE BARRIER TYPE S42 (LF)	ITEM 614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL (EACH)	ITEM 614.0230 STEEL THRIE BEAM (LF)	ITEM 614.2300 MGS GUARDRAIL 3 (LF)	ITEM 614.2500 MGS THRIE BEAM TRANSITION (LF)	ITEM 614.2610 MGS GUARDRAIL TERMINAL EAT (EACH)	ITEM 614.2620 MGS GUARDRAIL TERMINAL TYPE 2 (EACH)	SPV.0060.01 TERMINAL HIGH-TENSION CABLE GUARD TL-4 (EACH)	SPV.0090.01 HIGH-TENSION CABLE GUARD TL-4 SOCKETED (LF)
ROADWAY											
1213+03 TO 1219+03	RT	0010	-	-	-	600.0	-	1	1	-	-
1227+00 TO 1242+03	RT	0010	-	-	-	1500.0	-	1	1	-	-
1252+53 TO 1254+53	RT	0010	-	-	-	200.0	-	1	1	-	-
1280+53 TO 1281+00	RT	0010	-	-	-	12.5	-	1	-	-	-
1281+00 TO 1288+00	RT	0010	700	-	-	-	39	-	-	-	-
1307+53 TO 1308+53	RT	0020	-	-	-	100.0	-	1	1	-	-
1337+53 TO 1340+03	RT	0010	-	-	-	250.0	-	1	1	-	-
1388+53 TO 1391+03	RT	0010	-	-	-	250.0	-	1	1	-	-
1212+50 TO 1219+00	LT	0010	-	-	-	650.0	-	1	1	-	-
1233+00 TO 1243+00	LT	0020	-	-	-	1000.0	-	1	1	-	-
1252+50 TO 1256+00	LT	0010	-	-	-	350.0	-	1	1	-	-
1270+00 TO 1284+50	LT	0010	-	-	-	1450.0	-	1	1	-	-
1307+00 TO 1311+50	LT	0020	-	-	-	450.0	-	1	1	-	-
1389+00 TO 1391+00	LT	0010	-	-	-	200.0	-	1	1	-	-
STRUCTURE PROTECTION											
STH 28	MEDIAN	0020	-	2	150	-	-	-	-	-	-
S00 ROAD	MEDIAN	0020	-	2	100	-	-	-	-	-	-
STH 67	MEDIAN	0020	-	2	200	-	-	-	-	-	-
STH 49	MEDIAN	0020	-	2	200	-	-	-	-	-	-
MEDIAN											
1168+12 to 1556+36		0040	-	-	-	-	-	-	-	22	38900
UNDISTRIBUTED		0040	-	-	-	-	-	-	-	2	1000
CATEGORY 0010 SUBTOTAL			700	-	-	5462.5	39	10	9	-	-
CATEGORY 0020 SUBTOTAL			-	8	650	1550.0	-	3	3	-	-
CATEGORY 0040 SUBTOTAL			-	-	-	-	-	-	-	24	39900
TOTALS			700	8	650	7,012.5	39	13	12	24	39,900

MARKERS CULVERT END

CATEGORY 0010 LOCATION		ITEM 633.5200 MARKERS CULVERT END (EA)
1175+37	LT	1
1186+35	LT	1
1213+33	LT	1
1224+31	LT	1
1227+39	LT	1
1227+44	RT	1
1227+85	LT	1
1240+60	LT	1
1240+62	RT	1
1242+30	LT	1
1251+54	LT	1
1257+04	LT	1
1265+40	LT	1
1275+23	RT	1
1275+88	LT	1
1276+34	LT	1
1288+31	LT	1
1296+28	LT	1
1305+07	RT	1
1311+01	LT	1
1311+04	RT	1
1321+23	LT	1
1339+24	RT	1
1339+27	LT	1
1345+20	LT	1
1363+18	LT	1
1416+31	RT	1
1416+32	LT	1
1430+67	LT	1
SALT SHED (CATEGORY 0030)		1
CATEGORY 0010 SUBTOTAL		29
CATEGORY 0030 SUBTOTAL		1
TOTALS		30

HAUL ROAD RESTORATION

LOCATION	ITEM 618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (1107-00-74) (EACH)
PROJECT (CATEGORY 0010)	1
TOTALS	1

3

3

EROSION CONTROL

LOCATION		ITEM 625.0500 SALVAGED TOPSOIL (SY)	ITEM 628.1104 EROSION BALES (EACH)	ITEM 628.1504 SILT FENCE (LF)	ITEM 628.1520 SILT FENCE MAINTENANCE (LF)	ITEM 628.2002 EROSION MAT CLASS I TYPE A (SY)	ITEM 628.2004 EROSION MAT CLASS I TYPE B (SY)	ITEM 628.2006 EROSTION MAT URBAN CLASS I TYPE A (SY)	ITEM 628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	ITEM 628.7005 INLET PROTECTION TYPE A (EACH)	ITEM 628.7015 INLET PROTECTION TYPE C (EACH)	ITEM 628.7504 TEMPORARY DITCH CHECKS (LF)	ITEM 628.7555 CULVERT PIPE CHECKS (EACH)
MEDIAN (CATEGORY 0010)													
1168+12 TO 1423+28	MEDIAN	85053	-	-	-	-	109298	-	-	33	-	1020	12
1423+28 TO 1540+20	MEDIAN	-	-	-	-	-	-	-	-	25	-	20	12
1540+20 TO 1555+57	MEDIAN	5123	-	-	-	-	6150	-	-	1	-	100	-
SB OUTSIDE SLOPE (CATEGORY 0010)													
1168+12 TO 1423+28	SB	7088	-	-	-	16240	-	-	-	-	-	100	-
1540+20 TO 1555+57	SB	427	-	-	-	956	-	-	-	-	-	-	-
NB OUTSIDE SLOPE (CATEGORY 0010)													
1168+12 TO 1423+28	NB	7088	-	-	-	14625	-	-	-	-	-	60	-
1540+20 TO 1555+57	NB	427	-	-	-	949	-	-	-	-	-	-	-
SALT SHED (CATEGORY 0030)		-	-	1810	1810	-	-	2910	945	6	2	100	3
UNDISTRIBUTED		494	10	34500	34500	1230	552	145	47	9	-	20	8
CATEGORY 0010 SUBTOTAL		105700	10	34500	34500	34000	116000	-	-	68	-	1320	32
CATEGORY 0030 SUBTOTAL		-	-	1810	1810	-	-	3055	992	6	2	100	3
TOTALS		105,700	20	36,310	36,310	34,000	116,000	3,055	992	74	2	1,420	35

EROSION CONTROL MISC

LOCATION	ITEM 624.0100 WATER (MGAL)	ITEM 628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	ITEM 628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)	ITEM 606.0200 RIPRAP MEDIUM (CY)	ITEM 628.7570 ROCK BAGS (EACH)	ITEM 645.0120 GEOTEXTILE FABRIC TYPE HR (SY)
PROJECT (CATEGORY 0010)	-	8	4	-	*8*	-
SALT SHED (CATEGORY 0030)	5	1	1	18	-	30
UNDISTRIBUTED	20	1	1	2	1	-
CATEGORY 0010 SUBTOTAL	-	9	5	-	9	-
CATEGORY 0030 SUBTOTAL	25	1	1	20	-	30
TOTALS	25	10	6	20	9	30

RESTORATION

LOCATION		ITEM 629.0210 FERTILIZER TYPE B (CWT)	ITEM 630.0120 SEEDING MIXTURE NO. 20 (LB)	ITEM 630.0130 SEDDING MIXTURE NO. 30 (LB)	ITEM 630.0200 SEEDING TEMPORARY (LB)	ITEM 631.1100 SOD EROSION CONTROL (SY)
Application Rate		7 *lbs/1000 sf*	3 *lbs/1000 sf*	2 *lbs/1000 sf*	3 *lbs/1000 sf*	
MEDIAN (CATEGORY 0010)						
1168+12 TO 1423+28	MEDIAN	69	2951	-	2951	-
1423+28 TO 1540+20	MEDIAN	-	-	-	-	-
1540+20 TO 1555+57	MEDIAN	4	166	-	166	-
SB OUTSIDE SLOPE (CATEGORY 0010)						
1168+12 TO 1423+28	SB	10	438	-	438	-
1540+20 TO 1555+57	SB	1	26	-	26	-
NB OUTSIDE SLOPE (CATEGORY 0010)						
1168+12 TO 1423+28	NB	9	395	-	395	-
1540+20 TO 1555+57	NB	1	26	-	26	-
SALT SHED (CATEGORY 0030)		3	-	70	95	17
UNDISTRIBUTED		4	25	5	23	2
*NO FERTILIZER WILL BE USED IN THE UPLAND AREAS ADJACENT TO THE WETLANDS						
CATEGORY 0010 SUBTOTAL		97	4027	-	4025	-
CATEGORY 0030 SUBTOTAL		3	-	75	95	19
TOTALS		100	4,027	75	4,120	19

PERMANENT SIGNING, TYPE I

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE I SIGN SIZE W (FT)	H (FT)	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS (EST LBS)	636.0100 SIGN SUPPORTS CONCRETE MASONRY (CY)	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT (LBS)	637.1210 SIGNS TYPE I REFLECTIVE H (SF)	637.1220 SIGNS TYPE I REFLECTIVE SH (SF)	638.2601 REMOVING SIGNS TYPE I (EA)	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS (EA)	STEEL POST TYPE	MOUNT ON SAME POST AS SIGN #	REMARKS
ROADWAY ITEMS (CATEGORY 0010)															
02-01(R)	E5-51	I	--	12	5	524	1.2	68	60	--	1	2	A (2)	--	--
	E10-53	I	--	10	1.5	--	--	--	15	--	--	--	--	02-01(R)	--
	E10-54	I	--	10	1	--	--	--	10	--	--	--	--	02-01(R)	--
02-05(R)	D2-3	I	LOMIRA 3	16	7	773	1.6	98	--	112	1	2	B (2)	--	--
			OSHKOSH 38												--
			GREEN BAY 89												--
02-08(R)	E3-1	I	THERESA	11	4.5	452	1.2	68	--	49.5	1	2	A (2)	--	--
			NEXT RIGHT												--
02-09(R)	E1-5	I	EXIT 81	9	2.5	--	--	--	--	22.5	1	--	--	02-07(R)	--
	E4-1A	I	[28]	19	11	901	1.6	98	--	209	--	2	B (2)	--	--
			MAYVILLE [A]												--
			KEWASKUM												--
03-03(R)	E1-5	I	EXIT 81	9	2.5	--	--	--	--	22.5	1	--	--	03-03(R)	--
	E1-1A	I	[28]	16	13.5	981	1.6	98	--	216	--	2	B (2)	--	--
			MAYVILLE												--
			KEWASKUM												--
			1 MILE												--
04-01(R)	E5-52	I	--	12	4.5	452	1.2	68	54	--	1	2	A (2)	--	--
05-06(R)	E5-52	I	--	12	4.5	452	1.2	68	54	--	1	2	A (2)	--	--
06-02(R)	E1-5	I	EXIT 85	9	2.5	--	--	--	--	22.5	1	--	--	06-02(R)	--
	E1-1A	I	[67]	22	13.5	1182.1	1.8	100	--	297	--	2	C (2)	--	--
			LOMIRA												--
			CAMPBELLSPORT												--
			1 MILE												--
06-04(R)	D2-2	I	HWY 28 3	15	5	464.0	1.2	68	--	75	1	--	A (2)	--	--
			MILWAUKEE 47												
07-01	ESTR	I	FOOD - EXIT 85	--	--	--	--	--	--	--	--	--	--	--	E10-51
07-02	ESTR	I	GAS - EXIT 85	--	--	--	--	--	--	--	--	--	--	--	E10-51
			LODING - EXIT 85												--

(R) DENOTES REMOVAL OF EXISTING SIGN IN SAME LOCATION

PERMANENT SIGNING, TYPE I CONTINUED

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE I SIGN SIZE W (FT)	H (FT)	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS (EST LBS)	636.0100 SIGN SUPPORTS CONCRETE MASONRY (CY)	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT (LBS)	637.1210 SIGNS TYPE I REFLECTIVE H (SF)	637.1220 SIGNS TYPE I REFLECTIVE SH (SF)	638.2601 REMOVING SIGNS TYPE I (EA)	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS (EA)	STEEL POST TYPE	MOUNT ON SAME POST AS SIGN #	REMARKS
ROADWAY ITEMS (CATEGORY 0010)															
07-05(R)	E1-5	I	EXIT 85	9	2.5	--	--	--	--	22.5	1	--	--	07-05(R)	--
	E4-1A	I	[67] LOMIRA [A] CAMPBELLSPORT	25	11	1086.2	1.8	100	--	275	--	2	C (2)	--	--
07-09(R)	E5-51	I	--	12	5	488	1.2	68	60	--	1	2	A (2)	--	--
	E10-54	I	--	10	1	--	--	--	10	--	--	--	--	07-10(R)	--
08-04	ESTR	I	[A] FOOD [A] LODGING	--	--	--	--	--	--	--	--	--	--	--	E10-51
08-05	ESTR	I	[A] GAS [A]	--	--	--	--	--	--	--	--	--	--	--	E10-51
08-19(R)	E1-5	I	EXIT 85	9	2.5	--	--	--	--	22.5	1	--	--	08-19(R)	--
	E4-1A	I	LOMIRA [A] CAMPBELLSPORT	25	11	1086.2	1.8	100	--	275	--	2	C (2)	--	
08-23	ESTR	I	FOOD [A] LODGING [A]	--	--	--	--	--	--	--	--	--	--	--	E10-51
08-24	ESTR	I	[A] GAS [A]	--	--	--	--	--	--	--	--	--	--	--	E10-51
09-01(R)	E1-5	I	EXIT 87	9	2.5	--	--	--	--	22.5	1	--	--	09-01(R)	--
	E4-1A	I	[49] [KK] BROWNSVILLE WAUPON 1 MILE	18	13.5	981	1.6	98	--	243	--	2	B (2)	--	--
09-04	ESTR	I	GAS -EXIT 85 LODGING - EXIT 85	--	--	--	--	--	--	--	--	--	--	--	E10-51
10-03(R)	E1-5	I	EXIT 85	9	2.5	--	--	--	--	22.5	1	--	--	10-03(R)	--
	E1-1	I	[67] LOMIRA CAMPBELLSPORT 1 MILE	22	13.5	1181.2	1.8	100	--	297	--	2	C (2)	--	--
10-05	ESTR	I	FOOD - EXIT 85	--	--	--	--	--	--	--	--	--	--	--	E10-51
11-02(R)	E1-5	I	EXIT 87	9	2.5	--	--	--	--	22.5	1	--	--	11-02(R)	--
	E4-1A	I	[49] [KK] BROWNSVILLE [A] WAUPON	21	11	901	1.6	98	--	231	--	2	B (2)	--	--
12-13(R)	E1-5	I	EXIT 87	9	2.5	--	--	--	--	22.5	1	--	--	12-13(R)	--
	E4-1A	I	[49] [KK] BROWNSVILLE [A] WAUPON	21	11	901	1.6	98	--	231	--	2	B (2)	--	--
13-03(R)	D2-3	I	HWY B [4] FOND DU LAC [10] GREEN BAY [82]	17	7	773	1.6	98	--	119	1	2	B (2)	--	--
					TOTALS	13,578.70	25.6	1,494	263	2,832.00	17	32			

(R) DENOTES REMOVAL OF EXISTING SIGN IN SAME LOCATION

PERMANENT SIGNING, TYPE II

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W (IN.)	H (IN.)	634.0410 POSTS WOOD 4X4-INCH X 10-FT (EA)	634.0622 POSTS WOOD 4X6-INCH X 22-FT (EA)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2102 MOVING SIGNS TYPE II (EA)	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS
ROADWAY ITEMS (CATEGORY 0010)														
01-01	ESTR	II	EXIT 30 MPH HORSESHOE	--	--	--	--	--	--	--	--	--	--	W13-2A
01-02(R)	R6-2L	II	--	24	30	--	1	5.00	--	--	1	1	--	--
01-03	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	R1-1
	R6-3A	II	--	30	24	--	--	5.00	--	--	--	--	01-03	--
01-04	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	R1-1
01-05(R)	R5-1	II	--	30	30	--	1	6.25	--	--	1	1	--	--
01-06(R)	R3-1	II	--	24	24	--	--	4.00	--	--	1	--	01-05(R)	--
01-07	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	W12-1D
01-08(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
01-09(R)	R5-57	II	--	36	36	--	1	9.00	--	--	1	1	--	--
01-10(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
01-11(R)	D1-3	II	[A] KEWASKUM MAYVILLE [A] THERESA	72	36	--	2	18.00	--	--	1	2	--	-- -- --
01-12(R)	W3-1	II	--	36	36	--	1	--	9.00	--	1	1	--	--
01-13(R)	J3-2	II	--	48	57	--	--	19.00	--	--	1	2	01-08(R)	--
01-14(R)	M1-87	II	--	18	36	--	1	4.50	--	--	1	--	--	--
	M1-88A	II	--	12	12	--	--	1.00	--	--	--	--	01-14(R)	--
01-15	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	R1-1
01-16	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	R1-1
01-17(R)	E5-1A	II	EXIT 81 [A] 81 [A]	72	60	--	2	30.00	--	--	1	2	--	-- --
01-18	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	W4-1
01-19(R)	R4-3	II	--	48	60	--	2	20.00	--	--	1	2	--	--
01-20(R)	E5-1A	II	EXIT 81 [A] 81 [A]	72	60	--	2	30.00	--	--	1	2	--	-- --
01-21(R)	W3-1	II	--	36	36	--	1	--	9.00	--	1	1	--	--
01-22(R)	J2-2	II	--	48	57	--	1	19.00	--	--	1	2	--	--
01-23(R)	M1-87	II	--	18	36	--	1	4.50	--	--	1	--	--	--
	M1-88A	II	--	12	12	--	--	1.00	--	--	--	--	01-23(R)	--
01-24(R)	R5-1A	II	--	36	24	--	--	6.00	--	--	1	1	01-22(R)	--
01-25(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
01-26(R)	D1-3	II	[A] KEWASKUM MAYVILLE [A] THERESA	72	36	--	2	18.00	--	--	1	2	--	-- -- --
01-27(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
01-28(R)	J3-2	II	--	48	57	--	1	19.00	--	--	1	1	--	--
01-29(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
	R6-3	II	--	30	24	--	--	5.00	--	--	--	--	01-29(R)	--
01-30(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
01-31(R)	R5-57	II	--	36	36	--	1	9.00	--	--	1	1	--	--
01-32(R)	R6-2L	II	--	24	30	--	1	5.00	--	--	1	1	--	--
01-33(R)	R5-1	II	--	30	30	--	1	6.25	--	--	1	1	--	--
01-34(R)	R3-1	II	--	24	24	--	--	4.00	--	--	1	--	01-33(R)	--
01-35(R)	W4-1	II	--	48	48	--	2	--	16.00	--	1	2	--	--
01-36(R)	I2-2	II	--	54	15	--	2	5.63	--	--	1	2	--	--
01-37	ESTR	II	30 MPH	--	--	--	--	--	--	--	--	--	--	W13-1 W1-1L

(R) DENOTES REMOVAL OF EXISTING SIGN IN SAME LOCATION

PERMANENT SIGNING, TYPE II CONTINUED

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W (IN.)	H (IN.)	634.0410 POSTS WOOD 4X4-INCH X 10-FT (EA)	634.0622 POSTS WOOD 4X6-INCH X 22-FT (EA)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2102 MOVING SIGNS TYPE II (EA)	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS
ROADWAY ITEMS (CATEGORY 0010)														
01-38	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	W1-8
01-39	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	W1-8
02-02(R)	R2-1	II	SPEED LIMIT 65	48	60	--	1	20.00	--	--	1	1	--	--
02-03	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
02-04(R)	D10-2	II	MILE 82	12	36	--	1	3.00	--	--	1	1	--	--
02-06(R)	D10-2	II	MILE 82	12	36	--	1	3.00	--	--	1	1	--	--
02-07	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
02-10R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
02-11R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
03-01	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
03-02	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
03-04R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
03-05R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
03-06R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
04-02	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	W13-3
04-03(R)	E5-54	II	--	72	72	--	2	36.00	--	--	1	2	--	--
04-04(R)	D10-2	II	MILE 83	12	36	--	1	3.00	--	--	1	1	--	--
04-05(R)	W4-1	II	--	48	48	--	2	--	16.00	--	1	2	--	--
04-06(R)	D10-2	II	MILE 83	12	36	--	1	3.00	--	--	1	1	--	--
04-07(R)	R2-1	II	SPEED LIMIT 65	48	60	--	2	20.00	--	--	1	2	--	--
05-01(R)	R2-1	II	SPEED LIMIT 65	48	60	--	2	20.00	--	--	1	2	--	--
05-02	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
05-03	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
05-04	ESTR	II	RAMP SPEED 40 MPH	--	--	--	--	--	--	--	--	--	--	W13-3
05-07(R)	E5-54	II	--	72	72	--	2	36.00	--	--	1	2	--	--
05-08(R)	W4-1	II	--	48	48	--	2	--	16.00	--	1	2	--	--
05-09R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
05-10R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
05-11R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
05-12R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
06-01(R)	D10-2	II	MILE 84	12	36	--	1	3.00	--	--	1	1	--	--
06-03(R)	R2-1	II	SPEED LIMIT 65	48	60	--	2	20.00	--	--	1	2	--	--
06-05(R)	D10-2	II	MILE 84	12	36	--	1	3.00	--	--	1	1	--	--
07-03	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
07-04(R)	D10-2	II	MILE 85	12	36	--	1	3.00	--	--	1	1	--	--
07-06(R)	D10-2	II	MILE 85	12	36	--	1	3.00	--	--	1	1	--	--
07-07(R)	R4-3	II	--	48	60	--	2	20.00	--	--	1	1	--	--
07-08	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
07-10R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
07-11R	REMOVE	II	--	--	--	--	--	--	--	--	1	--	--	--
08-01(R)	E5-1A	II	EXIT 85 [A]	72	60	--	2	30.00	--	--	1	2	--	--
08-02(R)	W3-1	II	--	36	36	--	1	--	9.00	--	1	1	--	--
08-03(R)	J2-2	II	--	48	57	--	1	19.00	--	--	1	2	--	--
08-06(R)	D1-2	II	[A] LOMIRA CAMPBELLSPORT [A]	90	30	--	2	18.75	--	--	1	2	--	--

(R) DENOTES REMOVAL OF EXISTING SIGN IN SAME LOCATION

PERMANENT SIGNING, TYPE II CONTINUED

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W (IN.)	H (IN.)	634.0410 POSTS WOOD 4X4-INCH X 10-FT (EA)	634.0622 POSTS WOOD 4X6-INCH X 22-FT (EA)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2102 MOVING SIGNS TYPE II (EA)	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS
ROADWAY ITEMS (CATEGORY 0010)														
08-07(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
08-08(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
08-09(R)	J3-2	II	--	48	57	--	1	19.00	--	--	1	2	--	--
08-10	R1-1	II	--	36	36	--	1	7.46	--	--	--	--	--	--
08-11(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
08-12(R)	R1-1	II	--	36	36	--	--	7.46	--	--	1	1	--	--
	R6-3	II	--	30	24	--	--	5.00	--	--	--	--	08-12(R)	--
08-13(R)	R6-2L	II	--	24	30	--	--	5.00	--	--	1	--	--	--
08-14(R)	R5-1	II	--	30	30	--	--	6.25	--	--	1	--	--	--
08-15(R)	R5-57	II	--	36	36	--	1	9.00	--	--	1	1	--	--
08-16(R)	R6-2L	II	--	24	30	--	--	5.00	--	--	1	--	--	--
08-17	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	I55-56
08-18(R)	W4-1	II	--	48	48	--	2	--	16.00	--	1	2	--	--
08-20(R)	E5-1A	II	EXIT 85 [A]	72	60	--	2	30.00	--	--	1	2	--	--
08-21(R)	W3-1	II	--	36	36	--	1	--	9.00	--	1	1	--	--
08-22(R)	J2-2	II	--	48	57	--	1	19.00	--	--	1	2	--	--
08-25(R)	D1-2	II	[A]CAMPBELLSPORT LOMIRA [A]	90	30	--	2	18.75	--	--	1	2	--	--
08-26(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
08-27(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
08-28(R)	J3-2	II	--	48	57	--	1	19.00	--	--	1	2	--	--
08-29(R)	R1-1	II	--	36	36	--	--	7.46	--	--	1	1	--	--
08-30(R)	R1-1	II	--	36	36	--	--	7.46	--	--	1	1	--	--
	R6-3	II	--	30	24	--	--	5.00	--	--	--	--	08-30(R)	--
08-31(R)	R6-2L	II	--	24	30	--	--	5.00	--	--	1	--	08-30(R)	--
08-32(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
08-33(R)	R5-1	II	--	30	30	--	1	6.25	--	--	1	--	--	--
08-34(R)	R5-57	II	--	36	36	--	1	9.00	--	--	1	1	--	--
08-35(R)	R6-2L	II	--	24	30	--	--	5.00	--	--	1	--	--	--
08-36(R)	W4-1	II	--	48	48	--	2	--	16.00	--	1	2	--	--
08-37R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
09-02(R)	D10-2	II	MILE 86	12	36	--	1	3.00	--	--	1	1	--	--
09-03(R)	R2-1	II	SPEED LIMIT 65	48	60	--	2	20.00	--	--	1	2	--	--
09-05(R)	D10-2	II	MILE 86	12	36	--	1	3.00	--	--	1	1	--	--
10-01	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
10-02(R)	R2-1	II	SPEED LIMIT 65	48	60	--	2	20.00	--	--	1	2	--	--
10-04	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
10-06R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
10-07R	REMOVE	II	--	--	--	--	--	--	--	--	1	--	--	--
11-01(R)	D10-2	II	MILE 87	12	36	--	1	3.00	--	--	1	1	--	--

(R) DENOTES REMOVAL OF EXISTING SIGN IN SAME LOCATION

PERMANENT SIGNING, TYPE II CONTINUED

SIGN NO.	SIGN CODE	SIGN TYPE	SIGN MESSAGE	TYPE II SIGN SIZE W (IN.)	H (IN.)	634.0410 POSTS WOOD 4X4-INCH X 10-FT (EA)	634.0622 POSTS WOOD 4X6-INCH X 22-FT (EA)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2102 MOVING SIGNS TYPE II (EA)	638.2602 REMOVING SIGNS TYPE II (EA)	638.3000 REMOVING SMALL SIGN SUPPORTS (EA)	MOUNT ON SAME POST AS SIGN #	REMARKS
ROADWAY ITEMS (CATEGORY 0010)														
11-03(R)	E5-1A	II	EXIT 87 [A]	72	60	--	2	30.00	--	--	1	2	--	--
11-04(R)	W3-1	II	--	36	36	--	1	--	9.00	--	1	1	--	--
11-05(R)	W4-1	II	--	48	48	--	2	--	16.00	--	1	2	--	--
11-06(R)	D10-2	II	MILE 87	12	36	--	1	3.00	--	--	1	1	--	--
12-01(R)	D1-2	II	[A] BROWNSVILLE	78	24	--	2	13.00	--	--	1	2	--	--
			WAUPON										--	--
12-02(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
12-03(R)	J3-2	II	--	48	57	--	2	19.00	--	--	1	2	--	--
12-04(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
12-05(R)	R6-2L	II	--	24	30	--	1	5.00	--	--	1	1	--	--
12-06(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
	R6-3	II	--	30	24	--	--	5.00	--	--	--	--	12-06(R)	--
12-07(R)	R5-57	II	--	36	36	--	1	9.00	--	--	1	1	--	--
12-08(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
12-09(R)	R6-2L	II	--	24	30	--	1	5.00	--	--	1	1	--	--
12-10(R)	R5-1	II	--	30	30	--	1	6.25	--	--	1	1	--	--
12-11(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
12-12(R)	W4-1	II	--	48	48	--	2	--	16.00	--	1	2	--	--
12-14(R)	E5-1A	II	EXIT 87 [A]	72	60	--	2	30.00	--	--	1	2	--	--
12-15(R)	W3-1	II	--	36	36	--	1	--	9.00	--	1	1	--	--
12-16(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
12-17(R)	D1-2	II	BROWNSVILLE [A]	78	24	--	2	13.00	--	--	1	2	--	--
			WAUPON			--							--	--
12-18(R)	R5-1A	II	--	36	24	--	1	6.00	--	--	1	1	--	--
12-19(R)	J3-2	II	--	48	57	--	1	19.00	--	--	1	2	--	--
12-20(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
	R6-3	II	--	30	24	--	--	5.00	--	--	--	--	12-20(R)	--
12-21(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
12-22(R)	R6-2L	II	--	24	30	--	--	5.00	--	--	1	--	12-20(R)	--
12-23(R)	R1-1	II	--	36	36	--	1	7.46	--	--	1	1	--	--
12-24(R)	R5-1	II	--	30	30	--	1	6.25	--	--	1	1	--	--
12-25(R)	R5-57	II	--	36	36	--	1	9.00	--	--	1	1	--	--
12-26(R)	R6-2L	II	--	24	30	--	1	5.00	--	--	1	1	--	--
12-27	ESTR	II	--	--	--	--	--	--	--	--	--	--	--	155-56
12-28(R)	J3-1	II	--	24	69	--	--	11.50	--	--	1	--	12-11(R)	--
13-01(R)	D10-2	II	MILE 88	12	36	--	1	3.00	--	--	1	1	--	--
13-02(R)	R2-1	II	SPEED LIMIT 65	48	60		2	20.00	--	--	1	2	--	--
13-04	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
13-05(R)	I2-2	II	--	54	15	--	2	5.63	--	--	1	2	--	--
13-06	R3-4B	II	--	36	48	--	1	12.00	--	--	--	--	--	--
13-07(R)	D10-2	II	MILE 88	12	36	--	1	3.00	--	--	1	1	--	--
13-08R	REMOVE	II	--	--	--	--	--	--	--	--	1	1	--	--
13-09R	REMOVE	II	--	--	--	--	--	--	--	--	1	--	--	--
SALT SHED (CATEGORY 0030)														
PRIVEATE PROPERY SIGN		II	--	--	--	--	--	--	--	--	1	--	--	--
	OM4-3	II	--	--	--	3	--	--	--	3	--	3	--	--
	R7-8A	II	--	12	18	1	--	1.50	--	--	--	--	--	--
			CATEGORY 0010 SUBTOTAL			--	145	1285.65	166.00	--	130	153		
			CATEGORY 0030 SUBTOTAL			4	--	1.50	--	3	1	3		
			TOTALS			4	145	1,287.15	166.00	3	131	156		

(R) DENOTES REMOVAL OF EXISTING SIGN IN SAME LOCATION

3

TRAFFIC CONTROL

STAGE	LOCATION	DURATION CALANDAR DAYS	ITEM 643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (DAYS)	ITEM 643.0300 TRAFFIC CONTROL DRUMS #	(DAYS)	ITEM 643.0420 TRAFFIC CONTROL BARRICADES TYPE III #	(DAYS)	ITEM 643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A #	(DAYS)	ITEM 643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C #	(DAYS)	ITEM 643.0800 TRAFFIC CONTROL ARROW BOARDS #	(DAYS)	ITEM 643.0900 TRAFFIC CONTROL SIGNS #	(DAYS)	ITEM 643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I (EACH)	CYCLES	ITEM 643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II (EACH)	CYCLES	ITEM 643.1050 TRAFFIC CONTROL SIGNS PCMS (DAYS)
TOTAL PROJECT			97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	*28*
MAINLINE (LANE CLOSURE) (CATEGORY 0010)																				
	STAGE 1	21	-	*800*	16800	*10*	210	*20*	420	*50*	1050	*4*	84	*20*	420	-	-	-	-	-
	STAGE 2	56	-	*800*	44800	*10*	560	*20*	1120	*50*	2800	*4*	224	*20*	1120	-	-	-	-	-
	STAGE 3	8	-	*800*	6400	*10*	80	*20*	160	*50*	400	*4*	32	*20*	160	-	-	-	-	-
	STAGE 4	12	-	*800*	9600	*10*	120	*20*	240	*50*	600	*4*	48	*20*	240	-	-	-	-	-
MAINLINE (SHOULDER CLOSURE) (CATEGORY 0010)																				
	STAGE 1	21	-	-	-	-	-	-	-	-	-	*2*	42	*8*	168	-	-	-	-	-
	STAGE 2	56	-	-	-	-	-	-	-	-	-	*2*	112	*8*	448	-	-	-	-	-
	STAGE 3	8	-	-	-	-	-	-	-	-	-	*2*	16	*8*	64	-	-	-	-	-
	STAGE 4	12	-	-	-	-	-	-	-	-	-	*2*	24	*8*	96	-	-	-	-	-
RAMPS (CLOSURE OR WIDENING WORK) (CATEGORY 0010)																				
	STH 28 NB OFF-RAMP	2	-	*20*	40	*4*	8	*4*	8	-	-	-	-	*10*	20	*2*	*1*	*4*	*2*	*10*
	STH 28 NB ON-RAMP	2	-	*12*	24	*4*	8	*4*	8	-	-	-	-	*4*	8	*2*	*1*	*4*	*2*	*10*
	STH 28 NB ON-RAMP (WIDENING WORK)	10	-	*64*	640	*2*	20	*4*	40	*8*	80	-	-	*8*	80	-		-		-
	STH 28 SB OFF-RAMP	2	-	*20*	40	*4*	8	*4*	8	-	-	-	-	*10*	20	*2*	*1*	*4*	*2*	*10*
	WAYSIDE NB OFF-RAMP	2	-	*20*	40	*4*	8	*4*	8	-	-	-	-	*10*	20	*2*	*1*	*4*	*2*	*10*
	WAYSIDE NB ON-RAMP	2	-	*12*	24	-	-	-	-	-	-	-	-	-	-	-		-		*10*
	WAYSIDE NB ON-RAMP (WIDENING WORK)	20	-	*64*	1280	*2*	40	*4*	80	*8*	160	-	-	*8*	160	-		-		-
	WAYSIDE SB OFF-RAMP	2	-	*20*	40	*4*	8	*4*	8	-	-	-	-	*10*	20	*2*	*1*	*4*	*2*	*10*
	WAYSIDE SB ON-RAMP	2	-	*12*	24	-	-	-	-	-	-	-	-	-	-	-		-		*10*
	STH 67 NB OFF-RAMP	2	-	*20*	40	*4*	8	*4*	8	-	-	-	-	*10*	20	*2*	*1*	*4*	*2*	*10*
	STH 67 NB ON-RAMP	2	-	*12*	24	*4*	8	*4*	8	-	-	-	-	*4*	8	*2*	*1*	*4*	*2*	*10*
	STH 67 SB OFF-RAMP	2	-	*20*	40	*4*	8	*4*	8	-	-	-	-	*10*	20	*2*	*1*	*4*	*2*	*10*
	STH 67 SB ON-RAMP	2	-	*12*	24	*4*	8	*4*	8	-	-	-	-	*4*	8	*2*	*1*	*4*	*2*	*10*
	STH 49 NB OFF-RAMP	2	-	*20*	40	*4*	8	*4*	8	-	-	-	-	*10*	20	*2*	*1*	*4*	*2*	*5*
	STH 49 NB ON-RAMP	2	-	*12*	24	*4*	8	*4*	8	-	-	-	-	*4*	8	*2*	*1*	*4*	*2*	*5*
	STH 49 SB OFF-RAMP	2	-	*20*	40	*4*	8	*4*	8	-	-	-	-	*10*	20	*2*	*1*	*4*	*2*	*5*
	STH 49 SB ON-RAMP	2	-	*12*	24	*4*	8	*4*	8	-	-	-	-	*4*	8	*2*	*1*	*4*	*2*	*5*
SALT SHED (CATEGORY 0030)		100	-	-	-	*3*	300	-	-	-	-	-	-	-	-	-	-	-	-	-
Undistributed			3	-	492	-	146	-	56	-	110	-	18	-	474	4	-	13	-	12
	CATEGORY 0010 SUBTOTAL	100			80500		1280		2220		5200		600		3630	30		65		170
	CATEGORY 0030 SUBTOTAL	-			-		300		-		-		-		-	-		-		-
	TOTALS	100			80,500		1,580		2,220		5,200		600		3,630	30		65		170

3

FINAL CONDITION PAVEMENT MARKING

CATEGORY 0010 LOCATION		ITEM 646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW (LF)	ITEM 646.0106 PAVEMENT MARKING EPOXY 4-INCH WHITE (LF)	ITEM 646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH WHITE (12.5' SEG., 37.5' GAP) (LF)	ITEM 646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH WHITE (3' SEG., 9' GAP) (LF)	ITEM 646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH WHITE (LF)	ITEM 646.0881.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH WHITE (12.5' SEG., 37.5' GAP) (LF)	ITEM 646.0881.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH WHITE (3' SEG., 9' GAP) (LF)	ITEM 646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH WHITE (LF)	ITEM 647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH WHITE (LF)
ROADWAY										
USH 41	NB	38,800	27,450	2,940	-	-	6,810	-	-	-
USH 41	SB	38,800	30,850	2,980	-	-	6,860	-	-	-
STH 28 OFF-RAMP	NB	-	1,380	-	-	-	-	125	1390	295
STH 28 ON-RAMP	NB	-	2,560	-	-	-	-	170	2670	-
STH 28 OFF-RAMP	SB	-	870	-	-	-	-	45	835	355
WAYSIDE OFF-RAMP	NB	-	1,260	-	-	-	-	155	345	110
WAYSIDE ON-RAMP	NB	-	2,210	-	-	-	-	195	305	-
WAYSIDE OFF-RAMP	SB	-	780	-	-	-	-	47	600	180
WAYSIDE ON-RAMP	SB	-	2,640	-	-	-	-	185	3130	-
STH 67 OFF-RAMP	NB	-	880	-	-	-	-	48	780	300
STH 67 ON-RAMP	NB	-	2,070	-	-	-	-	180	2160	-
STH 67 OFF-RAMP	SB	-	780	-	-	-	-	47	600	180
STH 67 ON-RAMP	SB	-	2,060	-	-	-	-	110	2550	-
STH 49 OFF-RAMP	NB	-	730	-	45	680	-	-	-	230
STH 49 ON-RAMP	NB	-	1,850	-	175	3,800	-	-	-	-
STH 49 OFF-RAMP	SB	-	800	-	58	665	-	-	-	225
STH 49 ON-RAMP	SB	-	1,970	-	190	1,980	-	-	-	-
UNDISTRIBUTED		50	100	10	5	20	20	40	50	5
TOTALS		158,900		6,410		7,150	15,050		15,450	1,880

USE THESE QUANTITIES COMPLETE PERMANENT PAVEMENT MARKINGS. IF GROOVED WET REFLECTIVE PAVEMENT MARKINGS CANNOT BE PLACED SEE "TEMPORARY CONDITION PAVEMENT MARKING" CHART (NOTE 2) UNTIL THESE ITEMS CAN BE PLACED THE FOLLOWING SPRING.

SALT SHED

LOCATION	ITEM SPV.0060.04 RECONSTRUCT SANITARY MANHOLE (EACH)	ITEM SPV.0105.01 METAL VEHICLE STORAGE BUILDING (LS)	ITEM SPV.0105.02 SALT STORAGE BUILDING (LS)	ITEM SPV.0105.05 BRINE STORAGE AND DISPENSING SYSTEM (LS)	ITEM SPV.0105.06 UTILITIES SALT STORAGE SITE (LS)
SALT SHED (CATEGORY 0030)	1	1	1	1	1
TOTALS	1	1	1	1	1

TEMPORARY CONDITION PAVEMENT MARKING

CATEGORY 0010 LOCATION		646.0126 PAVEMENT MARKING EPOXY 8-INCH NOTE (1)(2) WHITE (LF)	646.0406 PAVEMENT MARKING SAME DAY EPOXY 4-INCH NOTE (1)(2) WHITE (LF)	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH NOTE (3) WHITE (LF)	ITEM 649.0300 TEMPORARY PAVEMENT MARKING REFLECTIVE TAPE 4-INCH YELLOW (LF)	WHITE SKIPS (LF)	WHITE (LF)	649.0400 TEMPORARY PAVEMENT MARKING REMOVEABLE TAPE 4-INCH BLACK (LF)	649.0801 TEMPORARY PAVEMENT MARKING REMOVEABLE TAPE 8-INCH WHITE (LF)
ROADWAY									
USH 41	NB	-	9750	16475	-	-	-	-	-
USH 41	SB	-	9840	16475	-	-	-	-	-
STH 28 OFF-RAMP	NB	1390	125	-	-	-	600	-	-
STH 28 ON-RAMP	NB	2670	170	-	3,200	750	3,200	200	200
STH 28 OFF-RAMP	SB	835	45	-	-	-	600	-	-
WAYSIDE OFF-RAMP	NB	345	155	-	-	-	600	-	-
WAYSIDE ON-RAMP	NB	305	195	-	3,150	740	3,150	200	200
WAYSIDE OFF-RAMP	SB	600	47	-	-	-	600	-	-
WAYSIDE ON-RAMP	SB	3130	185	-	-	-	-	-	-
STH 67 OFF-RAMP	NB	780	48	-	-	-	600	-	-
STH 67 ON-RAMP	NB	2160	180	-	-	-	-	-	-
STH 67 OFF-RAMP	SB	600	47	-	-	-	600	-	-
STH 67 ON-RAMP	SB	2550	110	-	-	-	-	-	-
STH 49 OFF-RAMP	NB	680	45	-	-	-	600	-	-
STH 49 ON-RAMP	NB	3800	175	-	-	-	-	-	-
STH 49 OFF-RAMP	SB	665	58	-	-	-	600	-	-
STH 49 ON-RAMP	SB	1980	190	-	-	-	-	-	-
UNDISTRIBUTED		70	75	2050	1,000		2,010	1,000	100
	TOTALS	22,600	21,460	35,000		22,000		1,400	500

(1) PLACE ITEMS 646.0126 AND 646.0406 ON SAME DAY AS FINAL SURFACE HMA PAVEMENT IS COMPLETED IN EXACT LOCATION AS FINAL CONDITION PAVEMENT MARKING.
(2) MAINTAIN ITEMS 646.0126 AND 646.0406 TILL THE FOLLOWING SPRING IF ITEMS 646.0841.S AND 646.0843.S CANNOT BE PLACED PRIOR TO NOV. 15TH.
(3) PLACE CENTERLINE SKIPS IN STAGE 1 AFTER BINDER FOR LANE 1 IS PLACED, PLACE CENTERLINE SKIPS IN CONCRETE SECTION AFTER DIAMOND GRINDING, AND PLACE CENTERLINE SKIPS IN STAGE 3 ONCE MICHIGAN JOINT IS PAVED FROM SURFACE LAYER IN LANE 2.

CONSTRUCTION STAKING ITEMS

LOCATION	ITEM 650.4000 CONSTRUCTION STAKING STORM SEWER (EACH)	ITEM 650.4500 CONSTRUCTION STAKING SUBGRADE (LF)	ITEM 650.5000 CONSTRUCTION STAKING BASE (LF)	ITEM 650.6000 CONSTUCTION STAKING PIPE CULVERTS (EACH)	ITEM 650.7500 CONSTRUCTION STAKING CONCRETE BARRIER (LF)	ITEM 650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE (LF)	ITEM 650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONSTROL (1107-00-74) (LS)	ITEM 650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)	SPV.0105.03 SURVEY SALT STORAGE SITE (LS)
PROJECT (CATEGORY 0010)	71	2328	2328	6	700	38745	1	27053	-
SALT SHED (CATEGORY 0030)	8	-	-	-	-	-	-	-	1
UNDISTRIBUTED	-	22	22	-	-	-	-	22	-
CATEGORY 0010 SUBTOTAL	71	2350	2350	6	700	38745	1	27075	-
CATEGORY 0030 SUBTOTAL	8	-	-	-	-	-	-	-	1
TOTALS	79	2,350	2,350	6	700	38,745	1	27,075	1

LEGEND

Ⓐ BASE PATCHING CONCRETE SHES

Ⓑ CONCRETE PAVEMENT REPAIR SHES

Ⓒ CONCRETE PAVEMENT REPLACEMENT SHES

EXISTING WETLAND BOUNDARY

EOP STH 28 SB ON-RAMP

SLOPE INTERCEPT

USH 41 SB

USH 41 ℄

USH 41 NB

1159+00 1160+00 1161+00 1162+00 1163+00 1164+00 1165+00 1166+00 1167+00 1168+00 1169+00 1170+00 1171+00 1172+00 1173+00 1174+00

10' 1' 24' 4' 2' 4' 2' 24' 12' 5' 3'

BEGIN PROJECT
STA. 1168+12.29
Y = 751,968.08
X = 963,330.77

200' BUTT JOINT

HIGH TENSION CABLE GUARD

SLOPE INTERCEPT

EXISTING WETLAND BOUNDARY

5

5

LEGEND

Ⓐ BASE PATCHING CONCRETE SHES

Ⓑ CONCRETE PAVEMENT REPAIR SHES

Ⓒ CONCRETE PAVEMENT REPLACEMENT SHES

STH 28

STH 28 SB OFF-RAMP

EXISTING WETLAND BOUNDARY

SLOPE INTERCEPT

STEEL THRIE BEAM

REMOVING GUARDRAIL

TERMINAL HIGH TENSION CABLE GUARD

HIGH TENSION CABLE GUARD

USH 41 SB

USH 41 ℄

USH 41 NB

1174+00 1175+00 1176+00 1177+00 1178+00 1179+00 1180+00 1181+00 1182+00 1183+00 1184+00 1185+00 1186+00 1187+00 1188+00 1189+00

10' 1' 24' 4' 2' 4' 2' 24' 10' 1'

STA 1180+15 USH 41 ℄
BEGIN BUTT JOINT

STA 1180+95 USH 41 ℄
END BUTT JOINT

STA 1185+25 USH 41 ℄
BEGIN BUTT JOINT

STA 1186+12 USH 41 ℄
END BUTT JOINT

3' 1' 15' 5' 3'

TERMINAL HIGH TENSION CABLE GUARD

STEEL THRIE BEAM BULLNOSE TERMINAL

87.5' BUTT JOINT

87.5' BUTT JOINT

SLOPE INTERCEPT

EXISTING WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

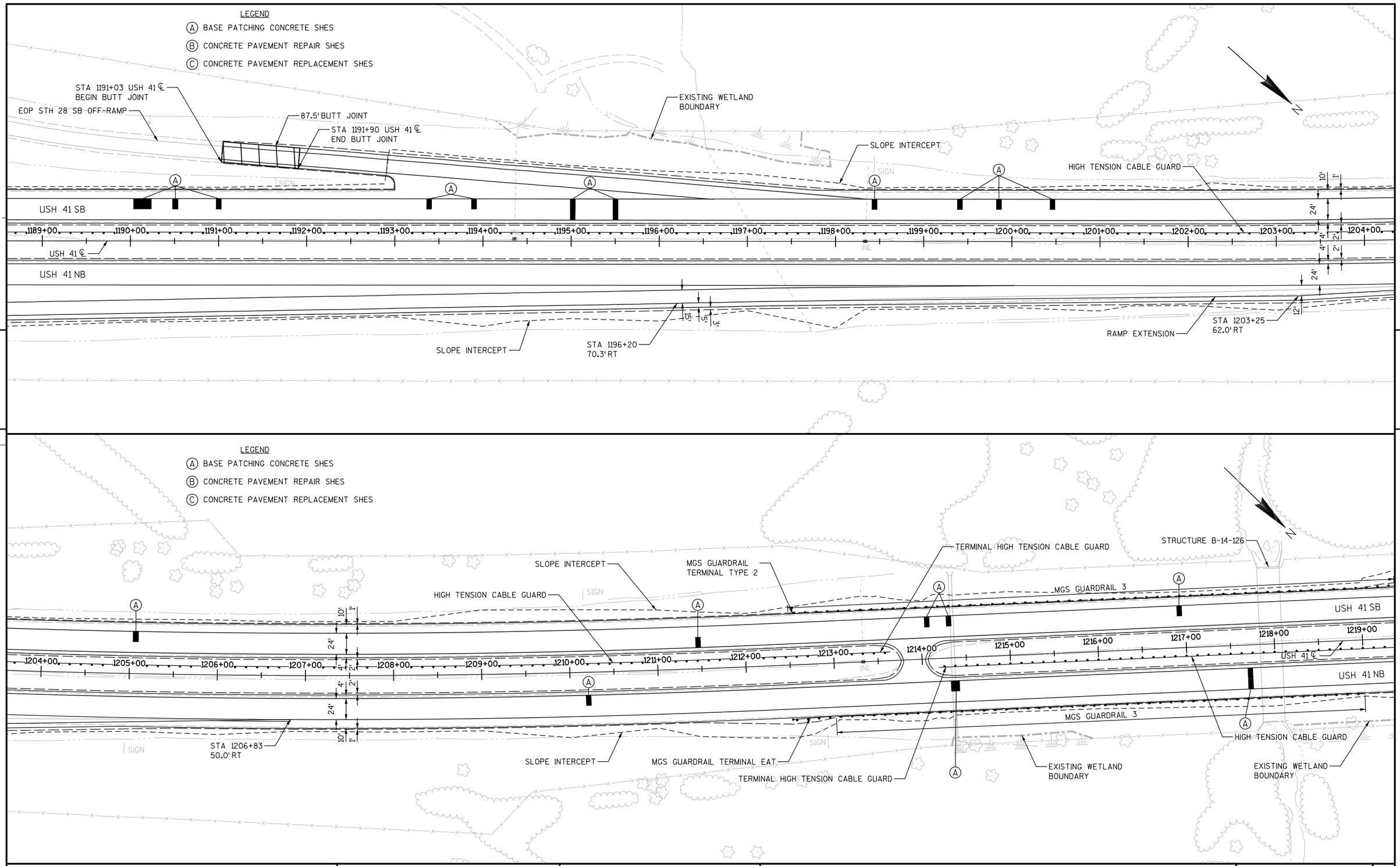
EXISTING WETLAND BOUNDARY

SEE CONSTRUCTION DETAIL - MILLING OPERATION UNDER STH 28 FOR VERTICAL CLEARANCE

EOP STH 28 NB OFF-RAMP

EOP STH 28 NB ON-RAMP

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 134	E



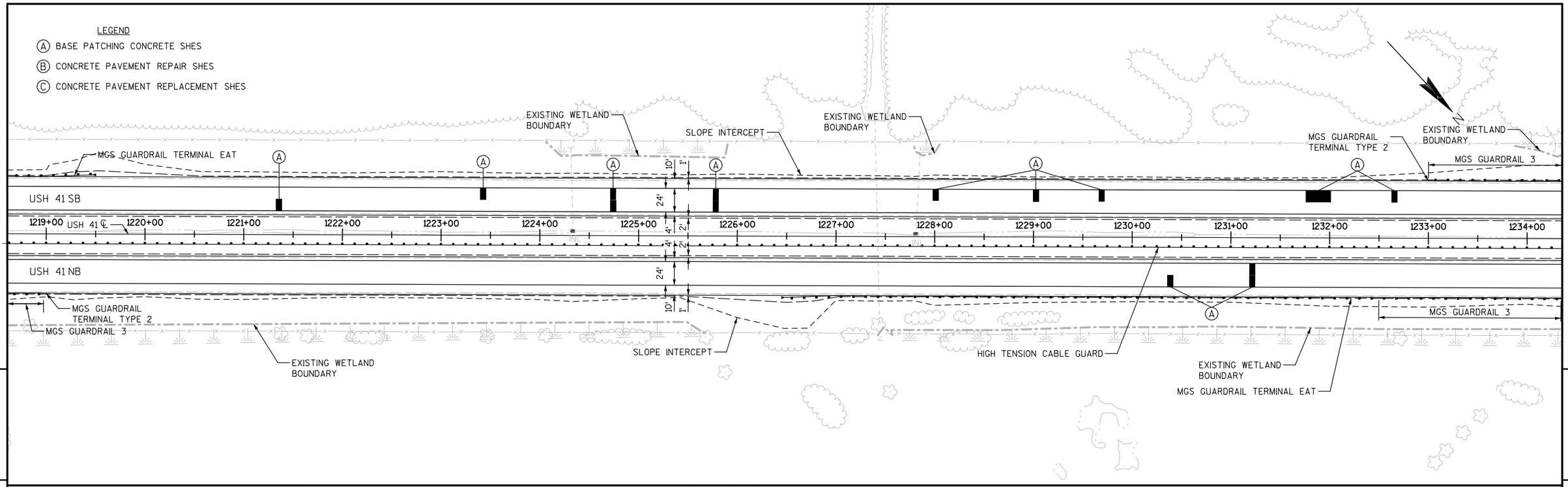
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PLAN SHEETS	SHEET 135	E

LEGEND

(A) BASE PATCHING CONCRETE SHES

(B) CONCRETE PAVEMENT REPAIR SHES

(C) CONCRETE PAVEMENT REPLACEMENT SHES

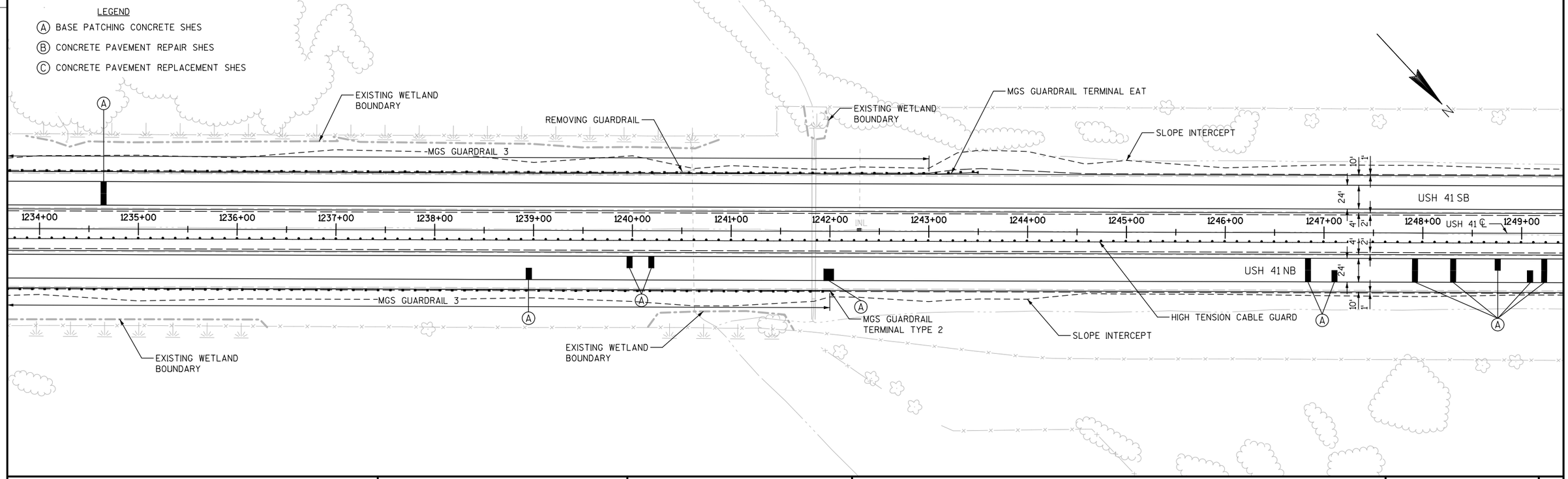


LEGEND

(A) BASE PATCHING CONCRETE SHES

(B) CONCRETE PAVEMENT REPAIR SHES

(C) CONCRETE PAVEMENT REPLACEMENT SHES



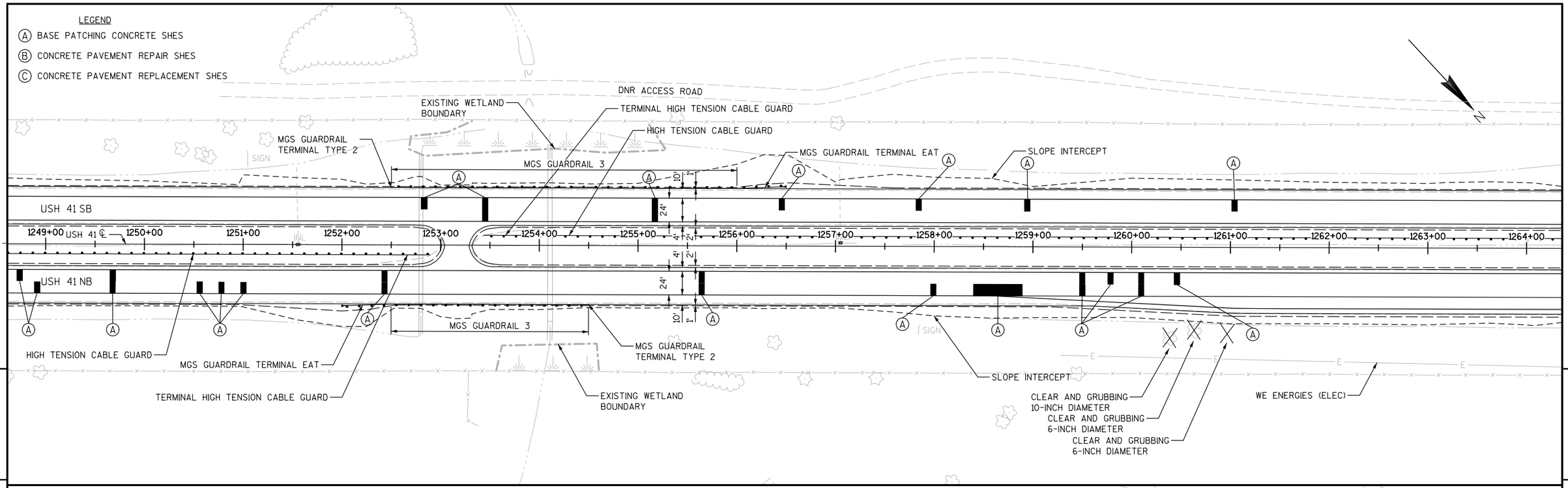
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 136	E

LEGEND

Ⓐ BASE PATCHING CONCRETE SHES

Ⓑ CONCRETE PAVEMENT REPAIR SHES

Ⓒ CONCRETE PAVEMENT REPLACEMENT SHES



5

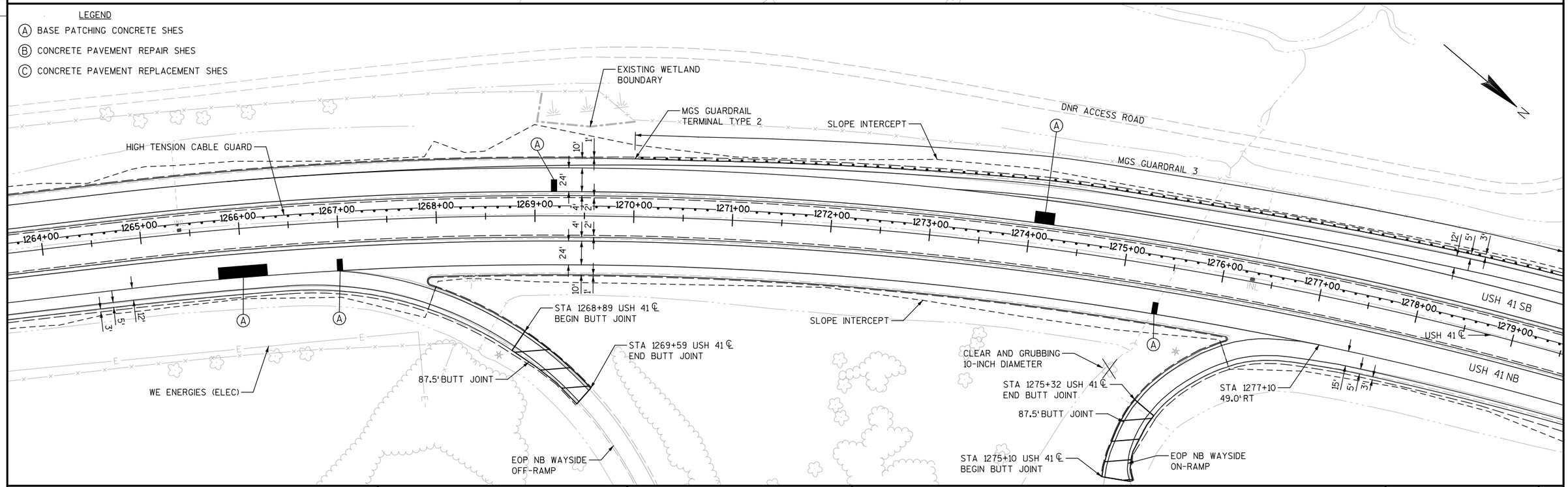
5

LEGEND

Ⓐ BASE PATCHING CONCRETE SHES

Ⓑ CONCRETE PAVEMENT REPAIR SHES

Ⓒ CONCRETE PAVEMENT REPLACEMENT SHES



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 137 E

LEGEND

(A) BASE PATCHING CONCRETE SHES

(B) CONCRETE PAVEMENT REPAIR SHES

(C) CONCRETE PAVEMENT REPLACEMENT SHES

SOO ROAD

EXISTING WETLAND BOUNDARY

TERMINAL HIGH TENSION CABLE GUARD

TERMINAL HIGH TENSION CABLE GUARD

MGS GUARDRAIL 3

MGS GUARDRAIL TERMINAL EAT

SLOPE INTERCEPT

87.5' BUTT JOINT

STA 1289+36 USH 41 ℄ BEGIN BUTT JOINT

STA 1290+20 USH 41 ℄ END BUTT JOINT

EOP SB WAYSIDE ON-RAMP

STEEL THRIE BEAM

1279+00 1280+00 1281+00 1282+00 1283+00 1284+00 1285+00 1286+00 1287+00 1288+00 1289+00 1290+00 1291+00 1292+00 1293+00 1294+00

HIGH TENSION CABLE GUARD

USH 41 SB

USH 41 ℄

USH 41 NB

REMOVING GUARDRAIL

PERMANENT CONCRETE BARRIER TYPE S42

EXISTING WETLAND BOUNDARY

MGS GUARDRAIL TERMINAL EAT

MGS GUARDRAIL 3

MGS THRIE BEAM TRANSITION

PERMANENT CONCRETE BARRIER TYPE S42

STEEL THRIE BEAM BULLNOSE TERMINAL

STA 1282+04 TO 1282+76 CONCRETE BARRIER TYPE S42C

RAMP EXTENSION

SLOPE INTERCEPT

STA 1291+55 62.0' RT

5

5

LEGEND

(A) BASE PATCHING CONCRETE SHES

(B) CONCRETE PAVEMENT REPAIR SHES

(C) CONCRETE PAVEMENT REPLACEMENT SHES

SB WAYSIDE

LOMIRA 6" SANITARY FORCE MAIN

FRONTIER BURIED CABLE

STRUCTURE C-14-41

MGS GUARDRAIL TERMINAL TYPE 2

STA 1306+52 USH 41 ℄ END BUTT JOINT

87.5' BUTT JOINT

STA 1305+65 USH 41 ℄ BEGIN BUTT JOINT

EXISTING WETLAND BOUNDARY

EOP SB WAYSIDE OFF-RAMP

MGS GUARDRAIL 3

SLOPE INTERCEPT

HIGH TENSION CABLE GUARD

REMOVING GUARDRAIL

1294+00 1295+00 1296+00 1297+00 1298+00 1299+00 1300+00 1301+00 1302+00 1303+00 1304+00 1305+00 1306+00 1307+00 1308+00 1309+00

USH 41 SB

USH 41 ℄

USH 41 NB

STA 1295+15 50.0' RT

SLOPE INTERCEPT

EXISTING WETLAND BOUNDARY

LOMIRA 6" SANITARY FORCE MAIN

MGS GUARDRAIL TERMINAL EAT

REMOVING GUARDRAIL

EXISTING WETLAND BOUNDARY

MGS GUARDRAIL 3

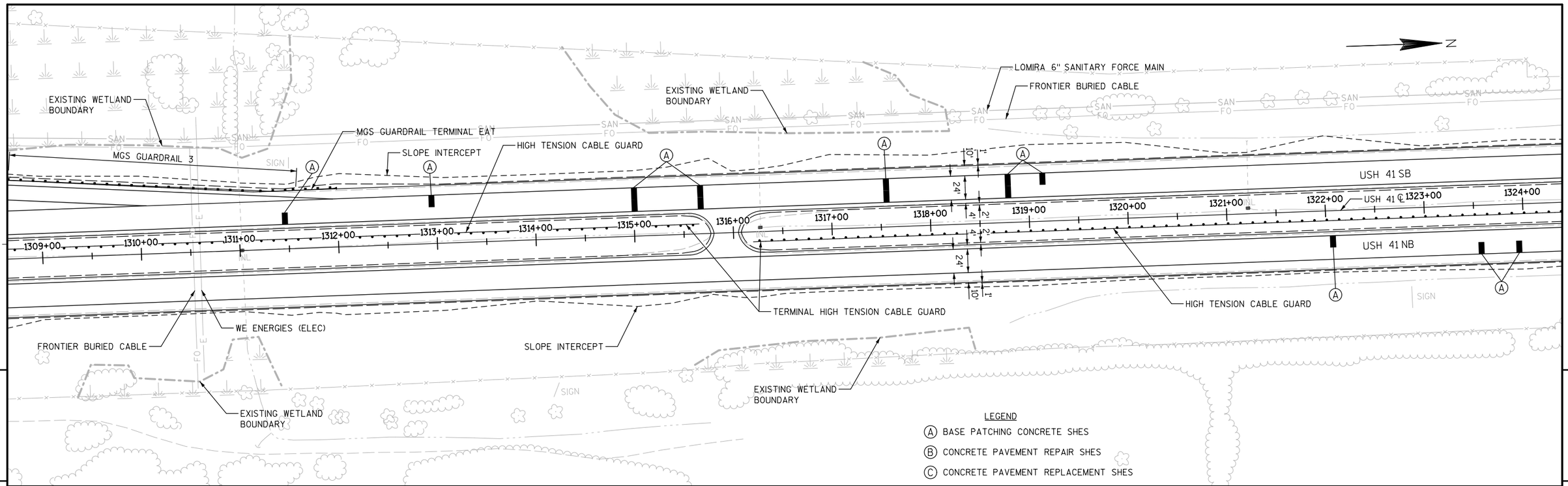
MGS GUARDRAIL TERMINAL 2

EXISTING WETLAND BOUNDARY

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PLAN SHEETS	SHEET 138 E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\050205_pn.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:100

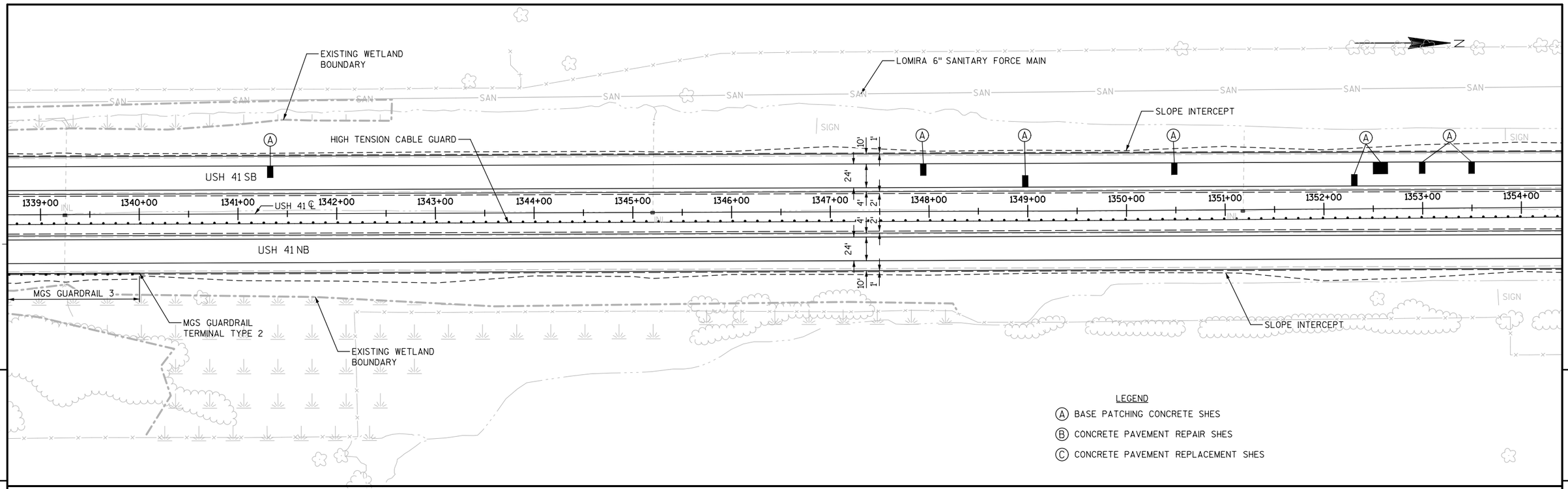
WISDOT/CADDS SHEET 42

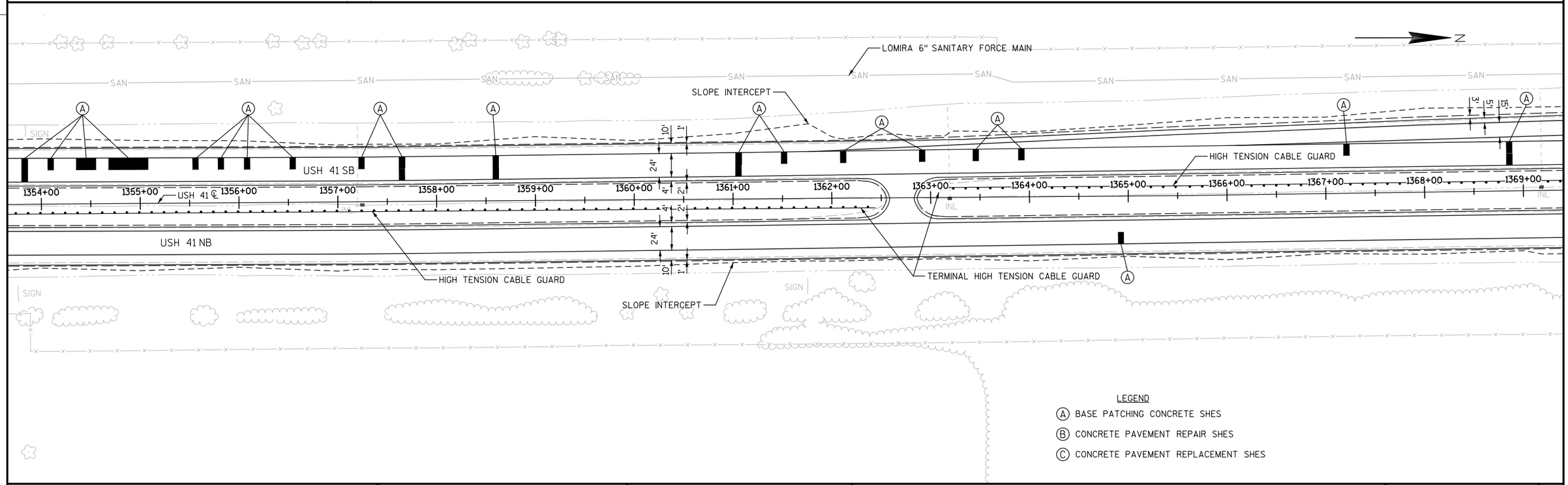


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 139	E

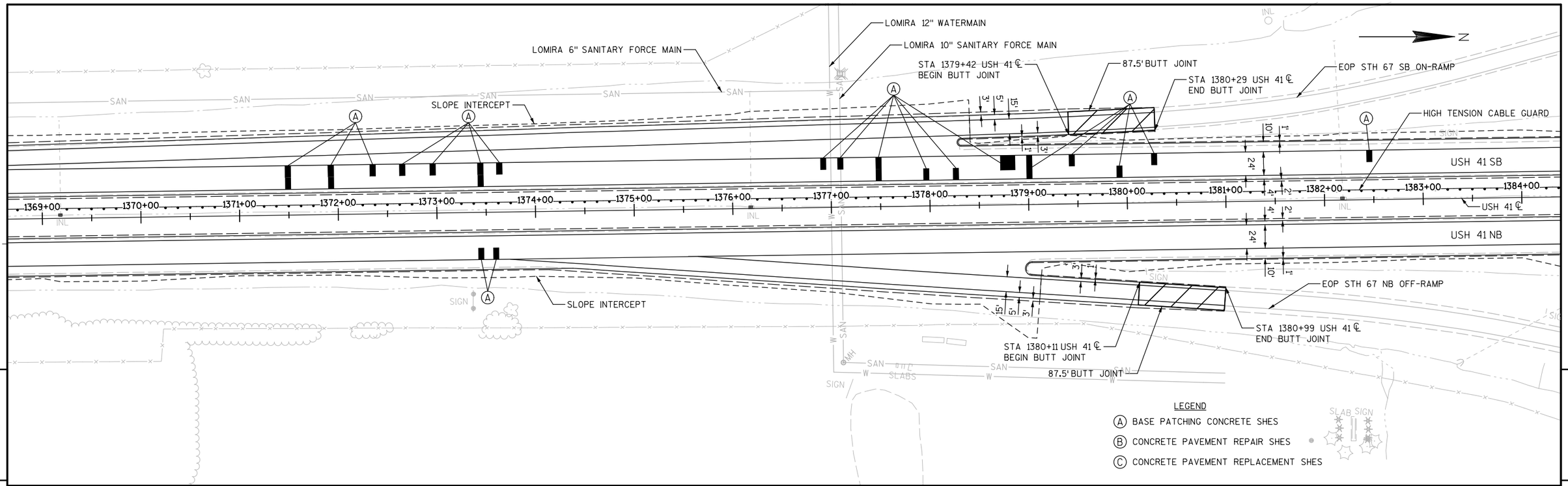
FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\050206_pn.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:100

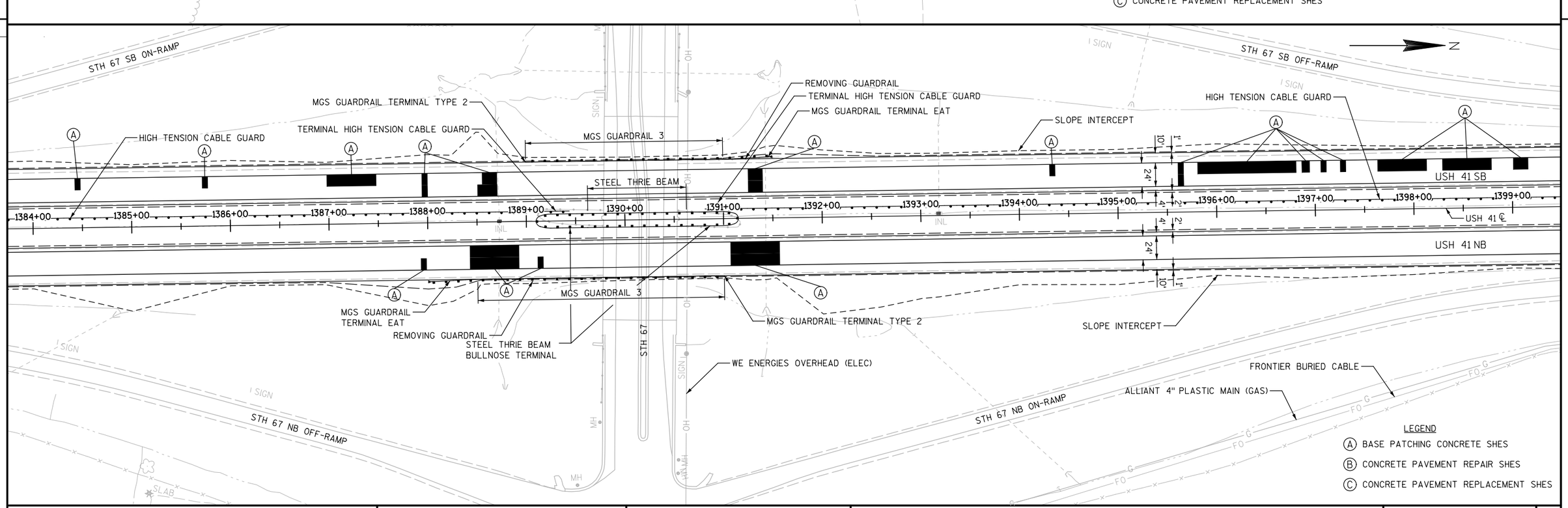
WISDOT/CADDS SHEET 42





PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 140	E

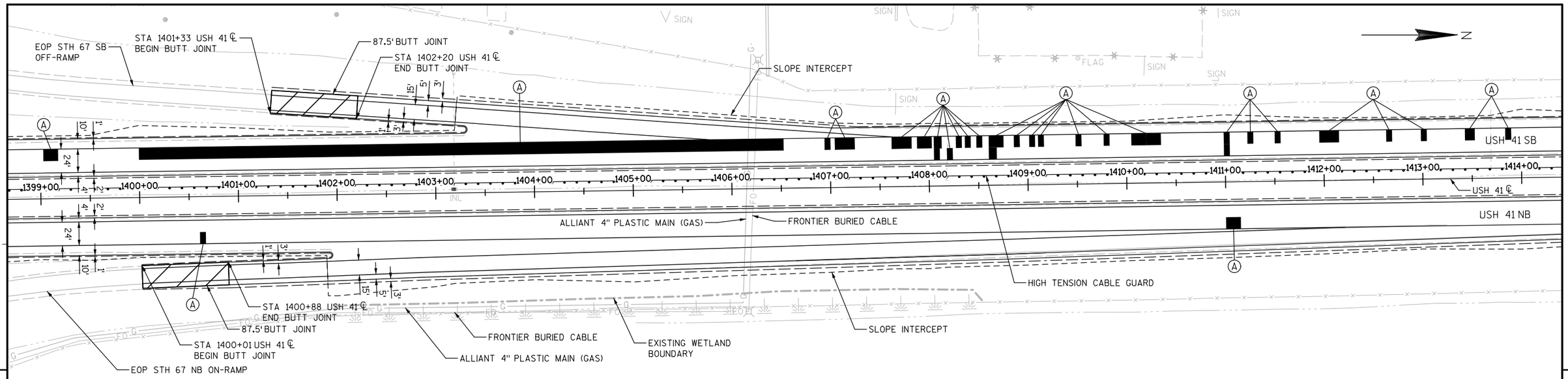




PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 141	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\050208_pn.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

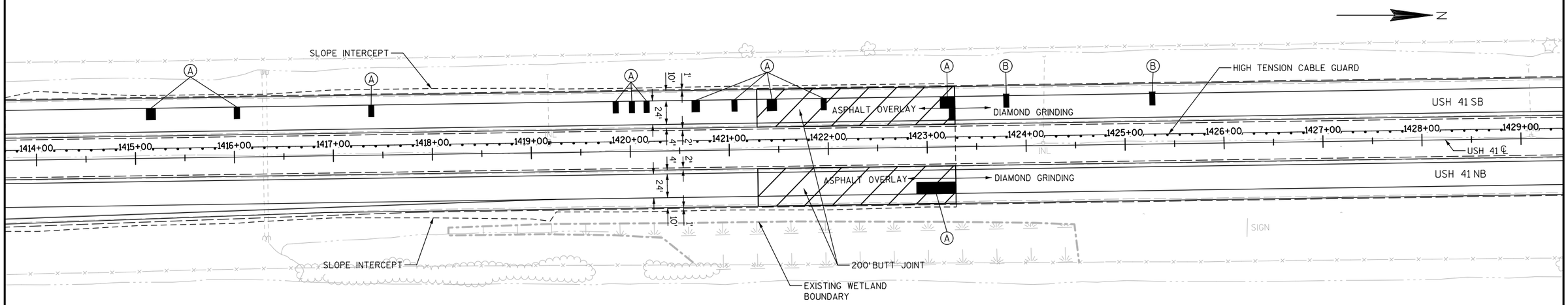


LEGEND

(A) BASE PATCHING CONCRETE SHES

(B) CONCRETE PAVEMENT REPAIR SHES

(C) CONCRETE PAVEMENT REPLACEMENT SHES



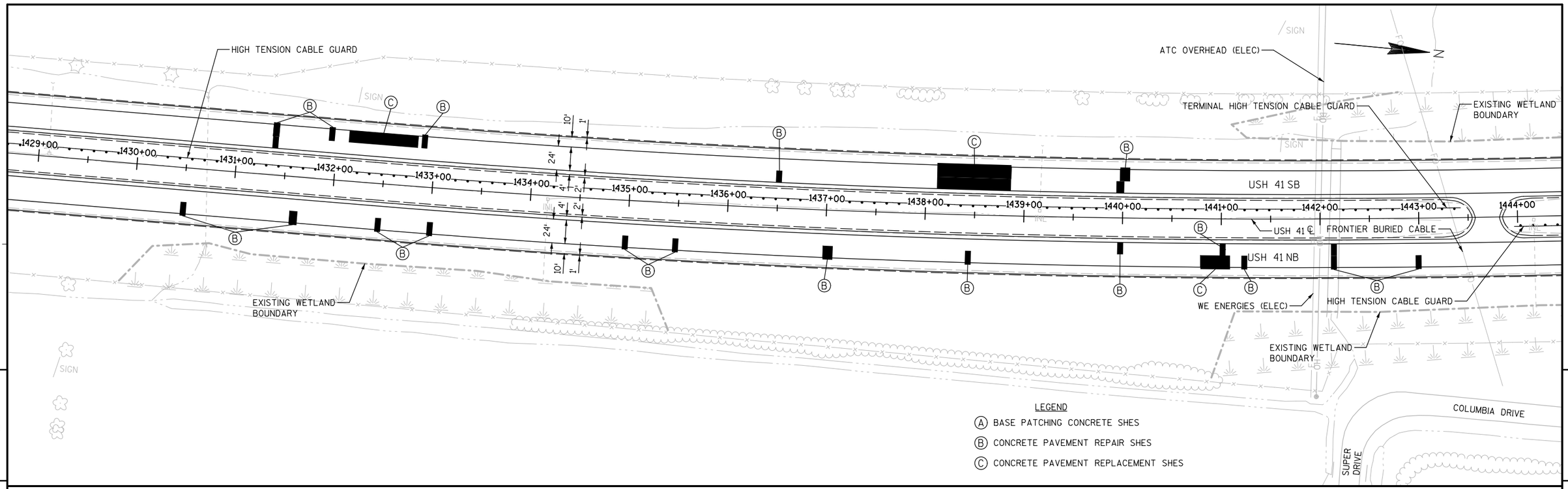
LEGEND

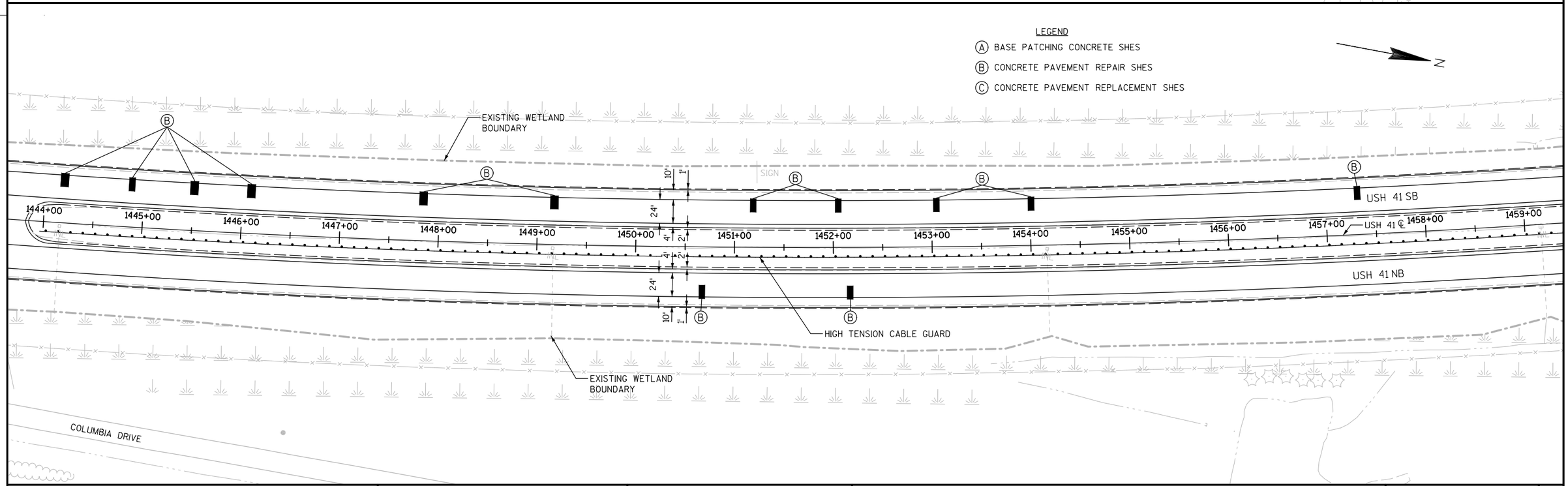
(A) BASE PATCHING CONCRETE SHES

(B) CONCRETE PAVEMENT REPAIR SHES

(C) CONCRETE PAVEMENT REPLACEMENT SHES

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 142	E





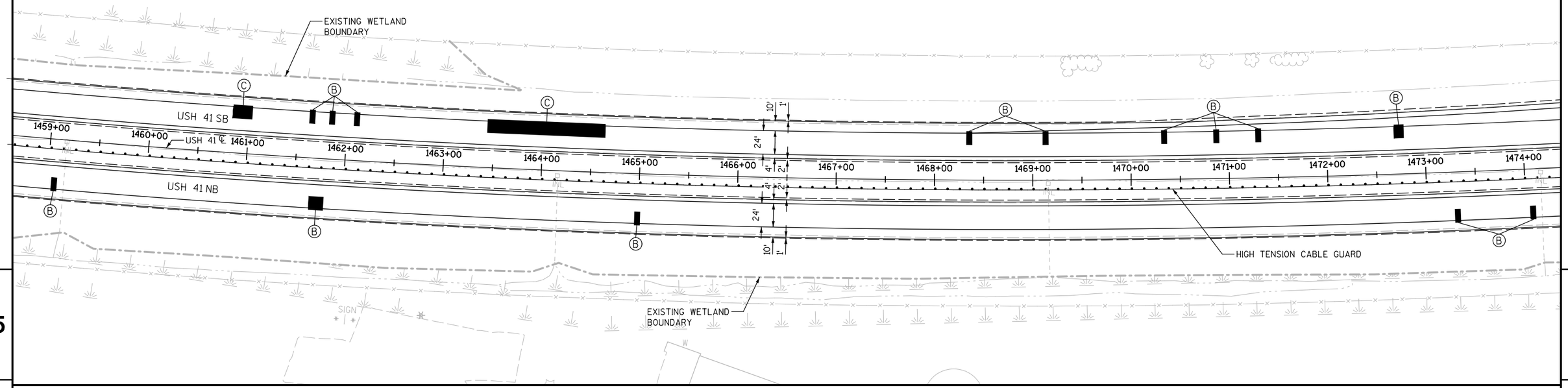
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 143 E

LEGEND

(A) BASE PATCHING CONCRETE SHES

(B) CONCRETE PAVEMENT REPAIR SHES

(C) CONCRETE PAVEMENT REPLACEMENT SHES

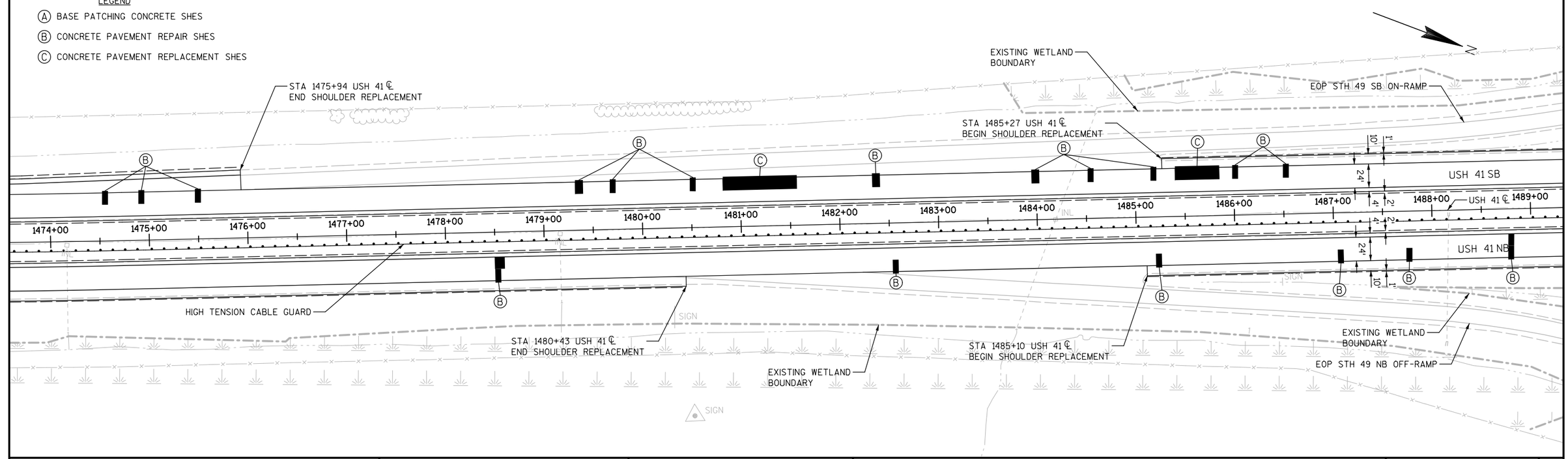


LEGEND

(A) BASE PATCHING CONCRETE SHES

(B) CONCRETE PAVEMENT REPAIR SHES

(C) CONCRETE PAVEMENT REPLACEMENT SHES



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 144 E

LEGEND

(A) BASE PATCHING CONCRETE SHES

(B) CONCRETE PAVEMENT REPAIR SHES

(C) CONCRETE PAVEMENT REPLACEMENT SHES

EXISTING WETLAND BOUNDARY

STH 49 SB ON-RAMP

HIGH TENSION CABLE GUARD

REMOVING GUARDRAIL

TERMINAL HIGH TENSION CABLE GUARD

HIGH TENSION CABLE GUARD

STEEL THRIE BEAM

USH 41 SB

USH 41 ℄

USH 41 NB

1489+00 1490+00 1491+00 1492+00 1493+00 1494+00 1495+00 1496+00 1497+00 1498+00 1499+00 1500+00 1501+00 1502+00 1503+00 1504+00

10' 1' 24' 4' 2' 4' 2' 24' 10' 1'

CLEAR AND GRUBBING 9-INCH DIAMETER

CLEAR AND GRUBBING 10-INCH DIAMETER

CLEAR AND GRUBBING 5-INCH DIAMETER

TERMINAL HIGH TENSION CABLE GUARD

STEEL THRIE BEAM BULLNOSE TERMINAL

EXISTING WETLAND BOUNDARY

STH 49 NB OFF-RAMP

STH 49

EXISTING WETLAND BOUNDARY

5

5

LEGEND

(A) BASE PATCHING CONCRETE SHES

(B) CONCRETE PAVEMENT REPAIR SHES

(C) CONCRETE PAVEMENT REPLACEMENT SHES

EOP STH 49 SB OFF-RAMP

EXISTING WETLAND BOUNDARY

STA 1511+34 USH 41 ℄ END SHOULDER REPLACEMENT

STA 1516+58 USH 41 ℄ BEGIN SHOULDER REPLACEMENT

EXISTING WETLAND BOUNDARY

HIGH TENSION CABLE GUARD

USH 41 SB

USH 41 ℄

USH 41 NB

1504+00 1505+00 1506+00 1507+00 1508+00 1509+00 1510+00 1511+00 1512+00 1513+00 1514+00 1515+00 1516+00 1517+00 1518+00 1519+00

10' 1' 24' 4' 2' 4' 2' 24' 10' 1'

STA 1512+05 USH 41 ℄ END SHOULDER REPLACEMENT

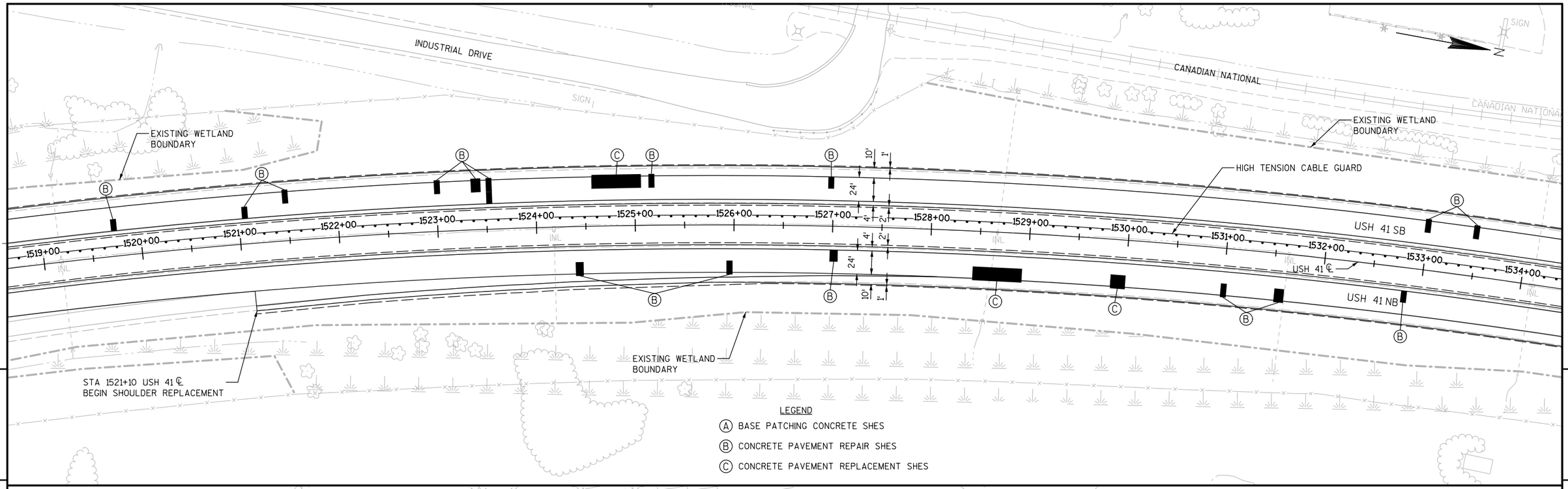
EXISTING WETLAND BOUNDARY

EOP STH 49 NB ON-RAMP

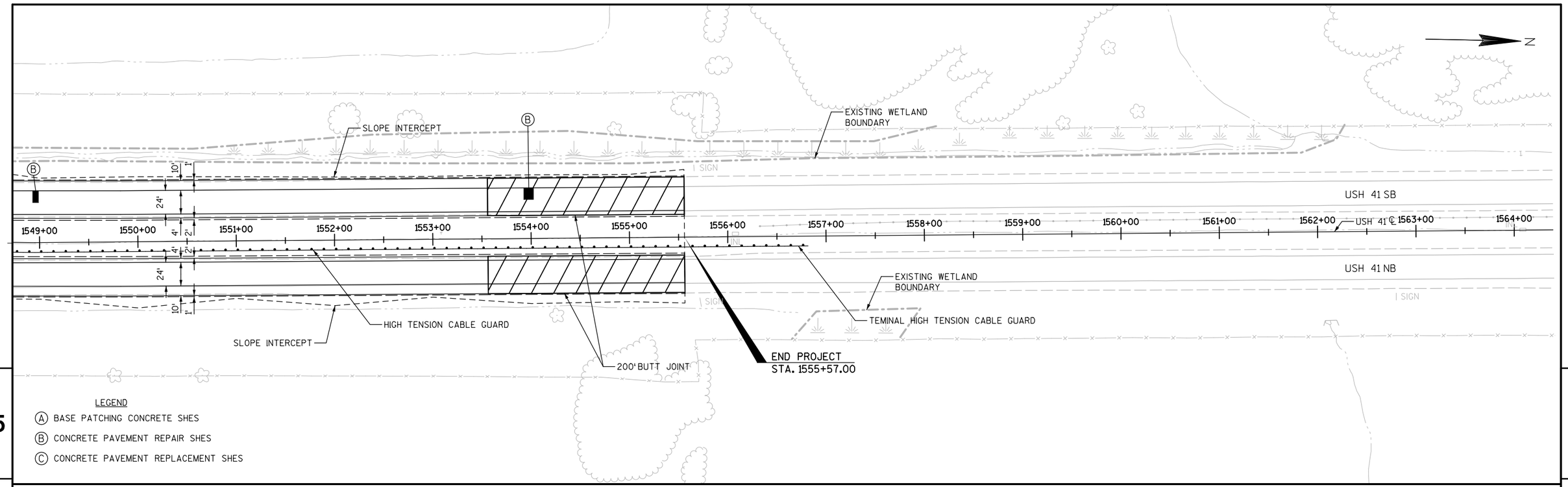
EXISTING WETLAND BOUNDARY

EXISTING WETLAND BOUNDARY

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 145 E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 146	E

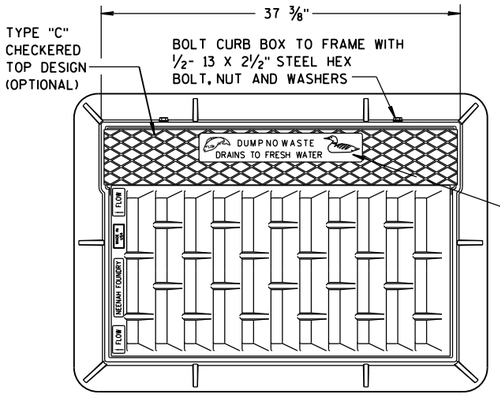


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY:DODGE	PLAN SHEETS	SHEET 147	E

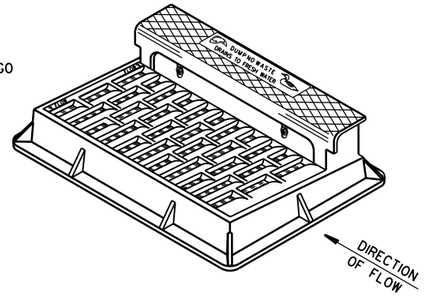
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08C09-01	INLETS MEDIAN 3 AND 4 GRATE
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
11A01-05	MAINTENANCE CROSSOVER FOR FREEWAYS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13C08-02	CONCRETE PAVEMENT PARTIAL DEPTH REPAIR
13C09-11A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-11C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C14-04A	BASE PATCHING CONCRETE
13C14-04B	BASE PATCHING CONCRETE
13C14-04C	BASE PATCHING CONCRETE
14B26-03A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-03E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B32-03A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-03E	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B33-01G	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B33-01H	CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-03A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-03J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C19-02C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-01D	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15D12-04	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE
15D16-02	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

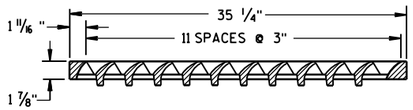
6

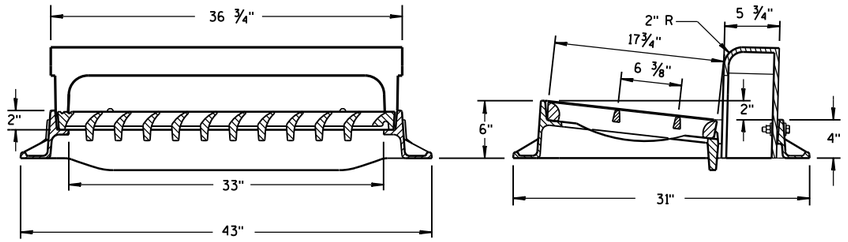


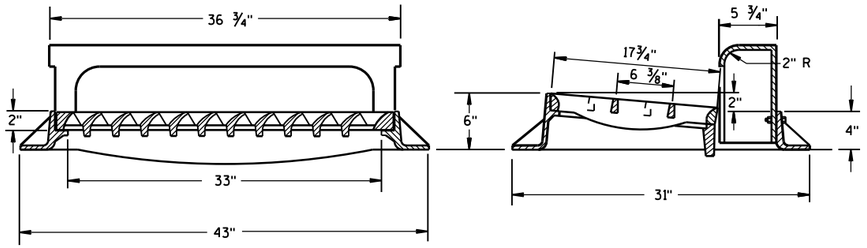
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

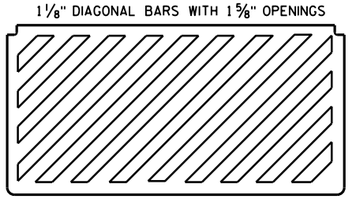






TYPE "H"

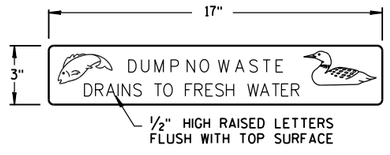
NOTE: EITHER CASTING IS ACCEPTABLE



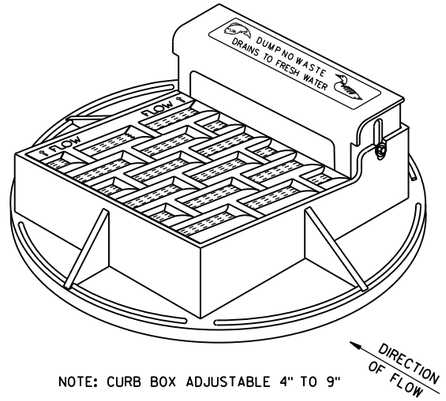
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

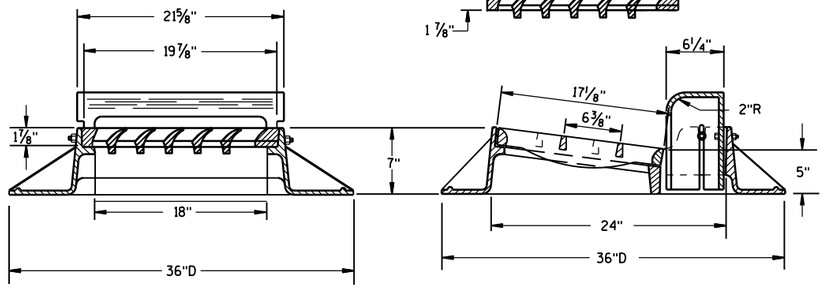


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



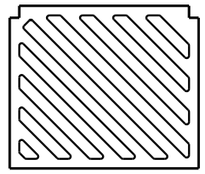
TYPE "A"

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

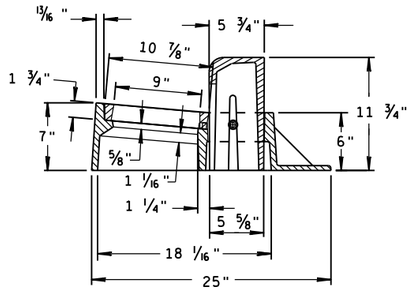
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

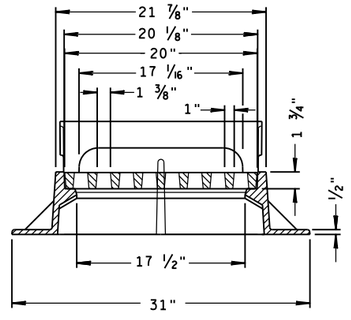


SPECIAL GRATE FOR TYPE "A" COVER

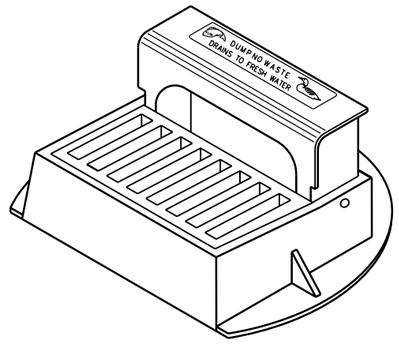
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



INLET COVERS TYPE A, H, A-S, H-S & Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

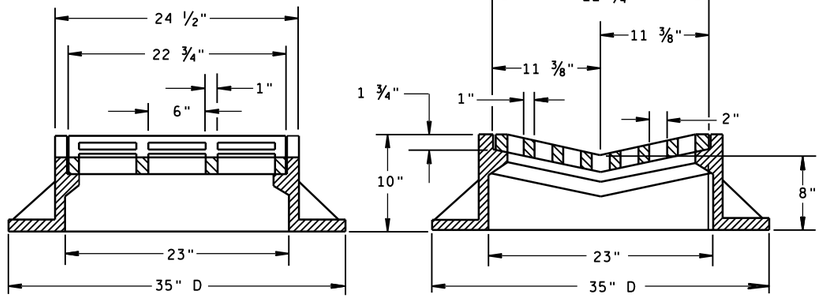
APPROVED
11-27-13 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

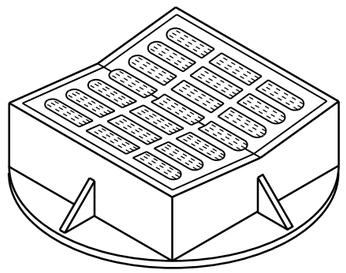
6

S.D.D. 8 A 5-19a

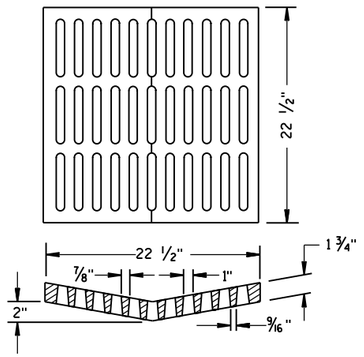
6

S.D.D. 8 A 5-19a



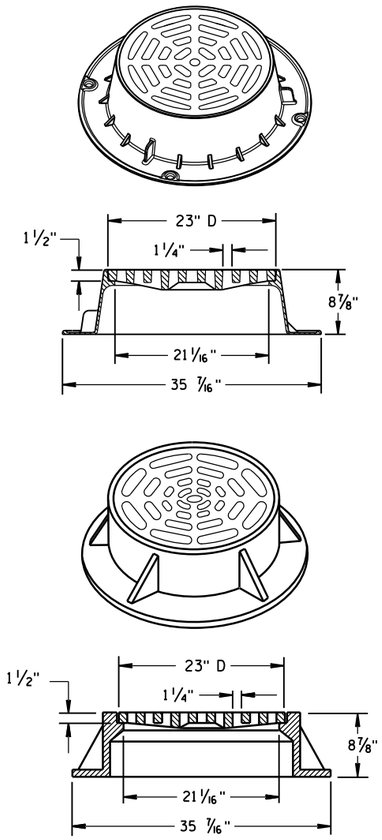


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

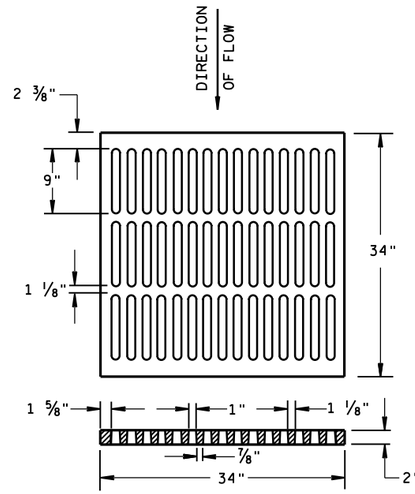
NOTE: EITHER CASTING IS ACCEPTABLE

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.

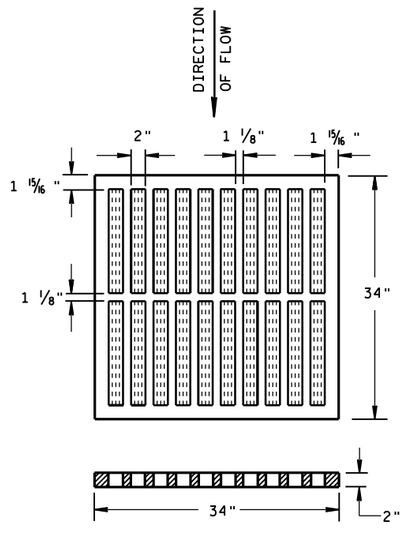
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



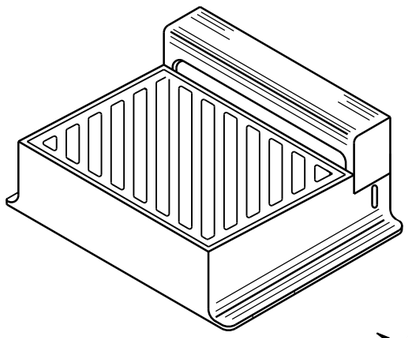
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

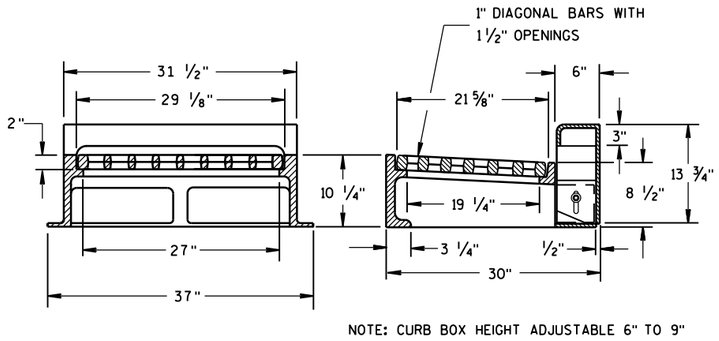


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

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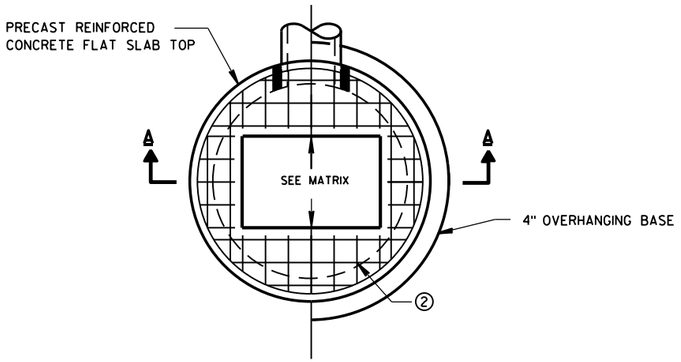
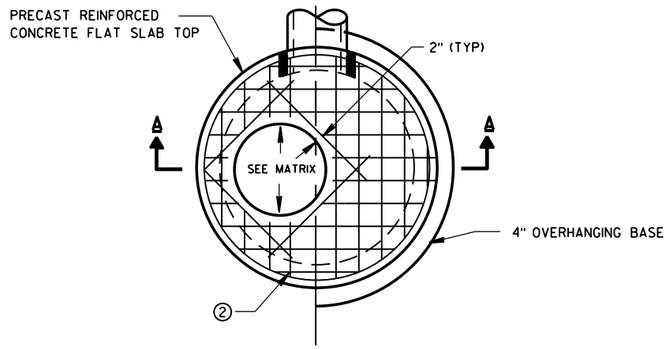
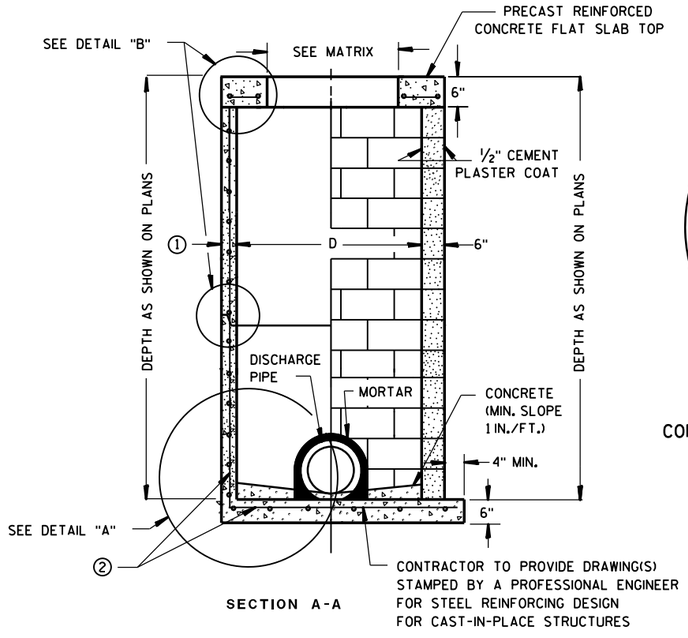
S.D.D. 8 A 5-19b



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

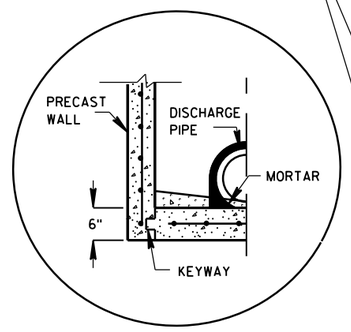


SECTION A-A

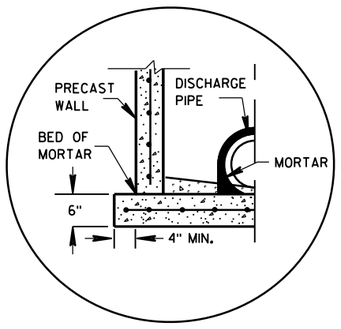
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

CIRCULAR INLETS W/ FLAT TOP

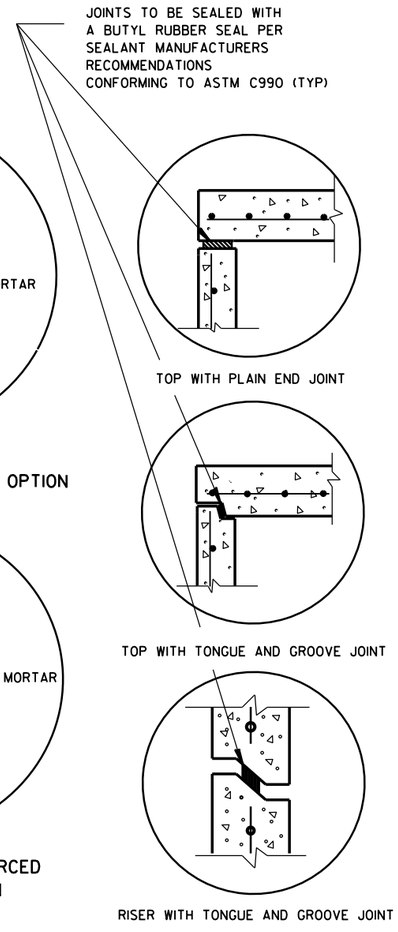


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "B"

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

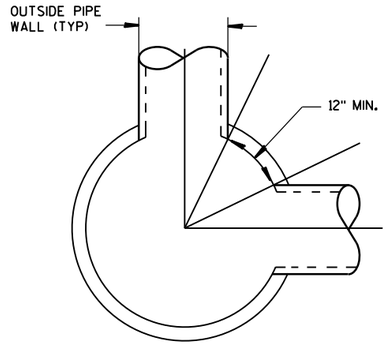
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.

② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

	INLET COVER TYPE	ALL A'S	ALL B'S	BW	C	F	ALL H'S	S	T	V	WM	Z
INLET SIZE	OPENING SIZE (FT)											
3-FT	2 DIA.				X							X
	2X2	X	X					X		X		
4-FT	2 DIA.				X							X
	2X2	X	X					X		X		
	2X2.5			X				X	X	X	X	
	2X3						X					
	2.5X3					X						



DETAIL "C"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18

INLETS 3-FT AND 4-FT DIAMETER

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INLETS 3-FT AND 4-FT DIAMETER

6

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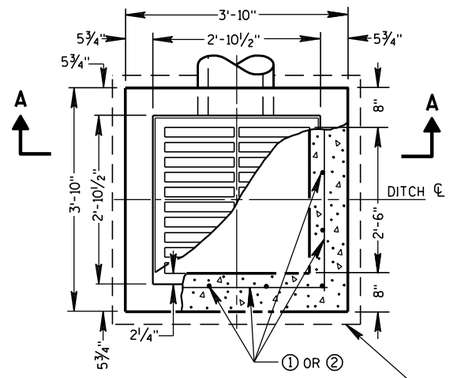
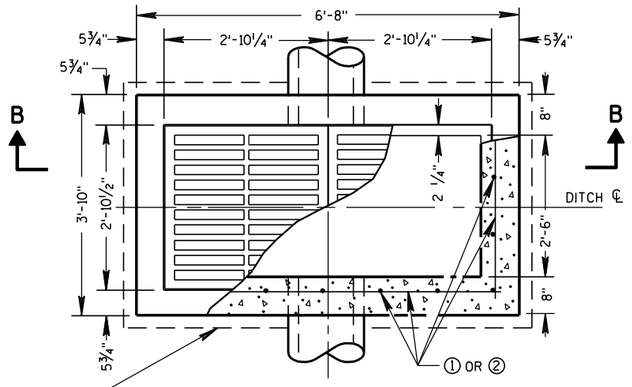
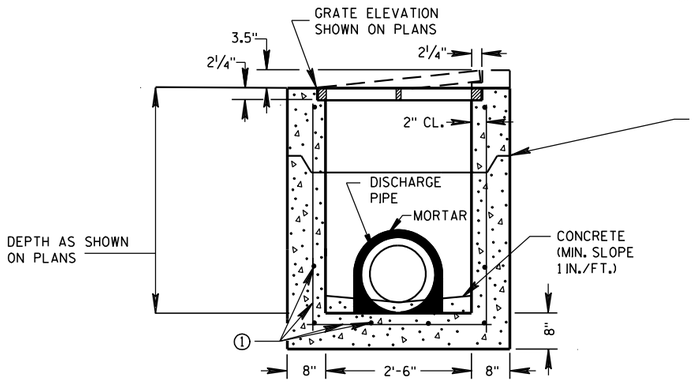


PLAN VIEW

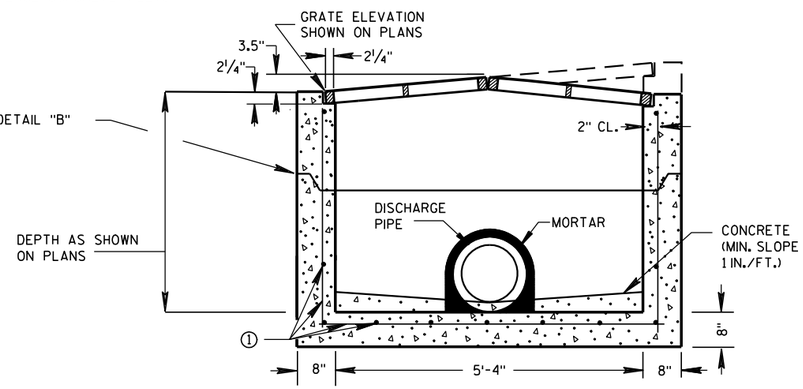


PLAN VIEW

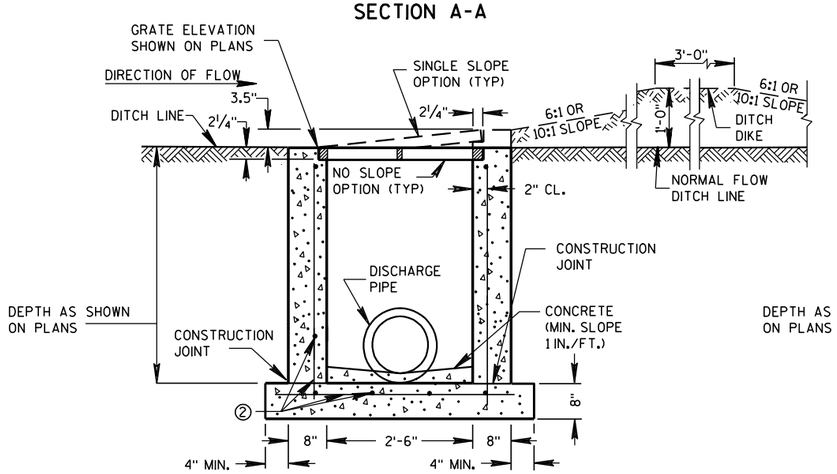
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



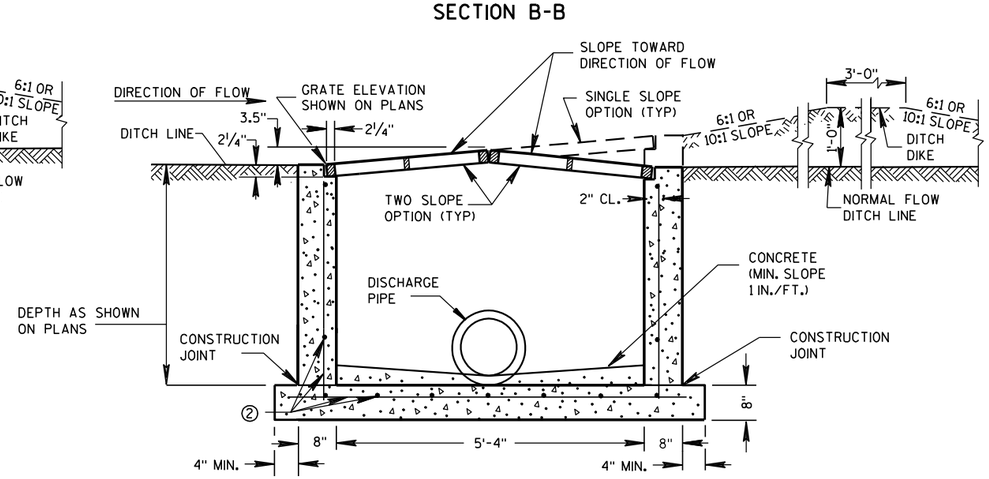
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

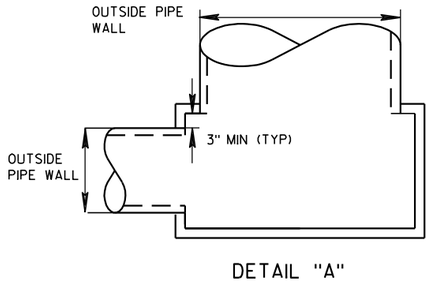
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

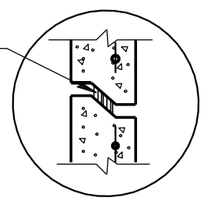
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

INLETS MEDIAN 1 AND 2 GRATE

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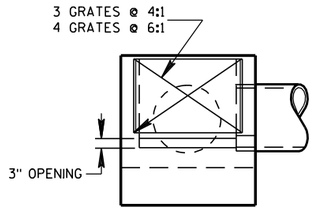
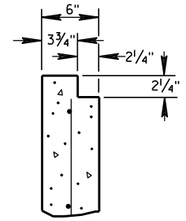


SECTION B-B



SECTION C-C

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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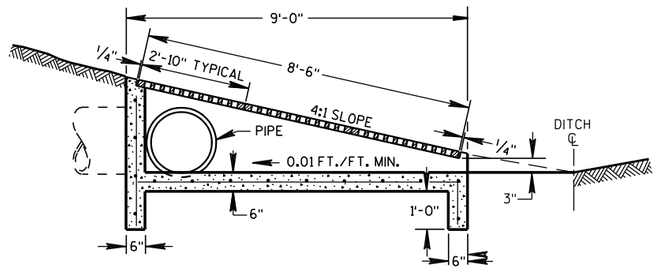
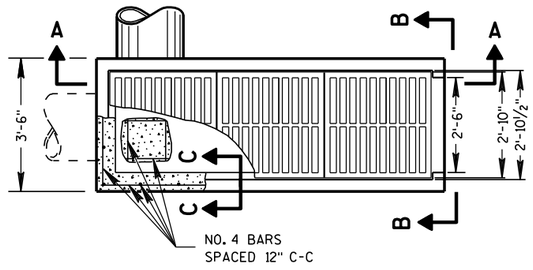
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

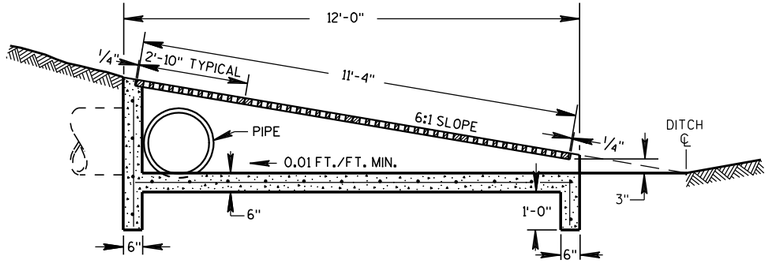


SECTION A-A

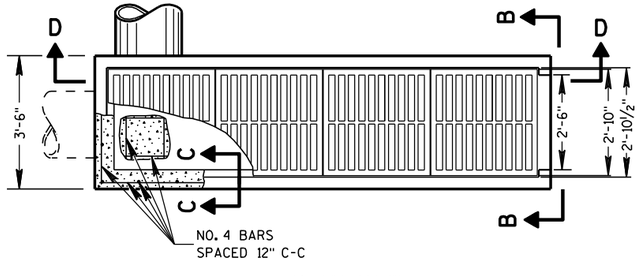


PLAN VIEW

INLETS MEDIAN 3 GRATE



SECTION D-D



PLAN VIEW

INLETS MEDIAN 4 GRATE

INLETS MEDIAN 3 AND 4 GRATE

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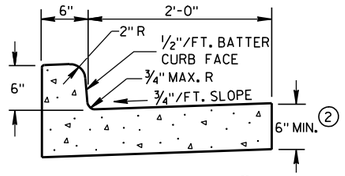
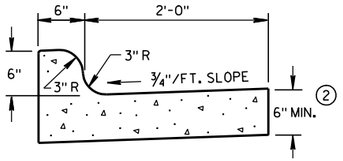
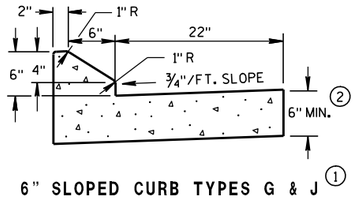


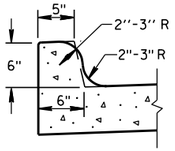
TYPES A & D (1)



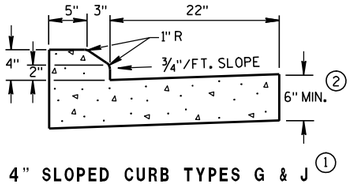
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

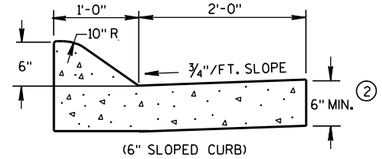


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

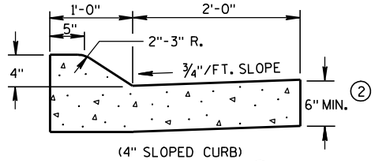


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

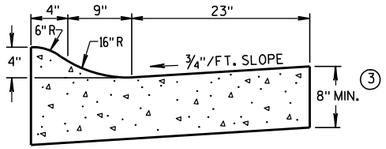


(6" SLOPED CURB)



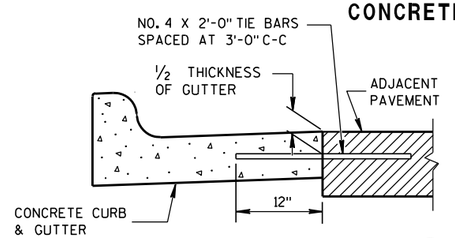
(4" SLOPED CURB)

TYPES A & D (1)

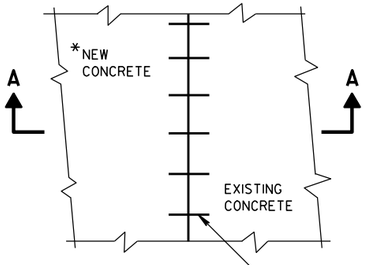


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

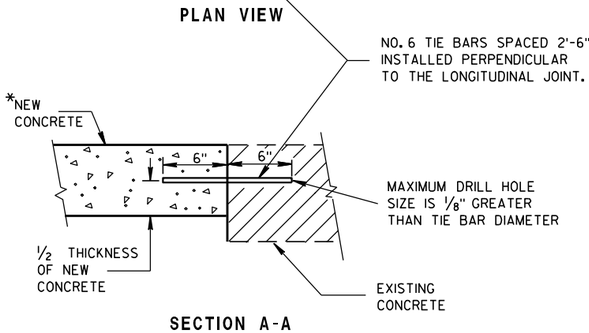


TYPICAL TIE BAR LOCATION (1)



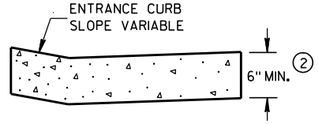
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW



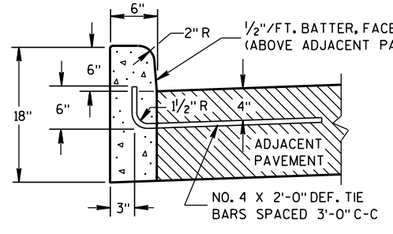
SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



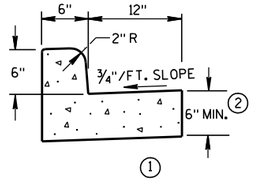
DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)



(1)

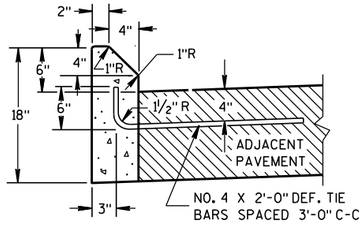
TYPES A & D



(1)

TYPES A & D

CONCRETE CURB & GUTTER 18"



(1)

TYPES G & J

CONCRETE CURB

(5)

REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)

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.

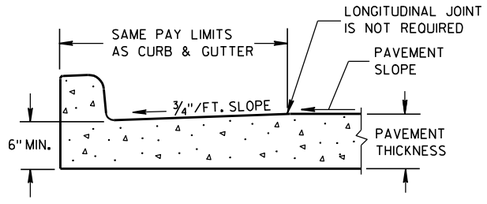
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(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.

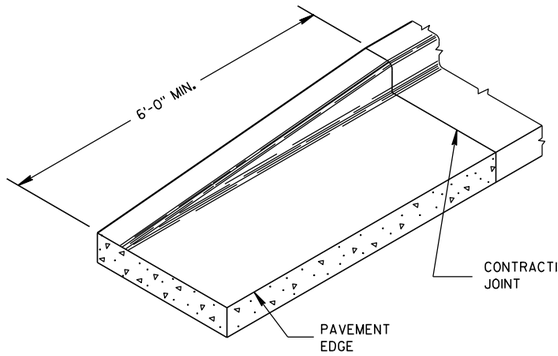
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(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.



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

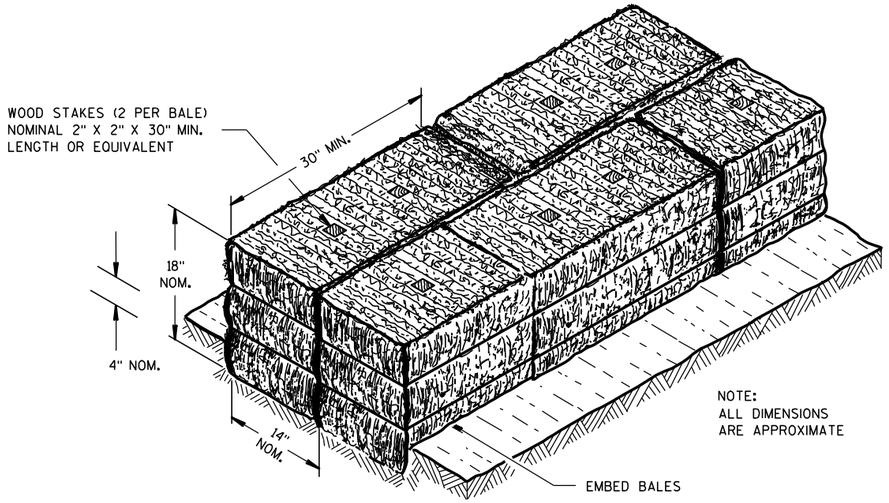
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

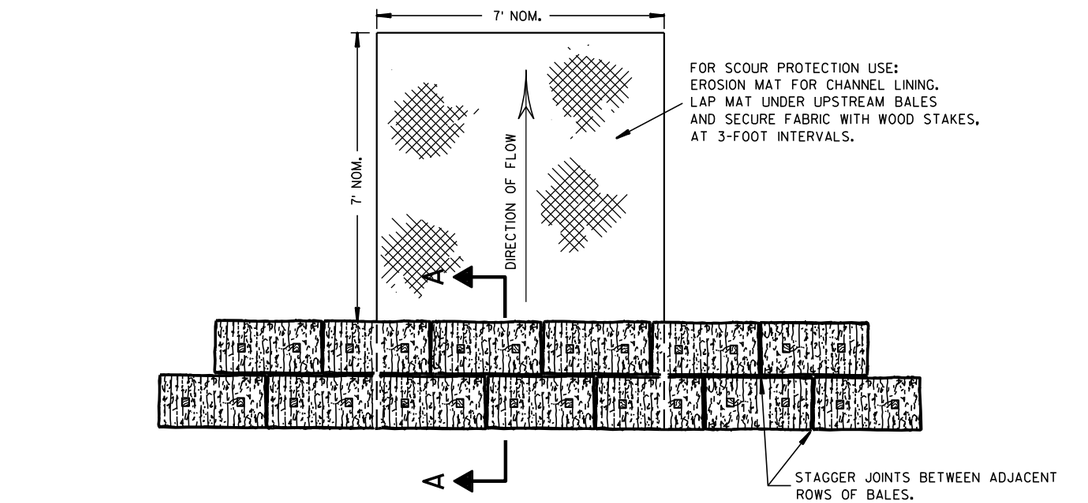
APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
FHWA

6

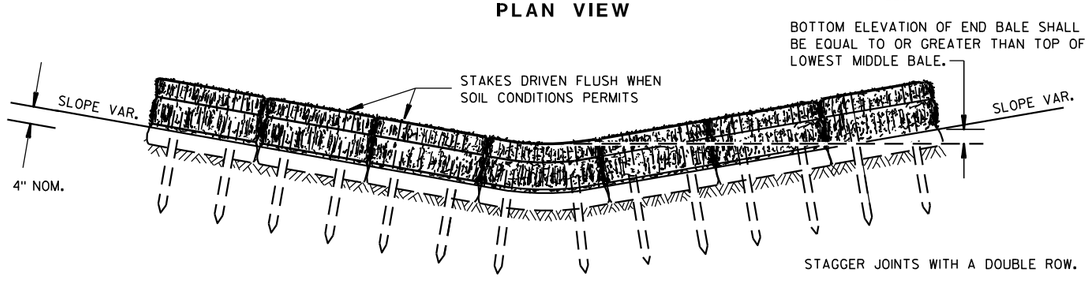
S.D.D. 8 D 1-17



SECTION A-A



PLAN VIEW



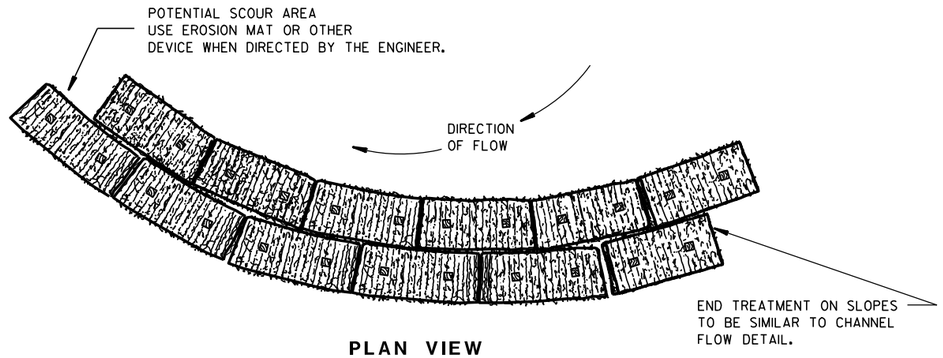
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

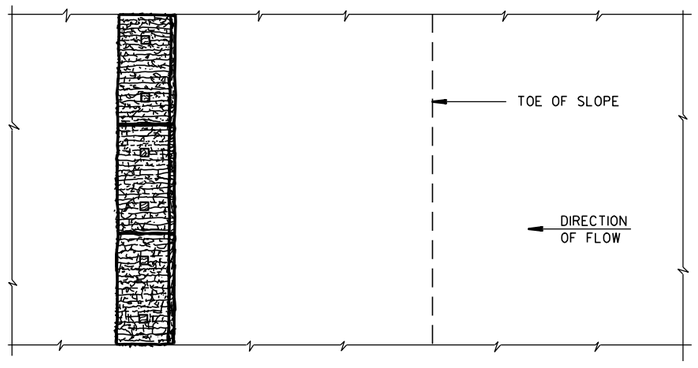
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

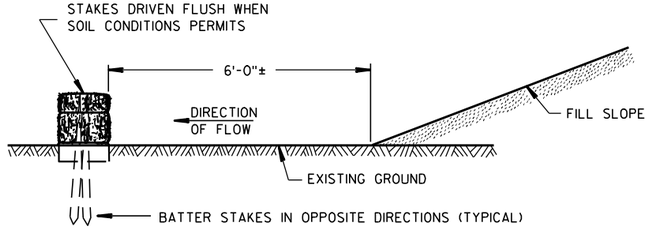


PLAN VIEW

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

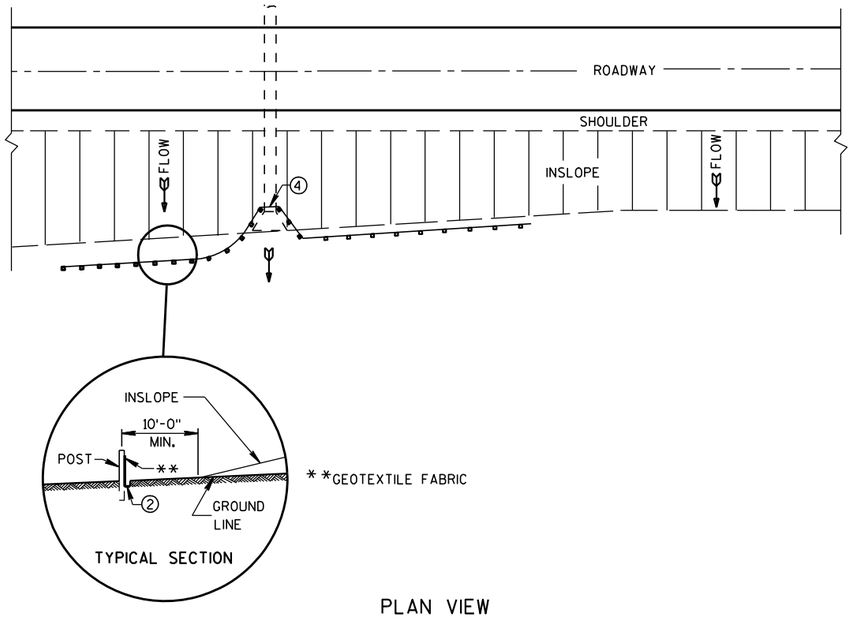
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

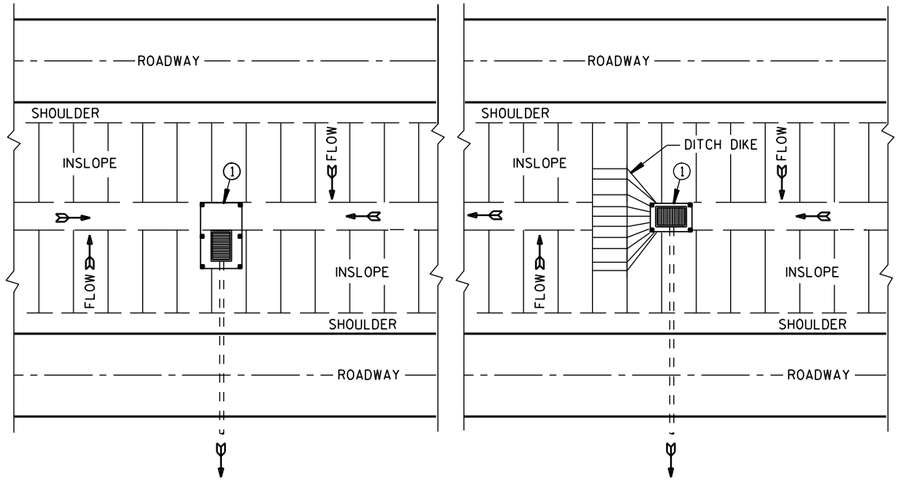
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



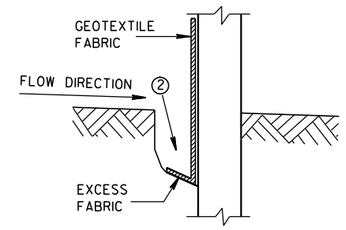
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

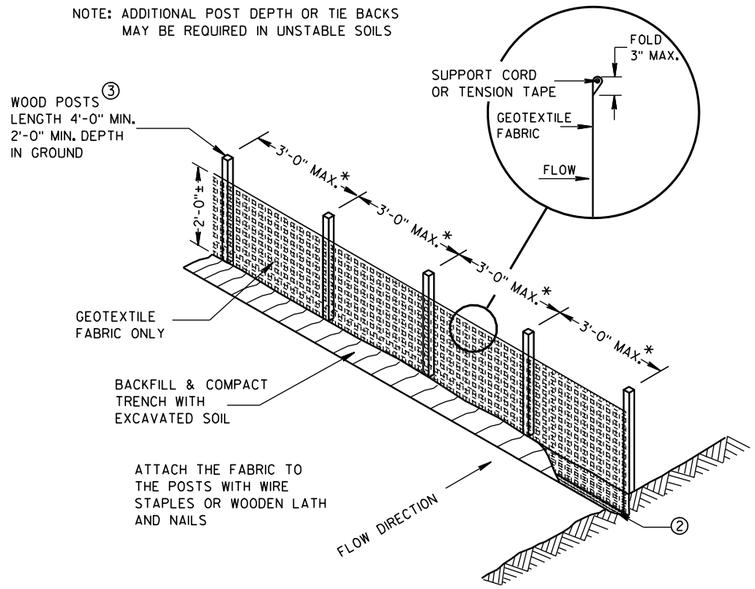
GENERAL NOTES

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.

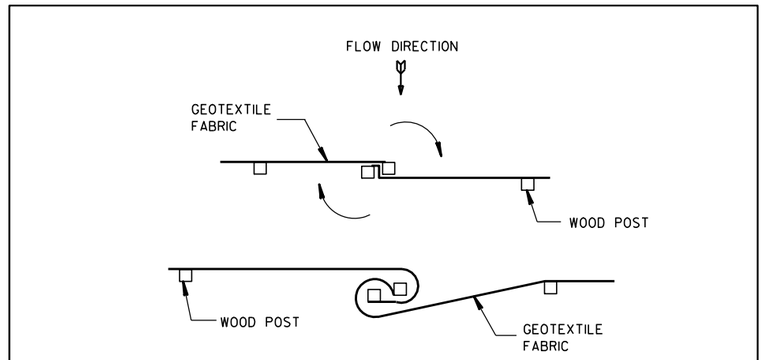


TRENCH DETAIL

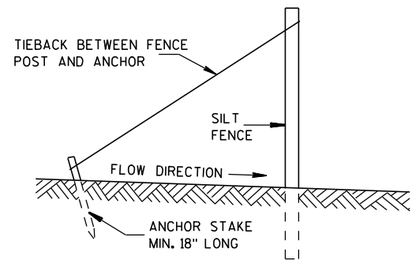


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

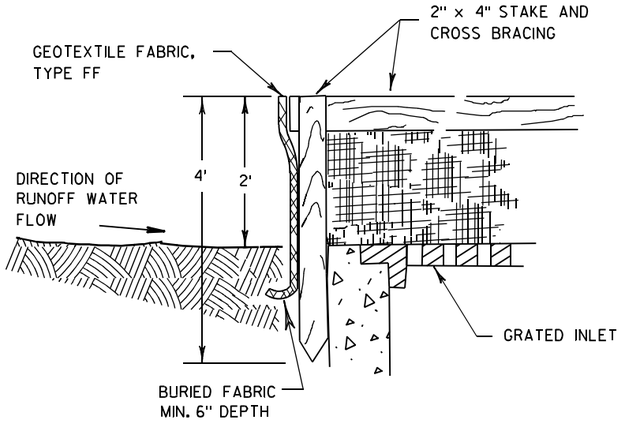
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

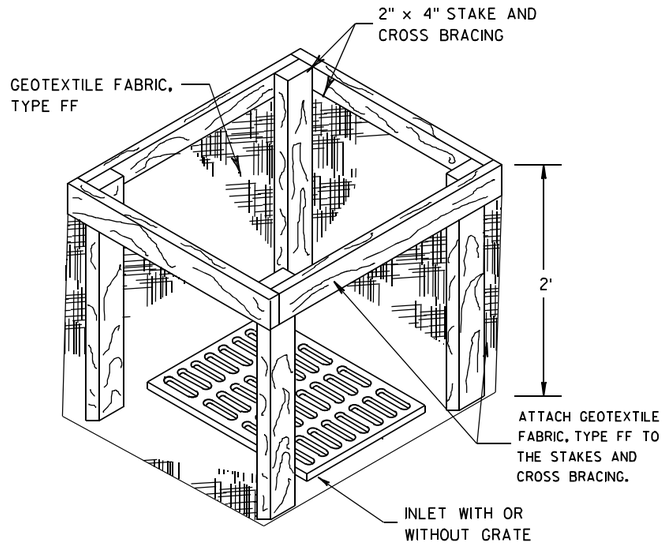
6

S.D.D. 8 E 9-6

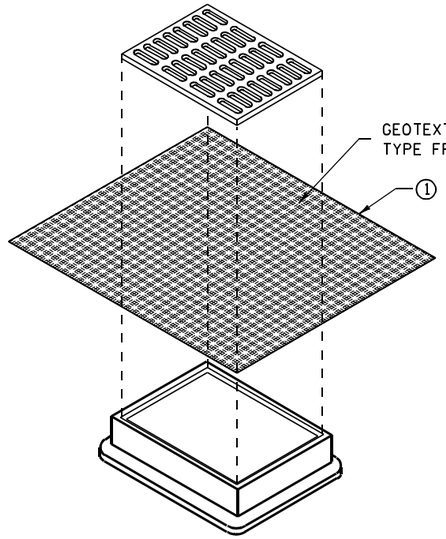
6

S.D.D. 8 E 9-6



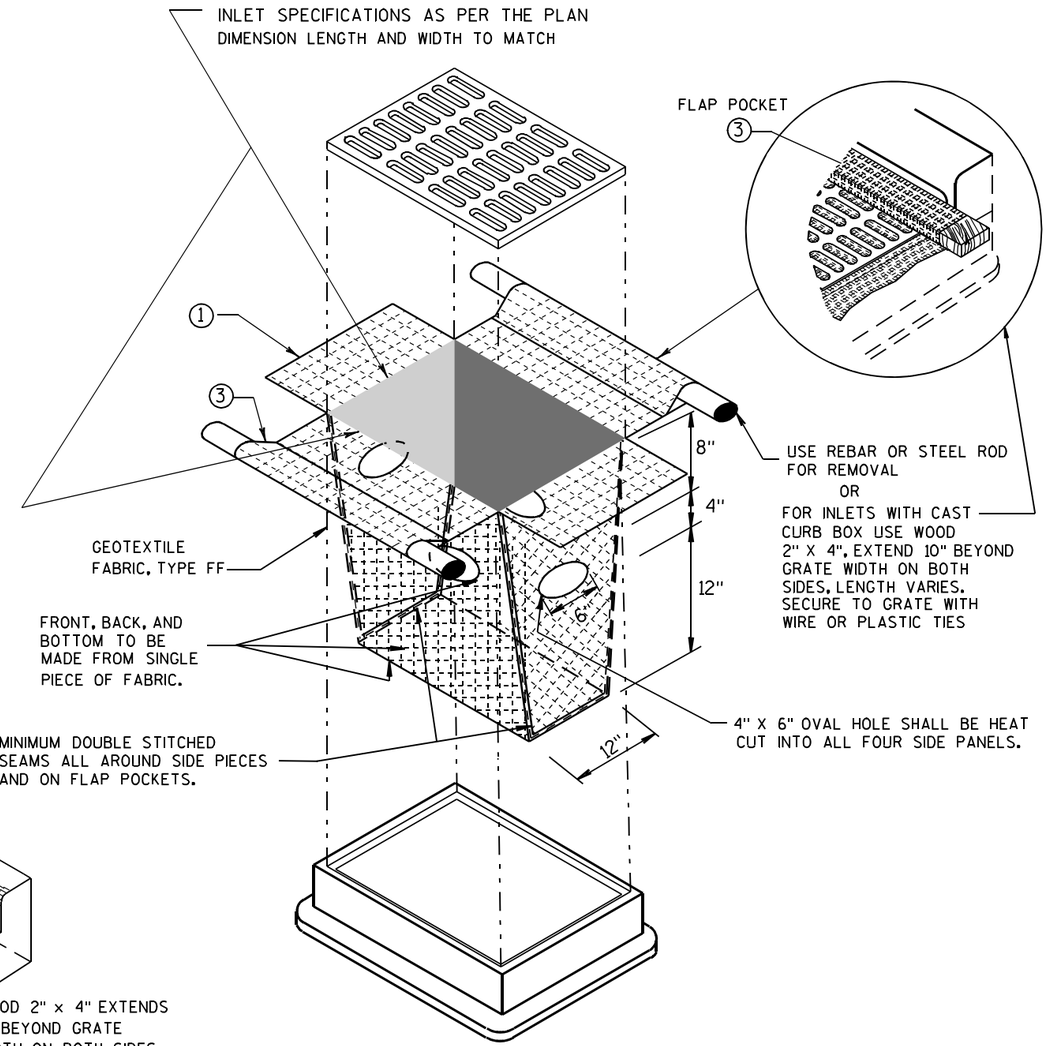


INLET PROTECTION, TYPE A



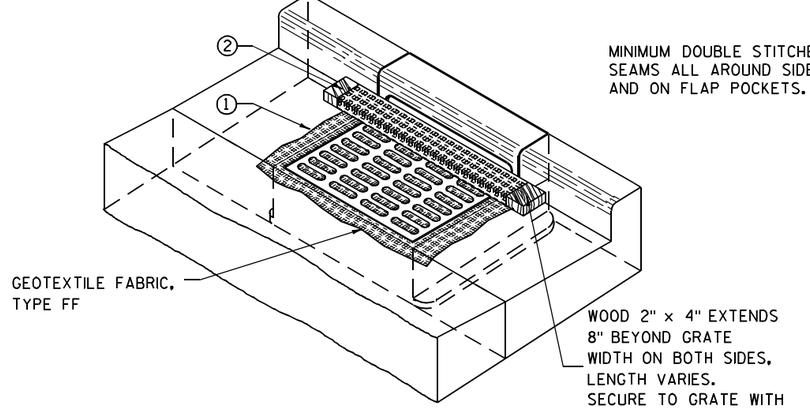
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

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 Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2

METAL APRON ENDWALLS

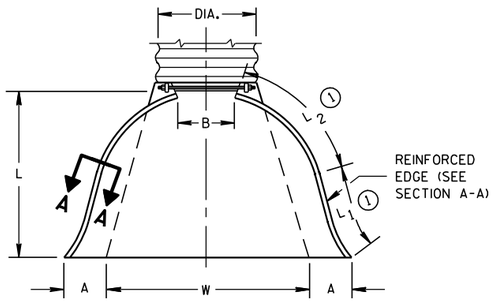
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

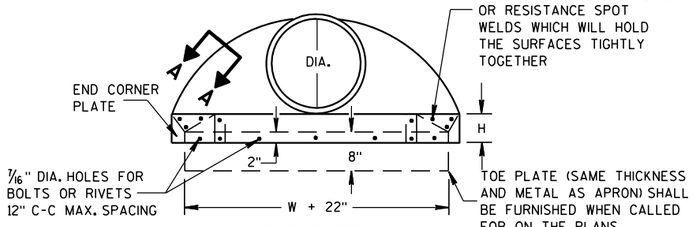
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

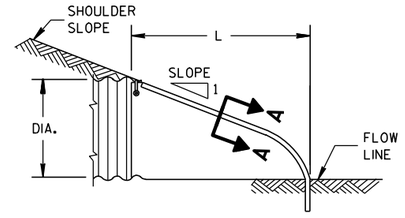
*MINIMUM
**MAXIMUM



PLAN VIEW

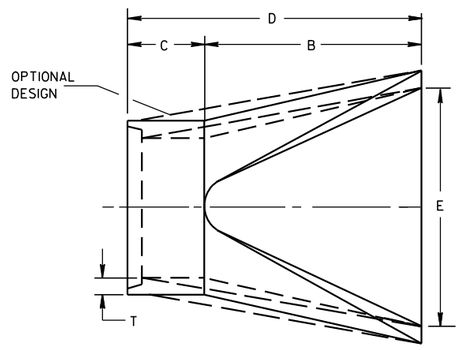


END VIEW

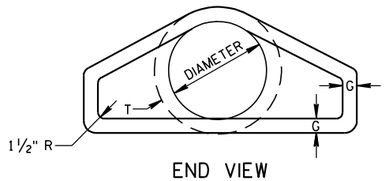


SIDE ELEVATION

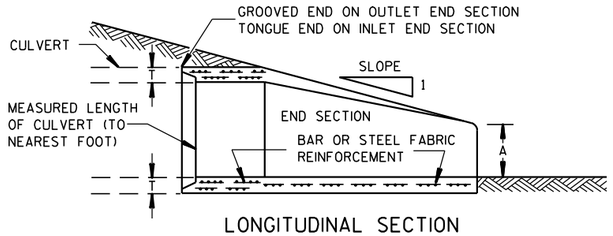
METAL ENDWALLS



PLAN

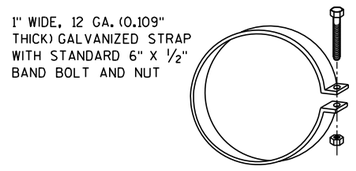


END VIEW



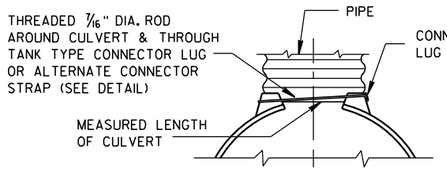
LONGITUDINAL SECTION

CONCRETE ENDWALLS

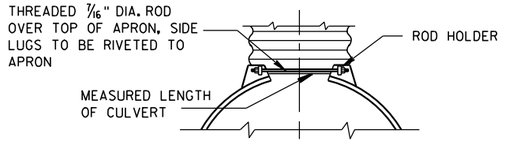


ALTERNATE FOR TYPE 1 CONNECTION

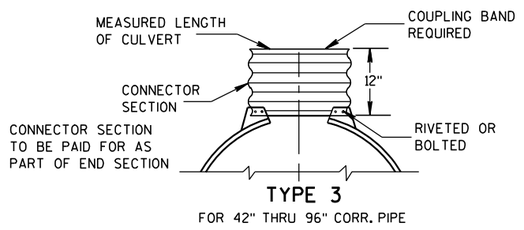
END SECTION CONNECTOR STRAP



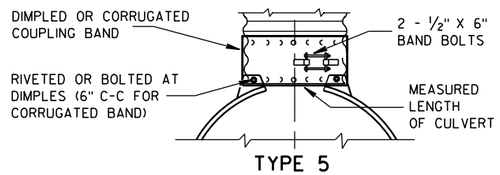
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

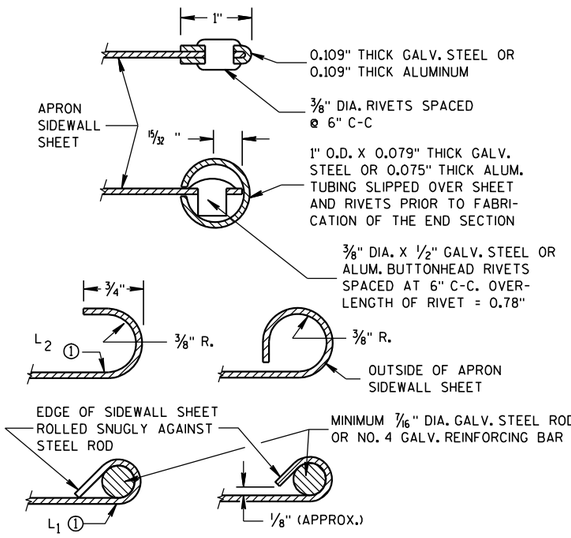
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

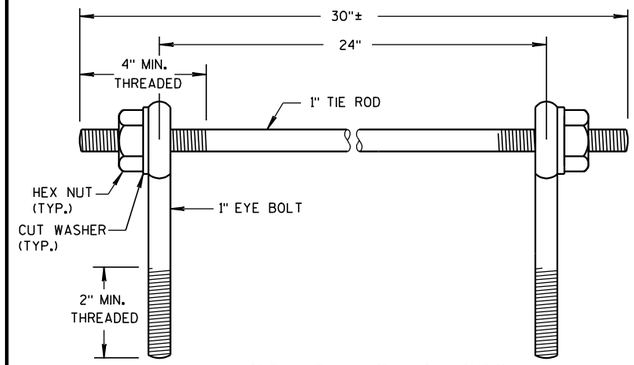
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

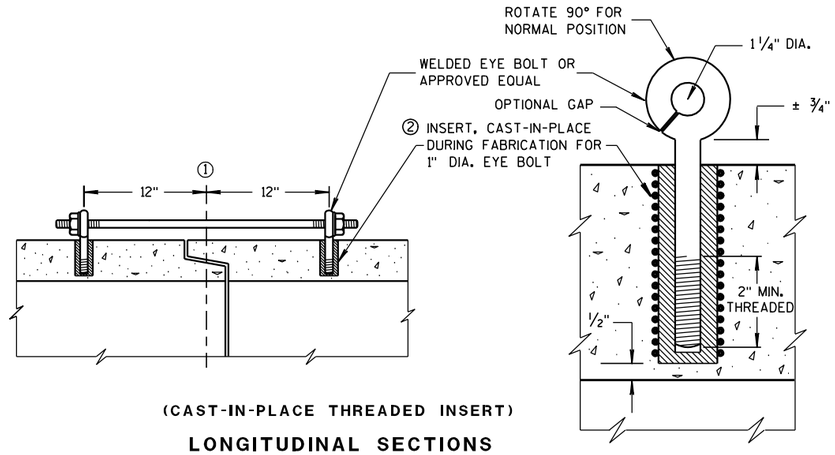
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

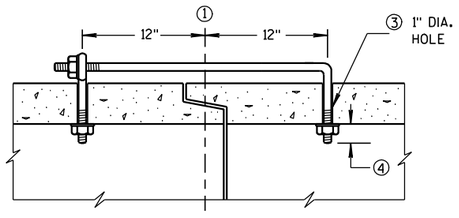
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

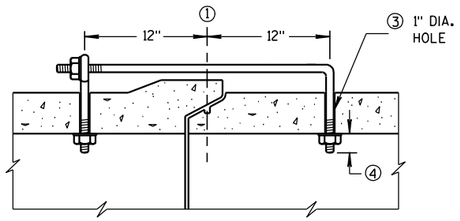
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

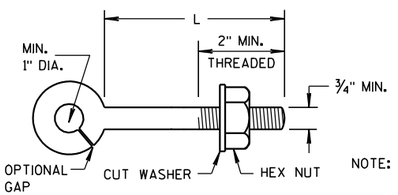


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

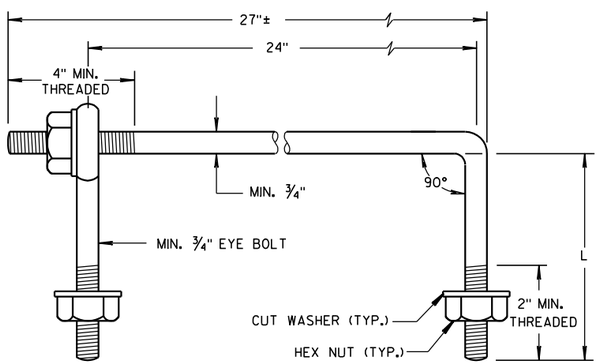
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

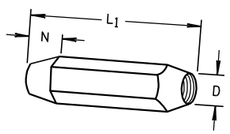
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



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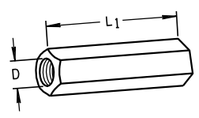
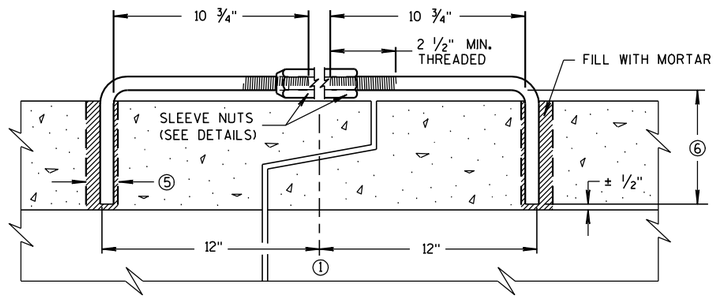


PLAIN

RIGHT AND LEFT THREADS

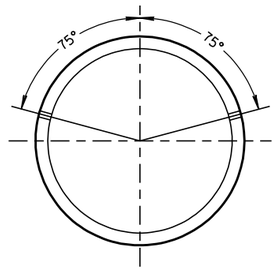
SLEEVE NUTS



LONGITUDINAL SECTION

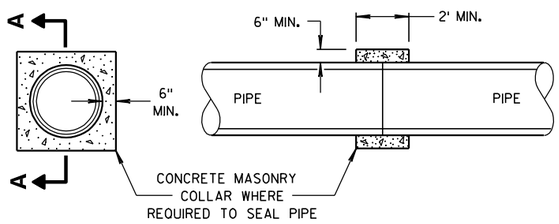
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
159
FHWA

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S.D.D. 8 F 4-7

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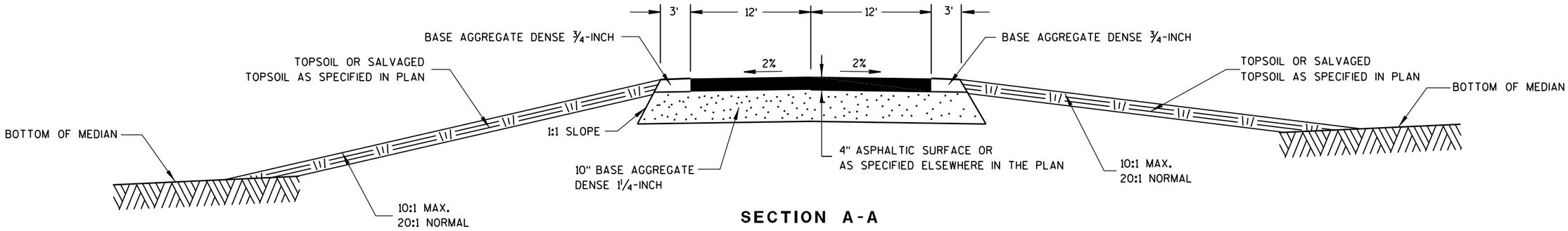
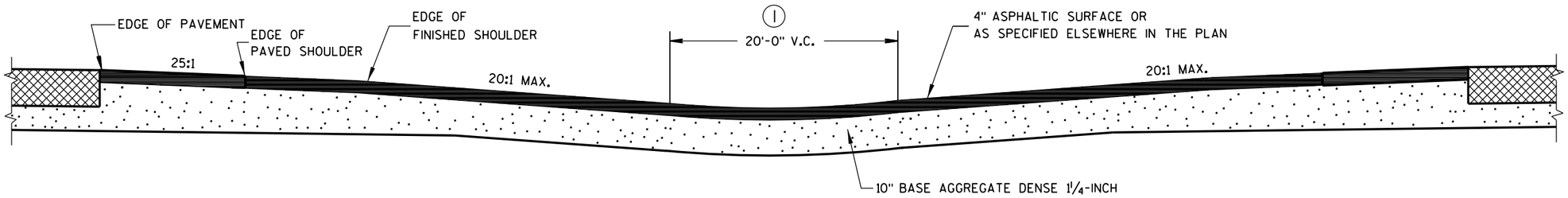
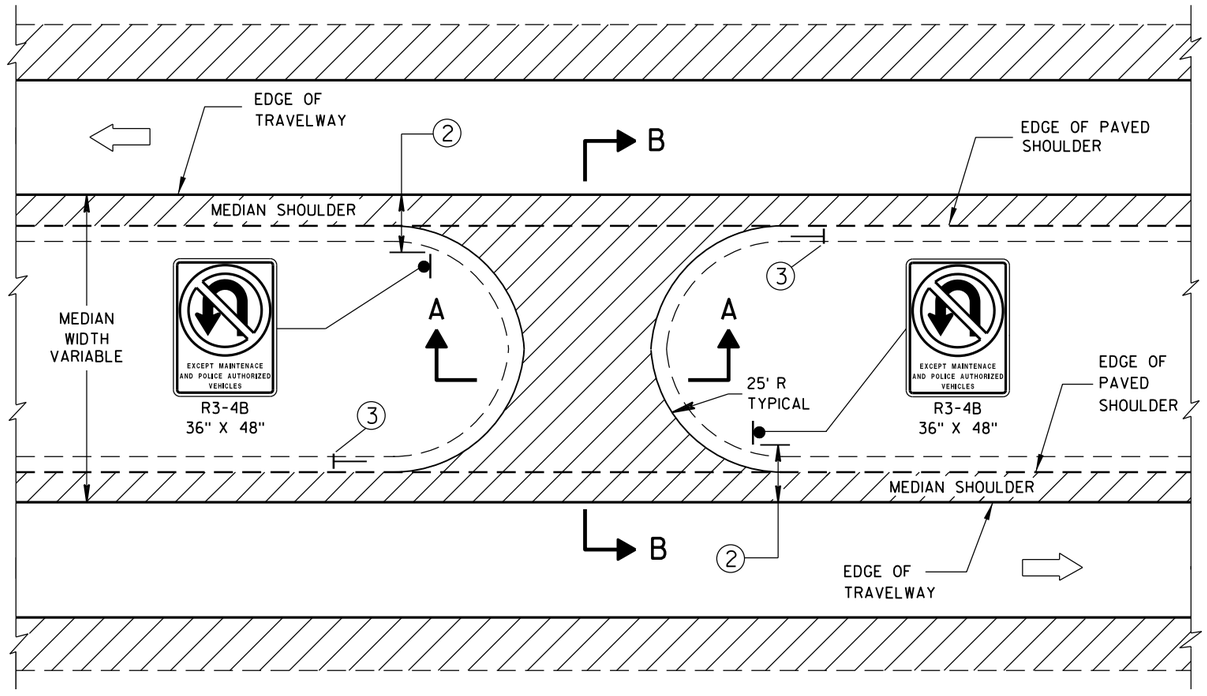
S.D.D. 8 F 4-7



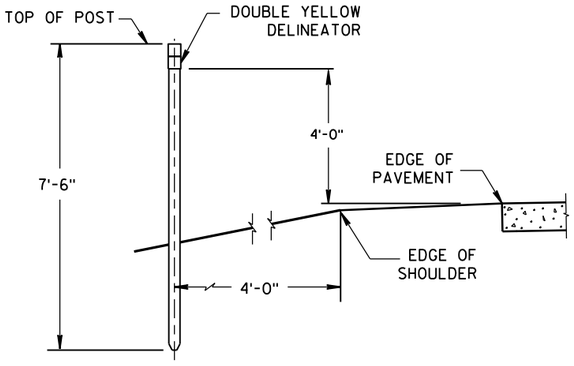
SECTION A-A



SECTION B-B



PLAN VIEW



DOUBLE YELLOW DELINEATOR INSTALLATION

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) ADJUST VERTICAL CURVE LOCATION LATERALLY TO MAINTAIN 20:1 MAX.

(2) SIGNING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

(3) INSTALL DOUBLE YELLOW DELINEATOR. SEE STANDARD DETAIL DRAWING 15A2.

MAINTENANCE CROSSOVER FOR FREEWAYS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 11 A 1-5

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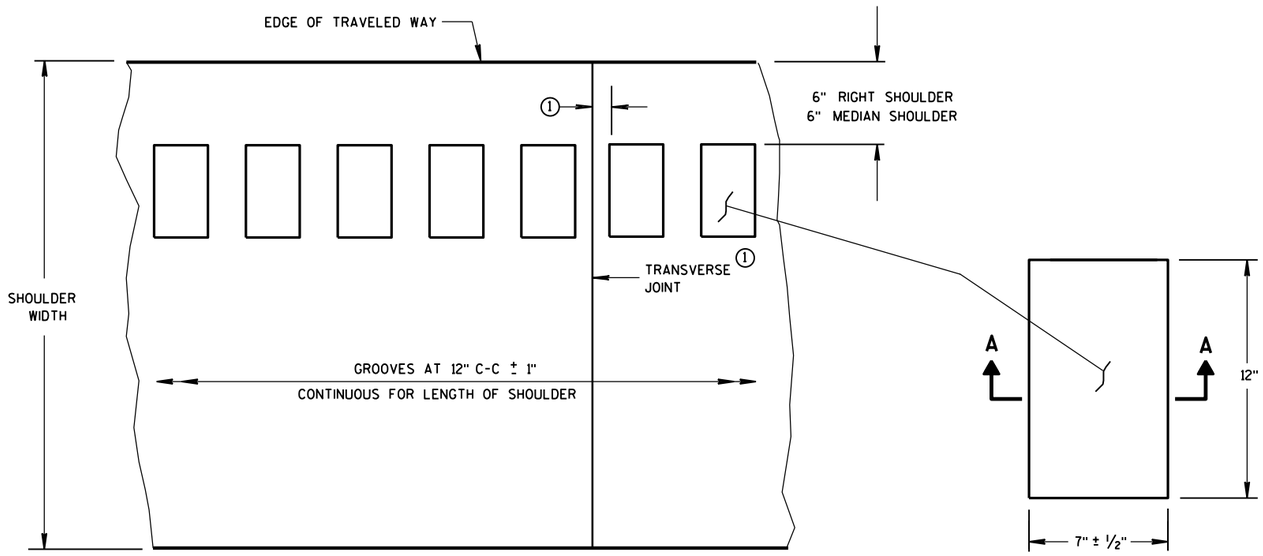
S.D.D. 11 A 1-5



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

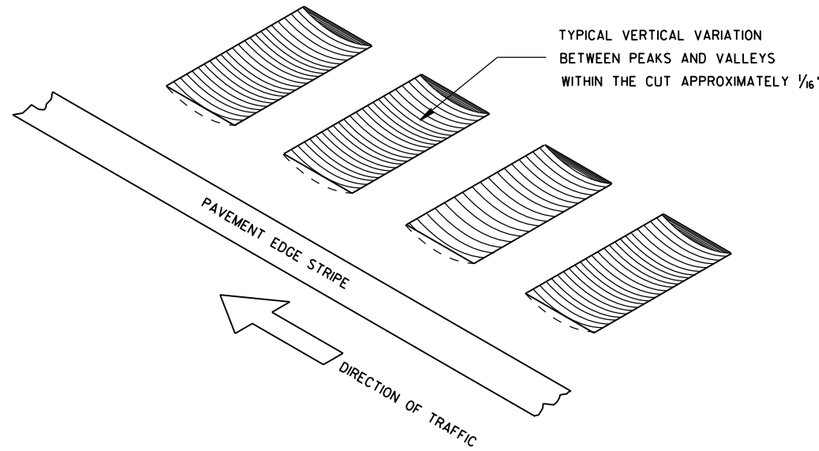
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



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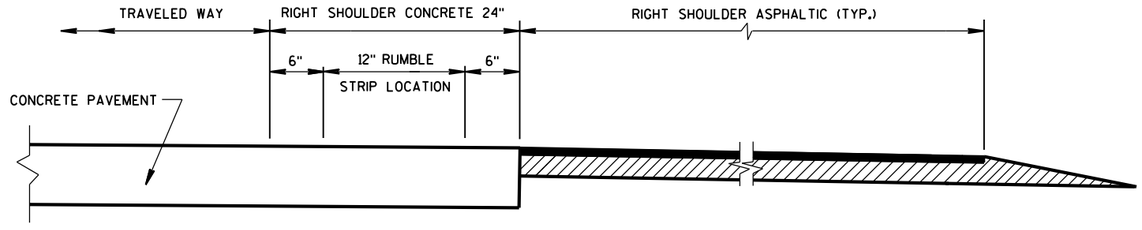
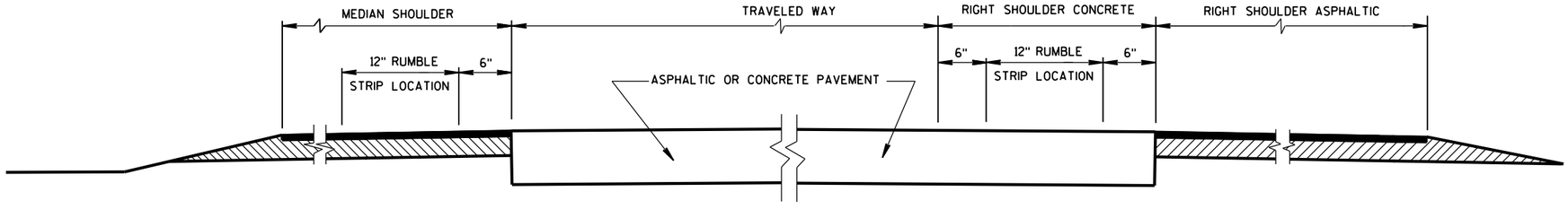


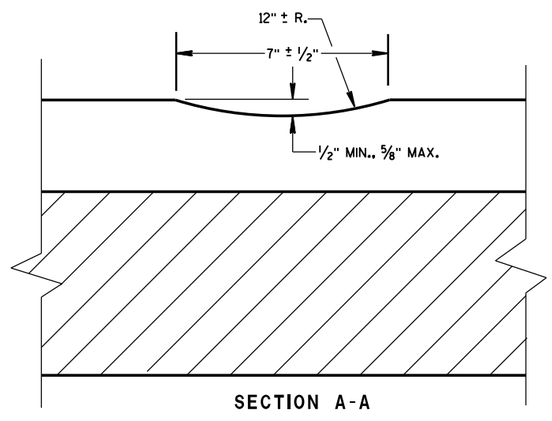
SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)



SECTION A-A

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 A 5-5a

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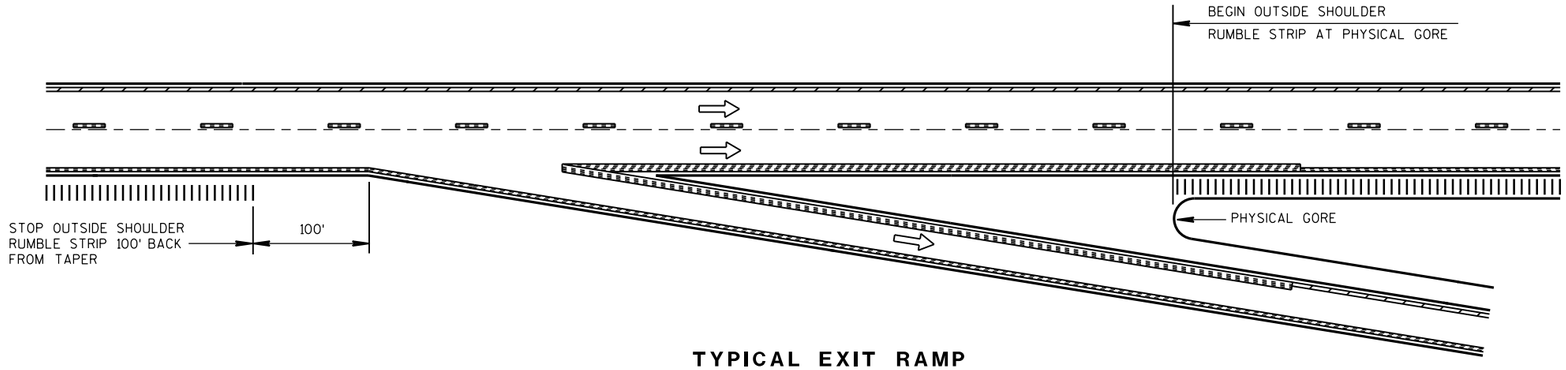
S.D.D. 13 A 5-5a



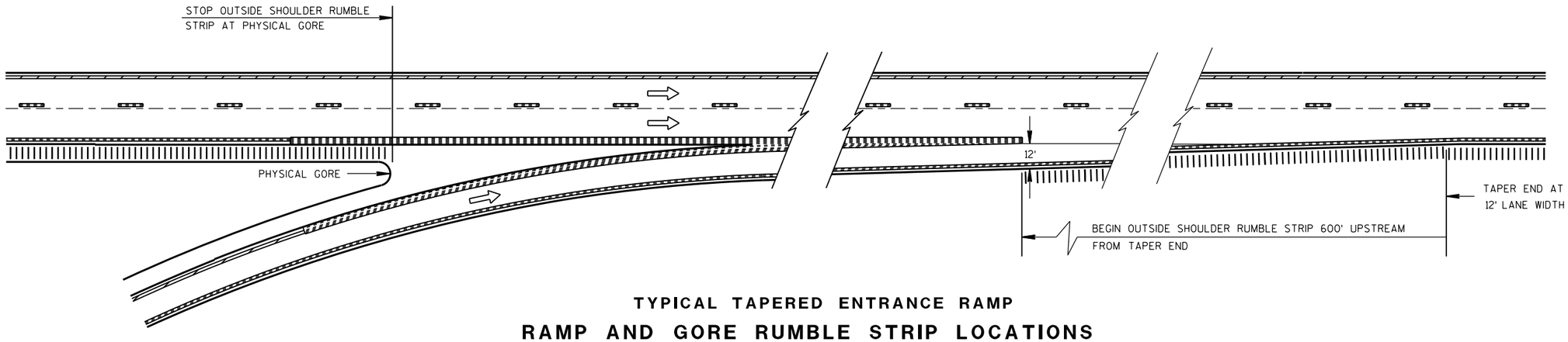
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

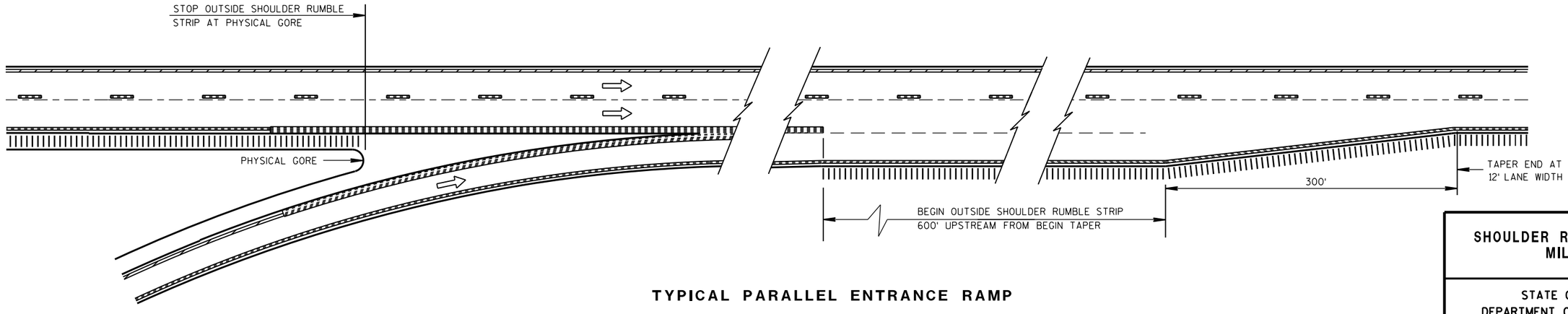
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

12/17/2012
DATE

/S/ Jerry H. Zoga
ROADWAY STANDARDS ENGINEER

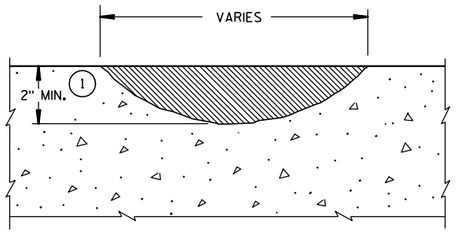
FHWA

6

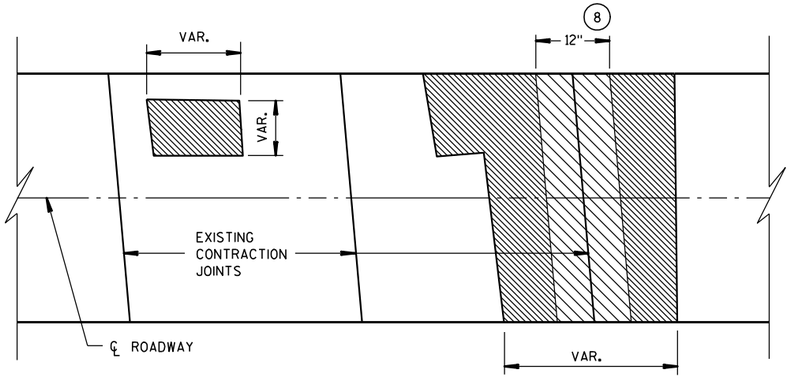
S.D.D. 13 A 5-5b

6

S.D.D. 13 A 5-5b

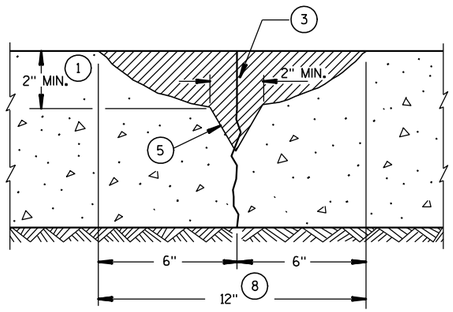


PROFILE VIEW

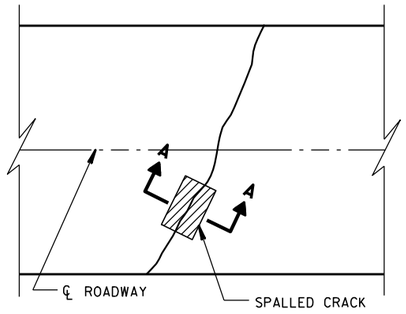


PLAN VIEW

SURFACE REPAIR



SECTION A-A

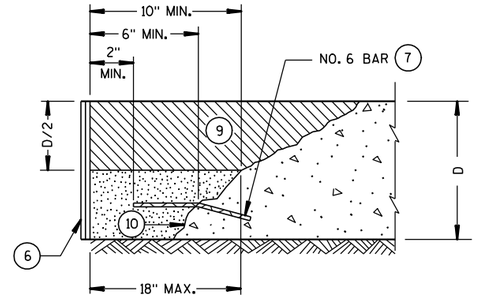


PLAN VIEW

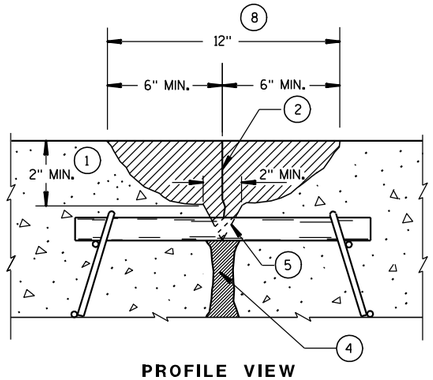
CRACK REPAIR

GENERAL NOTES

1. REMOVE ALL CONCRETE, TO LIMITS SHOWN, TO A MAXIMUM OF ½ THE PAVEMENT DEPTH OR TOP OF DOWELS.
2. IF REPAIR IS DEEPER THAN ANTICIPATED SAWCUT, COMPRESSION RELIEF MATERIAL MUST BE USED. THE THICKNESS OF COMPRESSION RELIEF MATERIAL MUST BE EQUAL TO OR GREATER THAN THE WIDTH OF THE JOINT OR CRACK (1/4"). THIS MATERIAL SHOULD EXTEND FULL DEPTH OF THE REPAIR.
3. COMPRESSION RELIEF MATERIAL MUST BE USED. THE THICKNESS OF COMPRESSION RELIEF MATERIAL MUST BE EQUAL TO OR GREATER THAN THE WIDTH OF THE JOINT OR CRACK (1/4"). THIS MATERIAL SHOULD EXTEND FULL DEPTH OF THE REPAIR.
4. CLEAN, DRY SAND WHEN NECESSARY.
5. REMOVE UNSOUND MATERIAL BY CHIPPING AT 1:1 SLOPE.
6. ¼" MINIMUM PREFORMED JOINT FILLER IF ADJACENT TO CONCRETE. EDGING REQUIRED. FULLY FORMED EDGE IF ADJACENT TO SHOULDER.
7. PAVEMENT TIES AS SHOWN. ALL EMBEDMENTS 6" MINIMUM AND INSTALLED WITH GROUT.
8. OVER 12" (NOMINAL WIDTH) WILL BE PAID AS SURFACE REPAIR.
9. PAID AS JOINT OR CRACK REPAIR.
10. FULL-DEPTH ADJUSTMENT SHALL BE CHIPPED TO BOTTOM OF PCC PAVEMENT AT 1:1 SLOPE.
11. BEYOND 18" WILL BE PAID AS SURFACE REPAIR.

