GRE MAY 2014

PROJECT ID: 9202-08-80

WITH: N/A

COUNTY: BROWN

ORDER OF SHEETS

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

TOTAL SHEETS = 260



35

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

DE PERE - SUAMICO

WIS 29 RELOCATION
US 41 - CTH J

OFF SYS

BROWN COUNTY

ELMHURST AVENUE EXTENSION

STATE PROJECT NUMBER
9202-08-80

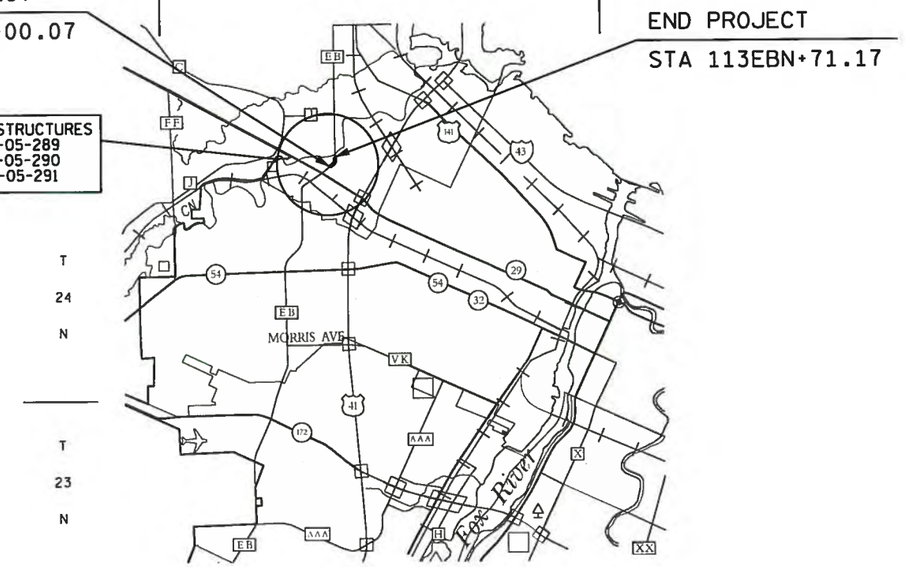
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9202-08-80	WISC 2014200	1

CONNECTING WISCONSIN

BEGIN PROJECT
STA 105EBN+00.07

END PROJECT
STA 113EBN+71.17

SIGN STRUCTURES
S-05-289
S-05-290
S-05-291



LAYOUT
SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.165 MI.

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

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BROWN COUNTY.

DESIGN DESIGNATION — CTH EB

A.A.D.T. 2015	=	14,000
A.A.D.T. 2035	=	16,100
D.H.V.	=	--
D.D.	=	52/48
T.	=	6%
DESIGN SPEED	=	40 MPH
ESALS	=	--

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE (PL + 58.1)
- 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
- COMMUNICATION OVERHEAD — OH
- COMMUNICATION UNDERGROUND — C
- ELECTRIC OVERHEAD — OH
- ELECTRIC UNDERGROUND — E
- GAS — G
- SANITARY SEWER — SAN
- STORM SEWER — SS
- WATER — W
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

ORIGINAL PLANS PREPARED BY
KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.751.7200

WISCONSIN
PRASAD S. NARAYAN
E-26170
BROOKFIELD, WI.
PROFESSIONAL ENGINEER

2/25/14 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	NE REGION
Designer	KAPUR AND ASSOCIATES
Project Manager	KATHLEEN SLATTERY
Regional Examiner	JOSH POTTER
Regional Supervisor	CHAD DEGRAVE
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 25 Feb 2014 Kathleen Slattery (Signature)

E

GENERAL NOTES

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

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

FILL ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES WITH BACKFILL GRANULAR. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN AND PROVIDE DOCUMENTATION TO THE ENGINEER.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.

PLACE EROSION CONTROL DEVICES IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER. EROSION CONTROL FEATURES ARE SHOWN AT APPROXIMATE LOCATIONS, WITH EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER. REMOVAL OF ITEMS ARE INCIDENTAL TO THE RESPECTIVE EROSION CONTROL BID ITEM COSTS.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. PLACE TOPSOIL TO A 6-INCH DEPTH UNLESS OTHERWISE NOTED.

PLACE TOPSOIL IN ALL GRADED AREAS AS DESIGNATED BY THE ENGINEER IMMEDIATELY AFTER GRADING HAS BEEN COMPLETED. GRADE TOPSOIL TO ½ INCH HIGHER THAN BACK OF CURB TO ALLOW FOR SETTLING. SEED, MULCH AND FERTILIZE OR SOD AND FERTILIZE ALL AREAS 5 DAYS AFTER PLACEMENT OF TOPSOIL.

FERTILIZER SHALL NOT BE USED NEAR NAVIGABLE WATERWAYS OR WETLANDS.

STATIONING, DISTANCES, AND OFFSETS FOR SIGNS AND TRAFFIC CONTROL DEVICES SHOWN IN THE PLANS ARE APPROXIMATE. EXACT LOCATIONS ARE DETERMINED BY THE ENGINEER.

COVER ALL SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE EXACT LOCATION AND WIDTH OF TEMPORARY ACCESS FOR DRIVEWAYS TO BE DETERMINED BY THE ENGINEER.

ALL DRIVEWAYS ARE TO BE REPLACED IN KIND UNLESS OTHERWISE DIRECTED BY THE ENGINEER, OR AS SHOWN ON THE PLANS. 6 INCHES OF BASE AGGREGATE DENSE WILL BE USED UNDER ALL DRIVEWAYS.

RESHAPING AND SEEDING OF ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS OUTSIDE OF THE ENGINEER DETERMINED CONSTRUCTION LIMITS ARE INCIDENTAL TO THE CONTRACT.

RIGHT OF WAY LINES SHOWN ON THE CROSS SECTIONS ARE APPROXIMATE.

ENGINEER SHALL FURNISH HORIZONTAL ALIGNMENT CONTROL POINTS.

ALL EXPOSED CURB ENDS SHALL BE SLOPED FROM 6” HEIGHT TO 0” HEIGHT IN 6 FT.

WHEN PORTIONS OF THE EXISTING ROADWAY AND DRIVEWAYS ARE TO BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION, THE LINE OF REMOVAL SHALL BE NEATLY DELINEATED WITH A SAW CUT SUCH THAT REMOVAL OF THE PAVEMENT WILL BE ACCOMPLISHED WITHOUT DAMAGE TO THE REMAINING PORTIONS.

SIDEWALK JOINTING SHALL OCCUR EVERY 5 FEET OR AS DIRECTED BY THE ENGINEER.

STANDARD ABBREVIATIONS

AEW	APRON END WALL
AGG	AGGREGATE
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EB	EASTBOUND
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT-HAND FORWARD
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASMENT
PT	POINT OF TANGENT
PVC	POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT-OF-WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCE CONCRETE
REQD	REQUIRED
RHF	RIGHT-HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
STA	STATION
SY	SQUARE YARD
T	TANGENT
TC	TOP OF CURB
TLE	TEMPORARY LIMITED EASEMENT
WB	WESTBOUND

2

UTILITY CONTACTS

AT&T WISCONSIN

MS. KAREN WELLS
205 S. JEFFERSON STREET
GREEN BAY, WI 54301
PHONE: 920-433-4226
E-MAIL: KW9272@ATT.COM

TIME WARNER CABLE

MR. VINCE ALBIN
3520 DESTINATION DRIVE
APPLETON, WI 54195
PHONE: 920-831-9249
E-MAIL: VINCE.ALBIN@TWCABLE.COM
CELL: 920-378-0444

VILLAGE OF HOWARD

MR. MARTY FRISQUE
WATER AND SANITARY SEWER
1336 CORNELL ROAD
GREEN BAY, WI 54313
PHONE: 920-434-4060
E-MAIL: MFRISQUE@VILLAGEOFHOWARD.COM

WISCONSIN PUBLIC SERVICE CORPORATION – GAS

MR. PHIL MAUERMANN
2805 S. ASHLAND AVENUE
GREEN BAY, WI 54307
PHONE: 920-617-5092
E-MAIL:
PGMAUERMANN@WISCONSINPUBLICSERVICE.COM

WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRIC

MR. SCOTT GAUGER
2805 S. ASHLAND AVENUE
GREEN BAY, WI 54307
PHONE: 920-617-5151
E-MAIL: SJGAUGER@WISCONSINPUBLICSERVICE.COM

TO OBTAIN LOCATION OF
PARTICIPANTS' UNDERGROUND
FACILITIES BEFORE YOU DIG IN
WISCONSIN

WIS. STATUTE 182.0175 (1974)
REQUIRES MIN. OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE.

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

OTHER CONTACTS – FOR INFORMATION ONLY

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

MR. JAMES DOPERALSKI
2984 SHAWANO AVENUE
PO BOX 10448
GREEN BAY, WI 54307-0448
PHONE: 920-662-5119
E-MAIL: JAMES.DOPERALSKI@WISCONSIN.GOV

WISCONSIN DEPARTMENT OF TRANSPORTATION

MS. KATHLEEN SLATTERY
USH 41 BROWN COUNTY PROJECT OFFICE
1940 WEST MASON STREET
GREEN BAY, WI 54303
PHONE: 920-492-2243
E-MAIL: KATHLEEN.SLATTERY@DOT.WI.GOV

KAPUR & ASSOCIATES – DESIGN CONSULTANT

MR. JUSTIN ARNDT
7711 NORTH PORT WASHINGTON ROAD
MILWUAKEE, WI 53217
PHONE: 414-751-7233
E-MAIL: JARNDT@KAPUR-ASSOC.COM

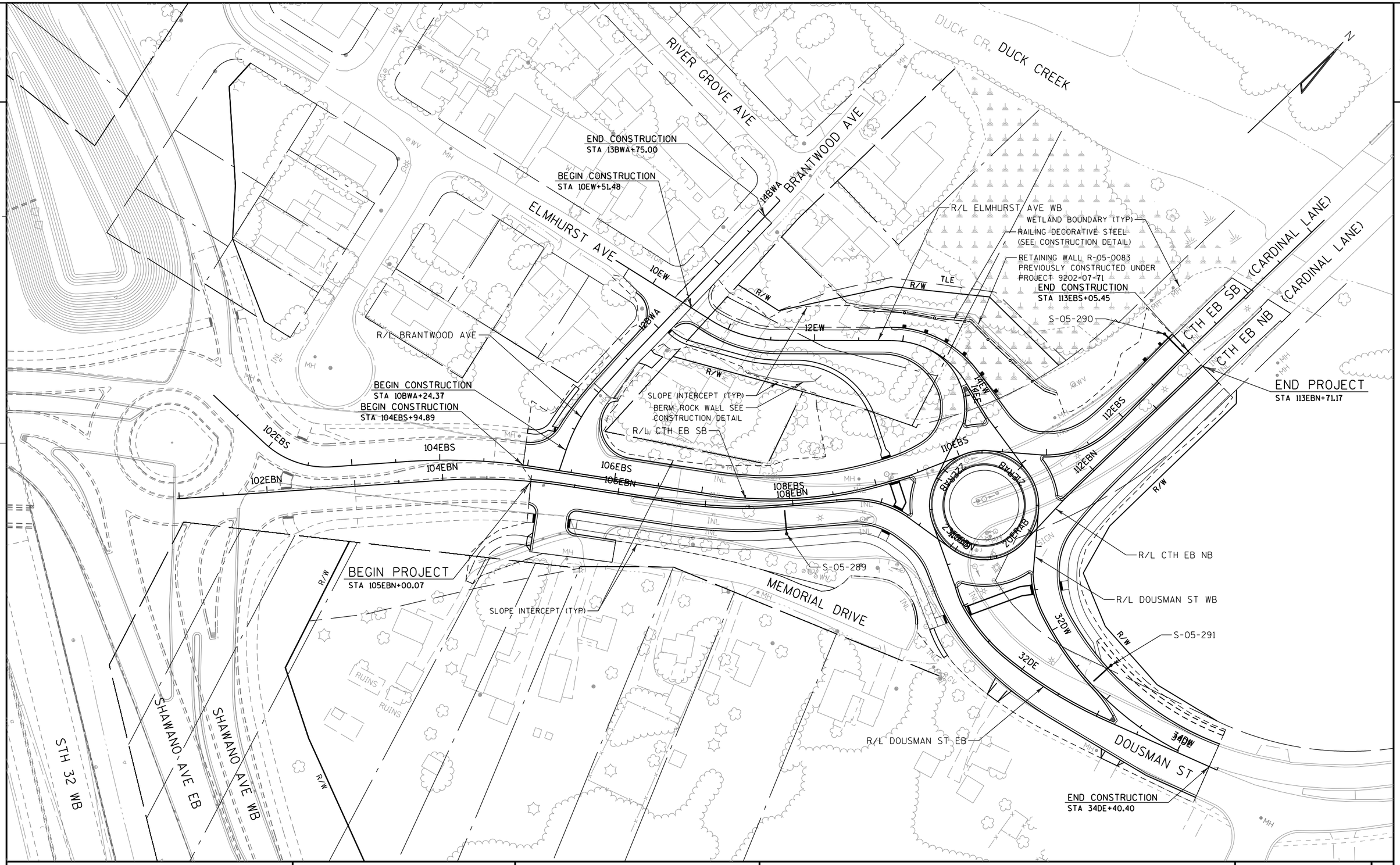
BROWN COUNTY SURVEYOR

PAT FORD
BROWN COUNTY
305 EAST WALNUT STREET
GREEN BAY, WI 54301
PHONE: 920-448-4493
E-MAIL: FORD_PJ@CO.BROWN.WI.US

ORDER OF SECTION 2 DETAIL SHEETS

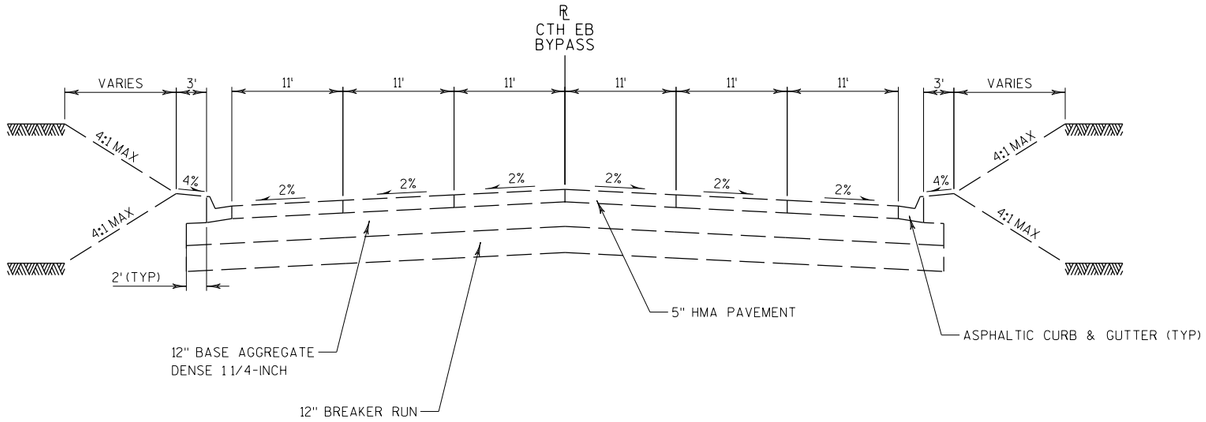
GENERAL NOTES
UTILITY CONTACTS
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLANS
PLAN DETAILS
PAVING GRADES
EROSION CONTROL
STORM SEWER PLAN
LANDSCAPING PLAN
PERMANENT SIGNING PLAN
LIGHTING PLAN
PAVEMENT MARKING
CONSTRUCTION STAGING
TRAFFIC CONTROL PLAN
ALIGNMENT PLAN

2



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PROJECT OVERVIEW	SHEET 4	E

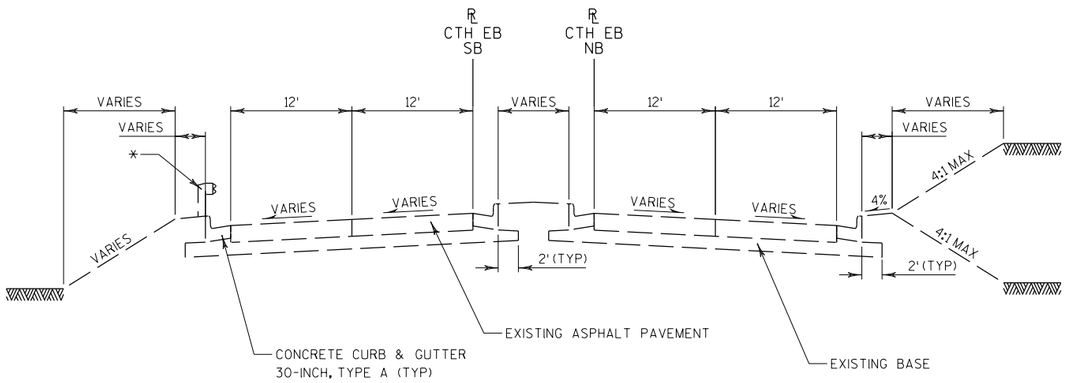
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TYPICAL EXISTING SECTION

CTH EB (CARDINAL LANE)

STA 105EBN+00 - STA 106EBN+32
STA 104EBS+95 - STA 106EBS+39



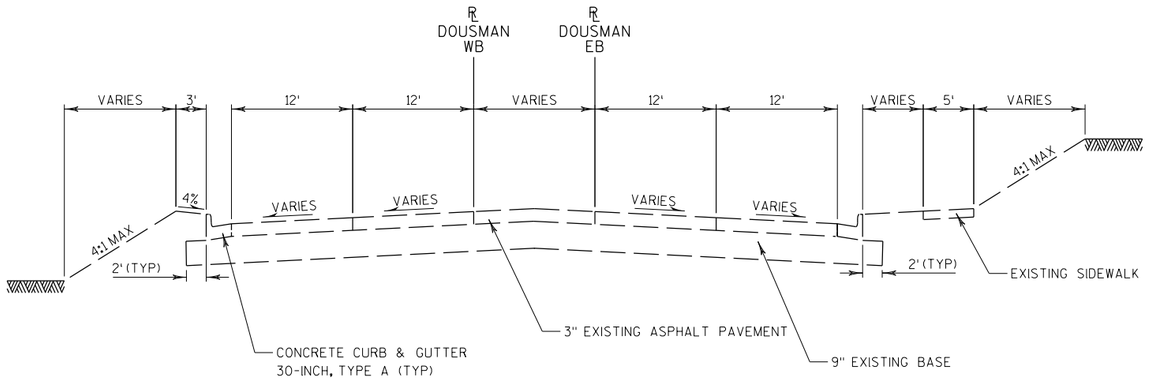
* EXISTING BEAM GUARD FROM
STA 110EBS+93 - STA 113EBS+05.45

TYPICAL EXISTING SECTION

CTH EB (CARDINAL LANE)

STA 106EBN+32 - STA 113EBN+71.17
STA 106EBS+39 - STA 113EBS+05.45

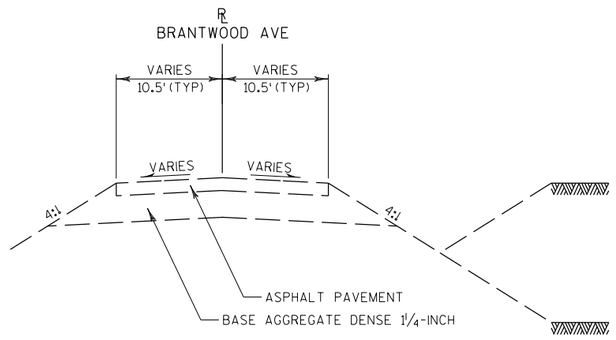
PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	EXISTING TYPICAL SECTIONS	SHEET 5	E



TYPICAL EXISTING SECTION

DOUSMAN STREET

STA 30DE+65 - STA 34DE+40.40
STA 31DW+24 - STA 33DW+20

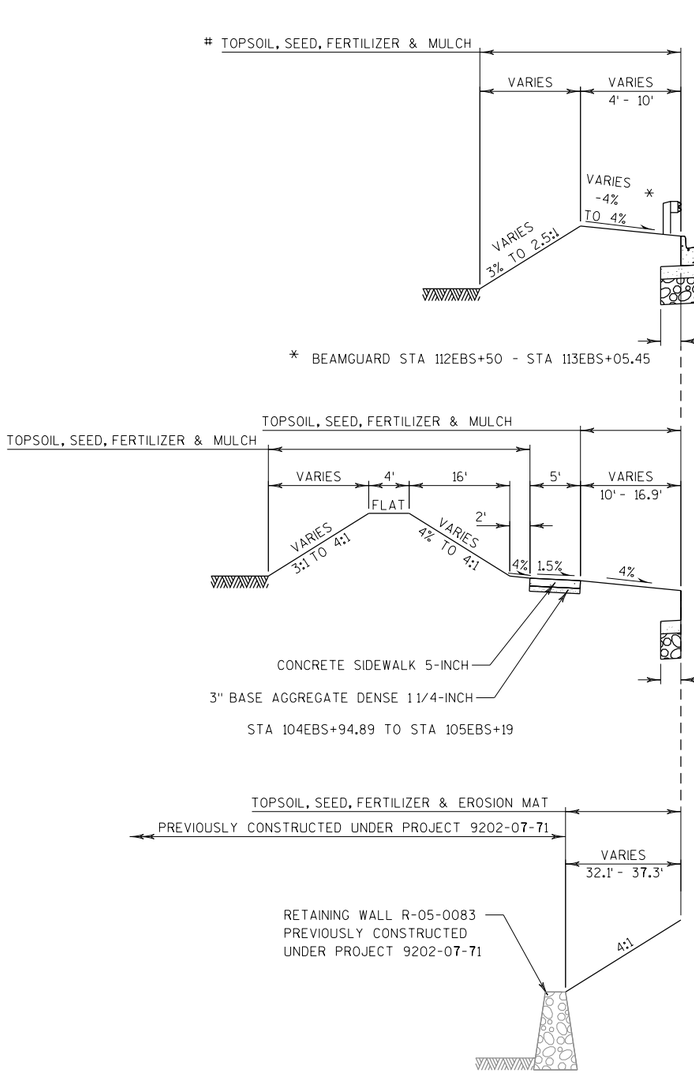


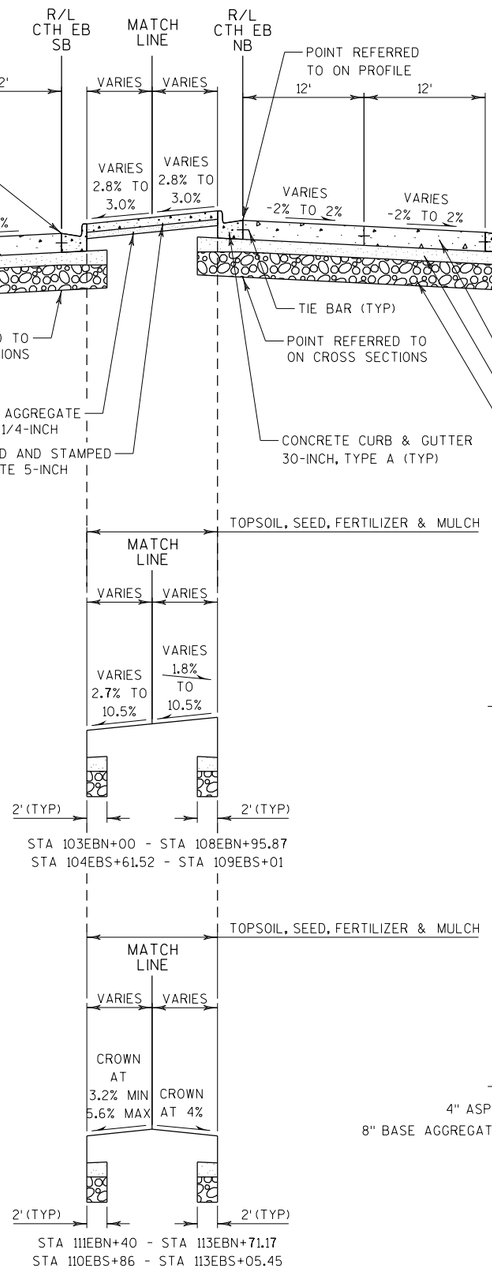
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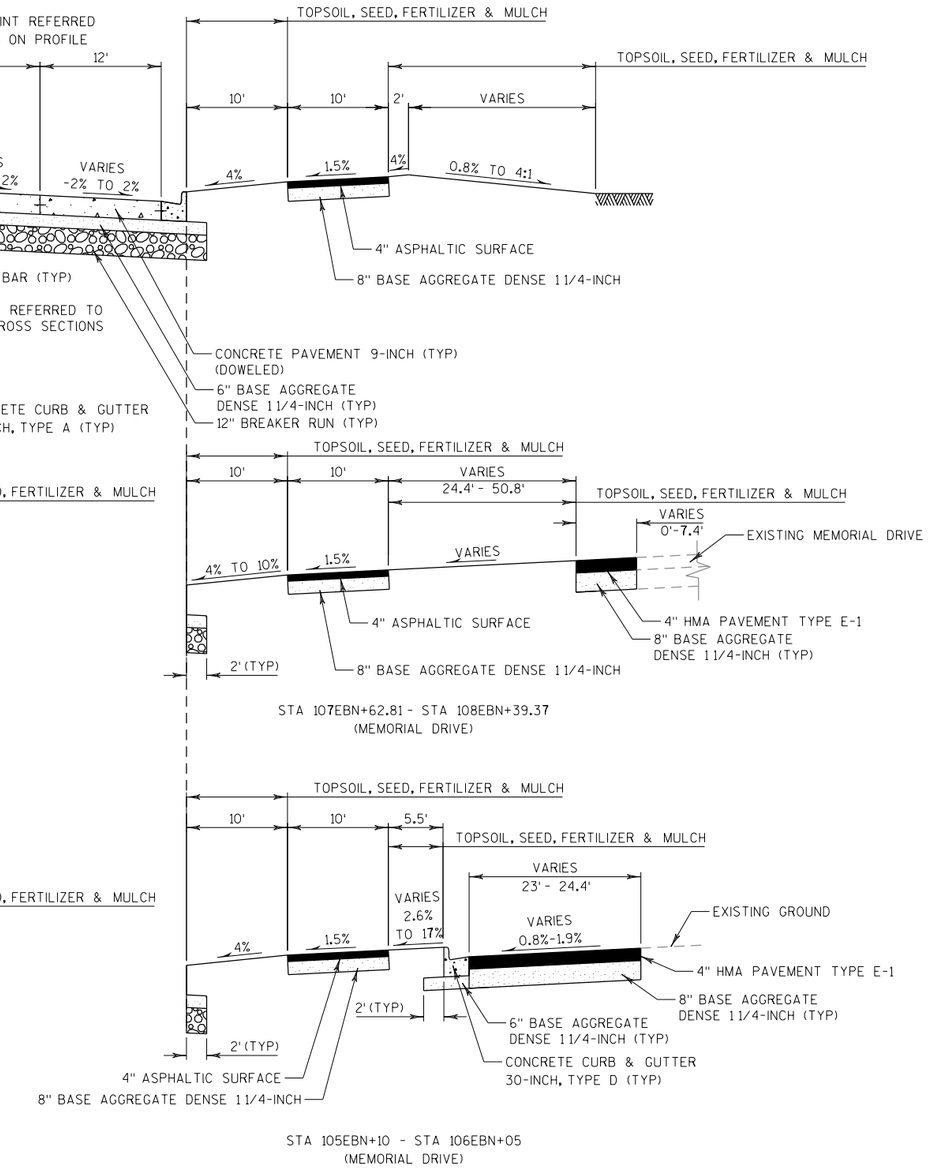
BRANTWOOD AVENUE

STA 10BWA+24.37 - STA 13BWA+75.00

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	EXISTING TYPICAL SECTIONS	SHEET 6	E







TYPICAL FINISHED SECTION

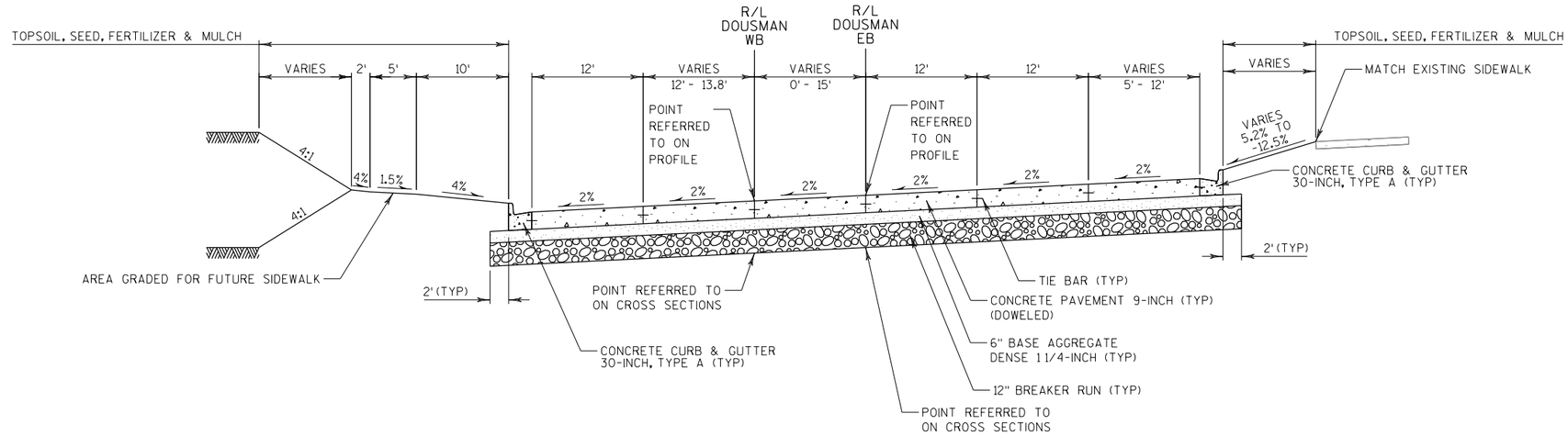
CTH EB (CARDINAL LANE)

STA 105EBN+00 - STA 109EBN+43
STA 111EBN+40 - STA 113EBN+71.17
STA 104EBS+94.89 - STA 109EBS+52
STA 110EBS+86 - STA 113EBS+05.45

SEE ELMHURST ROUNDABOUT FOR
STA 109EBN+43 TO 111EBN+40 AND
STA 109EBS+25 TO STA 110EBS+86

SEE EROSION CONTROL PLAN FOR AREAS OF TOPSOIL, SEED, FERTILIZER AND EROSION MAT.

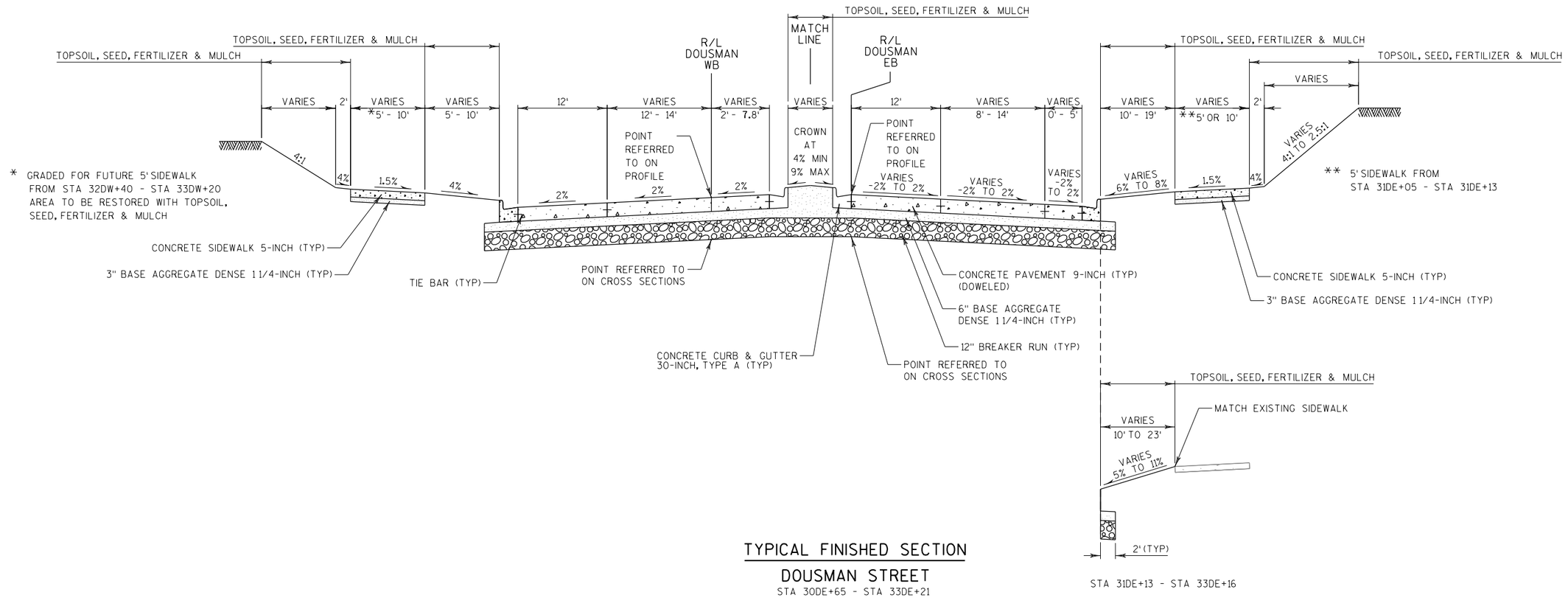
PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	FINISHED TYPICAL SECTIONS	SHEET 7	E



TYPICAL FINISHED SECTION

DOUSMAN STREET

STA 33DE+21 - STA 34DE+40.40



TYPICAL FINISHED SECTION

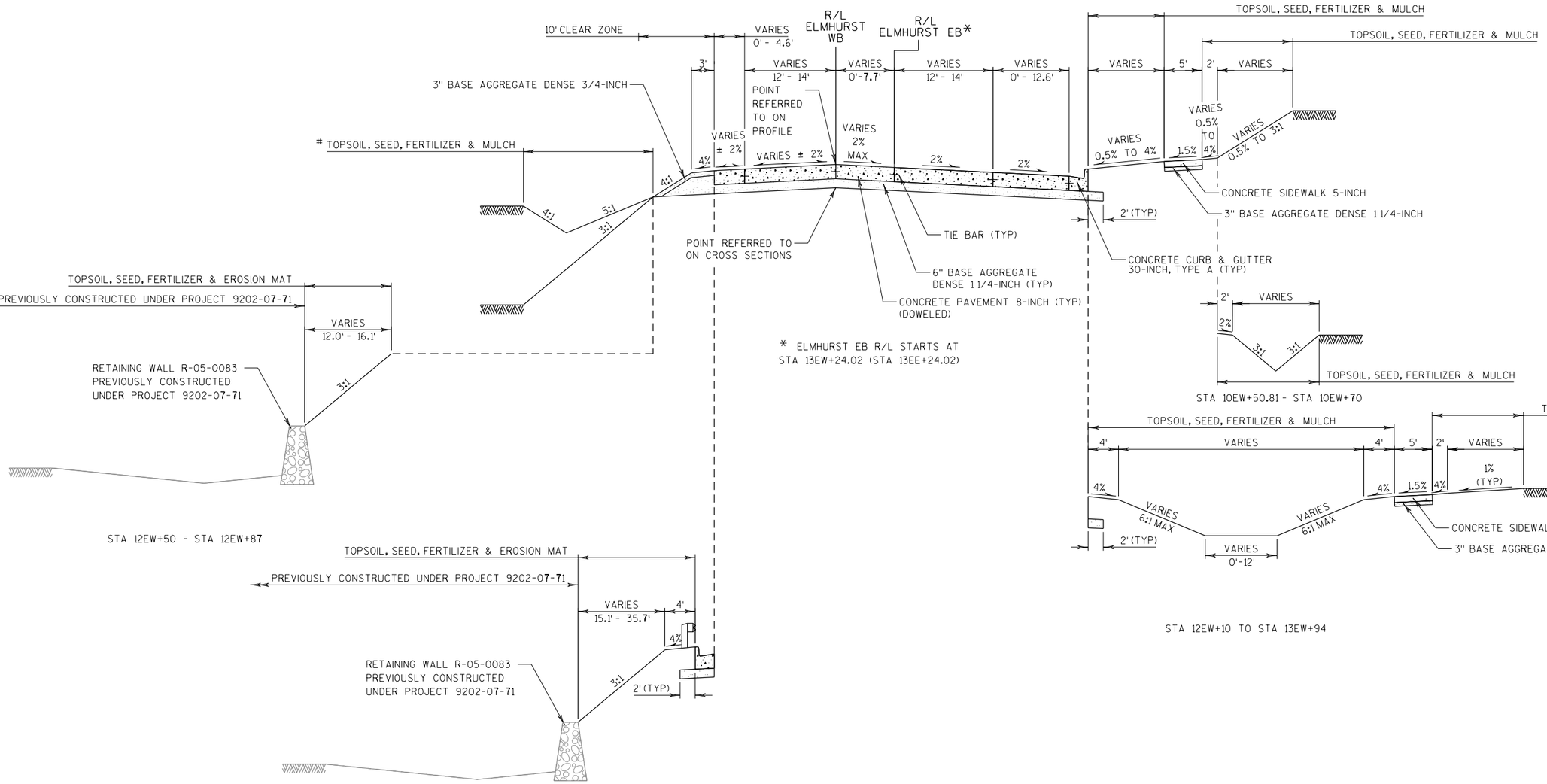
DOUSMAN STREET

STA 30DE+65 - STA 33DE+21
STA 31DW+24 - STA 33DW+24

STA 31DE+13 - STA 33DE+16

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	FINISHED TYPICAL SECTIONS	SHEET 8	E

2



TYPICAL FINISHED SECTION

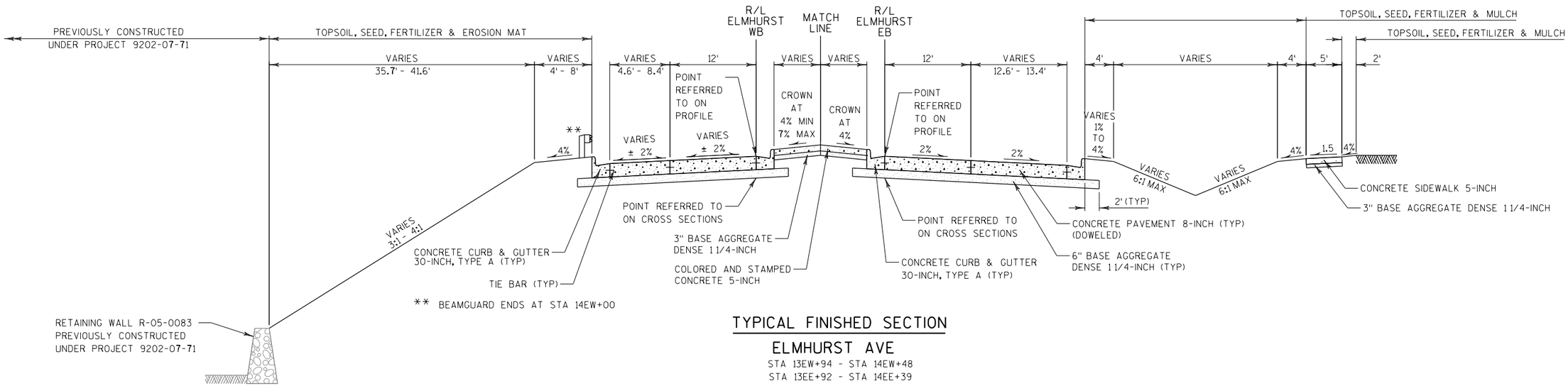
ELMHURST AVE

STA 10EW+51.48 - STA 13EW+94
STA 13EE+24.02 - STA 13EE+92

SEE EROSION CONTROL PLAN FOR AREAS OF TOPSOIL, SEED, FERTILIZER AND EROSION MAT.

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	FINISHED TYPICAL SECTIONS	SHEET 9	E

2



** BEAMGUARD ENDS AT STA 14EW+00

TYPICAL FINISHED SECTION

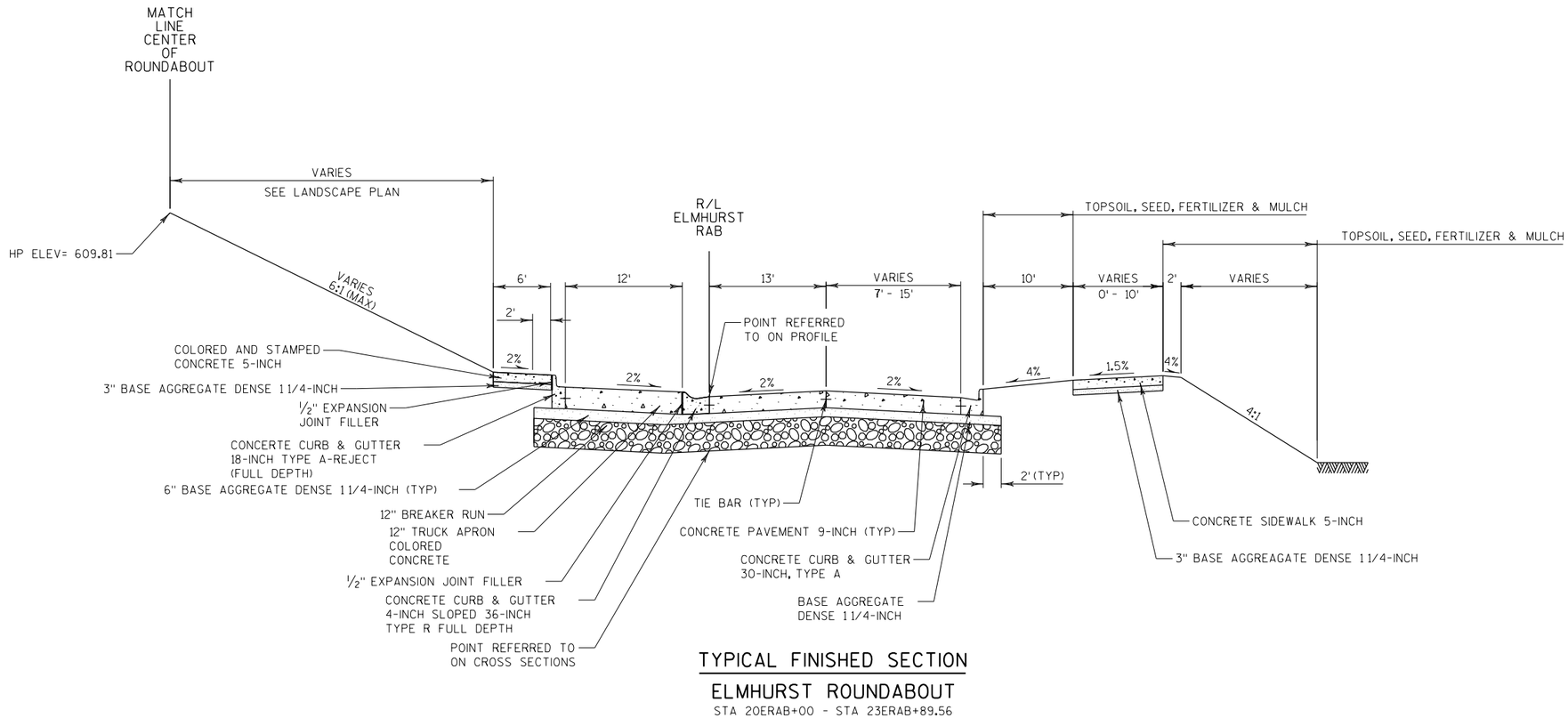
ELMHURST AVE

STA 13EW+94 - STA 14EW+48
STA 13EE+92 - STA 14EE+39

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	FINISHED TYPICAL SECTIONS	SHEET 10	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\020302_TS.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : $FILE$ PLOT SCALE : 1:15

2

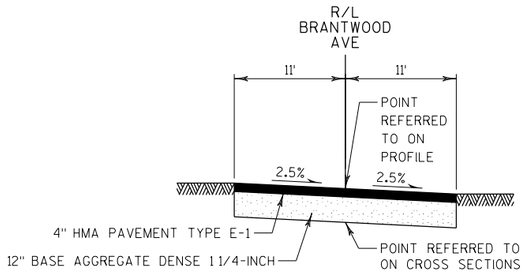


TYPICAL FINISHED SECTION

ELMHURST ROUNDABOUT

STA 20ERAB+00 - STA 23ERAB+89.56

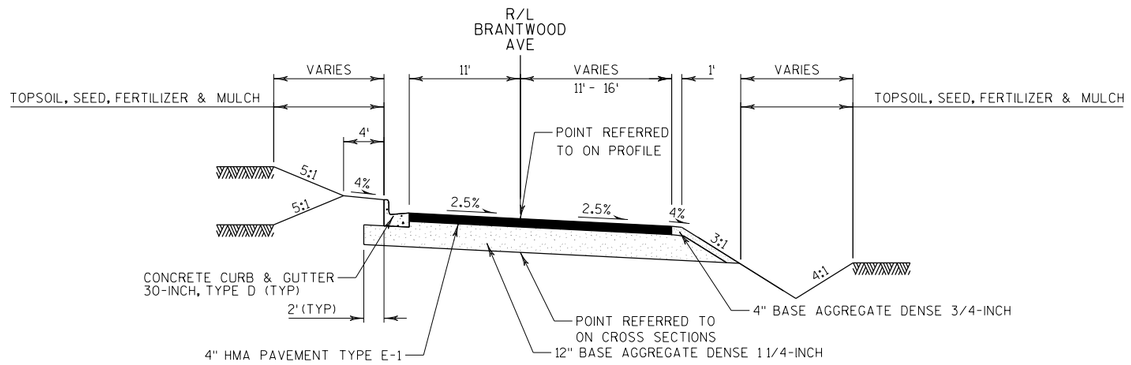
PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	FINISHED TYPICAL SECTIONS	SHEET 11	E



TYPICAL FINISHED SECTION

BRANTWOOD AVE

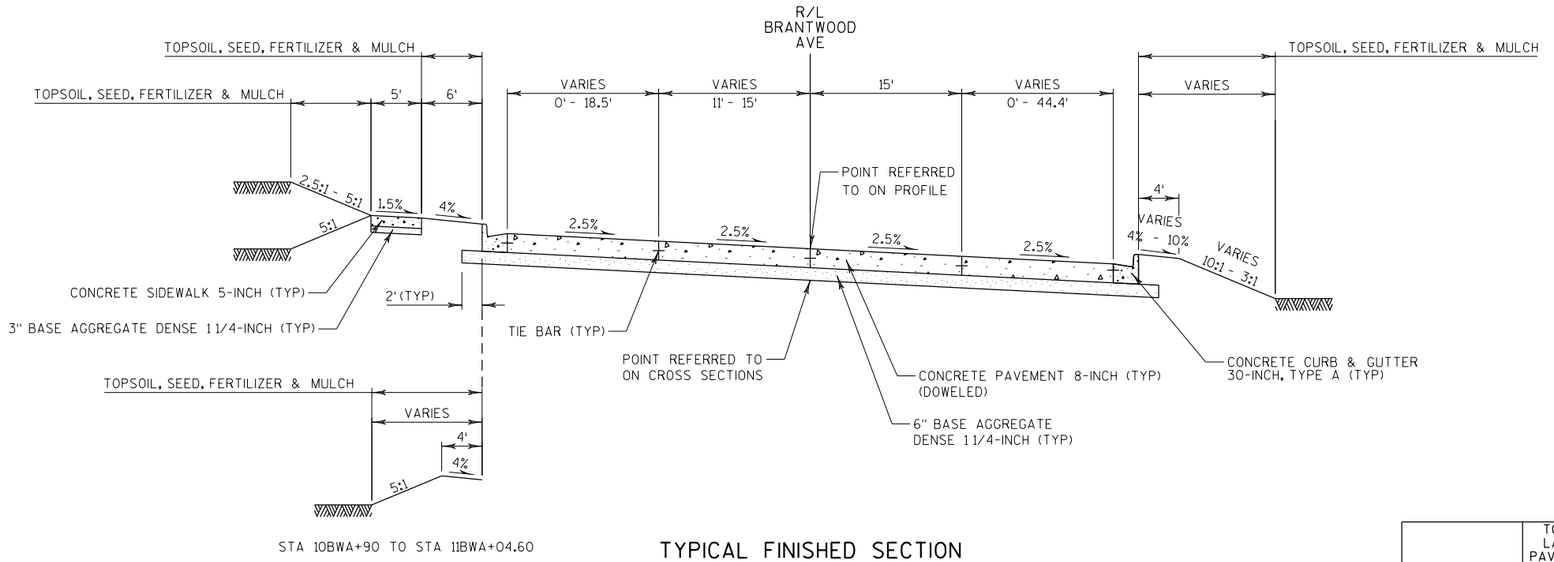
STA 12BWA+13.70 TO STA 13BWA+75.00



TYPICAL FINISHED SECTION

BRANTWOOD AVE

STA 11BWA+04.60 TO STA 12BWA+13.70



STA 10BWA+90 TO STA 11BWA+04.60

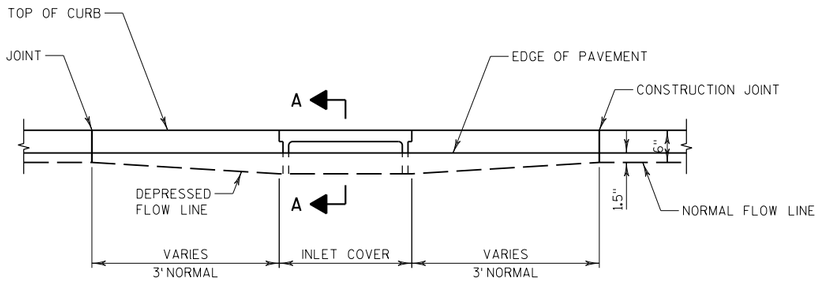
TYPICAL FINISHED SECTION

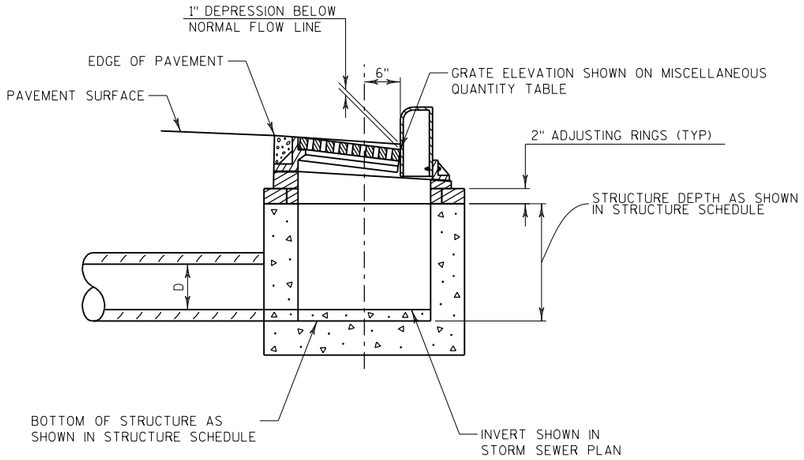
BRANTWOOD AVE

STA 10BWA+24.37 TO STA 11BWA+04.60

PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NORMAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
E-1	4"	1 ¾" UPPER 2 ¼" LOWER	12.5 MM 19.0 MM	PG-58-28

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	FINISHED TYPICAL SECTIONS	SHEET 12	E



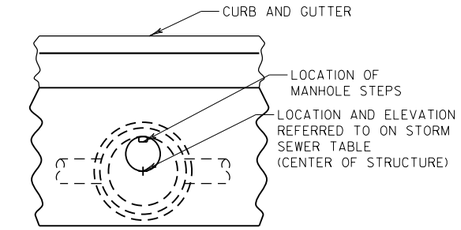


SECTION A-A

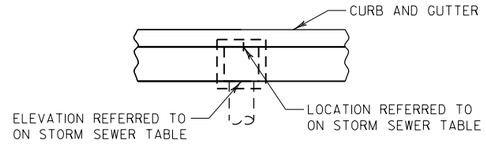
DETAIL OF CURB AND GUTTER AT INLETS

NOTE

1) LOCATION OF STRUCTURE MAY BE ADJUSTED TO FIT FIELD CONDITIONS.

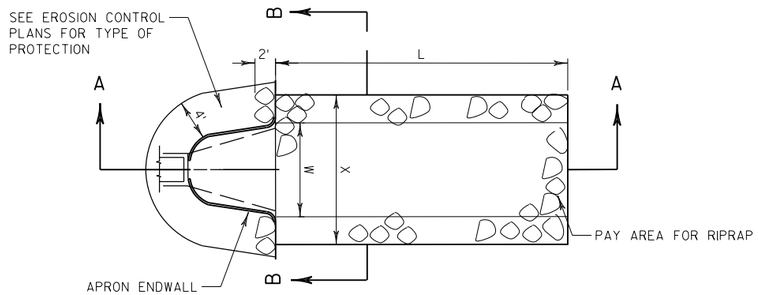


MANHOLE NOT IN CURB AND GUTTER



INLET IN CURB AND GUTTER

STRUCTURE LOCATION DETAIL



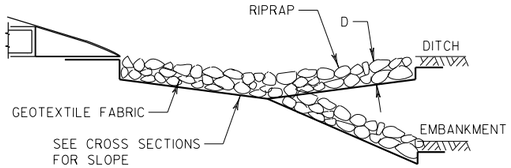
PLAN VIEW

L = 3 x W (NOR.) OR 10' MIN. OR AS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

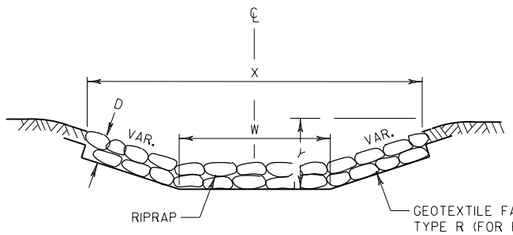
D = 12" FOR RIPRAP LIGHT
18" FOR RIPRAP MEDIUM
24" FOR RIPRAP HEAVY

X = W+2' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
W+5' FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE

Y = 0' FOR TYPICAL CULVERT DISCHARGE INTO DITCH
12" FOR CULVERT DISCHARGE DOWN EMBANKMENT SLOPE



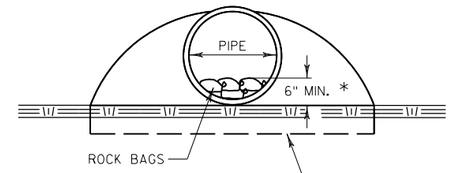
SECTION A-A



SECTION B-B

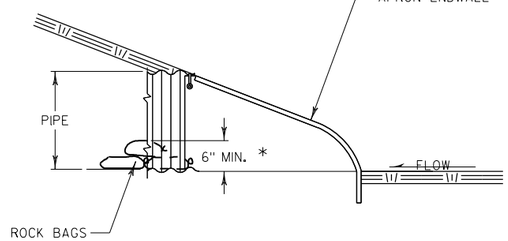
RIPRAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS

SEE EROSION CONTROL PLAN FOR LOCATIONS



END VIEW

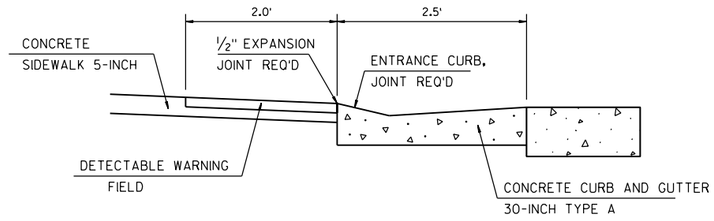
* OR AS DIRECTED BY THE ENGINEER



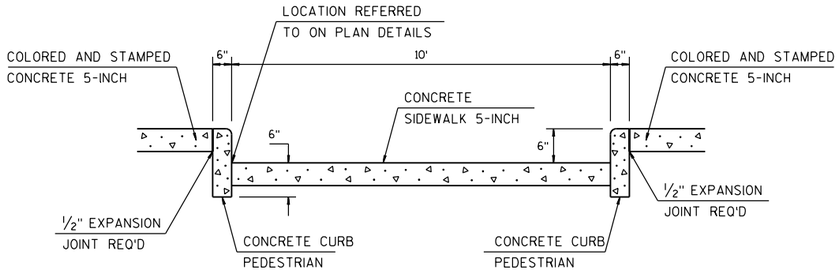
SIDE VIEW

CULVERT PIPE CHECKS

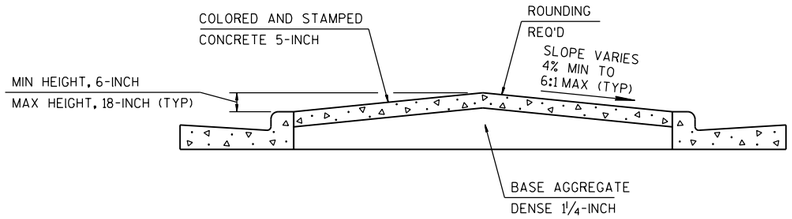
AT INLET LOCATIONS



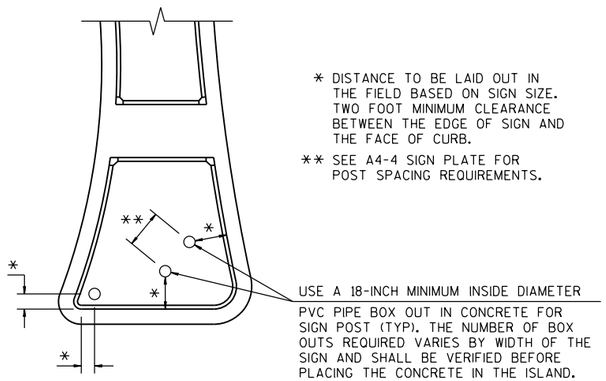
SECTION A-A



SECTION B-B



SECTION C-C



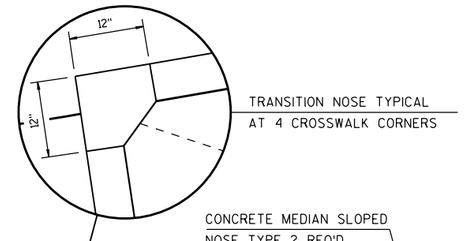
* DISTANCE TO BE LAID OUT IN THE FIELD BASED ON SIGN SIZE. TWO FOOT MINIMUM CLEARANCE BETWEEN THE EDGE OF SIGN AND THE FACE OF CURB.

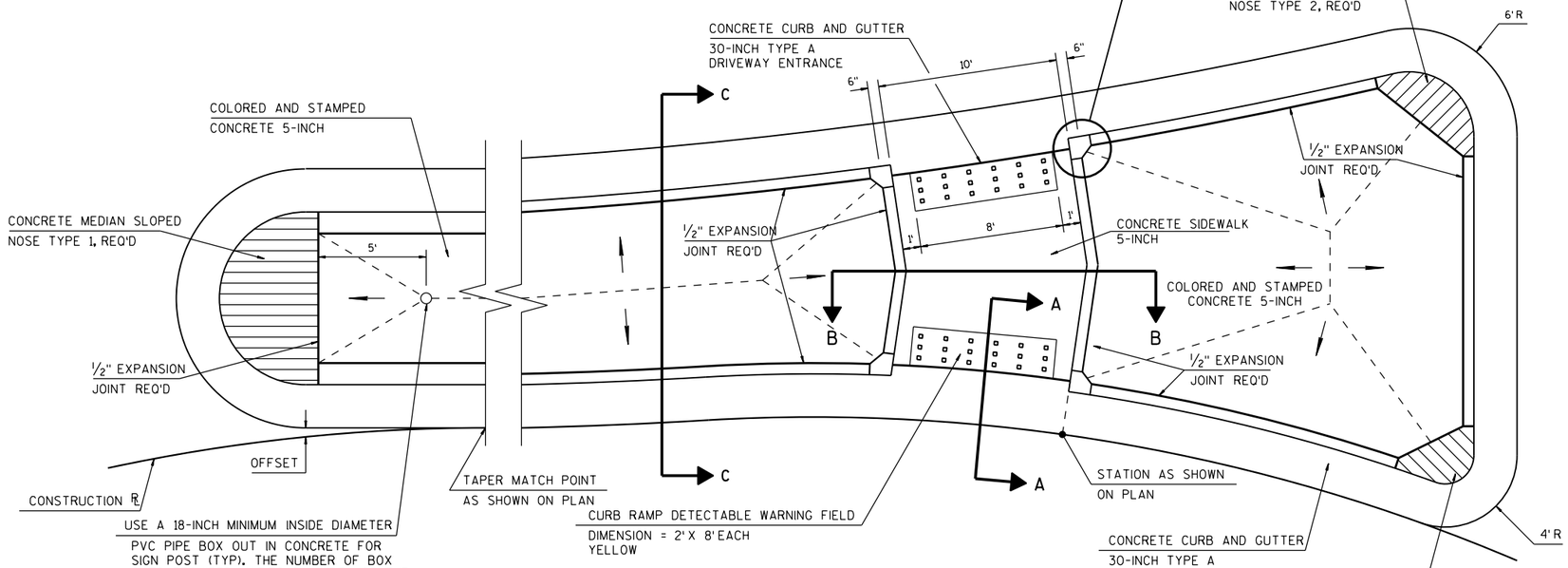
** SEE A4-4 SIGN PLATE FOR POST SPACING REQUIREMENTS.

USE A 18-INCH MINIMUM INSIDE DIAMETER PVC PIPE BOX OUT IN CONCRETE FOR SIGN POST (TYP). THE NUMBER OF BOX OUTS REQUIRED VARIES BY WIDTH OF THE SIGN AND SHALL BE VERIFIED BEFORE PLACING THE CONCRETE IN THE ISLAND.

ISLAND SIGN LOCATION DETAIL (TYP)

NOTIFY THE REGIONAL TRAFFIC UNIT AT 920-492-5653 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: INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

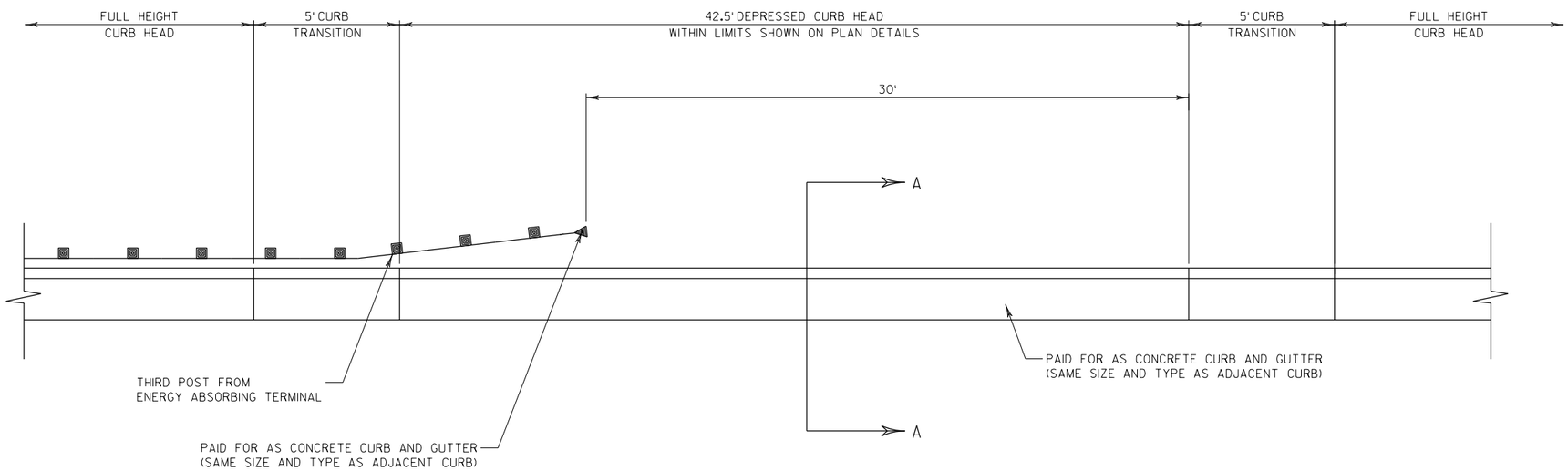
- - - DRAINAGE BREAK POINT

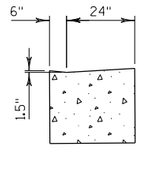
⟵ DIRECTION OF DRAINAGE

SPLITTER ISLAND DETAIL

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CONSTRUCTION DETAILS	SHEET 15	E

2





SECTION A-A

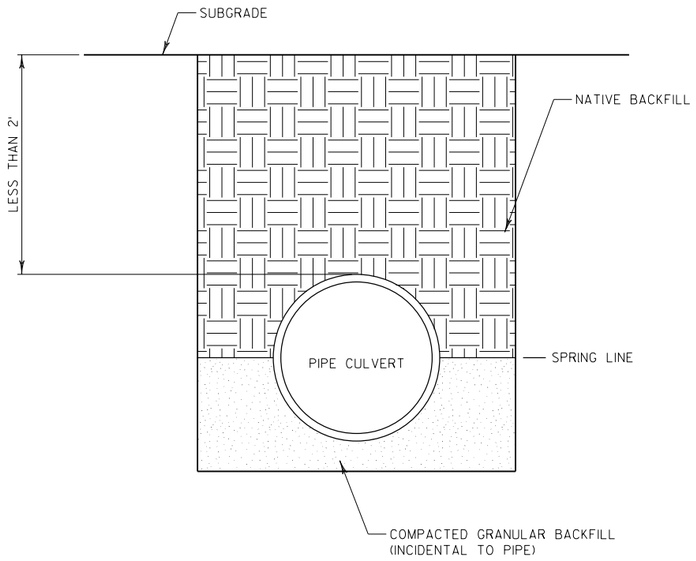
DEPRESSED CURB

DEPRESSED CURB HEAD AT BEAM GUARD TERMINAL

2

NOTES:

(1) NATIVE BACKFILL SHALL BE FREE OF LARGE LUMPS, CLODS, OR ROCK.

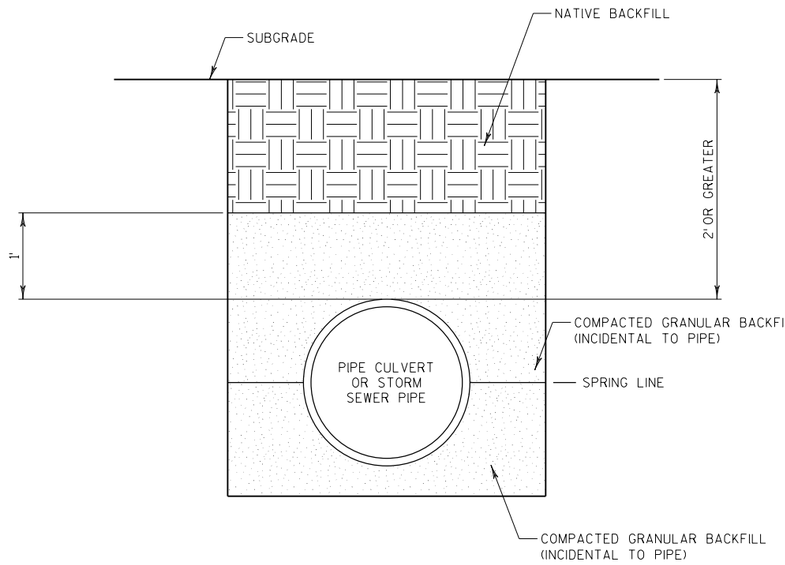


TRENCH BACKFILL DETAIL FOR SHALLOW PIPE CULVERTS

NOTES:

(1) NATIVE BACKFILL SHALL BE FREE OF LARGE LUMPS, CLODS, OR ROCK.

2



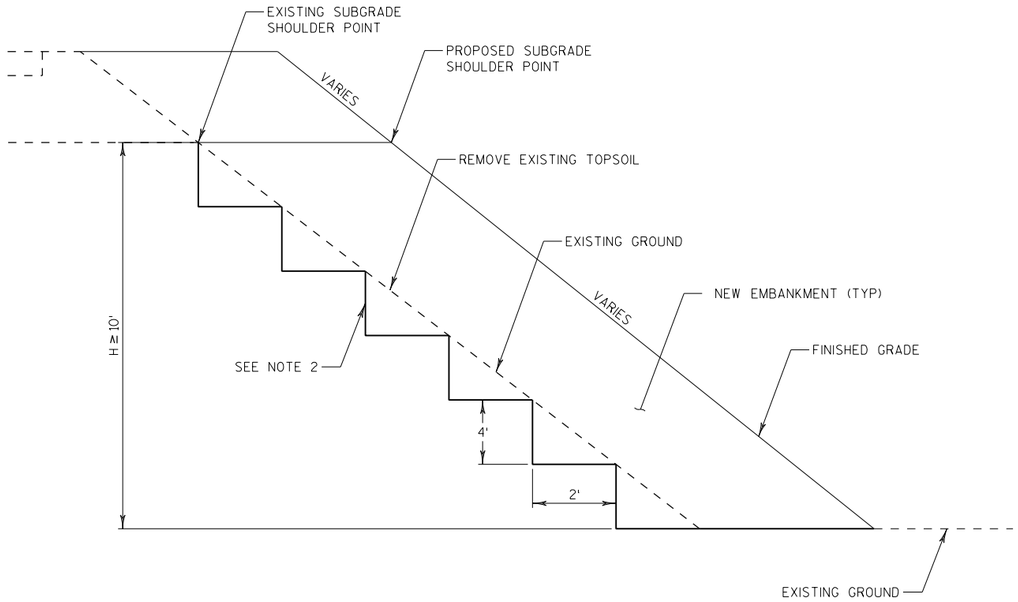
TRENCH BACKFILL DETAIL FOR NORMAL DEPTH PIPE CULVERTS AND STORM SEWER PIPE INSTALLATIONS

NOTES:

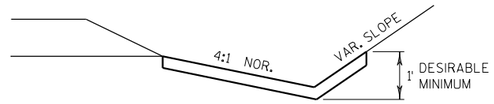
1) EMBANKMENT PLACED IN LAYERS AND COMPACTED PER SPECIFICATIONS

2) BENCH AS REQUIRED TO FACILITATE CONSTRUCTION FILLING OPERATIONS (4' BENCH DEPTH, INCIDENTAL).

3) EBS AS REQUIRED IN THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE PAID UNDER THE ITEM "EXCAVATION COMMON".



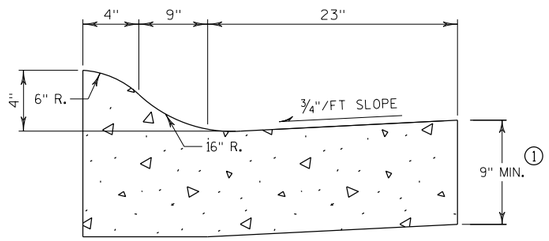
STEPPED EMBANKMENT



EROSION MAT DETAIL FOR DITCHES

GENERAL NOTES

① THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED THAT THE GUTTER THICKNESS IS EQUAL TO THE ADJACENT PAVEMENT DEPTH.

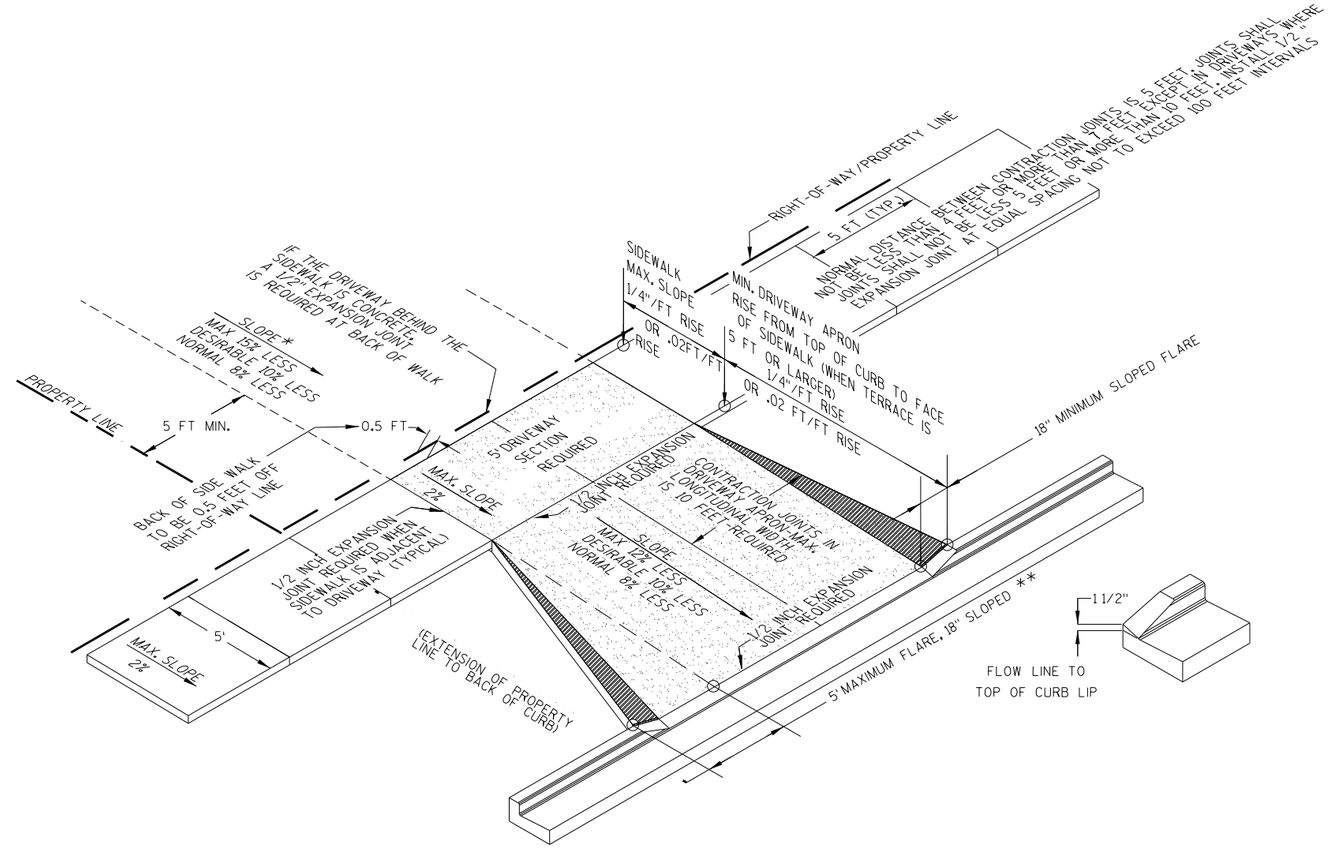


CONCRETE CURB & GUTTER 4-INCH
SLOPED 36-INCH TYPE R FULL DEPTH

2

NOTES:

CURB HEAD REMOVAL - IF A DRIVEWAY IS CONSTRUCTED WHERE A CURB CUT DOES NOT EXIST, ONLY THE CURB HEAD SHALL BE REMOVED BY SAW CUTTING ALONG THE BACK OF THE CURB WITH A SAW ORIENTED IN AN APPROXIMATE HORIZONTAL PLANE LEAVING A FINISHED GUTTER PAN FLOW LINE AND CURB LIP THAT REQUIRES NO CONCRETE PATCHING OR REPLACEMENT OF ANY REMOVED CONCRETE. SAW CUTTING SHALL BE ACCOMPLISHED WITH A RAIL MOUNTED, HYDRAULICALLY CONTROLLED, LARGE DIAMETER CONCRETE SAW DESIGNED SPECIFICALLY FOR THIS METHOD OF CURB HEAD REMOVAL. FOR WIDENING AN EXISTING CURB CUT ONLY- A RING SAW AND GRINDER IS ALLOWED UP TO A 2 FOOT WIDENING ON EITHER OR BOTH SIDES.



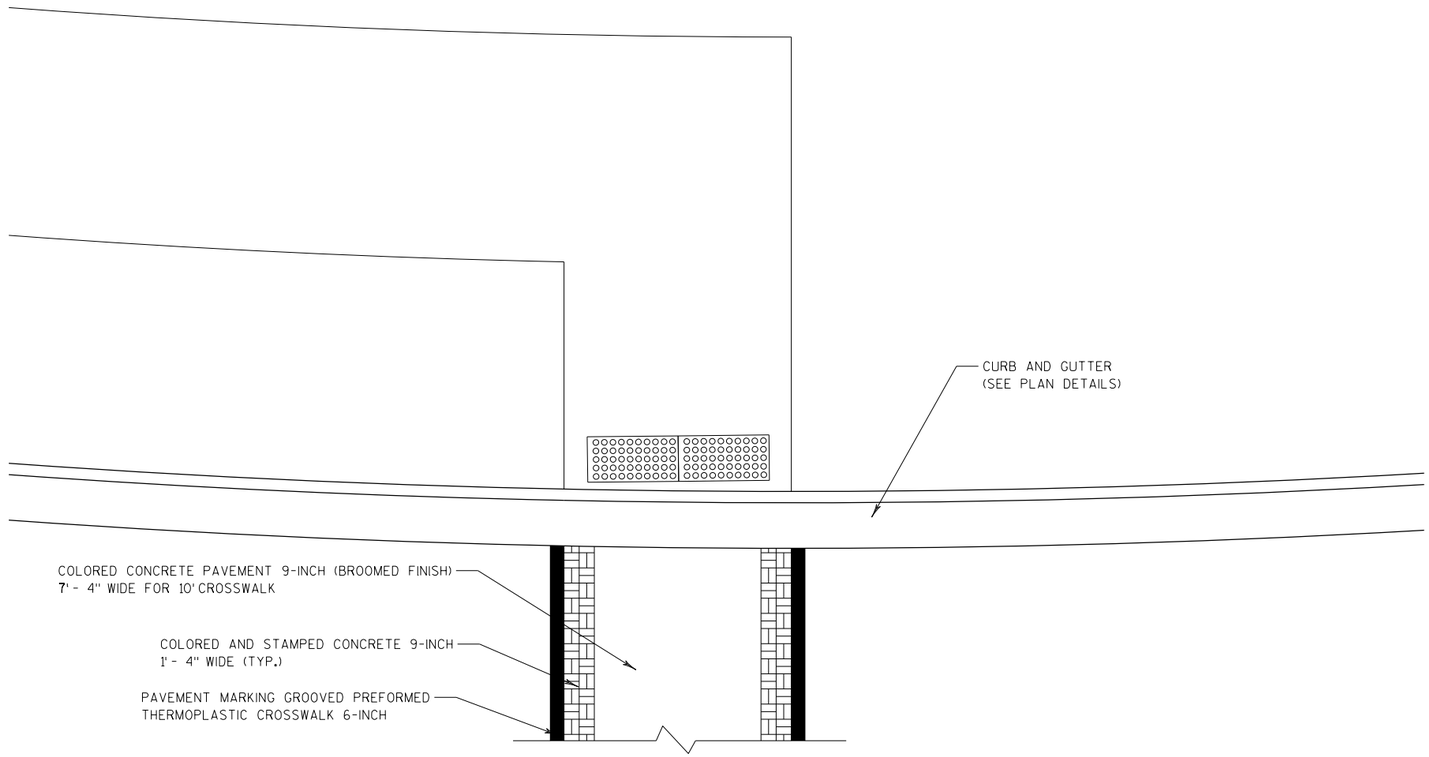
URBAN DRIVEWAY & SIDEWALK

DRIVEWAY APRONS & SIDEWALK SECTIONS SHALL BE CONSTRUCTED OF A MINIMUM OF 6" CONCRETE ON 4" CRUSHED STONE BASE.
DRIVEWAY SURFACE BEYOND APRON TO BE REPLACED IN-KIND WITH MINIMUM SECTION OF:

ASPHALTIC SURFACE (3-INCH) DRIVEWAYS AND FIELD ENTRANCES OVER BASE AGGREGATE DENSE ¾-INCH (4-INCH)
OR
CONCRETE DRIVEWAY 6-INCH OVER BASE AGGREGATE DENSE ¾-INCH (4-INCH)

SIDEWALKS OTHER THAN THOSE IN DRIVEWAY SECTIONS, SHALL BE CONSTRUCTED OF A MINIMUM OF 4" CONCRETE ON 2" CRUSHED STONE BASE.
* COMMERCIAL DRIVEWAYS SHALL SLOPE AWAY FROM THE SIDEWALK, AND HANDLE STORM WATER ON SITE, SLOPES TYPICALLY RANGE 2 - 7%. CONSULT WITH VILLAGE ENGINEER PRIOR TO CONSTRUCTION OF DRIVEWAYS THAT EXCEED 10% SLOPE.
** MAXIMUM FLARE DIMENSION APPLIES TO RESIDENTIAL DRIVEWAYS ONLY.

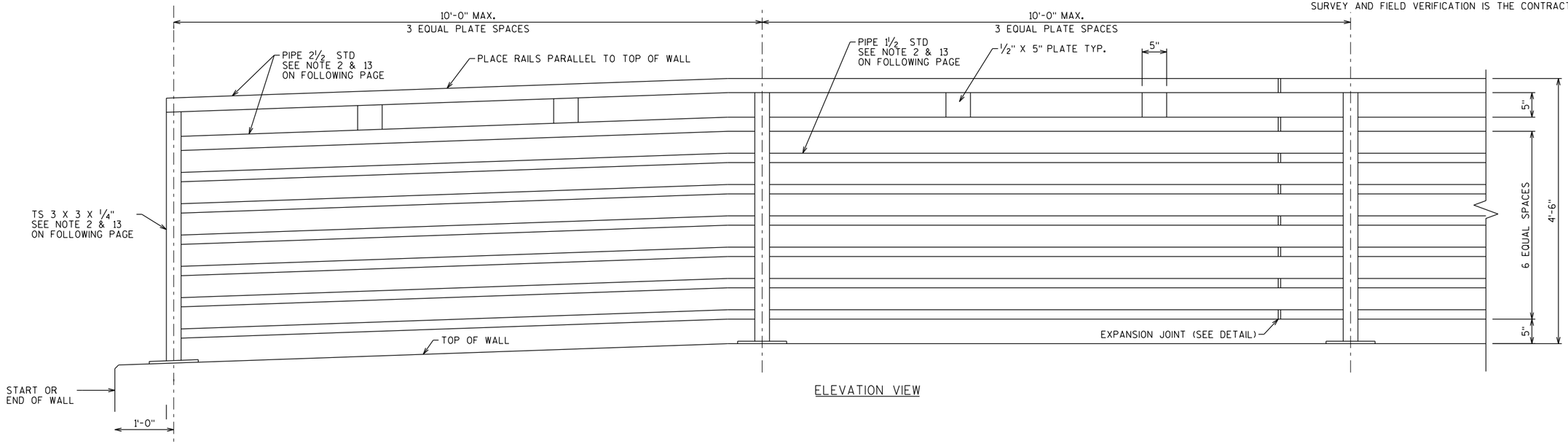
2



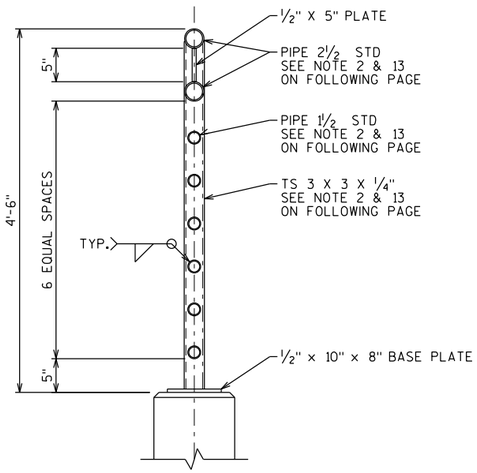
CROSSWALK DETAIL

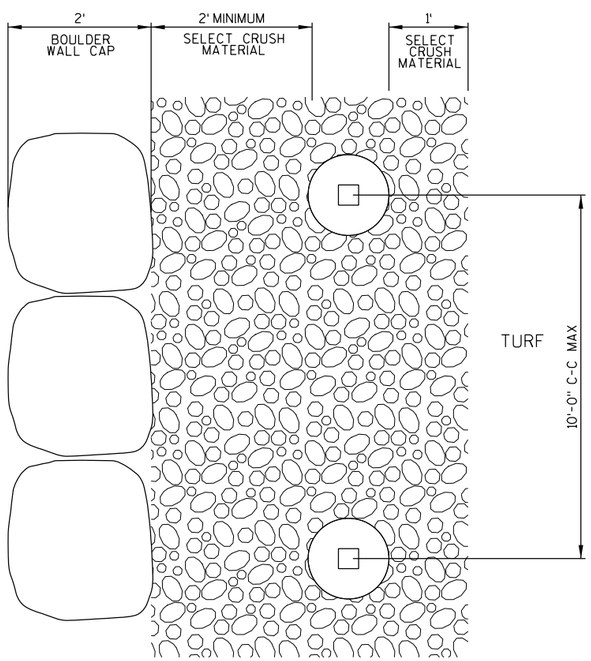
NOTE:

1) RAILING TO BE FABRICATED BASED UPON ACTUAL SURVEYED HORIZONTAL AND VERTICAL LOCATIONS OF RAILINGS, POSTS, ETC. SURVEY AND FIELD VERIFICATION IS THE CONTRACTORS RESPONSIBILITY.

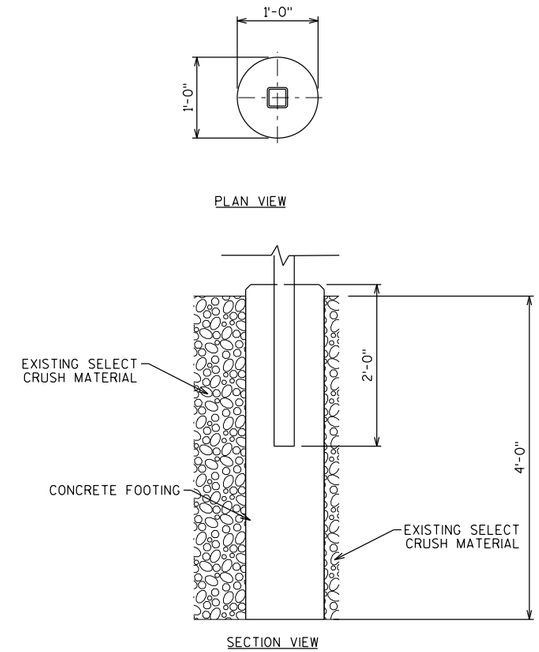


ELEVATION VIEW





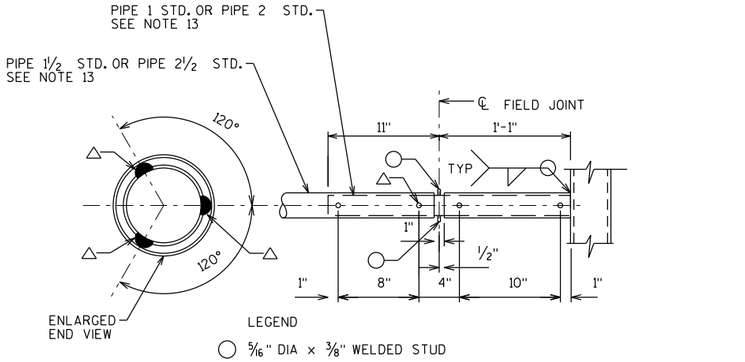
4" CONCRETE MOWING STRIP
PLAN VIEW



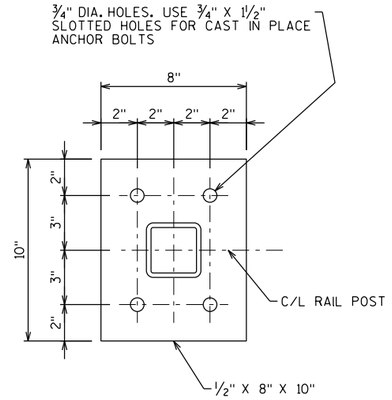
IN GROUND ANCHORAGE DETAIL

RAILING DECORATIVE STEEL

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CONSTRUCTION DETAILS	SHEET 21	E



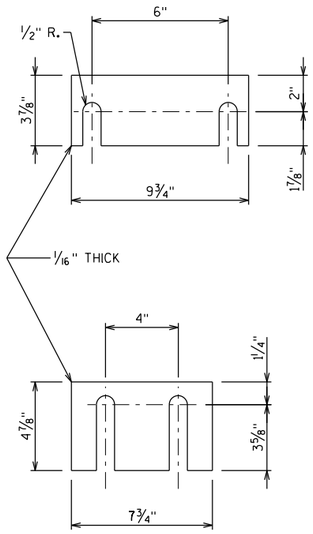
RAILING EXPANSION JOINT DETAIL
(30'-0" MAX. BETWEEN JOINTS)



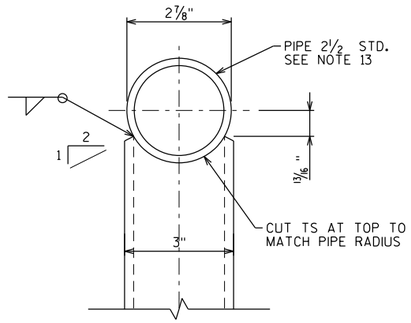
BASE PLATE

NOTES:

1. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH,STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
2. RAILS TO BE ASTM A53, GRADE B. POSTS TO BE A.S.T.M. A500, GRADE B. BASE PLATES AND SHIMS TO BE A.S.T.M. A709, GRADE 36. ALL GALVANIZED AFTER FABRICATION.
3. ANCHORAGES SHALL BE ACCURATELY PLACED TO PROVIDE CORRECT ALIGNMENT OF RAILING. SET POSTS NORMAL TO GRADE.
4. ALL POST SPA. ARE TAKEN HORIZ. ALONG CENTER LINE OF RAILING AT BASE OF POST.
5. SHIMS SHALL BE USED UNDER BASE PLATES WHERE REQUIRED FOR ALIGNMENT.
6. CAULK AROUND PERIMETER OF BASE PLATES AND FILL PORTION OF SLOTTED HOLES AROUND ANCHOR BOLTS WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.
7. ALL POSTS TO BE SET PLUMB.
8. ANCHOR BOLTS, NUTS AND WASHERS SHALL BE EITHER STAINLESS STEEL OR A.S.T.M. A 307. IF 307 IS USED, ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE GALVANIZED.
9. RAILING TO BE PAINTED FEDERAL COLOR NO. 27038 (SEMI-GLOSS BLACK).
10. THE BID ITEM SHALL BE "RAILING DECORATIVE STEEL" WHICH SHALL INCLUDE ALL ITEMS SHOWN.
11. RAILING SHALL BE FABRICATED IN LENGTHS THAT INCLUDE NOT MORE THAN 3 POSTS.
12. VENT HOLES SHALL BE DRILLED IN MEMBERS AS REQUIRED TO FACILITATE GALVANIZING.
13. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING ALL COMPONENTS SHALL BE GIVEN A #6 BLAST CLEANING BY SSPC SPECIFICATIONS. PAINT OVER GALVANIZING WITH APPROVED TIE COAT AND TOPCOAT.



SHIM PLATE DETAILS
TWO SHIMS OF EACH SIZE
REQUIRED PER POST
MAXIMUM OF 4
LAYERS ALLOWED



SECTION A-A

RAILING DECORATIVE STEEL

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CONSTRUCTION DETAILS	SHEET 22	E

2

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NAVD DATUM OF 1988.

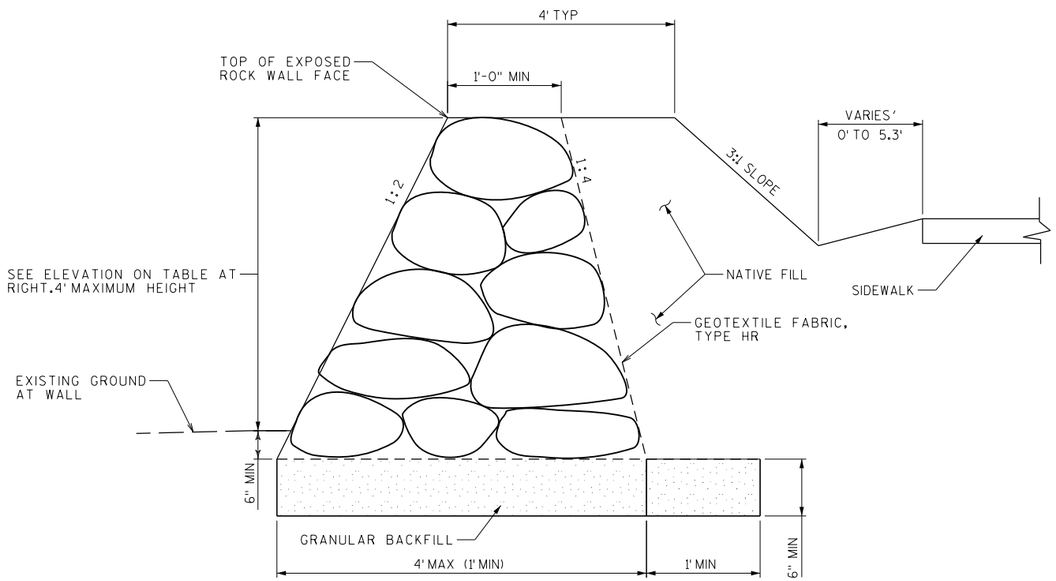
ALL BOULDERS MUST BE PLACED WITH THE LONGEST ROCK DIMENSION PERPENDICULAR TO THE FACE OF WALL. THE SECOND LARGEST DIMENSION MUST BE PARALLEL TO THE WALL ALIGNMENT, AND THE SMALLEST BOULDER DIMENSION MUST BE ITS VERTICAL DIMENSION.

THE BOULDERS LONGEST DIMENSION SHALL NOT EXCEED THREE TIMES THE SHORTEST DIMENSION.

EACH BOULDER SHALL BEAR ON AT LEAST TWO BOULDERS BELOW WITH NO CONTINUOUS JOINT DEVELOPED IN EITHER VERTICAL OR HORIZONTAL PLANS.

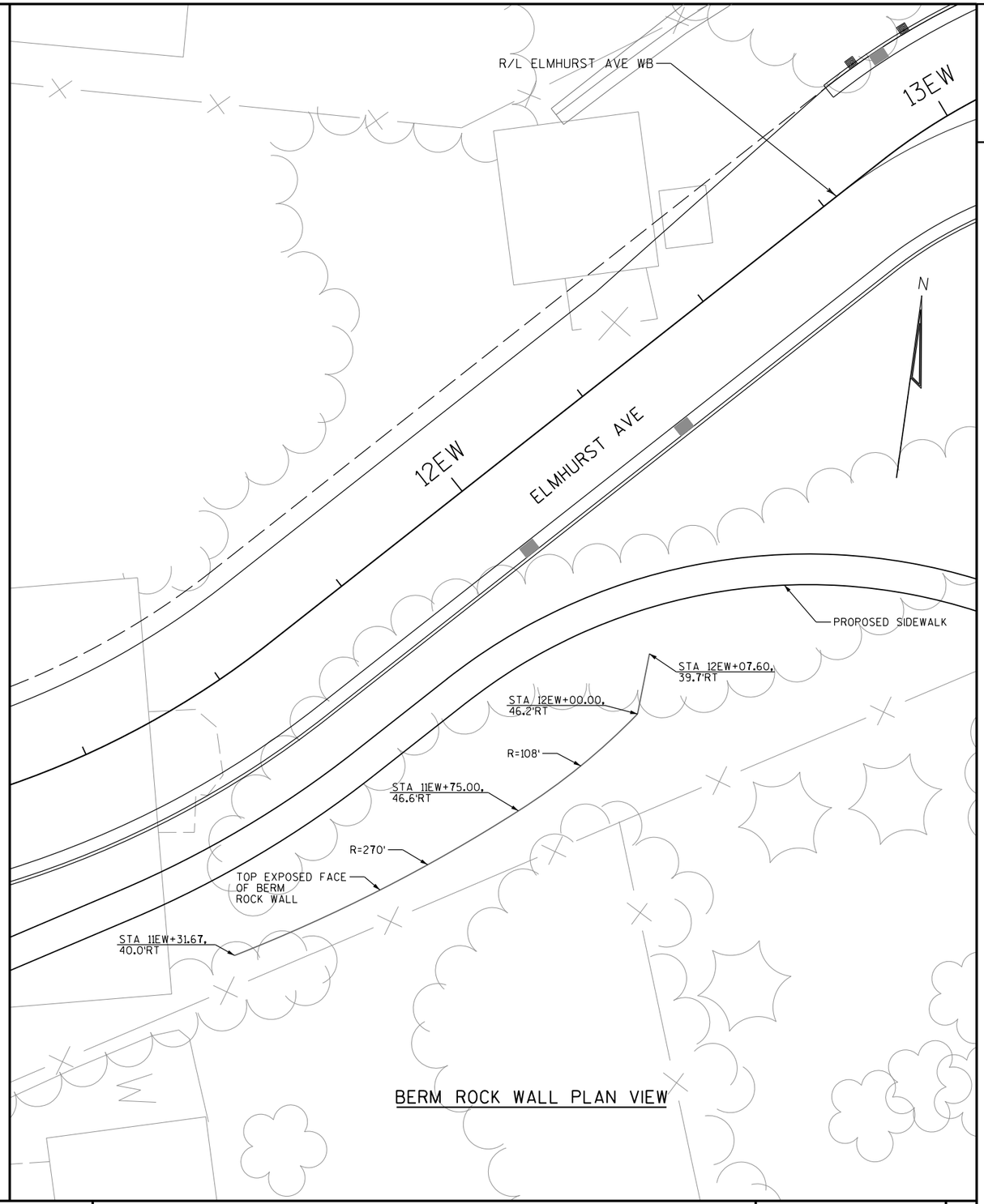
STATION	OFFSET	ELEVATION
11EW+31.67	40.0'RT	602.86
11EW+44.08	41.8'RT	606.00
11EW+63.10	45.1'RT	606.18
12EW+00.00	46.2'RT	605.50
12EW+07.60	39.7'RT	602.12

ALL INFORMATION IS PROVIDED TO TOP OF EXPOSED ROCK WALL FACE



BERM ROCK WALL SECTION

NOT TO SCALE



BERM ROCK WALL PLAN VIEW

2

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CONSTRUCTION DETAIL - BERM ROCK WALL	SHEET 23	E

LEGEND

REMOVING CURB AND GUTTER

REMOVING CONCRETE SIDEWALK

(D) INLET PROTECTION TYPE D

N

SAWCUT REQUIRED ALONG CURB & GUTTER REMOVAL

SAWCUT REQUIRED ALONG CURB & GUTTER REMOVAL

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

(D) (D)

REMOVAL PLAN
STAGE 1A

N

5" ASPHALTIC SURFACE TEMPORARY

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

(D) (D)

TEMPORARY PAVEMENT
STAGE 1A

N

CONCRETE CURB & GUTTER 30-INCH TYPE D

CONCRETE SIDEWALK 5-INCH

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

IN PLACE FROM STAGE 1A (D) (D) IN PLACE FROM STAGE 1A

PLAN DETAIL
STAGE 3

2

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CONSTRUCTION DETAIL: CARDINAL LANE TRAFFIC CROSSOVER	SHEET 24	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\021003_CD.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

LEGEND

- REMOVING CURB AND GUTTER
- SALVAGING GUARDRAIL
- X X X X X SAWCUT
- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- TREE REMOVAL
- —AB— ABANDONING STORM SEWER
- —RM— REMOVING STORM SEWER
- REMOVING INLETS
- REMOVING MANHOLES
- REMOVING CULVERT PIPE
- REMOVING TRAFFIC SIGNALS

NOTE:

1) SEE LIGHTING PLAN FOR LIGHTING REMOVALS AND SIGNING PLAN FOR SIGNING REMOVALS.

N

RIVER GROVE AVE

BRANTWOOD AVE

ELMHURST AVE

DUCK CREEK

END CONSTRUCTION
STA 13BWA+75.00

BEGIN CONSTRUCTION
STA 10EW+51.48

14BWA

10EW

12BWA

12EW

WETLAND BOUNDARY (TYP)

R/L ELMHURST AVE WB

RETAINING WALL R-05-0083
PREVIOUSLY CONSTRUCTED
UNDER PROJECT 9202-07-71

END CONSTRUCTION
STA 113EBS+05.45

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

R/L BRANTWOOD AVE

BEGIN CONSTRUCTION
STA 10BWA+24.37

BEGIN CONSTRUCTION
STA 104EBS+94.89

14EW

16EW

R/L CTH EB SB

R/L ELMHURST AVE EB

END PROJECT
STA 113EBN+71.17

102EBS

104EBS

104EBN

102EBN

106EBS

106EBN

108EBS

108EBN

110EBS

112EBS

112EBN

22ERAB

21ERAB

23ERAB

20ERAB

R/L CTH EB NB

R/L DOUSMAN ST WB

MEMORIAL DRIVE

32DW

32DE

34DW

BEGIN PROJECT
STA 105EBN+00.07

R/L DOUSMAN ST EB

ON EXISTING JOINT LINE

DOUSMAN ST

END CONSTRUCTION
STA 34DE+40.40

STH 32 WB

SHAWANO AVE EB

SHAWANO AVE WB

RUINS

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	REMOVAL PLAN STAGE 1A	SHEET 25	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\021200a_RM.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

2

LEGEND

- REMOVING CURB AND GUTTER
- SALVAGING GUARDRAIL
- X X X X X SAWCUT
- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- TREE REMOVAL
- —AB— ABANDONING STORM SEWER
- —RM— REMOVING STORM SEWER
- REMOVING INLETS
- REMOVING MANHOLES
- REMOVING CULVERT PIPE
- REMOVING TRAFFIC SIGNALS

NOTE:

1) SEE LIGHTING PLAN FOR LIGHTING REMOVALS AND SIGNING PLAN FOR SIGNING REMOVALS.

N

RIVER GROVE AVE

BRANTWOOD AVE

ELMHURST AVE

DUCK CREEK

(CARDINAL LANE)

(CARDINAL LANE)

MEMORIAL DRIVE

DOUSMAN ST

STH 32 WB

SHAWANO AVE EB

SHAWANO AVE WB

END CONSTRUCTION
STA 13BWA+75.00

BEGIN CONSTRUCTION
STA 10EW+51.48

14BWA

10EW

12BWA

12EW

WETLAND BOUNDARY (TYP)

R/L ELMHURST AVE WB

RETAINING WALL R-05-0083
PREVIOUSLY CONSTRUCTED
UNDER PROJECT 9202-07-71

END CONSTRUCTION
STA 113EBS+05.45

CTH EB SB

CTH EB NB

END PROJECT
STA 113EBN+71.17

R/L BRANTWOOD AVE

BEGIN CONSTRUCTION
STA 10BWA+24.37

BEGIN CONSTRUCTION
STA 104EBS+94.89

R/L CTH EB SB

R/L ELMHURST AVE EB

14EW

16EW

102EBS

104EBS

104EBN

102EBN

106EBS

106EBN

108EBS

108EBN

112EBS

22ERAB

21ERAB

20ERAB

23ERAB

R/L CTH EB NB

R/L DOUSMAN ST WB

32DW

32DE

34DW

R/L DOUSMAN ST EB

END CONSTRUCTION
STA 34DE+40.40

BEGIN PROJECT
STA 105EBN+00.07

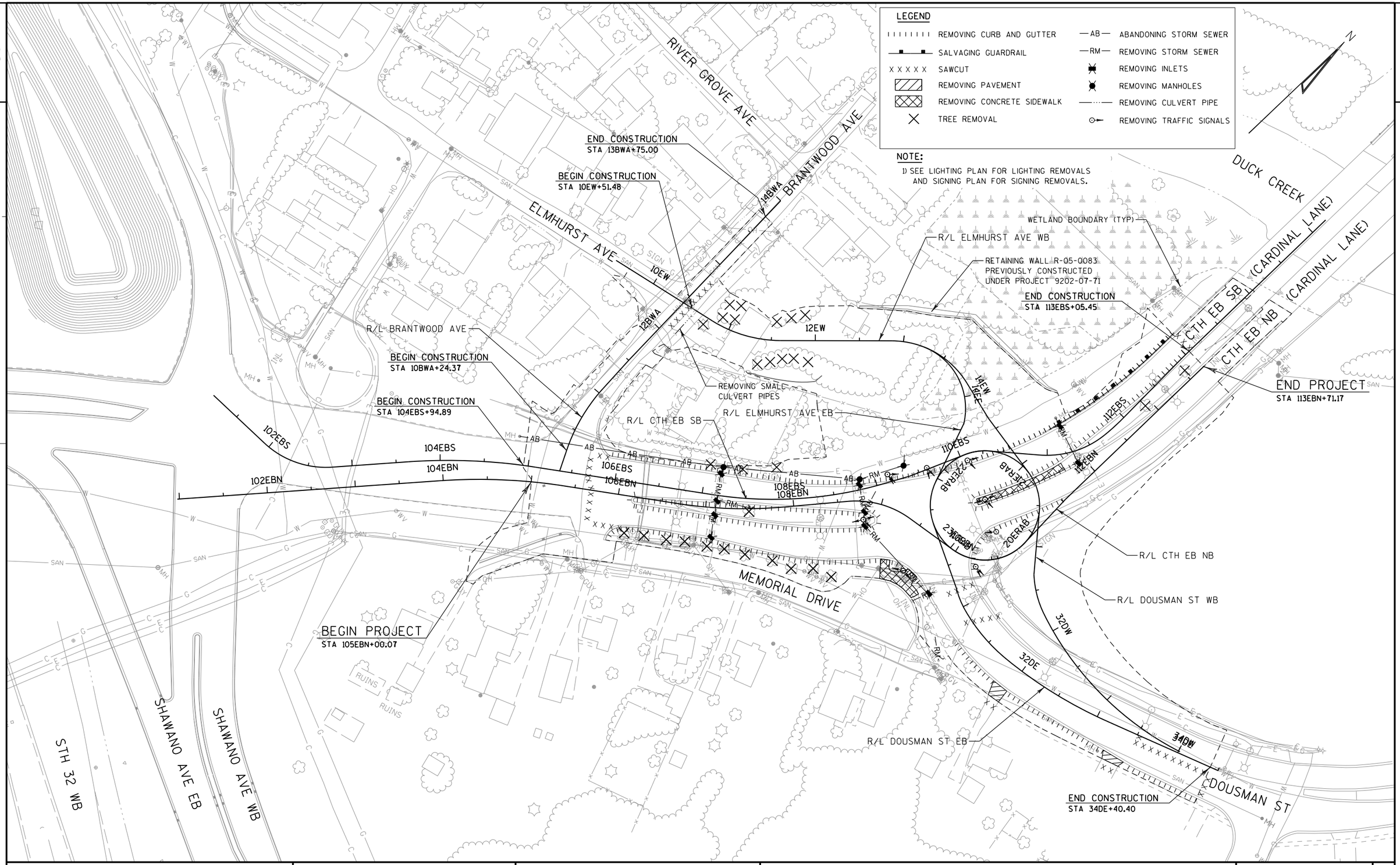
RUINS

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	REMOVAL PLAN STAGE 1B	SHEET 26	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\021200b_RM.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	REMOVAL PLAN STAGE 2	SHEET 27	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\021200c_RM.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

NOTE:
1) ALL REMOVALS IN STAGE 3 UNLESS OTHERWISE NOTED.

LEGEND

- REMOVING CURB AND GUTTER
- SALVAGING GUARDRAIL
- X X X X X SAWCUT
- REMOVING PAVEMENT
- REMOVING CONCRETE SIDEWALK
- TREE REMOVAL
- AB — ABANDONING STORM SEWER
- RM — REMOVING STORM SEWER
- REMOVING INLETS
- REMOVING MANHOLES
- REMOVING CULVERT PIPE
- REMOVING TRAFFIC SIGNALS

NOTE:
1) SEE LIGHTING PLAN FOR LIGHTING REMOVALS AND SIGNING PLAN FOR SIGNING REMOVALS.

N

RIVER GROVE AVE

BRANTWOOD AVE

ELMHURST AVE

DUCK CREEK

END CONSTRUCTION
STA 13BWA+75.00

BEGIN CONSTRUCTION
STA 10EW+51.48

14BWA

10EW

REMOVING SMALL CULVERT PIPES

12BWA

12EW

WETLAND BOUNDARY (TYP)

R/L ELMHURST AVE WB

RETAINING WALL R-05-0083 PREVIOUSLY CONSTRUCTED UNDER PROJECT 9202-07-71

END CONSTRUCTION
STA 113EBS+05.45

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

R/L BRANTWOOD AVE

BEGIN CONSTRUCTION
STA 10BWA+24.37

BEGIN CONSTRUCTION
STA 104EBS+94.89

14EW

16EE

END PROJECT
STA 113EBN+71.17

R/L CTH EB SB

R/L ELMHURST AVE EB

102EBS

104EBS

104EBN

102EBN

106EBS

106EBN

108EBS

108EBN

110EBS

112EBS

112EBN

22ERAB

21ERAB

23ERAB

20ERAB

R/L CTH EB NB

R/L DOUSMAN ST WB

AB

RM

MEMORIAL DRIVE

BEGIN PROJECT
STA 105EBN+00.07

STAGE 4 REMOVAL

32DW

32DE

34DW

R/L DOUSMAN ST EB

DOUSMAN ST

END CONSTRUCTION
STA 34DE+40.40

8' REMOVING STORM SEWER

2' REMOVING STORM SEWER

RUINS

STH 32 WB

SHAWANO AVE EB

SHAWANO AVE WB

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	REMOVAL PLAN STAGE 3 & STAGE 4	SHEET 28	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\021200d_RM.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

NOTE:

1) SEE "PLAN DETAILS - SIDEWALKS AND MULTI-USE PATHS" FOR SIDEWALK AND MULTI-USE PATH LOCATIONS.

MATCHLINE STA 11BWA+25.00

MATCHLINE STA 108EBN+37

11BWA

BRANTWOOD AVE

CGO7 CGO6 APO7 PVO5 CP15 CP11 CP18 CP19 CG06 DRO3 DW01

STA 11BWA+06.75
13.00'LT
STA 11BWA+04.48, 0.00'RT

STA 11BWA+06.00
14.83'RT
STA 11BWA+06.64
16.61'RT

STA 10BWA+45.16
17.26'LT
STA 10BWA+37.87
17.18'LT
STA 104EBS+94.88
64.00'LT
R=38'

STA 10BWA+97.36
17.00'RT
STA 106EBS+12.93
64.00'LT
R=38'
STA 10BWA+80.25
17.49'RT
STA 10BWA+68.78
22.22'RT
STA 10BWA+47.26
41.97'RT
STA 10BWA+41.54
58.50'RT

BEGIN CONSTRUCTION
STA 10BWA+24.37
STA 10BWA+20.28
34.13'LT

BEGIN CONSTRUCTION
STA 104EBS+94.89

STA 10BWA+27.17
15.00'RT
STA 10BWA+30.57
30.35'RT

R/L CTH EB SB

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

104EBS 105EBS 106EBS 107EBS 108EBS
103EBN 104EBN 105EBN 106EBN 107EBN 108EBN

BEGIN PROJECT
STA 105EBN+00.07

STA 105EBN+12.36
24.00'RT
STA 105EBN+46.45
24.00'RT

STA 105EBN+00.07
35.25'RT
R=9.3'
STA 105EBN+08.24
57.88'RT

STA 106EBN+05.63
52.50'RT

STA 107EBN+62.81
70.06'RT

R/L CTH EB NB

S-05-289

MEMORIAL DRIVE

MATCH EXISTING ASPHALT

STA 106EBN+05.38
77.62'RT
STA 105EBN+57.70
35.25'RT
R=9.3'
STA 105EBN+57.70
43.25'RT
R=9.3'

STA 105EBN+07.17
77.86'RT
STA 105EBN+07.65
79.56'RT
STA 104EBN+89.78
111.01'RT

STA 104EBN+22.65
115.23'RT
STA 104EBN+32.39
118.88'RT

MH INL WV

LEGEND

AGO1	BASE AGGREGATE DENSE 3/4-INCH
APO7	HMA PAVEMENT TYPE E-1, 4-INCH
BGO3	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
BGO4	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
BG12	MGS GUARDRAIL 3
CGO6	CONCRETE CURB AND GUTTER 30-INCH TYPE A
CGO7	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG17	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG30	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R FULL DEPTH
CMO1	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CMO2	CONCRETE MEDIAN SLOPED NOSE TYPE 2
CM12	COLORED AND STAMPED CONCRETE 5-INCH
CP11	CONCRETE PAVEMENT 9-INCH, DOWELED
CP15	CONCRETE PAVEMENT 8-INCH DOWELED
CP18	COLORED CONCRETE PAVEMENT 9-INCH AND COLORED AND STAMPED CONCRETE 9-INCH (SEE CROSSWALK CONSTRUCTION DETAIL)
CP19	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
DRO3	ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES 3-INCH
DW01	CONCRETE DRIVEWAY 6-INCH
PVO5	ASPHALTIC FLUME

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN DETAILS: CTH EB (CARDINAL LANE), BRANTWOOD AVE	SHEET 29	E

2

LEGEND

CM05 CONCRETE SIDEWALK, 5-INCH

CP18 COLORED CONCRETE PAVEMENT 9-INCH AND COLORED AND STAMPED CONCRETE 9-INCH (SEE CROSSWALK CONSTRUCTION DETAIL)

PV13 ASPHALTIC SURFACE 4-INCH

CURB RAMP DETECTABLE WARNING FIELD YELLOW

BRANTWOOD AVE

11BWA

MATCHLINE STA 108EBN+37

STA 10BWA+90.00
24.82'LT

STA 10BWA+46.44
28.67'LT

STA 10BWA+42.75
24.47'LT

STA 10BWA+48.51
48.52'LT
R=20'

STA 10BWA+37.81
27.00'LT

STA 10BWA+32.81
43.28'LT

STA 10BWA+31.74
48.95'LT

CM05

5'

STA 10BWA+43.98
17.96'LT

STA 10BWA+39.06
19.37'LT

R/L CTH EB SB

CTH EB SB (CARDINAL LANE)

103EBS

104EBS

105EBS

106EBS

107EBS

108EBS

103EBN

104EBN

105EBN

106EBN

107EBN

108EBN

STA 105EBN+48.95
36.50'RT

CTH EB NB (CARDINAL LANE)

STA 105EBN+09.30
36.50'RT

STA 105EBN+00.00
36.50'RT

CM05

CP18

STA 105EBN+00.07
46.50'RT

STA 105EBN+08.81
46.50'RT

STA 105EBN+58.95
36.50'RT

PV13

10'

10'

STA 105EBN+58.95
46.50'RT

CM05

STA 105EBN+49.58
46.50'RT

MEMORIAL DRIVE

R/L CTH EB NB

S-05-289

MH

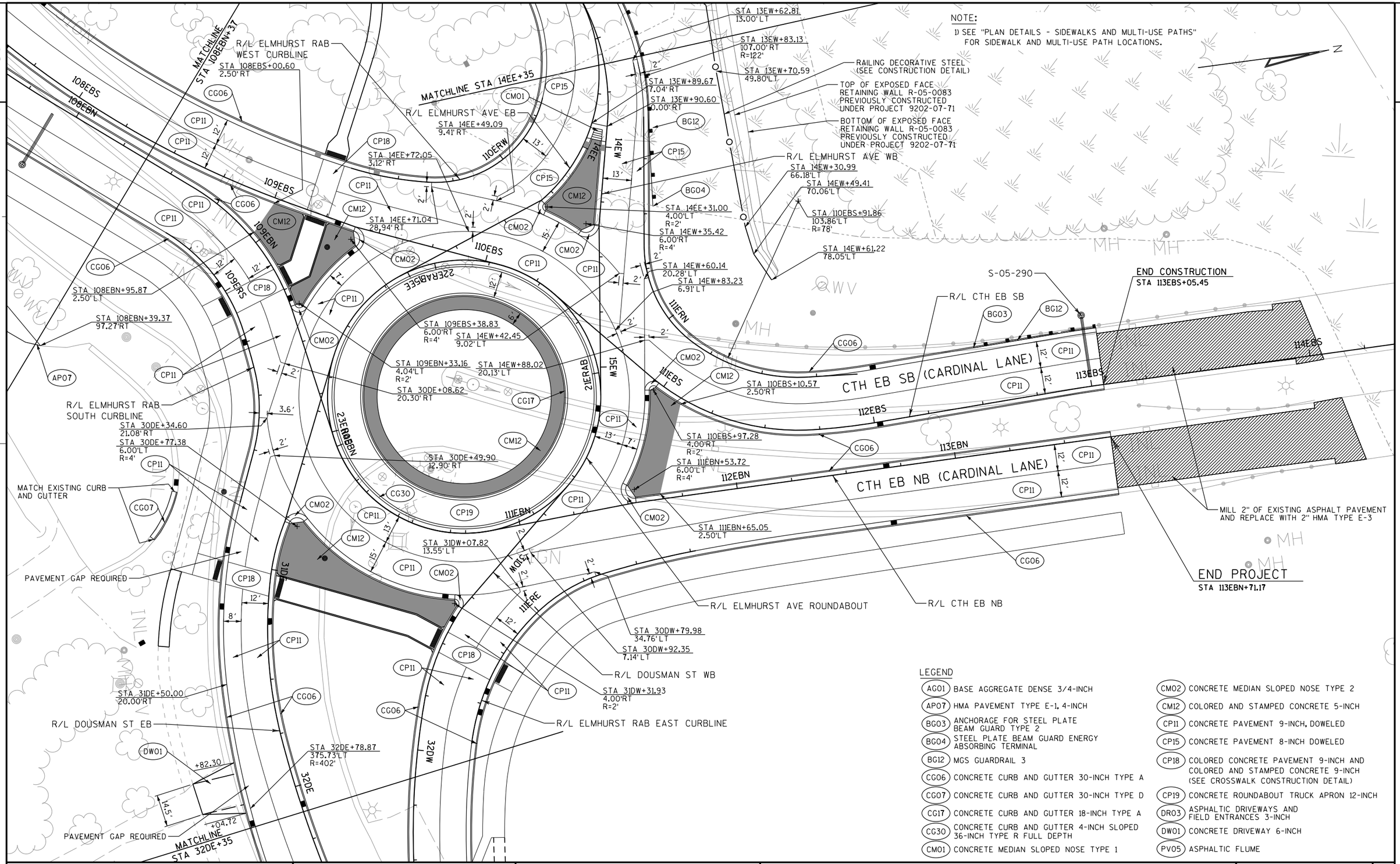
INL

SIGN

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN DETAILS: SIDEWALKS AND MULTI-USE PATHS	SHEET 30	E

NOTE:

1) SEE "PLAN DETAILS - SIDEWALKS AND MULTI-USE PATHS" FOR SIDEWALK AND MULTI-USE PATH LOCATIONS.



LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH
APO7	HMA PAVEMENT TYPE E-1, 4-INCH
BGO3	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
BGO4	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
BG12	MGS GUARDRAIL 3
CGO6	CONCRETE CURB AND GUTTER 30-INCH TYPE A
CGO7	CONCRETE CURB AND GUTTER 30-INCH TYPE D
CG17	CONCRETE CURB AND GUTTER 18-INCH TYPE A
CG30	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R FULL DEPTH
CM01	CONCRETE MEDIAN SLOPED NOSE TYPE 1
CM02	CONCRETE MEDIAN SLOPED NOSE TYPE 2
CM12	COLORED AND STAMPED CONCRETE 5-INCH
CP11	CONCRETE PAVEMENT 9-INCH, DOWELED
CP15	CONCRETE PAVEMENT 8-INCH DOWELED
CP18	COLORED CONCRETE PAVEMENT 9-INCH AND COLORED AND STAMPED CONCRETE 9-INCH (SEE CROSSWALK CONSTRUCTION DETAIL)
CP19	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
DRO3	ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES 3-INCH
DW01	CONCRETE DRIVEWAY 6-INCH
PV05	ASPHALTIC FLUME

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN DETAILS: CTH EB (CARDINAL LANE), ELMHURST & DOUSMAN AVE	SHEET 31	E

2

LEGEND

- CM05 CONCRETE SIDEWALK, 5-INCH
- CP18 COLORED CONCRETE PAVEMENT 9-INCH AND COLORED AND STAMPED CONCRETE 9-INCH (SEE CROSSWALK CONSTRUCTION DETAIL)
- PV13 ASPHALTIC SURFACE 4-INCH
- CURB RAMP DETECTABLE WARNING FIELD YELLOW

MATCHLINE STA 108EBN+37

MATCHLINE STA 14EE+35

MATCHLINE STA 32DE+35

R/L ELMHURST RAB WEST CURBLINE

R/L ELMHURST AVE EB

R/L ELMHURST AVE WB

R/L ELMHURST RAB NORTH CURBLINE

R/L CTH EB SB

S-05-290

R/L ELMHURST RAB SOUTH CURBLINE

R/L ELMHURST AVE ROUNDABOUT

R/L CTH EB NB

R/L ELMHURST RAB EAST CURBLINE

R/L DOUSMAN ST EB

R/L DOUSMAN ST WB

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

108EBS
108EBN
109EBS
109EBN
109ERS
110EBS
110ERW
14EE
14EW
22ERABSE
15EW
21ERAB
23ERABBN
111EBS
111ERN
112EBS
112EBN
113EBS
113EBN
114EBS
111EBN
111ERE
31DW
32DW
31DE
32DE

STA 109EBS+16.89
36.58' LT

STA 109EBS+14.57
31.54' LT

STA 109EBS+14.75
26.50' LT

STA 109EBS+21.89
36.72' LT

STA 109EBS+24.56
31.81' LT

STA 109EBS+24.74
26.81' LT

STA 109EBS+25.76
2.50' RT

STA 109EBS+15.76
2.55' RT

STA 109EBN+14.75
2.53' LT

STA 109EBN+12.92
26.50' RT

STA 109EBN+26.36
26.46' RT

STA 109EBN+24.51
2.54' LT

STA 109EBN+23.20
12.50' LT

STA 109EBN+16.41
9.37' LT

STA 30DE+51.25
35.06' RT

STA 31DE+02.42
2.50' LT

STA 30DE+99.50
22.58' RT

STA 30DE+98.53
34.19' RT

STA 31DE+04.61
45.30' RT

STA 31DE+33.23
49.76' RT

STA 31DE+08.07
22.50' RT

STA 31DE+12.74
2.50' LT

STA 31DW+52.89
15.81' RT

STA 31DW+54.14
2.50' RT

STA 31DW+44.11
16.66' RT

STA 31DW+44.34
2.50' RT

STA 31DW+45.13
29.28' LT

STA 31DW+60.69
37.42' LT

STA 31DW+58.69
28.61' LT

STA 31DW+11.20
150.00' RT
R=100'

STA 113EBN+71.31
44.50' RT

CM05 CP18 PV13 R=139.3' 5' 10'

LEGEND

- AG01 BASE AGGREGATE DENSE 3/4-INCH
- AP07 HMA PAVEMENT TYPE E-1, 4-INCH
- BG03 ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
- BG04 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
- BG12 MGS GUARDRAIL 3
- CG06 CONCRETE CURB AND GUTTER 30-INCH TYPE A
- CG07 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CG17 CONCRETE CURB AND GUTTER 18-INCH TYPE A
- CG30 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R FULL DEPTH
- CM01 CONCRETE MEDIAN SLOPED NOSE TYPE 1
- CM02 CONCRETE MEDIAN SLOPED NOSE TYPE 2
- CM12 COLORED AND STAMPED CONCRETE 5-INCH
- CP11 CONCRETE PAVEMENT 9-INCH, DOWELED
- CP15 CONCRETE PAVEMENT 8-INCH DOWELED
- CP18 COLORED CONCRETE PAVEMENT 9-INCH AND COLORED AND STAMPED CONCRETE 9-INCH (SEE CROSSWALK CONSTRUCTION DETAIL)
- CP19 CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
- DR03 ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES 3-INCH
- DW01 CONCRETE DRIVEWAY 6-INCH
- PV05 ASPHALTIC FLUME

NOTE:
1) SEE "PLAN DETAILS - SIDEWALKS AND MULTI-USE PATHS" FOR SIDEWALK AND MULTI-USE PATH LOCATIONS.

RIVER GROVE AVE
MH
MH
BRANTWOOD AVE
13BWA
14BWA
END CONSTRUCTION
STA 13BWA+75.00
10.5'
10.5'
AP07
STA 10EW+58.58
35.97'LT
BEGIN CONSTRUCTION
STA 10EW+51.48
AP07
STA 10EW+78.19
32.00'LT
R=20'
AG01
CP15
CP15
3'
12'
13'
12EW
11EW
CG06
STA 12EW+77.18
83.00'RT
R=68'
STA 13EW+50.54
51.32'LT
STA 13EW+83.13
107.00'RT
R=122'
BOTTOM OF EXPOSED FACE RETAINING WALL R-05-0083 PREVIOUSLY CONSTRUCTED UNDER PROJECT 9202-07-71
TOP OF EXPOSED FACE RETAINING WALL R-05-0083 PREVIOUSLY CONSTRUCTED UNDER PROJECT 9202-07-71
STA 13EW+00.06
32.77'LT
STA 13EW+25.83
35.66'LT
STA 12EW+87.18
15.00'RT
RAILING DECORATIVE STEEL (SEE CONSTRUCTION DETAIL)
BG12
CG06
STA 12EW+77.18
0.00'RT
STA 12EW+49.96
34.22'LT
13EW
14EW
14EE
R/L ELMHURST AVE WB
STA 12EW+37.22
12.00'RT
MATCHLINE STA 14EE+35
10OERW
N
W
W
SIGN
STA 12BWA+25.71
71.09'LT
STA 12BWA+37.99
10.50'LT
10EW
ELMHURST AVE
STA 12BWA+14.38
68.79'LT
AP07
R=27.5'
STA 12BWA+11.74
46.35'LT
CG07
STA 11BWA+85.51
13.39'LT
AP07
STA 11BWA+50.00
13.00'LT
12BWA
11'
STA 10EW+47.86
28.62
STA 10EW+65.32
33.00'RT
R=18'
BERM ROCK WALL SEE CONSTRUCTION DETAIL
R/L ELMHURST AVE EB
STA 11BWA+76.50
10.70'LT
STA 11BWA+79.55
26.09'LT
DR03
17.8'
STA 11BWA+61.72
25.72'LT
STA 11BWA+65.59
10.69'LT
MATCHLINE STA 11BWA+25.00
STA 11BWA+35.00
13.00'LT
11'
1'
AP07
109EBS
109EBN
108EBS
108EBN
MH
INL

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN DETAILS: ELMHURST & BRANTWOOD AVE	SHEET 33	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\021203_PD.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:40

WISDOT/CADDS SHEET 42

2

LEGEND

- (CM05) CONCRETE SIDEWALK, 5-INCH
- (CP18) COLORED CONCRETE PAVEMENT 9-INCH AND COLORED AND STAMPED CONCRETE 9-INCH (SEE CROSSWALK CONSTRUCTION DETAIL)
- (PV13) ASPHALTIC SURFACE 4-INCH
- CURB RAMP DETECTABLE WARNING FIELD YELLOW

N

RIVER GROVE AVE

ELMHURST AVE

BRANTWOOD AVE

MATCHLINE STA 14EE+35

R/L ELMHURST AVE WB

R/L ELMHURST AVE EB

14BWA

13BWA

12BWA

10EW

11EW

12EW

13EW

14EW

14EE

10EERM

CM05

STA 10EW+79.08
145.00'LT
R=172.5'

STA 10EW+56.82
15.56'LT
R=55'

STA 10EW+43.83
37.90'RT

STA 10EW+72.70
37.10'RT

STA 10EW+45.31
38.22'RT

STA 11EW+21.55
27.50'RT

STA 11EW+60.01
27.50'RT

STA 11EW+79.13
27.50'RT

BERM ROCK WALL SEE CONSTRUCTION DETAIL

STA 11EW+79.13
117.50'RT
R=90'

STA 12EW+64.53
89.08'RT

SIGN

MH

INL

109EBS

109EBN

108EBS

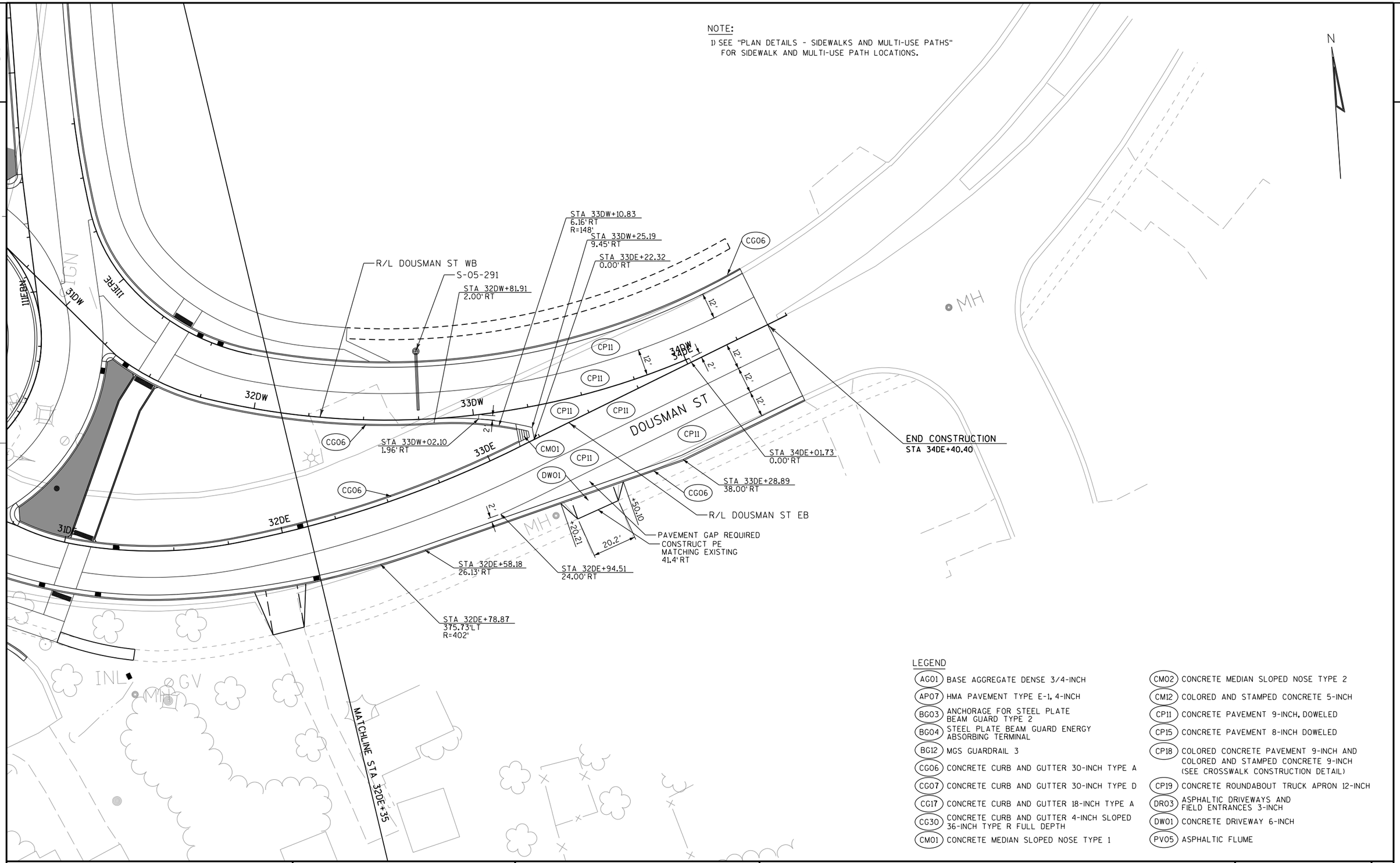
108EBN

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN DETAILS: SIDEWALKS AND MULTI-USE PATHS	SHEET 34	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\021203a_PD.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:40

NOTE:

1) SEE "PLAN DETAILS - SIDEWALKS AND MULTI-USE PATHS" FOR SIDEWALK AND MULTI-USE PATH LOCATIONS.



