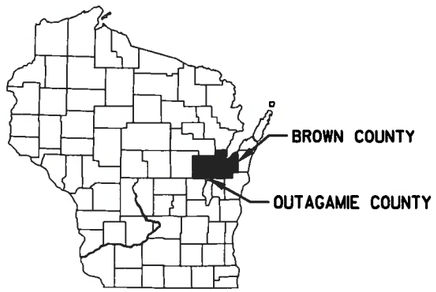
PROJECT ID: 586500-15
WITH: N/A

COUNTY: OUTAGAMIE & BROWN

ORDER OF SHEETS

TOTAL SHEETS = ___



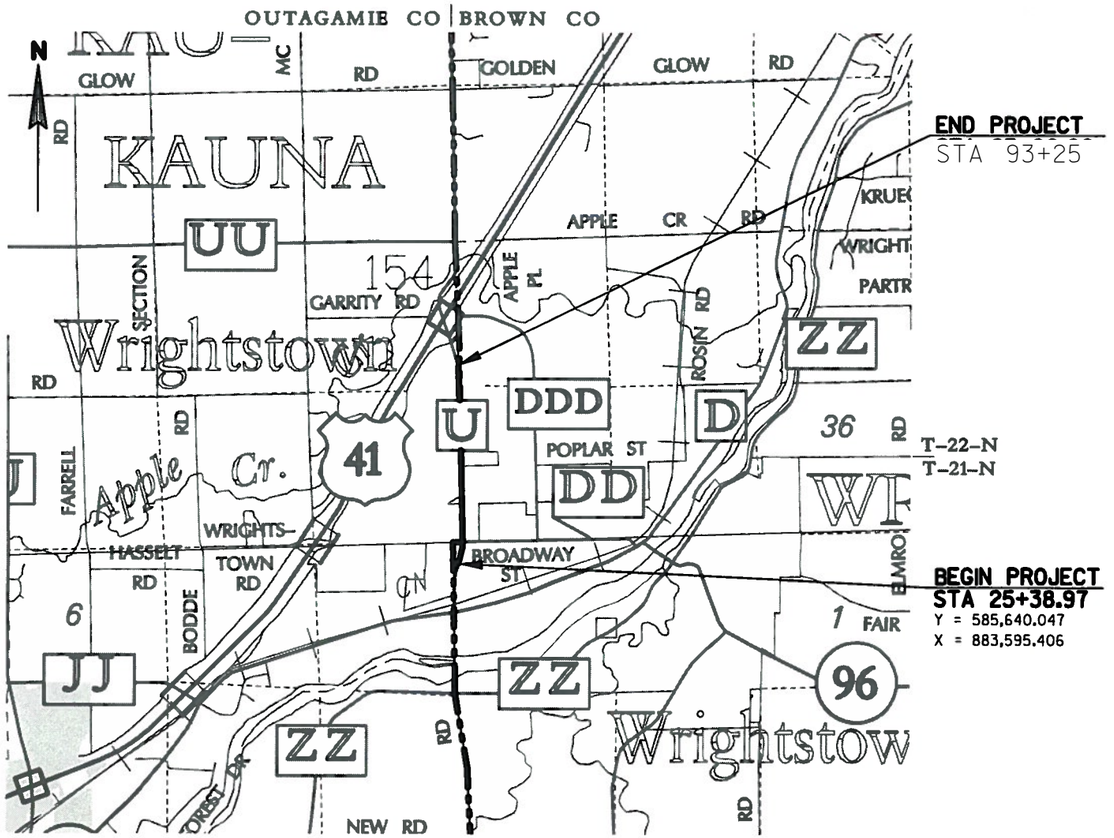
STATE OF WISCONSIN
OUTAGAMIE COUNTY HIGHWAY DEPARTMENT

PLAN OF PROPOSED IMPROVEMENT

CTH U
OUTAGAMIE AND BROWN COUNTIES

PROJECT NUMBER
586500-15

NOTE:
PLAN SET ALSO INCLUDES PLANS FOR OVERLAY PROJECT 595600-15, STA 93+25 TO 104+68



LAYOUT
SCALE 0 1/2 MI. 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 1.28 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), OUTAGAMIE COUNTY, NAD 1983 (91)

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 NAVD 88 (91)

DESIGN DESIGNATION

		CTH U
A.A.D.T. (2015)	=	4,896
A.A.D.T. (2035)	=	5.975
T. (DHV)	=	20.5%
DESIGN SPEED	=	60 MPH
ESALS	=	1,941,800

CONVENTIONAL SYMBOLS

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

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

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

ORIGINAL PLANS PREPARED BY
OMNI ASSOCIATES

WISCONSIN
MICHAEL A. MALCOLM
E-30025
Appleton, WI
PROFESSIONAL ENGINEER

5-8-15

PREPARED BY

Surveyor	OMNNI ASSOCIATES, INC
Designer	OMNNI ASSOCIATES, INC
Project Manager	MIKE MALCOLM, P.E.

APPROVED FOR OUTAGAMIE COUNTY
DATE: 5-8-15
(Signature)

1[1] E

F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_010101_ti.dwg, E2103_010101_ti

WISDOT/CADDS SHEET 15

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY FACILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

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

FILL AS SHOWN ON THE PLANS PERTAINS TO EMBANKMENTS CONSTRUCTED FROM COMMON EXCAVATION .

ALL DISTURBED AREAS NOT OTHERWISE SURFACED, ARE TO BE TOPSOILED, FERTILIZED, AND E-MATTED EXCEPT WHERE NOTED.

SEED MIX NO. 60 SHALL BE USED IN ALL WETLAND DITCH BOTTOMS AS NOTED ON THE EROSION CONTROL SHEETS.

ALL MANHOLE AND INLET OFFSETS ARE GIVEN TO THE CENTER OF THE STRUCTURE.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ARE APPROXIMATE AND SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

THE COST OF CONNECTING NEW STORM SEWERS OR DRAINAGE STRUCTURES TO THE EXISTING STORM SEWER SHALL BE INCIDENTAL TO THE COST OF THE STORM SEWER.

IMMEDIATELY AFTER CONSTRUCTION OF ANY INLET, CONTRACTOR SHALL CONSTRUCT THE EROSION CONTROL PROTECTION IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS TO MINIMIZE SEDIMENTATION IN THE INLET AND STORM SEWER.

THE EXACT LOCATIONS OF ALL EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

CURB AND GUTTER RADII ARE SHOWN TO THE CURB FACE.

BOXOUTS SHALL BE PROVIDED IN CONCRETE BY THE CONTRACTOR FOR SIGN PLACEMENT. THE COST FOR BOXOUTS WILL BE INCIDENTAL TO ASSOCIATED CONCRETE ITEM. LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.

WHERE SLOPE INTERCEPT LINES FALL OUTSIDE OF THE EXISTING RIGHT-OF-WAY, TEMPORARY INTERESTS TO ACCOMPLISH CONSTRUCTION WORK WITHIN THE SLOPE INTERCEPTS HAVE BEEN OBTAINED. THESE RIGHTS ARE EXTENDED TO THE CONTRACTOR.

DISTANCES SHOWN ON THIS PLAN ARE GROUND DISTANCES.
BEARINGS SHOWN ON THIS PLAN ARE GRID BEARINGS.

UTILITIES

SANITARY SEWER / WATER
VILLAGE OF WRIGHTSTOWN
TRAVIS COENEN
EMAIL: TCoenen@wrightstown.us
TEL: 920-532-0434

ELECTRIC
KAUKAUNA UTLITIES
ERIC MILLER
777 ISLAND ST
PO BOX 1777
KAUKAUNA, WI 54130-7077
TEL: 920-462-0214
EMAIL: emiller@ku_wi.org

ELECTRIC
WISCONSIN PUBLIC SERVICE CORP
LORI BUTRY
700 N ADAMS ST
PO BOX 19001
GREEN BAY, WI 54307-9001
TEL: 920-433-1703
EMAIL: LAButry@intgrysgroup.com

GAS
WISCONSIN PUBLIC SERVICE CORP
LORI BUTRY
700 N ADAMS ST
PO BOX 19001
GREEN BAY, WI 54307-9001
TEL: 920-433-1703
EMAIL: LAButry@integrysgroup.com

COMMUNICATION
TIME WARNER CABLE
VINCE ALBIN
3520 DESTINATION DR
APPLETON, WI 54915
TEL: 920-831-9249
EMAIL: vince.albin@twcable.com

AT&T DISTRIBUTION
JOE KASSAB
221 WEST WASHINGTON ST
APPLETON, WI 54911
TEL: 920-735-3206
EMAIL: jk572k@att.com

OTHER CONTACTS

DNR LIAISON
WI DEPARTMENT OF NATURAL RESOURCES
MATT SHAEVE
2984 SHAWANO AVE
GREEN BAY, WI 54313
TEL: 920-662-5472
EMAIL: matthew.schaeve@wisconsin.gov

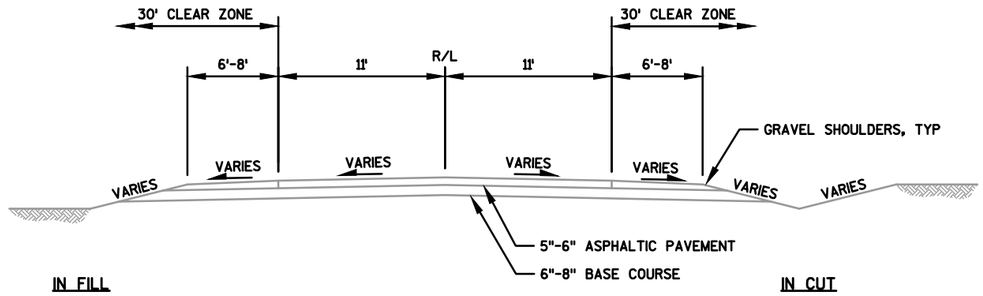
DIGGERS HOTLINE
CABLE LOCATE
TELEPHONE: (800) 242-8511 (TOLL FREE)

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

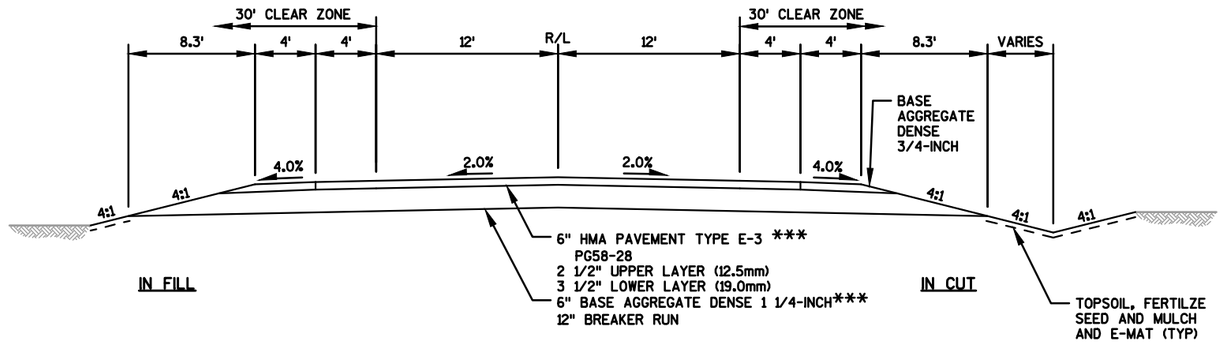
ORDER OF "SECTION 2" SHEETS

SHEET TITLE

2

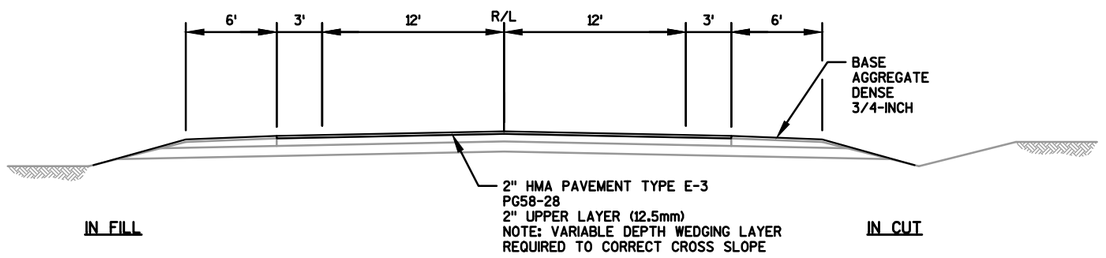


TYPICAL EXISTING SECTION - CTH 'U'
STA 25+39 TO STA 93+25



TYPICAL PROPOSED SECTION - CTH 'U'
STA 25+39 TO STA 93+25

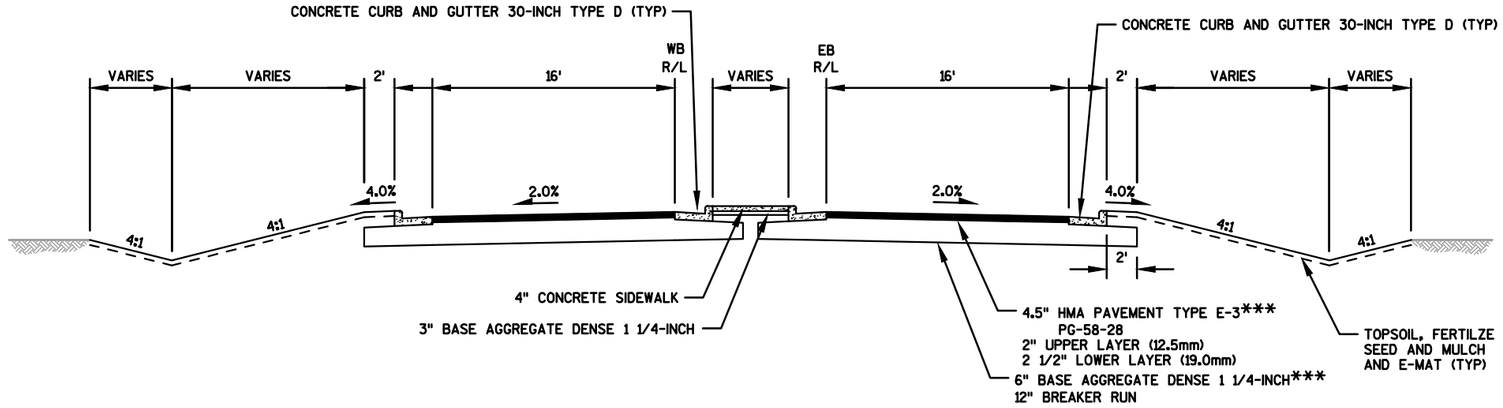
***6 1/2" HMA PAVEMENT
2 1/2" UPPER LAYER TYPE E-10 (12.5mm)
PG64-28
4" LOWER LAYER TYPE E-3 (19.0mm)
PG58-28
7" BASE AGGREGATE DENSE 1 1/4-INCH
12" BREAKER RUN
NB STA 32+80 - 36+80
SB STA 132+90 - 136+87



TYPICAL PROPOSED SECTION - CTH 'U'
STA 93+25 TO STA 104+68

OVERLAY PROJECT 595600-15

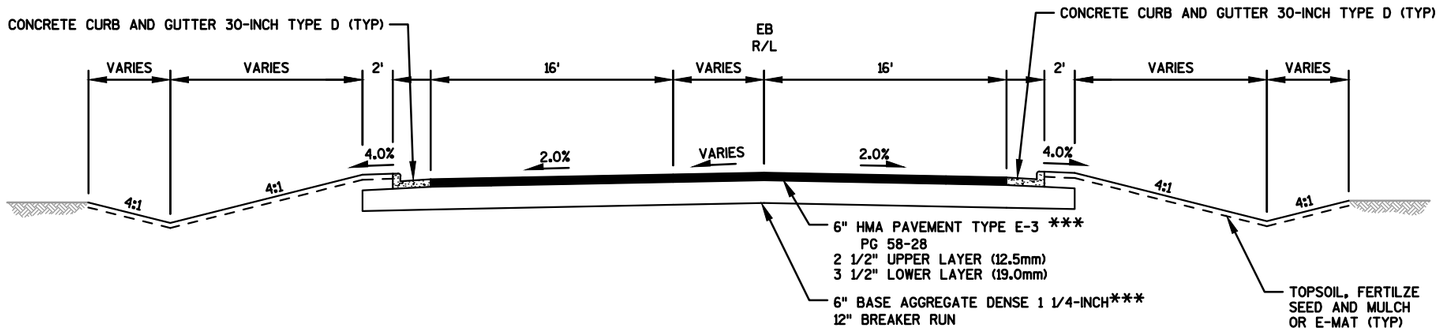
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	TYPICAL SECTIONS	SHEET 3	E



***6 1/2" HMA PAVEMENT
2 1/2" UPPER LAYER TYPE E-10 (12.5mm)
PG64-28
4" LOWER LAYER TYPE E-3 (19.0mm)
PG58-28
7" BASE AGGREGATE DENSE 1 1/4-INCH
12" BREAKER RUN
EB STA 213+84.47 - 214+66.61
WB STA 313+83 + 314+66.52

TYPICAL PROPOSED SECTION - GOLF COURSE DRIVE

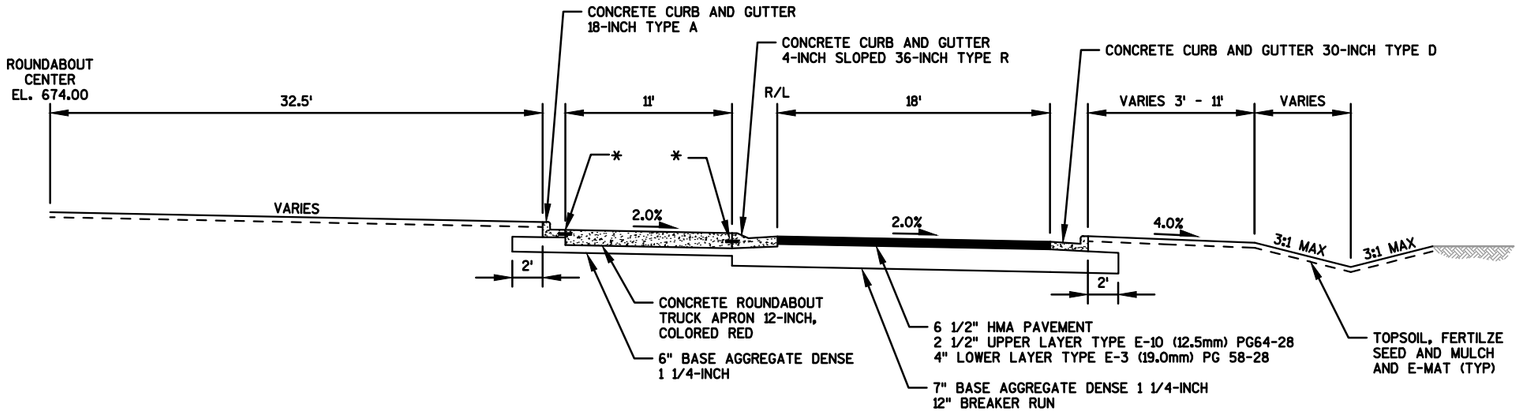
STA 210+77.35 TO STA 214+66.61



***6 1/2" HMA PAVEMENT
2 1/2" UPPER LAYER TYPE E-10 (12.5mm)
PG64-28
4" LOWER LAYER TYPE E-3 (19.0mm)
PG58-28
7" BASE AGGREGATE DENSE 1 1/4-INCH
12" BREAKER RUN
EB STA 400+00 - 400+90
WB STA 500+01.16 - 500+90

TYPICAL PROPOSED SECTION - CTH DD (BROADWAY STREET)

STA 400+00 TO STA 405+33

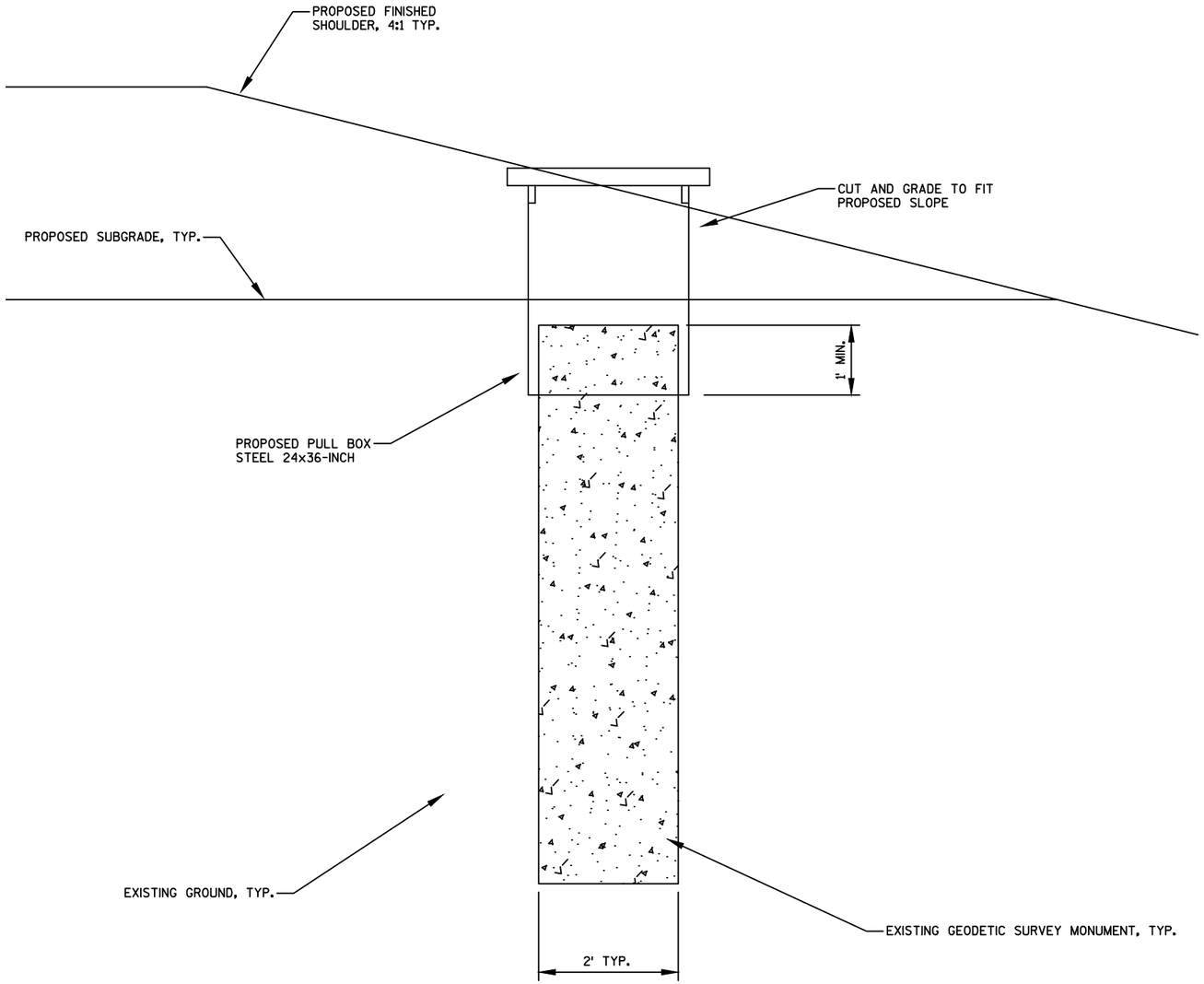


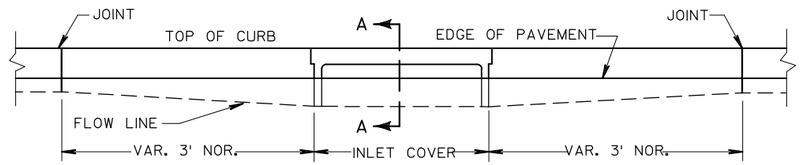
*TIE BARS NO 4X2'
SPACED AT 3' C-C

TYPICAL PROPOSED SECTION - ROUNDABOUT

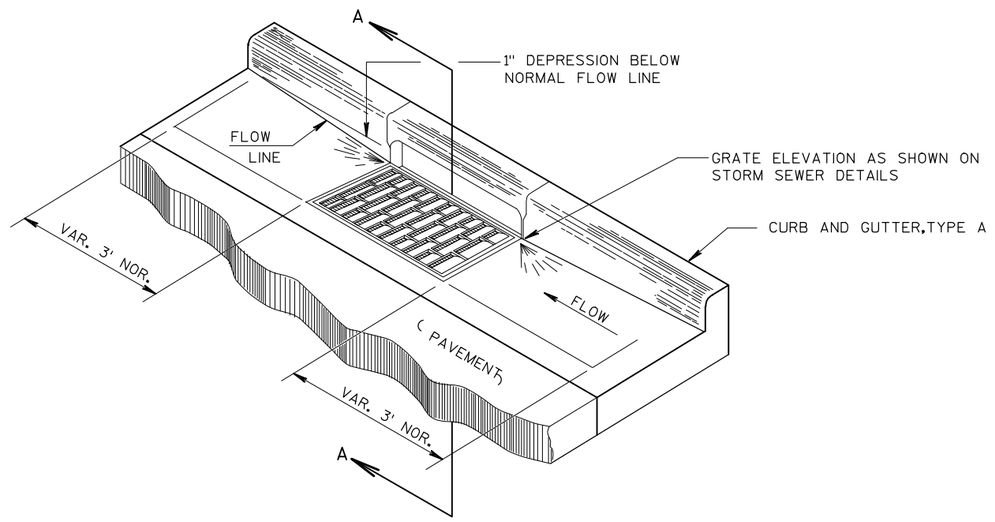
STA 10+00 TO STA 12+98.45

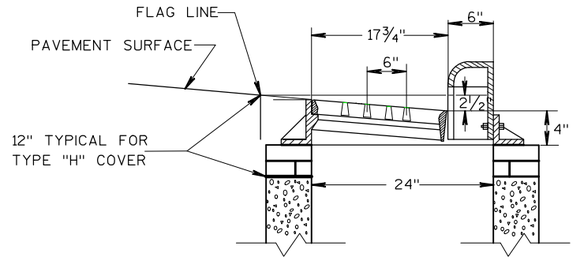
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	TYPICAL SECTIONS	SHEET 4---	E





ELEVATION





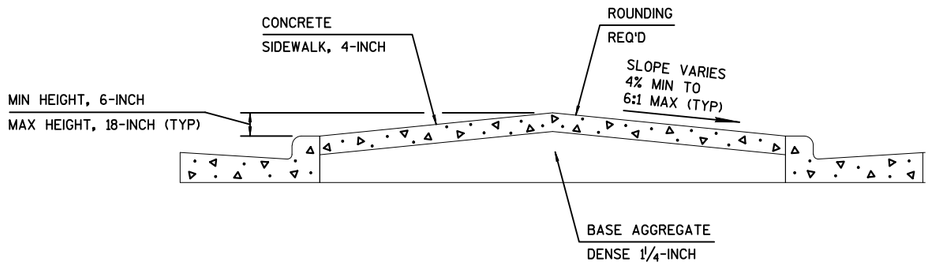
SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS

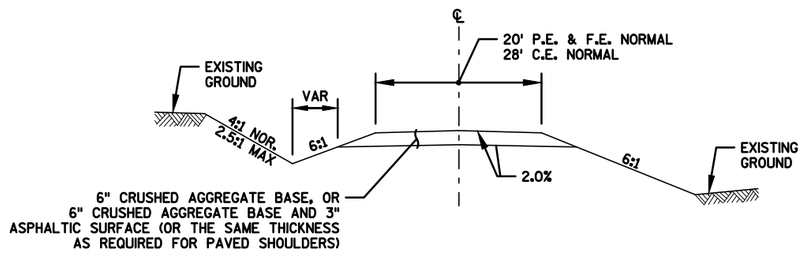
(TYPE 3-H INLET SHOWN)

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CONSTRUCTION DETAILS	SHEET 5	E

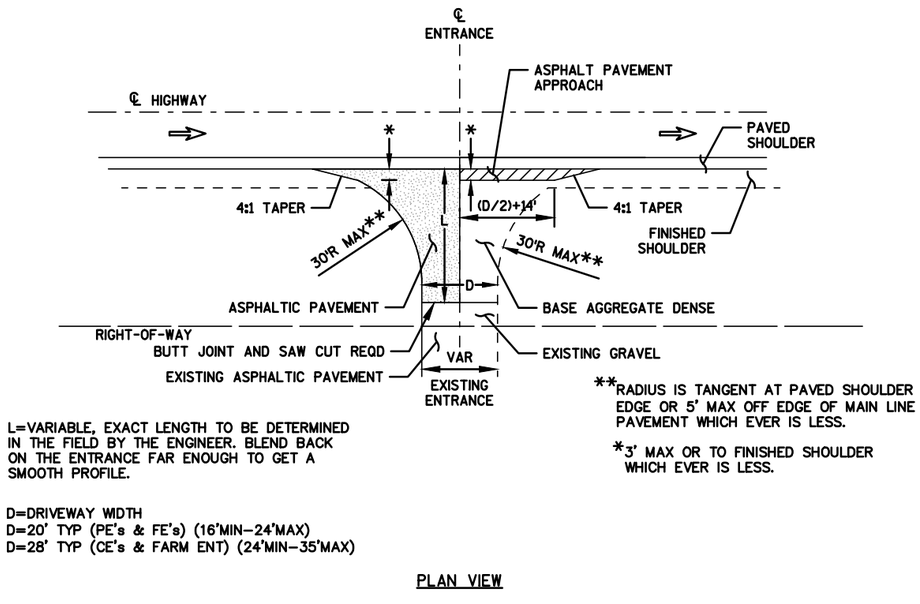
2



SPLITTER ISLAND CONCRETE SIDEWALK DETAIL

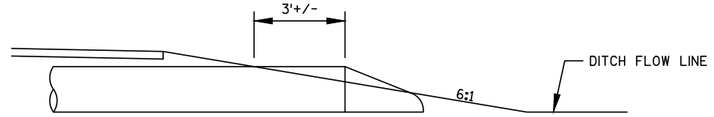


TYPICAL CROSS SECTION

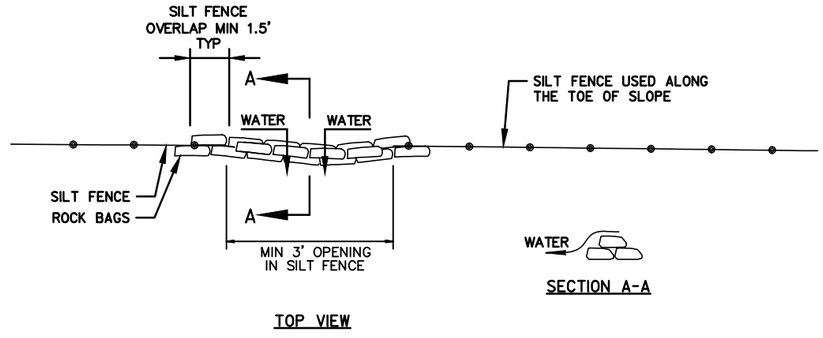


PLAN VIEW

RURAL DRIVEWAY INTERSECTION DETAIL

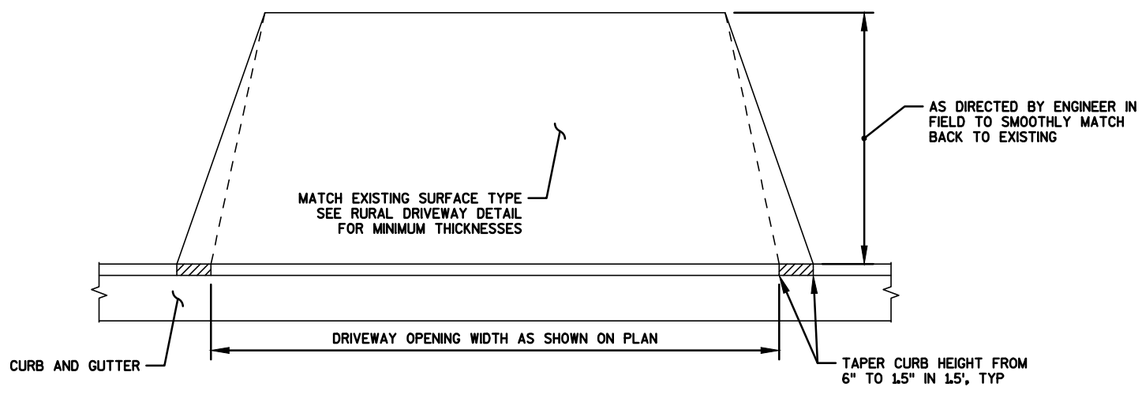


RURAL DRIVEWAY CULVERT STANDARD ENDWALL GRADING DETAIL

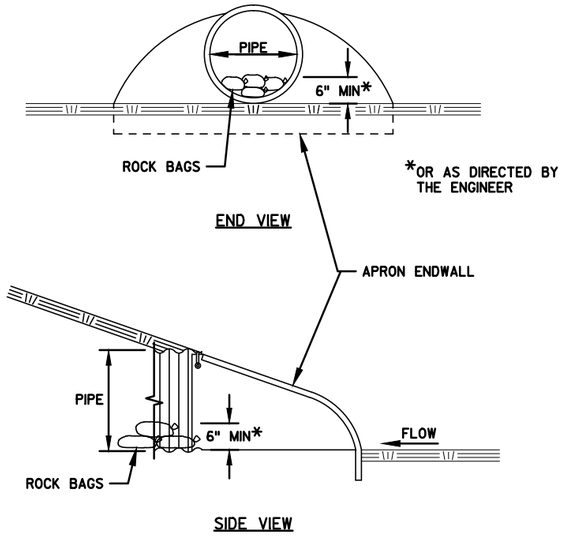


ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

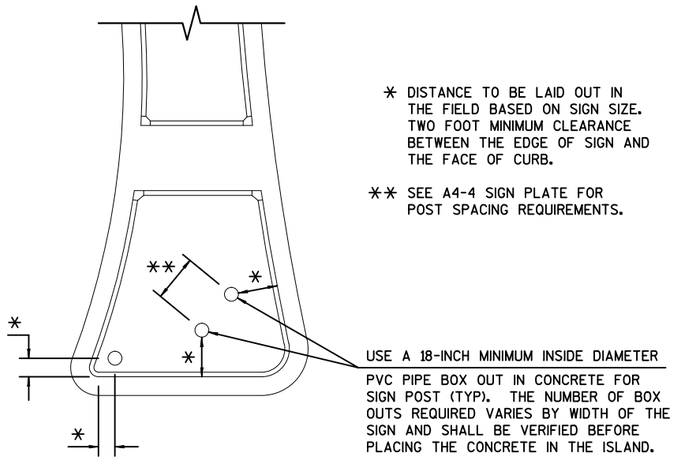
PAID AS ROCK BAGS



URBAN DRIVEWAY OPENING DETAIL

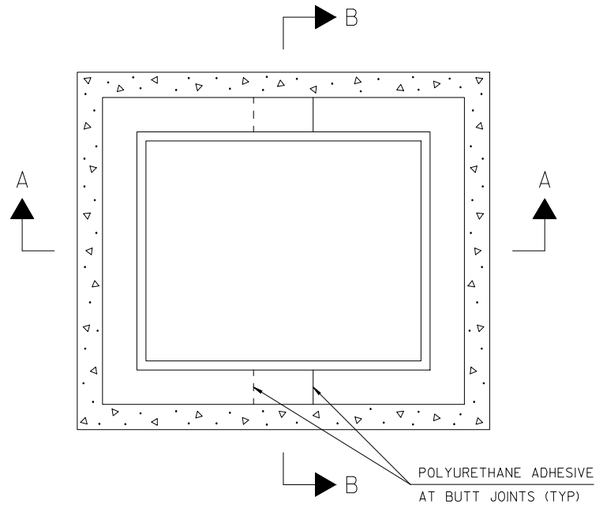


CULVERT PIPE CHECKS

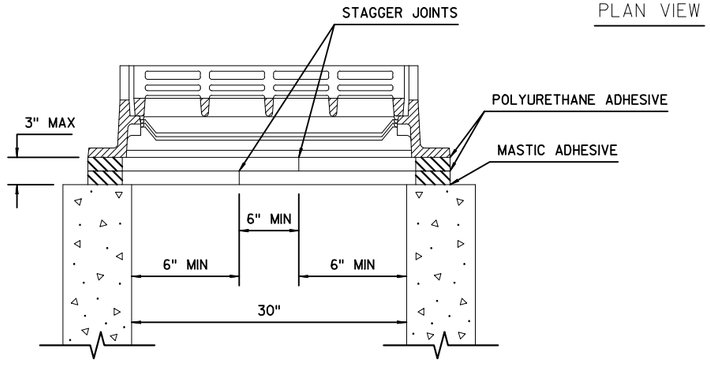


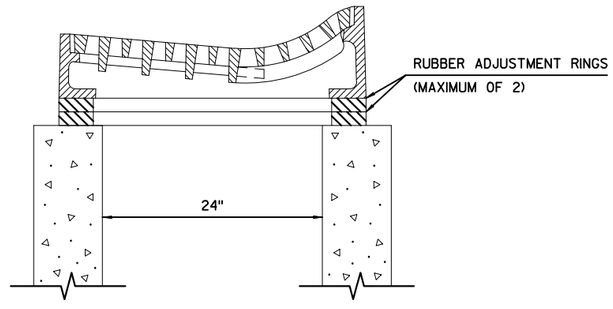
ISLAND SIGN LOCATION DETAIL (TYP)

NOTIFY THE ANDY ROWELL OF OUTAGAMIE COUNTY AT 920-968-5756 A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.



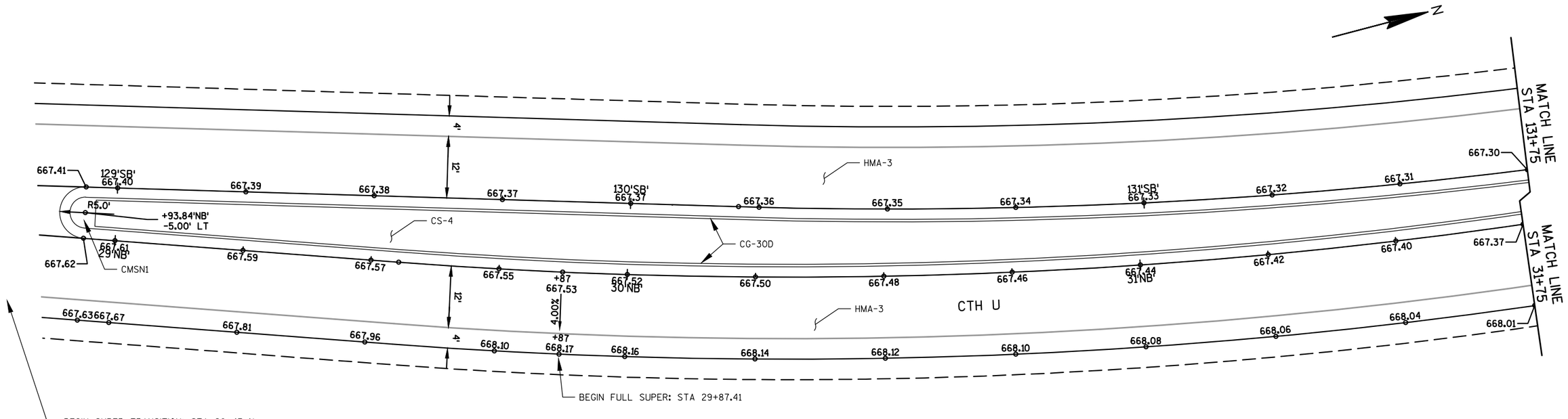
NOTE: ALL CUTS MADE TO RUBBER ADJUSTMENT RINGS WILL BE PERPENDICULAR AND PROVIDE A TIGHT JOINT.

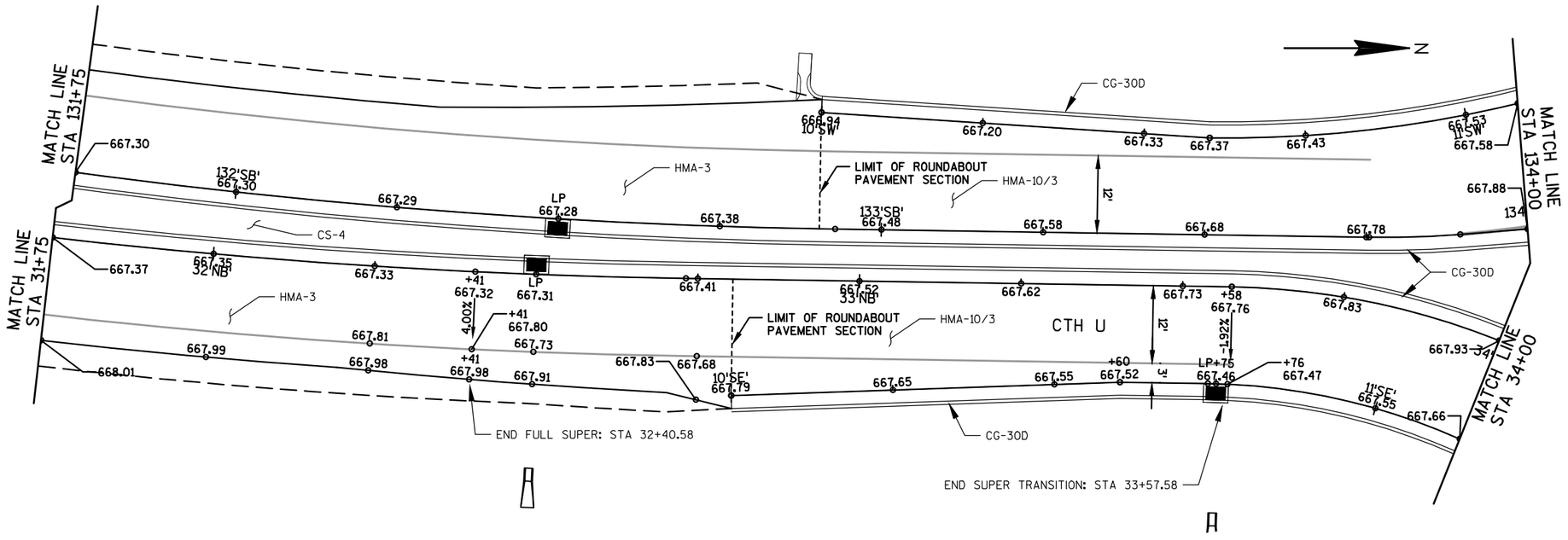




RUBBER RING CUTTING DETAIL FOR INLET 2 X 2.5-FT, SPECIAL

2

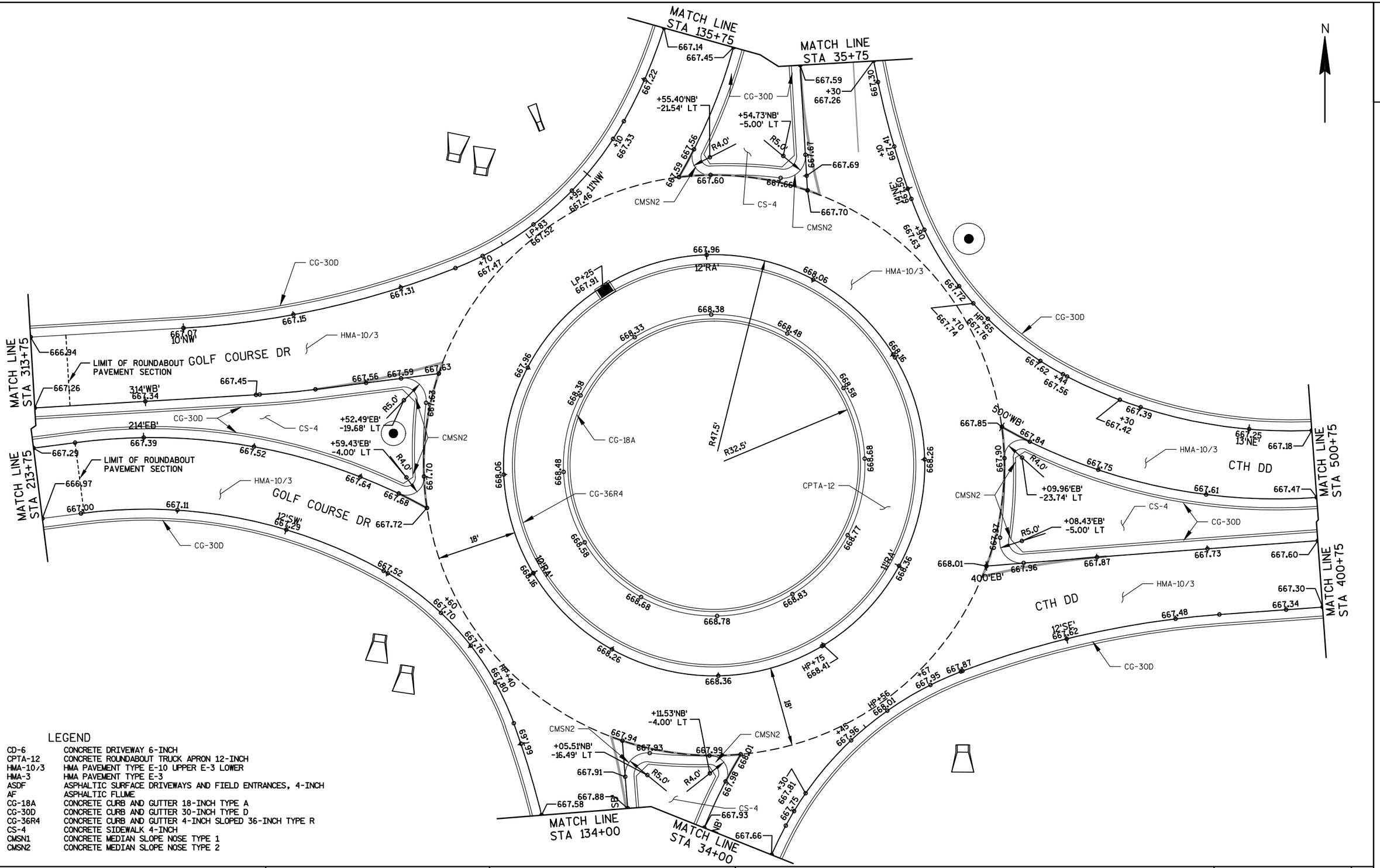




LEGEND

CD-6	CONCRETE DRIVEWAY 6-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
HMA-10/3	HMA PAVEMENT TYPE E-10 UPPER E-3 LOWER
HMA-3	HMA PAVEMENT TYPE E-3
ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 4-INCH
AF	ASPHALTIC FLUME
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CS-4	CONCRETE SIDEWALK 4-INCH
CMSN1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN2	CONCRETE MEDIAN SLOPE NOSE TYPE 2

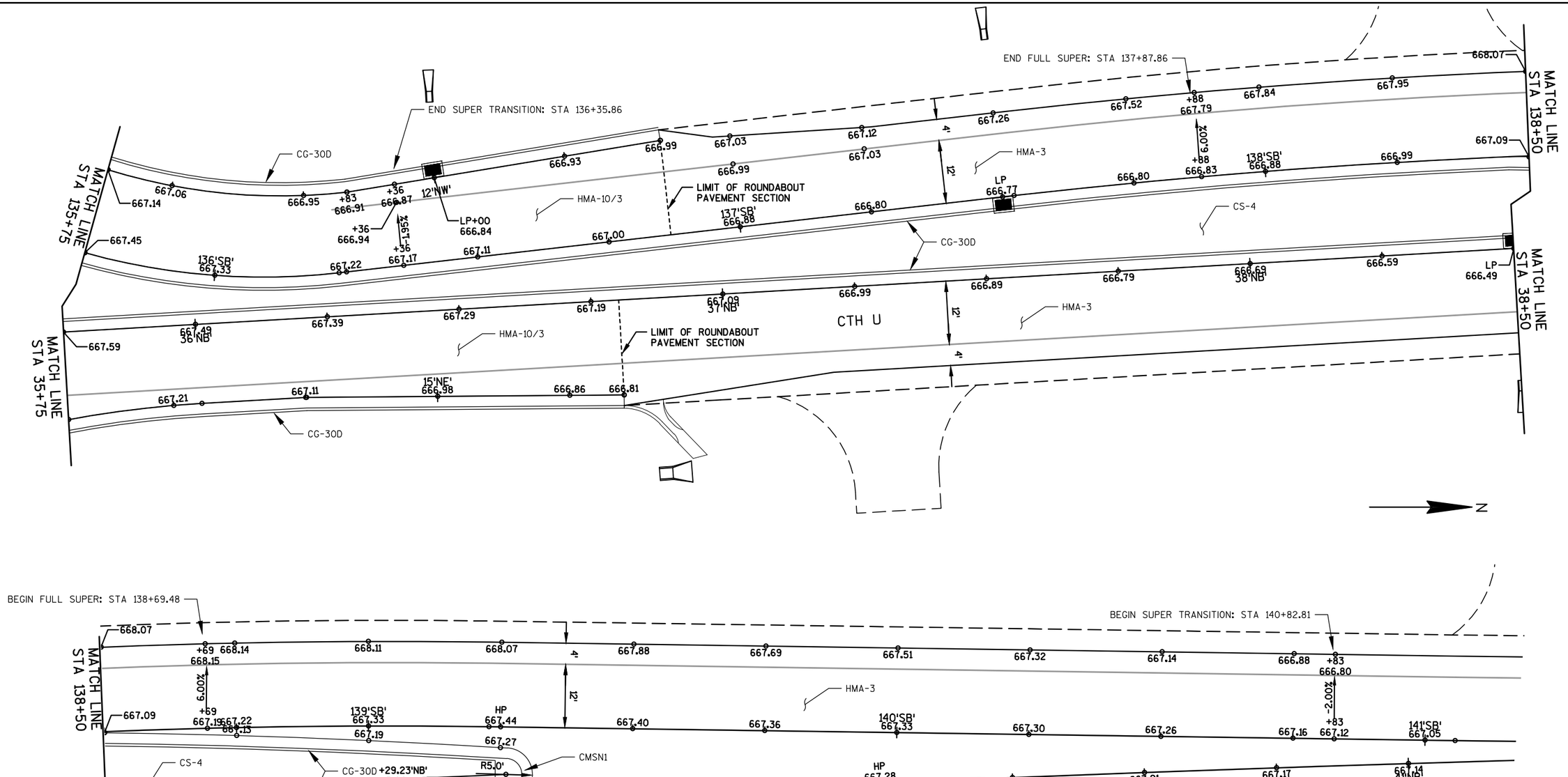
2

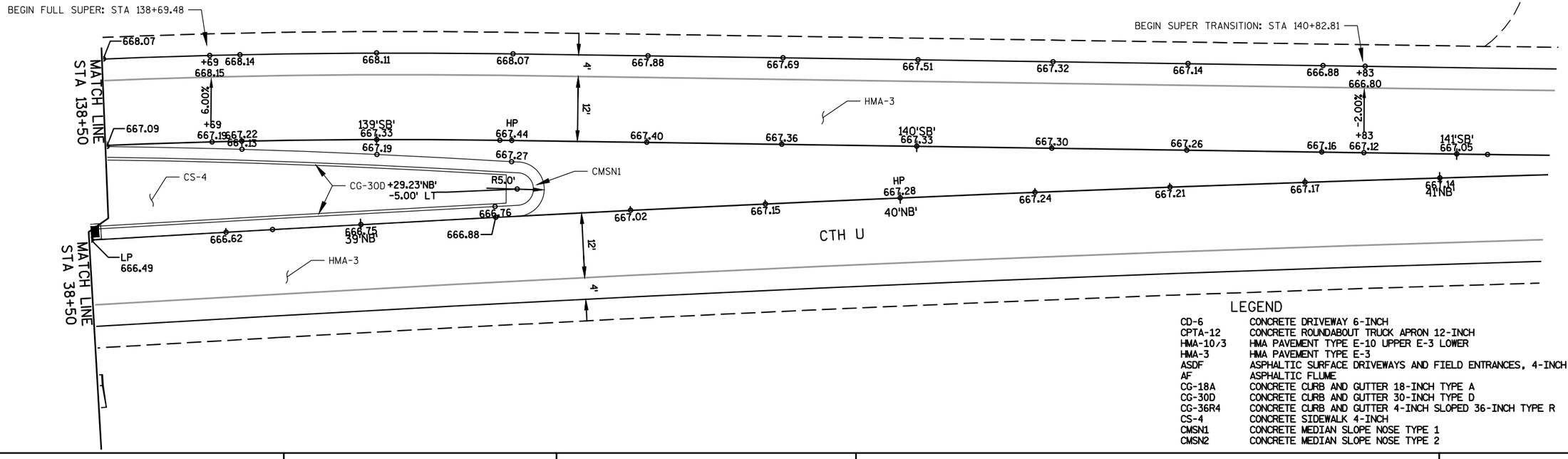


LEGEND

CD-6	CONCRETE DRIVEWAY 6-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
HMA-10/3	HMA PAVEMENT TYPE E-10 UPPER E-3 LOWER
HMA-3	HMA PAVEMENT TYPE E-3
ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 4-INCH
AF	ASPHALTIC FLUME
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CS-4	CONCRETE SIDEWALK 4-INCH
CMSN1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN2	CONCRETE MEDIAN SLOPE NOSE TYPE 2

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PAVING DETAILS	SHEET 9 E

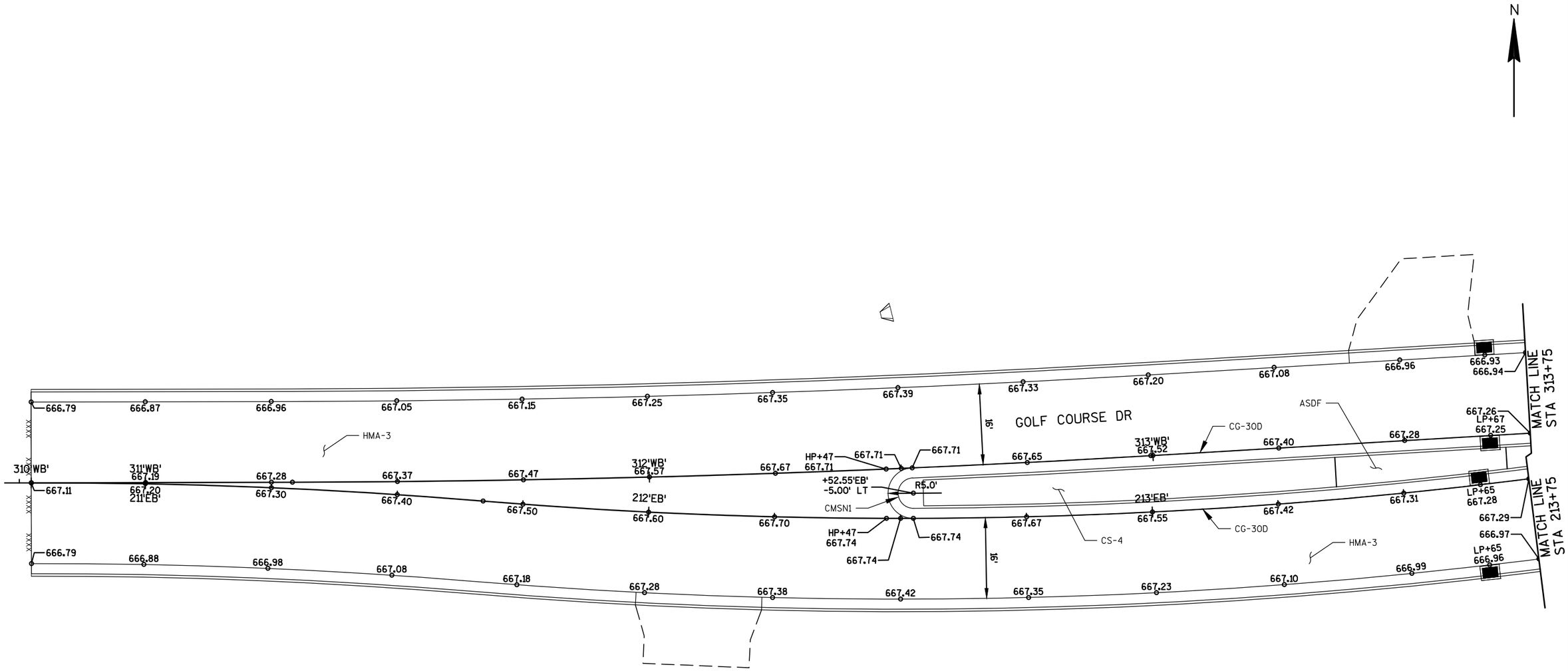




LEGEND

CD-6	CONCRETE DRIVEWAY 6-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
HMA-10/3	HMA PAVEMENT TYPE E-10 UPPER E-3 LOWER
HMA-3	HMA PAVEMENT TYPE E-3
ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 4-INCH
AF	ASPHALTIC FLUME
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CS-4	CONCRETE SIDEWALK 4-INCH
CMSN1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN2	CONCRETE MEDIAN SLOPE NOSE TYPE 2

2



LEGEND

CD-6	CONCRETE DRIVEWAY 6-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
HMA-10/3	HMA PAVEMENT TYPE E-10 UPPER E-3 LOWER
HMA-3	HMA PAVEMENT TYPE E-3
ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 4-INCH
AF	ASPHALTIC FLUME
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
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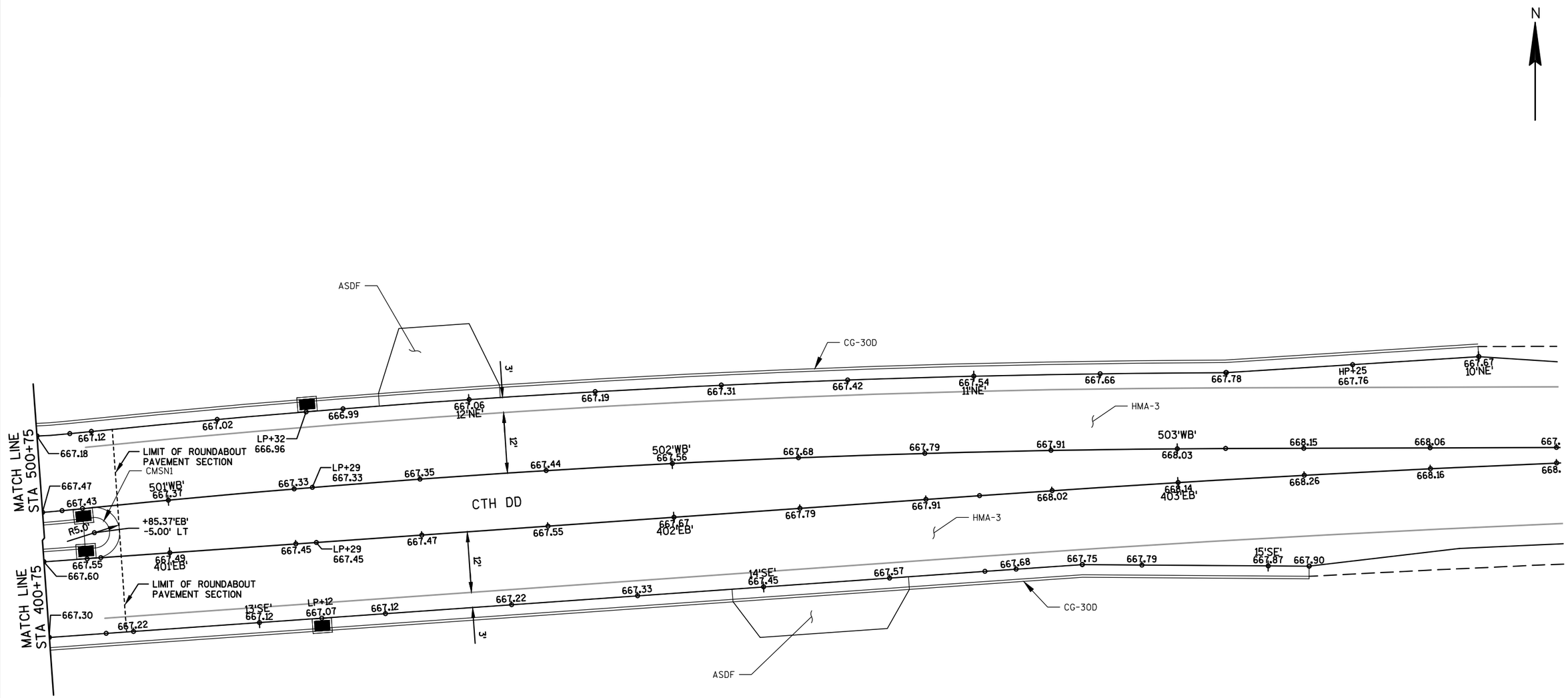
CMSN1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN2	CONCRETE MEDIAN SLOPE NOSE TYPE 2

2



LEGEND

CD-6	CONCRETE DRIVEWAY 6-INCH
CPTA-12	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
HMA-10/3	HMA PAVEMENT TYPE E-10 UPPER E-3 LOWER
HMA-3	HMA PAVEMENT TYPE E-3
ASDF	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES, 4-INCH
AF	ASPHALTIC FLUME
CG-18A	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG-30D	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG-36R4	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R
CS-4	CONCRETE SIDEWALK 4-INCH
CMSN1	CONCRETE MEDIAN SLOPE NOSE TYPE 1
CMSN2	CONCRETE MEDIAN SLOPE NOSE TYPE 2

2

2

SILT FENCE, TYP

126'SB' 127'SB' 128'SB' 129'SB' 130'SB' 131'SB'

26'NB' 27'NB' 28'NB' 29'NB' 30'NB' 31'NB'

CTH U

18" CMP

SEEDING MIXTURE NO. 60, TYP

N

LEGEND

- E-MAT URBAN CLASS I TYPE A
- E-MAT URBAN CLASS I TYPE B
- E-MAT CLASS I TYPE B
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK

SEEDING MIXTURE NO. 60, TYP

SILT FENCE, TYP

132'SB' 133'SB' 134'SB'

32'NB' 33'NB' 34'NB'

CTH U

TYPE C

TYPE C

8" PVC

SEEDING MIXTURE NO. 60, TYP

24" CMP

24" CMP

400'EB

CTH DD

SILT FENCE, TYP

TYPE C

136'SB'

CTH U

36'NB'

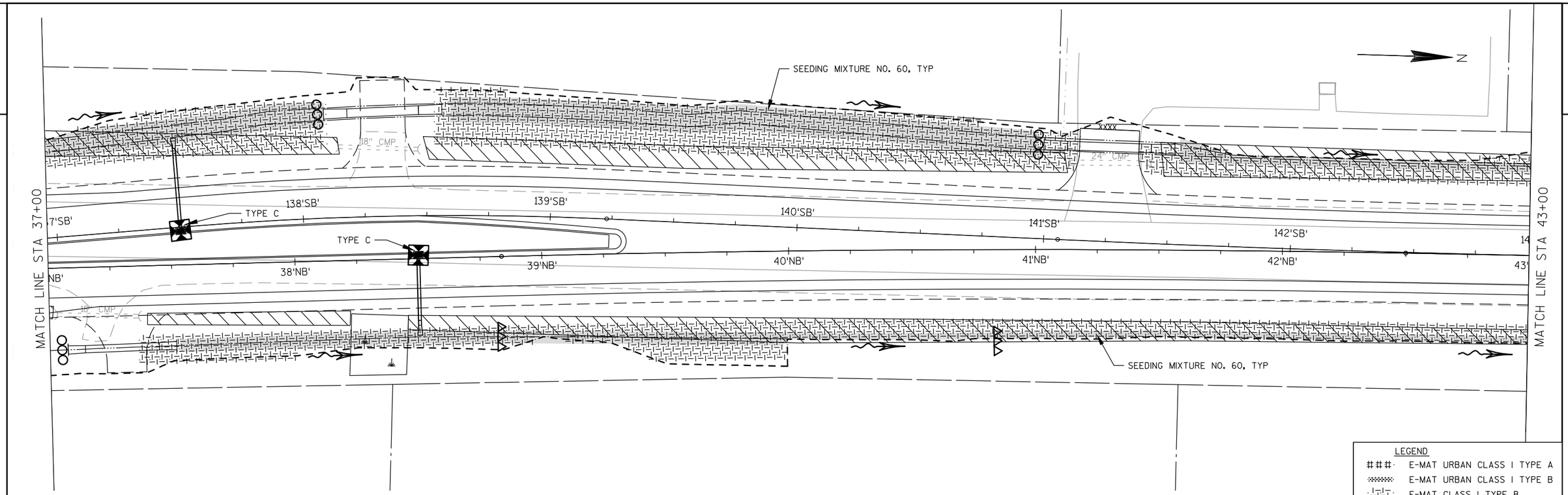
37'

N

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	EROSION CONTROL: CTH U	SHEET 13	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_022000_EC.DWG
E2103_022001_ec

PLOT DATE : 6/25/2015 7:50 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK



LEGEND

- ### E-MAT URBAN CLASS I TYPE A
- E-MAT URBAN CLASS I TYPE B
- E-MAT CLASS I TYPE B
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK

2

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	EROSION CONTROL: CTH U	SHEET 14	E

2

2

SEEDING MIXTURE NO. 60, TYP

24" CMP

24" CMP

3'SB'

NB'

44'NB'

45'NB'

46'NB'

47'NB'

48'NB'

49'

18" CMP

18" CMP

N

LEGEND

E-MAT URBAN CLASS I TYPE A

E-MAT URBAN CLASS I TYPE B

E-MAT CLASS I TYPE B

INLET PROTECTION

TEMPORARY DITCH CHECK

CULVERT PIPE CHECK

SILT FENCE, TYP

SEEDING MIXTURE NO. 60, TYP

MATCH LINE STA 49+00

NB'

50'NB'

51'NB'

52'NB'

53'NB'

54'NB'

55'

18" CMP

18" CMP

N

MATCH LINE STA 55+00

SEEDING MIXTURE NO. 60, TYP

NB'

56'NB'

57'NB'

58'NB'

59'NB'

60'NB'

61'

MATCH LINE STA 61+00

UNKN

N

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	EROSION CONTROL: CTH U	SHEET 15	E

2

2

MATCH LINE STA 61+00

61'NB'

62'NB'

63'NB'

64'NB'

65'NB'

66'NB'

67'

18" CMP

24" CMP

SEEDING MIXTURE NO. 60, TYP

SILT FENCE, TYP

SEEDING MIXTURE NO. 60, TYP

N

LEGEND

- ### E-MAT URBAN CLASS I TYPE A
- E-MAT URBAN CLASS I TYPE B
- E-MAT CLASS I TYPE B
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK

MATCH LINE STA 67+00

MATCH LINE STA 73+00

67'NB'

68'NB'

69'NB'

70'NB'

71'NB'

72'NB'

73'

18" CMP

N

MATCH LINE STA 73+00

MATCH LINE STA 79+00

73'NB'

74'NB'

75'NB'

76'NB'

77'NB'

78'NB'

79'

24" CMP

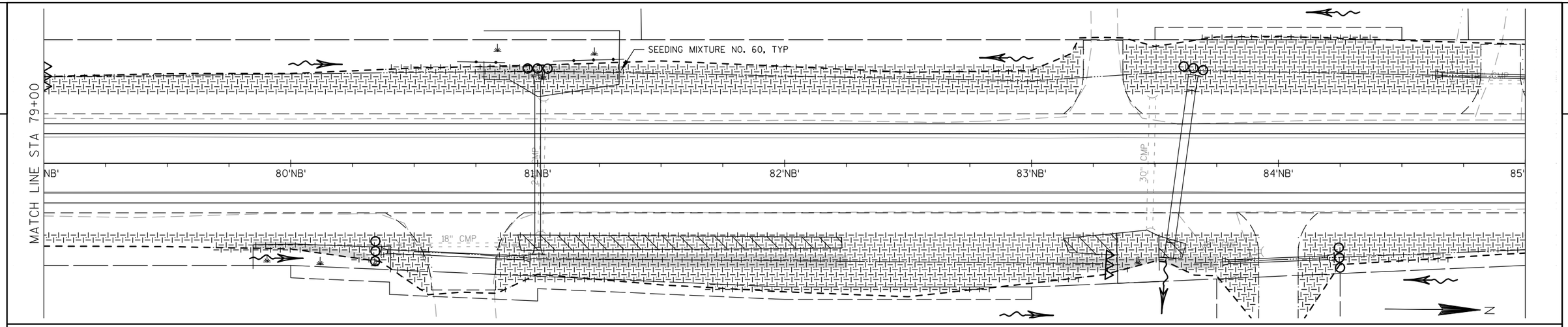
18" CMP

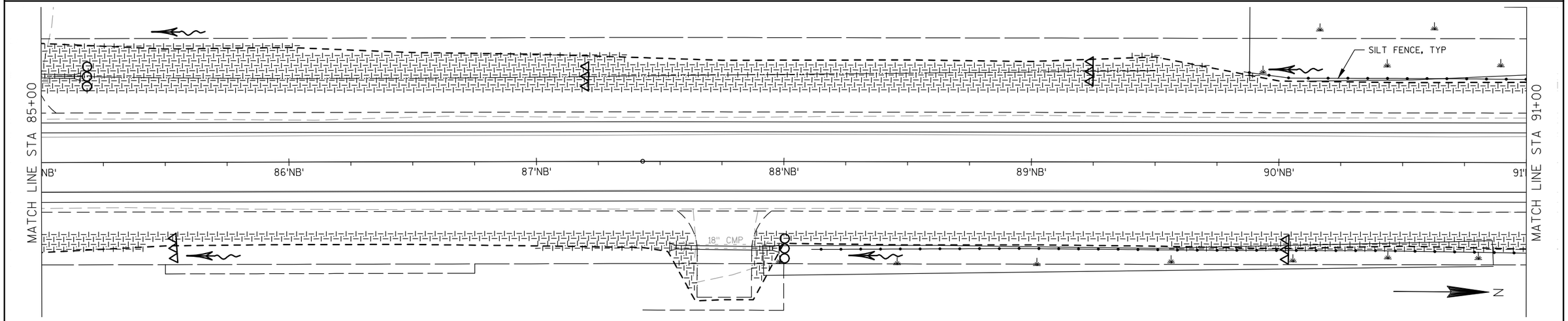
SEEDING MIXTURE NO. 60, TYP

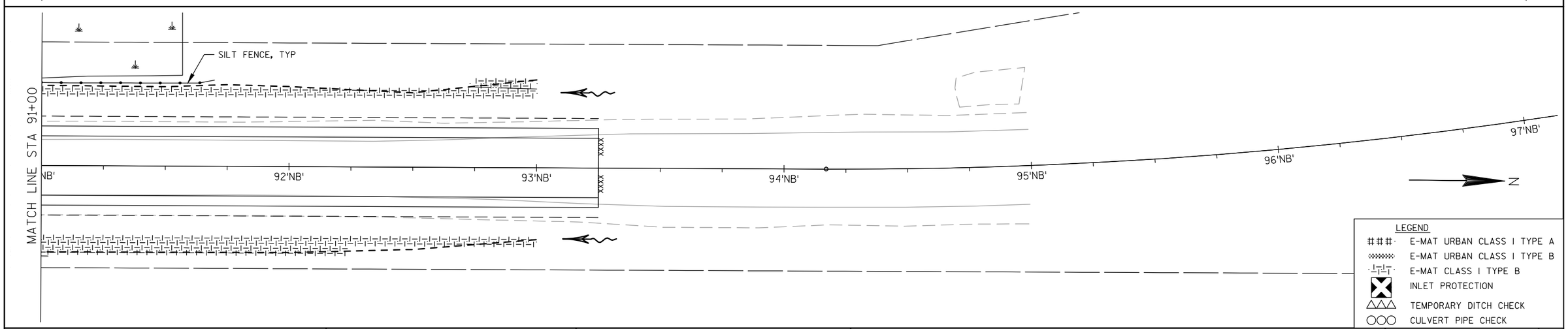
N

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	EROSION CONTROL: CTH U	SHEET 16	E

2

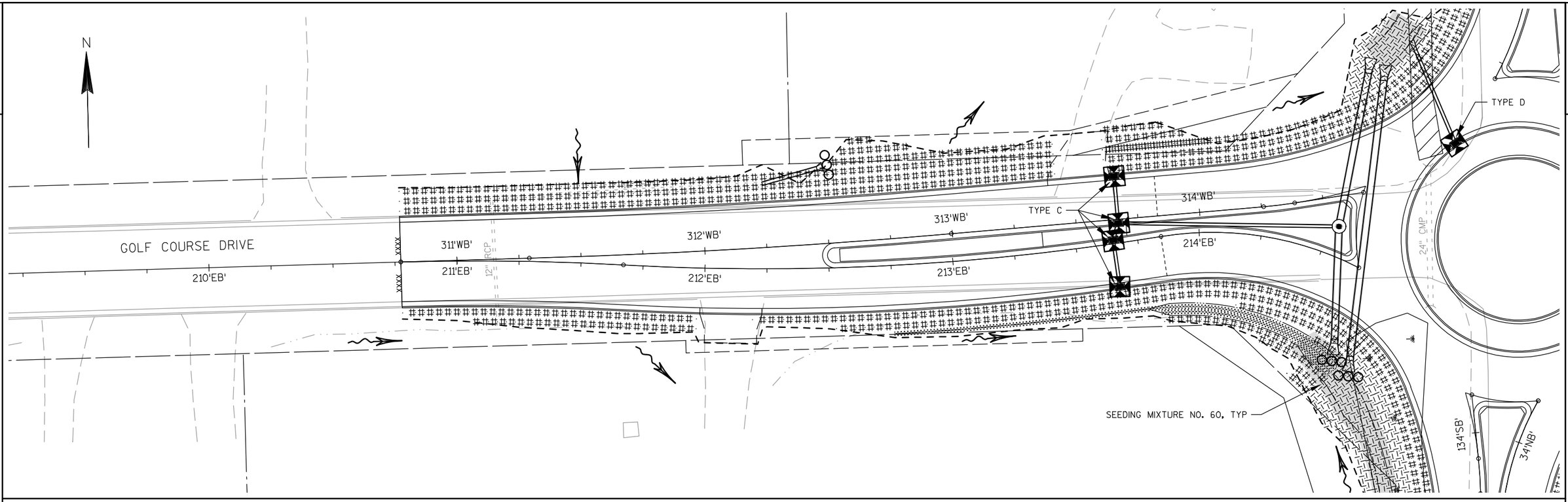




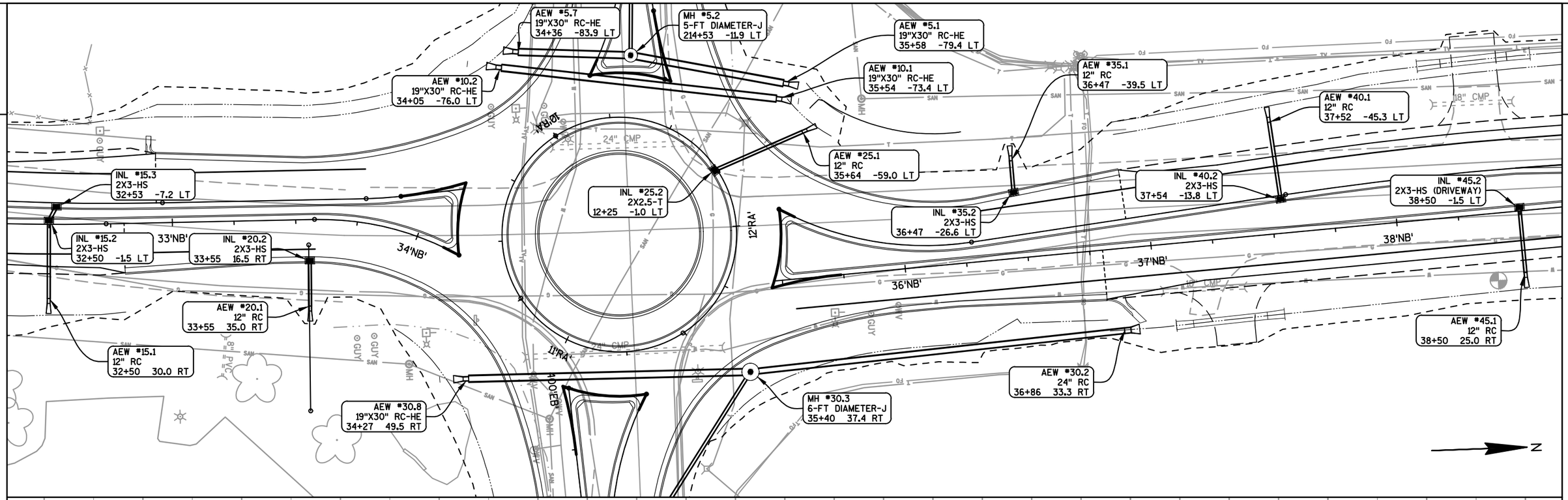


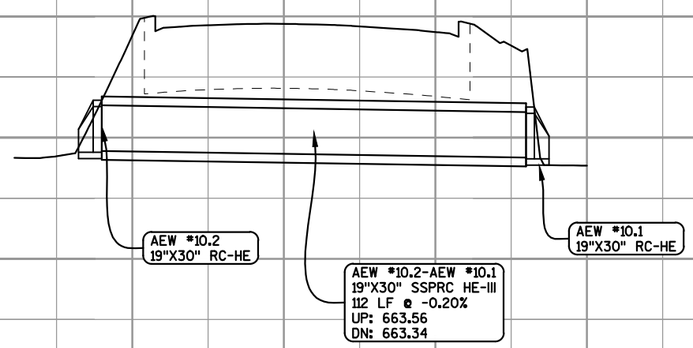
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	EROSION CONTROL: CTH U	SHEET 17	E

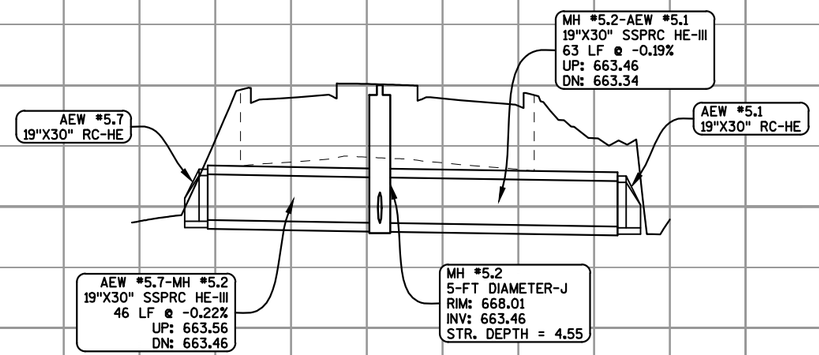
2

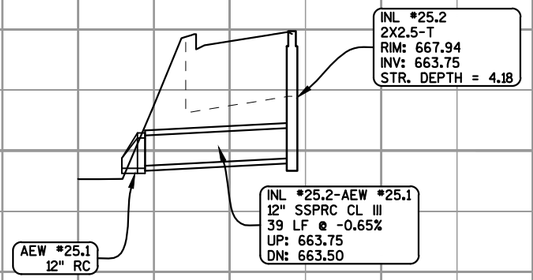


PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	EROSION CONTROL: GOLF COURSE RD/CTH DD	SHEET 18	E





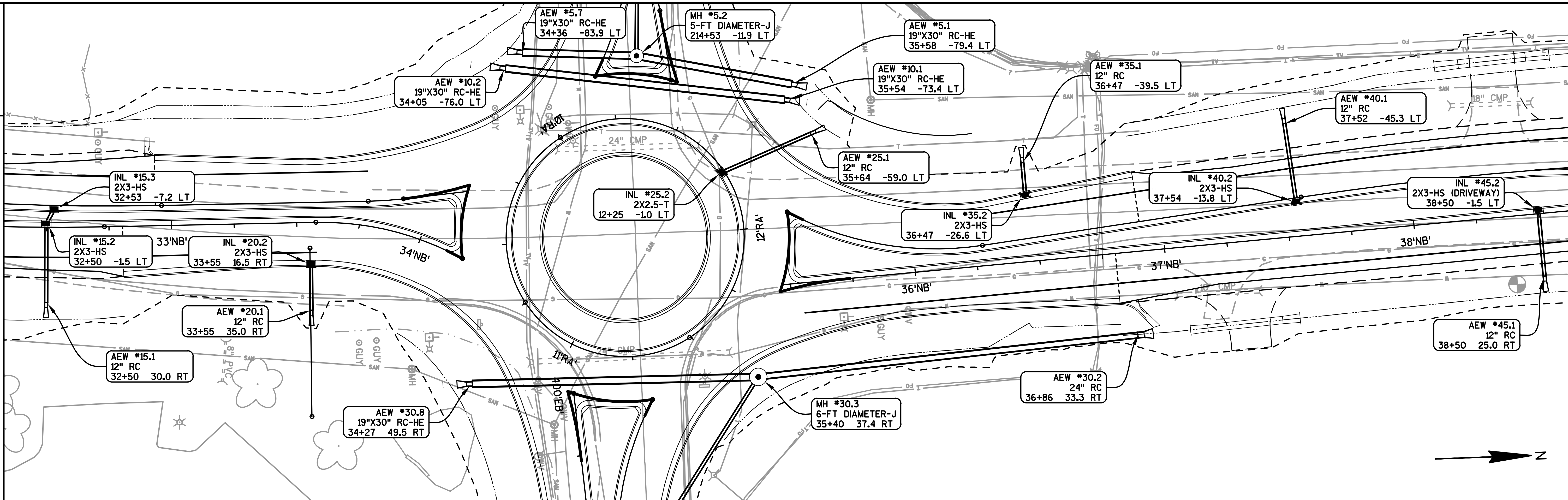


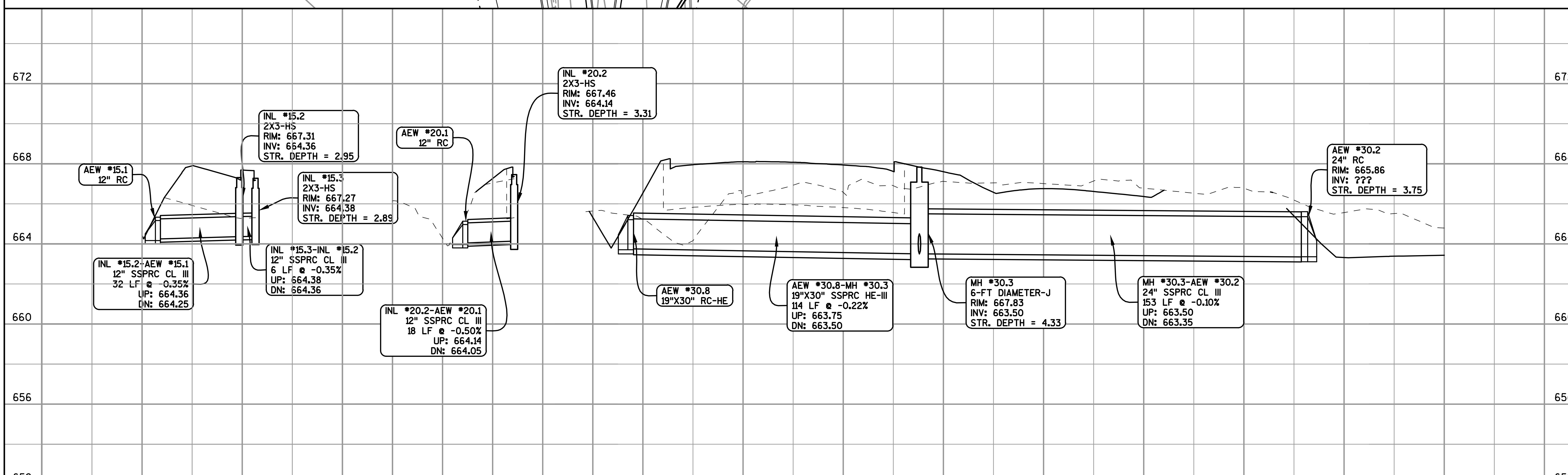


672 668 664 660 656 652

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	STORM SEWER	SHEET 19	E

2


AEW #5.7
19"X30" RC-HE
34+36 -83.9 LT
MH #5.2
5-FT DIAMETER-J
214+53 -11.9 LT
AEW #5.1
19"X30" RC-HE
35+58 -79.4 LT
AEW #10.2
19"X30" RC-HE
34+05 -76.0 LT
AEW #10.1
19"X30" RC-HE
35+54 -73.4 LT
AEW #35.1
12" RC
36+47 -39.5 LT
AEW #40.1
12" RC
37+52 -45.3 LT
AEW #25.1
12" RC
35+64 -59.0 LT
INL #15.3
2X3-HS
32+53 -7.2 LT
INL #25.2
2X2.5-T
12+25 -1.0 LT
INL #40.2
2X3-HS
37+54 -13.8 LT
INL #45.2
2X3-HS (DRIVEWAY)
38+50 -1.5 LT
INL #35.2
2X3-HS
36+47 -26.6 LT
INL #15.2
2X3-HS
32+50 -1.5 LT
INL #20.2
2X3-HS
33+55 16.5 RT
33'NB'
34'NB'
12'RA'
38'NB'
37'NB'
36'NB'
11'RA'
24" CMP
18" CMP
AEW #20.1
12" RC
33+55 35.0 RT
AEW #45.1
12" RC
38+50 25.0 RT
AEW #15.1
12" RC
32+50 30.0 RT
AEW #30.2
24" RC
36+86 33.3 RT
MH #30.3
6-FT DIAMETER-J
35+40 37.4 RT
AEW #30.8
19"X30" RC-HE
34+27 49.5 RT
N