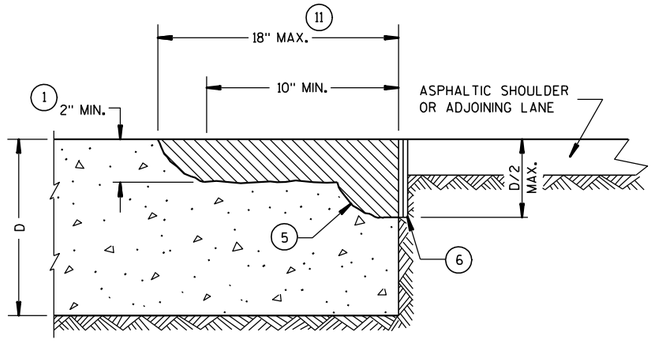


PROFILE VIEW

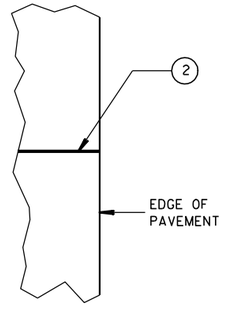


PROFILE VIEW

JOINT REPAIR

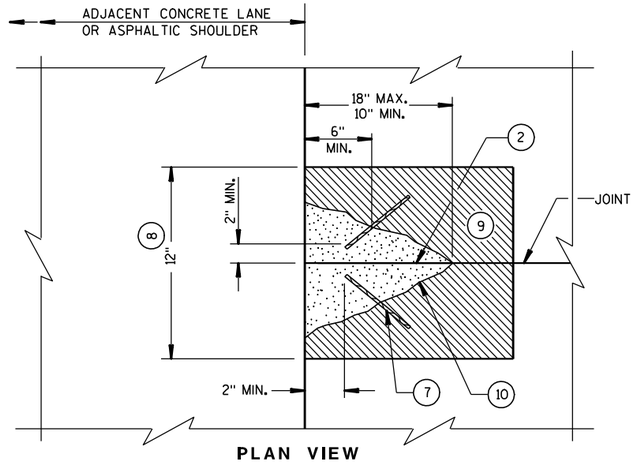


PROFILE VIEW



PLAN VIEW

EDGE REPAIR



PLAN VIEW

FULL DEPTH REPAIR ADJUSTMENT

CONCRETE PAVEMENT PARTIAL DEPTH REPAIR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/21/03 DATE
/S/ Bill Ducker PAVEMENT ENGR
FHWA

6

S.D.D. 13 C 8-2

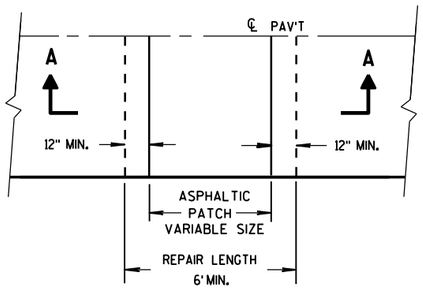
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

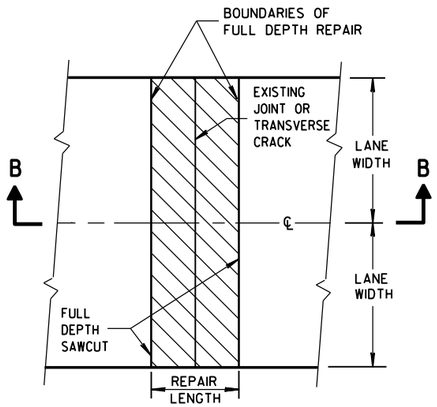
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

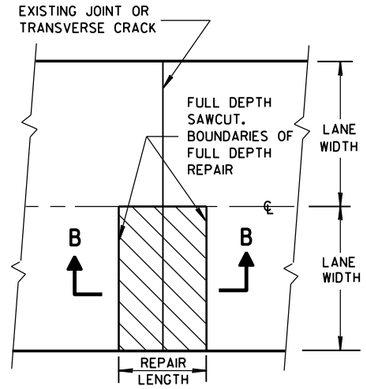
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



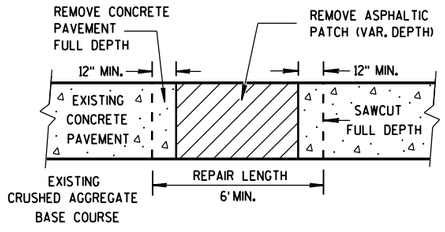
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

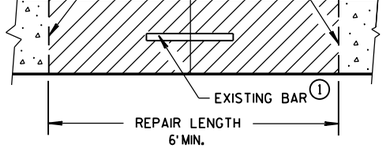
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



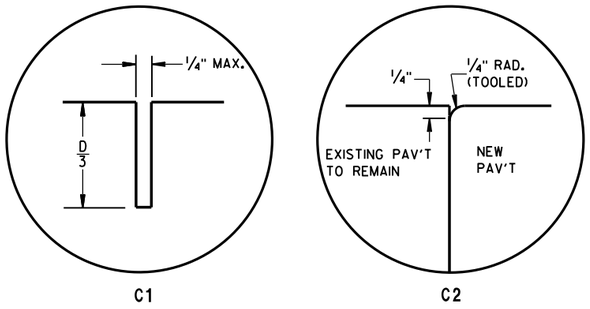
SECTION B-B

CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

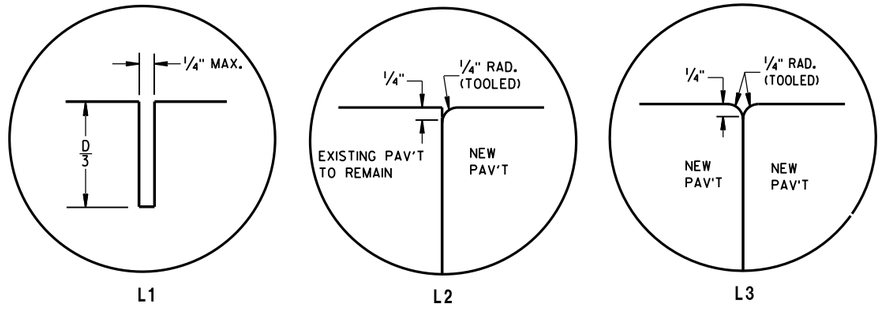
6
S.D.D. 13 C 9-11a



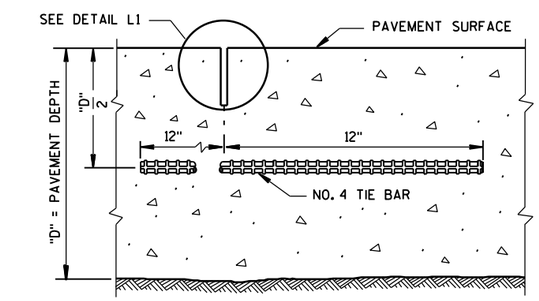
TRANSVERSE JOINTS

TIE BAR TABLE

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"



LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

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

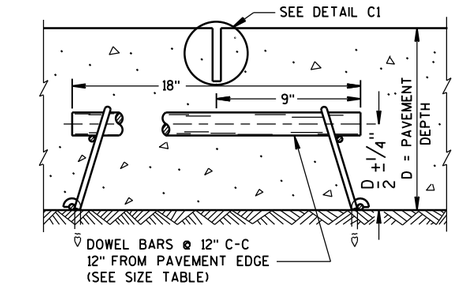
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

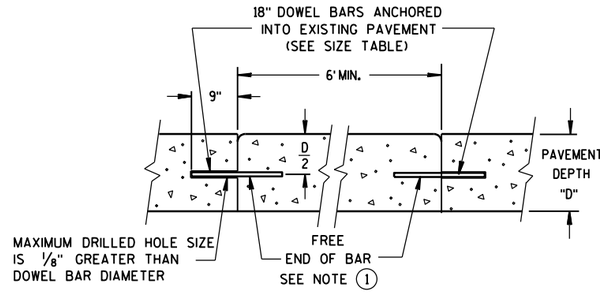
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

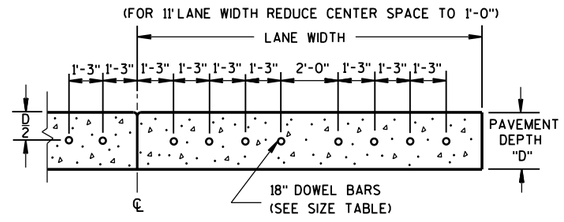


SECTION F-F

CONTRACTION JOINT



SECTION D-D

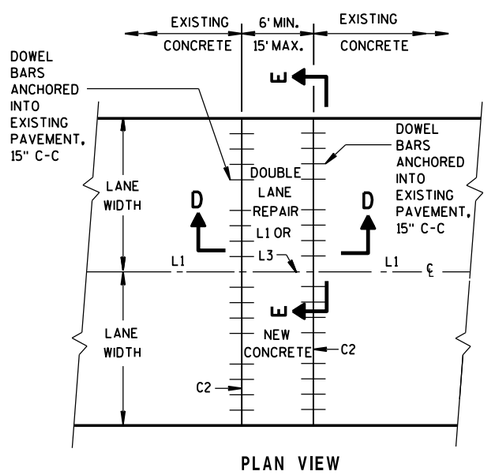


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

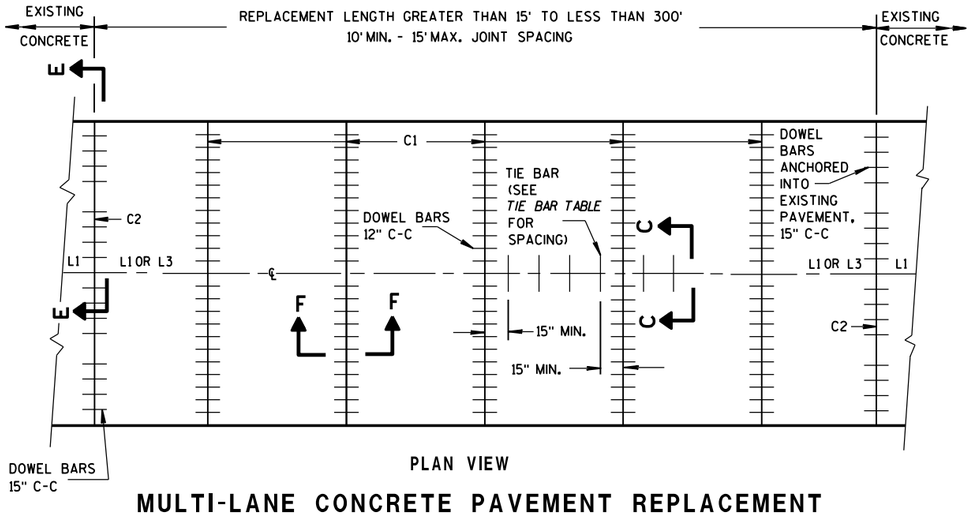
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

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'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



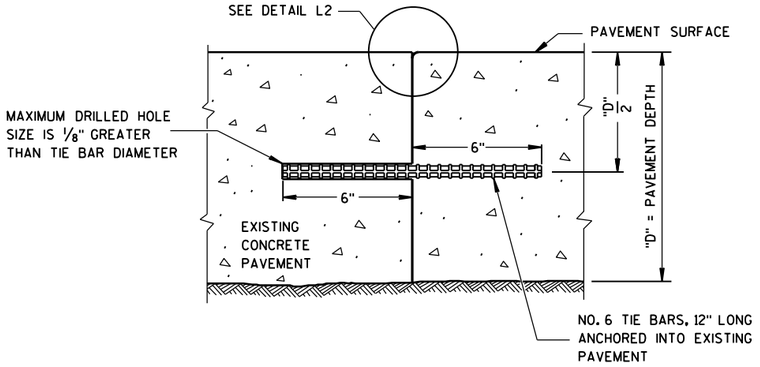
PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 13 C 9-11b



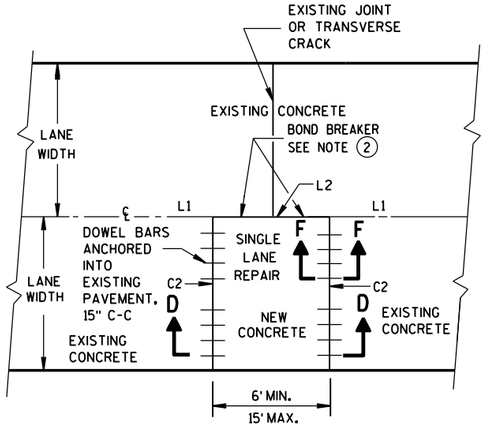
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

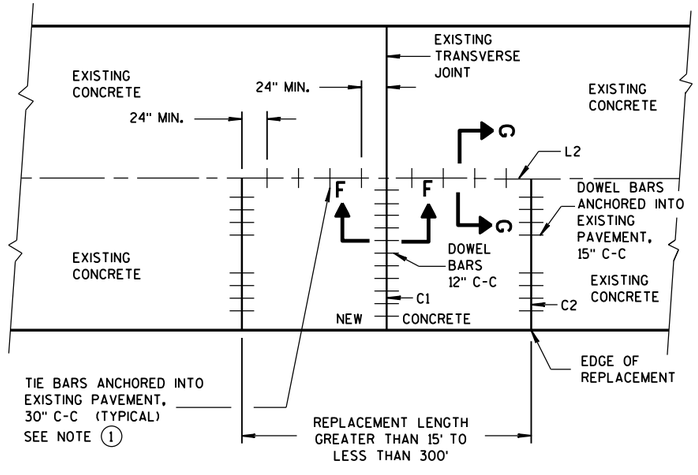
(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12-2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE
FHWA

6

S.D.D. 13 C 9-11c

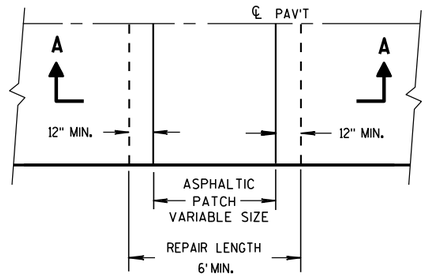
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

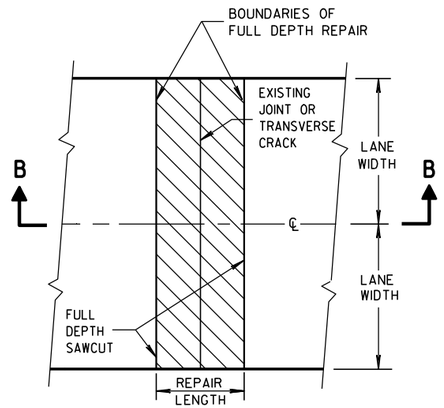
PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

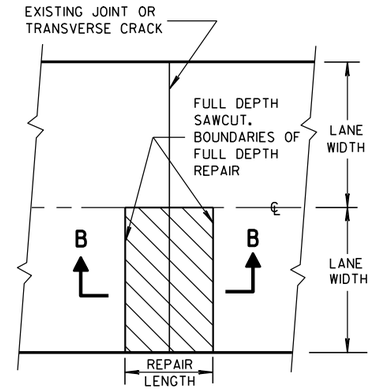
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW



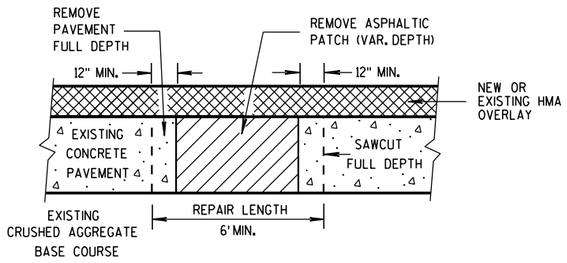
PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

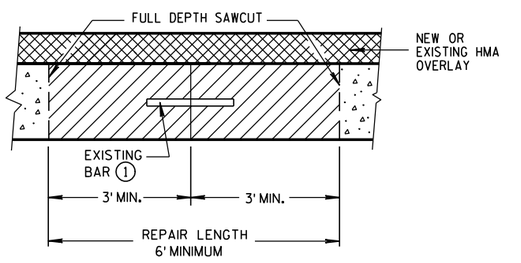
FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

CONCRETE REMOVAL

BASE PATCHING CONCRETE

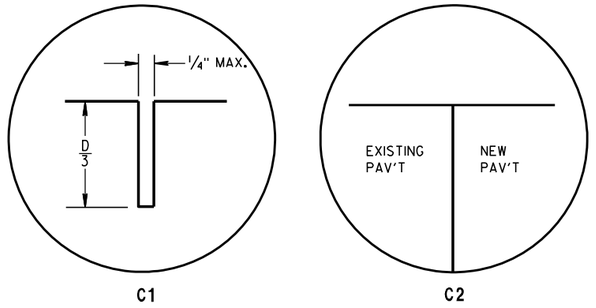
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

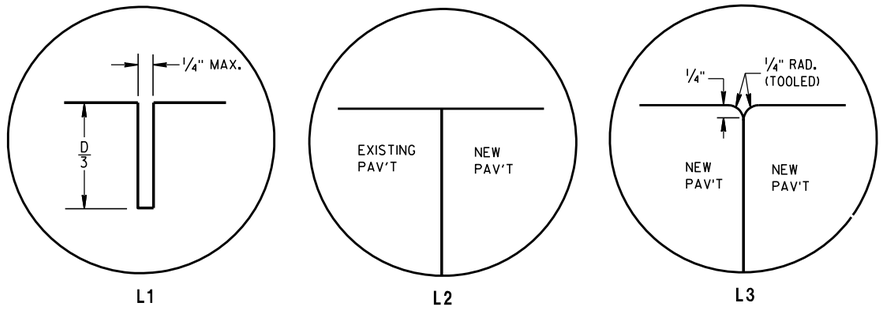
S.D.D. 13 C 14-4a

6

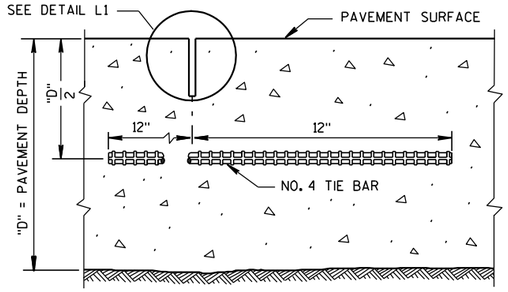
S.D.D. 13 C 14-4a



TRANSVERSE JOINTS

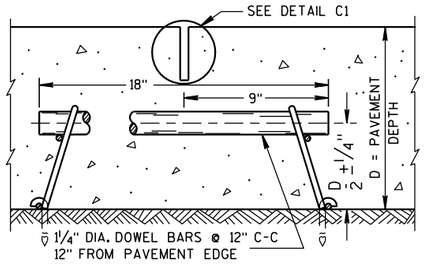


LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT



SECTION F-F

CONTRACTION JOINT

GENERAL NOTES

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

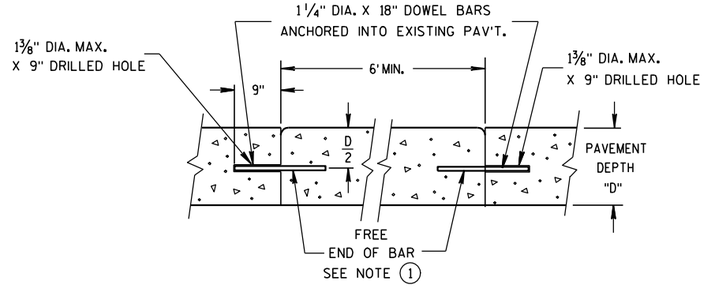
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

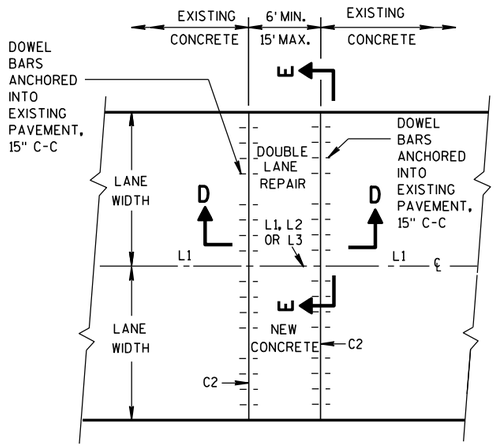
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

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

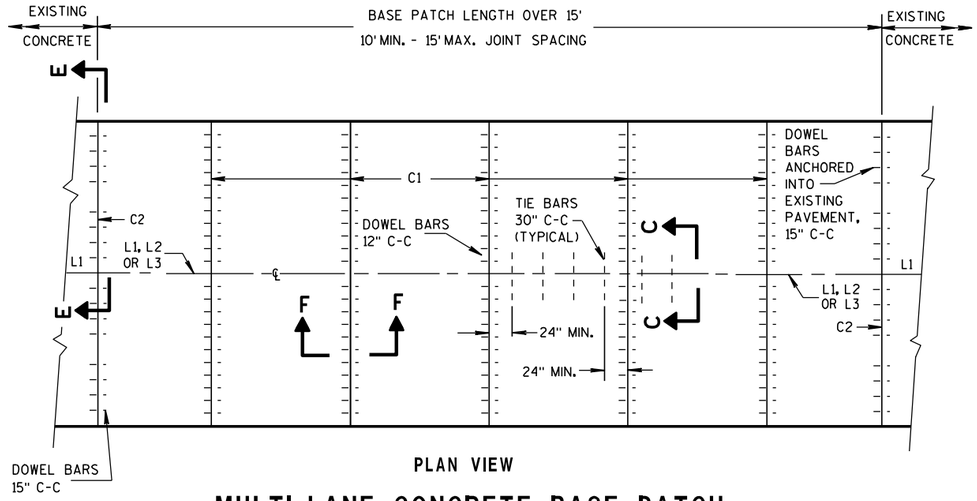


SECTION D-D



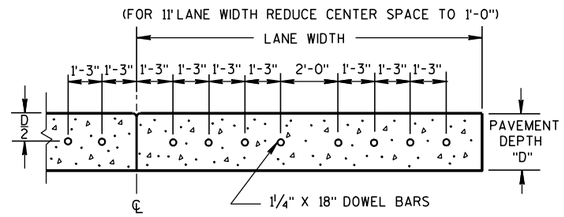
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH



SECTION E-E

SPACING OF DOWEL BARS ANCHORED INTO EXISTING PAVEMENT

BASE PATCHING CONCRETE

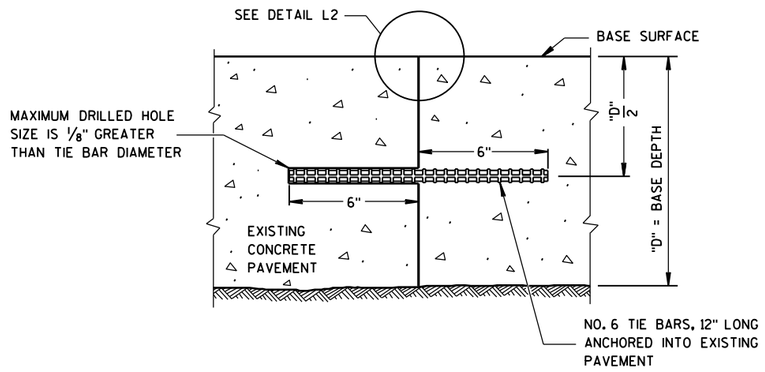
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 13 C 14-4b

6

S.D.D. 13 C 14-4b



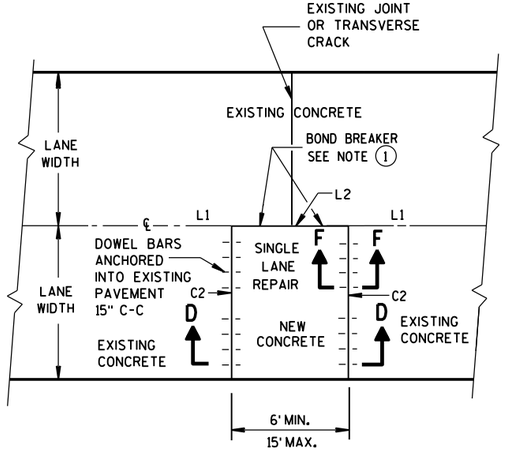
SECTION G-G

TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

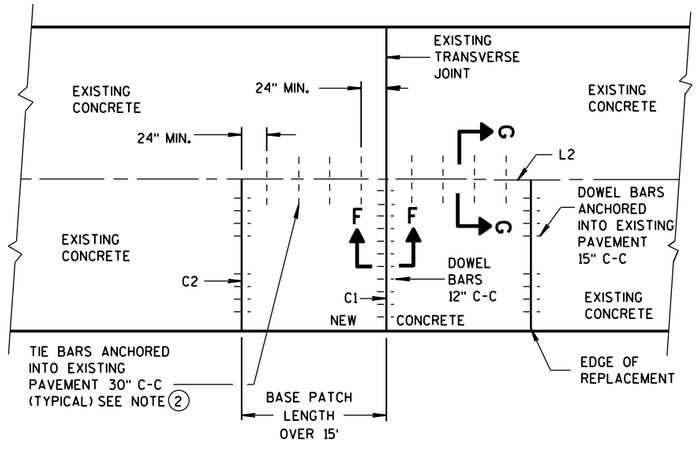
1. USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.

2. WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH 15' MAXIMUM LENGTH



PLAN VIEW

SINGLE LANE CONCRETE BASE PATCH GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12-11-2009 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE
FHWA

IEER

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S.D.D. 13 C 14-4c

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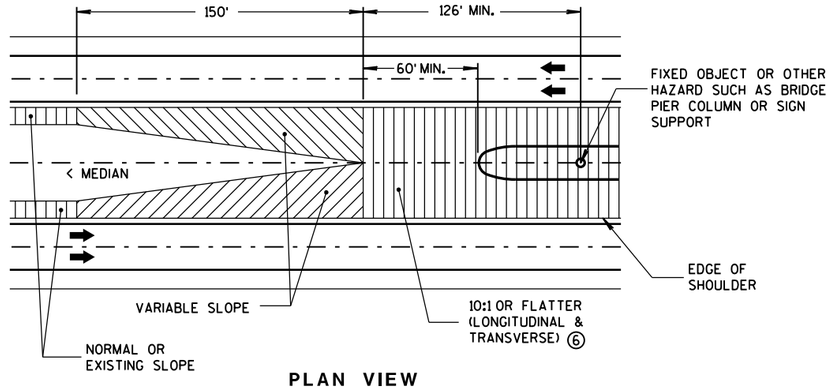
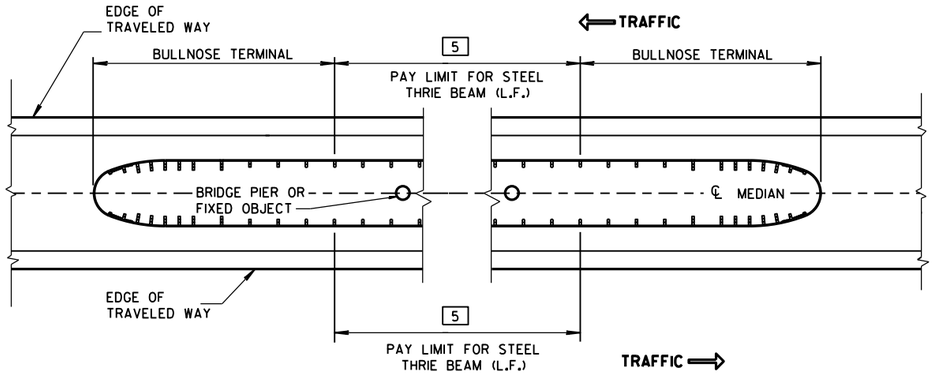
S.D.D. 13 C 14-4c

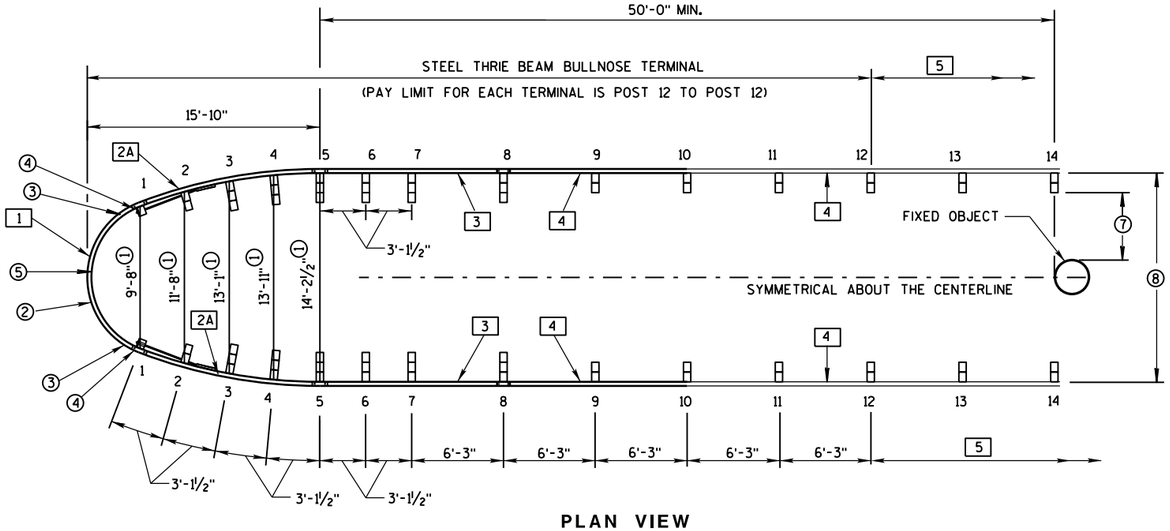


PLAN VIEW

GRADING AT BULLNOSE
(ALL INSTALLATIONS)

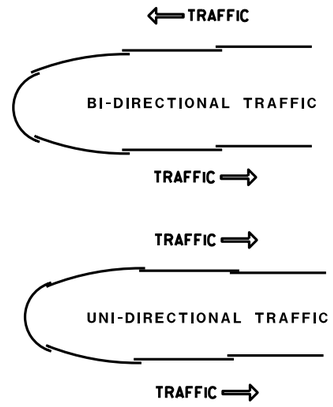


MEDIAN HAZARD PROTECTION PAY LIMITS



PLAN VIEW

TYPICAL BULLNOSE LAYOUT



LAPPING DETAIL
(ALL INSTALLATIONS)

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

ALL THRIE BEAM SHALL BE 12-GAUGE.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½" AND 12" DIAMETER AROUND POST. SEE SDD 14B15 OR SDD 14B42 FOR MORE INFORMATION.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

[4] UNBENT STANDARD THRIE-BEAM RAIL NO.4. (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.

② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.

③ NOSE CABLE W/SWAGGED END BUTTONS.

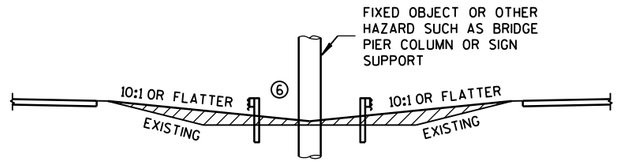
④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).

⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.

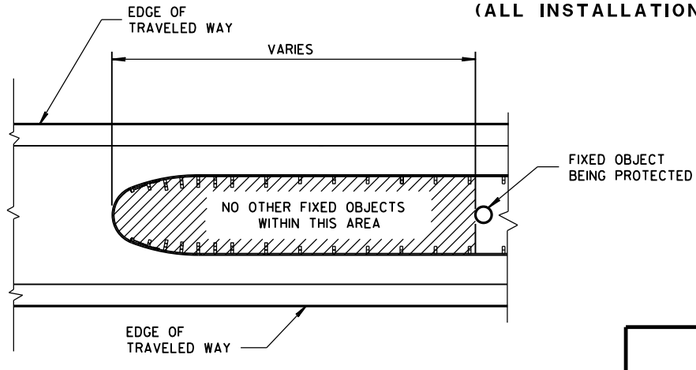
⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.

⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.

⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



MEDIAN GRADING SECTION
(ALL INSTALLATIONS)



HAZARD FREE AREA INSIDE BULLNOSE

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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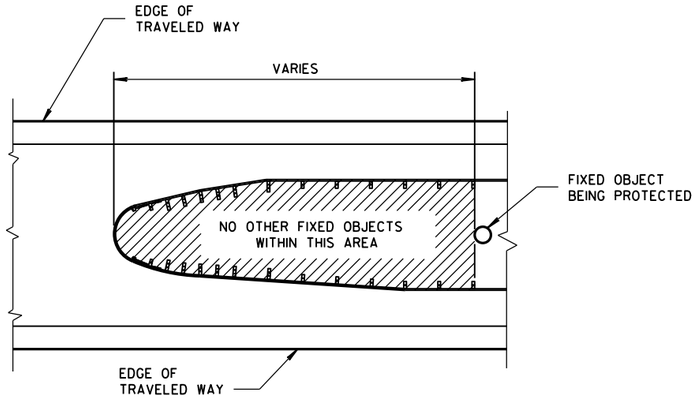
S.D.D. 14 B 26-3a



HAZARD FREE
AREA INSIDE BULLNOSE

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

[1] SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)

[2A] SLOTTED THRIE BEAM RAIL NO. 2A, (POST 1 TO POST 5)

[2B] SLOTTED THRIE BEAM RAIL NO. 2B, (POST 1 TO POST 5)

[3] SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)

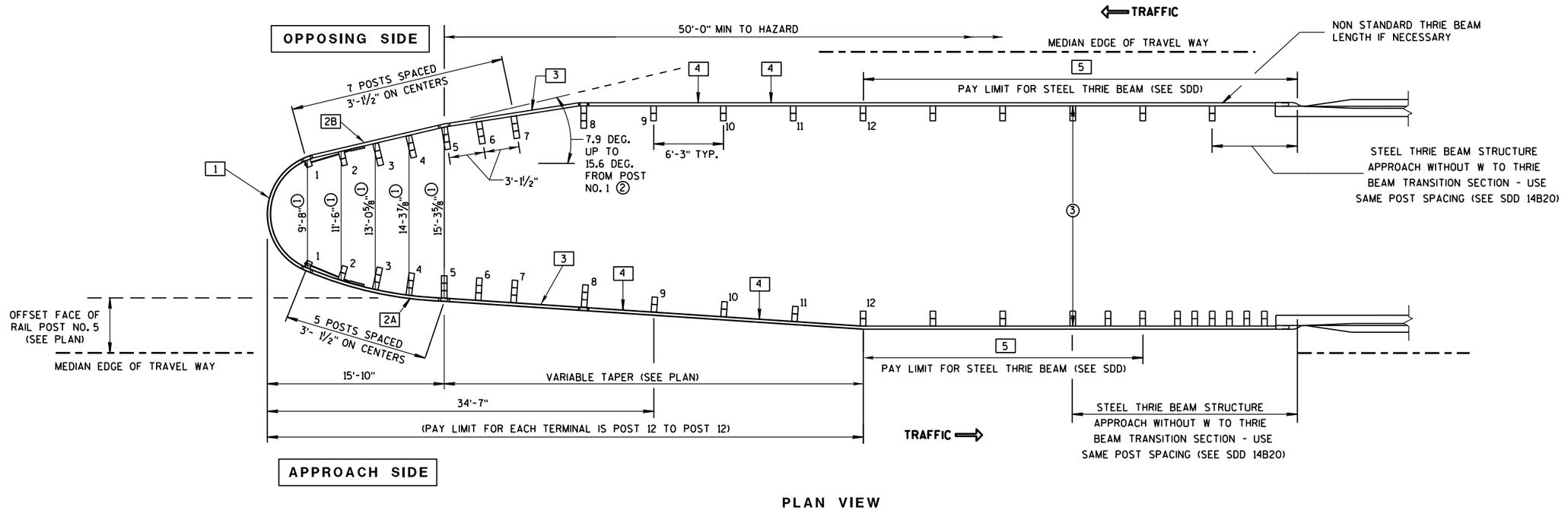
[4] UNBENT STANDARD THRIE-BEAM RAIL NO. 4, (POST 8 TO POST 10 & POST 10 TO POST 12)

[5] BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.

② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)

③ FOR MEDIANS WIDER THAN 14'-2½" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



PLAN VIEW

WIDENED BULLNOSE DESIGN

(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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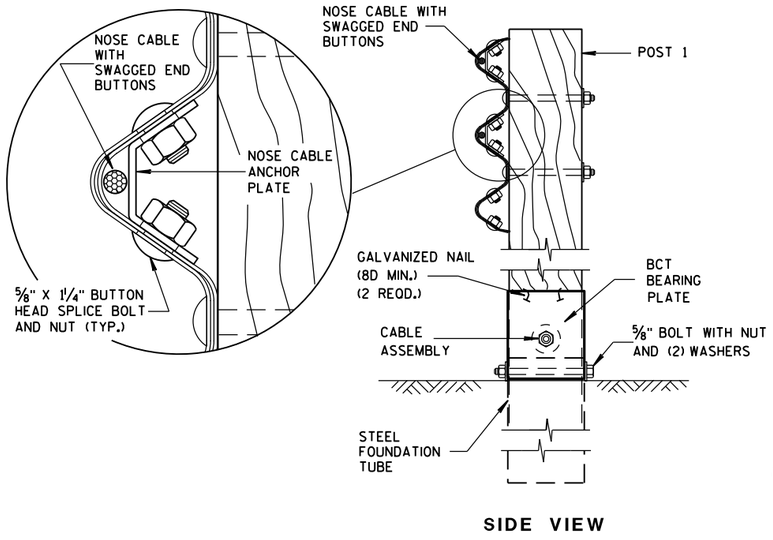
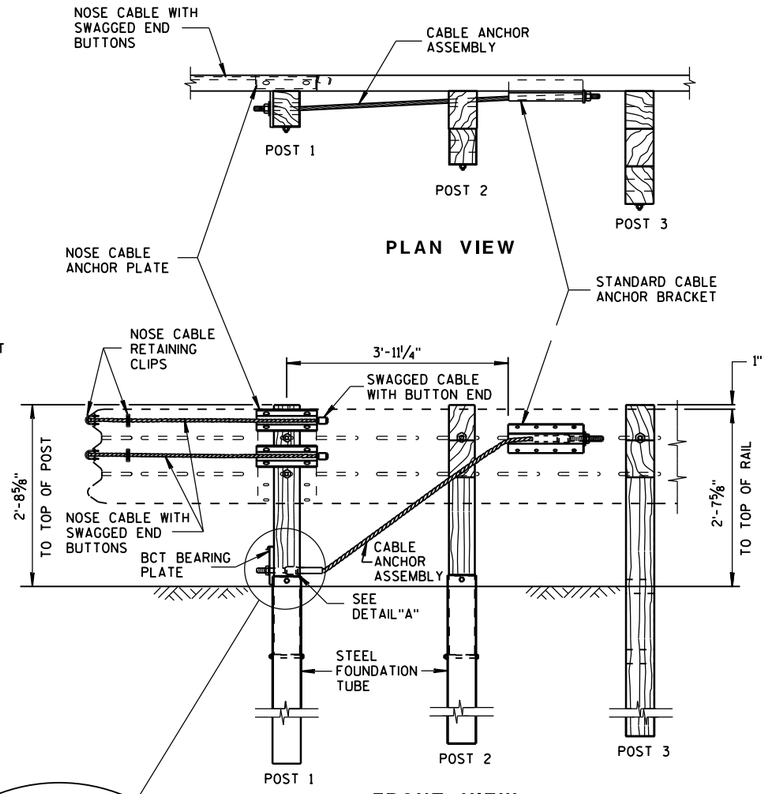
S.D.D. 14 B 26-3b



SIDE VIEW

NOSE CABLE ASSEMBLY AT POST NO. 1



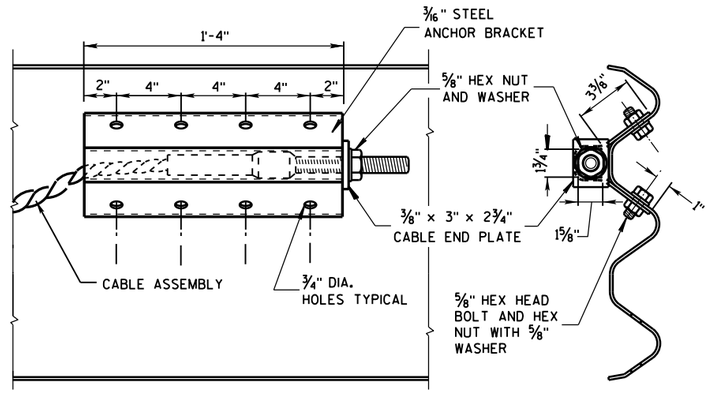
PLAN VIEW

FRONT VIEW

NOSE CABLE ANCHOR AND STANDARD BRACKET ASSEMBLY

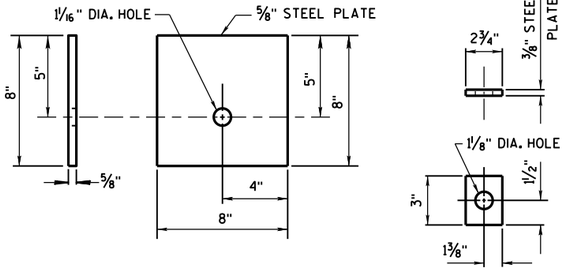
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



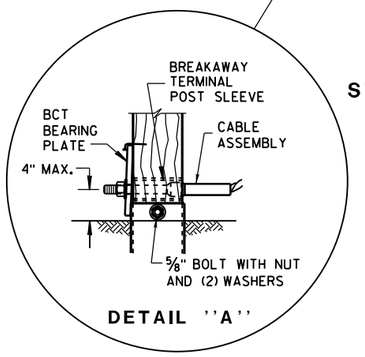
FRONT VIEW END VIEW

DETAILS OF CABLE ANCHOR BRACKET

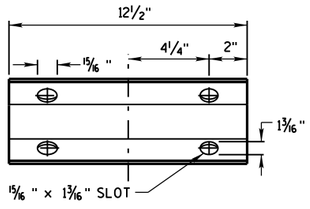


BCT BEARING PLATE

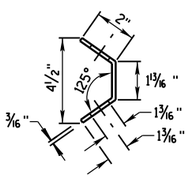
CABLE END PLATE



DETAIL ''A''



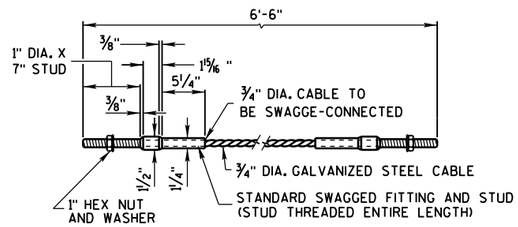
ELEVATION VIEW



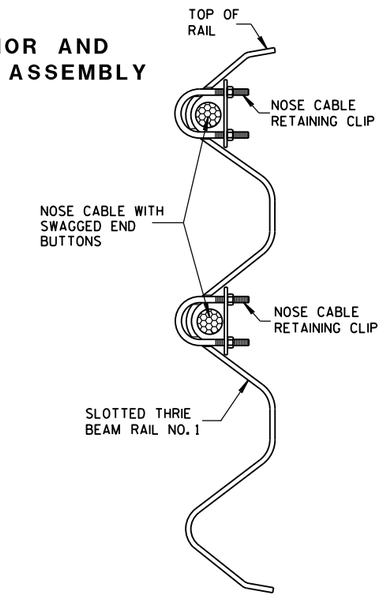
END VIEW

NOSE CABLE ANCHOR PLATE

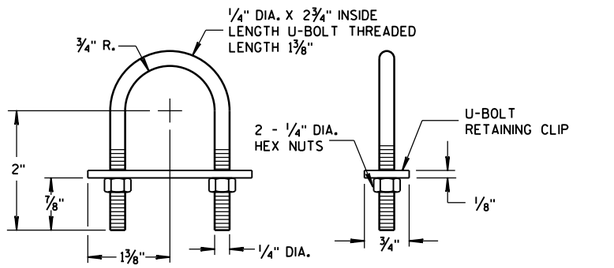
NOTE: 12 1/2" x 5 13/16" x 3/16" STEEL PLATE (A306)



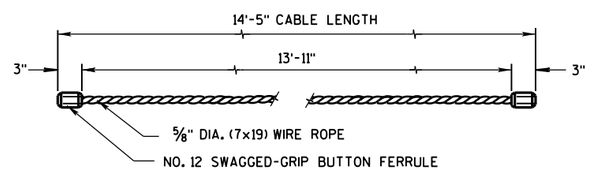
DETAILS OF CABLE ANCHOR ASSEMBLY



PLACEMENT OF NOSE CABLE RETAINING CLIP



NOSE CABLE RETAINING CLIP



NOSE CABLE WITH SWAGGED END BUTTONS

TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGHT.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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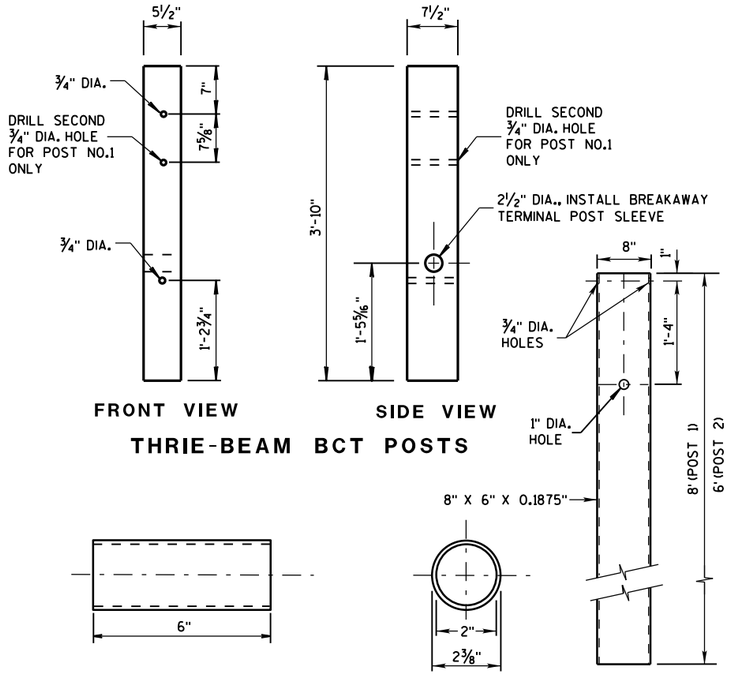
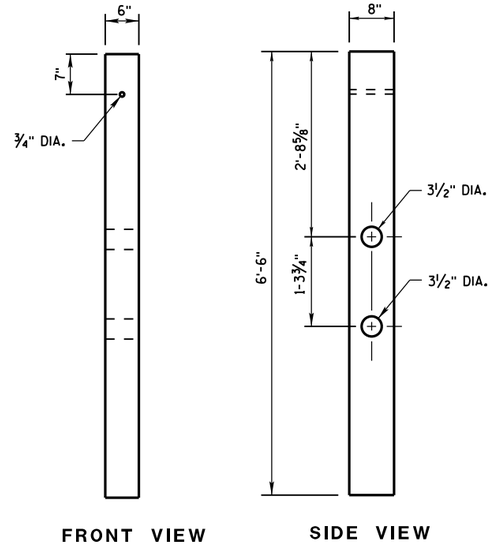
S.D.D. 14 B 26-3c



THRIE-BEAM BCT POSTS

BREAKAWAY TERMINAL POST SLEEVE

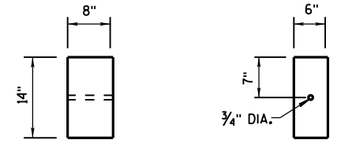
STEEL FOUNDATION TUBE



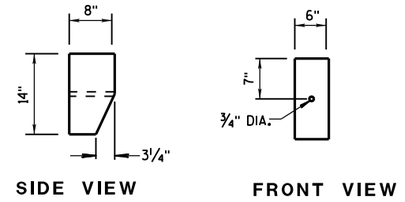
THRIE-BEAM CRT WOOD POSTS

GENERAL NOTES

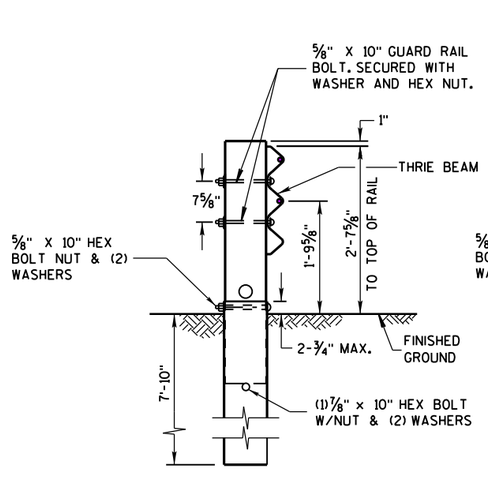
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



STANDARD WOOD BLOCK

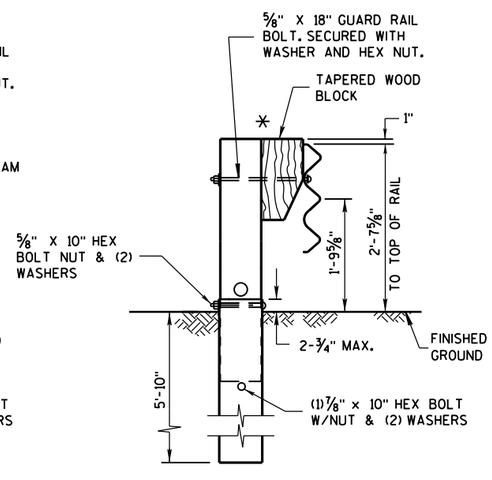


TAPERED WOOD BLOCK



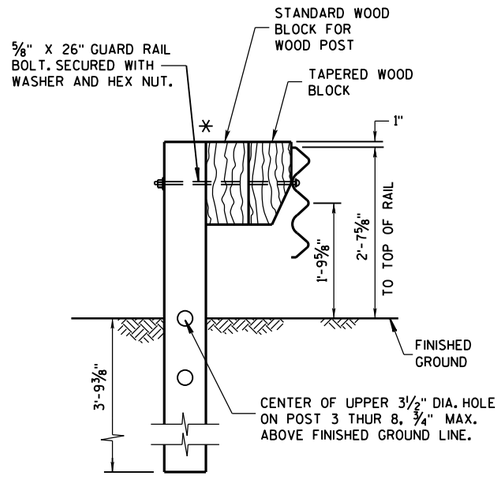
THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)

POST NO. 1



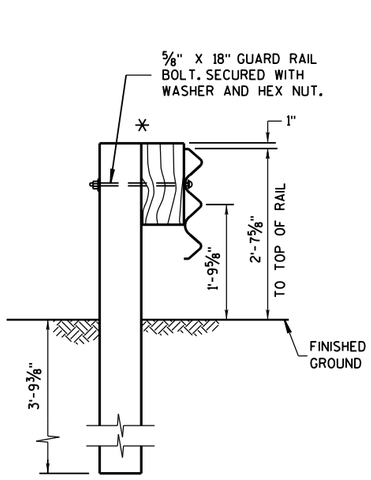
THRIE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE AND 1'-2" TAPERED BLOCK)

POST NO. 2



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8



THRIE-BEAM POST
(6'-6" LONG POST WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12

(ALSO USE FOR STEEL THRIE BEAM BEYOND POST 12)

* IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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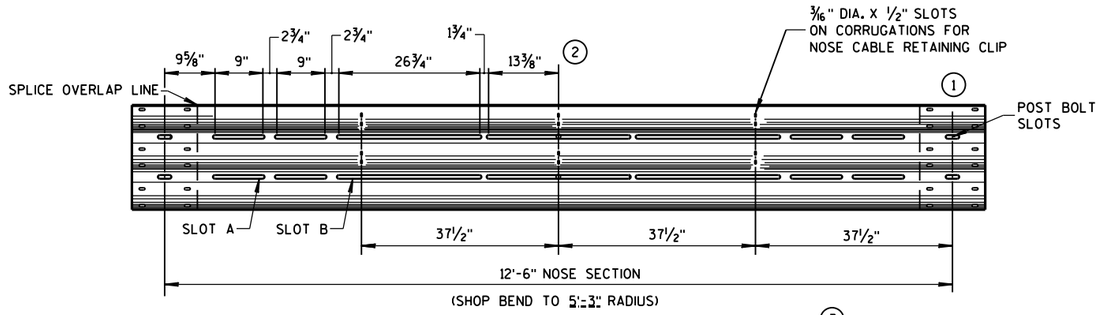
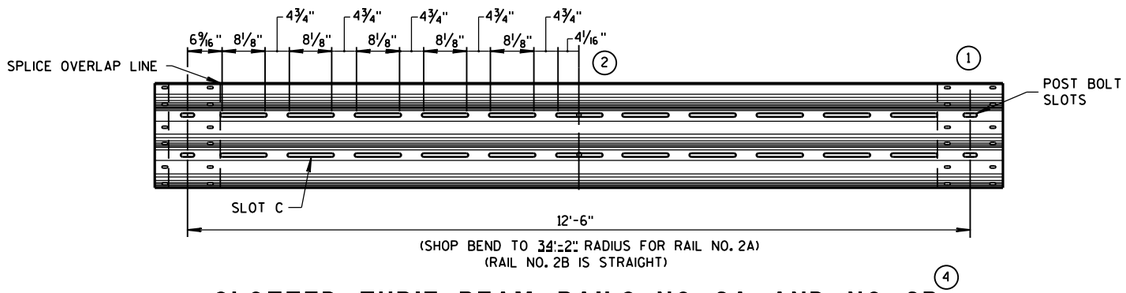
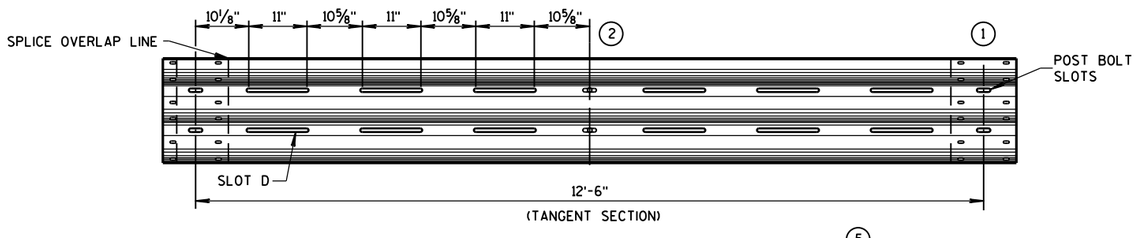
S.D.D. 14 B 26-3d



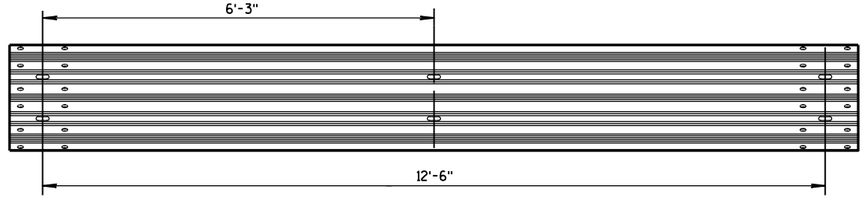
SLOTTED THRIE BEAM RAIL NO. 1 (3)



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B (4)



SLOTTED THRIE BEAM RAIL NO. 3 (5)



UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

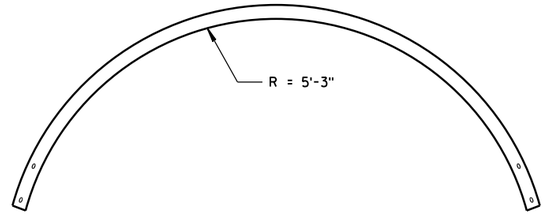
(1) SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.

(2) SLOT SIZE AND SPACING SYMMETRIC.

(3) SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".

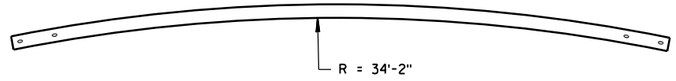
(4) SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.

(5) SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



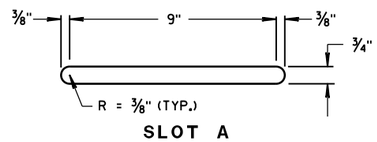
PLAN VIEW

SLOTTED THRIE BEAM RAIL NO. 1

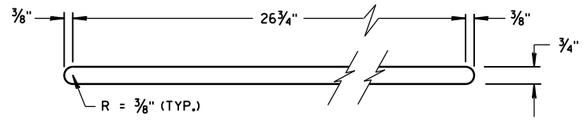


PLAN VIEW

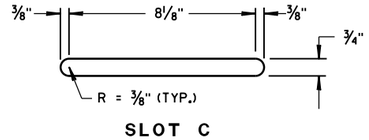
SLOTTED THRIE BEAM RAIL NO. 2A



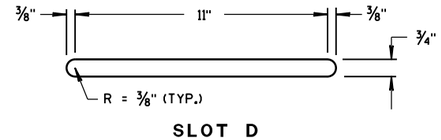
SLOT A



SLOT B



SLOT C



SLOT D

SLOT DETAILS

STEEL THRIE BEAM
BULLNOSE TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 14 B 26-3e

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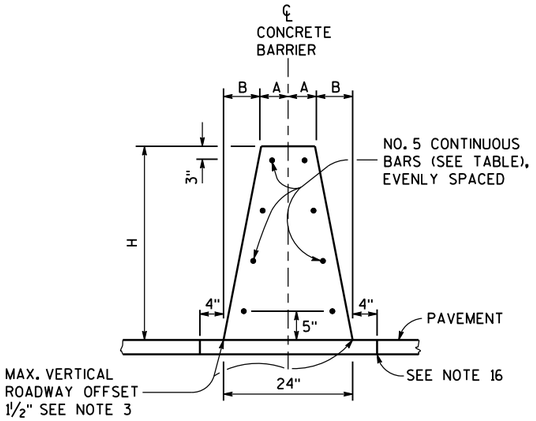
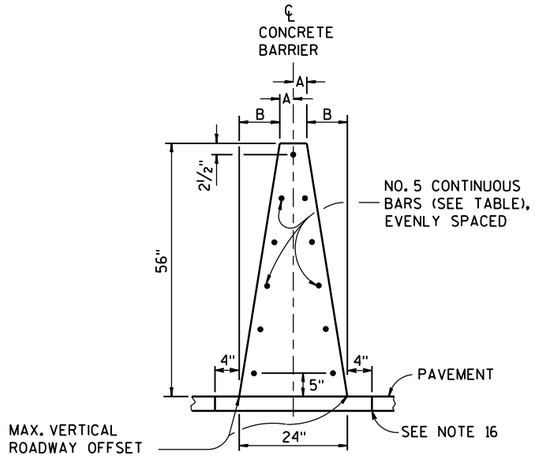
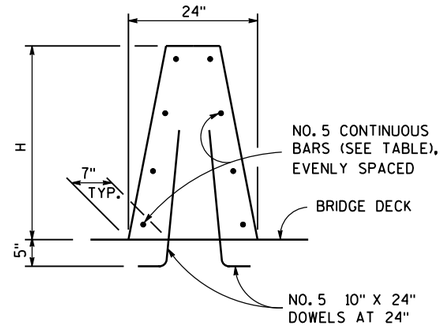
S.D.D. 14 B 26-3e



32-INCH, 36-INCH OR 42-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S32, TYPE S36, AND TYPE S42)



56-INCH SINGLE SLOPE CONCRETE BARRIER (TYPE S56)



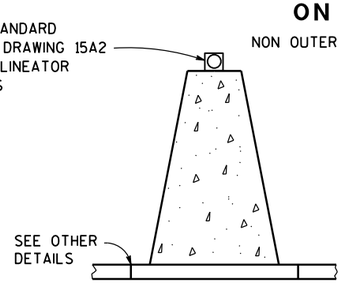
SINGLE SLOPE CONCRETE BARRIER ON BRIDGE

NON OUTER PARAPET APPLICATION

GENERAL NOTES

1. WHERE THE CONCRETE BARRIER IS ADDED TO THE FACE OF EXISTING CONCRETE STRUCTURE, MATCH EXISTING WEEP HOLES.
2. EXPANSION JOINTS IN CONCRETE BARRIER SHALL BE LOCATED AT ALL DECK, AND PRINCIPAL WALL JOINTS. EXPANSION JOINT FILLER MATERIAL SHALL BE THE SAME SIZE AS JOINT OR ½" MINIMUM.
3. WHERE VERTICAL ROADWAY OFFSET IS GREATER THAN 1½", USE TYPE A
4. PLACE BARRIER PERPENDICULAR TO SHOULDER GRADE, UNLESS INDICATED IN PLAN.
5. EXCEPT IN ANCHORS, VERTICAL REINFORCING STIRRUP NOT REQUIRED FOR ROADWAY OFFSETS LESS THAN 1'-0".
6. FOR TYPE S32, TYPE S36, TYPE S42, AND S56 MONOLITHIC FOOTING OR DOWELED FOOTING WITH 2-#8 x 8" @ 2'-0".
7. STAGGER LAPPING OF LONGITUDINAL STEEL. MINIMUM OVERLAP OF STEEL 2 FEET. BARS AT LAPS TO BE FIRMLY TIED OR CONNECTED.
8. 4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATION 501.
9. WHEN SWITCHING BETWEEN SLIP FORM AND CAST-IN-PLACE OPERATIONS, EXTEND LONGITUDINAL STEEL 3 FEET BEYOND SLIP-FORMING CUT OFF POINT. EXPOSED STEEL INTO NEXT POURS REINFORCEMENT. LAPS TO BE FIRMLY TIED.
10. USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS OTHERWISE NOTED.
11. 2" CLEAR COVER TYPICAL.
12. COLD-JOINTS MAY BE USED BETWEEN ANCHOR INSTALLATIONS. WHEN A COLD JOINT IS NEEDED, 3 FEET OF LAP OF LONGITUDINAL STEEL IS REQUIRED. LAPS TO BE FIRMLY TIED.
13. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 NO ADDITIONAL VERTICAL STEEL NEEDED. IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A REQUIRES VERTICAL STEEL. SEE OTHER DETAIL.
14. IN TYPE S32, TYPE S36, TYPE S42 AND TYPE S56 DEPTH OF FOOTING 10". IN TYPE S32A, TYPE S36A, TYPE S42A AND TYPE S56A MATCH TOTAL HEIGHT OF SINGLE SLOPE BARRIER RETAINING WALL.
15. FOR ALL BARRIER TYPES SHOWN, ANCHOR IS REQUIRED AT CONCRETE BARRIER ENDS AND AT INTERRUPTIONS IN CONCRETE BARRIER. ANCHOR MAY BE AS SHOWN ON DRAWING OR DETAILS SHOWN ON S.D.D. 14B33. ANCHORS INCIDENTAL TO CBSS.
16. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.

BARRIER HEIGHT H INCHES	A INCHES	B INCHES	NUMBER OF NO. 5 BARS EACH
32	7	5	8
36	6¼	5¾	8
42	5¼	6¾	10
56	3	9	11



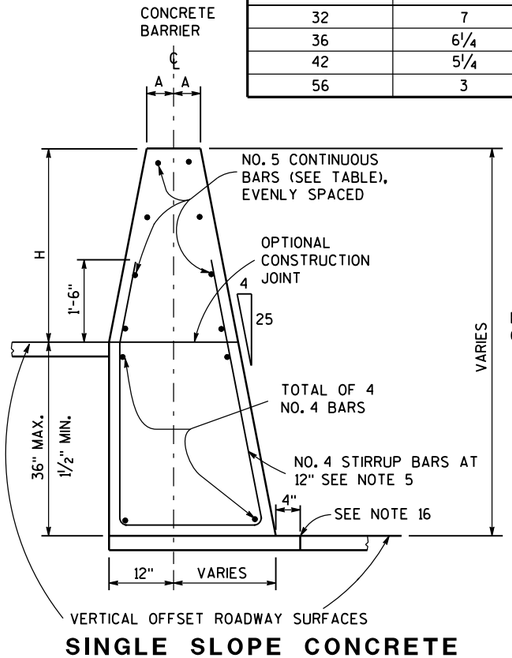
DELINEATION

DELINEATOR SPACING ON HORIZONTAL CURVES

RADIUS OF CURVE	APPROXIMATE SPACING ON CURVE
50 FEET	20 FEET
115 FEET	25 FEET
180 FEET	35 FEET
250 FEET	40 FEET
300 FEET	50 FEET
400 FEET	55 FEET
500 FEET	65 FEET
600 FEET	70 FEET
700 FEET	75 FEET
800 FEET	80 FEET
900 FEET	85 FEET
1000 FEET	90 FEET

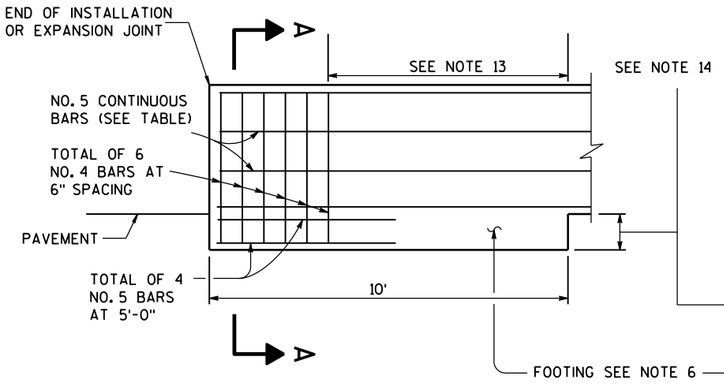
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	LENGTH OF BARRIER	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	



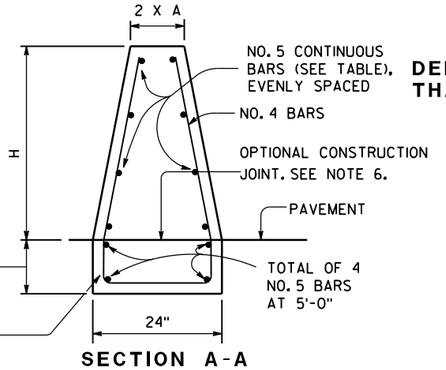
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(BETWEEN ADJACENT ROADWAYS)



END ANCHOR SINGLE SLOPE CONCRETE BARRIER

AT CONSTRUCTION JOINT



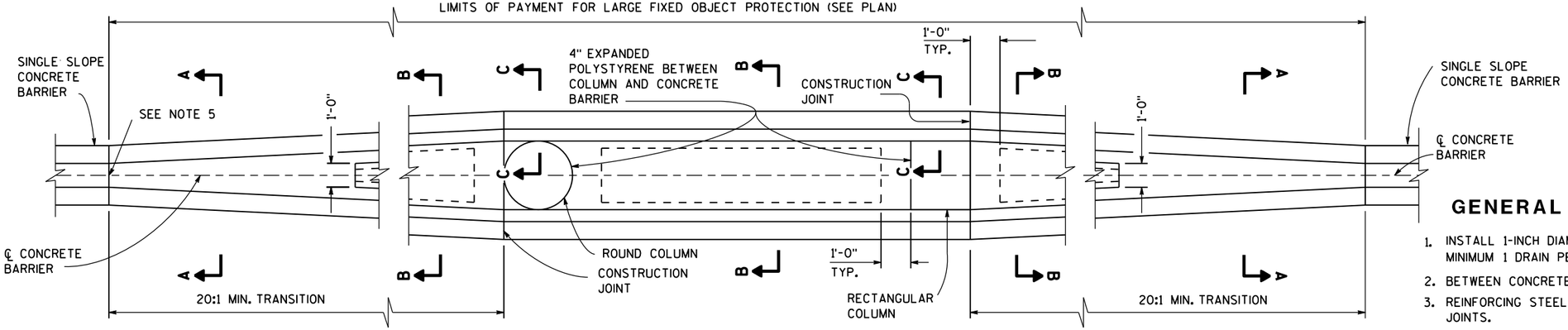
SECTION A-A

CONCRETE BARRIER SINGLE SLOPE (CBSS)

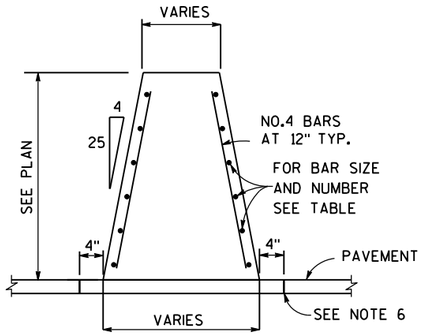
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

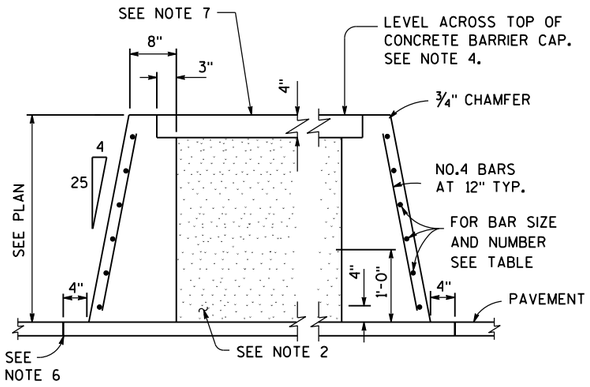
S.D.D. 14 B 32-3a



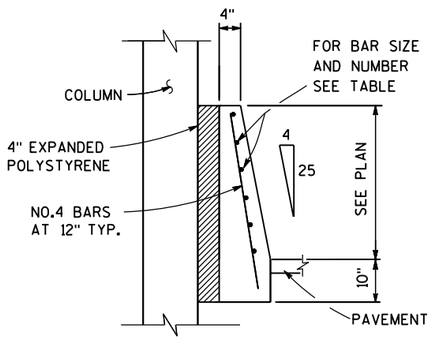
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



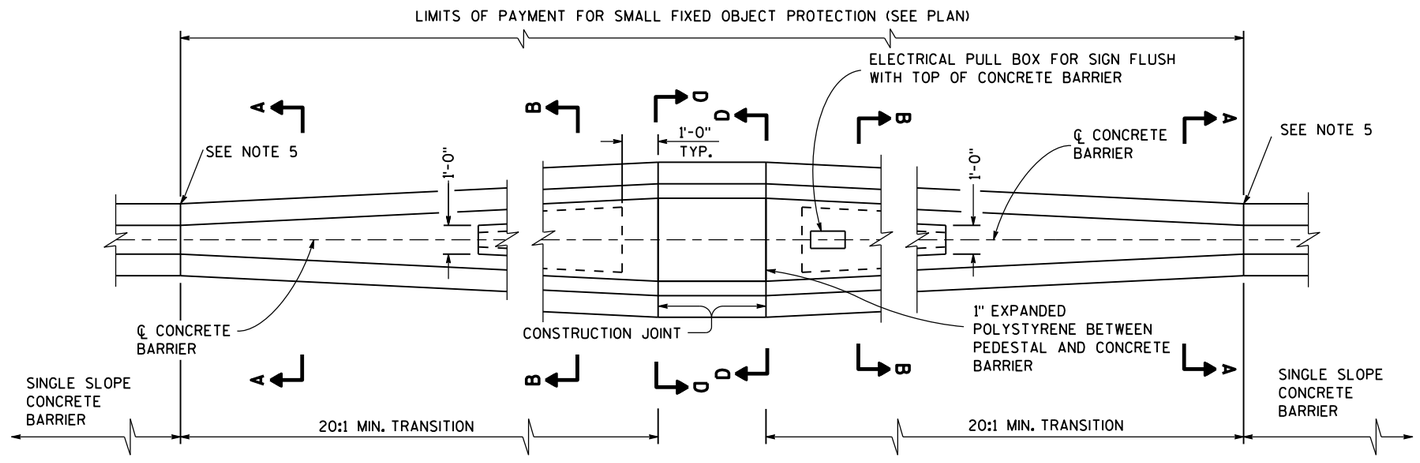
SECTION A-A



SECTION B-B



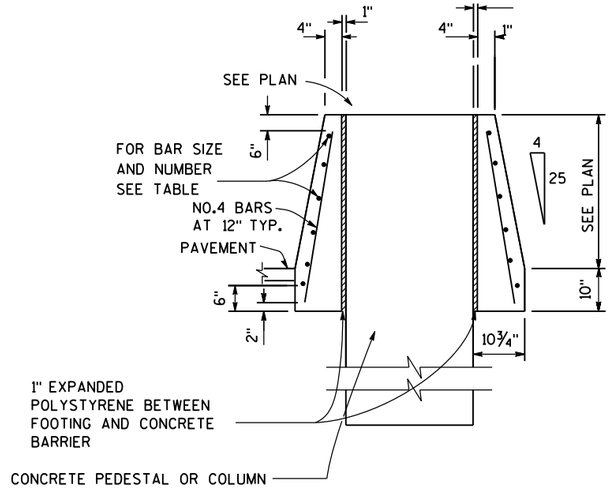
SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

1. INSTALL 1-INCH DIAMETER DRAIN PIPE EVERY 20 FEET OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH GRANULAR BACKFILL GRADE 2
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET OR SUPERELEVATED ROADWAYS TO PROVIDE LEVEL GRADE ACROSS TOP OF CONCRETE CAP.
5. IF FIXED OBJECT PROTECTION IS INSTALLED FIRST, USE COLD JOINTS. IF CBSS PLACED FIRST, USE EXPANSION JOINT.
6. CONCRETE PAD UNDER CBSS MAY BE PLACED INTEGRAL WITH BARRIER, PLACED SEPARATELY OR PLACED WITH CONCRETE SHOULDER AND SAWED FULL DEPTH. SAWING OF CONCRETE SHOULDER IS INCIDENTAL TO CONCRETE BARRIER BID ITEM. CONCRETE PAD MINIMUM DEPTH IS 6 INCHES, OR EQUAL TO THE DEPTH OF THE CONCRETE SHOULDER.
7. USE NO. 3 BAR SPACED 12 INCHES CENTER TO CENTER (PLACED IN EACH DIRECTION) OR EQUIVALENT WIRE MESH.



SECTION D-D

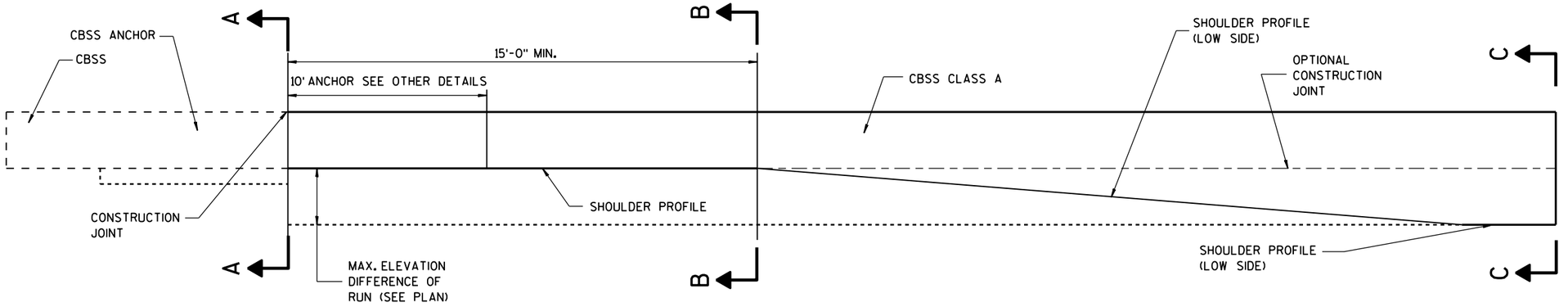
BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	9

CONCRETE BARRIER SINGLE SLOPE (CBSS)

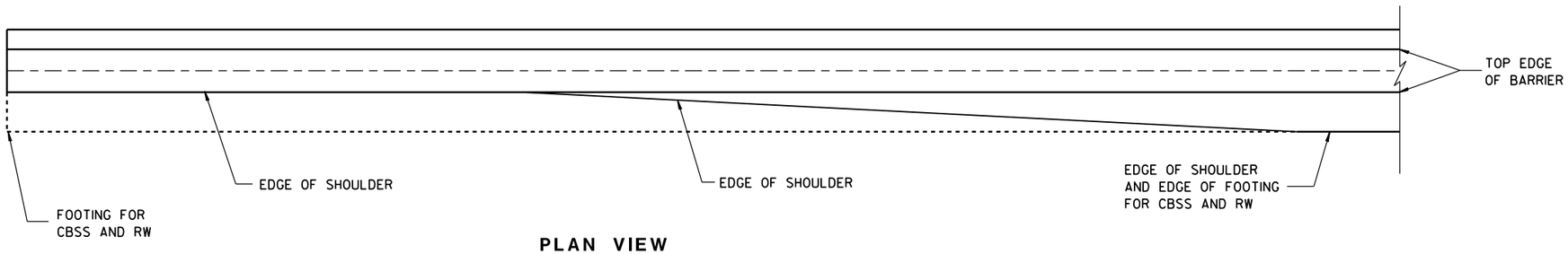
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

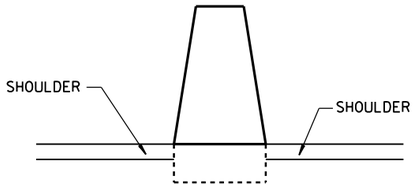
S.D.D. 14 B 32-3b



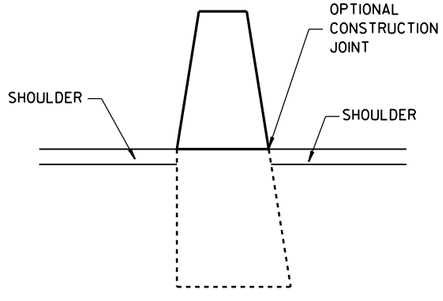
ELEVATION VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



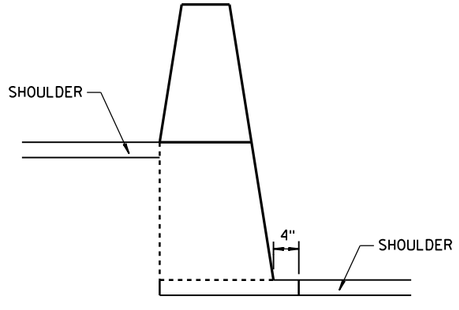
PLAN VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



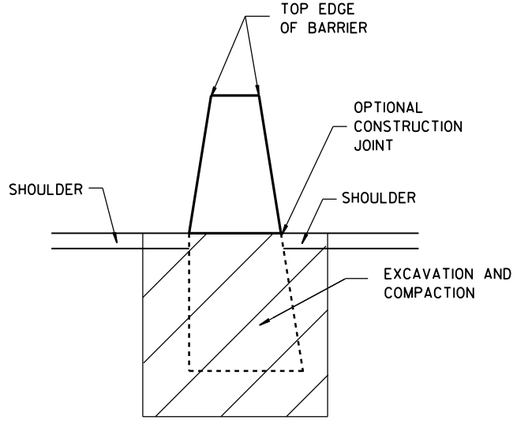
SECTION A-A



SECTION B-B



SECTION C-C

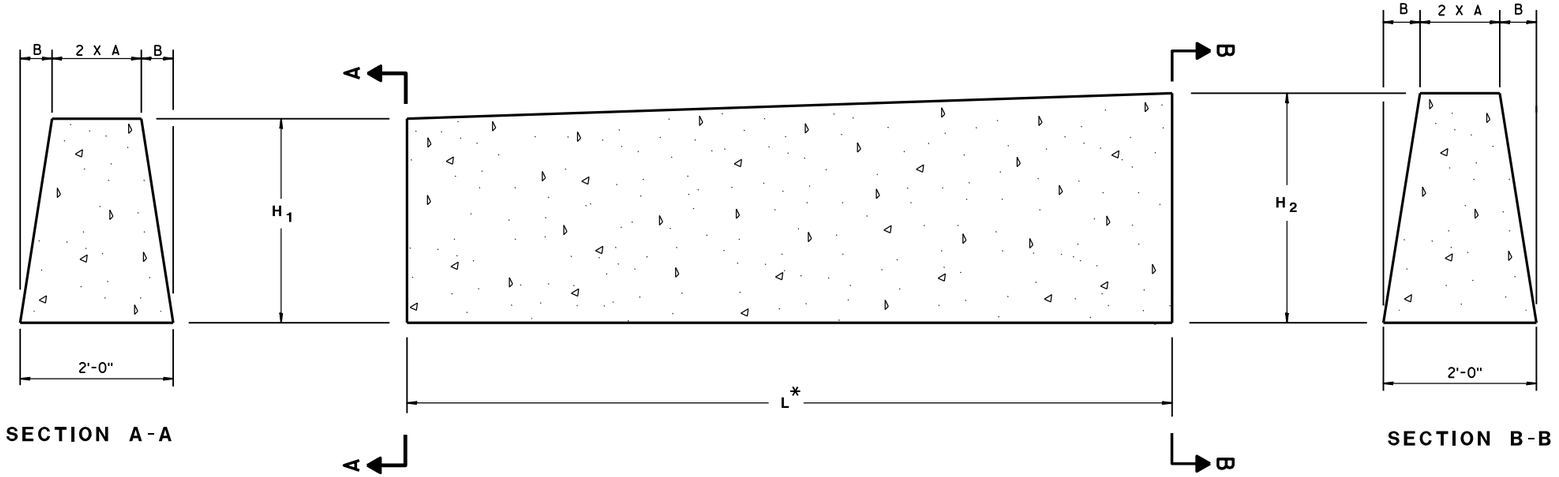


CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 32-3c



SECTION A-A

SECTION B-B

DOUBLE COLD JOINT HEIGHT TRANSITION

BARRIER DIMENSIONS

BARRIER HEIGHT INCHES	A INCHES	B INCHES
32	7	5
36	6 1/4	5 3/4
42	5 1/4	6 3/4
56	3	9

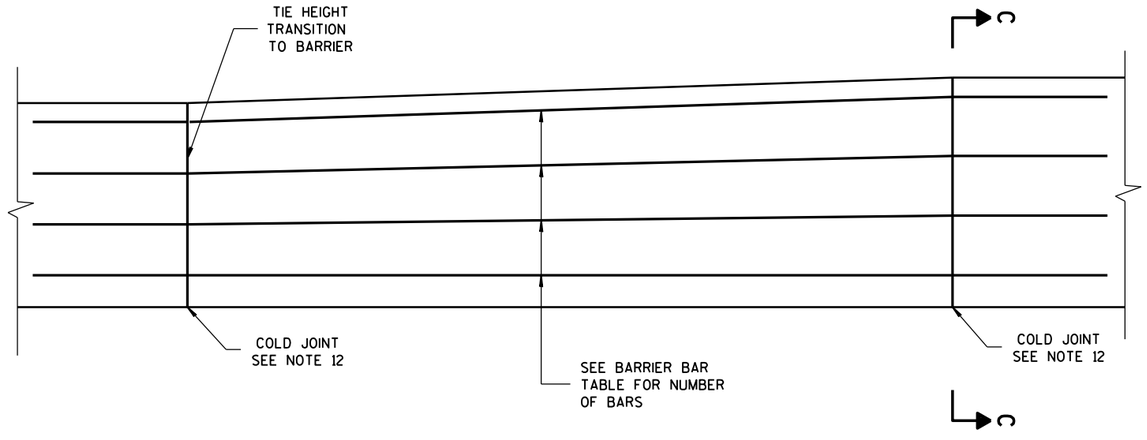
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

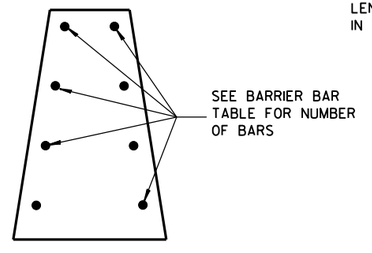
USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

BARRIER BARS

H_1	H_2	L*	NUMBER OF NO. 5 BARS
32"	36"	10'-0"	8
36"	42"	10'-6"	10
42"	56"	24'-6"	11

*
LENGTH OF DOUBLE COLD JOINT INCLUDED IN THE TOTAL LENGTH OF CBSS.





SECTION C-C

STEEL REINFORCEMENT DETAIL

CONCRETE BARRIER SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2014 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER

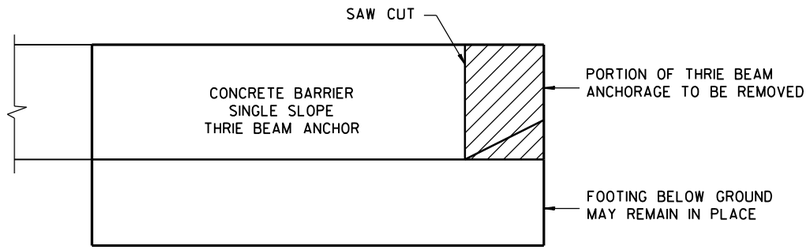
FHWA

6

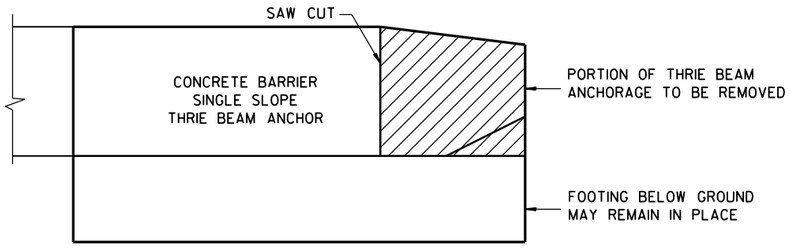
S.D.D. 14 B 32-3d

6

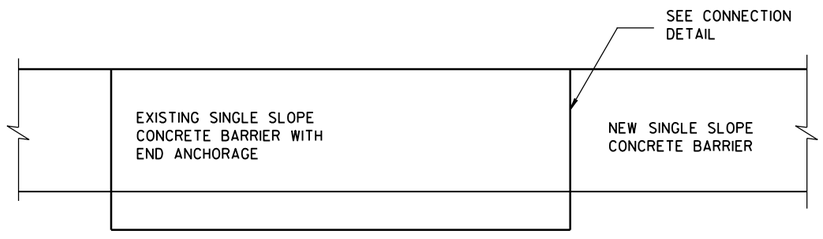
S.D.D. 14 B 32-3d



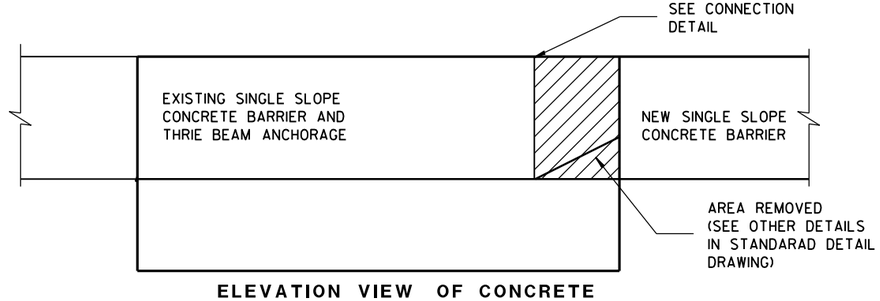
REMOVAL AREA OF
32" CONCRETE THRIE BEAM ANCHORAGE



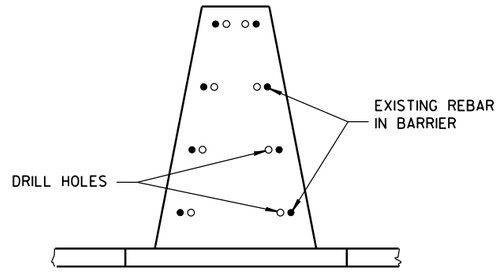
REMOVAL AREA OF CONCRETE THRIE BEAM
ANCHORAGE WITH HEIGHT GREATER THAN 32"



ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR END ANCHORAGE



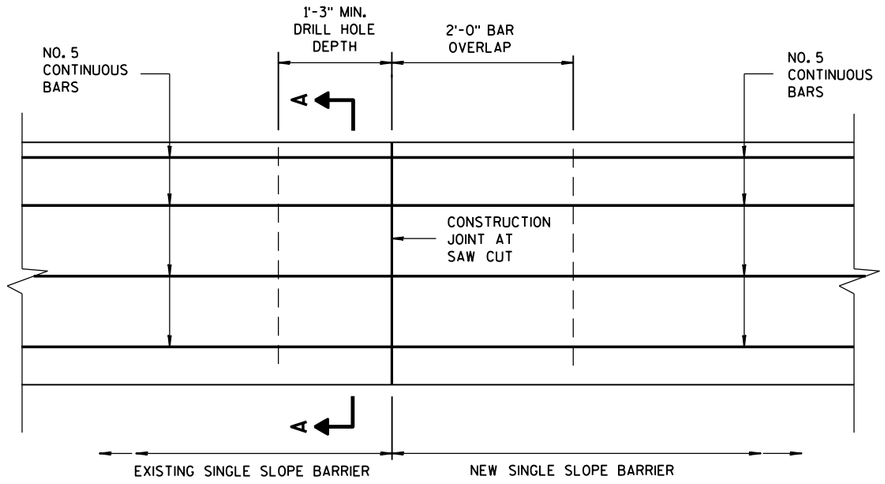
ELEVATION VIEW OF CONCRETE
BARRIER EXTENSION NEAR THRIE BEAM TERMINAL



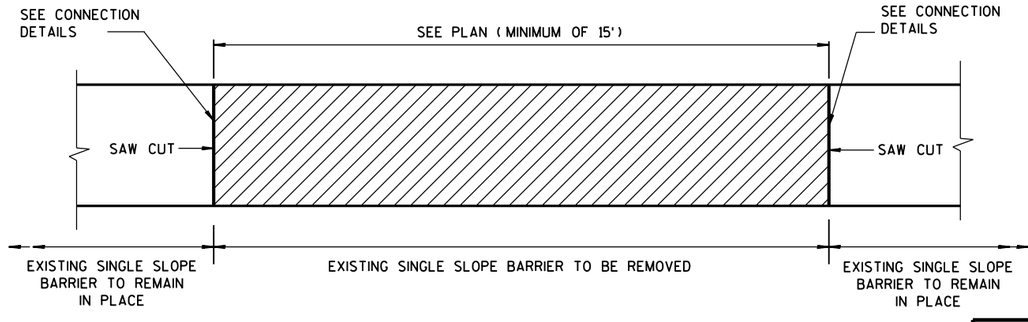
SECTION A-A

GENERAL NOTES

1. THE NUMBER OF DRILL HOLES IS EQUAL TO THE NUMBER OF REBAR IN BARRIER (SEE OTHER DETAILS).
2. MINIMUM DEPTH OF DRILL HOLES IS 1'-3".
3. DRILL HOLES TO BE A MINIMUM OF 4 INCHES FROM THE EDGE OF CONCRETE.
4. INSTALL EPOXY COATED NO. 5 BARS IN DRILL HOLES.
5. END ANCHORAGE MAY OR MAY NOT BE PRESENT ON EXISTING BARRIER.
6. REMOVE THRIE BEAM ANCHORAGE AS SHOWN.



CONNECTION OF EXISTING SINGLE SLOPE CONCRETE BARRIER TO
NEW SINGLE SLOPE CONCRETE BARRIER



ELEVATION FILE
BARRIER REMOVAL AND REPLACEMENT

CONCRETE BARRIER
SINGLE SLOPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

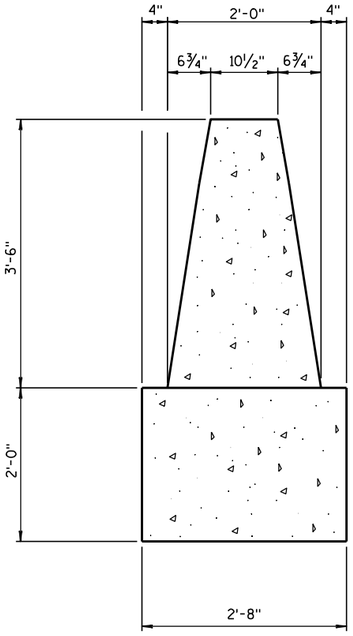
RETROFIT OR REPAIR SINGLE SLOPE CONCRETE BARRIER

6

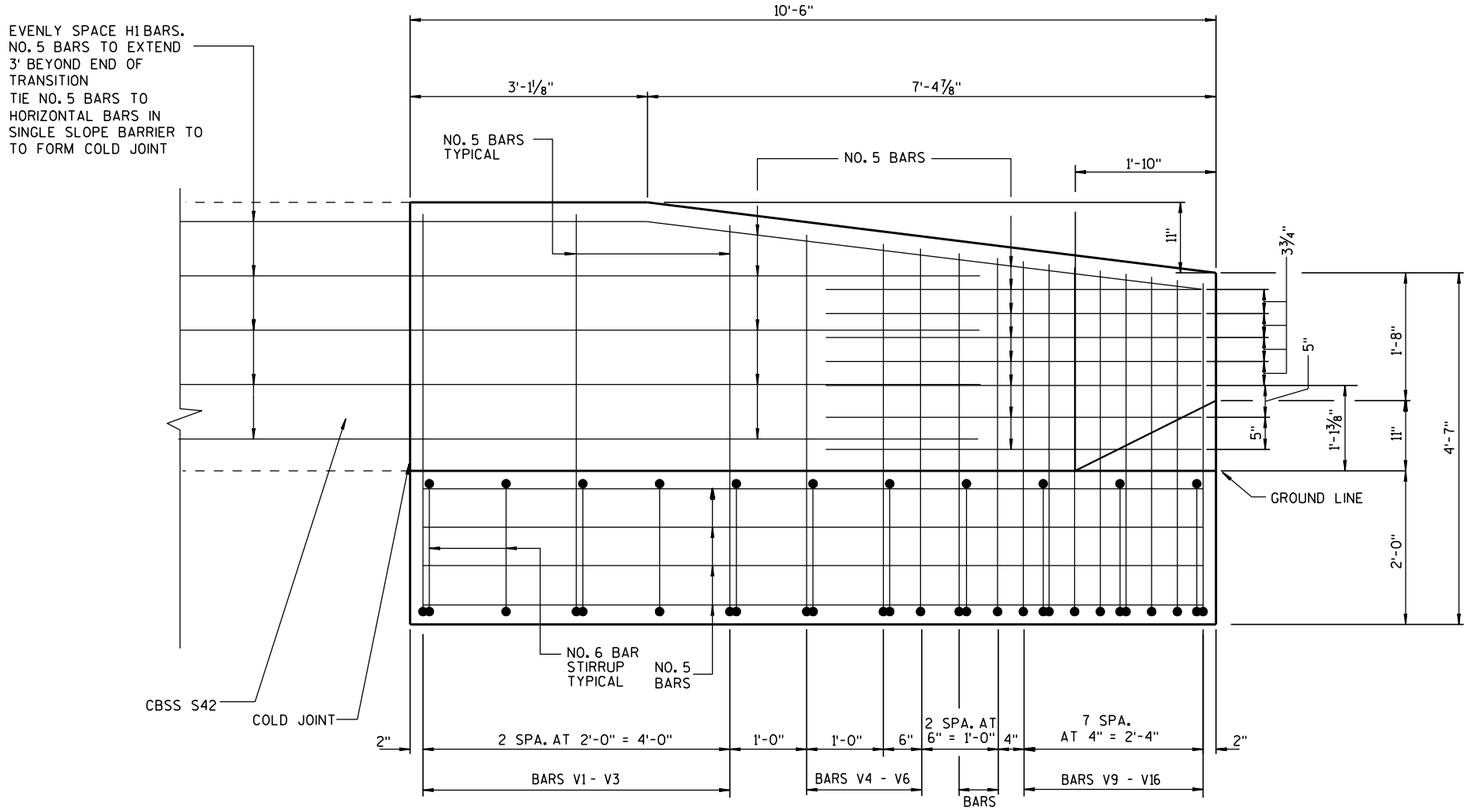
S.D.D. 14 B 32-3e

6

S.D.D. 14 B 32-3e

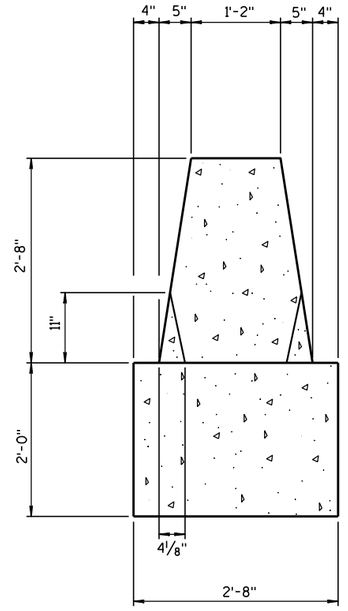


SECTION A-A

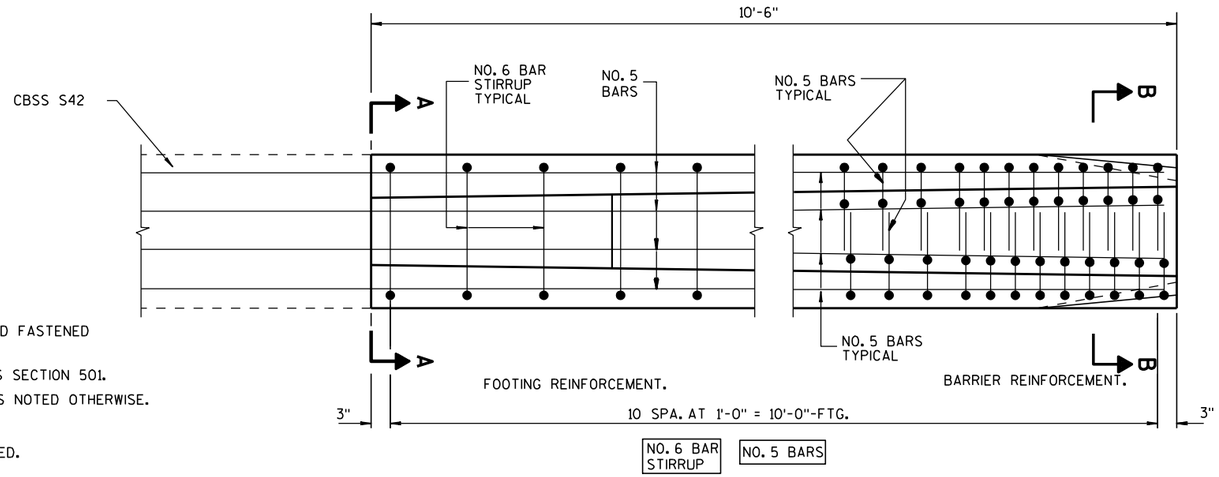


SEE SECTIONS ① THRU ⑯

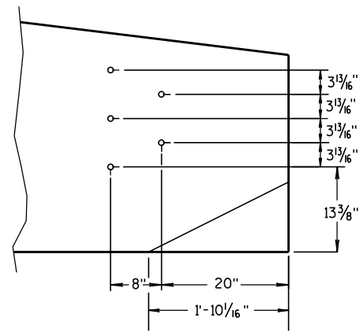
ELEVATION VIEW



SECTION B-B



PLAN VIEW



PVC PIPE LOCATIONS

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 603.

SPLICES OF LONGITUDINAL BARS TO BE 2'LONG AND FIRMLY TIED AND FASTENED TOGETHER UNLESS NOTED OTHERWISE.

4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS SECTION 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

THRIE BEAM ANCHOR INCIDENTAL TO CONCRETE BARRIER ITEM.

INSTALL SCHEDULE 40 PVC PIPE 1" DIAMETER AT LOCATIONS INDICATED.

EXTEND PVC PIPE COMPLETELY THROUGH BARRIER.

CUT ENDS OF PVC PIPE FLUSH WITH FINISHED FACE of BARRIER.

THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

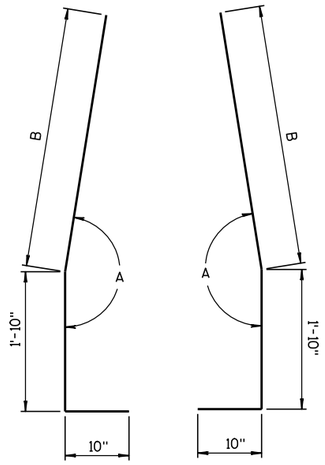
CONCRETE BARRIER SINGLE SLOPE 42" THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 33-1g

BAR CHART
SECTIONS V1 - V11

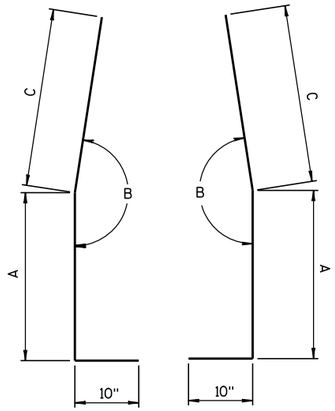
BAR	A	B
V1	170°-50'	3'-4½"
V2	171°-20'	3'-4½"
V3	171°-30'	3'-2½"
V4	171°-25'	3'-1½"
V5	171°-15'	3'-0"
V6	171°-15'	2'-11"
V7	171°-20'	2'-10½"
V8	171°-10'	2'-9½"
V9	171°-10'	2'-9"
V10	171°-05'	2'-8½"
V11	171°-10'	2'-8"



BAR BENDING DETAIL
FOR BARS V1 - V11

BAR CHART
SECTIONS V12 - V13

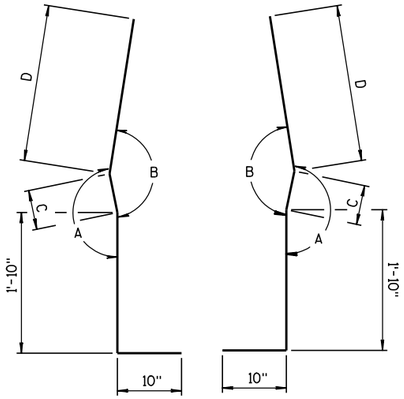
BAR	A	B	C
V12	2'-2"	171°-15'	2'-3½"
V13	2'-7"	171°-05'	1'-10"



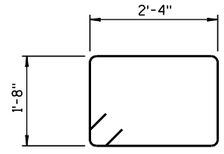
BAR BENDING DETAIL
FOR BARS V12 - V13

BAR CHART
SECTIONS V14 - V16

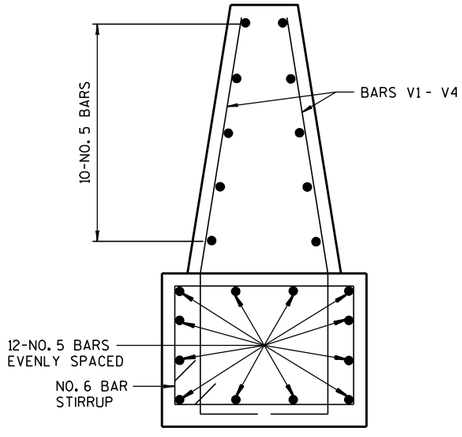
BAR	A	B	C	D
V14	168°-15'	159°-15'	6"	2'-0"
V15	169°-20'	161°-00'	8"	1'-10"
V16	168°-40'	160°-10'	10"	1'-8"



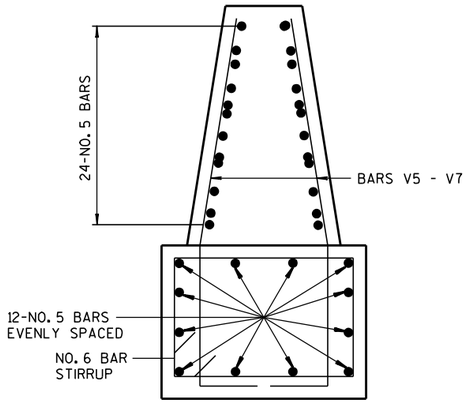
BAR BENDING DETAIL
FOR BARS V14 - V16



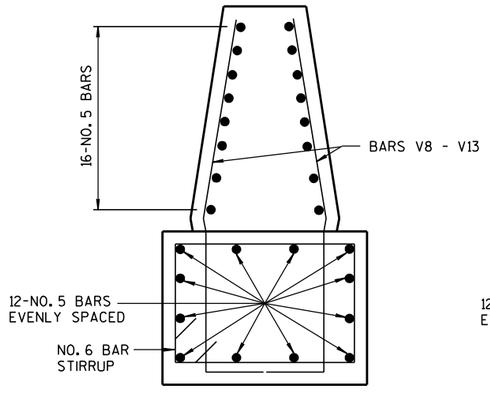
STIRRUP BAR
BENDING DETAIL



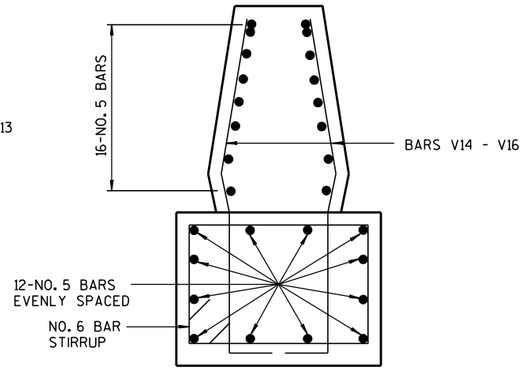
BAR DETAIL
SECTIONS V1 - V4



BAR DETAIL
SECTIONS V5 - V7



BAR DETAIL
SECTIONS V8 - V13



BAR DETAIL
SECTIONS V14 - V16

CONCRETE BARRIER
SINGLE SLOPE 42"
THRIE BEAM ANCHOR

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6-3-2010 DATE
/S/ Jerry H. Z---
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D.D. 14 B 33-1h

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.

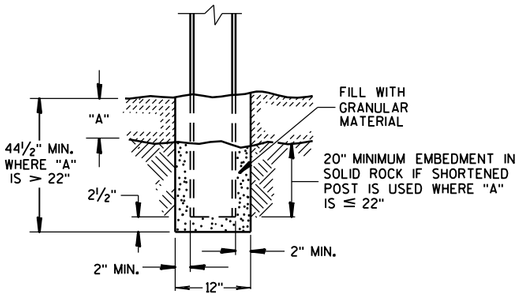
2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

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.

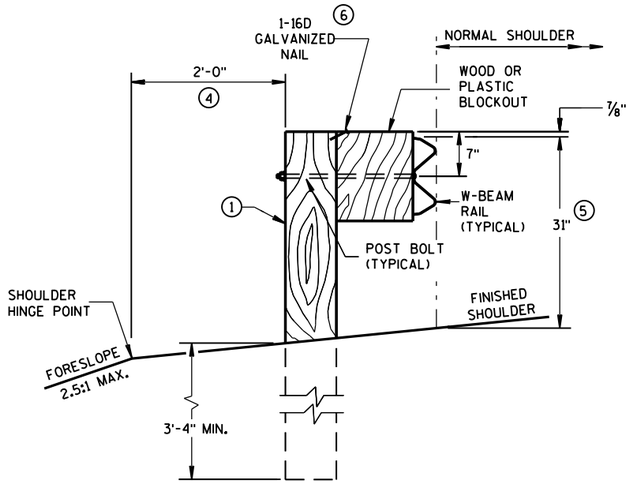
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

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".

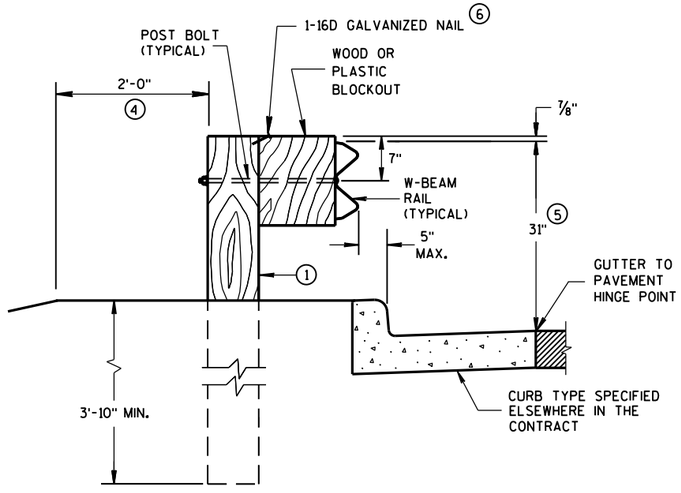
6. WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



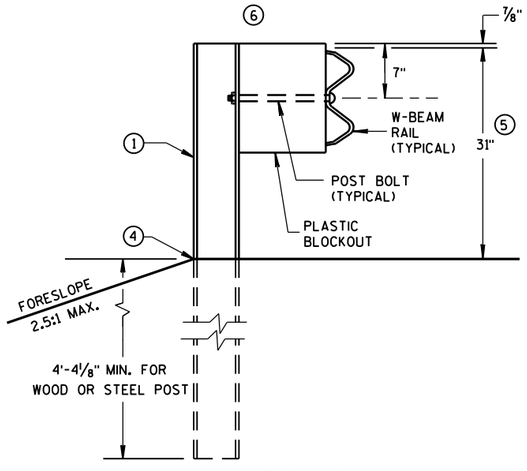
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



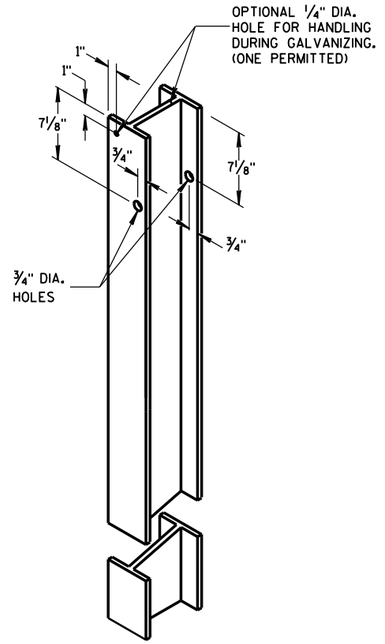
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



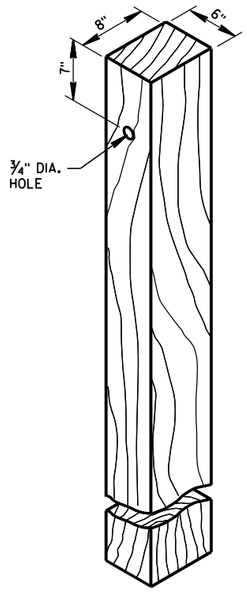
END VIEW
LOCATED ALONG A CURBED ROADWAY



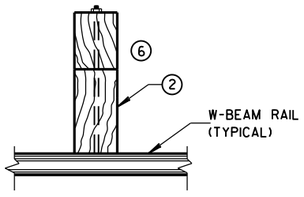
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



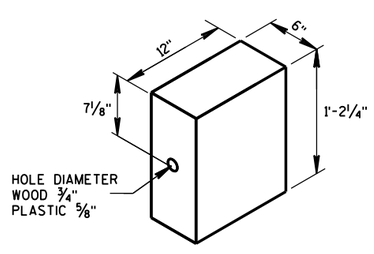
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



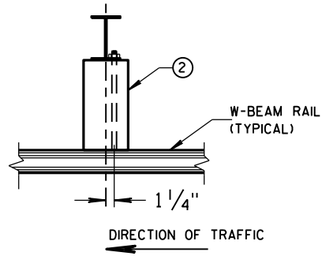
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

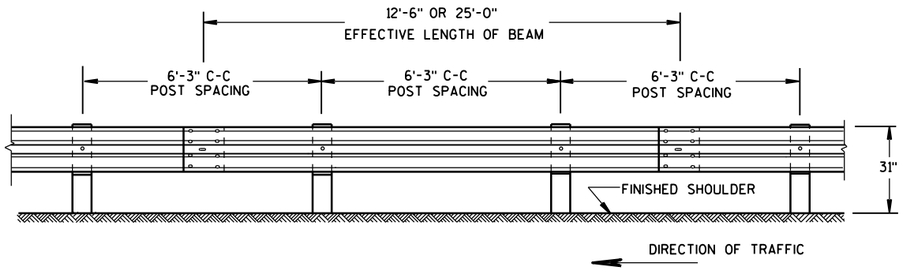


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

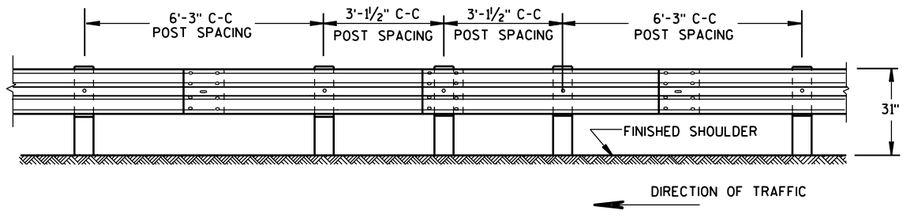
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-3a



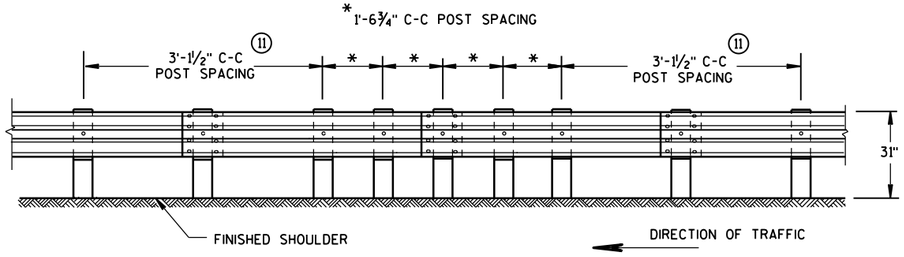
FRONT VIEW

POST SPACING STANDARD INSTALLATION



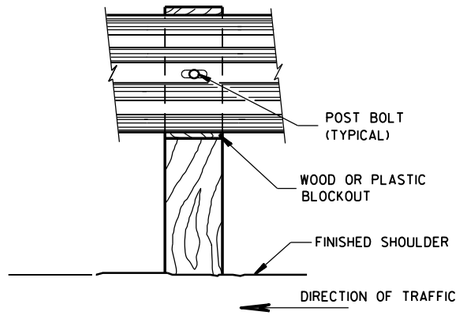
FRONT VIEW

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

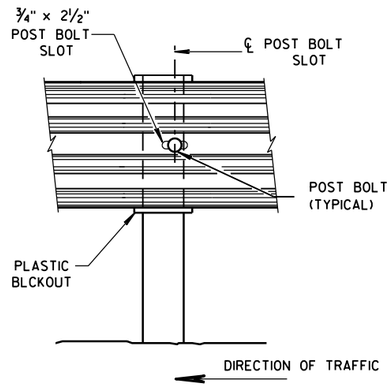


FRONT VIEW

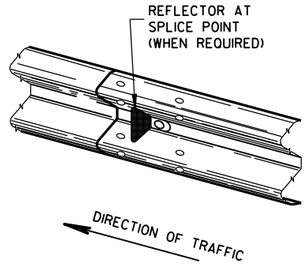
QUARTER POST SPACING (QS)

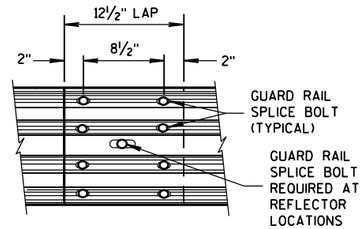


FRONT VIEW AT WOOD POST



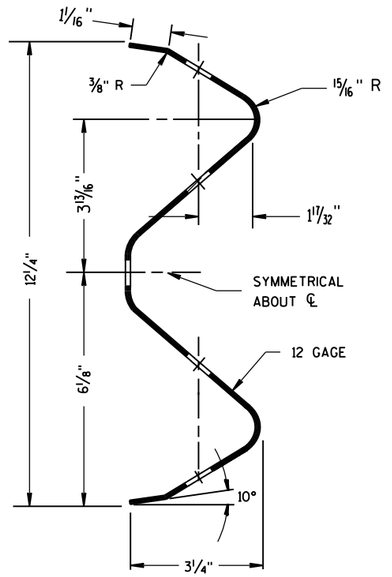
FRONT VIEW AT STEEL POST



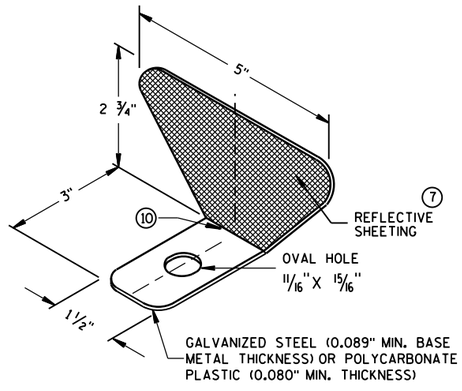


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

⑧ 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.

⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

⑩ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

⑪ 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.

REFLECTOR SPACING ⑧

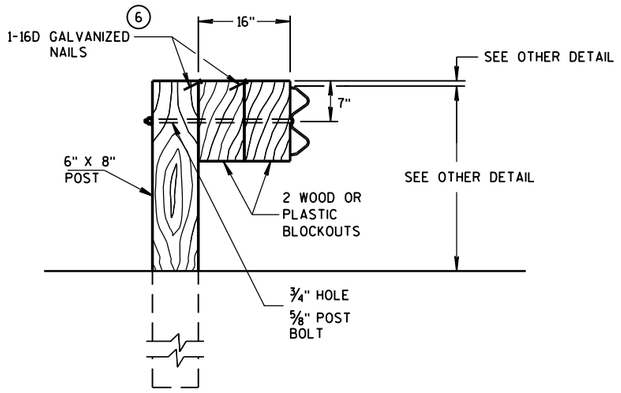
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ⑨ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

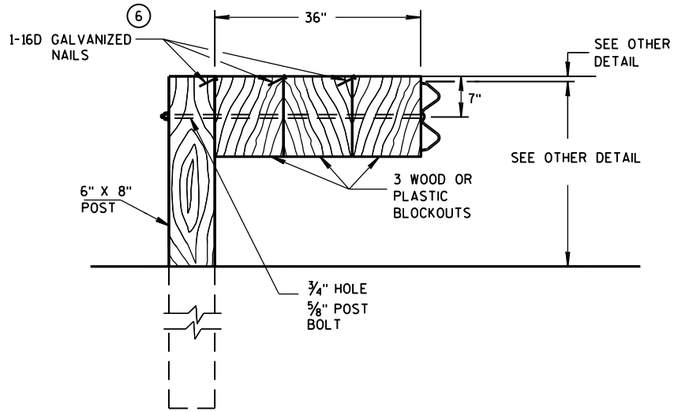
6

S.D.D. 14 B 42-3b



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.

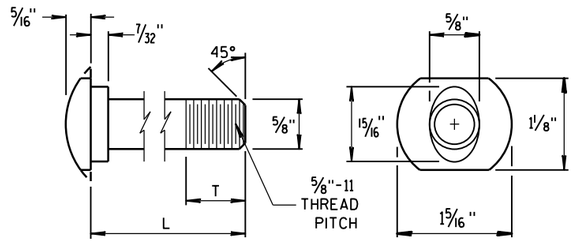


DETAIL FOR 36" BLOCKOUT DEPTH

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.

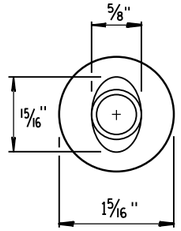
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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.

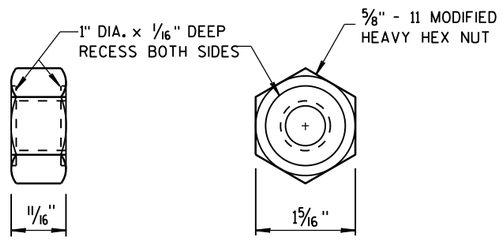


POST BOLT TABLE

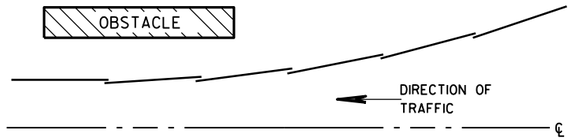
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

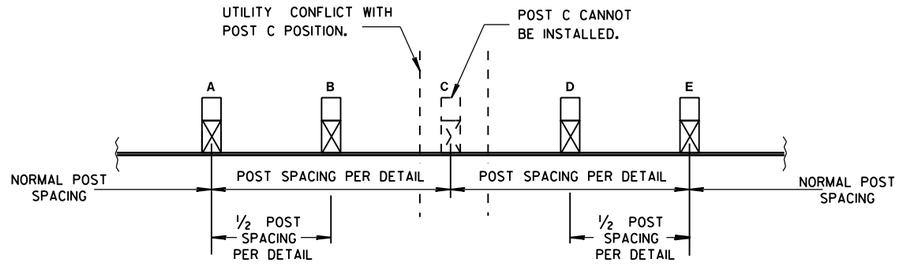


POST BOLT AND RECESS NUT

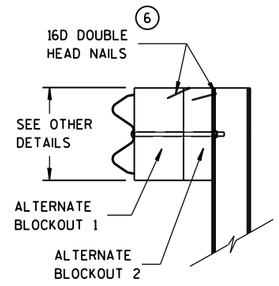


PLAN VIEW

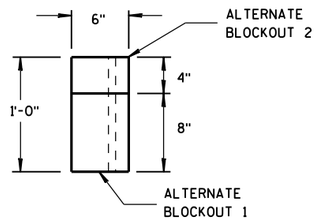
BEAM LAPPING DETAIL



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
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 14 B 42-3c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, 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) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(G) ½" 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.

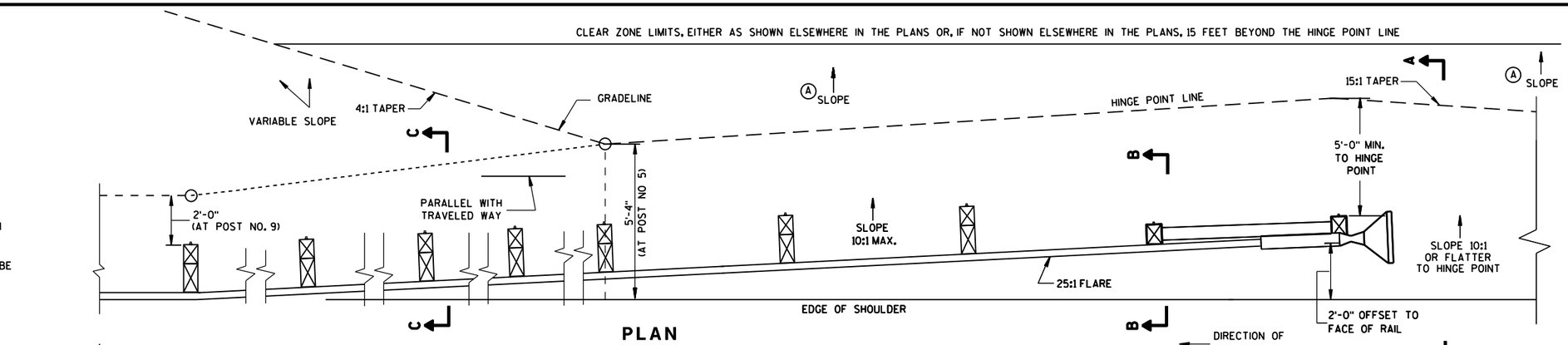
SEE SDD 14B42 FOR MORE INFORMATION.

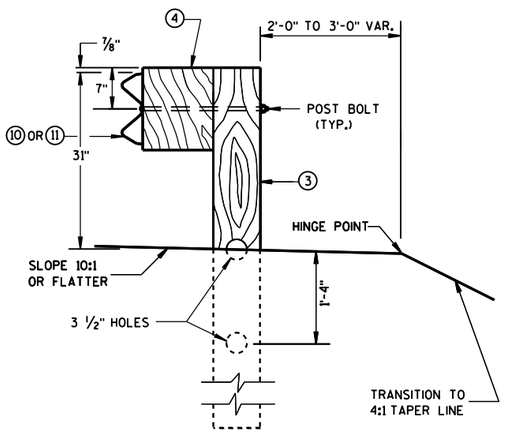
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

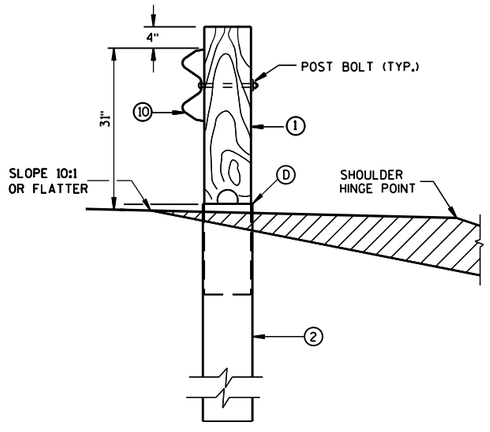
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

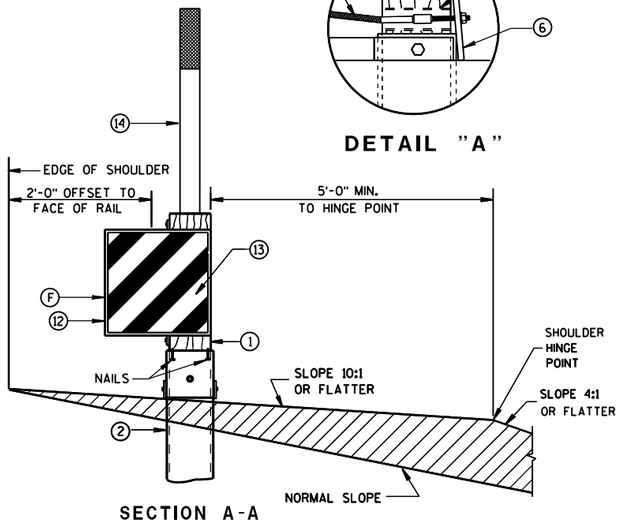




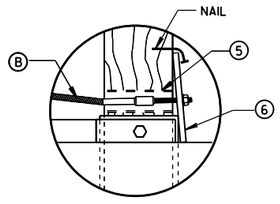
SECTION C-C
TYPICAL AT POST NOS. 3-9



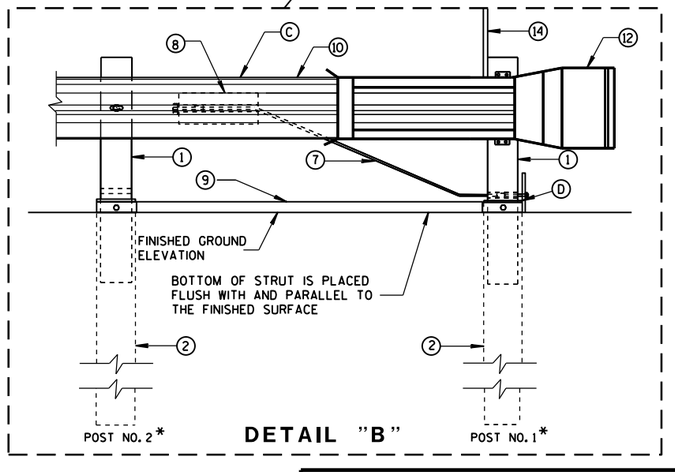
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



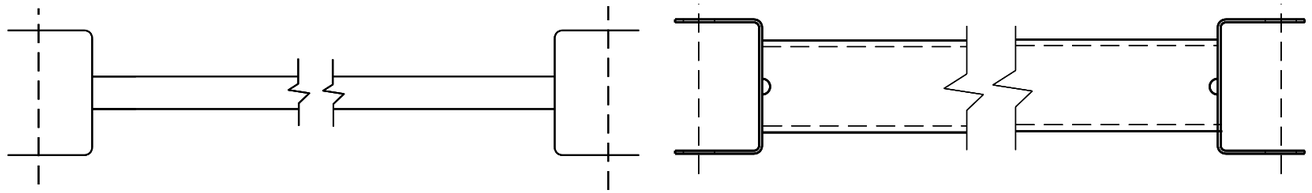
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

S.D.D. 14 B 44-2a

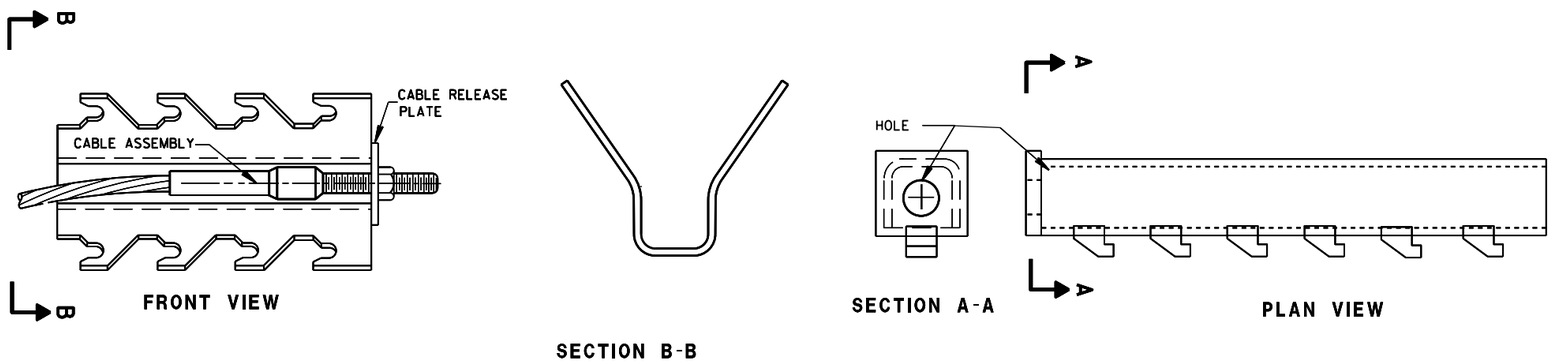
S.D.D. 14 B 44-2a



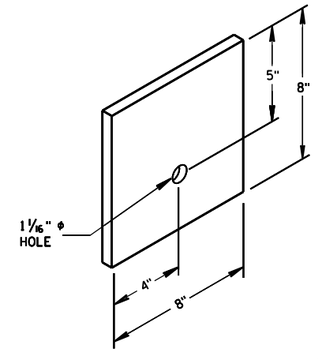
GENERIC GROUND STRUT (9) (H)

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 F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)

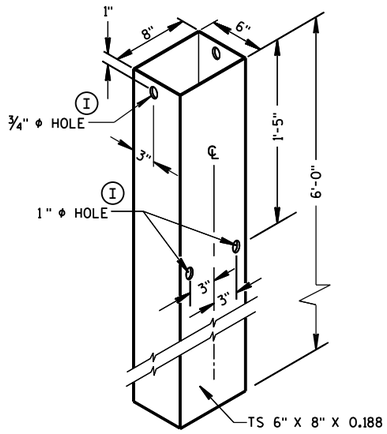


BEARING PLATE (6)

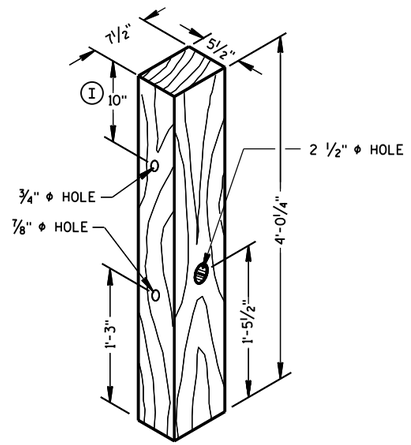
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 44-2b

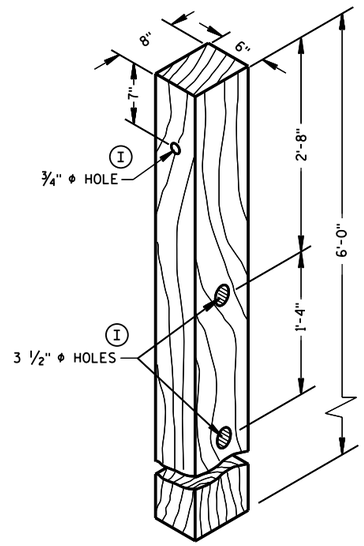


FOUNDATION TUBE (2)



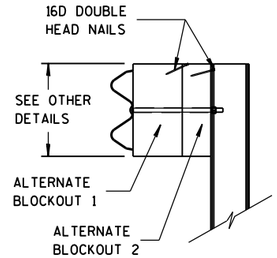
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

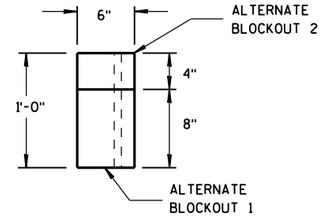


POSTS NUMBER 3-9

WOOD CRT POST (3)

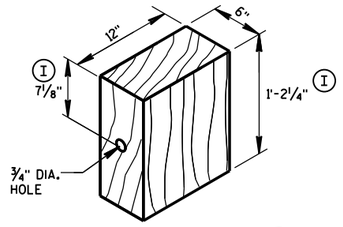


SIDE VIEW



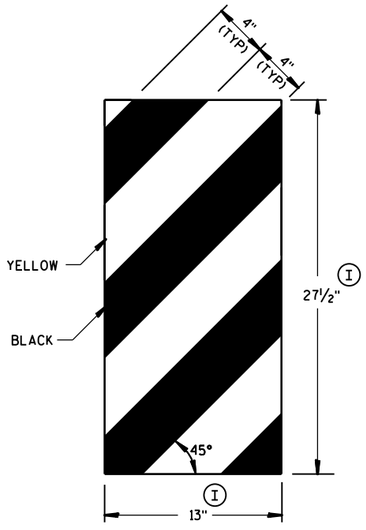
TOP VIEW

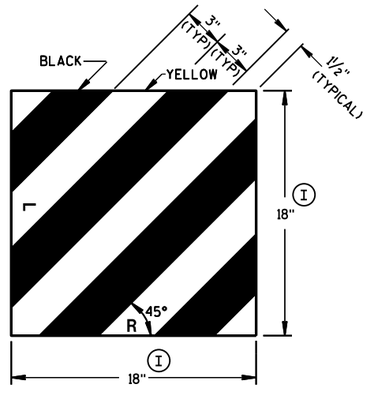
ALTERNATE WOOD BLOCKOUT DETAIL



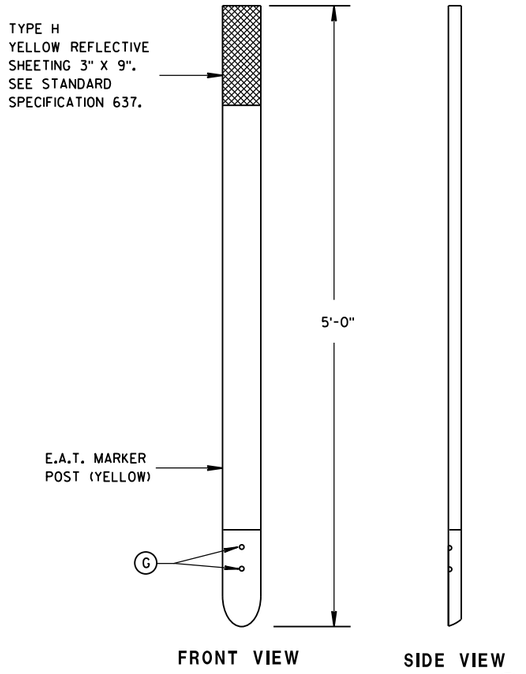
WOOD BLOCKOUT (4)

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





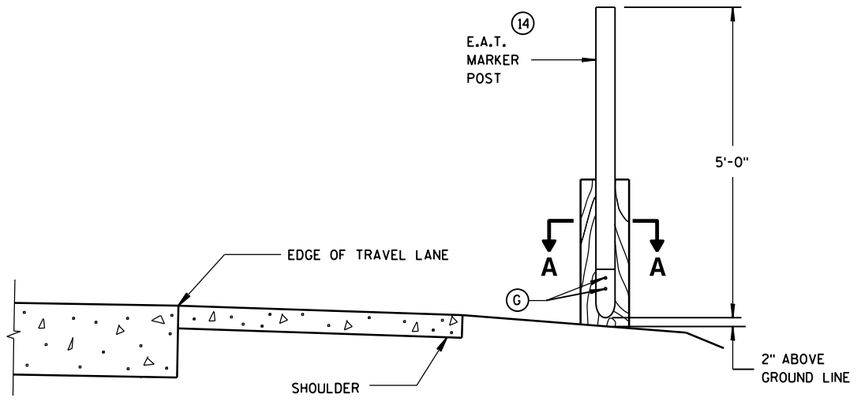
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

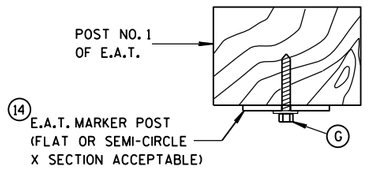
SIDE VIEW

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)

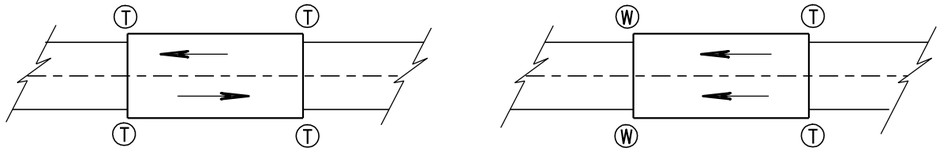
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

6

S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

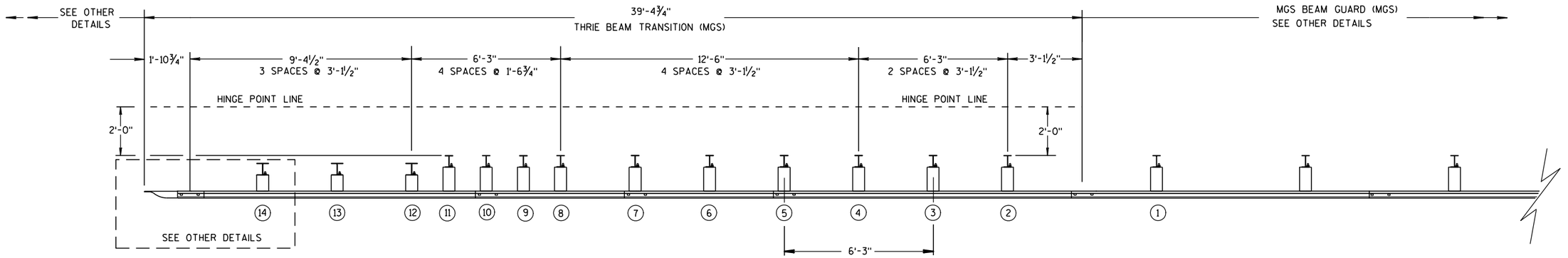
BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

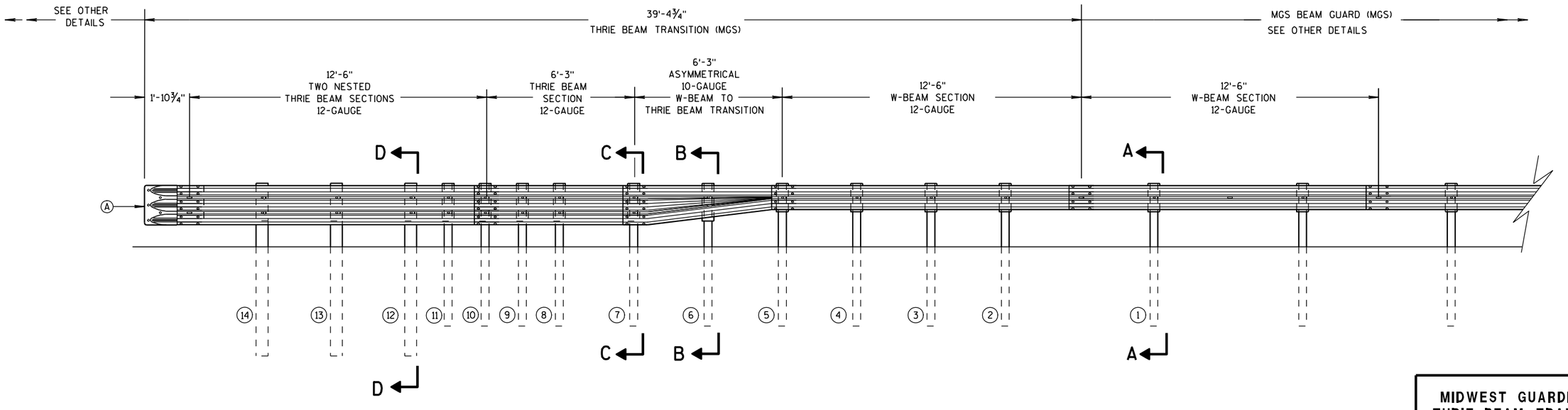
TRANSITION USES STEEL POSTS ONLY.

SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

Ⓐ BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

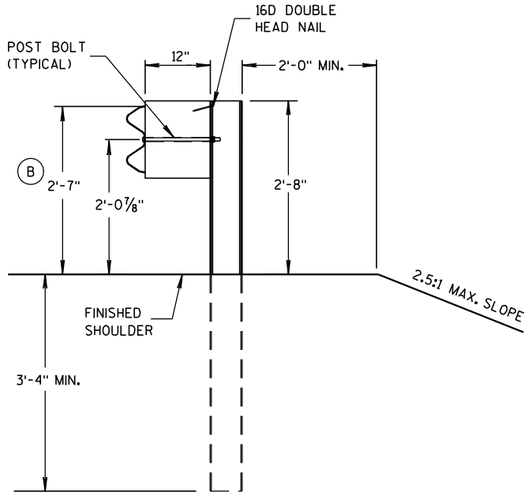
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3a

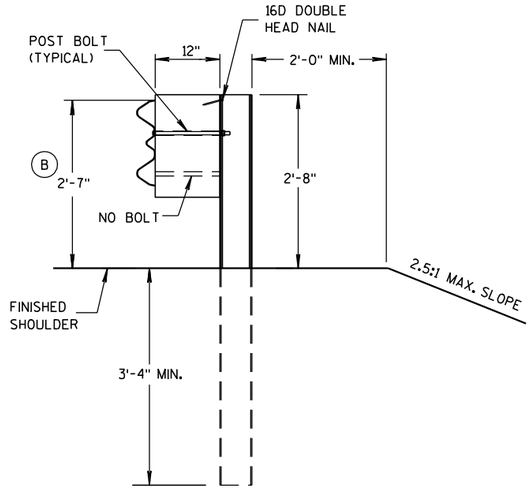
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



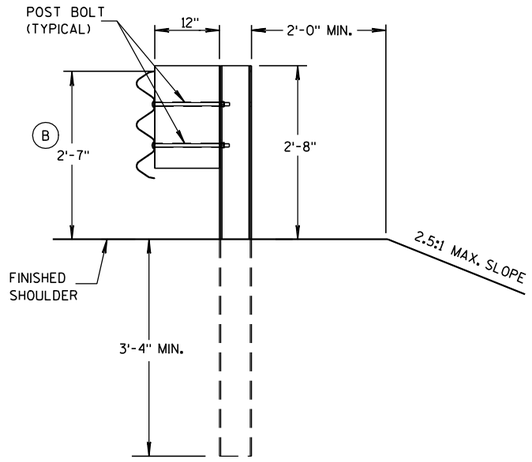
SECTION A-A

POSTS 1-5



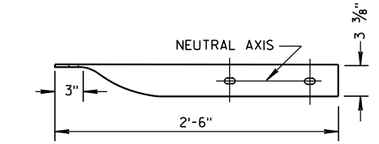
SECTION B-B

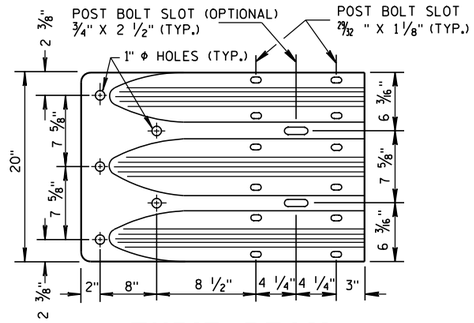
POST 6



SECTION C-C

POSTS 7-11

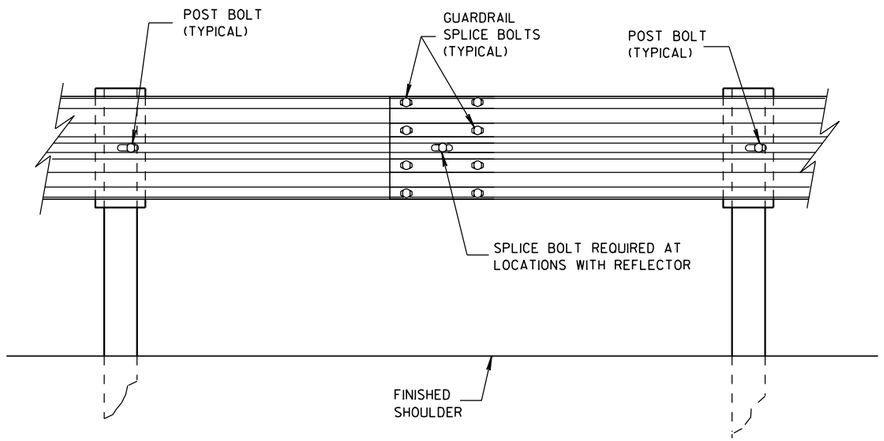




THRIE BEAM TERMINAL CONNECTOR

SECTION D-D

POSTS 12-14



SPLICE DETAIL

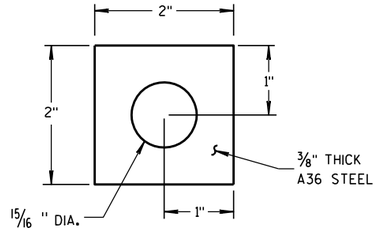
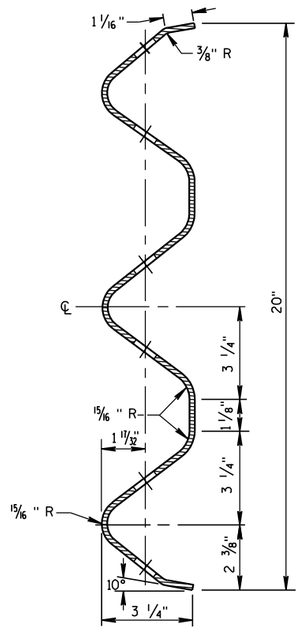


PLATE WASHER DETAIL

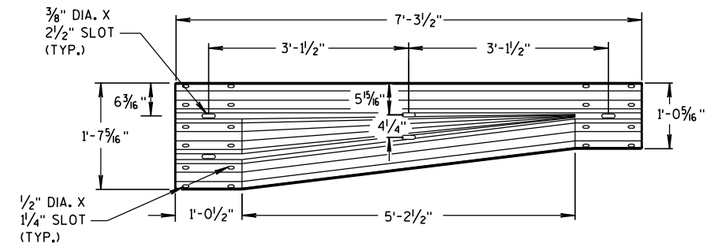


SECTION THRU THRIE BEAM RAIL ELEMENT

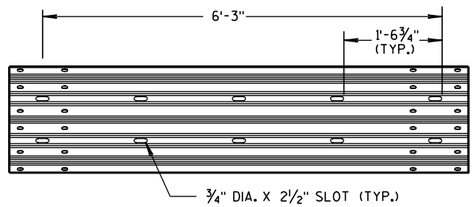
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

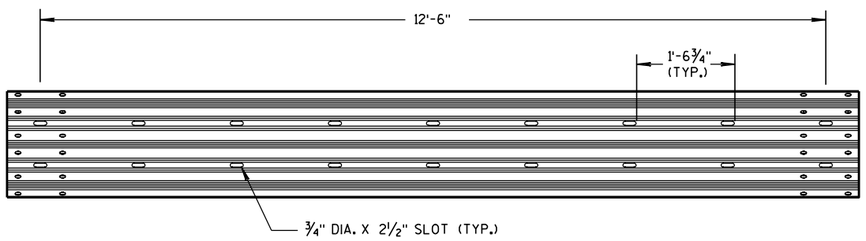
6
S.D.D. 14 B 45-3b



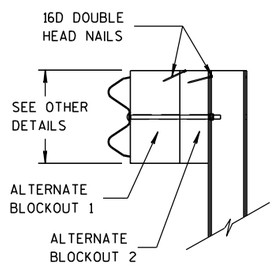
W-BEAM TO THRIE BEAM TRANSITION SECTION



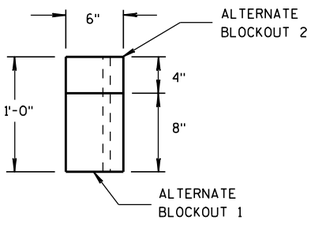
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

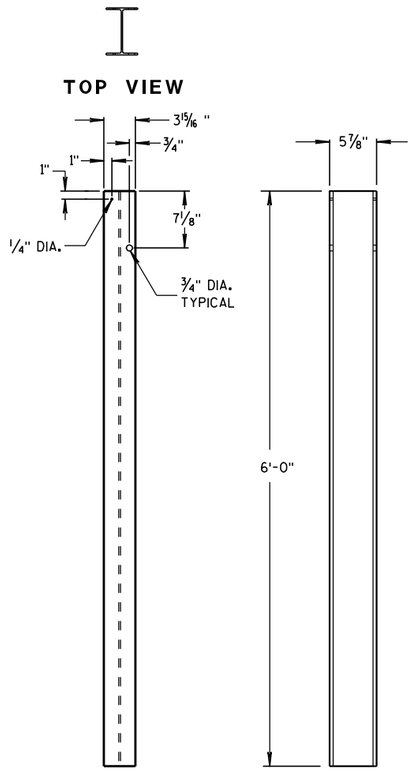


SIDE VIEW



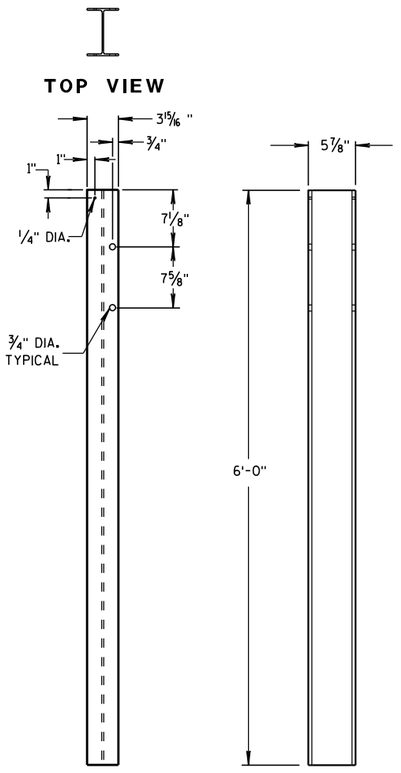
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



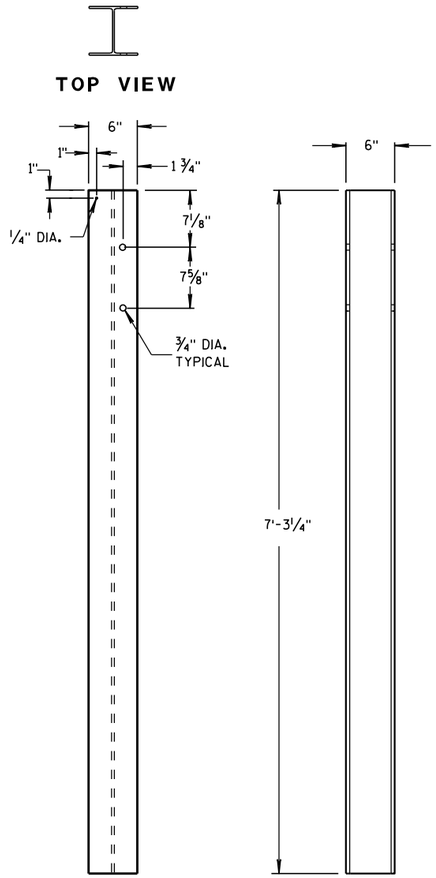
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5



FRONT VIEW SIDE VIEW

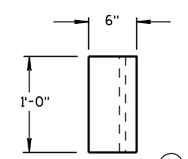
STEEL POSTS 6-11



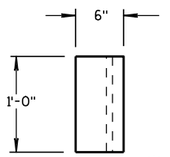
FRONT VIEW SIDE VIEW

STEEL POSTS 12-14

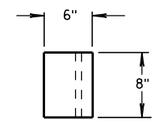
(1) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.



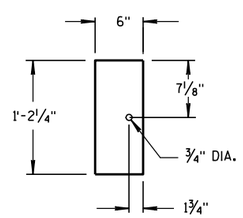
TOP VIEW (1)



TOP VIEW (1)

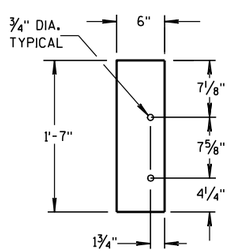


TOP VIEW



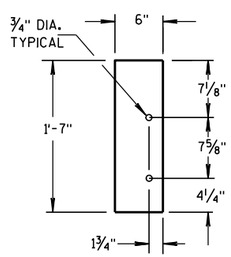
FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-11



FRONT VIEW

BLOCKOUT POSTS 12-14

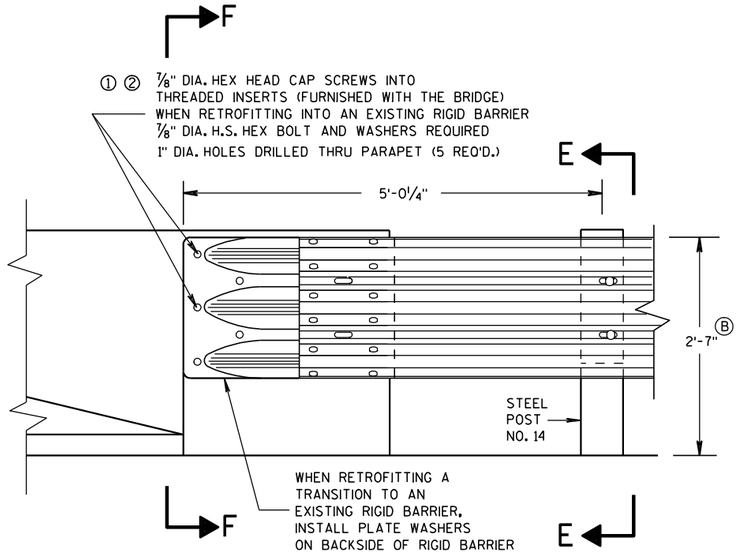
STEEL POST SIZES

POST NUMBER	SECTION TYPE	LENGTH
(1)	W6x9	72"
(2)	W6x9	72"
(3)	W6x9	72"
(4)	W6x9	72"
(5)	W6x9	72"
(6)	W6x9	72"
(7)	W6x9	72"
(8)	W6x9	72"
(9)	W6x9	72"
(10)	W6x9	72"
(11)	W6x9	72"
(12)	W6x15	87 1/8"
(13)	W6x15	87 1/8"
(14)	W6x15	87 1/8"

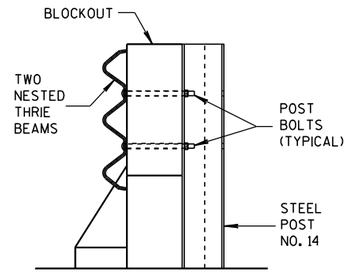
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 45-3c



FRONT VIEW



SECTION E-E

GENERAL NOTES

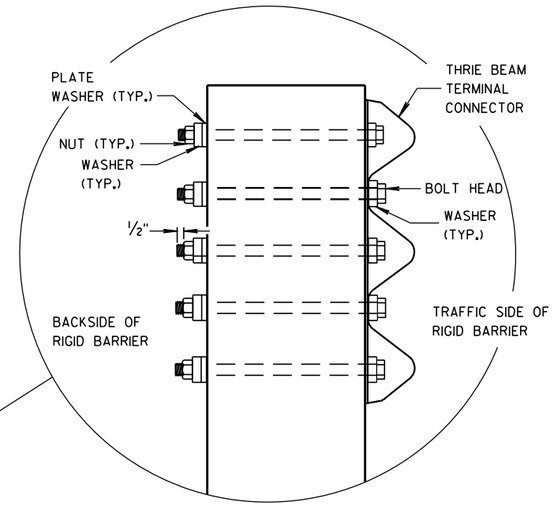
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

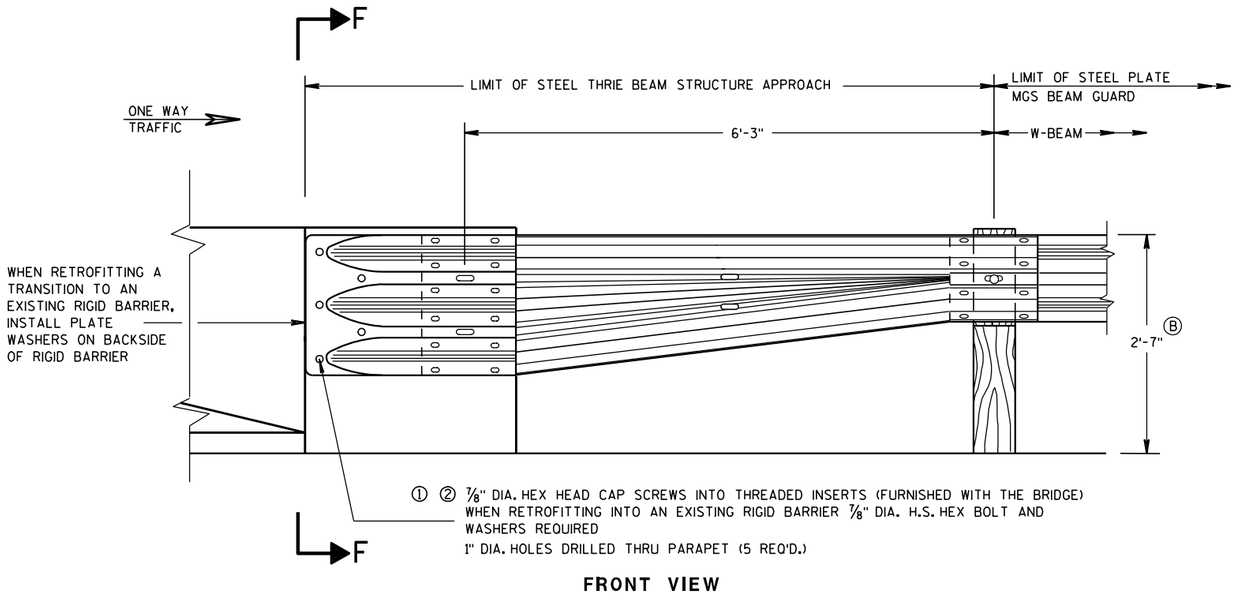
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

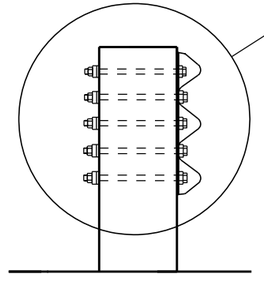
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



FRONT VIEW



SECTION F-F

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. [illegible] — ROADWAY STANDARDS [illegible] ENGINEER

FHWA

6
S.D.D. 14 B 45-3d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

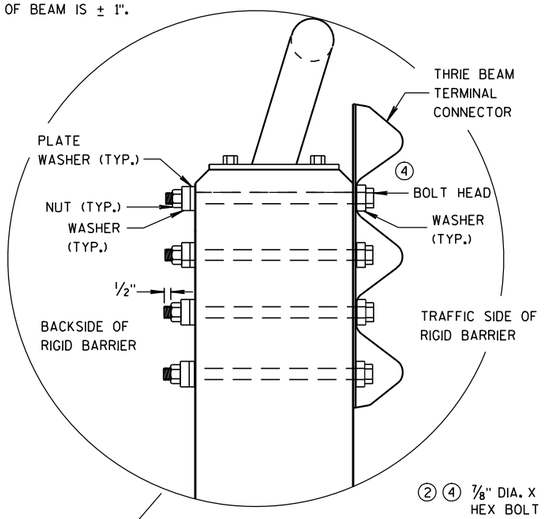
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

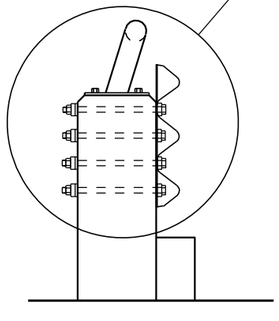
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2". BLOCK IS INCIDENTAL TO THE CONTRACT.

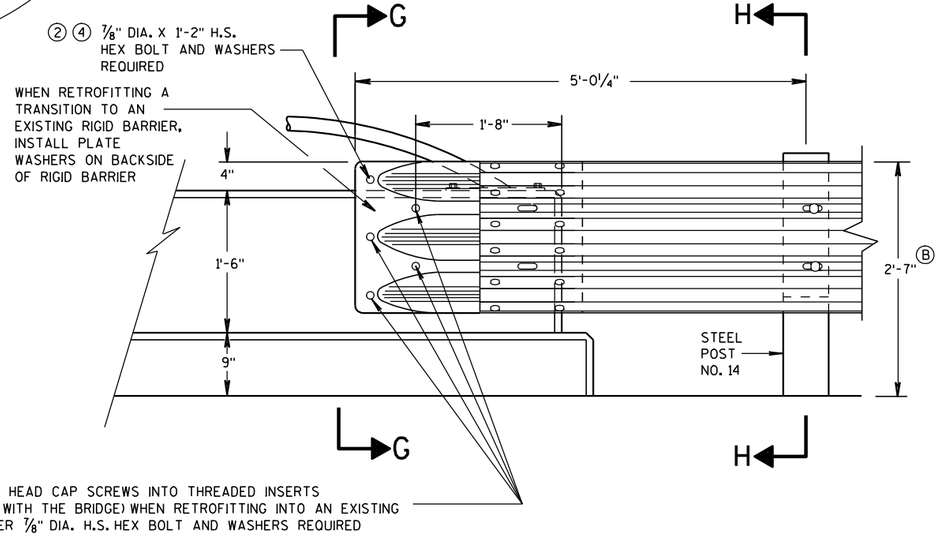
④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".

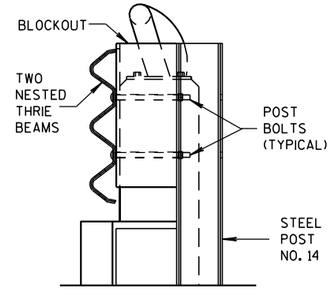




SECTION G-G

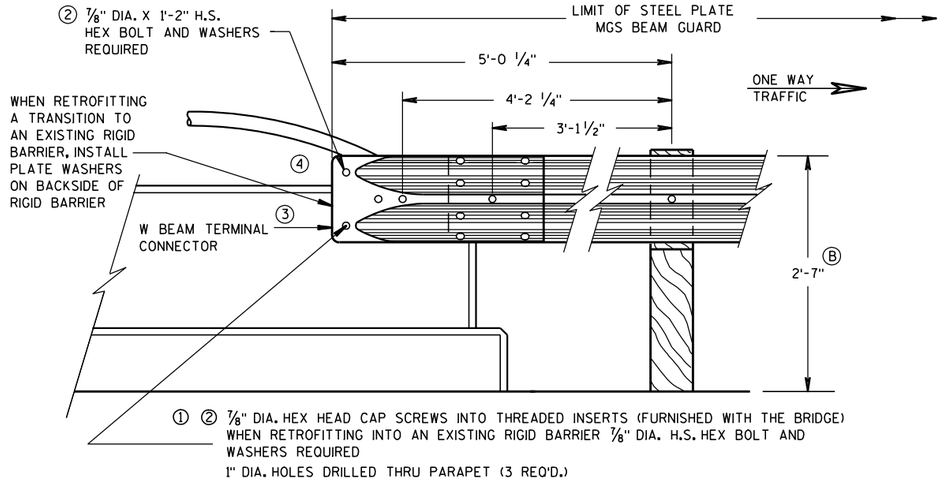


FRONT VIEW



SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-31-2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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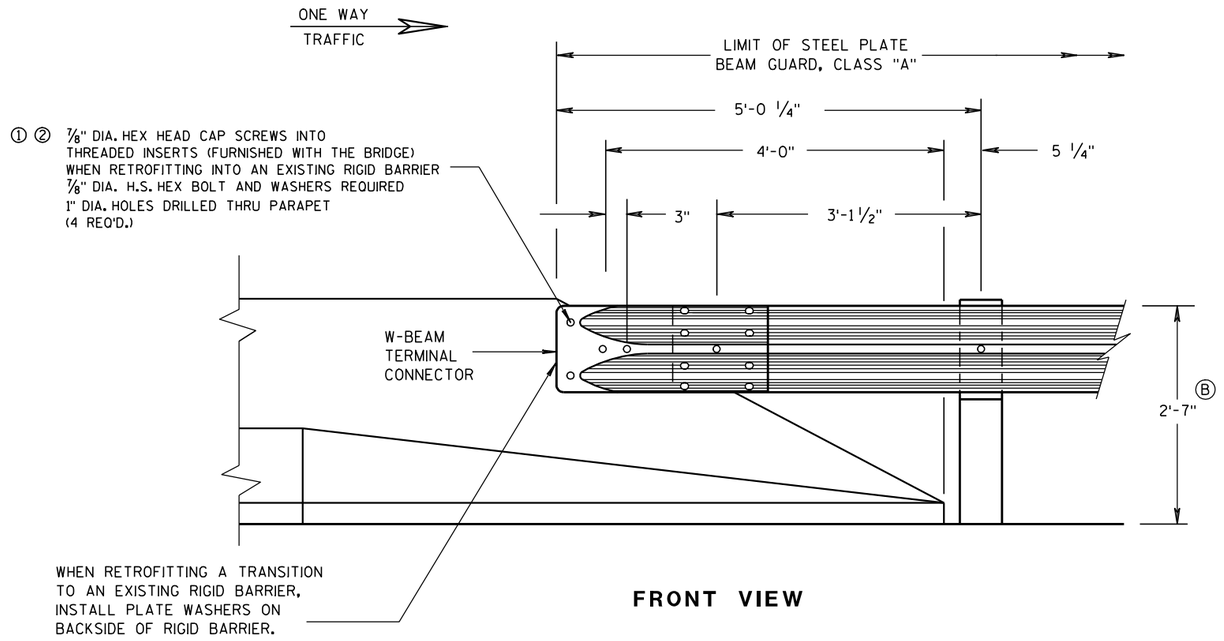
S.D.D. 14 B 45-3e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

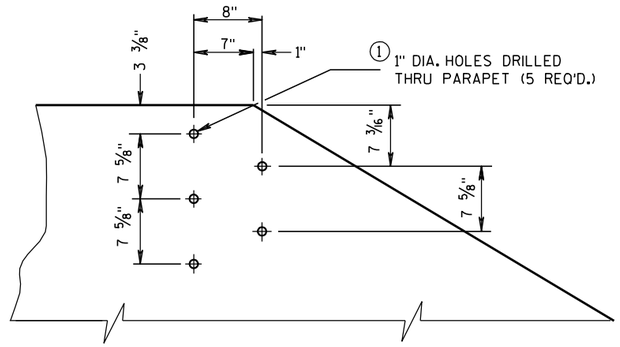
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

GENERAL NOTES

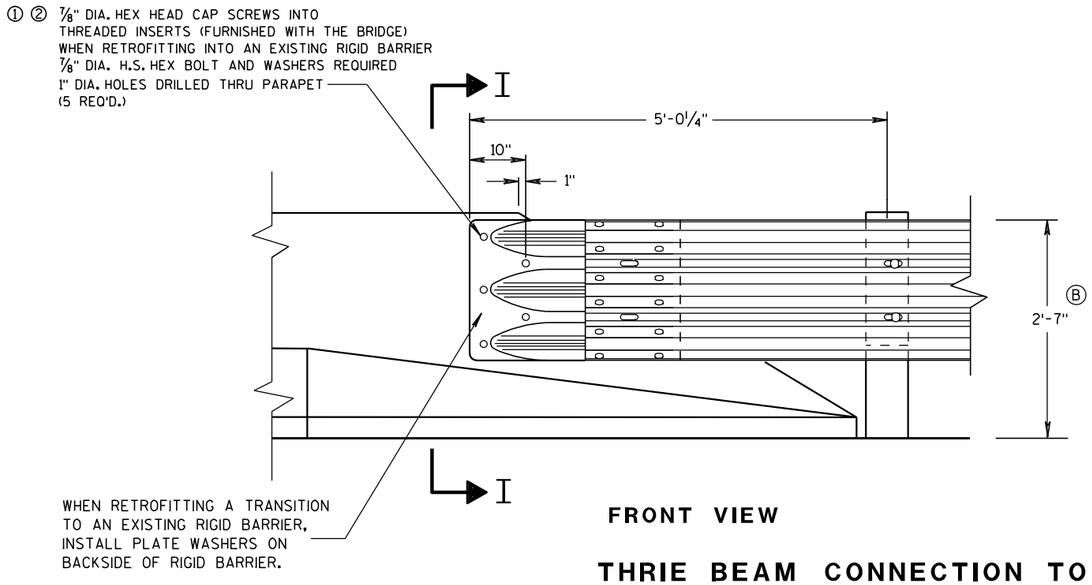
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

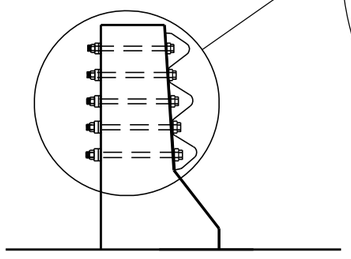
Ⓑ TOLERANCE FOR TOP OF BEAM IS ± 1".



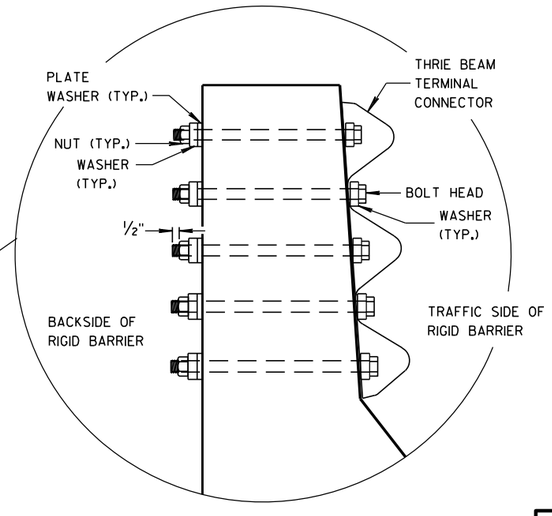
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012 — DATE

/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER

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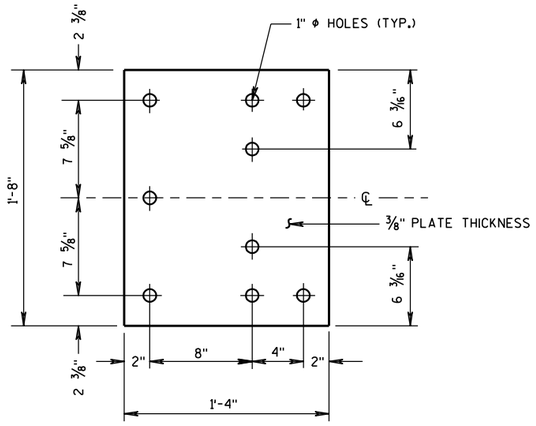
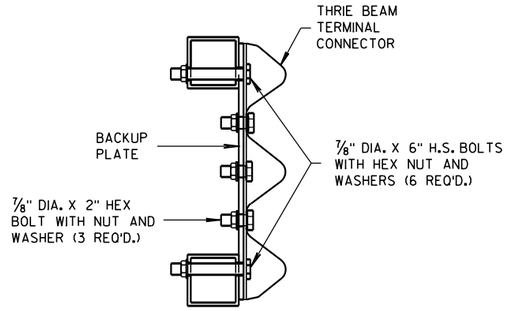


BACK-UP PLATE DETAIL

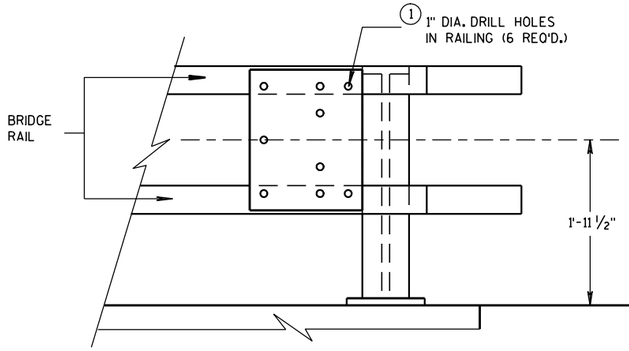


SECTION J-J

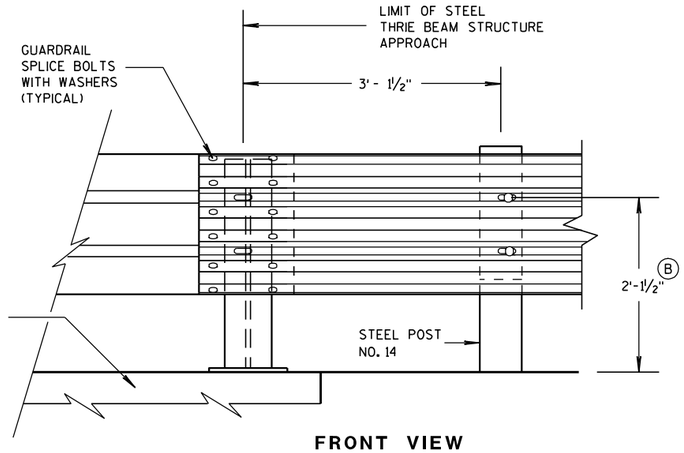
GENERAL NOTES

(1) DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(B) TOLERANCE FOR TOP OF BEAM IS ± 1".