LEGEND

AG01	BASE AGGREGATE DENSE 3/4-INCH	CM02	CONCRETE MEDIAN SLOPED NOSE TYPE 2
AP07	HMA PAVEMENT TYPE E-1, 4-INCH	CM12	COLORED AND STAMPED CONCRETE 5-INCH
BG03	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2	CP11	CONCRETE PAVEMENT 9-INCH, DOWELED
BG04	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	CP15	CONCRETE PAVEMENT 8-INCH DOWELED
BG12	MGS GUARDRAIL 3	CP18	COLORED CONCRETE PAVEMENT 9-INCH AND COLORED AND STAMPED CONCRETE 9-INCH (SEE CROSSWALK CONSTRUCTION DETAIL)
CG06	CONCRETE CURB AND GUTTER 30-INCH TYPE A		
CG07	CONCRETE CURB AND GUTTER 30-INCH TYPE D	CP19	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH
CG17	CONCRETE CURB AND GUTTER 18-INCH TYPE A	DR03	ASPHALTIC DRIVEWAYS AND FIELD ENTRANCES 3-INCH
CG30	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE R FULL DEPTH	DW01	CONCRETE DRIVEWAY 6-INCH
CM01	CONCRETE MEDIAN SLOPED NOSE TYPE 1	PV05	ASPHALTIC FLUME

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN DETAILS: DOUSMAN AVE	SHEET 35	E

2

LEGEND

CM05 CONCRETE SIDEWALK, 5-INCH

CP18 COLORED CONCRETE PAVEMENT 9-INCH AND COLORED AND STAMPED CONCRETE 9-INCH (SEE CROSSWALK CONSTRUCTION DETAIL)

PV13 ASPHALTIC SURFACE 4-INCH

CURB RAMP DETECTABLE WARNING FIELD YELLOW

N

STA 32DW+40.06
41.50' LT

STA 32DW+39.20
31.50' LT

GRADED FOR FUTURE CONSTRUCTION

STA 34DE+40.40
38.60' LT

R/L DOUSMAN ST WB

S-05-291

PV13

10'

5'

4"

5'

10'

STA 32DW+52.06
26.50' LT

111EBN

31DW

111ERE

32DW

33DW

34DW

34DE

33DE

DOUSMAN ST

32DE

31DE

INL

GV

MH

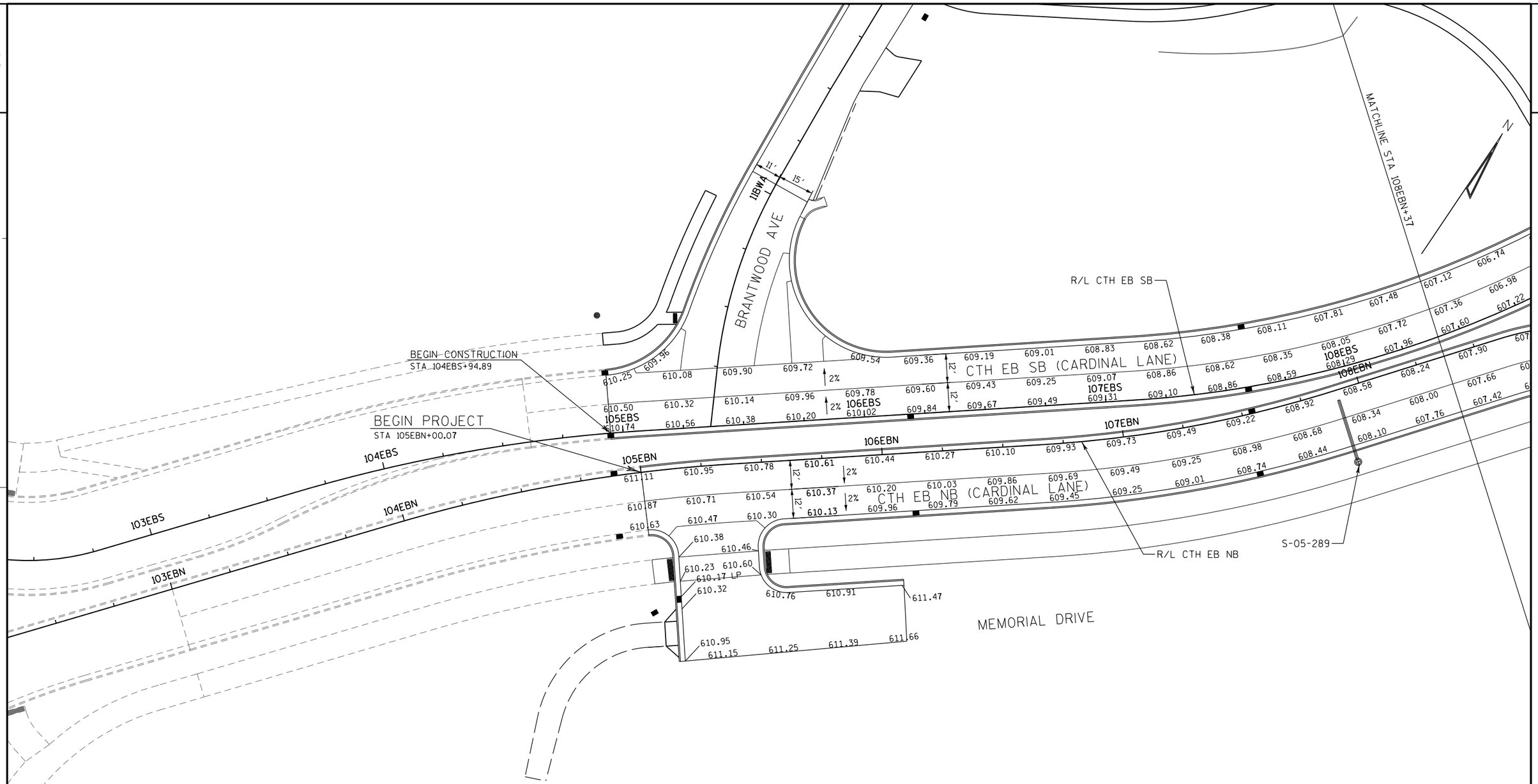
R/L DOUSMAN ST EB

MATCHLINE STA 32DE+35

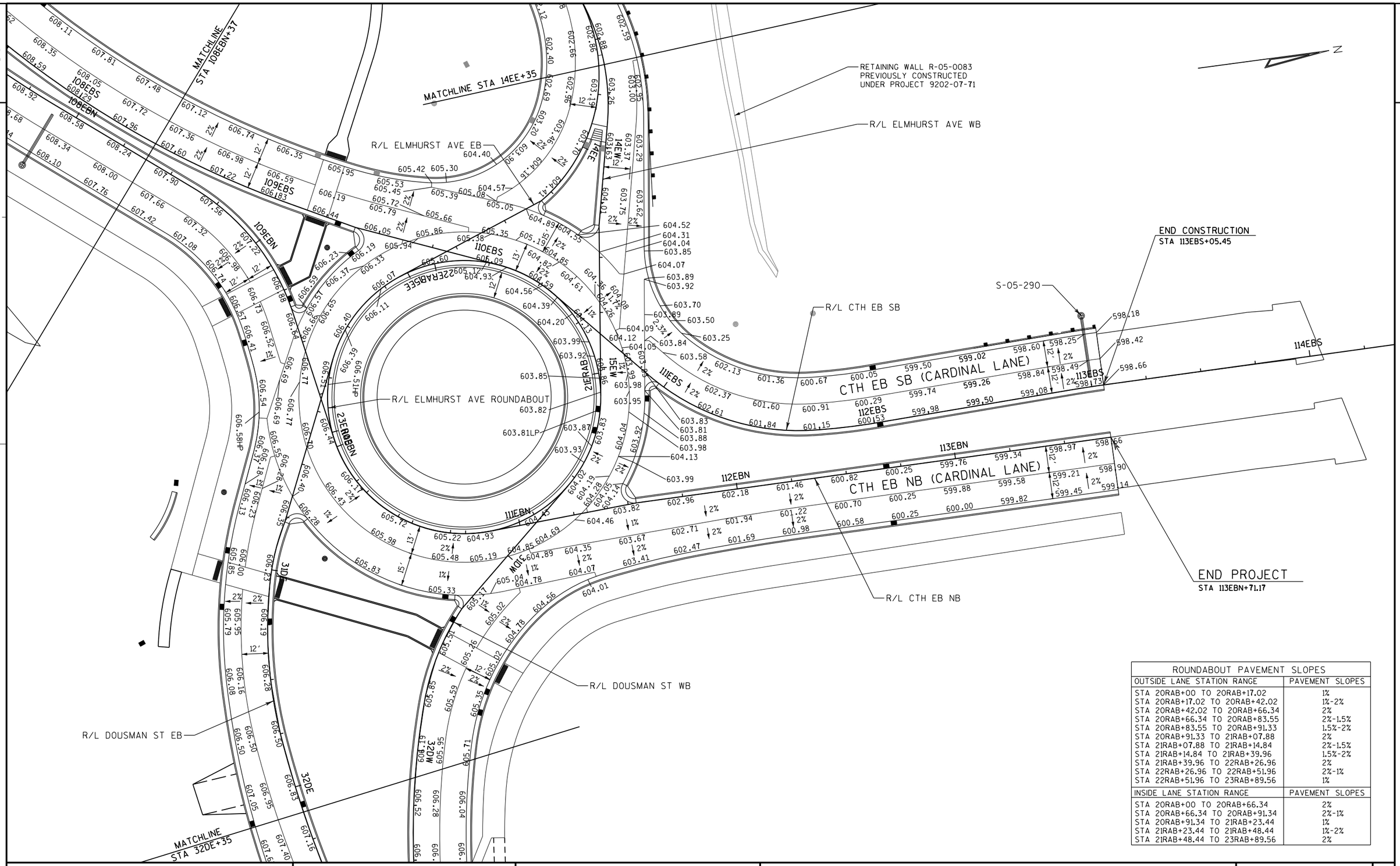
PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN DETAILS: SIDEWALKS AND MULTI-USE PATHS	SHEET 36	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\021204a_PD.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:40

2



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PAVING GRADES	SHEET 37	E



ROUNDABOUT PAVEMENT SLOPES	
OUTSIDE LANE STATION RANGE	PAVEMENT SLOPES
STA 20RAB+00 TO 20RAB+17.02	1%
STA 20RAB+17.02 TO 20RAB+42.02	1%-2%
STA 20RAB+42.02 TO 20RAB+66.34	2%
STA 20RAB+66.34 TO 20RAB+83.55	2%-1.5%
STA 20RAB+83.55 TO 20RAB+91.33	1.5%-2%
STA 20RAB+91.33 TO 21RAB+07.88	2%
STA 21RAB+07.88 TO 21RAB+14.84	2%-1.5%
STA 21RAB+14.84 TO 21RAB+39.96	1.5%-2%
STA 21RAB+39.96 TO 22RAB+26.96	2%
STA 22RAB+26.96 TO 22RAB+51.96	2%-1%
STA 22RAB+51.96 TO 23RAB+89.56	1%
INSIDE LANE STATION RANGE	PAVEMENT SLOPES
STA 20RAB+00 TO 20RAB+66.34	2%
STA 20RAB+66.34 TO 20RAB+91.34	2%-1%
STA 20RAB+91.34 TO 21RAB+23.44	1%
STA 21RAB+23.44 TO 21RAB+48.44	1%-2%
STA 21RAB+48.44 TO 23RAB+89.56	2%

2

N

MATCHLINE STA 14EE+35

RETAINING WALL R-05-0083
PREVIOUSLY CONSTRUCTED
UNDER PROJECT 9202-07-71

R/L ELMHURST AVE WB

END CONSTRUCTION
STA 13BWA+75.00

14BWA

10.5'

10.5'

BRANTWOOD AVE

13BWA

BEGIN CONSTRUCTION
STA 10EW+51.48

ELMHURST AVE

10EW

11EW

12EW

13EW

14EE

14EW

602.93

604.25

12BWA

11'

1'

11'

R/L ELMHURST AVE EB

BERM ROCK WALL SEE
CONSTRUCTION DETAIL

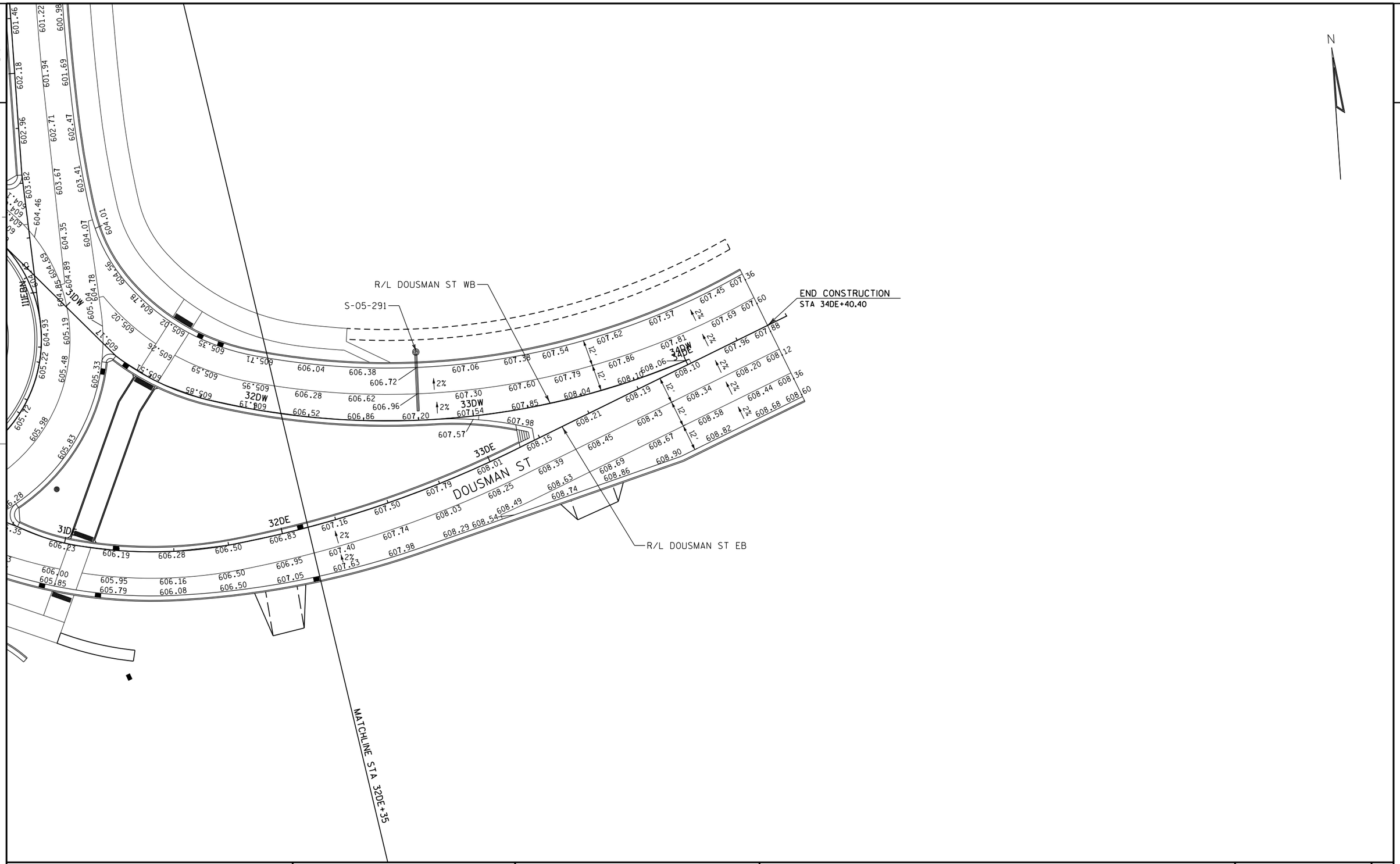
108EBS

109EBS

109EBN

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PAVING GRADES	SHEET 39	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\021253_PG.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:40


N
R/L DOUSMAN ST WB
S-05-291
END CONSTRUCTION
STA 34DE+40.40
DOUSMAN ST
R/L DOUSMAN ST EB
MATCHLINE STA 32DE+35
31DE
32DE
32DW
33DE
33DW
34DE
34DW
11IEBW
601.46
601.22
600.98
602.18
601.94
601.69
602.96
602.71
602.47
603.82
603.67
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606.96
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607.85
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607.63
607.74
607.98
608.03
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607.96
607.86
607.81
607.79
607.57
607.36
607.60
607.69
607.88
608.04
608.10

PLAN SHEET COMPLETED
BY NE REGION

N

BEGIN CONSTRUCTION
STA 10+24.37BWA

END CONSTRUCTION
STA 13+75.00 BWA

BRANTWOOD AVE R/L

BRANTWOOD AVE

104+00EBS
104+00EBN
105+00EBS
105+00EBN
106+00EBS
106+00EBN
107+00EBS
107+00EBN

10+00EW
11+00EW
12+00EW

11+00BWA
12+00BWA
13+00BWA

C'TH EB SB (CARDINAL LN)
C'TH EB NB (CARDINAL LN)

MEMORIAL DR

ELMHURST AVE

609.69 609.32 608.95 608.54 607.98 607.14 606.33 605.65 605.45
609.53 609.11 608.69 608.27 607.71 606.86 605.84 605.68 605.53
609.37 608.75 608.31 607.91 607.43 606.52 605.57 604.79 604.55 604.27 603.19 602.93 602.66 601.51 601.25 600.98 599.42 599.16 598.89 597.36 597.10 596.83 595.67 595.40 595.14 594.53 594.27 594.00
609.28
609.29

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PAVING GRADES	SHEET	E

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NOTES:

1) ALL EROSION CONTROL SHOWN IS PLACED IN STAGE 1A UNLESS OTHERWISE NOTED.

LEGEND

- RIP RAP
- SILT FENCE
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (D) INLET PROTECTION TYPE D
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- CULVERT PIPE CHECK
- ### EROSION MAT URBAN CLASS I TYPE B

N

RIVER GROVE AVE

DUCK CREEK

ELMHURST AVE

BEGIN CONSTRUCTION
STA 10EW+51.48

10EW

14BWA

BRANTWOOD AVE

WETLAND BOUNDARY (TYP)

R/L ELMHURST AVE WB

RETAINING WALL R-05-0083
PREVIOUSLY CONSTRUCTED
UNDER PROJECT 9202-07-71

R/W

TLE

END CONSTRUCTION
STA 113EBS+05.45

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

END CONSTRUCTION
STA 11BWA+50.00

12BWA

R/L BRANTWOOD AVE

12EW

BEGIN CONSTRUCTION
STA 10BWA+24.37

BEGIN PROJECT
STA 103EBN+00.00

R/W

SLOPE INTERCEPT (TYP)

14EW

18EE

(D) PLACED IN STAGE 1B

END PROJECT
STA 113EBN+71.17

R/L CTH EB SB

R/L ELMHURST AVE EB

102EBS

104EBS

104EBN

102EBN

106EBS

106EBN

108EBS

108EBN

110EBS

112EBS

112EBN

22ERAB

23ERAB

20ERAB

(B) PLACED IN STAGE 1B

R/W

R/L CTH EB NB

R/L DOUSMAN ST WB

MEMORIAL DRIVE

SLOPE INTERCEPT (TYP)

320W

320E

R/W

BEGIN CONSTRUCTION
STA 104EBS+61.52

RUINS

R/L DOUSMAN ST EB

34DW

DOUSMAN ST

END CONSTRUCTION
STA 34DE+40.40

SHAWANO AVE EB

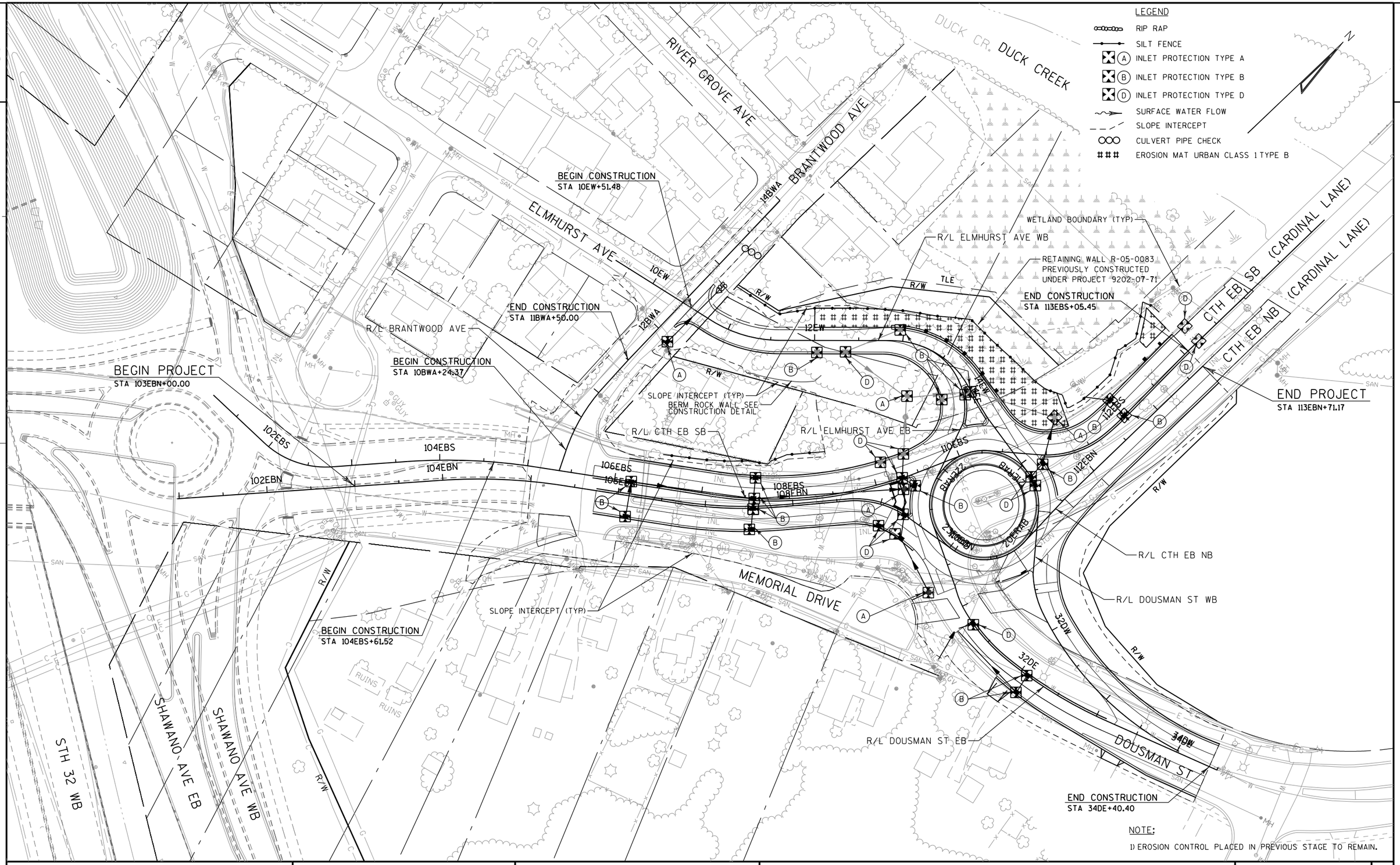
SHAWANO AVE WB

STH 32 WB

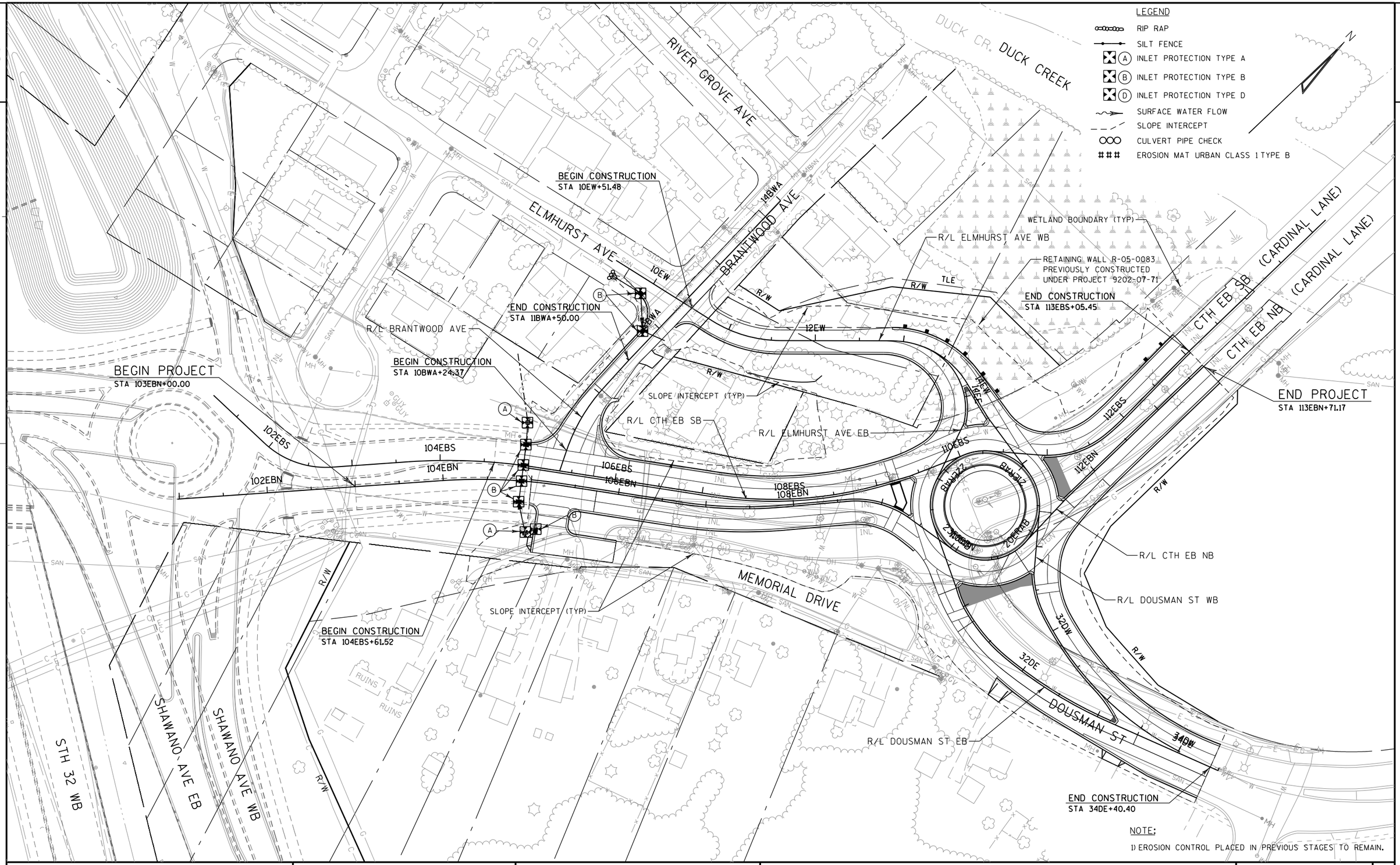
PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	EROSION CONTROL STAGE 1A & 1B	SHEET 42	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\022001_EC.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

2



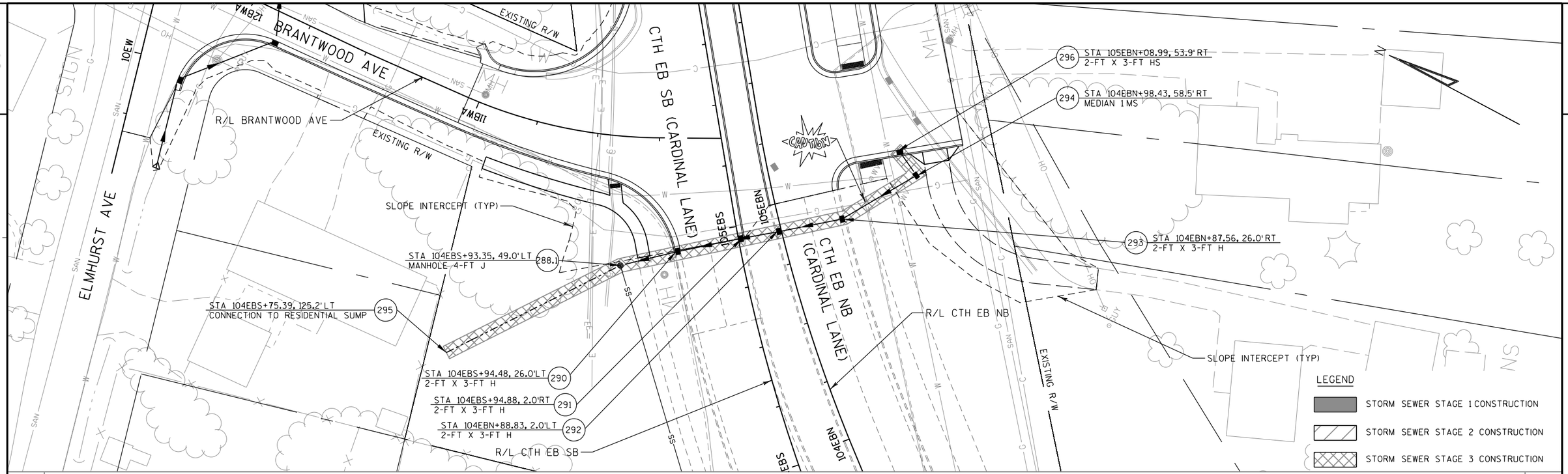
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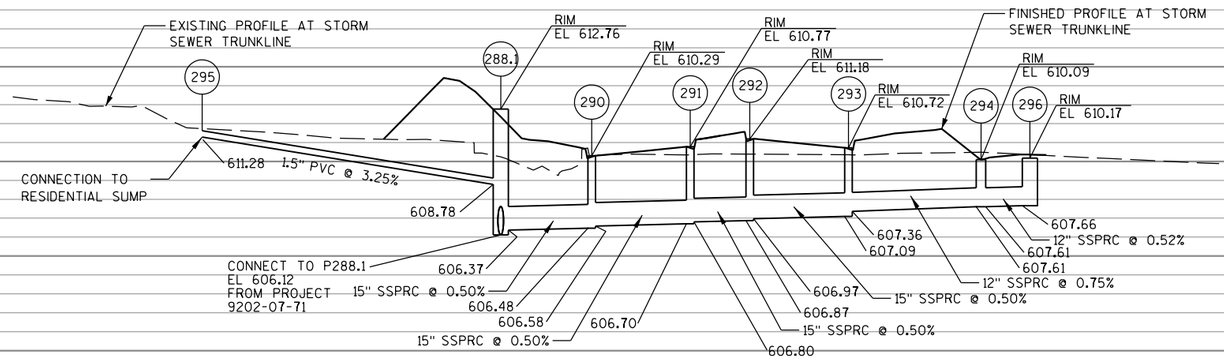


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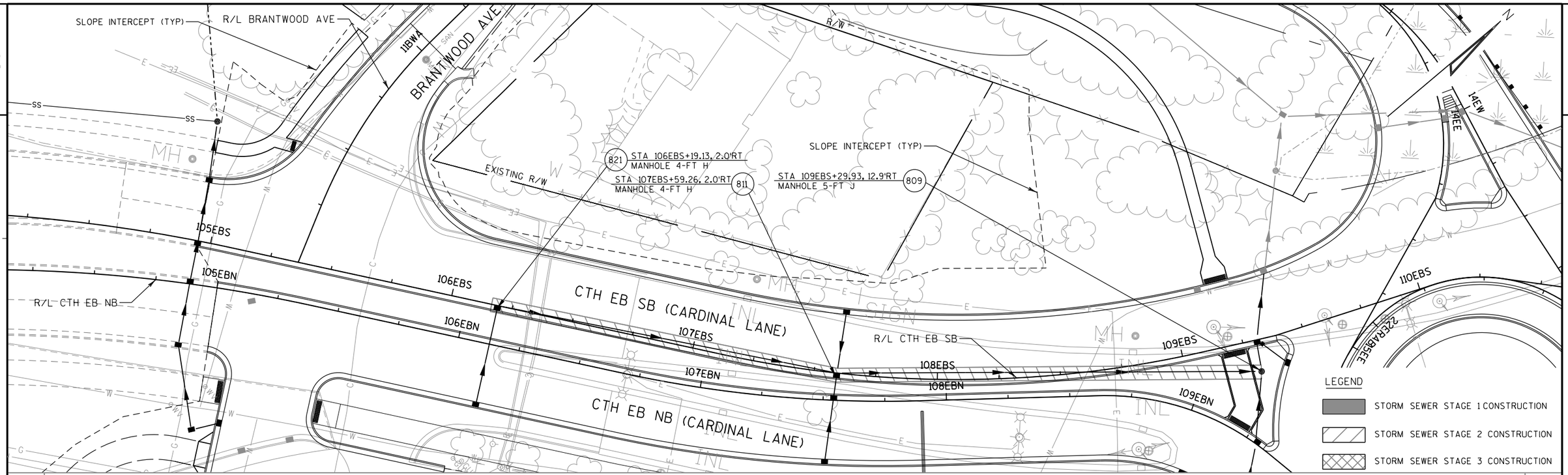
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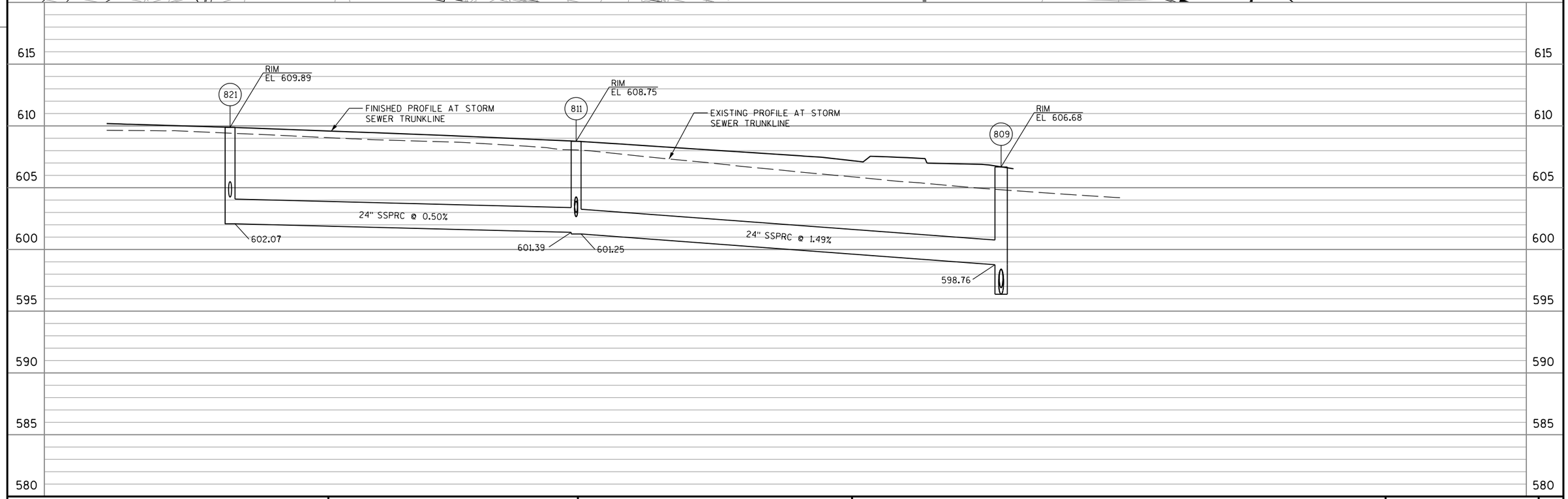
WISDOT/CADDS SHEET 42



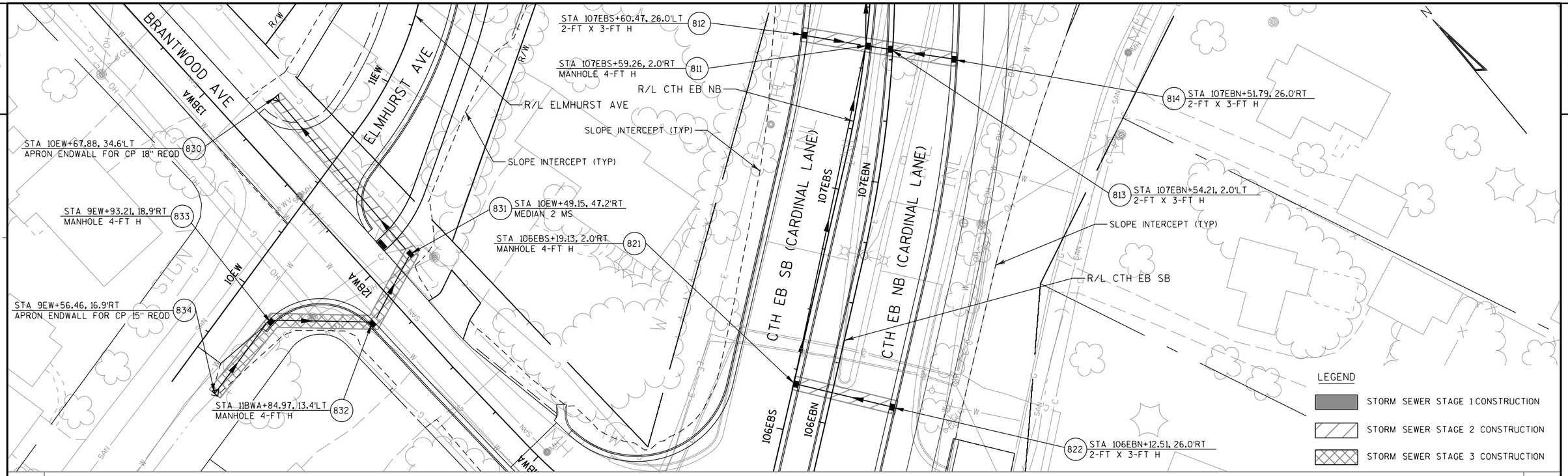


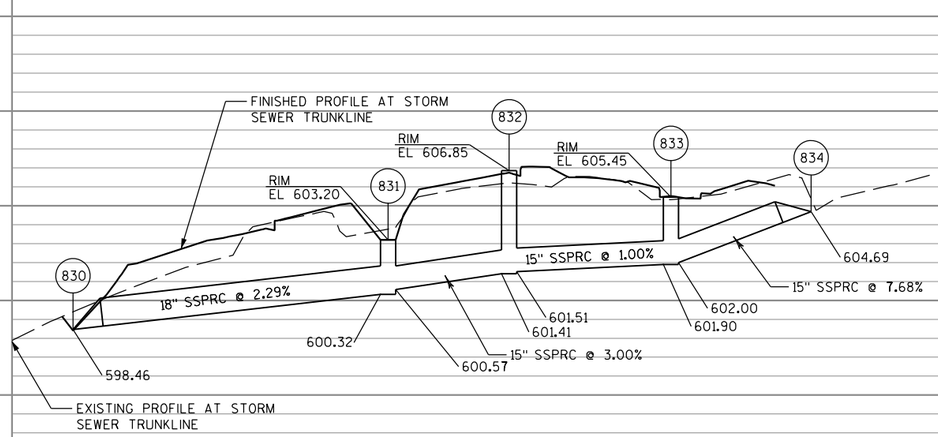
PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	STORM SEWER PLAN AND PROFILE	SHEET 45	E

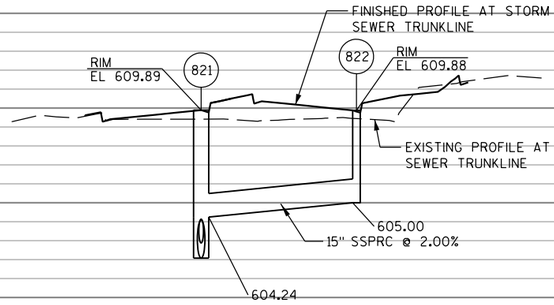


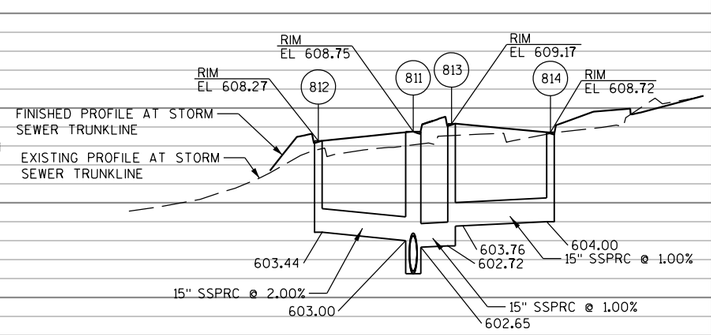


PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	STORM SEWER PLAN AND PROFILE	SHEET 46	E



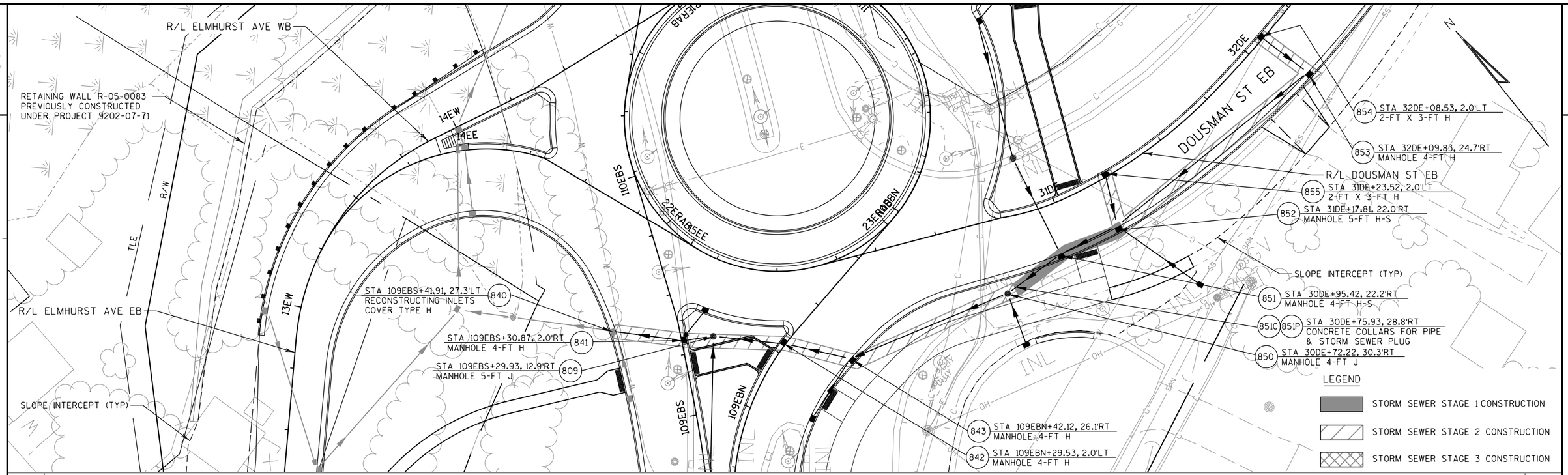


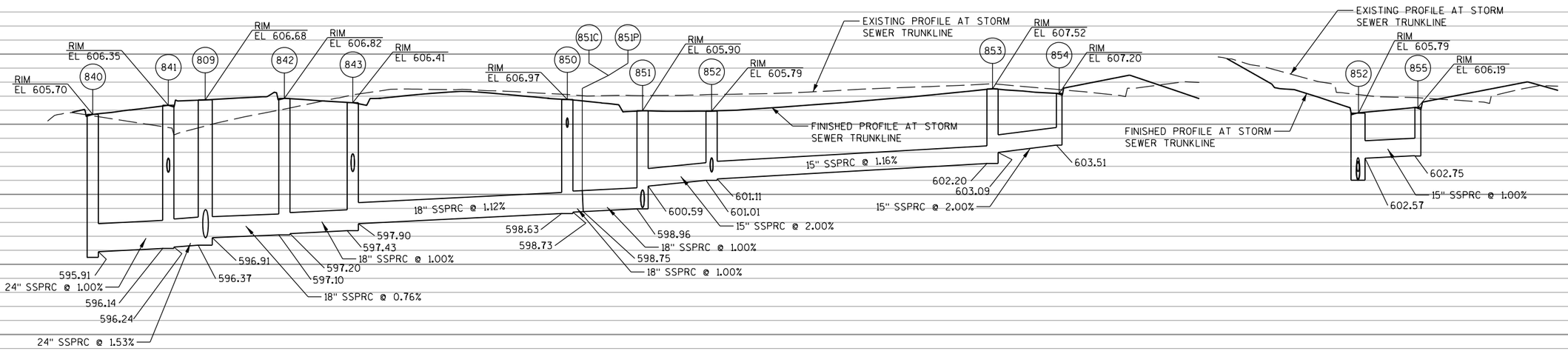




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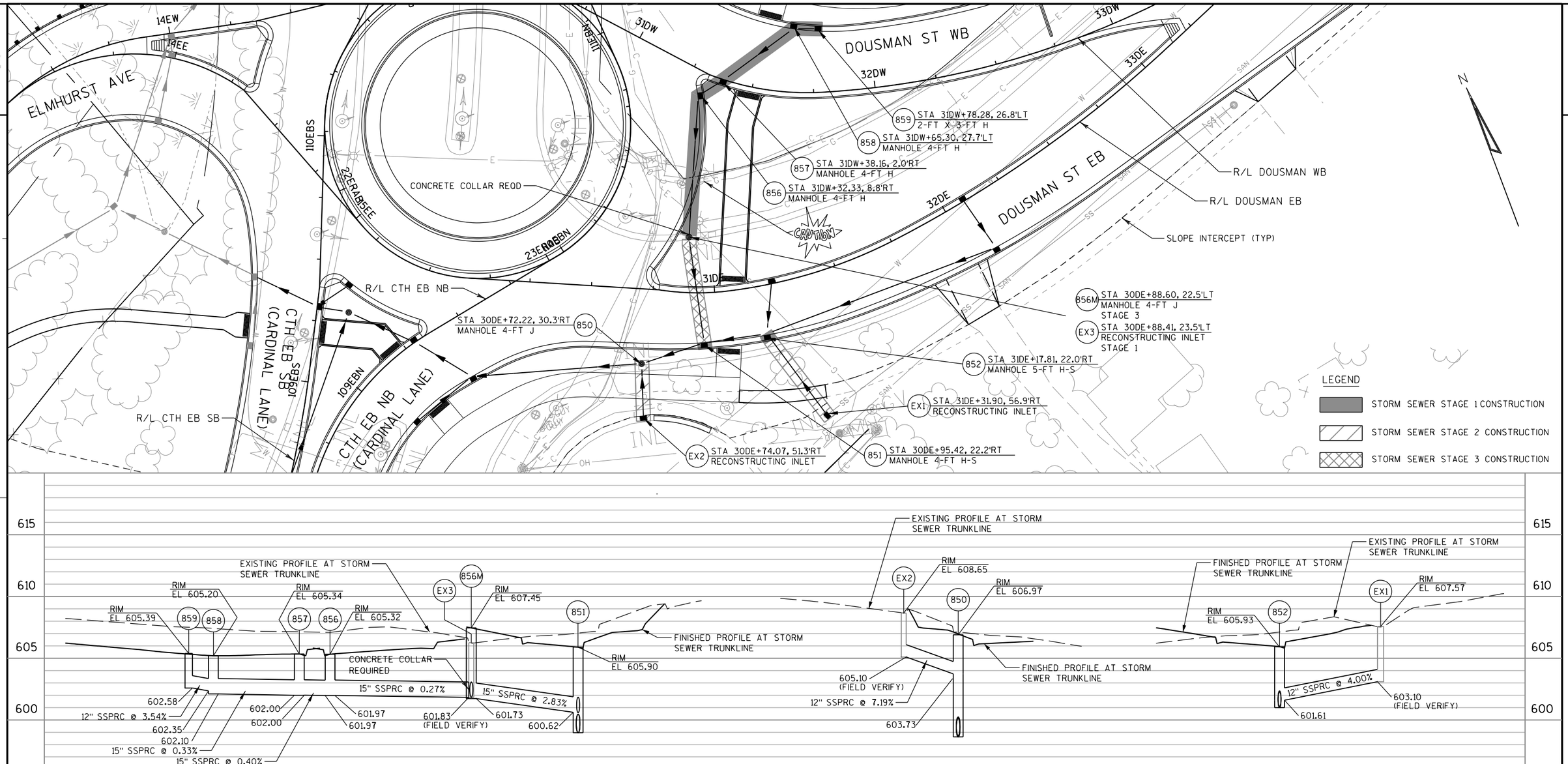
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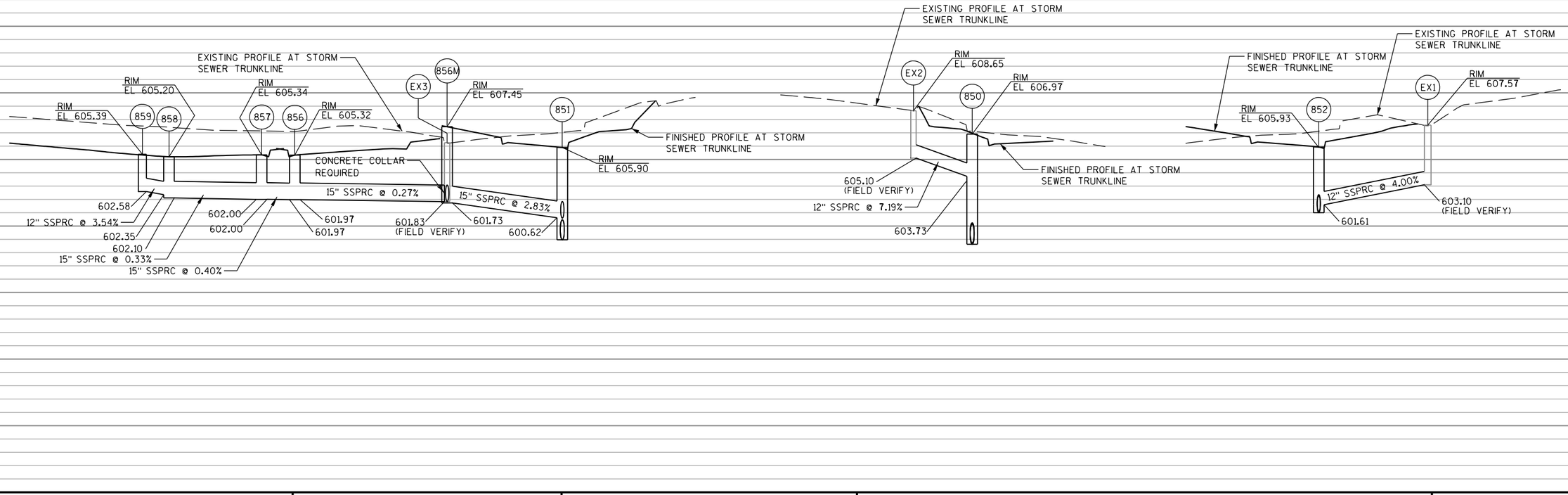




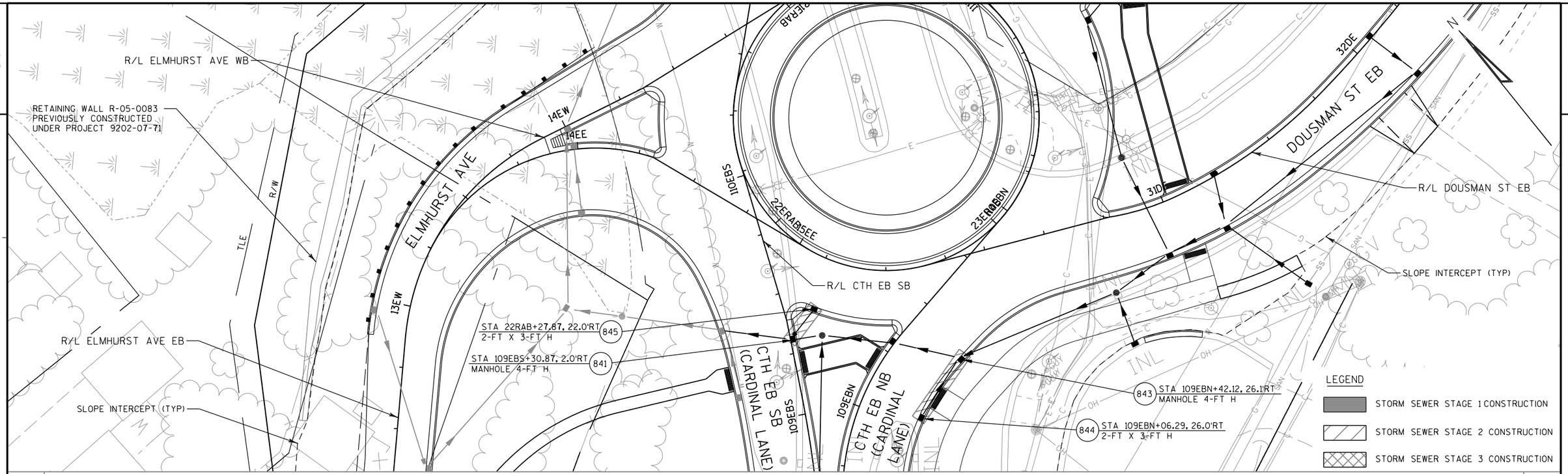
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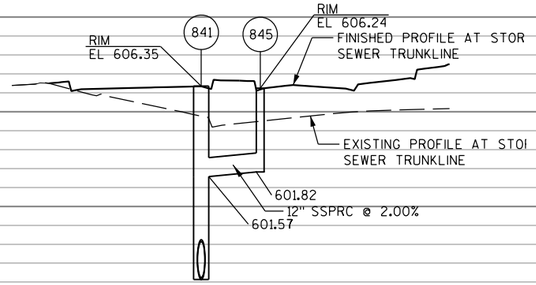
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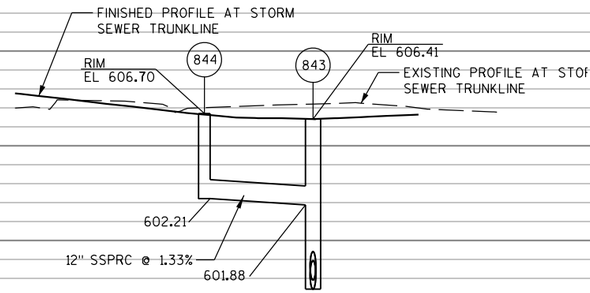




PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	STORM SEWER PLAN AND PROFILE	SHEET 49	E



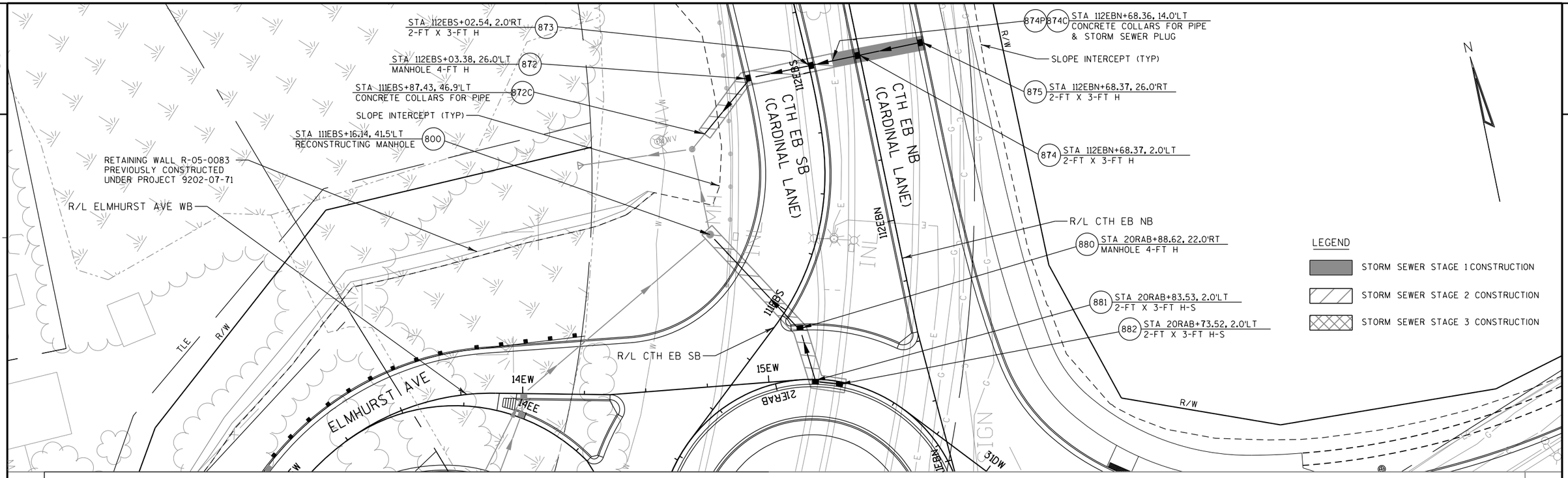


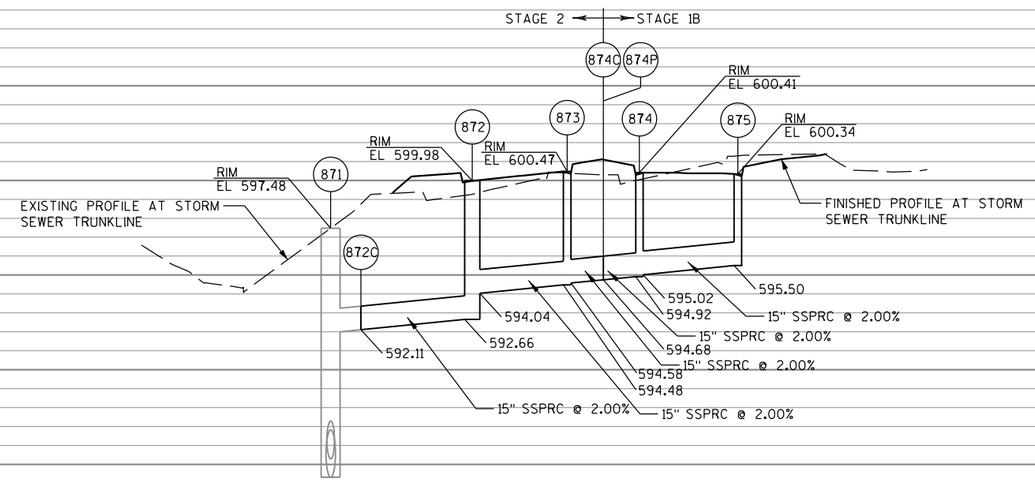


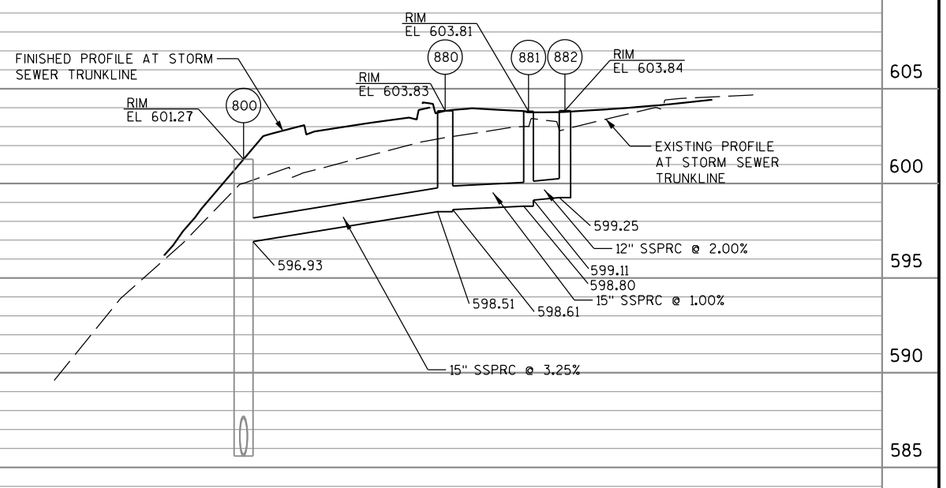
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PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	STORM SEWER PLAN AND PROFILE	SHEET 50	E

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WISDOT/CADDS SHEET 41







PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	STORM SEWER PLAN AND PROFILE	SHEET 51	E

2

2

SLOPE INTERCEPT (TYP)

TLE

R/W

R/W

BRANTWOOD AVE

12BWA

11EW

R/L ELMHURST AVE

12EW

ELMHURST AVE

13EW

806 STA 12EW+95.87, 15.0'LT
COVER TYPE H

RETAINING WALL R-05-0083
PREVIOUSLY CONSTRUCTED UNDER
PROJECT 9202-07-71

801 STA 14EW+00.54, 2.0'RT
COVER TYPE H

STA 12EW+02.93, 15.0'RT
COVER TYPE H 805

STA 12EW+42.93, 15.0'RT
COVER TYPE H-S 804

SLOPE INTERCEPT (TYP)

14EW

14EE

R/L CTH EB SB

CTH EB SB (CARDINAL LANE)

113EBS

112EBS

113EBN

CTH EB NB (CARDINAL LANE)

STA 13EE+98.57, 26.8'RT
COVER TYPE H 807

STA 13EE+98.48, 2.0'LT
COVER TYPE H 802

STA 109EBS+11.74, 26.0'LT
COVER TYPE H 846

STA 109EBS+41.91, 27.3'LT
RECONSTRUCTING INLETS
COVER TYPE H 840

CTH EB SB (CARDINAL LANE)

107EBS

107EBN

108EBS

108EBN

109EBS

109EBN

CTH EB NB (CARDINAL LANE)

110EBS

111EBS

15EW

22ERAB6EE

21ERAB

112EBN

111EBN

23ERØBBN

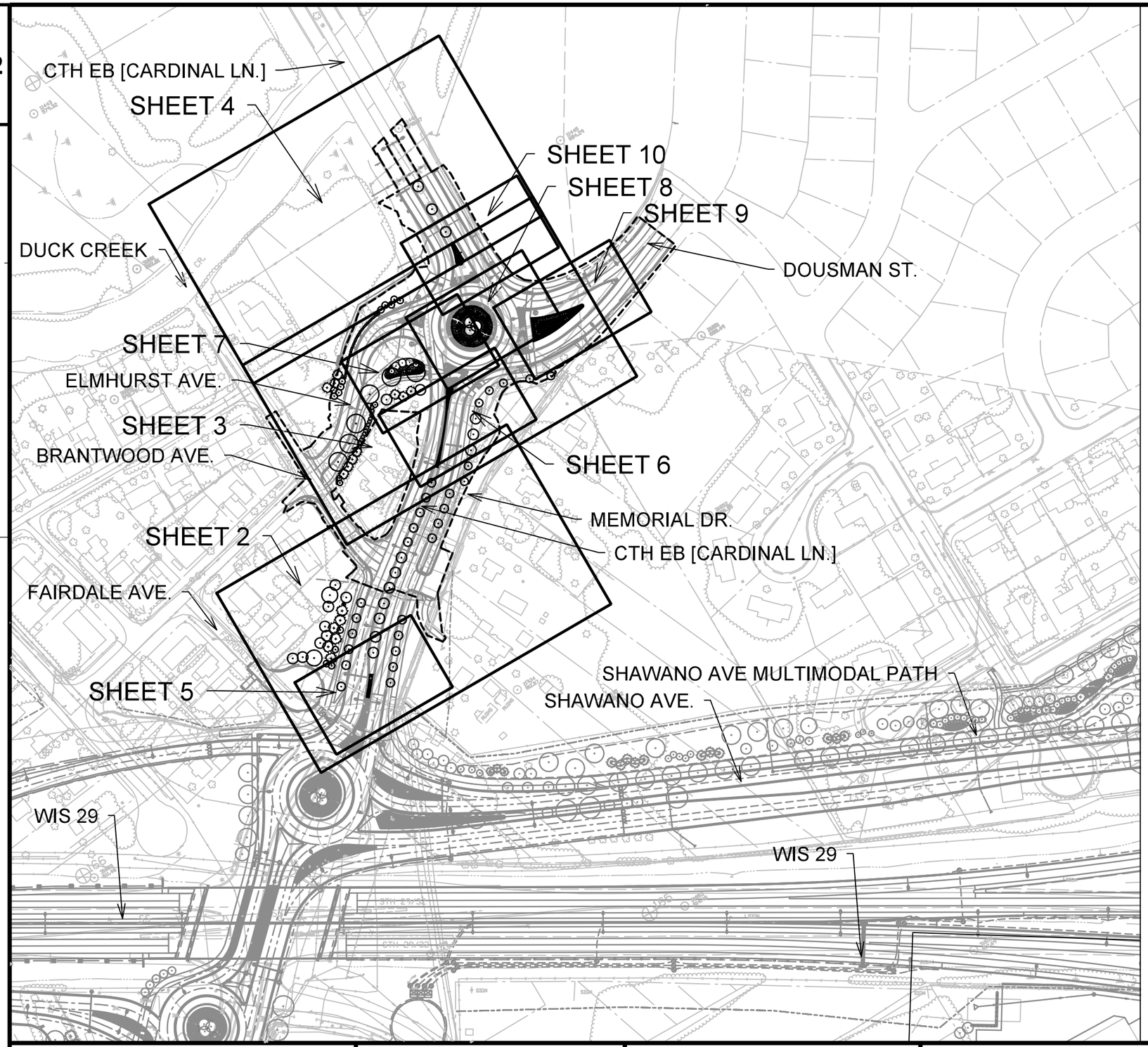
31DW

31D

R/W

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	STORM SEWER PLAN	SHEET 52	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\022508_SS.dgn PLOT DATE : 2/27/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:40



NOTES:

CONTRACTOR WILL BE FULLY RESPONSIBLE FOR REPAIRING ANY AND ALL AREAS IN INFIELDS, OUTFIELDS, AND RIGHT-OF-WAYS DISTURBED BY PLANTING OPERATIONS WITH WISDOT APPROVED SEED MIX AND APPROPRIATE EROSION CONTROL MATERIAL AND/OR MULCH ACCORDING TO SECTION 630 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURES CONSTRUCTION, CURRENT EDITION, AND THE EROSION CONTROL TEMPORARY AND PERMANENT PLANS INCLUDED IN THIS CONTRACT.

CONTRACTOR WILL BE FULLY RESPONSIBLE FOR REPAIRING ANY AND ALL AREAS IN TERRACES, MEDIANS, AND/OR ROUNDABOUTS DISTURBED BY PLANTING OPERATIONS WITH LIKE MATERIALS ACCORDING TO THESE PLANS AND THE EROSION CONTROL TEMPORARY AND PERMANENT PLANS INCLUDED IN THIS CONTRACT.

THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING AND PROPOSED UTILITIES AND SHALL ADJUST PLANT LOCATIONS AS NECESSARY TO AVOID CONFLICTS AND ACCOMMODATE UTILITY OFFSET REQUIREMENTS.

CONTRACTOR SHALL VERIFY THAT A MINIMUM OF 24-INCHES OF PLANTING MIXTURE HAS BEEN PROVIDED IN ALL PLANTING BEDS BEFORE BEGINNING PLANTING OPERATIONS.

CONTRACTOR SHALL VERIFY THAT A MINIMUM OF 24-INCHES OF TOPSOIL SPECIAL HAS BEEN PROVIDED FOR TREES PLANTED IN LAWN AREAS FOR THE WIDTHS INDICATED IN THE TREE PLANTING DETAIL, THIS PACKAGE.

SEE EROSION CONTROL PLANS FOR EXTENT OF SEED/SOD.

IF FIELD ADJUSTMENT OF TREES IS REQUIRED, RELOCATIONS MUST BE REVIEWED AND APPROVED BY FIELD ENGINEER.

RE-MULCHING AND MULTIPLE SHOVEL EDGE CUTS ARE EXPECTED TO BE PERFORMED IMMEDIATELY PRIOR TO THE END OF THE TWO-YEAR PROVING PERIOD. WORK IS INCIDENTAL TO LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES BID ITEM. ADDITIONAL PAYMENT FOR RE-MULCHING AND MULTIPLE EDGE CUTS WILL NOT BE GRANTED.

CONTRACTOR WILL BE FULLY RESPONSIBLE FOR COORDINATING WITH PROJECT 9202-07-71 ON THE OVERLAP OF PROJECTS FROM APPROXIMATELY STA 102+90 EBS TO 104+90 EBS.

PLANS PREPARED BY KEN SAIKI DESIGN,
MADISON, WI (608) 251-3600

LEGEND

- abc / xx — PLANT SYMBOL / QUANTITY
- XXX — STATIONING POINT
- . — DECIDUOUS PLANT MATERIAL LOCATION
- + — EVERGREEN PLANT MATERIAL LOCATION
- 1 — TRUCK APRON
- 2 — ROUNDABOUT CONCRETE CURB, TYPE A
- 3 — ROUNDABOUT CONCRETE TRAVERSABLE ZONE
- 4 — SHREDDED HARDWOOD BARK MULCH
- 5 — ALUMINUM EDGING
- 6 — PLANTING MIXTURE
- 7 — SHOVEL CUT EDGE

0' 100' 200' 400'

SCALE 1" = 200'-0"

1 OF 14

PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLAN LAYOUT - OVERVIEW	SHEET	E

FILE NAME : Q:2010-009 Brown County DOT\Shawano Ave\ 9202-08-80 Elmhurst Ave Extension\CAD\ 1 - Working Drawings\ 9202-08-80 ksd base.dgn PLOT DATE : 22-January-2014 PLOT BY : rdeboer PLOT NAME : PLOT SCALE : WISDOT/CADDS SHEET 42

LOCATION: CARDINAL LANE

MATCHLINE SHEET 3
SHEET 2

BRANTWOOD AVE.

MEMORIAL DR.

FAIRDALE AVE.
CUL-DE-SAC

CTH EB SB (CARDINAL LN.)

CTH EB NB (CARDINAL LN.)

BED 1

SYM	COMMON NAME
CD	Crabapple, 'Donald Wyman' (Shrub Form Tree)
CP1	Crabapple, 'Pink Spires' (Shrub Form Tree)
CR	Crabapple, 'Red Jewel'
HA	Hackberry, Common 'Prairie Pride'
HW	Hawthorn, 'Winter King'
JT	Japanese Tree Lilac, 'Ivory Silk'
JI5	Juniper, 'Iowa', 5-Foot Ht.
MT	Maple, Tatarian
MT1	Maple, Tatarian (Shrub Form Tree)
PC	Pear, Callery 'Cleveland Select'
SH8	Spruce, Black Hills
SS	Spruce, Serbian
VB	Viburnum, Blackhaw 'Forest Rouge' (Shrub Form Tree)

PLANT KEY

0' 20' 40' 80'

SCALE 1" = 40'-0"

2 OF 14

PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLANT LAYOUT	SHEET	E

FILE NAME : Q:2010-009 Brown County DOT\Shawano Ave\ 9202-08-80 Elmhurst Ave Extension\CAD\ 1 - Working Drawings\ 9202-08-80 ksd base.dgn PLOT DATE : 22-January-2014 PLOT BY : rdeboer PLOT NAME : PLOT SCALE : WISDOT/CADDS SHEET 42

LOCATION: CARDINAL LANE AT
ELMHURST AVENUE & DOUSMAN STREET

MATCHLINE SHEET 4
SHEET 3

MATCHLINE SHEET 3
SHEET 2

EXISTING OR N.I.C. PLANTS

EXISTING OR N.I.C. PLANTS

ELMHURST AVE.

CTH EB SB (CARDINAL LN.)

CTH EB NB (CARDINAL LN.)

MEMORIAL DR.

DOUSMAN ST.

BED 2

BED 3

BED 4

BED 5

BED 6

PLANT KEY

SYM	COMMON NAME
AT	Arborvitae, American 'Techny'
CD1	Crabapple, 'Donald Wyman' (Shrub Form Tree)
CR1	Crabapple, 'Red Jewel' (Shrub Form Tree)
DC1	Dogwood, Cornelian Cherry 'Golden Glory' (Shrub Form Tree)
HW1	Hawthorn, 'Winter King' (Shrub Form Tree)
HT	Honeylocust, Thornless 'Imperial'
JI3	Juniper, 'Iowa', 3-Foot Ht.
JI5	Juniper, 'Iowa', 5-Foot Ht.
JT1	Japanese Tree Lilac, 'Ivory Silk' (Shrub Form Tree)
MF	Maple, Freeman 'Sienna Glen'
MT1	Maple, Tatarian (Shrub Form Tree)
SH8	Spruce, Black Hills
SS	Spruce, Serbian
sgn	Switch Grass, 'Northwind'
VB	Viburnum, Blackhaw 'Forest Rouge' (Shrub Form Tree)

0' 20' 40' 80'

SCALE 1" = 40'-0"

3 OF 14

PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLANT LAYOUT	SHEET 55	E

FILE NAME : Q:2010-009 Brown County DOT\Shawano Ave\ 9202-08-80 Elmhurst Ave Extension\CAD\ 1 - Working Drawings\ 9202-08-80 ksd base.dgn

PLOT DATE : 22-January-2014 PLOT BY : rdeboer PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

LOCATION: CARDINAL LANE

PLANT KEY

SYM	COMMON NAME
JT	Japanese Tree Lilac, 'Ivory Silk'
MT	Maple, Tatarian

CR.

SAN

MH

SS

INL

W

G

E

OHWV

11444
598.07

114EBS

113EBS

113EBN

112EBS

112EBN

CTH EB SB
(CARDINAL LN.)

CTH EB NB
(CARDINAL LN.)

MT
2
303

302

JT
1
301

300
BED 6

EXISTING OR N.I.C. PLANTS

0' 20' 40' 80'

SCALE 1" = 40'-0"

MATCHLINE SHEET 4
SHEET 3

4 OF 14

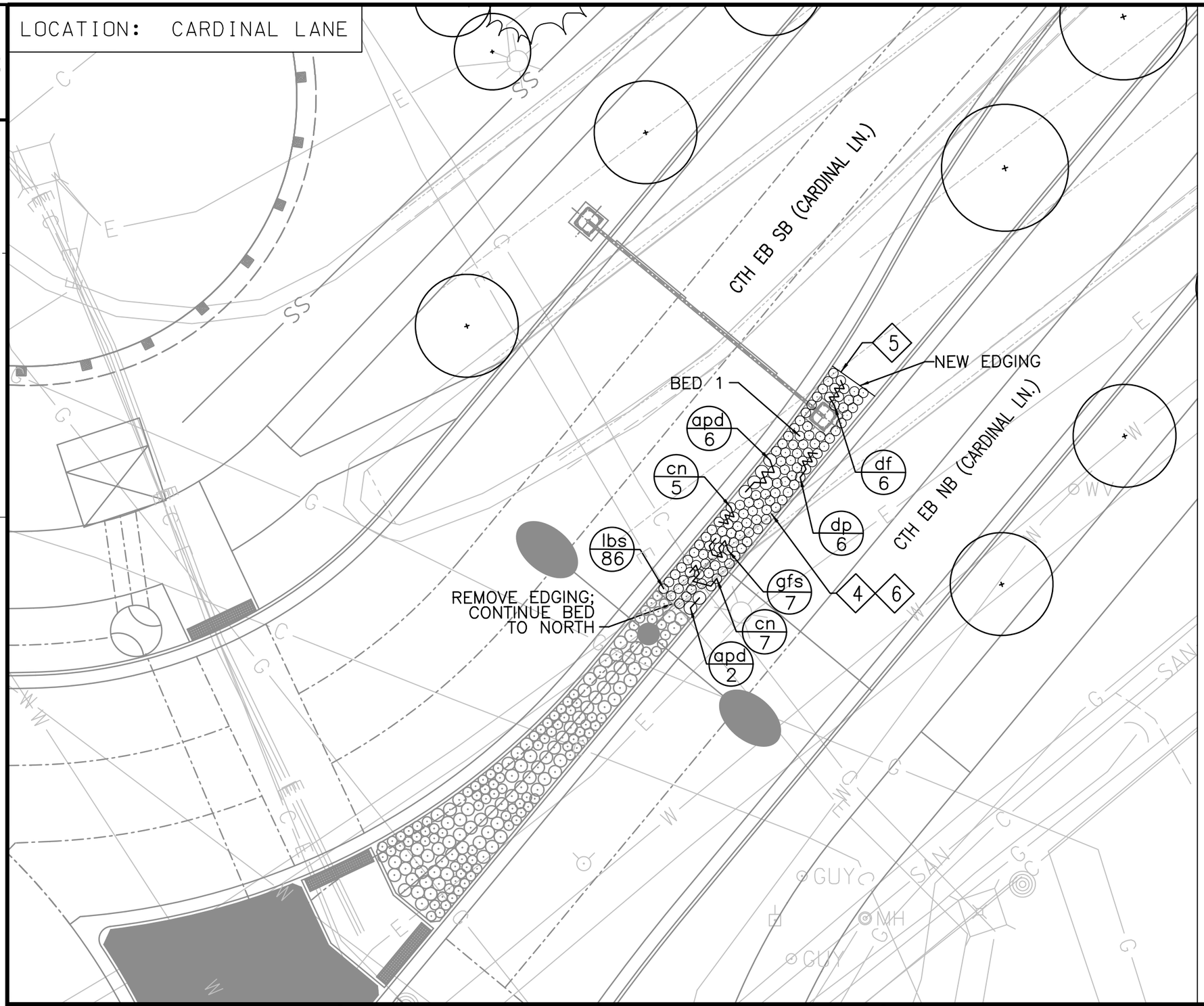
PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLANT LAYOUT	SHEET	E

FILE NAME : Q:2010-009 Brown County DOT\Shawano Ave\ 9202-08-80 Elmhurst Ave Extension\CAD\ 1 - Working Drawings\ 9202-08-80 ksd base.dgn

PLOT DATE : 22-January-2014 PLOT BY : rdeboer PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

LOCATION: CARDINAL LANE



LEGEND

- abc / xx — PLANT SYMBOL / QUANTITY
- DECIDUOUS PLANT MATERIAL LOCATION
- EVERGREEN PLANT MATERIAL LOCATION
- 4 — SHREDDED HARDWOOD BARK MULCH
- 5 — ALUMINUM EDGING
- 6 — PLANTING MIXTURE

NOTES

SEE DETAILS FOR PLANTING MIXTURE DEPTHS AND LOCATIONS.

CONTRACTOR SHALL COORDINATE WITH PROJECT 9202-07-71 ON THE INTERFACE BETWEEN PLANTINGS IN BED 1. EITHER THE CONTRACTOR SHALL COORDINATE TIMING OF PLANTINGS SUCH THAT THE 9202-07-71 CONTRACTOR DOES NOT INSTALL ALUMINUM EDGING AT THE NORTHERN END OF THEIR PLANTING LIMIT -- OR -- THE CONTRACTOR SHALL REMOVE ALUMINUM EDGING INSTALLED BY THE 9202-07-71 CONTRACTOR IN THE CARDINAL LN. MEDIAN BED AS PART OF THIS PROJECT IN ORDER TO CONTINUE THE PLANTING BED TO THE NORTH AS ONE CONTINUOUS BED. THE CONTRACTOR WILL STILL BE RESPONSIBLE FOR INSTALLING THE NEW ALUMINUM EDGING AS INDICATED ON THE PLANS JUST NORTH OF THE OVERHEAD SIGN STRUCTURE BASE.

PLANT KEY

SYM	COMMON NAME
apd	Aster, 'Purple Dome'
cn	Calamint
df	Daylily, 'Flava'
dp	Daylily, 'Pardon Me'
gfs	Gayfeather, Spiked 'Kobold'
lbs	Little Bluestem, 'The Blues'

N

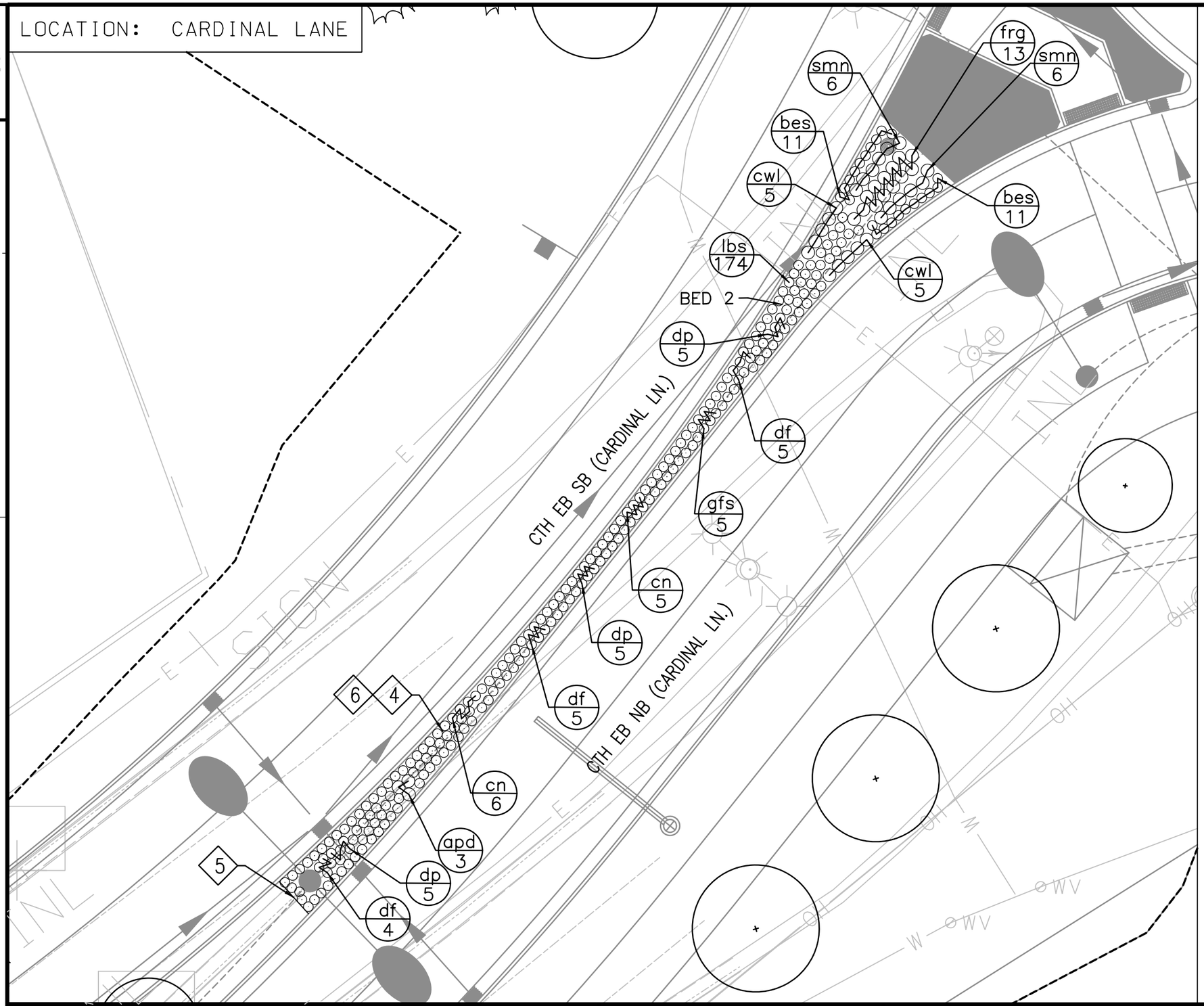
0' 8' 16' 32'

SCALE 1/16" = 1'-0"

5 OF 14

PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLANT LAYOUT ENLARGEMENT - BED 1	SHEET 57	E

LOCATION: CARDINAL LANE



LEGEND

- abc / xx — PLANT SYMBOL / QUANTITY
- DECIDUOUS PLANT MATERIAL LOCATION
- EVERGREEN PLANT MATERIAL LOCATION
- 4 — SHREDDED HARDWOOD BARK MULCH
- 5 — ALUMINUM EDGING
- 6 — PLANTING MIXTURE

NOTES

SEE DETAILS FOR PLANTING MIXTURE DEPTHS AND LOCATIONS.

PLANT KEY

SYM	COMMON NAME
apd	Aster, 'Purple Dome'
bes	Black-Eyed-Susan, 'City Garden'
cn	Calamint
cwl	Catmint, 'Walker's Low'
df	Daylily, 'Flava'
dp	Daylily, 'Pardon Me'
frg	Feather Reed Grass, 'Karl Foerster'
gfs	Gayfeather, Spiked 'Kobold'
lbs	Little Bluestem, 'The Blues'
smn	Salvia, 'May Night'

N

0' 8' 16' 32'

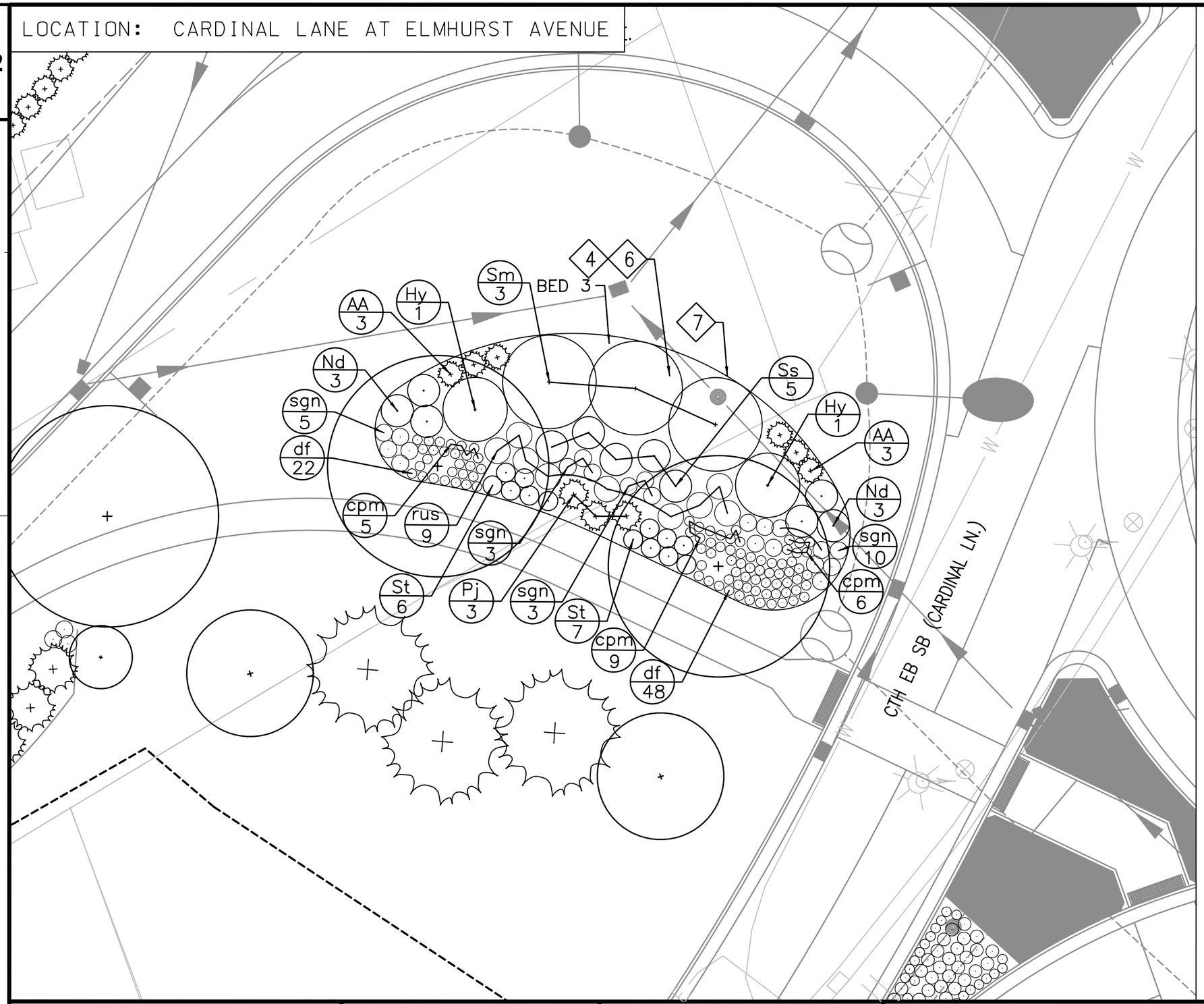
SCALE 1/16" = 1'-0"

6 OF 14

PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLANT LAYOUT ENLARGEMENT - BED 2	SHEET	E

FILE NAME : Q:2010-009 Brown County DOT\Shawano Ave\ 9202-08-80 Elmhurst Ave Extension\CAD\ 1 - Working Drawings\ 9202-08-80 ksd base.dgn PLOT DATE : 22-January-2014 PLOT BY : rdeboer PLOT NAME : PLOT SCALE : WISDOT/CADDS SHEET 42

LOCATION: CARDINAL LANE AT ELMHURST AVENUE



LEGEND

- abc / xx — PLANT SYMBOL / QUANTITY
- DECIDUOUS PLANT MATERIAL LOCATION
- EVERGREEN PLANT MATERIAL LOCATION
- 4 — SHREDDED HARDWOOD BARK MULCH
- 6 — PLANTING MIXTURE
- 7 — SHOVEL CUT EDGE

NOTES

SEE DETAILS FOR PLANTING MIXTURE DEPTHS AND LOCATIONS.

PLANT KEY

SYM	COMMON NAME
AA	Arborvitae, American 'Emerald Green'
cpm	Coneflower, Purple 'Magnus'
df	Daylily, 'Flava'
Hy	Hydrangea, Panicled 'Limelight'
Nd	Ninebark, 'Diablo'
Pj	Pfitzer Juniper, 'Kallay's Compact'
rus	Russian Sage
Sm	Smokebush, Purple 'Royal Purple'
St	Spirea, 'Tor'
Ss	Sumac, Staghorn 'Tiger Eyes'
sgn	Switch Grass, 'Northwind'

N

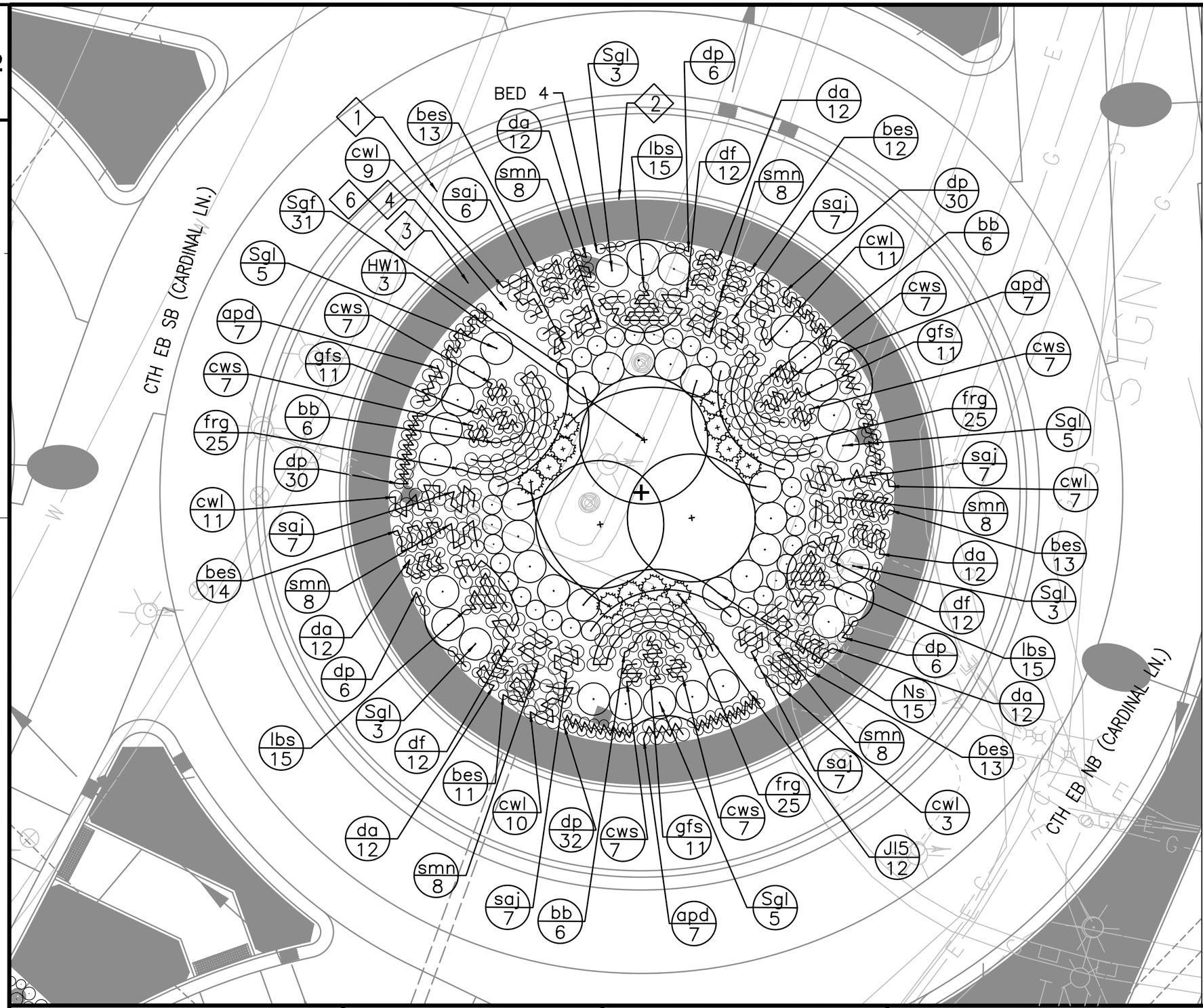
0' 8' 16' 32'

SCALE 1/16" = 1'-0"

7 OF 14

PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLANT LAYOUT ENLARGEMENT - BED 3	SHEET	E

FILE NAME : Q:2010-009 Brown County DOT\Shawano Ave\ 9202-08-80 Elmhurst Ave Extension\CAD\ 1 - Working Drawings\ 9202-08-80 ksd base.dgn
PLOT DATE : 22-January-2014 PLOT BY : rdeboer PLOT NAME : PLOT SCALE :
WISDOT/CADDS SHEET 42



LOCATION: CARDINAL / ELMHURST / DOUSMAN ROUNDABOUT

LEGEND

- abc / xx — PLANT SYMBOL / QUANTITY
- · — DECIDUOUS PLANT MATERIAL LOCATION
- + — EVERGREEN PLANT MATERIAL LOCATION
- 1 — TRUCK APRON
- 2 — ROUNDABOUT CONCRETE CURB, TYPE A
- 3 — ROUNDABOUT CONCRETE TRAVERSABLE ZONE
- 4 — SHREDDED HARDWOOD BARK MULCH
- 6 — PLANTING MIXTURE

LANDSCAPE LAYOUT

1) + DEPICTS HIGH POINT (HP) OF RAB
2) LOCATE +HP AT THE CENTER OF RAB
3) HP = +609.81

NOTES

SEE DETAILS FOR PLANTING MIXTURE DEPTHS AND LOCATIONS.

PLANT KEY

SYM	COMMON NAME
apd	Aster, 'Purple Dome'
bb	Bee Balm, 'Marshall's Delight'
bes	Black-Eyed-Susan, 'City Garden'
cwl	Catmint, 'Walker's Low'
cws	Coneflower, 'White Swan'
da	Daylily, 'Alabama Jubilee'
df	Daylily, 'Flava'
dp	Daylily, 'Pardon Me'
frg	Feather Reed Grass, 'Karl Foerster'
gfs	Gayfeather, Spiked 'Kobold'
HW1	Hawthorn, 'Winter King' (Shrub Form Tree)
JI5	Juniper, 'Iowa', 5-Foot Ht.
lbs	Little Bluestem, 'The Blues'
Ns	Ninebark, 'Summer Wine'
smn	Salvia, 'May Night'
saj	Sedum, 'Autumn Joy'
Sgf	Spirea, 'Goldflame'
Sgl	Sumac, 'Gro-Low' Fragrant

N

0' 8' 16' 32'

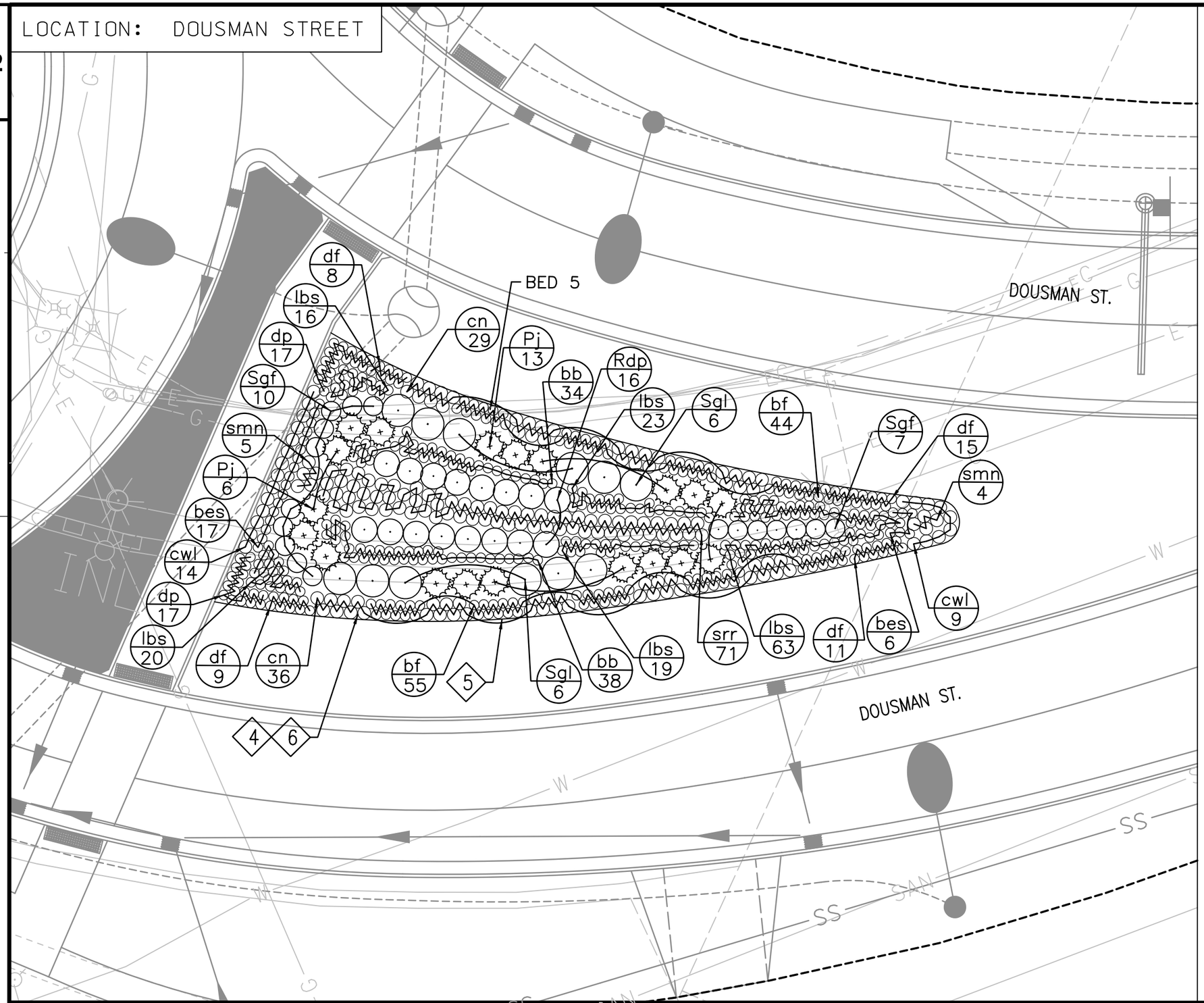
SCALE 1/16" = 1'-0"

8 OF 14

PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLANT LAYOUT ENLARGEMENT - BED 4	SHEET	E

FILE NAME : Q:2010-009 Brown County DOT\Shawano Ave\ 9202-08-80 Elmhurst Ave Extension\CAD\ 1 - Working Drawings\ 9202-08-80 ksd base.dgn
PLOT DATE : 22-January-2014 PLOT BY : rdeboer PLOT NAME : PLOT SCALE :
WISDOT/CADDS SHEET 42

LOCATION: DOUSMAN STREET



LEGEND

- abc / xx — PLANT SYMBOL / QUANTITY
- DECIDUOUS PLANT MATERIAL LOCATION
- EVERGREEN PLANT MATERIAL LOCATION
- 4 — SHREDDED HARDWOOD BARK MULCH
- 5 — ALUMINUM EDGING
- 6 — PLANTING MIXTURE

NOTES

SEE DETAILS FOR PLANTING MIXTURE DEPTHS AND LOCATIONS.

PLANT KEY

SYM	COMMON NAME
bb	Bee Balm, 'Marshall's Delight'
bes	Black-Eyed-Susan, 'City Garden'
bf	Blue Fescue, 'Elijah Blue'
cn	Calamint
cwl	Catmint, 'Walker's Low'
df	Daylily, 'Flava'
dp	Daylily, 'Pardon Me'
lbs	Little Bluestem, 'The Blues'
Pj	Pfitzer Juniper, 'Kallay's Compact'
Rdp	Rose, 'Dwarf Pavement'
smn	Salvia, 'May Night'
Sgf	Spirea, 'Goldflame'
Sgl	Sumac, 'Gro-Low' Fragrant
srr	Switch Grass, 'Ruby Ribbons'

N

0' 8' 16' 32'

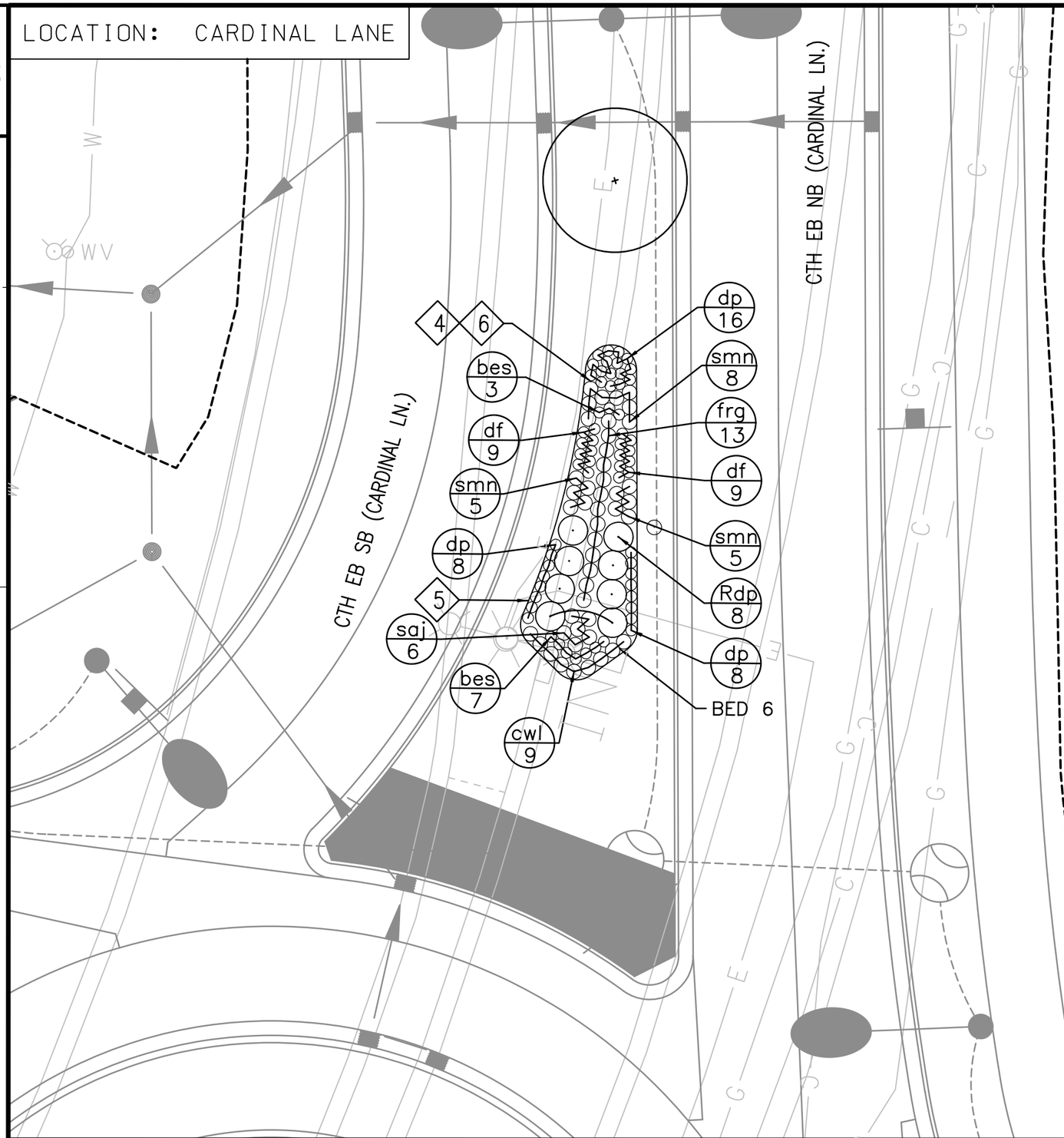
SCALE 1/16" = 1'-0"

9 OF 14

PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLANT LAYOUT ENLARGEMENT - BED 5	SHEET	E

FILE NAME : Q:2010-009 Brown County DOT\Shawano Ave\ 9202-08-80 Elmhurst Ave Extension\CAD\ 1 - Working Drawings\ 9202-08-80 ksd base.dgn
PLOT DATE : 22-January-2014 PLOT BY : rdeboer PLOT NAME : PLOT SCALE :
WISDOT/CADDS SHEET 42

LOCATION: CARDINAL LANE



LEGEND

- abc / xx — PLANT SYMBOL / QUANTITY
- DECIDUOUS PLANT MATERIAL LOCATION
- EVERGREEN PLANT MATERIAL LOCATION
- 4 — SHREDDED HARDWOOD BARK MULCH
- 5 — ALUMINUM EDGING
- 6 — PLANTING MIXTURE

NOTES

SEE DETAILS FOR PLANTING MIXTURE DEPTHS AND LOCATIONS.

PLANT KEY

SYM	COMMON NAME
bes	Black-Eyed-Susan, 'City Garden'
cwl	Catmint, 'Walker's Low'
df	Daylily, 'Flava'
dp	Daylily, 'Pardon Me'
frg	Feather Reed Grass, 'Karl Foerster'
Rdp	Rose, 'Dwarf Pavement'
smn	Salvia, 'May Night'
saj	Sedum, 'Autumn Joy'

0' 8' 16' 32'

SCALE 1/16" = 1'-0"

10 OF 14

PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLANT LAYOUT ENLARGEMENT - BED 6	SHEET	E

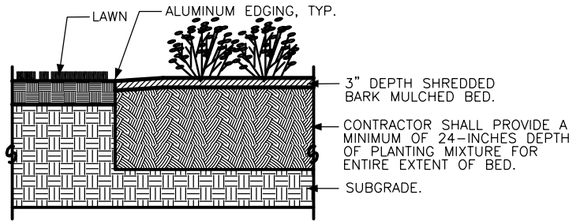
FILE NAME : Q:2010-009 Brown County DOT\Shawano Ave\ 9202-08-80 Elmhurst Ave Extension\CAD\ 1 - Working Drawings\ 9202-08-80 ksd base.dgn PLOT DATE : 22-January-2014 PLOT BY : rdeboer PLOT NAME : PLOT SCALE : WISDOT/CADDS SHEET 42

PLANT DATA TABLE

Symbol	Common Name	Scientific Name	Type	Average Mature Height	Size When Planted	Root Zone Mode	Minimum Size					Brace Or Guy	Fertilizer Units Required	Rodent Protection Required	Mulch Ring Required	Plant Bed Detail
							Ball/Pot		Root Spread	Plant Hole						
							Diameter	Depth		Diameter	Depth					
	Canopy Trees															
HA	Hackberry, Common 'Prairie Pride'	*Celtis occidentalis* 'Prairie Pride'	1T	40-50' Ht.	2.5" Cal.	B&B	28"	17"	-------	52"	17"	See SPV	6	Yes	64"	------
HT	Honeylocust, Thornless 'Imperial'	*Gleditsia triacanthos var. inermis* 'Impcole'	1T	30-35' Ht.	2.5" Cal.	B&B	28"	17"	-------	52"	17"	See SPV	6	Yes	64"	------
MF	Maple, Freeman 'Sienna Glen'	*Acer x freemanii* 'Sienna Glen'	1T	45-50' Ht.	2.5" Cal.	B&B	28"	17"	-------	52"	17"	See SPV	6	Yes	64"	------
	Deciduous Ornamental Trees															
CD	Crabapple, 'Donald Wyman'	*Malus* 'Donald Wyman'	3T	20' Ht.	2" Cal.	B&B	26"	15"	-------	50"	15"	See SPV	4	Yes	58"	------
CD1	Crabapple, 'Donald Wyman' (Shrub Form Tree)	*Malus* 'Donald Wyman' (Shrub Form Tree)	3T	20' Ht.	8' Ht.	B&B	26"	15"	-------	50"	15"	See SPV	4	Yes	58"	------
CP1	Crabapple, 'Pink Spires' (Shrub Form Tree)	*Malus* 'Pink Spires' (Shrub Form Tree)	3T	15' Ht.	8' Ht.	B&B	24"	14"	-------	48"	14"	See SPV	4	Yes	60"	------
CR	Crabapple, 'Red Jewel'	*Malus* 'Jewelcole'	3T	20' Ht.	2" Cal.	B&B	28"	17"	-------	52"	17"	See SPV	4	Yes	64"	------
CR1	Crabapple, 'Red Jewel' (Shrub Form Tree)	*Malus* 'Jewelcole' (Shrub Form Tree)	3T	20' Ht.	8' Ht.	B&B	28"	17"	-------	52"	17"	See SPV	4	Yes	64"	------
DC1	Dogwood, Cornelian Cherry 'Golden Glory' (Shrub Form Tree)	*Cornus mas* 'Golden Glory' (Shrub Form Tree)	3T	20-25' Ht.	6' Ht.	B&B	24"	14"	-------	48"	14"	See SPV	4	Yes	60"	
HW	Hawthorn, 'Winter King'	*Crataegus viridis* 'Winter King'	3T	20-25' Ht.	2" Cal.	B&B	24"	14"	-------	48"	14"	See SPV	4	Yes	60"	------
HW1	Hawthorn, 'Winter King' (Shrub Form Tree)	*Crataegus viridis* 'Winter King' (Shrub Form Tree)	3T	20-25' Ht.	8' Ht.	B&B	22"	12"	-------	46"	12"	See SPV	4	Yes	60"	BED 4
JT	Japanese Tree Lilac, 'Ivory Silk'	*Syringa reticulata* 'Ivory Silk'	3T	20-25' Ht.	2" Cal.	B&B	28"	17"	-------	52"	17"	See SPV	4	Yes	64"	------
JT1	Japanese Tree Lilac, 'Ivory Silk' (Shrub Form Tree)	*Syringa reticulata* 'Ivory Silk' (Shrub Form Tree)	3T	20-25' Ht.	8' Ht.	B&B	26"	15"	-------	50"	15"	See SPV	4	Yes	58"	------
MT	Maple, Tatarian	*Acer tataricum*	3T	15-20' Ht.	2" Cal.	B&B	26"	15"	-------	50"	15"	See SPV	4	Yes	58"	------
MT1	Maple, Tatarian (Shrub Form Tree)	*Acer tataricum* (Shrub Form Tree)	3T	15-20' Ht.	8' Ht.	B&B	26"	15"	-------	50"	15"	See SPV	4	Yes	58"	------
PC	Pear, Callery 'Cleveland Select'	*Pyrus calleryana* 'Chanticleer'	3T	25-35' Ht.	2" Cal.	B&B	28"	17"	-------	52"	17"	See SPV	4	Yes	64"	------
VB	Viburnum, Blackhaw 'Forest Rouge' (Shrub Form Tree)	*Viburnum prunifolium* 'McKRouge' (Shrub Form Tree)	4T	12-15' Ht.	6' Ht.	B&B	24"	14"	-------	48"	14"	See SPV	4	Yes	60"	------
	Evergreens															
AA	Arborvitae, American 'Emerald Green'	*Thuja occidentalis* 'Smaragd'	4E	12-14' Ht.	5' Ht.	B&B	20"	12"	-------	44"	12"	See SPV	3	No	BED	BED 3
AT	Arborvitae, American 'Techny'	*Thuja occidentalis* 'Techny'	4E	10-15' Ht.	5' Ht.	B&B	20"	12"	-------	44"	12"	See SPV	3	No	58"	------
JI3	Juniper, 'Iowa', 3-Foot Ht.	*Juniperus chinensis* 'Iowa', 3-Foot Ht.	4E	10-12' Ht.	3 Ht.	B&B	16"	10"	-------	40"	10"	See SPV	3	No	48"	------
JI5	Juniper, 'Iowa', 5-Foot Ht.	*Juniperus chinensis* 'Iowa', 5-Foot Ht.	4E	10-12' Ht.	5' Ht.	B&B	20"	12"	-------	44"	12"	See SPV	3	No	58"	BED 4
Pj	Pfitzer Juniper, 'Kallay's Compact'	*Juniperus chinensis* 'Kallay's Compact'	3E	2'-3'	2' Sp./#3	CONT	12"	8"	-------	36"	8"	-------	1	No	BED	BED 5
SH8	Spruce, Black Hills	*Picea glauca var. densata*	4E	40' Ht.	8' Ht.	B&B	27"	16"	-------	51"	16"	See SPV	4	No	62"	------
SS	Spruce, Serbian	*Picea omorika*	4E	40-50' Ht.	5' Ht.	B&B	20"	12"	-------	44"	12"	See SPV	4	No	56"	------
	Deciduous Ornamental Shrubs															
Hy	Hydrangea, Panicled 'Limelight'	*Hydrangea paniculata* 'Limelight'	2S	6-8' Ht.	3' Ht. / #5	CONT	20"	15"	-------	36"	15"	-------	1	No	BED	BED 3
Nd	Ninebark, 'Diablo'	*Physocarpus opulifolius* 'Diablo'	2S	4-8' Ht.	3' Ht. / #5	CONT	20"	15"	-------	36"	15"	-------	1	No	BED	BED 3
Ns	Ninebark, 'Summer Wine'	*Physocarpus opulifolius* 'Seward'	2S	5-6' Ht.	3' Ht. / #5	CONT	20"	15"	-------	36"	15"	-------	1	No	BED	BED 4
Rdp	Rose, 'Dwarf Pavement'	*Rosa rugosa* 'Dwarf Pavement'	1S	2-3' Ht.	18" Ht. / #3	CONT	12"	8"	-------	36"	8"	-------	1	No	BED	BED 5, 6
Sm	Smokebush, Purple 'Royal Purple'	*Cotinus coggygria* 'Royal Purple'	3S	10-15' Ht.	4' Ht./#5	CONT	20"	15"	-------	36"	15"	-------	1	No	BED	BED 3
Sgf	Spirea, 'Goldflame'	*Spiraea bumalda* 'Goldflame'	1S	2-3' Ht.	18" Ht. / #3	CONT	12"	8"	-------	36"	8"	-------	1	No	BED	BED 4, 5
St	Spirea, 'Tor'	*Spiraea betulifolia* 'Tor'	1S	2-3' Ht.	18" Ht. / #3	CONT	12"	8"	-------	36"	8"	-------	1	No	BED	BED 3
Sgl	Sumac, 'Gro-Low' Fragrant	*Rhus aromatica* 'Gro-Low'	2S	1-2' Ht.	2' Sp. / #3	CONT	12"	8"	-------	36"	8"	-------	1	No	BED	BED 4, 5
Ss	Sumac, Staghorn 'Tiger Eyes'	*Rhus typhina* 'Baltiger'	2S	3-6' Ht.	2' Ht. / #3	CONT	12"	8"	-------	36"	8"	-------	1	No	BED	BED 3
	Perennials / Ornamental Grasses															
apd	Aster, 'Purple Dome'	*Aster novae-angliae* 'Purple Dome'	1V	18-24" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 1,2,4
bb	Bee Balm, 'Marshall's Delight'	*Monarda didyma* 'Marshall's Delight'	1V	24-36" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 4,5
bes	Black-Eyed-Susan, 'City Garden'	*Rudbeckia fulgida* 'City Garden'	1V	12-18" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 2,4,5,6
bf	Blue Fescue, 'Elijah Blue'	*Festuca glauca* 'Elijah Blue'	1V	9-12"	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 5
cn	Calamint	*Calamintha nepeta subsp. Nepeta*	1V	12-18" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 1,2,5
cwl	Catmint, 'Walker's Low'	*Nepeta x faassenii* 'Walker's Low'	1V	12-18" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 2,4,5,6
cpm	Coneflower, Purple 'Magnus'	*Echinacea purpurea* 'Magnus'	1V	30-36" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 3
cws	Coneflower, 'White Swan'	*Echinacea purpurea* 'White Swan'	1V	24-36" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 4
da	Daylily, 'Alabama Jubilee'	*Hemerocallis* 'Alabama Jubilee'	1V	24-36" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 4
df	Daylily, 'Flava'	*Hemerocallis* 'Flava'	1V	30-36" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 1,2,4,5,6
dp	Daylily, 'Pardon Me'	*Hemerocallis* 'Pardon Me'	1V	12-18" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 1,2,4,5,6
frg	Feather Reed Grass, 'Karl Foerster'	*Calamagrostis acutiflora* 'Karl Foerster'	1V	3-5' Ht.	3 gal.	CONT	12"	14"	-------	20"	14"	-------	1	No	BED	BED 2,4,6
gfs	Gayfeather, Spiked 'Kobold'	*Liatris spicata* 'Kobold'	1V	18-24" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 1,2,4
lbs	Little Bluestem, 'The Blues'	*Schizachyrium scorparium* 'The Blues'	1V	24-36" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 1,2,4,5
rus	Russian Sage	*Perovskia atriplicifolia*	1V	3-5' Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 3
smn	Salvia, 'May Night'	*Salvia nemerosa* 'Mainacht'	1V	18-24" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 2,4,5,6
saj	Sedum, 'Autumn Joy'	*Sedum spectible* 'Autumn Joy'	1V	18-24" Ht.	1 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 4,6
sgn	Switch Grass, 'Northwind'	*Panicum virgatum* 'Northwind'	1V	4-6' Ht.	3 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 3
srr	Switch Grass, 'Ruby Ribbons'	*Panicum virgatum* 'Ruby Ribbons'	1V	3'-4' Ht.	3 gal.	CONT	8"	10"	-------	16"	10"	-------	1	No	BED	BED 5
	Bulbs															
-	Daffodil, 'Stainless'	*Narcissus* 'Stainless'	1B	18-22" Ht.	DNI	BULB	------	------	------	14"	6"	-------	------	No	BED	BED 4
-	Tulip, 'American Dream'	*Tulipa* 'American Dream'	1B	20"-22" Ht	12+cm	BULB	------	------	------	6"	6"	-------	------	No	BED	BED 4
-	Tulip, 'Jaap Groot'	*Tulipa* 'Jaap Groot'	1B	20"-22" Ht	12+cm	BULB	------	------	------	6"	6"	-------	------	No	BED	BED 4

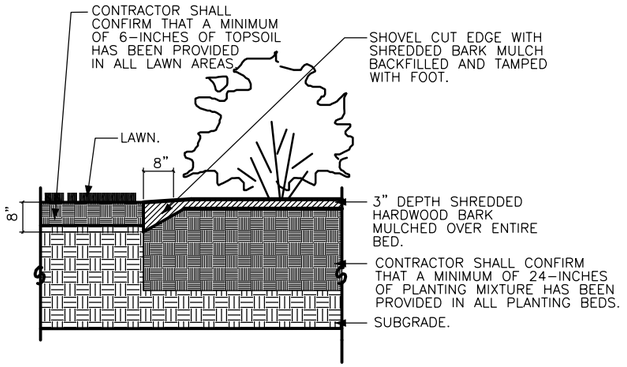
PLANT QUANTITIES TABLE

Symbol	Common Name	Scientific Name	Size When Planted	Root Zone Mode	Quantities									
					Sheet 2	Sheet 3	Sheet 4	Sheet 5	Sheet 6	Sheet 7	Sheet 8	Sheet 9	Sheet 10	Totals
	Canopy Trees													
HA	Hackberry, Common 'Prairie Pride'	*Celtis occidentalis* 'Prairie Pride'	2.5" Cal.	B&B	2									2
HT	Honeylocust, Thornless 'Imperial'	*Gleditsia triacanthos var. inermis* 'Impcole'	2.5" Cal.	B&B		3								3
MF	Maple, Freeman 'Sienna Glen'	*Acer x freemanii* 'Sienna Glen'	2.5" Cal.	B&B		3								3
	Deciduous Ornamental Trees													
CD	Crabapple, 'Donald Wyman'	*Malus* 'Donald Wyman'	2" Cal.	B&B	5									5
CD1	Crabapple, 'Donald Wyman' (Shrub Form Tree)	*Malus* 'Donald Wyman' (Shrub Form Tree)	8' Ht.	B&B		3								3
CP1	Crabapple, 'Pink Spires' (Shrub Form Tree)	*Malus* 'Pink Spires' (Shrub Form Tree)	8' Ht.	B&B	3									3
CR	Crabapple, 'Red Jewel'	*Malus* 'Jewelcole'	2" Cal.	B&B	5									5
CR1	Crabapple, 'Red Jewel' (Shrub Form Tree)	*Malus* 'Jewelcole' (Shrub Form Tree)	8' Ht.	B&B		2								2
DC1	Dogwood, Cornelian Cherry 'Golden Glory' (Shrub Form Tree)	*Cornus mas* 'Golden Glory' (Shrub Form Tree)	6' Ht.	B&B		3								3
HW	Hawthorn, 'Winter King'	*Crataegus viridis* 'Winter King'	2" Cal.	B&B	2									2
HW1	Hawthorn, 'Winter King' (Shrub Form Tree)	*Crataegus viridis* 'Winter King' (Shrub Form Tree)	8' Ht.	B&B		1					3			4
JT	Japanese Tree Lilac, 'Ivory Silk'	*Syringa reticulata* 'Ivory Silk'	2" Cal.	B&B	3		1							4
JT1	Japanese Tree Lilac, 'Ivory Silk' (Shrub Form Tree)	*Syringa reticulata* 'Ivory Silk' (Shrub Form Tree)	8' Ht.	B&B		3								3
MT	Maple, Tatarian	*Acer tataricum*	2" Cal.	B&B	4		2							6
MT1	Maple, Tatarian (Shrub Form Tree)	*Acer tataricum* (Shrub Form Tree)	8' Ht.	B&B	3	1								4
PC	Pear, Callery 'Cleveland Select'	*Pyrus calleryana* 'Chanticleer'	2" Cal.	B&B	12									12
VB	Viburnum, Blackhaw 'Forest Rouge' (Shrub Form Tree)	*Viburnum prunifolium* 'McKRouge' (Shrub Form Tree)	6' Ht.	B&B	4	10								14
	Evergreens													
AA	Arborvitae, American 'Emerald Green'	*Thuja occidentalis* 'Smaragd'	5' Ht.	B&B						6				6
AT	Arborvitae, American 'Techny'	*Thuja occidentalis* 'Techny'	5' Ht.	B&B		12								12
JI3	Juniper, 'Iowa', 3-Foot Ht.	*Juniperus chinensis* 'Iowa', 3-Foot Ht.	3' Ht.	B&B		16								16
JI5	Juniper, 'Iowa', 5-Foot Ht.	*Juniperus chinensis* 'Iowa', 5-Foot Ht.	5' Ht.	B&B	3	22					12			37
Pj	Pfitzer Juniper, 'Kallay's Compact'	*Juniperus chinensis* 'Kallay's Compact'	2' Sp./#3	CONT						3		19		22
SH8	Spruce, Black Hills	*Picea glauca var. densata*	8' Ht.	B&B	5	8								13
SS	Spruce, Serbian	*Picea omorika*	5' Ht.	B&B	1	2								3
	Deciduous Ornamental Shrubs													
Hy	Hydrangea, Panicled 'Limelight'	*Hydrangea paniculata* 'Limelight'	3' Ht. / #5	CONT						2				2
Nd	Ninebark, 'Diablo'	*Physocarpus opulifolius* 'Diablo'	3' Ht. / #5	CONT						6				6
Ns	Ninebark, 'Summer Wine'	*Physocarpus opulifolius* 'Seward'	3' Ht. / #5	CONT							15			15
Rdp	Rose, 'Dwarf Pavement'	*Rosa rugosa* 'Dwarf Pavement'	18" Ht. / #3	CONT								16	8	24
Sm	Smokebush, Purple 'Royal Purple'	*Cotinus coggygria* 'Royal Purple'	4' Ht./#5	CONT						3				3
Sgf	Spirea, 'Goldflame'	*Spiraea bumalda* 'Goldflame'	18" Ht. / #3	CONT							31	17		48
St	Spirea, 'Tor'	*Spiraea betulifolia* 'Tor'	18" Ht. / #3	CONT						13				13
Sgl	Sumac, 'Gro-Low' Fragrant	*Rhus aromatica* 'Gro-Low'	2' Sp. / #3	CONT							24	12		36
Ss	Sumac, Staghorn 'Tiger Eyes'	*Rhus typhina* 'Baltiger'	2' Ht. / #3	CONT						5				5
	Perennials / Ornamental Grasses													
apd	Aster, 'Purple Dome'	*Aster novae-angliae* 'Purple Dome'	1 gal.	CONT				8	3		21			32
bb	Bee Balm, 'Marshall's Delight'	*Monarda didyma* 'Marshall's Delight'	1 gal.	CONT							18	72		90
bes	Black-Eyed-Susan, 'City Garden'	*Rudbeckia fulgida* 'City Garden'	1 gal.	CONT					22		76	23	10	131
bf	Blue Fescue, 'Elijah Blue'	*Festuca glauca* 'Elijah Blue'	1 gal.	CONT								99		99
cn	Calamint	*Calamintha nepeta subsp. nepeta*	1 gal.	CONT				12	11			65		88
cwl	Catmint, 'Walker's Low'	*Nepeta x faassenii* 'Walker's Low'	1 gal.	CONT					10		51	23	9	93
cpm	Coneflower, Purple 'Magnus'	*Echinacea purpurea* 'Magnus'	1 gal.	CONT						20				20
cws	Coneflower, 'White Swan'	*Echinacea purpurea* 'White Swan'	1 gal.	CONT							42			42
da	Daylily, 'Alabama Jubilee'	*Hemerocallis* 'Alabama Jubilee'	1 gal.	CONT							72			72
df	Daylily, 'Flava'	*Hemerocallis* 'Flava'	1 gal.	CONT				6	14	70	36	43	18	187
dp	Daylily, 'Pardon Me'	*Hemerocallis* 'Pardon Me'	1 gal.	CONT				6	15		110	34	32	197
frg	Feather Reed Grass, 'Karl Foerster'	*Calamagrostis acutiflora* 'Karl Foerster'	3 gal.	CONT					13		75		13	101
gfs	Gayfeather, Spiked 'Kobold'	*Liatris spicata* 'Kobold'	1 gal.	CONT				7	5		33			45
lbs	Little Bluestem, 'The Blues'	*Schizachyrium scorparium* 'The Blues'	1 gal.	CONT				86	174		45	141		446
rus	Russian Sage	*Perovskia atriplicifolia*	1 gal.	CONT						9				9
smn	Salvia, 'May Night'	*Salvia nemerosa* 'Mainacht'	1 gal.	CONT					12		48	9	18	87
saj	Sedum, 'Autumn Joy'	*Sedum spectible* 'Autumn Joy'	1 gal.	CONT							41		6	47
sgn	Switch Grass, 'Northwind'	*Panicum virgatum* 'Northwind'	3 gal.	CONT		6				21				27
srr	Switch Grass, 'Ruby Ribbons'	*Panicum virgatum* 'Ruby Ribbons'	3 gal.	CONT								71		71
	Bulbs													
-	Daffodil, 'Stainless'	*Narcissus* 'Stainless'	DN I	BULB										90
-	Tulip, 'American Dream'	*Tulipa* 'American Dream'	12+cm	BULB										45
-	Tulip, 'Jaap Groot'	*Tulipa* 'Jaap Groot'	12+cm	BULB										45



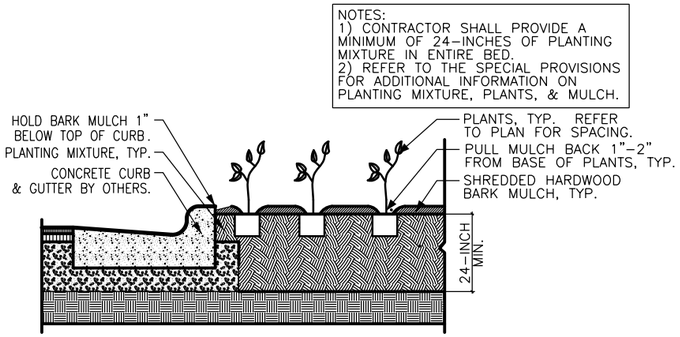
1 ALUMINUM EDGING, BEDS 1, 2, 5 & 6

DETAIL
NOT TO SCALE



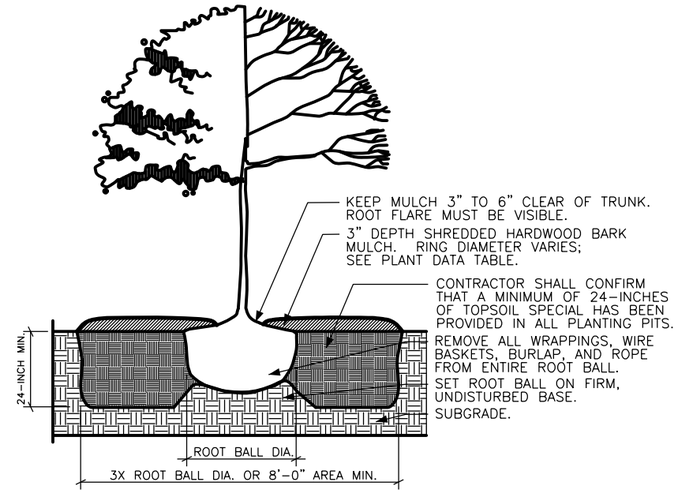
2 SHOVEL CUT EDGING BED 3

DETAIL
NOT TO SCALE



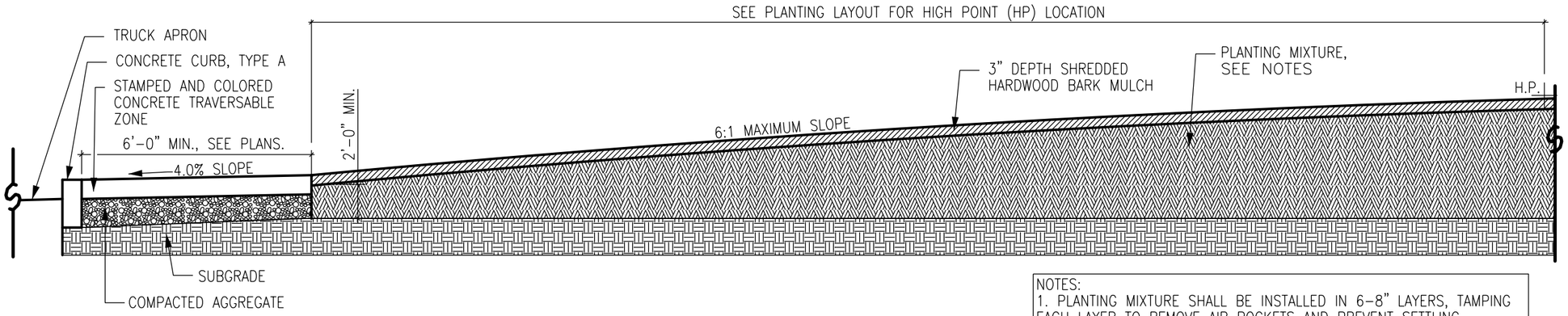
3 PLANTING BED DETAIL BED 1 & 2

DETAIL
NOT TO SCALE



4 NON-BED TREE PLANTING DETAIL

DETAIL
NOT TO SCALE



NOTES:
1. PLANTING MIXTURE SHALL BE INSTALLED IN 6-8" LAYERS, TAMPING EACH LAYER TO REMOVE AIR POCKETS AND PREVENT SETTLING. PLANTING MIXTURE SHALL BE NO LESS THAN 24" DEPTH AT ANY GIVEN POINT. DEPTH WILL INCREASE TOWARD CENTER OF ROUNDABOUT.
2. H.P. = HIGH POINT. SEE PLANS FOR ADDITIONAL INFORMATION.

5 ROUNDABOUT LANDSCAPE SECTION BED 4

DETAIL
NOT TO SCALE

PROJECT NO: 9202-08-80	HWY: USH 41 / STH 29	COUNTY: BROWN	PLANTING DETAILS	SHEET 65	E

FILE NAME : Q:2010-009 Brown County DOT\Shawano Ave\ 9202-08-80 Elmhurst Ave Extension\CAD\ 1 - Working Drawings\ 9202-08-80 ksd base.dgn
PLOT DATE : 22-January-2014 PLOT BY : rdeboer PLOT NAME : PLOT SCALE :
WISDOT/CADDS SHEET 42

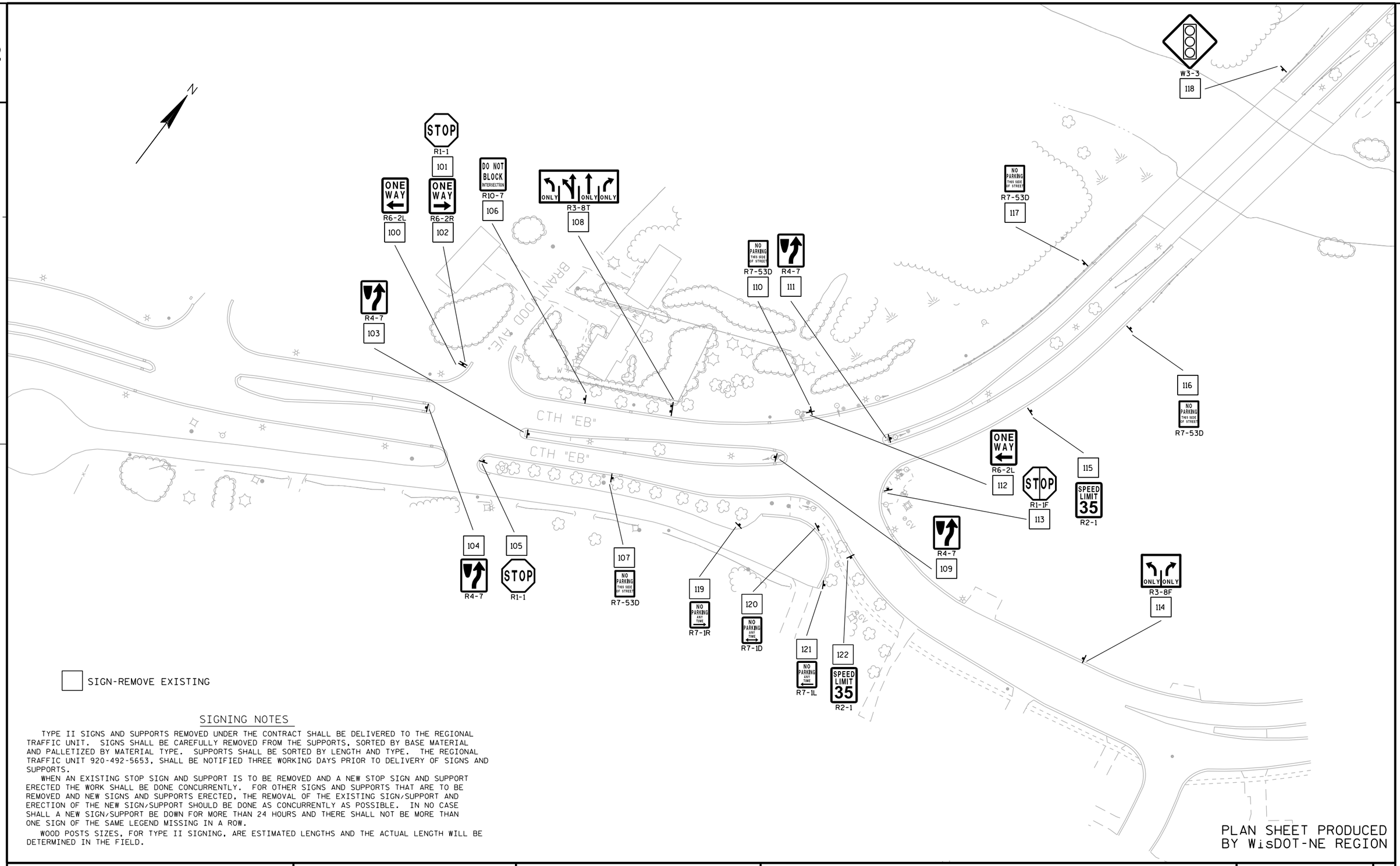
SHEET 2		
POINT	STATION	OFFSET
100	103'EBN'+25.73	31.50
101	103'EBN'+55.78	31.50
102	103'EBN'+85.84	31.50
103	104'EBN'+16.89	31.50
104	104'EBN'+48.70	31.50
105	106'EBN'+16.50	31.50
106	106'EBN'+46.50	31.50
107	106'EBN'+75.99	31.50
108	107'EBN'+04.25	31.50
109	107'EBN'+31.49	51.36
110	107'EBN'+58.89	51.50
111	102'EBN'+91.87	-3.56
112	103'EBN'+34.32	-9.77
113	103'EBN'+76.05	-9.57
114	104'EBN'+05.90	-10.49
115	104'EBN'+40.68	-10.20
116	104'EBN'+69.75	-9.35
117	105'EBN'+00.47	-8.40
118	105'EBN'+30.55	-7.86
119	105'EBN'+60.95	-7.94
120	105'EBN'+92.51	-7.95
121	106'EBN'+21.21	-8.09
122	106'EBN'+52.47	-7.91
123	106'EBN'+82.76	-7.81
124	107'EBN'+12.99	-7.04

SHEET 2 CONT...		
125	103'EBS'+05.32	-34.50
126	103'EBS'+46.38	-32.29
127	103'EBS'+76.04	-32.13
128	104'EBS'+04.74	-31.50
129	104'EBS'+33.40	-31.50
130	104'EBS'+62.02	-31.50
131	103'EBS'+42.13	-132.95
132	103'EBS'+49.70	-93.62
133	103'EBS'+40.80	-58.79
134	103'EBS'+53.89	-61.81
135	103'EBS'+91.42	-77.62
136	103'EBS'+89.38	-60.08
137	104'EBS'+22.09	-59.74
138	104'EBS'+39.23	-88.05
139	104'EBS'+62.72	-61.18
140	104'EBS'+76.76	-88.17

SHEET 3		
POINT	STATION	OFFSET
200	107'EBN'+44.77	-8.55
201	108'EBN'+94.12	-4.65
202	107'EBN'+86.10	51.50
203	108'EBN'+15.79	51.50
204	108'EBN'+45.79	51.57
205	108'EBN'+90.00	51.48
206	109'EBN'+43.19	51.55
207	109'EBN'+72.54	57.78
208	---------	-------
209	30'DE'+94.64	47.71
210	31'DE'+24.28	53.82
211	10'EW'+69.90	50.41
212	10'EW'+75.40	43.08
213	11'EW'+22.46	38.66
214	11'EW'+36.26	36.57
215	12'EW'+00.50	41.20
216	12'EW'+07.01	45.31
217	12'EW'+21.38	63.94
218	108'EBS'+95.29	-45.51
219	10'EW'+93.15	20.50
220	11'EW'+28.40	18.99
221	11'EW'+64.25	19.00
222	12'EW'+23.64	30.75
223	12'EW'+61.67	55.21
224	12'EW'+65.11	62.61
225	13'EW'+21.30	75.08
226	109'EBS'+29.98	-52.85
227	109'EBS'+35.30	-37.51

SHEET 3 CONT...		
228	12'EW'+04.63	-32.93
229	12'EW'+16.79	-49.95
230	12'EW'+44.98	-36.76
231	12'EW'+45.86	-21.49
232	12'EW'+65.09	-22.62
233	12'EW'+91.49	-22.48
234	13'EW'+00.91	-22.57
235	13'EW'+17.44	-22.80
236	13'EW'+27.06	-23.17
237	13'EW'+49.24	-23.78
238	13'EW'+65.25	-24.66
239	13'EW'+70.93	-28.96
240	14'EW'+05.36	-32.36
241	112'EBN'+00.46	-19.50
242	111'EBN'+92.85	-16.27
243	111'EBN'+99.54	-10.95
244	31'DE'+32.43	-60.23
245	31'DE'+18.07	-18.78
246	32'DE'+41.10	-19.33

SHEET 4		
POINT	STATION	OFFSET
300	112'EBN'+36.95	-11.37
301	112'EBN'+60.33	-10.36
302	113'EBN'+10.18	-11.19
303	113'EBN'+60.33	-11.95



SIGN-REMOVE EXISTING

SIGNING NOTES

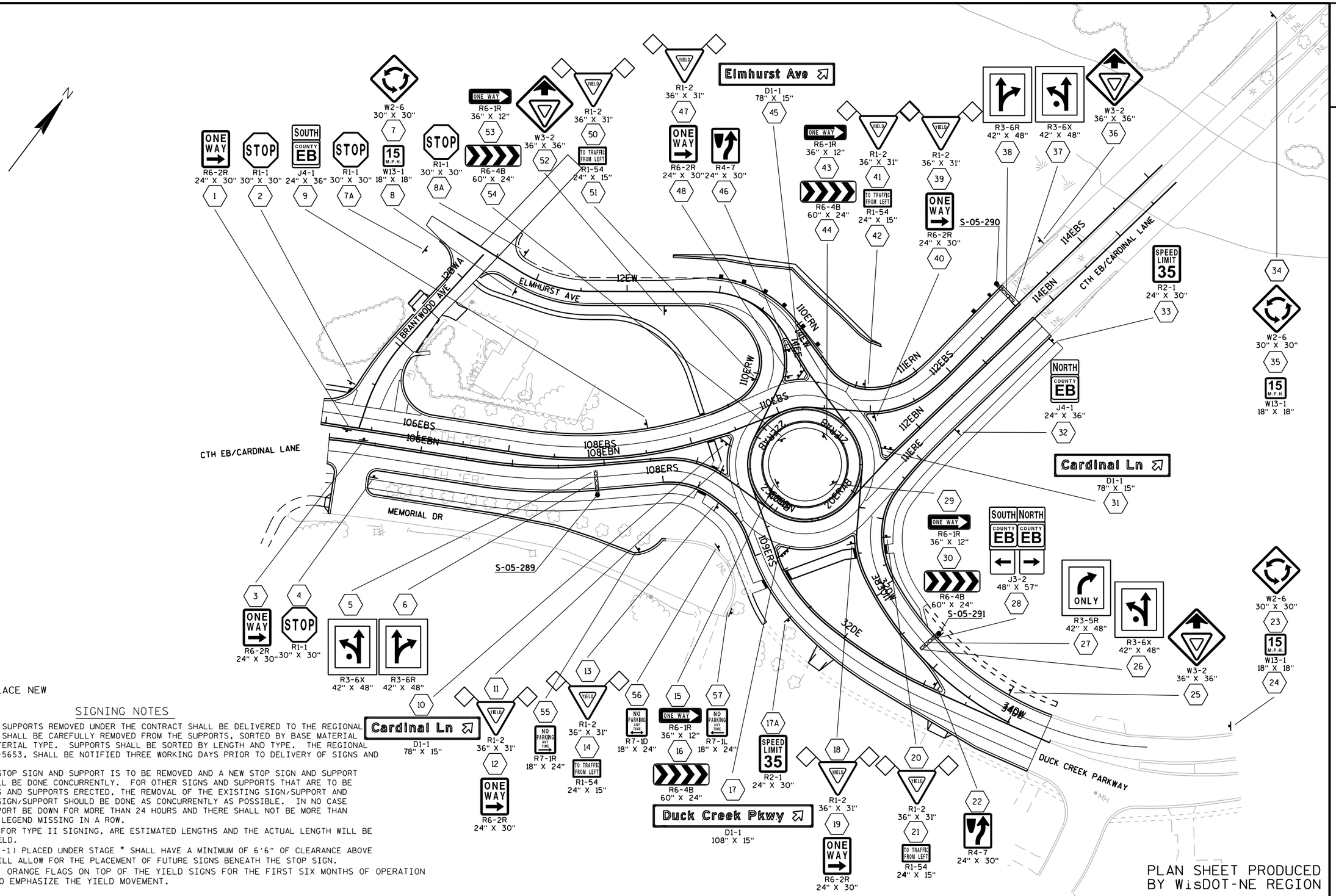
TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 9202-08-80	HWY: USH 41	COUNTY: BROWN	SIGN REMOVALS-TYPE II	SHEET 67	E



SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

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WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

INSTALL 18" X 18" ORANGE FLAGS ON TOP OF THE YIELD SIGNS FOR THE FIRST SIX MONTHS OF OPERATION OF THE ROUNDABOUT TO EMPHASIZE THE YIELD MOVEMENT.