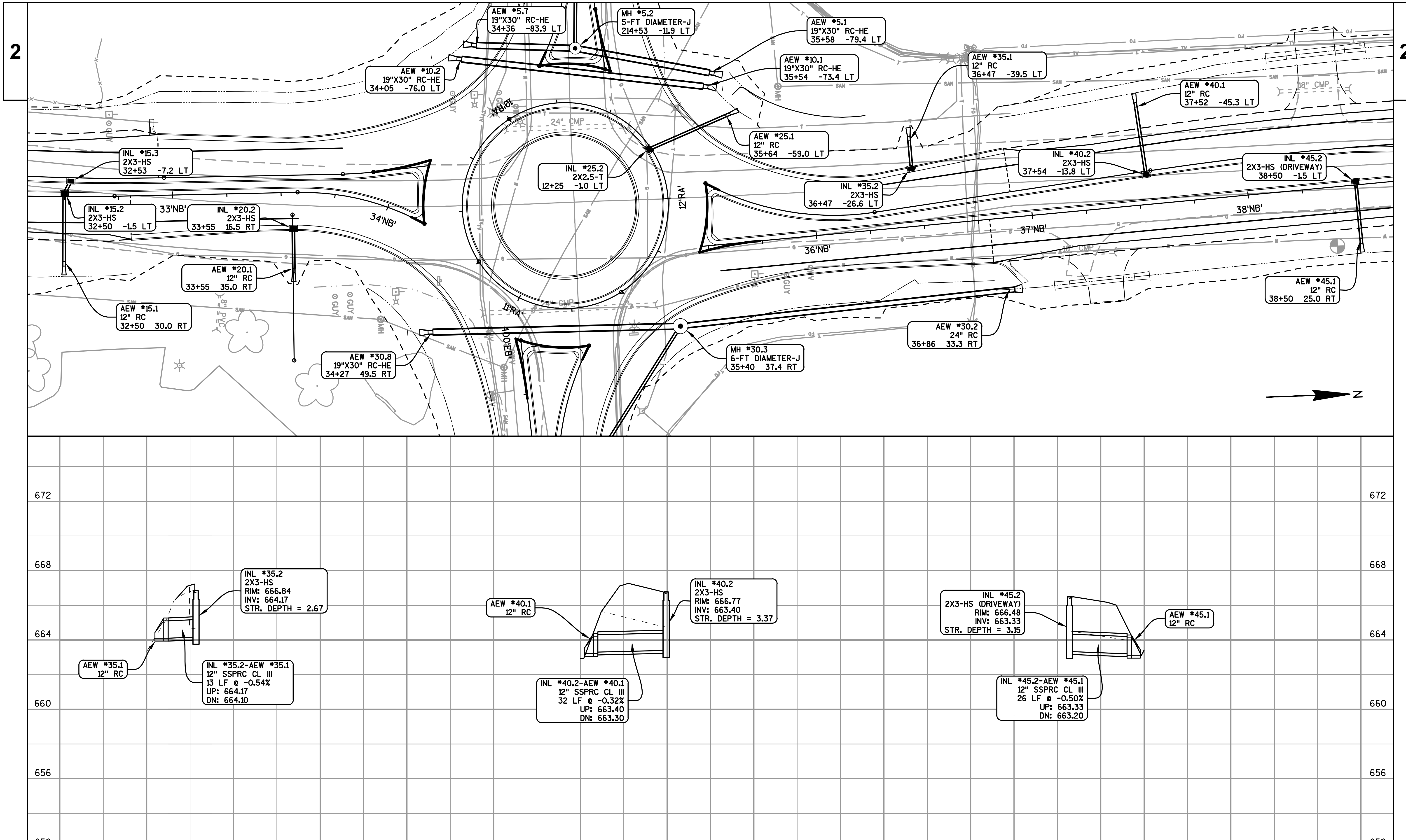

672
668
664
660
656
652
INL #20.2
2X3-HS
RIM: 667.46
INV: 664.14
STR. DEPTH = 3.31
INL #15.2
2X3-HS
RIM: 667.31
INV: 664.36
STR. DEPTH = 2.95
AEW #20.1
12" RC
AEW #15.1
12" RC
INL #15.3
2X3-HS
RIM: 667.27
INV: 664.38
STR. DEPTH = 2.89
AEW #30.2
24" RC
RIM: 665.86
INV: ???
STR. DEPTH = 3.75
INL #15.2-AEW #15.1
12" SSPRC CL III
32 LF @ -0.35%
UP: 664.36
DN: 664.25
INL #15.3-INL #15.2
12" SSPRC CL III
6 LF @ -0.35%
UP: 664.38
DN: 664.36
INL #20.2-AEW #20.1
12" SSPRC CL III
18 LF @ -0.50%
UP: 664.14
DN: 664.05
AEW #30.8
19"X30" RC-HE
AEW #30.8-MH #30.3
19"X30" SSPRC HE-III
114 LF @ -0.22%
UP: 663.75
DN: 663.50
MH #30.3
6-FT DIAMETER-J
RIM: 667.83
INV: 663.50
STR. DEPTH = 4.33
MH #30.3-AEW #30.2
24" SSPRC CL III
153 LF @ -0.10%
UP: 663.50
DN: 663.35

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	STORM SEWER	SHEET 20	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_022500_SS.DWG PLOT DATE : 4/15/2015 10:51 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_022500_ss.dwg, E2103_022502_ss

WISDOT/CADDS SHEET 44



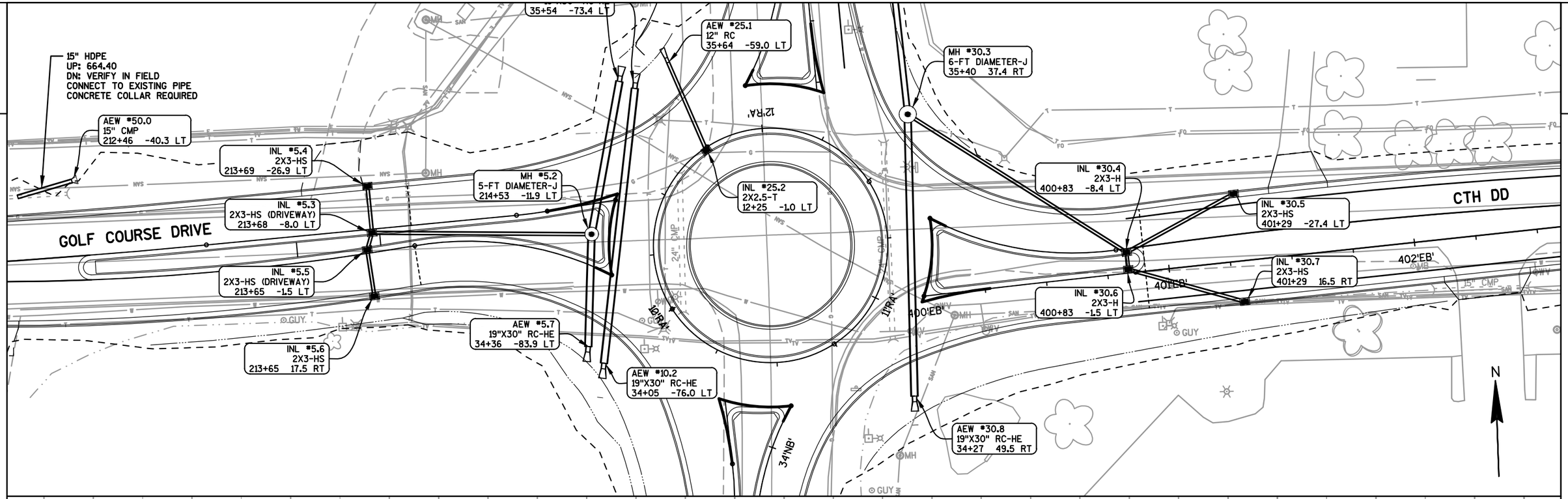
AEW #5.7
19"X30" RC-HE
34+36 -83.9 LT
MH #5.2
5-FT DIAMETER-J
214+53 -11.9 LT
AEW #5.1
19"X30" RC-HE
35+58 -79.4 LT
AEW #10.1
19"X30" RC-HE
35+54 -73.4 LT
AEW #10.2
19"X30" RC-HE
34+05 -76.0 LT
AEW #35.1
12" RC
36+47 -39.5 LT
AEW #40.1
12" RC
37+52 -45.3 LT
AEW #25.1
12" RC
35+64 -59.0 LT
INL #15.3
2X3-HS
32+53 -7.2 LT
INL #25.2
2X2.5-T
12+25 -1.0 LT
INL #40.2
2X3-HS
37+54 -13.8 LT
INL #45.2
2X3-HS (DRIVEWAY)
38+50 -1.5 LT
INL #35.2
2X3-HS
36+47 -26.6 LT
INL #15.2
2X3-HS
32+50 -1.5 LT
INL #20.2
2X3-HS
33+55 16.5 RT
AEW #20.1
12" RC
33+55 35.0 RT
AEW #15.1
12" RC
32+50 30.0 RT
AEW #30.8
19"X30" RC-HE
34+27 49.5 RT
MH #30.3
6-FT DIAMETER-J
35+40 37.4 RT
AEW #30.2
24" RC
36+86 33.3 RT
AEW #45.1
12" RC
38+50 25.0 RT
33'NB'
34'NB'
12'RA'
38'NB'
37'NB'
36'NB'
11'RA'
24" CMP
18" CMP
N
672
668
664
660
656
652
INL #35.2
2X3-HS
RIM: 666.84
INV: 664.17
STR. DEPTH = 2.67
AEW #35.1
12" RC
INL #35.2-AEW #35.1
12" SSPRC CL III
13 LF @ -0.54%
UP: 664.17
DN: 664.10
AEW #40.1
12" RC
INL #40.2
2X3-HS
RIM: 666.77
INV: 663.40
STR. DEPTH = 3.37
INL #40.2-AEW #40.1
12" SSPRC CL III
32 LF @ -0.32%
UP: 663.40
DN: 663.30
INL #45.2
2X3-HS (DRIVEWAY)
RIM: 666.48
INV: 663.33
STR. DEPTH = 3.15
AEW #45.1
12" RC
INL #45.2-AEW #45.1
12" SSPRC CL III
26 LF @ -0.50%
UP: 663.33
DN: 663.20

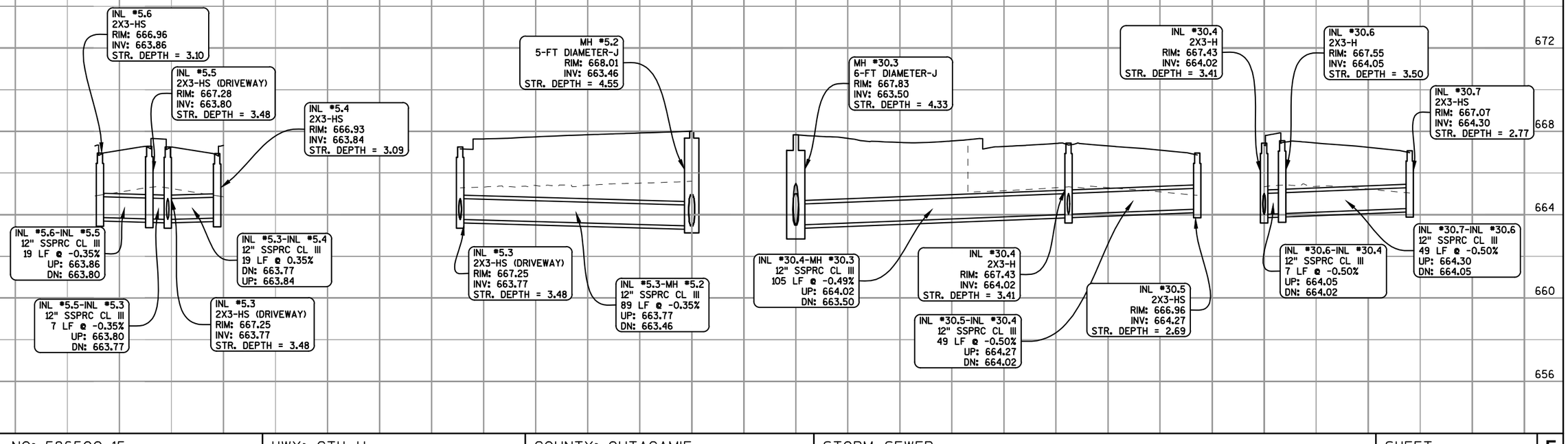
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	STORM SEWER	SHEET 21	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_022500_SS.DWG PLOT DATE : 4/15/2015 10:51 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 44

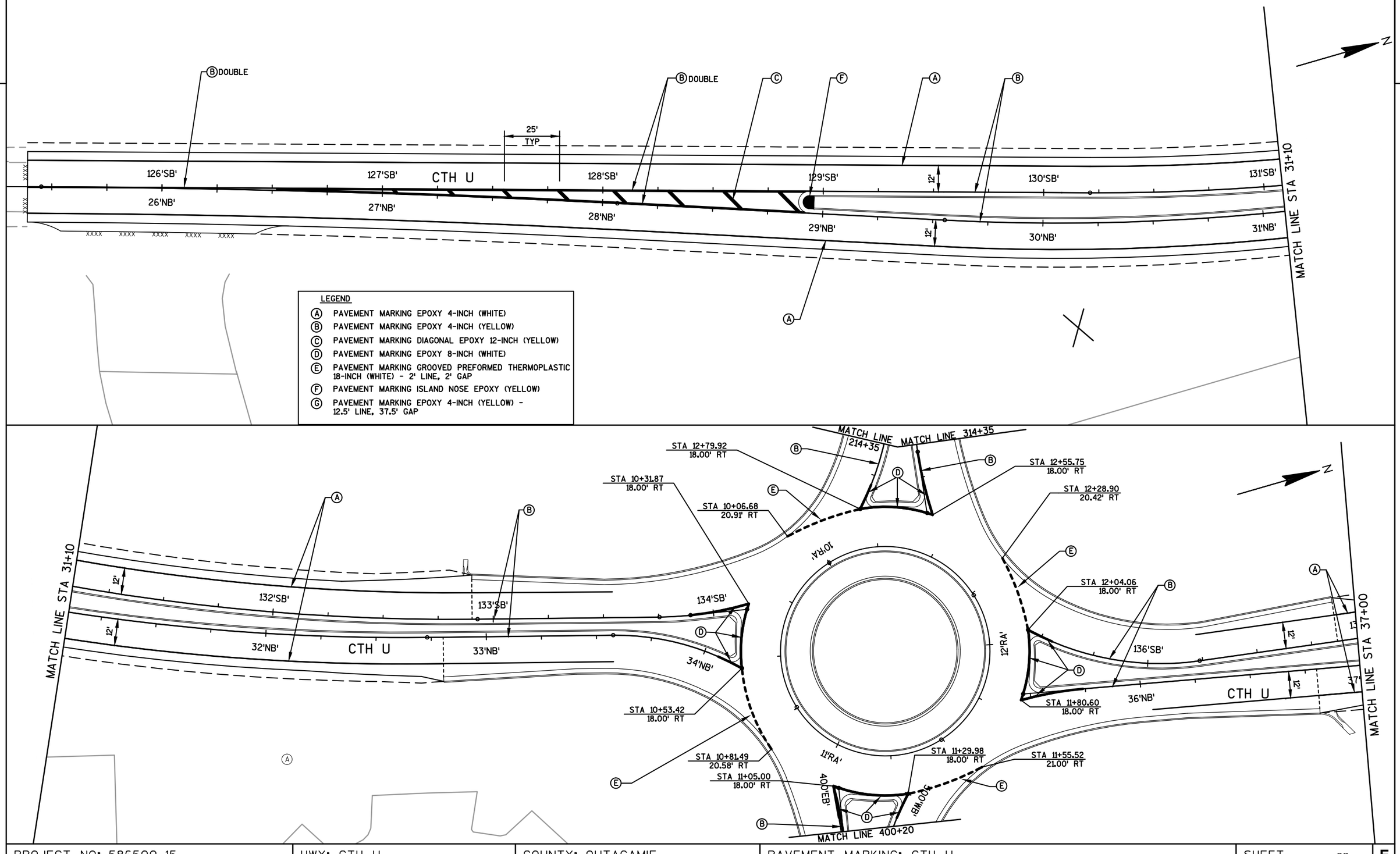
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_022500_ss.dwg, E2103_022503_ss



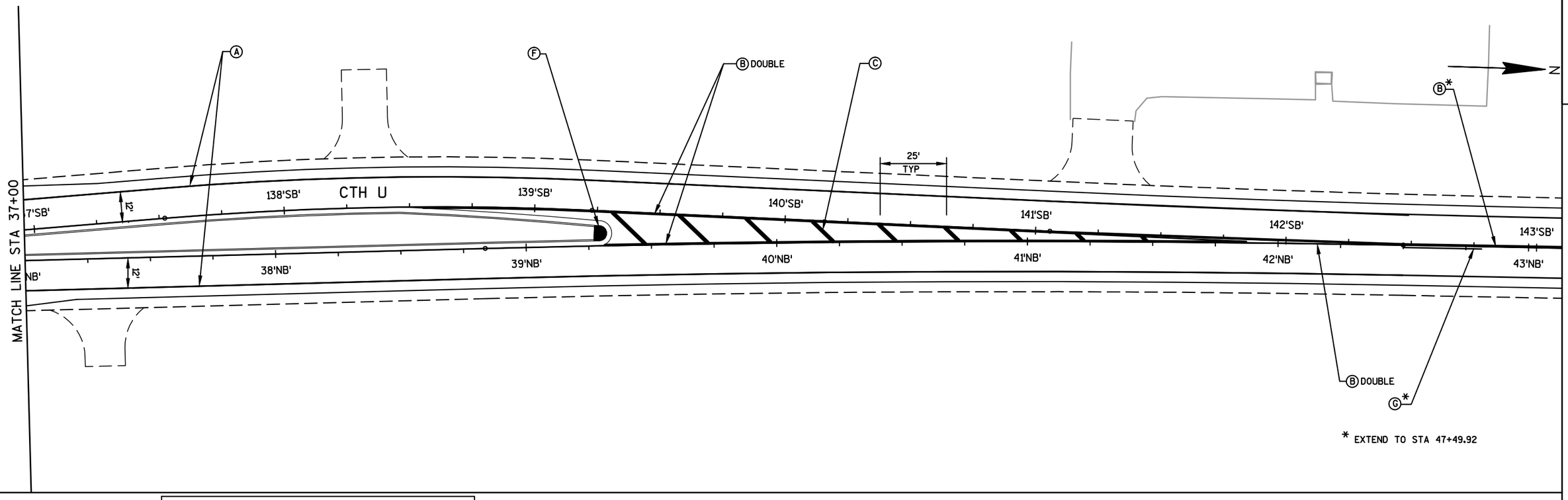


PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	STORM SEWER	SHEET 22	E

2



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PAVEMENT MARKING: CTH U	SHEET 23	E

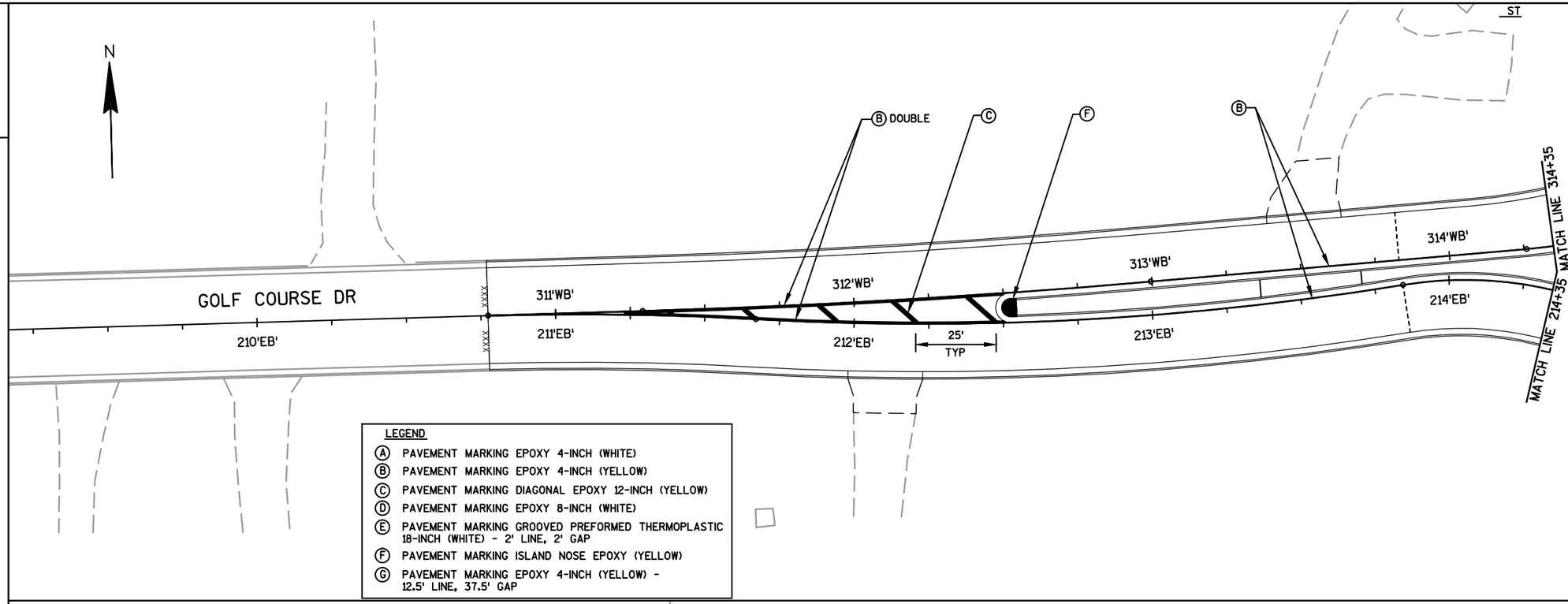


* EXTEND TO STA 47+49.92

LEGEND

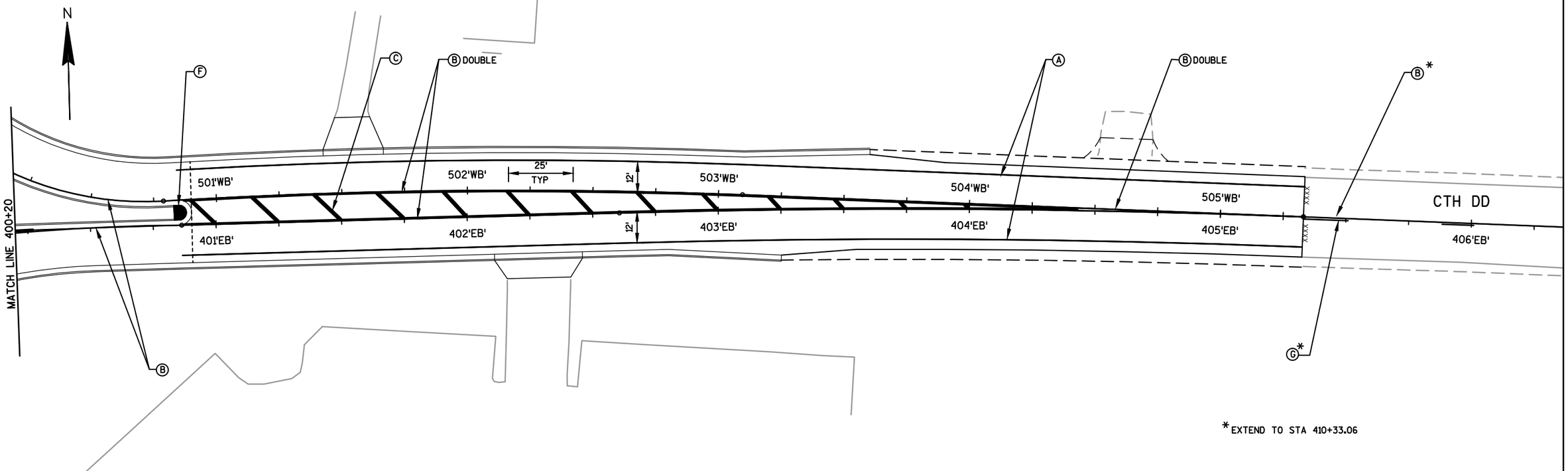
- (A) PAVEMENT MARKING EPOXY 4-INCH (WHITE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (C) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (D) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (E) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 18-INCH (WHITE) - 2' LINE, 2' GAP
- (F) PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
- (G) PAVEMENT MARKING EPOXY 4-INCH (YELLOW) - 12.5' LINE, 37.5' GAP

2



LEGEND

- (A) PAVEMENT MARKING EPOXY 4-INCH (WHITE)
- (B) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (C) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- (D) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (E) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 18-INCH (WHITE) - 2' LINE, 2' GAP
- (F) PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
- (G) PAVEMENT MARKING EPOXY 4-INCH (YELLOW) - 12.5' LINE, 37.5' GAP



*EXTEND TO STA 410+33.06

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PAVEMENT MARKING: GOLF COURSE DRIVE / CTH DD	SHEET 25	E

PI 'SB' STA = 125+45.18
Y = 585646.005
X = 883597.167

PI 'SB' STA = 131+57.78
Y = 586233.484
X = 883770.780
DELTA = 015°34'35.7"
D = 005°43'46.5"
T = 136.77'
L = 271.86'
R = 1000.00'
PC 'SB' STA = 130+21.00
Y = 586102.317
X = 883732.017
PT 'SB' STA = 132+92.86
Y = 586370.243
X = 883772.897
BK = N16° 27' 48.8"E
AH = N00° 53' 13.1"E
SE = 4.0%

PI 'SB' STA = 133+82.48
Y = 586459.845
X = 883774.284
DELTA = 038°11'49.9"
D = 005°22'55.1"
T = 7.05'
L = 14.09'
R = 150.00'
PC 'SB' STA = 133+75.43
Y = 586452.796
X = 883774.175
PT 'SB' STA = 133+89.52
Y = 586466.874
X = 883773.732
BK = N00° 53' 13.1"E
AH = N04° 29' 41.9"W
SE = NC

PI 'SB' STA = 134+15.32
Y = 586492.596
X = 883771.709

CTH U SB RL SUPERELEVATION TRANSITIONS

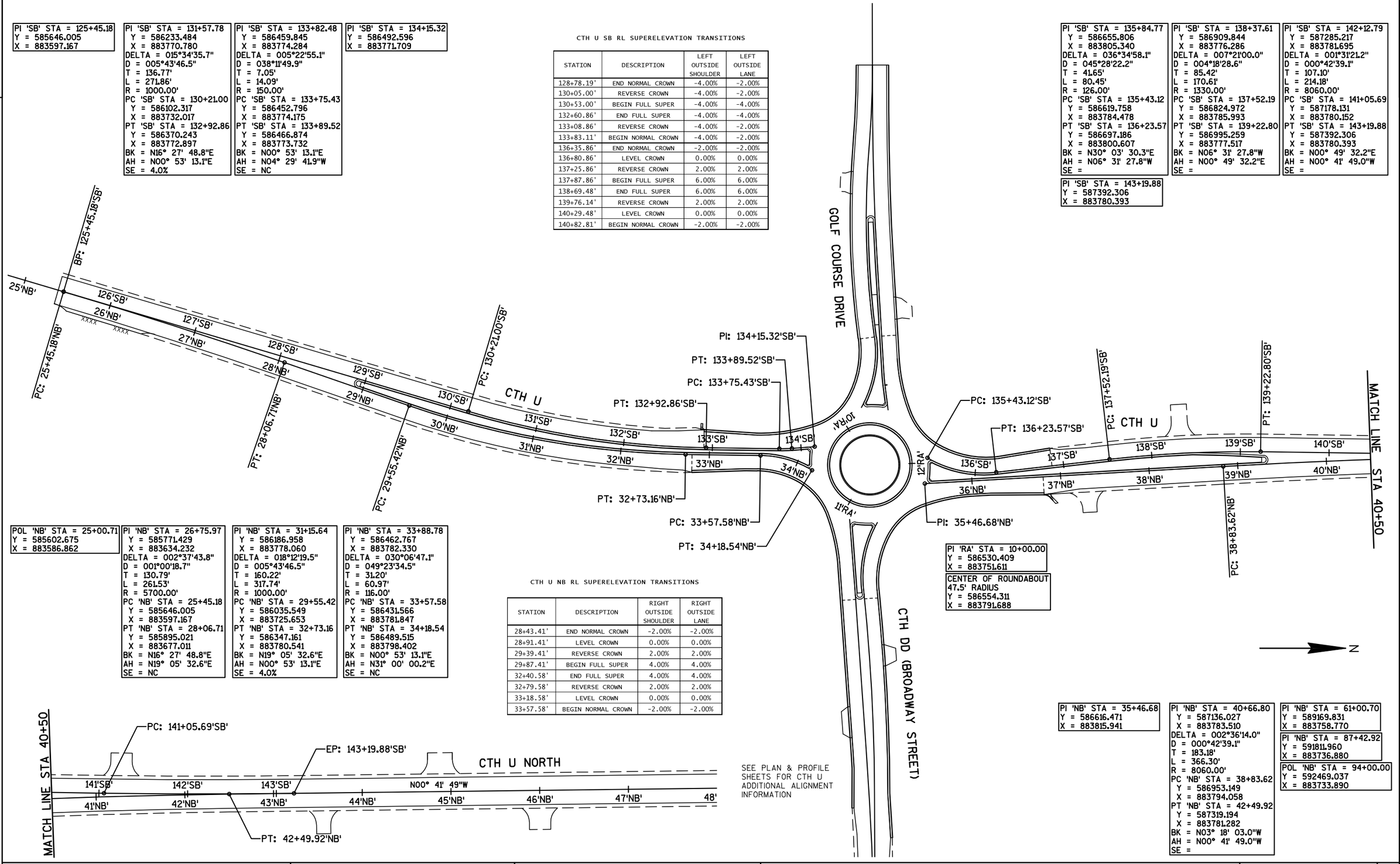
STATION	DESCRIPTION	LEFT OUTSIDE SHOULDER	LEFT OUTSIDE LANE
128+78.19'	END NORMAL CROWN	-4.00%	-2.00%
130+05.00'	REVERSE CROWN	-4.00%	-2.00%
130+53.00'	BEGIN FULL SUPER	-4.00%	-4.00%
132+60.86'	END FULL SUPER	-4.00%	-4.00%
133+08.86'	REVERSE CROWN	-4.00%	-2.00%
133+83.11'	BEGIN NORMAL CROWN	-4.00%	-2.00%
136+35.86'	END NORMAL CROWN	-2.00%	-2.00%
136+80.86'	LEVEL CROWN	0.00%	0.00%
137+25.86'	REVERSE CROWN	2.00%	2.00%
137+87.86'	BEGIN FULL SUPER	6.00%	6.00%
138+69.48'	END FULL SUPER	6.00%	6.00%
139+76.14'	REVERSE CROWN	2.00%	2.00%
140+29.48'	LEVEL CROWN	0.00%	0.00%
140+82.81'	BEGIN NORMAL CROWN	-2.00%	-2.00%

PI 'SB' STA = 135+84.77
Y = 586655.806
X = 883805.340
DELTA = 036°34'58.1"
D = 045°28'22.2"
T = 41.65'
L = 80.45'
R = 126.00'
PC 'SB' STA = 135+43.12
Y = 586619.758
X = 883784.478
PT 'SB' STA = 136+23.57
Y = 586697.186
X = 883800.607
BK = N30° 03' 30.3"E
AH = N06° 31' 27.8"W
SE =

PI 'SB' STA = 143+19.88
Y = 587392.306
X = 883780.393

PI 'SB' STA = 138+37.61
Y = 586909.844
X = 883776.286
DELTA = 007°21'00.0"
D = 004°18'28.6"
T = 85.42'
L = 170.61'
R = 1330.00'
PC 'SB' STA = 137+52.19
Y = 586824.972
X = 883785.993
PT 'SB' STA = 139+22.80
Y = 586995.259
X = 883777.517
BK = N06° 31' 27.8"W
AH = N00° 49' 32.2"E
SE =

PI 'SB' STA = 142+12.79
Y = 587285.217
X = 883781.695
DELTA = 001°31'21.2"
D = 000°42'39.1"
T = 107.10'
L = 214.18'
R = 8060.00'
PC 'SB' STA = 141+05.69
Y = 587178.131
X = 883780.152
PT 'SB' STA = 143+19.88
Y = 587392.306
X = 883780.393
BK = N00° 49' 32.2"E
AH = N00° 41' 49.0"W
SE =



POL 'NB' STA = 25+00.71
Y = 585602.675
X = 883586.862

PI 'NB' STA = 26+75.97
Y = 585771.429
X = 883634.232
DELTA = 002°37'43.8"
D = 001°00'18.7"
T = 130.79'
L = 261.53'
R = 5700.00'
PC 'NB' STA = 25+45.18
Y = 585646.005
X = 883597.167
PT 'NB' STA = 28+06.71
Y = 585895.021
X = 883677.011
BK = N16° 27' 48.8"E
AH = N19° 05' 32.6"E
SE = NC

PI 'NB' STA = 31+15.64
Y = 586186.958
X = 883778.060
DELTA = 018°12'19.5"
D = 005°43'46.5"
T = 160.22'
L = 317.74'
R = 1000.00'
PC 'NB' STA = 29+55.42
Y = 586035.549
X = 883725.653
PT 'NB' STA = 32+73.16
Y = 586347.161
X = 883780.541
BK = N19° 05' 32.6"E
AH = N00° 53' 13.1"E
SE = 4.0%

PI 'NB' STA = 33+88.78
Y = 586462.767
X = 883782.330
DELTA = 030°06'47.1"
D = 049°23'34.5"
T = 31.20'
L = 60.97'
R = 116.00'
PC 'NB' STA = 33+57.58
Y = 586431.566
X = 883781.847
PT 'NB' STA = 34+18.54
Y = 586489.515
X = 883798.402
BK = N00° 53' 13.1"E
AH = N31° 00' 00.2"E
SE = NC

CTH U NB RL SUPERELEVATION TRANSITIONS

STATION	DESCRIPTION	RIGHT OUTSIDE SHOULDER	RIGHT OUTSIDE LANE
28+43.41'	END NORMAL CROWN	-2.00%	-2.00%
28+91.41'	LEVEL CROWN	0.00%	0.00%
29+39.41'	REVERSE CROWN	2.00%	2.00%
29+87.41'	BEGIN FULL SUPER	4.00%	4.00%
32+40.58'	END FULL SUPER	4.00%	4.00%
32+79.58'	REVERSE CROWN	2.00%	2.00%
33+18.58'	LEVEL CROWN	0.00%	0.00%
33+57.58'	BEGIN NORMAL CROWN	-2.00%	-2.00%

SEE PLAN & PROFILE SHEETS FOR CTH U ADDITIONAL ALIGNMENT INFORMATION

PI 'RA' STA = 10+00.00
Y = 586530.409
X = 883751.611
CENTER OF ROUNDABOUT
47.5' RADIUS
Y = 586554.311
X = 883791.688

PI 'NB' STA = 35+46.68
Y = 586616.471
X = 883815.941

PI 'NB' STA = 40+66.80
Y = 587136.027
X = 883783.510
DELTA = 002°36'14.0"
D = 000°42'39.1"
T = 183.18'
L = 366.30'
R = 8060.00'
PC 'NB' STA = 38+83.62
Y = 586953.149
X = 883794.058
PT 'NB' STA = 42+49.92
Y = 587319.194
X = 883781.282
BK = N03° 18' 03.0"W
AH = N00° 41' 49.0"W
SE =

PI 'NB' STA = 61+00.70
Y = 589169.831
X = 883758.770

PI 'NB' STA = 87+42.92
Y = 591811.960
X = 883736.880

POL 'NB' STA = 94+00.00
Y = 592469.037
X = 883733.890

PI 'WB' STA = 310+77.35
Y = 586557.823
X = 883341.702

PI 'WB' STA = 312+14.37
Y = 586558.162
X = 883478.724
DELTA = 003°15'15.6"
D = 001°54'35.5"
T = 85.22'
L = 170.40'
R = 3000.00'
PC 'WB' STA = 311+29.15
Y = 586557.951
X = 883393.503
PT 'WB' STA = 312+99.55
Y = 586563.210
X = 883563.795
BK = N89° 51' 30.0"E
AH = N86° 36' 14.3"E
SE =

PI 'WB' STA = 314+32.16
Y = 586571.066
X = 883696.173
DELTA = 003°54'12.1"
D = 030°58'14.5"
T = 6.30'
L = 12.60'
R = 185.00'
PC 'WB' STA = 314+25.85
Y = 586570.692
X = 883689.880
PT 'WB' STA = 314+38.46
Y = 586571.867
X = 883702.426
BK = N86° 36' 14.3"E
AH = N82° 42' 02.3"E
SE =

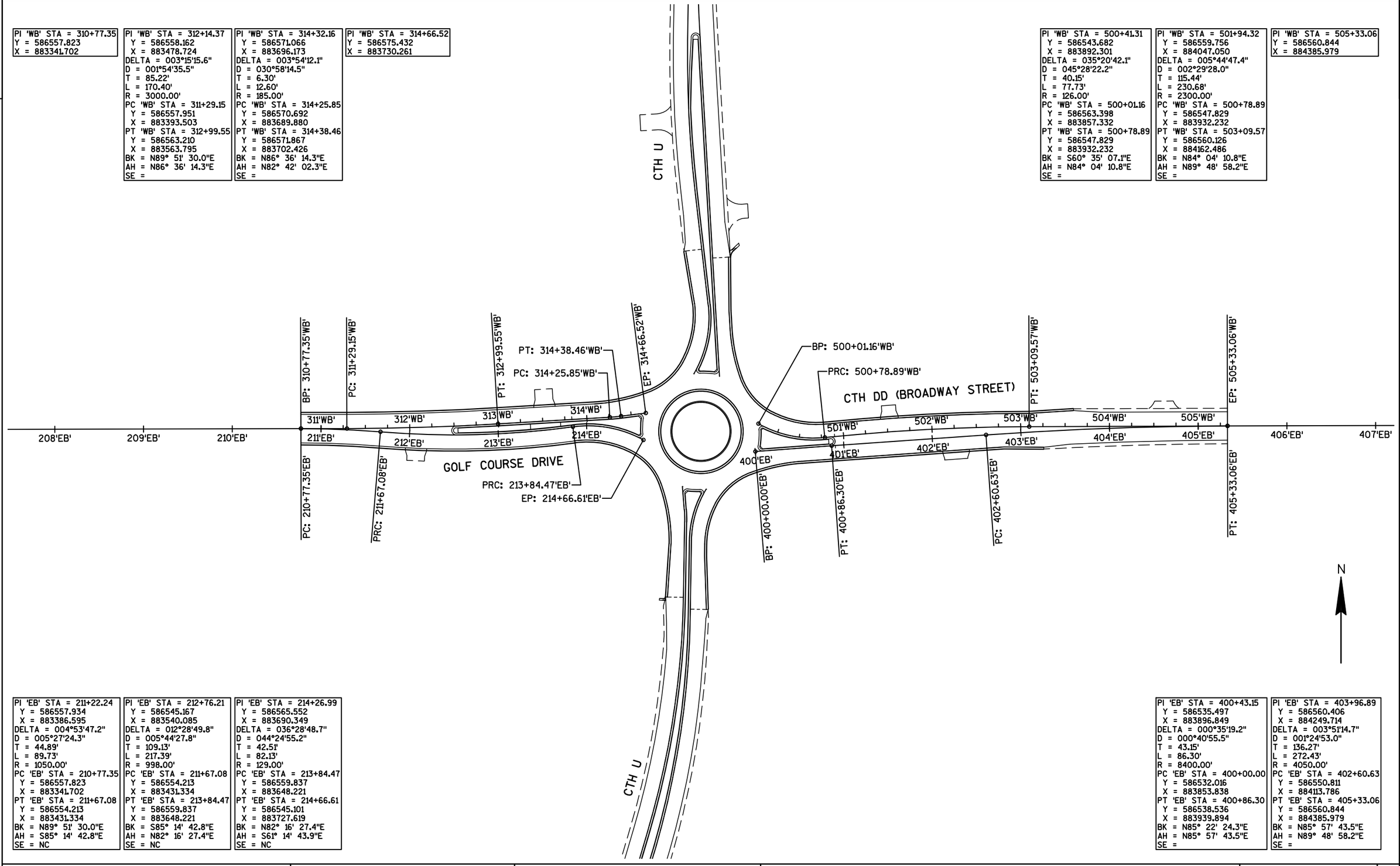
PI 'WB' STA = 314+66.52
Y = 586575.432
X = 883730.261

PI 'WB' STA = 500+41.31
Y = 586543.682
X = 883892.301
DELTA = 035°20'42.1"
D = 045°28'22.2"
T = 40.15'
L = 77.73'
R = 126.00'
PC 'WB' STA = 500+01.16
Y = 586563.398
X = 883857.332
PT 'WB' STA = 500+78.89
Y = 586547.829
X = 883932.232
BK = S60° 35' 07.1"E
AH = N84° 04' 10.8"E
SE =

PI 'WB' STA = 501+94.32
Y = 586559.756
X = 884047.050
DELTA = 005°44'47.4"
D = 002°29'28.0"
T = 115.44'
L = 230.68'
R = 2300.00'
PC 'WB' STA = 500+78.89
Y = 586547.829
X = 883932.232
PT 'WB' STA = 503+09.57
Y = 586560.126
X = 884162.486
BK = N84° 04' 10.8"E
AH = N89° 48' 58.2"E
SE =

PI 'WB' STA = 505+33.06
Y = 586560.844
X = 884385.979

2



PI 'EB' STA = 211+22.24
Y = 586557.934
X = 883386.595
DELTA = 004°53'47.2"
D = 005°27'24.3"
T = 44.89'
L = 89.73'
R = 1050.00'
PC 'EB' STA = 210+77.35
Y = 586557.823
X = 883341.702
PT 'EB' STA = 211+67.08
Y = 586554.213
X = 883431.334
BK = N89° 51' 30.0"E
AH = S85° 14' 42.8"E
SE = NC

PI 'EB' STA = 212+76.21
Y = 586545.167
X = 883540.085
DELTA = 012°28'49.8"
D = 005°44'27.8"
T = 109.13'
L = 217.39'
R = 998.00'
PC 'EB' STA = 211+67.08
Y = 586554.213
X = 883431.334
PT 'EB' STA = 213+84.47
Y = 586559.837
X = 883648.221
BK = S85° 14' 42.8"E
AH = N82° 16' 27.4"E
SE = NC

PI 'EB' STA = 214+26.99
Y = 586565.552
X = 883690.349
DELTA = 036°28'48.7"
D = 044°24'55.2"
T = 42.51'
L = 82.13'
R = 129.00'
PC 'EB' STA = 213+84.47
Y = 586559.837
X = 883648.221
PT 'EB' STA = 214+66.61
Y = 586545.101
X = 883727.619
BK = N82° 16' 27.4"E
AH = S61° 14' 43.9"E
SE = NC

PI 'EB' STA = 400+43.15
Y = 586535.497
X = 883896.849
DELTA = 000°35'19.2"
D = 000°40'55.5"
T = 43.15'
L = 86.30'
R = 8400.00'
PC 'EB' STA = 400+00.00
Y = 586532.016
X = 883853.838
PT 'EB' STA = 400+86.30
Y = 586538.536
X = 883939.894
BK = N85° 22' 24.3"E
AH = N85° 57' 43.5"E
SE =

PI 'EB' STA = 403+96.89
Y = 586560.406
X = 884249.714
DELTA = 003°51'14.7"
D = 001°24'53.0"
T = 136.27'
L = 272.43'
R = 4050.00'
PC 'EB' STA = 402+60.63
Y = 586550.811
X = 884113.786
PT 'EB' STA = 405+33.06
Y = 586560.844
X = 884385.979
BK = N85° 57' 43.5"E
AH = N89° 48' 58.2"E
SE =

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	ALIGNMENT DETAILS - GOLF COURSE DRIVE / CTH DD	SHEET 27	E

2

PI 'NW' STA = 10+31.81
Y = 586587.584
X = 883704.441
DELTA = 018°04'26.4"
D = 028°38'52.4"
T = 31.81'
L = 63.09'
R = 200.00'
PC 'NW' STA = 10+00.00
Y = 586585.700
X = 883672.688
PT 'NW' STA = 10+63.09
Y = 586599.227
X = 883734.043
BK = N86° 36' 14.3"E
AH = N68° 31' 48.0"E

PI 'NW' STA = 10+89.85
Y = 586609.021
X = 883758.946
DELTA = 039°16'19.3"
D = 076°23'39.7"
T = 26.76'
L = 51.41'
R = 75.00'
PC 'NW' STA = 10+63.09
Y = 586599.227
X = 883734.043
PT 'NW' STA = 11+14.50
Y = 586632.367
X = 883772.024
BK = N68° 31' 48.0"E
AH = N29° 15' 28.7"E

PI 'NW' STA = 11+50.04
Y = 586663.371
X = 883789.393
DELTA = 035°48'30.6"
D = 052°05'13.5"
T = 35.54'
L = 68.75'
R = 110.00'
PC 'NW' STA = 11+14.50
Y = 586632.367
X = 883772.024
PT 'NW' STA = 11+83.24
Y = 586698.678
X = 883785.339
BK = N29° 15' 28.7"E
AH = N06° 33' 01.9"W

PI 'NW' STA = 12+43.37
Y = 586757.997
X = 883775.533

PI 'NE' STA = 10+00.00
Y = 586578.291
X = 884212.547

PI 'NE' STA = 11+64.82
Y = 586574.762
X = 884047.829
DELTA = 005°40'17.2"
D = 002°28'29.9"
T = 114.67'
L = 229.15'
R = 2315.00'
PC 'NE' STA = 10+50.15
Y = 586575.127
X = 884162.497
PT 'NE' STA = 12+79.30
Y = 586563.066
X = 883933.758
BK = S89° 49' 03.5"W
AH = S84° 08' 46.3"W

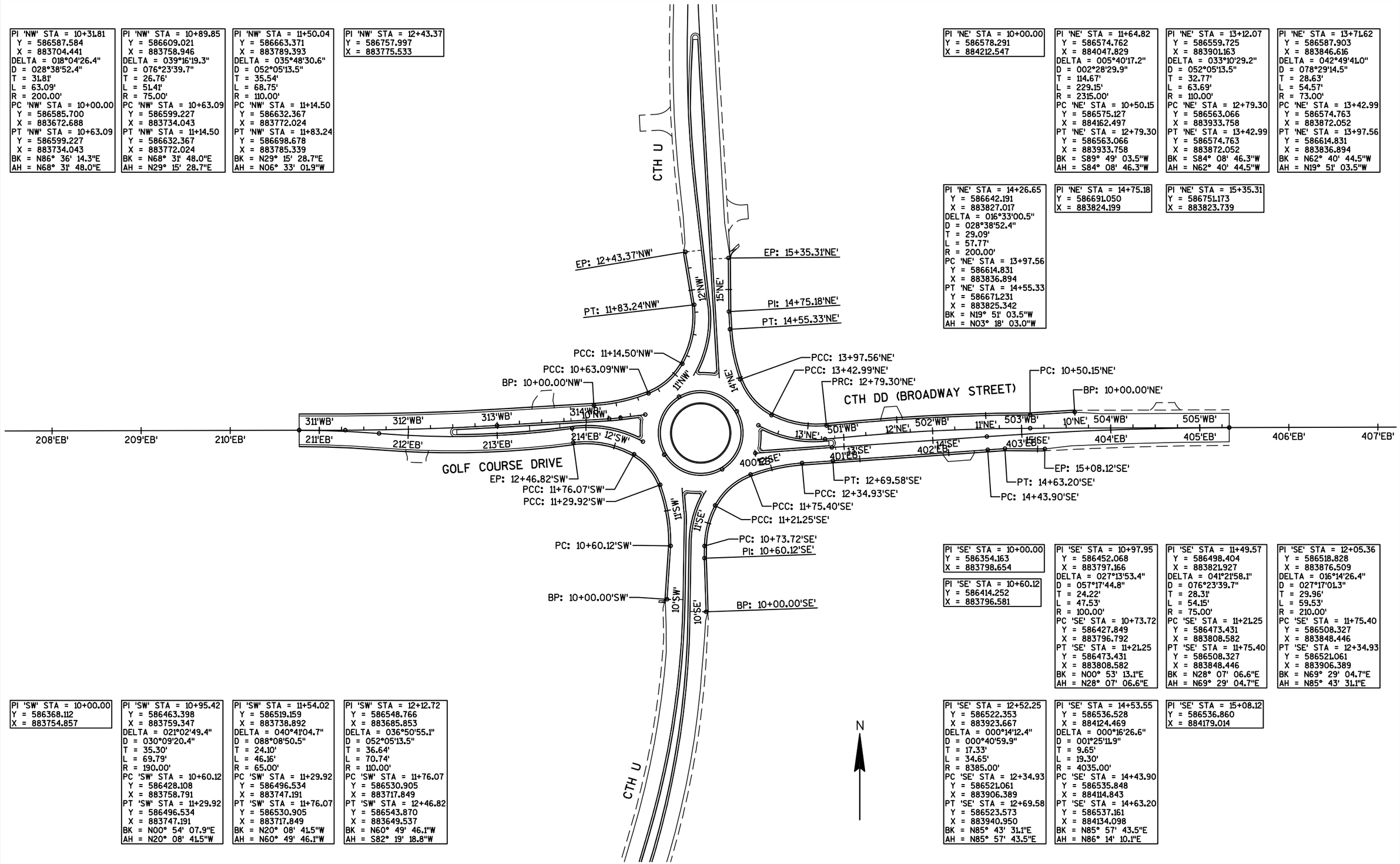
PI 'NE' STA = 12+12.07
Y = 586559.725
X = 883901.163
DELTA = 033°10'29.2"
D = 052°05'13.5"
T = 32.77'
L = 63.69'
R = 110.00'
PC 'NE' STA = 12+79.30
Y = 586563.066
X = 883933.758
PT 'NE' STA = 13+42.99
Y = 586574.763
X = 883872.052
BK = S84° 08' 46.3"W
AH = N62° 40' 44.5"W

PI 'NE' STA = 13+71.62
Y = 586587.903
X = 883846.616
DELTA = 042°49'41.0"
D = 078°29'14.5"
T = 28.63'
L = 54.57'
R = 73.00'
PC 'NE' STA = 13+42.99
Y = 586574.763
X = 883872.052
PT 'NE' STA = 13+97.56
Y = 586614.831
X = 883836.894
BK = N62° 40' 44.5"W
AH = N19° 51' 03.5"W

PI 'NE' STA = 14+26.65
Y = 586642.191
X = 883827.017
DELTA = 016°33'00.5"
D = 028°38'52.4"
T = 29.09'
L = 57.77'
R = 200.00'
PC 'NE' STA = 13+97.56
Y = 586614.831
X = 883836.894
PT 'NE' STA = 14+55.33
Y = 586671.231
X = 883825.342
BK = N19° 51' 03.5"W
AH = N03° 18' 03.0"W

PI 'NE' STA = 14+75.18
Y = 586691.050
X = 883824.199

PI 'NE' STA = 15+35.31
Y = 586751.173
X = 883823.739



PI 'SE' STA = 10+00.00
Y = 586354.163
X = 883798.654

PI 'SE' STA = 10+60.12
Y = 586414.252
X = 883796.581

PI 'SE' STA = 10+97.95
Y = 586452.068
X = 883797.166
DELTA = 027°13'53.4"
D = 057°17'44.8"
T = 24.22'
L = 47.53'
R = 100.00'
PC 'SE' STA = 10+73.72
Y = 586427.849
X = 883796.792
PT 'SE' STA = 11+21.25
Y = 586473.431
X = 883808.582
BK = N00° 53' 13.1"E
AH = N28° 07' 06.6"E

PI 'SE' STA = 11+49.57
Y = 586498.404
X = 883821.927
DELTA = 041°21'58.1"
D = 076°23'39.7"
T = 28.31'
L = 54.15'
R = 75.00'
PC 'SE' STA = 11+21.25
Y = 586473.431
X = 883808.582
PT 'SE' STA = 11+75.40
Y = 586508.327
X = 883848.446
BK = N28° 07' 06.6"E
AH = N69° 29' 04.7"E

PI 'SE' STA = 12+05.36
Y = 586518.828
X = 883876.509
DELTA = 016°14'26.4"
D = 027°17'01.3"
T = 29.96'
L = 59.53'
R = 210.00'
PC 'SE' STA = 11+75.40
Y = 586508.327
X = 883848.446
PT 'SE' STA = 12+34.93
Y = 586521.061
X = 883906.389
BK = N69° 29' 04.7"E
AH = N85° 43' 31.1"E

PI 'SW' STA = 10+00.00
Y = 586368.112
X = 883754.857

PI 'SW' STA = 10+95.42
Y = 586463.398
X = 883759.347
DELTA = 021°02'49.4"
D = 030°09'20.4"
T = 35.30'
L = 69.79'
R = 190.00'
PC 'SW' STA = 10+60.12
Y = 586428.108
X = 883758.791
PT 'SW' STA = 11+29.92
Y = 586496.534
X = 883747.191
BK = N00° 54' 07.9"E
AH = N20° 08' 41.5"W

PI 'SW' STA = 11+54.02
Y = 586519.159
X = 883738.892
DELTA = 040°41'04.7"
D = 088°08'50.5"
T = 24.10'
L = 46.16'
R = 65.00'
PC 'SW' STA = 11+29.92
Y = 586496.534
X = 883747.191
PT 'SW' STA = 11+76.07
Y = 586530.905
X = 883717.849
BK = N20° 08' 41.5"W
AH = N60° 49' 46.1"W

PI 'SW' STA = 12+12.72
Y = 586548.766
X = 883685.853
DELTA = 036°50'55.1"
D = 052°05'13.5"
T = 36.64'
L = 70.74'
R = 110.00'
PC 'SW' STA = 11+76.07
Y = 586530.905
X = 883717.849
PT 'SW' STA = 12+46.82
Y = 586543.870
X = 883649.537
BK = N60° 49' 46.1"W
AH = S82° 19' 18.8"W

PI 'SE' STA = 12+52.25
Y = 586522.353
X = 883923.667
DELTA = 000°14'12.4"
D = 000°40'59.9"
T = 17.33'
L = 34.65'
R = 8385.00'
PC 'SE' STA = 12+34.93
Y = 586521.061
X = 883906.389
PT 'SE' STA = 12+69.58
Y = 586523.573
X = 883940.950
BK = N85° 43' 31.1"E
AH = N85° 57' 43.5"E

PI 'SE' STA = 14+53.55
Y = 586536.528
X = 884124.469
DELTA = 000°16'26.6"
D = 001°25'11.9"
T = 9.65'
L = 19.30'
R = 4035.00'
PC 'SE' STA = 14+43.90
Y = 586535.848
X = 884114.843
PT 'SE' STA = 14+63.20
Y = 586537.161
X = 884134.098
BK = N85° 57' 43.5"E
AH = N86° 14' 10.1"E

PI 'SE' STA = 15+08.12
Y = 586536.860
X = 884179.014

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	ALIGNMENT DETAILS - QUADRANT CURB & GUTTER	SHEET 28	E

CLEARING AND GRUBBING

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0120 CLEARING ID	201.0205 GRUBBING STA	201.0220 GRUBBING ID
CATEGORY 0010							
30+15	-		RT	---	8	---	8
48+00	-	49+00	LT	1	---	1	---
			PROJECT TOTAL	1	8	1	8

TRUCK APRON

LOCATION	405.0100 CONCRETE COLORING RED CY	416.0512 CONCRETE ROUNDABOUT TRUCK APRON 12-INCH SY
CATEGORY 0010		
CTH U	101	304
PROJECT TOTAL	101	304

REMOVING CURB & GUTTER

STATION	TO	STATION	DIRECTION	LOCATION	204.0150 REMOVING CURB & GUTTER LF
210+77	-	214+40	LT	GOLF COURSE RD	370
210+77	-	214+55	RT	GOLF COURSE RD	370
35+45	-	402+92	RT/LT	CTH U/CTH DD NE QUAD	350
34+15	-	400+20	RT/RT	CTH U/CTH DD SE QUAD	92
				PROJECT TOTAL	1,182

BASE AGGREGATE DENSE AND WATER

STATION	TO	STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	311.0110 BREAKER RUN TON	624.0100 WATER MGAL	REMARKS
CATEGORY 0010								
25+39	-	34+11	CTH U	290	1,850	3,750	35	INCLUDES DWYS
10+00	-	12+98	R-A-B	0	1,500	2,550	24	
35+55	-	93+25	CTH U	2,480	12,050	24,400	234	INCLUDES DWYS
210+77	-	214+59	GOLF COURSE RD	10	550	1,150	10	INCLUDES DWYS
400+08	-	405+33	CTH DD	70	900	1,800	17	INCLUDES DWYS
---	-	---	MEDIAN SIDEWALK	0	150	0	1	
---	-	---	UNDISTRIBUTED	0	1,000	2,000	78	DUST CONTROL
93+25	-	104+68	CTH U OVERLAY	775	0	0	5	
			PROJECT TOTALS	3,625	18,000	35,650	404	

REMOVING SMALL CULVERT PIPES

STATION	LOCATION	DIRECTION	203.0100 EA	REMARKS
CATEGORY 0010				
35+00	CTH U	RT	1	CTH DD CROSSDRAIN
35+00	CTH U	LT	1	GOLF COURSE RD CROSSDRAIN
37+25	CTH U	RT	1	
38+35	CTH U	LT	1	
41+25	CTH U	LT	1	
43+50	CTH U	RT	1	
44+85	CTH U	LT	1	
46+00	CTH U	RT	1	
48+70	CTH U	LT	1	
50+00	CTH U	RT	1	
50+50	CTH U	LT/RT	1	
51+85	CTH U	LT	1	
54+75	CTH U	RT	1	
57+00	CTH U	RT	1	
61+35	CTH U	LT	1	
61+35	CTH U	RT	1	
65+40	CTH U	LT/RT	1	
65+85	CTH U	LT	1	
66+60	CTH U	LT	1	
68+50	CTH U	LT	1	
74+25	CTH U	LT/RT	1	
74+50	CTH U	RT	1	
80+70	CTH U	RT	1	
81+00	CTH U	LT/RT	1	
83+00	CTH U	LT/RT	1	
83+75	CTH U	RT	1	
84+85	CTH U	LT	1	
87+75	CTH U	RT	1	
402+25	CTH DD	RT	1	
		PROJECT TOTAL	29	

NOTE:
ITEMS ASSOCIATED WITH PAVING, SHOULDERS, AND OVERLAY FALL UNDER PROJECT 595600-15

ASPHALTIC ITEMS

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	455.0105 ASPHALTIC MATERIAL PG58-28 TON	455.0120 ASPHALTIC MATERIAL PG64-28 TON	460.1103 HMA PAVEMENT TYPE E-3 TON	460.1110 HMA PAVEMENT TYPE E-10 TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON	465.0315 ASPHALTIC FLUME SY	COMMENTS
CATEGORY 0010											
25+39	-	32+80	CTH U	200	50	---	950	---	10	---	
32+80	-	36+80	R-A-B	170	30	20	550	350	---	8	
36+80	-	93+25	CTH U	1,430	400	---	7,000	---	30	---	
210+77	-	214+59	GOLF COURSE RD	80	20	---	400	---	---	---	
400+08	-	405+33	CTH DD	130	40	---	650	---	10	---	
93+25	-	104+68	CTH U OVERLAY	280	50		950				INCL AVG 2" WEDGING LAYER
			PROJECT TOTALS	2,290	590	20	10,500	350	50	8	

CULVERT PIPES

STA	LOCATION		COATING	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	521.0130 CULVERT PIPE CORRUGATED STEEL 30-INCH LF	521.0142 CULVERT PIPE CORRUGATED STEEL 42-INCH LF	521.0728 PIPE ARCH CORRUGATED STEEL 28 X 20 INCH LF	521.0735 PIPE ARCH CORRUGATED STEEL 35 X 24 INCH LF	521.0742 PIPE ARCH CORRUGATED STEEL 42 X 29 INCH LF	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	521.1030 APRON ENDWALLS FOR CULVERT PIPE STEEL 30-INCH EACH	521.1228 APRON ENDWALLS FOR PIPE ARCH STEEL 28 X 20 INCH EACH	521.0342 APRON ENDWALLS FOR CULVERT PIPE SLOPED CROSS DRAINS STEEL 42-INCH 4 TO 1 EACH	521.0542 APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS STEEL 42 X 29 INCH 4 TO 1 EACH	521.1735 APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS STEEL 35 X 24 INCH 6 TO 1 EACH	521.1742 APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS STEEL 42 X 29 INCH 6 TO 1 EACH	633.5200* MARKERS CULVERT END EACH	INLET	OUTLET
CATEGORY 0010																				
37+20	CTH U	RT	GALVANIZED	---	---	---	---	30	---	---	---	---	---	---	2	---	---			
138+33	CTH U SB	LT	GALVANIZED	---	---	---	---	---	29	---	---	---	---	---	---	2	---			
141+25	CTH U SB	LT	GALVANIZED	---	---	---	---	---	34	---	---	---	---	---	---	2	---			
43+56	CTH U	RT	GALVANIZED	---	---	---	---	33	---	---	---	---	---	---	2	---	---			
44+88	CTH U	LT	GALVANIZED	---	---	---	---	---	37	---	---	---	---	---	---	2	---			
46+00	CTH U	RT	GALVANIZED	---	---	---	---	42	---	---	---	---	---	---	2	---	---			
48+70	CTH U	LT	GALVANIZED	---	---	---	---	---	32	---	---	---	---	---	---	2	---			
50+00	CTH U	RT	GALVANIZED	---	---	---	---	28	---	---	---	---	---	---	2	---	---			
50+50	CTH U	RT/LT	ALUMINIZED	---	120	---	---	---	---	---	4	---	---	---	---	---	4	661.00	660.80	
51+86	CTH U	LT	GALVANIZED	48	---	---	---	---	---	2	---	---	---	---	---	---	---			
54+75	CTH U	RT	GALVANIZED	38	---	---	---	---	---	2	---	---	---	---	---	---	---			
57+00	CTH U	RT	GALVANIZED	33	---	---	---	---	---	2	---	---	---	---	---	---	---			
61+35	CTH U	LT	GALVANIZED	52	---	---	---	---	---	2	---	---	---	---	---	---	---			
61+35	CTH U	RT	GALVANIZED	50	---	---	---	---	---	2	---	---	---	---	---	---	---			
65+38	CTH U	RT/LT	ALUMINIZED	---	---	132	---	---	---	---	---	---	4	---	---	---	4	659.00	658.90	
65+84	CTH U	LT	GALVANIZED	46	---	---	---	---	---	2	---	---	---	---	---	---	---			
66+58	CTH U	LT	GALVANIZED	56	---	---	---	---	---	2	---	---	---	---	---	---	---			
70+67	CTH U	RT	GALVANIZED	31	---	---	---	---	---	2	---	---	---	---	---	---	---			
74+25	CTH U	RT/LT	ALUMINIZED	---	---	---	64	---	---	---	---	2	---	---	---	---	2	661.40	661.10	
74+50	CTH U	RT	GALVANIZED	42	---	---	---	---	---	2	---	---	---	---	---	---	---			
80+70	CTH U	RT	GALVANIZED	55	---	---	---	---	---	2	---	---	---	---	---	---	---			
81+00	CTH U	RT/LT	ALUMINIZED	---	---	---	67	---	---	---	---	2	---	---	---	---	2	660.99	660.70	
83+61	CTH U	RT/LT	ALUMINIZED	---	---	---	---	---	62	---	---	---	---	2	---	---	2	660.93	660.15	
84+00	CTH U	RT	GALVANIZED	40	---	---	---	---	---	2	---	---	---	---	---	---	---			
84+90	CTH U	LT	GALVANIZED	47	---	---	---	---	---	2	---	---	---	---	---	---	---			
87+75	CTH U	RT	GALVANIZED	39	---	---	---	---	---	2	---	---	---	---	---	---	---			
PROJECT TOTALS				577	120	132	131	133	194	26	4	4	4	2	8	8	14			

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE CURB AND GUTTER

STATION	TO	STATION	LOCATION	601.0405 18-INCH TYPE A LF	601.0411 30-INCH TYPE D LF	601.0580 4-INCH SLOPED 36-INCH TYPE R LF	COMMENTS
CATEGORY 0010							
28+95	-	34+15	CTH U	---	1046	---	MEDIAN
32+94	-	210+77	R-A-B	---	552	---	SW LEG
210+77	-	36+90	R-A-B	---	571	---	NW LEG
32+80	-	403+25	R-A-B	---	505	---	SE LEG
403+60	-	36+80	R-A-B	---	532	---	NE LEG
212+52	-	214+67	GOLF COURSE RD	---	416	---	MEDIAN
400+00	-	400+85	CTH DD	---	167	---	MEDIAN
35+50	-	39+27	CTH U	---	768	---	MEDIAN
10+00	-	12+98	R-A-B	---	---	286	
10+00	-	12+98	R-A-B	207	---	---	
			PROJECT TOTALS	207	4,557	286	

CONCRETE SIDEWALK

STATION	TO	STATION	DIR	LOCATION	602.0405 4-INCH SF
28+95	-	34+15	MEDIAN	CTH U	3,150
35+50	-	39+27	MEDIAN	CTH U	3,350
212+52	-	214+67	MEDIAN	GOLF COURSE RD	1,200
400+00	-	400+85	MEDIAN	CTH DD	810
				PROJECT TOTAL	8,510

PULL BOXES

SATATION	LOCATION	DIR	653.0135 PULL BOXES STEEL 24X36-INCH EA	COMMENT
CATEGORY 0010				
54+90	CTH U	RT	1	PLACE OVER SURVEY MONUMENT
58+85	CTH U	RT	1	PLACE OVER SURVEY MONUMENT
		PROJECT TOTAL	2	

STORM SEWER PIPE

STRUCTURE FROM	STRUCTURE TO	610.0119 REIN. CONC. HE CLASS HE-III 19X30-INCH LF	608.0312 REIN. CONC. CLASS III 12-INCH LF	608.0324 REIN. CONC. CLASS III 24-INCH LF	SPV.0090.02 HDPE 15-INCH LF	REMARK
CATEGORY 0010						
5.2	5.1	63	---	---	---	
5.3	5.2	---	89	---	---	
5.4	5.3	---	19	---	---	
5.5	5.3	---	7	---	---	
5.6	5.5	---	19	---	---	
5.7	5.2	46	---	---	---	
10.2	10.1	112	---	---	---	
15.2	15.1	---	32	---	---	
15.3	15.2	---	6	---	---	
20.2	20.1	---	18	---	---	
25.2	25.1	---	39	---	---	
30.3	30.2	---	---	153	---	
30.4	30.3	---	105	---	---	
30.5	30.4	---	49	---	---	
30.6	30.4	---	7	---	---	
30.7	30.6	---	49	---	---	
30.8	30.3	114	---	---	---	
35.2	35.1	---	13	---	---	
40.2	40.1	---	32	---	---	
45.2	45.1	---	26		---	
EXISTING	50.0	---	---	---	22	
TOTALS		335	510	153	22	

JOINT TIES FOR CONCRETE PIPE SHALL BE PROVIDED AT ALL CONCRETE APRON ENDWALLS. APRON ENDWALLS SHALL BE TIED FOR THE LAST THREE JOINTS AT BOTH CULVERT ENDS. THE COST OF THESE TIES SHALL BE INCIDENTAL TO THE COST OF THE PIPE.

STORM SEWER STRUCTURES

STRUCTURE NUMBER	521.1015 AEW STEEL 15-INCH EACH	522.1012 AEW CPRC 12-INCH EACH	522.1024 AEW CPRC 24-INCH EACH	523.0519 AEW CPRC HE 19X30-INCH EACH	611.3225 INLETS 2X2.5-FT EACH	611.3230 INLETS 2X3-FT EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0652 INLET COVERS TYPE T EACH	611.2005 MANHOLES 5-FT EACH	611.2006 MANHOLES 6-FT EACH	611.0530 MANHOLE COVERS TYPE J EACH	633.5200* MARKERS CULVERT END EACH	REMARKS
CATEGORY 0010														
5.1	---	---	---	1	---	---	---	---	---	---	---	---	1	
5.2	---	---	---	---	---	---	---	---	---	1	---	1	---	
5.3	---	---	---	---	---	1	---	1	---	---	---	---	---	DWY LOCATION, CURB PLATE REQUIRED
5.4	---	---	---	---	---	1	---	1	---	---	---	---	---	
5.5	---	---	---	---	---	1	---	1	---	---	---	---	---	DWY LOCATION, CURB PLATE REQUIRED
5.6	---	---	---	---	---	1	---	1	---	---	---	---	---	
5.7	---	---	---	1	---	---	---	---	---	---	---	---	1	
10.1	---	---	---	1	---	---	---	---	---	---	---	---	1	
10.2	---	---	---	1	---	---	---	---	---	---	---	---	1	
15.1	---	1	---	---	---	---	---	---	---	---	---	---	1	
15.2	---	---	---	---	---	1	---	1	---	---	---	---	---	
15.3	---	---	---	---	---	1	---	1	---	---	---	---	---	
20.1	---	1	---	---	---	---	---	---	---	---	---	---	1	
20.2	---	---	---	---	---	1	---	1	---	---	---	---	---	
25.1	---	1	---	---	---	---	---	---	---	---	---	---	1	
25.2	---	---	---	---	1	---	---	---	1	---	---	---	---	
30.2	---	---	1	---	---	---	---	---	---	---	---	---	1	
30.3	---	---	---	---	---	---	---	---	---	---	1	1	---	
30.4	---	---	---	---	---	1	1	---	---	---	---	---	---	
30.5	---	---	---	---	---	1	---	1	---	---	---	---	---	
30.6	---	---	---	---	---	1	1	---	---	---	---	---	---	
30.7	---	---	---	---	---	1	---	1	---	---	---	---	---	
30.8	---	---	---	1	---	---	---	---	---	---	---	---	1	
35.1	---	1	---	---	---	---	---	---	---	---	---	---	1	
35.2	---	---	---	---	---	1	---	1	---	---	---	---	---	
40.1	---	1	---	---	---	---	---	---	---	---	---	---	1	
40.2	---	---	---	---	---	1	---	1	---	---	---	---	---	
45.1	---	1	---	---	---	---	---	---	---	---	---	---	1	
45.2	---	---	---	---	---	1	---	1	---	---	---	---	---	DWY LOCATION, CURB PLATE REQUIRED
50.0	1	---	---	---	---	---	---	---	---	---	---	---	1	
TOTALS	1	6	1	5	1	14	2	12	1	1	1	2	13	

* ADDITIONAL QUANTITIES SHOWN ELSEWHERE

GENERAL NOTES: LOCATION FOR INLETS AND MANHOLES REFERS TO THE CENTER OF STRUCTURE
LOCATION FOR APRON ENDWALLS REFERS TO THE BEGINNING OF ENDWALL
ELEVATIONS (ON PLAN SHEETS) REFER TO THE CENTER OF STRUCTURE FOR MANHOLES AND FLANGELINE FOR INLETS
STRUCTURE DEPTH (ON PLAN SHEETS) EQUALS THE RIM/FLANGE ELEVATION MINUS THE INVERT ELEVATION
INVERTS OF EXISTING PIPE AND STRUCTURES SHOULD BE VERIFIED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO ORDERING THE STRUCTURE

CONCRETE MEDIAN SLOPED NOSE

STATION	TO	STATION	LOCATION	620.0300 CONCRETE MEDIAN SLOPED NOSE SF	COMMENTS
CATEGORY 0010					
28+95	-	34+20	CTH U	95	
35+50	-	39+35	CTH U	95	
212+50	-	214+66	GOLF COURSE RD	74	
400+00	-	400+90	CTH DD	77	
			PROJECT TOTALS	341	

LANDSCAPING

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0140 SEEDING MIXTURE NO. 40 LB	631.0160 SEEDING MIXTURE NO. 60 LB	630.0200 SEEDING TEMPORARY LB
CATEGORY 0010									
25+39	-	35+00	CTH U	2,860	1.8	15	20	5	40
35+00	-	93+25	CTH U	21,930	13.8	345	10	25	295
210+77	-	214+59	GOLF COURSE RD	1,580	1.0	0	25	0	20
400+08	-	405+33	CTH DD	1,630	1.0	5	20	0	20
UNDISTRIBUTED				7,000	5	90	20	10	95
			PROJECT TOTALS	35,000	23	455	95	40	470

EROSION CONTROL

STATION	TO	STATION	LOCATION	628.2004 EROSION MAT CLASS I TYPE B SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINT. LF	628.7015 INLET PROTECTION TYPE C EA	628.7020 INLET PROTECTION TYPE D EA	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.1905 MOBILIZAITIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMER. EROSION CONTROL EACH
CATEGORY 0010														
25+39	-	35+00	CTH U	1090	1160	610	800	800	3	---	60	5	---	---
35+00	-	93+25	CTH U	21170	600	160	900	900	3	1	230	80	---	---
210+77	-	214+59	GOLF COURSE RD	80	1270	230	---	---	4	---	---	10	---	---
400+08	-	405+33	CTH DD	0	1130	500	---	---	4	---	---	5	---	---
UNDISTRIBUTED				5585	1040	375	425	425	---	---	75	25	3	3
			PROJECT TOTALS	27,925	5,200	1,875	2,125	2,125	14	1	365	125	3	3

EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	COMMON EXCAVATION (1) 205.0100 CUT (2)	COMMON EXCAVATION (1) 205.0100 EBS EXCAVATION (3)	SALVAGED /UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.25	MASS ORDINATE +/-	WASTE	COMMENT:
CTH U	25+39/93+25	19,537	1,000	0	19,537	4,569	5,711	15,126	15,126	
CTH DD	400+00/405+33	1,822	0	0	1,822	258	322	1,500	1,500	
GOLF COURSE DR	210+77/214+50	1,342	0	0	1,342	106	133	1,210	1,210	
PROJECT TOTALS		22,701	1,000	0	22,701	4,933	6,166	17,835	17,835	
TOTAL COMMON EXCAVATION		23,701								

1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS.
2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
3) EBS EXCAVATION IS ANTICIPATED IN EXISTING DITCH AREAS.
5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL.
13) EXPANDED FILL = (UNEXPANDED FILL * FILL FACTOR).

PAVEMENT MARKING

STATION	TO	STATION	LOCATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH (WHITE) LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH (YELLOW) LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY EACH	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW) LF	SPV.0090.01 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 18-INCH LF
CATEGORY 0010									
25+39	-	34+19	CTH U	1,493	2,210	---	1	54	---
			CTH U ROUNDABOUT	---	---	236	---	---	145
35+47	-	93+25	CTH U	11,282	4,562	---	1	86	---
210+77	-	214+67	GOLF COURSE RD	---	1,007	---	1	35	---
400+00	-	410+33	CTH DD	886	2,377	---	1	125	---
93+25	-	104+68	CTH U OVERLAY	2,286	2,286	---	---	---	---
			SUBTOTAL	15,947	12,443	236	4	299	145
			PROJECT TOTALS	28,390		236	4	299	145

NOTE:
ITEMS ASSOCIATED WITH PAVING, SHOULDERS, AND OVERLAY FALL UNDER PROJECT 595600-15

REMOVING PAVEMENT MARKINGS

STATION	TO	STATION	LOCATION	646.0600 REMOVING PAVEMENT MARKINGS LF
CATEGORY 0010				
405+33	-	410+33	CTH DD	125
			PROJECT TOTAL	125

SAW CUTTING

SATATION	LOCATION	690.0150 SAWING ASPHALT LF	COMMENT
CATEGORY 0010			
25+39	CTH U	24	
26+00	CTH U RT	90	DRIVEWAY
48+70	CTH U LT	20	DRIVEWAY
66+58	CTH U LT	20	DRIVEWAY
93+00	CTH U	24	
210+77	GOLF COURSE RD	37	
401+55	CTH DD LT	14	DRIVEWAY
402+28	CTH DD RT	26	DRIVEWAY
405+33	CTH DD	32	
	PROJECT TOTAL	287	

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
---	4.1	7
FEDERAL PROJECT NUMBER		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

CTH U

STH 96 TO USH 41

OUTAGAMIE COUNTY — BROWN COUNTY

CONSTRUCTION PROJECT NUMBER

586500-15

Conventional Signs and Abbreviations

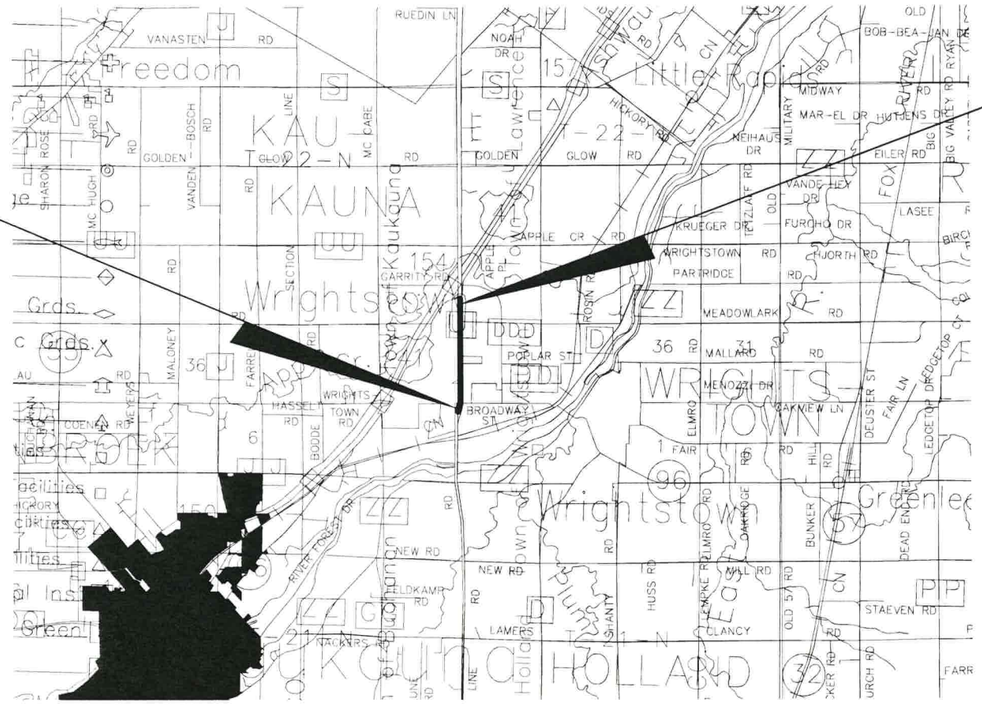
- SECTION LINE
- QUARTER LINE
- TOWNSHIP AND RANGE LINE
- PROPOSED OR NEW CENTERLINE
- PROPOSED OR NEW R/W LINE
- EXISTING R/W LINE
- LOT LINE
- PROPERTY LINE
- COUNTY LINE LIMITS
- SLOPE INTERCEPTS
- EXISTING MONUMENTATION
- FENCE
- SECTION OR QUARTER CORNER
- TELEPHONE
- GAS
- WATER
- ELECTRIC
- FIBER OPTIC
- SANITARY
- STORM SEWER
- NO ACCESS (BY ACQUISITION)
- NO ACCESS (BY STATUTORY AUTHORITY)
- NO ACCESS (BY PREVIOUS PROJECT)
- TEMPORARY INTEREST
- PERMANENT LIMITED EASEMENT
- HIGHWAY EASMENT
- RIGHT-OF-WAY TYPE 2 MONUMENTS SET AT NEWLY ACQUIRED R/W ANGLE POINTS
- 20 — R/W BOUNDARY POINT
- 6 — PARCEL NUMBER
- 32 — UTILITY PARCEL NUMBER

AC	ACRES	R	RADIUS
Δ	CENTRAL ANGLE	R.	RANGE
C/L	CENTERLINE	R/L	REFERENCE LINE
COR.	CORNER	R/W	RIGHT OF WAY
CTH	COUNTY TRUNK HIGHWAY	1/4 LINE	QUARTER LINE
D	DEGREE OF CURVE	1/16 LINE	SIXTEENTH LINE
E.	EAST	S.	SOUTH
L	LENGTH OF CURVE	SEC	SECTION
LC	LONG CHORD	SEC LINE	SECTION LINE
LCB	LONG CHORD BEARING	STH	STATE TRUNK HIGHWAY
MI	MILE	SF	SQUARE FEET
N.	NORTH	STA	STATION
PC	POINT OF CURVATURE	T.	TOWN
PI	POINT OF INTERSECTION	T	TANGENT LENGTH OF CURVE
PT	POINT OF TANGENCY	TI	TEMPORARY INTEREST
PLE	PERMANENT LIMITED EASEMENT	USH	UNITED STATES HIGHWAY
P±L	PROPERTY LINE	W.	WEST

	COMPENSABLE	NON-COMPENSABLE
POWER POLE	■	□
TELEPHONE POLE	●	⊘
TELEPHONE PEDESTAL	■	⊡

N

BEGIN RELOCATION ORDER
STATION 32+00.00
288.45 SOUTH OF AND 19.54'
WEST OF THE SE CORNER
SECTION 33, T22N, R19E
Y 586270.483
X 883770.993



LAYOUT
SCALE 0 1/2 1 MI.
TOTAL NET LENGTH OF CENTERLINE = 1.08 MI.

END RELOCATION ORDER
STATION 89+00.00
157.12 FEET NORTH OF AND 0.71
FEET WEST OF THE NW CORNER OF
SECTION 33, T22N, R19E
Y 591969.076
X 883736.165

Notes:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, (OUTAGAMIE COUNTY), NAD 83 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TLE'S EXPIRE AT THE TIME OF COMPLETION OF CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

EXISTING RIGHT-OF-WAY OF CTH U IS BASED UPON RIGHT-OF-WAY PROJECT NO. 6498-04-21.