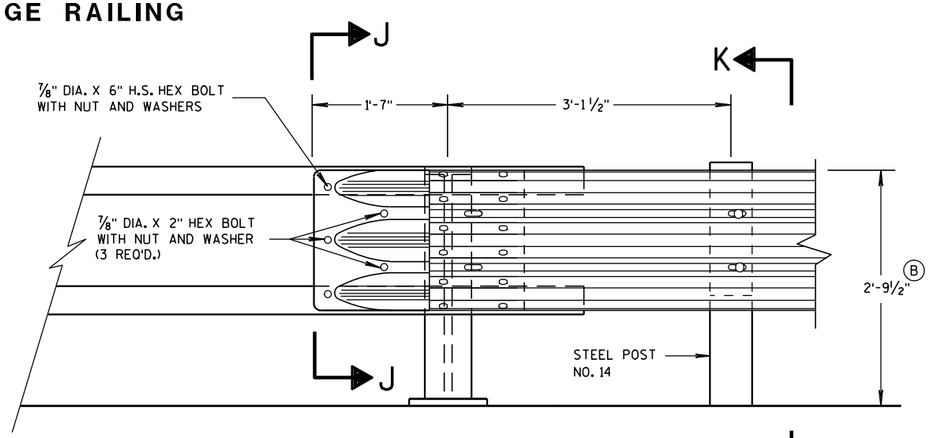


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

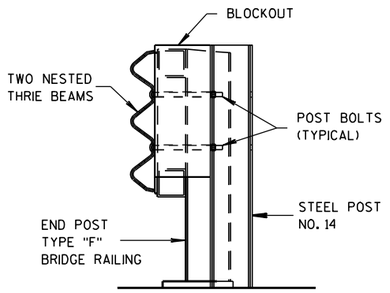


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/31/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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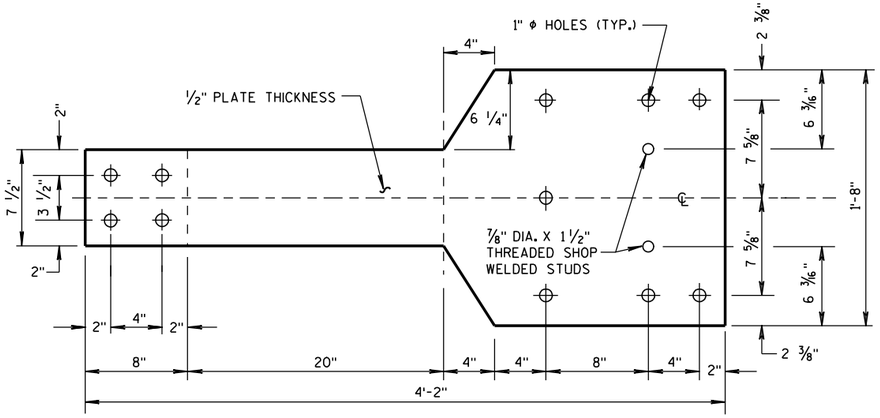
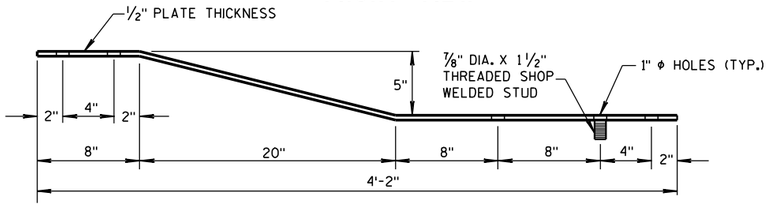
GENERAL NOTES

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

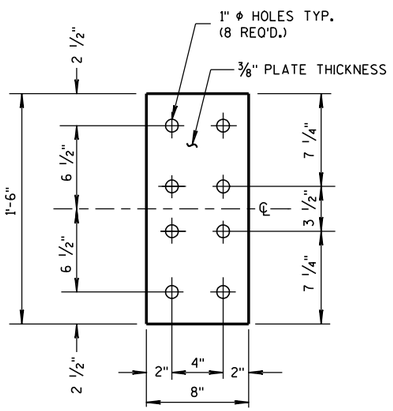


FRONT VIEW



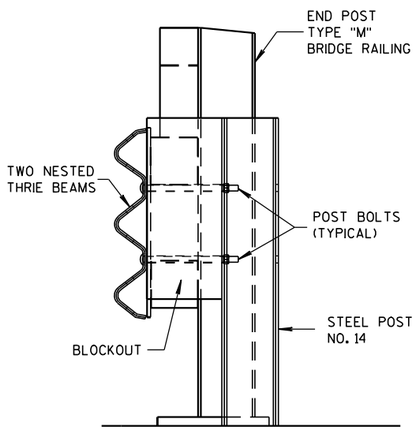
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

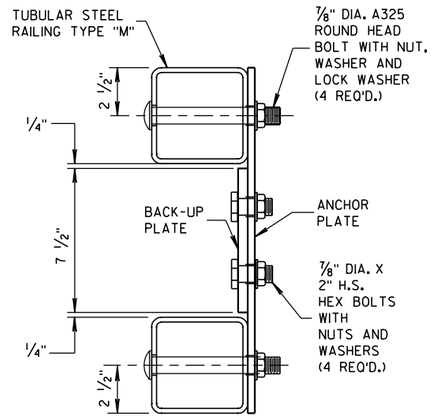


FRONT VIEW

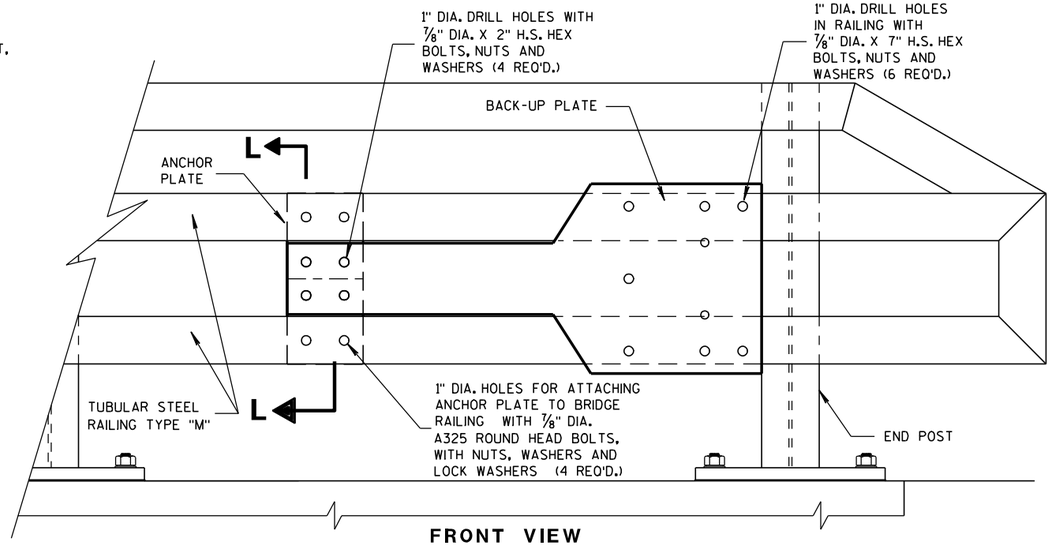
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

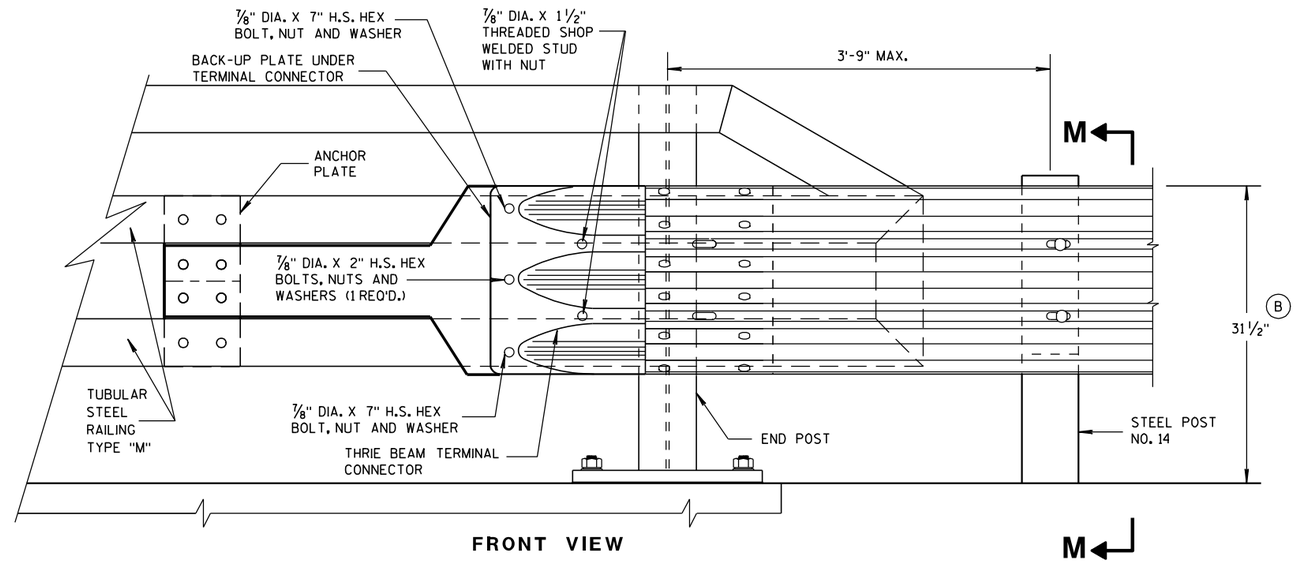


SECTION L-L

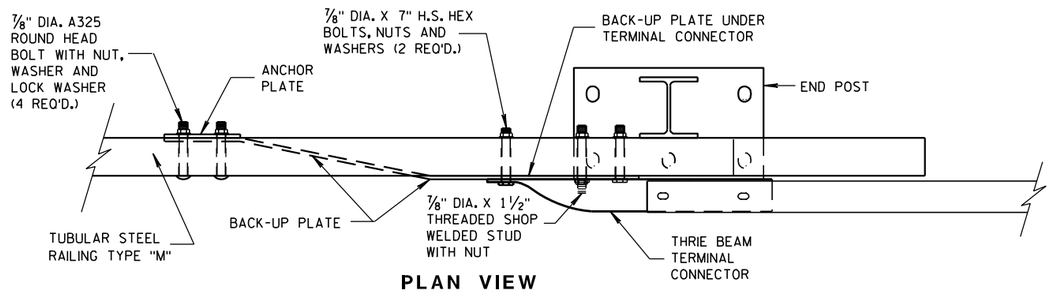


FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8-31-2012 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA ENT

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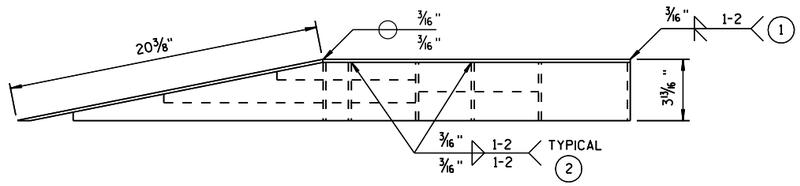

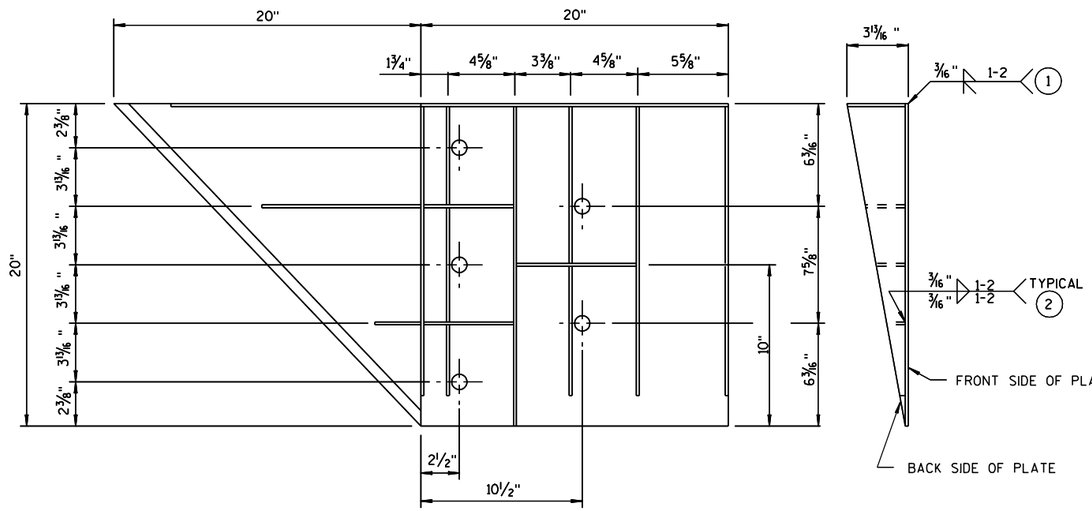

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(2) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

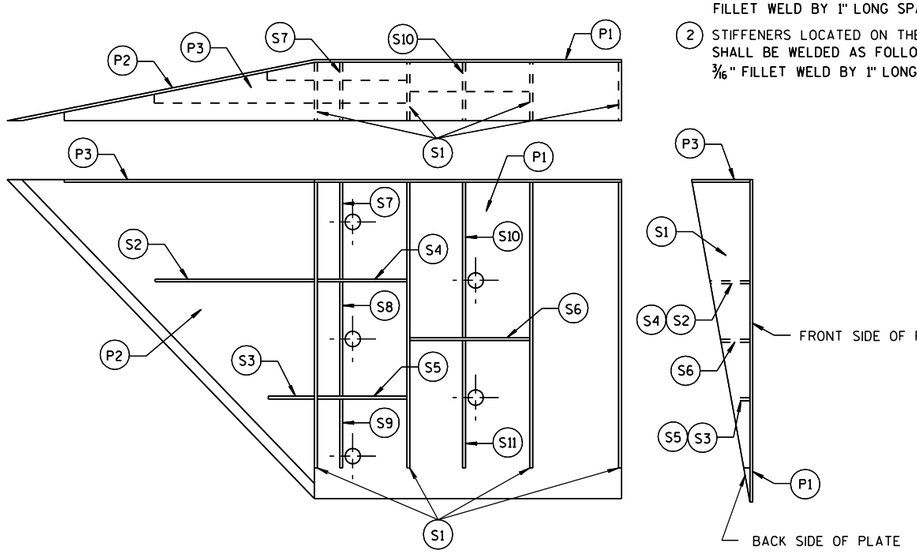

PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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8/31/2012
DATE
/S/ Jerry H ...
ROADWAY STANDARDS ENGINEER
FHWA

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S.D.D. 14 B 45-3i

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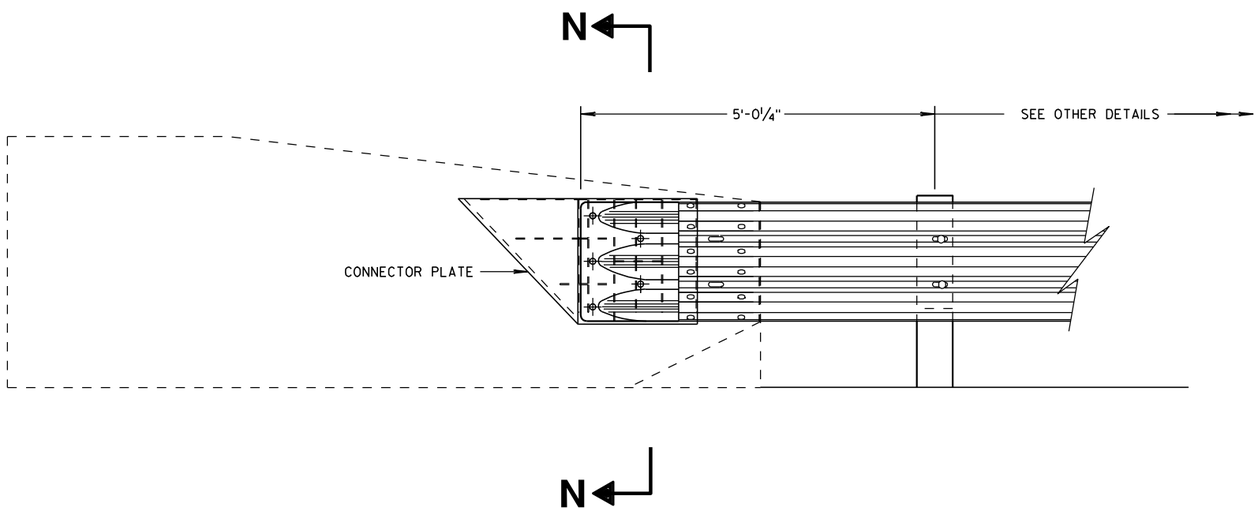
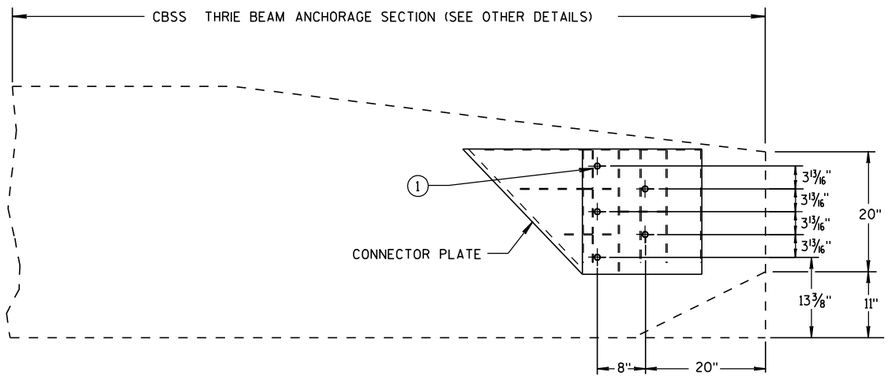
S.D.D. 14 B 45-3i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

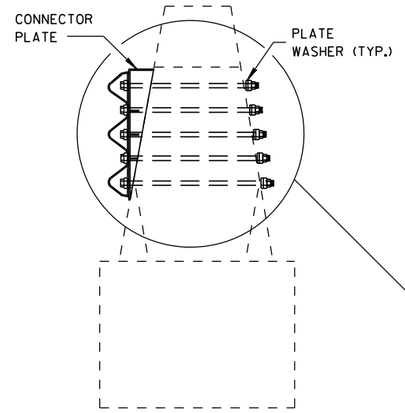


SINGLE SLOPE CONNECTION PLATE PLACEMENT

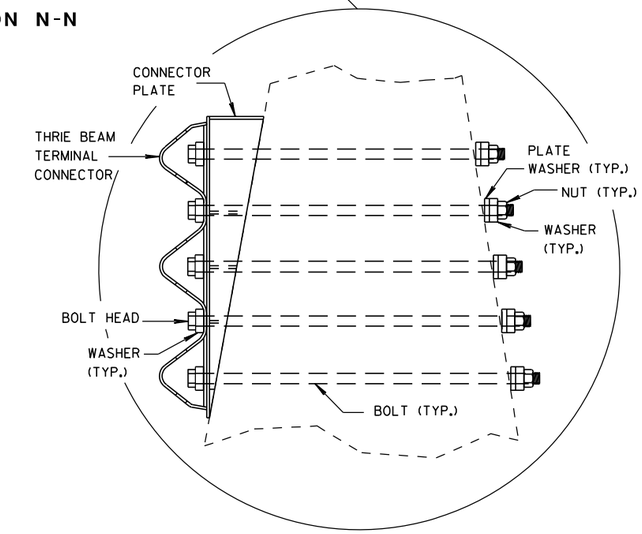
GENERAL NOTES

CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(1) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/31/2012
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS [illegible] ENGINEER

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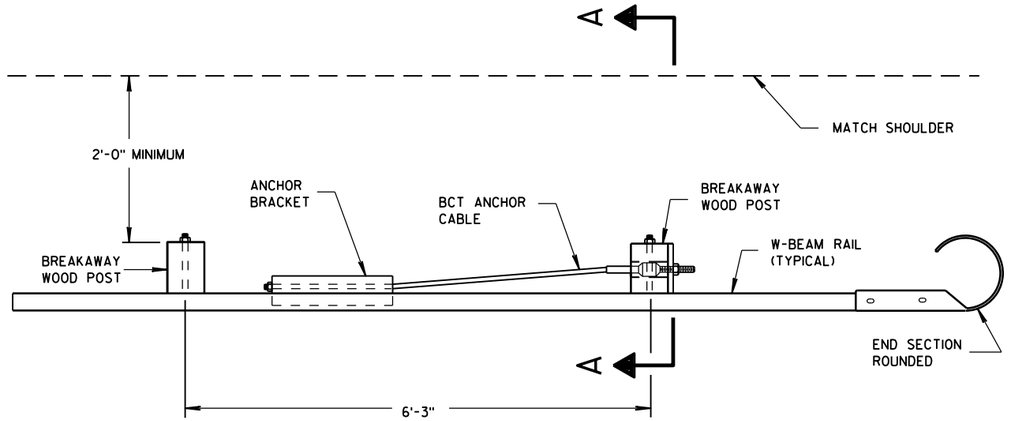
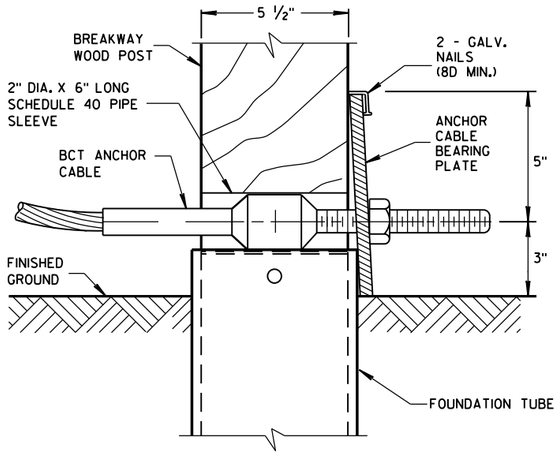


PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

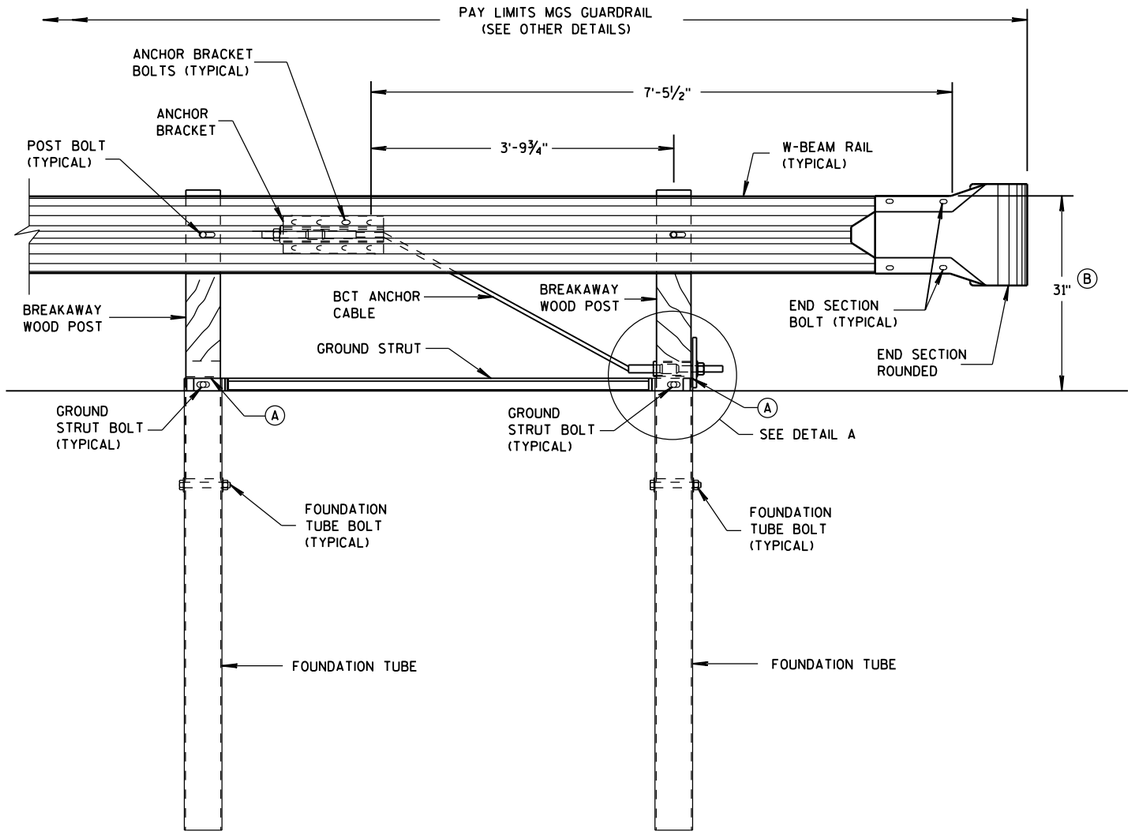
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

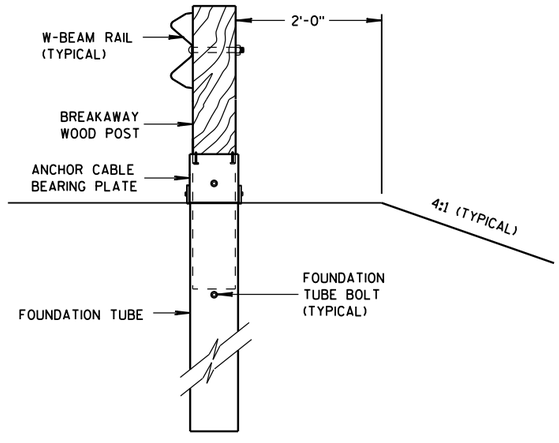
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

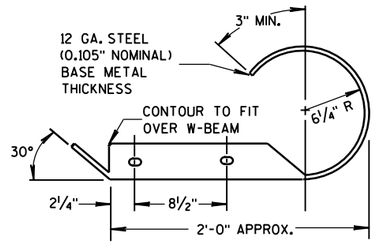


FRONT VIEW

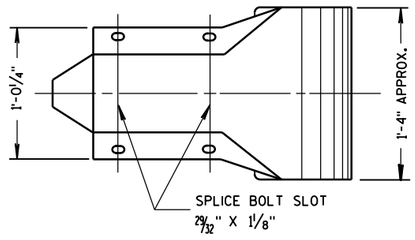
END RAIL DETAIL



SECTION A-A



PLAN VIEW



FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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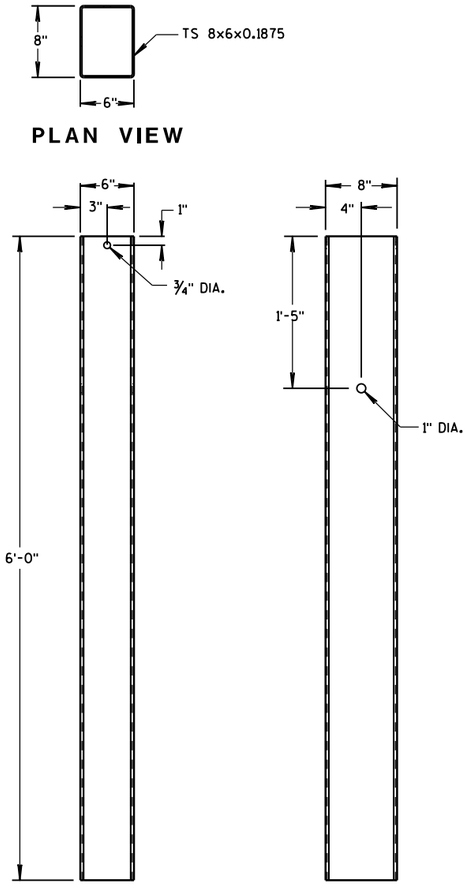
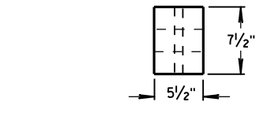
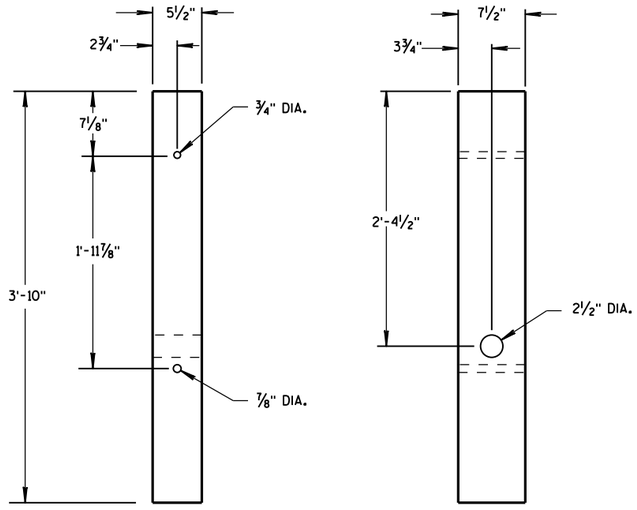
S.D.D. 14 B 47-2a



FOUNDATION TUBE

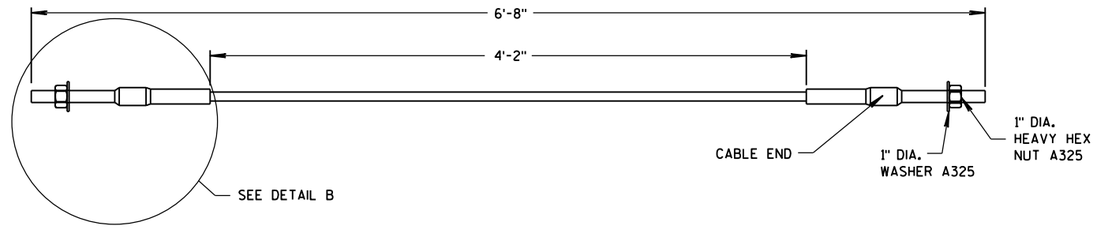




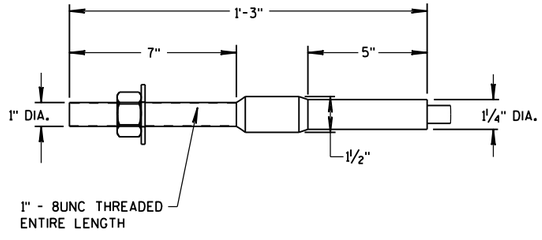
BREAKAWAY WOOD POST

GENERAL NOTES

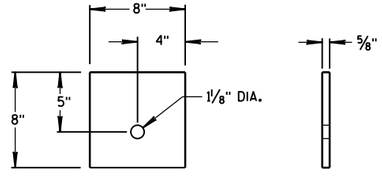
BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



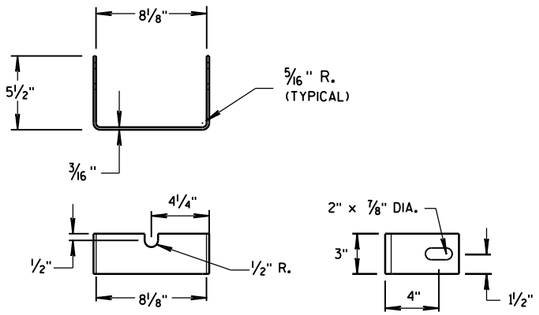
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

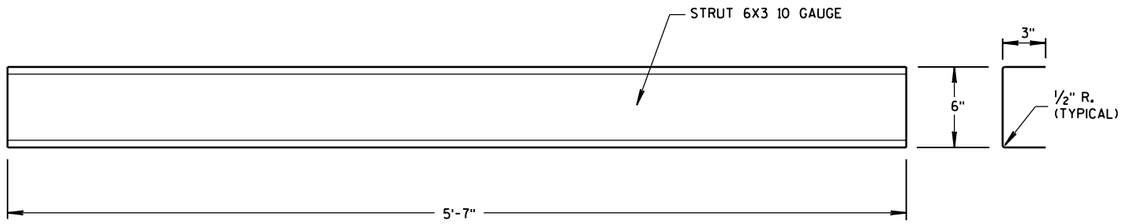
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

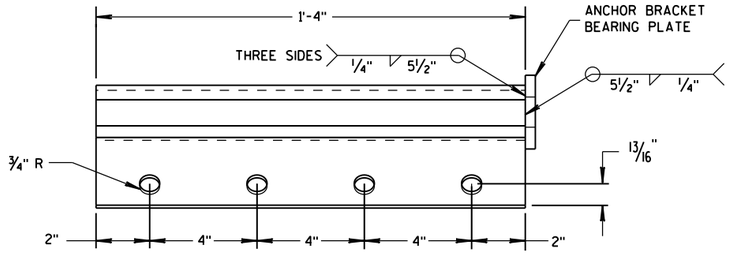
S.D.D. 14 B 47-2b

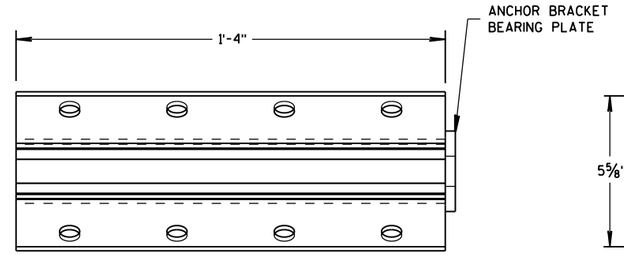


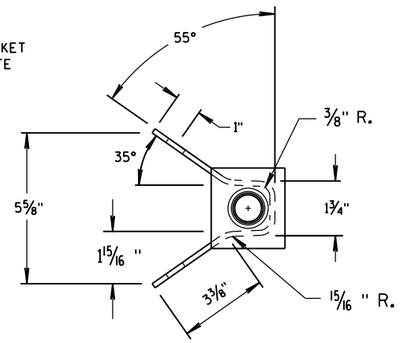
YOKE DETAIL



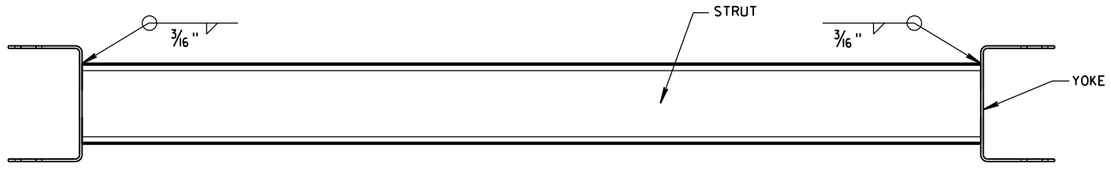
STRUT DETAIL



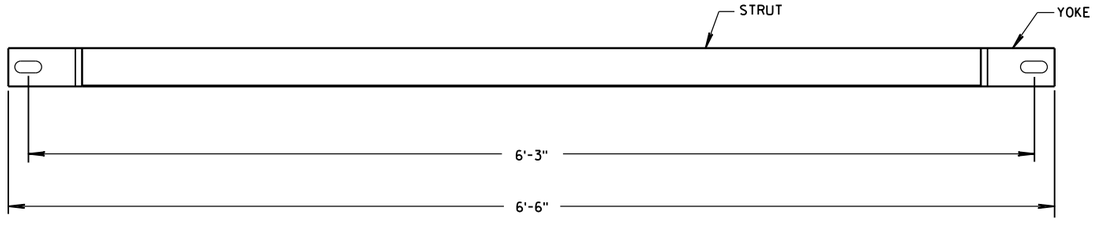




ANCHOR BRACKET

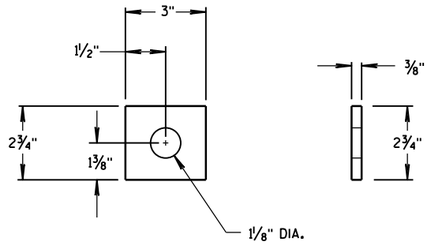


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

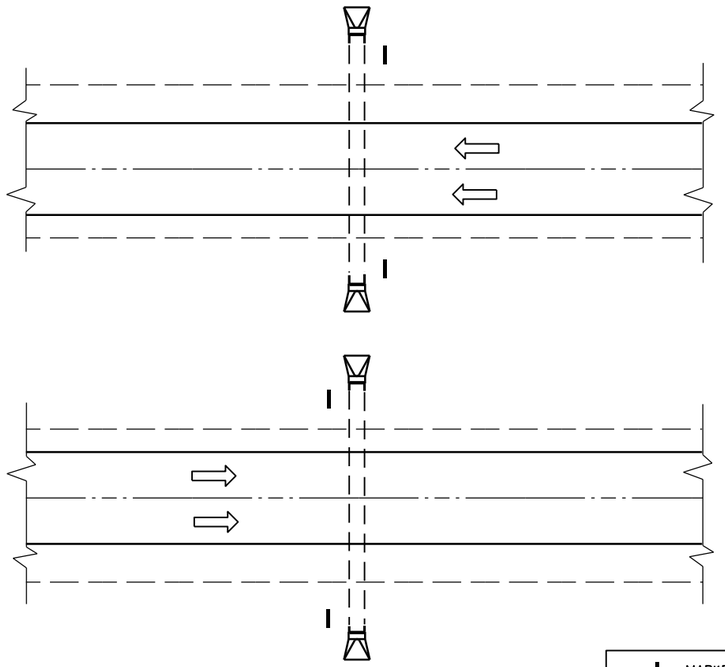
APPROVED
June 2014
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

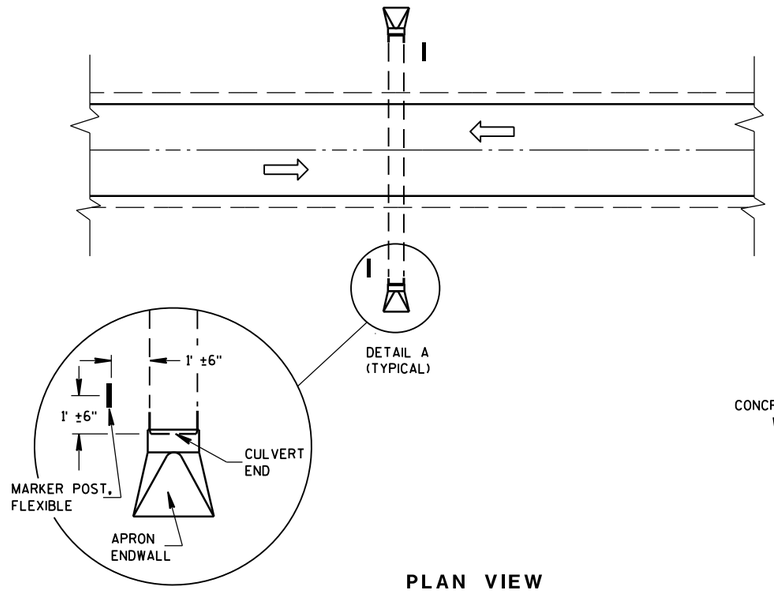
6

S.D.D. 14 B 47-2c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

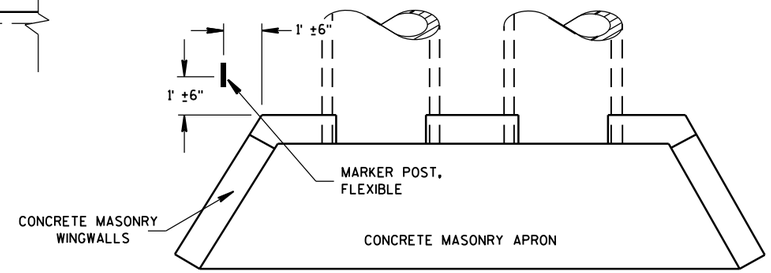
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

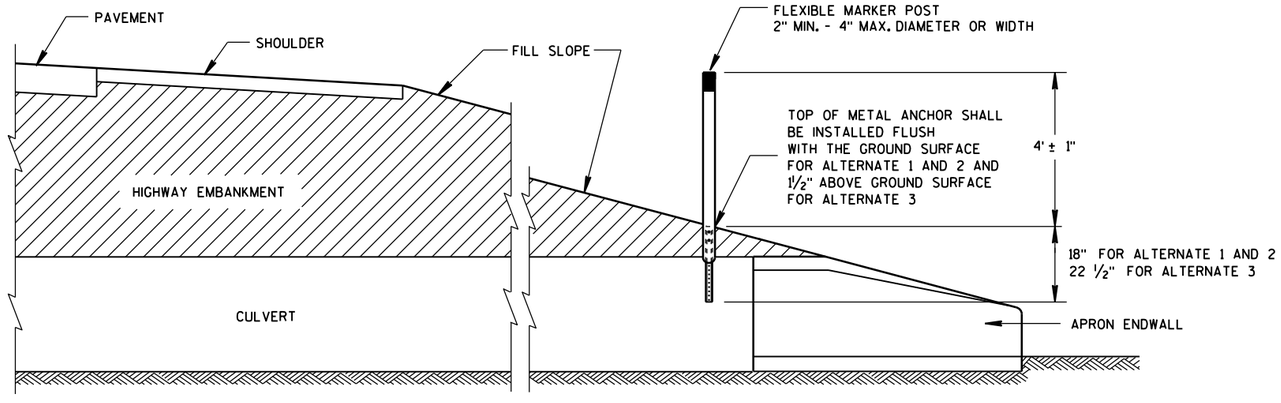
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

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 TRANSPOI

6

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

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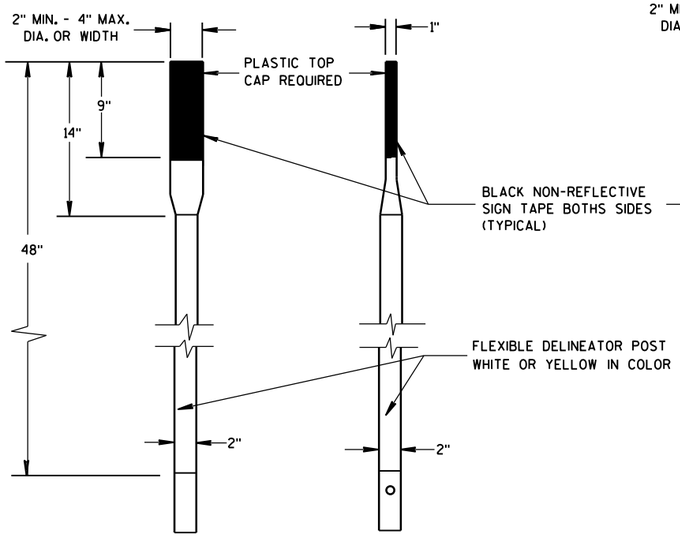
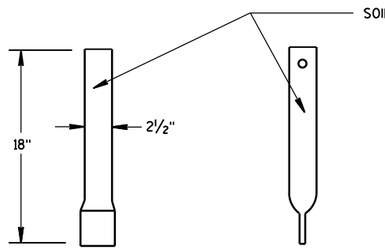
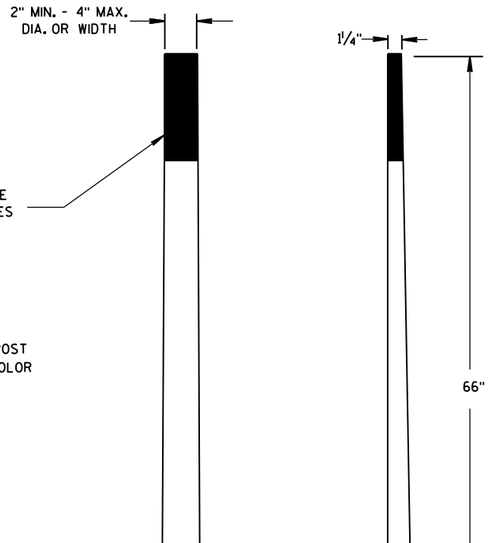
S.D.D. 15 A 3-2a





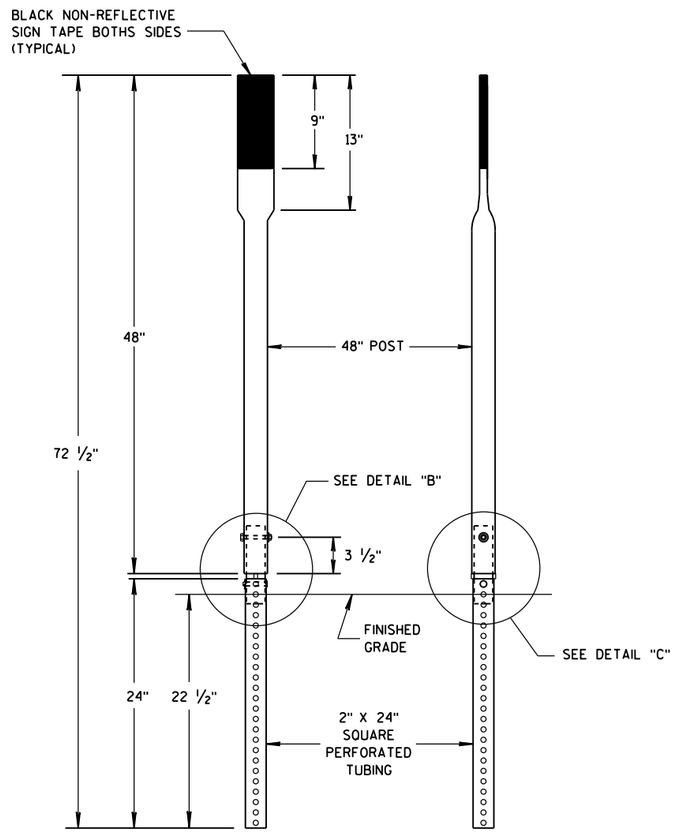
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

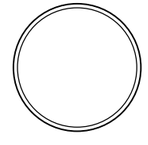
ALTERNATE 2



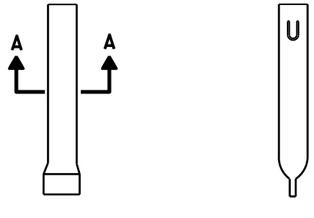
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

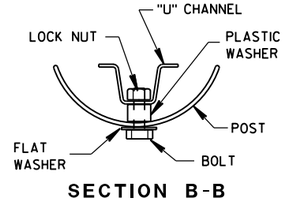


SECTION A-A

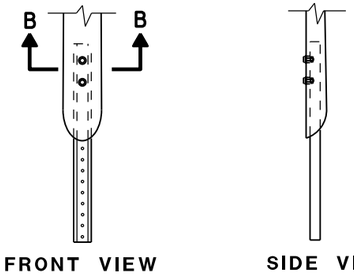


FRONT VIEW SIDE VIEW

ALTERNATE 1

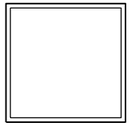


SECTION B-B

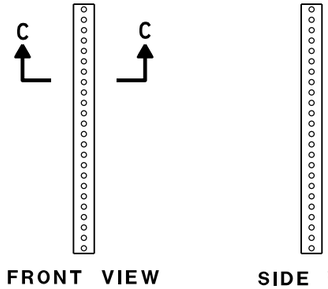


FRONT VIEW SIDE VIEW

ALTERNATE 2



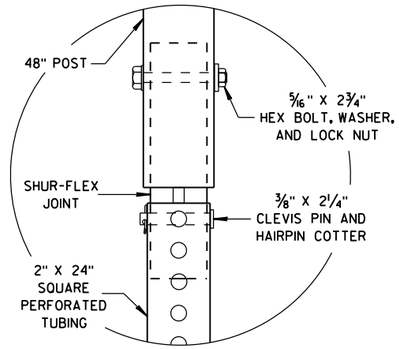
SECTION C-C



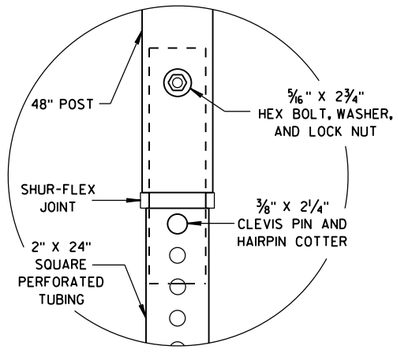
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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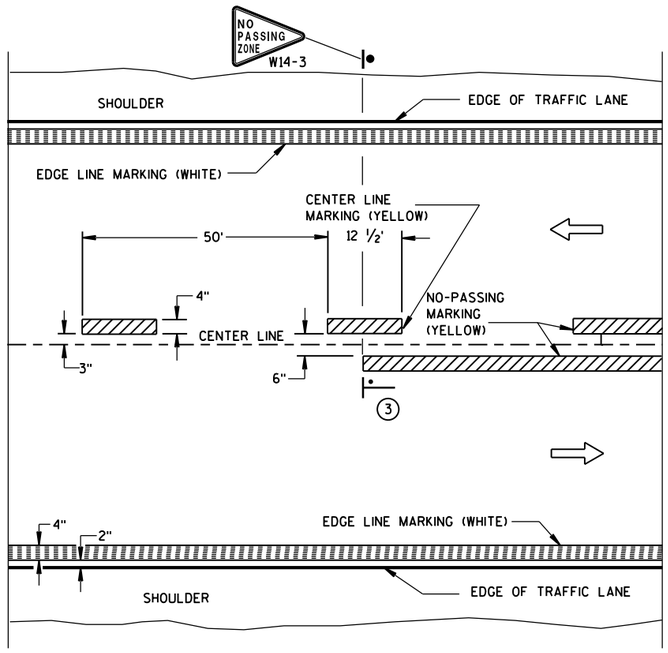
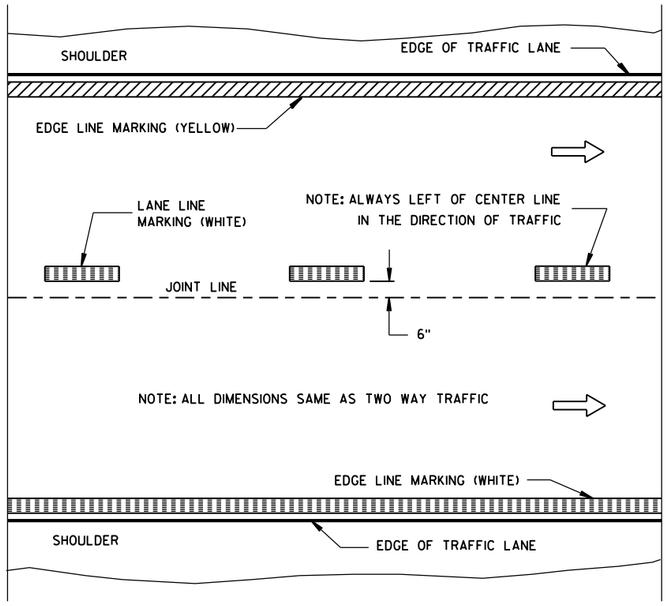
S.D.D. 15 A 3-2b

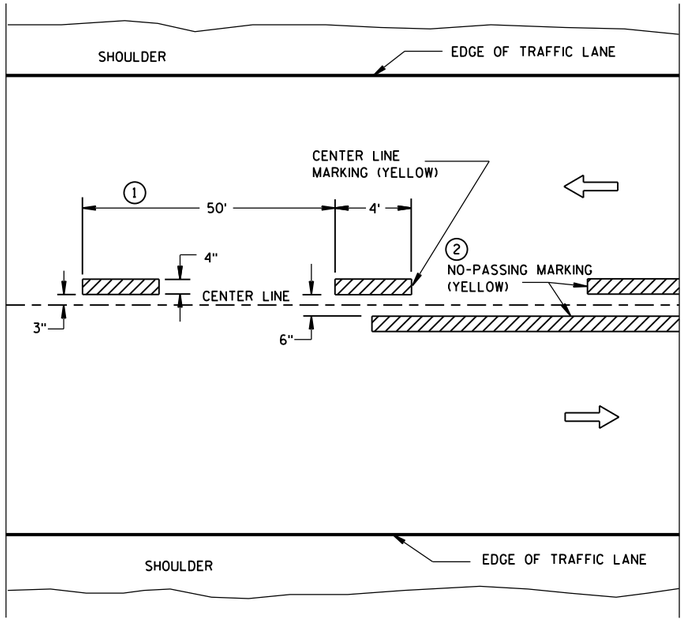


TWO WAY TRAFFIC

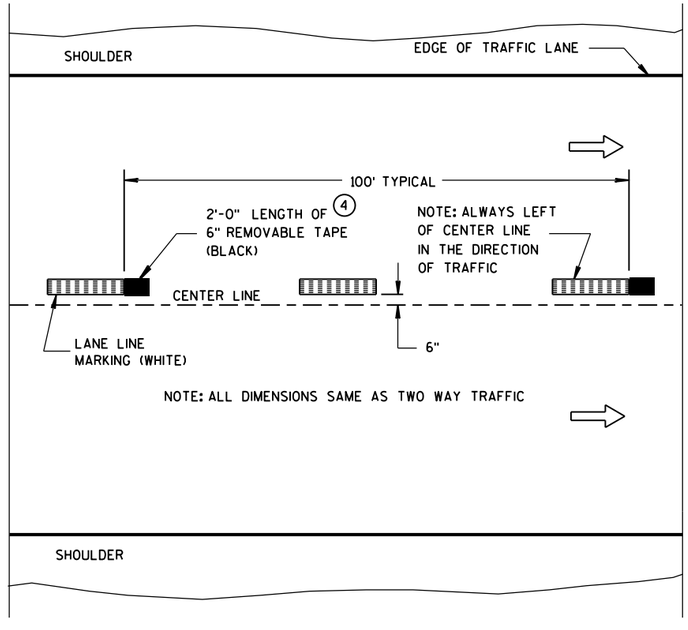


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

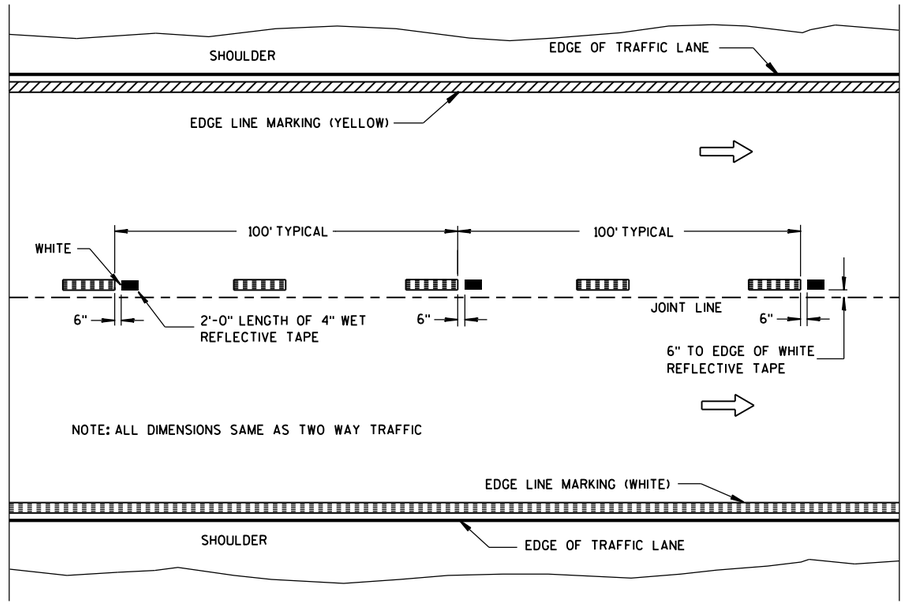
GENERAL NOTES

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

5-13-2013
DATE

/S/ Travis Feltes
STATE TRAFFIC E

FHWA

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S.D.D. 15 C 8-16a

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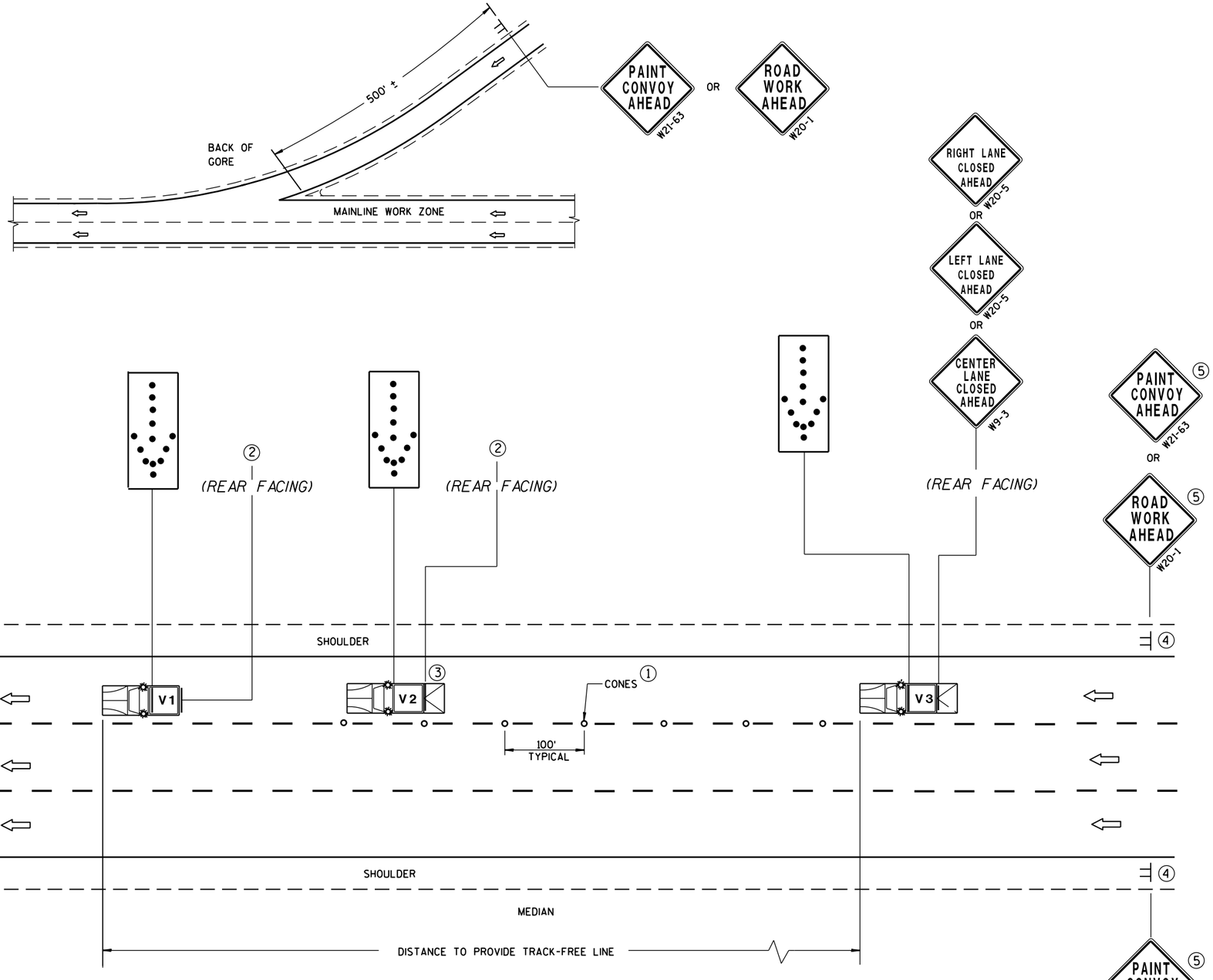
S.D.D. 15 C 8-16a



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED AFTER EVERY ON RAMP OR EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (MERGE)

MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/3/2013 DATE

/S/ Travis Feltes STATE TRAFFIC EN

FHWA

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S.D.D. 15 C 19-2c

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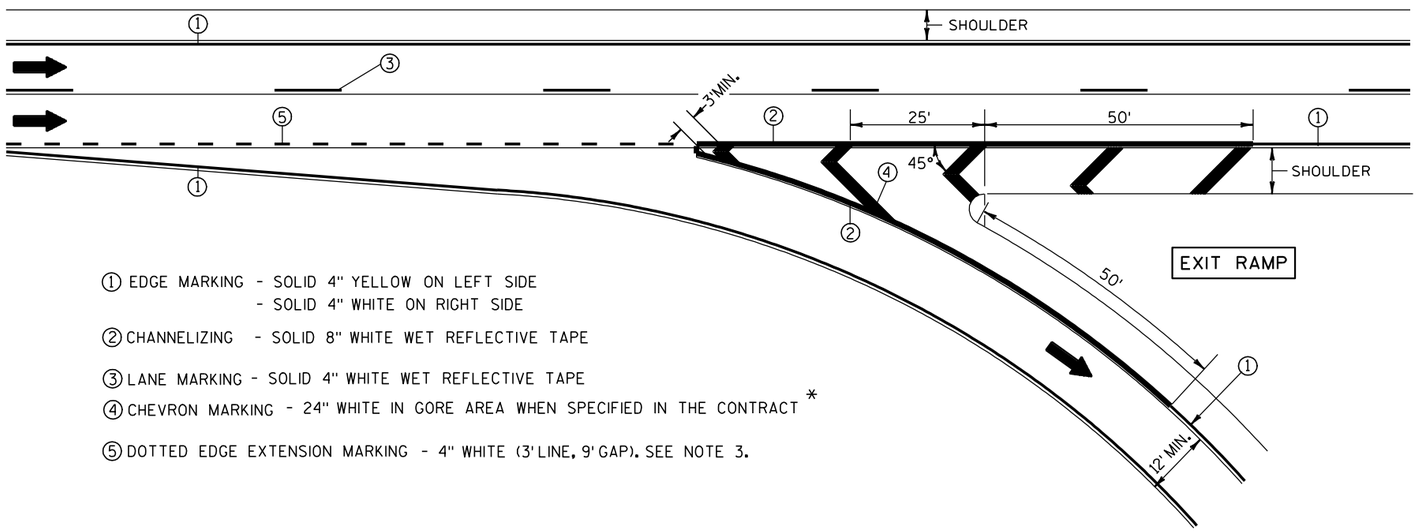
S.D.D. 15 C 19-2c



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

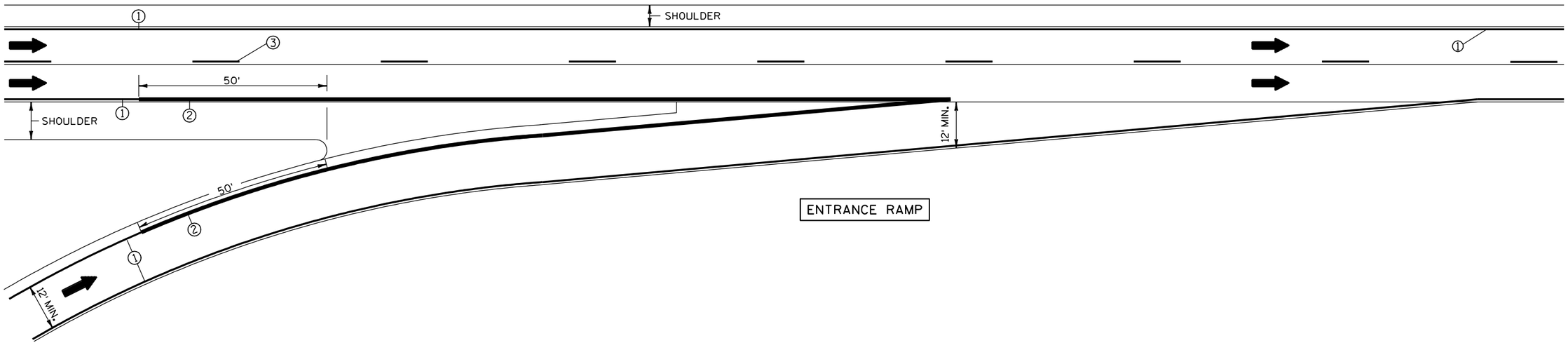
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

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

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



6

S.D.D. 15 C 31-1a

PAVEMENT MARKING (RAMPS AND GORES)

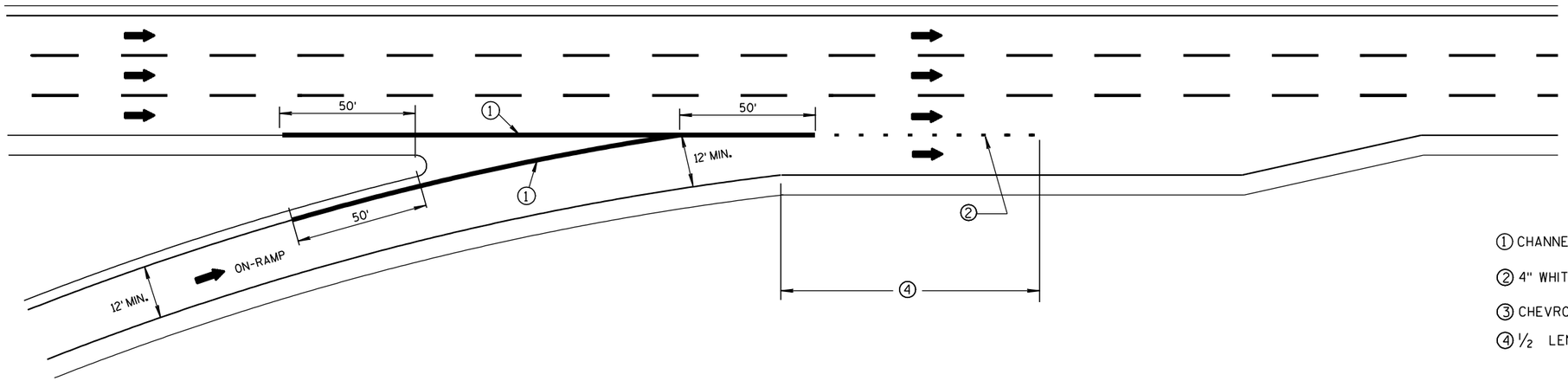
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 15 C 31-1a

NOTES:

1. AHEAD ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
3. RETRACE EXISTING DIAGONAL MARKINGS.



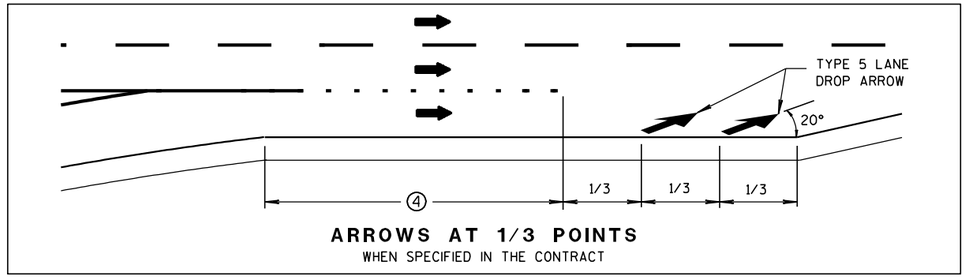
① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE IN GORE AREA.

② 4" WHITE (3' LINE, 9' GAP).

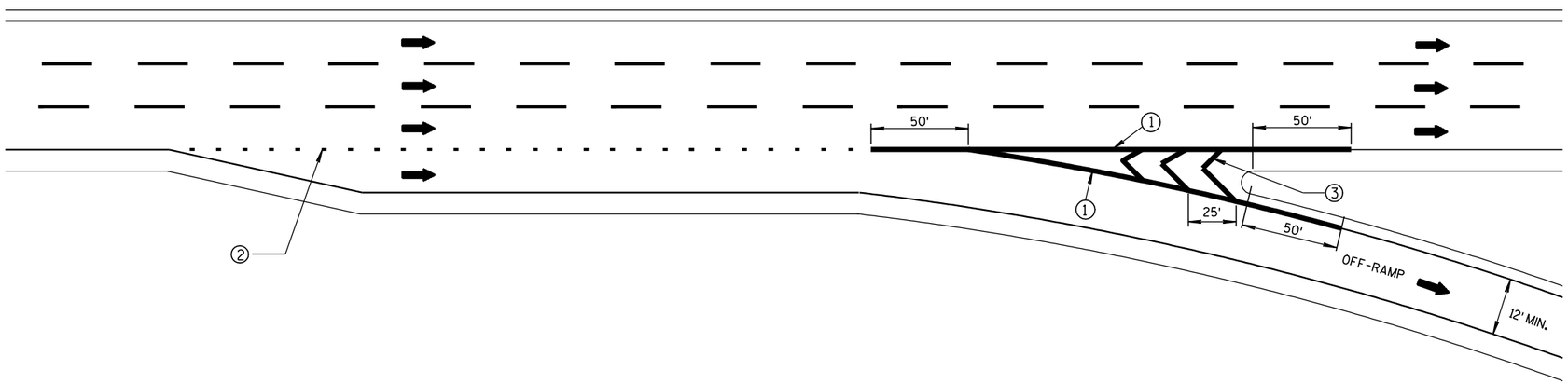
③ CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

④ ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP



ARROWS AT 1/3 POINTS
WHEN SPECIFIED IN THE CONTRACT



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/23/2011 DATE
/S/ Thomas N. Nothem STATE TRAFFIC ENGINE 206 SIGN
FHWA

6
S.D.D. 15 C 31-1d

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

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.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

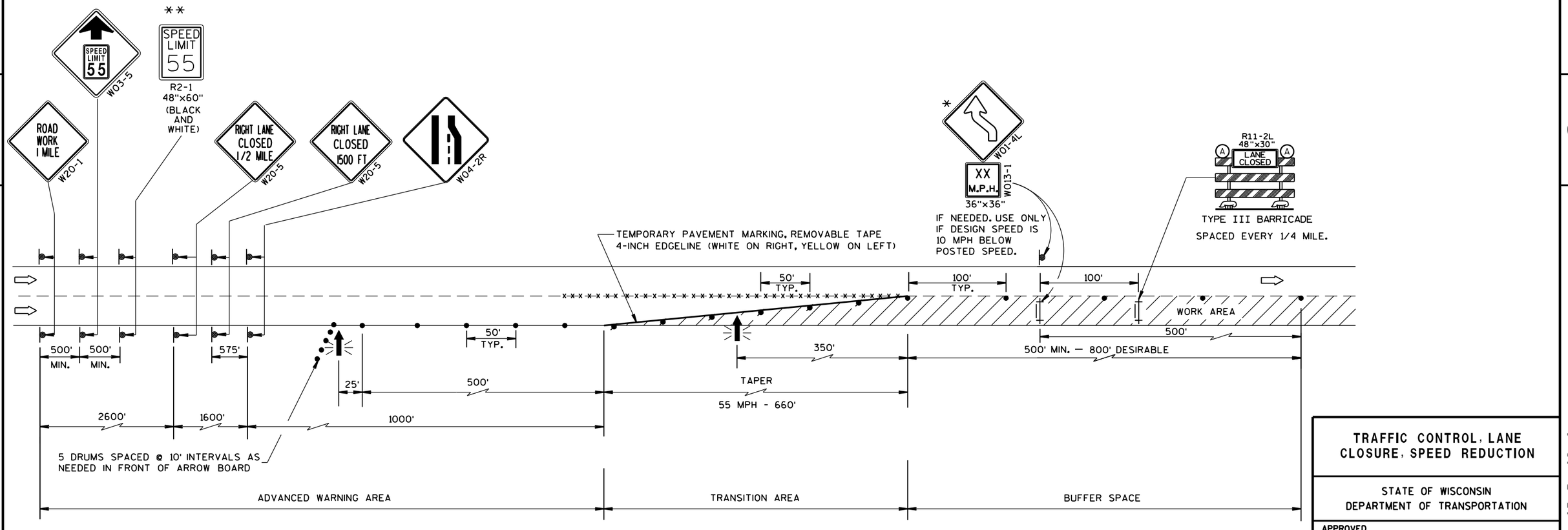
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A 65 MPH RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



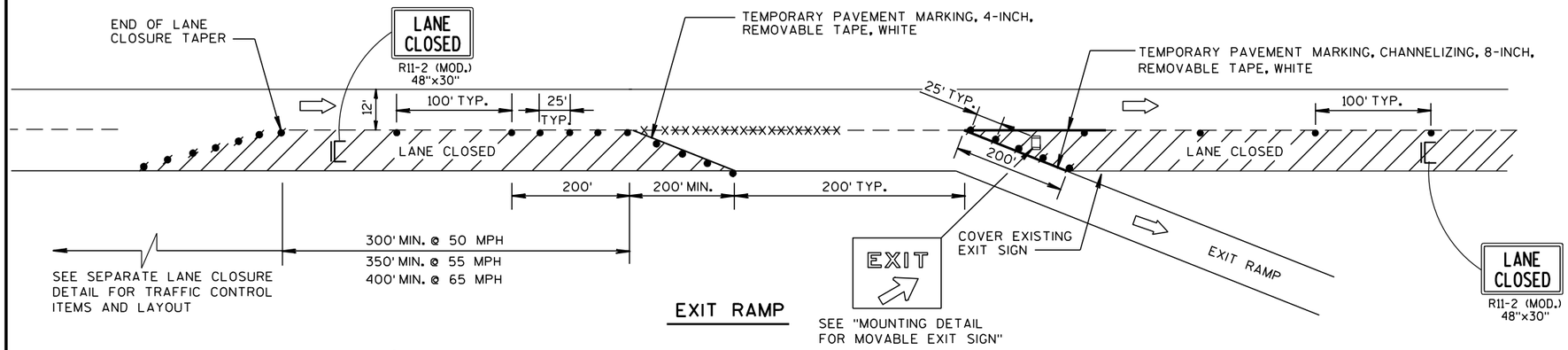
TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

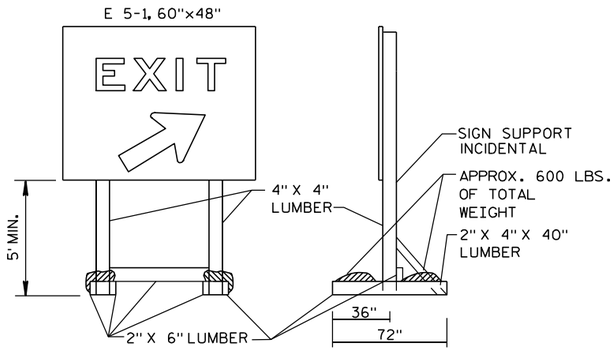
APPROVED
3-2014 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

S.D.D. 15 D 12-4

S.D.D. 15 D 12-4

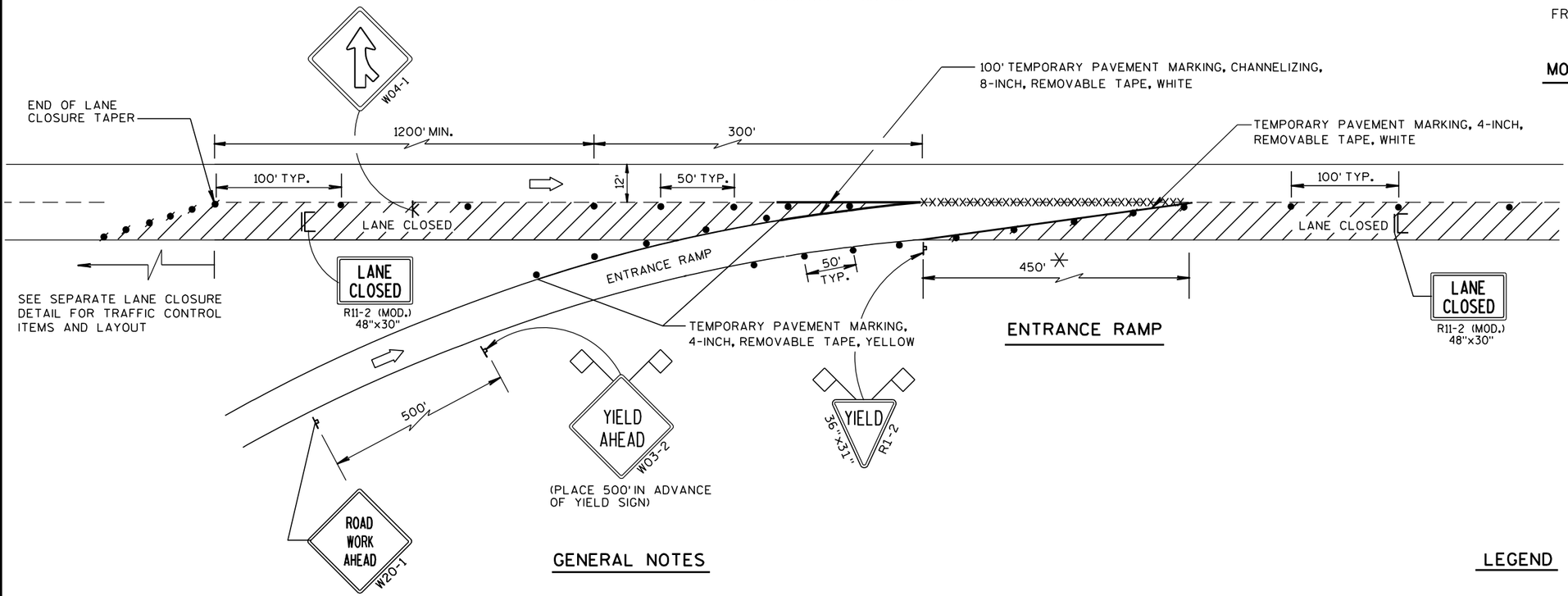


EXIT RAMP



NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL

MOUNTING DETAIL FOR MOVABLE EXIT SIGN



ENTRANCE RAMP

GENERAL NOTES

THE INSTALLATIONS SHOWN ON THIS SHEET ARE TYPICAL EXAMPLES AND ARE NOT INTENDED TO REPRESENT ANY PARTICULAR RAMP. AT SPECIFIC FIELD LOCATIONS, SIMILAR INSTALLATIONS SHALL BE USED AND ADJUSTED TO THE GEOMETRICS OF THE RAMP AS COORDINATED WITH THE ENGINEER.

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

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.

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

SEE SEPARATE LANE CLOSURE DETAIL FOR TYPICAL SPACING OF TYPE III BARRICADES AND R11-2 (MOD.) "LANE CLOSED" SIGNS.

YIELD SIGN AND WARNING SIGNS ON ENTRANCE RAMP ARE ALSO APPROPRIATE FOR CLOSURE OF THE MAINLINE LEFT LANE. OMIT THE YIELD SIGN IF MORE THAN ONE LANE REMAINS OPEN ON THE MAINLINE AND THE RAMP TAPER IS AT LEAST AS LONG AS THE NORMAL ENTRANCE RAMP TAPER AT THE SITE.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF INDICATED IN MISCELLANEOUS QUANTITIES, SUBSTITUTE FLEXIBLE TUBULAR MARKERS FOR DRUMS IN THE GORE BETWEEN THE ENTRANCE RAMP AND MAINLINE TRAFFIC.

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.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF LANE CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

✳ LENGTH OF OPENING MAY BE REDUCED TO 150 FEET DURING STAGING OF WORK IN IMMEDIATE AREA OF RAMP TAPER.

LEGEND

- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT
- TRAFFIC CONTROL, DRUM
- TRAFFIC CONTROL, DRUM WITH WARNING LIGHT, TYPE C (STEADY-BURN)
- REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)
- TYPE III BARRICADE (8' EQUIVALENT) WITH SIGN
- FLAGS, 16"x16" MIN., ORANGE
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/24/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKINGS ENGINEER
FHWA

S.D.D. 15 D 15-1

LEGEND

TYPE III BARRICADE

TYPE III BARRICADE WITH ATTACHED SIGN

TRAFFIC CONTROL DRUM

SIGN ON PERMANENT SUPPORT

TYPE "A" WARNING LIGHT (FLASHING)

DIRECTION OF TRAFFIC

GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

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" X 48" UNLESS OTHERWISE NOTED.

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.

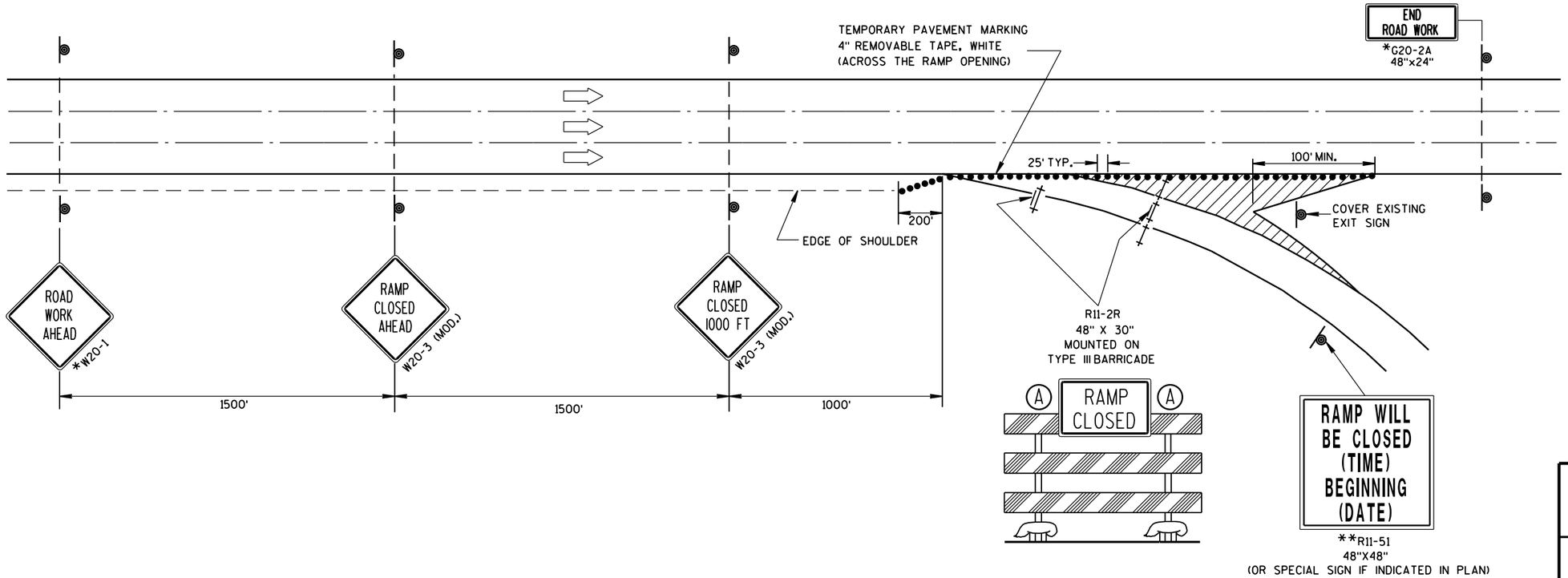
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

*W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



TRAFFIC CONTROL,
EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

DESIGN

FHWA

6

S.D.D. 15 D 16-2

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

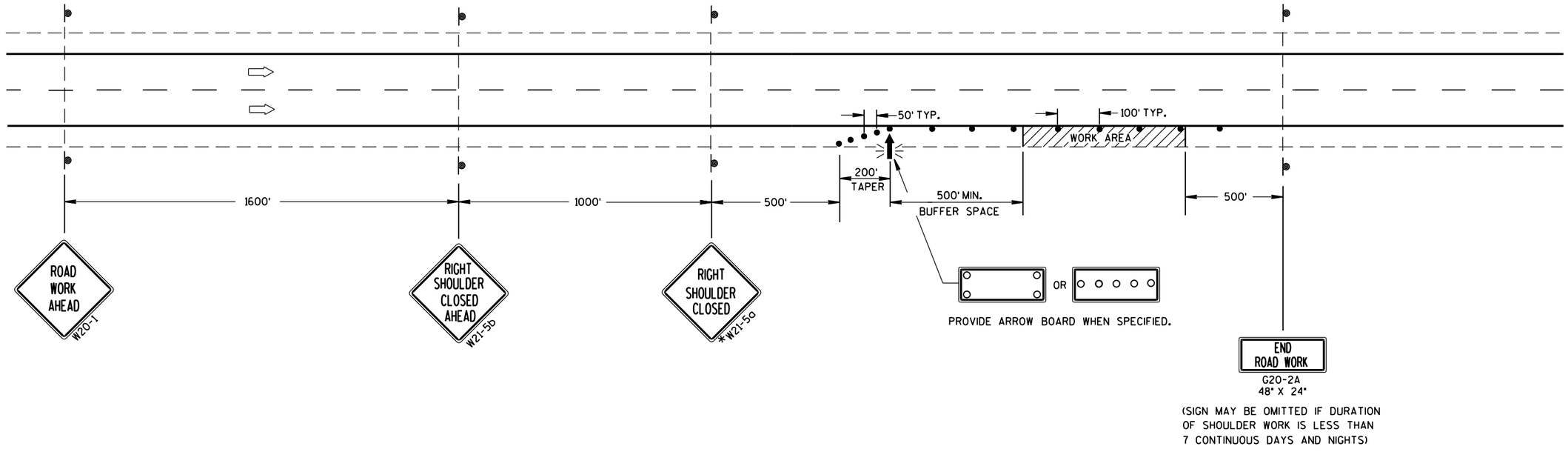
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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.

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

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

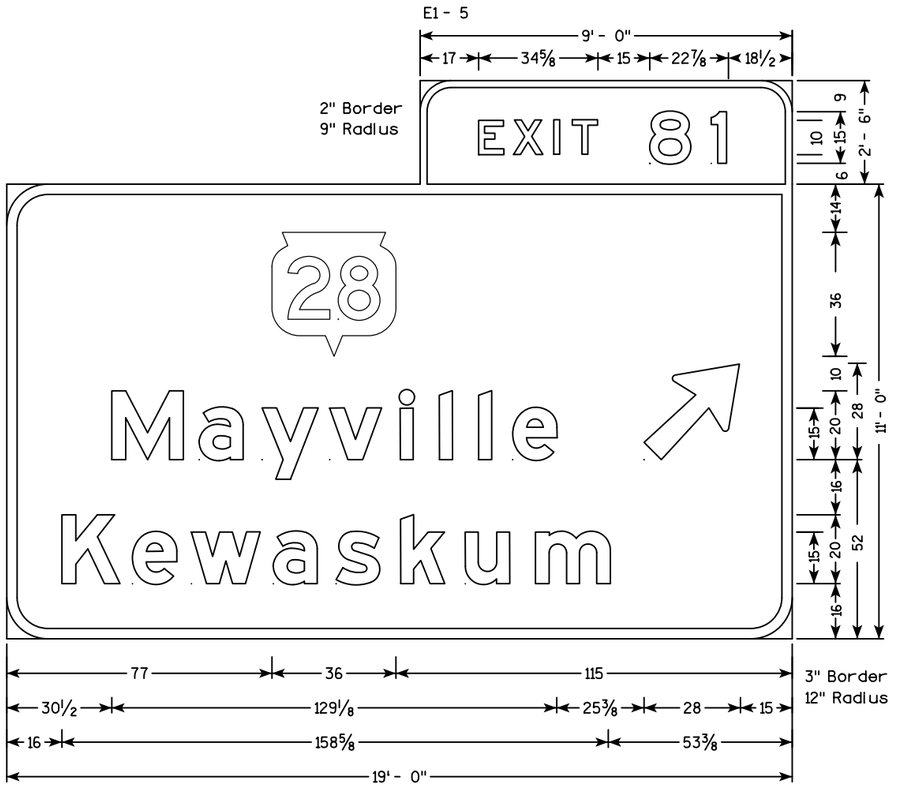
S.D.D. 15 D 27-2

6

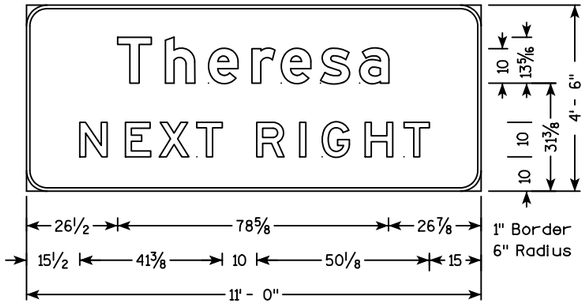
S.D.D. 15 D 27-2

NOTES

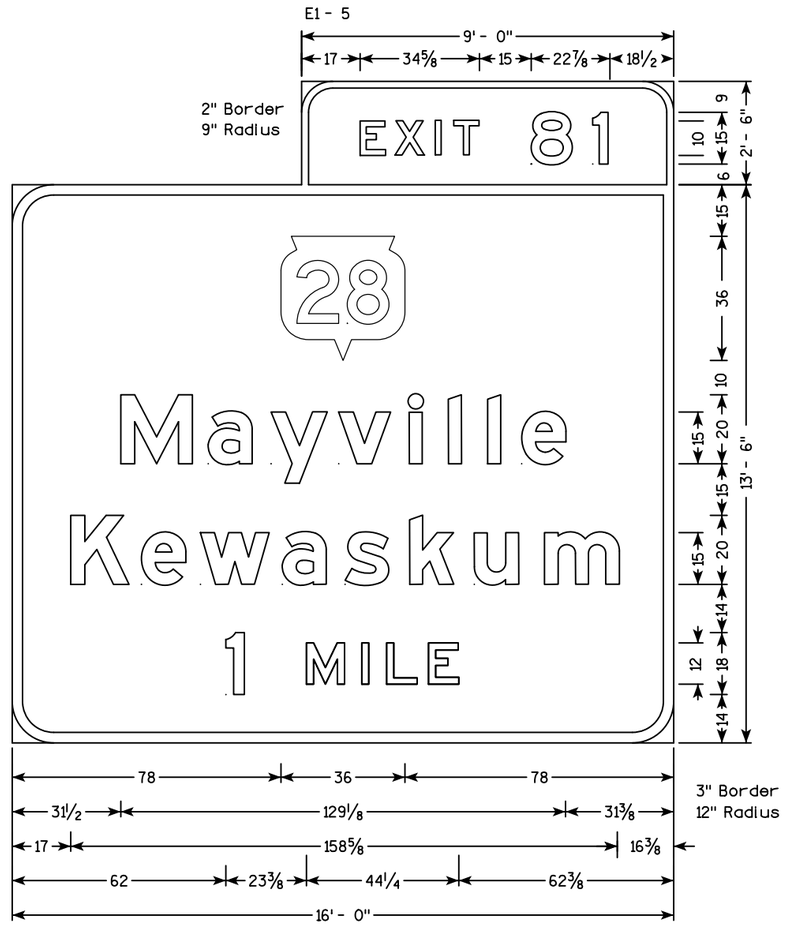
1. All Signs are Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all cap Words are Series E



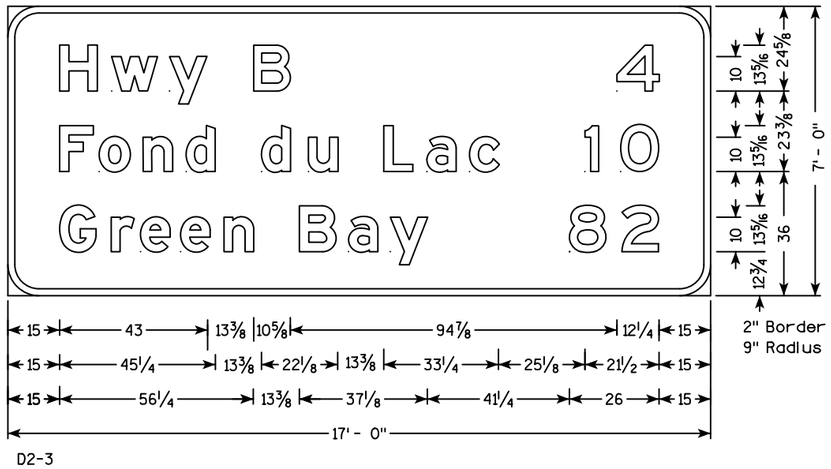
E4-1A



E3-1



E1-1A

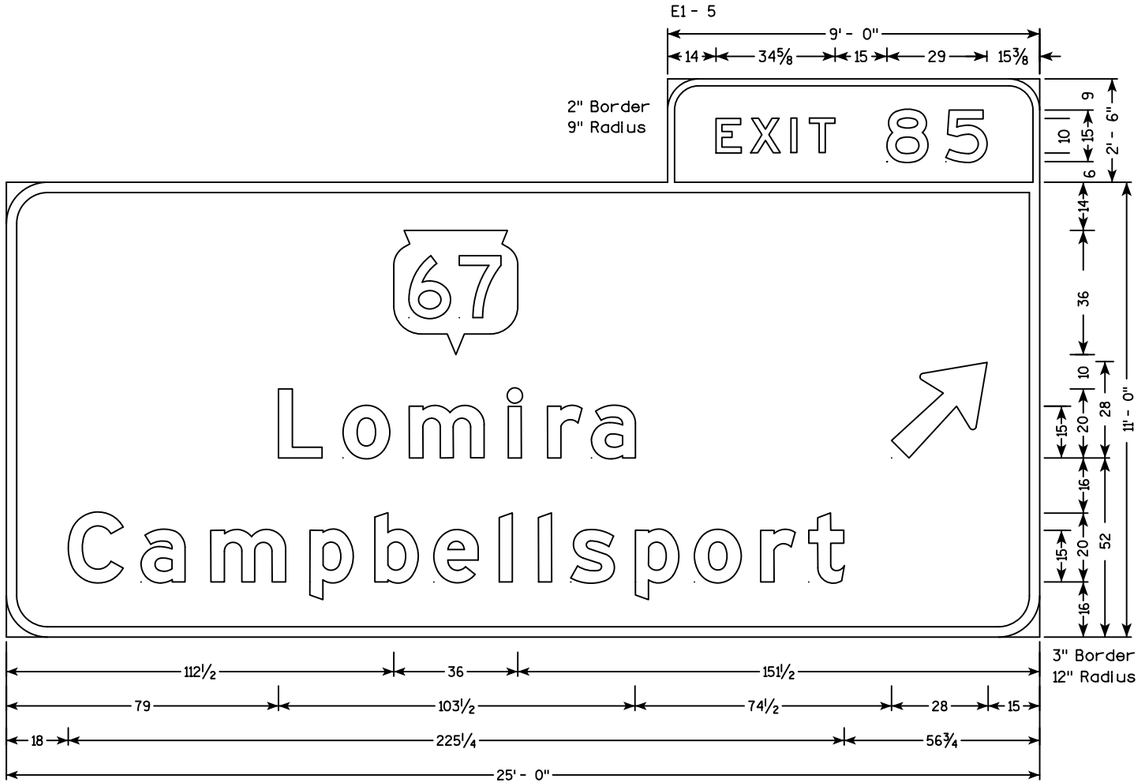


D2-3

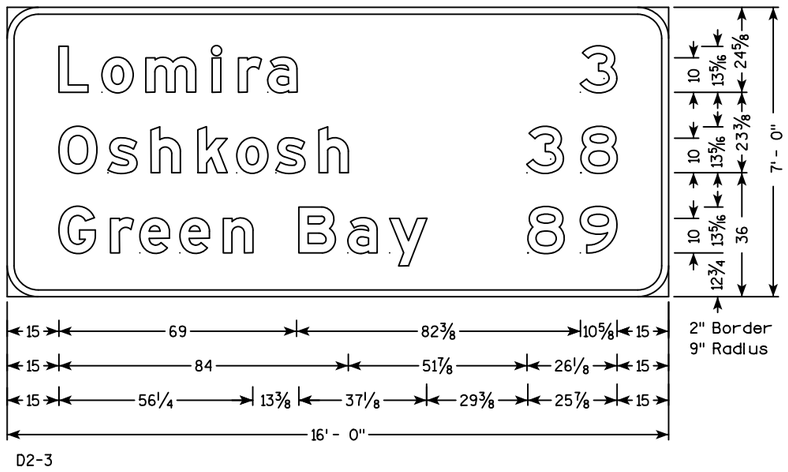
7

7

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET NO: 211	E



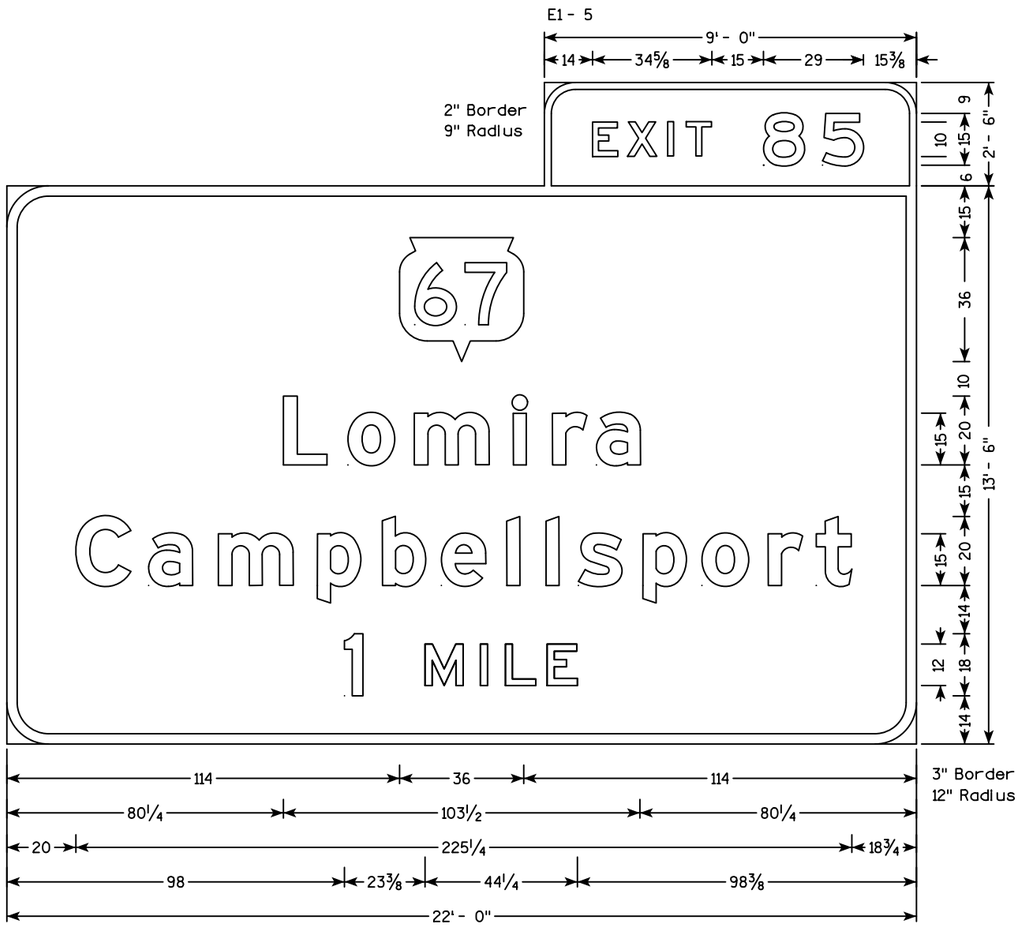
E4-1A



D2-3

NOTES

1. All Signs are Type I - Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E Modified except all cap Words are Series E



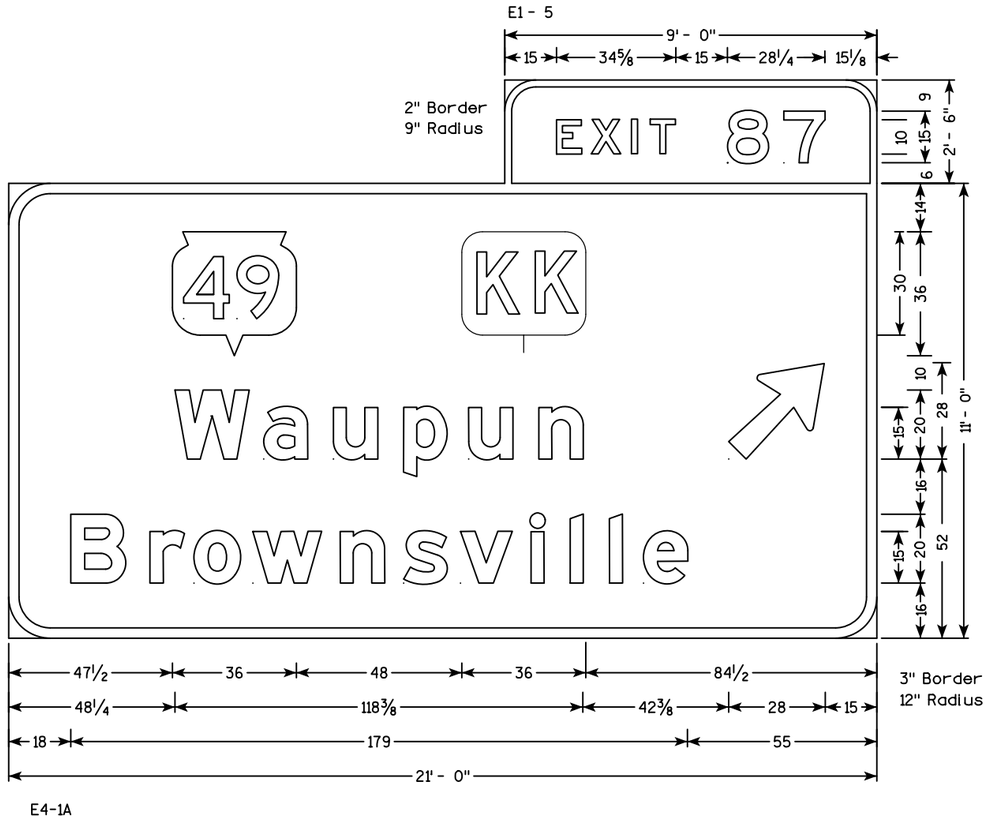
E1-1A

7

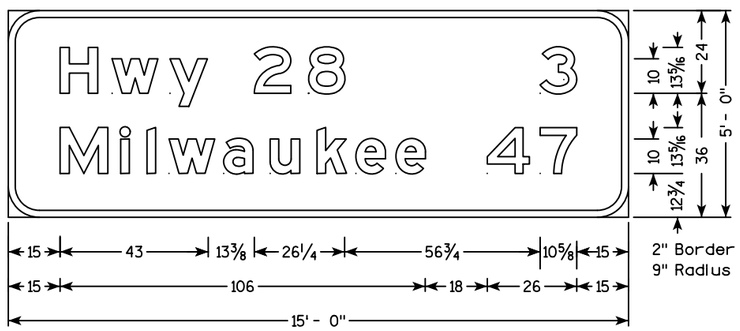
7

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET NO: 212	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\070101_sd.DGN PLOT DATE : 10/23/2014 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:43.9725
WISDOT/CADDS SHEET 42



E4-1A



D2-2

NOTES

1. All Signs are Type I - Type SH Reflective
2. Color:
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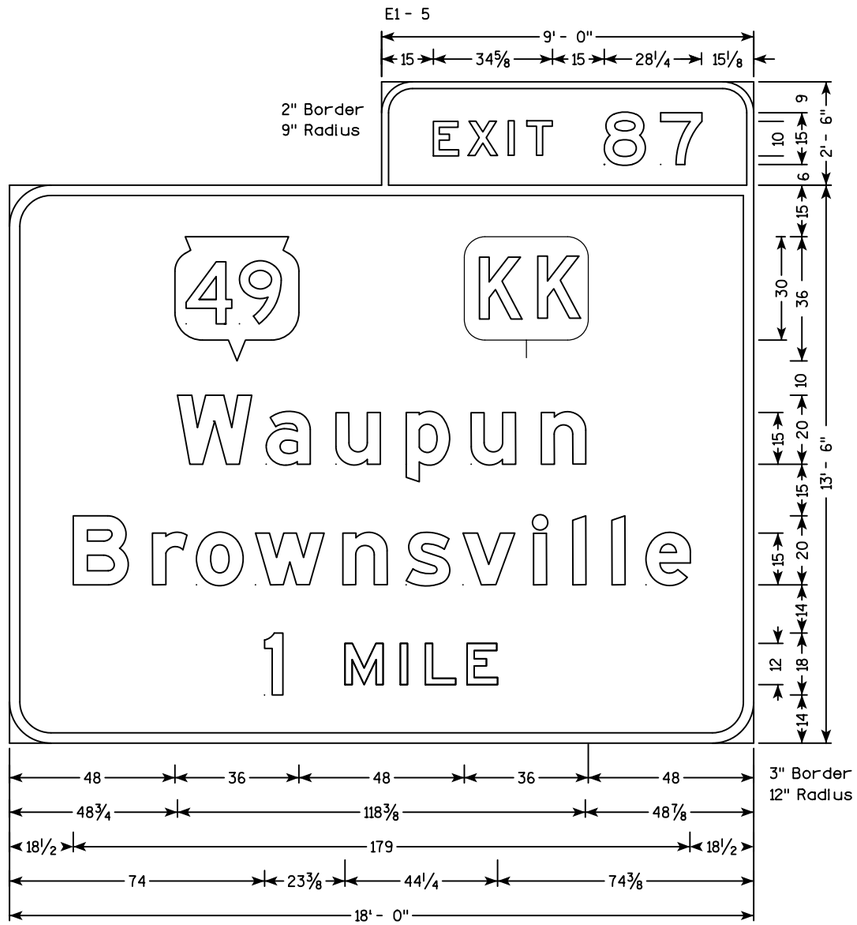
   Message - White
3. Message Series - E Modified except all cap Words are Series E

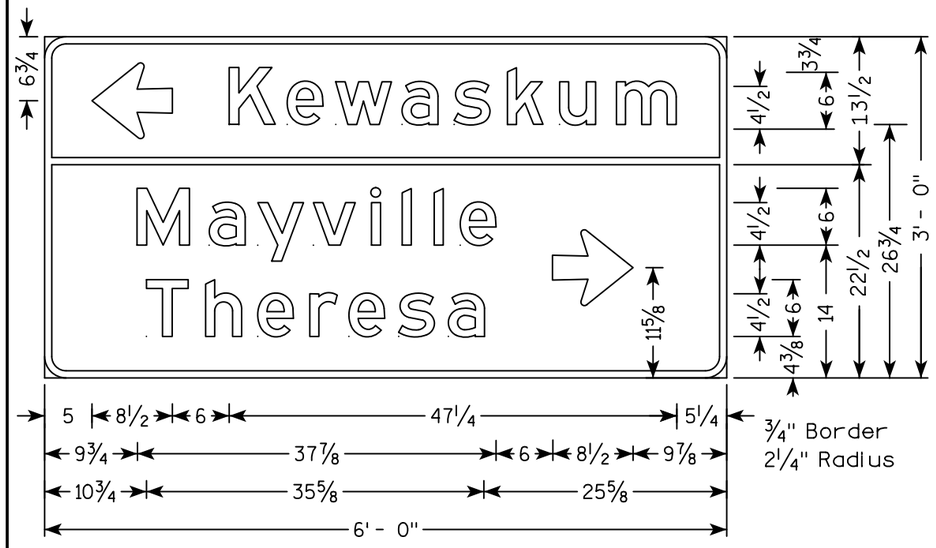


E1-1A

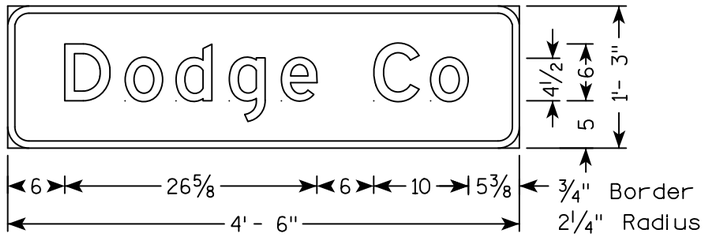
7

7

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET NO: 213	E



D1-3



I2-2

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
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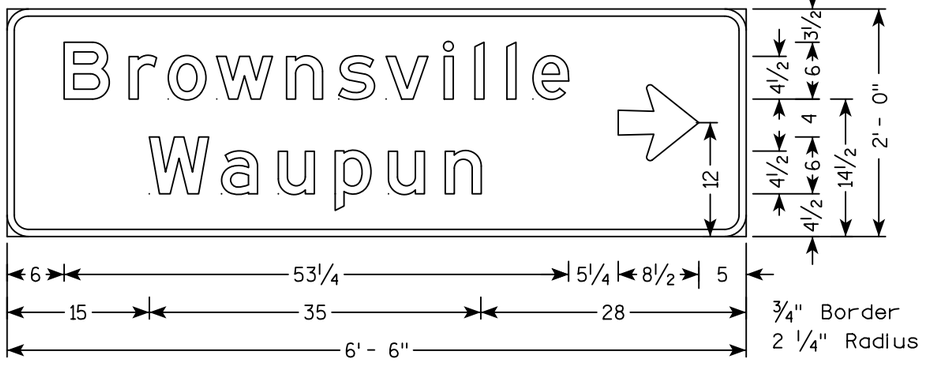
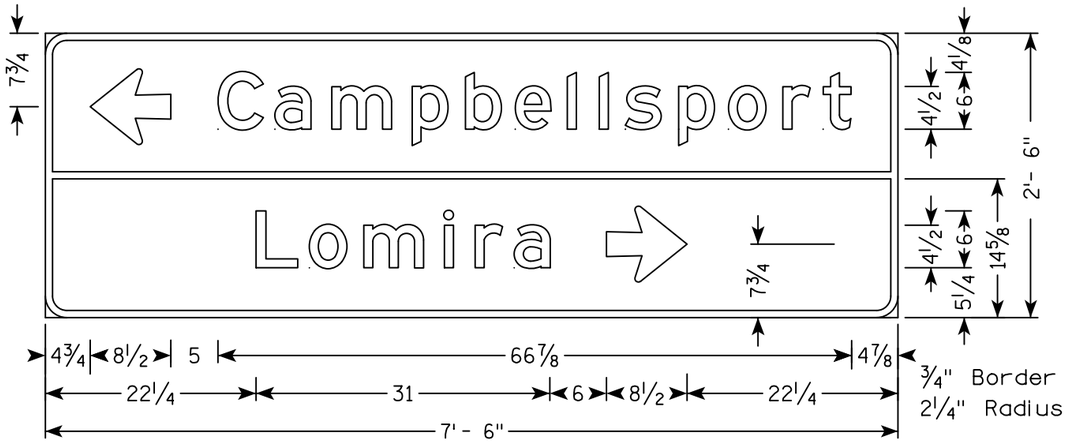
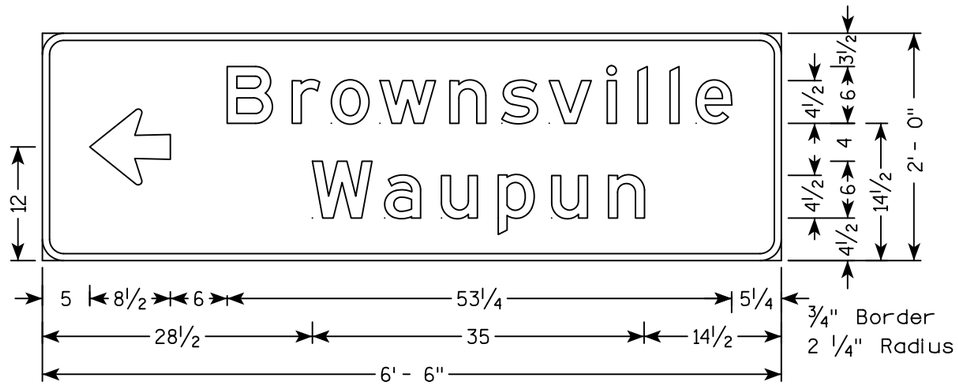
   Message - WHITE
3. Message Series - E



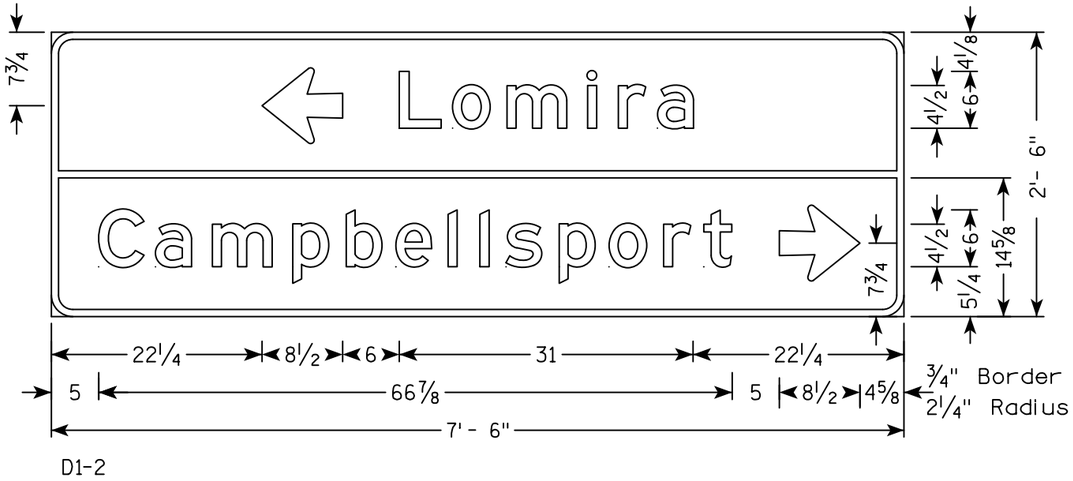
D1-2



D1-2



D1-2



D1-2

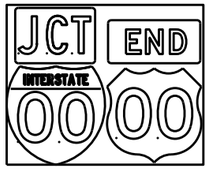
7

7

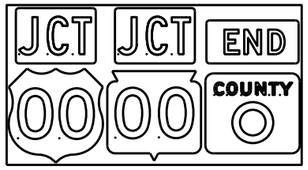
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	PERMANENT SIGNING	SHEET NO: 214	E

TYPICAL ASSEMBLIES

J1-1

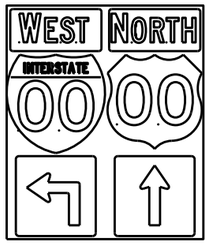


J1-2

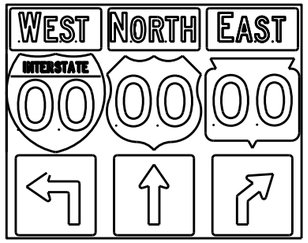


J1-3

J2-1



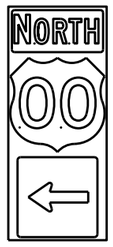
J2-2



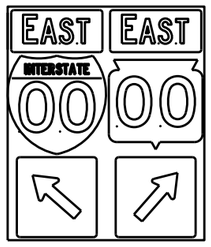
J2-3

JV

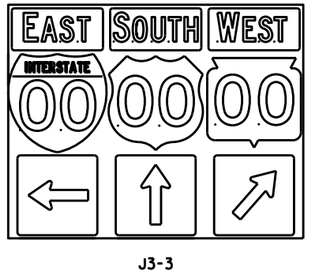
(Typical Vertical J-Assembly
See Note 10 and 11)



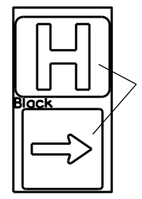
J3-1



J3-2



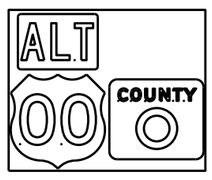
J3-3



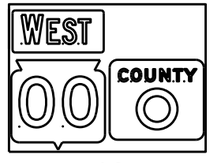
Blue Background

JH-1

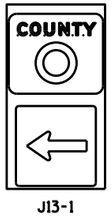
J4-1



J4-2



J4-2



J13-1

J12-1

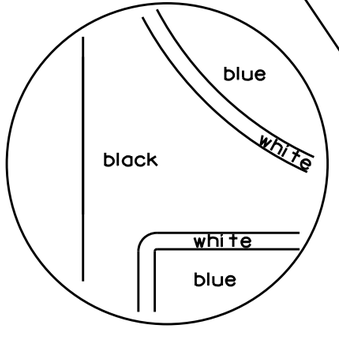
J32-1

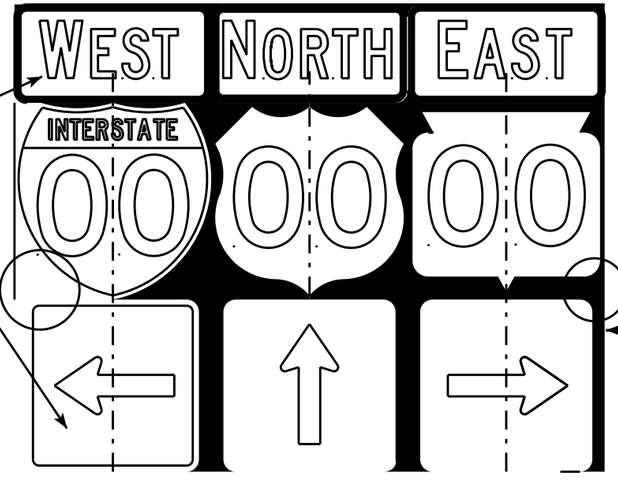
J33-1

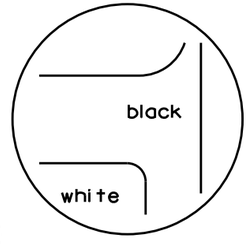
J23-1

J22-1

[blue background with interstate]







[black background]

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

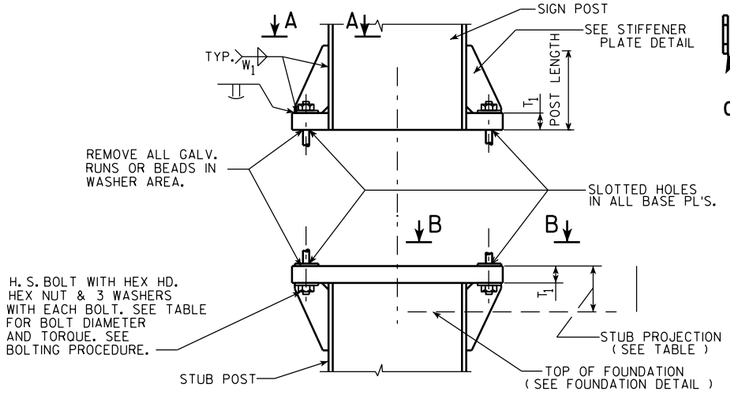
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

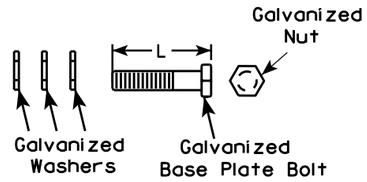
DATE 2/06/14 PL... A2-1S.8

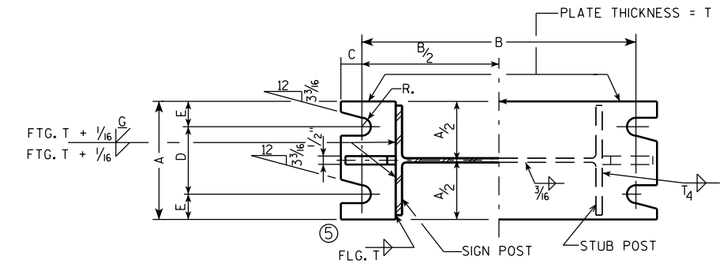
PROJECT NO: | SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42



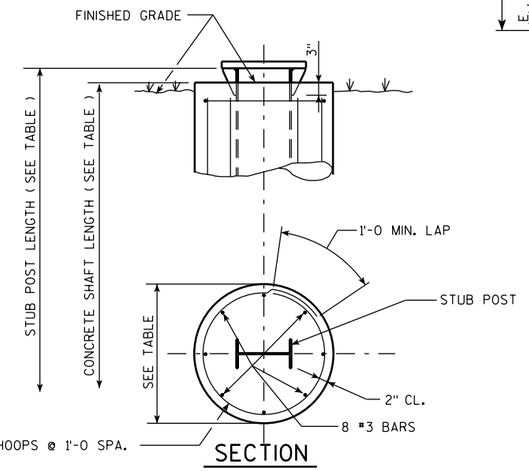
SIGN POST AND STUB POST ELEVATION



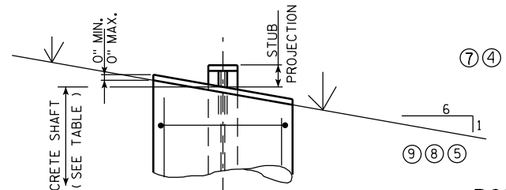


SECTION A-A

SECTION B-B



SECTION



SHAFT PLACEMENT

DESIGN DATA

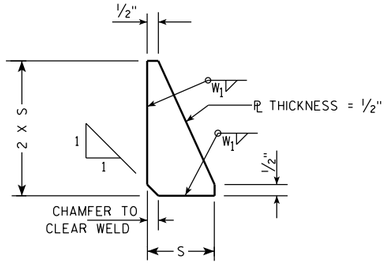
WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS
1. DEAD	100
2. DEAD & WIND	140
3. DEAD, ICE & 1/2 WIND[4]	140 [4]25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1 1/2 T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

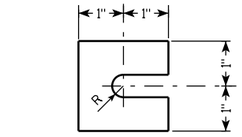
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50.
(9) THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
H.S. BOLTS, WASHERS & NUTS SHALL BE A325 GALVANIZED WHEN POSTS, POST STUBS AND ATTACHMENTS ARE A709 GRADE 50 AND GALVANIZED.



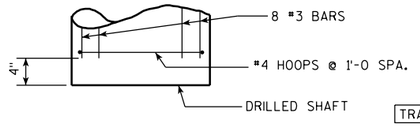
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)



FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

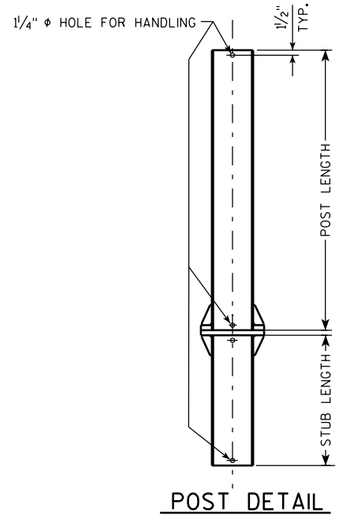
SHIM DETAIL



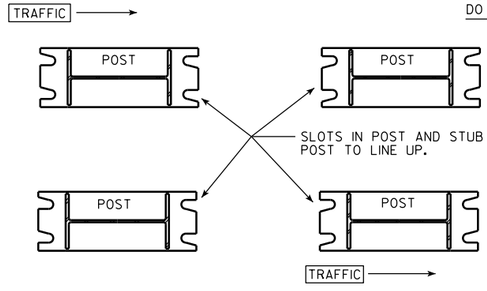
FOUNDATION DETAIL

	QUANTITIES FOR 1 FOOTING	
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
(7) E	1.0	62

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
(7)	E	8 @ 7'-11	9 @ 6'-3



POST DETAIL



POST SLOT ORIENTATION (7)

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.

				BASE CONNECTION DATA TABLE										FOUNDATION DATA				(2)
L	X	TYPE	DIMENSION / POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K
3 3/4	(4)	A	W10"X12.0 #/FT.	3/4" Φ @ 75#-FT.	5 1/4"	1'-0 3/8	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32"	2 1/8"	3'-6	3"	2'-0 Φ	5'-0	76.0# (4)
4 3/4	(4)	B	W12"X16.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	15/32"	3"	5'-6	3"	2'-0 Φ	7'-0	146.5# (4)
5		C	W12"X19.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	15/32"	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#
5		D	W12"X22.0 #/FT.	7/8" Φ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	3/8"	5/16"	15/32"	3"	6'-6	3"	2'-0 Φ	8'-0	210.5#
5	(3)	E	W12"X26.0 #/FT.	1" Φ @ 90#-FT.	7"	1'-4 1/4	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	5/16"	11/32"	3"	7'-0	3"	2'-0 Φ	8'-6	293.0# (3)
										(1)	(6)	(1)							

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO. A3-1.15

(10)	1-21-14	LUBRICATION OF BASE BOLTS
(9)	4-26-11	REMOVE NON-GALVANIZED
(8)	10-30-96	NOT GALVANIZED/GALVANIZED
(7)	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
(6)	8-24-87	BASE CONN. WELD
(5)	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
(4)	10-19-79	POST A & B, A572 GR. 50, & K
(2)	11-28-78	"K" (3) 4-23-79 TYPE "E"
(1)	5-4-78	T_1 , T_2 & W_1
NO.	DATE	REVISION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

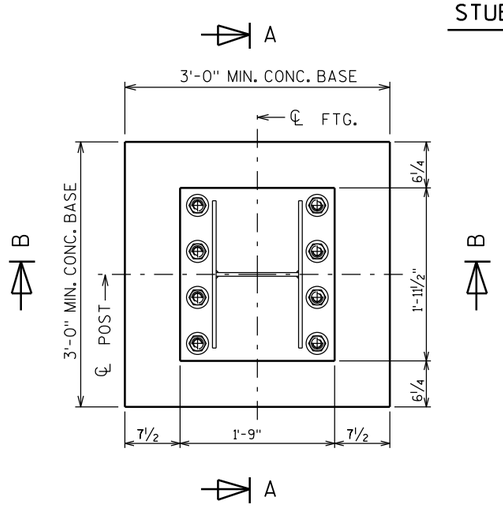
CONST. SPEC. 2011	DRAWN BY JPH	PLANS CK'D.

FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

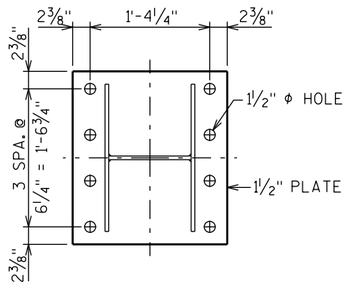
SHEET 216

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

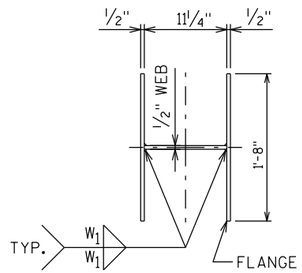
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



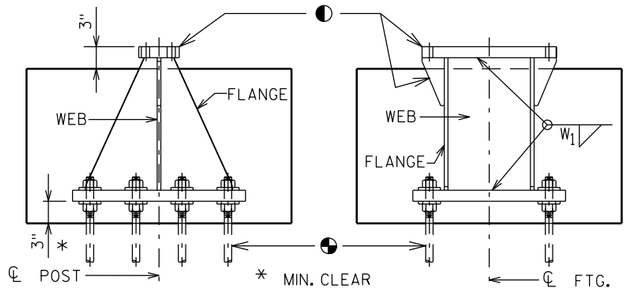
BASE PLATE



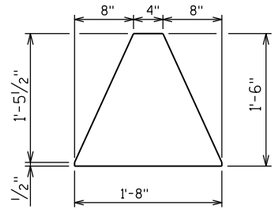
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



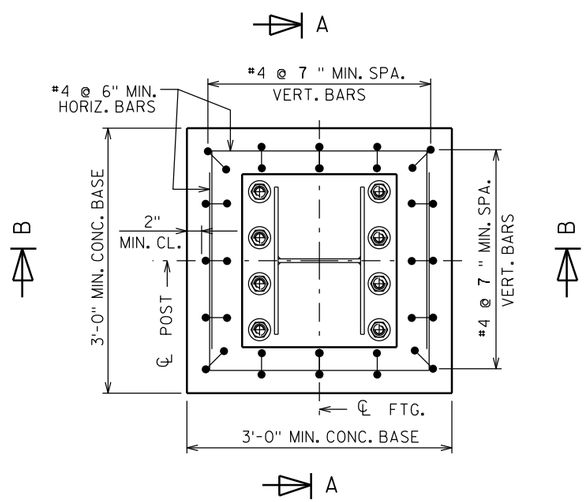
FLANGE

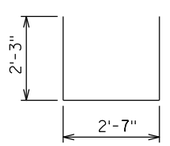
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

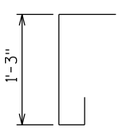
CONCRETE BASE SECTION





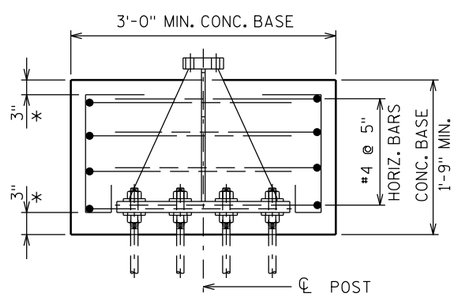
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



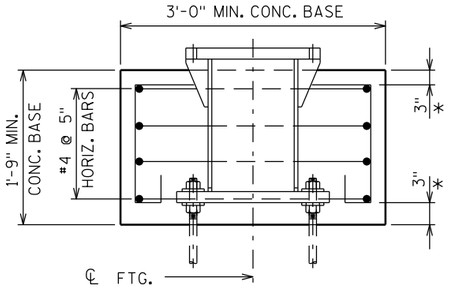
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/2014 PLAN A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31M.DGN PLOT DATE : 10-MAR-2014 15:16 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 1.556674:1.000000 WISDOT/CADDS SHEET 42

VERITCAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
10 ft.	25 Sq. Ft	30 Sq. Ft	35 Sq. Ft	40 Sq. Ft	45 Sq. Ft	50 Sq. Ft	55 Sq. Ft	60 Sq. Ft	65 Sq. Ft	70 Sq. Ft	75 Sq. Ft	80 Sq. Ft	85 Sq. Ft	90 Sq. Ft	95 Sq. Ft	100 Sq. Ft	105 Sq. Ft	110 Sq. Ft	115 Sq. Ft	120 Sq. Ft	125 Sq. Ft	130 Sq. Ft	135 Sq. Ft	140 Sq. Ft	145 Sq. Ft	150 Sq. Ft	155 Sq. Ft	160 Sq. Ft
11 ft.	27.5 Sq. Ft	33 Sq. Ft	38.5 Sq. Ft	44 Sq. Ft	49.5 Sq. Ft	55 Sq. Ft	60.5 Sq. Ft	66 Sq. Ft	71.5 Sq. Ft	77 Sq. Ft	82.5 Sq. Ft	88 Sq. Ft	93.5 Sq. Ft	99 Sq. Ft	104.5 Sq. Ft	110 Sq. Ft	115.5 Sq. Ft	121 Sq. Ft	126.5 Sq. Ft	132 Sq. Ft	137.5 Sq. Ft	143 Sq. Ft	148.5 Sq. Ft	154 Sq. Ft	159.5 Sq. Ft	165 Sq. Ft	170.5 Sq. Ft	176 Sq. Ft
12 ft.	30 Sq. Ft	36 Sq. Ft	42 Sq. Ft	48 Sq. Ft	54 Sq. Ft	60 Sq. Ft	66 Sq. Ft	72 Sq. Ft	78 Sq. Ft	84 Sq. Ft	90 Sq. Ft	96 Sq. Ft	102 Sq. Ft	108 Sq. Ft	114 Sq. Ft	120 Sq. Ft	126 Sq. Ft	132 Sq. Ft	138 Sq. Ft	144 Sq. Ft	150 Sq. Ft	156 Sq. Ft	162 Sq. Ft	168 Sq. Ft	174 Sq. Ft	180 Sq. Ft	186 Sq. Ft	192 Sq. Ft
13 ft.	32.5 Sq. Ft	39 Sq. Ft	45.5 Sq. Ft	52 Sq. Ft	58.5 Sq. Ft	65 Sq. Ft	71.5 Sq. Ft	78 Sq. Ft	84.5 Sq. Ft	91 Sq. Ft	97.5 Sq. Ft	104 Sq. Ft	110.5 Sq. Ft	117 Sq. Ft	123.5 Sq. Ft	130 Sq. Ft	136.5 Sq. Ft	143 Sq. Ft	149.5 Sq. Ft	156 Sq. Ft	162.5 Sq. Ft	169 Sq. Ft	175.5 Sq. Ft	182 Sq. Ft	188.5 Sq. Ft	195 Sq. Ft	201.5 Sq. Ft	208 Sq. Ft
14 ft.	35 Sq. Ft	42 Sq. Ft	49 Sq. Ft	56 Sq. Ft	63 Sq. Ft	70 Sq. Ft	77 Sq. Ft	84 Sq. Ft	91 Sq. Ft	98 Sq. Ft	105 Sq. Ft	112 Sq. Ft	119 Sq. Ft	126 Sq. Ft	133 Sq. Ft	140 Sq. Ft	147 Sq. Ft	154 Sq. Ft	161 Sq. Ft	168 Sq. Ft	175 Sq. Ft	182 Sq. Ft	189 Sq. Ft	196 Sq. Ft	203 Sq. Ft	210 Sq. Ft	217 Sq. Ft	224 Sq. Ft
15 ft.	37.5 Sq. Ft	45 Sq. Ft	52.5 Sq. Ft	60 Sq. Ft	67.5 Sq. Ft	75 Sq. Ft	82.5 Sq. Ft	90 Sq. Ft	97.5 Sq. Ft	105 Sq. Ft	112.5 Sq. Ft	120 Sq. Ft	127.5 Sq. Ft	135 Sq. Ft	142.5 Sq. Ft	150 Sq. Ft	157.5 Sq. Ft	165 Sq. Ft	172.5 Sq. Ft	180 Sq. Ft	187.5 Sq. Ft	195 Sq. Ft	202.5 Sq. Ft	210 Sq. Ft	217.5 Sq. Ft	225 Sq. Ft	232.5 Sq. Ft	240 Sq. Ft
16 ft.	40 Sq. Ft	48 Sq. Ft	56 Sq. Ft	64 Sq. Ft	72 Sq. Ft	80 Sq. Ft	88 Sq. Ft	96 Sq. Ft	104 Sq. Ft	112 Sq. Ft	120 Sq. Ft	128 Sq. Ft	136 Sq. Ft	144 Sq. Ft	152 Sq. Ft	160 Sq. Ft	168 Sq. Ft	176 Sq. Ft	184 Sq. Ft	192 Sq. Ft	200 Sq. Ft	208 Sq. Ft	216 Sq. Ft	224 Sq. Ft	232 Sq. Ft	240 Sq. Ft	248 Sq. Ft	256 Sq. Ft
17 ft.	42.5 Sq. Ft	51 Sq. Ft	59.5 Sq. Ft	68 Sq. Ft	76.5 Sq. Ft	85 Sq. Ft	93.5 Sq. Ft	102 Sq. Ft	110.5 Sq. Ft	119 Sq. Ft	127.5 Sq. Ft	136 Sq. Ft	144.5 Sq. Ft	153 Sq. Ft	161.5 Sq. Ft	170 Sq. Ft	178.5 Sq. Ft	187 Sq. Ft	195.5 Sq. Ft	204 Sq. Ft	212.5 Sq. Ft	221 Sq. Ft	229.5 Sq. Ft	238 Sq. Ft	246.5 Sq. Ft	255 Sq. Ft	263.5 Sq. Ft	272 Sq. Ft
18 ft.	45 Sq. Ft	54 Sq. Ft	63 Sq. Ft	72 Sq. Ft	81 Sq. Ft	90 Sq. Ft	99 Sq. Ft	108 Sq. Ft	117 Sq. Ft	126 Sq. Ft	135 Sq. Ft	144 Sq. Ft	153 Sq. Ft	162 Sq. Ft	171 Sq. Ft	180 Sq. Ft	189 Sq. Ft	198 Sq. Ft	207 Sq. Ft	216 Sq. Ft	225 Sq. Ft	234 Sq. Ft	243 Sq. Ft	252 Sq. Ft	261 Sq. Ft	270 Sq. Ft	279 Sq. Ft	288 Sq. Ft
19 ft.	47.5 Sq. Ft	57 Sq. Ft	66.5 Sq. Ft	76 Sq. Ft	85.5 Sq. Ft	95 Sq. Ft	104.5 Sq. Ft	114 Sq. Ft	123.5 Sq. Ft	133 Sq. Ft	142.5 Sq. Ft	152 Sq. Ft	161.5 Sq. Ft	171 Sq. Ft	180.5 Sq. Ft	190 Sq. Ft	199.5 Sq. Ft	209 Sq. Ft	218.5 Sq. Ft	228 Sq. Ft	237.5 Sq. Ft	247 Sq. Ft	256.5 Sq. Ft	266 Sq. Ft	275.5 Sq. Ft	285 Sq. Ft	294.5 Sq. Ft	304 Sq. Ft
20 ft.	50 Sq. Ft	60 Sq. Ft	70 Sq. Ft	80 Sq. Ft	90 Sq. Ft	100 Sq. Ft	110 Sq. Ft	120 Sq. Ft	130 Sq. Ft	140 Sq. Ft	150 Sq. Ft	160 Sq. Ft	170 Sq. Ft	180 Sq. Ft	190 Sq. Ft	200 Sq. Ft	210 Sq. Ft	220 Sq. Ft	230 Sq. Ft	240 Sq. Ft	250 Sq. Ft	260 Sq. Ft	270 Sq. Ft	280 Sq. Ft	290 Sq. Ft	300 Sq. Ft	310 Sq. Ft	320 Sq. Ft
21 ft.	52.5 Sq. Ft	63 Sq. Ft	73.5 Sq. Ft	84 Sq. Ft	94.5 Sq. Ft	105 Sq. Ft	115.5 Sq. Ft	126 Sq. Ft	136.5 Sq. Ft	147 Sq. Ft	157.5 Sq. Ft	168 Sq. Ft	178.5 Sq. Ft	189 Sq. Ft	199.5 Sq. Ft	210 Sq. Ft	220.5 Sq. Ft	231 Sq. Ft	241.5 Sq. Ft	252 Sq. Ft	262.5 Sq. Ft	273 Sq. Ft	283.5 Sq. Ft	294 Sq. Ft	304.5 Sq. Ft	315 Sq. Ft	325.5 Sq. Ft	336 Sq. Ft

Type "A" (2 Posts)
1.2 CY Conc.
68 LBs Bar Steel

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

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DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/03/10 PLATE NO. A3-2.2

PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A32.DGN PLOT DATE : 05-MAR-2010 10:10 PLOT BY : ditjph

WISDOT/CADDS SHEET 42

VERTICAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

Type "A" (2 Posts) 1.2 CY Conc. 68 LBs Bar Steel

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
22 ft.	55 Sq. Ft	66 Sq. Ft	77 Sq. Ft	88 Sq. Ft	99 Sq. Ft	110 Sq. Ft	121 Sq. Ft	132 Sq. Ft	143 Sq. Ft	154 Sq. Ft	165 Sq. Ft	176 Sq. Ft	187 Sq. Ft	198 Sq. Ft	209 Sq. Ft	220 Sq. Ft	231 Sq. Ft	242 Sq. Ft	253 Sq. Ft	264 Sq. Ft	275 Sq. Ft	286 Sq. Ft	297 Sq. Ft	308 Sq. Ft	319 Sq. Ft	330 Sq. Ft	341 Sq. Ft	352 Sq. Ft
23 ft.	57.5 Sq. Ft	69 Sq. Ft	80.5 Sq. Ft	92 Sq. Ft	103.5 Sq. Ft	115 Sq. Ft	126.5 Sq. Ft	138 Sq. Ft	149.5 Sq. Ft	161 Sq. Ft	172.5 Sq. Ft	184 Sq. Ft	195.5 Sq. Ft	207 Sq. Ft	218.5 Sq. Ft	230 Sq. Ft	241.5 Sq. Ft	253 Sq. Ft	264.5 Sq. Ft	276 Sq. Ft	287.5 Sq. Ft	299 Sq. Ft	310.5 Sq. Ft	322 Sq. Ft	333.5 Sq. Ft	345 Sq. Ft	356.5 Sq. Ft	368 Sq. Ft
24 ft.	60 Sq. Ft	72 Sq. Ft	84 Sq. Ft	96 Sq. Ft	108 Sq. Ft	120 Sq. Ft	132 Sq. Ft	144 Sq. Ft	156 Sq. Ft	168 Sq. Ft	180 Sq. Ft	192 Sq. Ft	204 Sq. Ft	216 Sq. Ft	228 Sq. Ft	240 Sq. Ft	252 Sq. Ft	264 Sq. Ft	276 Sq. Ft	288 Sq. Ft	300 Sq. Ft	312 Sq. Ft	324 Sq. Ft	336 Sq. Ft	348 Sq. Ft	360 Sq. Ft	372 Sq. Ft	384 Sq. Ft
25 ft.	62.5 Sq. Ft	75 Sq. Ft	87.5 Sq. Ft	100 Sq. Ft	112.5 Sq. Ft	125 Sq. Ft	137.5 Sq. Ft	150 Sq. Ft	162.5 Sq. Ft	175 Sq. Ft	187.5 Sq. Ft	200 Sq. Ft	212.5 Sq. Ft	225 Sq. Ft	237.5 Sq. Ft	250 Sq. Ft	262.5 Sq. Ft	275 Sq. Ft	287.5 Sq. Ft	300 Sq. Ft	312.5 Sq. Ft	325 Sq. Ft	337.5 Sq. Ft	350 Sq. Ft	362.5 Sq. Ft	375 Sq. Ft	387.5 Sq. Ft	400 Sq. Ft
26 ft.	65 Sq. Ft	78 Sq. Ft	91 Sq. Ft	104 Sq. Ft	117 Sq. Ft	130 Sq. Ft	143 Sq. Ft	156 Sq. Ft	169 Sq. Ft	182 Sq. Ft	195 Sq. Ft	208 Sq. Ft	221 Sq. Ft	234 Sq. Ft	247 Sq. Ft	260 Sq. Ft	273 Sq. Ft	286 Sq. Ft	299 Sq. Ft	312 Sq. Ft	325 Sq. Ft	338 Sq. Ft	351 Sq. Ft	364 Sq. Ft	377 Sq. Ft	390 Sq. Ft	403 Sq. Ft	416 Sq. Ft
27 ft.	67.5 Sq. Ft	81 Sq. Ft	94.5 Sq. Ft	108 Sq. Ft	121.5 Sq. Ft	135 Sq. Ft	148.5 Sq. Ft	162 Sq. Ft	175.5 Sq. Ft	189 Sq. Ft	202.5 Sq. Ft	216 Sq. Ft	229.5 Sq. Ft	243 Sq. Ft	256.5 Sq. Ft	270 Sq. Ft	283.5 Sq. Ft	297 Sq. Ft	310.5 Sq. Ft	324 Sq. Ft	337.5 Sq. Ft	351 Sq. Ft	364.5 Sq. Ft	378 Sq. Ft	391.5 Sq. Ft	405 Sq. Ft	418.5 Sq. Ft	432 Sq. Ft
28 ft.	70 Sq. Ft	84 Sq. Ft	98 Sq. Ft	112 Sq. Ft	126 Sq. Ft	140 Sq. Ft	154 Sq. Ft	168 Sq. Ft	182 Sq. Ft	196 Sq. Ft	210 Sq. Ft	224 Sq. Ft	238 Sq. Ft	252 Sq. Ft	266 Sq. Ft	280 Sq. Ft	294 Sq. Ft	308 Sq. Ft	322 Sq. Ft	336 Sq. Ft	350 Sq. Ft	364 Sq. Ft	378 Sq. Ft	392 Sq. Ft	406 Sq. Ft	420 Sq. Ft	434 Sq. Ft	448 Sq. Ft
29 ft.	72.5 Sq. Ft	87 Sq. Ft	101.5 Sq. Ft	116 Sq. Ft	130.5 Sq. Ft	145 Sq. Ft	159.5 Sq. Ft	174 Sq. Ft	188.5 Sq. Ft	203 Sq. Ft	217.5 Sq. Ft	232 Sq. Ft	246.5 Sq. Ft	261 Sq. Ft	275.5 Sq. Ft	290 Sq. Ft	304.5 Sq. Ft	319 Sq. Ft	333.5 Sq. Ft	348 Sq. Ft	362.5 Sq. Ft	377 Sq. Ft	391.5 Sq. Ft	406 Sq. Ft	420.5 Sq. Ft	435 Sq. Ft	449.5 Sq. Ft	464 Sq. Ft
30 ft.	75 Sq. Ft	90 Sq. Ft	105 Sq. Ft	120 Sq. Ft	135 Sq. Ft	150 Sq. Ft	165 Sq. Ft	180 Sq. Ft	195 Sq. Ft	210 Sq. Ft	225 Sq. Ft	240 Sq. Ft	255 Sq. Ft	270 Sq. Ft	285 Sq. Ft	300 Sq. Ft	315 Sq. Ft	330 Sq. Ft	345 Sq. Ft	360 Sq. Ft	375 Sq. Ft	390 Sq. Ft	405 Sq. Ft	420 Sq. Ft	435 Sq. Ft	450 Sq. Ft	465 Sq. Ft	480 Sq. Ft
31 ft.	77.5 Sq. Ft	93 Sq. Ft	108.5 Sq. Ft	124 Sq. Ft	139.5 Sq. Ft	155 Sq. Ft	170.5 Sq. Ft	186 Sq. Ft	201.5 Sq. Ft	217 Sq. Ft	232.5 Sq. Ft	248 Sq. Ft	263.5 Sq. Ft	279 Sq. Ft	294.5 Sq. Ft	310 Sq. Ft	325.5 Sq. Ft	341 Sq. Ft	356.5 Sq. Ft	372 Sq. Ft	387.5 Sq. Ft	403 Sq. Ft	418.5 Sq. Ft	434 Sq. Ft	449.5 Sq. Ft	465 Sq. Ft	480.5 Sq. Ft	496 Sq. Ft
32 ft.	80 Sq. Ft	96 Sq. Ft	112 Sq. Ft	128 Sq. Ft	144 Sq. Ft	160 Sq. Ft	176 Sq. Ft	192 Sq. Ft	208 Sq. Ft	224 Sq. Ft	240 Sq. Ft	256 Sq. Ft	272 Sq. Ft	288 Sq. Ft	304 Sq. Ft	320 Sq. Ft	336 Sq. Ft	352 Sq. Ft	368 Sq. Ft	384 Sq. Ft	400 Sq. Ft	416 Sq. Ft	432 Sq. Ft	448 Sq. Ft	464 Sq. Ft	480 Sq. Ft	496 Sq. Ft	512 Sq. Ft
33 ft.	82.5 Sq. Ft	99 Sq. Ft	115.5 Sq. Ft	132 Sq. Ft	148.5 Sq. Ft	165 Sq. Ft	181.5 Sq. Ft	198 Sq. Ft	214.5 Sq. Ft	231 Sq. Ft	247.5 Sq. Ft	264 Sq. Ft	280.5 Sq. Ft	297 Sq. Ft	313.5 Sq. Ft	330 Sq. Ft	346.5 Sq. Ft	363 Sq. Ft	379.5 Sq. Ft	396 Sq. Ft	412.5 Sq. Ft	429 Sq. Ft	445.5 Sq. Ft	462 Sq. Ft	478.5 Sq. Ft	495 Sq. Ft	511.5 Sq. Ft	528 Sq. Ft
34 ft.	85 Sq. Ft	102 Sq. Ft	119 Sq. Ft	136 Sq. Ft	153 Sq. Ft	170 Sq. Ft	187 Sq. Ft	204 Sq. Ft	221 Sq. Ft	238 Sq. Ft	255 Sq. Ft	272 Sq. Ft	289 Sq. Ft	306 Sq. Ft	323 Sq. Ft	340 Sq. Ft	357 Sq. Ft	374 Sq. Ft	391 Sq. Ft	408 Sq. Ft	425 Sq. Ft	442 Sq. Ft	459 Sq. Ft	476 Sq. Ft	493 Sq. Ft	510 Sq. Ft	527 Sq. Ft	544 Sq. Ft
35 ft.	87.5 Sq. Ft	105 Sq. Ft	122.5 Sq. Ft	140 Sq. Ft	157.5 Sq. Ft	175 Sq. Ft	192.5 Sq. Ft	210 Sq. Ft	227.5 Sq. Ft	245 Sq. Ft	262.5 Sq. Ft	280 Sq. Ft	297.5 Sq. Ft	315 Sq. Ft	332.5 Sq. Ft	350 Sq. Ft	367.5 Sq. Ft	385 Sq. Ft	402.5 Sq. Ft	420 Sq. Ft	437.5 Sq. Ft	455 Sq. Ft	472.5 Sq. Ft	490 Sq. Ft	507.5 Sq. Ft	525 Sq. Ft	542.5 Sq. Ft	560 Sq. Ft
36 ft.	90 Sq. Ft	108 Sq. Ft	126 Sq. Ft	144 Sq. Ft	162 Sq. Ft	180 Sq. Ft	198 Sq. Ft	216 Sq. Ft	234 Sq. Ft	252 Sq. Ft	270 Sq. Ft	288 Sq. Ft	306 Sq. Ft	324 Sq. Ft	342 Sq. Ft	360 Sq. Ft	378 Sq. Ft	396 Sq. Ft	414 Sq. Ft	432 Sq. Ft	450 Sq. Ft	468 Sq. Ft	486 Sq. Ft	504 Sq. Ft	522 Sq. Ft	540 Sq. Ft	558 Sq. Ft	576 Sq. Ft

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

Type "D" (3 Posts)
2.7 CY Conc.
168 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

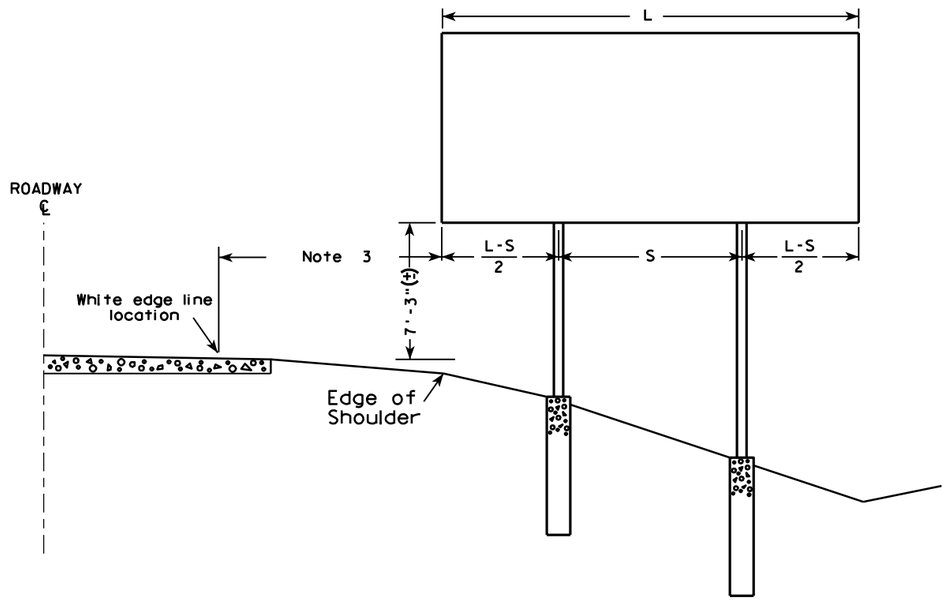
WISCONSIN DEPT OF TRANSPORTATION

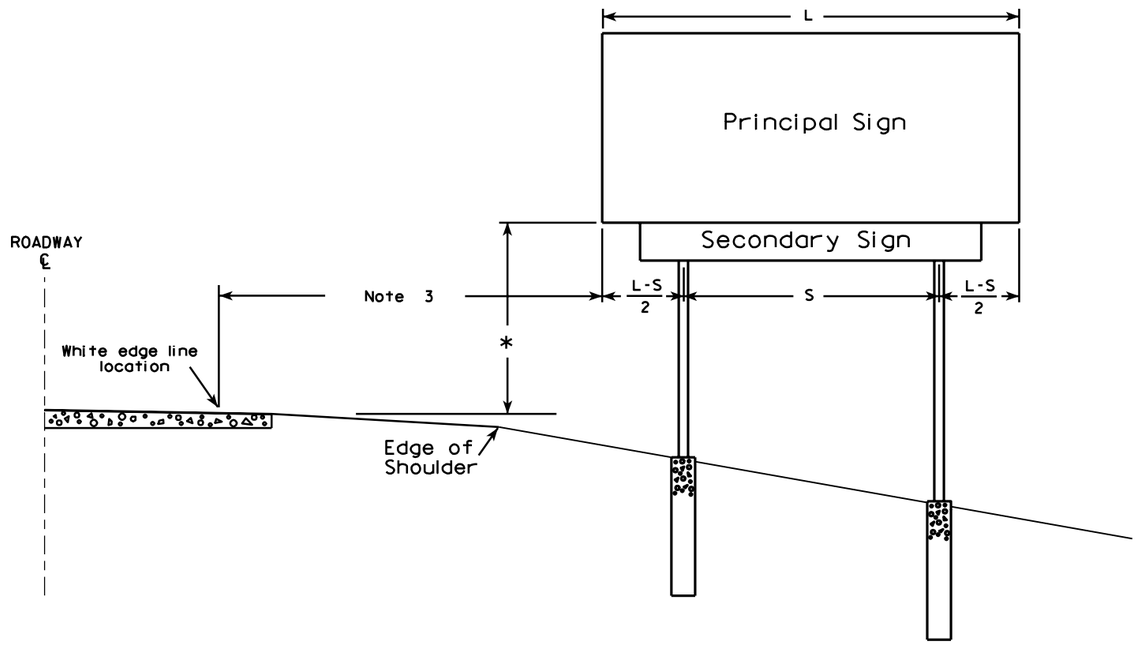
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/5/10 PLATE NO. A3-3.2

PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A33.DGN PLOT DATE : 05-MAR-2010 10:07 PLOT BY : ditjph





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

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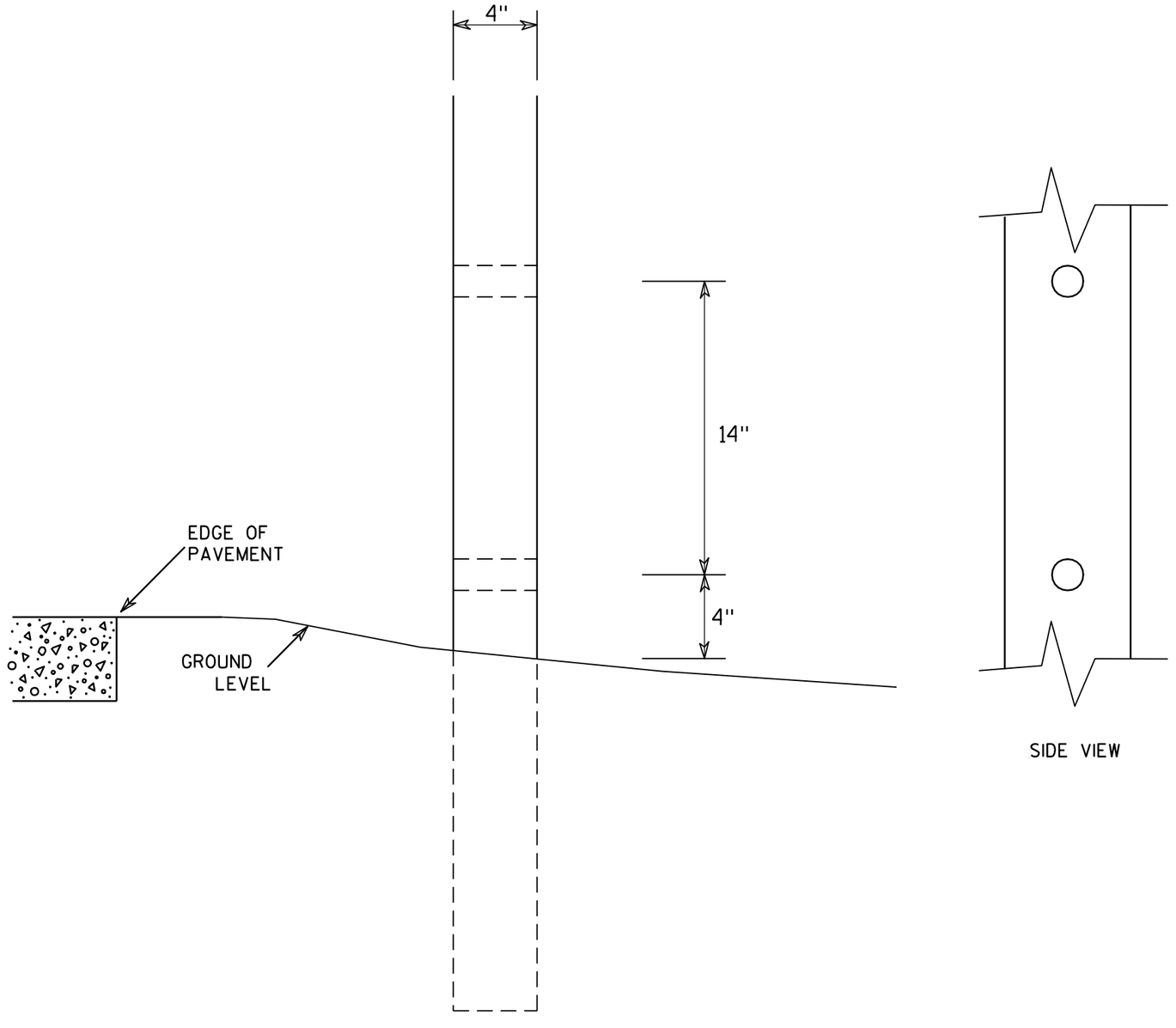
TYPICAL INSTALLATION OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew L Rauch
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:				SHEET NO: 220	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

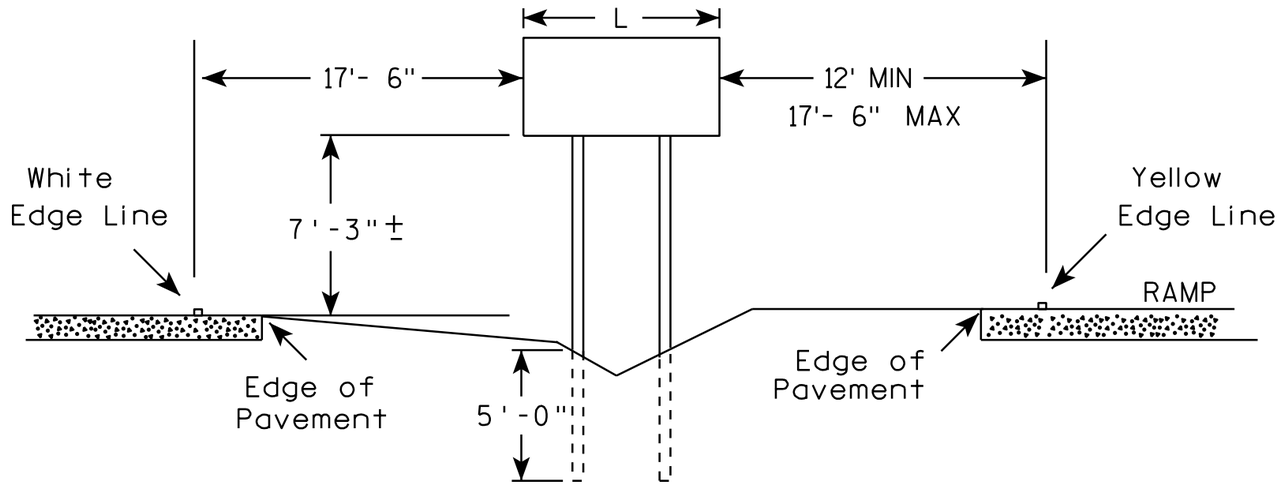
4 X 6 WOOD POST MODIFICATIONS

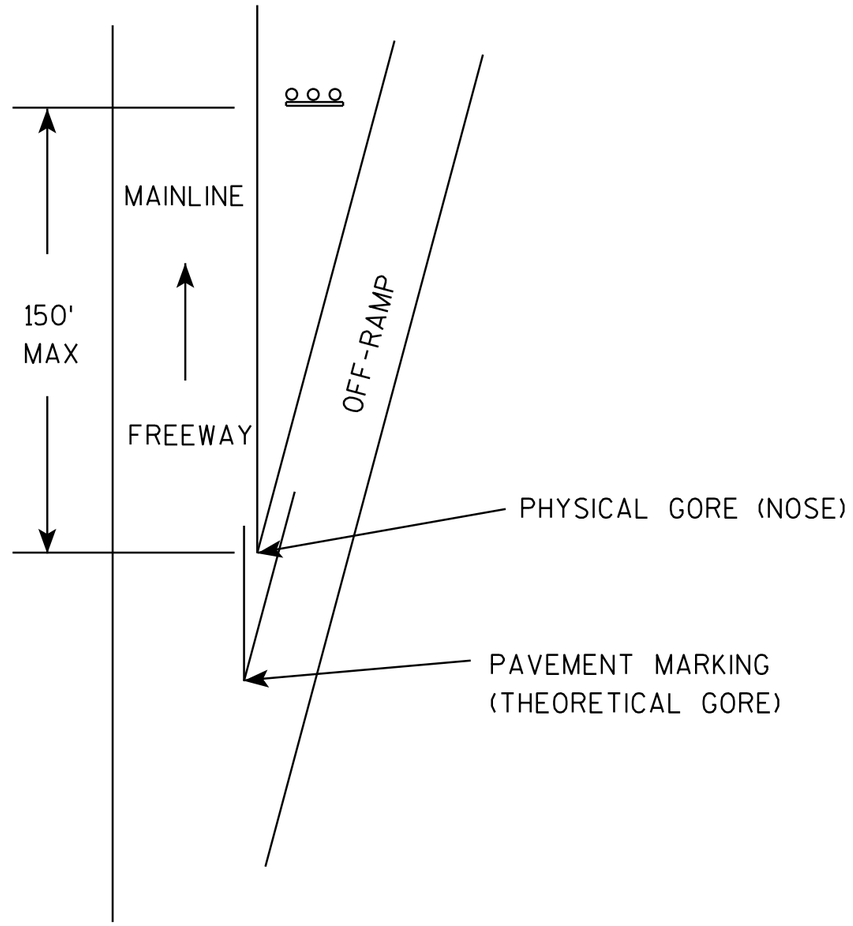
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 221	E





GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 10 feet, use 3 posts as per A4-4.
6. The (∓) tolerance for the mounting height is 3 inches.

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TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

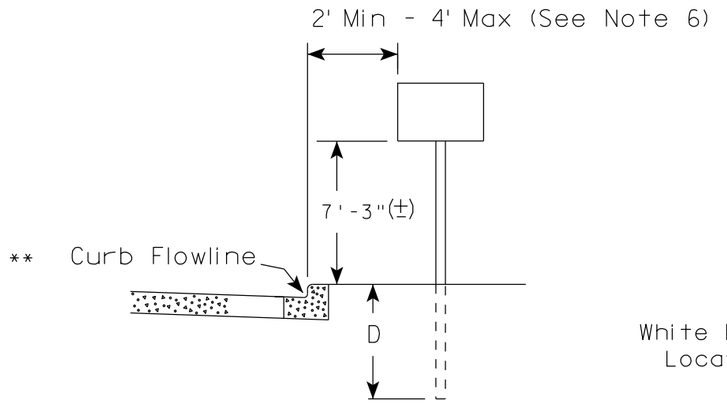
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

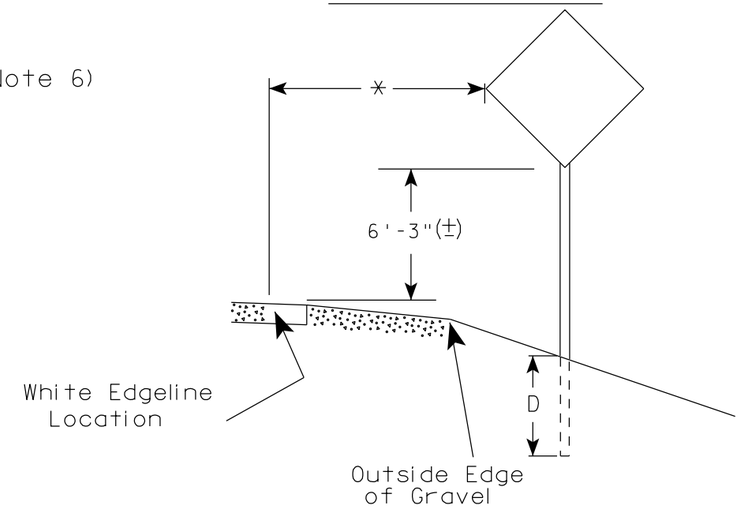
DATE 2/06/14 PLA 222 A4-2.3

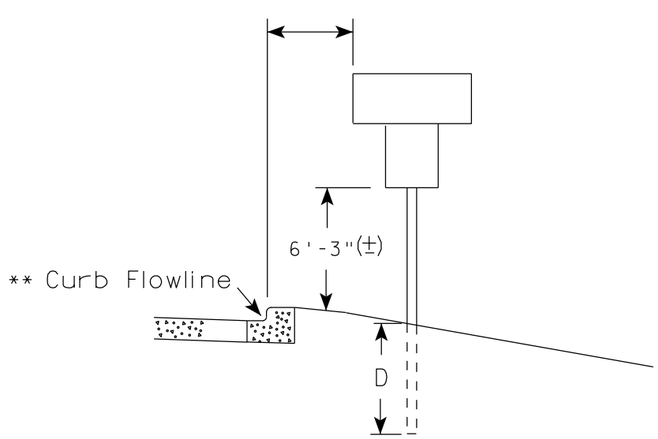
PROJECT NO: | SHEET NO: E

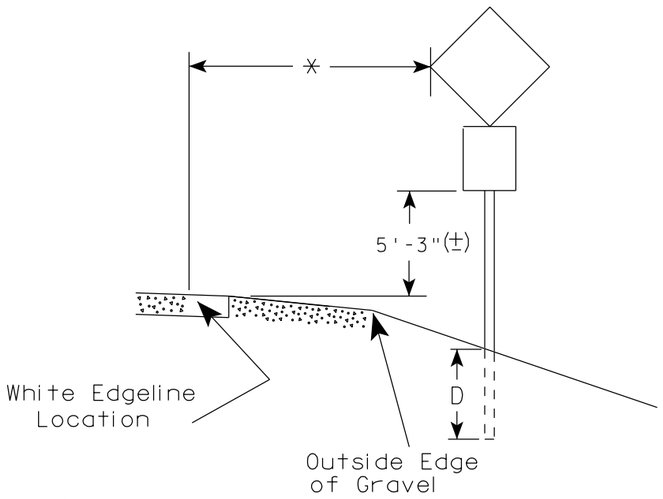
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, 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 (A2-1S) 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 signs shall be mounted at a height of 5'-3" (±) or as directd 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), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) 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.

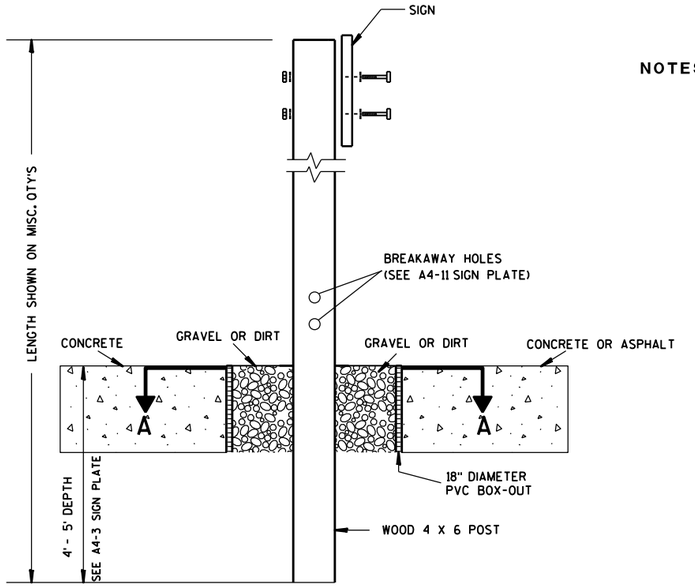
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

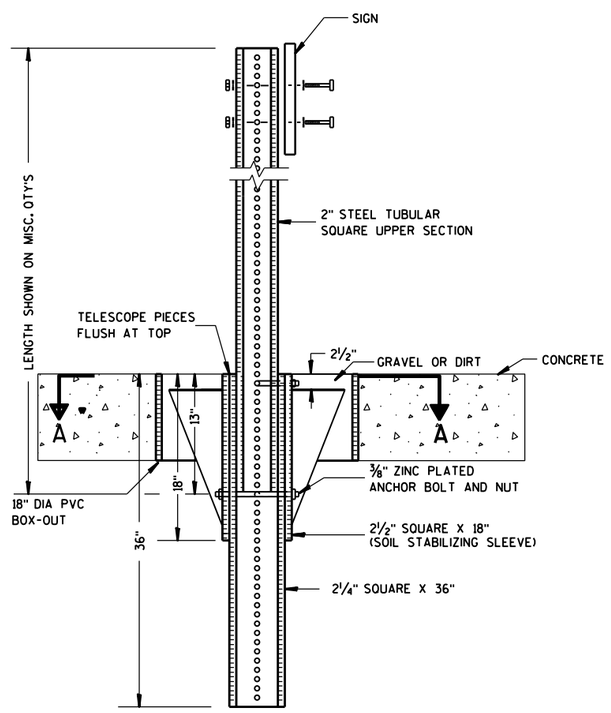
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

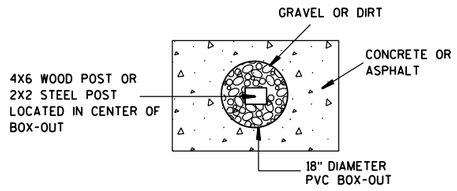
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

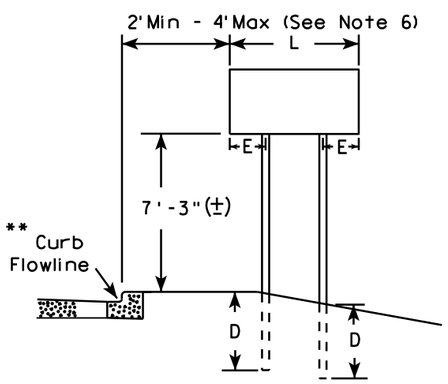
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

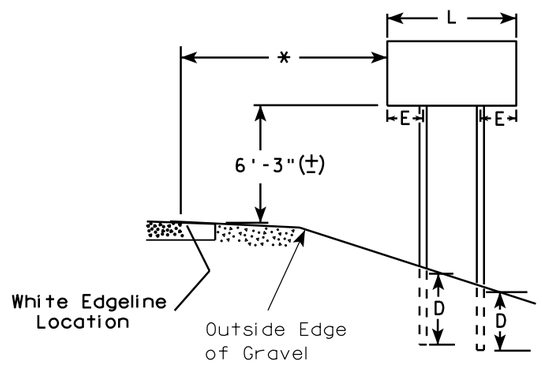
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

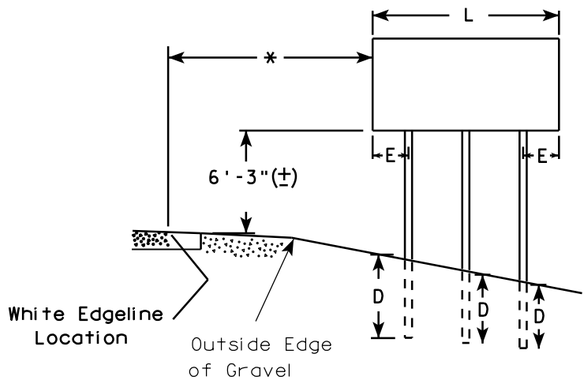
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

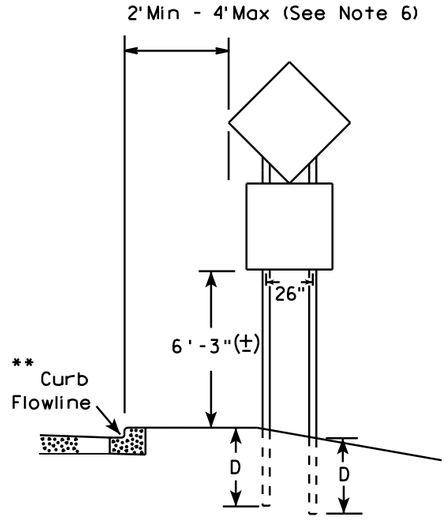
URBAN AREA



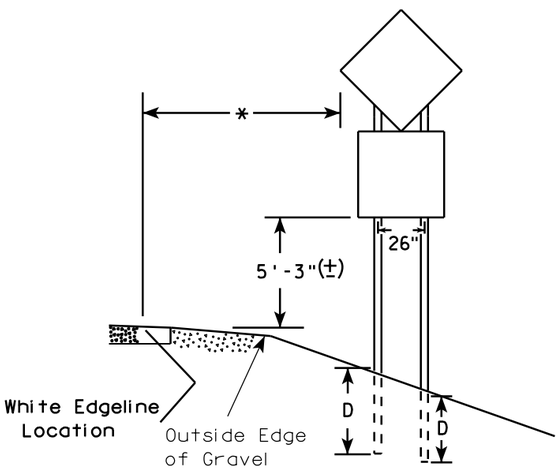
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	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"

GENERAL NOTES

1. For 3 or 4 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 (A2-1S) 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 signs 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), In Road Object Markers (W5-54) & End of Road Markers (W5-56) 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 less than 20 S.F. in area.

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

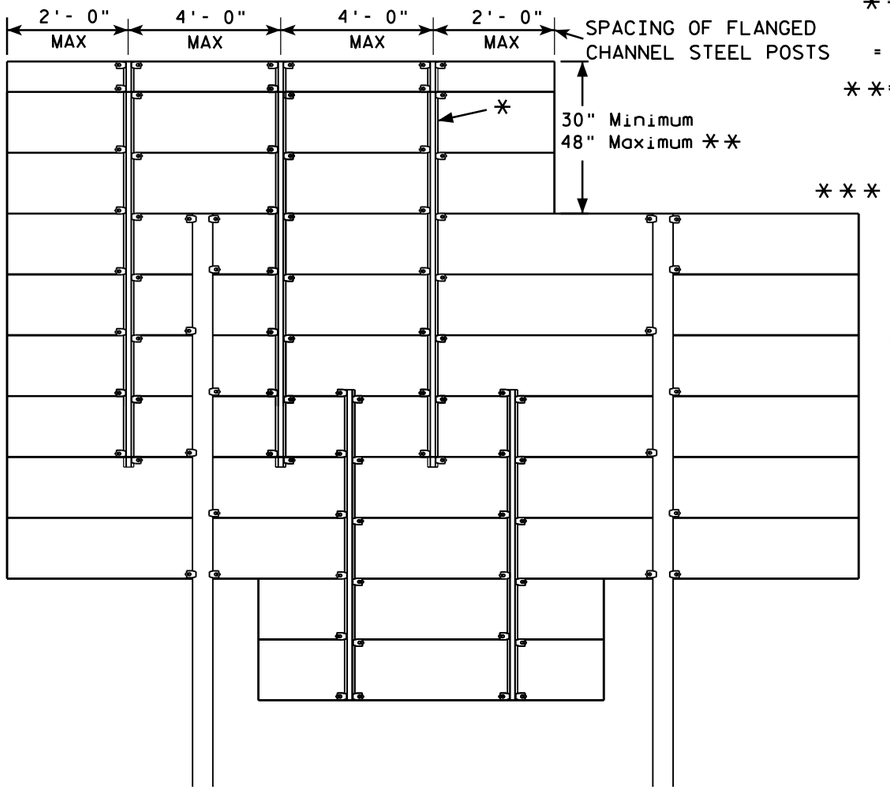
DATE 11/12/14 PLATE NO. A4-4 225 13

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 12-NOV-2014 14:01 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 107.021305:1.000000

WISDOT/CADDS SHEET 42

GROUND MOUNTED SIGN

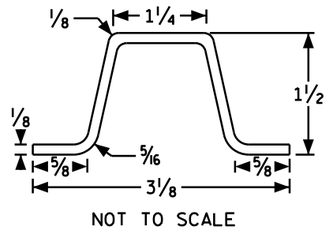


* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

** =FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

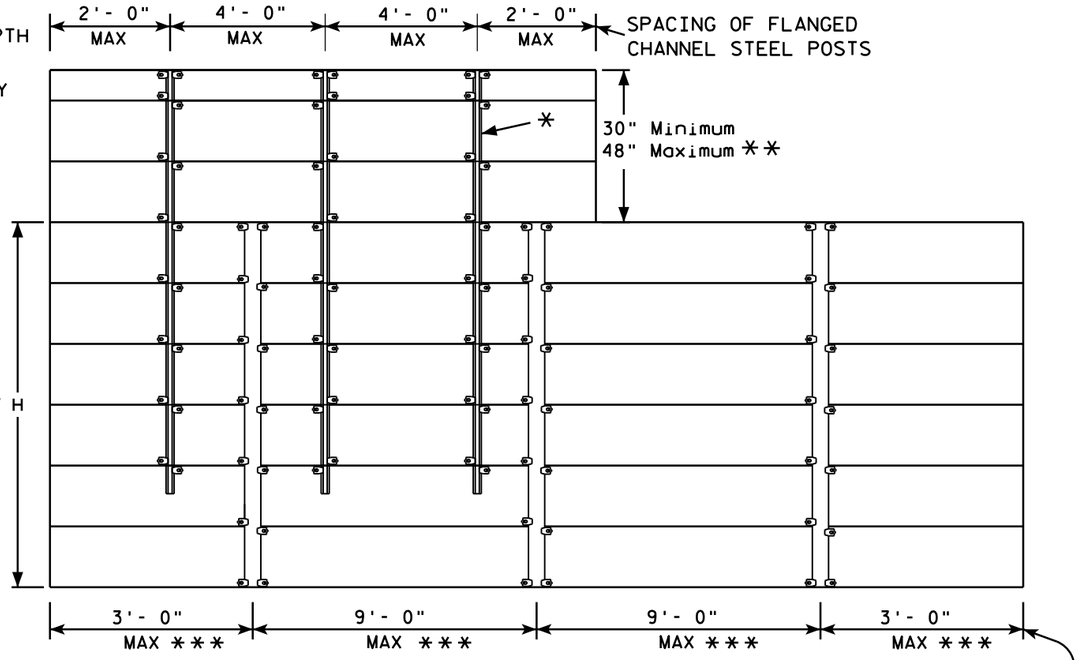
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

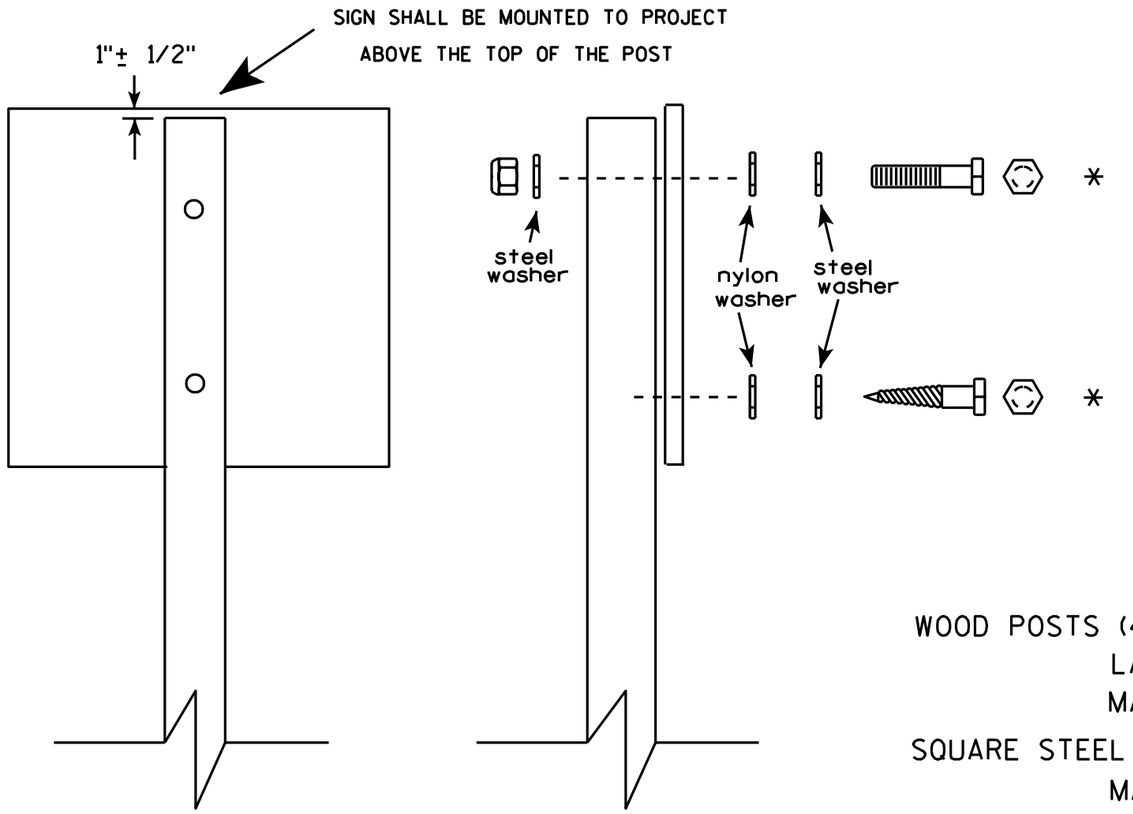
   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT A4-6.12



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

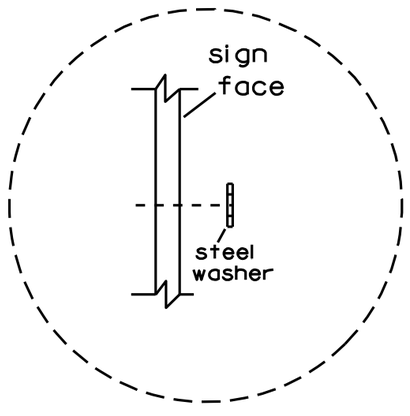
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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.