PLAN SHEET PRODUCED BY WisDOT-NE REGION

PROJECT NO: 9202-08-80	HWY: USH 41	COUNTY: BROWN	PERMANENT SIGNING PLAN	SHEET 68	E

2

STREET LIGHTING PLANS PREPARED BY

WISCONSIN
MIKE D.
SCARMON
E-37613
EVANSVILLE,
WI
PROFESSIONAL ENGINEER

02-01-2014
(DATE)

(SIGNATURE)

NOTES:

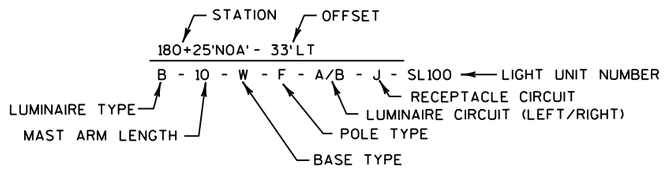
1) THE ENGINEER SHALL APPROVE THE FINAL LOCATION FOR ALL CONCRETE BASES IN THE FIELD PRIOR TO INSTALLATION. REQUEST STAKING A MINIMUM OF 3 DAYS IN ADVANCE OF INSTALLING.

2) THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

3) REFER TO LANDSCAPING PLANS FOR PLANTING LOCATIONS. ROUTE CONDUIT AND PLACE PULLBOXES OUTSIDE OF LANDSCAPED AREAS TO AVOID CONFLICTS.

4) PROJECT 9202-07-71 (STH 29 INTERCHANGE PROJECT) INCLUDES LIGHTING REMOVALS WITHIN THE AREA OF THIS PROJECT. REFER TO PLANS AND SPECIFICATIONS FOR THE 9202-07-71 PROJECT FOR ADDITIONAL ELECTRICAL WORK PLANNED FOR THIS AREA.

LIGHTING PLAN LEGEND



TWIN ARM LIGHTING UNIT ON CONCRETE BASE

SINGLE ARM LIGHTING UNIT ON CONCRETE BASE

LIGHTING CONTROL CABINET & BASE

PULL BOX (24" X 42" STEEL)

LIGHTING CONDUIT (REFER TO PLANS & MISC. QUANTITIES FOR SIZE, TYPE AND WIRING.)

X — REMOVE EXISTING STREET LIGHT CONCRETE BASE (STREET LIGHT REMOVED BY OTHERS)

PB — REMOVE EXISTING PULLBOX

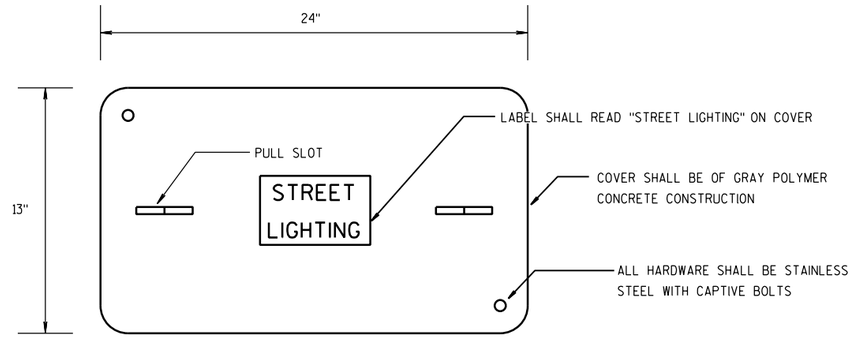
EXISTING LIGHTING UNIT

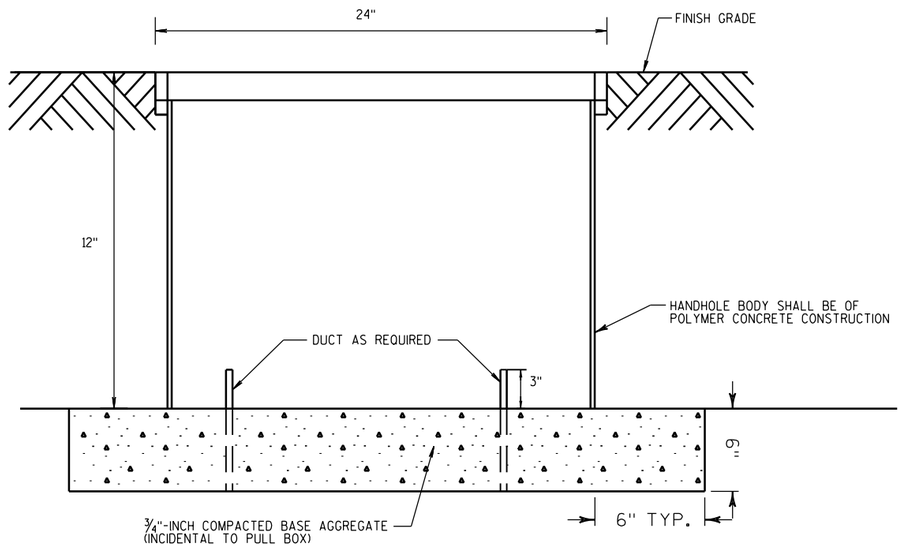
EXISTING PULLBOX

EXISTING CONDUIT

ABBREVIATIONS

PWO - PULLWIRE ONLY REQ'D
W - CONCRETE BASES TYPE W
B - BOX STYLE LUMINAIRE LED - INSTALL ONLY
10 - STREET LIGHT MAST ARM 10-FOOT - INSTALL ONLY
F - FIBERGLASS STREET LIGHT POLE - INSTALL ONLY





POLYMER CONCRETE PULLBOX

NO SCALE

2

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	LIGHTING - CONSTRUCTION DETAILS	SHEET 69	E

2

Notes:

1. 28-day concrete compressive strength 4000 psi.

2. Maximum reveal of 6 inches for foundation.

3. Rebar cage diameter 22-5/8 inches. Vertical bars to be evenly spaced approximately 5.92 inches.

4. Threaded 6", 8TPI, 3 inch bend, hot dip galvanized top 9" with one nut and one washer both galvanized. Bolts to be as per ASTM Standard F1554-99 Grade 105. Minimum yield strength of bolt and nut to meet ASTM A325 requirements. Bolt/nut dimensions to meet ANSI B18.2.1 and B18.2.2 requirements, and galvanizing will be as specified in ASTM Standard A-153.

5. Threaded 8 TPI, galvanized. Minimum yield strength of nut to meet ASTM A325 requirements. Nut dimension to meet ANSI B18.2.1 and B18.2.2 requirements, and galvanizing will be as specified in ASTM Standard A-153.

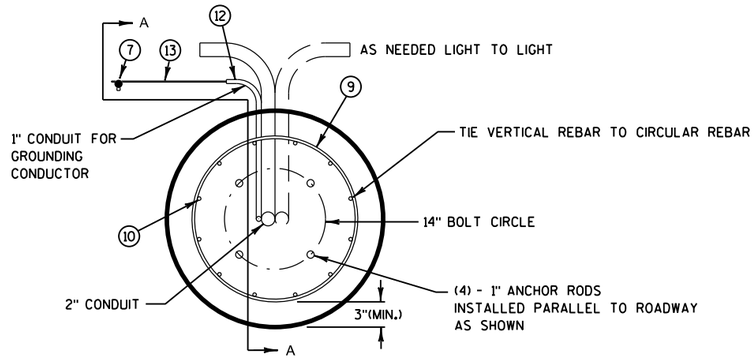
6. Inside diameter of 1-1/16", galvanized steel. Washer to be as per ASTM Standard A-325, dimensions to be as per ANSI specification for structural joints using ASTM A-325 or A-490 bolts - Table 1. All hot dip galvanizing to be as per ASTM Standard A-153.

7. Cap conduit ends.

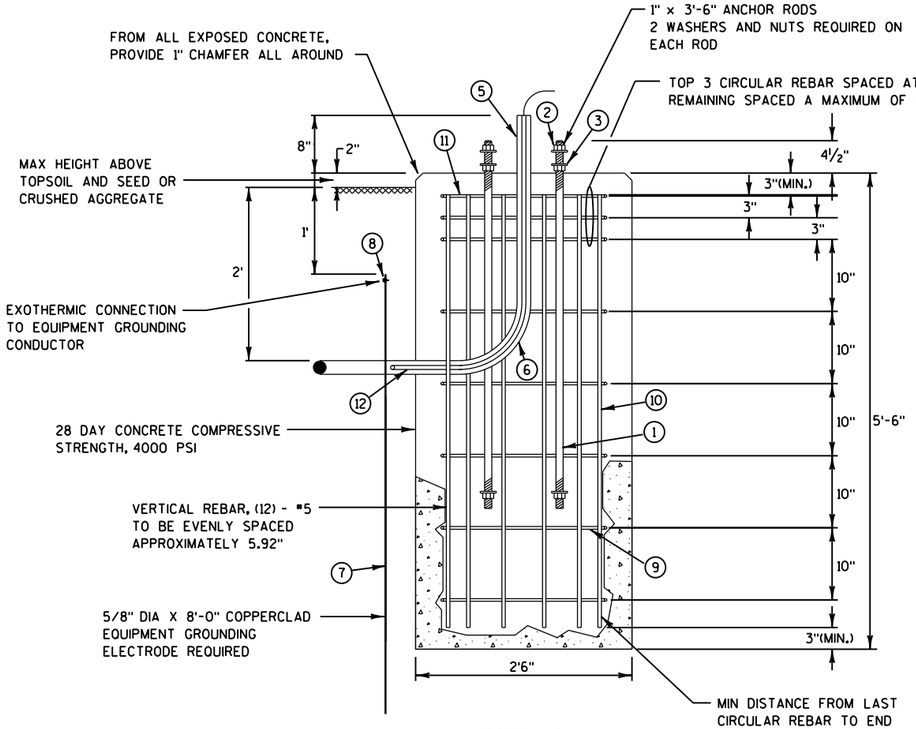
FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE.

FORMING SHALL BE REMOVED AFTER CONCRETE HAS SET

FORMING DETAIL



PLAN VIEW

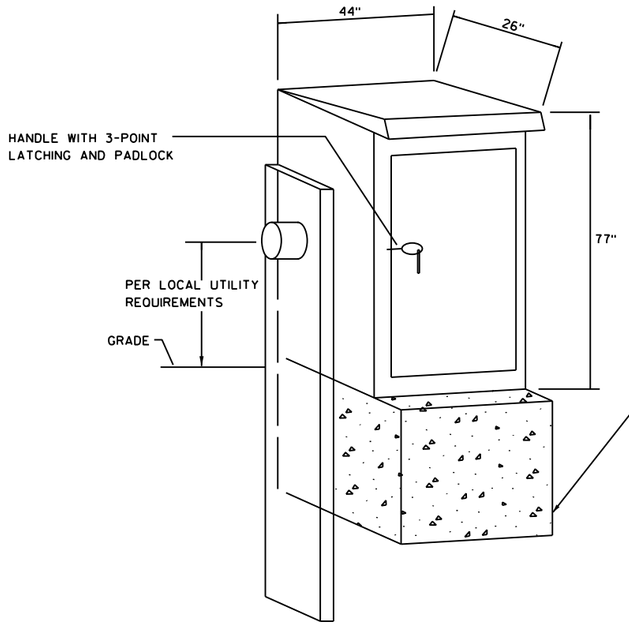


SECTION VIEW A-A

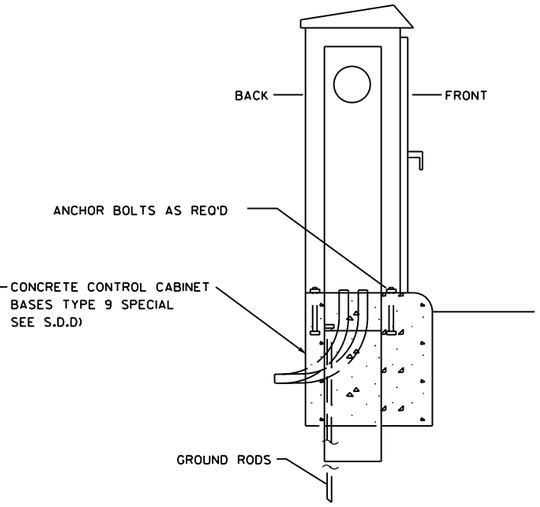
ITEM	MATERIAL	NO. REQ.	ITEM	MATERIAL	NO. REQ.
1	ANCHOR BOLT, 1" X 36", NOTE 4	4	8	GROUND ROD CONNECTOR, 5/8"	1
2	HEAVY HEX NUT TO FIT ANCHOR BOLT, NOTE 5	8	9	CIRCULAR REINFORCING BAR, 22-5/8"	8
3	WASHER, 1" NOTE 6	8	10	REINFORCING BAR, #5	12
4	NOT USED		11	TIE WIRE, REINFORCING BAR CAGE	AS REQ.
5	2" SCH 40 CONDUIT	AS REQ.	12	1" FLEXIBLE CONDUIT	AS REQ.
6	2" SCH 40 CONDUIT, 90° BEND	AS REQ.	13	#4 str AWG COPPER WIRE	AS REQ.
7	GROUND ROD, 5/8" X 8'-0"	1			

CONCRETE BASE TYPE W

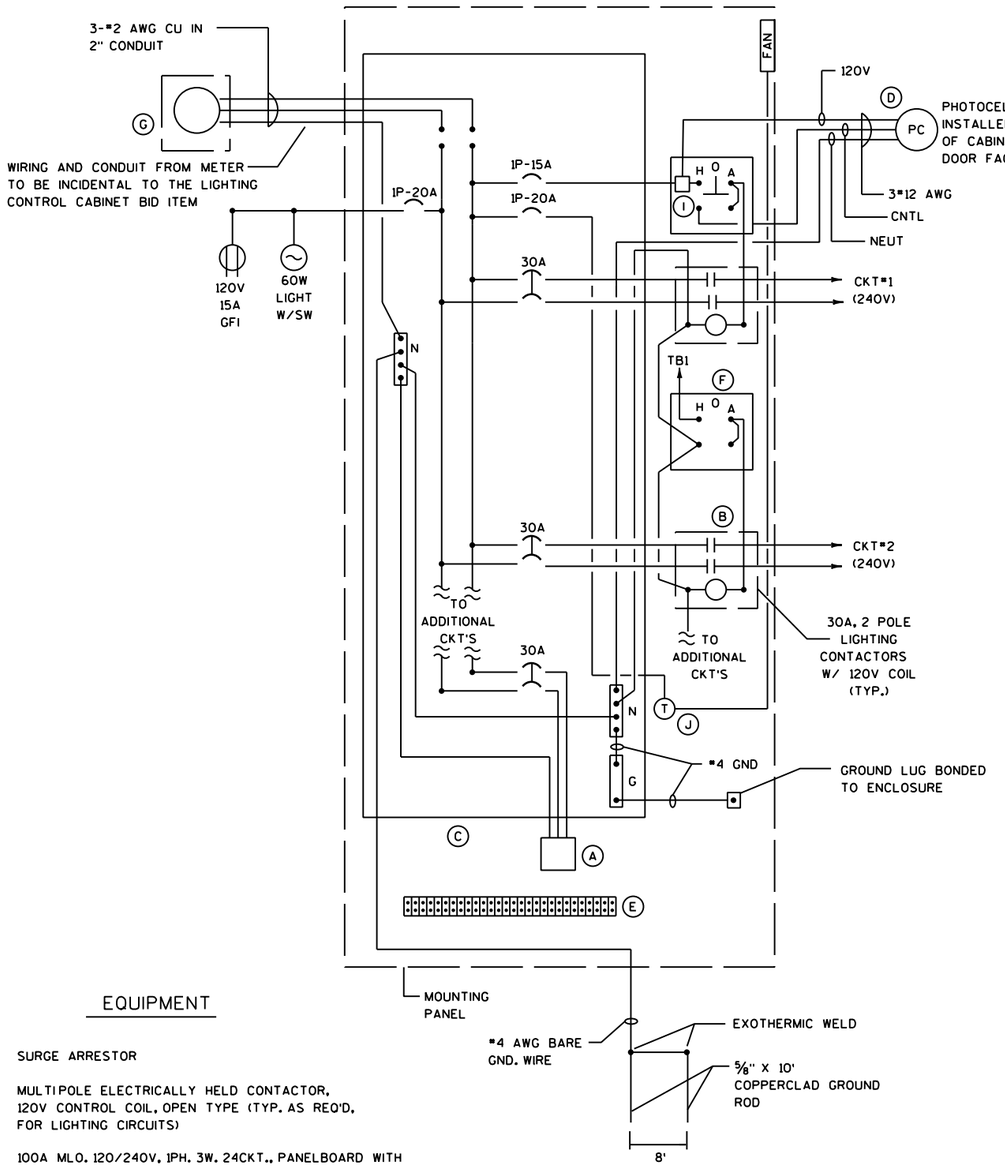
NO SCALE



CABINET VIEW



SIDE VIEW



CONTROL DIAGRAM

NOTES:

ALL CONTROL WIRING SHALL BE COLOR CODED #12 AWG. XLP UNLESS OTHERWISE NOTED.

ALL POWER AND CONTROL WIRING SHALL BE NEATLY ROUTED, LABELED, AND SUPPORTED.

THE LIGHTING CONTROL CABINET SHALL BE COMPLETELY WIRED UP TO THE FIELD WIRING TERMINATION STRIP IN THE CONTRACTORS SHOP AND TESTED PRIOR TO THE INSTALLATION AT SITE.

A COPY OF THIS SHEET WITH AS-BUILT (RECORD) CONDITIONS SHALL BE PUT IN A PLASTIC PROTECTOR IN THE CABINET.

THE CONTRACTOR SHALL COMPLY WITH LOCAL UTILITY INSTALLATION REQUIREMENTS.

USE #10 AWG XLP CONDUCTORS FROM THE 30A CB'S TO THE FIELD WIRING TERMINATION STRIP. PROVIDE A GROUND WIRE AND NEUTRAL WIRE TO FIELD WIRING TERMINATION STRIP FROM PANELBOARD FOR EACH UNDERGROUND CABLE RUN TO LIGHTING UNITS AS REQUIRED.

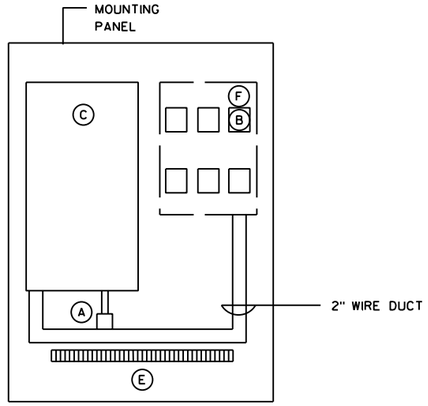
POSITION FAN AS THE VILLAGE DIRECTS

CABINET DOOR TO OPEN AWAY FROM ROADWAY.

CABINET SHALL NOT OVERLAP THE CONCRETE CONTROL BASE.

CONFIRM METER PLACEMENT WITH VILLAGE AND UTILITY. PLACE METER AS REQUIRED FOR MAINTAINING BENDING RADIUS OF CONDUCTORS.

ATTACH ALL EQUIPMENT TO CABINET MOUNTING CHANNEL.



EQUIPMENT LAYOUT

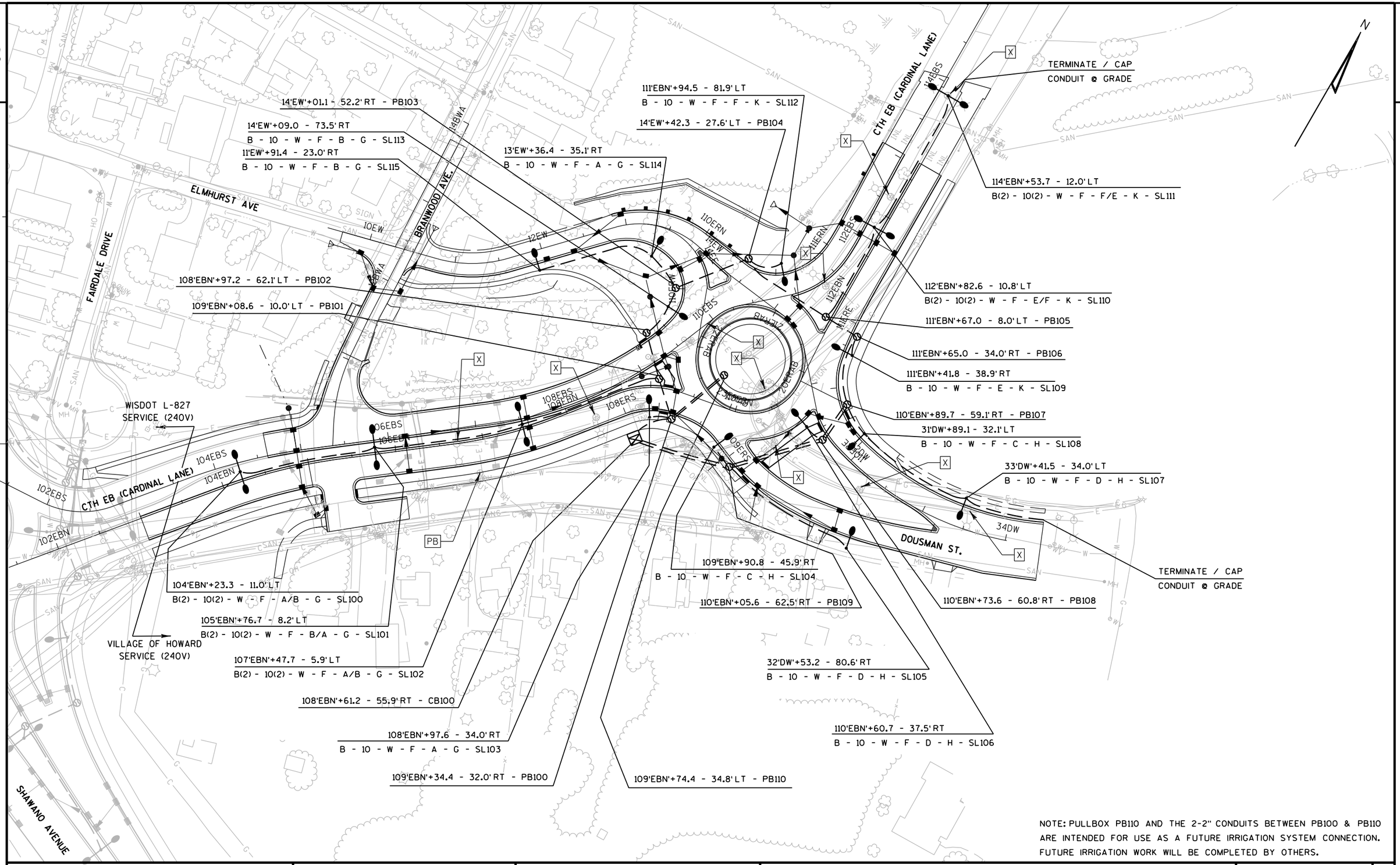
EQUIPMENT

- (A) SURGE ARRESTOR
- (B) MULTIPOLE ELECTRICALLY HELD CONTACTOR, 120V CONTROL COIL, OPEN TYPE (TYP. AS REQ'D, FOR LIGHTING CIRCUITS)
- (C) 100A MLO. 120/240V, 1PH. 3W. 24CKT., PANELBOARD WITH BREAKERS, 22000 A RMS INTERRUPTING CAPACITY.
- (D) BUTTON TYPE PHOTOCELL, 120V.
- (E) FIELD WIRING TERMINATION STRIP (40 BLOCKS)
- (F) H-O-A SWITCH (TYP. AS REQ'D)
- (G) 100A, 120/240V, 1 PH. 3W METER PEDESTAL
- (I) CONTROL TERMINAL BLOCK, TB1
- (J) THERMOSTAT FOR FAN CONTROL

LIGHTING CONTROL CABINET

NO SCALE

2

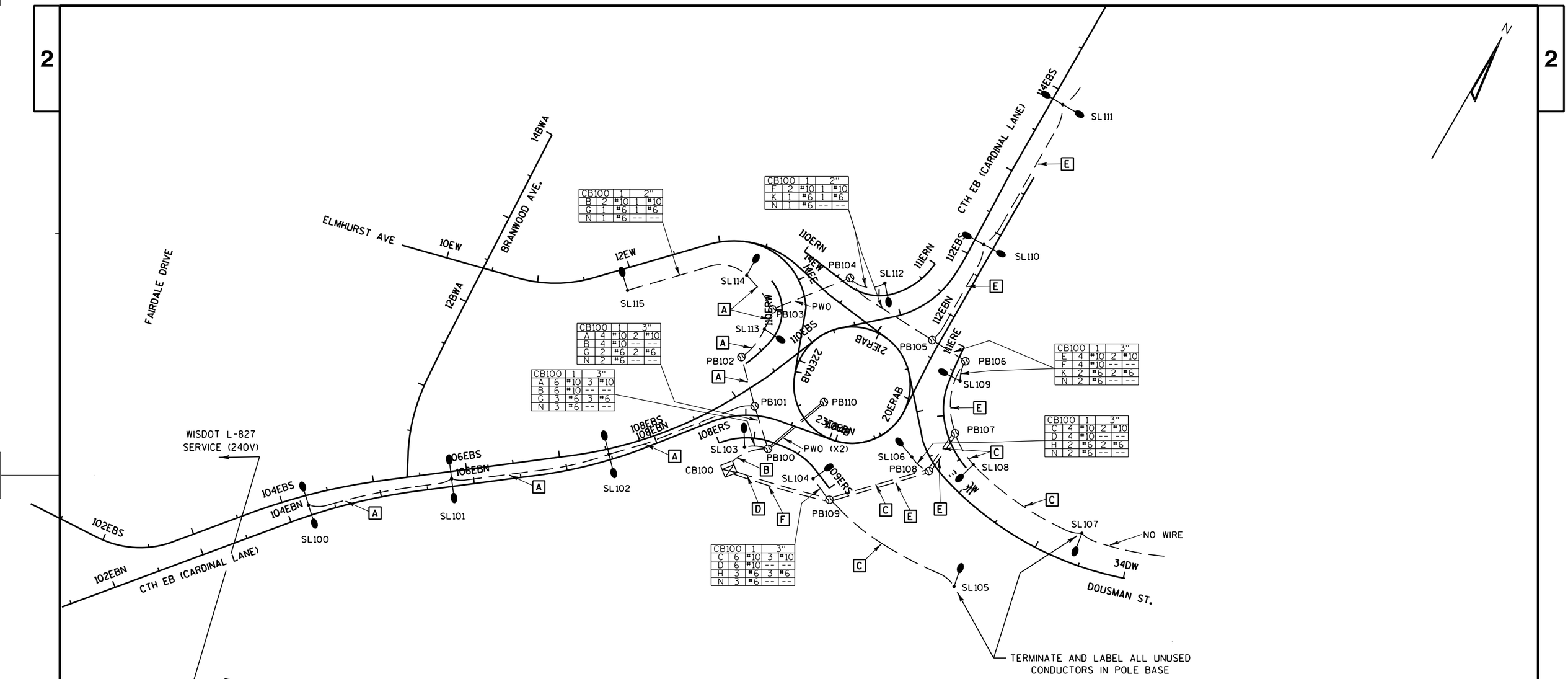


NOTE: PULLBOX PB110 AND THE 2-2" CONDUITS BETWEEN PB100 & PB110 ARE INTENDED FOR USE AS A FUTURE IRRIGATION SYSTEM CONNECTION. FUTURE IRRIGATION WORK WILL BE COMPLETED BY OTHERS.

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	LIGHTING PLANS	SHEET	E

FILE NAME : G:\WDOTNE\WNE30-0739\BROWN COUNTY - 02\9202-08-80 (ELMURST ROUNDABOUT)\DGN\Sheets\023501_LP.dgn PLOT DATE : 1/28/2014 PLOT BY : KL Engineering PLOT NAME : PLOT SCALE :

2



CB100	1	2"		
B	2	#10	1	#10
G	1	#6	1	#6
N	1	#6	--	--

CB100	1	2"		
F	2	#10	1	#10
K	1	#6	1	#6
N	1	#6	--	--

CB100	1	3"		
A	4	#10	2	#10
B	4	#10	--	--
G	2	#6	2	#6
N	2	#6	--	--

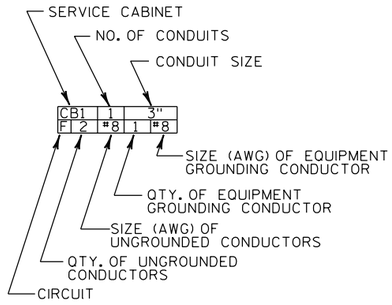
CB100	1	3"		
A	6	#10	3	#10
B	6	#10	--	--
G	3	#6	3	#6
N	3	#6	--	--

CB100	1	3"		
F	4	#10	2	#10
F	4	#10	--	--
K	2	#6	2	#6
N	2	#6	--	--

CB100	1	3"		
C	4	#10	2	#10
D	4	#10	--	--
H	2	#6	2	#6
N	2	#6	--	--

CB100	1	3"		
C	6	#10	3	#10
D	6	#10	--	--
H	3	#6	3	#6
N	3	#6	--	--

CONDUIT/CONDUCTOR LEGEND



A/C/E - BLACK
B/D/F - RED
240V PHASE TO PHASE
G - BROWN
H - BLUE
K - YELLOW
120V ISOLATED NEUTRAL

A = CB100 | 1 | 2" | A | 2 | #10 | 1 | #10 | B | 2 | #10 | -- | -- | C | 1 | #6 | 1 | #6 | N | 1 | #6 | -- | -- — 240V / 120V

B = CB100 | 1 | 3" | A | 2 | #10 | 1 | #10 | B | 2 | #10 | -- | -- | C | 1 | #6 | 1 | #6 | N | 1 | #6 | -- | -- — 240V / 120V

C = CB100 | 1 | 2" | C | 2 | #10 | 1 | #10 | D | 2 | #10 | -- | -- | H | 1 | #6 | 1 | #6 | N | 1 | #6 | -- | -- — 240V / 120V

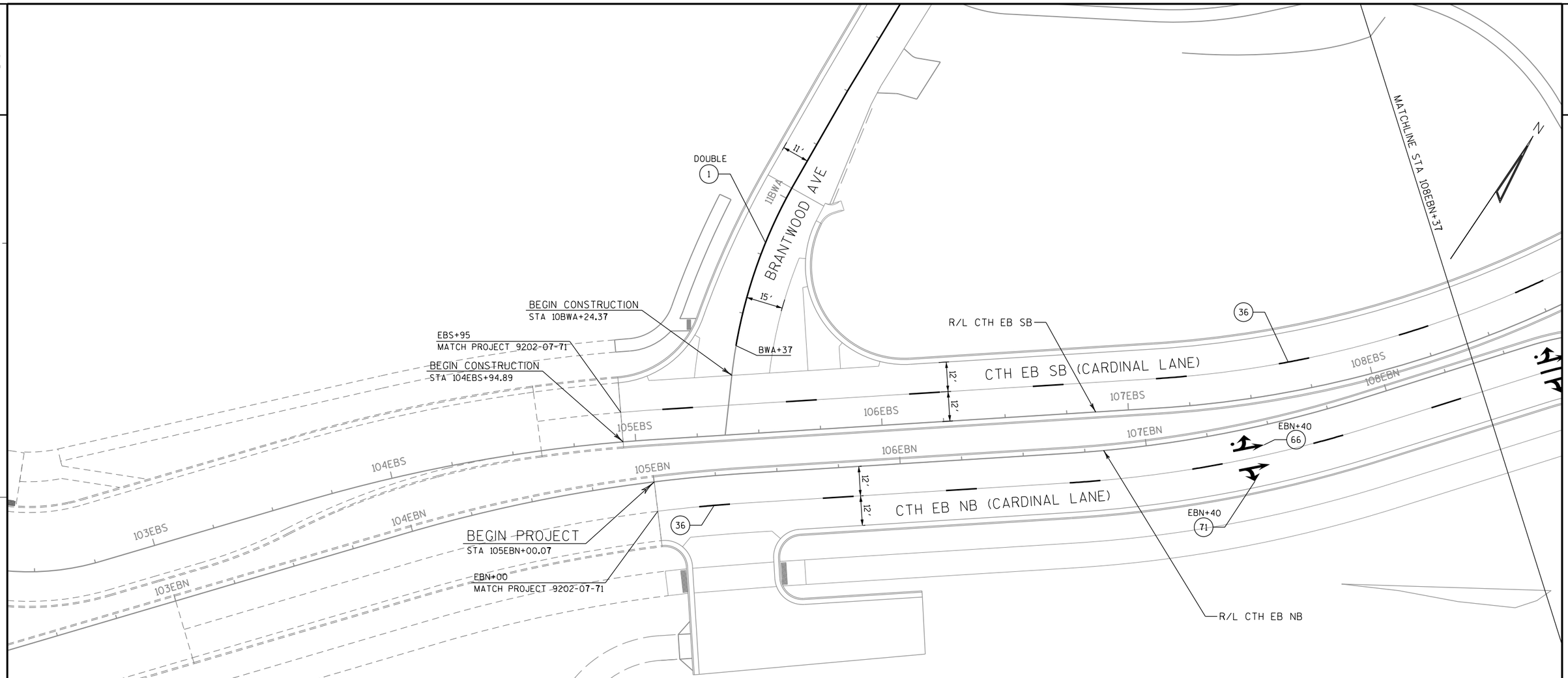
D = CB100 | 1 | 3" | C | 2 | #10 | 1 | #10 | D | 2 | #10 | -- | -- | H | 1 | #6 | 1 | #6 | N | 1 | #6 | -- | -- — 240V / 120V

E = CB100 | 1 | 2" | E | 2 | #10 | 1 | #10 | F | 2 | #10 | -- | -- | K | 1 | #6 | 1 | #6 | N | 1 | #6 | -- | -- — 240V / 120V

F = CB100 | 1 | 3" | E | 2 | #10 | 1 | #10 | F | 2 | #10 | -- | -- | K | 1 | #6 | 1 | #6 | N | 1 | #6 | -- | -- — 240V / 120V

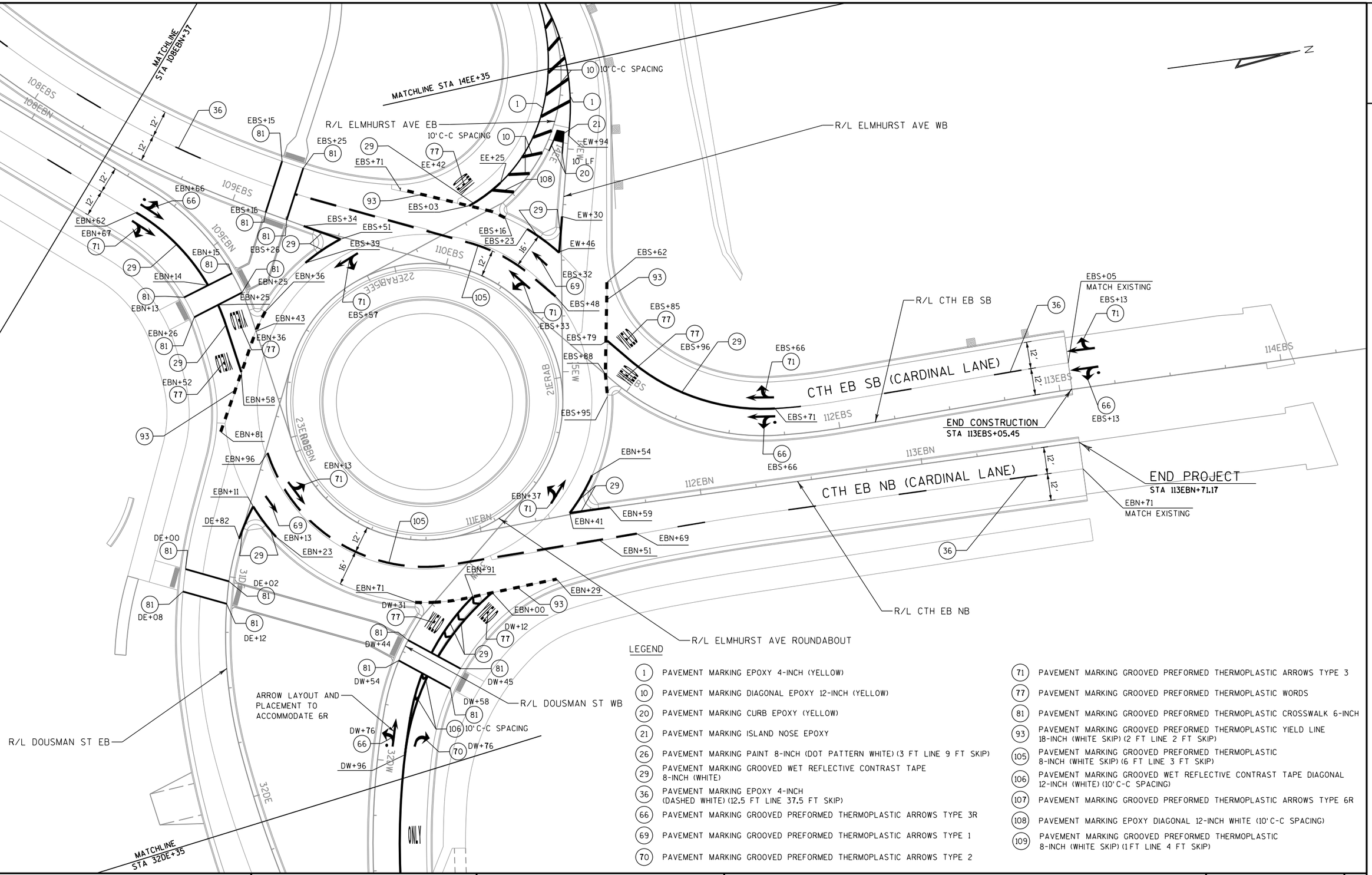
PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	LIGHTING PLANS	SHEET 73	E

2



LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
10	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20	PAVEMENT MARKING CURB EPOXY (YELLOW)
21	PAVEMENT MARKING ISLAND NOSE EPOXY
26	PAVEMENT MARKING PAINT 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
29	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
36	PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
66	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3R
69	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
70	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
71	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
77	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
81	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH
93	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC YIELD LINE 18-INCH (WHITE SKIP) (2 FT LINE 2 FT SKIP)
105	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 8-INCH (WHITE SKIP) (6 FT LINE 3 FT SKIP)
106	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE DIAGONAL 12-INCH (WHITE) (10' C-C SPACING)
107	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 6R
108	PAVEMENT MARKING EPOXY DIAGONAL 12-INCH WHITE (10' C-C SPACING)
109	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 8-INCH (WHITE SKIP) (1 FT LINE 4 FT SKIP)



LEGEND

1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
10	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20	PAVEMENT MARKING CURB EPOXY (YELLOW)
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109	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 8-INCH (WHITE SKIP) (1 FT LINE 4 FT SKIP)

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PAVEMENT MARKING	SHEET 75	E

2

LEGEND

(1) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)

(10) PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)

(20) PAVEMENT MARKING CURB EPOXY (YELLOW)

(21) PAVEMENT MARKING ISLAND NOSE EPOXY

(26) PAVEMENT MARKING PAINT 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)

(29) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)

(36) PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)

(66) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3R

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(70) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2

(71) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3

(77) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS

(81) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH

(93) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC YIELD LINE 18-INCH (WHITE SKIP) (2 FT LINE 2 FT SKIP)

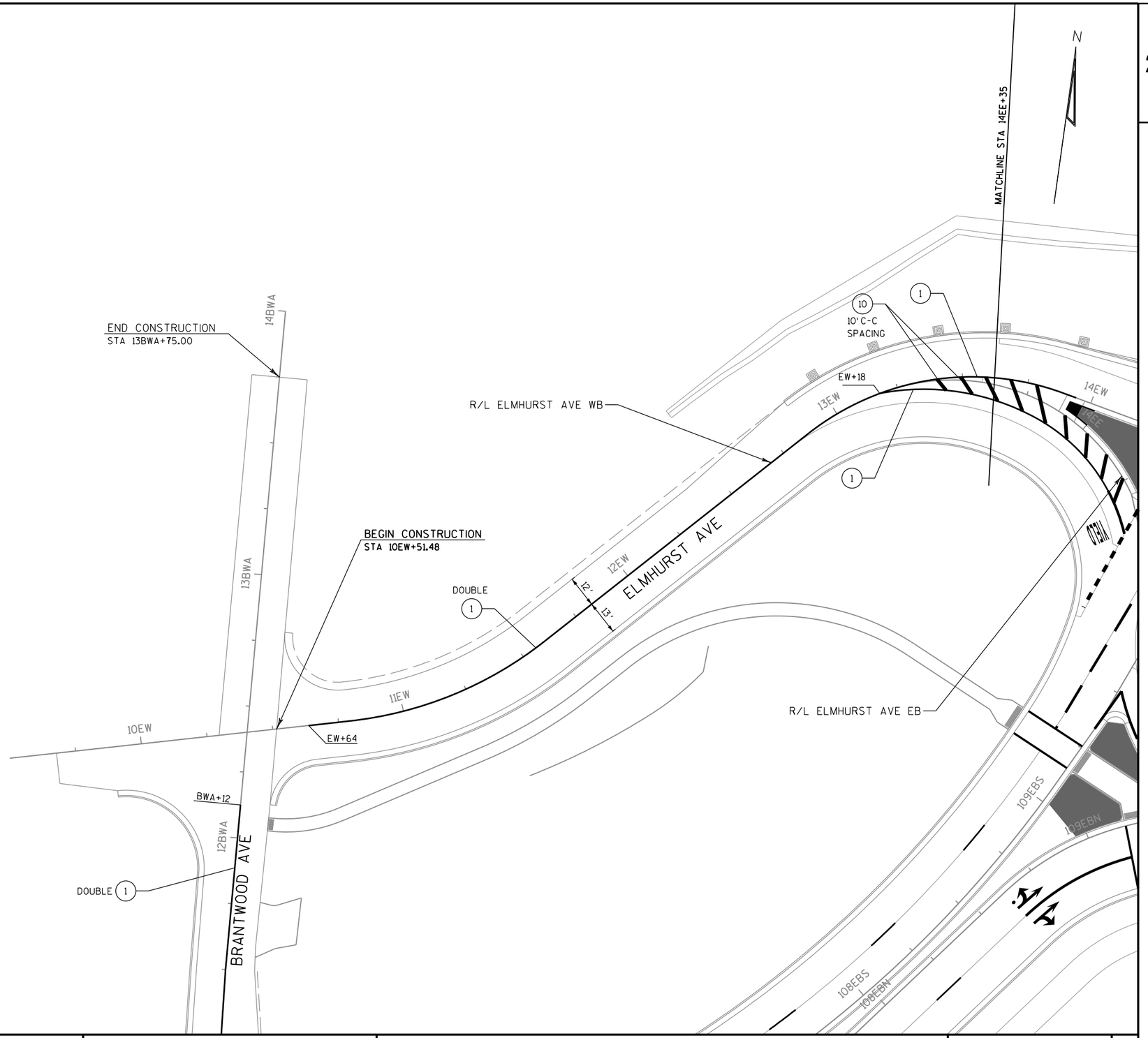
(105) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 8-INCH (WHITE SKIP) (6 FT LINE 3 FT SKIP)

(106) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE DIAGONAL 12-INCH (WHITE) (10' C-C SPACING)

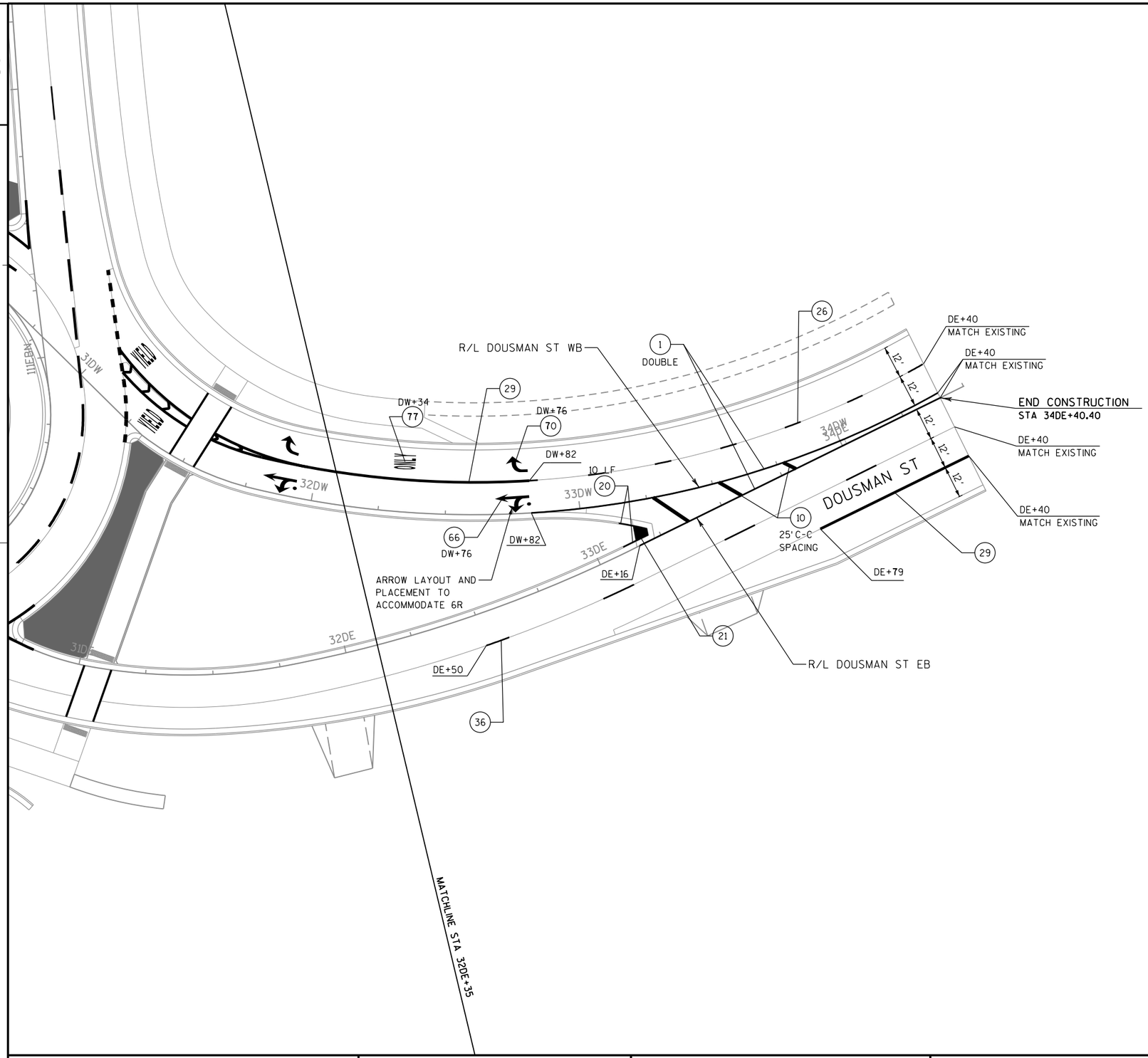
(107) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 6R

(108) PAVEMENT MARKING EPOXY DIAGONAL 12-INCH WHITE (10' C-C SPACING)

(109) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 8-INCH (WHITE SKIP) (1 FT LINE 4 FT SKIP)

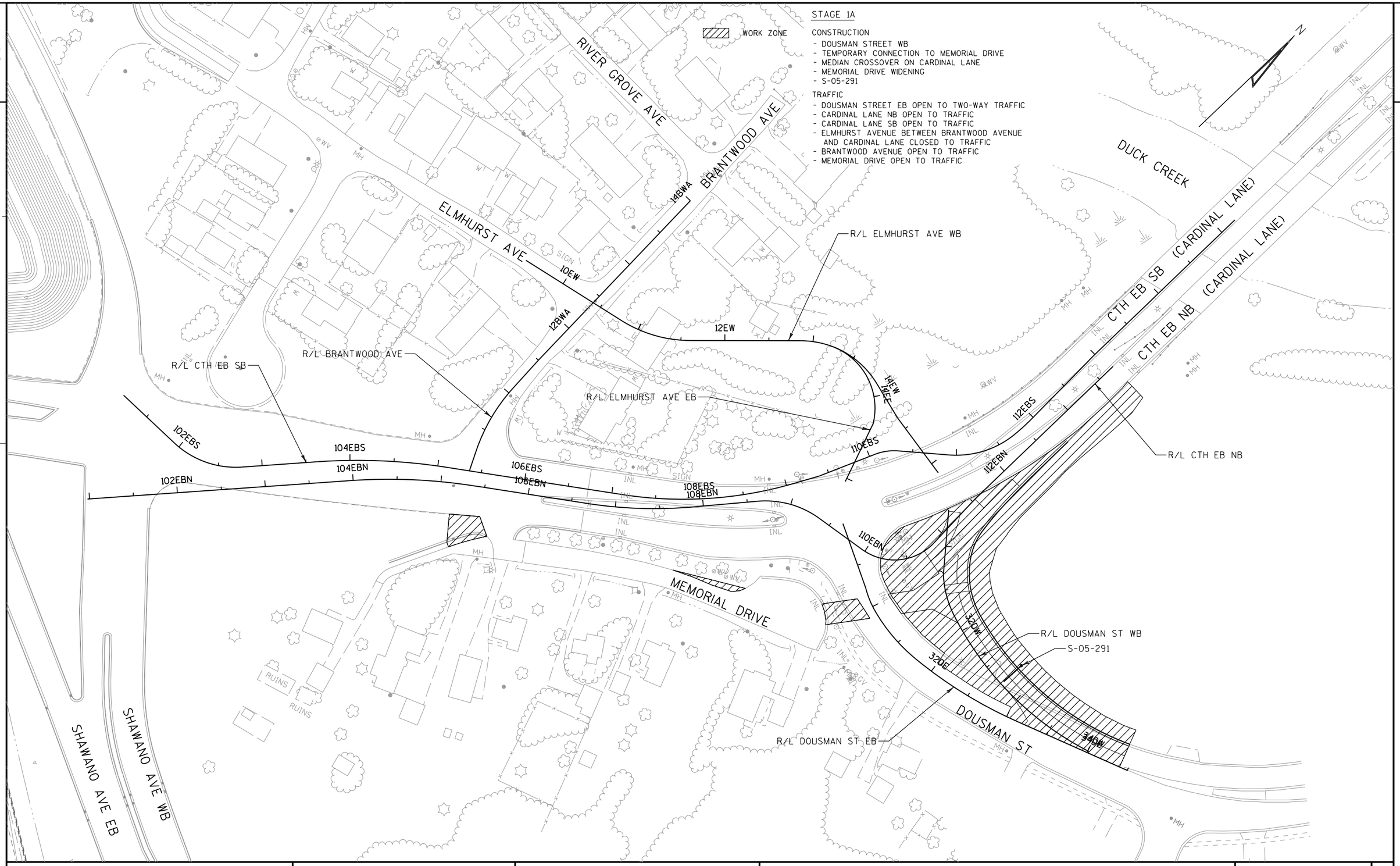


PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PAVEMENT MARKING	SHEET 76	E



LEGEND

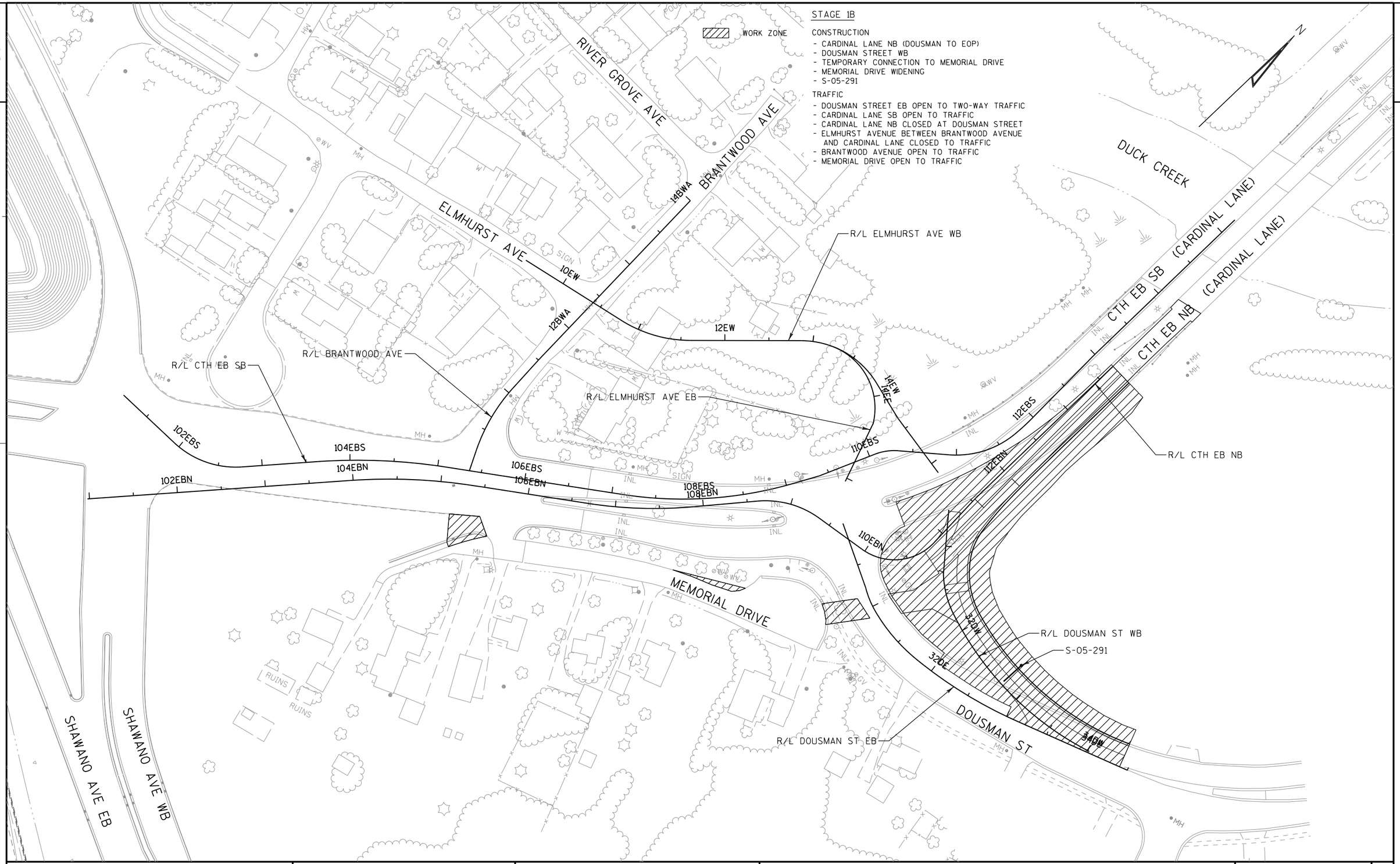
1	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
10	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
20	PAVEMENT MARKING CURB EPOXY (YELLOW)
21	PAVEMENT MARKING ISLAND NOSE EPOXY
26	PAVEMENT MARKING PAINT 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
29	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
36	PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
66	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3R
69	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1
70	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2
71	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3
77	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS
81	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH
93	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC YIELD LINE 18-INCH (WHITE SKIP) (2 FT LINE 2 FT SKIP)
105	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 8-INCH (WHITE SKIP) (6 FT LINE 3 FT SKIP)
106	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE DIAGONAL 12-INCH (WHITE) (10' C-C SPACING)
107	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 6R
108	PAVEMENT MARKING EPOXY DIAGONAL 12-INCH WHITE (10' C-C SPACING)
109	PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 8-INCH (WHITE SKIP) (1 FT LINE 4 FT SKIP)



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CONSTRUCTION STAGING OVERVIEW: STAGE 1A	SHEET 78	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025001A_CS.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CONSTRUCTION STAGING OVERVIEW: STAGE 1B	SHEET 79 E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025001B_CS.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

STAGE 2

CONSTRUCTION
- CARDINAL LANE NB (BRANTWOOD AVENUE TO DOUSMAN STREET)
- CARDINAL LANE SB (BRANTWOOD AVENUE TO EOP)
- ELMHURST AVENUE
- ELMHURST AVENUE ROUNDABOUT
- DOUSMAN EB
- DOUSMAN EB TEMPORARY WIDENING
- S-05-289
- S-05-290
- BERM ROCK WALL

TRAFFIC
- TWO-WAY TRAFFIC ON DOUSMAN STREET WB AND CARDINAL LANE NB NORTH OF DOUSMAN STREET
- CARDINAL LANE SOUTH OF DOUSMAN STREET CLOSED TO TRAFFIC
- BRANTWOOD AVENUE OPEN TO TRAFFIC
- ELMHURST AVENUE EAST OF BRANTWOOD CLOSED TO TRAFFIC
- MEMORIAL DRIVE AND TEMPORARY CONNECTION TO DOUSMAN WB OPEN TO TRAFFIC

WORK ZONE

RIVER GROVE AVE

BRANTWOOD AVE

ELMHURST AVE

DUCK CREEK

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

MEMORIAL DRIVE

DOUSMAN ST

SHAWANO AVE EB

SHAWANO AVE WB

RUINS

R/L ELMHURST AVE WB

R/L BRANTWOOD AVE

R/L CTH EB SB

R/L CTH EB NB

BERM ROCK WALL

R/L ELMHURST AVE EB

R/L DOUSMAN ST WB

R/L DOUSMAN ST EB

S-05-290

S-05-289

CARDINAL LANE/SHAWANO AVENUE INTERSECTION IS CLOSED TO TRAFFIC UNDER ID 9202-07-71

MAINTAIN ACCESS TO RESIDENTS AT ALL TIMES. PAVEMENT GAP REQUIRED

MAINTAIN ACCESS TO RESIDENTS AT ALL TIMES. PAVEMENT GAP REQUIRED

102EBS
102EBN
104EBS
104EBN
106EBS
106EBN
108EBS
108EBN
110EBS
110EBN
112EBN
10EW
12BWA
14BWA
12EW
14EW
16EW
10EBS
10EBN
32DW
32DE
34DW

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CONSTRUCTION STAGING OVERVIEW: STAGE 2	SHEET 80	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025002_CS.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

2

WORK ZONE

STAGE 3

CONSTRUCTION
- DOUSMAN STREET MEDIAN
- DOUSMAN STREET EB NEAR CROSSWALK
- CARDINAL LANE MEDIAN
- CARDINAL LANE NB (BOP TO BRANTWOOD AVENUE)
- CARDINAL LANE SB (BOP TO BRANTWOOD AVENUE)
- BRANTWOOD AVENUE
- MEDIAN CROSSOVER ON CARDINAL LANE

TRAFFIC
- DOUSMAN STREET WB OPEN TO TRAFFIC
- DOUSMAN STREET EB AND TEMPORARY WIDENING OPEN TO TRAFFIC
- CARDINAL LANE NB OPEN TO TRAFFIC
- CARDINAL LANE SOUTH OF DOUSMAN STREET CLOSED TO TRAFFIC
- ELMHURST AVENUE OPEN TO TRAFFIC
- BRANTWOOD AVENUE BETWEEN CARDINAL LANE AND ELMHURST AVE CLOSED TO TRAFFIC
- MEMORIAL DRIVE OPEN TO TRAFFIC

RIVER GROVE AVE
BRANTWOOD AVE
ELMHURST AVE
DUCK CREEK
CTH EB SB (CARDINAL LANE)
CTH EB NB (CARDINAL LANE)
MEMORIAL DRIVE
DOUSMAN ST
SHAWANO AVE EB
SHAWANO AVE WB
RUINS
RUINS
14BWA
10EW
12BWA
12EW
14EW
16EE
R/L ELMHURST AVE WB
ACCESS THROUGH INTERSECTION MUST BE MAINTAINED AT ALL TIMES
R/L BRANTWOOD AVE
R/L CTH EB SB
R/L ELMHURST AVE EB
CARDINAL LANE/SHAWANO AVENUE INTERSECTION IS CLOSED TO TRAFFIC UNDER ID 9202-07-71
102EBS
104EBS
104EBN
102EBN
106EBS
106EBN
108EBS
108EBN
110EBS
110EBN
112EBS
112EBN
R/L CTH EB NB
MAINTAIN ACCESS TO RESIDENTS
PAVEMENT GAP REQUIRED
32DW
32DE
R/L DOUSMAN ST WB
R/L DOUSMAN ST EB
34DW

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CONSTRUCTION STAGING OVERVIEW: STAGE 3	SHEET 81	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025003_CS.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

2

WORK ZONE

STAGE 4

CONSTRUCTION
- SIDEWALKS AND MULTI-USE TRAILS
- DOUSMAN STREET EB CURB AND GUTTER
- MEMORIAL DRIVE CURB AND GUTTER

TRAFFIC
- CARDINAL LANE SB OPEN TO TRAFFIC
- CARDINAL LANE NB OPEN TO TRAFFIC
- DOUSMAN STREET WB OPEN TO TRAFFIC
- DOUSMAN STREET EB OPEN TO TRAFFIC
- ELMHURST AVENUE OPEN TO TRAFFIC
- BRANTWOOD AVENUE OPEN TO TRAFFIC
- MEMORIAL DRIVE OPEN TO TRAFFIC

RIVER GROVE AVE
BRANTWOOD AVE
ELMHURST AVE
DUCK CREEK
MEMORIAL DRIVE
DOUSMAN ST
SHAWANO AVE EB
SHAWANO AVE WB
CTH EB SB (CARDINAL LANE)
CTH EB NB (CARDINAL LANE)
R/L ELMHURST AVE WB
R/L ELMHURST AVE EB
R/L BRANTWOOD AVE
R/L CTH EB SB
R/L CTH EB NB
R/L DOUSMAN ST WB
R/L DOUSMAN ST EB
RUINS
102EBS
102EBN
104EBS
104EBN
106EBS
106EBN
108EBS
108EBN
110EBS
110EBN
112EBS
112EBN
10EW
12BWA
12EW
14BWA
14EW
14EE
32DW
32DE
34DW

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CONSTRUCTION STAGING OVERVIEW: STAGE 4	SHEET 82	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025004_CS.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

NOTE:
1) ALL TEMPORARY PAVEMENT IS CONSTRUCTED IN STAGE 1A UNLESS NOTED OTHERWISE.

105EBN
106EBN
107EBN
108EBN
109EBN
110EBN
111EBN
R/L CTH EB NB
CTH EB SB (CARDINAL LANE)
CTH EB NB (CARDINAL LANE)
MEMORIAL DRIVE
STA 105EBN+13.64
35.43'RT
STA 105EBN+49.62
33.49'RT
STA 105EBN+61.03
54.48'RT
STA 105EBN+14.62
67.72'RT
STA 105EBN+17.40
72.63'RT
STA 30DE+20.57
29.83'RT
TEMPORARY
PAVEMENT
CONSTRUCTED
IN STAGE 2
R=75'
STA 30DE+50.93
22.57'RT
STA 30DE+68.49
40.03'RT
STA 30DE+70.69
22.07'RT
STA 30DE+82.11
42.25'RT
STA 30DE+84.41
23.00'RT
STA 30DE+86.00
12.57'RT
STA 30DE+81.09
52.85'RT
STA 31DE+09.79
9.37'RT
STA 31DE+03.89
25.59'RT
STA 30DE+96.35
57.14'RT
STA 31DE+27.32
20.00'RT
STA 30DE+99.91
40.39'RT
STA 31DE+16.31
41.95'RT
STA 31DE+49.95
20.00'RT
STA 31DE+42.36
35.06'RT
TEMPORARY
PAVEMENT
CONSTRUCTED
IN STAGE 2
STA 31DE+81.84
21.22'RT
R/L DOUSMAN ST EB
R/L DOUSMAN ST WB
DOUSMAN ST
31DE
32DE
32DW
31DW
STA 30+94.30
-21.88
STA 31DW+29.26
6.44'RT
R=4'
STA 31DW+31.93
0.00'RT
STA 31DW+31.23
4.90'RT
STA 31DE+07.77
49.00'LT
STA 31DE+47.99
54.01'LT
STA 31DE+25.56
23.26'LT
STA 31DW+90.23
0.00'RT
MH
SIGN
INL
W

VARIES
5" ASPHALTIC SURFACE TEMPORARY
12" BASE AGGREGATE DENSE 1 1/4-INCH

TEMPORARY PAVING TYPICAL SECTION

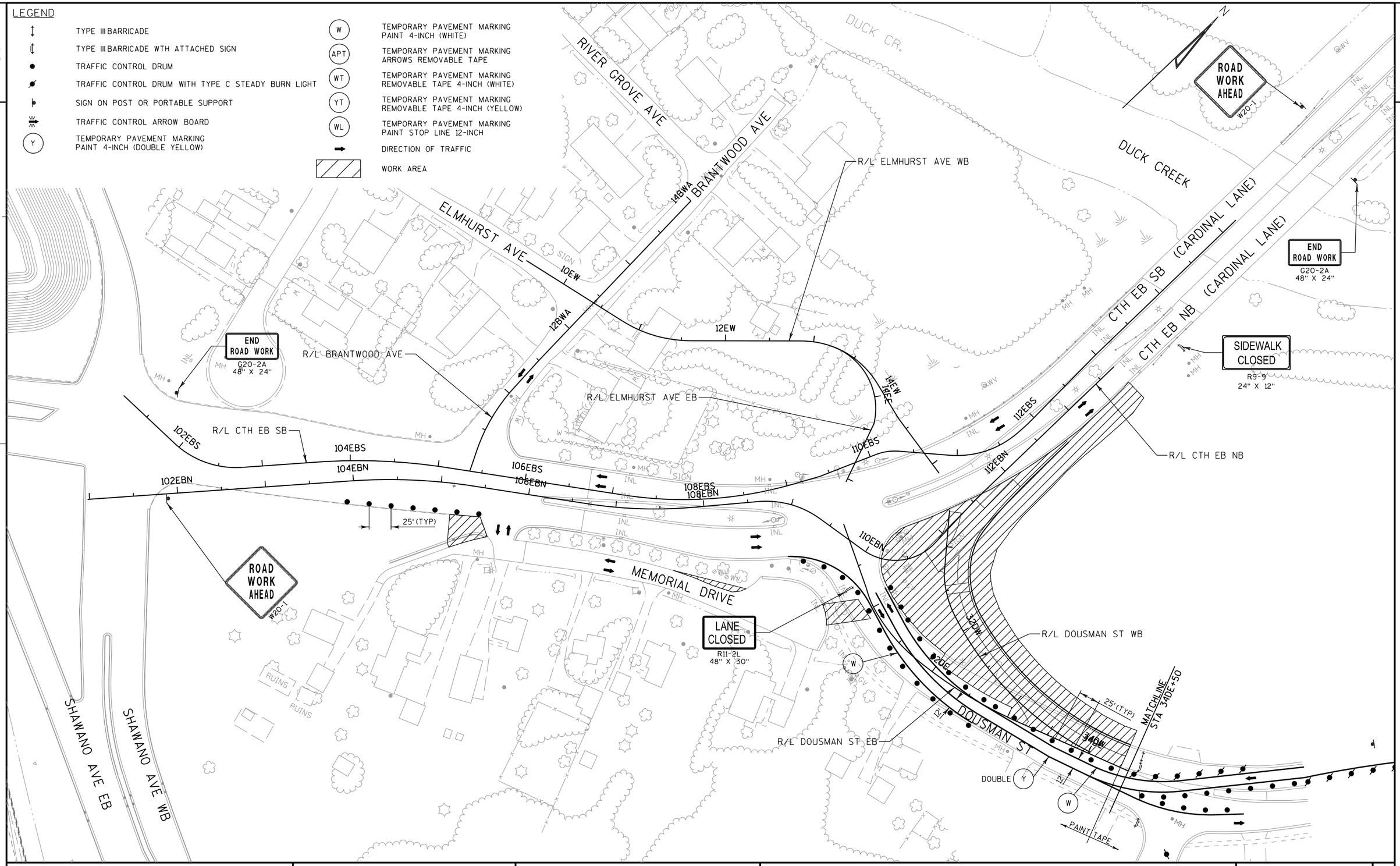
PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: TEMPORARY PAVEMENT PLAN	SHEET 83	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025050_TC.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:40

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON POST OR PORTABLE SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- (Y) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- (W) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- (APT) TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (WL) TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
- DIRECTION OF TRAFFIC
- WORK AREA



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 1A	SHEET 84 E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025101_TC.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON POST OR PORTABLE SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- (Y) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- (W) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- (APT) TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (WL) TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
- DIRECTION OF TRAFFIC
- WORK AREA



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 1A	SHEET 85	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025102_TC.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTE:

1) TRAFFIC CONTROL TO ONLY BE USED DURING MEDIAN REMOVAL AND PAVING.

N

DUCK CREEK

LANE CLOSED
R11-2L
48" X 30"

50' TYP

WT

APT

YT

50'

245'
TAPER

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

SHOULDER WORK
W21-5

SEE CONSTRUCTION DETAIL: CARDINAL LANE TRAFFIC CROSSOVER FOR REMOVAL PLAN, TEMPORARY PAVING PLAN AND PLAN DETAIL

25' (TYP)

LEFT TURN LANE
R3-56L
22" X 28"

N

245' TAPER

350'

W04-2L

700'

LEFT LANE CLOSED AHEAD
W20-5

700'

ROAD WORK AHEAD
W20-1

YT

25' (TYP)

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

END ROAD WORK
G20-2A
48" X 24"

LEGEND

	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON POST OR PORTABLE SUPPORT
	TRAFFIC CONTROL ARROW BOARD
(Y)	TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
(W)	TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
(APT)	TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
(WT)	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
(YT)	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
(WL)	TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
	DIRECTION OF TRAFFIC
	WORK AREA

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 1A (CARDINAL LANE MEDIAN CROSSOVER)	SHEET 86	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025103_TC.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON POST OR PORTABLE SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- (Y) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- (W) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- (APT) TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (WL) TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
- DIRECTION OF TRAFFIC
- WORK AREA

RIVER GROVE AVE
BRANTWOOD AVE
ELMHURST AVE
DUCK CR.
DUCK CREEK
R/L ELMHURST AVE WB
R/L BRANTWOOD AVE
R/L ELMHURST AVE EB
R/L CTH EB SB
R/L CTH EB NB
CTH EB SB (CARDINAL LANE)
CTH EB NB (CARDINAL LANE)
MEMORIAL DRIVE
DOUSMAN ST
R/L DOUSMAN ST WB
R/L DOUSMAN ST EB
SHAWANO AVE EB
SHAWANO AVE WB
RUINS
MATCHLINE STA 340E+50
PAINT TAPE
DOUBLE Y
25'(TYP)
200'
200'
180' TAPER

ROAD WORK AHEAD W20-1
END ROAD WORK G20-2A 48" X 24"
ROAD CLOSED AHEAD W20-3
CTH EB NB FMS 18" X 60" (100) (105)
SIDEWALK CLOSED R9-9 24" X 12"
ROAD CLOSED R11-2 48" X 30"
LANE CLOSED R11-2L 48" X 30"
RIGHT TURN ONLY R3-5R 24" X 30"
DO NOT ENTER R5-1 30" X 30"
R3-1 36" X 36"
R3-2 36" X 36"
W04-2L

14BWA 10EW 12BWA 12EW 14EW 14BE 102EBS 104EBS 104EBN 102EBN 106EBS 106EBN 108EBS 108EBN 110EBS 110EBN 112EBS 112EBN 32DW 34DW 12DE

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 1B	SHEET 87	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025151_TC.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON POST OR PORTABLE SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- (Y) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- (W) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- (APT) TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (WL) TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
- DIRECTION OF TRAFFIC
- WORK AREA

MEMORIAL DRIVE

DOUSMAN ST

MATCHLINE STA 34DE+50

245' TAPER

25' (TYP)

W6-3
36" X 36"

ROAD CLOSED
R11-2
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

ROAD CLOSED AHEAD
W20-3

101 CTH EB NB
FMS
18" X 60"

W04-2L

700'

LEFT LANE CLOSED AHEAD
W20-5

ROAD WORK AHEAD
W20-1

R4-7
24" X 30"

SIDEWALK CLOSED
R9-9
24" X 12"

R3-2
24" X 24"

R4-7
24" X 30"

LEFT LANE CLOSED AHEAD
W20-5

ROAD WORK AHEAD
W20-1

N

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 1B	SHEET 88	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025152_TC.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON POST OR PORTABLE SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- (Y) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- (W) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- (APT) TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (WL) TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
- DIRECTION OF TRAFFIC
- WORK AREA

RIVER GROVE AVE
BRANTWOOD AVE
DUCK CR.
DUCK CREEK
MATCHLINE STA 115EBN+00
ELMHURST AVE
14BWA
10EW
12BWA
12EW
R/L BRANTWOOD AVE
R/L ELMHURST AVE WB
R/L ELMHURST AVE EB
ROAD CLOSED
R11-2
48" X 30"
W01-1L
SPEED LIMIT 15
R2-1
24" X 30"
W5-52L
12" X 36"
W5-52R
12" X 36"
CTH EB SB
CTH EB NB (CARDINAL LANE)
SIDEWALK CLOSED
R9-9
24" X 12"
W01-1R
R/L CTH EB SB
102EBS
104EBS
104EBN
102EBN
106EBS
106EBN
108EBS
108EBN
110EBS
110EBN
112EBS
112EBN
CARDINAL LANE/SHAWANO AVENUE INTERSECTION IS CLOSED TO TRAFFIC UNDER ID 9202-07-71
102
ELMHURST AVE
BRANTWOOD AVE
FMS
48" X 84"
DOUBLE
MEMORIAL DRIVE
RUINS
SHAWANO AVE EB
SHAWANO AVE WB
103
BRANTWOOD AVE
ELMHURST AVE
104
32DW
32DE
34DW
STOP
R1-1
30" X 30"
MAINTAIN ACCESS TO RESIDENTS AT ALL TIMES
R/L DOUSMAN ST EB
R/L DOUSMAN ST WB
R/L CTH EB NB
MATCHLINE STA 34DE+50
DOUSMAN ST

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 2	SHEET 89	E

2

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON POST OR PORTABLE SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- (Y) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- (W) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- (APT) TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (WL) TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
- DIRECTION OF TRAFFIC
- WORK AREA

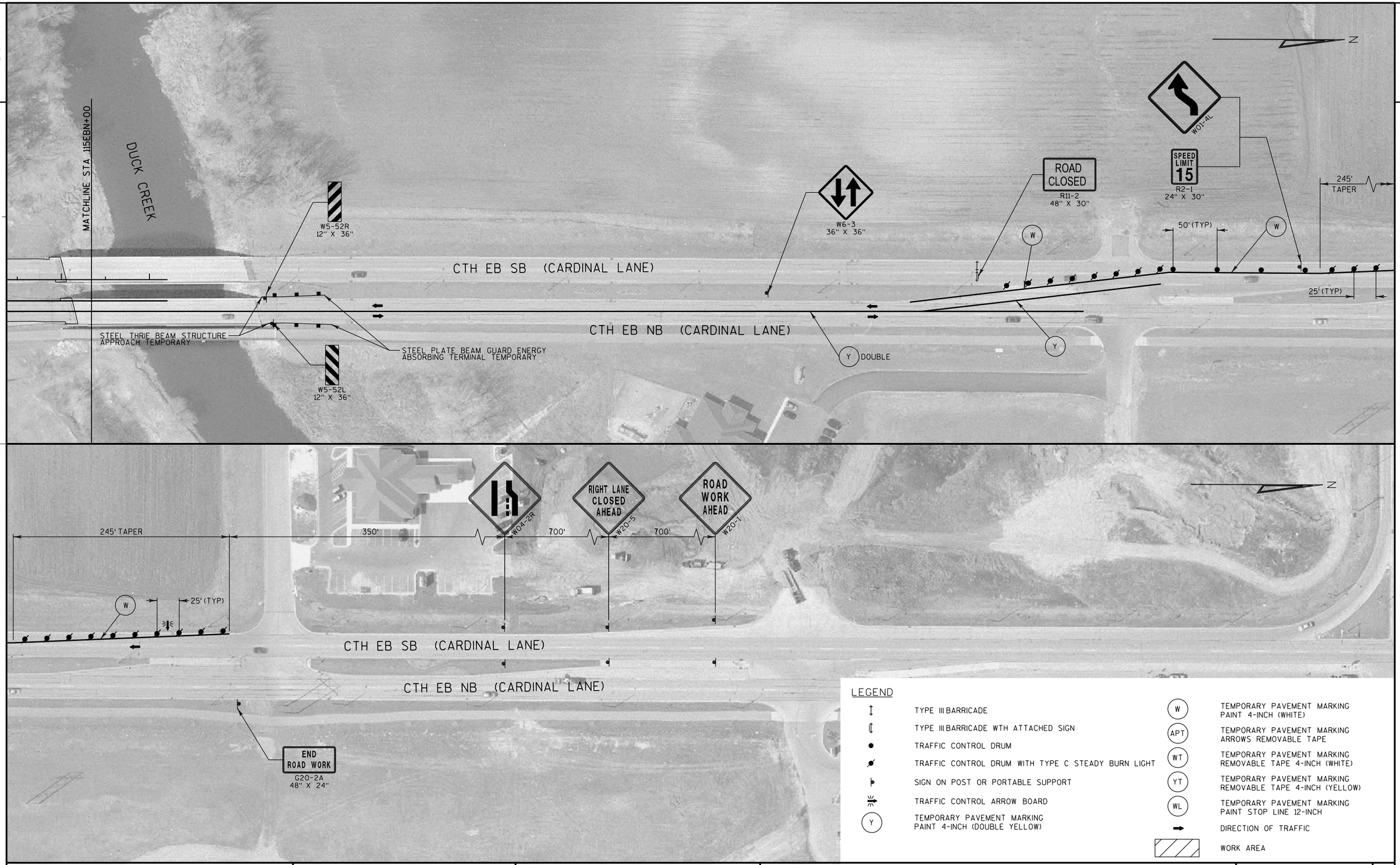


PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 2	SHEET 90	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025202_TC.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

2



LEGEND

‡	TYPE III BARRICADE	W	TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
‡	TYPE III BARRICADE WTH ATTACHED SIGN	APT	TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
●	TRAFFIC CONTROL DRUM	WT	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
●	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	YT	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
▶	SIGN ON POST OR PORTABLE SUPPORT	WL	TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
	TRAFFIC CONTROL ARROW BOARD	➡	DIRECTION OF TRAFFIC
Y	TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)	▨	WORK AREA

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 2	SHEET 91	E

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON POST OR PORTABLE SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- (Y) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- (W) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- (APT) TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (WL) TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
- DIRECTION OF TRAFFIC
- WORK AREA

RIVER GROVE AVE
BRANTWOOD AVE
ELMHURST AVE
DUCK CR.
DUCK CREEK
MATCHLINE STA 115EBN+00
(CARDINAL LANE)
CTH EB NB (CARDINAL LANE)
CTH EB SB
ACCESS THROUGH INTERSECTION MUST BE MAINTAINED AT ALL TIMES
R3-2 24" X 24"
STOP R1-1 30" X 30"
STOP R1-1 30" X 30"
W5-52L 12" X 36"
W5-52R 12" X 36"
R/L ELMHURST AVE WB
R/L ELMHURST AVE EB
R/L BRANTWOOD AVE
25' (TYP)
50' (TYP)
ROAD CLOSED R11-2 48" X 30"
ROAD CLOSED R11-2 48" X 30"
CARDINAL LANE/SHAWANO AVENUE INTERSECTION IS CLOSED TO TRAFFIC UNDER ID 9202-07-71
R/L CTH EB SB
SIDEWALK CLOSED R9-9 24" X 12"
R/L CTH EB NB
MEMORIAL DRIVE
MAINTAIN ACCESS TO RESIDENTS
ROAD CLOSED R11-2 48" X 30"
ROAD CLOSED R11-2 48" X 30"
STOP R1-1 30" X 30"
R/L DOUSMAN ST WB
W01-1R
SPEED LIMIT 15 R2-1 24" X 30"
R/L DOUSMAN ST EB
SHAWANO AVE EB
SHAWANO AVE WB
RUINS
MATCHLINE STA 34DE+50
DOUSMAN ST

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 3	SHEET 92 E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025301_TC.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON POST OR PORTABLE SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- (Y) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- (W) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- (APT) TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (WL) TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
- DIRECTION OF TRAFFIC
- WORK AREA



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 3	SHEET 93	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\025302_TC.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42

NOTE:

1) TRAFFIC CONTROL TO ONLY BE USED DURING MEDIAN REMOVAL AND RECONSTRUCTION.

N

DUCK CREEK

MATCHLINE STA 115EBN+00

LANE CLOSED
R11-2L
48" X 30"

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

SHOULDER WORK
W21-5

LANE CLOSED
R11-2L
48" X 30"

50' TYP

SEE CONSTRUCTION DETAIL: CARDINAL LANE TRAFFIC CROSSOVER FOR REMOVAL PLAN, TEMPORARY PAVING PLAN AND PLAN DETAIL

WT

APT

YT

50'

245'
TAPER

25' (TYP)

LEFT TURN LANE
R3-56L
22" X 28"

N

245' TAPER

350'

W04-2L

700'

LEFT LANE CLOSED AHEAD
W20-5

700'

ROAD WORK AHEAD
W20-1

YT

25' (TYP)

CTH EB SB (CARDINAL LANE)

CTH EB NB (CARDINAL LANE)

END ROAD WORK
G20-2A
48" X 24"

LEGEND

	TYPE III BARRICADE
	TYPE III BARRICADE WTH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	SIGN ON POST OR PORTABLE SUPPORT
	TRAFFIC CONTROL ARROW BOARD
(Y)	TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
(W)	TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
(APT)	TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
(WT)	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
(YT)	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
(WL)	TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
	DIRECTION OF TRAFFIC
	WORK AREA

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 3	SHEET 94	E

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON POST OR PORTABLE SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- (Y) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)
- (W) TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
- (APT) TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
- (WT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (YT) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (WL) TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
- DIRECTION OF TRAFFIC
- WORK AREA

RIVER GROVE AVE
BRANTWOOD AVE
ELMHURST AVE
DUCK CR.
DUCK CREEK
CTH EB SB (CARDINAL LANE)
CTH EB NB (CARDINAL LANE)
MEMORIAL DRIVE
DOUSMAN ST
SHAWANO AVE EB
SHAWANO AVE WB
RUINS

14BWA
10EW
12BWA
12EW
14EW
14EE
R/L ELMHURST AVE WB
R/L ELMHURST AVE EB
R/L BRANTWOOD AVE
R/L CTH EB SB
R/L CTH EB NB
R/L DOUSMAN ST WB
R/L DOUSMAN ST EB
102EBS
104EBS
104EBN
102EBN
106EBS
106EBN
108EBS
108EBN
110EBN
112EBS
112EBN
32DW
32DE
34DW

ROADWAY ROUNDABOUT AT SHAWANO AVENUE IS OPEN TO TRAFFIC

SIDEWALK CLOSED
R9-9
24" X 12"

SIDEWALK CLOSED
R9-9
24" X 12"

SIDEWALK CLOSED
R9-9
24" X 12"

LANE CLOSED
R11-2L
48" X 30"

RIGHT LANE CLOSED AHEAD
W20-5

W04-2R

ROAD WORK AHEAD
W20-1

ROAD WORK AHEAD
W20-1

ROAD WORK AHEAD
W20-1

END ROAD WORK
G20-2A
48" X 24"

200'
200'
25' TYP
180' TAPER

END CONSTRUCTION
STA 34DE+40.40

MATCHLINE
STA 34DE+50

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 4	SHEET 95	E

2

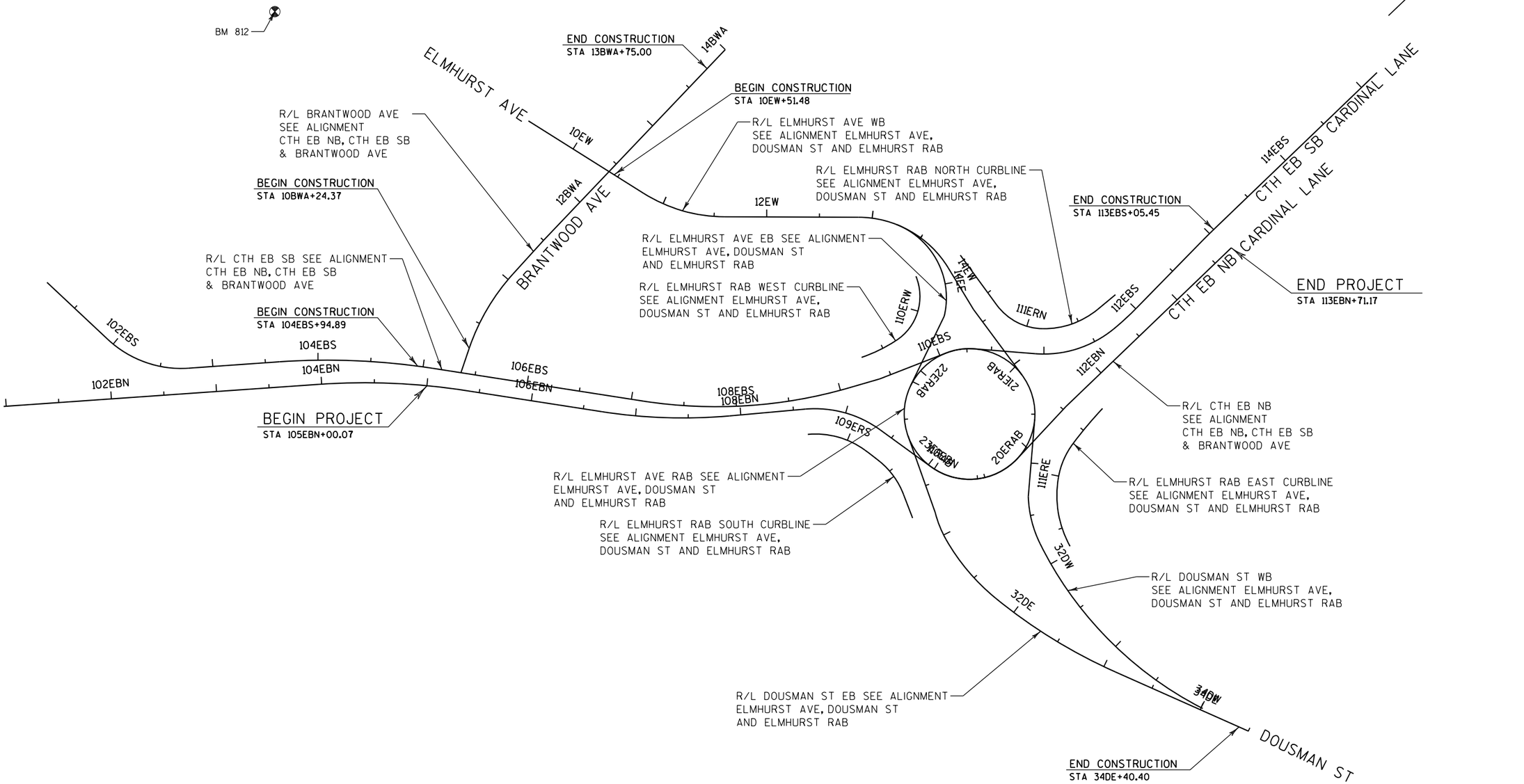
LEGEND

‡	TYPE III BARRICADE	W	TEMPORARY PAVEMENT MARKING PAINT 4-INCH (WHITE)
‡	TYPE III BARRICADE WTH ATTACHED SIGN	APT	TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE
●	TRAFFIC CONTROL DRUM	WT	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
●	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT	YT	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
▶	SIGN ON POST OR PORTABLE SUPPORT	WL	TEMPORARY PAVEMENT MARKING PAINT STOP LINE 12-INCH
⇛	TRAFFIC CONTROL ARROW BOARD	➡	DIRECTION OF TRAFFIC
Y	TEMPORARY PAVEMENT MARKING PAINT 4-INCH (DOUBLE YELLOW)	▨	WORK AREA



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	TRAFFIC CONTROL: STAGE 4	SHEET 96	E

BENCHMARKS			
NUMBER	LOCATION	DESCRIPTION	ELEVATION
812	STA 103EBS+75.83, 331.93' LT	CHISELED X ON BOLT OF FIRE HYDRANT SW QUAD OF FAIRDALE AVE AND ELMHURST AVE	613.70



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	ALIGNMENT OVERVIEW	SHEET 97	E

CURVE EBS1
PC = 101EBS+93.66
X = 80855.62
Y = 577896.93
PI = 102EBS+37.72
X = 80899.61
Y = 577899.39
PT = 102EBS+76.75
X = 80927.73
Y = 577933.30
R = 101.00
DELTA = 47°08'10" LT
D = 56°43'43"
L = 83.09
T = 44.06
BK = N 86°47'59" E
AH = N 39°39'49" E

CURVE EBS2
PC = 103EBS+63.49
X = 80983.09
Y = 578000.08
PI = 104EBS+36.32
X = 81029.57
Y = 578056.14
PT = 105EBS+08.53
X = 81087.34
Y = 578100.48
R = 648.00
DELTA = 12°49'26" RT
D = 08°50'31"
L = 145.04
T = 72.82
BK = N 39°39'49" E
AH = N 52°29'15" E

CURVE EBS3
PC = 107EBS+11.65
X = 81248.46
Y = 578224.17
PI = 108EBS+11.65
X = 81327.78
Y = 578285.06
PT = 109EBS+08.45
X = 81373.85
Y = 578373.82
R = 450.00
DELTA = 25°03'28" LT
D = 12°43'57"
L = 196.80
T = 100.00
BK = N 52°29'15" E
AH = N 27°25'47" E

CURVE EBS4
PC = 110EBS+06.15
X = 81413.45
Y = 578463.04
PI = 110EBS+20.39
X = 81418.87
Y = 578476.20
PT = 110EBS+34.14
X = 81429.49
Y = 578485.69
R = 62.00
DELTA = 25°51'35" RT
D = 92°24'45"
L = 27.98
T = 14.23
BK = N 22°21'49" E
AH = N 48°13'24" E

CURVE EBS5
PC = 110EBS+91.60
X = 81472.34
Y = 578523.97
PI = 111EBS+33.57
X = 81503.64
Y = 578551.93
PCC = 111EBS+71.38
X = 81506.76
Y = 578593.78
R = 104.00
DELTA = 43°57'09" LT
D = 55°05'32"
L = 79.78
T = 41.97
BK = N 48°13'24" E
AH = N 04°16'15" E

CURVE EBS6
PCC = 111EBS+71.38
X = 81506.76
Y = 578593.78
PI = 111EBS+86.26
X = 81507.87
Y = 578608.62
PT = 112EBS+01.12
X = 81507.37
Y = 578623.50
R = 274.00
DELTA = 6°13'04" LT
D = 20°54'39"
L = 29.73
T = 14.88
BK = N 04°16'15" E
AH = N 01°56'49" W

CURVE EBS7
PC = 112EBS+90.32
X = 81504.34
Y = 578712.65
PI = 112EBS+97.89
X = 81504.08
Y = 578720.21
PT = 113EBS+05.45
X = 81504.05
Y = 578727.78
R = 500.00
DELTA = 01°44'01" RT
D = 11°27'33"
L = 15.13
T = 7.57
BK = N 01°56'49" W
AH = N 00°12'48" W

CURVE BWA 1
PC = 10BWA+25.05
X = 81097.78
Y = 578139.60
PI = 10BWA+66.48
X = 81078.64
Y = 578176.34
PT = 11BWA+06.75
X = 81075.68
Y = 578217.66
R = 200.0
DELTA = 23°24'19" RT
D = 28°38'52"
L = 81.7
T = 41.4
BK = N 27°30'45" W
AH = N 4°06'26" W

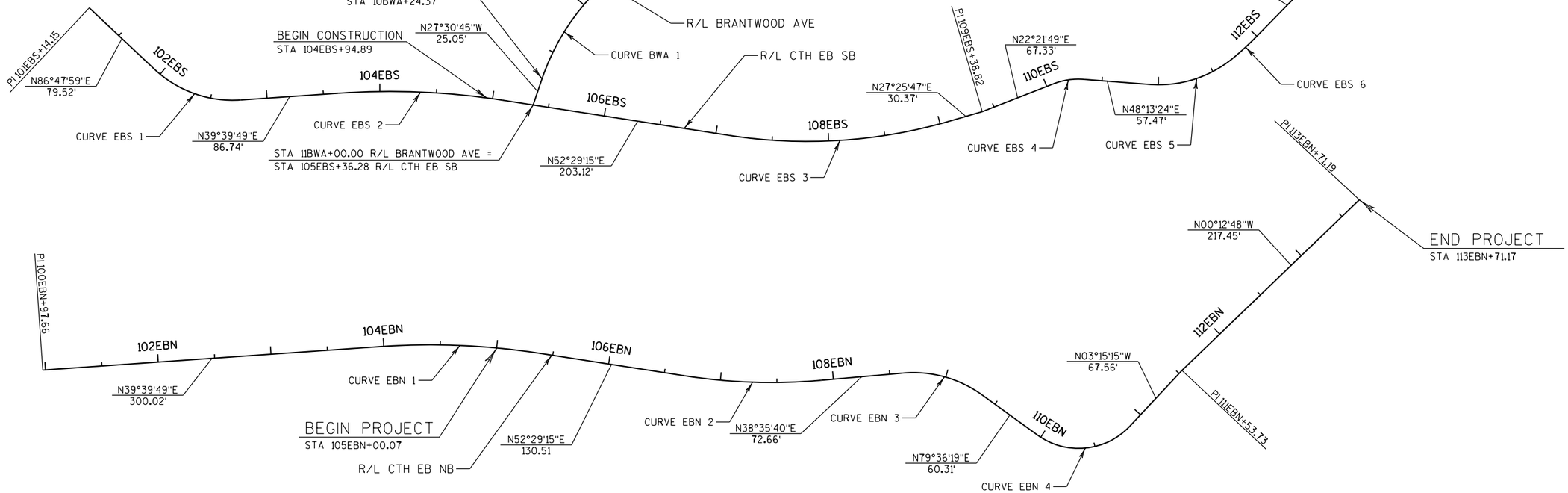
CURVE EBN1
PC = 103EBN+97.68
X = 81024.58
Y = 578012.51
PI = 104EBN+67.80
X = 81069.34
Y = 578066.49
PT = 105EBN+37.34
X = 81124.96
Y = 578109.19
R = 624.00
DELTA = 12°49'26" RT
D = 09°10'55"
L = 139.66
T = 70.12
BK = N 39°39'49" E
AH = N 52°29'15" E

CURVE EBN2
PC = 106EBN+67.86
X = 81228.49
Y = 578188.67
PI = 107EBN+28.77
X = 81276.81
Y = 578225.76
PT = 107EBN+89.10
X = 81314.81
Y = 578273.37
R = 500.00
DELTA = 13°53'35" LT
D = 11°27'33"
L = 121.24
T = 60.92
BK = N 52°29'15" E
AH = N 38°35'40" E

CURVE EBN3
PC = 108EBN+61.76
X = 81360.14
Y = 578330.17
PI = 109EBN+00.65
X = 81384.40
Y = 578360.57
PT = 109EBN+36.20
X = 81422.66
Y = 578367.58
R = 104.00
DELTA = 41°00'39" RT
D = 55°05'32"
L = 74.44
T = 38.90
BK = N 38°35'40" E
AH = N 79°36'19" E

CURVE EBN4
PC = 109EBN+96.51
X = 81481.98
Y = 578378.47
PI = 110EBN+51.23
X = 81535.80
Y = 578388.34
PT = 110EBN+86.17
X = 81532.69
Y = 578442.97
R = 62.00
DELTA = 82°51'34" LT
D = 92°24'45"
L = 89.66
T = 54.72
BK = N 79°36'19" E
AH = N 03°15'15" W

NOTE:
1) SEE ALIGNMENT OVERVIEW FOR TRUE ALIGNMENT LOCATIONS. ALIGNMENTS SHOWN ON THIS PAGE ARE SEPARATED FOR CLARITY OF GEOMETRIC CALLOUTS



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	ALIGNMENT CTH EB NB, CTH EB SB & BRANTWOOD AVE	SHEET 98	E

2

CURVE EW1
PC = 10EW+79.09
X = 81105.90
Y = 578360.33
PI = 11EW+20.63
X = 81146.18
Y = 578370.51
PT = 11EW+60.01
X = 81174.95
Y = 578400.48
R = 145.00
DELTA = 31°58'37" LT
D = 39°30'52"
L = 80.92
T = 41.55
BK = N 75°48'46" E
AH = N 43°50'09" E

CURVE EW2
PC = 12EW+86.95
X = 81262.87
Y = 578492.04
PI = 13EW+42.97
X = 81301.67
Y = 578532.45
PT = 13EW+89.07
X = 81356.39
Y = 578520.47
R = 100.00
DELTA = 58°30'43" RT
D = 57°17'45"
L = 102.12
T = 56.02
BK = N 43°50'09" E
AH = S 77°39'08" E

CURVE EE1
PC = 13EE+24.02
X = 81292.87
Y = 578513.47
PI = 13EE+60.61
X = 81326.11
Y = 578528.74
PCC = 13EE+92.10
X = 81358.61
Y = 578511.93
R = 75.00
DELTA = 52°00'26" RT
D = 76°23'40"
L = 68.08
T = 36.59
BK = N 65°20'09" E
AH = S 62°39'25" E

CURVE EE2
PCC = 13EE+92.10
X = 81358.61
Y = 578511.93
PI = 14EE+12.00
X = 81376.29
Y = 578502.79
PT = 14EE+31.00
X = 81387.11
Y = 578486.09
R = 75.00
DELTA = 29°43'10" RT
D = 76°23'40"
L = 38.90
T = 19.90
BK = S 62°39'25" E
AH = S 32°56'15" E

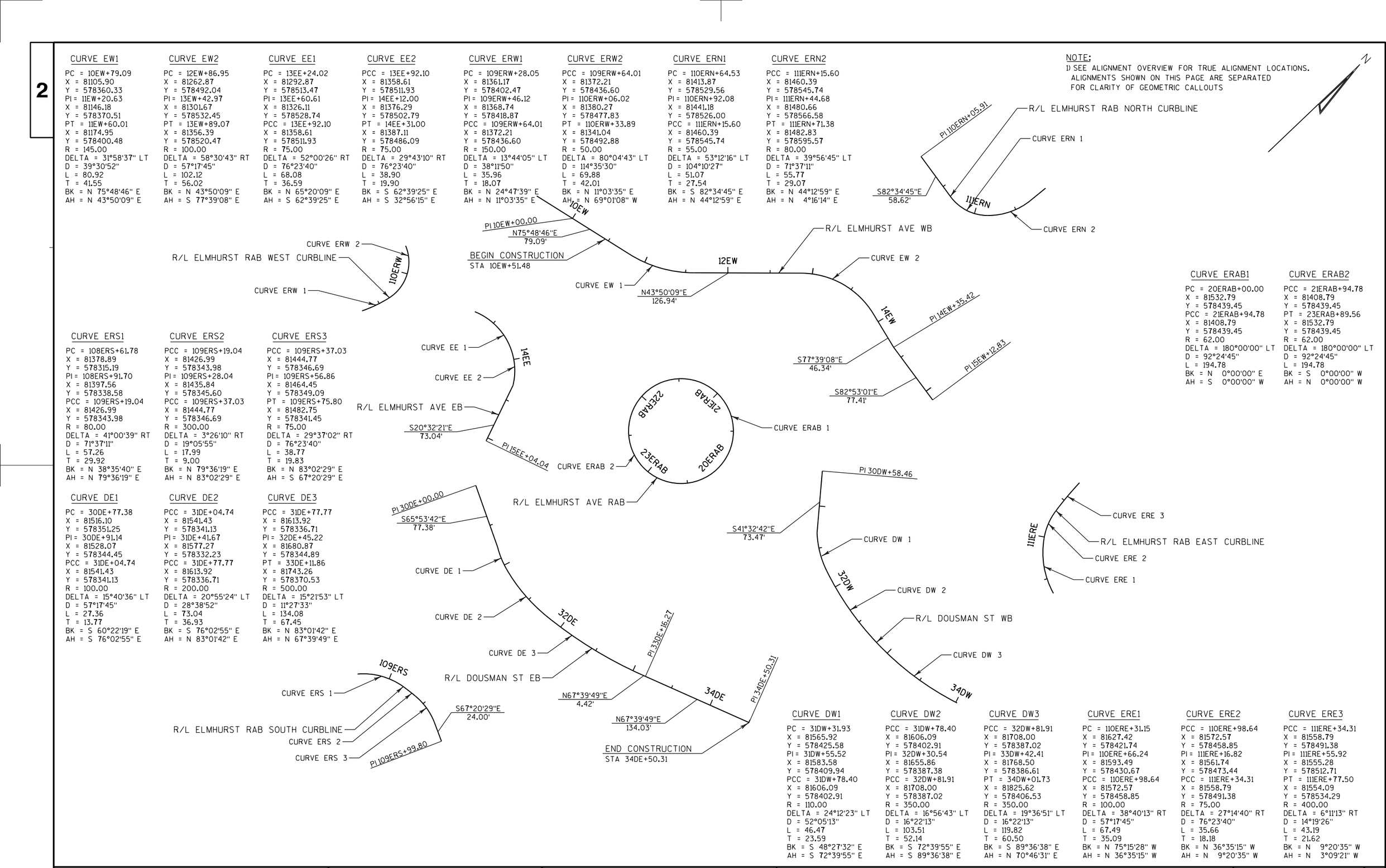
CURVE ERW1
PC = 109ERW+28.05
X = 81361.17
Y = 578402.47
PI = 109ERW+46.12
X = 81368.74
Y = 578418.87
PCC = 109ERW+64.01
X = 81372.21
Y = 578436.60
R = 150.00
DELTA = 13°44'05" LT
D = 38°11'50"
L = 35.96
T = 18.07
BK = N 24°47'39" E
AH = N 11°03'35" E

CURVE ERW2
PCC = 109ERW+64.01
X = 81372.21
Y = 578436.60
PI = 110ERW+06.02
X = 81380.27
Y = 578477.83
PT = 110ERW+33.89
X = 81341.04
Y = 578492.88
R = 50.00
DELTA = 80°04'43" LT
D = 114°35'30"
L = 69.88
T = 42.01
BK = N 11°03'35" E
AH = N 69°01'08" W

CURVE ERN1
PC = 110ERN+64.53
X = 81413.87
Y = 578529.56
PI = 110ERN+92.08
X = 81441.18
Y = 578526.00
PCC = 111ERN+15.60
X = 81460.39
Y = 578545.74
R = 55.00
DELTA = 53°12'16" LT
D = 104°10'27"
L = 51.07
T = 27.54
BK = S 82°34'45" E
AH = N 44°12'59" E

CURVE ERN2
PCC = 111ERN+15.60
X = 81460.39
Y = 578545.74
PI = 111ERN+44.68
X = 81480.66
Y = 578566.58
PT = 111ERN+71.38
X = 81482.83
Y = 578595.57
R = 80.00
DELTA = 39°56'45" LT
D = 71°37'11"
L = 55.77
T = 29.07
BK = N 44°12'59" E
AH = N 4°16'14" E

NOTE:
1) SEE ALIGNMENT OVERVIEW FOR TRUE ALIGNMENT LOCATIONS. ALIGNMENTS SHOWN ON THIS PAGE ARE SEPARATED FOR CLARITY OF GEOMETRIC CALLOUTS



CURVE ERAB1
PC = 20ERAB+00.00
X = 81532.79
Y = 578439.45
PCC = 21ERAB+94.78
X = 81408.79
Y = 578439.45
R = 62.00
DELTA = 180°00'00" LT
D = 92°24'45"
L = 194.78
BK = N 0°00'00" E
AH = S 0°00'00" W

CURVE ERAB2
PCC = 21ERAB+94.78
X = 81408.79
Y = 578439.45
PT = 23ERAB+89.56
X = 81532.79
Y = 578439.45
R = 62.00
DELTA = 180°00'00" LT
D = 92°24'45"
L = 194.78
BK = S 0°00'00" W
AH = N 0°00'00" W

CURVE ERS1
PC = 108ERS+61.78
X = 81378.89
Y = 578315.19
PI = 108ERS+91.70
X = 81397.56
Y = 578338.58
PCC = 109ERS+19.04
X = 81426.99
Y = 578343.98
R = 80.00
DELTA = 41°00'39" RT
D = 71°37'11"
L = 57.26
T = 29.92
BK = N 38°35'40" E
AH = N 79°36'19" E

CURVE ERS2
PCC = 109ERS+19.04
X = 81426.99
Y = 578343.98
PI = 109ERS+28.04
X = 81435.84
Y = 578345.60
PCC = 109ERS+37.03
X = 81444.77
Y = 578346.69
R = 300.00
DELTA = 3°26'10" RT
D = 19°05'55"
L = 17.99
T = 9.00
BK = N 79°36'19" E
AH = N 83°02'29" E

CURVE ERS3
PCC = 109ERS+37.03
X = 81444.77
Y = 578346.69
PI = 109ERS+56.86
X = 81464.45
Y = 578349.09
PT = 109ERS+75.80
X = 81482.75
Y = 578341.45
R = 75.00
DELTA = 29°37'02" RT
D = 76°23'40"
L = 38.77
T = 19.83
BK = N 83°02'29" E
AH = S 67°20'29" E

CURVE DE1
PC = 30DE+77.38
X = 81516.10
Y = 578351.25
PI = 30DE+91.14
X = 81528.07
Y = 578344.45
PCC = 31DE+04.74
X = 81541.43
Y = 578341.13
R = 100.00
DELTA = 15°40'36" LT
D = 57°17'45"
L = 27.36
T = 13.77
BK = S 60°22'19" E
AH = S 76°02'55" E

CURVE DE2
PCC = 31DE+04.74
X = 81541.43
Y = 578341.13
PI = 31DE+41.67
X = 81577.27
Y = 578332.23
PCC = 31DE+77.77
X = 81613.92
Y = 578336.71
R = 200.00
DELTA = 20°55'24" LT
D = 28°38'52"
L = 73.04
T = 36.93
BK = S 76°02'55" E
AH = N 83°01'42" E

CURVE DE3
PCC = 31DE+77.77
X = 81613.92
Y = 578336.71
PI = 32DE+45.22
X = 81680.87
Y = 578344.89
PT = 33DE+11.86
X = 81743.26
Y = 578370.53
R = 500.00
DELTA = 15°21'53" LT
D = 11°27'33"
L = 134.08
T = 67.45
BK = N 83°01'42" E
AH = N 67°39'49" E

CURVE DW1
PC = 31DW+31.93
X = 81565.92
Y = 578425.58
PI = 31DW+55.52
X = 81583.58
Y = 578409.94
PCC = 31DW+78.40
X = 81606.09
Y = 578402.91
R = 110.00
DELTA = 24°12'23" LT
D = 52°05'13"
L = 46.47
T = 23.59
BK = S 48°27'32" E
AH = S 72°39'55" E

CURVE DW2
PCC = 31DW+78.40
X = 81606.09
Y = 578402.91
PI = 32DW+30.54
X = 81655.86
Y = 578387.38
PCC = 32DW+81.91
X = 81708.00
Y = 578387.02
R = 350.00
DELTA = 16°56'43" LT
D = 16°22'13"
L = 103.51
T = 52.14
BK = S 72°39'55" E
AH = S 89°36'38" E

CURVE DW3
PCC = 32DW+81.91
X = 81708.00
Y = 578387.02
PI = 33DW+42.41
X = 81768.50
Y = 578386.61
PT = 34DW+01.73
X = 81825.62
Y = 578406.53
R = 350.00
DELTA = 19°36'51" LT
D = 16°22'13"
L = 119.82
T = 60.50
BK = S 89°36'38" E
AH = N 70°46'31" E

CURVE ERE1
PC = 110ERE+31.15
X = 81627.42
Y = 578421.74
PI = 110ERE+66.24
X = 81593.49
Y = 578430.67
PCC = 110ERE+98.64
X = 81572.57
Y = 578458.85
R = 100.00
DELTA = 38°40'13" RT
D = 57°17'45"
L = 67.49
T = 35.09
BK = N 75°15'28" W
AH = N 36°35'15" W

CURVE ERE2
PCC = 110ERE+98.64
X = 81572.57
Y = 578458.85
PI = 111ERE+16.82
X = 81561.74
Y = 578473.44
PCC = 111ERE+34.31
X = 81558.79
Y = 578491.38
R = 75.00
DELTA = 27°14'40" RT
D = 76°23'40"
L = 35.66
T = 18.18
BK = N 36°35'15" W
AH = N 9°20'35" W

CURVE ERE3
PCC = 111ERE+34.31
X = 81558.79
Y = 578491.38
PI = 111ERE+55.92
X = 81555.28
Y = 578512.71
PT = 111ERE+77.50
X = 81554.09
Y = 578534.29
R = 400.00
DELTA = 6°11'13" RT
D = 14°19'26"
L = 43.19
T = 21.62
BK = N 9°20'35" W
AH = N 3°09'21" W

PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	ALIGNMENT ELMHURST AVE, DOUSMAN ST AND ELMHURST RAB	SHEET 99	E

DATE 06MAR14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9202-08-80 QUANTITY
0010	108.4400	CPM PROGRESS SCHEDULE	EACH	1.000	1.000
0020	201.0105	CLEARING	STA	9.000	9.000
0030	201.0205	GRUBBING	STA	9.000	9.000
0040	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	2.000	2.000
0050	204.0100	REMOVING PAVEMENT	SY	140.000	140.000
0060	204.0110	REMOVING ASPHALTIC SURFACE	SY	606.000	606.000
0070	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	557.000	557.000
0080	204.0150	REMOVING CURB & GUTTER	LF	3,783.000	3,783.000
0090	204.0155	REMOVING CONCRETE SIDEWALK	SY	359.000	359.000
0100	204.0195	REMOVING CONCRETE BASES	EACH	10.000	10.000
0110	204.0210	REMOVING MANHOLES	EACH	4.000	4.000
0120	204.0220	REMOVING INLETS	EACH	16.000	16.000
0130	204.0245	REMOVING STORM SEWER (SIZE) 001. 12-INCH - 18-INCH	LF	645.000	645.000
0140	204.0245	REMOVING STORM SEWER (SIZE) 002. 21-INCH - 30-INCH	LF	62.000	62.000
0150	204.0291.S	ABANDONING SEWER	CY	327.000	327.000
0160	205.0100	EXCAVATION COMMON	CY	8,030.000	8,030.000
0170	213.0100	FINISHING ROADWAY (PROJECT) 001. 9202-08-80	EACH	1.000	1.000
0180	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	166.000	166.000
0190	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	5,709.000	5,709.000
0200	311.0110	BREAKER RUN	TON	4,957.000	4,957.000
0210	405.0100	COLORING CONCRETE RED	CY	16.000	16.000
0220	415.0080	CONCRETE PAVEMENT 8-INCH	SY	1,359.000	1,359.000
0230	415.0090	CONCRETE PAVEMENT 9-INCH	SY	6,669.000	6,669.000
0240	415.0210	CONCRETE PAVEMENT GAPS	EACH	3.000	3.000
0250	415.1090	CONCRETE PAVEMENT HES 9-INCH	SY	201.000	201.000
0260	416.0160	CONCRETE DRIVEWAY 6-INCH	SY	73.000	73.000
0270	416.0512	CONCRETE ROUNDABOUT TRUCK APRON 12-INCH	SY	444.000	444.000
0280	416.0620	DRILLED DOWEL BARS	EACH	32.000	32.000
0290	455.0105	ASPHALTIC MATERIAL PG58-28	TON	15.000	15.000
0300	455.0605	TACK COAT	GAL	65.000	65.000
0310	460.1101	HMA PAVEMENT TYPE E-1	TON	266.000	266.000
0320	460.1103	HMA PAVEMENT TYPE E-3	TON	68.000	68.000
0330	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	214.000	214.000
0340	465.0105	ASPHALTIC SURFACE	TON	222.000	222.000
0350	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	23.000	23.000
0360	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	297.000	297.000
0370	465.0315	ASPHALTIC FLUMES	SY	9.000	9.000
0380	520.8000	CONCRETE COLLARS FOR PIPE	EACH	5.000	5.000
0390	522.1015	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	EACH	1.000	1.000
0400	522.1018	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	EACH	1.000	1.000
0410	601.0405	CONCRETE CURB & GUTTER 18-INCH TYPE A	LF	289.000	289.000
0420	601.0409	CONCRETE CURB & GUTTER 30-INCH TYPE A	LF	4,627.000	4,627.000
0430	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	467.000	467.000
0440	601.0580	CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R	LF	377.000	377.000
0450	601.0600	CONCRETE CURB PEDESTRIAN	LF	220.000	220.000
0460	602.0410	CONCRETE SIDEWALK 5-INCH	SF	4,594.000	4,594.000
0470	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	168.000	168.000

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DATE 06MAR14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9202-08-80 QUANTITY
0480	606.0200	RIPRAP MEDIUM	CY	5.000	5.000
0490	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	174.000	174.000
0500	608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	642.000	642.000
0510	608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	152.000	152.000
0520	608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	352.000	352.000
0530	608.0415	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH	LF	148.000	148.000
0540	608.0418	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	LF	78.000	78.000
0550	611.0420	RECONSTRUCTING MANHOLES	EACH	2.000	2.000
0560	611.0430	RECONSTRUCTING INLETS	EACH	4.000	4.000
0570	611.0530	MANHOLE COVERS TYPE J	EACH	4.000	4.000
0580	611.0624	INLET COVERS TYPE H	EACH	35.000	35.000
0590	611.0639	INLET COVERS TYPE H-S	EACH	7.000	7.000
0600	611.0642	INLET COVERS TYPE MS	EACH	3.000	3.000
0610	611.2004	MANHOLES 4-FT DIAMETER	EACH	17.000	17.000
0620	611.2005	MANHOLES 5-FT DIAMETER	EACH	2.000	2.000
0630	611.3230	INLETS 2X3-FT	EACH	19.000	19.000
0640	611.3901	INLETS MEDIAN 1 GRATE	EACH	1.000	1.000
0650	611.3902	INLETS MEDIAN 2 GRATE	EACH	1.000	1.000
0660	611.8120.S	COVER PLATES TEMPORARY	EACH	6.000	6.000
0670	614.0115	ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2	EACH	1.000	1.000
0680	614.0250	STEEL THRIE BEAM STRUCTURE APPROACH TEMPORARY	LF	42.000	42.000
0690	614.0305	STEEL PLATE BEAM GUARD CLASS A	LF	56.000	56.000
0700	614.0380	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY	EACH	2.000	2.000
0710	614.0920	SALVAGED RAIL	LF	180.000	180.000
0720	614.2300	MGS GUARDRAIL 3	LF	112.000	112.000
0730	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	1.000	1.000
0740	614.2620	MGS GUARDRAIL TERMINAL TYPE 2	EACH	1.000	1.000
0750	616.0700.S	FENCE SAFETY	LF	1,250.000	1,250.000
0760	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 001. 9202-08-80	EACH	1.000	1.000
0770	619.1000	MOBILIZATION	EACH	1.000	1.000
0780	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	312.000	312.000
0790	624.0100	WATER	MGAL	25.000	25.000
0800	625.0100	TOPSOIL	SY	7,843.000	7,843.000
0810	627.0200	MULCHING	SY	8,193.000	8,193.000
0820	628.1504	SILT FENCE	LF	1,023.000	1,023.000
0830	628.1520	SILT FENCE MAINTENANCE	LF	1,023.000	1,023.000
0840	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	10.000	10.000
0850	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	5.000	5.000
0860	628.2008	EROSION MAT URBAN CLASS I TYPE B	SY	1,463.000	1,463.000
0870	628.7005	INLET PROTECTION TYPE A	EACH	13.000	13.000
0880	628.7010	INLET PROTECTION TYPE B	EACH	27.000	27.000
0890	628.7020	INLET PROTECTION TYPE D	EACH	21.000	21.000
0900	628.7555	CULVERT PIPE CHECKS	EACH	10.000	10.000
0910	629.0205	FERTILIZER TYPE A	CWT	5.500	5.500
0920	630.0140	SEEDING MIXTURE NO. 40	LB	207.000	207.000

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DATE 06MAR14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9202-08-80 QUANTITY
0930	631.1100	SOD EROSION CONTROL	SY	5.000	5.000
0940	632.0101	TREES (SPECIES, ROOT, SIZE) 01. HACKBERRY, COMMON 'PRAIRIE PRIDE', B&B, 2.5-INCH CAL.	EACH	2.000	2.000
0950	632.0101	TREES (SPECIES, ROOT, SIZE) 02. HONEYLOCUST, THORNLESS 'IMPERIAL', B&B, 2.5-INCH CAL.	EACH	3.000	3.000
0960	632.0101	TREES (SPECIES, ROOT, SIZE) 03. MAPLE, FREEMAN 'SIENNA GLEN', B&B, 2-INCH CAL.	EACH	3.000	3.000
0970	632.0101	TREES (SPECIES, ROOT, SIZE) 04. CRABAPPLE, 'DONALD WYMAN', B&B, 2-INCH CAL.	EACH	5.000	5.000
0980	632.0101	TREES (SPECIES, ROOT, SIZE) 05. CRABAPPLE, 'DONALD WYMAN', B&B, 8-FOOT HT.	EACH	3.000	3.000
0990	632.0101	TREES (SPECIES, ROOT, SIZE) 06. CRABAPPLE, 'PINK SPIRES' (SHRUB FORM TREE), B&B 8-FOOT HT.	EACH	3.000	3.000
1000	632.0101	TREES (SPECIES, ROOT, SIZE) 07. CRABAPPLE, 'RED JEWEL', B&B, 2-INCH CAL.	EACH	5.000	5.000
1010	632.0101	TREES (SPECIES, ROOT, SIZE) 08. CRABAPPLE, 'RED JEWEL' (SHRUB FORM TREE), B&B, 8-FOOT HT.	EACH	2.000	2.000
1020	632.0101	TREES (SPECIES, ROOT, SIZE) 09. DOGWOOD, CORNELIAN CHERRY 'GOLDEN GLORY' (SHRUB FORM TREE), B&B, 6-FT HT.	EACH	3.000	3.000
1030	632.0101	TREES (SPECIES, ROOT, SIZE) 10. HAWTHORN, 'WINTER KING', B&B, 2-INCH CAL.	EACH	2.000	2.000
1040	632.0101	TREES (SPECIES, ROOT, SIZE) 11. HAWTHRON, 'WINTER KING' (SHRUB FORM TREE), B&B, 8-FOOT HT.	EACH	4.000	4.000
1050	632.0101	TREES (SPECIES, ROOT, SIZE) 12. JAPANESE TREE LILAC, 'IVORY SILK' B&B, 2-INCH CAL.	EACH	4.000	4.000
1060	632.0101	TREES (SPECIES, ROOT, SIZE) 13. JAPANESE TREE LILAC, 'IVORY SILK' (SHRUB FORM TREE), B&B, 8-FOOT HT.	EACH	3.000	3.000
1070	632.0101	TREES (SPECIES, ROOT, SIZE) 14. MAPLE, TATARIAN, B&B, 2-INCH CAL.	EACH	6.000	6.000
1080	632.0101	TREES (SPECIES, ROOT, SIZE) 15. MAPLE, TATARIAN (SHRUB FORM TREE), B&B, 8-FOOT HT.	EACH	4.000	4.000
1090	632.0101	TREES (SPECIES, ROOT, SIZE) 16. PEAR, CALLERY 'CLEVELAND SELECT', B&B, 2-INCH CAL.	EACH	12.000	12.000
1100	632.0101	TREES (SPECIES, ROOT, SIZE) 17. VIBURNUM, BLACKHAW 'FOREST ROUGE' (SHRUB FORM TREE), B&B, 6-FOOT HT.	EACH	14.000	14.000
1110	632.0101	TREES (SPECIES, ROOT, SIZE) 18. ARBORVITAE, AMERICAN 'EMERALD GREEN', B&B, 5-FOOT HT.	EACH	6.000	6.000
1120	632.0101	TREES (SPECIES, ROOT, SIZE) 19. ARBORVITAE, AMERICAN 'TECHNY', B&B, 5-FOOT HT.	EACH	12.000	12.000
1130	632.0101	TREES (SPECIES, ROOT, SIZE) 20. JUNIPER, 'IOWA', B&B, 3-FOOT HT.	EACH	16.000	16.000
1140	632.0101	TREES (SPECIES, ROOT, SIZE) 21. JUNIPER, 'IOWA', B&B, 5-FOOT HT.	EACH	37.000	37.000

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DATE 06MAR14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9202-08-80 QUANTITY
1150	632.0101	TREES (SPECIES, ROOT, SIZE) 22. SPRUCE, BLACK HILL, B&B, 8-FOOT HT.	EACH	13.000	13.000
1160	632.0101	TREES (SPECIES, ROOT, SIZE) 23. SPRUCE, SERBIAN, B&B, 5-FOOT HT.	EACH	3.000	3.000
1170	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 01. PFITZER JUNIPER, KALLAY'S COMPACT, CONTAINER, 2-FOOT SP.	EACH	22.000	22.000
1180	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 02. HYDRANGEA, PANICLED 'LIMELIGHT', CONTAINER, 3-FOOT HT.	EACH	2.000	2.000
1190	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 03. NINEBARK, 'DIABLO', CONTAINER, 3-FOOT HT.	EACH	6.000	6.000
1200	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 04. NINEBARK, 'SUMMER WINE', CONTAINER, 3-FOOT HT.	EACH	15.000	15.000
1210	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 05. ROSE, 'DWARF PAVEMENT', CONTAINER, 18-INCH HT.	EACH	24.000	24.000
1220	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 06. SMOKEBUSH, PURPLE 'ROYAL PURPLE', CONTAINER, 4-FOOT HT.	EACH	3.000	3.000
1230	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 07. SPIREA, 'GOLDFLAME', CONTAINER, 18-INCH HT.	EACH	48.000	48.000
1240	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 08. SPIREA, 'TOR', CONTAINER, 18-INCH HT.	EACH	13.000	13.000
1250	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 09. SUMAC, 'GRO-LOW' FRAGANT, CONTAINER, 24-INCH SP.	EACH	36.000	36.000
1260	632.0201	SHRUBS (SPECIES, ROOT, SIZE) 10. SUMAC, STAGHORN 'TIGER EYES', CONTAINER, 2-FOOT HT.	EACH	5.000	5.000
1270	632.9101	LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	EACH	26.000	26.000
1280	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	28.000	28.000
1290	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	14.000	14.000
1300	637.2210	SIGNS TYPE II REFLECTIVE H	SF	327.300	327.300
1310	637.2230	SIGNS TYPE II REFLECTIVE F	SF	52.500	52.500
1320	638.2602	REMOVING SIGNS TYPE II	EACH	23.000	23.000
1330	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	17.000	17.000
1340	643.0100	TRAFFIC CONTROL (PROJECT) 001. 9202-08-80	EACH	1.000	1.000
1350	643.0300	TRAFFIC CONTROL DRUMS	DAY	12,272.000	12,272.000
1360	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	2,092.000	2,092.000
1370	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	4,631.000	4,631.000
1380	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	271.000	271.000
1390	643.0900	TRAFFIC CONTROL SIGNS	DAY	5,487.000	5,487.000
1400	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	5.000	5.000
1410	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	106.500	106.500
1420	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	360.000	360.000
1430	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	3.000	3.000
1440	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	2,060.000	2,060.000
1450	646.0123	PAVEMENT MARKING PAINT 8-INCH	LF	43.000	43.000
1460	646.0600	REMOVING PAVEMENT MARKINGS	LF	7,797.000	7,797.000
1470	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	LF	610.000	610.000
1480	647.0456	PAVEMENT MARKING CURB EPOXY	LF	20.000	20.000
1490	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	2.000	2.000

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DATE 06MAR14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9202-08-80 QUANTITY
1500	647.0726	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	LF	120.000	120.000
1510	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	8,701.000	8,701.000
1520	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	3,132.000	3,132.000
1530	649.0900	TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH	LF	15.000	15.000
1540	649.1700	TEMPORARY PAVEMENT MARKING ARROWS	EACH	2.000	2.000
1550	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	2,407.000	2,407.000
1560	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	244.000	244.000
1570	653.0905	REMOVING PULL BOXES	EACH	1.000	1.000
1580	654.0217	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	EACH	1.000	1.000
1590	655.0610	ELECTRICAL WIRE LIGHTING 12 AWG	LF	3,732.000	3,732.000
1600	655.0615	ELECTRICAL WIRE LIGHTING 10 AWG	LF	14,808.000	14,808.000
1610	655.0625	ELECTRICAL WIRE LIGHTING 6 AWG	LF	9,574.000	9,574.000
1620	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 001. (CB 100)	LS	1.000	1.000
1630	690.0150	SAWING ASPHALT	LF	1,300.000	1,300.000
1640	690.0250	SAWING CONCRETE	LF	35.000	35.000
1650	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	2,144.000	2,144.000
1660	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR	HRS	1,200.000	1,200.000
1670	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	600.000	600.000
1680	SPV.0035	SPECIAL 003. TOPSOIL SPECIAL	CY	211.000	211.000
1690	SPV.0035	SPECIAL 500. PLANTING MIXTURE	CY	940.000	940.000
1700	SPV.0045	SPECIAL 050. PCMS REMOTE COMMUNICATIONS	DAY	360.000	360.000
1710	SPV.0060	SPECIAL 096. EMERGENCY SWEEPING MOBILIZATION	EACH	4.000	4.000
1720	SPV.0060	SPECIAL 104. STORM SEWER PLUG	EACH	2.000	2.000
1730	SPV.0060	SPECIAL 105. CONNECTION TO RESIDENTIAL SUMP	EACH	1.000	1.000
1740	SPV.0060	SPECIAL 301. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 1	EACH	2.000	2.000
1750	SPV.0060	SPECIAL 302. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 2	EACH	3.000	3.000
1760	SPV.0060	SPECIAL 303. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 3	EACH	8.000	8.000
1770	SPV.0060	SPECIAL 304. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 3R	EACH	4.000	4.000
1780	SPV.0060	SPECIAL 305. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 6R	EACH	1.000	1.000
1790	SPV.0060	SPECIAL 306. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS	EACH	9.000	9.000
1800	SPV.0060	SPECIAL 351. LIGHTING CONTROL CABINET	EACH	1.000	1.000
1810	SPV.0060	SPECIAL 352. CONCRETE BASE TYPE W	EACH	16.000	16.000
1820	SPV.0060	SPECIAL 353. FIBERGLASS STREET LIGHT POLE - INSTALL ONLY	EACH	16.000	16.000
1830	SPV.0060	SPECIAL 354. STREET LIGHT MAST ARM 10 FOOT - INSTALL ONLY	EACH	21.000	21.000
1840	SPV.0060	SPECIAL 355. BOX STYLE LUMINAIRE LED - INSTALL ONLY	EACH	21.000	21.000
1850	SPV.0060	SPECIAL 356. POLYMER CONCRETE PULLBOX	EACH	11.000	11.000
1860	SPV.0060	SPECIAL 500. ASTER, 'PURPLE DOME', CONTAINER, 1 GAL.	EACH	32.000	32.000

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DATE 06MAR14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9202-08-80 QUANTITY
1870	SPV.0060	SPECIAL 501. BEE BALM, 'MARSHALL'S DELIGHT', CONTAINER, 1 GAL.	EACH	90.000	90.000
1880	SPV.0060	SPECIAL 502. BLACK-EYED-SUSAN, 'CITY GARDEN', CONTAINER, 1 GAL.	EACH	131.000	131.000
1890	SPV.0060	SPECIAL 503. BLUE FESCUE, 'ELIJAH BLUE', CONTAINER, 1 GAL.	EACH	99.000	99.000
1900	SPV.0060	SPECIAL 504. CALAMINT, CONTAINER, 1 GAL.	EACH	88.000	88.000
1910	SPV.0060	SPECIAL 505. CATMINT, 'WALKER'S LOW', CONTAINER, 1 GAL.	EACH	93.000	93.000
1920	SPV.0060	SPECIAL 506. CONEFLOWER, PURPLE 'MAGNUS', CONTAINER, 1 GAL.	EACH	20.000	20.000
1930	SPV.0060	SPECIAL 507. CONEFLOWER, 'WHITE SWAN', CONTAINER, 1 GAL.	EACH	42.000	42.000
1940	SPV.0060	SPECIAL 508. DAYLILY, 'ALABAMA JUBILEE', CONTAINER, 1 GAL.	EACH	72.000	72.000
1950	SPV.0060	SPECIAL 509. DAYLILY, 'FLAVA', CONTAINER, 1 GAL.	EACH	187.000	187.000
1960	SPV.0060	SPECIAL 510. DAYLILY, 'PARDON ME', CONTAINER, 1 GAL.	EACH	197.000	197.000
1970	SPV.0060	SPECIAL 511. FEATHER REED GRASS, 'KARL FORESTER', CONTAINER, 3 GAL.	EACH	101.000	101.000
1980	SPV.0060	SPECIAL 512. GAYFEATHER, SPIKED 'KOBOLD', CONTAINER, 1 GAL.	EACH	45.000	45.000
1990	SPV.0060	SPECIAL 513. LITTLE BLUESTEM, 'THE BLUES', CONTAINER, 1 GAL.	EACH	446.000	446.000
2000	SPV.0060	SPECIAL 514. RUSSIAN SAGE, CONTAINER, 1 GAL.	EACH	9.000	9.000
2010	SPV.0060	SPECIAL 515. SALVIA, 'MAY NIGHT', CONTAINER, 1 GAL.	EACH	87.000	87.000
2020	SPV.0060	SPECIAL 516. SEDUMN, 'AUTUMN JOY', CONTAINER, 1 GAL.	EACH	47.000	47.000
2030	SPV.0060	SPECIAL 517. SWITCH GRASS, 'NORTHWIND', CONTAINER, 3 GAL.	EACH	27.000	27.000
2040	SPV.0060	SPECIAL 518. SWITCH GRASS, 'RUBY RIBBONS', CONTAINER, 3 GAL.	EACH	71.000	71.000
2050	SPV.0060	SPECIAL 519. BULBS, DAFFODIL, 'STAINLESS', BULB, DN1	EACH	90.000	90.000
2060	SPV.0060	SPECIAL 520. BULBS, TULIP, 'AMERICAN DREAM', BULB, 12+CM	EACH	45.000	45.000
2070	SPV.0060	SPECIAL 521. BULBS, TULIP, 'JAAP GROOT', BULB, 12+CM	EACH	45.000	45.000
2080	SPV.0075	SPECIAL 001. STREET SWEEPING	HRS	4.000	4.000
2090	SPV.0075	SPECIAL 002. EMERGENCY SWEEPING	HRS	4.000	4.000
2100	SPV.0085	SPECIAL 150. FINE FESCUE SEED	LB	86.000	86.000
2110	SPV.0090	SPECIAL 005. RAILING DECORATIVE STEEL	LF	257.000	257.000
2120	SPV.0090	SPECIAL 300. PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE DIAG 12-INCH	LF	30.000	30.000
2130	SPV.0090	SPECIAL 301. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 8-INCH	LF	211.000	211.000
2140	SPV.0090	SPECIAL 302. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC YIELD LINE 18-INCH	LF	111.000	111.000
2150	SPV.0090	SPECIAL 303. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH	LF	189.000	189.000
2160	SPV.0090	SPECIAL 500. ALUMINUM EDGING	LF	347.000	347.000
2170	SPV.0090	SPECIAL 501. SHOVEL CUT EDGE	LF	185.000	185.000

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DATE 06MAR14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	9202-08-80 QUANTITY
2180	SPV.0105	SPECIAL 001. SURVEY PROJECT I.D. 9202-08-80	LS	1.000	1.000
2190	SPV.0105	SPECIAL 002. SALVAGE TRAFFIC SIGNALS SPECIAL	LS	1.000	1.000
2200	SPV.0105	SPECIAL 005. CONCRETE PAVEMENT JOINT LAYOUT	LS	1.000	1.000
2210	SPV.0105	SPECIAL 951. OVERHEAD SIGN SUPPORT BLACK FINISH STRUCTURE S-05-0289	LS	1.000	1.000
2220	SPV.0105	SPECIAL 952. OVERHEAD SIGN SUPPORT BLACK FINISH STRUCTURE S-05-0290	LS	1.000	1.000
2230	SPV.0105	SPECIAL 953. OVERHEAD SIGN SUPPORT BLACK FINISH STRUCTURE S-05-0291	LS	1.000	1.000
2240	SPV.0165	SPECIAL 004. BERM ROCK WALL	SF	246.000	246.000
2250	SPV.0180	SPECIAL 002. CONCRETE PAVEMENT SHES 9-INCH	SY	526.000	526.000
2260	SPV.0180	SPECIAL 004. COLORED CONCRETE PAVEMENT HES 9-INCH	SY	17.000	17.000
2270	SPV.0180	SPECIAL 005. COLORED CONCRETE PAVEMENT 9-INCH	SY	89.000	89.000
2280	SPV.0180	SPECIAL 006. COLORED & STAMPED CONCRETE 5-INCH	SY	519.000	519.000
2290	SPV.0180	SPECIAL 009. COLORED AND STAMPED CONCRETE HES 9-INCH	SY	6.000	6.000
2300	SPV.0180	SPECIAL 010. COLORED AND STAMPED CONCRETE 9-INCH	SY	32.000	32.000
2310	SPV.0180	SPECIAL 500. SHREDDED HARDWOOD BARK MULCH	SY	1,256.000	1,256.000

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REMOVING PAVEMENT

STATION	OFFSET	LOCATION	204.0100 REMOVING PAVEMENT SY	204.012 REMOVING ASPHALTIC SURFACE MILLING SY
STAGE 1A				
32DE+50	DRIVEWAY LT	DOUSMAN	89	--
STAGE 1A TOTAL			89	--
STAGE 1B				
113EBN+71 - 114EBS+19	RT	CTH EB NB	--	296
STAGE 1B SUBTOTAL			--	296
STAGE 2				
113EBS+05 - 114EBS+05	LT	CTH EB SB	--	261
31DE+93	DRIVEWAY RT	DOUSMAN	30	--
33DE+34	DRIVEWAY RT	DOUSMAN	21	--
STAGE 2 TOTAL			51	261
PROJECT 9202-08-80 TOTAL			140	557

REMOVING SMALL PIPE CULVERTS

STATION	OFFSET	-	STATION	OFFSET	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	REMARKS
STAGE 2							
10EW+51	34.7' RT	-	10EW+56	7.9' RT	ELMHURST	1	27 LF CORREGATED METAL CULVERT PIPE, 18"
STAGE 2 SUBTOTAL						1	
PROJECT 9202-08-80 TOTAL						1	

REMOVING SIDEWALK

STATION			OFFSET	LOCATION	204.0155 REMOVING CONCRETE SIDEWALK SY
STAGE 1A					
NORTH CROSSOVER			MEDIAN	CTH EB	71
110EBN+20	-	110EBN-68	RL/LT	CTH EB NB	71
30DE+69	-	31DE+34	RT	DOUSMAN EB	43
STAGE 1A SUBTOTAL					185
STAGE 2					
110EBS+00	-	111EBS+14	MEDIAN	CTH EB SB	82
30DE+17	-	30DE+70	RT	DOUSMAN EB	92
STAGE 2 SUBTOTAL					174
PROJECT 9202-08-80 TOTAL					359

CLEARING & GRUBBING

STATION	-	STATION	OFFSET	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
STAGE 1A						
30DE+00	-	32DE+00	RT	DOUSMAN EB	2	2
STAGE 1A SUBTOTAL					2	2
STAGE 2						
10EW+51	-	12EW+00	RT/LT	ELMHURST	2	2
106EBN+00	-	109EBN+00	RT	CTH EB NB	3	3
106EBS+00	-	108EBS+00	LT	CTH EB SB	2	2
STAGE 2 SUBTOTAL					7	7
PROJECT 9202-08-80 TOTAL					9	9

REMOVING MANHOLES

STATION	OFFSET	LOCATION	204.0210 REMOVING MANHOLES EACH
STAGE 2			
107EBS+20	LT	CTH EB SB	1
108EBS+83	LT	CTH EB SB	1
109EBS+35	LT	CTH EB SB	1
STAGE 2 SUBTOTAL			3
STAGE 3			
104EBS+87	LT	CTH EB SB	1
STAGE 3 SUBTOTAL			1
PROJECT 9202-08-80 TOTAL			4

REMOVING CURB & GUTTER

STATION			OFFSET	LOCATION	204.0150 REMOVING CURB & GUTTER LF
STAGE 1A					
NORTH CROSSOVER			MEDIAN	CTH EB	180
104EBN+41	-	105EBN+58	RT	MEMORIAL DR	113
30DE+63	-	34DE+40	LT	DOUSMAN EB	356
30DE+63	-	31DE+27	RT	DOUSMAN EB	75
30DE+81	-	30DE+96	RT	MEMORIAL DR	32
STAGE 1A SUBTOTAL					756
STAGE 1B					
111EBN+54	-	113EBN+71	RT	CTH EB NB	215
112EBN+17	-	113EBN+71	LT	CTH EB NB	158
STAGE 1B SUBTOTAL					373
STAGE 2					
105EBN+19	-	109EBN+48	RT	CTH EB NB	378
106EBN+15	-	109EBN+01	MEDIAN	CTH EB NB	563
110EBN+20	-	111EBN+51	RT	CTH EB NB	137
110EBN+63	-	112EBN+14	LT	CTH EB NB	137
105EBS+92	-	113EBS+05	LT	CTH EB SB	691
109EBS+94	-	113EBS+05	RT	CTH EB SB	321
30DE+25	-	30DE+84	RT	DOUSMAN EB	32
31DE+10	-	34DE+40	RT	DOUSMAN EB	347
STAGE 2 SUBTOTAL					2606
STAGE 3					
10BWA+30	-	10BWA+75	RT	BRANTWOOD	48
STAGE 3 SUBTOTAL					48
PROJECT 9202-08-80 TOTAL					3,783

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

REMOVING STORM SEWER

STATION	OFFSET	-	STATION	OFFSET	LOCATION	PIPE SIZE INCH	204.0245.001 REMOVING STORM SEWER 12-INCH-18-INCH LF	204.0245.002 REMOVING STORM SEWER 21-INCH-30-INCH LF	204.0291.S ABANDONING SEWER CY
STAGE 1A									
30DE+89	22.5' LT	-	31DE+01	23.7' LT	DOUSMAN EB	12	9	---	---
105EBN+22	63.7' RT	-	105EBN+42	55.4' RT	CTH EB NB	12	20	---	---
STAGE 1A SUBTOTAL							29	--	--
STAGE 2									
104EBS+87	32.2' LT	-	107EBS+20	32.7' LT	CTH EB SB	30	---	---	134
107EBS+17	6.3' RT	-	107EBS+18	25.2' LT	CTH EB SB	12	32	---	---
107EBS+17	7.7' RT	-	107EBN+54	2.0' RT	CTH EB	12	43	---	---
107EBS+17	49.5' RT	-	107EBS+17	7.7' RT	CTH EB SB	12	42	---	---
107EBS+18	25.2' LT	-	107EBS+20	32.7' LT	CTH EB SB	12	8	---	---
107EBS+20	32.7' LT	-	108EBS+83	11.7' LT	CTH EB SB	30	---	---	29
108EBS+77	41.6' RT	-	108EBS+80	26.9' RT	CTH EB SB	12	16	---	---
108EBS+80	25.1' RT	-	108EBS+81	5.9' LT	CTH EB SB	12	30	---	---
108EBS+81	5.9' LT	-	108EBS+83	11.7' LT	CTH EB SB	12	8	---	---
108EBS+83	11.7' LT	-	109EBS+35	13.1' RT	CTH EB SB	30	---	53	---
108EBS+80	26.9' RT	-	108EBS+97	5.9' RT	CTH EB SB	12	26	---	---
109EBS+35	13.1' LT	-	109EBS+42	27.3' LT	CTH EB SB	24	---	9	---
111EBS+16	41.5' LT	-	111EBS+32	15.6' RT	CTH EB SB	12	59	---	---
108EBS+77	41.6' RT	-	30DE+73	32.7' RT	DOUSMAN EB	12	106	---	---
30DE+73	32.7' RT	-	30DE+80	32.4' RT	DOUSMAN EB	12	6	--	--
31DE+12	44.8' RT	-	31DE+32	56.9' RT	DOUSMAN EB	12	27	--	--
30DE+73	32.7' RT	-	30DE+74	51.3' RT	DOUSMAN EB	12	19	---	---
STAGE 2 SUBTOTAL							422	62	163
STAGE 3									
30DE+73	32.7' RT	-	30DE+88	23.5' LT	DOUSMAN EB	12	10	---	164
104EBN+96	10.1' RT	-	105EBN+15	2.5' RT	CTH EB NB	12	20	--	--
105EBN+15	2.5' RT	-	105EBN+42	55.4' RT	CTH EB NB	12	59	--	--
104EBS+87	32.19 LT	-	105EBS+21	18.9' RT	CTH EB SB	15	61	--	--
STAGE 3 SUBTOTAL							150	--	164
STAGE 4									
30DE+80	32.4' RT	-	31DE+12	44.8' RT	DOUSMAN EB	12	44	--	--
STAGE 4 SUBTOTAL							44	--	--
PROJECT 9202-08-80 TOTAL							645	62	327

FINISHING ROADWAY

STATION	LOCATION	213.0100 FINISHING ROADWAY PROJECT ID 9202-08-80 EACH
105EBN+00 - 113EBN+71.71	CTH EB	1
PROJECT 9202-08-80 TOTAL		1

REMOVING ASPHALTIC SURFACE

STATION			OFFSET	LOCATION	204.0110 REMOVING ASPHALTIC SURFACE SY
STAGE 3					
31DW+29	-	31DW+90	RT	DOUSMAN	274
STAGE 3 TOTAL					274
STAGE 4					
30DE+20	-	30DE+81	RT	DOUSMAN	86
30DE+81	-	31DE+04	RT	DOUSMAN	120
31DE+04	-	31DE+78	RT	DOUSMAN	126
STAGE 4 TOTAL					332
PROJECT 9202-08-80 TOTAL					606

REMOVING INLETS

STATION	OFFSET	LOCATION	204.0220 REMOVING INLETS EACH
STAGE 1A			
31DE+00	24' LT	DOUSMAN	1
105EBN+22	64' RT	CTH EB NB	1
105EBN+42	55' RT	CTH EB NB	1
STAGE 1A SUBTOTAL			3
STAGE 2			
107EBN+08	35' RT	CTH EB NB	1
107EBN+10	8' RT	CTH EB NB	1
108EBN+81	13' RT	CTH EB NB	1
108EBN+84	27' RT	CTH EB NB	1
107EBS+17	8' RT	CTH EB SB	1
107EBS+18	25' LT	CTH EB SB	1
108EBS+80	6' LT	CTH EB SB	1
111EBS+21	33' LT	CTH EB SB	1
111EBS+32	14' RT	CTH EB SB	1
30DE+73	33' RT	DOUSMAN	1
STAGE 2 SUBTOTAL			10
STAGE 3			
104EBN+96	10' RT	CTH EB NB	1
105EBN+15	3' RT	CTH EB NB	1
30DE+89	23' LT	DOUSMAN	1
STAGE 3 SUBTOTAL			3
PROJECT 9202-08-80 TOTAL			16

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

EARTHWORK

Category	Stage	From/To Station	Location	Excavation Common (CY) (1) 205.0100		Structure Excavation (CY) (6)	Fill (CY)	Mass Ordinate +/- (5)	Comment:
				Cut (CY) (2)	EBS (CY) (3)				
1000	1A	111EBN+39.83 to 112EBN+00.00	CTH EB (CARDINAL LN) NB	213	0	0	20	193	
		33DE+50.00 to 34DE+40.40	DOUSMAN ST EB	297	0	0	0	297	
		31DW+23.70 to 33DW+21.16	DOUSMAN ST WB	1,144	0	0	38	1,105	
				1,654	0	0	59	1,596	
	Stage 1A Subtotal			1,654		0			
1000	1B	112EBN+00.00 to 113EBN+71.17	CTH EB (CARDINAL LN) NB	594	0	0	46	548	
				595	0	0	46	549	
	Stage 1B Subtotal			595		0			
1000	2	105EBN+75.00 to 109EBN+42.88	CTH EB (CARDINAL LN) NB	1,030	0	0	100	931	
		106EBS+00.00 to 109EBS+52.49	CTH EB (CARDINAL LN) SB	668	0	0	116	553	
		110EBS+87.65 to 113EBS+05.45	CTH EB (CARDINAL LN) SB	430	0	0	210	220	
		30DE+65.24 to 34DE+40.40	DOUSMAN ST EB	1,054	0	0	69	986	
		10EW+51.48 to 14EW+47.59	ELMHURST AVE WB	224	0	0	517	-293	
		13EE+92.10 to 14EE+38.90	ELMHURST AVE EB	0	0	0	55	-55	
		20ERAB+00.00 to 23ERAB+89.56	ELMHURST AVE ROUNDABOUT	1,425	0	0	2,437	-1,012	
				4,832	0	0	3,503	1,330	
	Stage 2 Subtotal			4,832		0			
1000	3	105EBN+00.00 to 105EBN+75.00	CTH EB (CARDINAL LN) NB	76	0	0	9	68	
		104EBS+94.89 to 106EBS+00.00	CTH EB (CARDINAL LN) SB	228	0	0	91	137	
		30DE+77.38 to 34DE+40.40	DOUSMAN ST EB	292	0	0	0		
		10BWA+25.00 to 13BWA+75.00	BRANTWOOD AVE	352	0	0	37	315	
				949	0	0	137	520	
	Stage 3 Subtotal			949		0			
	Project 9202-08-80 Total			8,030				3,995	

1) Excavation Common = Cut + EBS Excavation. Item number 205.0100.