RIGHT OF WAY MONUMENTS ARE TYPE 2 (TYPICALLY 3/4-INCH BY 24-INCH REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT OF WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF PUBLIC RECORD.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED OF MAPS AND DOCUMENTS OF PUBLIC RECORD AND/ OR EXISTING OCCUPATION LINES. EXCLUDING RIGHT-OF-WAY BOUNDARIES, THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

DIMENSIONS FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

ACCEPTED FOR

OUTAGAMIE COUNTY

Penny Hewitt — 10-7-14

(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

OMNNI ASSOCIATES
APPLETON, WISCONSIN

WISCONSIN
PAUL D. NORDWIG
S-2784
WRIGHTSTOWN, WI
PROFESSIONAL LAND SURVEYOR

Oct. 7 2014 — Paul Nordwig

(Date) (Signature)

OUTAGAMIE AND BROWN COUNTY

LEVELS ON = 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63

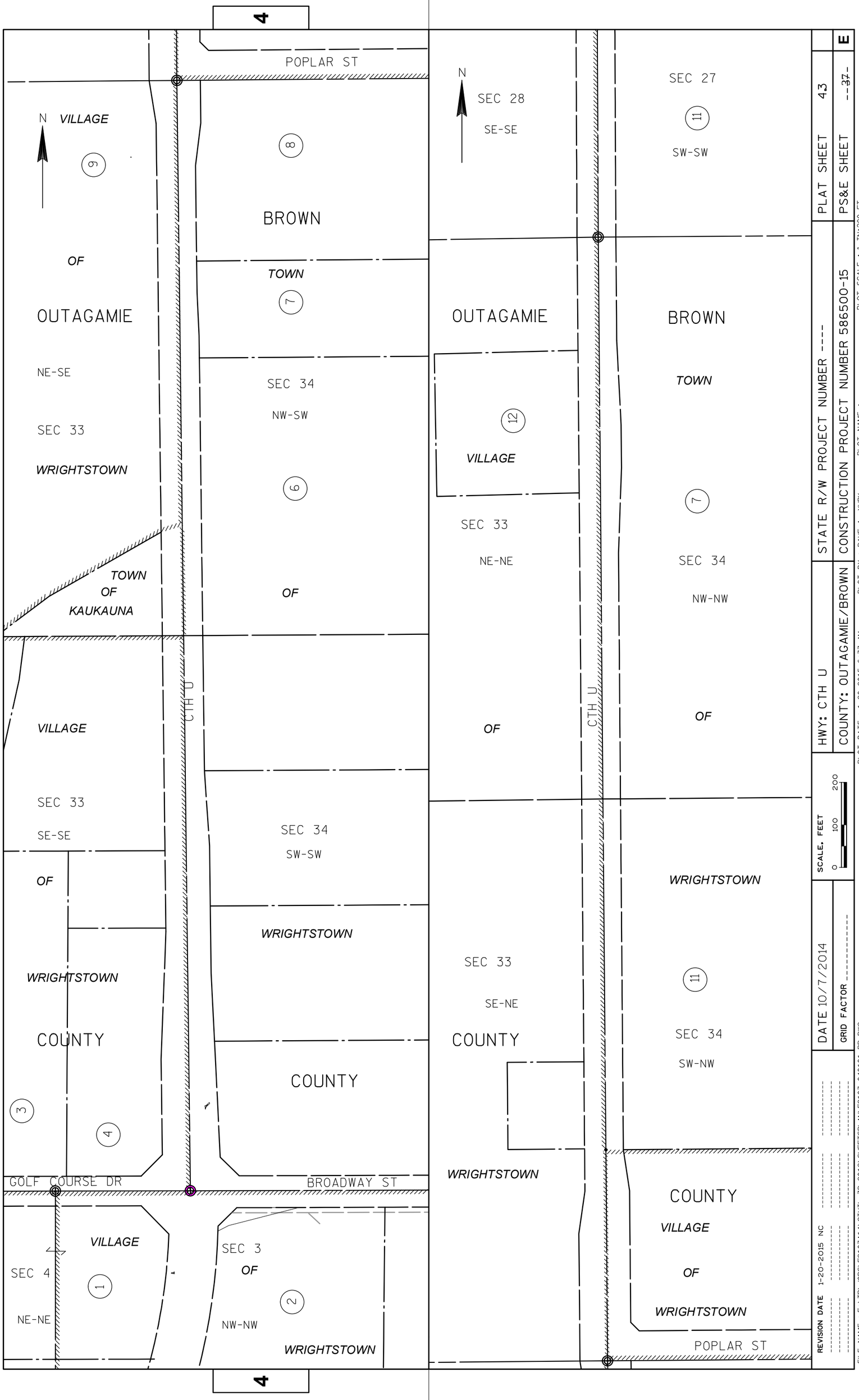
FILE NAME : $FILE$ PLOT DATE: $DATE$ $TIME$ ORG DATE : __/__/2000 PLOT SCALE : ORIGINATOR : OMNNI ASSOCIATES PLOT SCALE :

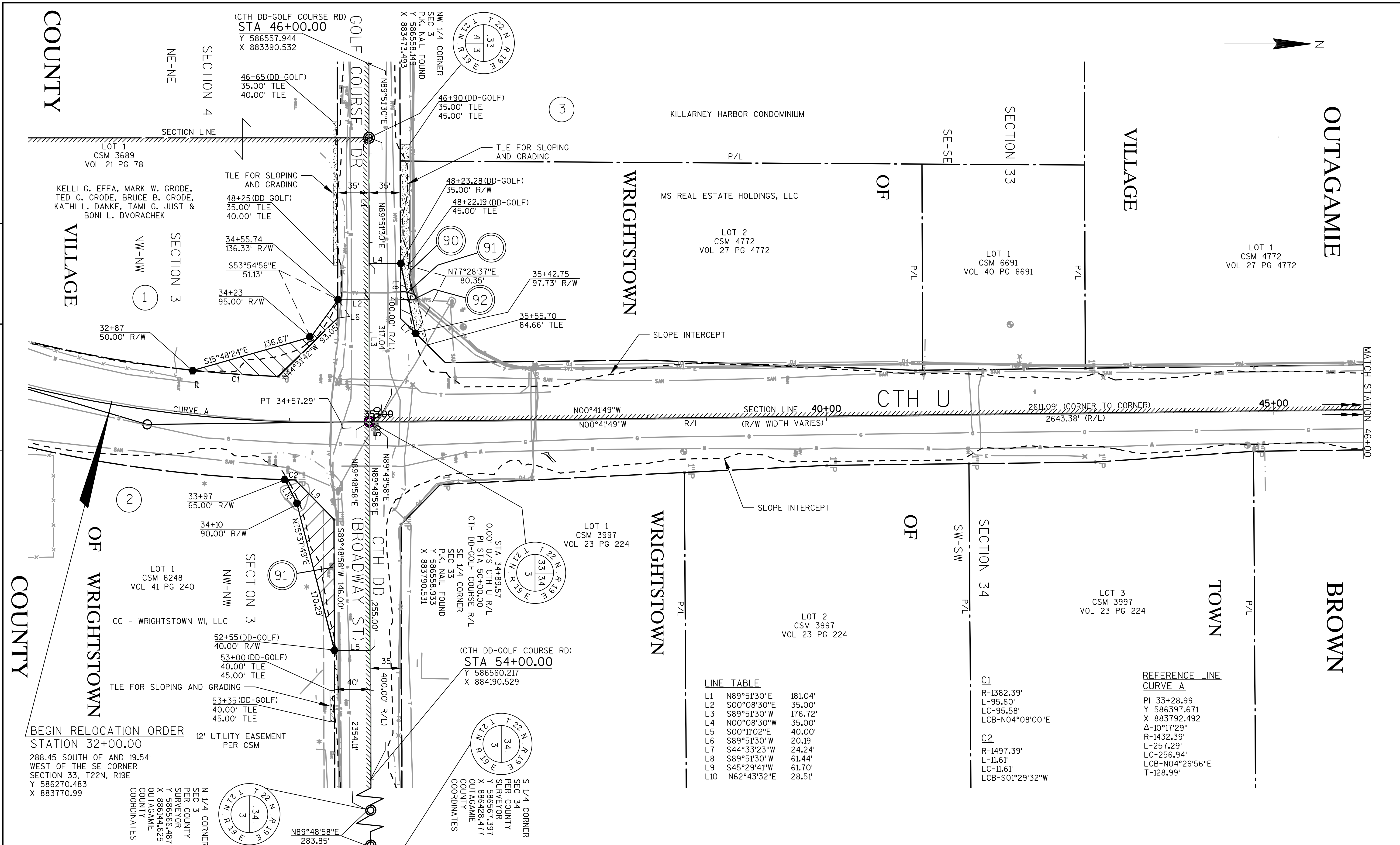
WISDOT/CADDS SHEET 50C

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE COUNTY OF OUTAGAMIE.

PARCEL NUMBER	PLAT SHEET NUMBER	OWNER	INT. REQD.	TOTAL AREA	AREA ACRES REQUIRED NEW	EXISTING	TOTAL	TOTAL AREA REMAINING	TLE Area
1	4.4	KELLI G. EFFA, MARK W. GOODE, TED G. GRODE, BRUCE B. GRODE, KATHI L. DANKE, TAMI G. JUST & BONI L. DVORACHEK	FEE TLE	2.05 AC	2861 SQ FT	0 SQ FT	2861 SQ FT	1.98 AC	800 SQ FT
2	4.4	CC - WHRIGHTSTOWN WI, LLC	FEE TLE	22.50 AC	3700 SQ FT	0 SQ FT	3700 SQ FT	22.42 AC	173 SQ FT
3	4.4	KILLARNEY HARBOR CONDOMINIUM ASSOCIATION	TLE	9.47 AC	0 SQ FT	0 SQ FT	0 SQ FT	0 SQ FT	190 SQ FT
4	4.4	MS REAL ESATE HOLDING, LLC	FEE TLE	3.00 AC	531 SQ FT	0 SQ FT	531 SQ FT	2.99 AC	2013 SQ FT
6	4.5	TINEDALE FARMS PARTNERSHIP LLP	TLE	19.10 AC	0 SQ FT	0 SQ FT	0 SQ FT	19.10 AC	750 SQ FT
7	4.5 4.7	UNITED MEADOWS DAIRY LLC	TLE	51.48 AC	0 SQ FT	0 SQ FT	0 SQ FT	51.48 AC	3748 SQ FT
8	4.5	SWING THRU REAL ESTATE LLC	TLE	6.10 AC	0 SQ FT	0 SQ FT	0 SQ FT	6.10 AC	433 SQ FT
9	4.5	PAGE GOLF PROPERTIES LLC	TLE	150.02 AC	0 SQ FT	0 SQ FT	0 SQ FT	150.02 AC	460 SQ FT
11	4.6 4.7	NATHON SPRANGERS & JANELLE SPRANGERS	TLE	62.35 AC	0 SQ FT	0 SQ FT	0 SQ FT	62.35 AC	2848 SQ FT
12	4.7	SCOTT R. BERKEN	TLE	2.62 AC	0 SQ FT	0 SQ FT	0 SQ FT	2.62 AC	500 SQ FT
90	4.4 4.7	AT & T	RELEASE OF RIGHTS	----	----	----	----	----	----
91	4.4 4.5 4.7	TIME WARNER CABLE	RELEASE OF RIGHTS	----	----	----	----	----	----
92	4.4	VILLAGE OF WRIGHTSTOWN	RELEASE OF RIGHTS	----	----	----	----	----	----
93	4.6	WISCONSIN PUBLIC SERVICE	RELEASE OF RIGHTS	----	----	----	----	----	----
94	4.5 4.7	KAUKAUNA UTILITIES	RELEASE OF RIGHTS	----	----	----	----	----	----


4
POPLAR ST
N
VILLAGE
9
8
BROWN
OF
TOWN
7
OUTAGAMIE
NE-SE
SEC 33
WRIGHTSTOWN
SEC 34
NW-SW
6
TOWN
OF
KAUKAUNA
OF
VILLAGE
CTH U
SEC 33
SE-SE
OF
SEC 34
SW-SW
WRIGHTSTOWN
WRIGHTSTOWN
COUNTY
COUNTY
3
4
GOLF COURSE DR
BROADWAY ST
VILLAGE
SEC 4
1
NE-NE
SEC 3
OF
2
NW-NW
WRIGHTSTOWN
N
SEC 28
SE-SE
SEC 27
11
SW-SW
OUTAGAMIE
BROWN
TOWN
12
VILLAGE
SEC 33
NE-NE
OF
7
SEC 34
NW-NW
OF
CTH U
WRIGHTSTOWN
SEC 33
SE-NE
COUNTY
11
SEC 34
SW-NW
WRIGHTSTOWN
COUNTY
VILLAGE
OF
WRIGHTSTOWN
POPLAR ST
4
STATE R/W PROJECT NUMBER ----
CONSTRUCTION PROJECT NUMBER 586500-15
HWY: CTH U
COUNTY: OUTAGAMIE/BROWN
PLAT SHEET 43
PS&E SHEET --37-
E
SCALE, FEET
0
100
200
DATE 10/7/2014
GRID FACTOR ----------
REVISION DATE 1-20-2015 NC
PLOT DATE : 1/20/2015 6:33 AM
PLOT BY : DAVE A. YURK
PLOT NAME : ----------
PLOT SCALE : 1 IN:200 FT
WISDOT/CADDS SHEET 75
FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_040101_RP.DWG



LINE TABLE

L1	N89°51'30"E	181.04'
L2	S00°08'30"E	35.00'
L3	S89°51'30"W	176.72'
L4	N00°08'30"W	35.00'
L5	S00°11'02"E	40.00'
L6	S89°51'30"W	20.19'
L7	S44°33'23"W	24.24'
L8	S89°51'30"W	61.44'
L9	S45°29'41"W	61.70'
L10	N62°43'32"E	28.51'

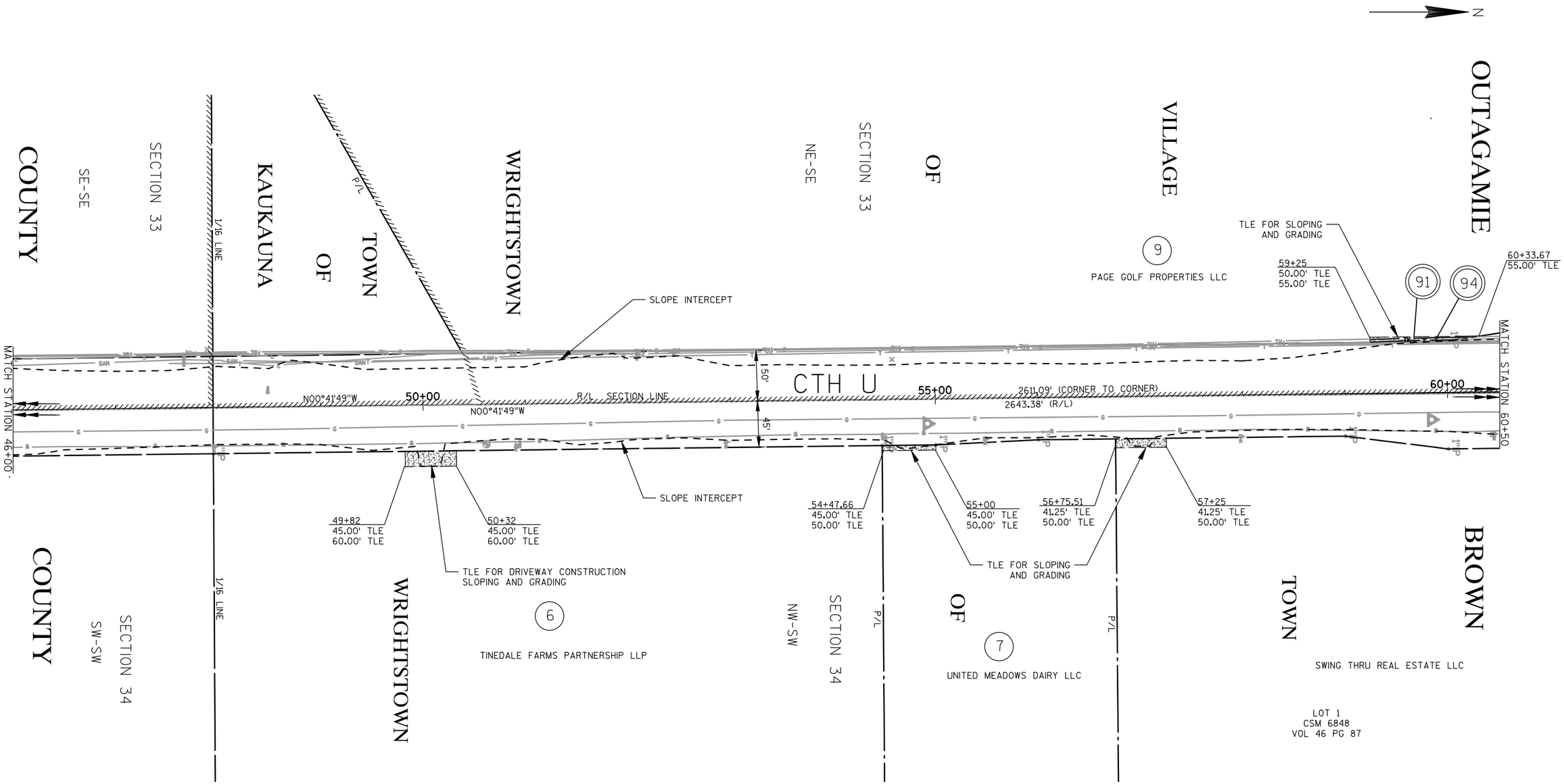
C1
R-1382.39'
L-95.60'
LC-95.58'
LCB-N04°08'00"E

C2
R-1497.39'
L-11.61'
LC-11.61'
LCB-S01°29'32"W

REFERENCE LINE
CURVE A
PI 33+28.99
Y 586397.671
X 883792.492
Δ-10°17'29"
R-1432.39'
L-257.29'
LC-256.94'
LCB-N04°26'56"E
T-128.99'

REVISION DATE 1-20-2015 NC	DATE 10/7/2014	SCALE, FEET 0 50 100	HWY: CTH U	STATE R/W PROJECT NUMBER ----	PLAT SHEET 4.4
	GRID FACTOR ___________		COUNTY: OUTAGAMIE/BROWN	CONSTRUCTION PROJECT NUMBER 586500-15	PS&E SHEET 38	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_040101_RP.DWG PLOT DATE : 1/20/2015 6:33 AM PLOT BY : DAVE A. YURK PLOT NAME : PLOT SCALE : WISDOT/CADDS SHEET 75

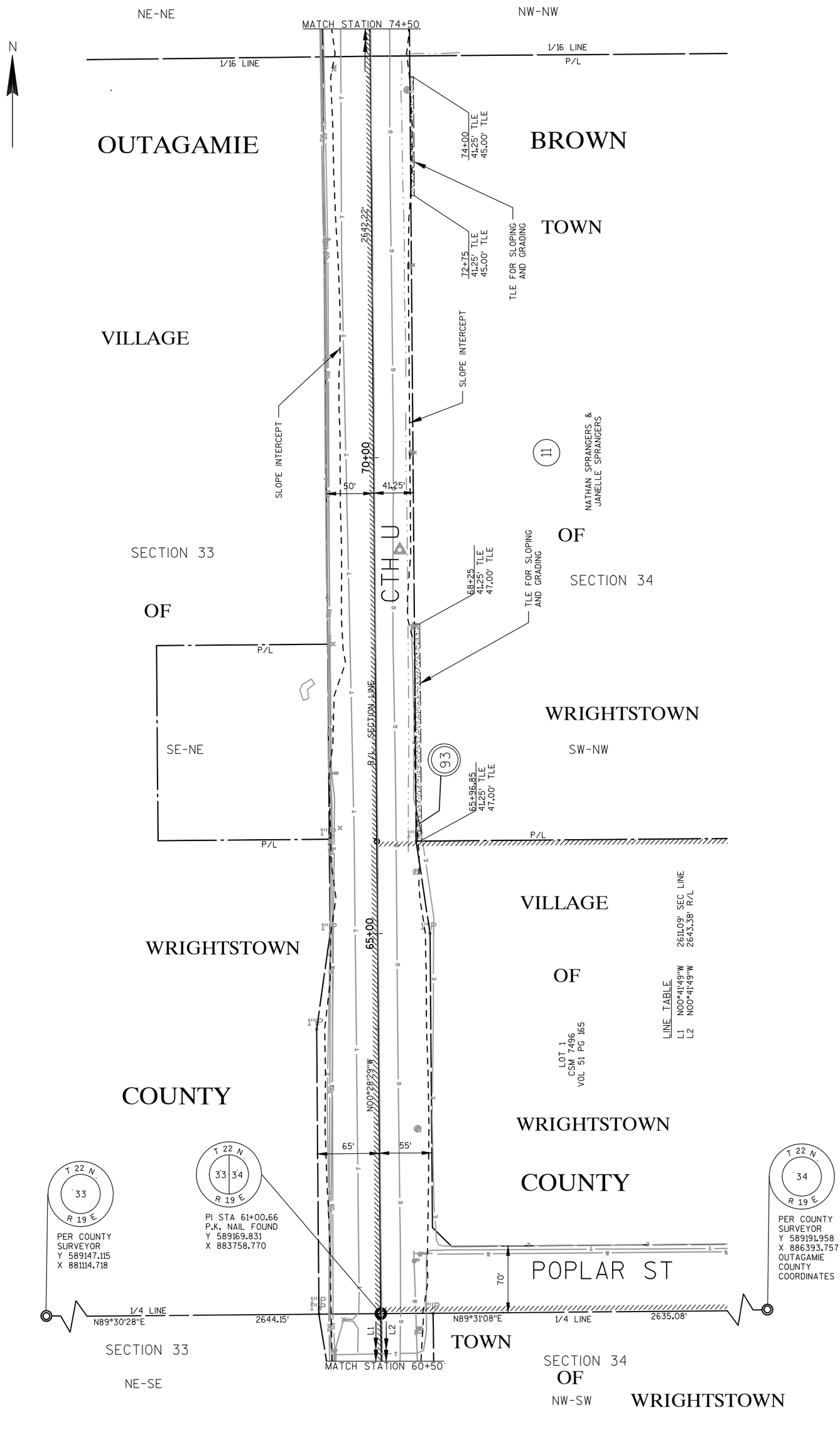


4

REVISION DATE 1-20-2015	DATE 10/7/2014	SCALE, FEET 0 50 100	HWY: CTH U
GRID FACTOR _____			COUNTY: OUTAGAMIE/BROWN

STATE R/W PROJECT NUMBER ----	PLAT SHEET 45	
CONSTRUCTION PROJECT NUMBER 586500-15	PS&E SHEET 39	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_040101_RP.DWG PLOT DATE : 1/20/2015 6:33 AM PLOT BY : DAVE A. YURK PLOT NAME : _____ PLOT SCALE : 1:100_XREF



REVISION DATE 1-20-2015 NC

GRID FACTOR

DATE 10/7/2014

SCALE, FEET 0 50 100

HWY: CTH U

COUNTY: OUTAGAMIE/BROWN

STATE R/W PROJECT NUMBER ----

CONSTRUCTION PROJECT NUMBER 586500-15

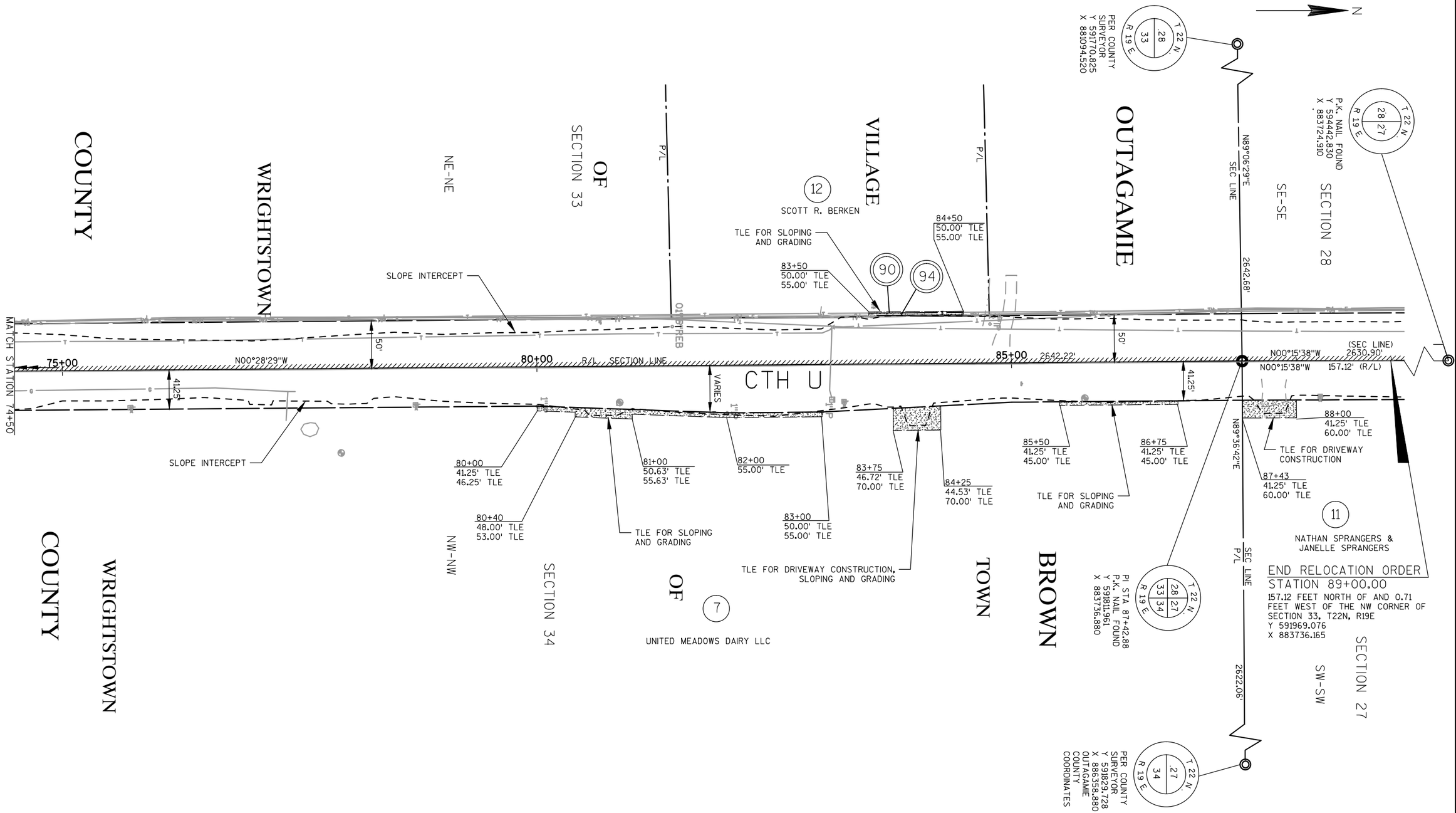
PLAT SHEET 46

PS&E SHEET --40- E

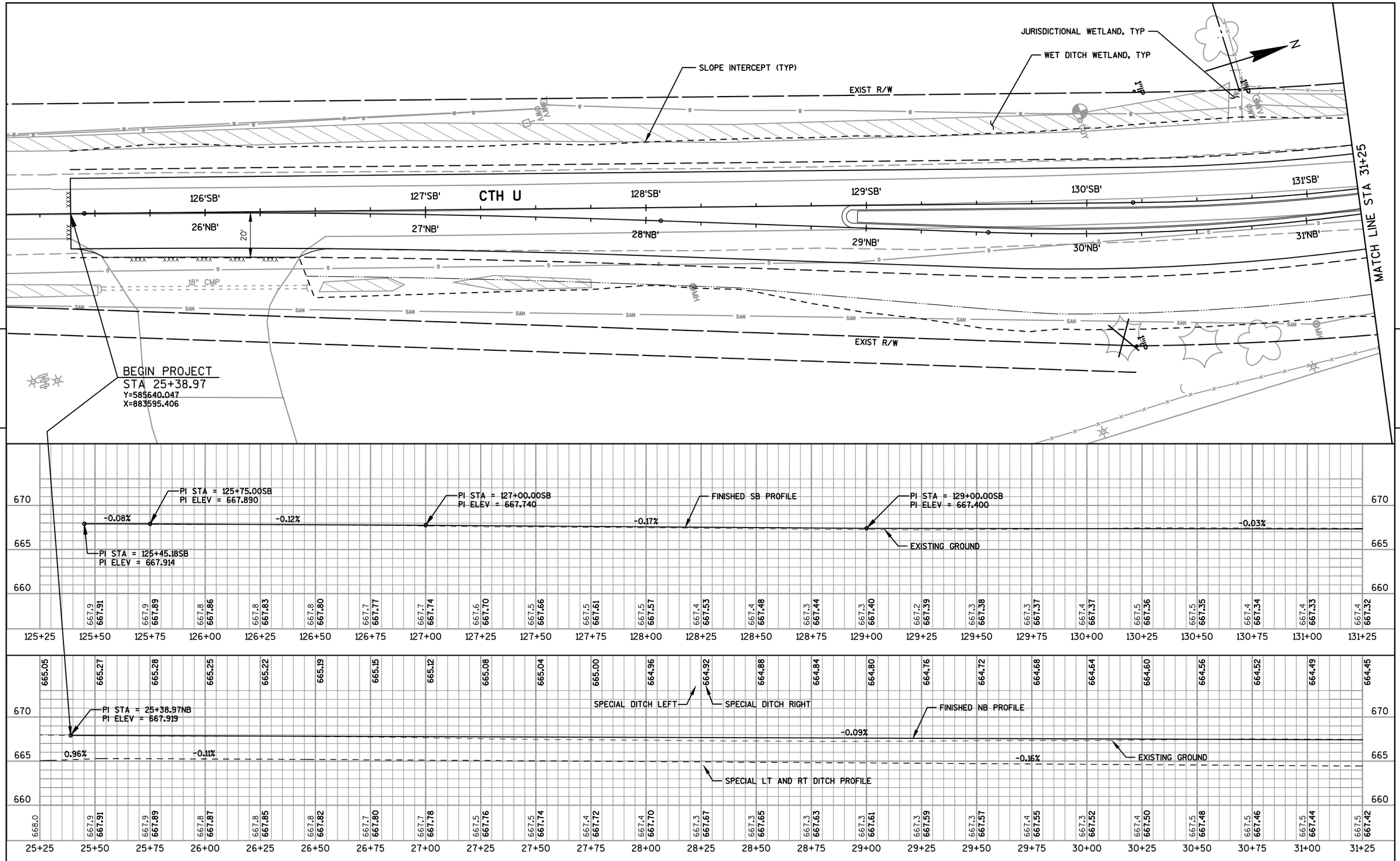
PLOT DATE : 1/20/2015 6:34 AM PLOT BY : DAVE A. YURK PLOT NAME : ---------- PLOT SCALE : 1:100 XREF

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_040101_RP.DWG

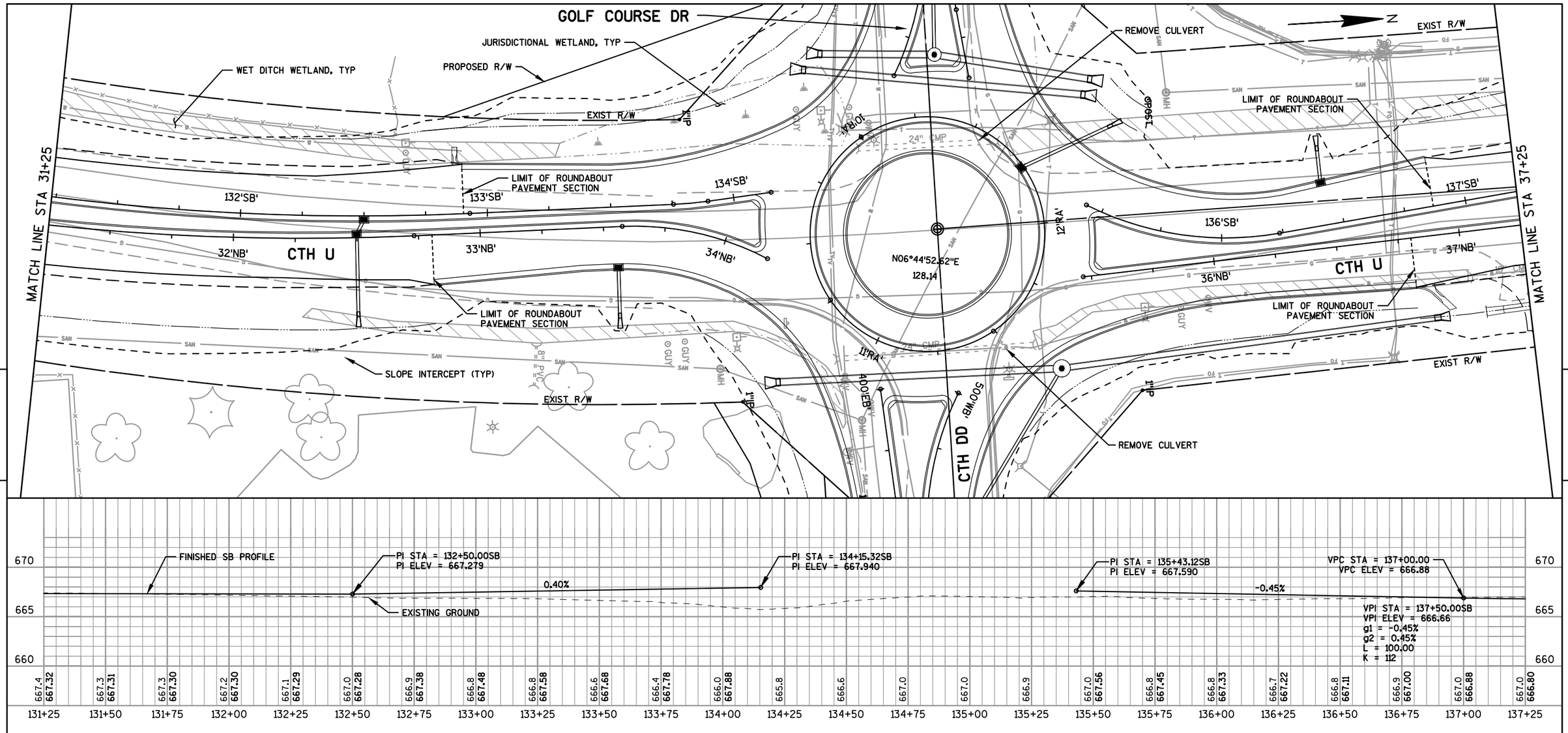
WISDOT/CADDS SHEET 75



REVISION DATE 1-20-2015	DATE 10/7/2014	SCALE, FEET 0 50 100	HWY: CTH U	STATE R/W PROJECT NUMBER ----	PLAT SHEET 4.7
	GRID FACTOR _____		COUNTY: OUTAGAMIE/BROWN	CONSTRUCTION PROJECT NUMBER 586500-15	PS&E SHEET --41- E



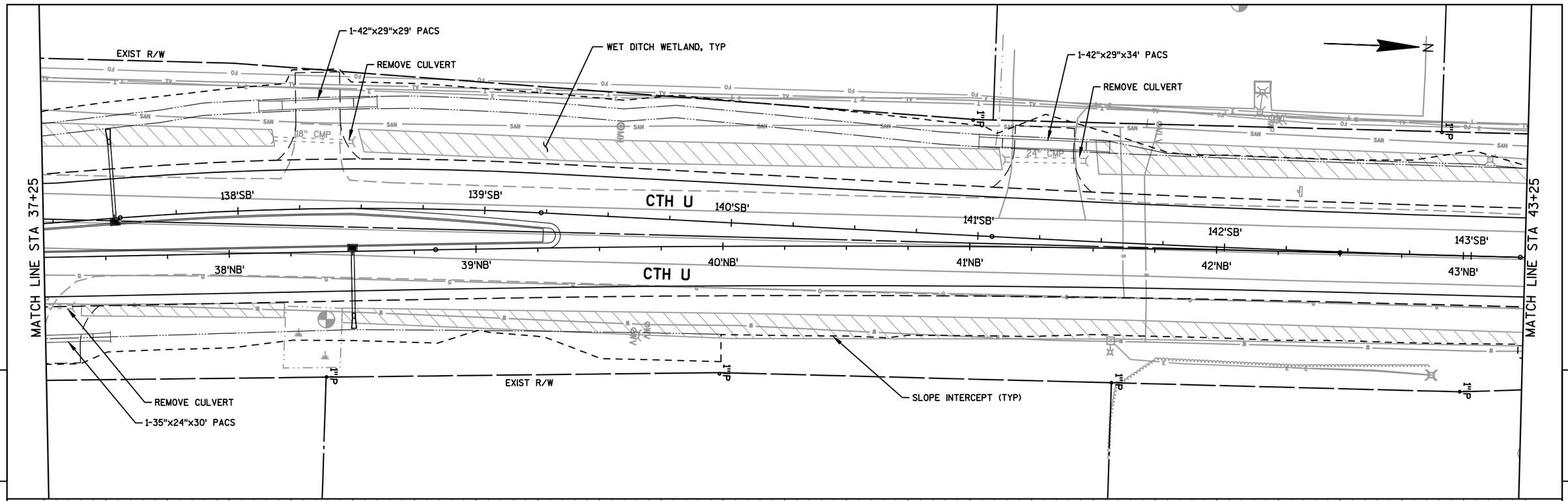
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: CTH U	SHEET 42	E

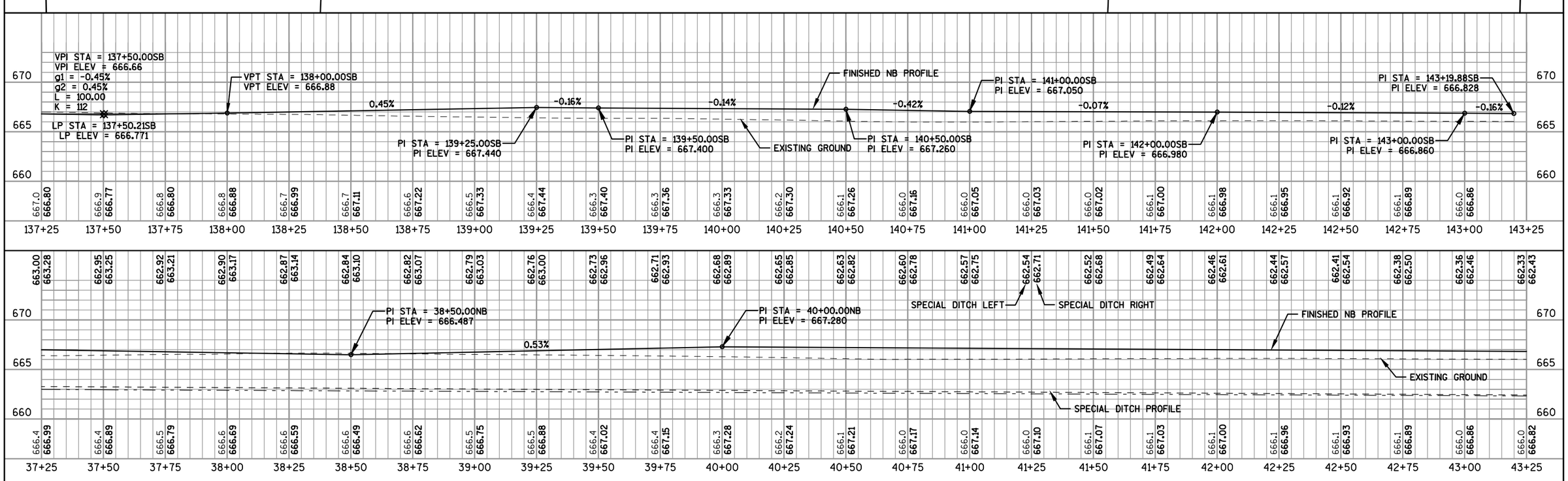


PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: CTH U	SHEET 43	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_050100_PP.DWG
E2103_050106_pp

PLOT DATE : 6/25/2015 7:45 AM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK





PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: CTH U	SHEET 44	E

MATCH LINE STA 43+25

MATCH LINE STA 58+25

N

1-42"x29"x37' PACS
REMOVE CULVERT
WET DITCH WETLAND, TYP
1-42"x29"x32' PACS
REMOVE CULVERT
STA 50+50
2-30"x60' CPCS
1-18"x48' CPCS
REMOVE CULVERT
NATIONAL GEODETIC SURVEY MONUMENT
DO NOT DISTURB
SLOPE INTERCEPT (TYP)
EXIST R/W
N00°41'49"W
CTH U
44'NB' 45'NB' 46'NB' 47'NB' 48'NB' 49'NB' 50'NB' 51'NB' 52'NB' 53'NB' 54'NB' 55'NB' 56'NB' 57'NB' 58'NB'
EXIST R/W
REMOVE CULVERT
1-35"x24"x33' PACS
REMOVE CULVERT
1-35"x24"x42' PACS
JURISDICTIONAL WETLAND, TYP
TLE
REMOVE CULVERT
1-35"x24"x28' PACS
TLE
REMOVE CULVERT
1-18"x38' CPCS
TLE
REMOVE CULVERT
1-18"x33' CPCS

5

5

662.33 662.43 | 662.30 662.39 | 662.25 662.32 | 662.19 662.25 | 662.14 662.18 | 662.09 662.11 | 662.03 662.04 | 661.98 661.97 | 661.92 661.90 | 661.87 661.83 | 661.82 661.75 | 661.76 661.68 | 661.71 661.61 | 661.65 661.54 | 661.60 661.47 | 661.50 661.40 | 661.57 661.50 | 661.64 661.60 | 661.71 | 661.78 | 661.85 | 661.92 | 661.98 | 662.05 660.82 | 662.12 660.96 | 662.19 661.09 | 662.26 661.23 | 662.33 661.36 | 662.40 661.50 | 662.23 661.63 | 662.07 661.77 | 661.98 661.83

695
690
685
680
675
670
665
660

SPECIAL DITCH LEFT
SPECIAL DITCH RIGHT

PI STA = 50+50.00NB
PI ELEV = 665.810

STA 50+50
2-30" CPCS
INL. ELEV. 661.00 (W)
DIS. ELEV. 660.80 (E)

FINISHED PROFILE
EXISTING GROUND
-0.14%
-0.14%
-0.20%
0.20%
0.14%
0.27%
-0.33%
SPECIAL DITCH LEFT
SPECIAL DITCH RIGHT

666.0 666.82 | 666.0 666.79 | 665.9 666.72 | 665.8 666.65 | 665.6 666.58 | 665.5 666.51 | 665.4 666.44 | 665.4 666.37 | 665.4 666.30 | 665.5 666.23 | 665.5 666.16 | 665.4 666.09 | 665.4 666.02 | 665.7 665.95 | 665.8 665.88 | 665.9 665.81 | 665.9 665.81 | 665.8 665.81 | 665.8 665.81 | 665.7 665.81 | 665.6 665.81 | 665.5 665.81 | 665.5 665.81 | 665.5 665.81 | 665.5 665.81 | 665.5 665.81 | 665.5 665.81 | 665.4 665.81 | 665.3 665.81 | 665.2 665.81

43+25 43+50 44+00 44+50 45+00 45+50 46+00 46+50 47+00 47+50 48+00 48+50 49+00 49+50 50+00 50+50 51+00 51+50 52+00 52+50 53+00 53+50 54+00 54+50 55+00 55+50 56+00 56+50 57+00 57+50 58+00 58+25

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: CTH U	SHEET 45	E

MATCH LINE STA 58+25

MATCH LINE STA 73+25

5

5

N

PI STATION = 61+00.70
Y = 589169.831
X = 883758.770

TLE

1-18"x52' CPCS

REMOVE CULVERT

WET DITCH WETLAND, TYP

EXIST R/W

STA 65+38
2-42"x66' CPCS
SKEW 9° RHF

1-18"x46' CPCS

REMOVE CULVERT

1-18"x56' CPCS

REMOVE CULVERT

REMOVE CULVERT

SLOPE INTERCEPT (TYP)

N00°41'49"W

N00°28'29"W

CTH U

59'NB' 60'NB' 61'NB' 62'NB' 63'NB' 64'NB' 65'NB' 66'NB' 67'NB' 68'NB' 69'NB' 70'NB' 71'NB' 72'NB' 73'NB'

REMOVE CULVERT

1-18"x50' CPCS

SLOPE INTERCEPT (TYP)

JURISDICTIONAL WETLAND, TYP

NATIONAL GEODETIC SURVEY MONUMENT
DO NOT DISTURB

TLE

EXIST R/W

TLE

1-18"x31' CPCS

NATIONAL GEODETIC SURVEY MONUMENT
DO NOT DISTURB

661.98 661.83 661.90 661.90 661.72 661.72 661.55 661.54 661.37 661.36 661.19 661.18 661.02 661.00 660.84 660.82 660.66 660.64 660.49 660.46 660.31 660.28 660.14 660.10 659.96 659.92 659.78 659.74 659.61 659.56 659.86 659.55 660.75 661.10 661.25 661.25 661.75 661.40 662.24 661.55 662.74 661.70 663.24 661.85 663.00 662.00 662.77 662.25 662.54 662.50 662.30 662.75 662.18 662.53 662.06 662.31 661.94 662.09 661.82 661.87 661.70 661.90 661.64 661.85

690
685
680
675
670
665
660
655

SPECIAL DITCH LEFT

SPECIAL DITCH RIGHT

FINISHED PROFILE

EXISTING GROUND

SPECIAL DITCH LEFT

SPECIAL DITCH RIGHT

0.00%

-0.35%

1.39%

1.00%

0.30%

-0.47%

0.50%

-0.44%

-0.24%

0.06%

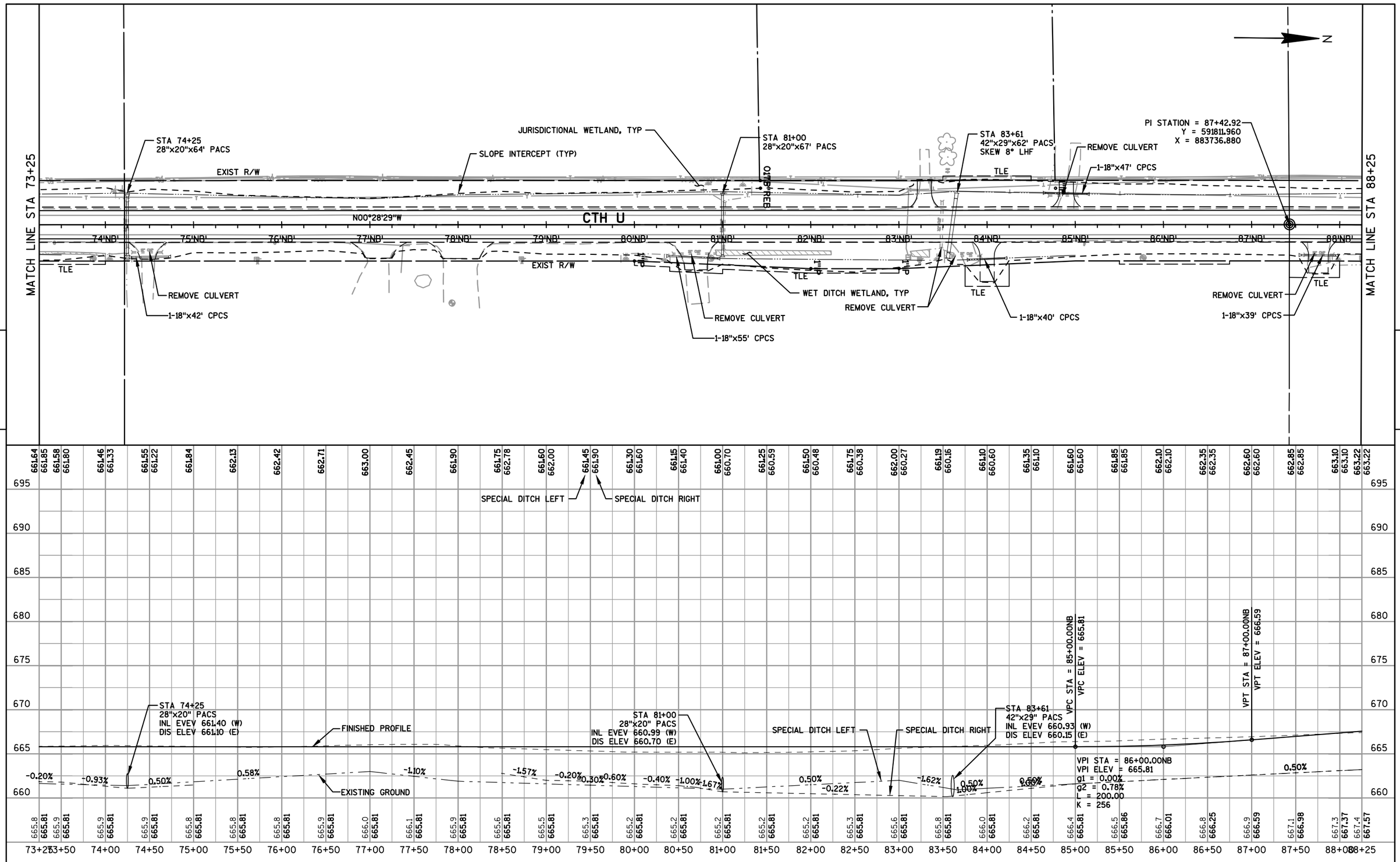
-0.20%

STA 65+38
2-42" CPCS
INL EVEV 659.00 (W)
DIS ELEV 658.90 (E)

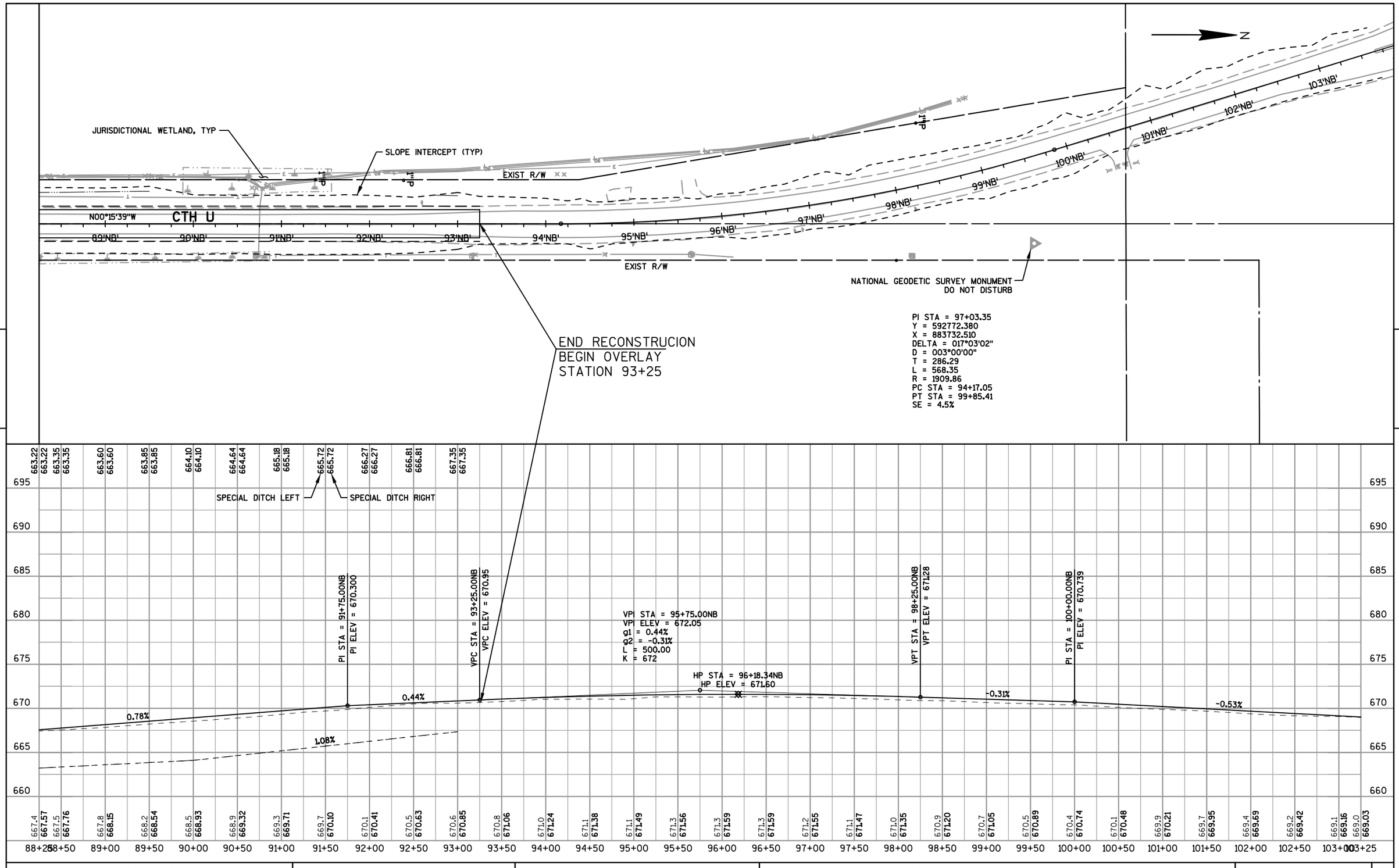
665.2 665.81 665.2 665.81 665.2 665.81 665.2 665.81 665.3 665.81 665.4 665.81 665.3 665.81 665.3 665.81 665.2 665.81 665.2 665.81 665.2 665.81 665.1 665.81 665.2 665.81 665.4 665.81 665.5 665.81 665.5 665.81 665.6 665.81 665.5 665.81 665.6 665.81 665.7 665.81 665.8 665.81 665.8 665.81 665.8 665.81 665.7 665.81 665.6 665.81 665.8 665.81 665.8 665.81 665.8 665.81 665.9 665.81 665.9 665.81 665.8 665.81 665.8 665.81

58+25 58+50 59+00 59+50 60+00 60+50 61+00 61+50 62+00 62+50 63+00 63+50 64+00 64+50 65+00 65+50 66+00 66+50 67+00 67+50 68+00 68+50 69+00 69+50 70+00 70+50 71+00 71+50 72+00 72+50 73+00 73+25

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: CTH U	SHEET 46	E



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: CTH U	SHEET 47	E



PROJECT NO: 586500-15 & 595600-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: CTH U	SHEET 48 E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_050100_PP.DWG
PLOT DATE : 6/8/2015 10:44 AM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_050100_pp.dwg, E2103_050113_pp

N

CTH U

103'NB'

104'NB'

104'NB'

SLOPE INTERCEPT (TYP)

END PROJECT 595600-15
STATION 104+68

5

5

695
690
685
680
675
670
665
660

PI STA = 103+50.00NB
PI ELEV = 668.895

PI STA = 103+85.25NB
PI ELEV = 668.823

PI STA = 104+34.74NB
PI ELEV = 668.454

-0.20%

0.58%

0.82%

-0.47%

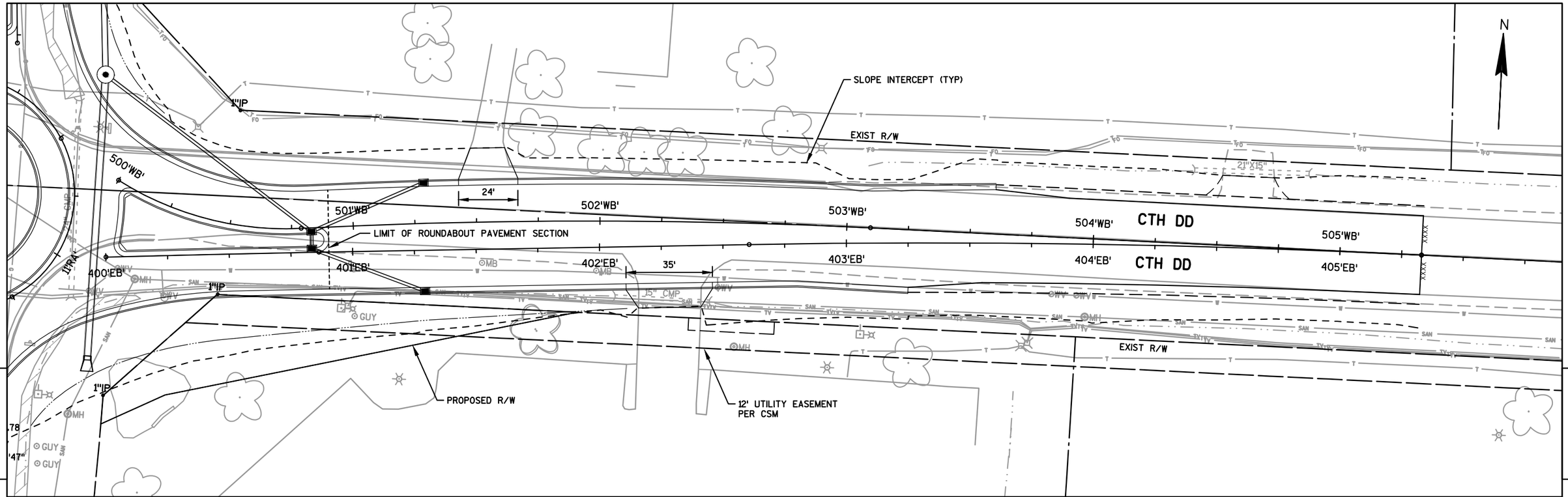
PI STA = 104+67.00NB
PI ELEV = 668.302

PI STA = 104+00.95NB
PI ELEV = 668.733

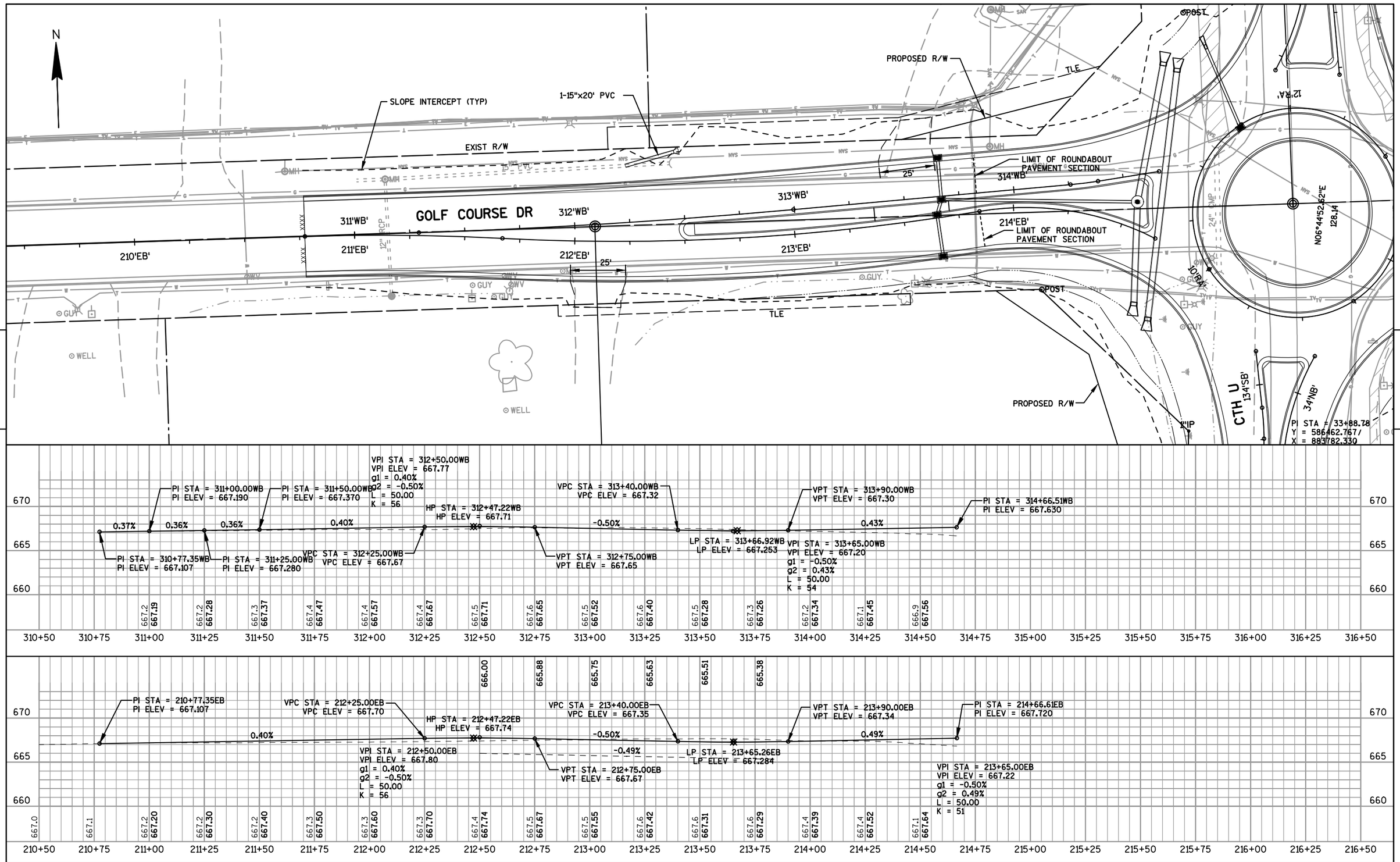
669.0
669.03
668.9
668.89
668.7
668.74
668.4
668.38

103+25
103+50
104+00
104+50
105+00
105+50
106+00
106+50
107+00
107+50
108+00
108+50
109+00
109+50
110+00
110+50
111+00
111+50
112+00
112+50
113+00
113+50
114+00
114+50
115+00
115+50
116+00
116+50
117+00
117+50
118+00
118+25

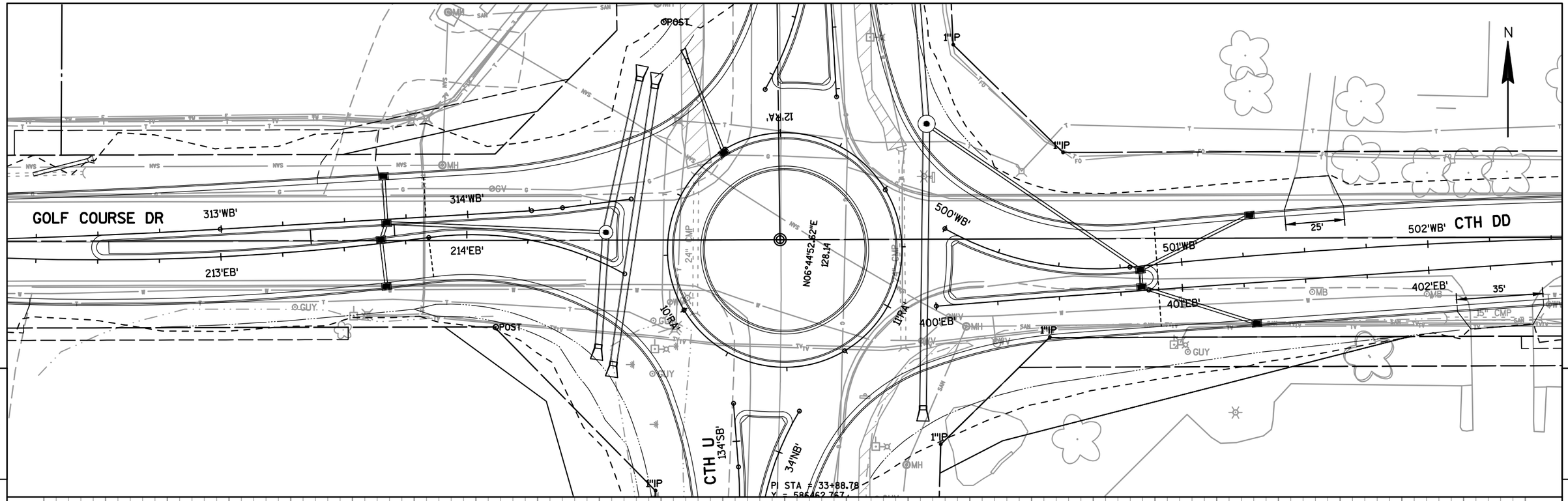
PROJECT NO: 595600-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: CTH U	SHEET 49	E

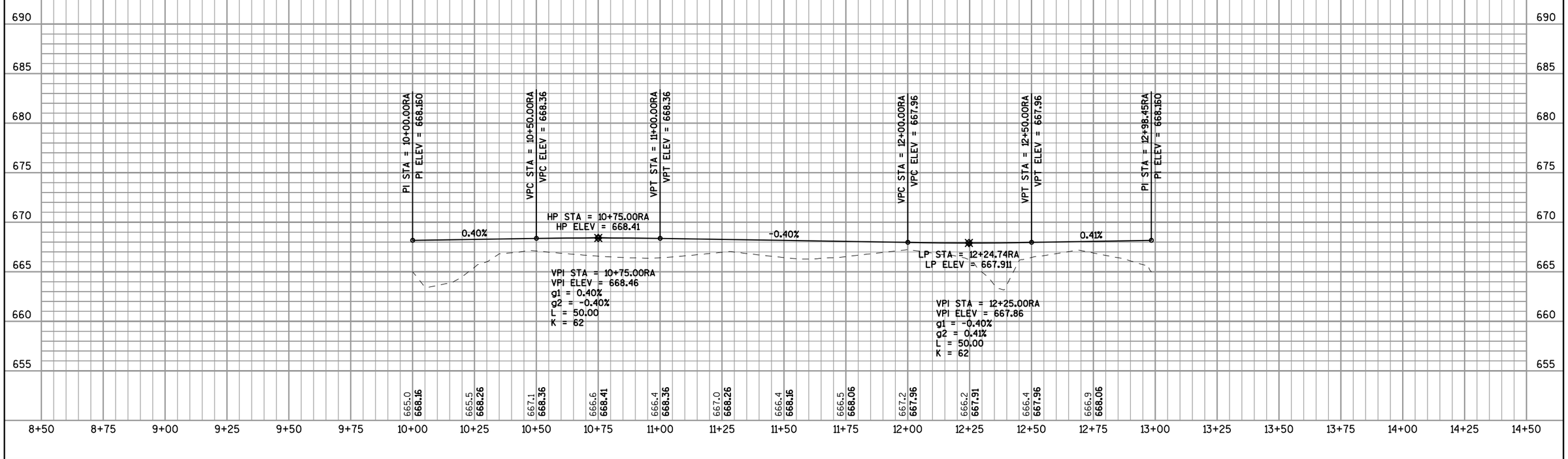


PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: CTH DD (BROADWAY STREET)	SHEET 50	E



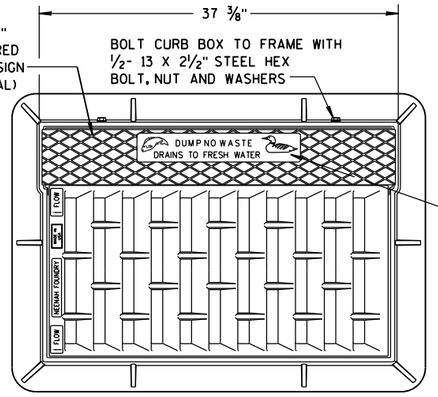
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: GOLF COURSE DRIVE	SHEET 51	E



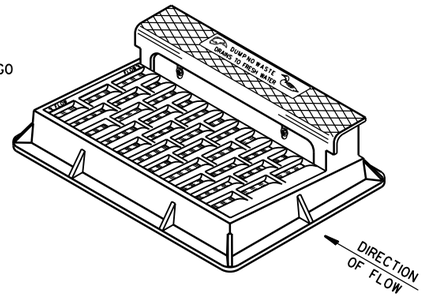


PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	PLAN AND PROFILE: ROUNDABOUT	SHEET 52	E

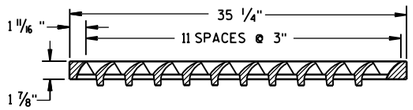
8A5 sheet a: Inlet Covers Type A, H, A-S, H-S & Z

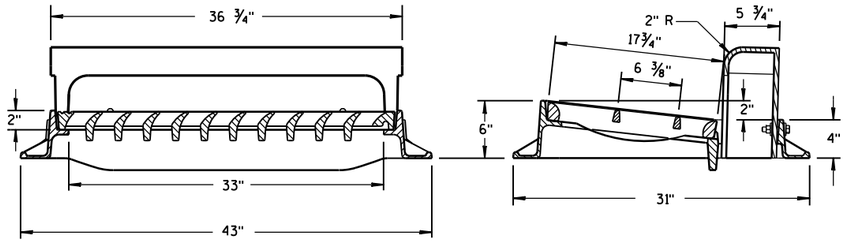


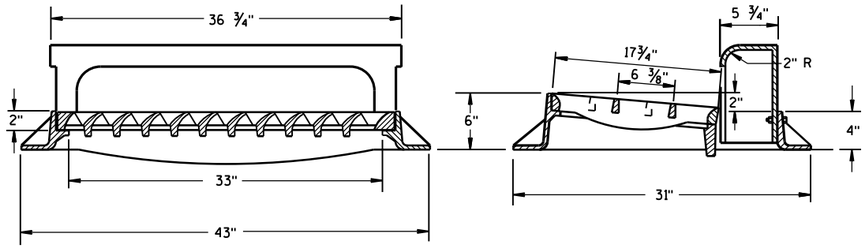
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

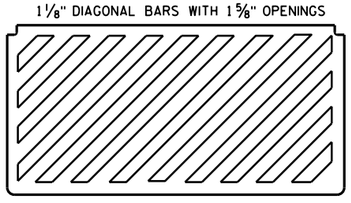






TYPE "H"

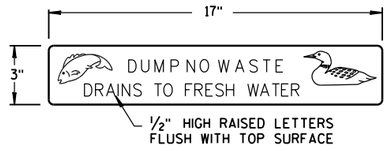
NOTE: EITHER CASTING IS ACCEPTABLE



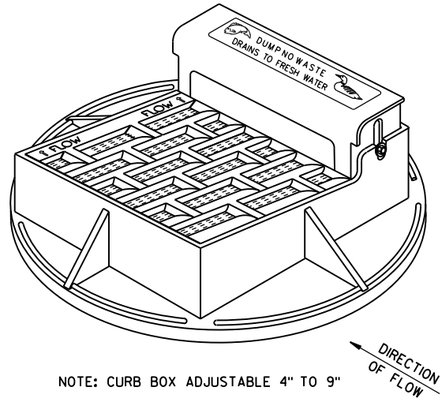
SPECIAL GRATE FOR TYPE "H" COVER

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

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

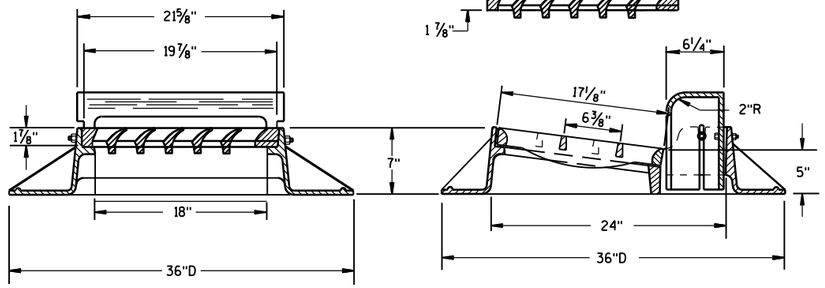


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



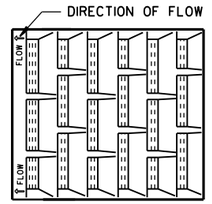
TYPE "A"

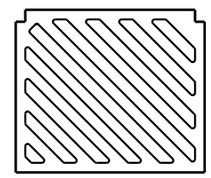
GENERAL NOTES

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.

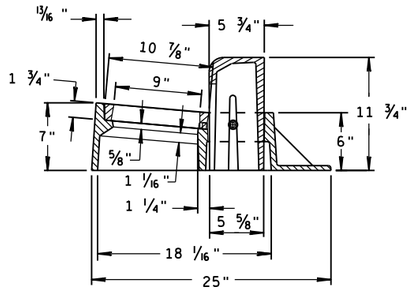


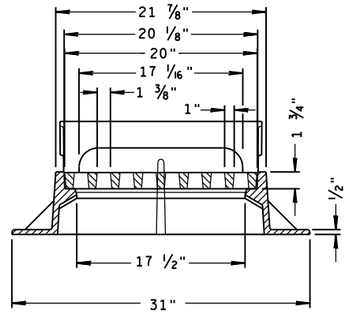


SPECIAL GRATE FOR TYPE "A" COVER

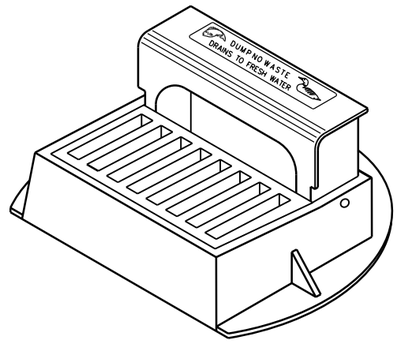
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



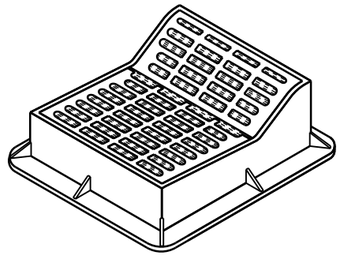
INLET COVERS TYPE A, H, A-S, H-S & Z

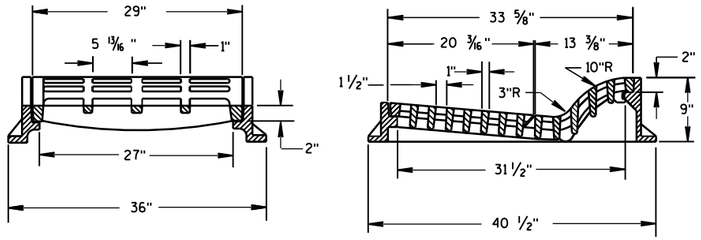
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
S.D.D. 8 A 5-19a

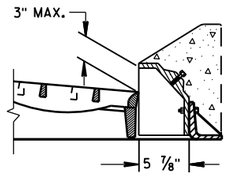
8A5 sheet c: Inlet Covers Type F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S





TYPE "F"

USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

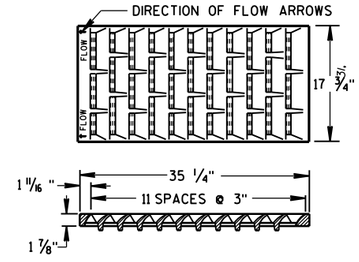
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

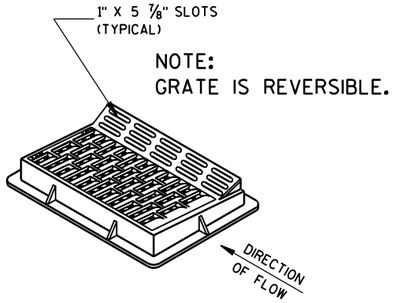
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

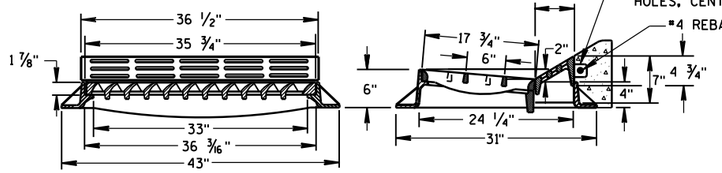
GENERAL NOTES

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 INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



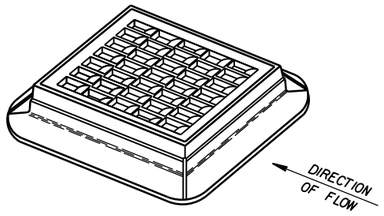


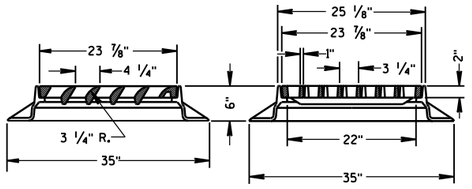


TYPE "HM"

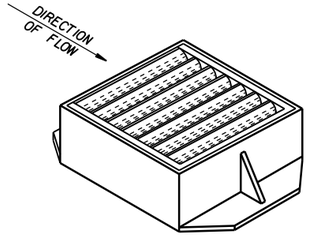
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

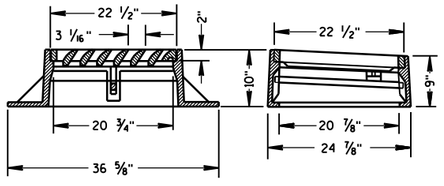
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



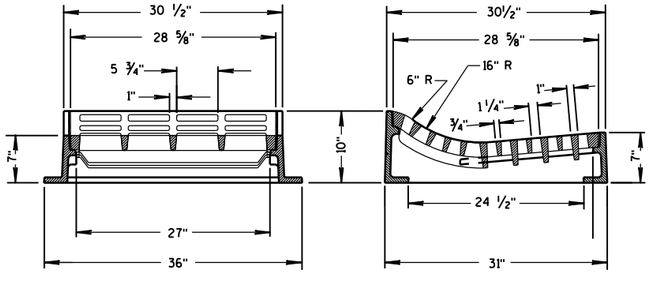


TYPE "S"



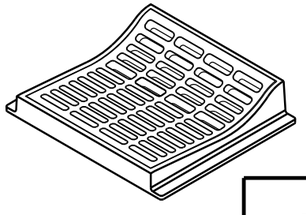


TYPE "V"



TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

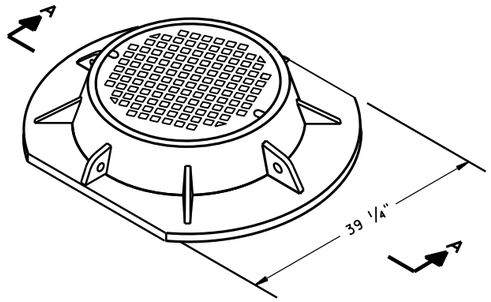
APPROVED
11/27/2013
DATE

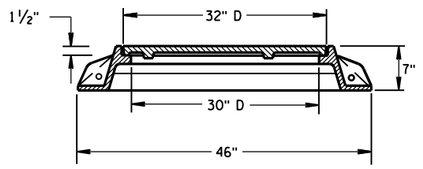
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

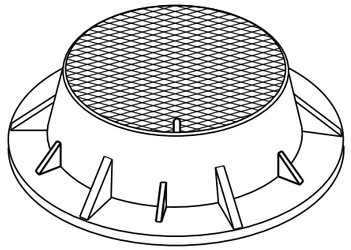
6
S.D.D. 8 A 5-19c

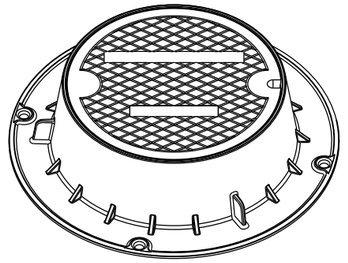
8A5 sheet d: Inlet Covers Type BW; Manhole Covers Type J, J-S, K, L & M

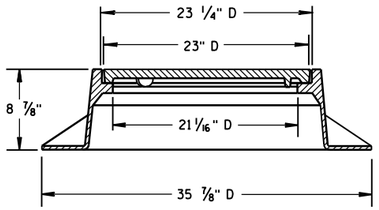


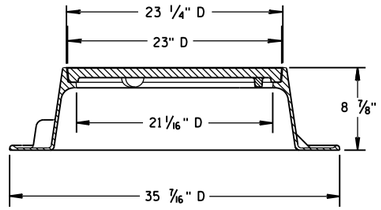


SECTION A-A
TYPE "K"









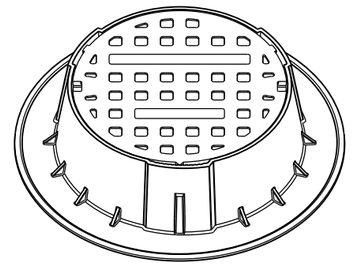
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

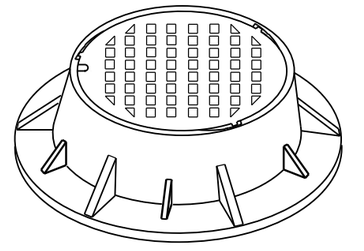
GENERAL NOTES

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.