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

7

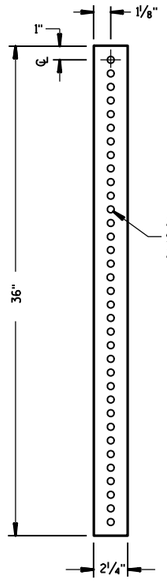
7

PROJECT NO:

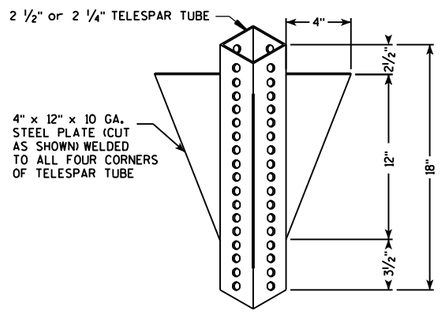
SHEET NO: 227 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

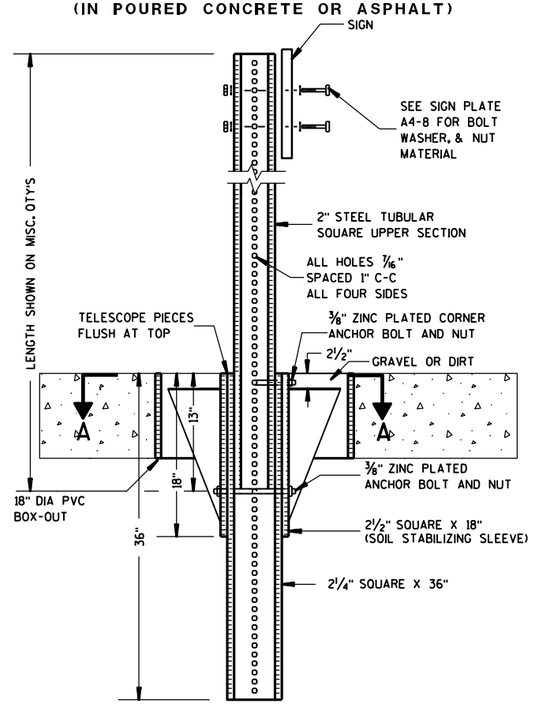
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



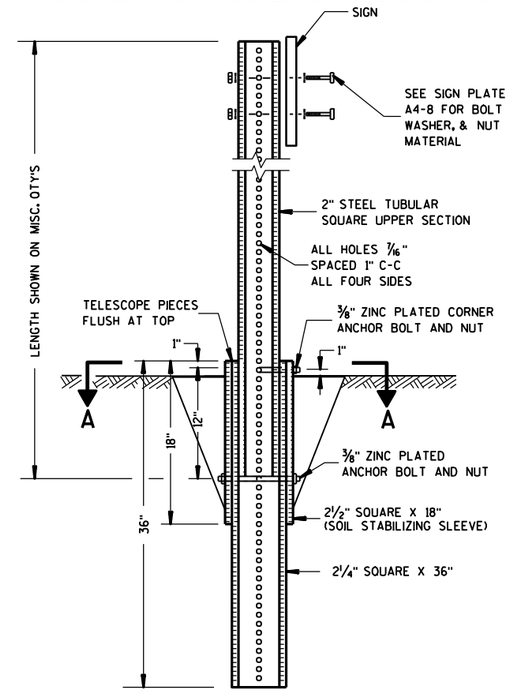
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

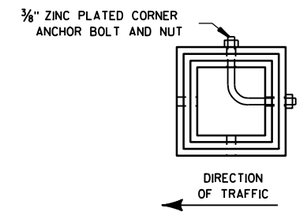


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

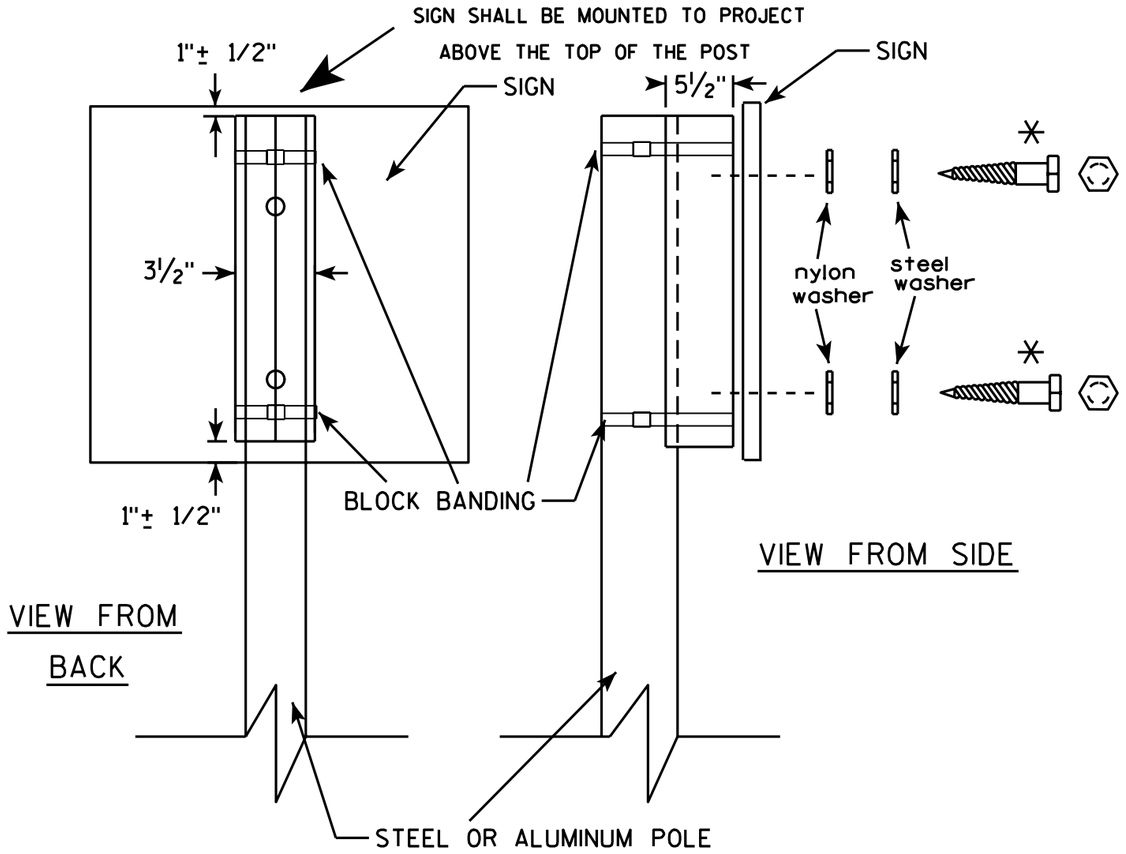
TUBULAR STEEL SIGN POST A4-9

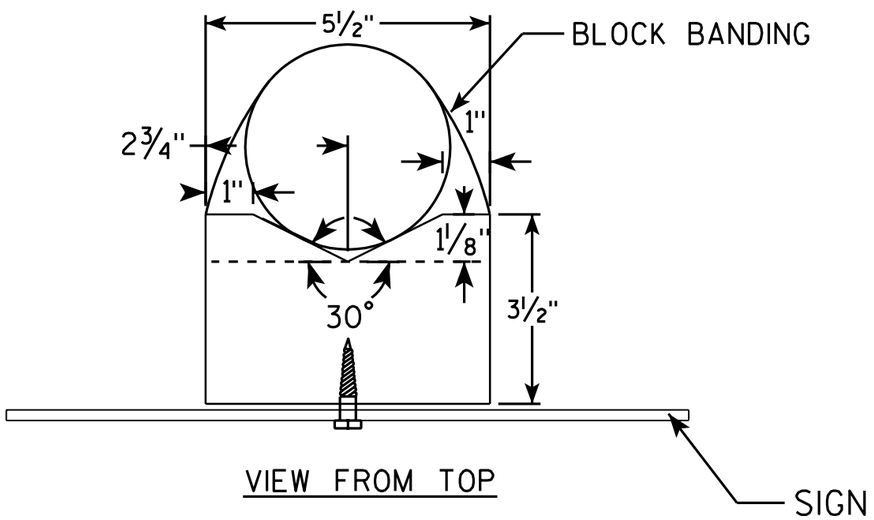
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 228	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

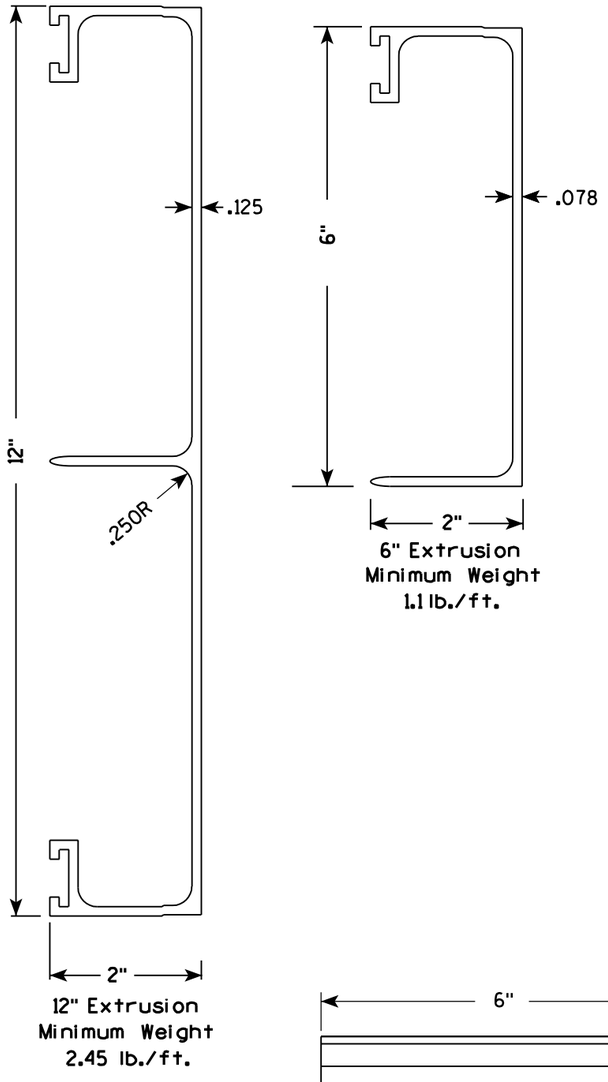
APPROVED Matthew R Rauch
for State Traffic Engineer

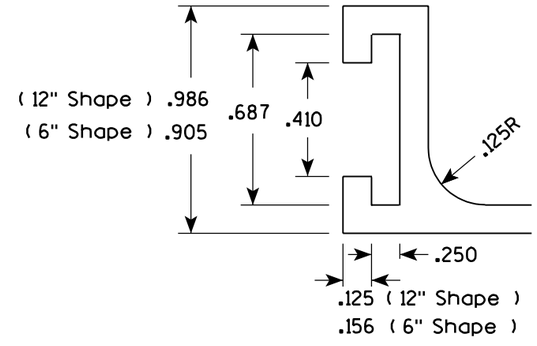
DATE 7/12/07 PLATE NO. A5-10.1

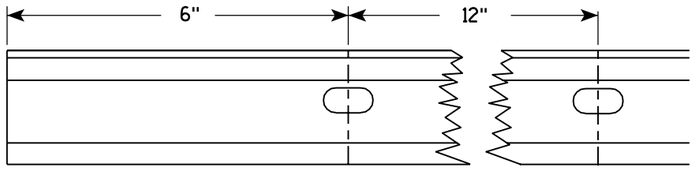
PROJECT NO:

SHEET NO: 229 E

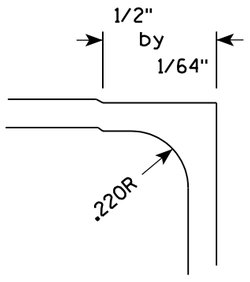
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

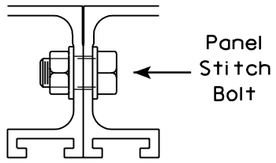


Hardware

STITCH BOLT, WASHER & NUT

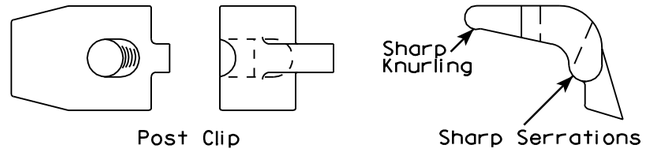
The hardware includes:

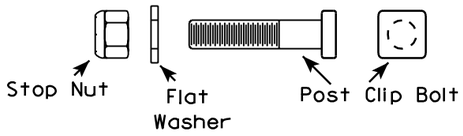
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spagg
for State Traffic Engineer

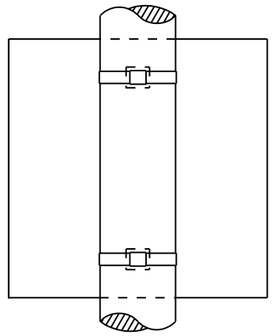
DATE 11/18/99 PLATE NO. A5-2.9

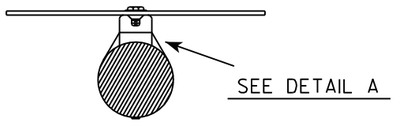
PROJECT NO:

SHEET NO: 230 E

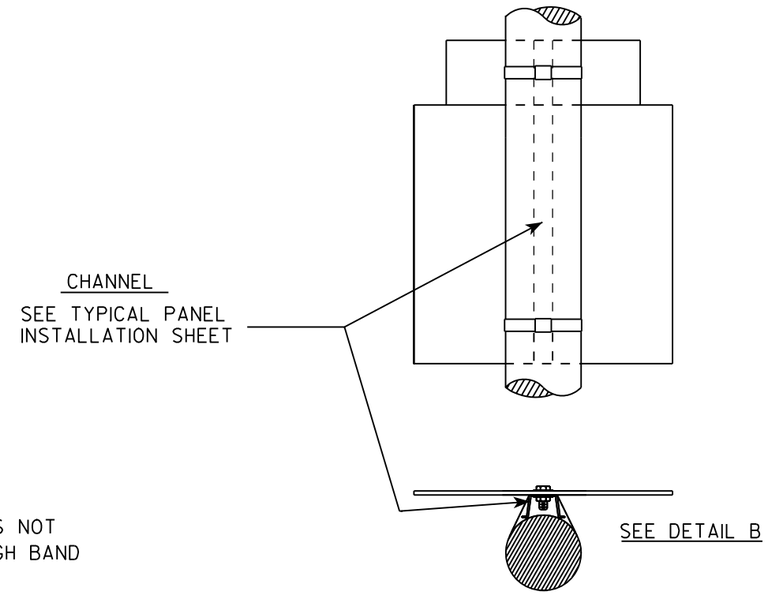
BANDING

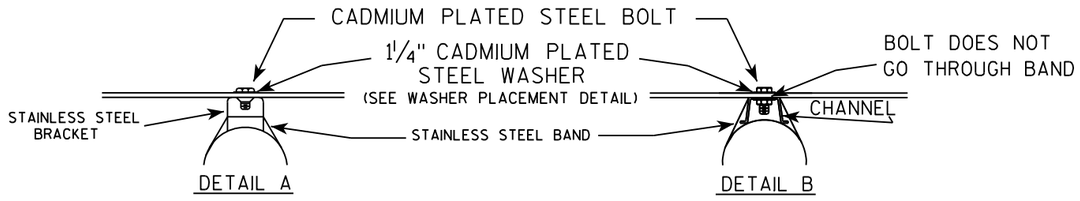
SINGLE SIGN



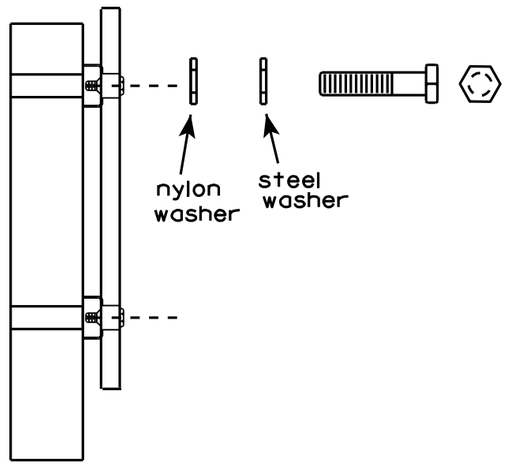


"J" ASSEMBLY





WASHER PLACEMENT



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

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

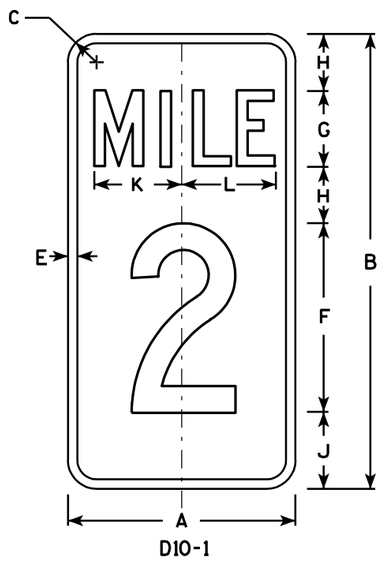
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

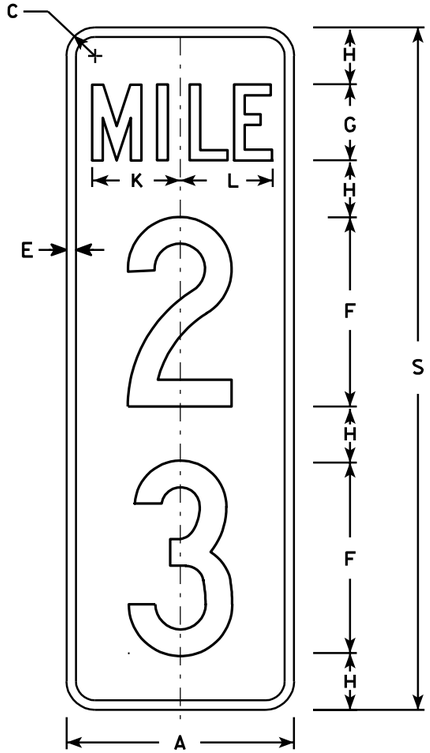
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

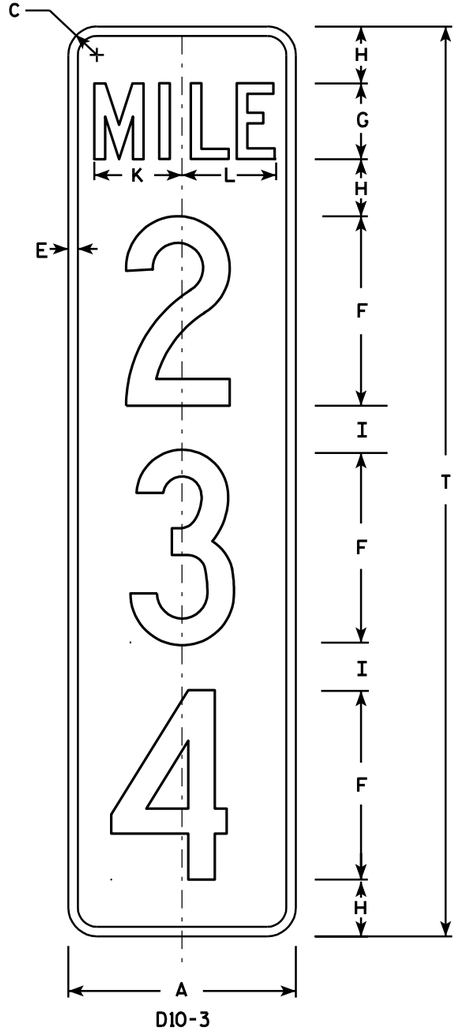
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 231	E



D10-1



D10-2



D10-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White - Type H Reflective
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. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 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
1																										
2																										
3																										
4	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						
5	12	24	1 ½		½	10	4	3	2 ½	4	4 ⅝	4 ⅞							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m2	Area m2	Area m2
.19	.28	.38

STANDARD SIGN
D10-1 , D10-2 & D10-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for Director, Office of Traffic

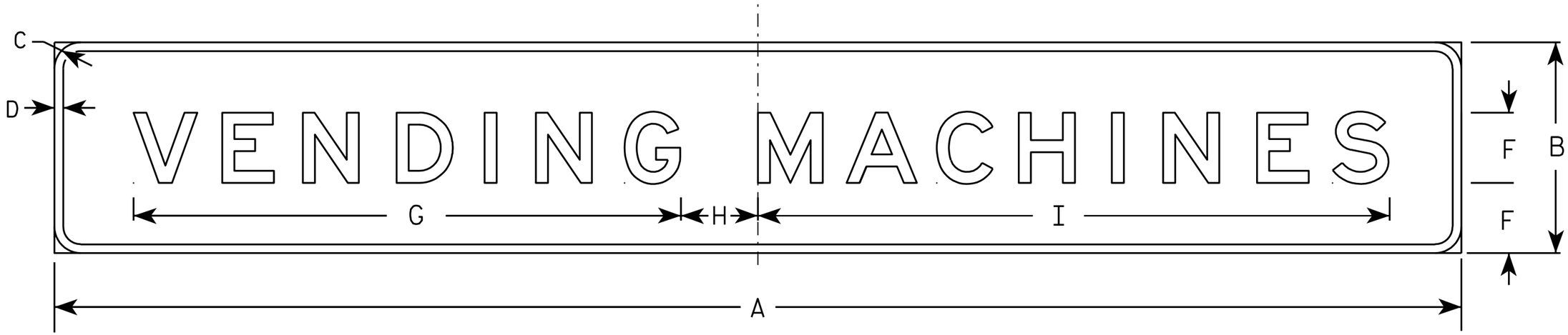
DATE 1/16/02 PLATE NO. D10-3.2

PROJECT NO:

SHEET NO: 232 E

NOTES

1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
3. Message Series - E



E10-53

Metric equivalent for this sign is:

SIZE	
1	
2	
3	
4	
5	3000 mm X 450 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																												
3																												
4																												
5	120	18	2 1/4	3/4		6	46 3/4	6 9/16	53 7/8																		15.0	1.35

STANDARD SIGN
E10-53

WISCONSIN DEPT OF TRANSPORTATION

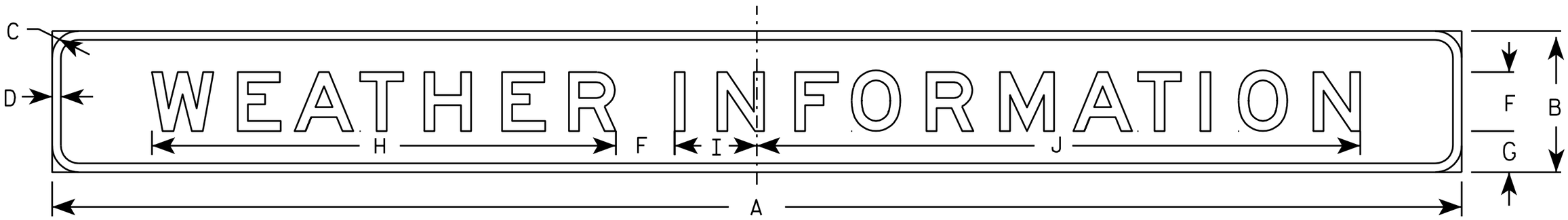
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/8/08 PLATE NO. E10-53.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 233	E

NOTES

1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
3. Message Series - E



E10-54

Metric equivalent for this sign is:

SIZE	
1	
2	
3	
4	
5	3000 mm X 300 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 m^2
1																												
2																												
3																												
4																												
5	120	12	2 1/4	3/4		5	3 1/2	39 1/2	7	51 3/8																	10.0	0.90

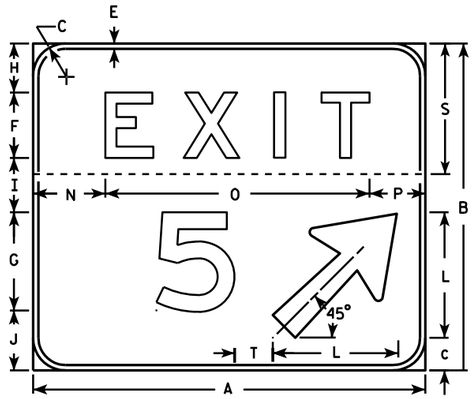
STANDARD SIGN
E10-54

WISCONSIN DEPT OF TRANSPORTATION

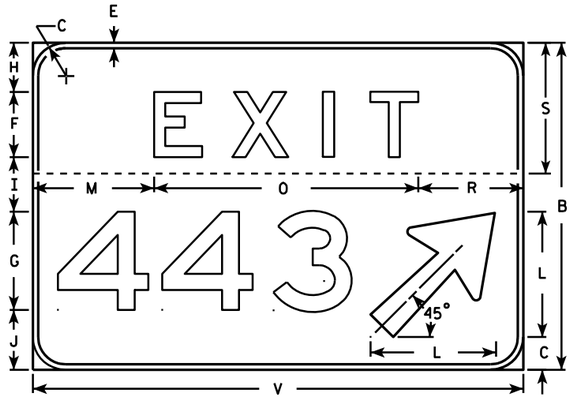
APPROVED Matthew R Rauch
for State Traffic Engineer

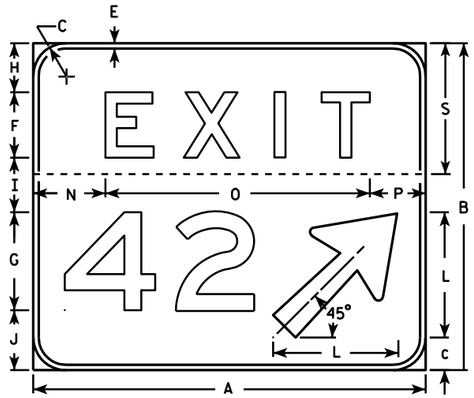
DATE 12/8/08 PLATE NO. E10-54.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 234	E



NOTE: T diminision shall be measured from the back of the number to the front of the arrow





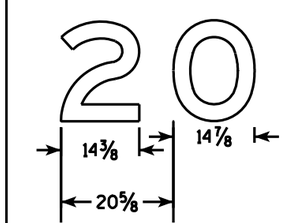
NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two seperate pieces as shown on each detail by the dashed line (----------).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

EXAMPLE FOR USING SPACING CHART



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
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 7/8	23	22 1/4	13 1/4	48 1/2	10 1/4		19 1/4	24	7		90		96	7 1/2	

1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

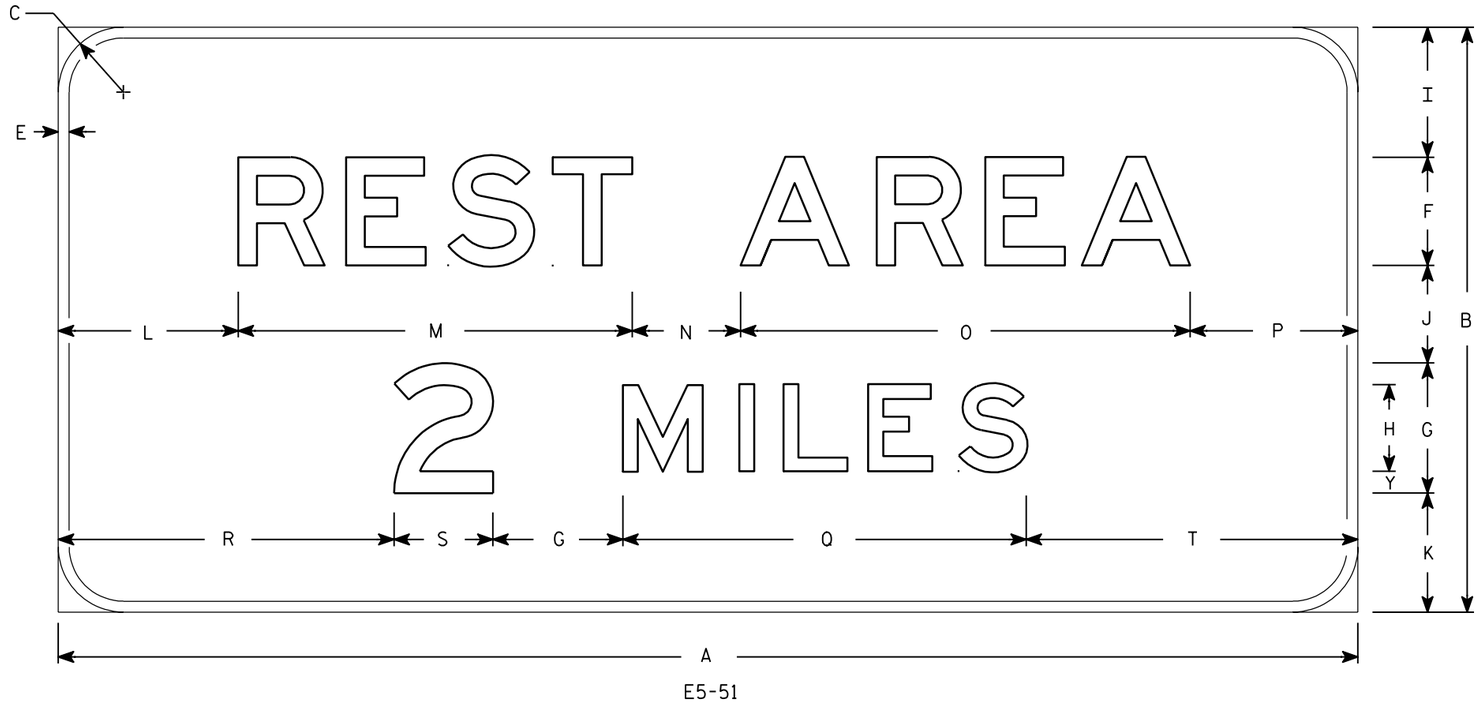
STANDARD SIGN E5-1A

WISCONSIN DEPT OF TRANSPORTATION

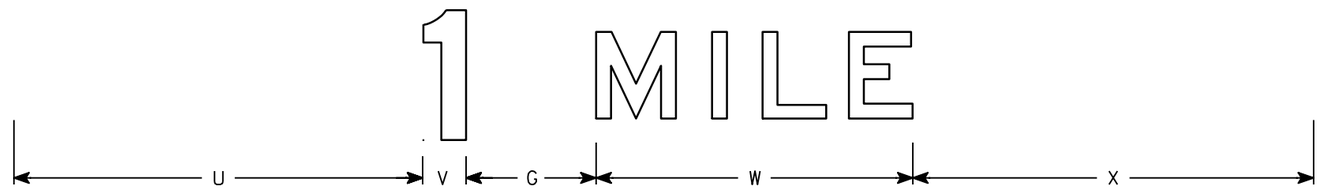
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 5/11/10 PLATE NO. E5-1A.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 235 | E



E5-51



NOTES

1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
3. Message Series - E
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.

Metric equivalent for this sign is:

SIZE	
1	
2	
3	
4	3000 mm X 1350 mm
5	3600 mm X 1500 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																												
3																												
4	120	54	6		1	10	12	8	12	9	11	16 5/8	36 3/8	10	41 1/2	15 1/2	37 1/4	31	9 1/8	30 5/8	37 3/4	4	29 1/4	37	2		45.0	4.05
5	144	60	6		2	12	15	10	12	10	11	19 3/4	44 3/4	12	49 1/2	18	46 1/4	36	11	35 3/4	44	4 7/8	36 1/4	43 7/8	2 1/2		60.0	5.40

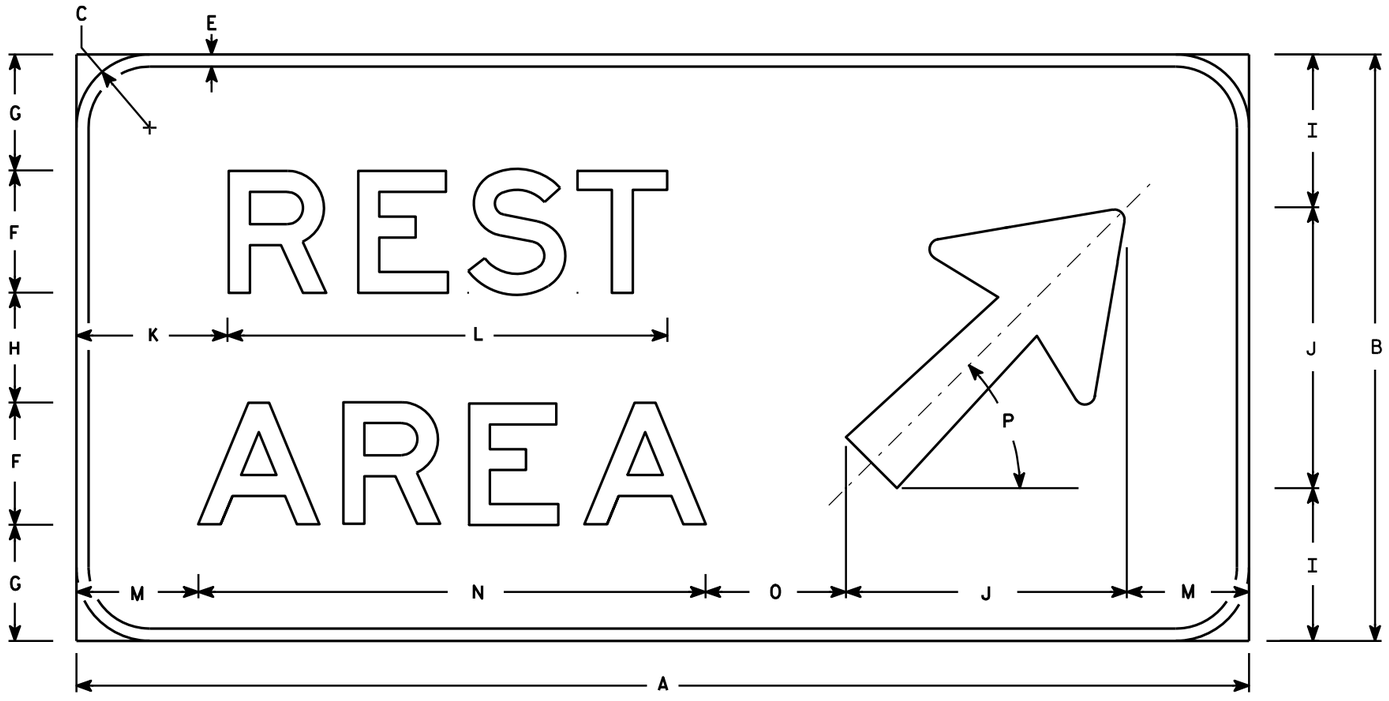
STANDARD SIGN
E5-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 12/8/08 PLATE NO. E5-51.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 236	E



E5-52

NOTES

1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for ROAD and BRIDGE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
3. Message Series - E
4. Arrow is standard Interstate Type A.

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																											
3																											
4	96	48	6		1	10	9 ½	9	12 ½	23	12 ⅜	36 ⅜	10	41 ½	11 ½	45°											32.0
5	144	54	6		2	15	8	8	13	28	20 ¼	62	16 ¼	68	15 ½	45°											54.0

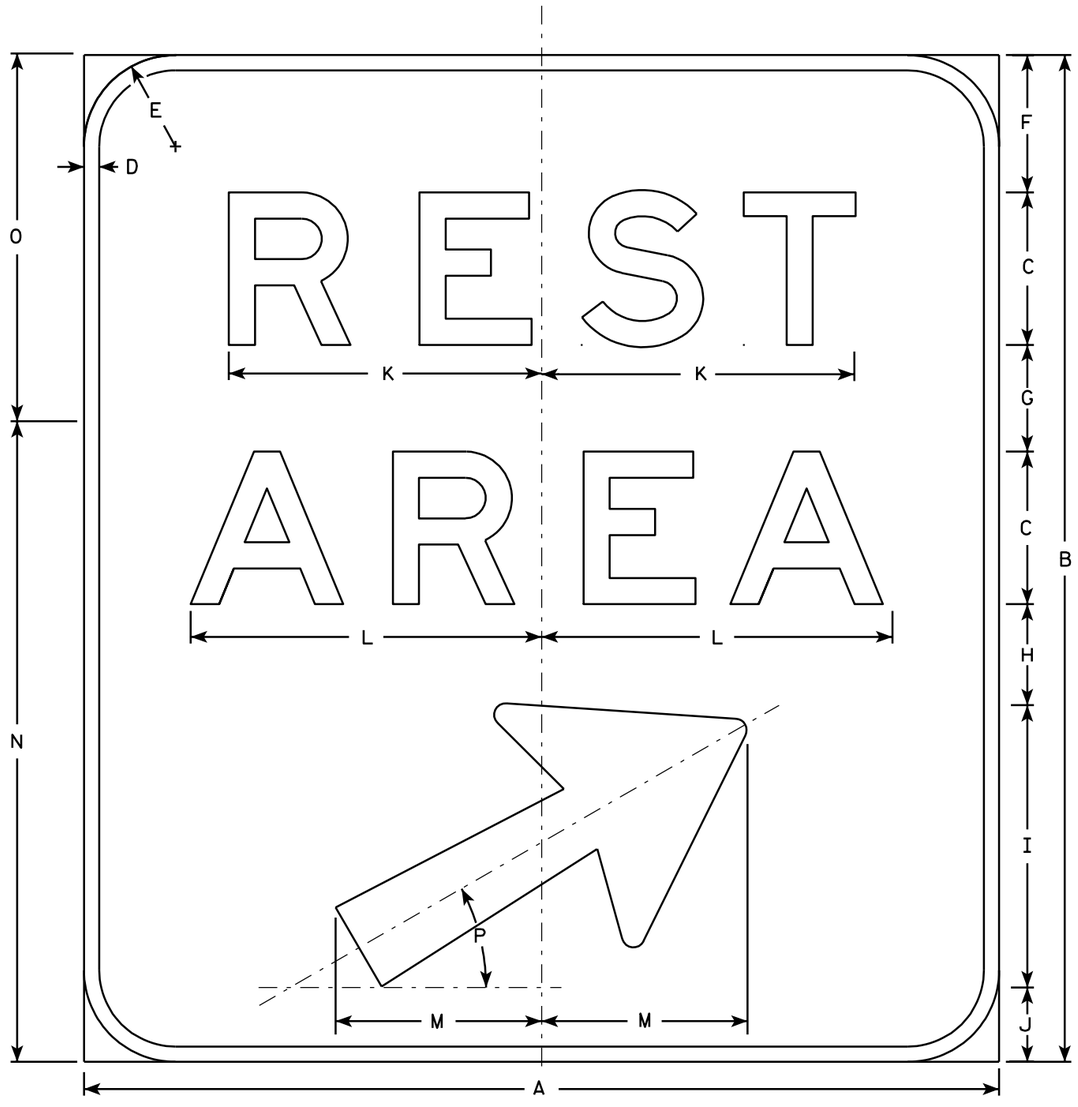
STANDARD SIGN
E5-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/30/13 PLATE NO. E5-52.11

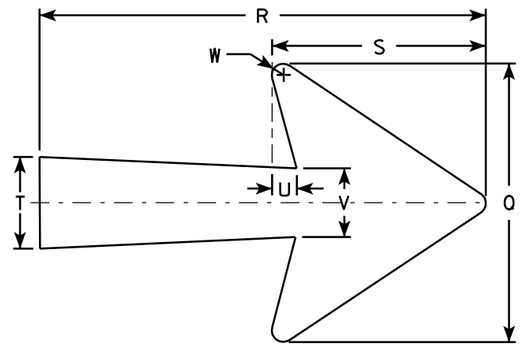
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 237	E



E5-54

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
3. Message Series - E
4. Corners may be square or rounded but borders shall be rounded as shown. Base material for this sign shall be plywood.
5. Arrow is Type A as per A1-1 standard
6. Dimensions N & O indicate cutting lines for plywood panels.



Arrow Detail

7

Metric equivalent for this sign is:

SIZE	
1	
2	
3	
4	1500 mm X 1650 mm
5	1800 mm X 1800 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																												
3																												
4	60	66	10	1	6	9	7	6 5/8	18 1/2	4 7/8	21	23	13 1/2	42	24	30°	18 1/4	29 1/4	14	6	1 1/2	4 1/2	3/4				27.5	2.47
5	72	72	12	1	9	9	7	8	18 1/2	5 1/2	25	27	13 1/2	48	24	30°	18 1/4	29 1/4	14	6	1 1/2	4 1/2	3/4				36.0	3.24

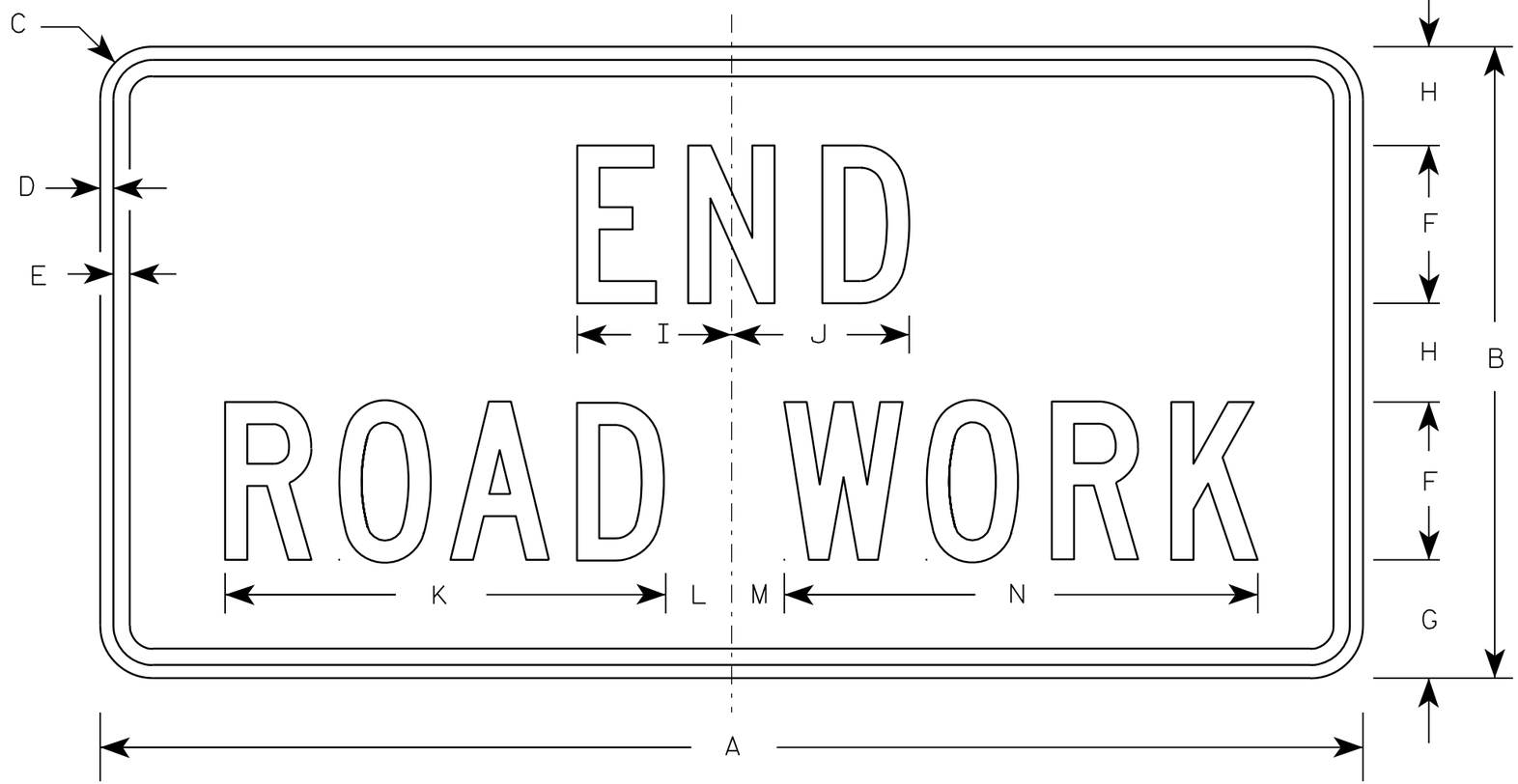
STANDARD SIGN
E5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

DATE 2/11/97 PLATE NO. E5-54.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 238	E



G20-2A

NOTES

1. Sign is 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 - 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.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 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	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

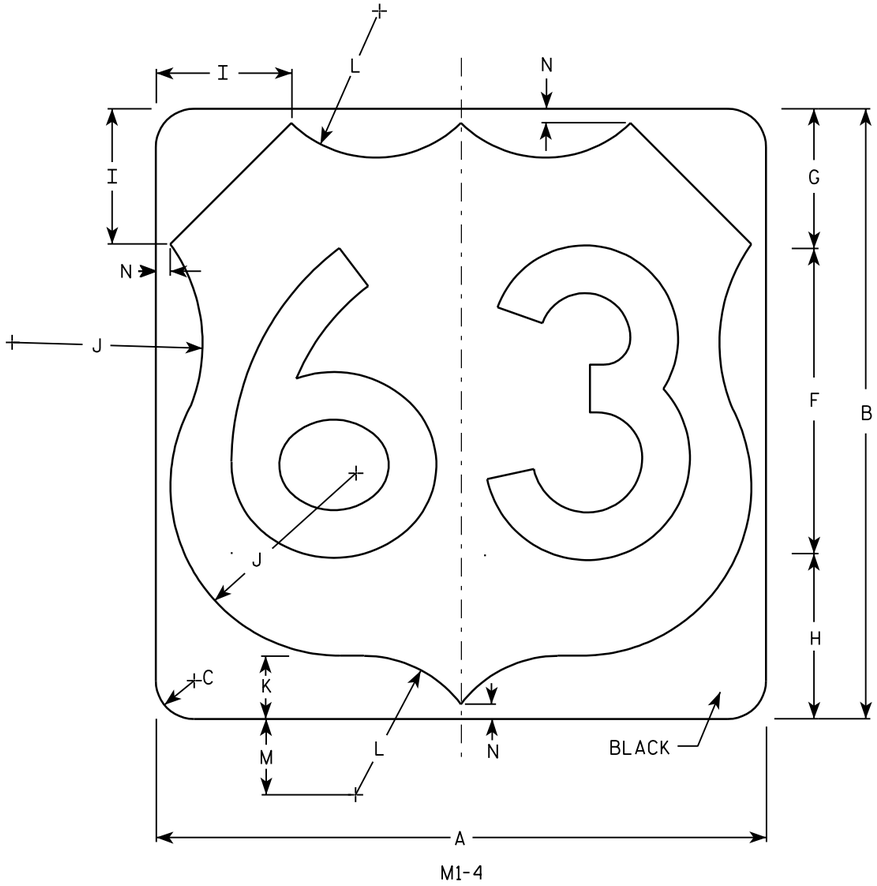
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

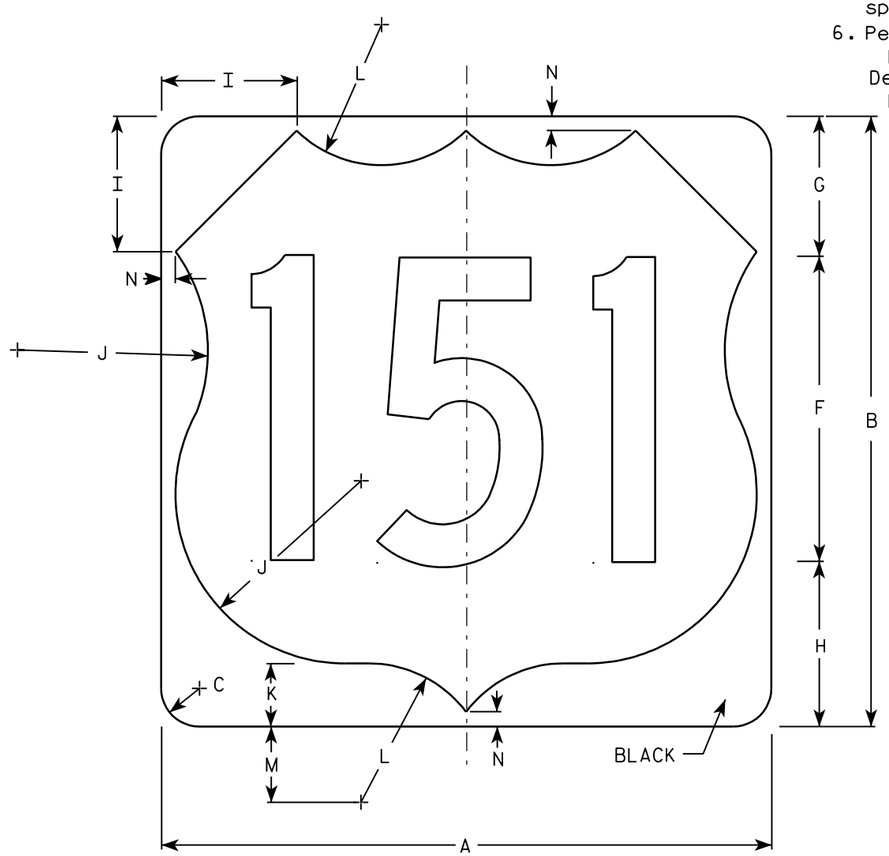
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 239	E

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   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. Substitute appropriate numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

7

7

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 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	Areq sq. ft.	Area m2
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

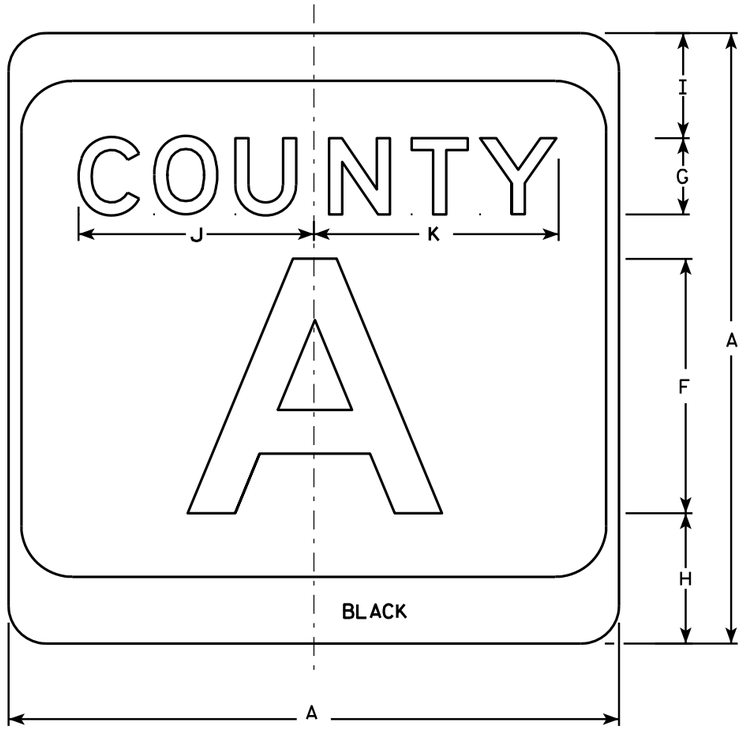
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

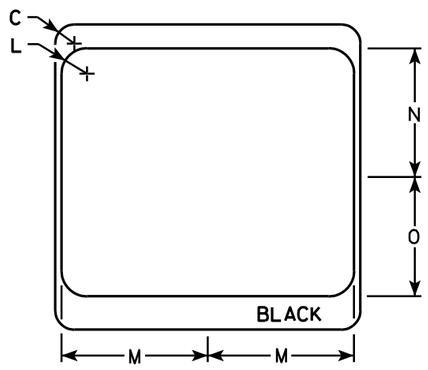
APPROVED Matthew R Rauch
for State Traffic Engineer

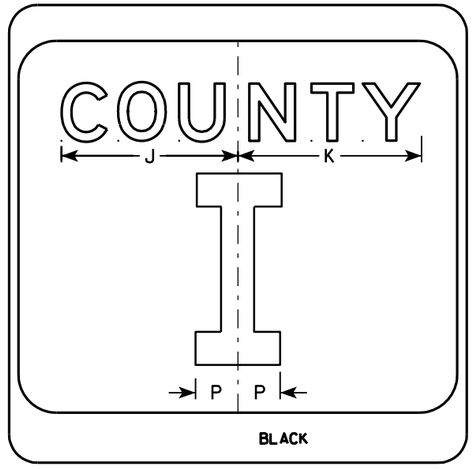
DATE 08/25/05 PLATE NO. M1-4.9

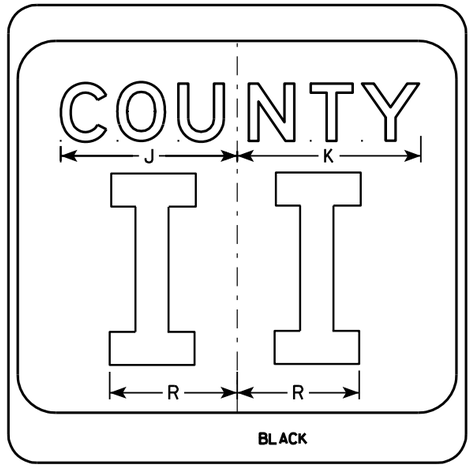
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 240	E



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

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

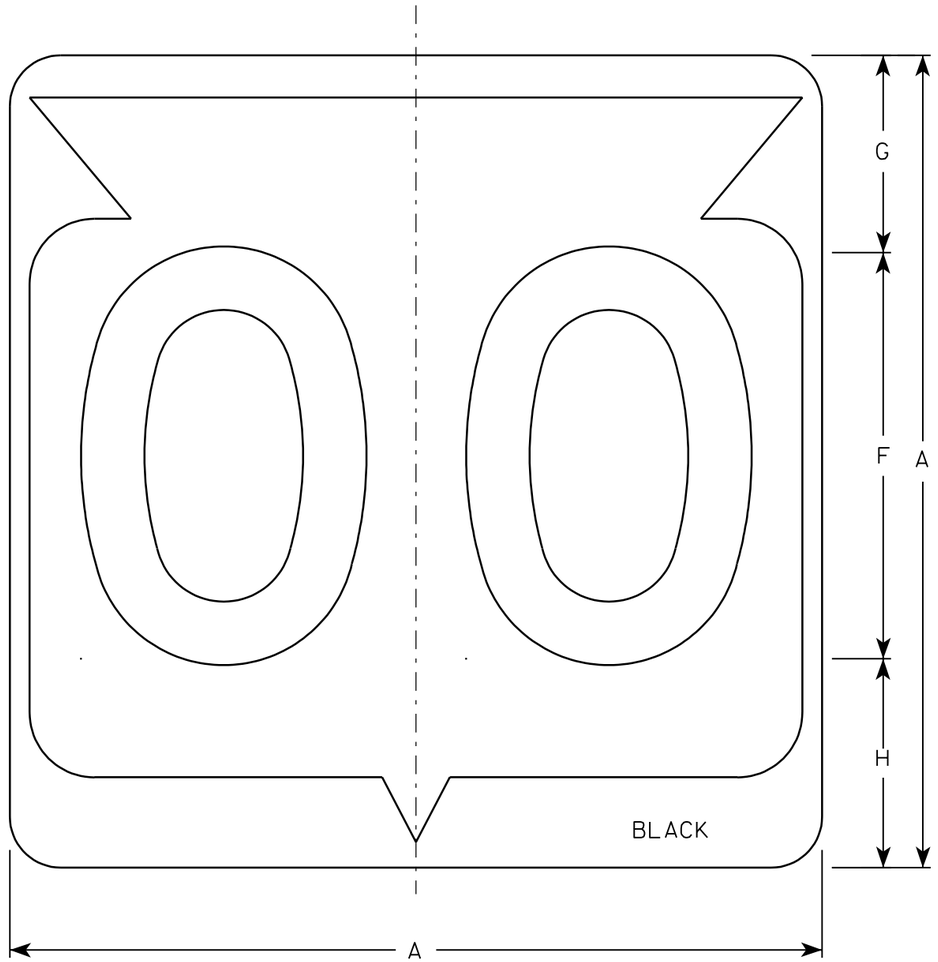
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

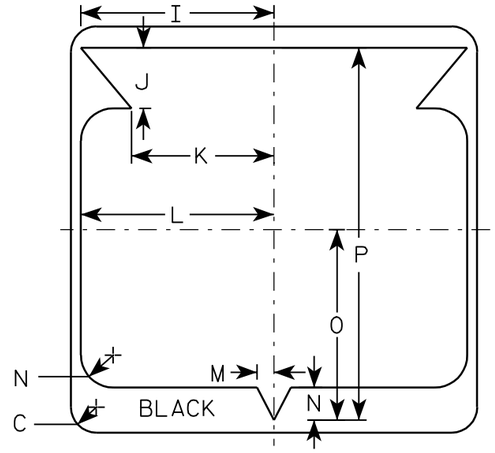
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 241	E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   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. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 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	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

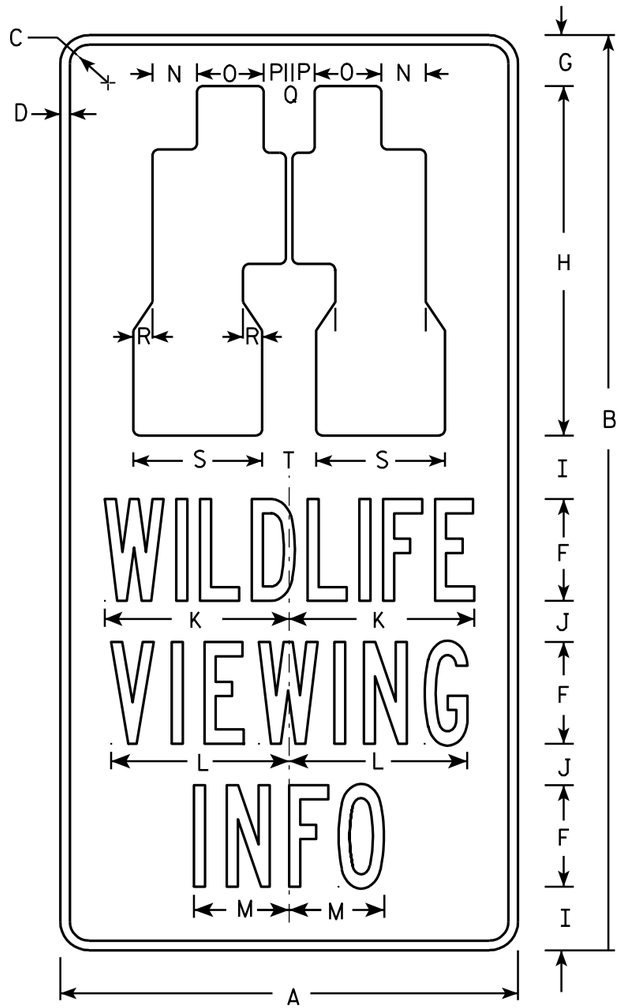
STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 242	E



M1-87

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	
2	450 mm X 900 mm
3	
4	
5	

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	18	36	1 1/8	3/8		4	2	13 3/4	2 1/2	1 5/8	7 1/4	7	3 3/4	1 3/4	2 5/8	7/8	1/4	3/4	5 1/8	2 1/8							4.5	.41
3																												
4																												
5																												

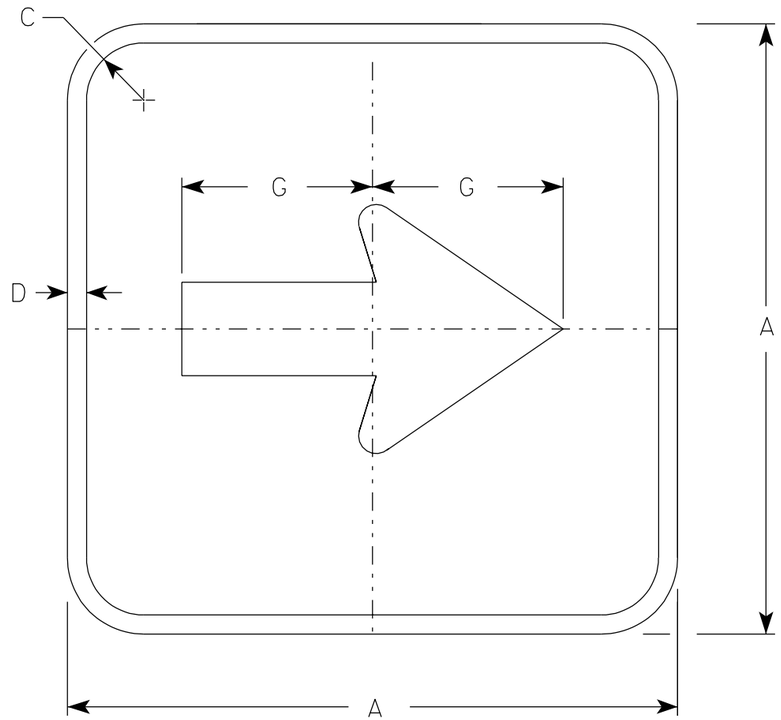
STANDARD SIGN
M1-87

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

DATE 1/30/02 PLATE NO. M1-87.3

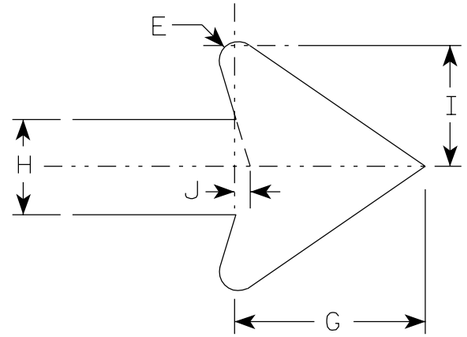
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 243 | E



M1-88A

NOTES

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



Metric equivalent for this sign is:

SIZE	
1	
2	300 mm X 300 mm
3	
4	
5	

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	12		1 1/8				3 3/4	1 7/8	2 3/8	5/16																	1.0	.09
3																												
4																												
5																												

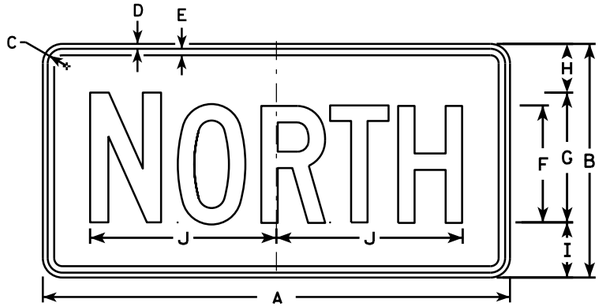
STANDARD SIGN
M1-88A

WISCONSIN DEPT OF TRANSPORTATION

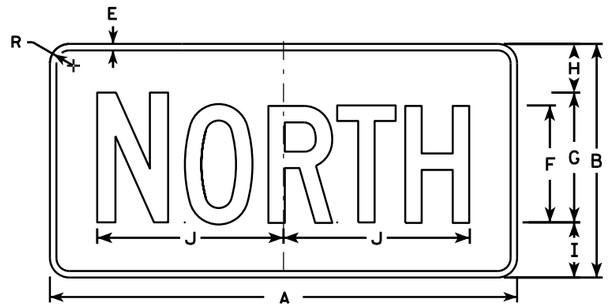
APPROVED Chester J Spang for State Traffic Engineer

DATE 1/30/02 PLATE NO. M1-88A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 244	E

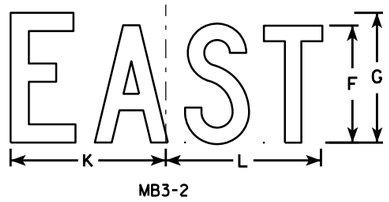


M3-1
MK3-1
MM3-1
MN3-1

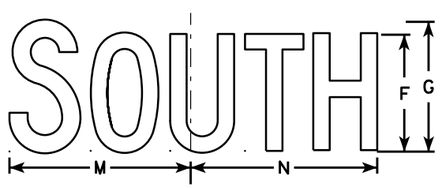


MB3-1

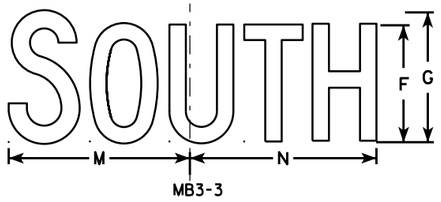
M3-2
MK3-2
MM3-2
MN3-2



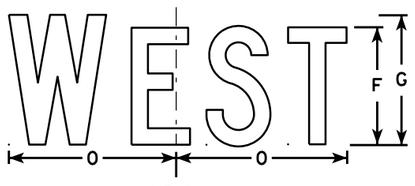
MB3-2



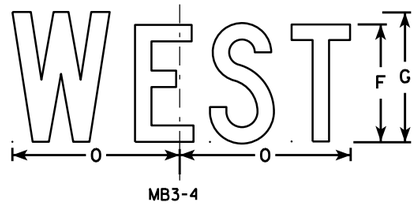
M3-3
MK3-3
MM3-3
MN3-3



MB3-3



M3-4
MK3-4
MM3-4
MN3-4



MB3-4

NOTES

1. All Signs Type II - Type H
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. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
6. Note the first letter of each direction is larger than the remainder of the message.

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	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

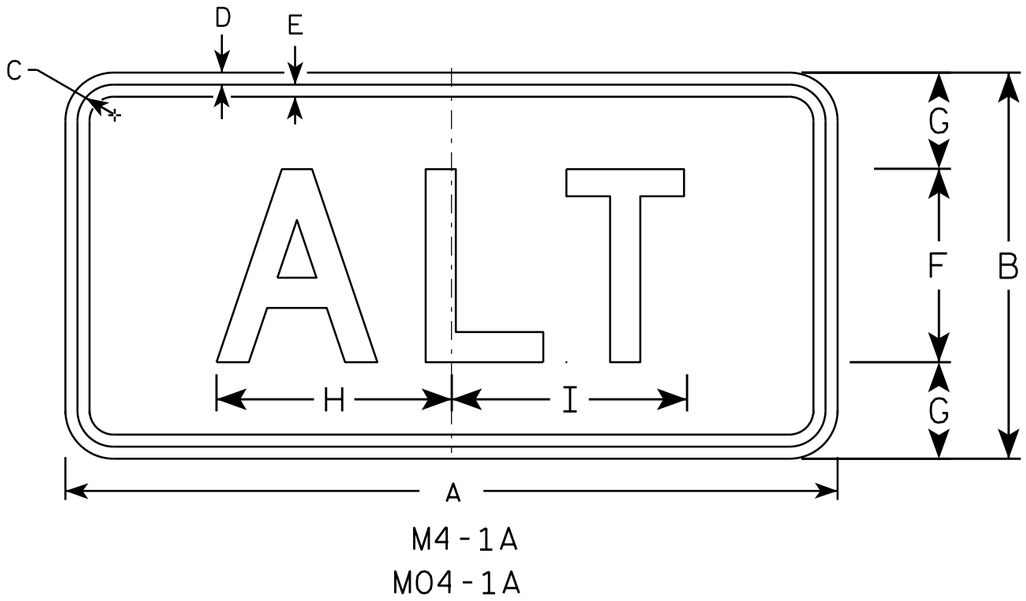
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

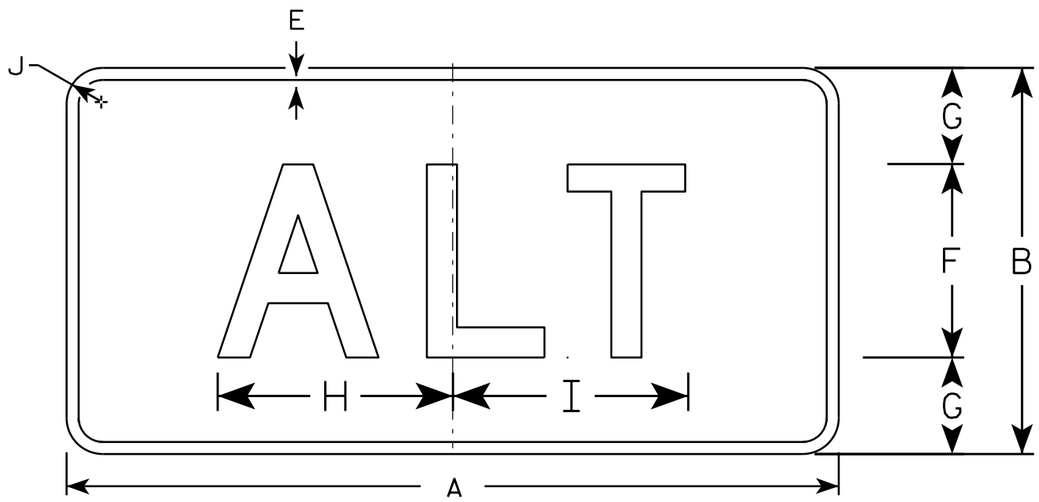
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/30/14 PLATE NO M3-1.13

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



M4-1A
MO4-1A



MB4-1A

NOTES

1. Sign is Type II - Type H except as Shown
2. Color:
   Background - See Note 5
   Message - See note 5
3. Message Series - D
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. M4-1A Background - White
   Message - Black
   MB4-1A Background - Blue
   Message - White
   MO4-1A Background - Orange - Type F
   Message - Black

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	12	1 1/8	3/8	3/8	6	3	7 1/4	7 3/8	1 1/8																	2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	11	11 1/8	1 1/8																	4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	11	11 1/8	1 1/8																	4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	11	11 1/8	1 1/8																	4.5

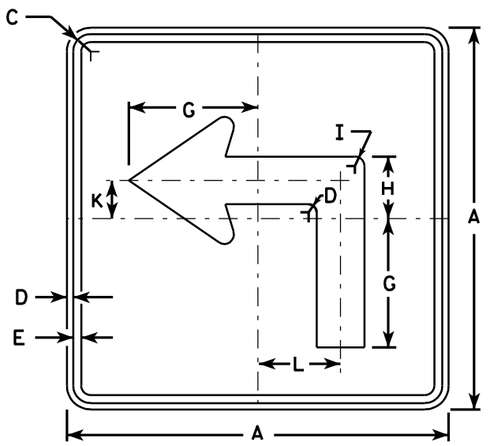
STANDARD SIGN
M4-1A

WISCONSIN DEPT OF TRANSPORTATION

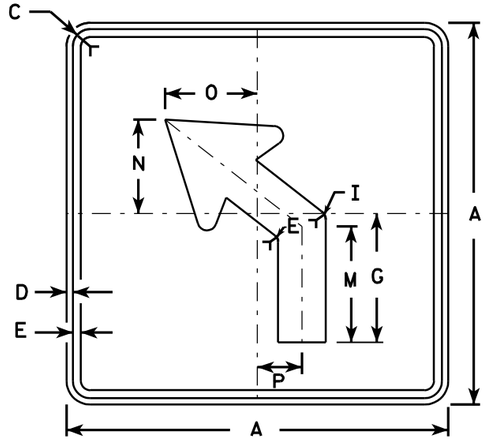
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/30/14 PLATE 246 M4-1A.3

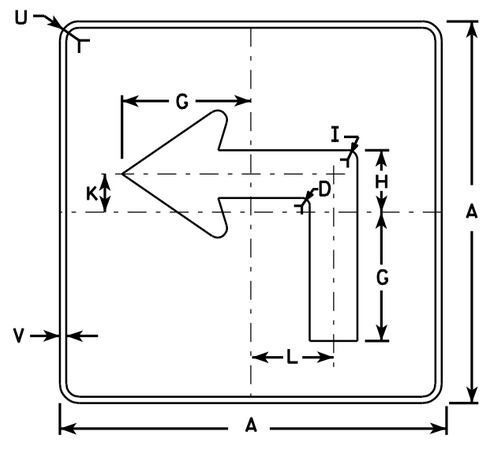
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



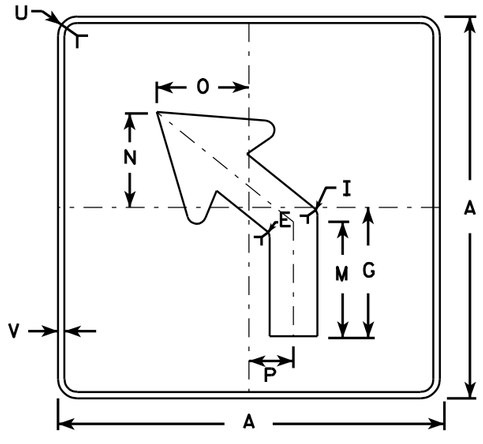
M5-1L
MK5-1L
MM5-1L
MO5-1L
MP5-1L
MR5-1L



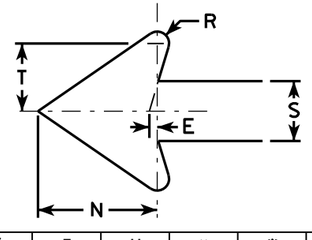
M5-2L
MK5-2L
MM5-2L
MO5-2L
MP5-2L
MR5-2L



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



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



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
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White - Type H 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 - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White - Type H Reflective
   Message - Blue
   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.

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	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
3	30		1 3/8	1/2	5/8		10 1/8	4 1/8	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
4	30		1 3/8	1/2	5/8		10 1/8	4 1/8	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
5	30		1 3/8	1/2	5/8		10 1/8	4 1/8	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

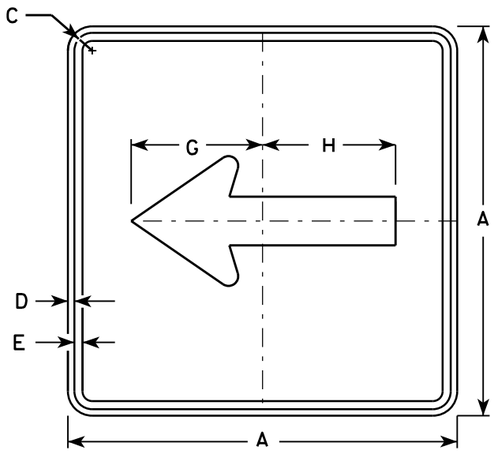
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

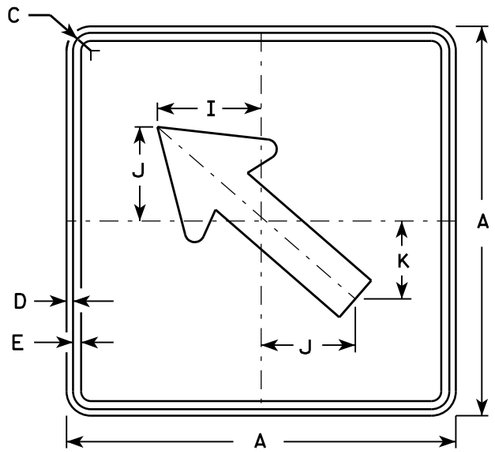
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M5-1.12

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 247 | E



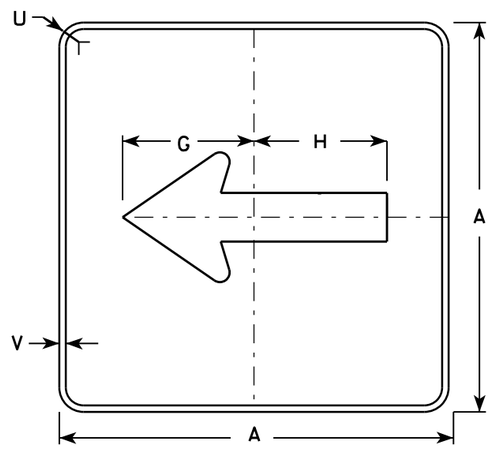
M6-1
MK6-1
MM6-1
MN6-1
MO6-1
MP6-1
MR6-1



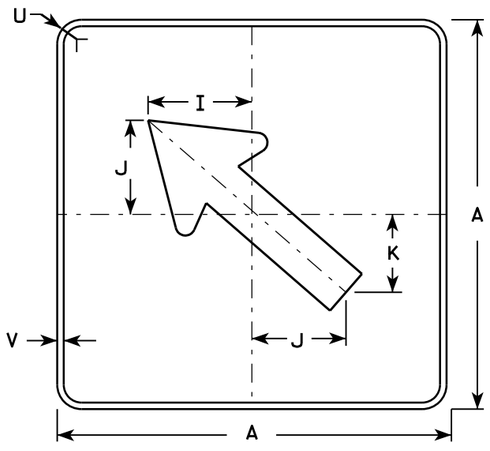
M6-2
MK6-2
MM6-2
MN6-2
MO6-2
MP6-2
MR6-2

NOTES

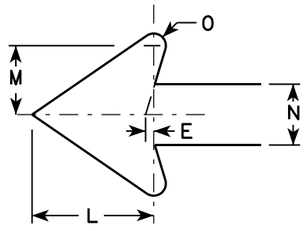
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MG6-1 and MG6-2 Background - Green
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow



MB6-1



MB6-2



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	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2						3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2						6.25

STANDARD SIGN
M6-1 & M6-2
SERIES

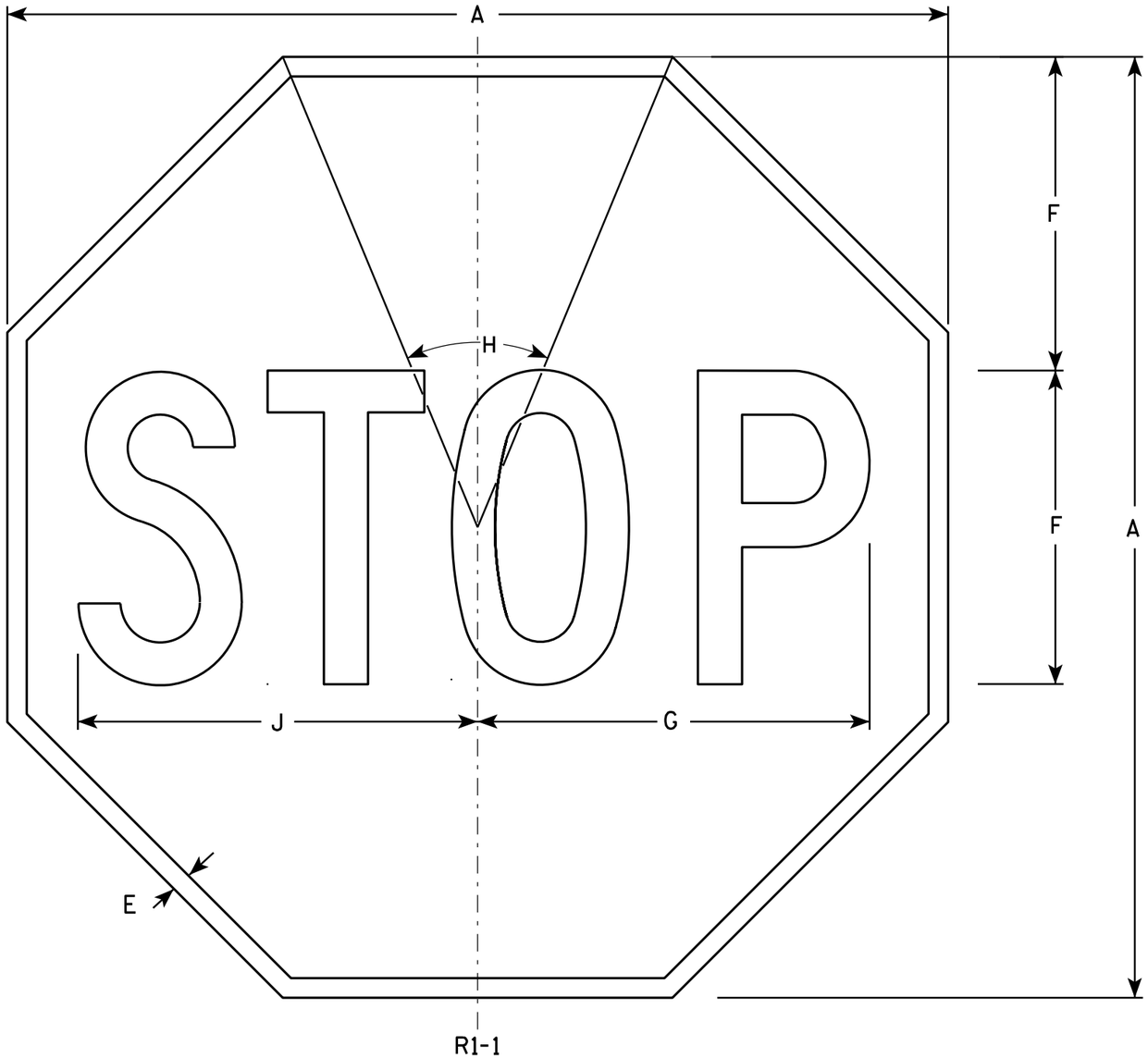
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/03/14 PLATE 248 M6-1.14

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 03-JUL-2014 14:28 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 11.675051:1.000000



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

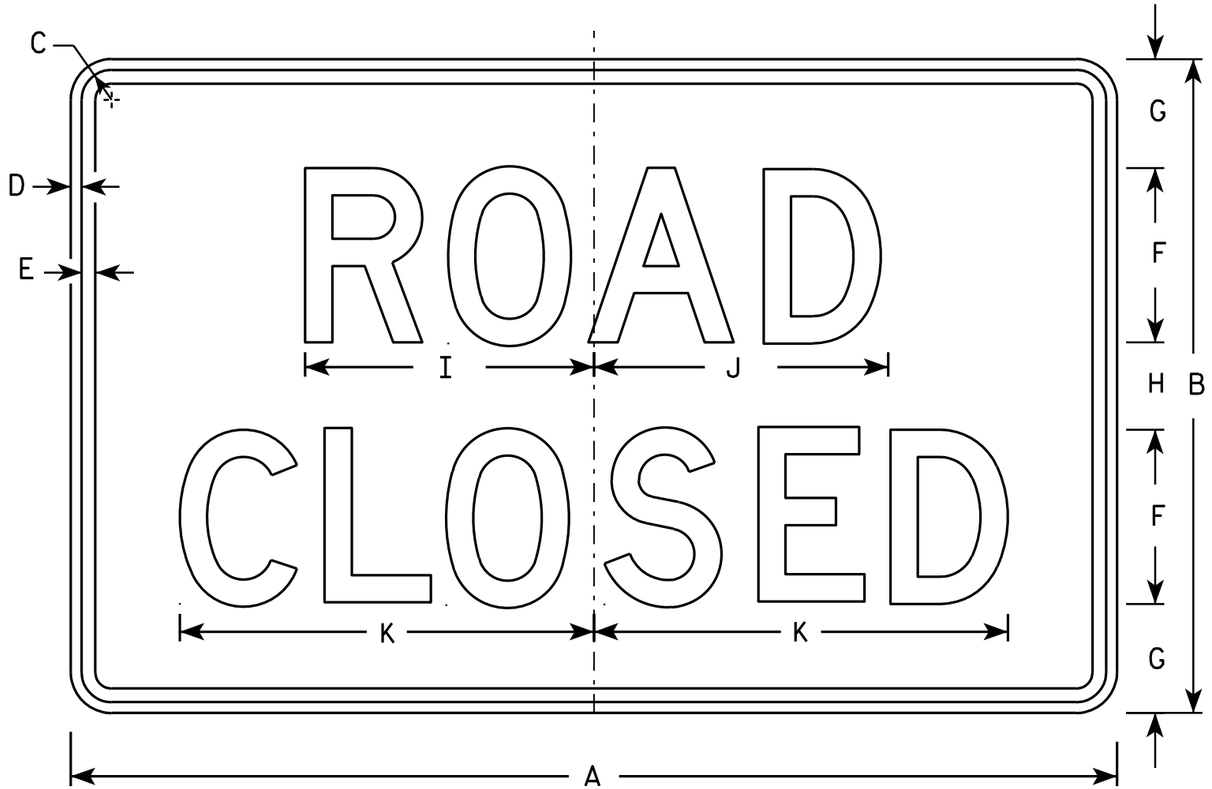
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

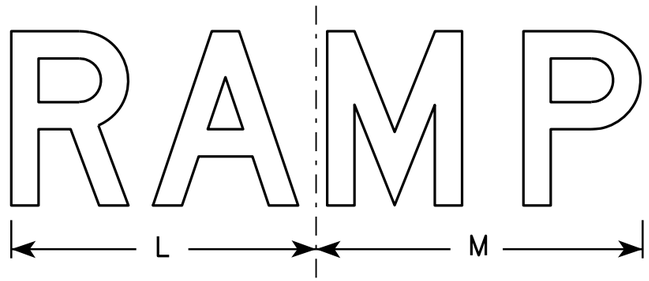
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 249	E



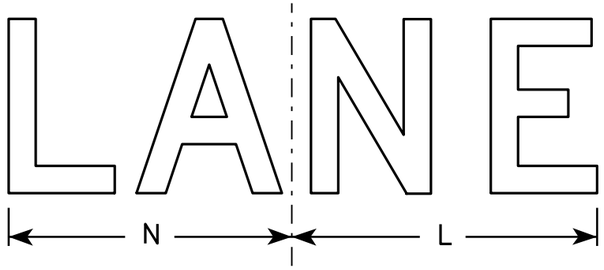
R11-2

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 - Black
3. Message Series - D
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. Modify the message as required.



R11-2R



R11-2L

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	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

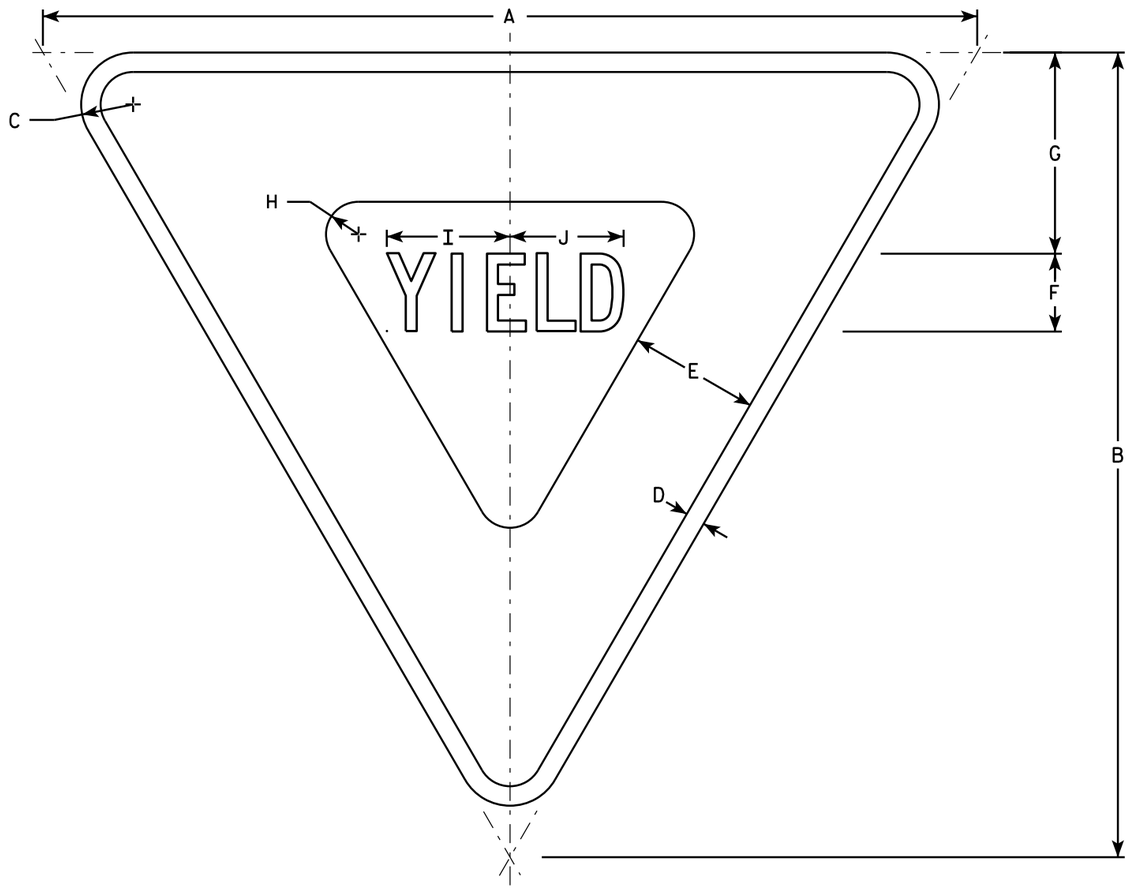
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 250	E



R1-2

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 - 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. The border strip and word message are reflectorized red.

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	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

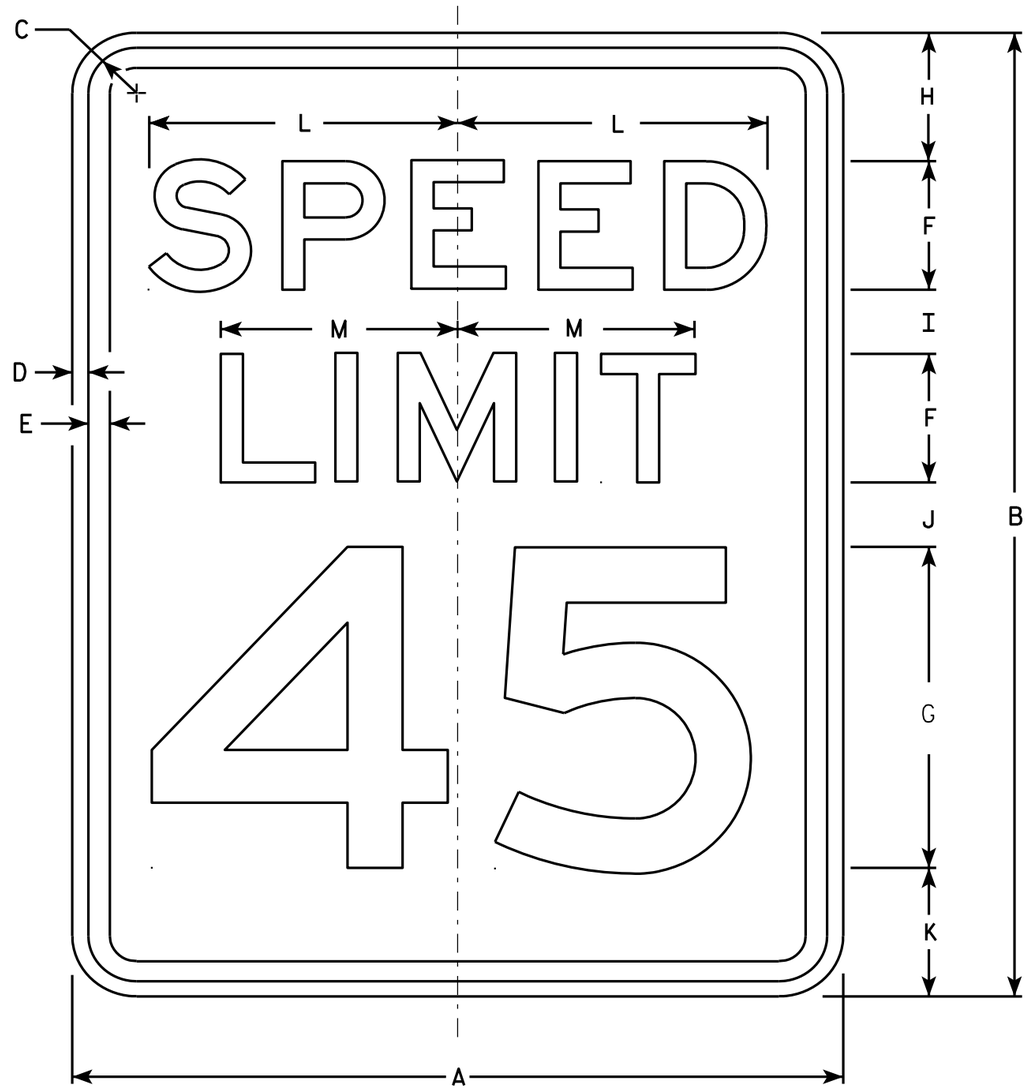
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
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. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

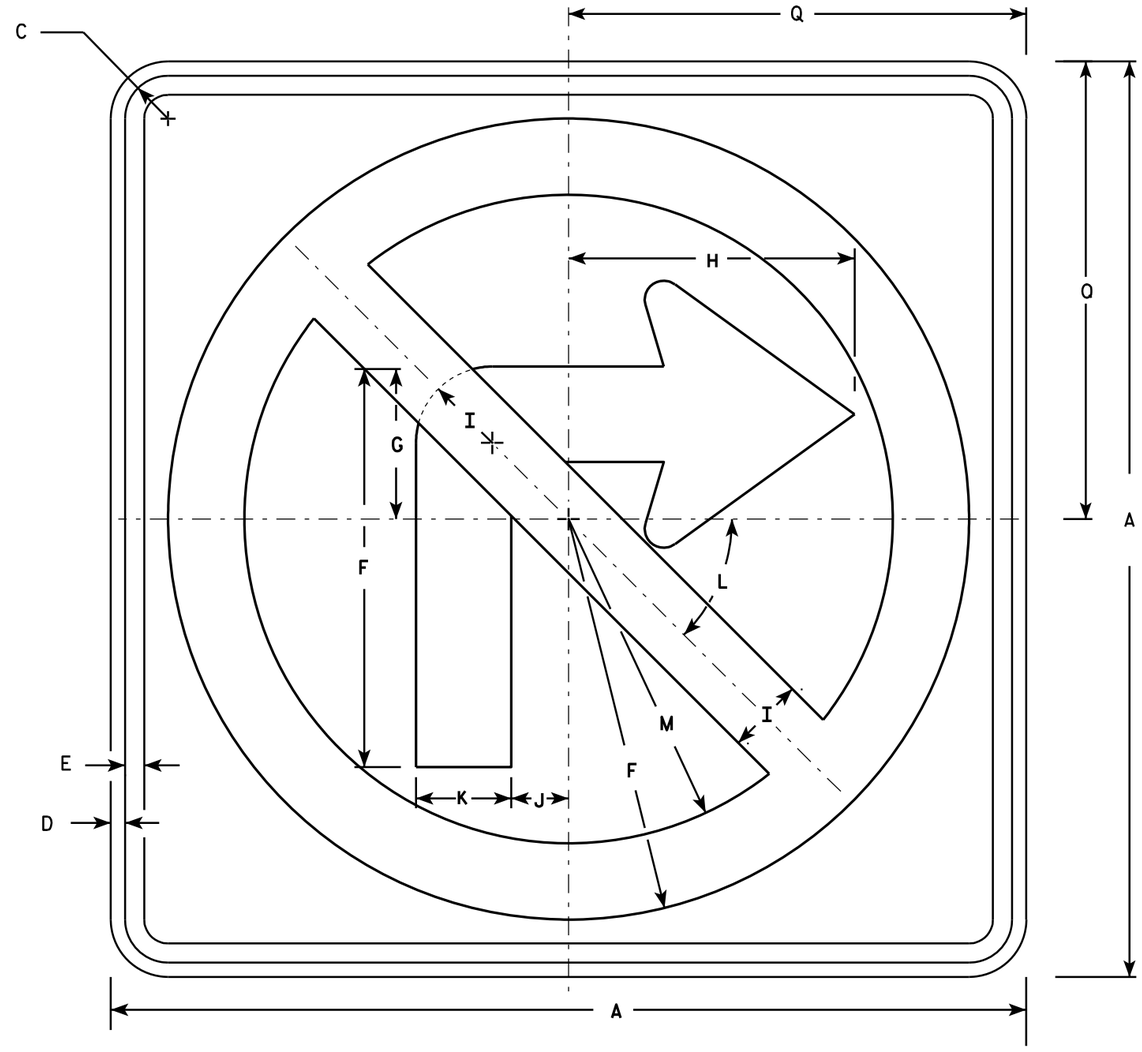
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

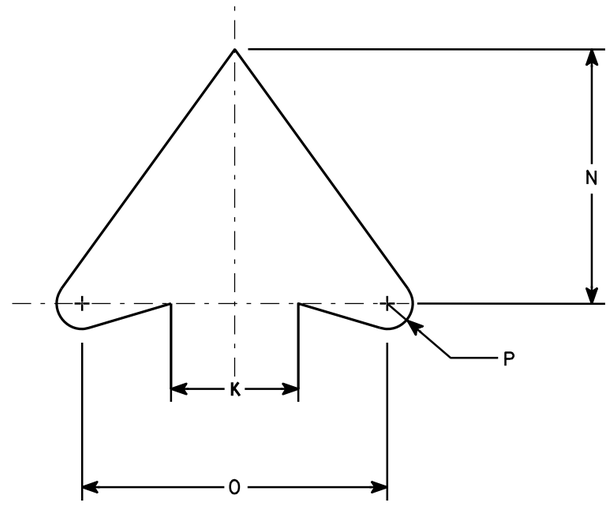
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 252	E



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



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	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

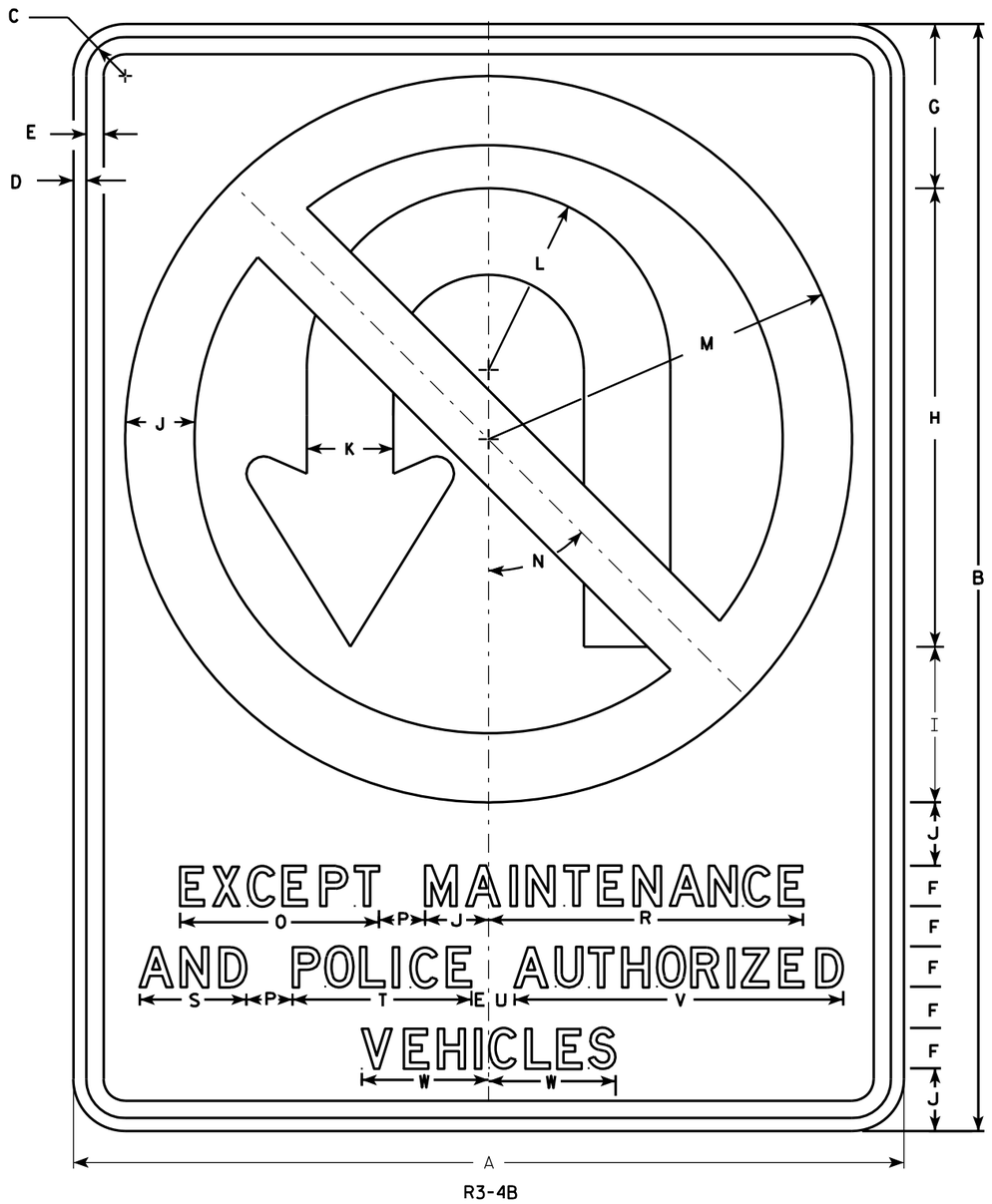
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

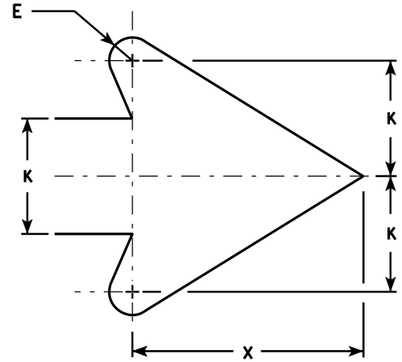
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 253	E



R3-4B

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 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. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



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																											
2S																											
2M																											
3																											
4	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0
5	36	48	1 5/8	5/8	3/4	1 3/4	7 1/8	19 7/8	6 3/4	2 3/4	3 3/4	7 7/8	15 3/4	45°	8 5/8	2		13 5/8	4 5/8	7 3/4	1 1/8	14 1/4	5 1/2	7 5/8			12.0

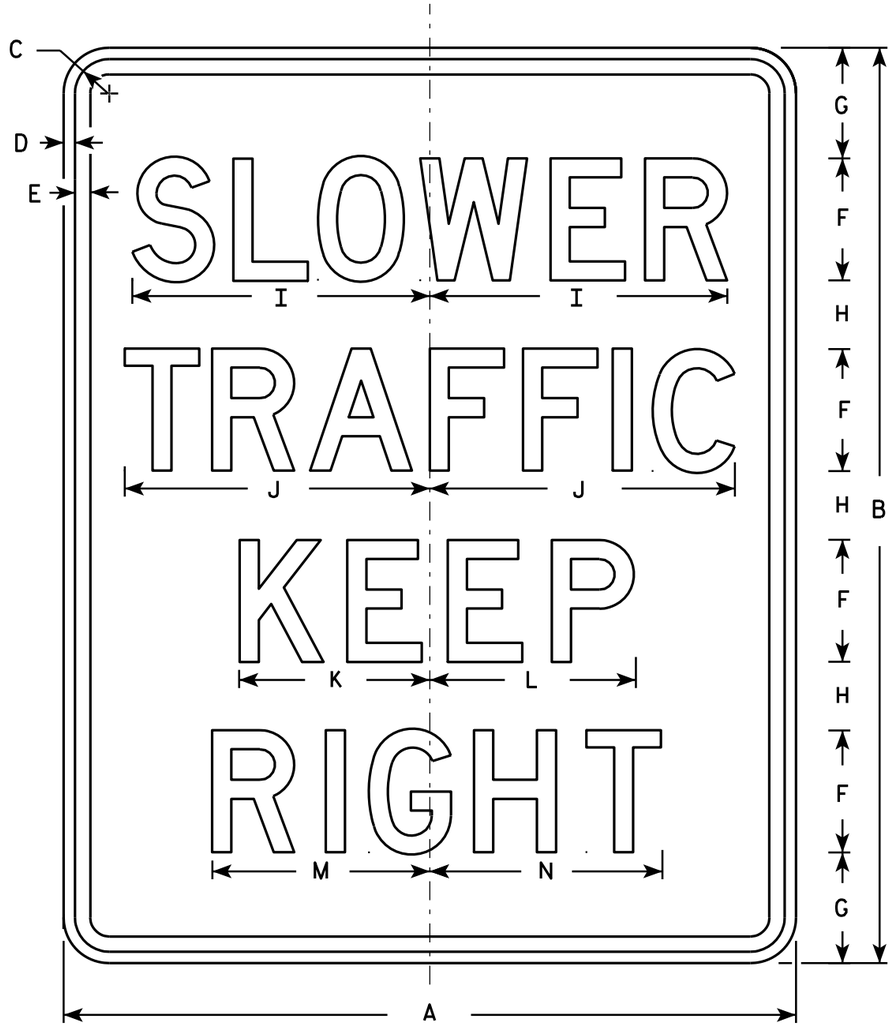
STANDARD SIGN
R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 254	E



R4-3

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 - Black
3. Message Series - D
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.

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	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN
R4-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

PROJECT NO:

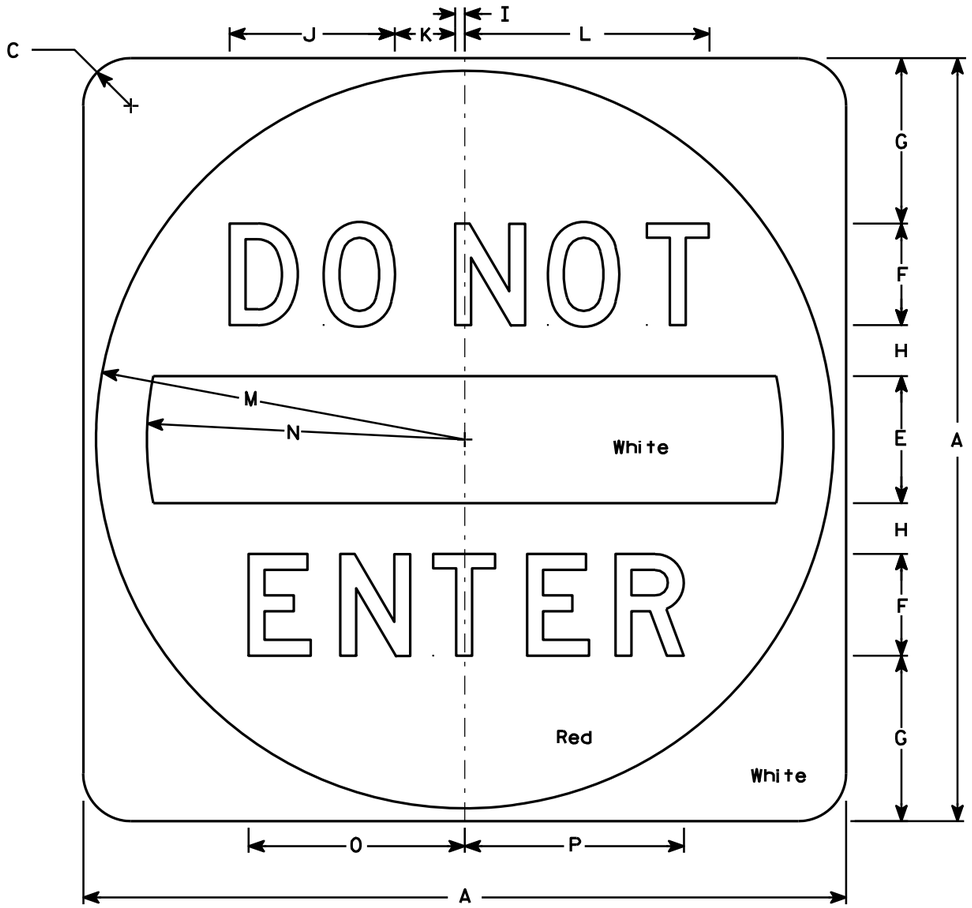
SHEET NO: 255 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R43.DGN PLOT DATE : 25-MAR-2011 13:40 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

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.

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

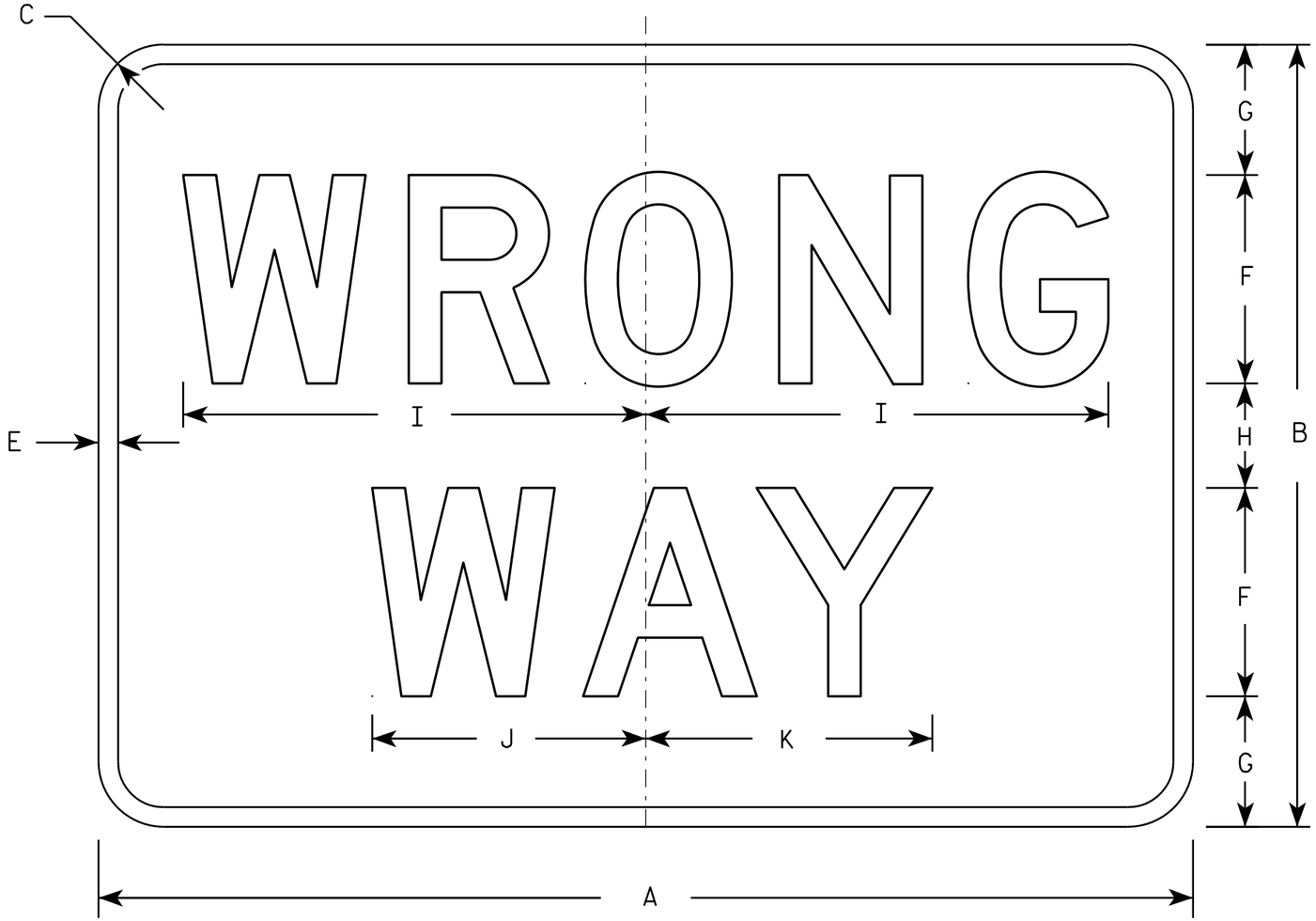
STANDARD SIGN
R5-1

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: 256 | E



R5-1A

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 - D
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.

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	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 257	E

R5-57

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 - Black
3. Message Series - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are Series B.
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.

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																											
2M																											
3																											
4	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0
5	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0

STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

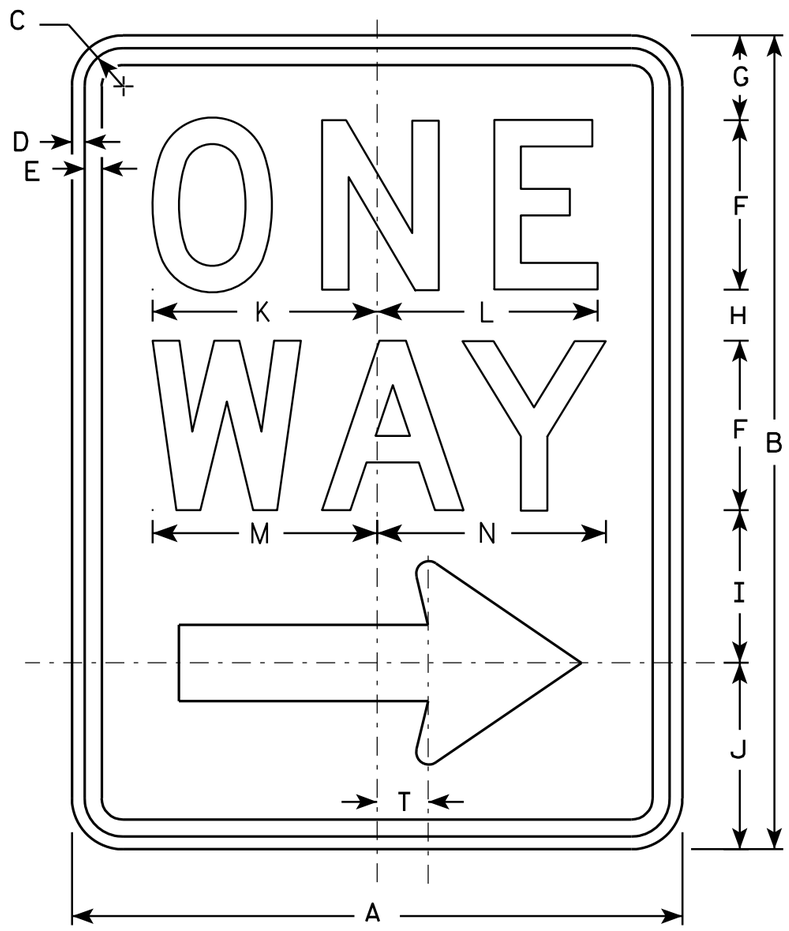
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 258 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R557.DGN PLOT DATE : 29-MAR-2011 14:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

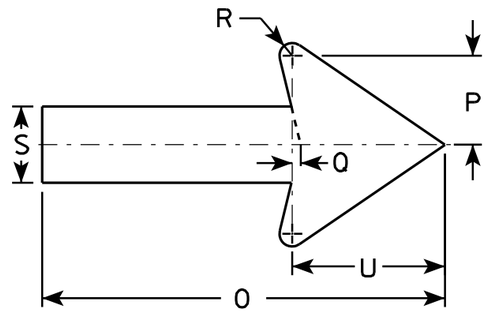
7



R6-2R

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 - Black
3. Message Series - D
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. R6-2L same as R6-2R except arrow points to the left.



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
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

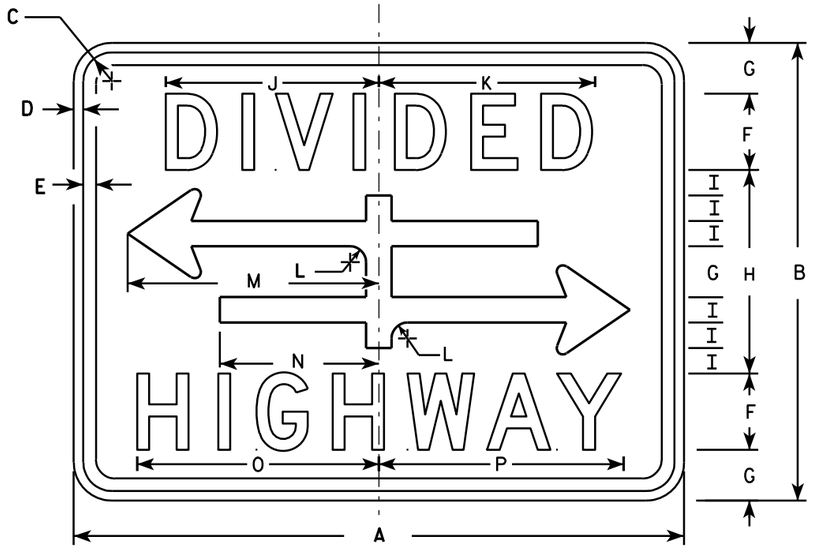
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

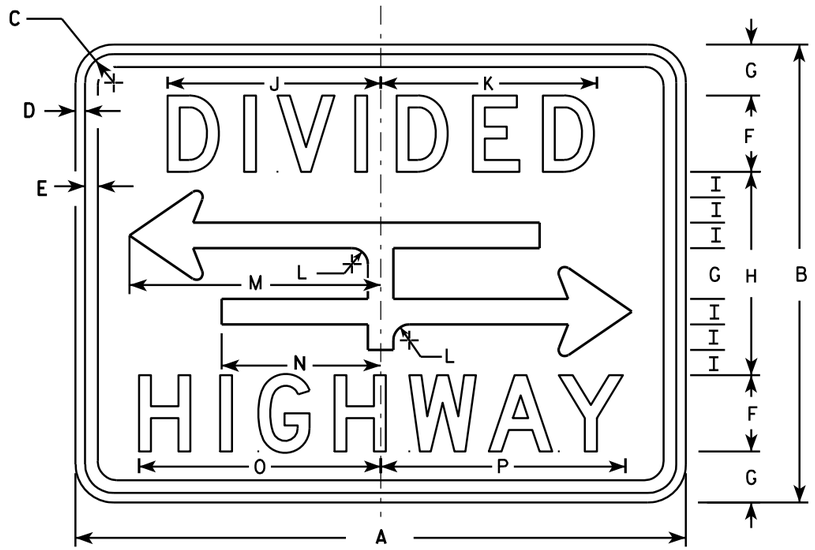
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 259	E



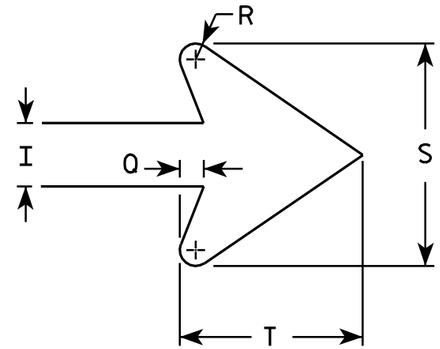
R6-3

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 - Black
3. Message Series - D
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.



R6-3A



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	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

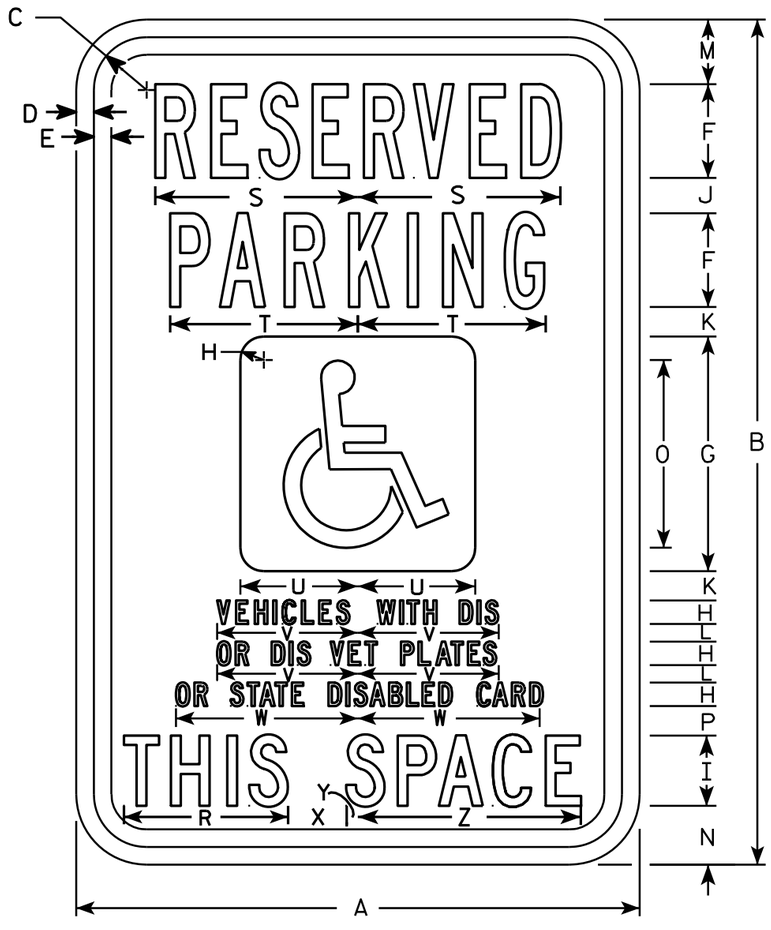
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 260 E



R7-8A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Sign is white Type H Reflective; paraplegic background is blue.
   Message - Legend and border are green; paraplegic symbol is white
3. Message Series - Lines 1 & 2 are Series B
   Lines 3, 4, 5 & 6 are 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.

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	12	18	1 1/8	3/8	3/8	2	5	1/2	1 1/2	3/4	5/8	3/8	1 3/8	1 1/4	4	5/8		3 1/2	4 3/8	4	2 1/2	3	3 7/8	1 1/4	1/4	4 3/4	1.5
2M	18	24	1 1/8	3/8	1/2	3	6	3/4	2	7/8	5/8	1/2	1 7/8	2	5	3/4		4 5/8	6 1/2	5 3/8	3	4 1/2	5 7/8	1 1/2	1/4	6 3/8	3.0
3	18	24	1 1/8	3/8	1/2	3	6	3/4	2	7/8	5/8	1/2	1 7/8	2	5	3/4		4 5/8	6 1/2	5 3/8	3	4 1/2	5 7/8	1 1/2	1/4	6 3/8	3.0
4																											
5																											

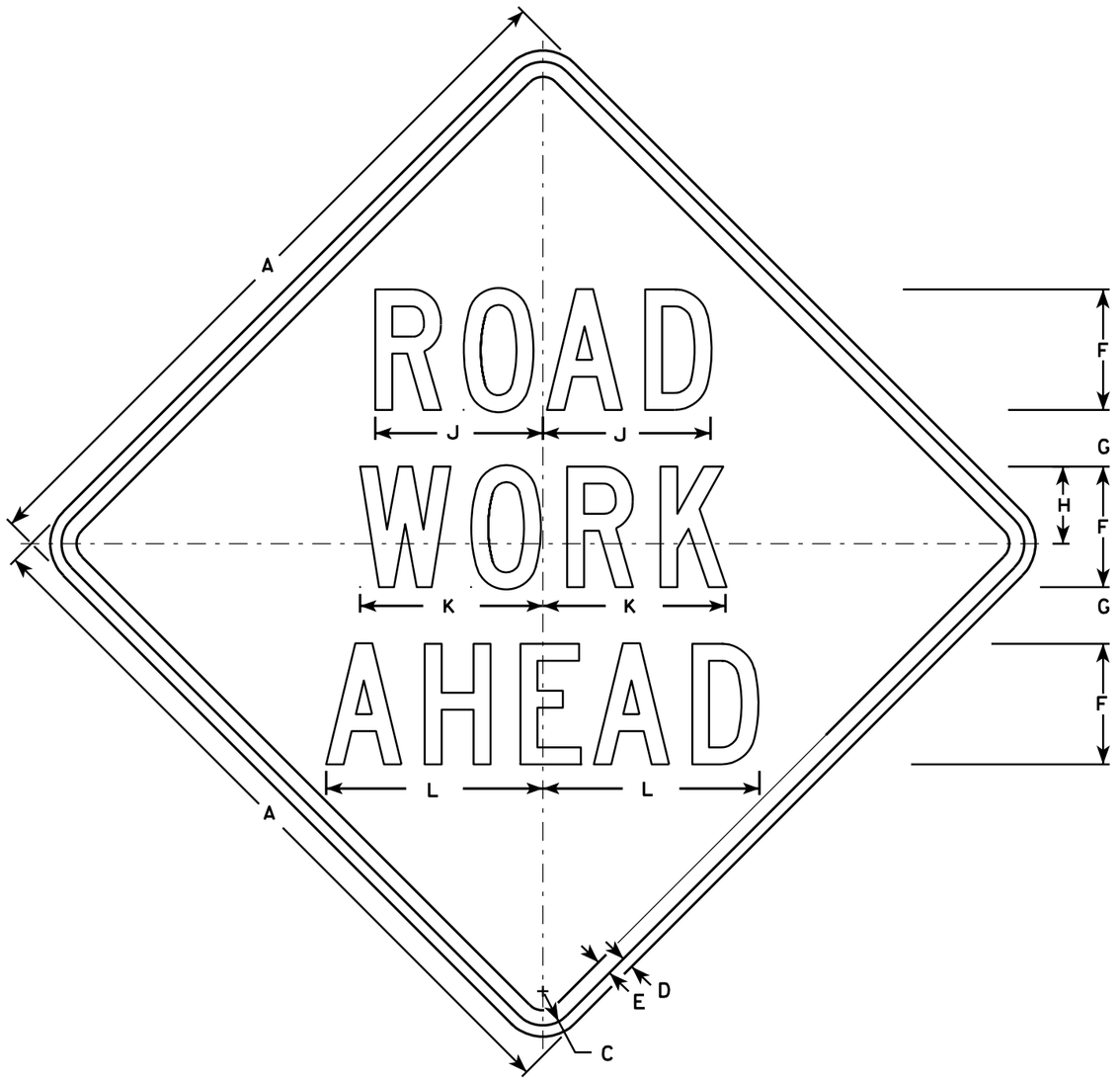
STANDARD SIGN
R7-8A

WISCONSIN DEPT OF TRANSPORTATION

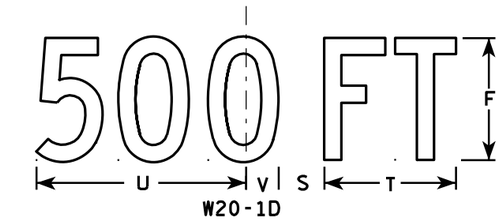
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/25/2011 PLATE NO. R7-8A.6

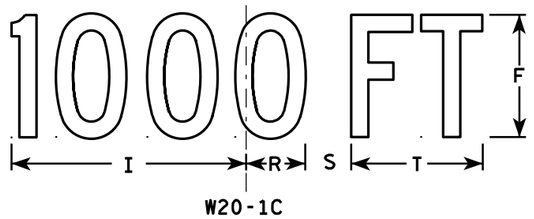
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 261 | E



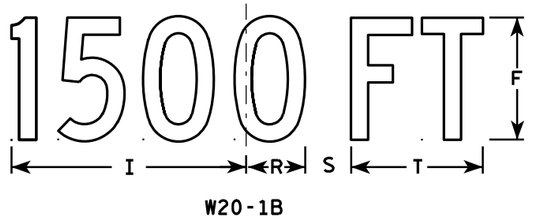
W20-1A



W20-1D

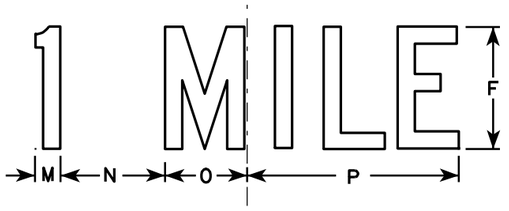


W20-1C



W20-1B

W20-1G



W20-1F

NOTES

1. Sign is 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 - 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.

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	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	1 7/8	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8		3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-1.9

PROJECT NO:

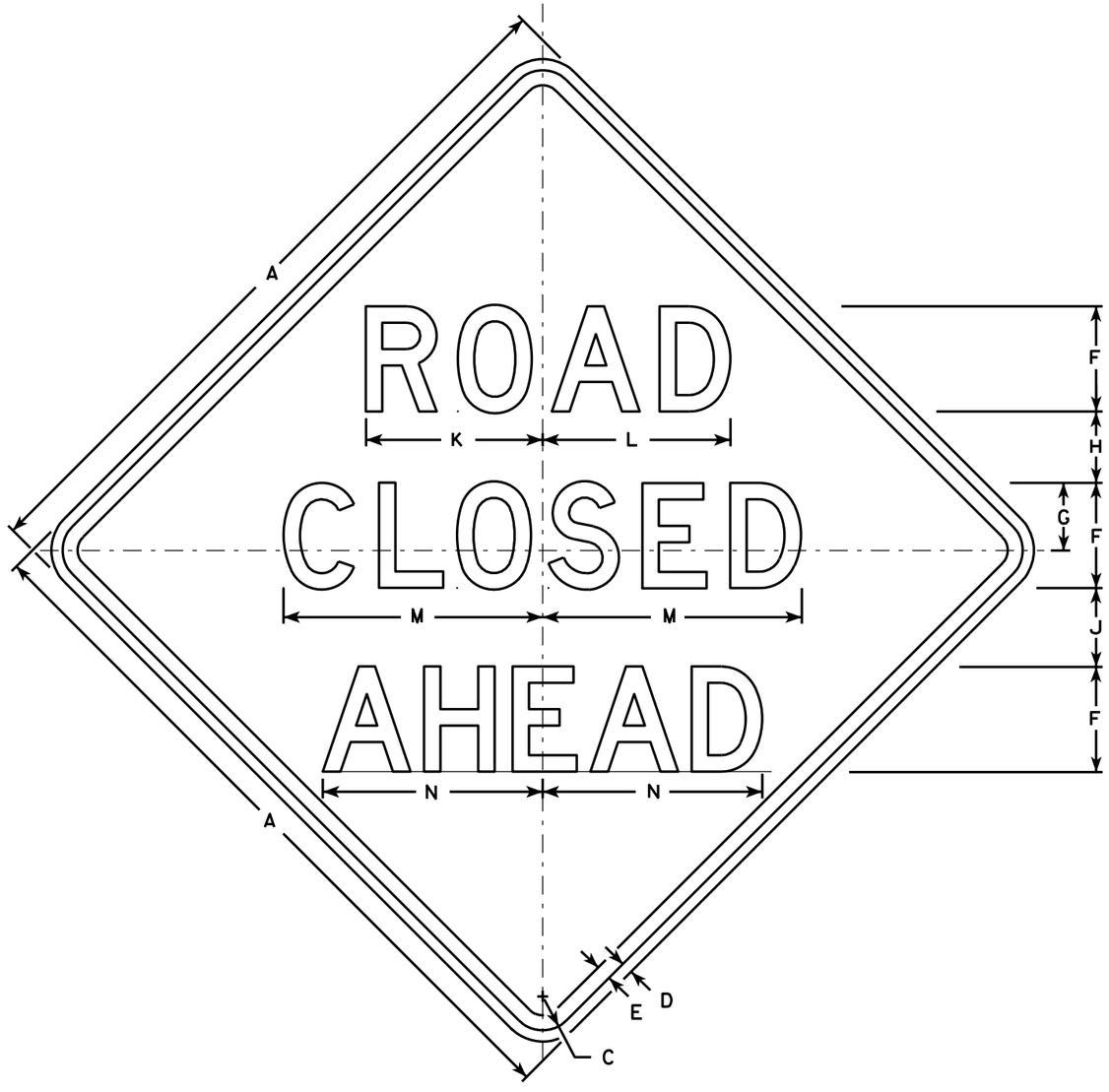
SHEET NO: 262 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W201.DGN PLOT DATE : 18-MAR-2011 09:56 PLOT BY : mscj9h

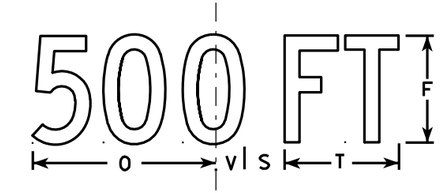
WISDOT/CADDS SHEET 42

7

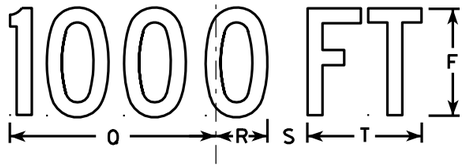
7



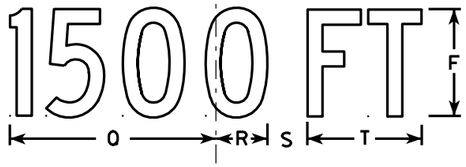
W20-3A



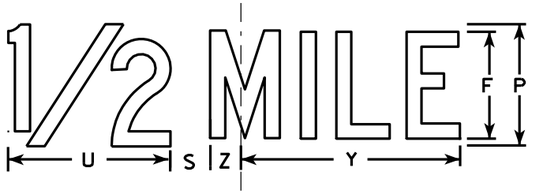
W20-3D



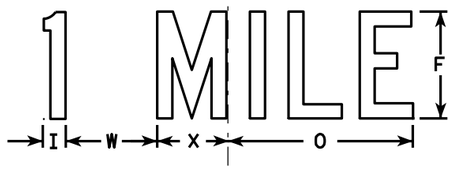
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is 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 - 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. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-3.7

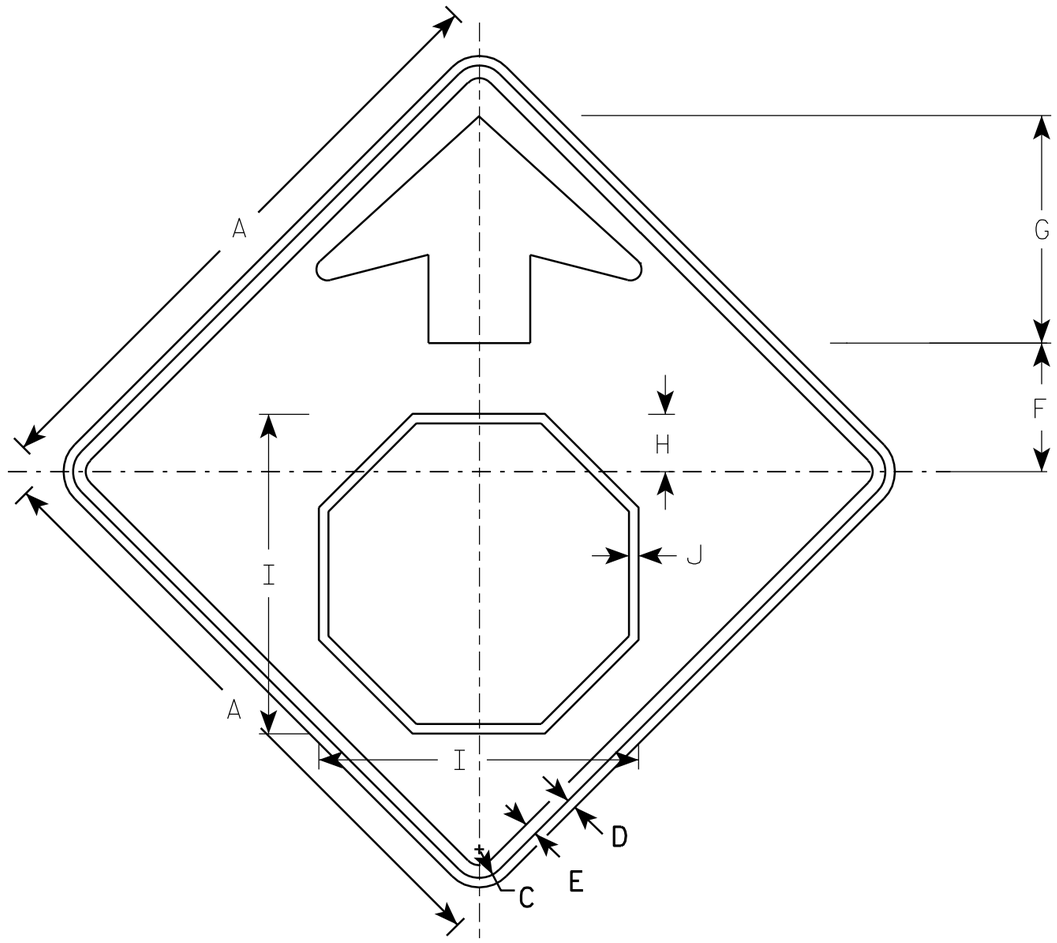
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 263 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W203.DGN PLOT DATE : 18-MAR-2011 12:08 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.931739:1.000000

WISDOT/CADDS SHEET 42

7

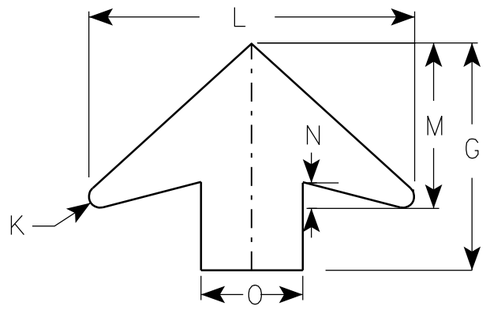
7



W3-1

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

STANDARD SIGN
W3-1

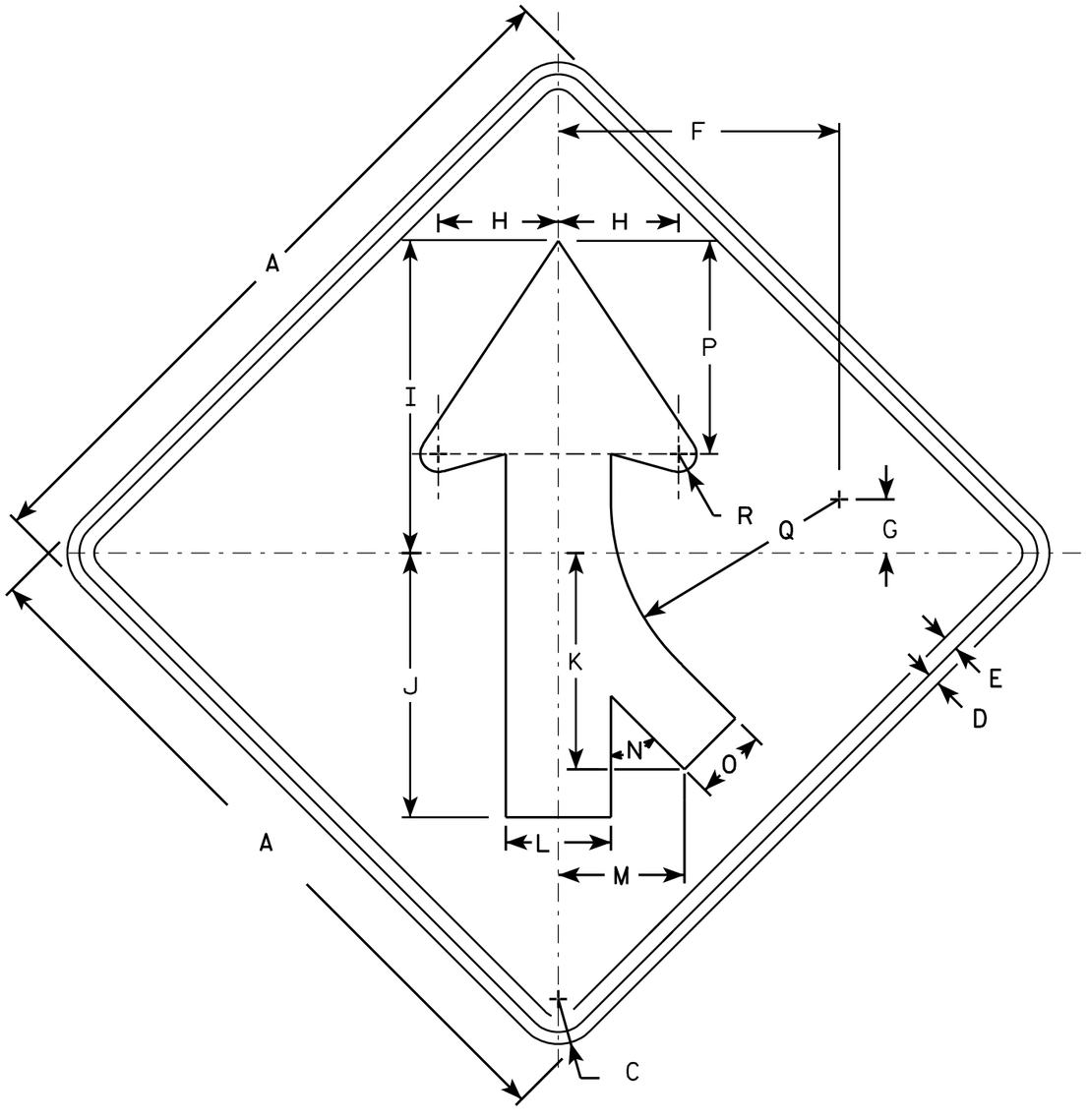
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 264 E



W4-1 R

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	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

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. 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. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

STANDARD SIGN
W4-1

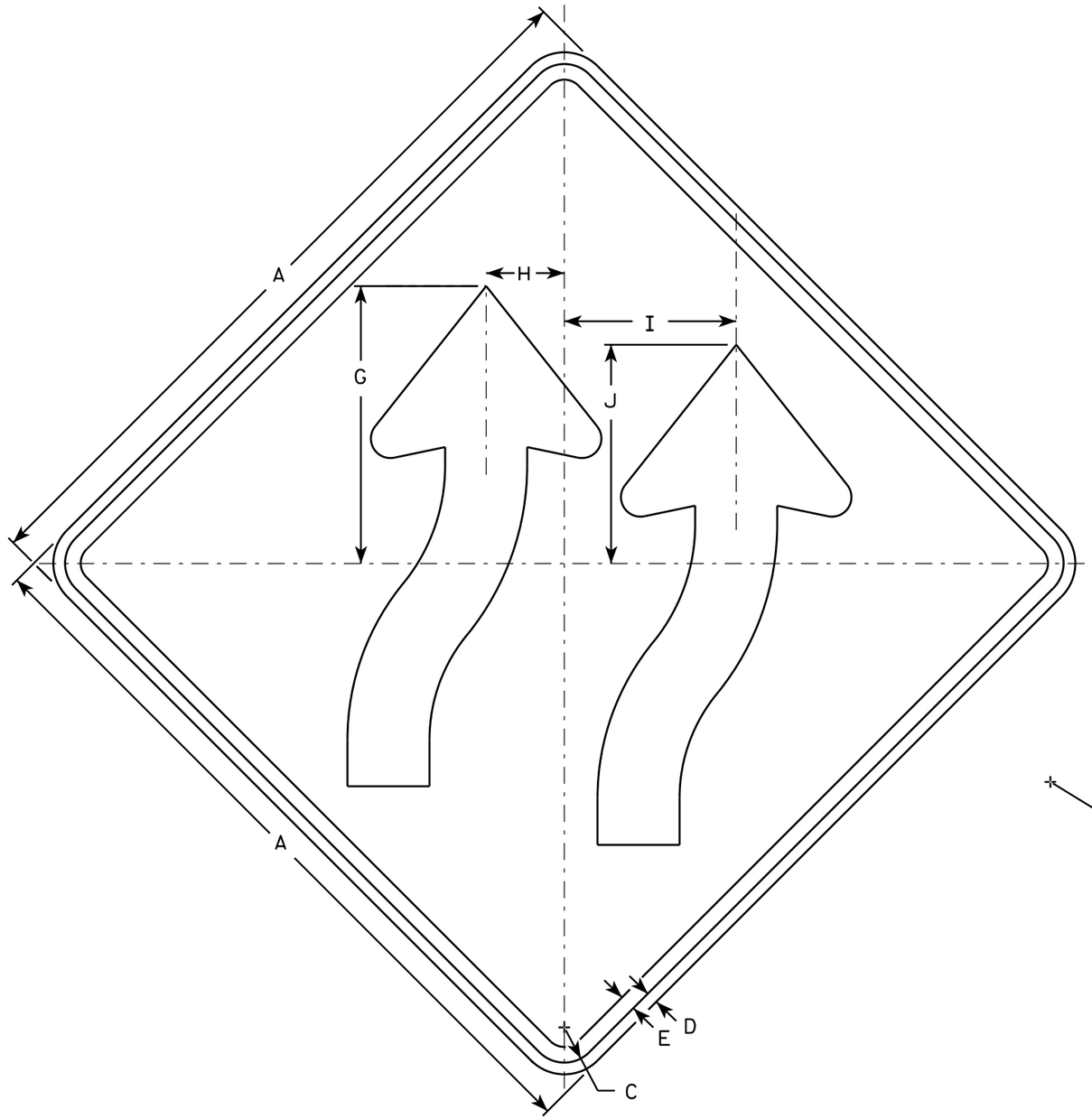
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rausch for State Traffic Engineer

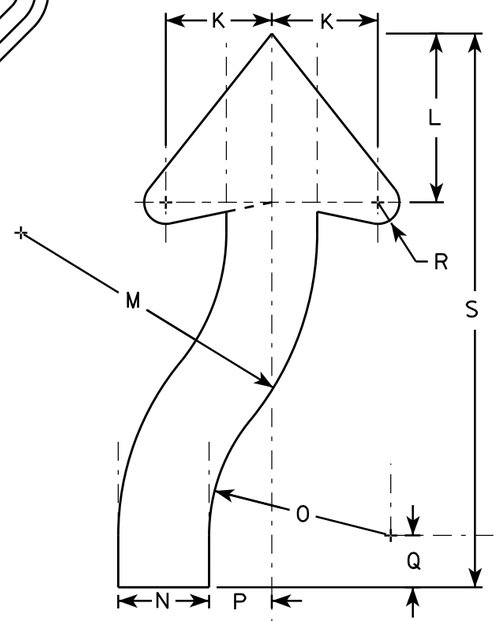
DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 265 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W41.DGN PLOT DATE : 12-MAR-2013 11:06 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.202372:1.000000
WISDOT/CADDS SHEET 42



W01-4bR



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
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. W01-4bL is the same as W014-bR exept arrows are reversed along the vertical centerline

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	36		1 5/8	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

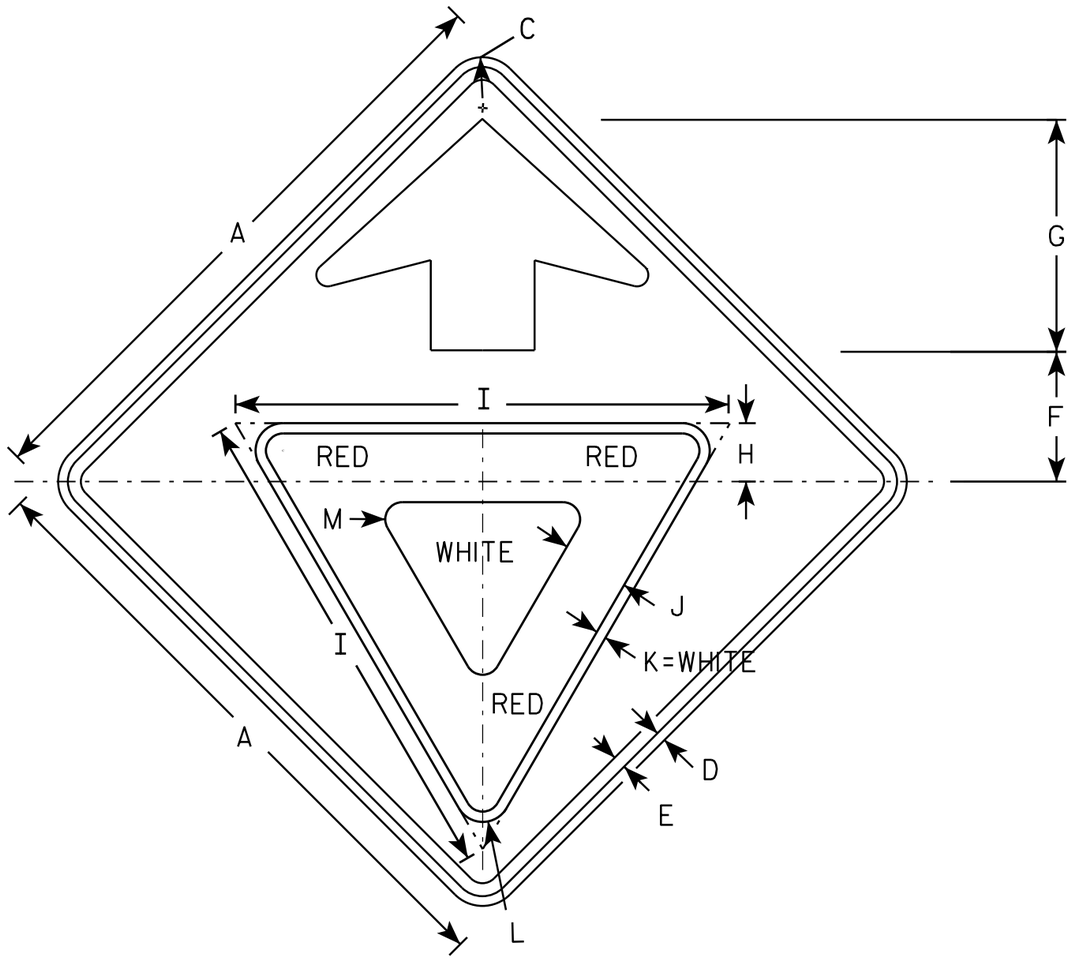
STANDARD SIGN
W01-4b

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

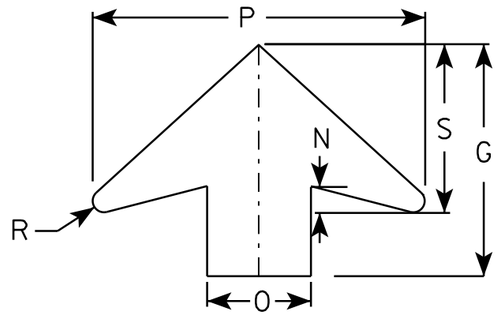
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W03-2

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
   Arrow & Border - BLACK
   Yield Symbol - WHITE BORDER ON RED BACKGROUND



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	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2S	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
2M	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
3	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W03-2

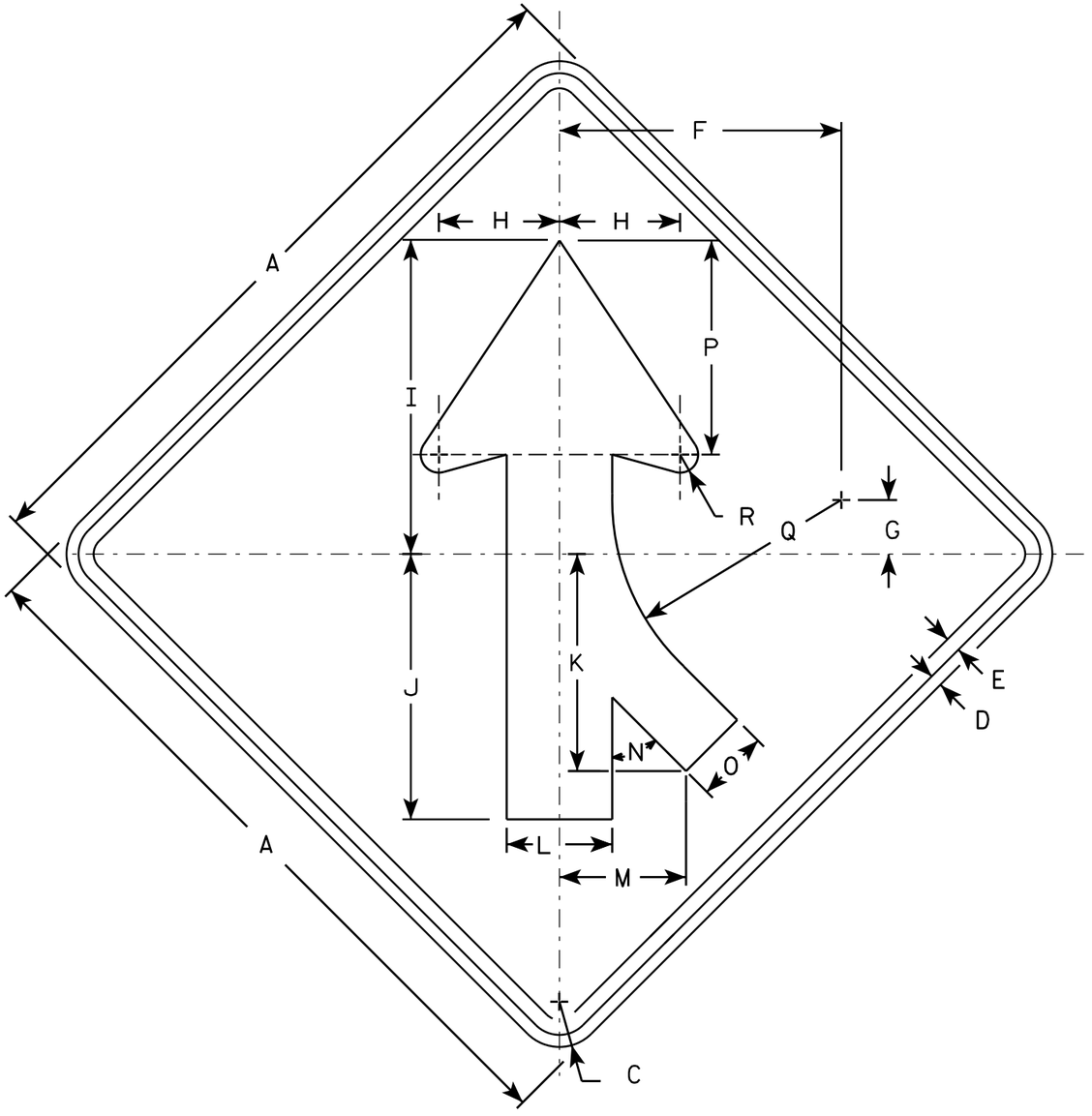
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W03-2.1

PROJECT NO:

SHEET NO: E



W04-1R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
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. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

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	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2S	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
2M	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
3	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

STANDARD SIGN
W04-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO W04-1.1

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

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W041.DGN PLOT DATE : 20-NOV-2013 11:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.080757:1.000000
WISDOT/CADDS SHEET 42

USH 41 STA 1168+12 TO STA 1423+29 (CUT INCLUDES PAVEMENT REMOVAL UNDER ITEM ASPHALTIC SURFACE MILLING)

STATION	Distance	AREA (SF)					Incremental Vol (CY) (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Pavement Material in Cut	Available Material = Cut - Pavment Material	FILL	EBS	Cut	Pavement Material in Cut	Available Material = Cut - Pavement Material	FILL	EBS	Cut 1.00	Available Material 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
1168+12	0	5.64	7	-1	46.61	0	0	0	0	0	0	0	0	0	0	0	0
1169+00	88	7.53	7	1	35.4	0	21	22	0	133	0	21	0	167	0	0	-167
1170+00	100	9.50	7	3	26.34	0	32	25	7	114	0	53	7	309	0	0	-303
1171+00	100	13.09	7	6	17.81	0	42	25	17	82	0	95	24	412	0	0	-388
1172+00	100	10.20	7	4	12.4	0	43	25	18	56	0	138	42	482	0	0	-439
1173+00	100	10.65	7	4	20.01	0	39	25	14	60	0	177	56	557	0	0	-500
1174+00	100	7.12	7	0	19.71	0	33	25	8	74	0	209	64	649	0	0	-584
1175+00	100	17.52	7	11	19.44	0	46	25	21	73	0	255	85	739	0	0	-654
1175+36	36	22.74	7	16	25.07	0	27	9	18	30	0	282	103	776	0	0	-673
1176+00	64	10.96	7	4	21.2	0	40	16	24	55	0	322	127	845	0	0	-717
1177+00	100	19.04	7	12	7.79	0	56	25	31	54	0	377	158	912	0	0	-754
1178+00	100	36.56	7	30	13.55	0	103	25	78	40	0	480	236	961	0	0	-725
1179+00	100	4.53	7	-2	44.27	0	76	25	51	107	0	556	288	1095	0	0	-807
1180+00	100	6.77	7	0	9.19	0	21	25	-4	99	0	577	284	1219	0	0	-935
1180+35	35	24.47	7	18	22.5	0	20	9	12	21	0	598	296	1245	0	0	-949
1181+00	65	17.16	7	10	10.89	0	50	16	34	40	0	648	330	1295	0	0	-965
1182+00	100	8.68	7	2	14.68	0	48	25	23	47	0	696	353	1354	0	0	-1001
1183+00	100	8.73	7	2	16.7	0	32	25	8	58	0	728	360	1427	0	0	-1066
1183+36	36	8.11	7	1	22.33	0	11	9	2	26	0	739	363	1459	0	0	-1096
1184+00	64	3.68	7	-3	16.23	0	14	16	-2	46	0	753	361	1516	0	0	-1155
1184+37	37	15.51	7	9	76.03	0	13	9	4	63	0	766	365	1595	0	0	-1230
1185+00	63	3.35	7	-3	36.93	0	22	16	6	132	0	788	371	1760	0	0	-1389
1186+00	100	3.69	7	-3	30.95	0	13	25	-12	126	0	801	360	1917	0	0	-1557
1186+36	36	3.85	7	-3	32.78	0	5	9	-4	42	0	806	356	1970	0	0	-1614
1187+00	64	6.88	7	0	31.75	0	13	16	-3	76	0	819	353	2066	0	0	-1713
1188+00	100	1.79	7	-5	25.2	0	16	25	-9	105	0	835	344	2198	0	0	-1853
1189+00	100	1.23	7	-5	40.29	0	6	25	-19	121	0	841	325	2349	0	0	-2024
1190+00	100	3.07	7	-4	29.25	0	8	25	-17	129	0	849	308	2510	0	0	-2202
1191+00	100	2.94	7	-4	32.61	0	11	25	-14	115	0	860	295	2653	0	0	-2359
1192+00	100	5.28	7	-1	28.98	0	15	25	-9	114	0	875	285	2796	0	0	-2511
1193+00	100	8.24	7	2	37.87	0	25	25	0	124	0	900	286	2951	0	0	-2665
1194+00	100	9.26	7	3	30.9	0	32	25	8	127	0	932	293	3110	0	0	-2817
1194+36	36	8.94	7	2	35.58	0	12	9	3	44	0	944	297	3165	0	0	-2869
1195+00	64	12.17	7	6	26.76	0	25	16	9	74	0	970	306	3258	0	0	-2952
1196+00	100	21.45	7	15	31.65	0	62	25	38	108	0	1032	343	3393	0	0	-3049
1197+00	100	9.11	7	2	25.14	0	57	25	32	105	0	1088	375	3524	0	0	-3149
1198+00	100	9.35	7	3	20.08	0	34	25	9	84	0	1123	385	3629	0	0	-3244
1198+36	36	5.21	7	-1	20.01	0	10	9	1	27	0	1132	386	3662	0	0	-3277
1199+00	64	4.19	7	-2	15.17	0	11	16	-5	42	0	1143	381	3715	0	0	-3334
1200+00	100	9.89	7	3	16.14	0	26	25	1	58	0	1169	382	3787	0	0	-3405
1201+00	100	9.66	7	3	17.72	0	36	25	12	63	0	1206	394	3865	0	0	-3472
1202+00	100	7.95	7	1	17.08	0	33	25	8	64	0	1238	402	3946	0	0	-3544
1203+00	100	8.96	7	2	17	0	31	25	7	63	0	1270	408	4025	0	0	-3616

USH 41 STA 1168+12 TO STA 1423+29 (CUT INCLUDES PAVEMENT REMOVAL UNDER ITEM ASPHALTIC SURFACE MILLING)

STATION	Distance	AREA (SF)					Incremental Vol (CY) (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Pavement Material In Cut	Available Material = Cut - Pavment Material	FILL	EBS	Cut	Pavement Material In Cut	Available Material = Cut - Pavement Material	FILL	EBS	Cut 1.00	Available Material 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
1204+00	100	13.82	7	7	12.15	0	42	25	17	54	0	1312	426	4092	0	0	-3666
1205+00	100	5.24	7	-1	18.51	0	35	25	11	57	0	1347	437	4163	0	0	-3727
1206+00	100	10.79	7	4	19.6	0	30	25	5	71	0	1377	442	4252	0	0	-3810
1207+00	100	14.81	7	8	15.63	0	47	25	23	65	0	1424	464	4333	0	0	-3869
1208+00	100	6.26	7	0	23.38	0	39	25	14	72	0	1463	479	4423	0	0	-3945
1209+00	100	13.39	7	7	17.2	0	36	25	12	75	0	1500	490	4517	0	0	-4027
1210+00	100	6.02	7	-1	24.82	0	36	25	11	78	0	1536	502	4615	0	0	-4113
1211+00	100	1.74	7	-5	21.55	0	14	25	-10	86	0	1550	491	4722	0	0	-4231
1211+45	45	5.88	7	-1	23.71	0	6	11	-5	38	0	1556	486	4769	0	0	-4283
1212+00	55	8.46	7	2	25.31	0	15	14	1	50	0	1571	487	4832	0	0	-4344
1212+50	50	6.23	7	0	42.55	0	14	12	1	63	0	1584	489	4910	0	0	-4421
1212+75	25	5.73	7	-1	38.26	0	6	6	-1	37	0	1590	488	4957	0	0	-4469
1213+00	25	9.60	7	3	46.84	0	7	6	1	39	0	1597	489	5006	0	0	-4517
1213+33	33	8.42	7	2	46.27	0	11	8	3	57	0	1608	492	5077	0	0	-4585
1214+00	67	32.94	7	26	11.55	0	51	17	35	72	0	1659	527	5167	0	0	-4640
1214+35	35	22.39	7	16	14.42	0	36	9	27	17	0	1695	554	5188	0	0	-4634
1215+00	65	3.53	7	-3	21.94	0	31	16	15	44	0	1726	569	5243	0	0	-4674
1216+00	100	8.92	7	2	25.54	0	23	25	-2	88	0	1750	567	5353	0	0	-4785
1217+00	100	4.85	7	-2	19.22	0	26	25	1	83	0	1775	568	5456	0	0	-4888
1217+94	94	6.71	7	0	18.14	0	20	23	-3	65	0	1795	565	5537	0	0	-4972
1218+00	6	5.87	7	-1	19.43	0	1	1	0	4	0	1797	565	5543	0	0	-4978
1219+00	100	2.59	7	-4	20.99	0	16	25	-9	75	0	1812	556	5636	0	0	-5080
1219+28	28	2.14	7	-5	28.61	0	2	7	-4	26	0	1815	552	5668	0	0	-5117
1219+53	25	5.10	7	-2	28.63	0	3	6	-3	27	0	1818	549	5701	0	0	-5153
1220+00	47	2.06	7	-5	22.53	0	6	12	-5	45	0	1824	543	5757	0	0	-5214
1220+58	58	2.27	7	-4	24.54	0	5	14	-10	51	0	1829	534	5820	0	0	-5287
1221+00	42	3.55	7	-3	20.77	0	5	10	-6	35	0	1833	528	5864	0	0	-5337
1222+00	100	4.86	7	-2	17.94	0	16	25	-9	72	0	1849	519	5954	0	0	-5435
1223+00	100	1.34	7	-5	28.74	0	11	25	-13	86	0	1860	505	6062	0	0	-5557
1224+00	100	0.54	7	-6	47.28	0	3	25	-21	141	0	1864	484	6238	0	0	-5754
1224+34	34	1.07	7	-6	43.05	0	1	8	-7	57	0	1865	477	6309	0	0	-5832
1225+00	66	2.35	7	-4	24.08	0	4	16	-12	82	0	1869	465	6412	0	0	-5947
1225+42	42	5.87	7	-1	18.22	0	6	10	-4	33	0	1876	461	6453	0	0	-5992
1226+00	58	3.82	7	-3	22.03	0	10	14	-4	43	0	1886	457	6507	0	0	-6050
1226+47	47	3.40	7	-3	48.58	0	6	12	-5	61	0	1892	452	6584	0	0	-6132
1226+72	25	3.37	7	-3	43.12	0	3	6	-3	42	0	1895	449	6637	0	0	-6188
1227+00	28	3.77	7	-3	16.62	0	4	7	-3	31	0	1899	445	6675	0	0	-6230
1227+41	41	2.13	7	-5	25.4	0	4	10	-6	32	0	1904	440	6715	0	0	-6276
1227+80	39	9.07	7	2	33.81	0	8	10	-2	43	0	1912	438	6769	0	0	-6331
1228+00	20	3.63	7	-3	38.62	0	5	5	0	27	0	1916	438	6802	0	0	-6364
1229+00	100	4.36	7	-2	34.66	0	15	25	-10	136	0	1931	428	6972	0	0	-6544
1230+00	100	4.24	7	-2	34.73	0	16	25	-9	129	0	1947	419	7133	0	0	-6713
1231+00	100	4.35	7	-2	37.33	0	16	25	-9	133	0	1963	410	7299	0	0	-6889
1232+00	100	1.69	7	-5	50.76	0	11	25	-14	163	0	1974	397	7503	0	0	-7106
1233+00	100	9.52	7	3	28.41	0	21	25	-4	147	0	1995	393	7687	0	0	-7294
1234+00	100	7.48	7	1	43.37	0	31	25	7	133	0	2026	400	7853	0	0	-7453
1235+00	100	7.02	7	0	44.64	0	27	25	2	163	0	2053	402	8056	0	0	-7654
1236+00	100	9.89	7	3	30.86	0	31	25	7	140	0	2085	409	8231	0	0	-7823
1237+00	100	7.86	7	1	33.25	0	33	25	8	119	0	2117	417	8380	0	0	-7963
1238+00	100	8.77	7	2	28.08	0	31	25	6	114	0	2148	423	8522	0	0	-8099

USH 41 STA 1168+12 TO STA 1423+29 (CUT INCLUDES PAVEMENT REMOVAL UNDER ITEM ASPHALTIC SURFACE MILLING)

STATION	Distance	AREA (SF)					Incremental Vol (CY) (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Pavement Material In Cut	Available Material = Cut - Pavment Material	FILL	EBS	Cut	Pavement Material In Cut	Available Material = Cut - Pavement Material	FILL	EBS	Cut 1.00	Available Material 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
1239+00	100	7.63	7	1	24.29	0	30	25	6	97	0	2179	429	8643	0	0	-8214
1240+00	100	7.75	7	1	32.15	0	28	25	4	105	0	2207	432	8773	0	0	-8341
1240+62	62	5.70	7	-1	32.27	0	15	15	0	74	0	2223	432	8866	0	0	-8433
1241+00	38	3.85	7	-3	27.24	0	7	9	-3	42	0	2229	430	8918	0	0	-8488
1241+84	84	16.76	7	10	9.95	0	32	21	11	58	0	2261	441	8991	0	0	-8549
1242+00	16	13.86	7	7	25.51	0	9	4	5	11	0	2270	446	9004	0	0	-8557
1242+28	28	12.05	7	5	27.37	0	13	7	7	27	0	2284	453	9038	0	0	-8585
1243+00	72	10.95	7	4	15.86	0	31	18	13	58	0	2314	466	9110	0	0	-8644
1243+28	28	8.91	7	2	32.49	0	10	7	3	25	0	2325	469	9141	0	0	-8672
1243+53	25	8.13	7	1	48.93	0	8	6	2	38	0	2333	471	9188	0	0	-8718
1244+00	47	10.51	7	4	32.88	0	16	12	5	71	0	2349	475	9277	0	0	-8802
1244+58	58	14.80	7	8	14.58	0	27	14	13	51	0	2376	488	9341	0	0	-8853
1245+00	42	13.12	7	6	12.52	0	22	10	11	21	0	2398	500	9368	0	0	-8868
1246+00	100	14.17	7	8	12.04	0	51	25	26	45	0	2448	525	9424	0	0	-8899
1247+00	100	12.63	7	6	16.22	0	50	25	25	52	0	2498	550	9490	0	0	-8939
1248+00	100	10.17	7	4	14.93	0	42	25	18	58	0	2540	568	9562	0	0	-8994
1249+00	100	12.72	7	6	15.67	0	42	25	18	57	0	2583	586	9633	0	0	-9047
1250+00	100	8.49	7	2	23.4	0	39	25	15	72	0	2622	600	9723	0	0	-9123
1250+95	95	6.71	7	0	37.96	0	27	23	3	108	0	2649	603	9858	0	0	-9255
1251+00	5	9.24	7	3	39.52	0	1	1	0	7	0	2650	604	9867	0	0	-9263
1251+55	55	8.78	7	2	33.37	0	18	14	5	74	0	2668	608	9960	0	0	-9351
1252+00	45	3.89	7	-3	49.74	0	11	11	-1	69	0	2679	608	10046	0	0	-9439
1252+25	25	0.79	7	-6	36.28	0	2	6	-4	40	0	2681	604	10096	0	0	-9492
1252+50	25	5.30	7	-1	17.97	0	3	6	-3	25	0	2684	601	10128	0	0	-9527
1252+80	30	32.88	7	26	7.24	0	21	7	14	14	0	2705	614	10145	0	0	-9531
1253+00	20	14.72	7	8	8.02	0	18	5	13	6	0	2723	627	10152	0	0	-9525
1253+16	16	12.74	7	6	7.64	0	8	4	4	5	0	2731	631	10158	0	0	-9527
1254+00	84	3.78	7	-3	11.34	0	26	21	5	30	0	2757	636	10195	0	0	-9559
1254+11	11	3.57	7	-3	15.65	0	1	3	-1	5	0	2758	635	10202	0	0	-9567
1255+00	89	6.49	7	0	16.66	0	17	22	-5	53	0	2775	630	10268	0	0	-9639
1256+00	100	16.51	7	10	18.52	0	43	25	18	65	0	2817	648	10350	0	0	-9702
1256+28	28	8.39	7	2	33.85	0	13	7	6	27	0	2830	654	10384	0	0	-9730
1256+53	25	7.84	7	1	41.53	0	8	6	1	35	0	2838	655	10427	0	0	-9773
1257+00	47	9.02	7	2	19.19	0	15	12	3	53	0	2852	658	10493	0	0	-9836
1257+05	5	8.58	7	2	18.24	0	2	1	0	3	0	2854	658	10498	0	0	-9839
1257+58	53	26.30	7	20	4.31	0	34	13	21	22	0	2888	679	10525	0	0	-9846
1258+00	42	45.46	7	39	0	0	56	10	45	3	0	2944	725	10530	0	0	-9805
1259+00	100	13.63	7	7	8.45	0	109	25	85	16	0	3054	810	10549	0	0	-9740
1260+00	100	13.61	7	7	16.13	0	50	25	26	46	0	3104	835	10606	0	0	-9771
1261+00	100	20.41	7	14	14.24	0	63	25	38	56	0	3167	874	10676	0	0	-9803
1262+00	100	9.71	7	3	15.58	0	56	25	31	55	0	3223	905	10745	0	0	-9841
1263+00	100	10.90	7	4	33.15	0	38	25	13	90	0	3261	918	10858	0	0	-9940
1264+00	100	16.42	7	10	38.23	0	51	25	26	132	0	3311	944	11023	0	0	-10079
1265+00	100	2.63	7	-4	40.35	0	35	25	11	146	0	3347	955	11205	0	0	-10251
1265+40	40	6.12	7	-1	38.45	0	6	10	-3	58	0	3353	951	11278	0	0	-10327
1266+00	60	10.80	7	4	33.68	0	19	15	4	80	0	3372	955	11378	0	0	-10423
1267+00	100	16.42	7	10	22.72	0	50	25	26	104	0	3422	981	11509	0	0	-10528
1268+00	100	15.48	7	9	34.48	0	59	25	34	106	0	3482	1015	11641	0	0	-10626
1269+00	100	10.69	7	4	49.41	0	48	25	24	155	0	3530	1039	11836	0	0	-10796
1270+00	100	7.43	7	1	46.78	0	34	25	9	178	0	3564	1048	12058	0	0	-11010
1271+00	100	12.16	7	5	46.38	0	36	25	12	173	0	3600	1060	12274	0	0	-11214

USH 41 STA 1168+12 TO STA 1423+29 (CUT INCLUDES PAVEMENT REMOVAL UNDER ITEM ASPHALTIC SURFACE MILLING)

STATION	Distance	AREA (SF)					Incremental Vol (CY) (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Pavement Material In Cut	Available Material = Cut - Pavment Material	FILL	EBS	Cut	Pavement Material In Cut	Available Material = Cut - Pavement Material	FILL	EBS	Cut 1.00	Available Material 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
1272+00	100	4.66	7	-2	59.51	0	31	25	6	196	0	3631	1066	12519	0	0	-11453
1273+00	100	9.66	7	3	55.94	0	27	25	2	214	0	3658	1068	12786	0	0	-11718
1274+00	100	12.00	7	5	27.84	0	40	25	15	155	0	3698	1083	12980	0	0	-11897
1275+00	100	5.94	7	-1	46.06	0	33	25	9	137	0	3731	1092	13151	0	0	-12059
1276+00	100	7.43	7	1	50.06	0	25	25	0	178	0	3756	1092	13374	0	0	-12282
1276+30	30	10.89	7	4	53.93	0	10	7	3	58	0	3766	1095	13446	0	0	-12351
1277+00	70	10.76	7	4	47.85	0	28	17	11	132	0	3794	1106	13611	0	0	-12505
1278+00	100	12.99	7	6	48.21	0	44	25	19	178	0	3838	1125	13833	0	0	-12708
1278+95	95	6.86	7	0	53.48	0	35	23	11	179	0	3873	1136	14057	0	0	-12921
1279+00	5	6.54	7	0	54.33	0	1	1	0	10	0	3874	1136	14069	0	0	-12933
1280+00	100	14.08	7	7	47.99	0	38	25	13	189	0	3912	1150	14306	0	0	-13156
1280+25	25	17.13	7	10	41.2	0	14	6	8	41	0	3927	1158	14358	0	0	-13200
1280+50	25	13.26	7	7	36.89	0	14	6	8	36	0	3941	1166	14403	0	0	-13237
1281+00	50	18.86	7	12	21.33	0	30	12	17	54	0	3970	1183	14470	0	0	-13287
1282+00	100	70.15	7	63	14.1	0	165	25	140	66	0	4135	1323	14552	0	0	-13229
1283+00	100	21.69	7	15	24.93	0	170	25	145	72	0	4305	1469	14643	0	0	-13174
1283+30	30	13.07	7	6	41.48	0	19	7	12	37	0	4325	1481	14689	0	0	-13208
1284+00	70	11.36	7	5	68.16	0	32	17	14	142	0	4356	1495	14867	0	0	-13371
1284+78	78	14.25	7	8	83.63	0	37	19	18	219	0	4393	1513	15141	0	0	-13628
1285+00	22	14.05	7	7	76.03	0	12	5	6	65	0	4405	1519	15222	0	0	-13703
1285+03	3	13.88	7	7	77.63	0	2	1	1	9	0	4406	1520	15233	0	0	-13713
1286+00	97	15.07	7	8	179.06	0	52	24	28	461	0	4458	1548	15809	0	0	-14261
1286+08	8	15.87	7	9	83.87	0	5	2	3	39	0	4463	1550	15858	0	0	-14307
1287+00	92	11.87	7	5	39.55	0	47	23	25	210	0	4510	1575	16121	0	0	-14546
1288+00	100	10.81	7	4	56.16	0	42	25	17	177	0	4552	1592	16342	0	0	-14750
1288+31	31	7.79	7	1	47.28	0	11	8	3	59	0	4563	1595	16416	0	0	-14821
1289+00	69	9.18	7	3	48.4	0	22	17	5	122	0	4585	1600	16569	0	0	-14969
1290+00	100	6.85	7	0	44.11	0	30	25	5	171	0	4614	1605	16783	0	0	-15178
1291+00	100	5.94	7	-1	30.13	0	24	25	-1	137	0	4638	1604	16955	0	0	-15351
1292+00	100	13.20	7	7	50.2	0	35	25	11	149	0	4673	1615	17141	0	0	-15526
1293+00	100	8.38	7	2	55.85	0	40	25	15	196	0	4713	1630	17387	0	0	-15757
1294+00	100	8.08	7	1	46.71	0	30	25	6	190	0	4744	1636	17624	0	0	-15988
1295+00	100	13.17	7	7	52.71	0	39	25	15	184	0	4783	1650	17854	0	0	-16204
1296+00	100	4.08	7	-3	41.19	0	32	25	7	174	0	4815	1658	18071	0	0	-16414
1296+28	28	2.35	7	-4	40.07	0	3	7	-4	42	0	4818	1654	18124	0	0	-16470
1297+00	72	3.65	7	-3	30.18	0	8	18	-10	94	0	4826	1644	18241	0	0	-16597
1298+00	100	12.12	7	5	24.23	0	29	25	5	101	0	4856	1649	18367	0	0	-16718
1299+00	100	5.85	7	-1	30.64	0	33	25	9	102	0	4889	1657	18494	0	0	-16837
1300+00	100	2.80	7	-4	34.72	0	16	25	-9	121	0	4905	1649	18645	0	0	-16997
1301+00	100	4.66	7	-2	24.78	0	14	25	-11	110	0	4919	1638	18783	0	0	-17145
1302+00	100	6.22	7	0	22.94	0	20	25	-5	88	0	4939	1633	18894	0	0	-17260
1302+29	29	7.33	7	1	19.12	0	7	7	0	23	0	4946	1633	18922	0	0	-17288
1303+00	71	9.01	7	2	24.25	0	21	18	4	57	0	4968	1637	18993	0	0	-17356
1304+00	100	4.97	7	-2	28.75	0	26	25	1	98	0	4994	1639	19116	0	0	-17477
1305+00	100	9.52	7	3	35.27	0	27	25	2	119	0	5020	1641	19264	0	0	-17623
1305+05	5	9.18	7	3	34.14	0	2	1	0	6	0	5022	1641	19272	0	0	-17631
1305+95	90	4.86	7	-2	32.4	0	23	22	1	111	0	5046	1642	19411	0	0	-17768
1306+00	5	4.81	7	-2	33.09	0	1	1	0	6	0	5046	1642	19418	0	0	-17776
1307+00	100	12.70	7	6	22.28	0	32	25	8	103	0	5079	1650	19546	0	0	-17897
1307+25	25	12.46	7	6	16.58	0	12	6	5	18	0	5091	1655	19569	0	0	-17914

USH 41 STA 1168+12 TO STA 1423+29 (CUT INCLUDES PAVEMENT REMOVAL UNDER ITEM ASPHALTIC SURFACE MILLING)

STATION	Distance	AREA (SF)					Incremental Vol (CY) (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Pavement Material in Cut	Available Material = Cut - Pavment Material	FILL	EBS	Cut	Pavement Material in Cut	Available Material = Cut - Pavement Material	FILL	EBS	Cut 1.00	Available Material 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.30	Reduced EBS in Fill 0.80	
1307+50	25	14.97	7	8	14.02	0	13	6	7	14	0	5103	1662	19587	0	0	-17925
1308+00	50	22.81	7	16	8.94	0	35	12	23	21	0	5138	1684	19613	0	0	-17929
1308+05	5	22.72	7	16	9.18	0	4	1	3	2	0	5142	1687	19615	0	0	-17928
1309+00	95	20.14	7	13	9.35	0	75	23	52	33	0	5218	1739	19656	0	0	-17917
1310+00	100	13.80	7	7	20.86	0	63	25	38	56	0	5281	1778	19726	0	0	-17948
1311+00	100	11.39	7	5	37.94	0	47	25	22	109	0	5327	1800	19862	0	0	-18063
1311+02	2	11.85	7	5	38.28	0	1	0	0	3	0	5328	1800	19866	0	0	-18066
1311+78	76	11.56	7	5	24.37	0	33	19	14	88	0	5361	1814	19976	0	0	-18162
1312+00	22	11.03	7	4	22.31	0	9	5	4	19	0	5370	1818	20000	0	0	-18182
1312+03	3	11.23	7	5	21.92	0	1	1	0	2	0	5372	1818	20003	0	0	-18184
1313+00	97	5.80	7	-1	17.66	0	31	24	7	71	0	5402	1825	20092	0	0	-18267
1313+08	8	4.40	7	-2	18.13	0	2	2	0	5	0	5404	1824	20098	0	0	-18274
1314+00	92	3.40	7	-3	25.23	0	13	23	-9	74	0	5417	1815	20191	0	0	-18375
1315+00	100	10.49	7	4	20.77	0	26	25	1	85	0	5443	1816	20297	0	0	-18481
1316+00	100	9.92	7	3	7.62	0	38	25	13	53	0	5480	1829	20363	0	0	-18534
1316+27	27	17.96	7	11	23.51	0	14	7	7	16	0	5494	1836	20382	0	0	-18546
1317+00	73	7.05	7	0	35.67	0	34	18	16	80	0	5528	1852	20482	0	0	-18630
1318+00	100	7.66	7	1	38.78	0	27	25	3	138	0	5555	1855	20655	0	0	-18800
1319+00	100	4.23	7	-2	36.73	0	22	25	-3	140	0	5577	1852	20829	0	0	-18977
1320+00	100	3.09	7	-4	24.57	0	14	25	-11	114	0	5591	1841	20971	0	0	-19130
1321+00	100	3.25	7	-3	21.19	0	12	25	-13	85	0	5603	1828	21077	0	0	-19249
1321+22	22	5.81	7	-1	27.27	0	4	5	-2	20	0	5606	1826	21102	0	0	-19276
1322+00	78	4.13	7	-3	31.71	0	14	19	-5	85	0	5621	1821	21208	0	0	-19387
1323+00	100	3.13	7	-4	28.4	0	13	25	-11	111	0	5634	1810	21347	0	0	-19537
1324+00	100	10.51	7	4	18.01	0	25	25	1	86	0	5660	1811	21455	0	0	-19644
1325+00	100	5.90	7	-1	23.49	0	30	25	6	77	0	5690	1816	21551	0	0	-19735
1326+00	100	5.67	7	-1	28.27	0	21	25	-3	96	0	5711	1813	21671	0	0	-19858
1327+00	100	5.17	7	-1	30.13	0	20	25	-5	108	0	5731	1809	21806	0	0	-19997
1327+21	21	6.73	7	0	23.98	0	5	5	-1	21	0	5736	1808	21832	0	0	-20024
1328+00	79	9.84	7	3	26.06	0	24	20	5	73	0	5760	1813	21924	0	0	-20111
1329+00	100	9.68	7	3	24.9	0	36	25	11	94	0	5796	1824	22042	0	0	-20218
1330+00	100	8.75	7	2	19.78	0	34	25	9	83	0	5831	1834	22145	0	0	-20312
1331+00	100	6.74	7	0	15.83	0	29	25	4	66	0	5859	1838	22228	0	0	-20390
1332+00	100	5.74	7	-1	19.72	0	23	25	-2	66	0	5882	1836	22310	0	0	-20474
1333+00	100	3.77	7	-3	13.75	0	18	25	-7	62	0	5900	1829	22387	0	0	-20558
1333+27	27	5.66	7	-1	12.75	0	5	7	-2	13	0	5905	1827	22404	0	0	-20577
1334+00	73	7.49	7	1	18.41	0	18	18	0	42	0	5922	1827	22457	0	0	-20630
1335+00	100	3.90	7	-3	24.72	0	21	25	-4	80	0	5944	1823	22556	0	0	-20733
1335+95	95	2.66	7	-4	21.21	0	12	23	-12	81	0	5955	1811	22657	0	0	-20846
1336+00	5	2.68	7	-4	20.68	0	0	1	-1	4	0	5956	1810	22662	0	0	-20852
1337+00	100	9.67	7	3	9.29	0	23	25	-2	56	0	5978	1809	22732	0	0	-20923
1337+25	25	0.00	7	-7	0	0	4	6	-2	4	0	5983	1807	22737	0	0	-20930
1337+50	25	0.00	7	-7	0	0	0	6	-6	0	0	5983	1801	22737	0	0	-20936
1338+00	50	1.14	7	-6	22.61	0	1	12	-11	21	0	5984	1790	22763	0	0	-20974
1339+00	100	4.89	7	-2	24.77	0	11	25	-14	88	0	5995	1776	22873	0	0	-21097
1339+25	25	4.79	7	-2	35.36	0	4	6	-2	28	0	6000	1774	22908	0	0	-21133
1340+00	75	5.45	7	-1	21.34	0	14	19	-4	79	0	6014	1770	23006	0	0	-21236
1341+00	100	6.87	7	0	18.54	0	23	25	-2	74	0	6037	1768	23098	0	0	-21330
1342+00	100	7.34	7	1	13.89	0	26	25	2	60	0	6063	1770	23173	0	0	-21404
1343+00	100	5.78	7	-1	11.69	0	24	25	0	47	0	6087	1769	23233	0	0	-21463

USH 41 STA 1168+12 TO STA 1423+29 (CUT INCLUDES PAVEMENT REMOVAL UNDER ITEM ASPHALTIC SURFACE MILLING)

STATION	Distance	AREA (SF)					Incremental Vol (CY) (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Pavement Material in Cut	Available Material = Cut - Pavment Material	FILL	EBS	Cut	Pavement Material in Cut	Available Material = Cut - Pavement Material	FILL	EBS	Cut 1.00	Available Material 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.30	Reduced EBS In Fill 0.80	
1344+00	100	7.99	7	1	11.91	0	26	25	1	44	0	6113	1770	23287	0	0	-21517
1345+00	100	4.37	7	-2	20.8	0	23	25	-2	61	0	6136	1768	23363	0	0	-21595
1345+20	20	5.68	7	-1	29.78	0	4	5	-1	19	0	6139	1767	23386	0	0	-21619
1346+00	80	9.07	7	2	13.71	0	22	20	2	64	0	6161	1769	23467	0	0	-21698
1347+00	100	10.39	7	4	14.05	0	36	25	11	51	0	6197	1781	23531	0	0	-21751
1348+00	100	7.12	7	0	17	0	32	25	8	58	0	6230	1788	23603	0	0	-21815
1349+00	100	7.47	7	1	17.55	0	27	25	2	64	0	6257	1791	23683	0	0	-21892
1350+00	100	14.53	7	8	16.69	0	41	25	16	63	0	6297	1807	23762	0	0	-21956
1351+00	100	17.65	7	11	10.85	0	60	25	35	51	0	6357	1842	23826	0	0	-21985
1351+18	18	8.66	7	2	20.13	0	9	4	4	10	0	6366	1846	23839	0	0	-21993
1352+00	82	4.54	7	-2	24.21	0	20	20	0	67	0	6386	1846	23923	0	0	-22077
1353+00	100	17.73	7	11	9.9	0	41	25	17	63	0	6427	1862	24002	0	0	-22140
1354+00	100	15.74	7	9	6.8	0	62	25	37	31	0	6489	1900	24041	0	0	-22141
1355+00	100	10.69	7	4	13.07	0	49	25	24	37	0	6538	1924	24087	0	0	-22163
1356+00	100	13.13	7	6	9.92	0	44	25	19	43	0	6582	1943	24140	0	0	-22197
1357+00	100	9.81	7	3	8.95	0	42	25	18	35	0	6625	1961	24184	0	0	-22223
1357+21	21	5.75	7	-1	20.41	0	6	5	1	11	0	6631	1962	24198	0	0	-22236
1358+00	79	12.98	7	6	3.97	0	27	20	8	36	0	6658	1970	24243	0	0	-22273
1359+00	100	11.95	7	5	5.42	0	46	25	21	17	0	6704	1991	24264	0	0	-22273
1360+00	100	6.07	7	-1	6.51	0	33	25	9	22	0	6738	2000	24292	0	0	-22292
1361+00	100	9.18	7	3	5.45	0	28	25	4	22	0	6766	2003	24320	0	0	-22316
1362+00	100	15.15	7	8	2	0	45	25	20	14	0	6811	2024	24337	0	0	-22313
1362+69	69	17.75	7	11	0.21	0	42	17	25	3	0	6853	2049	24340	0	0	-22292
1363+00	31	9.27	7	3	4.57	0	16	8	8	3	0	6868	2057	24344	0	0	-22287
1363+22	22	8.40	7	2	2.83	0	7	5	2	3	0	6876	2058	24348	0	0	-22289
1364+00	78	7.14	7	0	5.46	0	22	19	3	12	0	6898	2062	24363	0	0	-22301
1365+00	100	8.96	7	2	9.81	0	30	25	5	28	0	6928	2067	24398	0	0	-22331
1366+00	100	13.83	7	7	11.79	0	42	25	18	40	0	6970	2084	24448	0	0	-22364
1367+00	100	25.63	7	19	8.37	0	73	25	48	37	0	7043	2133	24495	0	0	-22362
1368+00	100	19.92	7	13	16.03	0	84	25	60	45	0	7128	2192	24551	0	0	-22359
1369+00	100	15.49	7	9	12.94	0	66	25	41	54	0	7193	2233	24618	0	0	-22385
1369+18	18	22.12	7	15	13.82	0	13	4	8	9	0	7206	2241	24629	0	0	-22388
1370+00	82	20.24	7	14	12.05	0	64	20	44	39	0	7270	2285	24678	0	0	-22393
1371+00	100	16.89	7	10	10.92	0	69	25	44	43	0	7339	2329	24732	0	0	-22402
1372+00	100	9.76	7	3	9.54	0	49	25	25	38	0	7388	2354	24779	0	0	-22425
1373+00	100	13.49	7	7	11.11	0	43	25	18	38	0	7431	2372	24827	0	0	-22454
1374+00	100	10.82	7	4	22.1	0	45	25	20	62	0	7476	2393	24904	0	0	-22511
1375+00	100	18.86	7	12	16.37	0	55	25	30	71	0	7531	2423	24993	0	0	-22570
1376+00	100	20.06	7	13	19.22	0	72	25	47	66	0	7603	2470	25075	0	0	-22605
1376+19	19	18.25	7	12	23.98	0	13	5	9	15	0	7617	2479	25094	0	0	-22615
1377+00	81	15.23	7	9	22.36	0	50	20	30	70	0	7667	2509	25181	0	0	-22671
1378+00	100	34.06	7	27	19.98	0	91	25	67	78	0	7758	2576	25279	0	0	-22703
1379+00	100	7.36	7	1	10.58	0	77	25	52	57	0	7835	2628	25350	0	0	-22722
1379+15	15	5.41	7	-1	12.47	0	4	4	0	6	0	7838	2628	25358	0	0	-22730
1379+40	25	9.77	7	3	11.1	0	7	6	1	11	0	7845	2629	25371	0	0	-22742
1380+00	60	15.43	7	9	17.73	0	28	15	13	32	0	7873	2642	25411	0	0	-22769
1381+00	100	8.42	7	2	13.86	0	44	25	19	59	0	7918	2661	25484	0	0	-22823
1382+00	100	11.89	7	5	16.74	0	38	25	13	57	0	7955	2674	25555	0	0	-22881
1382+18	18	10.39	7	4	20.45	0	7	4	3	12	0	7963	2677	25571	0	0	-22893
1383+00	82	11.96	7	5	8	0	34	20	14	43	0	7997	2691	25625	0	0	-22934

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PROJECT NO: 1107-00-74 | HWY: USH 41 | COUNTY: DODGE | EARTH QUANTITIES | SHEET: 274 | E