2) Cut volume includes concrete and asphaltic surface material.

3) EBS Excavation to be backfilled roadway embankment unless otherwise noted in plans.

4) Roadway Embankment = (Fill + EBS Excavation - Select Borrow)

5) The Mass Ordinate is calculated by division. A positive quantity indicates an excess of material within the Division and a negative quantity indicates a shortage of material within the Division. Mass Ordinate = Cut - Fill. The Mass Ordinate is for information purposes only as Common Excavation and Roadway Embankment are not balanced for quantity purposes and does not guarantee the quality of Common Excavation, and if it can be reused onsite. All EBS material is assumed to be wasted offsite. Structure Excavation is not included in this calculation.

6) Structure Excavation limits for Retaining Wall construction are shown in the cross sections and are assumed to be 70% of the retaining wall height. This is for information purposes only, and will vary depending on shop drawing design.

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

AGGREGATE ITEMS

STATION			OFFSET	LOCATION	305.011* BASE AGGREGATE DENSE 3/4-INCH TON	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	311.0110 BREAKER RUN TON
STAGE 1A							
107EBN+63	-	108EBN+39	RT	CTH EB NB	--	16	--
30DW+59	-	34DE+40	LT	DOUSMAN WB	--	510	811
STAGE 1A SUBTOTAL					--	526	811
STAGE 1B							
111EBN+54	-	113EBN+71	RT	CTH EB NB	--	230	347
STAGE 1B SUBTOTAL					--	230	347
STAGE 2							
105EBN+75	-	109EBN+43	RT	CTH EB NB	--	462	692
105EBS+75	-	109EBS+67	LT	CTH EB SB	--	442	660
110EBS+89	-	113EBS+05	LT	CTH EB SB	--	268	401
20ERAB+43	-	23ERAB+78	RT	ROUNDABOUT	--	500	830
10EW+51	-	14EW+48	LT	ELMHURST WB	84	538	--
13EE+25	-	14EE+39	RT	ELMHURST EB	4	197	17
31DE+20	-	34DE+40	RT	DOUSMAN EB	4	240	519
STAGE 2 SUBTOTAL					92	2647	3119
STAGE 3							
10BWA+49	-	11BWA+05	RL	BRANTWOOD	--	150	--
11BWA+05	-	13BWA+75	RL	BRANTWOOD	20	314	--
104EBS+95	-	106EBS+13	LT	CTH EB SB	--	108	168
105EBN+00	-	105EBN+75	RT	CTH EB NB	--	132	196
105EBN+11	-	106EBN+06	RT	MEMORIAL DR	--	120	153
30DE+77	-	31DE+20	RT	DOUSMAN	--	84	95
33DE+50	-	34DE+40	RT	DOUSMAN	--	40	68
STAGE 3 SUBTOTAL					20	948	680
PROJECT 9202-08-80 TOTAL					112	4,351	4,957

*- ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE PAVEMENT GAPS

STATION	OFFSET	LOCATION	415.0210 CONCRETE PAVEMENT GAPS EACH
STAGE 2			
31DE+93	RT	DOUSMAN EB	1
33DE+34	RT	DOUSMAN EB	1
STAGE 2 SUBTOTAL			2
STAGE 3			
30DE+94	RT	DOUSMAN EB	1
STAGE 3 SUBTOTAL			1
PROJECT 9202-08-80 TOTAL			3

DRIVEWAY ITEMS

STATION	OFFSET	LOCATION	305.011* BASE AGGREGATE DENSE 3/4-INCH TON	416.0160 CONCRETE DRIVEWAY 6-INCH SY	465.0120 ASPHALTIC SURFACE DWY & FIELD ENTRANCES TON
STAGE 2					
31DE+93	RT	DOUSMAN EB	12	42	--
33DE+34	RT	DOUSMAN EB	7	23	--
STAGE 2 SUBTOTAL			19	65	--
STAGE 3					
105EBN+00	RT	CTH EB NB	28	8	18
11BWA+71	RT	BRANTWOOD	7	--	5
STAGE 3 SUBTOTAL			35	8	23
PROJECT 9202-08-80 TOTAL			54	73	23

* - ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ASPHALTIC SURFACE TEMPORARY

STATION	OFFSET	LOCATION	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON
STAGE 1A				
NORTH CROSSOVER	MEDIAN	CTH EB	41	39
105EBN+14 - 105EBN+61	RT	CTH EB NB	101	40
30DE+81 - 31DE+10	RT	DOUSMAN	92	37
31DW+29 - 31DW+90	RT	DOUSMAN	209	83
STAGE 1 SUBTOTAL			443	199
STAGE 1B				
INTERIM PAVEMENT GAP	RT	CTH EB NB	44	34
STAGE 1B SUBTOTAL			44	34
STAGE 2				
30DE+20 - 30DE+81	RT	DOUSMAN	60	26
31DE+04 - 31DE+78	RT	DOUSMAN	97	38
STAGE 2 SUBTOTAL			157	64
PROJECT 9202-08-80 TOTAL			644	297

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

PAVEMENT ITEMS

STATION			OFFSET	LOCATION	405.0100 COLORING CONCRETE RED CY	415.0080 CONCRETE PAVEMENT 8-INCH SY	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.1090 CONCRETE PAVEMENT HES 9-INCH SY	SPV.0180.002 CONCRETE PAVEMENT SHES 9-INCH SY	416.0512 CONCRETE ROUNDABOUT TRUCK APRON 12-INCH SY	SPV.0180.004 COLORED CONCRETE PAVEMENT HES 9-INCH SY	SPV.0180.005 COLORED CONCRETE PAVEMENT 9-INCH SY	SPV.0180.009 COLORED AND STAMPED CONCRETE HES 9-INCH SY	SPV.0180.010 COLORED AND STAMPED CONCRETE 9-INCH SY	455.0105 ASPHALTIC MATERIAL PG58-28 TON	455.0605 TACK COAT GAL	460.1101 HMA PAVEMENT TYPE E-1 TON	460.1103 HME PAVEMENT TYPE E-3 TON
STAGE 1A																		
107EBN+63	-	108EBN+39	RT	CTH EB NB	--	--	--	--	--	--	--	--	--	--	--	1	8	--
30DW+59	-	34DE+40	LT	DOUSMAN WB	--	--	1,276	--	--	--	--	22	--	8	--	--	--	--
STAGE 1 SUBTOTAL					--	--	1,276	--	--	--	--	22	--	8	--	1	8	--
STAGE 1B																		
111EBN+54	-	113EBN+71	RT	CTH EB NB	--	--	--	--	526	--	--	--	--	--	--	--	--	--
113EBN+71	-	114EBS+19	RT	CTTH EB NB	--	--	--	--	--	--	--	--	--	--	--	7	--	36
STAGE 1 SUBTOTAL					--	--	--	--	526	--	--	--	--	--	--	7	--	36
STAGE 2																		
105EBN+75	-	109EBN+43	RT	CTH EB NB	--	--	990	--	--	--	--	20	--	7	--	--	--	--
105EBS+75	-	109EBS+67	LT	CTH EB SB	--	--	950	--	--	--	--	20	--	7	--	--	--	--
110EBS+89	-	113EBS+05	LT	CTH EB SB	--	--	588	--	--	--	--	--	--	--	--	--	--	--
113EBS+05	-	114EBS+05	LT	CTH EB SB	--	--	--	--	--	--	--	--	--	--	--	7	--	32
20ERAB+43	-	23ERAB+78	RT	ROUNDABOUT	16	--	1,195	--	--	444	--	--	--	--	--	--	--	--
10EW+51	-	14EW+48	LT	ELMHURST WB	--	1,066	--	--	--	--	--	--	--	--	--	--	--	--
13EE+25	-	14EE+39	RT	ELMHURST EB	--	293	--	--	--	--	--	--	--	--	--	--	--	--
31DE+20	-	34DE+40	RT	DOUSMAN EB	--	--	789		--	--	--	--	--	--	--	--	--	--
STAGE 2 SUBTOTAL					16	1,359	4,512	--	--	444	--	40	--	14	--	7	--	32
STAGE 3																		
10BWA+49	-	11BWA+05	RL	BRANTWOOD	--	--	363	--	--	--	--	--	--	--	--	--	--	--
11BWA+05	-	13BWA+75	RL	BRANTWOOD	--	--	--	--	--	--	--	--	--	--	11	21	193	--
104EBS+95	-	106EBS+13	LT	CTH EB SB	--	--	267	--	--	--	--	--	--	--	--	--	--	--
105EBN+00	-	105EBN+75	RT	CTH EB NB	--	--	251	--	--	--	--	27	--	10	--	--	--	--
105EBN+11	-	106EBN+06	RT	MEMORIAL DR	--	--	--	--	--	--	--	--	--	--	4	29	65	--
30DE+77	-	31DE+20	RT	DOUSMAN	--	--	--	80	--	--	17	--	6	--	--	--	--	--
33DE+50	-	34DE+40	RT	DOUSMAN	--	--	--	121	--	--	--	--	--	--	--	--	--	--
STAGE 3 SUBTOTAL					--	--	881	201	--	--	17	27	6	10	15	50	258	--
PROJECT 9202-08-80 TOTAL					16	1,359	6,669	201	526	444	17	89	6	32	15	65	266	68

DOWEL BARS

STATION	OFFSET	LOCATION	416.0620 DRILLED DOWEL BARS EACH
105EBN+00	RT	CTH EB NB	16
104EBS+95	LT	CTH EB SB	16
PROJECT 9202-08-80 TOTAL			32

ASPHALITIC FLUMES

STATION	OFFSET	LOCATION	465.0315 ASPHALTIC FLUMES SY
11BWA+00	RT	BRANTWOOD	9
PROJECT 9202-08-80 TOTAL			9

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

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SIDEWALKS AND MULTI-USE PATHS

STATION		OFFSET	LOCATION	305.0120* BASE AGGREGATE DENSE 1 1/4-INCH TON	465.0105 ASPHALTIC SURFACE TON	601.0600 CONCRETE CURB PEDESTRIAN LF	602.0410 CONCRETE SIDEWALK 5-INCH SF	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW SF	SPV.0180.006 COLORED & STAMPED CONCRETE 5-INCH SY
STAGE 2									
			ROUNDABOUT	35	--	--	--	--	178
13EW+97	14EW+35	MEDIAN	ELMHURST	14	--	--	--	--	68
108EBN+96	109EBN+72	MEDIAN	CTH EB NB	23	--	64	319	32	80
STAGE 2 SUBTOTAL				72	--	64	319	32	326
STAGE 3									
30DE+77	31DE+13	MEDIAN	DOUSMAN EB	23	--	--	--	--	126
111EBN+50	111EBN+80	MEDIAN	CTH EB NB	14	--	--	--	--	67
NORTH CROSSOVER		MEDIAN	CTH EB	44	--	--	774	--	--
STAGE 3 SUBTOTAL				81	--	--	774	--	193
STAGE 4									
10EW+44	14EW+32	RT	ELMHURST	35	--	--	1606	16	--
10BWA+23	10BWA+90	LT	BRANTWOOD	9	--	--	440	8	
30DE+77	31DE+13	MEDIAN	DOUSMAN EB	16	--	156	781	32	--
105EBN+01	105EBN+09	RT	CTH EB NB	2	--	--	84	16	--
105EBN+49	109EBN+75	RT	CTH EB NB	237	106	--	199	32	--
30DE+41	31DE+05	RT	DOUSMAN EB	46	18	--	124	--	--
31DE+05	31DE+34	RT	DOUSMAN EB	5	--	--	176	16	--
31DW+00	32DW+62	LT	DOUSMAN WB	71	32	--	91	16	--
111EBN+18	113EBN+71	RT	CTH EB NB	140	66	--	--	--	--
STAGE 4 SUBTOTAL				561	222	156	3501	136	--
PROJECT 9202-08-80 TOTAL				714	222	220	4594	168	519

* - ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SALVAGED RAIL

STATION	OFFSET	LOCATION	614.0920 SALVAGED RAIL LF
111EBS+03 - 113EBS+05	LT	CTH EB SB	180
PROJECT 9202-08-80 TOTAL			180

MAINTENANCE AND REPAIR OF HAUL ROADS

LOCATION	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS PROJECT I.D. 9202-08-80 EACH
PROJECT 9202-08-80	1
PROJECT 9202-08-80 TOTAL	1

FENCE SAFETY

LOCATION	616.0700.S FENCE SAFETY LF
UNDISTRIBUTED	1,250
PROJECT 9202-08-80 TOTAL	1,250

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

CONCRETE CURB & GUTTER

STATION	OFFSET	LOCATION	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A LF	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF	601.0405 CONCRETE CURB & GUTTER 18- INCH TYPE A LF	601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R LF	COMMENTS
STAGE 1A							
30DW+80 - 34DE+40	LT	DOUSMAN WB	327	--	--	--	--
111EBN+25 - 112EBN+75	RT	CTH EB NB	143	--	--	--	--
STAGE 1A SUBTOTAL			470	--	--	--	
STAGE 1B							
111EBN+30 - 113EBN+71	RT	CTH EB NB	237	--	--	--	--
STAGE 1B SUBTOTAL			237	--	--	--	
STAGE 2							
105EBN+75 - 109EBN+75	RT	CTH EB NB	389	--	--	--	--
105EBN+75 - 109EBS+75	LT	CTH EB NB	359	--	--	--	--
105EBS+75 - 109EBS+38	RT	CTH EB SB	365	--	--	--	--
106EBS+13 - 109EBS+67	LT	CTH EB SB	340	--	--	--	--
110EBS+64 - 113EBS+05	LT	CTH EB SB	222	--	--	--	--
110EBS+92 - 113EBS+05	RT	CTH EB SB	210	--	--	--	--
13EW+98 - 14EW+38	RT	ELMHURST WB	38	--	--	--	--
12EW+87 - 14EW+59	LT	ELMHURST WB	187	--	--	--	--
10EW+48 - 14EE+39	RT	ELMHURST EB	106	--	--	--	--
13EE+95 - 14EE+35	LT	ELMHURST EB	37	--	--	--	--
20ERAB+00 - 23ERAB+90	LT	ELMHURST RAB	--	--	289	377	--
20ERAB+58 - 20ERAB+91	RT	ELMHURST RAB	45	--	--	--	--
21ERAB+48 - 21ERAB+61	RT	ELMHURST RAB	19	--	--	--	--
22ERAB+23 - 22ERAB+52	RT	ELMHURST RAB	36	--	--	--	--
31DE+82 - 34DE+40	RT	DOUSMAN EB	266	--	--	--	--
31DE+20 - 33DE+12	LT	DOUSMAN EB	191	--	--	--	--
STAGE 2 SUBTOTAL			2,810	--	289	377	
STAGE 3							
105EBN+00 - 105EBN+08	RT	CTH EB NB	26	--	--	--	--
105EBN+08 105EBN+08	RT	CTH EB NB	--	33	--	--	--
105EBN+48 - 105EBN+75	RT	CTH EB NB	40	--	--	--	--
105EBN+48 - 106EBN+06	RT	CTH EB NB	--	62	--	--	--
105EBN+00 - 105EBN+75	LT	CTH EB NB	75	--	--	--	--
105EBS+00 - 105EBS+75	RT	CTH EB SB	75	--	--	--	--
10BWA+20 - 11BWA+05	LT	BRANTWOOD	108	--	--	--	--
10BWA+41 - 10BWA+97	RT	BRANTWOOD	80	--	--	--	--
30DE+75 - 31DE+20	LT	DOUSMANEB	42	--	--	--	--
31DW+31 - 33DW+18	RT	DOUSMAN WB	193	--	--	--	--
111EBN+50 - 13EBN+71	LT	CTH EB NB	217	--	--	--	--
23ERAB+23 - 23ERAB+80	RT	ELMHURST RAB	80	--	--	--	--
NORTH CROSSOVER	MEDIAN	CTH EB	--	211	--	--	--
STAGE 3 SUBTOTAL			936	306	--	--	
STAGE 4							
30DE+81 - 30DE+96	RT	MEMORIAL DR	--	32	--	--	--
30DE+21 - 31DE+82	RT	DOUSMAN EB	174	--	--	--	GRADING FOR BASE AGGREGATE INCIDENTAL TO CURB AND GUTTER
STAGE 4 SUBTOTAL			174	32	--	--	
PROJECT 9202-08-80 TOTAL			4,627	338	289	377	

MOBILIZATION

LOCATION	619.1000 MOBILIZATION EACH
PROJECT 9202-08-80	1
PROJECT 9202-08-80 TOTAL	1

CONCRETE MEDIAN SLOPED NOSE

STATION	OFFSET	LOCATION	620.0300 CONCRETE MEDIAN SLOPED NOSE (TYPE 1) SF	620.0300 CONCRETE MEDIAN SLOPED NOSE (TYPE 2) SF
STAGE 2				
109EBN+37	LT	CTH EB NB	--	17
109EBS+44	RT	CTH EB SB	--	34
110EBS+94	RT	CTH EB SB	--	17
14EE+34	LT	ELMHURST	--	15
14EW+40	RT	ELMHURST	--	33
13EW+95	RT	ELMHURST	56	--
STAGE 2 SUBTOTAL			56	116
STAGE 3				
111EBN+49	LT	CTH EB NB	--	35
31DW+29	RT	DOUSMAN WB	--	16
30DE+73	LT	DOUSMAN EB	--	33
33DE+20	LT	DOUSMAN EB	56	--
STAGE 3 SUBTOTAL			56	84
PROJECT 9202-08-80 TOTAL			112	200
			312	

WATER

LOCATION	624.0100 WATER MGAL
UNDISTRIBUTED	25
PROJECT 9202-08-80 TOTAL	25

NOTE: FOR USE IN DUST CONTROL

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

STORM SEWER STRUCTURES

ROADWAY	STR NO.	STATION	OFFSET FT	LOCATION	RIM OR FLANGE ELEV	STR TYPE	COVER	STR[1] DEPTH FT	520.8000* CONCRETE COLLARS FOR PIPE EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	611.0530 MANHOLE COVER TYPE J EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0642 INLET TYPE MS COVERS EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.8120.S COVER PLATES TEMPORARY EACH	SPV.0060.104 STORM SEWER PLUG EACH	COMMENTS
STAGE 1A																					
DOUSMAN EB	851	30DE+95.42	22.2	RT	605.90	MH 4-FT	H-S	6.27	---	---	---	---	---	---	1	---	---	---	---	1	---	CASTING PLACED IN STAGE 4
DOUSMAN EB	851P	30DE+75.93	28.8	RT	N/A	PLUG	N/A	N/A	---	---	---	---	---	---	---	---	---	---	---	---	1	---
DOUSMAN EB	852	31DE+17.81	22.0	RT	605.79	MH 5-FT	H-S	4.11	---	---	---	---	---	---	---	1	---	---	---	1	---	CASTING PLACED IN STAGE 4
DOUSMAN WB	856	31DW+32.33	8.8	RT	605.32	MH 4-FT	H	2.68	---	---	---	---	---	---	1	---	---	---	---	1	---	CASTING PLACED IN STAGE 3
DOUSMAN WB	857	31DW+38.16	2.0	RT	605.34	MH 4-FT	H	2.67	---	---	---	---	---	---	1	---	---	---	---	1	---	CASTING PLACED IN STAGE 3
DOUSMAN WB	858	31DW+65.30	27.7	LT	605.20	MH 4-FT	H	2.43	---	---	---	1	---	---	1	---	---	---	---	---	---	---
DOUSMAN WB	859	31DW+78.28	26.8	LT	605.39	IN 2X3-FT	H	2.14	---	---	---	1	---	---	---	---	1	---	---	---	---	---
STAGE 1A SUBTOTAL									0	0	0	2	0	0	4	1	1	0	0	4	1	
STAGE 1B																						
CARDINAL NB	874	112EBN+68.37	2.0	LT	600.41	IN 2X3-FT	H	4.82	---	---	---	---	---	---	---	---	1	---	---	1	---	CASTING PLACED IN STAGE 3
CARDINAL NB	874P	112EBN+68.36	14.0	LT	594.68	PLUG	N/A	N/A	---	---	---	---	---	---	---	---	---	---	---	---	1	---
CARDINAL NB	875	112EBN+68.37	26.0	RT	600.34	IN 2X3-FT	H	4.17	---	---	---	1	---	---	---	---	1	---	---	---	---	---
STAGE 1B SUBTOTAL									0	0	0	1	0	0	0	0	2	0	0	1	1	
STAGE 2																						
ELMHURST WB	801	14EW+00.54	2.0	RT	603.64	N/A	H	N/A	---	---	---	1	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN EARLY FILL
ELMHURST EB	802	13EE+98.48	2.0	LT	603.66	N/A	H	N/A	---	---	---	1	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN EARLY FILL
ELMHURST WB	804	12EW+42.93	15.0	RT	601.41	N/A	H-S	N/A	---	---	---	---	1	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN EARLY FILL
ELMHURST WB	805	12EW+02.93	15.0	RT	601.55	N/A	H	N/A	---	---	---	1	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN EARLY FILL
ELMHURST WB	806	12EW+95.87	15.0	LT	601.81	N/A	H	N/A	---	---	---	1	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN EARLY FILL
ELMHURST EB	807	13EE+98.57	26.8	RT	603.17	N/A	H	N/A	---	---	---	1	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN EARLY FILL
CARDINAL SB	809	109EBS+29.93	12.9	RT	606.68	MH 5-FT	J	9.56	---	---	1	---	---	---	---	1	---	---	---	---	---	---
CARDINAL SB	811	107EBS+59.26	2.0	RT	608.75	MH 4-FT	H	6.83	---	---	---	1	---	---	1	---	---	---	---	---	---	---
CARDINAL SB	812	107EBS+60.47	26.0	LT	608.27	IN 2X3-FT	H	4.16	---	---	---	1	---	---	---	---	1	---	---	---	---	---
CARDINAL NB	813	107EBN+54.21	2.0	LT	609.17	IN 2X3-FT	H	5.78	---	---	---	1	---	---	---	---	1	---	---	---	---	---
CARDINAL NB	814	107EBN+51.79	26.0	RT	608.72	IN 2X3-FT	H	4.05	---	---	---	1	---	---	---	---	1	---	---	---	---	---
CARDINAL SB	821	106EBS+19.13	2.0	RT	609.89	MH 4-FT	H	7.15	---	---	---	1	---	---	1	---	---	---	---	---	---	---
CARDINAL NB	822	106EBN+12.51	26.0	RT	609.88	IN 2X3-FT	H	4.21	---	---	---	1	---	---	---	---	1	---	---	---	---	---
ELMHURST WB	830	10EW+67.88	34.6	LT	598.46	ENDWALL	N/A	N/A	---	1	---	---	---	---	---	---	---	---	---	---	---	A
ELMHURST WB	831	10EW+49.15	47.2	RT	603.20	MEDIAN 2	MS	2.71	---	---	---	---	---	2	---	---	---	---	1	---	---	B
CARDINAL SB	840	109EBS+41.91	27.3	LT	605.70	N/A	H	N/A	---	---	---	1	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN EARLY FILL
CARDINAL SB	841	109EBS+30.87	2.0	RT	606.35	MH 4-FT	H	9.54	---	---	---	1	---	---	1	---	---	---	---	---	---	---
CARDINAL NB	842	109EBN+29.53	2.0	LT	606.82	MH 4-FT	H	9.05	---	---	---	1	---	---	1	---	---	---	---	---	---	---
CARDINAL NB	843	109EBN+42.12	26.1	RT	606.41	MH 4-FT	H	8.31	---	---	---	1	---	---	1	---	---	---	---	---	---	---
CARDINAL NB	844	109EBN+06.29	26.0	RT	606.70	IN 2X3-FT	H	3.82	---	---	---	1	---	---	---	---	1	---	---	---	---	---

STAGE 2 CONTINUES ON NEXT SHEET

1) STRUCTURE DEPTH = RIM ELEVATION - CASTING DEPTH - 2" FOR ADJUSTMENT RINGS - INVERT ELEVATION (ADJUSTMENT RINGS EXCLUDED WHEN J COVER IS USED)

A) STATION/OFFSET OF APRON ENDWALLS ARE TO FLOWLINE END OF ENDWALL

B) STRUCTURE DEPTH = RIM ELEVATION - INVERT ELEVATION

C) ATTACH EXISTING 12" PIPE COMING FROM EX3. ESTIMATED INVERT ELEVATION OF 600.75, FIELD VERIFY INVERT ELEVATION

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PROJECT 9202-08-80

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

STORM SEWER STRUCTURES (CONTINUED)

ROADWAY	STR NO.	STATION	OFFSET FT	LOCATION	RIM OR FLANGE ELEV	STR TYPE	COVER	STR[1] DEPTH FT	520.8000* CONCRETE COLLARS FOR PIPE EACH	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	611.0530 MANHOLE COVER TYPE J EACH	611.0624 INLET COVERS TYPE H EACH	611.0639 INLET COVERS TYPE H-S EACH	611.0642 INLET TYPE MS COVERS EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.8120.S COVER PLATES TEMPORARY EACH	SPV.0060.104 STORM SEWER PLUG EACH	COMMENTS
ELMHURST RAB	845	22RAB+27.87	22.0	RT	606.24	IN 2X3-FT	H	3.75	---	---	---	1	---	---	---	---	1	---	---	---	---	---
CARDINAL SB	846	109EBS+11.74	26.0	LT	606.17	N/A	H	N/A	---	---	---	1	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN EARLY FILL
DOUSMAN EB	850	30DE+72.22	30.3	RT	606.97	MH 4-FT	J	7.59	1	---	---	---	---	---	1	---	---	---	---	1	---	C, CASTING PLACED IN STAGE 4
DOUSMAN EB	851C	30DE+75.93	28.8	RT	N/A	COLLAR	N/A	N/A	1	---	---	---	---	---	---	---	---	---	---	---	---	---
DOUSMAN EB	853	32DE+09.83	24.7	RT	607.52	MH 4-FT	H	4.57	---	---	---	1	---	---	1	---	---	---	---	---	---	---
DOUSMAN EB	854	32DE+08.53	2.0	LT	607.20	IN 2X3-FT	H	3.78	---	---	---	1	---	---	---	---	1	---	---	---	---	---
DOUSMAN EB	855	31DE+23.52	2.0	LT	606.19	IN 2X3-FT	H-S	2.77	---	---	---	---	1	---	---	---	1	---	---	---	---	---
CARDINAL SB	872	112EBS+03.38	26.0	LT	599.98	MH 4-FT	H	6.65	---	---	---	1	---	---	1	---	---	---	---	---	---	---
CARDINAL SB	872C	111EBS+87.43	46.9	LT	N/A	COLLAR	N/A	N/A	1	---	---	---	---	---	---	---	---	---	---	---	---	---
CARDINAL SB	873	112EBS+02.54	2.0	RT	600.47	IN 2X3-FT	H	5.32	---	---	---	1	---	---	---	---	1	---	---	---	---	---
CARDINAL NB	874C	112EBN+68.36	14.0	LT	594.68	COLLAR	N/A	N/A	1	---	---	---	---	---	---	---	---	---	---	---	---	---
ELMHURST RAB	880	20RAB+88.62	22.0	RT	603.83	MH 4-FT	H	4.65	---	---	---	1	---	---	1	---	---	---	---	---	---	---
ELMHURST RAB	881	20RAB+83.53	2.0	LT	603.81	IN 2X3-FT	H-S	4.34	---	---	---	---	1	---	---	---	1	---	---	---	---	---
ELMHURST RAB	882	20RAB+73.52	2.0	LT	603.84	IN 2X3-FT	H-S	3.92	---	---	---	---	1	---	---	---	1	---	---	---	---	---
STAGE 2 SUBTOTAL									4	1	1	23	4	2	9	1	11	0	1	1	0	
STAGE 3																						
CARDINAL SB	288.1	104EBS+93.35	49.0	LT	612.76	MH 4-FT	J	5.89	---	---	1	---	---	---	1	---	---	---	---	---	---	288.1 CONNECTS INTO P288.1 FROM ADJACENT PROJECT NO: 9202-07-71
CARDINAL SB	290	104EBS+94.48	26.0	LT	610.29	IN 2X3-FT	H	3.14	---	---	---	1	---	---	---	---	1	---	---	---	---	---
CARDINAL SB	291	104EBS+94.88	2.0	RT	610.77	IN 2X3-FT	H	3.40	---	---	---	1	---	---	---	---	1	---	---	---	---	---
CARDINAL NB	292	104EBN+88.83	2.0	LT	611.18	IN 2X3-FT	H	3.64	---	---	---	1	---	---	---	---	1	---	---	---	---	---
CARDINAL NB	293	104EBN+87.56	26.0	RT	610.72	IN 2X3-FT	H	2.96	---	---	---	1	---	---	---	---	1	---	---	---	---	---
CARDINAL NB	294	104EBN+98.43	58.5	RT	610.09	MEDIAN 1	MS	2.48	---	---	---	---	---	1	---	---	---	1	---	---	---	B
CARDINAL NB	296	105EBN+08.99	53.9	RT	610.17	IN 2X3-FT	H-S	1.84	---	---	---	---	1	---	---	---	1	---	---	---	---	---
DOUSMAN WB	856	31DW+32.33	8.8	RT	605.32	N/A	H	N/A	---	---	---	1	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN STAGE 1A
DOUSMAN EB	856M	30DE+88.60	22.5	LT	607.45	MH 4-FT	J	4.97	---	---	1	---	---	---	1	---	---	---	---	---	---	---
DOUSMAN WB	857	31DW+38.16	2.0	RT	605.34	N/A	H	N/A	---	---	---	1	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN STAGE 1A
CARDINAL NB	874	112EBN+68.37	2.0	LT	600.41	N/A	H	N/A	---	---	---	1	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN STAGE 1B
STAGE 3 SUBTOTAL									0	0	2	7	1	1	2	0	5	1	0	0	0	
STAGE 4																						
DOUSMAN EB	850	30DE+72.22	30.3	RT	606.97	N/A	J	N/A	---	---	1	---	---	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN STAGE 2
DOUSMAN EB	851	30DE+95.42	22.2	RT	605.90	N/A	H-S	N/A	---	---	---	---	1	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN STAGE 1A
DOUSMAN EB	852	31DE+17.81	22.0	RT	605.79	N/A	H-S	N/S	---	---	---	---	1	---	---	---	---	---	---	---	---	STRUCTURE PLACED IN STAGE 1A
STAGE 4 SUBTOTAL									0	0	1	0	2	0	0	0	0	0	0	0	0	
PROJECT 9202-08-80 TOTAL									4	1	4	33	7	3	15	2	19	1	1	6	2	

1)STRUCTURE DEPTH = RIM ELEVATION - CASTING DEPTH - 2" FOR ADJUSTMENT RINGS - INVERT ELEVATION (ADJUSTMENT RINGS EXCLUDED WHEN J COVER IS USED)

A) STATION/OFFSET OF APRON ENDWALLS ARE TO FLOWLINE END OF ENDWALL

B) STRUCTURE DEPTH = RIM ELEVATION - INVERT ELEVATION

C) ATTACH EXISTING 12" PIPE COMING FROM EX3. ESTIMATED INVERT ELEVATION OF 600.75, FIELD VERIFY INVERT ELEVATION

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PROJECT 9202-08-80

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

STORM SEWER PIPES

ROADWAY	PIPE ID	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[1] %	PIPE[2] LENGTH LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	SPV.0060.105 CONNECTION TO RESIDENTIAL SUMP EACH	COMMENTS
STAGE 1A															
DOUSMAN EB	P851	851	851P	598.96	598.75	1.00	21	---	---	23	---	---	---	---	---
DOUSMAN EB	P852	852	851	601.01	600.59	2.00	21	---	26	---	---	---	---	---	---
DOUSMAN WB	P856	856	EX3	601.97	EXIST	0.27	54	---	---	---	---	57	---	---	ESTIMATED DISCH ELEV.: 601.83 (FIELD VERIFY)
DOUSMAN WB	P857	857	856	602.00	601.97	0.40	8	---	---	---	---	12	---	---	---
DOUSMAN WB	P858	858	857	602.10	602.00	0.33	31	---	---	---	---	35	---	---	---
DOUSMAN WB	P859	859	858	602.58	602.35	3.54	7	10	---	---	---	---	---	---	---
STAGE 1A SUBTOTAL								10	26	23	0	105	0	0	
STAGE 1B															
CARDINAL NB	P874	874	874P	594.92	594.68	2.00	12	---	13	---	---	---	---	---	---
CARDINAL NB	P875	875	874	595.50	595.02	2.00	24	---	26	---	---	---	---	---	---
STAGE 1B SUBTOTAL								0	39	0	0	0	0	0	
STAGE 2															
CARDINAL SB	P809	809	841	596.37	596.24	1.53	8	---	---	---	13	---	---	---	---
CARDINAL SB	P811	811	809	601.25	598.76	1.49	168	---	---	---	172	---	---	---	---
CARDINAL SB	P812	812	811	603.44	603.00	2.00	22	---	25	---	---	---	---	---	---
CARDINAL NB	P813	813	811	602.72	602.65	1.00	7	---	10	---	---	---	---	---	---
CARDINAL NB	P814	814	813	604.00	603.76	1.00	24	---	26	---	---	---	---	---	---
CARDINAL NB	P822	822	821	605.00	604.24	2.00	38	---	41	---	---	---	---	---	---
CARDINAL SB	P821	821	811	602.07	601.39	0.50	136	---	---	---	140	---	---	---	---
ELMHURST WB	P831	831	830	600.32	598.46	2.29	81	---	---	---	---	---	78	---	---
CARDINAL SB	P841	841	840	596.14	595.91	1.00	23	---	---	---	27	---	---	---	---
CARDINAL NB	P842	842	809	597.10	596.91	0.76	25	---	---	29	---	---	---	---	---
CARDINAL NB	P843	843	842	597.43	597.20	1.00	23	---	---	27	---	---	---	---	---
CARDINAL NB	P844	844	843	602.21	601.88	1.33	25	29	---	---	---	---	---	---	---
ELMHURST RAB	P845	845	841	601.82	601.57	2.00	13	16	---	---	---	---	---	---	---
DOUSMAN EB	P850	850	843	598.63	597.90	1.12	65	---	---	69	---	---	---	---	---
DOUSMAN EB	P851C	851C	850	598.75	598.73	1.00	2	---	---	4	---	---	---	---	---

STAGE 2 CONTINUES ON NEXT SHEET

1) SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE STRUCTURE WALL TO INSIDE STRUCTURE WALL

2) PIPE LENGTH COLUMN SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.
'PIPE LENGTH" REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE STRUCTURE WALL TO EITHER INSIDE STRUCTURE WALL OR FLOWLINE END OF ENDWALL

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

3

STORM SEWER PIPES (CONTINUED)

ROADWAY	PIPE ID	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[1] %	PIPE[2] LENGTH LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH LF	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	SPV.0060.105 CONNECTION TO RESIDENTIAL SUMP EACH	COMMENTS
DOUSMAN EB	P853	853	852	602.20	601.11	1.16	95	---	99	---	---	---	---	---	---
DOUSMAN EB	P854	854	853	603.51	603.09	2.00	21	---	24	---	---	---	---	---	---
DOUSMAN EB	P855	855	852	602.75	602.57	1.00	18	---	21	---	---	---	---	---	---
CARDINAL SB	P872	872	872C	592.66	592.11	2.00	27	---	29	---	---	---	---	---	---
CARDINAL SB	P873	873	872	594.48	594.04	2.00	22	---	25	---	---	---	---	---	---
CARDINAL NB	P874C	874C	873	594.68	594.58	2.00	5	---	6	---	---	---	---	---	---
ELMHURST RAB	P880	880	800	598.51	596.93	3.25	49	---	53	---	---	---	---	---	---
ELMHURST RAB	P881	881	880	598.80	598.61	1.00	17	---	21	---	---	---	---	---	---
ELMHURST RAB	P882	882	881	599.25	599.11	2.00	7	10	---	---	---	---	---	---	---
DOUSMAN EB	PEX1	EX1	852	EXIST	601.61	4.00	37	40	---	---	---	---	---	---	ESTIMATED INLET ELEV.: 603.10 (FIELD VERIFY)
DOUSMAN EB	PEX2	EX2	850	EXIST	603.73	7.19	19	22	---	---	---	---	---	---	ESTIMATED INLET ELEV.: 605.10 (FIELD VERIFY)
STAGE 2 SUBTOTAL								117	380	129	352	0	78	0	
STAGE 3															
CARDINAL SB	P288.1	288.1	NA	606.12	NA	NA	---	---	---	---	---	---	---	---	P288.1 IS TO BE CONSTRUCTED UNDER PROJECT NO: 9202-07-71
CARDINAL SB	P290	290	288.1	606.48	606.37	0.50	21	---	24	---	---	---	---	---	---
CARDINAL SB	P291	291	290	606.70	606.58	0.50	24	---	26	---	---	---	---	---	---
CARDINAL NB	P292	292	291	606.87	606.80	0.50	14	---	16	---	---	---	---	---	---
CARDINAL NB	P293	293	292	607.09	606.97	0.50	24	---	26	---	---	---	---	---	---
CARDINAL NB	P294	294	293	607.61	607.36	0.75	33	35	---	---	---	---	---	---	---
CARDINAL SB	P295	295	288.1	EXIST	608.78	3.25	77	---	---	---	---	---	---	1	CONNECT TO EXISTING RESIDENTAL SUMP, ESTIMATED INVERT ELEVATION 611.28, FIELD VERIFY
CARDINAL NB	P296	296	294	607.66	607.61	0.52	9	12	---	---	---	---	---	---	---
DOUSMAN EB	P856M	856M	851	601.73	600.62	2.83	39	---	---	---	---	43	---	---	---
STAGE 3 SUBTOTAL								47	92	0	0	43	0	1	
PROJECT 9202-08-80 TOTAL								174	537	152	352	148	78	1	

1) SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE STRUCTURE WALL TO INSIDE STRUCTURE WALL

2) PIPE LENGTH COLUMN SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.
'PIPE LENGTH" REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE STRUCTURE WALL TO EITHER INSIDE STRUCTURE WALL OR FLOWLINE END OF ENDWALL

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

3

ADJUSTING DRAINAGE STRUCTURES

STRUCTURE NUMBER	STATION	OFFSET	LOCATION	520.8000* CONCRETE COLLARS FOR PIPE EACH	611.0420 RECONSTRUCTING MANHOLES EACH	611.0430 RECONSTRUCTING INLETS EACH	COMMENTS
STAGE 1							
EX3	30DE+88.41	23.5	LT	1	---	1	ATTACH PIPE P856
STAGE 1 SUBTOTAL				1	0	1	
STAGE 2							
EX1	31DE+31.90	56.9	RT	---	---	1	REMOVE EXISTING 12" PIPE AND ATTACH PEX1
EX2	30DE+74.07	51.3	RT	---	---	1	REMOVE EXISTING 12" PIPE AND ATTACH PEX2
800	111EBS+16.14	41.5	LT	---	1	---	REMOVE EXISTING 12" PIPE AND ATTACH PIPE P880
840	109EBS+41.91	27.3	LT	---	---	1	REMOVE PIPE FROM TEMP MANHOLE AND ATTACH P841
STAGE 2 SUBTOTAL				0	1	3	
STAGE 3							
850	30DE+72.22	30.3	RT	---	1	---	REMOVE EXISTING 12" PIPE TO NORTHEAST
STAGE 3 SUBTOTAL				0	1	0	
PROJECT 9202-08-80 TOTAL				1	2	4	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE IN PROJECT 9202-08-80

BEAM GUARD

STATION	OFFSET	LOCATION	614.0115 ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2 EACH	614.0250 STEEL THRIE BEAM STRUCTURE APPROACH TEMPORARY LF	614.0305 STEEL PLATE BEAM GUARD CLASS A LF	614.0380 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY EACH	614.2300 MGS GUARDRAIL 3 LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TERMINAL TYPE 2 EACH
112EBS+50 - 113EBS+05	LT	CTH EB SB	1	--	56	--	--	--	--
12EW+87 - 14EW+25	LT	ELMHURST	--	--	--	--	112	1	1
NB CTH EB STRUCTURE OVER DUCK CREEK			--	21	--	1	--	--	--
SB CTH EB STRUCTURE OVER DUCK CREEK			--	21	--	1	--	--	--
PROJECT 9202-08-80 TOTAL			1	42	56	2	112	1	1

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

RESTORATION

STATION		OFFSET	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	629.0205 FERTILIZER TYPE A CWT	630.0140 SEEDING MIXTURE NO. 40 LB	SPV.0085.150 FINE FESCUE SEED LB	SPV.0035.003* TOPSOIL SPECIAL CY
STAGE 1									
111EBN+30 -	113EBN+71	RT	CTH EB NB	403	404	0.2	11	--	--
30DW+80 -	34DE+40	LT	DOUSMAN WB	602	602	0.3	17	--	--
STAGE 1 SUBTOTAL				1,005	1,006	0.5	28	--	--
STAGE 2									
105EBN+50 -	109EBN+75	RT	CTH EB NB	1,339	1,407	0.9	39	--	41
106EBS+13 -	108EBS+00	MEDIAN	CTH EB	144	168	0.1	4	--	15
106EBS+13 -	108EBS+50	LT	CTH EB SB	273	273	0.2	8	--	--
111EBS+10 -	113EBS+05	LT	CTH EB SB	321	321	0.3	--	20	--
10EW+51 -	14EE+71	RT	ELMHURST	2,107	2,180	1.3	59	--	44
10EW+51 -	14EW+70	LT	ELMHURST	174	290	0.9	--	66	70
30DE+34 -	34DE+40	RT	DOUSMAN EB	710	734	0.4	20	--	15
STAGE 1 SUBTOTAL				5,068	5,373	4	130	86	185
STAGE 3									
104EBS+95 -	106EBS+13	MEDIAN	CTH EB	104	129	0.1	3	--	15
104EBN+30 -	105EBN+25	RT	CTH EB NB	261	262	0.1	7	--	--
111EBS+10 -	113EBS+05	MEDIAN	CTH EB	415	433	0.2	12	--	11
10BWA+18 -	11BWA+50	LT	BRANTWOOD	294	295	0.2	8	--	--
10BWA+23 -	11BWA+50	RT	BRANTWOOD	91	90	0.1	2	--	--
31DE+13 -	33DE+15	MEDIAN	DOUSMAN	605	605	0.3	17	--	--
STAGE 3 SUBTOTAL				1,770	1,814	1.0	49	--	26
PROJECT 9202-08-80 TOTAL				7,843	8,193	5.5	207	86	211

* TOPSOIL SPECIAL TO BE PLACE IN 4' RADIUS AROUND TREES

RIPRAP, SOD & GEOTEXTILE FABRIC

STATION	OFFSET	LOCATION	606.0200 RIPRAP MEDIUM CY	631.1100 SOD EROSION CONTROL SY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
STAGE 2					
10EW+60	LT	ELMHURST	4	4	2
UNDISTRIBUTED			1	1	1
STAGE 2 SUBTOTAL			5	5	3
PROJECT 9202-08-80 TOTAL			5	5	3

MOBILIZATIONS EROSION CONTROL

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
UNDISTRIBUTED	10	5
PROJECT 9202-08-80 TOTAL	10	5

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

INLET PROTECTION

STRUCTURE NUMBER	LOCATION	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7020 INLET PROTECTION TYPE D EACH	COMMENTS
STAGE 1A					
EXIST	DOUSMAN	1	--	--	31DE+17 20.8' RT
EX1	DOUSMAN	1	--	--	--
EX2	DOUSMAN	--	1	--	--
EX3	DOUSMAN	--	--	1	--
851	DOUSMAN	1	--	--	--
852	DOUSMAN	1	--	--	--
856	DOUSMAN	1	--	--	--
857	DOUSMAN	1	--	--	--
858	DOUSMAN	--	--	1	--
859	DOUSMAN	--	--	1	--
NORTH CROSSOVER	CTH EB	--	--	4	FOR MEDIAN INLETS APPROX. 134 FT SOUTH FROM EXISTING MEDIAN NOSE
STAGE 1A SUBTOTAL		6	1	7	
STAGE 1B					
874	CTH EB	--	1	--	--
875	CTH EB	--	1	--	--
EXIST	CTH EB NB	--	--	1	JUST NORTH OF PROJECT LIMIT, LEFT
EXIST	CTH EB NB	--	--	1	JUST NORTH OF PROJECT LIMIT, RIGHT
STAGE 1B SUBTOTAL		--	2	2	
STAGE 2					
800	CTH EB	1	--	--	--
801	ELMHURST	--	1	--	--
802	ELMHURST	--	1	--	--
803	ELMHURST	1	--	--	--
804	ELMHURST	--	--	1	--
805	ELMHURST	--	1	--	--
806	ELMHURST	--	1	--	--
807	ELMHURST	--	1	--	--
809	CTH EB	1	--	--	--
811	CTH EB	--	1	--	--
812	CTH EB	--	1	--	--
813	CTH EB	--	1	--	--
814	CTH EB	--	1	--	--
821	CTH EB	--	1	--	--
822	CTH EB	--	1	--	--
831	CTH EB	1	--	--	--
840	CTH EB	--	--	1	--
841	CTH EB	--	--	1	--
842	CTH EB	--	--	1	--
843	CTH EB	--	--	1	--

INLET PROTECTION (CONTINUED)

STRUCTURE NUMBER	LOCATION	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7020 INLET PROTECTION TYPE D EACH	COMMENTS
844	CTH EB	--	--	1	--
845	CTH EB	--	1	--	--
846	CTH EB	--	--	1	--
850	DOUSMAN	1	--	--	--
853	DOUSMAN	--	1	--	--
854	DOUSMAN	--	1	--	--
855	DOUSMAN	--	--	1	--
872	CTH EB	--	1	--	--
873	CTH EB	--	1	--	--
880	CTH EB SB	--	1	--	--
881	CTH EB SB	--	--	1	--
882	CTH EB SB	--	--	1	--
EXIST	CTH EB SB	--	--	1	JUST NORTH OF PROJECT LIMIT, LEFT
EXIST	CTH EB SB	--	--	1	JUST NORTH OF PROJECT LIMIT, RIGHT
STAGE 2 SUBTOTAL		5	17	12	
STAGE 3					
288.1	CTH EB	1	--	--	--
290	CTH EB	--	1	--	--
291	CTH EB	--	1	--	--
292	CTH EB	--	1	--	--
293	CTH EB	--	1	--	--
294	CTH EB	1	--	--	--
296	CTH EB	--	1	--	--
832	ELMHURST	--	1	--	--
833	BRANTWOOD	--	1	--	--
STAGE 3 SUBTOTAL		2	7	--	
PROJECT 9202-08-80 TOTAL		13	27	21	

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

EROSION CONTROL

STATION	OFFSET	LOCATION	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7555 CULVERT PIPE CHECKS EACH
STAGE 2				
10EW+76	LT	ELMHURST	--	4
12EW+00 - 14EW+90	LT	ELMHURST	1,059	--
112EBS+75 - 113EBS+05	LT	CTH EB SB	111	--
UNDISTRIBUTED			293	1
STAGE 2 SUBTOTAL			1,463	5
STAGE 3				
9EW+54	RT	ELMHURST	--	4
UNDISTRIBUTED			--	1
STAGE 3 SUBTOTAL			--	5
PROJECT 9202-08-80 TOTAL			1,463	10

SILT FENCE

STATION	OFFSET	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
STAGE 1A				
111EBN+40 - 113EBN+71	RT	CTH EB NB	229	229
STAGE 1A SUBTOTAL			229	229
STGAE 2				
106EBS+50 - 108EBS+50	RT	CTH EB NB	188	188
10EW+85 - 14EW+75	LT	ELMHURST	437	437
111EBS+67 - 113EBS+13	LT	CTH EB SB	169	169
STAGE 2 SUBTOTAL			794	794
PROJECT 9202-08-80 TOTAL			1,023	1,023

FIXED MESSAGE SIGNS

SIGN NUMBER	SIGN SIZE W FT x H FT	DESCRIPTION	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF
100	5.00 x 1.50	CTH EB NB	7.5
101	5.00 x 1.50	CTH EB NB	7.5
105	5.00 x 1.50	CTH EB NB	7.5
102	7.00 x 4.00	BRANTWOOD AVE, ELMHURST AVE (ARROW RIGHT)	28
103	7.00 x 4.00	BRANTWOOD AVE, ELMHURST AVE (ARROW RIGHT)	28
104	7.00 x 4.00	BRANTWOOD AVE, ELMHURST AVE (ARROW LEFT)	28
PROJECT 9202-08-80 TOTAL			106.5

TRAFFIC CONTROL

LOCATION	643.0100 TRAFFIC CONTROL PROJECT ID 9202-08-80 EACH
PROJECT 9202-08-80	1
PROJECT 9202-08-80 TOTAL	1

TRAFFIC CONTROL

STATION	DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAYS	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAYS	643.0800 TRAFFIC CONTROL ARROW BOARDS EACH	643.0800 TRAFFIC CONTROL ARROW BOARDS DAYS	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAYS	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS EACH	643.1050 TRAFFIC CONTROL SIGNS PCMS DAYS	SPV.0045.050 PCMS REMOTE COMMUNICATIONS EACH	SPV.0045.050 PCMS REMOTE COMMUNICATIONS DAYS
STAGE 1A	60	95	5,700	7	420	33	1,980	2	120	33	1,980	--	--	--	--	--
STAGE 1B	3	101	303	9	27	30	90	1	3	37	111	--	--	--	--	--
STAGE 2	45	73	3,285	29	1,305	37	1,665	2	90	51	2,295	--	--	--	--	--
STAGE 3	15	135	2,025	11	165	37	555	2	30	40	600	--	--	--	--	--
STAGE 4	15	25	375	5	75	8	120	1	15	16	240	--	--	--	--	--
UNDISTRIBUTED		--	584	--	100	--	221	--	13	--	261	5	4	360	4	360
PROJECT 9202-08-80 TOTAL			12,272		2,092		4,631		271		5,487	5		360		360

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

ERECTION OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	REMARKS
1	CTH EB, AT BRANTWOOD AVE INTERSECTION	R6-2R	24" X 30"	5.00		1		
2	BRANTWOOD AVE	R1-1	30" X 30"	5.18		1		
3	CTH EB, AT MEMORIAL DR INTERSECTION	R6-2R	24" X 30"	5.00		1		
4	MEMORIAL DR	R1-1	30" X 30"	5.18		1		
5	CTH EB, N. OF MEMORIAL DR	R3-6X	42" X 48"	14.00				STA 107+90, CANTILEVERED, MOUNT ON S-05-289 OVER LEFT LANE
6	"	R3-6R	42" X 48"	14.00				MOUNT ON S-05-289 OVER RIGHT LANE
7	ELMHURST AVE	W2-6	30" X 30"		6.25		1	
7A	"	R1-1	30" X 30"	5.18		1		
8	"	W13-1	18" X 18"		2.25			MOUNT BELOW SIGN #7, 15 MPH
8A	"	R1-1	30" X 30"	5.18		1		
9	CTH EB, N. OF MEMORIAL DR	J4-1	24" X 36"	6.00		1		SOUTH CTH EB
10	CTH EB, AT EXIT SPLITTER ISLAND	D1-1	78" X 15"	8.13		2		CARDINAL LN, SEE SIGN DETAIL SHEET
11	CTH EB, AT APPROACH SPLITTER ISLAND	R1-2	36" X 31"	3.88			1	
12	"	R6-2R	24" X 30"	5.00				MOUNT BELOW SIGN #11
13	CTH EB, AT APPROACH TO RAB	R1-2	36" X 31"	3.88			1	
14	"	R1-54	24" X 15"	2.50				MOUNT BELOW SIGN #13
15	CTH EB, CENTRAL ISLAND OF RAB	R6-1R	36" X 12"	3.00		1		
16	"	R6-4B	60" X 24"	10.00				MOUNT BELOW SIGN #15
17	DUCK CREEK PARKWAY, AT EXIT SPLITTER ISLAND	D1-1	108" X 15"	11.25		3		DUCK CREEK PARKWAY, SEE SIGN DETAIL SHEET
17A	DUCK CREEK PARKWAY	R2-1	24" X 30"	5.00		1		35 MPH
18	DUCK CREEK PARKWAY, AT APPROACH SPLITTER ISLAND	R1-2	36" X 31"	3.88			1	
19	"	R6-2R	24" X 30"	5.00				MOUNT BELOW SIGN #18
20	DUCK CREEK PARKWAY, AT APPROACH TO RAB	R1-2	36" X 31"	3.88			1	
21	"	R1-54	24" X 15"	2.50				MOUNT BELOW SIGN #20
22	DUCK CREEK PARKWAY, AT APPROACH SPLITTER ISLAND	R4-7	24" X 30"	5.00		1		
23	DUCK CREEK PARKWAY	W2-6	30" X 30"		6.25		1	
24	"	W13-1	18" X 18"		2.25			MOUNT BELOW SIGN #22, 15 MPH
25	"	W3-2	36" X 36"		9.00		1	
26	"	R3-6X	42" X 48"	14.00				STA 32+75, CANTILEVERED, MOUNT ON S-05-291 OVER LEFT LANE
27	"	R3-5R	42" X 48"	14.00				MOUNT ON S-05-291 OVER RIGHT LANE
28	"	J3-2	48" X 57"	19.00				BAND AND MOUNT ON S-05-291 ON VERTICAL COLUMN
29	DUCK CREEK PARKWAY, CENTRAL ISLAND OF RAB	R6-1R	36" X 12"	3.00		1		
30	"	R6-4B	60" X 24"	10.00				MOUNT BELOW SIGN #29
31	CTH EB, AT EXIT SPLITTER ISLAND	D1-1	78" X 15"	8.13		2		CARDINAL LN, SEE SIGN DETAIL SHEET
32	CTH EB, N. OF DUCK CREEK PARKWAY	J4-1	24" X 36"	6.00		1		NORTH CTH EB
33	"	R2-1	24" X 30"	5.00		1		35 MPH
34	"	W2-6	30" X 30"		6.25		1	
35	"	W13-1	18" X 18"		2.25			MOUNT BELOW SIGN #34, 15 MPH
36	"	W3-2	36" X 36"		9.00		1	
37	"	R3-6X	42" X 48"	14.00				STA 113+02, CANTILEVERED, MOUNT ON S-05-290 OVER LEFT LANE
38	"	R3-6R	42" X 48"	14.00				MOUNT ON S-05-290 OVER RIGHT LANE
	PAGE SUBTOTALS			244.74	43.50	20	9	

PLAN SHEET PRODUCED

BY WisDOT - NE REGION

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ERECTION OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637.2210 SIGNS TYPE II REFLECTIVE H S.F.	637.2230 SIGNS TYPE II REFLECTIVE F S.F.	634.0614 POSTS WOOD 4x6x14 EACH	634.0616 POSTS WOOD 4x6x16 EACH	REMARKS
39	CTH EB, AT APPROACH SPLITTER ISLAND	R1-2	36" X 31"	3.88			1	
40	"	R6-2R	24" X 30"	5.00				MOUNT BELOW SIGN #39
41	CTH EB, AT APPROACH TO RAB	R1-2	36" X 31"	7.75			1	
42	"	R1-54	24" X 15"	2.50				MOUNT BELOW SIGN #41
43	CTH EB, CENTRAL ISLAND OF RAB	R6-1R	36" X 12"	3.00		1		
44	"	R6-4B	60" X 24"	10.00				MOUNT BELOW SIGN #43
45	ELMHURST AVE, AT EXIT SPLITTER ISLAND	D1-1	78" X 15"	8.13		2		ELMHURST AVE, SEE SIGN DETAIL SHEET
46	ELMHURST AVE, AT APPROACH SPLITTER ISLAND	R4-7	24" X 30"	5.00		1		
47	"	R1-2	36" X 31"	3.88			1	
48	"	R6-2R	24" X 30"	5.00				MOUNT BELOW SIGN #47
49	VACANT							
50	ELMHURST AVE, AT APPROACH TO RAB	R1-2	36" X 31"	3.88			1	
51	"	R1-54	24" X 15"	2.50				MOUNT BELOW SIGN #50
52	ELMHURST AVE	W3-2	36" X 36"		9.00		1	
53	ELMHURST AVE, CENTRAL ISLAND OF RAB	R6-1R	36" X 12"	3.00		1		
54	"	R6-4B	60" X 24"	10.00				MOUNT BELOW SIGN #53
55	MEMORIAL DR CUL DU SAC	R7-1R	18" X 24"	3.00		1		
56	"	R7-1D	18" X 24"	3.00		1		
57	"	R7-1L	18" X 24"	3.00		1		
	PAGE SUBTOTALS			82.52	9.00	8	5	
	PROJECT TOTALS			**327.26**	**52.50**	**28**	**14**	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

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REMOVING TYPE II SIGNS AND REMOVING SMALL SIGN SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
100	BRANTWOOD AVE	R6-2L	1	1	
101	"	R1-1	1		MOUNTED ON BACK OF SIGN #100
102	"	R6-2R	1		MOUNTED BELOW SIGN #101
103	CTH EB, AT BRANTWOOD AVE	R4-7	1	1	
104	"	R4-7	1	1	
105	BRANTWOOD AVE	R1-1	1	1	
106	CTH EB, W. OF DOUSMAN ST	R10-7	1	1	
107	"	R7-53D	1	1	
108	"	R3-8T	1	2	
109	CTH EB, AT DOUSMAN ST	R4-7	1		MOUNTED TO TRAFFIC SIGNAL
110	"	R7-53D	1	1	
111	"	R4-7	1		MOUNTED TO TRAFFIC SIGNAL
112	"	R6-2L	1		MOUNTED TO SIDE OF POST FOR SIGN #110
113	DOUSMAN ST	R1-1F	1		MOUNTED TO TRAFFIC SIGNAL
114	"	R3-8F	1		MOUNTED TO LIGHT POLE
115	CTH EB, E. OF DOUSMAN ST	R2-1	1	1	35 MPH
116	"	R7-53D	1	1	
117	"	R7-53D	1	1	
118	"	W3-3	1	1	
119	MEMORIAL DR	R7-1R	1	1	
120	"	R7-1D	1	1	
121	"	R7-1L	1	1	
122	DUCK CREEK PARKWAY	R2-1	1	1	
	PROJECT TOTALS		**23**	**17**	

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

PAVEMENT MARKING

STATION	ROADWAY	646.0106 PAVEMENT MARKING EPOXY 4-INCH YELLOW LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH 12.5 FT LINE WHITE LF	646.0123 PAVEMENT MARKING PAINT 8-INCH 3 FT-LINE WHITE LF	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH YELLOW LF	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH WHITE LF	647.0456 PAVEMENT MARKING CURB EPOXY YELLOW LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY EACH	646.0843.S SPV.0090.300 PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH WHITE LF	646.0843.S SPV.0090.300 PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE DIAGONAL 12-INCH WHITE LF	SPV.0090.301 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 8-INCH 6 FT LINE WHITE LF	SPV.0090.302 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC YIELD LINE 18 IN 2 FT LINE WHITE LF	SPV.0090.303 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH LF	SPV.0060.301 PAVEMENT MARKING GROOVED PREFORMED ARROWS, TYPE 1 EACH	SPV.0060.302 PAVEMENT MARKING GROOVED PREFORMED ARROWS, TYPE 2 EACH	SPV.0060.303 PAVEMENT MARKING GROOVED PREFORMED ARROWS, TYPE 3 EACH	SPV.0060.304 PAVEMENT MARKING GROOVED PREFORMED ARROWS, TYPE 3R EACH	SPV.0060.305 PAVEMENT MARKING GROOVED PREFORMED ARROWS, TYPE 6R EACH	SPV.0060.306 PAVEMENT MARKING GROOVED PREFORMED WORDS EACH
103EBN+00 - 113EBN+71	CTH EB NB	--	191	--	--	--	--	--	134	--	126	61	48	1	--	4	2	--	2
104EBS+62 - 113EBS+05	CTH EB SB	--	142	--	--	--	--	--	140	--	85	50	48	1	--	4	1	--	2
30DE+67 - 34DE+40	DOUSMAN EB	554	85	--	31	--	10	1	76	--	--	--	40	--	--	--	--	--	--
31DW+03 - 32DW+82	DOUSMAN WB	--	--	43	--	--	--	--	225	30	--	--	53	--	3	--	1	1	4
10EW+51 - 14EW+47	ELMHURST	862	--	--	79	10	10	1	35	--	--	--	--	--	--	--	--	--	1
10BWA+25 - 11BWA+50	BRANTWOOD	226	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PROJECT 9202-08-80 TOTAL		1,642	418	43	110	10	20	2	610	30	211	111	189	2	3	8	4	1	9
		2,060			120														

TEMPORARY PAVEMENT MARKING

STATION	646.0600 REMOVING PAVEMENT MARKINGS LF	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH (WHITE) LF	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE (WHITE) LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE (YELLOW) LF	649.0900 TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH LF	649.1800 TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE EACH
STAGE 1A	1050	644	712	280	990	--	1
STAGE 1B	--	--	--	--	550	--	--
STAGE 2	185	2,325	5,020	--	--	15	--
STAGE 3	5024	--	--	242	1,070	--	1
STAGE 4	1538	--	--	--	--	--	--
PROJECT 9202-08-80 TOTAL	7,797	2,969	5,732	522	2,610	15	2
		8,701		3,132			

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

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SAWCUTS

STATION	OFFSET	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
STAGE 1A				
NORTH CROSSOVER	MEDIAN	CTH EB	188	--
32DE+00 - 34DE+40	LT	DOUSMAN EB	287	--
30DE+50 - 31DE+16	RT	DOUSMAN EB	112	--
STAGE 1A SUBTOTAL			587	0
STAGE 1B				
111EBN+54 - 112EBN+12	LT	CTH EB NB	59	--
STAGE 1B SUBTOTAL			59	--
STAGE 2				
105EBN+75 - 106EBN+18	RT	CTH EB NB	83	--
105EBS+72 - 105EBS+93	LT	CTH EB SB	56	--
113EBS+05 - 113EBS+05	LT	CTH EB SB	24	--
12BWA+10 - 12BWA+79	RT	BRANTWOOD	69	--
30DE+77 - 30DE+77	RT/LT	DOUSMAN EB	35	--
31DE+08 - 31DE+30	RT/LT	DOUSMAN EB	41	--
31DE+93	DRIVEWAY RT	DOUSMAN EB	--	15
33DE+34	DRIVEWAY RT	DOUSMAN EB	--	20
33DE+50 - 34DE+40	RT	DOUSMAN EB	126	--
STAGE 2 SUBTOTAL			434	35
STAGE 3				
11BWA+71	DRIVEWAY RT	BRANTWOOD	18	--
12BWA+14 - 12BWA+65	LT	BRANTWOOD	100	--
13BWA+75 - 13BWA+75	RT/LT	BRANTWOOD	21	--
104EBN+28	DRIVEWAY RT	MEMORIAL DR	9	--
105EBN+37	DRIVEWAY RT	MEMORIAL DR	16	--
105EBN+81	DRIVEWAY RT	MEMORIAL DR	19	--
106EBN+05 - 106EBN+05	RT	MEMORIAL DR	25	--
34DE+40	RT	DOUSMAN	12	--
STAGE 3 SUBTOTAL			220	--
PROJECT 9202-08-80 TOTAL			1,300	35

SURVEY PROJECT

LOCATION	SPV.0105.001 SURVEY PROJECT ID 9202-08-80 LS
PROJECT 9202-08-80	1
PROJECT 9202-08-80 TOTAL	1

RAILING DECORATIVE STEEL

STATION	OFFSET	LOCATION	SPV.0090.005 RAILING DECORATIVE STEEL LF
12EW+50 - 14EW+61	LT	ELMHURST	257
PROJECT 9202-08-80 TOTAL			257

CONCRETE PAVEMENT JOINT LAYOUT

LOCATION	SPV.0105.005 CONCRETE PAVEMENT JOINT LAYOUT LS
PROJECT ID 9202-08-80	1
PROJECT 9202-08-80 TOTAL	1

STREET SWEEPING

STATION	SPV.0060.096 EMERGENCY SWEEPING MOBILIZATION EACH	SPV.0075.001 STREET SWEEPING HRS	SPV.0075.002 EMERGENCY SWEEPING HRS
UNDISTRIBUTED	4	4	4
PROJECT 9202-08-80 TOTAL	4	4	4

BERM ROCK WALL

STATION	OFFSET	STATION	OFFSET	SPV.0165.004 BERM ROCK WALL SF
11EW+31.67	RT	- 12EW+07.60	RT	246
PROJECT 9202-08-80 TOTAL				246

SALVAGE TRAFFIC SIGNALS SPECIAL

LOCATION	SPV.0105.002 SALVAGE TRAFFIC SIGNALS SPECIAL LS
STAGE 2	
CTH EB/DOUSMAN INTERSECTION	1
STAGE 2 SUBTOTAL	1
PROJECT 9202-08-80 TOTAL	1

ALL ITEMS ARE CATEGORY **1000** UNLESS OTHERWISE SPECIFIED.

LIGHTING CONTROL

CABINET NUMBER	STATION	OFFSET	R/L	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	SPV.0060.351 LIGHTING CONTROL CABINET EACH	656.0200.001 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
PROJECT ID 9202-08-80						
ALL ITEMS ARE CATEGORY 1100						
CB100	108 'EBN' + 61.2	55.9'	RT	1	1	1
PROJECT ID 9202-08-80 TOTALS				**1**	**1**	**1**

LIGHTING PULLBOXES

PULLBOX NUMBER	STATION	OFFSET	R/L	SPV.0060.356 POLYMER CONCRETE PULLBOX EACH
PROJECT ID 9202-08-80				
ALL ITEMS ARE CATEGORY 1100				
PB 100	109 'EBN' + 34.4	32.0'	RT	1
PB 101	109 'EBN' + 8.6	10.0'	LT	1
PB 102	108 'EBN' + 97.2	62.1'	LT	1
PB 103	14 'EW' + 01.1	52.2'	LT	1
PB 104	14 'EW' + 42.3	27.6'	LT	1
PB 105	111 'EBN' + 67.0	8.0'	LT	1
PB 106	111 'EBN' + 65.0	34.0	RT	1
PB 107	110 'EBN' + 89.7	59.1'	RT	1
PB 108	111 'EBN' + 73.6	60.8'	RT	1
PB 109	110 'EBN' + 05.6	62.5'	RT	1
PB 110	109'EBN' + 74.4	34.8	LT	1
PROJECT ID 9202-08-80 TOTALS				**11**

LIGHTING REMOVALS

LOCATION	STATION	OFFSET	R/L	204.0195 * REMOVING CONCRETE BASES EACH	653.0905 * REMOVING PULL BOXES EACH
PROJECT ID 9202-08-80					
ALL ITEMS ARE CATEGORY 1100					
EX PB	106'EBN'+90	36.5'	RT	--	1
EX SL	106'EBN'+70	0.0'	LT	1	--
EX SL	108'EBN'+29	15.8'	RT	1	--
EX SL	109'EBN'+40	82.0'	LT	1	--
EX SL	109'EBN'+95	23.5'	LT	1	--
EX SL	111'EBN'+97	25.3'	LT	1	--
EX SL	113'EBN'+22	11.0'	LT	1	--
EX SL	114'EBN'+53	11.4'	LT	1	--
EX SL	31'DW'+40	57.7'	RT	1	--
EX SL	32'DW'+27	18.8'	RT	1	--
EX SL	33'DW'+48	23.7'	LT	1	--
CATEGORY 1100 TOTALS				**10**	**1**

* ADDITIONAL QUANTITIES LISTED ELSEWHERE

LIGHTING CONDUIT AND WIRE

FROM	-	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF
PROJECT ID 9202-08-80						
ALL ITEMS ARE CATEGORY 1100						
CB100	-	PB100	--	45	285	171
PB100	-	PB101	--	50	620	372
PB101	-	SL102	165	--	885	531
SL102	-	SL101	175	--	935	561
SL101	-	SL100	160	--	860	516
PB101	-	PB102	55	--	335	201
PB102	-	SL113	40	--	260	156
SL113	-	PB103	20	--	160	96
PB103	-	SL114	45	--	285	171
SL114	-	SL115	135	--	441	441
PB103	-	PB104	90	--	--	--
PB104	-	SL112	40	--	156	156
PB104	-	PB105	110	--	366	366
PB105	-	SL110	115	--	635	381
SL110	-	SL111	175	--	935	561
SL111	-	STUB	30	--	--	--
PB105	-	PB106	--	42	540	324
PB106	-	SL109	--	23	350	210
PB106	-	PB107	82	--	470	282
PB107	-	SL108	40	--	260	156
SL108	-	SL107	140	--	760	760
SL107	-	STUB	90	--	--	--
PB107	-	PB108	50	--	310	186
PB107	-	PB108	50	--	310	186
PB108	-	SL106	--	42	540	324
PB108	-	PB109	110	--	610	366
PB108	-	PB109	110	--	610	366
PB109	-	SL105	160	--	860	516
PB109	-	SL104	--	42	810	486
PB109	-	CB100	110	--	610	366
PB109	-	CB100	110	--	610	366
PROJECT ID 9202-08-80 TOTALS			**2407**	**244**	**14808**	**9574**

STREET LIGHTS

LIGHT NUMBER	STATION	OFFSET	R/L	SPV.0060.352 CONCRETE BASES TYPE W EACH	SPV.0060.353 FIBERGLASS STREET LIGHT POLE INSTALL ONLY EACH	SPV.0060.354 STREET LIGHT MAST ARM 10 FOOT INSTALL ONLY EACH	SPV.0060.355 BOX STYLE LUMINAIRE LED INSTALL ONLY EACH	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
PROJECT ID 9202-08-80								
ALL ITEMS ARE CATEGORY 1100								
SL 100	104 'EBN' + 23.3	11.0'	LT	1	1	2	2	324
SL 101	105 'EBN' + 76.7	8.2'	LT	1	1	2	2	324
SL 102	107 'EBN' + 47.7	5.9'	LT	1	1	2	2	324
SL 103	108 'EBN' +97.6	34.0'	RT	1	1	1	1	192
SL 104	109 'EBN' + 90.8	45.9'	RT	1	1	1	1	192
SL 105	32 'DW' + 53.2	80.6'	RT	1	1	1	1	192
SL 106	110 'EBN' + 60.7	37.5'	RT	1	1	1	1	192
SL 107	33 'DW' + 41.5	34.0'	LT	1	1	1	1	192
SL 108	31 'DW' + 89.1	32.1'	LT	1	1	1	1	192
SL 109	111 'EBN' + 41.8	38.9'	RT	1	1	1	1	192
SL 110	112 'EBN' +82.6	10.8'	LT	1	1	2	2	324
SL 111	114 'EBN' + 53.7	12.0'	LT	1	1	2	2	324
SL 112	111 'EBN' + 94.5	81.9'	LT	1	1	1	1	192
SL 113	14 'EW' + 09.0	73.5'	RT	1	1	1	1	192
SL 114	13 'EW' + 36.4	35.1'	RT	1	1	1	1	192
SL 115	11 'EW' + 91.4	23.0'	RT	1	1	1	1	192
PROJECT ID 9202-08-80 TOTALS				**16**	**16**	**21**	**21**	**3732**

LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES

CATEGORY	ROADWAY	LOCATION	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES EACH
1400	WIS 29 / PACKERLAND TO US 41	ALL	26
		TOTALS	26

PLANTING MIXTURE

CATEGORY	ROADWAY	LOCATION	SPV.0035.500 PLANTING MIXTURE CY
1400	CARDINAL LANE	BED 1	24
	CARDINAL LANE	BED 2	61
	ELMHURST AVENUE	BED 3	146
	ROUNDABOUT	BED 4	465
	DOUSMAN STREET	BED 5	208
	CARDINAL LANE	BED 6	36
		TOTALS	940

ALUMINUM EDGING

CATEGORY	ROADWAY	LOCATION	SPV.0090.500 ALUMINUM EDGING LF
1400	CARDINAL LANE	BED 1	9
	CARDINAL LANE	BED 2	7
	ELMHURST AVENUE	BED 3	–
	ROUNDABOUT	BED 4	–
	DOUSMAN STREET	BED 5	225
	CARDINAL LANE	BED 6	106
		TOTALS	347

SHOVEL CUT EDGE

CATEGORY	ROADWAY	LOCATION	SPV.0090.501 SHOVEL CUT EDGE LF
1400	CARDINAL LANE	BED 1	–
	CARDINAL LANE	BED 2	–
	ELMHURST AVENUE	BED 3	185
	ROUNDABOUT	BED 4	–
	DOUSMAN STREET	BED 5	–
	CARDINAL LANE	BED 6	–
		TOTALS	185

SHREDDED HARDWOOD BARK MULCH

CATEGORY	ROADWAY	LOCATION	SPV.0180.500 SHREDDED HARDWOOD BARK MULCH SY
1400	CARDINAL LANE	BED 1	36
	CARDINAL LANE	BED 2	92
	ELMHURST AVENUE	BED 3	218
	ROUNDABOUT	BED 4	545
	DOUSMAN STREET	BED 5	312
	CARDINAL LANE	BED 6	53
		TOTALS	1256

STORM SEWER STRUCTURES

ROADWAY	STR NO.	STATION	OFFSET FT	LOCATION	RIM OR FLANGE ELEV	STR TYPE	COVER	STR* DEPTH FT	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH EACH	611.0624 INLET COVERS TYPE H EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	COMMENTS
STAGE 1A												
BRANTWOOD	832	11BWA+84.97	13.4	LT	606.85	MH 4-FT	H	4.77	---	1	1	---
ELMHURST WB	833	9EW+93.21	18.9	RT	605.45	MH 4-FT	H	2.88	---	1	1	---
ELMHURST WB	834	9EW+56.46	16.9	RT	604.69	ENDWALL	N/A	N/A	1	---	---	A
STAGE 3 SUBTOTAL									1	2	2	
PROJECT 9202-08-80 TOTAL									1	2	2	

*STRUCTURE DEPTH = RIM ELEVATION - CASTING DEPTH - 2" FOR ADJUSTMENT RINGS - INVERT ELEVATION (ADJUSTMENT RINGS EXCLUDED WHEN J COVER IS USED)

A) STATION/OFFSET OF APRON ENDWALLS ARE TO FLOWLINE END OF ENDWALL

REMOVING SMALL PIPE CULVERTS

STATION	OFFSET	-	STATION	OFFSET	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	REMARKS
STAGE 3							
12BWA+07	78.8' LT	-	12BWA+37	13.1' RT	BRANTWOOD	1	97 LF CORREGATED METAL CULVERT PIPE, 18"
STAGE 3 SUBTOTAL						1	
PROJECT 9202-08-80 TOTAL						1	

CONCRETE CURB & GUTTER

STATION	OFFSET	LOCATION	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF
STAGE 3			
11BWA+05 - 12BWA+12	LT	BRANTWOOD	129
STAGE 3 SUBTOTAL			129
PROJECT 9202-08-80 SUBTOTAL			129

STORM SEWER PIPES

ROADWAY	PIPE ID	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[1] %	PIPE[2] LENGTH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	COMMENTS
STAGE 3									
BRANTWOOD	P832	832	831	601.41	600.57	3.00	28	31	---
ELMHURST WB	P833	833	831	601.90	601.51	1.00	39	43	---
ELMHURST WB	P834	834	833	604.69	602.00	7.68	35	31	---
STAGE 3 SUBTOTAL								105	
PROJECT 9202-08-80 TOTAL								105	

1) SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE STRUCTURE WALL TO INSIDE STRUCTURE WALL

2) PIPE LENGTH COLUMN SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

'PIPE LENGTH" REPRESENTS LENGTH OF PIPE MEASURED FROM INSIDE STRUCTURE WALL TO EITHER INSIDE STRUCTURE WALL OR FLOWLINE END OF ENDWALL

ALL ITEMS ARE CATEGORY **1600** UNLESS OTHERWISE SPECIFIED.

TRANSPORTATION PROJECT PLAT NO: 9202-07-23-4.09

PART OF LOT 1, CSM #5500, WITHIN AND INCLUDING UNPLATTED LANDS WITHIN LOTS 297 AND 298 IN THE FORT HOWARD MILITARY RESERVE (FHMR); ALL LOCATED IN THE VILLAGE OF HOWARD, BROWN COUNTY, WISCONSIN.

RELOCATION ORDER STH 29 BROWN COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

POINT	STATION	OFFSET	COORDINATES
RL1	10+00.00	0.00'L	Y 577716.108 X 80567.904
PRW813	18+42.32	228.19'L	Y 578410.119 X 81096.976
PRW814	18+92.13	206.26'L	Y 578423.065 X 81149.836
RL2	19+00.67	0.00'R	Y 578264.682 X 81282.237
PRW815	21+04.87	230.94'L	Y 578534.403 X 81218.397
PRW822	22+13.08	214.70'R	Y 578443.976 X 81665.316
PRW823	22+14.87	149.38'R	Y 578467.579 X 81604.365
PRW821	22+29.74	299.76'R	Y 578440.698 X 81753.794
RW1935	22+55.29	368.25'R	Y 578461.610 X 81831.040
PRW824	22+55.81	115.16'R	Y 578526.283 X 81586.358
PRW816	22+66.12	178.42'L	Y 578606.999 X 81303.938
PRW817	22+99.62	70.82'L	Y 578610.341 X 81414.467
RL4	23+95.29	0.00'R	Y 578693.328 X 81492.278
PRW825	24+27.81	92.83'R	Y 578726.278 X 81584.959
PRW827	24+39.02	81.68'R	Y 578737.440 X 81573.750
RL5	26+95.29	0.00'R	Y 578993.325 X 81490.881

POINT TO POINT	BEARING	DISTANCE
PC156 DB1009	N 00°24'03" W	317.44'
DB1009 RW1058	N 72°05'58" W	359.00'
RW1058 PRW812	S 58°49'12" W	152.63'
PRW812 PRW813	N 04°05'41" W	110.00'
PRW813 PRW814	N 76°14'20" E	54.42'
PRW814 PRW815	N 31°37'28" E	130.75'
PRW815 PRW816	N 49°40'47" E	112.19'
PRW816 PRW817	N 88°16'05" E	110.58'
PRW817 PRW827	N 51°24'43" E	203.78'
PRW827 PRW825	S 45°07'07" E	15.82'
PRW825 PRW824	S 00°24'03" E	200.00'
PRW824 PRW823	S 17°03'11" E	61.40'
PRW823 PRW822	S 58°49'53" E	65.36'
PRW822 PRW821	S 87°52'42" E	88.54'
PRW821 RW1935	N 74°51'07" E	80.03'
RW1935 DB1009	S 52°50'19" W	318.73'

ALIGNMENT CURVE CUR139				
RL2	PC N 578264.682 E	81282.237	STA	19+00.67
	CC N 578690.827 E	80954.978		
	PI N 578426.936 E	81493.518	STA	21+67.06
	TAN 266.39'			
	DB N 52°28'39" E			
	DA N 0°16'00" W			
	LChord Distance 477.34'	Bearing N 26°06'19" E		
	External Distance 62.41'			
	Middle Ordinate 55.92'			
	Radius 537.31'			
	DEC 10°39'49"			
	DELTA -52°44'39"			
	LENGTH 494.62'			
RL4	PT N 578693.328 E	81492.278	STA	23+95.29

POINT	STATION	OFFSET	COORDINATES
TLE "A"			
PRW814	18+92.13	206.26'L	Y 578423.065 X 81149.836
TLE213	19+82.35	233.30'L	Y 578480.533 X 81174.521
TLE214	21+08.09	240.91'L	Y 578541.023 X 81210.729
TLE215	22+79.09	179.55'L	Y 578615.683 X 81304.752
TLE216	23+11.04	70.84'L	Y 578620.126 X 81416.058

COURSE TABLE CTH EB R/W REFERENCE LINE			
POINT TO POINT			
RL1	RL2	N 52°28'39" E	900.67'
RL2	RL4	SEE CURVE CUR139	
RL4	RL5	N 00°16'00" W	300.00'

2625261
CATHY WILLIQUETTE LINDSAY
BROWN COUNTY RECORDER
GREEN BAY, WI
RECORDED ON
04/30/2013 10:59 AM
REC FEE: 25.00
EXEMPT #
PAGES: 1

RESERVE FOR REGISTER OF DEEDS
PROJECT NUMBER 9202-07-23-4.09
AMENDMENT NUMBER:

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE ACRES	T.L.E. ACRES	EXISTING ACRES
55	STURZLS' LANDING LIMITED PARTNERSHIP	FEE	0.432	-	-
56	JUDY J. PAGEL	FEE & TLE	0.085	0.033	-
57	GORDON R. OBEY	FEE & TLE	0.261	0.026	-
			-	-	-
			-	-	-
			-	-	-

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER	INTEREST REQUIRED
101	AT&T WISCONSIN	RELEASE OF RIGHTS
107	WISCONSIN PUBLIC SERVICE-GAS (WPS)	RELEASE OF RIGHTS
224	VILLAGE OF HOWARD-SANITARY UA	
225	VILLAGE OF HOWARD-WATER UA	

NOT OFFICIAL
A recorded copy of this plat can be obtained from the Register of Deeds Office.

CONVENTIONAL ABBREVIATIONS AND SYMBOLS

ACCESS POINT	AP	SECTION CORNER (MATERIAL AS NOTED)	⊕
ACCESS RIGHTS	AR	SET R/W MONUMENT W/CAP (1-1/4" OUTSIDE DIA.x18" IRON PIPE 1.13 LBS/FT)	○
ACRES	AC.	SET P.K. NAIL	△
CHORD BEARING	CH BRG	PROPOSED R/W	
CHORD DISTANCE	CH DIS	BOUNDARY POINT	PRW000
DEED	(D)	CORPORATE LIMITS	
DOCUMENT	DOC	EXISTING R/W	
EAST BOUND	EB	SECTION LINE	
GAS VALVE	GV	QUARTER LINE	
INLET	▭ IL	SIXTEENTH LINE	
LENGTH OF CURVE	L	PROPOSED OR NEW R/W LINE	
MANHOLE	● MH	PROPOSED EASEMENT LINE	
MONUMENT	MON	PARCEL NUMBER	(00)
NORTH BOUND	NB	UTILITY PARCEL NUMBER	000
PAGE	PG	PROPERTY LINE	PL
PERMANENT	PERM	LOT, TIE AND OTHER MINOR DASHED LINES	
PERMANENT LIMITED EASEMENT	PLE	ACCESS CONTROL (By Previous Acquisition or Covenant)	◆◆◆◆◆◆◆◆◆
PRIVATE DRIVEWAY	PD	NO ACCESS (By Acquisition)	' ' ' ' ' ' ' ' ' '
PROPERTY LINE	PL	NO ACCESS (By Statutory Authority)	◆◆◆◆◆◆◆◆◆◆◆◆◆◆
RADIUS	RAD	LIMITED EASEMENT (Temporary or Permanent)	TLE
REFERENCE LINE	℄		
REMAINING	REM		
RIGHT OF WAY	R/W		
SECTION	SEC		
SECTION LINE	¾		
FOUND IRON PIPE	IP ●		
STATION	STA		
TEMPORARY LIMITED EASEMENT	TLE		
TIE POINT	DB1		
VOLUME	VOL		
ADJOINING LANDS WITH SAME OWNER			
PARALLEL TO LINE	00'		
BUILDING TO BE RAZED			
FEE ACQUISITION	VARIOUS HATCHING		

COUNTY MONUMENT
Y=579229.870
X=80252.990

	COMPENSABLE	NON-COMPENSABLE
POWER POLE	●	○
TELEPHONE POLE	●	○
SIGN	▶	▷
TELEPHONE PEDESTAL	✖	✖

BURIED FIBER OPTICS CABLE —FO—
BURIED COMMUNICATION CABLE —C-UG—
BURIED GAS LINE —G—
STORM SEWER LINE —SAN—
BURIED WATER LINE —W—
BURIED ELECTRIC LINE —E—
OVERHEAD ELECTRIC LINE —OH—

GRAPHIC SCALE, FEET: 0, 100, 200

RESERVE FOR CLAUSES AND NOTE INFORMATION

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

RIGHT OF WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

AREAS SHOWN IN THE TOTAL ACRES COLUMN OF THE SCHEDULE OF LANDS & INTEREST TABLE MAY BE APPROXIMATE AND ARE DERIVED FROM TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED.

COORDINATES AS SHOWN ARE NOT INTENDED TO BE USED FOR RETRACEMENT PURPOSES AND MUST BE VERIFIED WITH THE COUNTY SURVEY DEPARTMENT.

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, BROWN COUNTY, (ENGLISH), NAD OF 1983 (1991) ADJUSTMENT. ALL PLAT DISTANCES ARE GROUND LENGTH.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. 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.

EXISTING RIGHT OF WAY WAS ACQUIRED FROM PROJECT(S):
F 020 3(9), 9202-02-21, 9202-07-21, 9202-02-22, 61-EB-15, HW-01-99 & COUNTY MAPS

EXISTING ACCESS CONTROL WAS ACQUIRED UNDER PROJECT(S):
F 020 3(9), T 02-5(26), 9202-02-22

RIGHT OF WAY REFERENCE LINE MAY NOT BE THE SAME AS THE CONSTRUCTION REFERENCE LINE.

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 TO PREVENT EROSION OF THE SOIL. ALL TLEs ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOESES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO DEPARTMENT OF TRANSPORTATION.

I HEREBY CERTIFY THAT THIS PLAT MEETS ALL REQUIREMENTS OF SECTION 84.095, WISCONSIN STATUTES. THIS PLAT WAS PREPARED BY OR UNDER THE DIRECTION OF

JON L. HERBEL (PRINTED NAME) — Jon L Herbel (SIGNATURE) — 04/25/2013 (DATE)

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

BRUCE ENKE (PRINTED NAME) — Bruce Enke (SIGNATURE) — 04/25/2013 (DATE)

VILLAGE OF HOWARD

TOWN OF GREEN BAY

FHMR LOT 299

FHMR LOT 298

FHMR LOT 303

FHMR LOT 304

FHMR LOT 297

FHMR LOT 305

DUCK CREEK

RIVER GROVE AVE.

SHAWANO AVE.

FAIRDALE AVE.

ELMHURST AVE.

BRANTWOOD LANE

CARDINAL LANE

DOUSMAN STREET

VIEW POINT ROAD

PAMPERIN PLAT

BLK. 1, BLK. 2, BLK. 3, BLK. 4, BLK. 5

CTH "EB"

S.T.H. "29 / 32"

STATE OF WISCONSIN

RIGHT-OF-WAY ℄

TLE "A" FOR TEMPORARY ROADWAY CONSTRUCTION AND SLOPING

PI 26+95.29 RL5

RL4 PT 23+95.29

PC 19+00.67 RL2

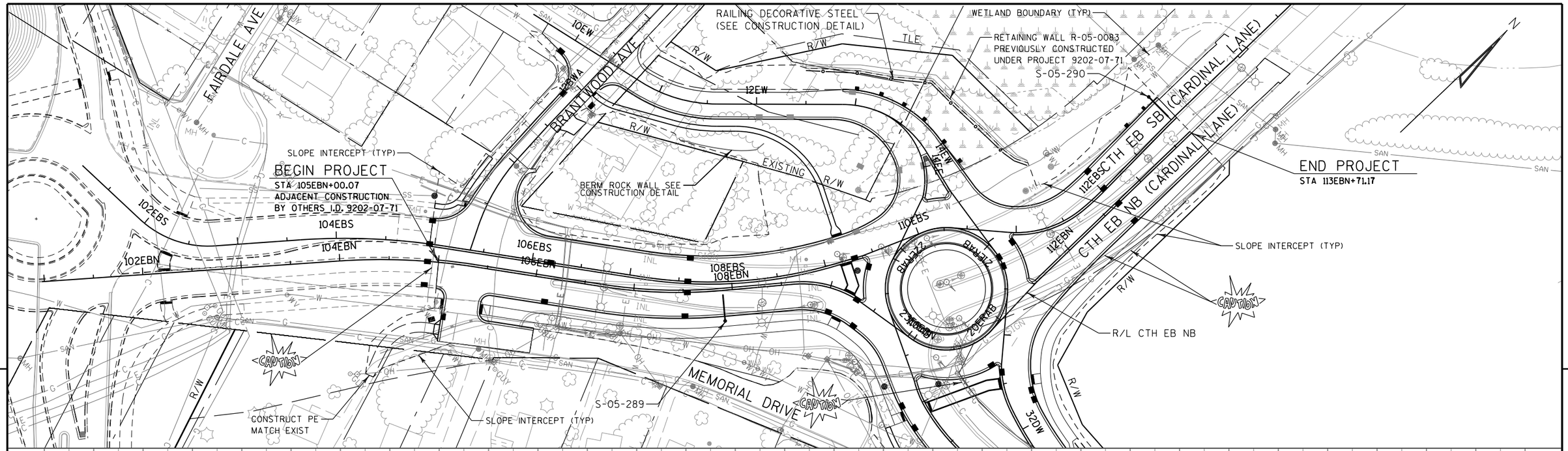
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X=880261.865

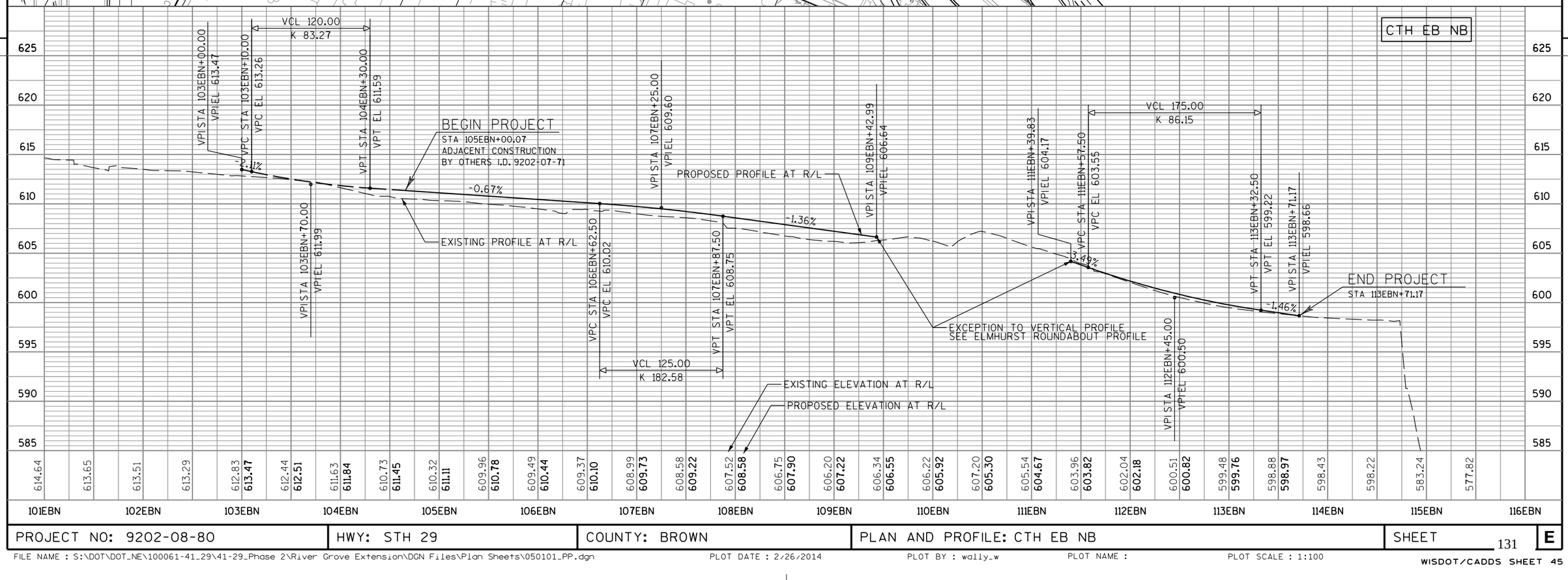
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LOTS 297 & 298 IN THE FORT HOWARD MILITARY RESERVE

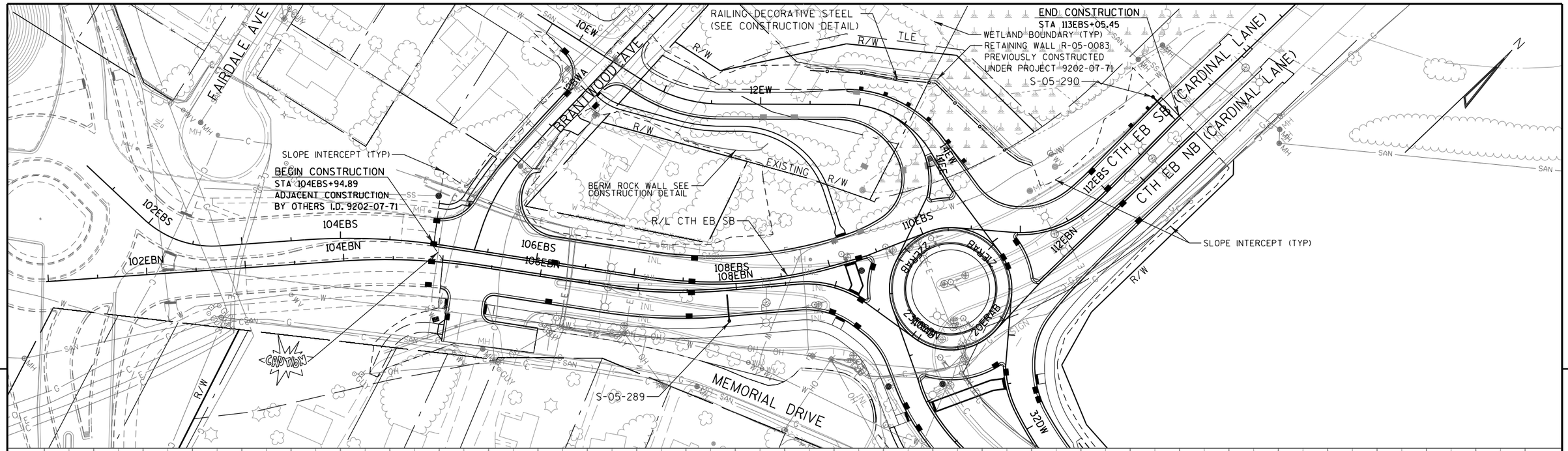
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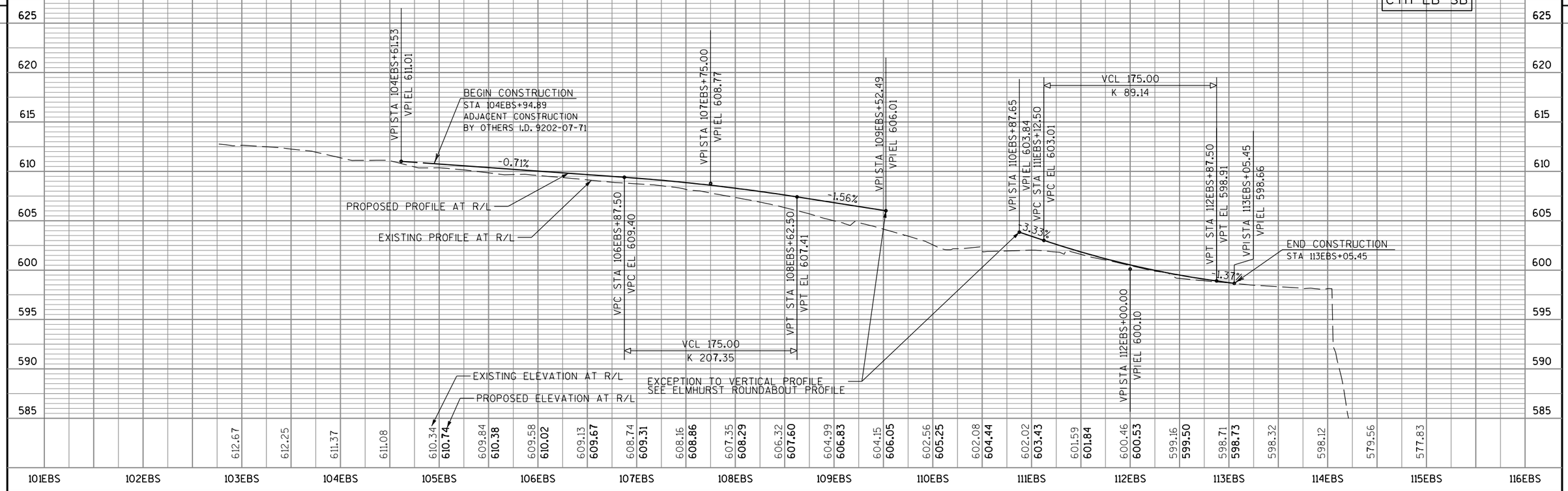
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PLOT DATE : 25-APR-2013 08:23
PLOT BY : $$...plotuser...$$
PLOT NAME : D3
PLOT SCALE : 100.000000:1.000000
APPRAISAL PLAT DATE :





PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN AND PROFILE: CTH EB NB	SHEET 131 E

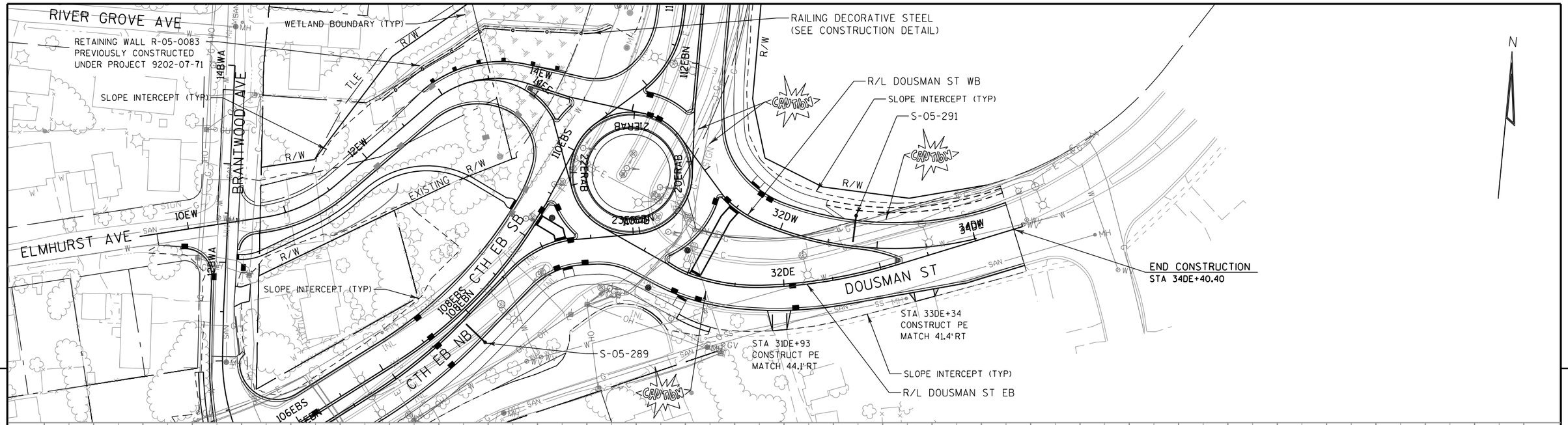


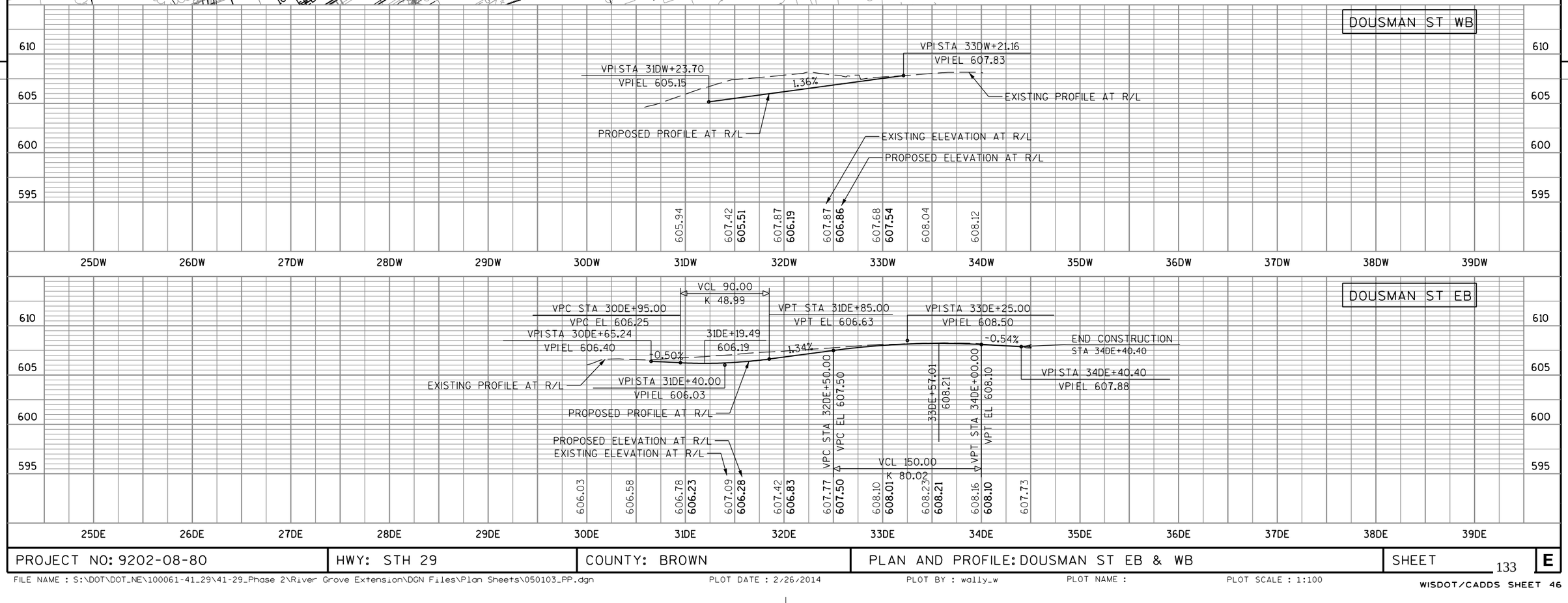


PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN AND PROFILE: CTH EB SB	SHEET 132 E

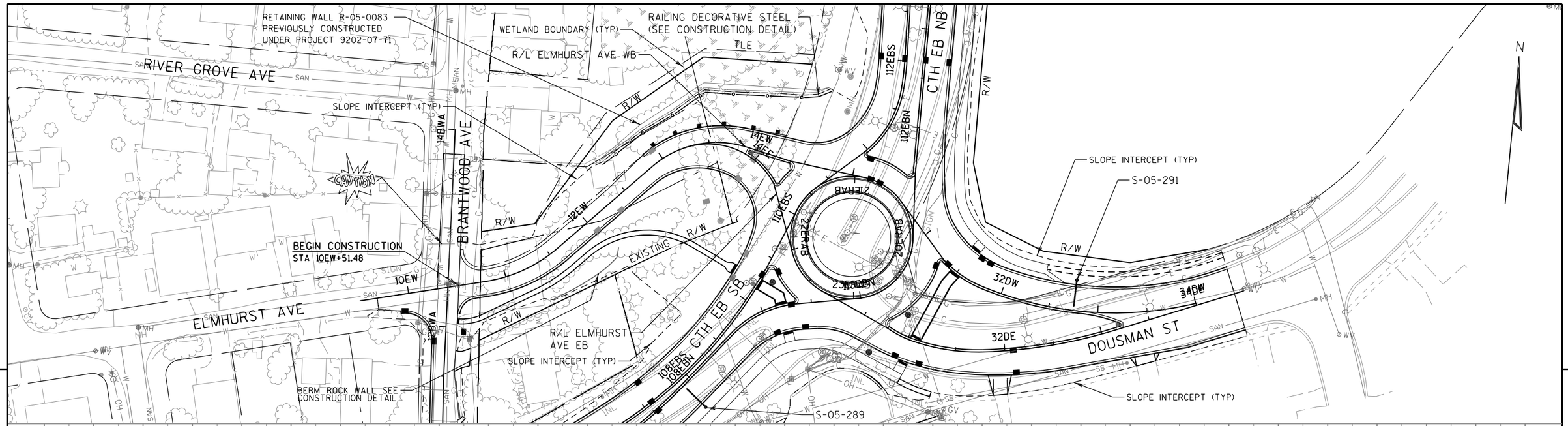
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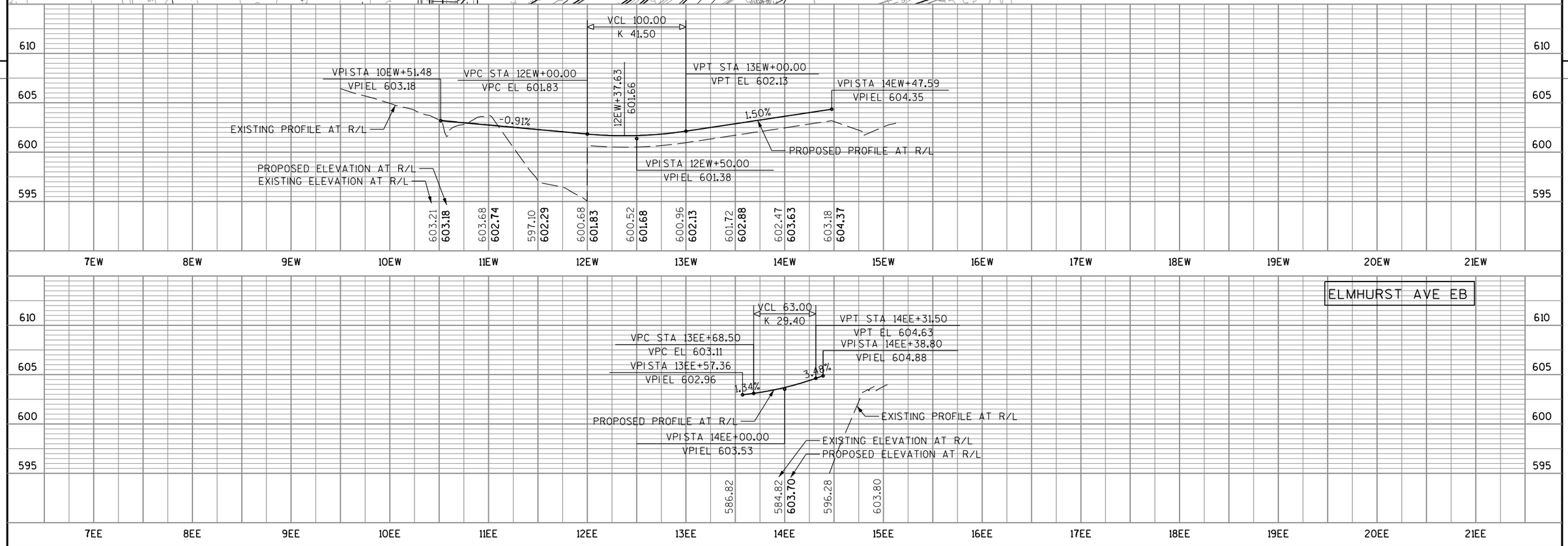
WISDOT/CADDS SHEET 45



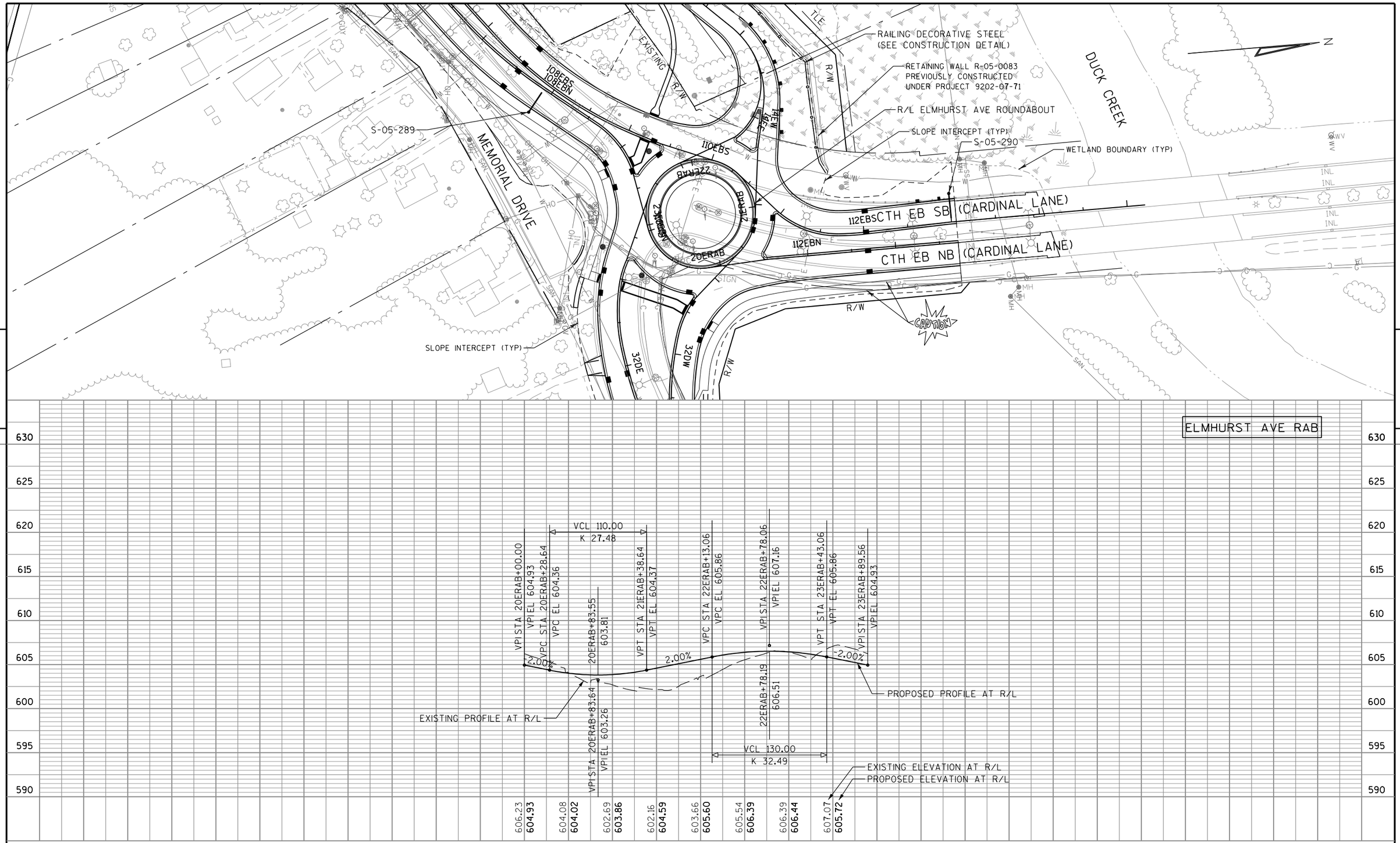


PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN AND PROFILE: DOUSMAN ST EB & WB	SHEET 133	E

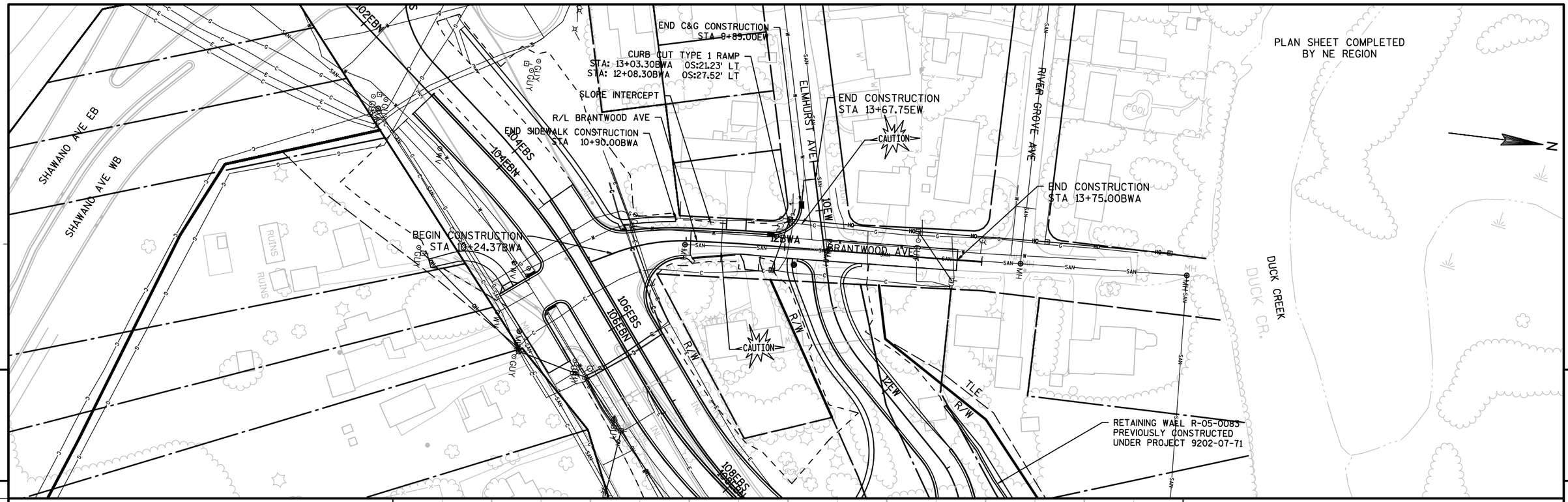


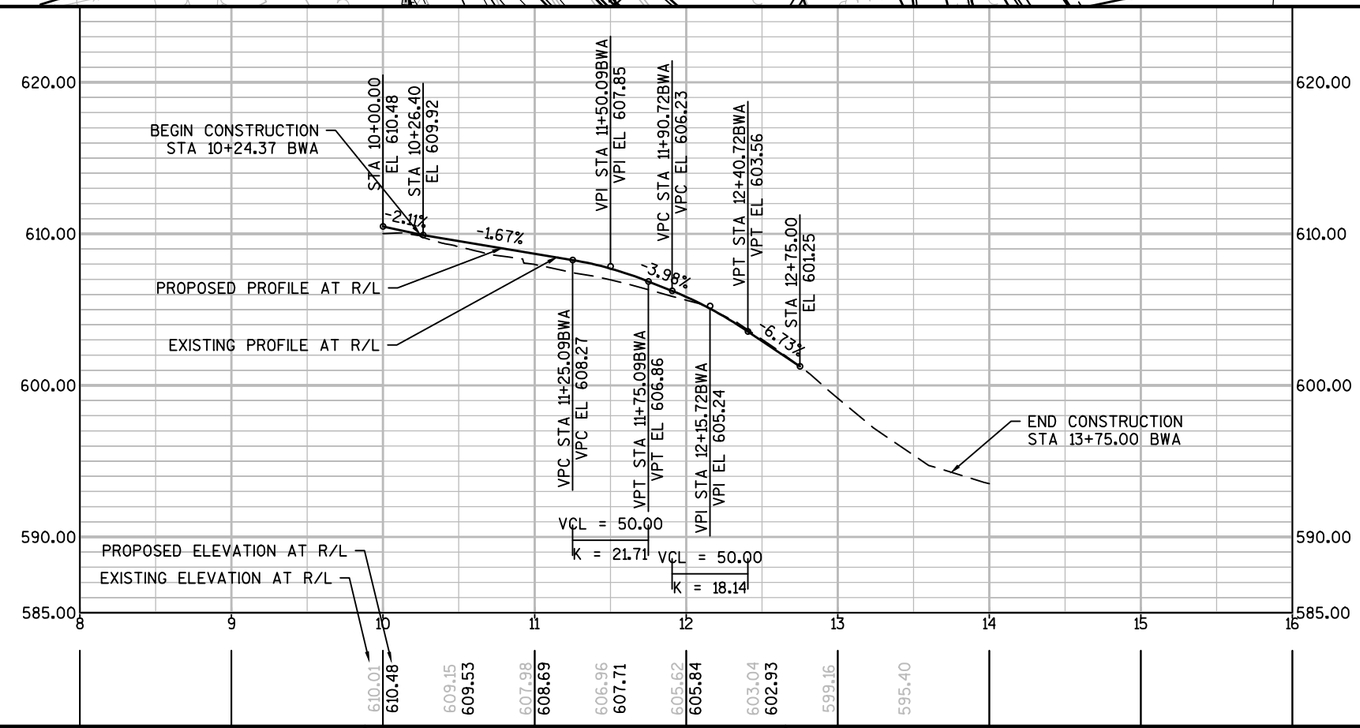


PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN AND PROFILE: ELMHURST AVE EB & WB	SHEET 134	E



PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN AND PROFILE: ELMHURST AVE ROUNDABOUT	SHEET 135 E



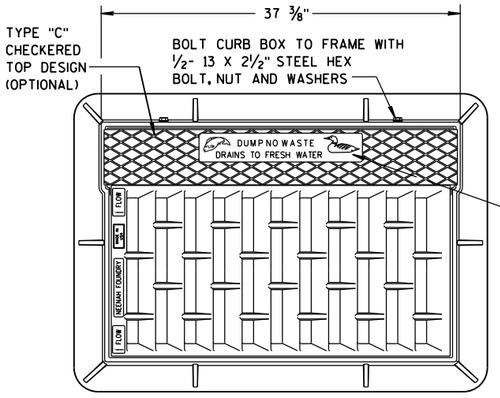


PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	PLAN AND PROFILE: BRANTWOOD AVE	SHEET	E

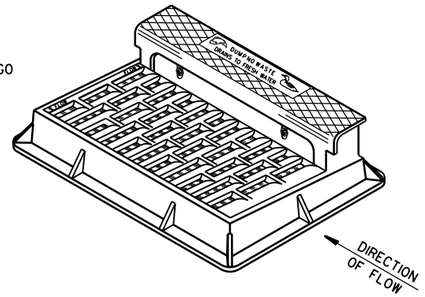
Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-15A	CURB RAMPS TYPES 1 AND 1-A
08D05-15B	CURB RAMPS TYPES 2 AND 3
08D05-15C	CURB RAMPS TYPES 4A AND 4A1
08D05-15D	CURB RAMPS TYPE 4B AND 4B1
08D05-15E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-07	CONDUIT
09C06-06	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
09D01-04	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09E03-04	NON-FREEWAY LIGHTING UNIT POLE WIRING
11B02-02	CONCRETE MEDIAN NOSE
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13C01-16	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-08	URBAN DOWELED CONCRETE PAVEMENT
13C18-02A	CONCRETE PAVEMENT JOINTING
13C18-02B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-02C	CONCRETE PAVEMENT JOINT TIES
13C18-02D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
13C18-02E	CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS
14B15-07A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-07C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B16-04A	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B16-04B	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B47-01A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C07-12D	ROUNDABOUT ARROWS
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16F	PAVEMENT MARKING (ISLANDS)
15C18-03	MEDIAN ISLAND MARKING
15C20-01	YIELD MARKING

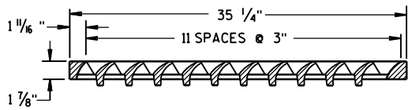
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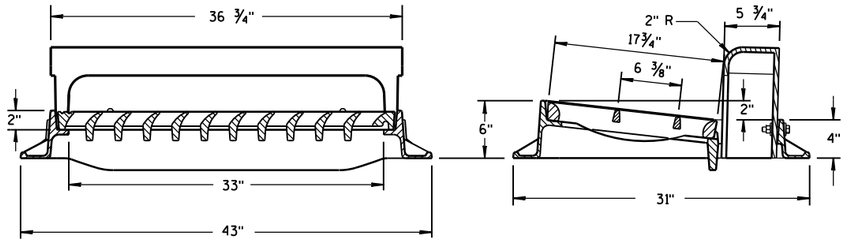


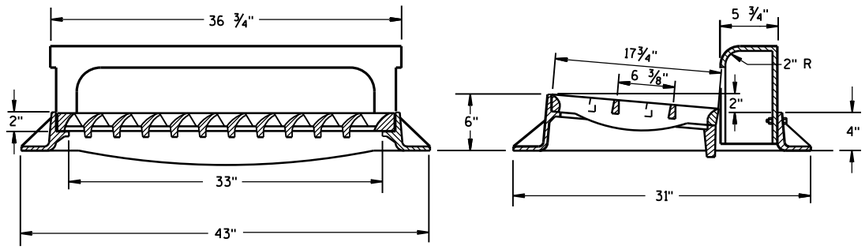
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

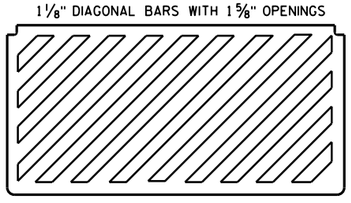






TYPE "H"

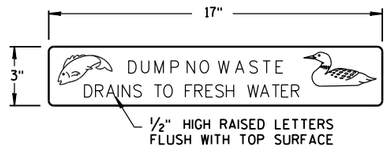
NOTE: EITHER CASTING IS ACCEPTABLE



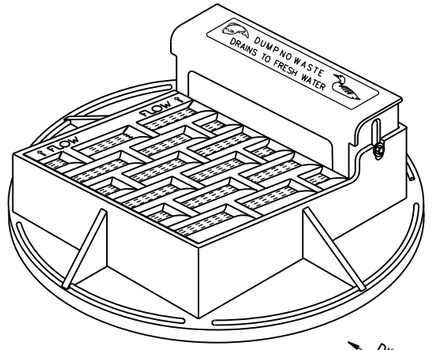
SPECIAL GRATE FOR TYPE "H" COVER

(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"

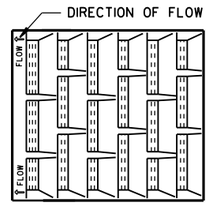
NOTE:
GRATE IS REVERSIBLE.