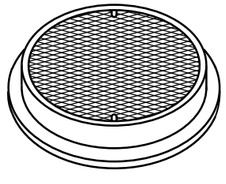
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

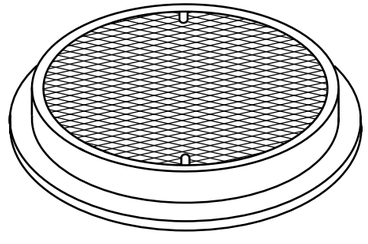
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

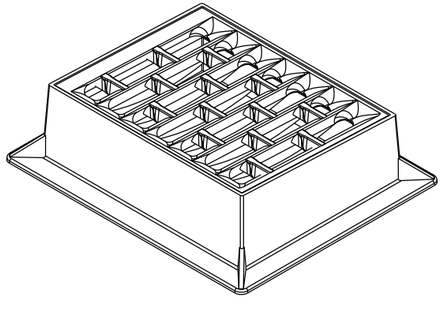


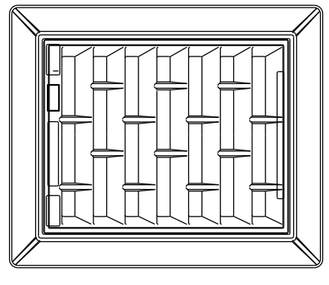


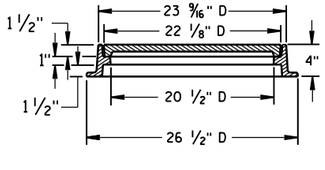
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



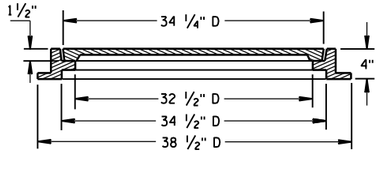




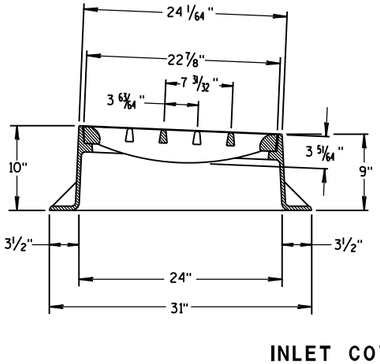


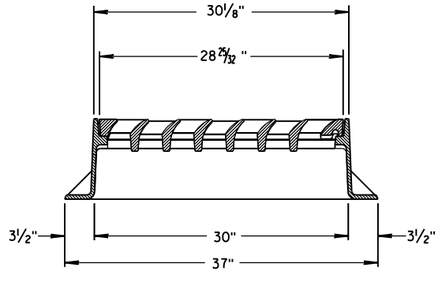


TYPE "L"



TYPE "M"





INLET COVER TYPE "BW"

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

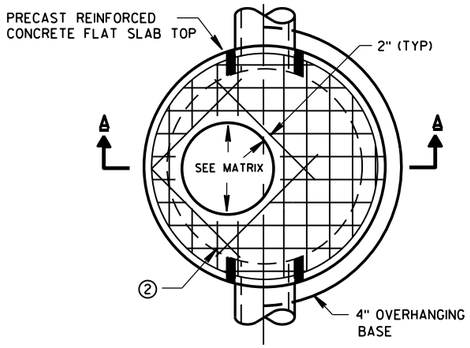
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

6

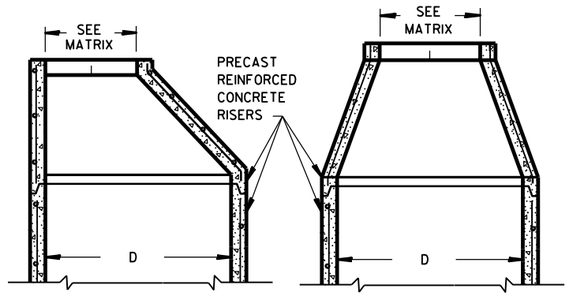
S.D.D. 8 A 5-19d

6

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

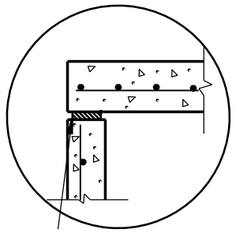


PLAN VIEW CIRCULAR OPENING

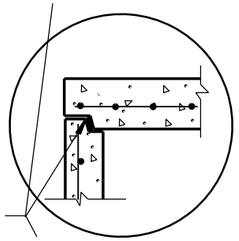


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

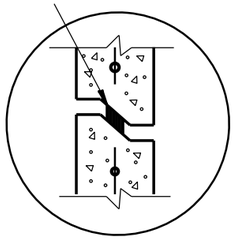


TOP WITH PLAIN END JOINT



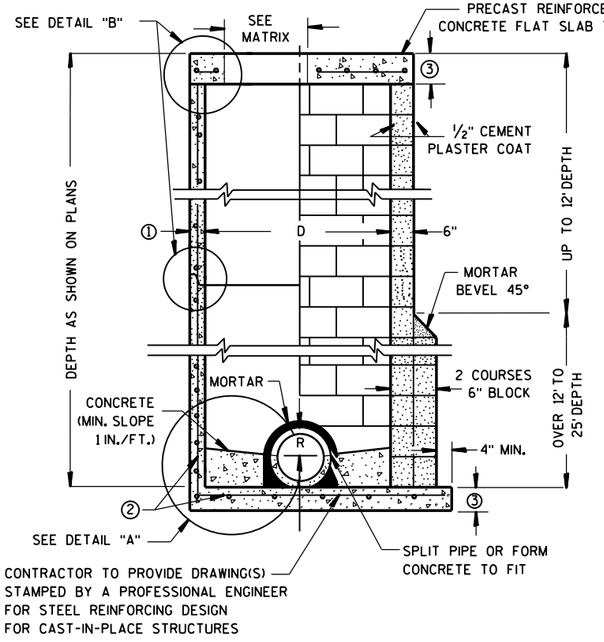
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



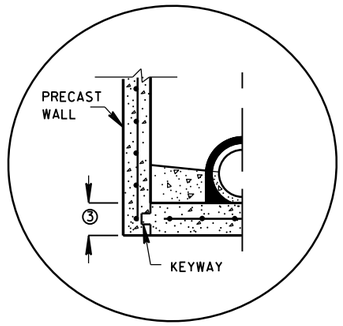
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

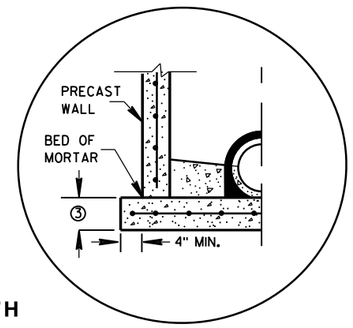


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

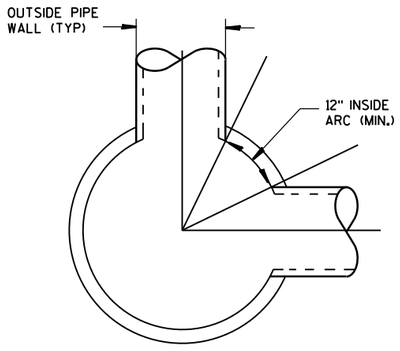


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "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 MANHOLE 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.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

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 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

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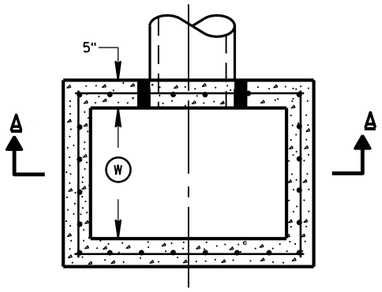
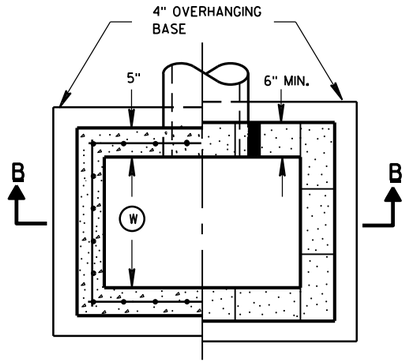
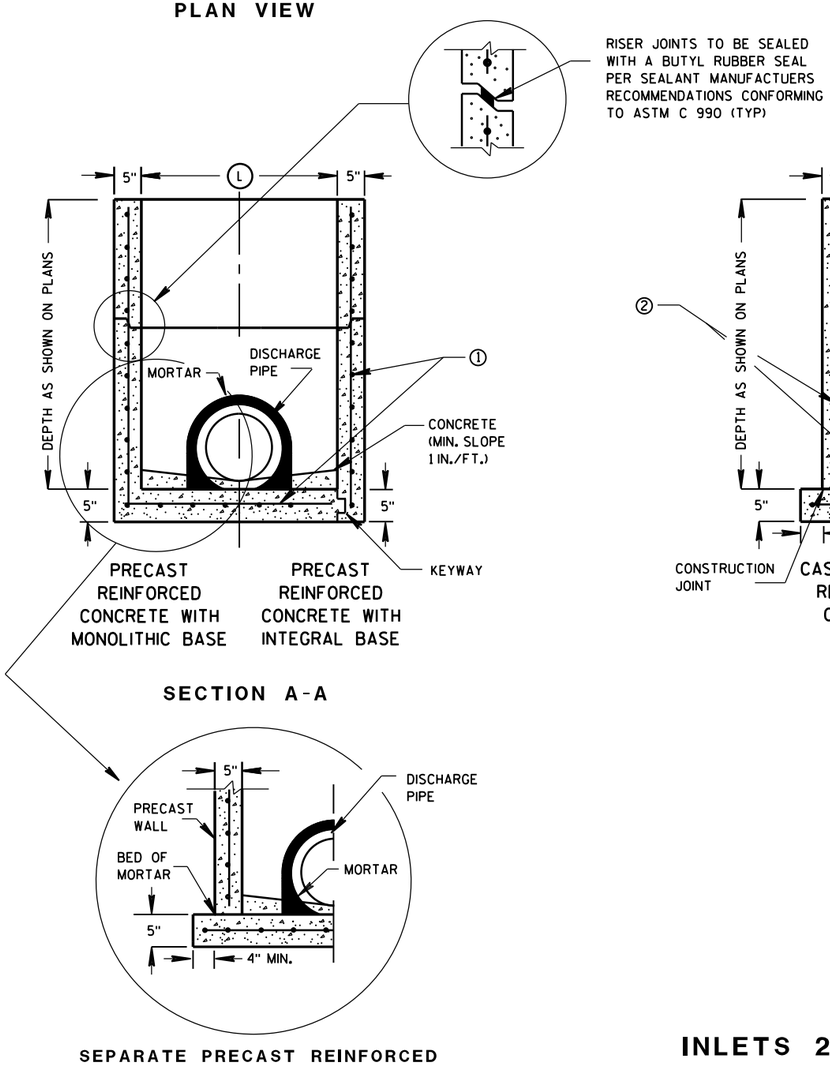
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER



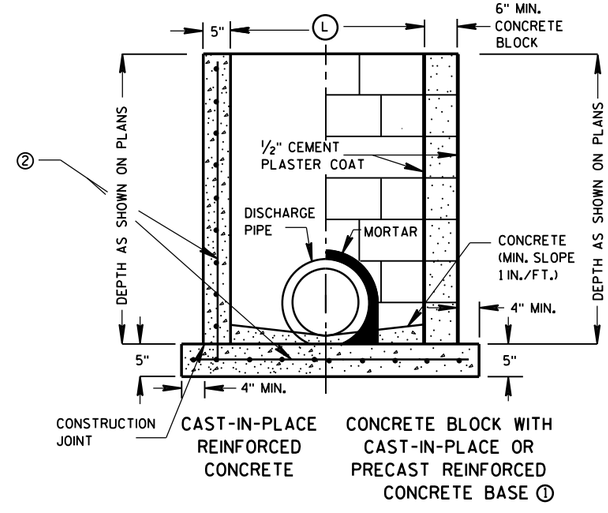
PLAN VIEW



PLAN VIEW



SECTION A-A



SECTION B-B

SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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 PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES 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.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND 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.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH 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.

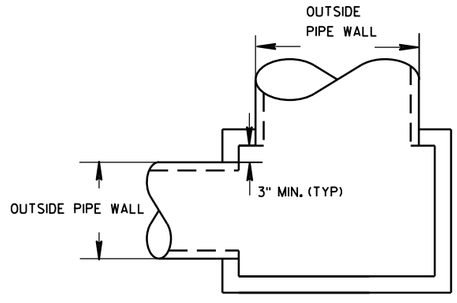
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

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6/5/2012
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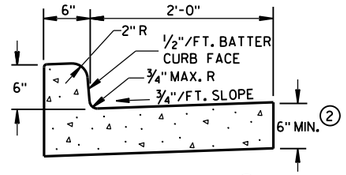
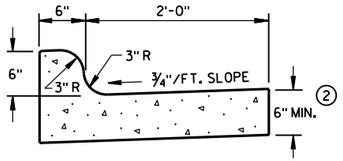
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

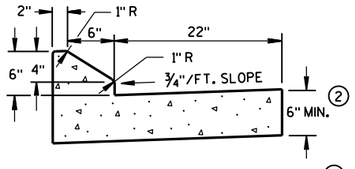
8D1: Concrete Curb, Concrete Curb & Gutter and Ties



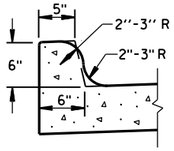
TYPES A & D ①



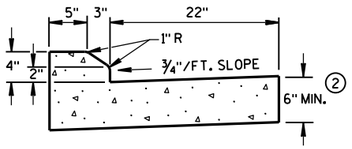
TYPES K & L ①



6" SLOPED CURB TYPES G & J ①

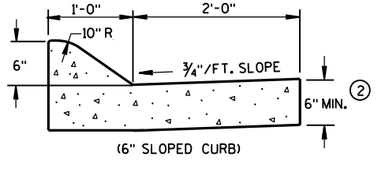


OPTIONAL CURB SHAPE FOR TYPES K & L ①

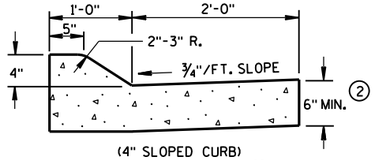


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

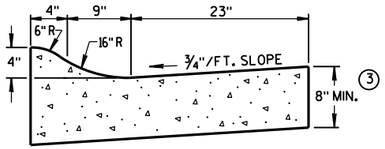


(6" SLOPED CURB)



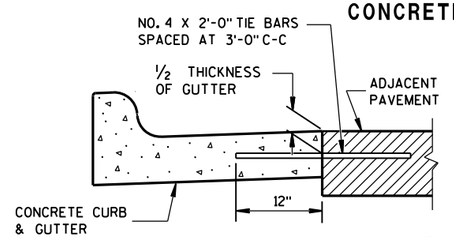
(4" SLOPED CURB)

TYPES A & D ①

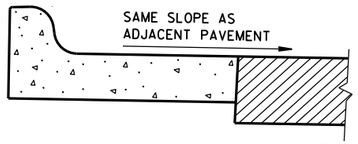


4" SLOPED CURB TYPES R & T ① ④

CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION ①



REVERSE SLOPE GUTTER ⑤
(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.

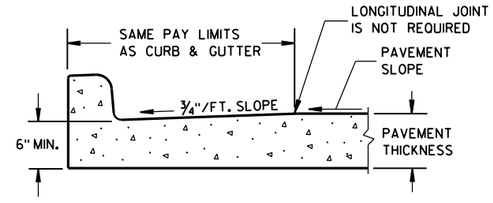
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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.

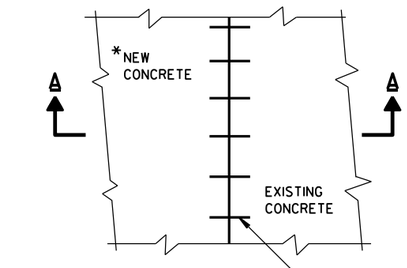
③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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.

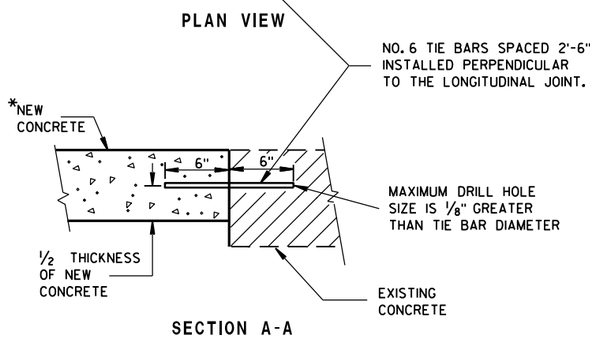


PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



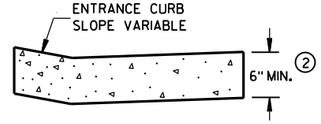
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

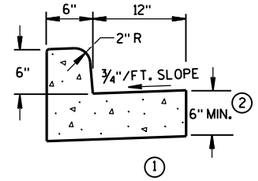


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

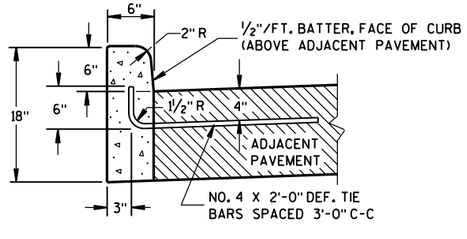


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

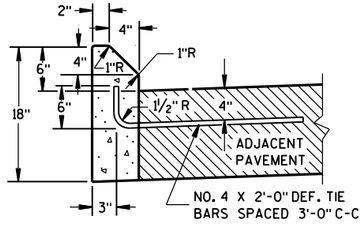


① TYPES A & D

CONCRETE CURB & GUTTER 18"

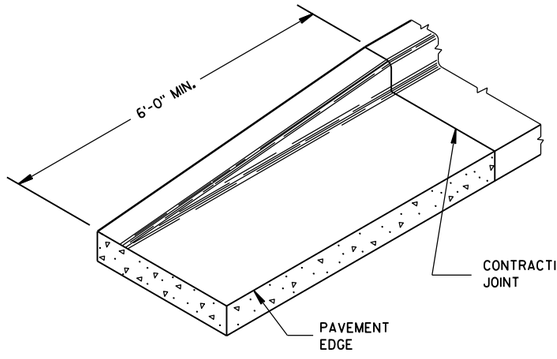


① TYPES A & D



① TYPES G & J

CONCRETE CURB



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

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DEPARTMENT OF TRANSPORTATION

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/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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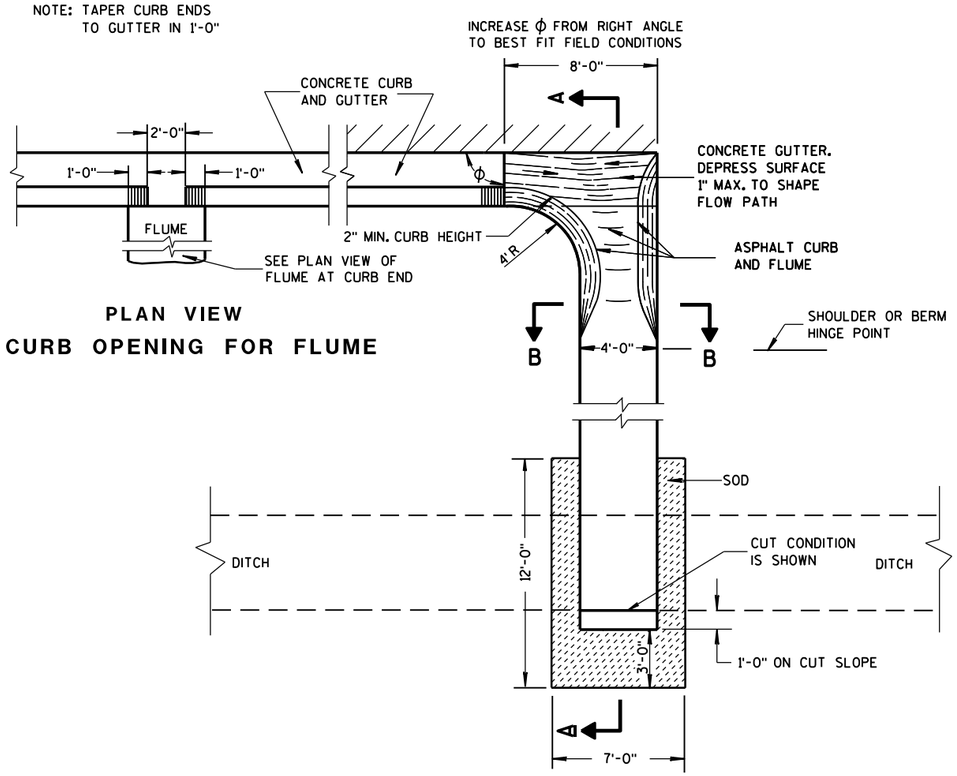
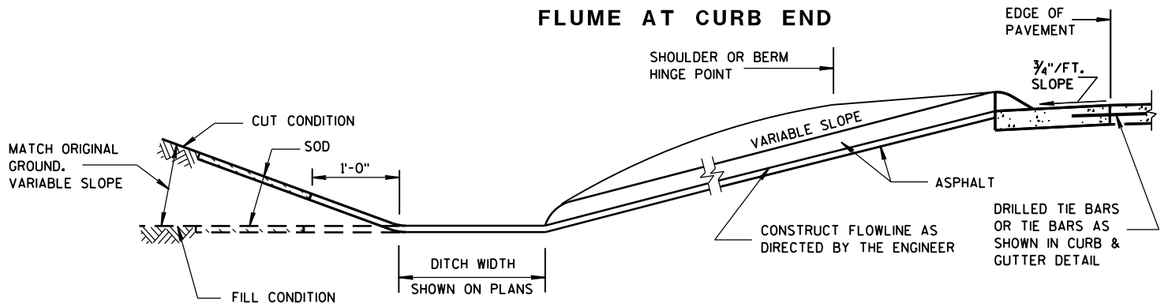
S.D.D. 8 D 1-17

ASPHALTIC FLUME

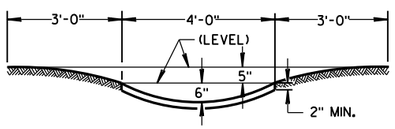


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

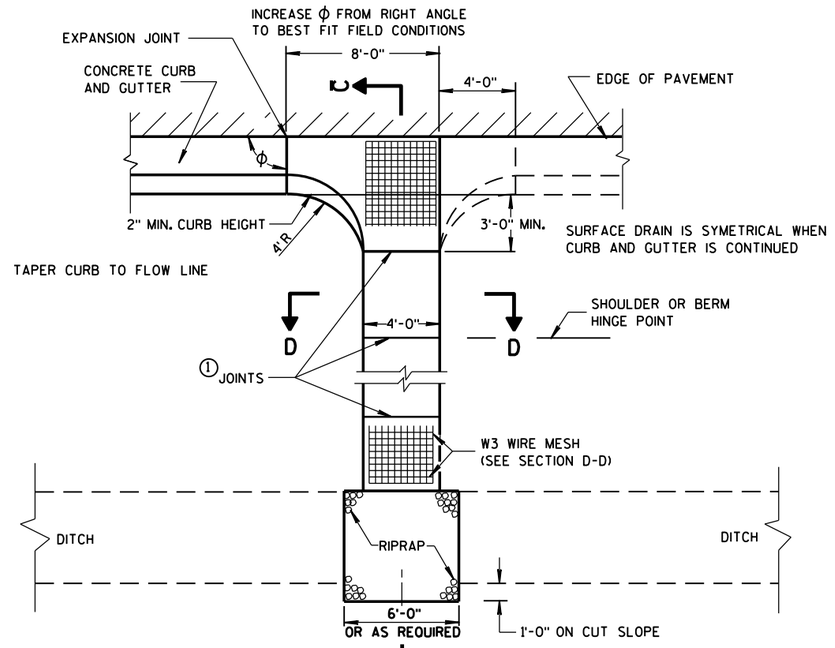
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

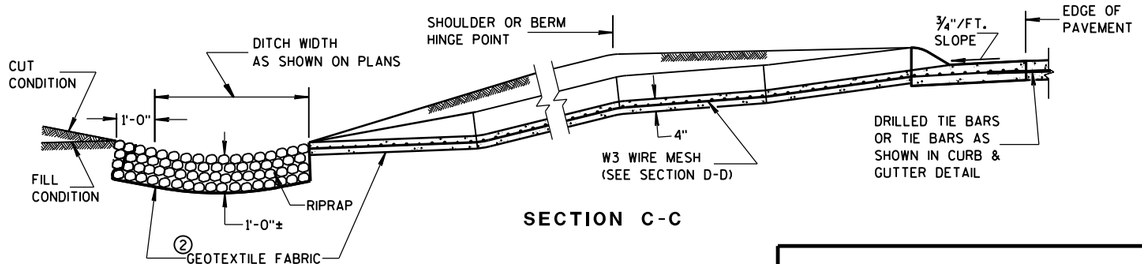
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

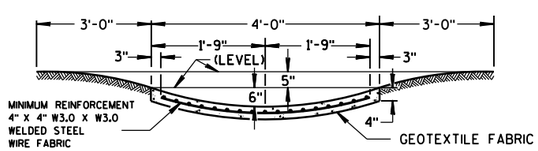
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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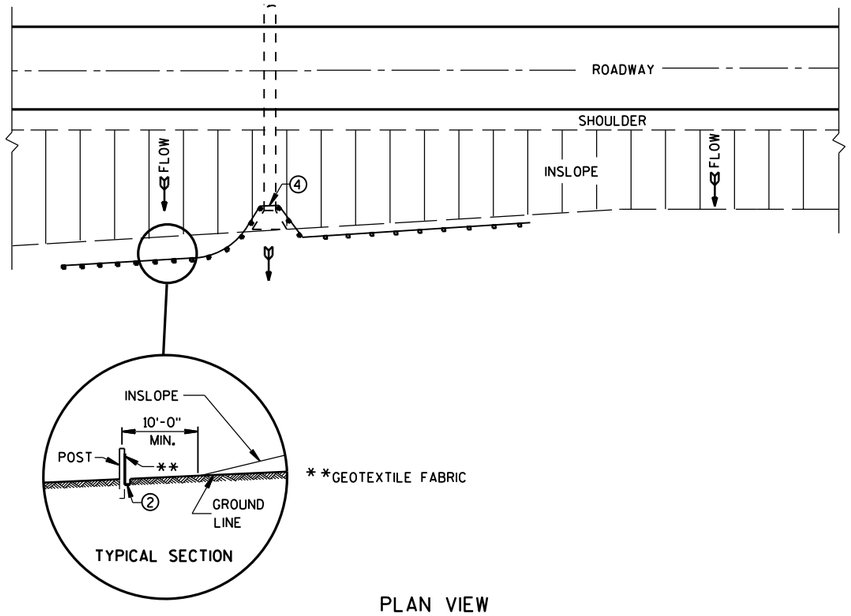
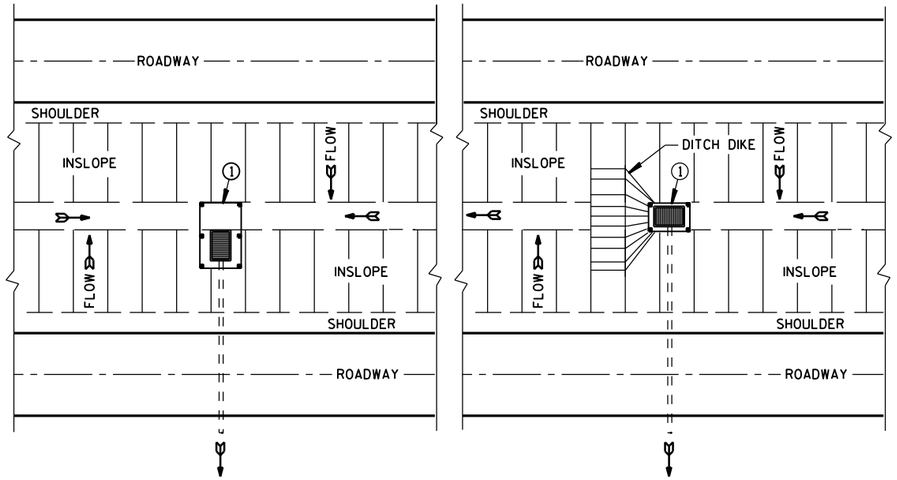
FHWA

8E9: Silt Fence



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.

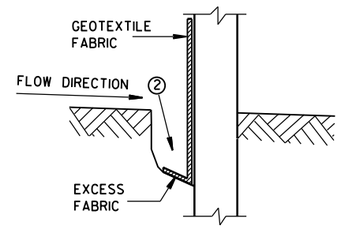
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

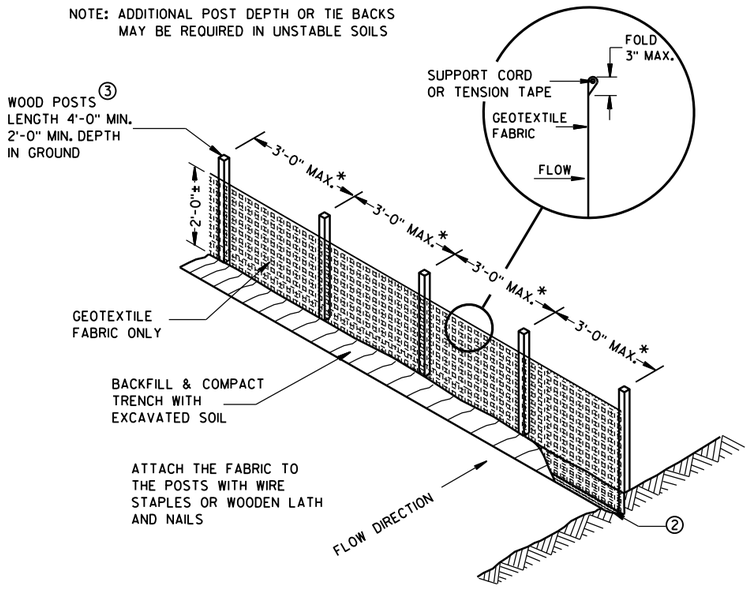
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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.

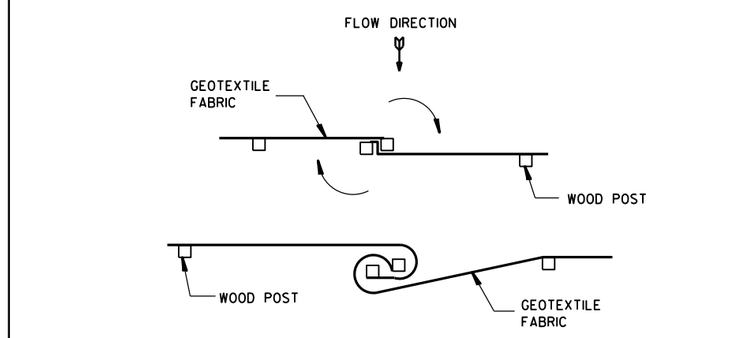


TRENCH DETAIL

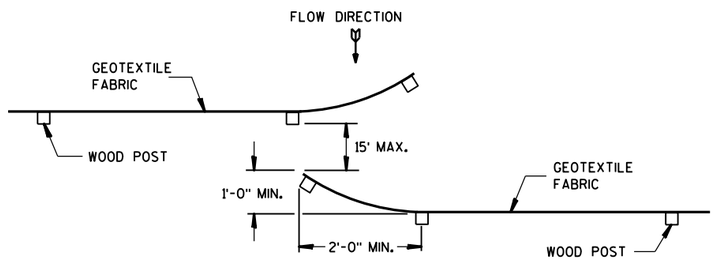


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

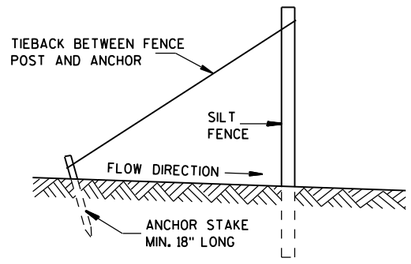


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤

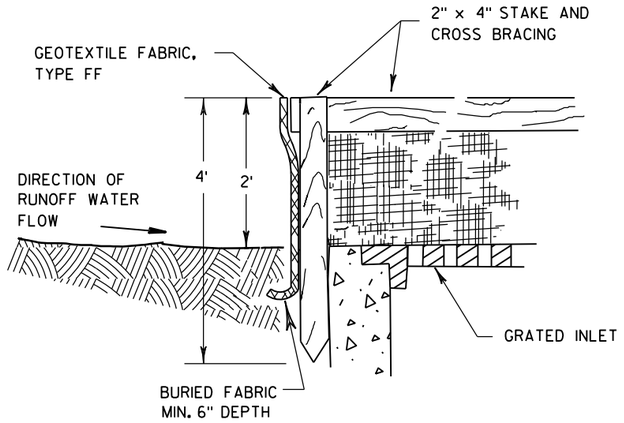


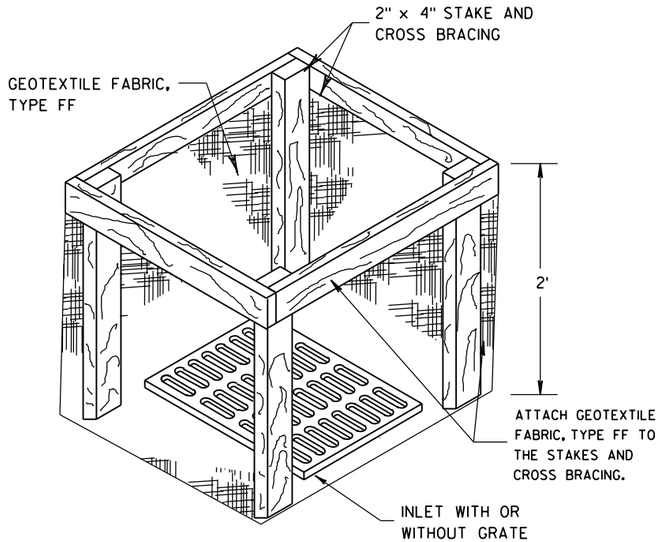
SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

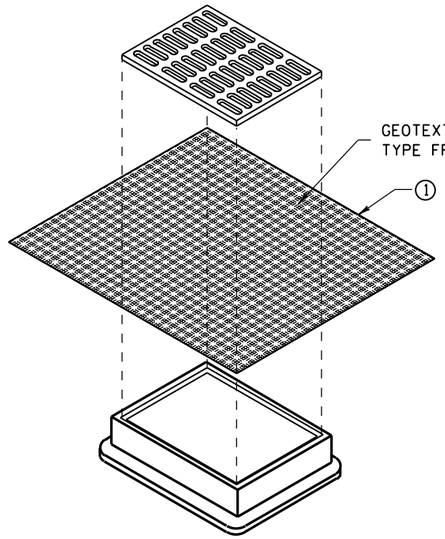
SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4-29-05 DATE	/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

8E10: Inlet Protection Type A, B, C and D



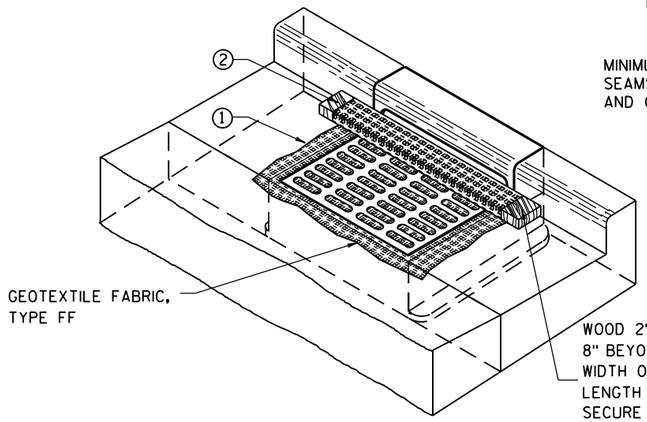


INLET PROTECTION, TYPE A

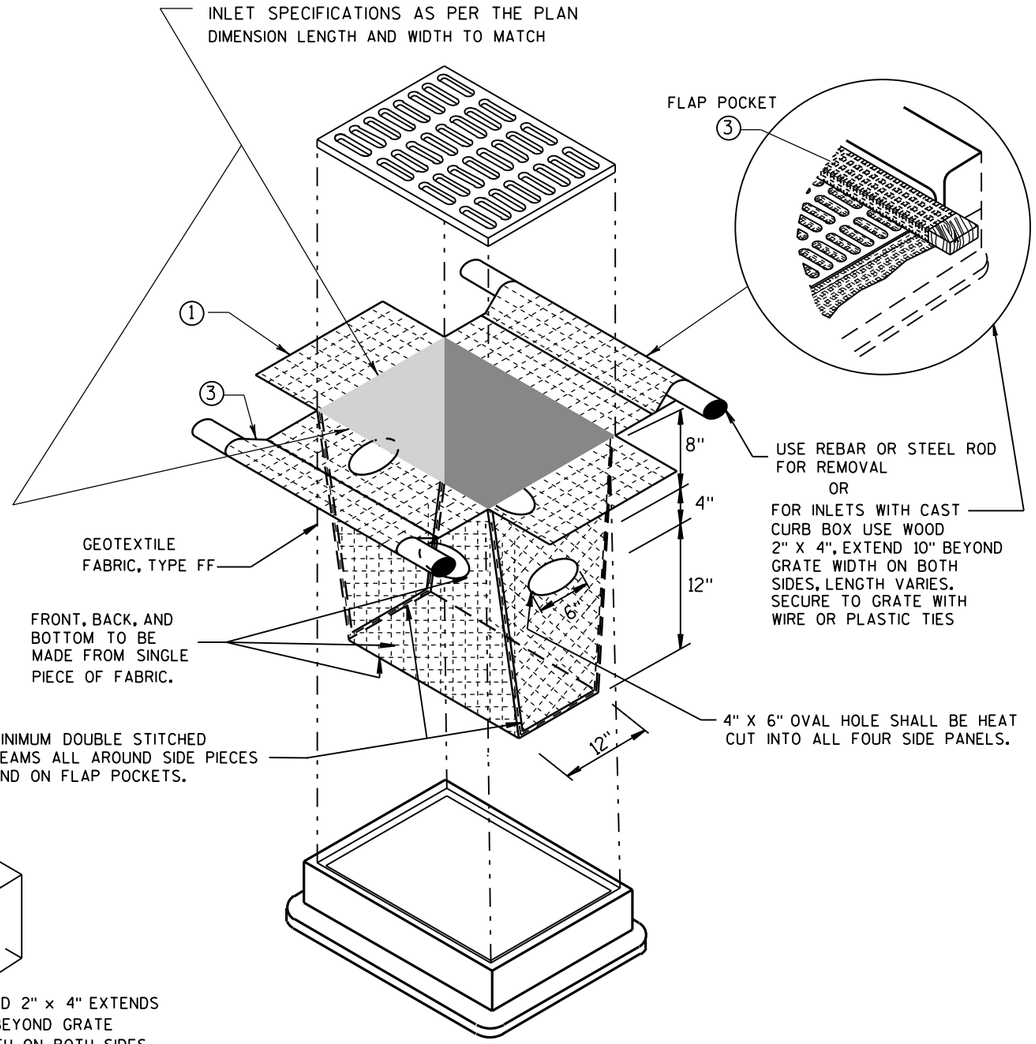


INLET PROTECTION, TYPE B (WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

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

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-16-02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 10-2

8F1: Apron Endwalls for Culvert Pipe

METAL APRON ENDWALLS

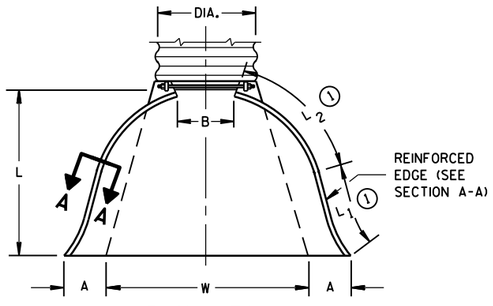
PIPE DIA. (IN.)	MIN. THICK. (inches)		DIMENSIONS (inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 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

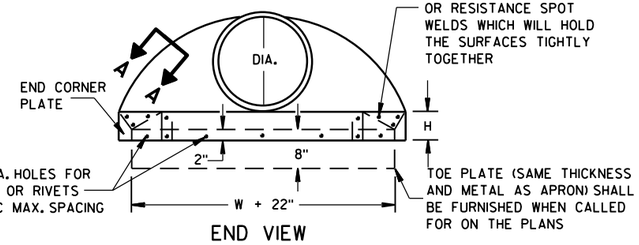
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 7/8	72 7/8	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

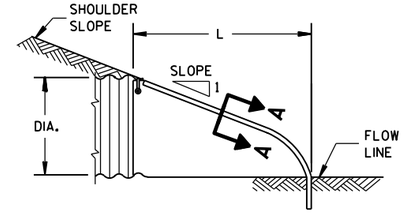
*MINIMUM
**MAXIMUM



PLAN VIEW

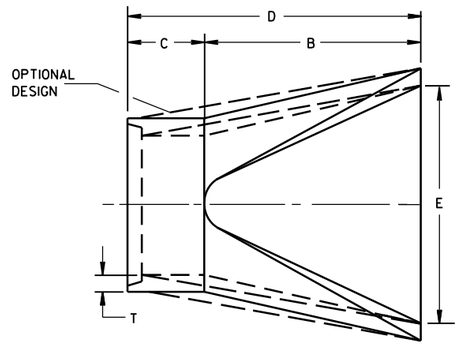


END VIEW

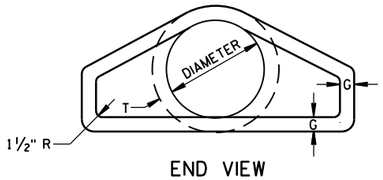


SIDE ELEVATION

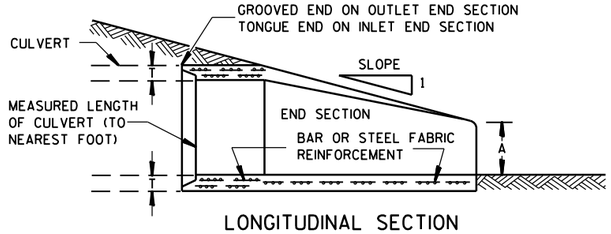
METAL ENDWALLS



PLAN

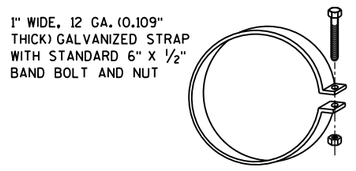


END VIEW



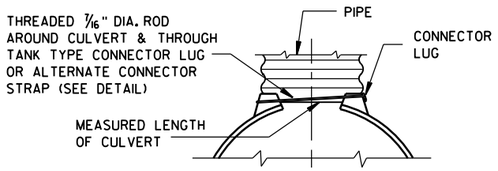
LONGITUDINAL SECTION

CONCRETE ENDWALLS

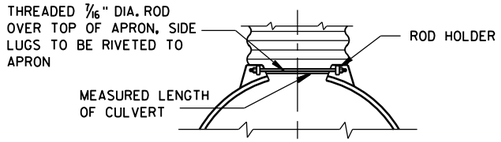


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

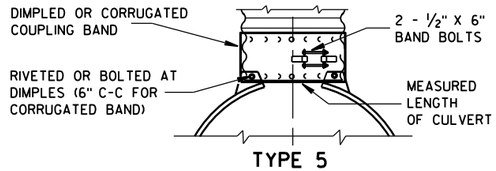


TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

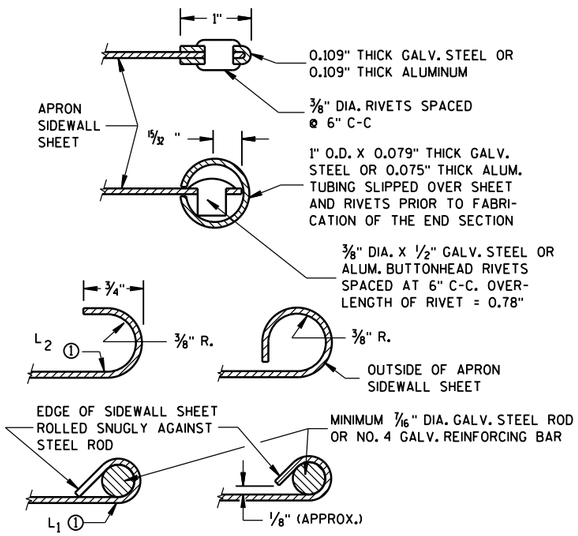
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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
8-30-94
DATE

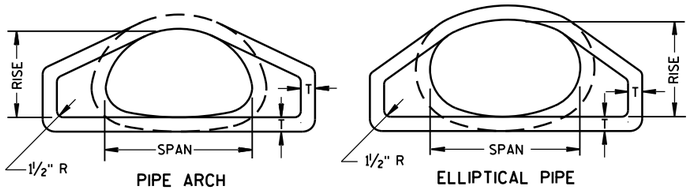
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

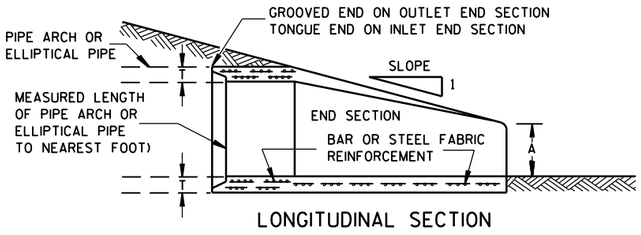
6

S.D.D. 8 F 1-11

8F2: Apron Endwalls for Pipe Arch and Elliptical Pipe



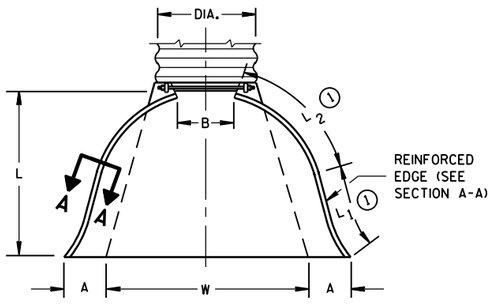
END VIEW



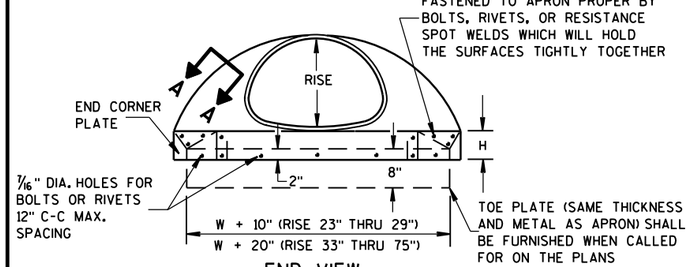
LONGITUDINAL SECTION

PLAN VIEW

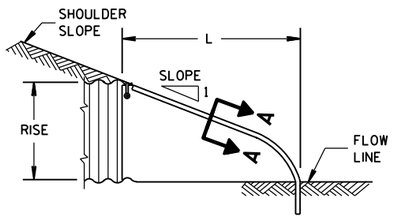
CONCRETE ENDWALLS



PLAN VIEW

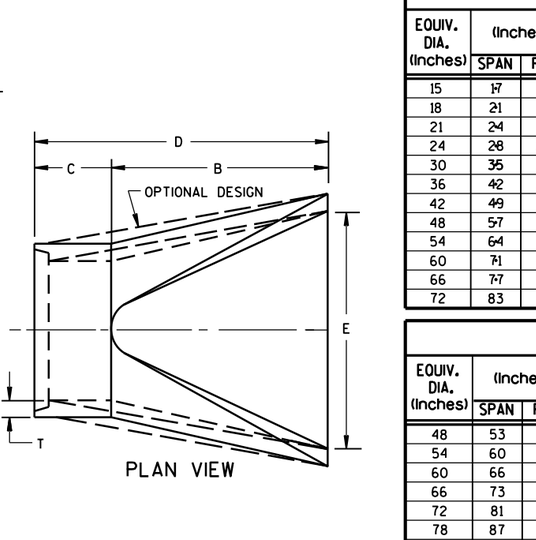


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19 3/8	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37 5/8	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45 3/8	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	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
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

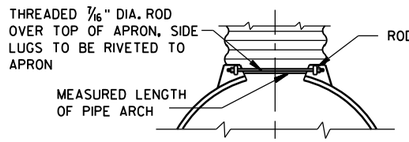
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 1/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

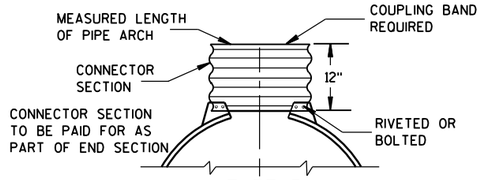
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



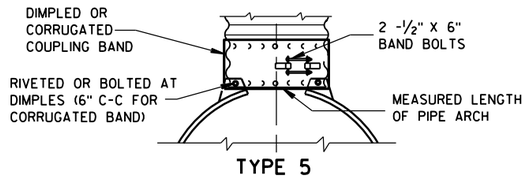
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

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 APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH 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 ARCH 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 77" X 52" THROUGH 112" X 75" 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 ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

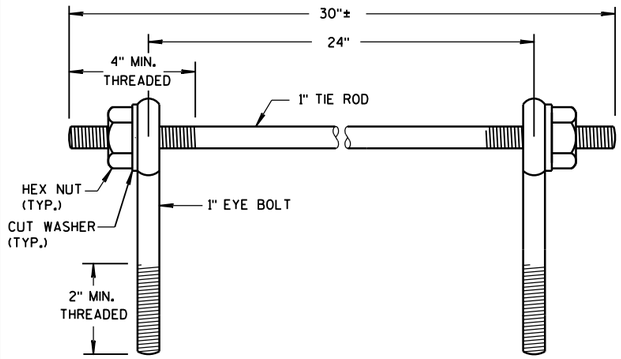
APPROVED

11-30-94 — DATE

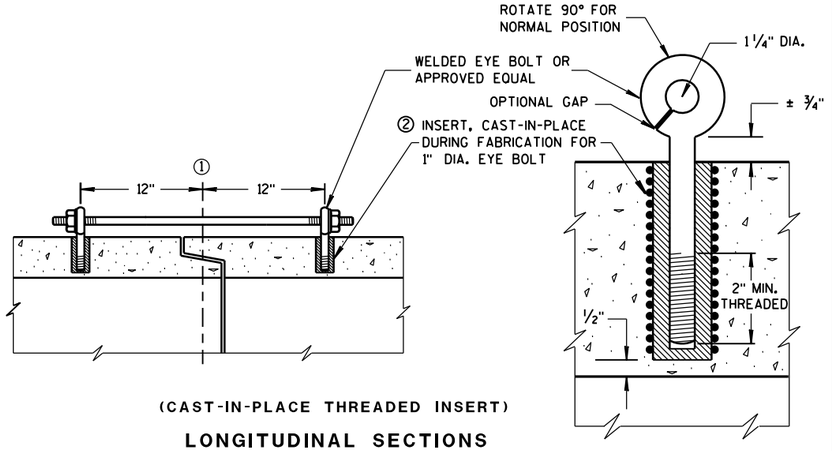
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

8F4: Joint Ties for Concrete Pipe



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.

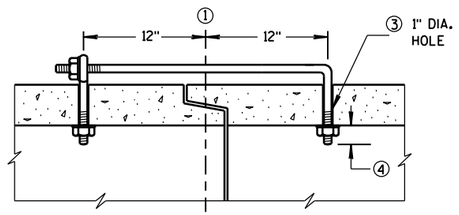
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

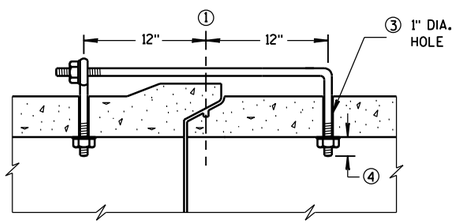
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

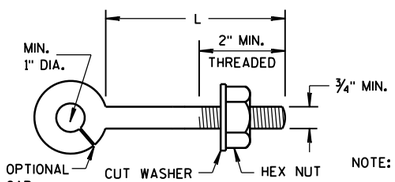


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

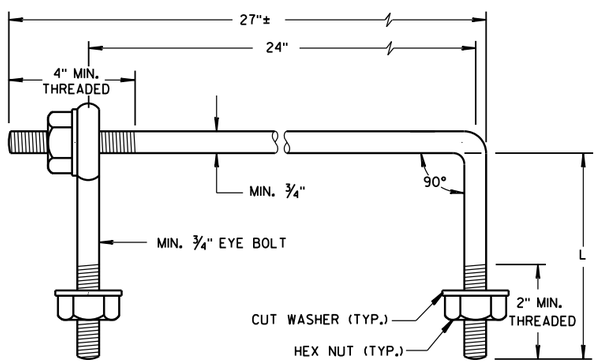
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

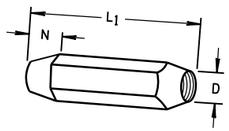
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

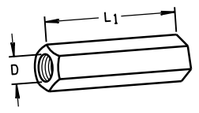
ADJUSTABLE TIE ROD TABLE

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



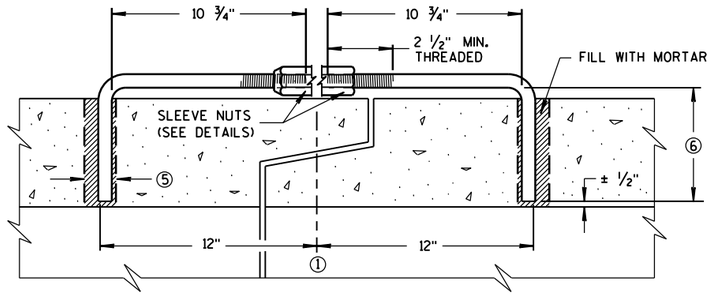
TAPERED



PLAIN

RIGHT AND LEFT THREADS

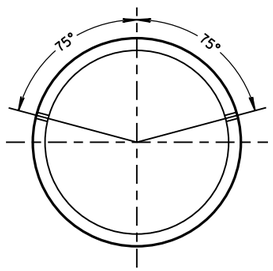
SLEEVE NUTS



LONGITUDINAL SECTION

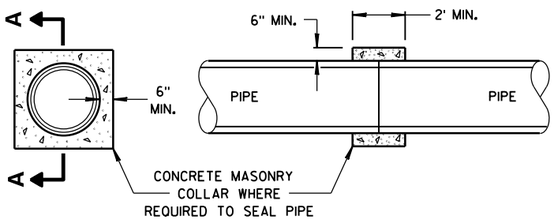
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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 DEVELOPMENT ENGINEER
FHWA

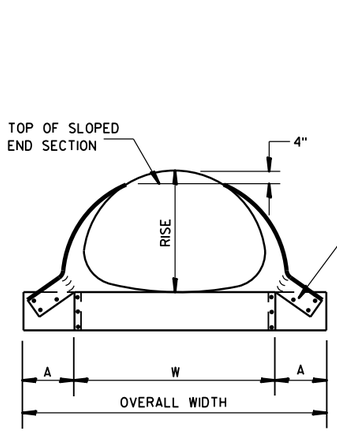
6

S.D.D. 8 F 4-7

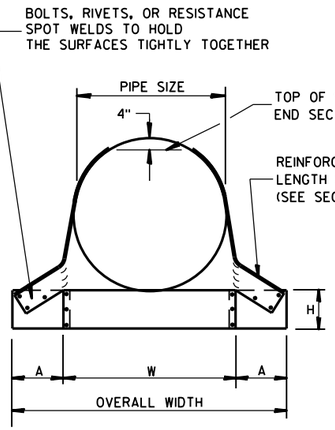
6

S.D.D. 8 F 4-7

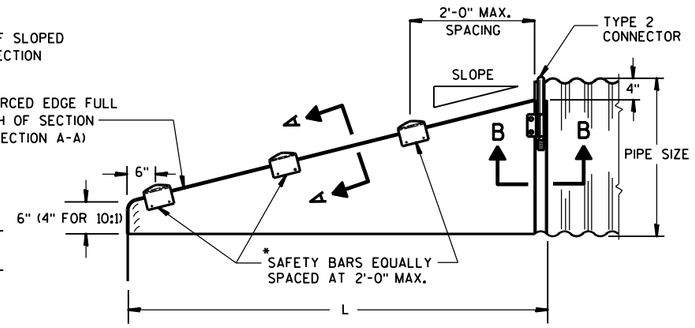
8F7: Steel Apron Endwalls for Culvert Pipe and Pipe Arch Sloped Side Drains



FRONT VIEW



FRONT VIEW



SIDE VIEW

GENERAL NOTES

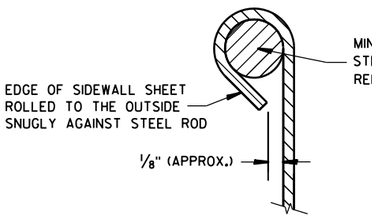
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS

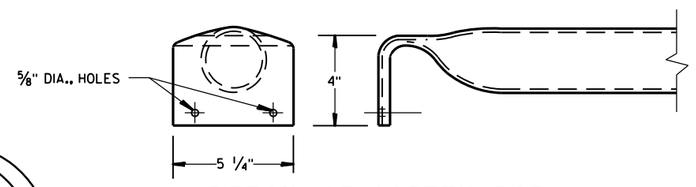
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	——	——
48	.109	16	12	54	86	4:1	152	6:1	228	——	——
54	.109	16	12	60	92	4:1	176	6:1	264	——	——
60	.109	16	12	66	98	4:1	200	6:1	300	——	——



SECTION A-A

*NOTE:
THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

3" GALVANIZED PIPE. FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.

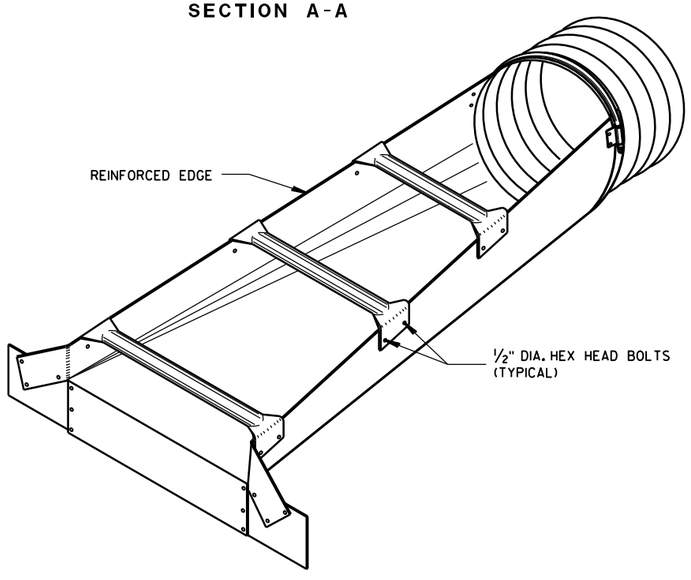


DETAIL OF SAFETY BAR

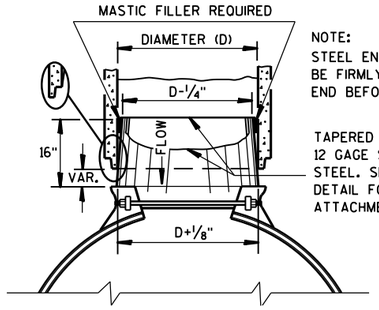
STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) ①	DIMENSIONS (Inches) A	H	W	OVERALL WIDTH	L DIMENSIONS SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	4:1	92	6:1	138	——	——
48	57	38	.109	16	12	63	95	4:1	112	6:1	168	——	——
54	64	43	.109	16	12	70	102	4:1	132	6:1	198	——	——

① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".
② ACTUAL SLOPE GREATER THAN 10:1.



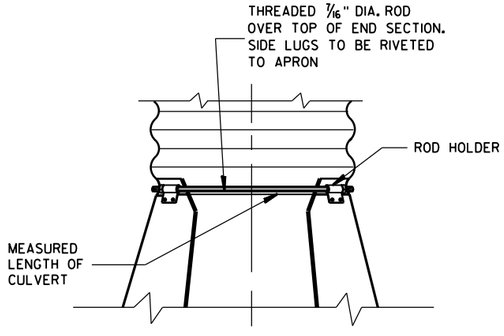
ISOMETRIC VIEW



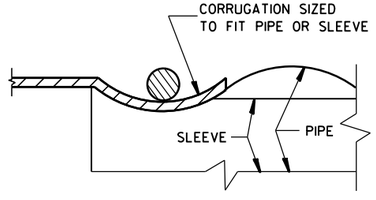
NOTE:
STEEL END SECTION SHALL BE FIRMLY WEDGED INTO PIPE END BEFORE BACKFILLING

TAPERED SLEEVE TO BE 12 GAGE SMOOTH GALVANIZED STEEL. SEE SECTION B-B DETAIL FOR END SECTION ATTACHMENT.

STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



TYPE 2
CONNECTION DETAIL



SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/14/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

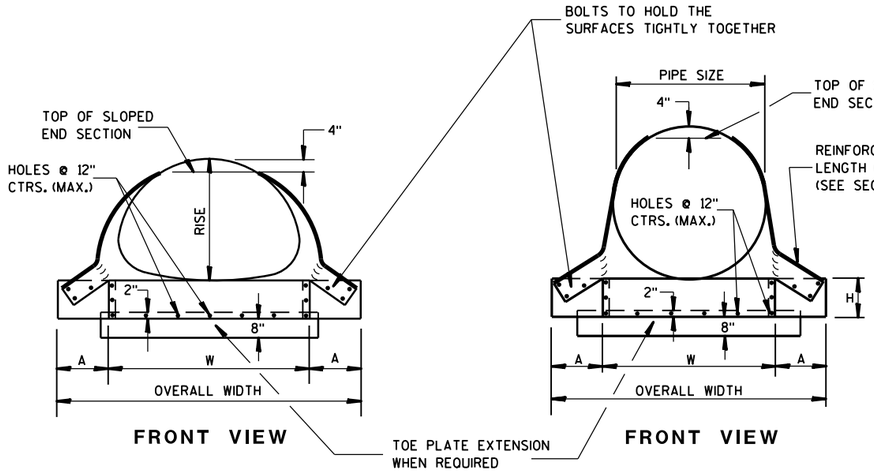
6

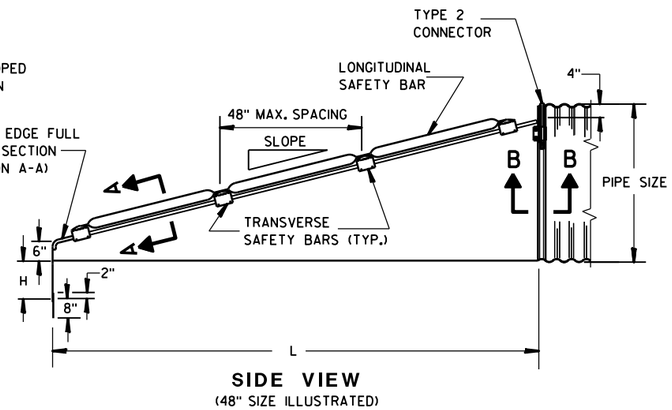
S.D.D. 8 F 7-5

6

S.D.D. 8 F 7-5

8F8: Steel Endwalls for Culvert Pipe and Pipe Arch Sloped Cross Drains





SIDE VIEW
(48" SIZE ILLUSTRATED)

GENERAL NOTES

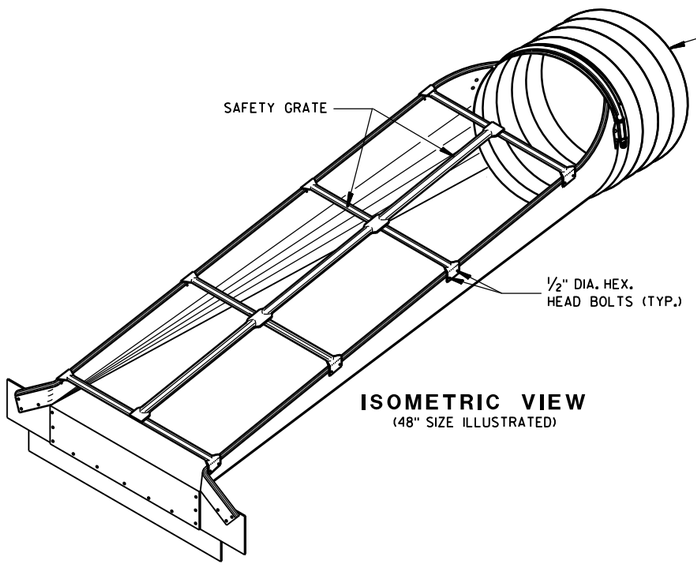
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

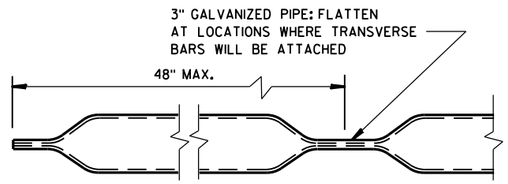
SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS

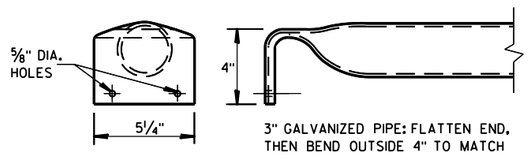
PIPE DIA. (IN.)	MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104	6:1	156
42	.109	12	16	12	48	80	4:1	128	6:1	192
48	.109	12	16	12	54	86	4:1	152	6:1	228
54	.109	12	16	12	60	92	4:1	176	6:1	264
60	.109	12	16	12	66	98	4:1	200	6:1	300



ISOMETRIC VIEW
(48" SIZE ILLUSTRATED)



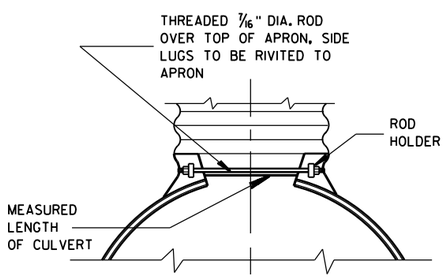
LONGITUDINAL SAFETY BAR



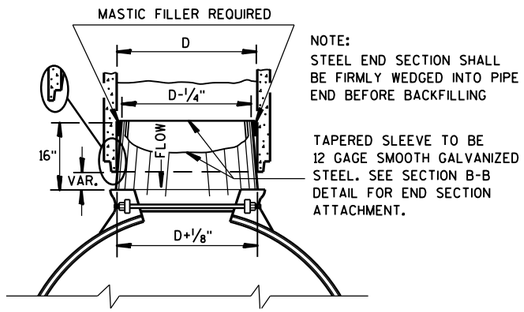
TRANSVERSE SAFETY BAR

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS

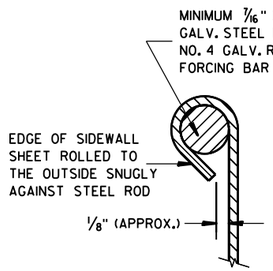
EQUIV. DIA. (IN.)	INCHES		MIN. THICK.		DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE	IN.	GAGE	A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138
48	57	38	.109	12	16	12	63	95	4:1	112	6:1	168
54	64	43	.109	12	16	12	70	102	4:1	132	6:1	198
60	71	47	.109	12	16	12	77	109	4:1	148	6:1	222



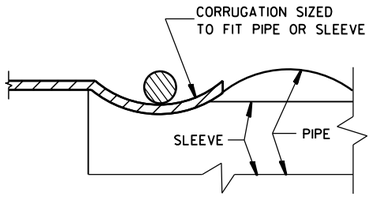
TYPE 2 CONNECTOR DETAIL



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



SECTION A-A



SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

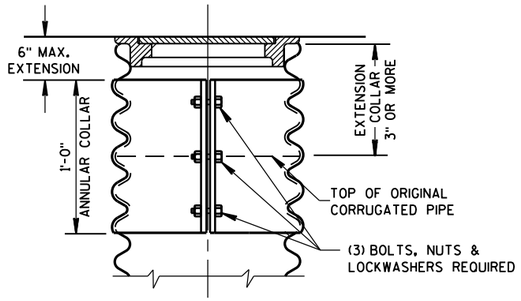
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

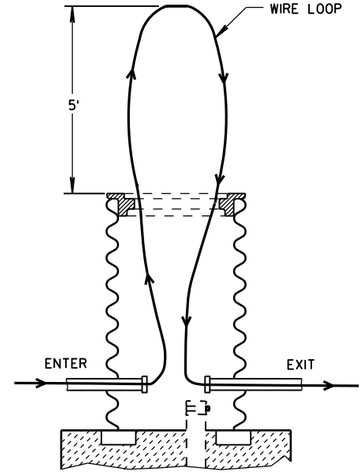
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

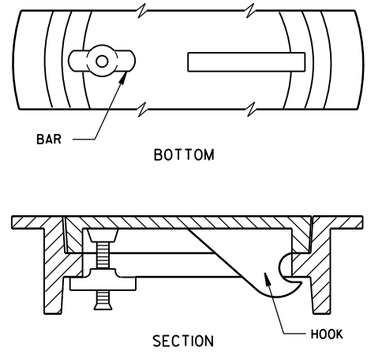
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

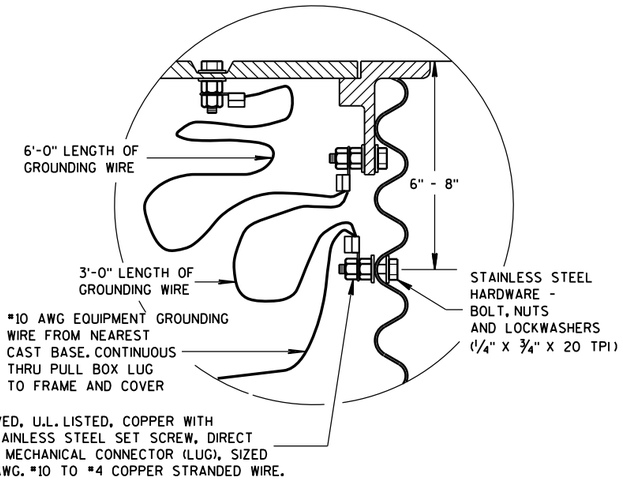


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

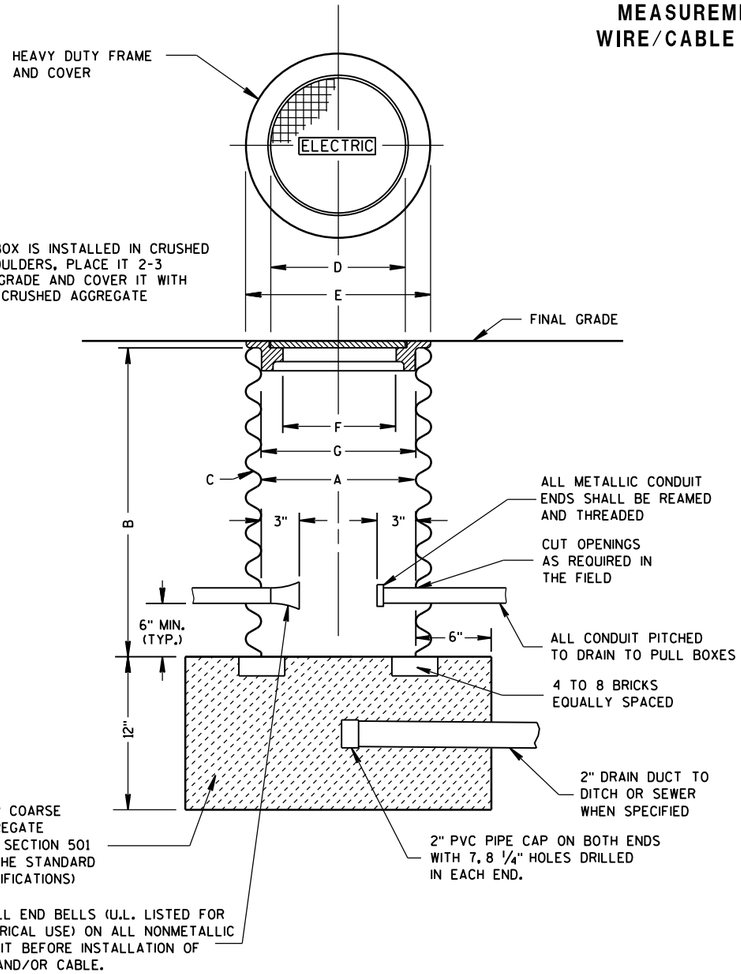


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE

PULL BOX

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

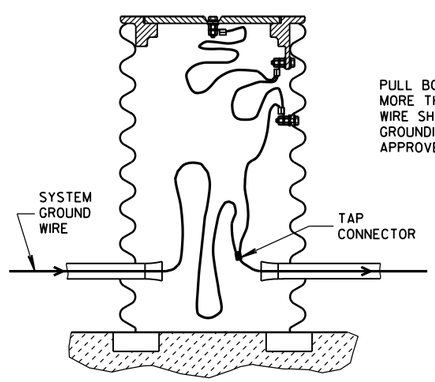
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL ENGINEER
FHWA

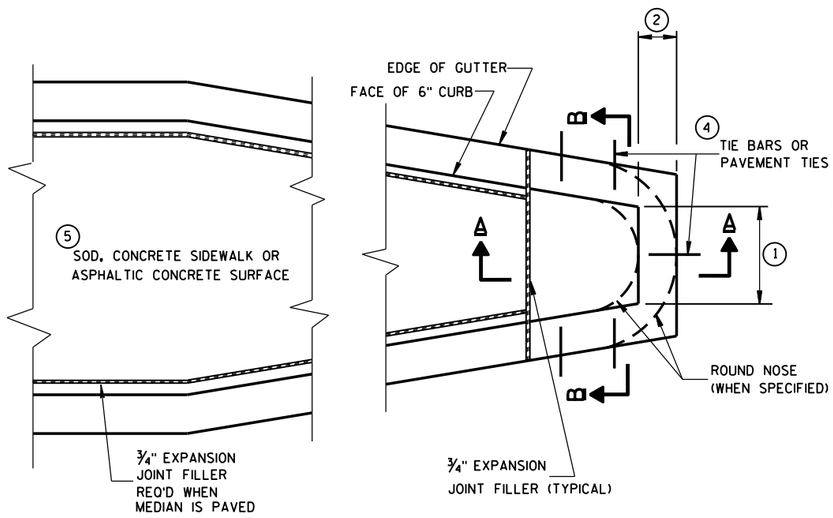
6

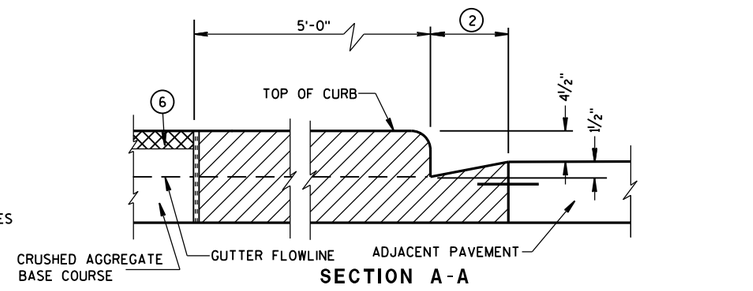
S.D.D. 9 B 4-11

6

S.D.D. 9 B 4-11

11B2: Concrete Median Nose





CONCRETE MEDIAN BLUNT NOSE DETAIL

GENERAL NOTES

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

(1) SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).

(2) WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.

(3) DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:

(1) NEW OR EXISTING CONCRETE PAVEMENT.

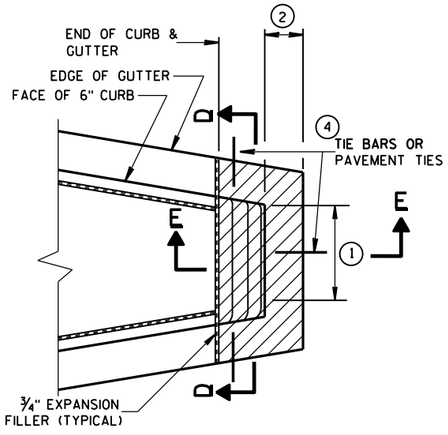
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

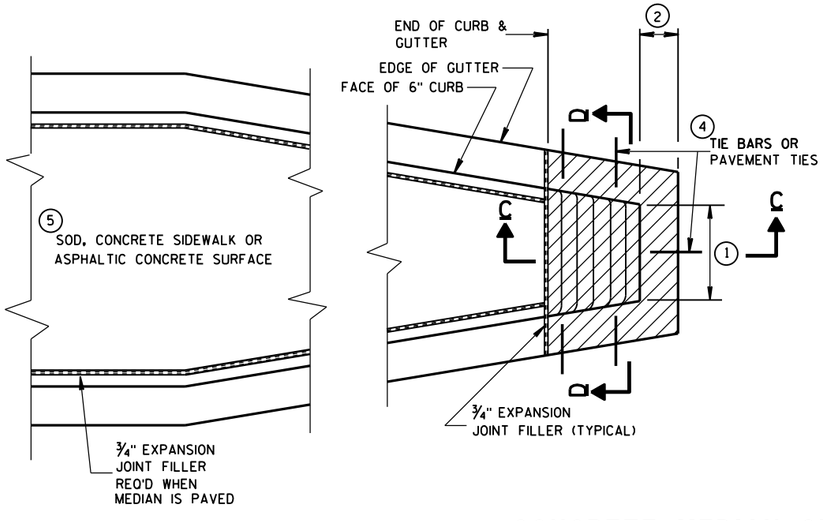
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

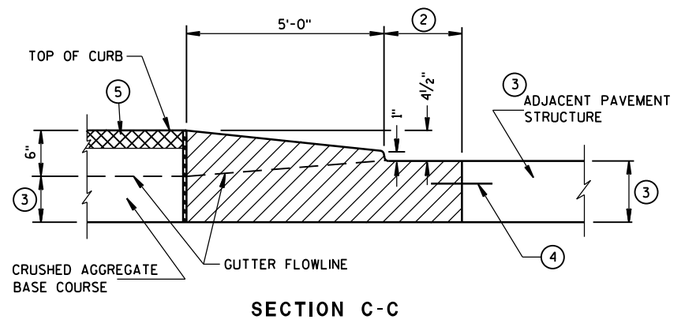
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

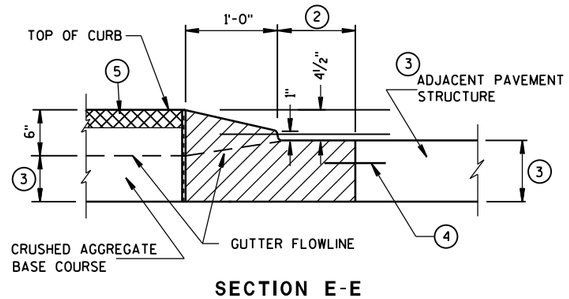
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.



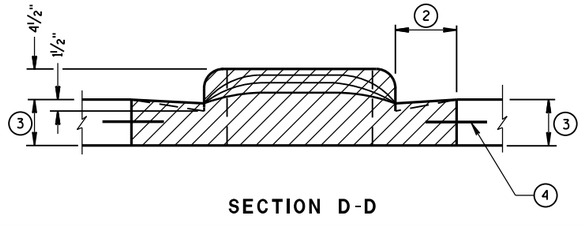


CONCRETE MEDIAN SLOPED NOSE TYPE 1





CONCRETE MEDIAN SLOPED NOSE TYPE 2



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

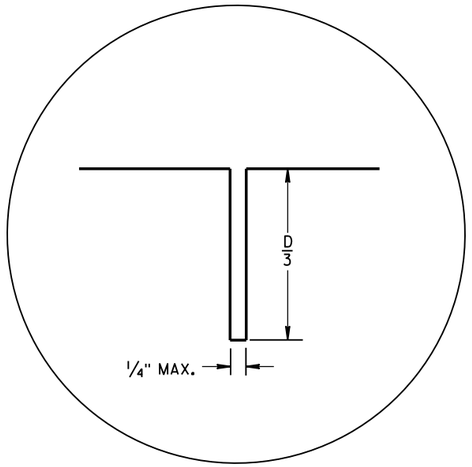
APPROVED
6-8-2006
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

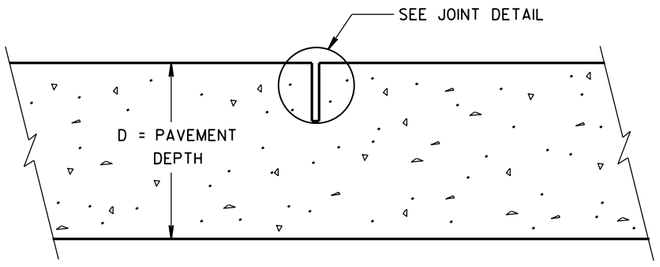
S.D.D. 11 B 2-2

6

S.D.D. 11 B 2-2



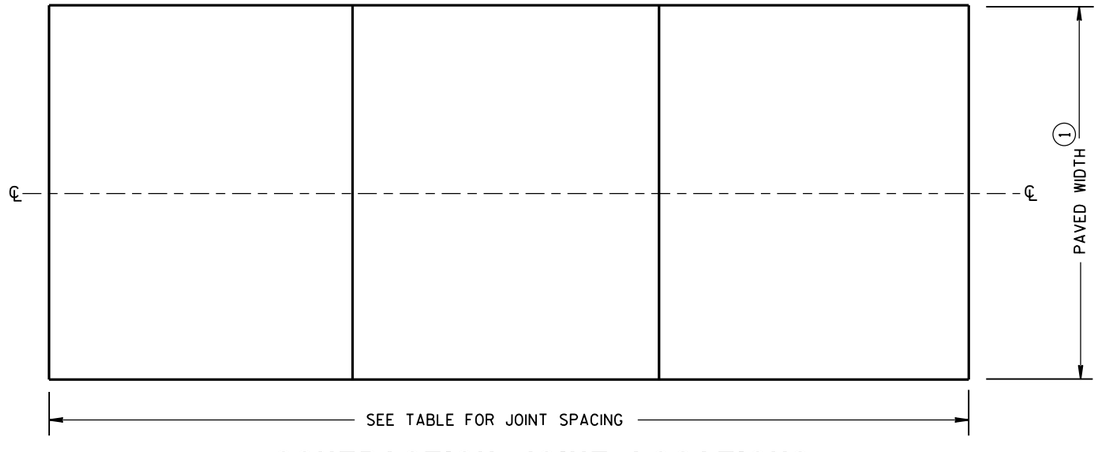
JOINT DETAIL



CONTRACTION JOINT

PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE.

LOCATE AND ORIENT CONTRACTION JOINTS THROUGH INTERSECTIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

CONSTRUCTION JOINTS

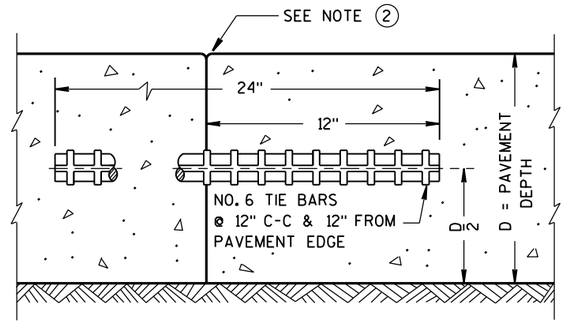
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE CONTRACTION JOINTS.

FORM OR SAW CONSTRUCTION JOINTS.

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

(1) REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF LONGITUDINAL JOINTS.

(2) PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.