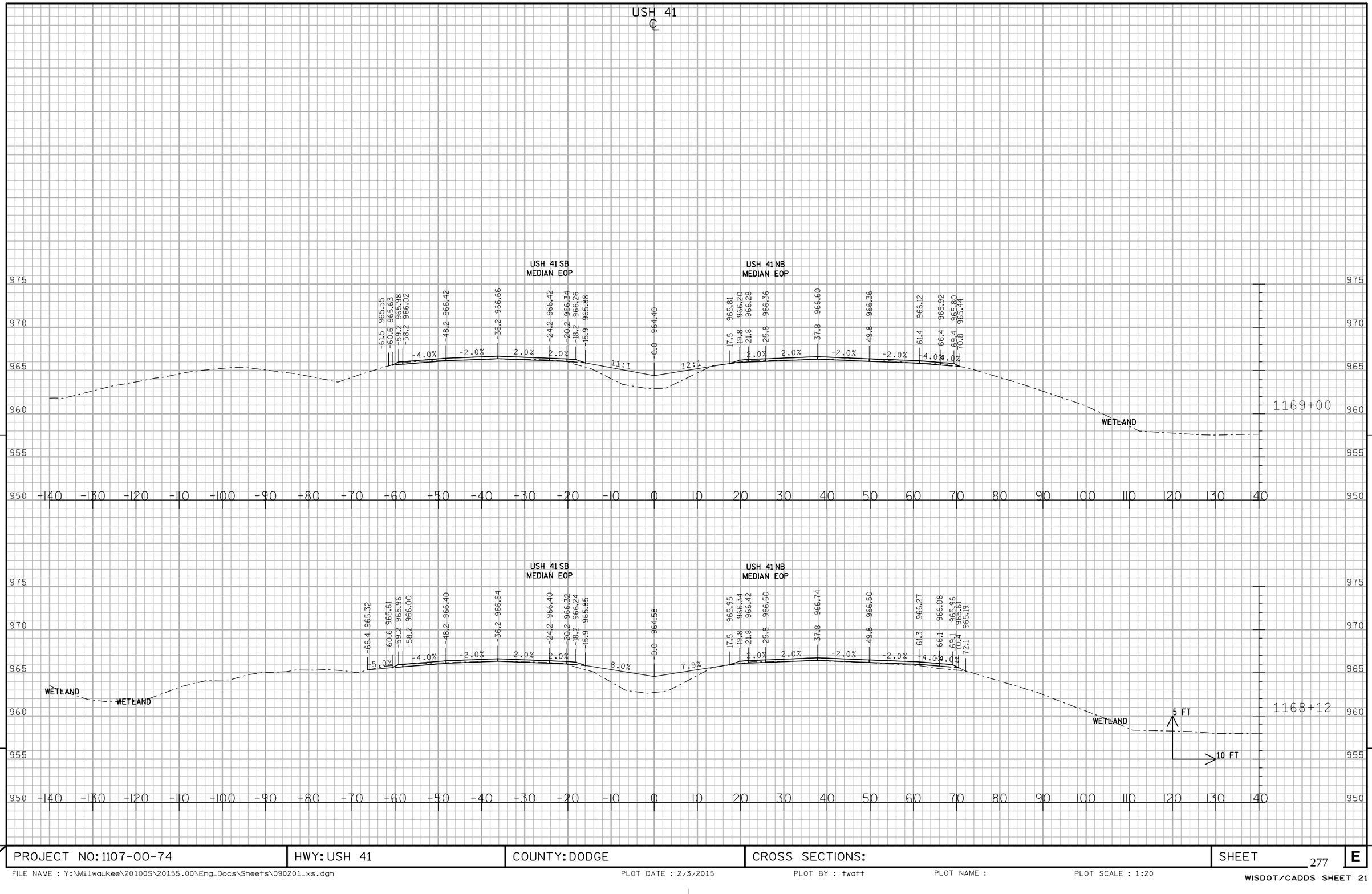
FILE NAME : 20103.00/Eng_Docs/Sheets/1060-38-70/Earthwork.pptx PLOT DATE : 10/22/2014 PLOT BY : _____ PLOT NAME : _____ PLOT SCALE : 1:1

USH 41 STA 1168+12 TO STA 1423+29 (CUT INCLUDES PAVEMENT REMOVAL UNDER ITEM ASPHALTIC SURFACE MILLING)

STATION	Distance	AREA (SF)					Incremental Vol (CY) (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Pavement Material in Cut	Available Material = Cut - Pavment Material	FILL	EBS	Cut	Pavement Material in Cut	Available Material = Cut - Pavement Material	FILL	EBS	Cut 1.00	Available Material 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.30	Reduced EBS in Fill 0.80	
1384+00	100	12.15	7	5	16.04	0	45	25	20	45	0	8041	2711	25680	0	0	-22969
1385+00	100	6.31	7	0	32.47	0	34	25	9	90	0	8075	2720	25793	0	0	-23072
1386+00	100	14.66	7	8	23.12	0	39	25	14	103	0	8114	2735	25921	0	0	-23187
1386+95	95	9.17	7	3	27.26	0	42	23	18	89	0	8156	2753	26032	0	0	-23279
1387+00	5	8.90	7	2	27.26	0	2	1	0	5	0	8158	2754	26038	0	0	-23285
1388+00	100	7.00	7	0	37.76	0	29	25	5	120	0	8187	2758	26189	0	0	-23431
1388+25	25	4.46	7	-2	35.95	0	5	6	-1	34	0	8193	2757	26232	0	0	-23474
1388+50	25	16.33	7	10	25.46	0	10	6	3	28	0	8202	2761	26267	0	0	-23506
1388+72	22	6.79	7	0	25.43	0	9	5	4	21	0	8212	2765	26293	0	0	-23528
1389+00	28	5.27	7	-1	16.34	0	6	7	-1	22	0	8218	2764	26320	0	0	-23556
1390+00	100	10.12	7	3	6.59	0	29	25	4	42	0	8246	2768	26373	0	0	-23605
1391+00	100	3.39	7	-3	13.18	0	25	25	0	37	0	8271	2768	26419	0	0	-23651
1391+03	3	3.39	7	-3	13.5	0	0	1	0	1	0	8272	2768	26421	0	0	-23653
1391+28	25	3.33	7	-3	23.82	0	3	6	-3	17	0	8275	2765	26442	0	0	-23678
1391+43	15	3.49	7	-3	26.18	0	2	4	-2	14	0	8277	2763	26460	0	0	-23697
1391+53	10	5.87	7	-1	25.66	0	2	2	-1	10	0	8279	2762	26472	0	0	-23709
1392+00	47	26.19	7	20	26.7	0	28	12	16	46	0	8306	2779	26529	0	0	-23750
1392+58	58	9.15	7	2	35.69	0	38	14	24	67	0	8344	2802	26613	0	0	-23810
1393+00	42	8.42	7	2	31.93	0	14	10	3	53	0	8358	2806	26678	0	0	-23873
1393+18	18	6.13	7	-1	32.32	0	5	4	0	21	0	8363	2806	26705	0	0	-23899
1394+00	82	6.51	7	0	22.35	0	19	20	-1	83	0	8382	2805	26809	0	0	-24004
1395+00	100	10.99	7	4	9.9	0	32	25	8	60	0	8415	2813	26884	0	0	-24071
1396+00	100	8.32	7	2	14.74	0	36	25	11	46	0	8450	2824	26941	0	0	-24117
1397+00	100	12.93	7	6	13.59	0	39	25	15	52	0	8490	2838	27006	0	0	-24168
1398+00	100	8.62	7	2	15.9	0	40	25	15	55	0	8530	2854	27074	0	0	-24221
1399+00	100	7.98	7	1	21.62	0	31	25	6	69	0	8560	2860	27161	0	0	-24302
1400+00	100	4.01	7	-3	28.34	0	22	25	-2	93	0	8583	2857	27277	0	0	-24420
1401+00	100	6.10	7	-1	16.71	0	19	25	-6	83	0	8601	2851	27381	0	0	-24530
1402+00	100	12.93	7	6	16.27	0	35	25	11	61	0	8636	2862	27458	0	0	-24596
1403+00	100	23.47	7	17	13.39	0	67	25	43	55	0	8704	2904	27526	0	0	-24622
1403+18	18	22.60	7	16	13.97	0	15	4	11	9	0	8719	2915	27538	0	0	-24622
1404+00	82	28.87	7	22	11.11	0	78	20	58	38	0	8797	2973	27585	0	0	-24612
1405+00	100	26.90	7	20	14.77	0	103	25	79	48	0	8901	3052	27645	0	0	-24593
1406+00	100	27.37	7	21	17.23	0	101	25	76	59	0	9001	3128	27719	0	0	-24591
1407+00	100	12.43	7	6	12.89	0	74	25	49	56	0	9075	3177	27789	0	0	-24612
1408+00	100	9.20	7	3	7.1	0	40	25	15	37	0	9115	3192	27835	0	0	-24643
1408+18	18	13.03	7	6	3.41	0	7	4	3	4	0	9122	3195	27840	0	0	-24645
1409+00	82	6.31	7	0	11.71	0	29	20	9	23	0	9152	3204	27868	0	0	-24664
1410+00	100	12.53	7	6	8.15	0	35	25	10	37	0	9187	3214	27914	0	0	-24700
1411+00	100	15.47	7	9	6.87	0	52	25	27	28	0	9238	3242	27949	0	0	-24707
1412+00	100	12.26	7	6	10.12	0	51	25	27	31	0	9290	3268	27988	0	0	-24720
1413+00	100	12.71	7	6	9.03	0	46	25	22	35	0	9336	3290	28033	0	0	-24743
1413+69	69	20.54	7	14	14.33	0	42	17	25	30	0	9379	3315	28070	0	0	-24755
1414+00	31	18.76	7	12	8.99	0	23	8	15	13	0	9401	3330	28087	0	0	-24757
1415+00	100	12.27	7	6	10.65	0	57	25	33	36	0	9459	3363	28132	0	0	-24769
1416+00	100	5.96	7	-1	9.53	0	34	25	9	37	0	9492	3372	28179	0	0	-24807
1416+30	30	7.16	7	0	6.56	0	7	7	0	9	0	9500	3372	28190	0	0	-24818
1416+33	3	7.19	7	1	6.7	0	1	1	0	1	0	9500	3372	28191	0	0	-24819
1417+00	67	5.64	7	-1	18.76	0	16	17	-1	32	0	9516	3371	28230	0	0	-24859
1418+00	100	5.51	7	-1	17.62	0	21	25	-4	67	0	9537	3367	28315	0	0	-24947
1419+00	100	7.22	7	1	7.73	0	24	25	-1	47	0	9561	3366	28373	0	0	-25007
1419+18	18	8.92	7	2	8.68	0	5	4	1	5	0	9566	3367	28380	0	0	-25013
1420+00	82	10.85	7	4	4.15	0	30	20	10	19	0	9596	3377	28405	0	0	-25028
1421+00	100	11.25	7	5	3.86	0	41	25	16	15	0	9637	3393	28423	0	0	-25030
1422+00	100	8.04	7	1	7.12	0	36	25	11	20	0	9673	3404	28448	0	0	-25044
1423+00	100	8.22	7	2	5.8	0	30	25	5	24	0	9703	3409	28478	0	0	-25069
1423+29	29	9.21	7	3	8.69	0	9	7	2	8	0	9712	3412	28488	0	0	-25076
						Column totals	9712	6300	3412	22790	0						

USH 41 STA 1540+21 TO STA 1555+57 (CUT INCLUDES PAVEMENT REMOVAL UNDER ITEM ASPHALTIC SURFACE MILLING)

STATION	Distance	AREA (SF)					Incremental Vol (CY) (Unadjusted)					Cumulative Vol (CY)					Mass Ordinate
		Cut	Pavement Material in Cut	Available Material = Cut - Pavement Material	FILL	EBS	Cut	Pavement Material in Cut	Available Material = Cut - Pavement Material	FILL	EBS	Cut 1.00	Available Material 1.00	Expanded Fill 1.25	Expanded EBS Backfill 1.30	Reduced EBS in Fill 0.80	
1540+21	0	12.96	7	6	22.32	0	0	0	0	0	0	0	0	0	0	0	0
1541+00	79	17.84	7	11	12.08	0	45	20	26	51	0	45	26	63	0	0	-38
1541+55	55	15.66	7	9	16.43	0	34	14	21	29	0	79	46	100	0	0	-53
1542+00	45	9.13	7	2	8.65	0	21	11	10	21	0	100	56	126	0	0	-70
1543+00	100	8.60	7	2	22.26	0	33	25	8	57	0	133	64	197	0	0	-133
1544+00	100	5.83	7	-1	24.1	0	27	25	2	86	0	160	66	305	0	0	-239
1545+00	100	4.16	7	-3	21.06	0	19	25	-6	84	0	178	60	409	0	0	-349
1546+00	100	15.07	7	8	25.56	0	36	25	11	86	0	214	71	517	0	0	-446
1547+00	100	3.05	7	-4	34.65	0	34	25	9	112	0	247	80	656	0	0	-577
1548+00	100	3.02	7	-4	22.46	0	11	25	-13	106	0	259	66	789	0	0	-722
1549+00	100	8.51	7	2	9.23	0	21	25	-3	59	0	280	63	862	0	0	-799
1550+00	100	13.77	7	7	13.57	0	41	25	17	42	0	321	79	915	0	0	-835
1551+00	100	4.05	7	-3	16.37	0	33	25	8	55	0	354	88	984	0	0	-896
1552+00	100	9.46	7	3	16.06	0	25	25	0	60	0	379	88	1059	0	0	-971
1553+00	100	5.03	7	-2	15.17	0	27	25	2	58	0	406	90	1131	0	0	-1041
1554+00	100	10.49	7	4	5.7	0	29	25	4	39	0	435	94	1180	0	0	-1086
1555+00	100	8.13	7	1	7.9	0	34	25	10	25	0	469	104	1211	0	0	-1107
1555+56	56	12.27	7	6	4.02	0	21	14	7	12	0	490	111	1227	0	0	-1115
Column totals							490	379	111	981	0						



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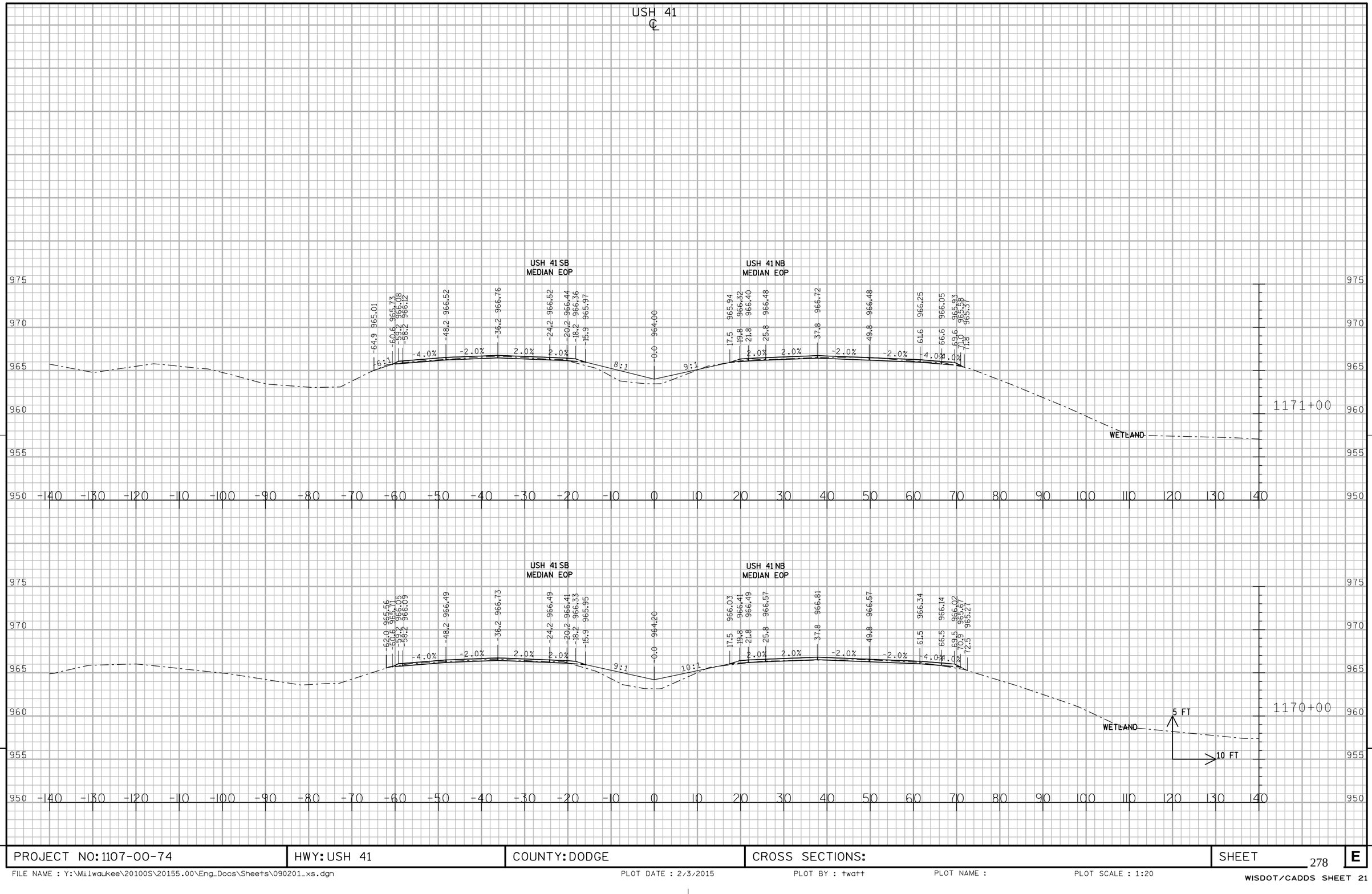
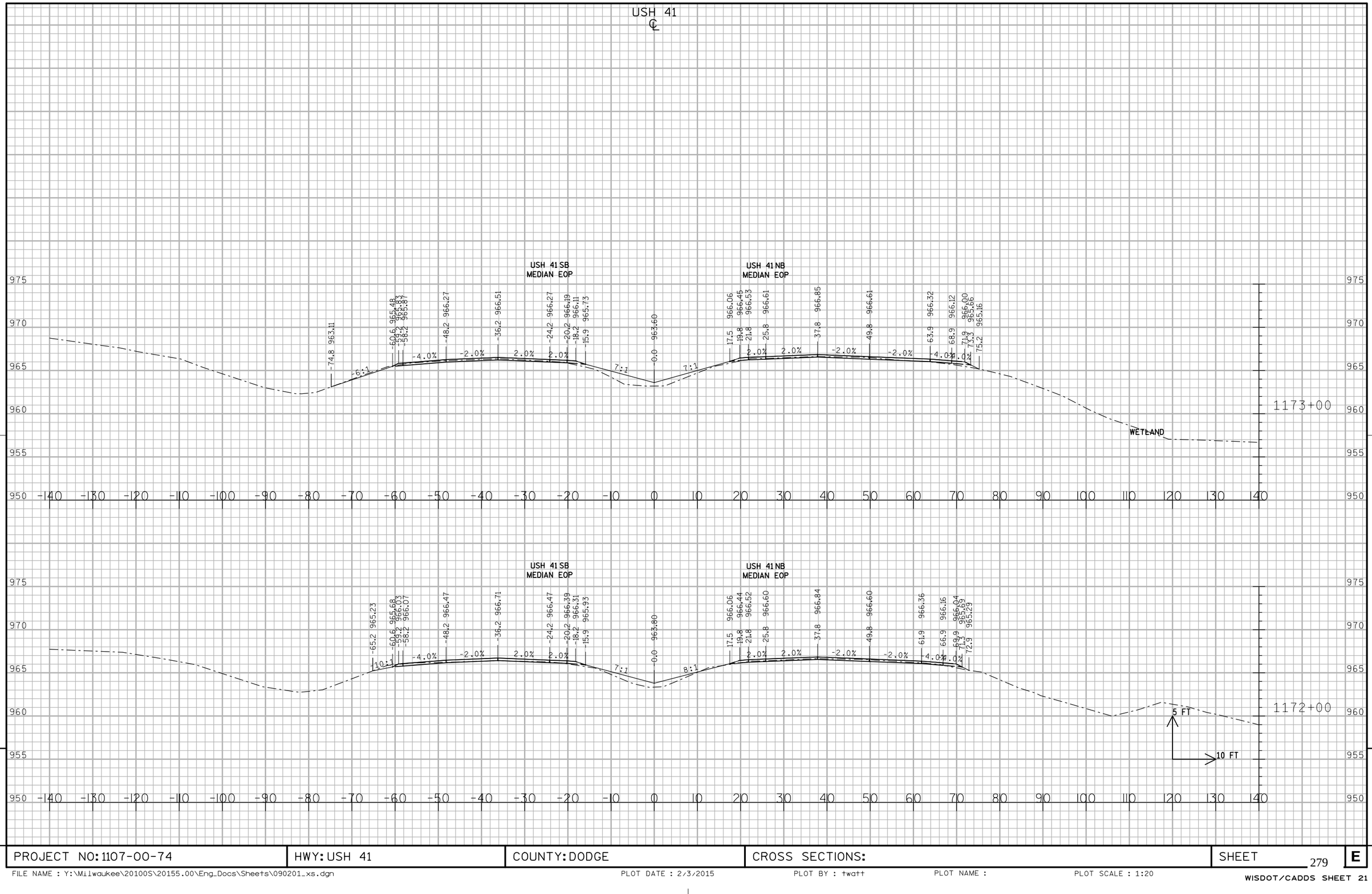
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 277	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 278	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 279	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄

1174+74

-72.5 963.45 -6:1 -60.6 965.44 -59.2 965.82 -58.2 965.82 -4.0% -48.2 966.22 -2.0% -36.2 966.46 2.0% -24.2 966.22 2.0% -20.2 966.14 -18.2 966.06 -15.9 965.68 7:1 0.0 963.25 6:1 17.5 966.12 19.8 966.51 21.8 966.58 2.0% 25.8 966.67 2.0% 37.8 966.91 -2.0% 49.8 966.66 52.5 966.61 -2.0% -4.0% 67.5 966.31 72.5 966.11 75.5 965.99 76.8 965.84

1174+00

USH 41 SB MEDIAN EOP

USH 41 NB MEDIAN EOP

-69.3 964.13 -6:1 -60.6 965.57 -59.2 965.96 -58.2 965.96 -4.0% -48.2 966.36 -2.0% -36.2 966.60 2.0% -24.2 966.36 2.0% -20.2 966.28 -18.2 966.20 -15.9 965.82 7:1 0.0 963.40 6:1 17.5 966.14 19.8 966.52 21.8 966.60 2.0% 25.8 966.68 2.0% 37.8 966.92 -2.0% 49.8 966.68 51.0 966.68 -2.0% -4.0% 65.9 966.36 70.9 966.16 73.9 966.04 75.1 965.89 75.8 965.58

5 FT
WETLAND
WETLAND
10 FT

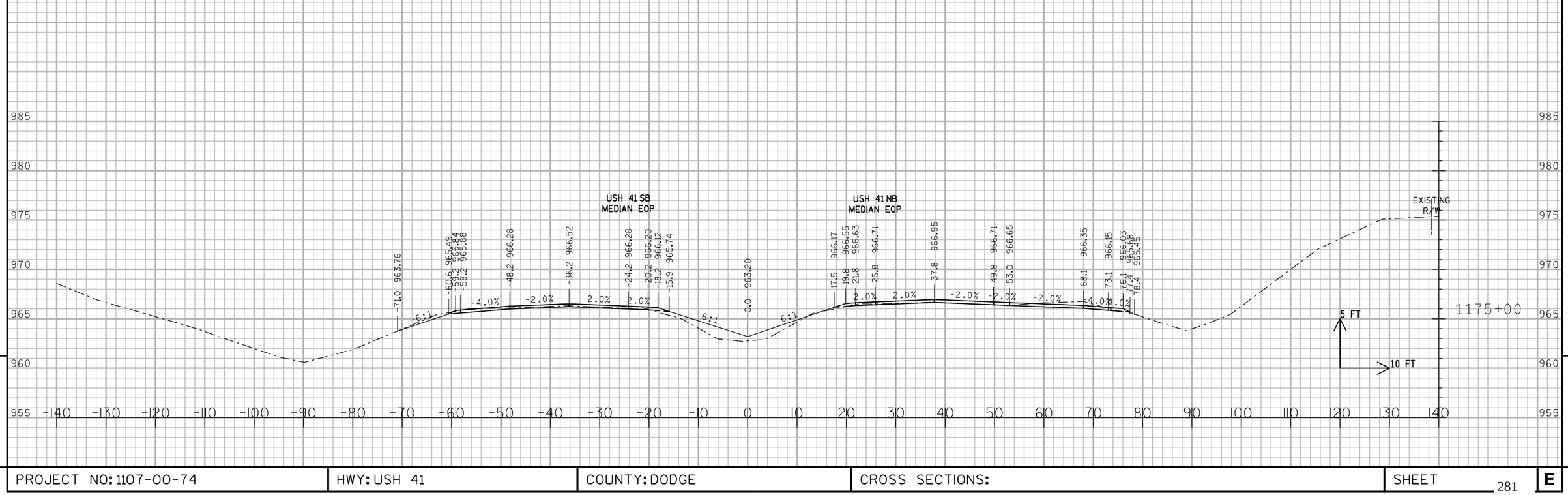
9 9

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 280	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 281	E

USH 41
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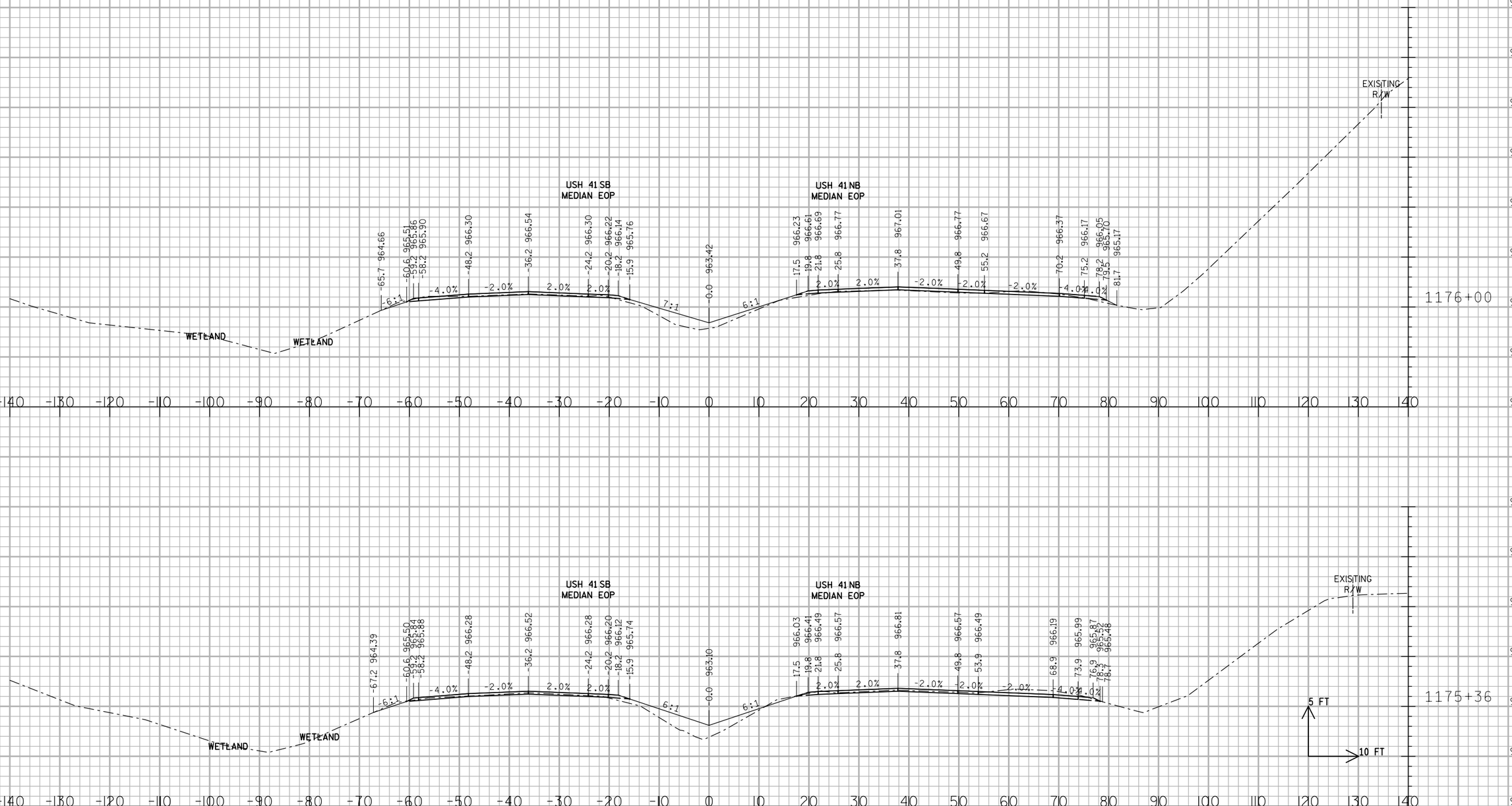

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 282	E

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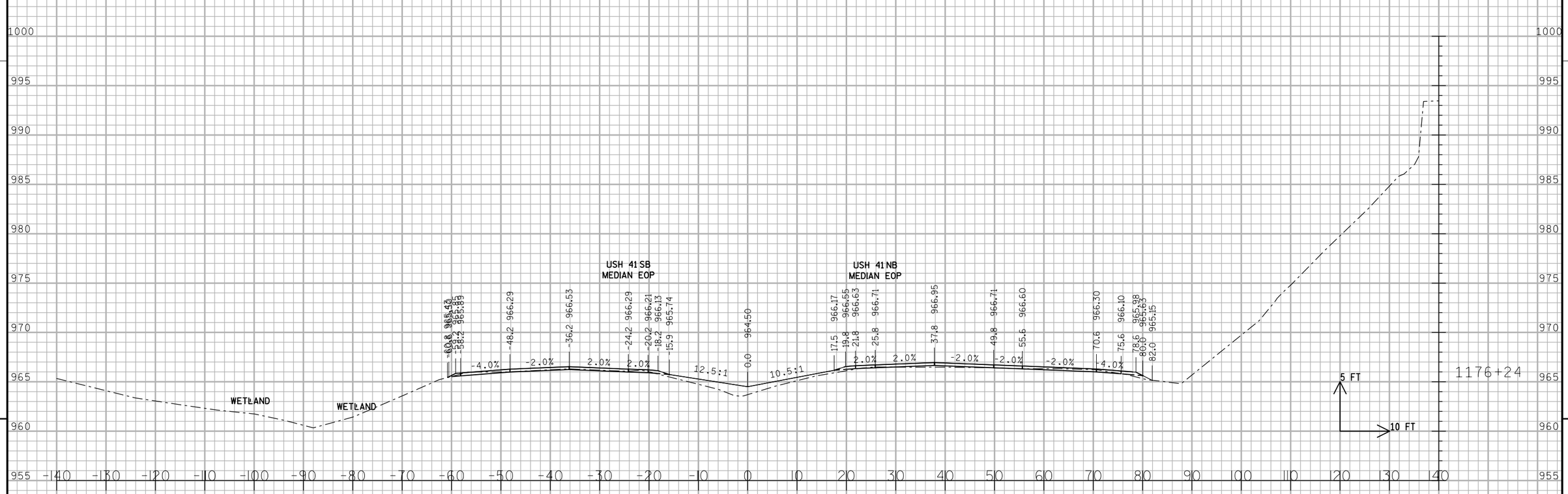
WISDOT/CADDS SHEET 21

USH 41
℄



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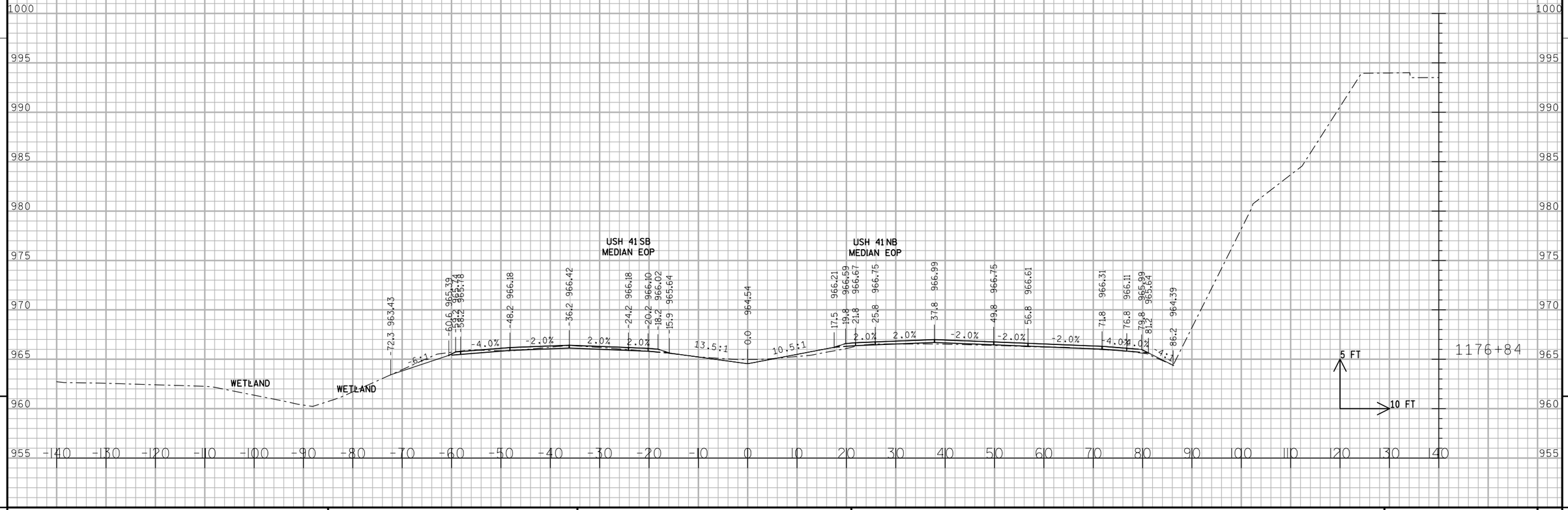
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 283	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 284	E

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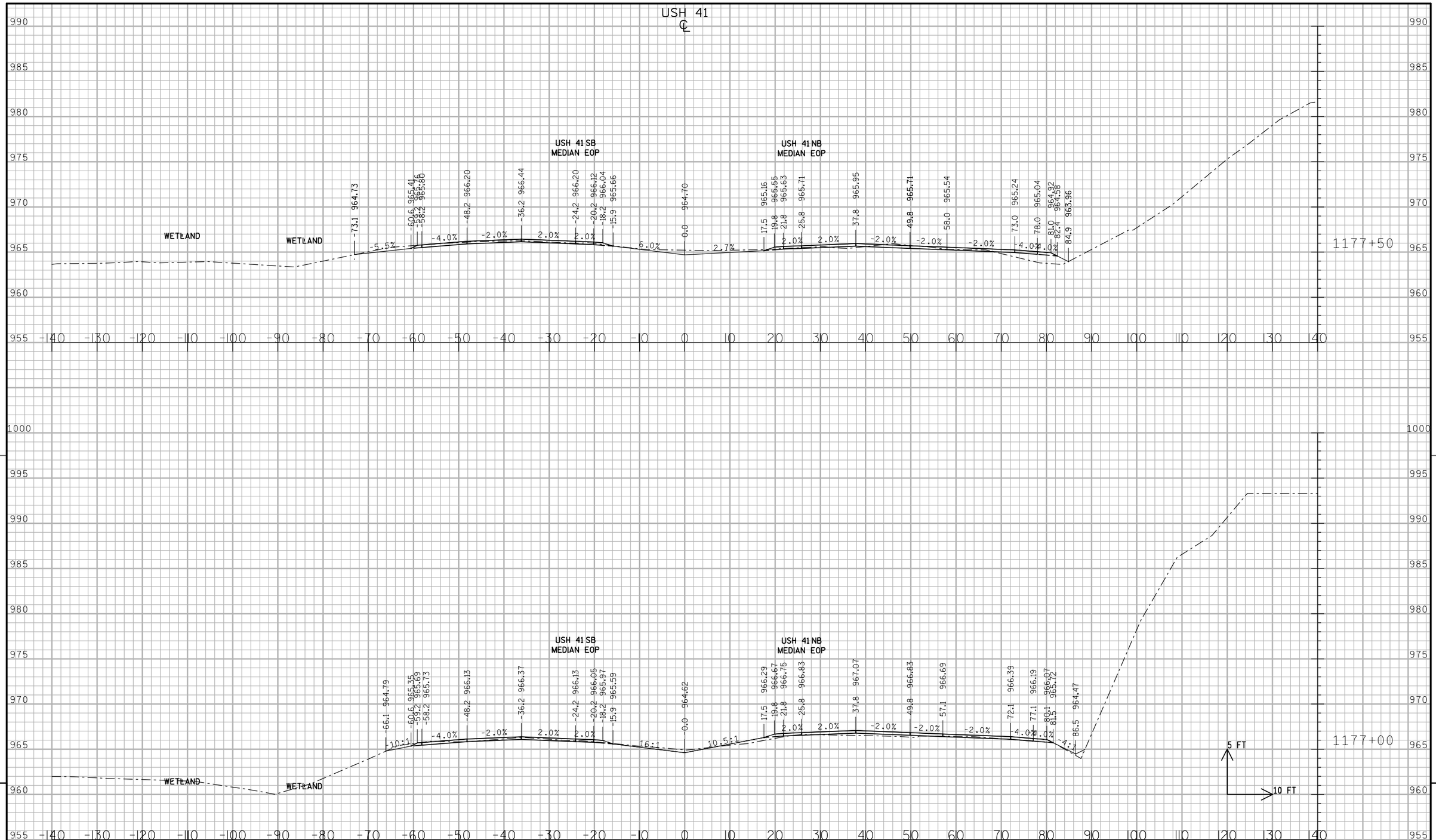
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 285	E

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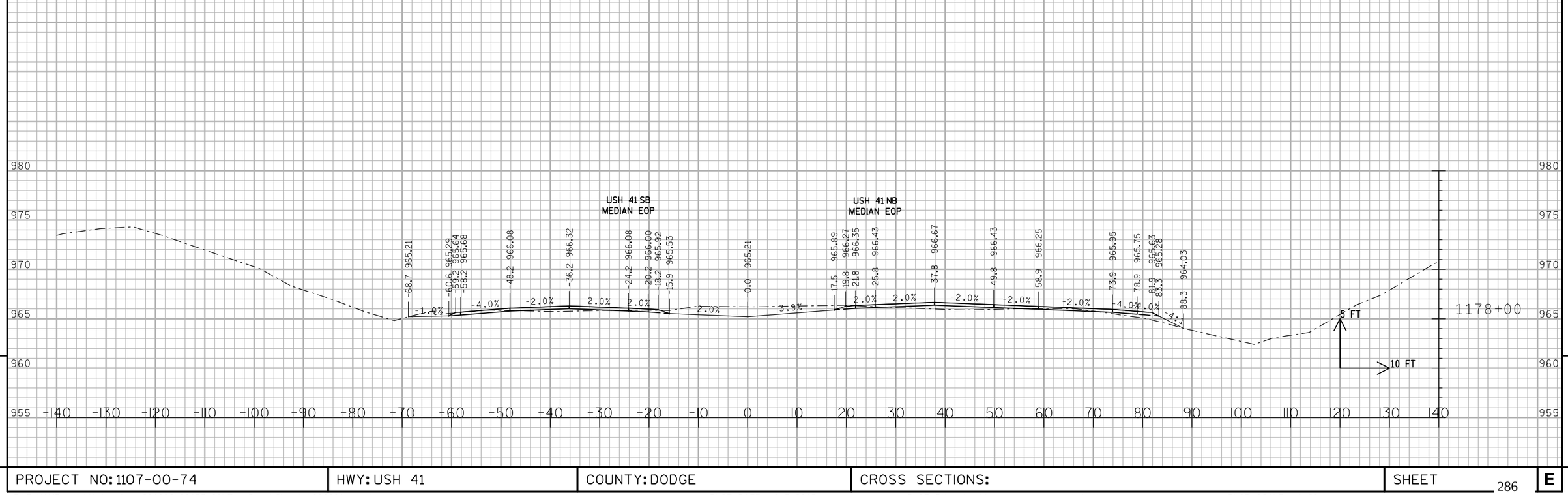
WISDOT/CADDS SHEET 21

USH 41
℄



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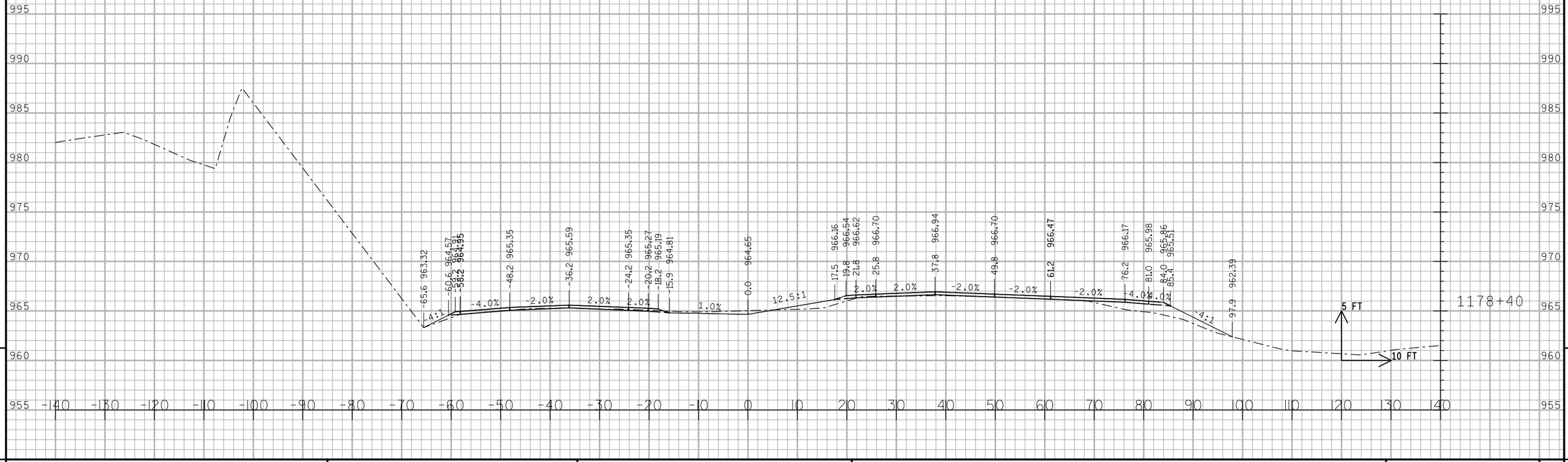
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 286	E

USH 41
℄



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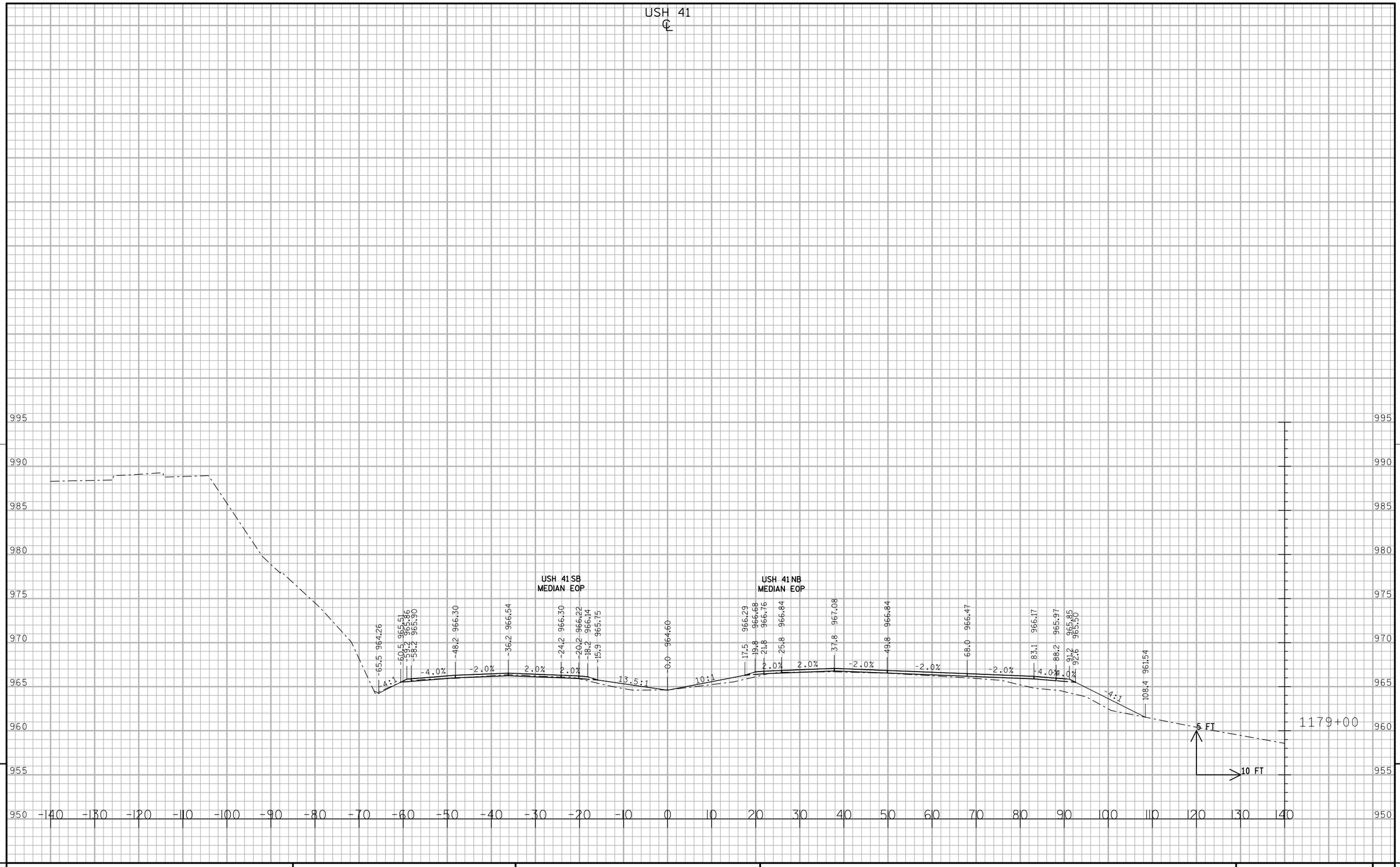
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 287	E

USH 41
℄

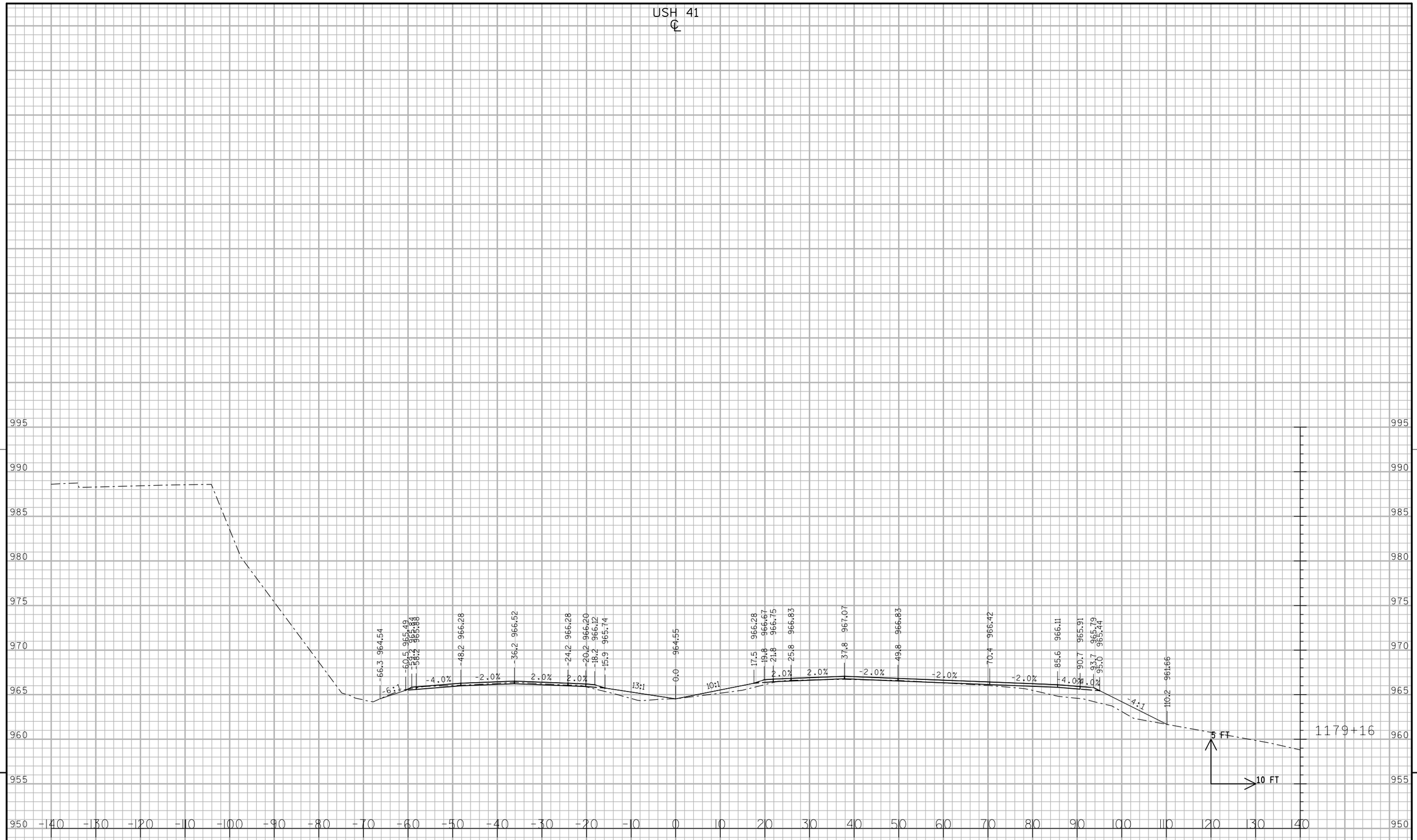


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 288	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 289	E

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WISDOT/CADDS SHEET 21

USH 41
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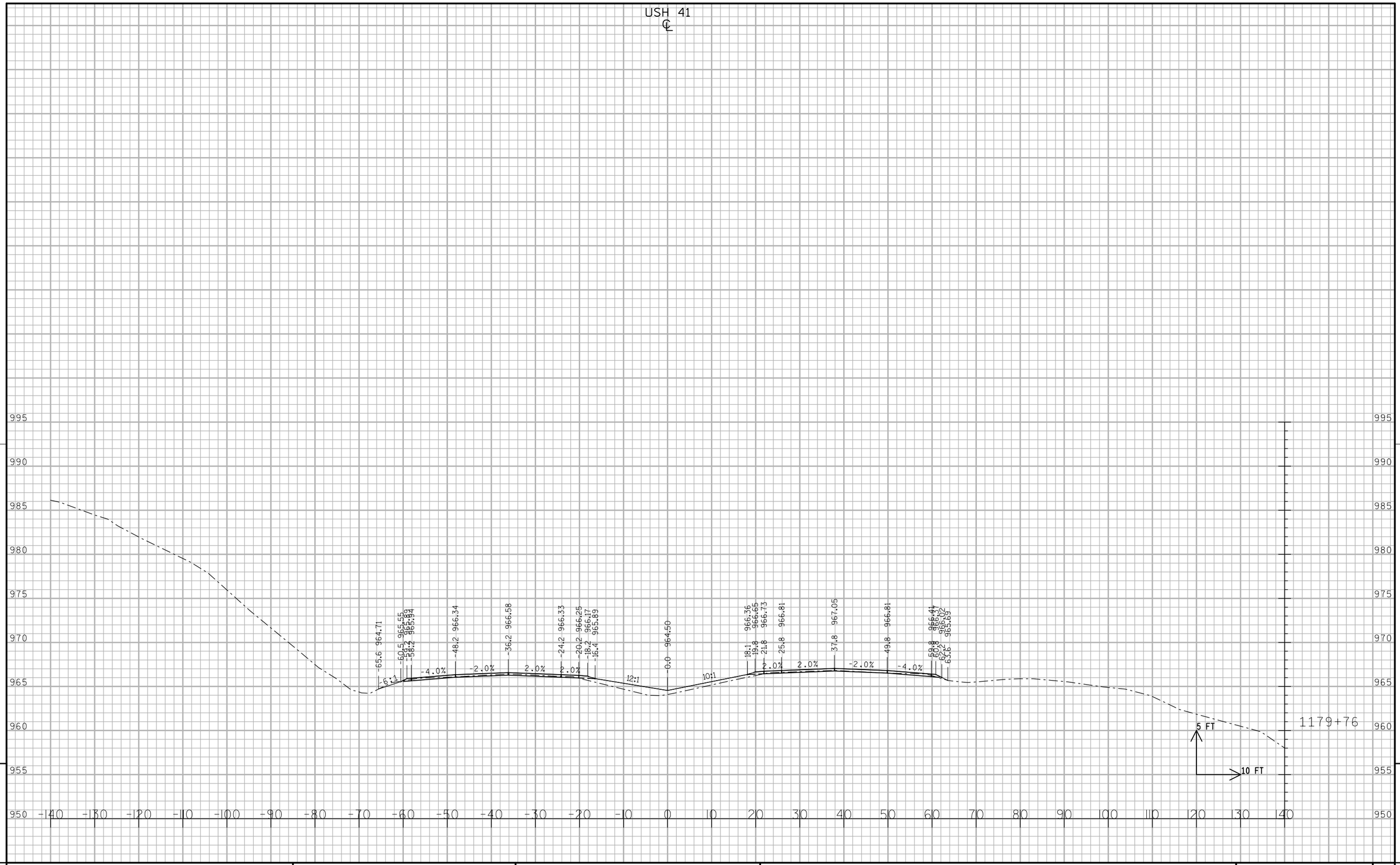

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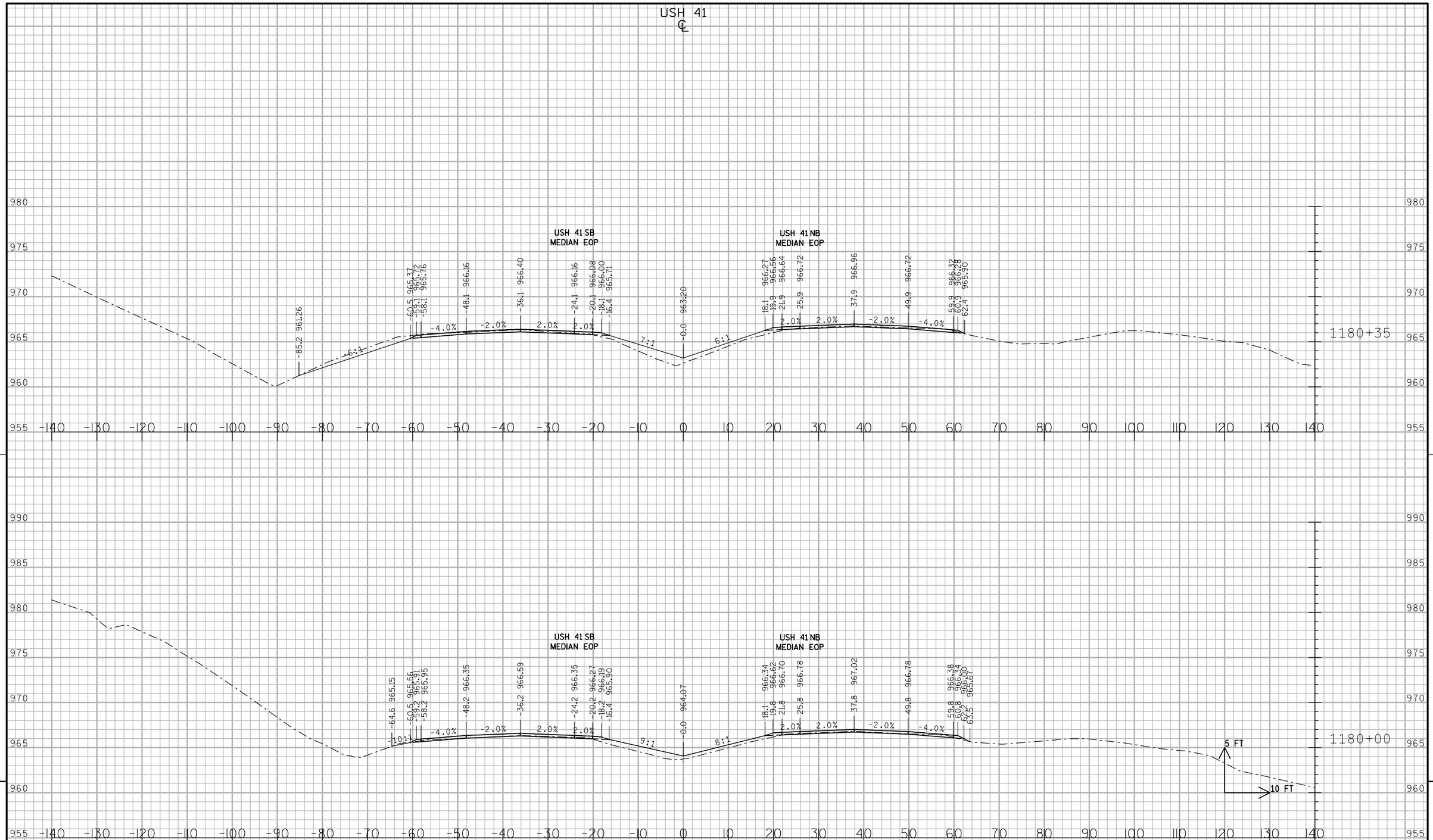
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 290	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

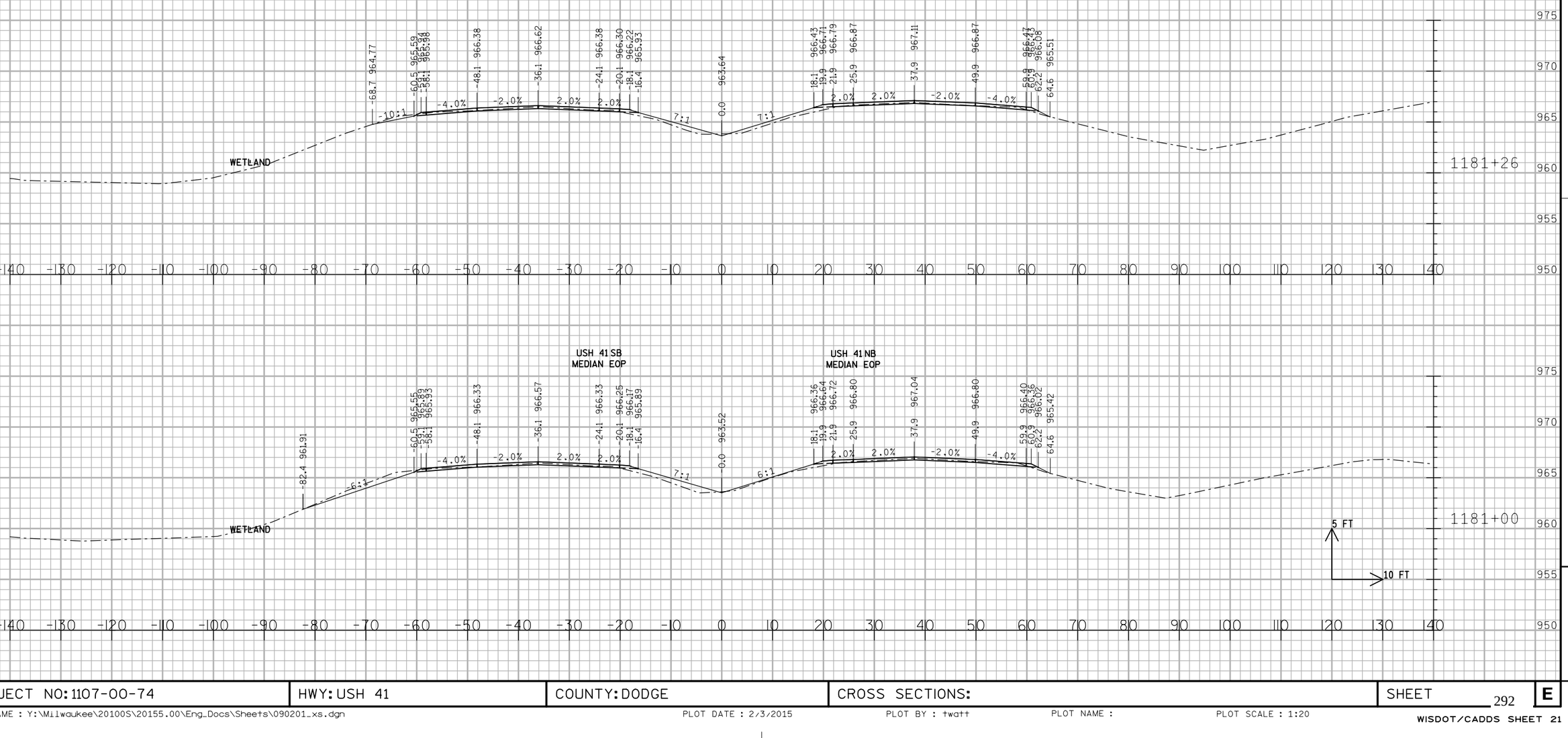


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 291	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 292	E

USH 41
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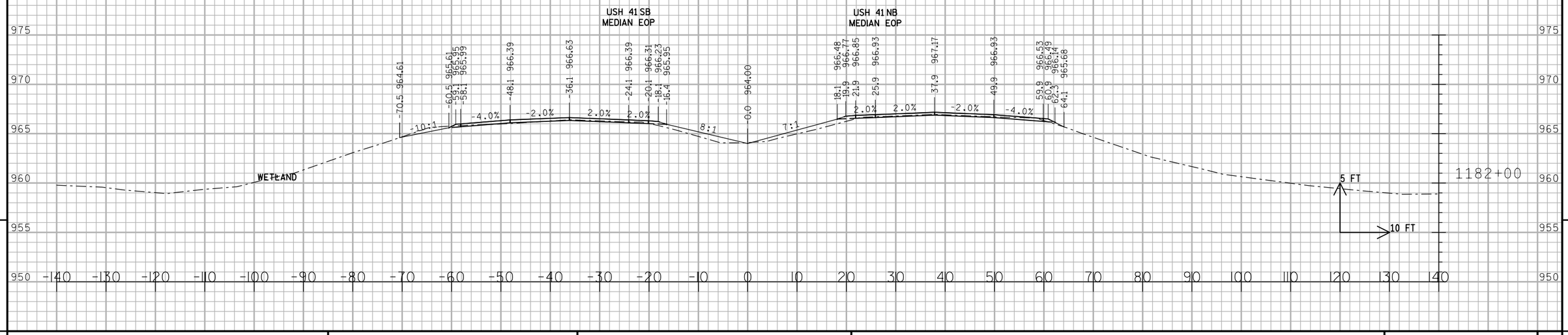

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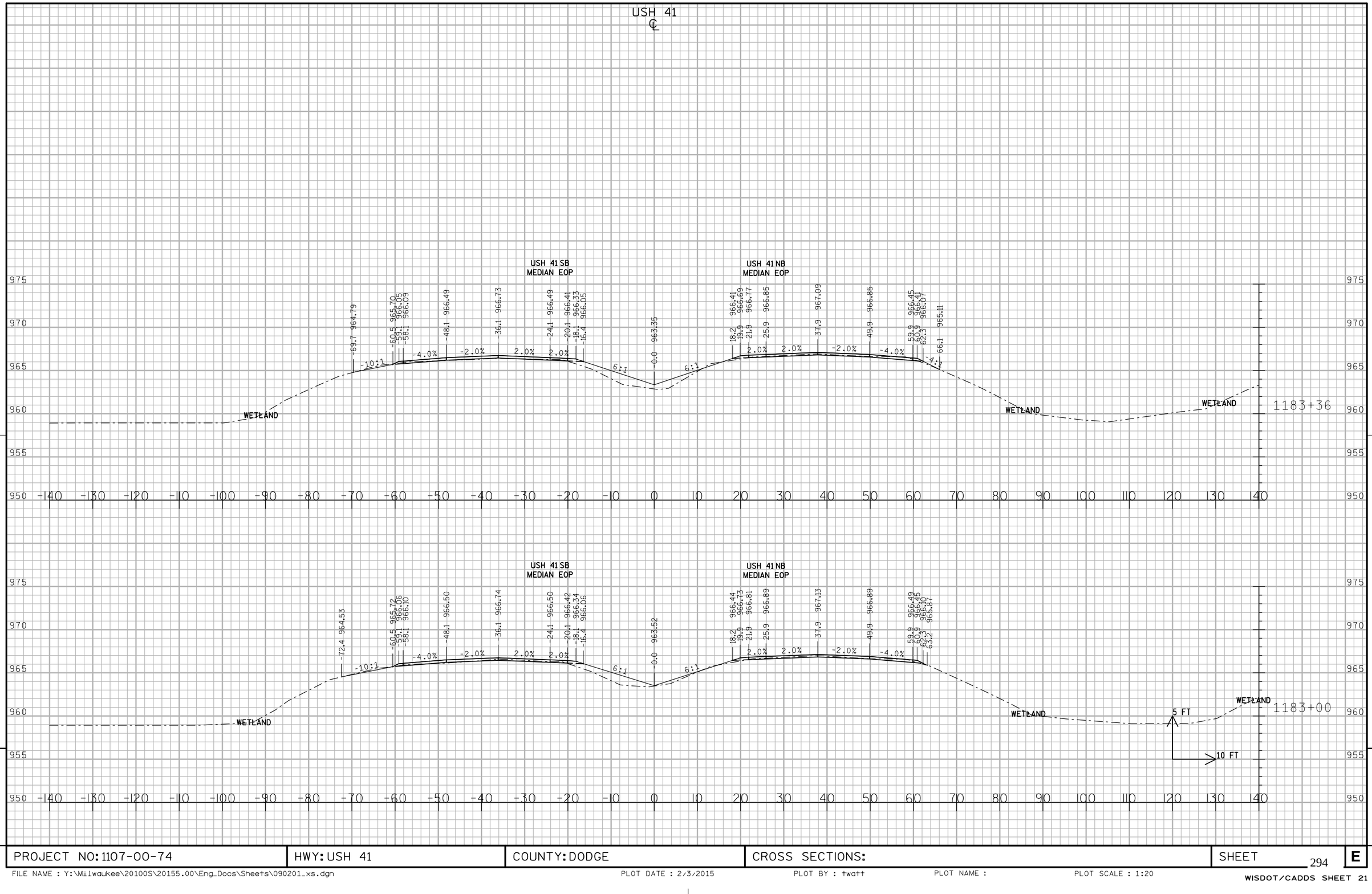
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 293	E



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 294	E

USH 41
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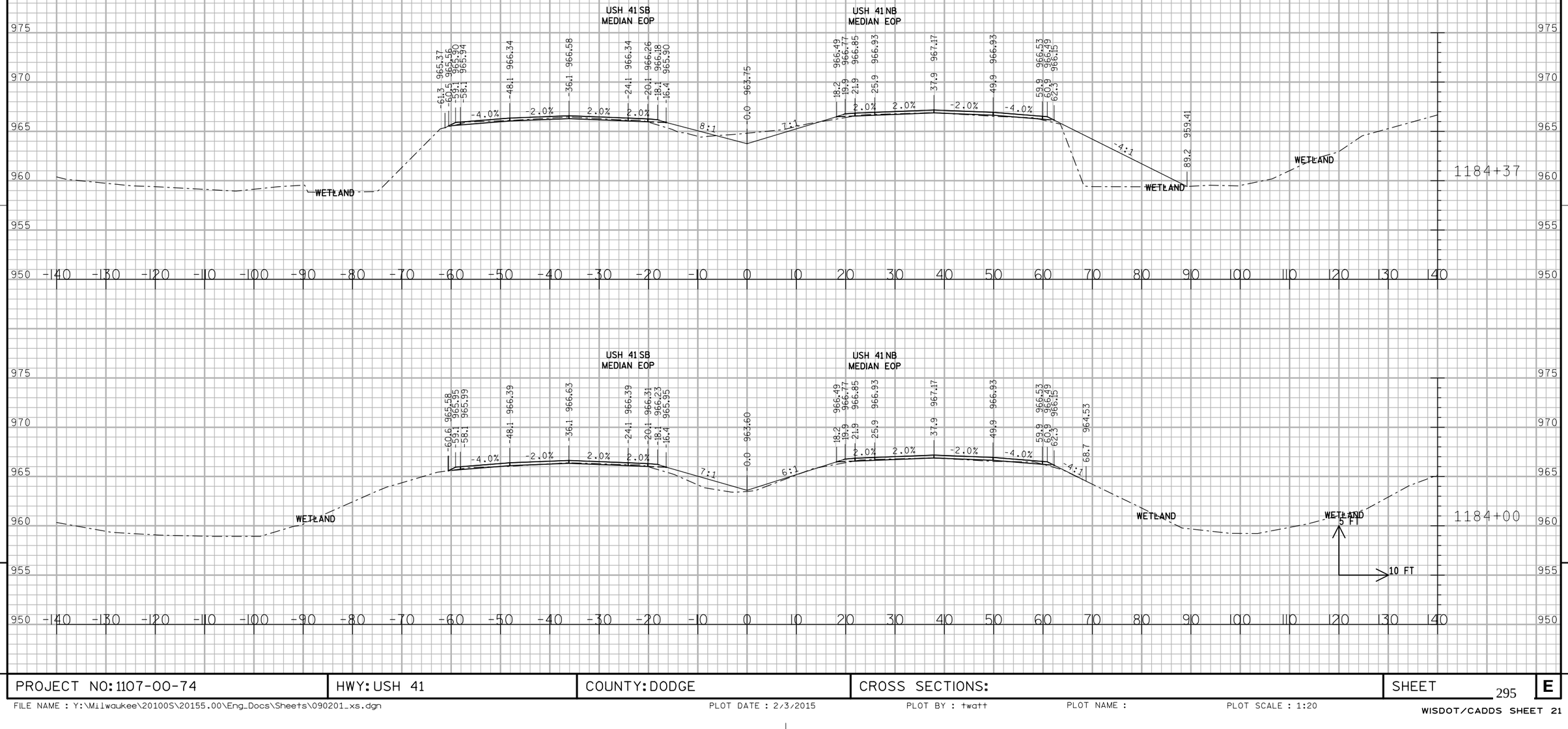
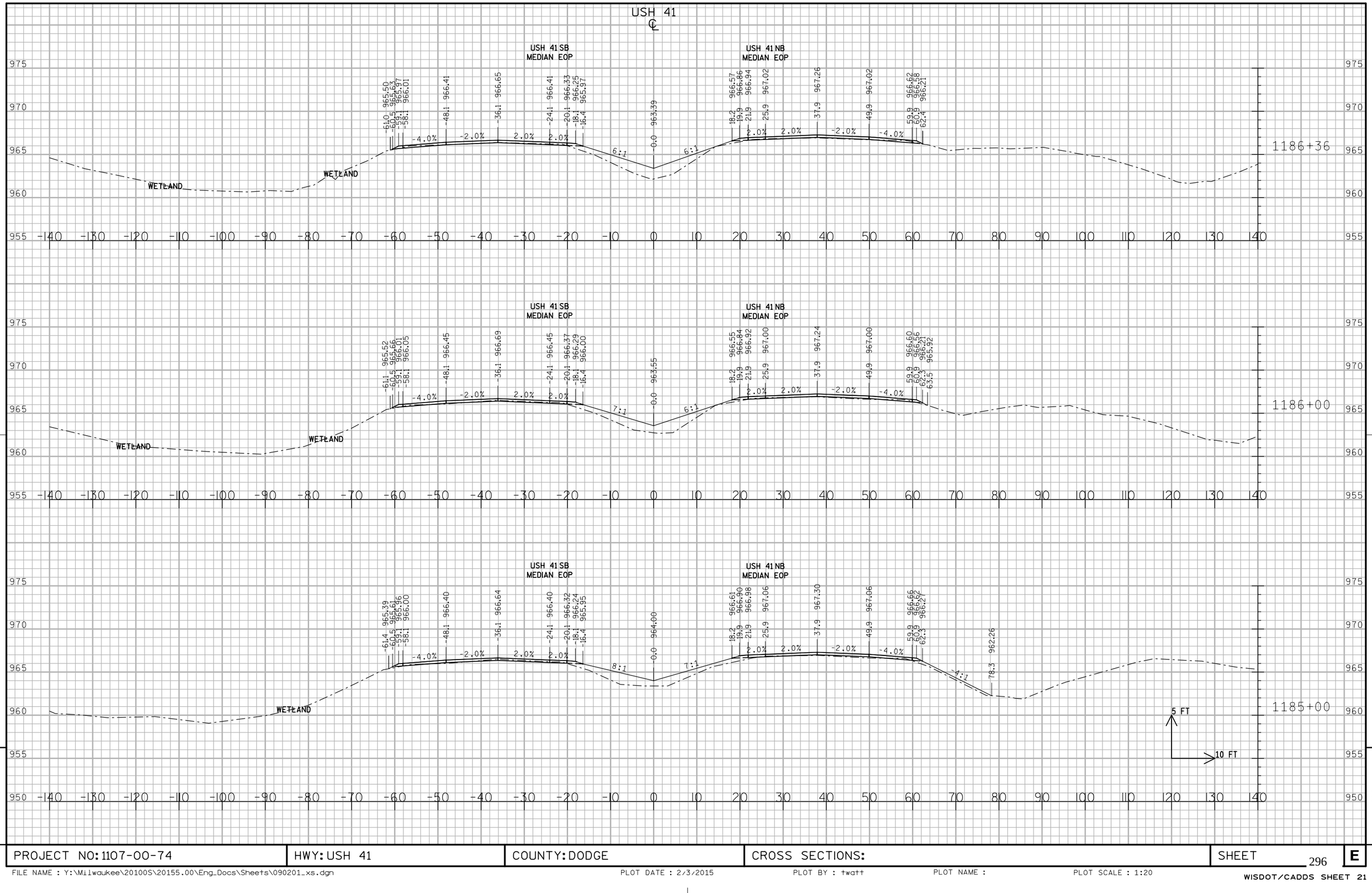


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 295	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 296	E

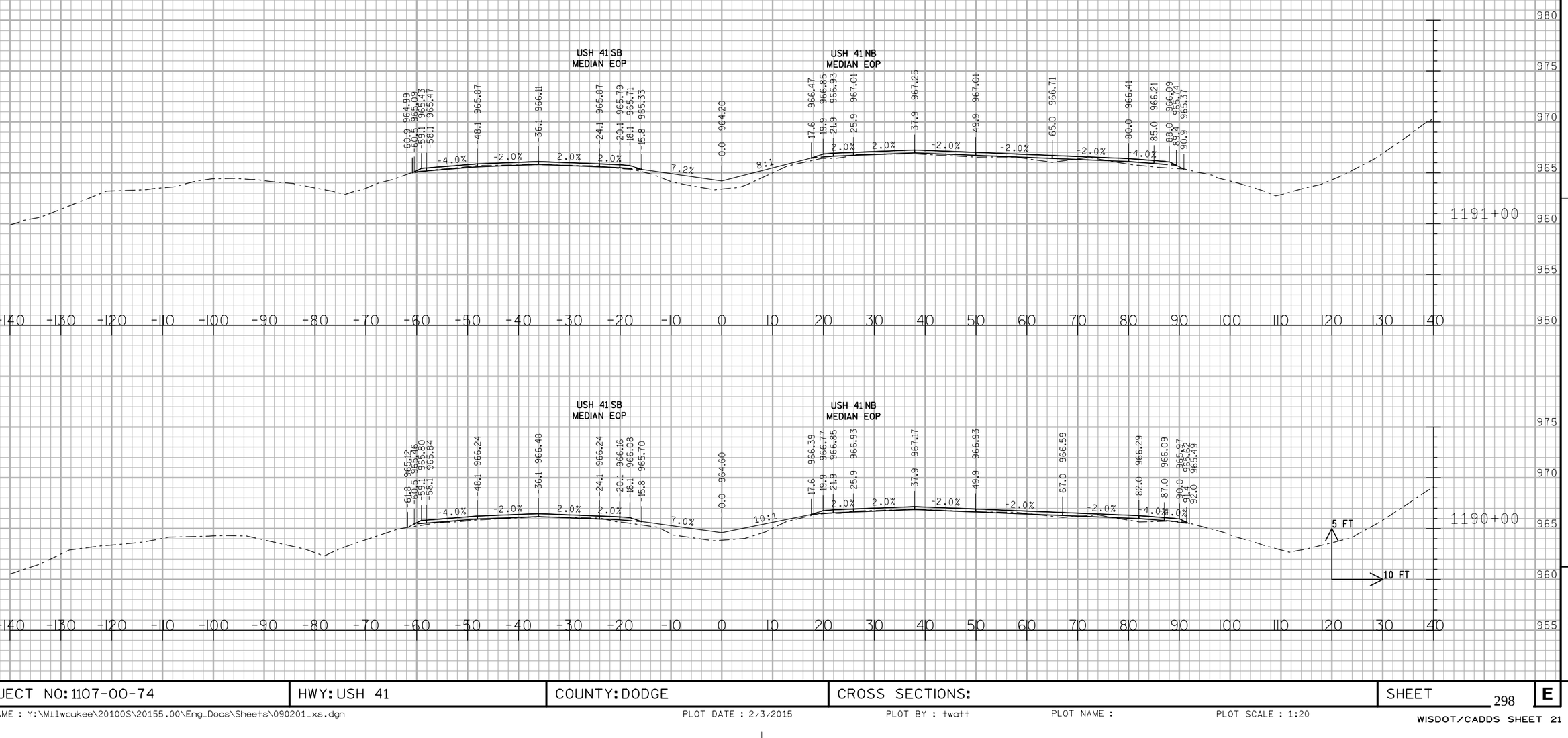
USH 41
℄

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 297	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

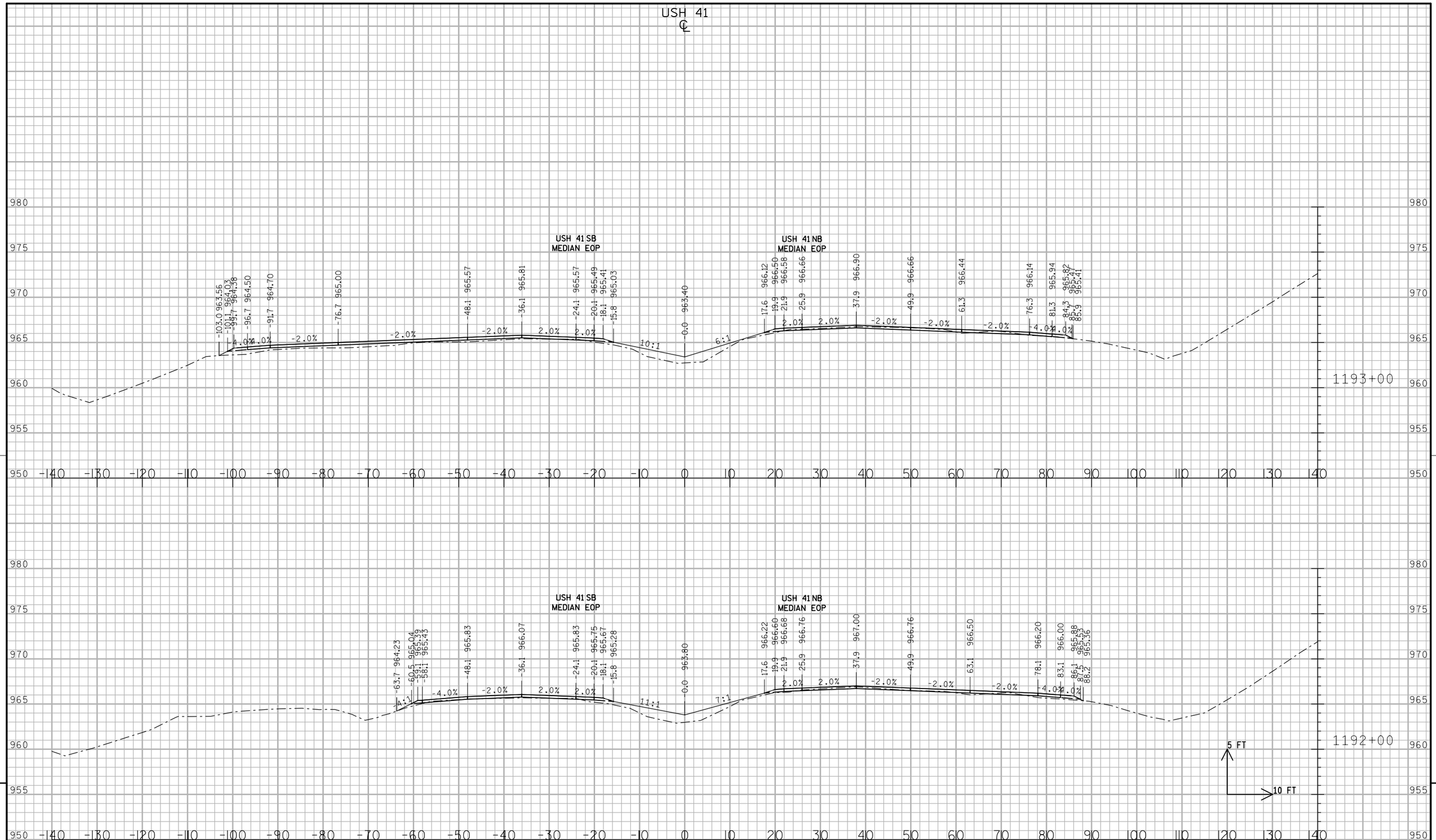
USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 298	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 299	E

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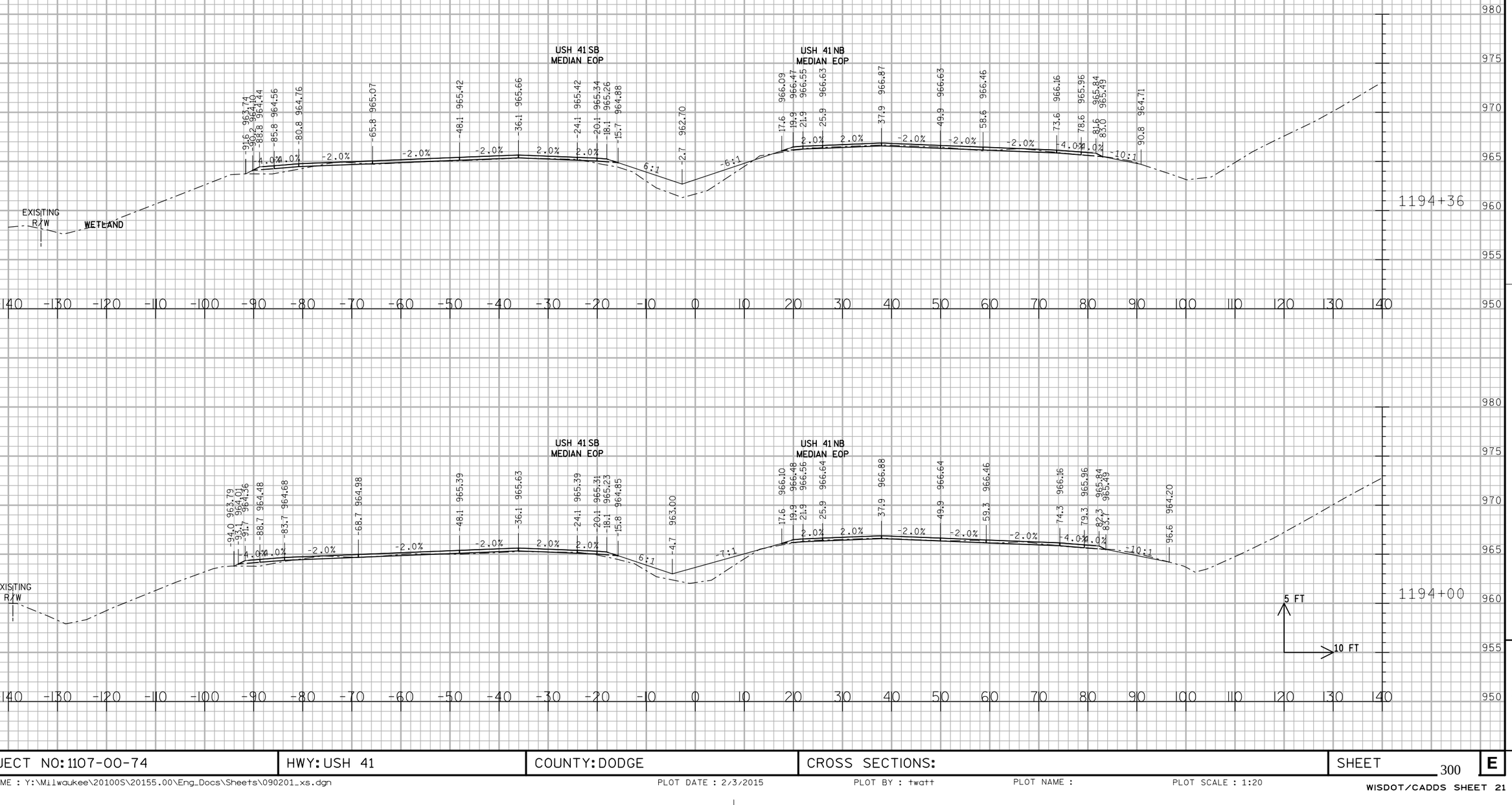
WISDOT/CADDS SHEET 21

USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 300	E

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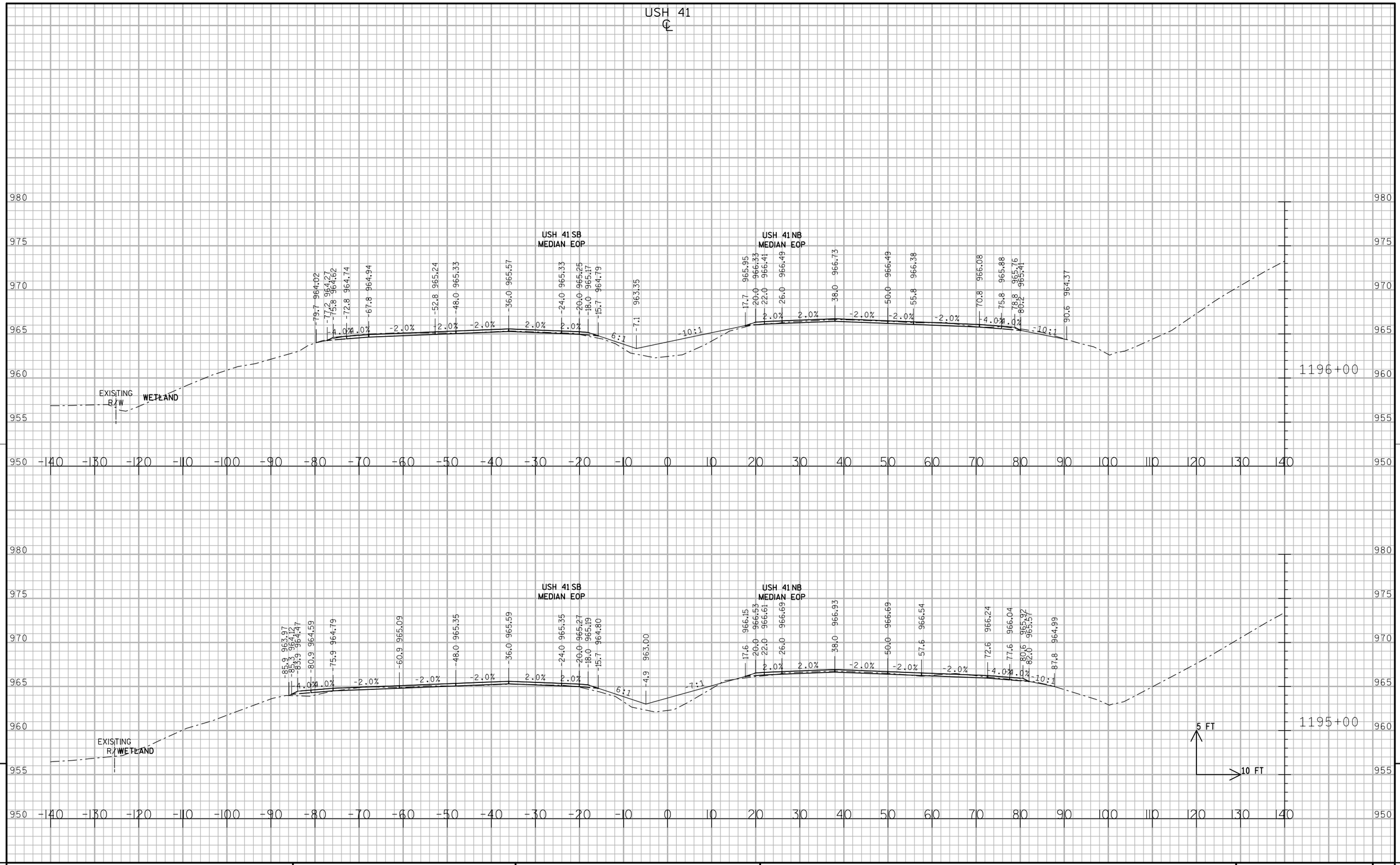
WISDOT/CADDS SHEET 21

USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 301	E

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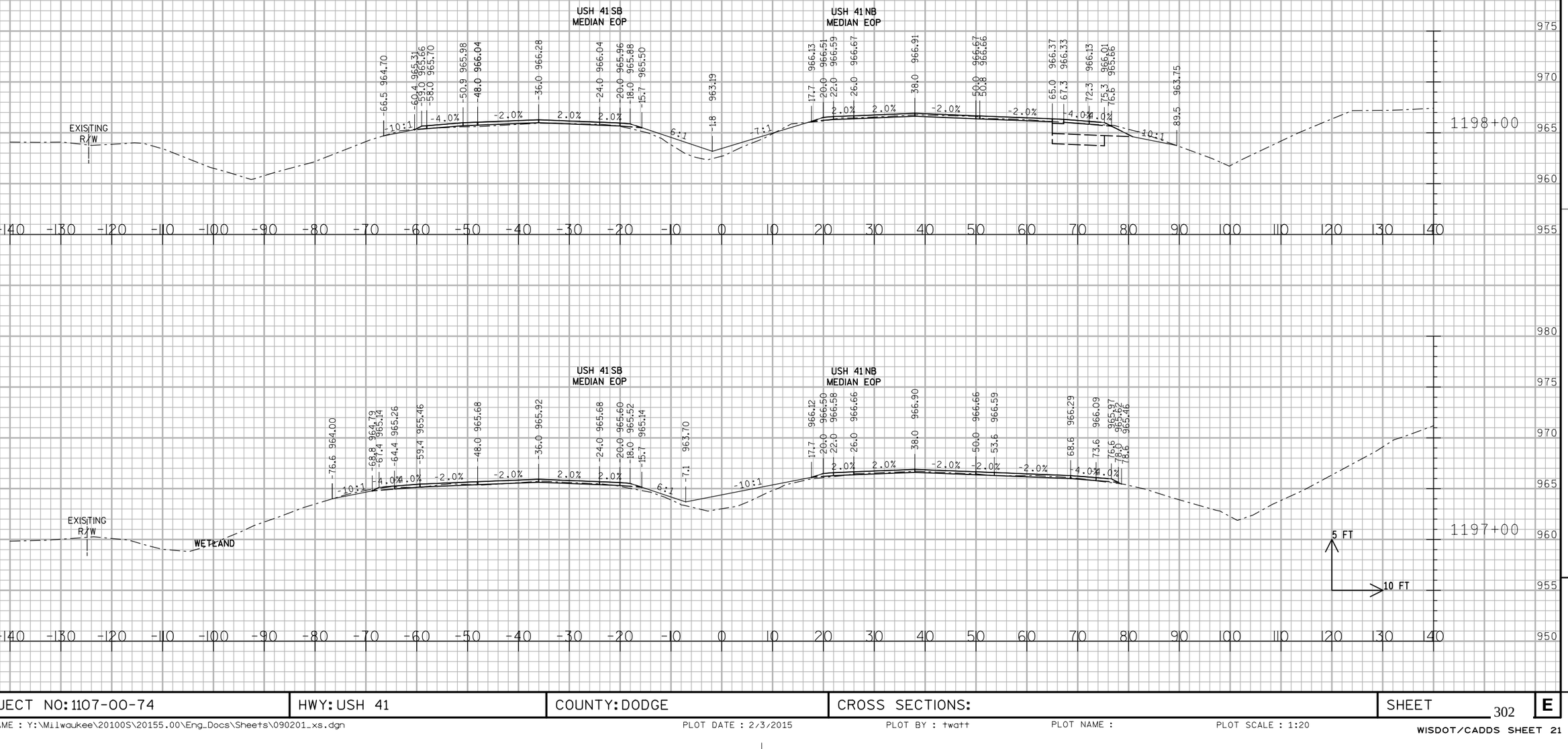
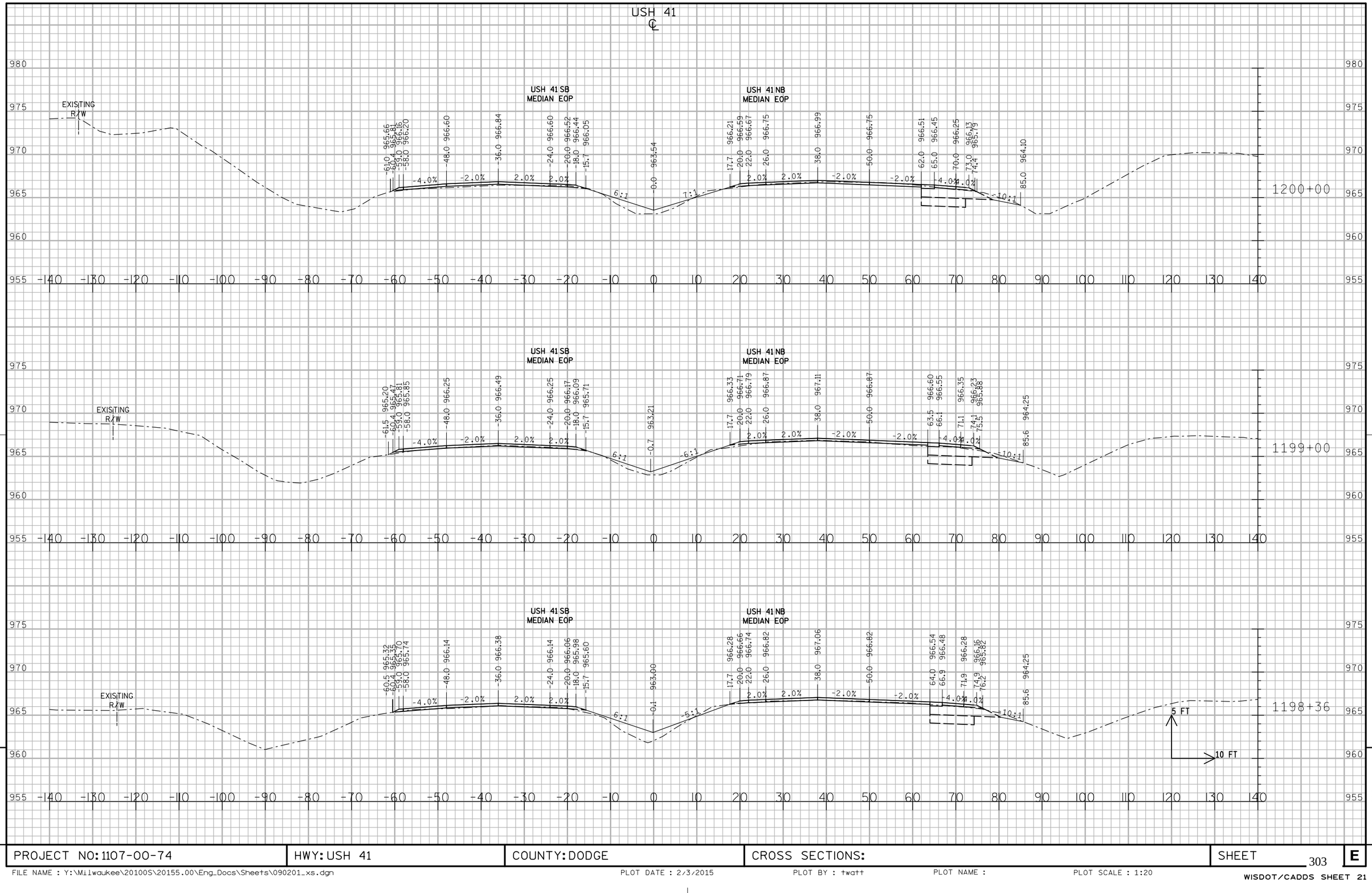
WISDOT/CADDS SHEET 21

USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 302	E



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 303	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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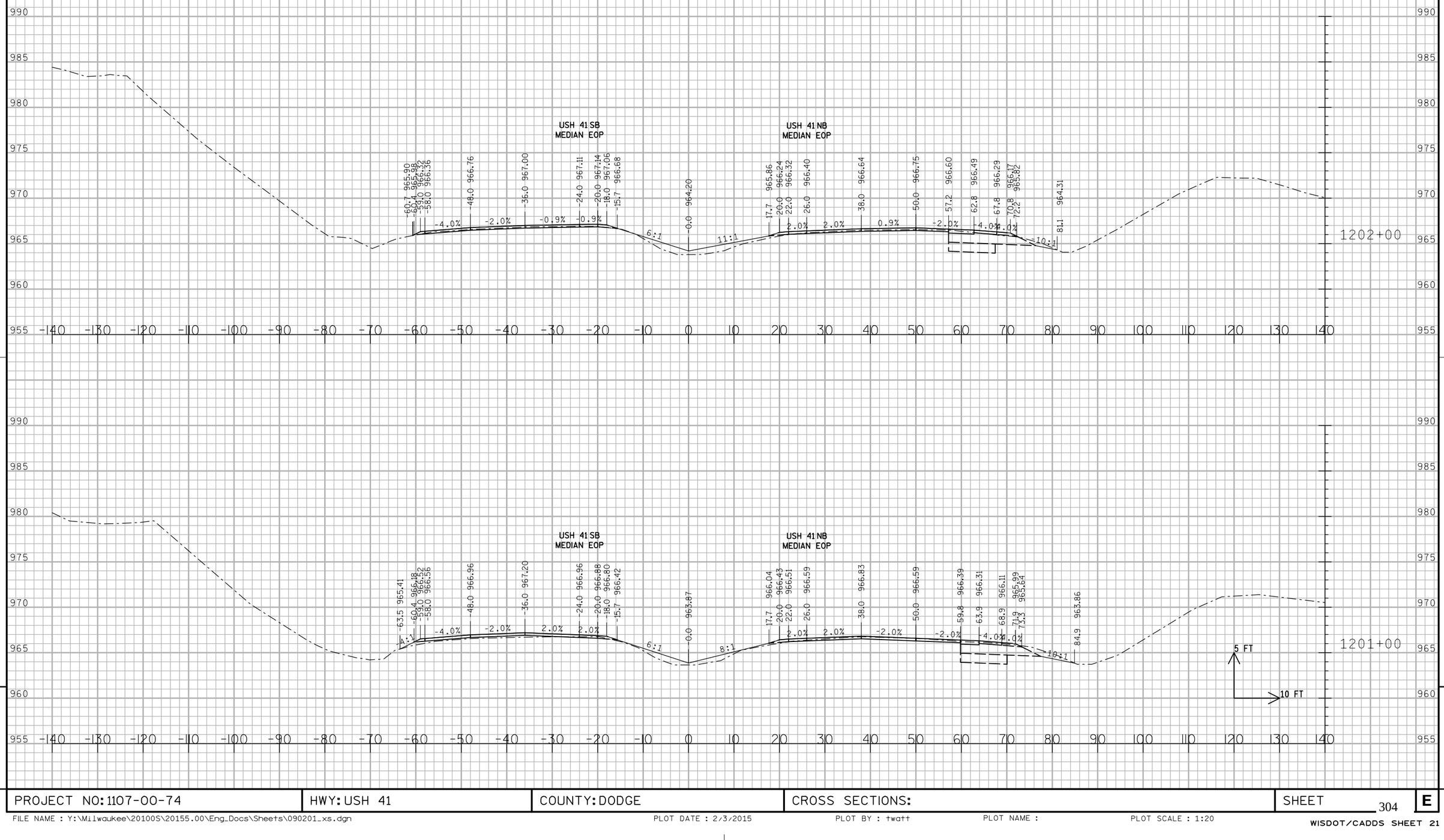

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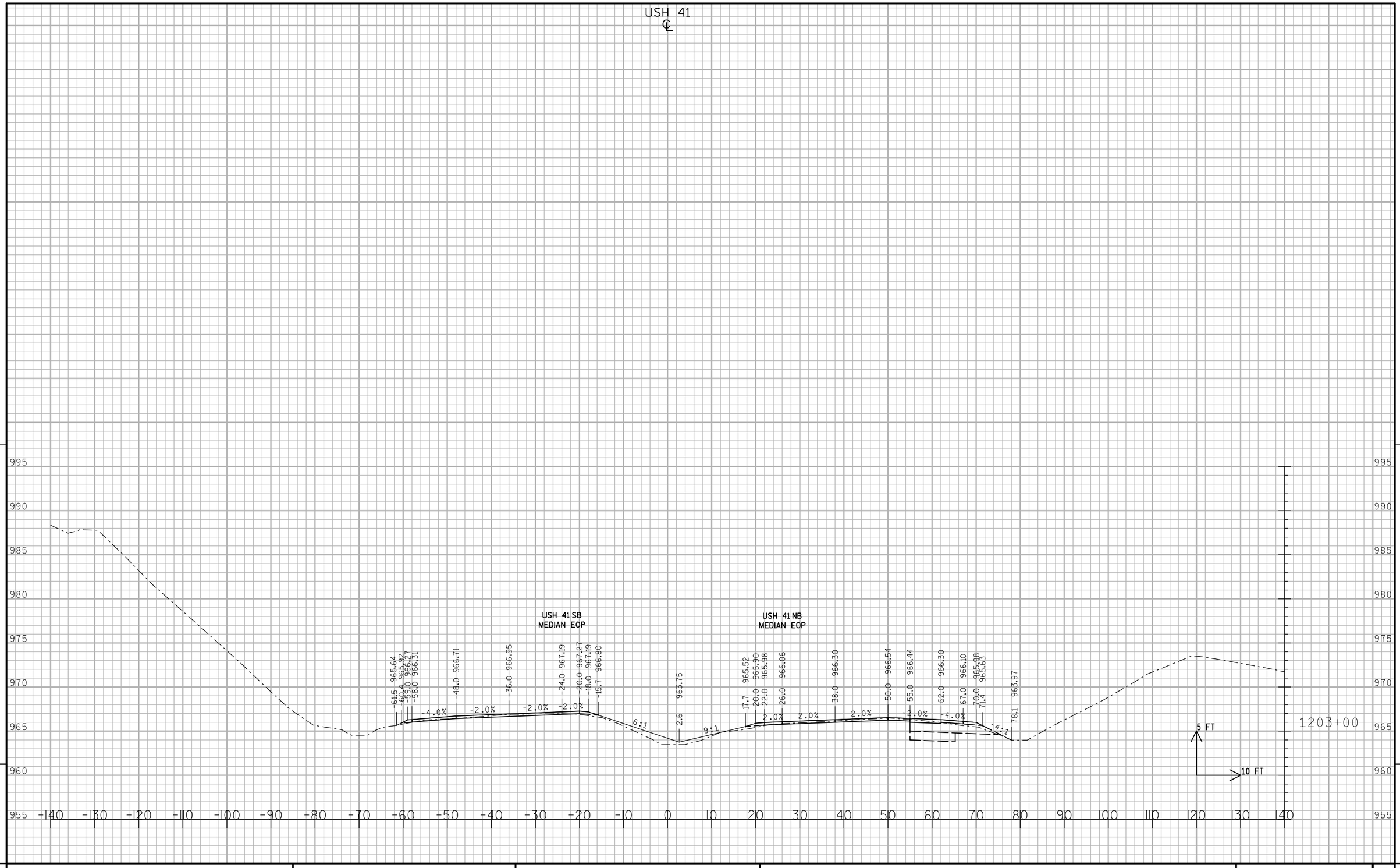
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 304	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 305	E

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WISDOT/CADDS SHEET 21

USH 41
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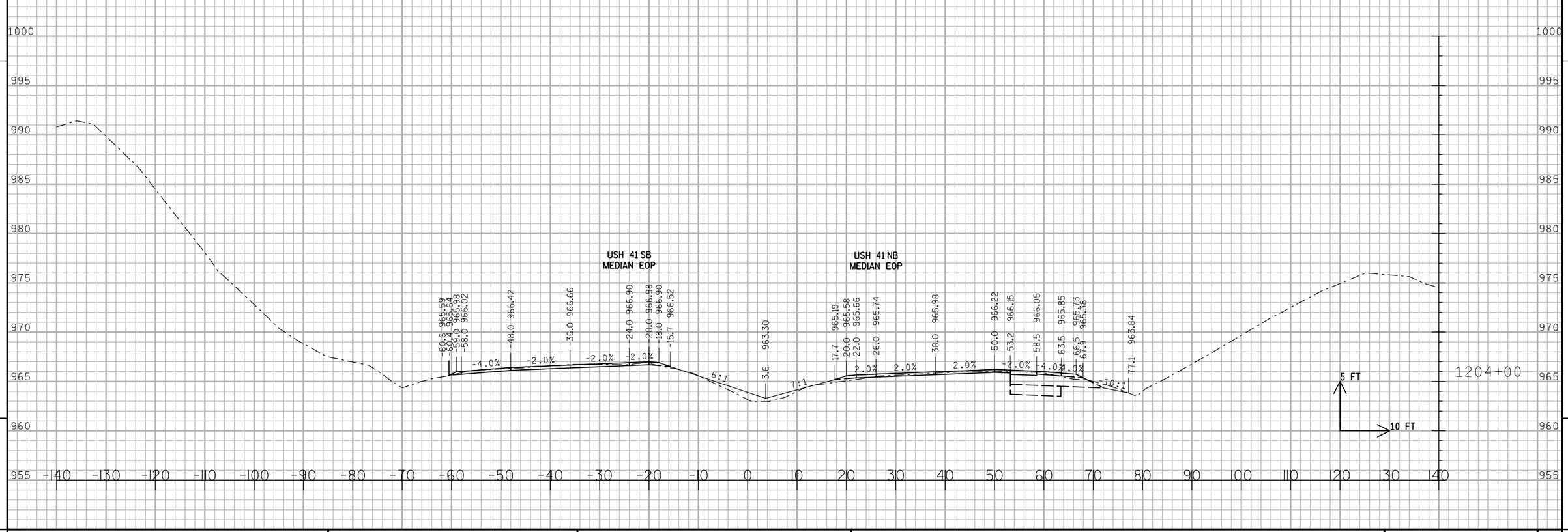

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 306	E

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WISDOT/CADDS SHEET 21

USH 41
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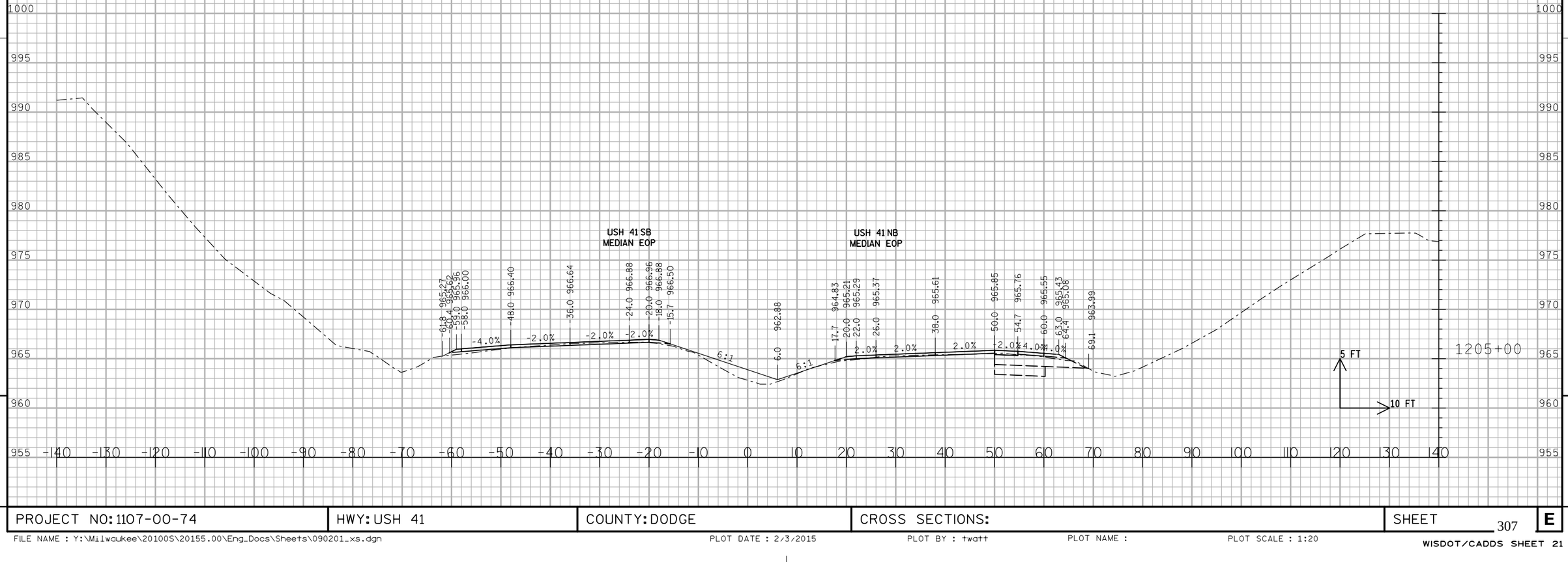

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 307	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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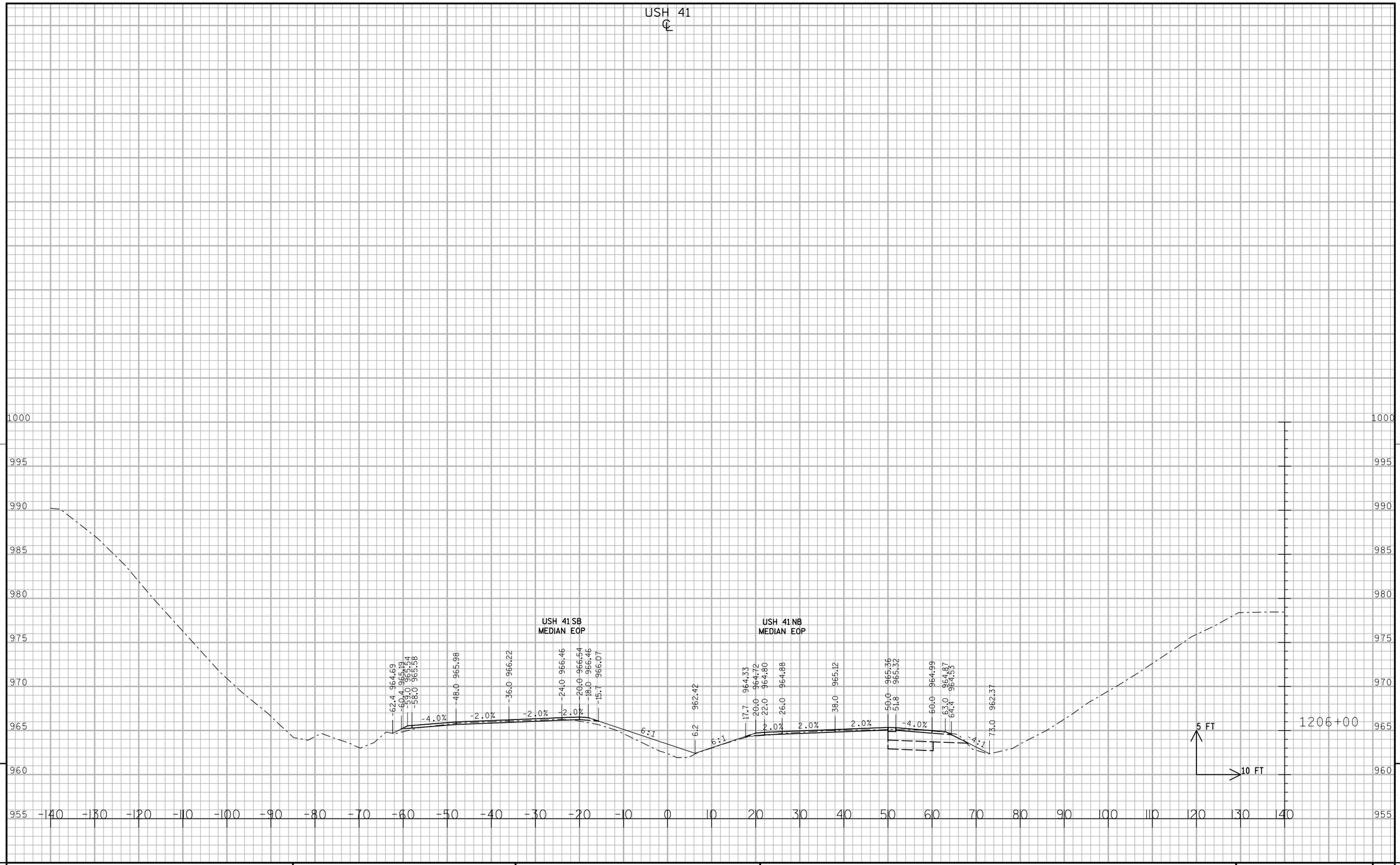

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 308	E

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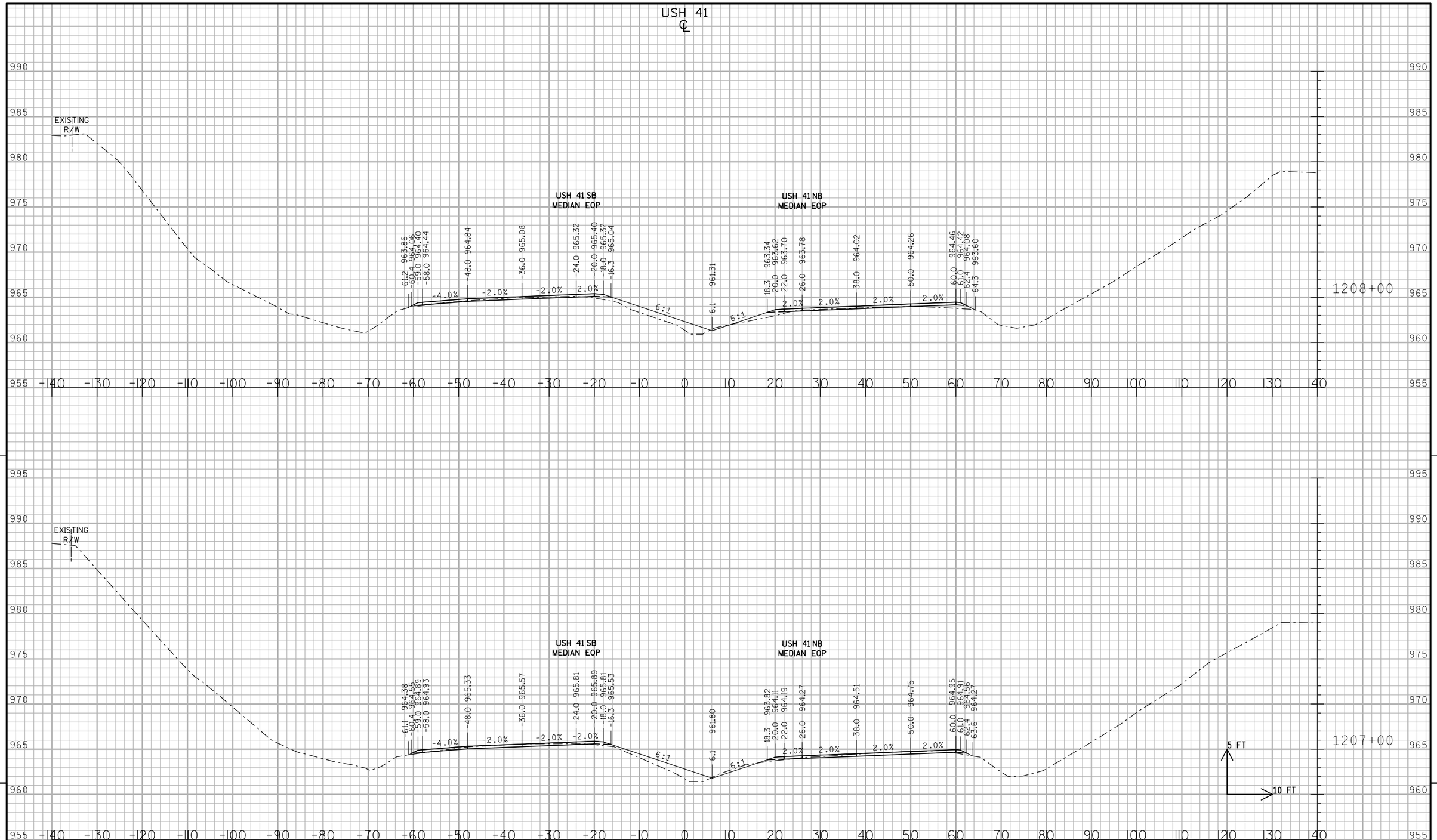
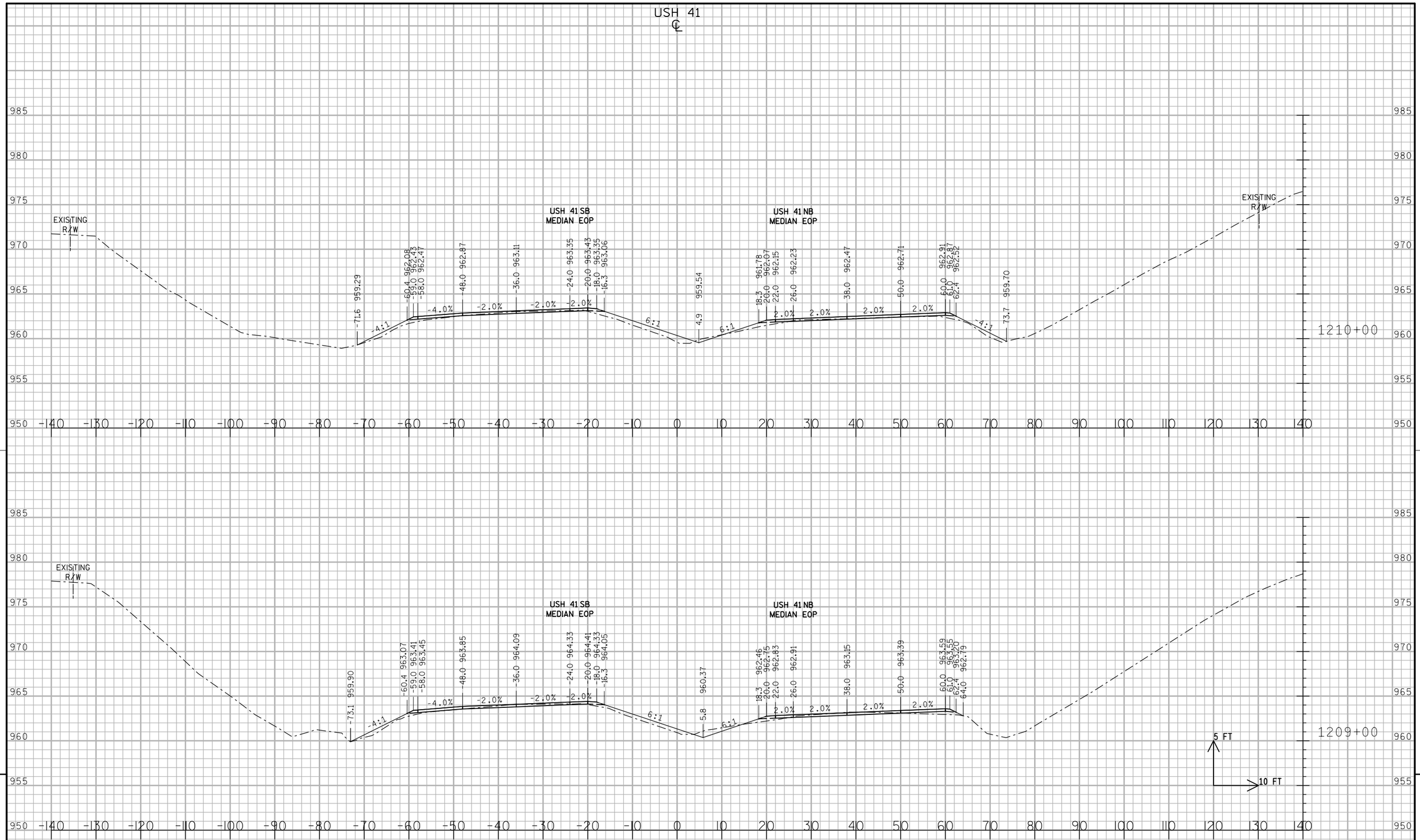
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 309	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 310	E

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WISDOT/CADDS SHEET 21

USH 41
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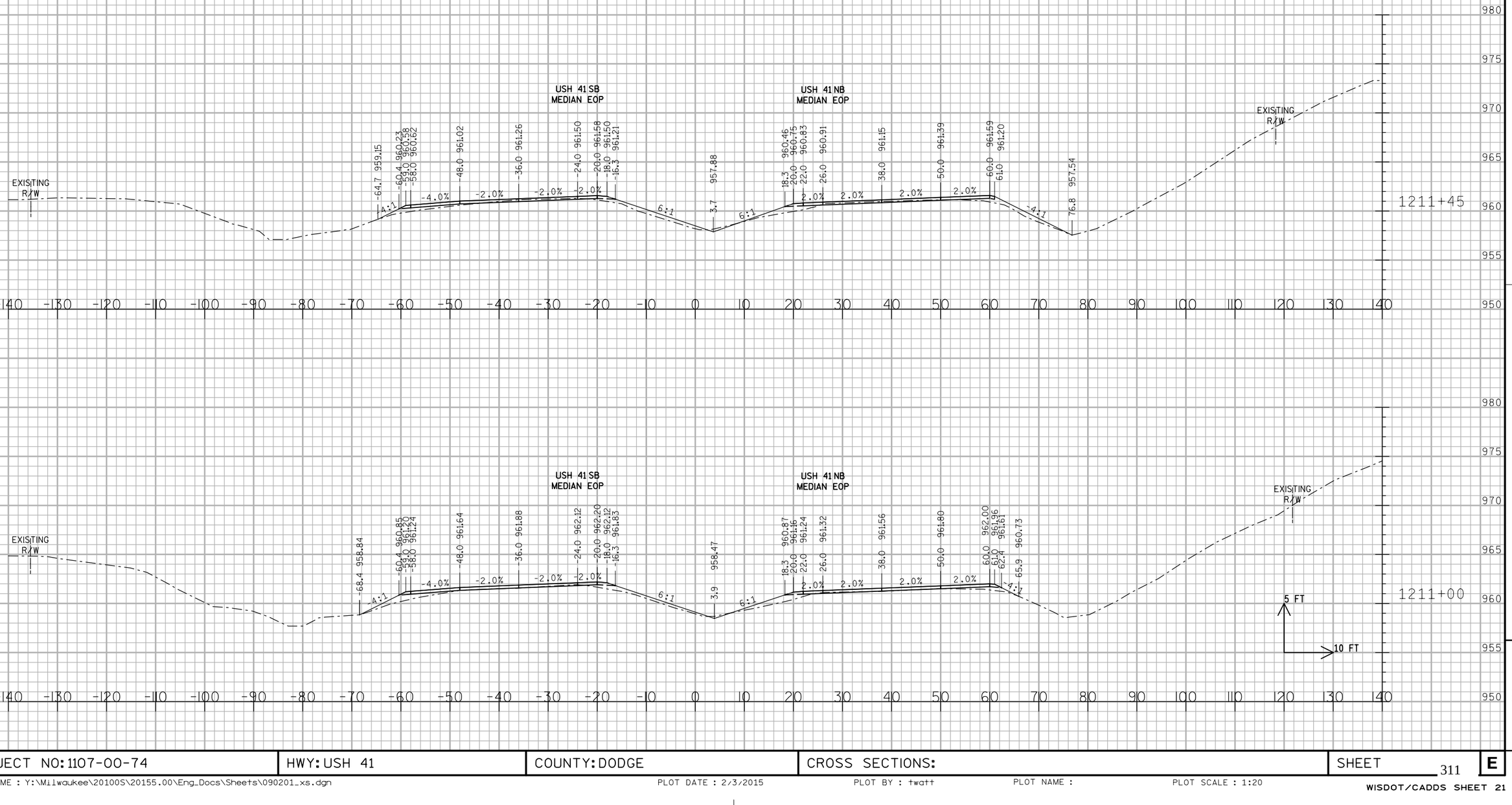

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 311	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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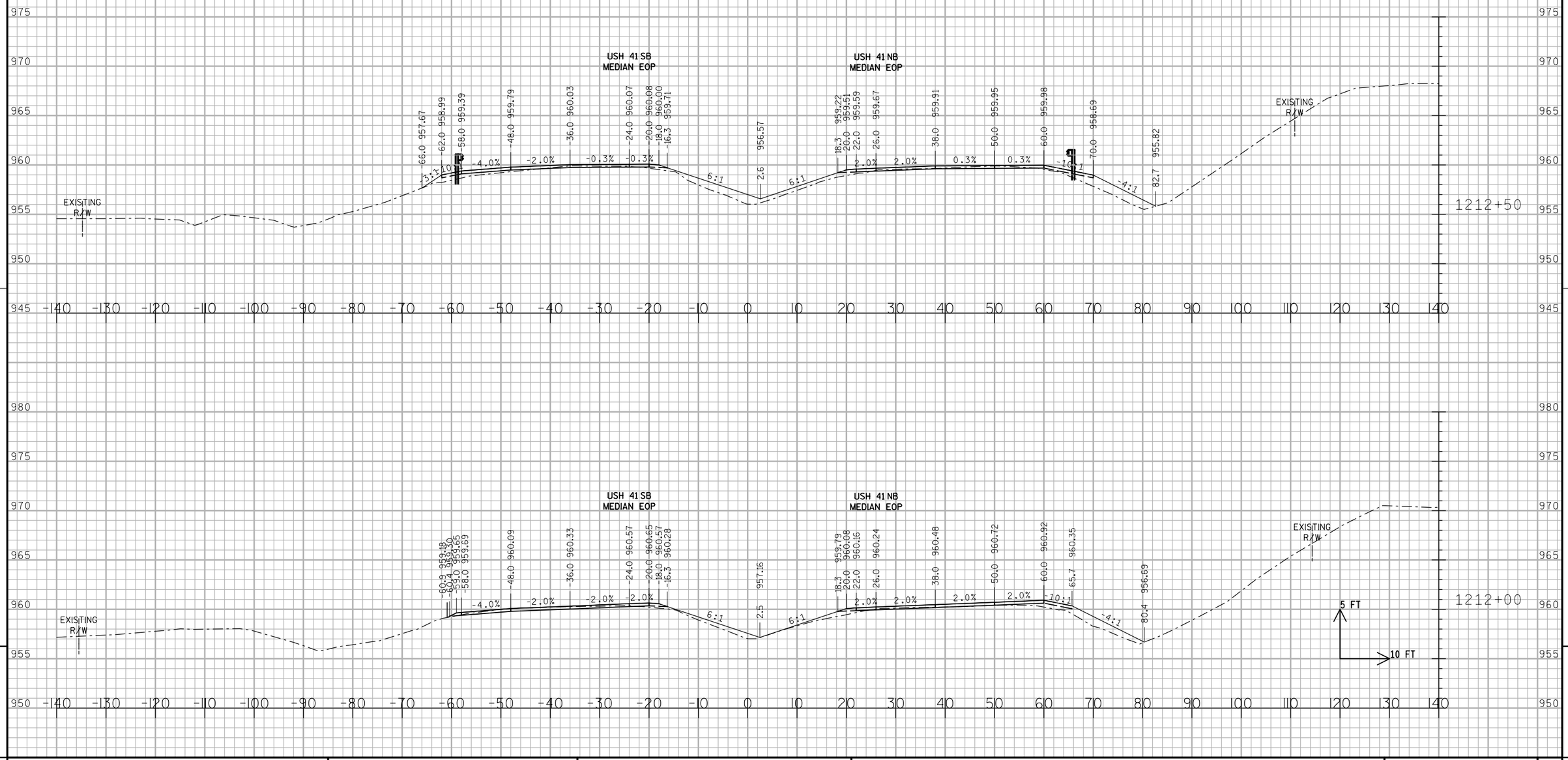

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 312	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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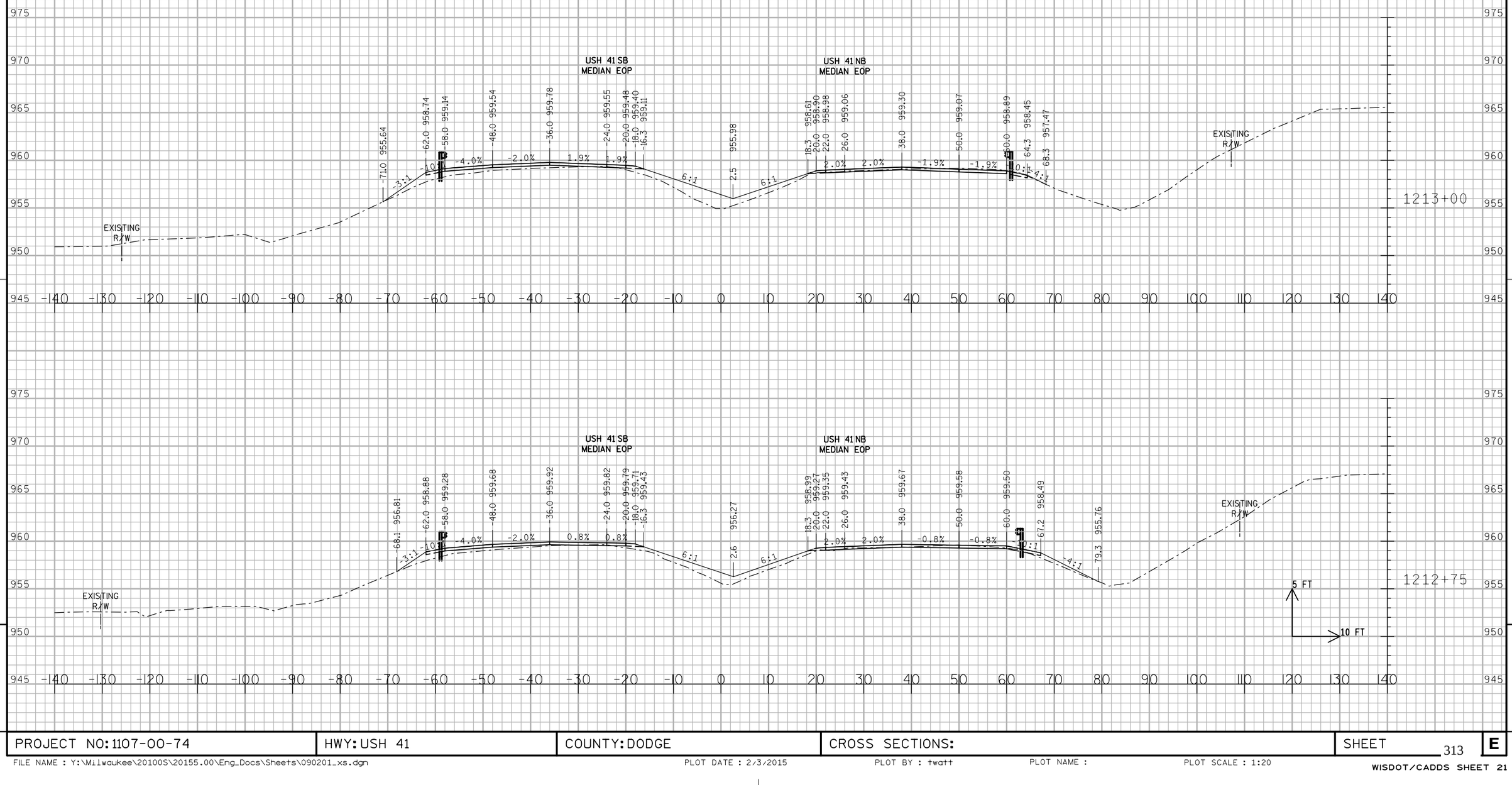

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 313	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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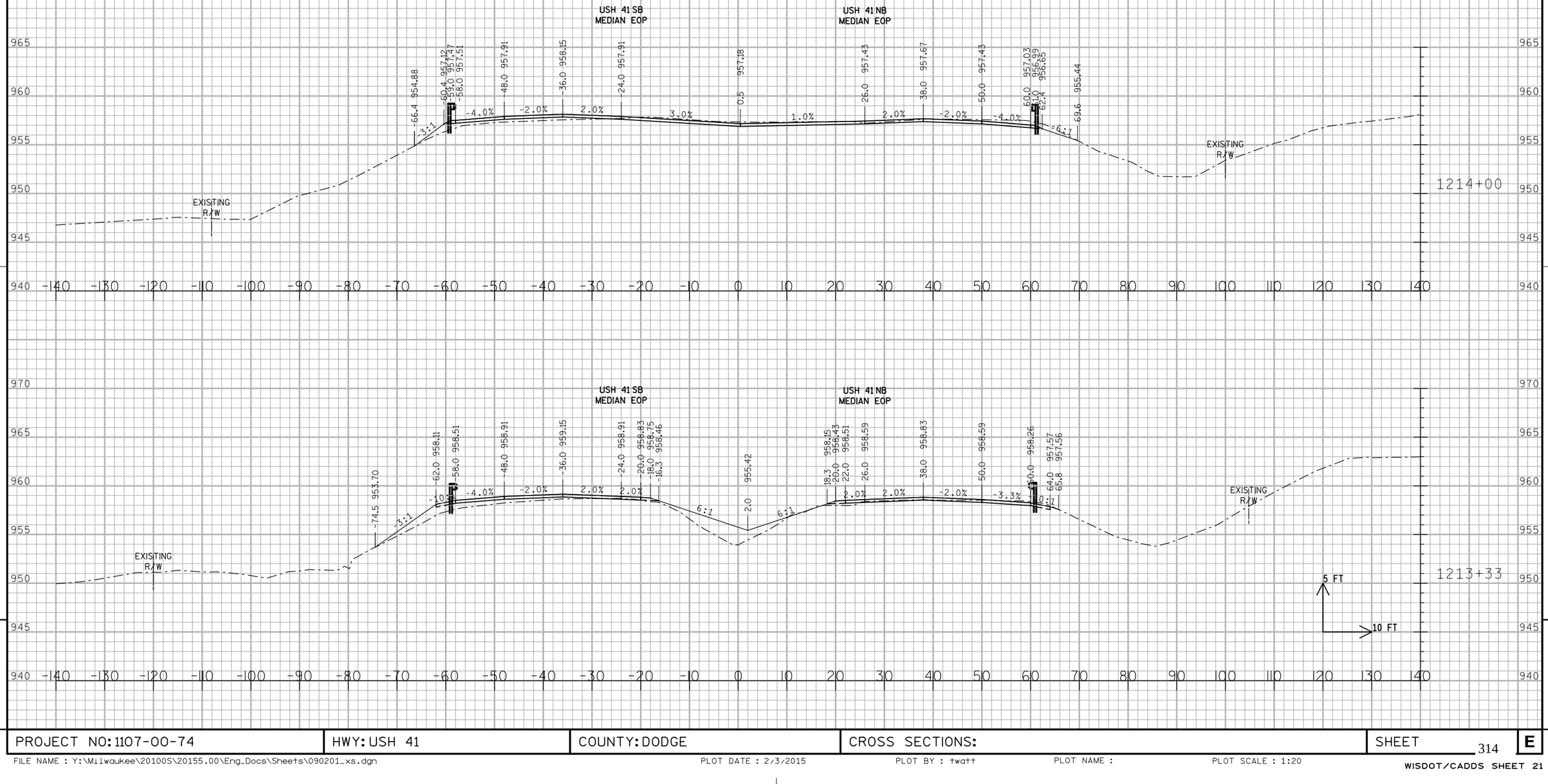

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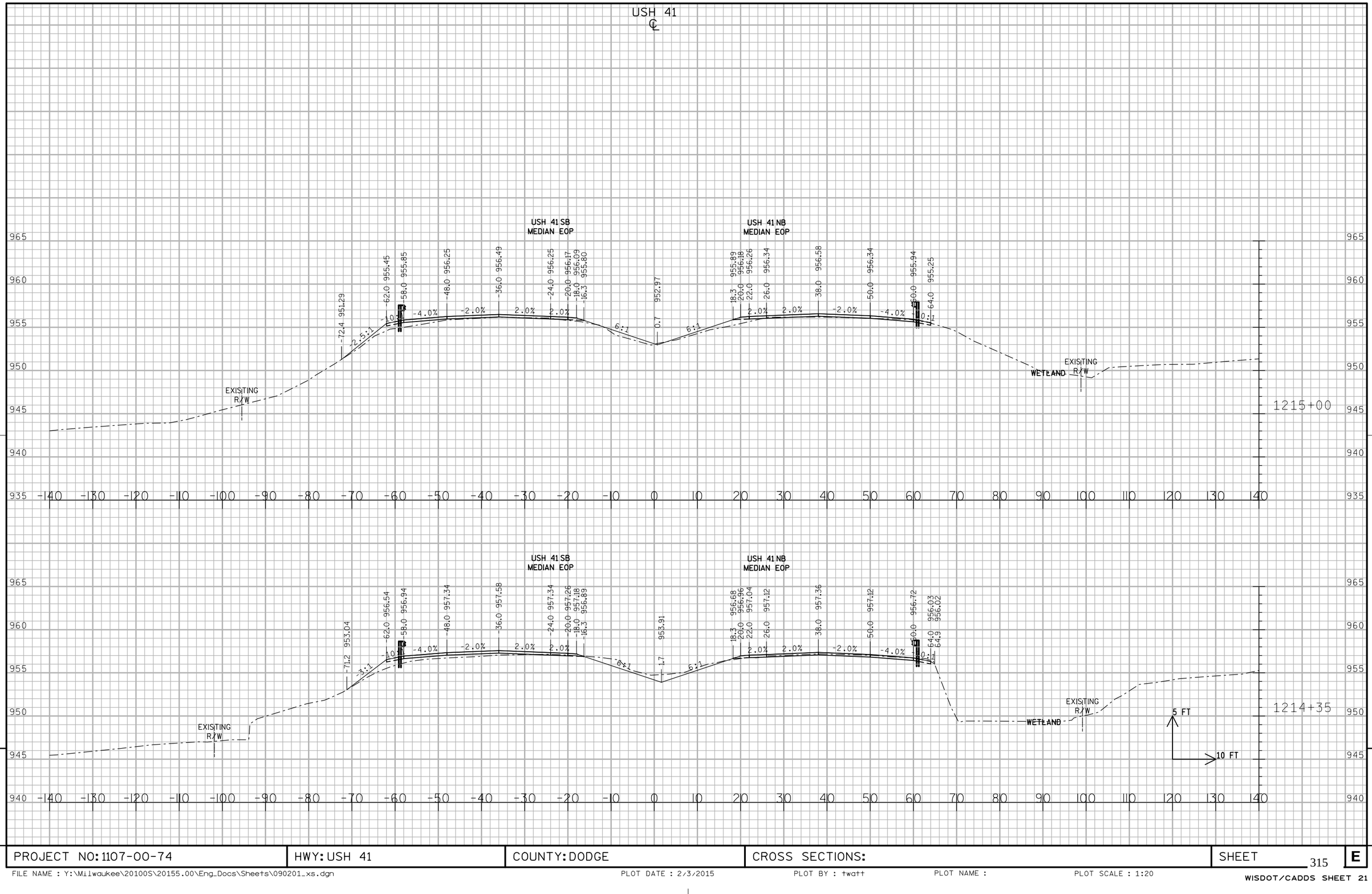
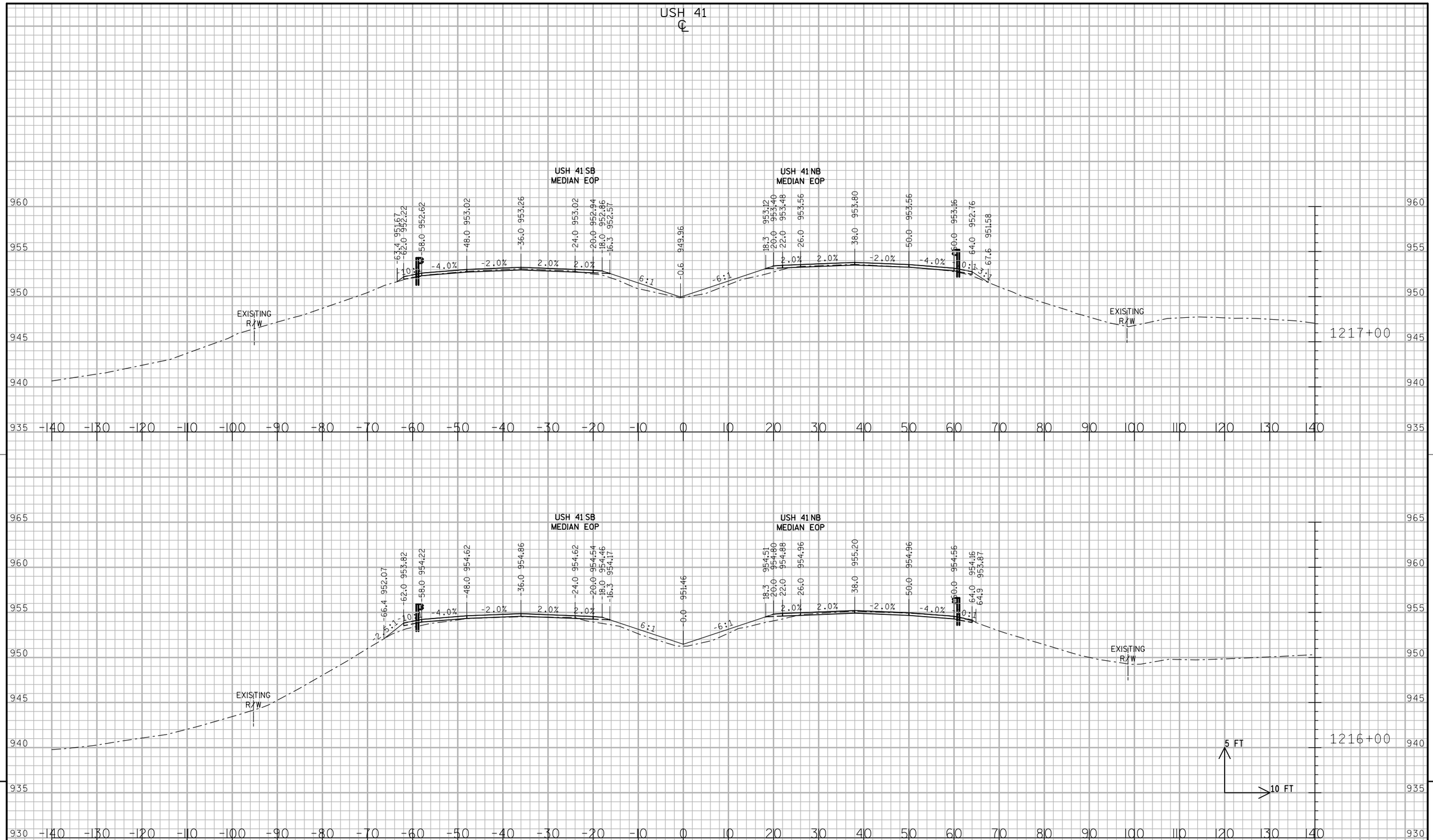
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 314	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



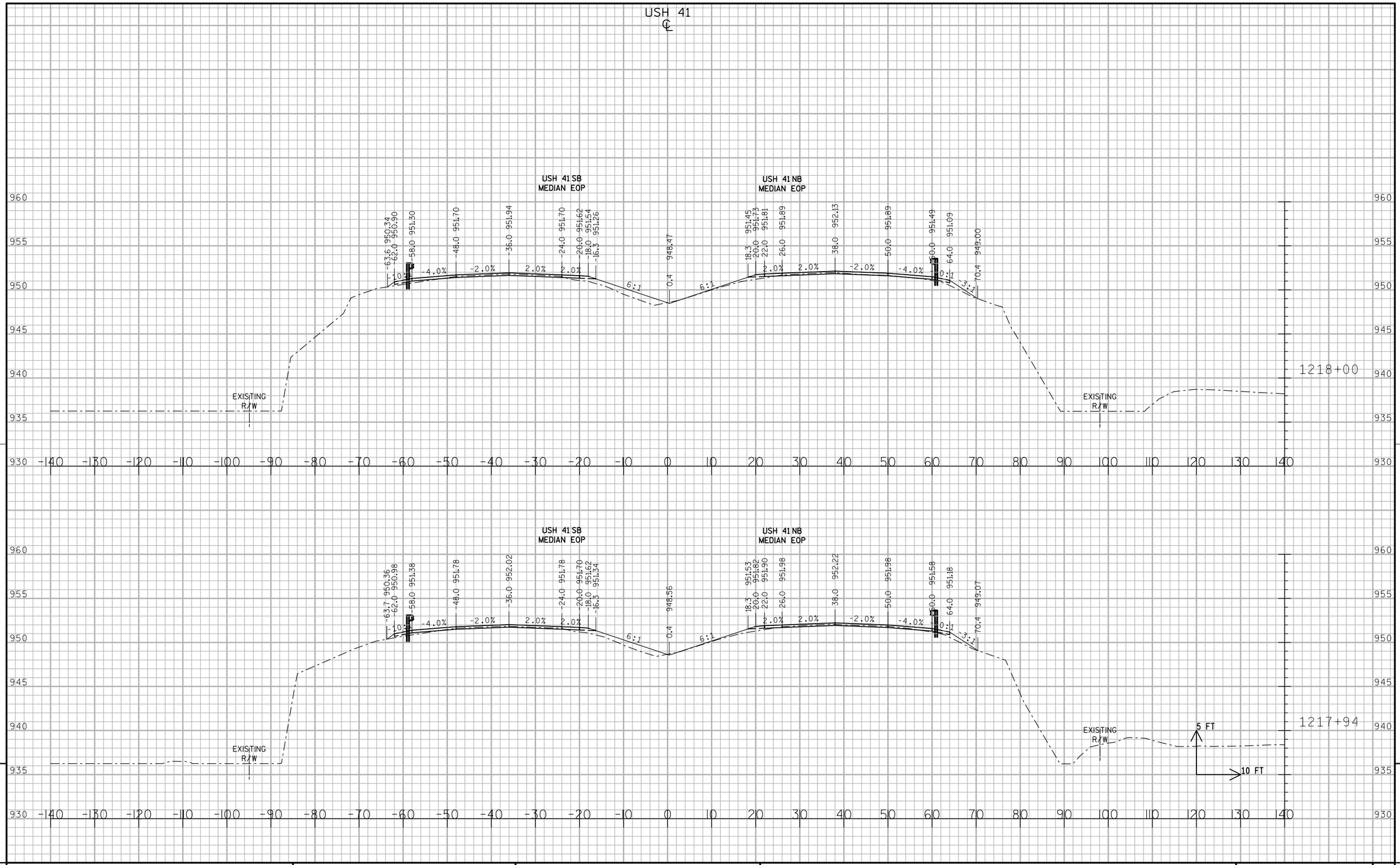
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 315	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 316	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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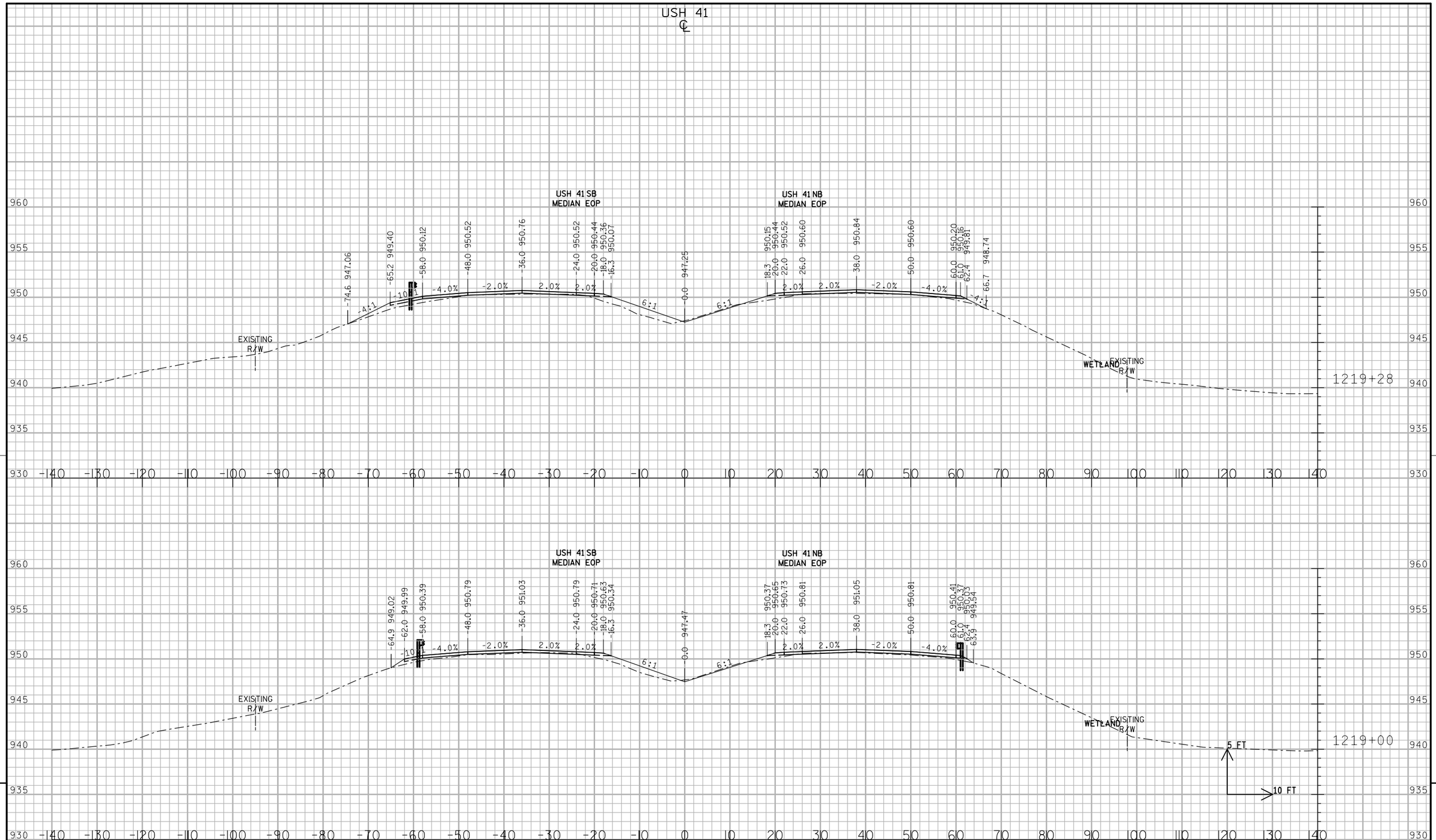
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 317	E

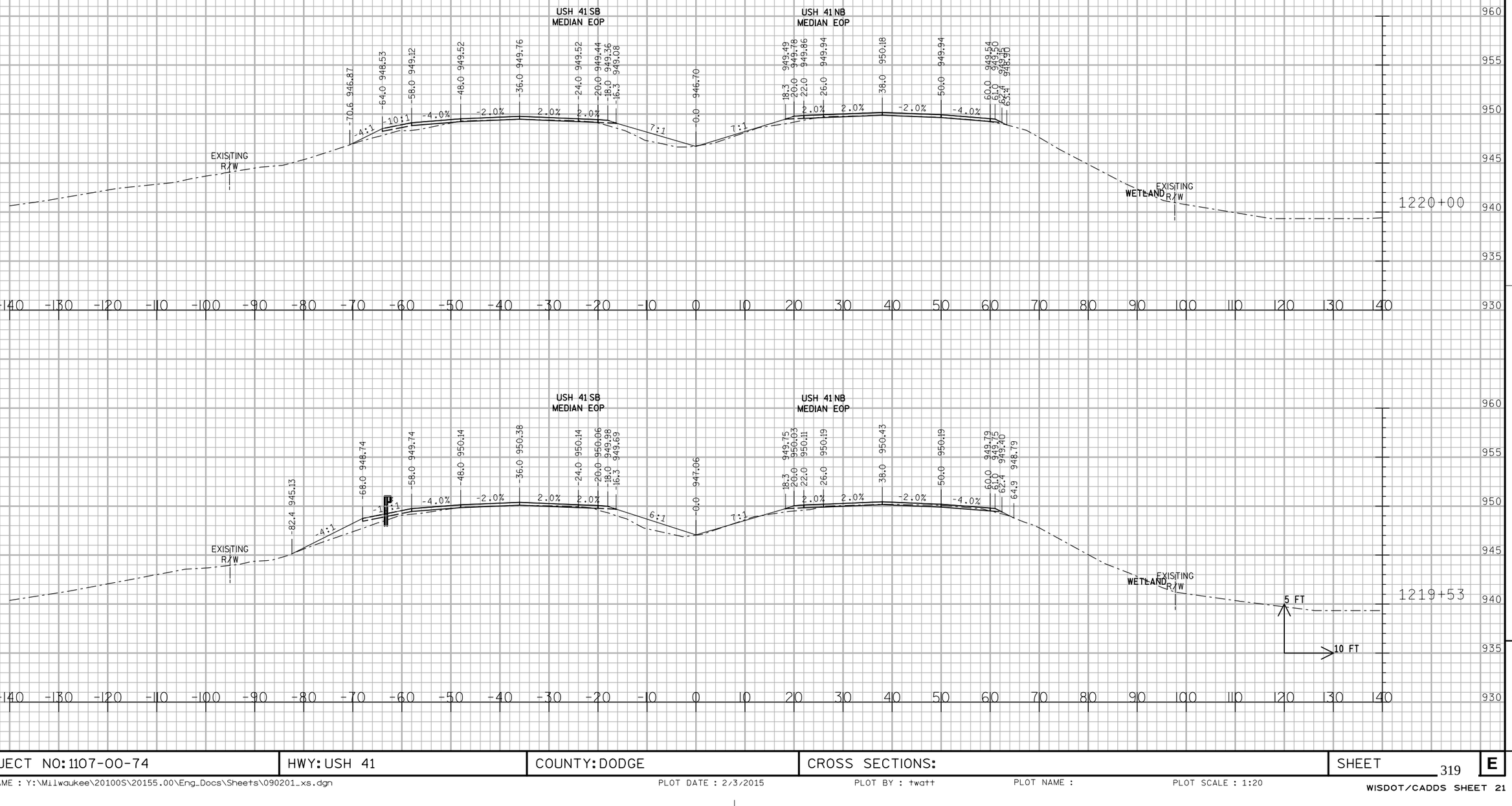


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 318	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 319	E

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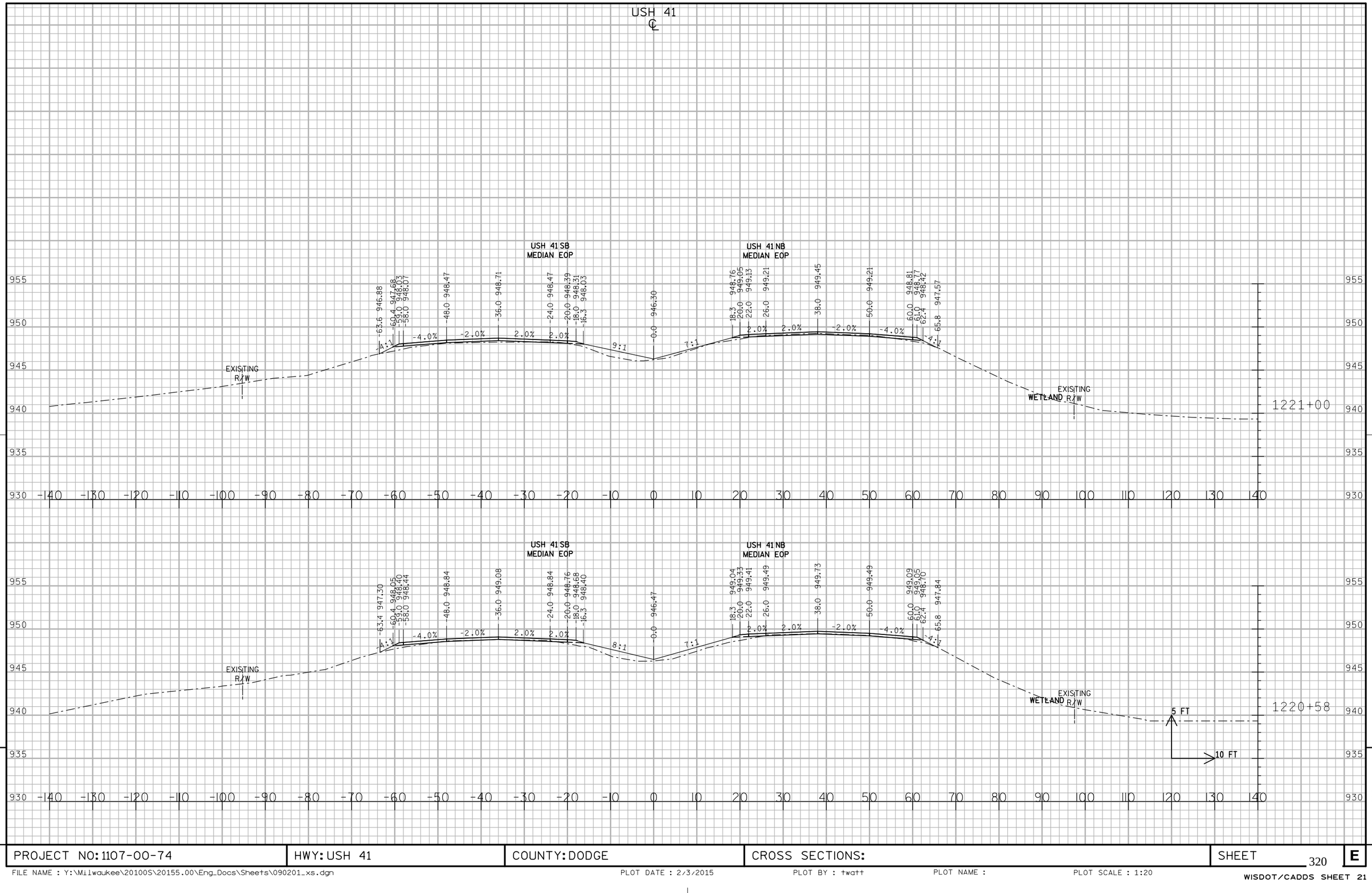

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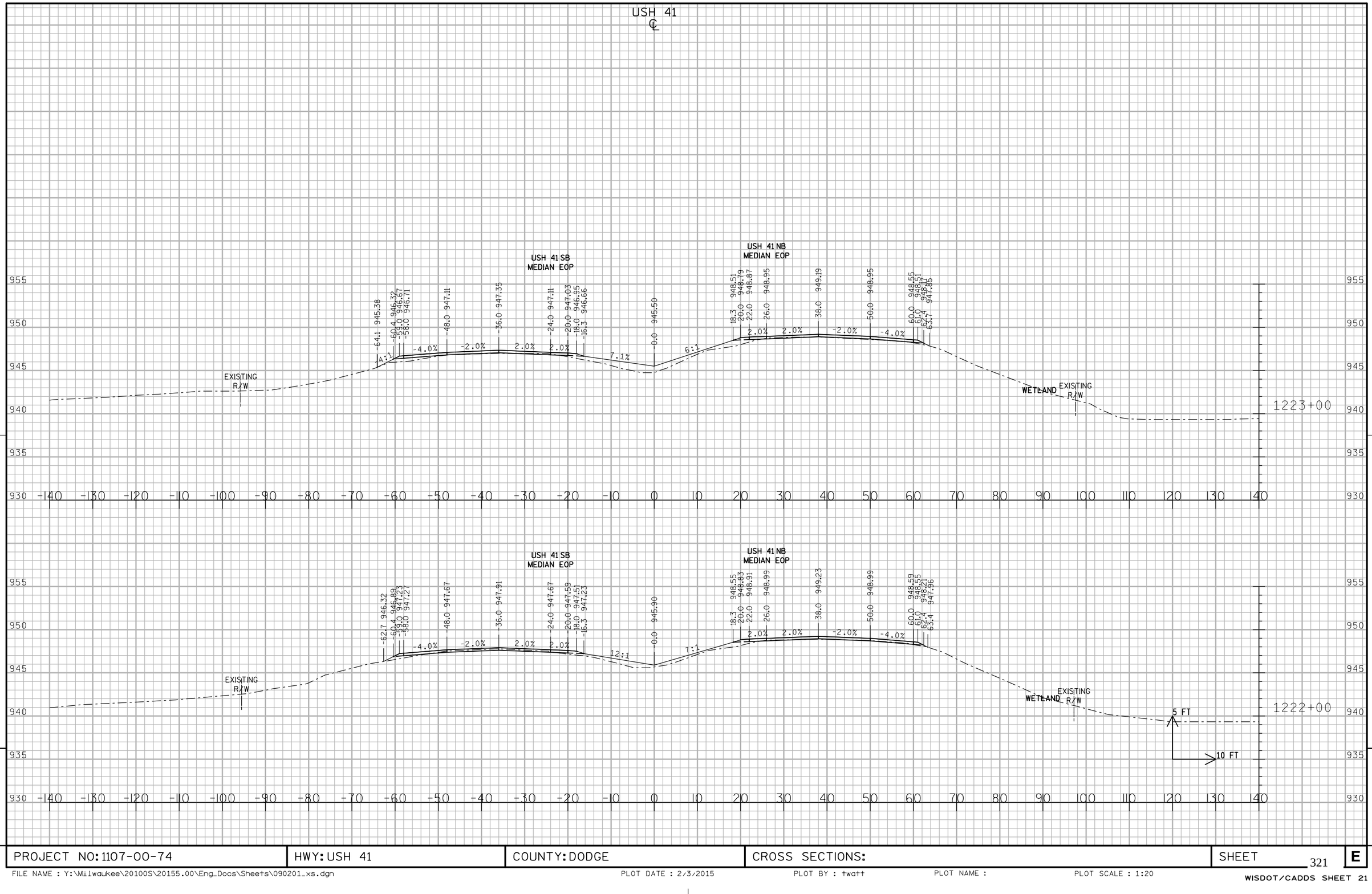
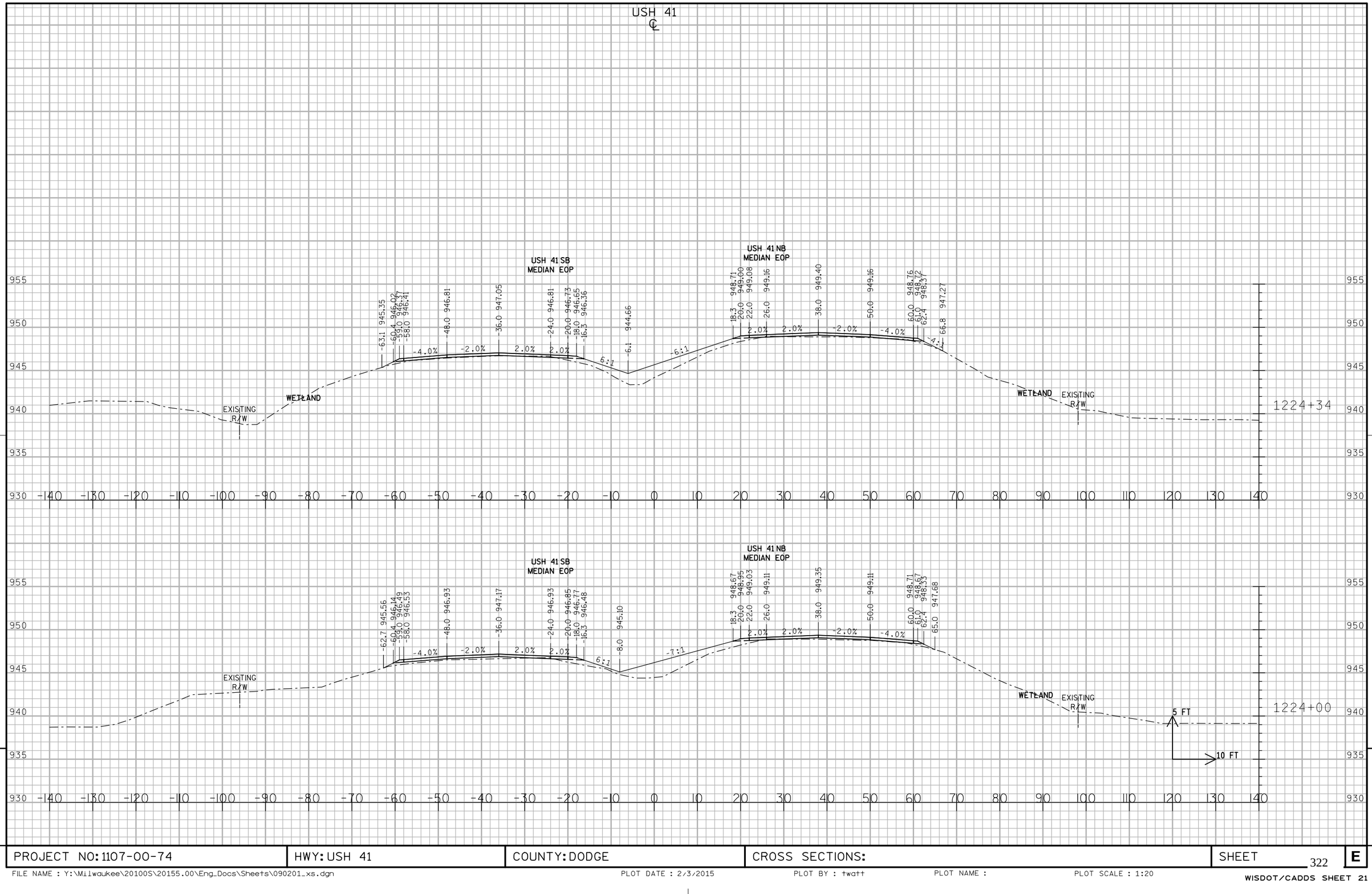
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 320	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 321	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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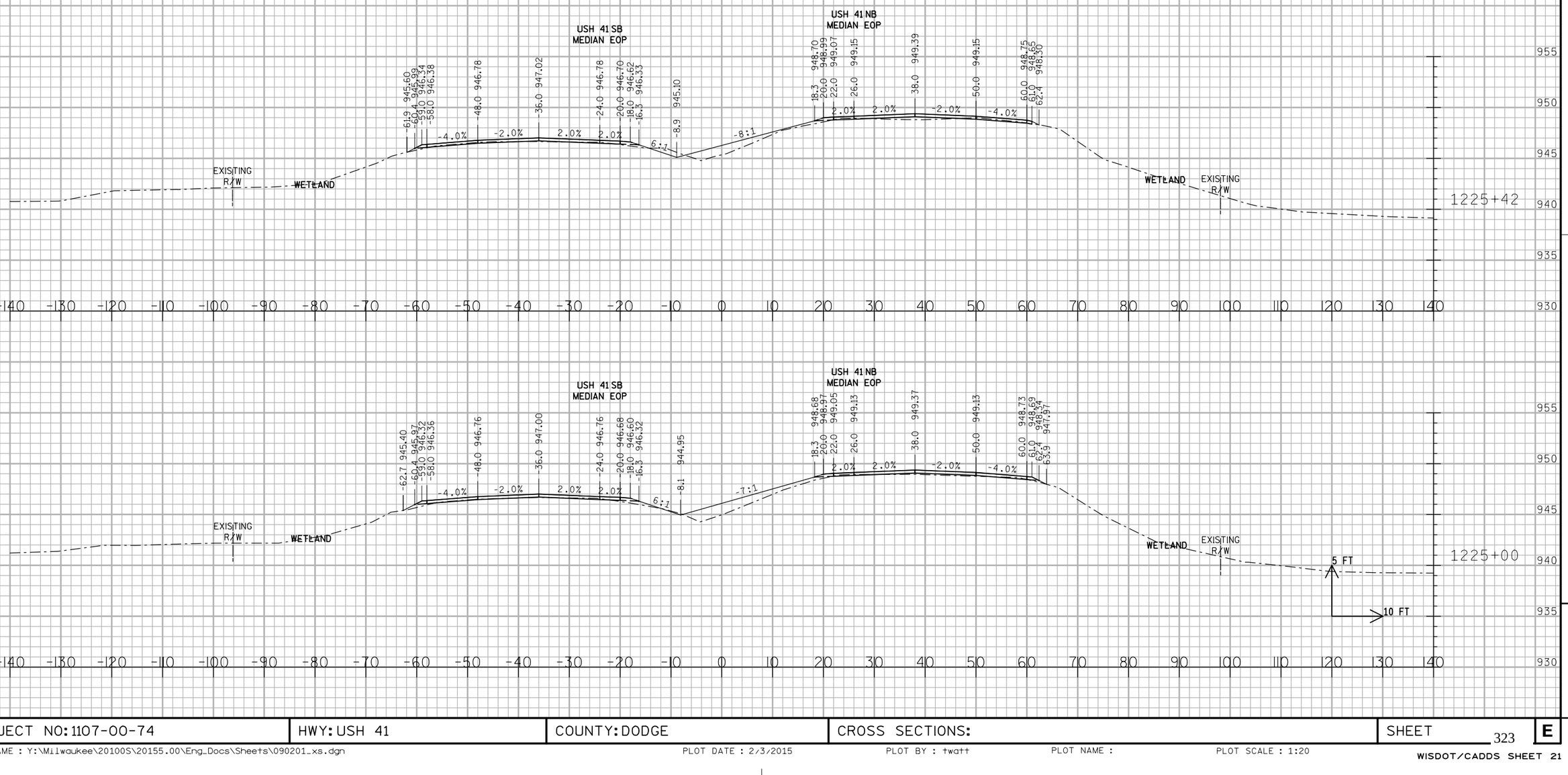
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 322	E

USH 41
℄



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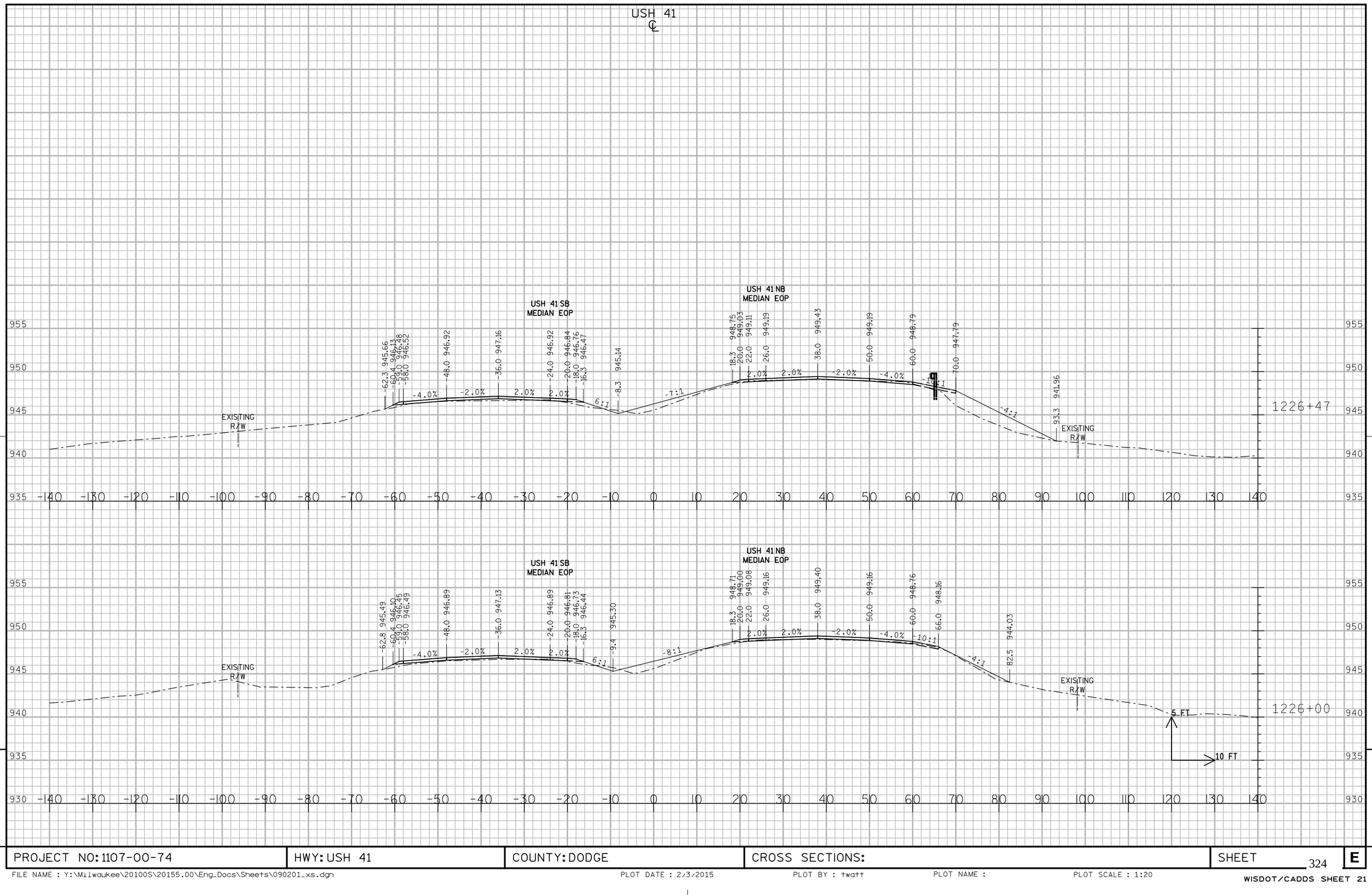
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 323	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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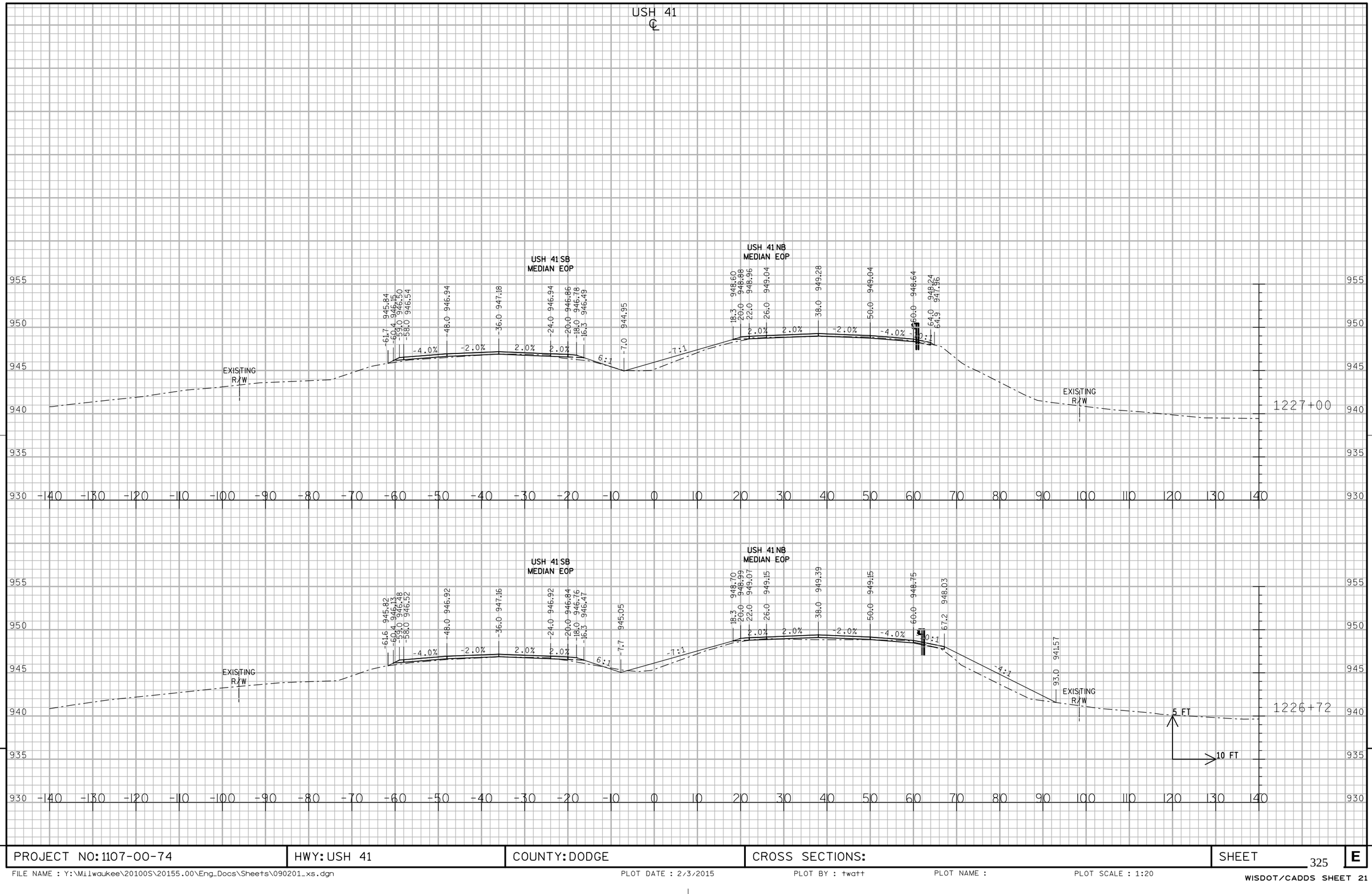
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 324	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

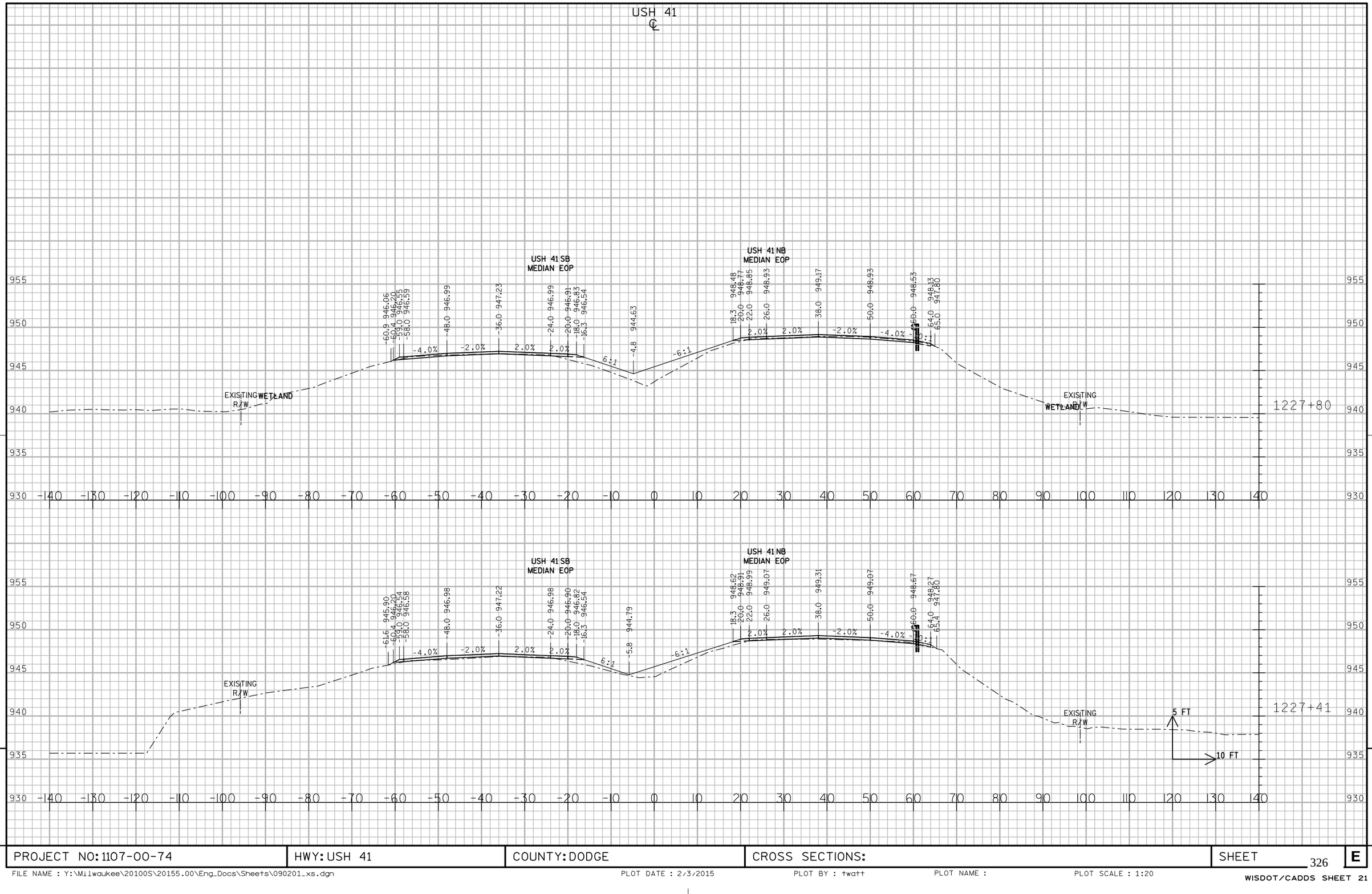
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 325	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