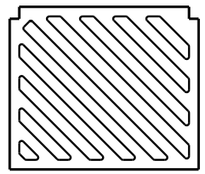
GENERAL NOTES

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.

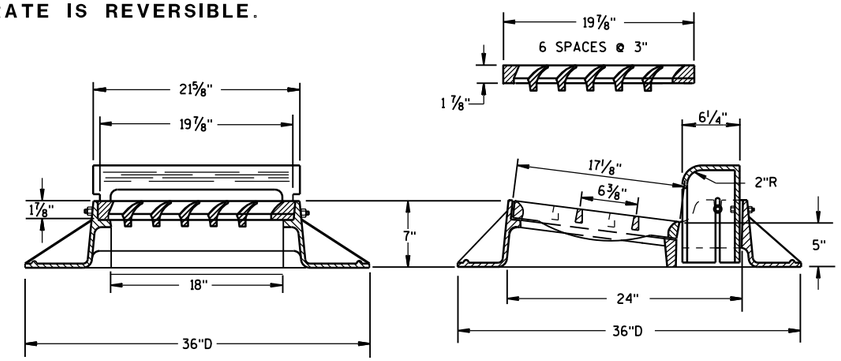




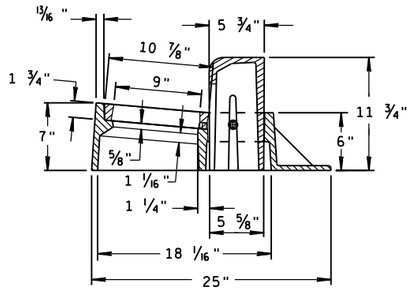
SPECIAL GRATE FOR TYPE "A" COVER

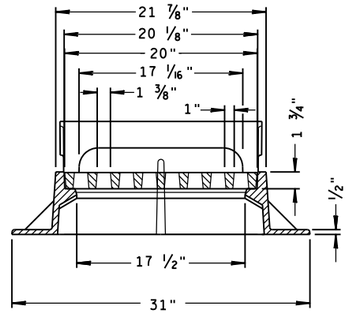
(MEASURES 19 3/4" X 17" X 1 7/8")

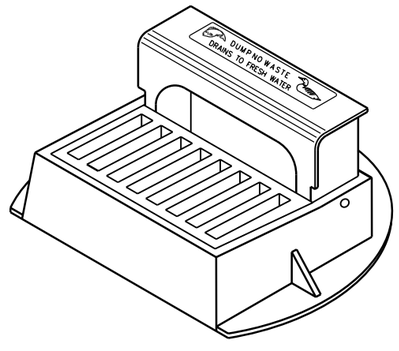
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"







TYPE "Z"

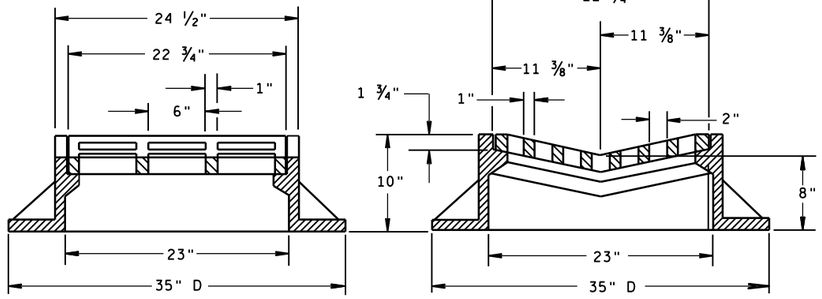
INLET COVERS
TYPE A, H, A-S, H-S & Z

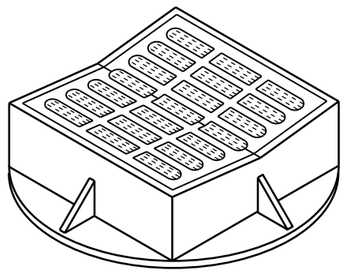
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

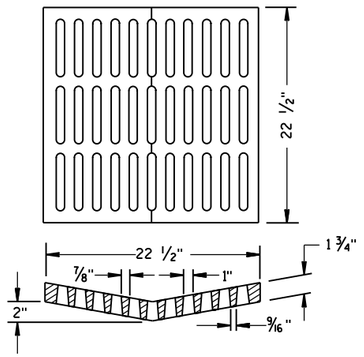
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S.D.D. 8 A 5-19a



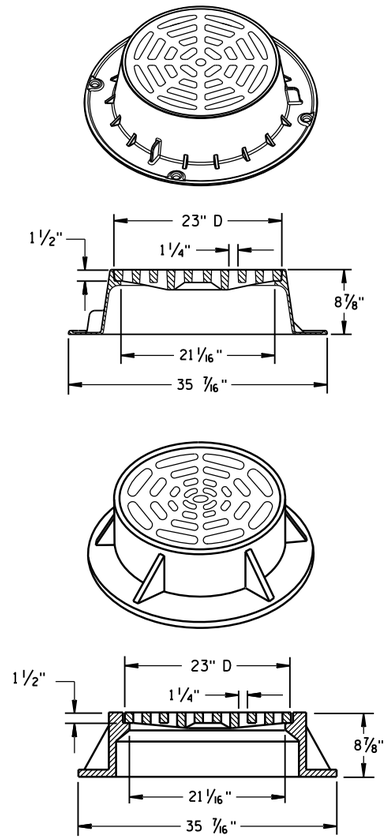


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

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



TYPE "C"

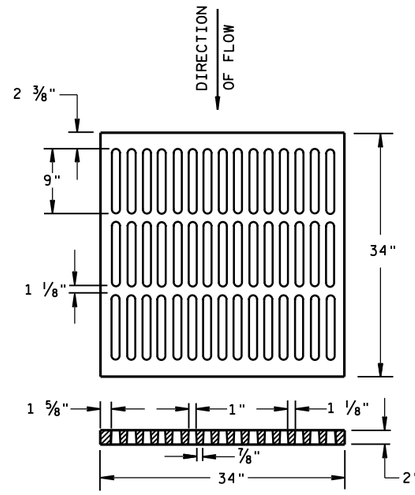
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

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

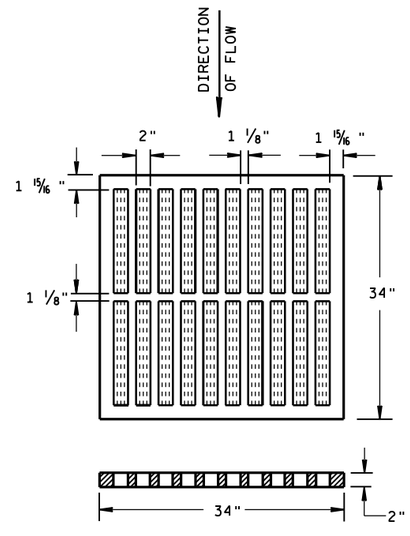
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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



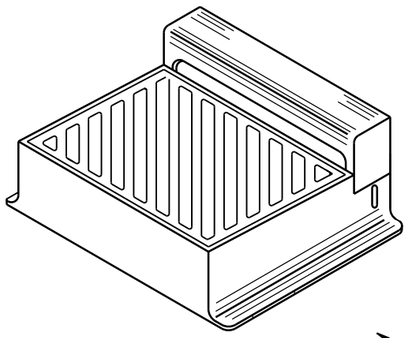
ALTERNATIVE TYPE "MS"

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

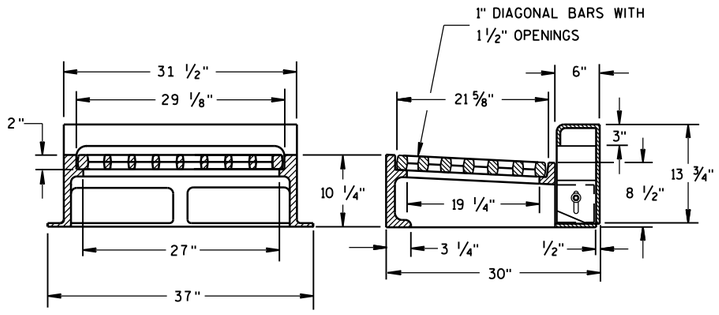


TYPE "MS"

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



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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

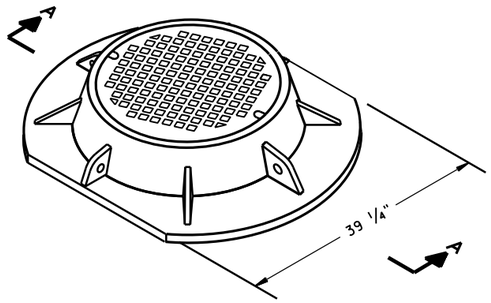
INLET COVERS
TYPE B, B-A, C,
MS, MS-A, & WM

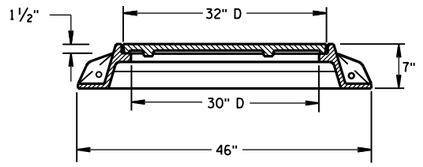
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

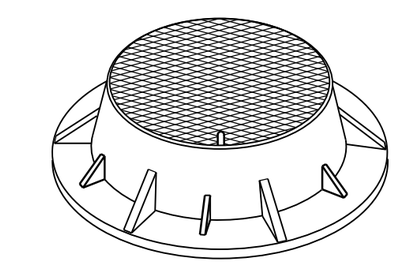
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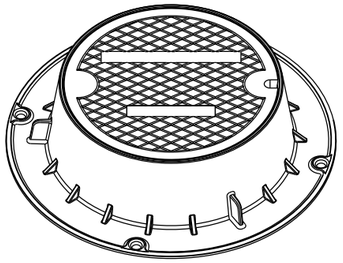
S.D.D. 8 A 5-19b

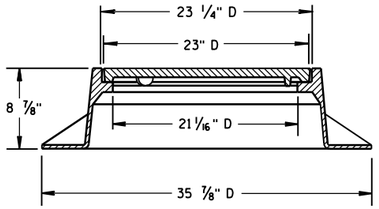


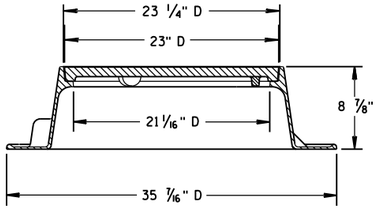


SECTION A-A
TYPE "K"









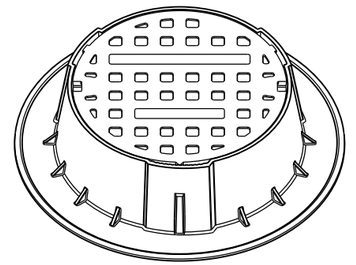
TYPE "J"
NOTE: EITHER CASTING IS ACCEPTABLE

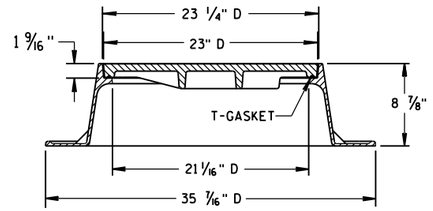
GENERAL NOTES

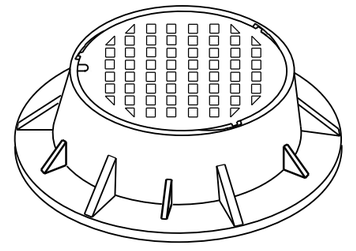
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

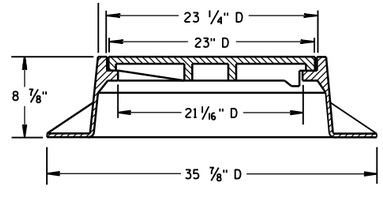
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

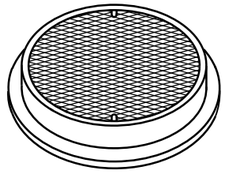


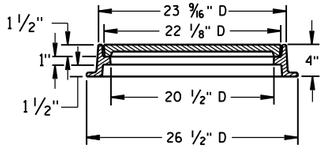




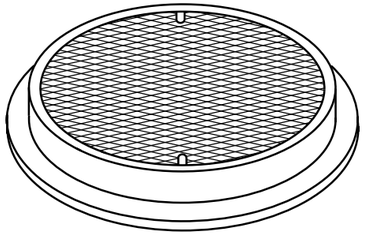


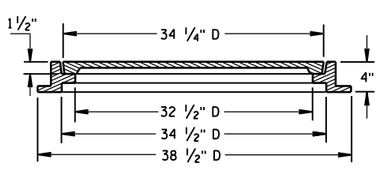
TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)
NOTE: EITHER CASTING IS ACCEPTABLE



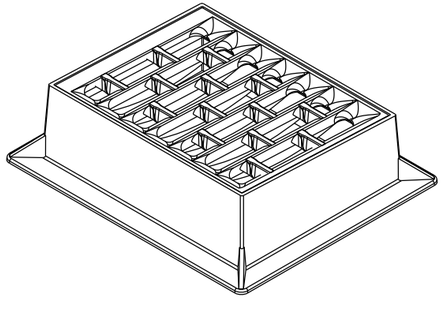


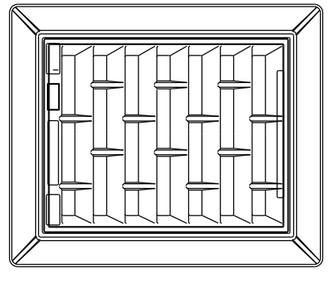
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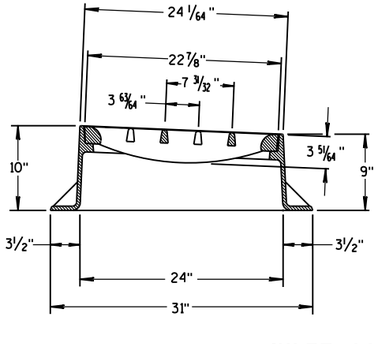


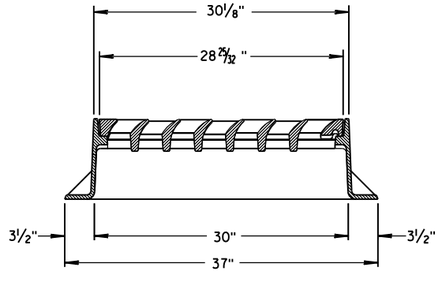


TYPE "M"









INLET COVER TYPE "BW"

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

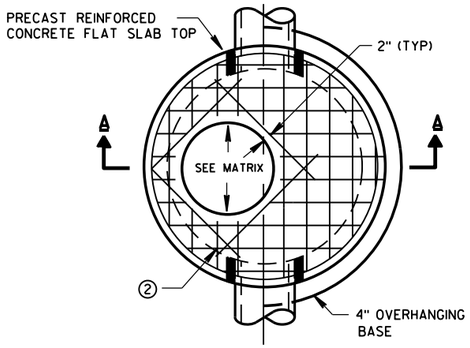
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APPROVED
11/27/2013
DATE
FHWA

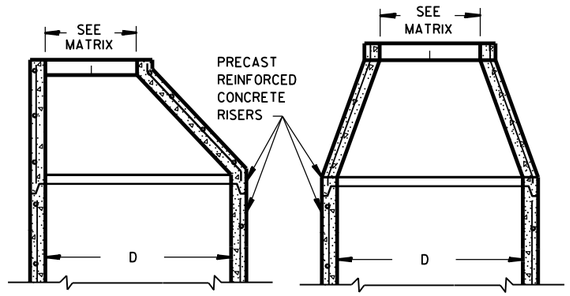
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

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

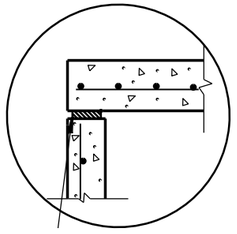


PLAN VIEW CIRCULAR OPENING

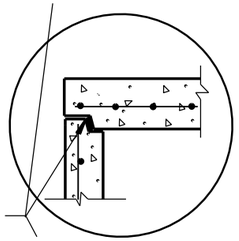


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

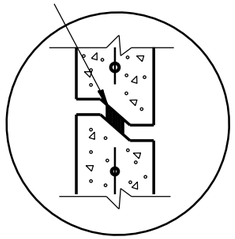


TOP WITH PLAIN END JOINT



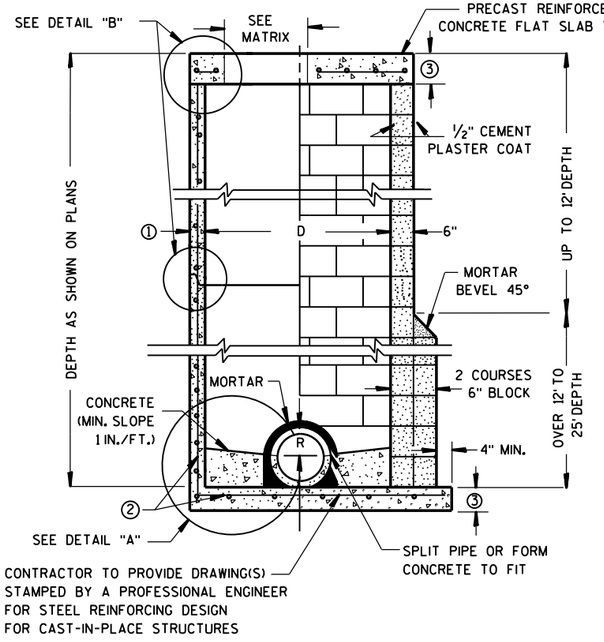
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



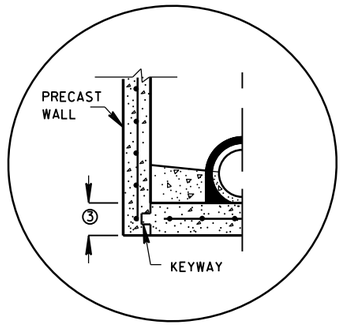
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

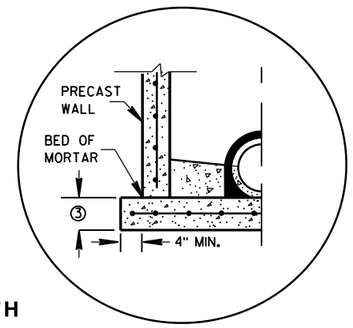


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

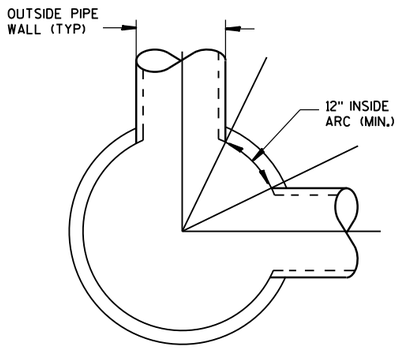


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



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

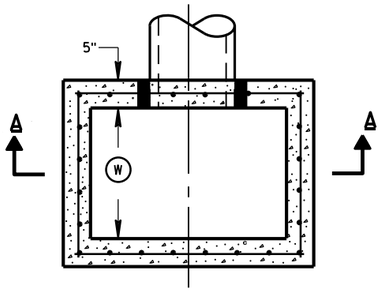
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

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

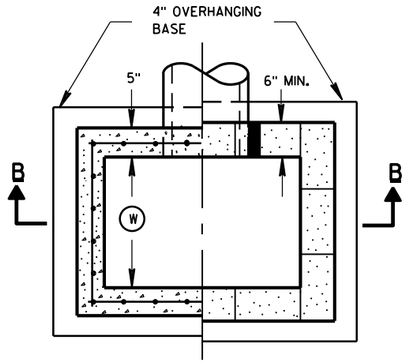
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

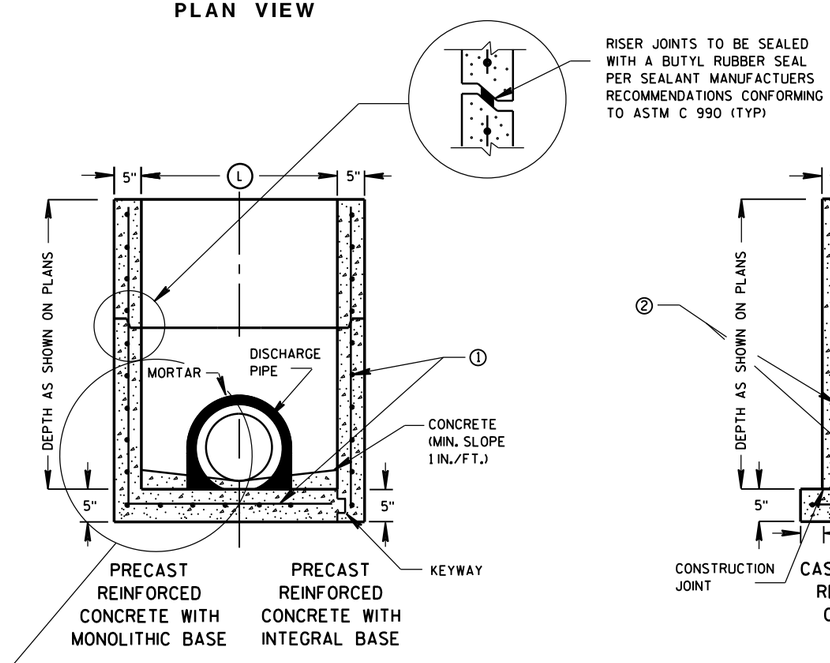
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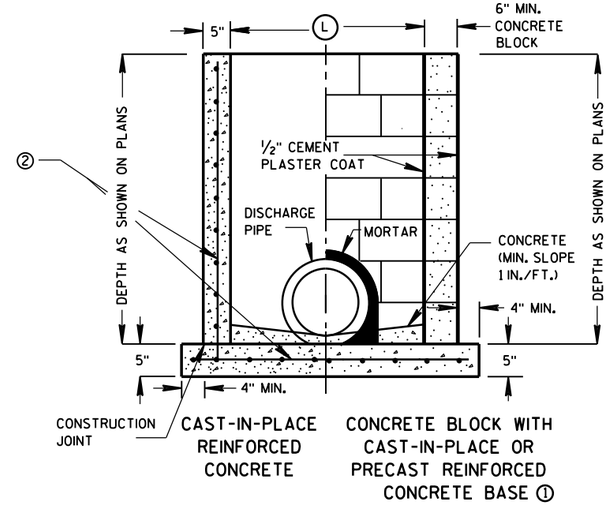
PLAN VIEW



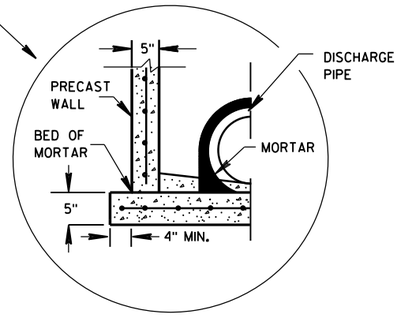
PLAN VIEW



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.

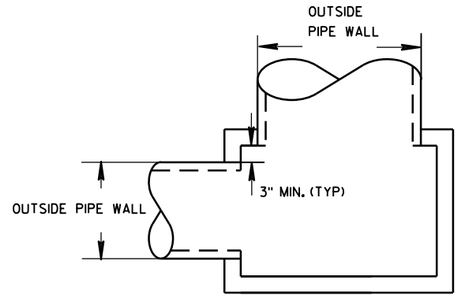
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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"

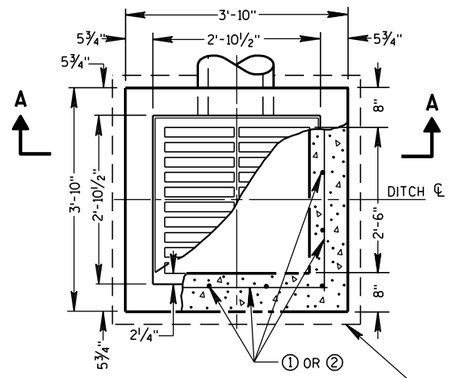
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

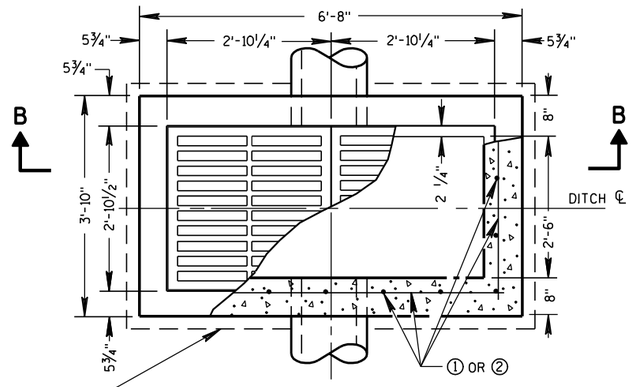
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER

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S.D.D. 8 C 7-1

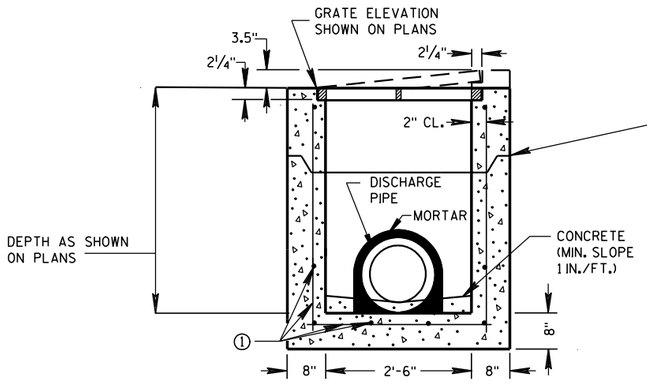


PLAN VIEW

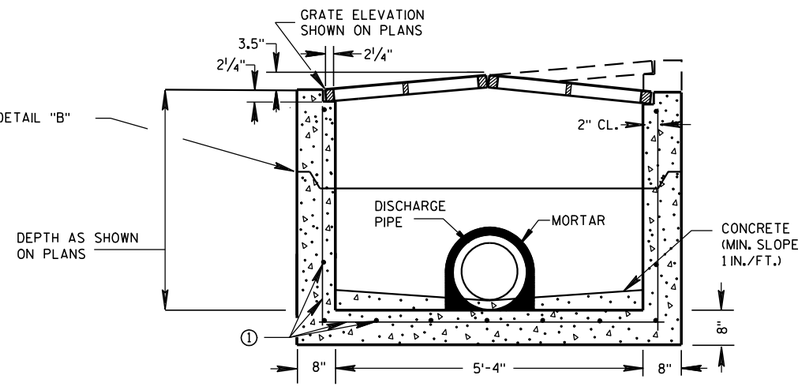


PLAN VIEW

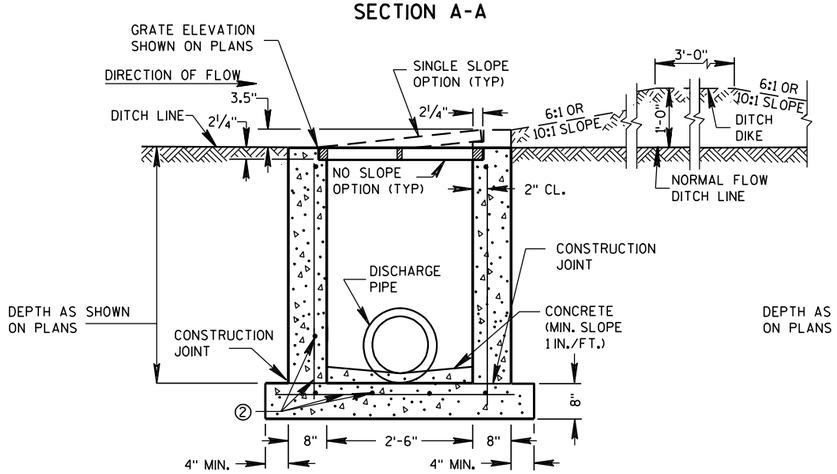
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



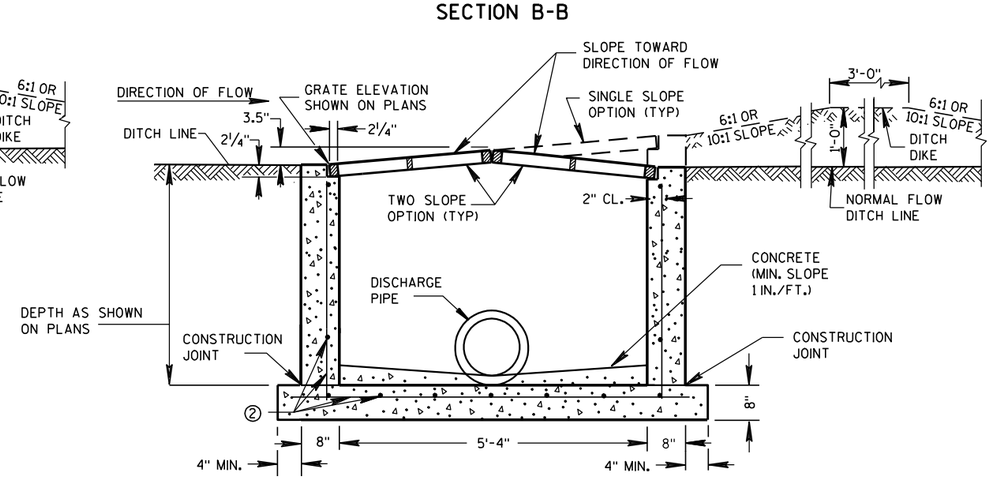
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

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

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

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

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

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

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

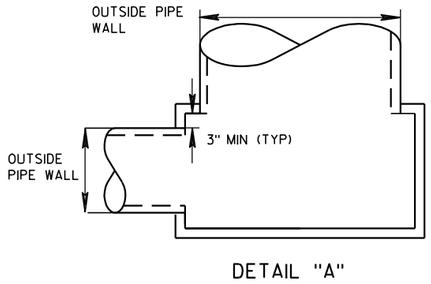
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

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

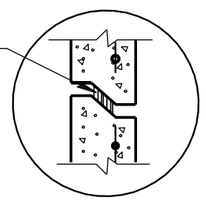
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

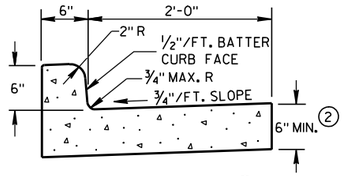
FHWA

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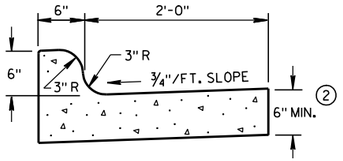
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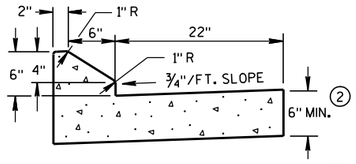
S.D.D. 8 C 8-1



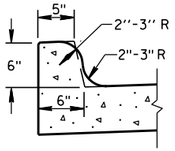
TYPES A & D (1)



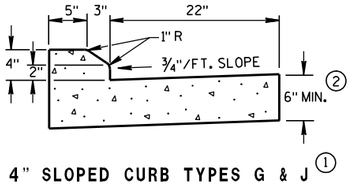
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

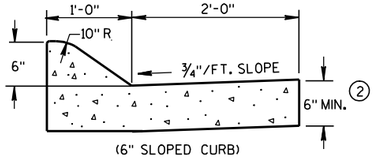


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

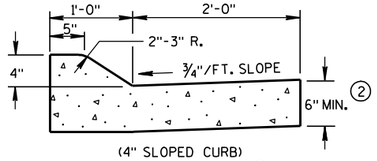


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

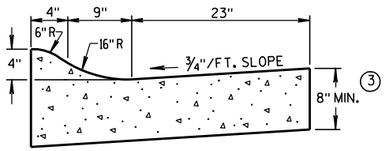


(6" SLOPED CURB)



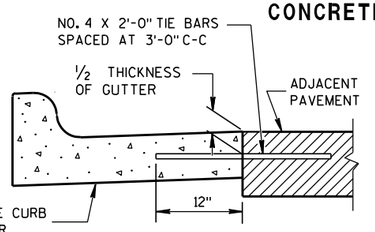
(4" SLOPED CURB)

TYPES A & D (1)

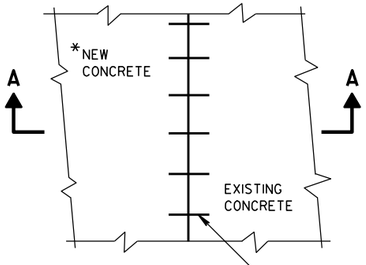


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"

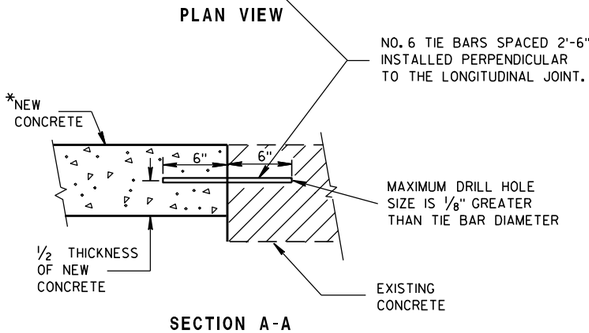


TYPICAL TIE BAR LOCATION (1)



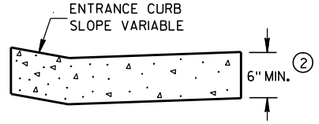
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW



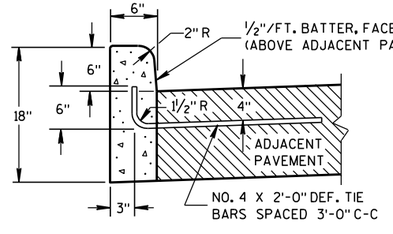
SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



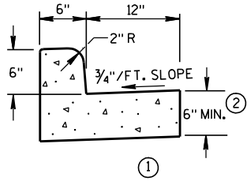
DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)



(1)

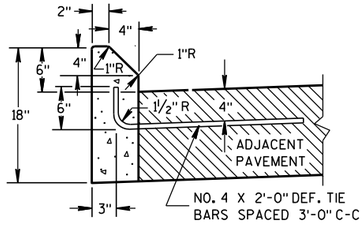
TYPES A & D



(1)

TYPES A & D

CONCRETE CURB & GUTTER 18"



(1)

TYPES G & J

CONCRETE CURB

(5)

REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

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

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

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

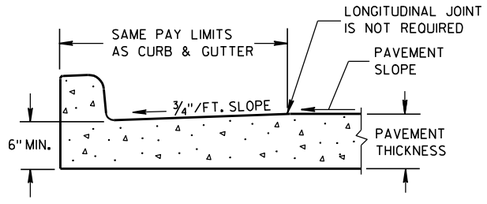
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

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

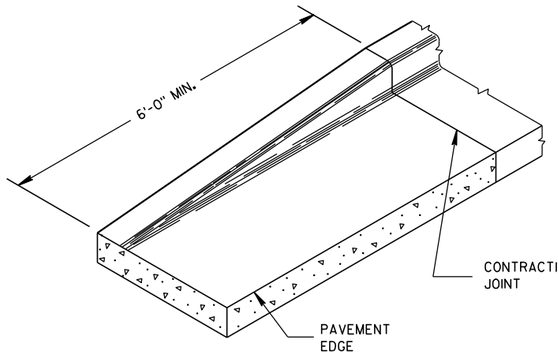
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

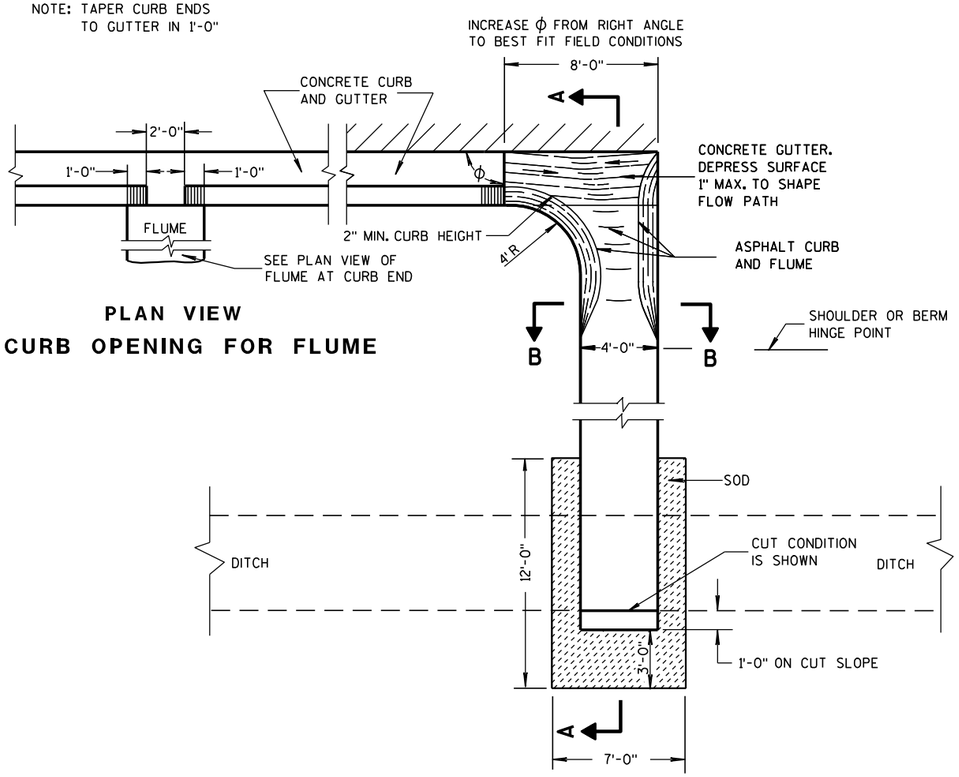
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S.D.D. 8 D 1-17

6

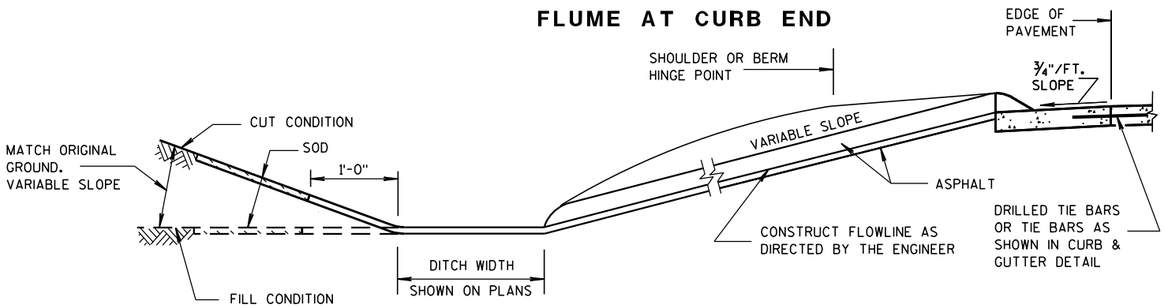
S.D.D. 8 D 1-17

ASPHALTIC FLUME

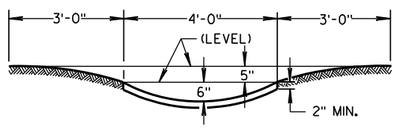


PLAN VIEW
CURB OPENING FOR FLUME

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.

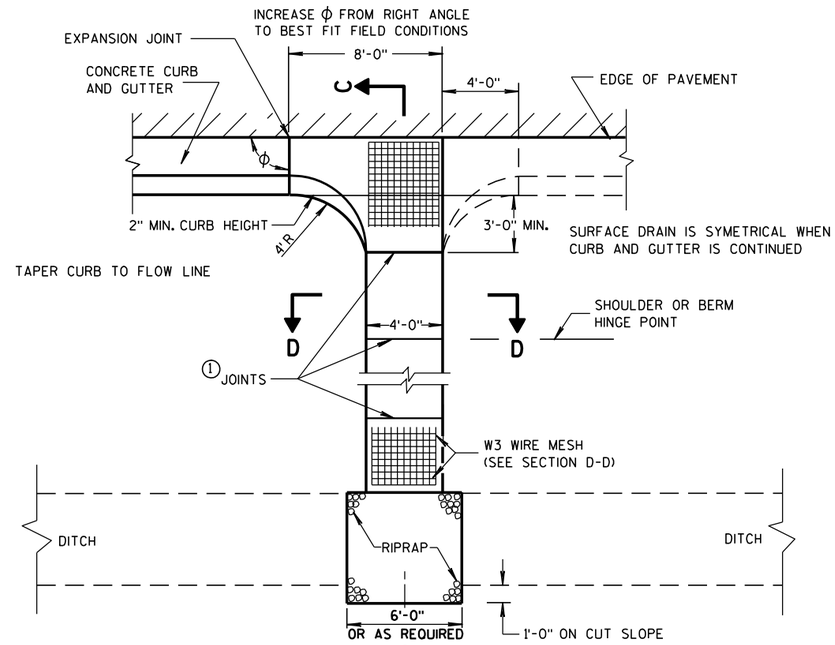
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

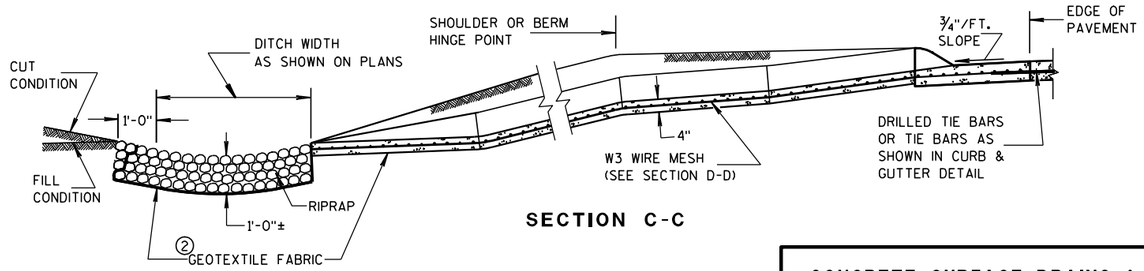
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

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

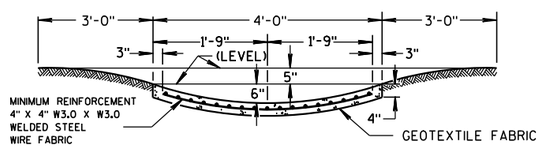
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

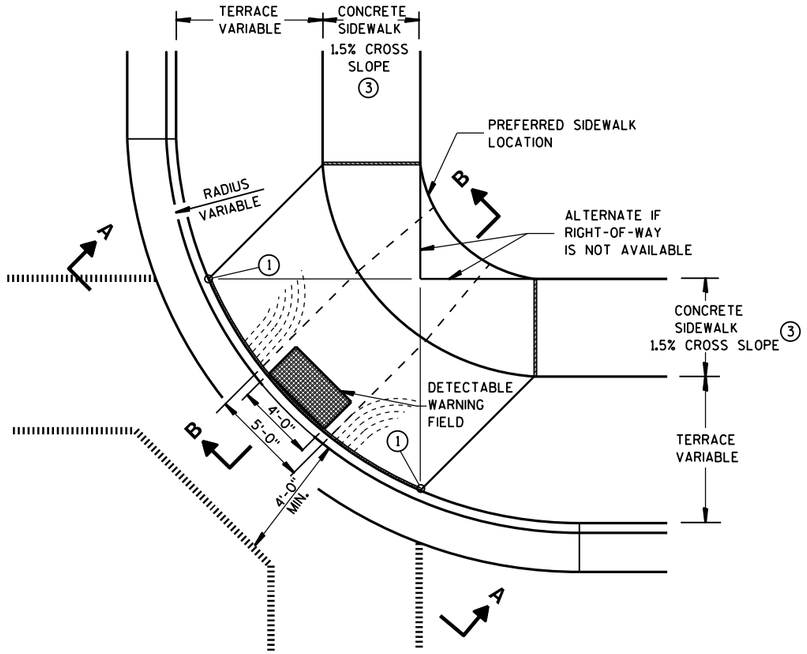
APPROVED
9-4-08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
145
MENT
FHWA

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S.D.D. 8 D 4-5

6

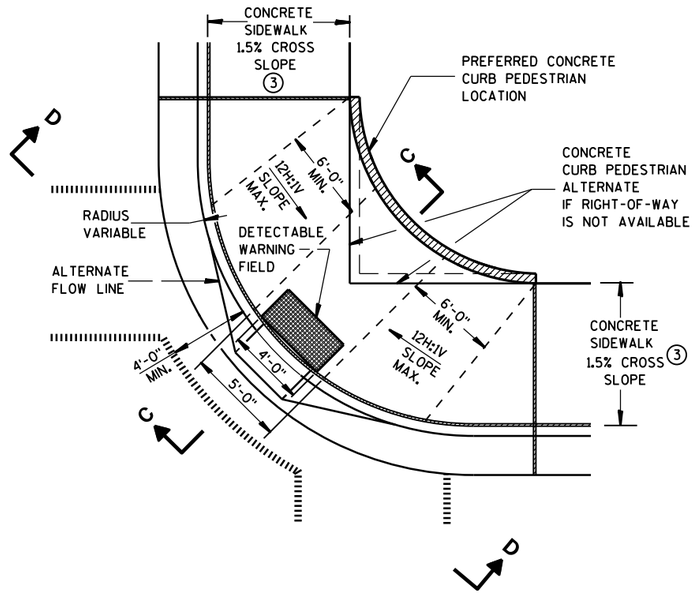
S.D.D. 8 D 4-5



PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

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.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

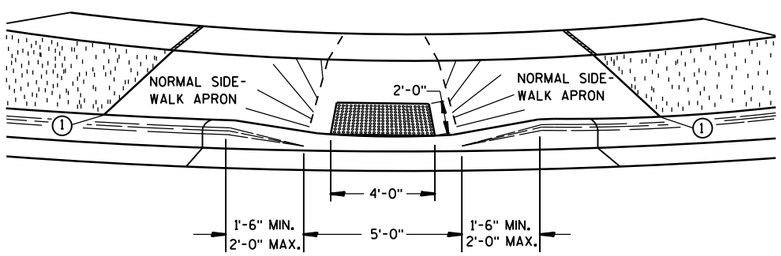
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

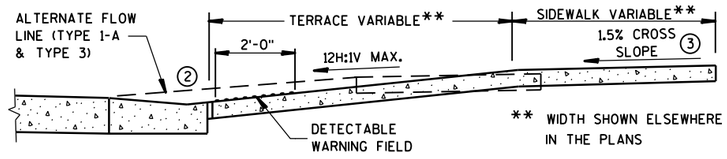
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

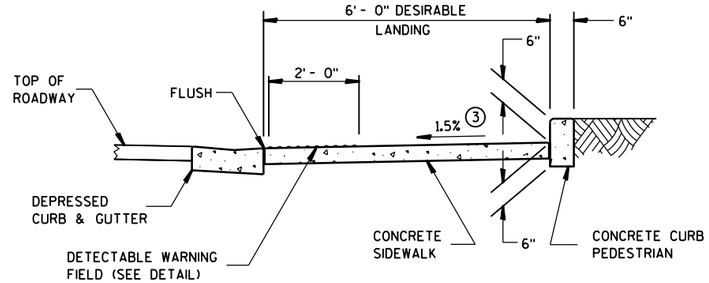
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



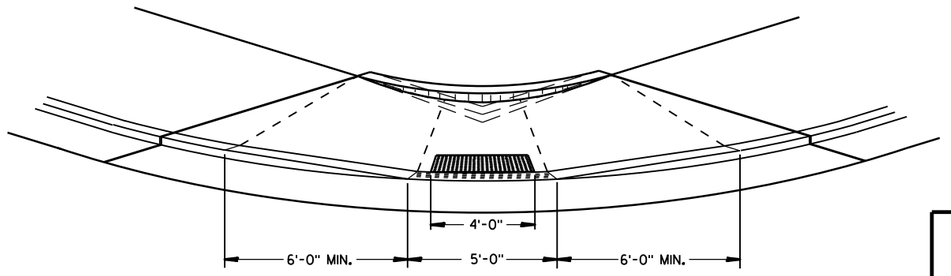
VIEW A-A



SECTION B-B



SECTION C-C



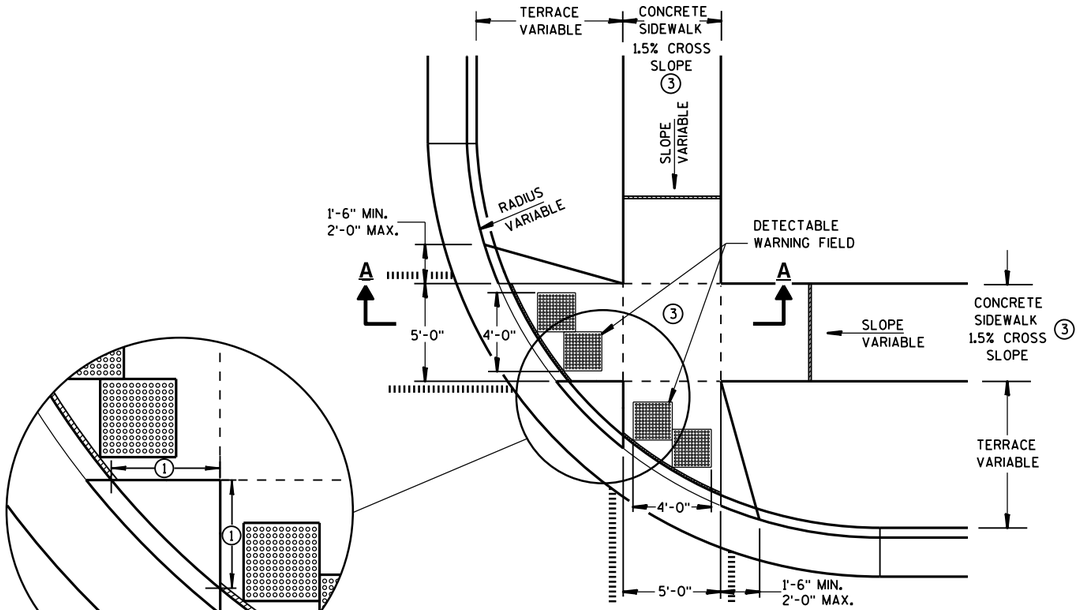
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

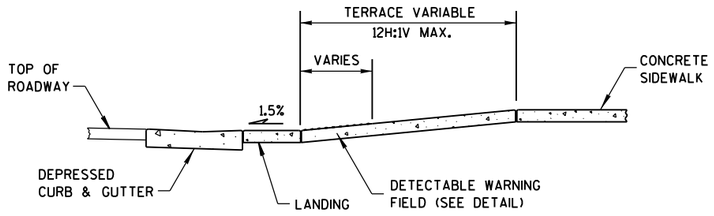
S.D.D. 8 D 5-15a



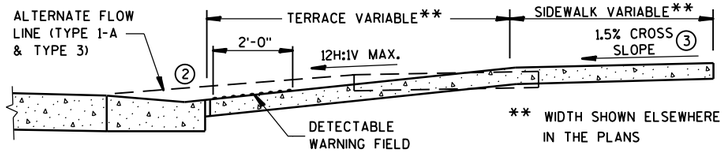
PLAN VIEW

TYPE 2 RAMP

(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

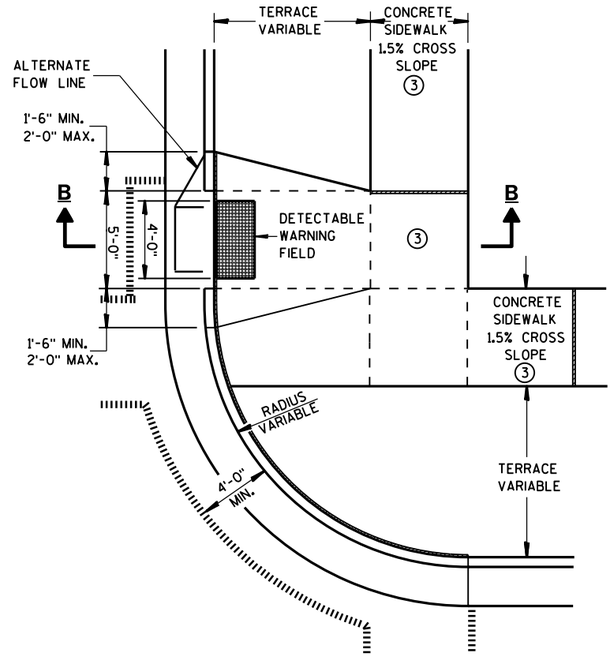
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



PLAN VIEW

TYPE 3 RAMP

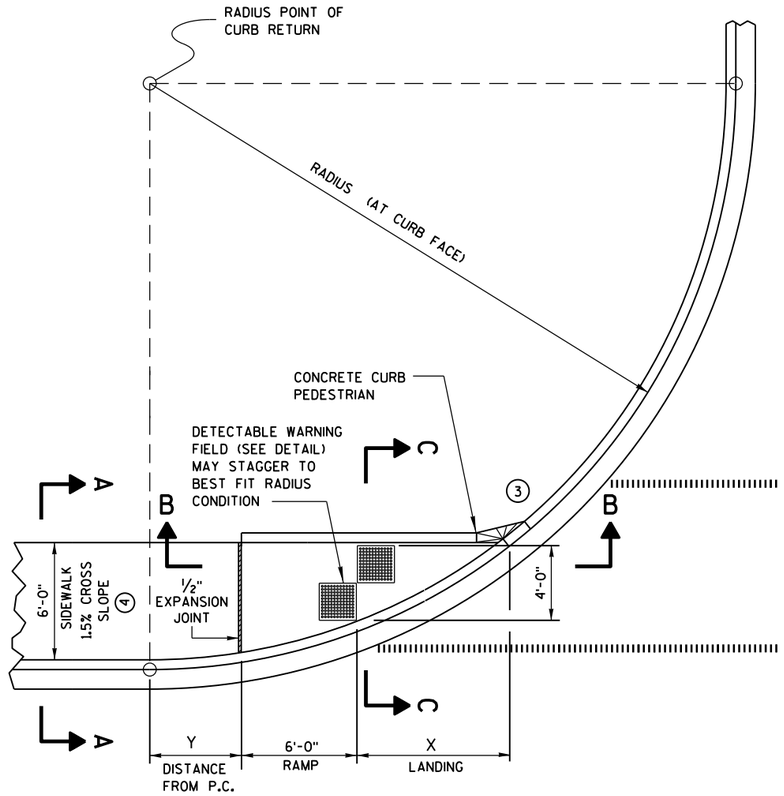
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

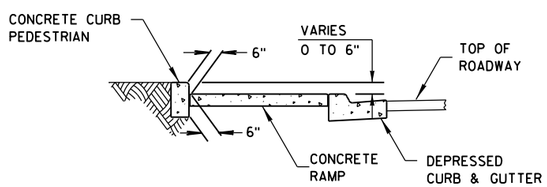
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

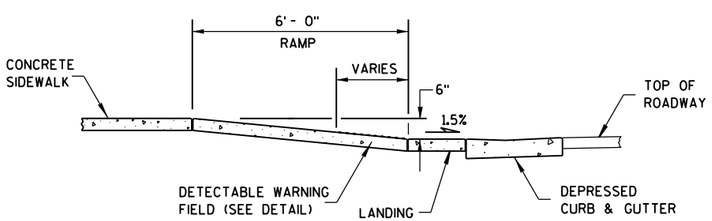
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



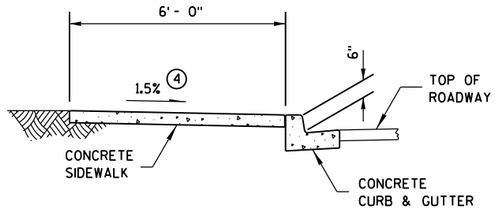
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

GENERAL NOTES

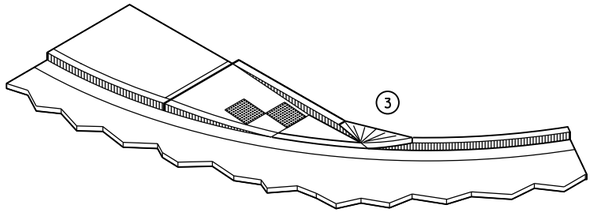
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

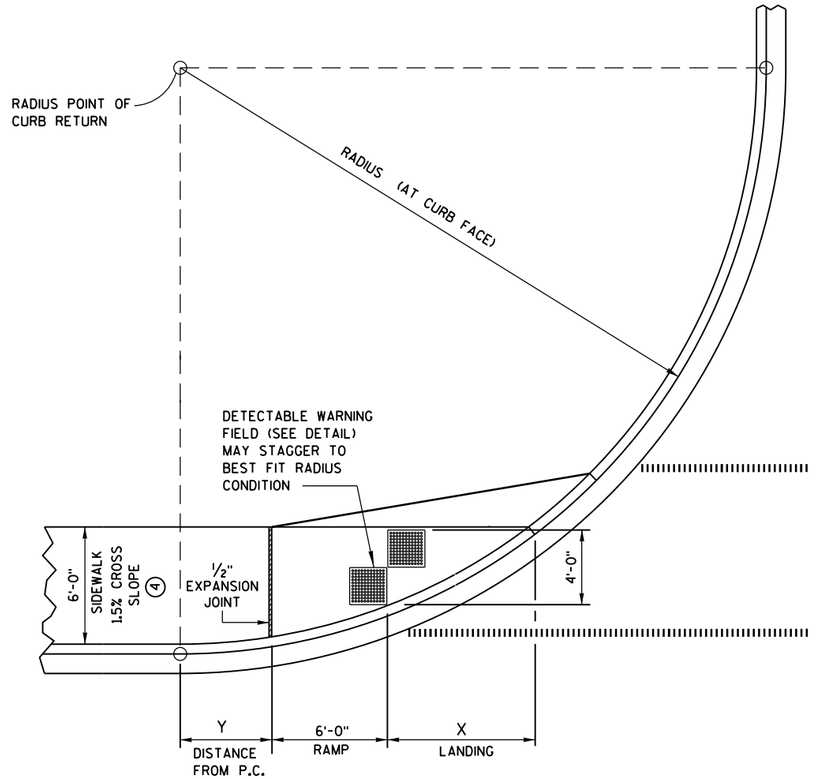
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

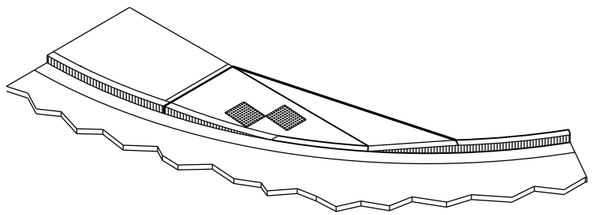
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



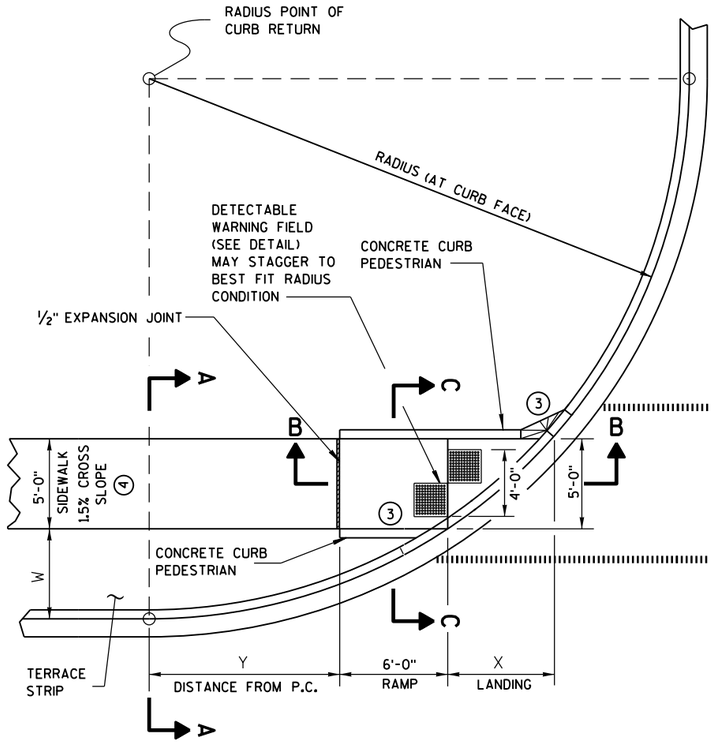
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

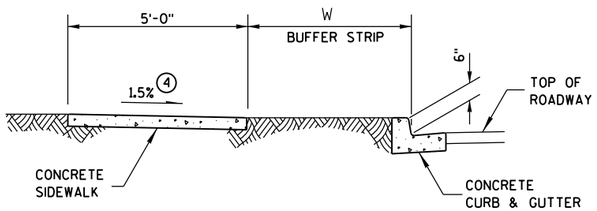
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

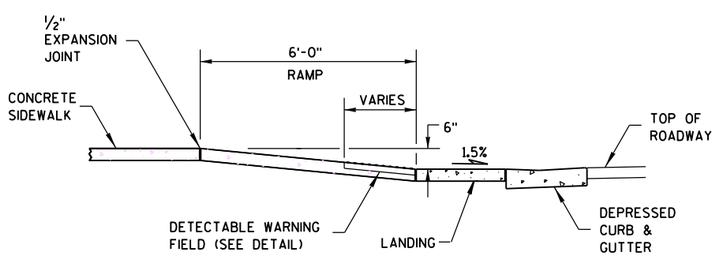
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



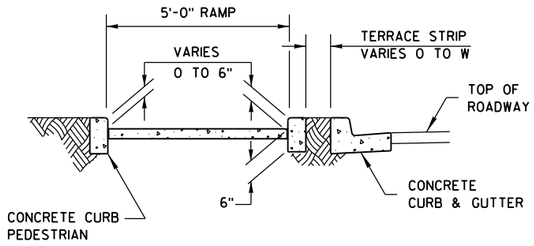
SECTION B-B FOR TYPE 4B

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION C-C FOR TYPE 4B

GENERAL NOTES

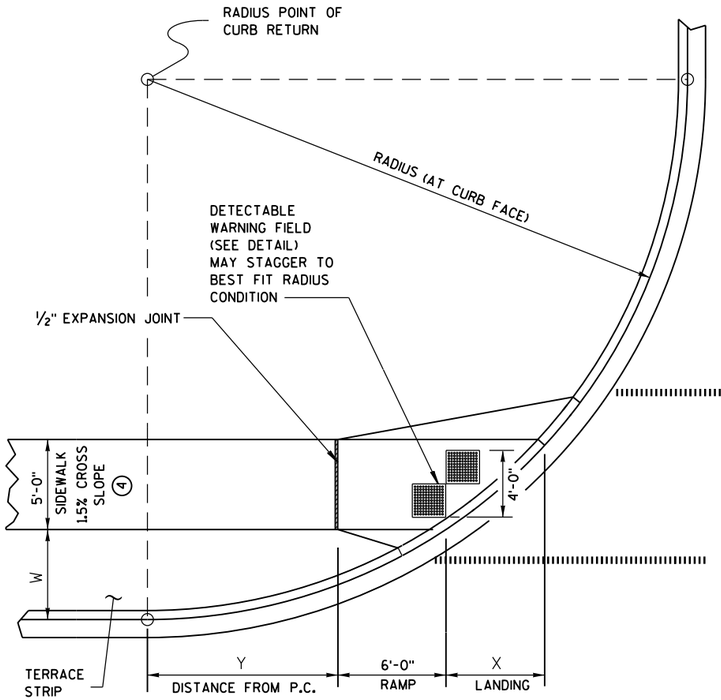
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

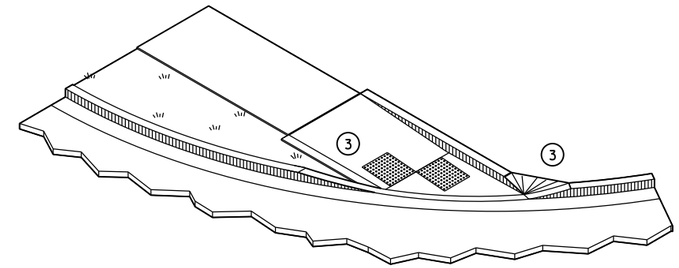
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

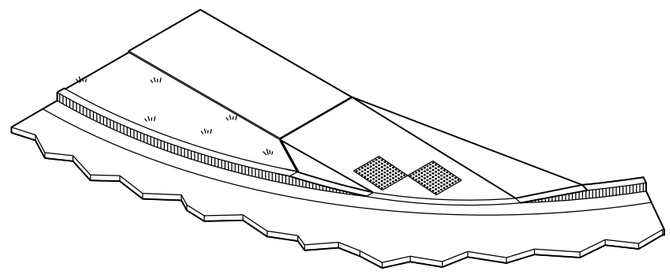
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



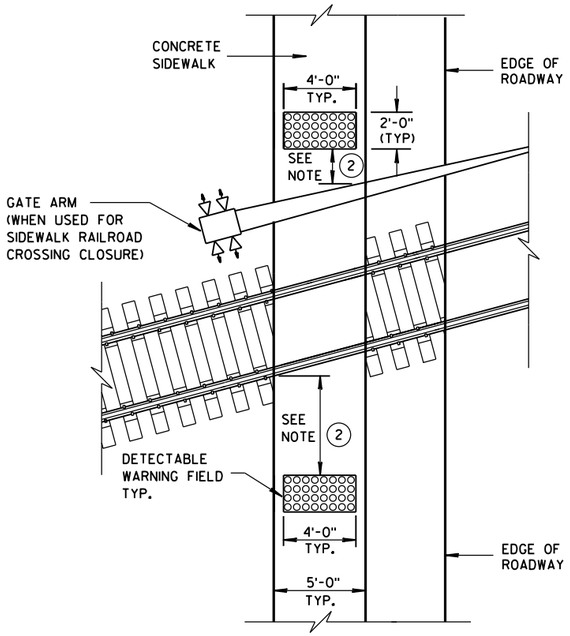
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS
TYPE 4B AND 4B1

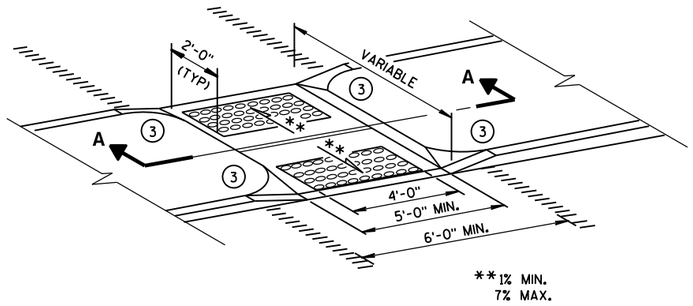
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 8 D 5-15d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING



MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

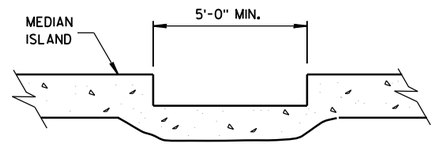
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(1) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

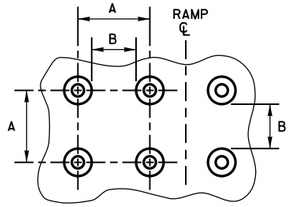
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

(3) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



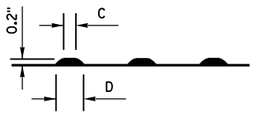
SECTION A-A



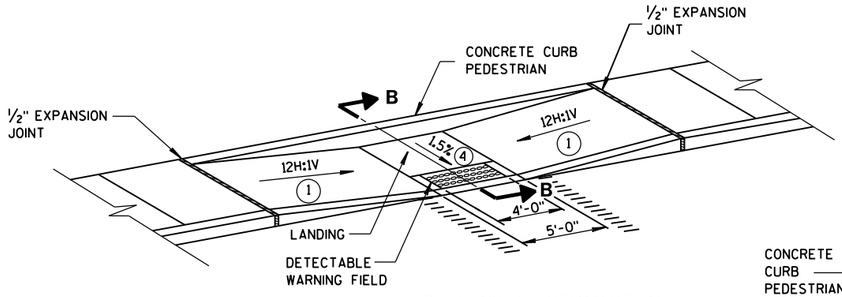
PLAN VIEW

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

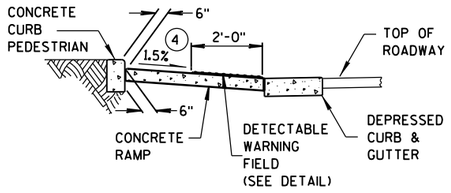
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

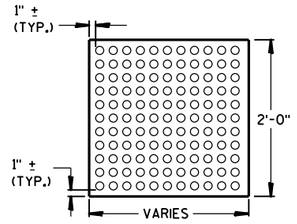


MID-BLOCK CROSSING
TYPE 7A



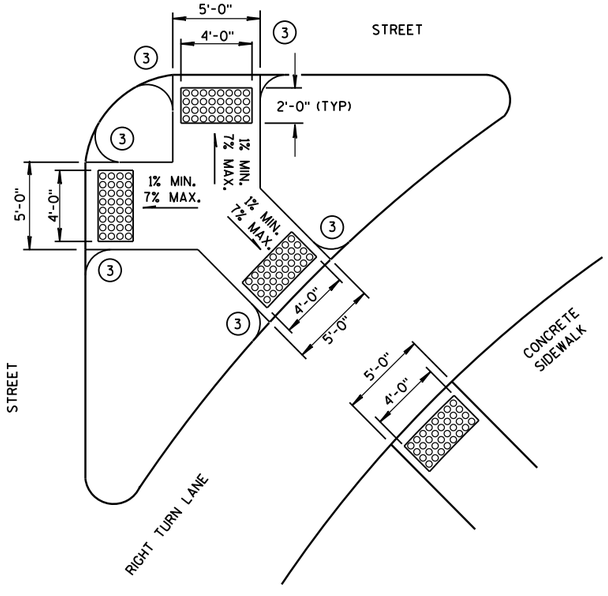
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

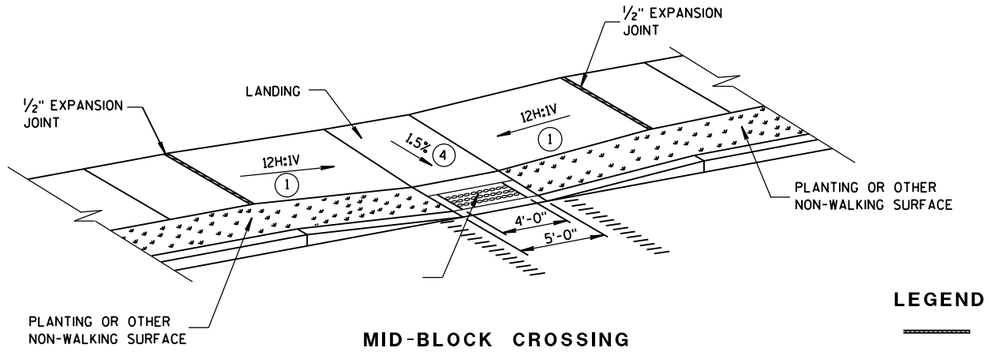


PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

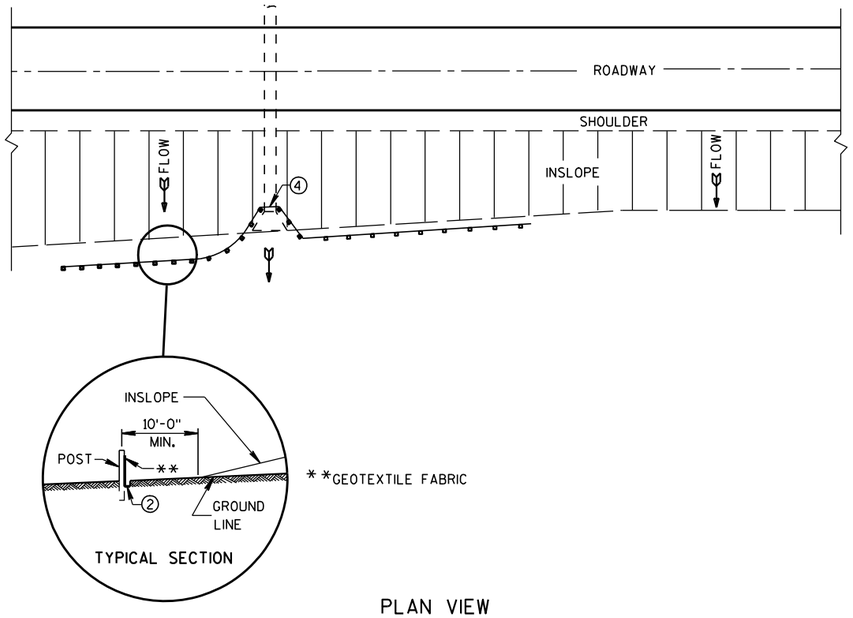
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

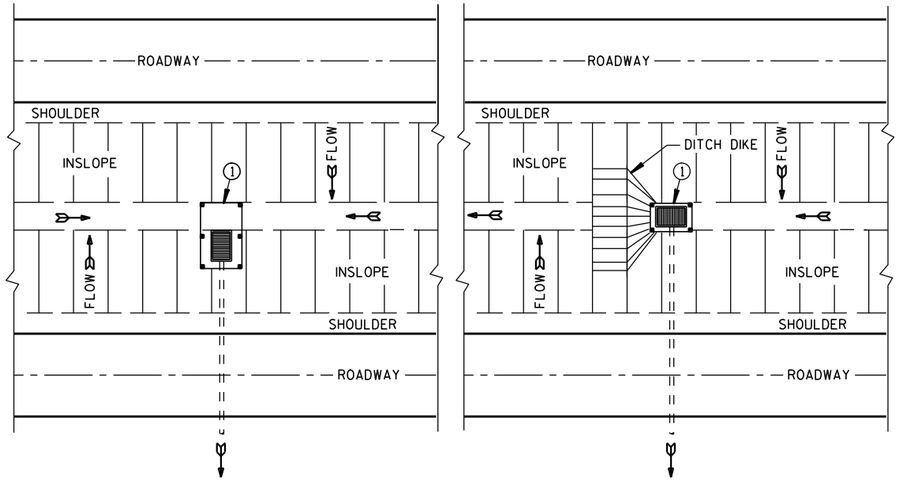
6

S.D.D. 8 D 5-15e



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.

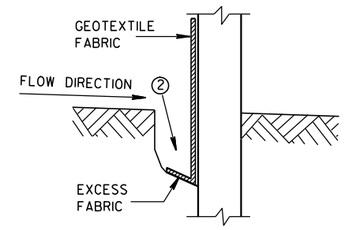
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

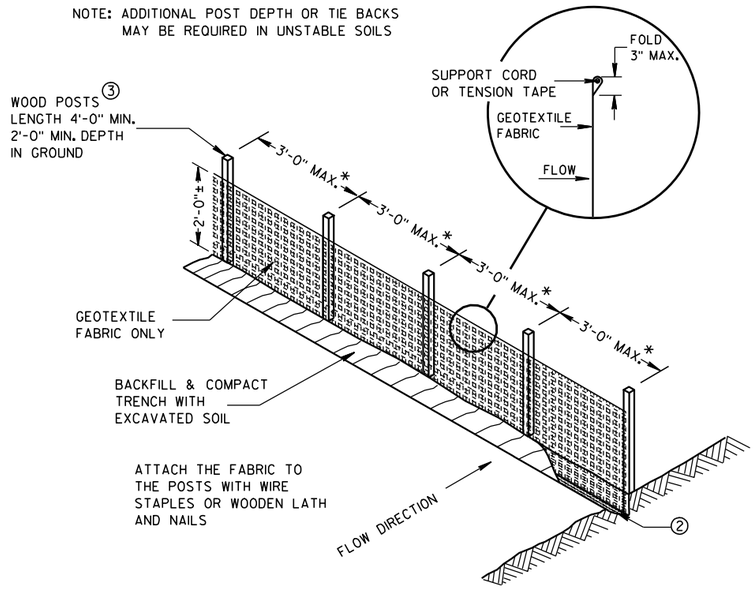
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

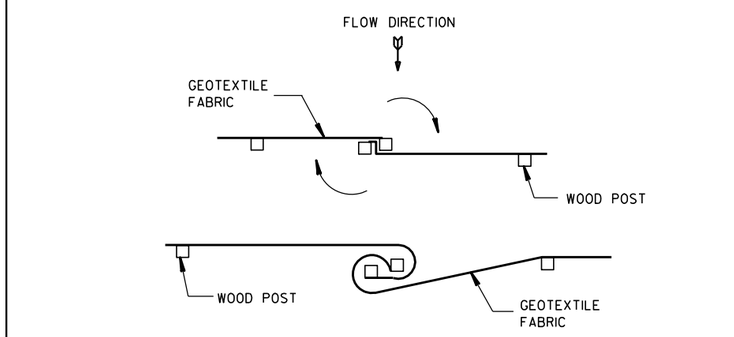
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



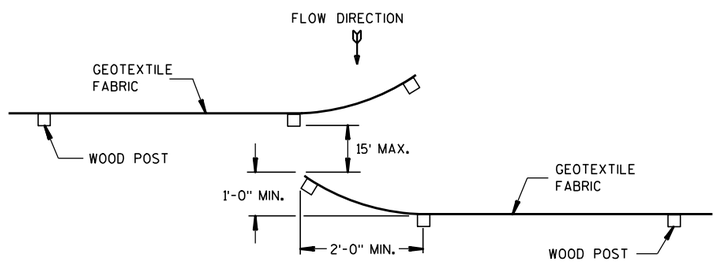
TRENCH DETAIL



SILT FENCE

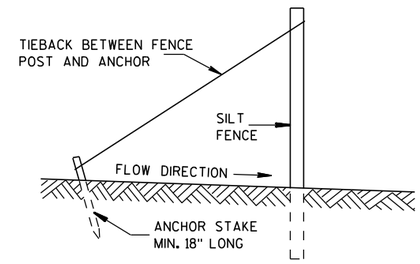


TWIST METHOD



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

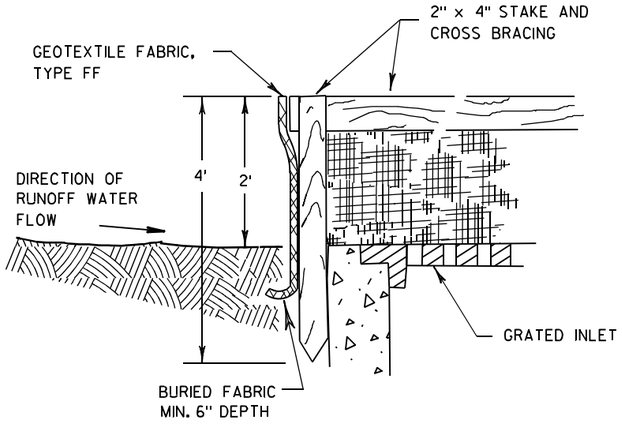
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

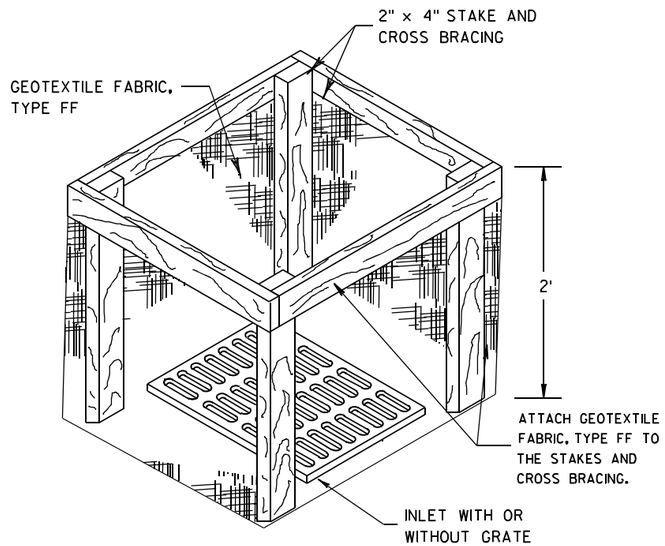
6

S.D.D. 8 E 9-6

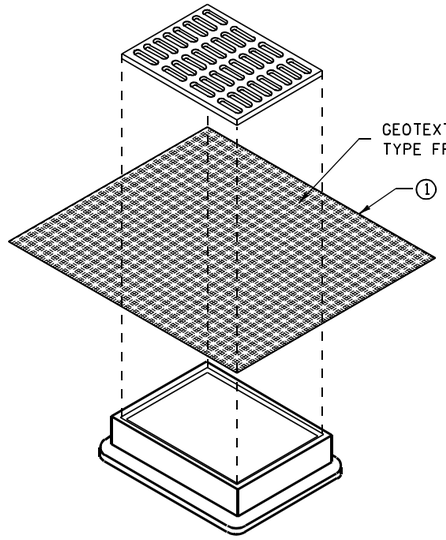
6

S.D.D. 8 E 9-6



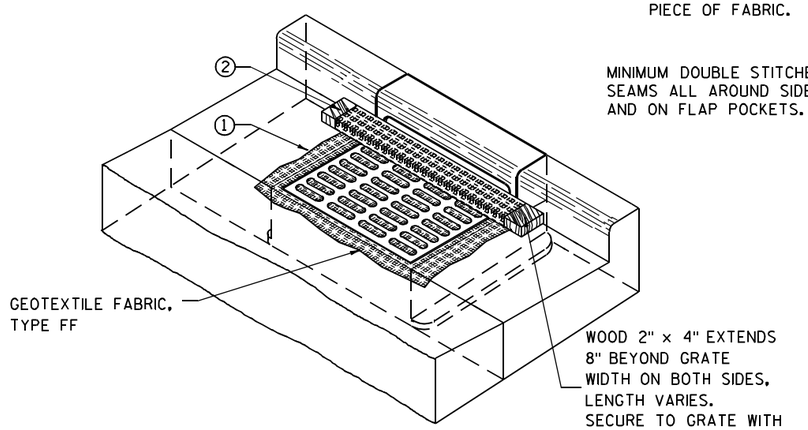


INLET PROTECTION, TYPE A

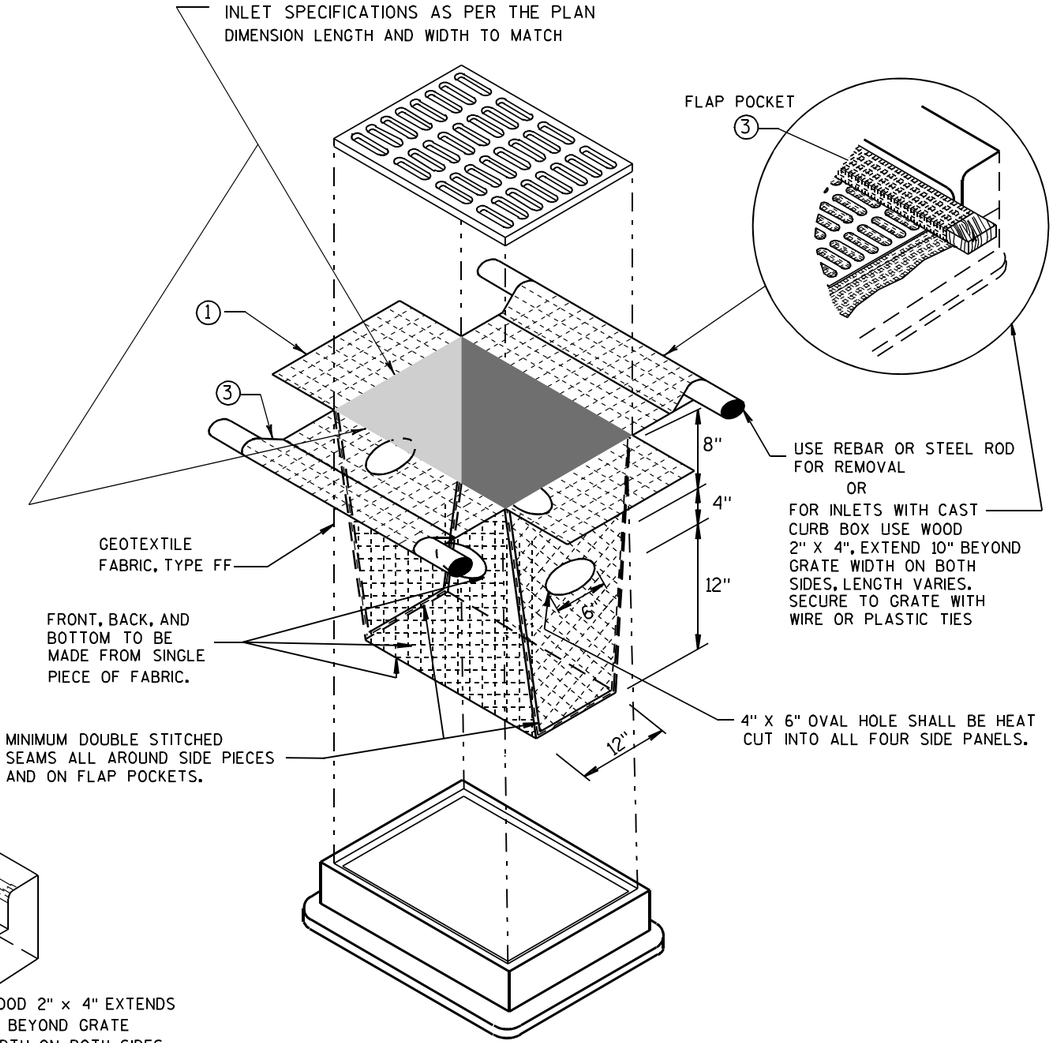


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE 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

METAL APRON ENDWALLS

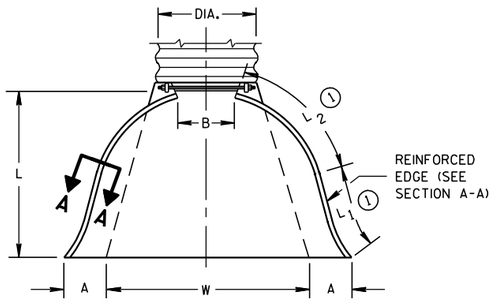
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

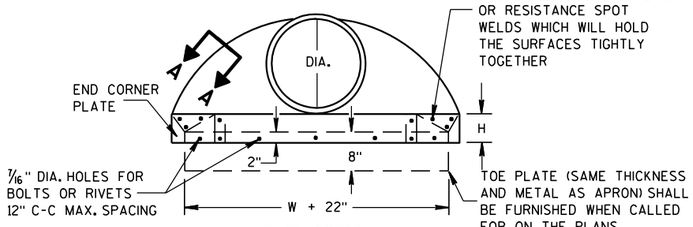
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

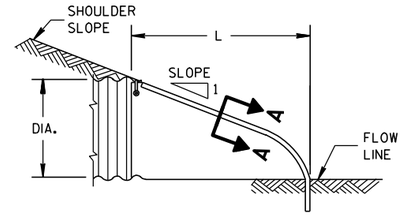
*MINIMUM
**MAXIMUM



PLAN VIEW

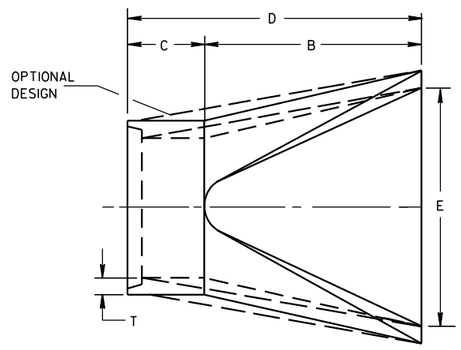


END VIEW

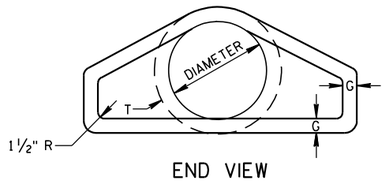


SIDE ELEVATION

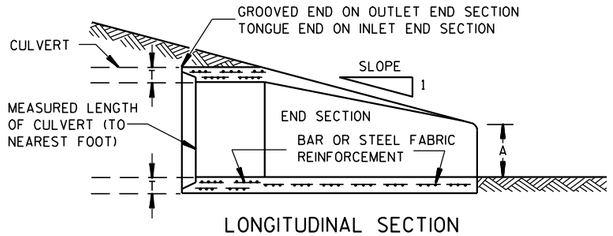
METAL ENDWALLS



PLAN

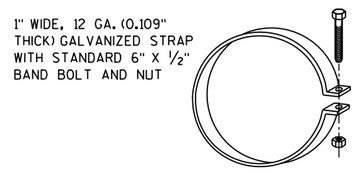


END VIEW



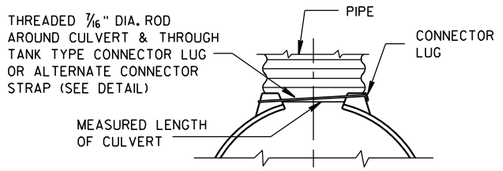
LONGITUDINAL SECTION

CONCRETE ENDWALLS

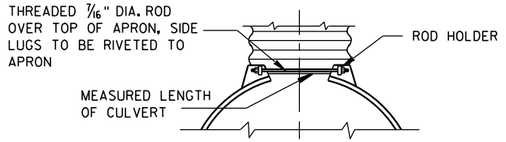


ALTERNATE FOR TYPE 1 CONNECTION

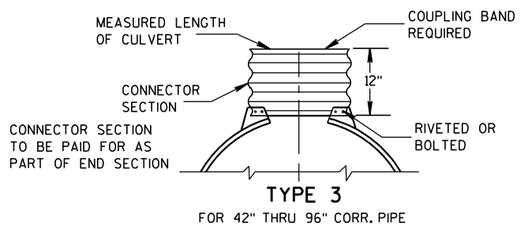
END SECTION CONNECTOR STRAP



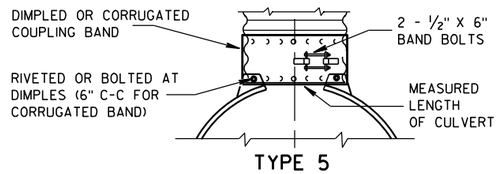
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

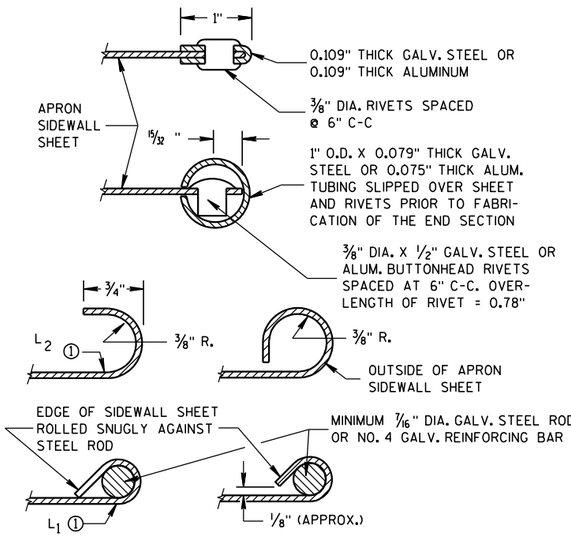
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

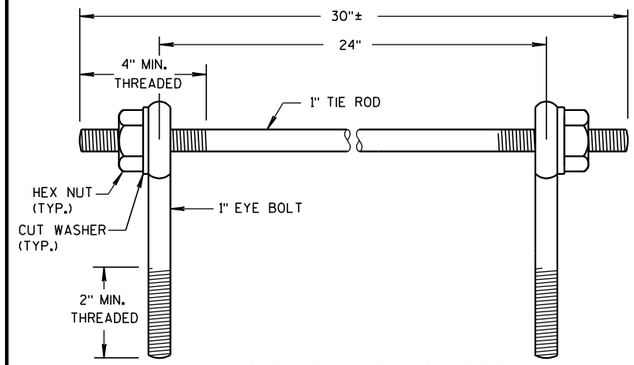
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

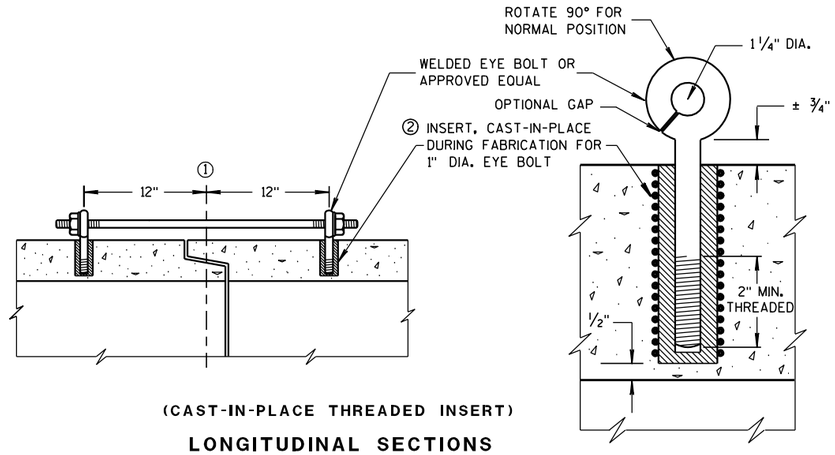
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

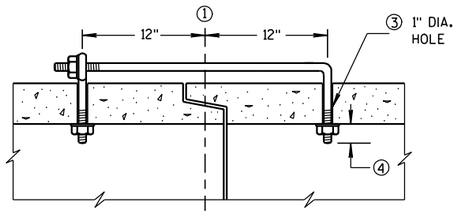
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

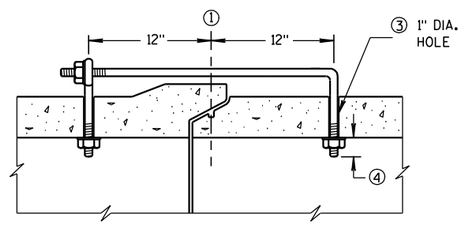
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

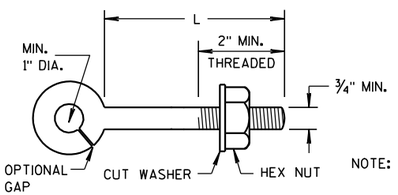


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

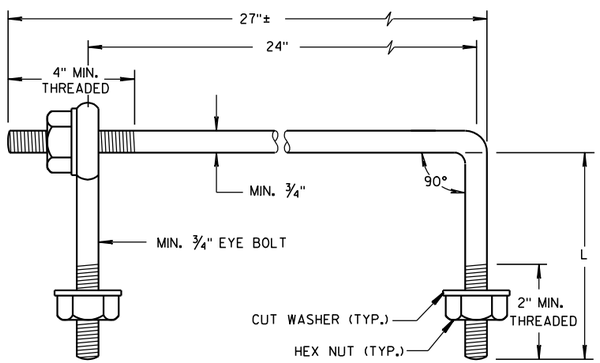
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

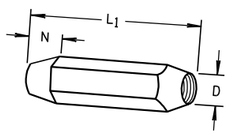
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

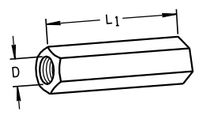
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



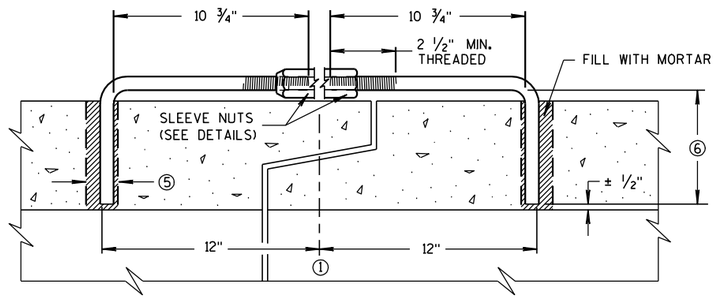
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PLAIN

RIGHT AND LEFT THREADS

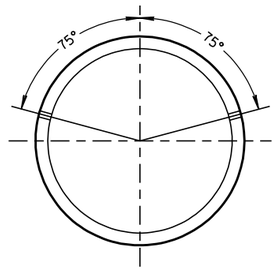
SLEEVE NUTS



LONGITUDINAL SECTION

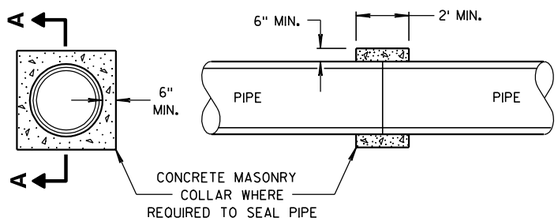
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

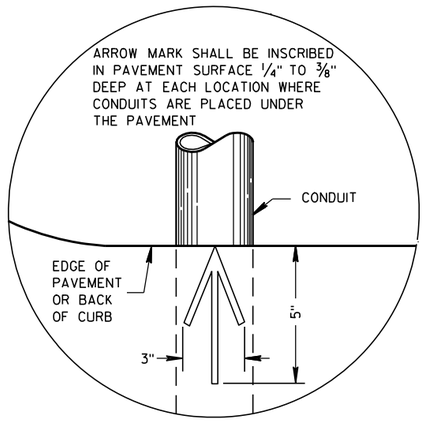
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 8 F 4-7

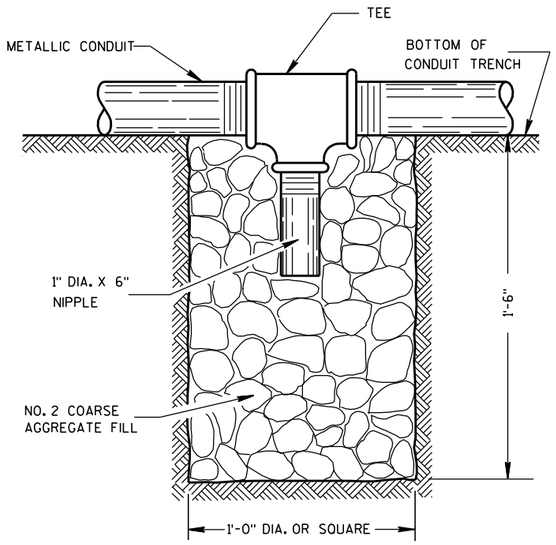
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S.D.D. 8 F 4-7



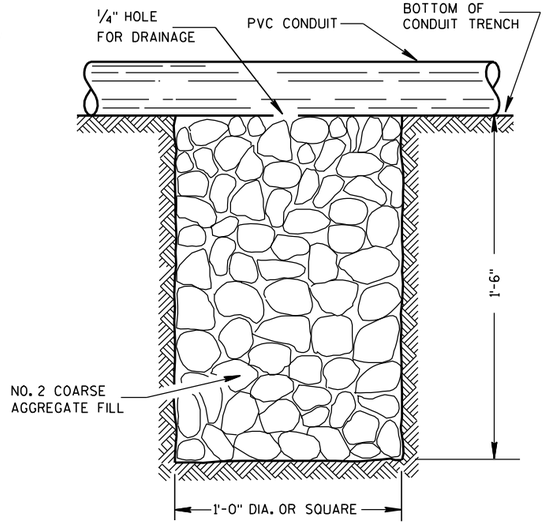
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

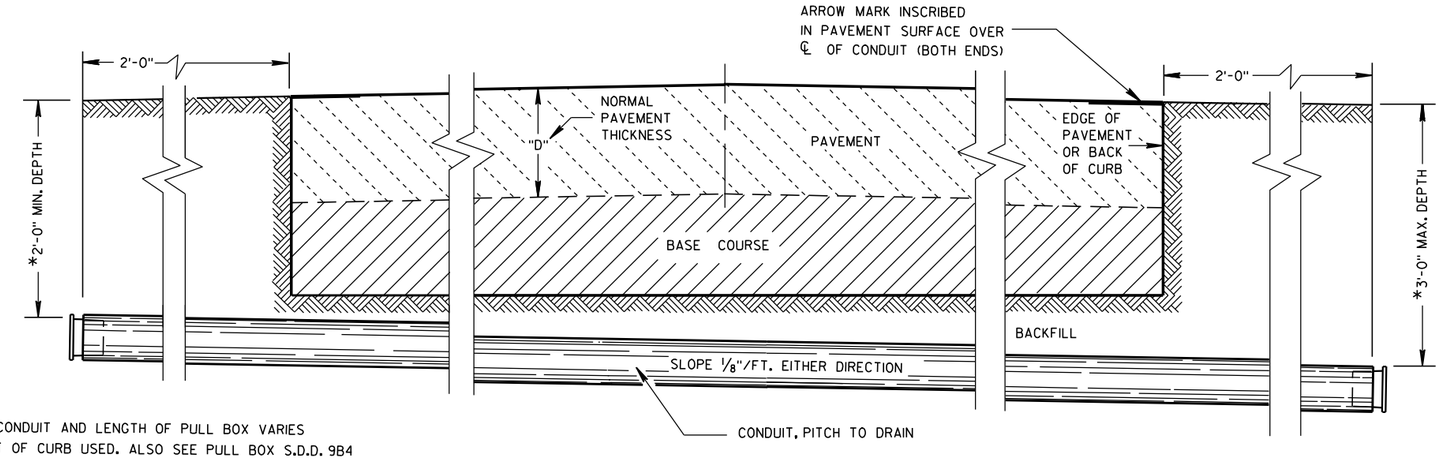
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

POLY ROPE OR A PULL WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

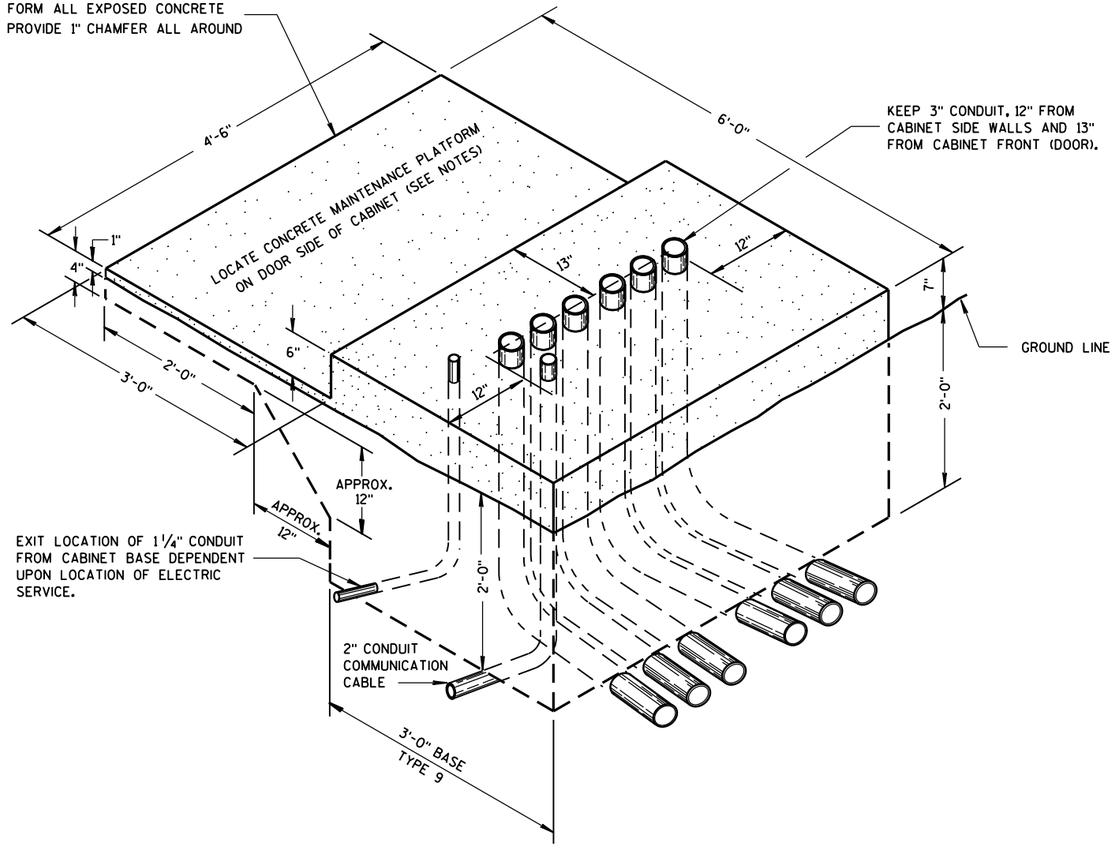
10/23/03 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI

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HWYS

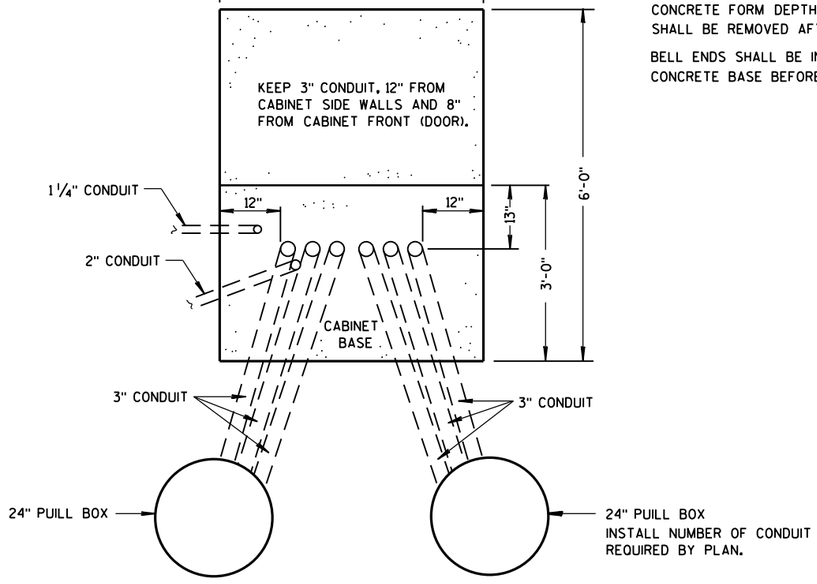
FHWA



ISOMETRIC VIEW

TYPE 9, SPECIAL

(C.Y. CONCRETE = APPROX. 1.56)



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE (SIX THREE INCH) SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

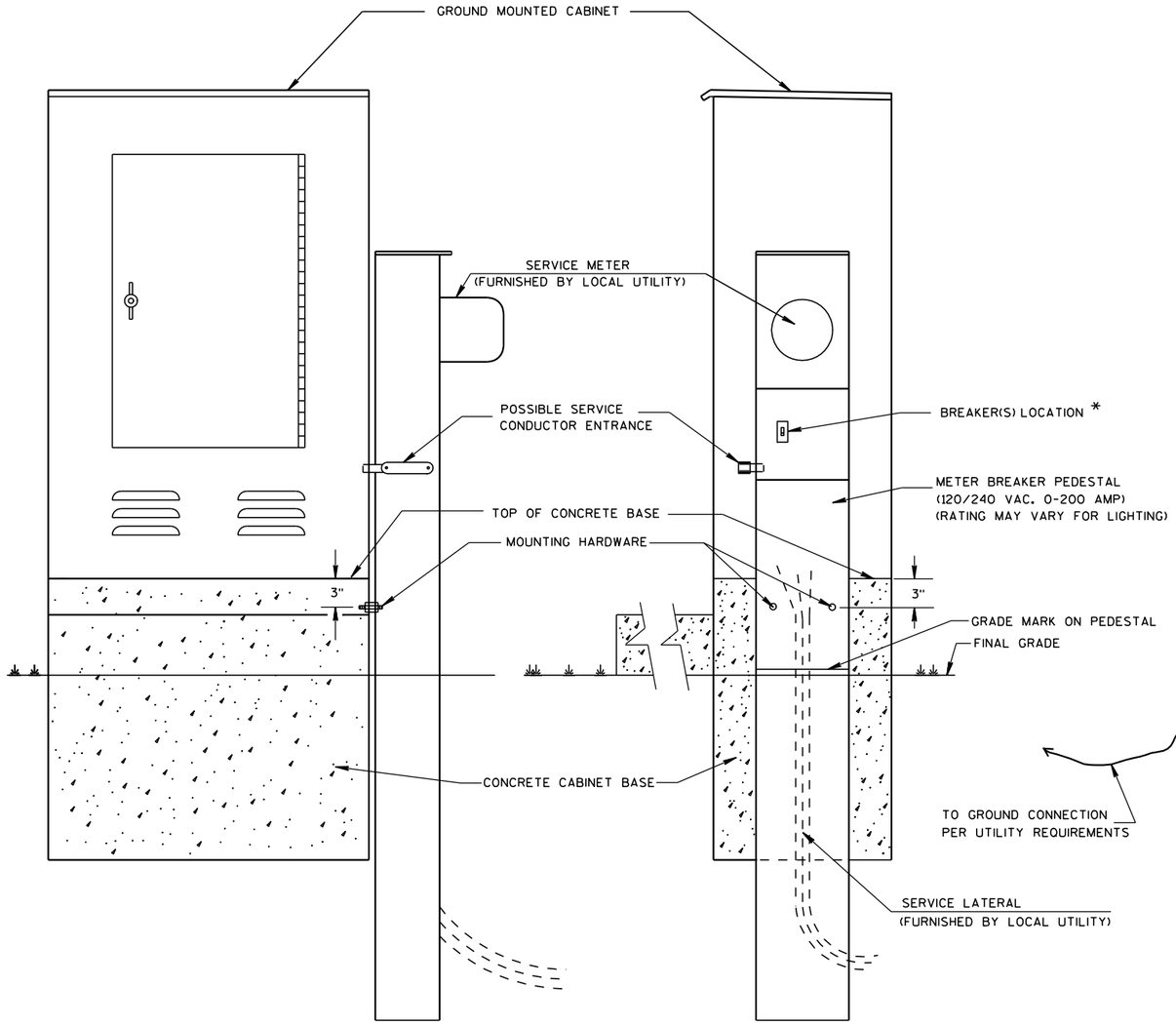
CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/26/2013 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA



TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

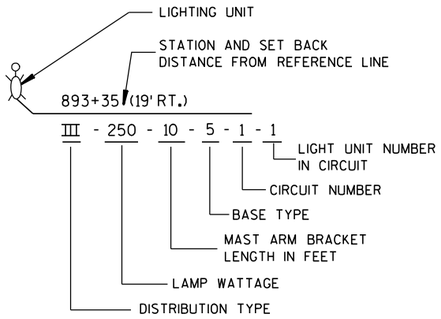
* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

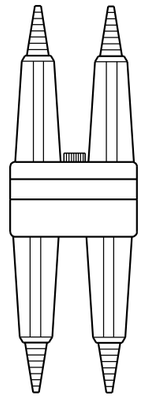
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/27/09 DATE
/S/ Joanna L. Bush STATE ELECTRICAL ENGI
157
HWYS
FHWA

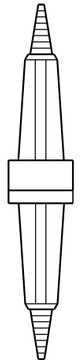
6
S.D.D. 9 D 1-4



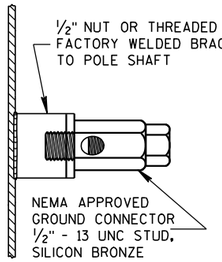
LIGHTING UNIT CODE
(TYPICAL)

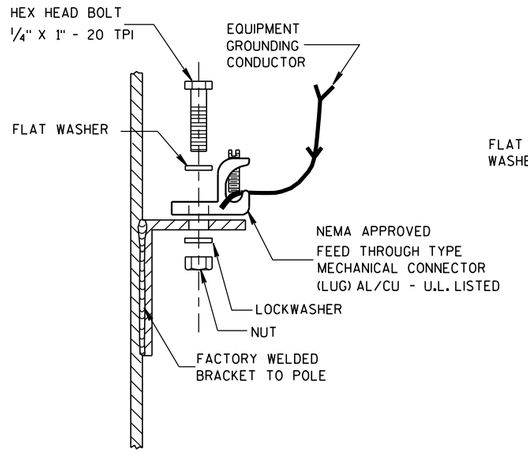


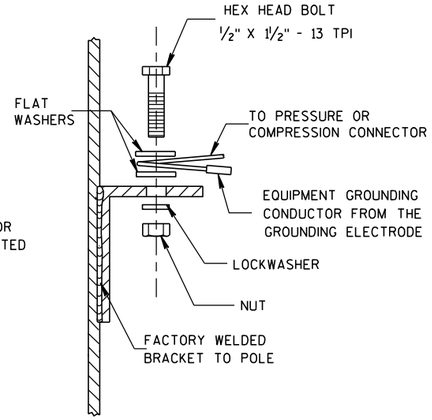
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



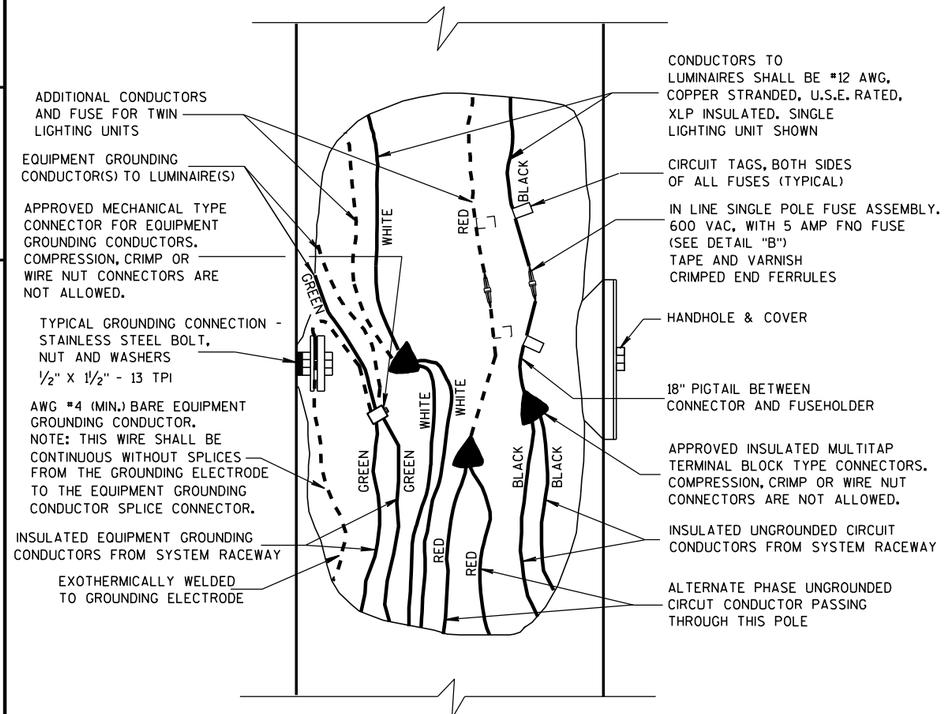
DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



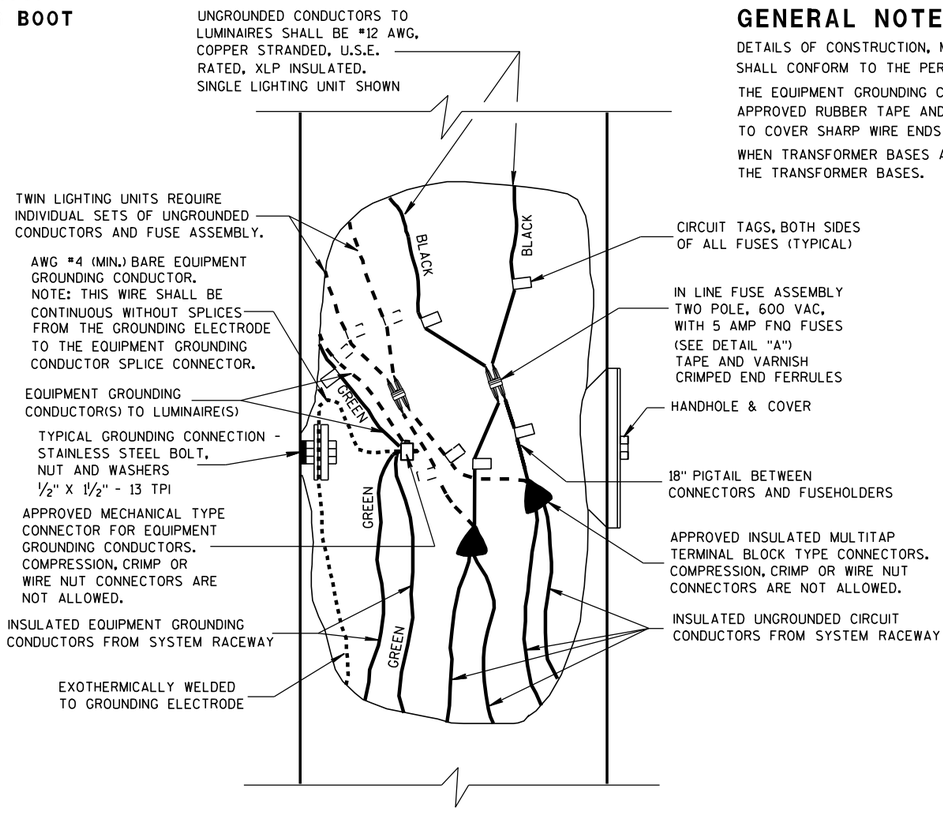




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



3 WIRE - 120, 240 OR 480 VAC (UNGROUNDED CONDUCTOR) WITH GROUNDED CONDUCTOR AND WITH EQUIPMENT GROUNDING CONDUCTOR



2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

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

THE EQUIPMENT GROUNDING CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.

NON-FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 — DATE

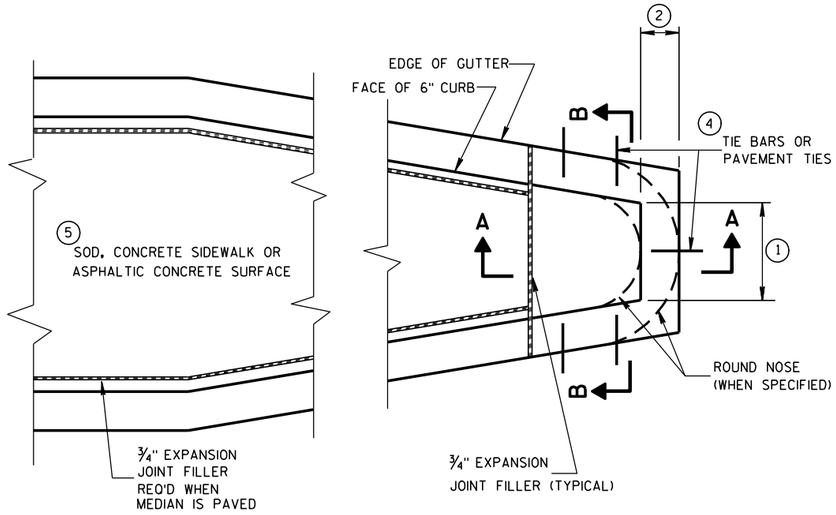
/S/ Thomas J. Gosnine — STATE ELECTRICAL ENGI

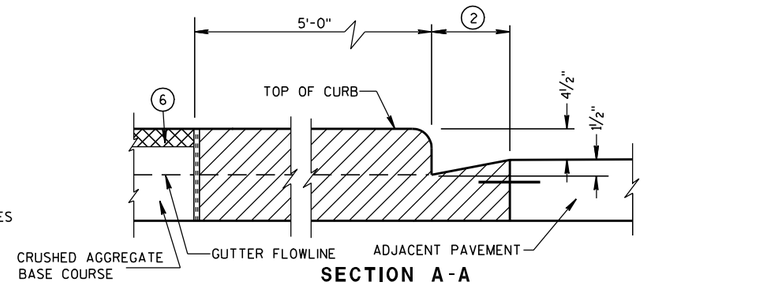
158

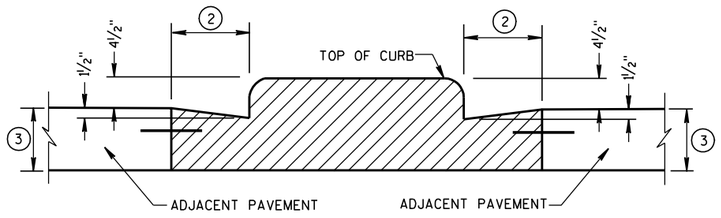
HWYS

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S.D.D. 9 E 3-4







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.

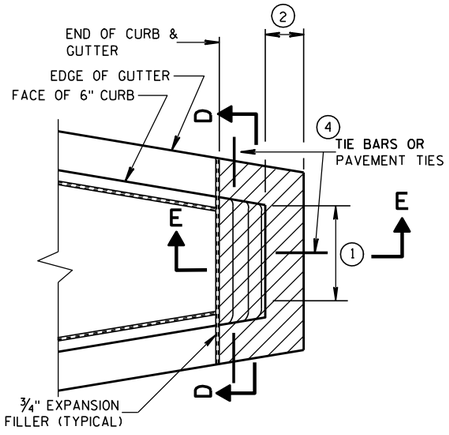
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

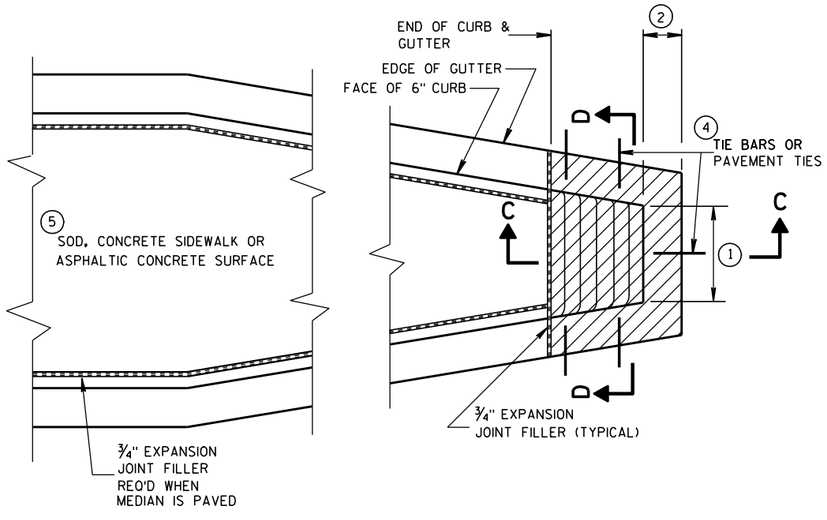
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

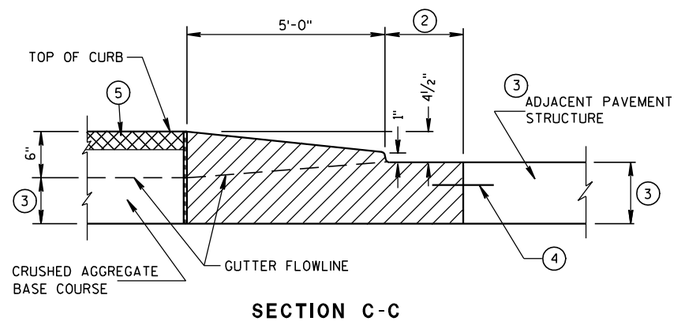
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

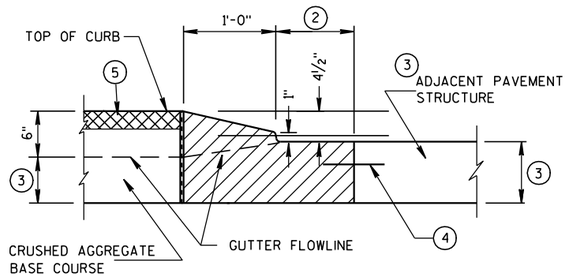
PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

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



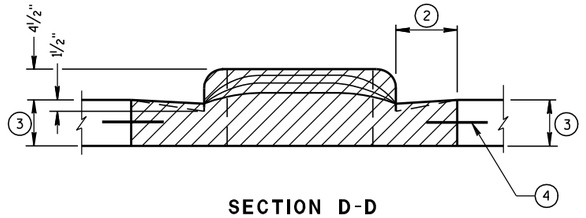






CONCRETE MEDIAN SLOPED NOSE TYPE 1

CONCRETE MEDIAN SLOPED NOSE TYPE 2



CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

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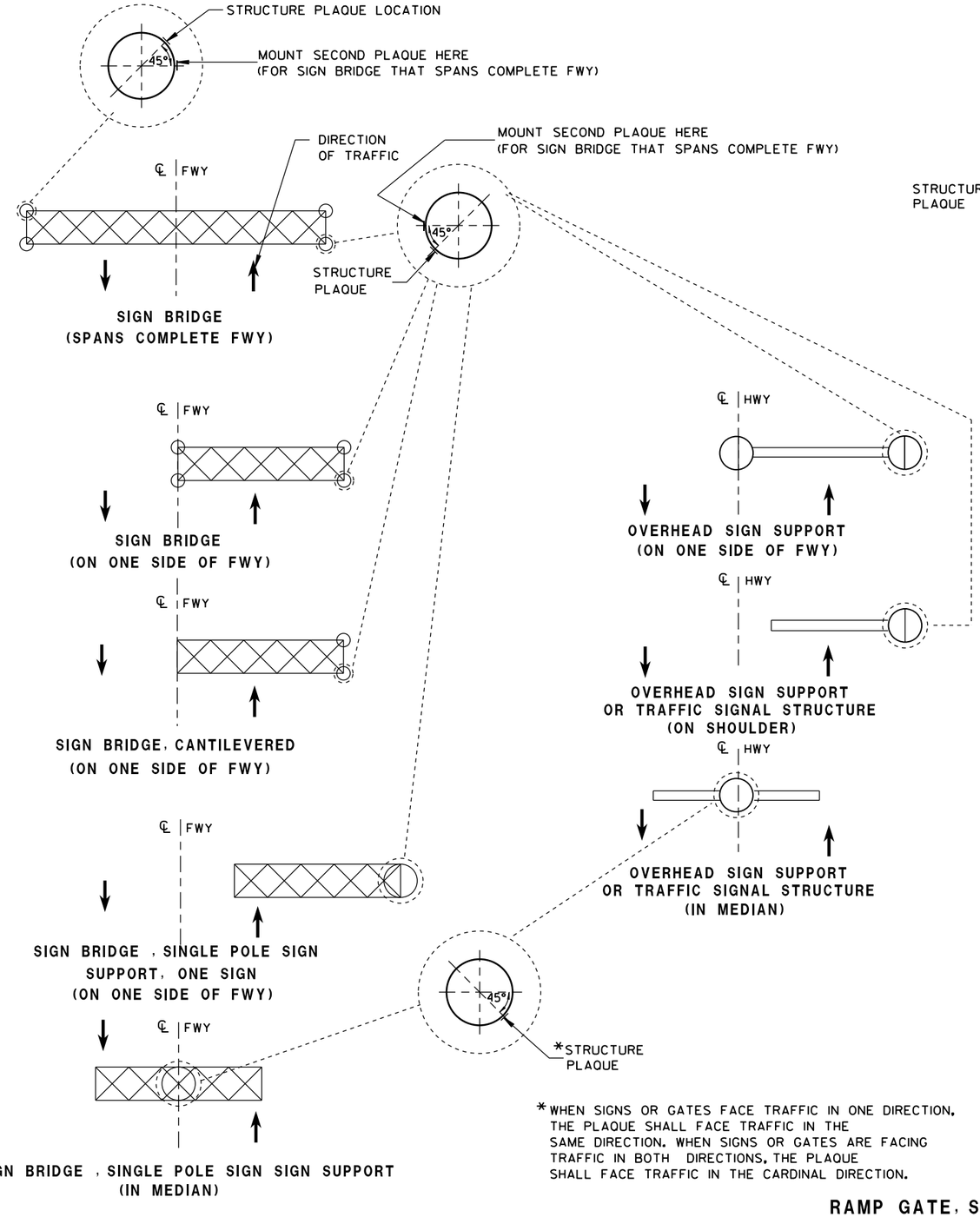
FHWA

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S.D.D. 11 B 2-2

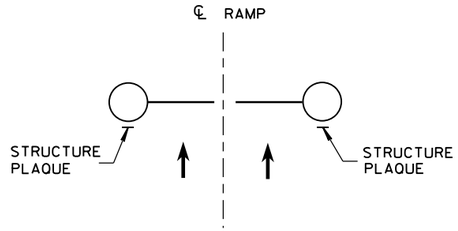
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S.D.D. 11 B 2-2

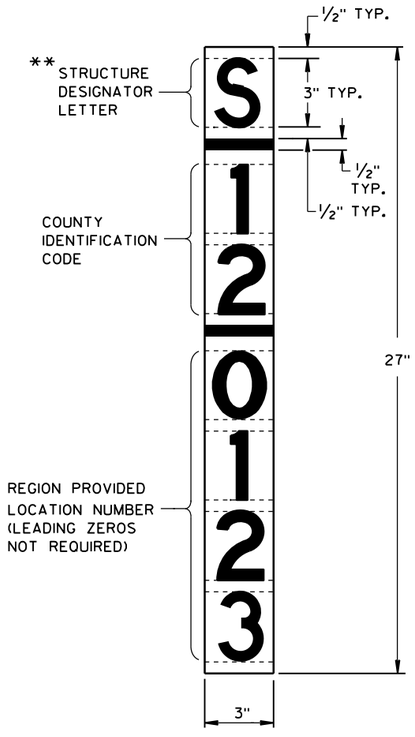


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



RAMP GATE
(ACROSS FWY ON-RAMP)



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

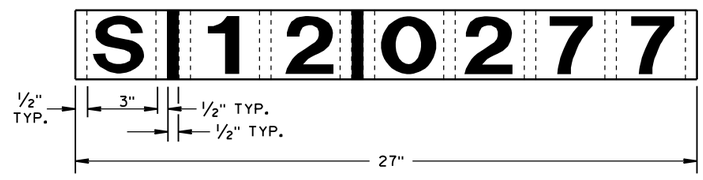
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

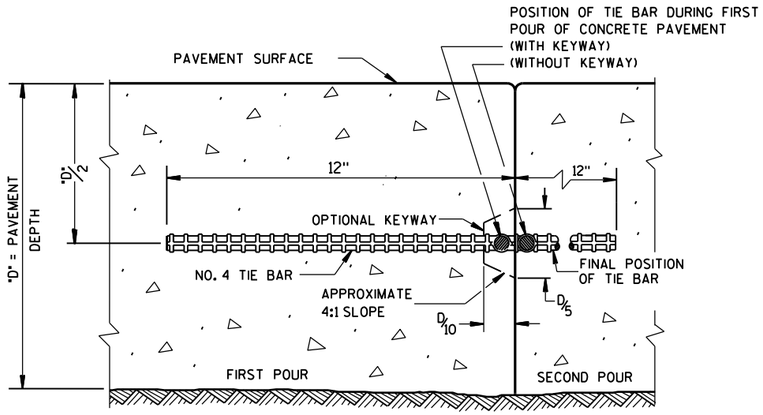
STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

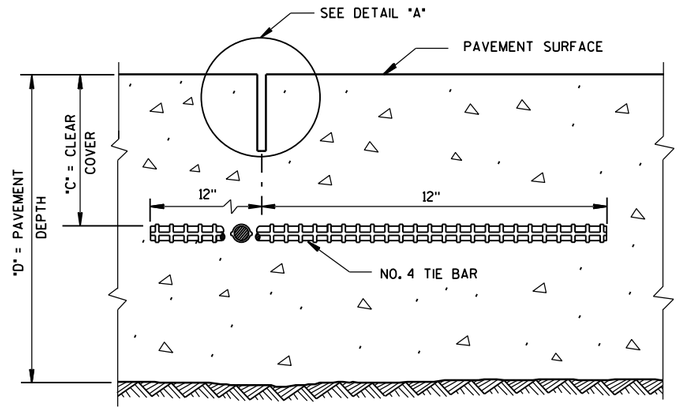
APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 12 A 4-3



CONSTRUCTION JOINT



SAWED JOINT

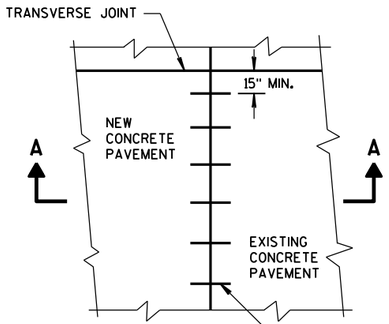
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

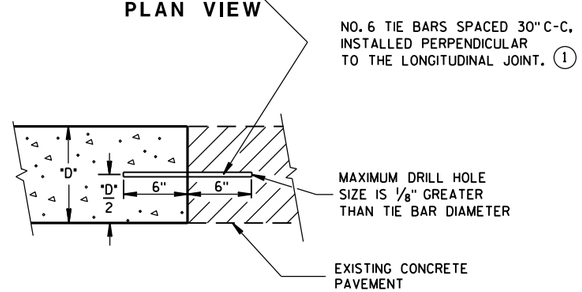
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

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

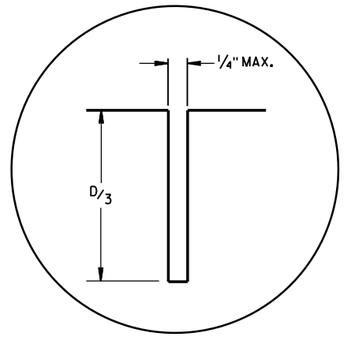


PLAN VIEW



SECTION A-A

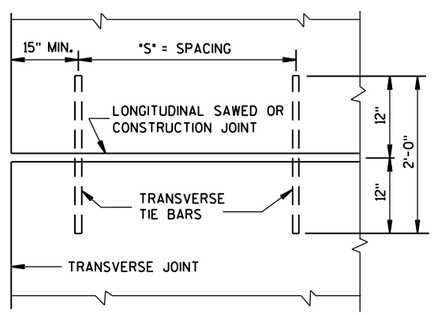
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"

TIE BAR TABLE

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



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE ...NEER

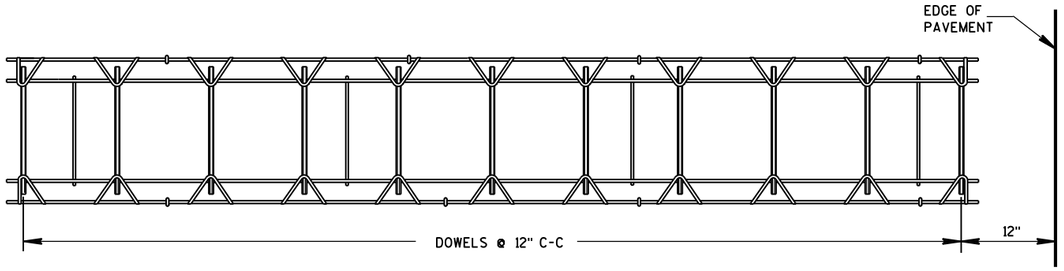
FHWA

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S.D.D. 13 C 1-16

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S.D.D. 13 C 1-16

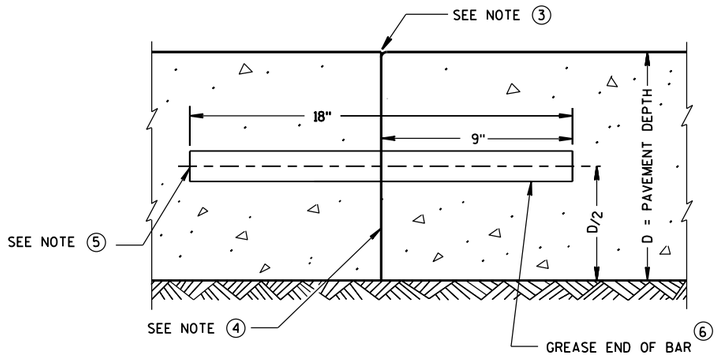


PLAN VIEW

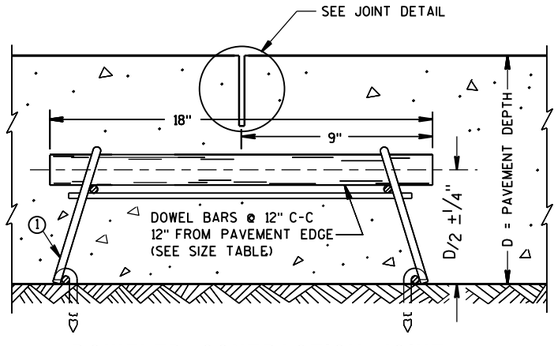


SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



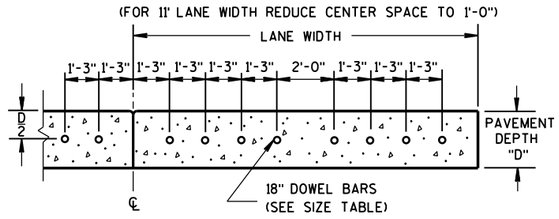
TRANSVERSE CONSTRUCTION JOINT



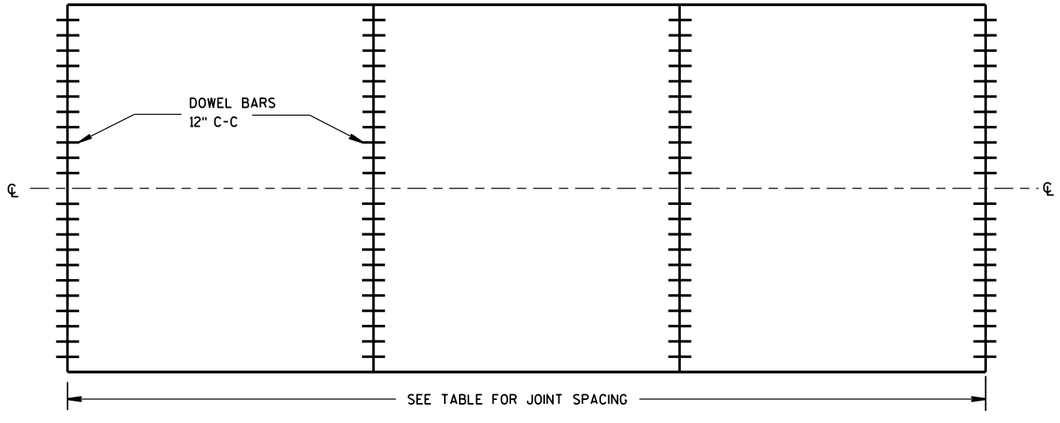
DOWELED CONTRACTION JOINT

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

CONTRACTION JOINTS

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

DO NOT SEAL OR FILL CONTRACTION JOINTS.