TIED TRANSVERSE CONSTRUCTION JOINT

URBAN
NON-DOWELED CONCRETE
PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

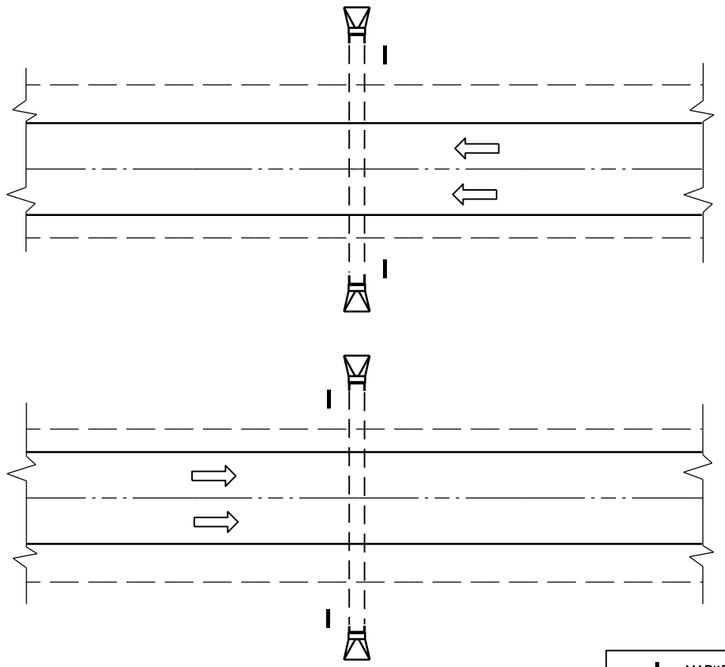
APPROVED
5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DESIGN ENGINEER

FHWA

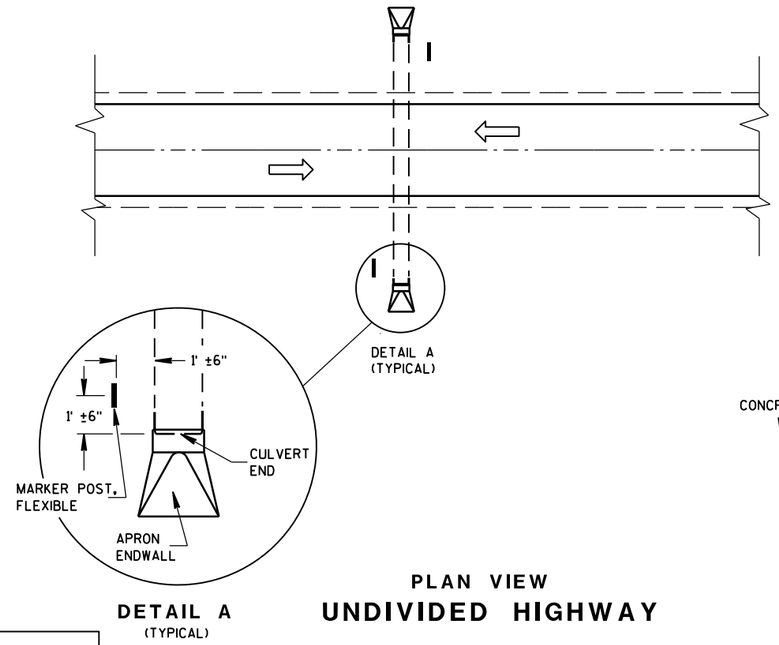
6
S.D.D. 13 C 4-16

15A3 sheet a: Flexible Marker Post for Culvert End



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

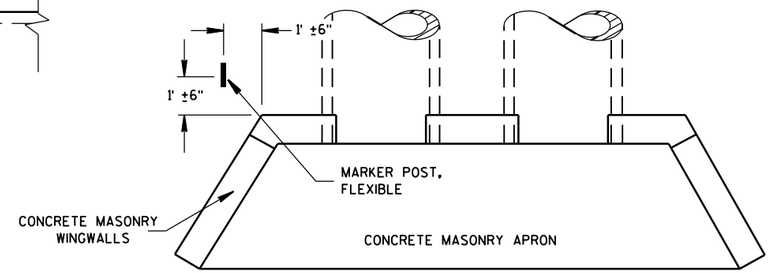
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

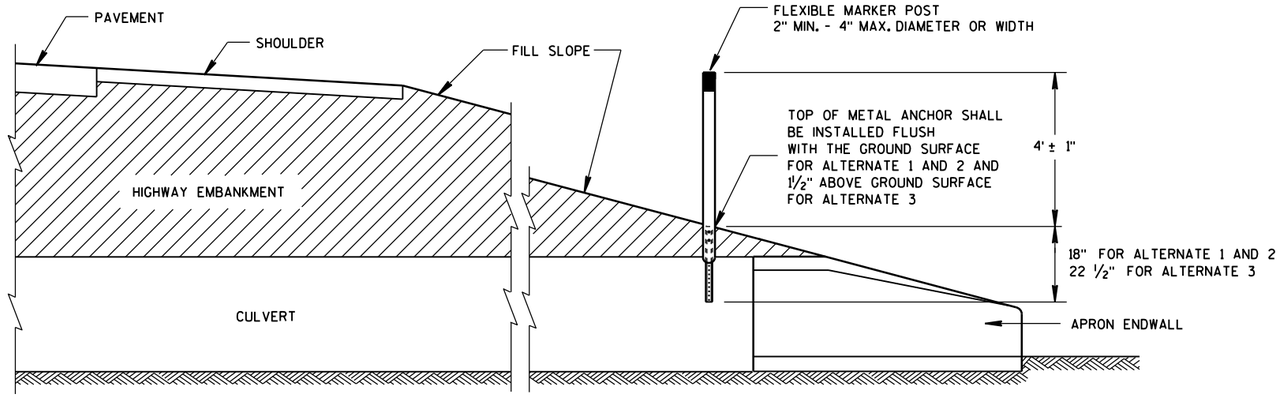
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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 TRANSPORTATION

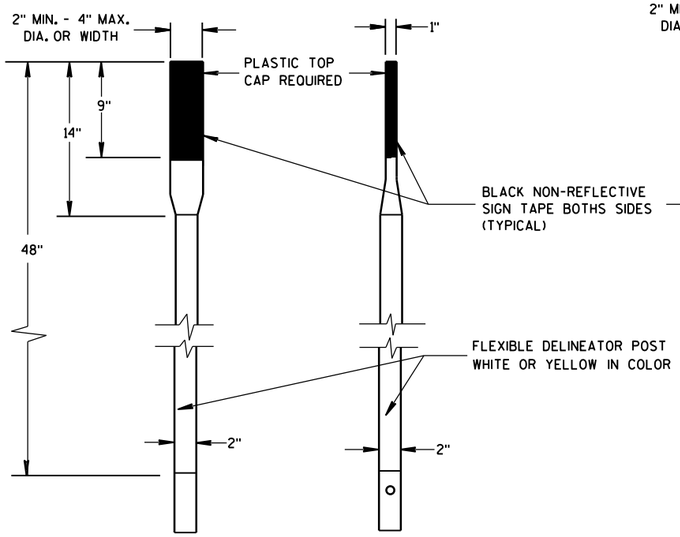
6

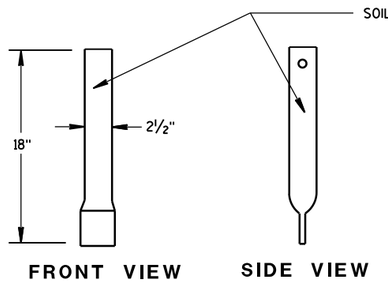
S.D.D. 15 A 3-2a

6

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

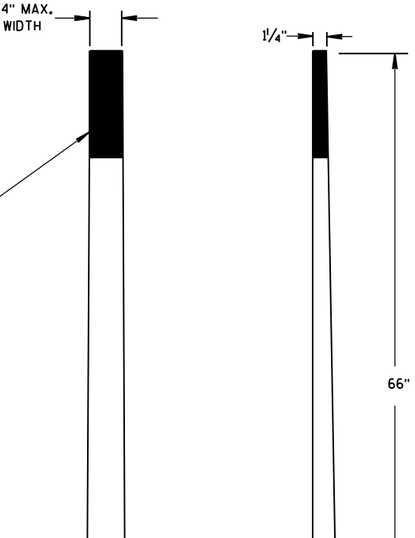
15A3 sheet b: Flexible Marker Post for Culvert End





FRONT VIEW SIDE VIEW

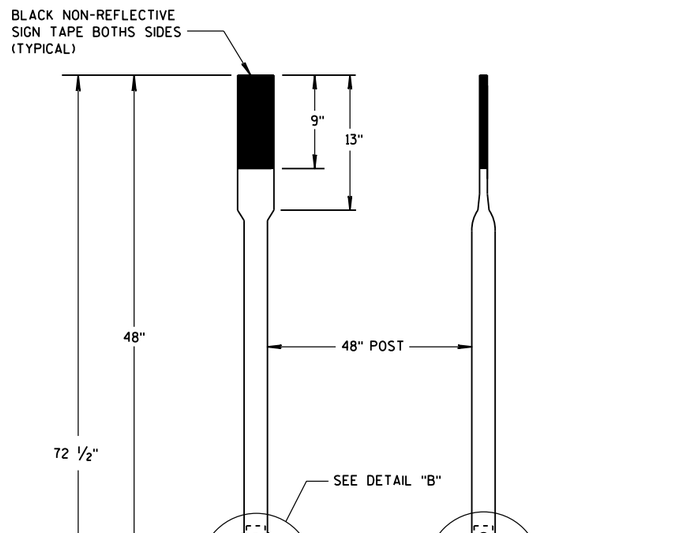
ALTERNATE 1



FRONT VIEW SIDE VIEW

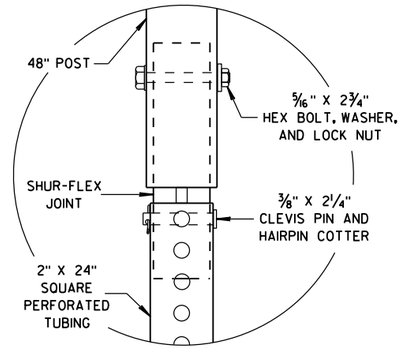
ALTERNATE 2

FLEXIBLE MARKER POSTS

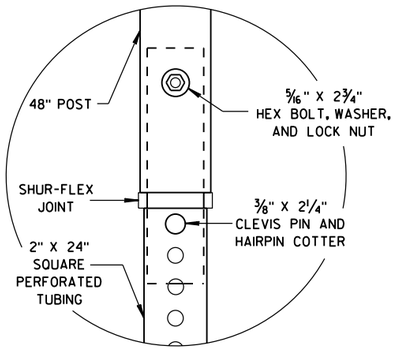


FRONT VIEW SIDE VIEW

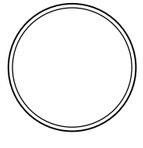
ALTERNATE 3



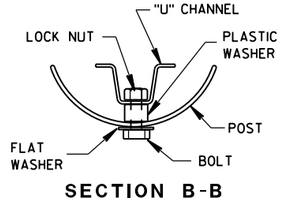
DETAIL B



DETAIL C

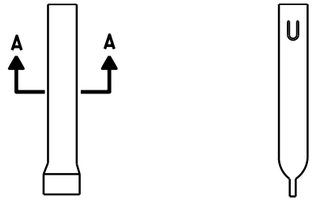


SECTION A-A



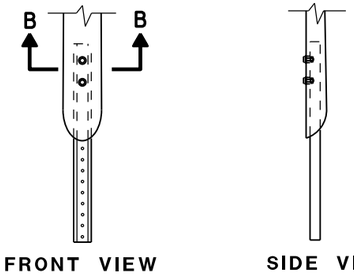
SECTION B-B

SECTION C-C



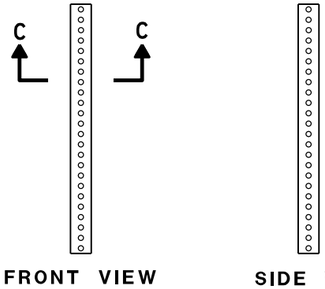
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

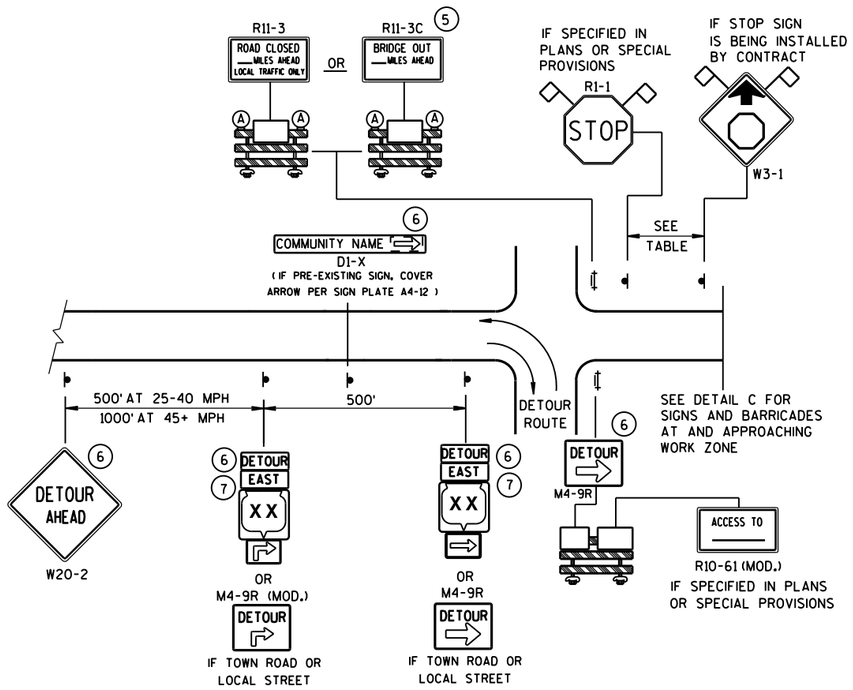
6

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

6

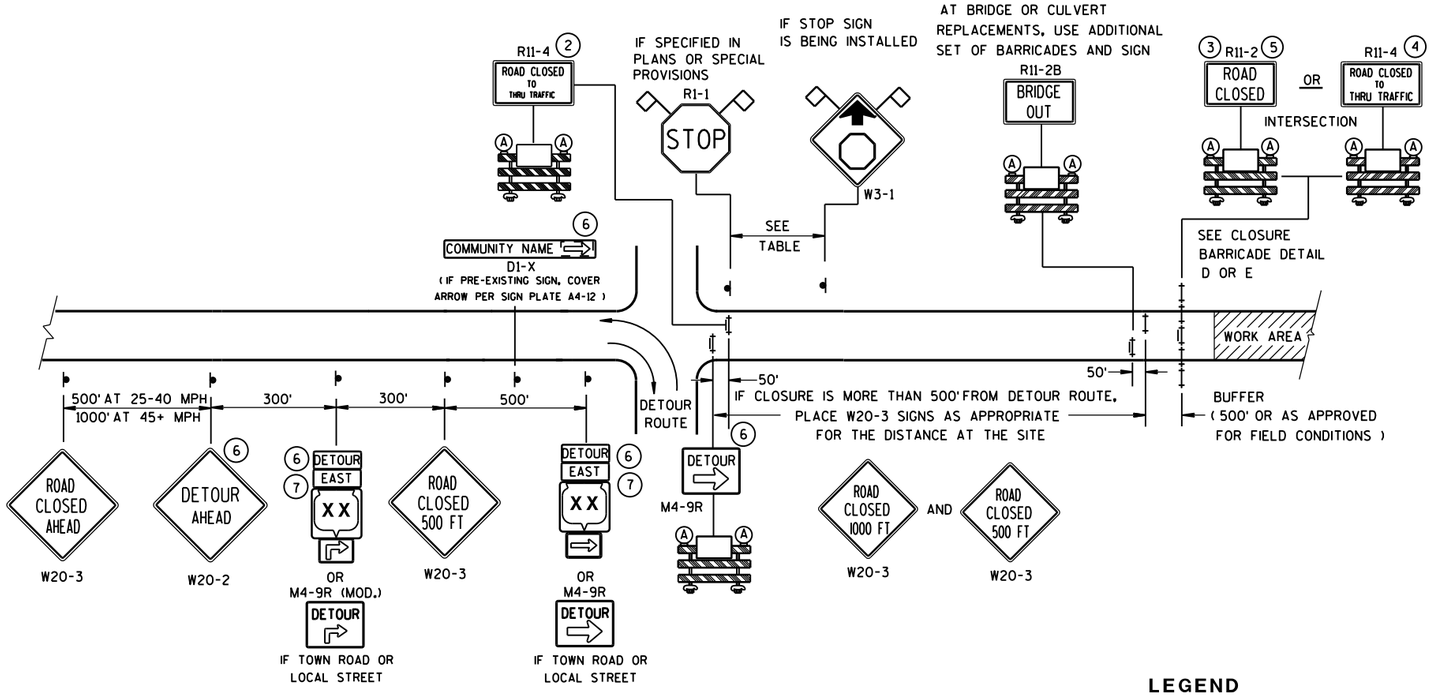
S.D.D. 15 A 3-2b

15C2 sheet a: Barricades and Signs for Mainline Closures



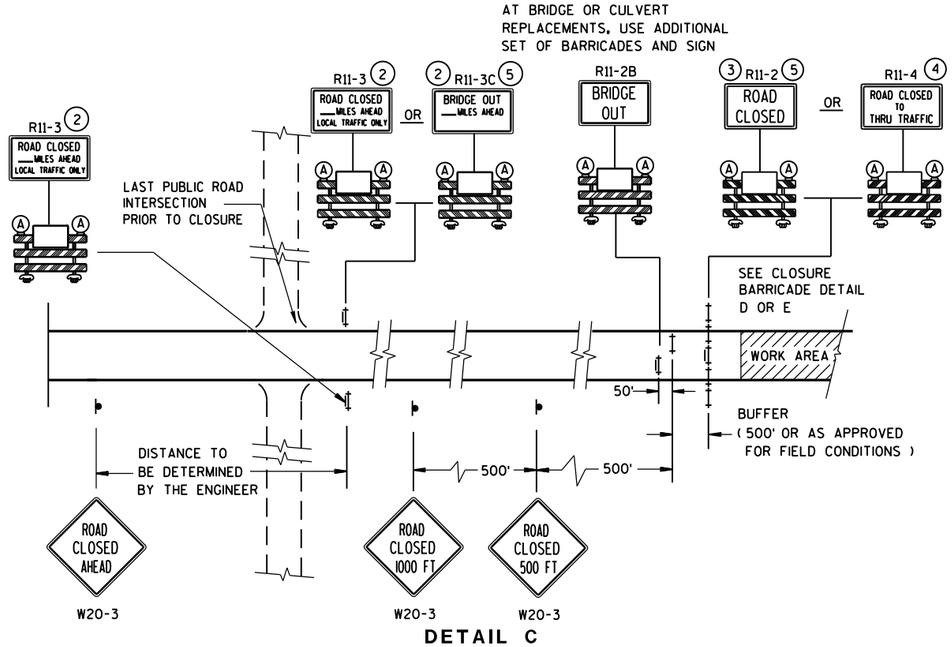
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

SEE SDD 15C2-SHEET "**b**" FOR GENERAL NOTES AND FOOTNOTES (1) THROUGH (7)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

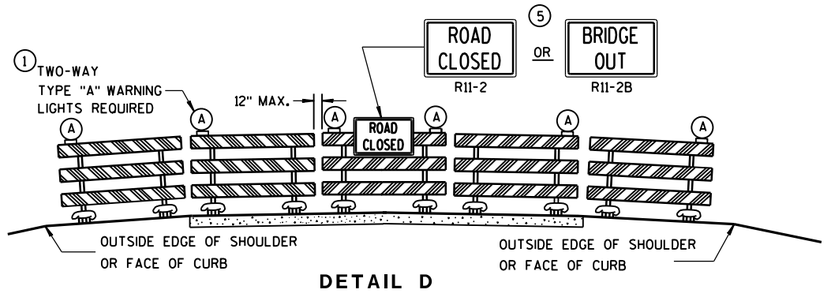
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER - DIRECTOR OF DESIGN

FHWA

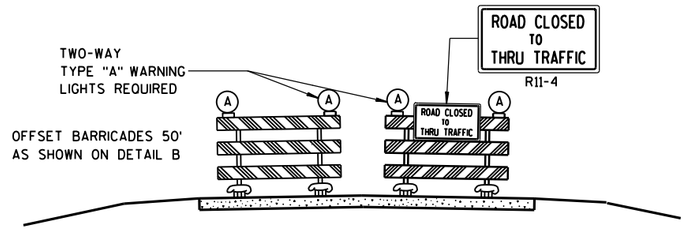
6
S.D.D. 15 C 2-5a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

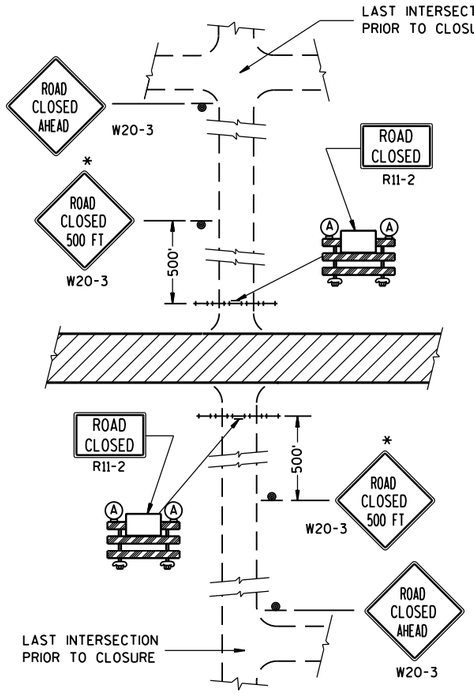
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER - BUREAU OF DESIGN

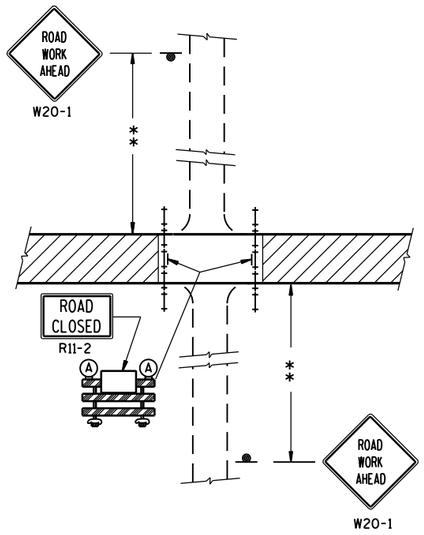
FHWA

15C3: Barricades and Signs for Sideroad Closures



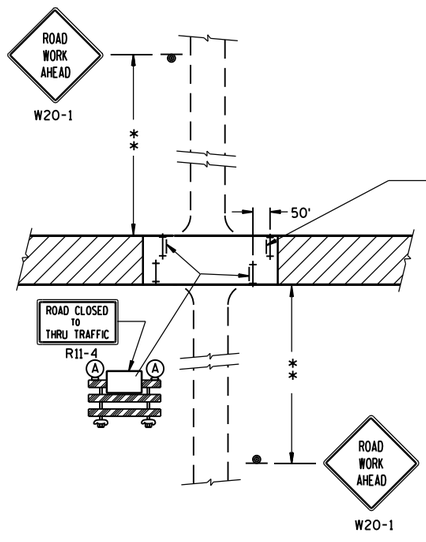
DETAIL 1

(NO ACCESS TO PROJECT)



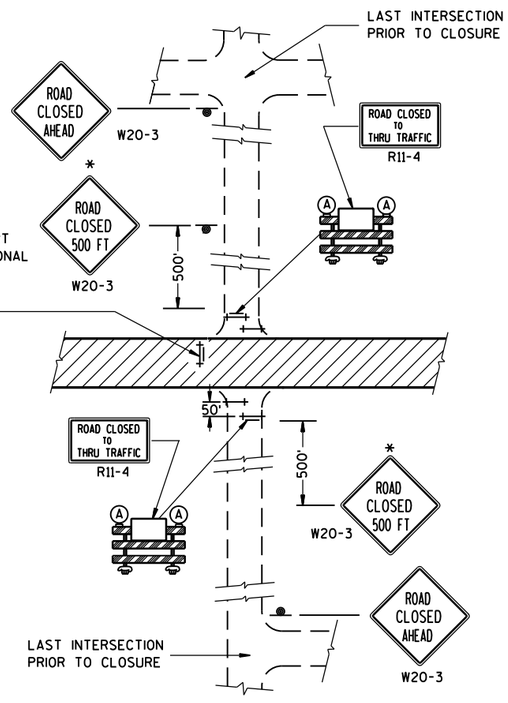
DETAIL 2

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



DETAIL 3

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



DETAIL 4

(CONTRACTOR, LOCAL BUSINESS AND RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

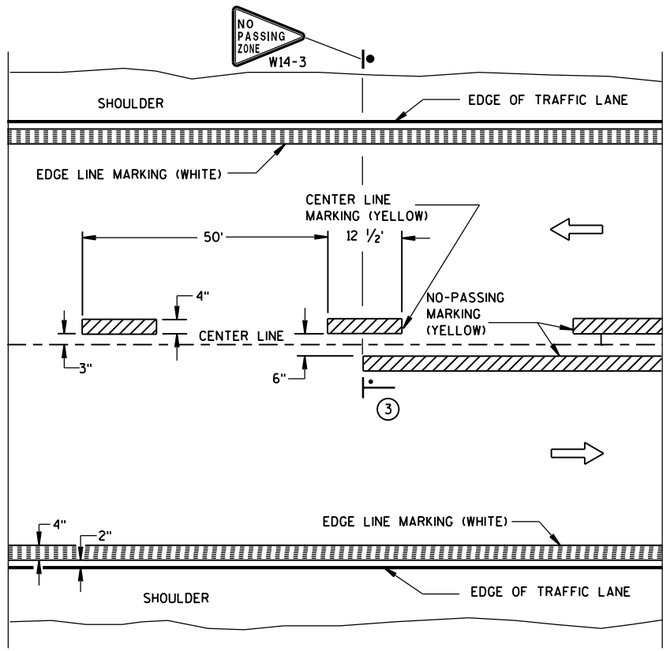
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/2013
DATE

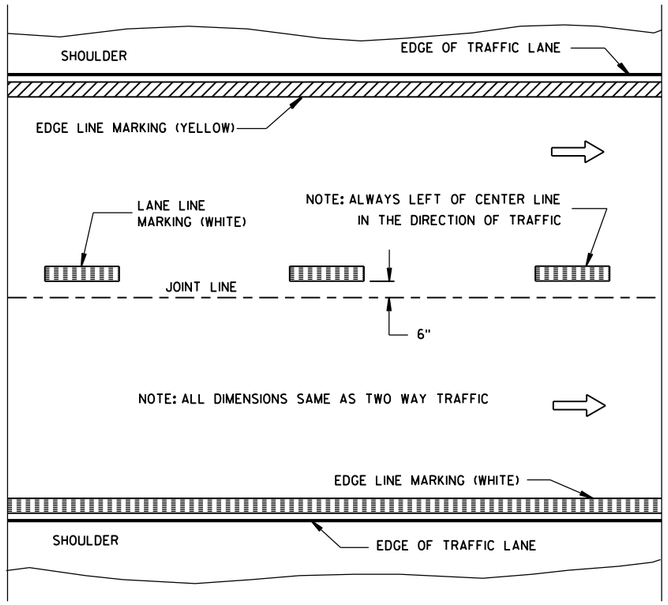
/S/ Travis Feltes
STATE TRAFFIC ENGINEER - DIRECTOR OF DESIGN

FHWA

15C8 sheet a: Pavement Marking (Mainline)



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

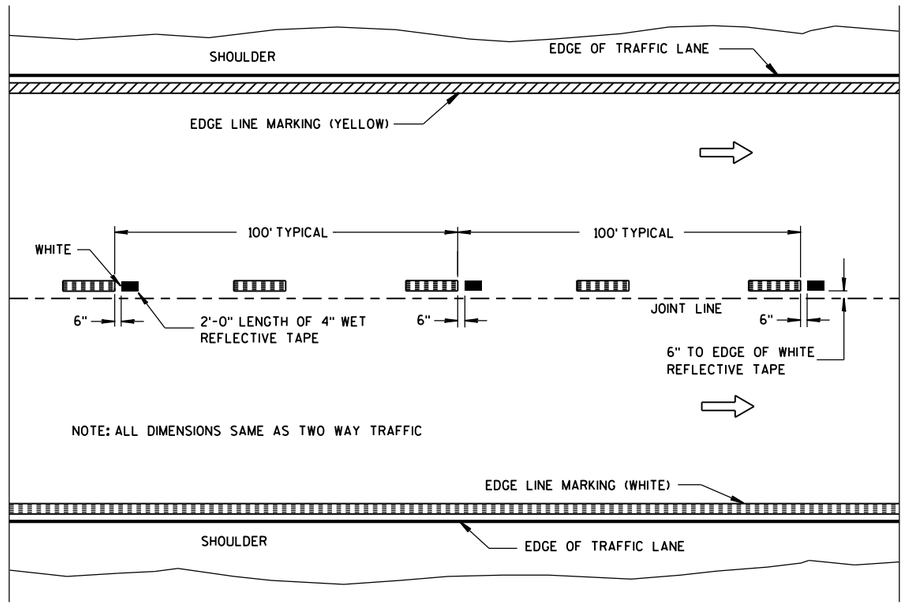
GENERAL NOTES

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

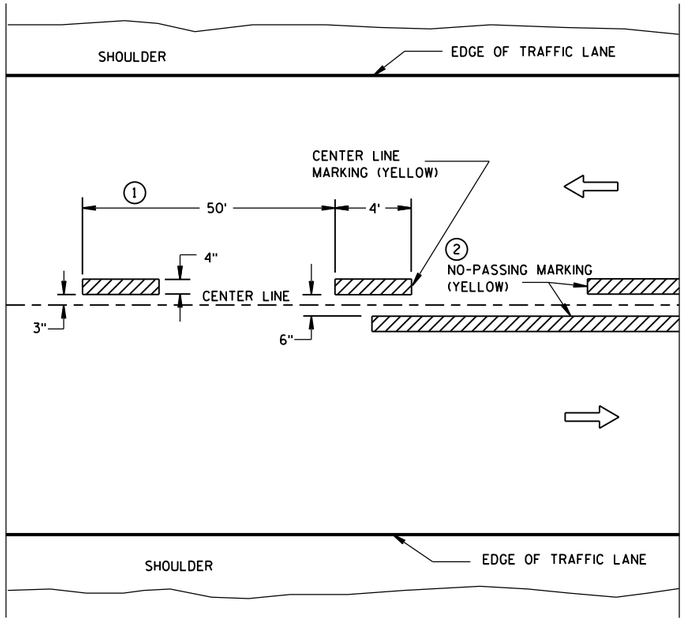
1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING 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

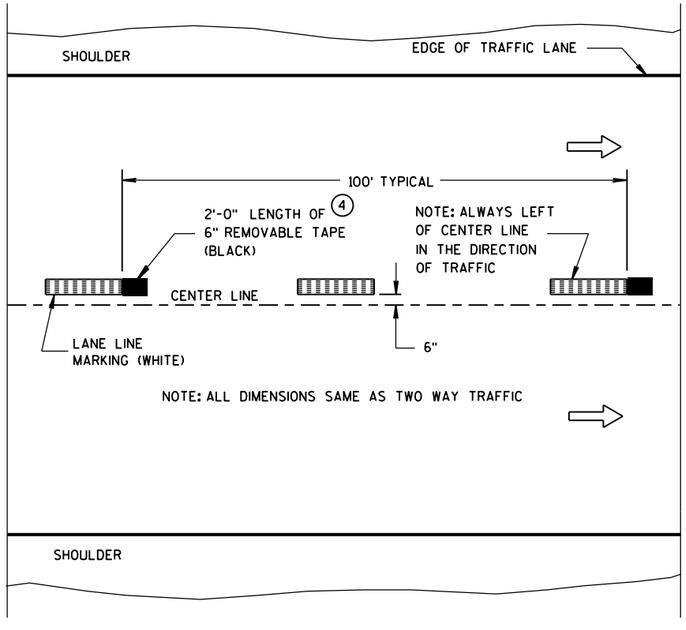
ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

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 ENGINEER

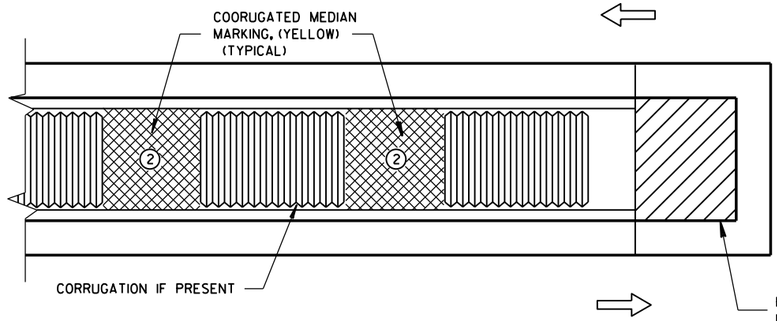
FHWA

6

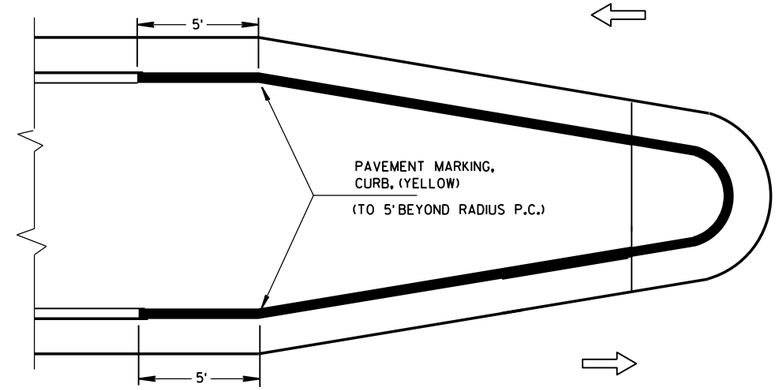
S.D.D. 15 C 8-16a

6

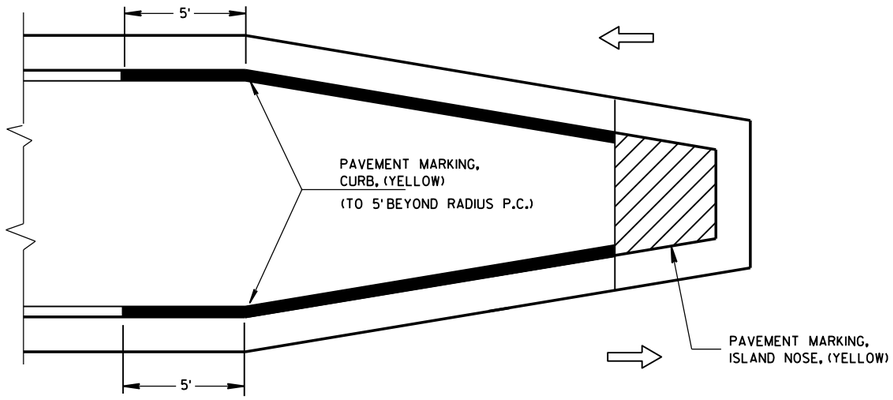
S.D.D. 15 C 8-16a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

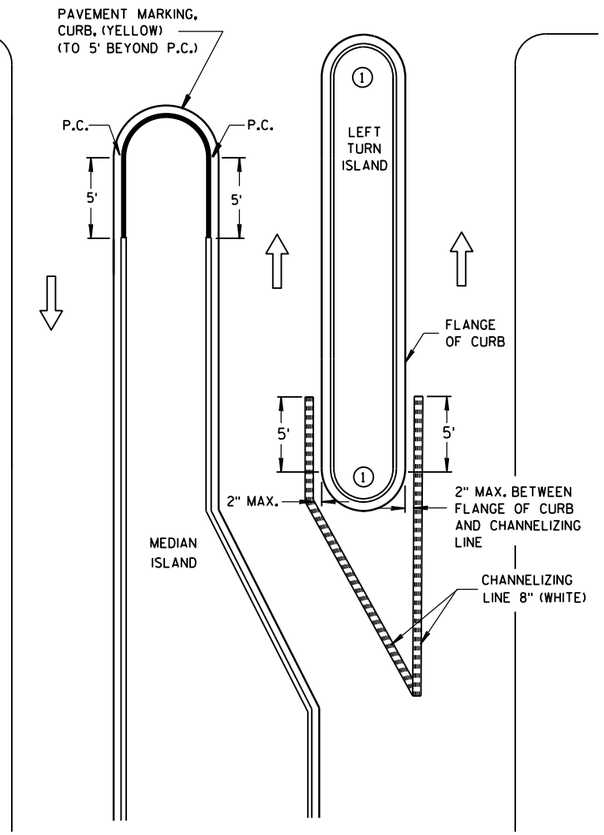


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

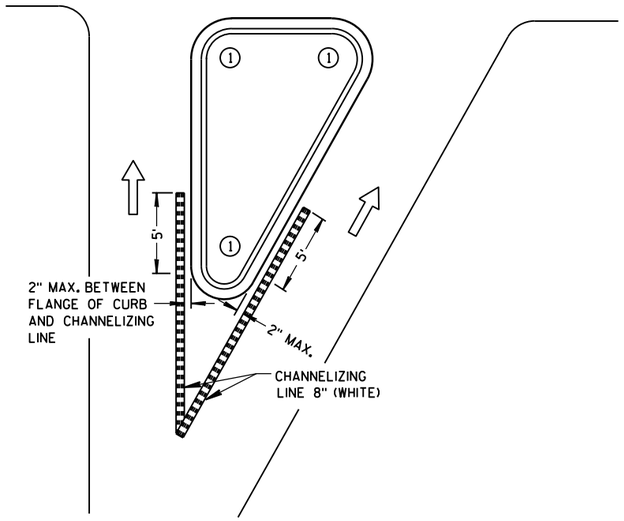


LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.

2. WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

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

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

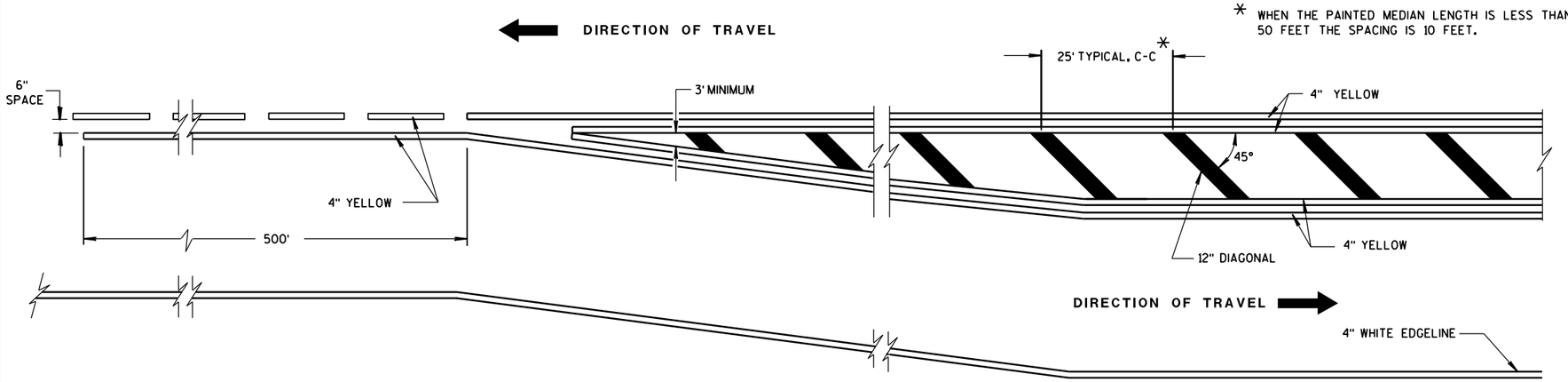
6

S.D.D. 15 C 8-16f

6

S.D.D. 15 C 8-16f

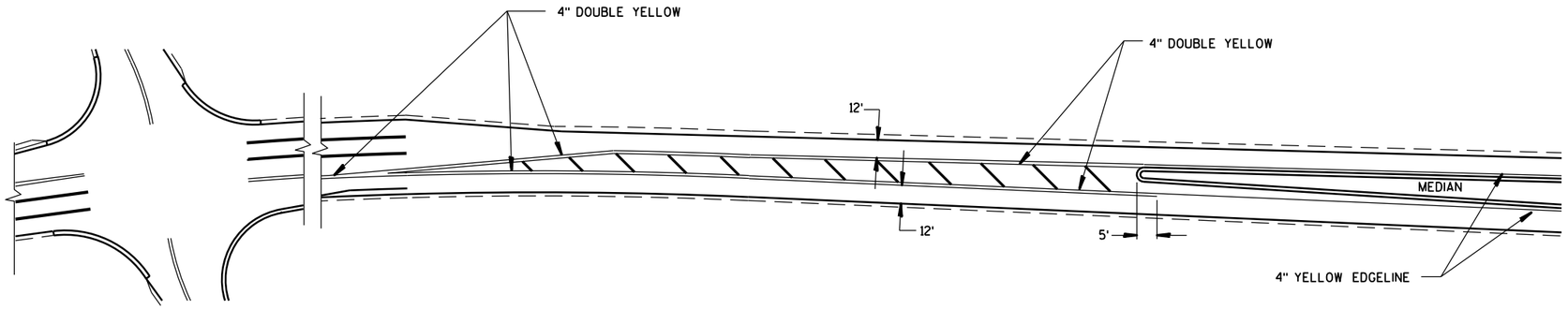
15C18: Median Island Marking



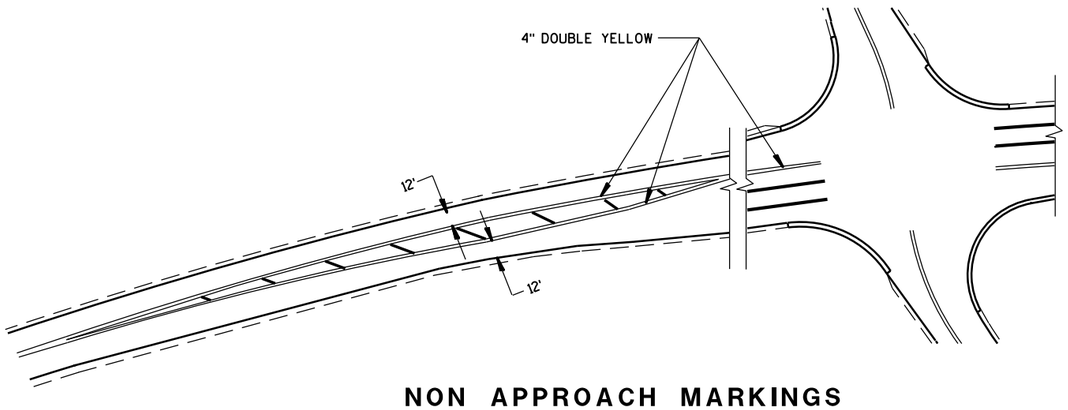
MEDIAN ISLAND DETAIL

GENERAL NOTE

DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT WIDEST POINT.



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON APPROACH MARKINGS

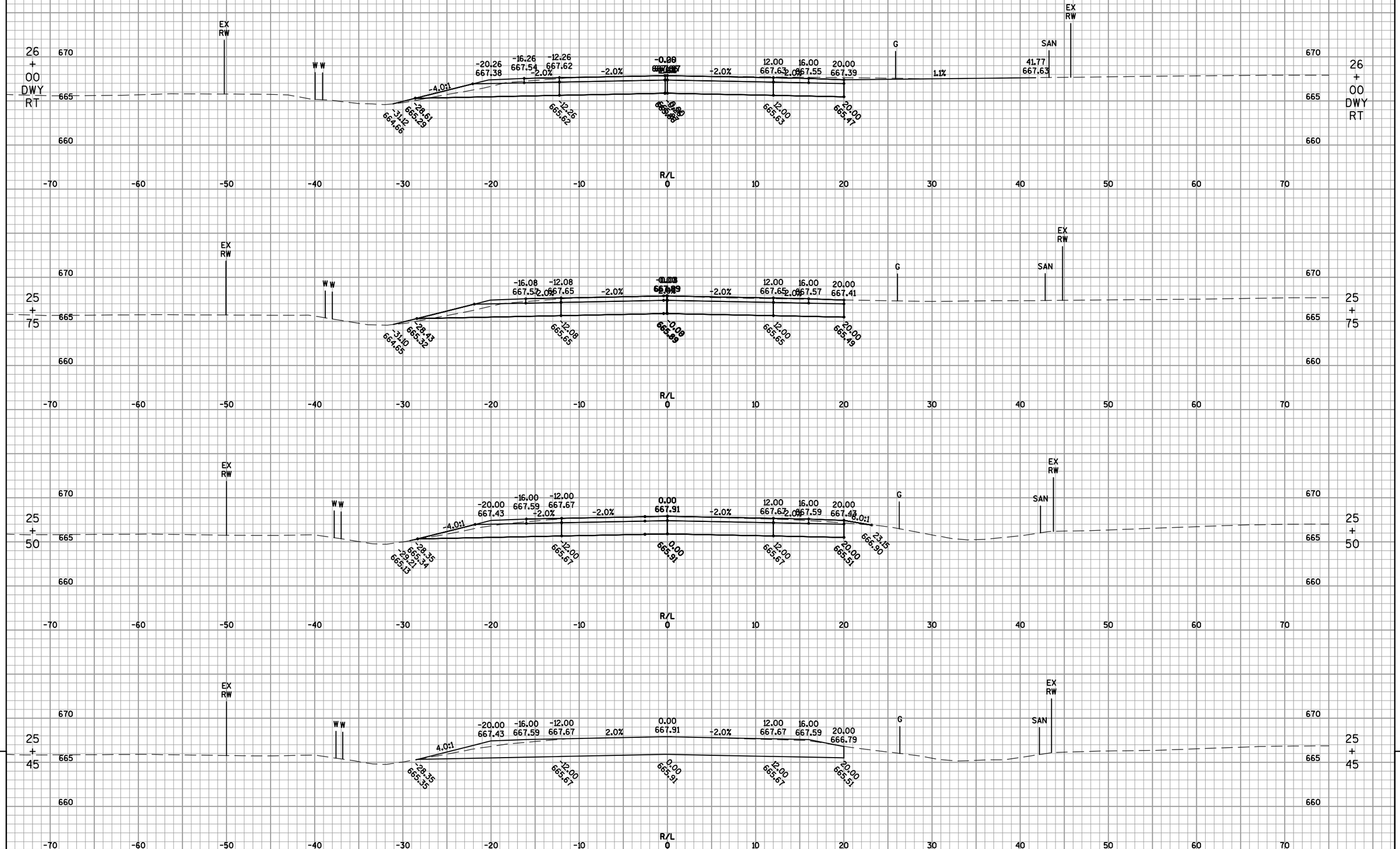
MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-2009 DATE	/S/ Thomas N. Notbolm STATE TRAFFIC ENGINEER ~~OF~~ DESIGN
FHWA	

6

S.D.D. 15 C 18-3

6

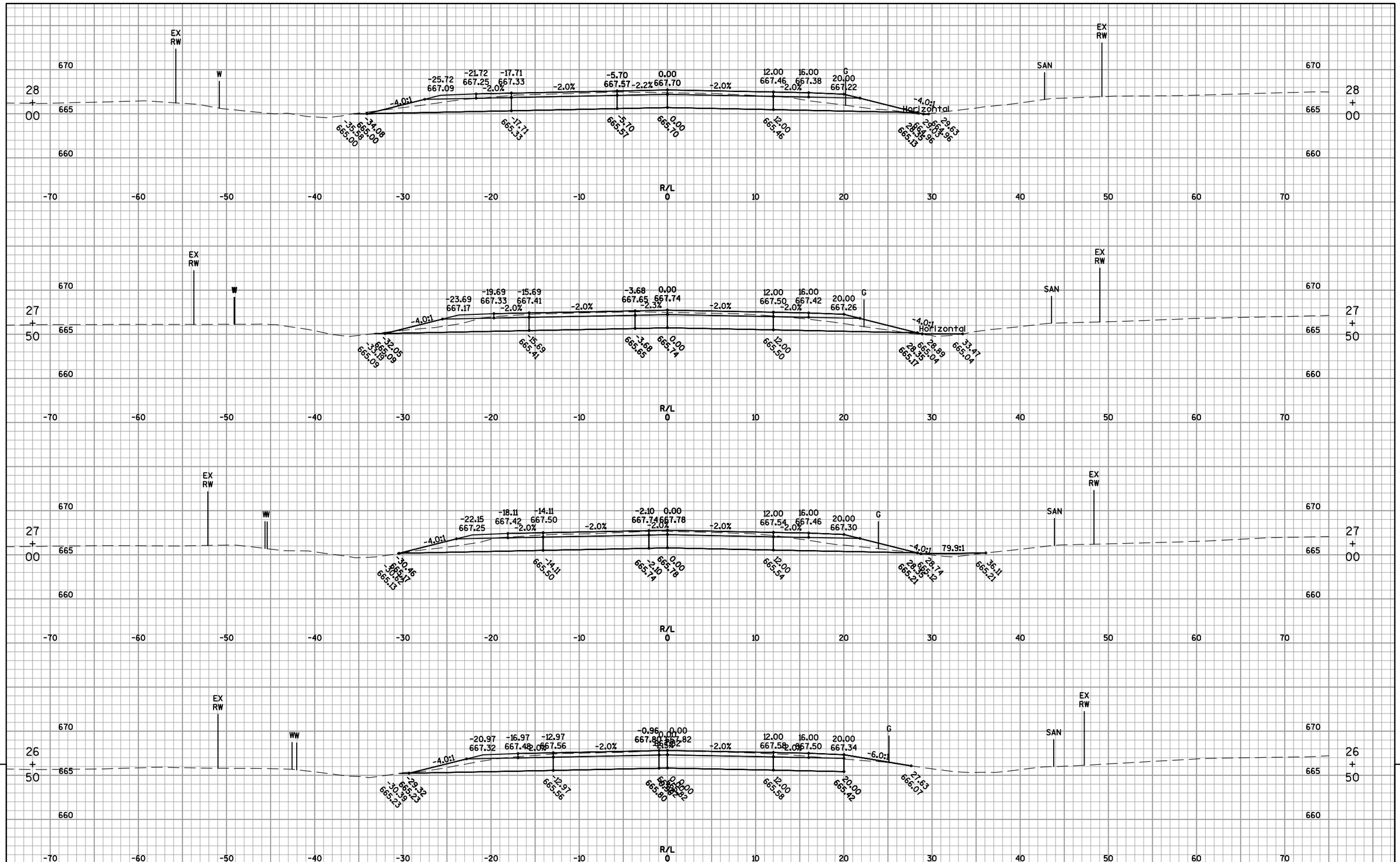
S.D.D. 15 C 18-3



9

9

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 78	E



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 79	E

9

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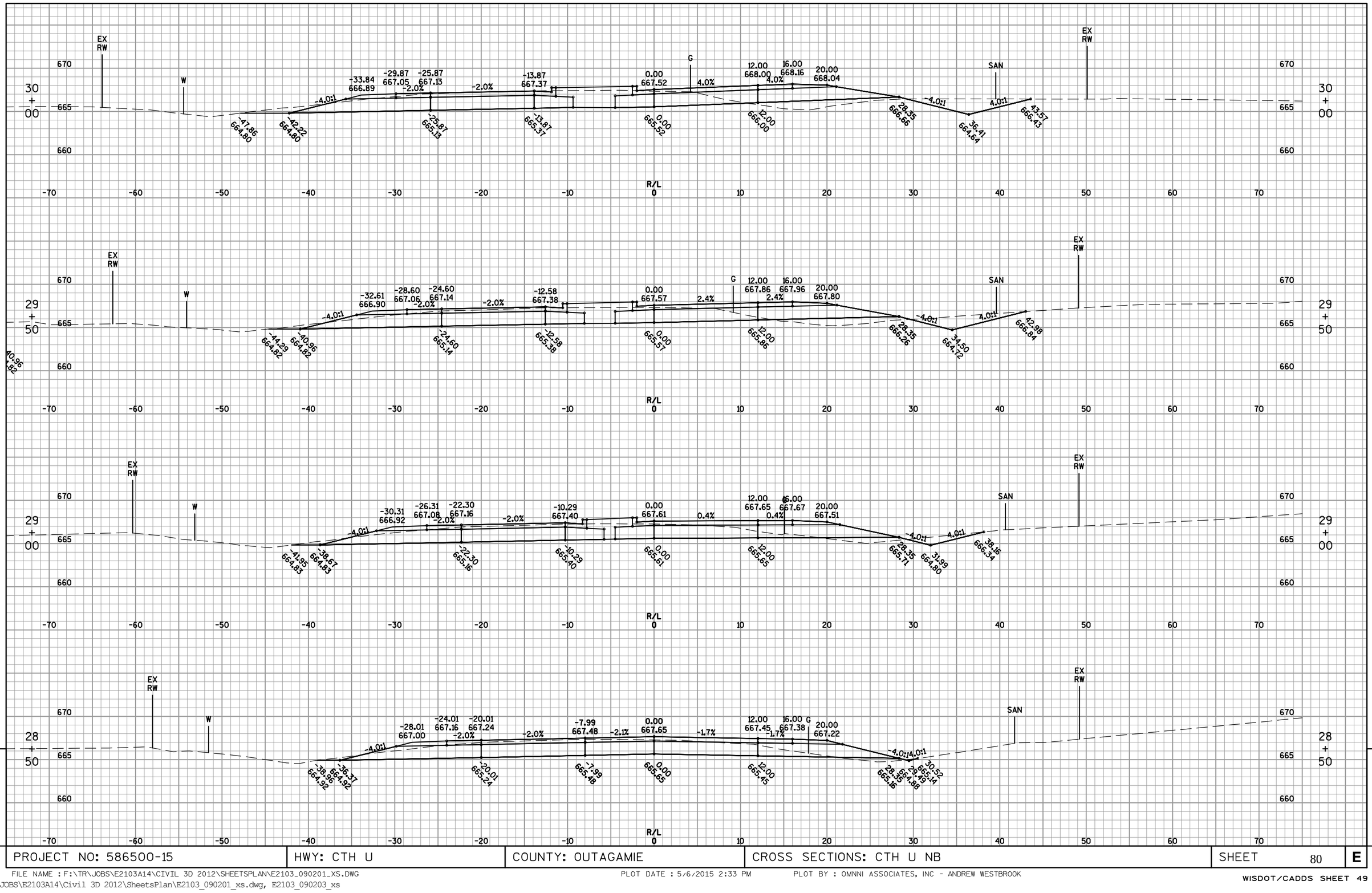
WISDOT/CADDS SHEET 49



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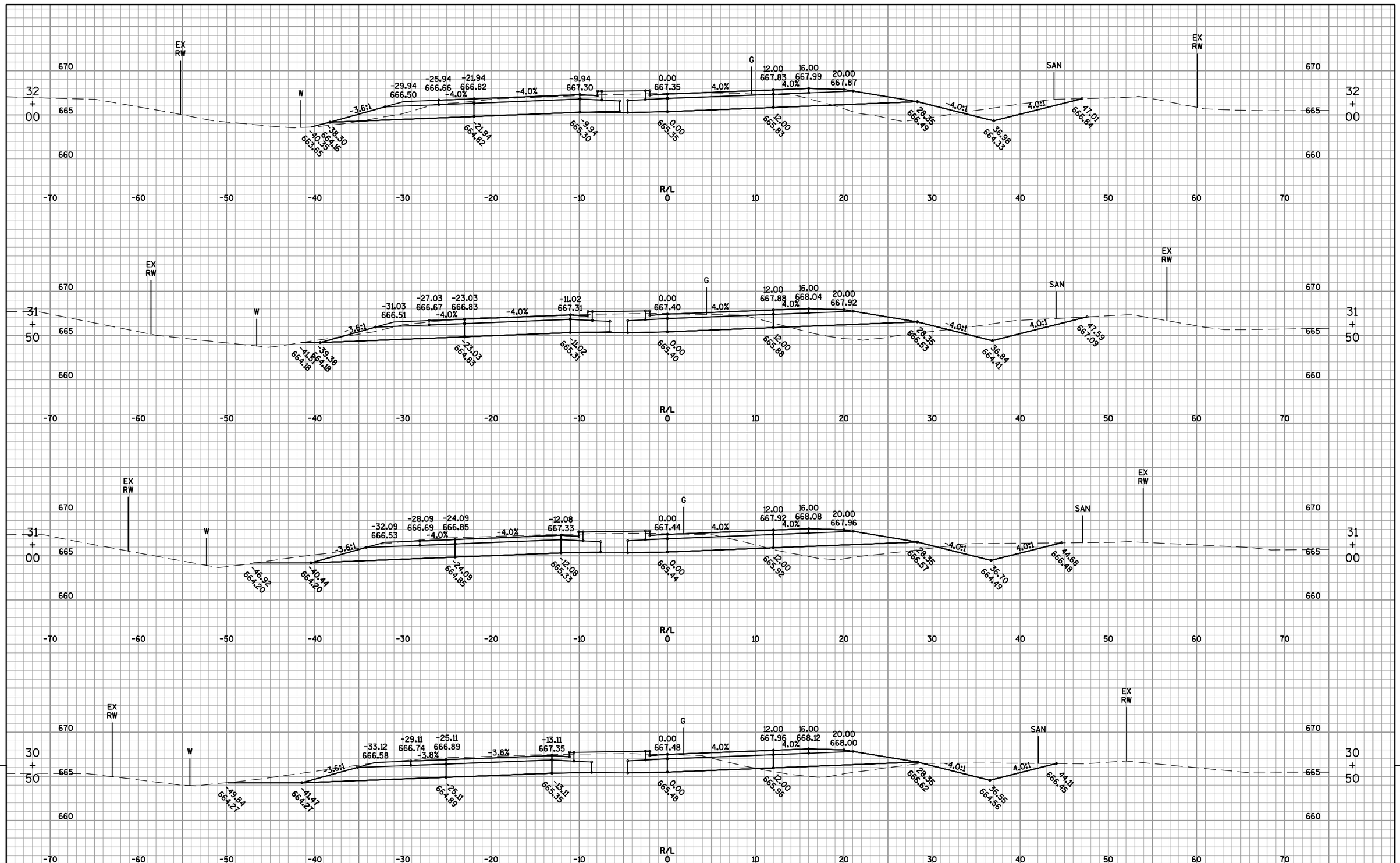

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9

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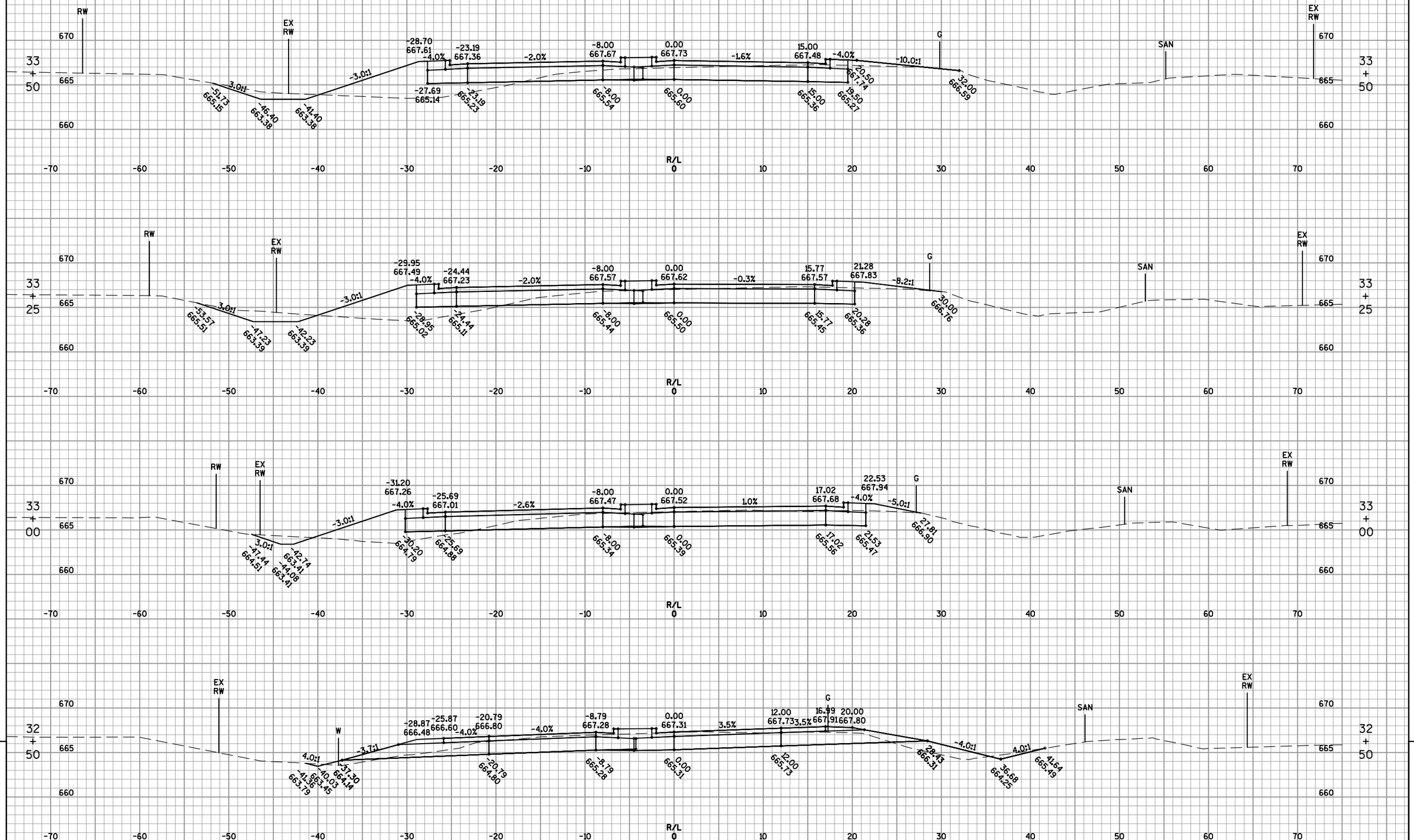

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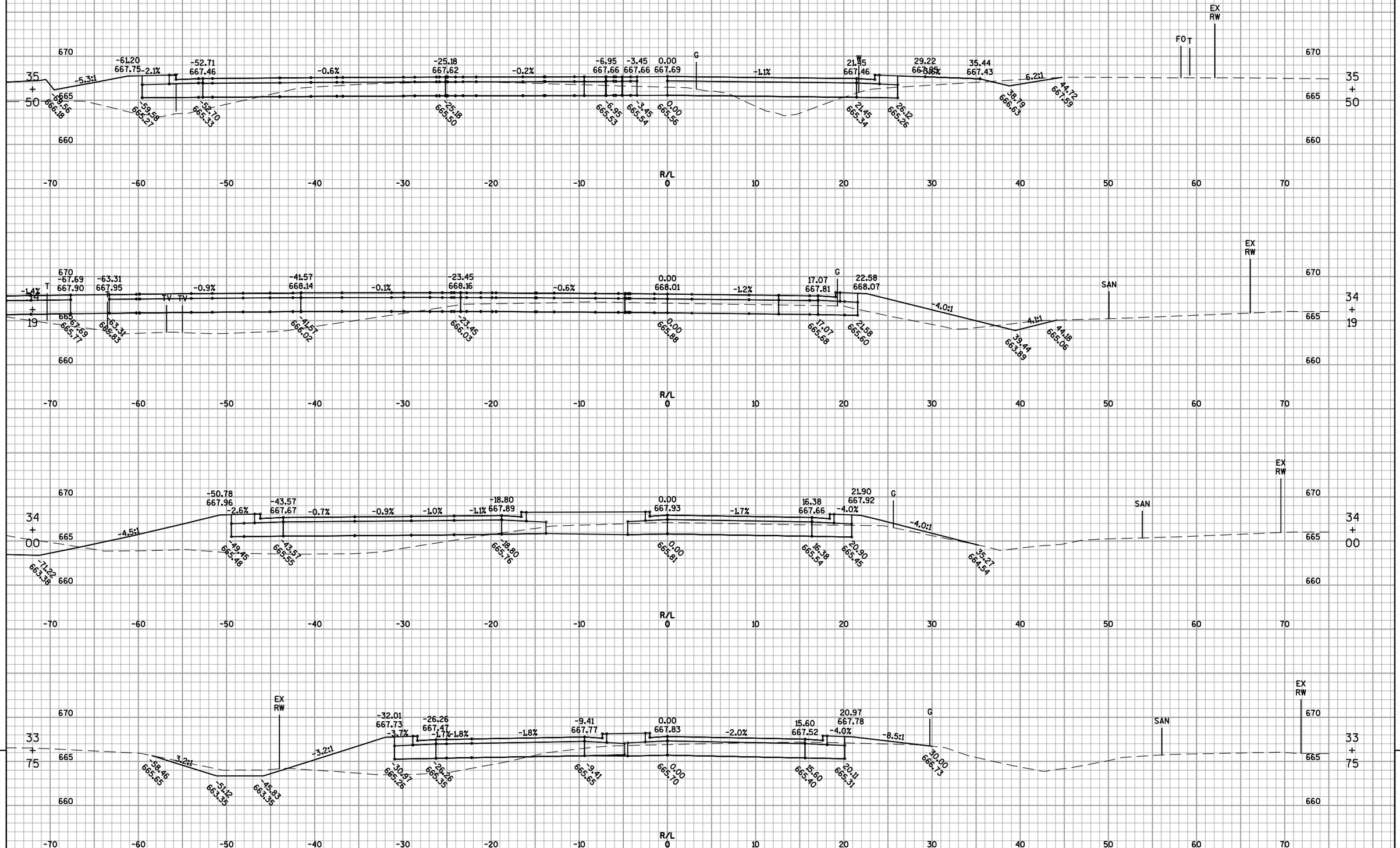

9

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 83	E

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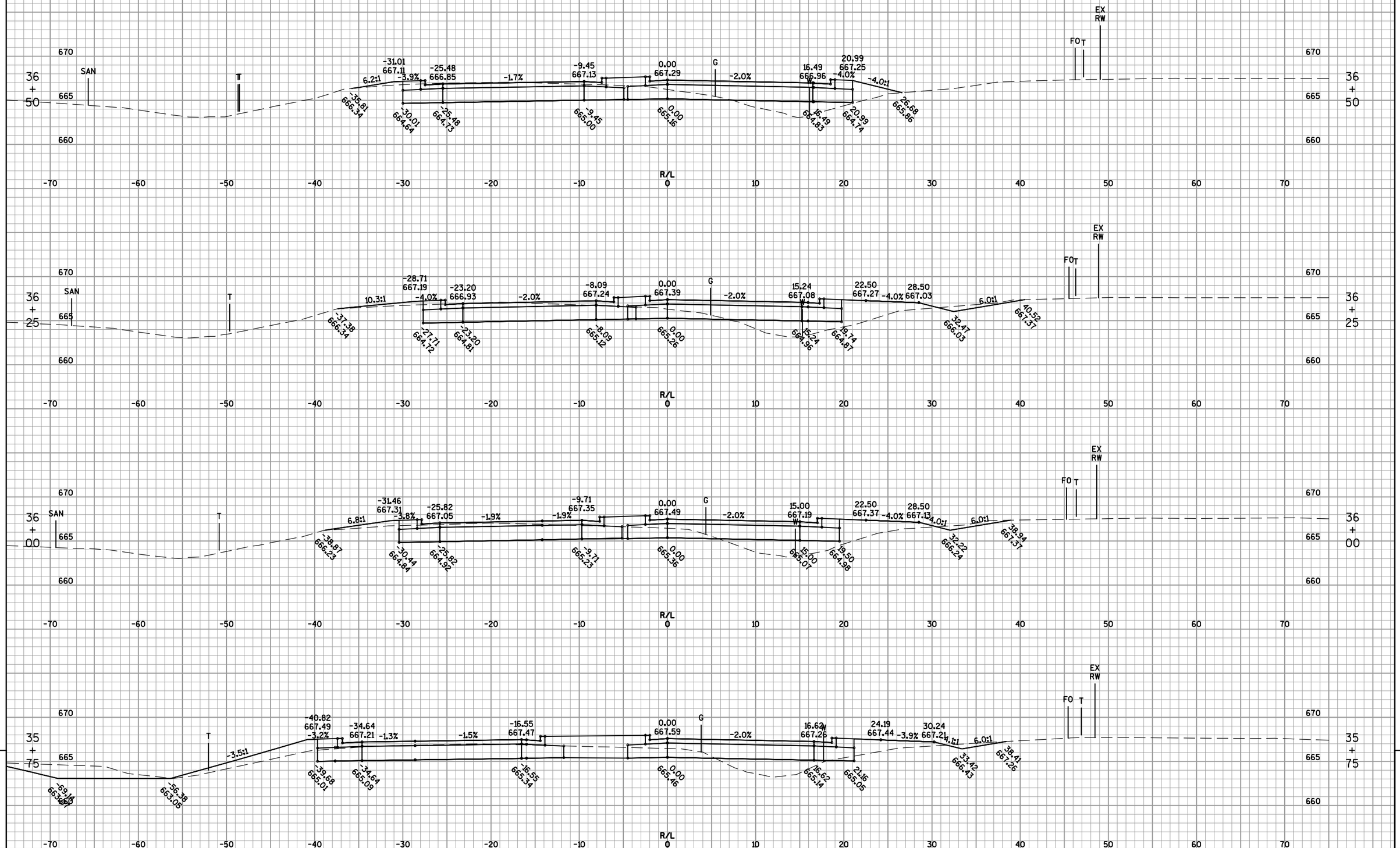

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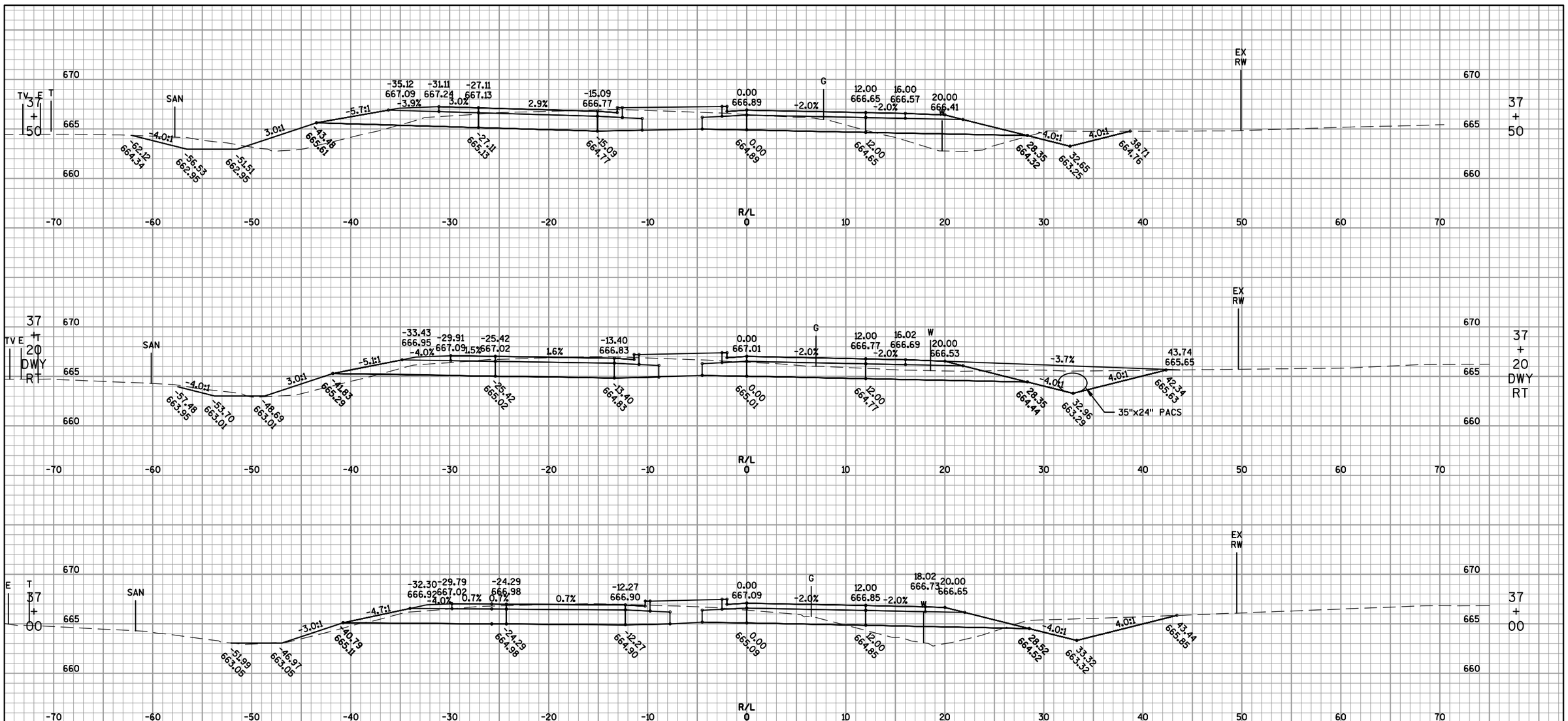
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090201_xs.dwg, E2103_090207_xs



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 85	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
PLOT DATE : 5/6/2015 2:34 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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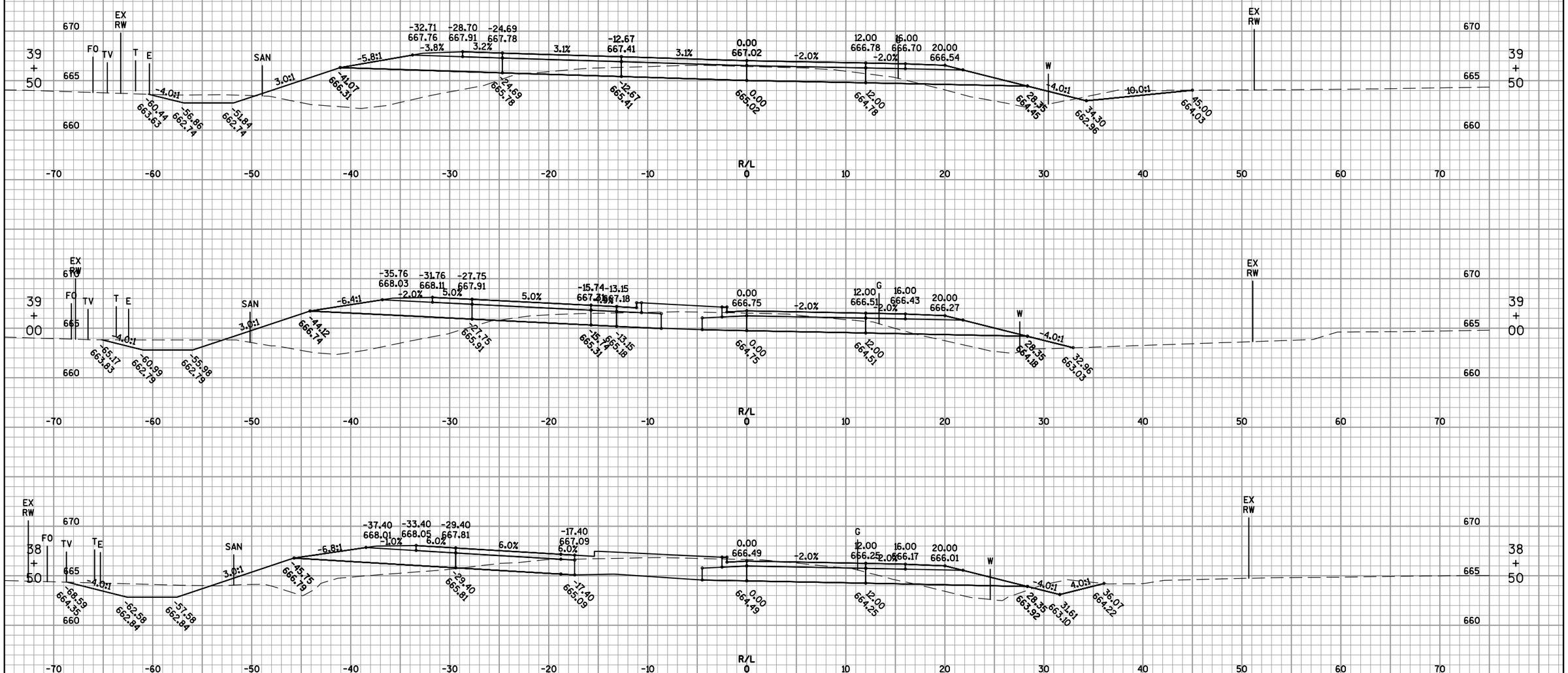

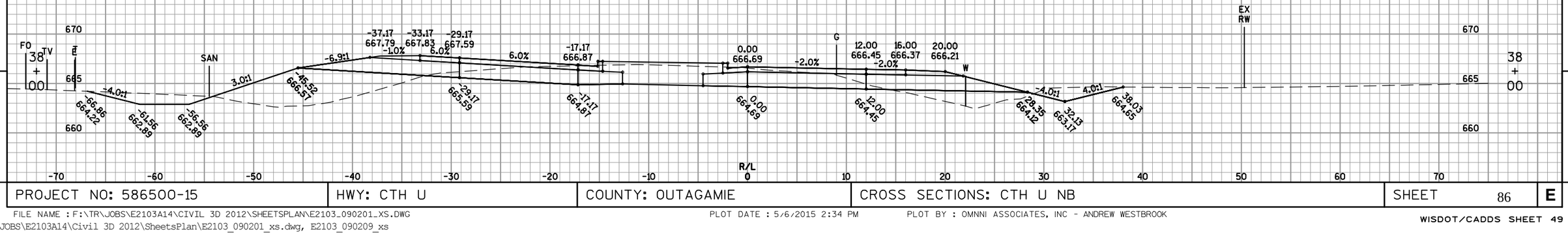

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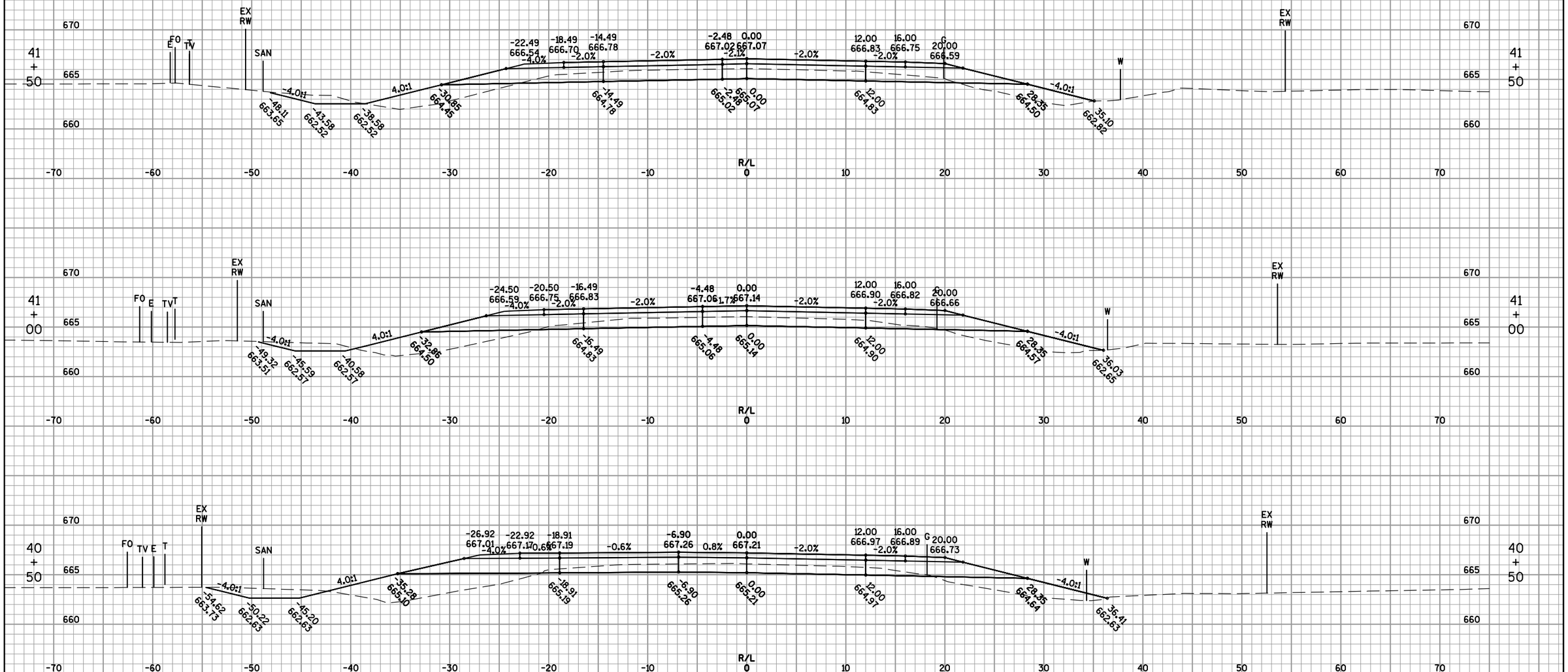
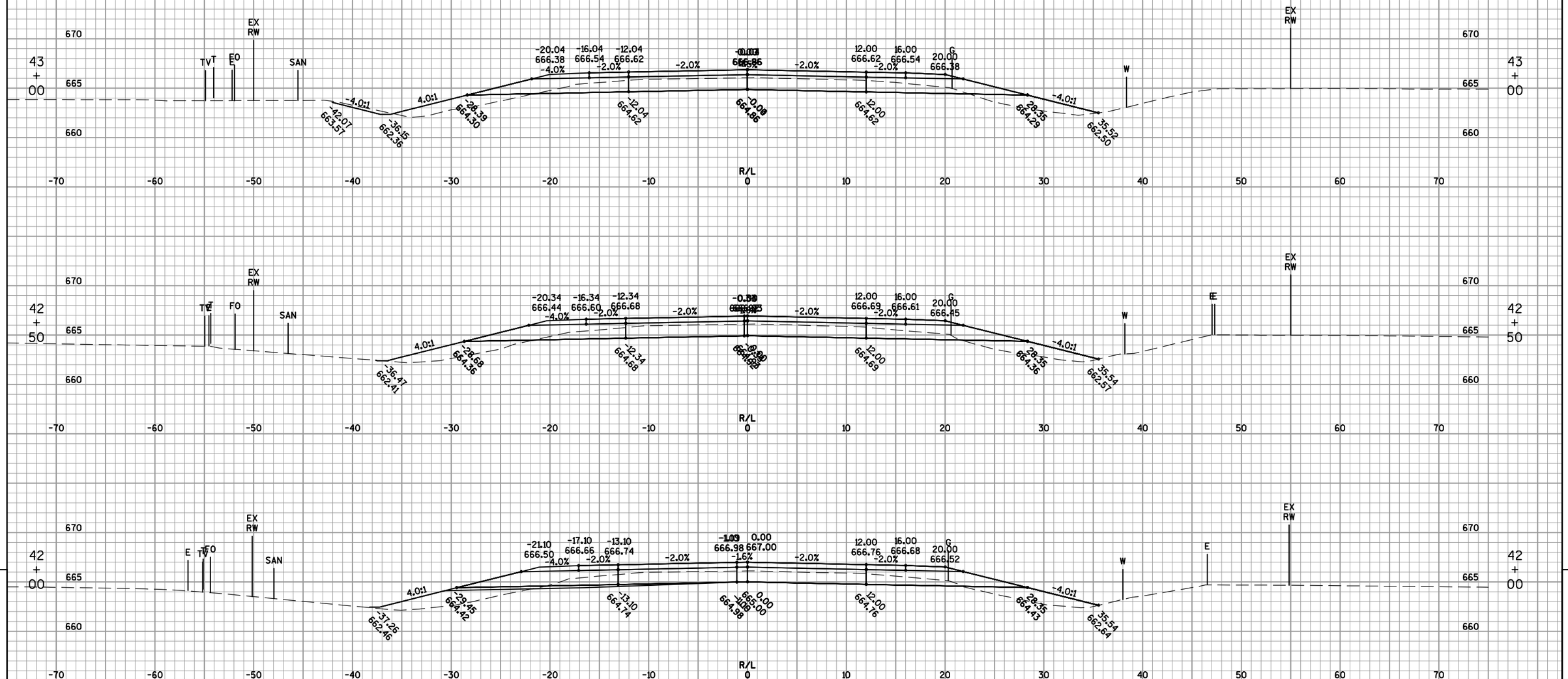
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 86	E



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 87	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
PLOT DATE : 5/6/2015 2:34 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090201_xs.dwg, E2103_090210_xs



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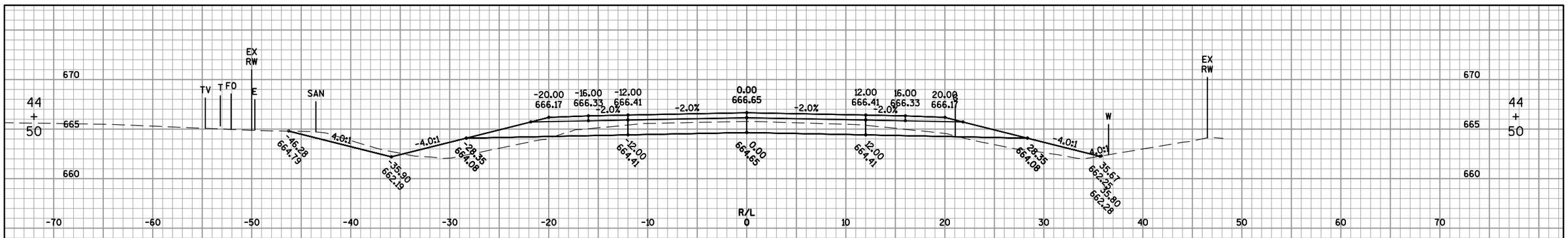
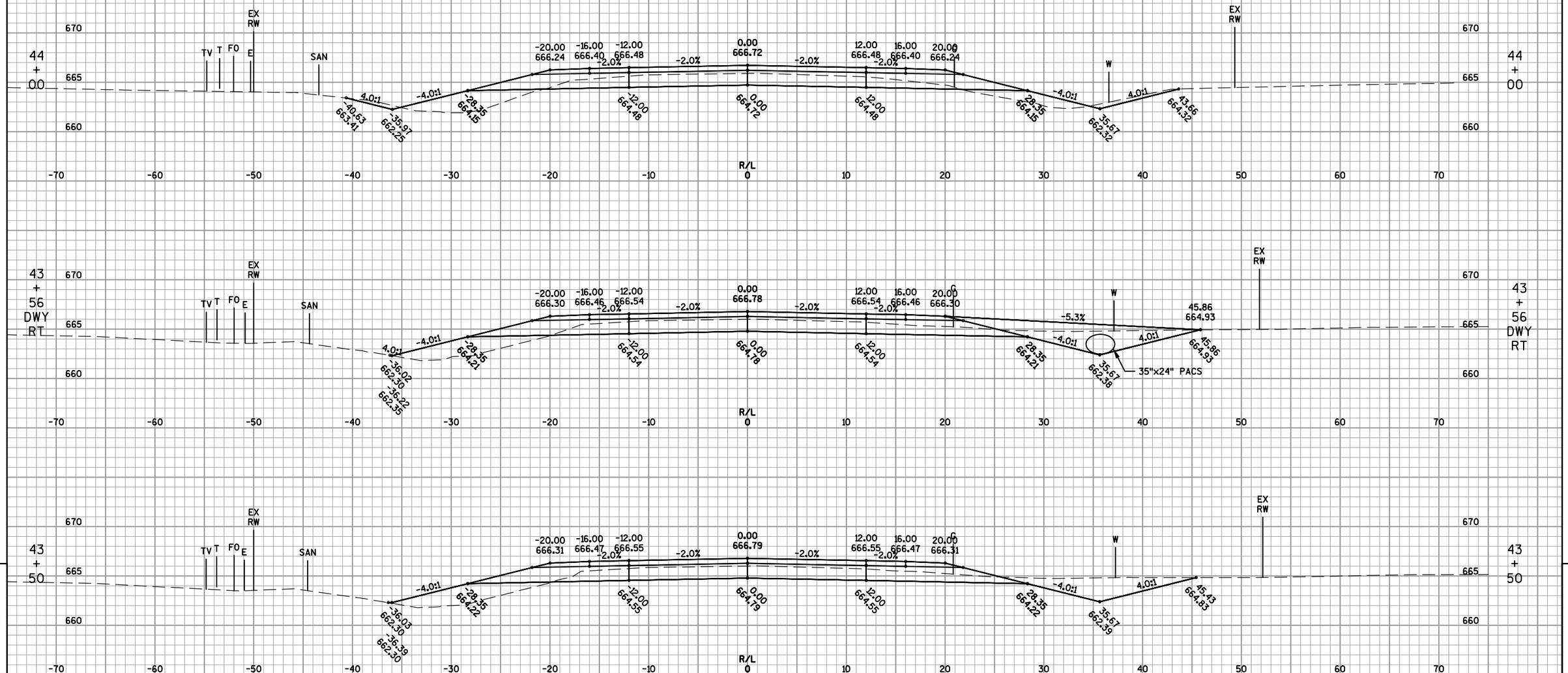
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 88	E

9

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
PLOT DATE : 5/6/2015 2:34 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090201_xs.dwg, E2103_090211_xs