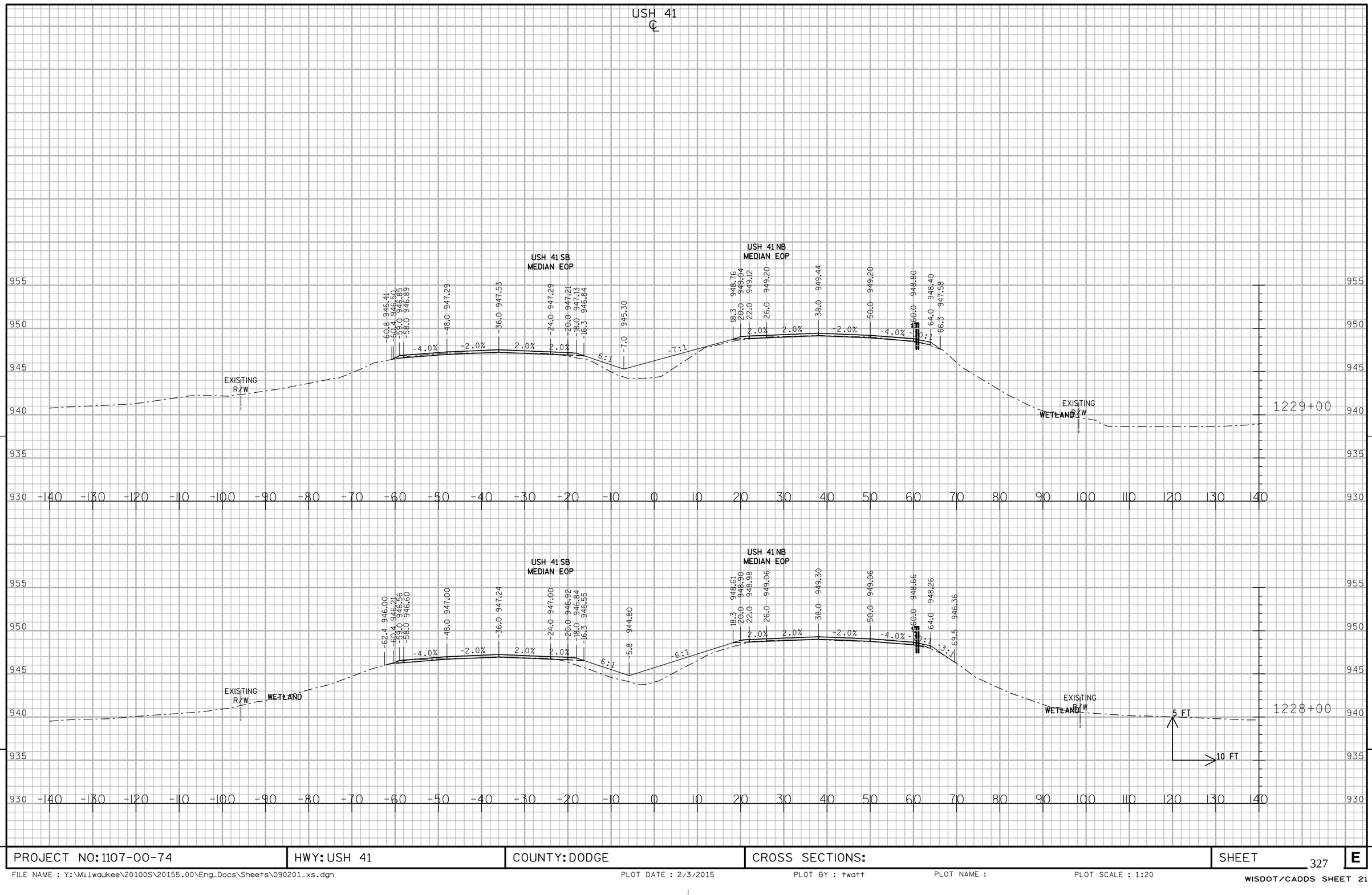
WISDOT/CADDS SHEET 21



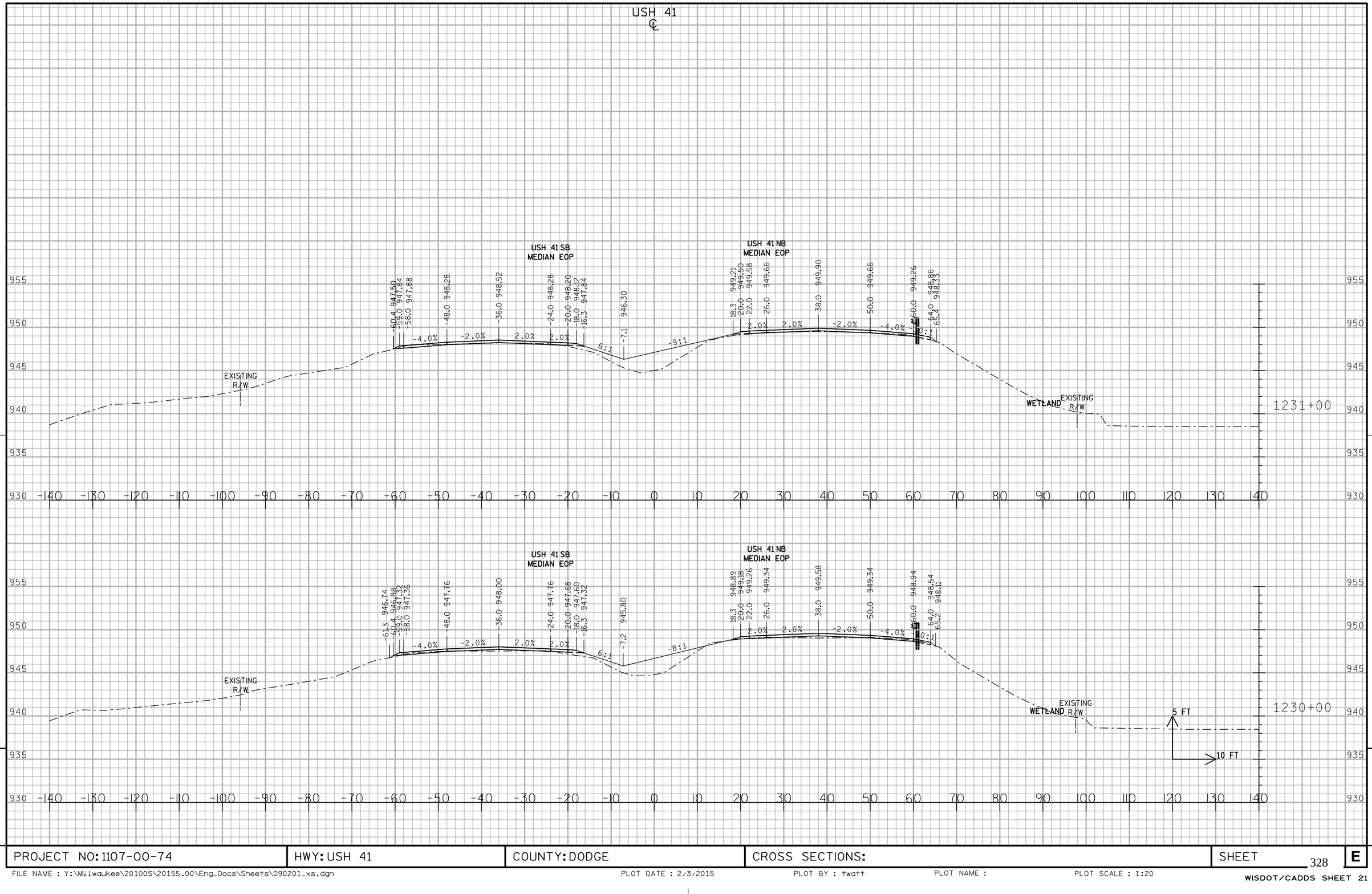
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



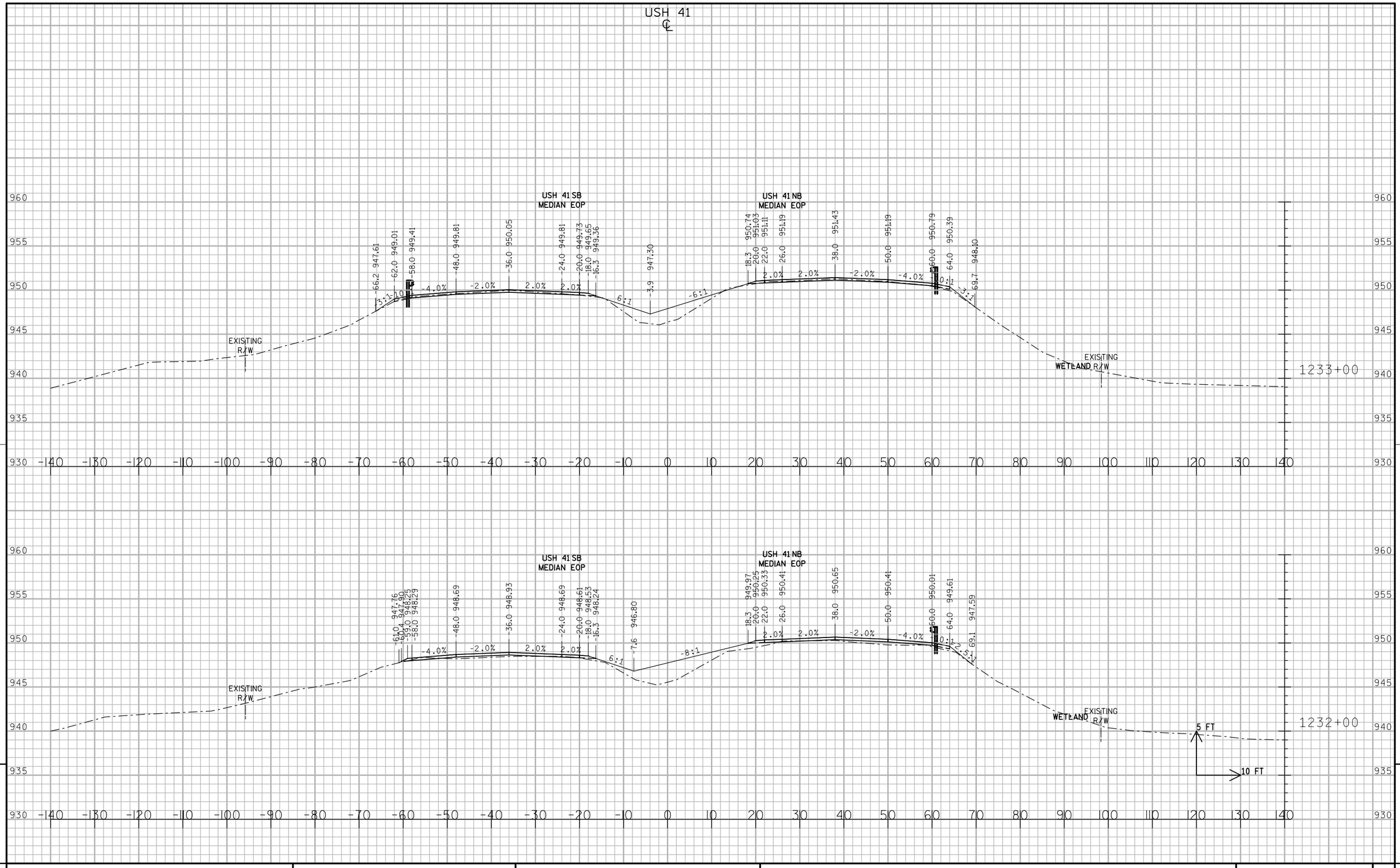
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 327	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 328	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

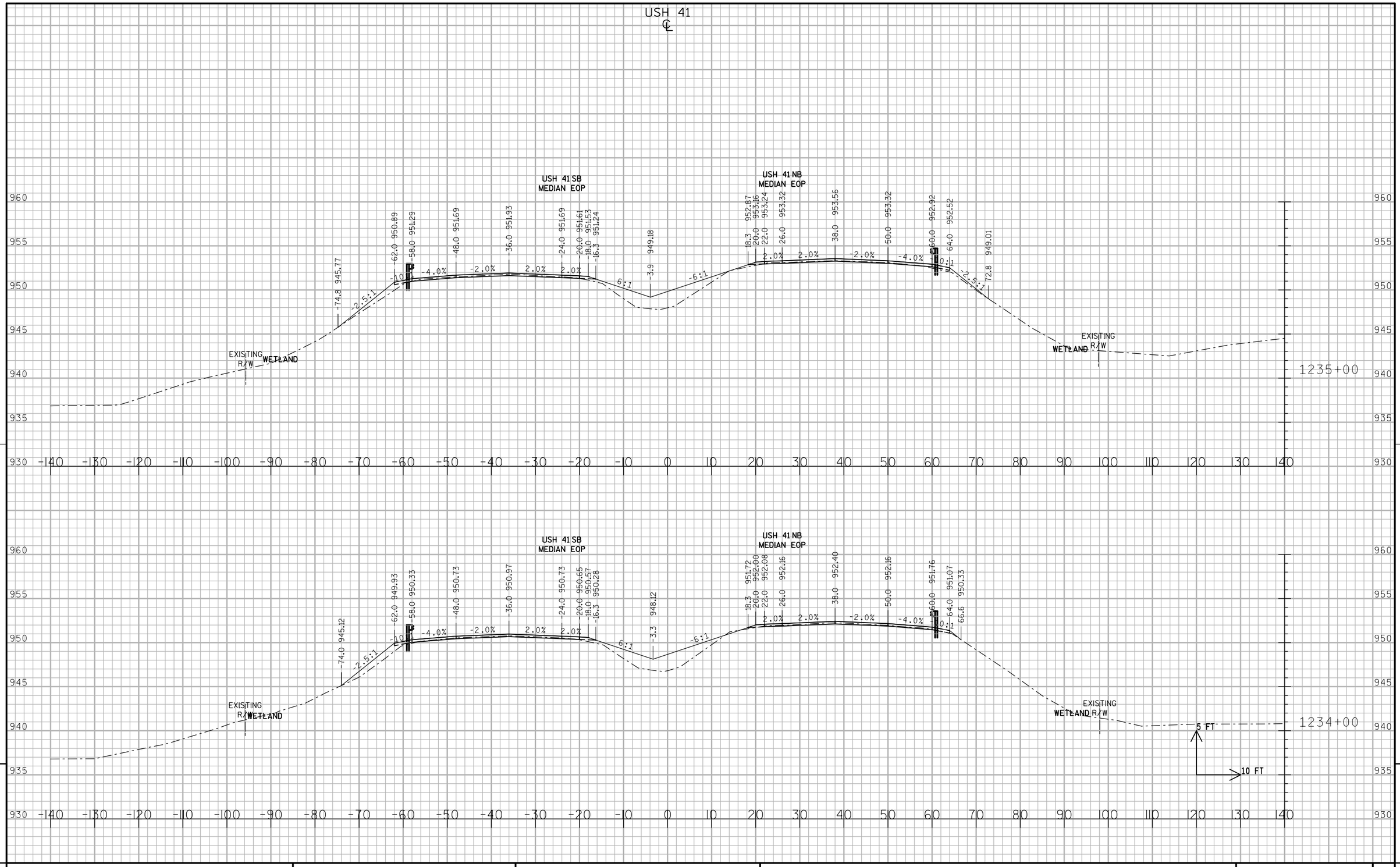
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 329	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 330	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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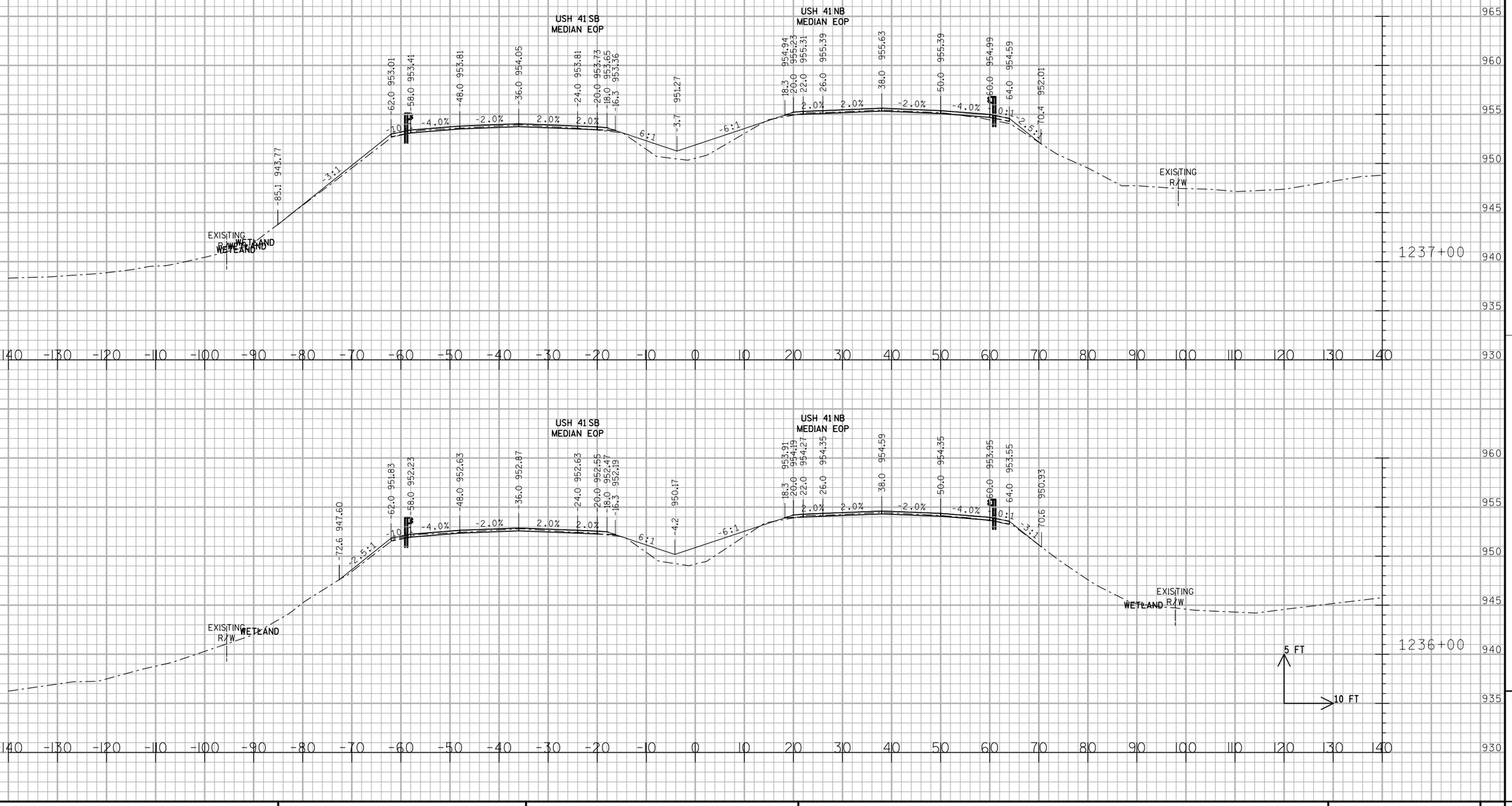
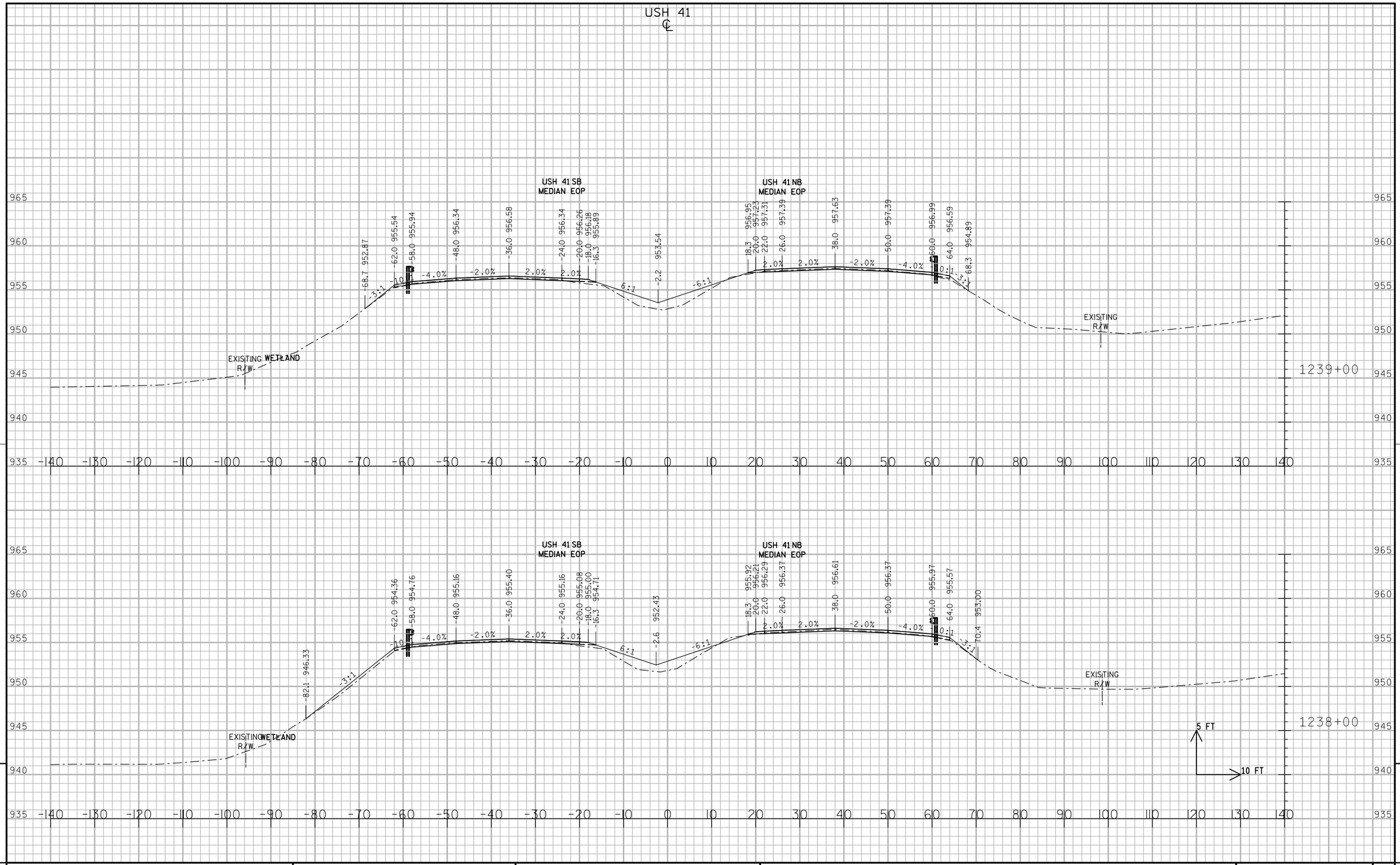


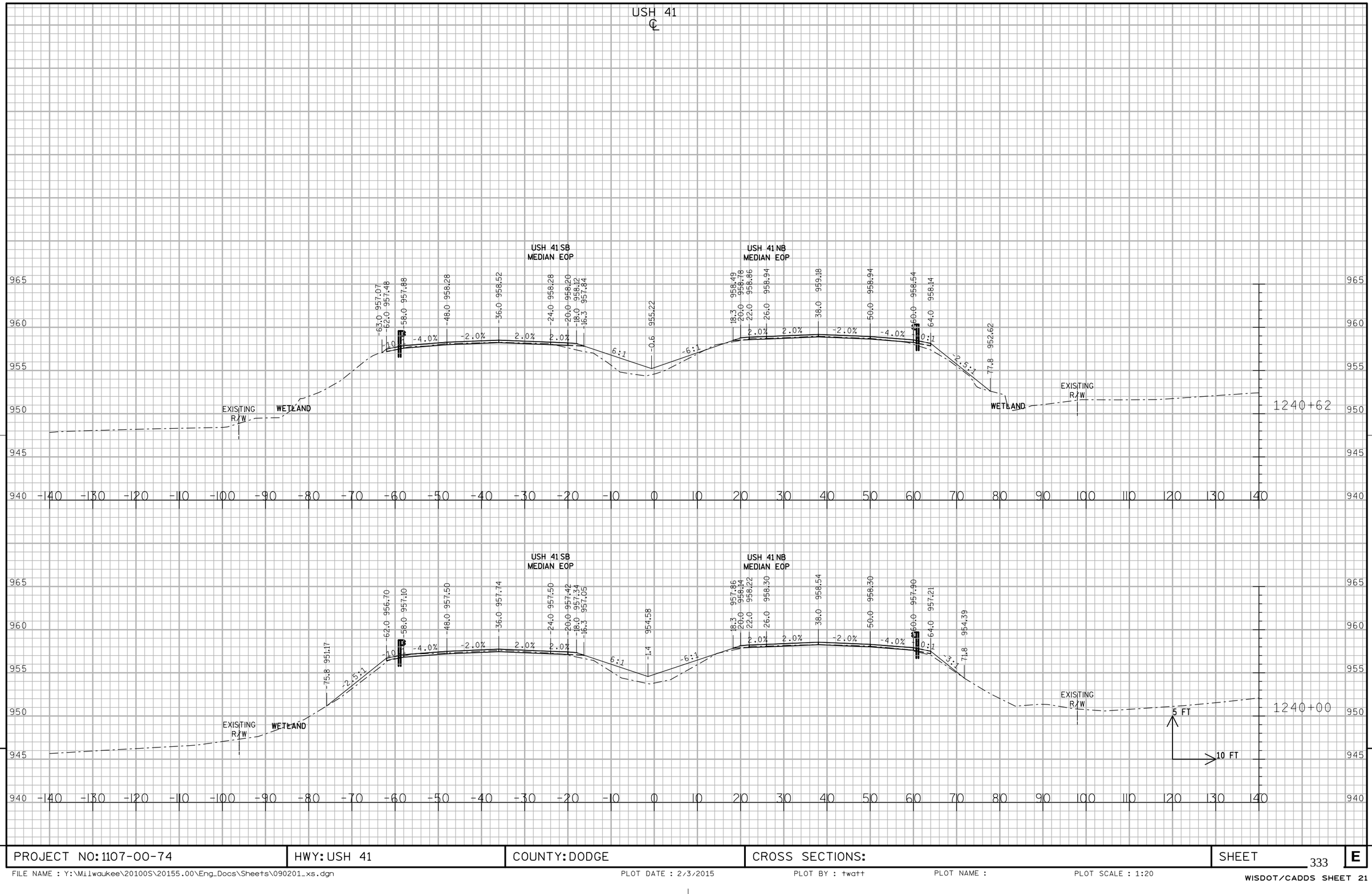
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 331	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 332	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 333	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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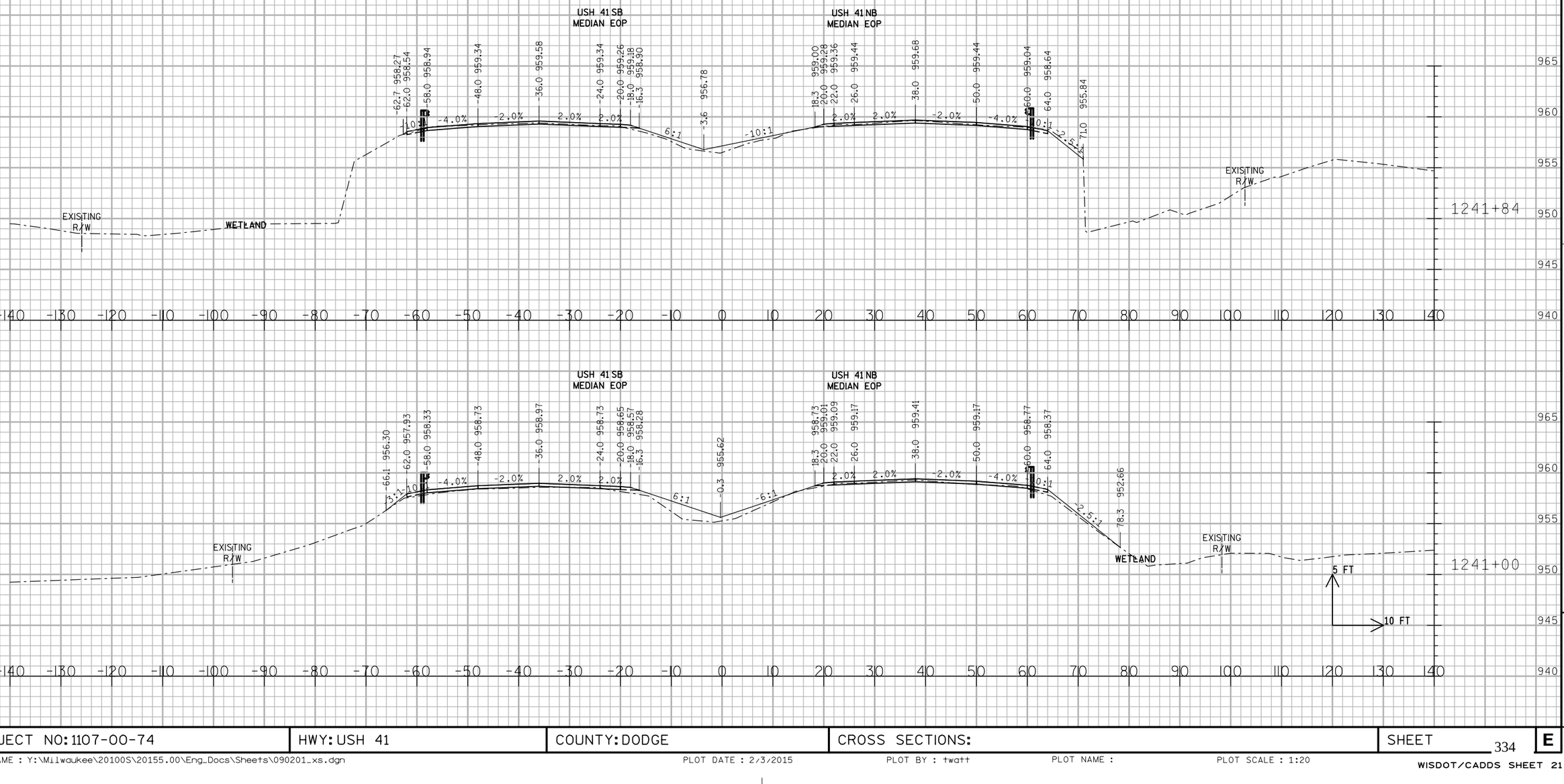

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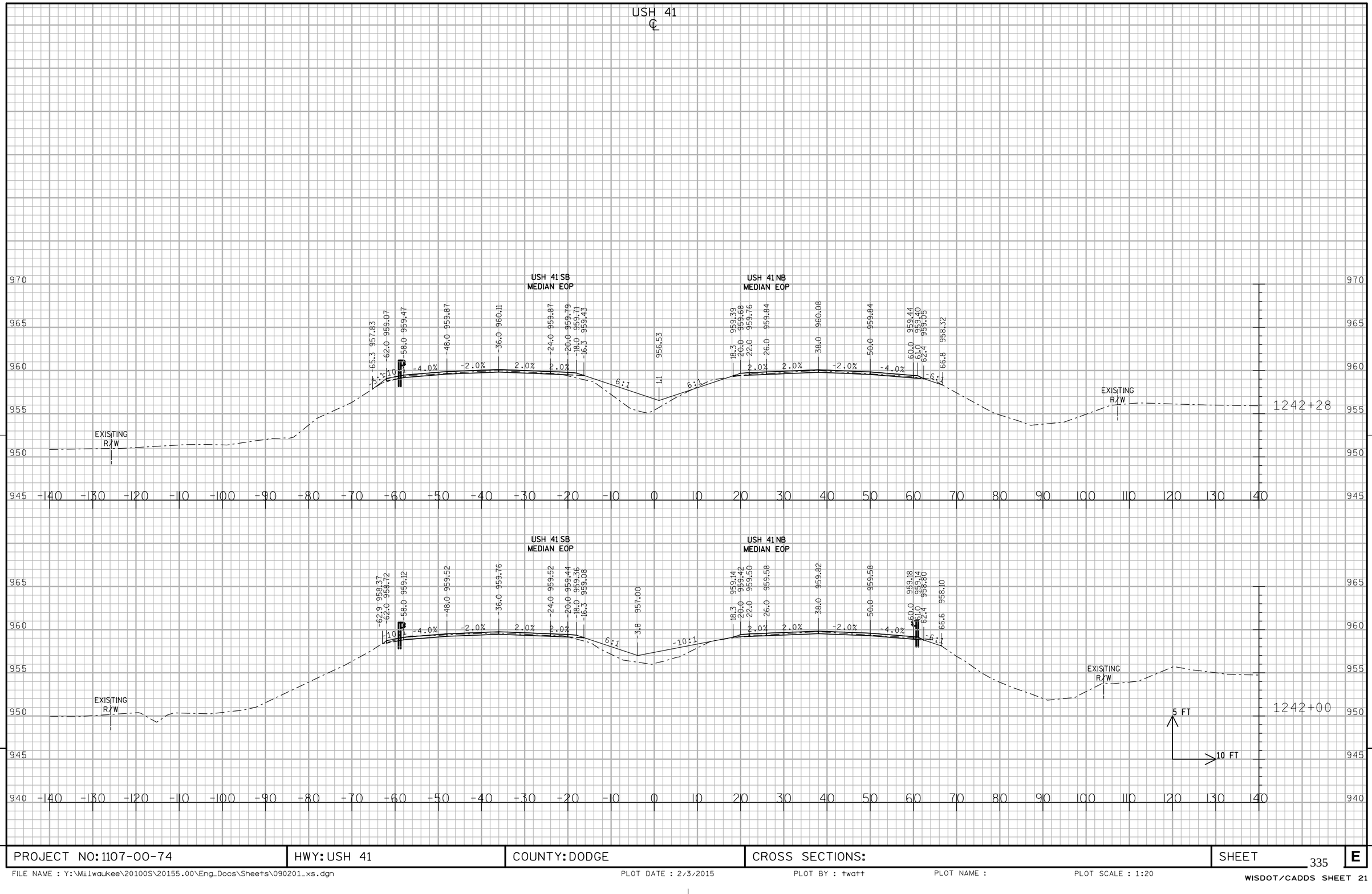
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 334	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

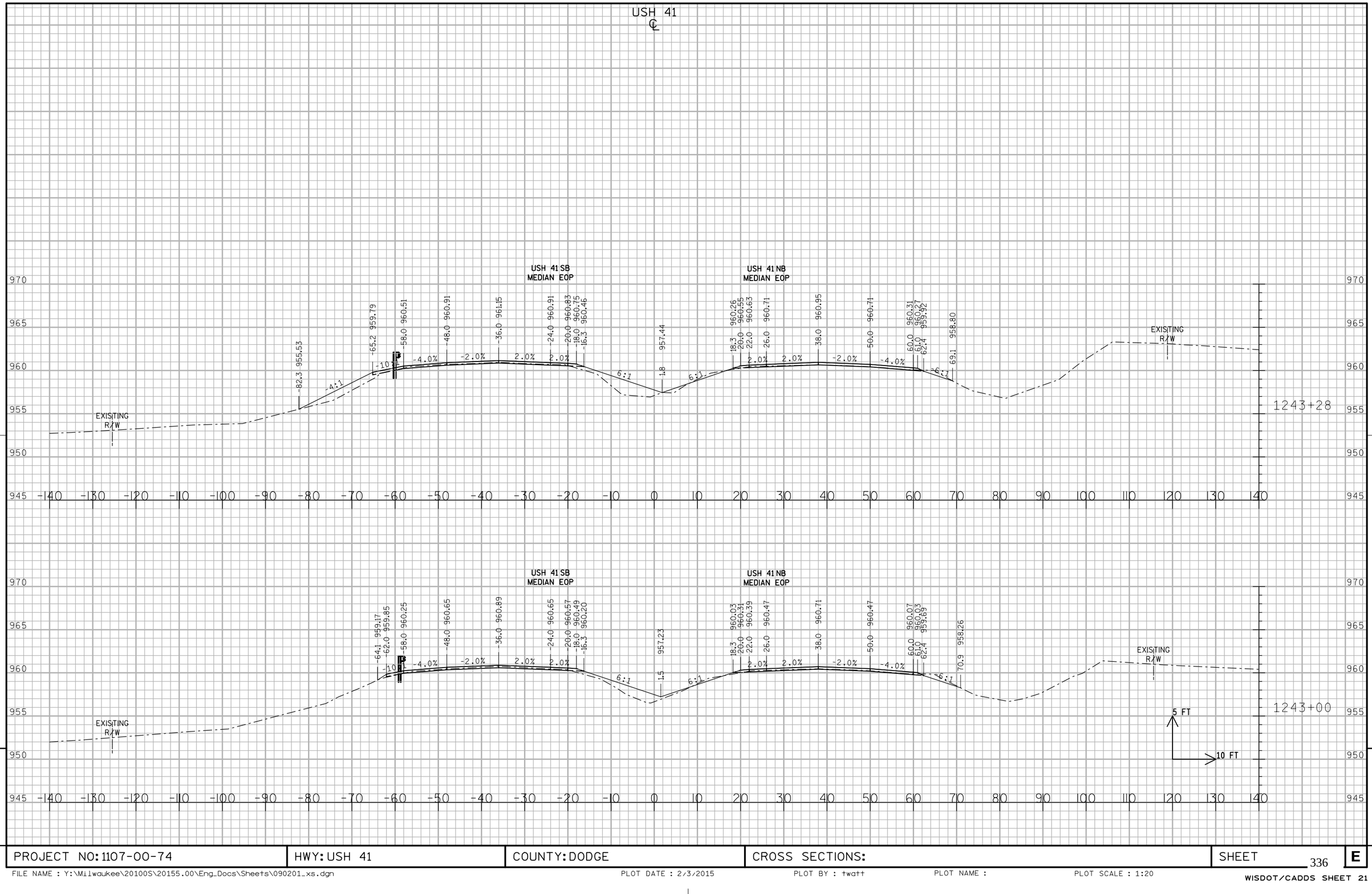
WISDOT/CADDS SHEET 21



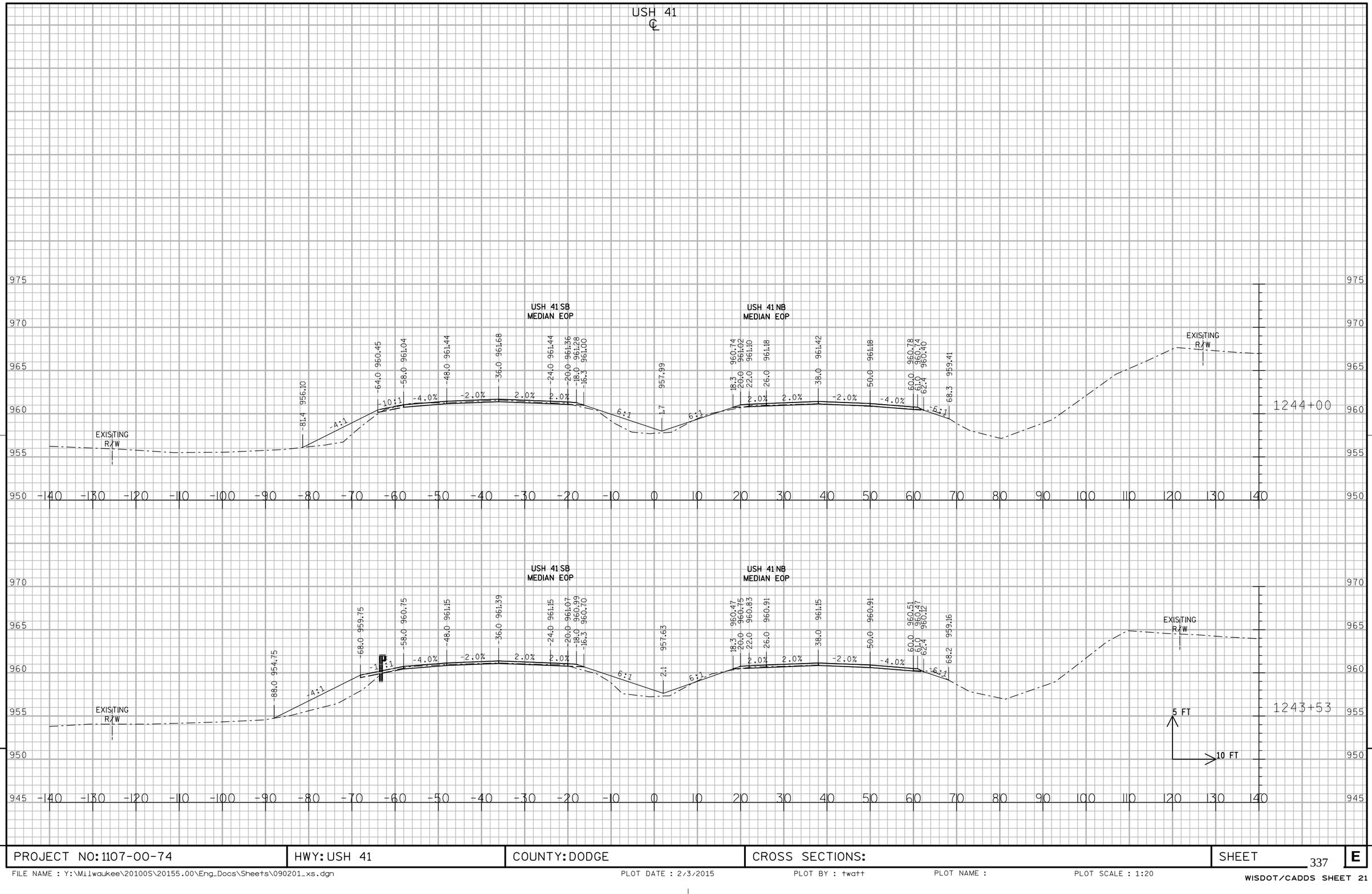
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 335	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 336	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 337	E

USH 41
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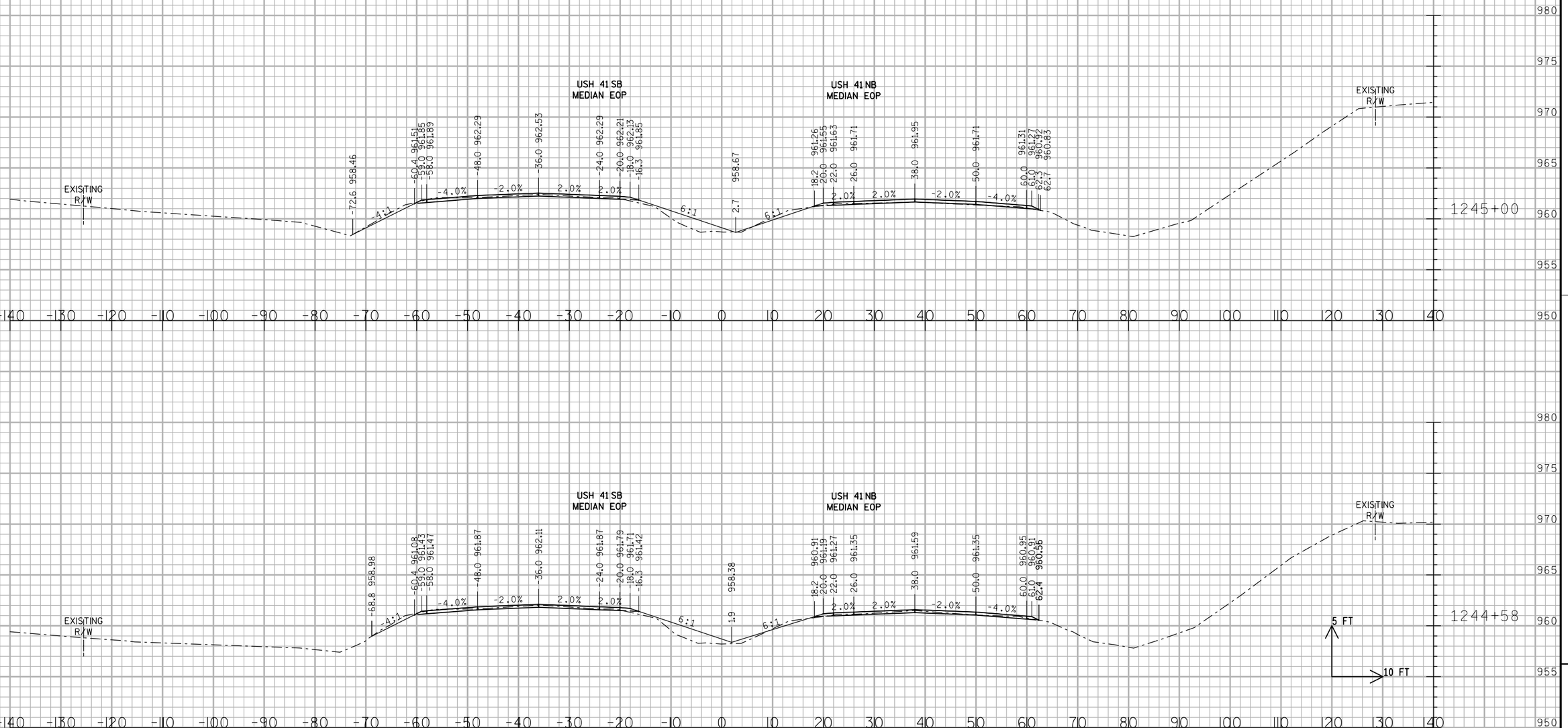

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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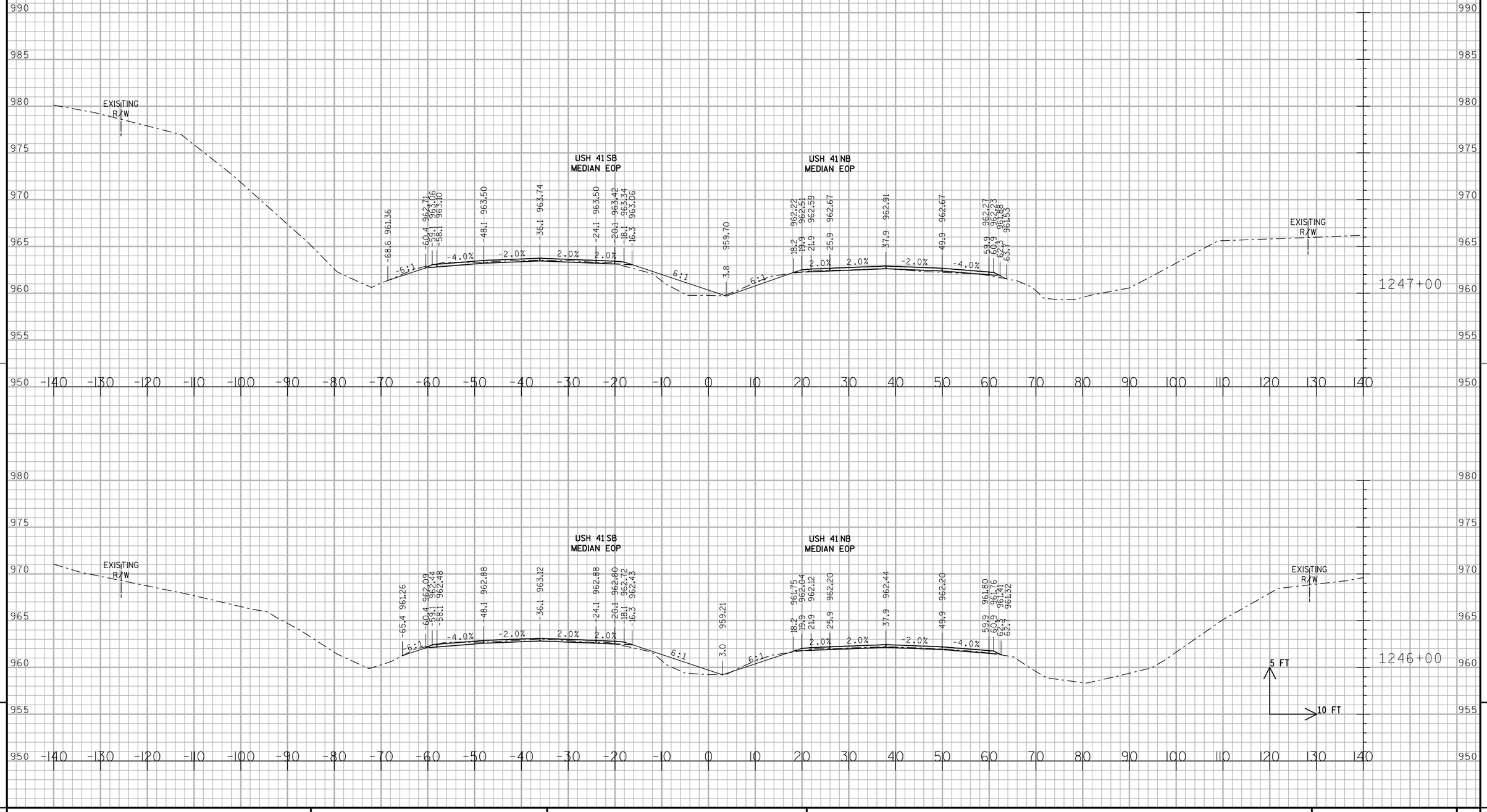

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 339	E

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WISDOT/CADDS SHEET 21

USH 41
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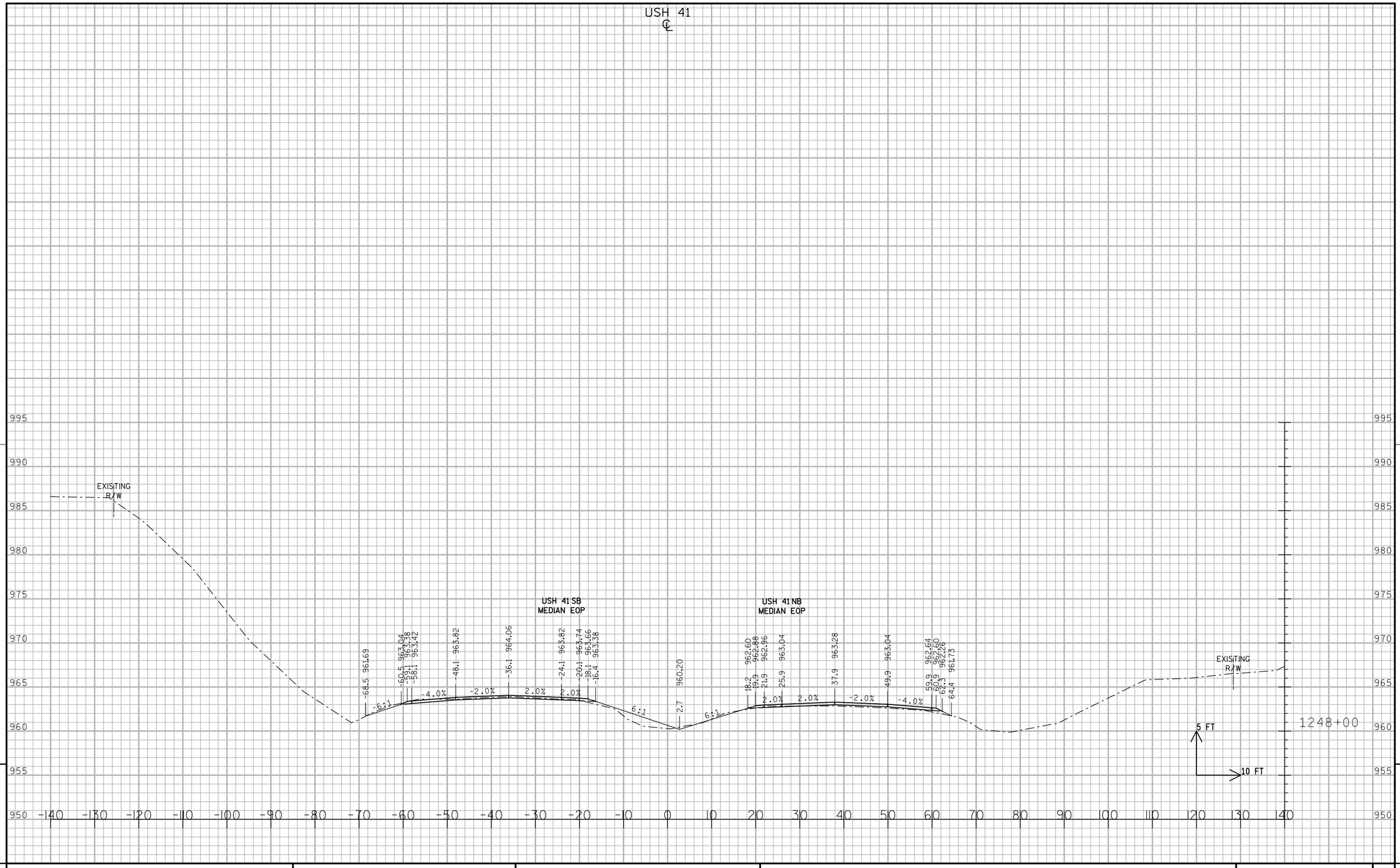

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 340	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄

995 990 985 980 975 970 965 960 955 950

EXISTING R/W

USH 41 SB MEDIAN EOP

USH 41 NB MEDIAN EOP

-65.6 962.65 -60.5 963.16 -55.1 963.51 -36.1 963.55 -48.1 963.95 -36.1 964.19 -24.1 963.95 -20.1 963.87 -18.1 963.79 -16.4 963.50 0.4 960.70 18.2 962.52 19.9 962.81 21.9 962.89 25.9 962.97 37.9 963.21 49.9 962.97 59.9 962.67 60.3 962.65 62.5 962.13

10:1 -4.0% -2.0% 2.0% 2.0% 6:1 10:1 2.0% 2.0% -2.0% -4.0%

EXISTING R/W

1249+00

5 FT

10 FT

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

9

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 341	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄

EXISTING R/W

USH 41 SB MEDIAN EOP

USH 41 NB MEDIAN EOP

-60.6 963.35
-59.1 963.72
-58.1 963.76
-48.1 964.16
-36.1 964.40
-24.1 964.16
-20.1 964.08
-18.1 964.00
-16.4 963.72
0.0 961.67
18.2 963.05
19.9 963.34
21.9 963.42
25.9 963.50
37.9 963.74
49.9 963.50
58.9 963.10
60.9 963.00
62.7 962.54

-4.0% -2.0% 2.0% 2.0% 8:1 7.6% 2.0% 2.0% -2.0% -4.0%

EXISTING R/W

1250+95

985 980 975 970 965 960 955

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

995 990 985 980 975 970 965 960 955

EXISTING R/W

-64.2 962.80
-60.5 963.17
-59.1 963.52
-58.1 963.56
-48.1 963.96
-36.1 964.20
-24.1 963.96
-20.1 963.88
-18.1 963.80
-16.4 963.51
0.0 961.20
18.2 962.67
19.9 962.95
21.9 963.03
25.9 963.11
37.9 963.35
49.9 963.11
58.9 962.71
60.9 962.57
62.6 962.26

10:1 -4.0% -2.0% 2.0% 2.0% 7:1 12:1 2.0% 2.0% -2.0% -4.0%

5 FT

10 FT

EXISTING R/W

1250+00

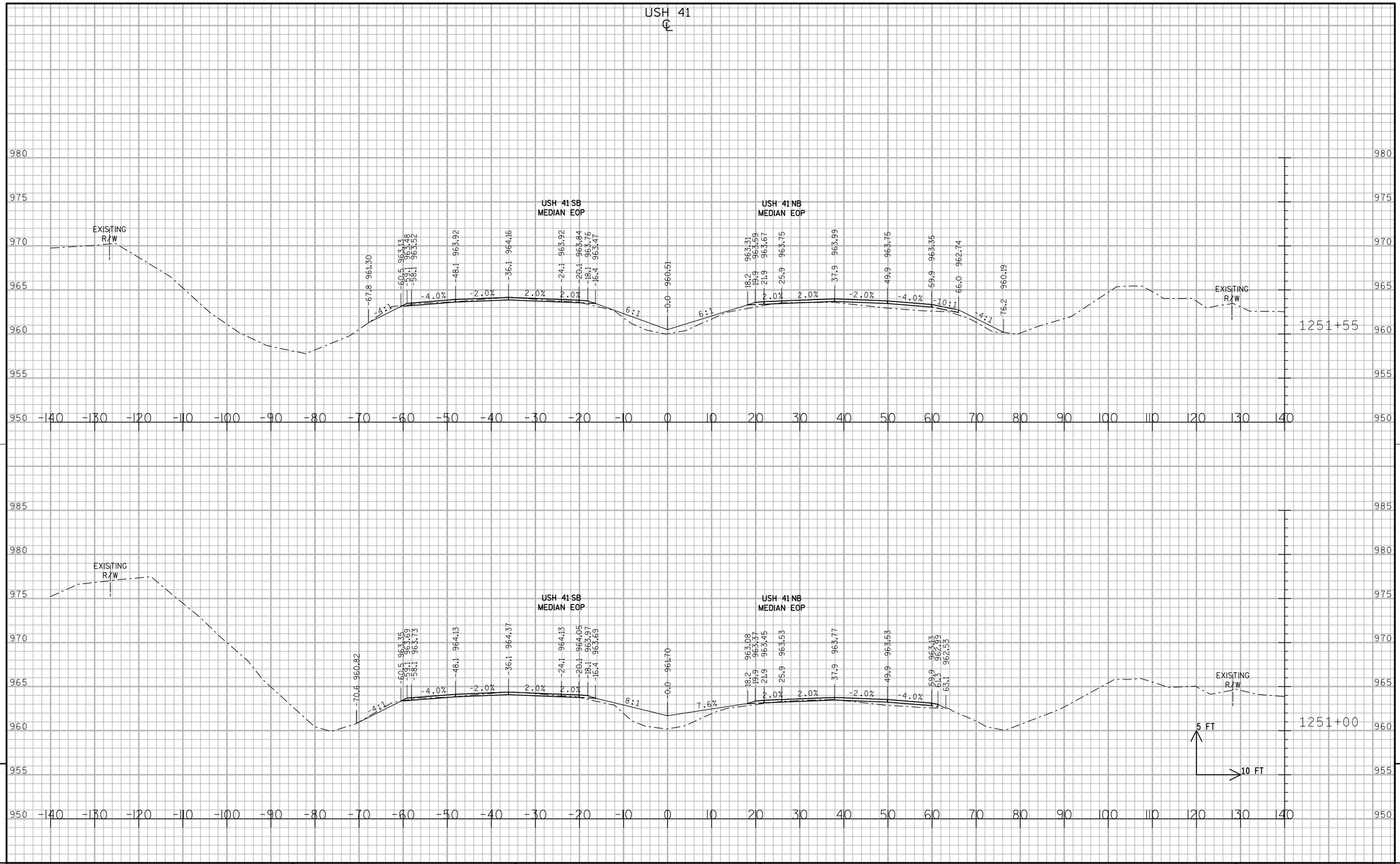
9

9

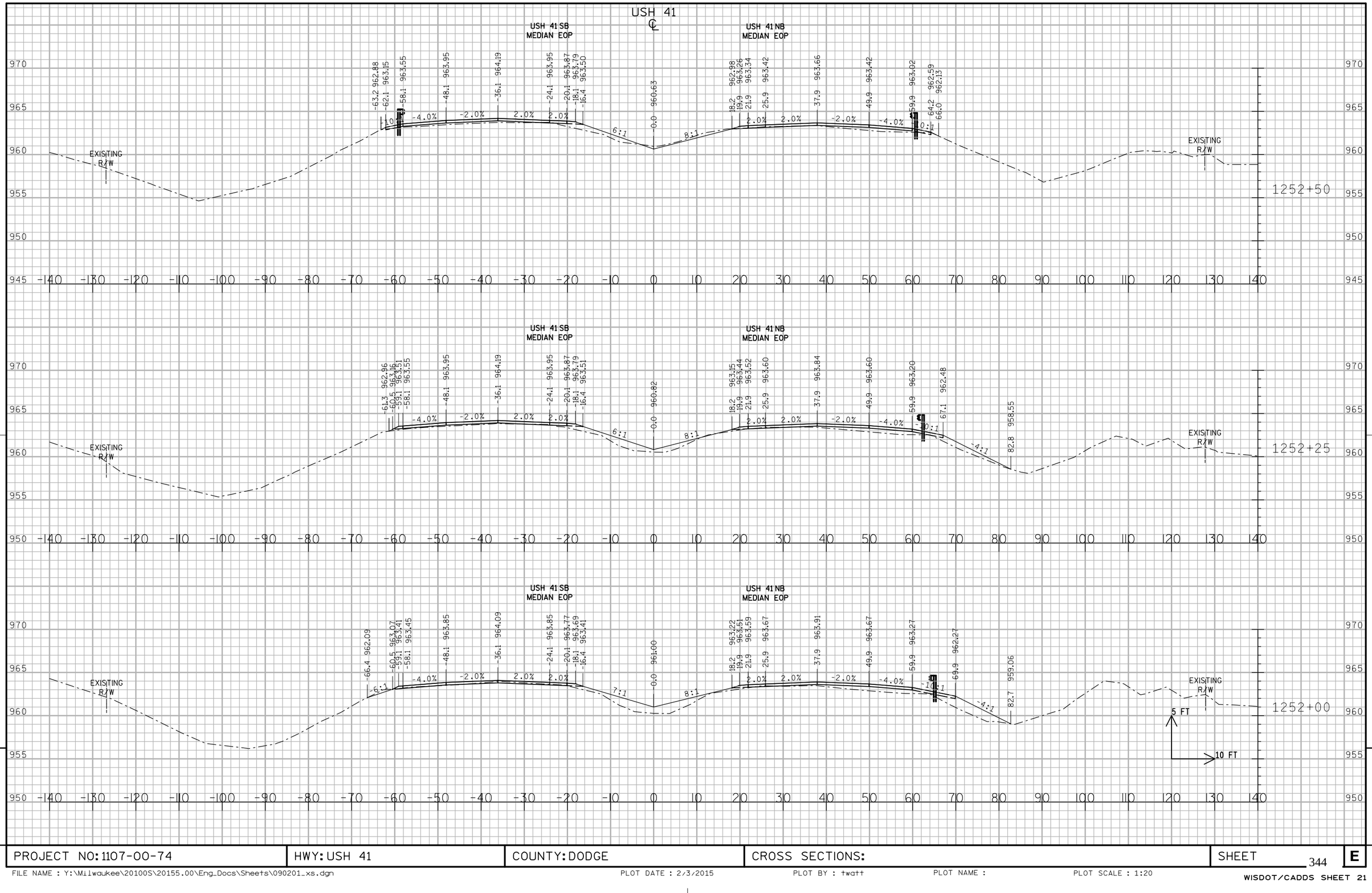
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 342	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

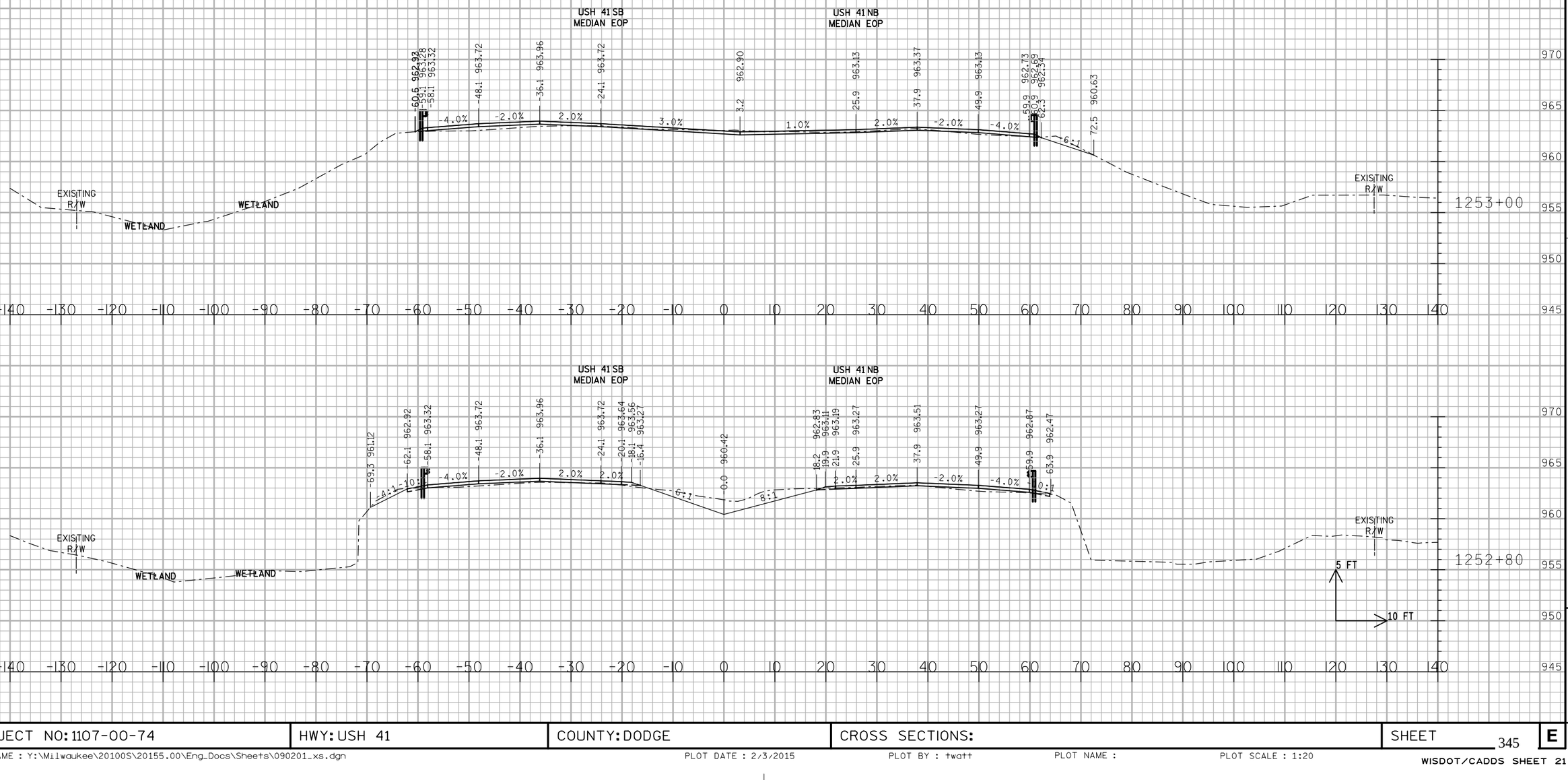


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 343	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 344	E

USH 41
℄

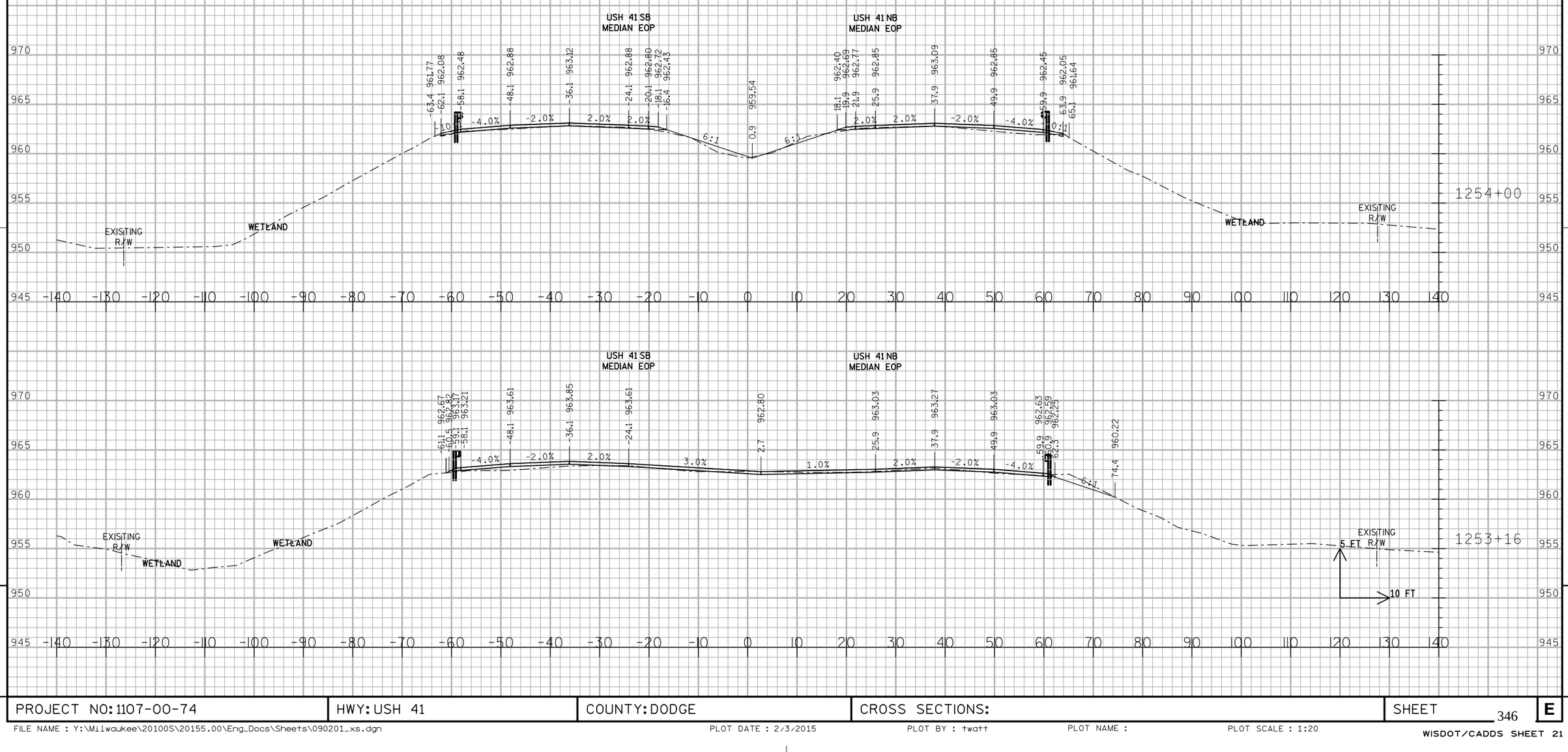


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 345	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

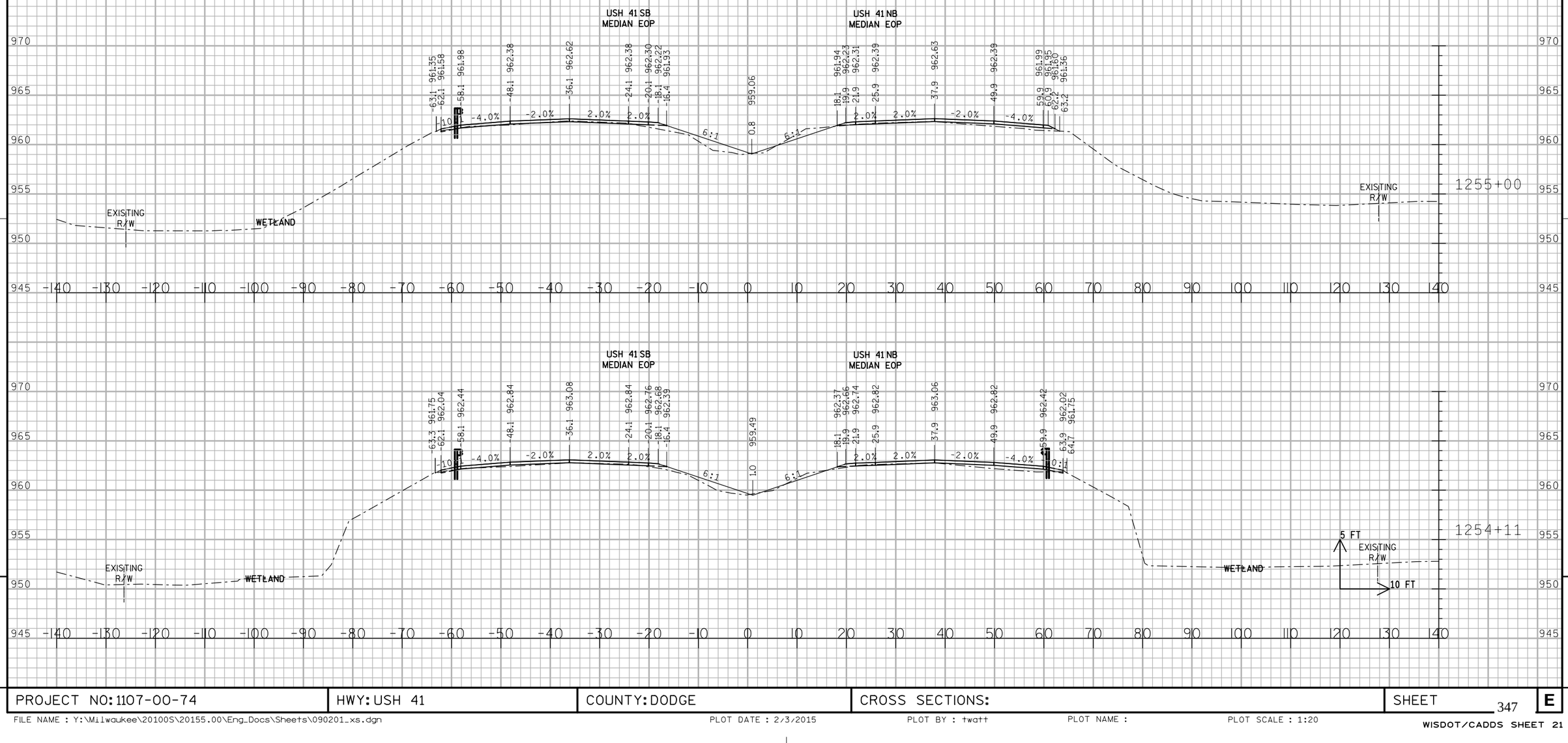
WISDOT/CADDS SHEET 21

USH 41
℄

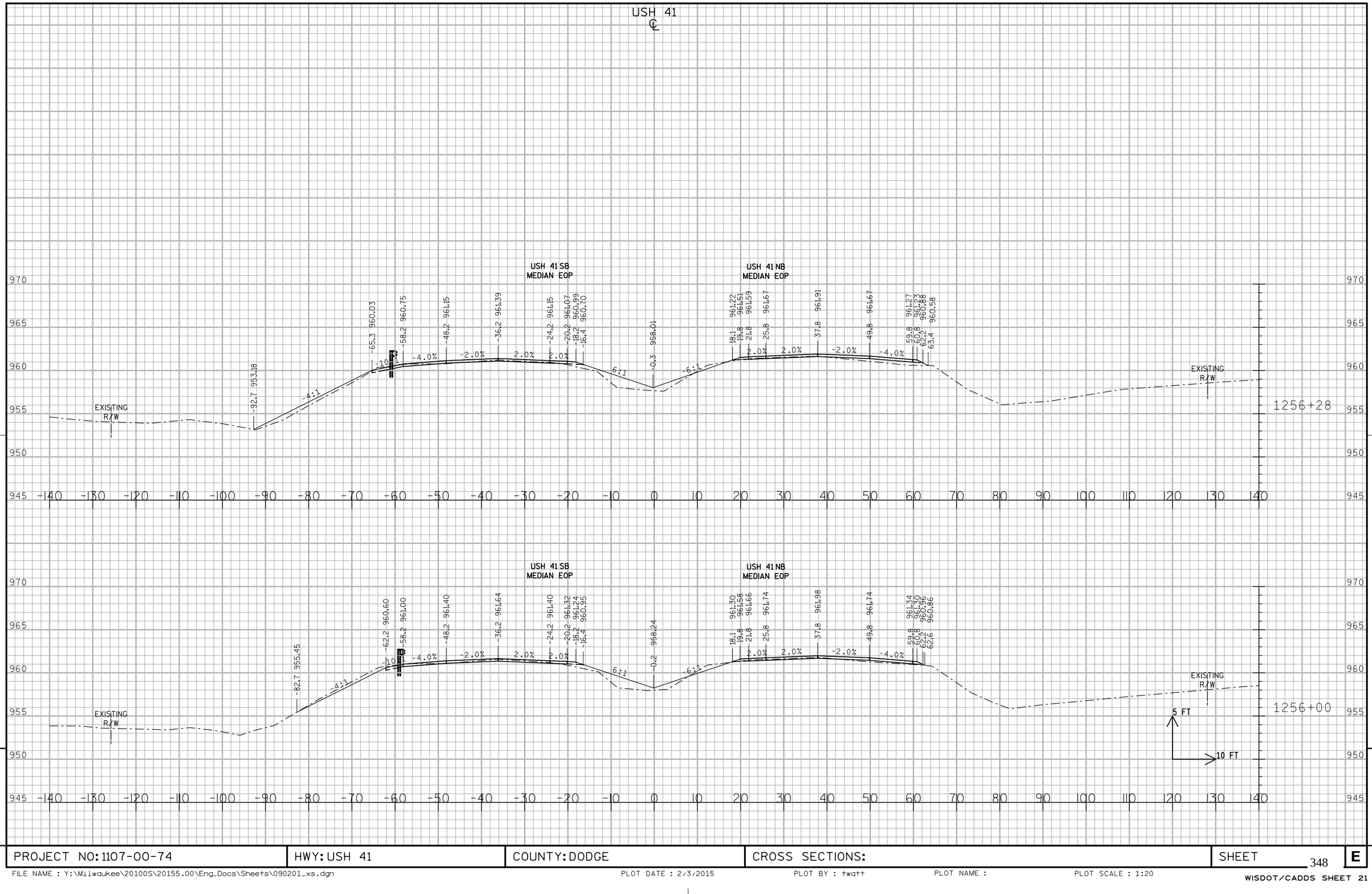


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 346	E

USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 347	E

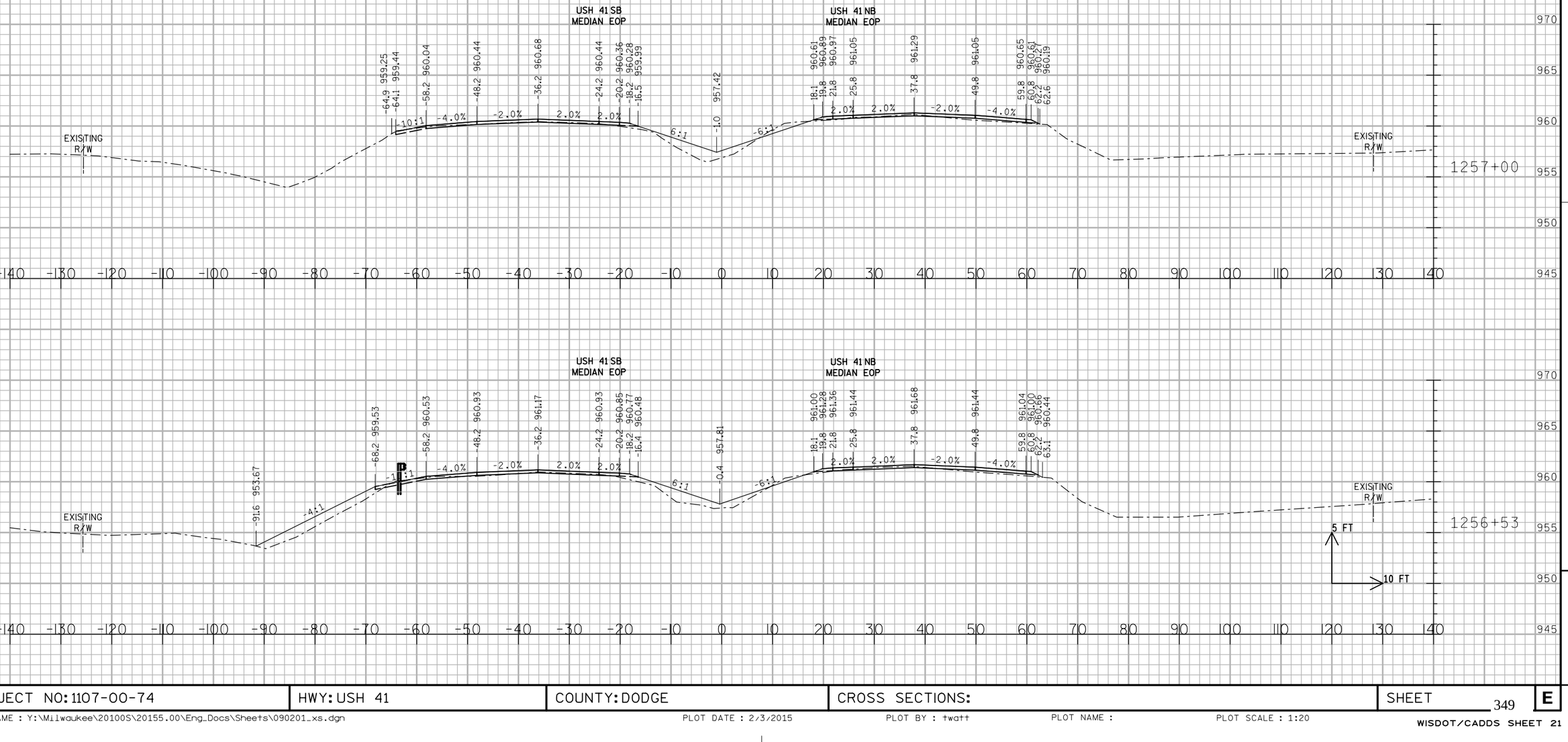


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 348	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



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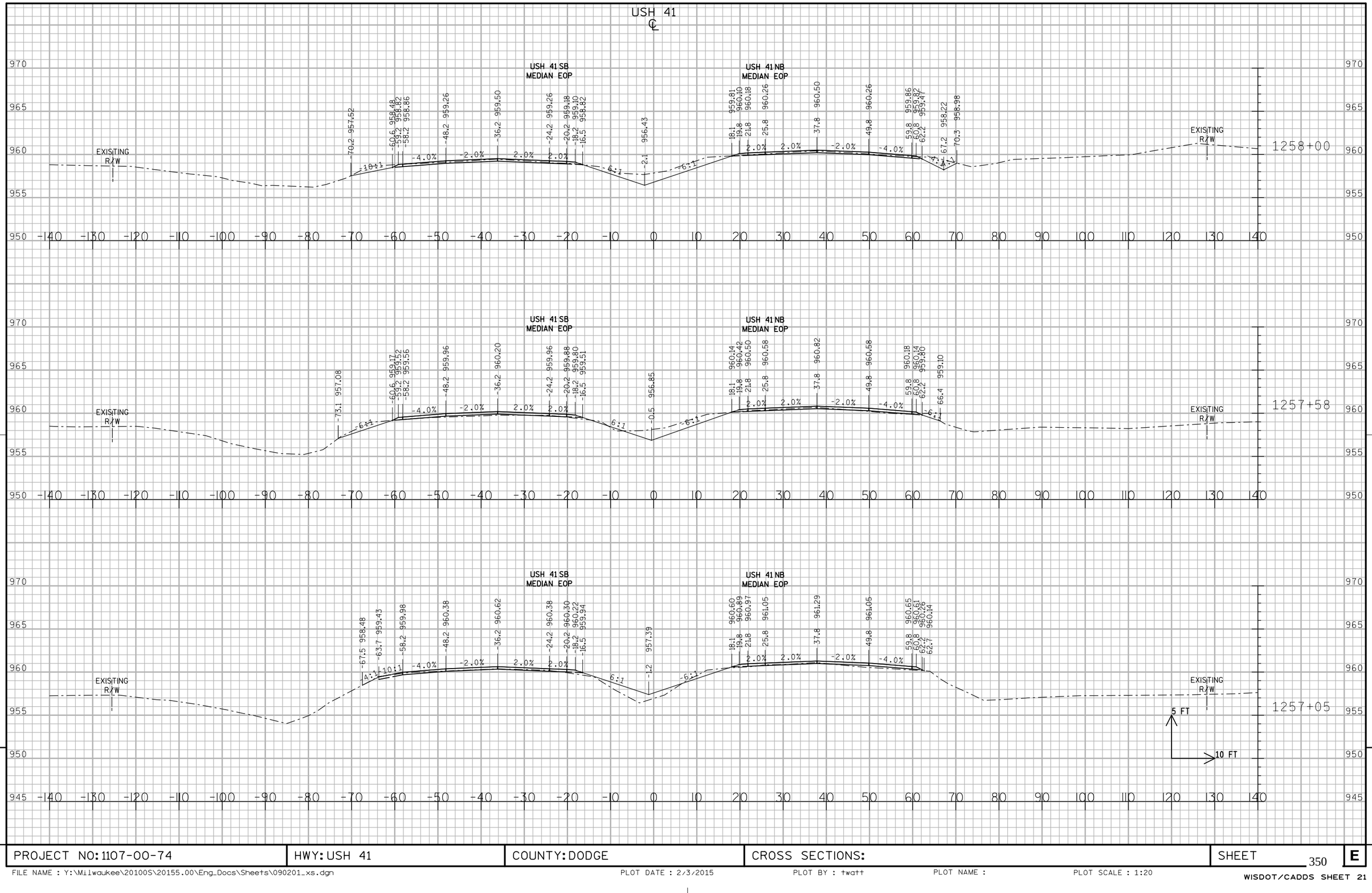
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 349	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 350	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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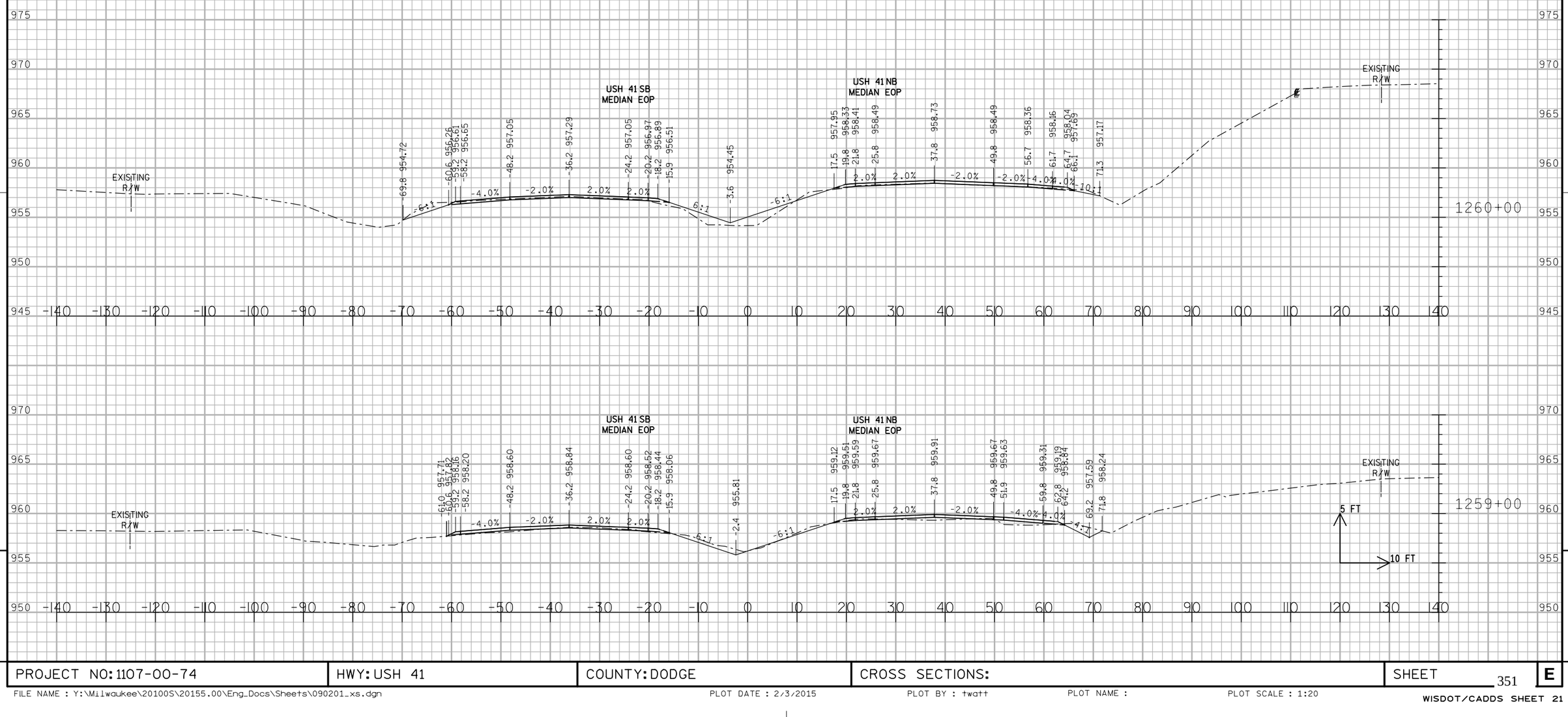

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 351	E

USH 41
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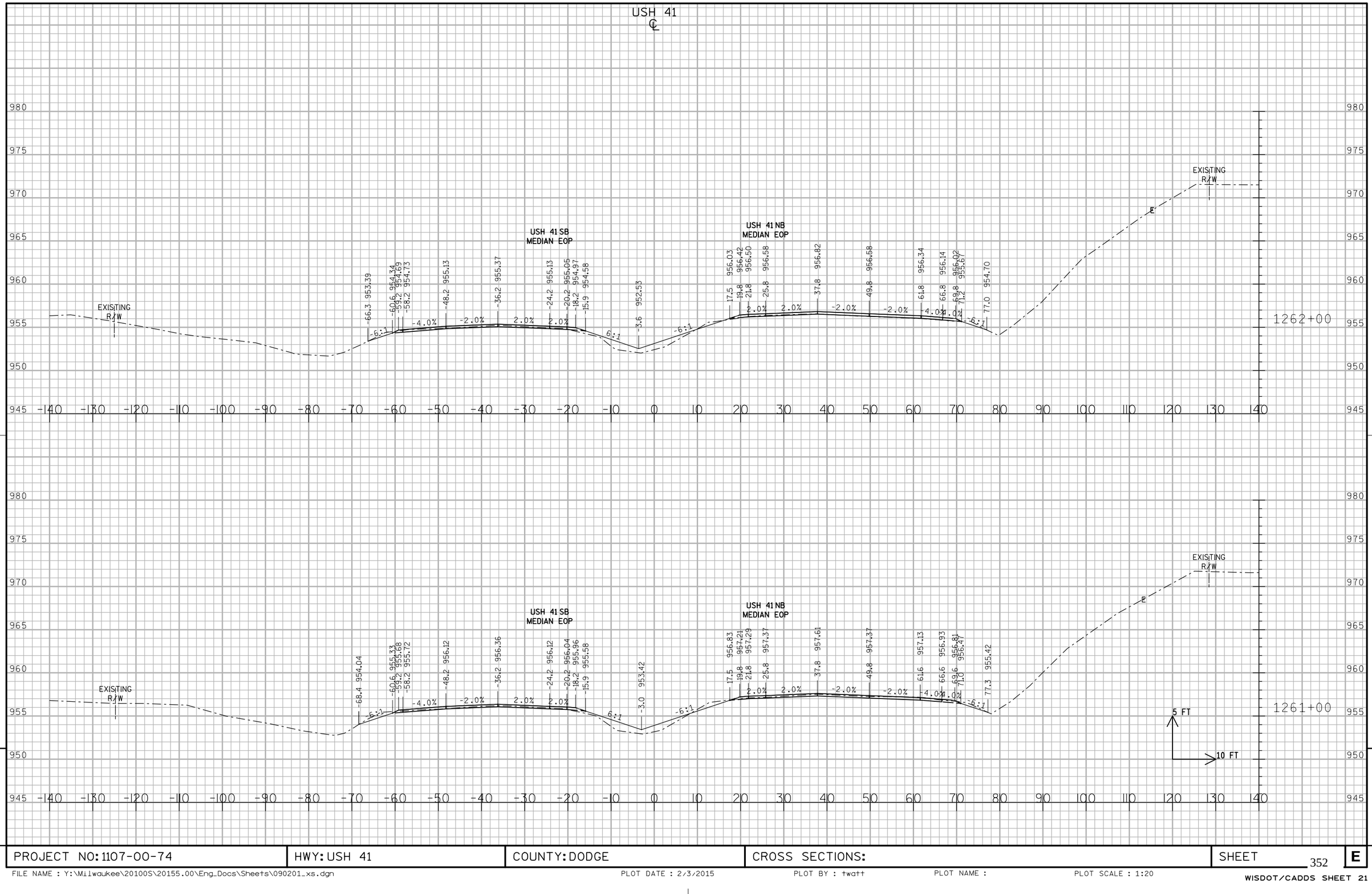

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 352	E

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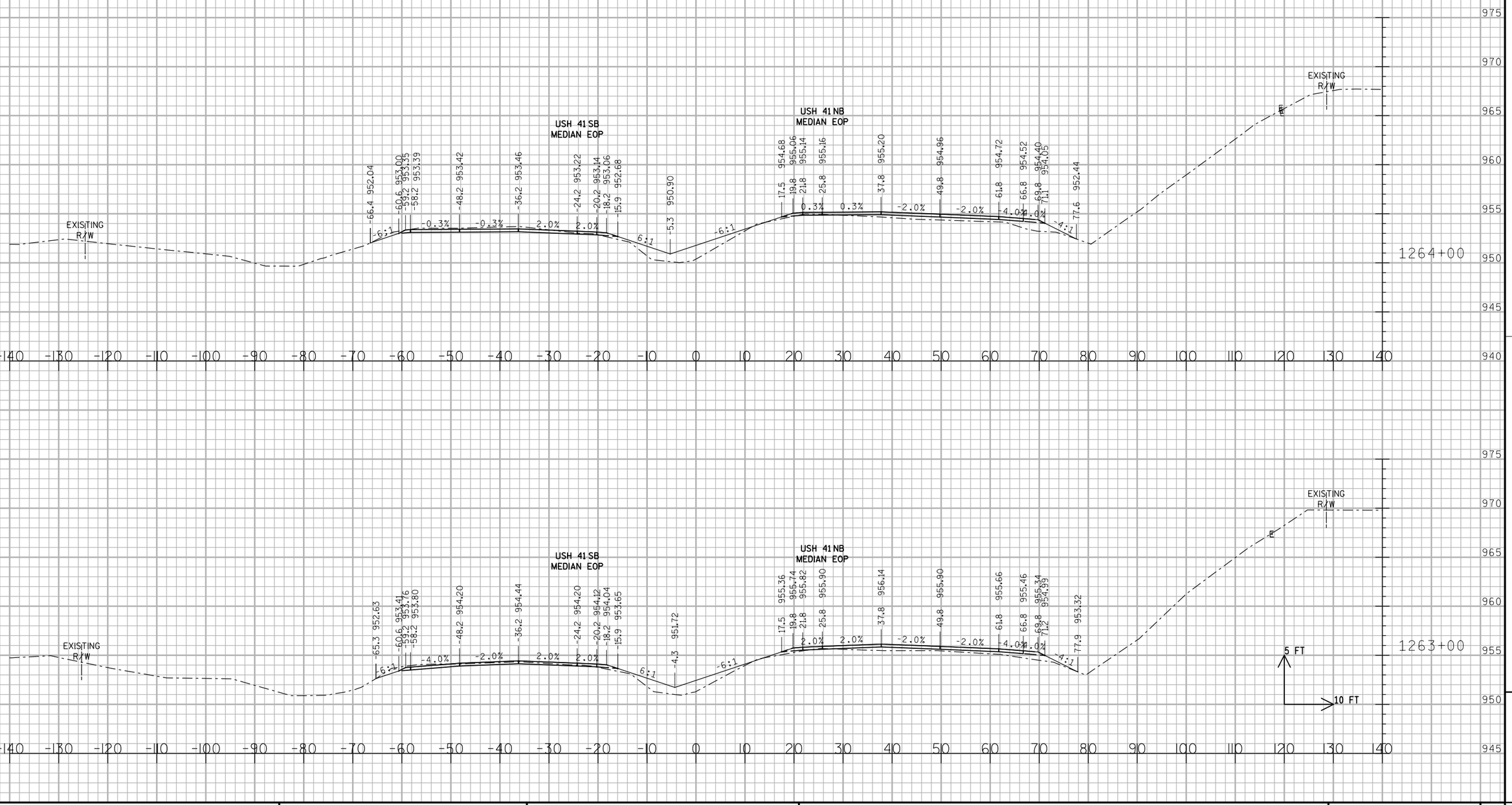
WISDOT/CADDS SHEET 21

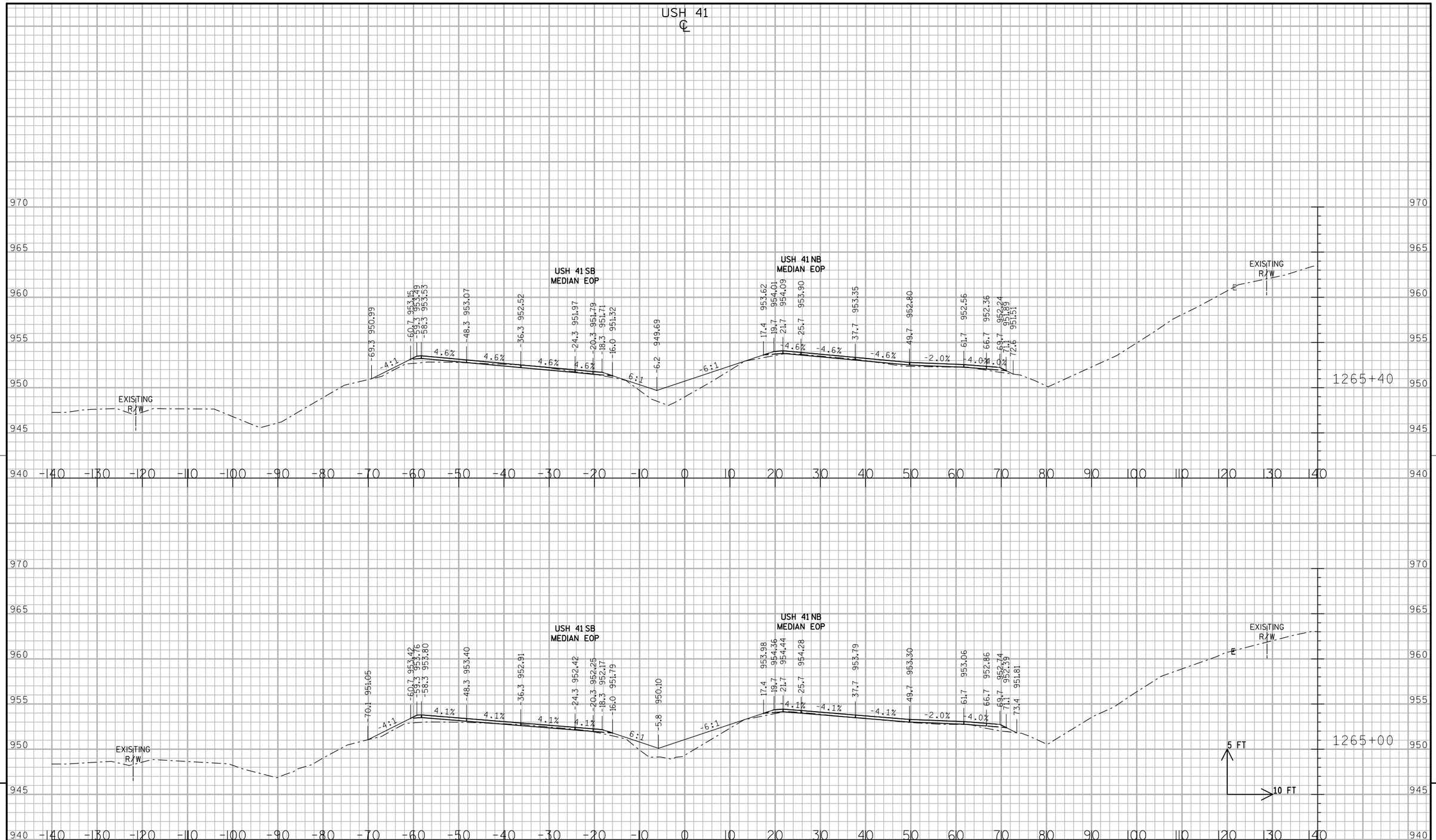
USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 353	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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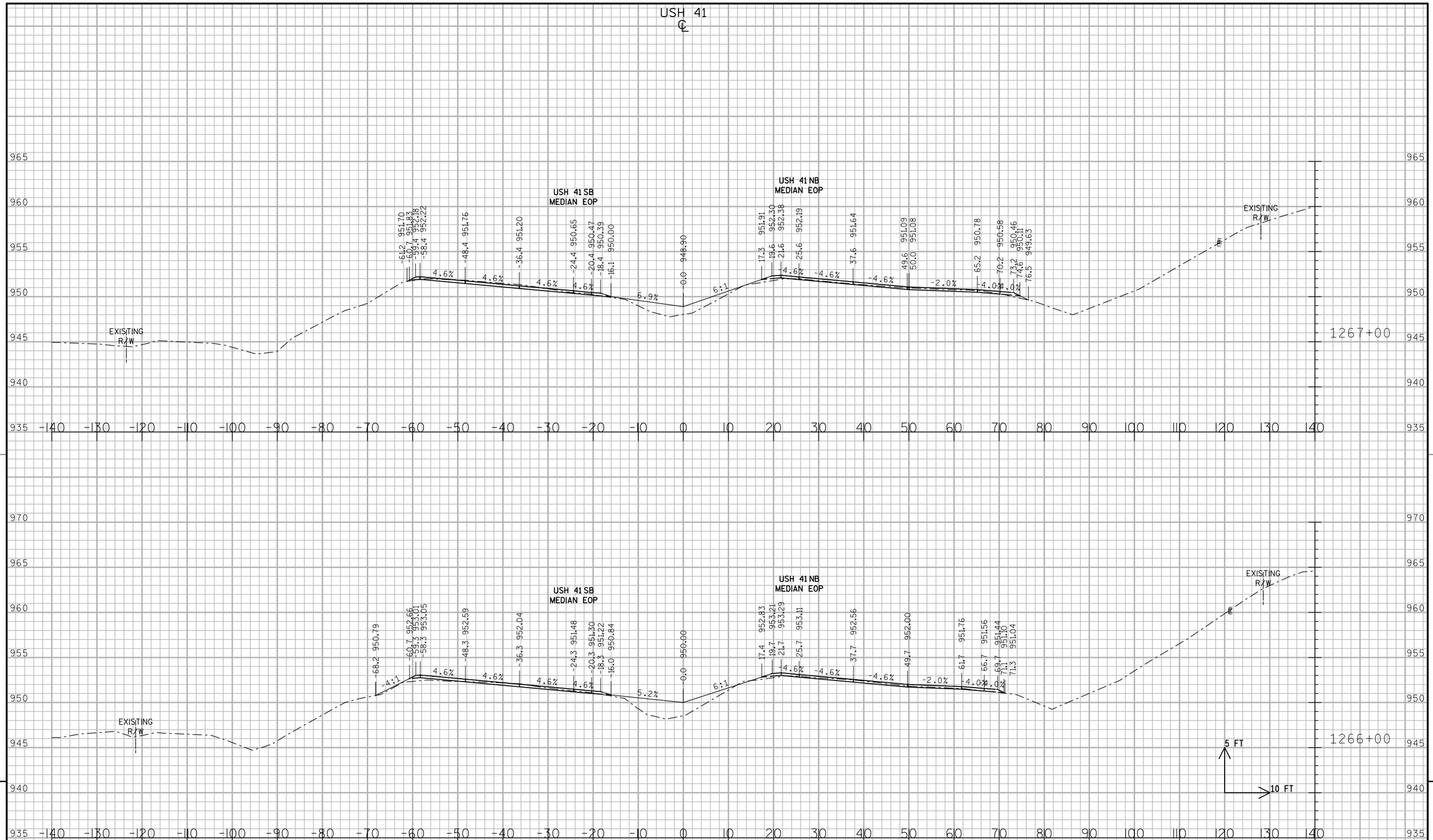
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 354	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 355	E

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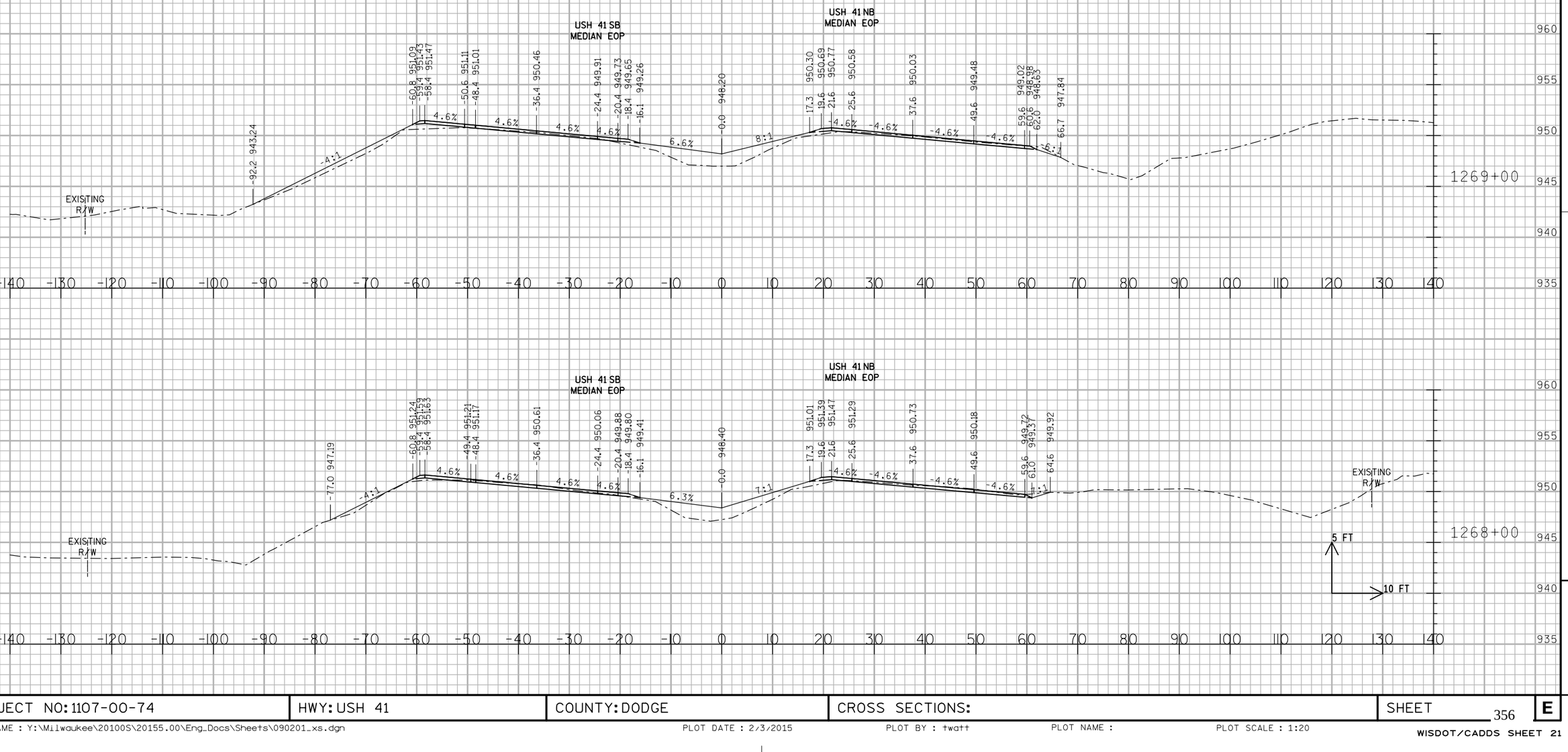
WISDOT/CADDS SHEET 21

9

USH 41
℄



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 356	E

USH 41
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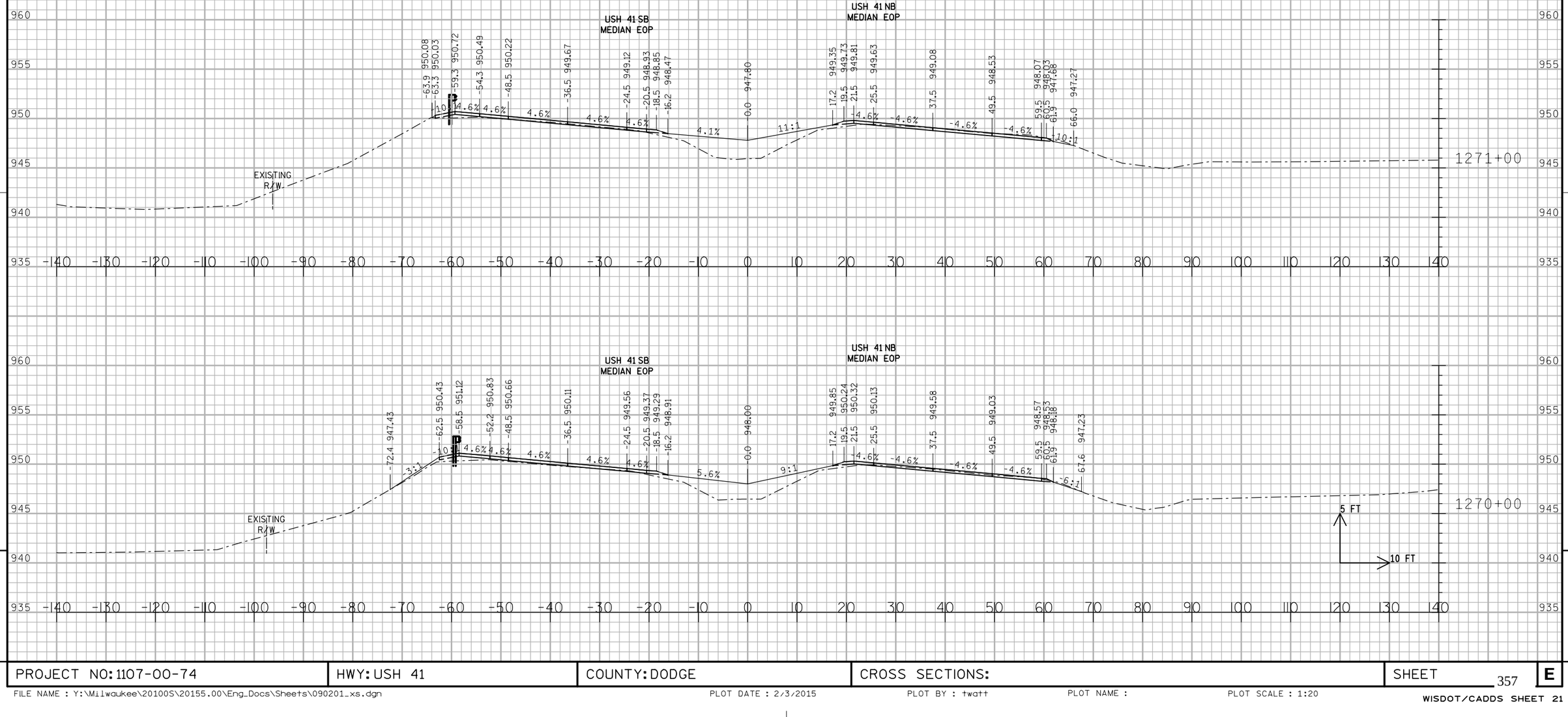

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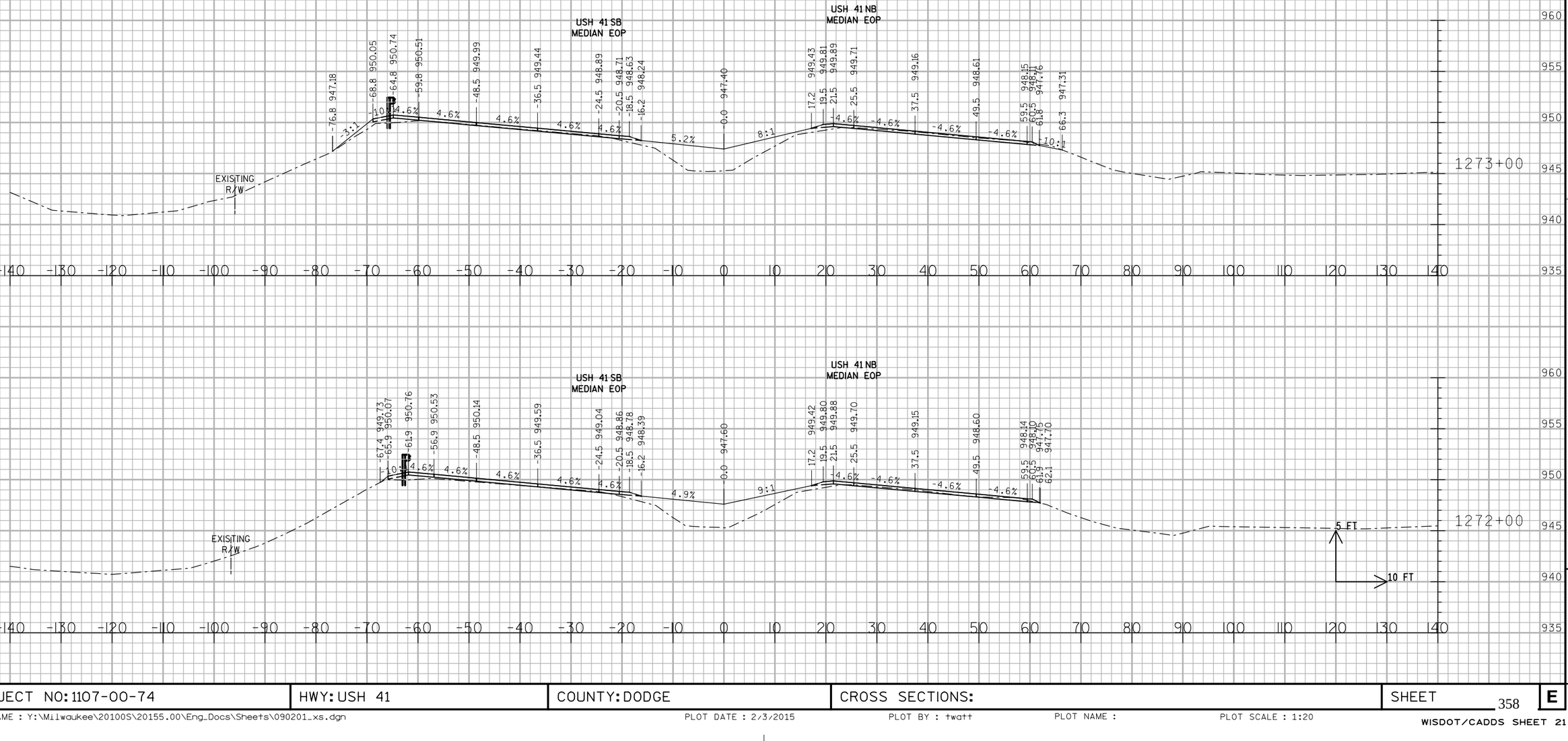
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 357	E

USH 41
℄



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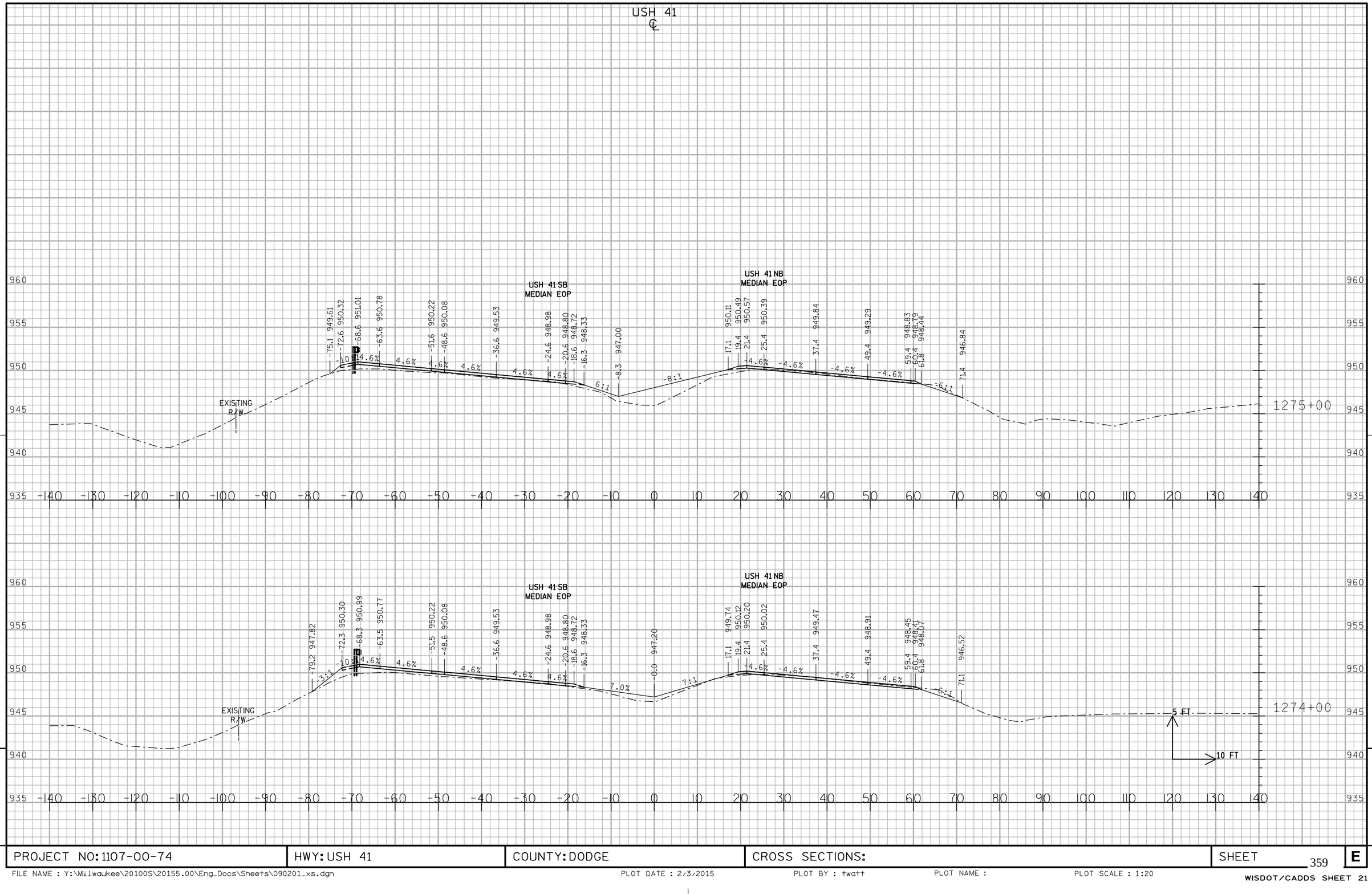
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 358	E



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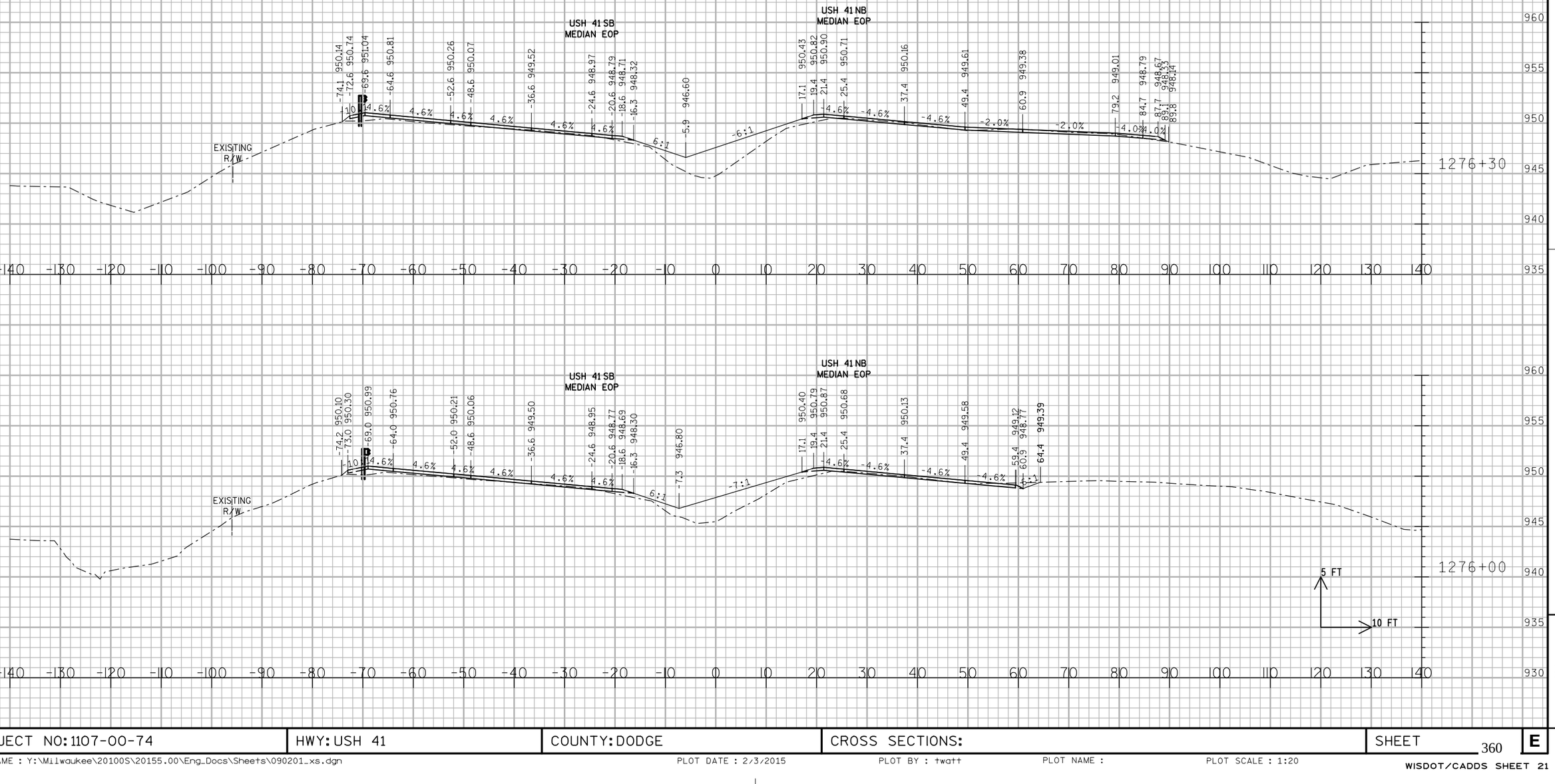
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 359	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

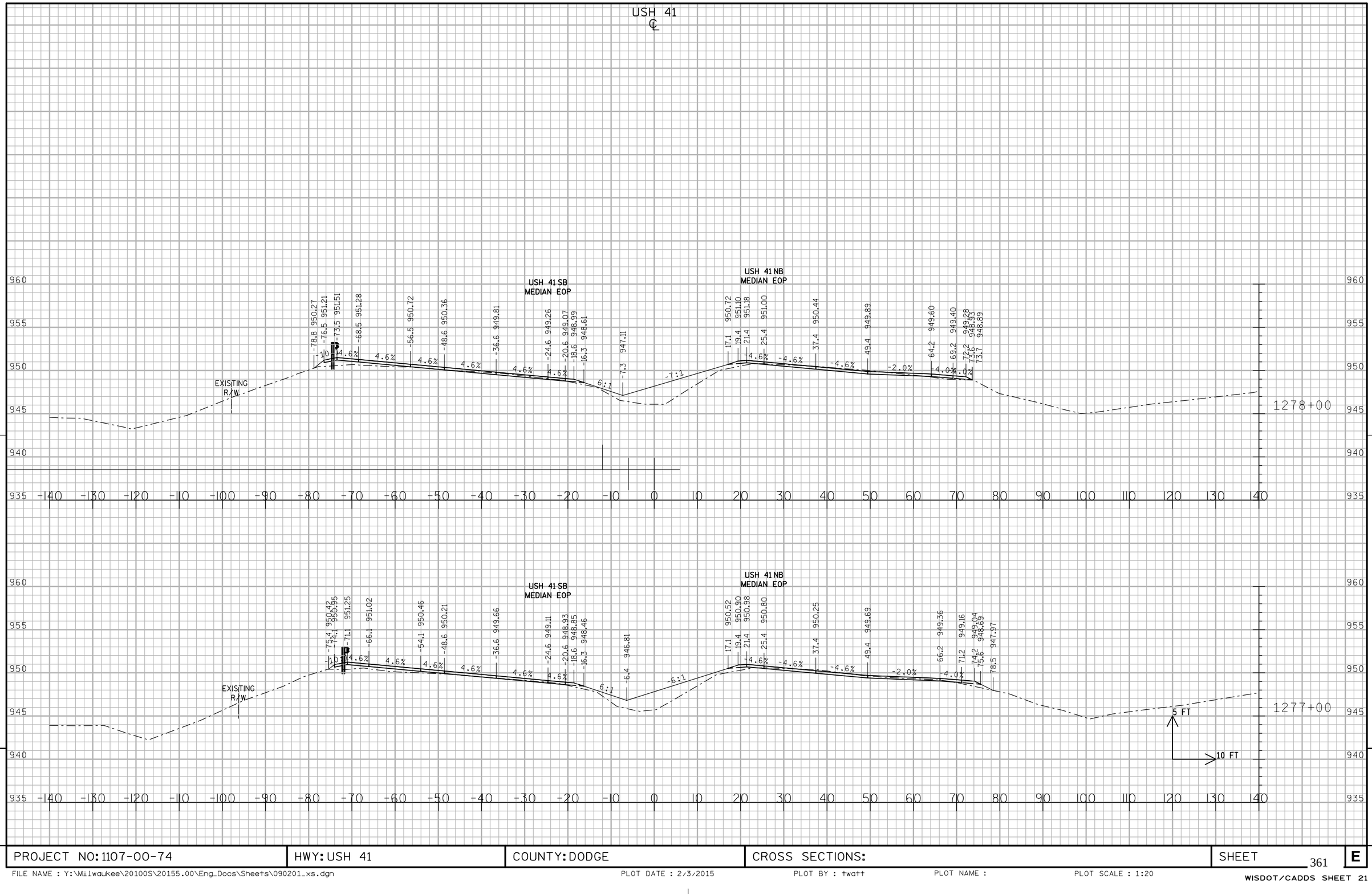
USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 360	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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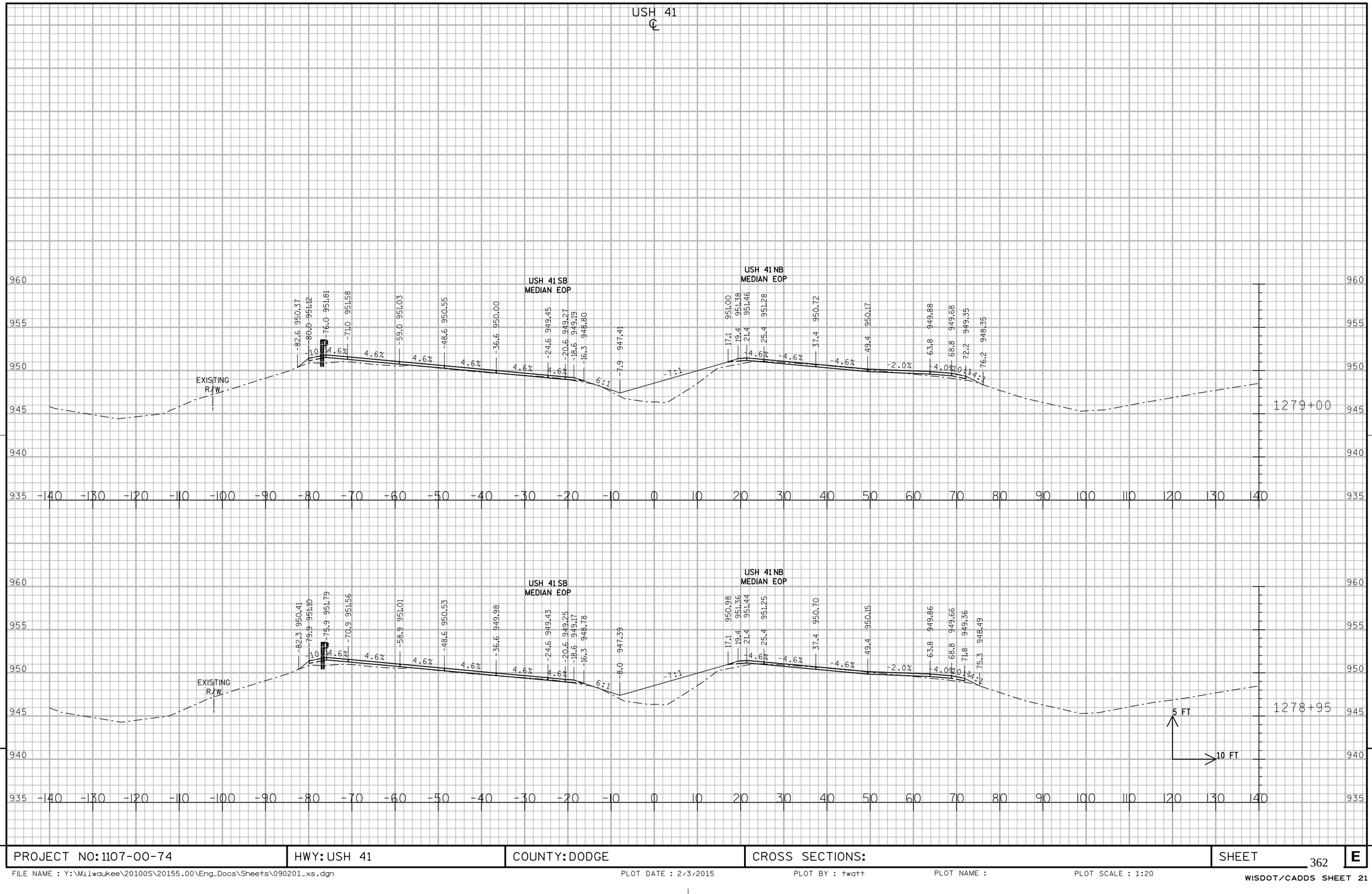
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 361	E

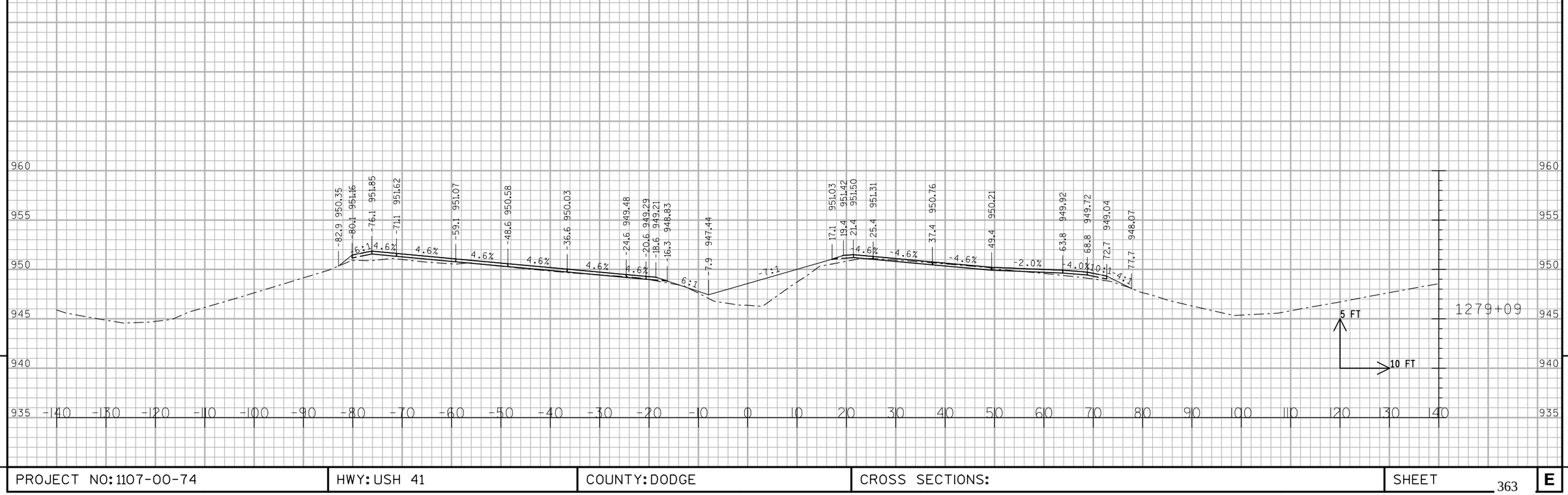
FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 362	E

USH 41
℄



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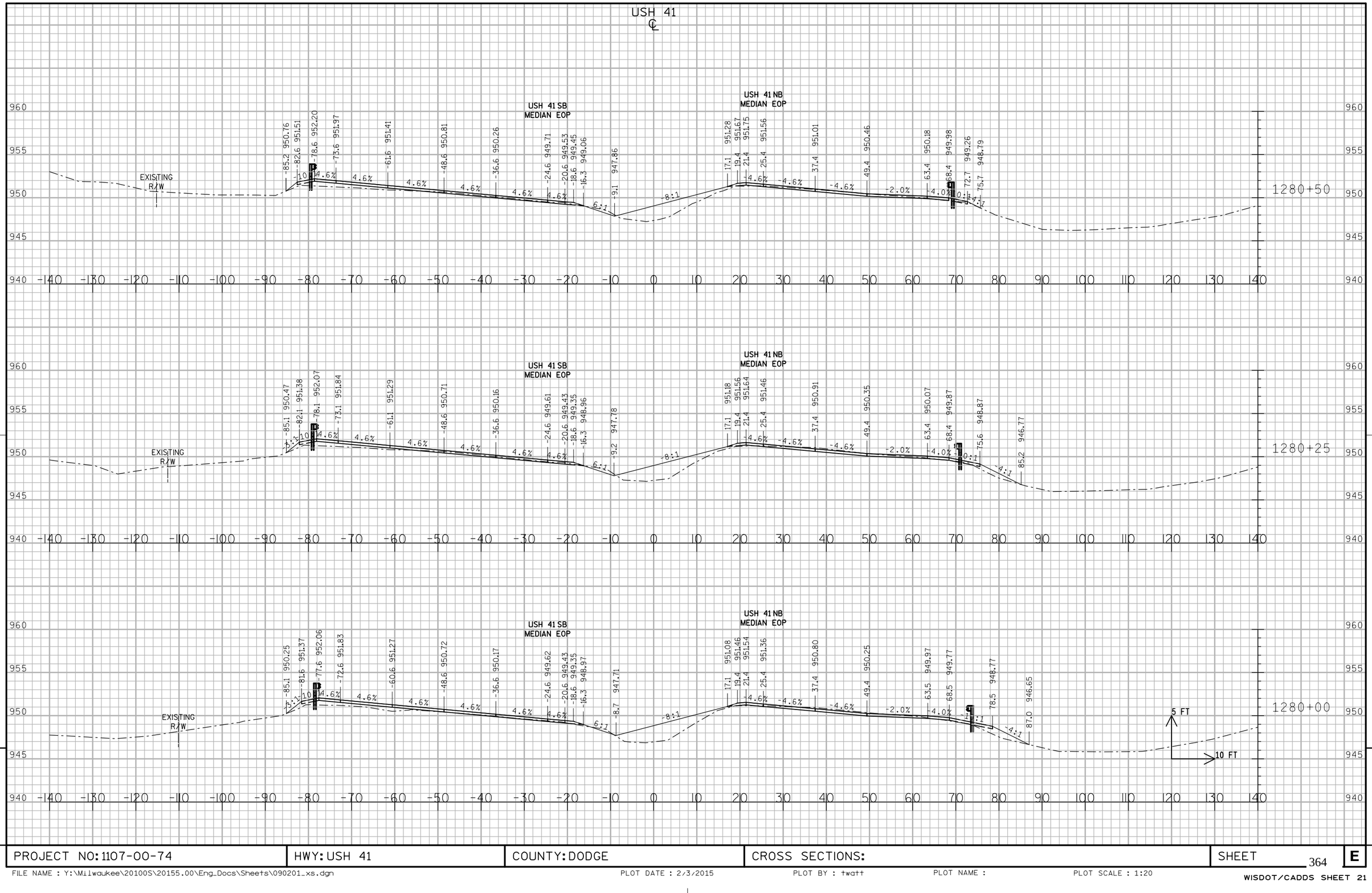
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 363	E

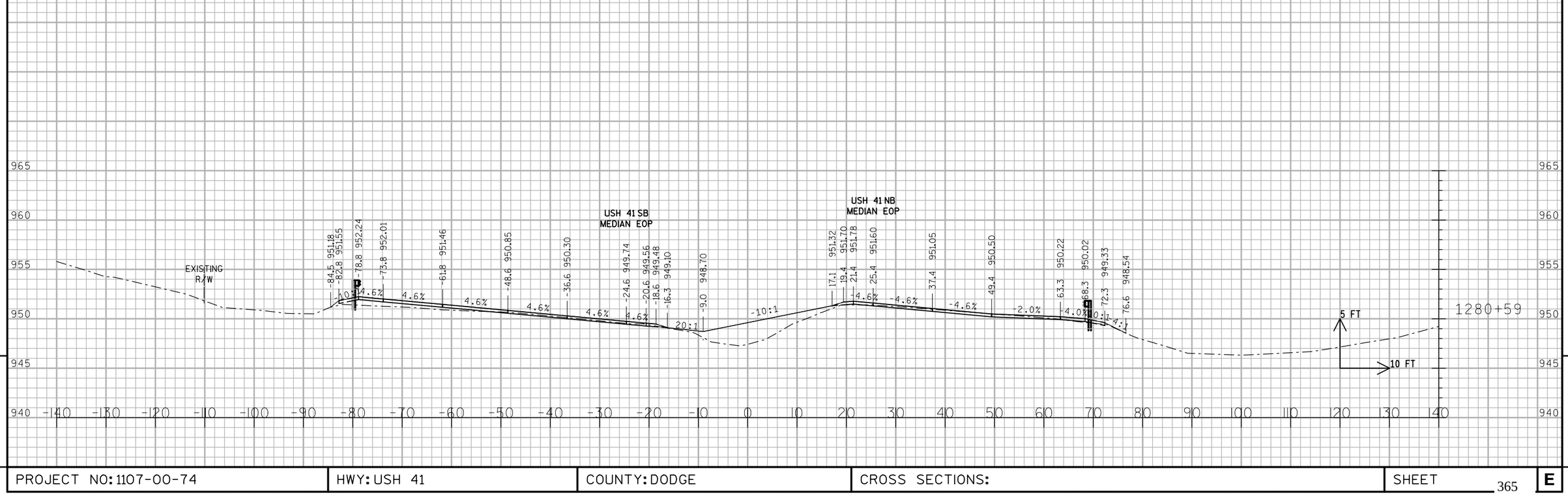


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 364	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



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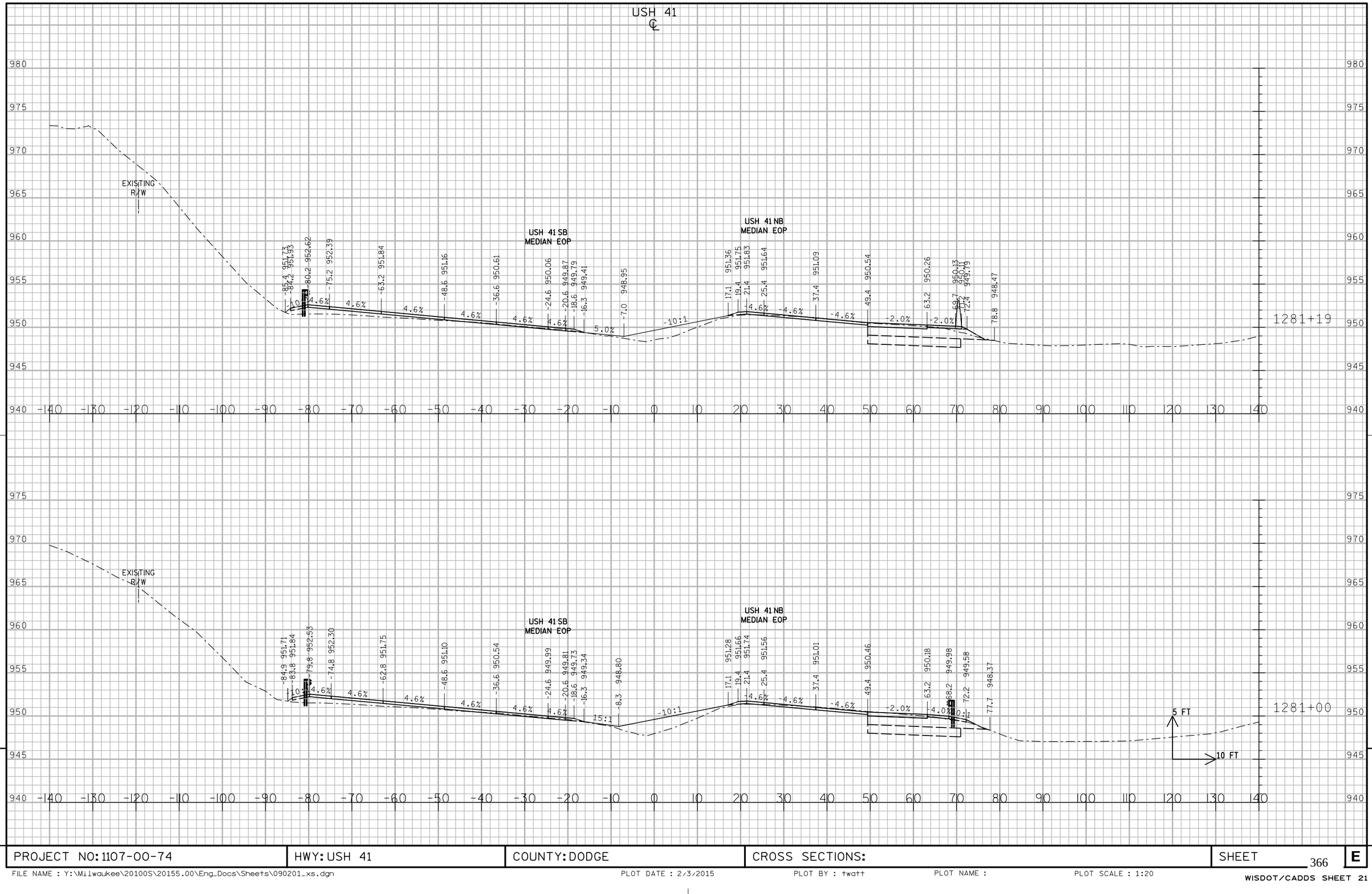
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 365	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 366	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄

980
975
970
965
960
955
950
945
940

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

951.01 951.97 952.66 952.43 951.88 951.19 950.64 950.09 949.90 949.82 949.44 948.99 951.44 951.82 951.90 951.72 951.17 950.62 950.34 950.21 950.18 950.01 949.81 949.24 949.23 948.53

-89.5 -84.5 -80.5 -75.5 -63.5 -48.6 -36.6 -24.6 -20.6 -18.6 -16.3 -7.3 17.1 19.4 21.4 25.4 37.4 49.4 63.1 69.7 71.1 73.9 77.7

-5:1 -10:1 4.6% 4.6% 4.6% 4.6% 4.6% 4.6% 4.6% 5.0% -10:1 -14.6% -4.6% -4.6% -2.0% -2.0%

USH 41 SB
MEDIAN EOP

USH 41 NB
MEDIAN EOP

5 FT
10 FT

1281+35

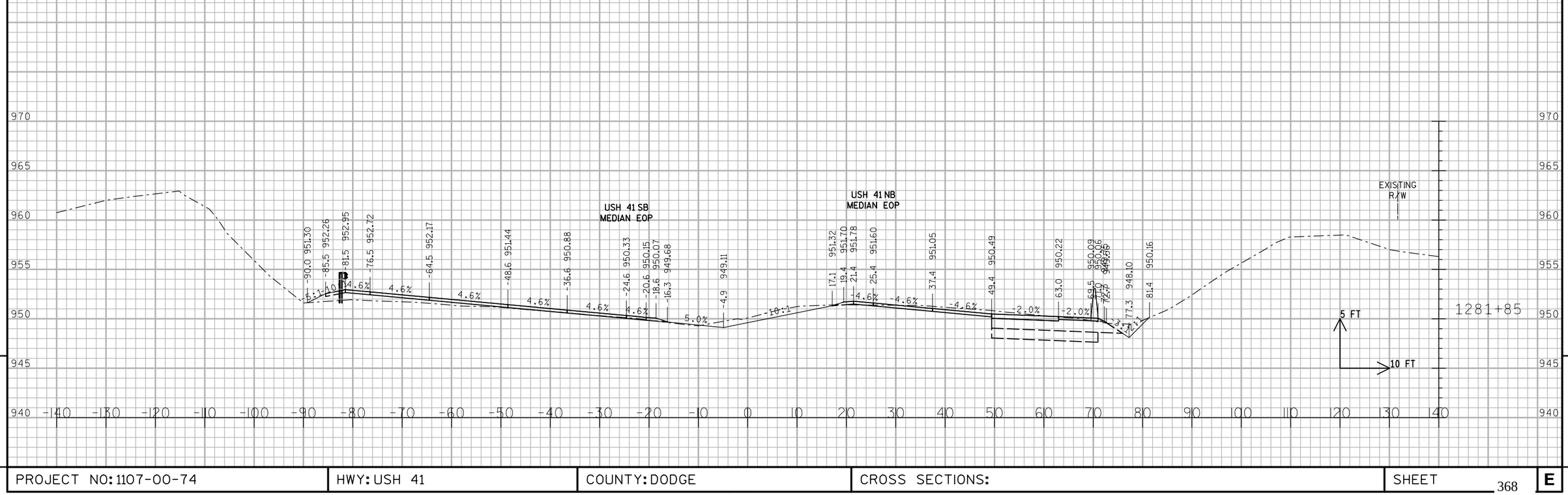
9

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 367	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



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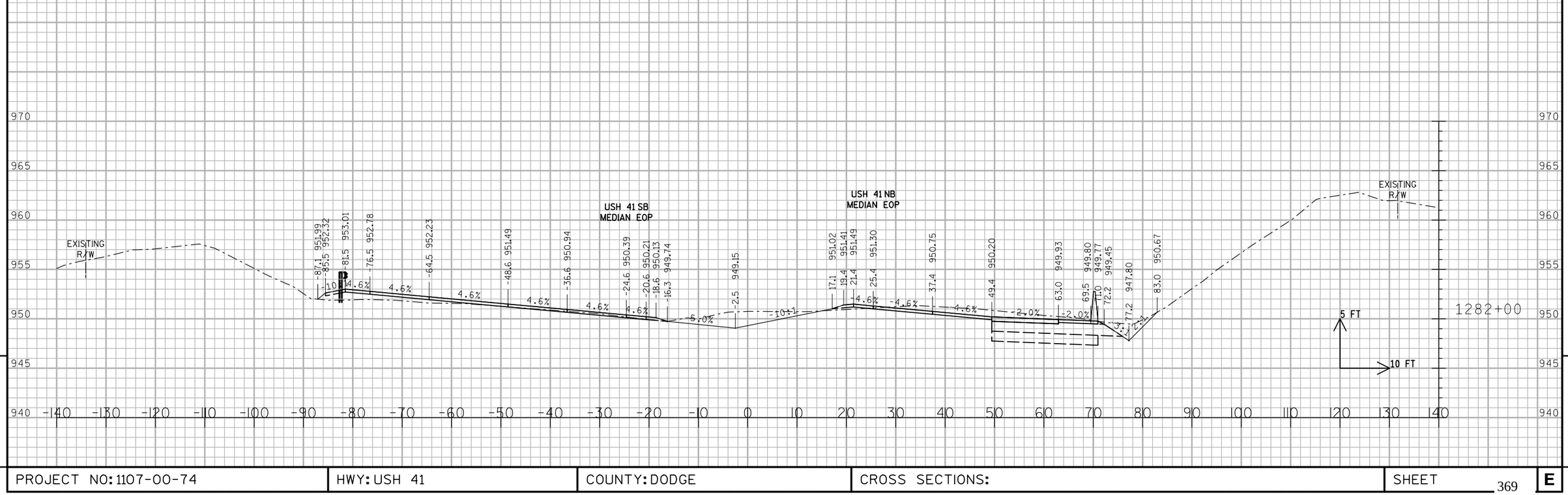
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 368	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



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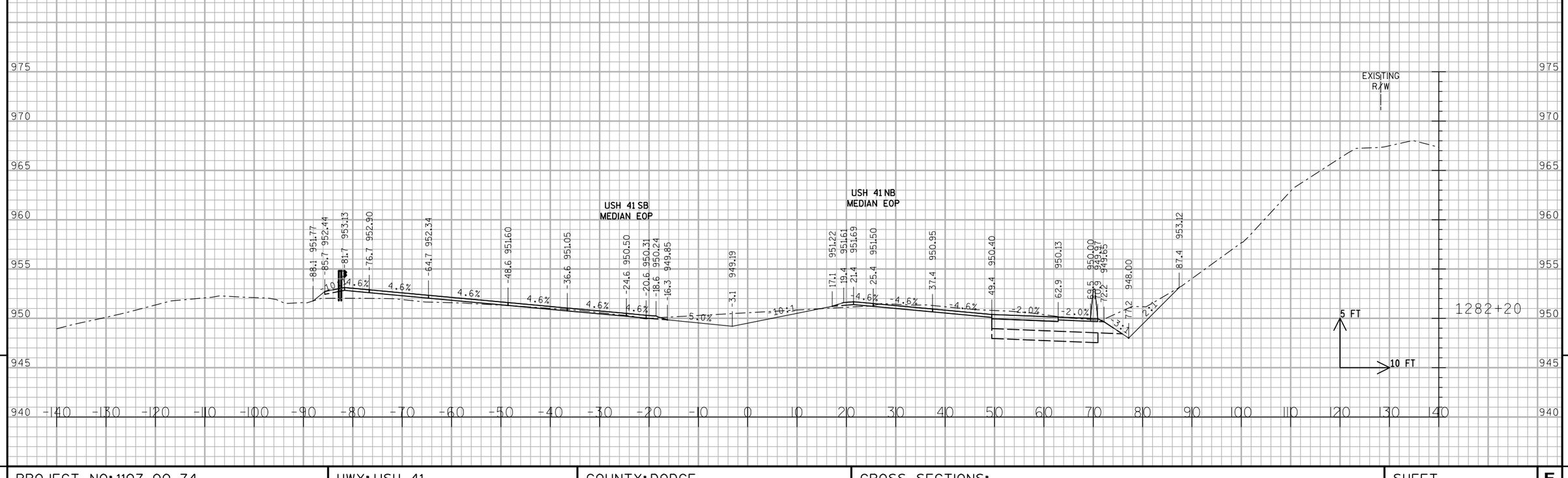
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 369	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 370	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄

985
980
975
970
965
960
955
950
945
940
935

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

89.9 951.48
86.5 952.56
82.5 953.25
77.5 953.02
65.5 952.47
48.6 951.69
36.6 951.14
24.6 950.59
20.6 950.40
18.6 950.32
16.3 949.94
6.4 949.45
17.1 951.81
19.4 952.19
21.4 952.27
25.4 952.09
37.4 951.54
49.4 950.98
62.8 950.72
69.3 950.59
70.8 950.56
72.1 950.24
77.1 948.59
79.1 949.63

4.6% 4.6% 4.6% 4.6% 4.6% 4.6% 4.6% 5.0% -10:1 -4.6% -4.6% -4.6% -2.0% -2.0%

USH 41 SB
MEDIAN EOP

USH 41 NB
MEDIAN EOP

EXISTING
R/W

WETLAND

1282+70

5 FT
10 FT

9 9

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 371	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄

985
980
975
970
965
960
955
950
945
940
935

EXISTING R/W

USH 41 SB MEDIAN EOP

USH 41 NB MEDIAN EOP

WETLAND

-89.5 951.81
-86.9 952.59
-82.9 953.28
-77.9 953.05
-65.8 952.49
-48.6 951.70
-36.6 951.15
-24.6 950.59
-20.6 950.41
-18.6 950.33
-16.3 949.95
-5.9 949.58
17.1 951.87
19.4 952.26
21.4 952.34
25.4 952.15
37.4 951.60
49.4 951.05
62.7 950.78
69.3 950.65
70.7 950.62
72.0 950.51
77.0 948.66
81.2 950.77

10:1
25:1
4.6%
-2.0%

5 FT
10 FT

1282+86

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

9 9

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 372	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

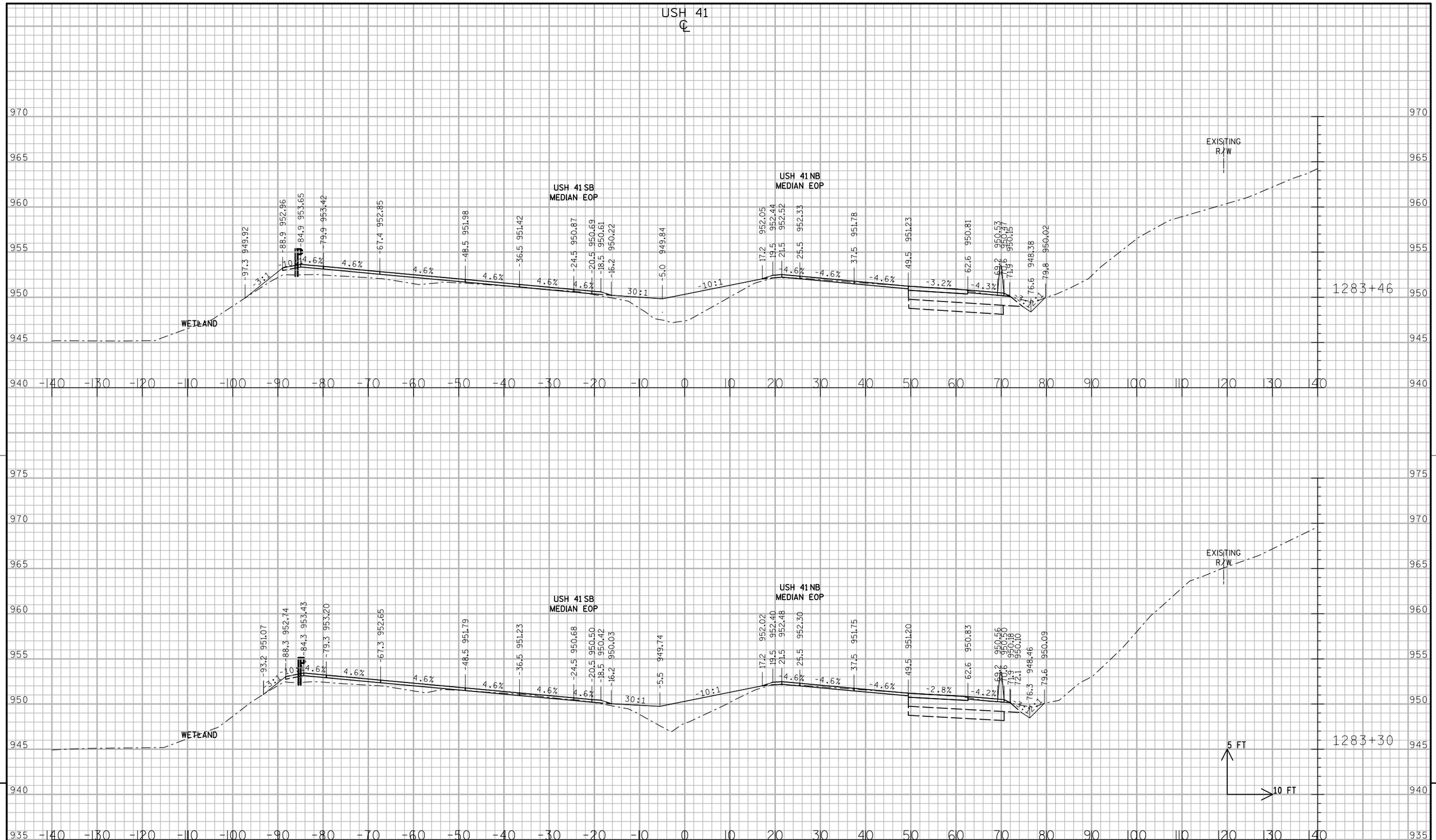
WISDOT/CADDS SHEET 21

USH 41
℄

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 373	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 374	E

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WISDOT/CADDS SHEET 21

9

9

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 375	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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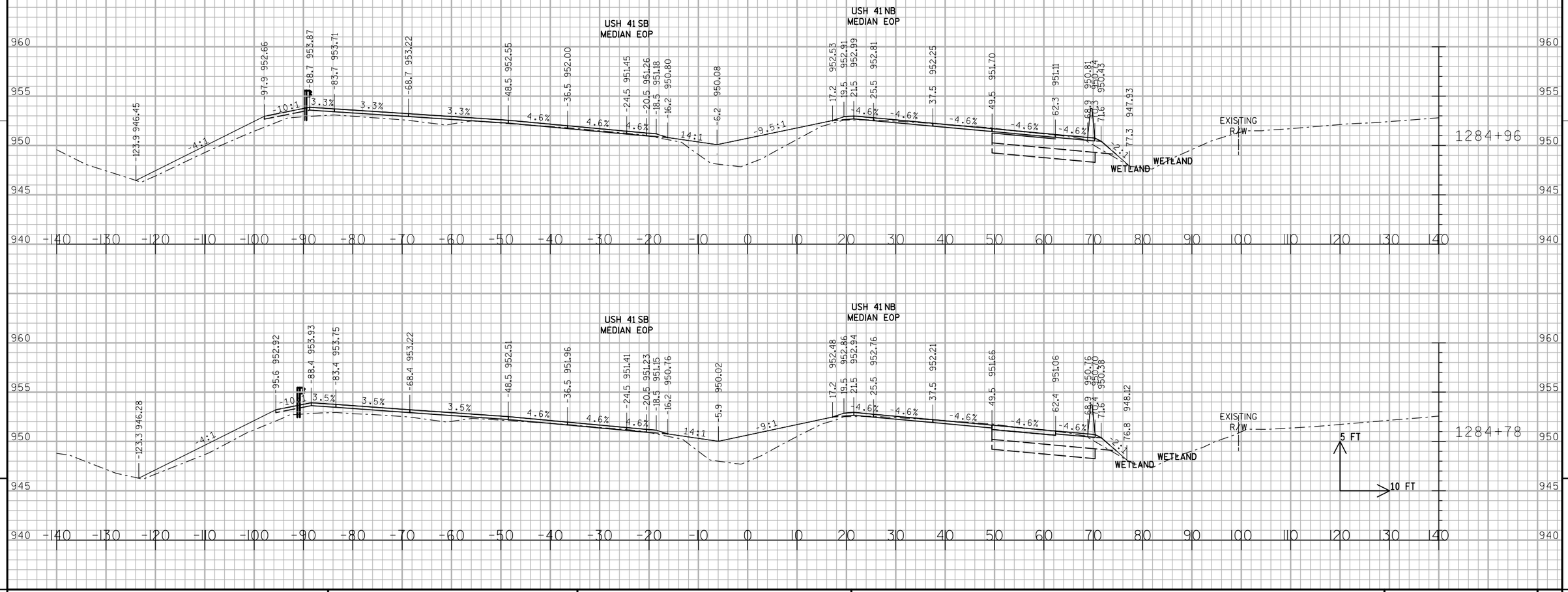

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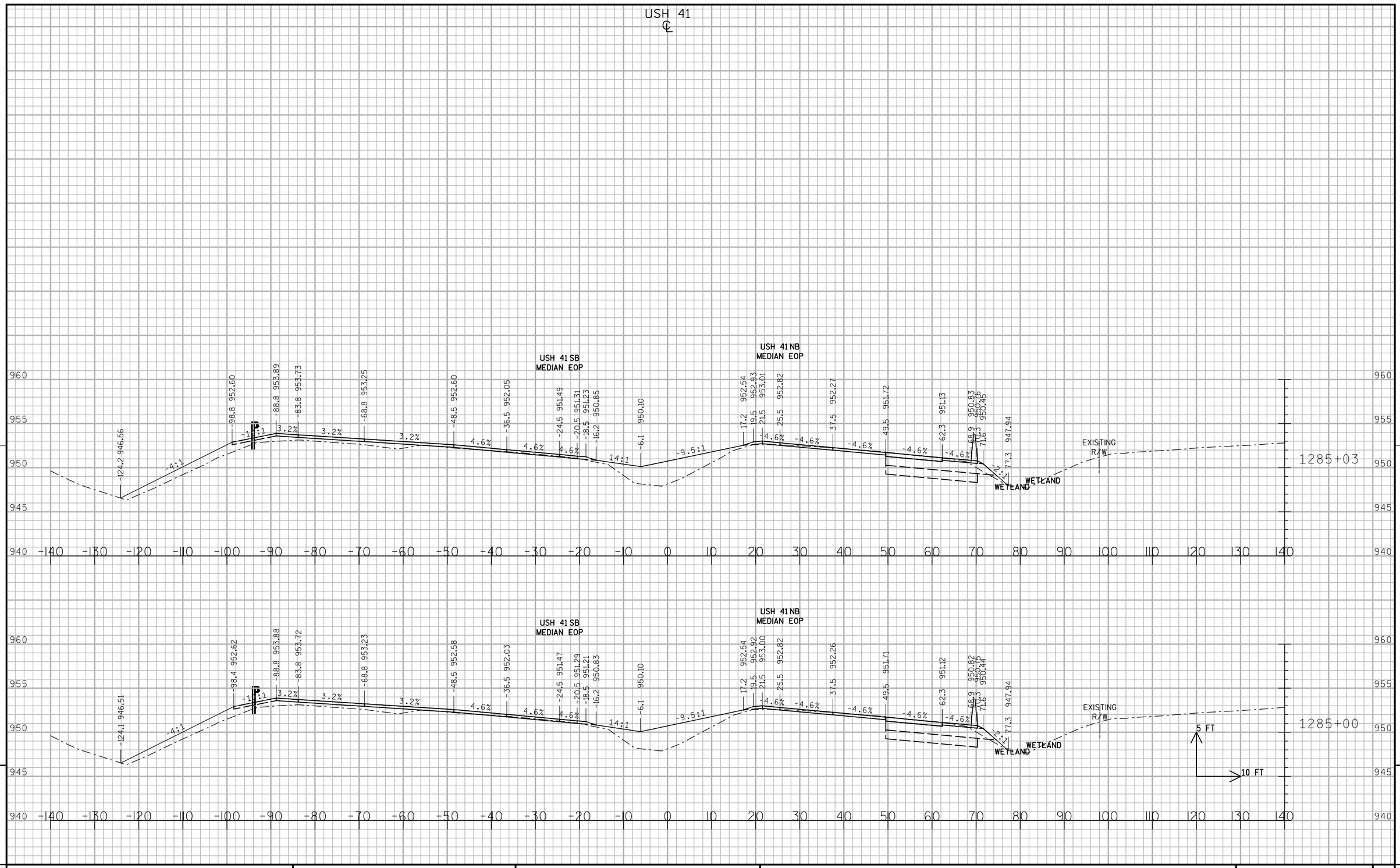
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 376	E



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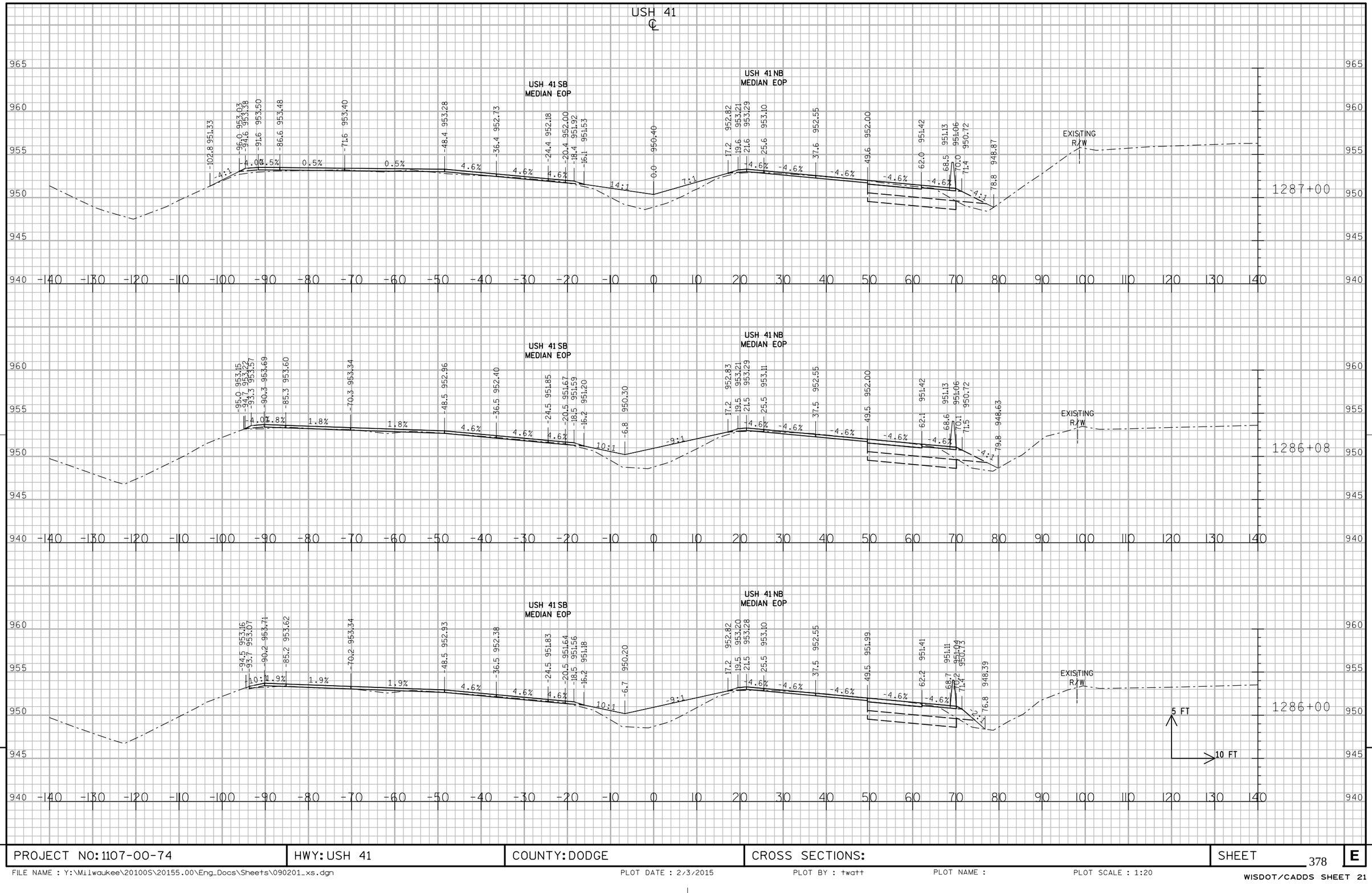
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 377	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

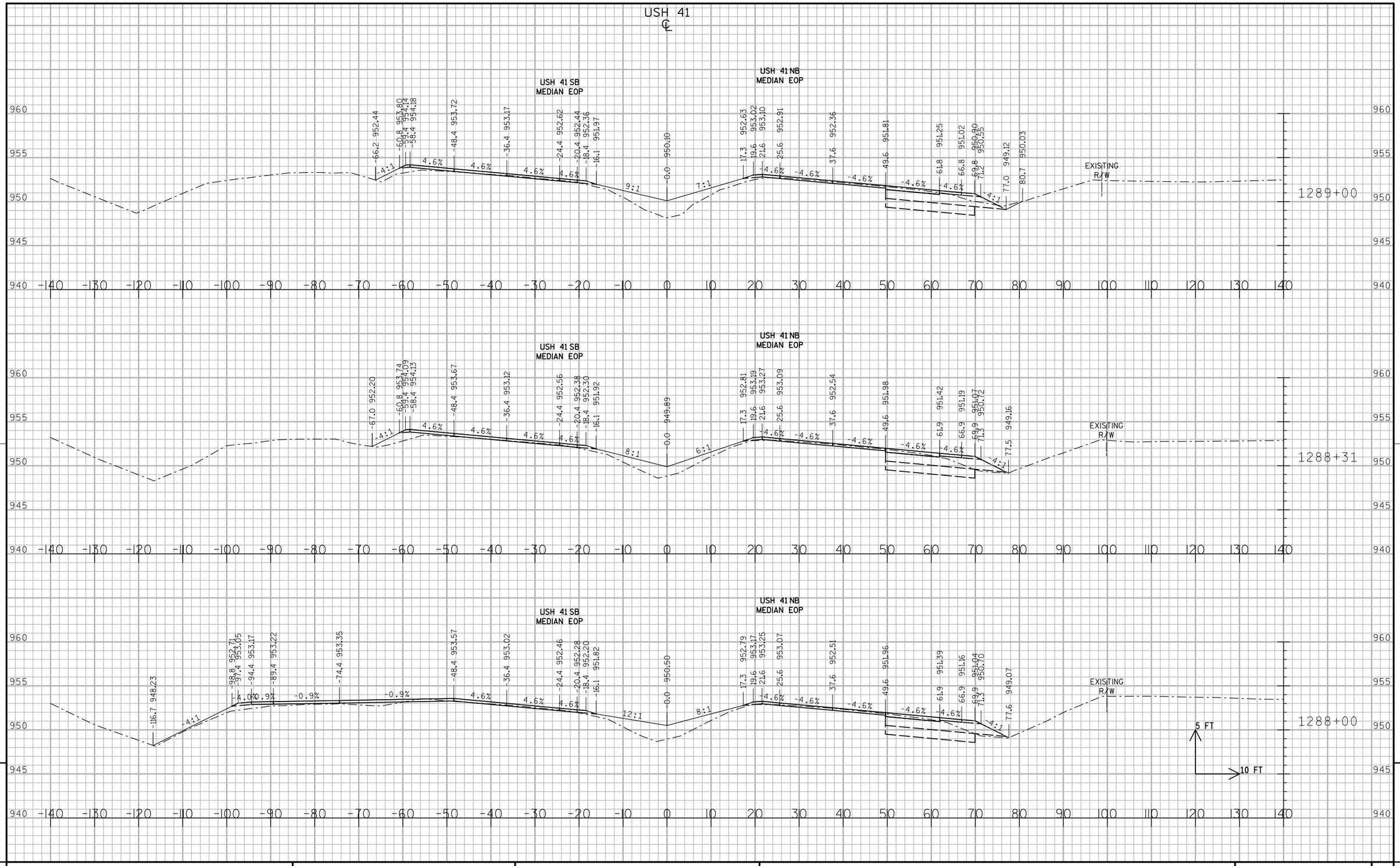
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 378	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 379	E

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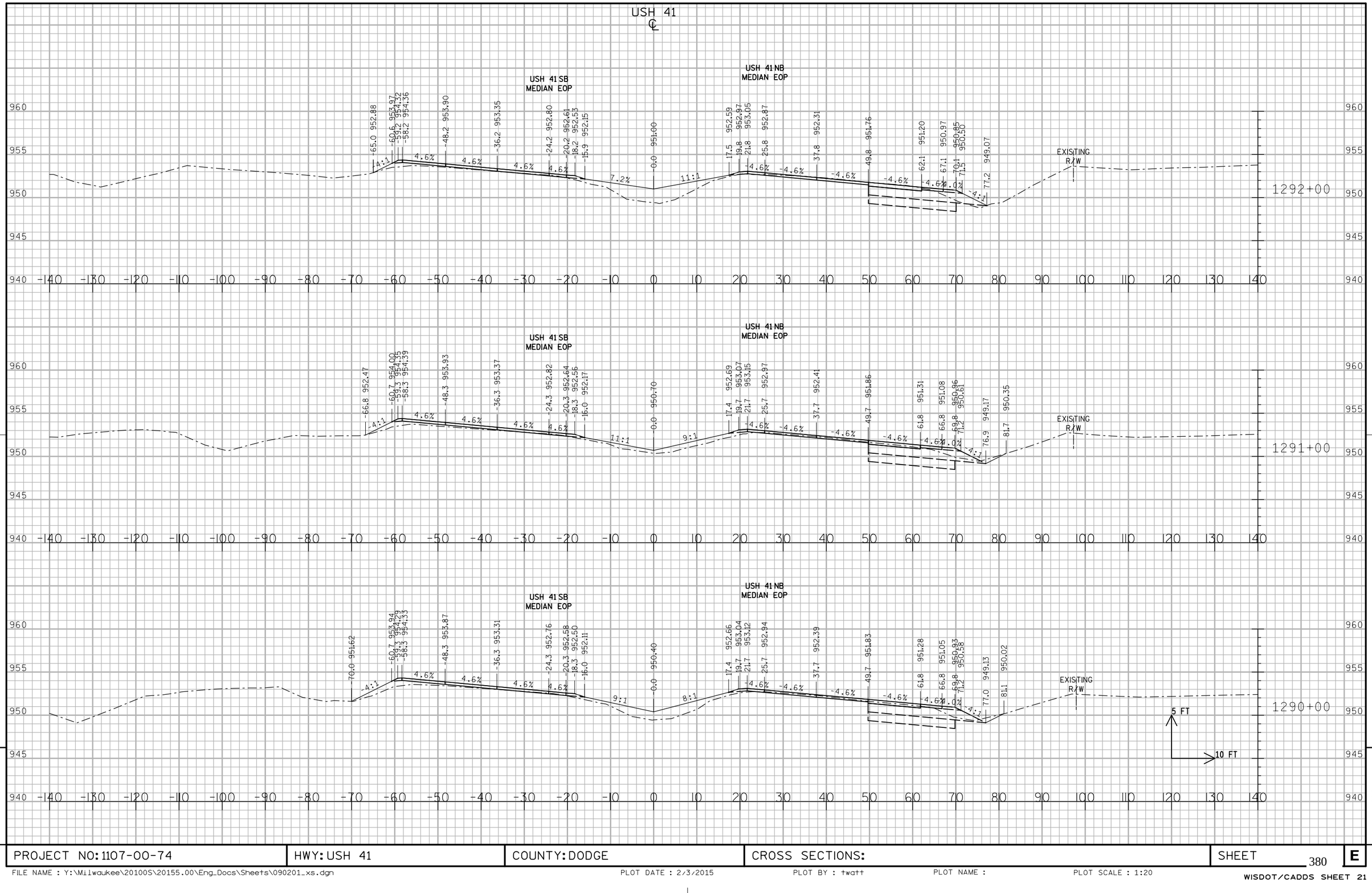
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 380	E

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WISDOT/CADDS SHEET 21

USH 41
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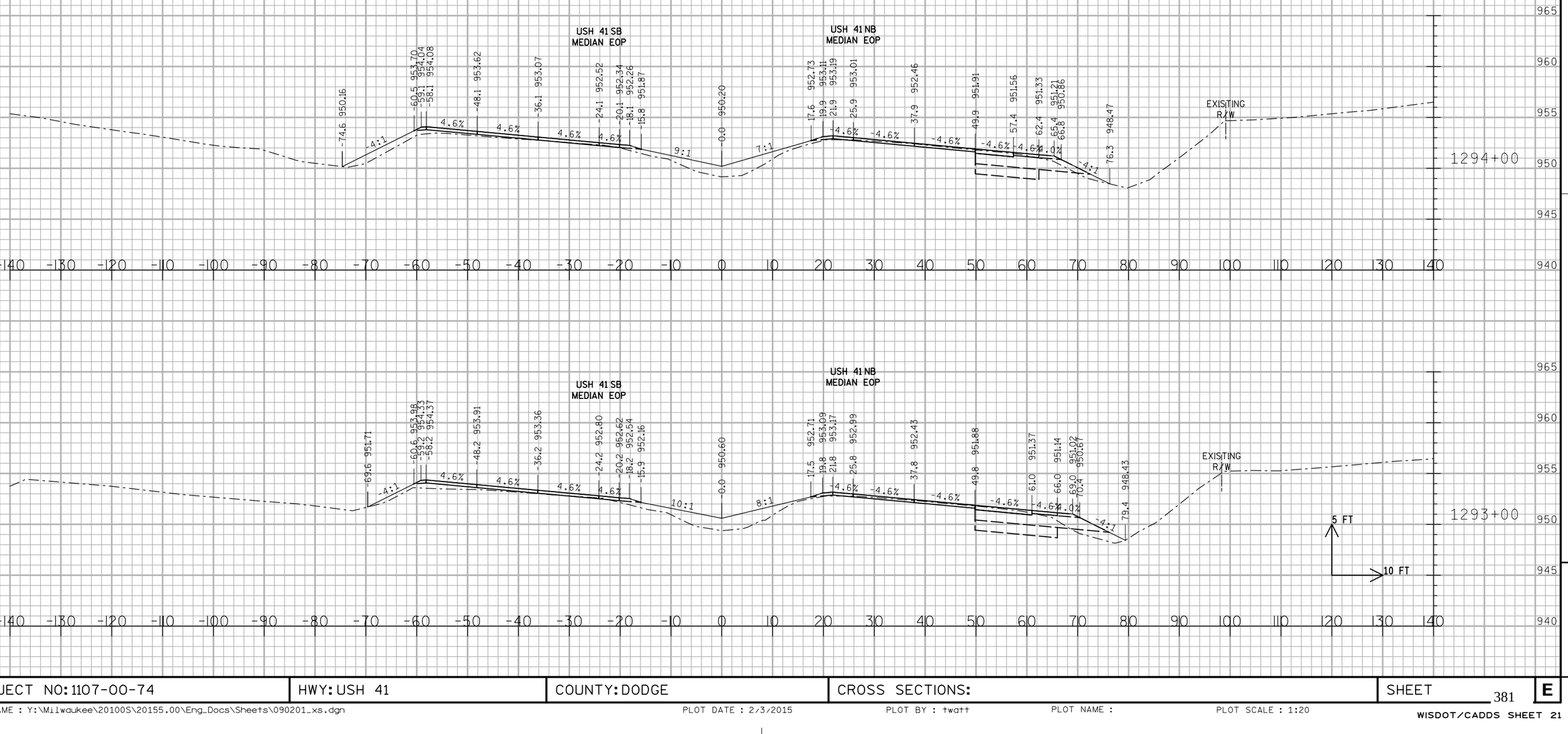

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 381	E

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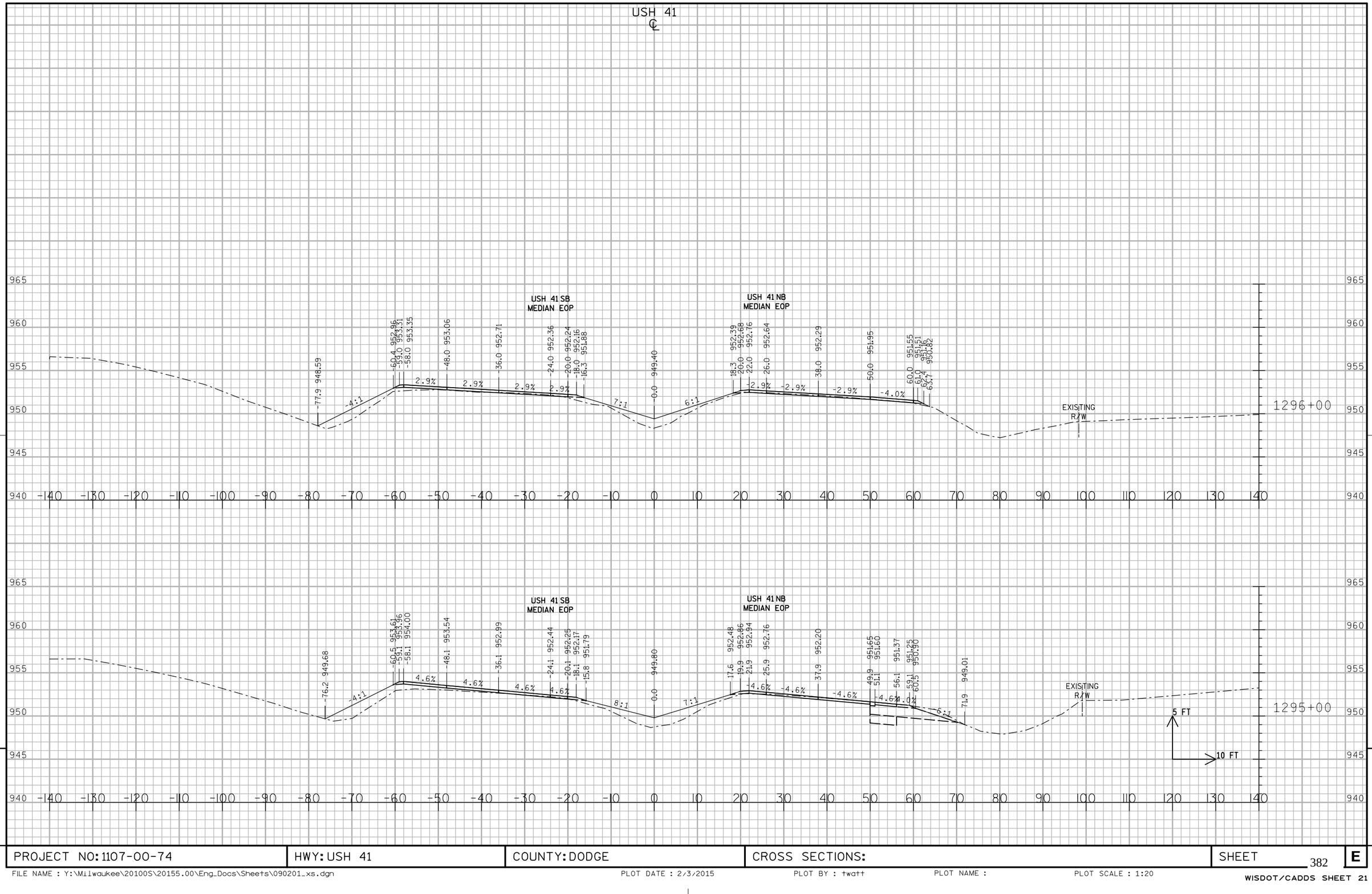
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 382	E

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WISDOT/CADDS SHEET 21

USH 41
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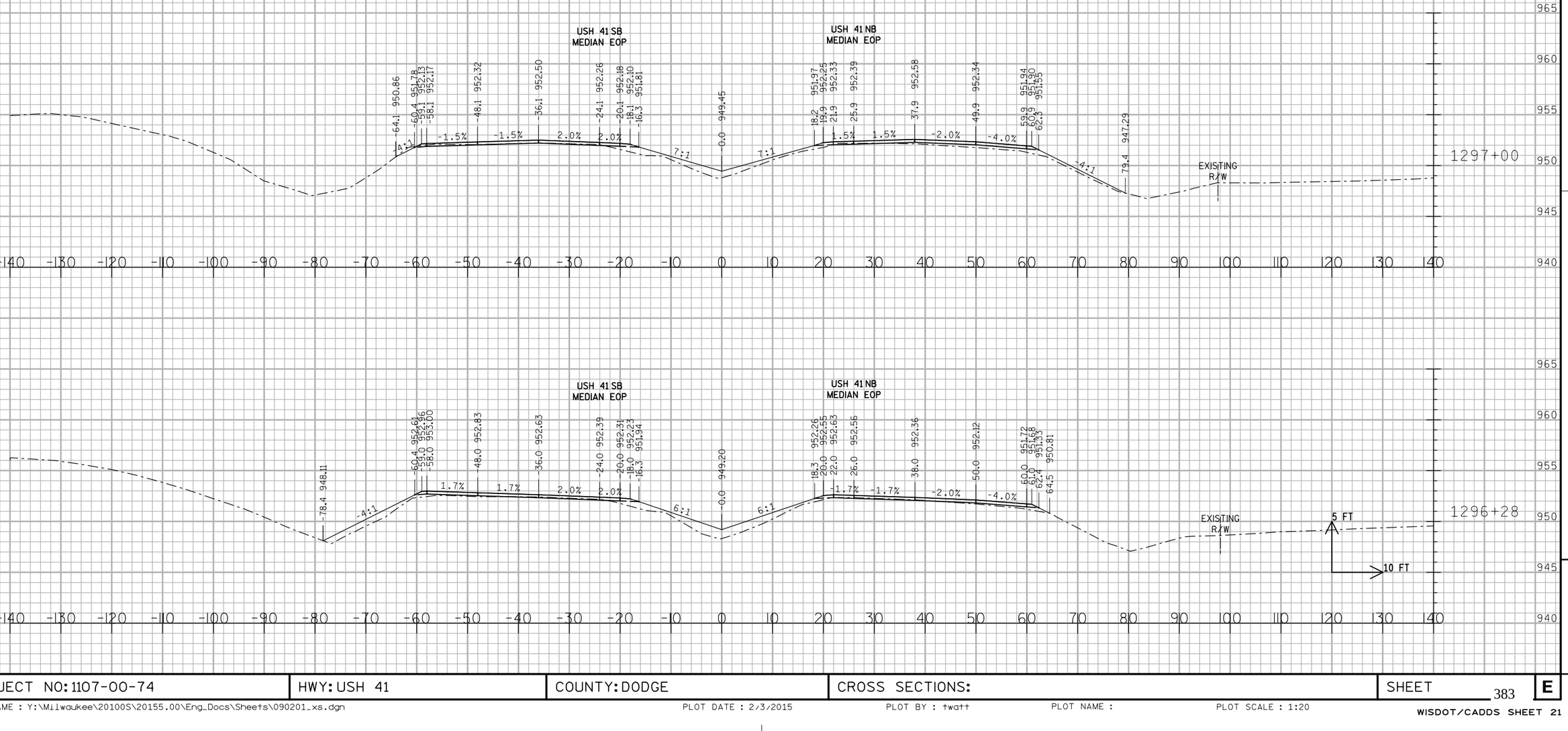