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

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE LONGITUDINAL JOINT AND THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

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

① **OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.**

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

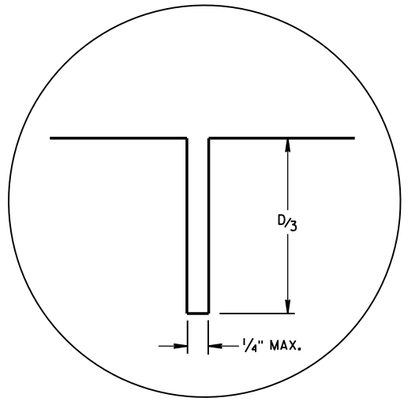
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A ¼-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS ⅛-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



JOINT DETAIL

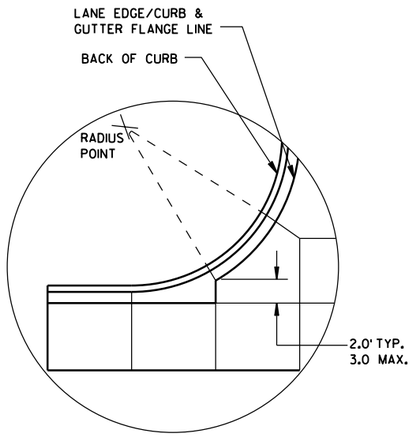
URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

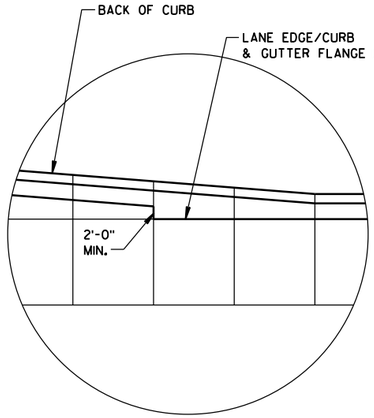
APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ENGINEER
FHWA

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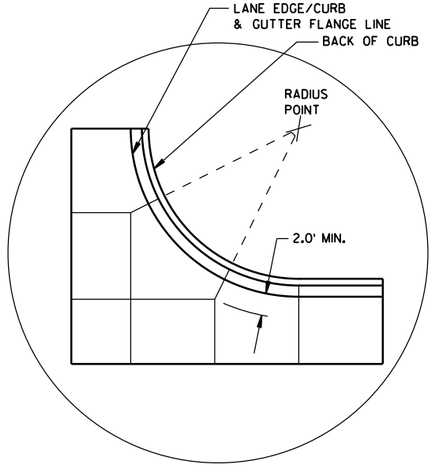
S.D.D. 13 C 13-8



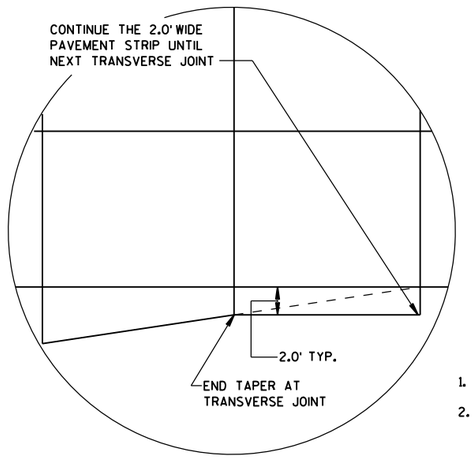
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

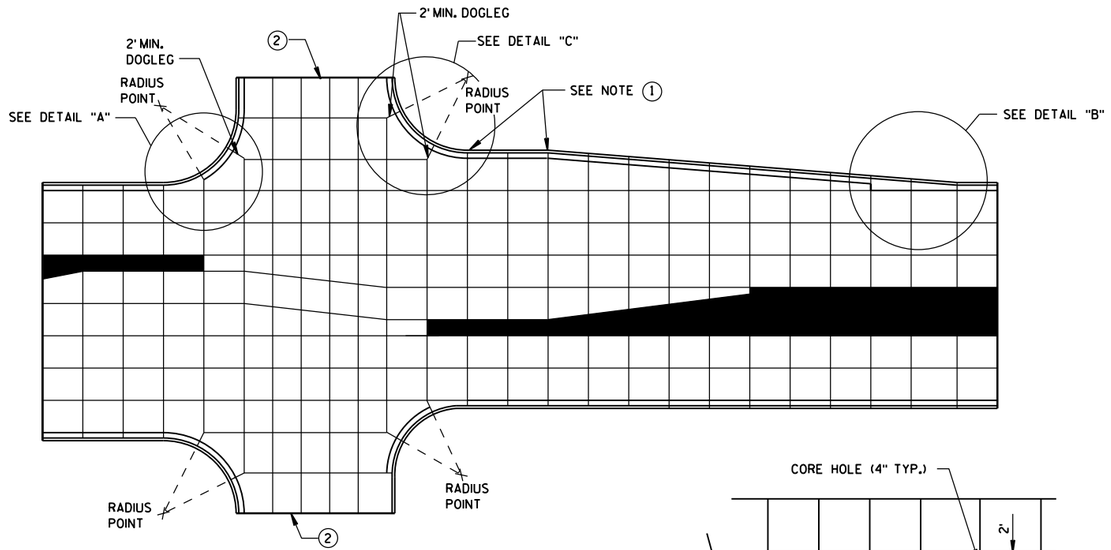
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.

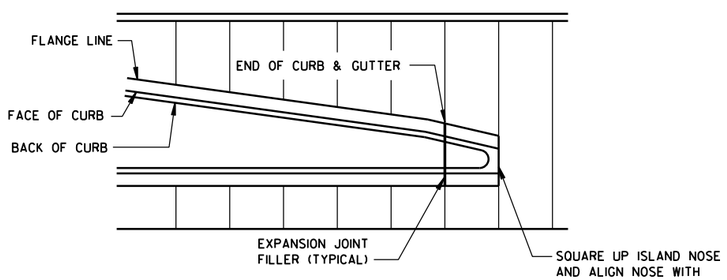


STANDARD INTERSECTION

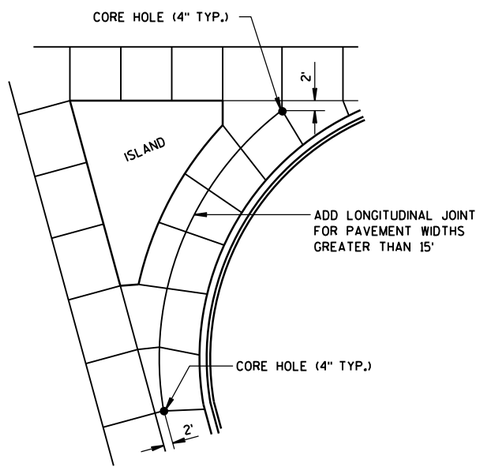
PAVEMENT DEPTH AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'

SKEWED INTERSECTION



APPROACH TO MEDIAN



LARGE RIGHT TURN

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

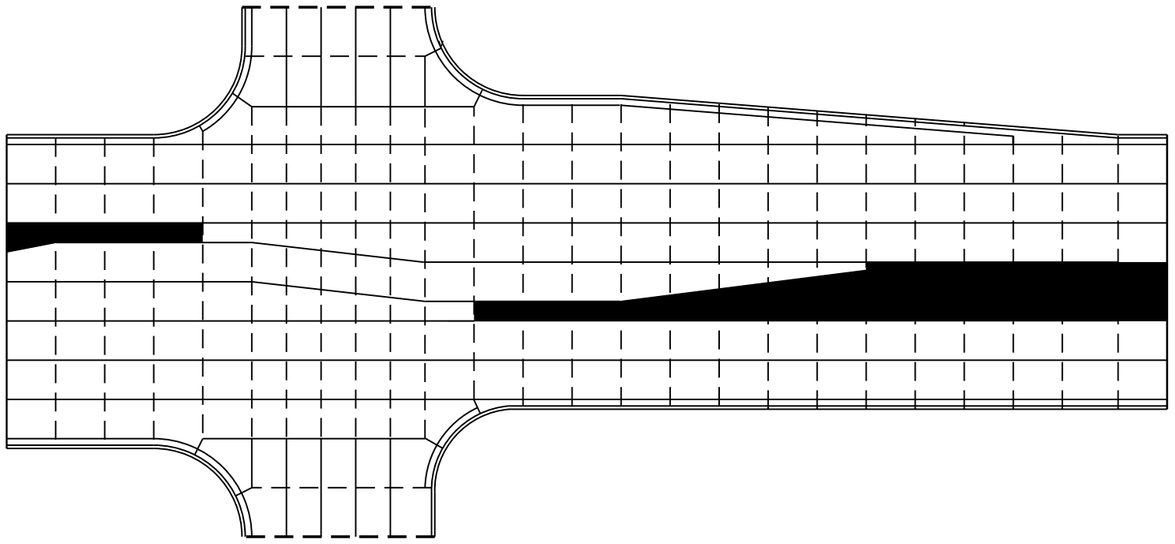
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S.D.D. 13 C 18-2a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

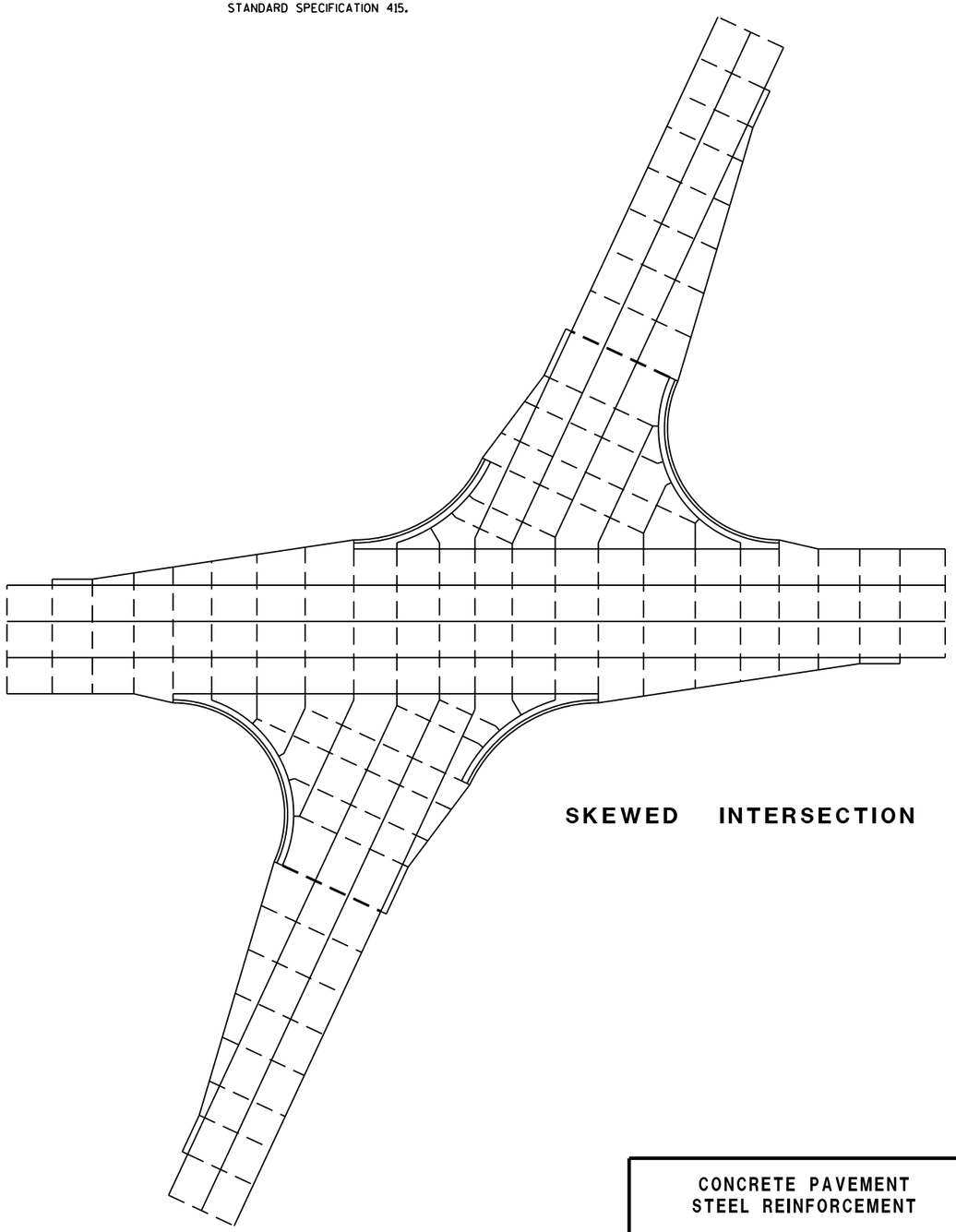
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

CONCRETE PAVEMENT
STEEL REINFORCEMENT

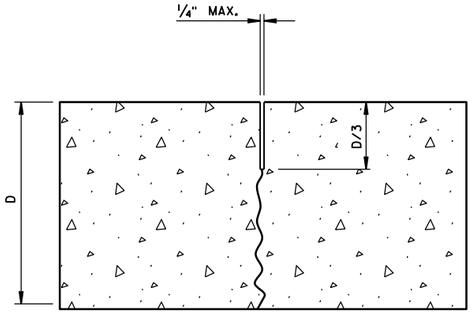
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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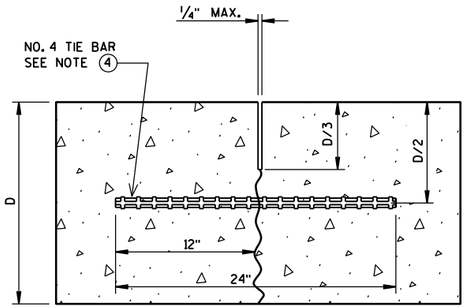
S.D.D. 13 C 18-2b

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S.D.D. 13 C 18-2b



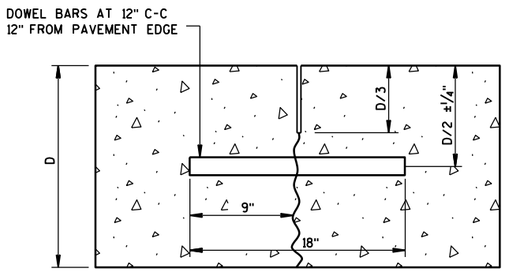
UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

GENERAL NOTES

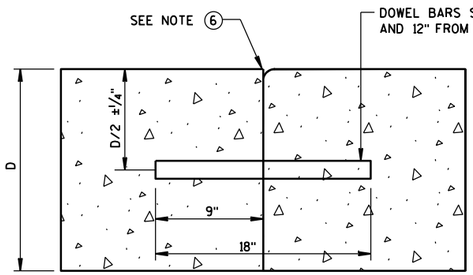
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. SPACE TIE BARS AT LONGITUDINAL CONSTRUCTION OR CONTRACTION JOINTS IN ACCORDANCE WITH SDD 13C1.
5. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
6. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.



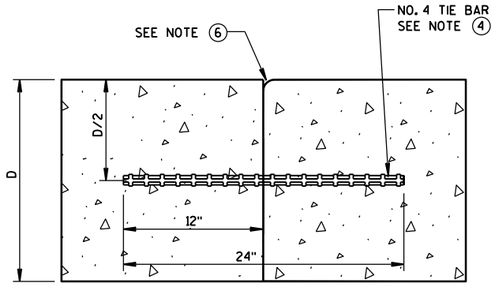
DOWELED-TRANSVERSE

CONTRACTION JOINTS

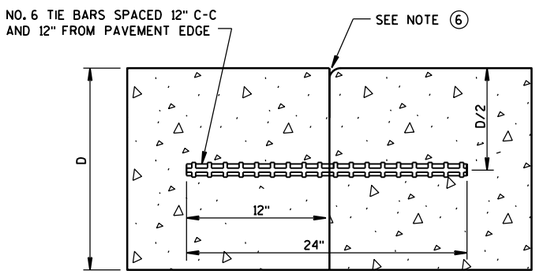
SEE NOTE (2)



DOWELED TRANSVERSE

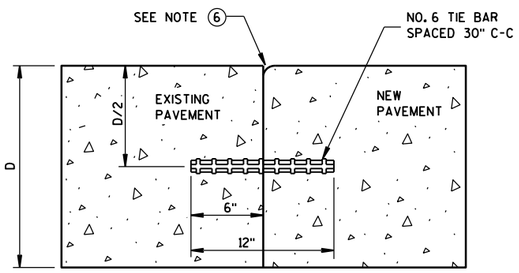


TIED LONGITUDINAL



TIED TRANSVERSE

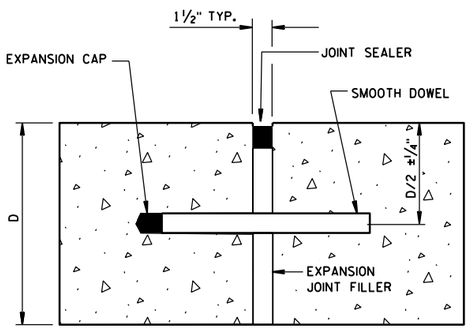
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

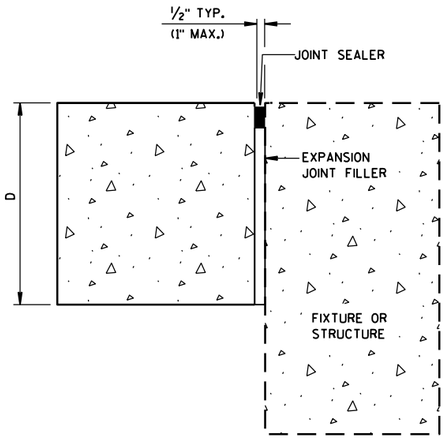
CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

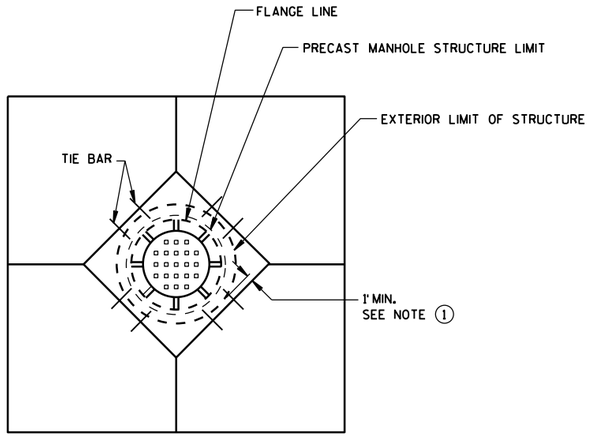
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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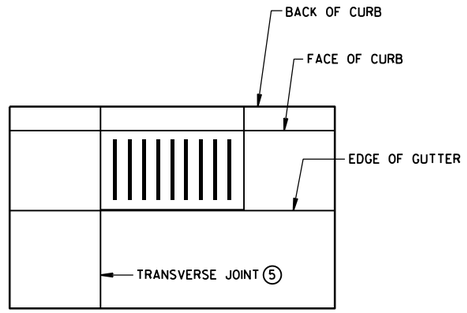
S.D.D. 13 C 18-2c

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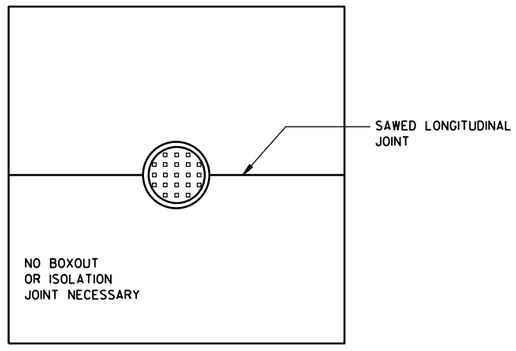
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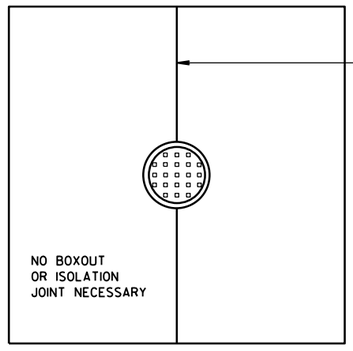
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



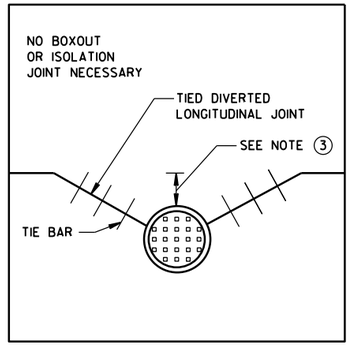
INLET WITH TRANSVERSE JOINT



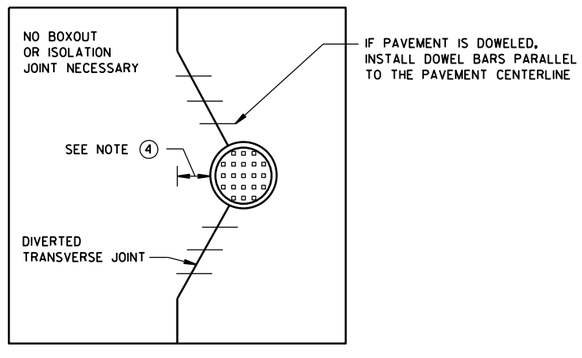
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-3-2013
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DE

NEER

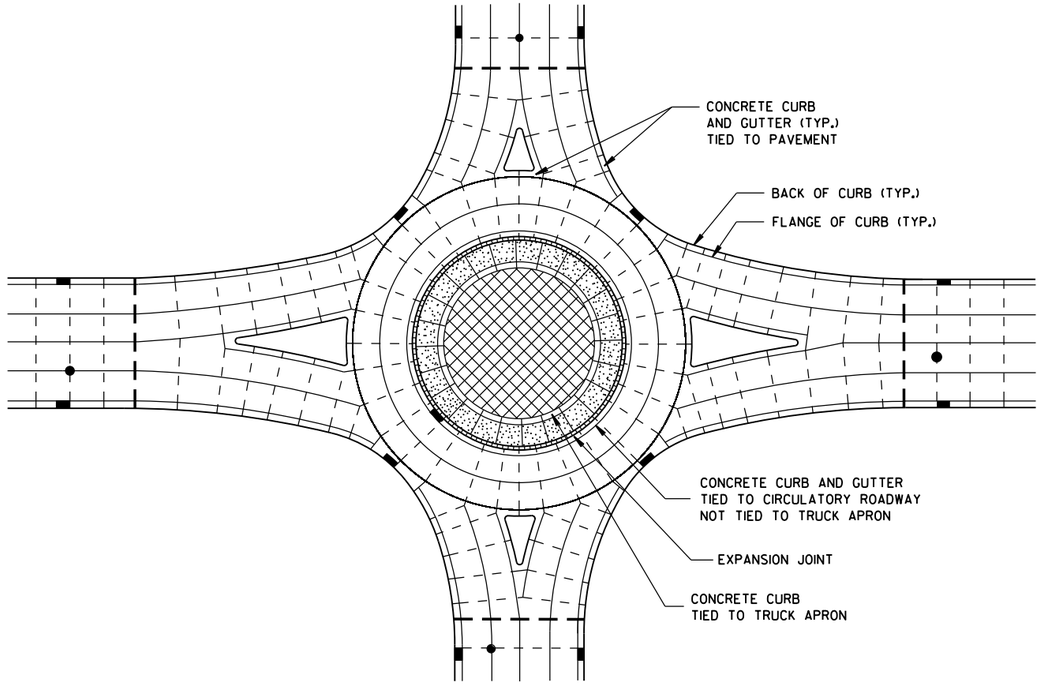
FHWA

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S.D.D. 13 C 18-2d

LEGEND

- DOWELED JOINT
- TIED JOINT
- EXPANSION JOINT
- POTENTIAL DOWELED EXPANSION JOINT
- TRUCK APRON
- CENTRAL ISLAND
- UTILITY STRUCTURES



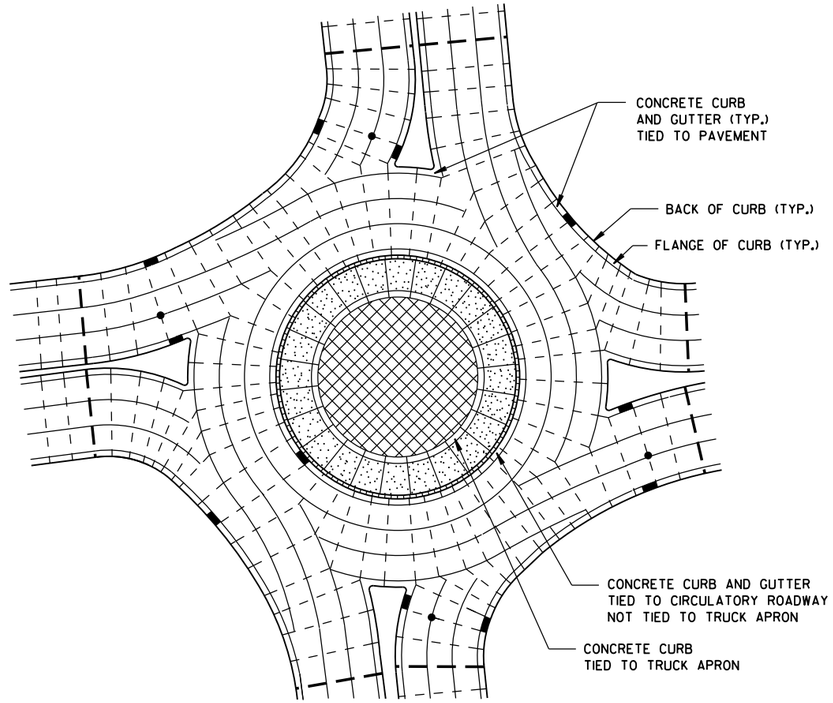
ISOLATED CIRCLE JOINT LAYOUT FOR ROUNDABOUTS

GENERAL NOTES

MAXIMUM JOINT SPACING IS IN ACCORDANCE WITH THE TABLE SHOWN ON SDD 13C18 SHEET "a".

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.

DO NOT DOWEL OR TIE THE TRUCK APRON TRANSVERSE JOINTS.



PINWHEEL JOINT LAYOUT FOR ROUNDABOUTS

CONCRETE PAVEMENT JOINTING AND STEEL REINFORCEMENT IN ROUNDABOUTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
5-3-2013 DATE	/S/ Deb Bischoff PAVEMENT POLICY & DE ENGINEER
FHWA	

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S.D.D. 13 C 18-2e

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) W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.

DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.

(2) USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.

(3) INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

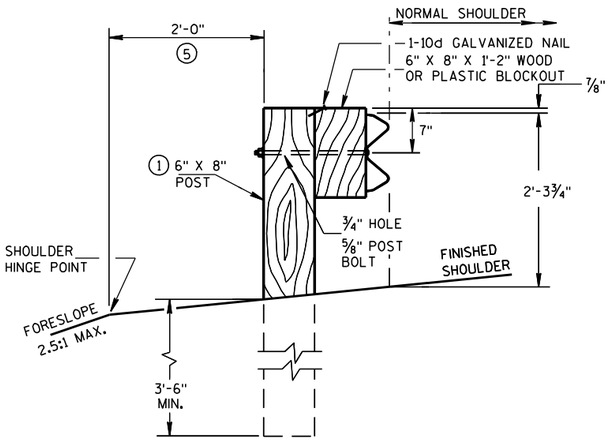
(4) USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.

(5) IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).

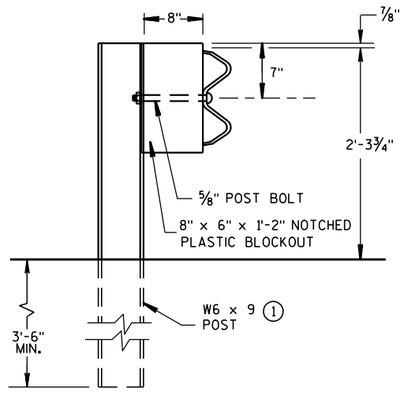
(6) IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.

INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.

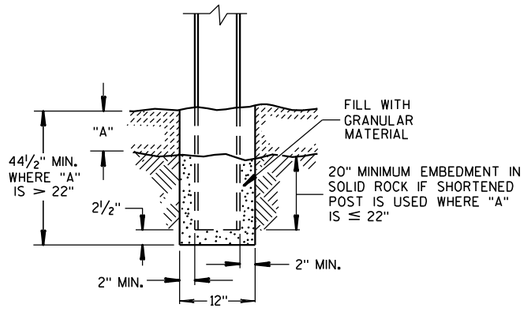
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



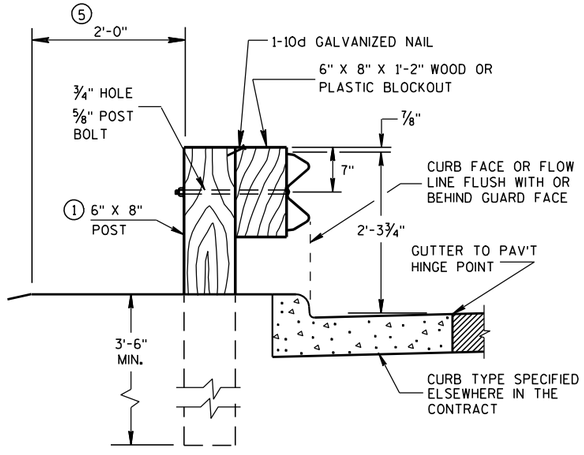
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



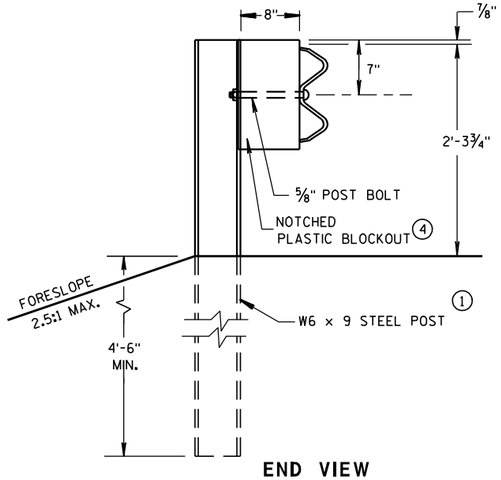
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



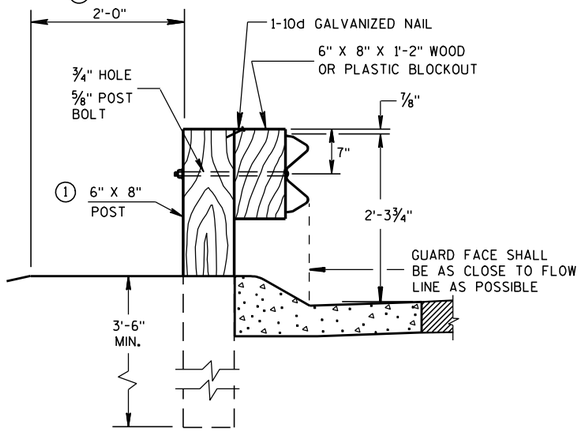
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)



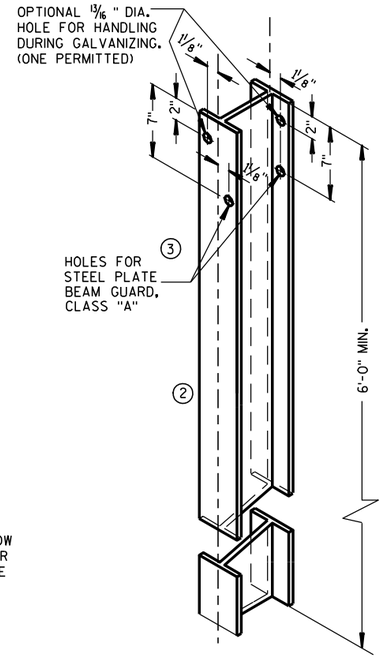
END VIEW
LOCATED ALONG A CURBED ROADWAY



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)

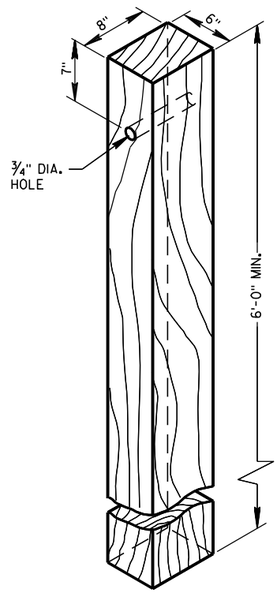


END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

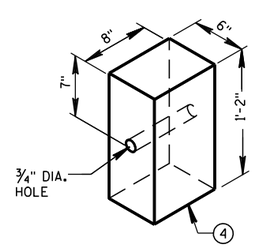


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

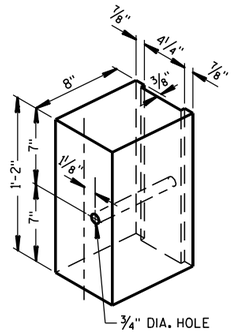
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



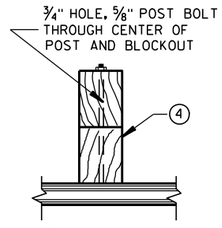
WOOD POST
(6"X8") NOMINAL



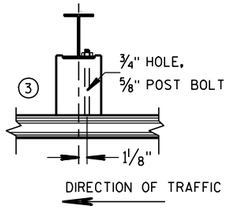
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



TYPICAL NOTCHED (1)
PLASTIC BLOCKOUT
FOR STEEL POSTS



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



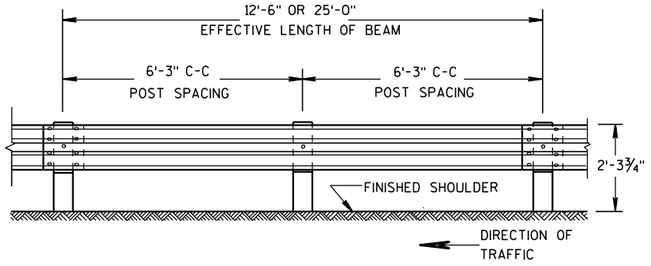
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

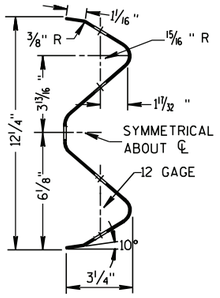
TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

6
S.D.D. 14 B 15-7a

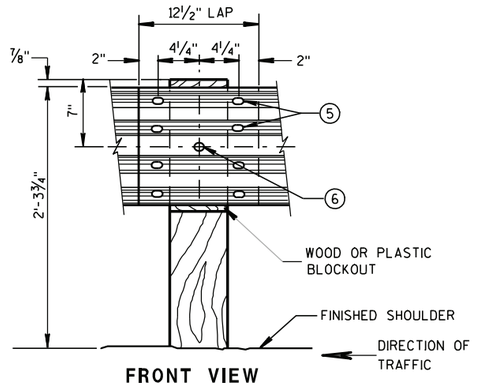


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM

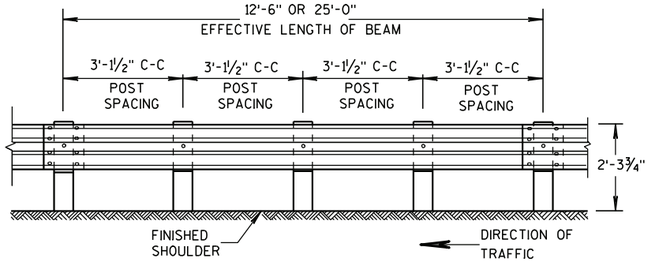


FRONT VIEW

BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

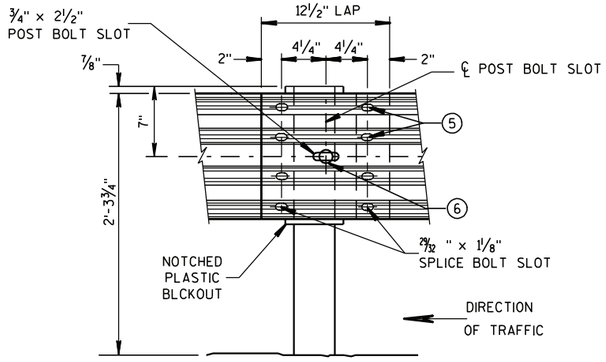
GENERAL NOTES

1. PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
2. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
3. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
4. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
5. 8 - 5/8" Φ X 2 " BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
6. 5/8" Φ X 1'-6" BUTTON HEAD BOLT AND AND RECESS NUT WITH ROUND WASHER UNDER NUT.



FRONT VIEW

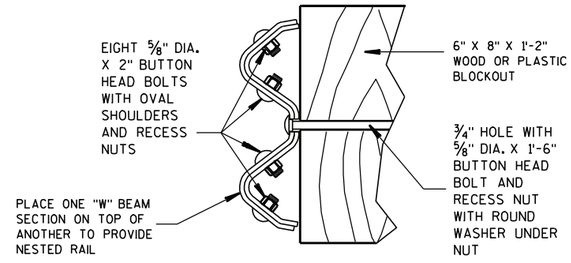
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

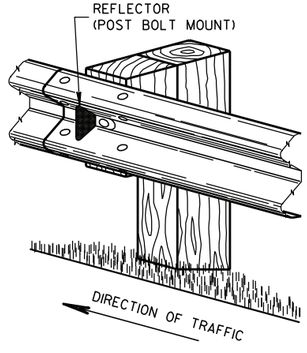


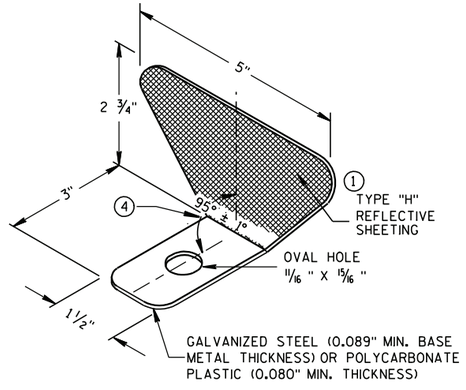
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

REFLECTOR SPACING (2)

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



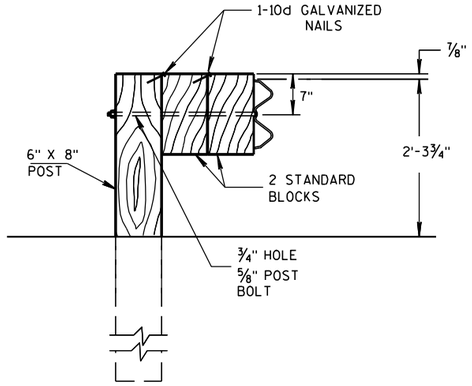


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

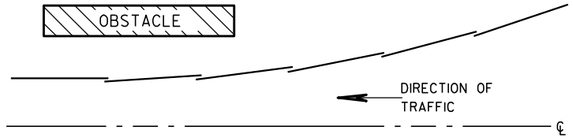
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 15-7b

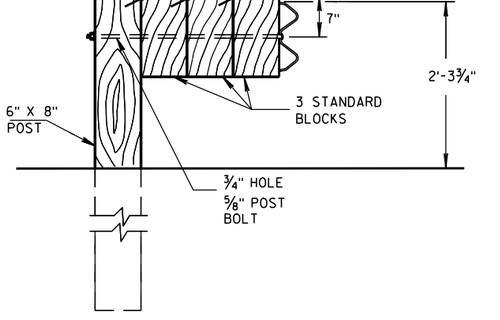


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

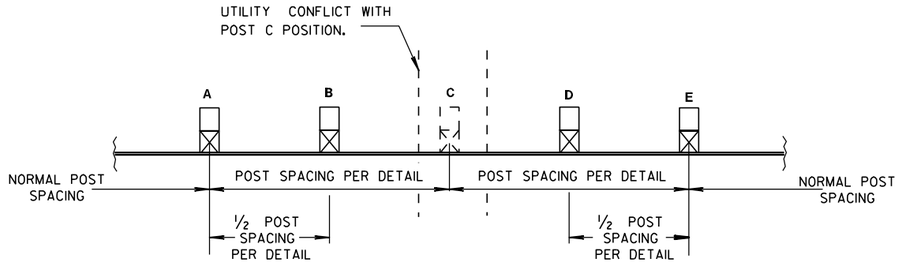


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

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

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

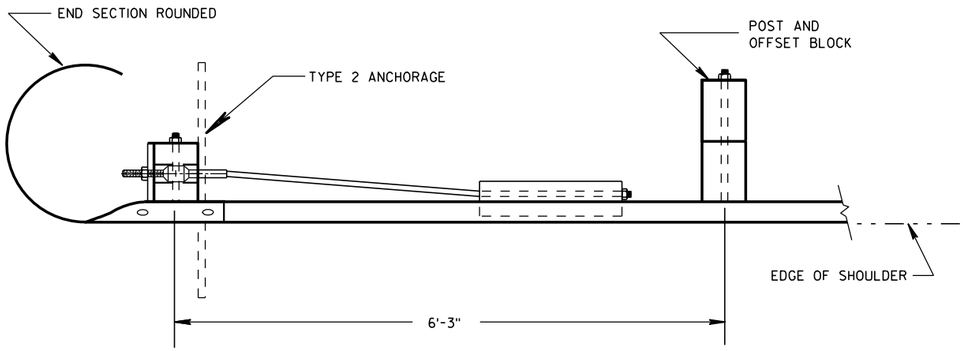
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

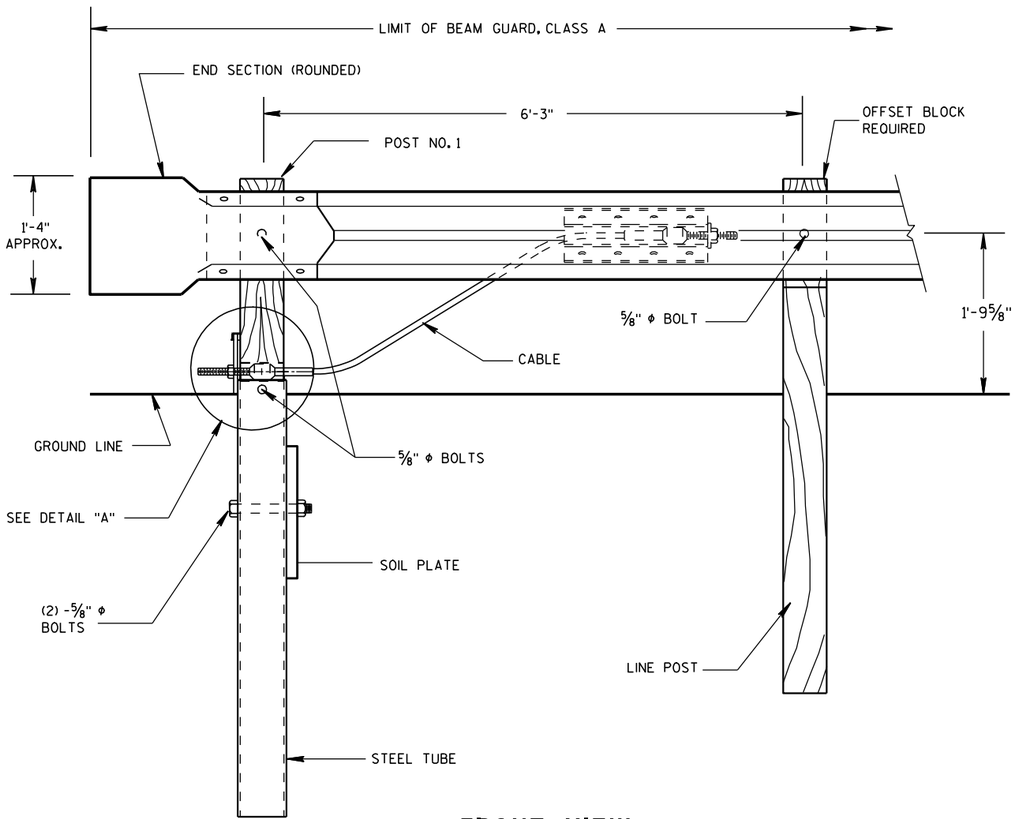
5/23/11	/S/ Jerry H. Zogg	
DATE	ROADWAY STANDARDS ENGINEER	ENT

FHWA

6
S.D.D. 14 B 15-7c



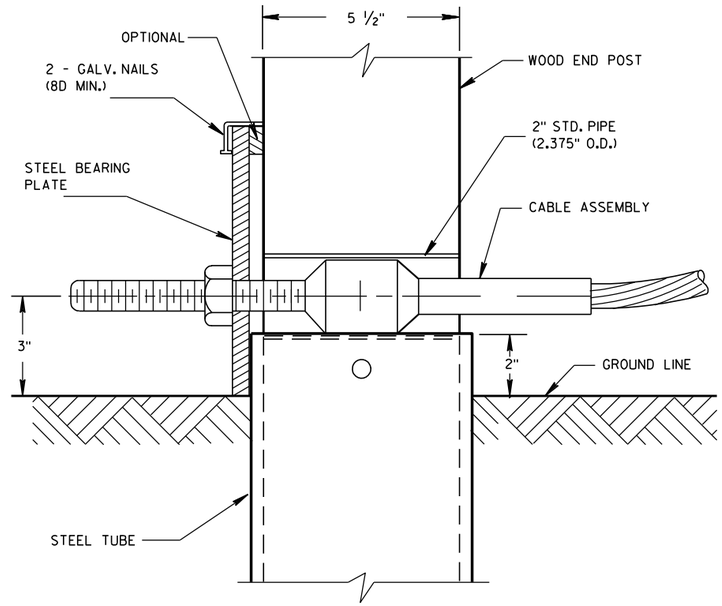
PLAN VIEW



FRONT VIEW

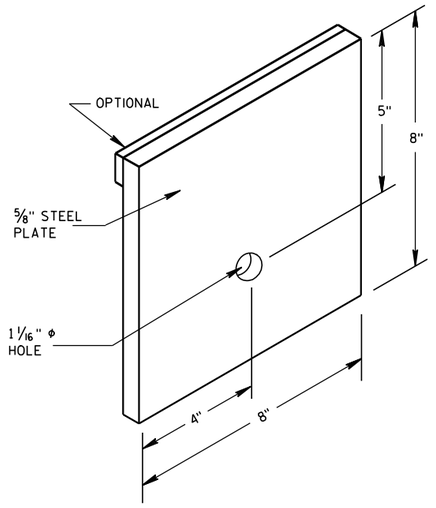
END TREATMENT WITH TYPE 2 ANCHORAGE

(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)



DETAIL "A"

POST NO. 1



STEEL BEARING PLATE

ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2

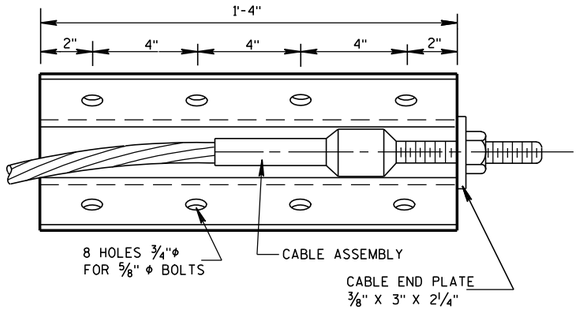
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

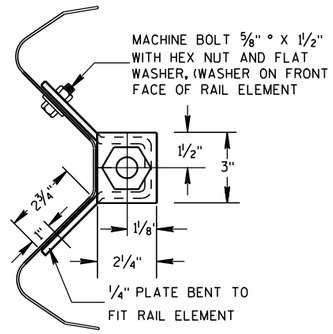
S.D.D. 14 B 16-4a

6

S.D.D. 14 B 16-4a

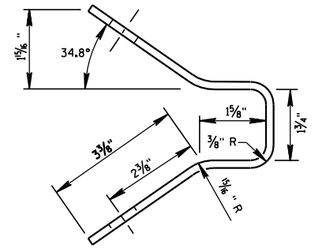


FRONT VIEW

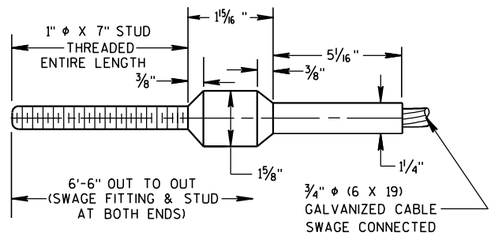


END VIEW

ANCHOR PLATE DETAIL



END VIEW OF BRACKET



CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP
A MINIMUM BREAKING STRENGTH OF 40,000 LB
(TIGHTEN UNTIL TAUT)

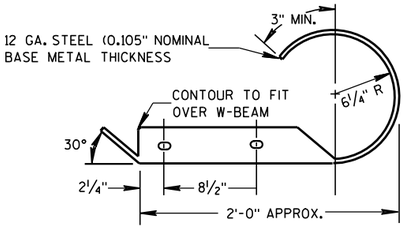
GENERAL NOTES

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

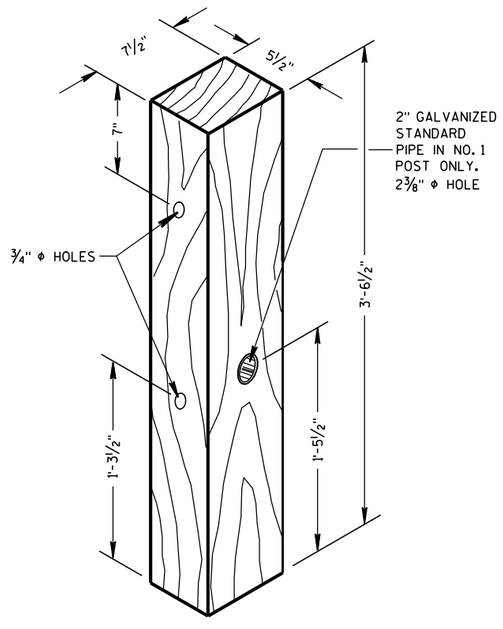
STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

POST NO. 1 SHALL BE WOOD BREAKAWAY POST INSERTED AND BOLTED INTO STEEL TUBE.

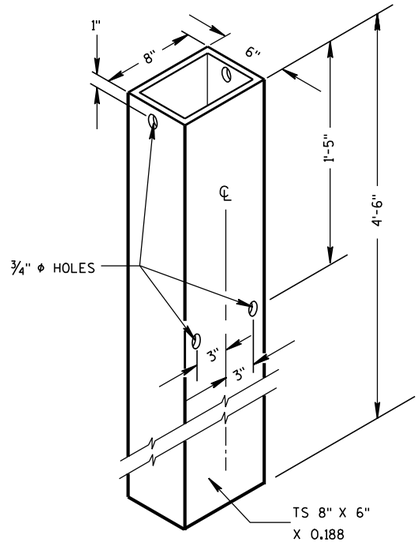
TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.



PLAN VIEW

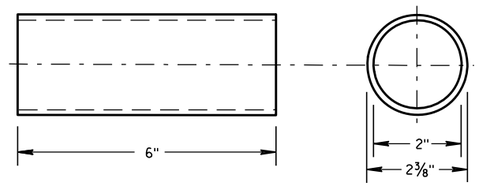


WOOD BREAKAWAY POST



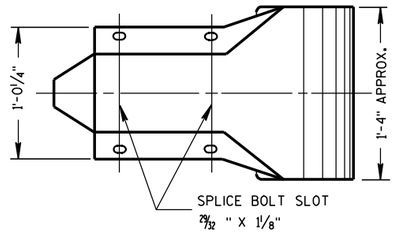
STEEL TUBE

STEEL TUBE SHALL CONFORM TO
REQUIREMENTS OF ASTM A500

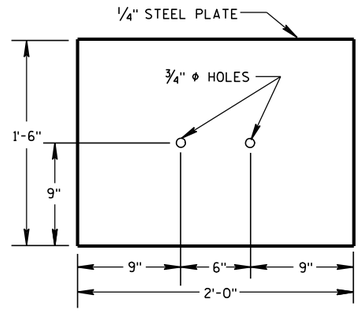


BREAKAWAY TERMINAL POST SLEEVE

GALVANIZED STANDARD STRENGTH STEEL PIPE, ASTM 53 GRADE "B"



FRONT VIEW
W BEAM END SECTION ROUNDED



SOIL PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/21/2007
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
172
FHWA

6

S.D.D. 14 B 16-4b

6

S.D.D. 14 B 16-4b

GENERAL NOTES

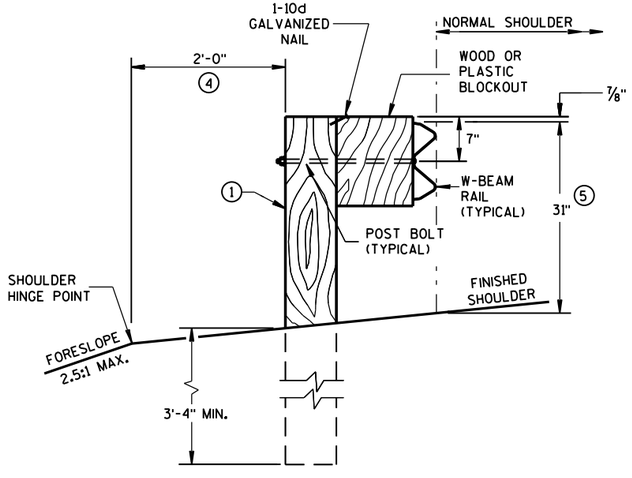
1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

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

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

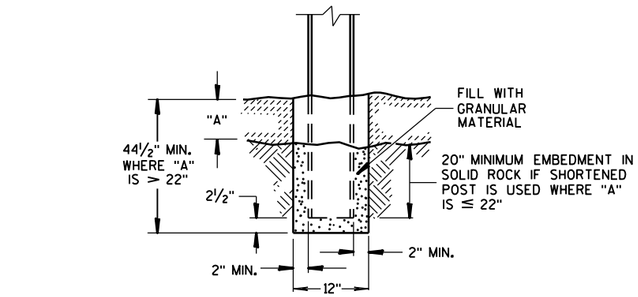
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

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



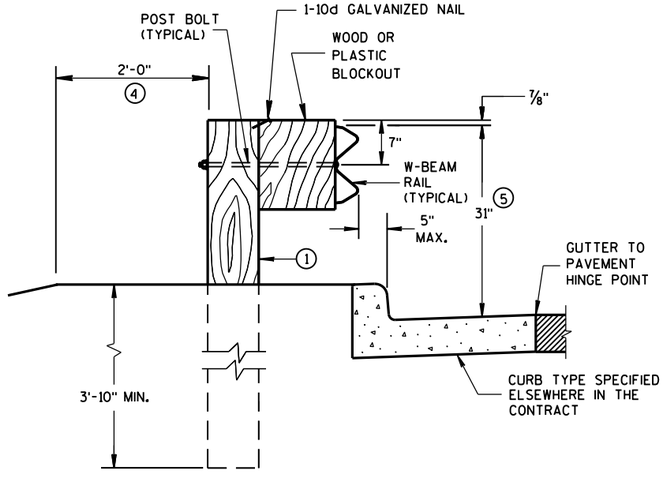
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



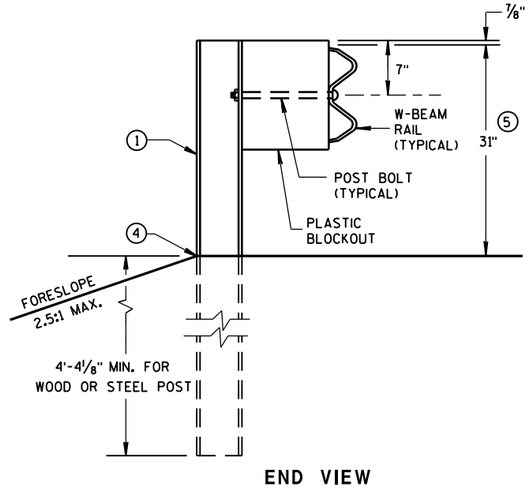
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



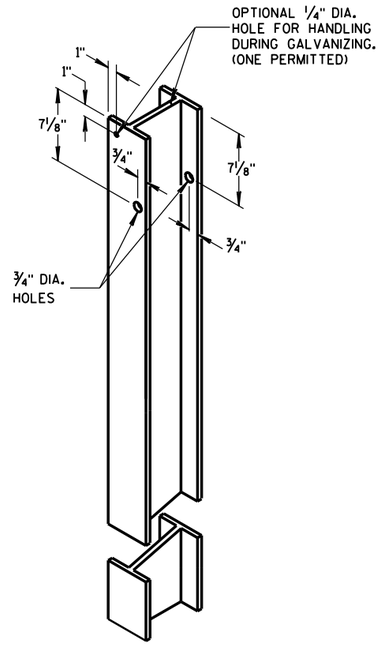
END VIEW

LOCATED ALONG A CURBED ROADWAY

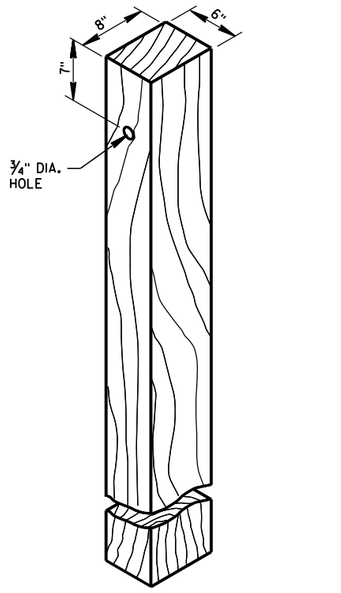


END VIEW

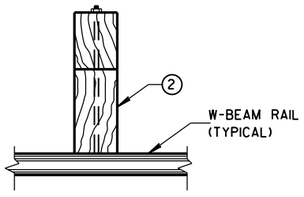
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



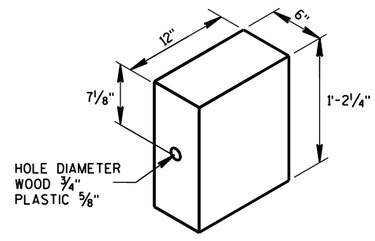
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



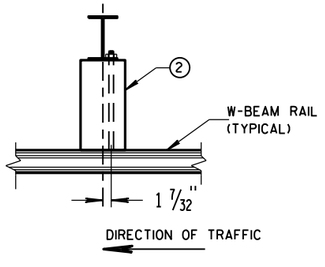
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②

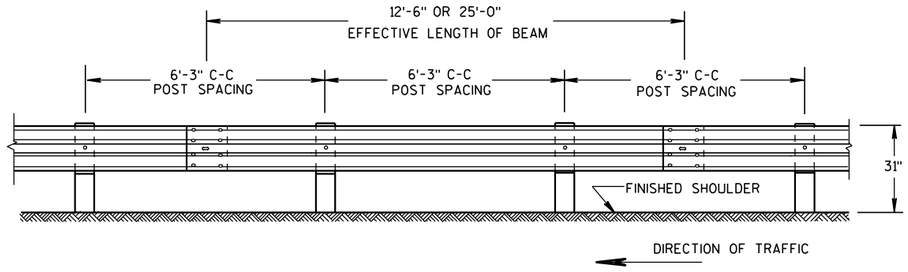


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

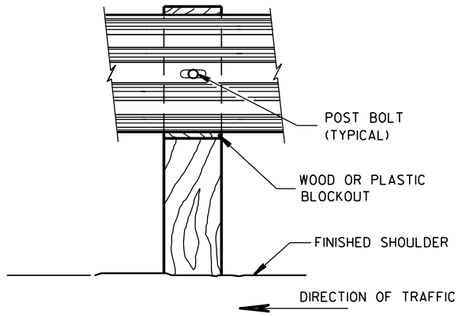
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 42-2a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



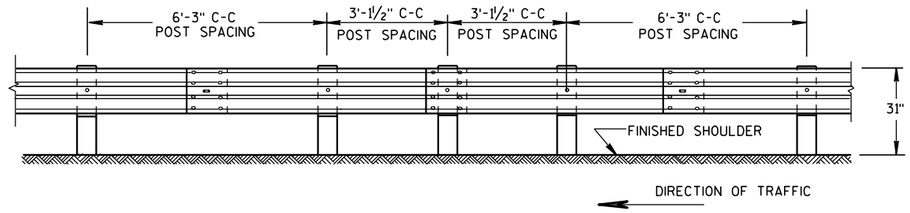
FRONT VIEW AT WOOD POST

GENERAL NOTES

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

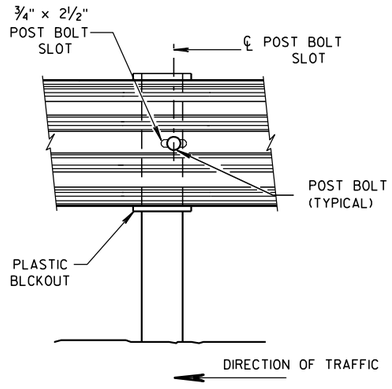
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

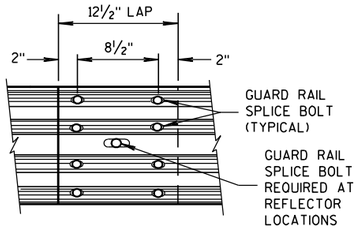


FRONT VIEW

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

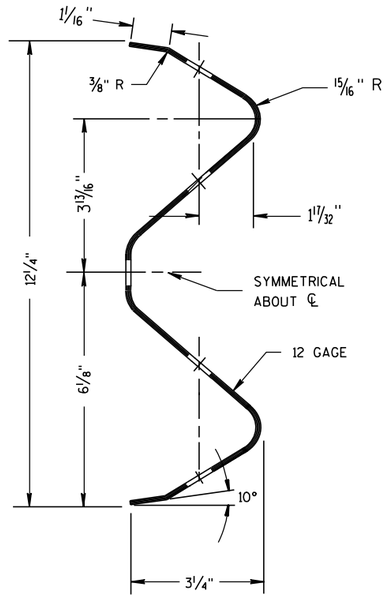


FRONT VIEW AT STEEL POST

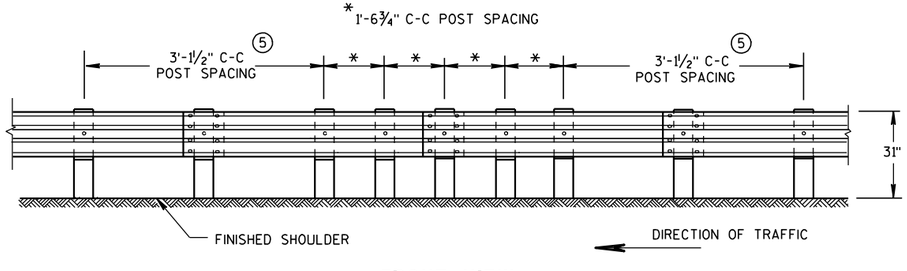


FRONT VIEW

MID-SPAN BEAM SPLICE

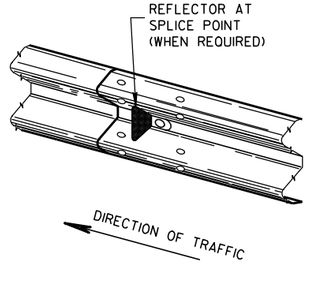


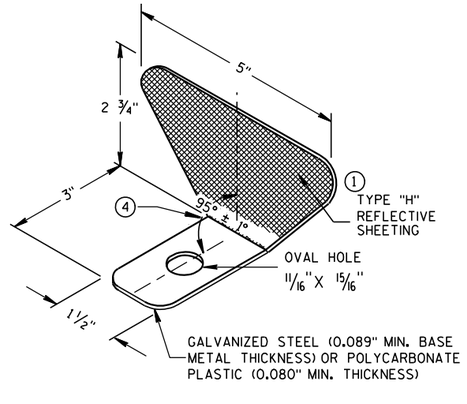
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (1)

REFLECTOR SPACING (2)

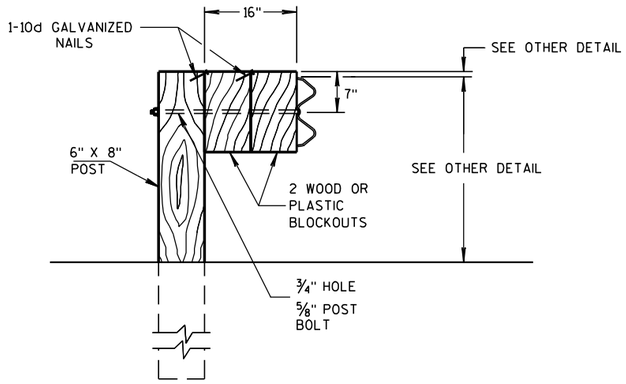
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 (3) 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 (4) 2	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

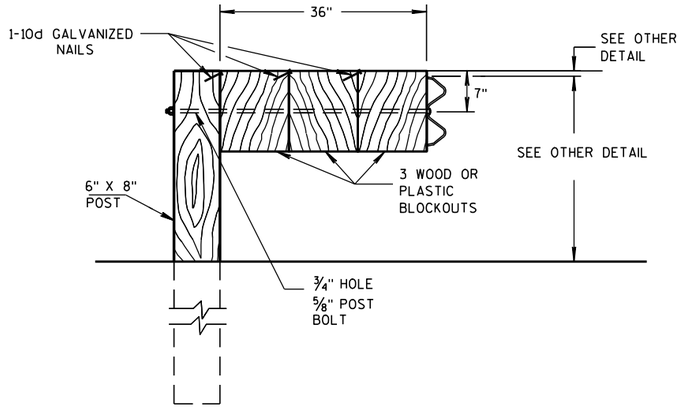
S.D.D. 14 B 42-2b

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



DETAIL FOR 16" BLOCKOUT DEPTH

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

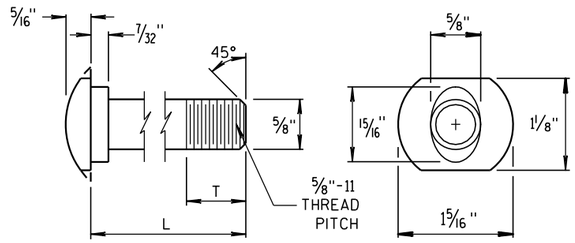


DETAIL FOR 36" BLOCKOUT DEPTH

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

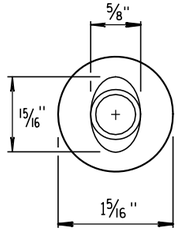
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

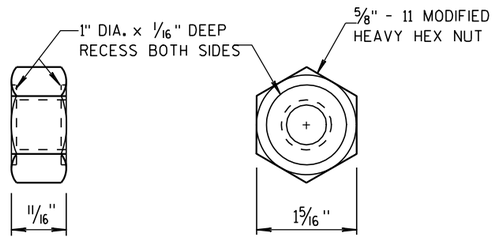


POST BOLT TABLE

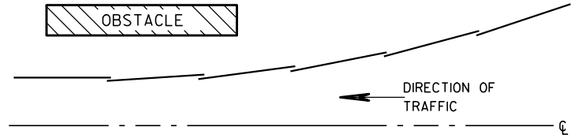
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

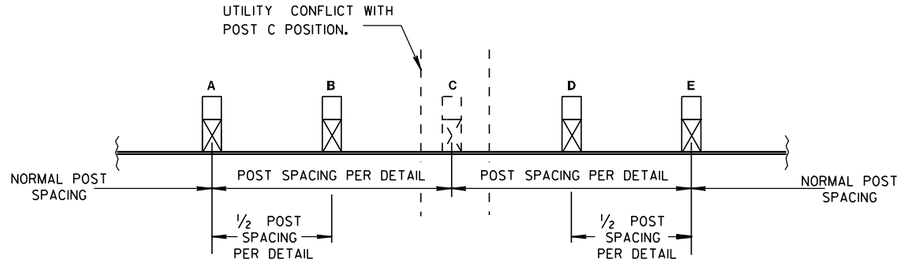


POST BOLT AND RECESS NUT

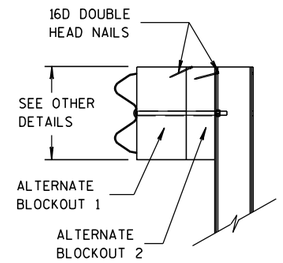


PLAN VIEW

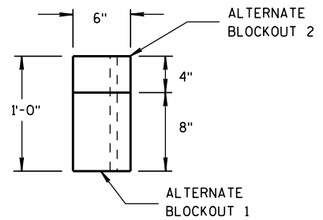
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/15/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

ENT

6

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

6

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

GENERAL NOTES

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

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

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

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

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

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

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

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

SEE SDD 14B42 FOR MORE INFORMATION.

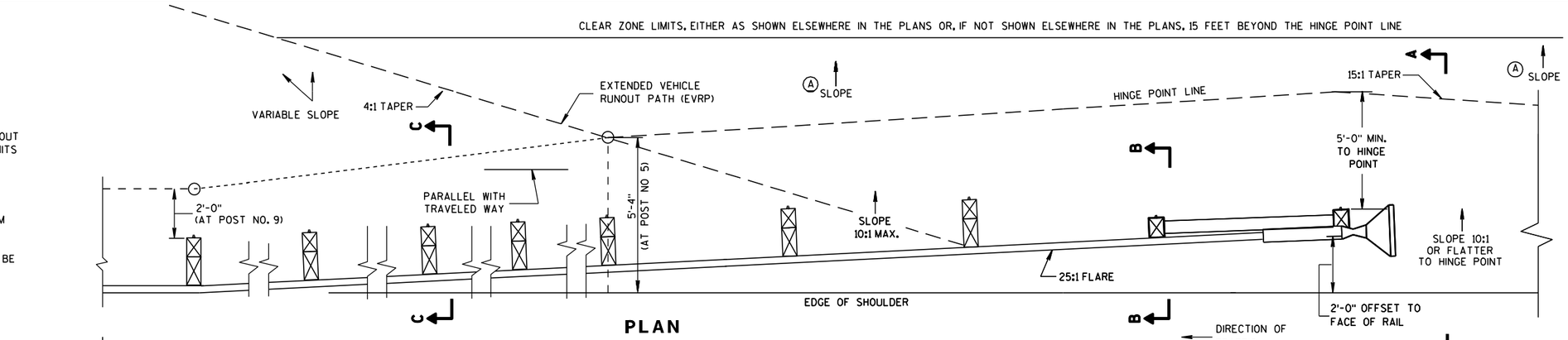
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

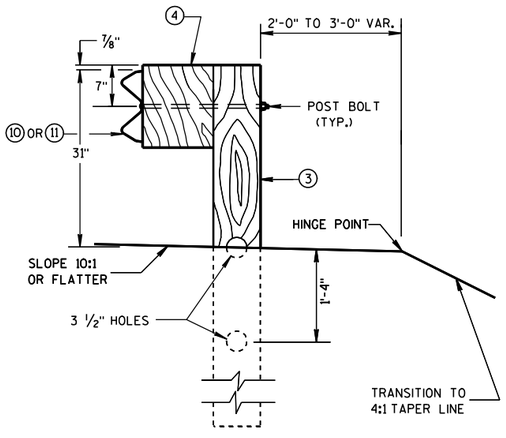
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

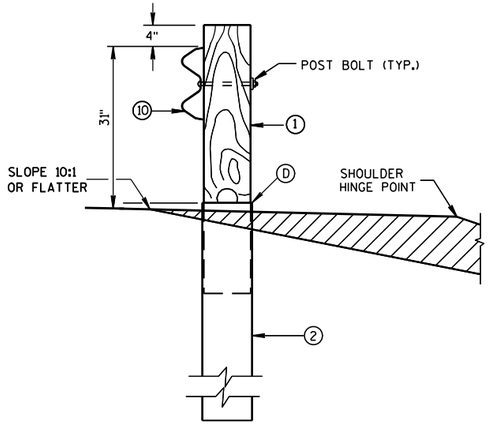
PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE (± ¾")

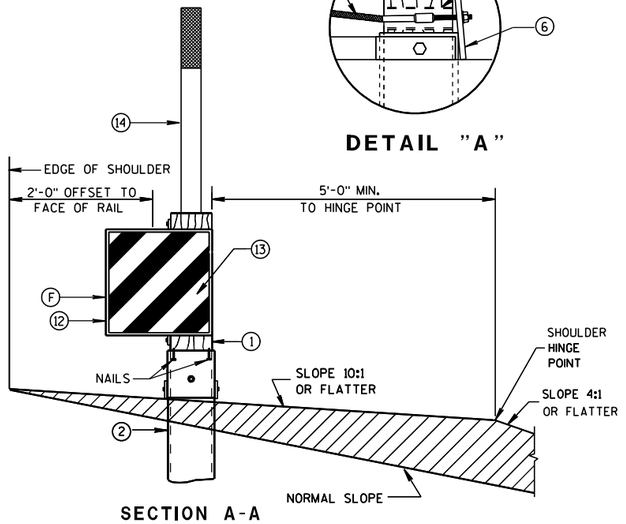




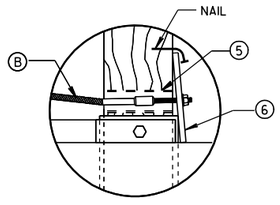
SECTION C-C
TYPICAL AT POST NOS. 3-9



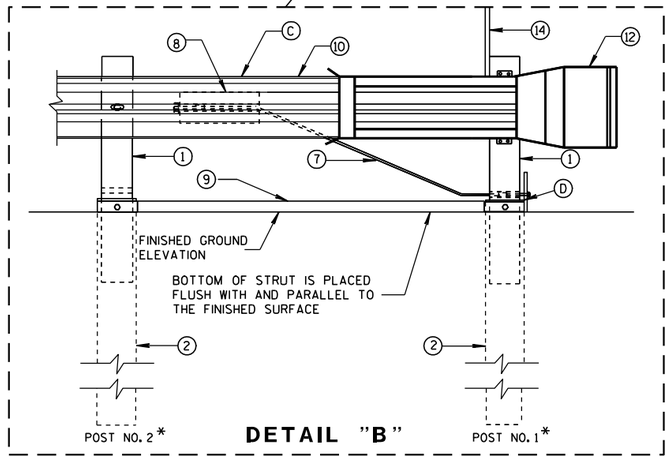
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



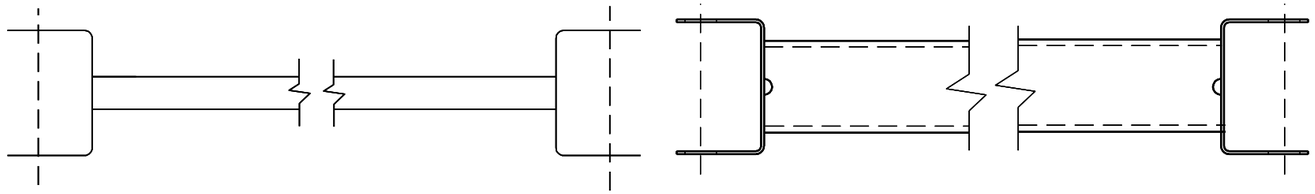
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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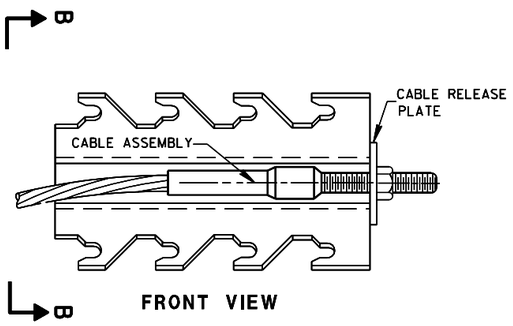


⑨ Ⓗ

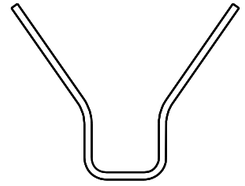
GENERIC GROUND STRUT

BILL OF MATERIALS

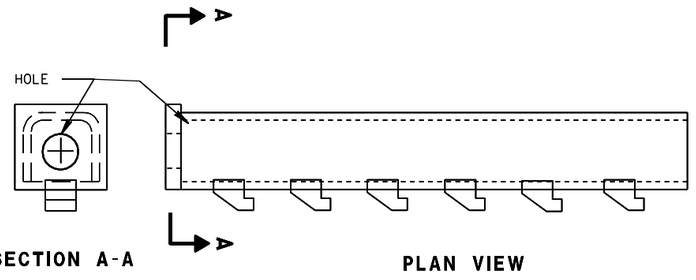
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND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



FRONT VIEW



SECTION B-B

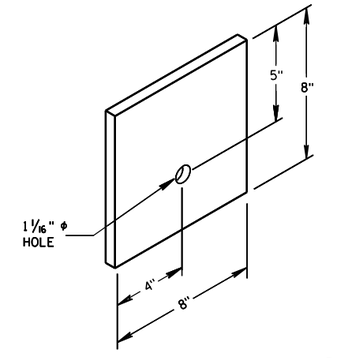


SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX

⑧ Ⓗ



BEARING PLATE

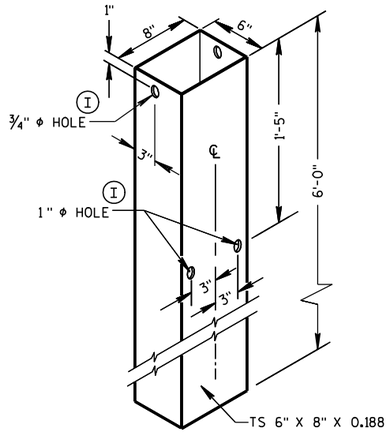
⑥

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

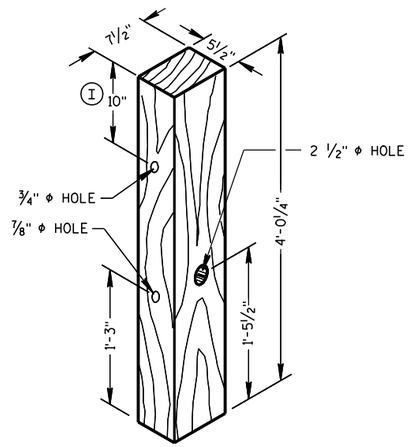
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

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

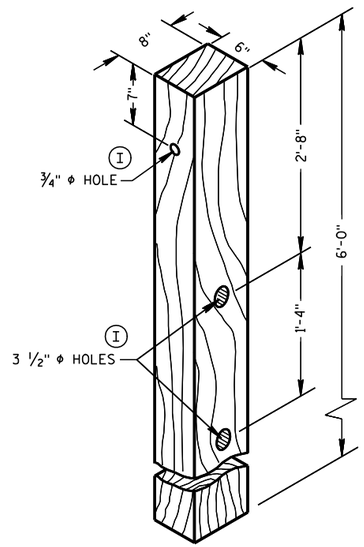


FOUNDATION TUBE (2)



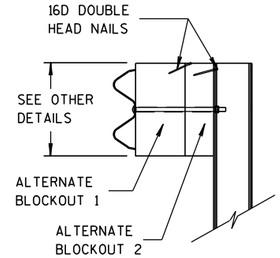
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

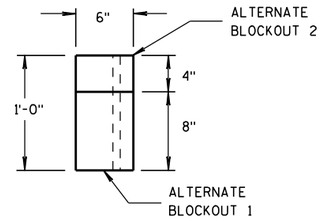


POSTS NUMBER 3-9

WOOD CRT POST (3)

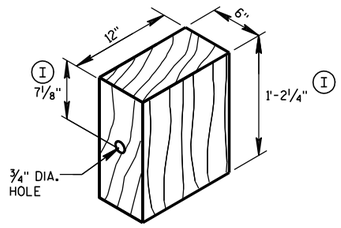


SIDE VIEW



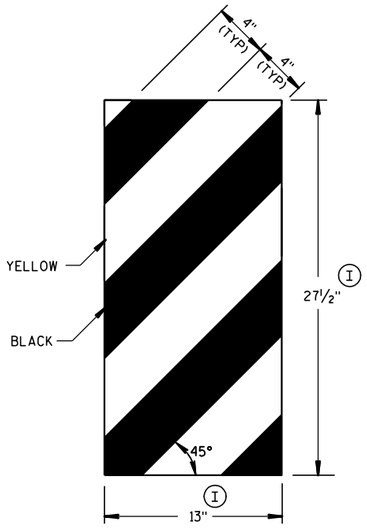
TOP VIEW

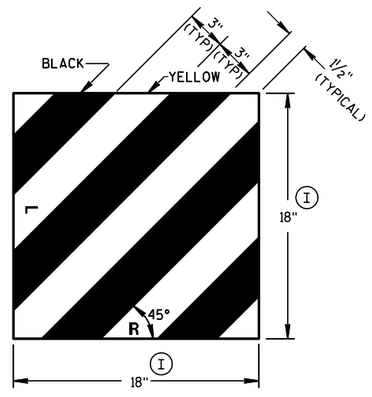
ALTERNATE WOOD BLOCKOUT DETAIL



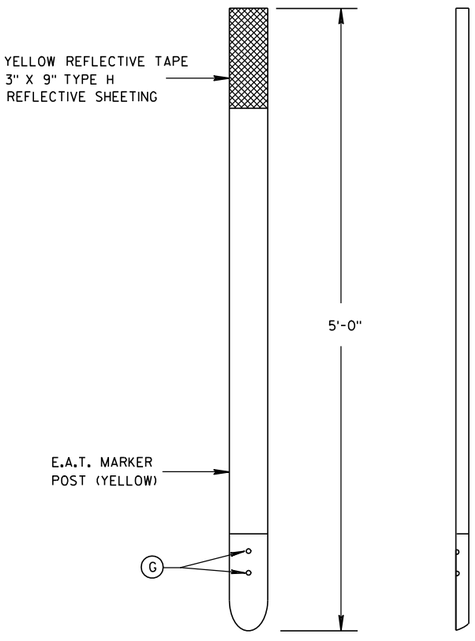
WOOD BLOCKOUT (4)

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



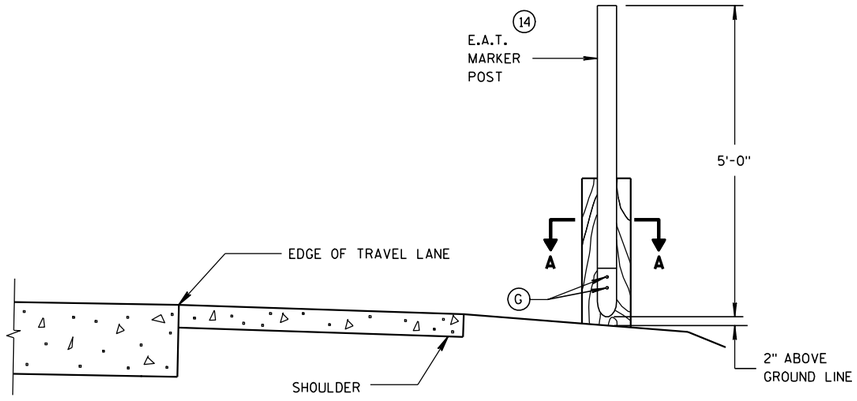


GENERIC REFLECTIVE SHEETING (13) (H)



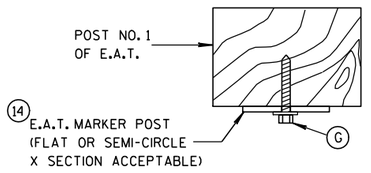
FRONT VIEW **SIDE VIEW**

E.A.T. MARKER POST (14)



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

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



SECTION A-A

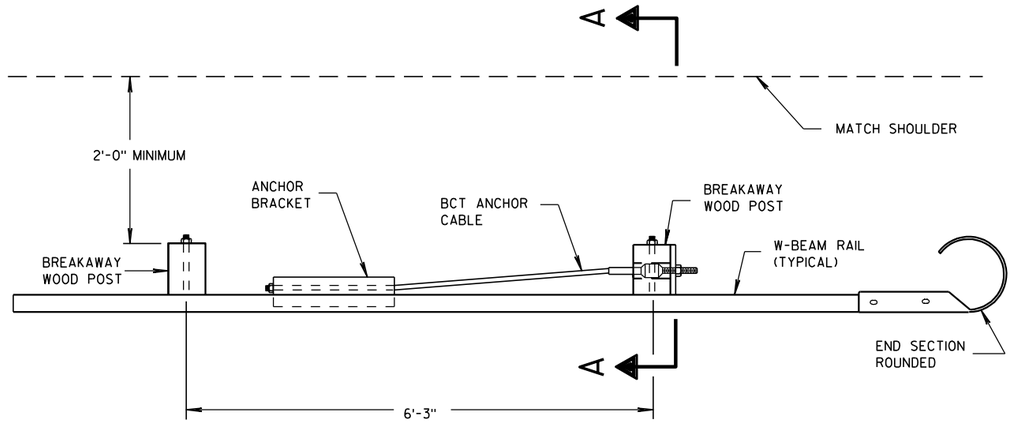
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

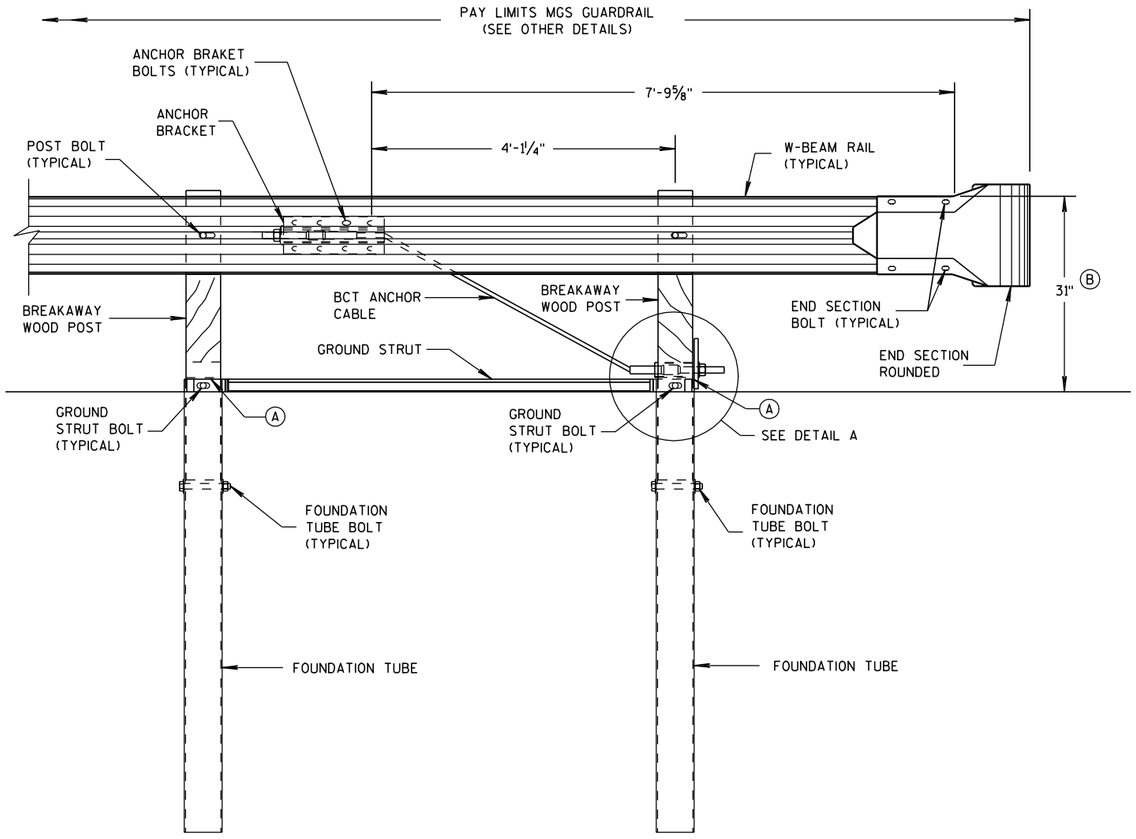
APPROVED
5/23/2011 — DATE
/S/ Jerry H. [illegible] — ROADWAY STANDARDS ENGINEER
FHWA

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

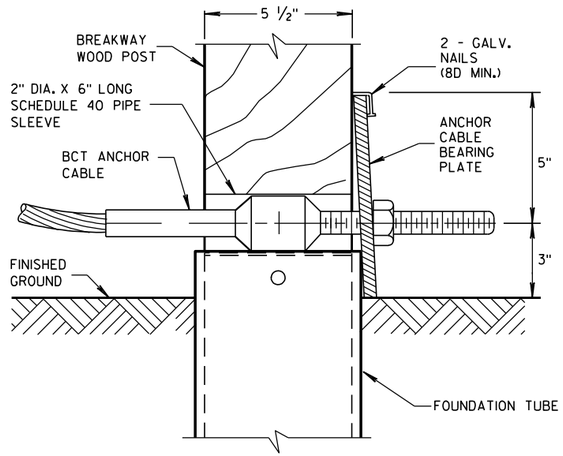


PLAN VIEW



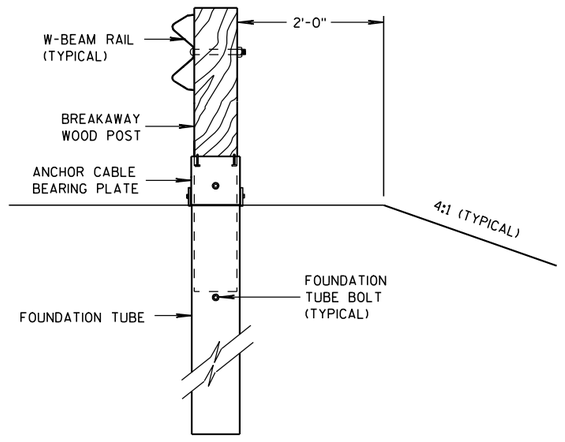
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

POST BOLTS ARE A ⅝" DIAMETER X 10" LONG GUARDRAIL BOLT. A POST BOLT REQUIRES A ⅝" DIAMETER DH MODIFIED (RECESSED) HEAVY HEX NUT AND ⅝" DIAMETER FLAT WASHER.

FOUNDATION TUBE BOLTS ARE A ⅞" DIAMETER X 7½" LONG HEAVY HEX HEAD BOLT. A FOUNDATION TUBE BOLT REQUIRES A ⅞" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

GROUND STRUT BOLTS ARE A ⅝" DIAMETER X 10" LONG HEAVY HEX HEAD BOLT. A GROUND STRUT BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

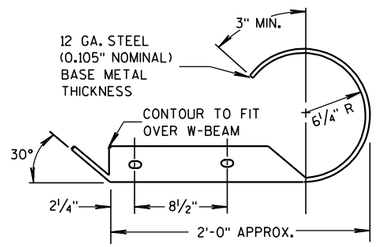
ANCHOR BRAKET BOLTS ARE A ⅝" DIAMETER X 1½" LONG HEAVY HEX HEAD BOLT. AN ANCHOR BRAKET BOLT REQUIRES A ⅝" DIAMETER DH HEAVY HEX NUT AND A FLAT WASHER.

END SECTION BOLTS ARE A ⅝" DIAMETER X 1½" HEAVY HEX HEAD BOLT. AN END SECTION BOLT REQUIRES ⅝" DIAMETER DH HEAVY HEX NUT AND A ⅝" DIAMETER FLAT WASHER.

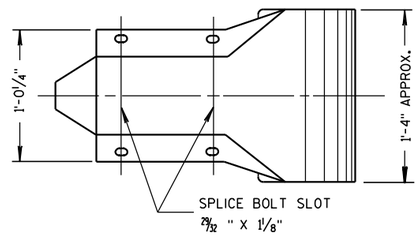
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

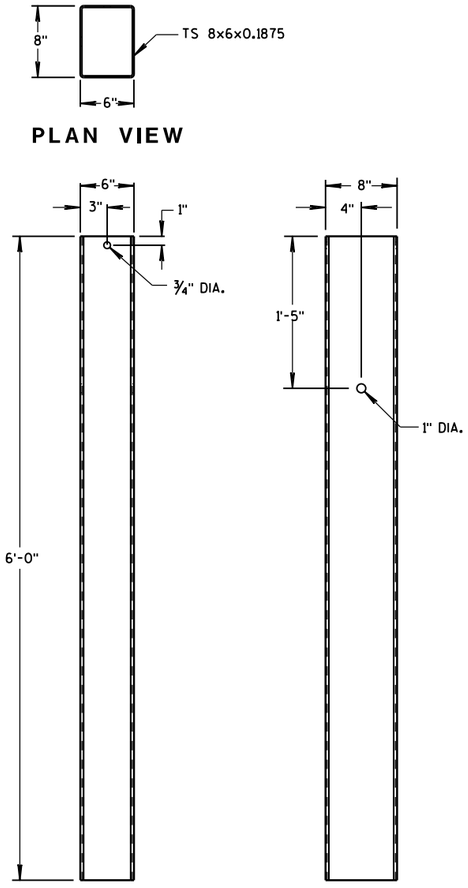
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 47-1a

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S.D.D. 14 B 47-1a

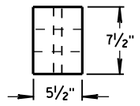


PLAN VIEW

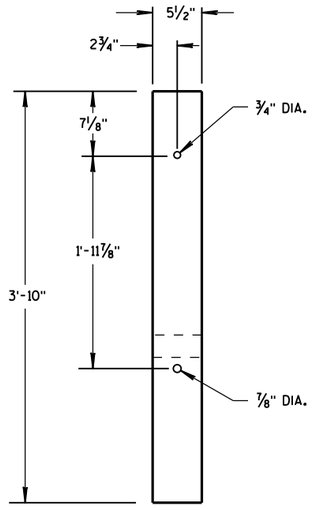
FRONT VIEW

SIDE VIEW

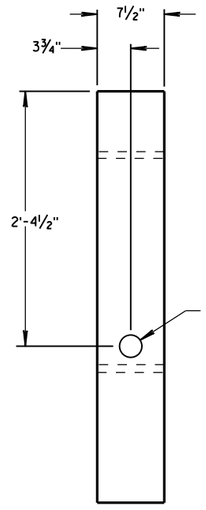
FOUNDATION TUBE



PLAN VIEW



FRONT VIEW

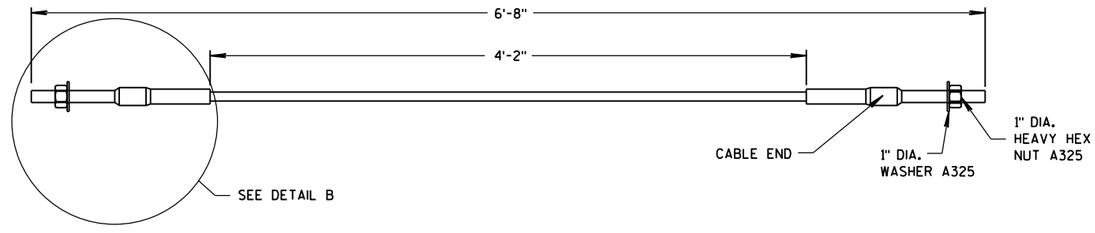


SIDE VIEW

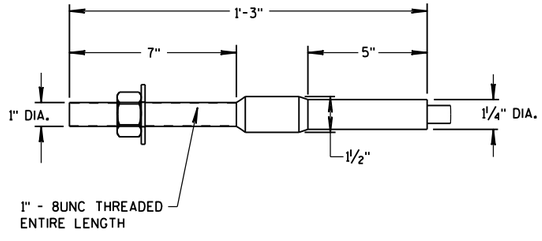
BREAKAWAY WOOD POST

GENERAL NOTES

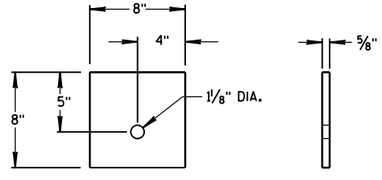
BCT ANCHOR CABLE IS A ⅜" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. THE END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. THE TREADED STUD SHOULD CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.



BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

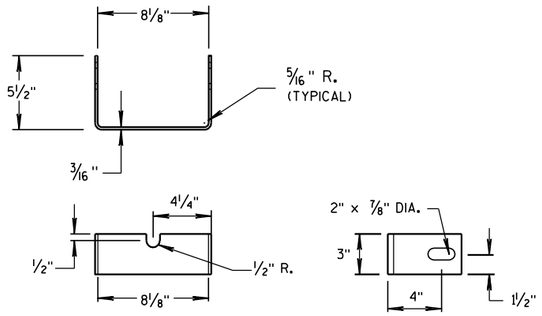
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

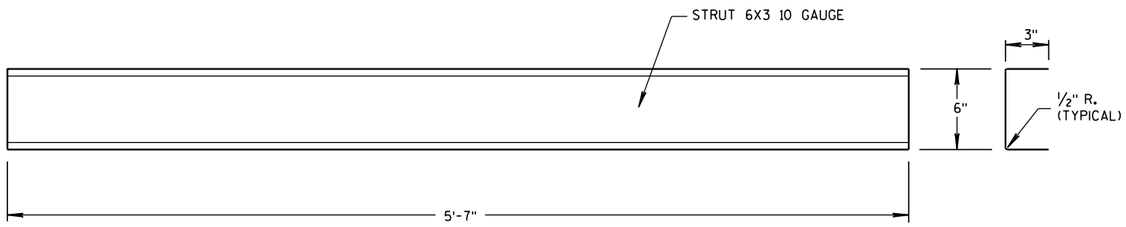
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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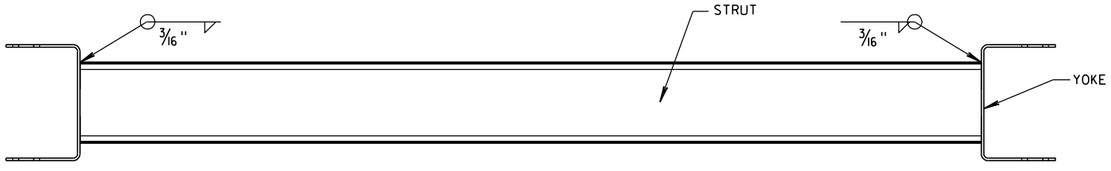
S.D.D. 14 B 47-1b



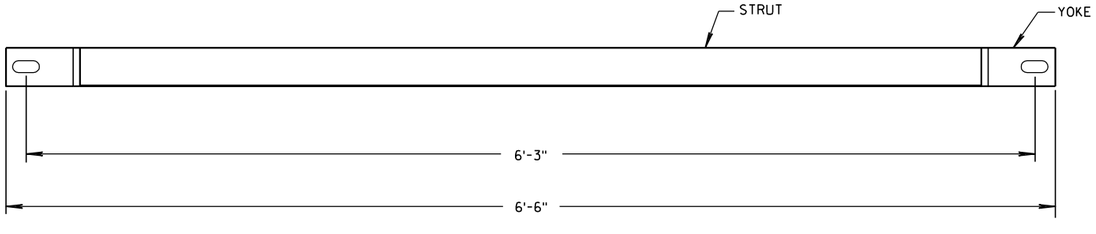
YOKE DETAIL



STRUT DETAIL

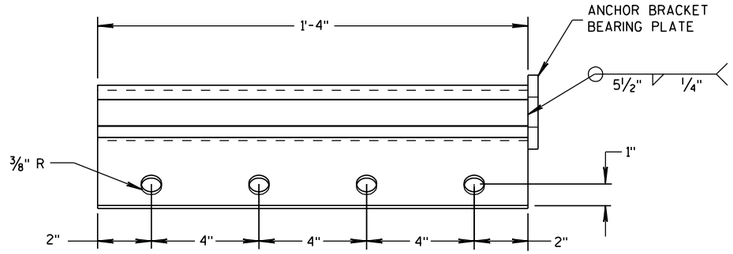


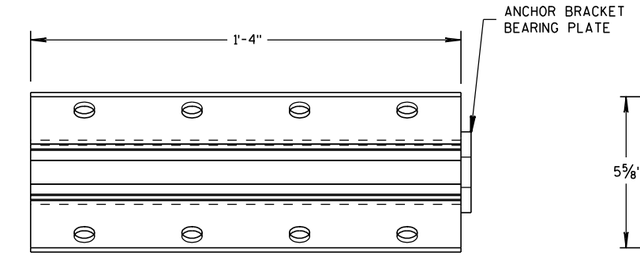
PLAN VIEW

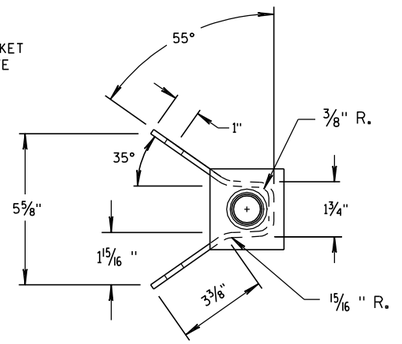


FRONT VIEW

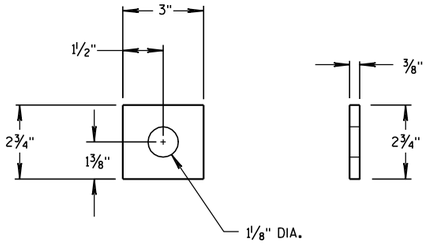
GROUND STRUT DETAIL







ANCHOR BRACKET



ANCHOR BRACKET BEARING PLATE

6

6

S.D.D. 14 B 47-1c

S.D.D. 14 B 47-1c

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/2011
DATE

/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

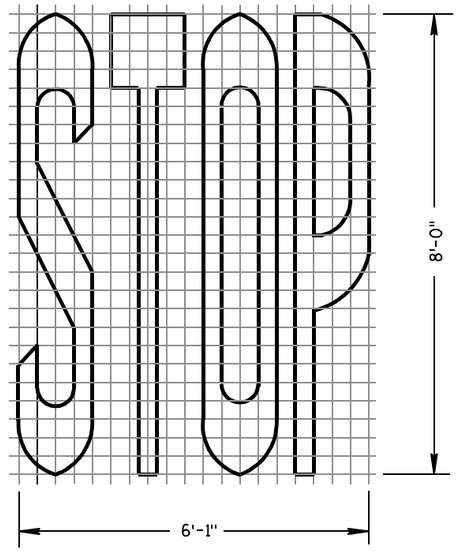
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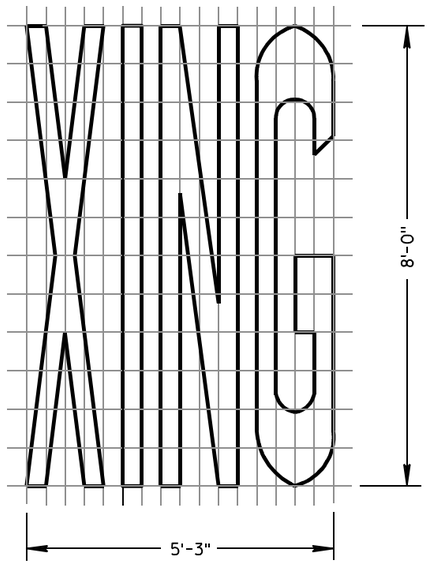
FHWA

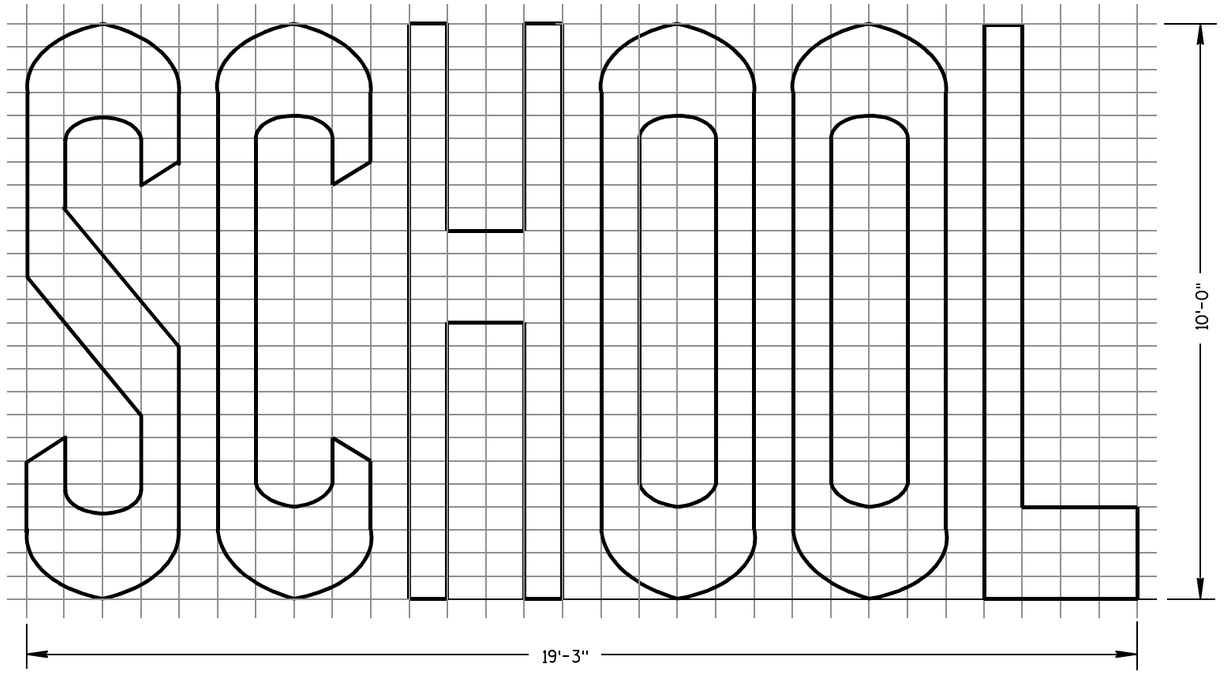
GENERAL NOTES

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

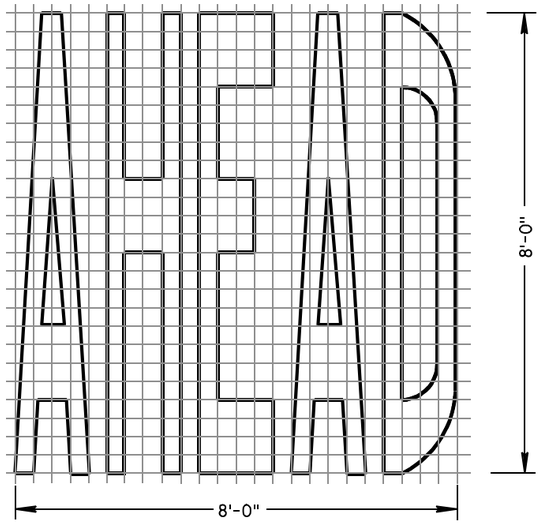
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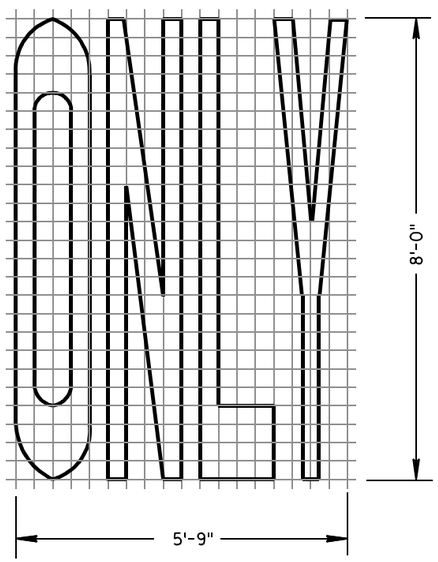


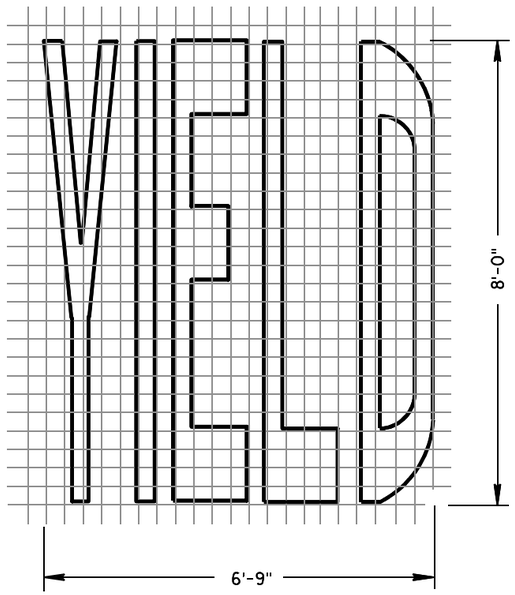


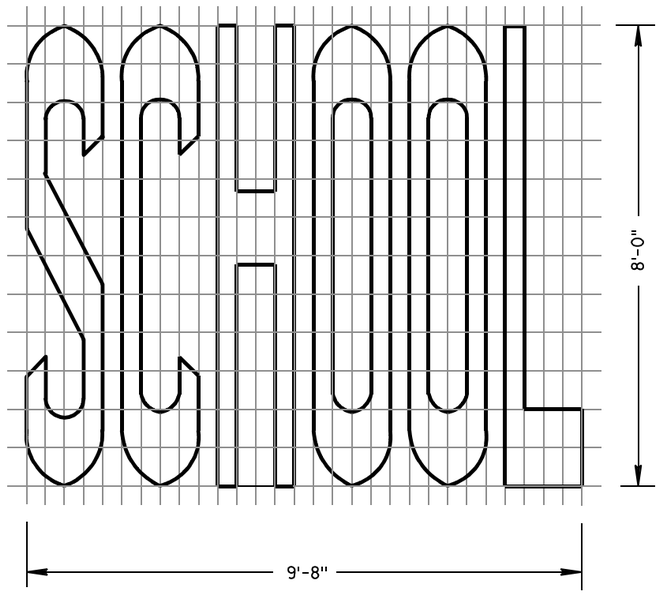


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE

/S/ Thomas N. Nothohm
STATE TRAFFIC ENGINEER

IGN

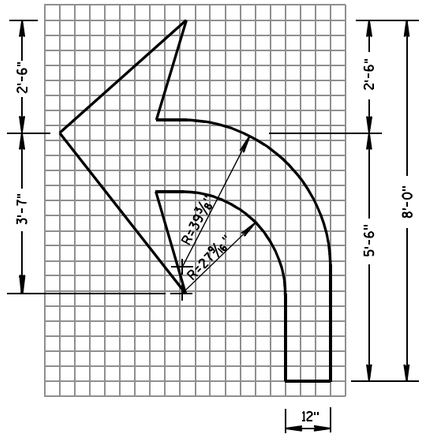
FHWA

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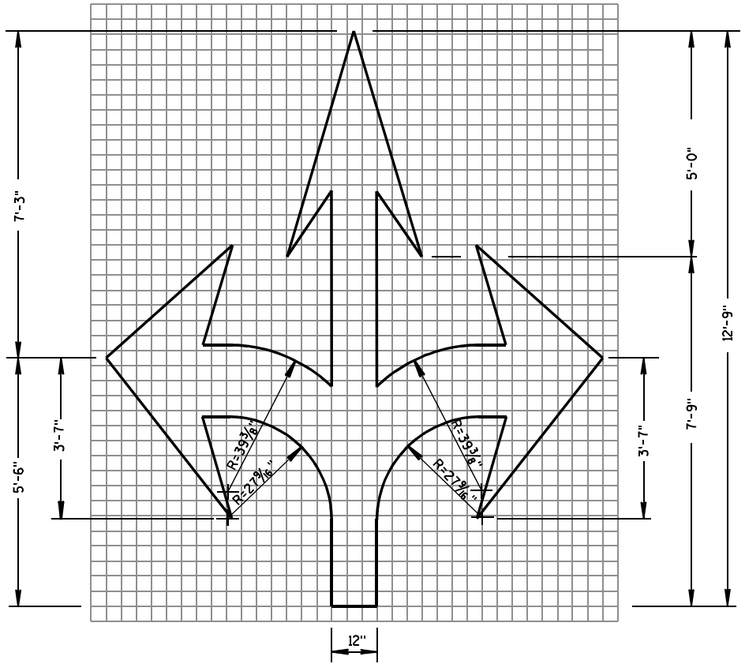
S.D.D. 15 C 7-12b

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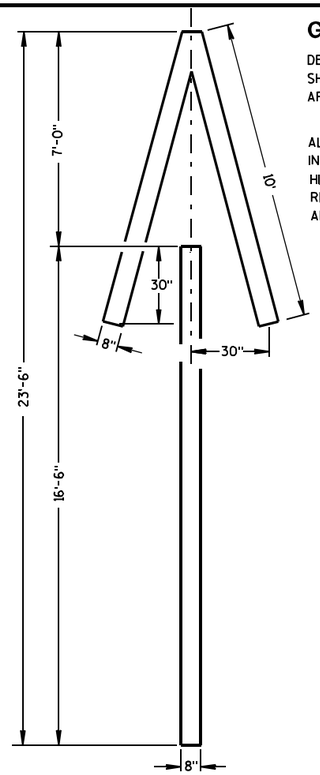
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TYPE 2



TYPE 6

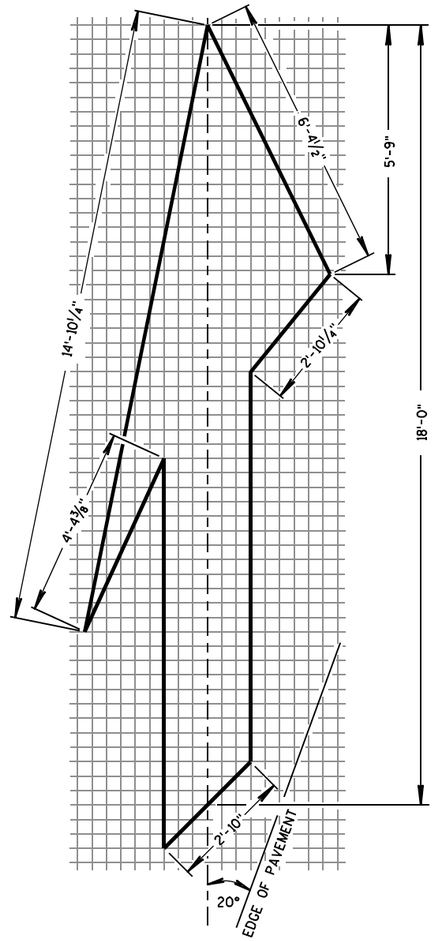


TYPE 4

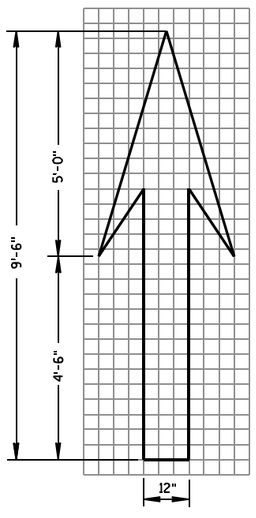
GENERAL NOTES

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

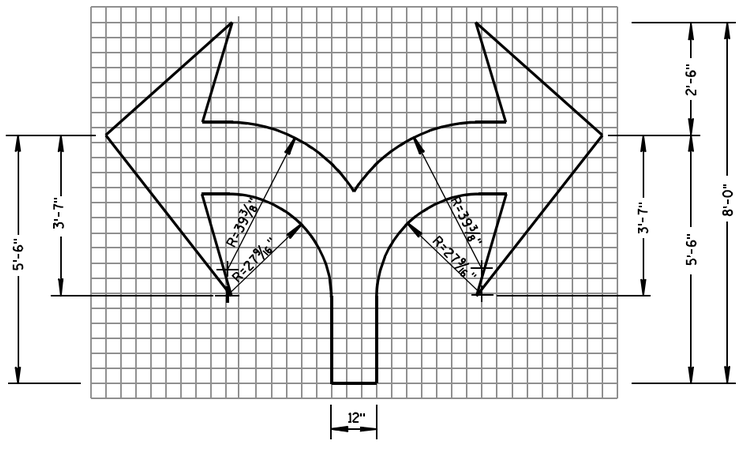
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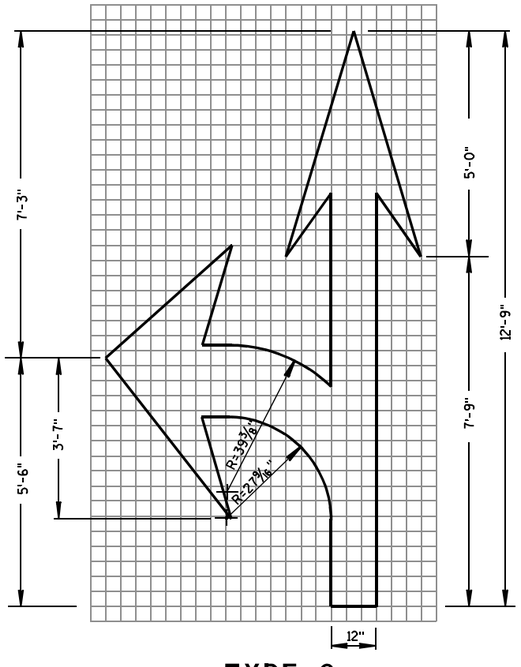
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nathaham — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 7-12c

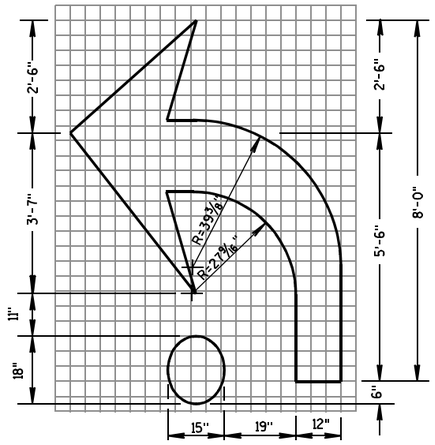
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S.D.D. 15 C 7-12c

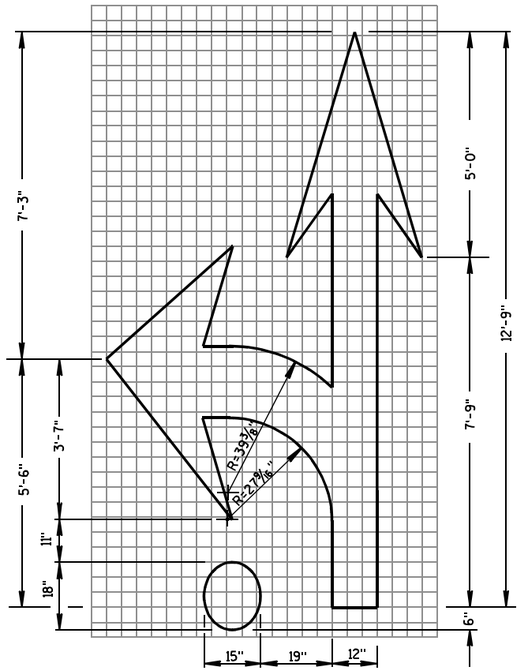
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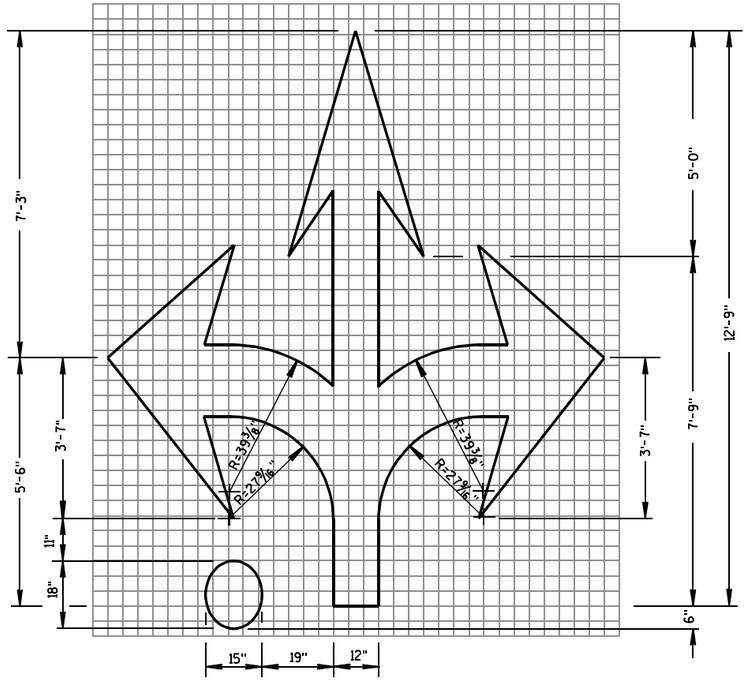
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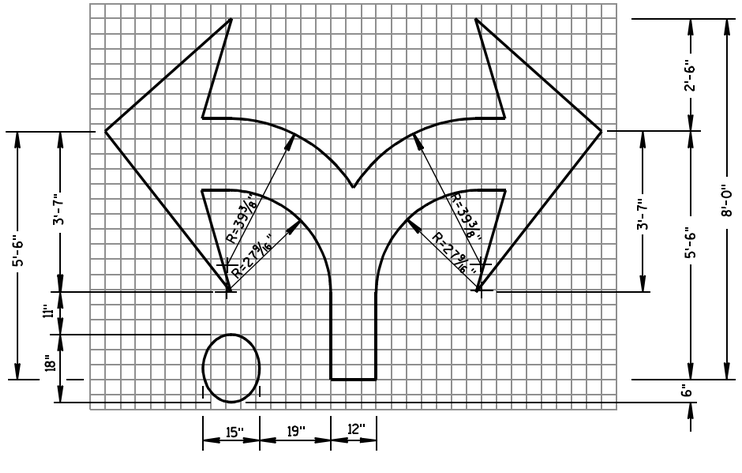
TYPE 2R



TYPE 3R



TYPE 6R



TYPE 7R

ROUNDABOUT ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

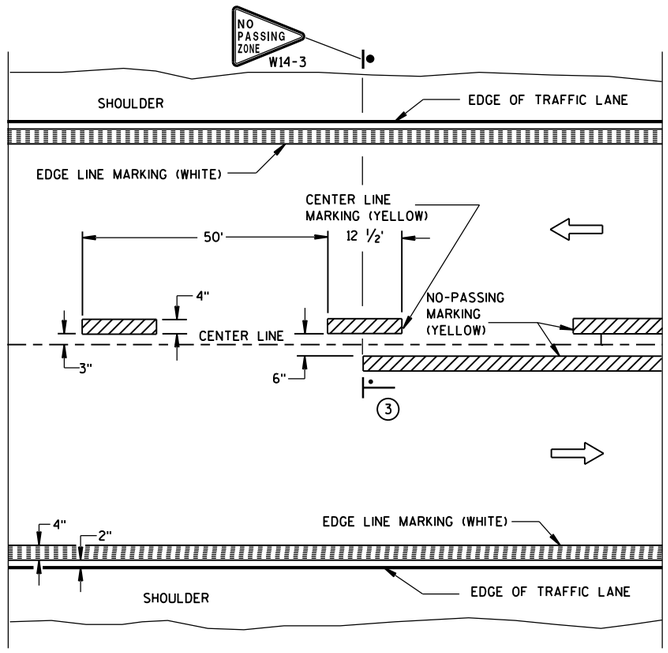
7/1/11 — DATE

/S/ Thomas N. Nothdurm — STATE TRAFFIC ENGINEER

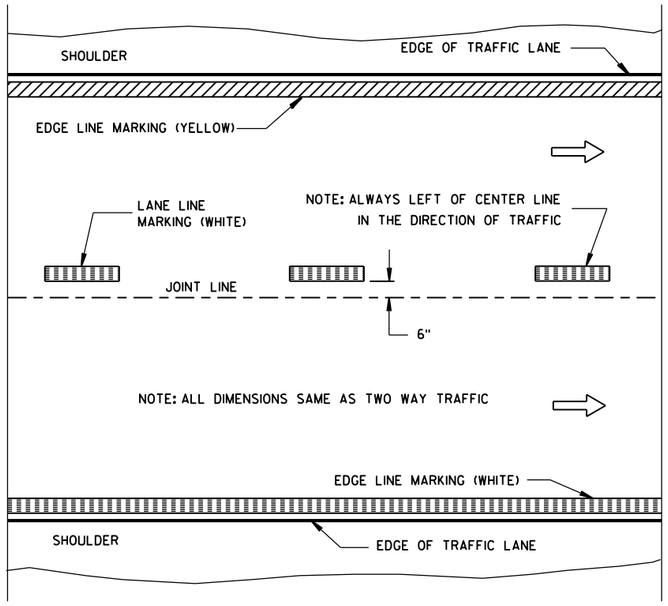
FHWA

6

S.D.D. 15 C 7-12d

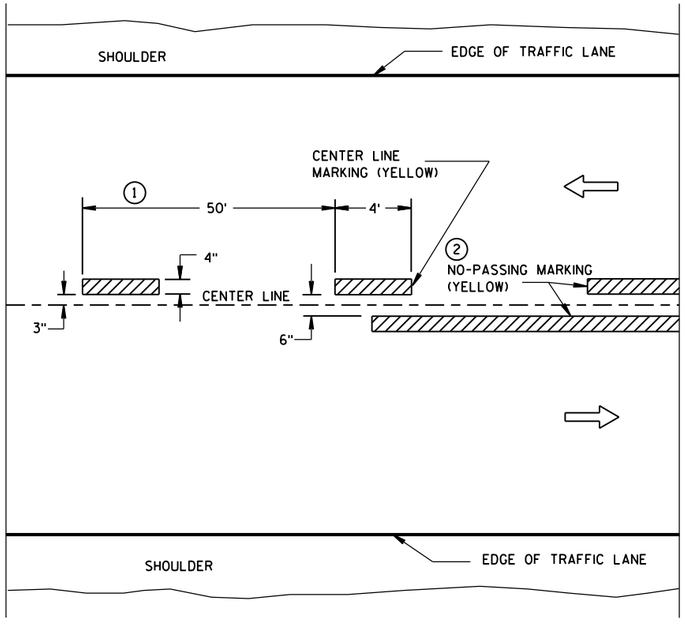


TWO WAY TRAFFIC

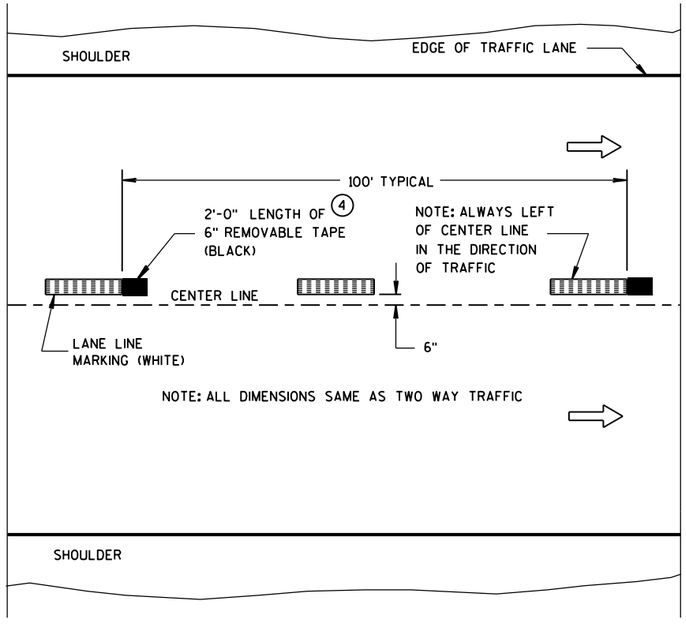


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

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

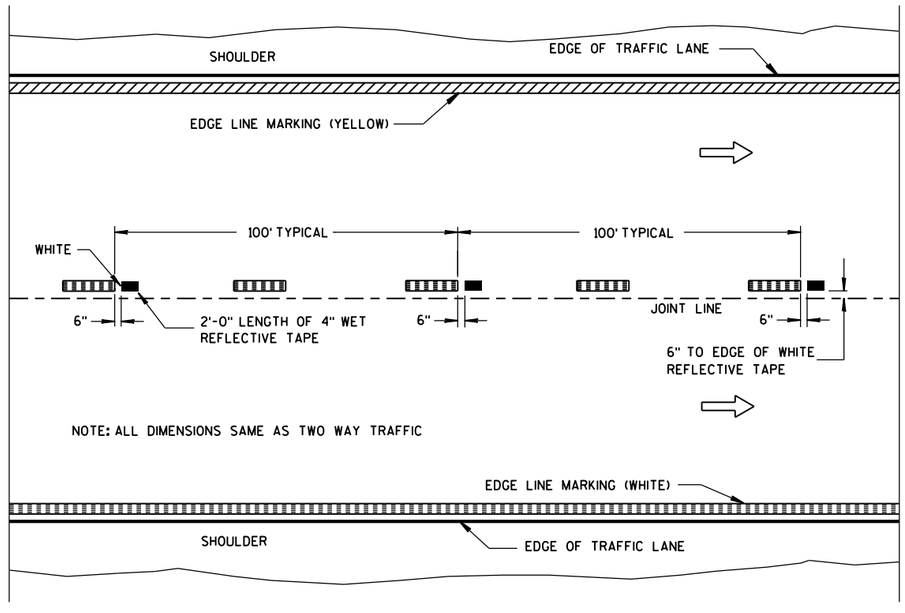
GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



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

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5-13-2013 DATE

/S/ Travis Feltes STATE TRAFFIC E

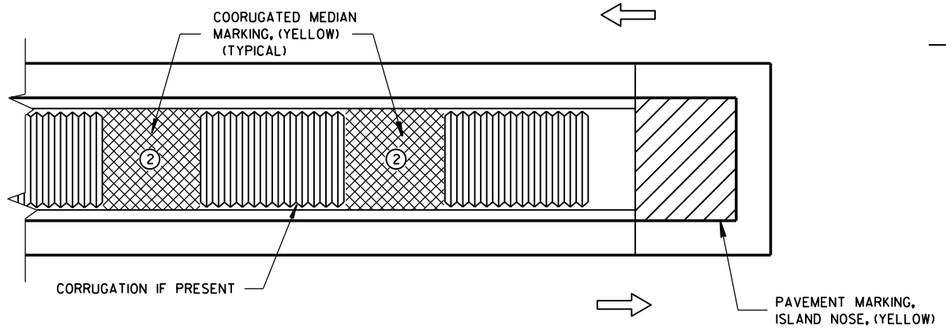
FHWA

6

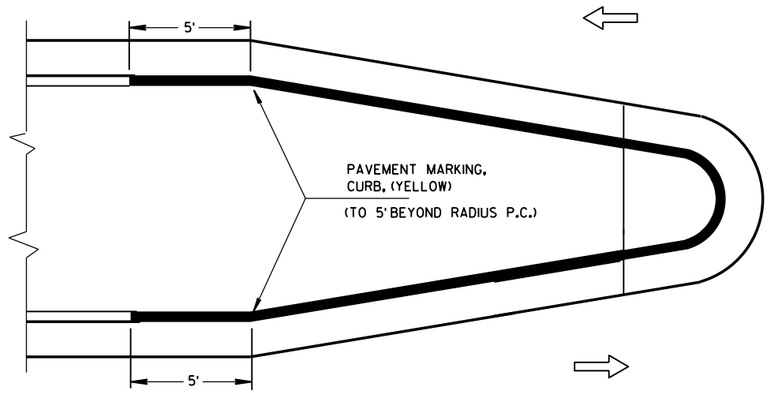
S.D.D. 15 C 8-16a

6

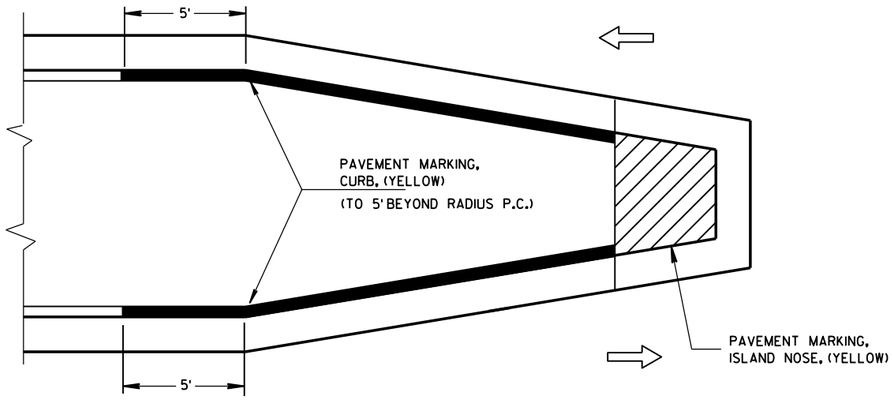
S.D.D. 15 C 8-16a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

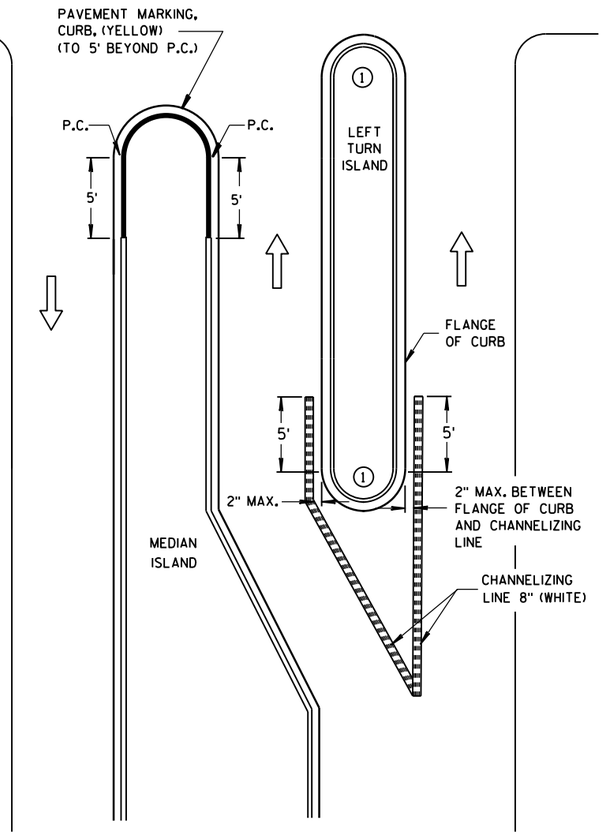


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

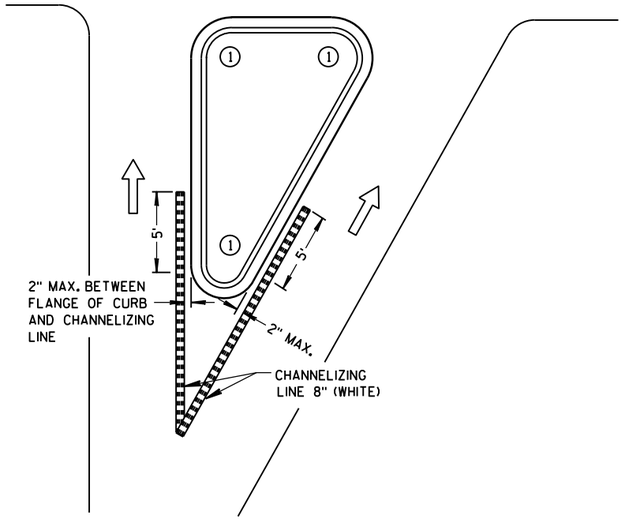


LEFT TURN & MEDIAN ISLAND

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)

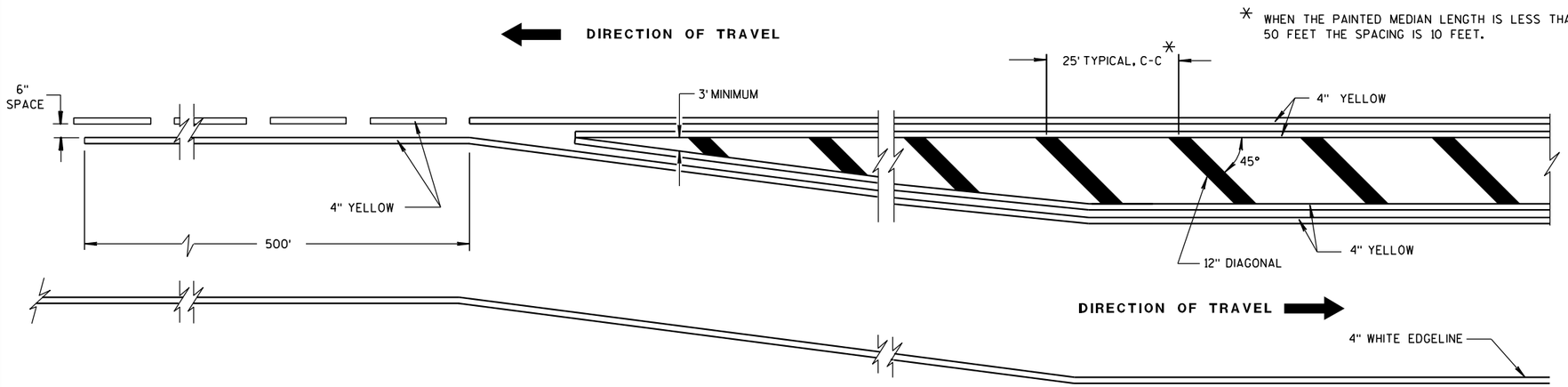
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

6

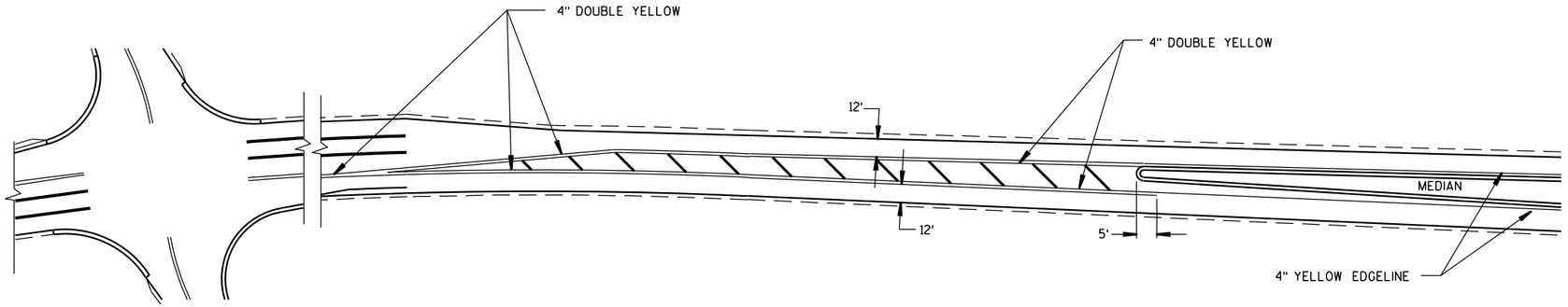
S.D.D. 15 C 8-16f



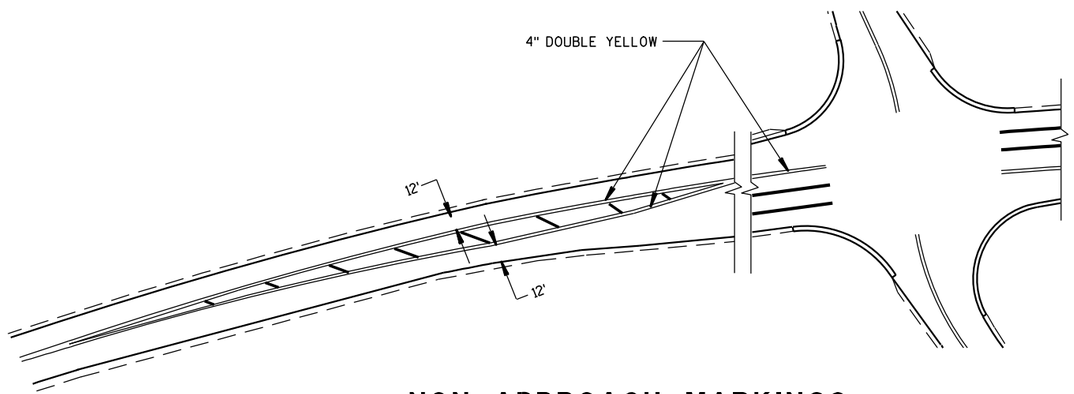
MEDIAN ISLAND DETAIL

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

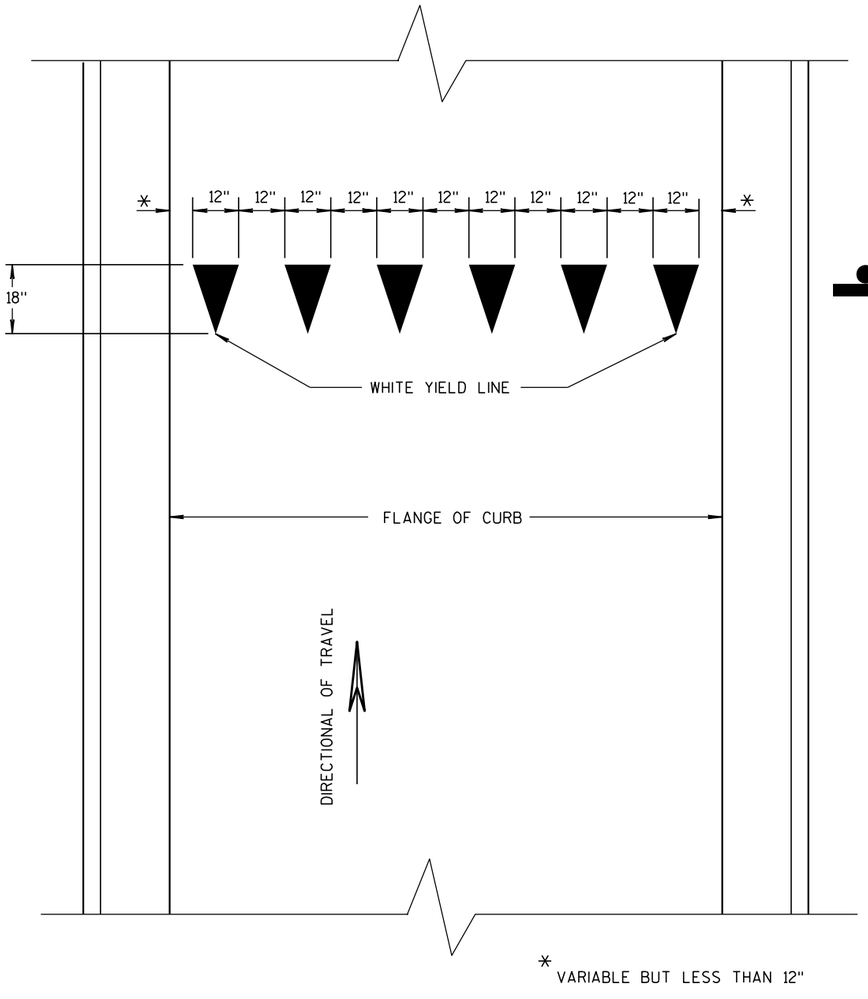
MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER
FHWA	187 IGN

6

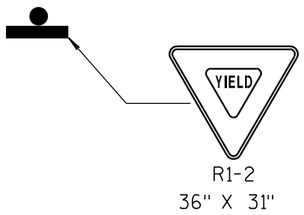
S.D.D. 15 C 18-3

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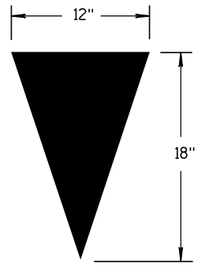
S.D.D. 15 C 18-3



YIELD LINE



R1-2
36" X 31"



YIELD TRIANGLE

YIELD MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

1/28/05
DATE

/S/ Thomas N. Nothdurft
STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 C 20-1

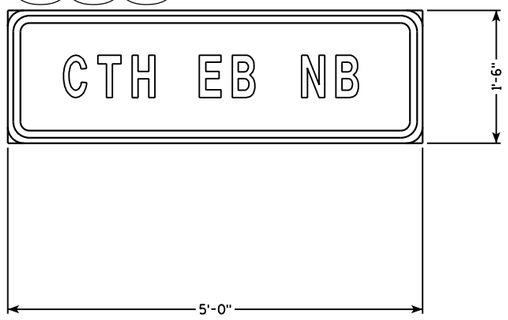
6

S.D.D. 15 C 20-1

(102) (103)



(100) (101) (105)



NOTES:

1) ALL SIGNS TO HAVE STANDARD REFLECTIVE SHEETING - REFERENCE: "WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION." LATEST EDITION.