WISDOT/CADDS SHEET 49





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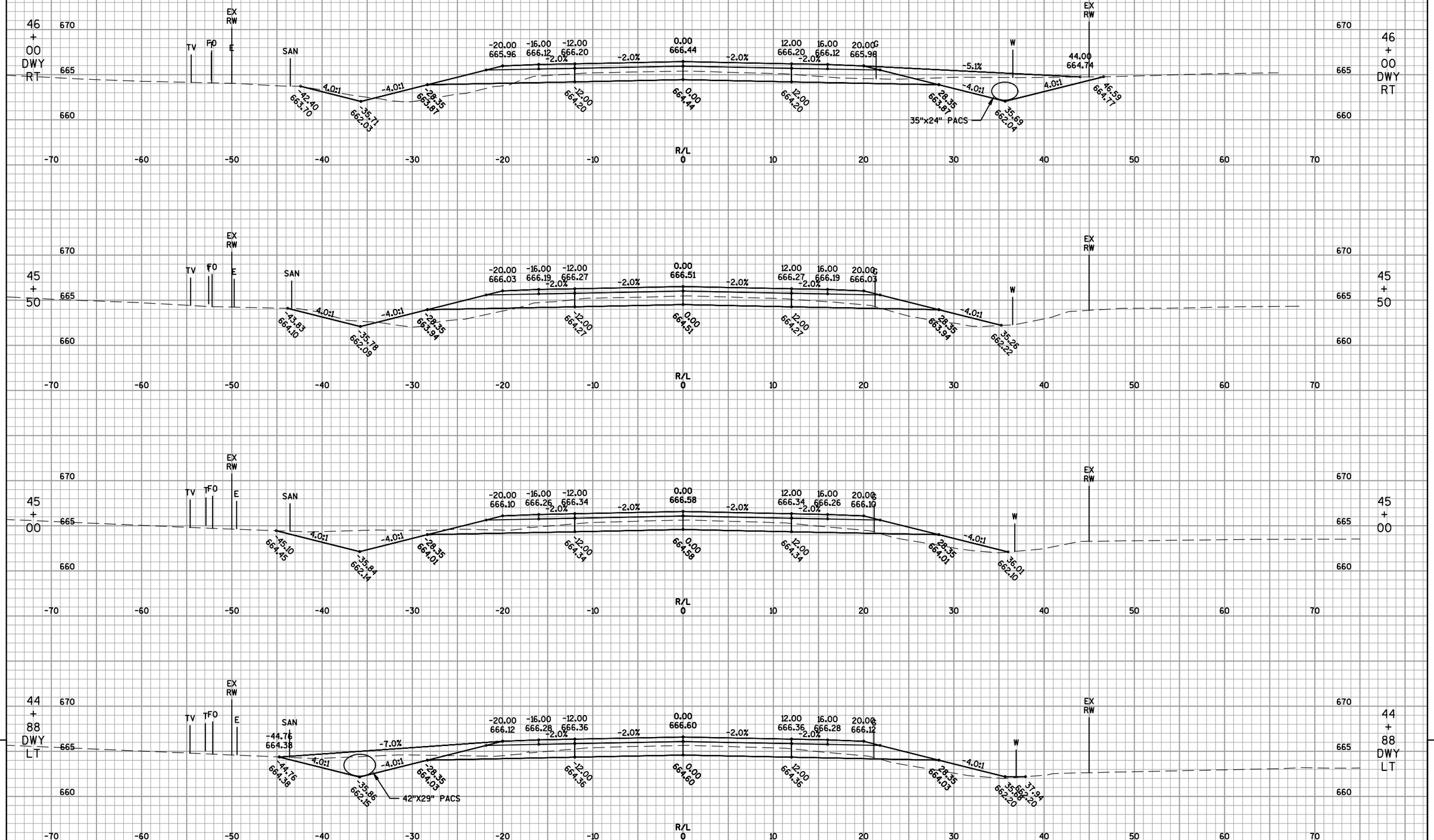
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 89	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:35 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090220_xs

WISDOT/CADDS SHEET 49



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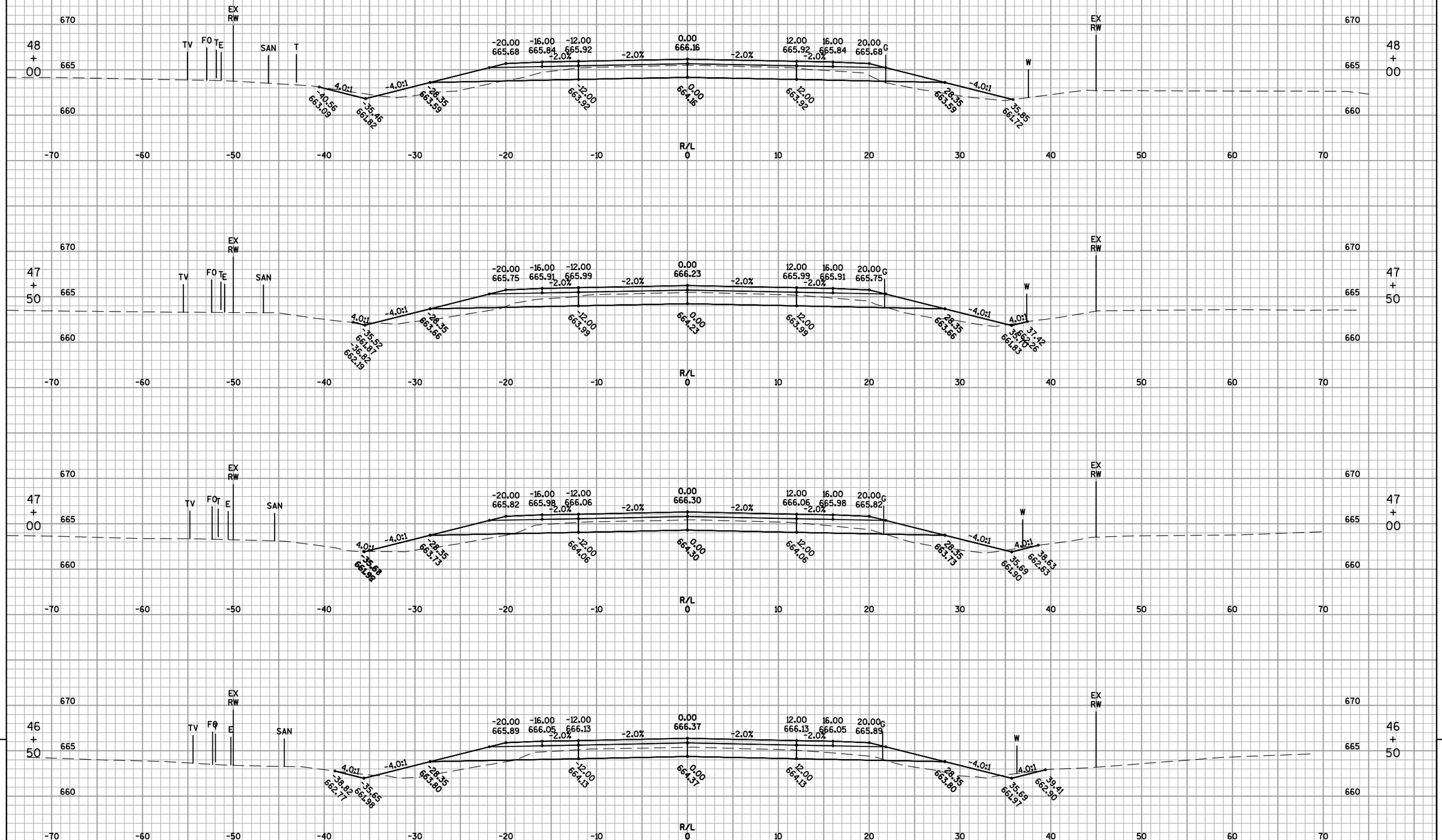
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 90	E

9

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:35 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090221_xs

WISDOT/CADDS SHEET 49



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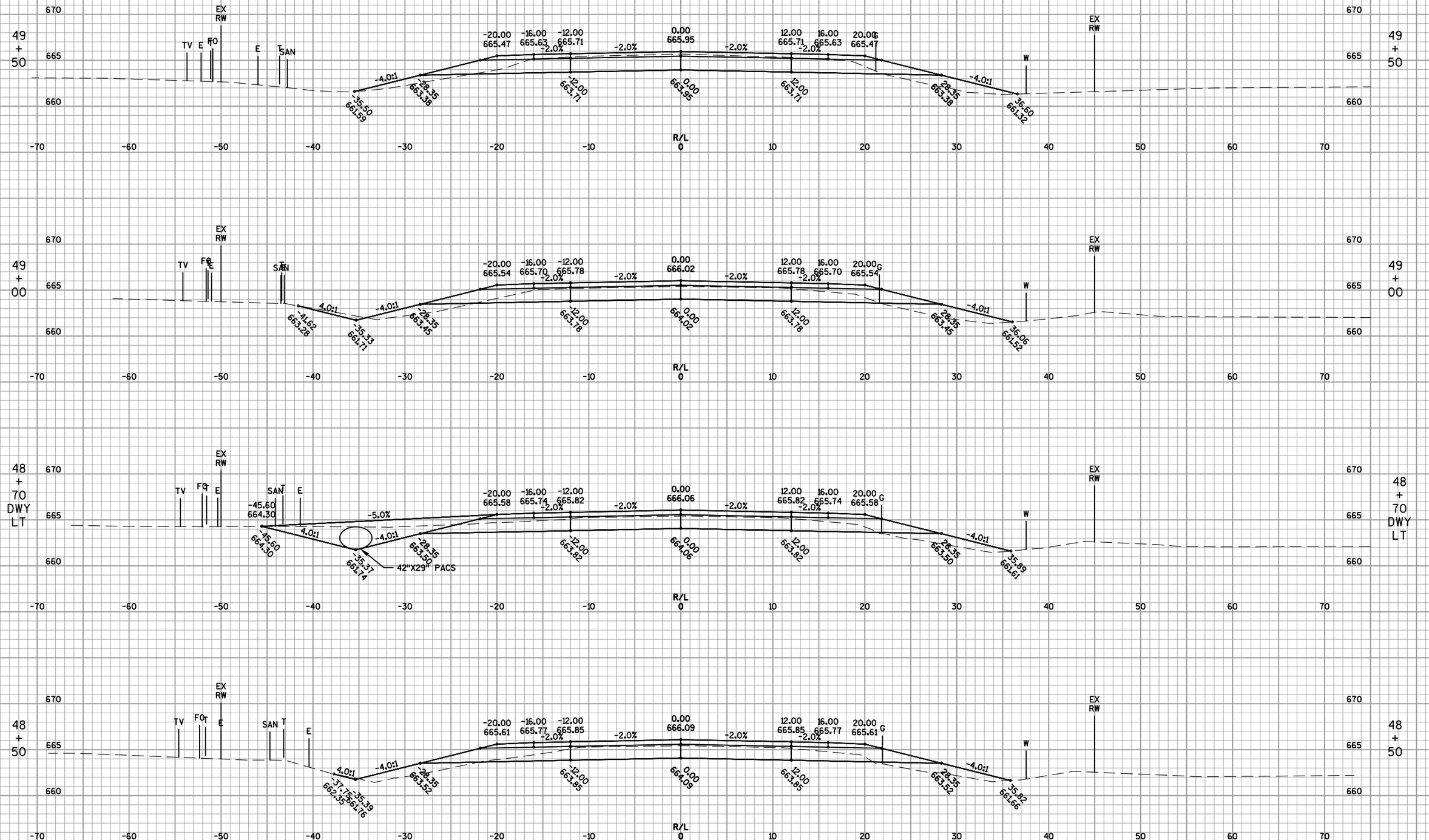
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 91	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:35 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090222_xs

WISDOT/CADDS SHEET 49



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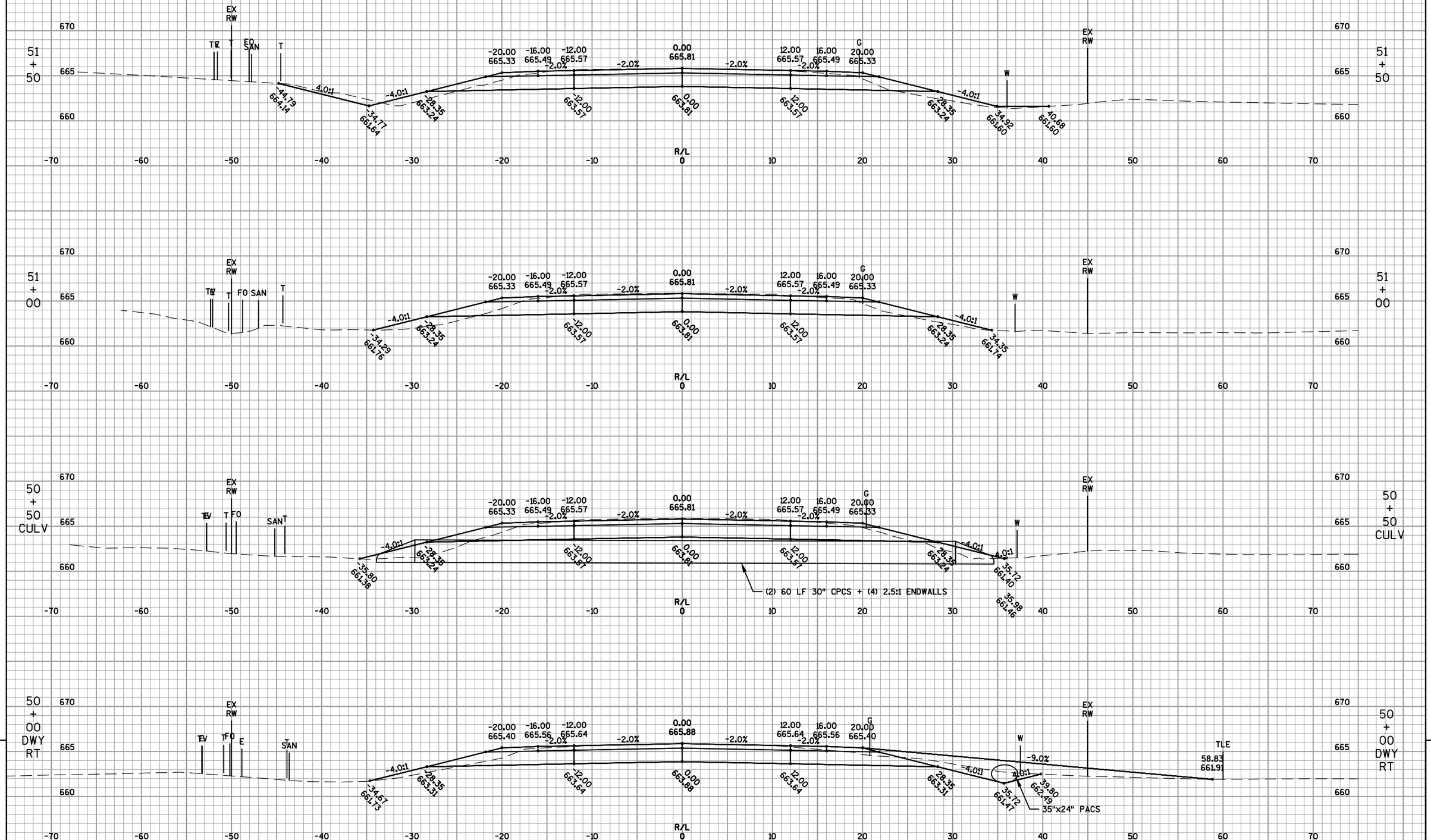
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 92	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG
PLOT DATE : 5/6/2015 2:35 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090223_xs

WISDOT/CADDS SHEET 49

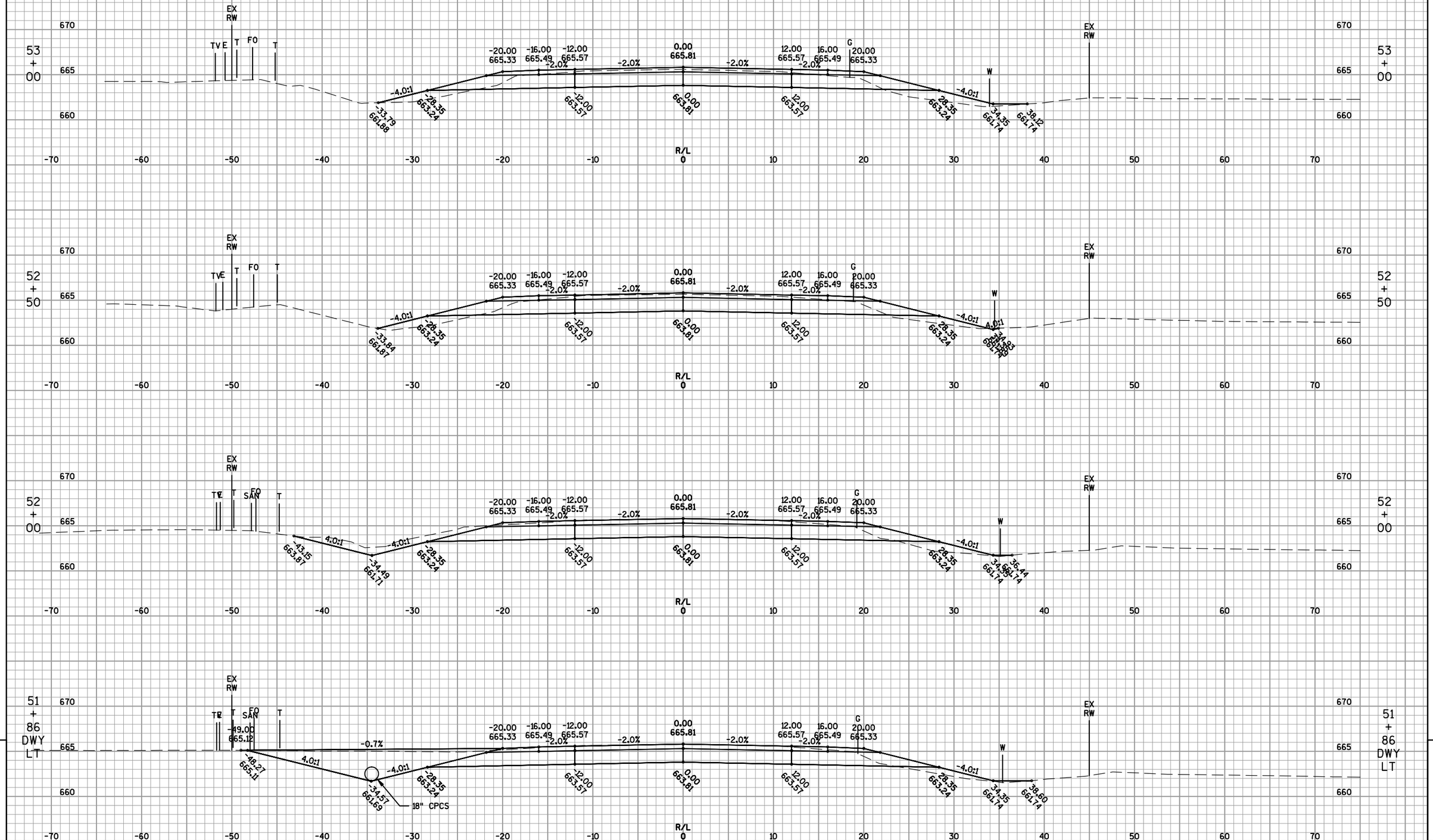


PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 93	E

9

9

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG
PLOT DATE : 5/6/2015 2:36 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090224_xs



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 94	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:36 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

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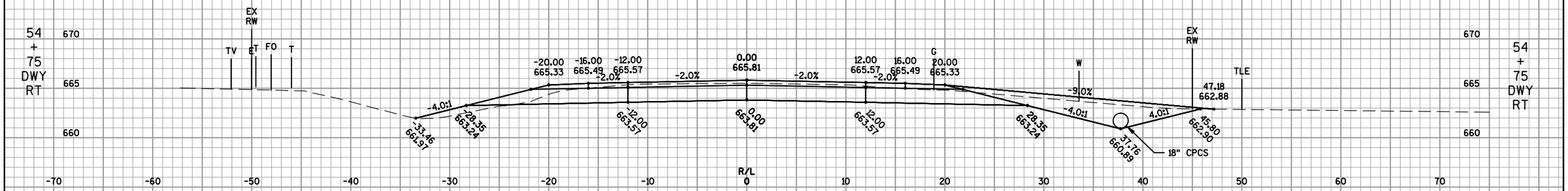
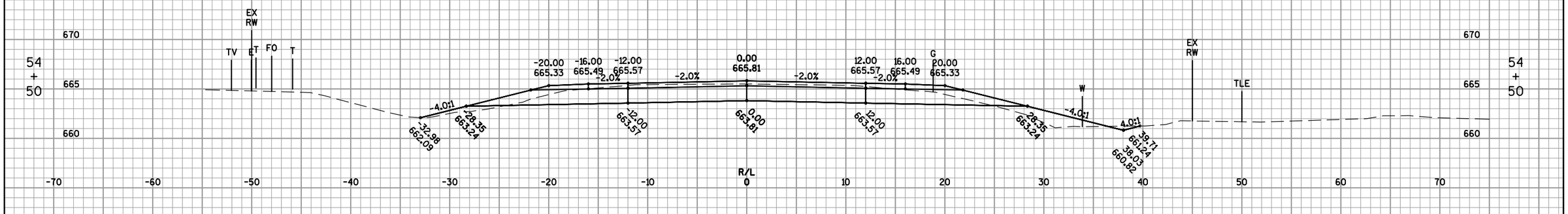
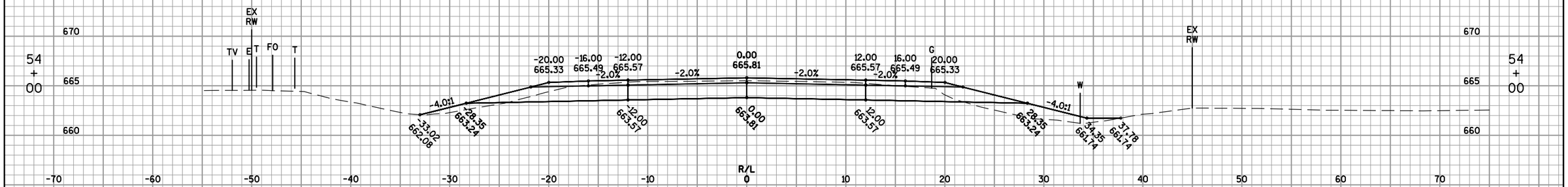
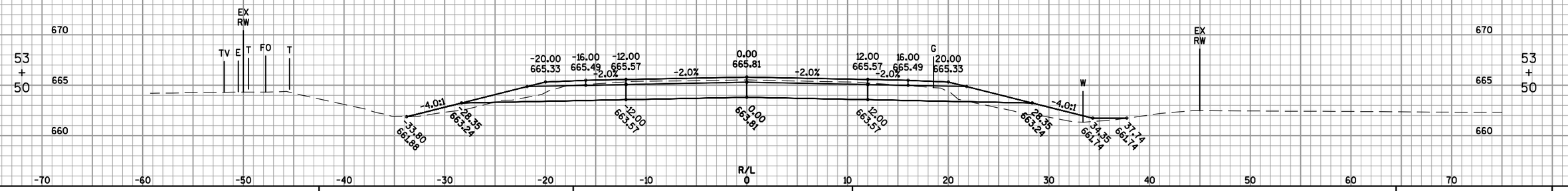
WISDOT/CADDS SHEET 49



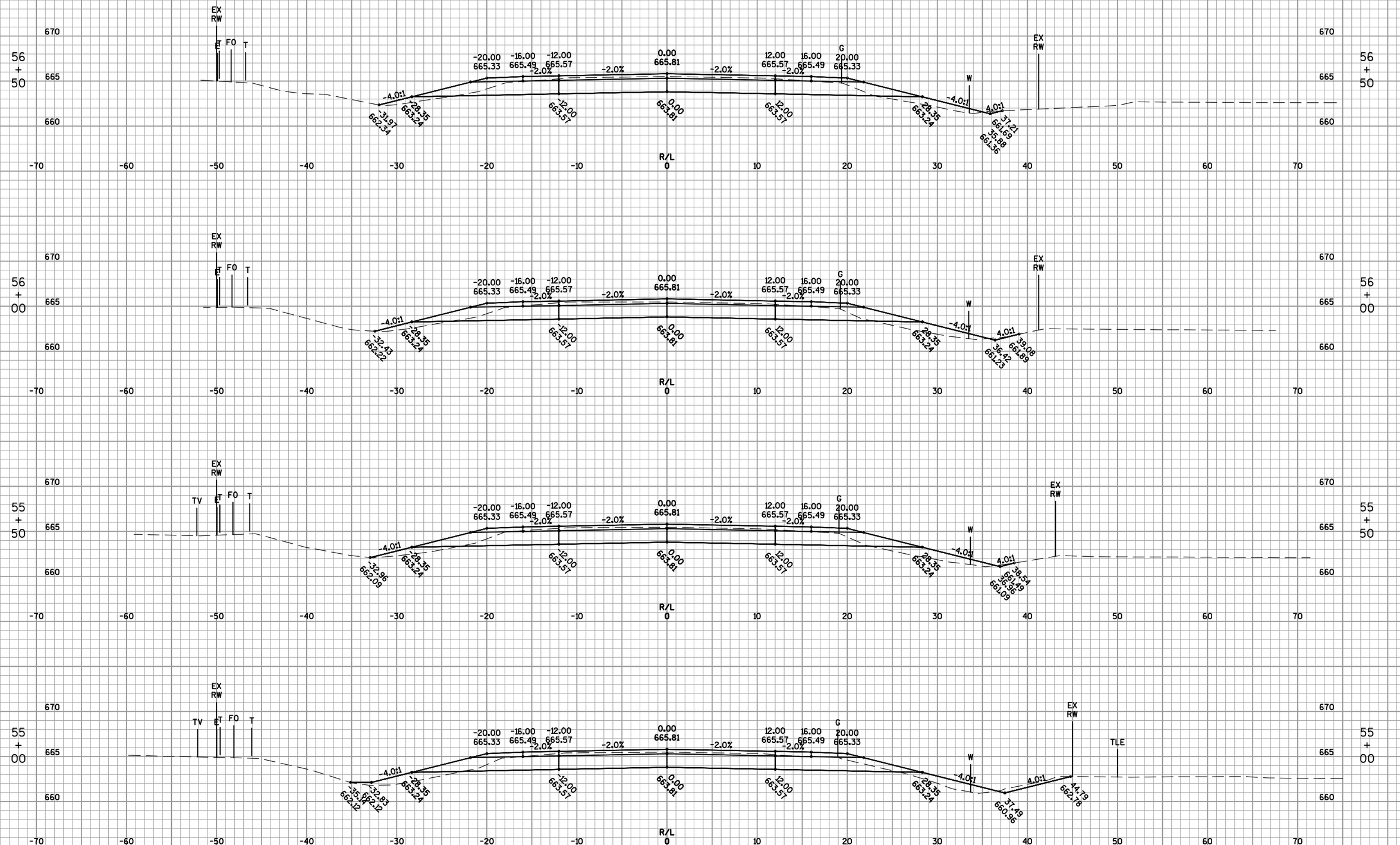






9 9

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 95	E



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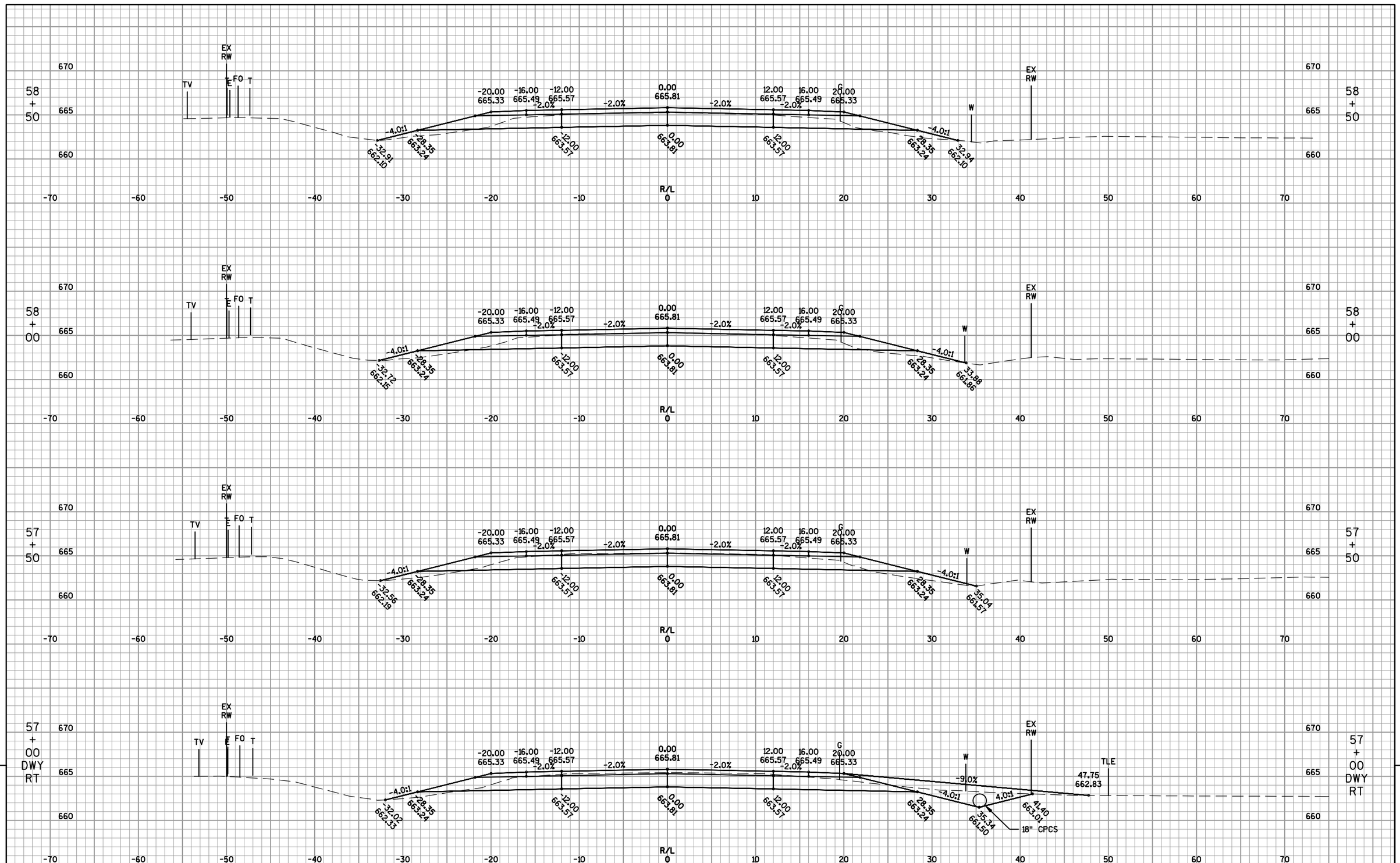
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 96	E



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 97	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG
PLOT DATE : 5/6/2015 2:36 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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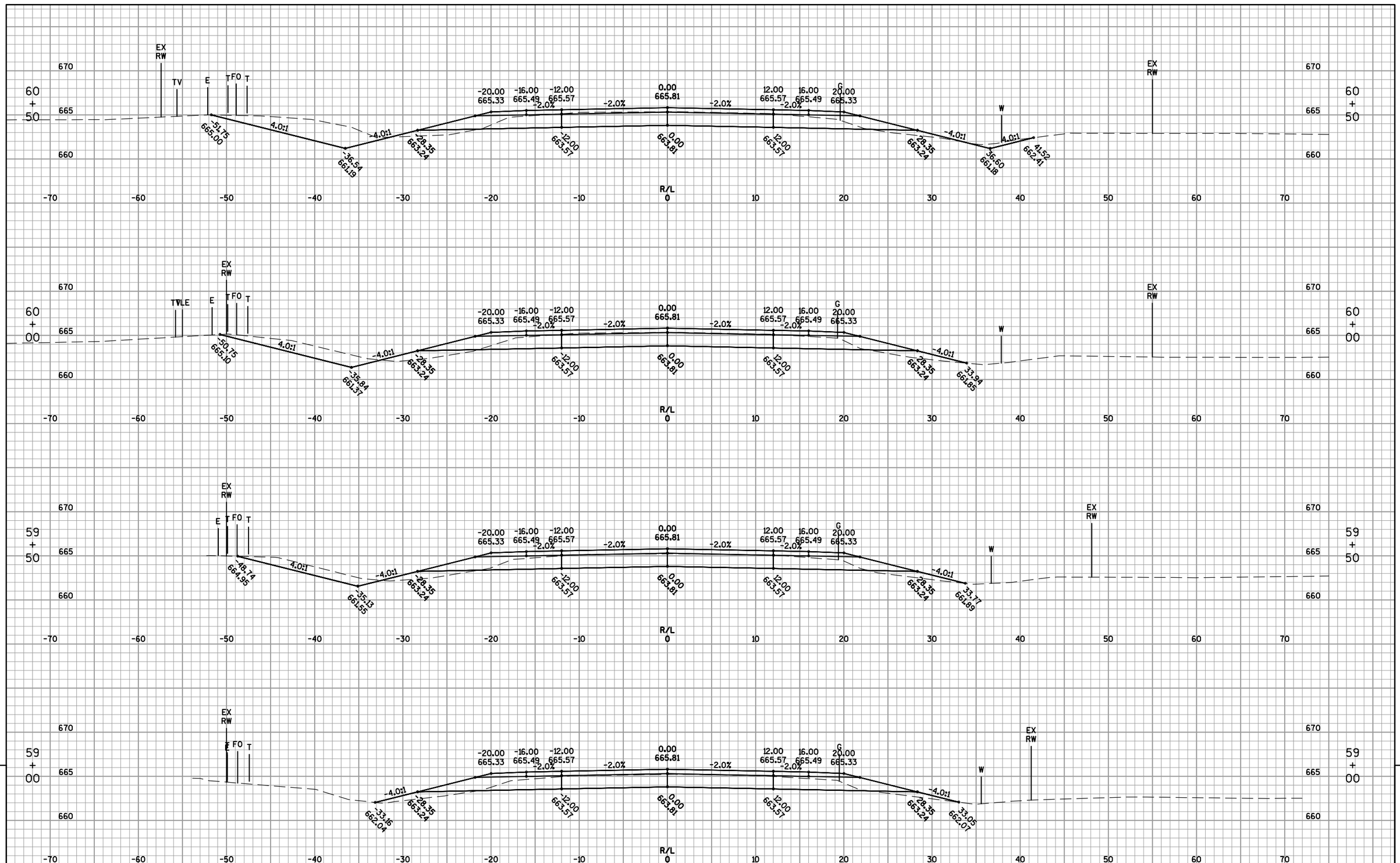
WISDOT/CADDS SHEET 49



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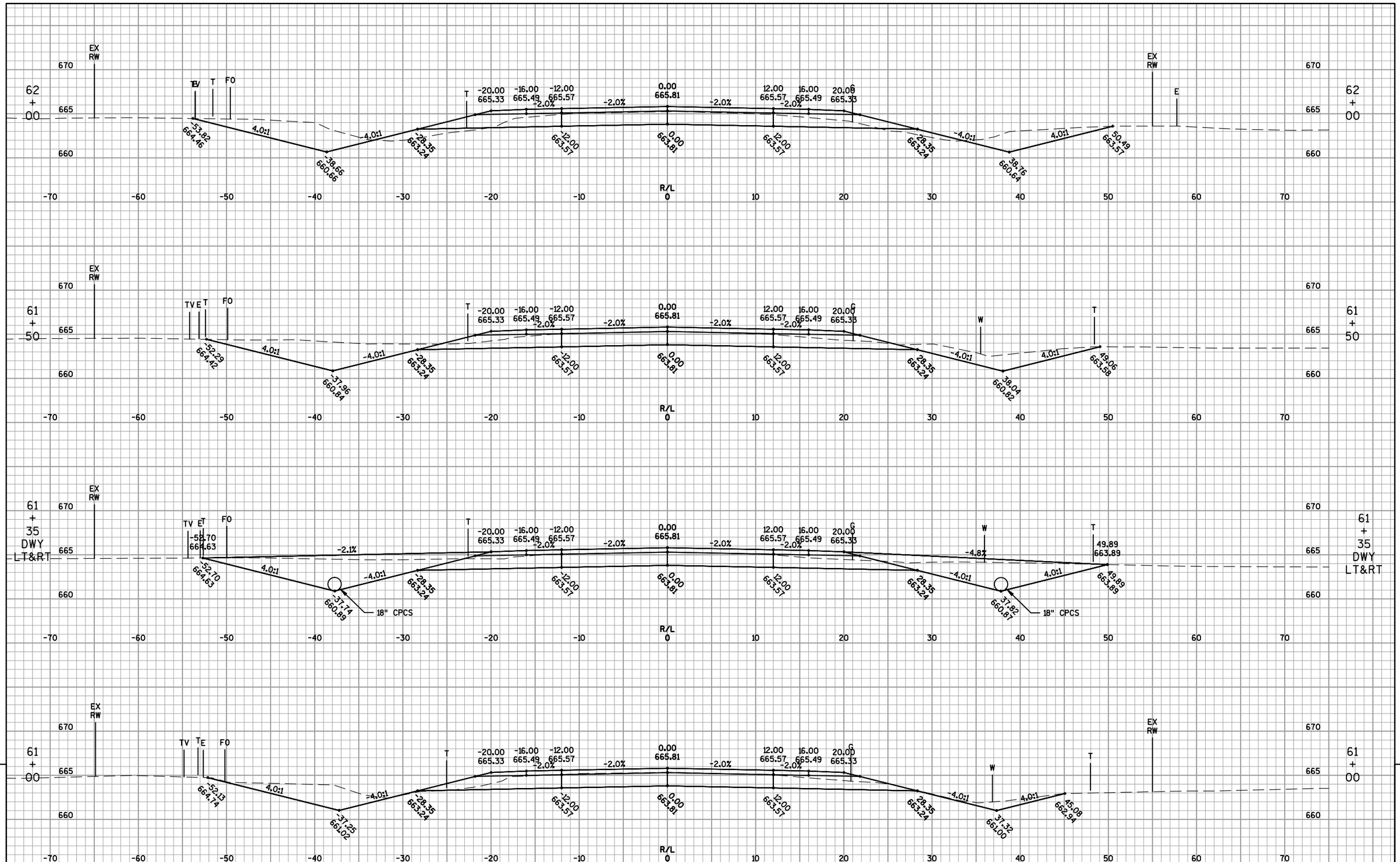
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 98	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:36 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

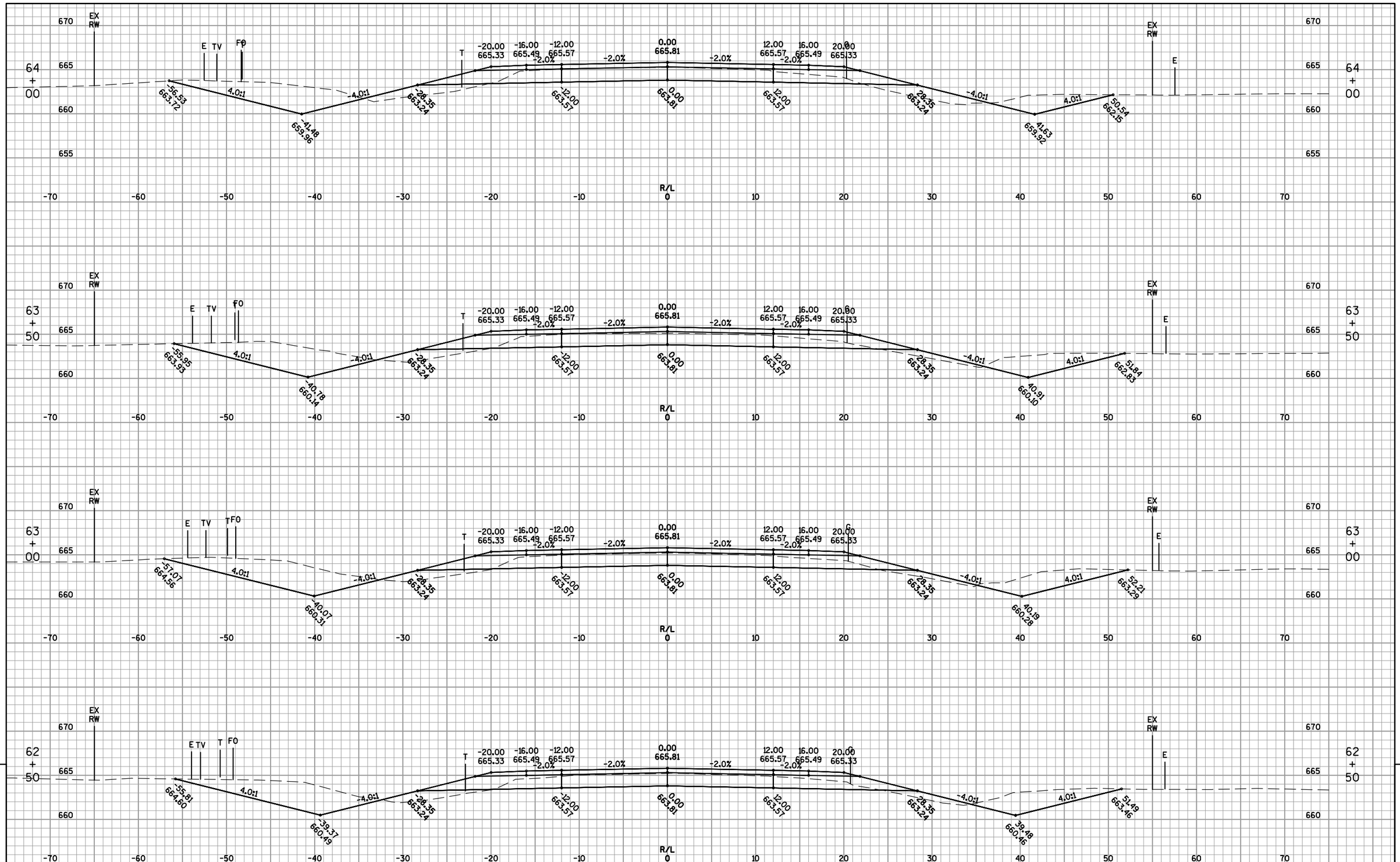
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090229_xs

WISDOT/CADDS SHEET 49



9	PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 99	E

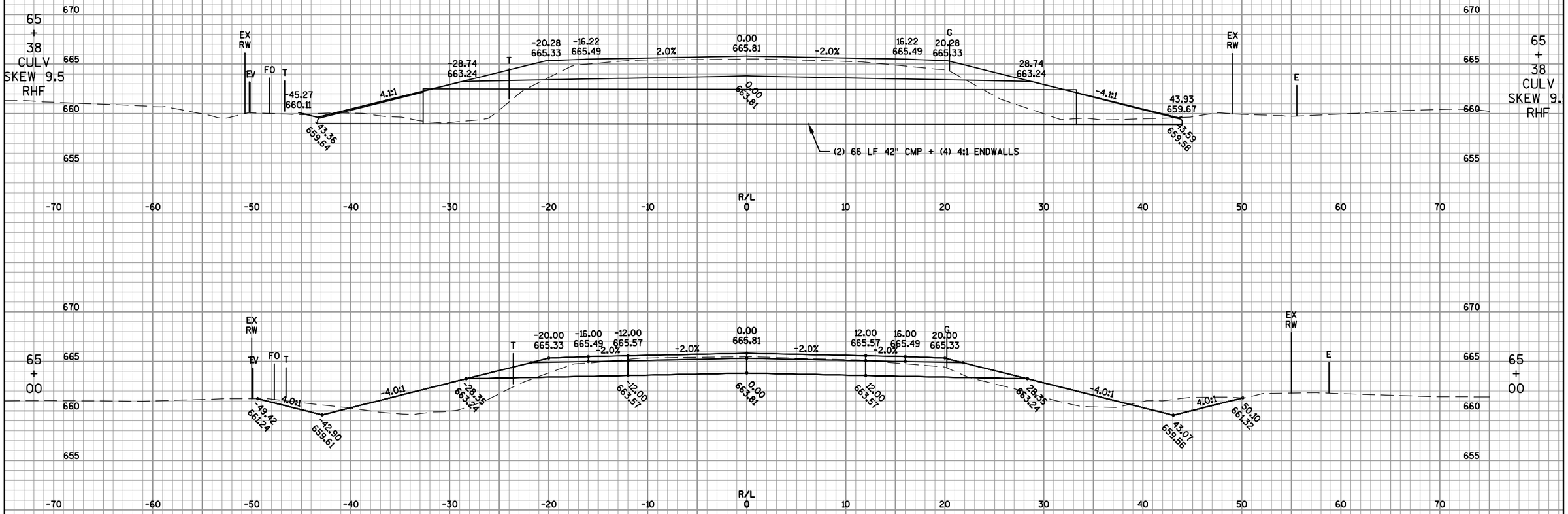
FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG
PLOT DATE : 5/6/2015 2:36 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090230_xs

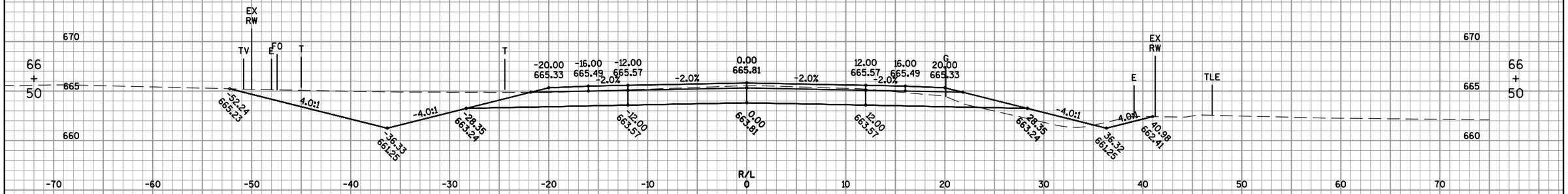


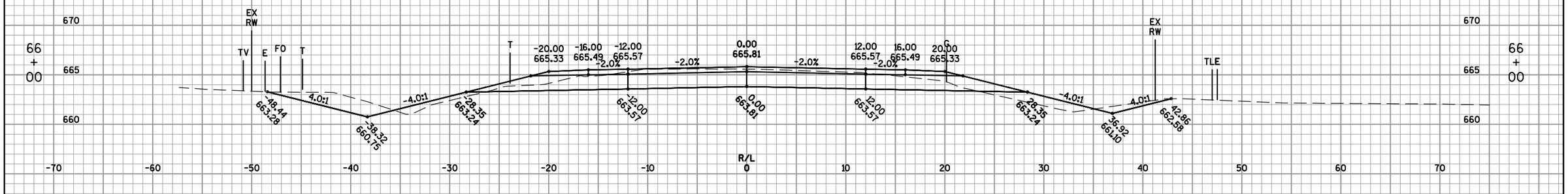
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 100	E

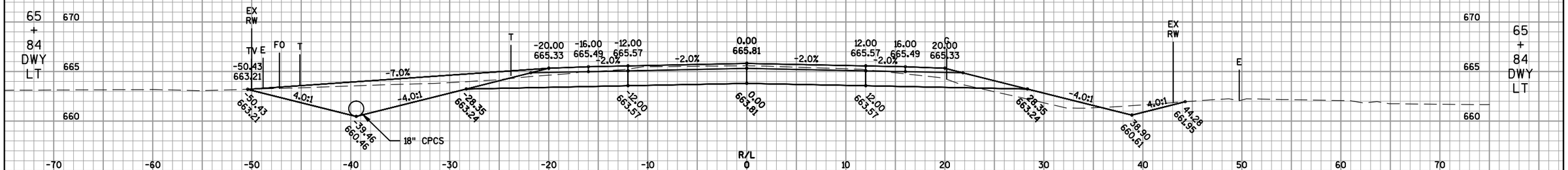
FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:36 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

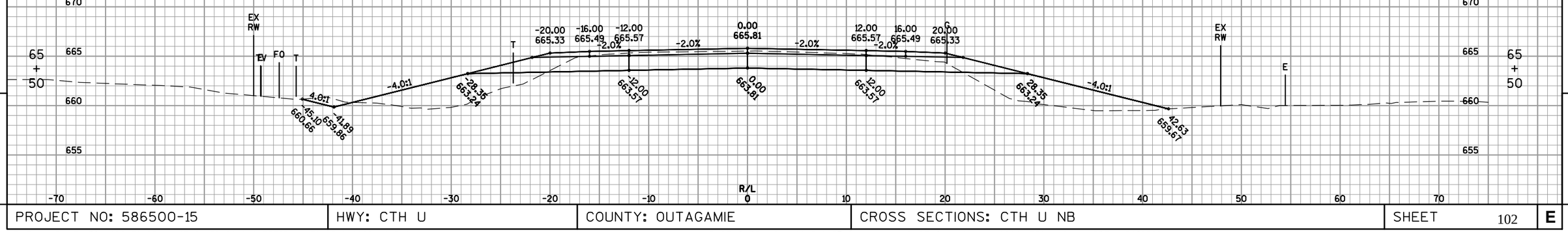
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090231_xs


65 + 38 CULV SKEW 9.5 RHF
EX RW
EV
FO
T
-45.27 660.11
43.36 659.64
4.1:1
-28.74 663.24
-20.28 665.33
-16.22 665.49
2.0%
0.00 665.81
-2.0%
16.22 665.49
G
20.28 665.33
28.74 663.24
-4.1:1
43.93 659.67
43.59 659.58
E
65 + 38 CULV SKEW 9.5 RHF
(2) 66 LF 42" CMP + (4) 4:1 ENDWALLS
670
665
660
655
-70
-60
-50
-40
-30
-20
-10
R/L 0
10
20
30
40
50
60
70
65 + 00
ETV
FO
T
-49.42 661.24
4.0:1
-42.90 659.61
-4.0:1
-28.35 663.24
-20.00 665.33
-16.00 665.49
-12.00 665.57
-2.0%
0.00 665.81
12.00 665.57
16.00 665.49
20.00 665.33
28.35 663.24
43.07 659.56
50.10 661.32
64 + 50
-50.31 661.81
-42.49 659.78
42.35 659.74
50.70 661.83
9
PROJECT NO: 586500-15
HWY: CTH U
COUNTY: OUTAGAMIE
CROSS SECTIONS: CTH U NB
SHEET 101
E









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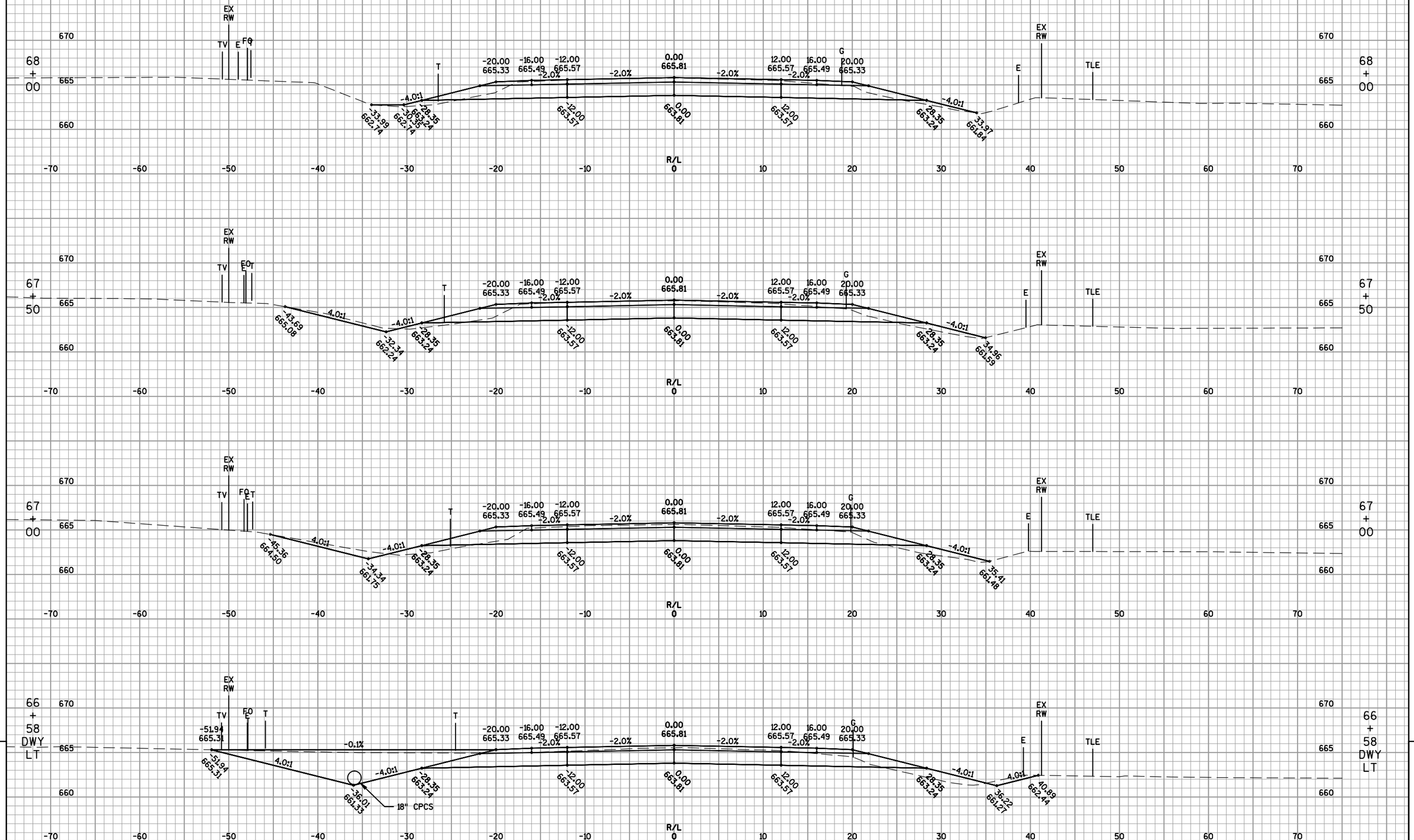
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 102	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:37 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090233_xs

WISDOT/CADDS SHEET 49

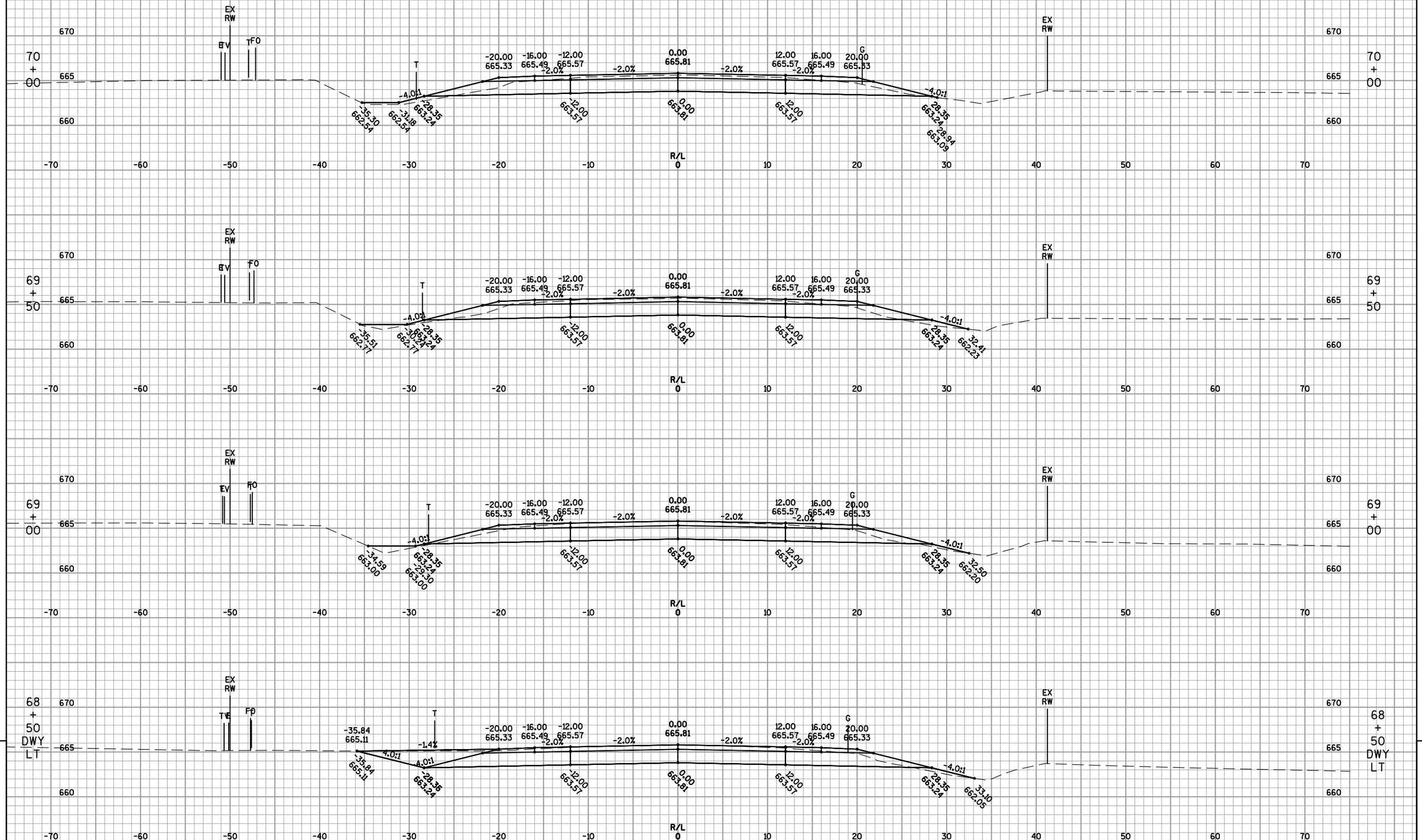


PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 103 E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:37 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090234_xs

WISDOT/CADDS SHEET 49



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 104	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG
PLOT DATE : 5/6/2015 2:37 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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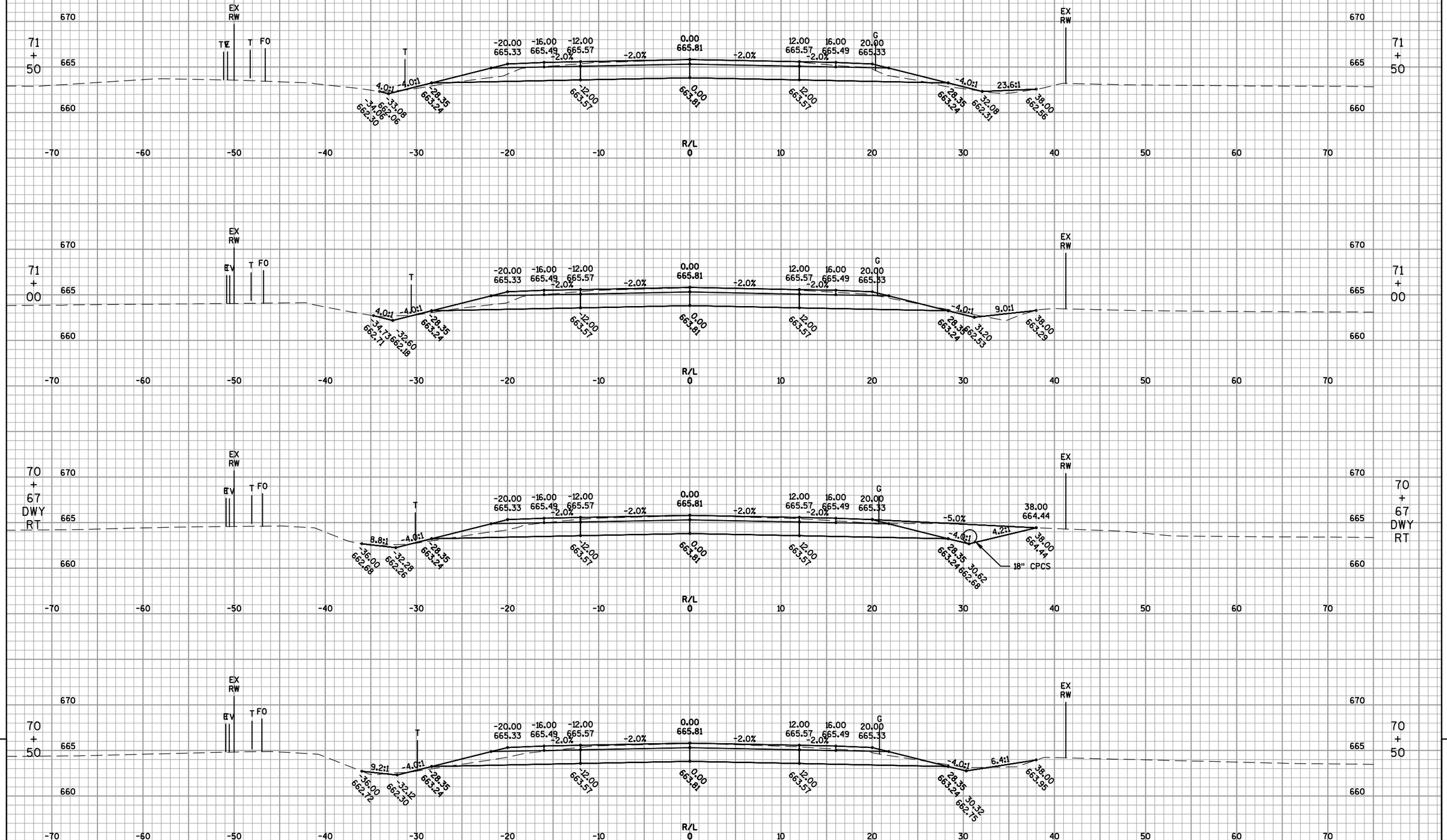

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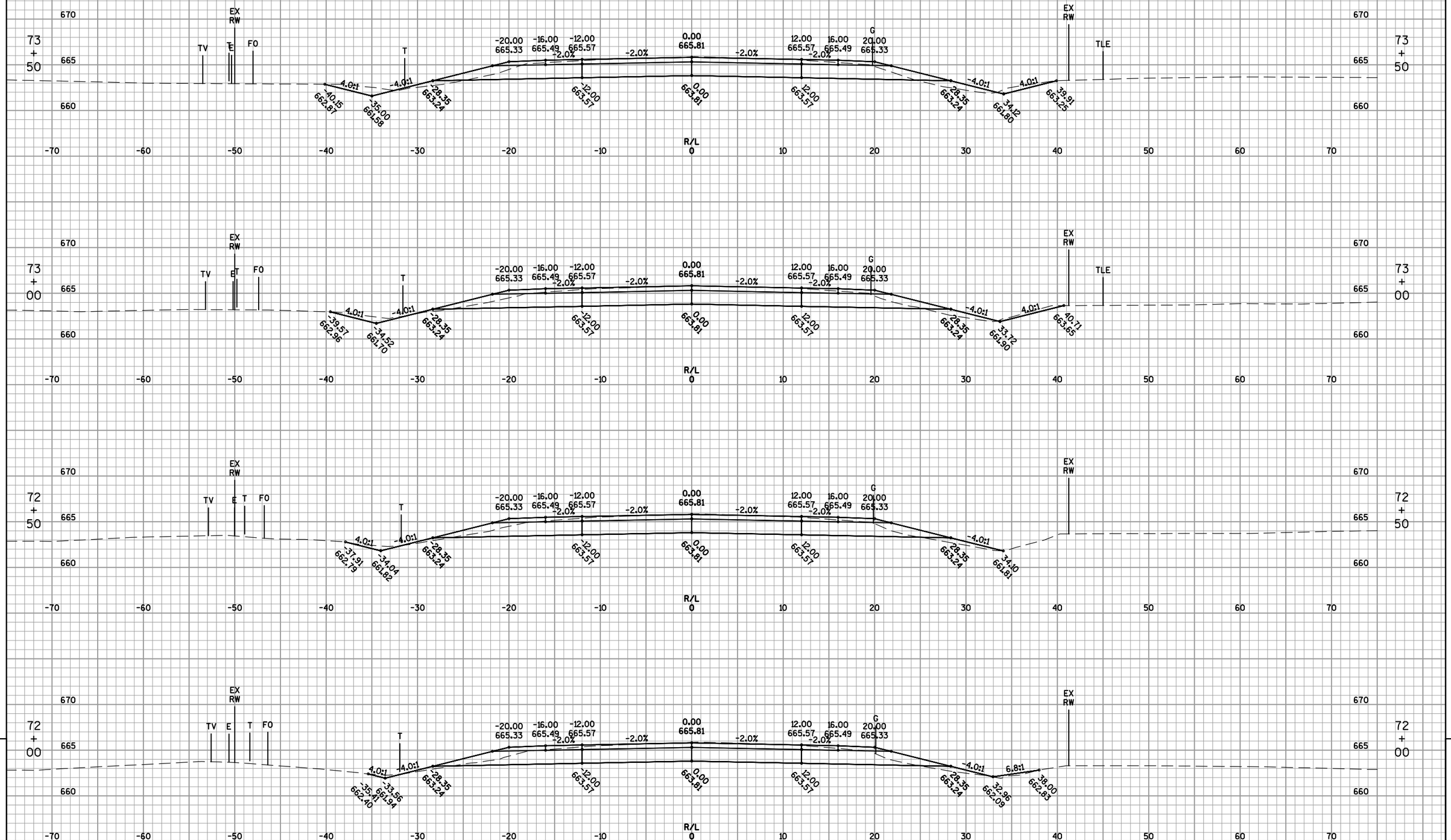
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 105	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG
PLOT DATE : 5/6/2015 2:37 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090236_xs



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 106	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG
PLOT DATE : 5/6/2015 2:37 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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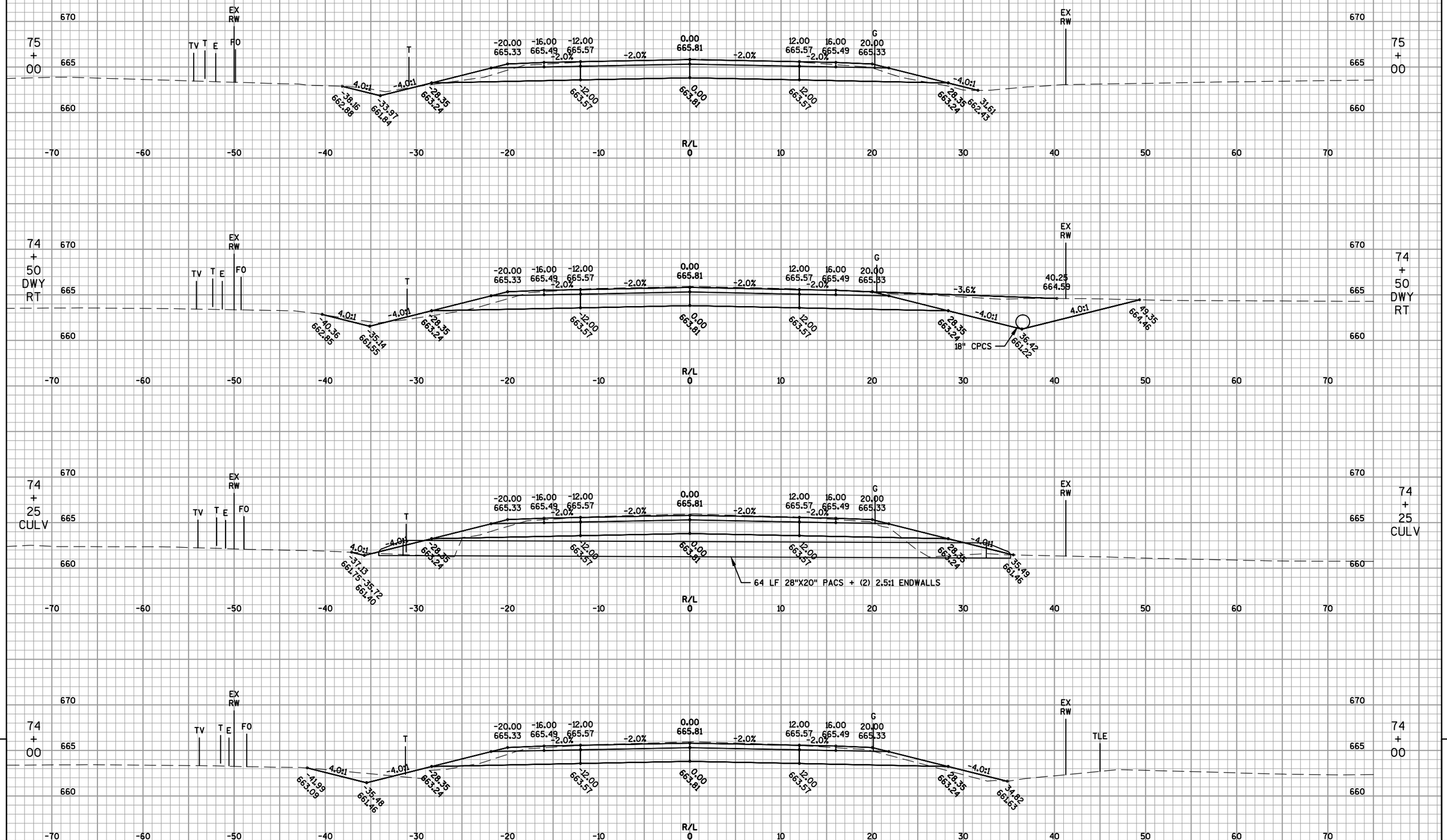
WISDOT/CADDS SHEET 49



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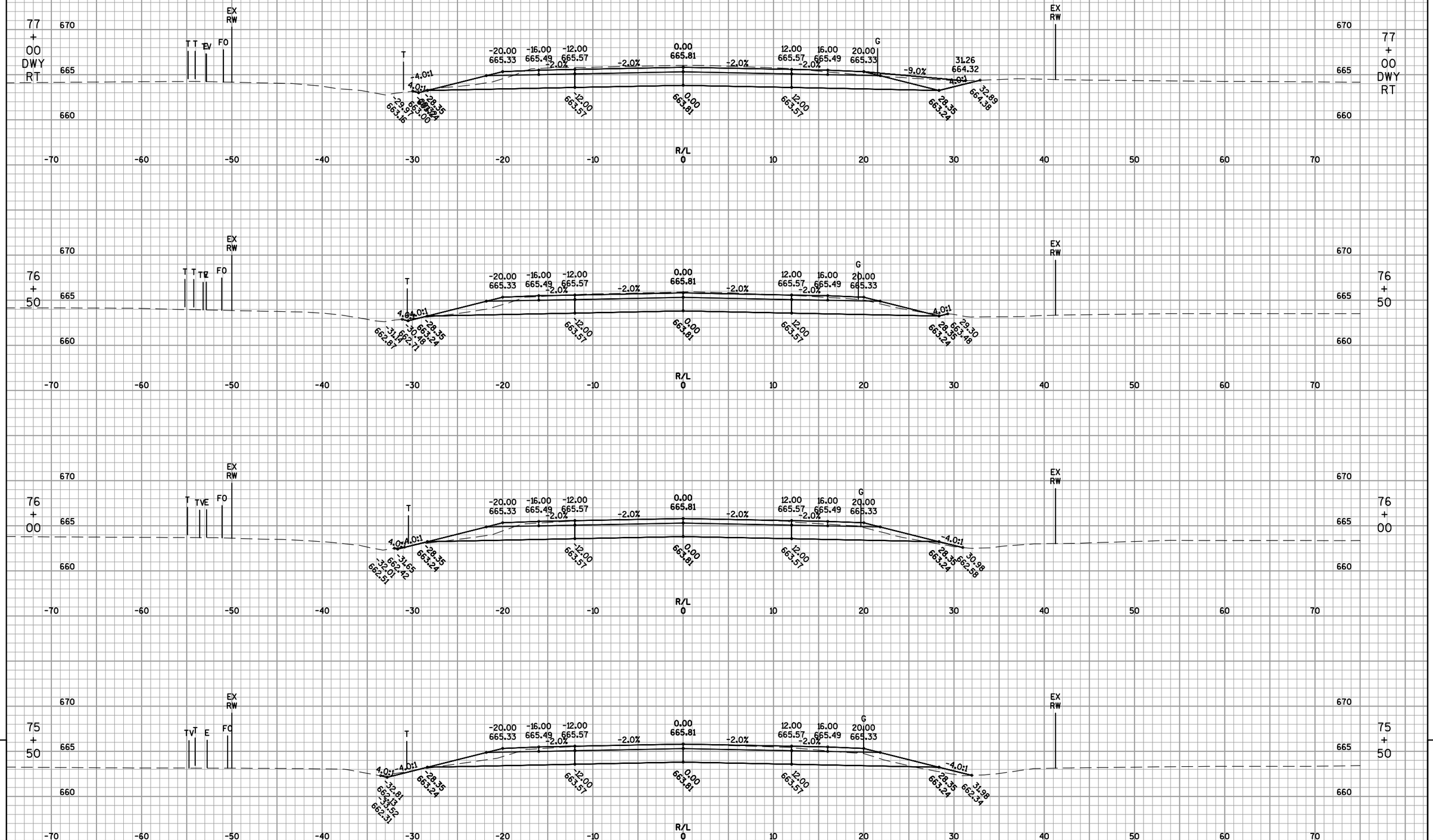
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 107	E

9

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:37 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090238_xs

WISDOT/CADDS SHEET 49



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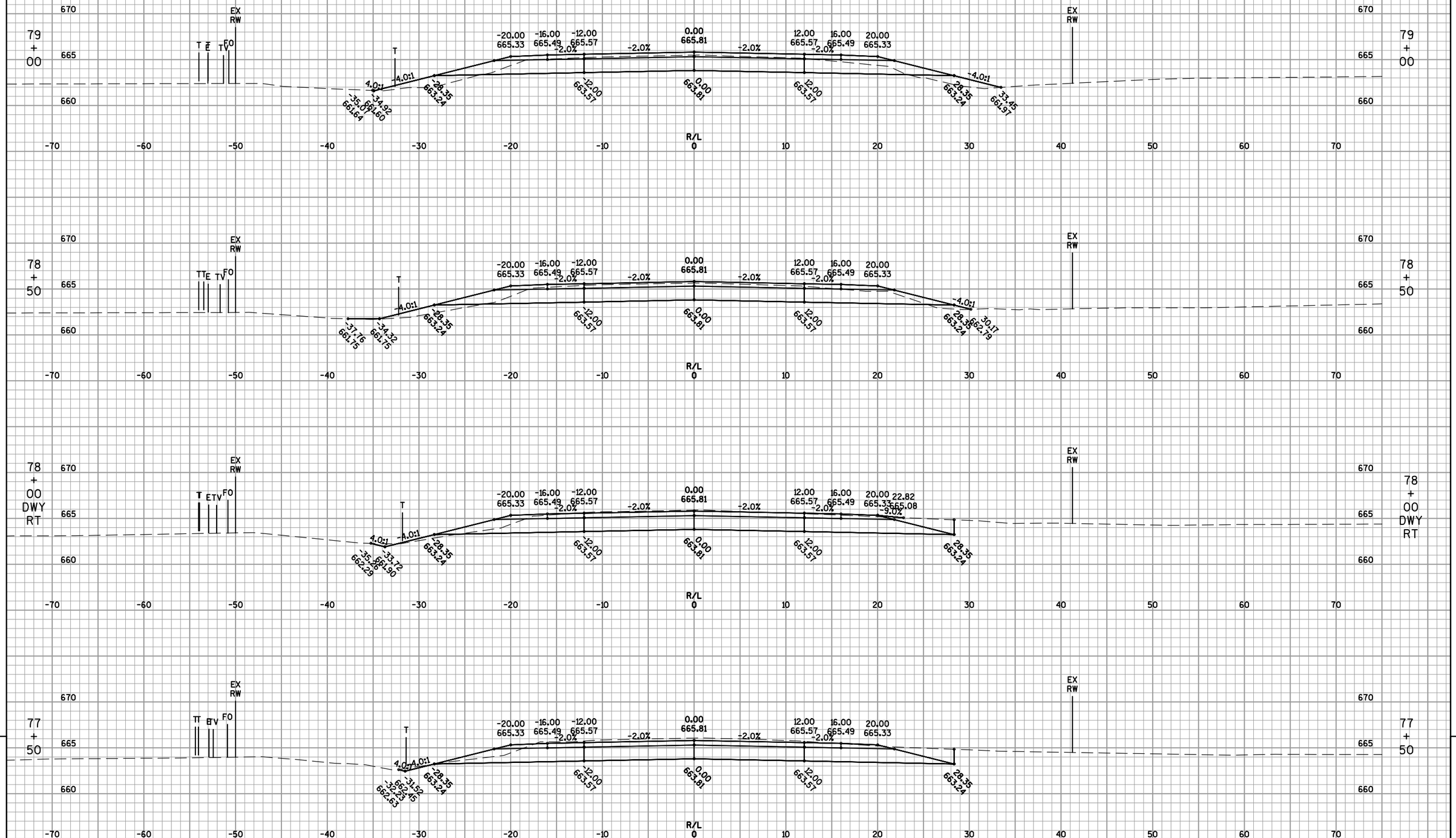
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 108	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:37 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090239_xs

WISDOT/CADDS SHEET 49



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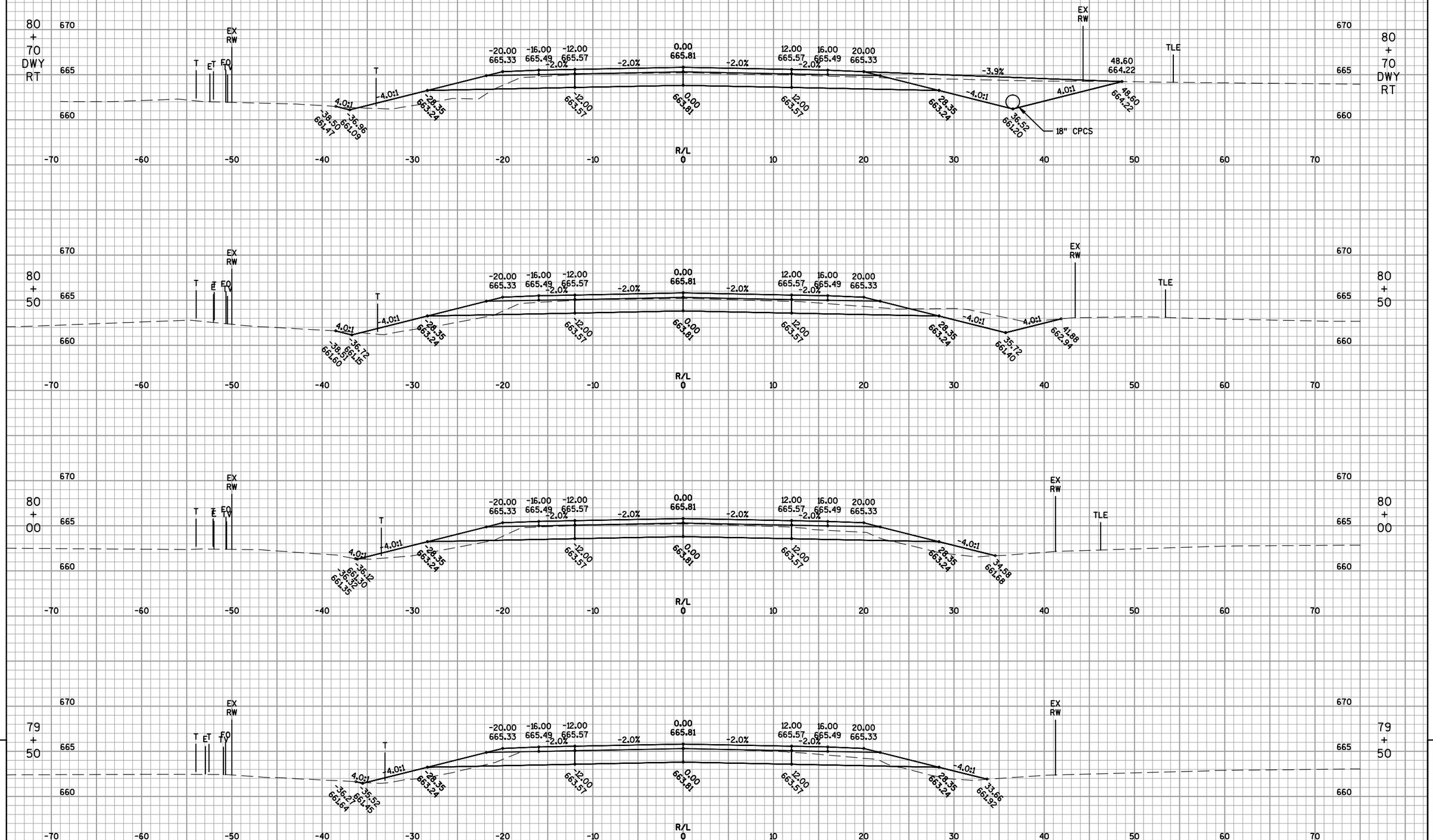
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 109	E



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 110	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:37 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

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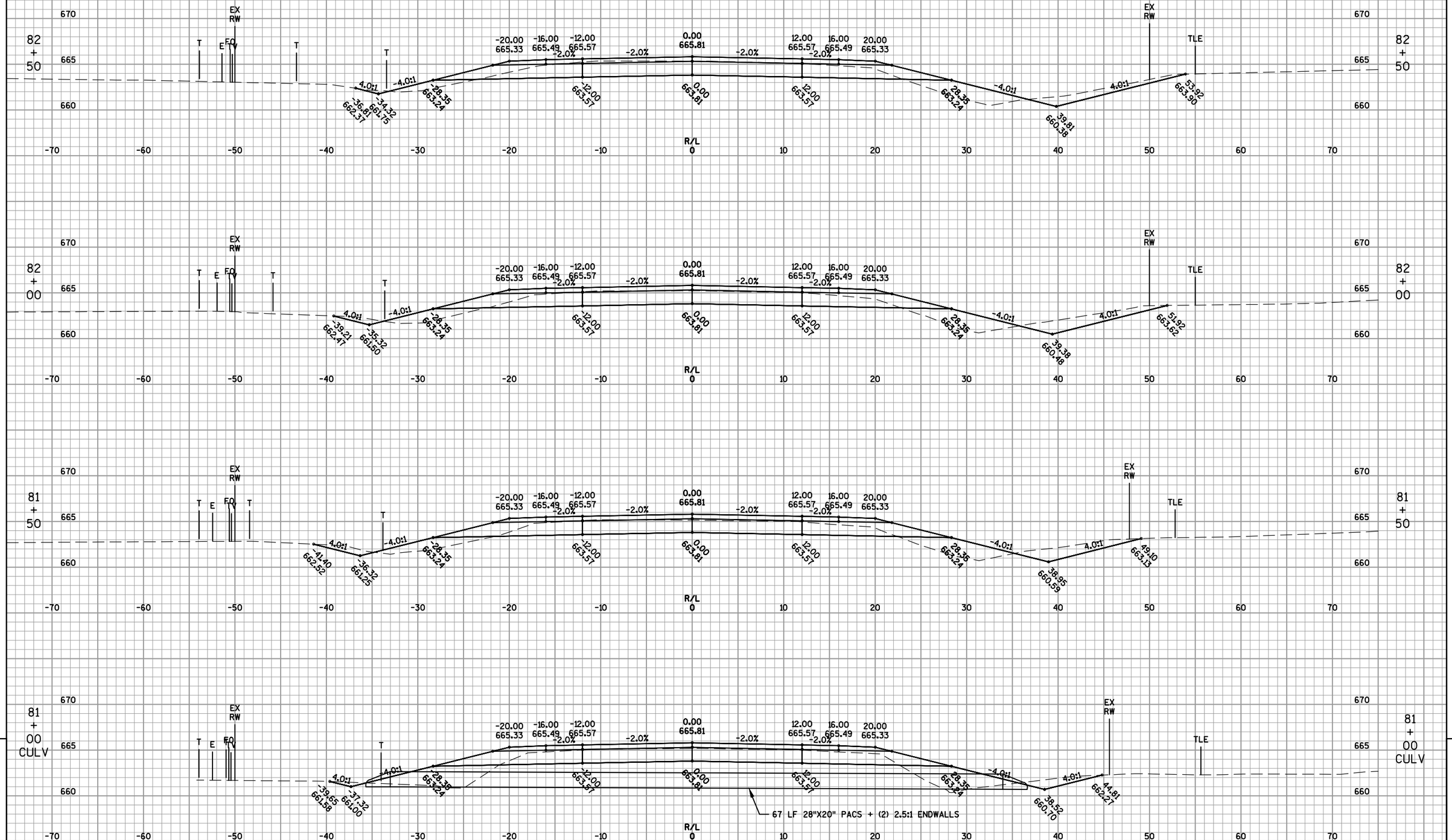
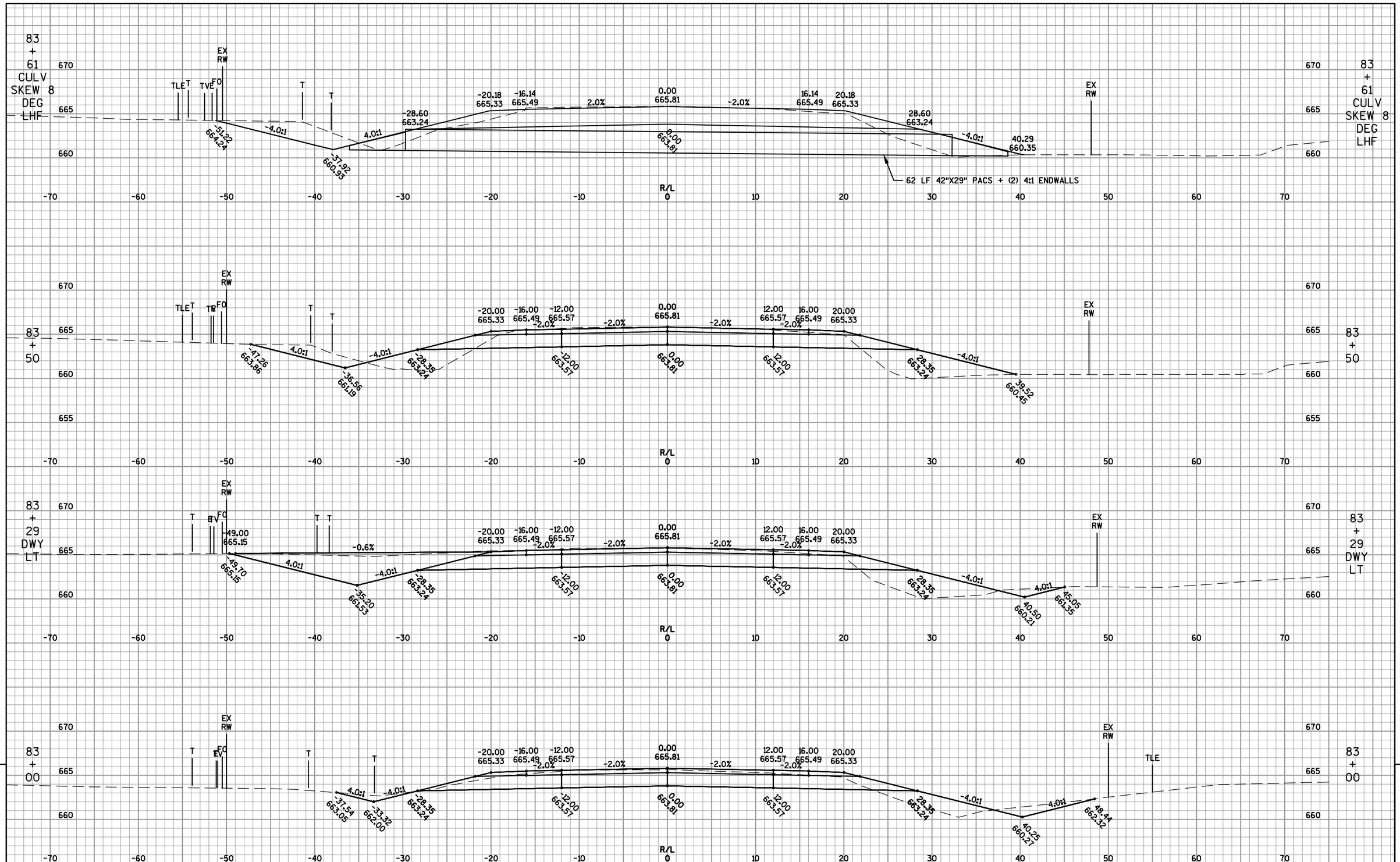
WISDOT/CADDS SHEET 49