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 383	E

USH 41
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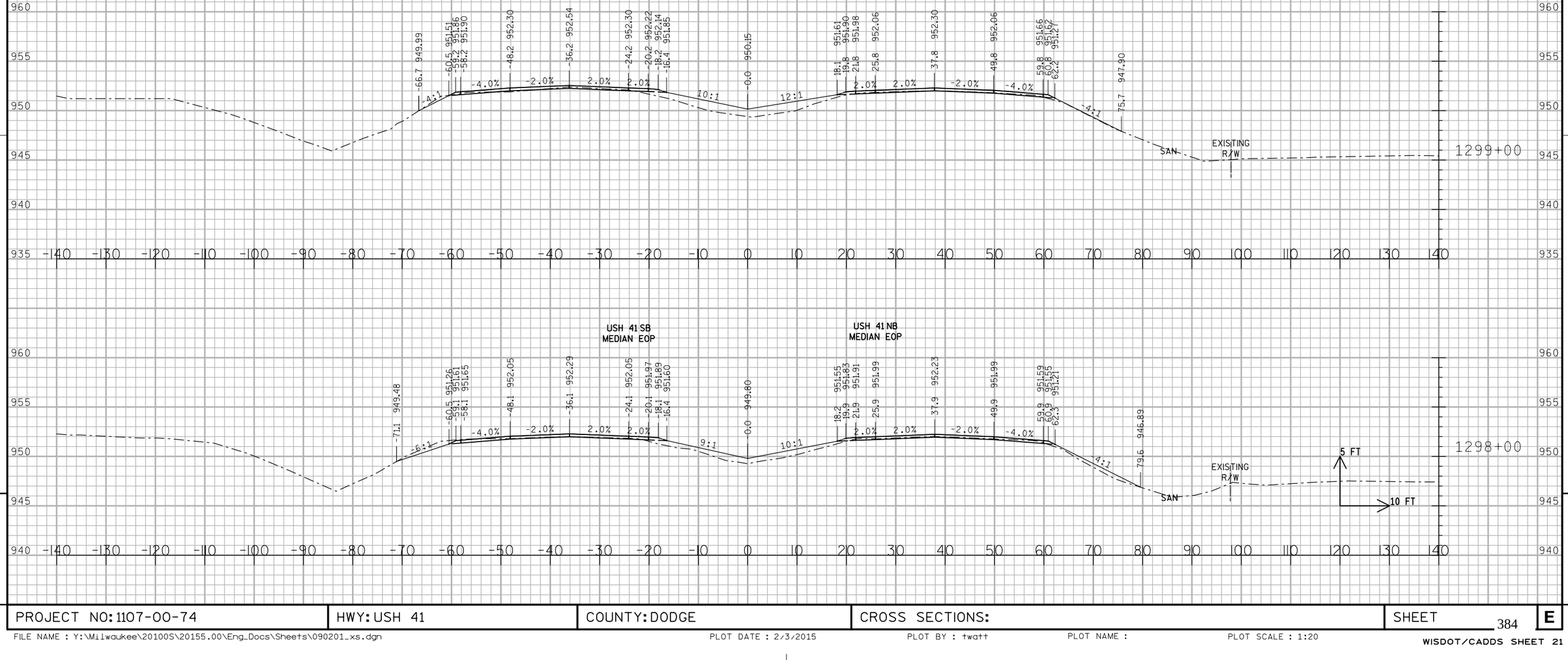

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 384	E

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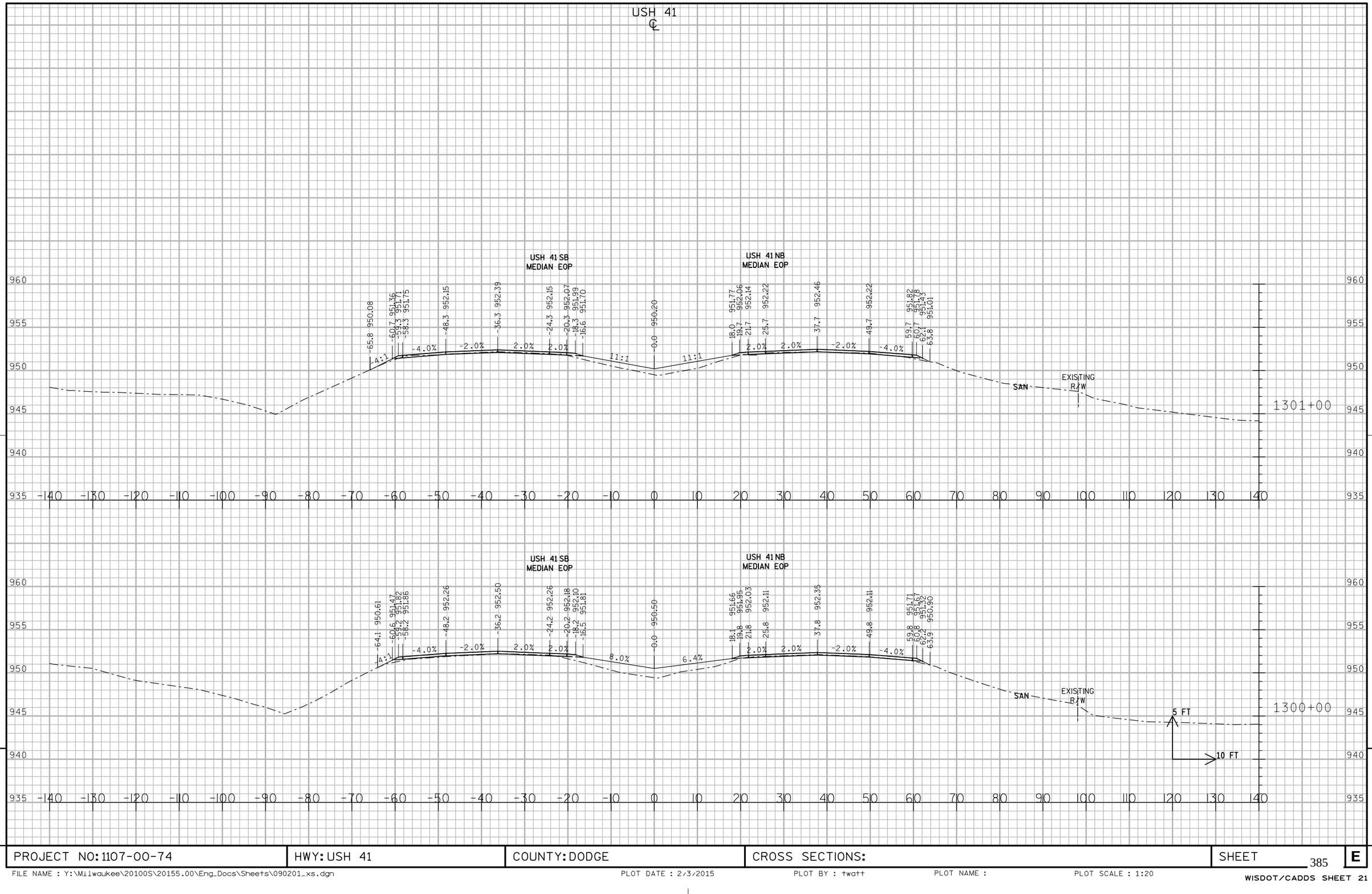

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 385	E

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WISDOT/CADDS SHEET 21

USH 41
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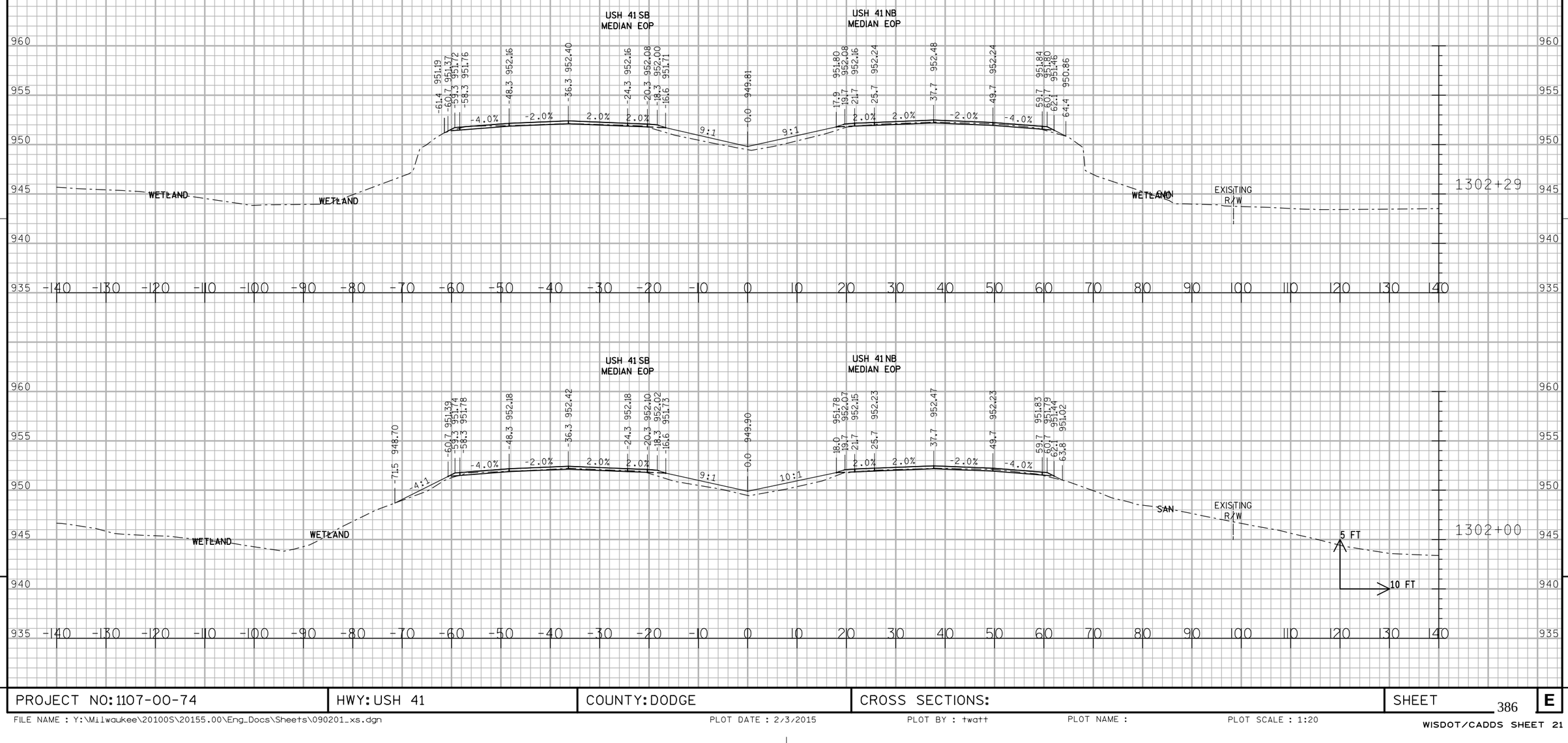

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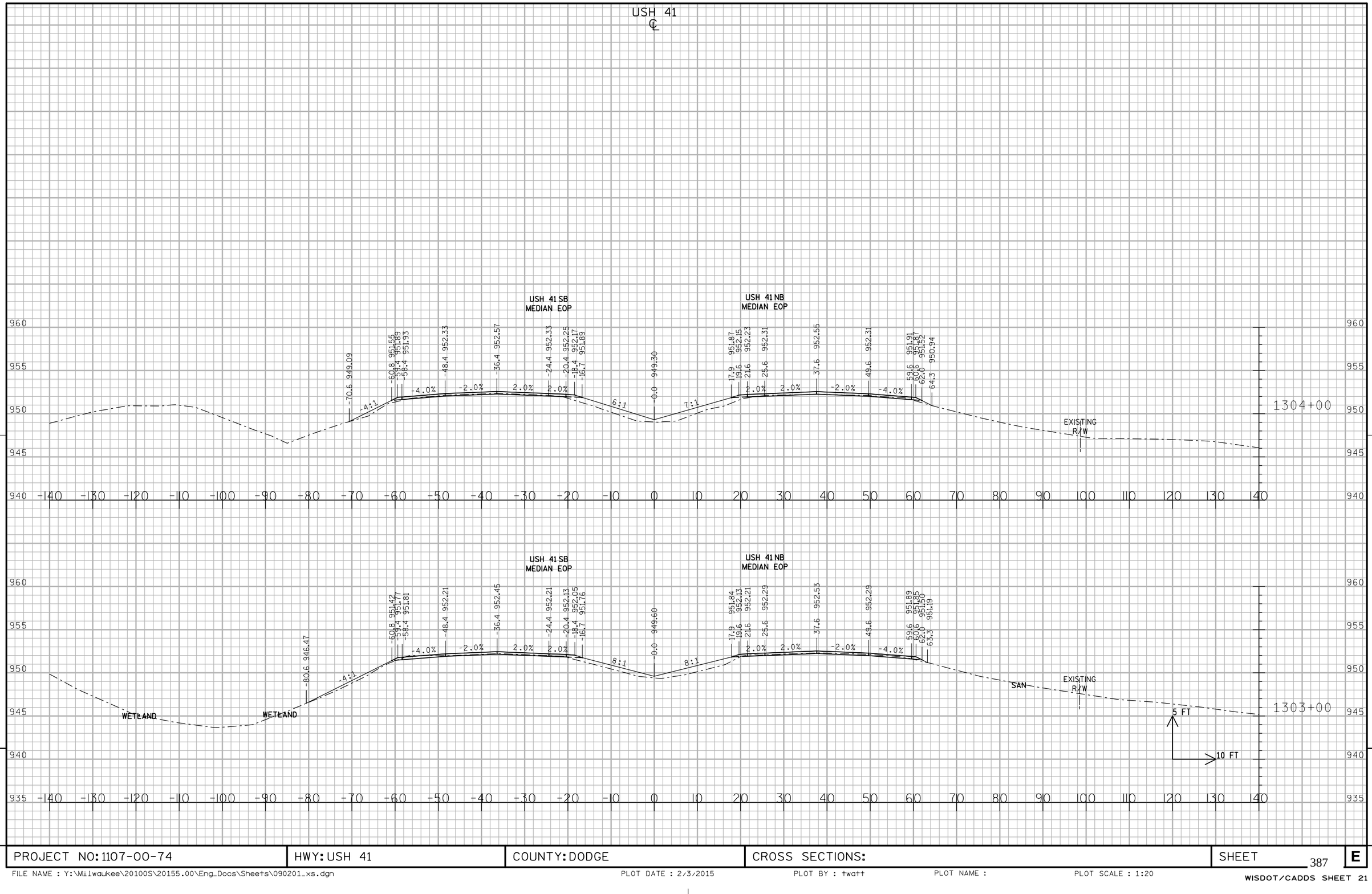
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 386	E



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 387	E

USH 41
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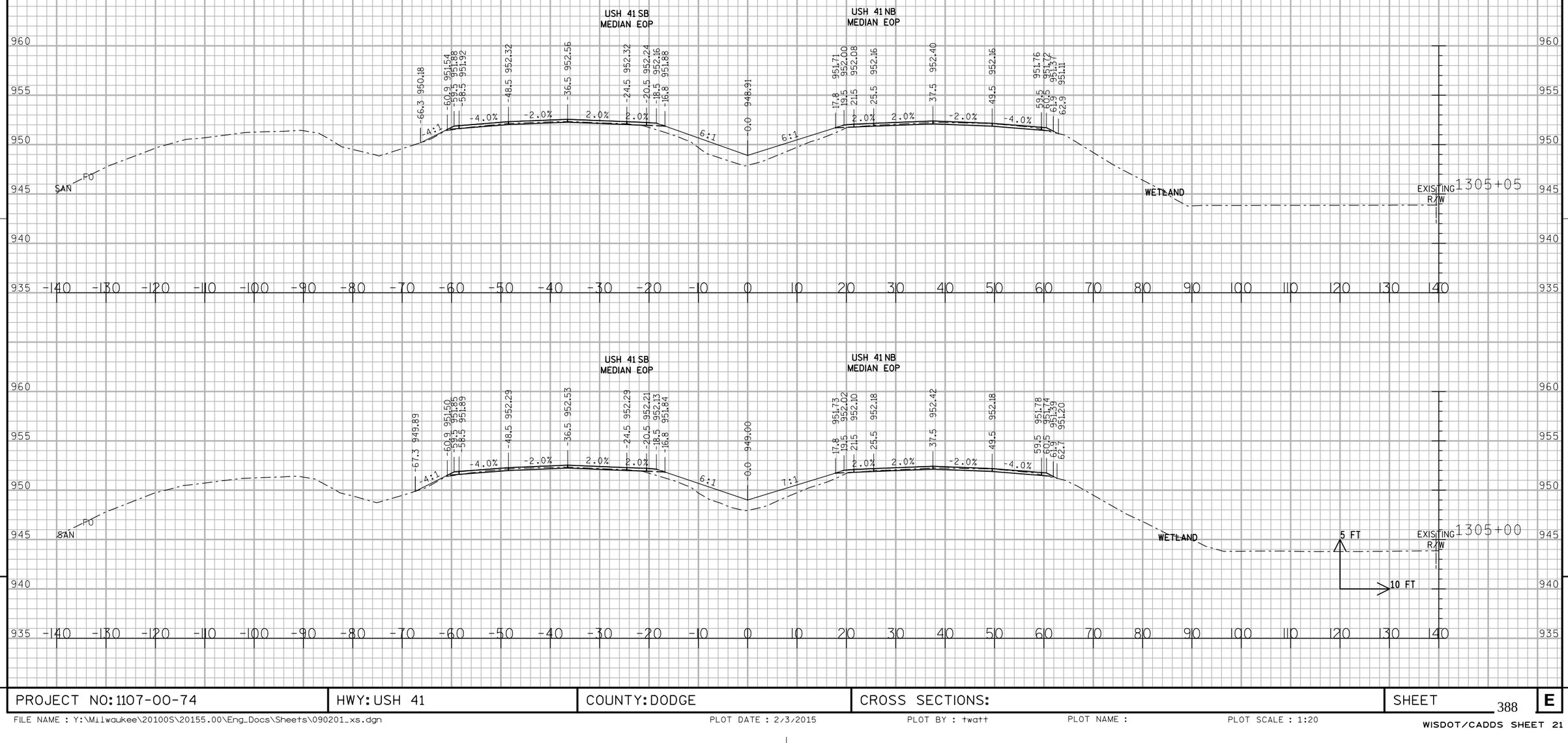

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 388	E

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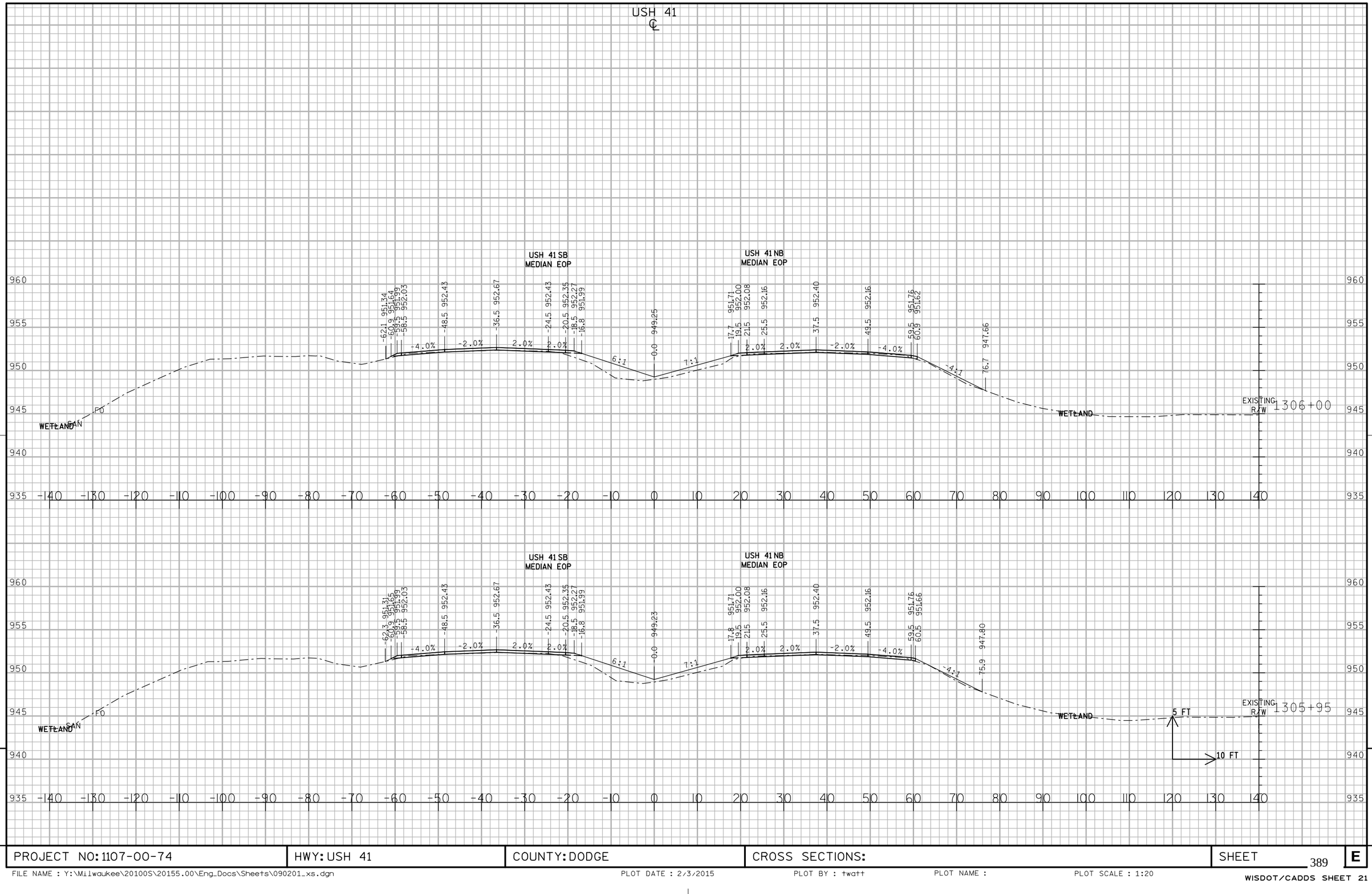
WISDOT/CADDS SHEET 21



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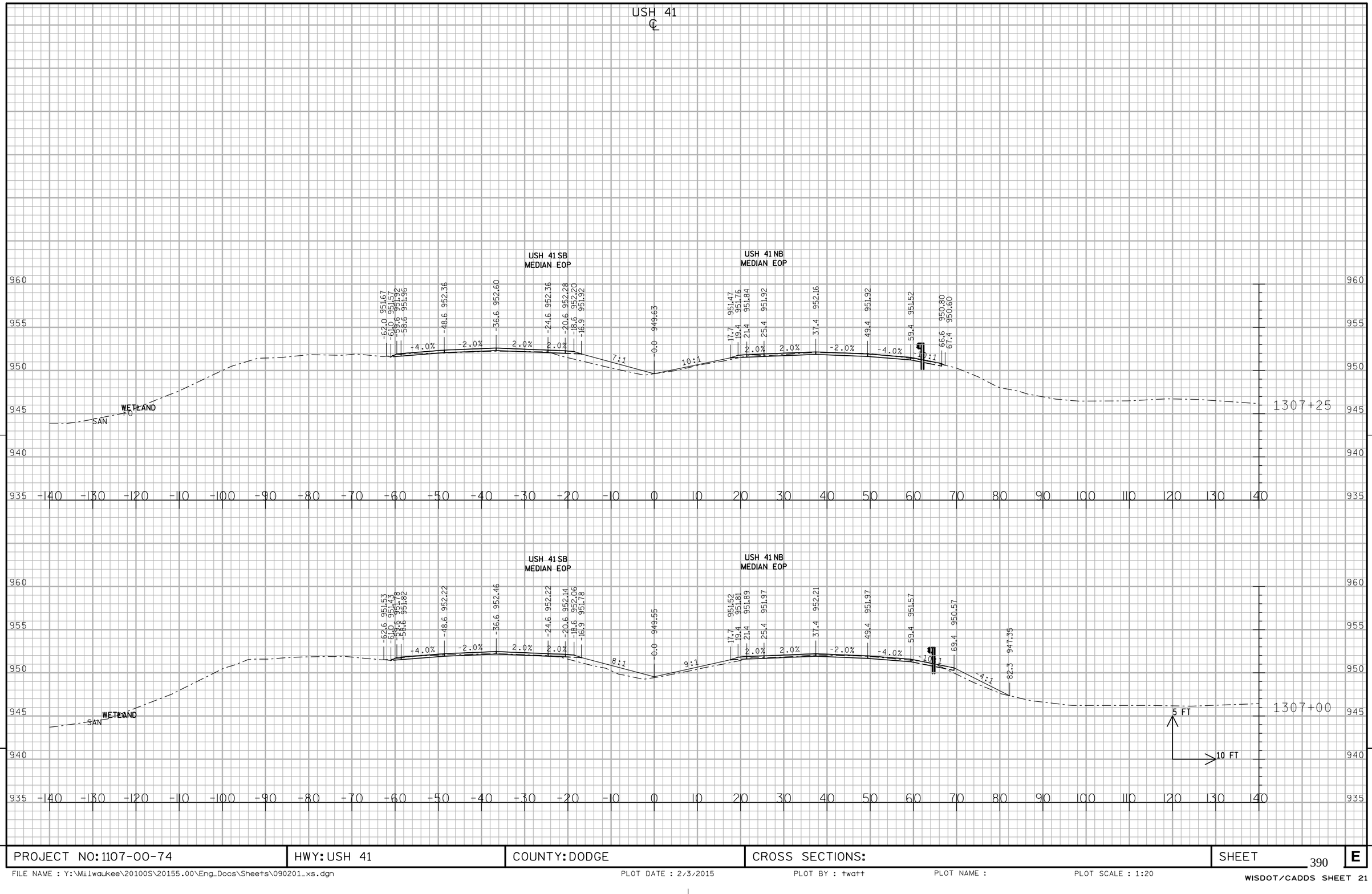

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 390	E

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WISDOT/CADDS SHEET 21

USH 41
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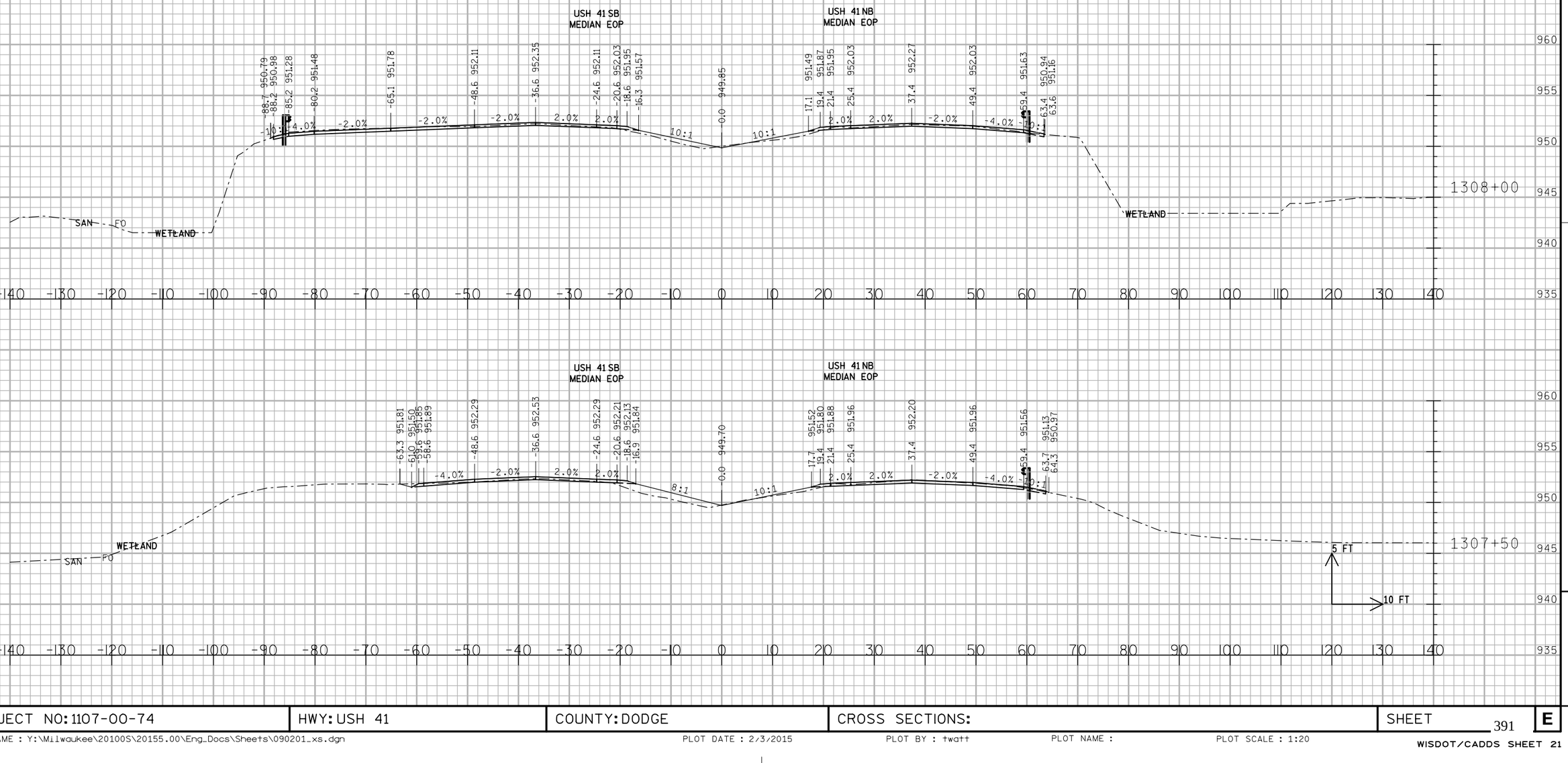

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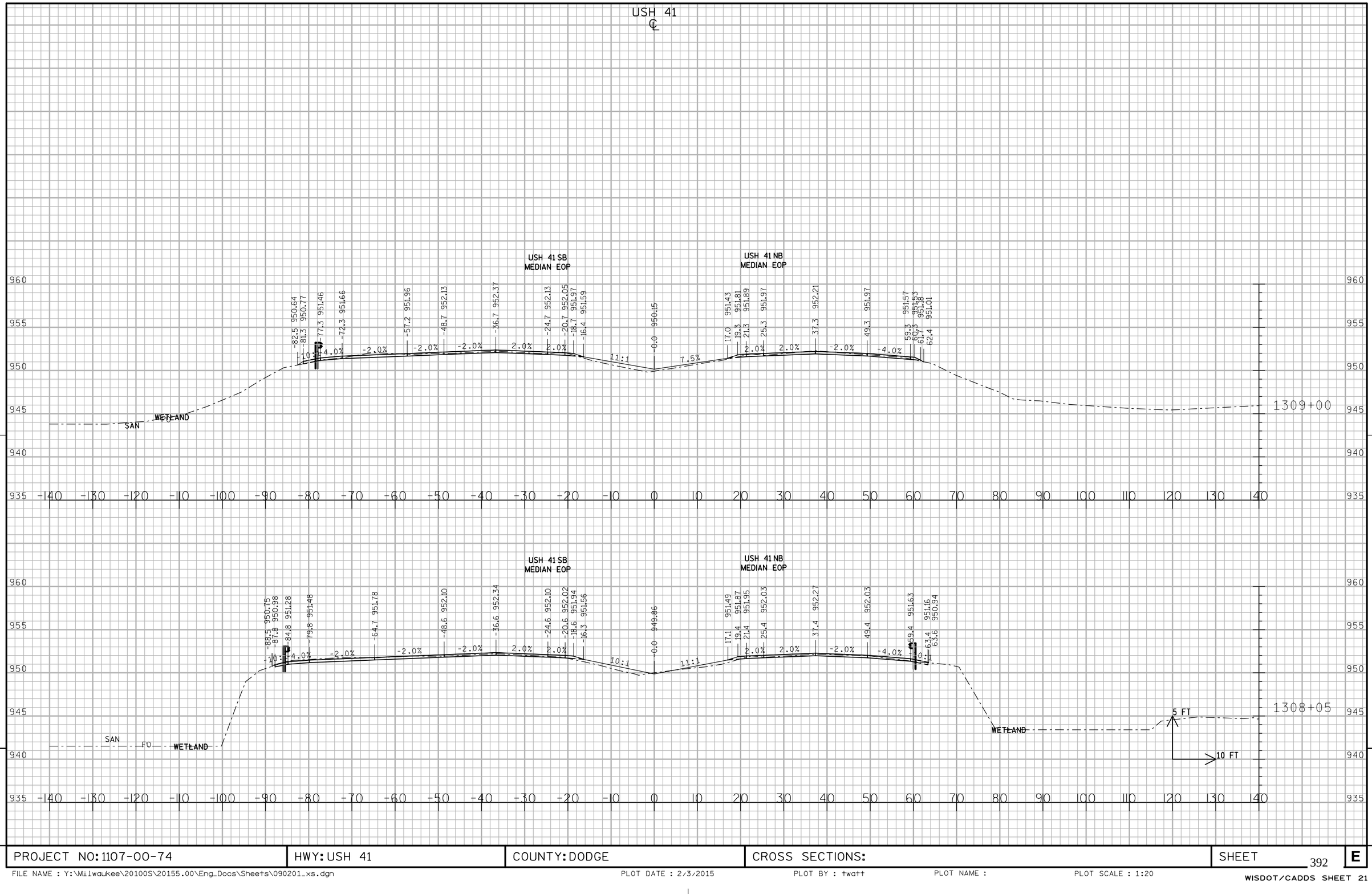
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 391	E



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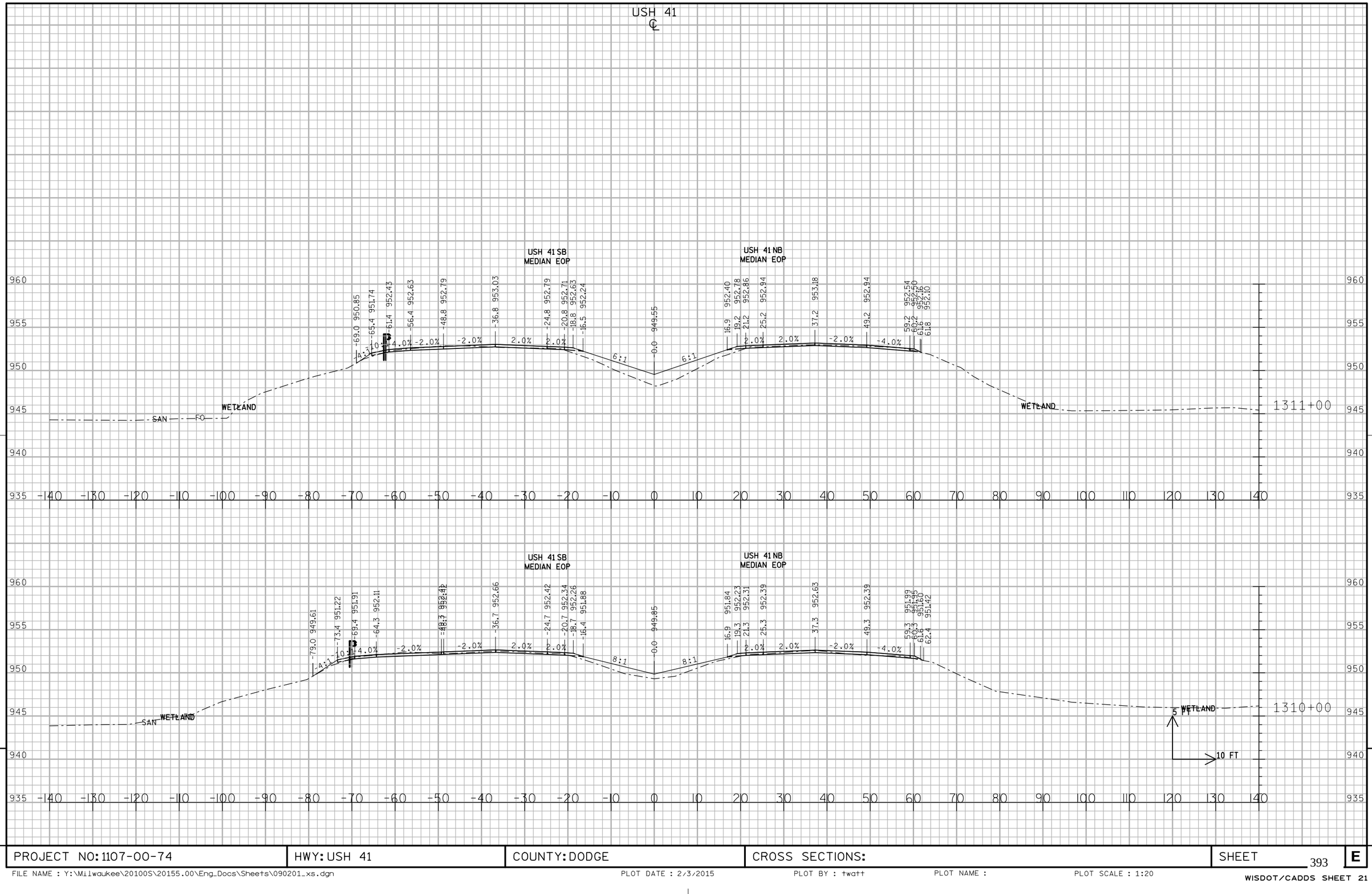

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 393	E

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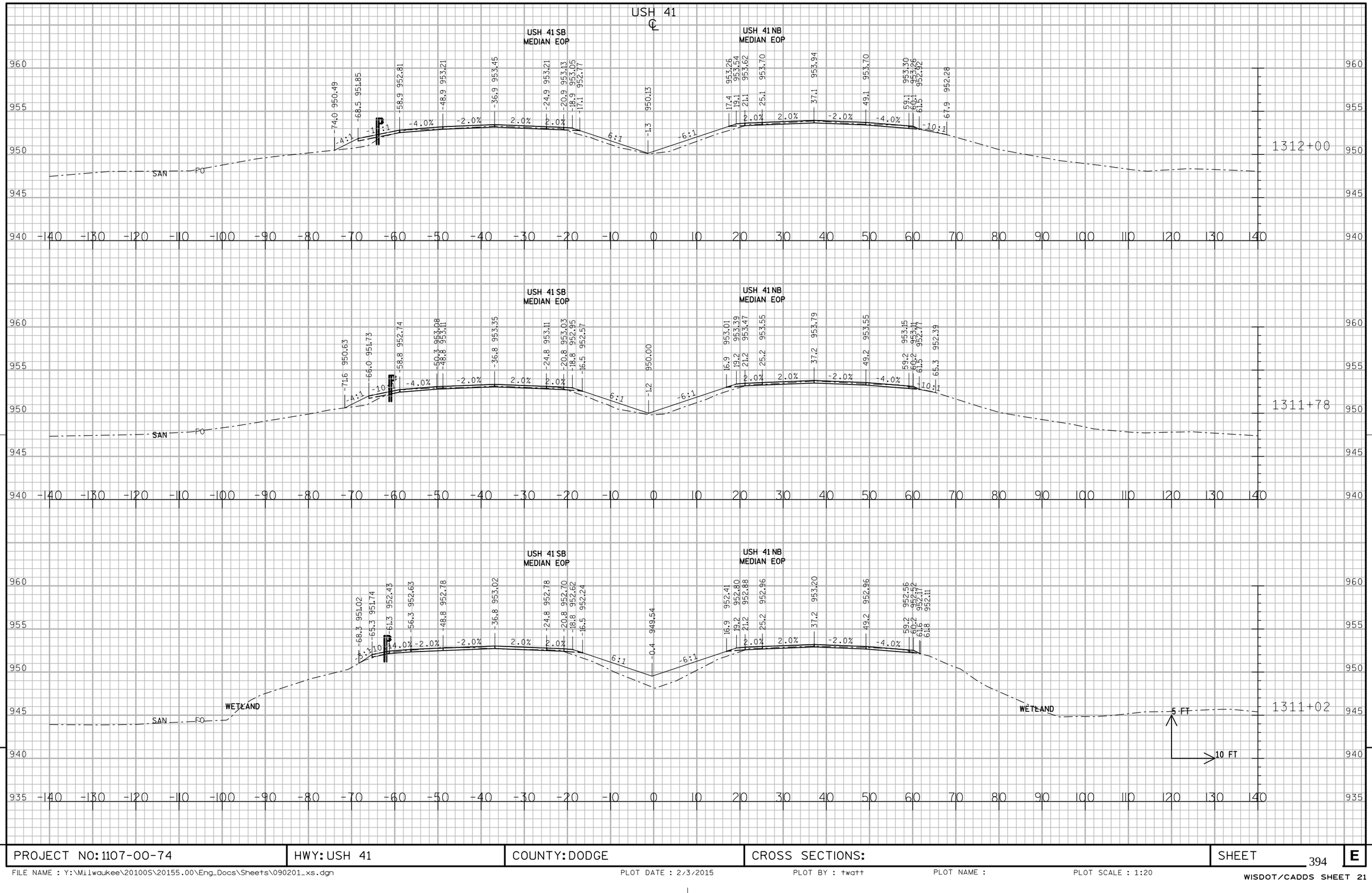
WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 394	E

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WISDOT/CADDS SHEET 21

USH 41
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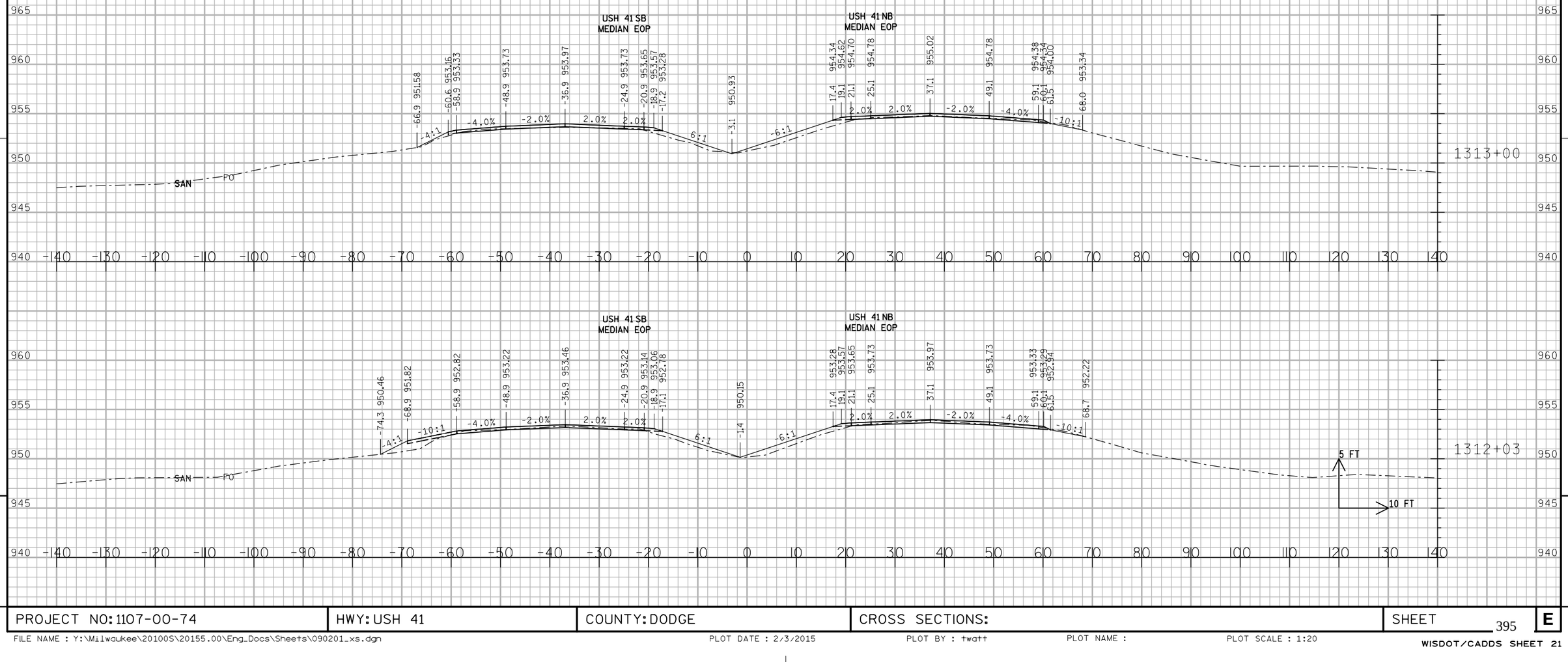

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 395	E

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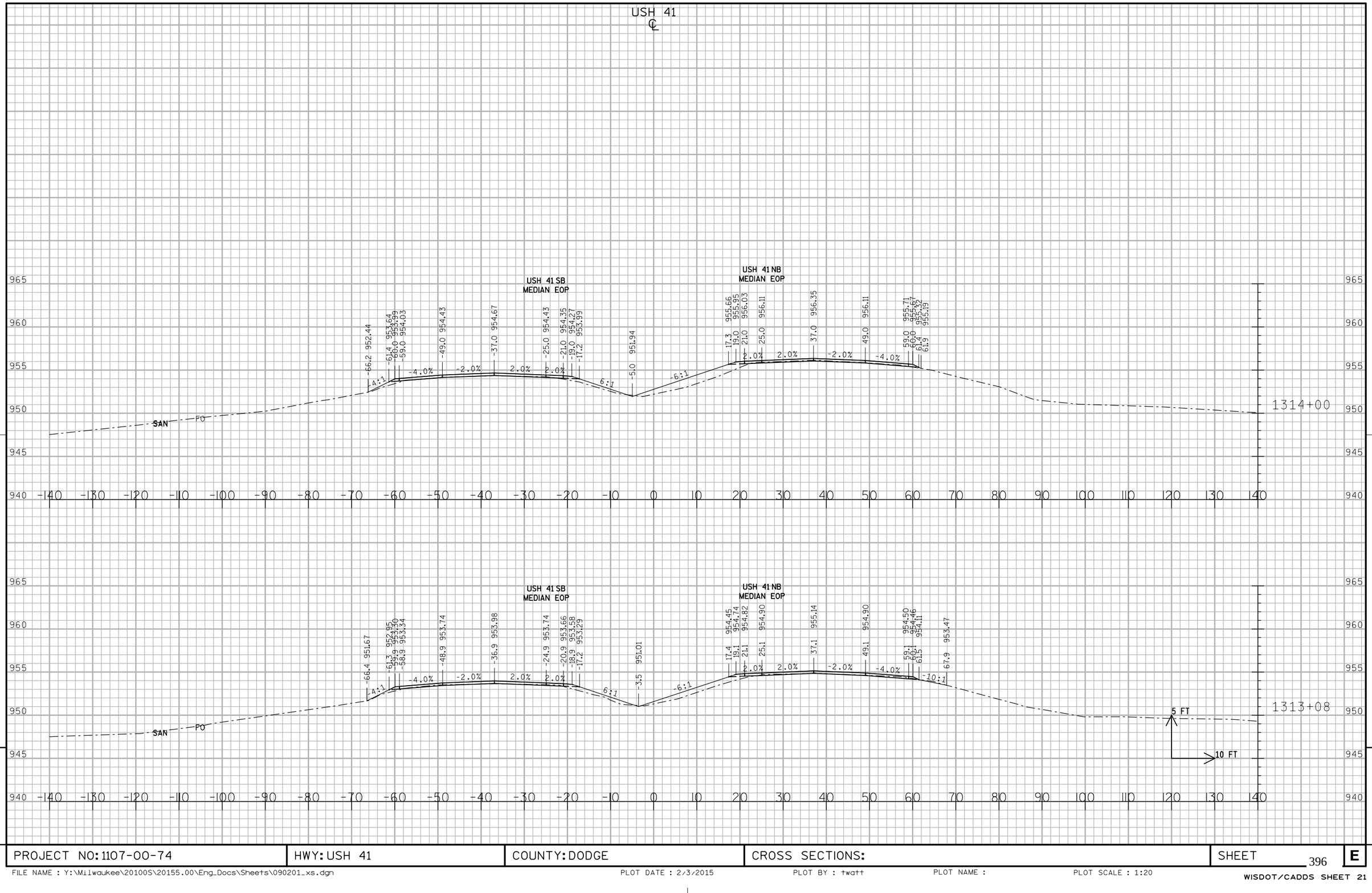
WISDOT/CADDS SHEET 21



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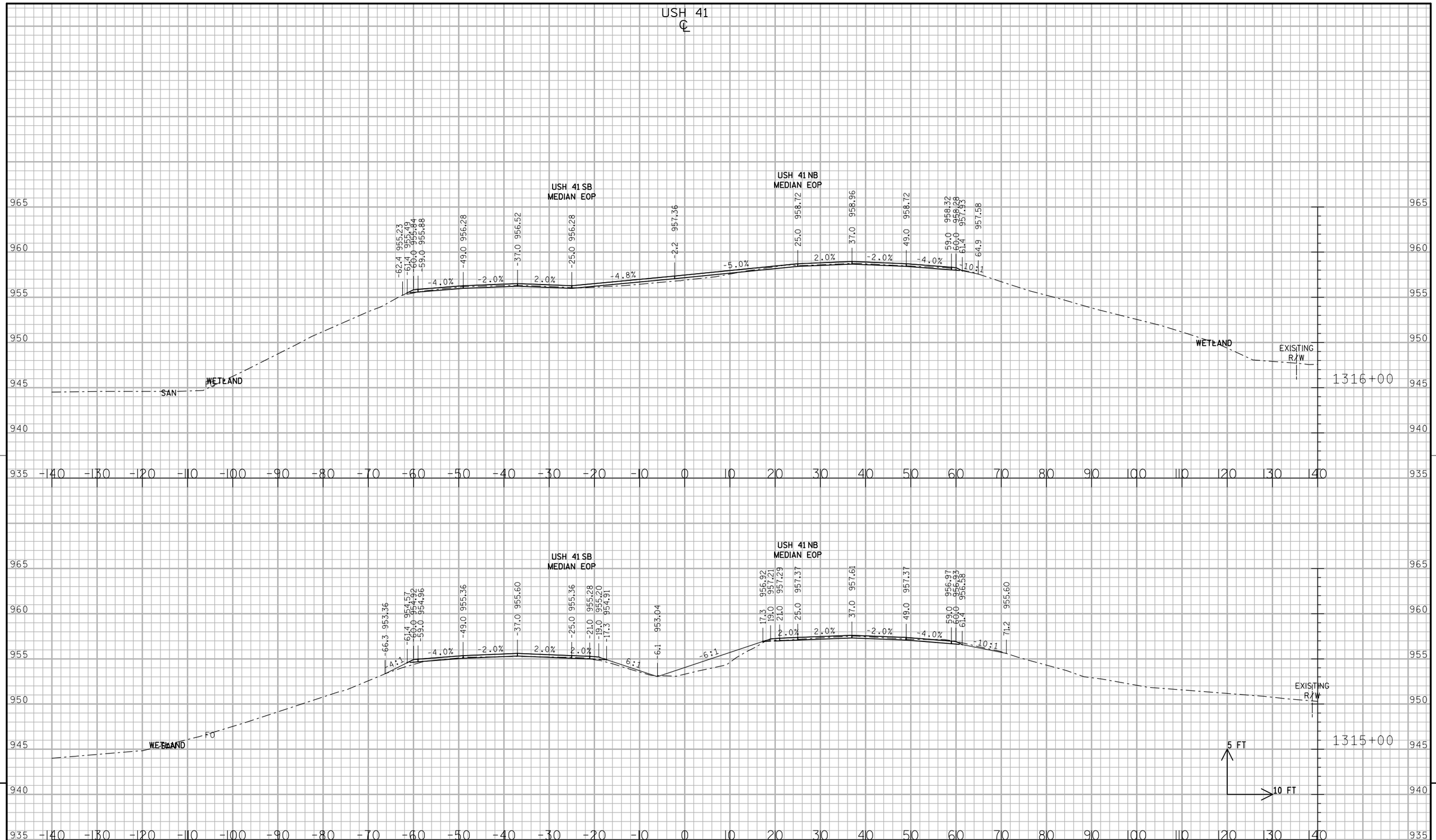
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 396	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 397	E

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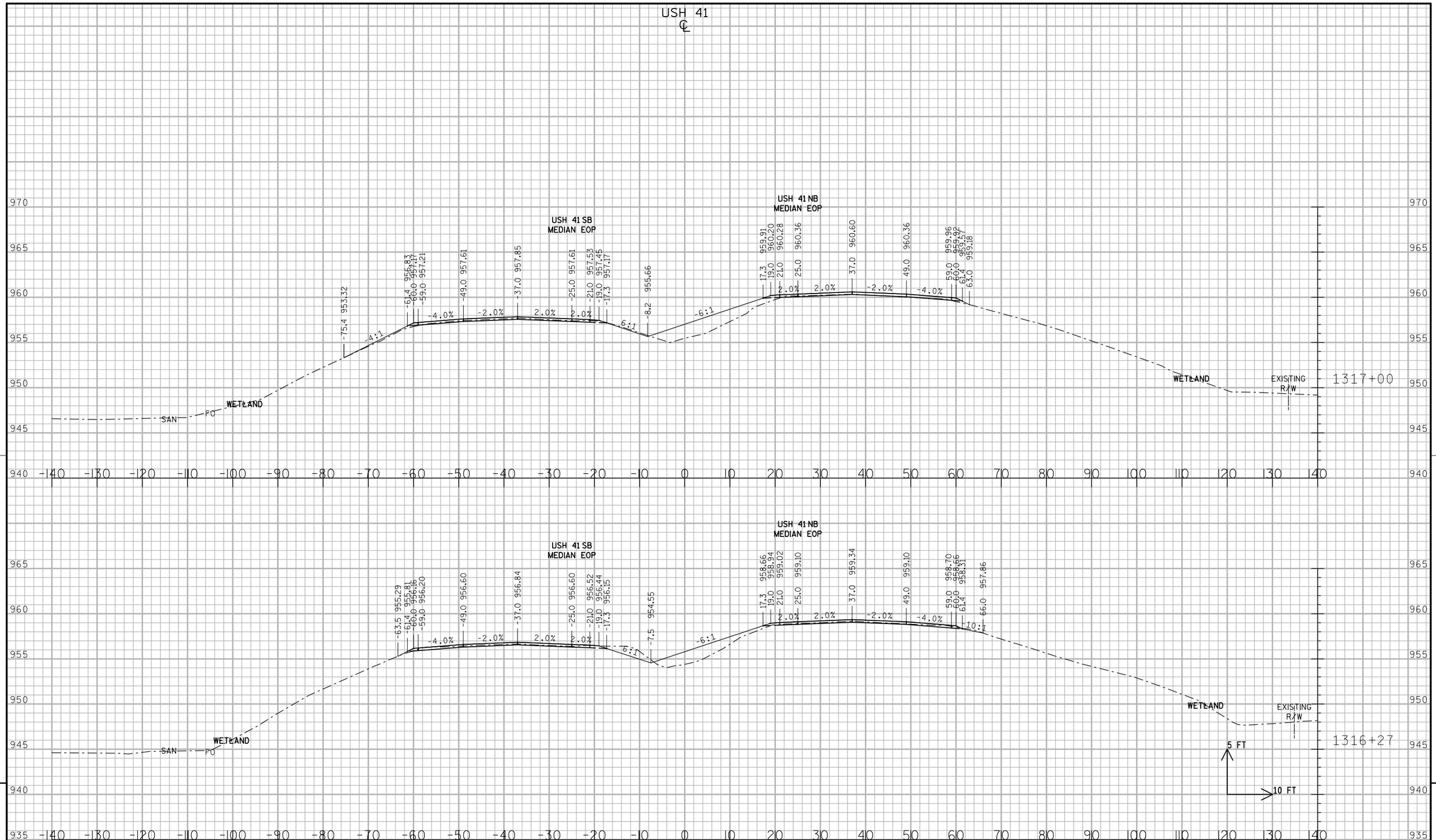
WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 398	E

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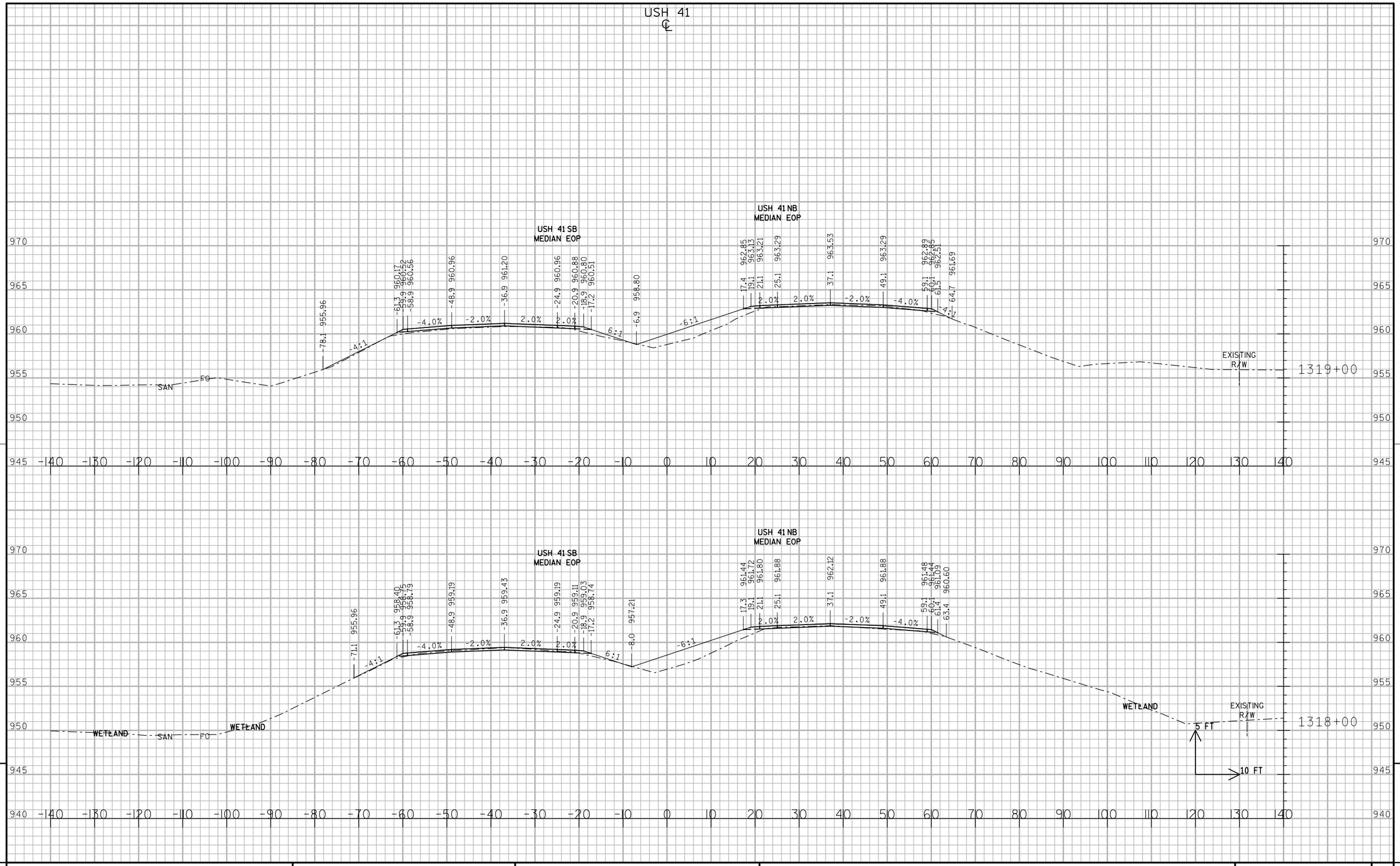
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 399	E

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WISDOT/CADDS SHEET 21

USH 41
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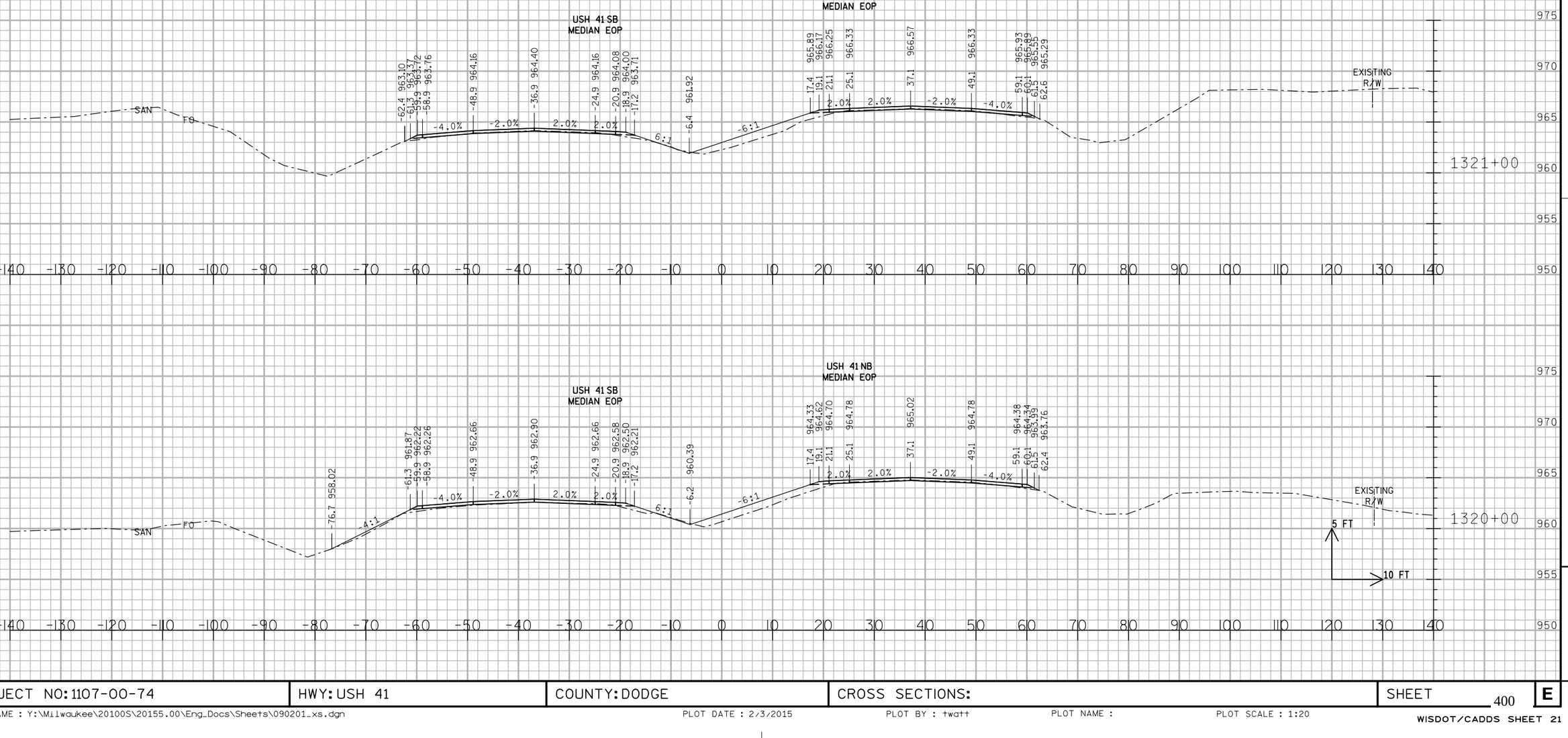

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 400	E

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WISDOT/CADDS SHEET 21

USH 41
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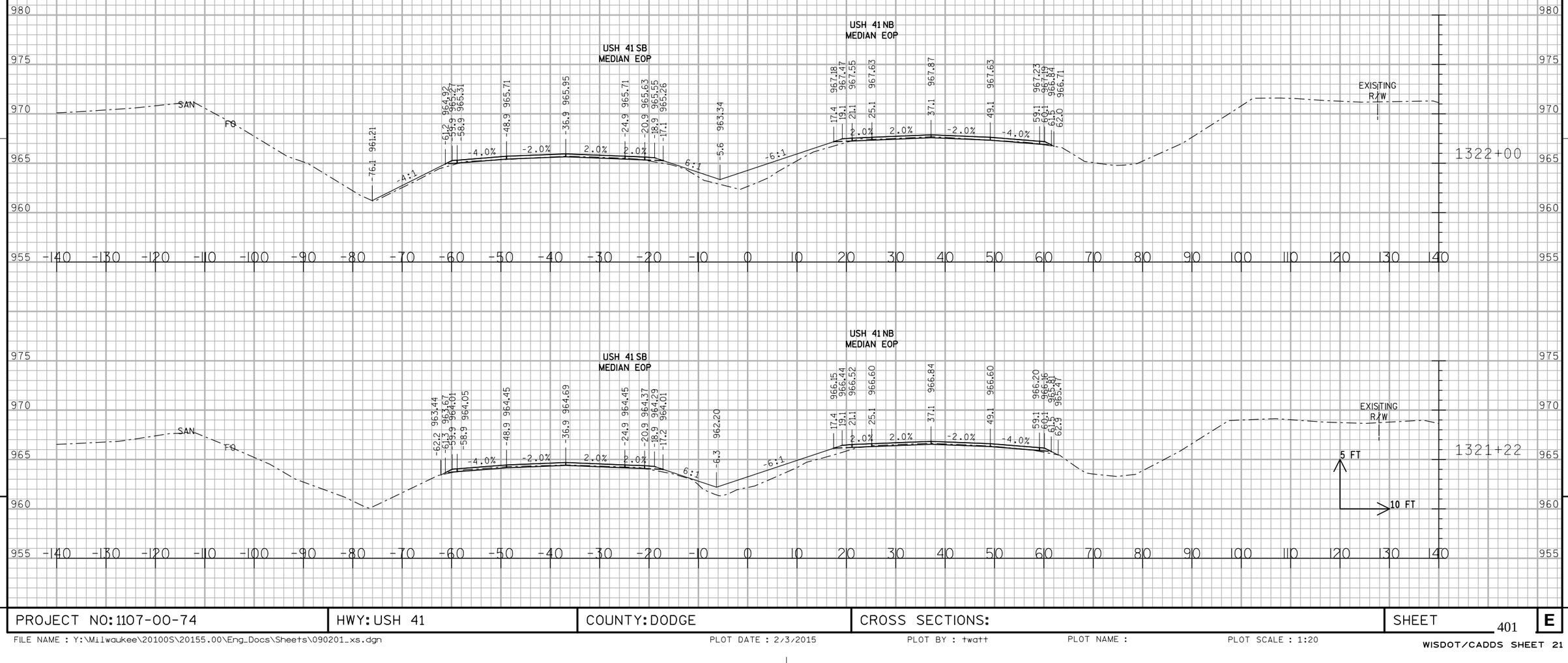

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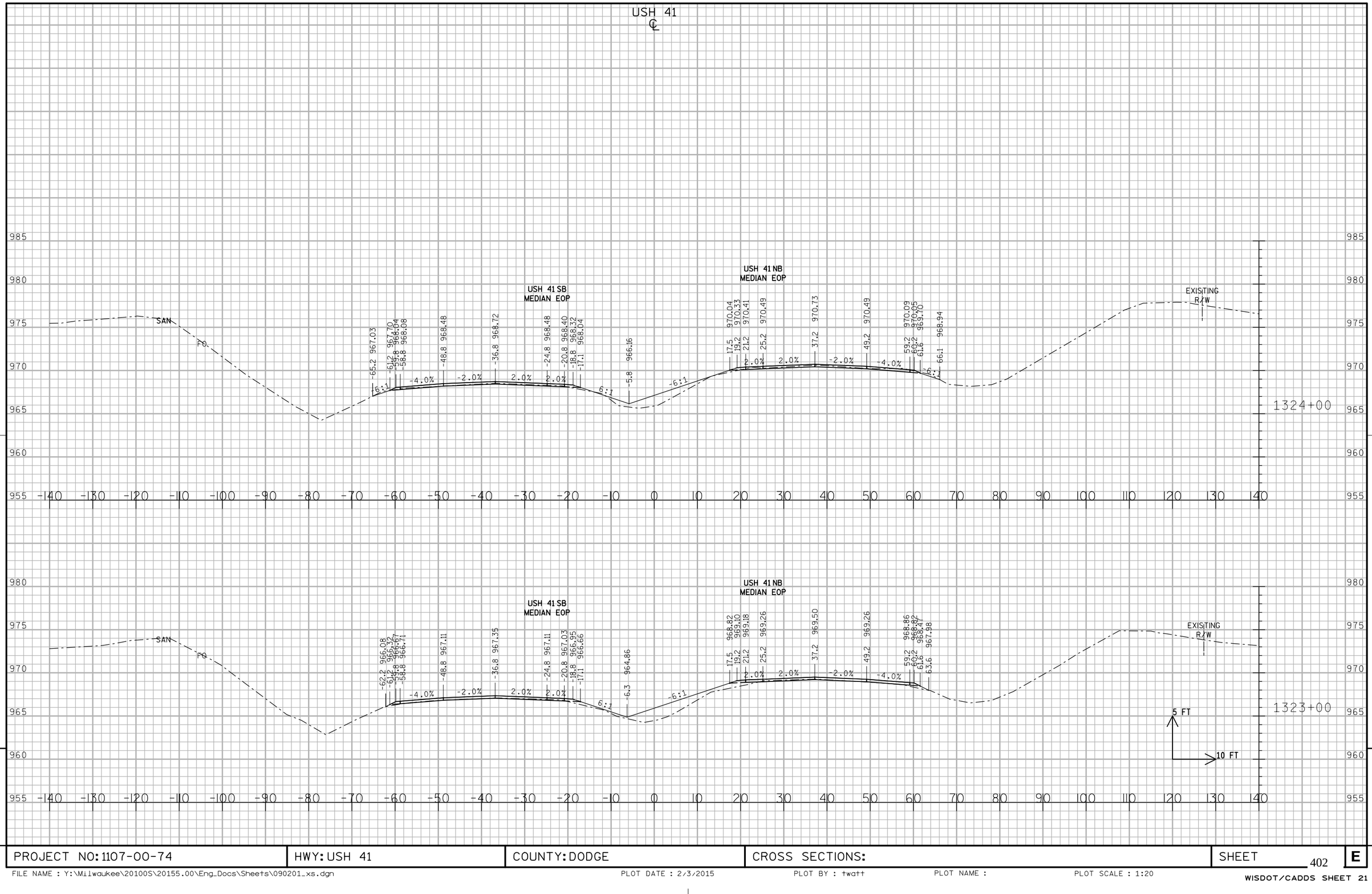
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 401	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 402	E

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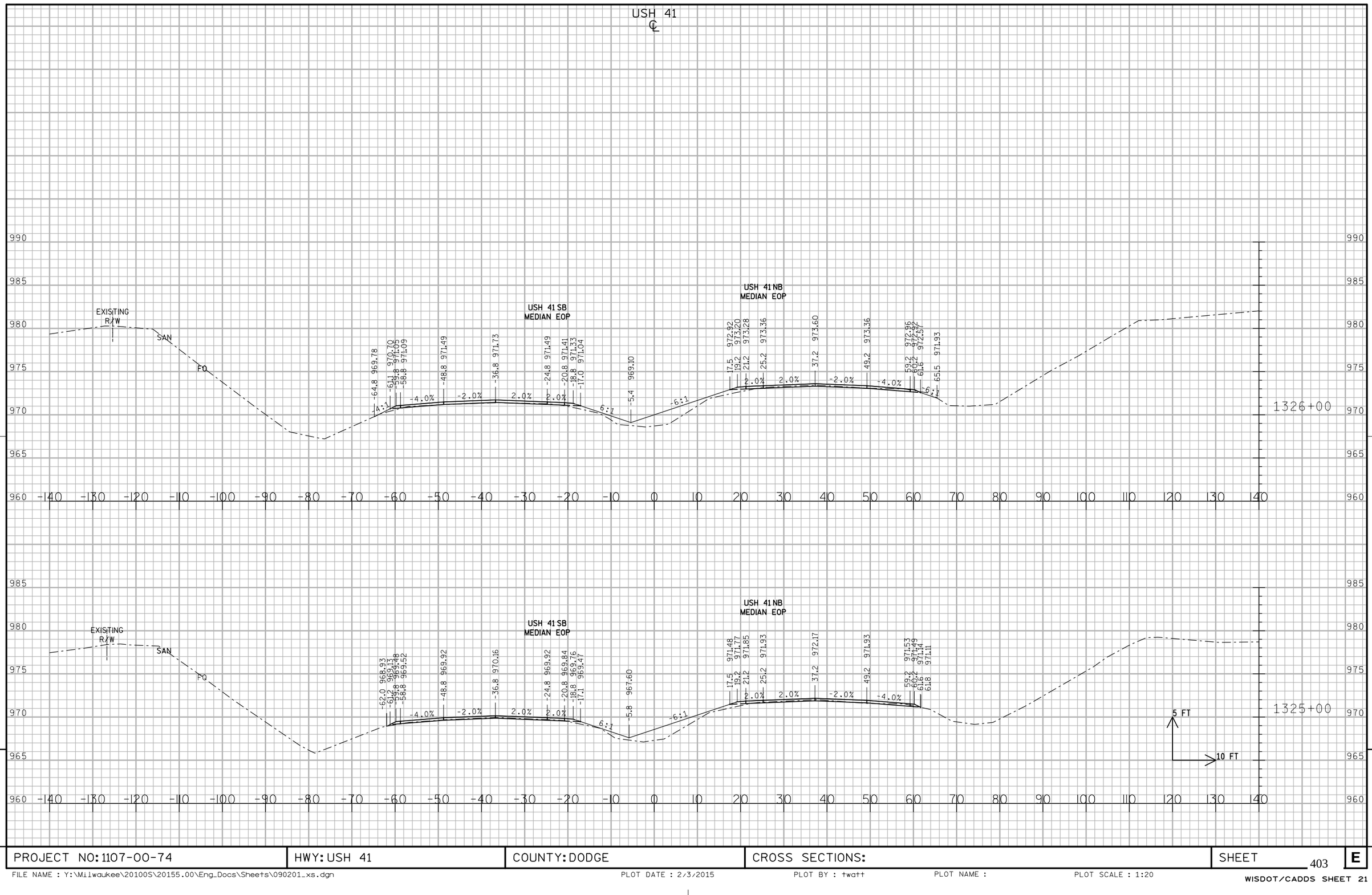
WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 403	E

USH 41
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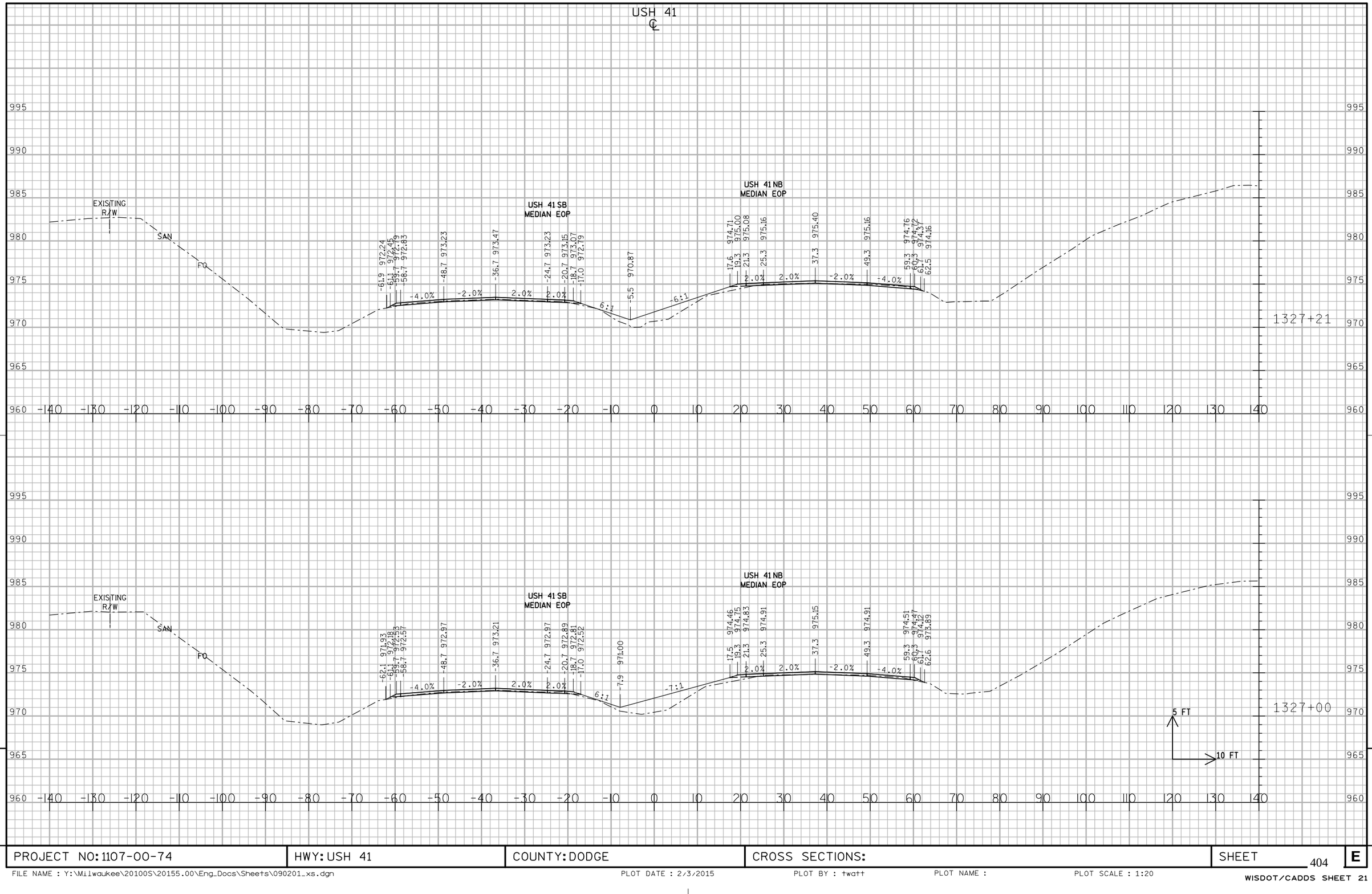

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 404	E

USH 41
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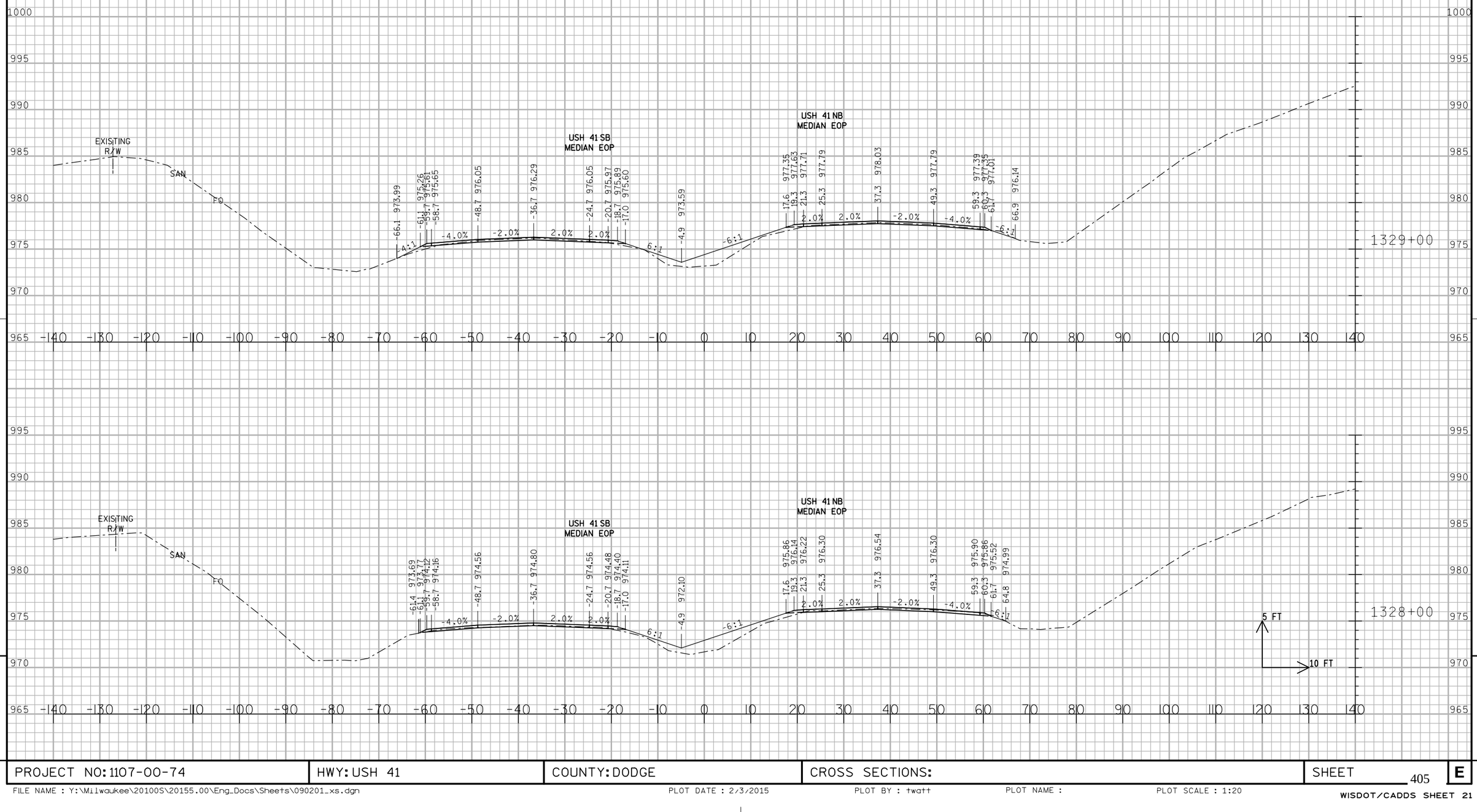
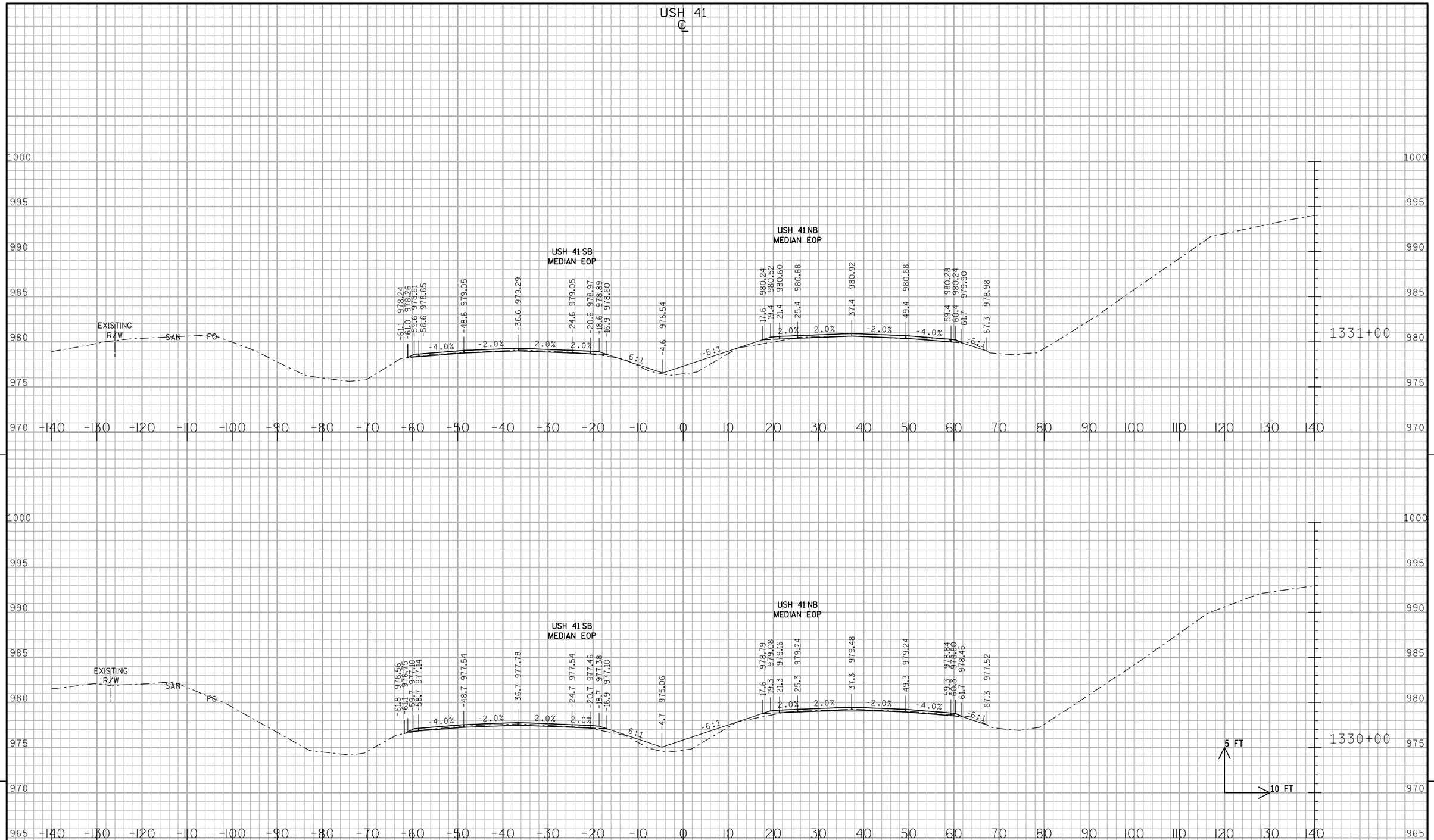


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 405	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 406	E

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WISDOT/CADDS SHEET 21

USH 41
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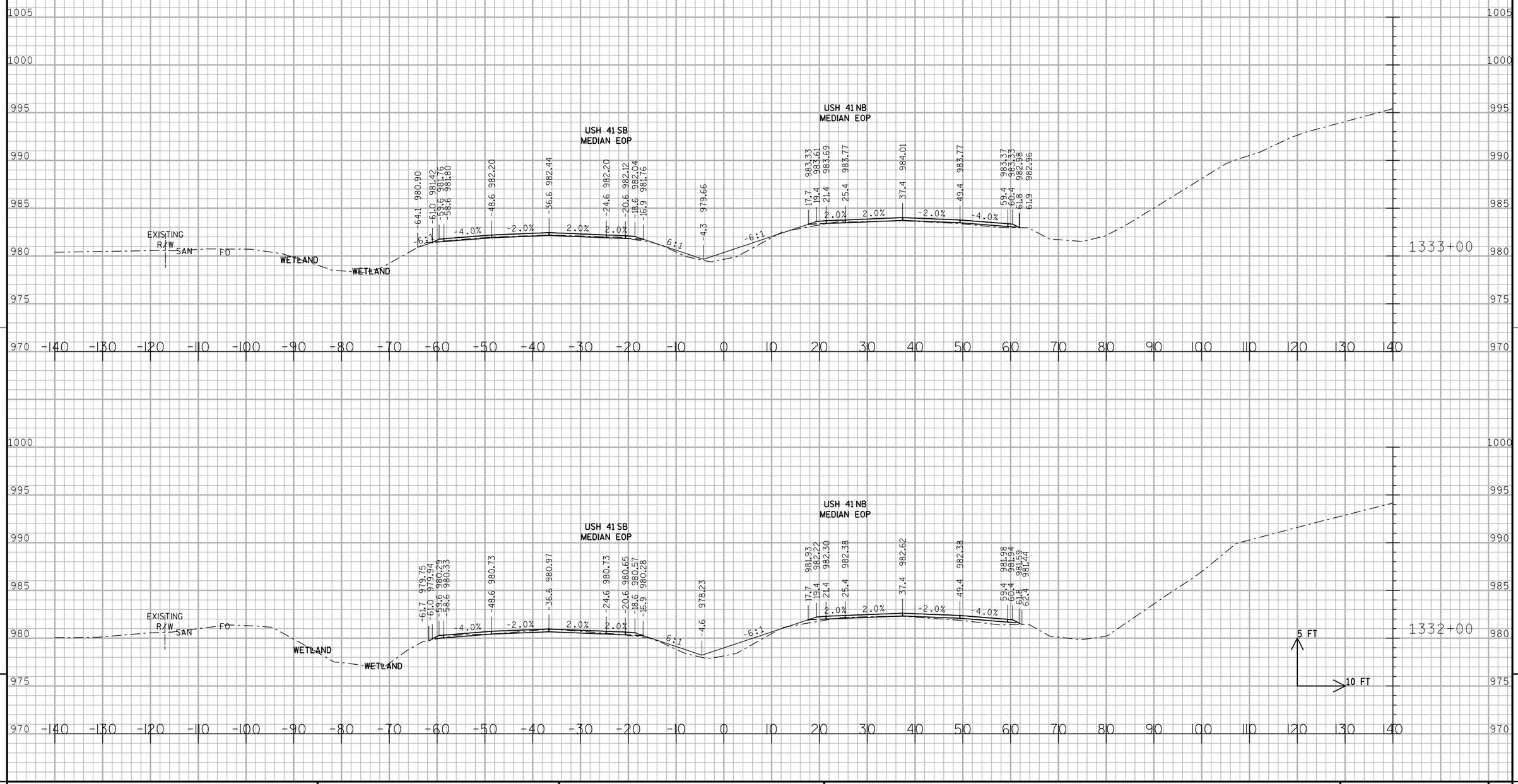

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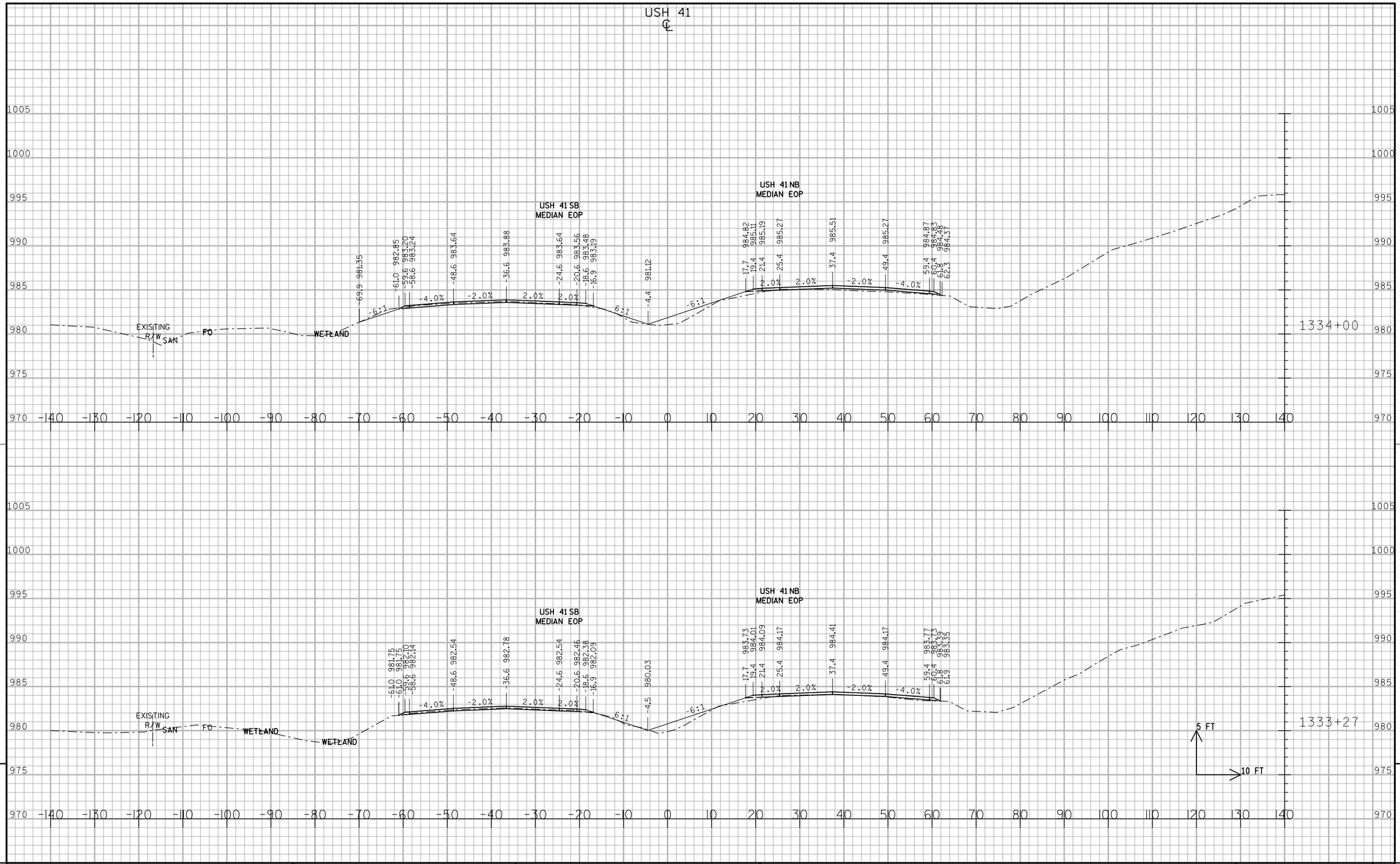

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 408 E

USH 41
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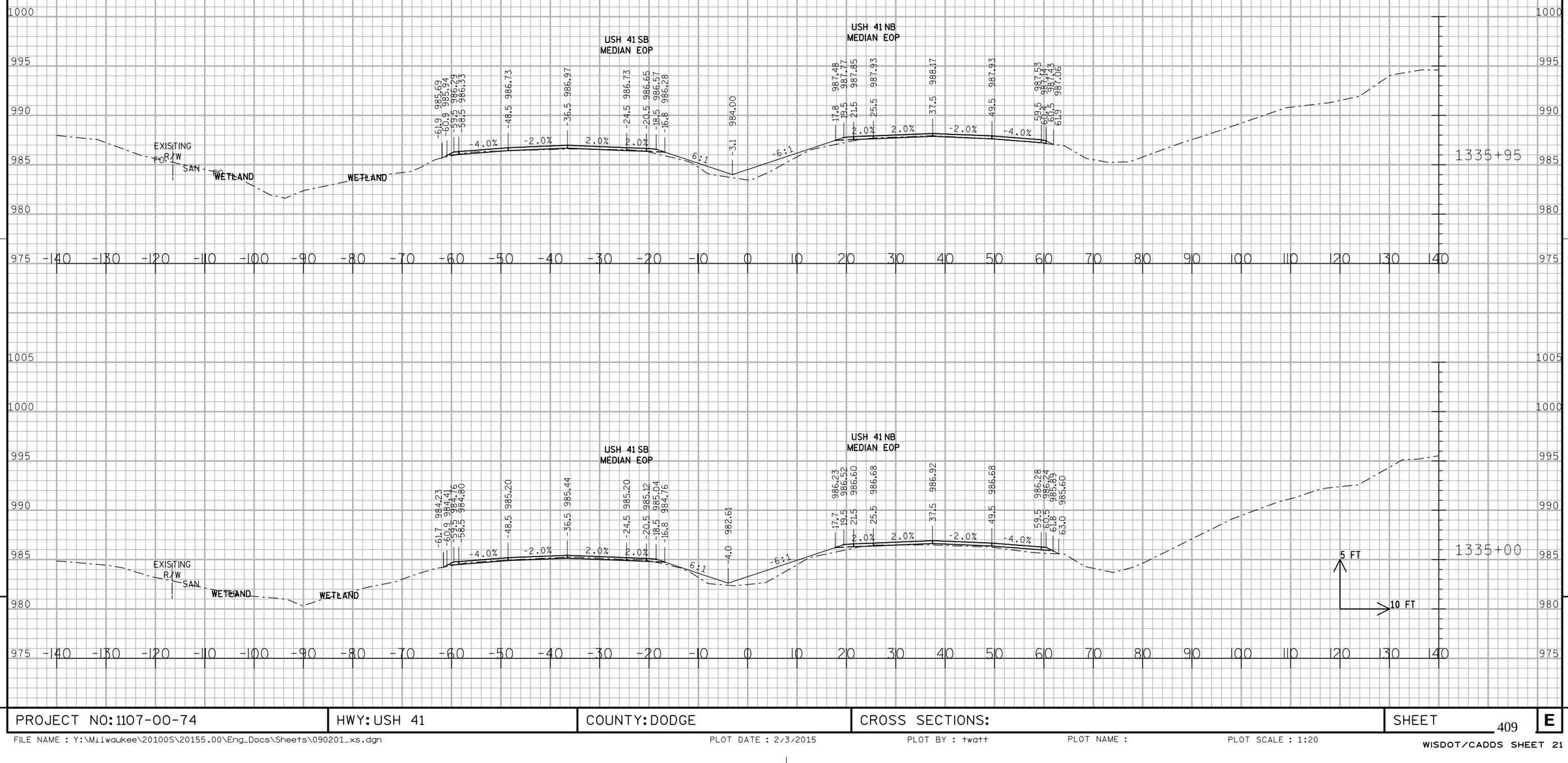

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 409	E

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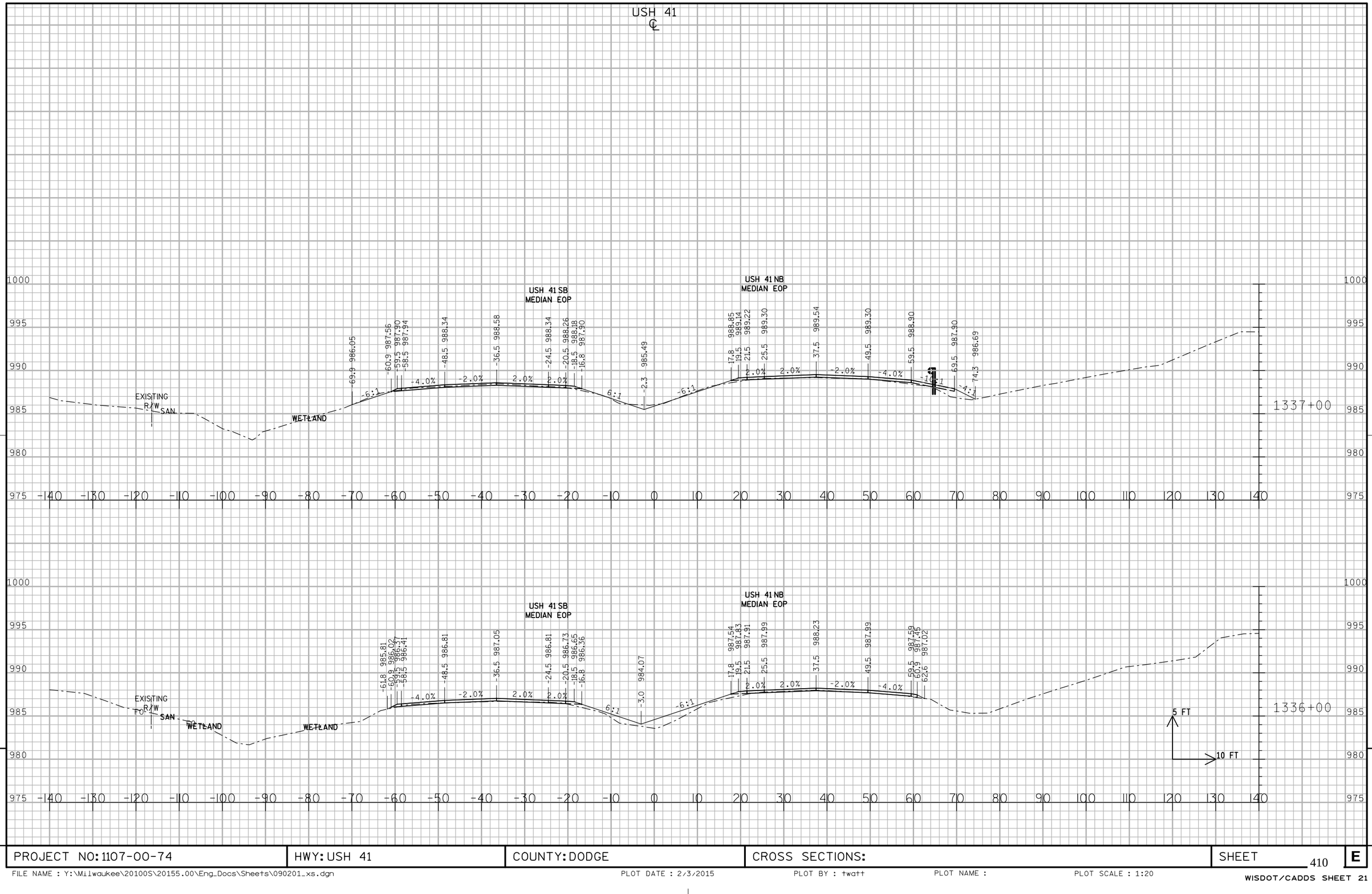
WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 410	E

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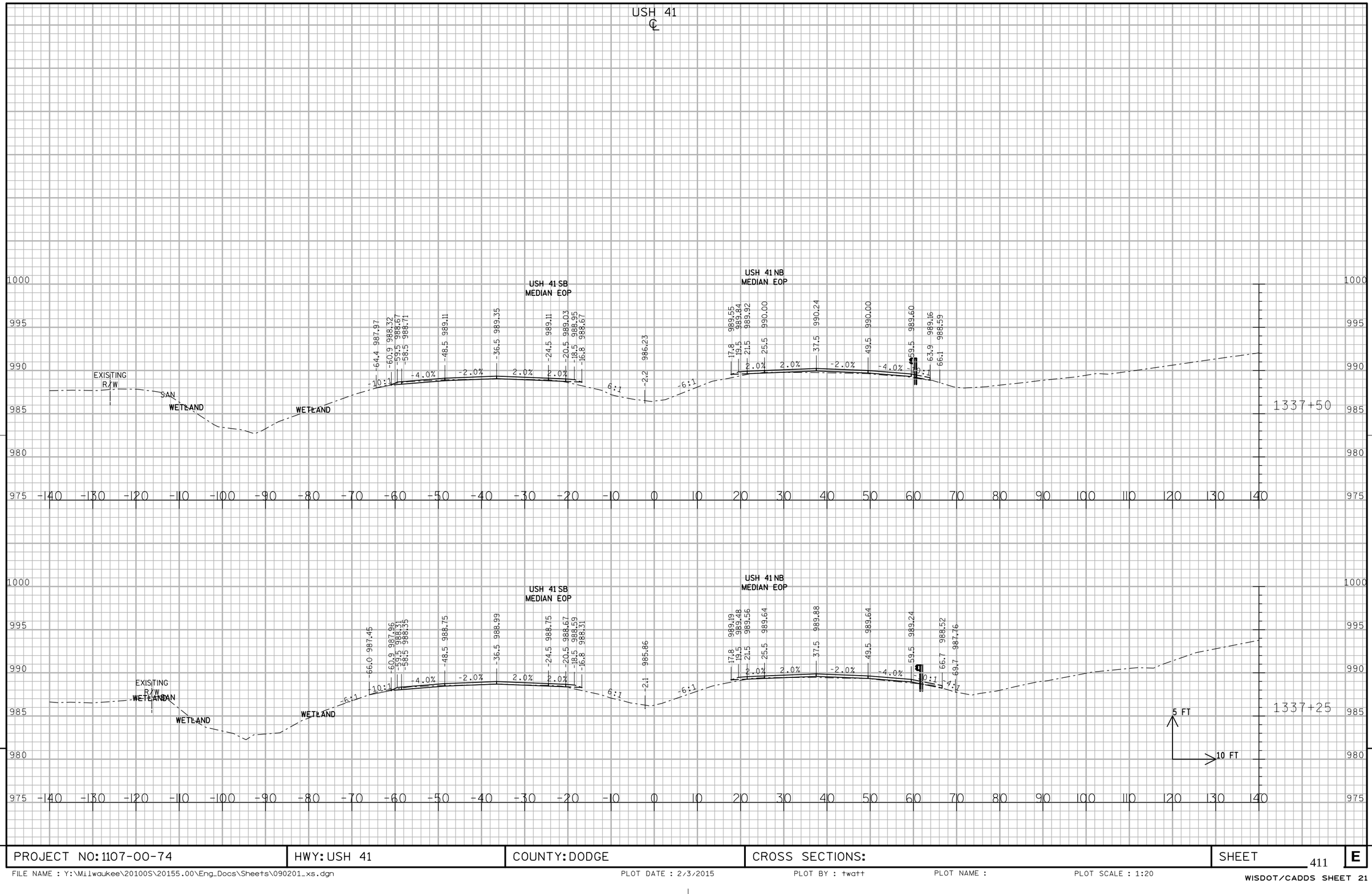
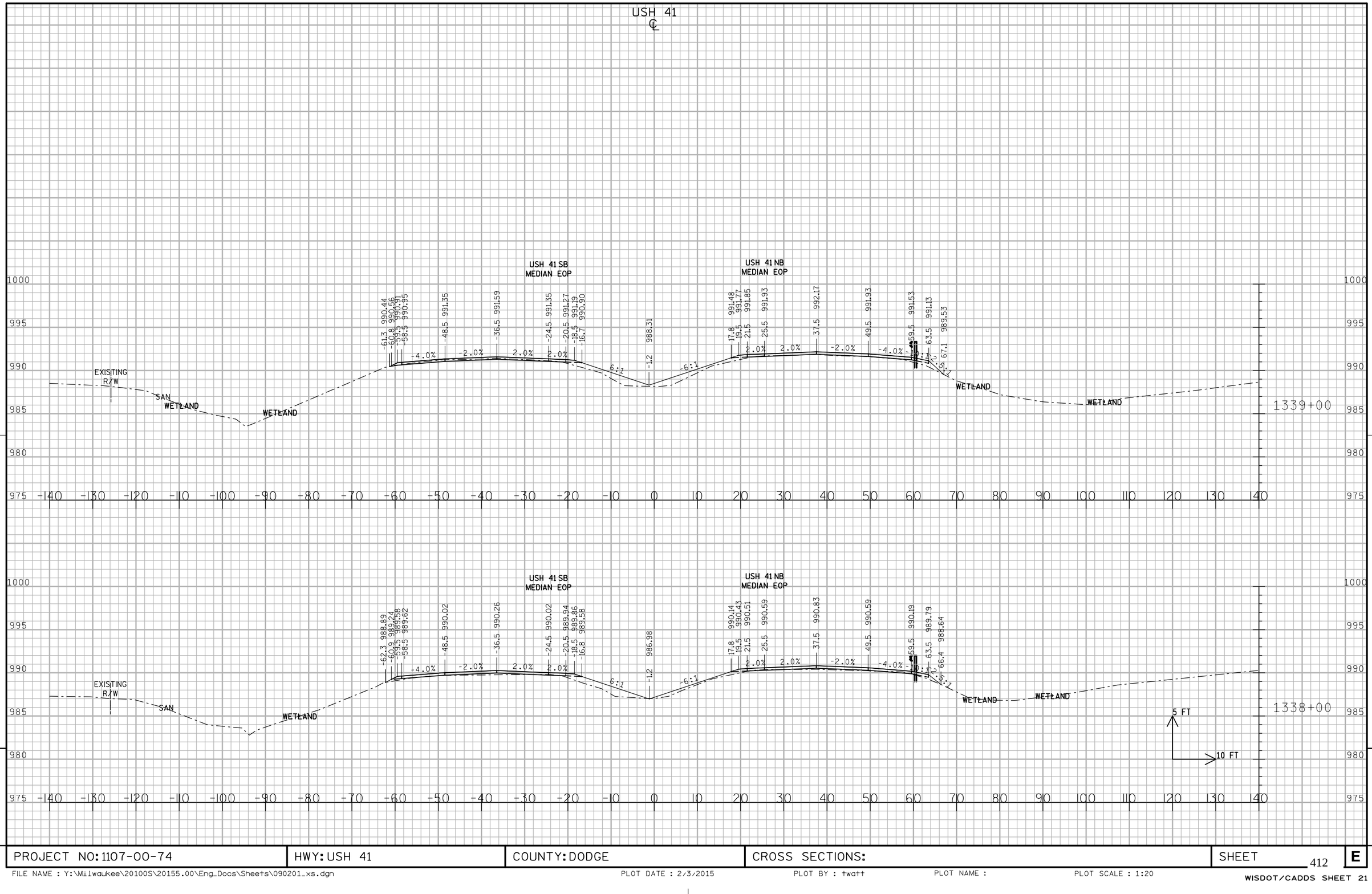


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 411	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 412	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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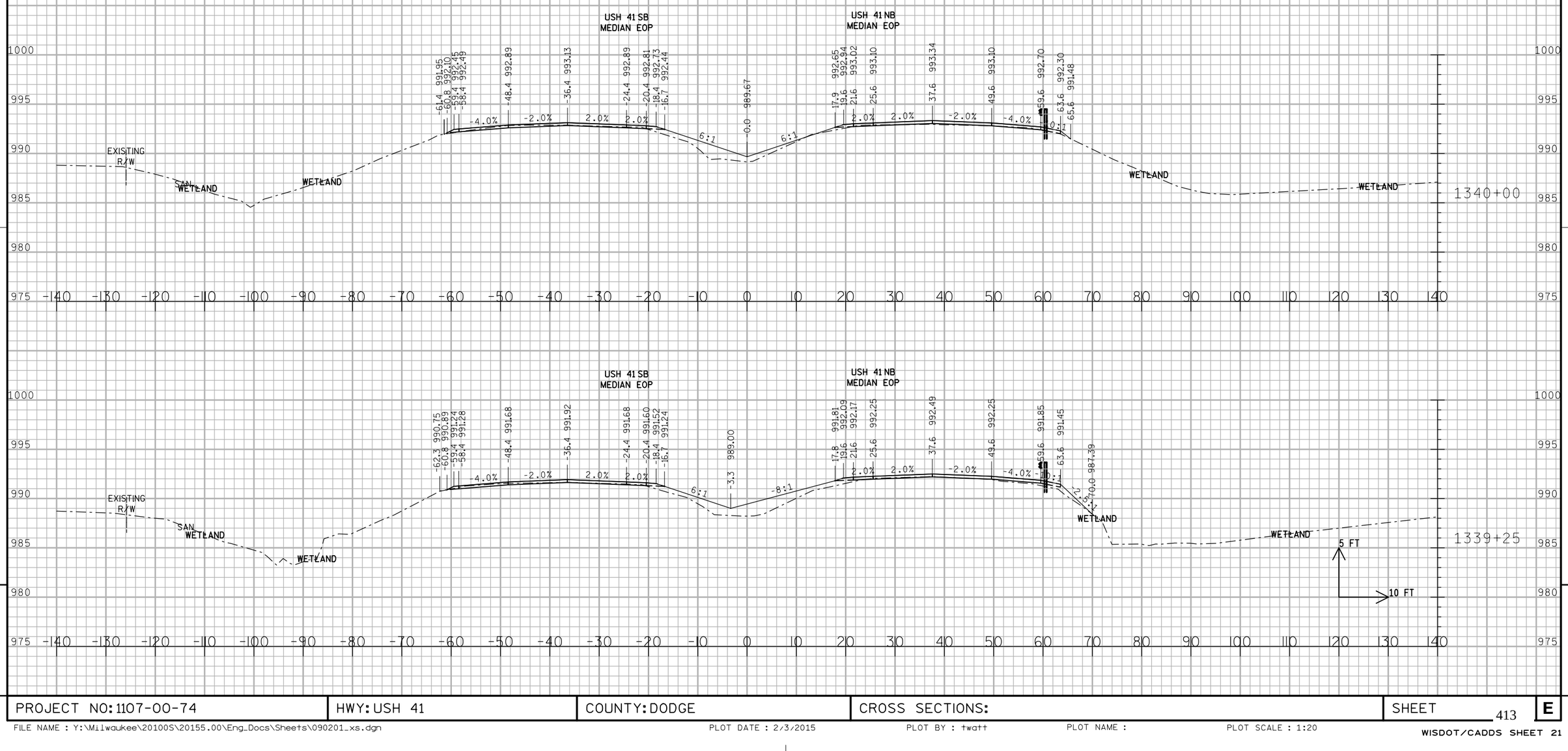

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 413	E

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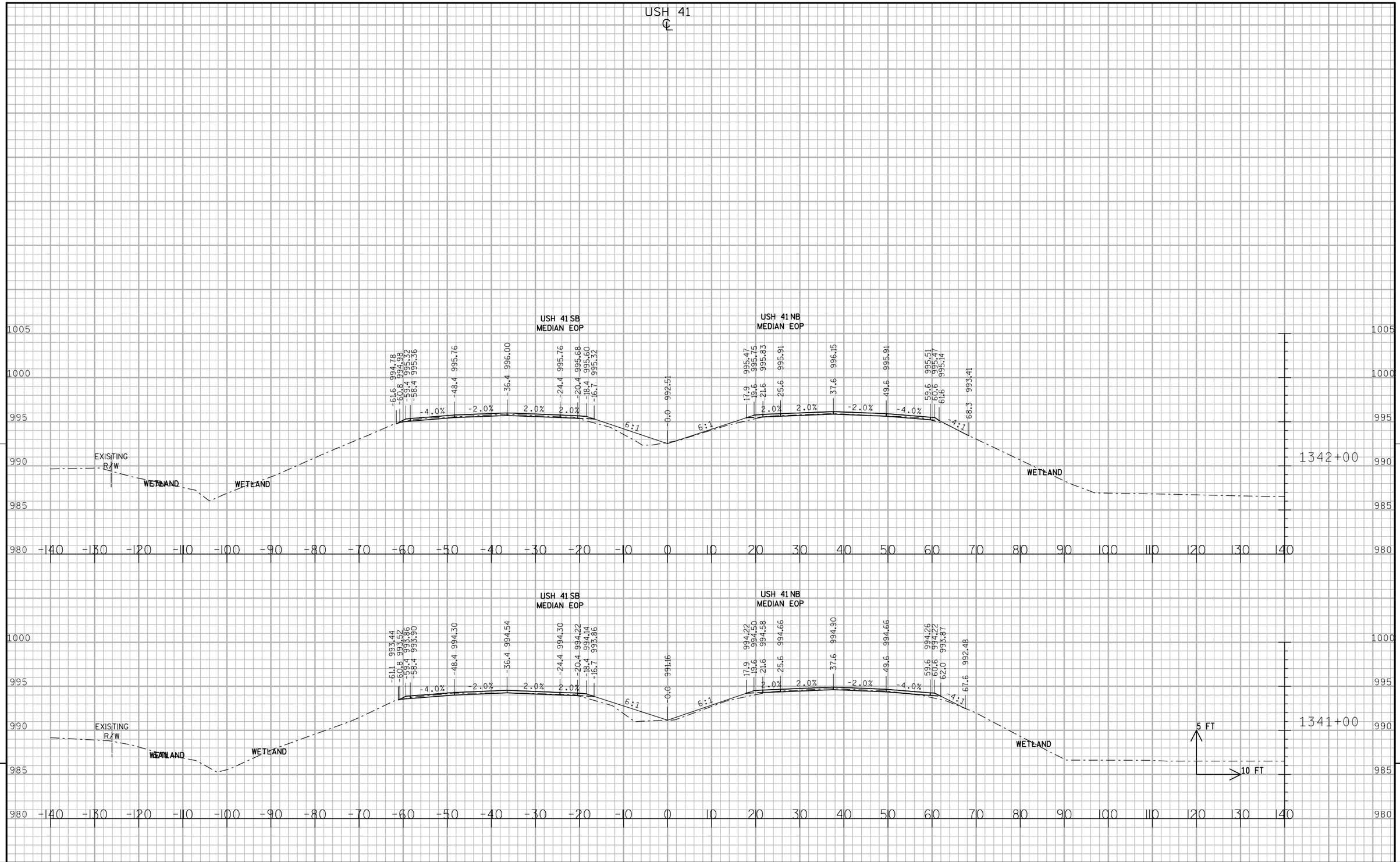
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 414	E

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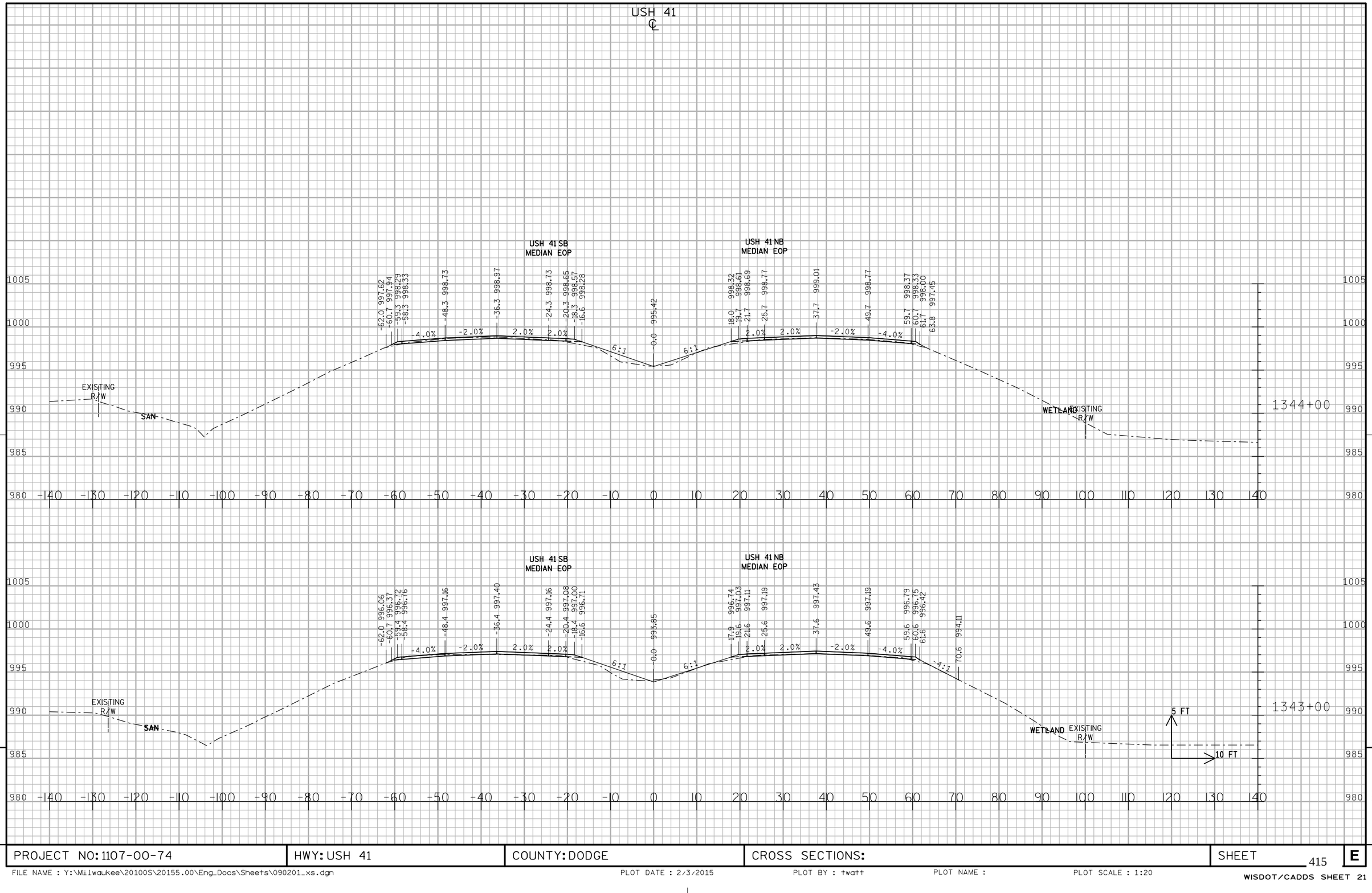
WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 415	E

USH 41
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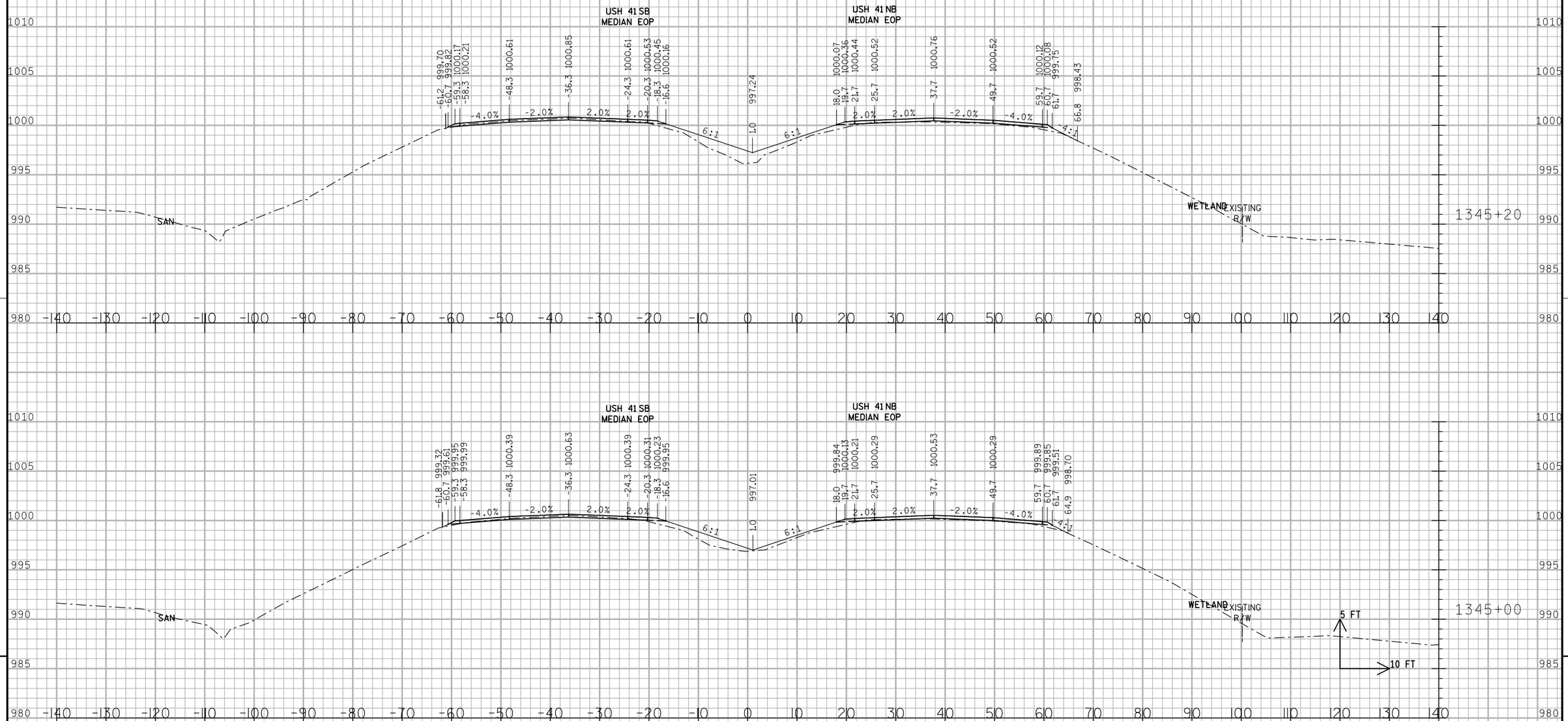

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 416	E

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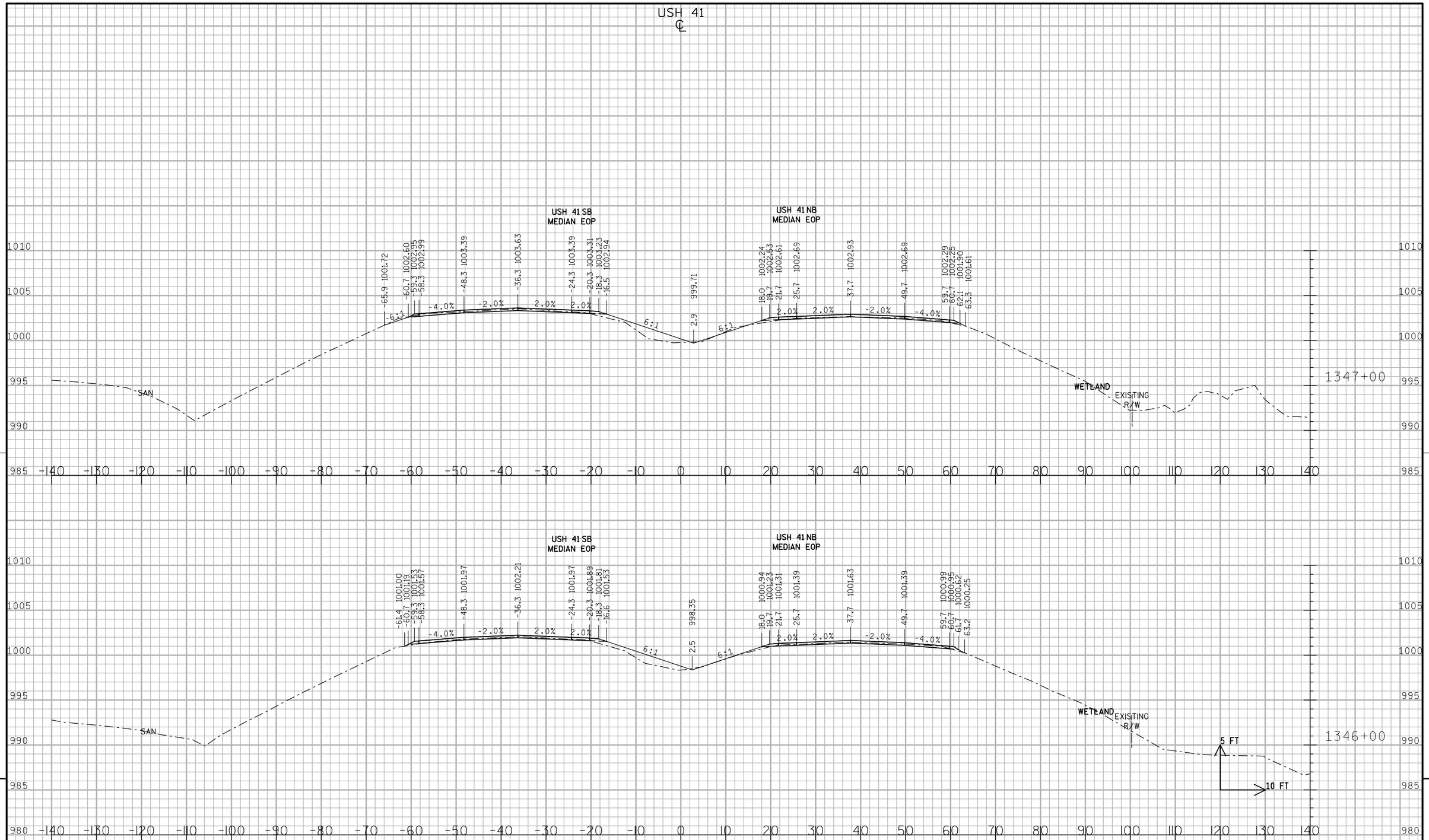
WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 417	E

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WISDOT/CADDS SHEET 21

USH 41
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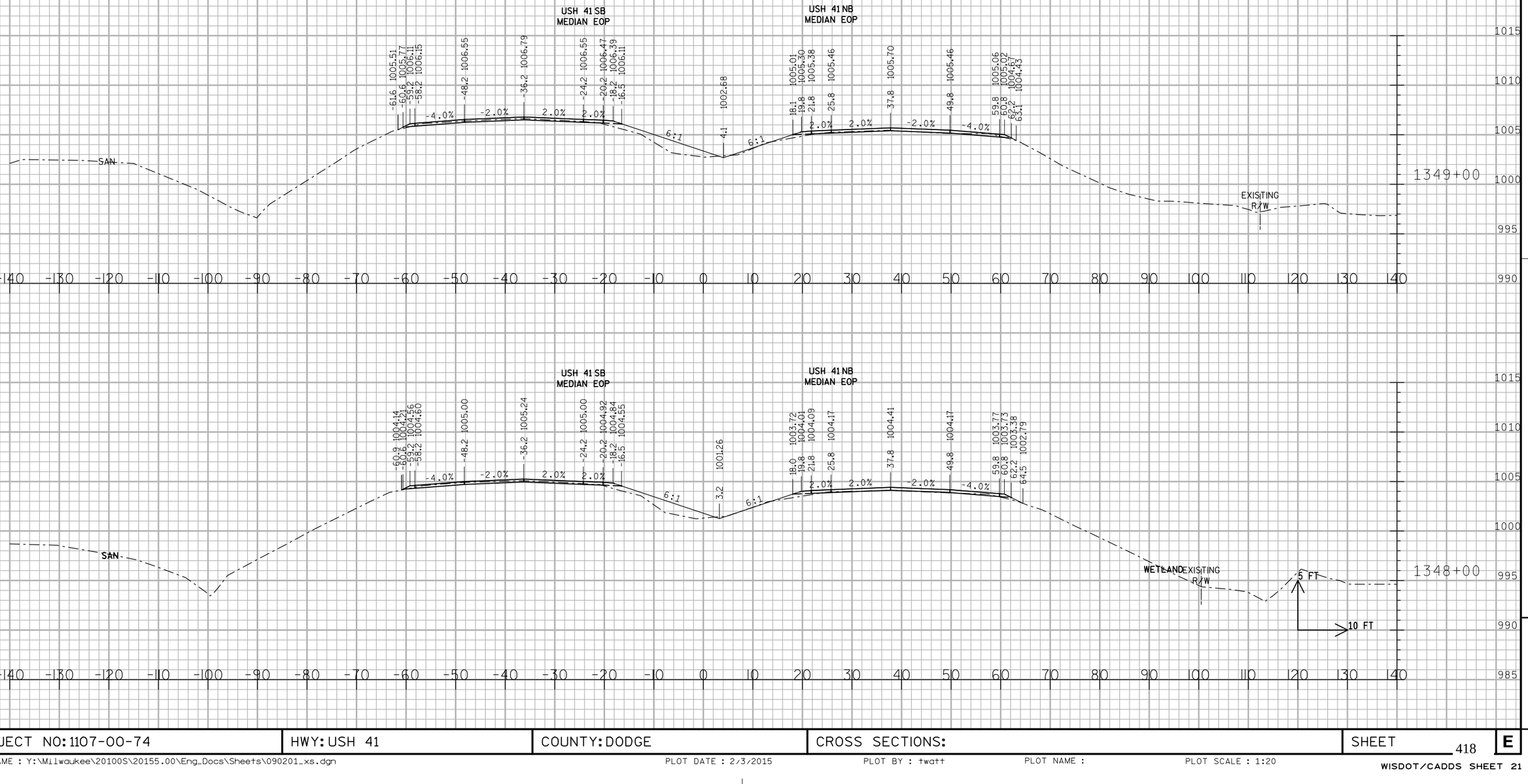

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 418	E

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WISDOT/CADDS SHEET 21

USH 41
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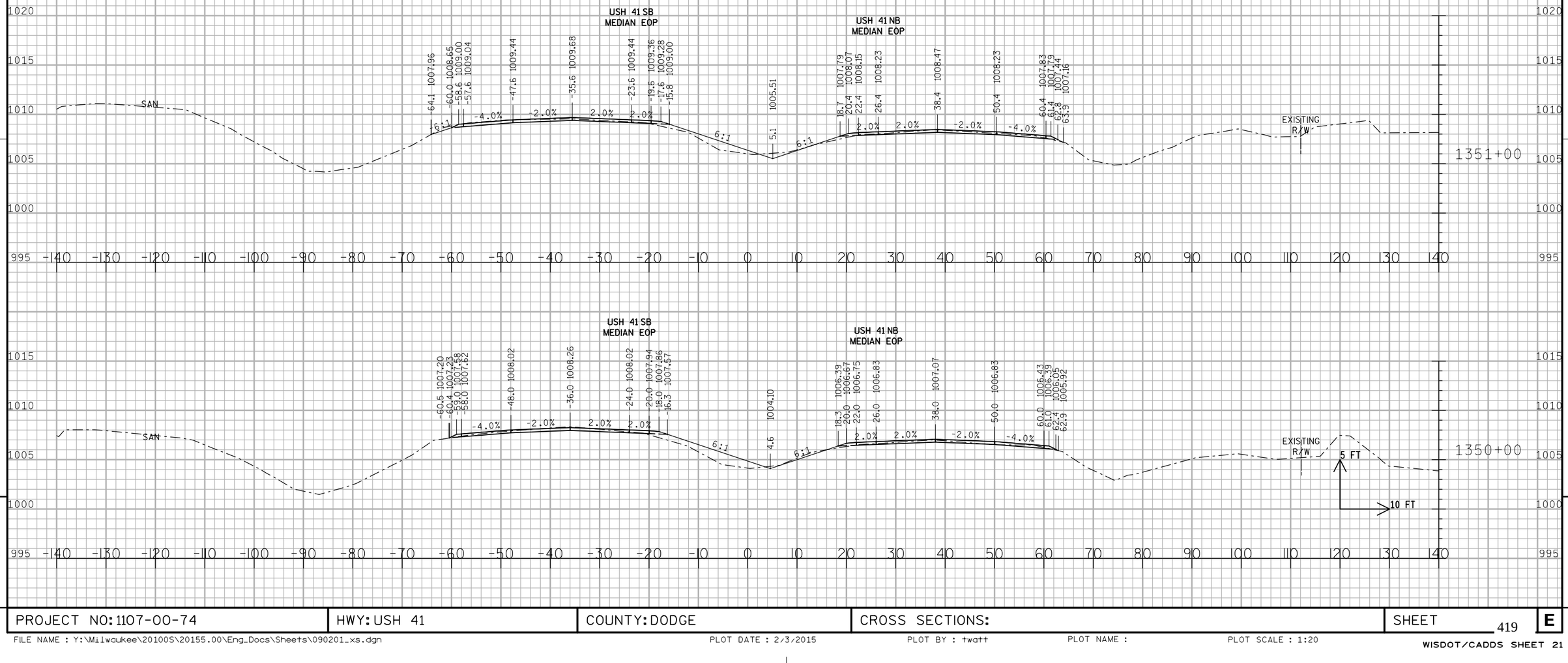

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 419	E

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WISDOT/CADDS SHEET 21

USH 41
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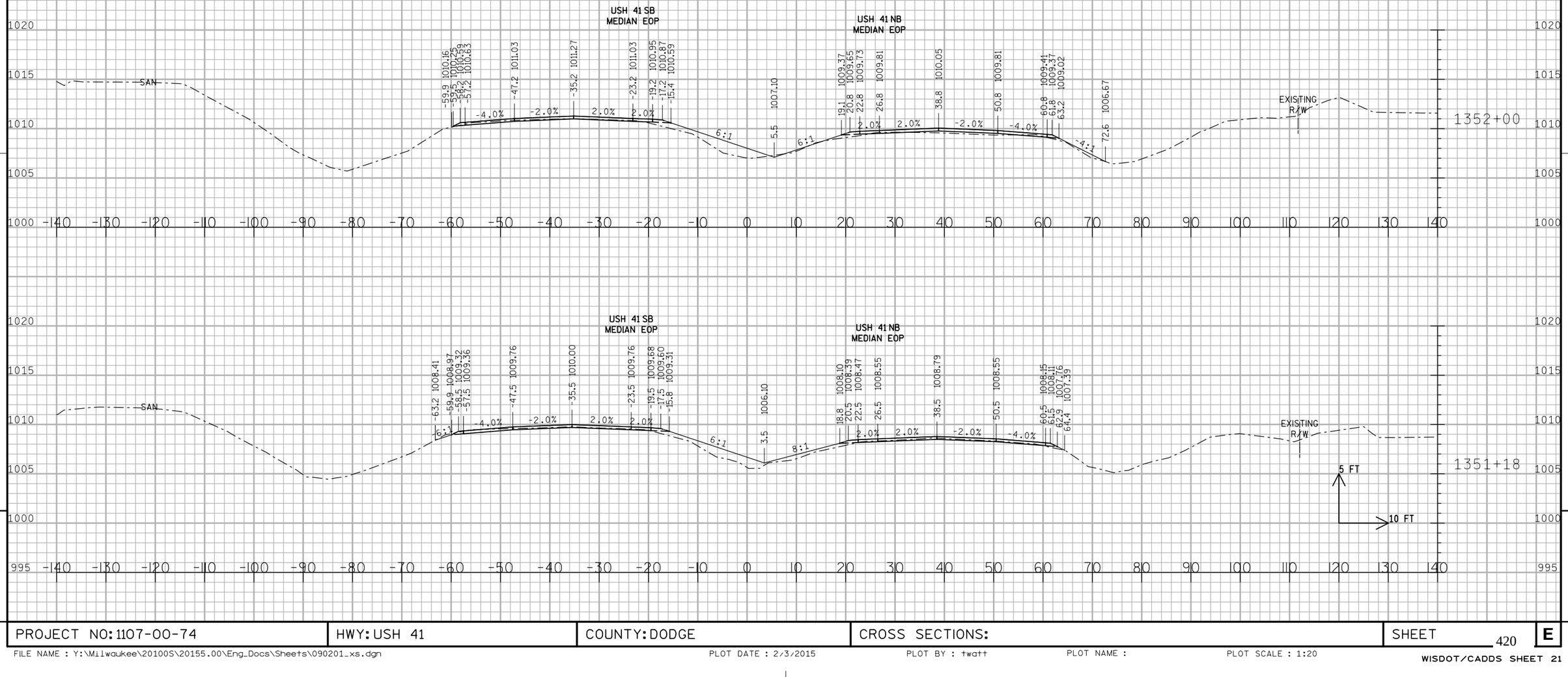

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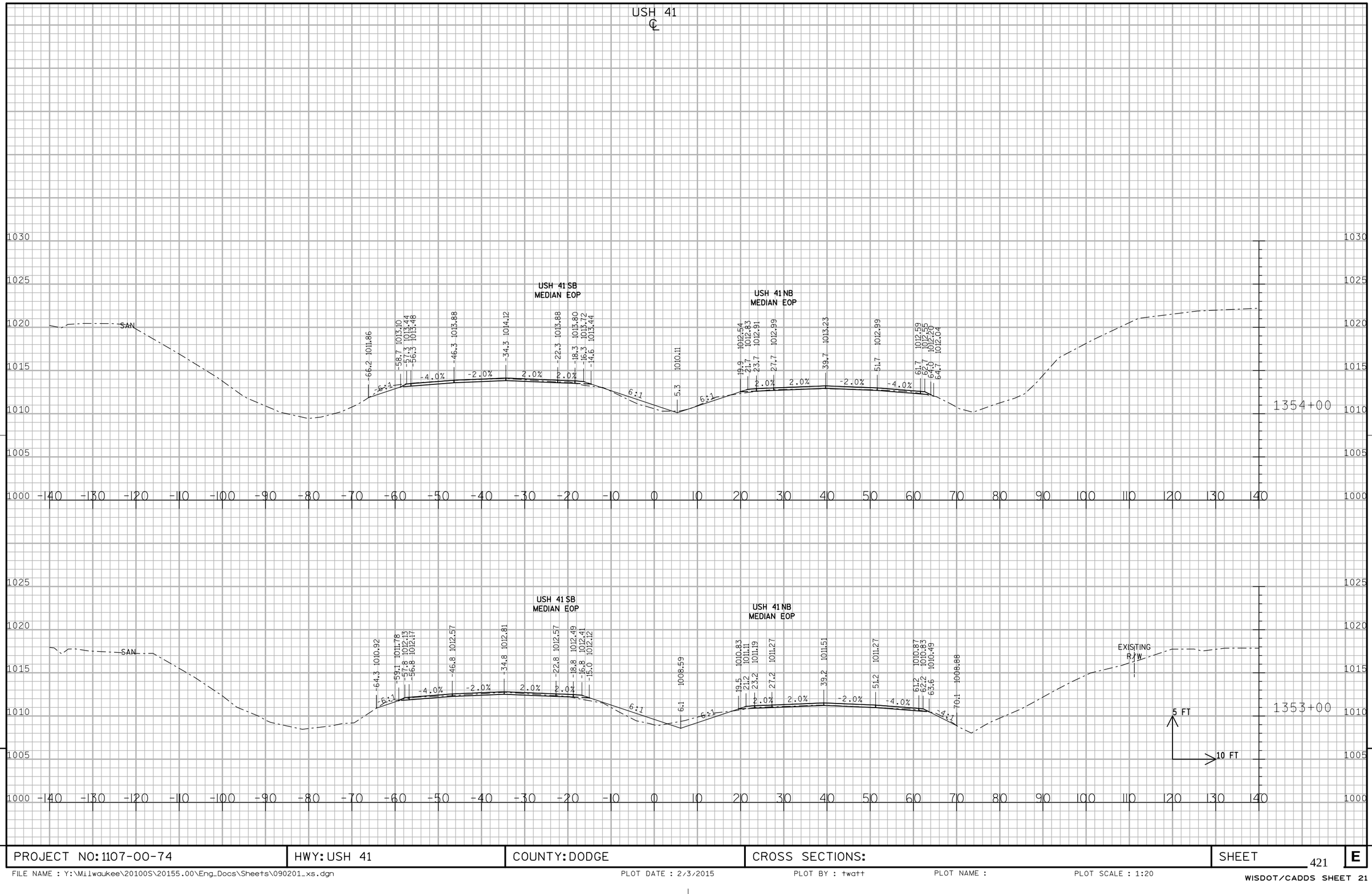

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 421	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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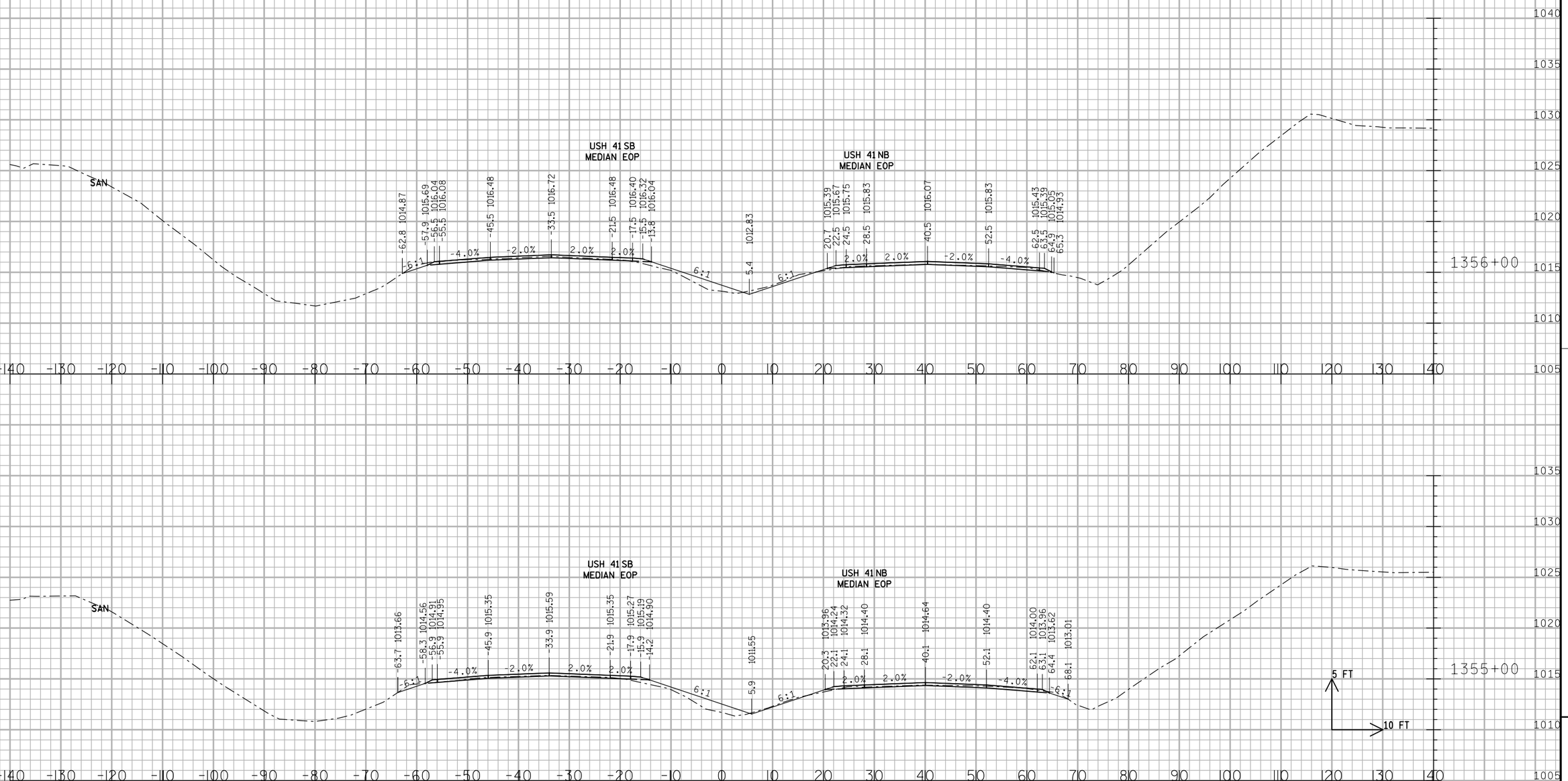

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 422	E

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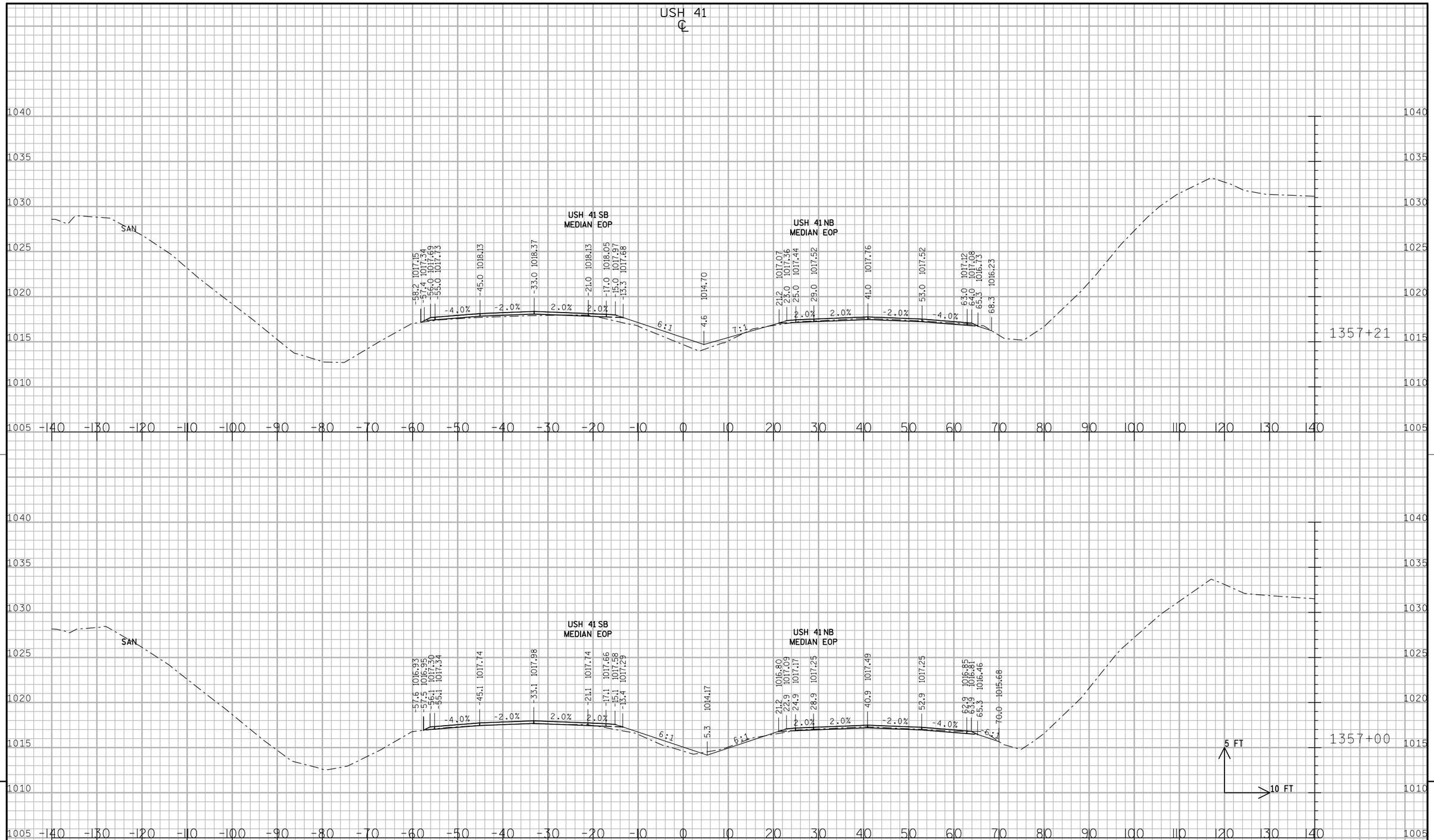
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 423	E

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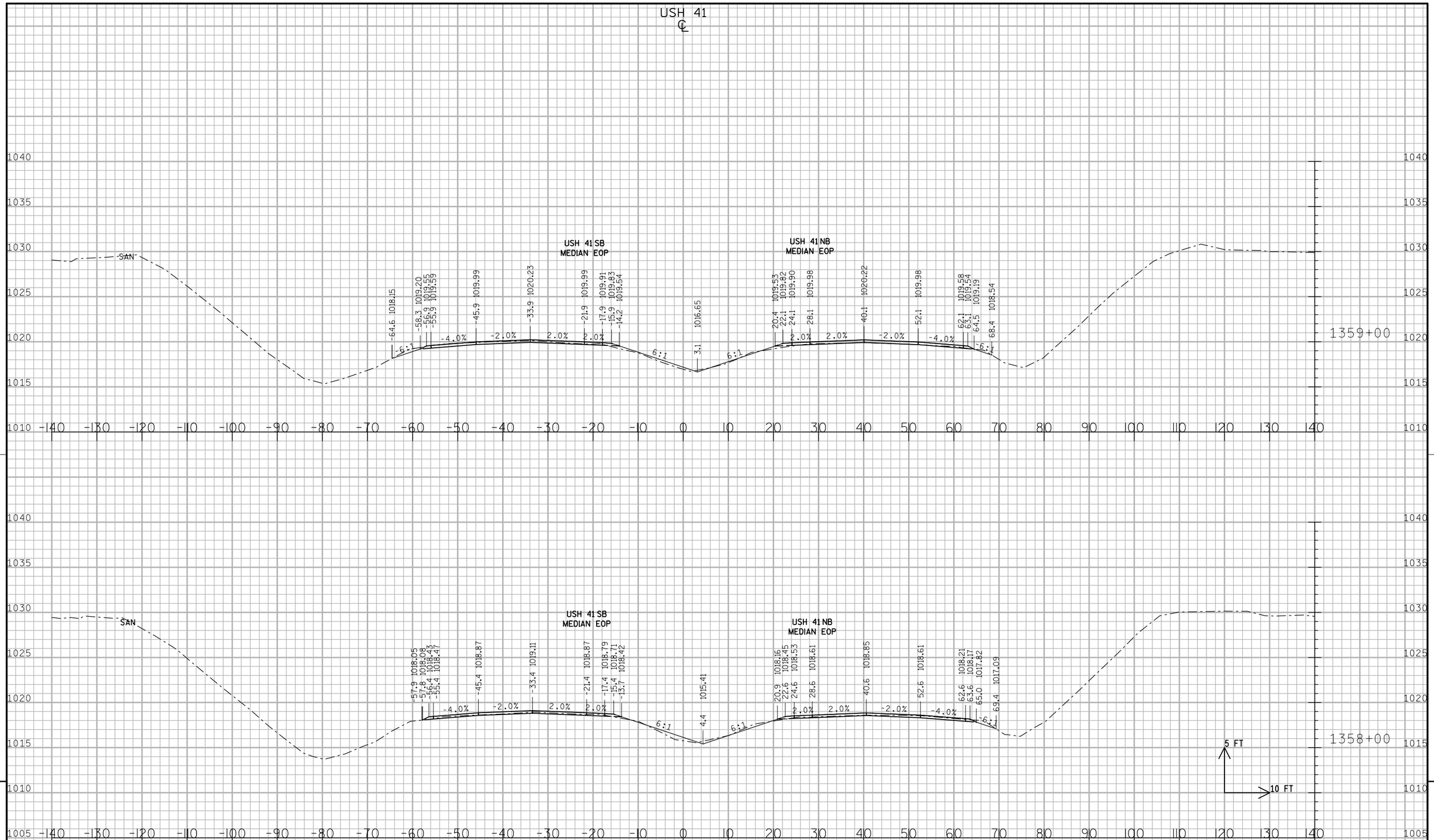

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 424	E

USH 41
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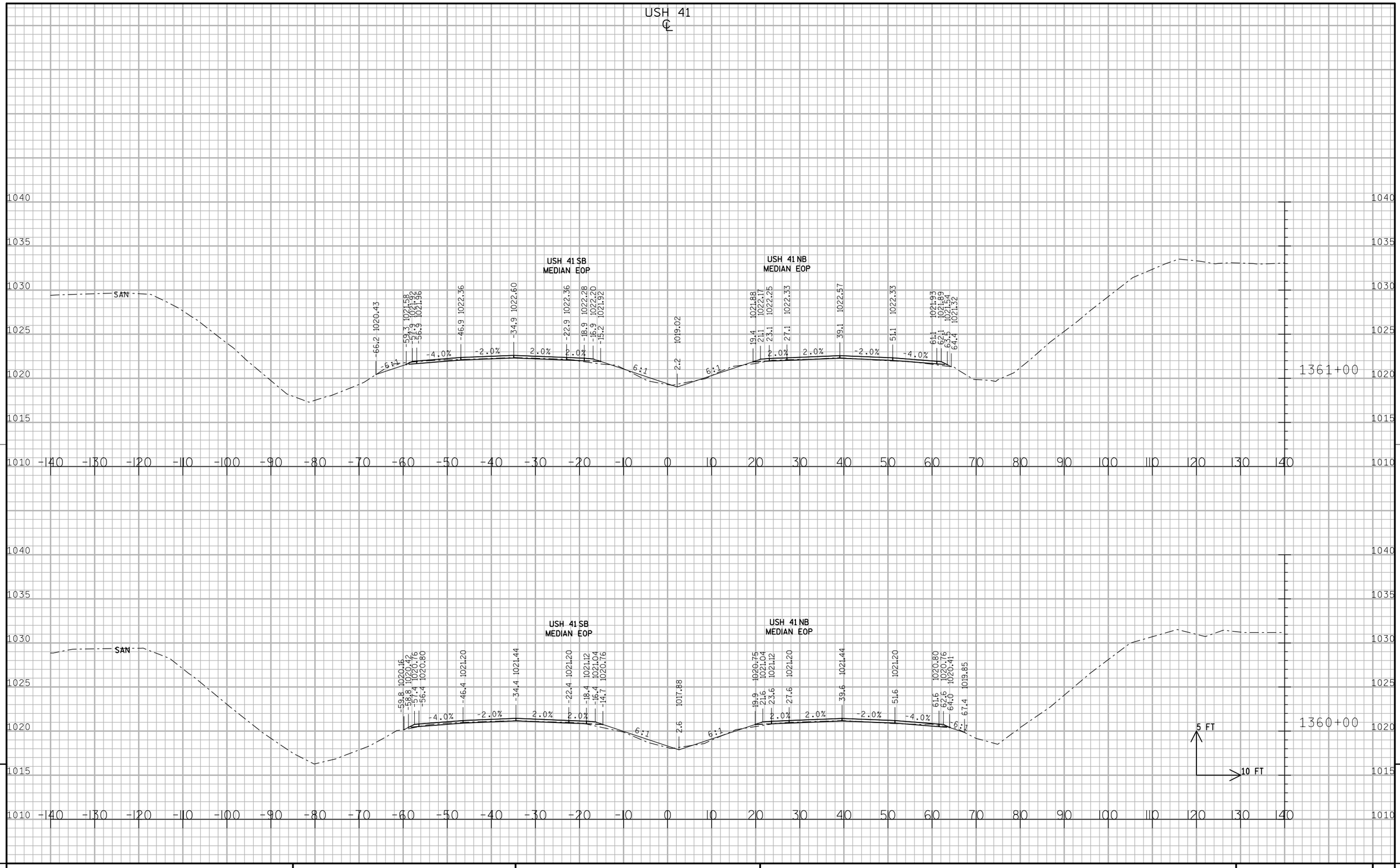

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 425	E

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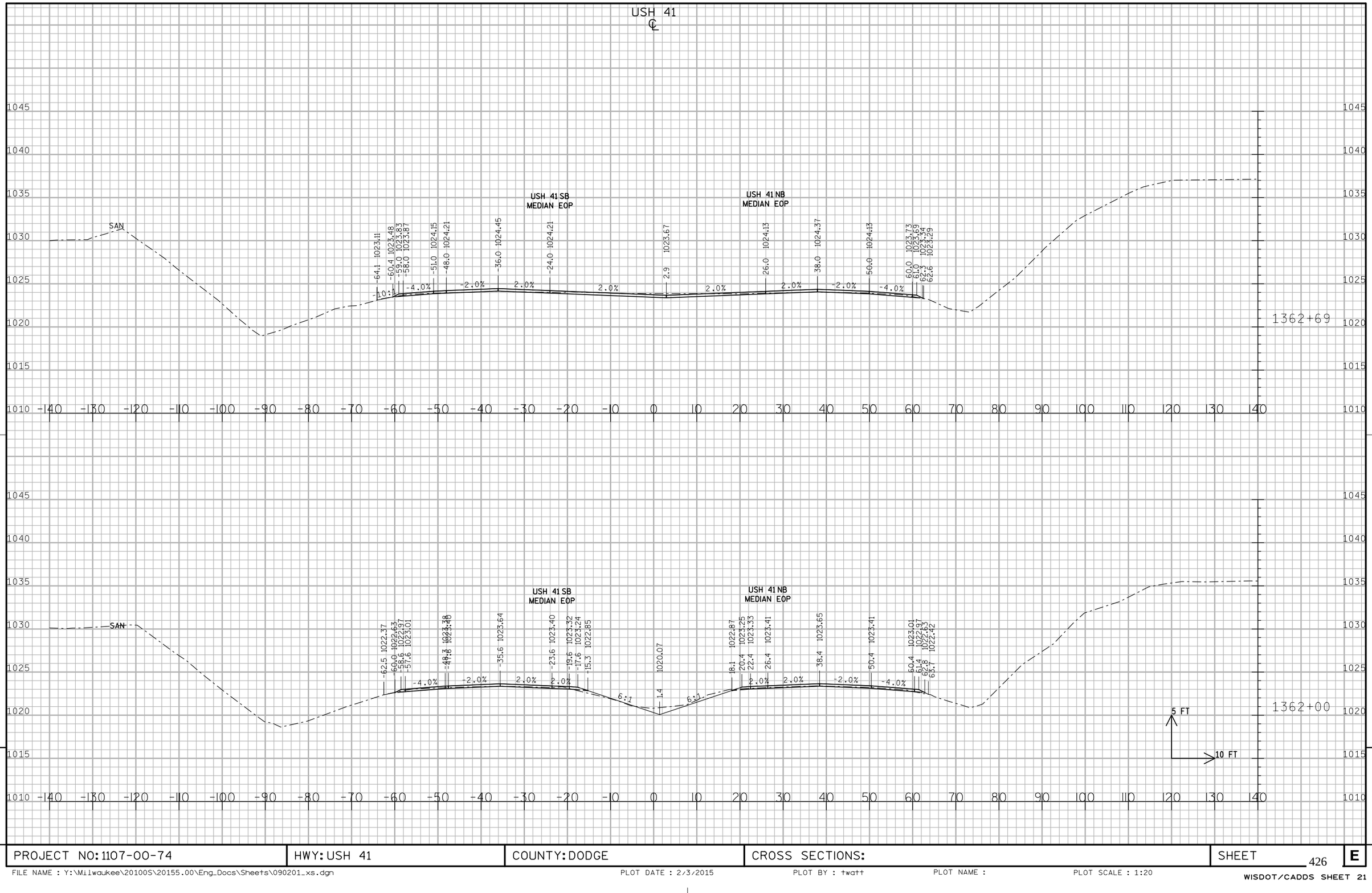
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 426	E

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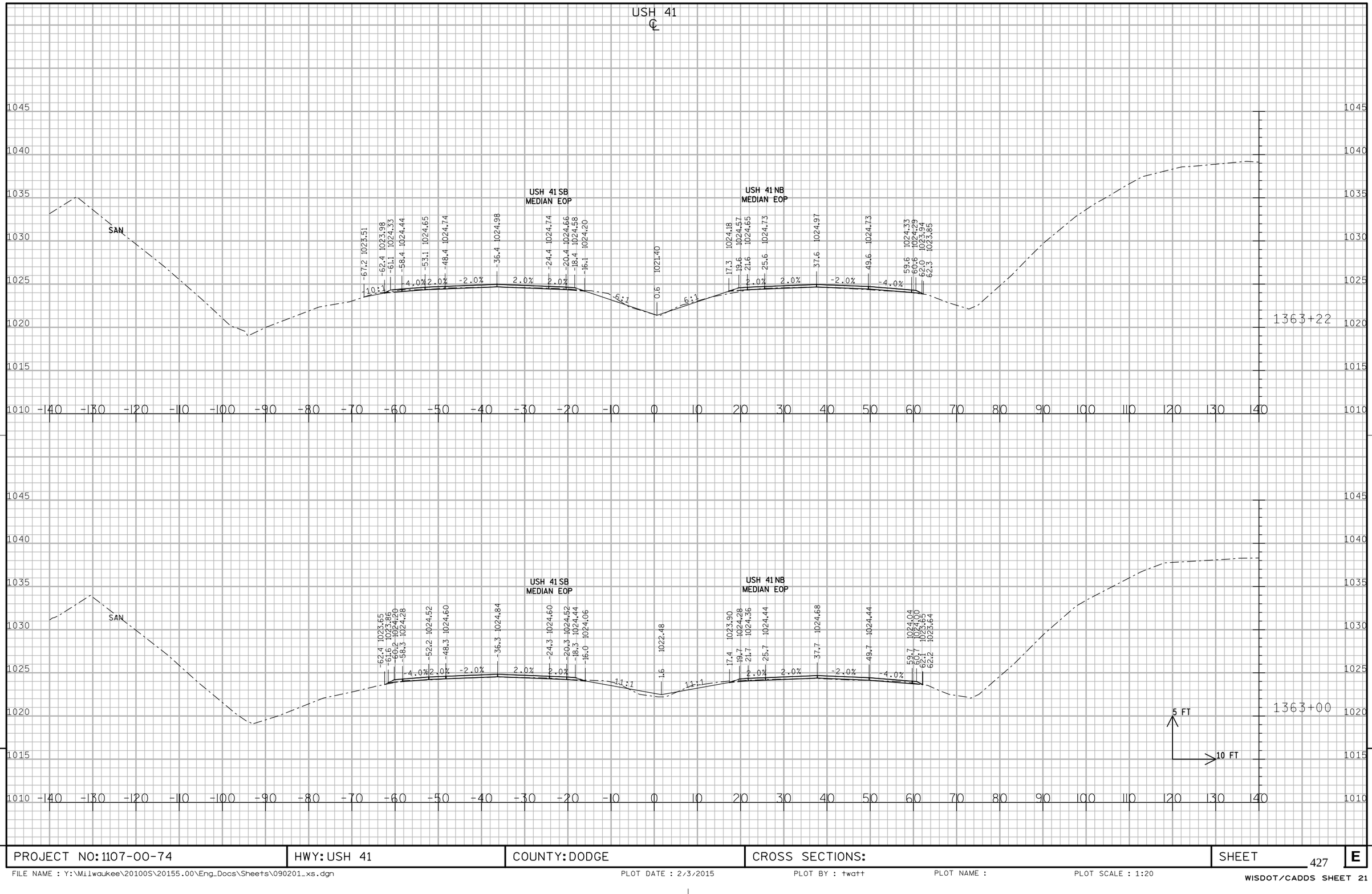
WISDOT/CADDS SHEET 21



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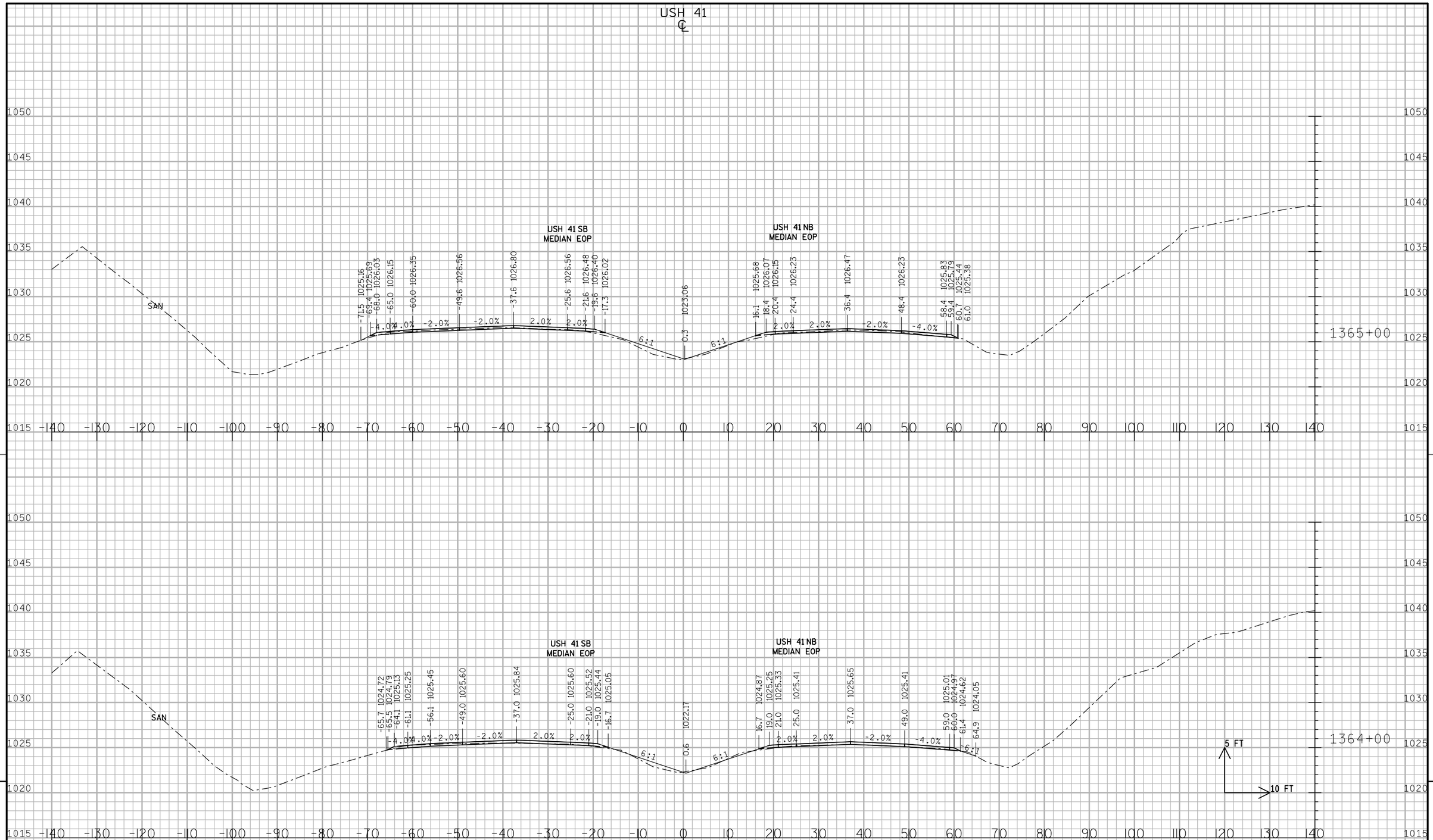
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 427	E



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 428	E

USH 41
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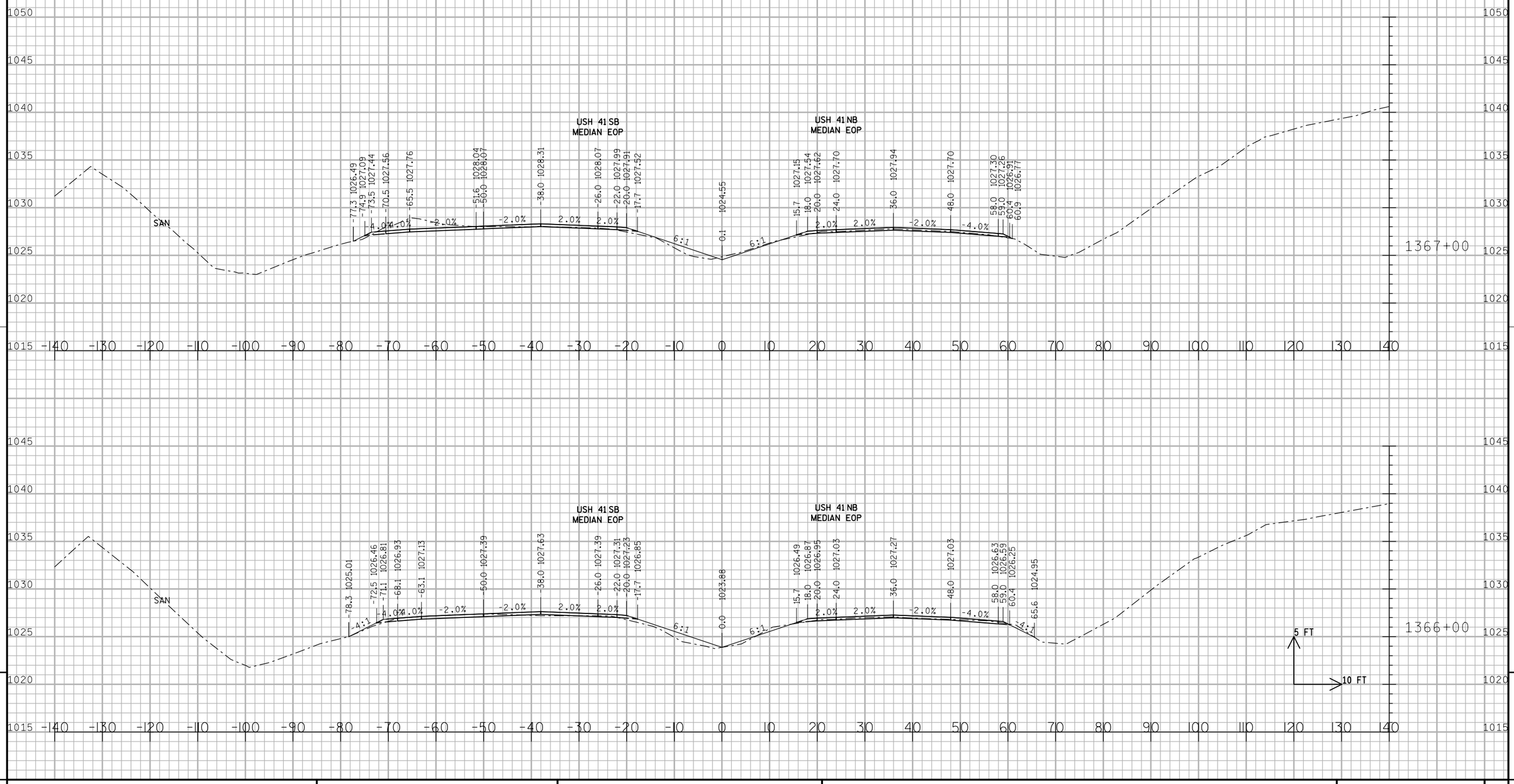

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 429	E

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WISDOT/CADDS SHEET 21

USH 41
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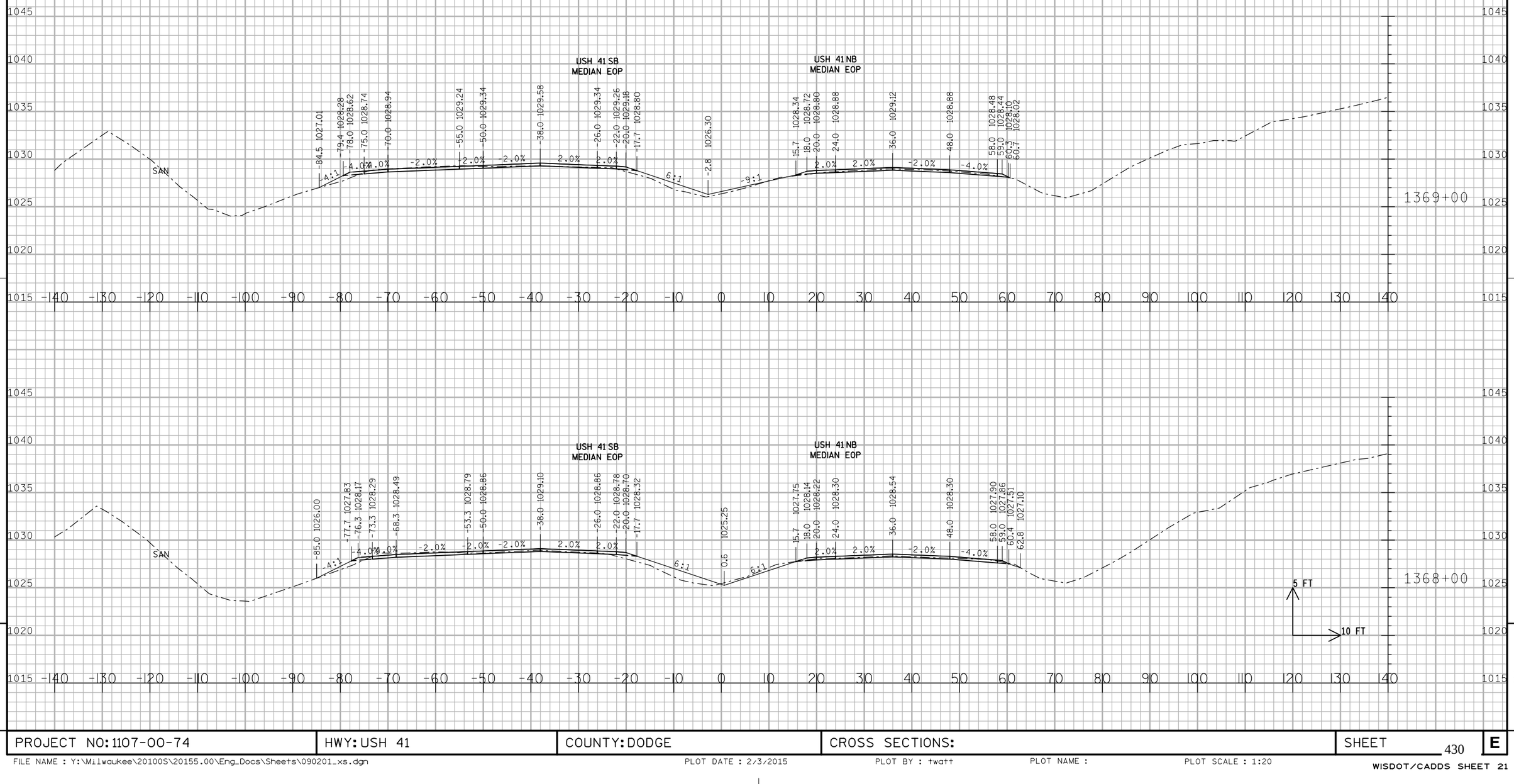

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 430	E

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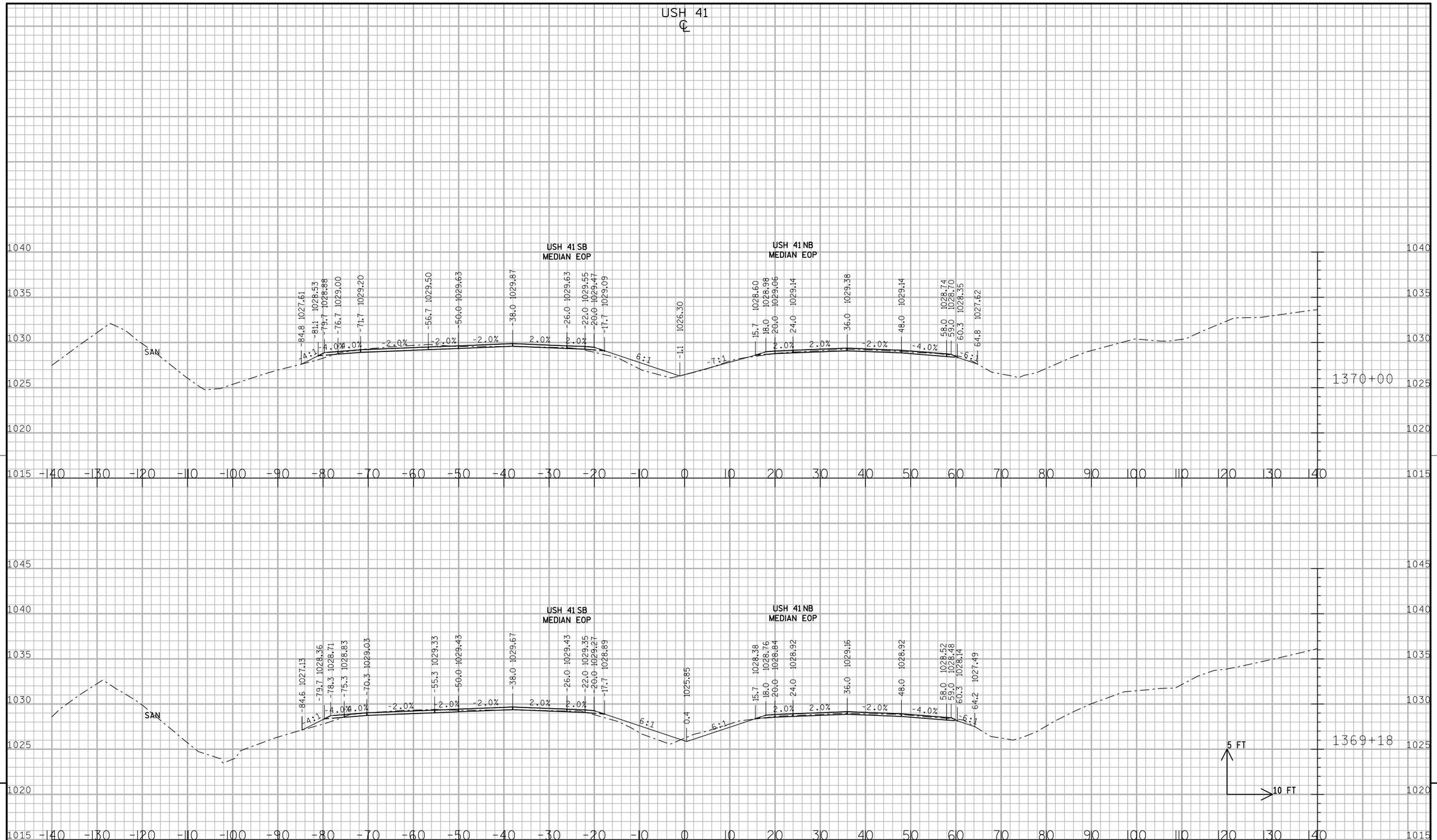
WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 431	E

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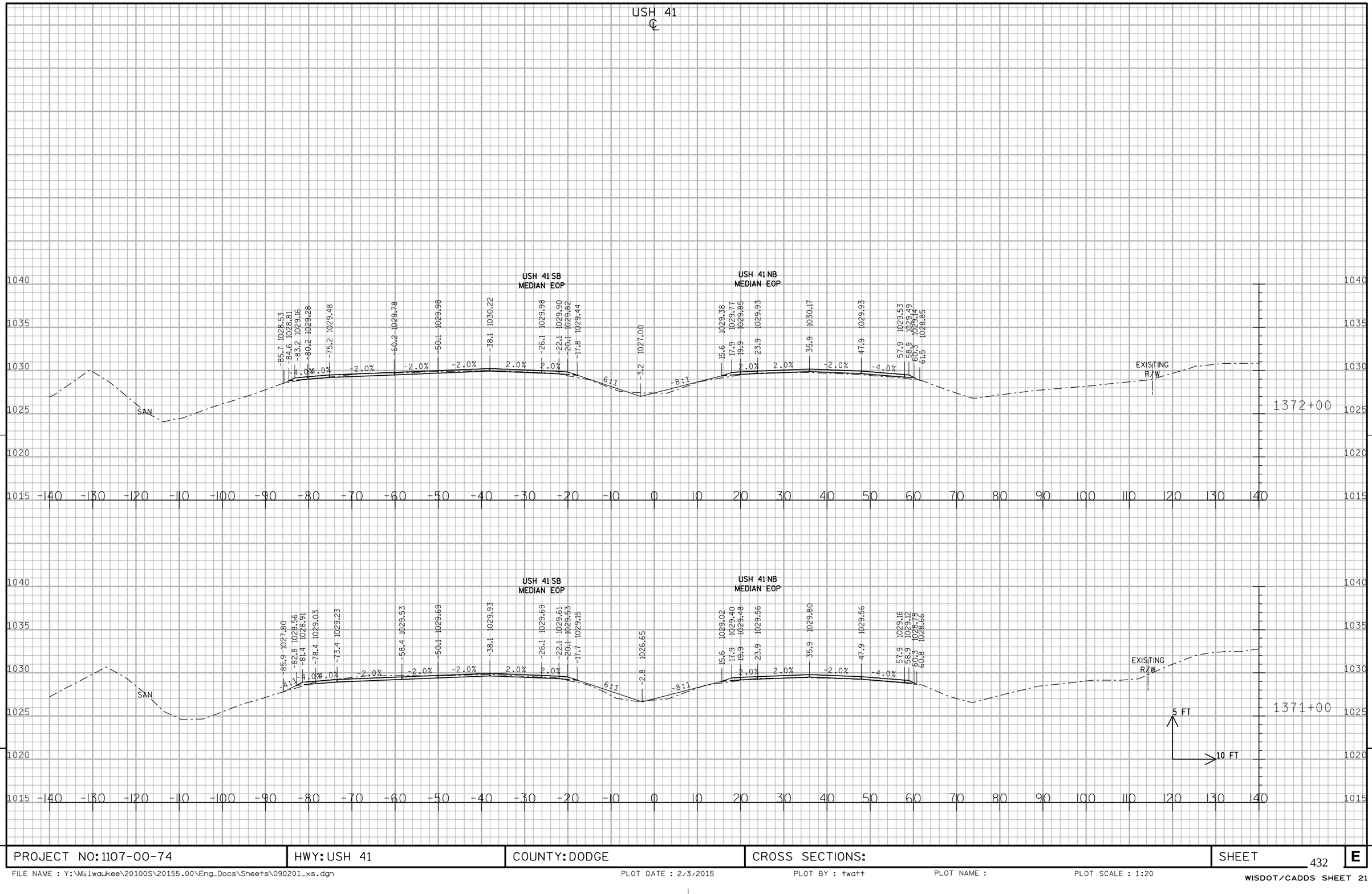
WISDOT/CADDS SHEET 21