2) AFTER SIGNS HAVE BEEN LOCATED IN THE FIELD, BUT BEFORE INSTALLATION, THE SIGNING AND MARKING SUPERVISOR SHALL VERIFY EACH SIGN LOCATION.

3) ALL FIXED MESSAGE SIGNS TO BE MOUNTED ON WOODEN SUPPORT POSTS (4"X6"). POSTS ARE INCIDENTAL TO ITEM "FIXED MESSAGE SIGN. STEEL POSTS (2"X2") MAY BE USED FOR SIGNS ON SURFACE STREETS.

4) SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "FIXED MESSAGE SIGNS." OR "SPECIAL MESSAGE SIGNS"

5) SIGNS SHALL BE BLACK NON- REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND UNLESS OTHERWISE NOTED.

6) ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS:

6-IN CAPES SHALL BE SERIES C

7) CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

8) SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.

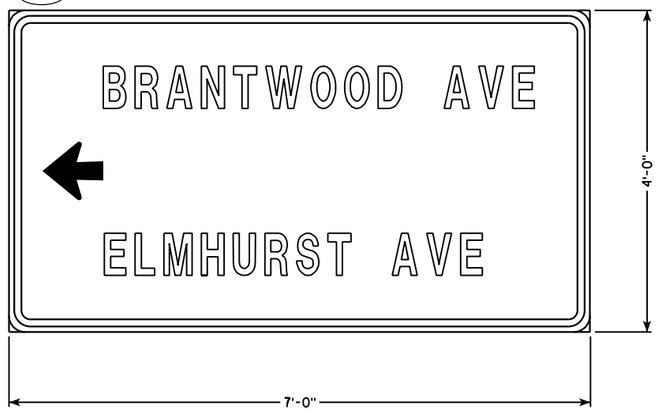
9) SIGN NUMBERS SHOWN BY .... (XXX)

10) BEGIN XXX XX SIGNS TO BE IN PLACE 10 DAYS PRIOR TO CONSTRUCTION.

11) BEGIN XXX XX SIGNS SHALL BE SEPERATE PANELS, BUT SHALL BE CONSIDERED AS PART OF THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE DIRECTED BY THE ENGINEER IN THE FIELD.

12) DO NOT SCALE.

(104)



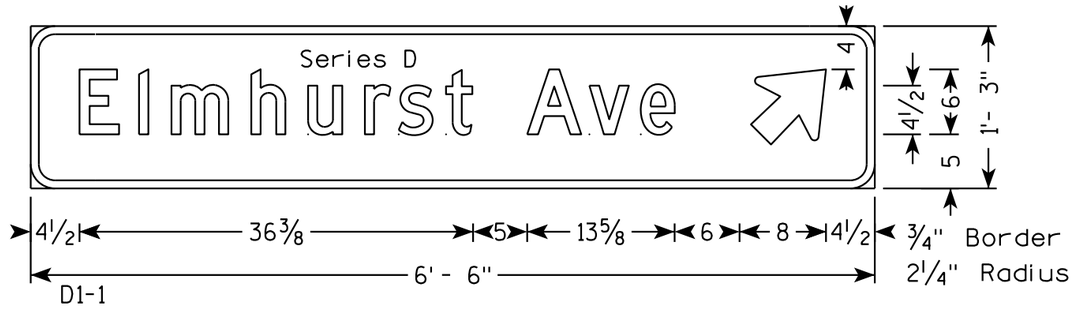
7

7

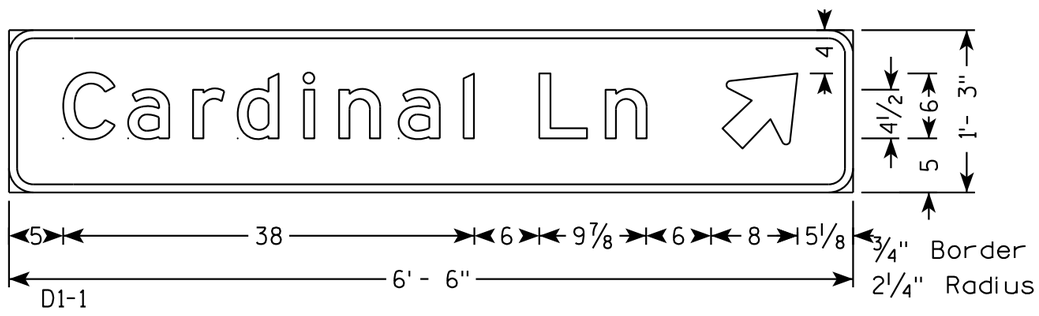
PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	FIXED MESSAGE SIGN DETAILS	SHEET 189	E

NOTES

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







7

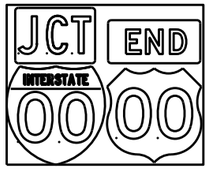
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PROJECT NO: 9202-08-80	HWY: USH 41	COUNTY: BROWN	PERMANENT SIGNING	SHEET NO: 190	E

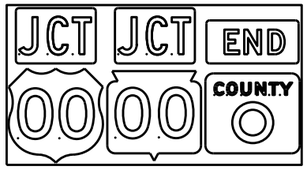
TYPICAL ASSEMBLIES



J1-1



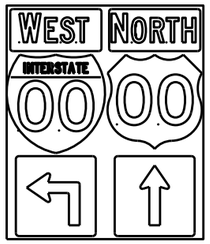
J1-2



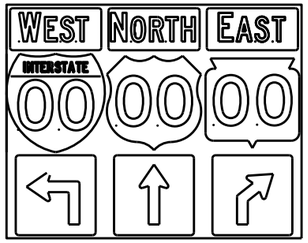
J1-3



J2-1



J2-2

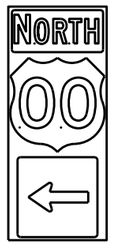


J2-3

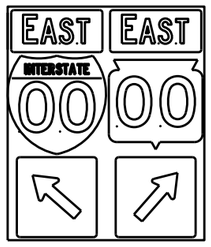


JV

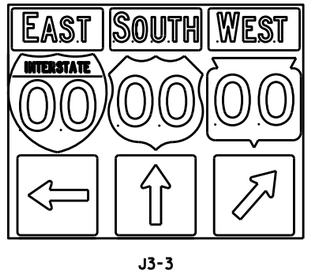
(Typical Vertical J-Assembly
See Note 10 and 11)



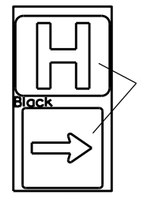
J3-1



J3-2



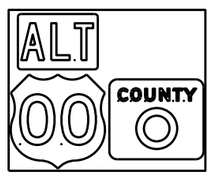
J3-3



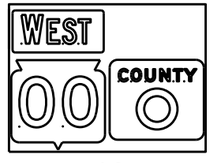
JH-1



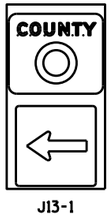
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

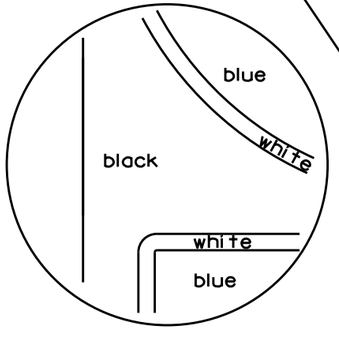


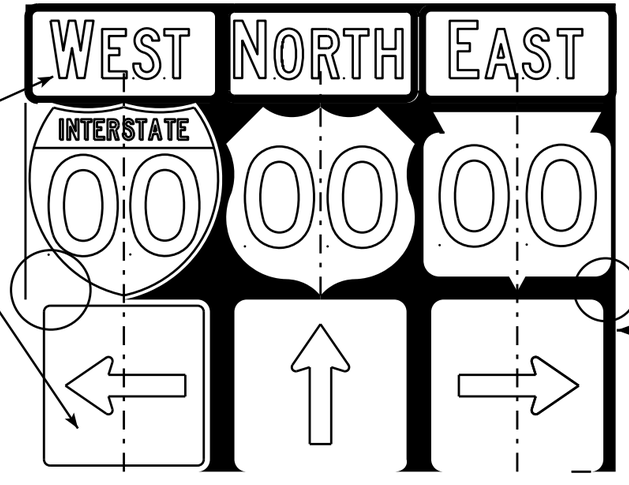
J23-1

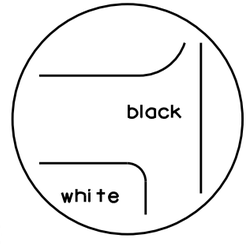


J22-1

[blue background with interstate]







[black background]

NOTES

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

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

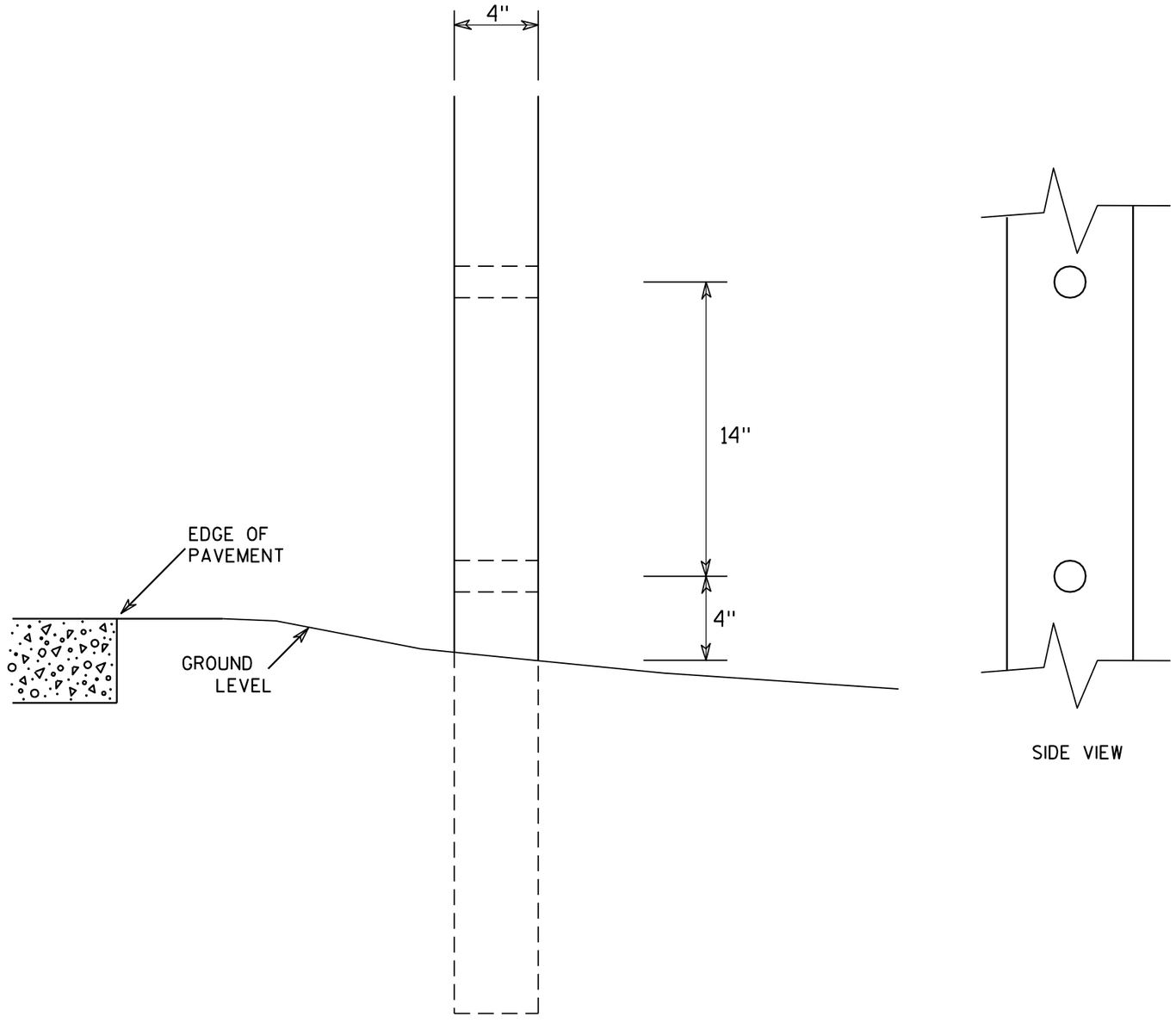
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL A2-1S.8

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :

WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

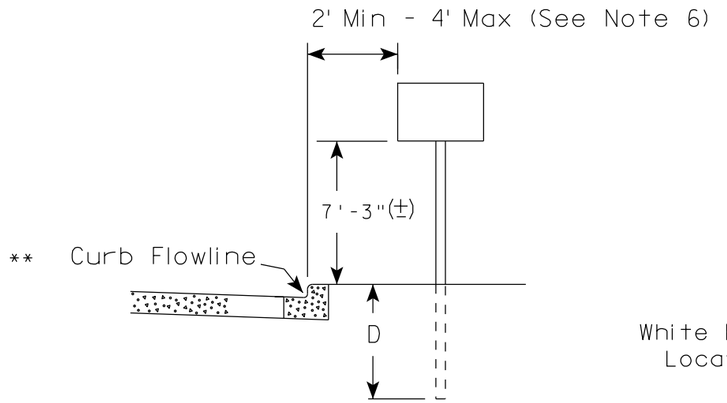
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

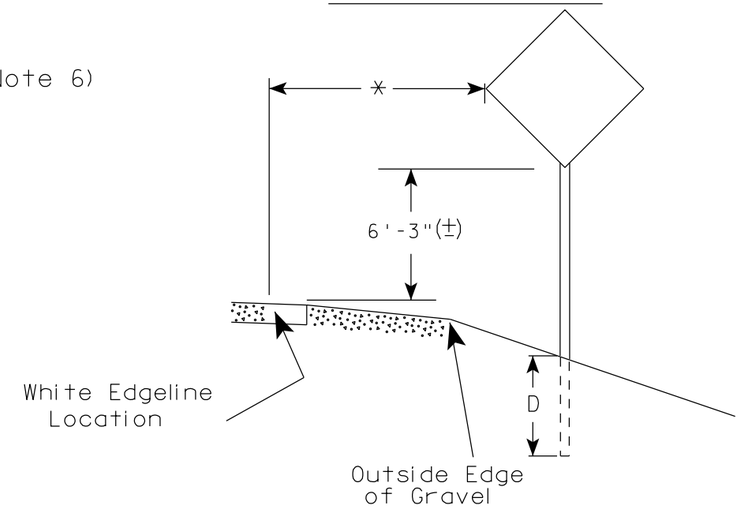
DATE 3/27/97 PLATE NO. A4-11.2

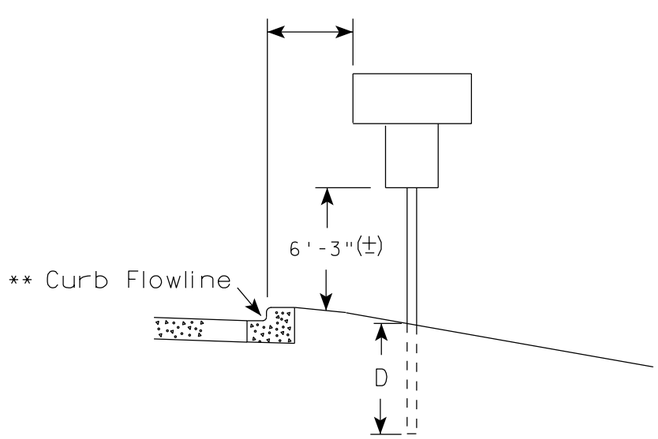
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 192	E

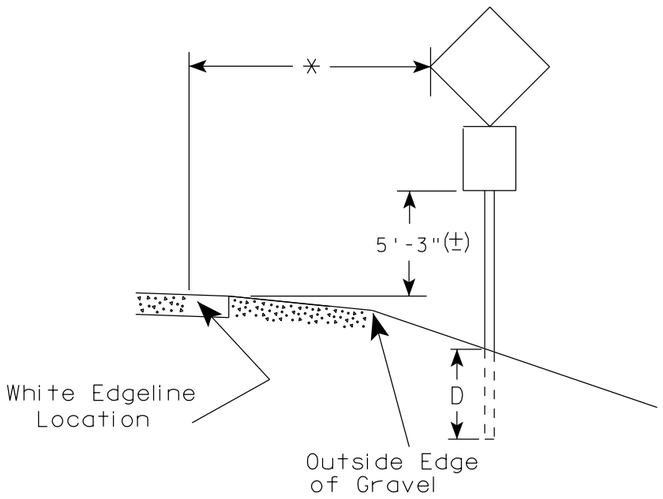
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

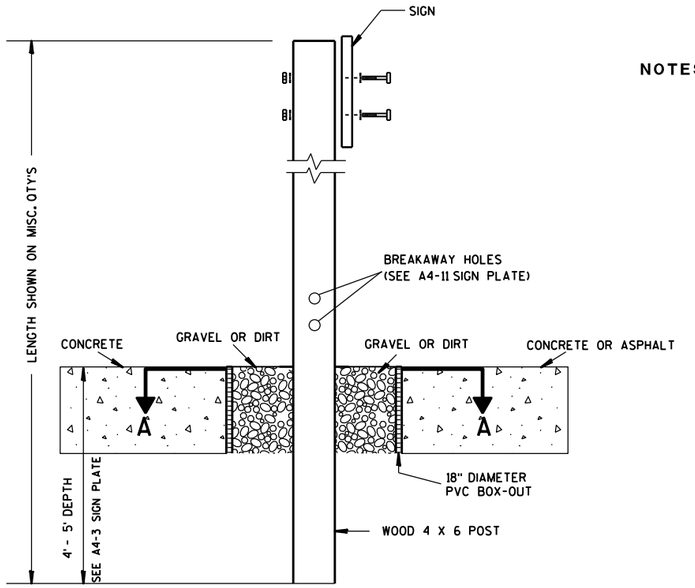
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-3.18

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

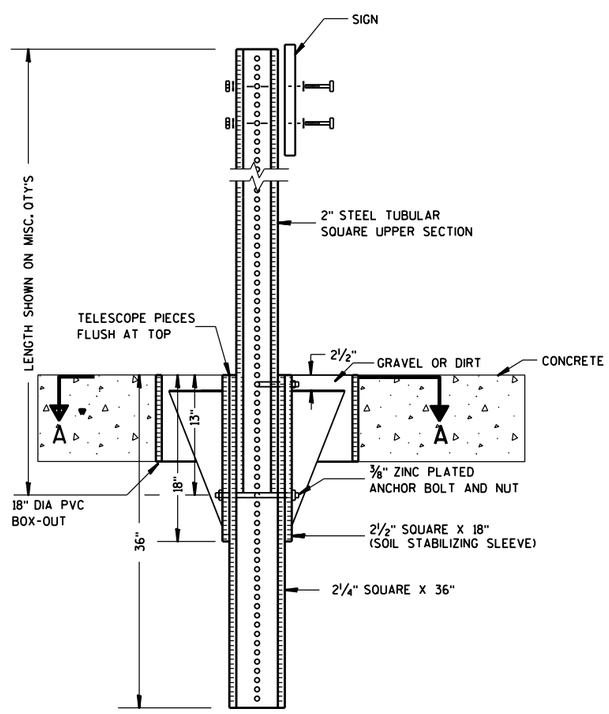
7



ELEVATION VIEW

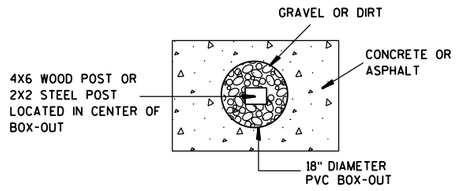
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

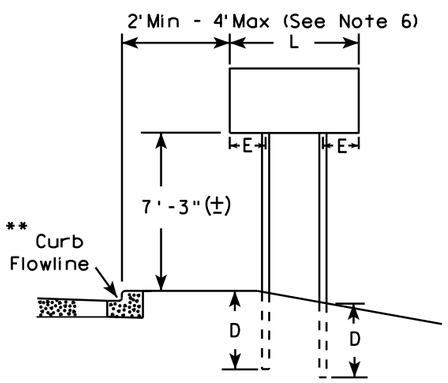
APPROVED Matthew R Rauch
for State Traffic Engineer

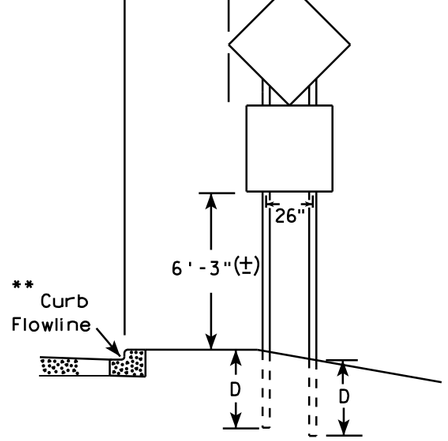
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

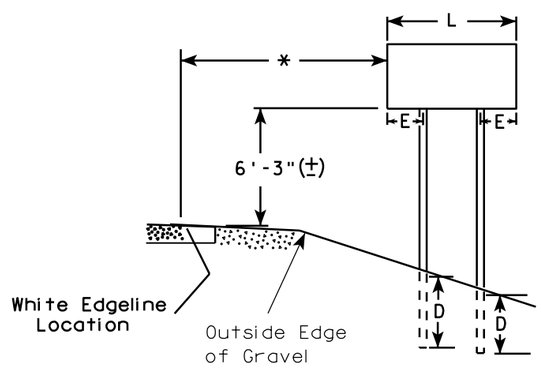
URBAN AREA

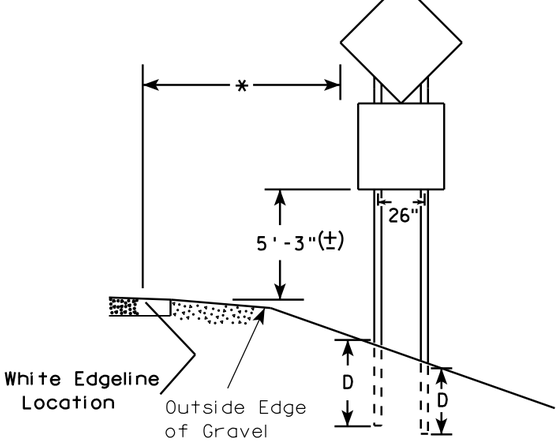




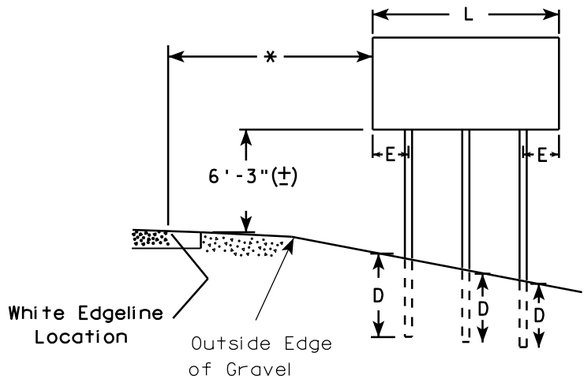
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



GENERAL NOTES

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

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

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

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

***

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

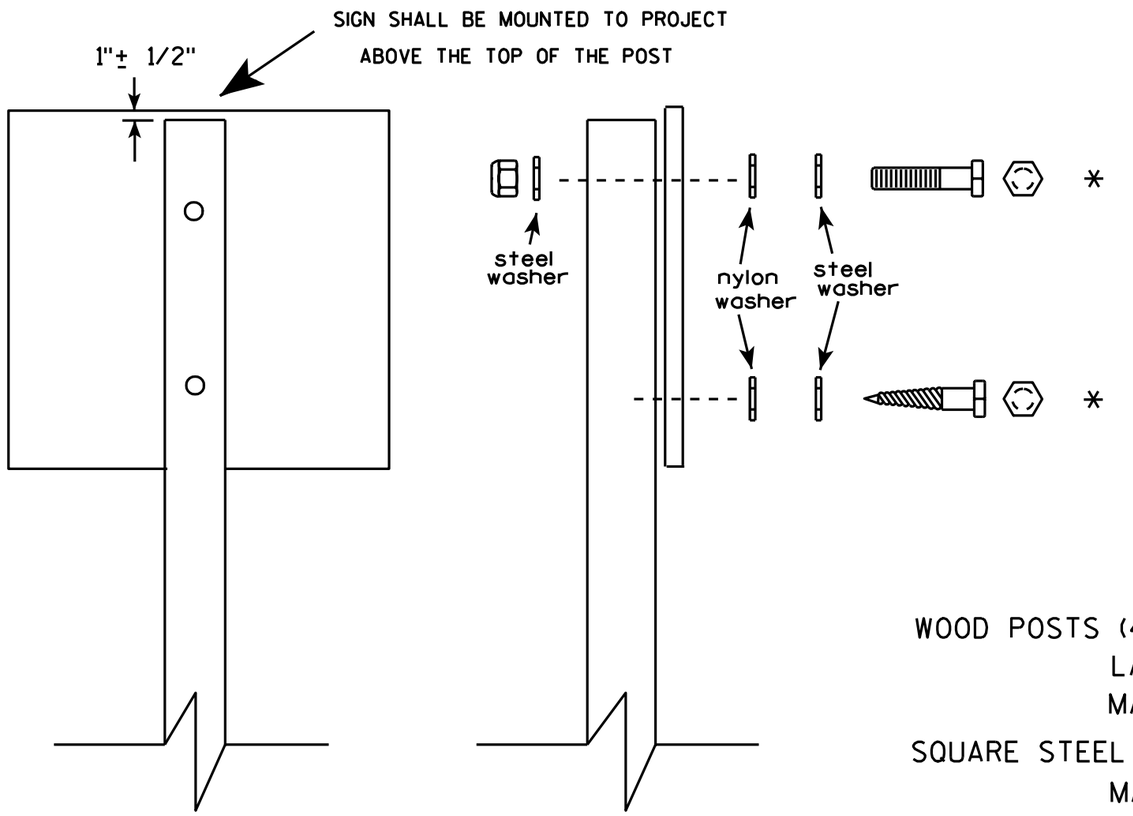
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/13 PLATE NO. A4-4 12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 30-SEP-2013 13:27 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000 WISDOT/CADDS SHEET 42



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

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

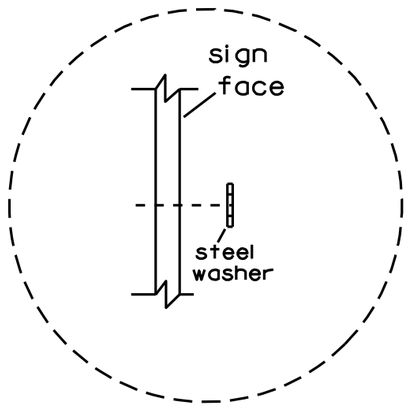
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

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



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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7

7

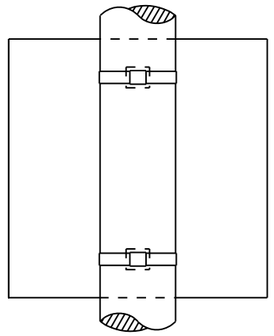
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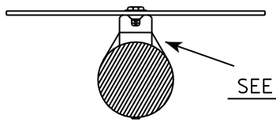
PROJECT NO:

SHEET NO: 196 E

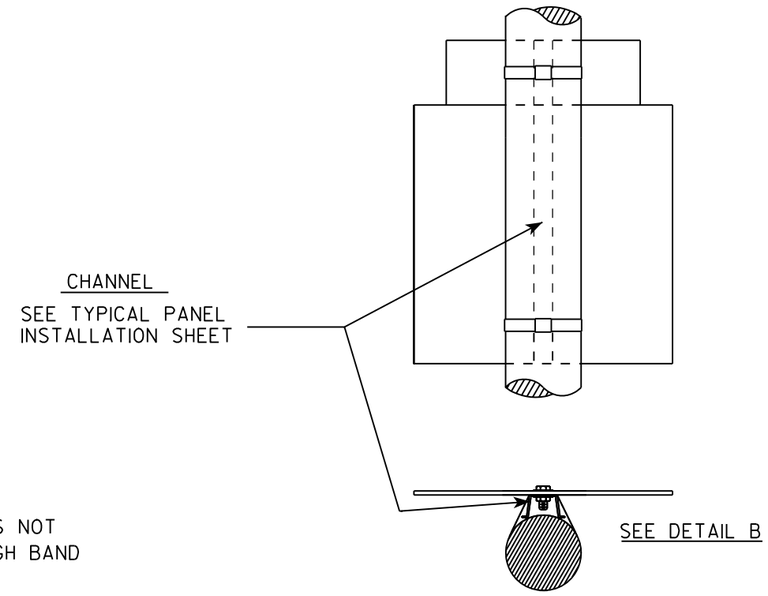
BANDING

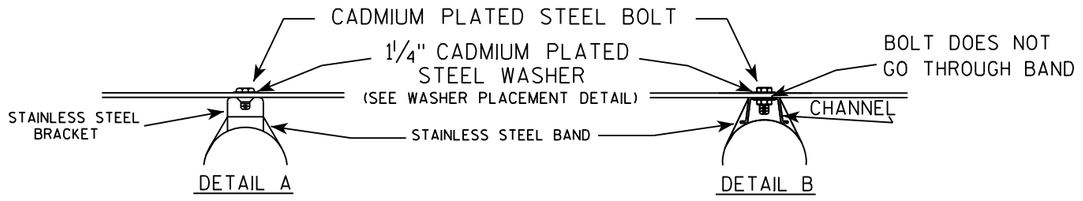
SINGLE SIGN



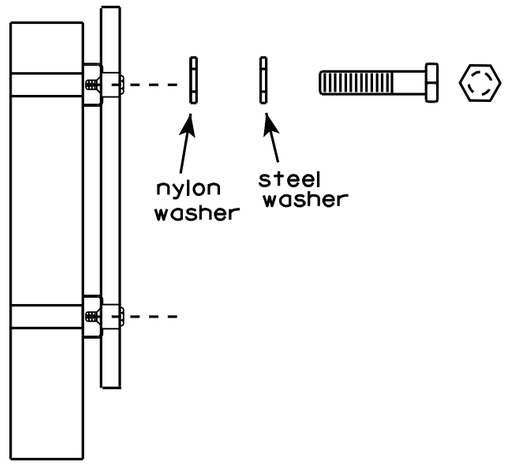


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

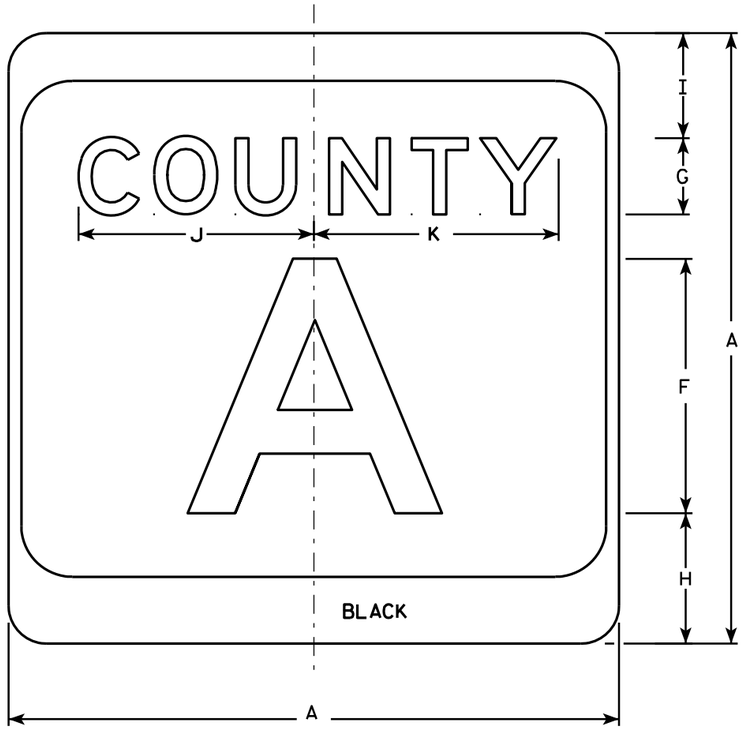
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

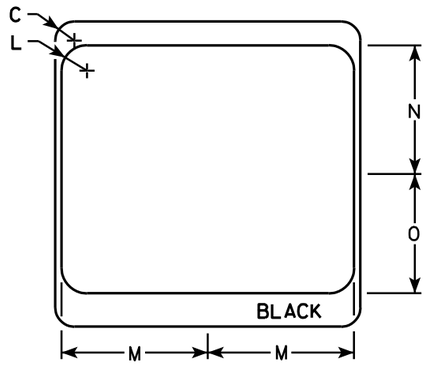
APPROVED Matthew R Rauch
for State Traffic Engineer

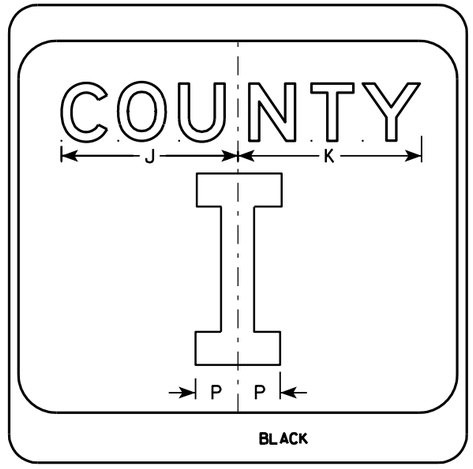
DATE 8/16/13 PLATE NO. A5-9.3

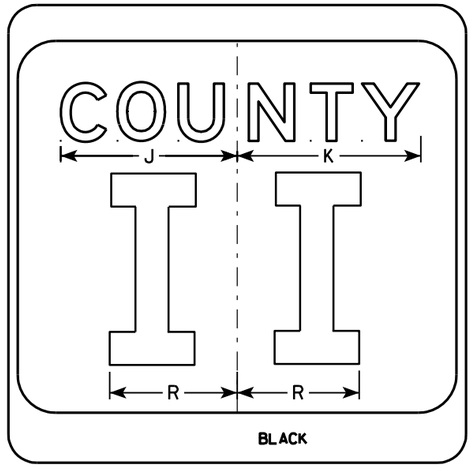
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 197	E



M1-5A







NOTES

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

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

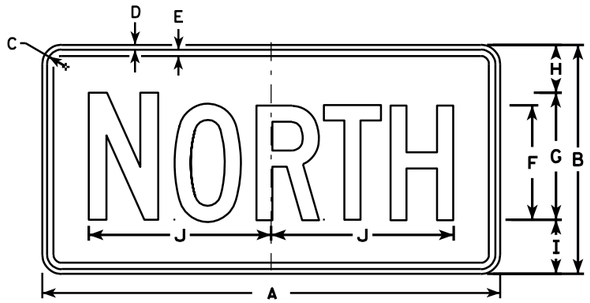
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

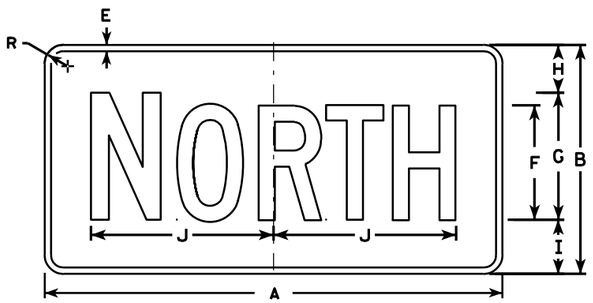
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 198 | E



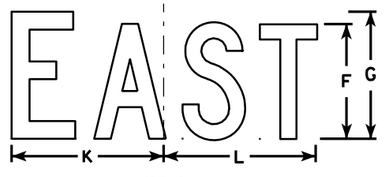
M3-1
MK3-1
MO3-1



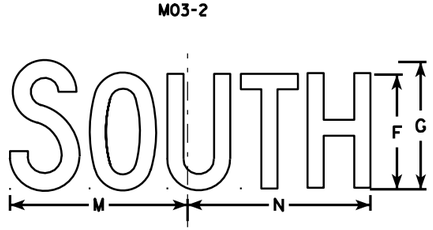
MB3-1
MG3-1
MM3-1
MN3-1



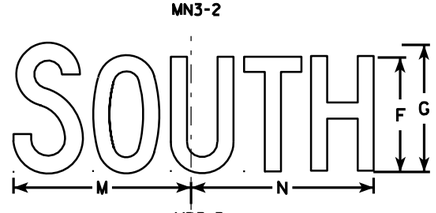
M3-2
MK3-2
MO3-2



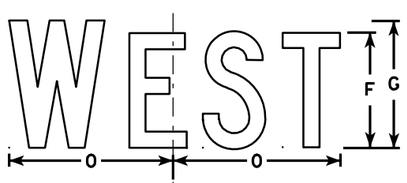
MB3-2
MG3-2
MM3-2
MN3-2



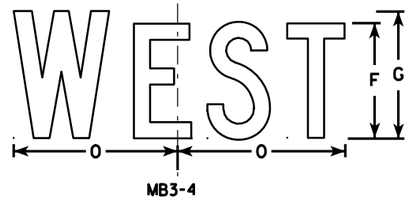
M3-3
MK3-3
MO3-3



MB3-3
MG3-3
MM3-3
MN3-3



M3-4
MK3-4
MO3-4



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White - Type H Reflective
   (Detour or temporary signs - Reflective)
   MG3-1 thru MG3-4 Background - Green
   Message - White - Type H Reflective
   MK3-1 thru MK3-4 Background - Green
   Message - White - Type H Reflective
   MM3-1 thru MM3-4 Background - White - Type H Reflective
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White - Type H Reflective
   M03-1 thru M03-4 Background - Orange - Reflective
   Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

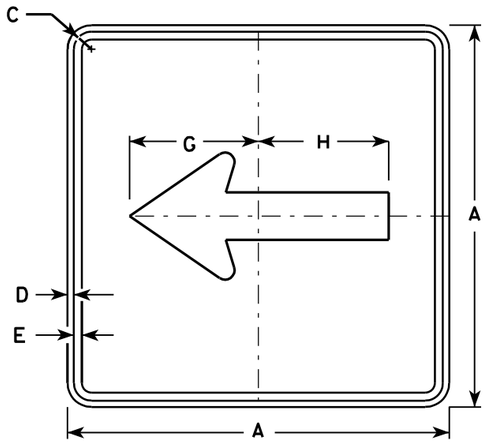
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

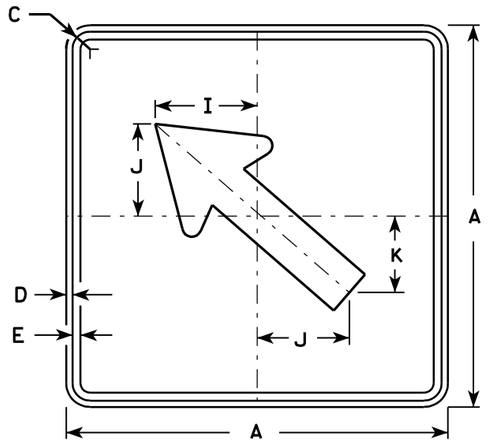
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

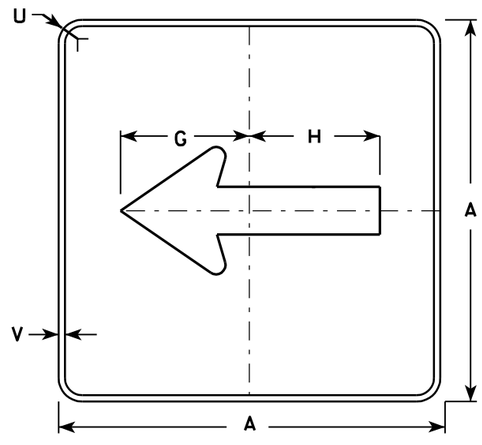
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 199	E



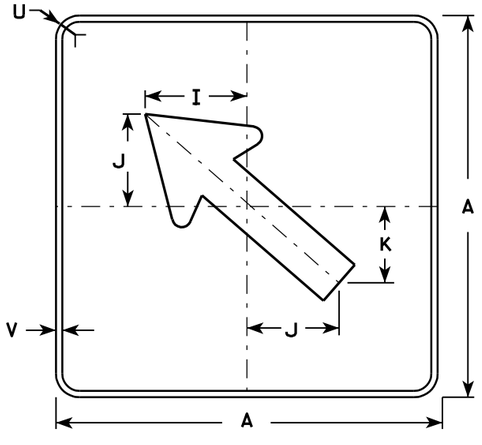
M6-1
MK6-1
MM6-1
MO6-1
MP6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MP6-2
MR6-2



MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

1. Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White - Type H Reflective
   Message - Black

   MB6-1 and MB6-2 Background - Blue
   Message - White - Type H Reflective

   MG6-1 and MG6-2 Background - Green
   Message - White - Type H Reflective

   MK6-1 and MK6-2 Background - Green
   Message - White - Type H Reflective

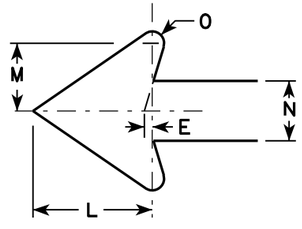
   MM6-1 and MM6-2 Background - White - Type H Reflective
   Message - Green

   MN6-1 and MN6-2 Background - Brown
   Message - White - Type H Reflective

   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black

   MP6-1 and MP6-2 Background - White - Type H Reflective
   Message - Blue

   MR6-1 and MR6-2 Background - Brown
   Message - White - Type H Reflective



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

STANDARD SIGN M6-1 & M6-2 SERIES

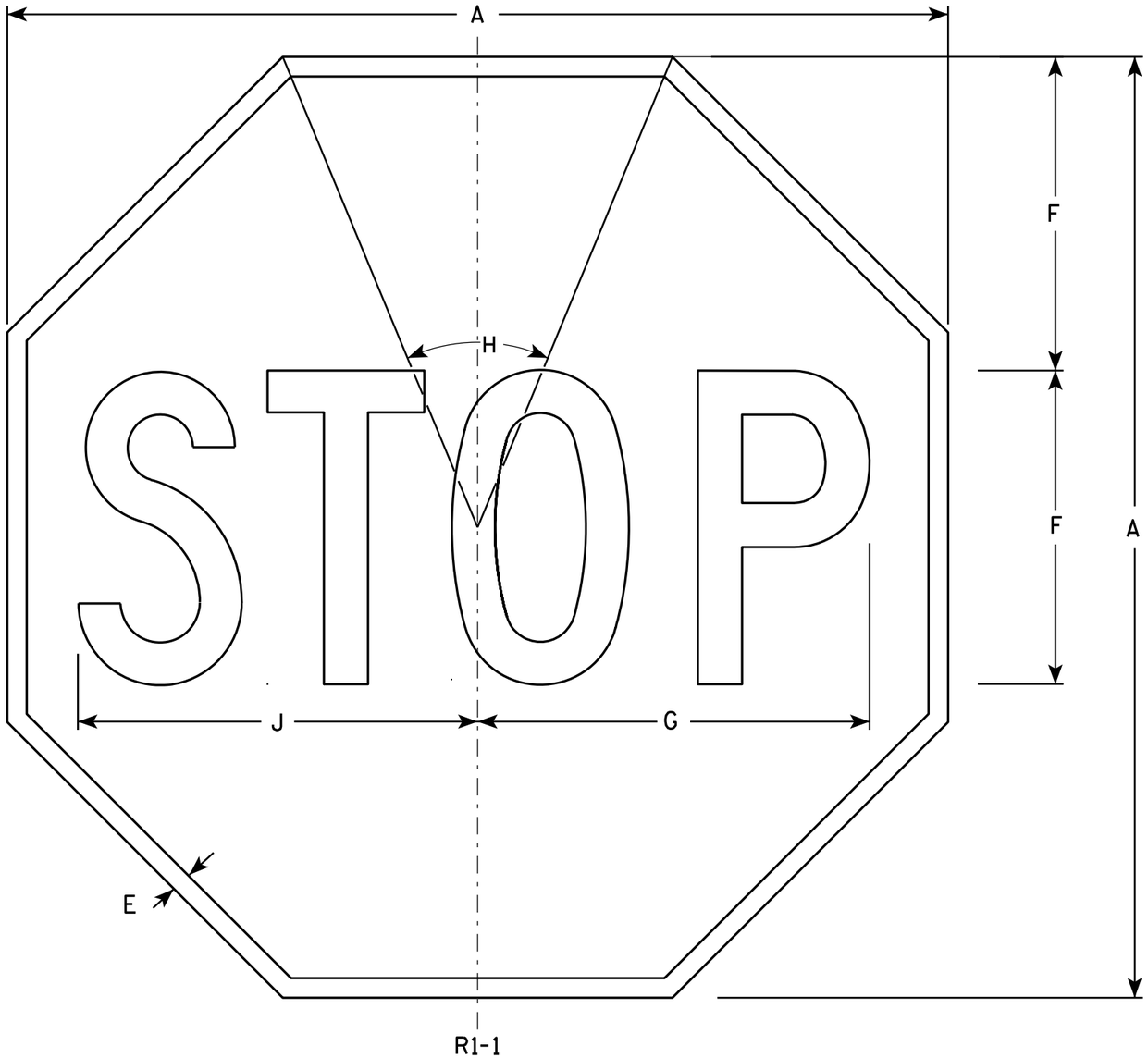
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/29/13 PLATE NO. M6-1.13

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 200 | E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\M61.DGN PLOT DATE : 29-JUL-2013 13:57 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.908552:1.000000
WISDOT/CADDS SHEET 42



NOTES

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

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

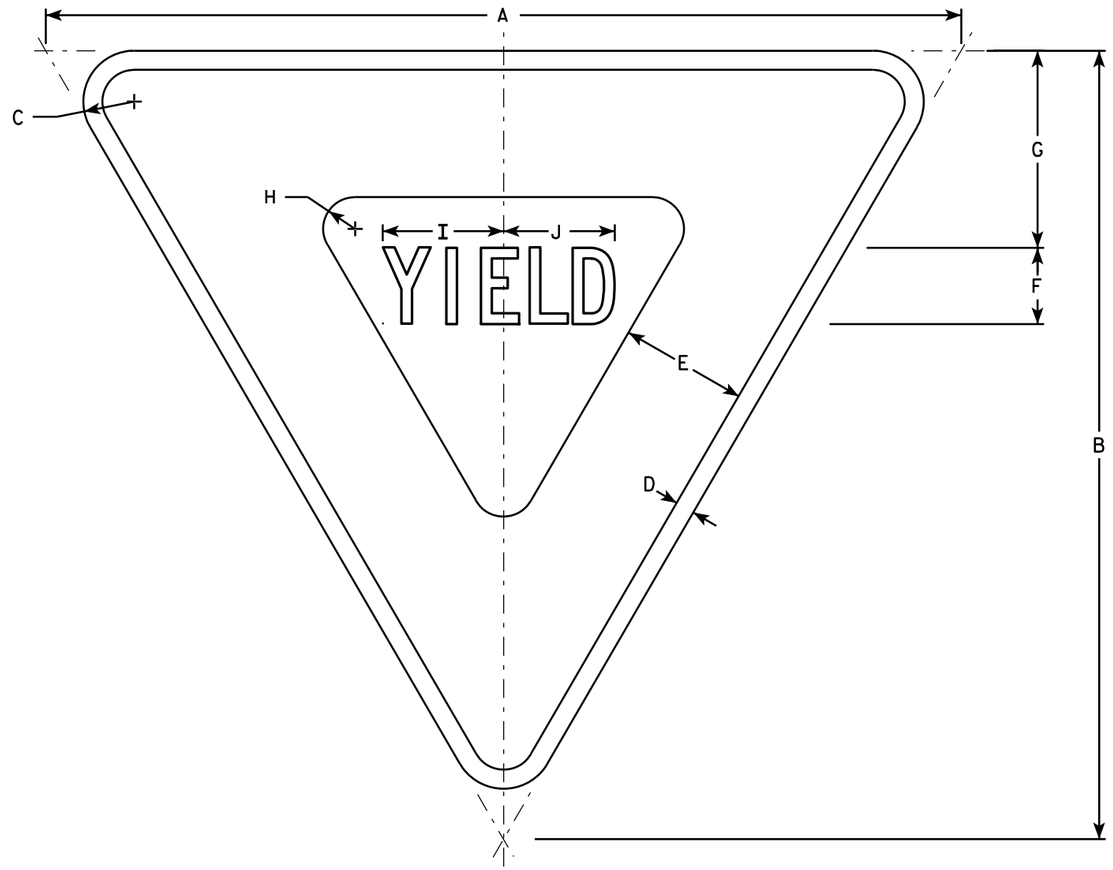
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 201	E



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6	24	21	1 1/2	3/8	3	2	4 3/4	7/8	3 1/4	3																	1.75
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

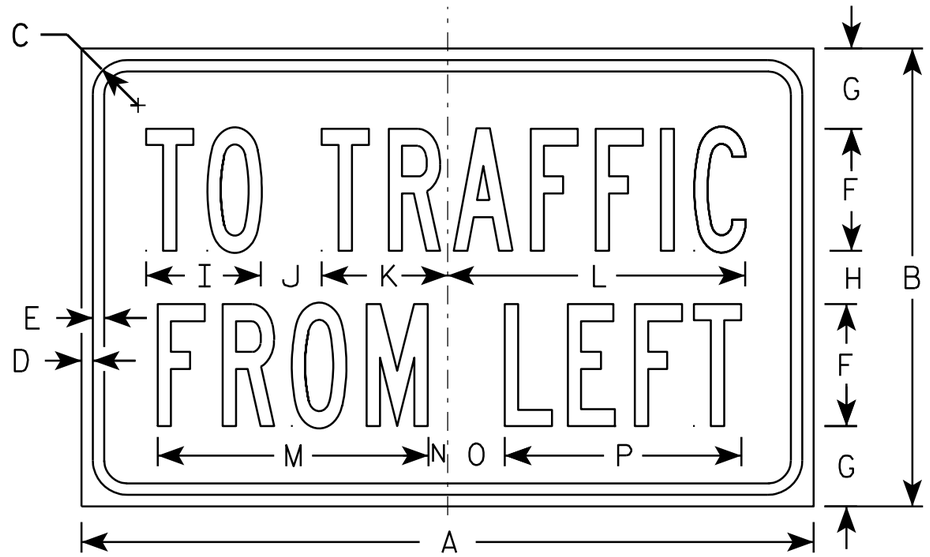
STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. R1-2.11

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 202 | E



R1-54

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
2M	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
3																											
4																											
5																											

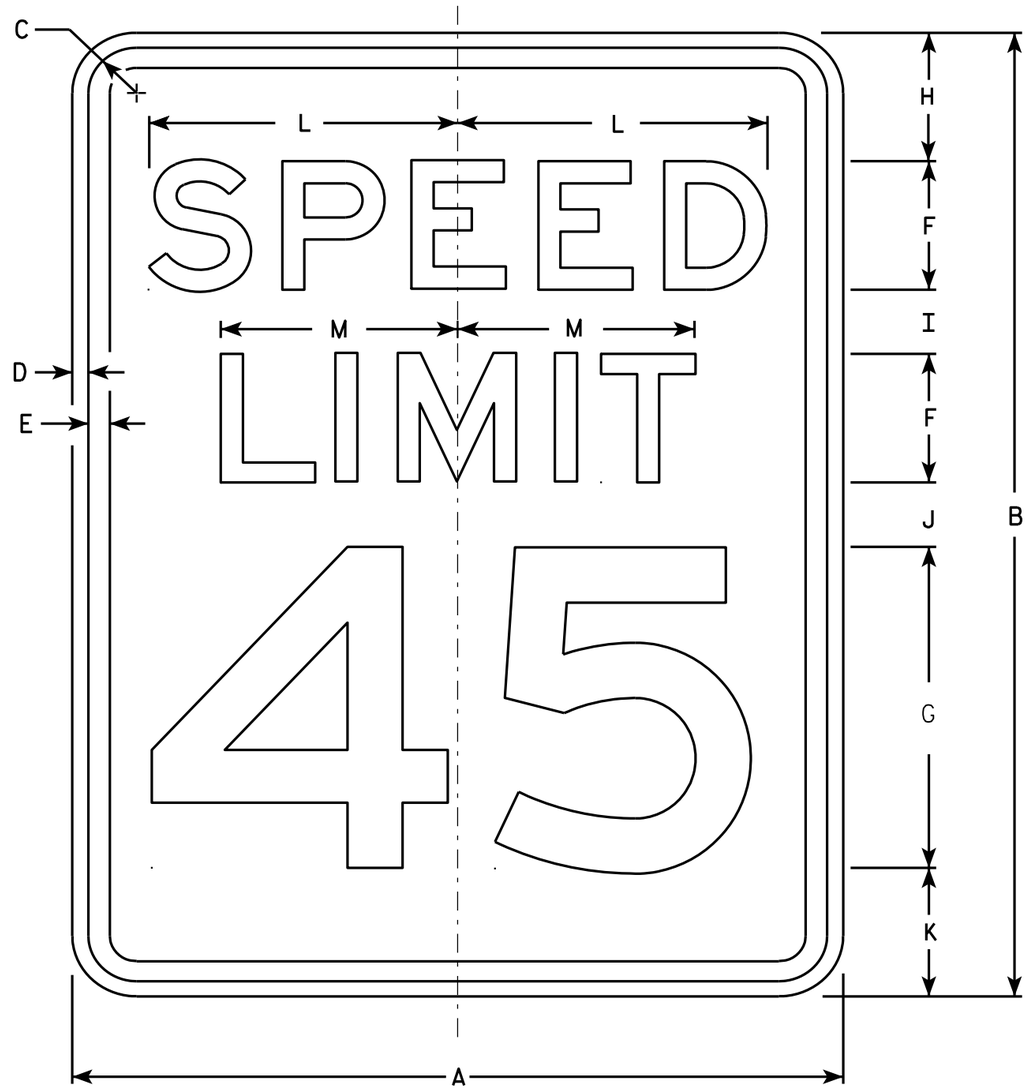
STANDARD SIGN
R1-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-54.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 203	E



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

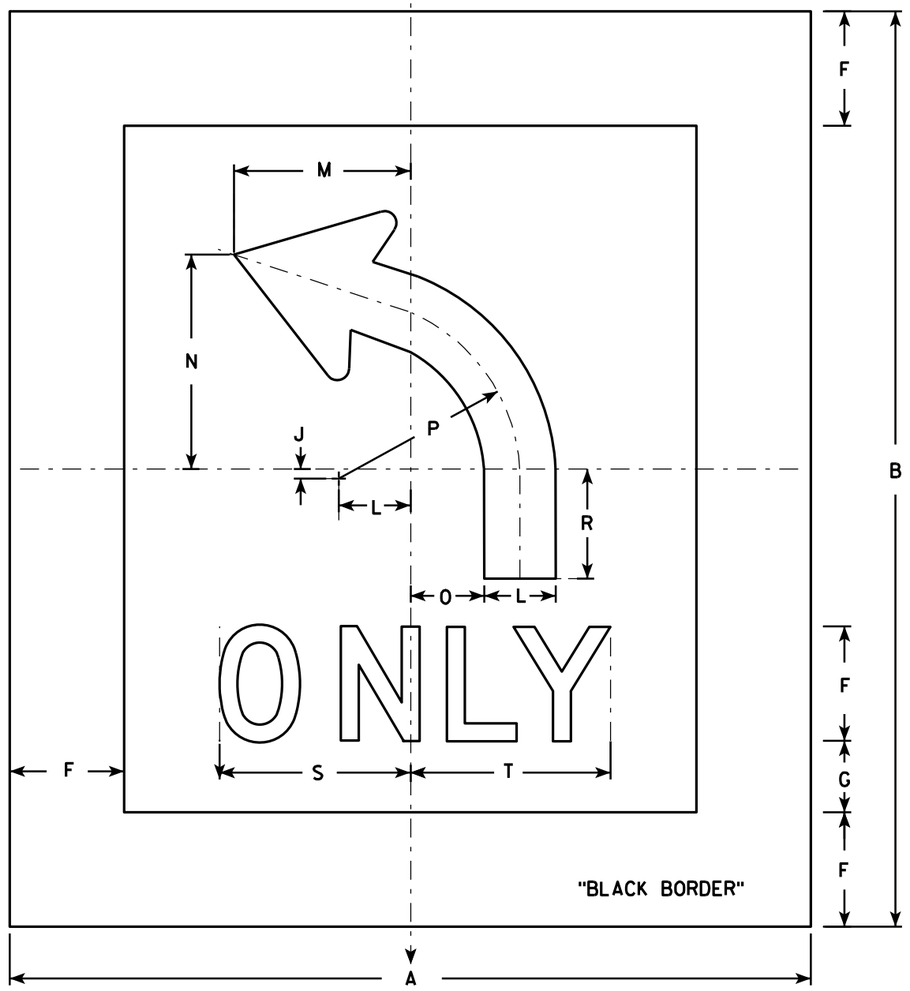
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

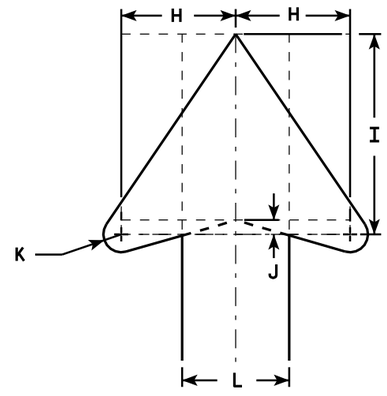
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 204 | E



R3-5L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
5. R3-5R is the same as R3-5L except curved portion of arrow points right.
6. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
2M	42	48				6	3 3/4	4	7	1/2	5/8	3 3/4	9 1/4	11 1/4	3 7/8	9 1/2		5 3/4	10	10 1/2							1.26
3																											
4																											
5																											

STANDARD SIGN
R3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/24/11 PLATE NO. R3-5.6

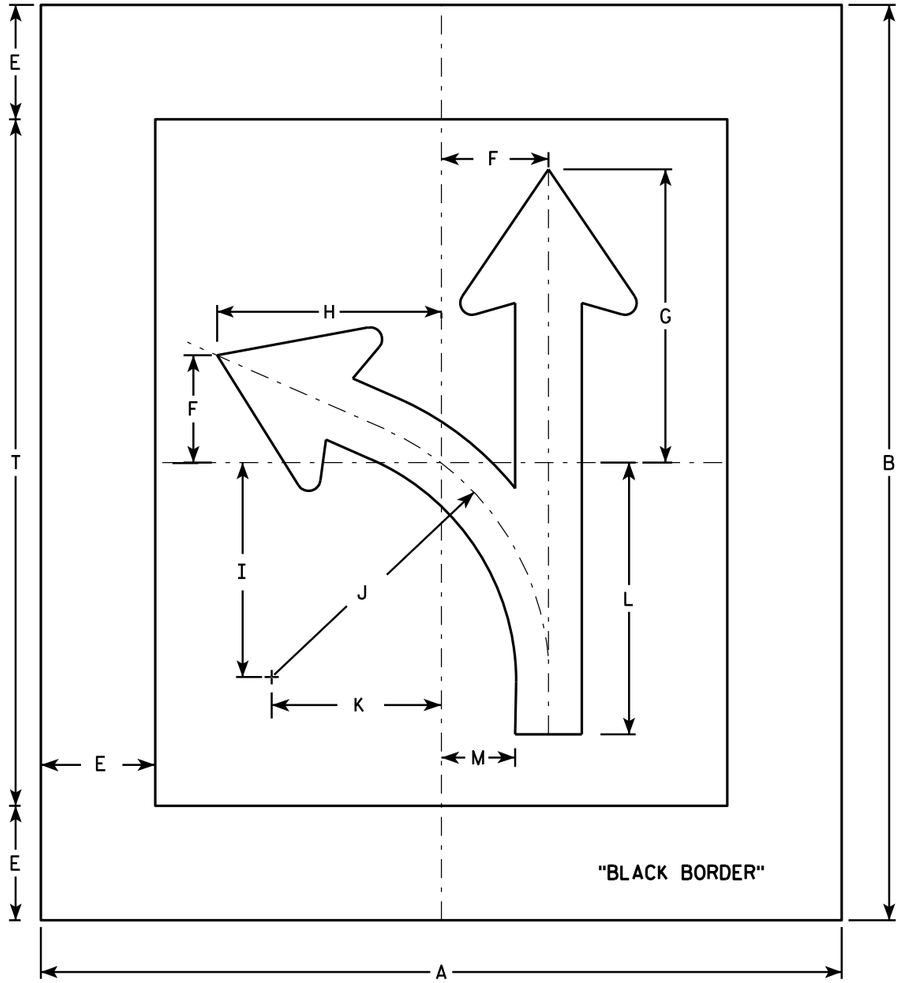
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 205 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R35.DGN PLOT DATE : 24-FEB-2011 14:53 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

WISDOT/CADDS SHEET 42

7

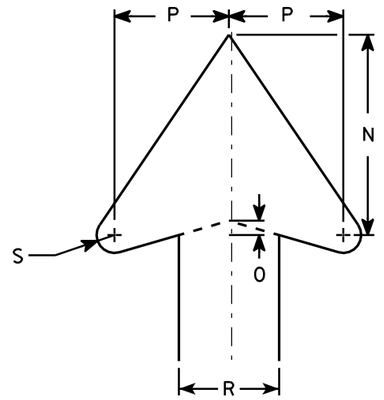
7



R3-6L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
4. R3-6R is the same as R3-6L except curved portion of arrow points right.
5. The 6" border is non-reflective black.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
2M	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4		3 1/2	5/8	36							14.0
3																											
4																											
5																											

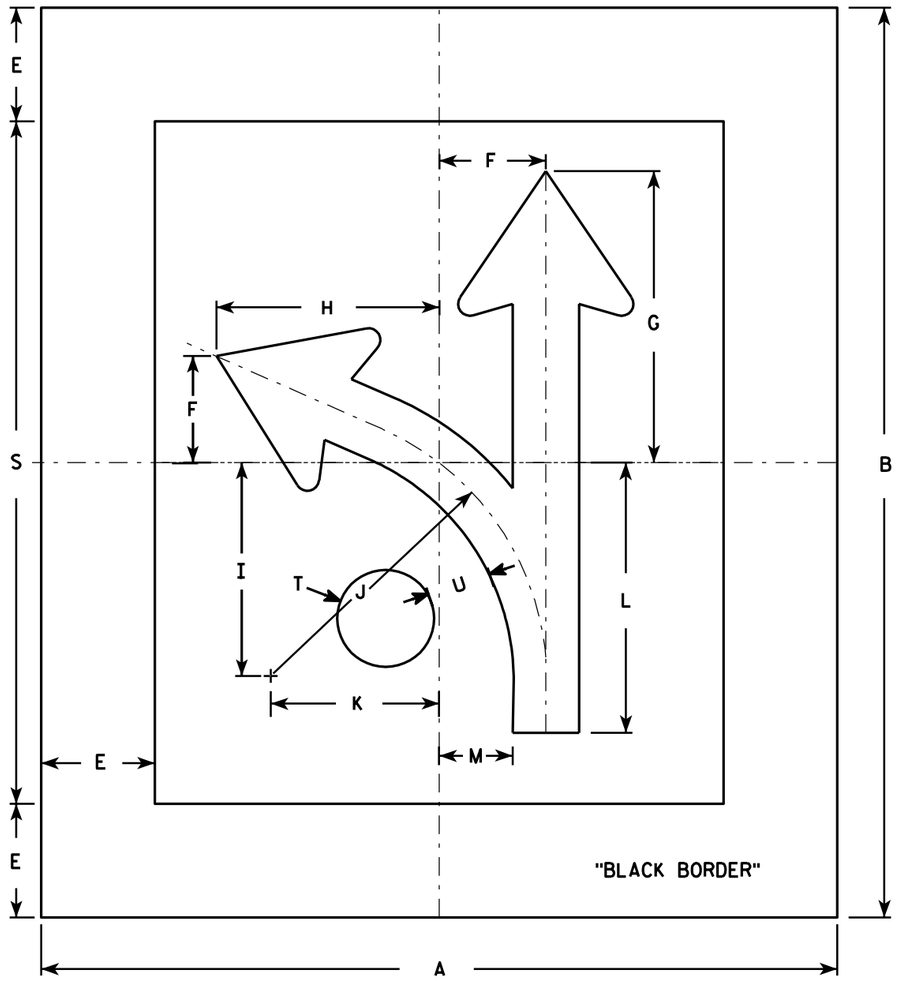
STANDARD SIGN
R3-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-6.5

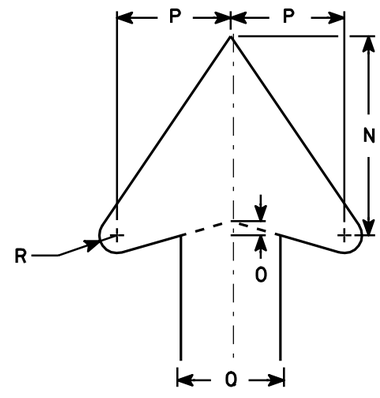
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 206 | E



R3-6XL

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base material is plywood. When base material is metal, the corners shall be rounded.
4. R3-6XR is the same as R3-6XL except curved portion of arrow points right.
5. The 6" border is non-reflective black.



ARROW DETAIL

Metric equivalent for this sign is:

SIZE	
1	
2	1050 mm X 1200 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	42	48			6	5 5/8	15 3/8	11 3/4	11 1/4	14 1/2	8 7/8	14 1/4	3 7/8	7	1/2	4	3 1/2	5/8	36	5	3 1/2						14.0	1.26
3																												
4																												
5																												

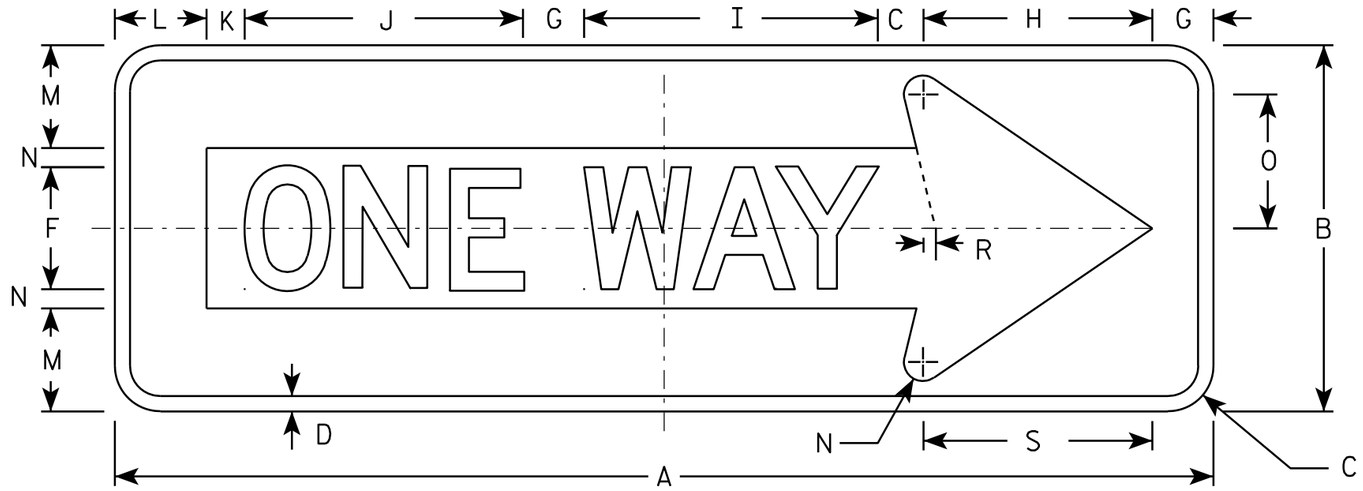
STANDARD SIGN
R3-6X

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/13/08 PLATE NO. R3-6X.1

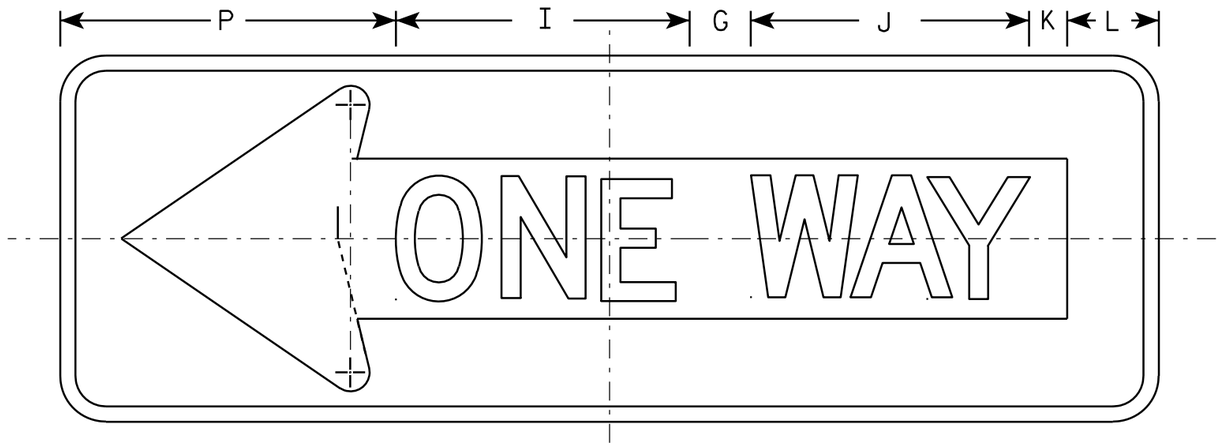
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 207	E



R6-1R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - BLACK
   Message - BLACK LEGEND & WHITE ARROW & BORDER
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-1L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 ½	½		4	2	7 ½	9 ⅝	9 ⅛	1 ¼	3	3 ⅜	⅝	4 ⅜	11		⅜	7 ½								3.0
2M	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
3	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
4	54	18	2 ¼	¾		6	3	11 ¼	14 ½	13 ⅝	1 ⅞	4 ½	5	1	6 ½	16 ½		⅝	11 ¼								6.75
5																											

STANDARD SIGN
R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

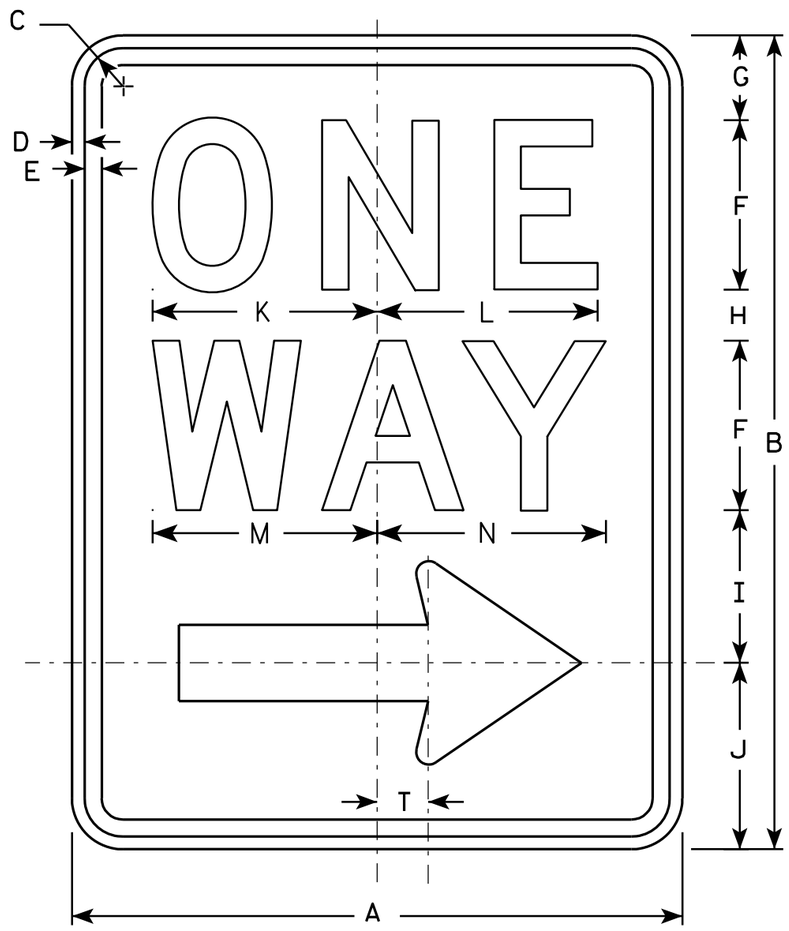
DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

SHEET NO: 208 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R61.DGN PLOT DATE : 17-DEC-2010 14:11 PLOT BY : dotsja

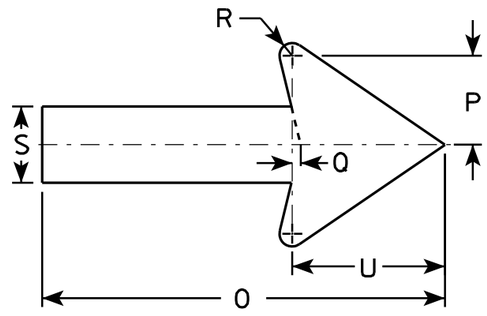
WISDOT/CADDS SHEET 42



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

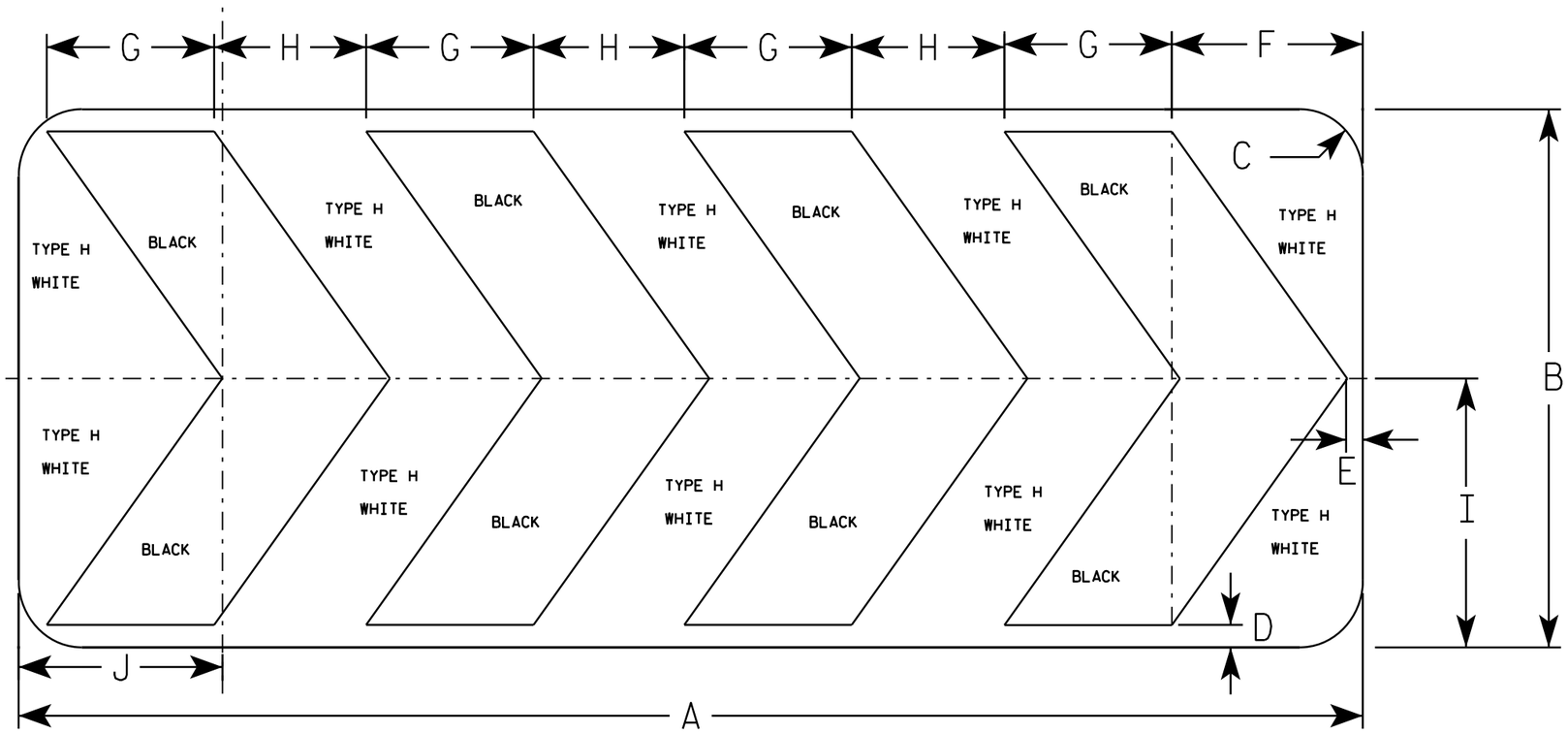
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 209	E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - WHITE
   Message - BLACK
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-4B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	24	2 1/4	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	2 1/4	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
3																											
4																											
5																											

STANDARD SIGN
R6-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/03/11 PLATE NO. R6-4B.2

PROJECT NO:

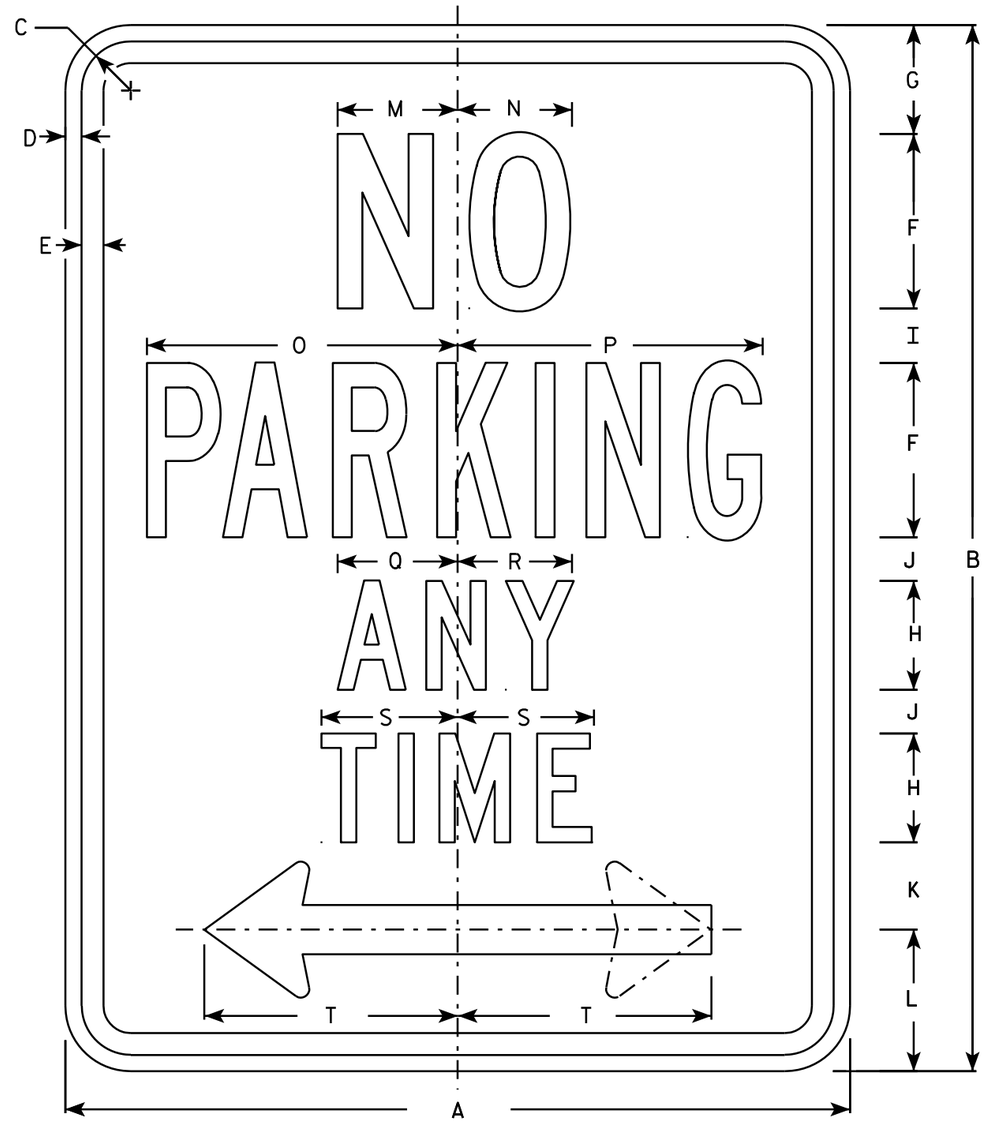
SHEET NO: 210 E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R64B.DGN PLOT DATE : 03-JAN-2011 14:30 PLOT BY : dotsja

WISDOT/CADDS SHEET 42

7

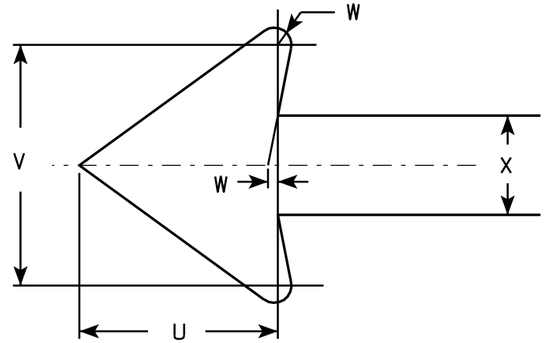
7



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

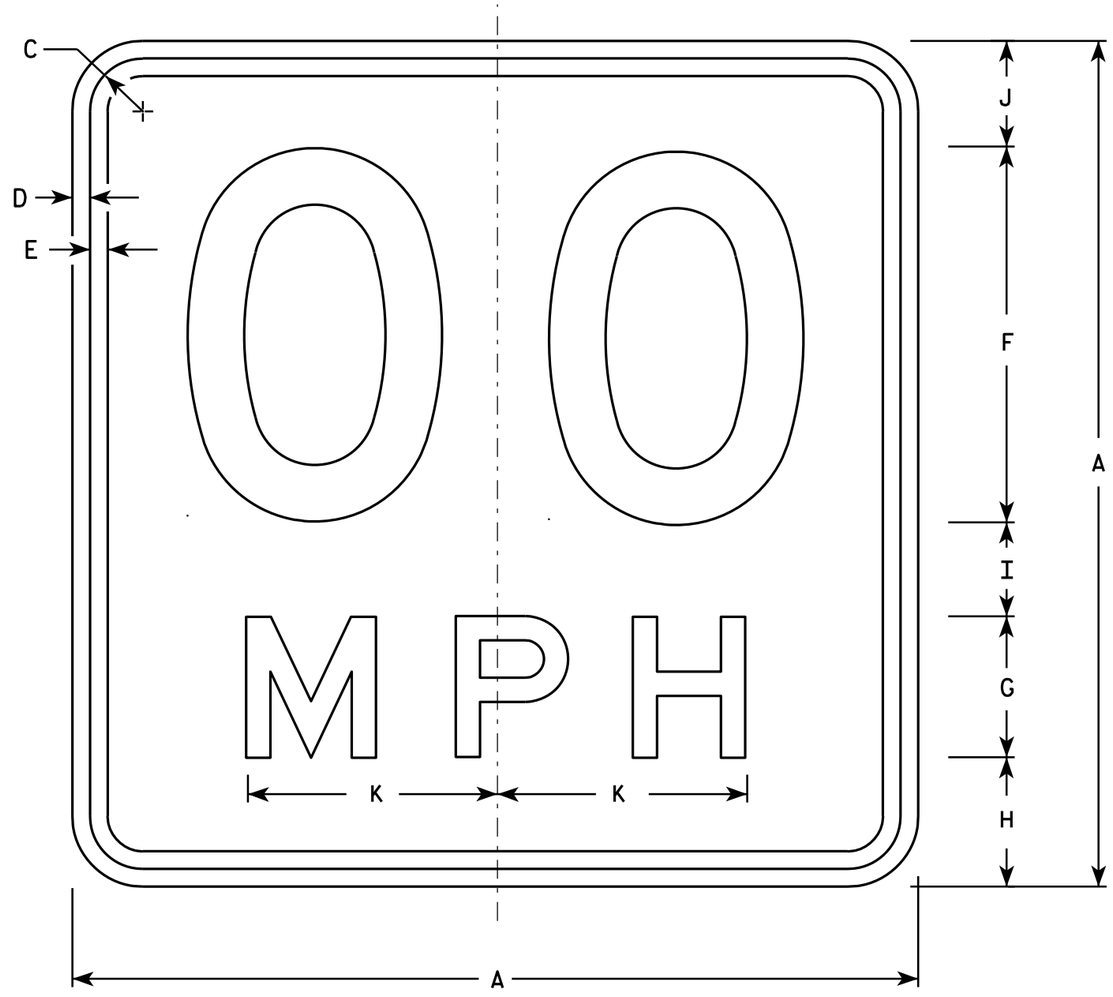
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 211 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42



W13-1

* For 30" x 30" Warning Signs, use 18" x 18" W13-1 signs.
For 36" x 36" Warning Signs, use 24" x 24" W13-1 signs.

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
   Line 2 is Series E

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2S	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
*	2M	18		1 1/8	3/8	3/8	8	3	2 3/4	2	2 1/4	5 3/8																2.25
	3	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	6 5/8																4.00
	4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
	5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

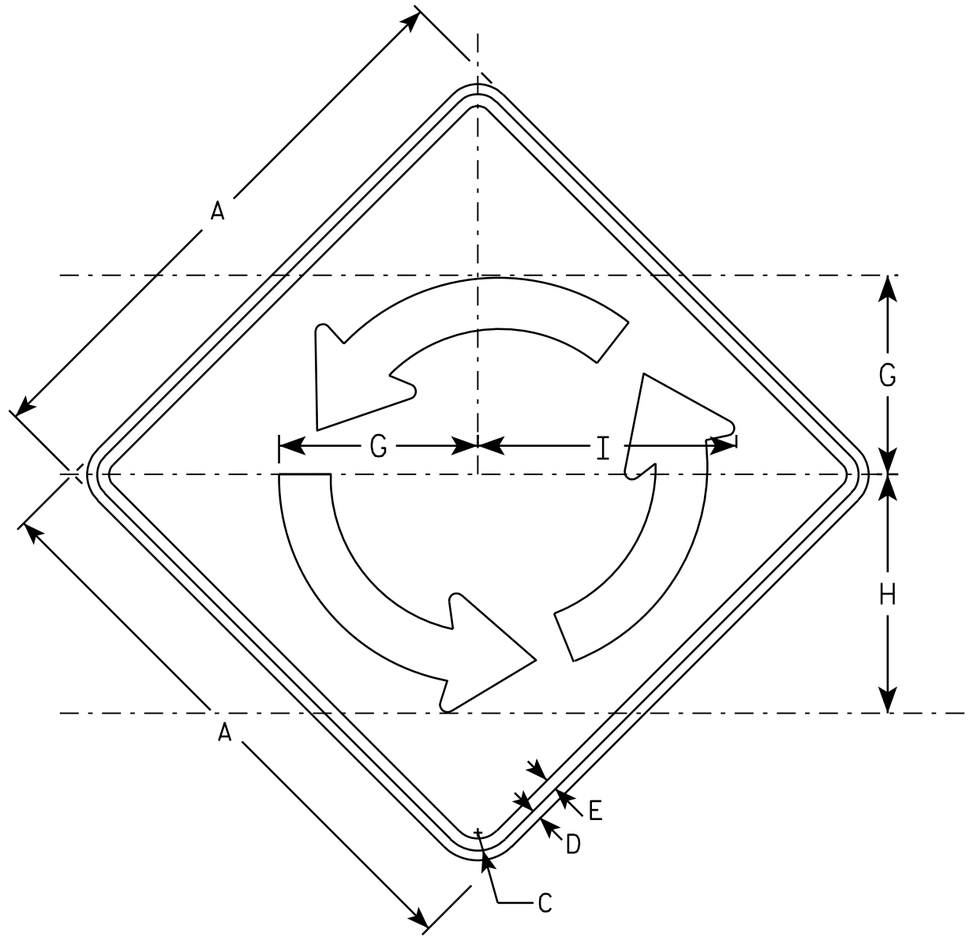
STANDARD SIGN
W13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 5/31/12 PLATE NO. W13-1.16

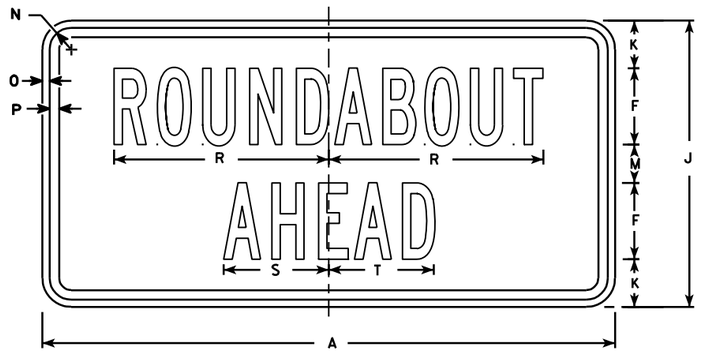
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 212 | E



W2-6

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Message - BLACK
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W2-6P

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	W2-6 Area sq. ft.	W2-6P Area sq. ft.
1																										
2S	30		1 3/8	1/2	5/8	4	10 3/8	12 1/2	13 1/2	15	2 1/2		2	1 1/8	3/8	1/2		11 1/4	5 1/2	5 1/2					6.25	3.12
2M	30		1 3/8	1/2	5/8	4	10 3/8	12 1/2	13 1/2	15	2 1/2		2	1 1/8	3/8	1/2		11 1/4	5 1/2	5 1/2					6.25	3.12
3	36		1 5/8	5/8	3/4	5	12 1/2	15	16 1/4	18	2 5/8		2 3/4	1 1/8	3/8	1/2		14	7	6 3/4					9.00	4.50
4	48		2 1/4	3/4	1	6	16 5/8	20	16 1/4	24	4 3/8		3 5/8	1 3/8	1/2	5/8		17	8 1/4	8 1/4					16.0	8.0
5																										

STANDARD SIGN
W2-6

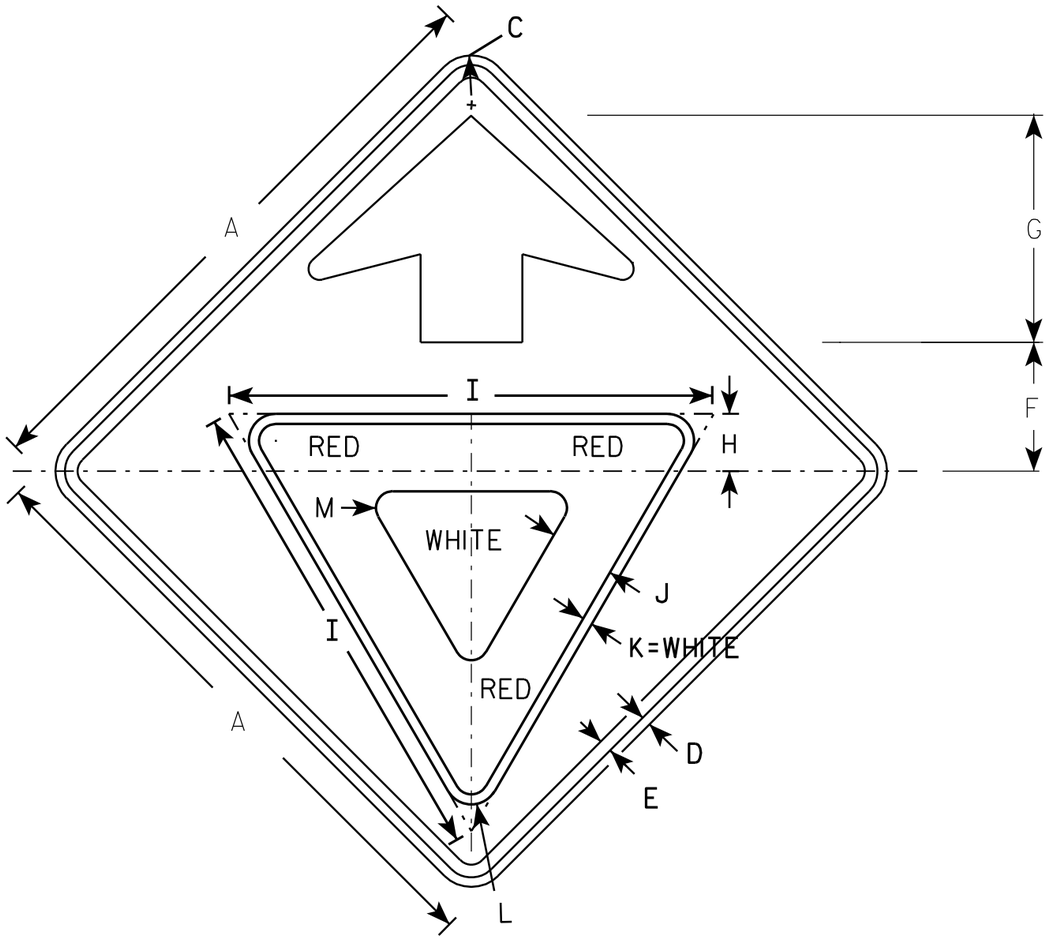
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/29/12 PLATE NO. W2-6.5

PROJECT NO:

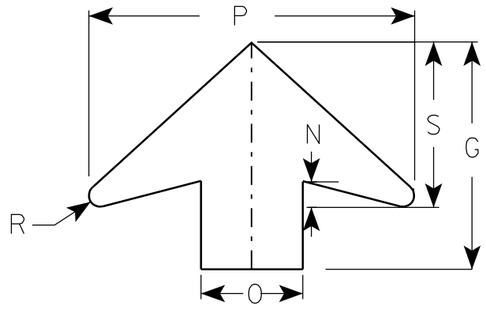
SHEET NO: 213 E



W3-2

NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - YELLOW
   Arrow & Border - BLACK
   Yield Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	3	25	3 3/8	1/2	1 3/8	7/8	1 1/4	5	16		1/2	8								6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 3/8	28	3 3/4	5/8	1 1/2	1	1 5/8	6	19 1/4		5/8	9 3/4								9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	38	5	3/4	2 1/8	1 3/8	2	8	25 5/8		7/8	13								16.0

STANDARD SIGN
W3-2

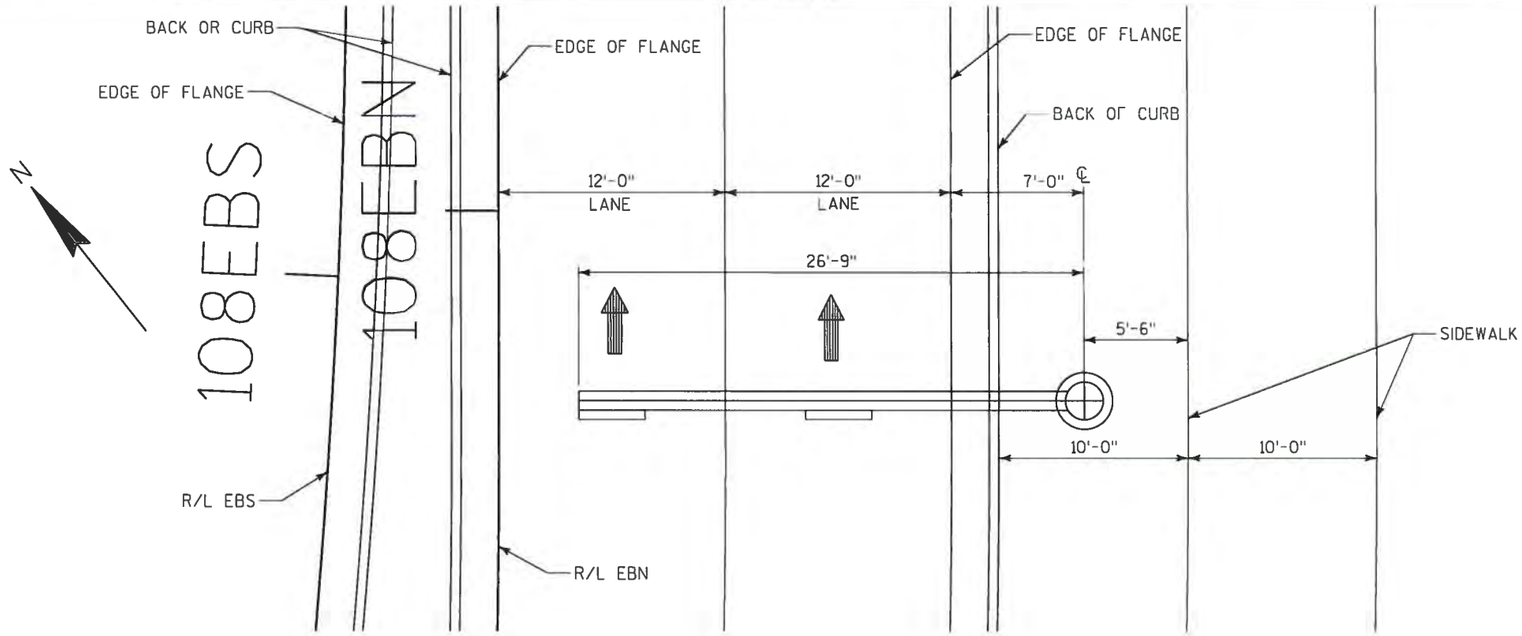
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-2..9

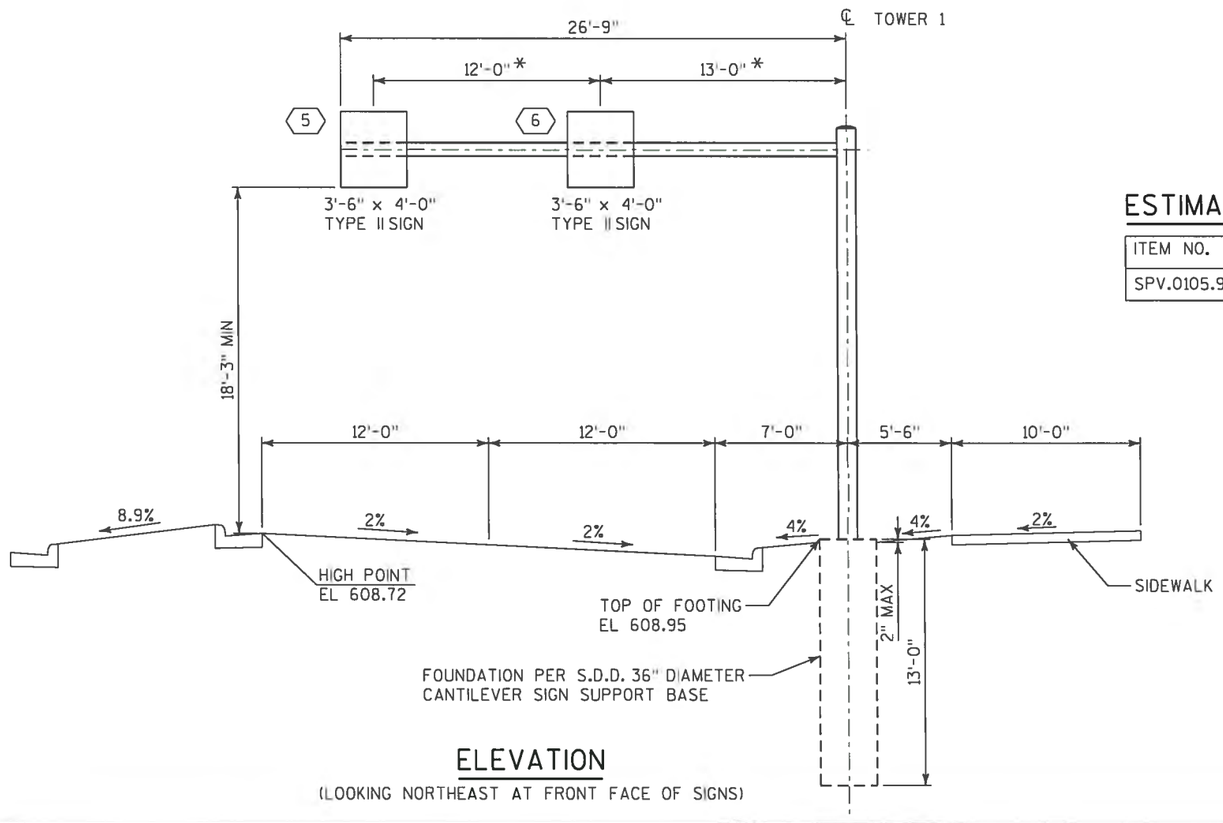
PROJECT NO:

SHEET NO: 214 E



PLAN

STA 107EBN+90



ELEVATION

(LOOKING NORTHEAST AT FRONT FACE OF SIGNS)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

OVERHEAD SIGN SUPPORTS SHALL BE DESIGNED AND FABRICATED USING STEEL.

CENTER SIGNS VERTICALLY ON CHORD/TRUSS.

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. UTILITY SERVICES ARE NOT SHOWN.

PROVIDE AN IDENTIFICATION PLAQUE FOR THE OVERHEAD SIGN SUPPORT. TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "OVERHEAD SIGN SUPPORT BLACK FINISH STRUCTURE S-05-289

DESIGN NEW OVERHEAD SIGN SUPPORT ACCORDING TO THE LATEST EDITION OF, AND SUPPLEMENTAL TO THE STATE OF WISCONSIN "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION" AND AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS." THE OVERHEAD SIGN SHALL BE DESIGNED FOR FATIGUE CATEGORY I.

DESIGN THE STRUCTURE BASE PLATE CONNECTION TO ACCOMMODATE A MINIMUM OF SIX (6) ANCHOR BOLTS.

SIZE THE ANCHOR BOLT/TEMPLATE ASSEMBLY TO FIT WITHIN THE BAR CAGE OF FOOTING BASE SHOWN IN THE CONTRACT PLANS IN ADDITION TO MEETING ALL APPLICABLE DESIGN REQUIREMENTS FOR THE DESIGN OF THE UPRIGHT BASE CONNECTION.

SIGNS OR BLANKS SHALL BE INSTALLED ON THE OVERHEAD SIGN SUPPORT AT THE TIME OF ERECTION. BLANKS, IF USED SHALL BE OF THE SAME SIZE AND LOCATION AS PERMANENT SIGNS. SIGN BLANKS AND MOUNTING HARDWARE SHALL BE INCIDENTAL TO OVERHEAD SIGN SUPPORT "S-05-289"

(##) - REPRESENTS THE SIGN NO. REFER TO THE PERMANENT SIGNING SHEETS.

* SIGN PANEL DIMENSIONS ARE TO THE CENTER OF THE SIGN PANEL. CONTRACTOR TO FIELD VERIFY SIGN PANEL DISPLAYS CORRELATE WITH ROADWAY LANE LAYOUT.

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
SPV.0105.951	OVERHEAD SIGN SUPPORT BLACK FINISH STRUCTURES S-05-289	LS	1

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER

1/20/14

CONTACTS

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER: (608) 266-8489

CONSULTANT CONTACT:
MOHAMMED ZAGLOUL (414) 751-7223

NO.	DATE	REVISION	BY

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.751.7200

Plans Prepared for WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher KAR 02/21/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-05-289

DE PERE - SUMAMICO

COUNTY: BROWN
TOWN/CITY/VILLAGE: HOWARD

DESIGN SPEC. AASHTO 2012

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MHZ	MHZ	WAW	BJK

PLAN & ELEVATION

SHEET 1 OF 1

215

I.D.

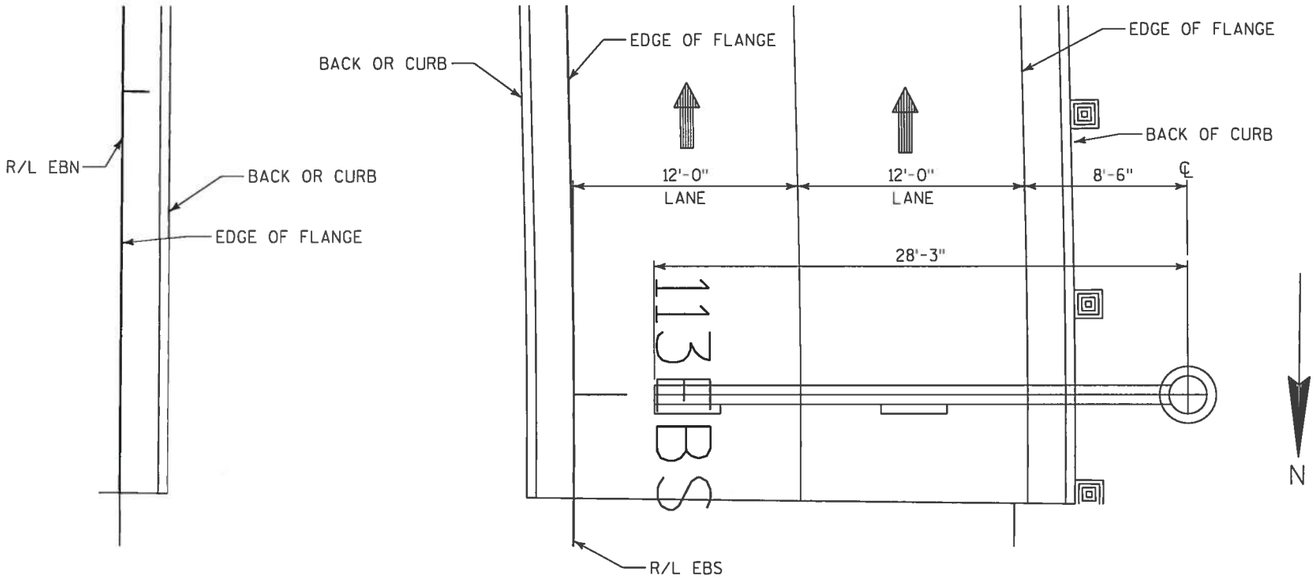
DATE:

SCALE =

STATE PROJECT NUMBER
9202-08-80

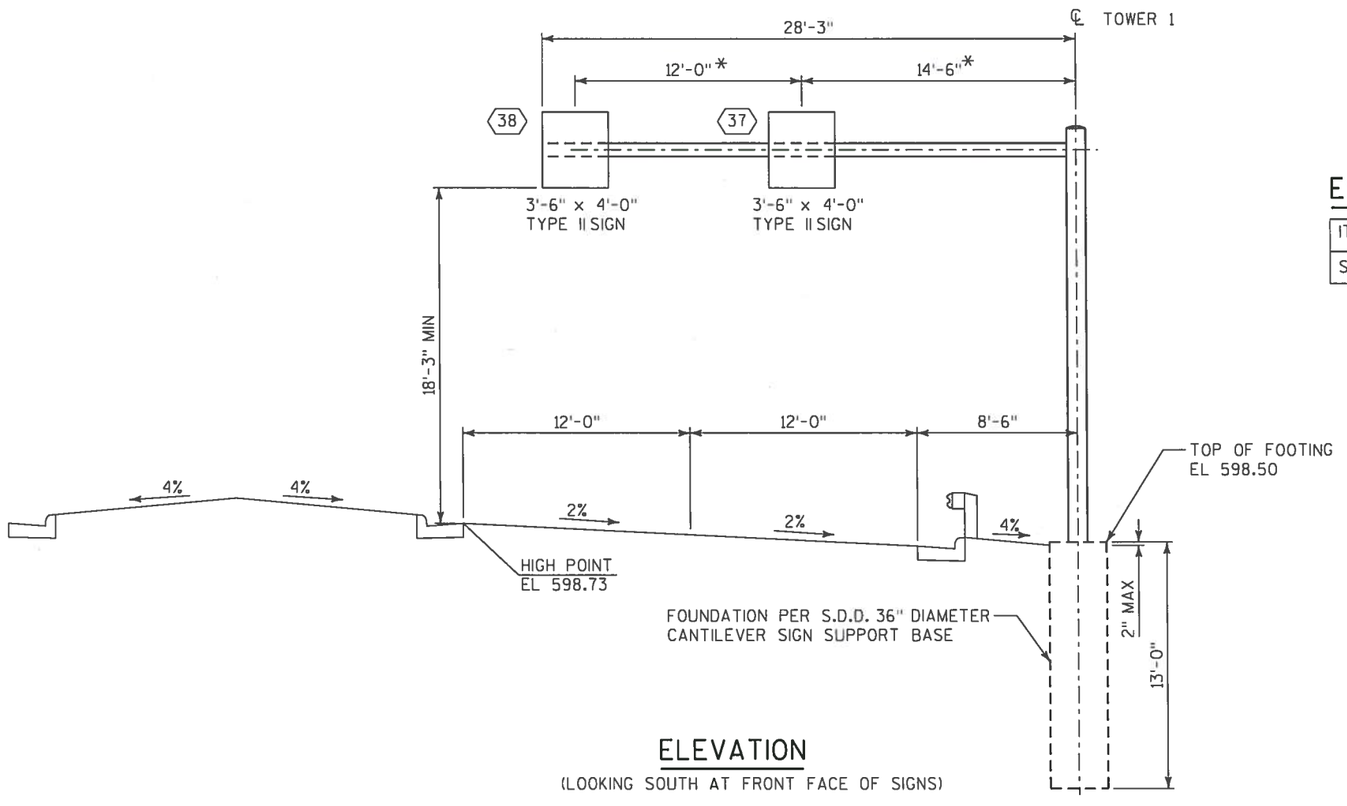
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8



PLAN

STA 113EBS+00



ELEVATION

(LOOKING SOUTH AT FRONT FACE OF SIGNS)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

OVERHEAD SIGN SUPPORTS SHALL BE DESIGNED AND FABRICATED USING STEEL.

CENTER SIGNS VERTICALLY ON CHORD/TRUSS.

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. UTILITY SERVICES ARE NOT SHOWN.

PROVIDE AN IDENTIFICATION PLAQUE FOR THE OVERHEAD SIGN SUPPORT. TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "OVERHEAD SIGN SUPPORT BLACK FINISH STRUCTURE S-05-290

DESIGN NEW OVERHEAD SIGN SUPPORT ACCORDING TO THE LATEST EDITION OF, AND SUPPLEMENTAL TO THE STATE OF WISCONSIN "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION" AND AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS." THE OVERHEAD SIGN SHALL BE DESIGNED FOR FATIGUE CATEGORY I.

DESIGN THE STRUCTURE BASE PLATE CONNECTION TO ACCOMMODATE A MINIMUM OF SIX (6) ANCHOR BOLTS.

SIZE THE ANCHOR BOLT/TEMPLATE ASSEMBLY TO FIT WITHIN THE BAR CAGE OF FOOTING BASE SHOWN IN THE CONTRACT PLANS IN ADDITION TO MEETING ALL APPLICABLE DESIGN REQUIREMENTS FOR THE DESIGN OF THE UPRIGHT BASE CONNECTION.

SIGNS OR BLANKS SHALL BE INSTALLED ON THE OVERHEAD SIGN SUPPORT AT THE TIME OF ERECTION. BLANKS, IF USED SHALL BE OF THE SAME SIZE AND LOCATION AS PERMANENT SIGNS. SIGN BLANKS AND MOUNTING HARDWARE SHALL BE INCIDENTAL TO OVERHEAD SIGN SUPPORT "S-05-290"

(##) - REPRESENTS THE SIGN NO. REFER TO THE PERMANENT SIGNING SHEETS.

* SIGN PANEL DIMENSIONS ARE TO THE CENTER OF THE SIGN PANEL. CONTRACTOR TO FIELD VERIFY SIGN PANEL DISPLAYS CORRELATE WITH ROADWAY LANE LAYOUT.

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
SPV.0105.952	OVERHEAD SIGN SUPPORT BLACK FINISH STRUCTURES S-05-290	LS	1

STATE PROJECT NUMBER

9202-08-80

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER

1/29/14

CONTACTS

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER: (608) 266-8489

CONSULTANT CONTACT:
MOHAMMED ZAGLOUL (414) 751-7223

NO.	DATE	REVISION	BY

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.751.7200

Plans Prepared for WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher KAR 02/21/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-05-290

DE PERE - SUMAMICO

COUNTY: BROWN
TOWN/CITY/VILLAGE: HOWARD

DESIGN SPEC. AASHTO 2012

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MHZ	MHZ	WAW	BJK

PLAN & ELEVATION

SHEET 1 OF 1

216

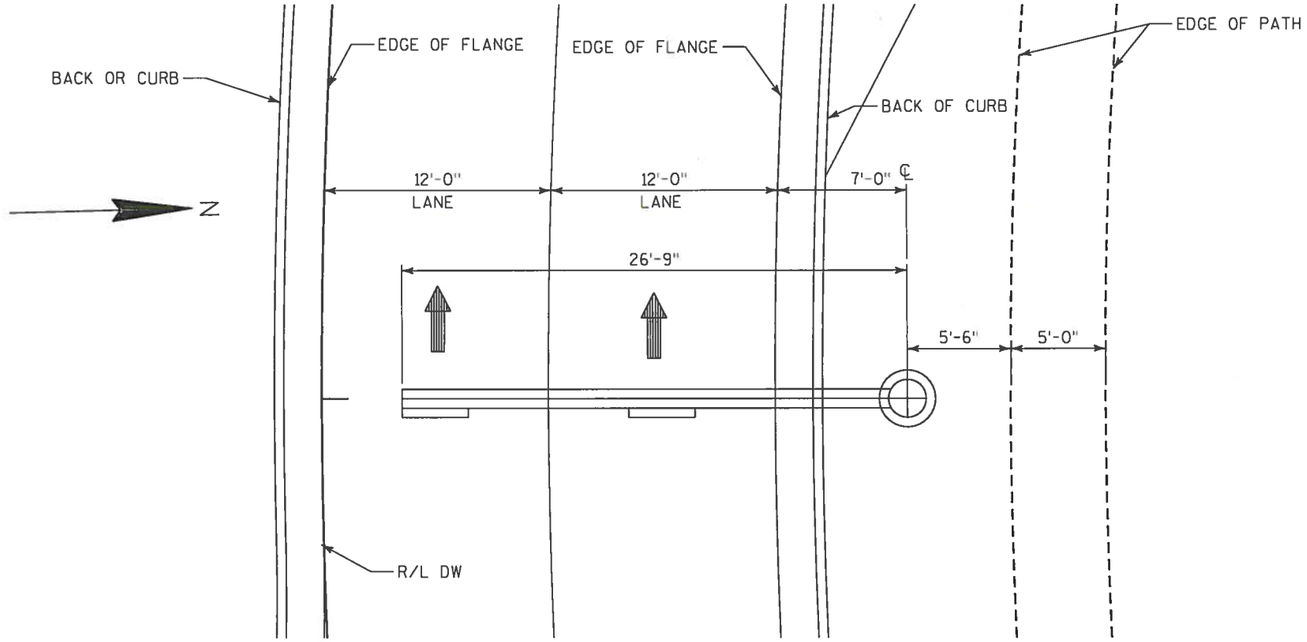
I.D.

DATE:

SCALE =

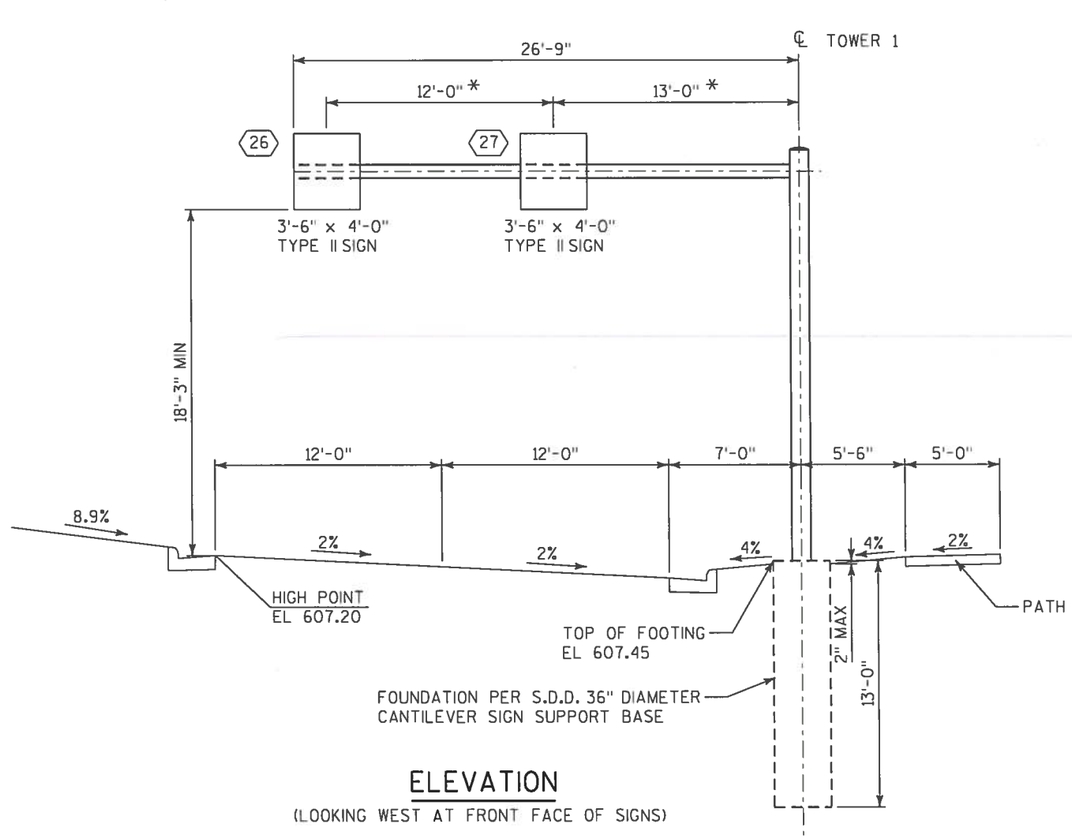
8

8



PLAN

STA 32DW+75



ELEVATION

(LOOKING WEST AT FRONT FACE OF SIGNS)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

OVERHEAD SIGN SUPPORTS SHALL BE DESIGNED AND FABRICATED USING STEEL.

CENTER SIGNS VERTICALLY ON CHORD/TRUSS.

THE LOCATION OF EXISTING OR PROPOSED UTILITIES AS NOTED ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. UTILITY SERVICES ARE NOT SHOWN.

PROVIDE AN IDENTIFICATION PLAQUE FOR THE OVERHEAD SIGN SUPPORT. TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "OVERHEAD SIGN SUPPORT BLACK FINISH STRUCTURE S-05-291

DESIGN NEW OVERHEAD SIGN SUPPORT ACCORDING TO THE LATEST EDITION OF, AND SUPPLEMENTAL TO THE STATE OF WISCONSIN "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION" AND AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES, AND TRAFFIC SIGNALS." THE OVERHEAD SIGN SHALL BE DESIGNED FOR FATIGUE CATEGORY I.

DESIGN THE STRUCTURE BASE PLATE CONNECTION TO ACCOMMODATE A MINIMUM OF SIX (6) ANCHOR BOLTS.

SIZE THE ANCHOR BOLT/TEMPLATE ASSEMBLY TO FIT WITHIN THE BAR CAGE OF FOOTING BASE SHOWN IN THE CONTRACT PLANS IN ADDITION TO MEETING ALL APPLICABLE DESIGN REQUIREMENTS FOR THE DESIGN OF THE UPRIGHT BASE CONNECTION.

SIGNS OR BLANKS SHALL BE INSTALLED ON THE OVERHEAD SIGN SUPPORT AT THE TIME OF ERECTION. BLANKS, IF USED SHALL BE OF THE SAME SIZE AND LOCATION AS PERMANENT SIGNS. SIGN BLANKS AND MOUNTING HARDWARE SHALL BE INCIDENTAL TO OVERHEAD SIGN SUPPORT 'S-05-291"

⟨**⟩ - REPRESENTS THE SIGN NO. REFER TO THE PERMANENT SIGNING SHEETS.

* SIGN PANEL DIMENSIONS ARE TO THE CENTER OF THE SIGN PANEL. CONTRACTOR TO FIELD VERIFY SIGN PANEL DISPLAYS CORRELATE WITH ROADWAY LANE LAYOUT.

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL
SPV.0105.953	OVERHEAD SIGN SUPPORT BLACK FINISH STRUCTURES S-05-291	LS	1

STATE PROJECT NUMBER

9202-08-80

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER

CONTACTS

BUREAU OF STRUCTURES CONTACT:
WILLIAM DREHER: (608) 266-8489

CONSULTANT CONTACT:
MOHAMMED ZAGLOUL (414) 751-7223

NO.	DATE	REVISION	BY

KAPUR & ASSOCIATES, INC.
CONSULTING ENGINEERS
MILWAUKEE, WISCONSIN
414.751.7200

Plans Prepared for WISDOT
BUREAU OF STRUCTURES

ACCEPTED William C. Dreher KAR 02/21/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE S-05-291

DE PERE - SUMAMICO

COUNTY: BROWN
TOWN/CITY/VILLAGE: HOWARD

DESIGN SPEC. AASHTO 2012

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MHZ	MHZ	WAW	BJK

PLAN & ELEVATION

SHEET 1 OF 1

217

I.D.