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 111	E



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 112	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:38 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

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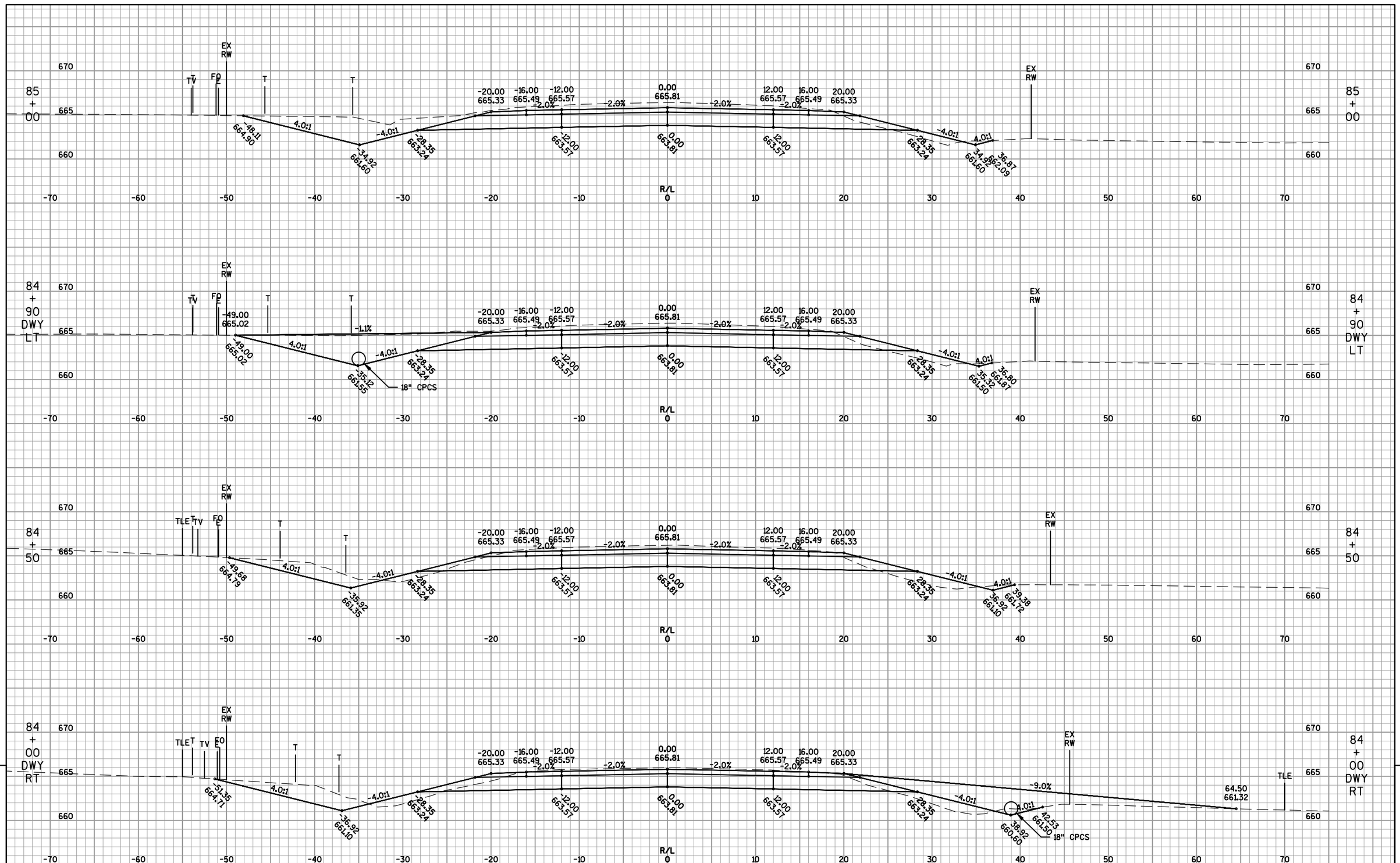
WISDOT/CADDS SHEET 49



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PLOT DATE : 5/6/2015 2:38 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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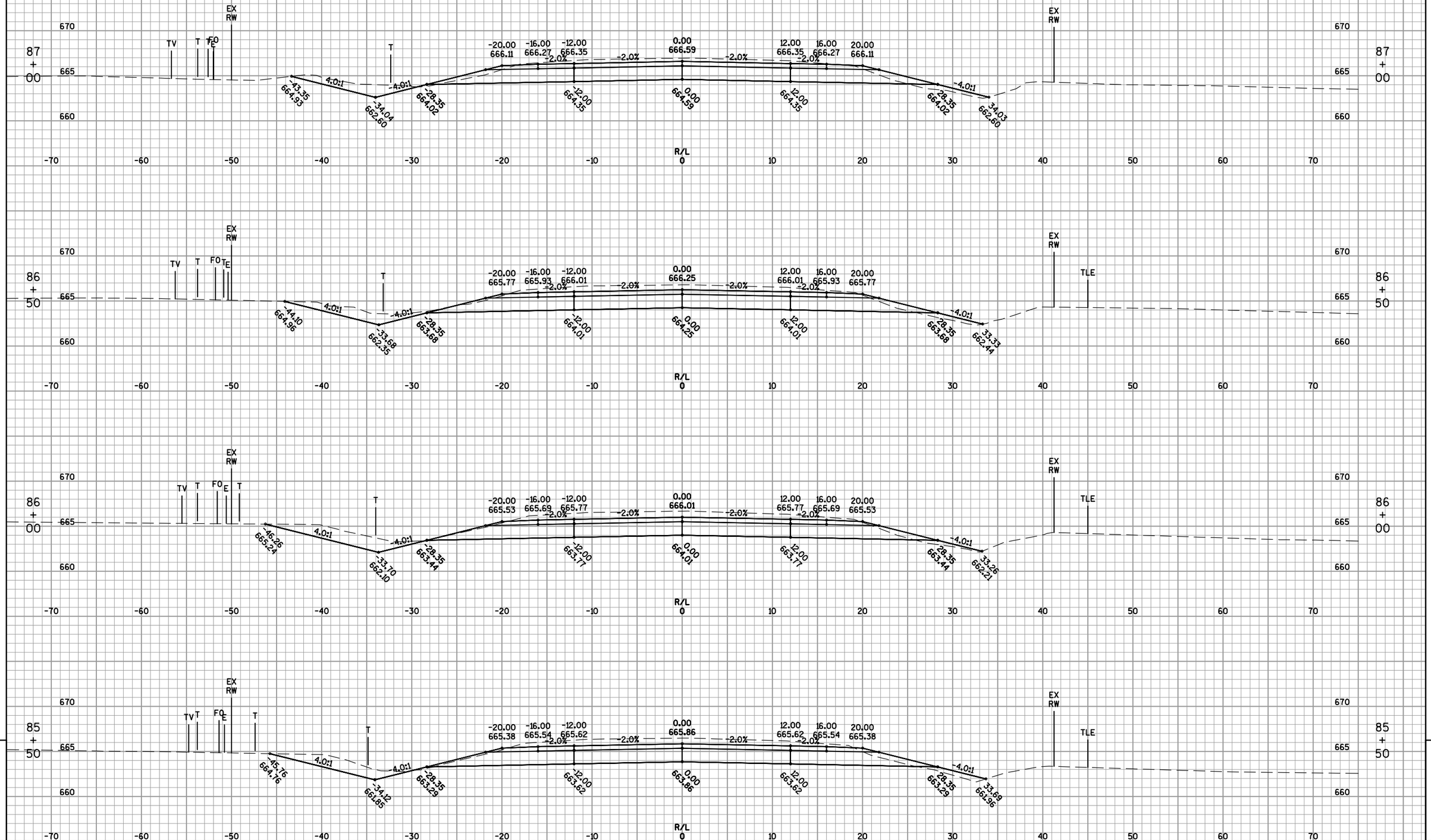

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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 114	E

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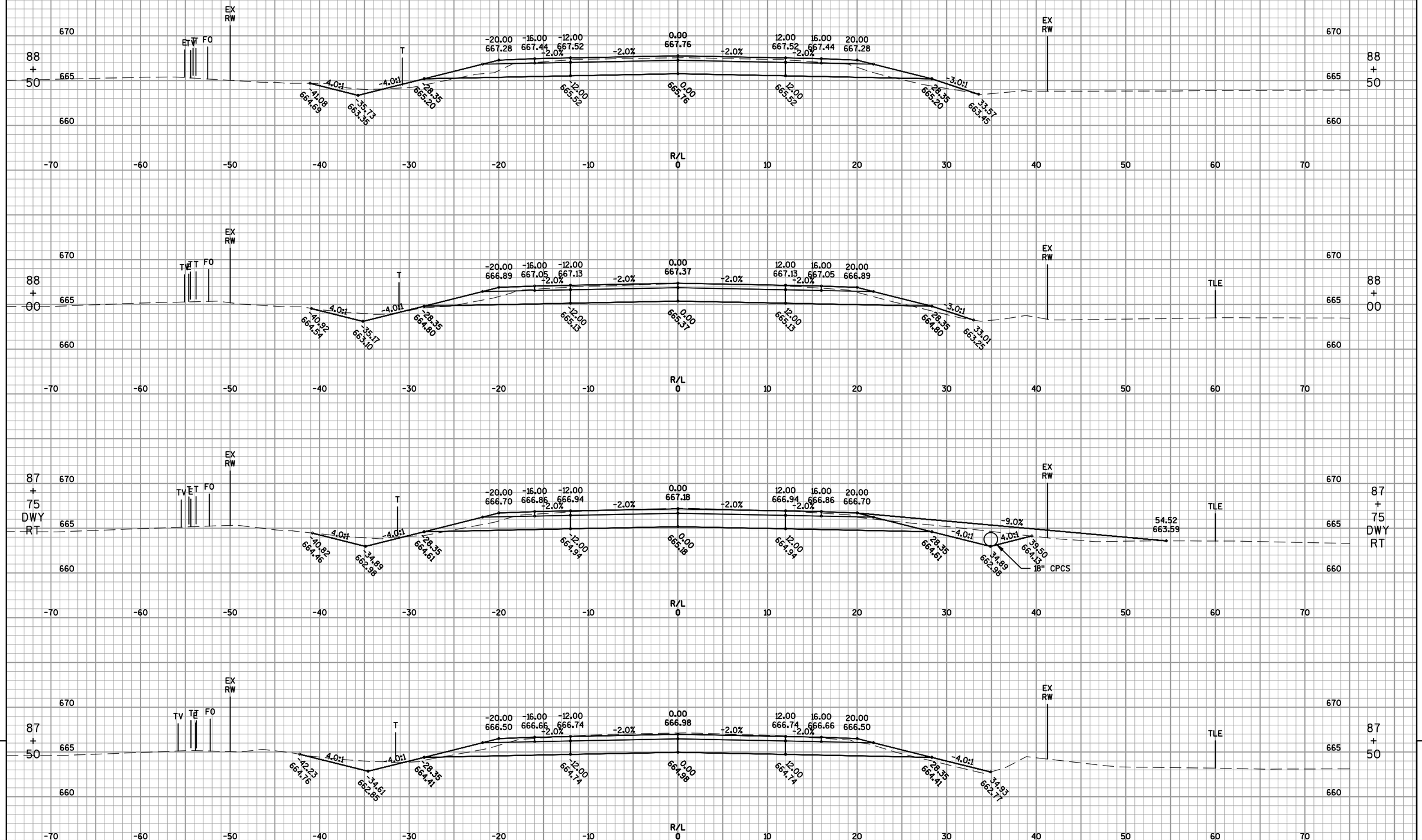
PLOT DATE : 5/6/2015 2:38 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090250_xs.dwg, E2103_090245_xs



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 115	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG PLOT DATE : 5/6/2015 2:38 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

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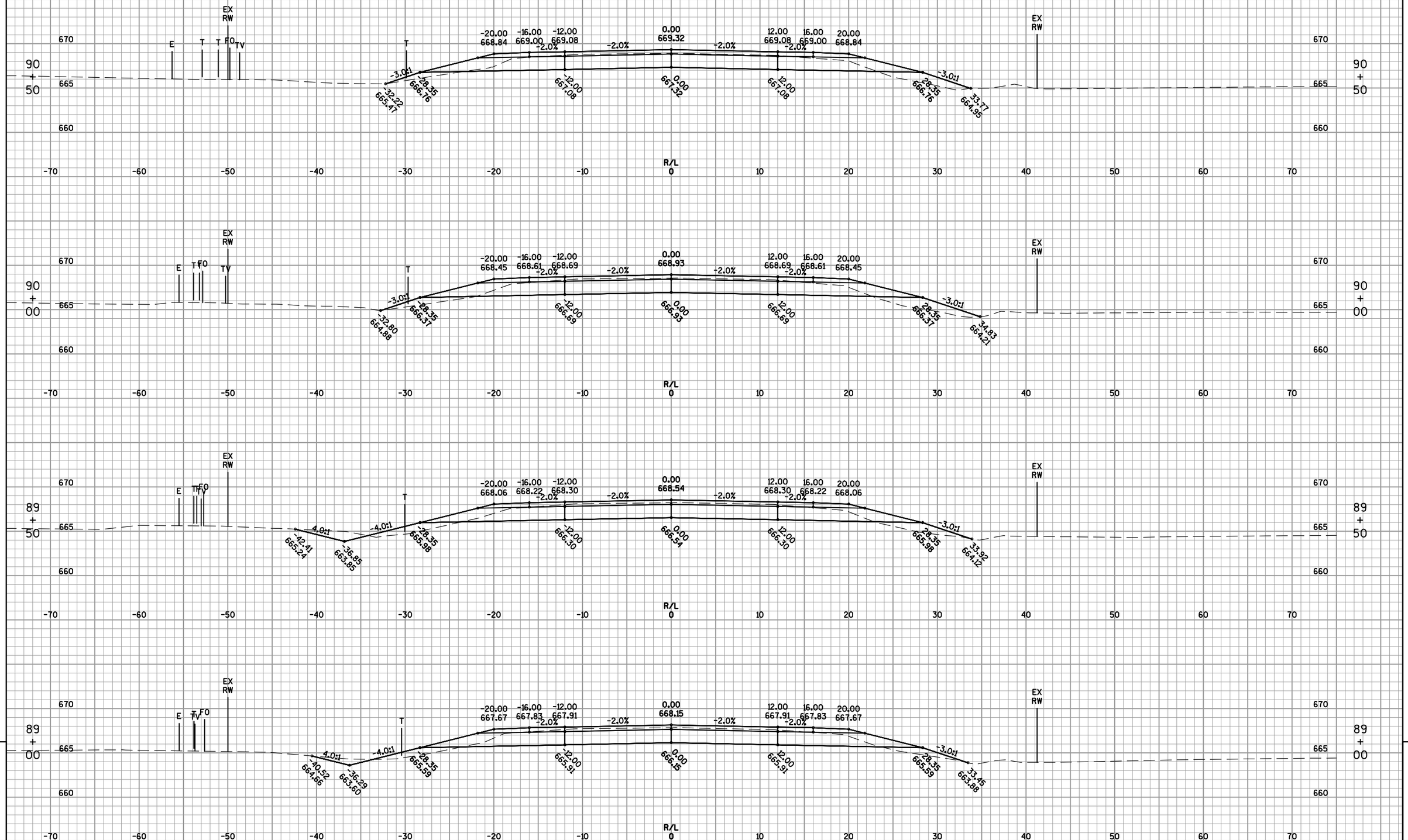
WISDOT/CADDS SHEET 49



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 116	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG
PLOT DATE : 5/6/2015 2:38 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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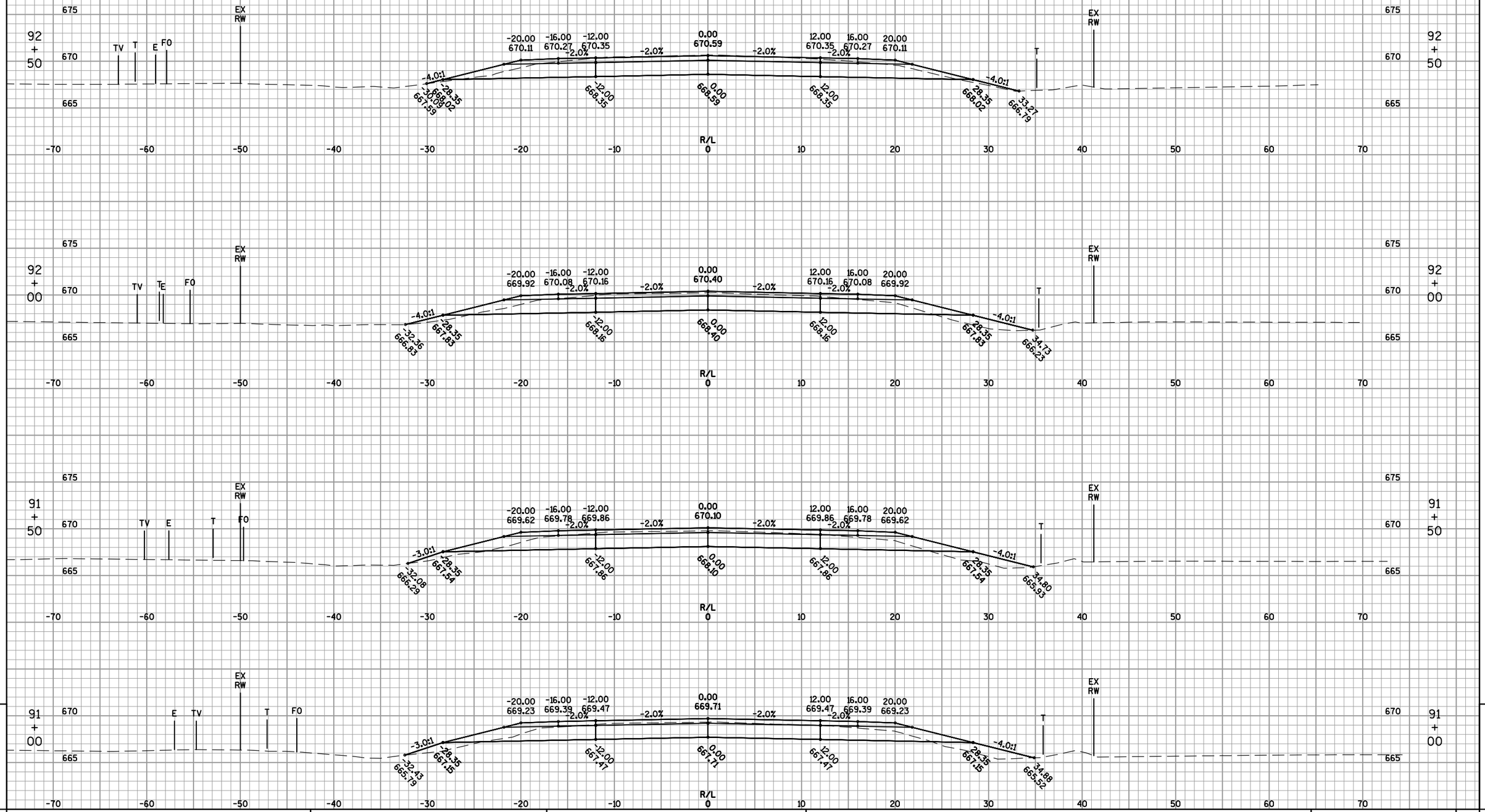
WISDOT/CADDS SHEET 49



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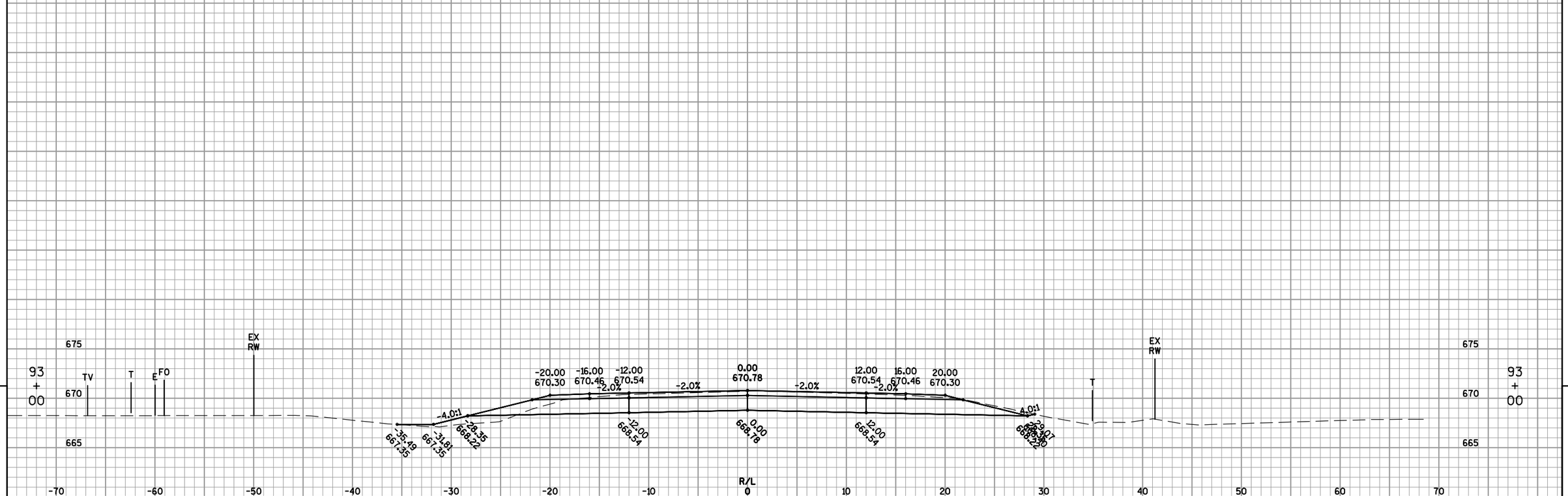
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 117	E



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 118	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090250_XS.DWG
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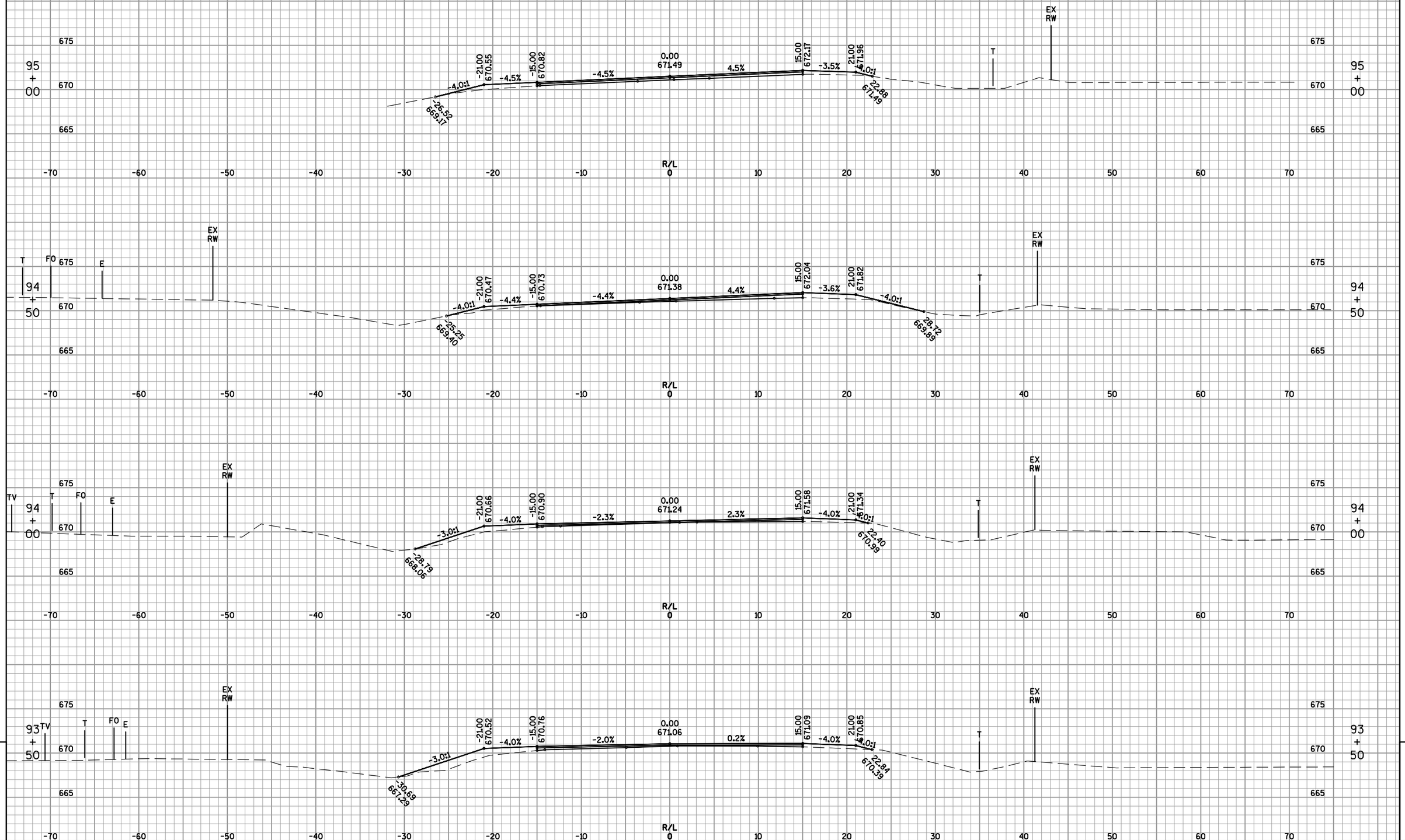
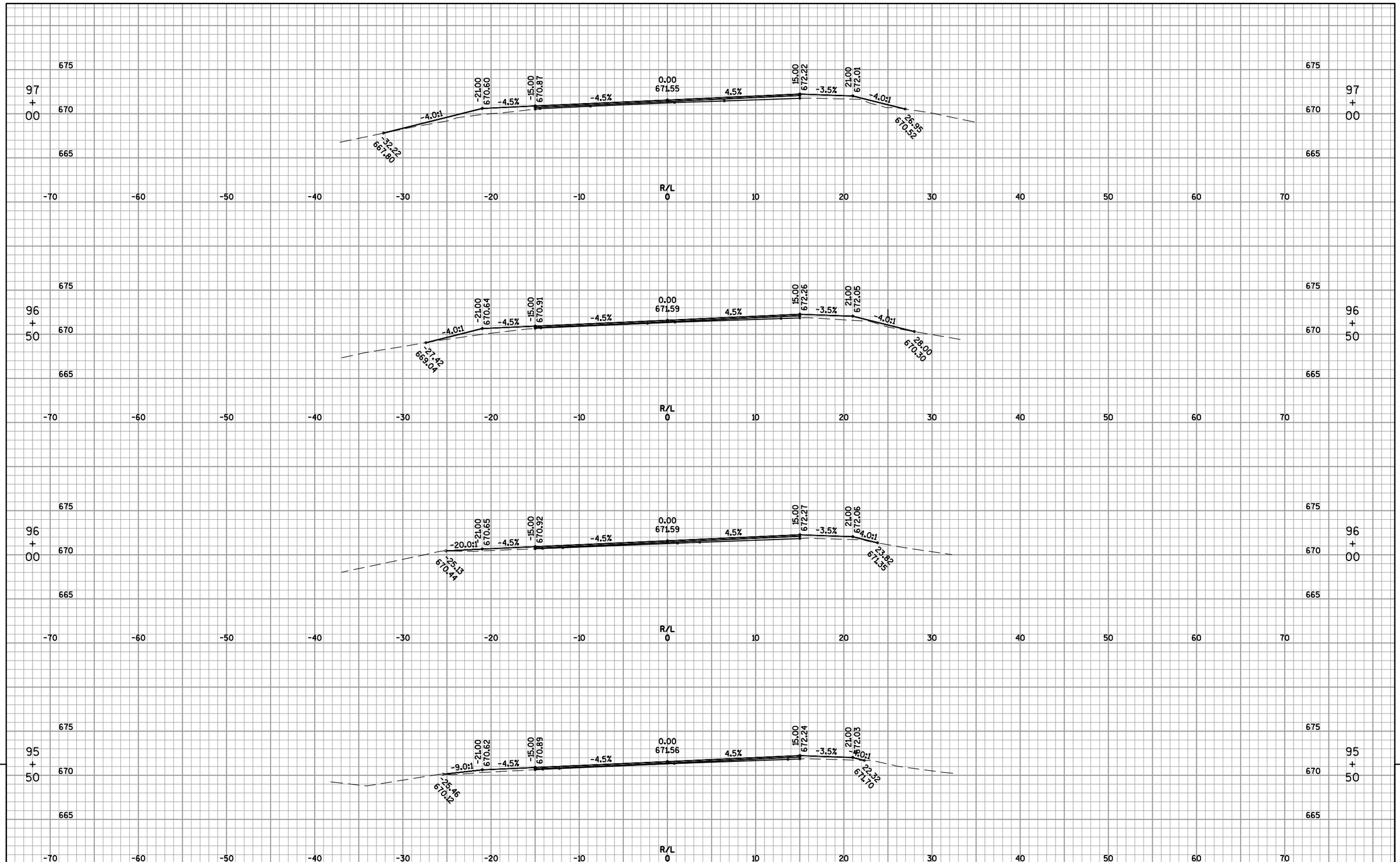
PLOT DATE : 5/6/2015 2:38 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 49



9

PROJECT NO: 595600-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 119	E



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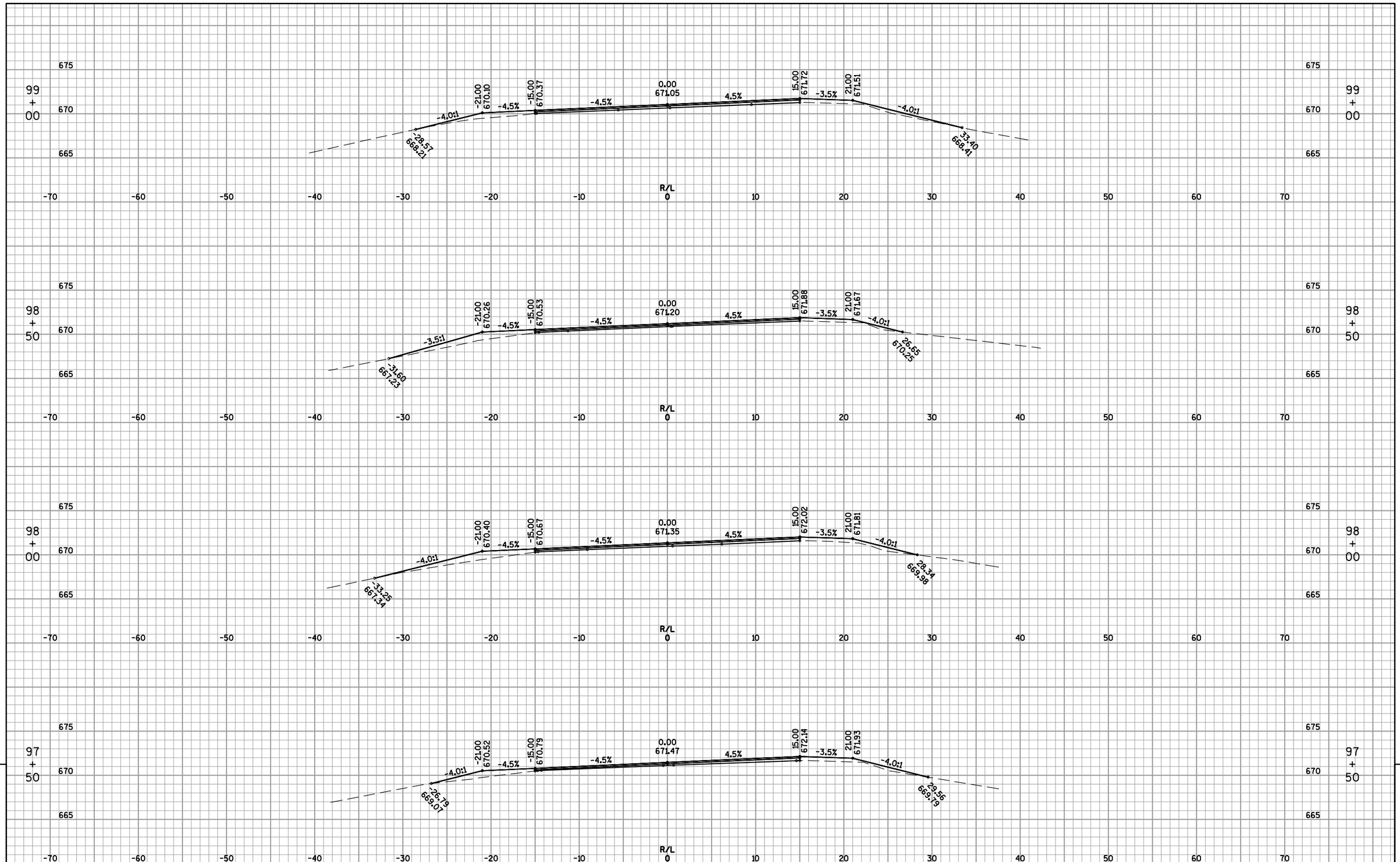
PROJECT NO: 595600-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 120	E



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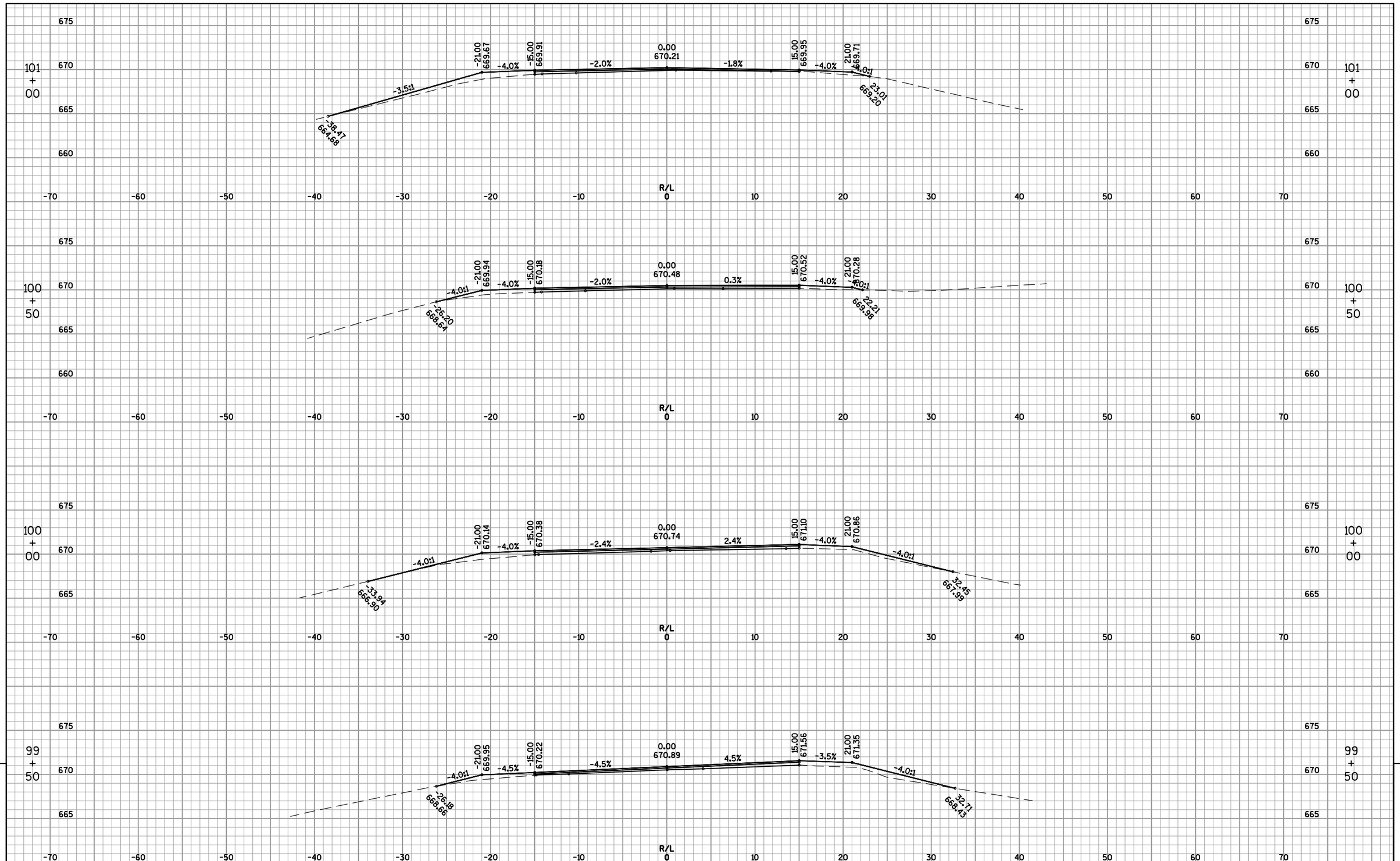
9

PROJECT NO: 595600-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 121	E



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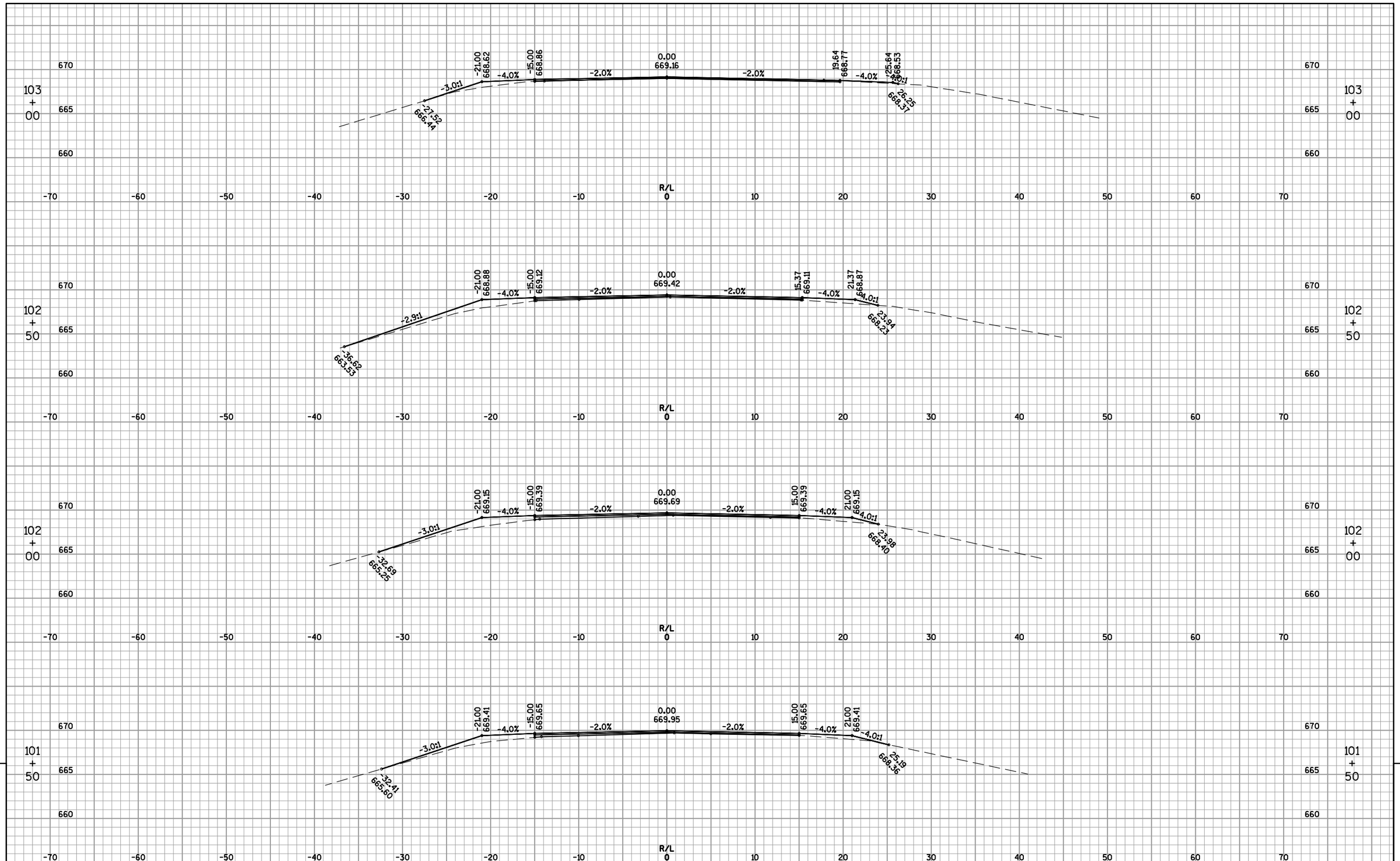
PROJECT NO: 595600-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 122	E

9



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9

PROJECT NO: 595600-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 123	E

104 + 75

104 + 50

104 + 00

103 + 50

R/L

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

670 665 660

-3.0:1 -4.0% -2.0% -2.0% -4.0% 2.0:1

-29.43 666.10

-22.77 668.32

-16.77 668.56

0.00 668.89

23.63 668.42

29.63 668.18

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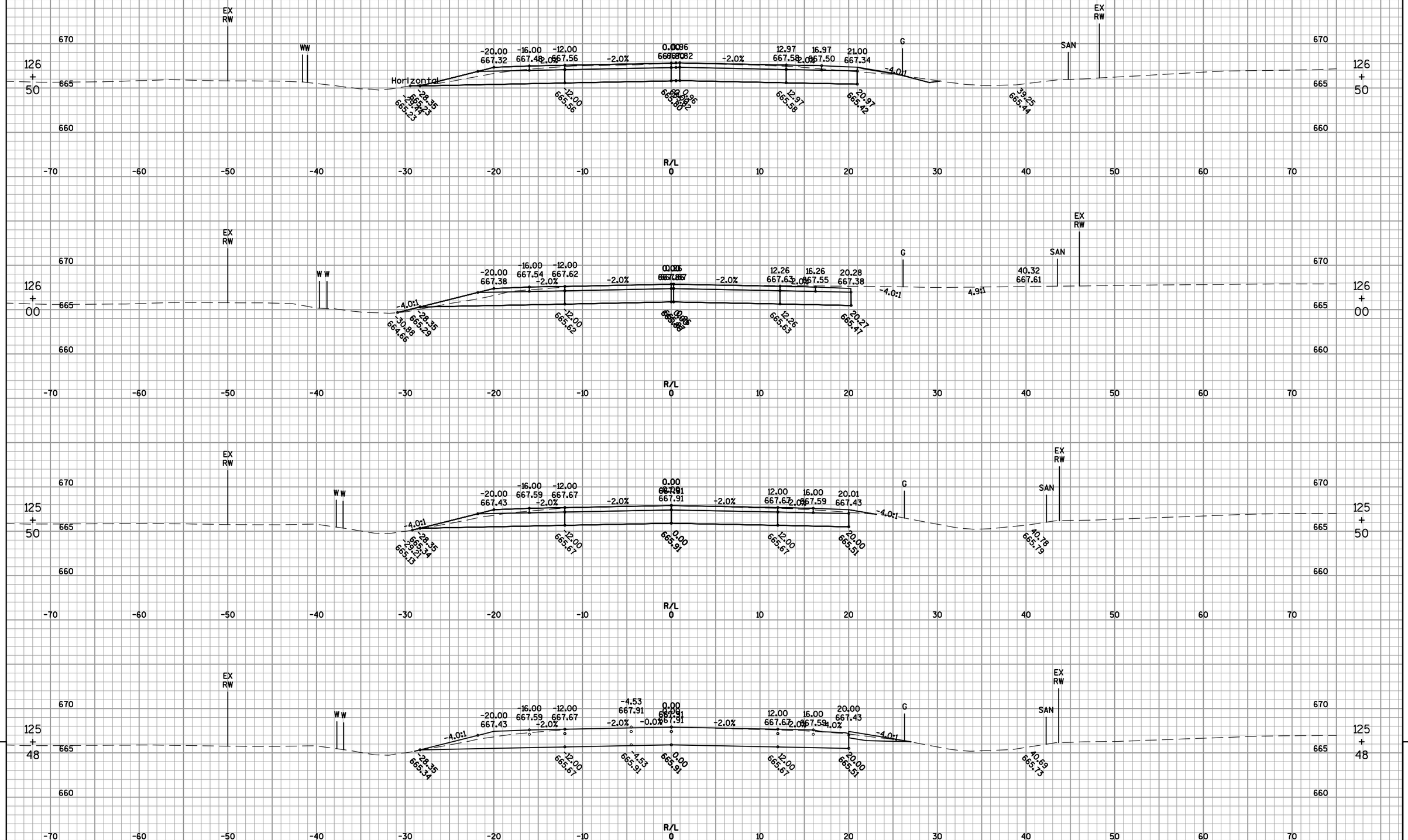
PROJECT NO: 595600-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U NB	SHEET 124	E



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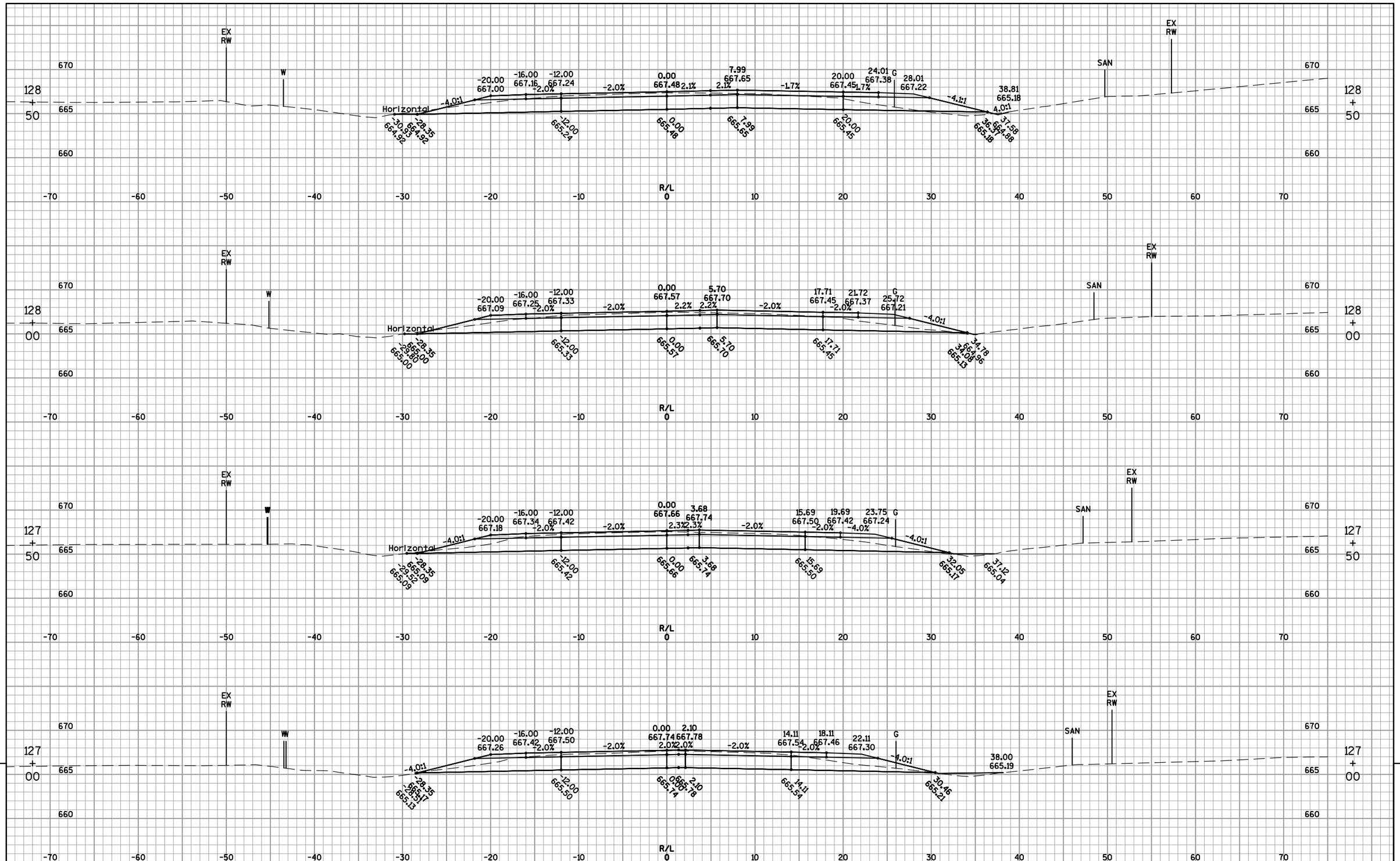
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 125	E



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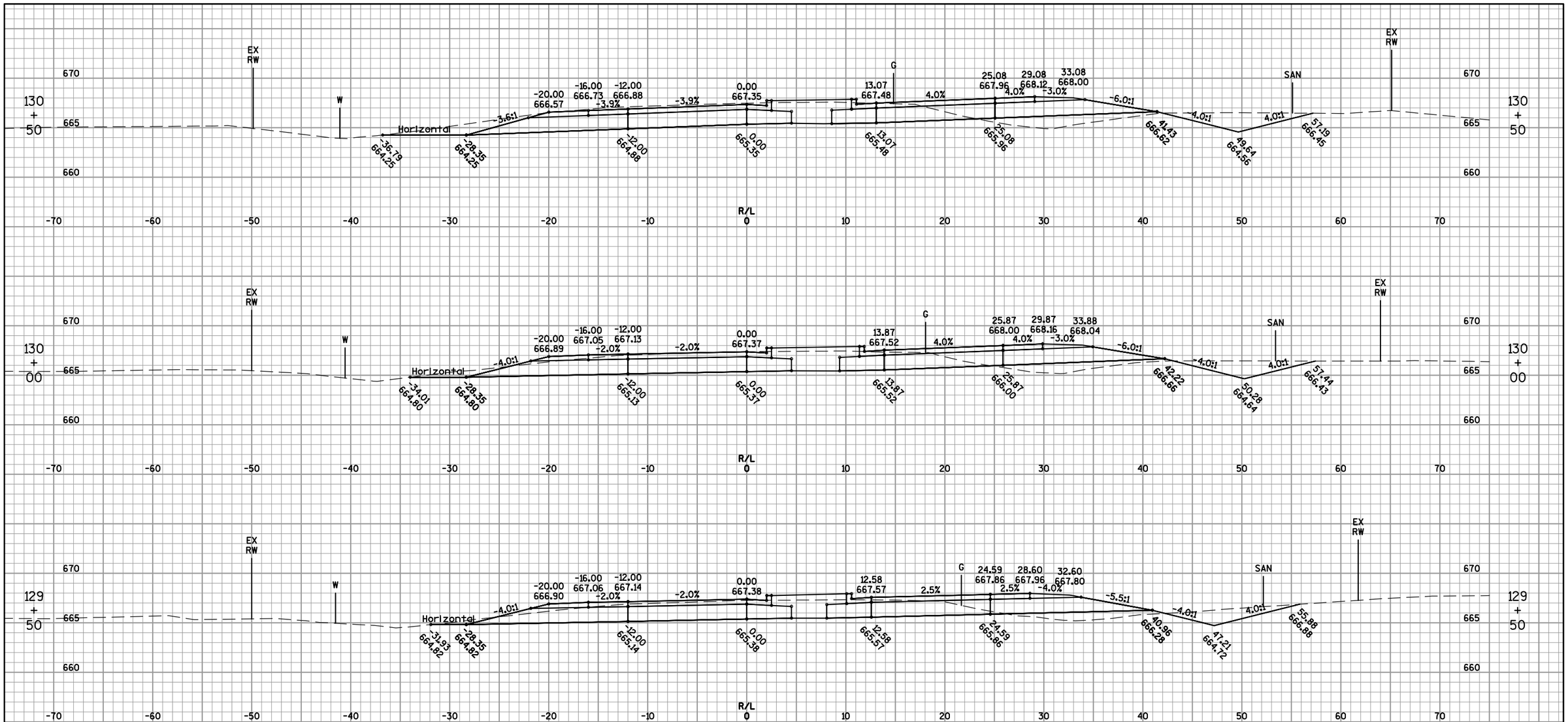
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 126	E



9 9

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 127	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
PLOT DATE : 5/6/2015 2:40 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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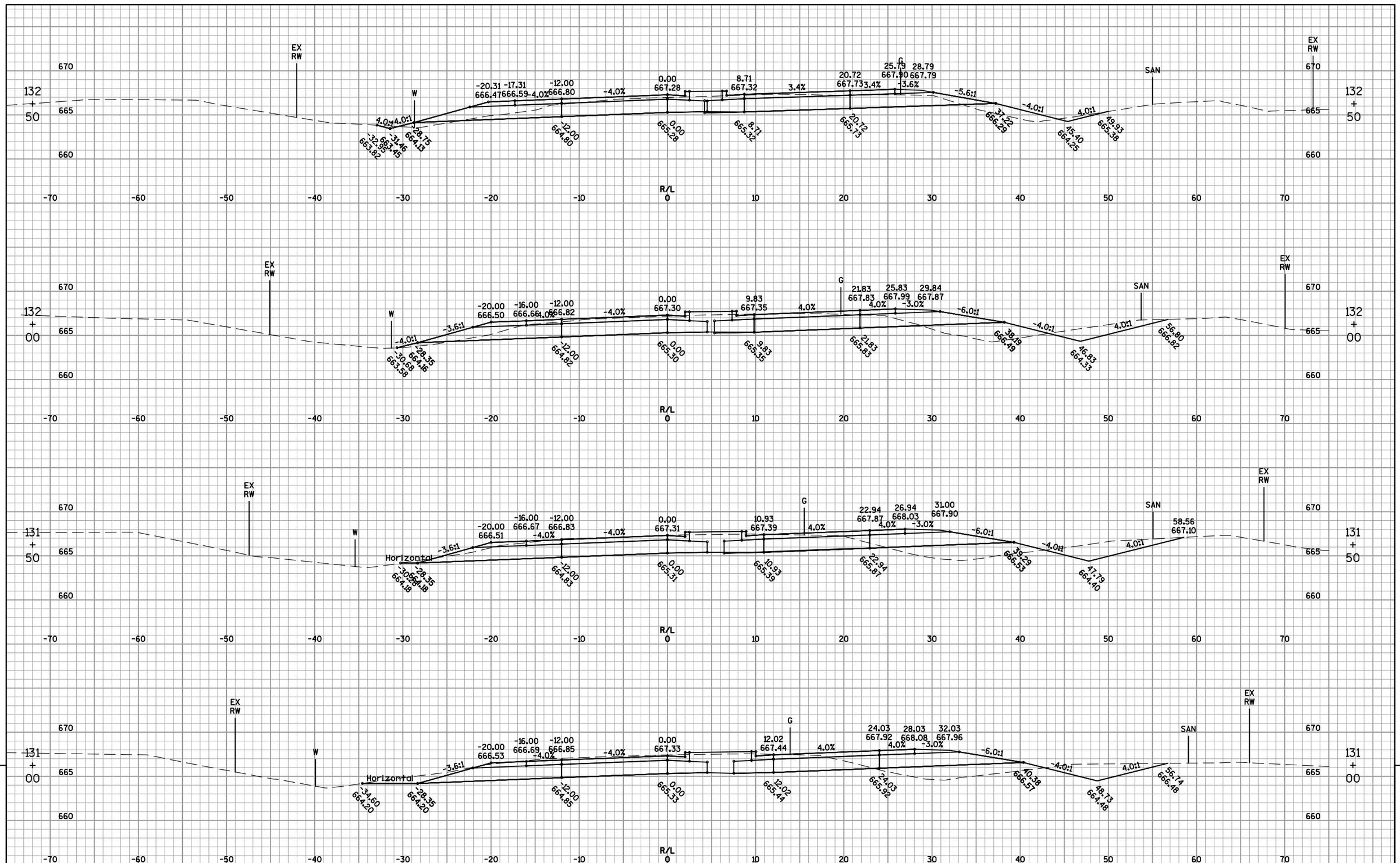

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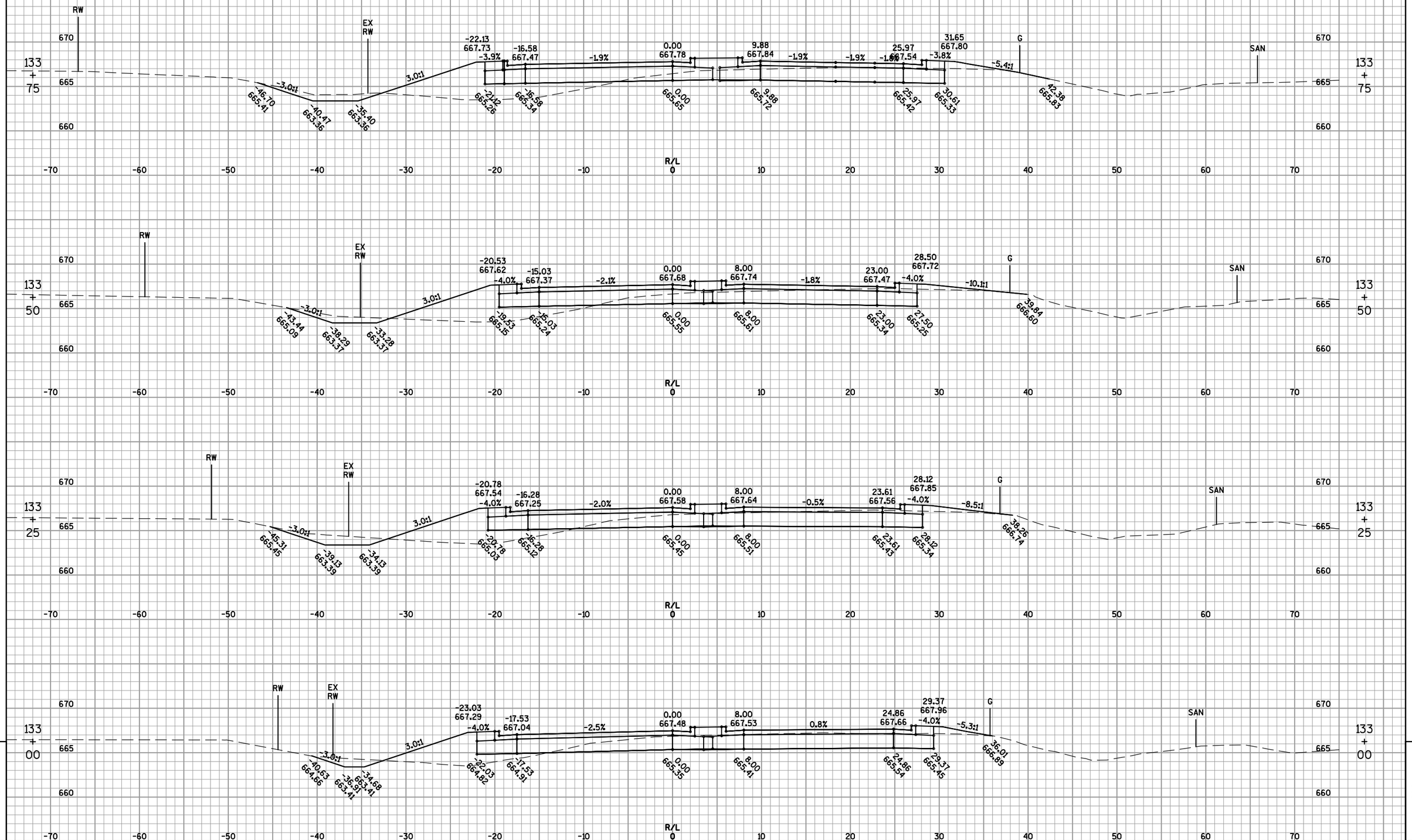
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 128	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
PLOT DATE : 5/6/2015 2:40 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090201_xs.dwg, E2103_090263_xs
WISDOT/CADDS SHEET 49



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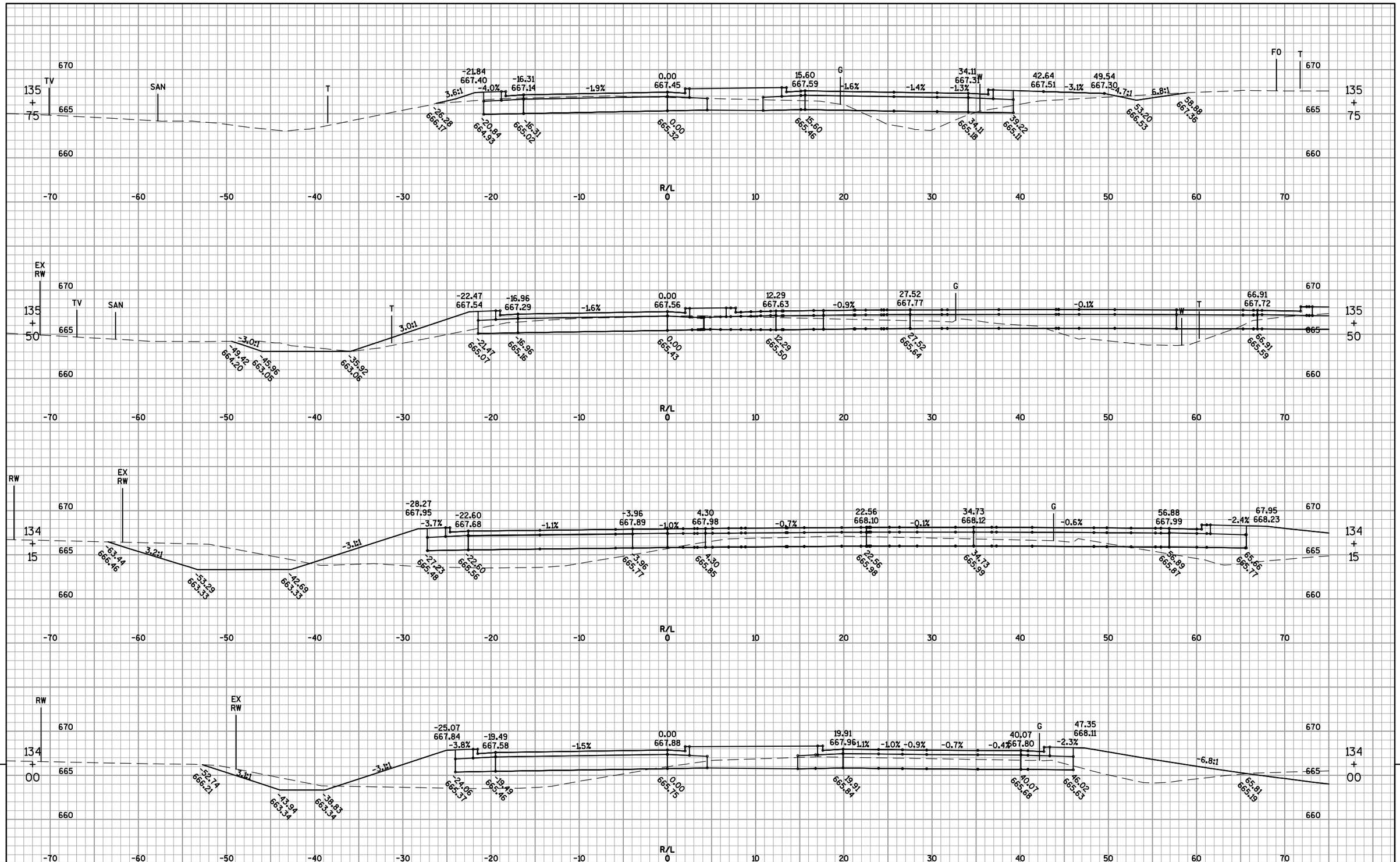
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 129	E

9

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
E2103_090264_xs

PLOT DATE : 6/25/2015 7:39 AM

PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 130	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
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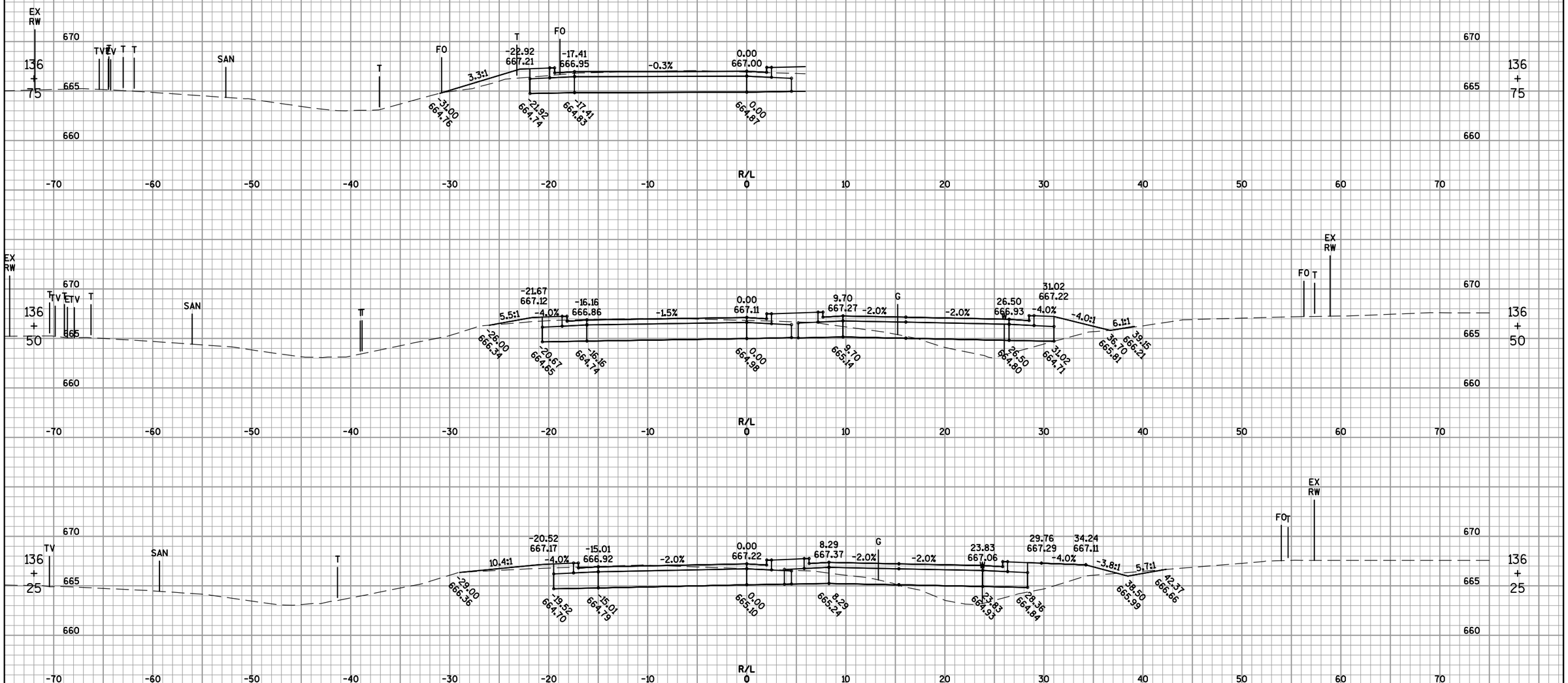
PLOT DATE : 5/6/2015 2:41 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 131	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
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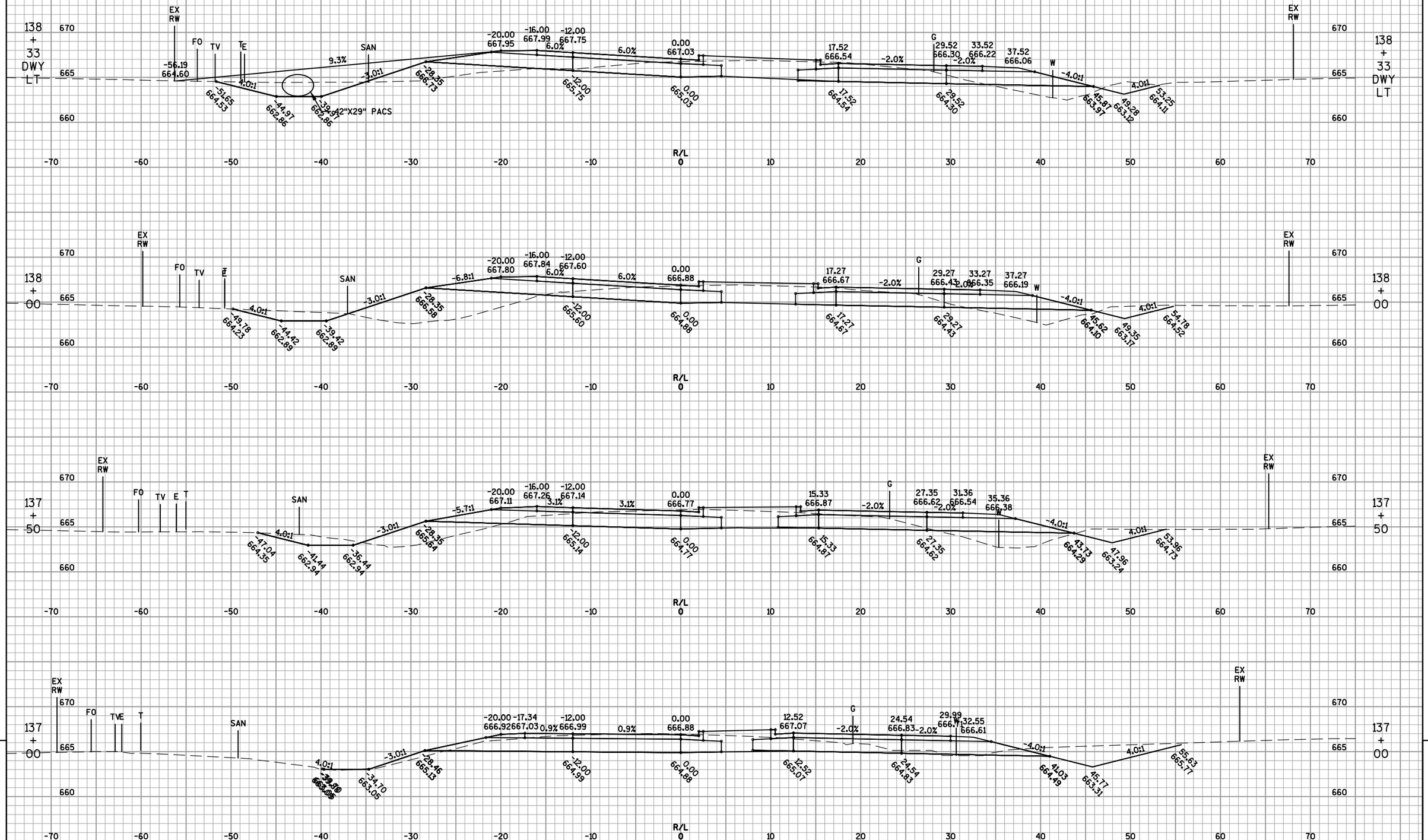
PLOT DATE : 5/6/2015 2:41 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 49



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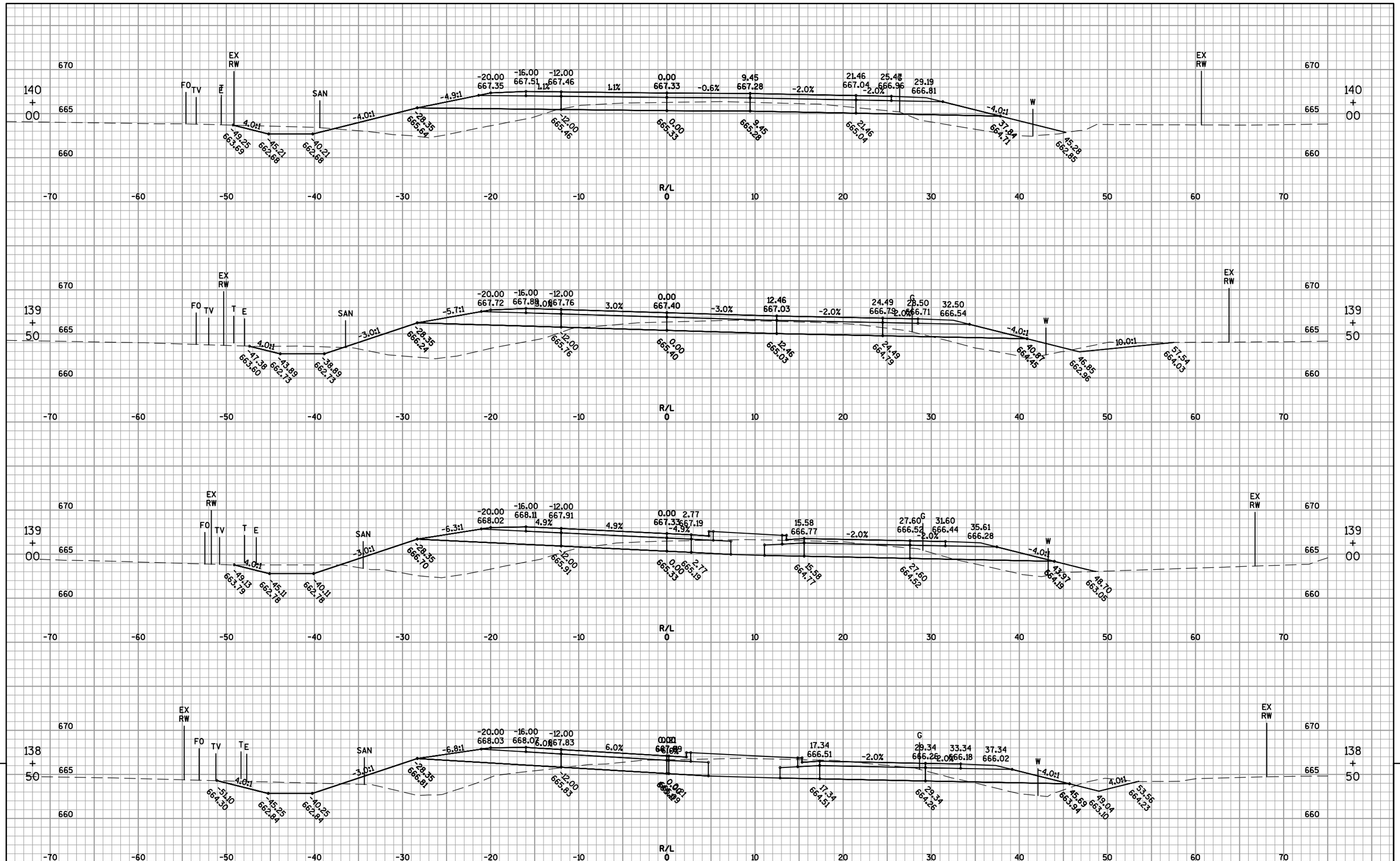
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 132	E



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 133	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
PLOT DATE : 5/6/2015 2:42 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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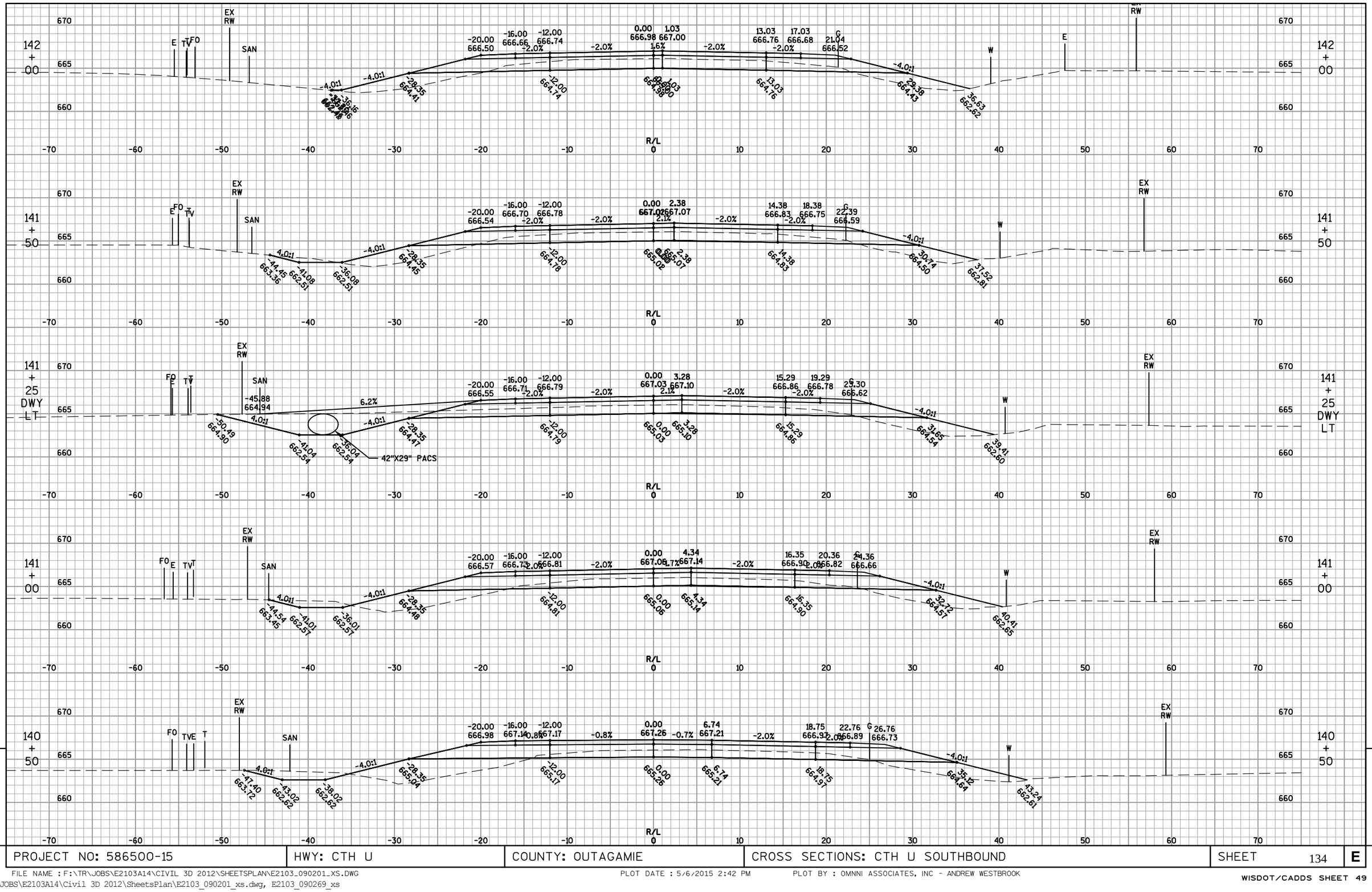

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 134	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
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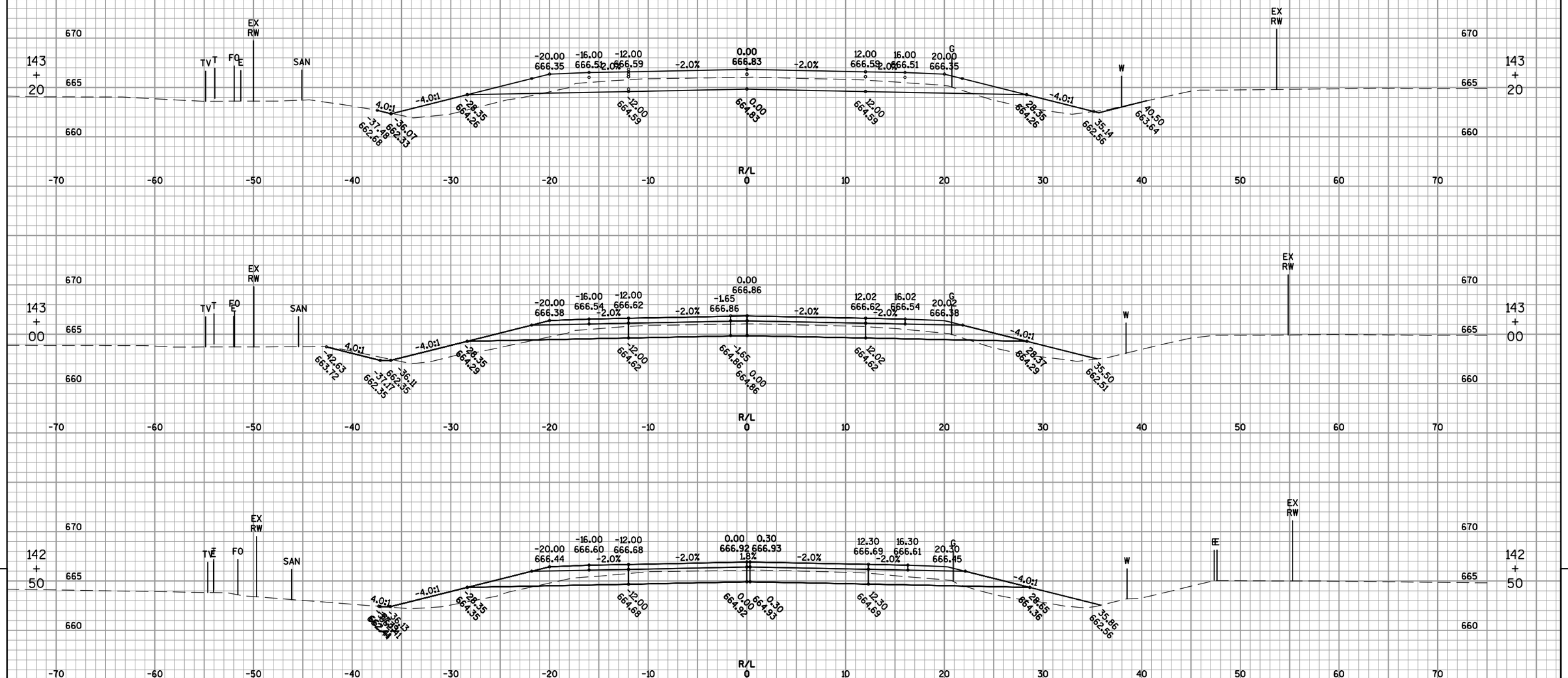
PLOT DATE : 5/6/2015 2:42 PM

PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH U SOUTHBOUND	SHEET 135	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG PLOT DATE : 5/6/2015 2:42 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

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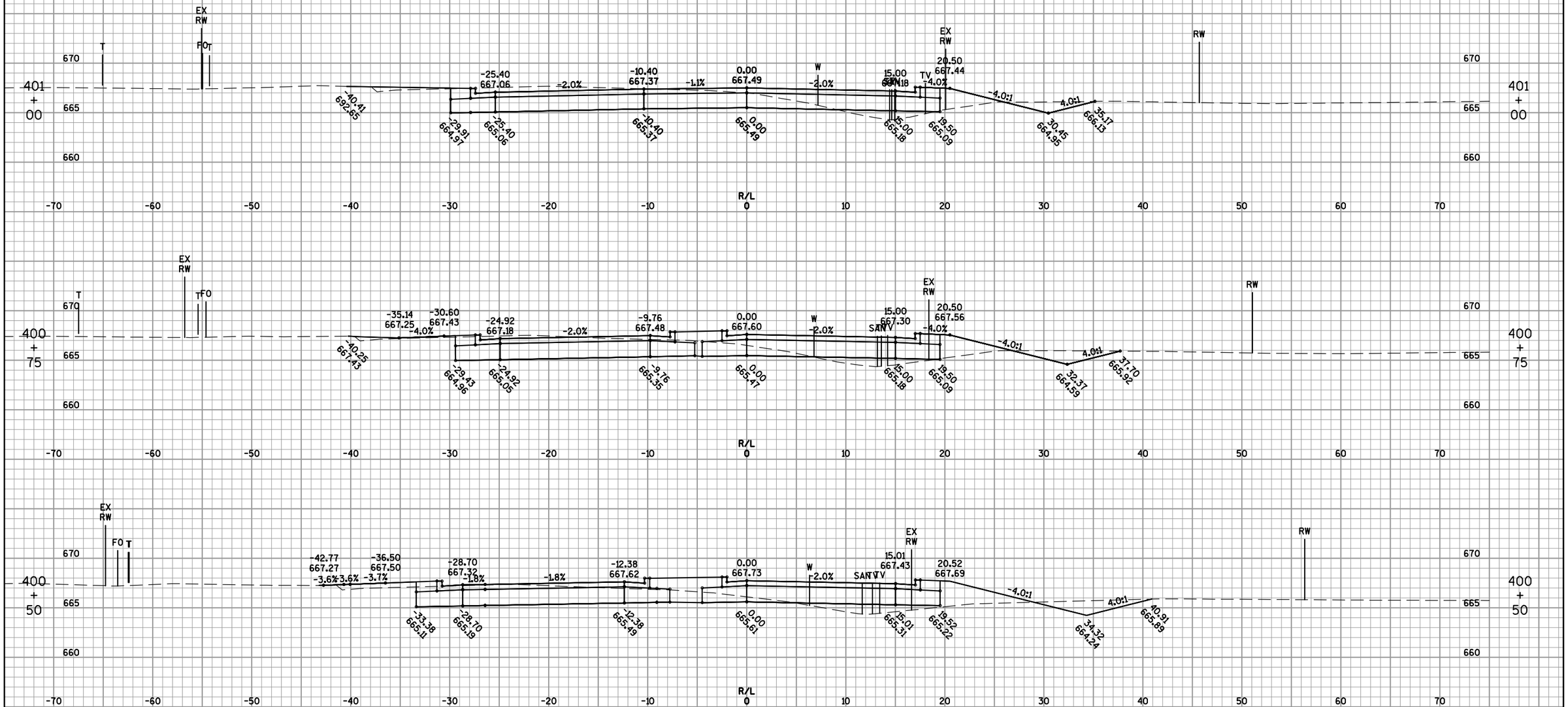
WISDOT/CADDS SHEET 49



FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
PLOT DATE : 4/23/2015 12:30 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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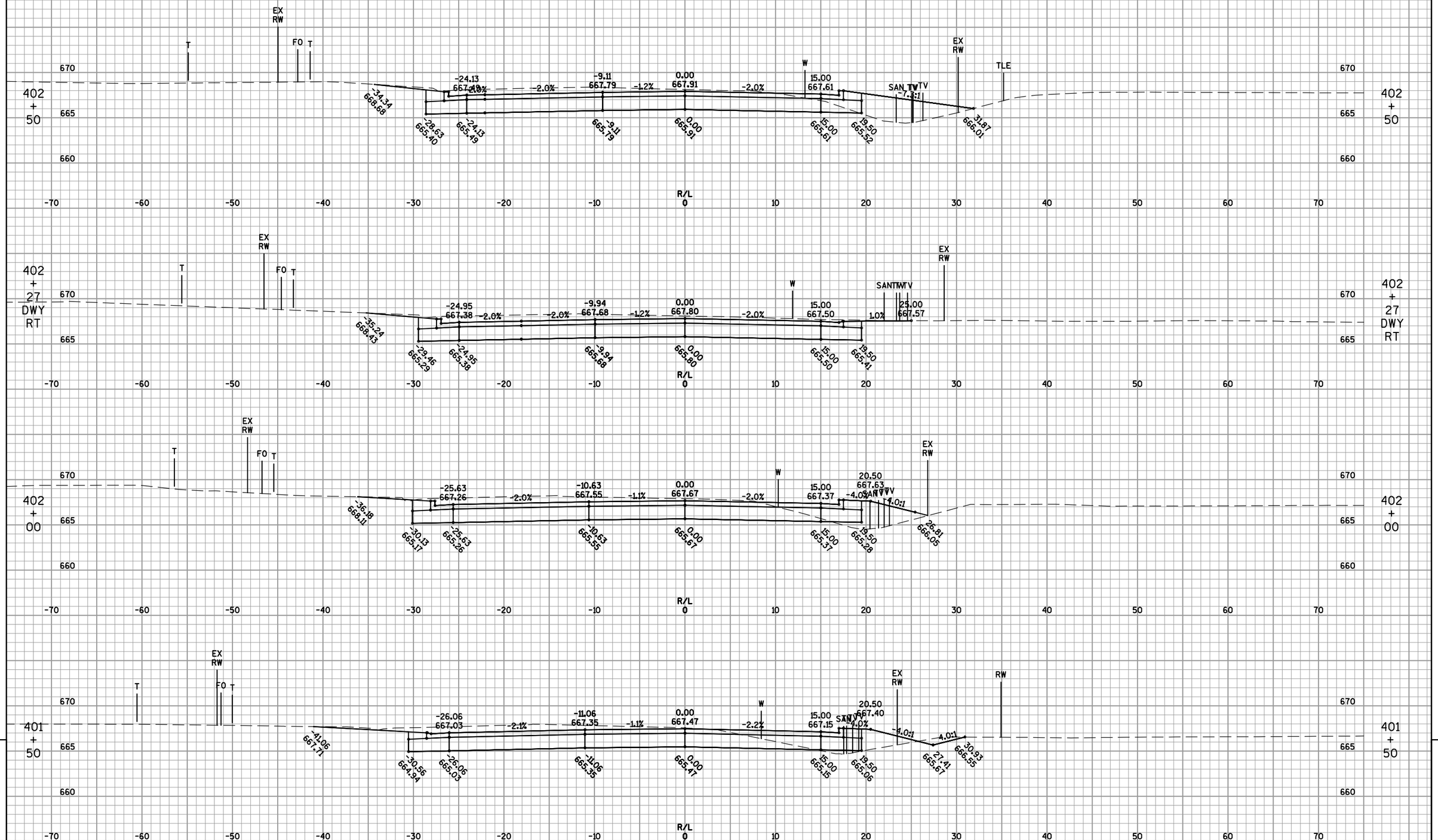

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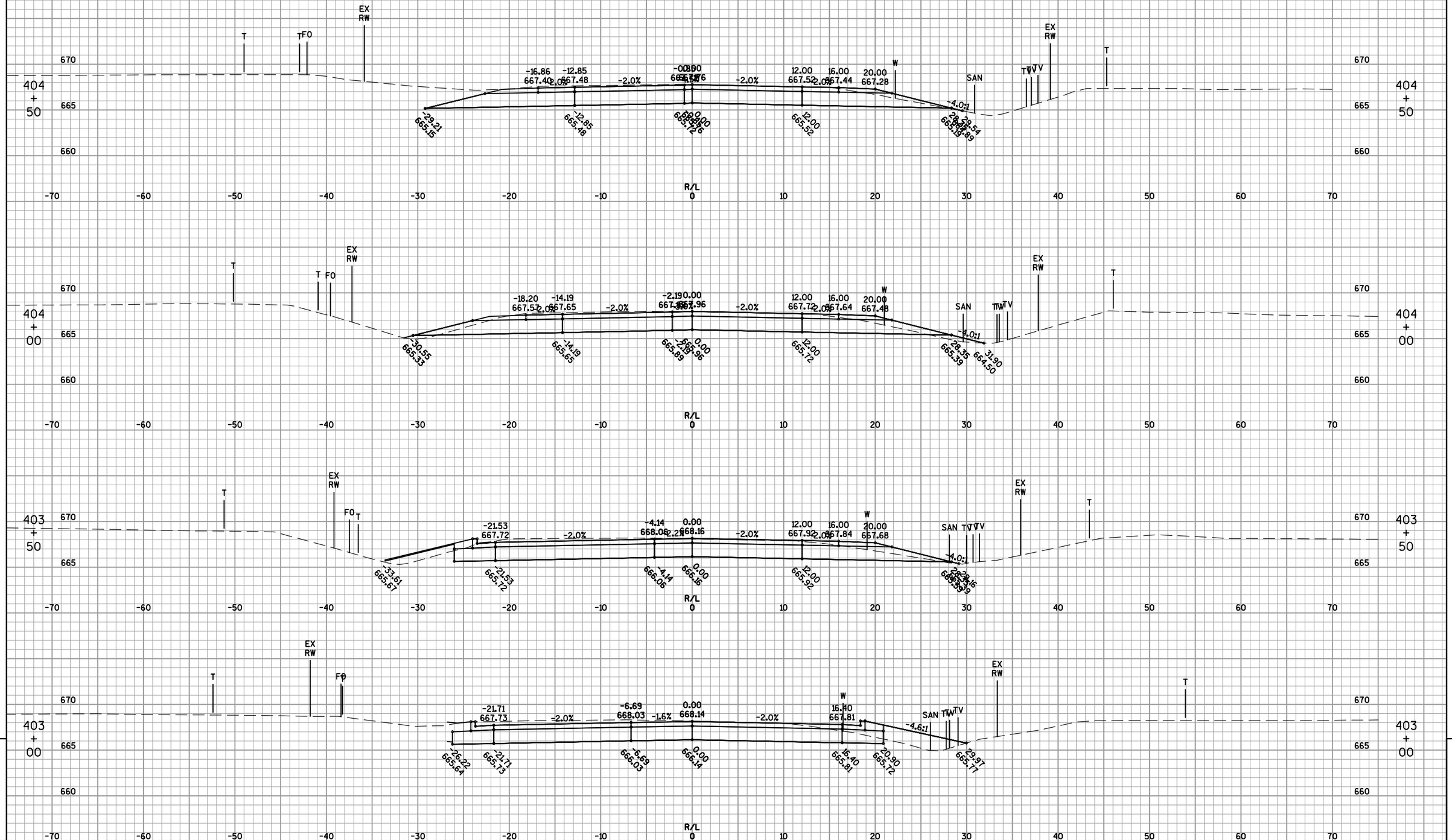
9

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH DD EASTBOUND	SHEET 137	E



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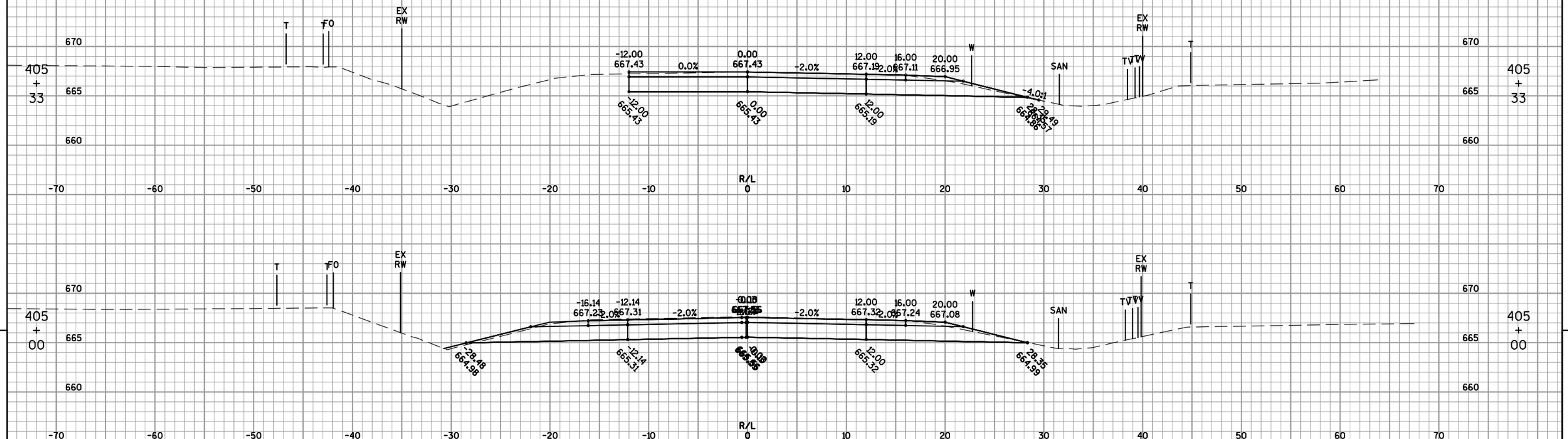
9

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH DD EASTBOUND	SHEET 138	E



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9

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH DD EASTBOUND	SHEET 139	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
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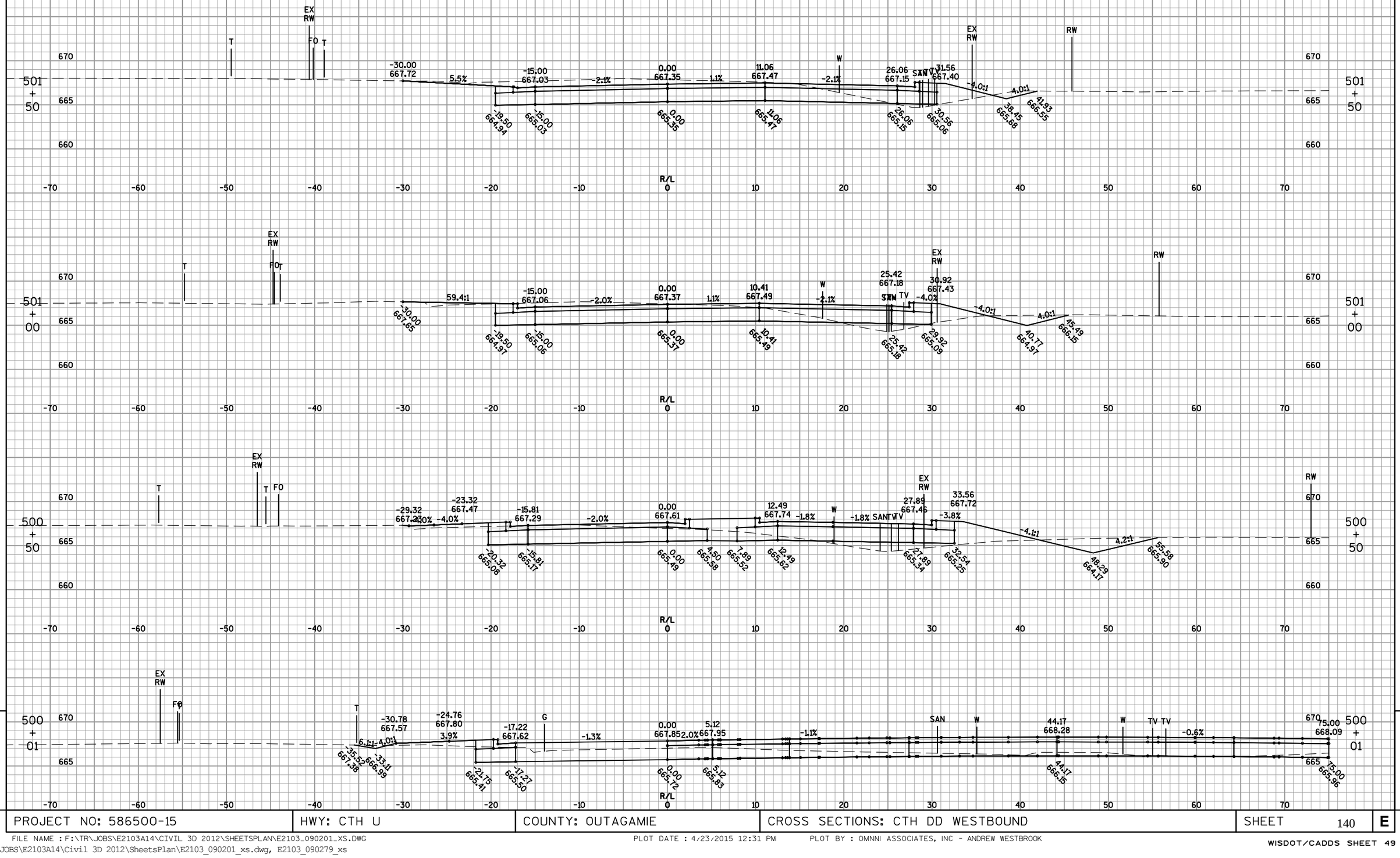
PLOT DATE : 4/23/2015 12:31 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK



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9

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH DD WESTBOUND	SHEET 140	E

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PLOT DATE : 4/23/2015 12:31 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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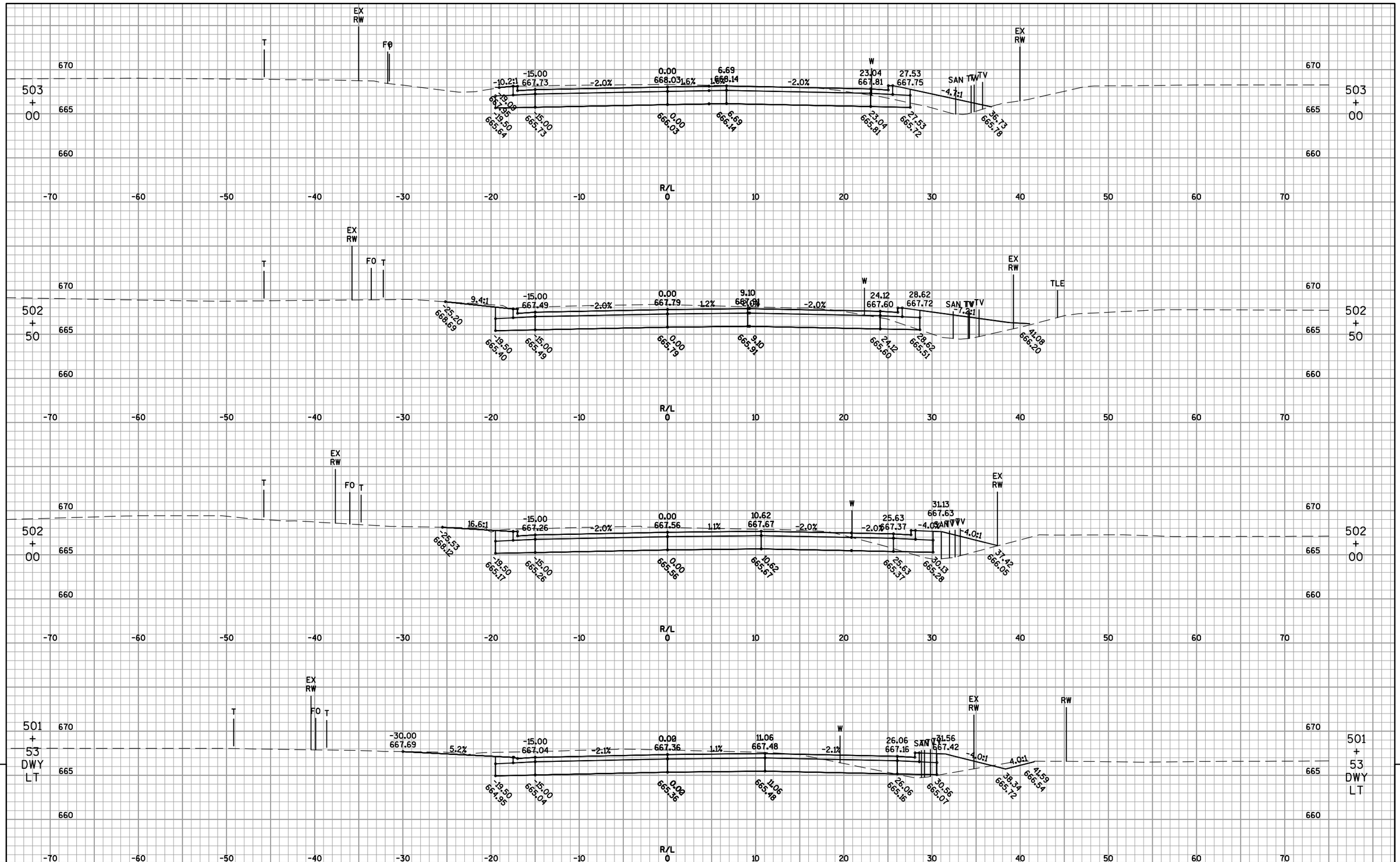

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH DD WESTBOUND	SHEET 141	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
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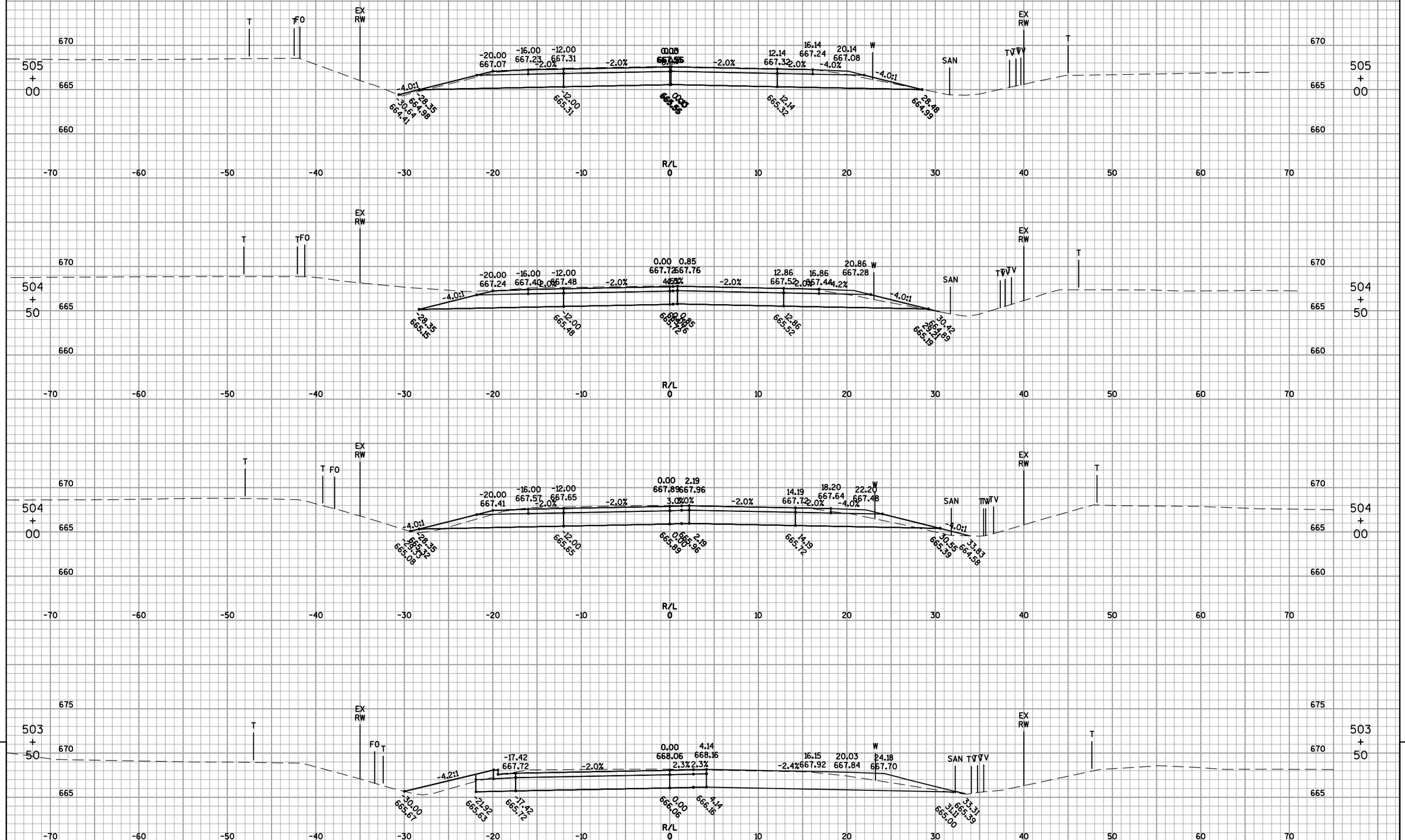
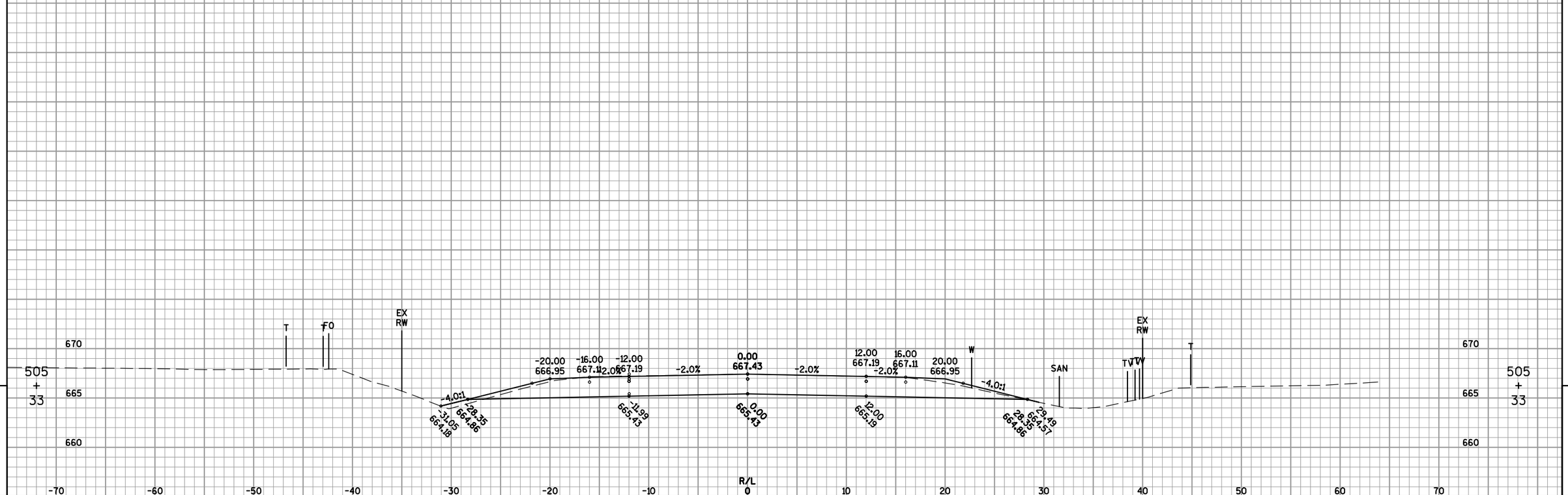
PLOT DATE : 4/23/2015 12:32 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK



9	PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH DD WESTBOUND	SHEET 142 E



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: CTH DD WESTBOUND	SHEET 143	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
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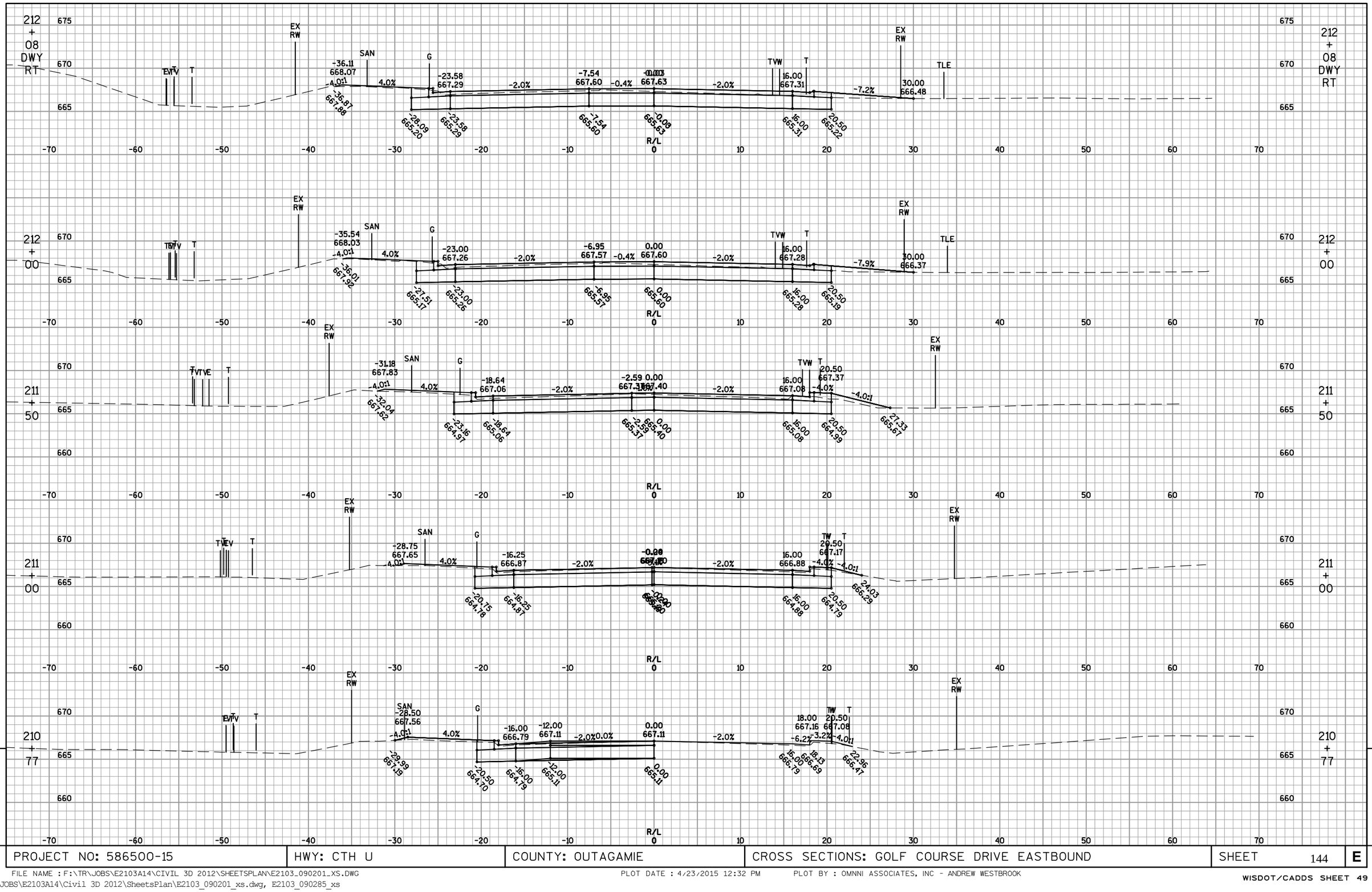
PLOT DATE : 4/23/2015 12:32 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK



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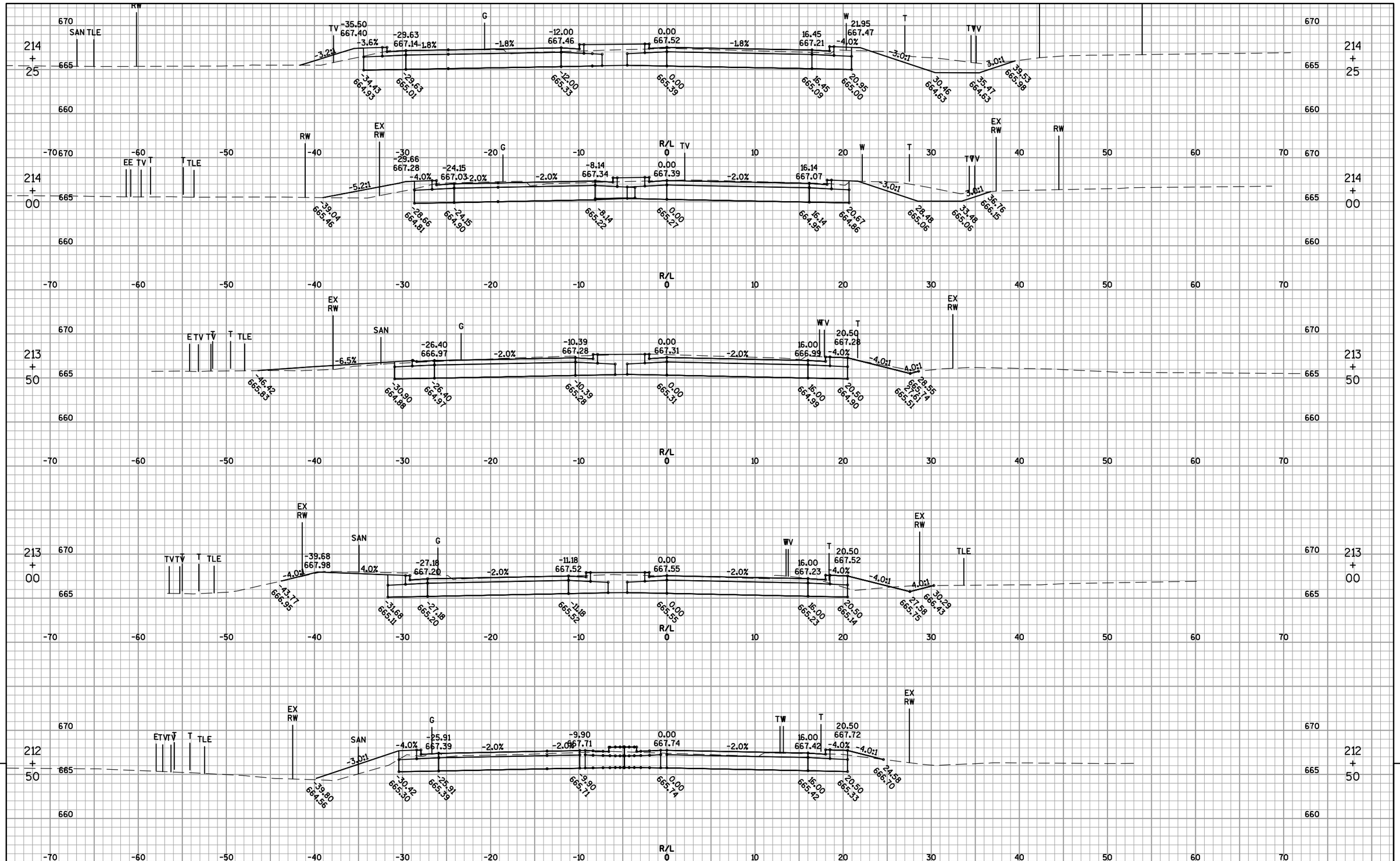
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: GOLF COURSE DRIVE EASTBOUND	SHEET 144	E



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: GOLF COURSE DRIVE EASTBOUND	SHEET 145	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
PLOT DATE : 4/23/2015 12:32 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
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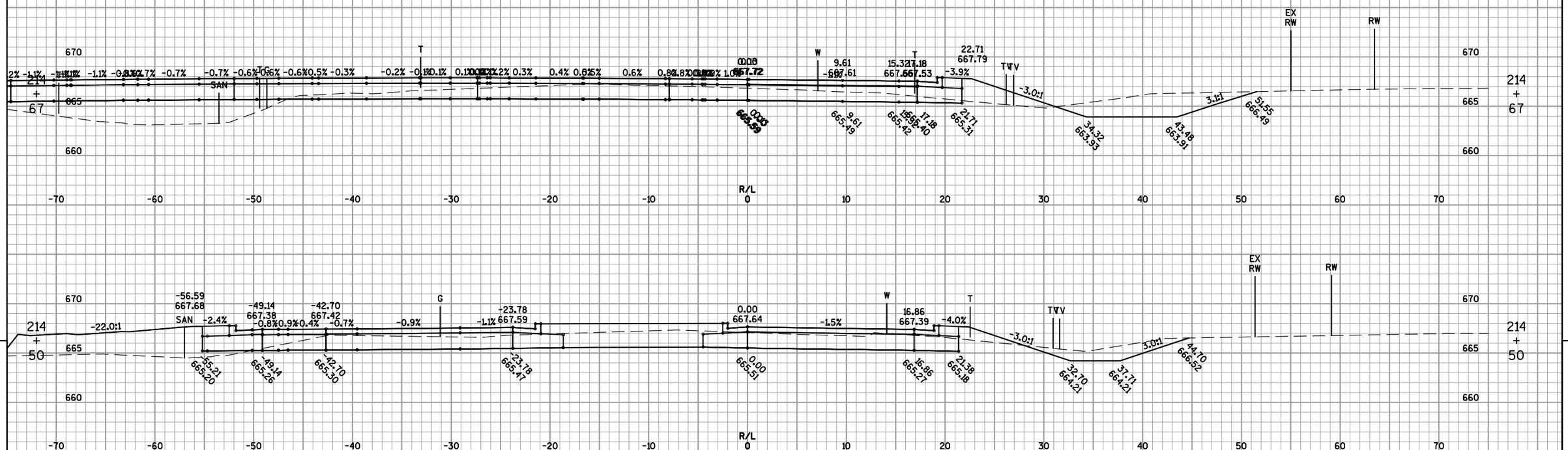

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: GOLF COURSE DRIVE EASTBOUND	SHEET 146 E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG PLOT DATE : 4/23/2015 12:33 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

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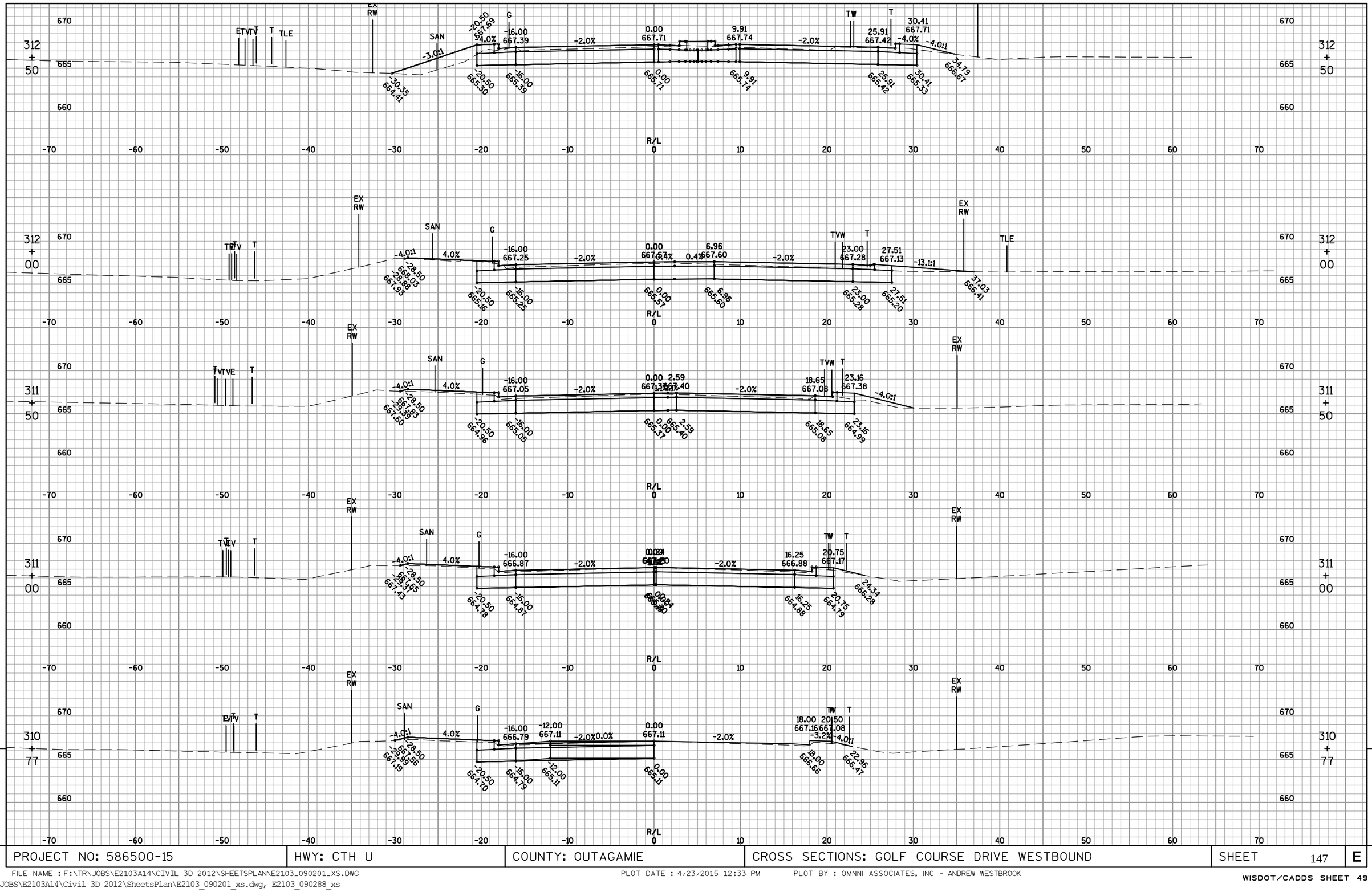
WISDOT/CADDS SHEET 49



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: GOLF COURSE DRIVE WESTBOUND	SHEET 147 E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
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PLOT DATE : 4/23/2015 12:33 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 49

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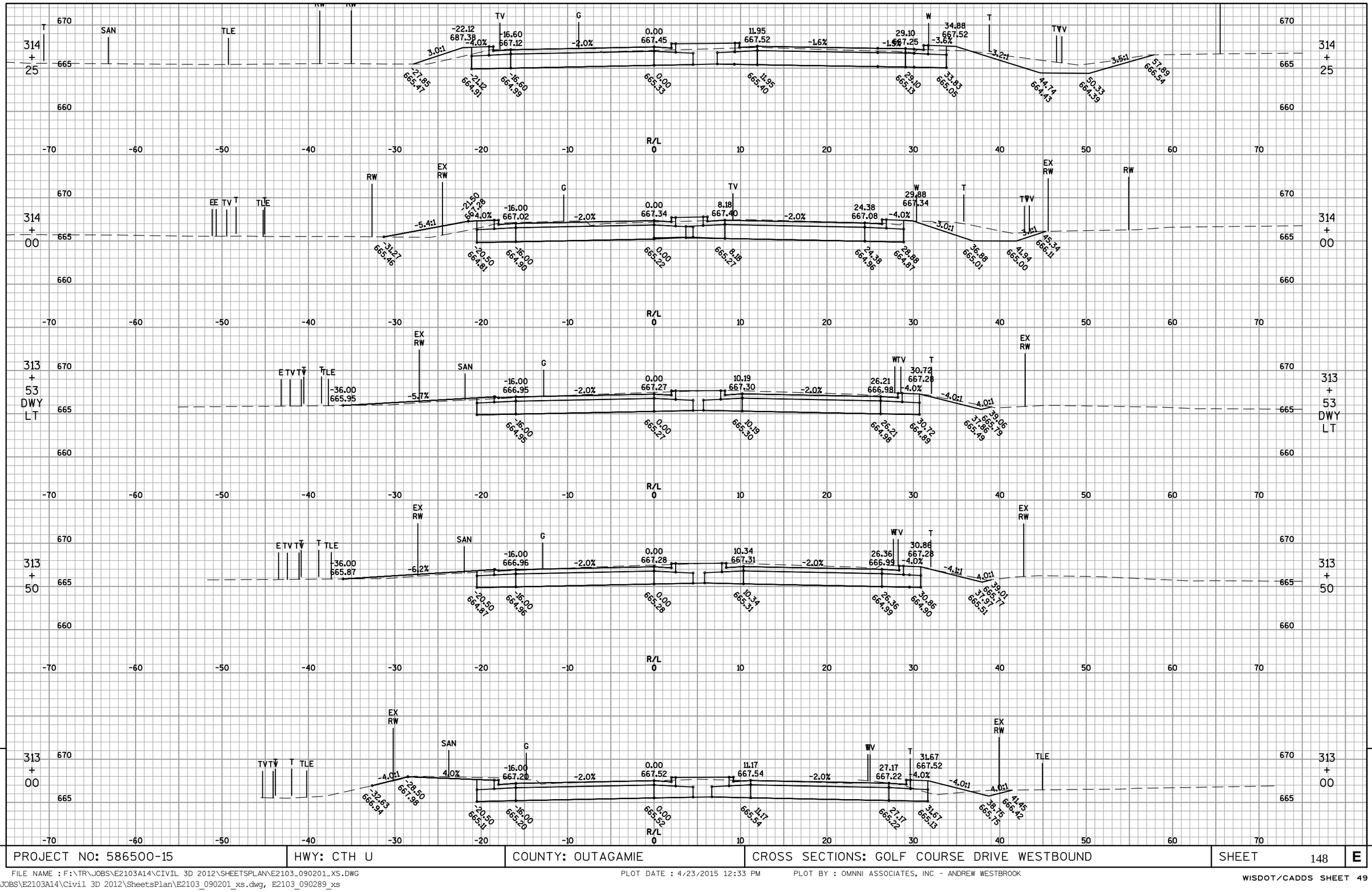
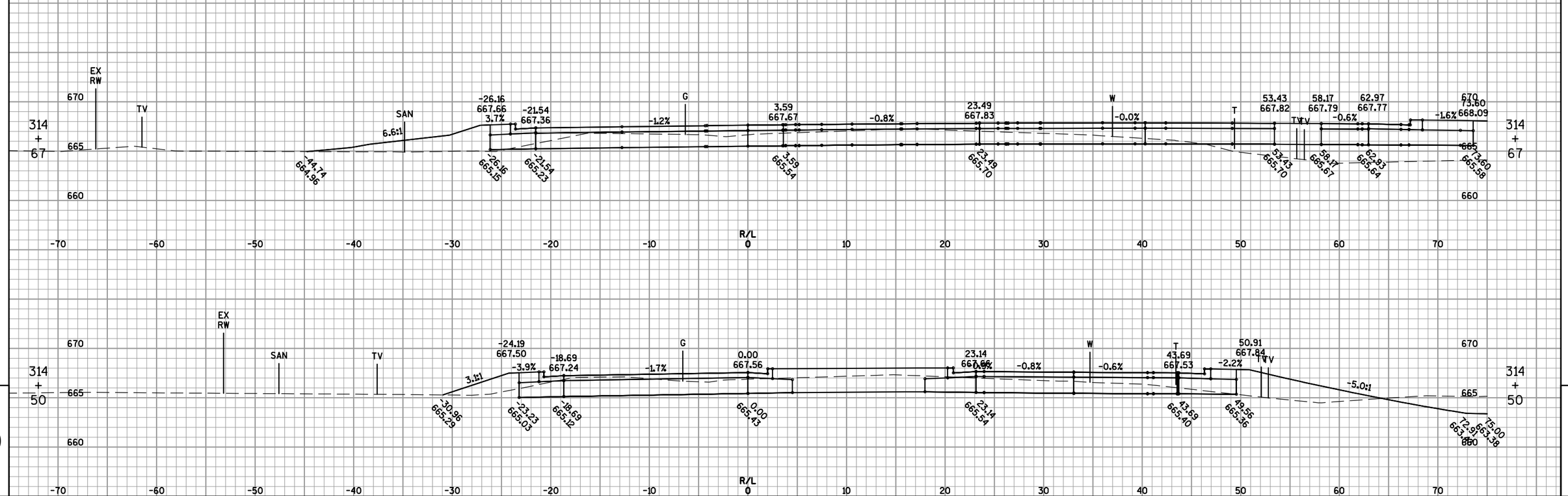
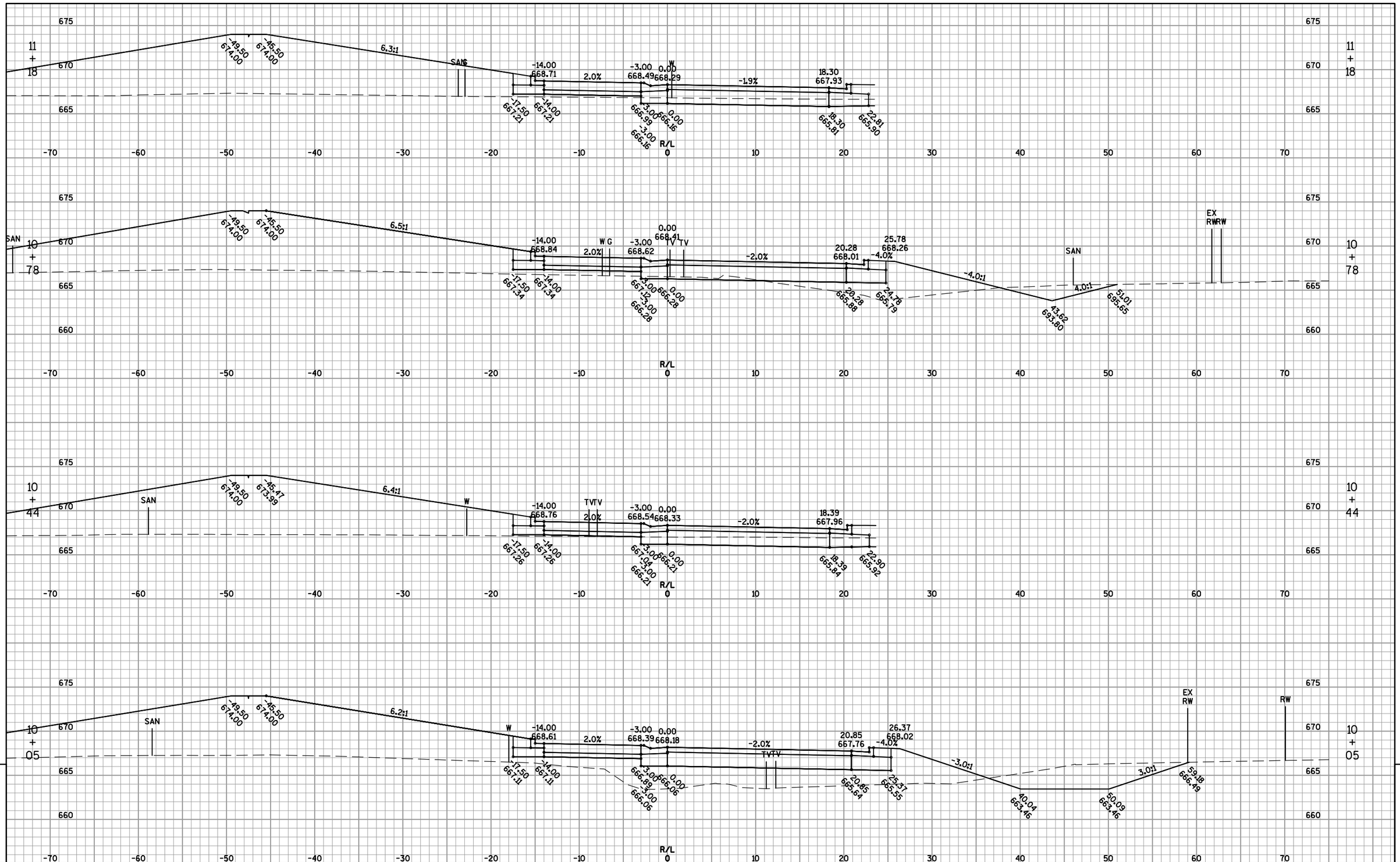


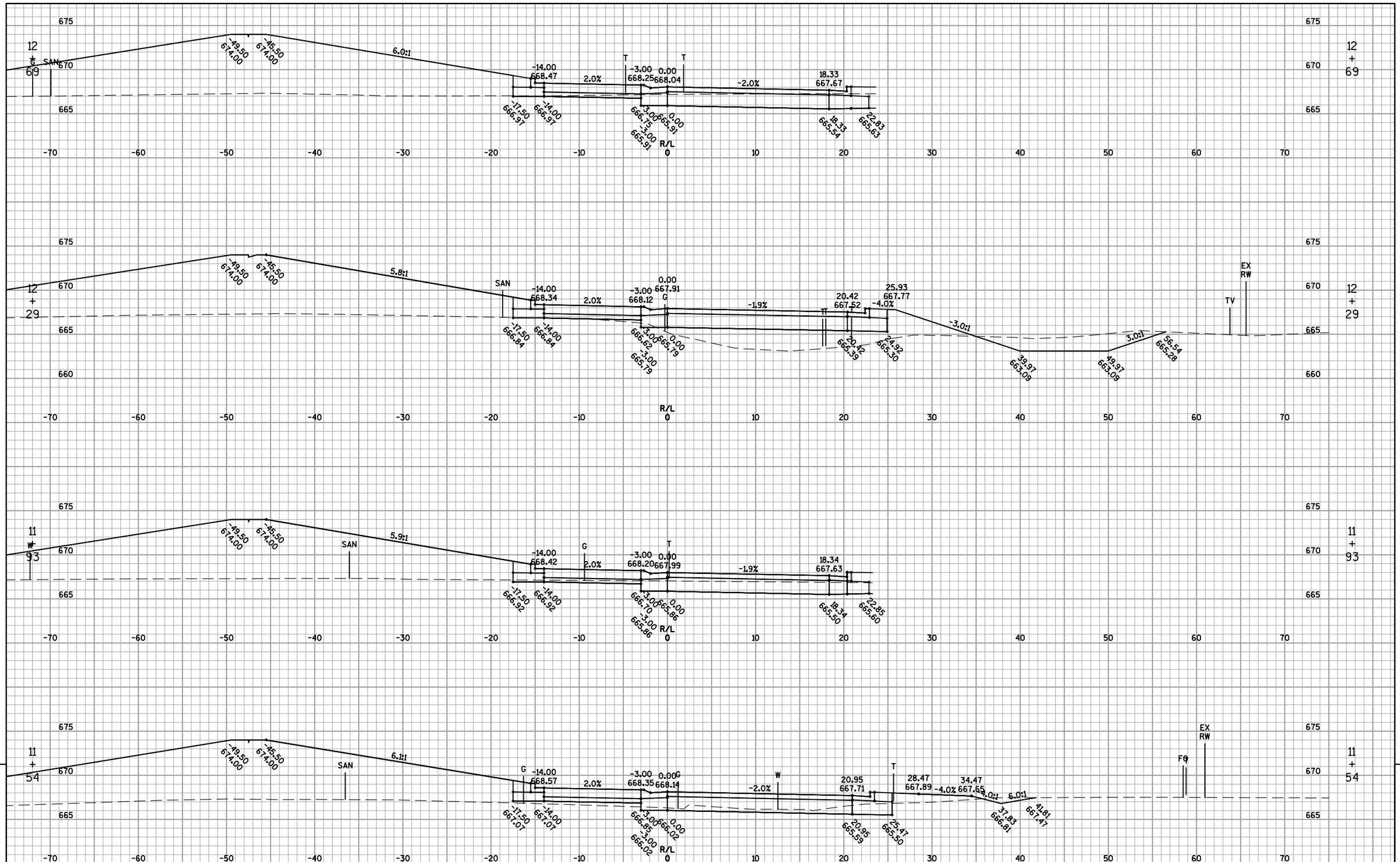
PROJECT NO: 586500-15 | HWY: CTH U | COUNTY: OUTAGAMIE | CROSS SECTIONS: GOLF COURSE DRIVE WESTBOUND | SHEET 148 | E



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: GOLF COURSE DRIVE WESTBOUND	SHEET 149	E



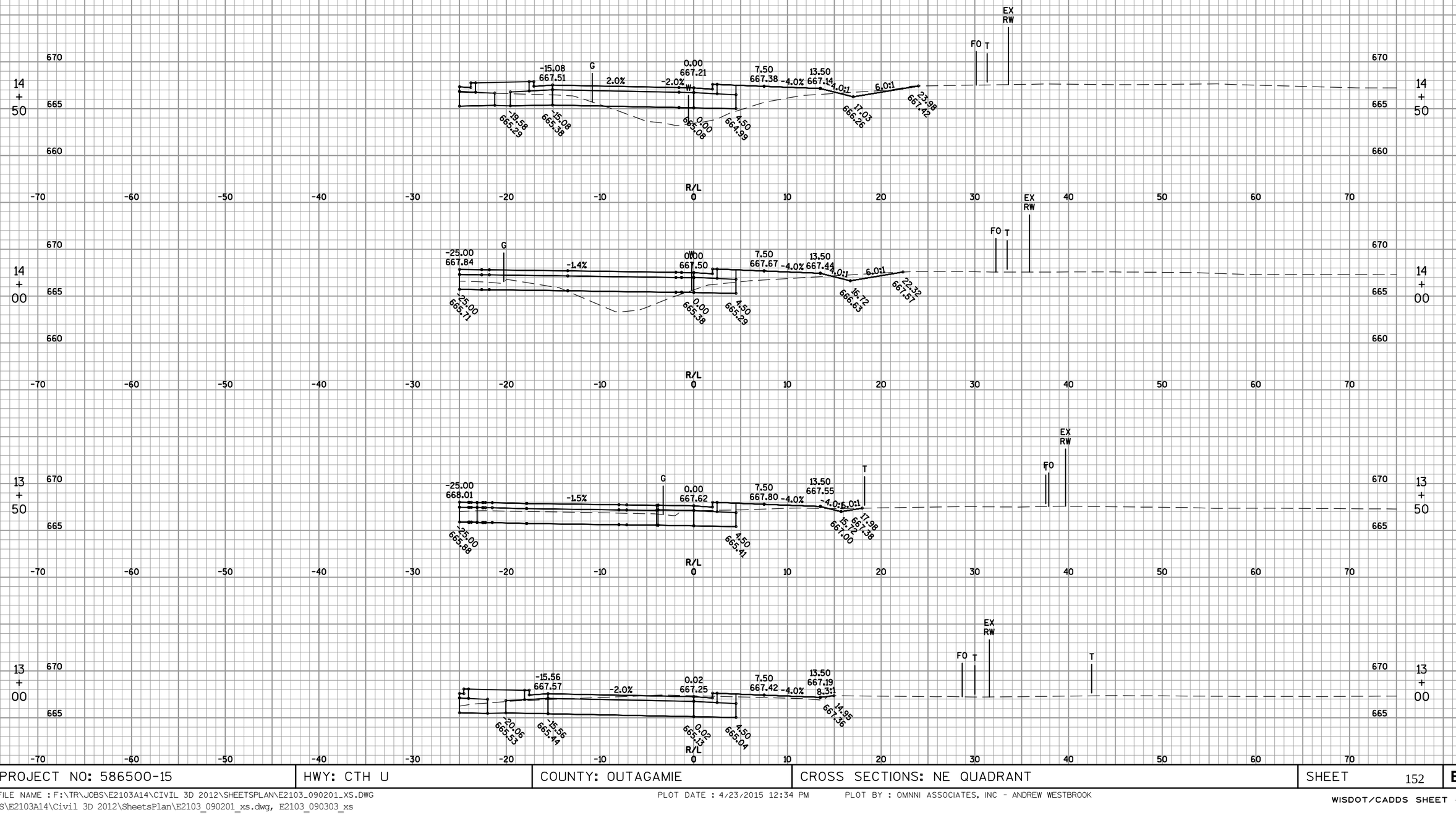
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: ROUNDABOUT	SHEET 150	E



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: ROUNDABOUT	SHEET 151	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
F:\TR\JOBS\E2103A14\Civil 3D 2012\SheetsPlan\E2103_090201_xs.dwg, E2103_090302_xs

PLOT DATE : 4/23/2015 12:34 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK



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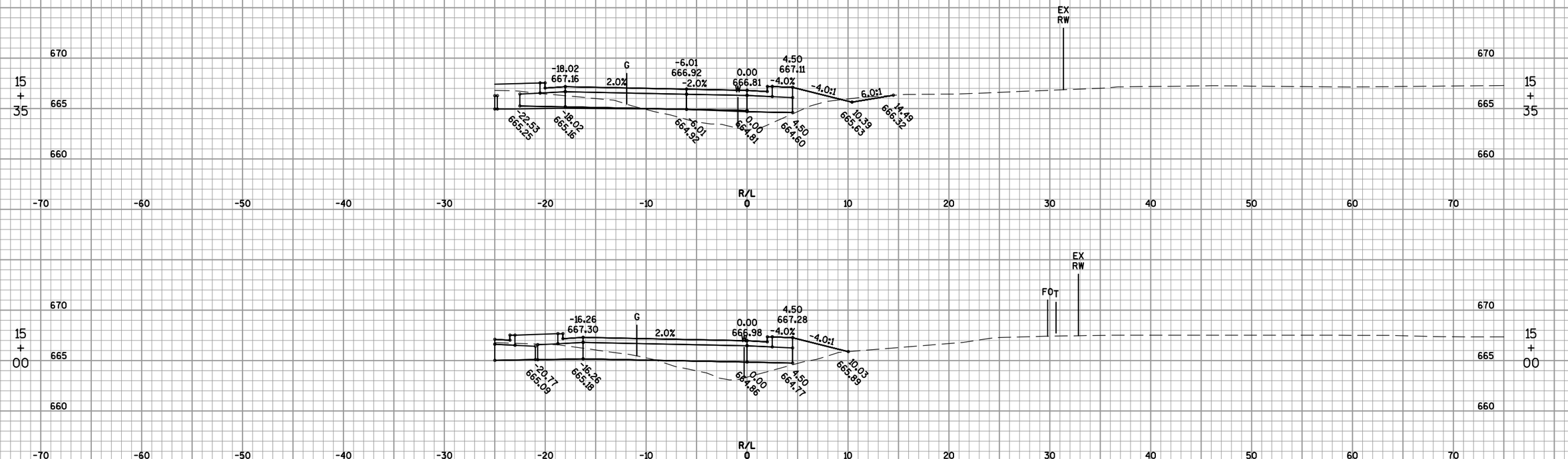
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: NE QUADRANT	SHEET 152	E



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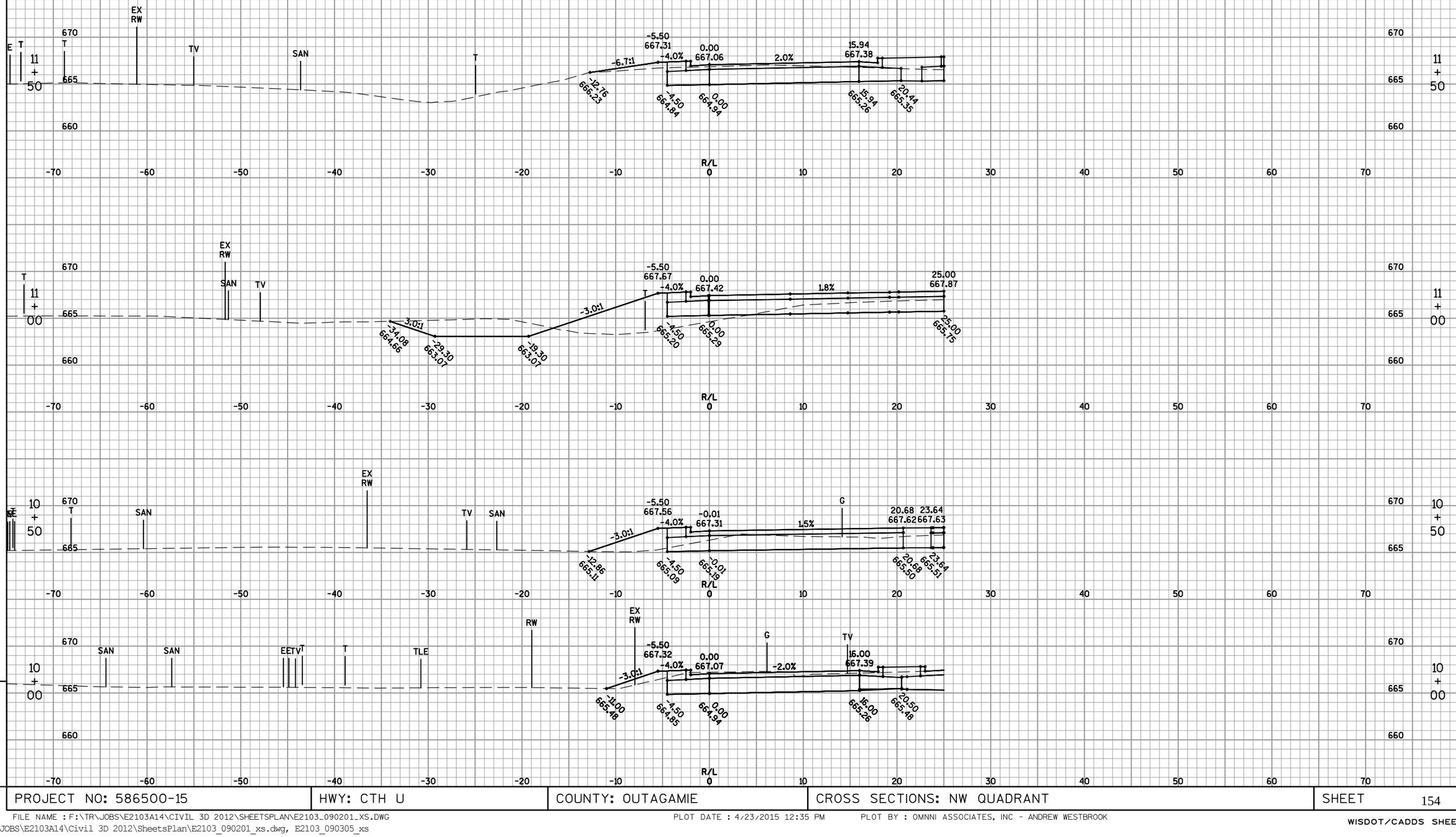
9

PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: NE QUADRANT	SHEET 153	E



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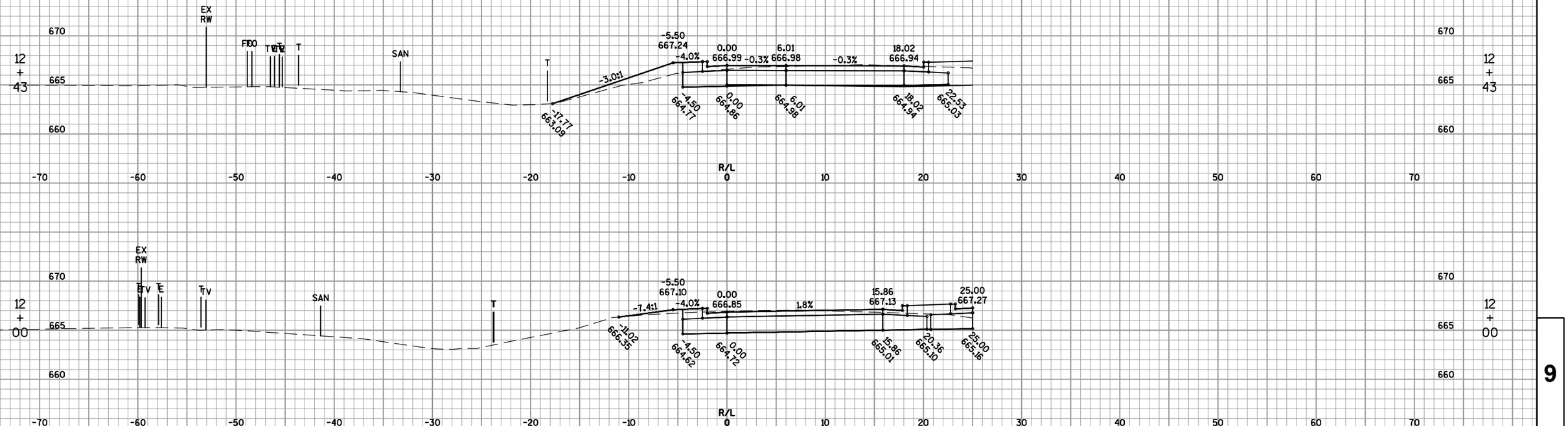
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: NW QUADRANT	SHEET 154	E



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: NW QUADRANT	SHEET 155	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
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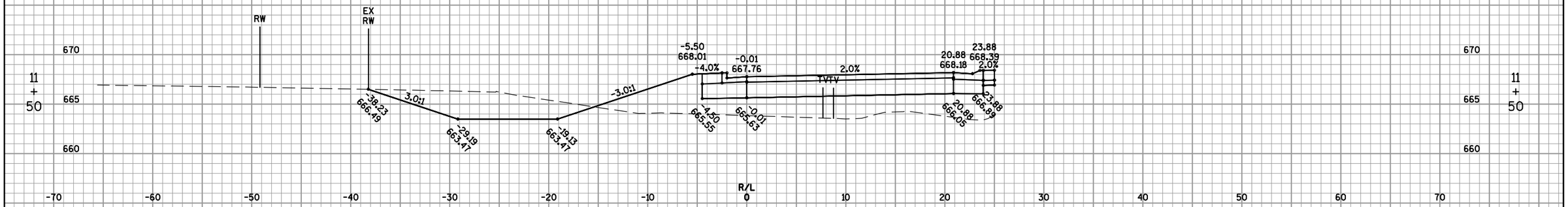
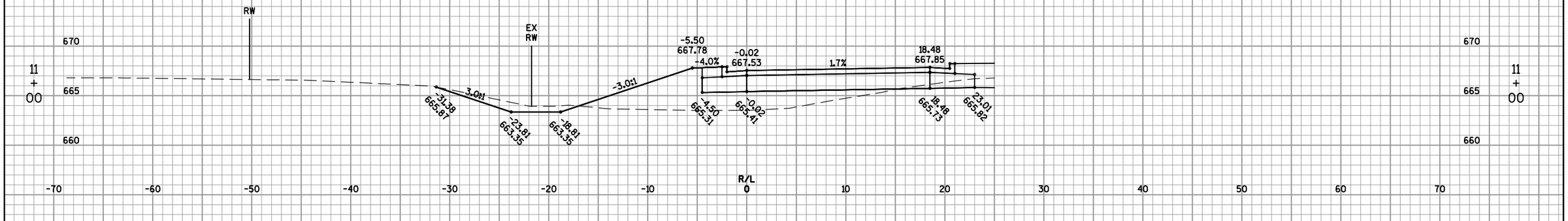
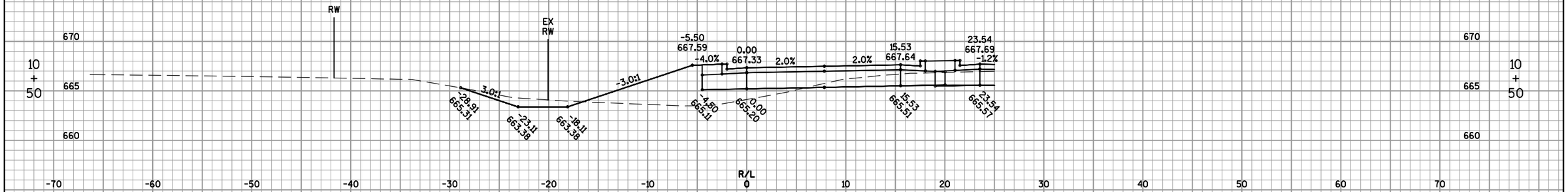
PLOT DATE : 4/23/2015 12:35 PM
PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK
WISDOT/CADDS SHEET 49


11 + 50
RW
EX RW
670
665
660
-70 -60 -50 -40 -30 -20 -10 R/L 0 10 20 30 40 50 60 70
-39.23 666.49
3.0:1
-29.19 663.47
-19.13 663.47
-3.0:1
-5.50 668.01
-4.0%
-0.01 667.76
2.0%
TYP
20.88 668.18
23.88 668.39
2.0%
-4.50 665.55
-0.01 665.63
20.88 666.05
-23.88 666.89


11 + 00
RW
EX RW
670
665
660
-70 -60 -50 -40 -30 -20 -10 R/L 0 10 20 30 40 50 60 70
-31.38 665.67
3.0:1
-23.81 663.35
-18.81 663.35
-3.0:1
-5.50 667.78
-4.0%
-0.02 667.53
1.7%
18.48 667.85
-4.50 665.31
-0.02 665.41
18.48 665.73
-23.01 665.92


10 + 50
RW
EX RW
670
665
660
-70 -60 -50 -40 -30 -20 -10 R/L 0 10 20 30 40 50 60 70
-28.91 665.31
3.0:1
-23.11 663.38
-18.11 663.38
-3.0:1
-5.50 667.59
-4.0%
0.00 667.33
2.0%
2.0%
15.53 667.64
23.54 667.69
-1.2%
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0.00 665.20
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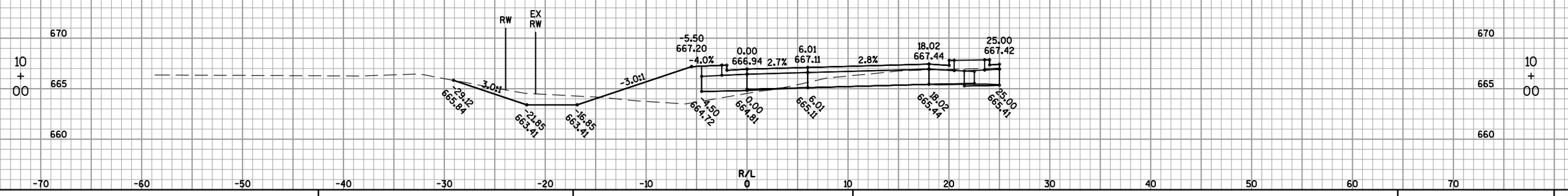
23.54 665.57


10 + 00
RW
EX RW
670
665
660
-70 -60 -50 -40 -30 -20 -10 R/L 0 10 20 30 40 50 60 70
-29.42 665.84
3.0:1
-21.85 663.41
-16.85 663.41
-3.0:1
-5.50 667.20
-4.0%
0.00 666.94
2.7%
6.01 667.11
2.8%
18.02 667.44
25.00 667.42
-4.50 664.72
0.00 664.81
6.01 665.11
18.02 665.44
25.00 665.41

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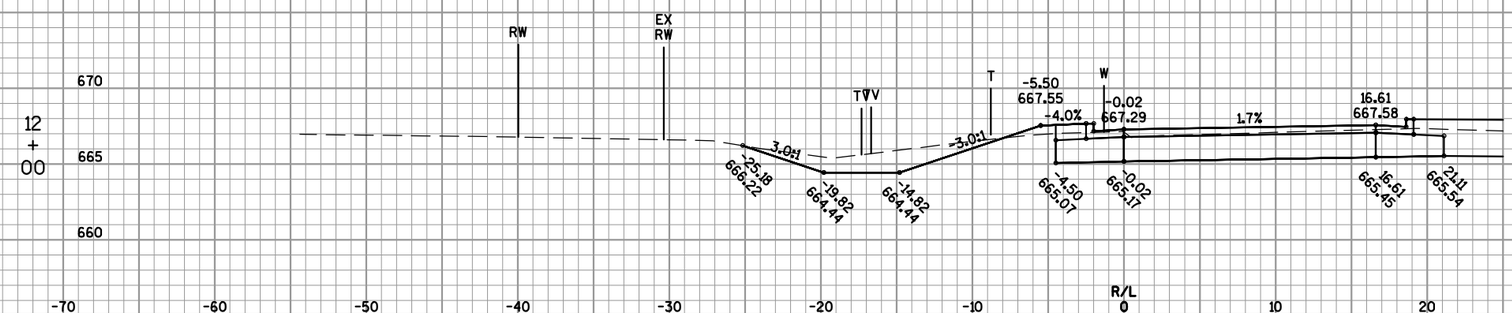
PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: SW QUADRANT	SHEET 156	E



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: SW QUADRANT	SHEET 157	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
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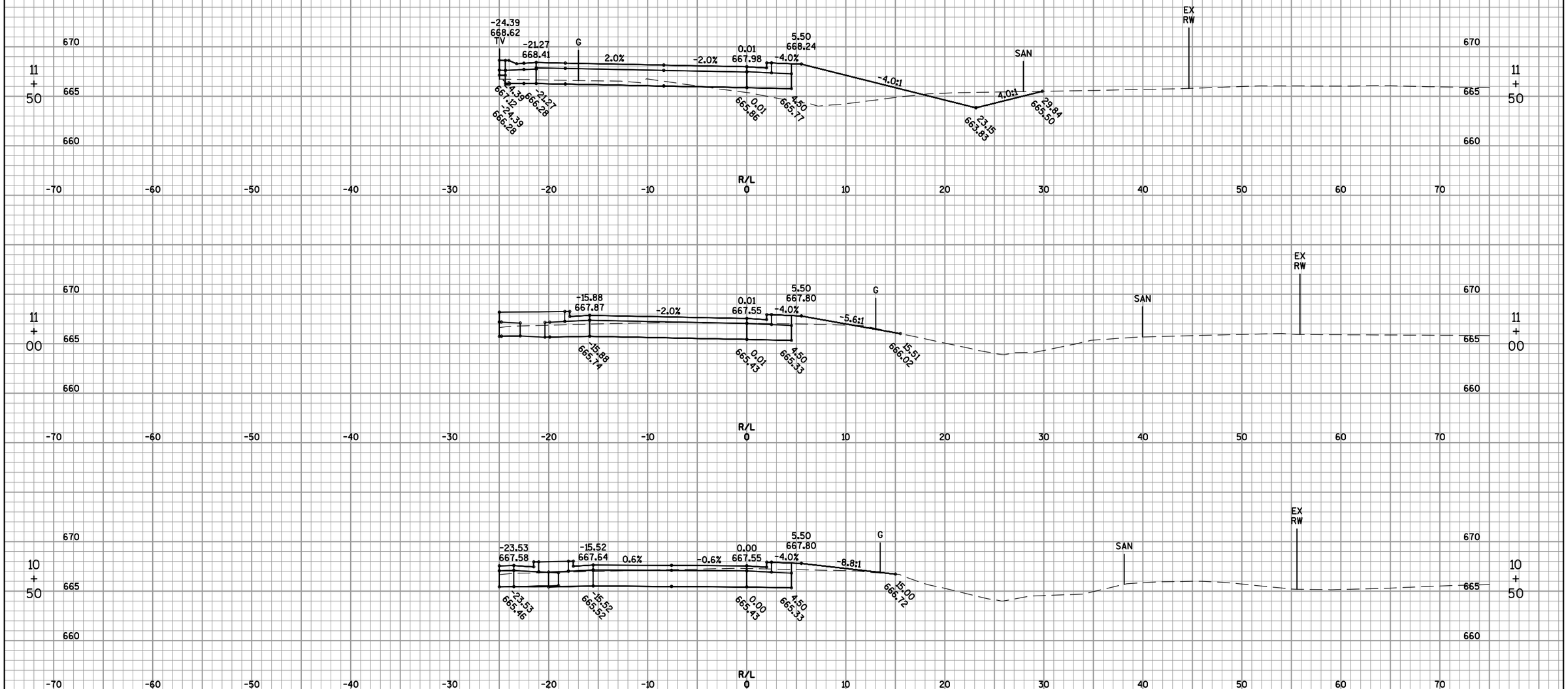
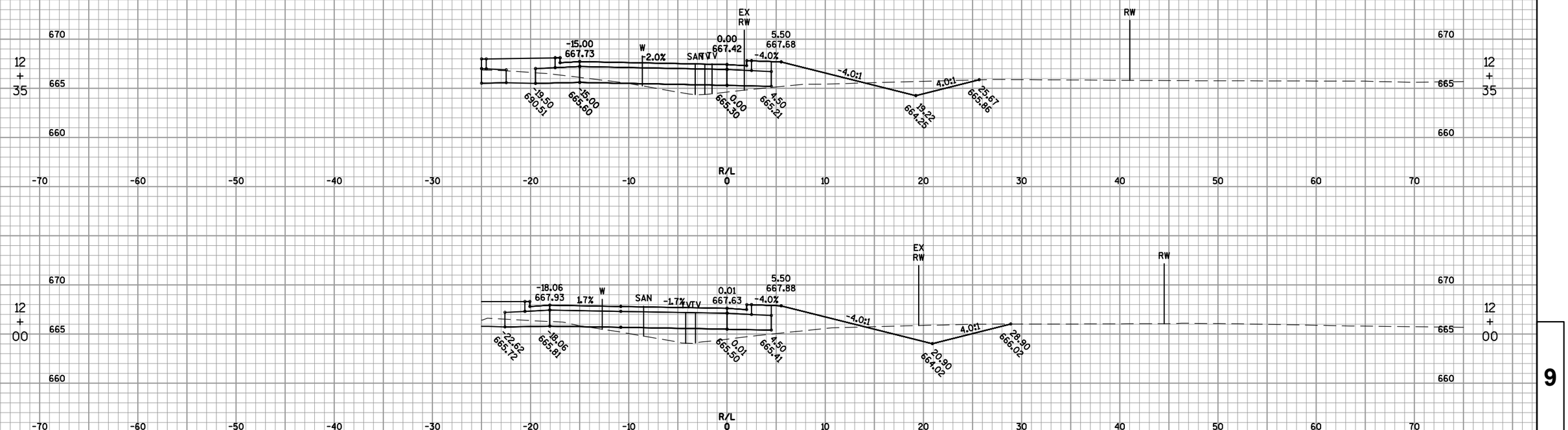
PLOT DATE : 4/23/2015 12:35 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK



PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: SE QUADRANT	SHEET 158	E



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PROJECT NO: 586500-15	HWY: CTH U	COUNTY: OUTAGAMIE	CROSS SECTIONS: SE QUADRANT	SHEET 159	E

FILE NAME : F:\TR\JOBS\E2103A14\CIVIL 3D 2012\SHEETSPLAN\E2103_090201_XS.DWG
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PLOT DATE : 4/23/2015 12:34 PM PLOT BY : OMNNI ASSOCIATES, INC - ANDREW WESTBROOK

WISDOT/CADDS SHEET 49

WISCONSIN DEPARTMENT OF TRANSPORTATION

EPlans Preliminary Sheet Numbering Tool

Notes

- Acrobat 5 or higher is required to Insert Preliminary Sheet Numbers.
- The Bureau of Highway Construction Plan Examiner places sheet numbers in the final plan.
- This sheet is for placing preliminary sheet numbers with a “PRE_" prefix.
- If a plan contains multiple projects, number each plan individually.
- Leave this sheet in the plan.

TO ADD PRELIMINARY SHEET NUMBERS

1. Insert this sheet at the end of the plan

a. With the plan open in Acrobat, select Document > Insert Pages.
b. In the Select File to Insert dialog box, select this file (Preliminary_Sheet_Numbers.pdf)
c. In the Insert dialog box, choose After for Location and Last page for Page.
d. Click OK.

2. Click the Place Preliminary Sheet Numbers button

a. Go to the last sheet of the plan.
b. Click the Place Preliminary Sheet Numbers button once.
(The preliminary sheet number appears in the bottom right corner of the sheets.
The number should match the page number in the Acrobat Status bar).

3. Re-Save the PDF

a. Select File > Save As and save the PDF.

Place Preliminary Sheet Numbers

TO REMOVE PRELIMINARY SHEET NUMBERS

Remove

STARTING PAGE NUMBER

1