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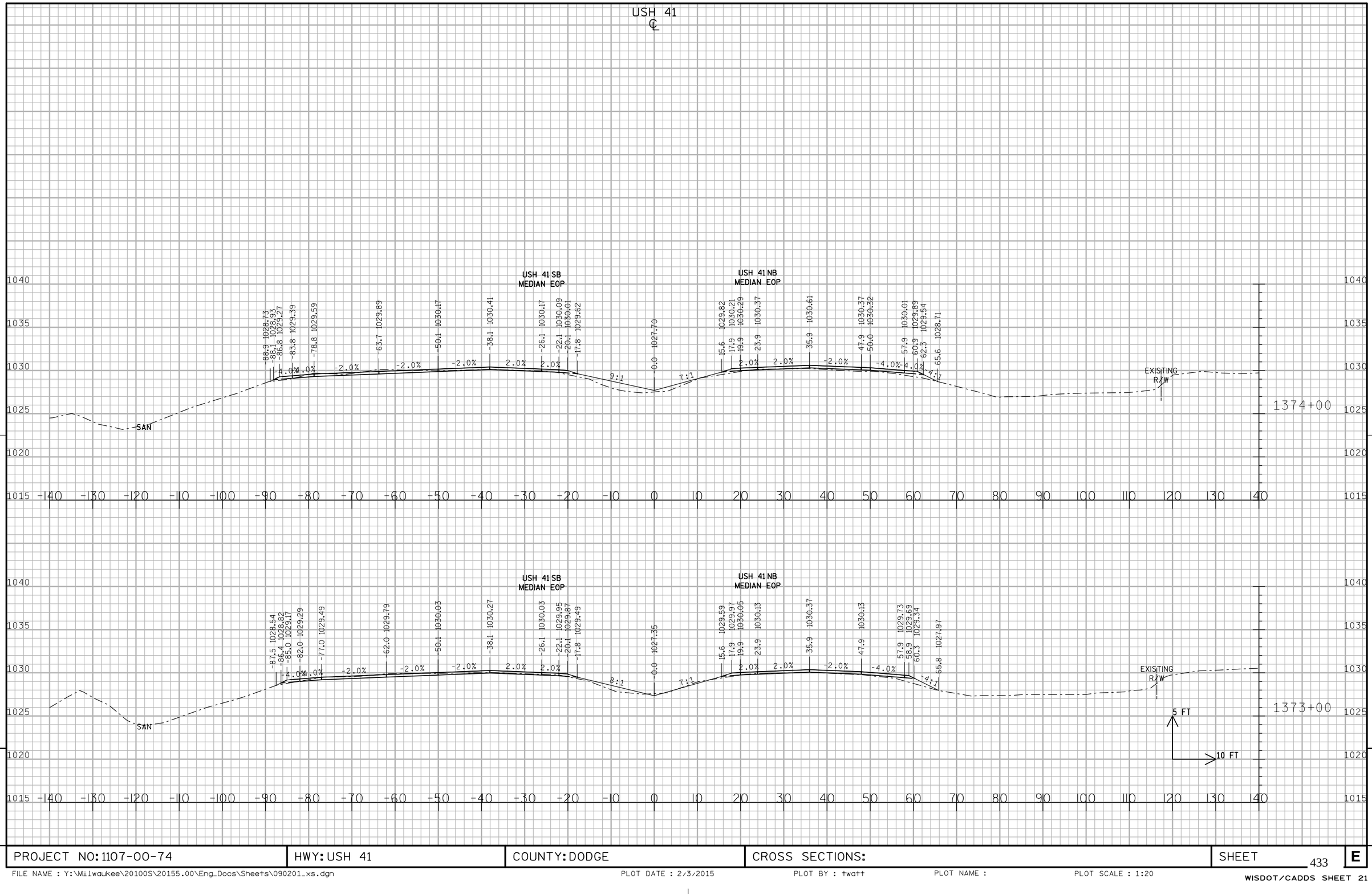

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 433	E

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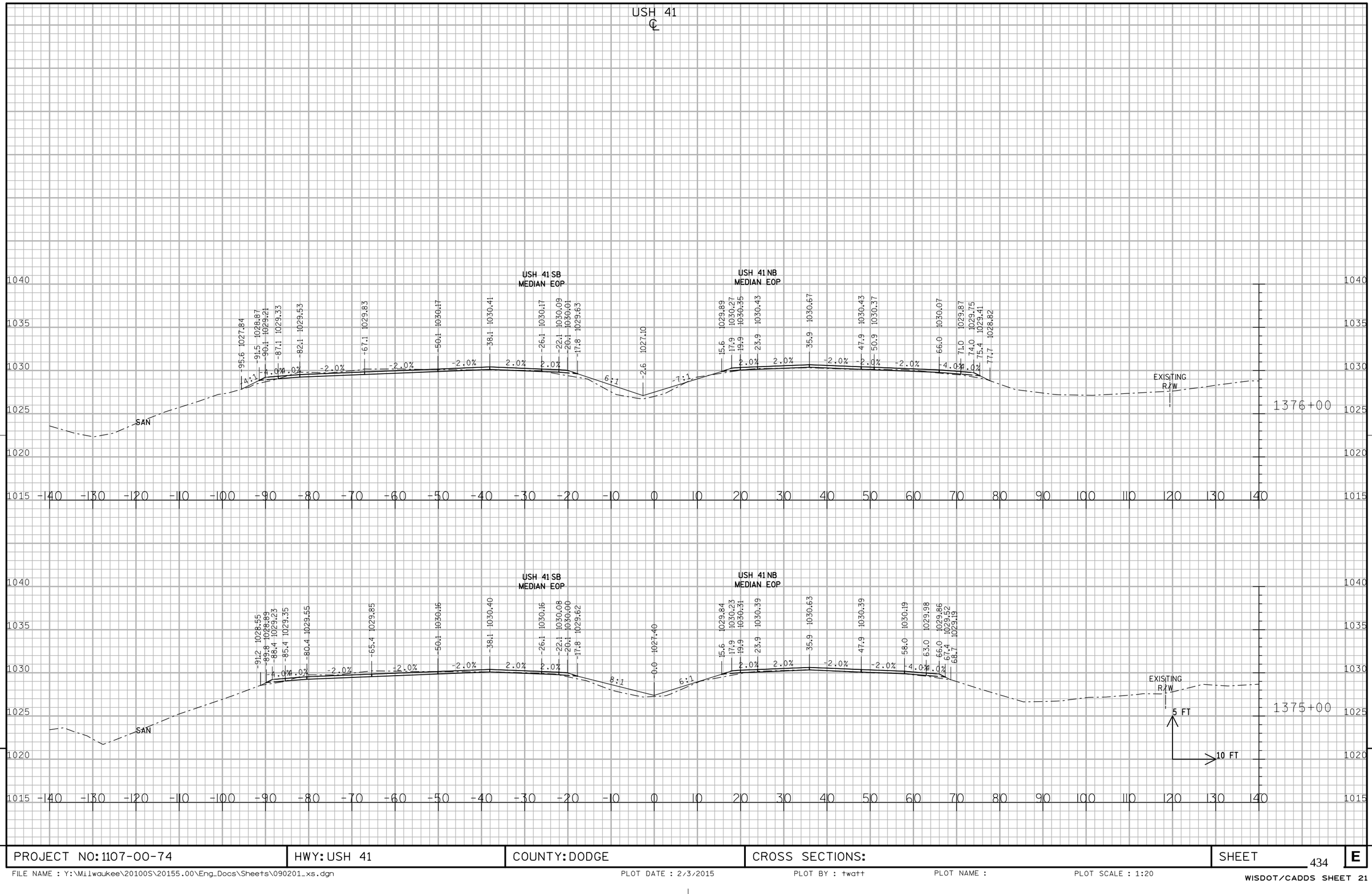
WISDOT/CADDS SHEET 21



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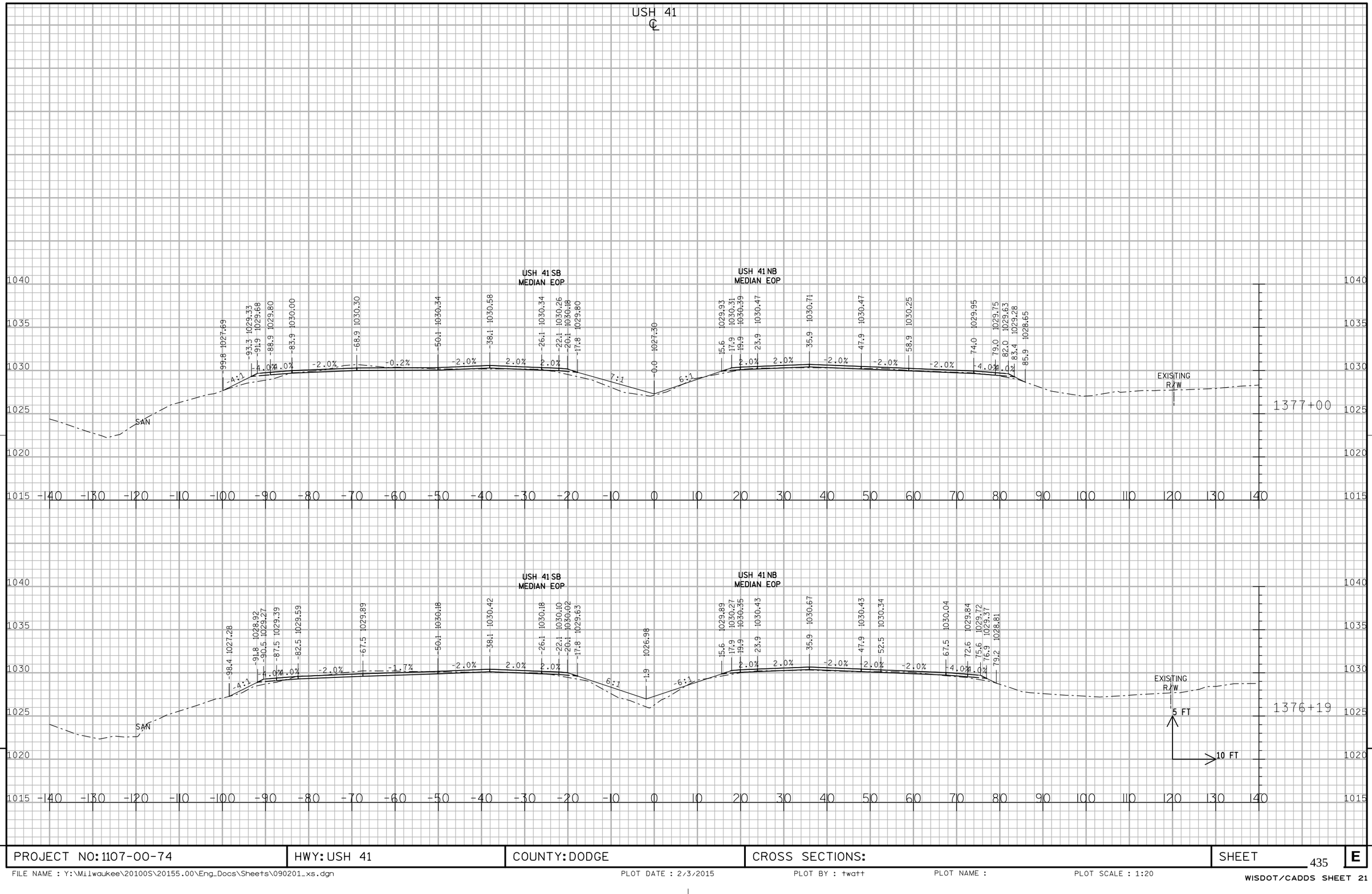
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 434	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 435	E

USH 41
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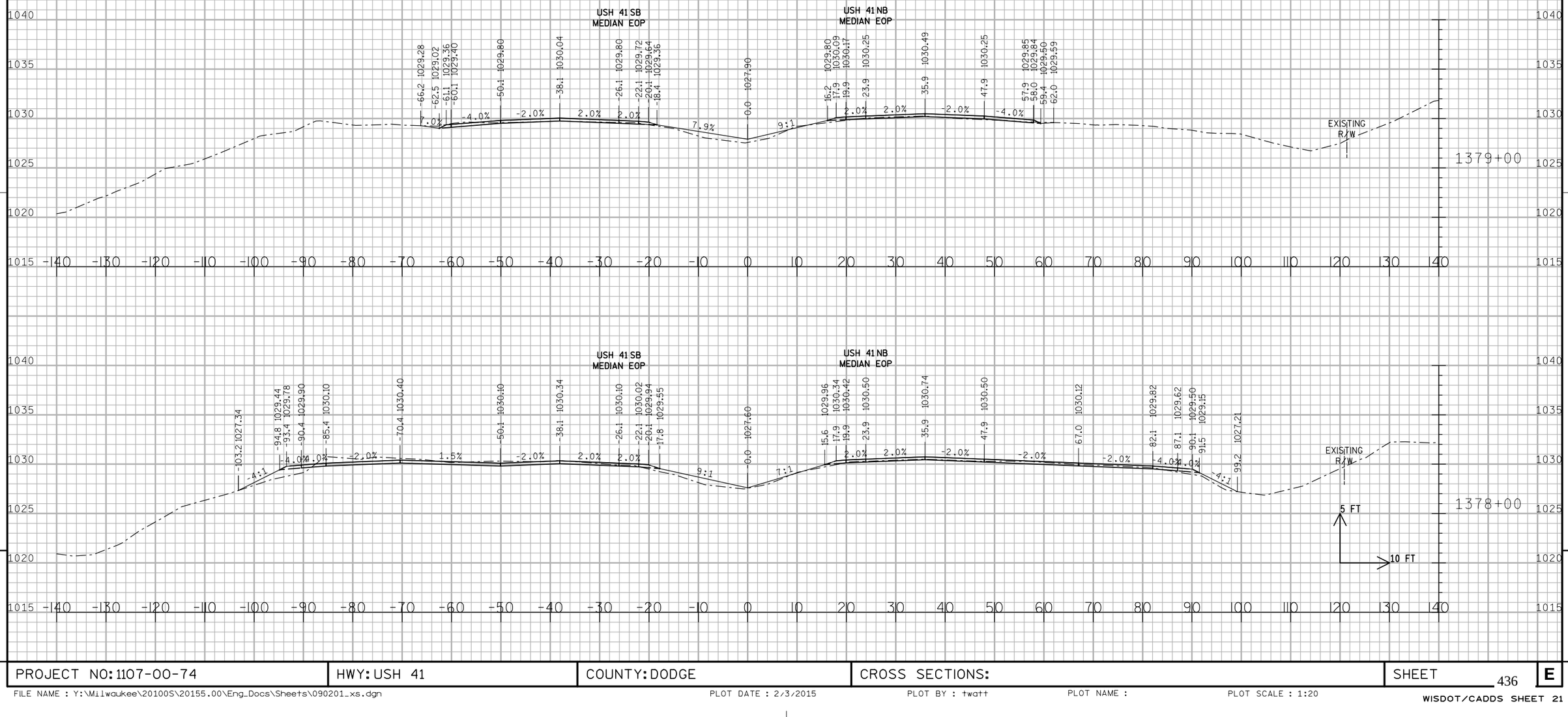

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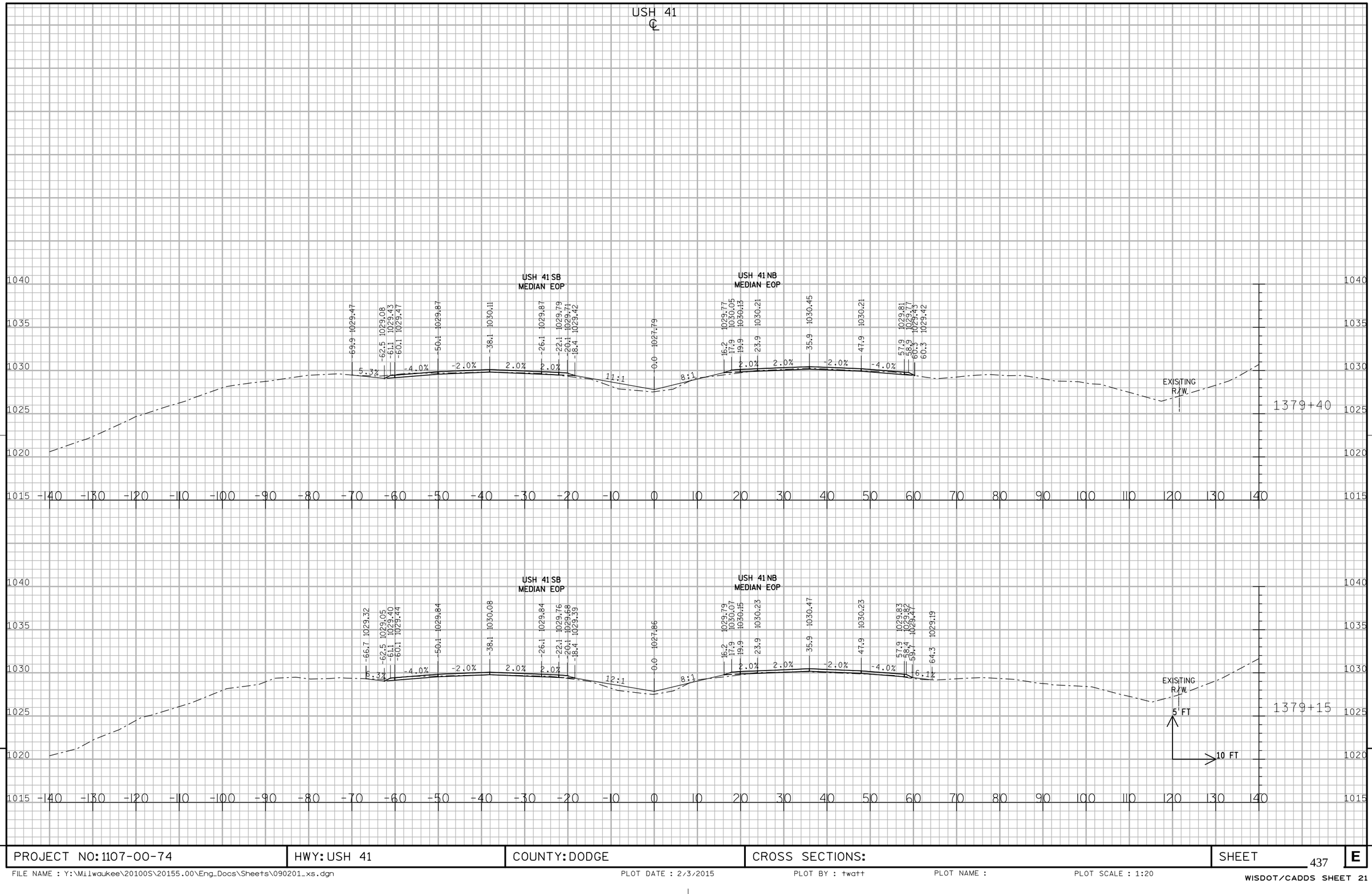
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 436	E



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 437	E

USH 41
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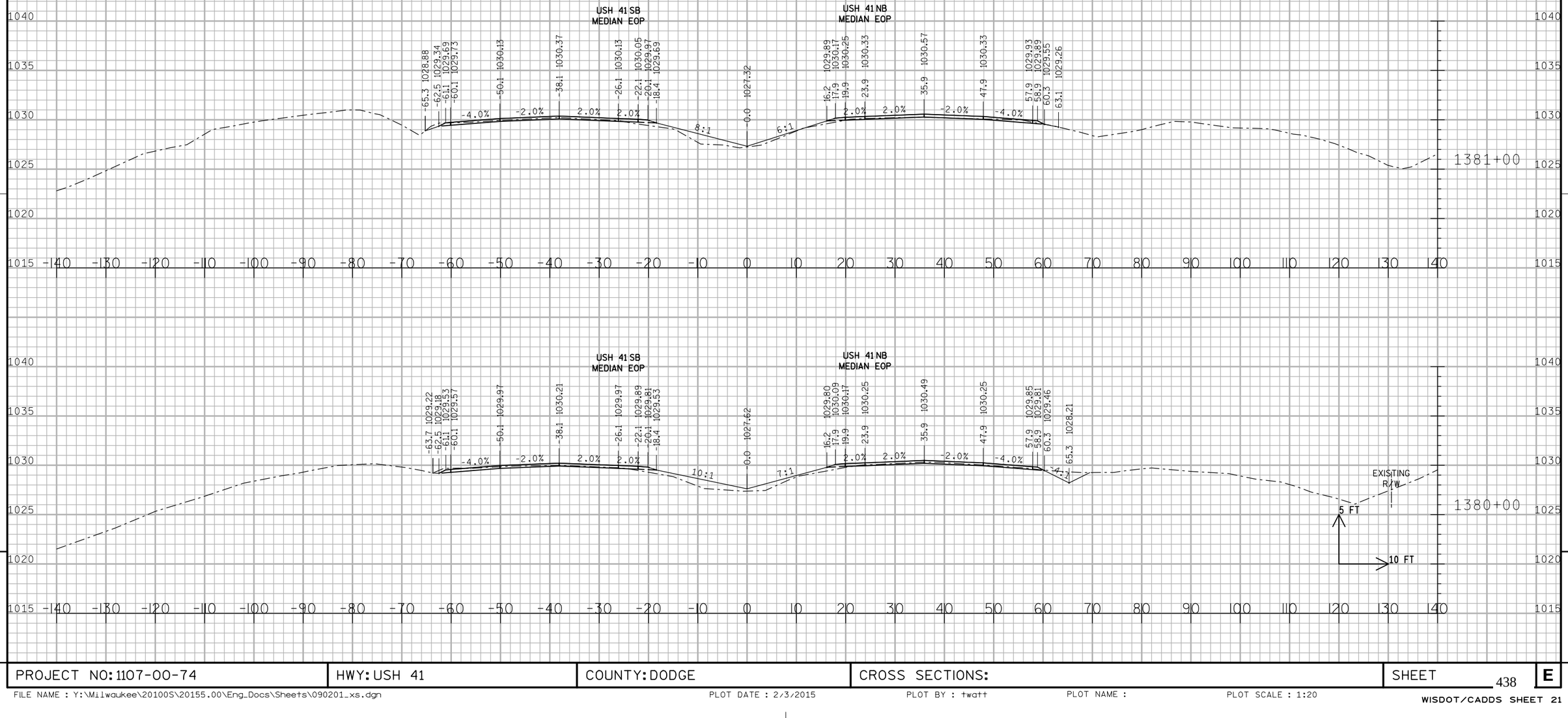

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 438	E

USH 41
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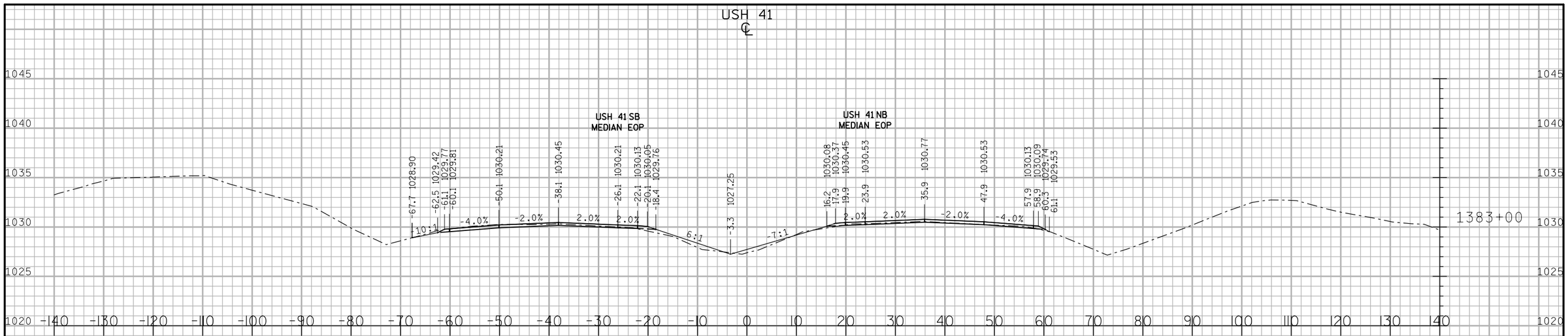

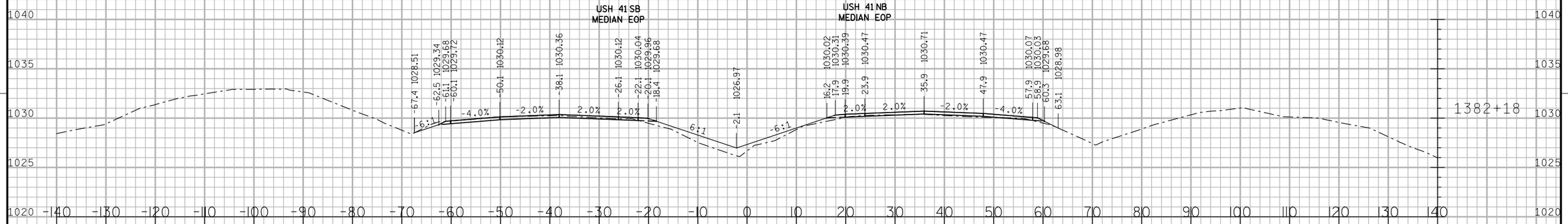

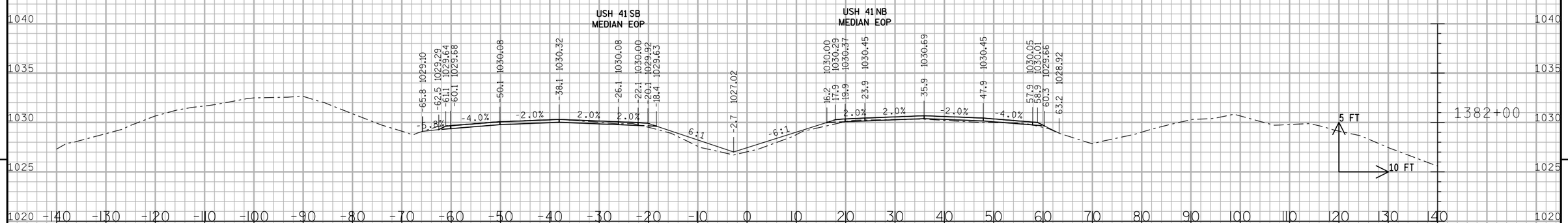

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 439	E

USH 41
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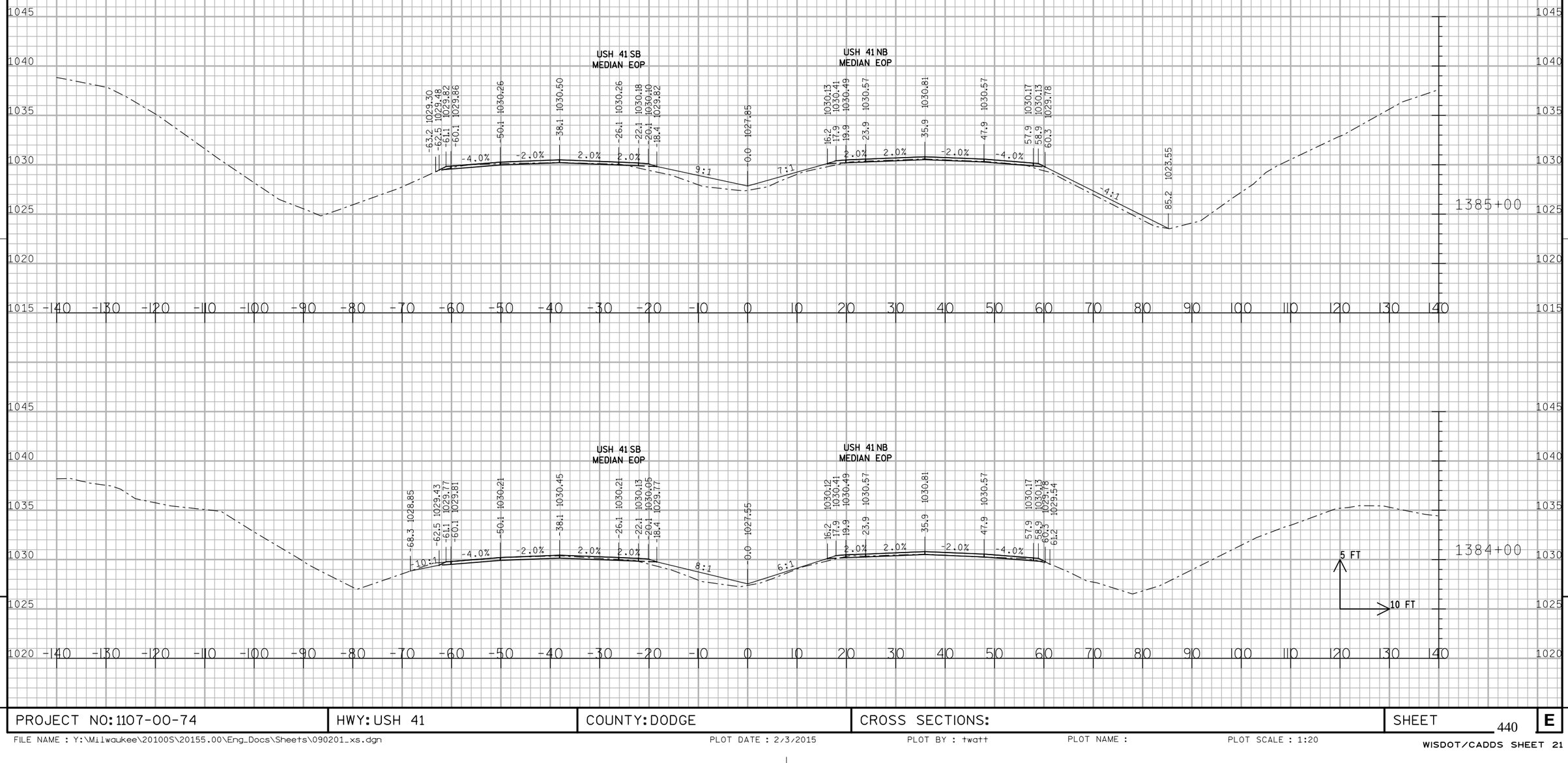

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 440	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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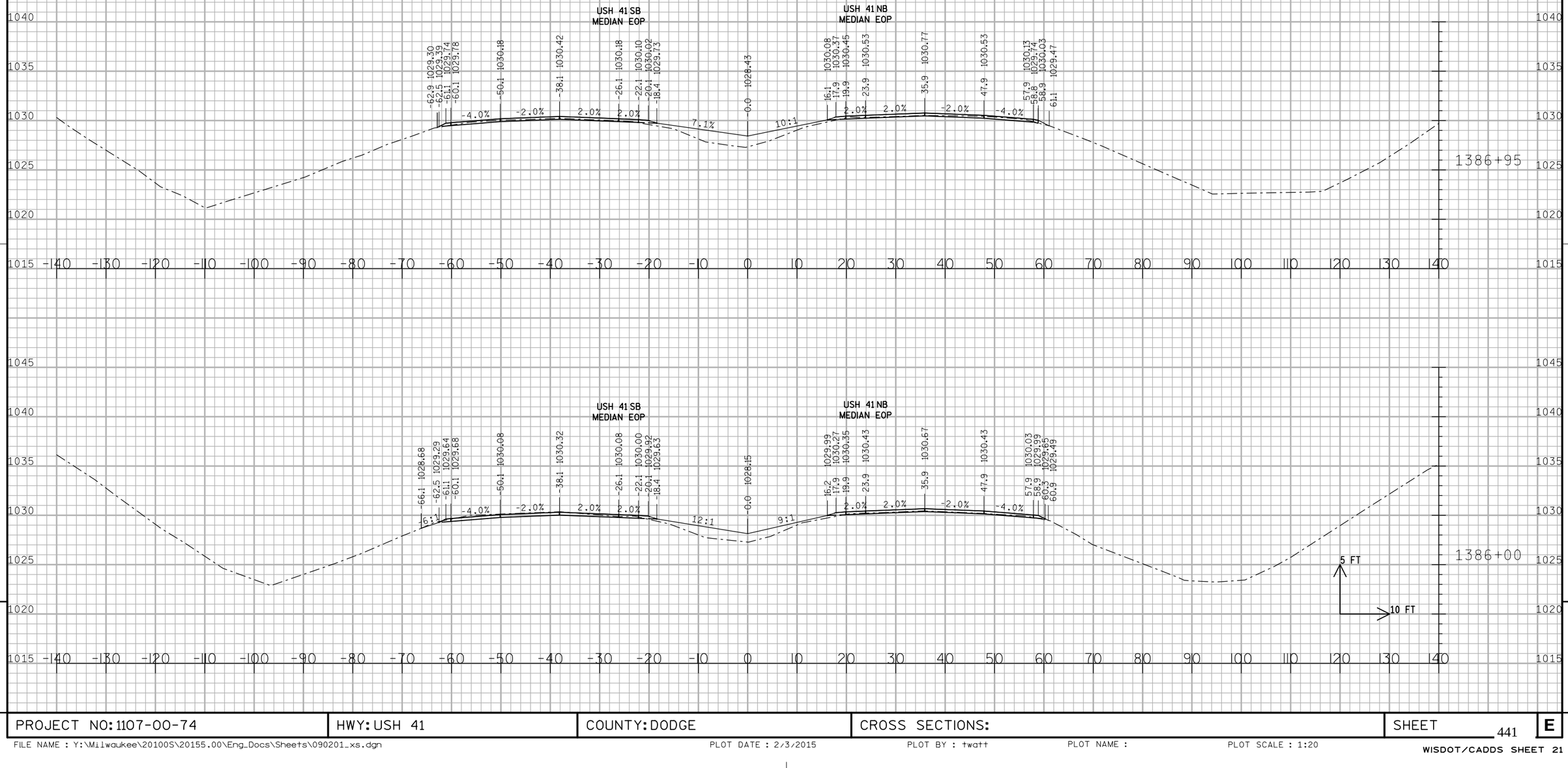

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 441	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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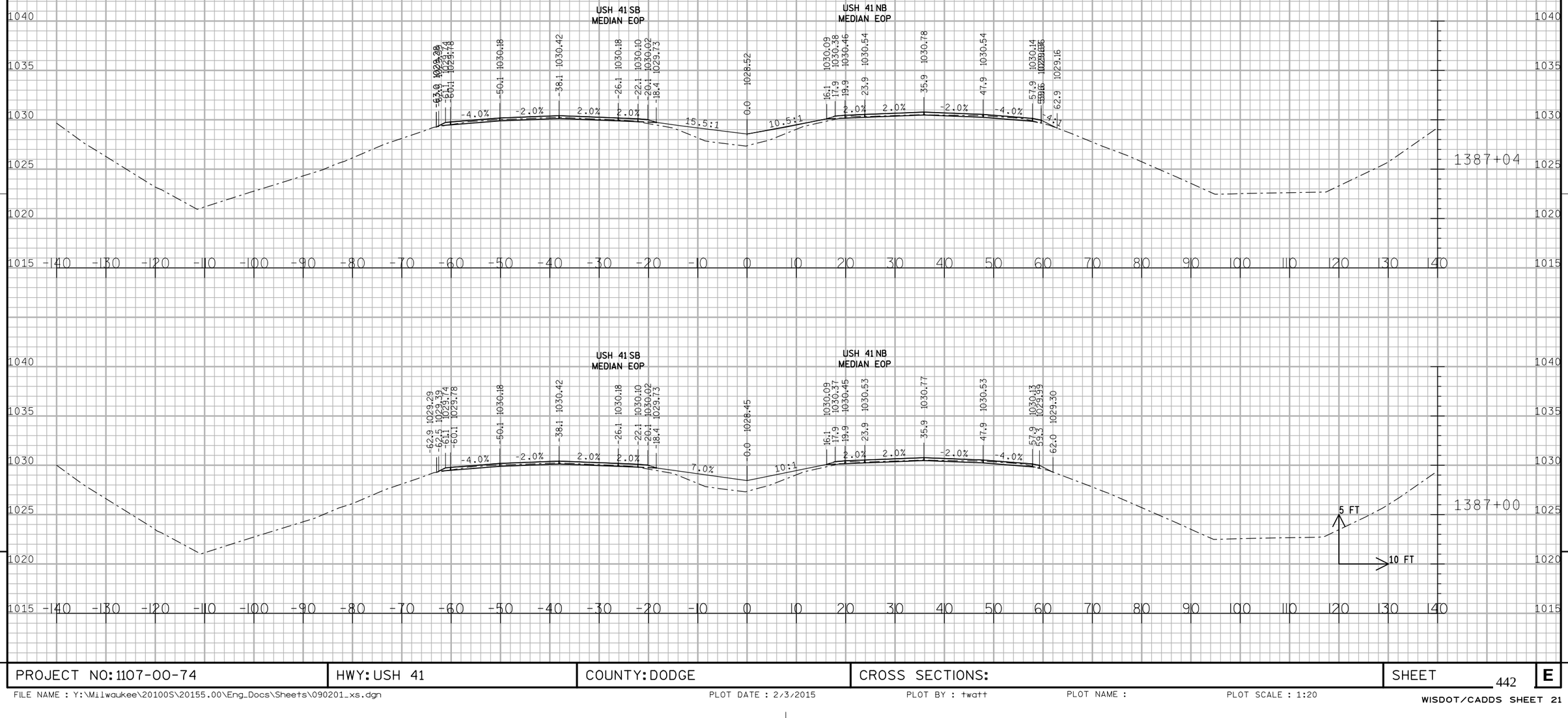

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 442	E

USH 41
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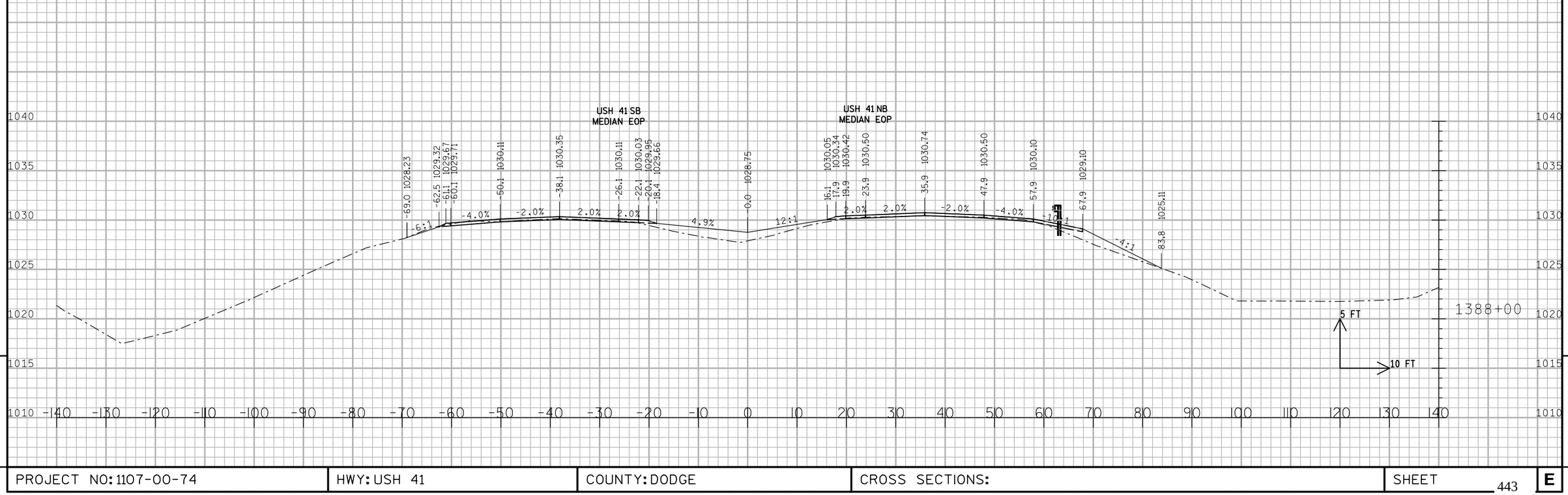

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 443	E

USH 41
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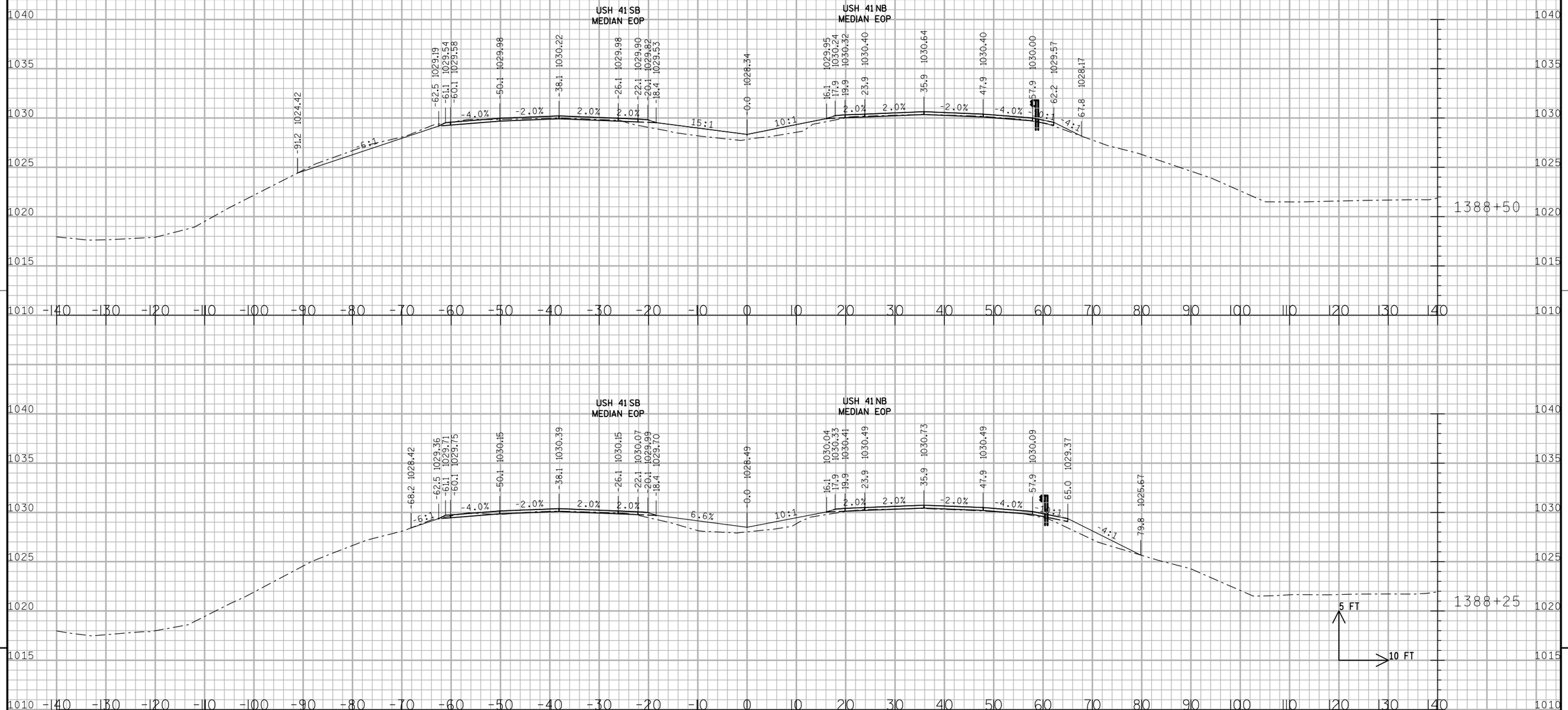

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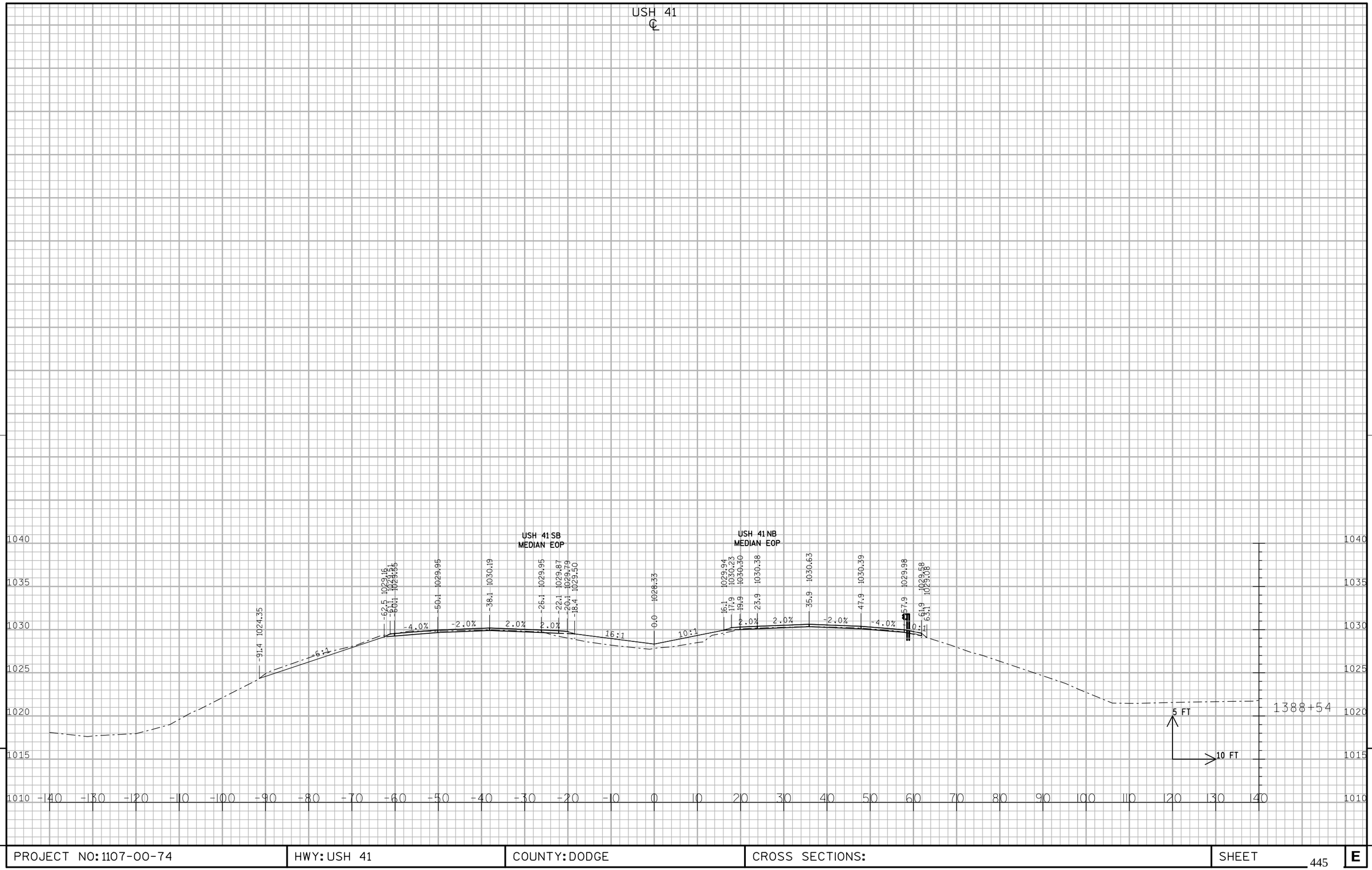
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 444	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 445	E

USH 41
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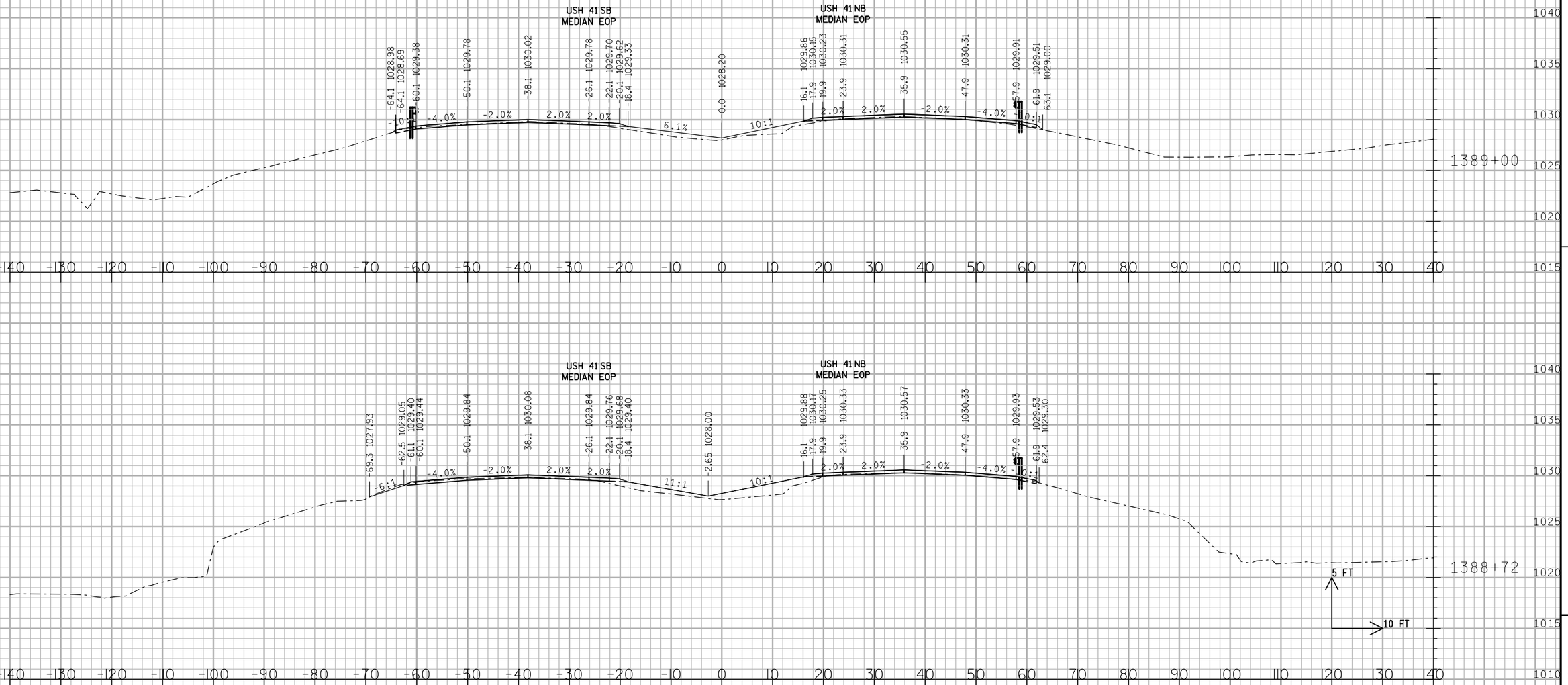

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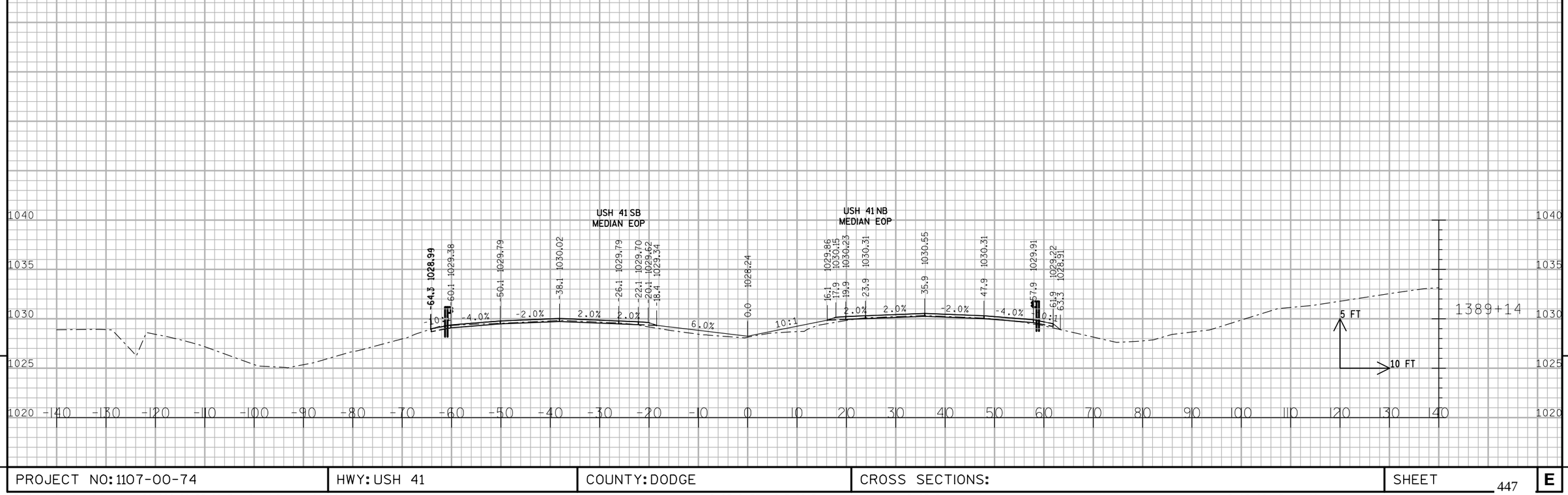
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 446	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

9

USH 41
℄



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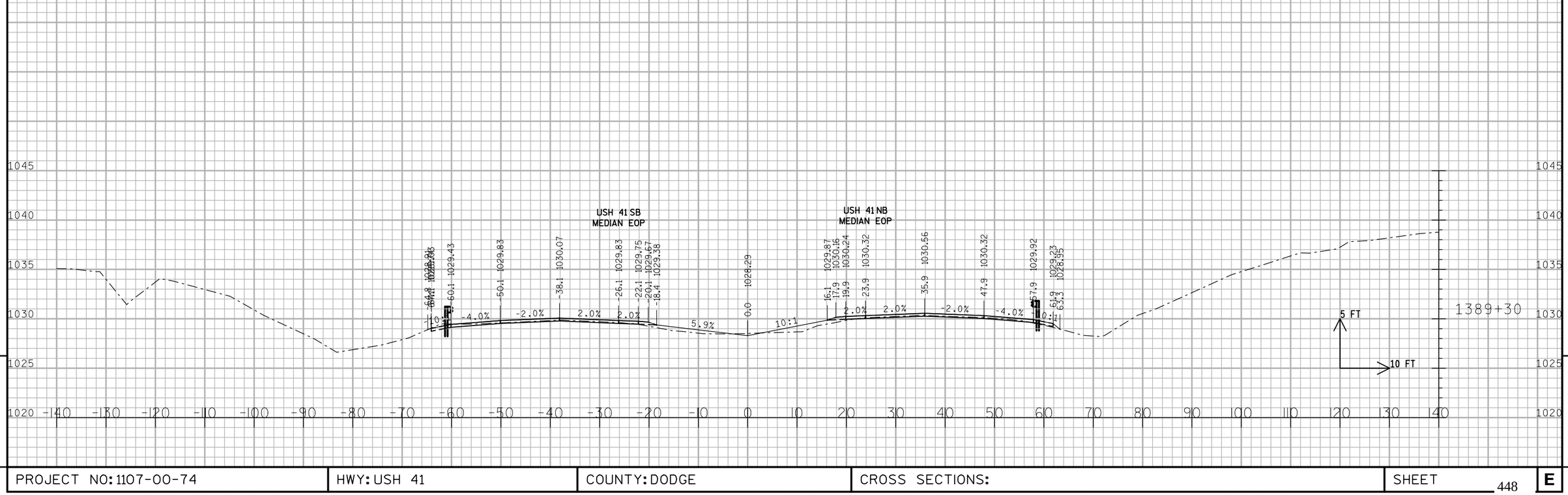
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 447	E

USH 41
℄



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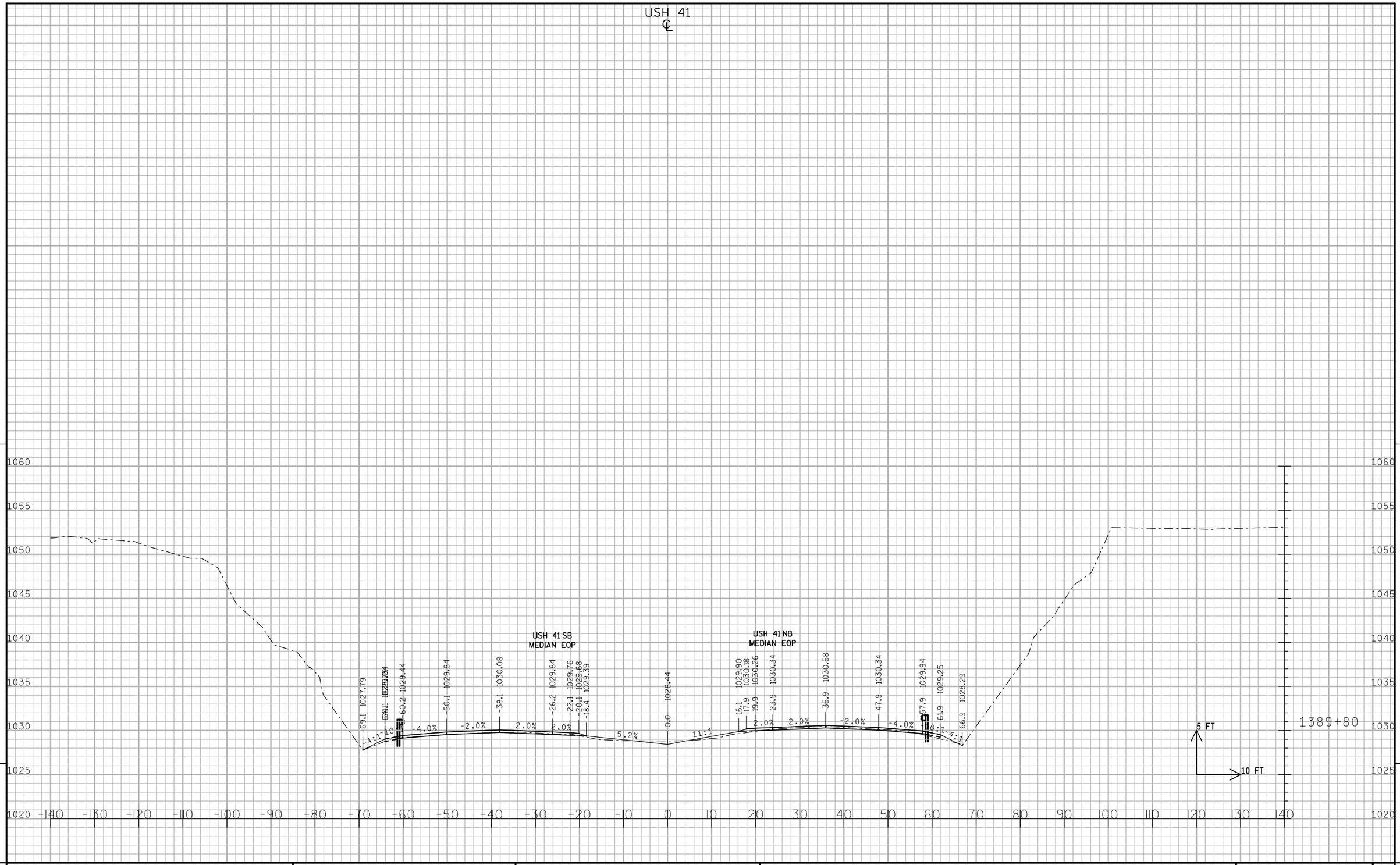
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 448	E



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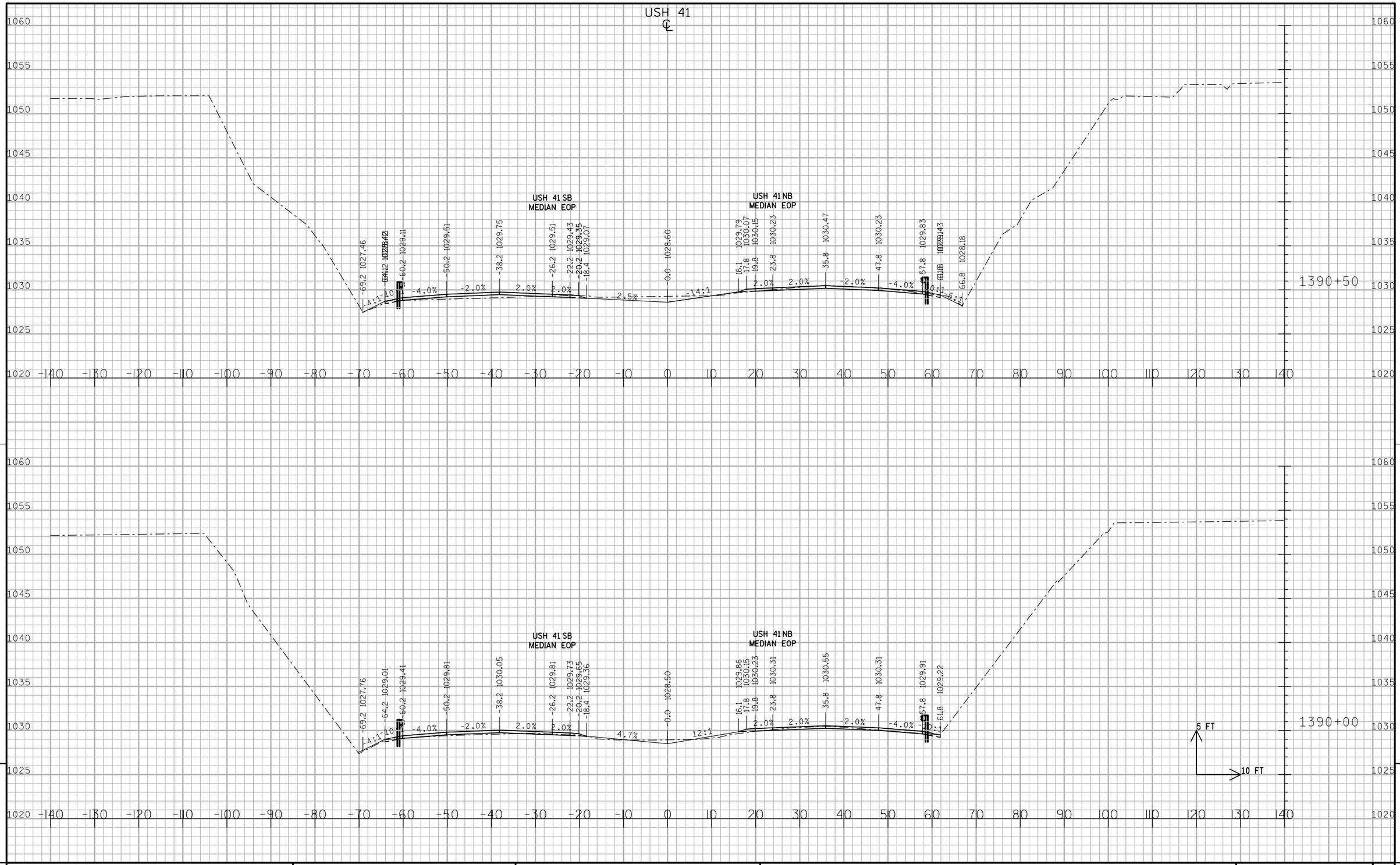
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 449	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 450	E

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WISDOT/CADDS SHEET 21

USH 41
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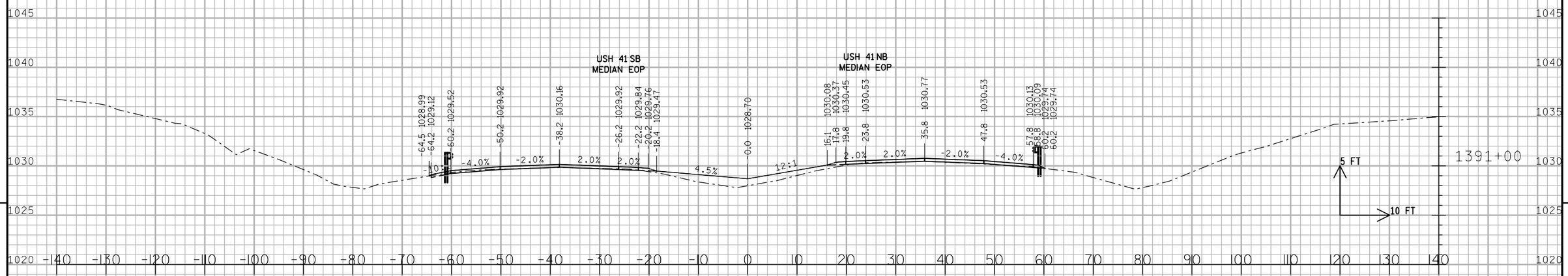

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 451	E

USH 41
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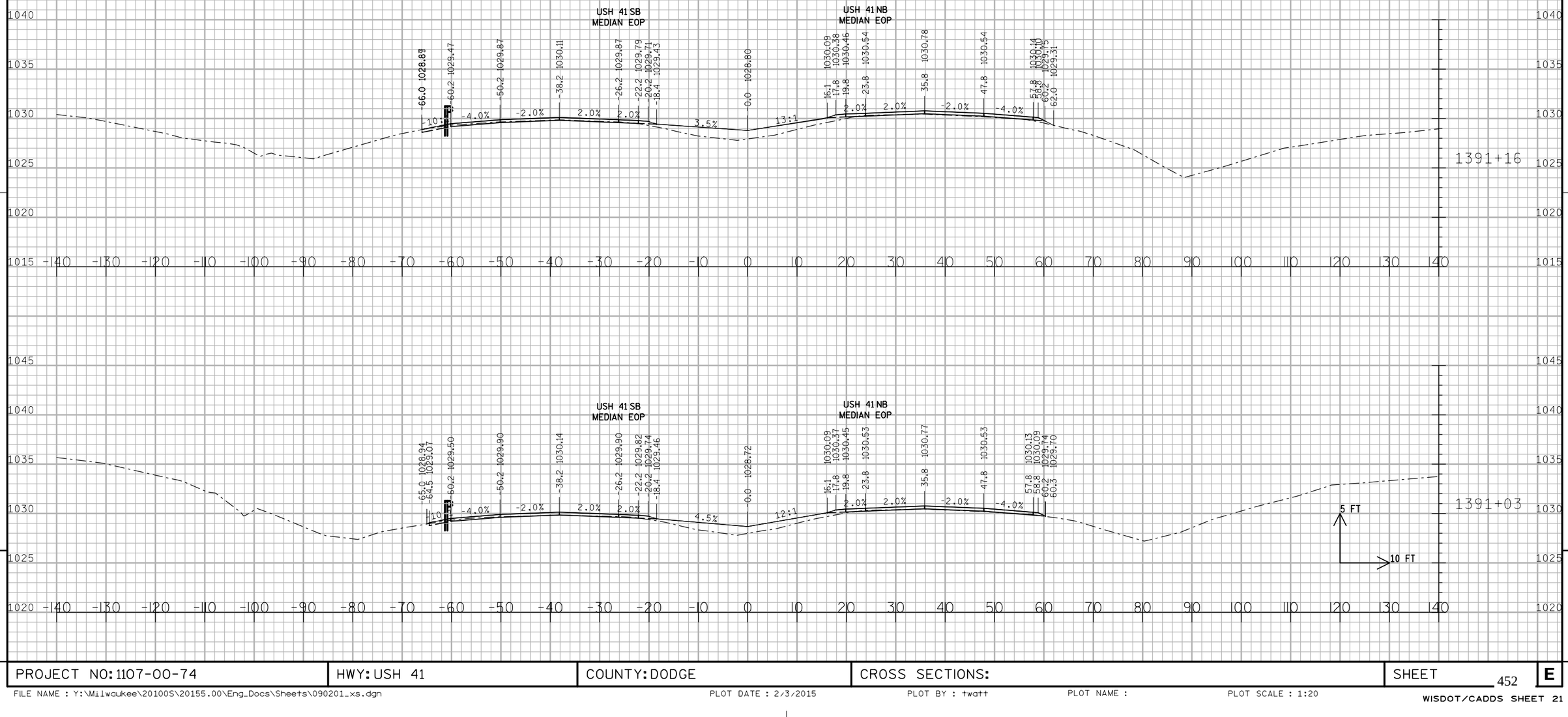

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 452	E

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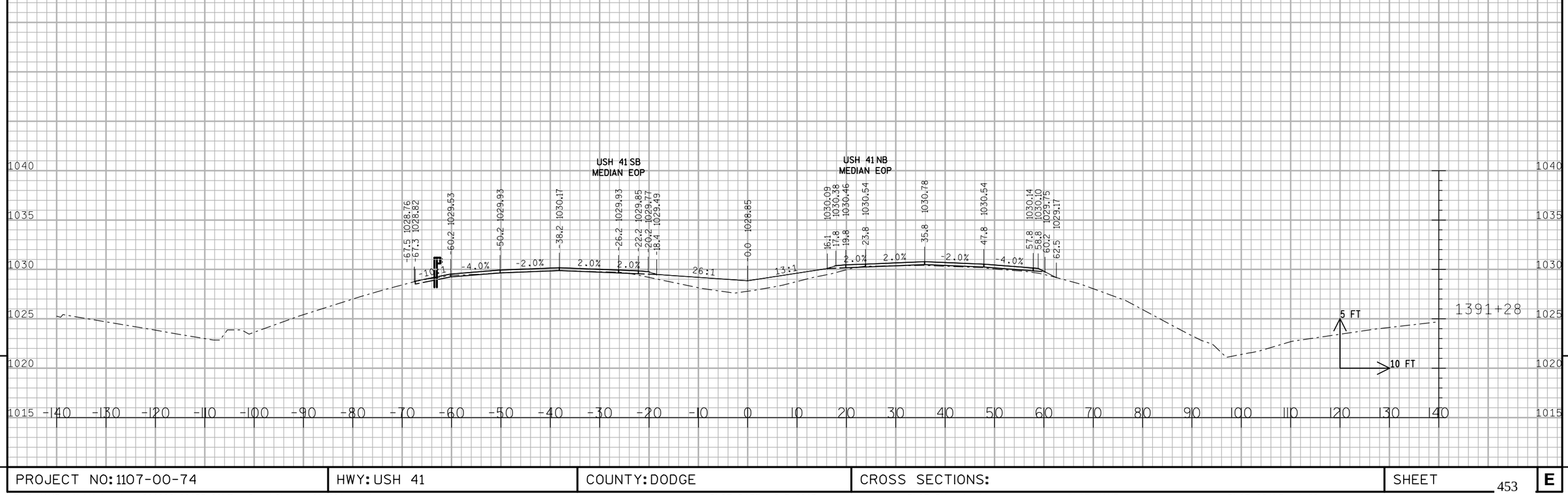
WISDOT/CADDS SHEET 21

USH 41
℄



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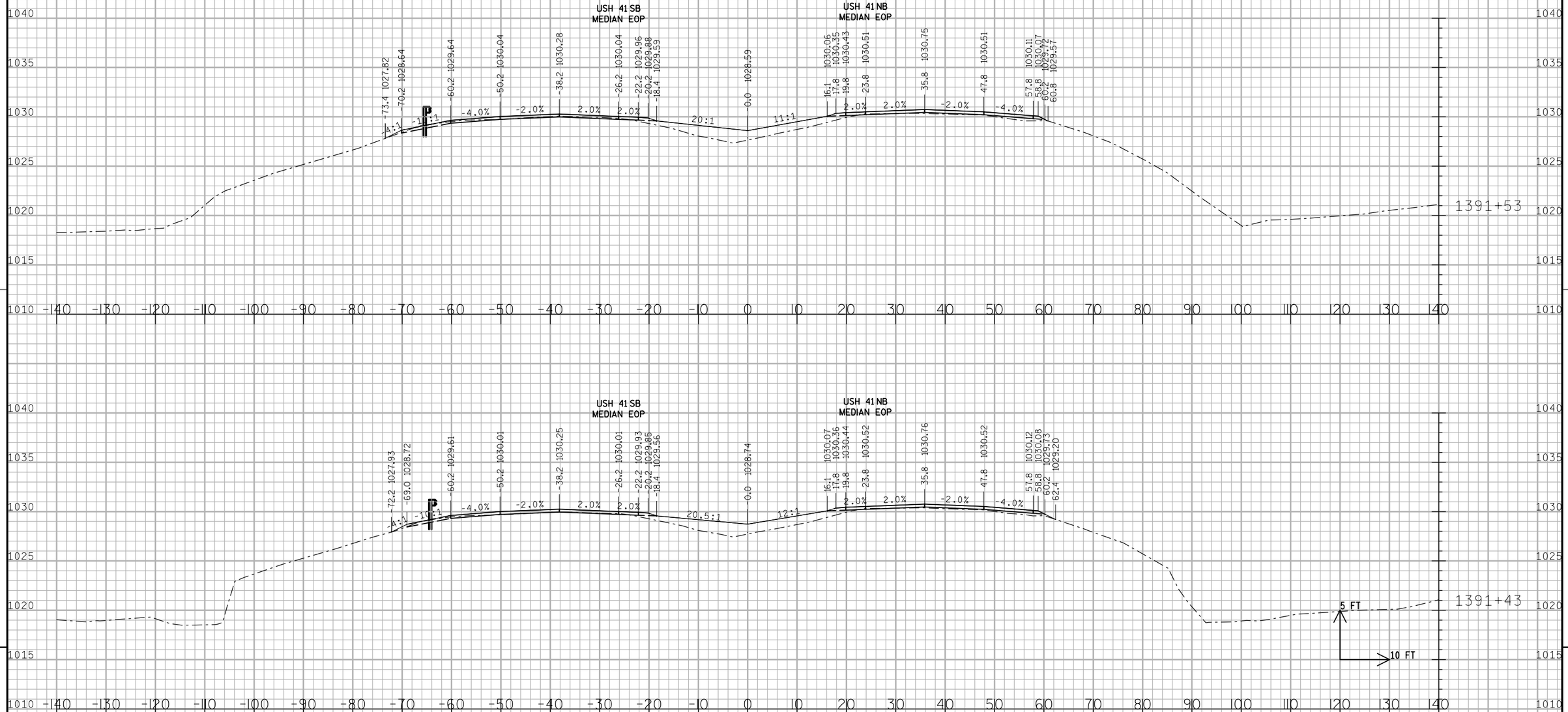
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 453	E

USH 41
℄



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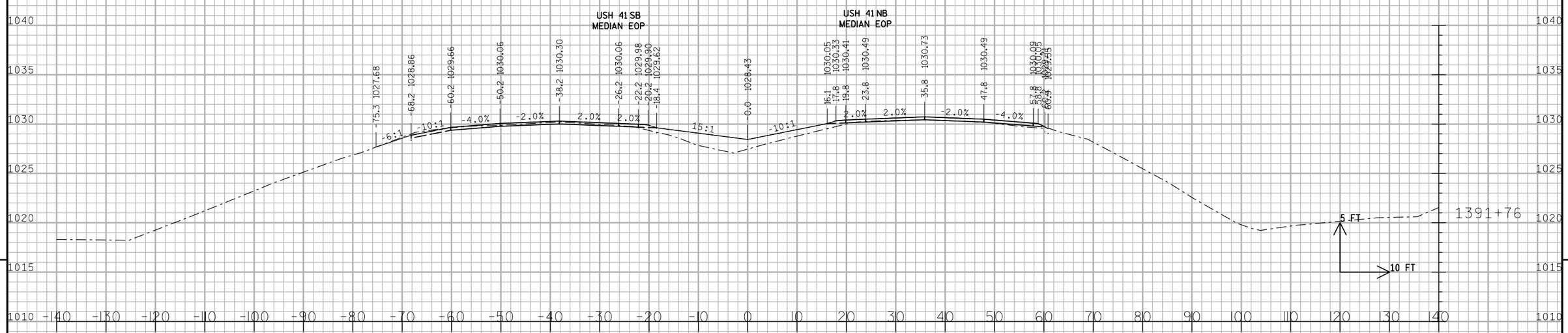
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 454	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
℄



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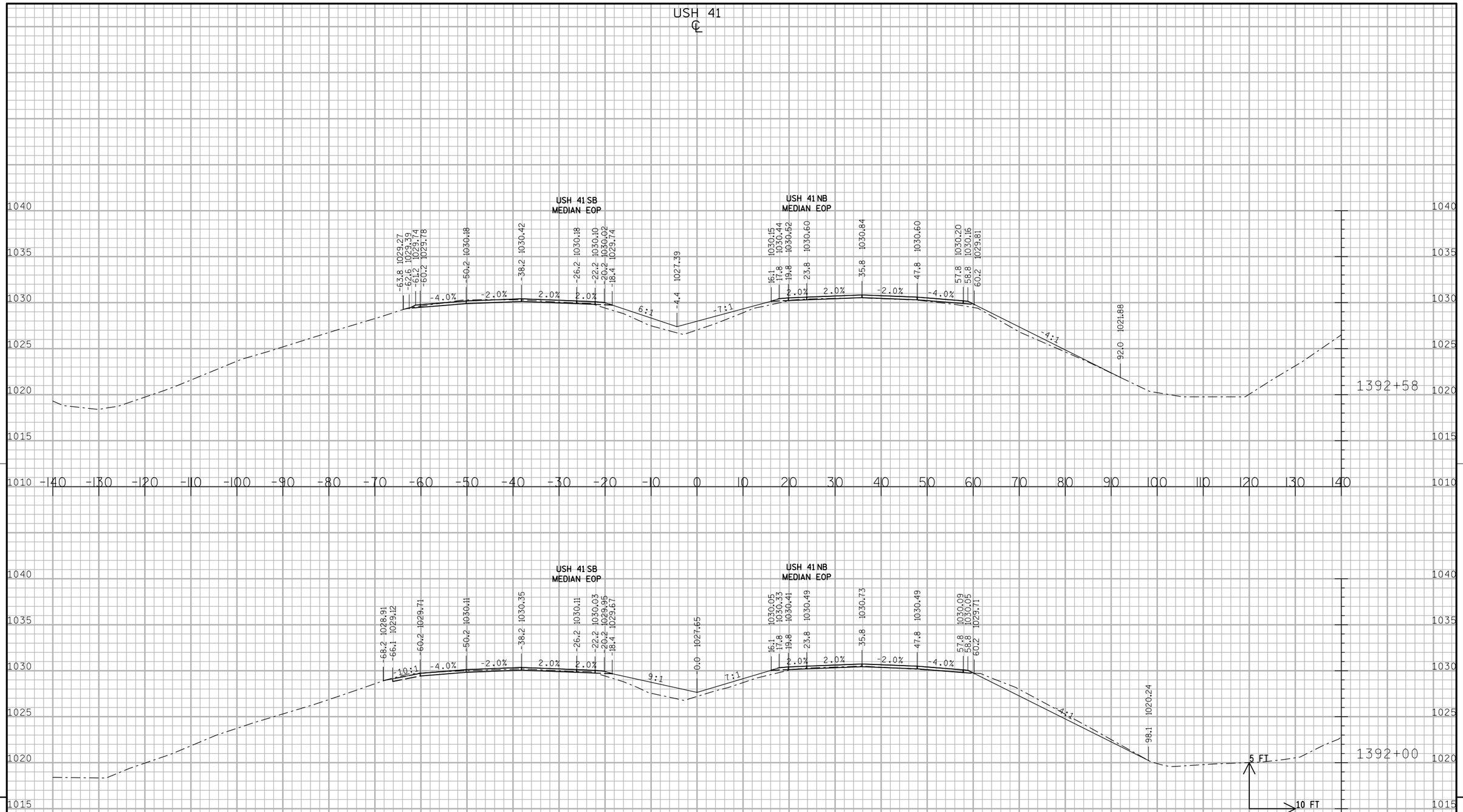
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 455	E



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WISDOT/CADDS SHEET 21

USH 41
℄

USH 41 SB
MEDIAN EOP

USH 41 NB
MEDIAN EOP

1393+18

1393+00

5 FT

10 FT

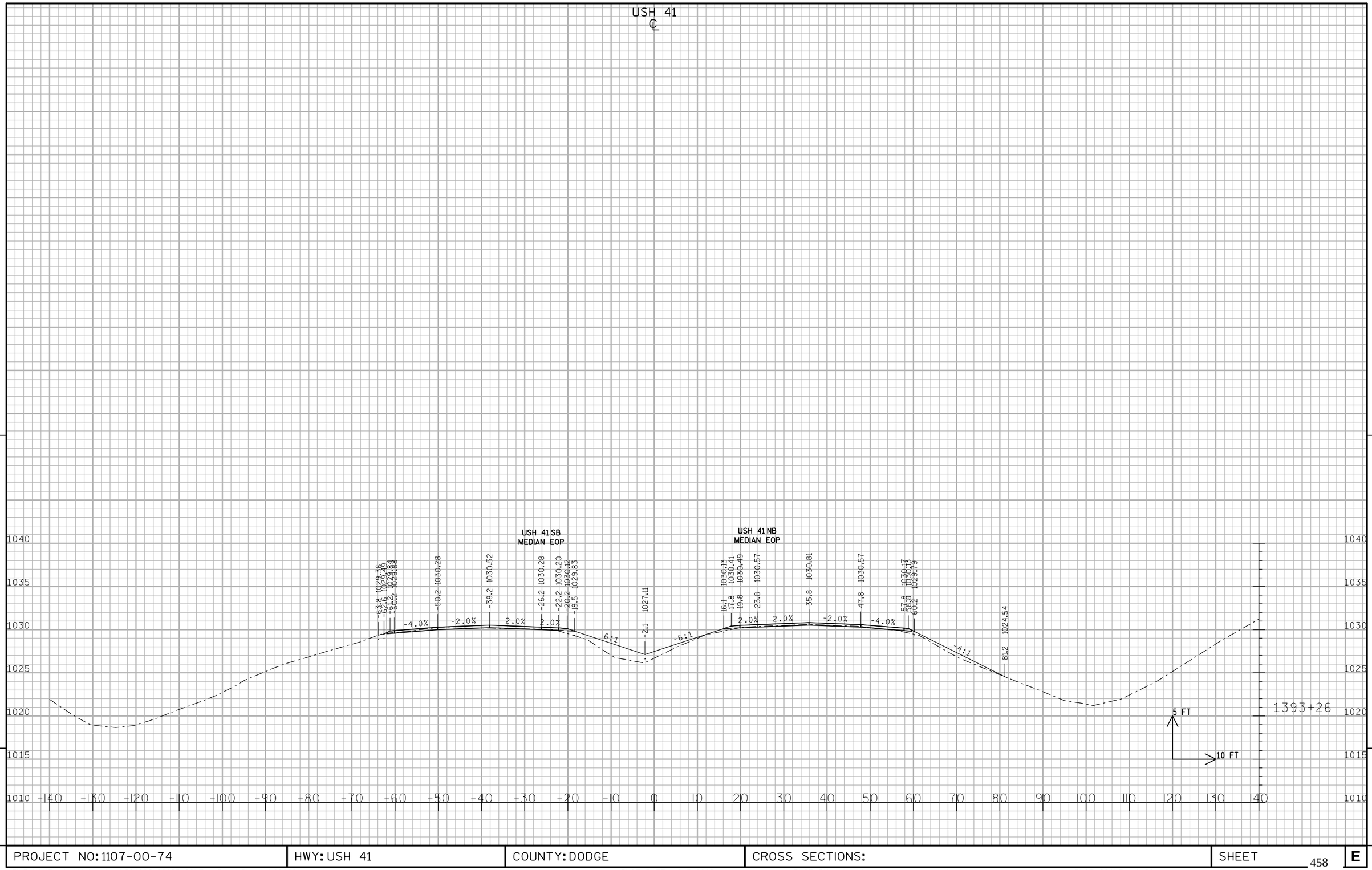
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 457	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

9

9



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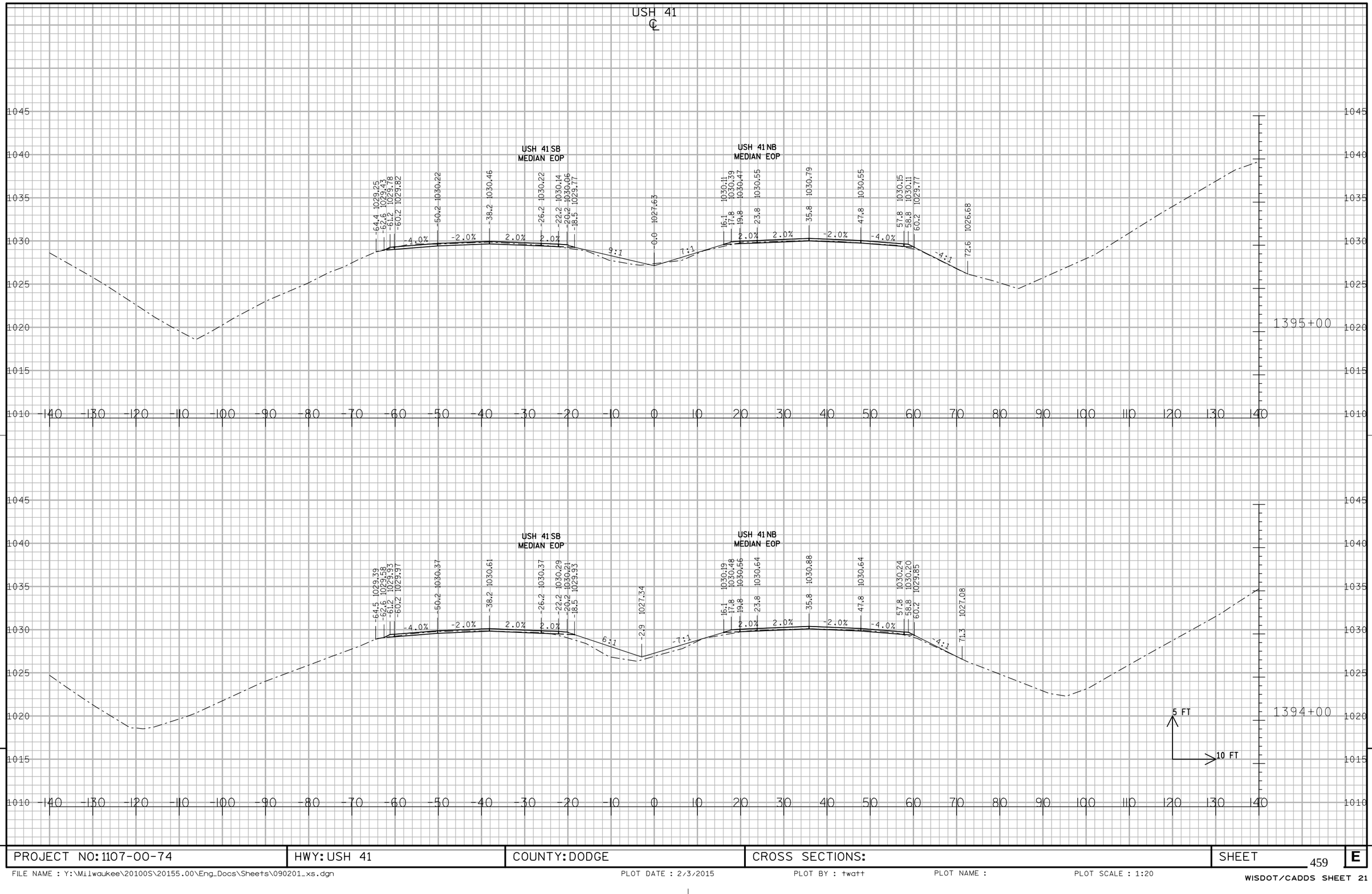
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 458	E



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 459	E

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USH 41
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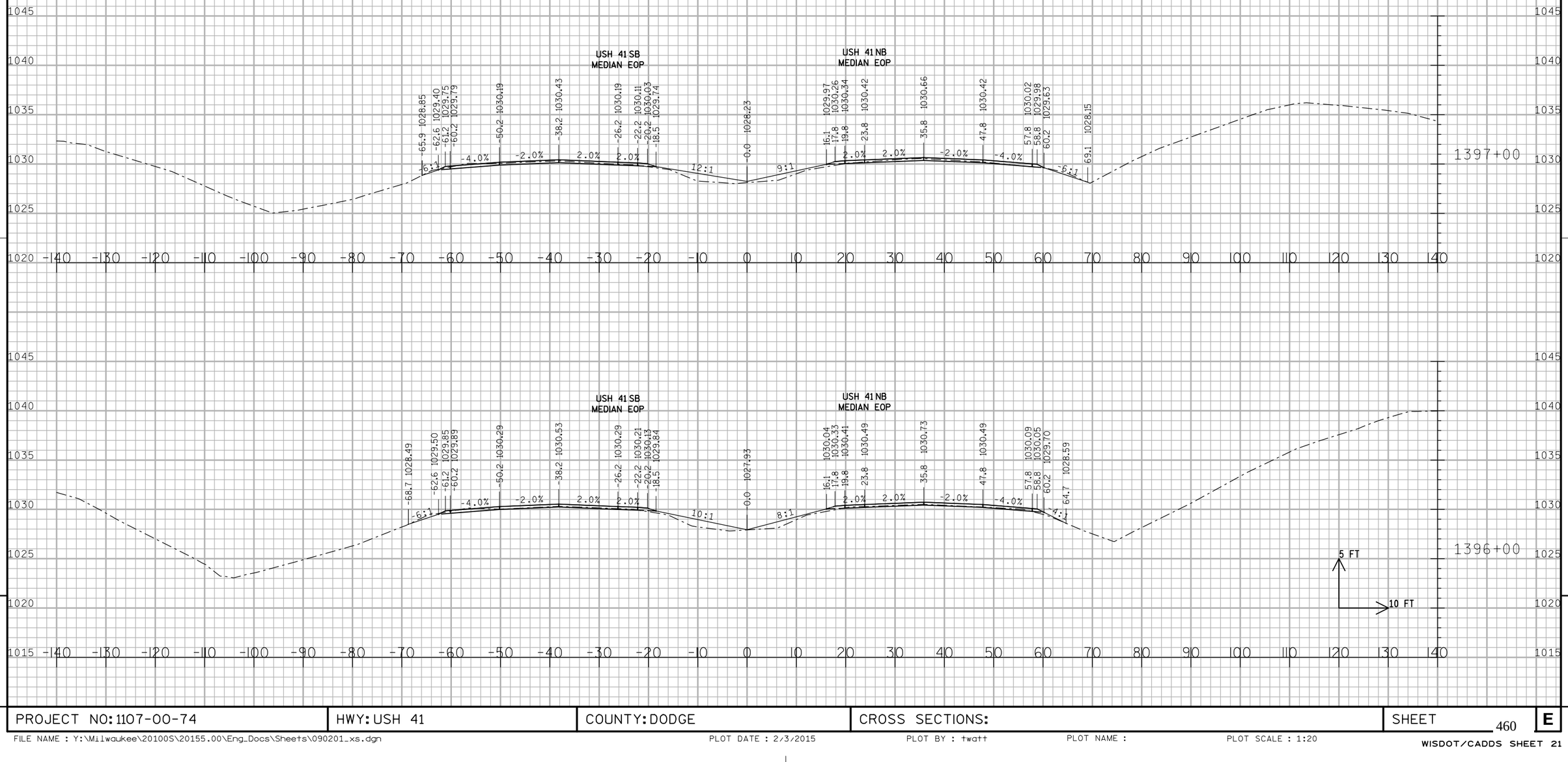

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 460	E

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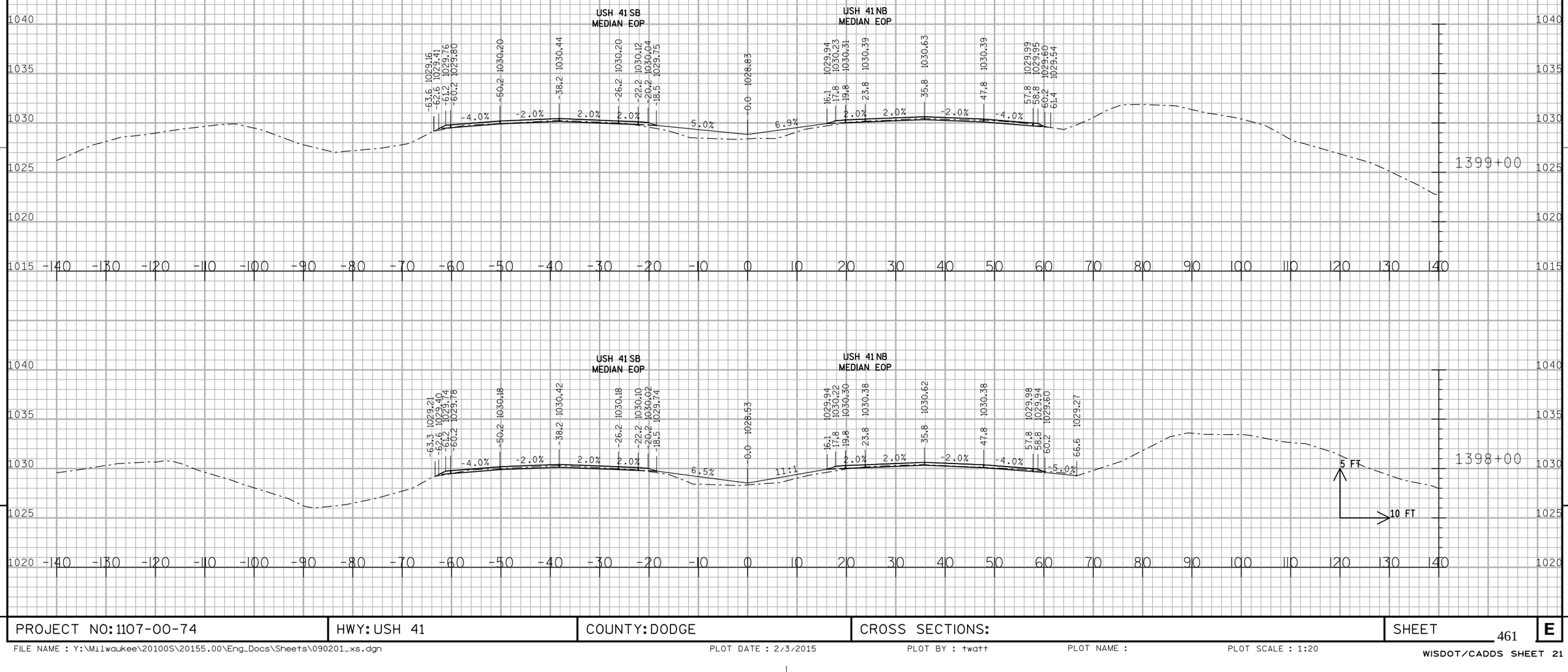
WISDOT/CADDS SHEET 21

USH 41
℄



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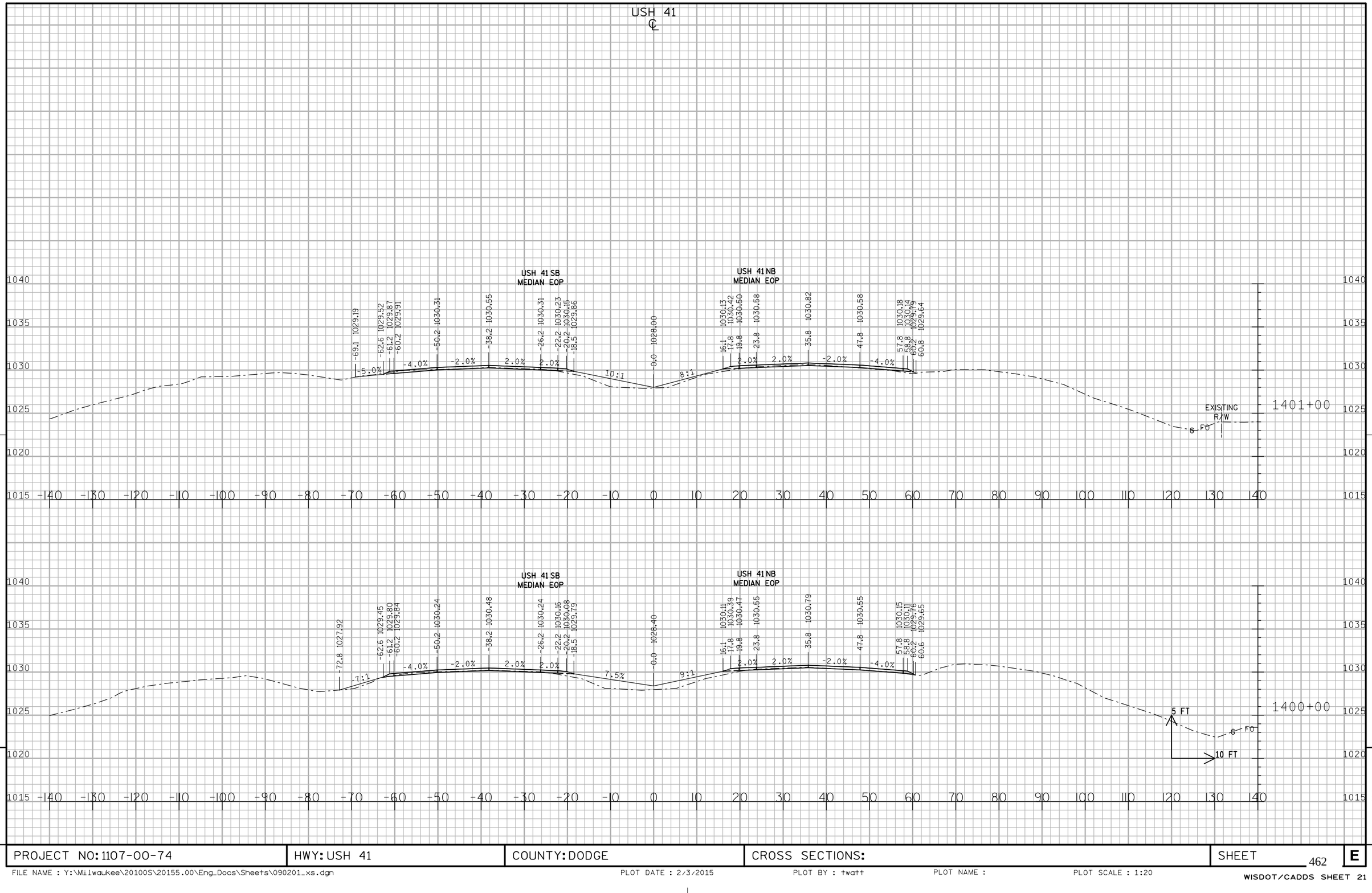
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 461	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 462	E

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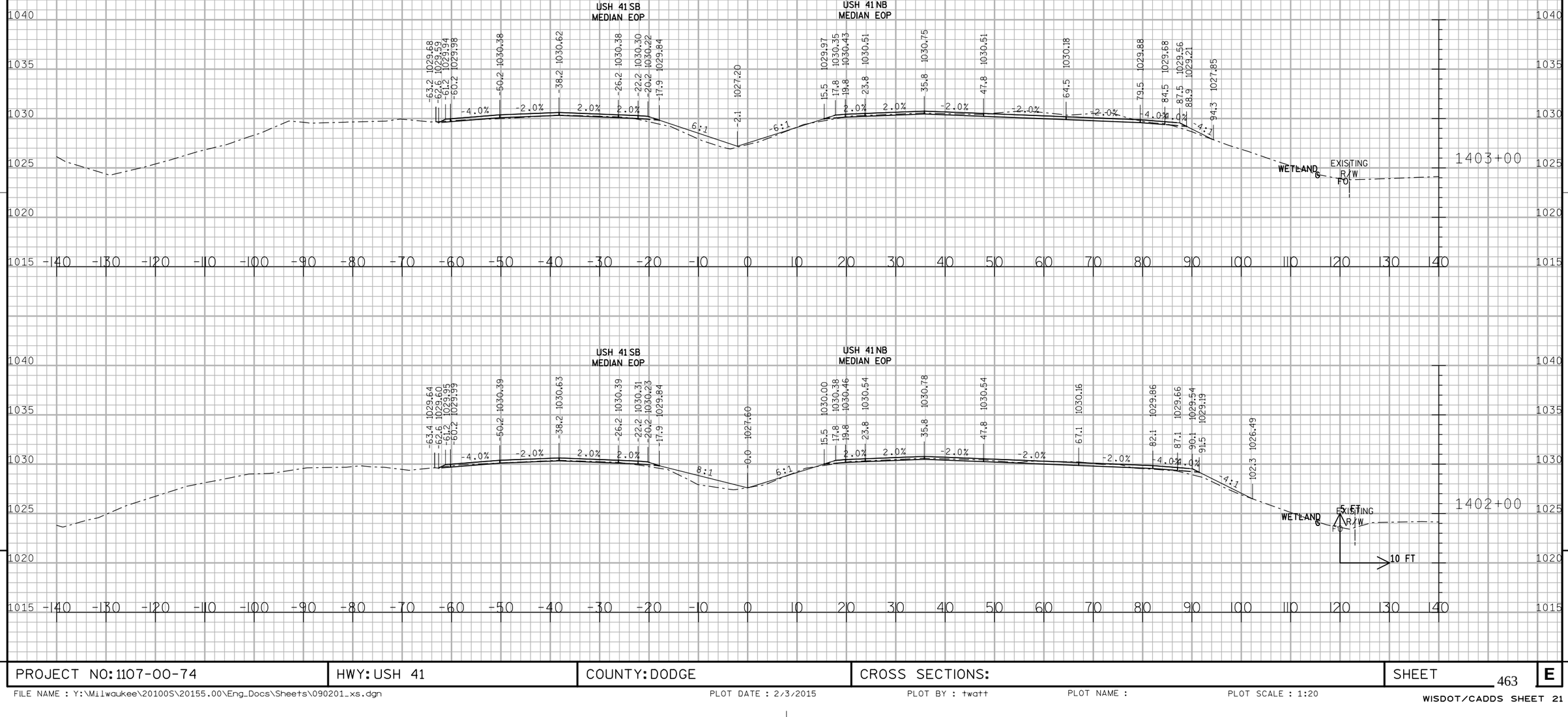
WISDOT/CADDS SHEET 21

USH 41
℄



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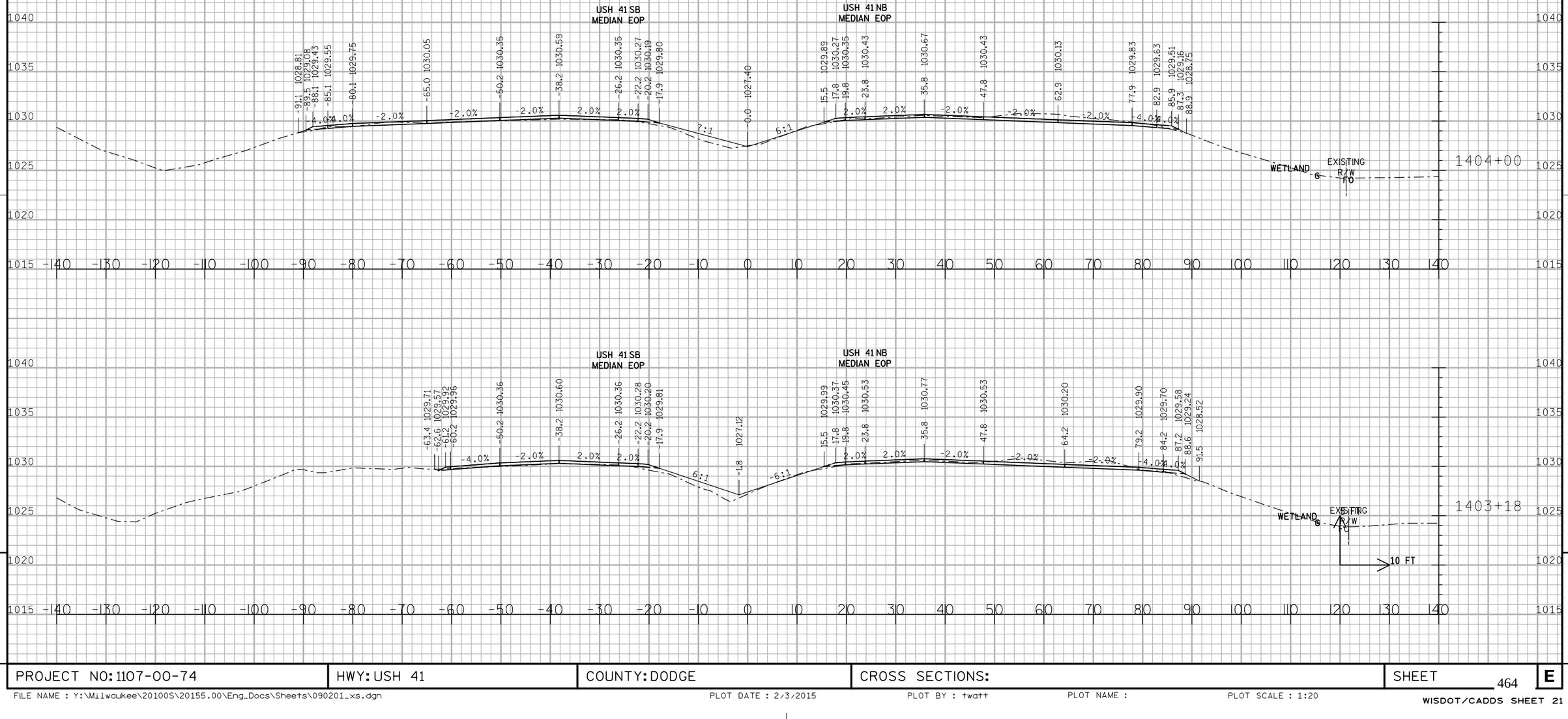
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 463	E

USH 41
℄



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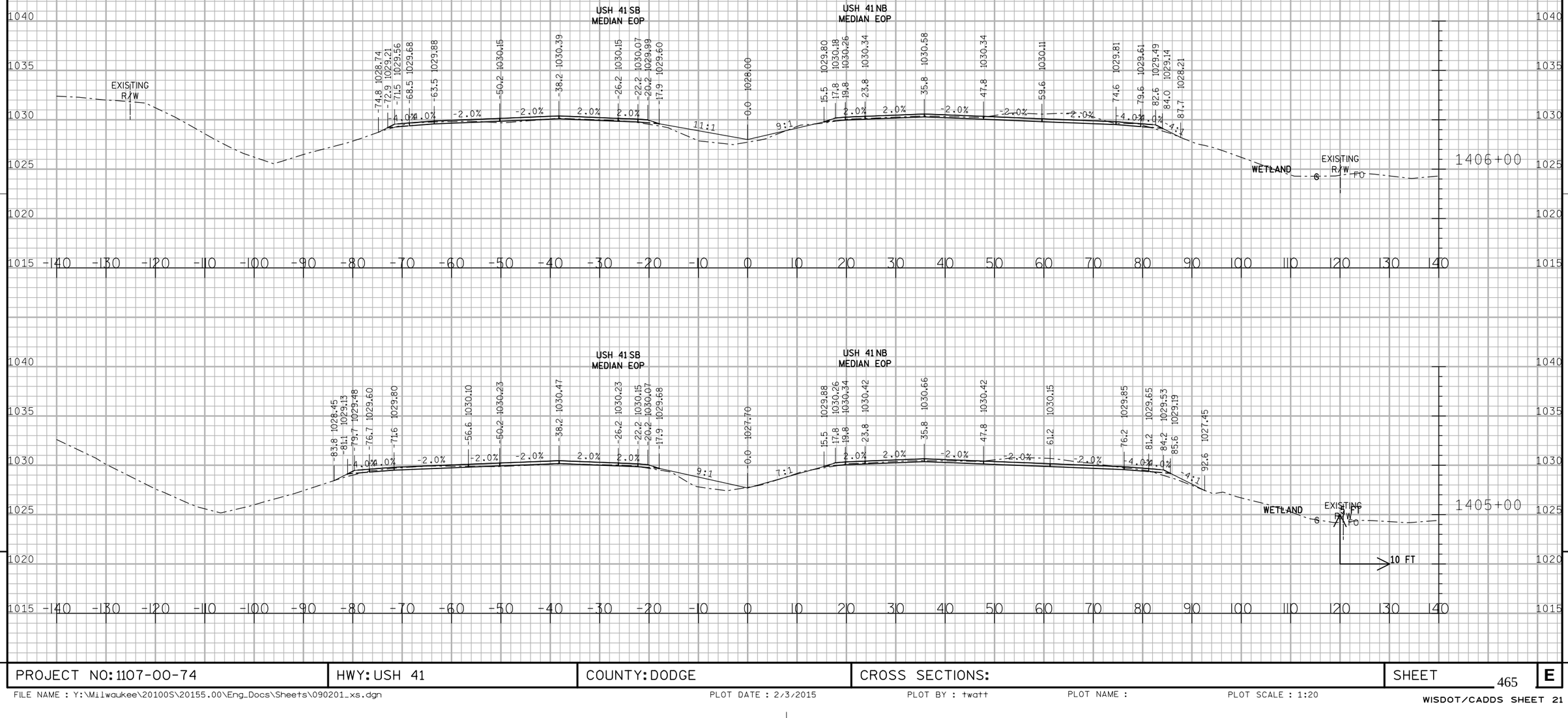
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 464	E

USH 41
℄



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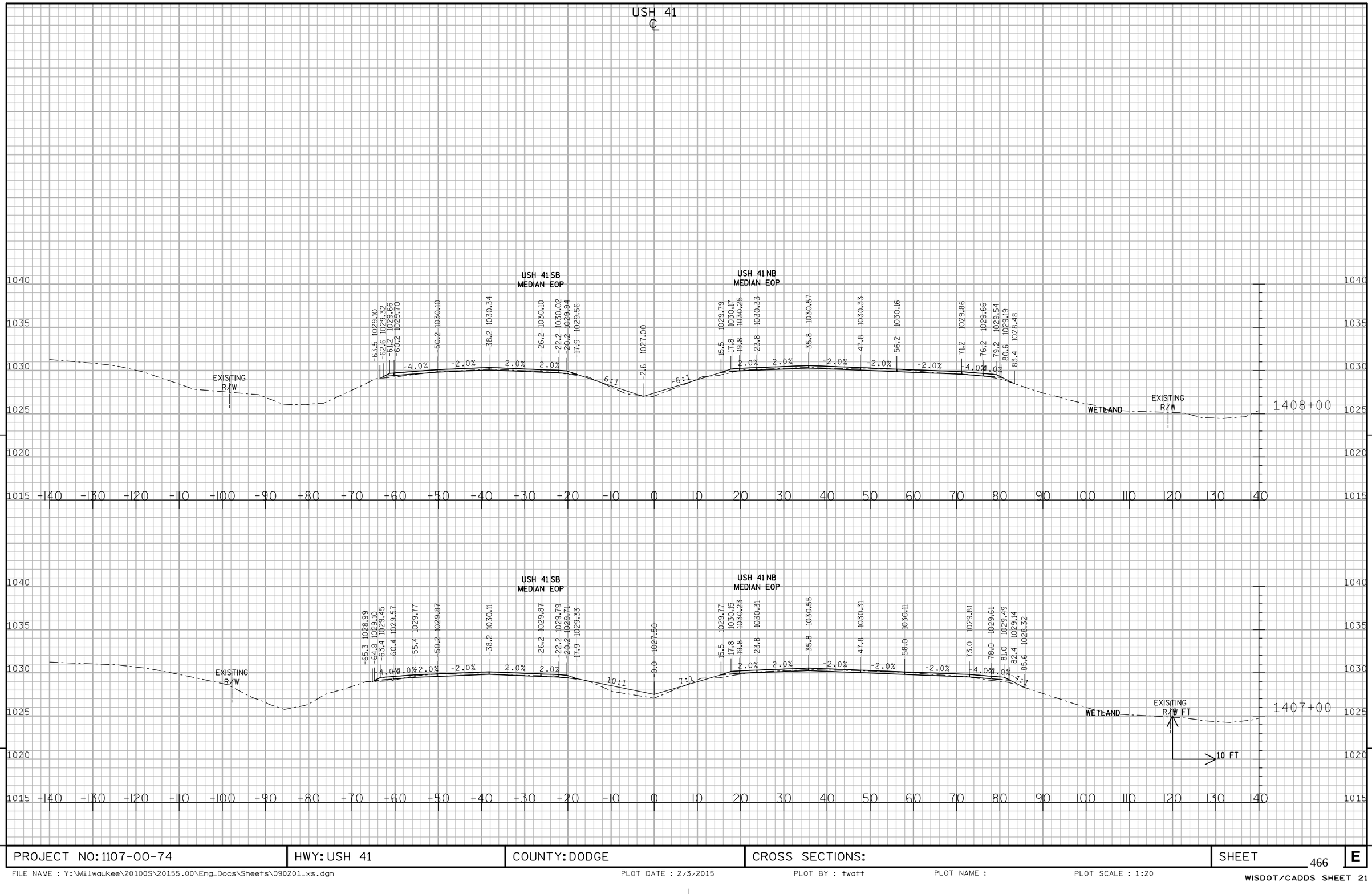

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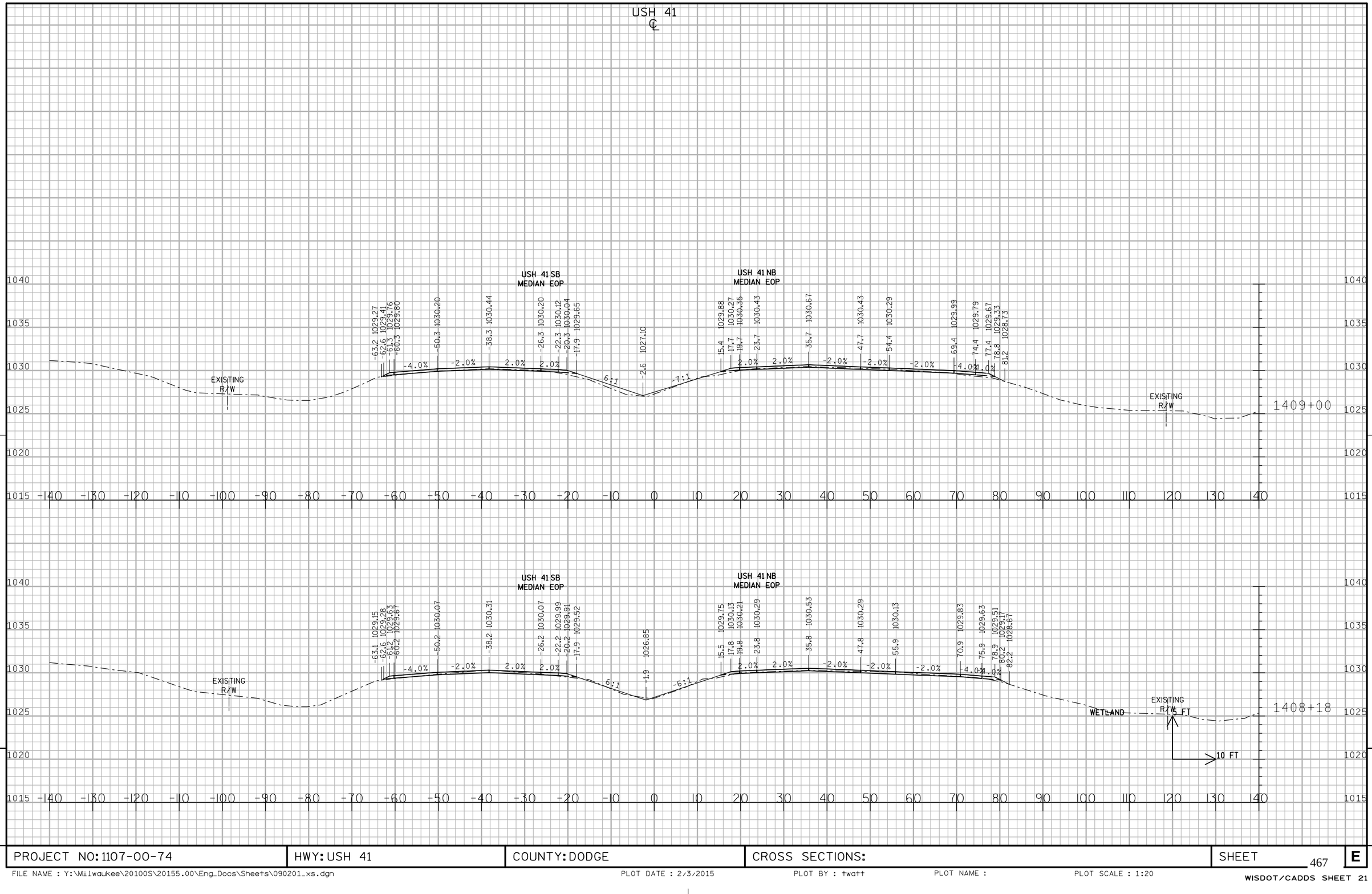

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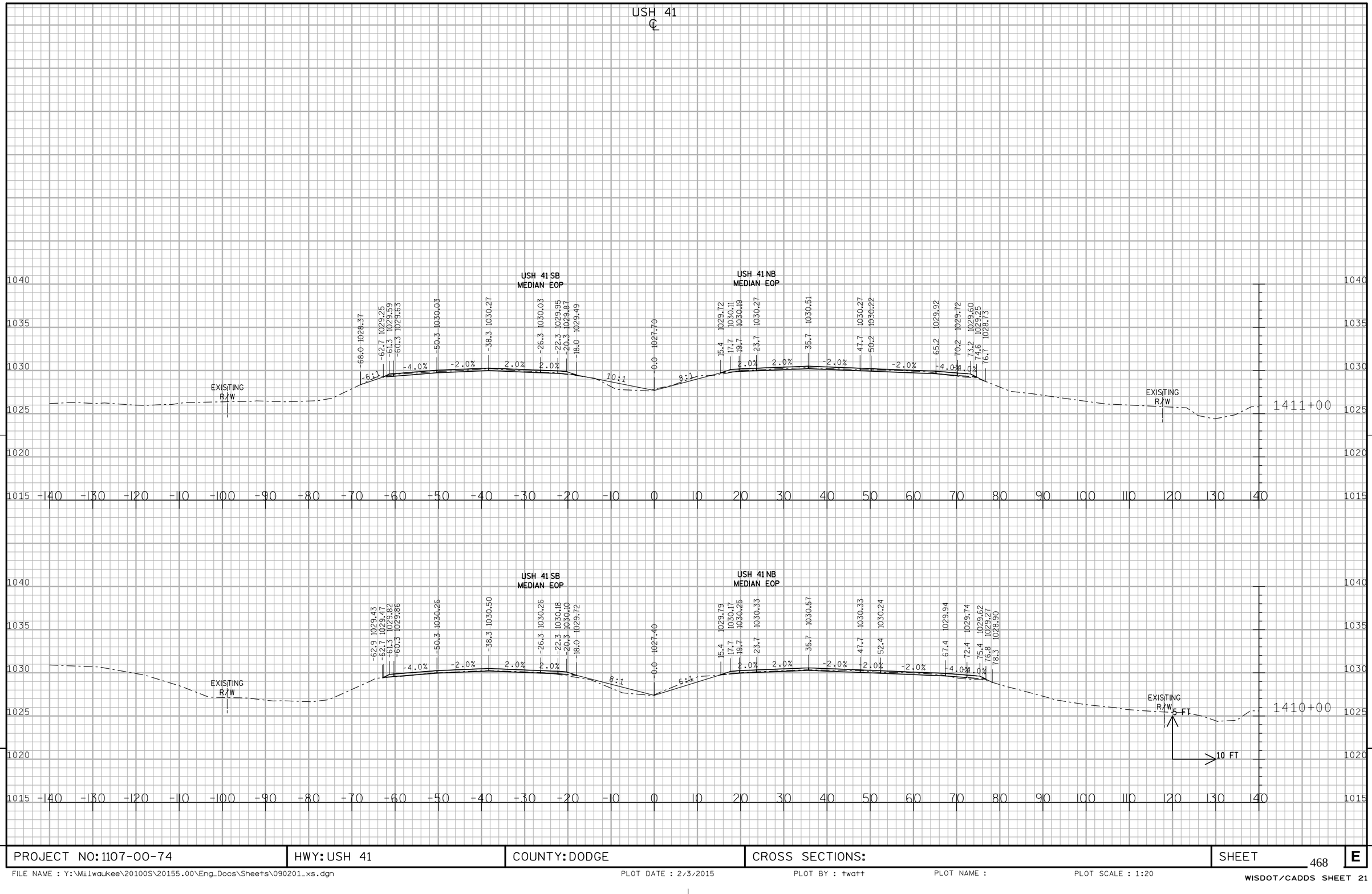

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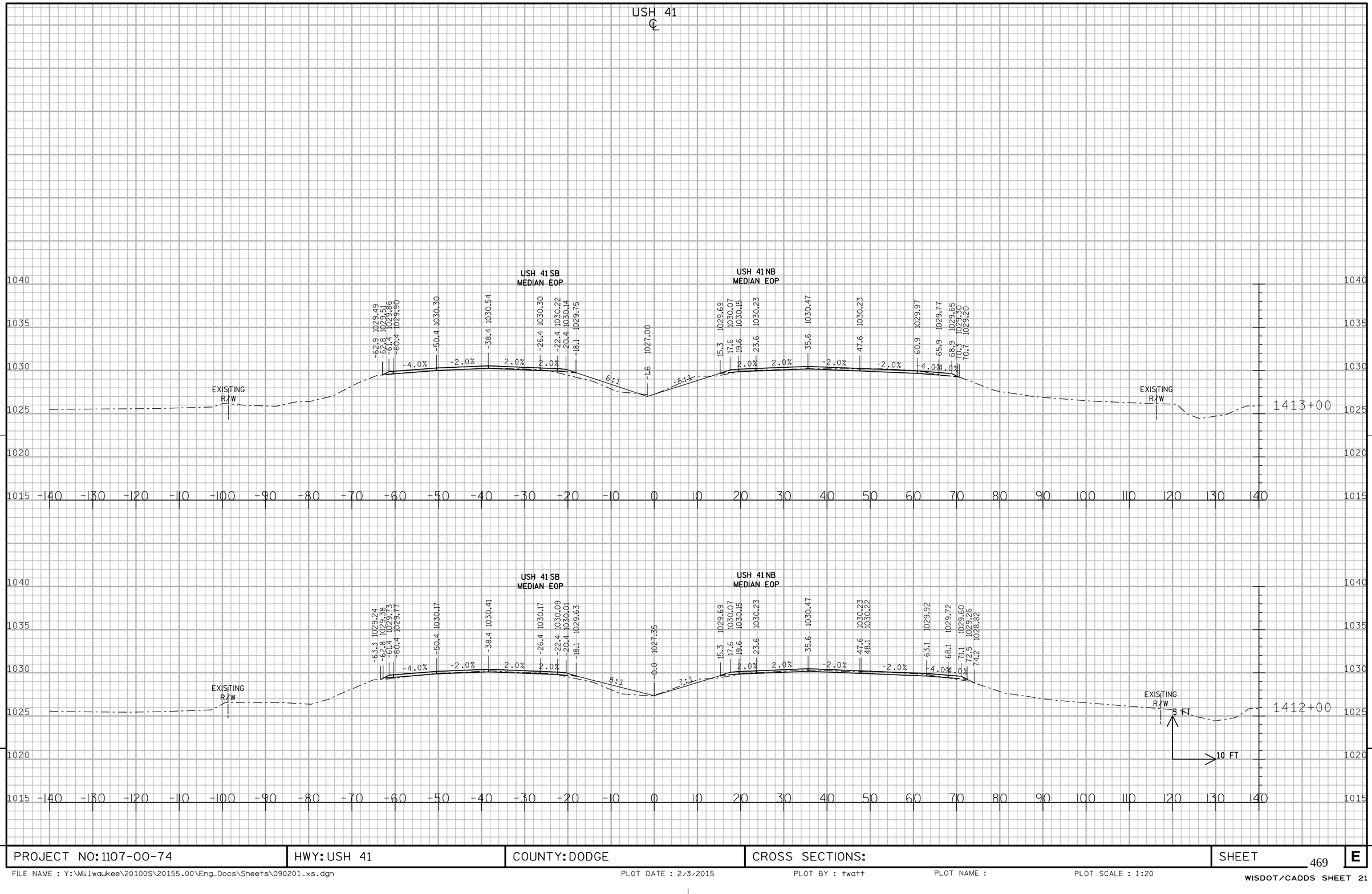
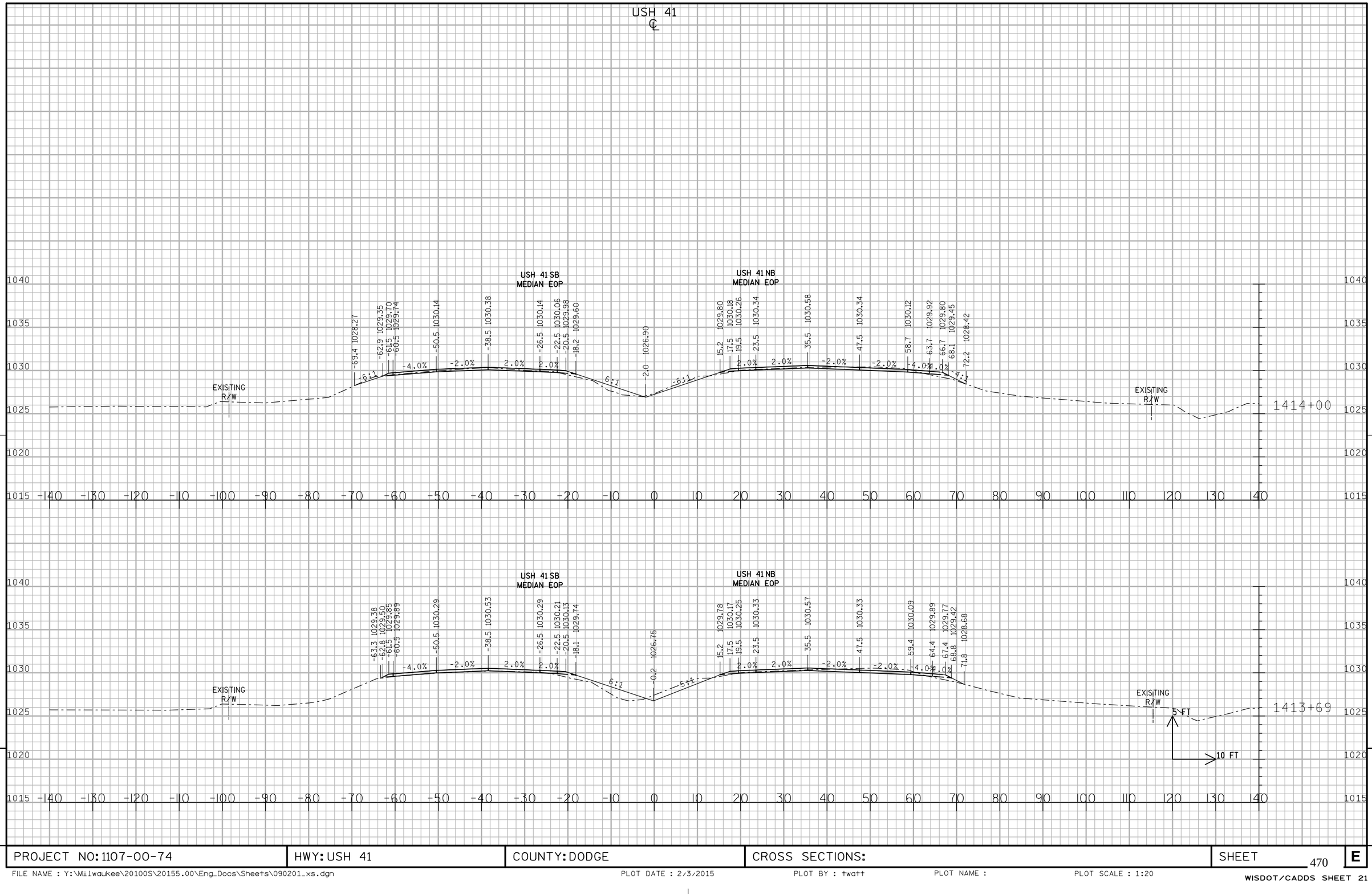


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 469	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 470	E

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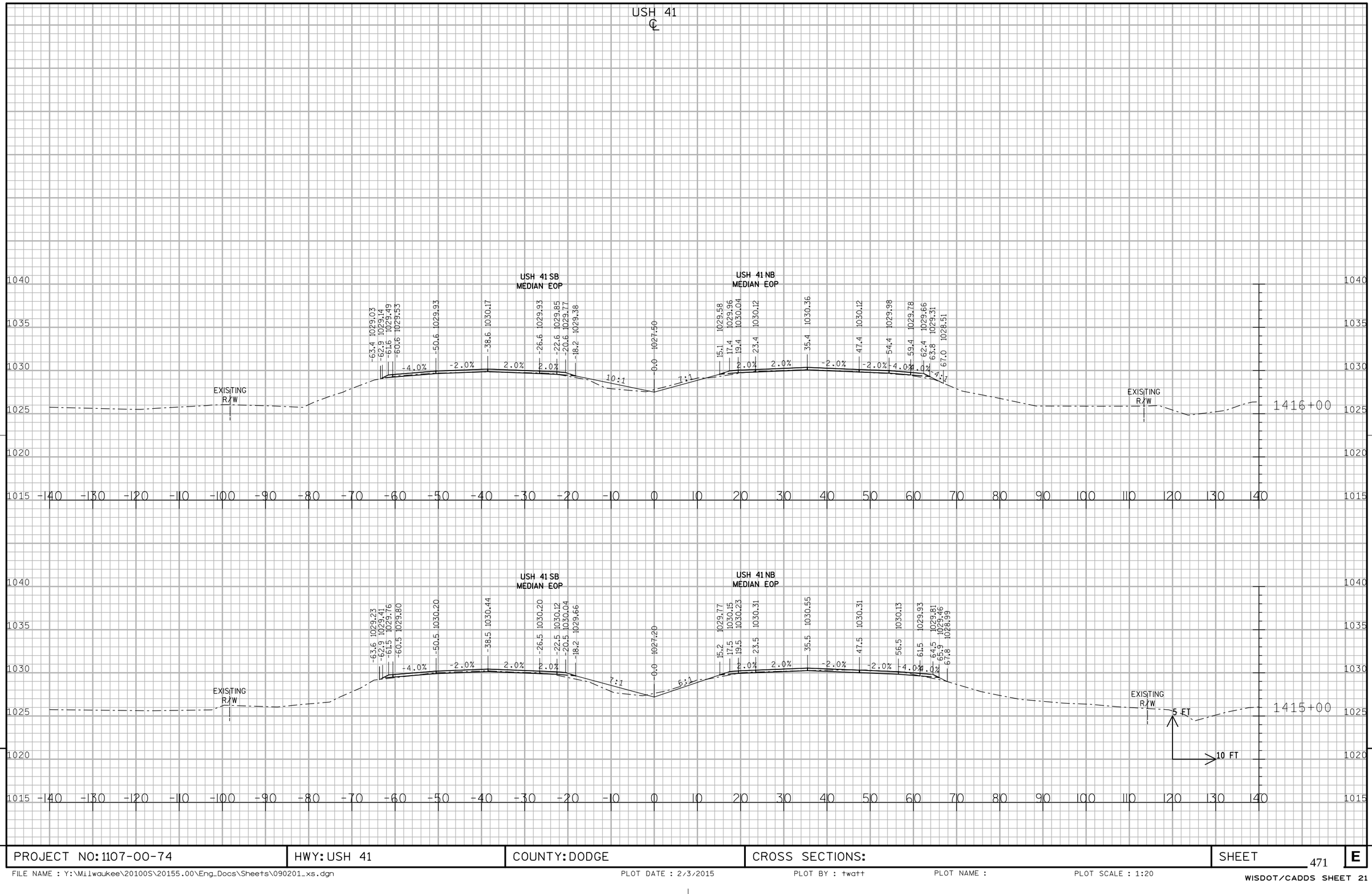
WISDOT/CADDS SHEET 21



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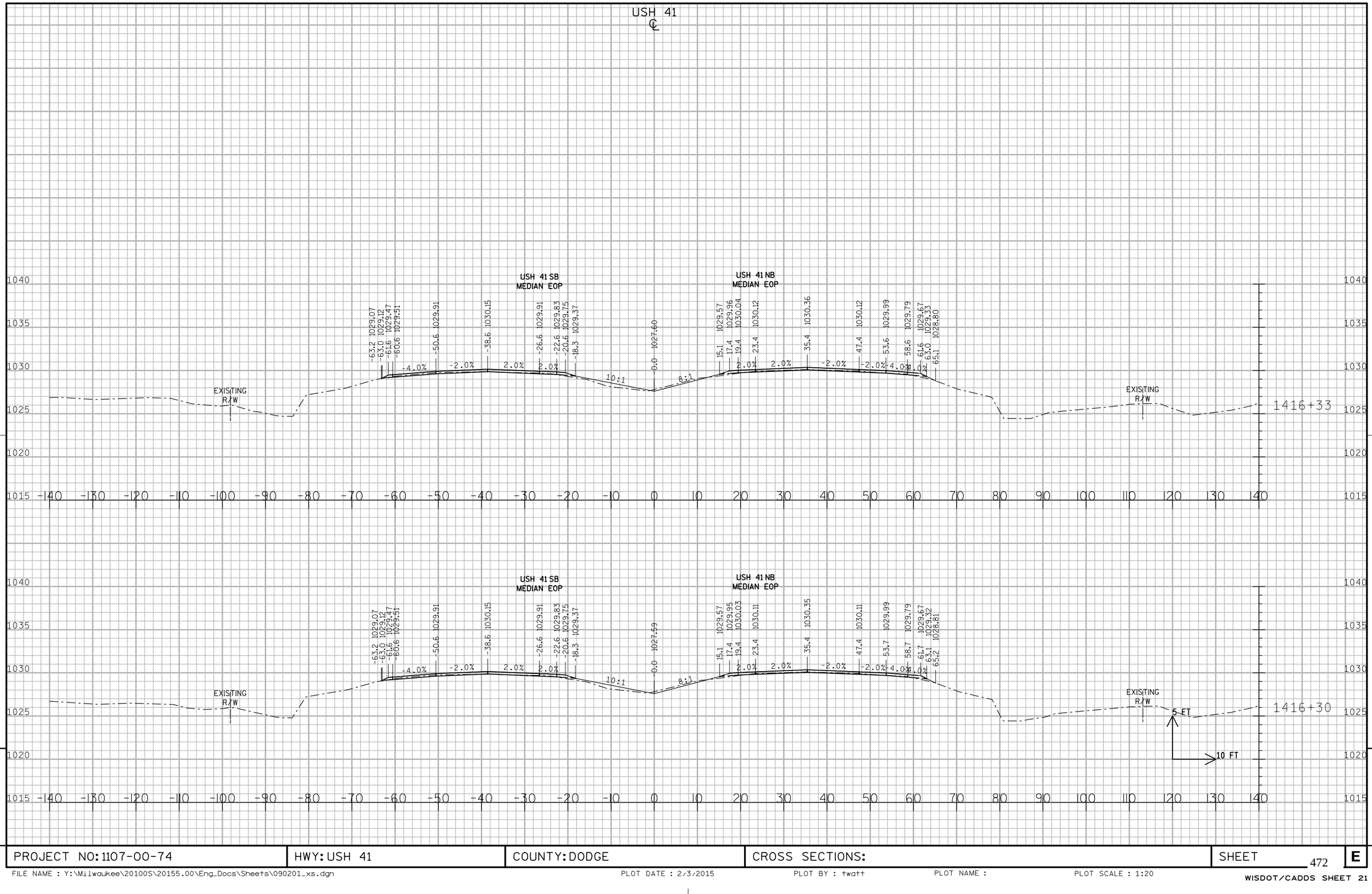
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 471	E



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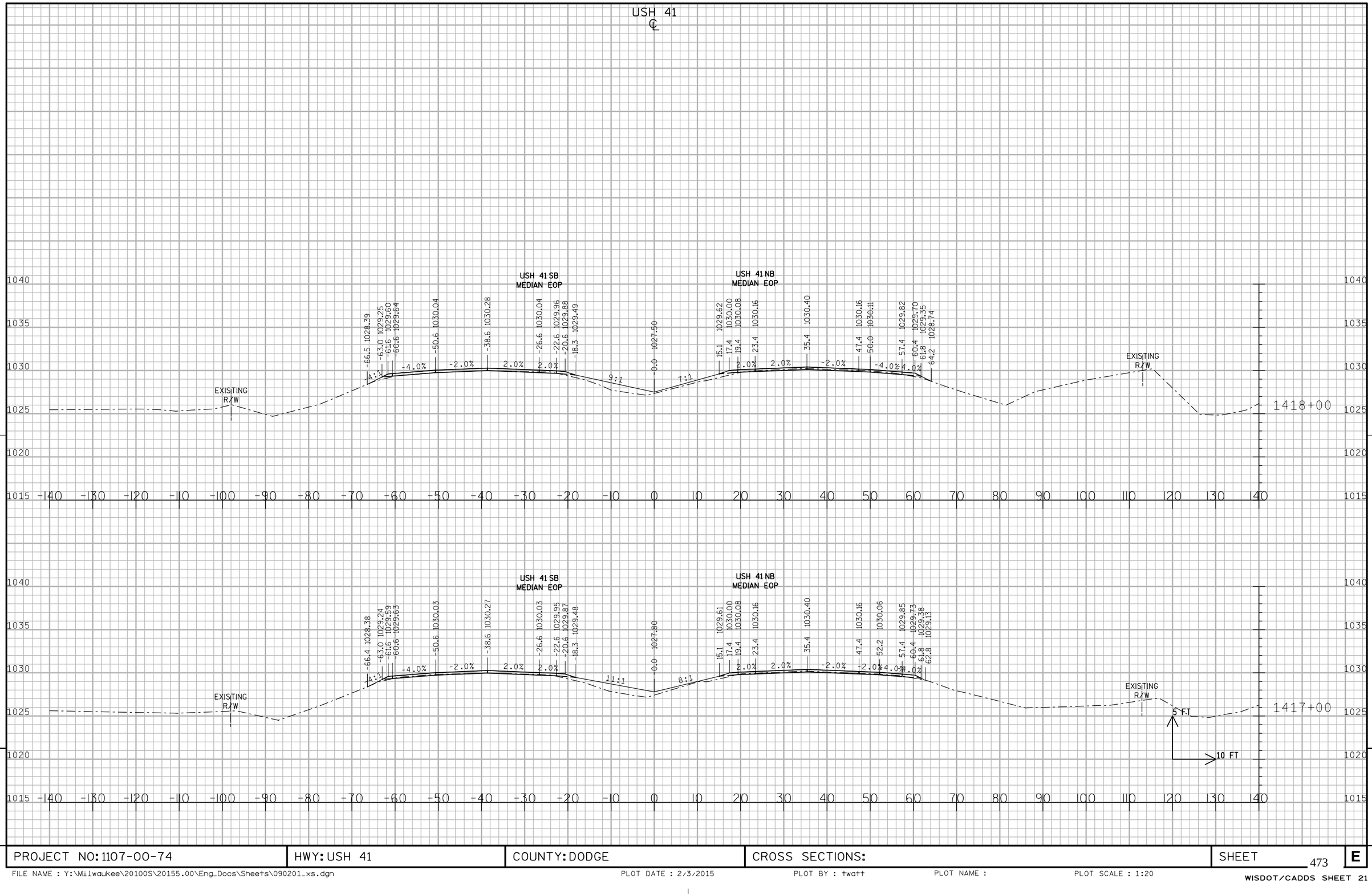
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 472	E



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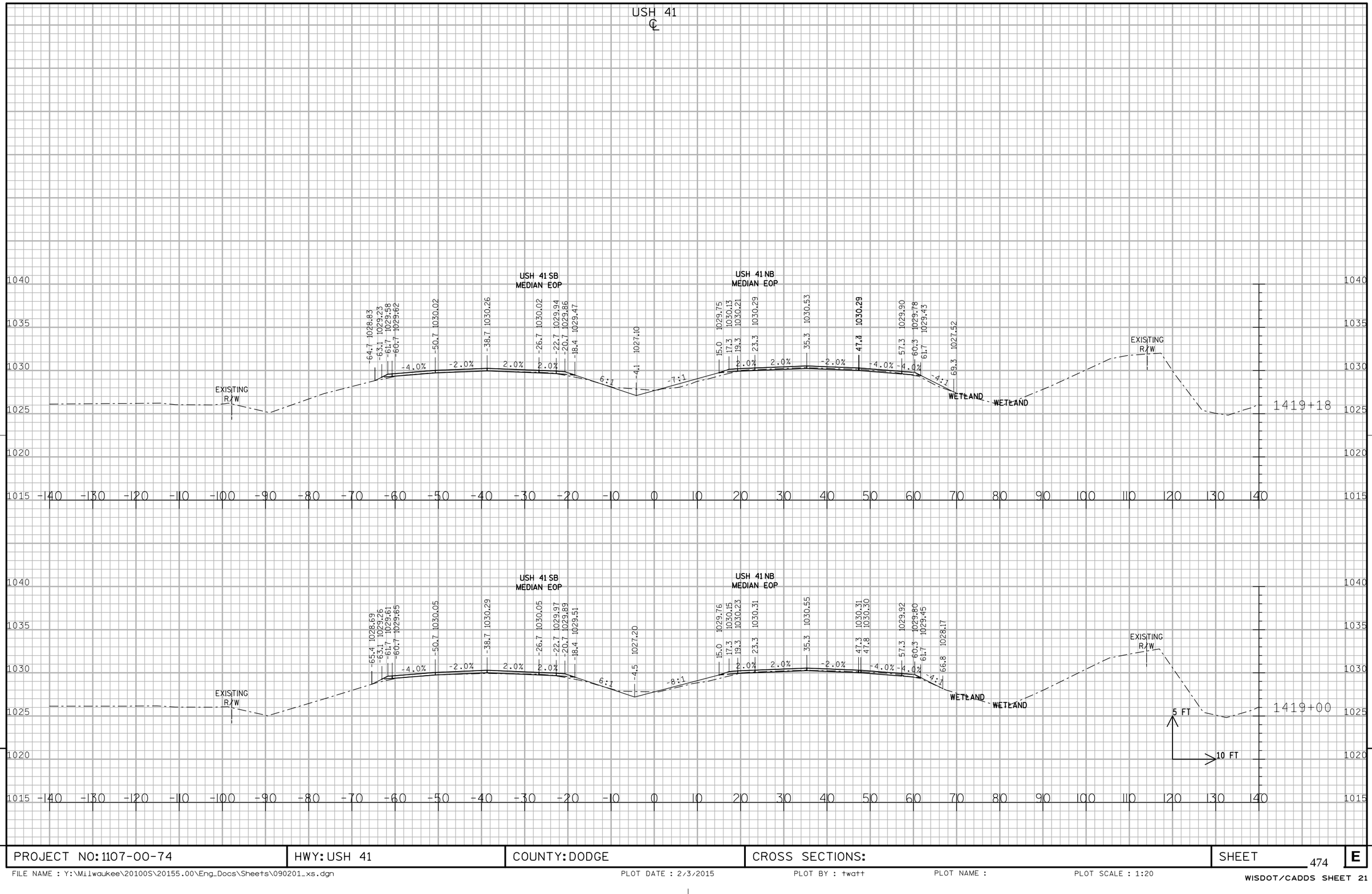
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 473	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21



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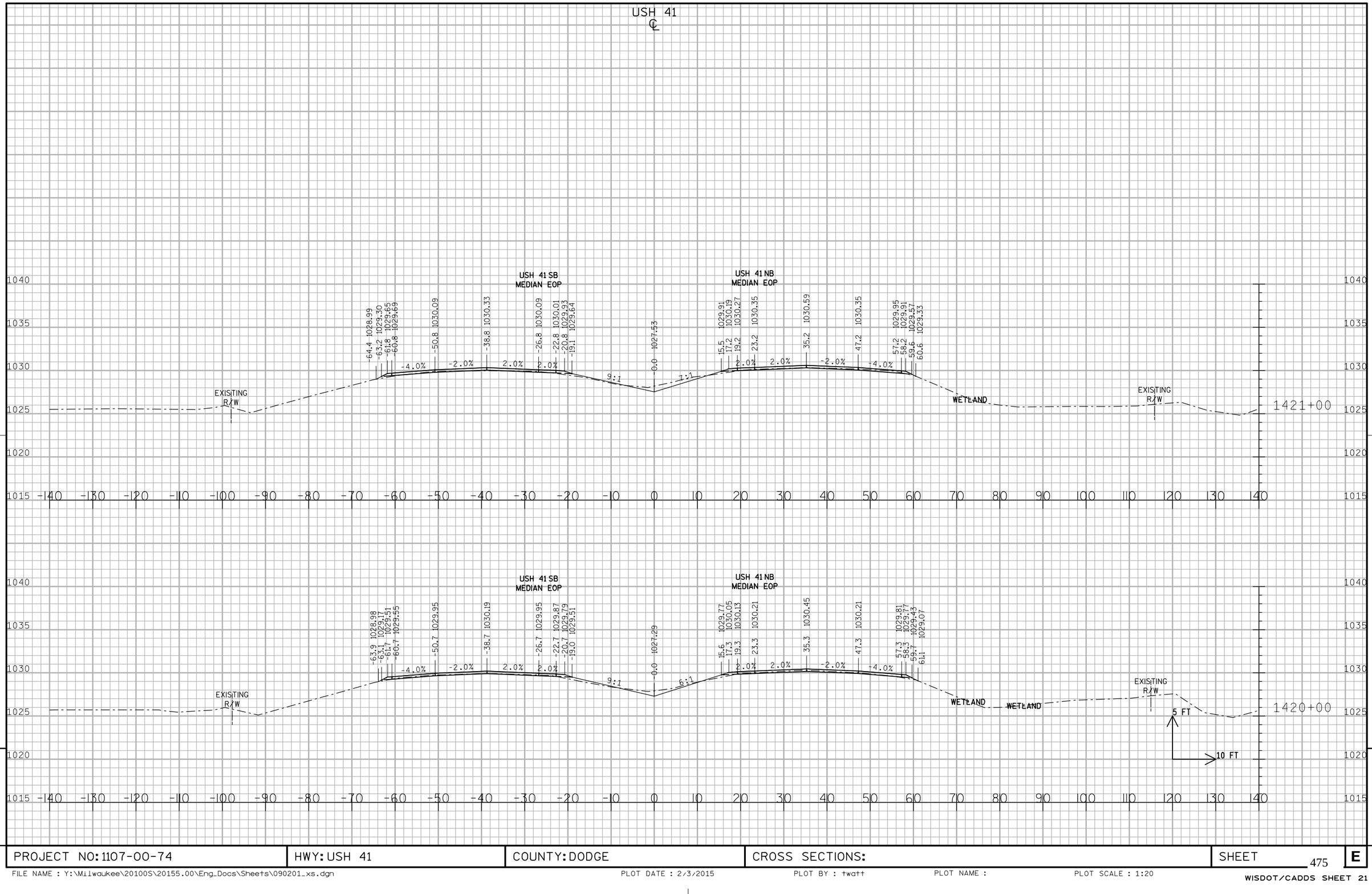

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 475	E

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USH 41
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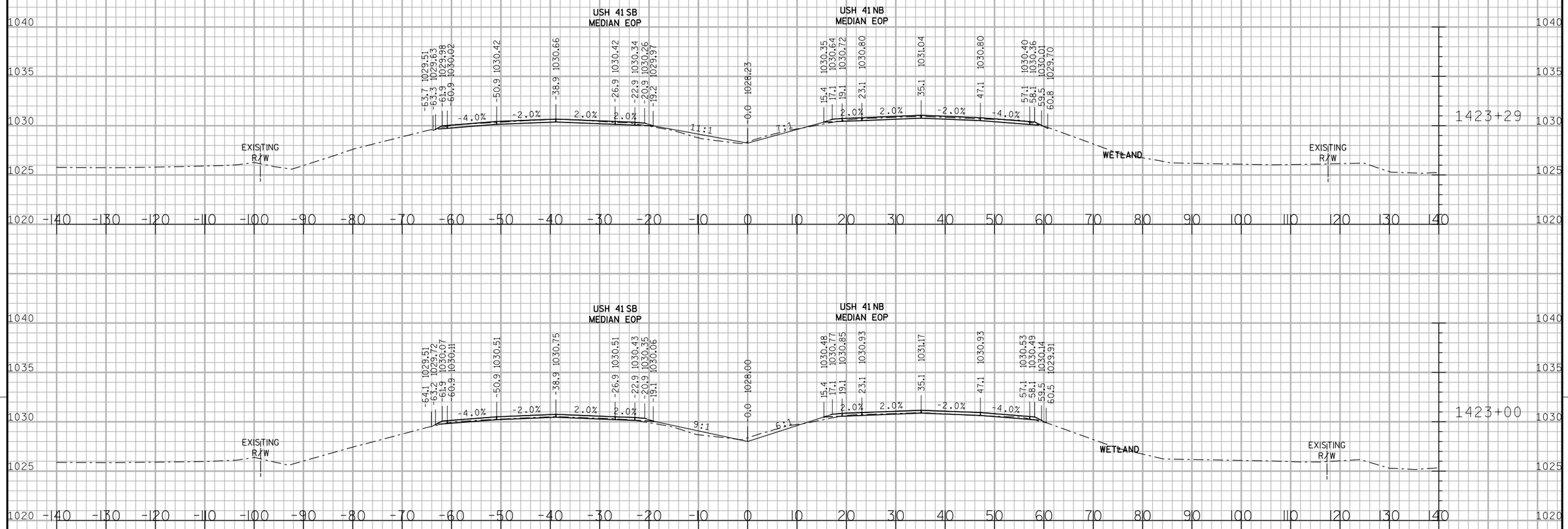

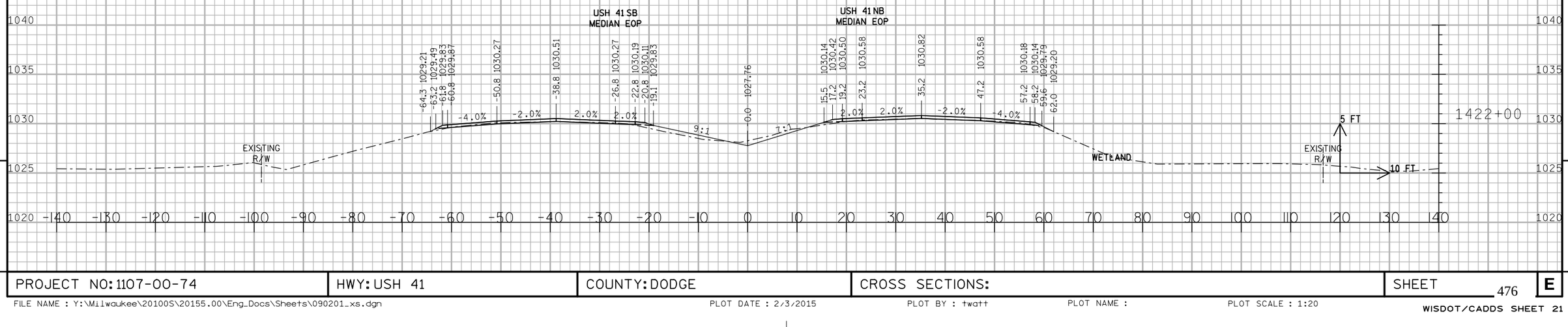

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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 476	E

USH 41
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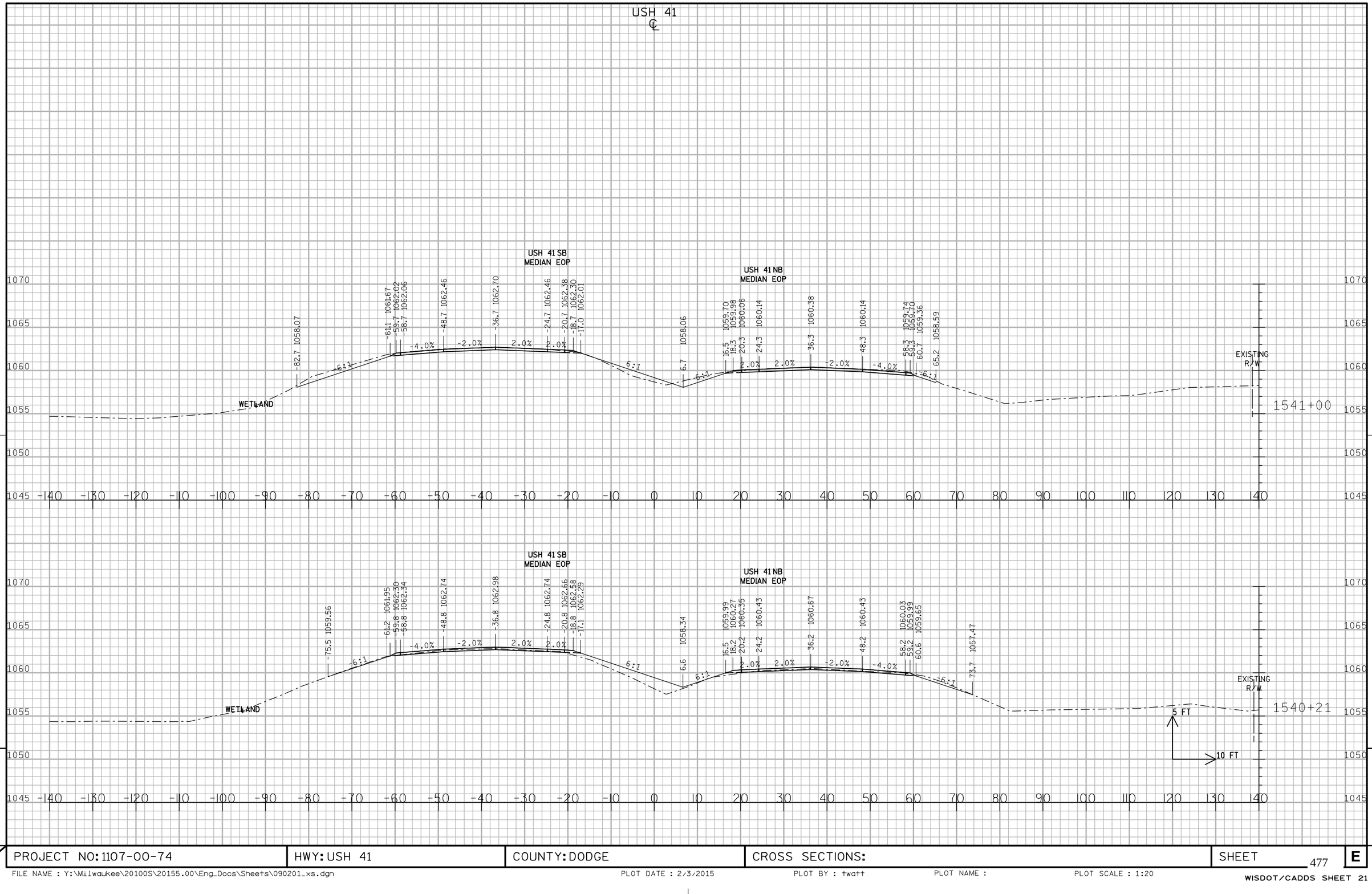
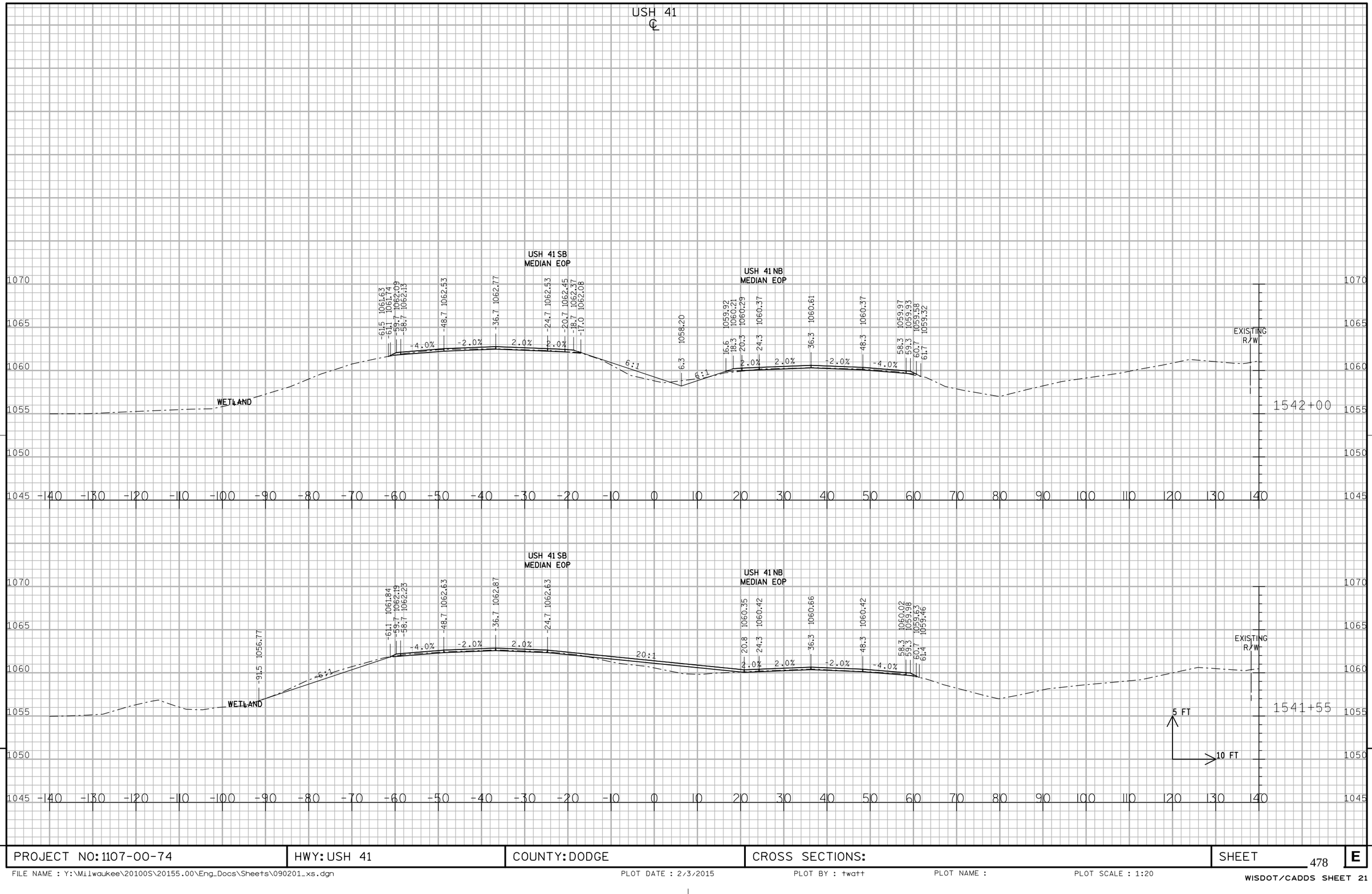


PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 477	E



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 478	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

USH 41
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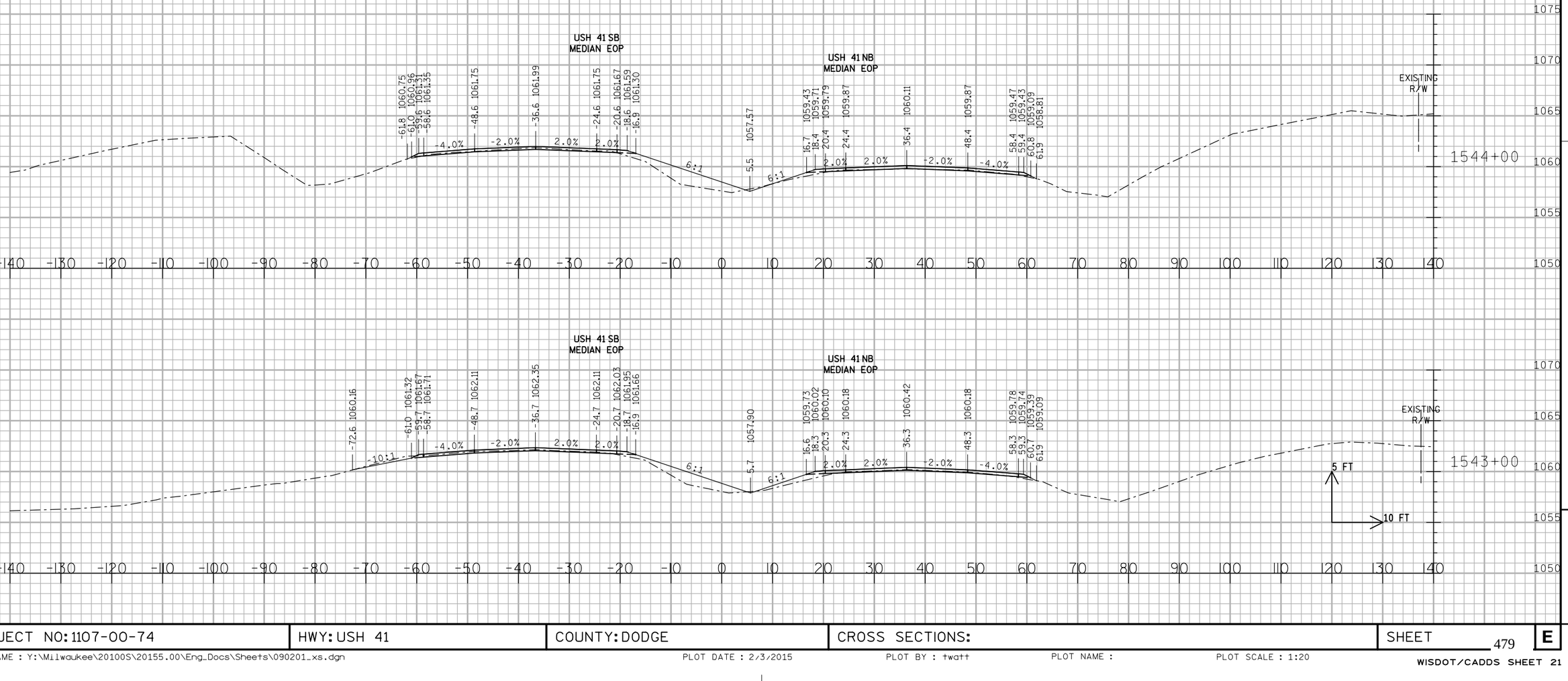

PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 479	E

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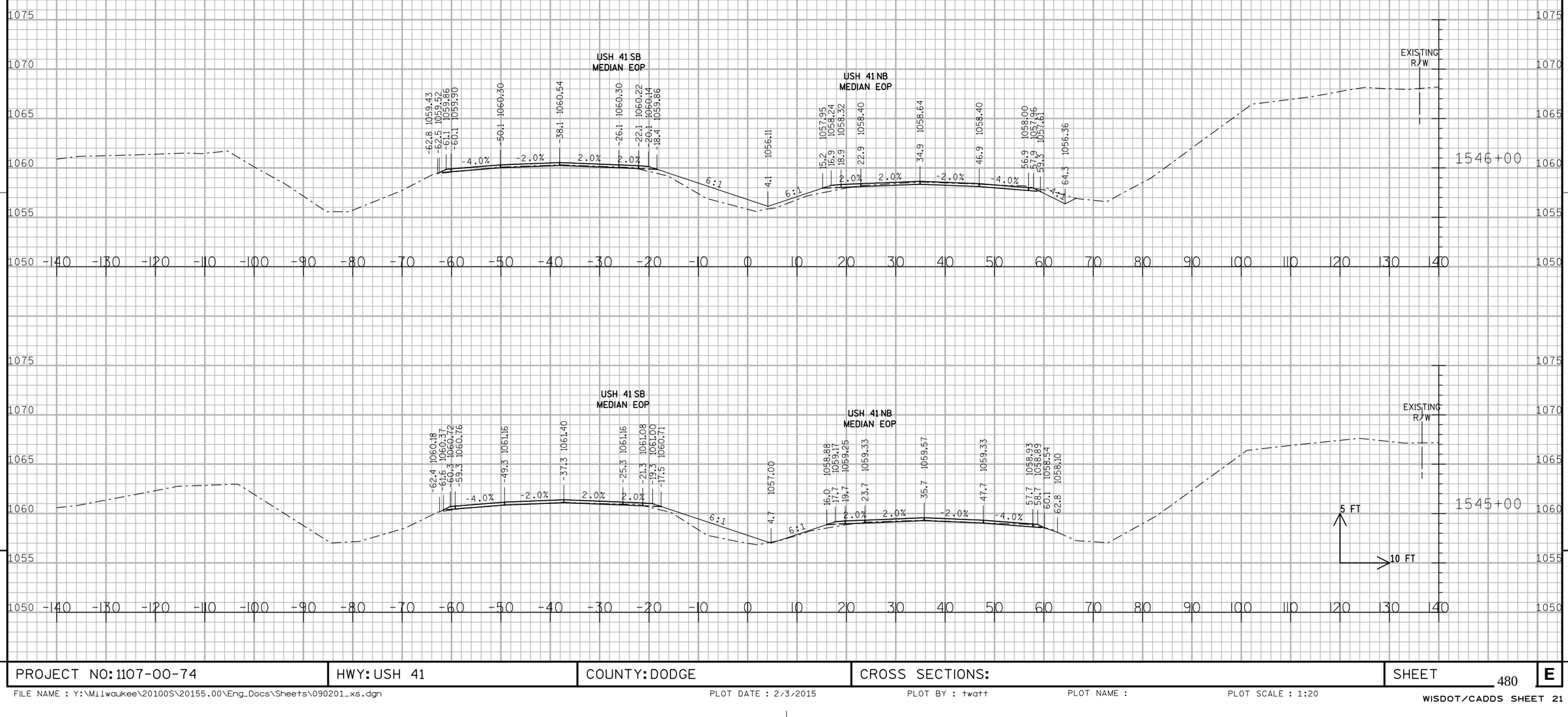
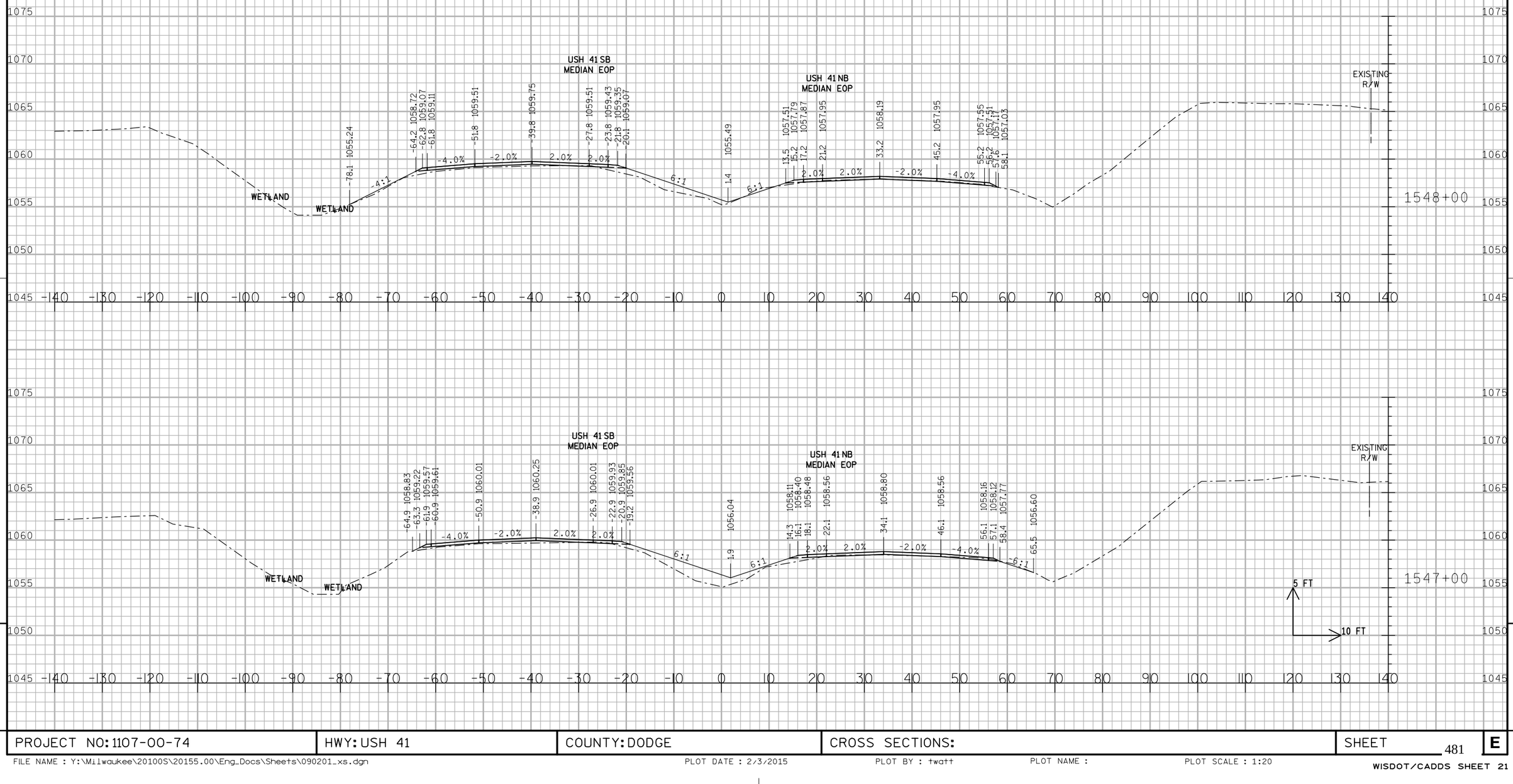
WISDOT/CADDS SHEET 21

USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 480	E

USH 41
℄



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 481	E

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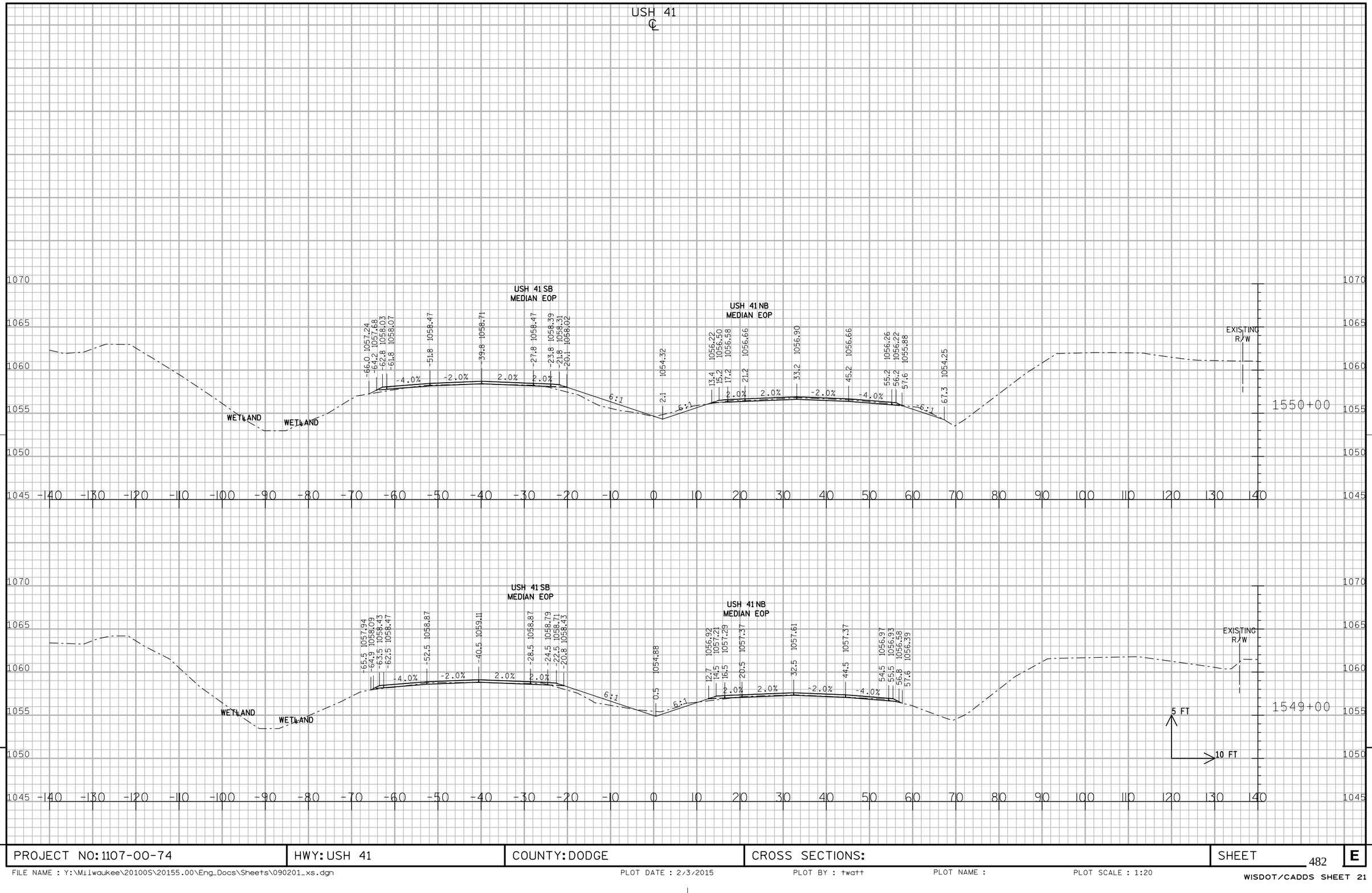
WISDOT/CADDS SHEET 21



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PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 482	E

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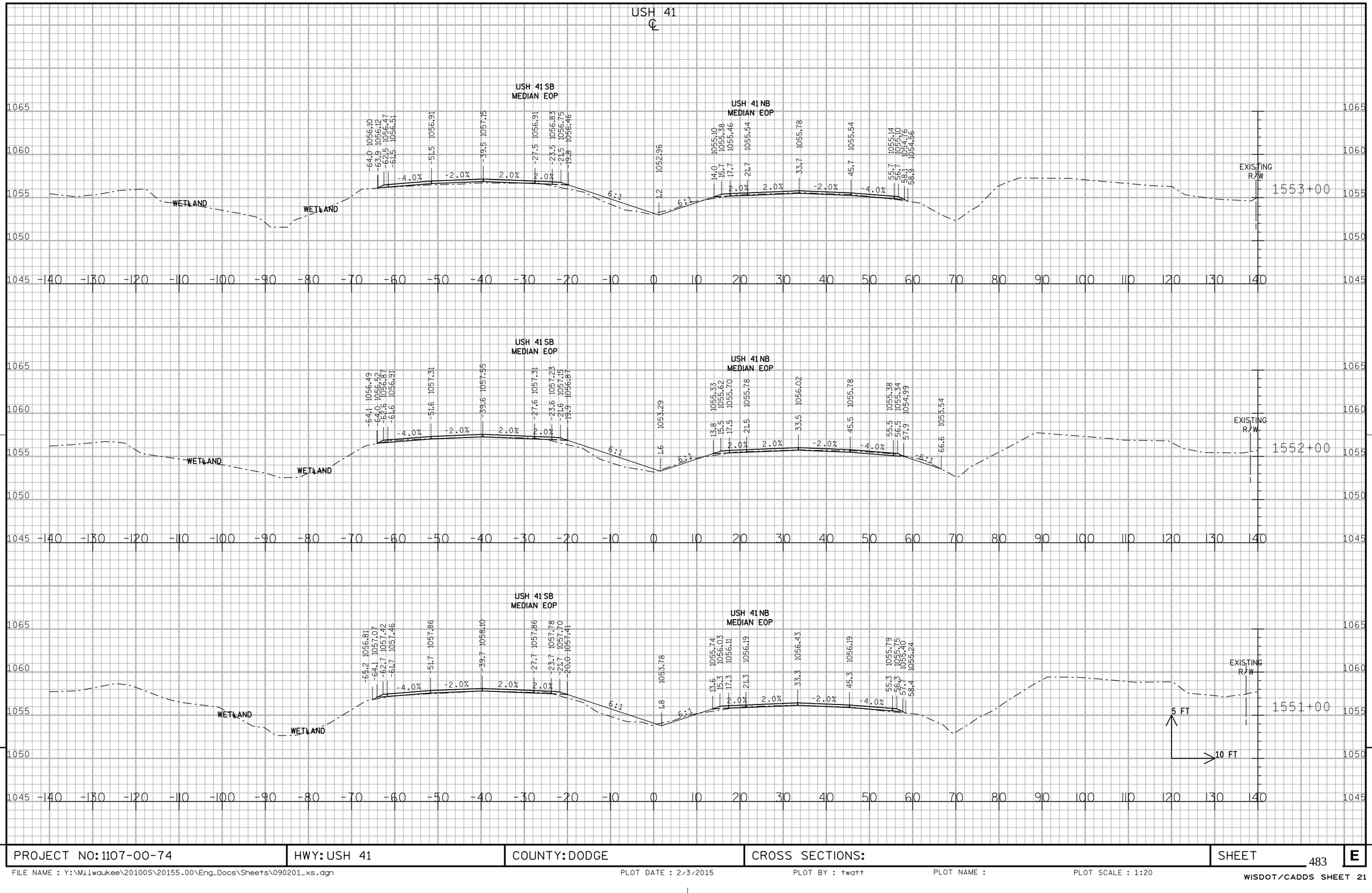
WISDOT/CADDS SHEET 21

9



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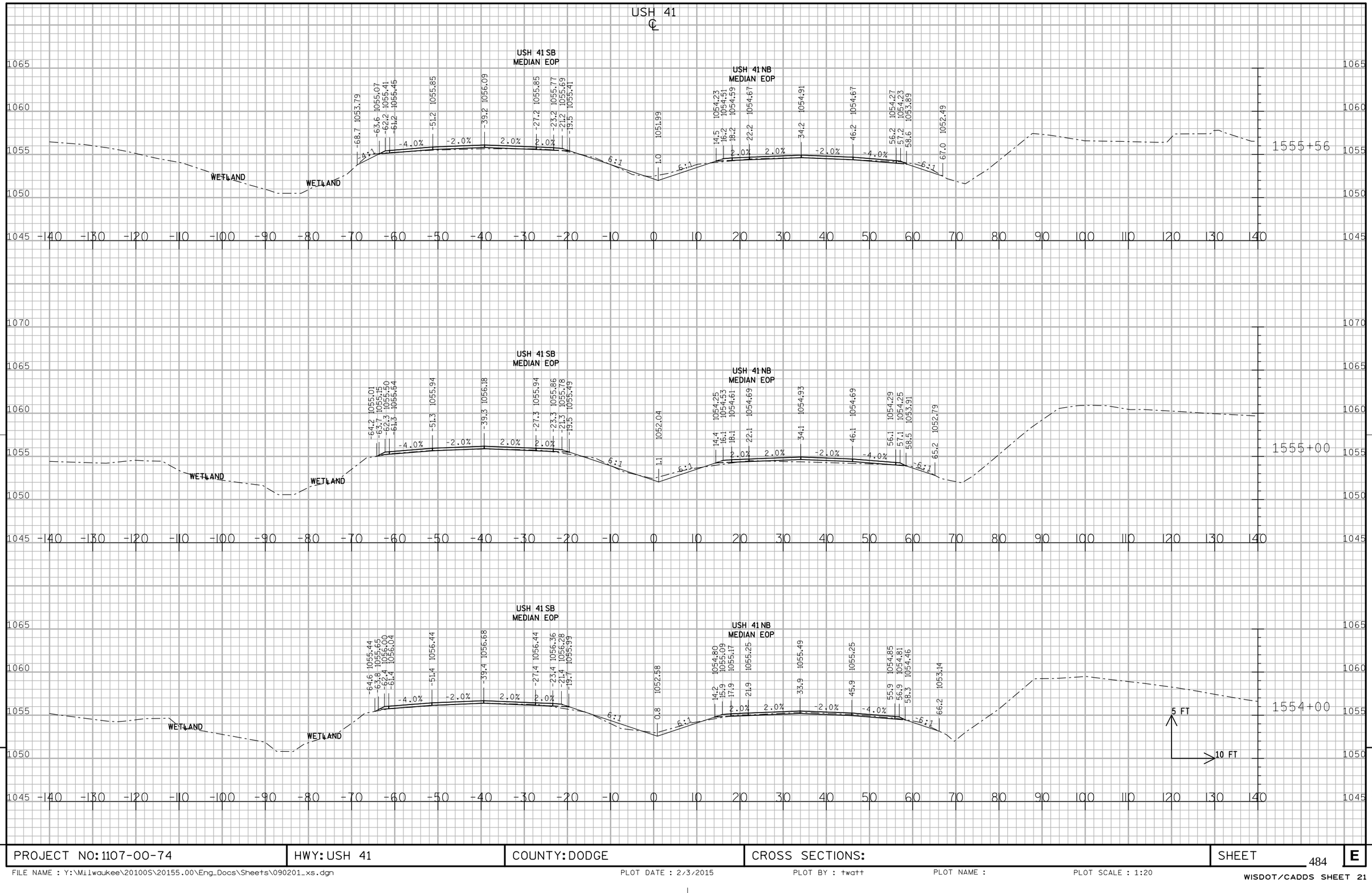
PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 483	E

9



PROJECT NO: 1107-00-74	HWY: USH 41	COUNTY: DODGE	CROSS SECTIONS:	SHEET 484	E

FILE NAME : Y:\Milwaukee\20100S\20155.00\Eng_Docs\Sheets\090201_xs.dgn PLOT DATE : 2/3/2015 PLOT BY : twatt PLOT NAME : PLOT SCALE : 1:20

WISDOT/CADDS SHEET 21

Notes

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