DATE:

SCALE =

8

8

PROJECT ID 9202-08-80
STAGE 1A - CARDINAL LANE - CTH EB NB 2

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
111EBN+40	AH	0.00	84.30	4.90	0.00	0.00	0.00	0.00	0.00
111EBN+50		10.17	85.80	3.70	32.04	1.62	32.04	1.62	30.42
112EBN+00	BK	50.00	109.50	16.40	180.83	18.61	212.87	20.23	192.64
				Column totals	212.87	20.23			

PROJECT ID 9202-08-80
STAGE 1A - DOUSMAN EB

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
33DE+50	AH	0.00	126.10	0.00	0.00	0.00	0.00	0.00	0.00
34DE+00		50.00	76.52	0.00	187.61	0.00	187.61	0.00	187.61
34DE+40	BK	40.00	71.30	0.00	109.50	0.00	297.11	0.00	297.11
				Column totals	297.11	0.00			

PROJECT ID 9202-08-80
STAGE 1A - DOUSMAN WB

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
31DW+24	AH	0.00	135.50	0.00	0.00	0.00	0.00	0.00	0.00
31DW+50		26.30	191.20	3.90	159.12	1.90	159.12	1.90	157.22
32DW+00		50.00	180.80	4.10	344.44	7.41	503.56	9.31	494.25
32DW+50		50.00	148.00	10.60	304.44	13.61	808.00	22.92	785.09
33DW+00		50.00	116.70	4.10	245.09	13.61	1053.10	36.53	1016.57
33DW+21	BK	21.16	114.80	0.50	90.71	1.80	1143.81	38.33	1105.48
				Column totals	1143.81	38.33			

PROJECT ID 9202-08-80
STAGE 1B - CARDINAL LANE - CTH EB NB 2

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
112EBN+00	AH	0.00	109.50	16.40	0.00	0.00	0.00	0.00	0.00
112EBN+50		50.00	104.40	6.80	198.06	21.48	198.06	21.48	176.57
113EBN+00		50.00	86.30	4.80	176.57	10.74	374.63	32.22	342.41
113EBN+50		50.00	80.00	6.30	153.98	10.28	528.61	42.50	486.11
113EBN+71	BK	21.17	86.90	2.00	65.43	3.25	594.04	45.75	548.29
				Column totals	594.04	45.75			

PROJECT ID 9202-08-80
STAGE 2 - CARDINAL LANE - CTH EB NB 1

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
105EBN+75	AH	0.00	82.40	9.40	0.00	0.00	0.00	0.00	0.00
106EBN+00		25.00	87.60	11.80	78.70	9.81	78.70	9.81	68.89
106EBN+50		50.00	79.00	5.20	154.26	15.74	232.96	25.56	207.41
107EBN+00		50.00	65.10	10.20	133.43	14.26	366.39	39.81	326.57
107EBN+50		50.00	68.20	5.40	123.43	14.44	489.81	54.26	435.56
108EBN+00		50.00	68.20	7.20	126.30	11.67	616.11	65.93	550.19
108EBN+50		50.00	74.10	4.90	131.76	11.20	747.87	77.13	670.74
109EBN+00		50.00	77.50	10.40	140.37	14.17	888.24	91.30	796.94
109EBN+43	BK	42.88	101.10	0.00	141.82	8.26	1030.06	99.55	930.51
				Column totals	1030.06	99.55			

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PROJECT ID 9202-08-80
STAGE 2 - CARDINAL LANE - CTH EB SB 1

STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut	Fill	
106EBS+00 AH	0.00	55.60	3.80	0.00	0.00	0.00	0.00	0.00
106EBS+50	50.00	64.60	4.40	111.30	7.59	111.30	7.59	103.70
107EBS+00	50.00	61.70	4.60	116.94	8.33	228.24	15.93	212.31
107EBS+50	50.00	53.60	6.60	106.76	10.37	335.00	26.30	308.70
108EBS+00	50.00	39.20	32.57	85.93	36.27	420.93	62.56	358.36
108EBS+50	50.00	43.40	0.20	76.48	30.34	497.41	92.91	404.50
109EBS+00	50.00	44.20	12.10	81.11	11.39	578.52	104.30	474.22
109EBS+50	50.00	47.90	0.20	85.28	11.39	663.80	115.69	548.11
109EBS+52 BK	2.49	48.60	0.20	4.45	0.02	668.25	115.70	552.54
			Column totals	668.25	115.70			

PROJECT ID 9202-08-80
STAGE 2 - CARDINAL LANE - CTH EB SB 2

STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut	Fill	
110EBS+88 AH	0.00	5.10	40.90	0.00	0.00	0.00	0.00	0.00
111EBS+00	12.35	15.10	65.90	4.62	24.43	4.62	24.43	-19.81
111EBS+50	50.00	54.40	24.60	64.35	83.80	68.97	108.22	-39.25
112EBS+00	50.00	61.40	13.90	107.22	35.65	176.19	143.87	32.32
112EBS+50	50.00	62.10	11.80	114.35	23.80	290.55	167.67	122.88
113EBS+00	50.00	72.80	27.70	124.91	36.57	415.45	204.24	211.21
113EBS+05 BK	5.45	74.20	33.70	14.84	6.20	430.29	210.44	219.85
			Column totals	430.29	210.44			

PROJECT ID 9202-08-80
STAGE 2 - DOUSMAN EB

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
30DE+65	AH	0.00	102.30	0.00	0.00	0.00	0.00	0.00	0.00
31DE+00		34.76	0.00	0.00	65.85	0.00	0.00	0.00	0.00
31DE+50		50.00	108.90	11.90	100.83	11.02	100.83	11.02	89.81
32DE+00		50.00	97.20	12.30	190.83	22.41	291.67	33.43	258.24
32DE+50		50.00	86.90	9.80	170.46	20.46	462.13	53.89	408.24
33DE+00		50.00	85.20	3.00	159.35	11.85	621.48	65.74	555.74
33DE+50		50.00	69.00	0.00	142.78	2.78	764.26	68.52	695.74
34DE+00		50.00	67.40	0.00	126.30	0.00	890.56	68.52	822.04
34DE+40	BK	40.00	65.00	0.00	98.07	0.00	988.63	68.52	920.11
				Column totals	1054.48	68.52			

PROJECT ID 9202-08-80
STAGE 2 - ELMHURST AVE WB

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
10EW+51	AH	0.00	33.30	12.90	0.00	0.00	0.00	0.00	0.00
10EW+75		23.52	72.30	0.30	45.99	5.75	45.99	5.75	40.25
11EW+00		25.00	129.80	0.00	93.56	0.14	139.56	5.89	133.67
11EW+25		25.00	23.10	30.50	70.79	14.12	210.35	20.01	190.34
11EW+50		25.00	0.00	176.00	10.69	95.60	221.04	115.61	105.43
11EW+75		25.00	0.00	244.80	0.00	194.81	221.04	310.43	-89.38
12EW+00		25.00	2.20	49.00	1.02	136.02	222.06	446.44	-224.38
12EW+25		25.00	0.40	0.00	1.20	22.69	223.26	469.13	-245.87
12EW+50		25.00	0.20	0.00	0.28	0.00	223.54	469.13	-245.59
12EW+75		25.00	0.00	0.00	0.09	0.00	223.63	469.13	-245.50
13EW+00		25.00	0.00	6.80	0.00	3.15	223.63	472.28	-248.64
13EW+25		25.00	0.00	6.70	0.00	6.25	223.63	478.53	-254.89
13EW+50		25.00	0.00	7.90	0.00	6.76	223.63	485.29	-261.65
13EW+75		25.00	0.00	6.70	0.00	6.76	223.63	492.05	-268.41
14EW+00		25.00	0.00	7.30	0.00	6.48	223.63	498.53	-274.89
14EW+25		25.00	0.00	15.70	0.00	10.65	223.63	509.18	-285.54
14EW+48	BK	22.59	0.00	3.00	0.00	7.82	223.63	517.00	-293.36
				Column totals	223.63	517.00			

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PROJECT NUMBER: 9202-08-80 | HWY: STH 29 | COUNTY: BROWN | EARTHWORK SUMMARY | SHEET NO:

FILE NAME:S:\DOT\DOT_NE\100061-41_29\41-29_PHASE 2\RIVER GROVE EXTENSION\QUANTITIES\090101_EW_9202-08-80.PPT ORIGINATOR: REBECCA ALONGE ORIG. DATE: SEPTEMBER 6, 2013 PLOTTED DATE: 2/27/2014 12:05 PM

PROJECT ID 9202-08-80
STAGE 2 - ELMHURST AVE EB

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
13EE+92	AH	0.00	0.00	28.84	0.00	0.00	0.00	0.00	0.00
14EE+00		7.90	0.00	34.53	0.00	9.27	0.00	9.27	-9.27
14EE+39	BK	38.90	0.00	28.62	0.00	45.49	0.00	54.76	-54.76
				Column totals	0.00	54.76			

PROJECT ID 9202-08-80
STAGE 2 - ELMHURST RAB

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
20ERAB+00	AH	0.00	190.60	138.90	0.00	0.00	0.00	0.00	0.00
20ERAB+50		50.00	86.40	156.50	256.48	273.52	256.48	273.52	-17.04
21ERAB+00		50.00	37.60	163.70	114.81	296.48	371.30	570.00	-198.70
21ERAB+50		50.00	32.17	189.00	64.60	326.57	435.90	896.57	-460.67
22ERAB+00		50.00	58.64	191.90	84.08	352.68	519.98	1249.25	-729.27
22ERAB+50		50.00	56.10	190.20	106.24	353.79	626.22	1603.04	-976.82
23ERAB+00		50.00	170.56	167.60	209.87	331.30	836.09	1934.34	-1098.25
23ERAB+50		50.00	175.80	148.00	320.70	292.22	1156.80	2226.56	-1069.77
23ERAB+90	BK	39.56	190.60	138.90	268.42	210.18	1425.22	2436.74	-1011.53
				Column totals	1425.22	2436.74			

PROJECT ID 9202-08-80
STAGE 3 - CARDINAL LANE - CTH EB NB 1

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
105EBN+50	AH	0.00	82.40	9.40	0.00	0.00	0.00	0.00	0.00
105EBN+75	BK	25.00	82.40	9.40	76.30	8.70	76.30	8.70	67.59
				Column totals	76.30	8.70			

PROJECT ID 9202-08-80
STAGE 3 - CARDINAL LANE - CTH EB SB 1

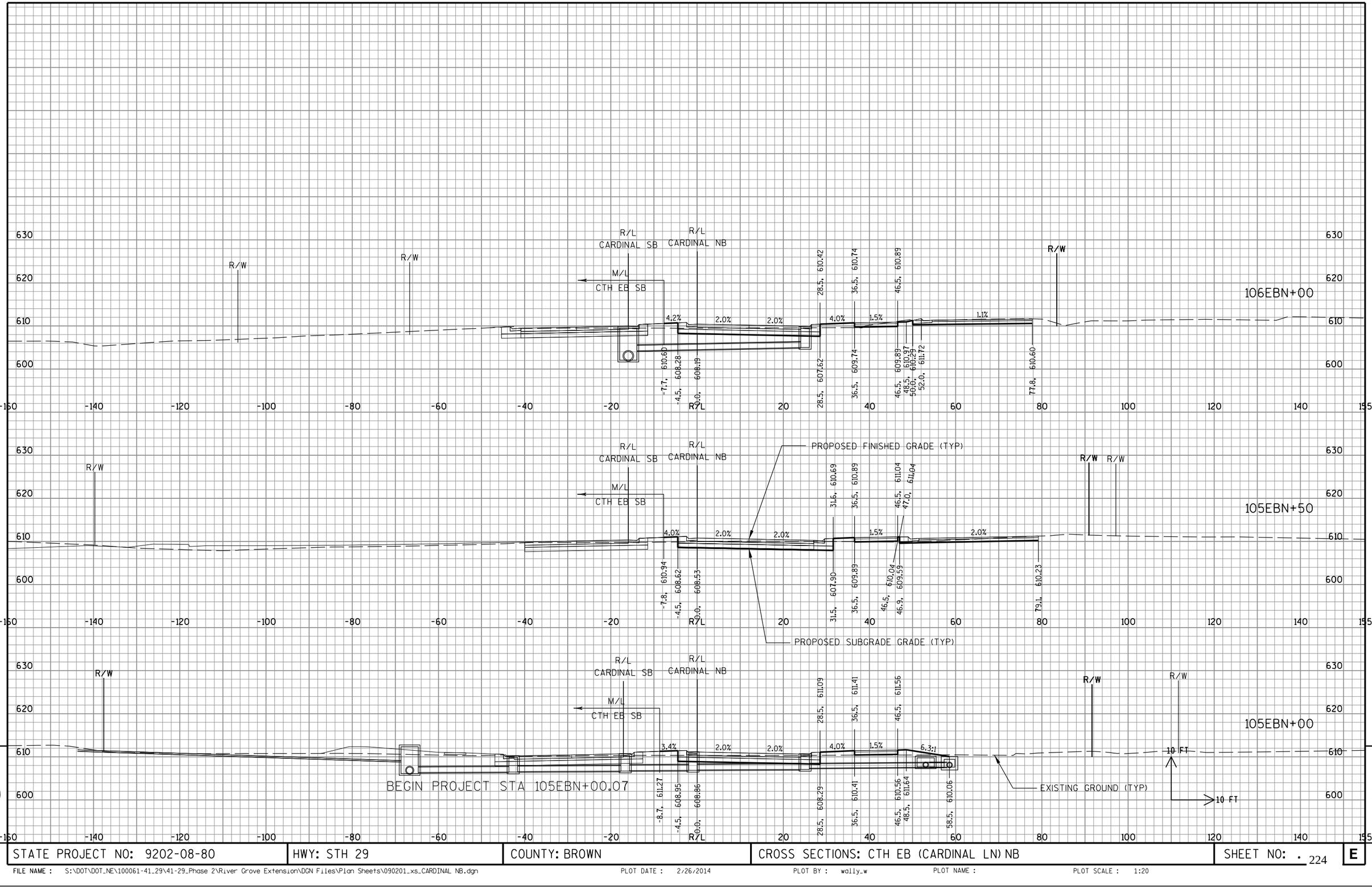
STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
104EBS+95	AH	0.00	78.96	187.66	0.00	0.00	0.00	0.00	0.00
105EBS+00		5.11	67.92	61.33	13.90	23.56	13.90	23.56	-9.66
105EBS+50		50.00	53.70	3.70	112.61	60.21	126.51	83.77	42.74
106EBS+00	BK	50.00	55.60	3.80	101.20	6.94	227.71	90.72	136.99
				Column totals	227.71	90.72			

PROJECT ID 9202-08-80
STAGE 3 - DOUSMAN EB

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
30DE+77	AH	0.00	102.30	0.00	0.00	0.00	0.00	0.00	0.00
31DE+00		22.62	136.80	0.00	100.16	0.00	100.16	0.00	100.16
31DE+20		20.00	136.80	0.00	101.33	0.00	201.49	0.00	201.49
33DE+50		0.00	27.00	0.00	0.00	0.00	201.49	0.00	201.49
34DE+00		50.00	27.50	0.00	50.46	0.00	251.95	0.00	251.95
34DE+40	BK	40.40	26.50	0.00	40.40	0.00	292.35	0.00	292.35
				Column totals	292.35	0.00			

PROJECT ID 9202-08-80
STAGE 3 - BRANTWOOD AVENUE

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut	Incremental Vol (CY) (Unadjusted) Fill	Cumulative Vol (CY) Cut	Cumulative Vol (CY) Fill	Mass Ordinate
10BWA+25	AH	0.00	35.84	4.96	0.00	0.00	0.00	0.00	0.00
10BWA+50		25.00	51.49	4.89	40.43	4.56	40.43	4.56	35.87
11BWA+00		50.00	12.44	8.29	59.20	12.20	99.64	16.76	82.88
11BWA+50		50.00	15.33	3.50	25.72	10.91	125.36	27.67	97.69
12BWA+00		50.00	29.96	3.21	41.94	6.22	167.30	33.88	133.42
12BWA+50		50.00	29.92	0.00	55.45	2.98	222.75	36.86	185.89
13BWA+00		50.00	28.17	0.00	53.78	0.00	276.53	36.86	239.67
13BWA+50		50.00	26.94	0.00	51.03	0.00	327.56	36.86	290.70
13BWA+75	BK	25.00	25.27	0.00	24.17	0.00	351.73	36.86	314.87
				Column totals	351.73	36.86			

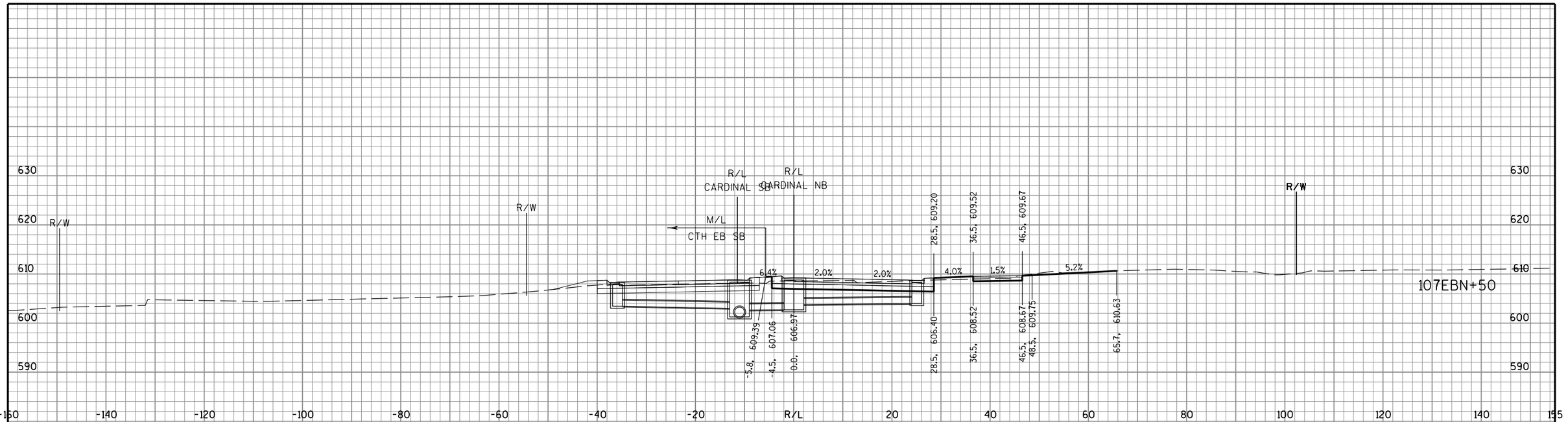


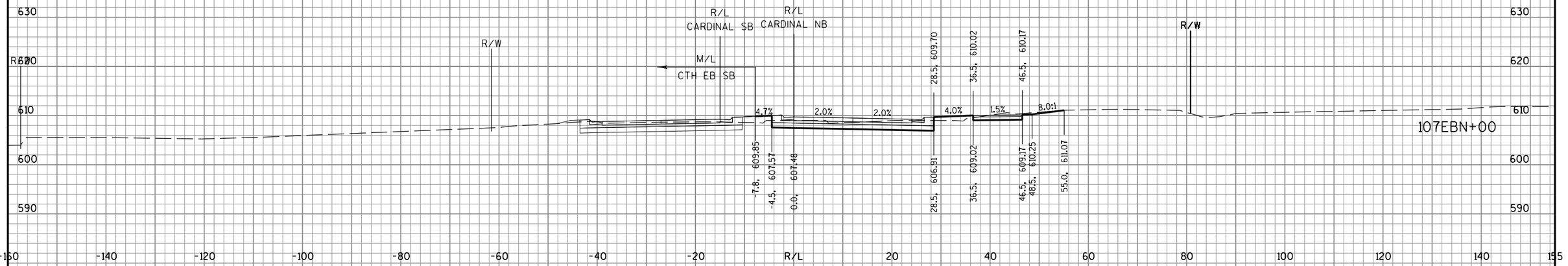
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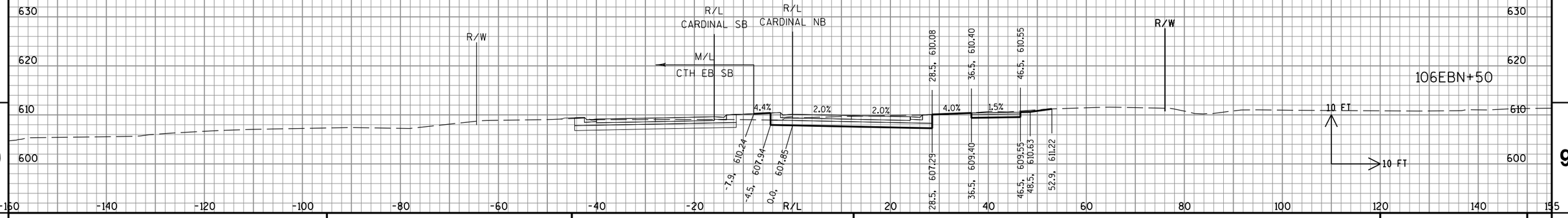
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) NB	SHEET NO: . 224	E

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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) NB	SHEET NO: . 225	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090201_xs_CARDINAL NB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

STORM SEWER PREVIOUSLY CONSTRUCTED (TYP) (PROJECT ID 9202-07-71)

R/L CARDINAL SB

R/L CARDINAL NB

2.8% 2.0% 2.0% 4.0% 1.5% 4.5%

28.5, 607.20 36.5, 607.52 46.5, 607.67

-21.1, 604.42 -4.5, 604.06 0.0, 604.97 28.5, 604.40 36.5, 606.52 46.5, 606.67 48.5, 607.75 84.2, 609.36

109EBN+00

620 610 600 590 580

-160 -140 -120 -100 -80 -60 -40 -20 R/L 20 40 60 80 100 120 140 155

R/L CARDINAL SB R/L CARDINAL NB

M/L CTH EB SB

8.3% 2.0% 2.0% 4.0% 1.5% 1.9%

28.5, 607.88 36.5, 608.20 46.5, 608.35

-4.5, 605.74 0.0, 605.65 28.5, 605.08 36.5, 607.20 46.5, 607.35 48.5, 608.43 91.8, 609.27

108EBN+50

620 610 600 590

-160 -140 -120 -100 -80 -60 -40 -20 R/L 20 40 60 80 100 120 140 155

R/W R/W

R/L CARDINAL SB R/L CARDINAL NB

M/L CTH EB SB

9.3% 2.0% 2.0% 4.0% 1.5% 1.8%

28.5, 608.56 36.5, 608.88 46.5, 609.03

-3.9, 606.42 0.0, 606.33 28.5, 605.76 36.5, 607.88 46.5, 608.03 48.5, 609.11 89.1, 609.85

R/W

108EBN+00

10 FT 10 FT

630 620 610 600 590

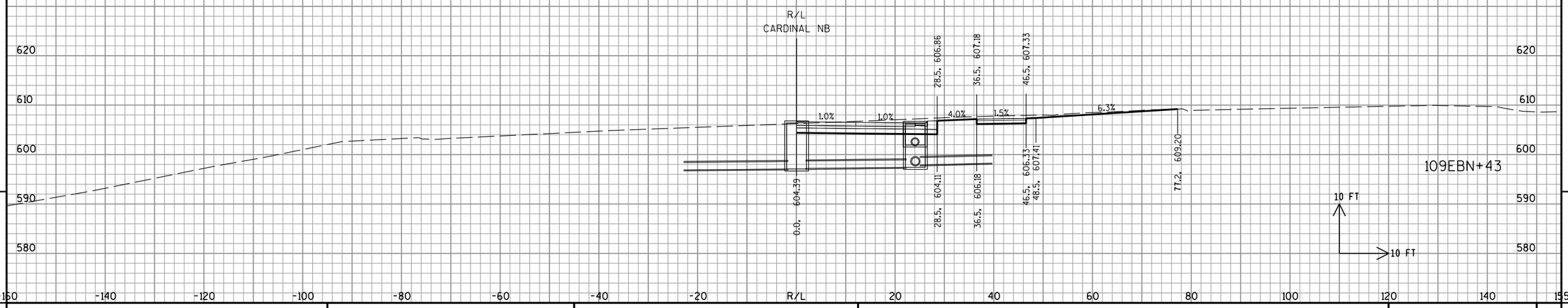
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) NB	SHEET NO: . 226	E

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ELMHURST ROUNDABOUT

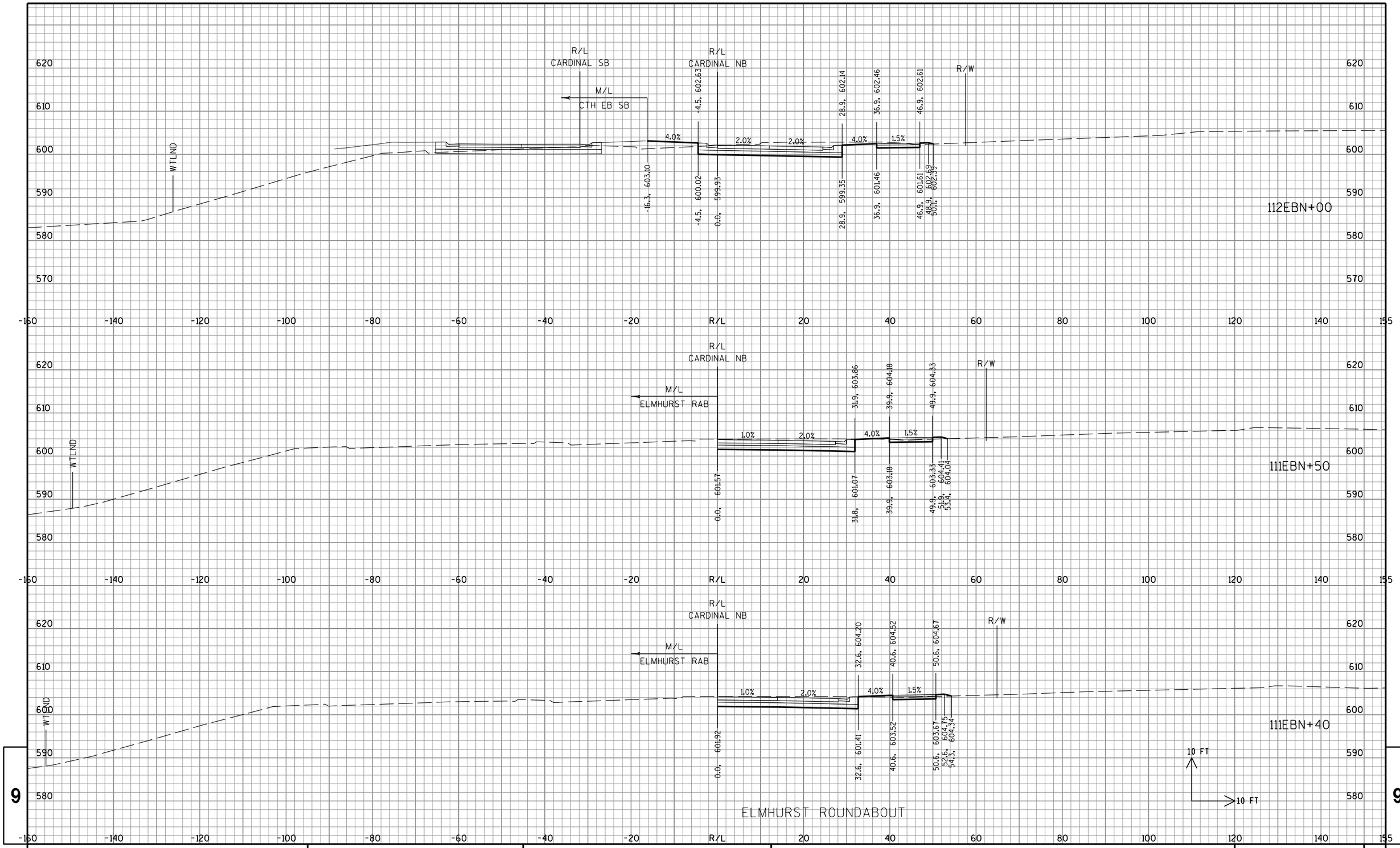


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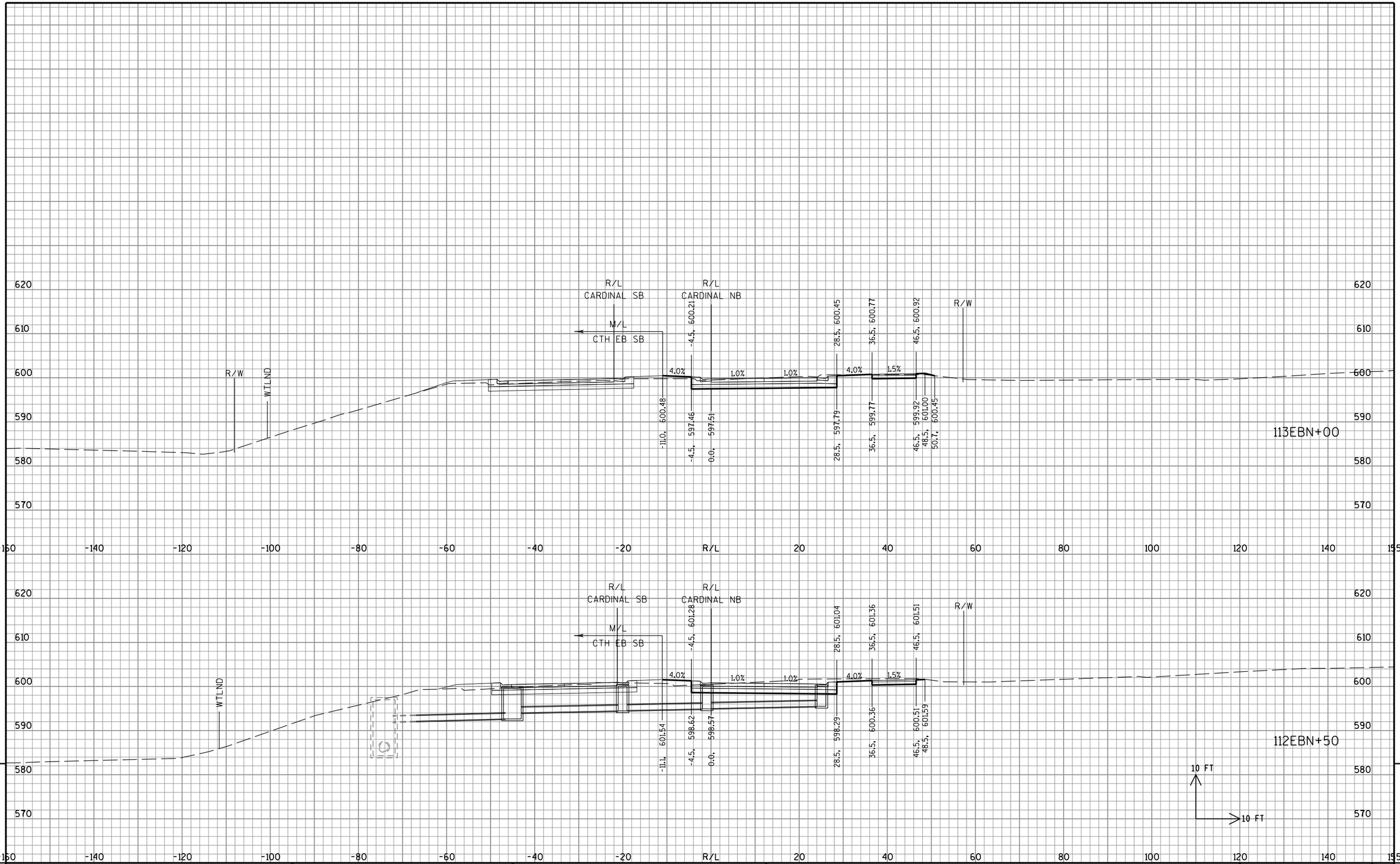
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) NB	SHEET NO: 228

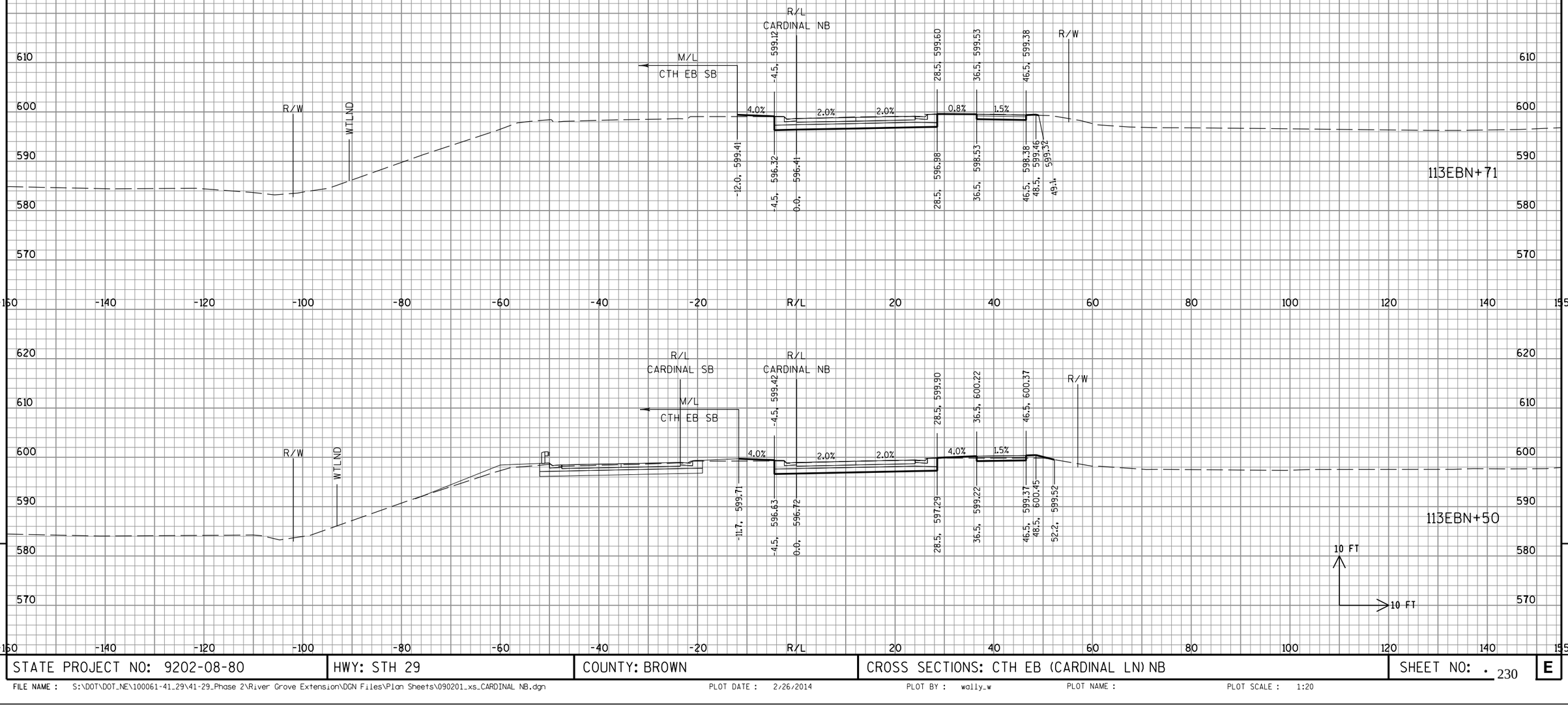
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) NB	SHEET NO: 229	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090201_xs_CARDINAL NB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

END PROJECT STA 113EBN+71.17

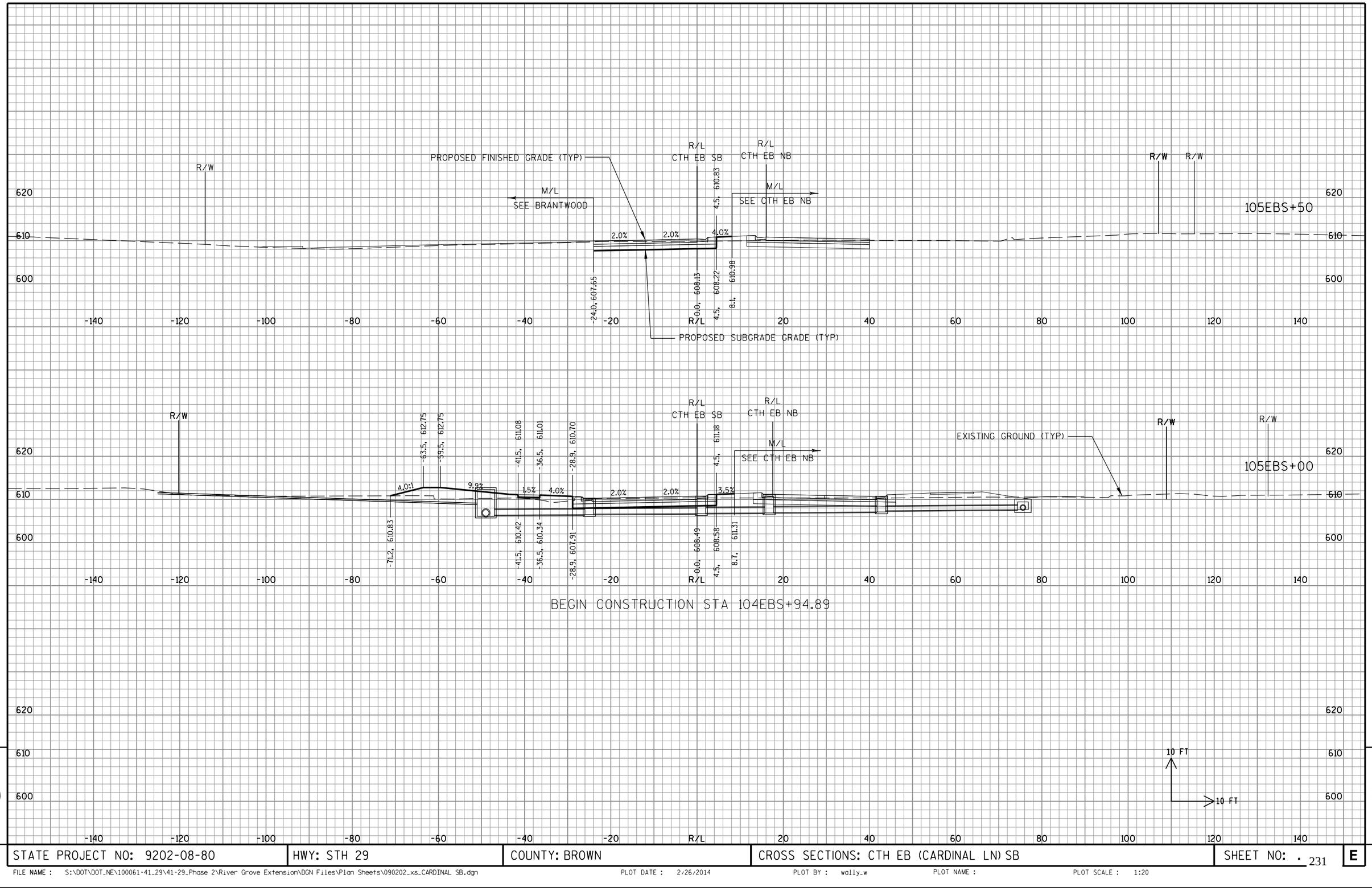


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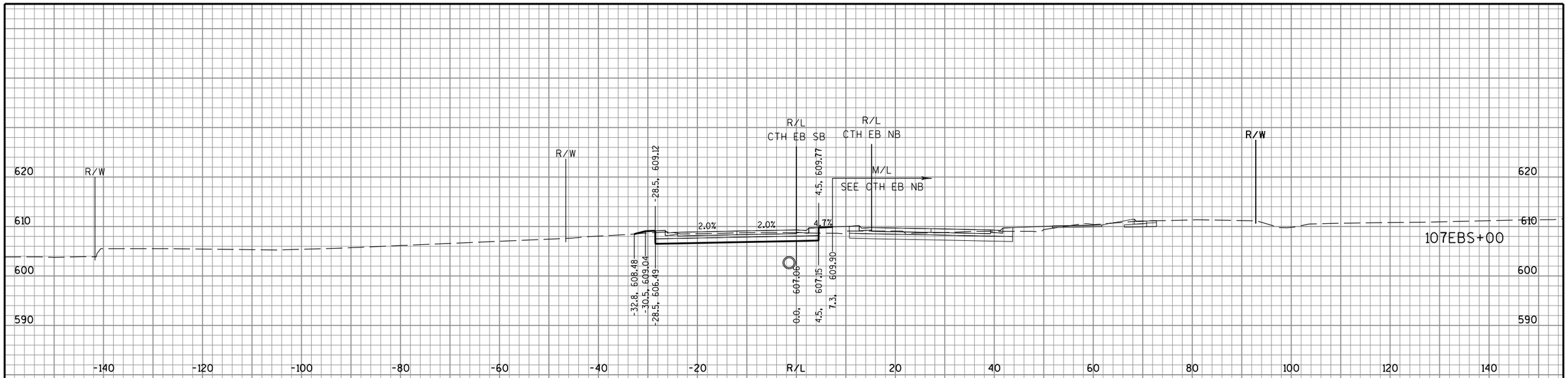
STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) NB	SHEET NO: . 230	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090201_xs_CARDINAL NB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



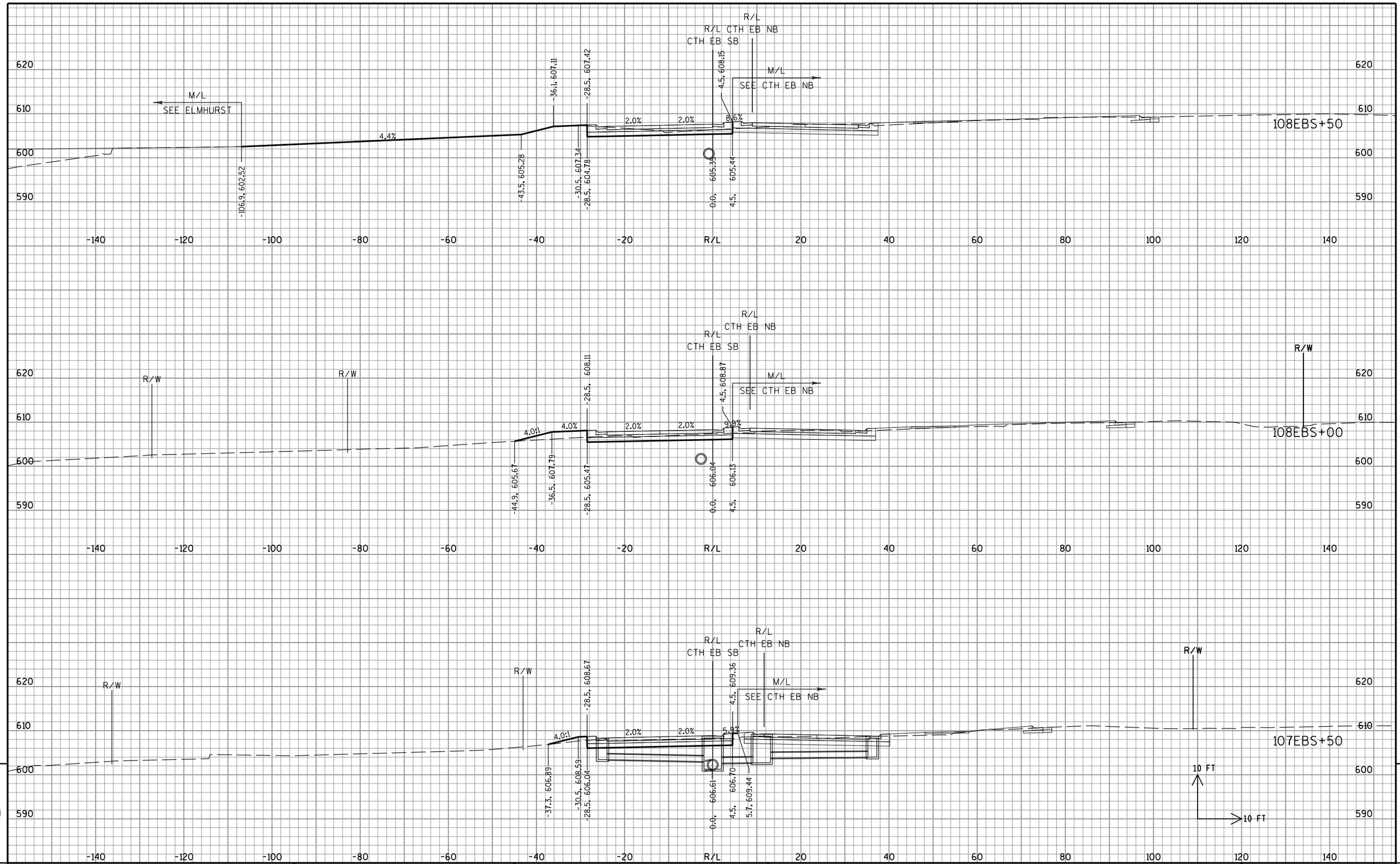
STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) SB	SHEET NO: . 231	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090202_xs_CARDINAL SB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) SB	SHEET NO: 232	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090202_xs_CARDINAL SB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

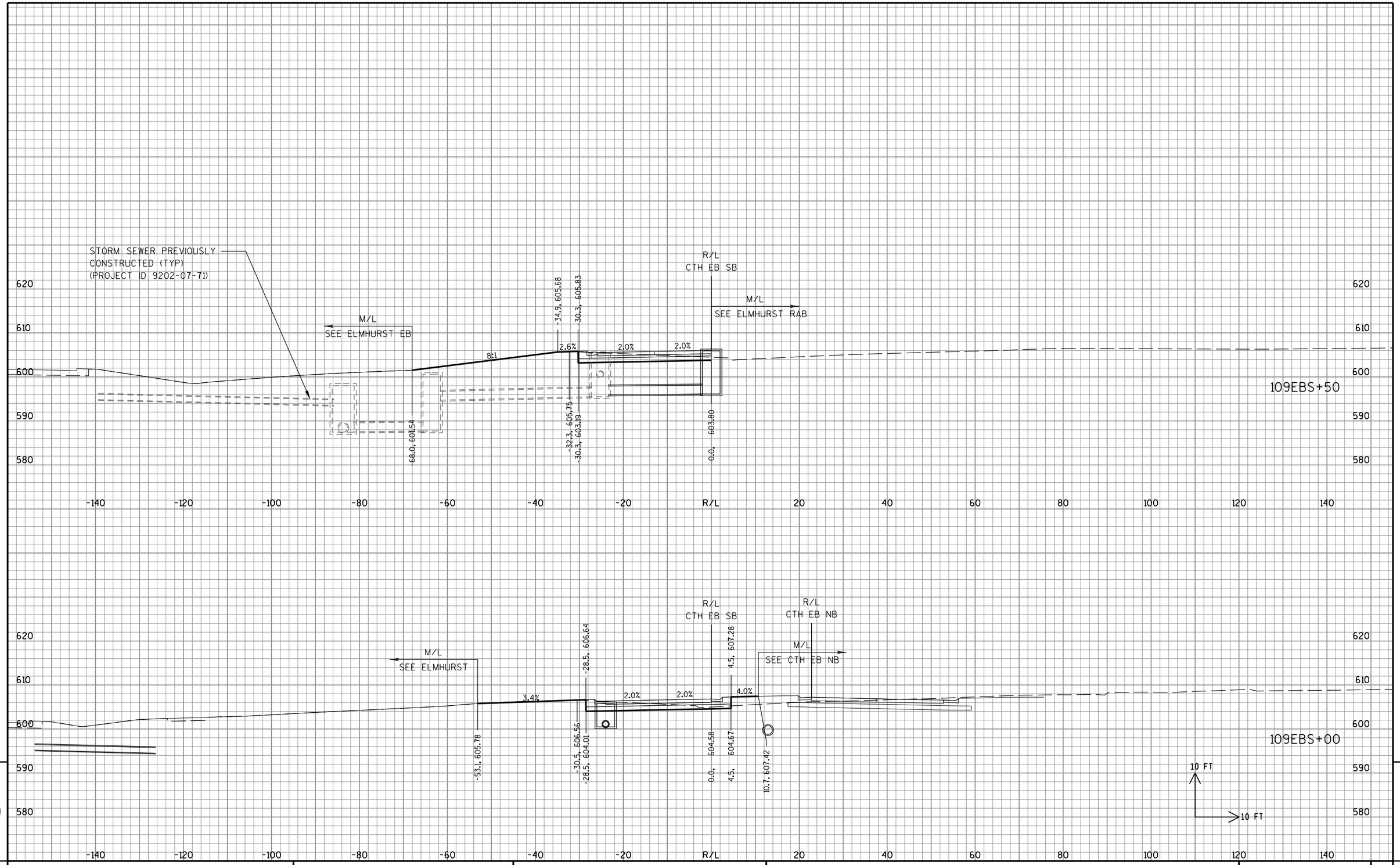


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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) SB	SHEET NO: . 233	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090202_xs_CARDINAL SB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



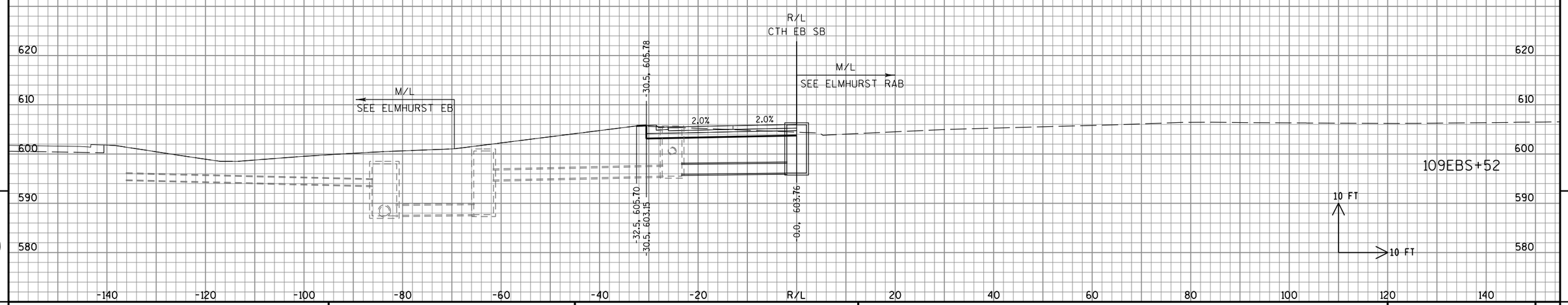
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) SB	SHEET NO: . 234	E

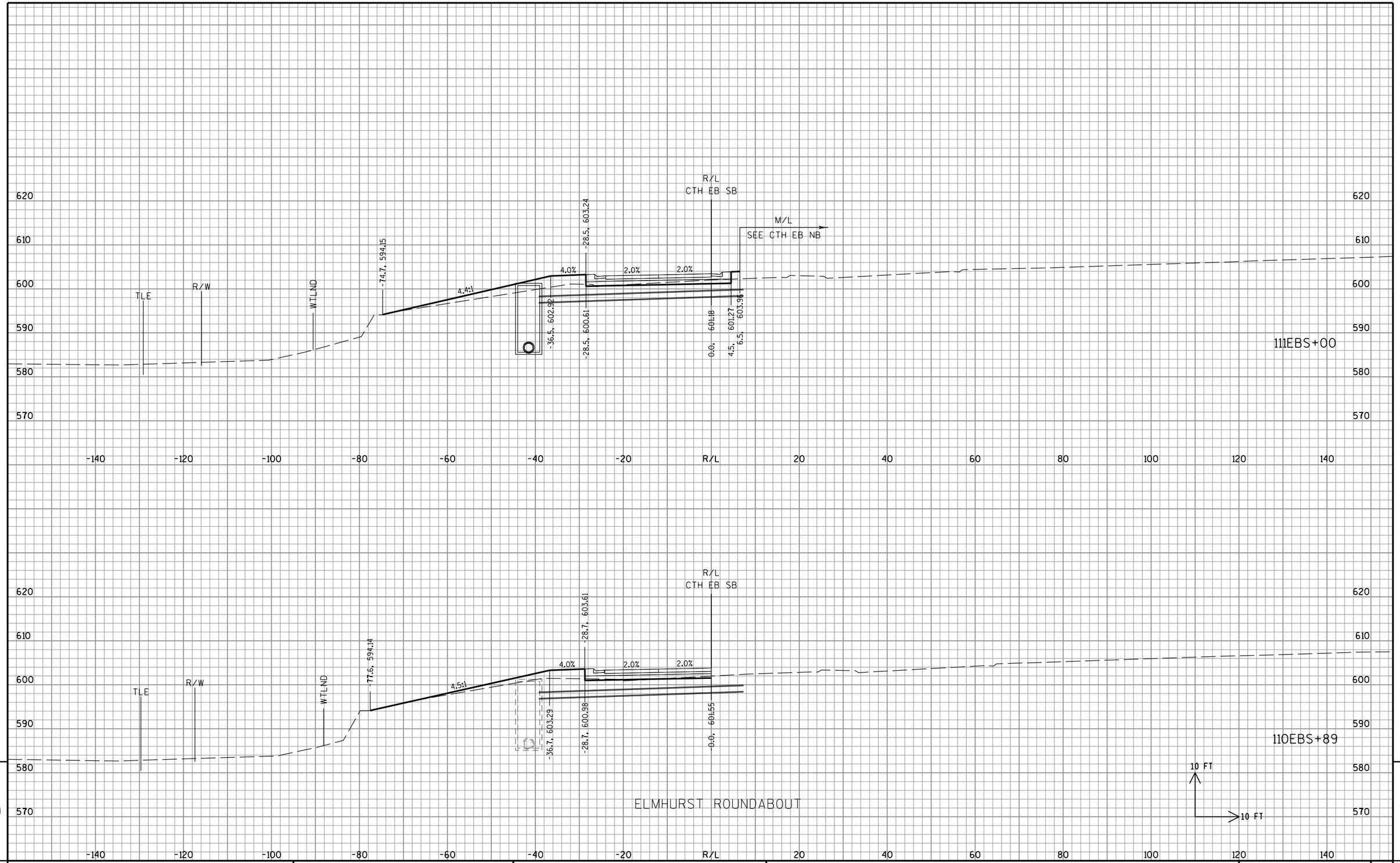
FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090202_xs_CARDINAL SB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

ELMHURST ROUNDABOUT



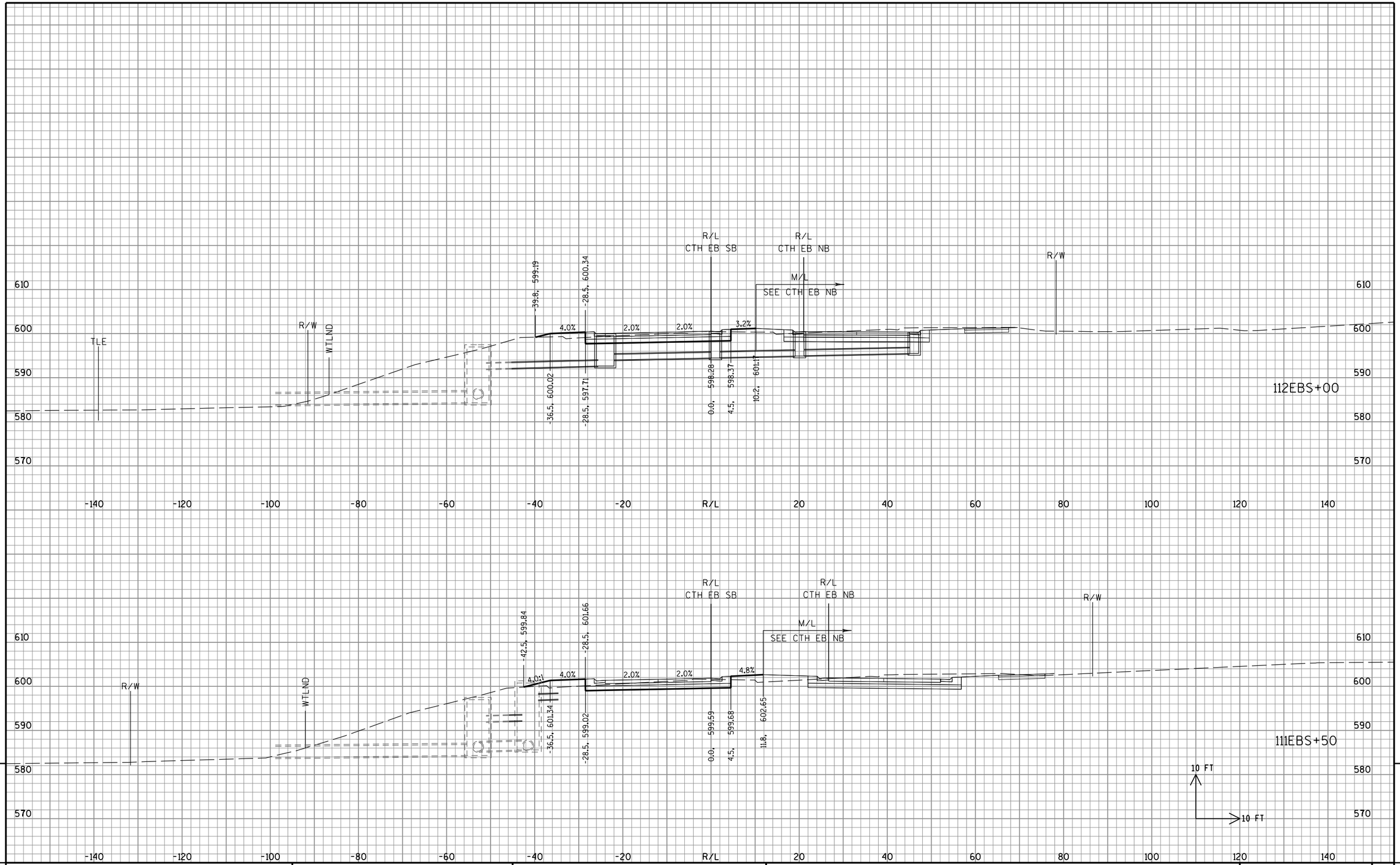
STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) SB	SHEET NO: . 235	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090202_xs_CARDINAL SB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



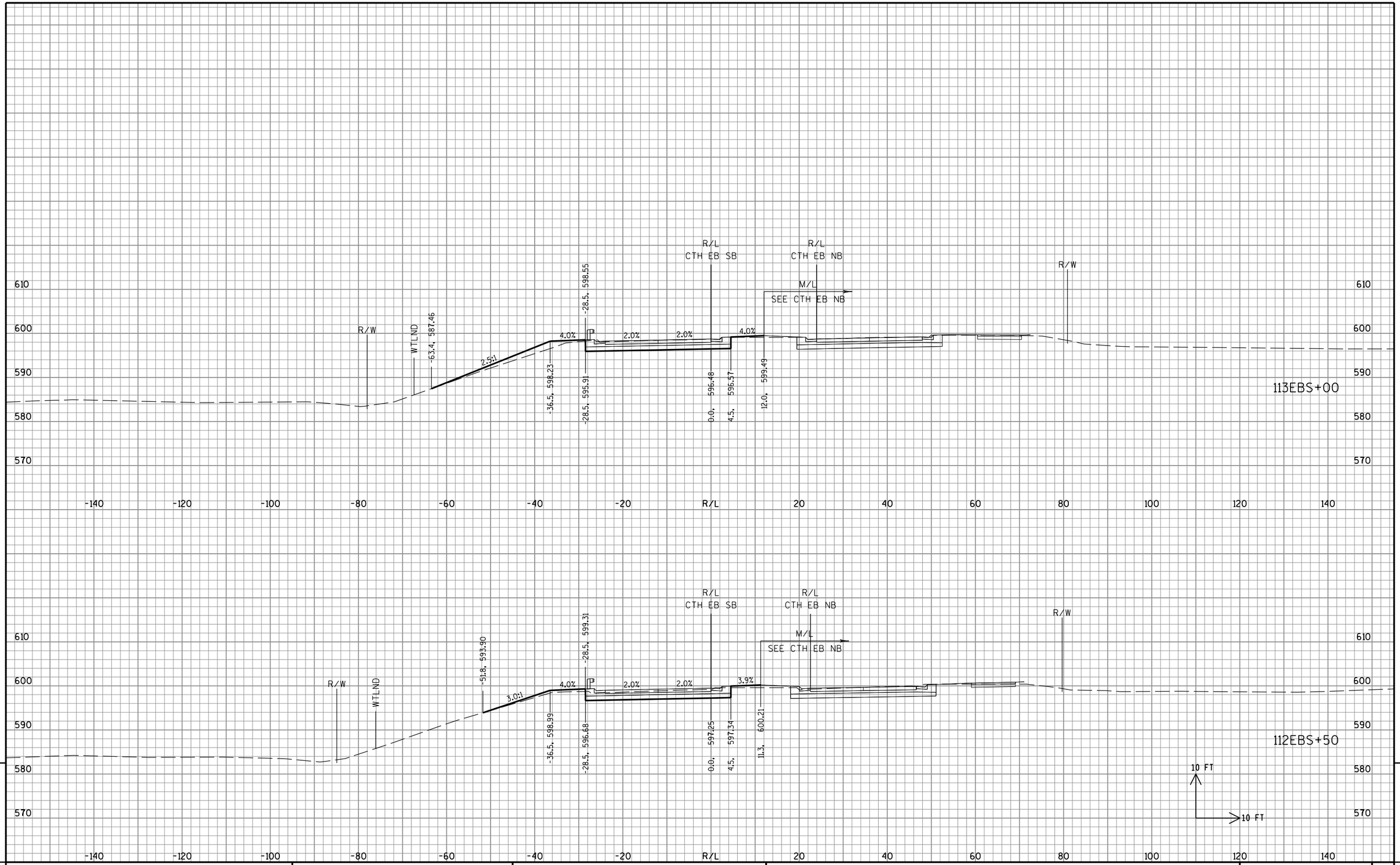
STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) SB	SHEET NO: . 236	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090202_xs_CARDINAL SB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) SB	SHEET NO: . 237	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090202_xs_CARDINAL SB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



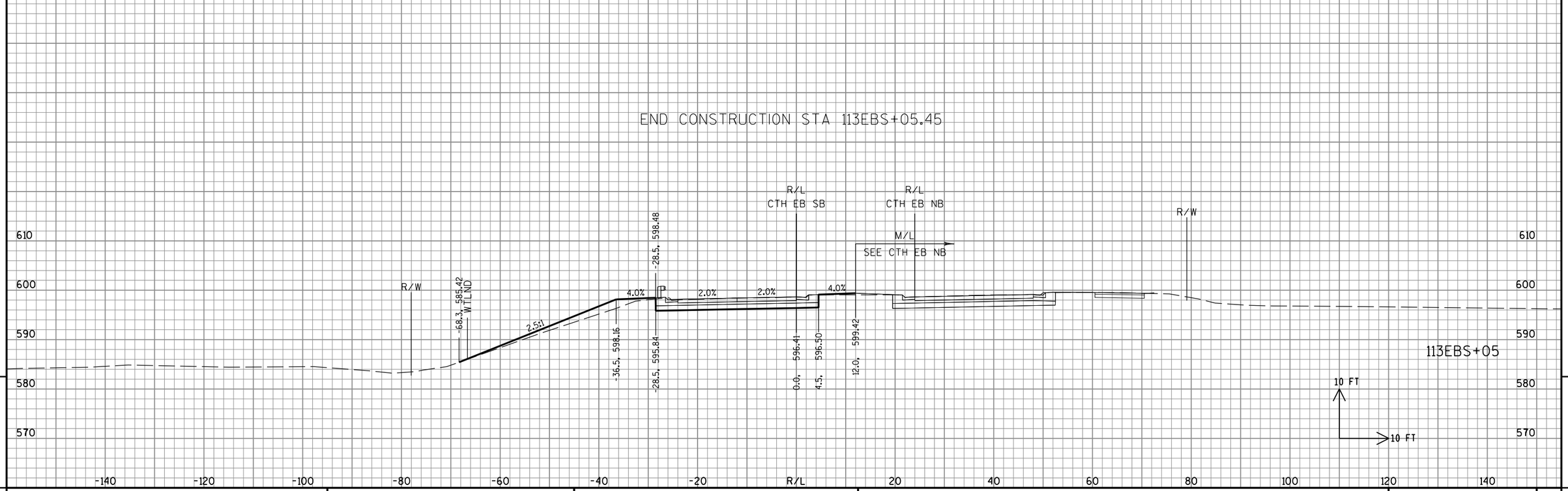
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) SB	SHEET NO: . 238	E

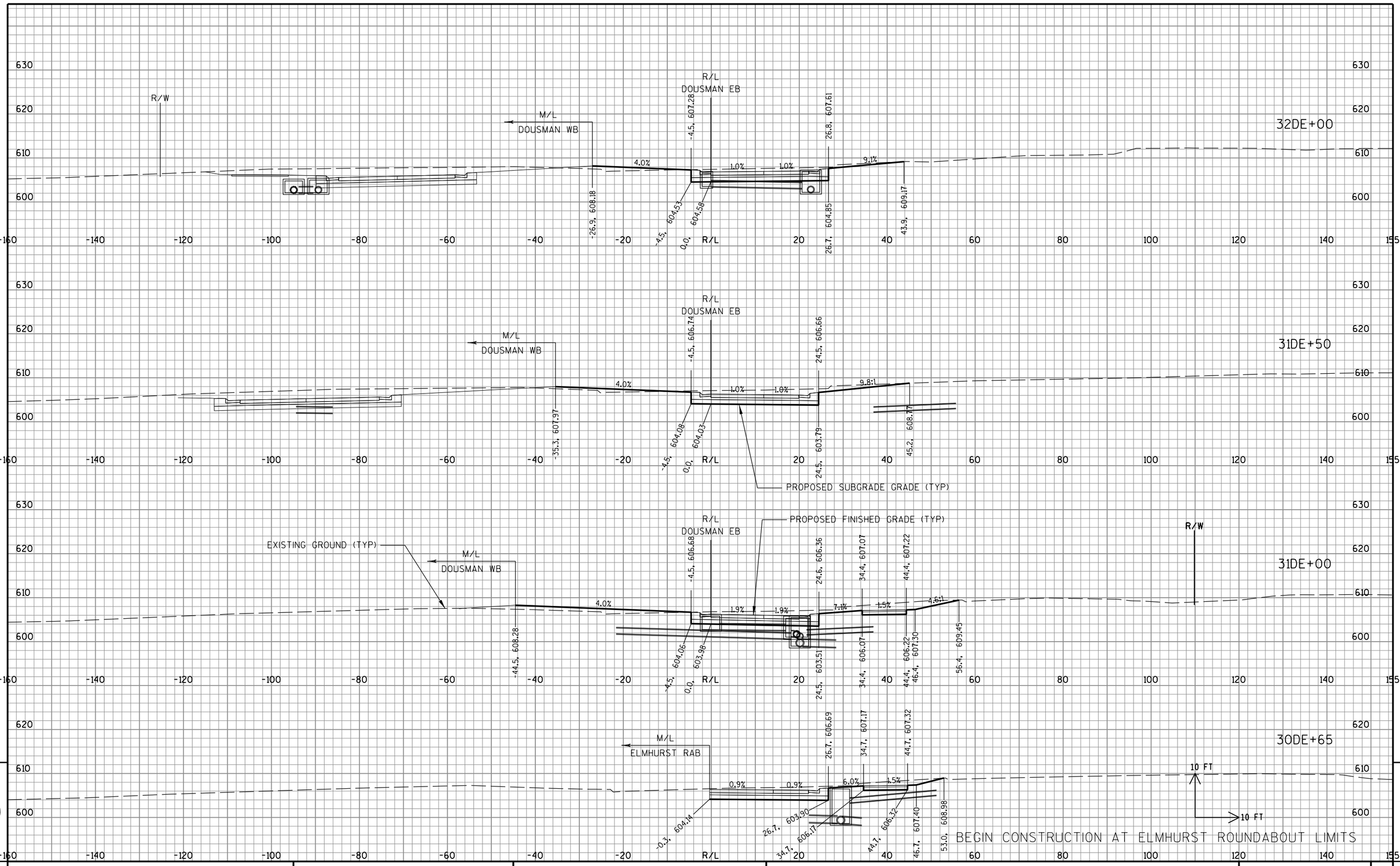
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END CONSTRUCTION STA 113EBS+05.45



STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: CTH EB (CARDINAL LN) SB	SHEET NO: . 239	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090202_xs_CARDINAL SB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

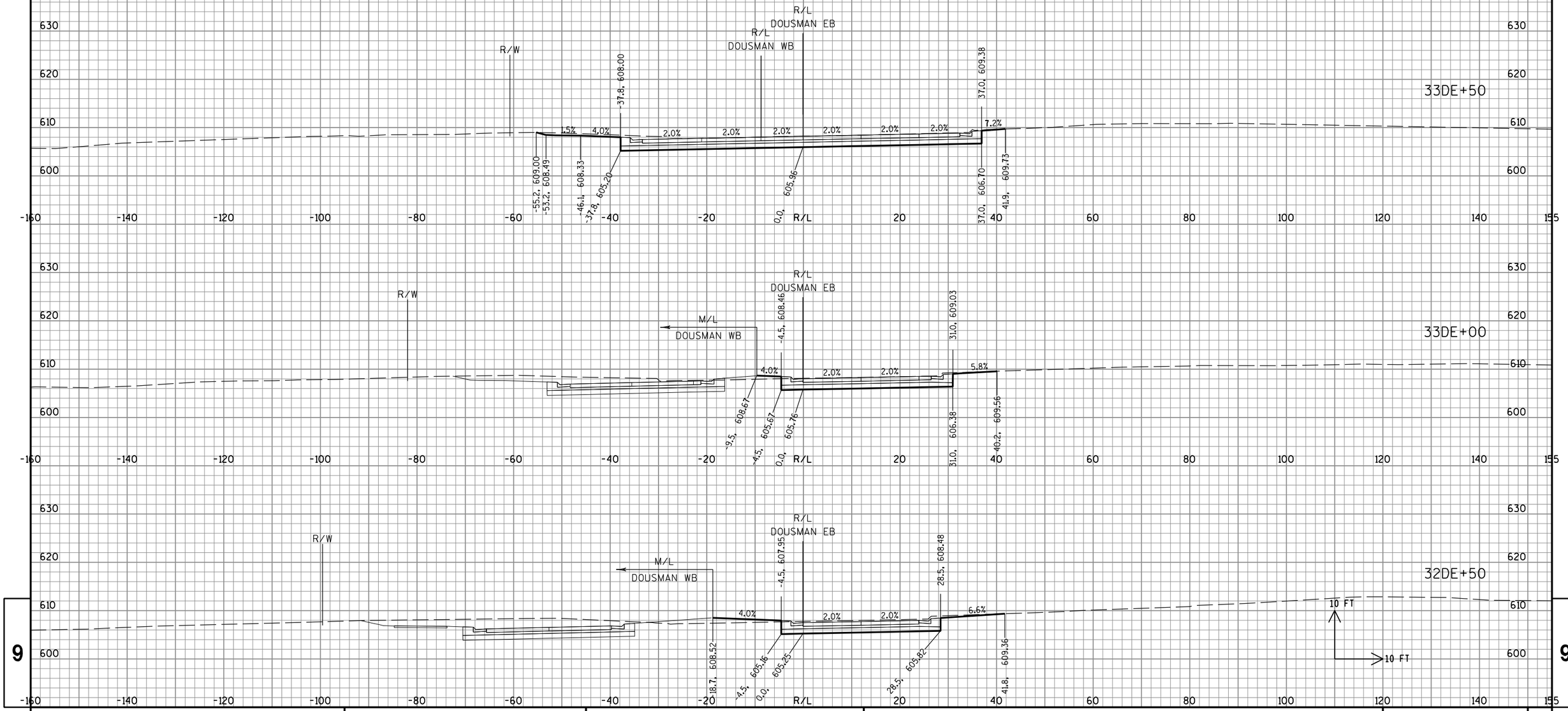


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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: DOUSMAN EB	SHEET NO: . 240	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090203_xs_DOUSMAN EB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



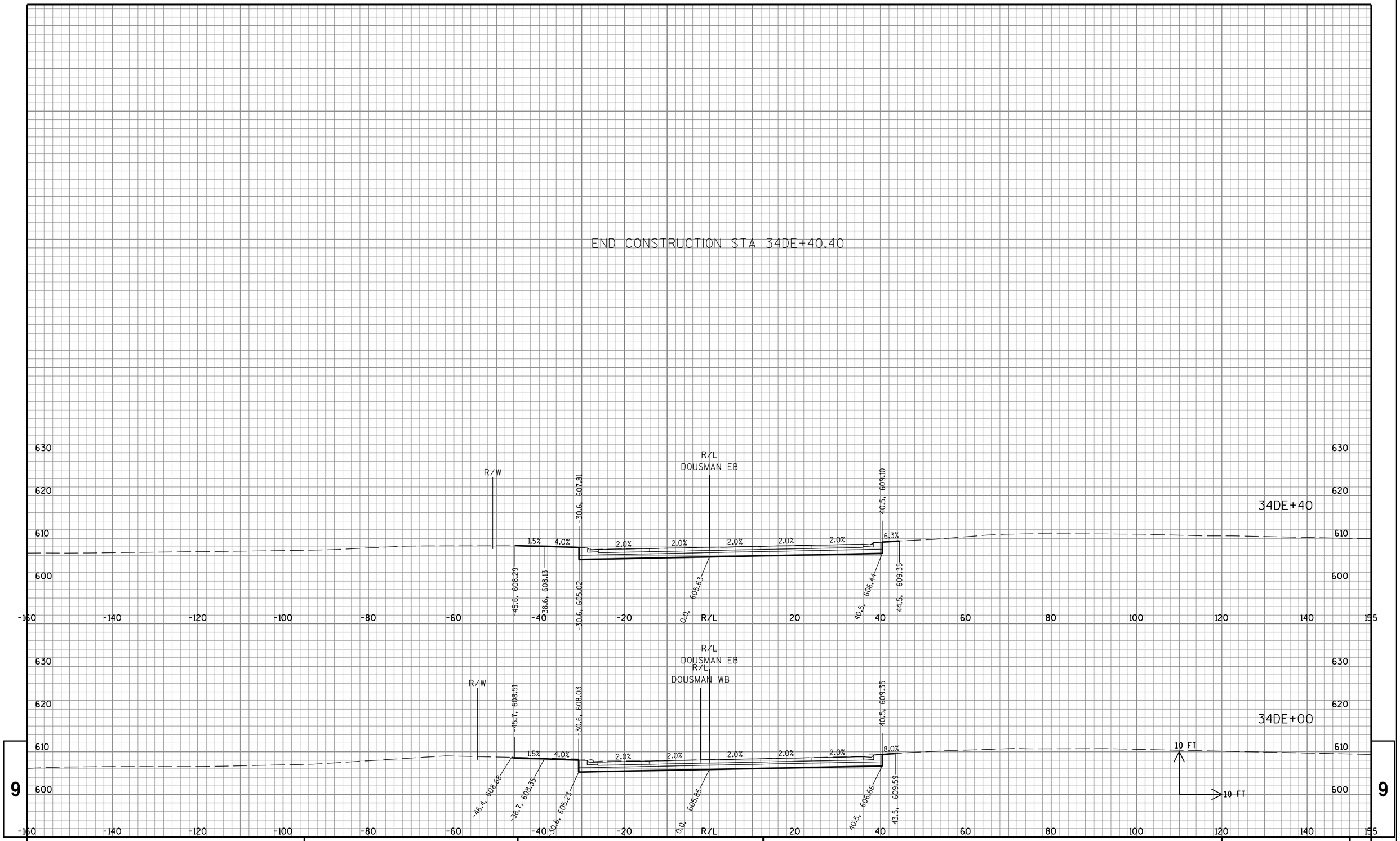
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: DOUSMAN EB	SHEET NO: . 241	E

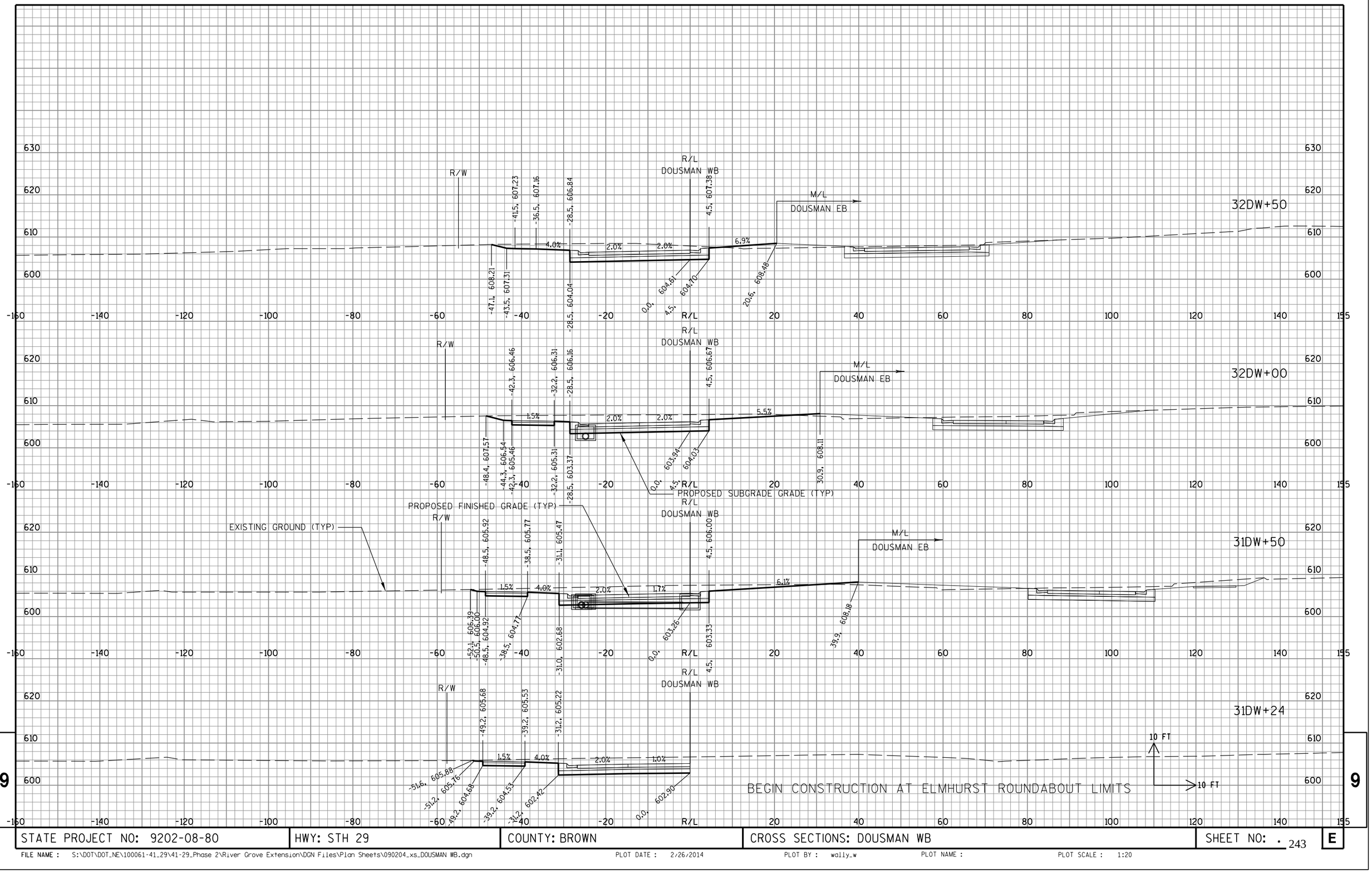
FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090203_xs_DOUSMAN EB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

END CONSTRUCTION STA 34DE+40.40



STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: DOUSMAN EB	SHEET NO: . 242	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090203_xs_DOUSMAN EB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



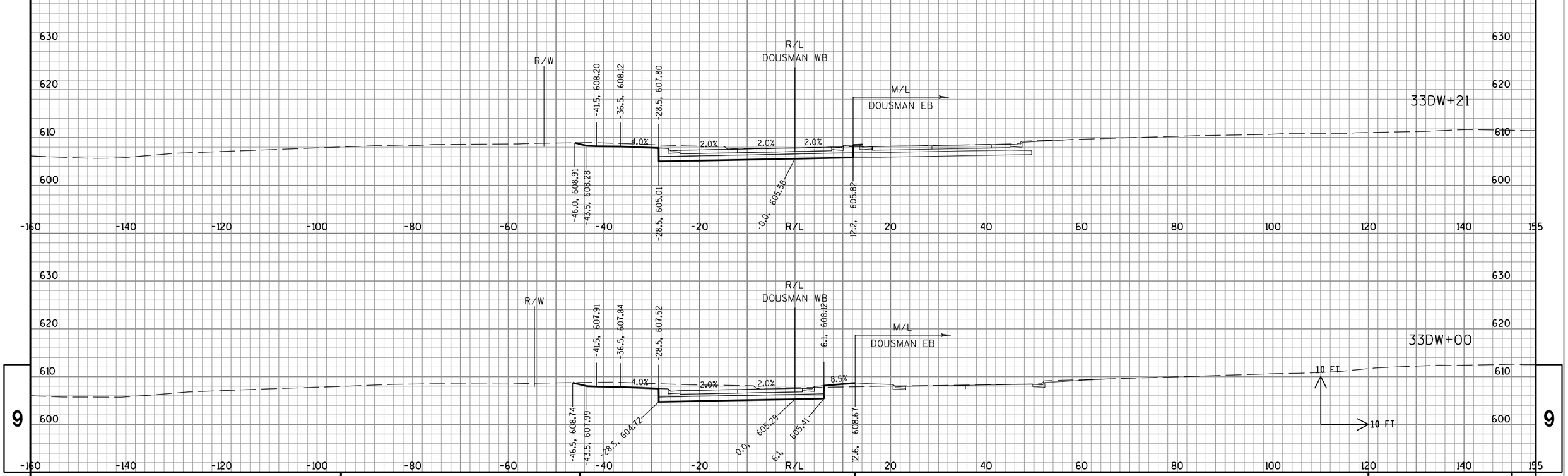
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: DOUSMAN WB	SHEET NO: . 243	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090204_xs_DOUSMAN WB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

END CONSTRUCTION STA 33DW+21.16
SEE DOUSMAN EB FOR REMAINING SECTIONS

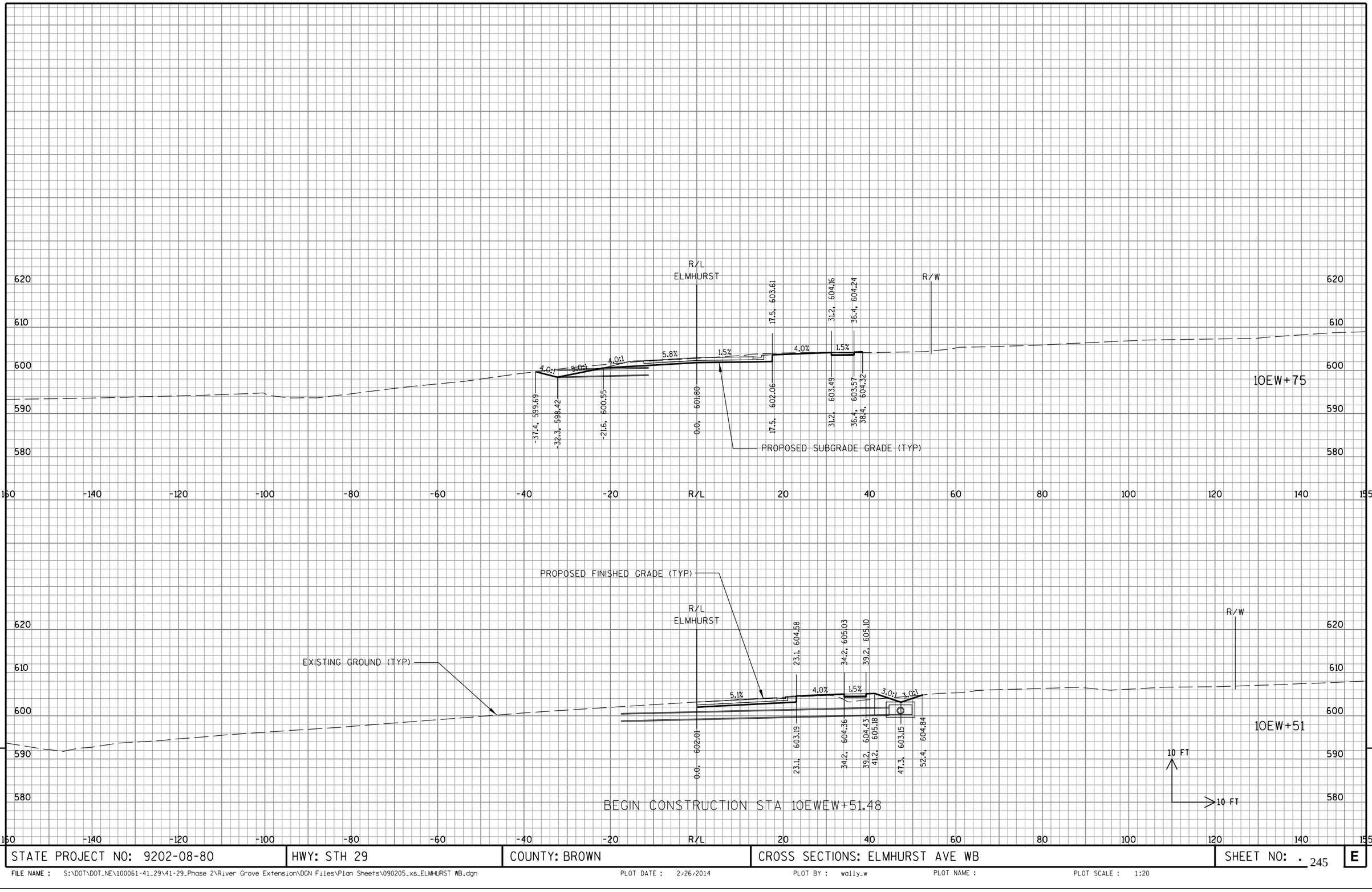


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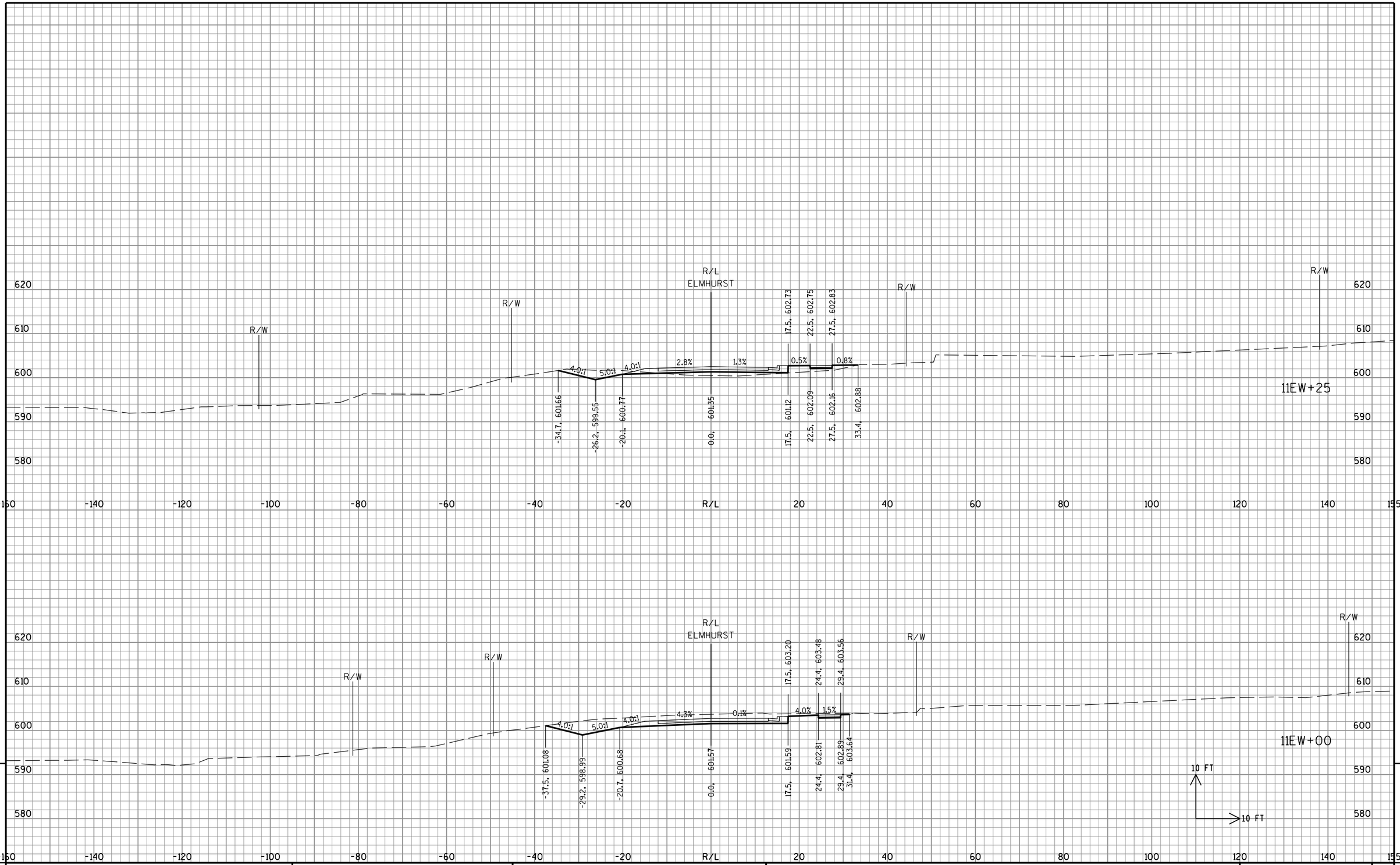
STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: DOUSMAN WB	SHEET NO: . 244	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090204_xs_DOUSMAN WB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST AVE WB	SHEET NO: . 245 E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090205_xs_ELMHURST WB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

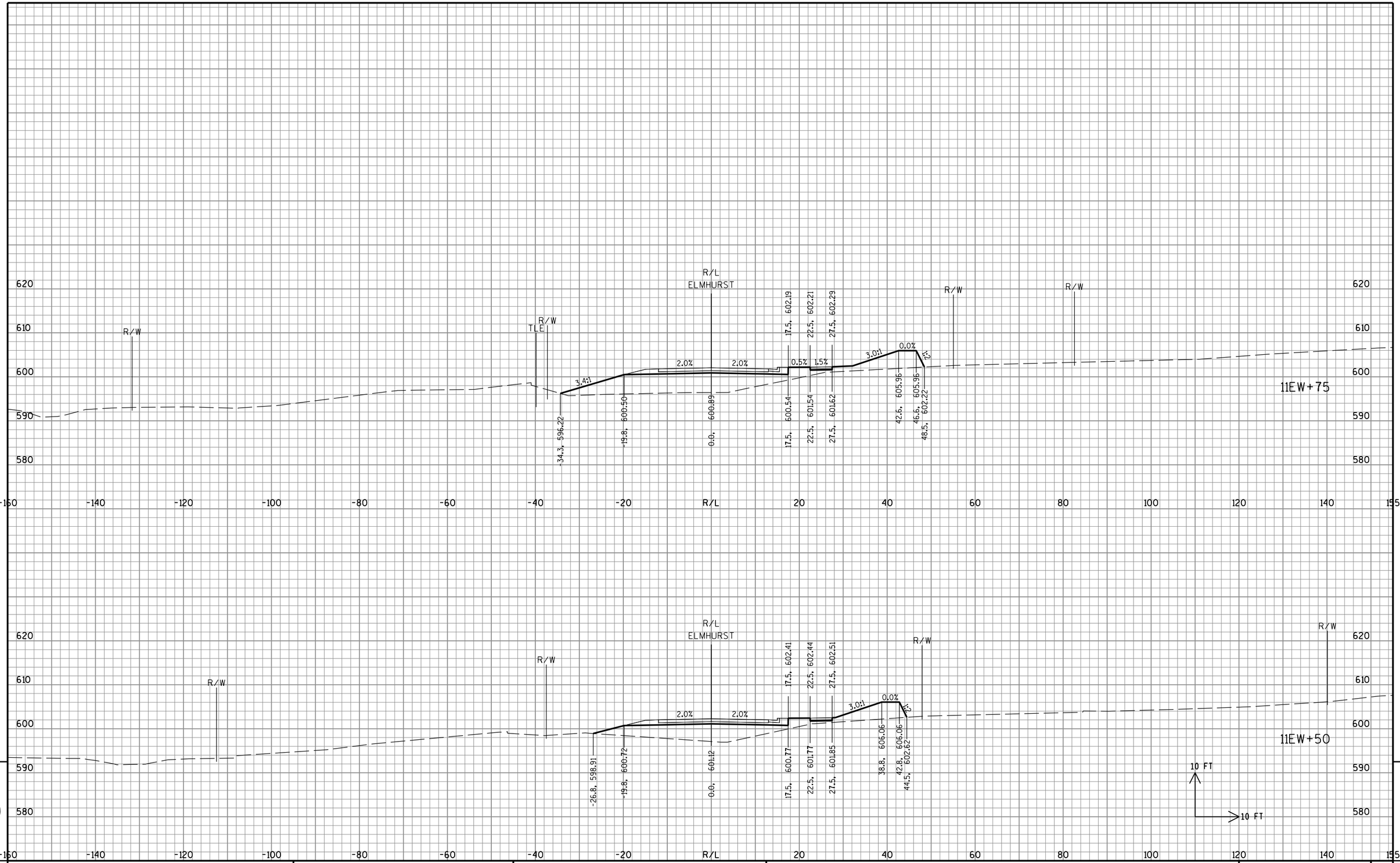


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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST AVE WB	SHEET NO: . 246	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090205_xs_ELMHURST WB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

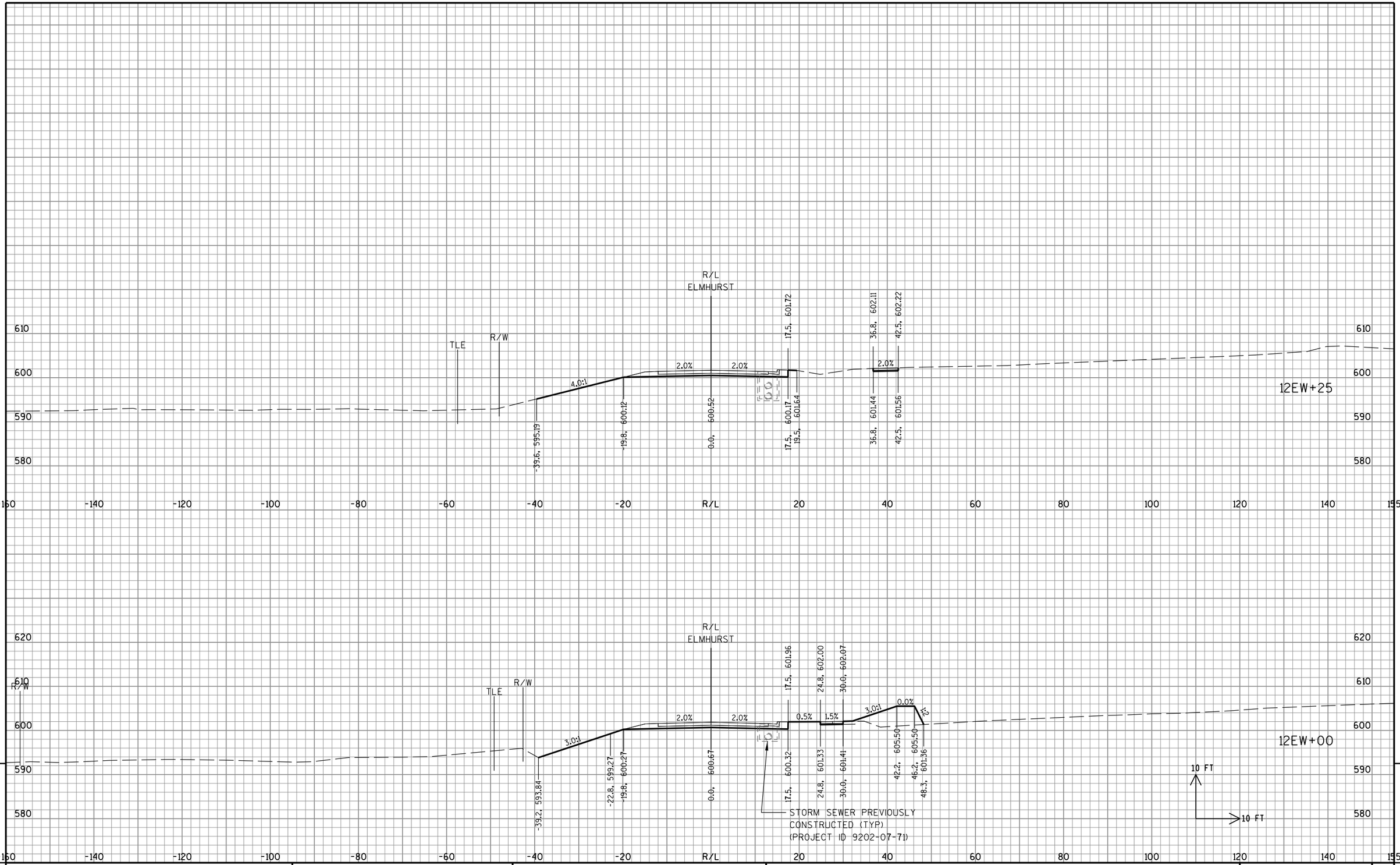


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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST AVE WB	SHEET NO: . 247	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090205_xs_ELMHURST WB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

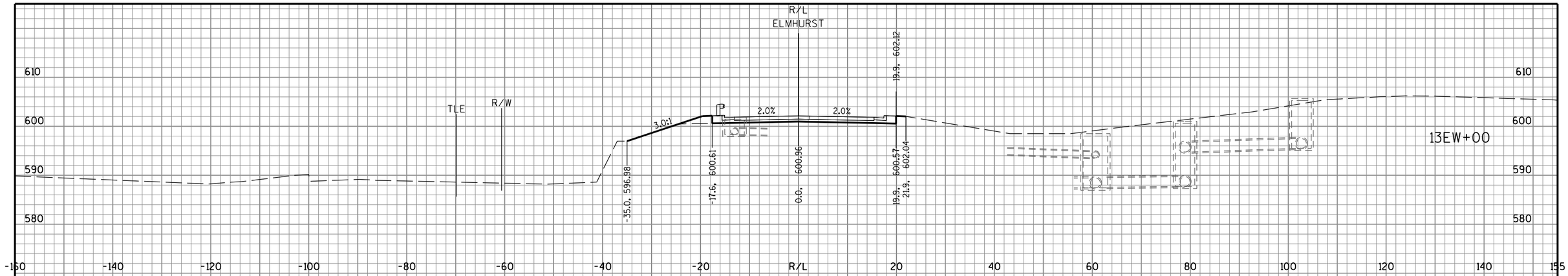


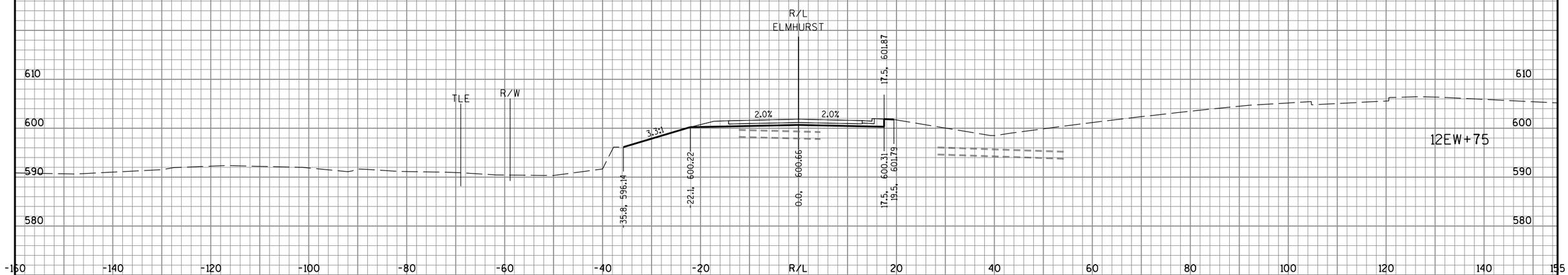
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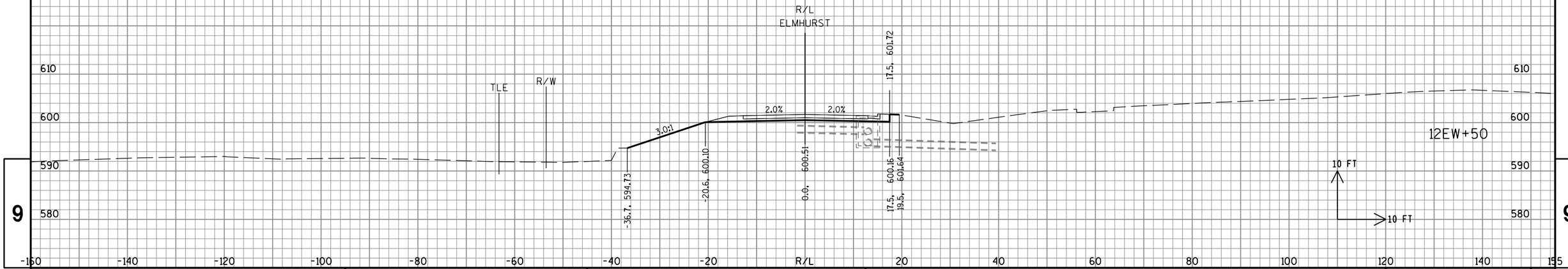
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST AVE WB	SHEET NO: . 248	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090205_xs_ELMHURST WB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20





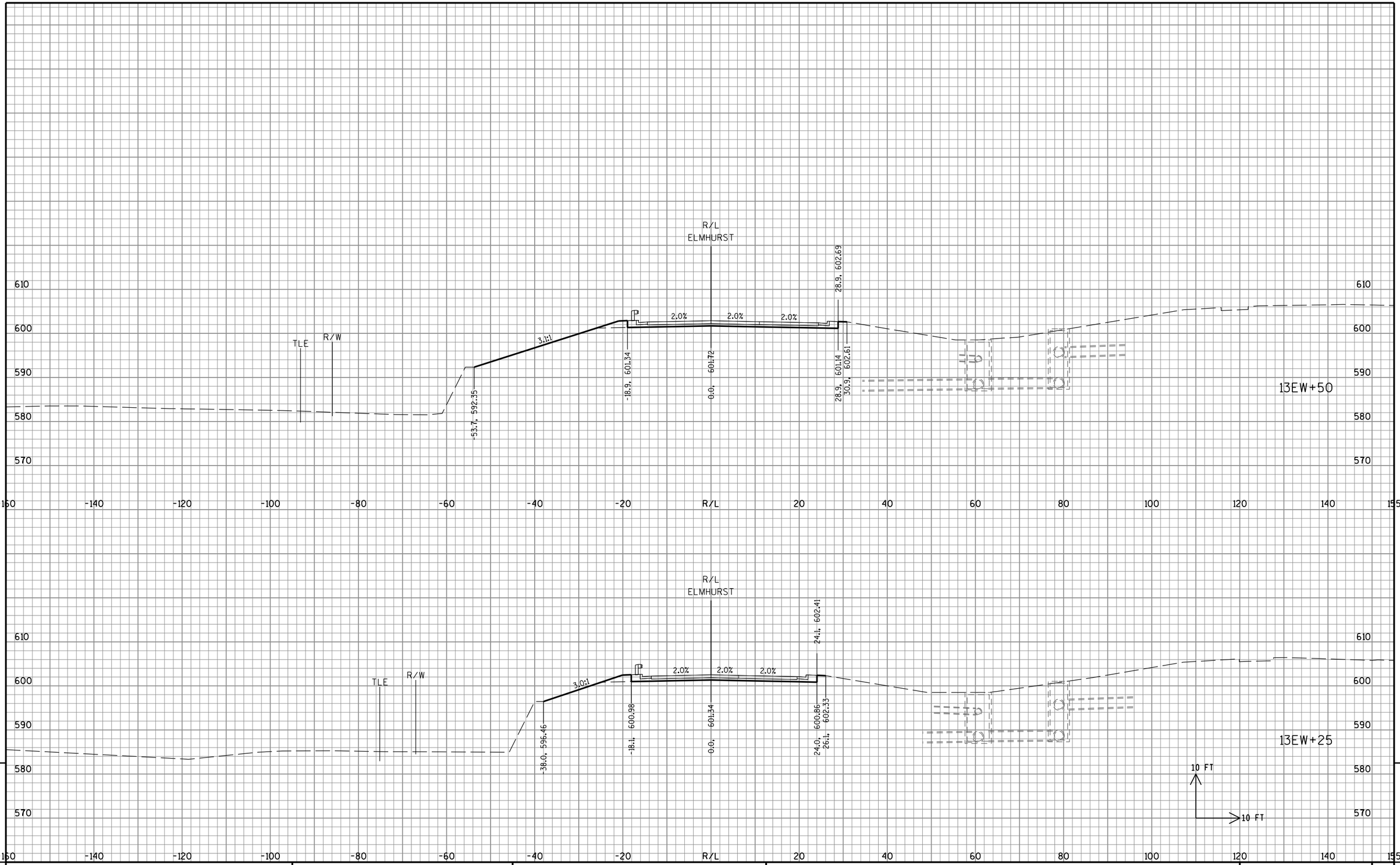


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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST AVE WB	SHEET NO: . 249	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090205_xs_ELMHURST WB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

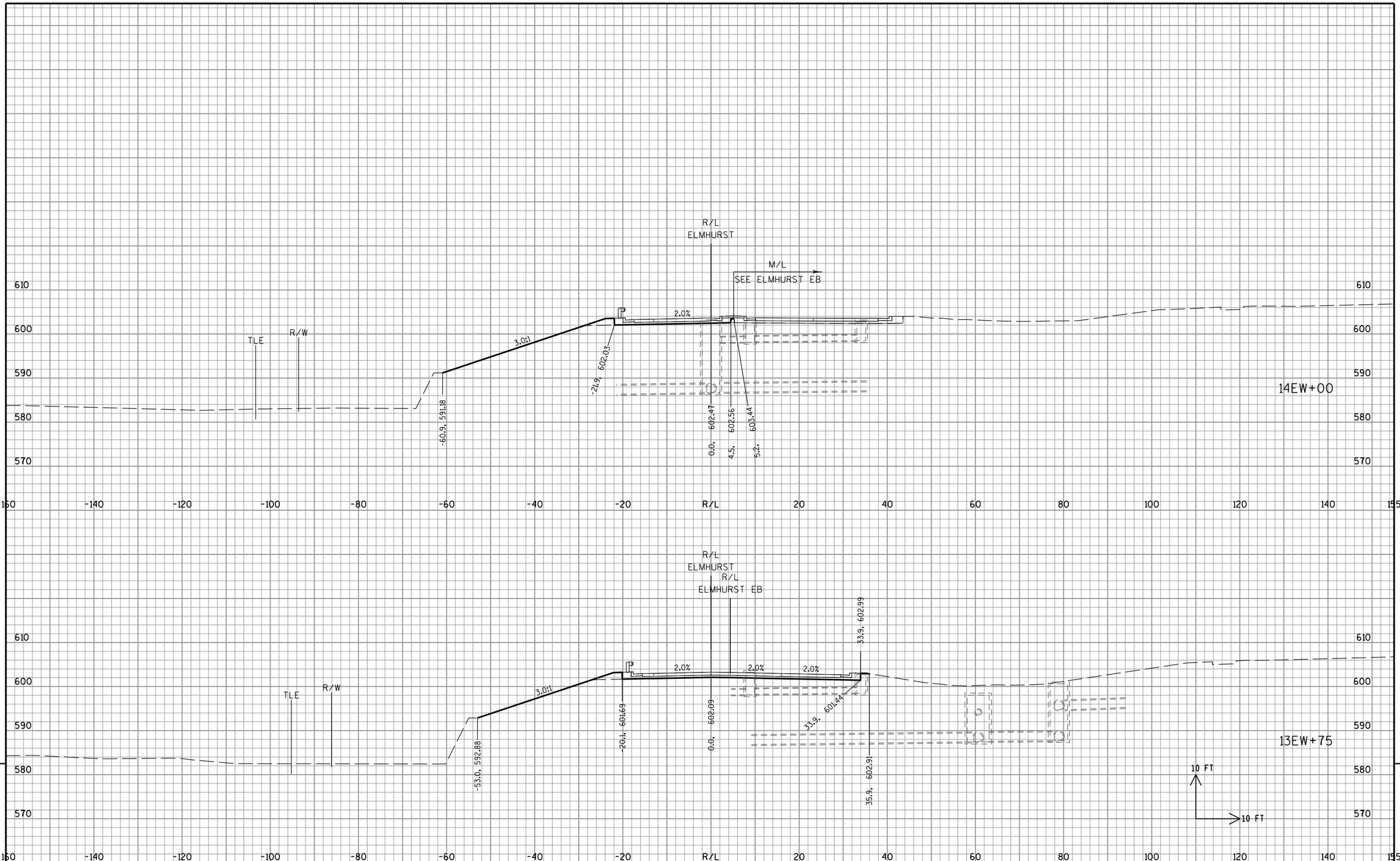


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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST AVE WB	SHEET NO: . 250	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090205_xs_ELMHURST WB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

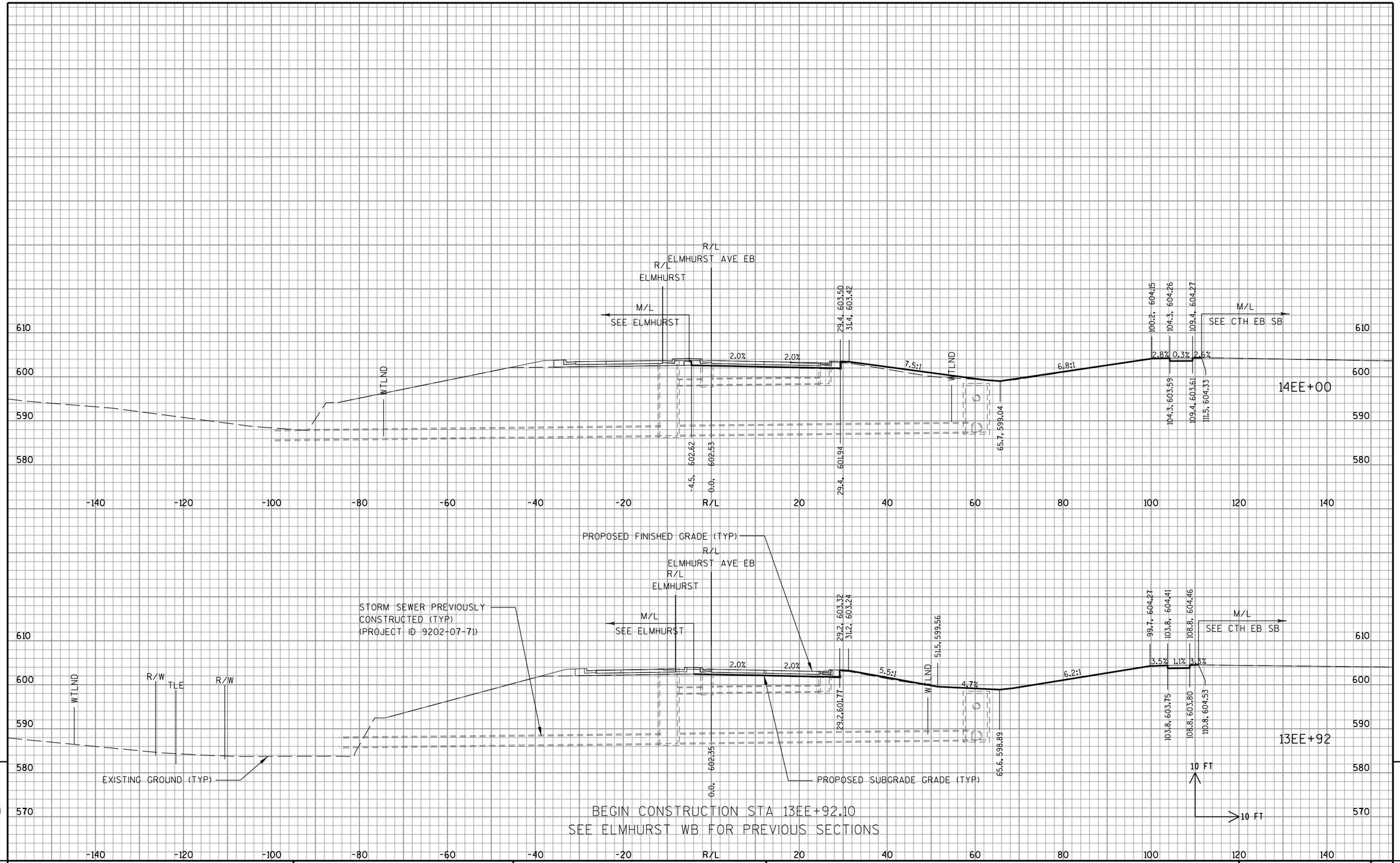


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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST AVE WB	SHEET NO: . 251	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090205_xs_ELMHURST WB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

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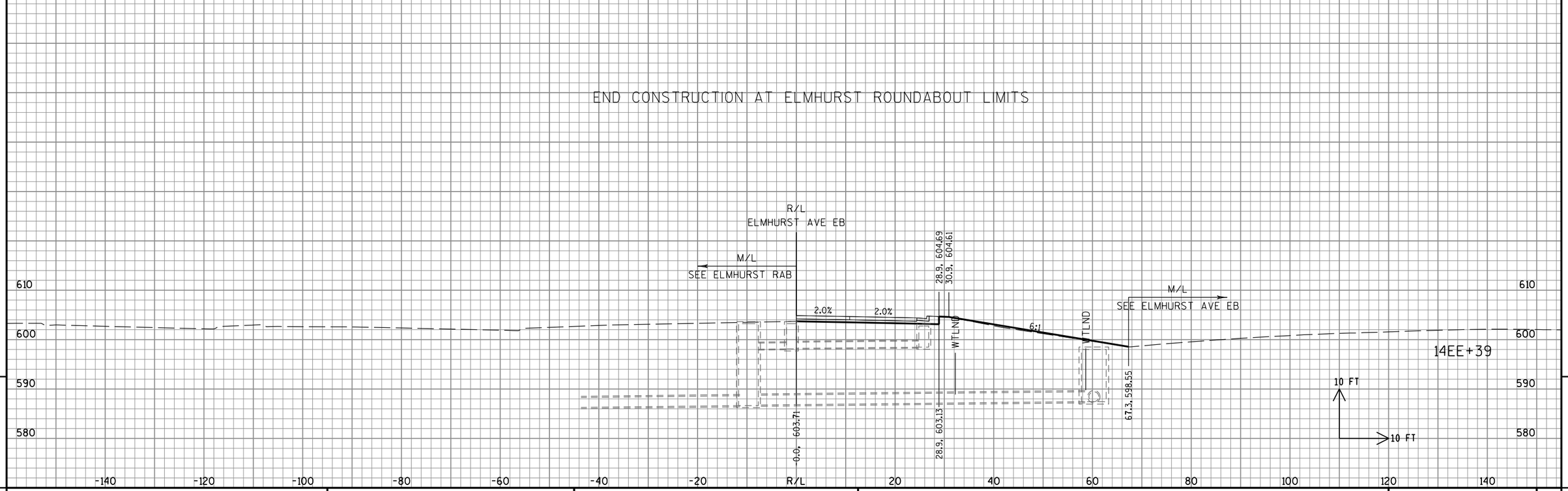
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST AVE EB	SHEET NO: . 252	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090206_xs_ELMHURST EB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

END CONSTRUCTION AT ELMHURST ROUNDABOUT LIMITS

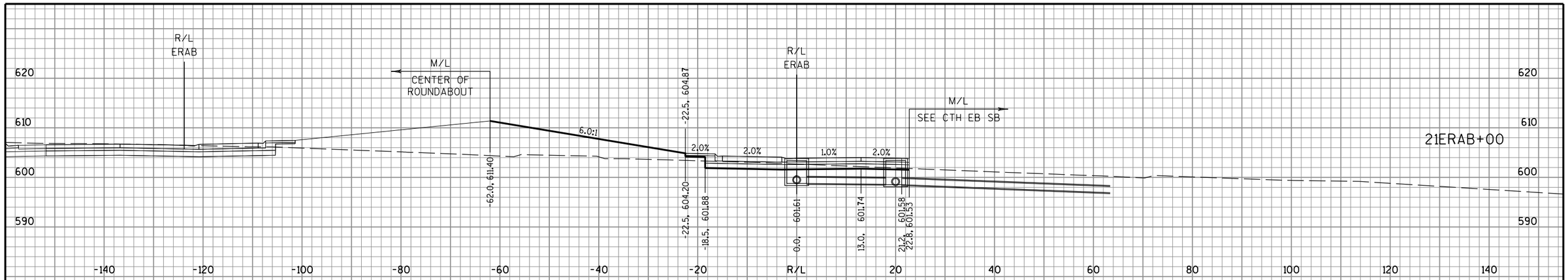


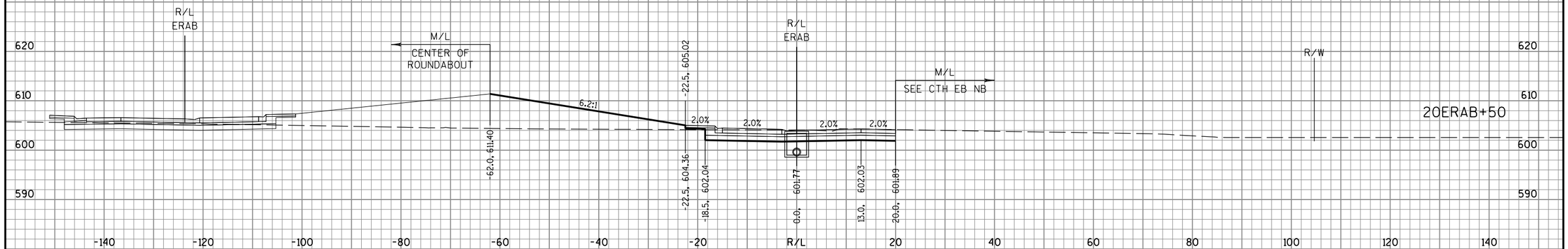
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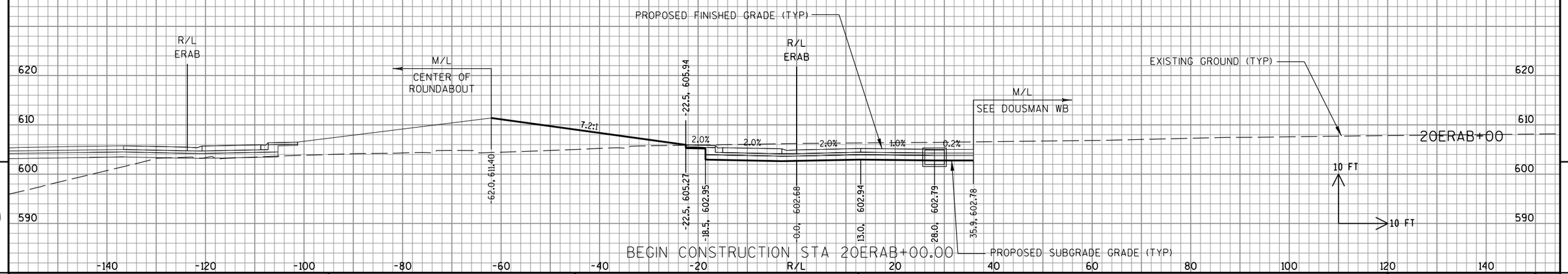
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST AVE EB	SHEET NO: . 253	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090206_xs_ELMHURST EB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20





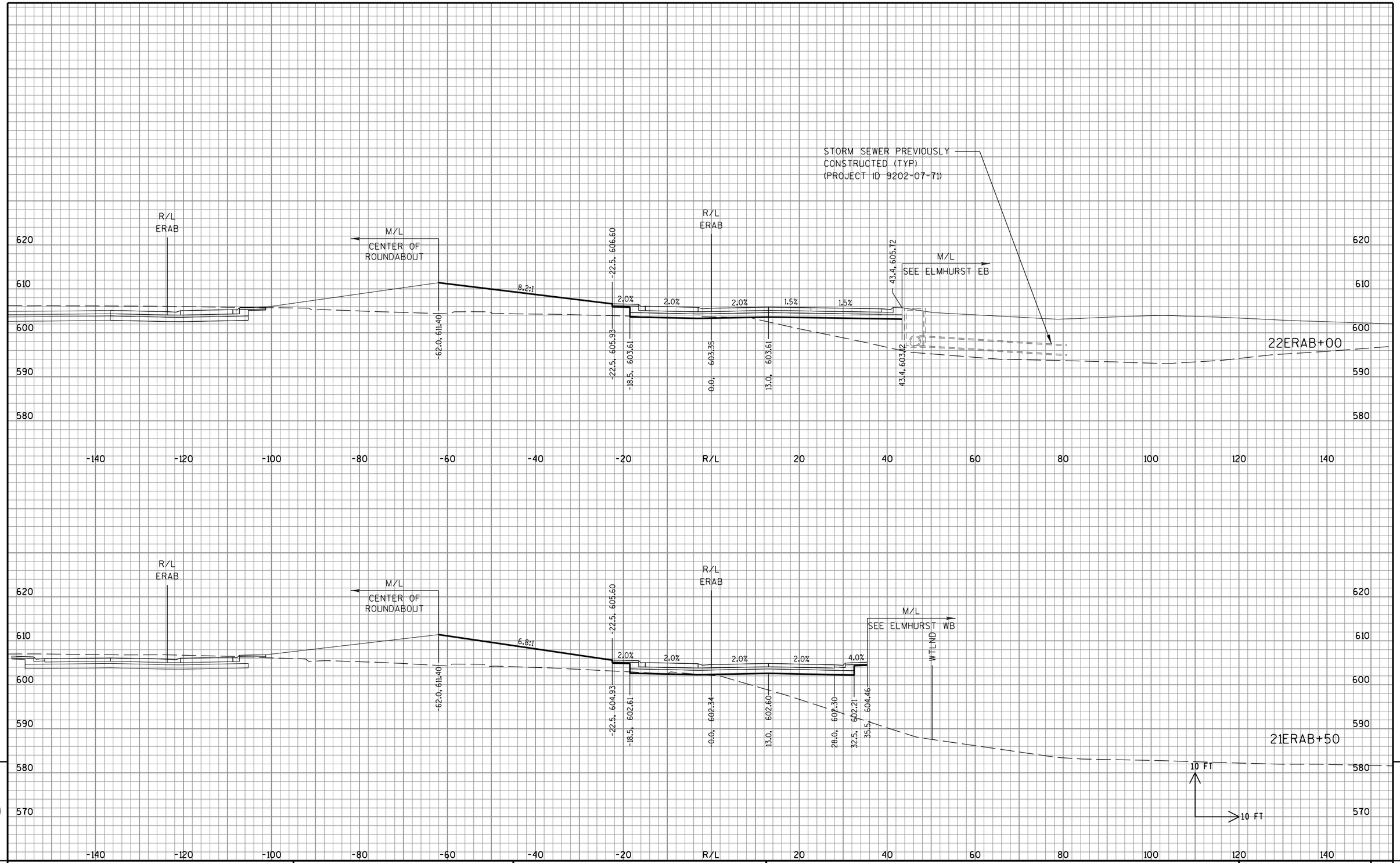


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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST ROUNDABOUT	SHEET NO: . 254	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090207_xs_ELMHURST RAB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

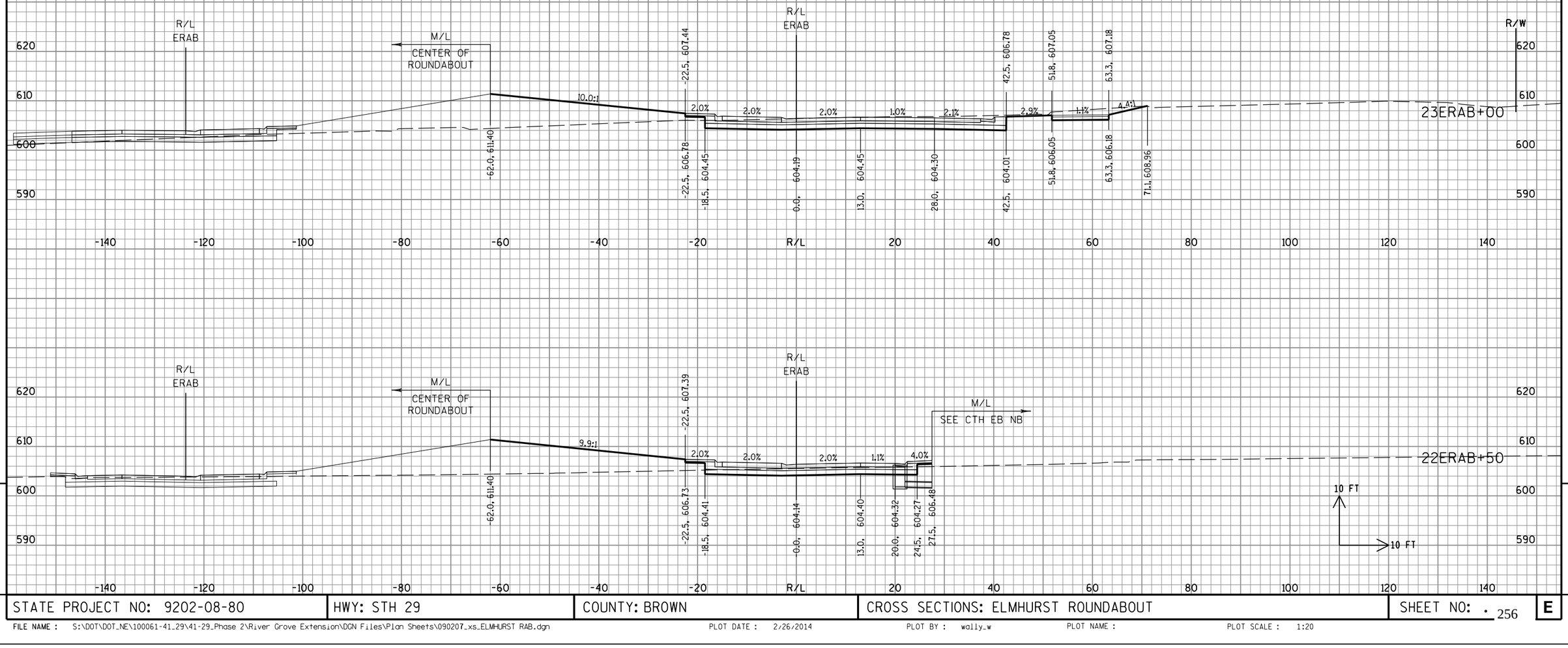


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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST ROUNDABOUT	SHEET NO: . 255	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090207_xs_ELMHURST RAB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20



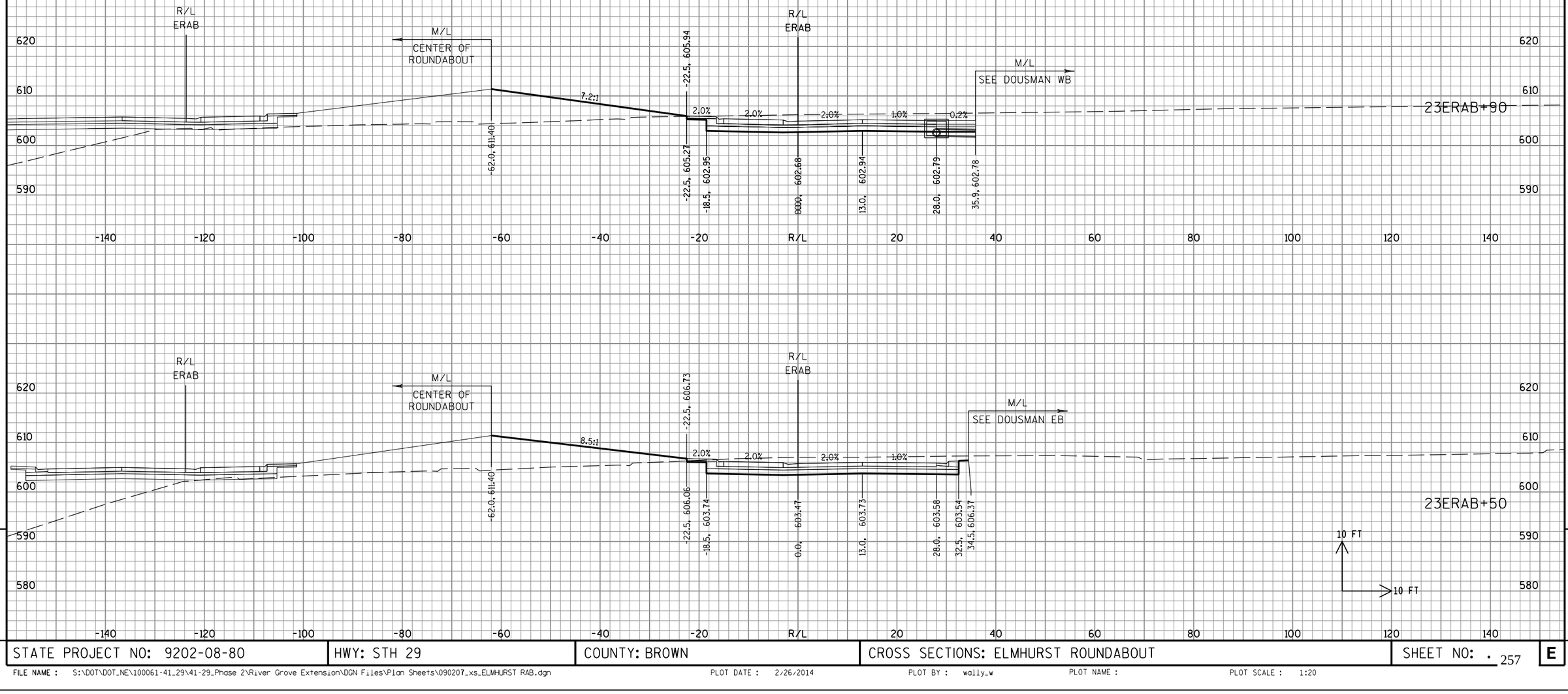
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9

STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST ROUNDABOUT	SHEET NO: . 256	E

FILE NAME : S:\DOT\DOT_NE\100061-41_29\41-29_Phase 2\River Grove Extension\DGN Files\Plan Sheets\090207_xs_ELMHURST RAB.dgn PLOT DATE : 2/26/2014 PLOT BY : wally_w PLOT NAME : PLOT SCALE : 1:20

END CONSTRUCTION STA 23ERAB+89.56



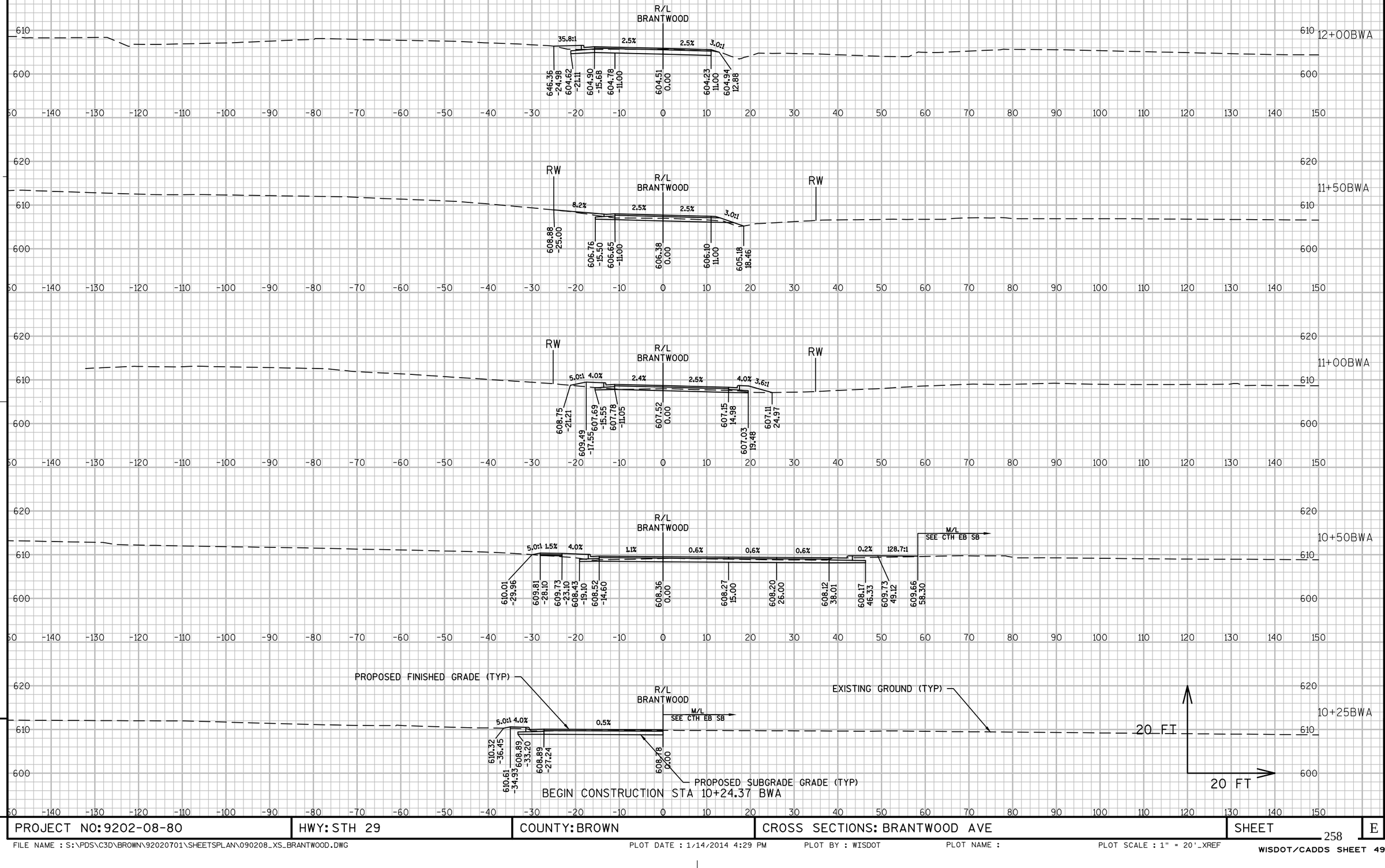
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STATE PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: ELMHURST ROUNDABOUT	SHEET NO: . 257	E

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PLAN SHEET COMPLETED BY NE REGION



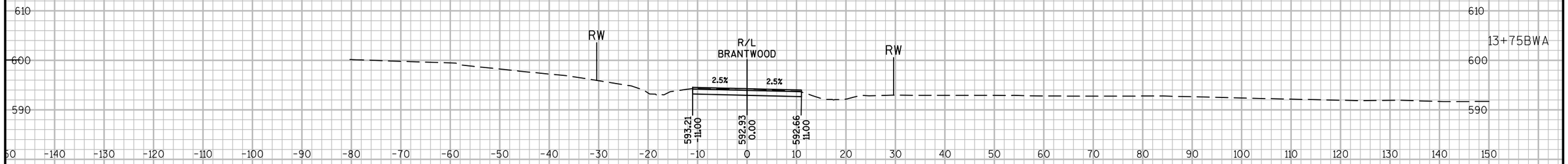
PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: BRANTWOOD AVE	SHEET	E

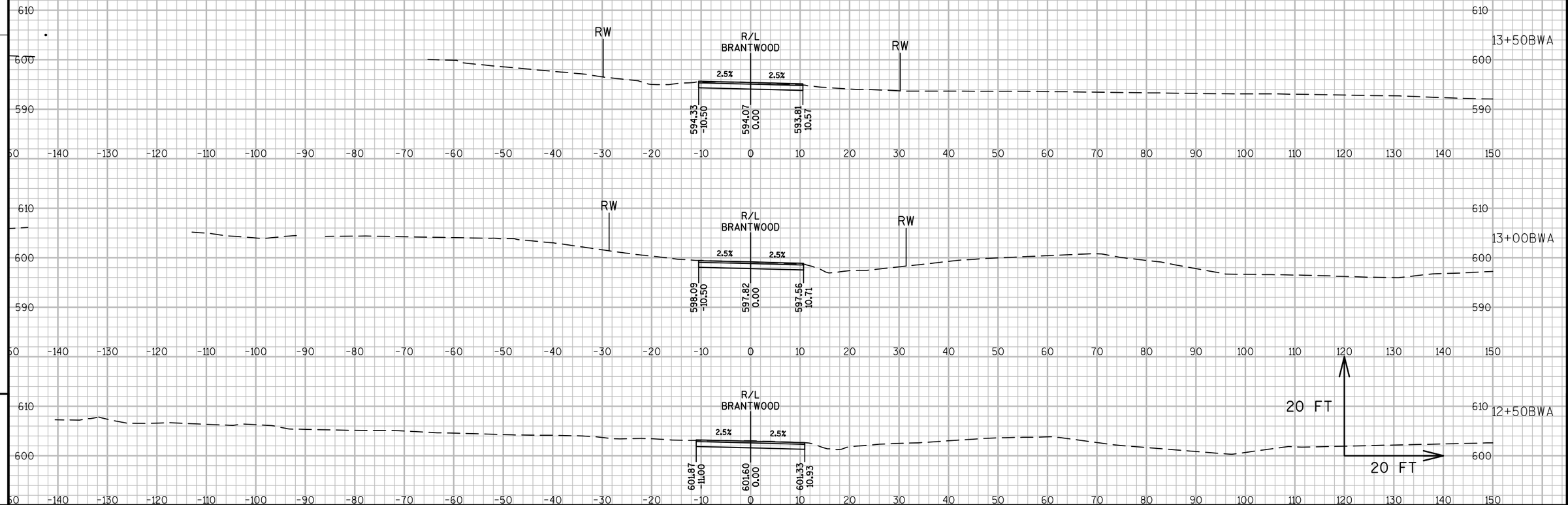
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WISDOT/CADDS SHEET 49

PLAN SHEET COMPLETED
BY NE REGION

END CONSTRUCTION STA 13+75.00 BWA





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PROJECT NO: 9202-08-80	HWY: STH 29	COUNTY: BROWN	CROSS SECTIONS: BRANTWOOD AVE	SHEET 259	E

Wisconsin Department of Transportation

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